MAGNETAWAN PROJECT

Results of the 1999 Exploration Program for Ni-Cu-Co Sulphide Deposits on Mining Claim SO 1077361 in Lount Township, Ontario

N.T.S. 31-E/13

Carried Out Under the Ontario Prospectors Assistance Program

OPAP File Number OP99-051

By G. Vandevalk

January 2000

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Results of the 1999 Exploration Program for Ni-Cu-Co Sulphide Deposits on Mining Claim SO 1077361 in Lount Township, Ontario

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SUMMARY

During the summer of 1997, the writer and his two brothers (Brothers Minerals and Exploration, B-MAX), conducted a program of stream sediment sampling and prospecting to follow-up on Geological Survey of Canada Ni-Cu-Co lake sediment geochemical anomalies north of the Town of Magnetawan. An area in Lount Township, mapped by the OGS as being underlain by metagabbroic rocks, drained into Lake Of Many Islands to the south and Spring Lake to the north. Both lakes contained anomalous levels of nickel and cobalt in sediments. Sediment samples, collected from streams that drained this area, contained anomalous levels of nickel, cobalt and chromium. Prospecting in this area confirmed the presence of mafic and ultramafic rocks including metagabbro and pyroxenite, both with disseminated sulphides. B-MAX believed these results indicated that the area had potential to host economic concentrations of magmatic sulphides and that follow up exploration was warranted to further investigate this potential. In November 1997, H. Vandevalk staked a 12-unit claim block (SO1077361).

In 1998 the writer was awarded an OPAP grant of $10,000 (OP99-011) to carry out a program of soil geochemical sampling, prospecting and ground magnetic surveys, directed toward the discovery of nickel–copper–cobalt, magmatic sulphide deposits on the property. The Summer 1998 program was successful in identifying several areas with highly anomalous Ni, Cr, Co, Fe and Mg in soil, associated with strong ground magnetic anomalies. Follow-up prospecting in this area confirmed the presence of olivine bearing metagabbroic and ultramafic rocks with disseminated sulphides. The area covered by the Summer 1998 surveys probably contains the source(s) of the GSC Nickel anomaly in Spring Lake sediments.

In 1999 the writer was awarded an OPAP grant of $15,000 (OP99-051) to carry out a program of line cutting, VLF-EM, MaxMin II HLEM and detailed magnetometer surveys over a continuous area covering the strongest and largest soil geochemical anomalies. The MaxMin II survey was successful in identifying an area of anomalous bedrock conductivity, which will require further follow-up work. Several VLF-EM conductors with good magnetic and soil geochemical correlation were selected as target sites for hand excavated overburden pits. Analyses of soil samples from two pits, which did not reach bedrock, yielded up to **0.25% Ni, 937 ppm Cr, 470 ppm Cu, 121 ppm Co and traces of PGE's**. Another pit, which reached bedrock, exposed a fault in a strongly weathered ultramafic rock (pyroxenite). Grab samples of medium to coarse grained pyroxenite from the new showing contained coarsely disseminated py, po and cpy, and returned analyses of up to **260 ppm Ni, 776 ppm Cu, 115 ppm Cr, 68 ppm Co and traces of PGE's**.

LOCATION AND ACCESS

The Property lies approximately 14 kilometres north of the town of Magnetawan, (Figure 1). Figure 2 shows the location of **Mining Claim SO1077361** which lies on the north ½ of Concession 5, Concession 6 & the south ½ of Concession 7 – Lots 27, 28 & 29, as shown on the Lount Township Claim Map number M.184. Lount Township is in the Parry Sound District of the Sudbury Mining Division. The property lies within the N.T.S. 31 E/13 division (Golden Valley Sheet), and its southwest corner occurs at approximately 45° 47' 05" north latitude and 79° 41' 03" west longitude. The U.T.M. coordinates of this corner are 602,295mE and 5,070,750mN.

The property can be accessed by travelling approximately 8.5 kilometres north on the Nipissing Road off of Highway 124 (at its junction with Highway 510), to the Youthdale Camp Road, which branches to the west (Figure 1). By heading west along the Youthdale Camp Road for approximately 4 kilometres, a gate, which marks the beginning of the Youthdale private lands, will be encountered (Figure 2). The author requested and was granted permission from the owner, to travel a further 0.7km beyond the gate to a trail which heads north to the property. This trail can be traveled by highway vehicle for only a short distance, to a clearing and sandpit just off the Youthdale property. An ATV was used to travel the remainder of the trails to the property and work area. A public boat launch ramp provides access to Spring Lake, from which the northern portion of the property can be accessed if desired.

REGIONAL GEOLOGY

The property lies within the Parry Sound Mafic Domain (PSMD) of the Central Gneiss Belt (CGB) in the Grenville Geologic Province (Figure 3). Easton (1992) described the geology of the Grenville Province and the CGB, including the PSMD.

Areas to the west and southwest of the property were covered by recent, 1 inch = ¼ mile scale OGS mapping (Bright E.G., 1987 and McRoberts, T., & Tremblay, M.L., 1988). Lount Township was mapped by J. Satterly in 1953 (Map No. 1955-4) primarily to investigate magnetite and garnet occurrences that were found along the Rosseau to Nipissing pioneer road, and to assess the iron potential of the area. Although the lithological classifications are not as detailed as the recent OGS mapping to the west, Satterly's map provides the only detailed coverage in Lount Township and it locates several metagabbro bodies, Cu-Ni occurrences and old workings on occurrences.

Figure 1

PROPERTY LOCATION

Scale - 1:250,000

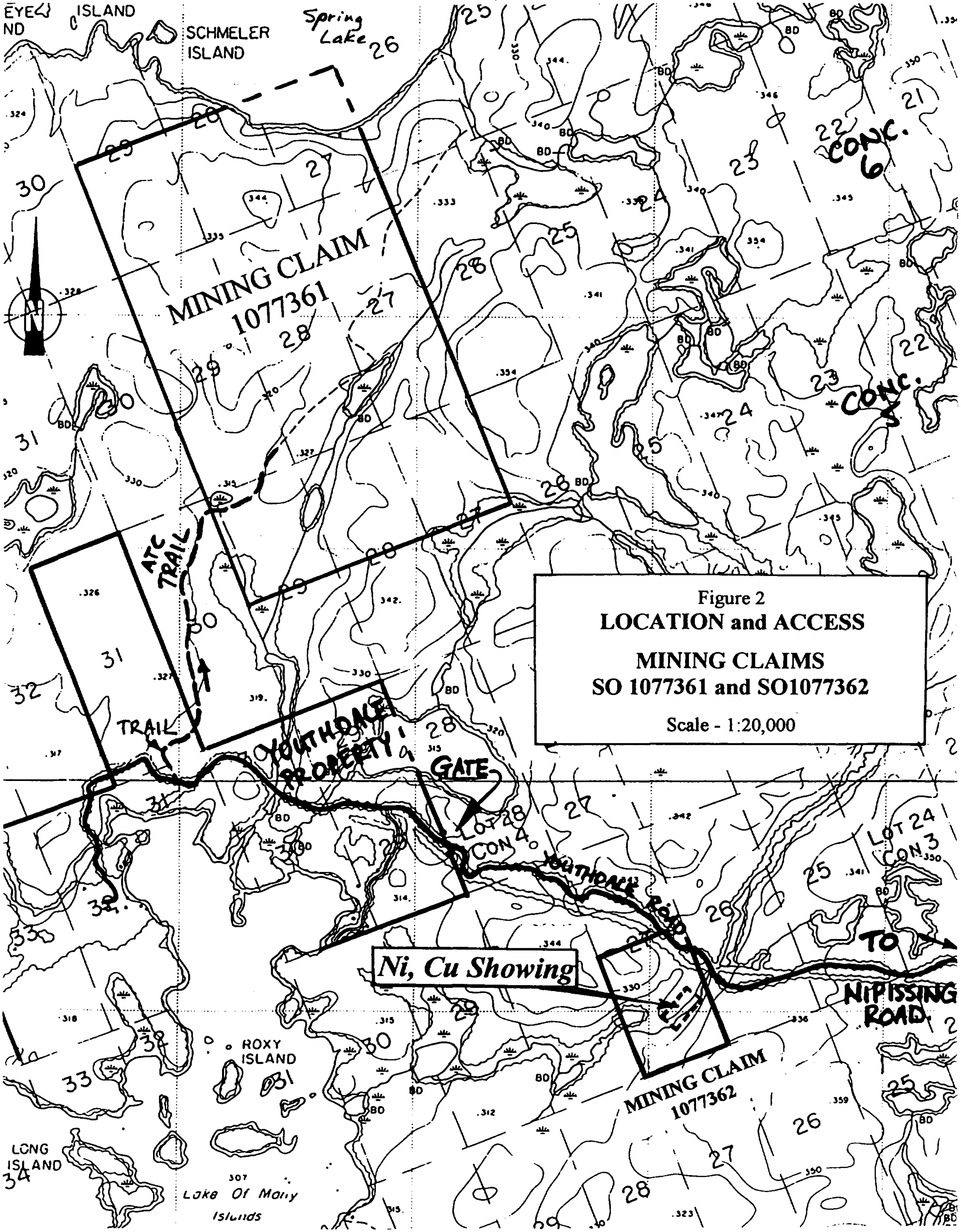
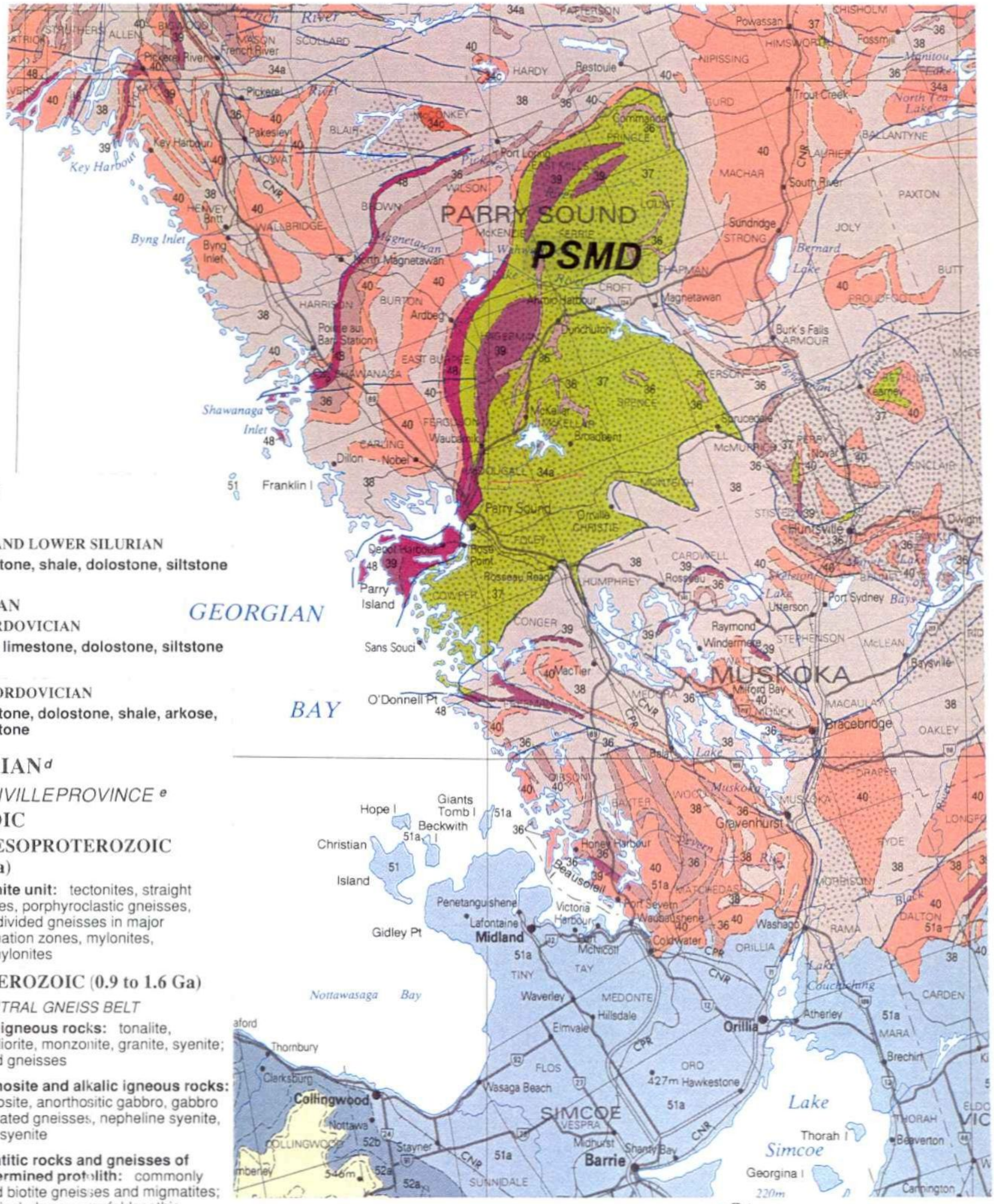


Figure 2
LOCATION and ACCESS

MINING CLAIMS
SO 1077361 and SO1077362

Scale - 1:20,000



PALEOZOIC

SILURIAN

MIDDLE AND LOWER SILURIAN

| 53 | Sandstone, shale, dolostone, siltstone |

ORDOVICIAN

UPPER ORDOVICIAN

| 52 | Shale, limestone, dolostone, siltstone |

MIDDLE ORDOVICIAN

| 51 | Limestone, dolostone, shale, arkose, sandstone |

PRECAMBRIAN[d]

GRENVILLE PROVINCE [e]

PROTEROZOIC

NEO- TO MESOPROTEROZOIC (0.57 to 1.6 Ga)

| 48 | **Tectonite unit:** tectonites, straight gneisses, porphyroclastic gneisses, unsubdivided gneisses in major deformation zones, mylonites, protomylonites |

MESOPROTEROZOIC (0.9 to 1.6 Ga)

CENTRAL GNEISS BELT

40	**Felsic igneous rocks:** tonalite, granodiorite, monzonite, granite, syenite; derived gneisses
39	**Anorthosite and alkalic igneous rocks:** anorthosite, anorthositic gabbro, gabbro and related gneisses, nepheline syenite, alkalic syenite
38	**Migmatitic rocks and gneisses of undetermined protolith:** commonly layered biotite gneisses and migmatites; locally includes quartzofeldspathic gneisses, orthogneisses, paragneisses
37	**Mafic rocks:** amphibolite, gabbro, diorite mafic gneisses
36	**Gneisses of metasedimentary origin:** quartzofeldspathic gneisses, pelitic to semi-pelitic gneisses, calc-silicate gneisses, minor quartzite, minor marble and marble breccia

Ontario

Ministry of Northern Development and Mines

MNDM • OBM • MDNM 1891-1991

MAP 2544

Scale 1:1 000 000

Kilometres 20 0 20 40 60 80 100 Kilometres

Miles 10 0 10 20 30 40 50 Miles

published 1991

Figure 3

PREVIOUS WORK and LOCAL MINERAL OCCURRENCES

References to the mineral occurrences in the vicinity of the properties are found in MNDM assessment files and in Satterly, 1955 (with Map No. 1955-4). An examination of government assessment records was carried out using the ERLIS facilities at the OGS's public information office located in the MacDonald Block, Queens Park, Toronto. This examination was sufficient to ascertain that only a very minimal amount of exploration has been conducted in the project area, most of which was not recently done. Apart from the work carried out by B-MAX, there is no public record of any work having ever been carried out on or immediately adjacent to Claim Block SO 1077361.

An airborne magnetometer survey was flown in the 1950's by an iron ore company, along the Rosseau-Nipissing road allowance in Lount Township, presumably to follow-up on the iron potential discussed by Satterly, 1955. Some drilling was done on magnetite occurrences as a follow-up to that survey. Other unrecorded work in the form of pit or shaft blasting and some drilling are indicated in Satterly's report and shown on Map 1955-4. Satterly believed that the majority of old pits were blasted in error on a locally abundant massive red garnet rock, which was mistaken for magnetite.

Ground geophysics, geochemical surveys, geological surveys, and some diamond drilling were reported for several lots (claims) in southwestern Lount Township, covering the documented Cu-Ni occurrences and limestone prospects. All of the drilling reported in the area encountered varying concentrations of sulphide mineralization (in some cases massive, over narrow intervals) including py, po, cpy and, in some cases, pentlandite, in a variety of rock types including gabbro. The local occurrences described by Satterly are uneconomic, but are of interest in that they indicate that sulphides, sometimes containing nickel and copper, occur in, or in proximity to gabbroic rocks, locally in the project area. Satterly stated that the Cu-Ni occurrences fall into two groups; (1) as disseminations within mafic gneisses, and (2) as a garnet skarn at the contact between limestone and mafic gneisses.

The S.½ of Lot 27, Conc. III, Lount Township is the location of several pits blasted into a nickel and copper showing consisting of massive to semi-massive po and py. Occurring in amphibolite at the edge of a hybrid granite gneiss unit, its location is shown on Satterly's map (1955-4) by only a pit symbol. Subsequently, in 1992, P. McLean (OPAP File # OP92-245) carried out geological and geophysical work on this showing, which he interpreted to be a nickeliferous, peridotite "plug". McLean observed pentlandite in the showing and obtained a grab sample that assayed 0.12% Ni. He concluded that the showing was small and of "academic interest only". In April 1998, this showing was staked (SO 1077362) by William Vandevalk (Figure 2) after a visit in March during which 5 rock samples that yielded analyses of up to 0.21% Ni and 0.10% Cu, were obtained from the rubble dump.

RESULTS and HIGHLIGHTS of the 1998 PROGRAM

Two deposit models are considered as possible targets for exploration over mining claim 1077361:

1. Mafic (metagabbro or mafic gneiss) hosted Ni, Cu, Co magmatic sulphides
2. Ultramafic hosted Ni, Cu, Co (Cr, Pt, Pd) magmatic sulphides

Both types could possibly have been intruded as dykes, either crosscutting or parallel to stratigraphy, or intruded as larger bodies or masses.

1998 PROSPECTING

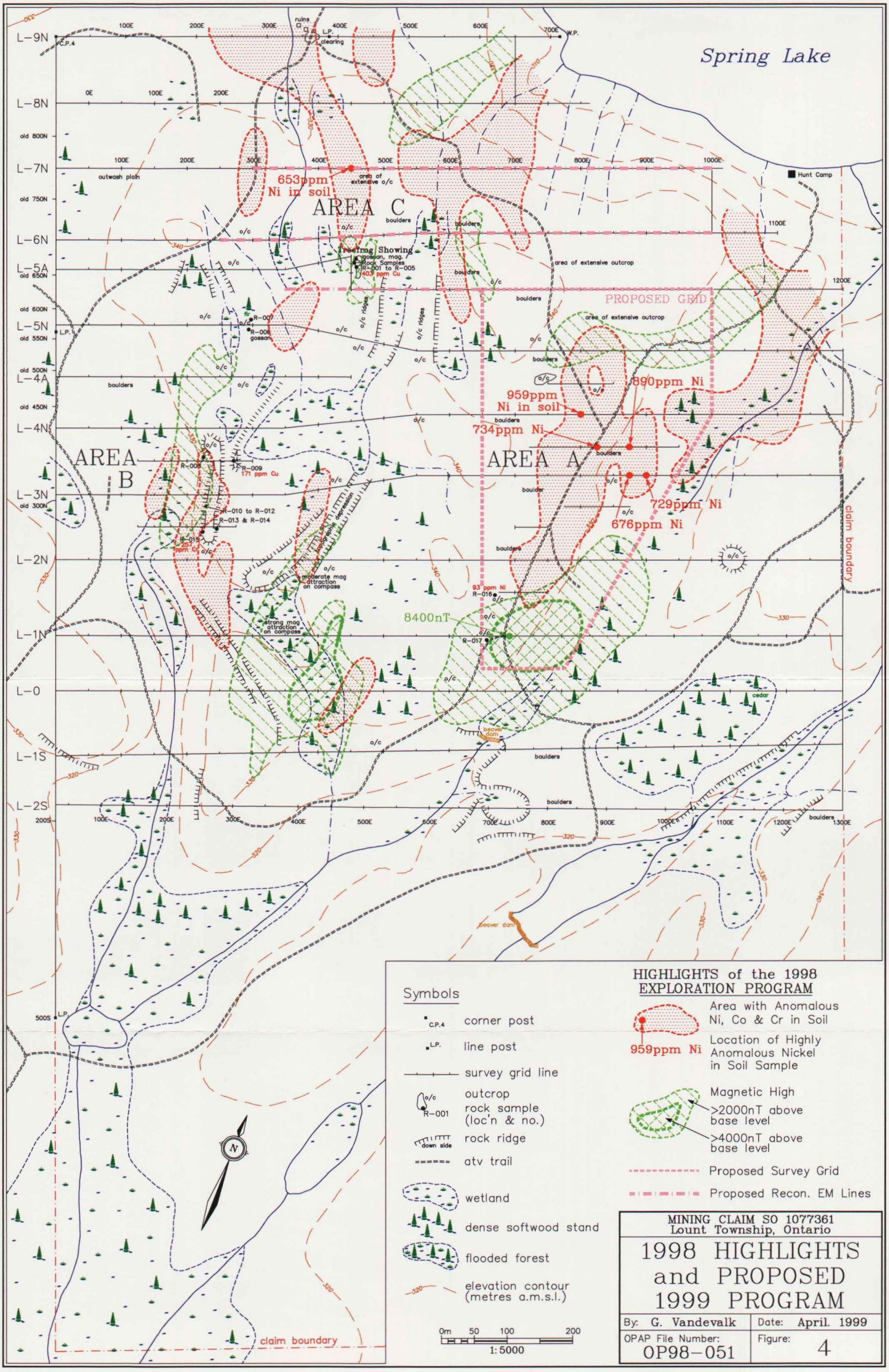
A new showing (Treefrog) of very gossanous, magnetite bearing, fine to medium-grained metagabbro with disseminated sulphides was discovered in 1998 (Figure 4). A very strong, but very localized magnetic anomaly associated with the **Treefrog Showing**, may be part of a longer trend. Elevated background Fe and possibly anomalous Cu in soils surround the Treefrog Showing. Only modest values of Cu (up to 403 ppm) and no significant Ni, Cr or Co were returned in analyses of rock samples from this showing. The Treefrog showing appears to have limited size and economic potential.

In other areas, prospecting confirmed the presence of medium to coarse-grained metagabbroic rocks with minor disseminated sulphides. Black, pyroxene and olivine bearing, medium to very coarse-grained ultramafic rocks were also found to occur commonly in the area. The ultramafic rocks (pyroxenite) are variably magnetic owing to the presence of magnetite that is sometimes interspersed throughout, or occurs as small seams within the rock. The magnetometer survey probably maps the ultramafic horizons fairly accurately.

1998 SOIL GEOCHEMISTRY

Area A

Area A (Figure 4) represents the most intriguing soil geochemical anomaly encountered during the Summer 1998 exploration program. The Ni, Cr, Co, Mg & Fe anomaly is pronounced by a very large and continuous, anomalous core that extends across 175 metres at its widest point along Line-3N, and along more than 300 metres of strike length. The highest Ni value of the soil geochemical survey was returned from sample number SO98-485 (959 ppm), located within the anomalous core. An anomalous trend adjacent to, and northeast of the core anomaly, may represent a possible down-drainage geochemical plume, and further extends the overall dimensions of the anomalous area dramatically. The anomalous core lies within a NNW oriented geochemical trend that is roughly parallel to a topographic linear feature indicated by the drainage pattern. This feature may be interpreted as a possible fault or shear zone. The core of the anomaly also trends along a magnetic "trough" adjacent to the northern flank of the eastern lobe of a very high magnitude and extensive magnetic anomaly. Rock sample MA 98-R-016, which returned an analysis of 93 ppm Ni, was taken from an outcrop of rusty, medium-grained metagabbro, occurring in the vicinity of this anomaly.


Spring Lake
AREA C
AREA A
AREA B
653ppm Ni in soil
959ppm Ni in soil
890ppm Ni
734ppm Ni
729ppm Ni
676ppm Ni
8400nT
PROPOSED GRID
Treefrog Showing
gossan, mag.
Rock Samples
R-001 to R-005
403 ppm Cu
171 ppm Cu
93 ppm Ni
area of extensive o/c
area of extensive outcrop
strong mag attraction on compass
moderate mag attraction on compass
outwash plain
Hunt Camp
ruins
clearing
beaver dam
cedar
boulders
claim boundary
L-9N
L-8N
L-7N
L-6N
L-5A
L-5N
L-4A
L-4N
L-3N
L-2N
L-1N
L-0
L-1S
L-2S
HIGHLIGHTS of the 1998 EXPLORATION PROGRAM
Area with Anomalous Ni, Co & Cr in Soil
959ppm Ni
Location of Highly Anomalous Nickel in Soil Sample
Magnetic High
>2000nT above base level
>4000nT above base level
Proposed Survey Grid
Proposed Recon. EM Lines
Symbols
C.P.4 corner post
L.P. line post
survey grid line
o/c outcrop
R-001 rock sample (loc'n & no.)
rock ridge
down side
atv trail
wetland
dense softwood stand
flooded forest
320 elevation contour (metres a.m.s.l.)
0m 50 100 200
1: 5000
MINING CLAIM SO 1077361
Lount Township, Ontario
1998 HIGHLIGHTS and PROPOSED 1999 PROGRAM
By: G. Vandevalk
Date: April. 1999
OPAP File Number: OP98-051
Figure: 4

Problematic for the interpretation of the significance of the Area A anomaly is the fact that it occurs partly in glacial till which incorporates rounded cobbles and boulders. Prior to the 1999 program, three possible interpretations were considered for the existence of the anomaly:

1. The anomaly may be a false anomaly resulting from Mn/Fe scavenging of background base metal values from the underlying mafic rocks. The porous till cover would allow for the free movement of groundwater through it, where an active geochemical system may be in place.
2. The anomaly may have a genuine Ni and Cr (+Co) mineralized bedrock source that may also have high Fe and Mn. Depending on the thickness of the till cover, the same rationale for the geochemical mechanism as in the first interpretation, would apply in this case.
3. The source of the anomaly may be a dispersion train of mineralized boulders from an up ice, mineralized bedrock source. Glacial transport direction in Lount Twp. Is generally from north to south (Satterly, 1955). The area immediately "up ice", to the north of the soil geochemical anomaly has thin soil cover over scattered exposures of bedrock, and has a sizeable, moderately strong magnetic signature. Despite the presence of rounded boulders within the till, which suggests a longer distance of till transport, the shape and strongly defined nature of the anomaly would suggest a nearby source under this interpretation for the existence of the anomaly.

The 1999 exploration program has indicated that it may be reasonable to rule out "Interpretation 3" as an explanation for the presence of the Area A anomaly. The reasoning for this will be explained in the discussion of the results of the 1999 program.

Area B

Area B (Figure 4) was chosen for follow-up sampling based on initially encouraging soil geochemical results and their direct correlation with a strong, linear, 300 metre long magnetic anomaly. The results of follow-up soil sampling and prospecting in this area were only modest. Rock sample MA 98-R-015 returned an analysis of 257 ppm Cr and rock sample MA 98-R-009 returned 171 ppm Cu.

Area C

The Area C soil geochemical anomaly (Figure 4) is marked by several anomalous and highly anomalous Ni, Cr & Co trends which are enveloped by a broad area of elevated background values. The soil at the southern edge of the area forms a relatively thin cover over widespread outcroppings of metagabbroic rocks, and gradually thickens down-slope to Spring Lake. The source of the anomalous values in soil appears to be the topographically high area with thin soil cover, between Lines 6N and 7N, from 400mE to 700mE. The anomalous trends may define down-slope "metal rich" plumes that might be sourced by buried mineralization near the top of the slope. Mn and Fe concentrations in soil are not high in Area C, giving validity to the genuineness of the anomalies. There is considerable fluctuation in magnetic relief in this area suggesting a complex bedrock makeup. Limited prospecting in this area failed to encounter any visually obvious bedrock source for the Ni, Cr & Co soil geochemical anomalies.

THE INITIAL 1999 PROGRAM

The writer was awarded an OPAP grant of $15,000 (OP99-051) to carry out a program of line cutting, VLF-EM, MaxMin II HLEM and detailed magnetometer surveys over a continuous area covering the strongest and largest soil geochemical anomalies encountered in the 1998 Program (Figure 4). Based on Satterly's Lount Township bedrock geology interpretation (O.G.S. Map No. 1955-4) and on the apparent orientation of the Area A soil geochemical anomaly, a grid line direction of 069° azimuth was determined to be perpendicular to the strike of the local lithologies. The results of the 1999 geophysical surveys have indicated that this assumption may be incorrect. This will be discussed in the VLF-EM Survey section of this report.

LINE CUTTING

The first day of the 1999 program was spent clearing numerous deadfalls from the property access roads and trails. The "Area A" 1999 cut survey grid was tied into the existing 1998 flagged grid at Line 6+00N (old Line 5A-N) and Station 6+25mE (Map 1). A baseline was established by proceeding from this point on a compass heading of 339° azimuth. Distances were measured using a "hip-chain" (string) distance meter. The baseline was named BL 6+50mE and flagged with fluorescent orange flagging tape and 25 metre stations were marked with blue flagging tape. Gridlines, spaced 50 metres apart, were established by compass at 069° azimuth, east of the baseline and marked in the same manner as the baseline with 25 metre station intervals. All 1998 flagged lines were incorporated into the new grid but in several cases, re-naming was required to maintain a more or less uniform line separation. All existing 50 metre station numbers on the 1998 lines were incorporated into the new grid and new 25 metre stations were established. The flagged lines were cleared of small trees and underbrush to facilitate the operation of geophysical equipment. Three "Area C" reconnaissance EM lines, L 7+00N, L 6A-N and L 6+00N (west of the baseline) were established along existing 1998 flagged lines and cleared (Map 3). A total of **5.95 line kilometres of cut grid lines** were established as control for the geophysical surveys (Table 1).

INITIAL MAGNETOMETER SURVEY

Using a **GeoMetrics G 816 Proton Magnetometer,** readings of total magnetic field were taken and manually recorded in a field notebook. Base values for the survey were established along the base line at its intersections with each grid line by surveying it twice, correcting each reading for the diurnal magnetic drift, then averaging the corrected readings at each station. The resulting base values were subsequently used to correct the readings over the remainder of the grid for diurnal magnetic drift. Readings were taken at each 25-metre station along the cut grid lines. A total of **4.02 line kilometres of magnetometer survey** were carried out over the Area A survey grid (Table 1).

A base value of 55,000 nT was subtracted from each corrected value to simplify the plotting of the values. The corrected values of total magnetic field for each station are shown on Map 1, plotted to a scale of 1:2,500. Map 2 shows the contoured values of the total magnetic field for the Area A survey grid.

TABLE ONE - SUMMARY OF LINE CUTTING AND GEOPHYSICAL SURVEYS (LINE KMS)

INITIAL	LINE CUTTING	FLAGGED GRIDS	MAGNETOMETER SURVEY	VLF-EM SURVEY	MAX-MIN SURVEY
BASELINE	0.7		0.7		
AREA "A"	3.65		3.32	3.32	3.65
AREA "C"	1.6			1.53	1.6
NORTH-SOUTH TRAIL		0.8			0.8
SUB-TOTAL	5.95	0.8	4.02	4.85	6.05

FOLLOW-UP					
AREA "A"		1.35	1.35	1.35	
AREA "C"		1.23	1.23	1.23	
SUB-TOTAL		2.58	2.58	2.58	

TOTAL	5.95	3.38	6.6	7.43	6.05

INITIAL VLF-EM SURVEY

It was assumed that the 069° azimuth orientation of the cut survey grid lines would be suitable for a good coupling of the VLF signal from the transmitter in Annapolis, Maryland (NSS), with the **Geonics EM-16 VLF-EM** receiver. Upon commencement of the VLF-EM surveys it was discovered that the EM-16 receiver was unable to pick up the 21.4 kHz NSS frequency when facing the 160° azimuth direction toward Annapolis. It was subsequently learned that the Annapolis VLF transmitter had been permanently shut down and the 21.4 kHz frequency assigned to Hawaii.

The VLF-EM Survey was continued along the east-west grid lines, utilizing the 24.0 kHz frequency from Cutler, Maine (NAA), and the 24.8 kHz frequency from Seattle, Washington (NLK). Coupling with the NAA signal was obtained by facing 092° azimuth and the NAA readings were taken facing 002° azimuth. Coupling with the NLK signal was obtained by facing 294° azimuth and the NLK readings were taken facing 204° azimuth. In-phase and quadrature determinations were made for both frequencies at each 25-metre station along each cut line and manually recorded in a field notebook. An initial total of **4.85 line kilometres of VLF-EM survey** were completed over both the Area A and Area C grids (Table 1).

The field data was manually plotted as east-west profiles (facing north) as it was originally obtained, and re-plotted as north-south profiles (facing west) along extrapolated north-south lines. Both sets of profiles were used to interpret VLF-EM conductors but, predictably, the north-south profiles were of far greater value in this exercise. The field data and plotted profiles are provided in this report in Appendix I. The interpreted Initial VLF-EM Survey conductors are shown on Map 3.

MAX MIN II HLEM SURVEY

The **Apex MaxMin II EM** system was configured in the cable-linked, "Min" (minimum) coupled mode (horizontal transmitter coil plane and vertical receiver coil plane), with the transmitter always to the west of the receiver (for the east-west lines). A 25 metre coil separation between the transmitter and the receiver was chosen to detect near surface, shallowly buried conductive lithologies that could be practically investigated by hand dug overburden pits. 222, 444, 888, 1777 and 3555 Hz frequency readings were taken at every 25-metre station along the east-west cut lines and manually recorded in a field notebook. Using the same configuration for the instrument, but with the transmitter to the north of the receiver, additional readings (spaced 25 metres apart) were taken along an 800 metre trail which transects the Area A grid in an approximate north-south direction. A total of **6.05 line kilometres of MaxMin II HLEM Survey** were carried out over both the Area A and Area C grids including the "north-south" trail line (Table 1).

The field data was manually plotted as east-west profiles (facing north) for each surveyed line and as a north-south profile (facing west) for the trail line. The profiles were used to interpret bedrock conductors and relative bedrock conductivity. The field data and plotted profiles are provided in this report in Appendix II. The interpreted HLEM conductors and relative bedrock conductivity are shown on Map 4.

FOLLOW-UP GEOPHYSICAL SURVEYS

Upon the completion of the initial geophysical surveys it became apparent that two areas, one within the Area A grid and the other within the Area C grid, would require additional follow-up Magnetometer and VLF-EM surveys on north-south lines. The outlines of these areas are shown on Map 3. An additional **2.58 line kilometres of flagged grid** was established for the follow-up work. Correspondingly, an additional 2.58 line kilometres of Follow-up Magnetometer Survey and 2.58 line kilometres of Follow-up VLF-EM Survey were completed, bringing the **1999 totals** of **Magnetometer** and **VLF-EM Surveys** to **6.60 line kilometres** and **7.43 line kilometres** respectively (Table 1).

The results of the Follow-up Magnetometer Surveys are shown in Figure 5 for Area A and Figure 6 for Area C. The field data and plotted profiles for the Follow-up VLF-EM Surveys are provided in this report in Appendix I. The interpreted Follow-up VLF-EM Survey conductors are shown in Figure 7 for Area A and in Figure 8 for Area C.

