COMINCO LTD.

EXPLORATION
NTS:104G/2,4

WESTERN CANADA

FOREMORE PROPERTY

LIARD MINING DISTRICT

BRITISH COLUMBIA

1992

# ASSESSMENT REPORT ON

# GEOPHYSICAL SURVEYS

LAT.57°02'
LONG.130°54'

WORK PERFORMED: JUNE 1992



OCTOBER 1992

R.W. HOLROYD

# TABLE OF CONTENTS

# LIST OF PLATES

COMINCO LTD

EXPLORATION
NTS:104G/2,4

WESTERN CANADA

# FOREMORE PROPERTY

# 1992 ASSESSMENT REPORT ON

# GEOPHYSICAL SURVEYS

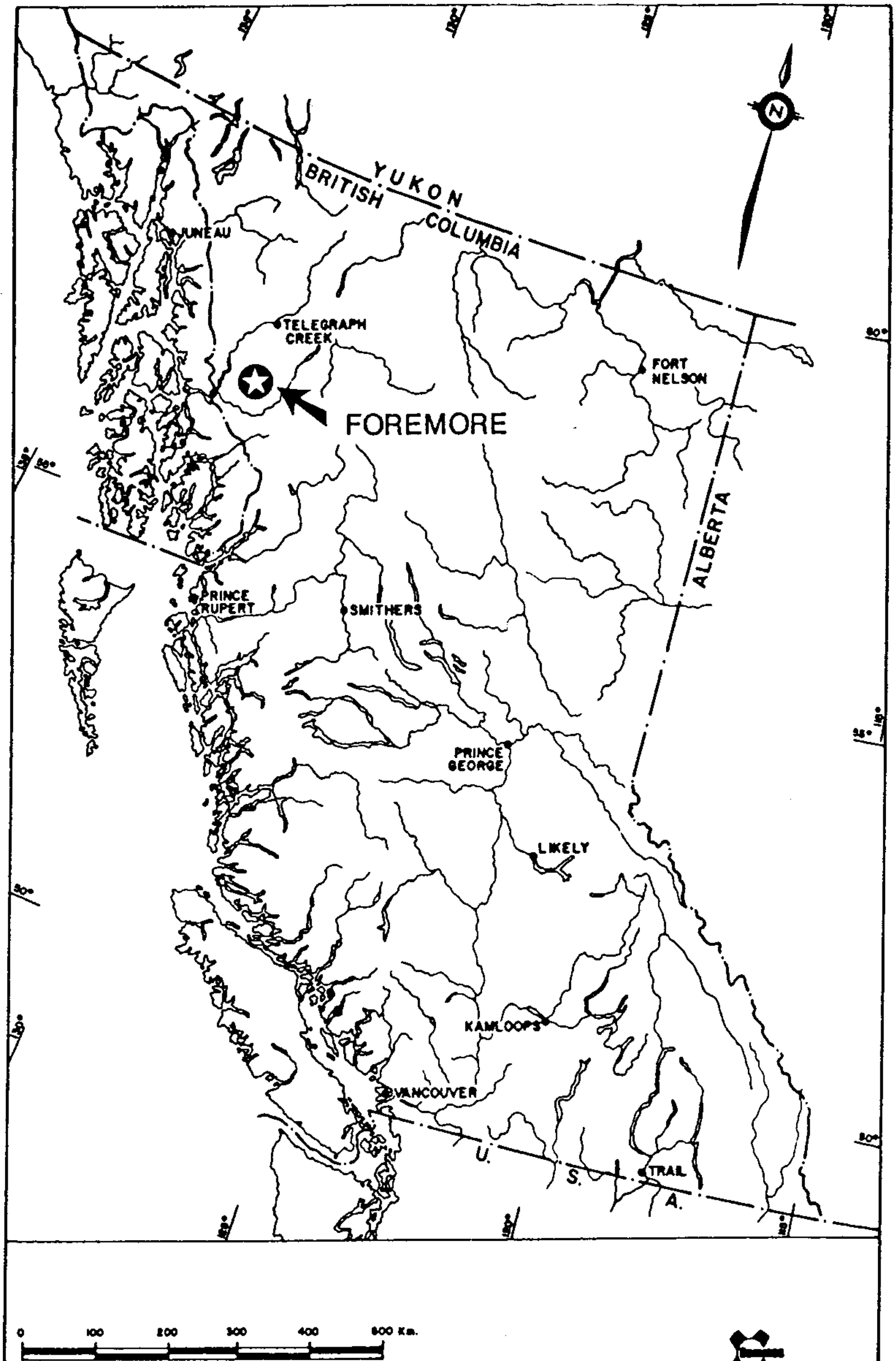

## SUMMARY

A brief geophysical program was carried out in the soutwestern portion of the Foremore property in 1992. This program mainly involved UTEM surveys from several loop configurations, though limited magnetics and HLEM surveys were undertaken. The work was designed to further evaluate Conductors D and E, which were outlined in 1990 UTEM surveys, extending under a thick cover of glacial ice. The conductors appear to be related to mineralized limestones exposed in a nunatack along the projection of the conductors. In conjunction with the Cominco geophysical program, a brief radar program was contracted to glaciologists from UBC in an effort to map the sub-glacial topography in the area of Conductors D and E.

The geophysical program traced Conductors D and E from the western margin of the glacier for about 900 m and 1300 m respectively where both appear to be structurally terminated. Conductors were identified on the east side of the glacier, and may be related to Conductors D and E. Where traced to land, these eastern conductors also appear to be related to limestones, though responses are considerably weaker, and conductances are quite low. The radar survey outlined rugged sub-glacial topography in the area of the nunatack, and shows the glacier to cascade over a sub-glacial cliff in that area. The radar results indicate that there is up to 400 m of ice in the main portion of the glacier, with about 150 m ice-thickness indicated for with the tributary glacier to the west, similar to the depths estimated from the 1990 UTEM survey.


## INTRODUCTION

The Foremore property is situated in the Iskut River area of northwestern British Columbia, about 130 km NNW of Stewart B.C., and about 45 km NE of Cominco's Snip mine. The property is generally above the treeline, with a large portion covered by glaciers and permanent snow fields. The claims were originally staked as a result of the discovery of numerous mineralized boulders at the foot of the Foremore glacier during a 1987 helicopter reconnaissance program. Initial follow-up in 1988 located an extensive boulder field of massive to semi-massive pyrite with associated grey sphalerite, galena and tetrahedrite mineralization.




| Drawn by: | | Traced by: e.m.b. | |
|---|---|---|---|
| Revised by | Date | Revised by | Date |

# FOREMORE GROUP
# LOCATION MAP

Scale: 1 : 6,370,000 Date: Plate:

## 1992 GEOPHYSICS

During the period June 21 to August 11, 1990, geophysical surveys were carried out on the Foremore property. Those involved in the survey were R.W. Holroyd,a Cominco geophysicist from Vancouver, temporary geophysicist G. Wood, and assistants S. Tooley, A. Robulack, and F. Dyment.

The surveys consisted primarily of UTEM and magnetic coverage, as well as local detailing with HLEM. Geophysical production totals amounted to 48.4 km of UTEM, 14.0 kms of magnetics, and 4.5 km of HLEM. The significantly higher UTEM totals are due to the fact that most lines were surveyed from more than one loop configuration, in an effort to evaluate Conductors D and E.

The 1992 exploration program also included radar surveys over the southwestern portion of the glacier, in the area of Conductors D and E. This work was carried out during the period June 5-12, by J. Schmok and D. Stone, glaciologists with Snowline Research & Consulting Ltd. from UBC. The surveys were mainly concentrated in the Nunatack area, near Conductors D and E, to map the subglacial topography in order to assist in the interpretation of the UTEM responses, and to aid in the evaluation of those conductors.

## EQUIPMENT AND PROCEDURES

### UTEM

As mentioned previously, UTEM surveys were carried out on the property during 1992. A description of the equipment used in the program, field surveying and data processing procedures are given below.

"UTEM" is an acronym for "University of Toronto Electromagnetometer". The system was developed by Dr. Y. Lamontagne while he was a graduate student at the University of Toronto.

The field procedure consists of first laying out a large loop of single strand insulated wire and energizing it with current from a transmitter loop which is powered by a 2 Kw motor generator. Survey lines were generally oriented perpendicular to one side of the loop and surveying performed outside the loop.

The transmitter loop is energized with a precise triangular waveform at a carefully controlled frequency (30.974 Hz for this survey). The receiver system includes a sensor coil and backpack portable receiver which has an internal recording facility. The time synchronization between transmitter and receiver is achieved though quartz crystal clocks in both units, which must be accurate to within about one second in fifty years.

The receiver sensor measures the vertical component of the electromagnetic field and responds to its time derivative. Since the transmitter current waveform is triangular, the receiver coil will sense a perfect square wave in the absence of geological conductors.

Deviations from the perfect square wave are caused by electrical conductors which may be geologic or cultural in origin. The receiver stacks any pre-set number of cycles in order to increase the signal to noise ratio.

The UTEM receiver gathers and records 10 (or optionally 20) channels of information at each station, of which 9 channels are plotted. The higher number channels (7,8,9) correspond to short time or high frequency while the lower number channels (1,2,3) correspond to long time or low frequency. Therefore, poor or weak conductors will respond on channels 9,8,7, and 6, while better conductors will produce anomalous responses on progressively lower number channels. For example, massive, highly conducting sulphides or graphite will produce a response on all nine channels.

The digitally recorded data from the receiver's memory is dumped to a computer at the base camp, processed, and, after initial screen previewing, hard copy plots are produced. Data are presented on data sections as profiles of each of the nine channels, one section for each survey line, though several normalizing schemes may be utilized to further analyze the data, resulting in two or more profile plots per line.

## MAGNETICS

The magnetics survey was carried out with the EDA OMNI PLUS system. Total field measurements were recorded, utilizing the same grid lines as the UTEM survey, though a denser station spacing of 12.5 m was used. Data is recorded and stored within the magnetometer's internal memory, and dumped to a computer in the evenings. A base station magnetometer was set up at the Snip camp, 40 kms to the south, and set to record at 15 sec. intervals throughout the day. The base station and field units were linked and dumped to the computer simultaneously at the end of the day. Computer processing of the data allows diurnal magnetic variations to be removed from the field data. Reading accuracies of ±5 nT were attained for the magnetics survey.