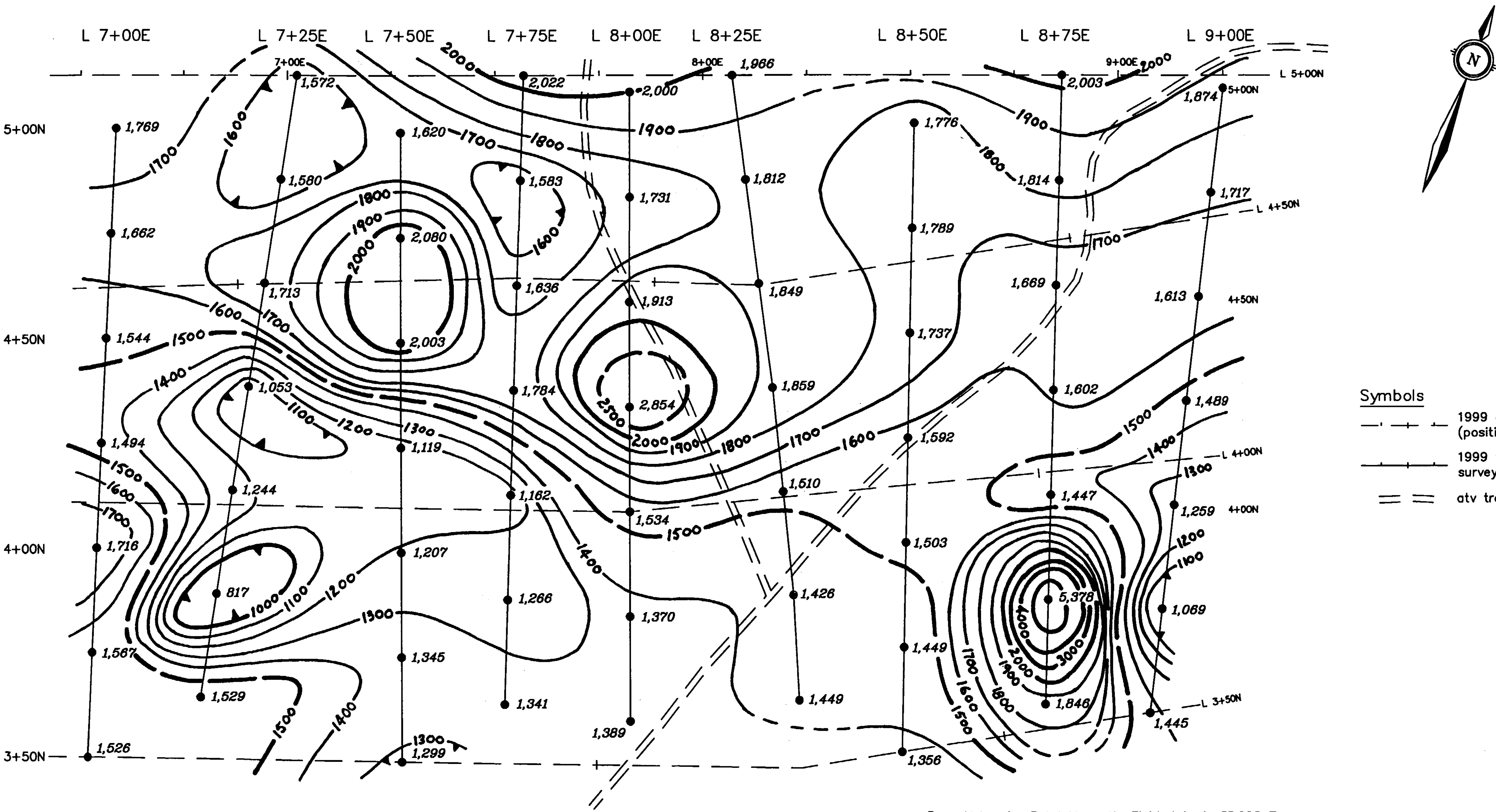
SOIL PROFILE and BEDROCK SAMPLING in OVERBURDEN PITS

Figure 7 shows the locations of 5, hand dug overburden pits, which were targeted to attempt to explain VLF-EM or MaxMin conductors, associated with either magnetic or soil geochemical anomalies. The primary objective for the pit excavations was to reach bedrock. Soil profile sampling and determination of the overburden type was also carried out in each pit to enable a better understanding of the nature of the Area A soil geochemical anomaly.

A total of **23 soil samples** and **10 bedrock samples** were collected during the initial and follow-up overburden pitting exercises. All rock and soil samples were delivered to XRAL Laboratories in Toronto. The soil samples were sieved to –80 mesh and analyzed, using the ICP scan method, for 31 elements, including Ni, Cu, Co, Cr, Mg, Mn and Fe. In addition, fire assays were performed on each sample to test for the presence of PGE's. Table 2 is a summary, by soil sample number, of the analytical results for nickel, copper, cobalt, chromium and PGE's. **Results for all A Horizon soil samples were removed from the data set shown in Table 2**. Rock samples were prepared by XRAL and analyzed for Au and PGE's by FA30/1 method and for 31 trace elements by ICP70 method. Complete analytical results and certificates of analysis for all soil and rock samples collected during the 1999 program are provided in Appendix III.

With the exception of Pit 5, pit locations are reported in reference to the Area A follow-up grid.

Pit 1 (Line 8+00E, 4+25N) was targeted to test an interpreted VLF-EM conductor, associated with a strong magnetic high. The location was just up-slope (north) of the highly anomalous "core" of the Area A soil geochem anomaly. The pit was excavated through till with rounded boulders up to 30 cm in diameter. Bedrock, consisting of fine to medium grained **pyroxenite with disseminated py, cpy and po**, was encountered at about 0.45 metre depth (Figure 9). The cause of the VLF-EM conductor was a 0.5 metre wide fault gouge with strongly weathered (rusty) and brecciated surfaces. The breccia was comprised of clasts of pyroxenite within a very coarse grained, sulphide and magnetite bearing, friable matrix. Angular boulders locally derived from the fault surfaces filled the fault gouge.



Symbols

1999 cut survey grid line (position approximate)

1999 flagged follow-up survey grid line

atv trail

0m 10 20 30 40 50

1:1,000

Base Value for Total Magnetic Field data is 55,000nT

Instrument: GeoMetrics G-816 Proton Magnetometer

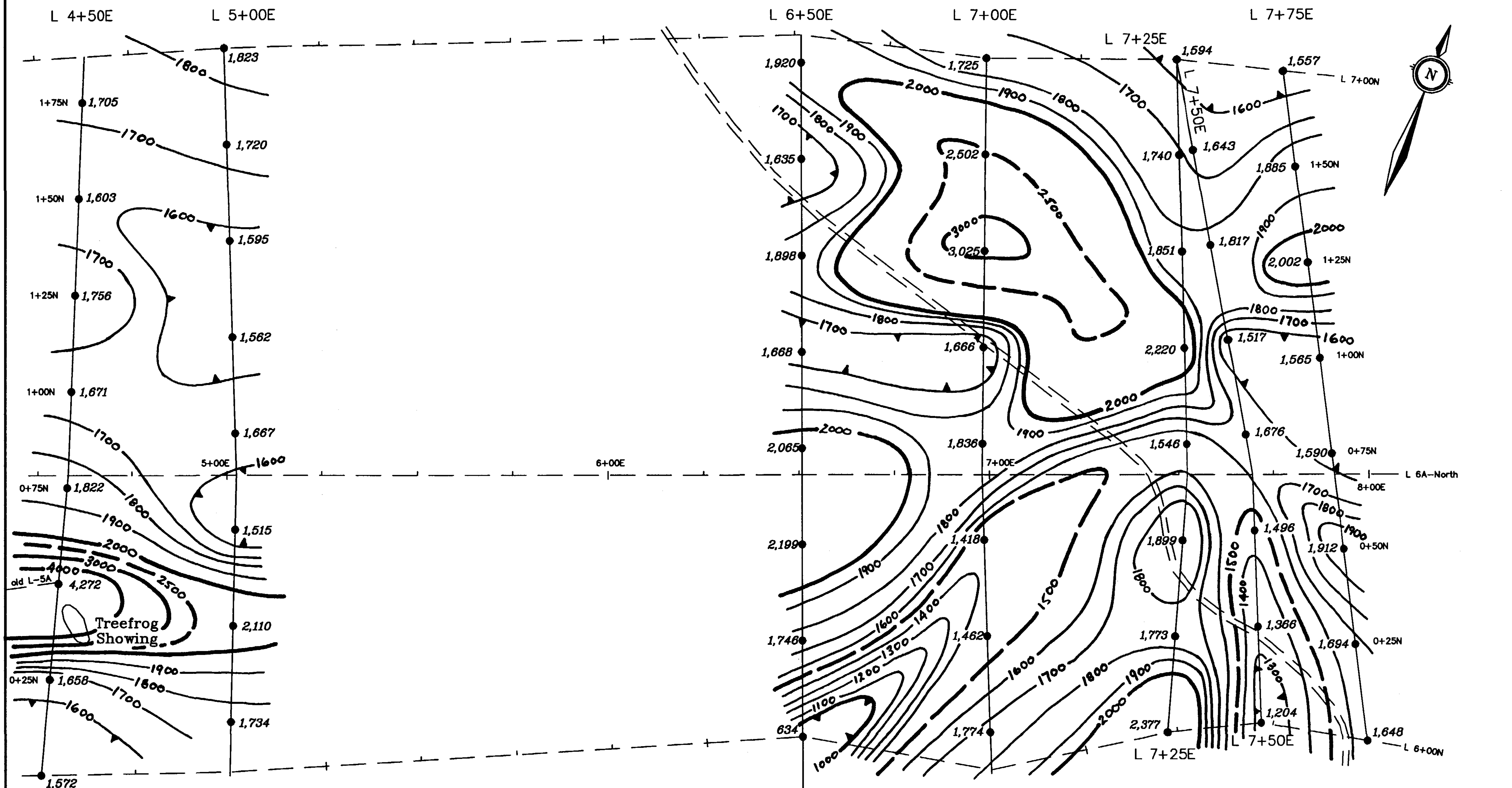
Contour Intervals

1,000nT

500nT

100nT

MINING CLAIM SO 1077361 Lount Township, Ontario	
Area A Follow-up Grid MAGNETOMETER SURVEY	
By: G. Vandevalk	Date: January 2000
OPAP File Number: OP99-051	Figure: 5



Symbols

— · — + — · —	1999 cut survey grid line (position approximate)
——+——	1999 flagged follow-up survey grid line
= =	atv trail

0m 10 20 30 40 50

1: 1,000

Base Value for Total Magnetic Field data is 55,000nT

Instrument: GeoMetrics G–816 Proton Magnetometer

Contour Intervals

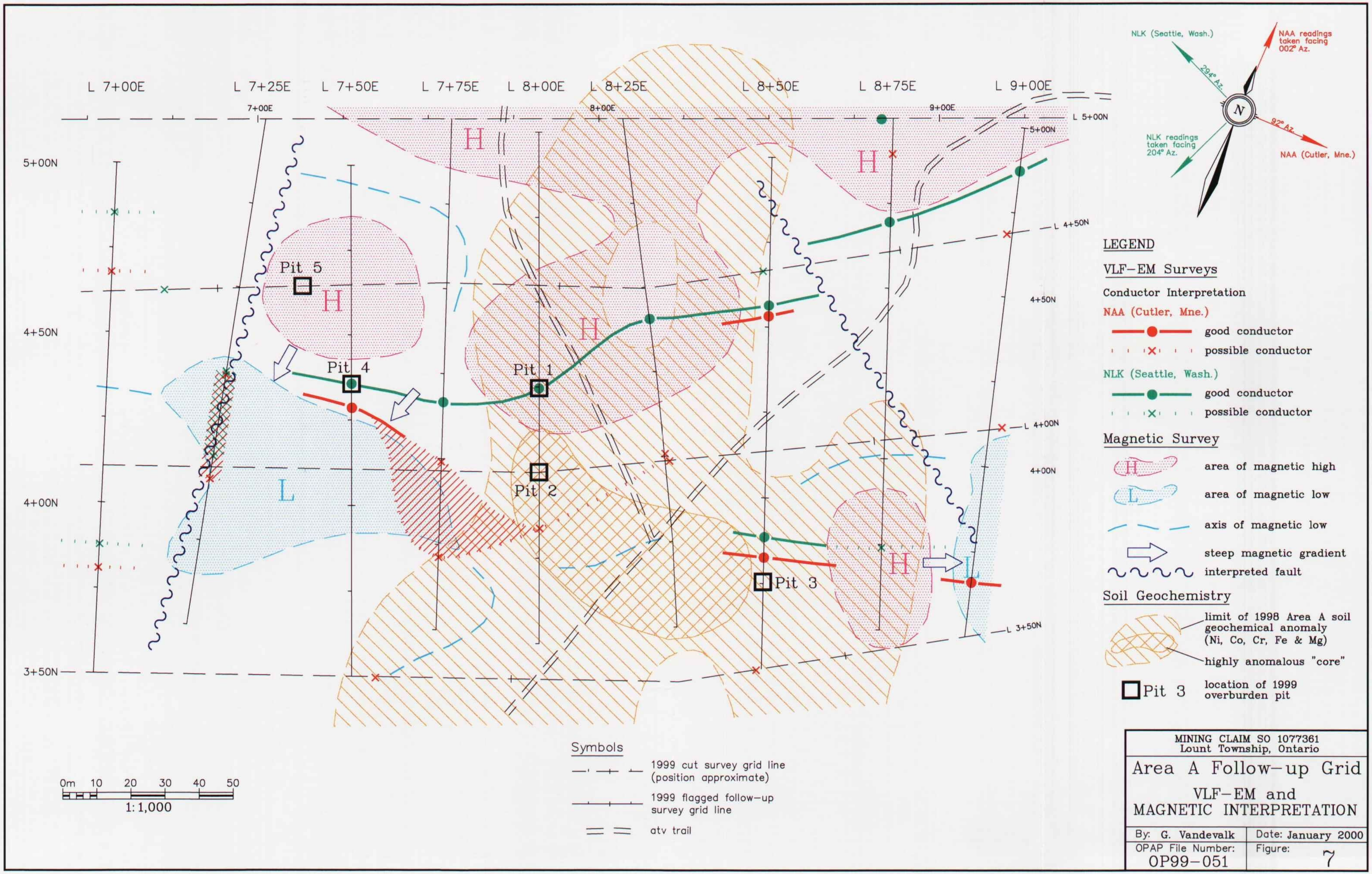
- 1,000nT
- 500nT
- 100nT

MINING CLAIM SO 1077361
Lount Township, Ontario

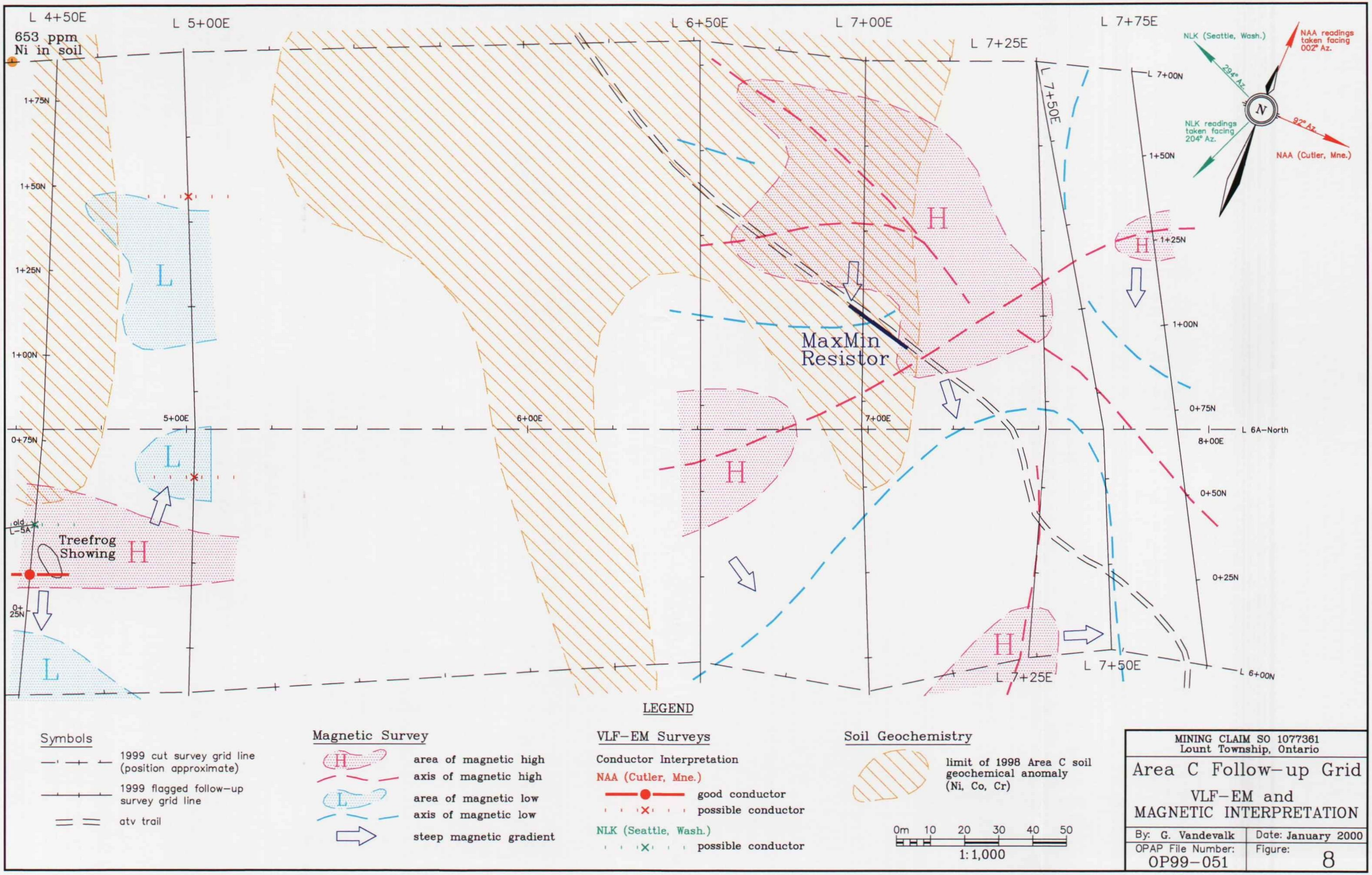
Area C Follow–up Grid

MAGNETOMETER SURVEY

By: G. Vandevalk	Date: January 2000
OPAP File Number: 0P99–051	Figure: 6



L 7+00E
L 7+25E
L 7+50E
L 7+75E
L 8+00E
L 8+25E
L 8+50E
L 8+75E
L 9+00E
7+00E
8+00E
9+00E
L 5+00N
5+00N
L 4+50N
4+50N
L 4+00N
4+00N
L 3+50N
3+50N
Pit 1
Pit 2
Pit 3
Pit 4
Pit 5
H
L
NLK (Seattle, Wash.)
294° Az.
NAA readings taken facing 002° Az.
N
92° Az.
NLK readings taken facing 204° Az.
NAA (Cutler, Mne.)
LEGEND
VLF-EM Surveys
Conductor Interpretation
NAA (Cutler, Mne.)
good conductor
possible conductor
NLK (Seattle, Wash.)
good conductor
possible conductor
Magnetic Survey
area of magnetic high
area of magnetic low
axis of magnetic low
steep magnetic gradient
interpreted fault
Soil Geochemistry
limit of 1998 Area A soil geochemical anomaly (Ni, Co, Cr, Fe & Mg)
highly anomalous "core"
Pit 3
location of 1999 overburden pit
Symbols
1999 cut survey grid line (position approximate)
1999 flagged follow-up survey grid line
atv trail
0m 10 20 30 40 50
1:1,000
MINING CLAIM SO 1077361
Lount Township, Ontario
Area A Follow-up Grid
VLF-EM and MAGNETIC INTERPRETATION
By: G. Vandevalk
Date: January 2000
OPAP File Number: OP99-051
Figure: 7



L 4+50E
L 5+00E
L 6+50E
L 7+00E
L 7+25E
L 7+75E
L 7+50E
653 ppm
Ni in soil
1+75N
1+50N
1+25N
1+00N
0+75N
0+50N
0+25N
L 7+00N
L 6A-North
L 6+00N
5+00E
6+00E
7+00E
8+00E
old L-5A
Treefrog Showing
MaxMin Resistor
H
L
NLK (Seattle, Wash.)
294° Az.
NLK readings taken facing 204° Az.
NAA readings taken facing 002° Az.
92° Az.
NAA (Cutler, Mne.)
N
LEGEND
Symbols
1999 cut survey grid line (position approximate)
1999 flagged follow-up survey grid line
atv trail
Magnetic Survey
area of magnetic high
axis of magnetic high
area of magnetic low
axis of magnetic low
steep magnetic gradient
VLF-EM Surveys
Conductor Interpretation
NAA (Cutler, Mne.)
good conductor
possible conductor
NLK (Seattle, Wash.)
possible conductor
Soil Geochemistry
limit of 1998 Area C soil geochemical anomaly (Ni, Co, Cr)
0m 10 20 30 40 50
1:1,000
MINING CLAIM SO 1077361
Lount Township, Ontario
Area C Follow-up Grid
VLF-EM and MAGNETIC INTERPRETATION
By: G. Vandevalk
Date: January 2000
OPAP File Number: OP99-051
Figure: 8

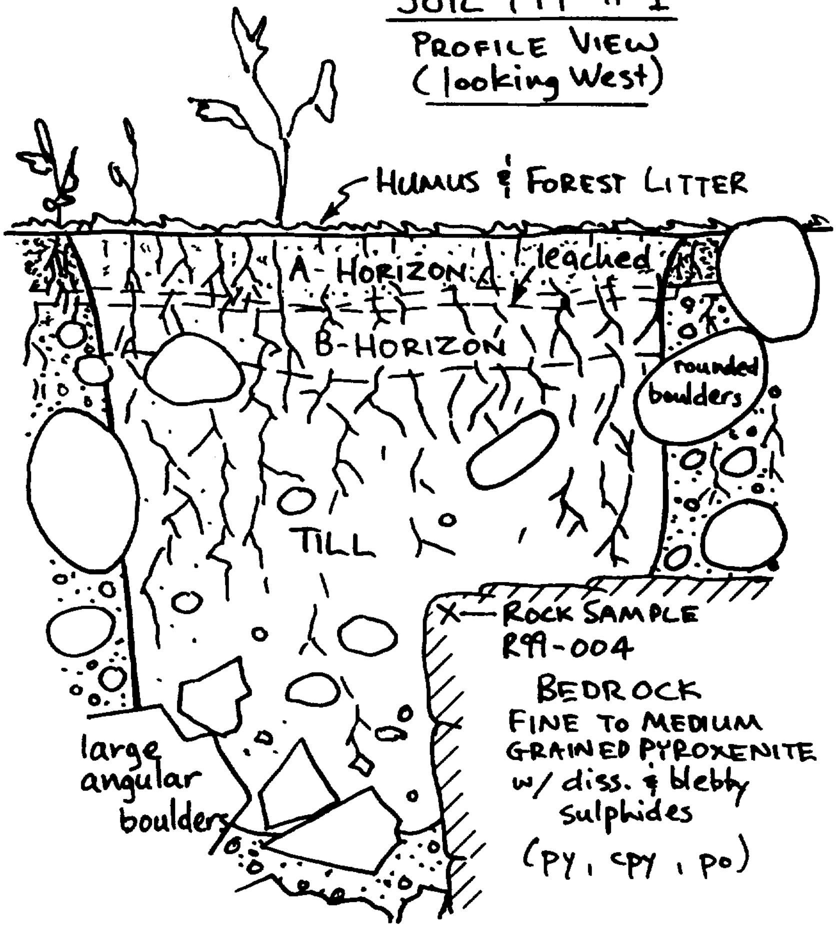
Table 2 - Summary of Soil Profile Sampling and Geochemical Results

Sample # Analysis Unit	Location Pit #	Mn ppm	Fe %	Mg %	Pt ppb	Pd ppb	Pt + Pd ppb	Cr ppm	Co ppm	Ni ppm	Cu ppm	.01Mn + 10Fe	Cr+Co+Cu
S99-002	2	984	3.86	1.54	0	3	3	209	41	655	137.0	48.44	387.0
S99-003	2	958	3.85	2.05	13	4	17	277	45	770	165.0	48.08	487.0
S99-004	2	949	5.36	4.20	13	5	18	292	63	1020	281.0	63.09	636.0
S99-005	2	1800	5.49	4.29	0	5	5	328	59	1080	288.0	72.90	675.0
S99-006	2	1680	5.92	6.66	17	7	24	373	89	1460	470.0	76.00	932.0
S99-007	2	1950	5.69	4.30	14	5	19	324	53	1070	302.0	76.40	679.0
S99-008	2	458	2.32	1.94	0	3	3	131	22	464	125.0	27.78	278.0
S99-010	1	2080	5.24	1.72	12	3	15	260	52	445	60.1	73.20	372.1
S99-011	1	1950	5.84	2.26	13	2	15	277	74	644	65.1	77.90	416.1
S99-012	1	3070	6.87	1.99	11	8	19	251	60	597	86.5	99.40	397.5
S99-013	1	2100	6.08	1.97	21	7	28	225	56	545	68.5	81.80	349.5
S99-014	3	980	5.41	6.67	17	8	25	399	68	1420	257.0	63.90	724.0
S99-015	3	1390	5.88	12.20	12	5	17	937	121	2500	369.0	72.70	1427.0
S99-016	3	1670	5.84	7.64	19	6	25	385	107	1770	239.0	75.10	731.0
S99-017	3	1220	5.37	7.07	0	4	4	383	75	1510	184.0	65.90	642.0
S99-018	3	1720	6.29	5.95	10	4	14	377	86	1240	125.0	80.10	588.0
S99-020	4	293	3.96	1.04	18	4	22	117	23	281	48.1	42.53	188.1
S99-026	1	6050	12.40	0.93	24	3	27	204	79	518	82.1	184.50	365.1

FIGURE 9

SOIL PIT # 1

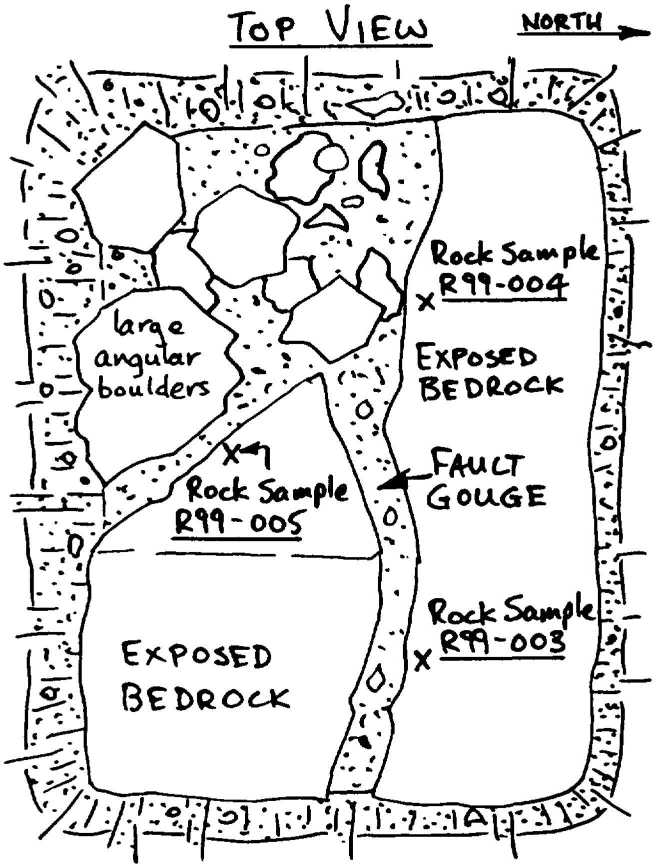
PROFILE VIEW (looking West)

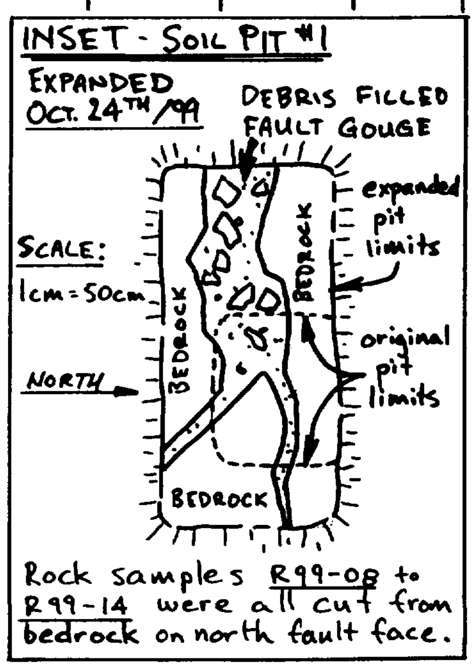


SOIL SAMPLE NUMBER	Ni-ppm	Cu-ppm	Co-ppm	Cr-ppm
S99-009 (A-HORIZON)	386 (40 ppb Pd+Pt)	53.0	33	118
S99-010	445	60.1	52	260
S99-011	644	65.1	74	277
S99-012	597	86.5	60	251
S99-013	545 (28 ppb Pd+Pt)	68.5	56	225
S99-026 - taken from bottom of expanded pit	518	82.1	79	204

SCALE: 1cm = 10cm

TOP VIEW





The locations of 3 bedrock samples and 5 soil samples, collected from Pit 1 during the initial pit excavation, are shown in Figure 9. After receiving encouraging assays in the bedrock samples taken from Pit 1, a follow-up trip was made during which the pit was enlarged to expose more bedrock. An additional 5 rock samples and 1 soil sample were collected from the expanded pit. The best results from rock samples include **260 ppm Ni, 776 ppm Cu, 115 ppm Cr, 68 ppm Co and traces of PGE's.**

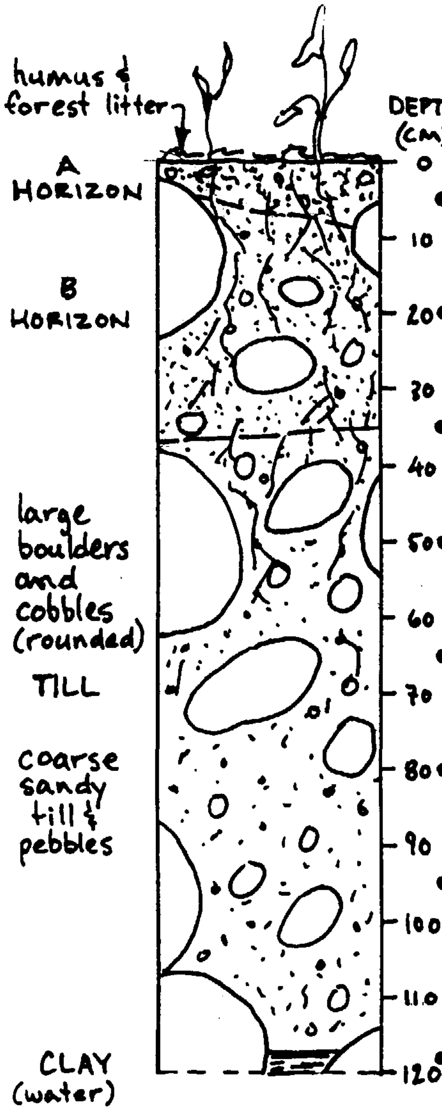
Pit 2 (Line 8+00E, 4+00N) was targeted to test an area at the apex of the highly anomalous "core" of the Area A soil geochem anomaly, between 2 interpreted VLF-EM conductors. This location yielded a soil sample with the highest nickel value (959 ppm) in the 1998 soil geochemical survey. The pit, which did not reach bedrock, was excavated through till with rounded boulders up to 30 cm in diameter (Figure 10). A depth of 1.2 metres was attained before inflows of water prevented deeper overburden penetration. Eight soil samples were collected which returned analyses that indicated greater concentrations of base metals with increasing depth. A maximum value of **1,460 ppm Ni** was obtained from a sample taken from 0.8 metre depth.

Pit 3 (Line 8+50E, 3+75N) was targeted to test 2 coincident VLF-EM conductors associated with a very strong magnetic anomaly to the east. This location, at the downslope "tail" of the highly anomalous "core" of the Area A soil geochem anomaly, yielded a soil sample with the second highest nickel value (890 ppm) in the 1998 soil geochemical survey. The pit, which did not reach bedrock, was excavated through till containing small (10 cm diameter maximum) rounded cobbles (Figure 11). A depth of 1.35 metres was attained before inflows of water prevented deeper overburden penetration. Six soil samples were collected which returned analyses that indicated greater concentrations of base metals with increasing depth (Figure 11). Base metal values of up to **0.25% Ni, 937 ppm Cr, 470 ppm Cu, 121 ppm Co and traces of PGE's** were obtained from a sample taken at 1.1 metre depth. The geophysical anomaly remains unexplained.

Pit 4 (Line 7+50 E, 4+35N) was targeted to test 2 coincident VLF-EM conductors associated with a very steep magnetic gradient between a magnetic high to the north and a magnetic low to the south. This location was west along the interpreted strike of the Pit 1 VLF-EM conductor. The pit was abandoned at 0.4 metre depth when very large rounded boulders were encountered (Figure 12). Two soil samples were taken from the pit. The geophysical anomaly remains unexplained.

Pit 5 (east-west cut grid, Line 4+50N, 7+25E) was targeted to test a conductive MaxMin response coincident with a magnetic high. A thin cover of A horizon soil was removed to expose a limestone tectonic breccia bedrock unit (Figure 13). Satterly (1955) mapped this unit throughout Lount Township. The limestone matrix of this unit encompassed clasts of mafic gneiss. Samples that were cut from the exposure (1 of the matrix and another of a clast) did not yield any significant results upon analysis. The MaxMin anomaly remains unexplained with the exposure of this non-conductive rock unit. One A-horizon soil sample was taken from the covering soil.

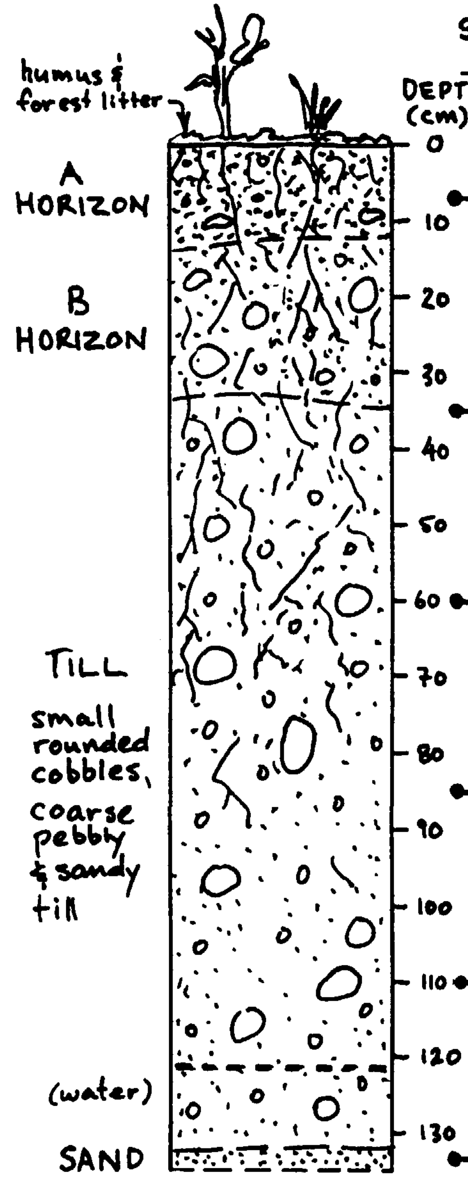
With the exception of Pit 1, all pits were rehabilitated and back-filled to original grade.



SOIL SAMPLE NUMBER	Ni-ppm	Cu-ppm	Co-ppm	Cr-ppm
S99-001 (A-HORIZON)	683	114	38	178
S99-002	655	137	41	209
S99-003	770	165	45	277
S99-004	1020	281	63	292
S99-005	1080	288	59	328
S99-006	1460 (24 ppb Pt+Pd)	470	89	373
S99-007	1070	302	53	324
S99-008 (CLAY)	464	125	22	131

SOIL PIT #2

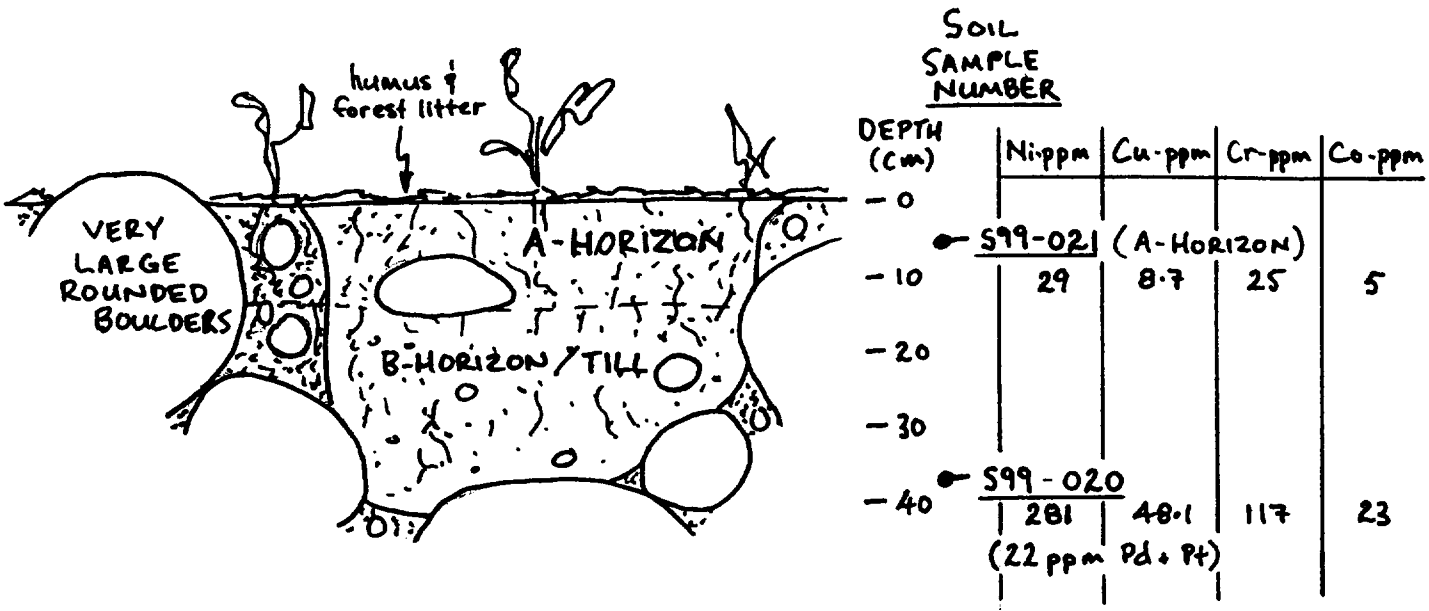
FIGURE 10



SOIL SAMPLE NUMBER	Ni-ppm	Cu-ppm	Co-ppm	Cr-ppm
S99-019 (A-HORIZON)	423	30.5	49	160
S99-018	1240	125	86	377
S99-017	1510	184	75	383
S99-016	1770 (25 ppb Pd+Pt)	239	107	385
S99-015	2500	369	121	937
S99-014 (SAND)	1420 (25 ppb Pd+Pt)	257	68	399

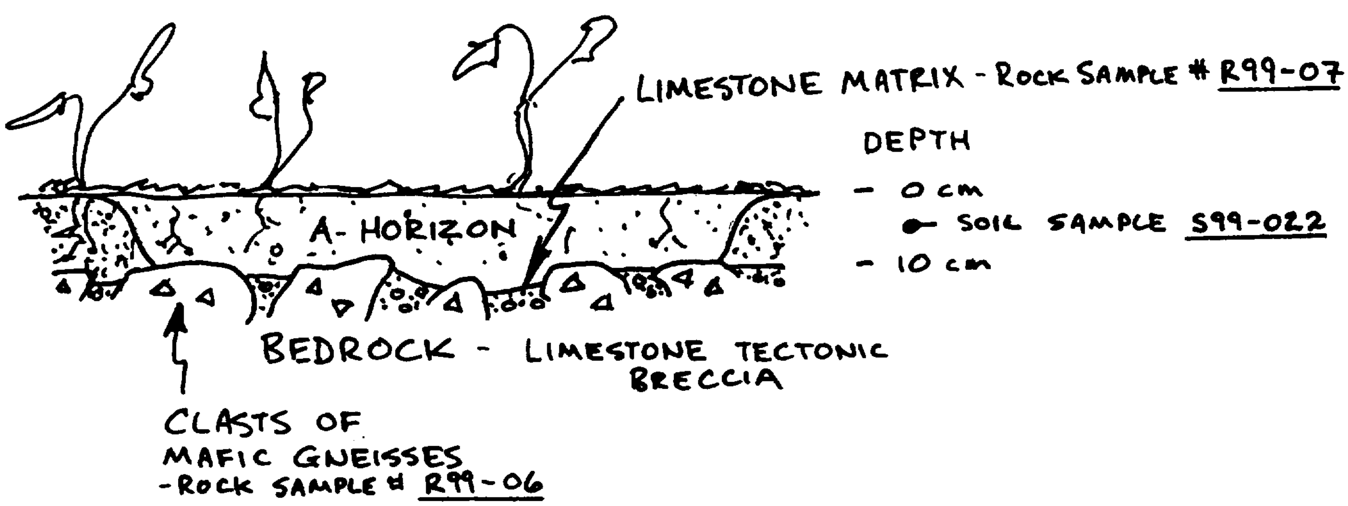
SOIL PIT #3

FIGURE 11



SOIL PIT # 4

FIGURE 12



SOIL PIT # 5

FIGURE 13

FOLLOW-UP PROSPECTING

The location of the **Treefrog Showing,** discovered in 1998 (see "1998 Prospecting", page 4, this report) is shown on Figures 4 and 8. It was re-visited and stripped of overburden in several locations. At two of these locations, about 2 metres apart, rotten rock was broken away from the face to a depth of about 15 cm. After reaching somewhat fresher rock, a rock saw was used to cut away **2 samples (R99-01 & 02)**. Analytical results, shown in Appendix III, were not improved upon over the 1998 results.