## HORIZONTAL LOOP EM

The HLEM portion of the survey utilized the Max Min I system produced by Apex Parametrics Ltd. in conjunction with a KTP-84 data logger manufactured by Rautaruukki Instruments Ltd. Four lines in the southeastern portion of the 1992 survey area were covered with HLEM to further define some UTEM conductors, utilizing a 150 m coil separation. Readings for three frequencies (440 Hz, 1760 Hz, and 3520 Hz) were taken at 50 m intervals. A reading accuracy of ±0.5% was attained for both the in-phase and quadrature components of the secondary electromagnetic field. The data recorded by the KTP was transferred to a portable computer at the end of each survey day, from which it was processed and plotted.

## RADAR

In order to determine ice depths and provide an indication of subglacial topography, a radar survey was carried out along several lines over the glacier, in the area of Conductors D and E. The radar system is comprised of a radar transmitter, and a receiver, each connected to a dipole antenna. The transmitter emits an electromagnetic pulse, centered in the 1-10 MHz band, through a resistively loaded dipole antenna. The receiver is a digital storage oscilloscope, with high impedance and moderately fast bandwidth, connected to a dipole antenna. The system measures the two-way travel time to reflectors. Using known electromagnetic wave velocities in ice, the distance to subsurface reflectors, which, at these wavelengths can be any surface greater than 10 m in size, is calculated. Typically the basal reflector (basal till or bedrock) returns the strongest signal, though in shallow ice, is often obscured by the transmitted pulse. The radar measurements in this survey were quite straight forward since the variations in bedrock topography are small compared to the ice depths.

The main sources of errors in the radar survey are system limitations due to reading accuracies and EM velocity uncertainties, resulting in depth determinations of $\pm 5$ m. The velocity of EM radiation in ice is generally accepted as 168 m/$\mu$s, and was used here, but the determination of the velocity along the ice/air interface is less predictable. A velocity of 300 m/$\mu$s, which is the value in air, has been used in these calculations.

Glaciological influences from several sources, i.e., reflectors within the glacier, diffuse basal reflectors, surface, englacial and subglacial water, crevasses, and snow cover, also contribute to errors. Even with the strong reflections observed in this survey, the ice depth calculations are referred to as "radar depth", since the measured reflections are influenced by so many glacialogical factors.

## DATA PRESENTATION

### UTEM

The results of the 1992 UTEM surveys are presented on a compilation map (Plate 360-92-186) at a scale of 1:5,000. The symbols utilized to describe the UTEM responses are listed in Table 1. Data sections are plotted for each line surveyed for the Hz component, and are plotted at ~ 1:3,000 facing northwest. A legend is provided to explain the symbols used on the compilation maps and data sections. It should be noted that the interpretation symbols displayed below the UTEM profiles correspond to the responses for that particular section and normalizing scheme, and may not correspond exactly to the interpretation presented on the plan maps, since the latter indicate the best anomalous response for that particular conductor.

The magnetic field amplitudes from both the transmitter loop (primary field) and from those induced in the ground (secondary field) vary considerably with distance from the loop. To present such data a normalizing scheme must be used. In this survey, the calculated primary field from the transmitter loop is used to normalize the data according to the following schemes:

1. Continuously normalized plots-

The standard normalization scheme is:

a) For channel 1:

$$\%Ch.1\ anomaly = \frac{Ch.1 - P}{P} \times 100\%$$

wher P is the primary field from the loop at the station and Ch.1 is the observed amplitude for channel 1.

b) The remaining channels (n = 2 to 9) are channel 1 reduced and channel 1 normalized:

$$\%Ch.n\ anomaly = \frac{Ch.n - Ch.1}{Ch.1} \times 100\%$$

where Ch.n is the observed amplitude of channel n (n = 2 to 9).

2. Point normalized plots-

These plots display an arrow at the top of the section indicating the station to which all data on the line is normalized.

a) For channel 1:

$$\%Ch.1\ anomaly = \frac{Ch.1 - P_{pn}}{P_{pn}} \times 100\%$$

where $P_{pn}$ is the primary field from the loop at the station of normalization, i.e., point normalized station, and Ch.1 is the observed amplitude for Channel 1.

b) The remaining channels (n = 2 to 9) are channel 1 reduced and channel 1 normalized:

$$\%Ch.n\ anomaly = \frac{Ch.1 - Ch.1_{pn}}{Ch.1_{pn}} \times 100\%$$

where Ch.n is the observed amplitude of Channel n and $Ch.1_{pn}$ is the observed channel 1 amplitude at the point normalized station.

Point normalized plots are usually produced on data sections containing anomalies to aid interpretation by isolating the secondary field responses at that location. However, it has become standard practice to produce a point normalized plot for each line at a predetermined distance from the loop to monitor the secondary field variations from line to line.

## MAGNETICS

The magnetic data are presented as profiles on two plates, i.e., for the north-south and east-west lines, at a scale of 1:2,500. The total field profiles are plotted at a vertical scale of 1 cm = 50 nT. Contour plans are also provided on two separate plates at the same horizontal scale as the profiles.

### HORIZONTAL LOOP EM

The HLEM data are presented on 1:2,500 plan maps, and plotted in profile form with both the in-phase and quadrature components at a vertical scale of 1 cm = 10%. A separate plate is provided for the results of each of the three frequencies.

### RADAR

The radar data are presented as "radar depth" sections for each line surveyed. These sections are arc migrated to reflect the distance from the surface measuring location, and a sub-glacial profile is produced by connecting smooth curves tangent to the arcs. Several horizontal and vertical scales were used for these profiles, depending on the length of the survey line.

## DISCUSSION OF RESULTS

The 1992 geophysical program was successful in relocating and further defining Conductors D and E. A third conductive trend was identified south of Conductor E, and traced eastward to land on the eastern margin of the glacier. Three loops were position to optimize coupling with the target horizons, with Loop #21 to the south on the main glacier, Loop #23 to the south on the tributary glacier, Loop #22 to the north, and a fourth small loop, Loop #24, with a front edge north of Conductor E and south of Conductor D. Loop #24 was set up to better outline the responses of Conductor E by minimizing the masking effect of Conductor D when energized from a north transmitter loop.

The UTEM coverage outlined three conductive trends in the detail grid area, with the most significant being Conductors D and E, and a third south of Conductor E. Conductor D was traced from the western side of the glacier where it produces strong Ch-1 and Ch-2 responses from Loops #23 and #22, and extends 900 m to the southeast across the glacier to L-1200E. East of L-1200E there was no indication of the continuation of the conductor from either Loop #21 or #22. A distinct trough in the sub-glacial topography in this area, where ice thicknesses of over 400 m are interpreted, suggests that the conductor may be either structurally or erosionally terminated, or lost due to excessive depths. Despite continuing the UTEM coverage eastward onto land, where some weak conductivities are indicated, the expression of Conductor D on land was not directly evident. Conductive responses are traceable from the north end of L-2400E (at ~ 1000S) across to L-2800E, and onto the Southeastern grid, where the responses extend from the eastern end of L-2600S to beyond L-3400S, and may be the landward continuation of Conductor D. On land, the best UTEM responses occur at approximately 3650E from L-2600S to L-3000S. These responses are Ch-3 to Ch-6, and in plan occur in an area dominated by felsic-intermediate tuffs, though with a deep conductive source and variable stratigraphic attitudes, it is impossible to reliably relate these conductors to geology. However, the best UTEM responses associated with Conductor D occur near the western margin of the glacier, though the limited outcrop in the area flanking the glacier indicates the presence of a large intrusive and did not reveal the source of the Conductor D responses, or provide any reason for continuing coverage in that direction.

Conductor E was traced from the western margin of the western tributary glacier, southeastward across the northern tip of the nunatack, to about 1200E. Like Conductor D, this conductive trend is abruptly terminated east of L-1200E, and its landward continuation is not traceable. The best UTEM responses along Conductor E are near its western margin, where Loop #23 produced strong Ch-1 and Ch-2 cross-over style anomalies, and only subtle responses from Loop #22, where responses were masked by those of Conductor D. East of the nunatack, Conductor E weakens significantly, producing only Ch-4 and Ch-5 responses, before disappearing east of L-1200E, due to either a sudden increase in depth, or a structural termination of the horizon.

A third conductive horizon is also indicated south of Conductor E, and is traceable across the width of the glacier. This conductor shows weak Ch-5 responses immediately east of the nunatack, but improves to Ch-2 and Ch-3 toward the eastern margin of the glacier. The UTEM responses on the eastern portion of the conductor are evident only from the northern loop, Loop #22, and not from Loop #21 to the south, probably reflecting differences in coupling with a south-dipping feature. Unfortunately the conductor weakens near land on the eastern side of the glacier, and a weak Ch-7 to Ch-5 anomaly on land appears to be the continuation of the conductive trend. On land, where shallowest, the conductor appears to have a weak magnetic correlation, and follows along the northeastern margin of a limestone unit similar to the mineralized limestone at the nunatack. The conductivity may also be due to an argillite unit, which is locally carbonaceous, and immediately overlies the limestones to the northeast. The conductor may also be related to basaltic flow breccias which locally contain py, and coincide quite well with the conductor axis at approximately 3400E on L-3200S.

The HLEM coverage over the land portion of the conductors, i.e., on L-2800S to L-3400S, did not outline any conductive responses, despite using a relatively large 150 m coil spacing. This indicates that the conductors are not near surface, i.e., depths are greater than 80 m, and thus are difficult to correlate with bedrock exposures. Geological correlation is made even more tenuous in that this area was found to be structurally quite complex. The magnetic responses are quite shallow, and therefore are probably related to the exposures of basaltic flows. The magnetic feature indicated on the UTEM interpretation map immediately west of the nunatack was outlined in the 1990 program.