The southern part of the Area A Grid covered a portion of an extremely high amplitude magnetic anomaly, first encountered in the 1998 Magnetometer Survey. The 1999 VLF-EM Survey was successful in delineating 2 coincident conductors associated with this magnetic anomaly (Map 3). While the MaxMin II EM survey did not define any conductors in this area, it did indicate an overall increase in relative bedrock conductivity (Map 4). A covering of glacial till, which contained numerous large boulders, hampered follow-up prospecting in this area. A few outcrops of olivine bearing metagabbro, rusty-weathering pyroxenite and mafic gneiss were encountered and **2 rock samples** (R99-08 & 09) were taken (Map 3). Analysis of these 2 samples failed to return encouraging results (Appendix III).

DISCUSSION OF RESULTS

Geophysics

As discussed in the VLF-EM section of this report, it now appears that the geophysical survey grid lines should have been oriented in a north-south direction. The data obtained from the Initial VLF-EM and Magnetometer Surveys on the east-west grid lines was readily usable in defining areas for follow-up geophysics on a re-oriented grid (Map 3). The follow-up VLF-EM and Magnetometer Surveys were very successful in defining targets for overburden pit excavation (Figure 7). The MaxMin II EM Survey was not successful in defining any very strong or definitive conductors and this survey may have achieved better results had it been conducted on a re-oriented grid. The MaxMin Survey did however, indicate an area of potentially higher conductivity, just off of the existing grid, to the south of Line 6+00N and to the west of the western extents of Lines 4+50N and 5+50N (Map 4).

Overburden Pits and Soil Geochemistry

The overburden pits were excavated through till. As mentioned at the end of the 1998 Highlights section of this report, a dispersion train of mineralized boulders may probably be ruled out as a possible cause of the Area A soil geochem anomaly. The main reason is that no mineralized boulders were encountered during excavation of the soil pits. Secondly, base metal geochemical values increased with depth in the pits, suggesting an upward migration of metals through the soil from their source(s). Large volumes of ground water move easily downslope through the very porous till, as evidenced by the rapid inflows into the excavated pits. This condition is favourable for the existence of an active geochemical system within the overburden. The main source of the Area A anomaly may be widespread low grade bedrock mineralization of the type encountered in Pit 1. Nonetheless, the very high grades encountered in the soils of Pit 3 (up to 0.25% Ni), associated with a very strong magnetic high and VLF-EM conductors, are highly significant and may indicate the presence of a much higher grade source.

Several important assumptions can be made by comparing the metals contained in soil samples from the pits. Levels of manganese and iron occur in relatively high concentrations in the Area A anomaly, raising the concern of a false anomaly caused by Mn-Fe scavenging of base metals. While it could be anticipated that high iron levels in the soil are a possible indicator of a favourable environment, given the deposit models, the concern should be addressed. Figures 14, 15 and 16 compare Mn vs. Ni, Fe vs. Ni and (Mn + Fe) vs. Ni respectively. These comparisons do not support the existence of a direct correlation between high levels of nickel and high concentrations and manganese and iron. Base metal scavenging may not be a significant factor in the cause of the existence of the Area A anomaly.

Figure 17, which compares Ni with (Cu + Co + Cr), shows a good correlation, suggesting that these metals occur together in the source of the soil geochem anomaly. Figure 18 shows a very strong correlation of nickel with magnesium, suggesting that an ultramafic intrusion(s) may be a possible bedrock source of the Area A soil geochem anomaly.

CONCLUSION AND RECOMMENDATIONS

The results of the 1999 program have enhanced the potential for the existence of a significant Ni, Cu, Co and Cr deposit as the possible source of the Area A soil geochem anomaly. The discovery of mineralized fault and breccia in pyroxenite in Pit 1 is a positive indication that the Area A soil geochem anomaly has a mineralized bedrock source. Encountering extremely high nickel values in the soil from Pit 3 is encouraging.

The area of potentially higher conductivity indicated by the MaxMin Survey, just west of the northern part of Grid A, and to the south of Line 6+00N (Map 4), should be investigated further to better define the bedrock conductivity. This area is at a topographically higher elevation than the Area A soil geochem anomaly, which is down slope in porous till. This area may represent a possible source of the groundwater flow through the Area A soil geochem anomaly.

A new grid with north-south lines, spaced 50 metres apart, should be cut between 3+50mE and 10+00mE, from line 6A-N, south to line 3+00 N. An Induced Polarization (IP) survey should be conducted on the new grid to look for areas with bedrock concentrations of disseminated, net textured and massive sulphides on which to target mechanized trenching and/or diamond drilling. A more sophisticated Magnetometer Survey conducted over the new grid would be beneficial to the interpretation of the IP results.

Respectfully Submitted

G. Vandevalk
January, 2000

Figure 14

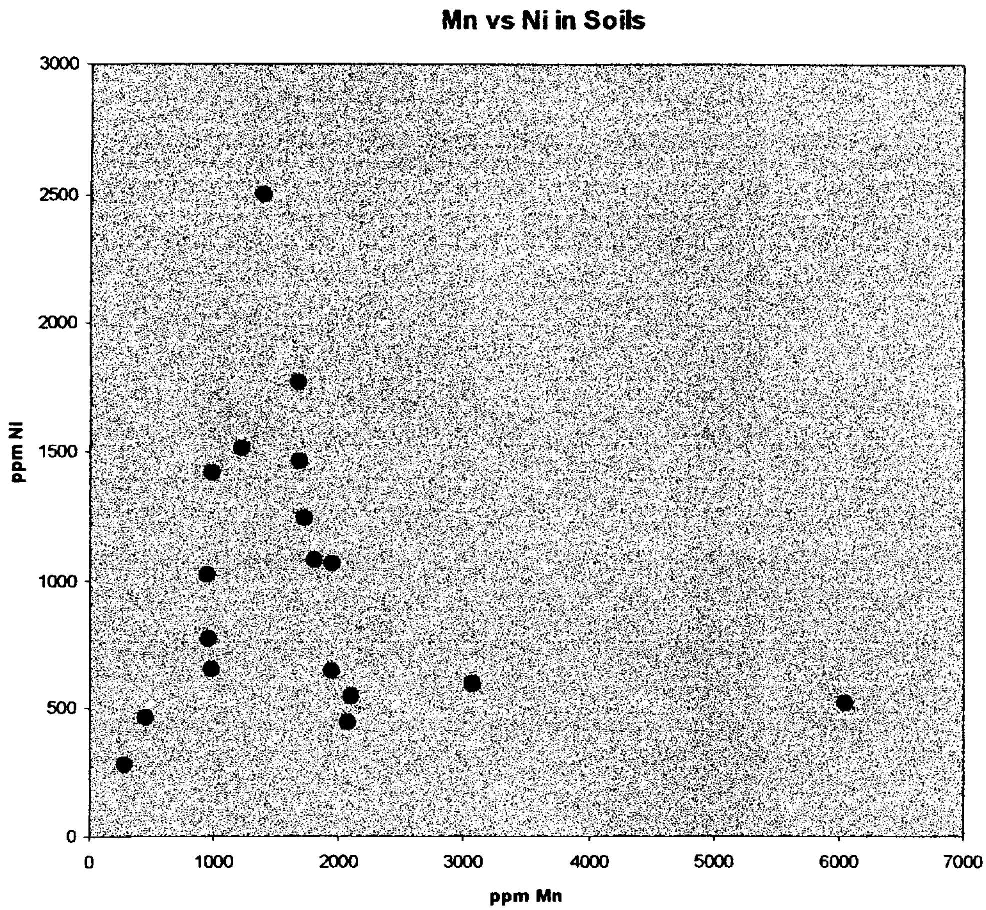


Figure 15

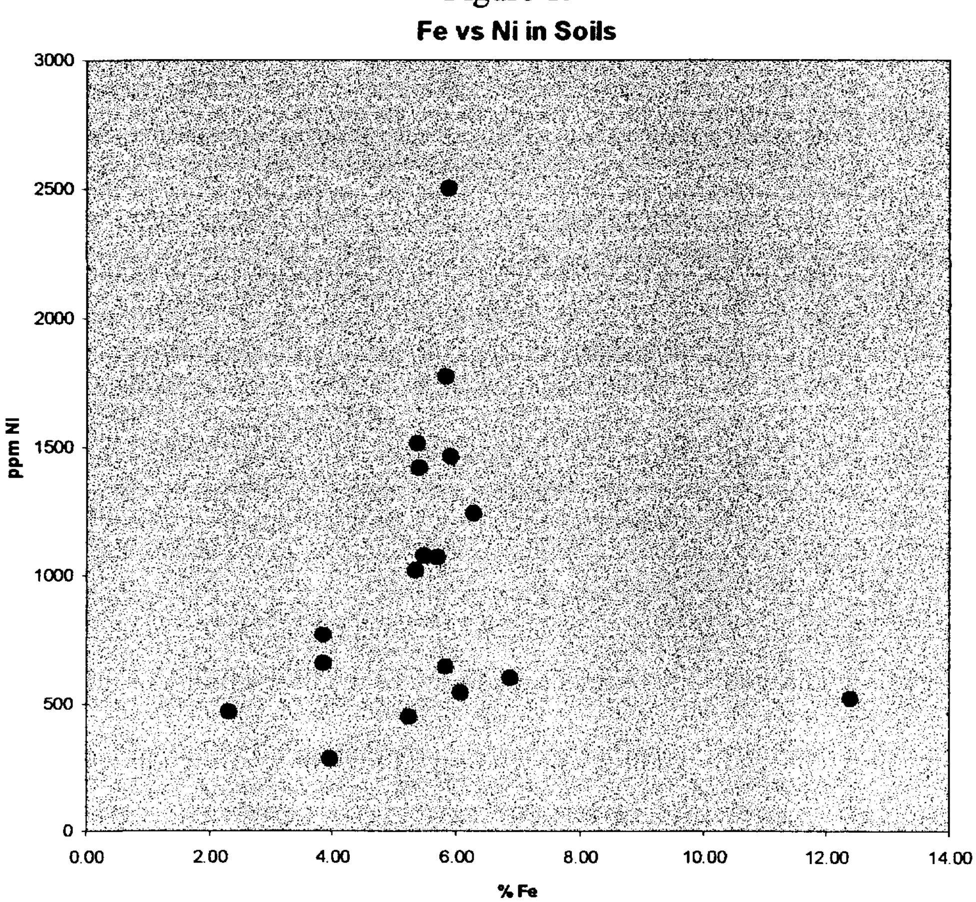


Figure 16

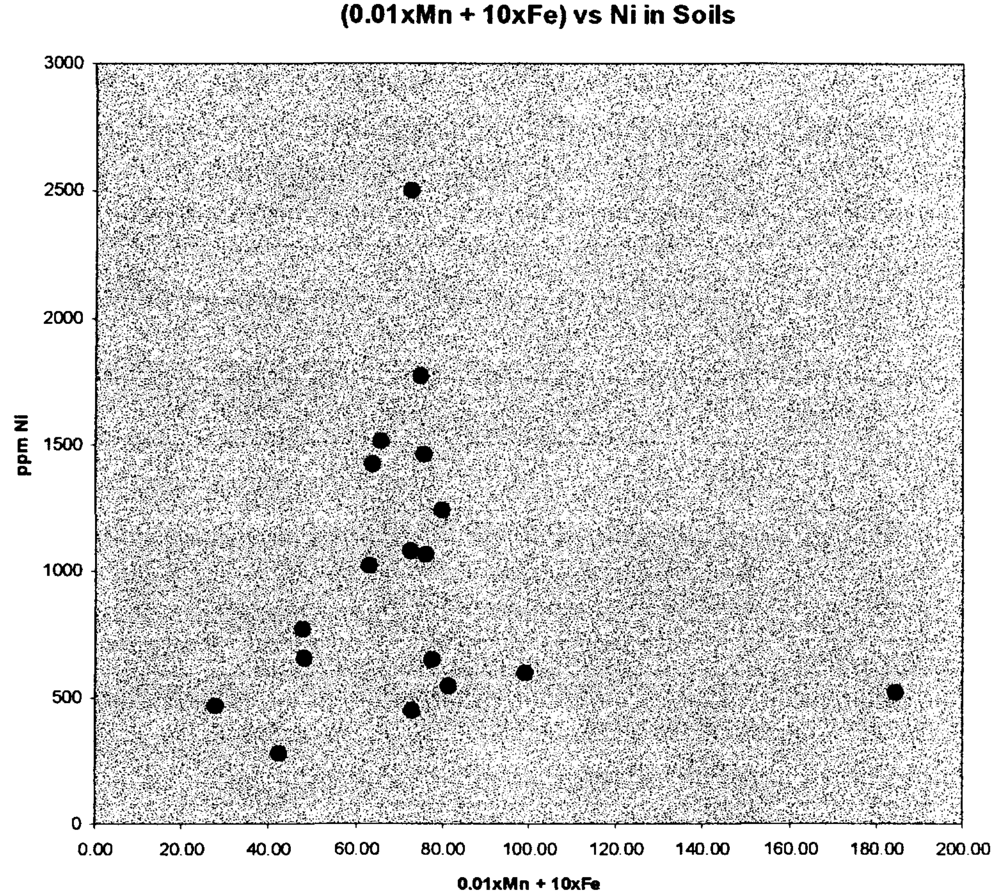


Figure 17

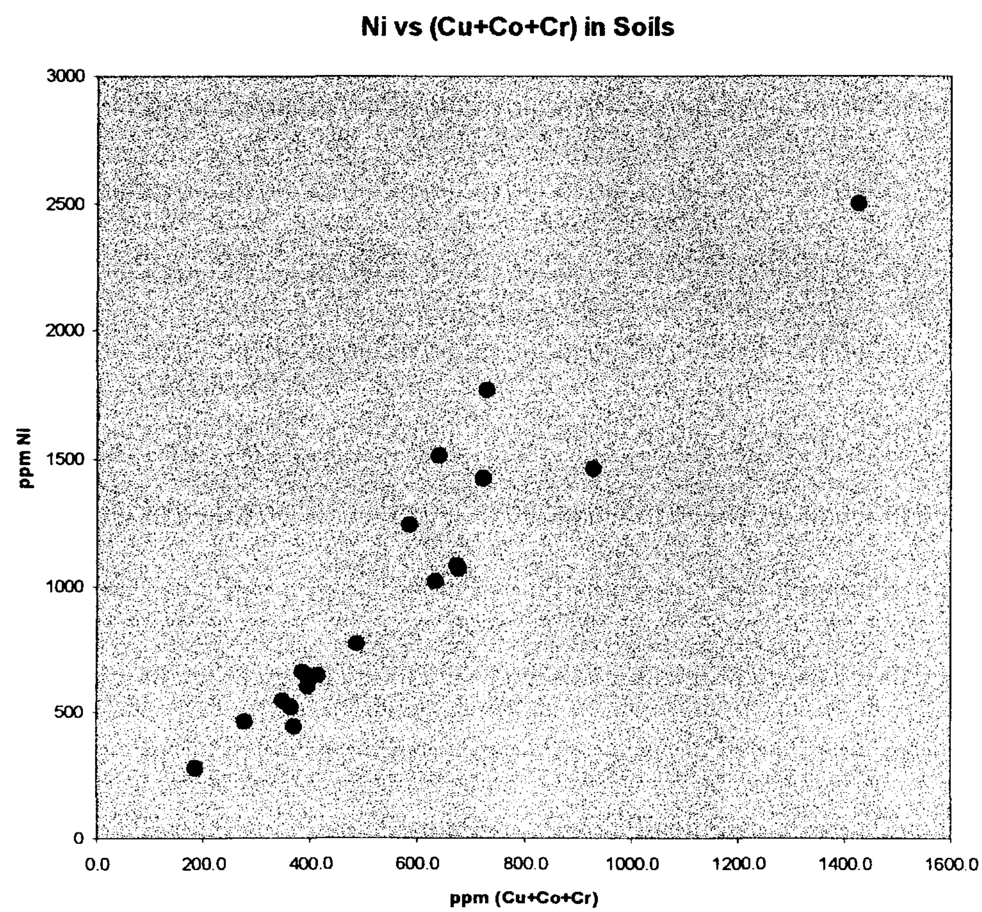
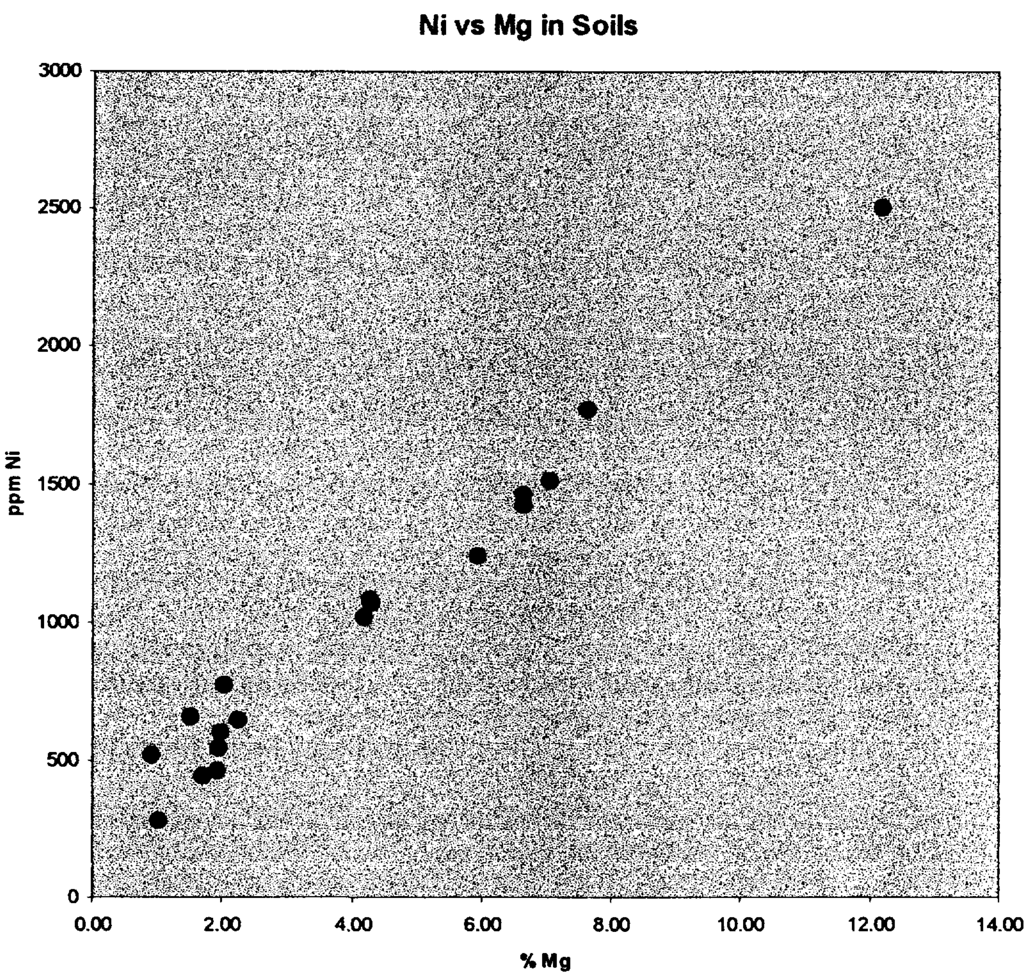


Figure 18



Ni vs Mg in Soils
3000
2500
2000
1500
1000
500
0
ppm Ni
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
% Mg

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Appendix I

Field Data and Plotted Profiles for Initial and Follow-up VLF-EM Surveys

VLF-EM Survey

Sept 4/99

LINE	STATION	CUTLER NAA IP	CUTLER NAA QUAD	SEATTLE NLK IP	SEATTLE NLK QUAD
0+50N	6+25E	+1	+22	-16	-12
	6+50E	+5	+14	-10	-5
	6+75E	+3	+13	-16	-1
	7+00E	+3	+4	-11	-4
	7+25E	+8	+4	-14	-2
	7+50E	+8	+3	-18	0
	7+75E	+4	-4	-7	+1
1+00N	8+00E	+3	-2	-2	+3
	7+75E	+1	+1	-6	+1
	7+50E	-2	+4	-6	0
	7+25E	8	+4	0	+1
	7+00E	-16	+2	+4	+3
	6+75E	-14	0	+2	+4
	6+50E	-18	-10	+14	+10
	6+25E	-25	-4	+7	+7
L 1+50N	6+25E	-23	0	+5	+2
	6+50E	-19	+2	+7	+3
	6+75E	-16	+2	+4	-1
	7+00E	-16	+2	+3	+3
	7+25E	-10	+3	+2	+3
	7+50E	-4	+3	-3	+1
	7+75E	+4	+1	-5	+3

Weather - clear sunny cool
Time of first reading 8:15A

Compass bearing to:

Cutler - 92° AZ

Seattle - 234° AZ

Sept 4/99

LINE	STN	NAA IP	NAA QUAD	NLK IP	NLK QUAD
L1+50N	8+00E	+1	-1	-9	0
2+00N	8+00E	-8	+7	-1	-1
	7+75E	-14	+5	+2	-1
	7+50E	-12	+9	-2	-2
	7+25E	-15	+10	0	0
	7+00E	-12	+11	-3	-6
	6+75E	-11	+11	+1	-2
	6+50E	-13	+7	+3	-2
	6+25E	-14	+6	+5	0
2+50N	6+25E	-11	+4	+4	0
	6+50E	-12	+4	+2	+2
	6+75E	-12	+7	-1	-1
	7+00E	-16	+6	+1	0
	7+25E	-18	+5	+3	+2
	7+50E	-5	+7	+1	+2
	7+75E	-11	+9	-1	-2
	8+00E	-9	+10	-3	-4
3+00N	8+00E	-9	+8	-3	+1
	7+75E	-4	+9	-8	+1
	7+50E	-10	+7	-3	+1
	7+25E	-10	+5	-3	+1
	7+00E	-11	+5	-1	-1
	6+75E (0)	-9	+5	+1	+2
	6+50E	-10	+4	+2	0
	6+25E	-10	+2	+1	+4

Sept 4/99

LINE	STN	NAA IP	NAA QUAD	NLK IP	NLK QUAD
3+50N	6+50E	-4	+3	-1	0
	6+75E	-3	+4	-2	+5
	7+00E	-4	+3	-4	+2
	7+25E	-2	+5	-7	+3
	7+50E	-1	+7	-7	+1
	7+75E	+2	+8	-12	-1
	8+00E	+1	+7	-10	0
	8+25E	+2	+6	-10	+2
	8+50E	0	+5	-7	+3
	8+75E	0	+4	-9	+1
	9+00E	+2	+4	-12	+4
4+00N	9+50E	+3	+2	-11	+5
	9+25E	-2	0	-8	+9
	9+00E	+4	+6	-18	+2
	8+75E	+1	+3	-9	+4
	8+50E	+2	+2	-8	+6
	8+25E	-3	0	-6	+5
	8+00E	-3	+1	-3	+8
	7+75E	-1	+2	-4	+4
	7+50E	-1	+2	-4	+4
	7+25E	-7	0	-3	+5
	7+00E	-3	+1	-2	+4
	6+75E	-5	+1	-4	+2
	6+50E	-3	+1	-4	+3
	6+25E	-2	+3	-3	+4

VLF-EM SURVEY

SEPTEMBER 5/99

		CUTLER NAA		SEATTLE NLK	
LINE	STN	IP	QUAD	IP	QUAD
4+50N	6+25E	+3	+3	-4	+1
	6+50E	-3	0	-2	+8
	6+75E	-3	0	-1	+6
	7+00E	-5	-1	+1	+6
	7+25E	-7	-2	+1	+6
	7+50E	-8	-6	+4	+10
	7+75E	-14	-7	+5	+12
	8+00E	-12	-8	+6	+10
	8+25E	-11	-6	+3	+11
	8+50E	-9	-5	-3	+8
	8+75E	-13	-8	+2	+12
	9+00E	-6	-3	-8	+9
	9+25E	+1	0	-12	+7
	9+50E	-5	-4	-8	+8
	9+75E	-3	-3	-9	+9
	10+00E	-5	-6	-4	+13
5+00N	10+50E	-4	-8	-4	+12
	10+25	-1	-6	-7	+12
	10+00E	-7	-8	-3	+12
	9+75E	-6	-8	-3	+14
	9+50E	-7	-8	-6	+12

Sept 5/99

		NAA		NLK	
LINE	STN	IP	QUAD	IP	QUAD
5+00N	9+25E	-7	-7	-8	+12
	9+00	-12	-10	-4	+12
	8+75	-13	-11	+1	+14
	8+50	-17	-11	+1	+14
	8+25E	-14	-16	+1	+16
	8+00E	-13	-10	+3	+14
	7+75E	-14	-8	+2	+14
	7+50E	-12	-8	+4	+11
	7+25E	-13	-7	+4	+11
	7+00E	-9	-5	+3	+10
	6+75E	-9	-4	+2	+12
	6+50E	-9	-5	+3	+11
	6+25E	-10	-6	+5	+12
5+50N	6+25E	-9	-6	+6	+14
	6+50E	-8	-6	+3	+13
	6+75E	-9	-9	+4	+15
	7+00E	-8	-7	+2	+12
	7+25E	-7	-7	+4	+15
	7+50E	-9	-8	+3	+13
	7+75E	-9	-9	-1	+16
	8+00E	-8	-9	-2	+18
	8+25	-5	-9	-7	+14
	8+50E	-4	-8	-11	+10
	8+75E	-1	-8	-13	+10

Sept 5/99

Line	Sta.	NAA IP	NAA QUAD	NLK IP	NLK QUAD
5+50N	9+00E	-2	-8	-9	+10
	9+25E	-5	-11	-6	+16
	9+50E	-6	-12	-8	+16
	9+75E	-7	-12	-7	+14
	10+00E	-3	-11	-10	+14
	10+25E	-3	-12	-11	+16
6+00N	10+50E	-5	-17	-10	+20
	10+25E	-8	-18	-7	+19
	10+00E	-6	-16	-5	+22
	9+75E	-4	-13	-10	+18
	9+50E	-2	-12	-8	+17
	9+25E	-3	-12	-8	+18
	9+00E	+1	-8	-9	+14
	8+75E	+7	-5	-10	+8
	8+50E	+4	-6	-13	+11
	8+25E	0	-8	-10	+14
	8+00E	-2	-8	-7	+14
	7+75E	-4	-9	-1	+15
	7+50E	-3	-9	-4	+13
	7+25E	-6	-9	-2	+15
	7+00E	-8	-9	+2	+13
	6+75E	-9	-9	+1	+12
	6+50E	-6	-7	-1	+13
	6+25E	-6	-6	-1	+16

VLF-EM SURVEY

SEPTEMBER 6 1999

		CUTLER NAA		SEATTLE NLK	
LINE	STN	IP	QUAD	IP	QUAD
6+00N	6+00E	-3	-4	-1	+12
	5+75E	+7	+4	-15	1
	5+50E	+3	0	-8	+4
	5+25E	-1	-2	-5	+8
	5+00E	-3	-6	-5	+9
	4+75E	-4	-4	-6	+7
	4+50E	-1	-2	-8	+5
	4+25E	-1	-2	-4	+8
	4+00E	-2	-3	-3	+8
	3+75E	-4	-4	-2	+12
	3+50E	-3	-4	+1	+9
6AN	1+50E	-4	-5	-1	+10
	1+75E	-3	-6	-2	+9
	2+00E	-6	-7	-3	+10
	2+25E	-9	-6	-3	+10
	2+50E	-4	-4	-4	+8
	2+75E	-1	-4	-4	+10
	3+00E	-1	-4	-9	+5
	3+25E	-1	-2	-12	+6
	3+50E	-5	-6	-1	+10

Sept 6/99

		NAA		NLK	
LINE	STN	IP	QUAD	IP	QUAD
6AN	3+75E	-11	-10	+10	+16
	4+00E	-9	-10	0	+12
	4+25E	-5	-7	+1	+16
	4+50E	-5	-8	+3	+12
	4+75E	-3	-4	+1	+11
	5+00E	-3	-9	-5	+9
	5+25E	-1	-6	-7	+8
	5+50E	0	-5	-6	+6
	5+75E	-3	-7	-6	+10
	6+00E	-2	-7	0	+15
	6+25E	-9	-11	+4	+17
	6+50E	-5	-10	0	+14
	6+75E	-6	-11	+1	+20
	7+00	-3	-10	-4	+16
	7+25E	-2	-10	-2	+16
	7+50E	+2	-6	-8	+13
	7+75E	+4	-7	-11	+12
	8+00E	+7	-6	-12	+12
	8+25E	+8	-5	-16	+12
	8+50E	+11	-6	-17	+10
	8+75E	+10	-7	-16	+11
	9+00	+3	-11	-11	+15
	9+25E	+2	-13	-9	+17
	9+50E	+1	-13	-11	+19
	9+75E	+3	-14	-10	+19
	10+00E	+3	-14	-12	+20

Sept 6 Line	Sta	NAA I P	NAA QUAD	NCK I P	NCK QUAD.
7+00N	7+50E	+8	-16	-19	+16
	7+25E	+7	-12	-15	+17
	7+00E	+8	-12	-12	+20
	6+75E	+4	-12	-10	+15
	6+50E	+2	-13	-9	+16
	6+25E	+2	-12	-7	+14
	6+00E	+3	-10	-7	+15
	5+75E	+2	-8	-9	+14
	5+50E	+1	-8	-6	+15
	5+25E	-2	-11	-4	+18
	5+00E	-3	-10	-1	+14
	4+75E	-3	-8	-4	+14
	4+50E	-1	-8	0	+14
	4+25E	+4	-6	-7	+7
	4+00E	-1	-7	-7	+14
	3+75E	-6	-11	-6	+12
	3+50E	-5	-10	-7	+11
	3+25E	-3	-10	-7	+14
	3+00E	-1	-6	-10	+11

NO. VLF-EM SURVEY AREA "A" NO. FOLLOW-UP

Date. SEPT. 25 Page. Date. Page.

LINE	STN	NAA IP	NAA QUAD	NLK IP	NLK QUAD	COMMENTS
8+00E	4+00N	-3	-2	-4	+2	RIGHT AT THE EXISTING STN.
	3+75N	+2	0	-3	+1	
	3+50N	+1	6	-7	-2	13 m N of C 3+50N
						8 m E of 8+00E
	4+25N	-5	-5	0	+2	
	4+50N	-13	-8	+11	+10	8 m S of TR 75N
	4+75N	-11	-10	+12	+10	
	5+00N	-9	-10	+7	+12	4 m S of C 5+00N
						7 meters E of 7+75E
8+25E	5+00N	-9	-11	+13	+14	Right on C 5+00N
						25 E of LAST STN
	4+75N	-9	-6	+13	+9	
	4+50N	-9	-6	+4	+9	Right at C 4+50N 8+25E
	4+25N	-2	-2	-5	+2	
	4+00N	-1	-3	-5	+2	2 meters N of C 4+00N
						12 W of 8+50E
	3+75N	-4	-4	-2	+4	
	3+50N	-4	-3	-6	+1	21 m N of 3+50N
						m W of 8+50E

NO. VLF-EM Survey AREA "A" NO. - FOLLOW-UP
Date. Sept 25/99 Page. Date. Page.

LINE	STN	NAA IP	NAA QUAD	NLK IP	NLK QUAD	COMMENTS
8+50 E	3+50 N	+6	+2	-7	-2	Right on 3+50N 25 METERS W of 8+75 E
	3+75 N	+2	-3	-6	0	
	4+00 N	-2	-5	+3	+5	9 meters S of ℄ 4+00 N 8 " W of 8+75 E
	4+25 N	+6	0	-9	0	
	4+50 N	+1	-4	-2	+4	19 meters S of ℄ 4+50 N 12 " E of 8+50 E
	4+75 N	-6	-8	+6	+9	
	5+00 N	-6	-12	+3	+12	11 meters S of ℄ 5+00 N meters E of 8+75 E
8+75 E	5+00 N	-3	-12	+3	+14	Right ON ℄ 5+00 N. 25 meters E of last
	4+75 N	+2	-6	+1	+8	12 meters N of ℄ 4+50 N 2 meters W of 9+00 E
	4+50	+2	-4	-4	+4	
	4+25	+8	-3	-4	+2	14 M N of ℄ 4+00 N 4 M E of 9+00 E
	4+00	+11	+3	-10	-1	
	3+75 N	+5	-3	0	+4	
	3+50 N	+5	-1	-8	-1	4 meters N of ℄ 3+50 N 10 meters E of 9+00 E

NO. VLF-EM AREA "A" - FOLLOW-UP NO.

Date Sept 26/99 Page Date Page

LINE	STN.	NAA IP	NAA QUAD	NCK IP	NCK QUAD	COMMENTS
9+00E	3+50N	+4	+2	-8	-1	
	3+75N	-1	-3	-4	+2	
	4+00N	-2	-6	-1	+6	10 meters S of C 4+00N
						10 meters E of 9+25E
	4+25N	+3	-2	-4	+4	
	4+50N	+8	-3	-4	+4	18 m S of 4+50N
						7 m E of 9+25E
	4+75N	+7	-2	-4	+5	
	5+00N	+6	-8	+6	+11	3 m ~~south~~ of 5+00N
						right of 9+25E
7+75E	5+00N	-9	-10	+8	+11	
	4+75N	-7	-8	+6	+10	23 meters N of 4+50
	~~4+50N~~	~~-8~~	~~-7~~			5 meters W of 7+75E
	4+50N	-8	-7	+7	+8	
	4+25N	-3	-3	+2	+4	
	4+00N	0	-2	-3	+1	ON C 4+00
						2 meters W of 7+75E
	3+75	0	+1	-1	+1	
	3+50N	+6	+4	-6	-3	12 m N of C 3+50N
						2 m E of 7+75E

NO. VLF - EM AREA "A" FOLLOW - UP

Date Sept 25/98 Page

LINE	STN	NAA I.P.	NAA QUAD	NLK I.P	NLK QUAD	COMMENTS
7+50E	3+50N	+3	+3	-5	-4	2 meters E of L 3+50N 7+50E
	3+75N	+1	+1	-2	-1	
	4+00N	+2	-1	-2	0	9 M S of L 4+00 N 7+50E
	4+25N	+1	-1	-3	+1	
	4+50N	-7	-6	+5	+6	10 meters S of L 4+50N 7+50E
	4+75N	-9	-6	+6	+9	
	5+00N	-6	-9	+8	+10	14 meters south of L 5+00N
						2 meters east of 7+25E
7+25E	5+00N	-8	-10	+5	+9	25 M west of last station
	4+75N	-6	-6	+5	+7	
	4+50N	-2	-4	+4	+5	on L 4+50N
						10 M E of 7+01E
	4+25N	0	0	0	+1	
	4+00N	-1	-2	0	+2	
	3+75N	+4	-2	-4	0	
	3+50N	+3	+2	-4	-1	10 meters N of 3+50N
						2 meters E of 7+01E

NO. VLF - EM AREA "A" FOLLOW-UP

Date Sept 25/99 Page .... Date .... Page ....