## CONCLUSIONS AND RECOMMENDATIONS

Conductors D and E in the southwestern corner of the Foremore property were better defined by the 1992 geophysical program. The best portions of the conductors occur in the Nunatack area, with conductivity weakening somewhat to the east. Both conductors appear to terminate east of L-1200E, and though weak conductivities are indicated near the eastern margin of the glacier, and on land, the landward projection of these conductors cannot be reliably traced. The exposures of limestones similar to those at the nose of the nunatack, suggests that the conductors are in some way related. Perhaps the low conductivity indicated along the eastern projection of the conductors as they extend on to land is a function of fragmentation due to the structural complexity that was noted in the area.

Drilling is recommended, with a hole be collared near the nose of the nunatack, and drilled vertically. With the interpreted moderate southern dip, such a hole should be able to test both conductors. If sufficient encouragement is gained from the first hole, or the conductors are not adequately tested, additional drill tests should be attempted to the northwest, on the western tributary glacier, where the best UTEM responses were outlined, and in an area of least ice thickness (~150 m).

Report by: R. W. Holroyd
R. W. Holroyd
Geophysicist, W.D.

October 20, 1992

Approved for Release by: W. J. Wolfe
W.J. Wolfe
Manager, Western Dist.

**SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):**

Mapping indicates that the property is underlain by a sequenc of foliated felsic volcanic breccias + tuffs, greenstones (andesite fragmentals) limestone breccia or sharpstone conglomera hematite schists + pyroclastics. This sequence is overlain by a thick section of massive bedded dark green andesite in turn overlain by undifferentiated volcanics + a thick limestone. The rock units generally trend northwesterly with moderate to steep dips to the southwes

# APPENDIX I

## STATEMENT OF GEOPHYSICAL EXPENDITURES (1992) -FOREMORE CLAIMS

| | | | |
|---|---|---|---|
| **1. SALARIES** | | | |
| R.W. Holroyd: | 18 days @ $435.00/day | $7,830.00 | |
| G. Wood: | 17.5 days @ $220.00/day | $3,850.00 | |
| S. Tooley: | 16 days @ $150.00/day | $2,400.00 | |
| A.M. Robulack: | 16 days @ $115.00/day | $1,840.00 | |
| F. Dyment: | 16 days @ $105.00/day | $1,680.00 | |
| | | $17,490.00 | |
| **2. OPERATING DAY CHARGES** (charge applied for survey days to cover the cost of data compilation, drafting, interpretation, and reporting) | | | |
| | 18.5 days @ $445.00/day | $8,232.50 | |
| **3. EQUIPMENT RENTAL** | | | |
| UTEM 3 System: | 18 days @ $250/day | $4,500.00 | |
| 2nd UTEM Receiver | 9 days @ $150/day | $1,350.00 | |
| Misc./Wire | 16 days @ $25/day | $ 400.00 | |
| Max Min 1: | 3 days @ $75/day | $ 225.00 | |
| EDA Magnetometers: | 3 days @ $135/day | | $ 405.00 |
| | | $6,880.00 | |
| **4. EXPENSE ACCOUNTS** | | $2,062.19 | |
| **5. MISCELLANEOUS** | | | |
| Accomodation | | $2,625.00 | |
| Freight Charges | | $ 817.96 | |
| Radar Contract (Snowline Research) | | $9,213.00 | |
| Helicopter | 38.4 hrs @ $720/hr | $28,800.00 | |
| | TOTAL | $76,120.65 | |

I certify this to be a true statement of expenditures for the geophysical program on the FOREMORE claims in 1992.

R.W. Holroyd,
Geophysicist, Cominco Ltd.