LINE	STN	NAA I.P.	NAA QUAD	NLK I.P.	NLK QUAD	COMMENTS
7+00E	3+50N	-2	-2	-1	0	THIS YEARS PREVIOUS GRID MARKED L 4+30N 6+75E AT THIS STATION
	3+75N	+1	+1	-3	-1	
	4+00N	-2	-2	+1	+3	11 meter S of L 4+00 1 meter E of 6+75E
	4+25N	+2	-3	-2	+2	
	4+50N	+2	-1	-4	+2	8 meter S of L 4+50N
		~~1~~	~~2~~			10 " W of 6+75E
	4+75N	-1	-2	-2	-2	
	5+00N	-6	-7	+3	+6	13 meter S of L 5+00N 9 E of 6+50E

NO. VLF-EM SURVEY AREA "C"

Date. SEPT. 26/99 Page

LINE	STN	NAA I.P.	NAA QUAD	NLK I.P.	NLK QUAD
8+00E	00N	+1	-12	-2	+12
	25N	+4	-10	-5	+11
	50N	+4	-10	-8	+10
	75N	+6	-11	-11	+11
	1+00N	+7	-10	-13	+14
	1+25N	+7	-14	-11	+18
	1+50N	+10	-17	-13	+20
	1+75N	+13	-15	-18	+16
¢7+50E	1+75N	+16	-12	-14	+18
	1+50N	+12	-16	-11	+20
	1+25N	+9	-14	-8	+17
	1+00N	+11	-10	-12	+12
	75N	+11	-11	-10	+10
	50N	+3	-9	-8	+11
	25N	+3	-10	-4	+11
	00N	-1	-16	-4	+11

NO.

Date. Page

COMMENTS

{19 meters S of 6AN
{8 " W of 8+00E

28 meters @ 259° AZ from
¢ 8+00E 1+75N

11 meters N of 6AN
6 meters W of 7+75E

2 meters N of TR 250N
3 meters W of 6+00N 7+50E

NO. VLF-EM SURVEY AREA "C"
Date. Sept 26/99 Page.

NO.
Date. Page.

LINE	STN	NAA I.P.	NAA QUAD	NLK I.P.	NLK I.P.	COMMENTS
C7+25E	00N	-1	-12	0	+13	25 meters W along line
	25N	-2	-12	-2	+12	16 meters S of TR 275N
	50N	+2	-10	-5	+12	17 meters S of 6AN
						4 meters E 7+50E
	75N	+8	-6	-10	+8	
	1+00.N	+11	-11	-11	+12	
	1+25N	+14	-14	-9	+16	
	1+50N	+12	-13	-12	+18	
	1+75N	SAME	AS	C7+50		1+75N Ended up at same point
C7+00E	1+75N	+8	-15	-15	+15	started at 7N 7+00E on blue
						flagging tape
	1+50N	+5	-14	-10	+17	
	1+25N	+2	-14	-6	+18	
	1+00N	+4	-15	-5	+14	2 meters W of TR 250N
	75N	-1	-11	-2	+14	8 meters N of 6AN
						2 meters W of 7+00E
	50N	-2	-14	0	+12	
	25N	-3	-12	0	+12	
	00N	-4	-12	+2	+12	9 meters N of C6+10N 6+75E

(Margin note beside stations 25N–1+50N of line C7+25E: numbered incorrectly on flagging tape 25 m too much)

NO. VLF-EM SURVEY AREA "C"

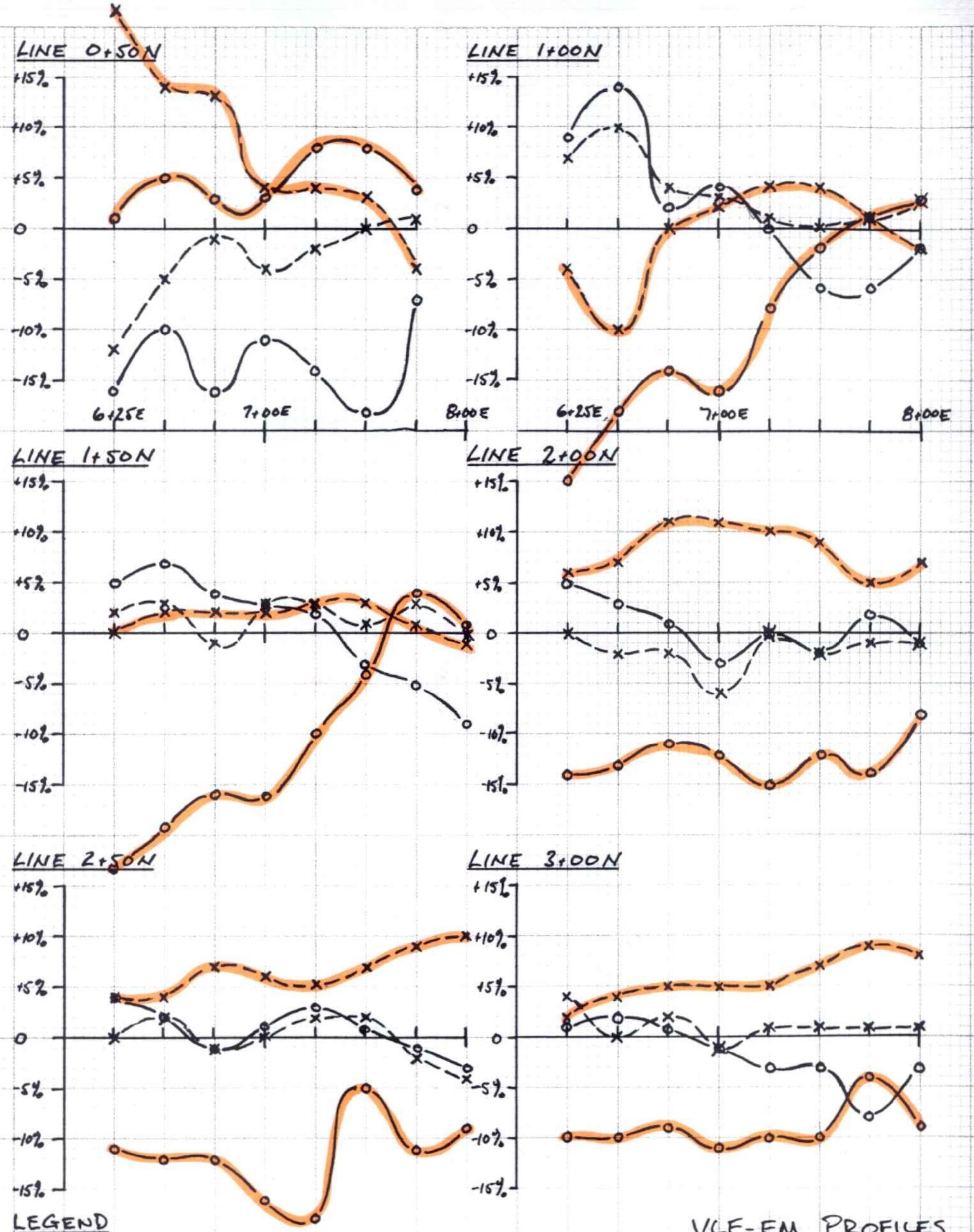
Date. Sept 26/99 Page.

		N.A.A.		NLK		
LINE	STN	I.P.	QUAD	I.P.	QUAD	COMMENTS
6+50E	00N	-4	-8	+1	+10	Baseline
	~~25N~~	~~-5~~	~~-12~~			@ 6+00N 6+75E (Actual 6+25E)
	25N	-5	-12	+2	+12	
	50N	-6	-10	+3	+12	18 meters S of 6AN
	~~75N~~					1 " E of 6+50E
	75N	-6	-12	+2	+14	
	1+00N	-3	-12	0	+15	
	1+25N	+1	-13	-4	+16	
	1+50N	+4	-13	-6	+16	
	1+75N	+8	-14	-9	+15	7 meters East of 7N
						2 m south of 6+50E
5+00E	1+75N	-1	-12	-3	+14	at 7N 5+00E
	1+50N	-3	-11	-3	+13	
	1+25N	+1	-8	-5	+11	
	1+00N	-1	-8	-6	+10	
	75N	-1	-6	-4	+10	11 meters N of 6AN
						2 meters E of 5+00E
	50N	0	-6	-4	+0	
	25N	+1	-5	-5	+5	
	00N	+1	-3	-4	+7	13 m N of 6N
						3 m W of 4+75E

NO. VLF-EM SURVEY AREA "C"
Date. SEPT. 26/99 Page

		NAA		NLK		COMMENTS
LINE	STN	I.P.	QUAD	I.P.	QUAD	
4+50E	00N	+2	-5	-4	+4	at 6N 4+25E on blue flagging tape.
	25N	+3	-1	-6	+4	
	50N	-5	-7	0	+8	
	75N	-3	-8	+1	+11	3 M S of 6AN 8 M E of 4+50E
	1+00N	-2	-9	-3	+10	
	1+25N	-2	-9	-2	+10	
	1+50N	-3	-10	-3	+12	
	1+75N	-1	-10	-6	+12	

NO.
Date. Page

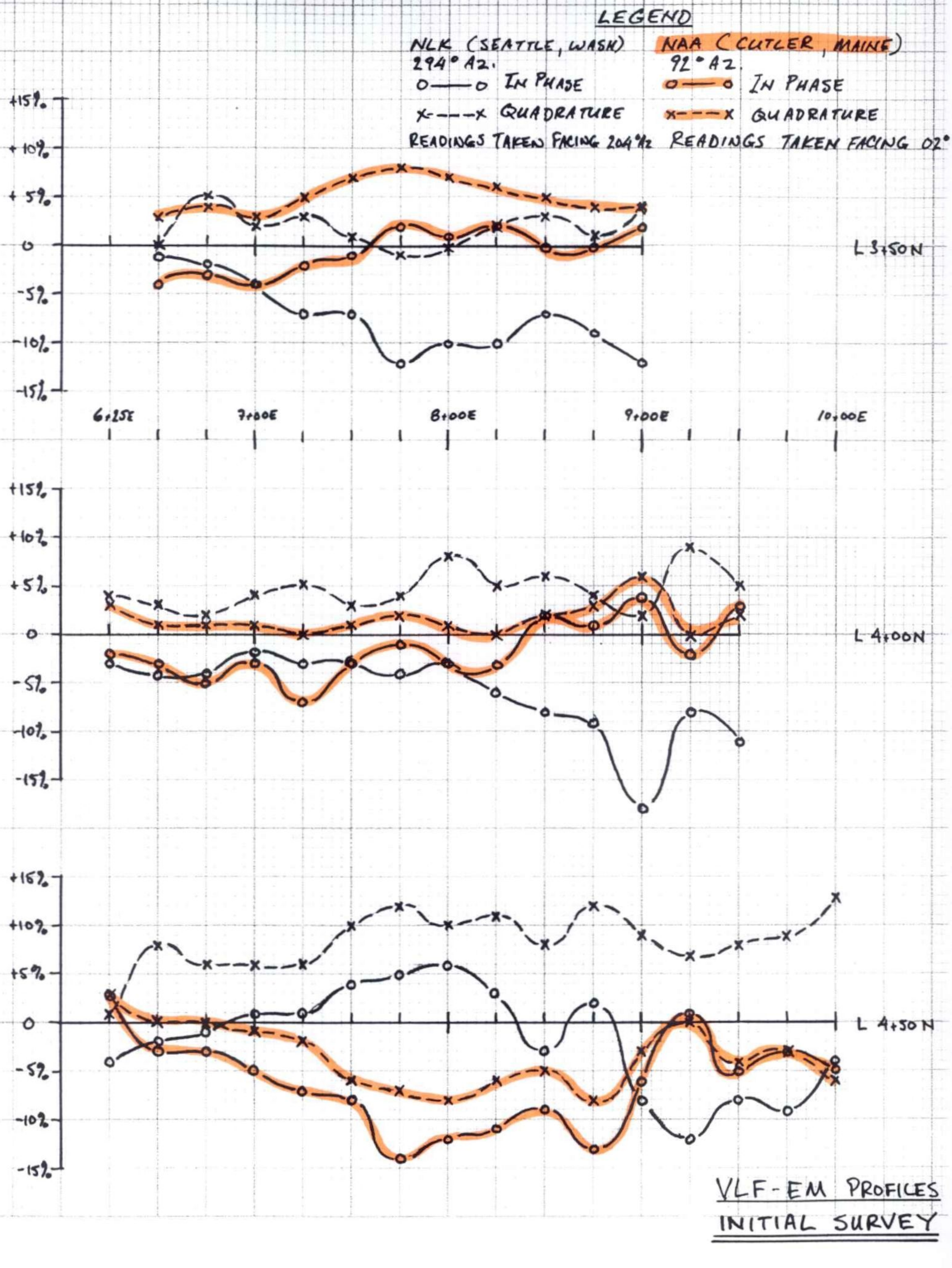


LEGEND

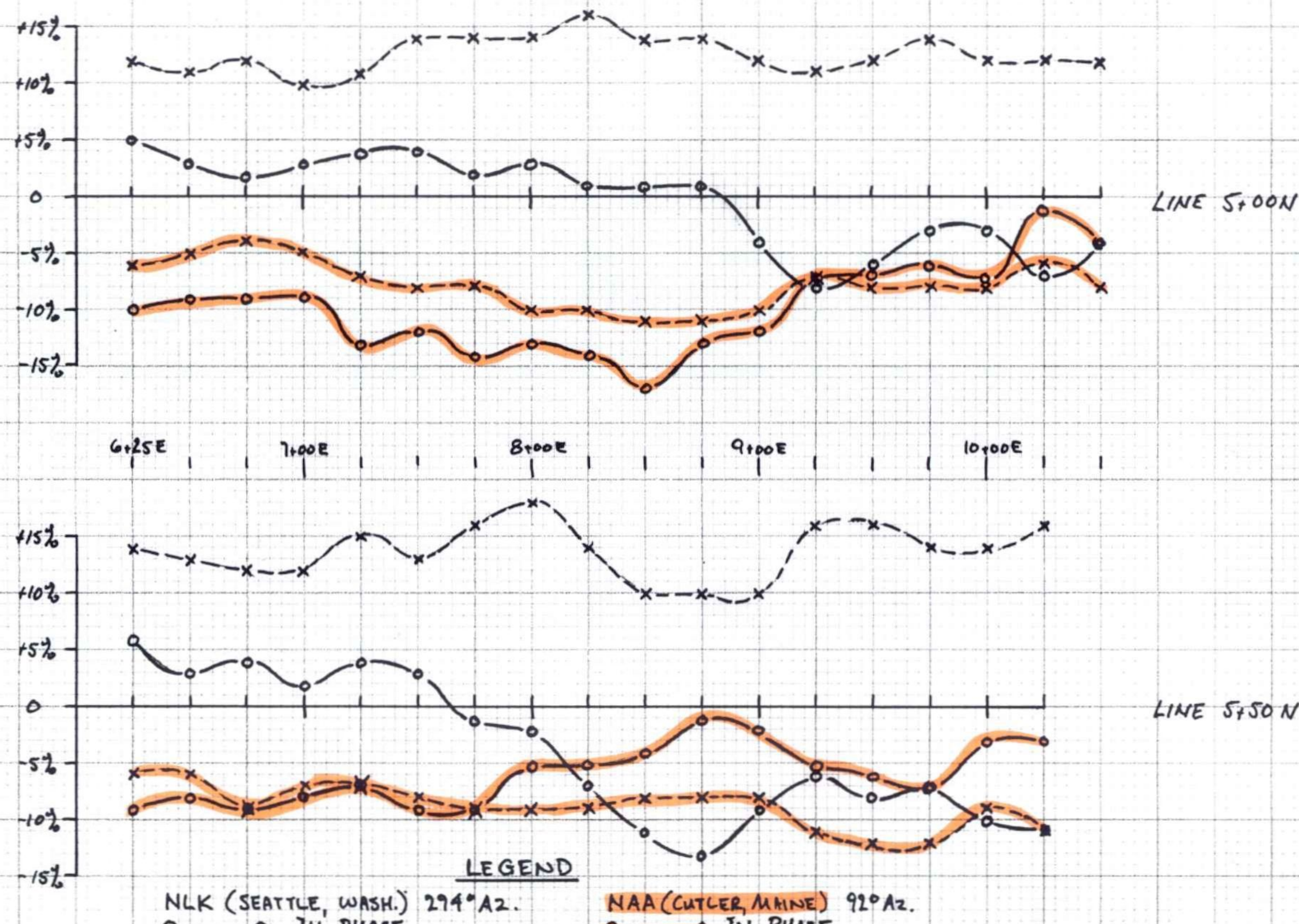
NLK (SEATTLE, WASH.) 294° Az.
o——o IN PHASE
x- - - -x QUADRATURE
READINGS TAKEN FACING 204° Az.

NAA (CUTLER, MAINE) 92° Az.
o——o IN PHASE
x- - - -x QUADRATURE
READINGS TAKEN FACING 02° Az.

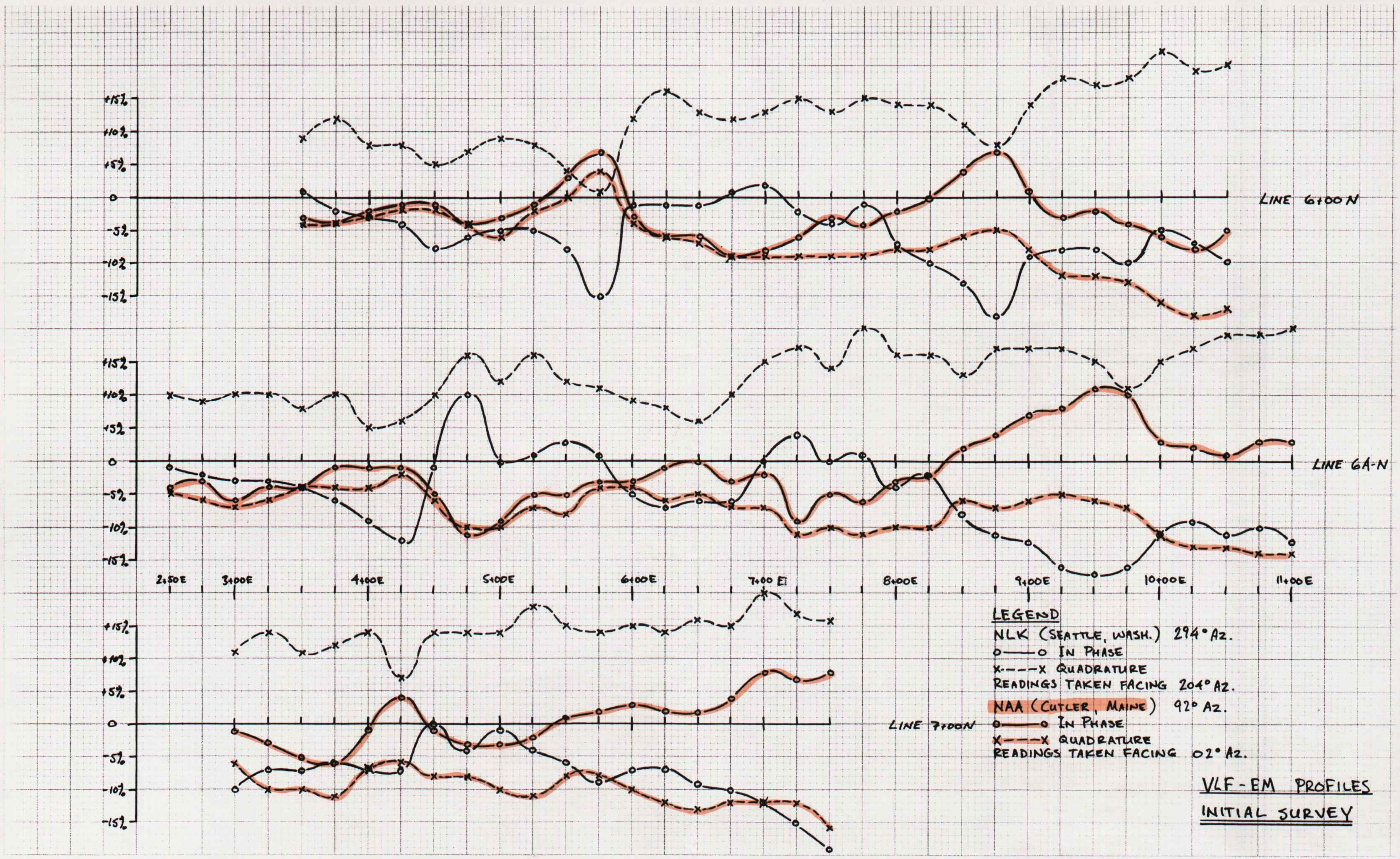
VLF-EM PROFILES
INITIAL SURVEY



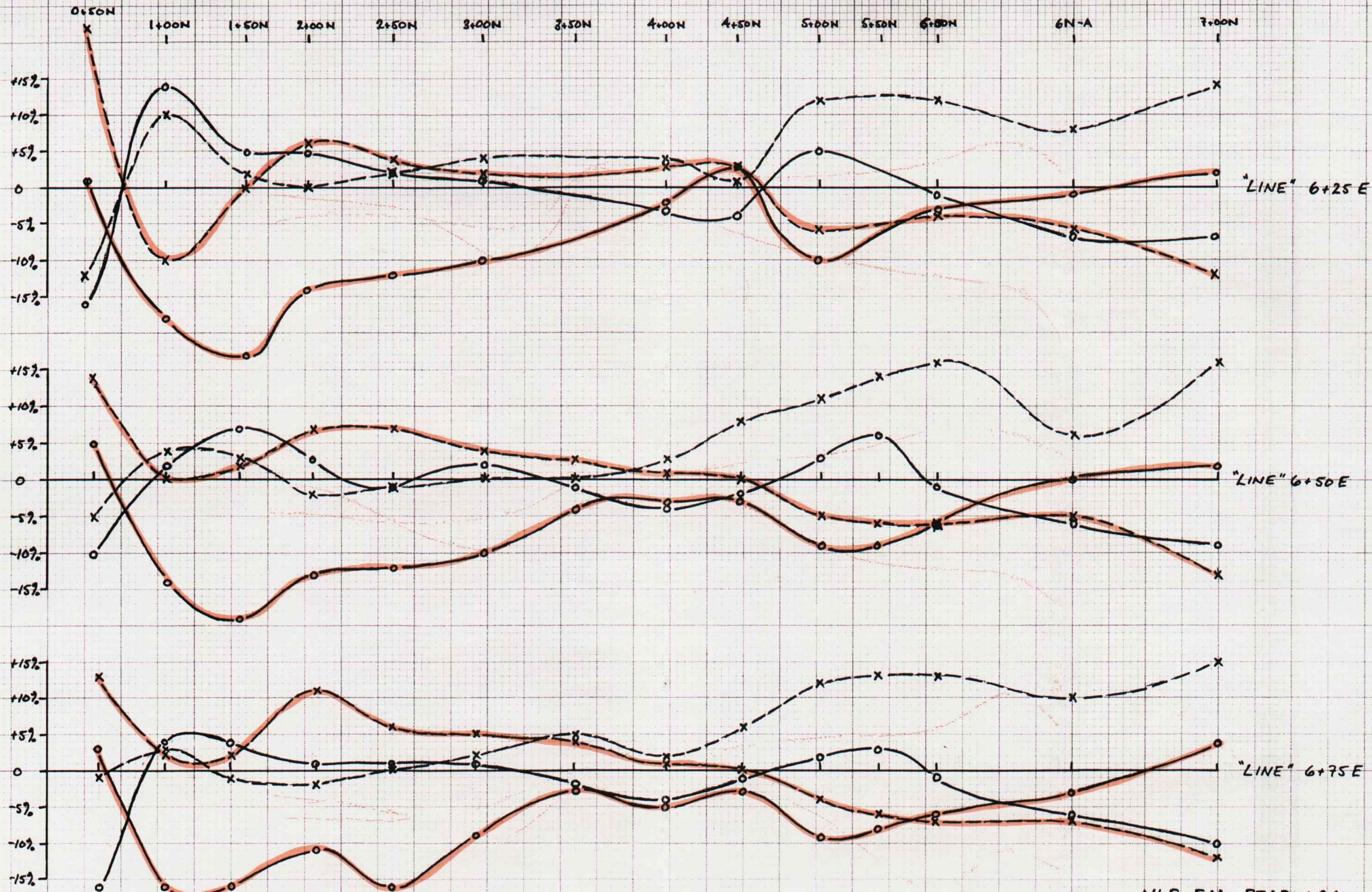
LEGEND
NLK (SEATTLE, WASH) 294° Az.
o——o IN PHASE
x----x QUADRATURE
READINGS TAKEN FACING 204°Az
NAA (CUTLER, MAINE) 92° Az.
o——o IN PHASE
x----x QUADRATURE
READINGS TAKEN FACING 02°
+15%
+10%
+5%
0
-5%
-10%
-15%
L 3+50N
6+25E
7+00E
8+00E
9+00E
10+00E
L 4+00N
L 4+50N
VLF-EM PROFILES
INITIAL SURVEY



VLF-EM PROFILES
INITIAL SURVEY

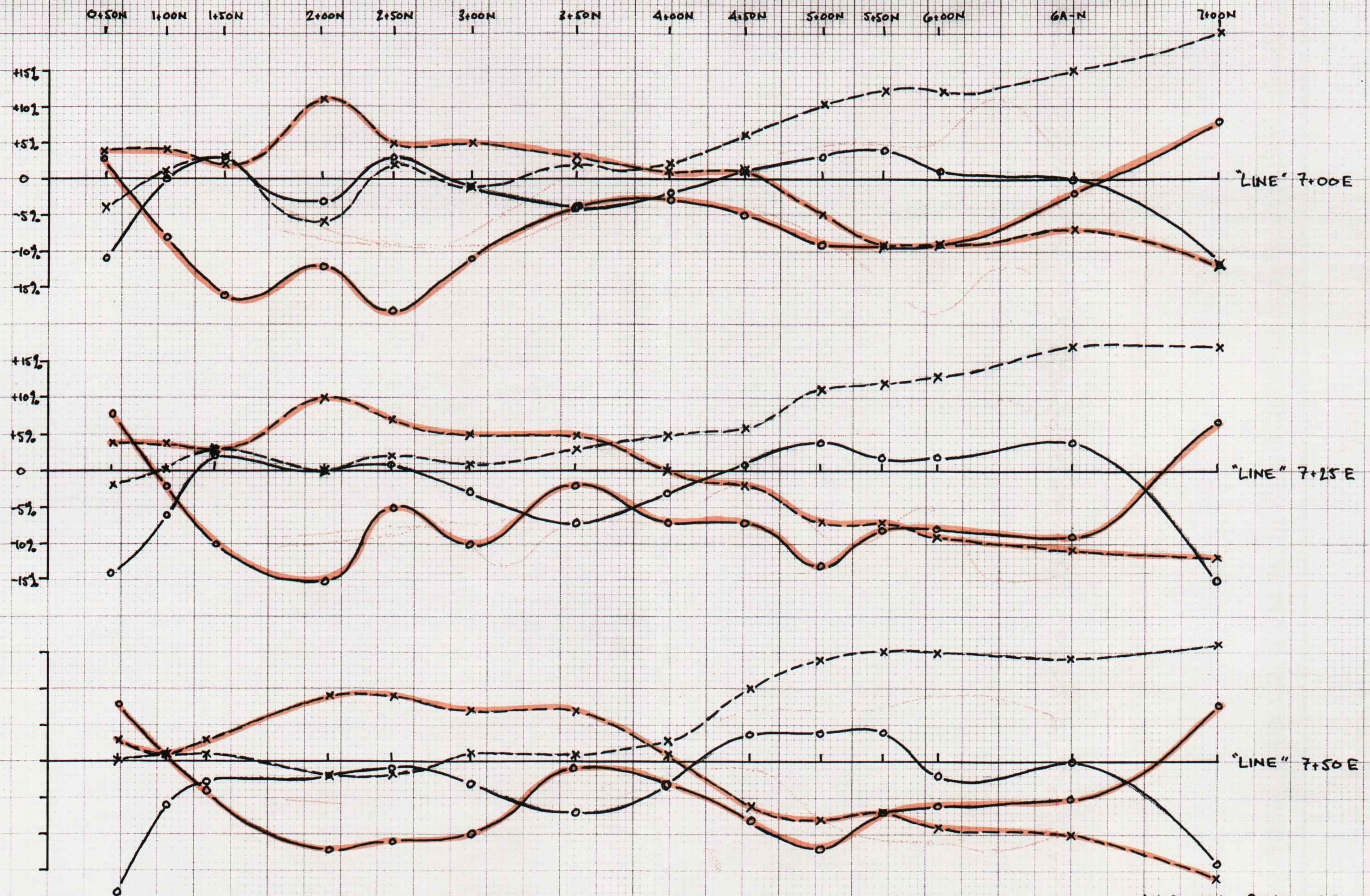


+15%
+10%
+5%
0
-5%
-10%
-15%
LINE 6+00 N
LINE 6A-N
2+50E
3+00E
4+00E
5+00E
6+00E
7+00 E
8+00E
9+00E
10+00E
11+00E
LINE 7+00N
LEGEND
NLK (SEATTLE, WASH.) 294° Az.
o——o IN PHASE
x- - -x QUADRATURE
READINGS TAKEN FACING 204° Az.
NAA (CUTLER, MAINE) 92° Az.
o——o IN PHASE
x- - -x QUADRATURE
READINGS TAKEN FACING 02° Az.
VLF-EM PROFILES
INITIAL SURVEY



VLF-EM READINGS
RE-PLOTTED ALONG N-S "LINES"

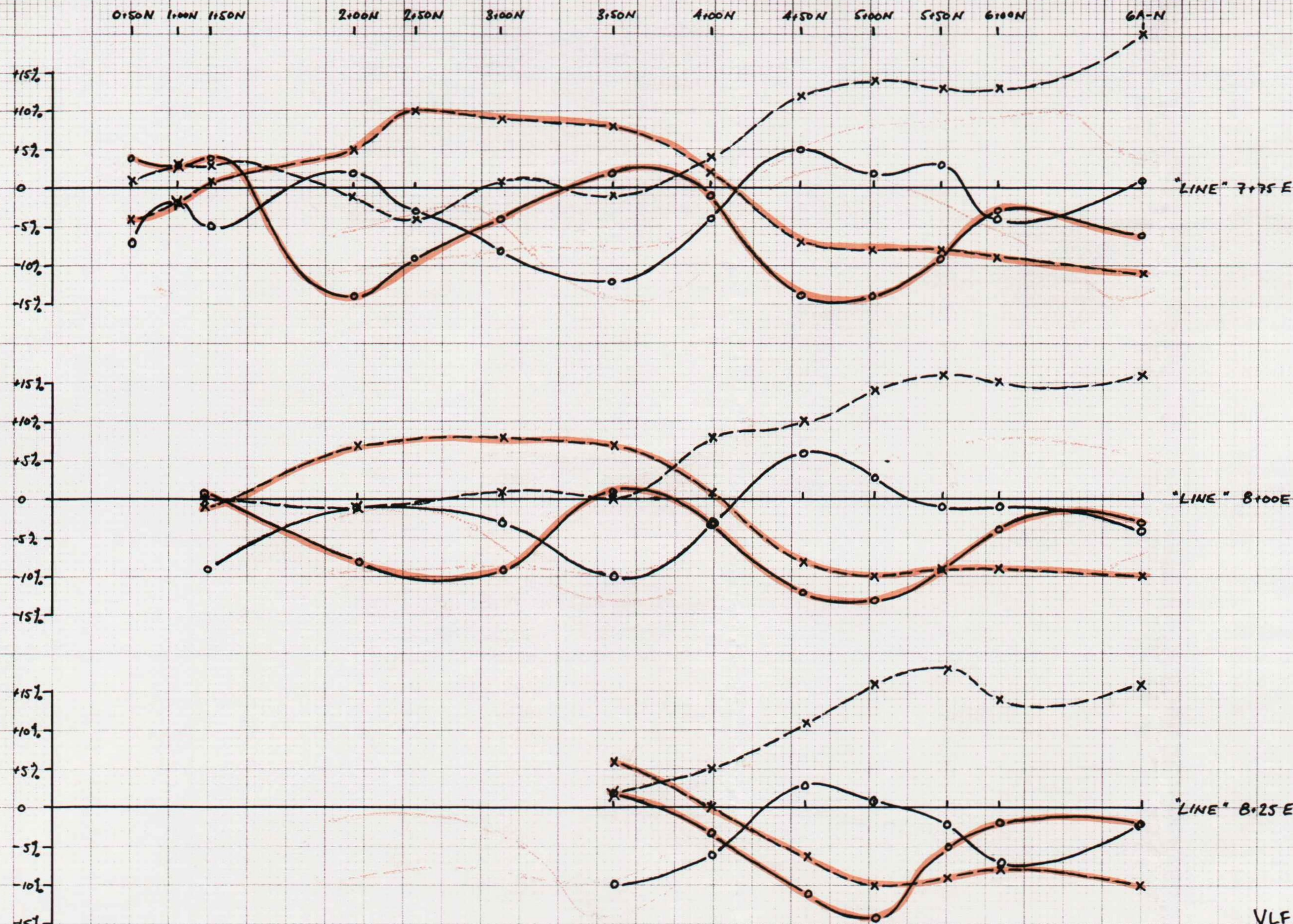
SEE INITIAL SURVEY FOR LEGEND



VLF-EM READINGS

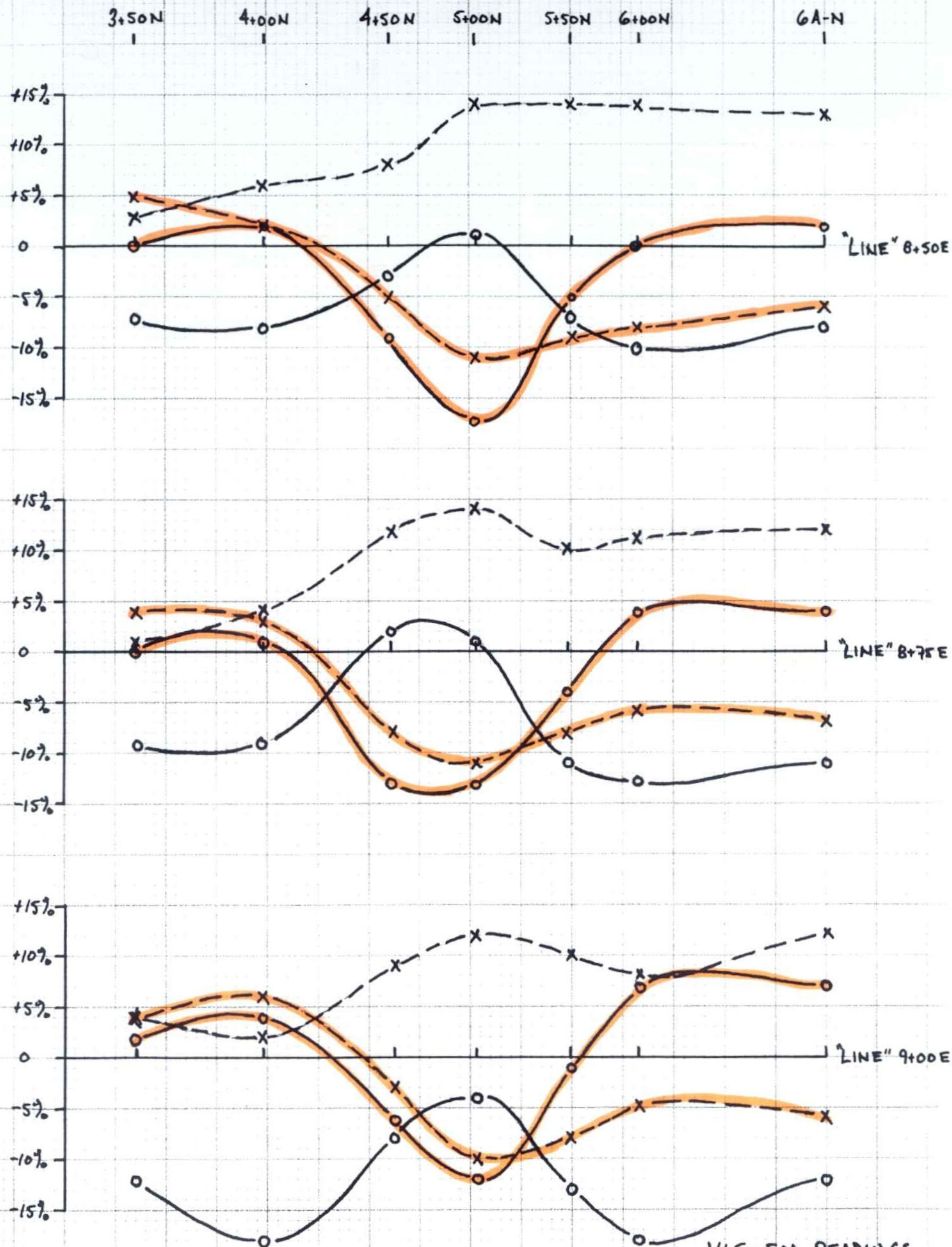
RE-PLOTTED ALONG N-S "LINES"