## APPENDIX II

## CERTIFICATION

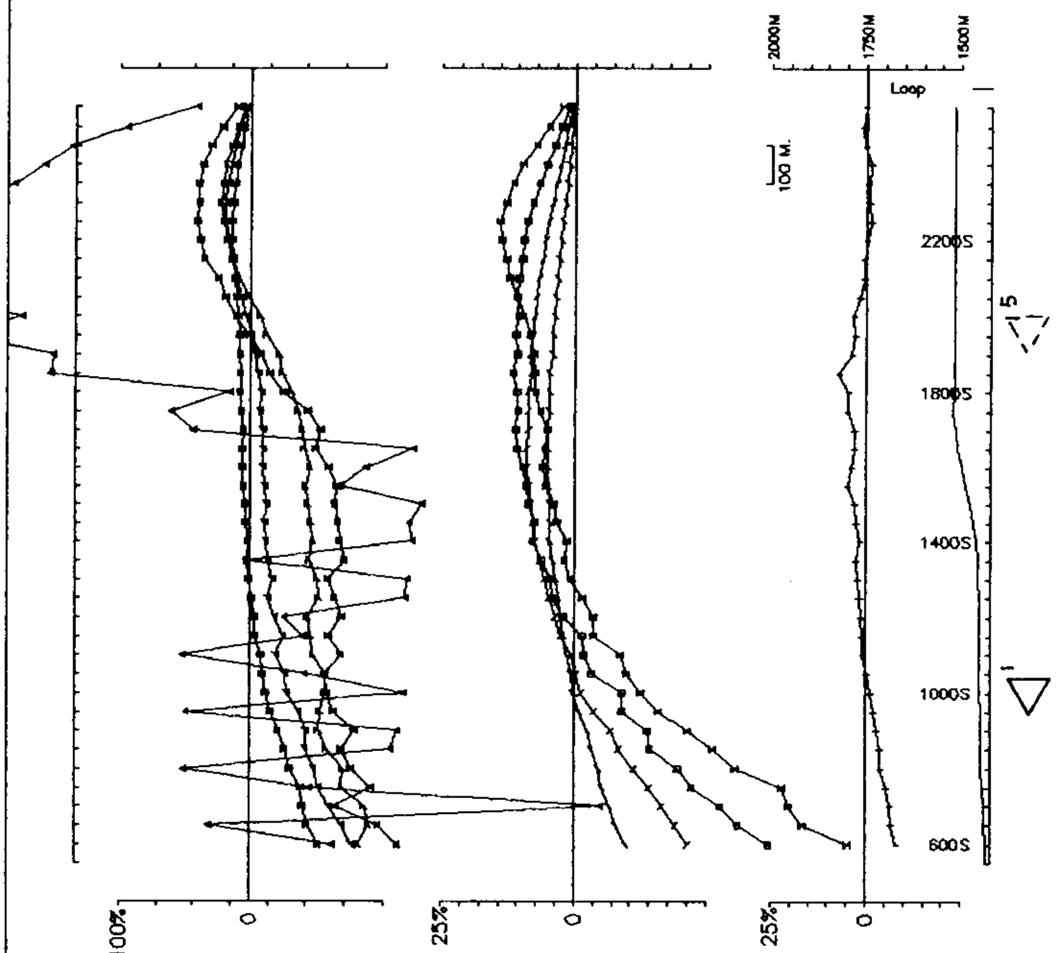
I, Robert W. Holroyd, of 2752 Dollarton Highway, in the City of North Vancouver, in the Province of British Columbia, do hereby certify that:

1. I graduated from the University of Waterloo in 1977 with an Honours Bachelor of Science in Applied Geology.

2. I am a member of the British Columbia Geophysical Society.

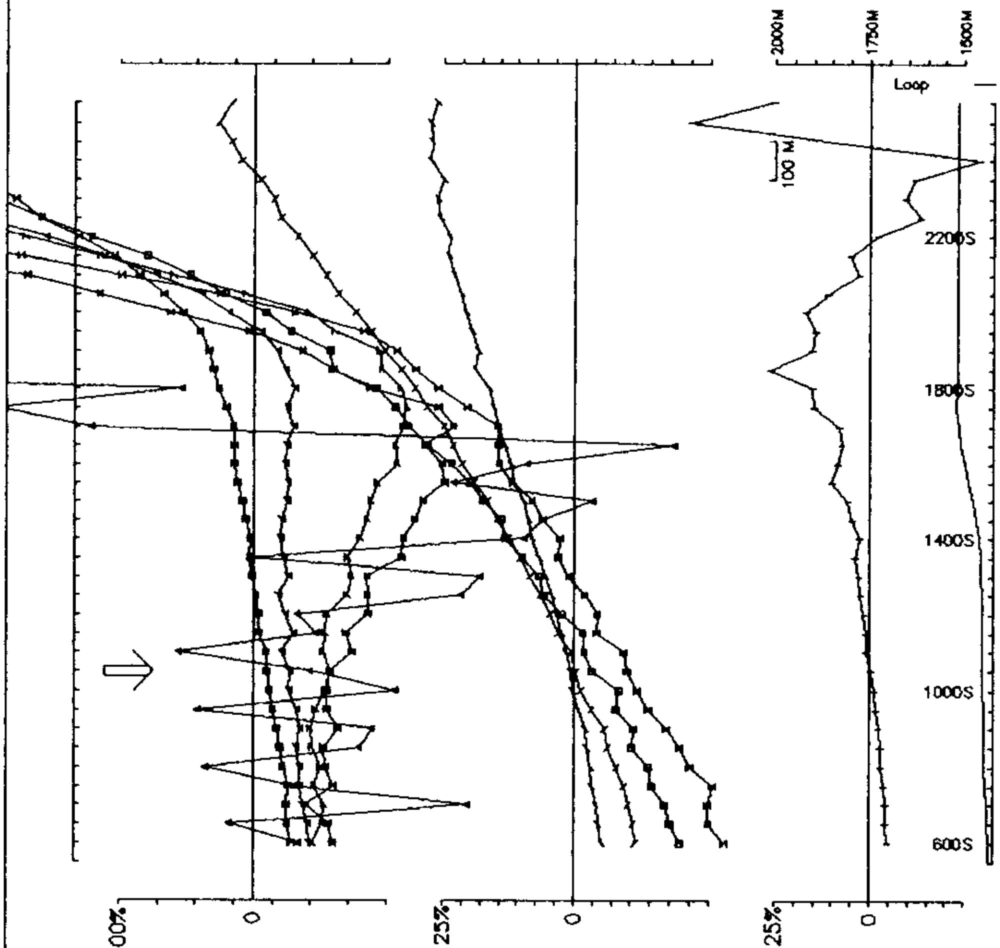
3. I have been practicing my profession for the past fifteen years.