SEE INITIAL SURVEY FOR LEGEND



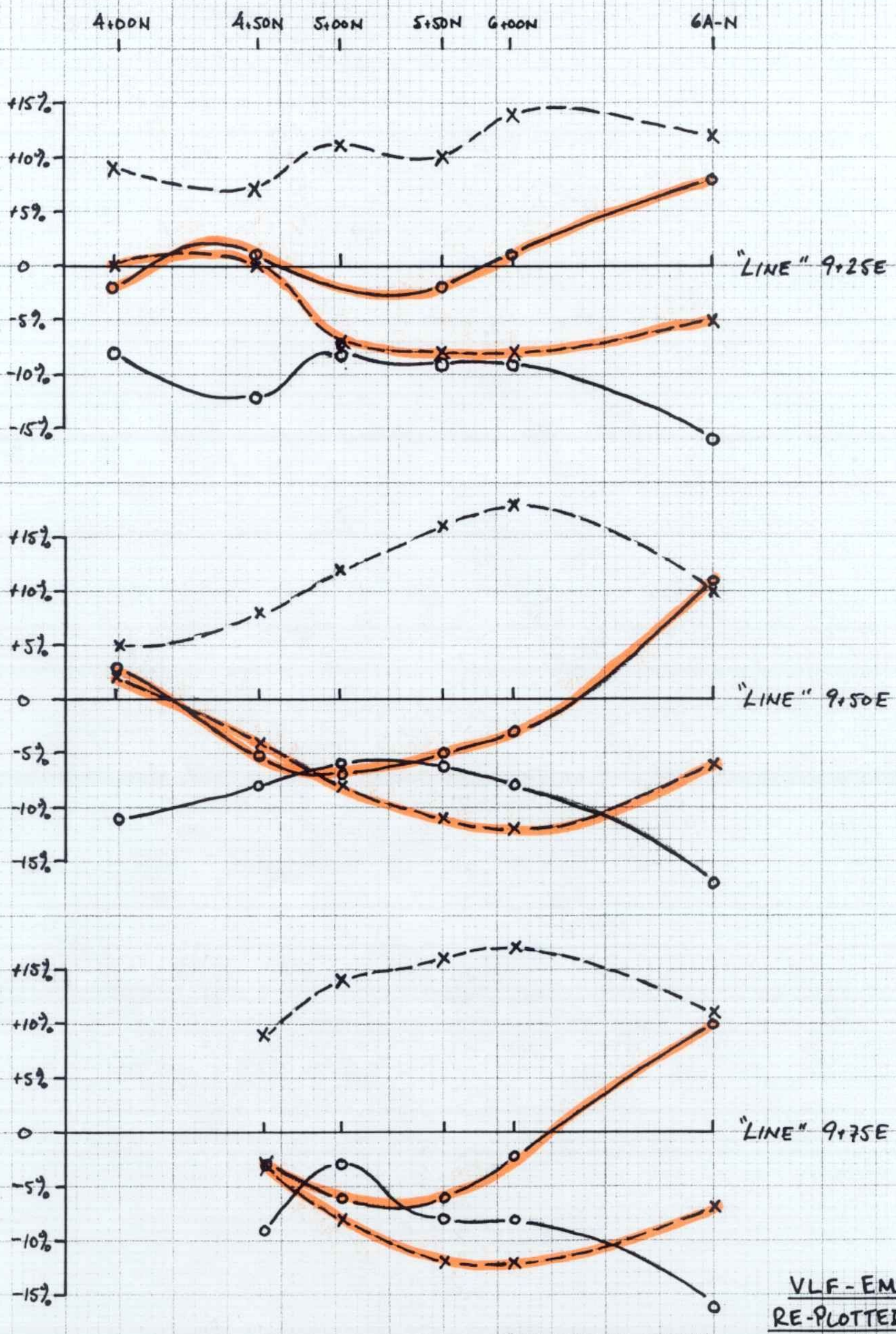
VLF-EM READINGS
RE-PLOTTED ALONG N-S "LINES"

SEE INITIAL SURVEY FOR LEGEND



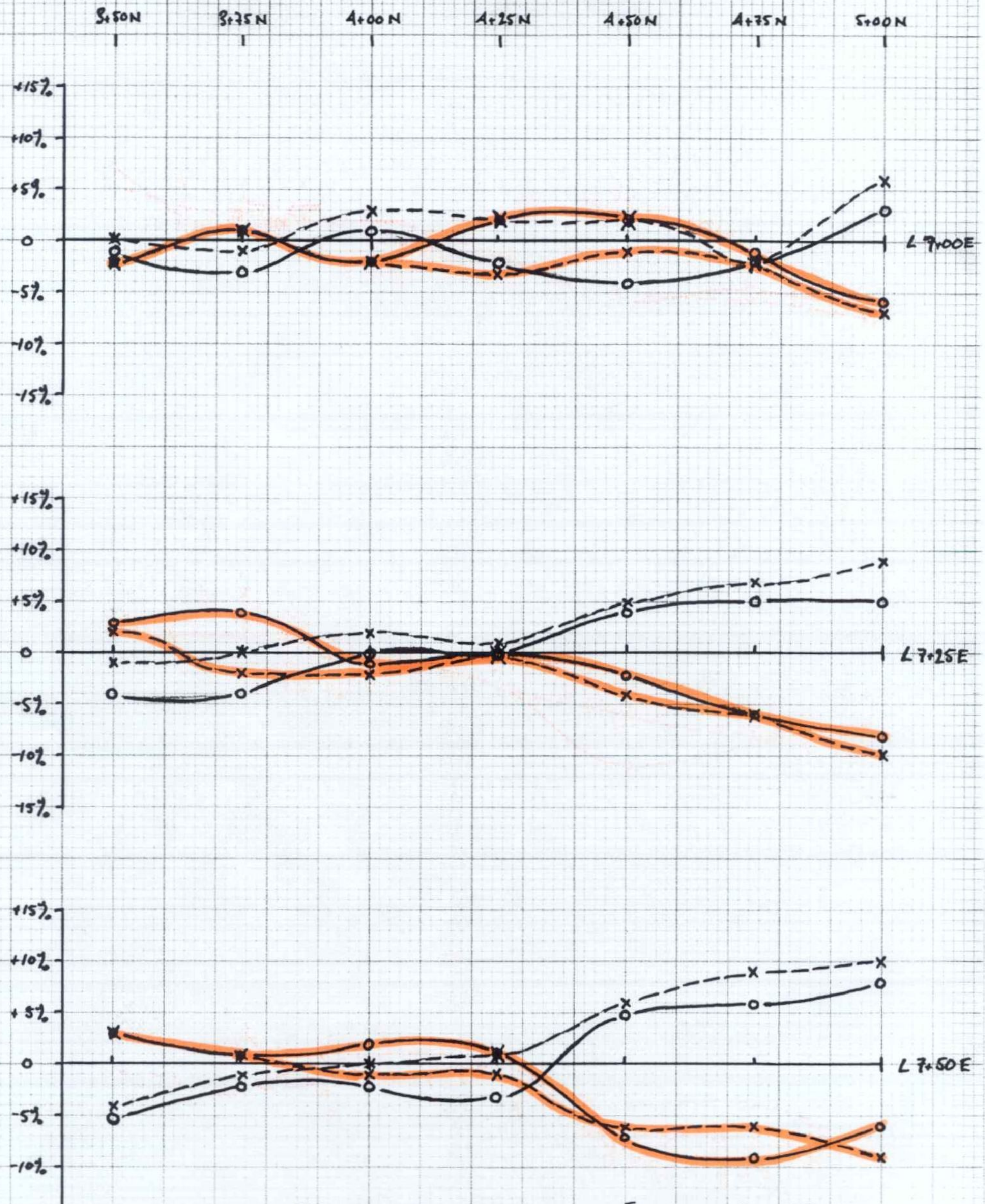
SEE INITIAL SURVEY FOR LEGEND

VLF-EM READINGS RE-PLOTTED ALONG NORTH-SOUTH "LINES"



SEE INITIAL SURVEY FOR LEGEND

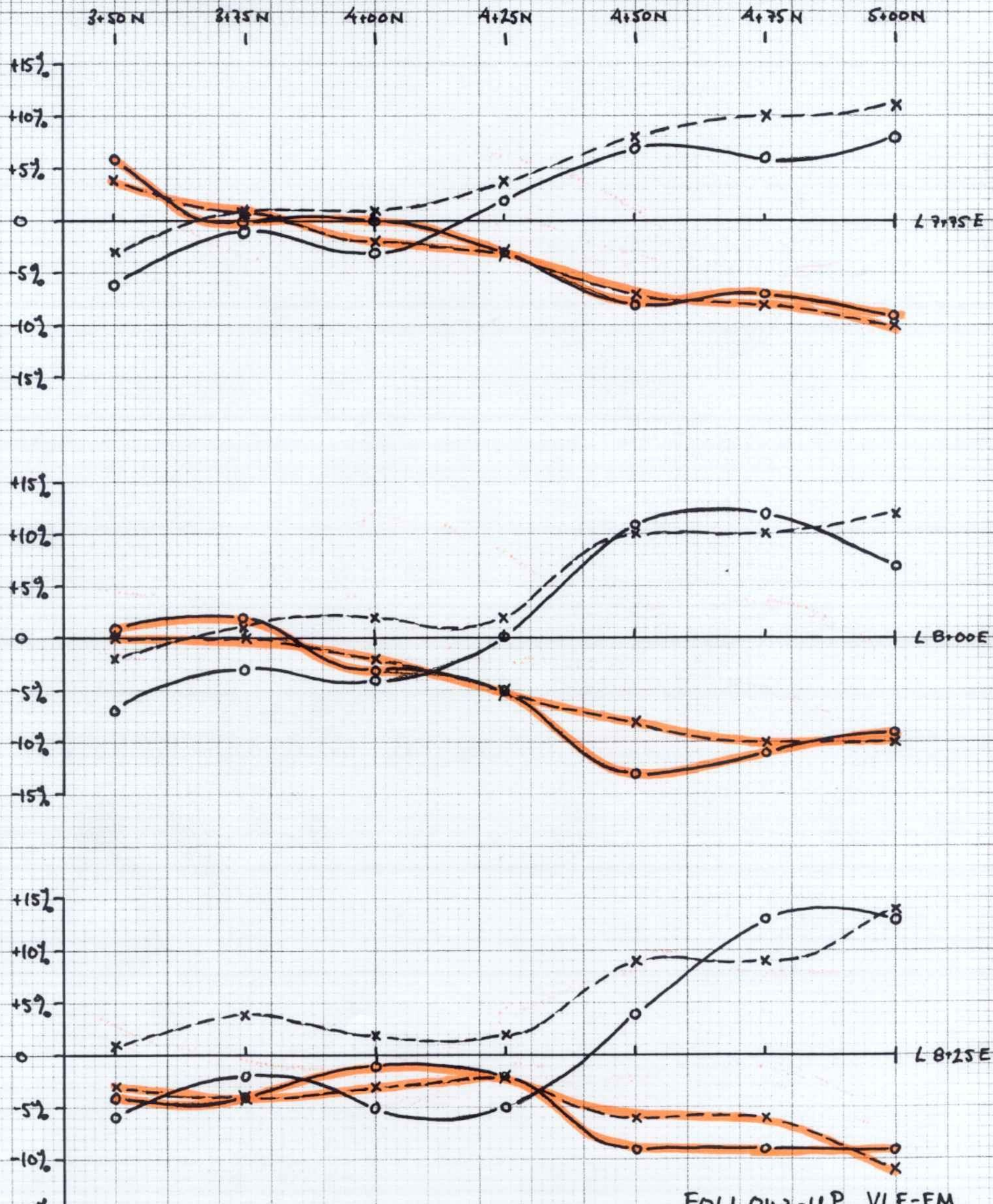
VLF-EM READINGS RE-PLOTTED ALONG NORTH-SOUTH "LINES"



SEE INITITAL SURVEY FOR LEGEND

FOLLOW-UP VLF-EM PROFILES AREA "A"

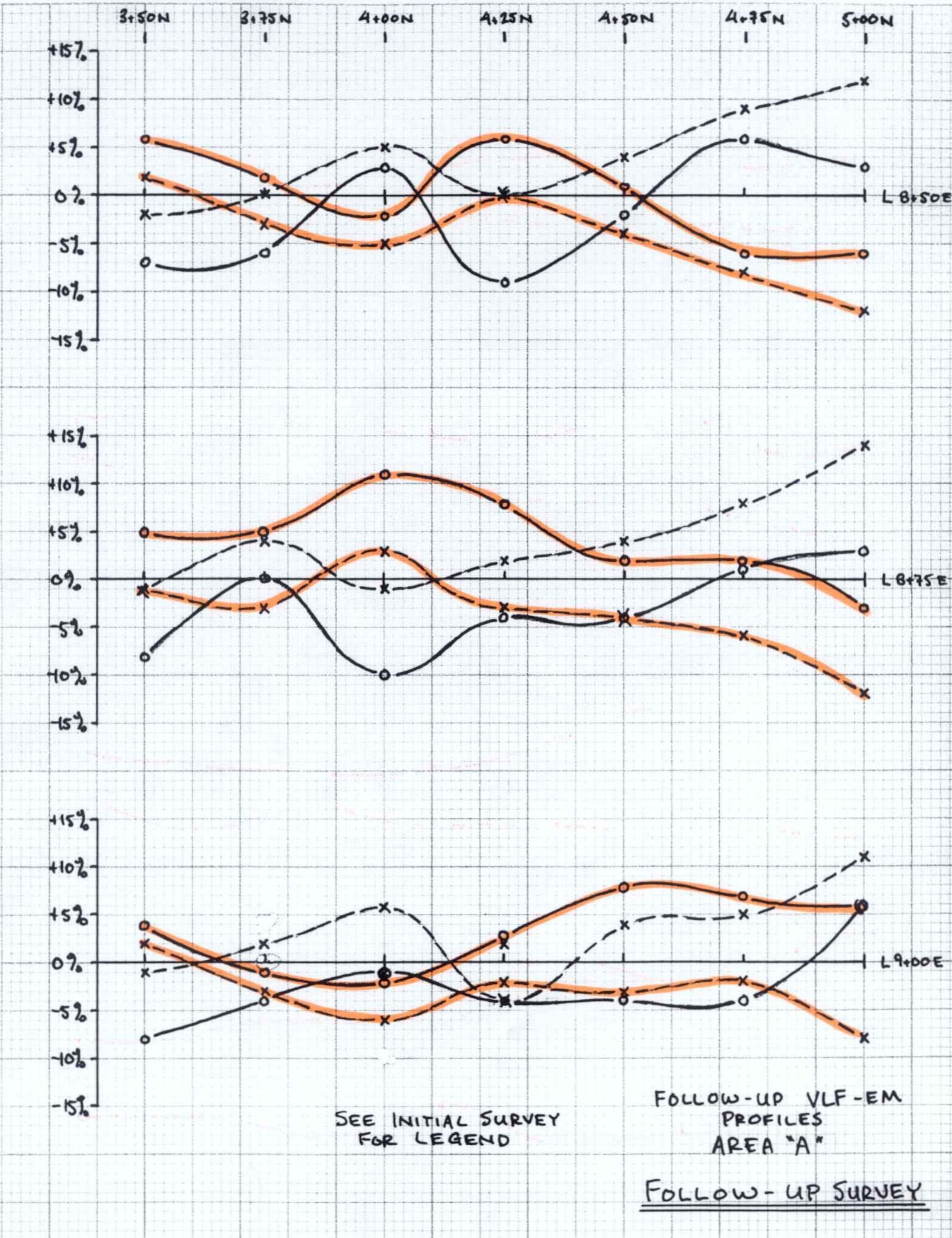
FOLLOW-UP SURVEY

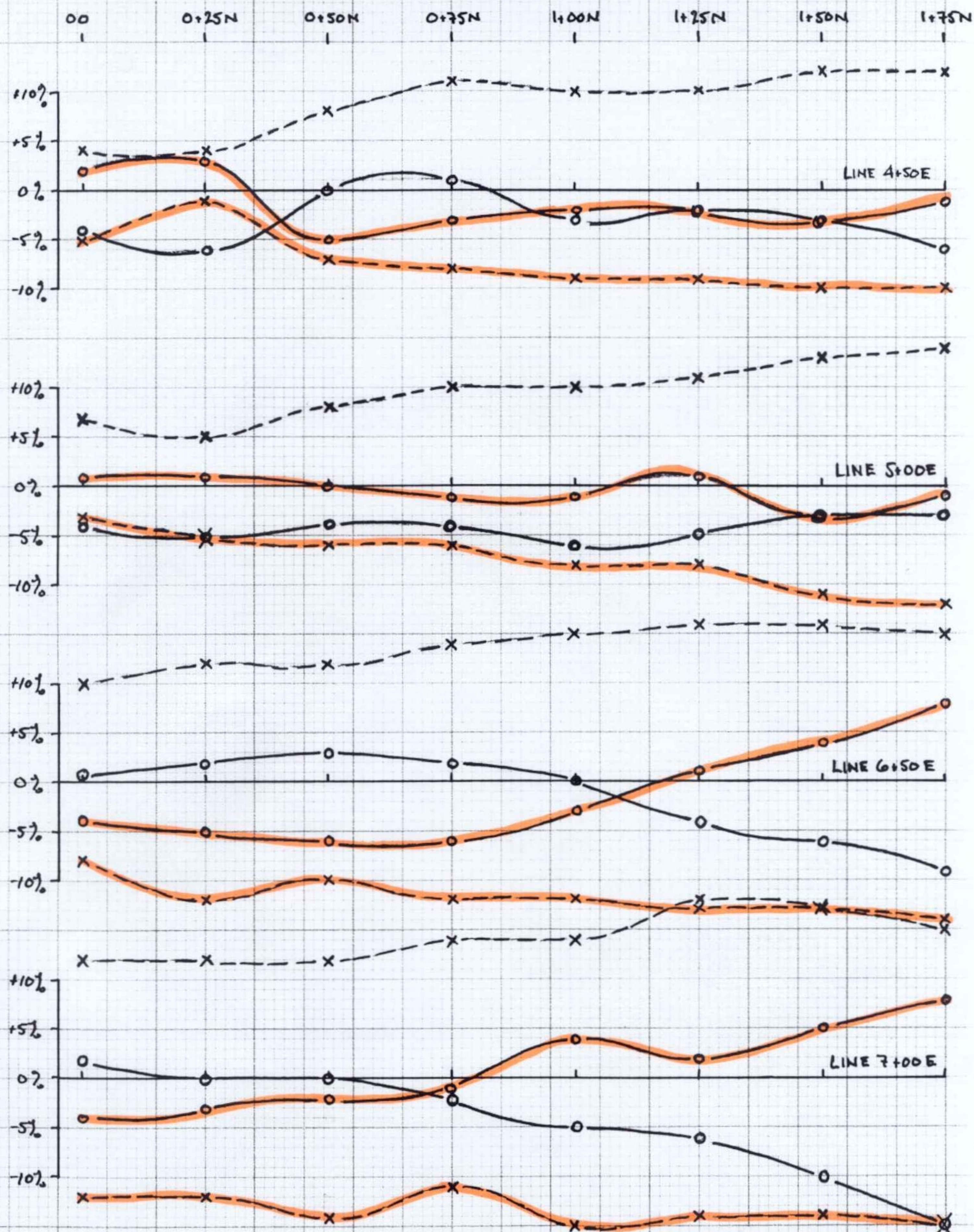


SEE INITIAL SURVEY
FOR LEGEND

FOLLOW-UP VLF-EM
PROFILES
AREA "A"

FOLLOW-UP SURVEY

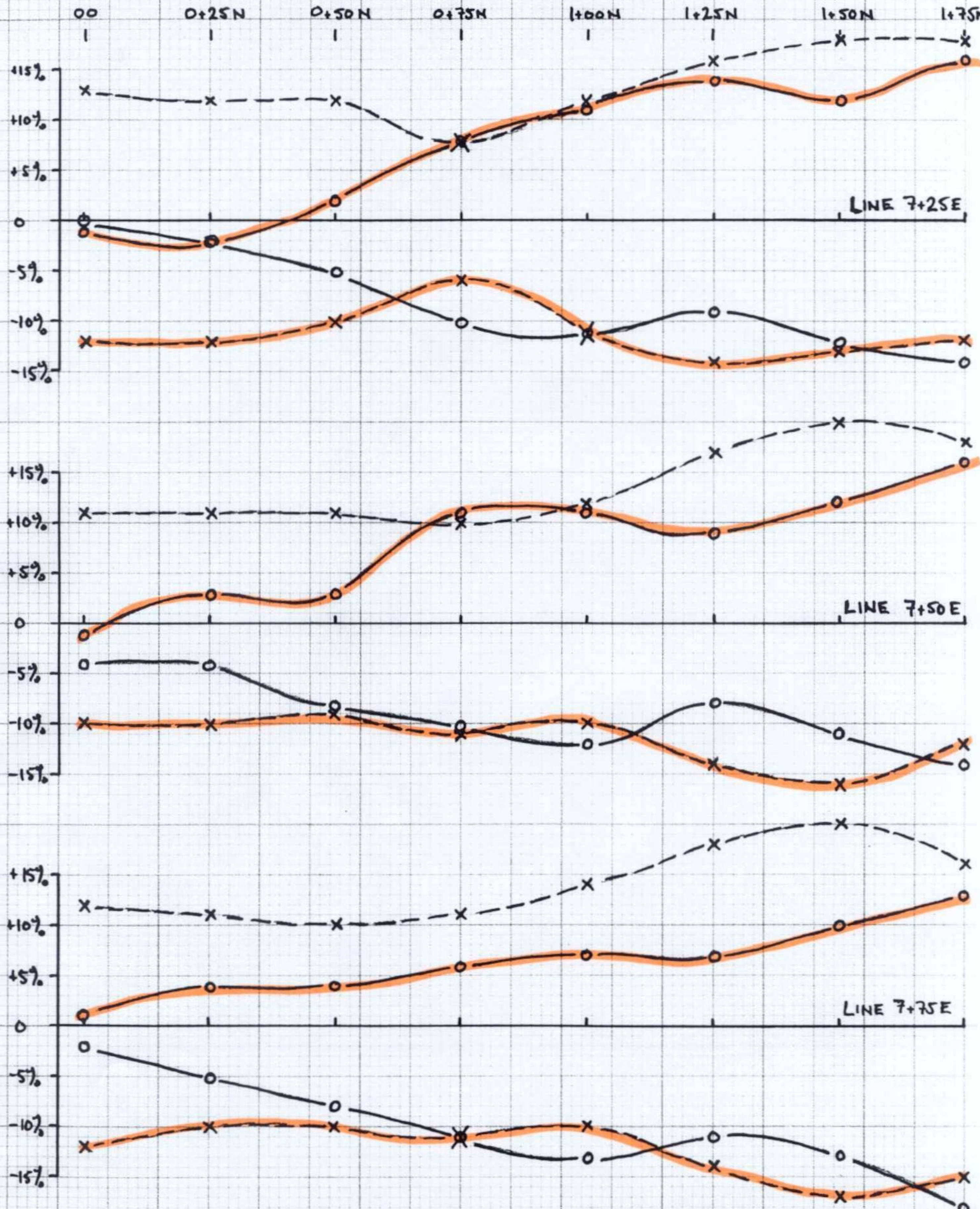

3+50N
3+75N
4+00N
4+25N
4+50N
4+75N
5+00N
+15%
+10%
+5%
0%
-5%
-10%
-15%
L8+50E
L8+75E
L9+00E
SEE INITIAL SURVEY FOR LEGEND
FOLLOW-UP VLF-EM PROFILES AREA "A"
FOLLOW-UP SURVEY



SEE INITIAL SURVEY FOR LEGEND

FOLLOW-UP VLF-EM PROFILES

AREA "C" FOLLOW-UP SURVEY



SEE INITIAL SURVEY FOR LEGEND

FOLLOW-UP VLF-EM PROFILES

AREA "C" FOLLOW-UP SURVEY

Appendix II

Field Data and Plotted Profiles for MaxMin II HLEM Survey

SEPT 11/99 MAX-MIN II SURVEY

LINE	STATION	222 IP.	QUAD	444 IP.	QUAD	888 IP.	QUAD	1777 IP	QUAD	3555 IP	QUAD
0+50N	6+50E	-8.75	+2.5	-9.	+3.75	-8	+4.25	-9.25	+3.75	-10	+5
	6+75E	-7.75	+2.5	-8	+3.75	-7	+4.25	-8	+3.75	-9	+4.75
	7+00E	-8	+2.5	-7.75	+3.75	-7.25	+4.25	-8.25	+3.75	-9	+4.75
	7+25E	-6.5	+2.5	-6.	+3.75	-5.25	+4.25	-6.25	+4.	-6.75	+4.5
	7+50E	-5.5	+2.5	-5.75	+3.75	-5	+4.25	-6.25	+4	-6.25	+4.75
	7+75E	-6.25	+2.5	-6.5	+3.75	-6.5	+4.25	-7.5	+3.75	-3.75	+2.75
1+00N	8+00E	-4	+2.5	-3.75	+3.75	-3.25	+4.25	-4.25	+4.75	-4.5	+5
	7+75E	-4.5	+2.5	-3.75	+3.75	-3.	+4.75	-4.25	+5.0	-3.5	+5.25
	7+50E	-7.5	+2.5	-7.25	+3.75	-6.25	+4.75	-7.25	+4.25	-2.25	+5
	7+25E	-7	+2.5	-6.25	+3.75	-5.5	+4.25	-6.75	+4.25	-3.25	+2.75
	7+00E	-6.25	+2.5	-6	+3.75	-5.25	+4.25	-6.25	+4.25	-6.5	+4.75
	6+75E	+.25	+2.75	+.25	+3.75	+1.	+4.25	+.25	+8	+.25	+4.25
	6+50	-6.75	+2.5	-5.75	+7.75	-5	+4.25	-6	+4	-6.5	+4.5
1+50N	6+50E	-9.5	+2.25	-9.5	+3.75	-8.25	+4.25	-9.5	+3.25	-9.75	+4.25
	6+75E	-8	+2.5	-7.75	+3.75	-7.25	+4.25	-8.5	+3.75	-4.5	+3
	7+00E	-10.5	+2.5	-10	+3.75	-9.	+4.25	-10.25	+2.25	-11.75	+4.25
	7+25E	-7.5	+2.5	-7.5	+3.75	-7.	+4.25	-8.	+3.75	-8.75	+4.75
	7+50E	-7.5	+2.5	-7.25	+3.75	-6.5	+4.25	-7.25	+4.	-7.50	+5.0
	7+75E	-9.25	+2.5	-8.5	+3.75	-7.25	+4.25	-8.25	+4.0	-4	[illegible]
	8+00E	-6.25	+2.75	-6	+4	-5.25	+4.5	-6.5	+4.25	-3.25	+2.75

Sept 11/99

LINE	STN	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555 IP	3555 QUAD
2+00N	8+00E	-5	+2.5	-4.5	+3.75	-4	+4.25	-5	+4	-5	+4.5
	7+75	-1.5	+2.5	-1.75	+3.75	-1	+4.25	-1.5	+5	-1	+2
	7+50	-4.5	+2.5	-4.5	+3.75	-3.25	+4.25	-4.5	+4.25	-5	+4.75
	7+25	-3	+2.5	-2.5	+3.75	-2	+4.25	-3	+4.75	-2.5	+4.25
	7+00	-3	+2.75	-2.75	+3.75	-2.25	+4.25	-3	+4.75	-3.5	+5
	6+75	-0.75	+2.5	-0.75	+3.75	-0.5	+4.25	-1.25	+5	-1.25	+4.5
	6+50	-4.5	+2.5	-4.25	+3.75	-3.75	+4.25	-4.75	+4	-5	+4.25
2+50N	6+50E	-7.75	+2.25	-7.5	+3.75	-7	+4.25	-8	+3.75	-4	+3
	6+75E	-7	+2.5	-6.75	+3.75	-5.75	+4.25	-7.25	+3.75	-7.5	+4.75
	7+00E	-5.25	+2.5	-4.75	+3.75	-3.75	+4.25	-5	+4	-2.5	+2.5
	7+25E	-5.25	+2.5	-5.25	+3.75	-5	+4.25	-6.25	+4	-6.5	+4.75
	7+50E	-7	+2.5	-6.75	+3.75	-6.5	+4.25	-7.75	+3.75	-4	+3
	7+75E	-8.5	+2.5	-8.5	+3.75	-7.75	+4.25	-8.75	+3.75	-9.75	+4.5
	8+00E	-6	+2.5	-5.75	+3.75	-4.75	+4.25	-5	+4.25	-5	+5
SEE NOTE 1											
3+00N	8+00E ~~7+75E~~	-4	+2.25	-3.75	+3.75	-3	+4.25	-4.25	+4.25	-4.5	+4.5
	7+75E ~~7+50E~~	-5	+2.25	-4.5	+3.75	-3.75	+4.25	-5	+4	-5.25	+4.25
	7+50E	-5.25	+2.5	-4.75	+3.75	-4.25	+4.25	-5.5	+4.25	-6	+4.75
	7+25E	-4.5	+2.5	-4	+3.75	-3.5	+4.25	-4.25	+4.25	-2.5	+2.75
	7+00E	-3.5	+2.5	-3.50	+3.25	-2.5	+4.25	-3.25	+4.5	-2	+2.5

NOTE 1: TWO STATIONS MARKED 7+50E, NOTES BUT NOT ON STATION ARE ON OFFSET PORTION OF

8+00 & 7+75 RENUMBERED IN FIELD MARKERS IN FIELD. 8+00E TO 7+00E LINE 3+00N

STN	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555 IP	3555 QUAD
6+75E	+1.25	+2.75	+1.5	+3.75	+2	+4.25	+.75	+5.25	+0.5	+2
6+50E	-.5	+2.5	-4.5	+3.75	-4.25	+4.25	-5.5	+4.25	-6	+4.5

Sept 11/99

LINE	STN	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555 IP	3555 QUAD
3+50N	6+75E	-9.25	+2.25	-9.5	+3.75	-9	+4.25	-10	+3.25	-5.5	+3.25
	7+00E	-6.25	+2.5	-6	+3.75	-5.5	+4.25	-6.75	+4	-3.75	+3
	7+25E	-8.0	+2.5	-8	+3.75	-7.25	+4.25	-8.25	+3.75	-9.25	+4.5
	7+50E	-6.5	+2.5	-6.75	+3.75	-6.25	+4.25	-7	+3.75	-4	+3
	7+75E	-8	+2.5	-7.75	+3.75	-7.25	+4.25	-8.25	+3.75	-4.5	+3
	8+00E	-6	+2.25	-6	+3.75	-5.25	+4.25	-6.25	+4	-7	+4.75
	8+25E	-7.75	+2.5	-7.5	+3.75	-7	+4.25	-8	+3.75	-4.25	+3
	8+50	-5.5	+2.75	-5.25	+3.25	-4.25	+4.25	-6	+4.25	-3.25	+2.75
	8+75	-8.	+2.75	-8.5	+3.25	-7.5	+4.25	-9	+3.75	-5	+3
	9+00E	-6.25	+2.5	-6.25	+3.25	-5.25	+4.25	-6.75	+4.0	-7	+4.75

SEPT 12/99 MAX-MIN SURVEY

LINE	STN.	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555 IP	3555 QUAD
4+00N	9+50E	-6	+2.5	-5.25	+3.75	-5	+4.25	-6.25	+4.25	-6.5	+5
	9+25E	-5	+2.5	-5	+3.75	-4.25	+4.25	-5.25	+4.25	-3.0	+2.75
	9+00E	-6.25	+2.5	-6	+3.75	-5.5	+4.25	-6.75	+4	-3.75	+3
	8+75E	-6.75	+2.25	-6	+3.75	-5.25	+4.25	-6.5	+4	-3.75	+3
	8+50E	-3.75	+2.5	-3	+3.75	-2.5	+4.25	-3.5	+4.75	-2.25	+2.75
	8+25E	-4.25	+2.5	-4	+3.75	-3.5	+4.25	-4.75	+4.25	-5.	+5
	8+00E	-5.	+2.25	-3.5	+3.75	-2.75	+4.25	-4.75	+4.5	-4	+5
	7+75	-4.25	+2.5	-3.75	+3.75	-3.	+4.25	-4	+4.25	-4	+4.75
	7+50	-6	+2.5	-6	+3.75	-4.25	+4.25	-5.	+4.25	-5.75	+5
	7+25	-5.25	+2.5	-5	+3.75	-4.25	+4.25	-6	+4	-6.25	+5

Sept 12/99

LINE	STN.	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555 IP	3555 QUAD
4+00N	7+00E	-6.25	+2.5	-6	+3.75	-5	+4.25	-6.25	+4.5	-7	+5
	6+75E	-4	+2.5	-4.25	+3.75	-4	+4.25	-5	+4.25	-5.25	+5
	6+50E	-2.75	+2.5	-2.25	+3.75	-2.25	+4.25	-3.5	+4.75	-2	+2.75
4+50N	6+50E	-7.5	+2.75	-7	+3.75	-6.5	+4.25	-7.75	+3.75	-4.25	+3
	6+75E	-7	2.25	-7	+3.75	-6.25	+4.25	-7	+3.75	-3.75	+3
	7+00E	-12.25	+2.5	-11.75	+3.75	-11	+4.25	-12.5	+2.75	-6.75	+3.5
	7+25E	-14.5	+2.5	-13.5	+3.75	-12.75	+4.25	-14	+2.75	-16	+4.75
	7+50	-5.75	+2.25	-5.75	+3.75	-5.25	+4.25	-6.5	+3.75	-3.5	+2.75
	7+75	-5.75	+2.5	-5.5	+3.75	-5.25	+4.25	-6	+4	-4.75	+2.75
	8+00E	-6.5	+2.5	-6	+3.75	-5.5	+4.25	-6.5	+4	-4.75	+3
	8+25E	-6.25	+2.25	-6	+3.75	-5.25	+4.25	-7	+4	-7.5	+5
	8+50E	-6.75	+2.5	-6.75	+3.75	-6	+4.25	-7	+4	-8	+5
	8+75	-6.5	+2.5	-6.75	+3.75	-6	+4.25	-7.25	+4	-7.75	+5
	9+00	-6.5	+2.5	-6.75	+3.75	-6	+4.25	-7	+4	-8	+5
	9+25	-6.5	+2.5	-6.25	-3.75	-5.5	+4.25	-6.75	+4.0	-3.25	+2.75
	9+50	-9	+2.5	-8.75	+3.75	-8.25	+4.25	-9.25	+4	-5	+3.25
	9+75	-8	+2.75	-8	+3.75	-7.5	+4.25	-8.5	+3.75	-9.75	+5
	10+00	-7	+2.5	-6.75	+4.75	-6.25	+4.25	-7.5	+3.75	-4.25	+3
5+00N	10+50E	-5	+2.5	-4.75	+3.75	-4.25	+4.25	-5.25	+4.25	-3	+2.75
	10+25	-3	+2.25	-2.75	+3.75	-3.0	+4.25	-3.5	+4.75	-2.25	+2.75
	10+00	-6.75	+2.5	-6.25	+3.75	-5.75	+4.25	-7	+4	-8	+5
	9+75	-4	+2.5	-4	+3.75	-3.5	+4.25	-4.5	+4.5	-2.5	+2.75
	9+50	-3.75	+2.5	-3.5	+3.75	-3	+4.25	-4	+4.5	-2.5	+2.75

Sept 12/99

Line	Stn.	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555 IP	3555 QUAD
5+00N	9+25E	-3	+2.5	-2.25	+3.75	-2.25	+4.25	-3.5	+4.75	-2	+2.75
	9+00E	-6	+2.5	-5.75	+3.75	-5	+4.25	-6.5	+4	-3.75	+3.00
	8+75	-5	+2.5	-5	+3.75	-4.5	+4.25	-5.75	+4.25	-6.5	+5
	8+50	-5.5	+2.5	-5	+3.75	-4.25	+4.25	-6	+4	-3.75	+3
	8+25	-3	+2.5	-2.5	+3.75	-2.25	+4.25	-3.25	+4.75	-2	+2.75
	8+00E	-2.75	+2.5	-2.75	+3.75	-2.25	+4.25	-3.25	+4.75	-2	+2.75
	7+75E	-2	+2.5	-2	+3.75	-1.75	+4.25	-2.75	+4.75	-1.5	+2.5
	7+50	-4.5	+2.5	-3.75	+3.75	-3.5	+4.25	-4.5	+4.5	-2.5	+2.75
	7+25E	-6	+2.5	-6	+3.75	-5	+4.25	-6.25	+4	-3.5	+2.75
	7+00E	-2.25	+2.5	-2.5	+3.75	-2	+4.25	-3	+4.75	-1.75	+2.75
	6+75E	-5.5	+2.5	-5.5	+3.75	-4.75	+4.25	-6.25	+4	-7	+5
	6+50E	-8.75	+2.5	-8.5	+3.75	-7.5	+4.25	-9	+7.5	-5	+3.25