R.W. Holroyd,
Geophysicist, Cominco Ltd.



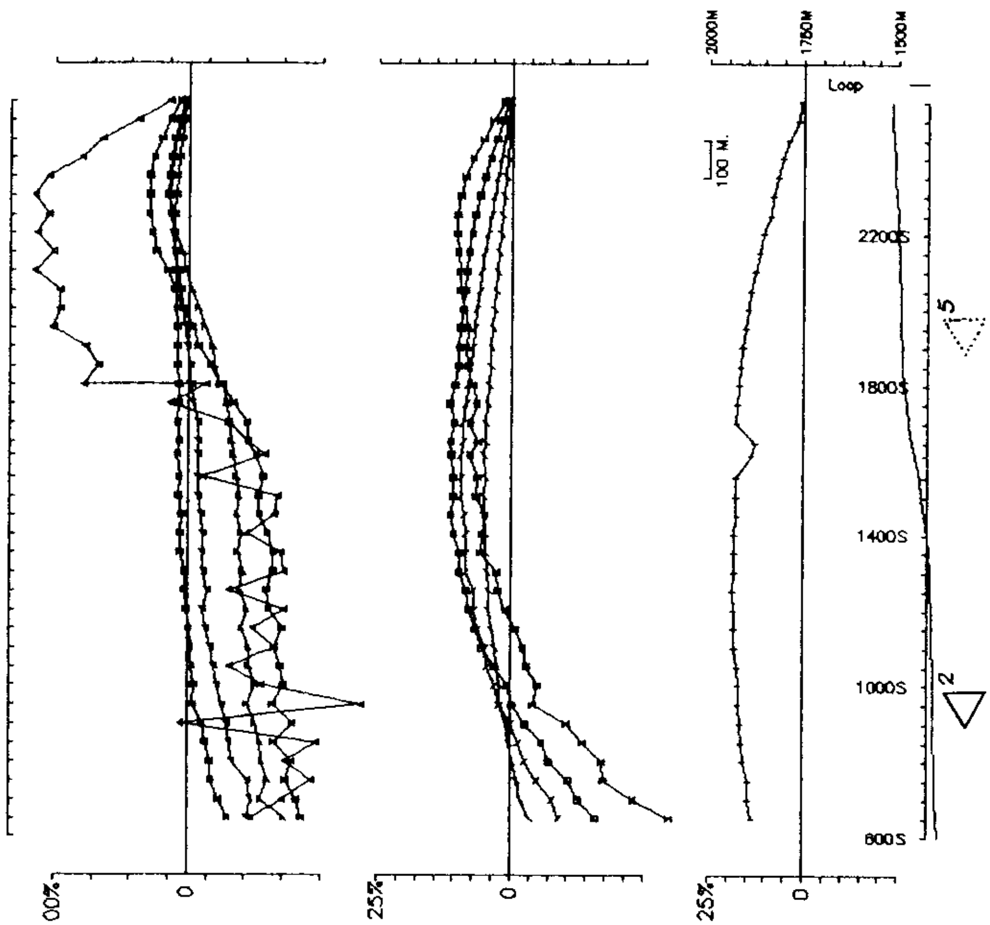

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 1000E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1947M./L- 1996M. Line Azim.: 0 , Rx Label: 10 , Base Shift: -9.0 %