Station 5+50N 6+50E is only 15 meters from base line

Line	Stn.	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555 IP	3555 QUAD
5+50N	6+50E	-1.5	+2.5	-1.5	+3.75	-14.25	+4.25	-15.75	+2.5	-18	+5
	6+75E	-11	+2.25	-11	+3.75	-10.75	+4.25	-12.25	+3	-14.0	+4.5
	7+00E	-10	+2.5	-9.5	+3.75	-8.75	+4.25	-10.25	+3.25	-12	+4.75
	7+25E	-7.5	+2.5	-7.25	+3.75	-7	+4.25	-8	+3.75	-9.75	+5
	7+50E	-5.75	+2.5	-5.75	+3.75	-4.75	+4.25	-6.25	+4	-7	+5
	7+75E	-4.75	+2.25	-4.75	+3.75	-4.5	+4.25	-5.75	+4	-6.75	+4.75
	8+00E	-1.75	+2.5	+.5	+4.75	+.75	+4.25	0	+5.25	-.75	+5
OFFSET	8+25E	-8	+2.25	-7.75	+3.75	-7.25	+4.25	-8.25	+3.75	-4.25	+3
	8+50E	-5.75	+2.25	-5.75	+3.75	-5	+4.25	-6.25	+4	-7	+5

Sept 12/99

LINE	STN.	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555 IP	3555 QUAD
5+50N	8+75E	-6.75	+2.5	-6.5	+3.75	-6	+4.25	-7	+4.0	-4.25	+3
	9+00	-7.75	+2.25	-7.25	+3.75	-6.75	+4.25	-7.75	+3.75	-4.25	+3
	9+25	-10.5	+2.75	-10	+3.75	-9.5	+4.25	-10.75	+3.25	-6.5	+3.25
	9+50E	-6.25	+2.25	-6	+3.75	-5.5	+4.25	-6.75	+3.75	-3.75	+3
	9+75E	-7.25	+2.5	-7	+3.75	-6.25	+4.25	-7.5	+4	-9	+5
	10+00E	-8	+2.5	-7.75	+3.75	-7	+4.25	-8.25	3.75	-4.75	+3.25
	10+25E	-6.5	+2.5	-6.25	+3.75	-6	+4.5	-7	+4	-7.25	+5

Sept 13/99 Max-Min Survey

Line	Station	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555 IP	3555 QUAD
6+00N	3+75E	-19	+2.5	-19	+3.75	-18	+4.25	-19	+1.75	-10	+4.25
	4+00E	-5	+2.5	-5	+3.75	-4	+4.25	-5.25	+4.25	-5.5	+5
	4+25E	-5.75	+2.5	-5.5	+3.75	-5	+4.25	-6.5	+4	-7	+5
	4+50E	-12	+2.25	-11.25	+3.75	-10.25	+4.25	-11	+3	-6.25	+3.75
	4+75E	-4.75	+2.75	-4.5	+3.75	-3.75	+4.5	-4.75	+4.5	-30	+2.75
	5+00E	-10.75	+2.25	-10.25	+3.75	-9.5	+4.25	-10.75	+3	-5.75	+3.25
	5+25E	-9	+2.5	-9.25	+3.75	-8.25	+4.25	-9.5	+3.75	-5.25	+3.25
	5+50	-7.75	+2.5	-7.5	+3.75	-7	+4.25	-7.25	+4	-4.5	+3.25
	5+75E	-5.75	+2.5	-6	+3.75	-5.25	+4.25	-6.25	+4.25	-3.5	+3
	6+00	-11.25	+2.5	-11	+3.75	-10.25	+4.25	-11.5	+3	-6.5	+3.5
	6+25E	-15	+2.25	-14.75	+3.75	-14	+4	-14.7	+2.5	-7.75	+3.75
	6+50E	-9.5	+2.5	-9.5	+3.75	-9	+4.25	-9.75	+3.5	-5	+3.25
	6+75E	-2.5	+2.5	-1	+3.75	0	+4.25	-1	+5	-.5	+2.25
	7+00	-6.25	+2.5	-7.25	+3.75	-6.75	+4.25	-1	+4	-7.75	+5

Sep 13 Line	Sta	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555 IP	3555 QUAD
6+00N	7+25E	-4	+2.75	-3.75	+3.75	-3	+4.25	-4	+4.5	-2.25	+2.75
	7+50	-4	+2.75	-3.75	+3.75	-3.75	+4.25	-4.75	+4.25	-2.75	+2.75
	7+75E	-5.75	+2.75	-6.25	+3.75	-5.5	+4.25	-6.25	+4.0	-6.75	+4.75
	8+00E	-7	+2.75	-6	+3.75	-5.5	+4.25	-6.75	+4.0	-7.5	+5
	8+25E	-4.25	+2.5	-4.25	+3.75	-3.75	+4.25	-4.75	+4.5	-5	+5
	8+50E	-6	+2.5	-5.5	+3.75	-4.75	+4.25	-6	+4	-3.25	+2.75
	8+75	-6.25	+2.5	-6	+3.75	-6	+4.25	-6.75	+4	-3.5	+3
	9+00E	-10.5	+2.5	-10	+3.75	-9.25	+4.25	-10.5	+3.25	-5.75	+3.25
	9+25E	-8.25	+2.25	-8	+3.75	-7.25	+4.25	-8	+3.75	-4.25	+3
	9+50	-7	+2.75	-6.25	+3.75	-5.25	+4.25	-6.5	+4.25	-3.75	+3
	9+75E	-5	+2.75	-6	+4	-5.25	+4.25	-6.25	+4.25	-6.5	+5
	10+00E	-6.5	+2.5	-6.75	+3.75	-5.75	+4.25	-6.75	+4	-4.75	+3
	10+25E	-6.75	+2.5	-7	+3.75	-6.5	+4.25	-7.75	+4	-8	+5
6AN	10+00E	-2	+2.5	-1.75	+3.75	-1.5	+4.25	-2.75	+5	-2.5	+5
	9+75E	-6	+2.75	-5.75	+3.75	-5.25	+4.25	-6.75	+4.25	-3.75	+3
	9+50E	-3.75	+2.5	-5.5	+3.75	-5.75	+4.25	-7	+4	-3.75	+3
	9+25E	-6	+2.5	-5	+3.75	-4	+4.25	-5	+4.5	-5.25	+5
	9+00E	-4.5	+2.5	-4.5	+3.75	-4	+4.25	-5	+4.25	-3	+2.75
	8+75E	-3.25	+2.5	-3.5	+3.75	-2.75	+4.25	-4.25	+4.5	-4.25	+5
	8+50E	-4.5	+2.5	-7.75	+3.75	-4	+4.25	-5	+4.25	-5.25	+5
	8+25E	-5	+2.5	-4.5	+3.75	-4.5	+4.25	-5.5	+4.25	-6	+5
	8+00E	-5	+2.5	-4.75	+3.75	-4.25	+4.25	-5.5	+4.25	-6	+4.75
	7+75	-5.25	+2.5	-5.25	+3.75	-4.75	+4.25	-6	+4	-6.25	+5
	7+50	-4.25	+2.5	-4	+3.75	-3.75	+4.25	-5	+4.25	-2.5	+2.75

Sept 13 Line	Sta.	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3535 IP	3535 QUAD
6AN	7+25E	-4.75	+2.75	-4	+3.75	-3.5	+4.25	-4.5	+4.5	-2.5	+2.5
	7+00 E	-5.5	+2.5	-5	+3.75	-5	+4.25	-6	+4	-3.25	+3
	6+75 E	-4.5	+2.5	-4.5	+3.75	-4	+4.25	-5	+4.25	-2.75	+3.75
	6+50	-7	+2.5	-7	+3.75	-6	+4	-7.5	+4	-8	+5
	6+25	-6	+2.5	-5.5	+3.75	-5	+4.25	-6.25	+4.25	-3.5	+3
	6+00	-5.5	+2.5	-6.5	+3.75	-5.75	+4.25	-7	+4	-3.75	+3
	5+75	-5	+2.5	-4.75	+3.75	-4	+4.25	-5	+4.25	-5	+5
	5+50	-3.75	+2.5	-3.75	+3.75	-3	+4.25	-4.75	+4.5	-2.5	+2.75
	5+25	-2	+2.5	-2	+3.75	-1.5	+4.25	-2.25	+5	-1.25	+2.5
	5+00	-5.25	+2.5	-5.25	+3.75	-5	+4.25	-6	+4	-2.25	+2.75
	4+75	-6.5	+2.5	-6	+3.75	-5.5	+4.25	-7	+4	-3.75	+3
	4+50 E	-7	+2.5	-7	+3.75	-6.25	+4.25	-7.25	+4	-4	+3
	4+25E	-4.75	+2.75	-4.5	+3.75	-3.75	+4.25	-5	+4.25	-2.75	+2.75
	4+00	-5.25	+2.5	-6.5	+3.75	-6	+4.25	-7	+4.25	-3.75	+3
	3+75E	-2.75	+2.5	-3	+3.75	-2.5	+4.25	-3.25	+4.5	-2	+2.5
	3+50	-4	+2.5	-3.75	+3.75	-3.5	+4.25	-4.25	+4.25	-2.25	+2.5
	3+25E	-5.25	+2.5	-5	+3.75	-4.75	+4.25	-6.25	+4	-3	+3
	3+00 E	-6.25	+2.25	-6.25	+3.75	-5.25	+4.25	-6.25	+4	-3	+2.75
	2+75E	-4.5	+2.5	-4	+3.75	-3.75	+4.25	-4.5	+4.5	-2.5	+2.75
	2+50 E	-7	+2.5	-6.5	+3.75	-6	+4.25	-7.25	+4	-3.5	+3
	2+25 E	-6	+2.5	-6	+3.75	-5.25	+4.25	-6.25	+4.25	-3.5	+3
	2+00E	-8	+2.25	-8.25	+3.75	-7.25	+4.25	-8.5	+3.5	-4.5	+3
	1+75E	-9	+2.5	-8.75	+3.75	-8.25	+4.25	-7.25	+3.5	-5	+3

Sept 13

Line	Stn	222 IP	222 QUAD	444 IP	444 QUAD	888 IP	888 QUAD	1777 IP	1777 QUAD	3555	3555 QUAD
7+00N	3+25E	-10	+.2	-11	+4	-10	+4	-11	+3	-6	+3
	3+50E	-8	+2.5	-8	+4	-7.5	+4	-9	+4	-5	+3
	3+75E	-6	+2.5	-6	+4	-5	+4	-6.5	+4	-4	+3
	4+00E	-8	+2.5	-7.5	+4	-7	+4	-8	+4	-5	+3
	4+25E	-6	+2.5	-6	+4	-6	+4	-7	+4	-4	+3
	4+50E	-11	+2	-10	+4	-10	+4	-11	+3	-6	+3
	4+75E	-11	+2.5	-11	+4	-10	+4	-12	+3	-14	+5
	5+00	-9	+2.5	-9	+4	-8	+4	-9	+3.5	-10	+5
	5+25	-7	+2.5	-8	+4	-7.5	+4	-9	+3.5	-5	+3
	5+50E	-5	+2.5	-5	+3.5	-4	+4	-5	+4	-6	+5
	5+75E	-9	+2.5	-9	+4	-8	+4	-9	+3.5	-5	+3.2
	6+00E	-8	+2.6	-8	+4	-7	+4	-8	+4	-5	+3
	6+25E	-10	+2.5	-10	+4	-9	+4	-10	+3.5	-5.5	+3
	6+50	-6.5	+2.5	-6.5	+4	-6	+4	-7	+4	-4	+3
	6+75	-8	+2	-7	+4	-6.5	+4	-8	+3.75	-4	+3
	7+00E	-6	+2.5	-5	+4	-5	+4	-6	+4	-7	+5
	7+25E	-7.5	+2.5	-7.5	+4	-6	+4.5	-7.5	+4	-4	+3
	7+50E	-9	+2.5	-9	+4	-8	+4.5	-9	+3.75	-10	+5
MAX-MIN SURVEY ALONG TRAIL. STARTED AT "Y" IN ATC TRAIL.											
TR	25S	-4.5	+2.5	-4	+3.75	-3.5	+4	-5	+4.25	-5	+5
	0	-4.5	+2.5	-4.5	+3.25	-4	+4.5	-5	+4.5	-6	+5
	25N	-5.5	+2.5	-4.75	+3.75	-4.25	+4.25	-5.25	+4.25	-6.5	+5
	50N	-6	+2.5	-6.25	+3.75	-5.75	+4.25	-6.5	+4	-7.5	+5
	75N	-5	+2.5	-5	+3.75	-4	+4.25	-5.5	+4	-5.25	+4.75
	100N	-5.25	+2.5	-5.25	+3.75	-4.75	+4.25	-6	+4	-6.5	+4.75

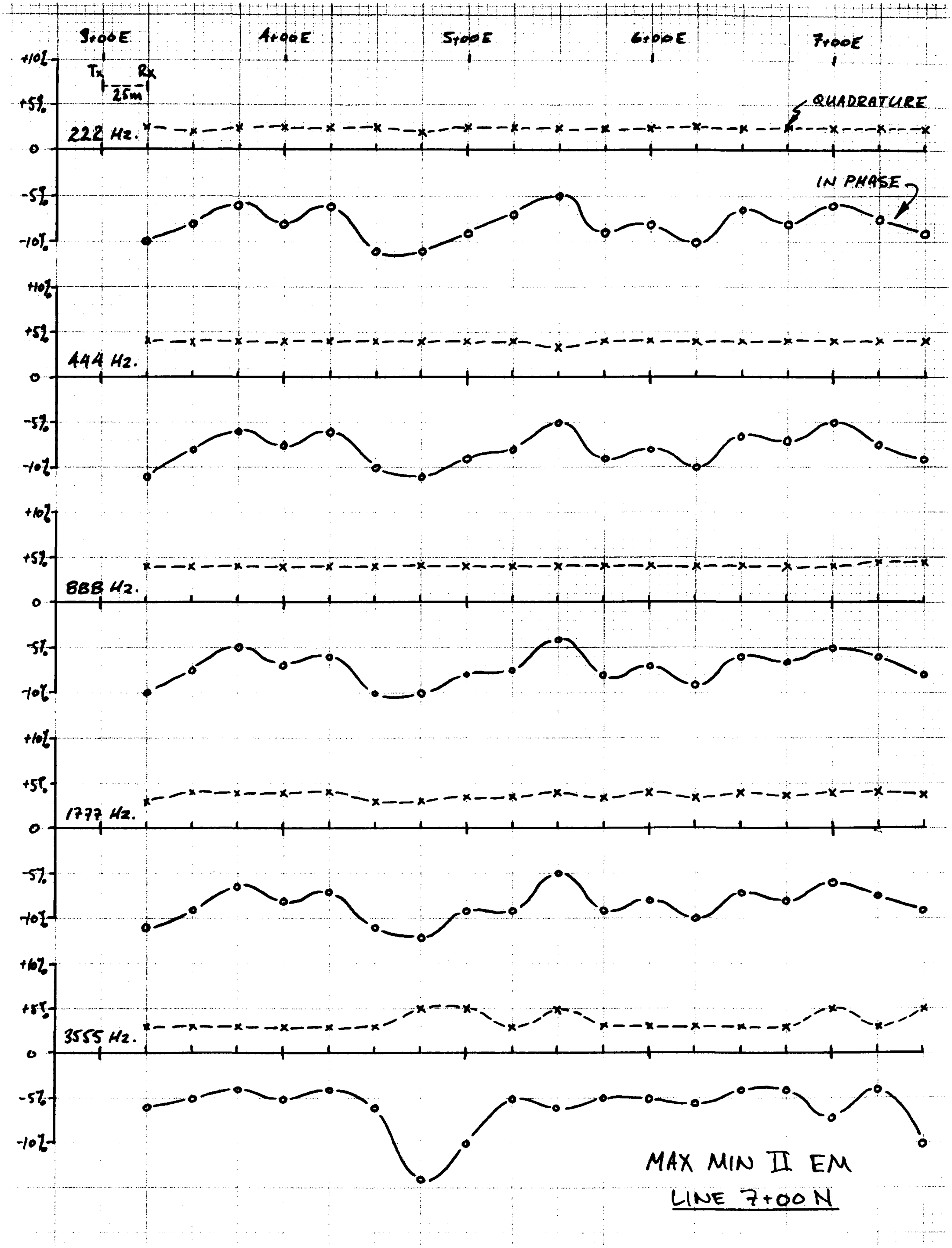
Sept 13

		222		444		888		1777		3555	
LINE	STN.	IP	QUAD	IP	QUAD	IP	QUAD	IP	QUAD	IP	QUAD
TR	125N	-6.25	+2.5	-6	+3.75	-5.25	+4.25	-7	+4	-3.75	+3
	150N	-3.75	+2.5	-4.75	+3.75	-4	+4.25	-5	+4.25	-5.25	4.75
	175N	-3.75	+2.5	-3.5	+3.75	-3	+4.25	-4	+4.25	-4.5	+4.75
	200N	-7	+2.5	-6.75	+3.75	-6.75	+4.25	-6.75	+4	-4.25	+3
	225N	-7	+2.5	7	+3.5	-6.25	+4.25	-7.25	+3.75	-8	+5
	250N	-5.25	+2.5	-5.25	+3.75	-4.5	+4.25	-5.5	+4.25	-5.25	+4.75
	275N	-6.25	+2.5	-5.5	+3.75	-5	-4	-6	+4	-7	+5
	300N	-6.5	+2.5	-6.25	+3.75	-5.75	+4.25	-7	+4	-7.5	+4.75
	325N	-6.25	+2.5	-5.75	+3.75	-4.75	+4.25	-6	+4.25	-7	+5
→	350N	+6.25	+2.5	+7	+3.75	+6.75	+4.25	+6	+6.25	+3.25	+1.65
→	375N	+2.5	+2.5	+2.75	+3.75	+3.0	+4.25	+2.25	+5.5	+1	+2
→	400N	0	+2.5	0	+3.75	+.25	+4.25	-1	+5	-.5	+2.25
	425N	+1	+2.5	+1	+3.75	+1.75	+4.25	+.5	+5.25	+.75	+5
	450N	-5.5	+2.5	-5.75	+3.75	-5	+4.25	-6.25	+4	-3.5	+2.75

		222		444		3555	
LINE	STN.	IP	QUAD	IP	QUAD	IP	QUAD
TR	50S	-8.75	+2.5	-8.25	+4.25	-10.	+4.25
	75S	-6	+2.5	-5	+4.25	+5.25	+4.5
	100S	-6.5	+2.5	-5.5	+4.25	-7	+4.5
	125S	-6.5	+2.5	-6.25	+4.25	-7.75	+4.5
	150S	-7.5	+2.5	-6	+4	-7	+4.5
	175S	-8	+2.5	-7.25	+4.25	-8.75	+4.5
	200S	-5.75	+2.5	-5.25	+4.25	-6.25	+4.5
	225S	-8	+2.5	-7.75	+4.25	-9.5	+4.25
	250S	-9.5	+2.5	-8.75	+4.25	-10.25	+4.25

Sept 13

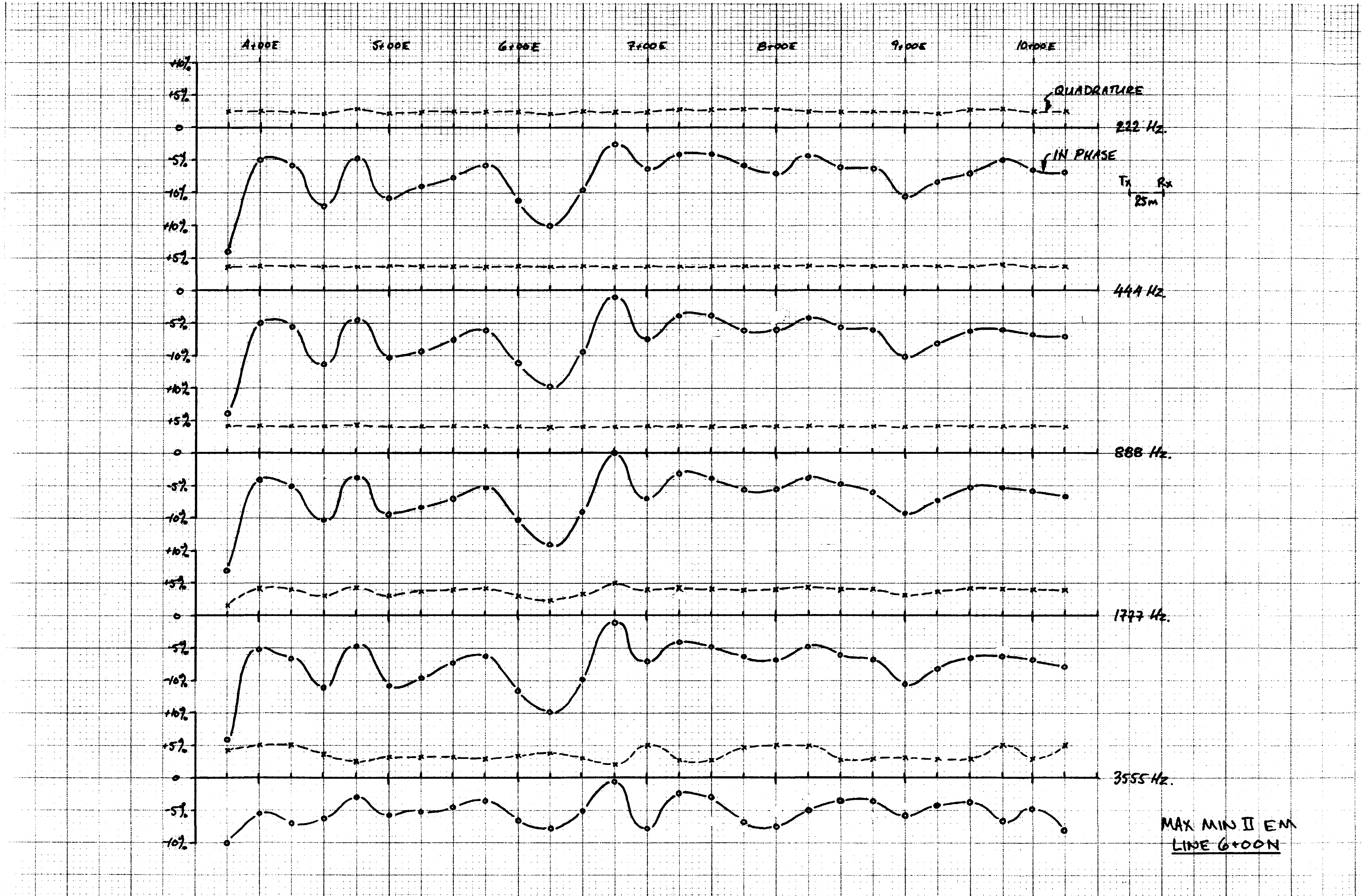
LINE	STN	222 IP	222 QUAD	444 IP	444 QUAD	3555 IP	3555 QUAD
TR	275S	-9.5	+2.5	-8.5	+4.25	-10	+4.75
	300S	-10	+2.5	-8.75	+4.25	-10.25	+4.25
	325S	-9.5	+2.5	-8	+4.25	-10	+4.5
	350S	-9.75	+2.5	-9	+4.25	-11	+4.5
	375S	-9	+2.5	-8.25	+4.25	-10	+4.75

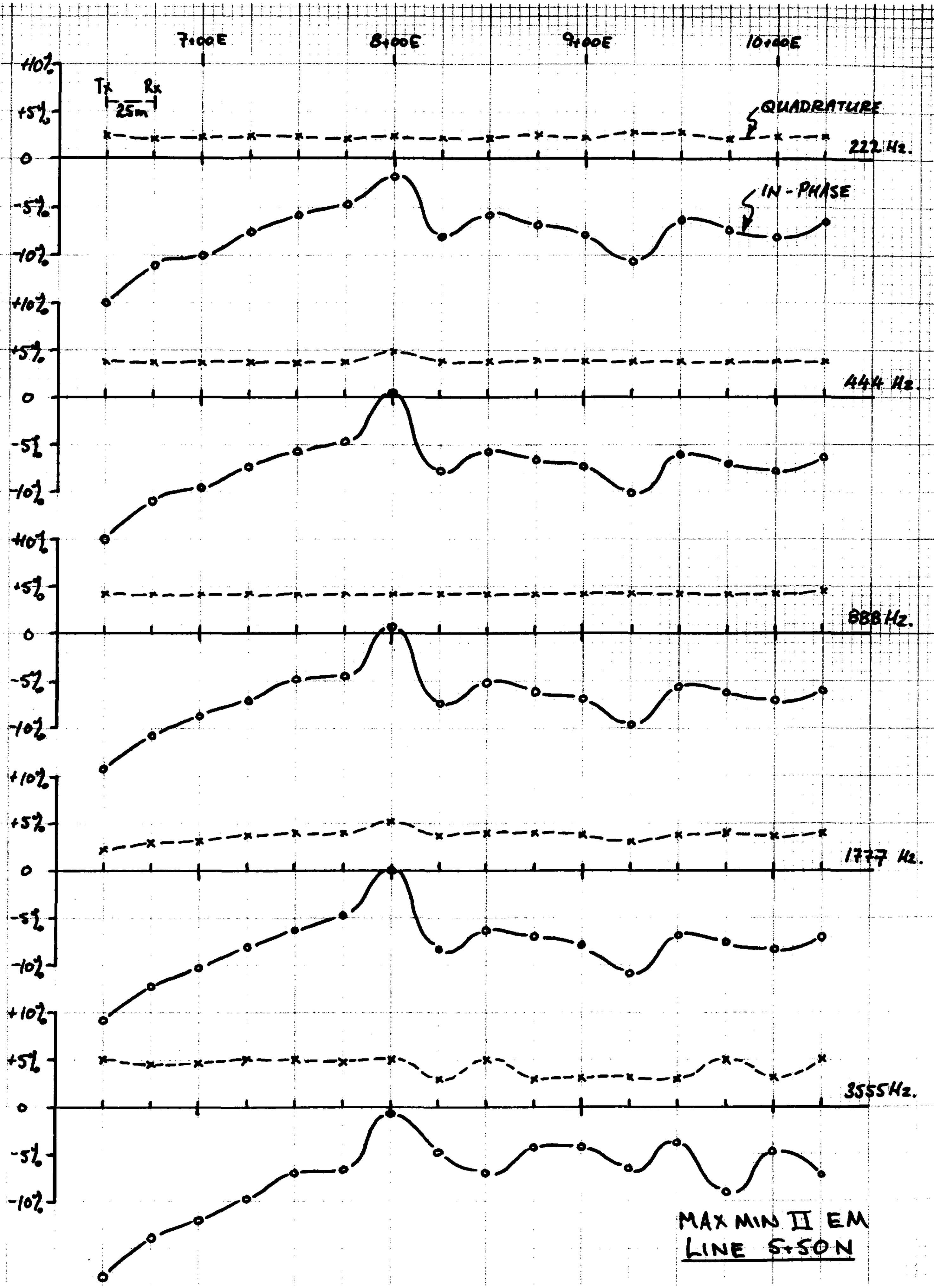


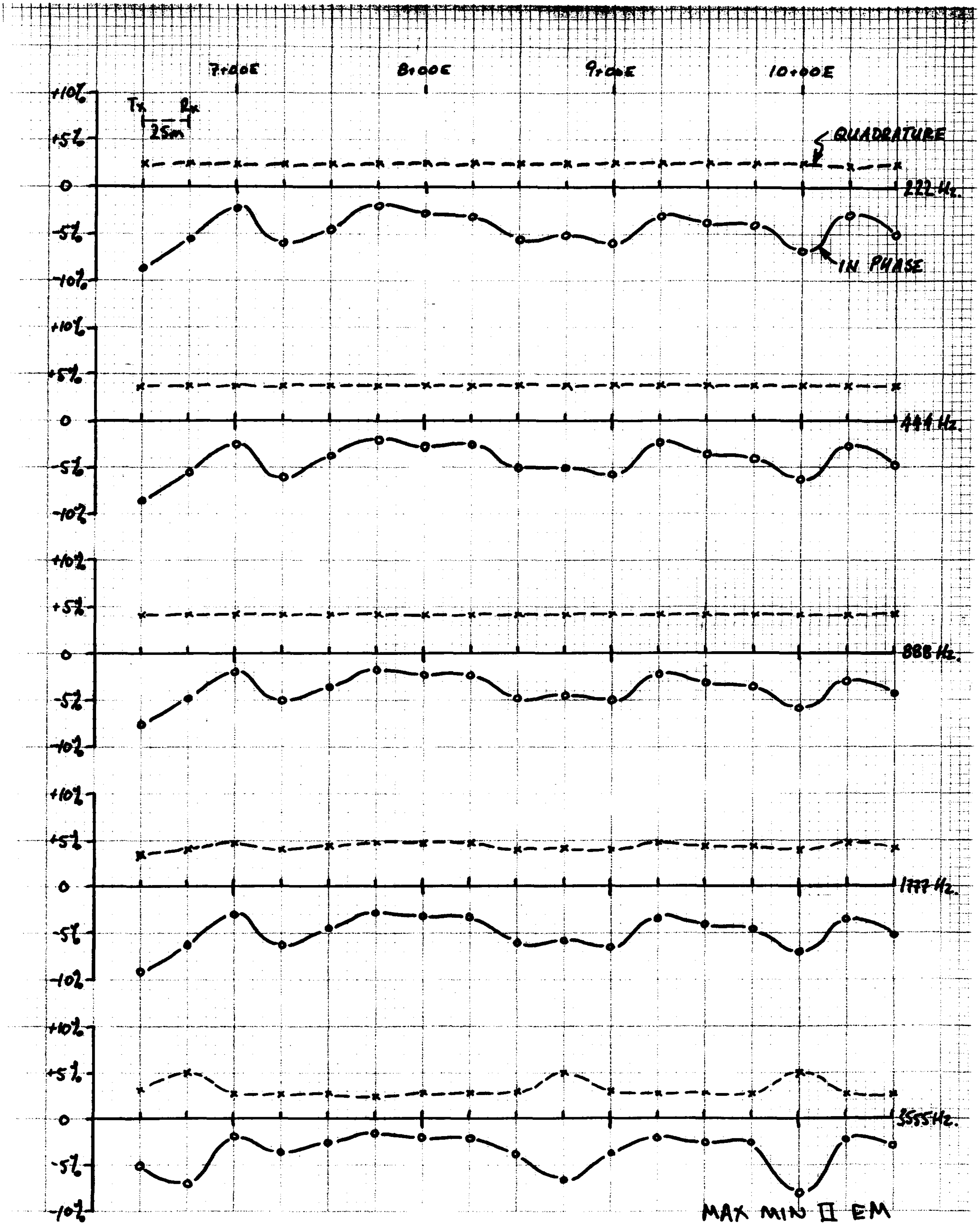
MAX MIN II EM

LINE 7+00 N

3+00E
4+00E
5+00E
6+00E
7+00E
8+00E
9+00E
10+00E
11+00E
QUADRATURE
IN PHASE
222 Hz.
444 Hz.
888 Hz.
1777 Hz.
3555 Hz.
Tx Rx
25m
+10%
+5%
0
-5%
-10%
MAX MIN II EM
LINE 6-A NORTH

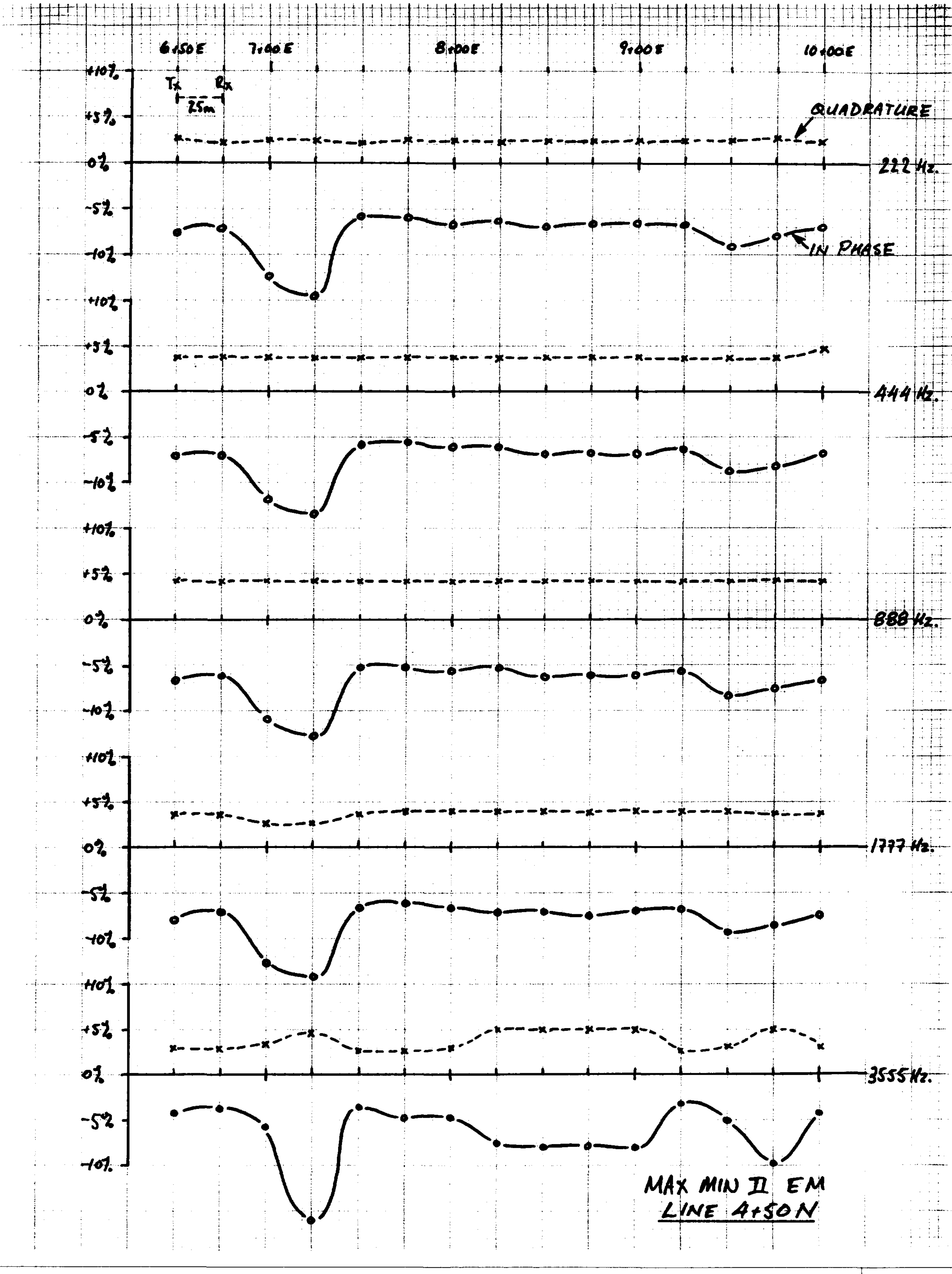

4+00E
5+00E
6+00E
7+00E
8+00E
9+00E
10+00E
QUADRATURE
IN PHASE
222 Hz.
444 Hz.
888 Hz.
1777 Hz.
3555 Hz.
Tx
Rx
25m
+10%
+5%
0
-5%
-10%
MAX MIN II EM
LINE 6+00N


7+00E
8+00E
9+00E
10+00E
Tx
Rx
25m
QUADRATURE
IN-PHASE
+10%
+5%
0
-5%
-10%
222 Hz.
444 Hz.
888 Hz.
1777 Hz.
3555 Hz.
MAX MIN II EM
LINE 5+50N

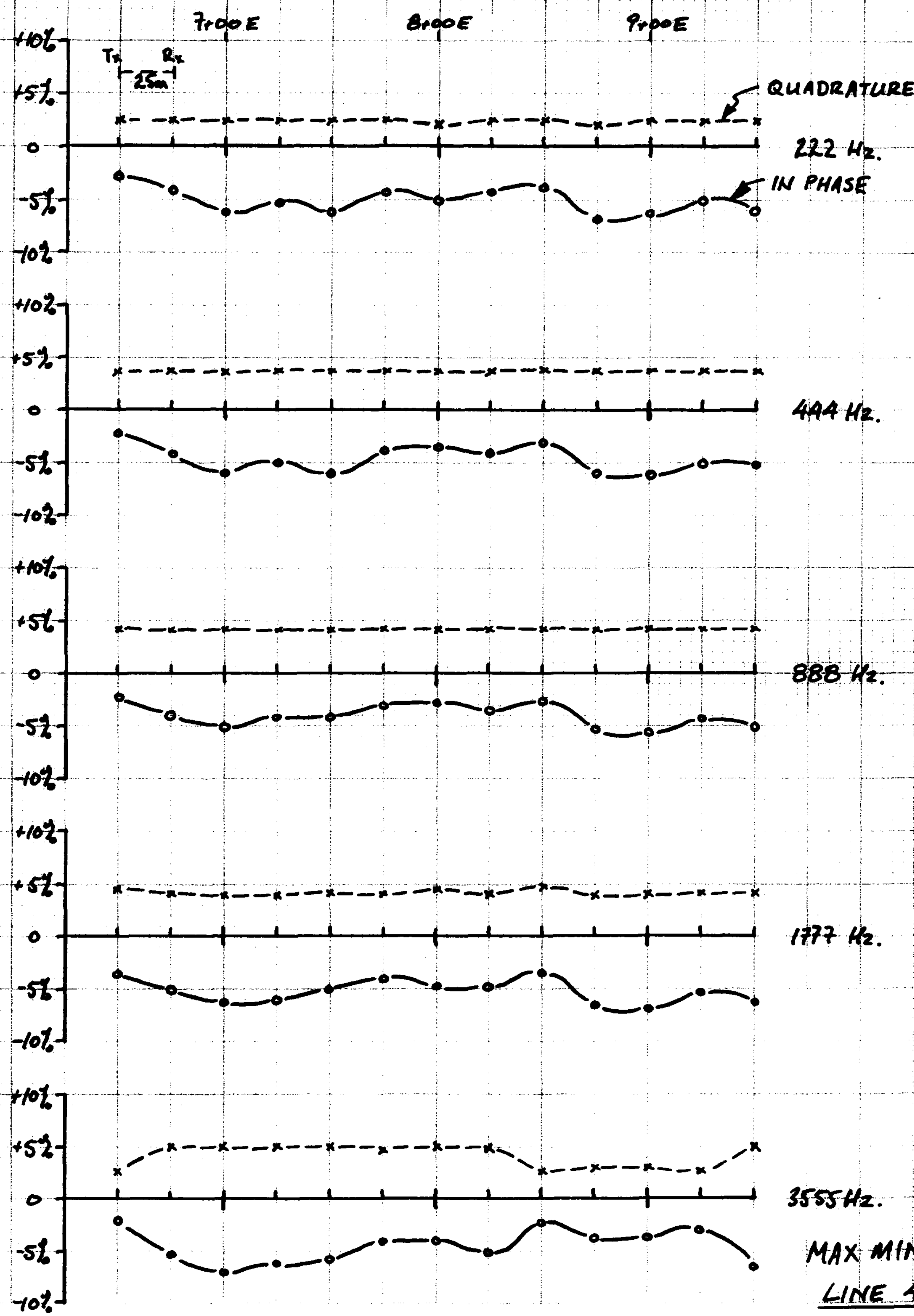


MAX MIN II EM

LINE 5+00N

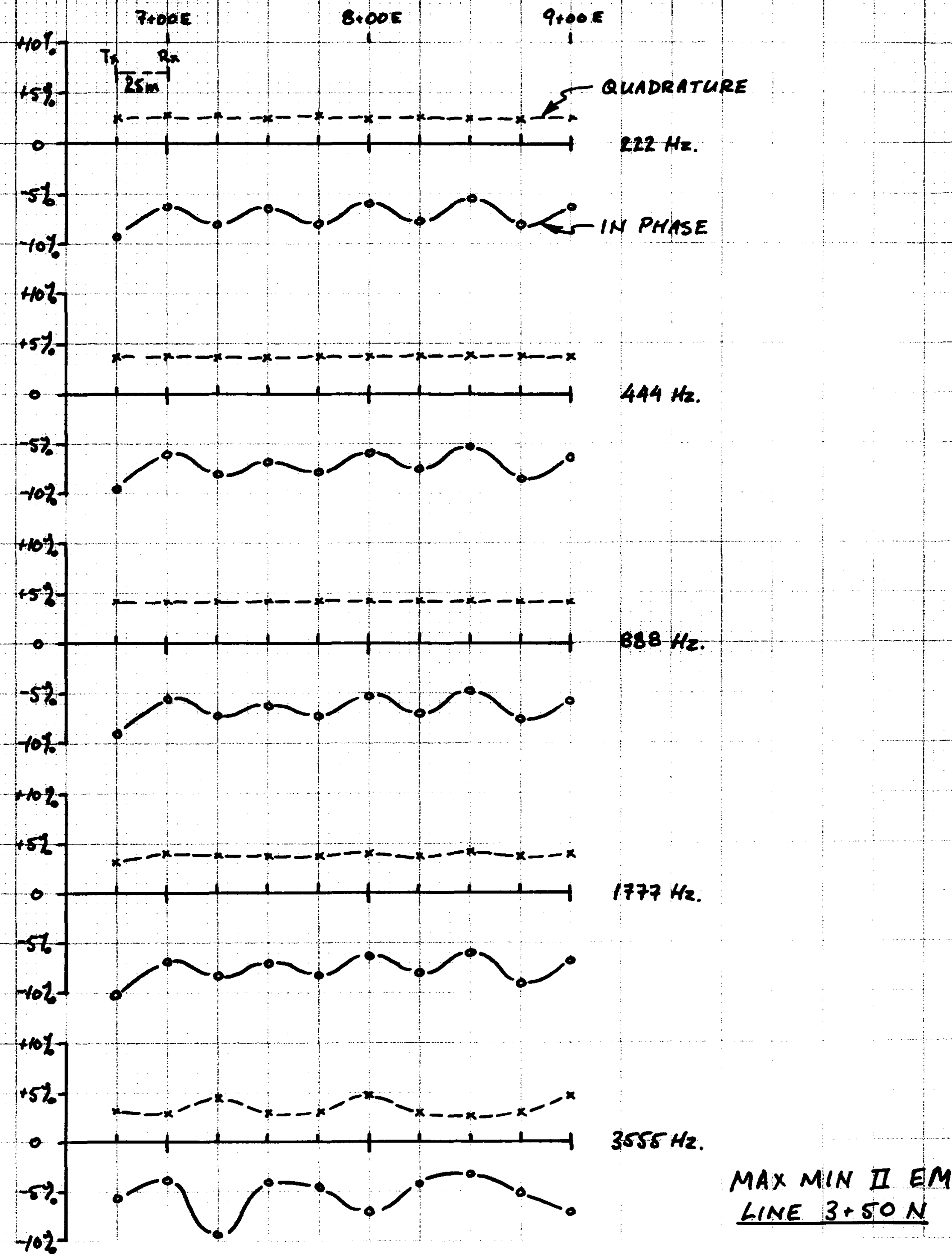


6+50E
7+00E
8+00E
9+00E
10+00E
Tx
Rx
25m
QUADRATURE
IN PHASE
+10%
+5%
0%
-5%
-10%
222 Hz.
444 Hz.
888 Hz.
1777 Hz.
3555 Hz.
MAX MIN II EM
LINE 4+50N

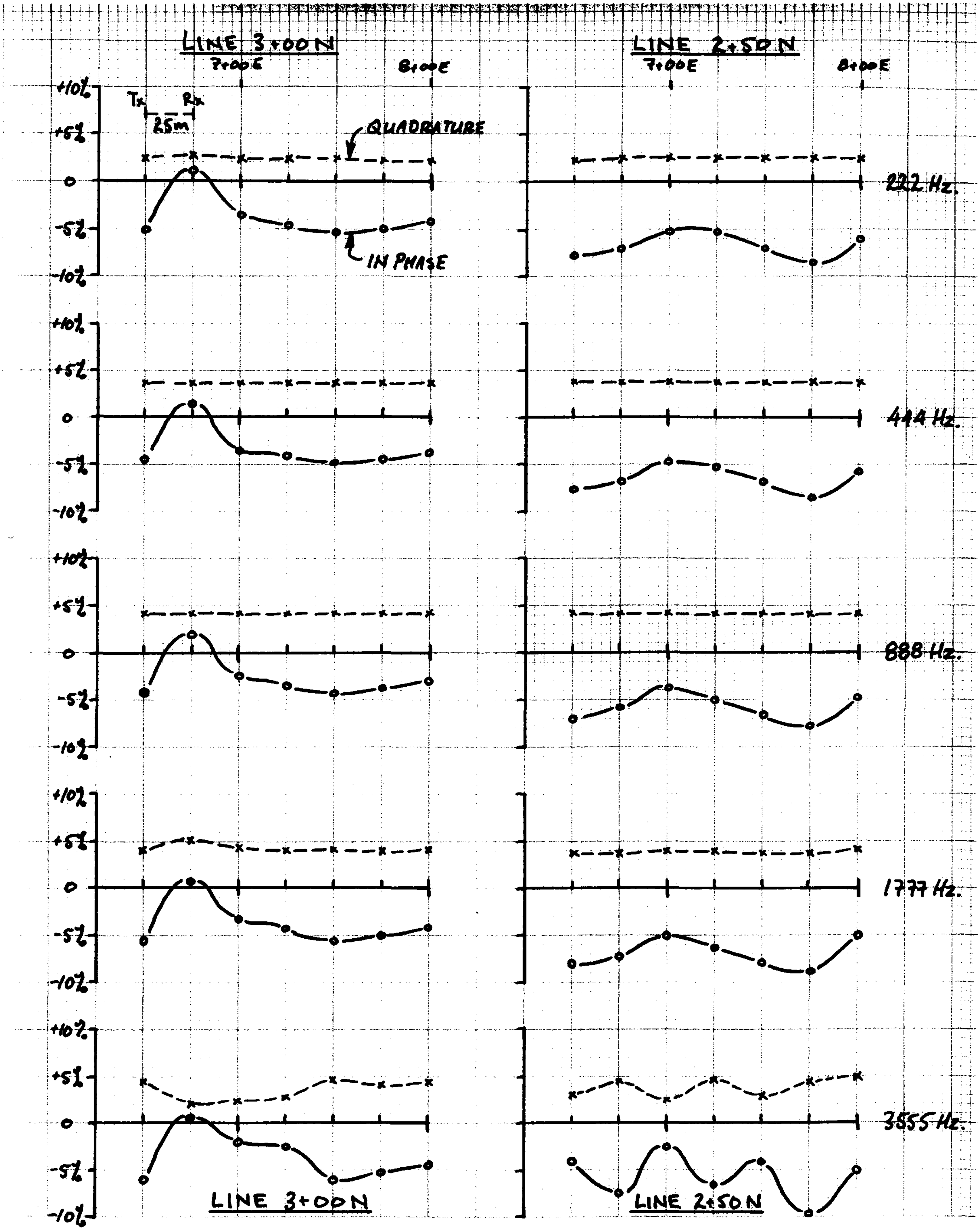


MAX MIN II EM

LINE 4+00N

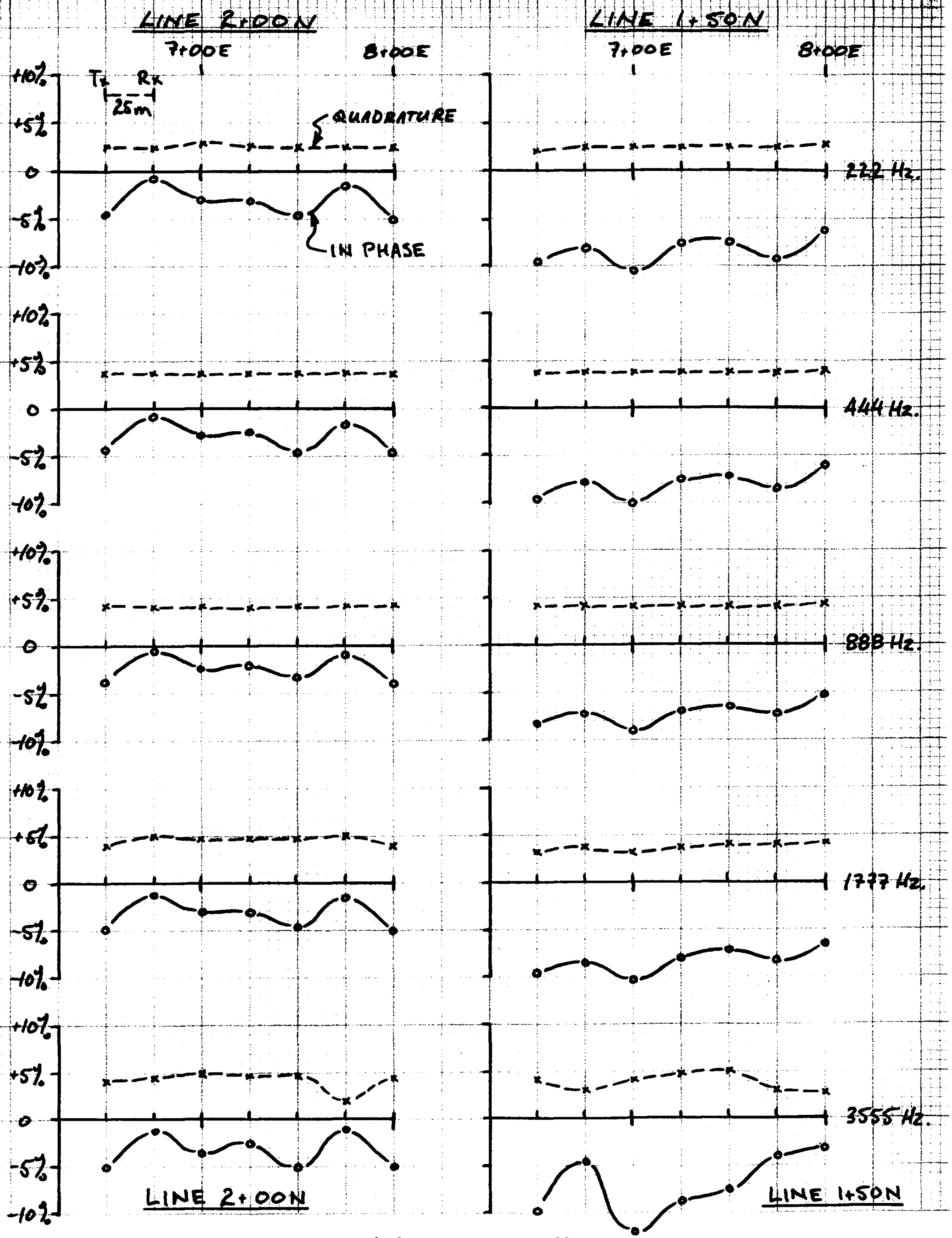


7+00E
8+00E
9+00E
Tx
Rx
25m
+10%
+5%
0
-5%
-10%
QUADRATURE
IN PHASE
222 Hz.
444 Hz.
888 Hz.
1777 Hz.
3555 Hz.
MAX MIN II EM
LINE 3+50 N



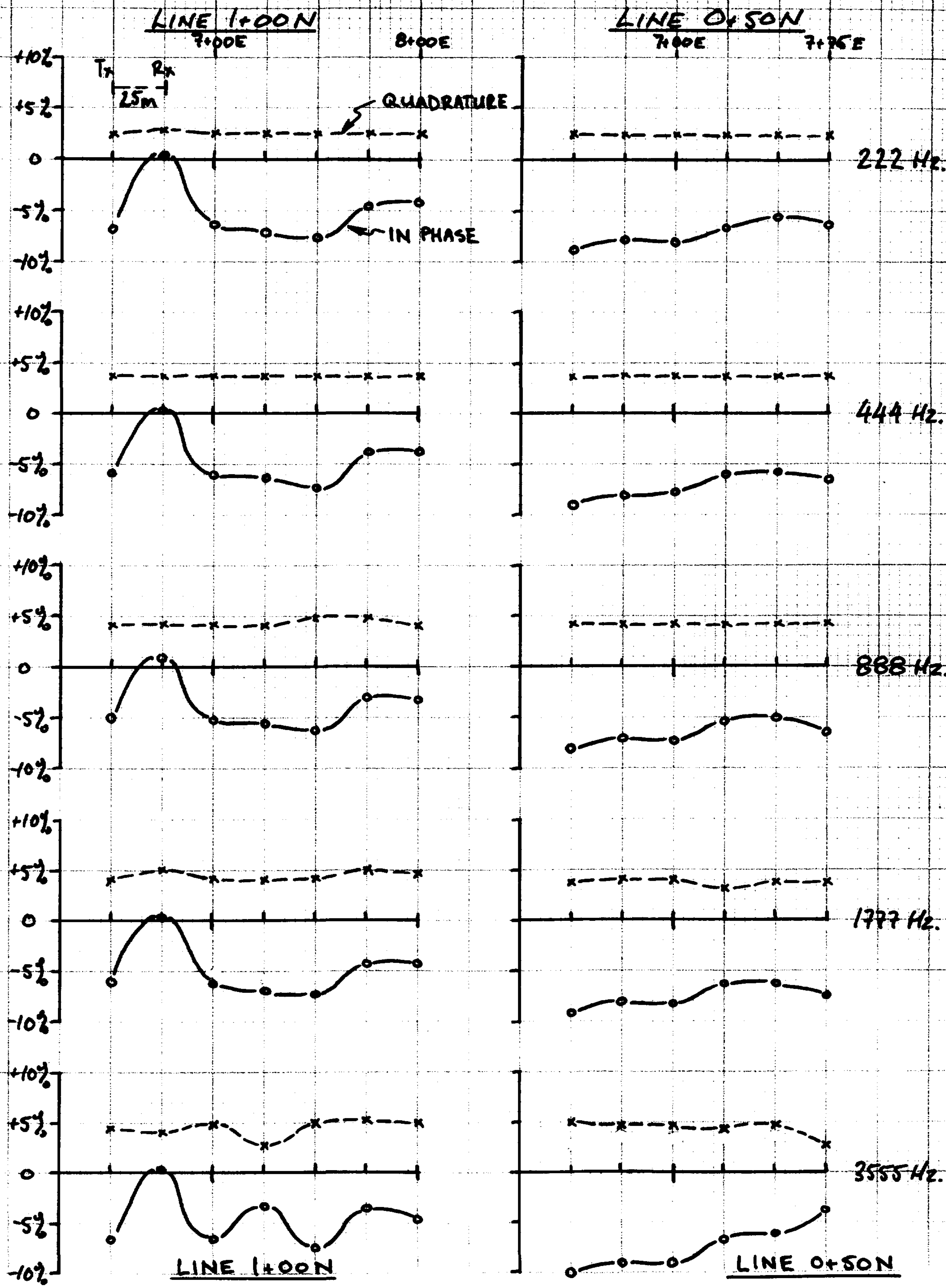
LINE 3+00N
LINE 2+50N
7+00E
8+00E
Tx
Rx
25m
QUADRATURE
IN PHASE
+10%
+5%
0
-5%
-10%
222 Hz.
444 Hz.
888 Hz.
1777 Hz.
3555 Hz.
LINE 3+00N
LINE 2+50N

MAX MIN II EM

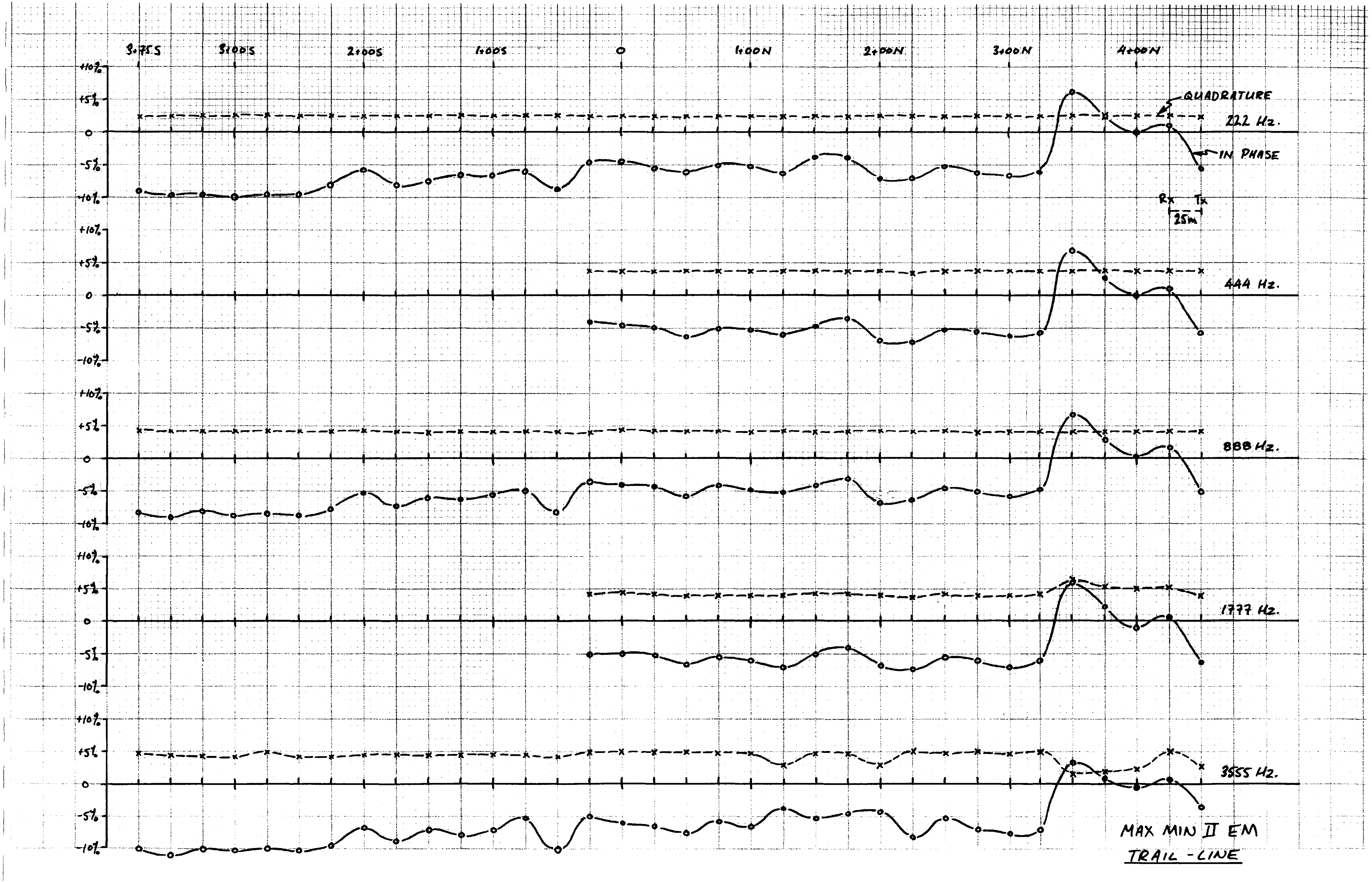


LINE 2+00N
LINE 1+50N
7+00E
8+00E
7+00E
8+00E
Tx
Rx
25m
QUADRATURE
IN PHASE
+10%
+5%
0
-5%
-10%
222 Hz.
444 Hz.
888 Hz.
1777 Hz.
3555 Hz.
LINE 2+00N
LINE 1+50N

MAX MIN II EM


LINE 1+00N
7+00E
8+00E
LINE 0+50N
7+00E
7+75E
Tx
Rx
25m
QUADRATURE
IN PHASE
+10%
+5%
0
-5%
-10%
222 Hz.
444 Hz.
888 Hz.
1777 Hz.
3555 Hz.
LINE 1+00N
LINE 0+50N

MAX MIN II EM


3+75S
3+00S
2+00S
1+00S
0
1+00N
2+00N
3+00N
4+00N
+10%
+5%
0
-5%
-10%
QUADRATURE
222 Hz.
IN PHASE
Rx
Tx
25m
444 Hz.
888 Hz.
1777 Hz.
3555 Hz.
MAX MIN II EM
TRAIL-LINE

Appendix III

Analytical Results and Certificates of Analysis for All Soil and Rock Samples Collected During the 1999 Program

XRAL

XRAL Laboratories
A Division of SGS Canada Inc.

1885 Leslie Street
Don Mills, Ontario
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152

CERTIFICATE OF ANALYSIS

Work Order: 057211

To: **B-MAX Ltd.**
Attn: **Gord Vandevalk**
Brothers Minerals and Exploration
R.R.#3 Milton
HALTON HILLS
ONTARIO, CANADA L9T 2X7

Date : 27/10/99

Copy 1 to :

Copy 2 to :

P.O. No. :
Project No. : JOB# MA99
No. of Samples : 32 SOIL AND ROCKS
Date Submitted : 12/10/99
Report Comprises : Cover Sheet plus
Pages 1 to 6

Distribution of unused material:
Pulps: Discarded After 90 Days Unless Instructed!!!
Rejects: Discarded After 90 Days Unless Instructed!!!

Certified By : [signature]
Dr. Hugh de Souza, General Manager
XRAL Laboratories

ISO 9002 REGISTERED

Report Footer:

L.N.R.	= Listed not received	I.S.	= Insufficient Sample
n.a.	= Not applicable	--	= No result
*INF	= Composition of this sample makes detection impossible by this method		

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

XRAL

XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 057211 **Date:** 27/10/99 **FINAL**

Element.	Au	Pt	Pd	Be	Na	Mg	Al	P	K	Ca	Sc	Ti	V	Cr	Mn	Fe
Method.	FA301	FA301	FA301	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det.Lim.	1	10	1	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2	1	2	0.01
Units.	ppb	ppb	ppb	ppm	%	%	%	%	%	%	ppm	%	ppm	ppm	ppm	%
R99-01	4	<10	5	<0.5	0.03	0.08	0.17	0.11	<0.01	0.68	<0.5	0.02	13	51	149	2.66
R99-02	10	<10	6	<0.5	0.04	0.03	0.43	0.16	<0.01	1.11	<0.5	0.13	27	55	267	3.67
R99-03	5	<10	3	0.7	0.51	0.12	2.46	0.10	0.07	2.52	<0.5	0.06	11	69	117	1.22
R99-04	10	14	3	<0.5	0.33	0.11	1.66	0.09	0.05	1.80	<0.5	0.08	13	65	92	3.72
R99-05	4	11	<1	0.6	0.52	0.18	2.17	0.20	0.11	2.86	0.7	0.07	14	65	128	0.96
R99-06	8	<10	1	<0.5	0.26	0.15	1.15	0.12	0.05	1.54	0.5	0.11	10	69	71	0.44
R99-07	5	12	1	<0.5	0.06	0.16	0.19	0.04	0.01	21.0	0.7	0.05	4	22	215	0.51
S99-001	5	<10	5	<0.5	0.02	0.86	1.85	0.09	0.07	0.49	14.2	0.05	63	178	5110	3.76
S99-002	6	<10	3	<0.5	0.02	1.54	1.87	0.06	0.06	0.47	11.0	0.08	61	209	984	3.86
S99-003	5	13	4	<0.5	0.02	2.05	1.64	0.07	0.07	0.49	11.4	0.09	56	277	958	3.85
S99-004	8	13	5	<0.5	0.02	4.20	1.86	0.14	0.09	0.83	15.1	0.13	74	292	949	5.36
S99-005	11	<10	5	<0.5	0.02	4.29	1.88	0.08	0.13	0.69	19.7	0.12	80	328	1800	5.49
S99-006	12	17	7	<0.5	0.03	6.66	2.00	0.13	0.11	0.87	24.2	0.08	76	373	1680	5.92
S99-007	3	14	5	<0.5	0.03	4.30	1.82	0.14	0.12	0.85	22.5	0.08	88	324	1950	5.69
S99-008	11	<10	3	<0.5	0.02	1.94	0.77	0.08	0.05	0.40	8.7	0.04	27	131	458	2.32
S99-009	13	31	9	<0.5	0.02	0.82	1.48	0.09	0.12	1.12	5.0	0.05	53	118	5710	3.33
S99-010	14	12	3	<0.5	0.02	1.72	1.92	0.08	0.19	0.72	5.5	0.10	80	260	2080	5.24
S99-011	5	13	2	<0.5	0.02	2.26	1.84	0.09	0.15	0.71	6.7	0.08	75	277	1950	5.84
S99-012	10	11	8	<0.5	0.05	1.99	2.17	0.13	0.16	0.85	10.3	0.06	86	251	3070	6.87
S99-013	9	21	7	<0.5	0.06	1.97	1.95	0.11	0.10	0.81	6.7	0.06	78	225	2100	6.08
S99-014	11	17	8	<0.5	0.02	6.67	1.12	0.07	0.06	0.29	16.8	0.04	56	399	980	5.41
S99-015	9	12	5	<0.5	0.02	12.2	1.74	0.05	0.07	0.22	11.6	0.05	62	937	1390	5.88
S99-016	8	19	6	<0.5	0.02	7.64	1.25	0.12	0.10	0.42	9.8	0.06	64	385	1670	5.84
S99-017	6	<10	4	<0.5	0.04	7.07	1.86	0.11	0.08	0.50	9.3	0.08	74	383	1220	5.37
S99-018	6	10	4	<0.5	0.02	5.95	2.00	0.11	0.15	0.45	8.6	0.09	89	377	1720	6.29
S99-019	6	20	3	<0.5	0.02	1.27	0.99	0.05	0.11	0.32	2.6	0.08	66	160	1350	3.99
S99-020	4	18	4	<0.5	0.02	1.04	2.26	0.06	0.04	0.22	1.9	0.10	61	117	293	3.96
S99-021	4	17	3	<0.5	0.01	0.10	0.35	0.03	0.06	0.20	0.6	0.07	44	25	141	1.28
S99-022	2	<10	2	0.8	0.03	0.24	4.29	0.21	0.02	0.92	3.7	0.08	46	35	2400	3.70
S99-023	11	17	14	<0.5	0.03	1.18	2.02	0.28	1.50	0.36	8.0	0.23	226	102	191	12.5

Work Order: 057211 **Date:** 27/10/99 **FINAL**

Element.	Au	Pt	Pd	Be	Na	Mg	Al	P	K	Ca	Sc	Ti	V	Cr	Mn	Fe
Method.	FA301	FA301	FA301	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det.Lim.	1	10	1	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2	1	2	0.01
Units.	ppb	ppb	ppb	ppm	%	%	%	%	%	%	ppm	%	ppm	ppm	ppm	%
S99-024	10	<10	1	<0.5	0.02	0.38	1.75	0.14	0.03	0.27	1.9	0.10	53	22	234	5.01
S99-025	10	12	20	<0.5	0.02	1.29	1.72	0.10	0.17	0.33	2.0	0.12	52	39	326	4.32
*Dup R99-01	4	<10	3	<0.5	0.03	0.08	0.17	0.11	<0.01	0.67	<0.5	0.02	13	50	149	2.67
*Dup S99-006	14	17	6	<0.5	0.03	6.71	2.00	0.13	0.11	0.85	23.7	0.08	75	361	1640	5.79
*Dup S99-018	5	11	3	<0.5	0.02	5.75	2.00	0.11	0.15	0.45	8.7	0.09	90	366	1740	6.27

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Work Order: 057211 **Date:** 27/10/99 **FINAL**

Element.	Co	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W
Method.	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det.Lim.	1	1	0.5	0.5	3	0.5	0.5	0.5	1	0.2	1	10	5	1	0.5	10
Units.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
R99-01	9	3	54.7	10.2	<3	25.2	2.6	3.9	<1	<0.2	<1	<10	<5	9	6.5	<10
R99-02	44	15	321	7.3	<3	45.8	10.7	10.0	<1	<0.2	<1	<10	<5	4	14.2	<10
R99-03	4	30	14.2	13.6	<3	368	3.5	6.0	1	<0.2	<1	<10	<5	43	4.3	<10
R99-04	68	260	565	11.5	<3	247	5.0	10.1	<1	<0.2	<1	<10	<5	21	7.2	<10
R99-05	4	13	17.8	11.8	<3	302	4.9	7.5	<1	<0.2	<1	<10	<5	39	6.7	<10
R99-06	3	15	17.1	7.3	<3	192	3.8	15.5	<1	<0.2	<1	<10	<5	27	3.9	<10
R99-07	2	13	16.9	4.1	<3	1510	13.3	9.9	<1	<0.2	<1	<10	<5	26	7.0	<10
S99-001	38	683	114	293	<3	36.6	119	2.5	1	<0.2	1	<10	<5	246	75.1	<10
S99-002	41	655	137	207	<3	35.6	115	4.1	<1	<0.2	<1	<10	<5	97	91.8	<10
S99-003	45	770	165	191	<3	36.0	122	2.8	<1	<0.2	<1	<10	<5	85	93.7	<10
S99-004	63	1020	281	217	<3	51.7	75.0	6.6	<1	<0.2	<1	<10	<5	113	75.5	<10
S99-005	59	1080	288	222	<3	45.4	80.9	7.5	<1	0.4	<1	<10	<5	126	93.2	<10
S99-006	89	1460	470	298	<3	60.7	100	6.8	<1	<0.2	<1	<10	<5	117	92.4	<10
S99-007	53	1070	302	210	<3	57.3	100	7.0	<1	0.2	<1	<10	<5	132	102	<10
S99-008	22	464	125	88.2	<3	23.5	45.1	2.9	<1	0.2	<1	<10	<5	42	42.9	<10
S99-009	33	386	53.0	260	<3	88.1	8.1	2.1	<1	<0.2	2	<10	<5	280	13.3	<10
S99-010	52	445	60.1	254	<3	49.7	5.4	4.2	<1	<0.2	<1	<10	<5	171	10.7	<10
S99-011	74	644	65.1	307	<3	49.0	9.0	3.6	<1	0.3	<1	<10	<5	186	19.1	<10
S99-012	60	597	86.5	262	<3	78.3	14.8	5.0	<1	<0.2	<1	<10	<5	196	26.5	<10
S99-013	56	545	68.5	233	<3	84.8	12.9	3.8	<1	<0.2	<1	<10	<5	155	24.0	<10
S99-014	68	1420	257	190	<3	18.5	33.5	3.8	<1	<0.2	<1	<10	<5	76	49.8	<10
S99-015	121	2500	369	204	<3	15.1	21.0	4.4	<1	0.3	<1	<10	<5	87	35.9	<10
S99-016	107	1770	239	197	<3	27.7	22.0	4.2	<1	0.2	<1	<10	<5	106	39.9	<10
S99-017	75	1510	184	182	<3	30.5	19.9	3.3	<1	<0.2	<1	<10	<5	91	36.8	<10
S99-018	86	1240	125	245	<3	27.7	20.0	3.7	<1	<0.2	<1	<10	<5	112	30.9	<10
S99-019	49	423	30.5	160	<3	26.0	3.3	2.8	<1	<0.2	<1	<10	<5	91	9.0	<10
S99-020	23	281	48.1	189	<3	16.3	5.2	2.7	1	0.4	<1	<10	<5	66	8.8	<10
S99-021	5	29	8.7	41.9	<3	18.2	1.3	1.2	<1	0.3	<1	<10	<5	75	5.7	<10
S99-022	18	51	33.4	125	<3	82.0	35.9	7.9	1	<0.2	<1	<10	<5	120	34.3	<10
S99-023	3	4	346	89.0	<3	55.6	3.3	7.2	38	1.2	1	<10	<5	542	15.4	<10

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XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 057211 **Date:** 27/10/99 **FINAL**

Element.	Co	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W
Method.	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det.Lim.	1	1	0.5	0.5	3	0.5	0.5	0.5	1	0.2	1	10	5	1	0.5	10
Units.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
S99-024	17	33	123	378	<3	7.4	7.3	4.2	8	0.2	<1	<10	<5	26	8.9	<10
S99-025	21	37	131	499	<3	8.0	6.7	2.3	5	<0.2	<1	<10	<5	28	14.0	<10
*Dup R99-01	8	2	55.6	10.0	<3	25.6	2.6	2.8	<1	<0.2	<1	<10	<5	9	6.0	<10
*Dup S99-006	86	1410	464	291	<3	60.2	97.1	7.3	<1	<0.2	<1	<10	<5	116	91.6	<10
*Dup S99-018	86	1230	125	240	<3	27.7	20.6	3.8	<1	0.3	<1	<10	<5	112	31.3	<10

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 057211 **Date:** 27/10/99 **FINAL**

Element.	Pb	Bi
Method.	ICP70	ICP70
Det.Lim.	2	5
Units.	ppm	ppm
R99-01	<2	<5
R99-02	2	<5
R99-03	<2	<5
R99-04	<2	<5
R99-05	<2	<5
R99-06	<2	<5
R99-07	<2	<5
S99-001	17	<5
S99-002	14	<5
S99-003	10	<5
S99-004	16	<5
S99-005	17	<5
S99-006	21	<5
S99-007	17	<5
S99-008	6	<5
S99-009	55	<5
S99-010	19	<5
S99-011	27	<5
S99-012	31	<5
S99-013	26	<5
S99-014	13	<5
S99-015	17	<5
S99-016	21	<5
S99-017	19	<5
S99-018	24	<5
S99-019	20	<5
S99-020	9	<5
S99-021	12	<5
S99-022	11	<5
S99-023	247	<5

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 057211 **Date:** 27/10/99 **FINAL**

Element.	Pb	Bi
Method.	ICP70	ICP70
Det.Lim.	2	5
Units.	ppm	ppm
S99-024	181	<5
S99-025	113	<5
*Dup R99-01	<2	<5
*Dup S99-006	20	<5
*Dup S99-018	23	<5

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

1885 Leslie Street
Don Mills, Ontario
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152

CERTIFICATE OF ANALYSIS

Work Order: 057419

To: **B-MAX Ltd.**
Attn: Gord Vandevalk
Brothers Minerals and Exploration
R.R.#3 Milton
HALTON HILLS
ONTARIO, CANADA L9T 2X7

Date : 04/11/99

Copy 1 to :

Copy 2 to :

P.O. No. :
Project No. : MA99
No. of Samples : 8 ROCK & SOIL
Date Submitted : 26/10/99
Report Comprises : Cover Sheet plus
Pages 1 to 3

Distribution of unused material:
Pulps: Pulps dumped after 90 days of reporting.
Rejects: *Rejects dumped after 30 days of reporting.*

Certified By :

Dr. Hugh de Souza, General Manager
XRAL Laboratories

ISO 9002 REGISTERED

Report Footer:

L.N.R.	= Listed not received	I.S.	= Insufficient Sample
n.a.	= Not applicable	--	= No result
*INF	= Composition of this sample makes detection impossible by this method		

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 057419 **Date:** 04/11/99 **FINAL**

Element.	Au	Pt	Pd	Be	Na	Mg	Al	P	K	Ca	Sc	Ti	V	Cr	Mn	Fe
Method.	FA301	FA301	FA301	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det.Lim.	1	10	1	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2	1	2	0.01
Units.	ppb	ppb	ppb	ppm	%	%	%	%	%	%	ppm	%	ppm	ppm	ppm	%
R99-08	2	<10	<1	<0.5	0.12	0.10	1.23	0.02	0.02	4.43	0.6	0.06	35	115	709	3.45
R99-09	8	15	<1	<0.5	0.28	0.31	1.66	0.13	0.08	1.76	1.1	0.13	15	76	48	0.68
R99-10	4	10	<1	0.7	0.44	0.11	2.14	0.14	0.05	2.85	<0.5	0.07	9	73	104	2.08
R99-11	2	20	<1	<0.5	0.27	0.07	1.36	0.07	0.03	1.82	<0.5	0.01	8	57	117	2.49
R99-12	4	18	<1	0.7	0.50	0.07	2.69	0.07	0.06	2.62	<0.5	0.03	8	59	87	3.48
R99-13	3	10	<1	0.5	0.24	0.08	1.32	0.08	0.02	1.97	<0.5	0.01	10	52	100	5.36
S99-026	<1	24	3	1.6	0.16	0.93	2.66	0.24	0.08	1.55	11.0	0.03	149	204	6050	12.4
R99-14	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
*Dup R99-08	<1	<10	<1	<0.5	0.12	0.10	1.19	0.02	0.02	4.31	0.5	0.06	34	115	691	3.37

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 057419 **Date:** 04/11/99 **FINAL**

Element.	Co	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W
Method.	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det.Lim.	1	1	0.5	0.5	3	0.5	0.5	0.5	1	0.2	1	10	5	1	0.5	10
Units.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
R99-08	2	6	1.3	8.1	<3	16.7	50.9	21.2	2	<0.2	<1	<10	<5	6	2.3	<10
R99-09	6	18	15.8	12.0	<3	291	4.6	13.0	<1	<0.2	<1	<10	<5	27	3.1	<10
R99-10	35	155	226	9.0	<3	292	3.0	9.4	2	<0.2	<1	<10	<5	23	2.3	<10
R99-11	24	87	245	8.1	<3	194	1.4	3.4	<1	0.2	<1	<10	<5	25	1.9	<10
R99-12	48	188	486	9.5	<3	321	1.2	4.9	1	0.4	<1	<10	<5	39	1.0	<10
R99-13	62	213	776	8.9	<3	159	1.2	3.7	<1	<0.2	<1	<10	<5	15	1.3	<10
S99-026	79	518	82.1	195	<3	223	44.2	5.3	<1	0.4	4	<10	<5	307	88.9	<10
R99-14	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
*Dup R99-08	2	5	1.6	8.1	<3	16.7	49.5	21.1	2	<0.2	<1	<10	<5	6	2.3	<10

Work Order: 057419 **Date:** 04/11/99 **FINAL**

Element.	Pb	Bi
Method.	ICP70	ICP70
Det.Lim.	2	5
Units.	ppm	ppm
R99-08	2	<5
R99-09	<2	<5
R99-10	<2	<5
R99-11	<2	<5
R99-12	<2	<5
R99-13	2	<5
S99-026	73	<5
R99-14	L.N.R.	L.N.R.
*Dup R99-08	<2	<5

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

1885 Leslie Street
Don Mills, Ontario
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152

CERTIFICATE OF ANALYSIS

Work Order: 057590

To: **B-MAX Ltd.**
Attn: **Gord Vandevalk**
Brothers Minerals and Exploration
R.R.#3 Milton
HALTON HILLS
ONTARIO, CANADA L9T 2X7

Date : 12/11/99

Copy 1 to :

Copy 2 to :

P.O. No. :
Project No. :
No. of Samples : 1 Rock
Date Submitted : 28/10/99
Report Comprises : Cover Sheet plus
Pages 1 to 3

Distribution of unused material:
Pulps: Discarded After 90 Days Unless Instructed!!!
Rejects: Discarded After 90 Days Unless Instructed!!!

Certified By : [signature]

Dr. Hugh de Souza, General Manager
XRAL Laboratories

ISO 9002 REGISTERED

Report Footer:
L.N.R. = Listed not received
I.S. = Insufficient Sample
n.a. = Not applicable
-- = No result
*INF = Composition of this sample makes detection impossible by this method
M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 057590 **Date:** 12/11/99 **FINAL**

Element.	Au	Pt	Pd	Be	Na	Mg	Al	P	K	Ca	Sc	Ti	V	Cr	Mn	Fe
Method.	FA301	FA301	FA301	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det.Lim.	1	10	1	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	2	1	2	0.01
Units.	ppb	ppb	ppb	ppm	%	%	%	%	%	%	ppm	%	ppm	ppm	ppm	%
R99-14	10	<10	<1	<0.5	0.27	0.07	1.39	0.07	0.03	1.79	<0.5	0.01	11	79	110	3.70
*Dup R99-14	8	<10	<1	<0.5	0.27	0.07	1.40	0.07	0.03	1.79	<0.5	0.01	11	80	112	3.75

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 057590 **Date:** 12/11/99 **FINAL**

Element.	Co	Ni	Cu	Zn	As	Sr	Y	Zr	Mo	Ag	Cd	Sn	Sb	Ba	La	W
Method.	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70	ICP70
Det.Lim.	1	1	0.5	0.5	3	0.5	0.5	0.5	1	0.2	1	10	5	1	0.5	10
Units.	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
R99-14	54	195	720	8.8	<3	195	1.3	3.7	<1	0.5	<1	<10	<5	24	<0.5	<10
*Dup R99-14	57	198	732	8.9	<3	195	1.3	3.6	<1	0.3	<1	<10	<5	24	<0.5	<10

XRAL XRAL Laboratories
A Division of SGS Canada Inc.

Work Order: 057590 **Date:** 12/11/99 **FINAL**

Element.	**Pb**	**Bi**
Method.	**ICP70**	**ICP70**
Det.Lim.	**2**	**5**
Units.	**ppm**	**ppm**
R99-14	3	<5
*Dup R99-14	4	<5

Appendix IV

Identification of Author, Claim Holder and Field Assistant

Identification of Author And Claim Holders

All fieldwork submitted under this assessment application was carried out by the Author of this report, the Claim Holder of Mining Claims SO 1077361 and a field assistant. All three are Licensed Ontario Prospectors and, for the purpose of this report, are collectively referred to as B-MAX (Brothers Minerals and Exploration). The Author presently holds no direct or indirect interest in the mining claim, which is the subject of this report.

Author:	**Gordon J. Vandevalk**
Prospecting License:	A52179
Client Number:	303366
Address:	R.R.#3 Milton, Halton Hills, Ontario, L9T 2X7
Occupation:	Mineral Exploration Draftsman
Claim Holder (SO 1077361):	**Henry Vandevalk**
Prospecting License:	A52183
Client Number:	303369
Address:	1978 Balsam Avenue, Mississauga, Ontario, L5J 1L2
Occupation:	Water Treatment Plant Operator
Field Assistant:	**William J. Vandevalk**
Prospecting License:	A52184
Client Number:	303370
Address:	1880 Carrera Court, Mississauga, Ontario, L5J 4R5
Occupation:	Trucking Company Dispatch Manager

Ontario — Ministry of Northern Development and Mines

Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use): W0090.00076
Assessment Files Research Imaging

31E13SE2003 2.20601 LOUNT 900

ority of subsections 65(2) and 66(3) of the Mining Act. Under section 8 of the ed to review the assessment work and correspond with the mining land holder. ining Recorder, Ministry of Northern Development and Mines, 6th Floor,

Instructions: - For work performed on Crown Lands before **recording** a claim, use form 0240.
- Please type or print in ink.

2.20601

1. Recorded holder(s) (Attach a list if necessary)

Name: HENRY VANDEVALK LIC. NO. A52183	Client Number: CLN 303369
Address: 1970 BALSAM AVE. MISSISSAUGA	Telephone Number: (905) 823-4319
ONTARIO L5J. 1L2	Fax Number: (905) 823-1597
Name:	Client Number:
Address:	Telephone Number:
	Fax Number:

PROVINCIAL RECORDING OFFICE - SUDBURY
RECEIVED
SEP 27 2000
A.M. 9:35 P.M.
7 8 9 10 11 12 1 2 3 4 5 6

2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

- [x] Geotechnical: prospecting, surveys, assays and work under section 18 (regs)
- [ ] Physical: drilling, stripping, trenching and associated assays
- [ ] Rehabilitation

Work Type: ESTABLISH GRID, MAGNETOMETER SURVEY, VLF-EM SURVEY, MAX-MIN SURVEY, HAND-DIG PITS, SOIL SAMPLING, PROSPECTING, REPORT PREPARATION	**Office Use**
	Commodity
	Total $ Value of Work Claimed: 22,072
Dates Work Performed From: 2 (Day) 7 (Month) 99 (Year) To: 16 (Day) 01 (Month) 2000 (Year)	NTS Reference
Global Positioning System Data (if available) — Township/Area: LOUNT	Mining Division: Southern Ont
M or G-Plan Number: M 184	Resident Geologist District: Sudbury

Please remember to:
- obtain a work permit from the Ministry of Natural Resources as required;
- provide proper notice to surface rights holders before starting work;
- complete and attach a Statement of Costs, form 0212;
- provide a map showing contiguous mining lands that are linked for assigning work;
- include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

Name: GORDON VANDEVALK	Telephone Number: (905) 878-0018
Address: RR #3 MILTON HALTON HILLS ONT. L9T 2X7	Fax Number: (905)-823-1597
Name:	Telephone Number:
Address:	Fax Number:
Name:	Telephone Number:
Address:	Fax Number:

RECEIVED
SEP 27 2000
GEOSCIENCE ASSESSMENT OFFICE

4. Certification by Recorded Holder or Agent

I, HENRY VANDEVALK (Print Name), do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent		Date
[signature]		SEPT 10/2000
Agent's Address	Telephone Number	Fax Number

0241 (02/96)

#2545

5. *Work to be recorded and distributed.* *Work can only be assigned to claims that are contiguous (adjoining) to* the mining land where work was performed, at the time work was performed. A map showing the contiguous lin[illegible] must accompany this form.

	Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	**Number of Claim Units.** For other mining land, list hectares.	**Value of work performed** on this claim or other mining land.	**Value of work applied** to this claim.	**Value of work assigned** to other mining claims.	**Bank.** Value of work to be distributed at a future date.
eg	TB 7827	16 ha	$26, 825	N/A	$24,000	$2,825
eg	1234567	12	0	$24,000	0	0
eg	1234568	2	$ 8, 892	$ 4,000	0	$4,892
1	1077361	12	$22,072	$4,800	0	$17,272
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
		Column Totals				

2.2060 [illegible]

I, HENRY VANDEVALK (Print Full Name), do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing	Date
[signature]	SEPT 10/2000

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- ☑ 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- ☑ 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- ☐ 3. Credits are to be cut back equally over all claims listed in this declaration; or
- ☐ 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp	Deemed Approved Date	Date Notification Sent
RECEIVED SEP 27 [illegible] GEOSCIENCE ASSESSMENT OFFICE	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

0241 (02/96)

Ontario Ministry of Northern Development and Mines

Statement of Costs for Assessment Credit

Transaction Number (office use): W0090.00076

PROVINCIAL RECORDING OFFICE — RECEIVED SEP 27 2000 — A.M. 9:35 P.M.

2.20601

Work Type	Units of work Depending on the type of work, list the number of hours/day worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
Establish grid	9.33 km 19 man/days	$200/man/day	$3,800
Magnetometer Survey	6.6 km 3 man/days	$200/man/day	$ 600
VLF-EM Survey	7.34 km 10 man/days	$200/man/day	$2,000
Max-Min Survey	6.05 km 9 man/days	$200/man/day	$1,800
Prospecting	23 soil, 10 bedrock 1 man/day	$200/man/day	$ 200
Plotting Results	6 man/days	$200/man/day	$1,200
Hand Digging Pitts Final Report Prep	8 man/days 8 man/days	$200/man/day $200/man/day	$1,600 $1,600
Associated Costs (e.g. supplies, mobilization and demobilization).			
Equipment – flagging tape, batteries, etc.			$119.70
ATC rental (18 days)		$150/day	$2,700
Instruments, chain saw, and quick cut saw rental			$931.97
Analysis Costs			$706.08
Final Report – paper, photocopying, etc.			$482.90
Transportation Costs			
6,940 km		$0.30/km	$2,082
Food and Lodging Costs			
50 man/nights		$45/man/night	$2,250
		Total Value of Assessment Work	$22,072.65

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK x 0.50 = Total $ value of worked claimed.

Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, [signature] (please print full name), do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as Recorded Holder (recorded holder, agent, or state company position with signing authority) I am authorized to make this certification.

RECEIVED SEP 27 2000 GEOSCIENCE ASSESSMENT OFFICE

Signature: [signature] Date: Sept 10/2000

0212 (03/97)

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Ontario

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

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

January 12, 2001

HENRY VANDEVALK
1978 BALSAM AVE.
MISSISSAUGA, ONTARIO
L5J-1L2

Dear Sir or Madam:

Submission Number: 2.20601

		Status
Subject: Transaction Number(s):	W0090.00076	Approval After Notice

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact JIM MCAULEY by e-mail at james.mcauley@ndm.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,

Lucille Jerome

ORIGINAL SIGNED BY
Lucille Jerome
Acting Supervisor, Geoscience Assessment Office
Mining Lands Section

Correspondence ID: 15602
Copy for: Assessment Library

Work Report Assessment Results

Submission Number: 2.20601

Date Correspondence Sent: January 12, 2001

Assessor: JIM MCAULEY

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W0090.00076	1077361	LOUNT	Approval After Notice	January 08, 2001

Section:
14 Geophysical MAG
14 Geophysical VLF
14 Geophysical EM
9 Prospecting PROSP
13 Geochemical GCHEM

The 45 days outlined in the Notice dated November 24, 2000 have passed.

Assessment work credit has been approved as outlined on the attached Distribution of Assessment Work Credit sheet.

The assessment credit is being reduced by $2,438. The TOTAL VALUE of assessment credit that will be allowed, based on the information provided in this submission, is $19,635.

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.

Correspondence to:
Resident Geologist
Sudbury, ON

Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):
HENRY VANDEVALK
MISSISSAUGA, ONTARIO

Correspondence ID: 15602

Distribution of Assessment Work Credit

The following credit distribution reflects the value of assessment work performed on the mining land(s).

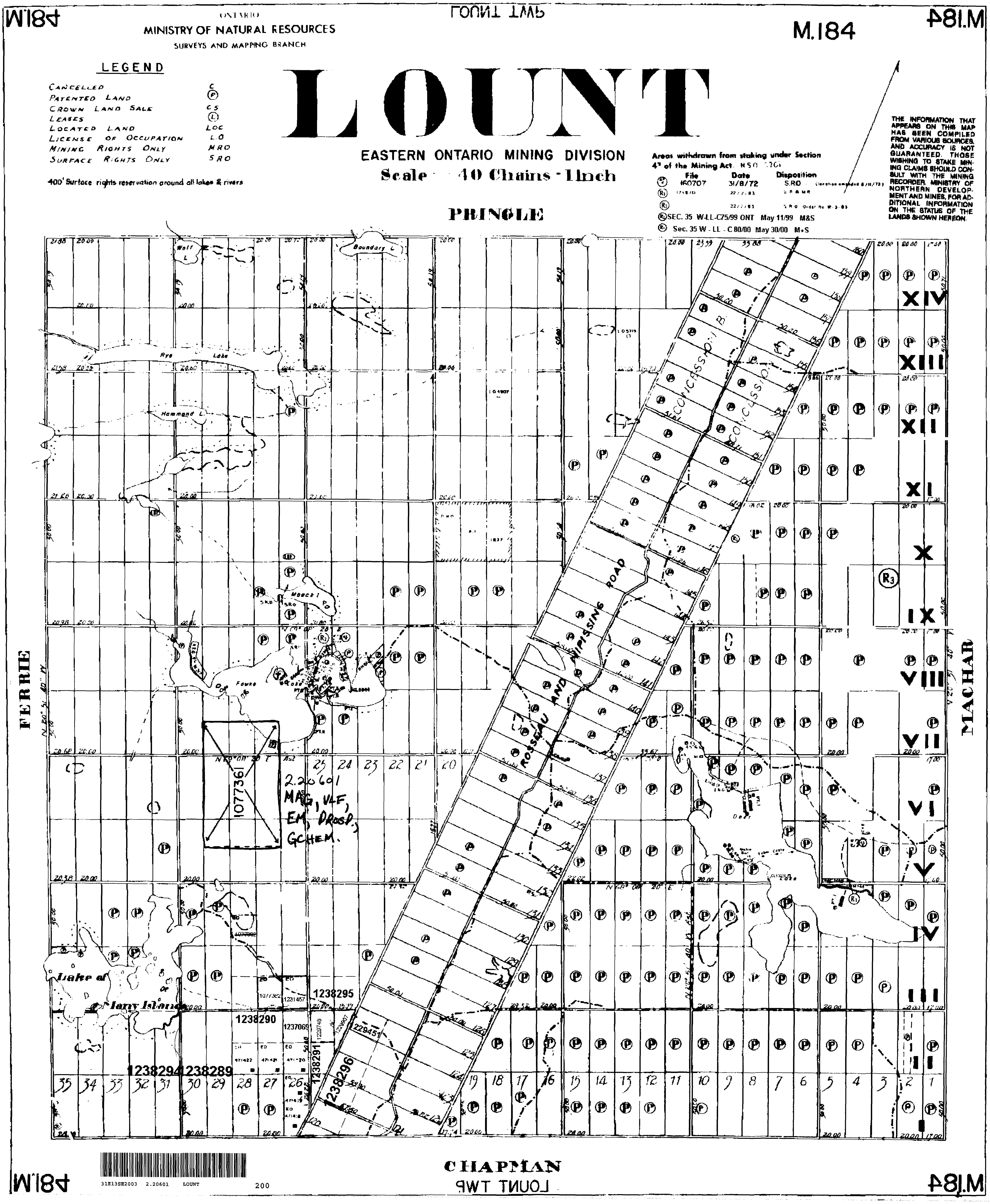
Date: January 12, 2001

Submission Number: 2.20601

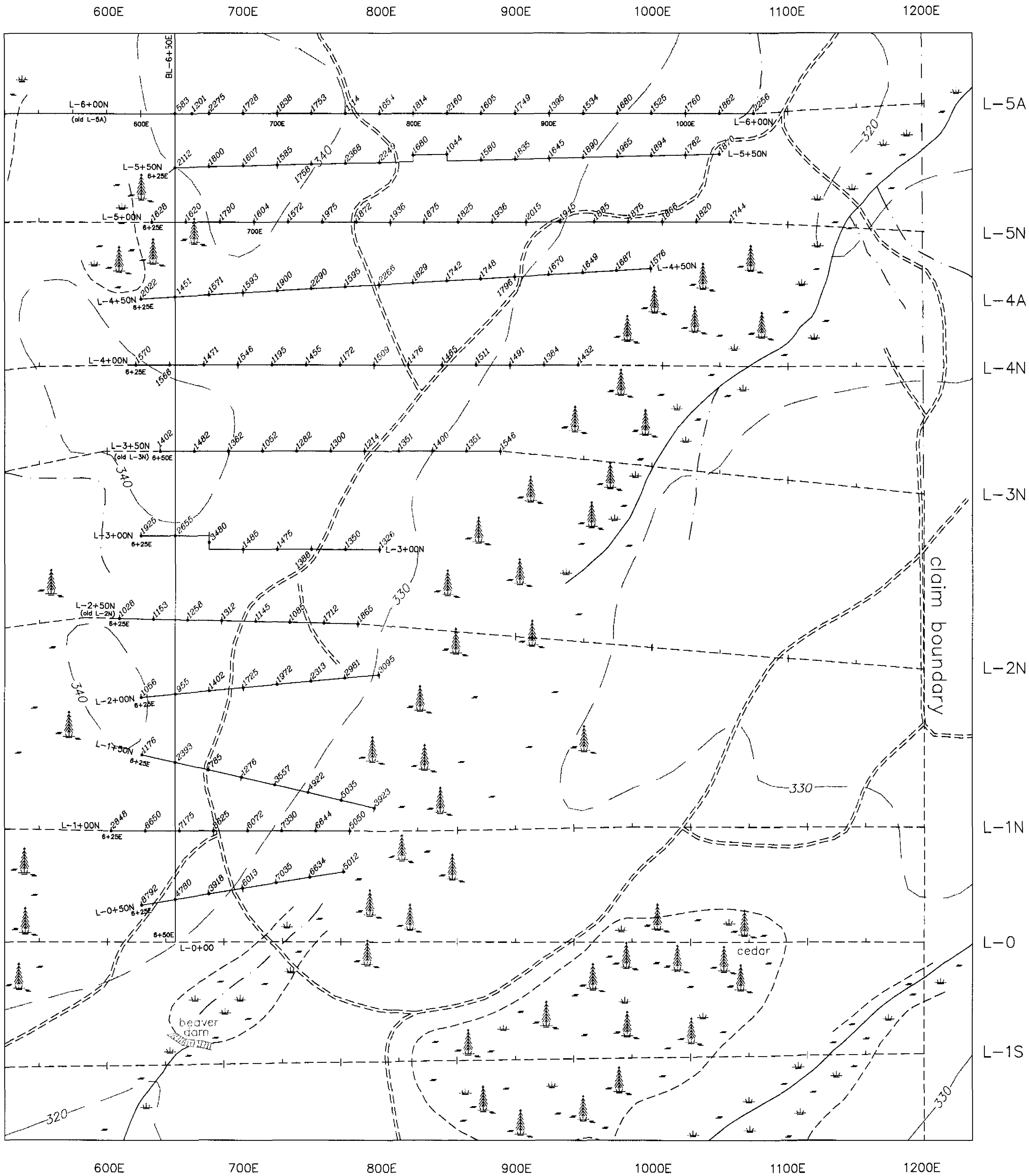
Transaction Number: W0090.00076

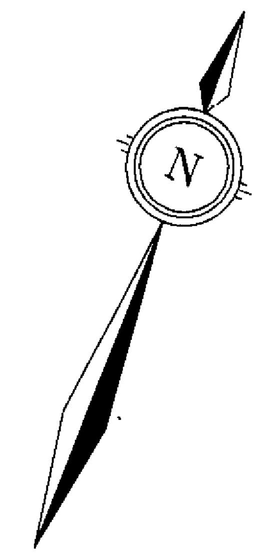
Claim Number	Value Of Work Performed
1077361	19,635.00
Total: $	19,635.00

Correspondence ID: 15602



M.184
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH
LEGEND
Cancelled C
Patented Land (P)
Crown Land Sale CS
Leases (L)
Located Land LOC
License of Occupation L.O
Mining Rights Only MRO
Surface Rights Only SRO
400' Surface rights reservation around all lakes & rivers
LOUNT
EASTERN ONTARIO MINING DIVISION
Scale 40 Chains - 1 Inch
PRINGLE
Areas withdrawn from staking under Section 4? of the Mining Act. RSO 1970
File Date Disposition
160707 31/8/72 S.RO
SEC. 35 W-LL-C75/99 ONT May 11/99 M&S
Sec. 35 W - LL - C 80/00 May 30/00 M+S
THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.
FERRIE
MACHAR
CHAPMAN
LOUNT TWP
Rye Lake
Hammond L
Wolf L
Boundary L
Fowke
Lake of Many Islands
ROSSEAU AND NIPISSING ROAD
CONCESSION B
CONCESSION A
XIV
XIII
XII
XI
X
IX
VIII
VII
VI
V
IV
III
II
I
1077361
2.20601 MAG, VLF, EM, PROSP., GCHEM.
1238295
1238290
1238294
1238289
1238291
1238296
1229451
31E13SE2003 2.20601 LOUNT 200





Instrument: GeoMetrics G-816
Proton Magnetometer

Base Value for Total Magnetic
Field data is 55,000nT

2.2060

Symbols

1998 flagged survey grid line

1999 cut survey grid line

atv trail

wetland

dense softwood stand

flooded forest

elevation contour (metres a.m.s.l.)

0m 50 100 200

1: 2,500

MINING CLAIM SO 1077361
Lount Township, Ontario

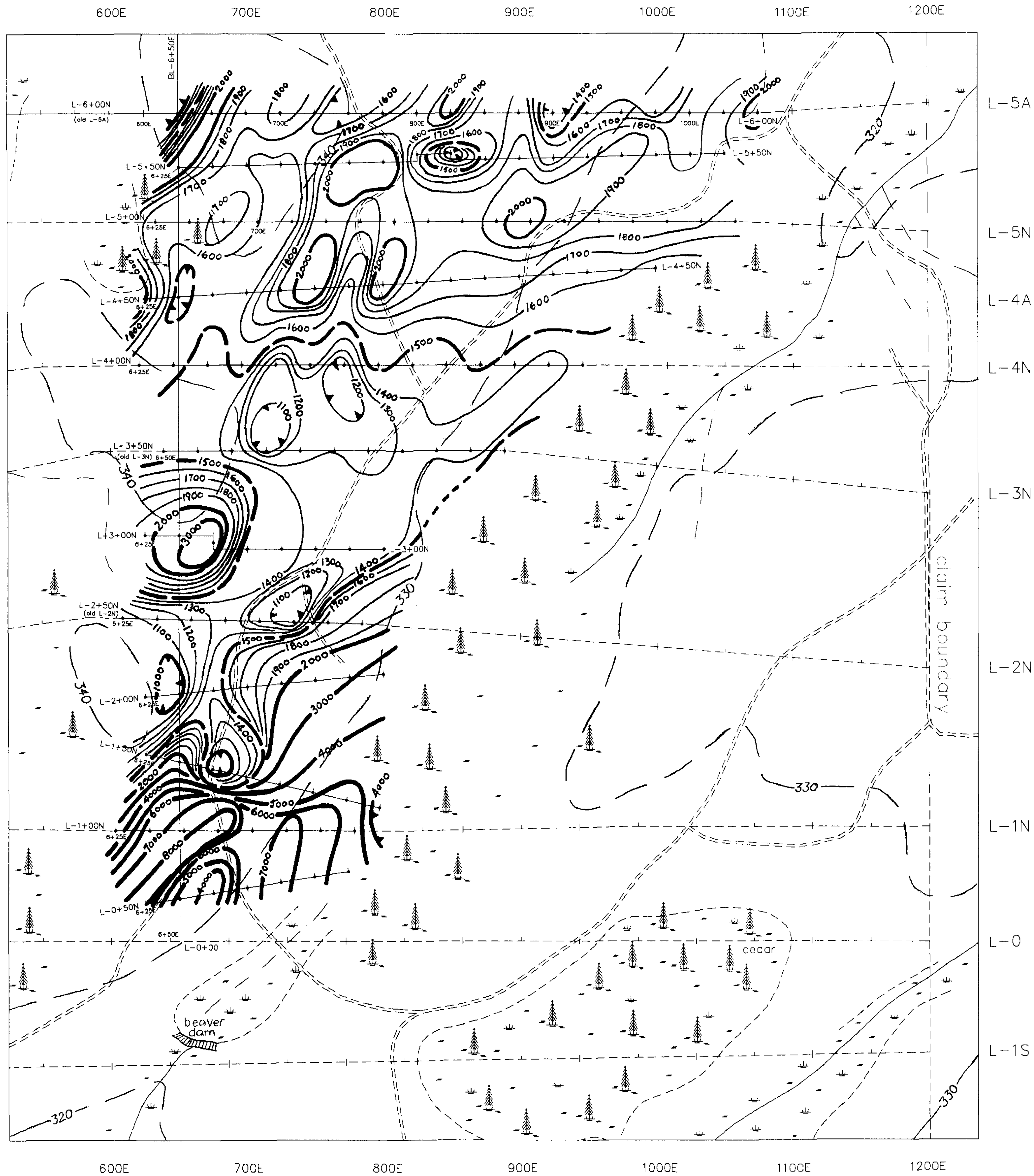
Area A – Initial Magnetometer Survey

TOTAL FIELD VALUES

By: G. Vandevalk | Date: January 2000

OPAP File Number: 0P99-051

MAP 1



Instrument: GeoMetrics G-816
Proton Magnetometer

Base Value for Total Magnetic
Field data is 55,000nT

Contour Intervals

1,000nT
500nT
100nT

Symbols

1998 flagged survey grid line

1999 cut survey grid line

atv trail

wetland

dense softwood stand

flooded forest

elevation contour (metres a.m.s.l.)

0m 50 100 200

1:2,500

MINING CLAIM SO 1077361
Lount Township, Ontario

Area A – Initial Magnetometer Survey

CONTOURS OF TOTAL FIELD

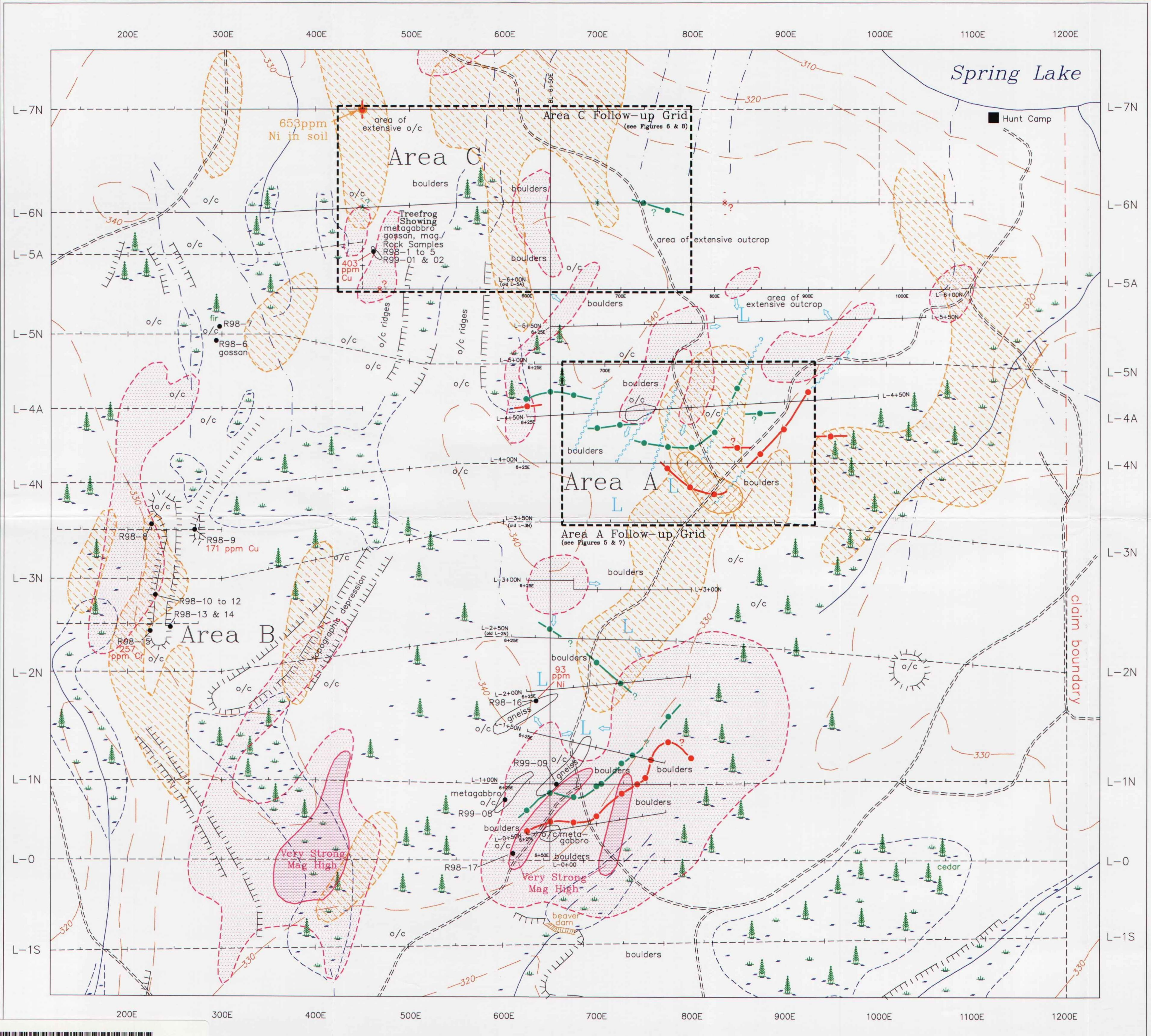
By: G. Vandevalk

Date: January 2000

OPAP File Number:
OP99-051

MAP 2

31E13SE2003 2.20601 LOUNT 220



NLK (Seattle, Wash.)

NAA readings taken facing 002° Az.

NLK readings taken facing 204° Az.

NAA (Cutler, Mne.)

LEGEND

VLF-EM Surveys

Instrument: Geonics EM-16 VLF-EM Receiver

Conductor Interpretation

NAA (Cutler, Mne.)
- good conductor
- possible conductor

NLK (Seattle, Wash.)
- good conductor
- possible conductor

Magnetic Surveys
- area of magnetic high (for 1998 and 1999 survey areas)
- L area of magnetic low (for 1999 survey area only)
- steep magnetic gradient (for 1999 survey area only)
- interpreted fault (for 1999 survey area only)

Geochemistry
- limit of 1998 soil geochemical anomalies (Ni, Co, Cr, Fe & Mg)
- Area A "core" soil geochemical where Ni, Co, Cr, Fe & Mg are all coincidently highly anomalous
- o/c outcrop
- R99-09 location of 1998 & 1999 rock samples

2.2060 1

Symbols
- 1998 flagged survey grid line
- 1999 cut survey grid line
- atv trail
- wetland
- dense softwood stand
- flooded forest
- elevation contour (metres a.m.s.l.)

0m 50 100 200

1:2,500

MINING CLAIM SO 1077361
Lount Township, Ontario

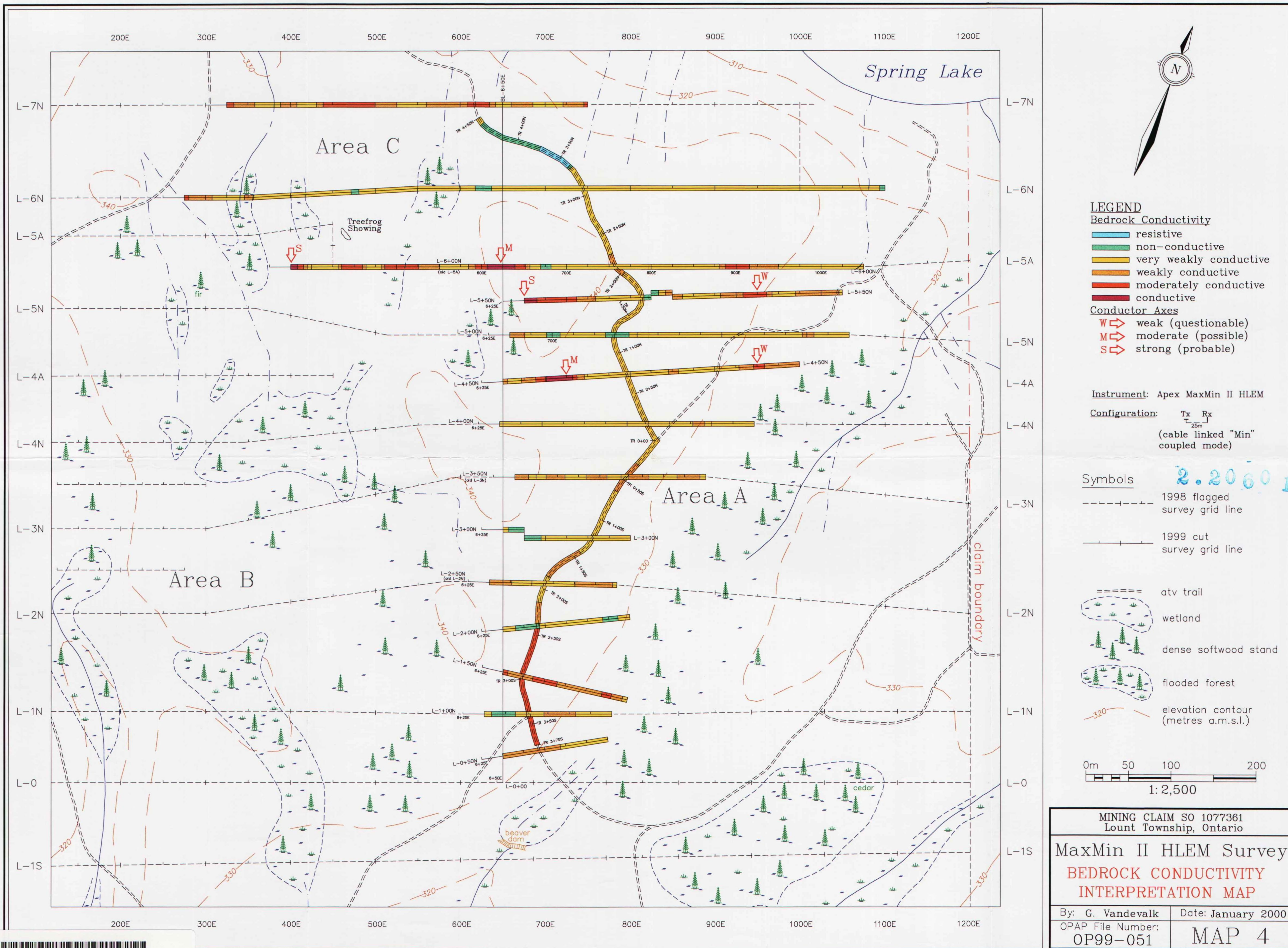
Initial VLF-EM Survey and Magnetics

INTERPRETATION MAP

By: G. Vandevalk | Date: January 2000

OPAP File Number: OP99-051

MAP 3



31E13SE2003 2.20601 LOUNT 240