Plate 360-92-189a



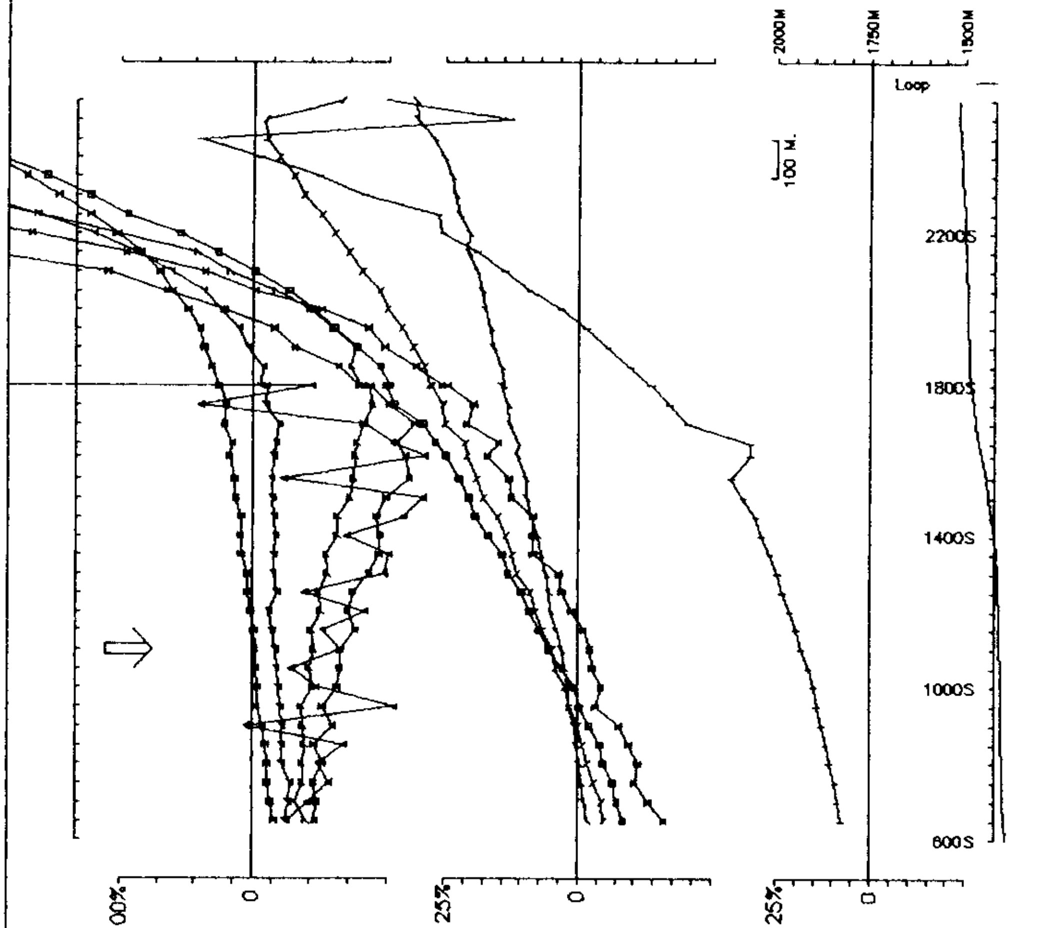

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 1000E DS:
Ch1 reduced. Ch1 normalized. Totals:P-1947M./L-1996M. Line Azim.: 0 . Rx Label: 10 . Base Shift: -9.0 % Point Norr

Plate 360-92-189b




FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 1200E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1895M./L-1945M. Line Azim.: 0 . Rx Label: 12 . Base Shift: 5.0 %

Plate 360-92-190a

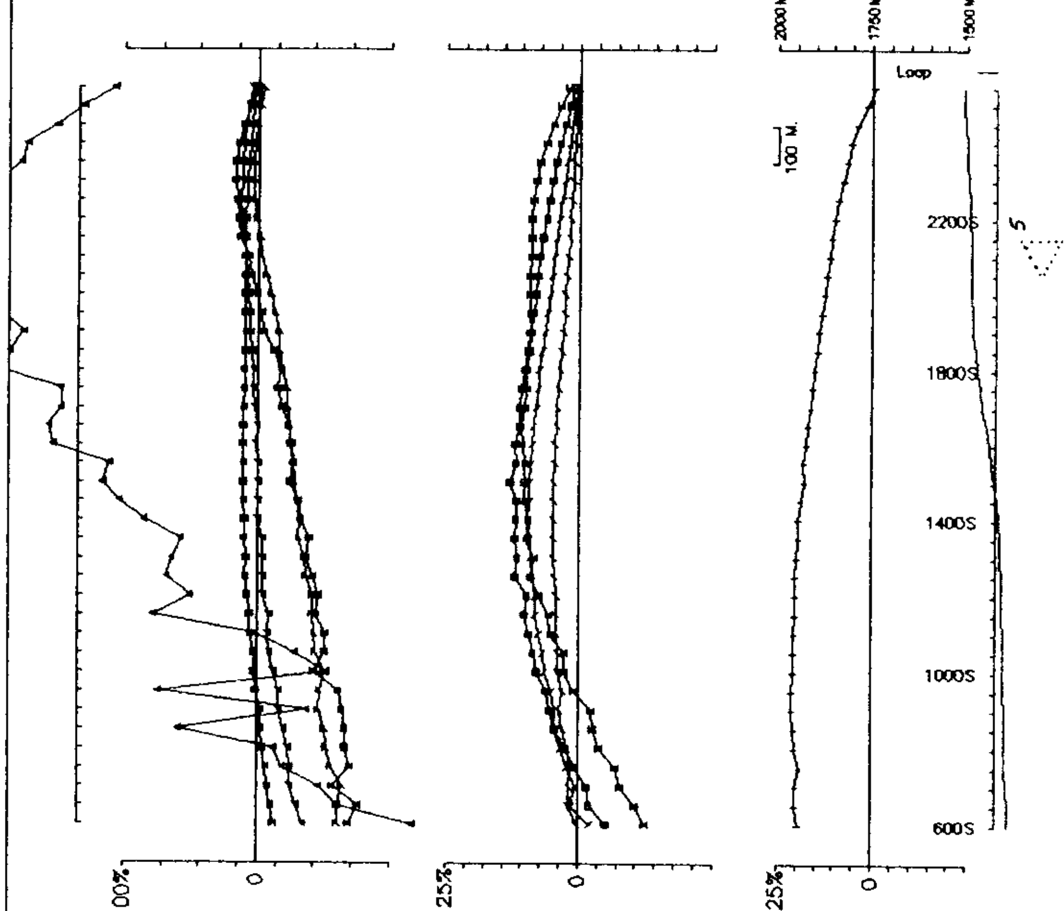



FOREMORE COMINCO Hz

Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 1200E DS:

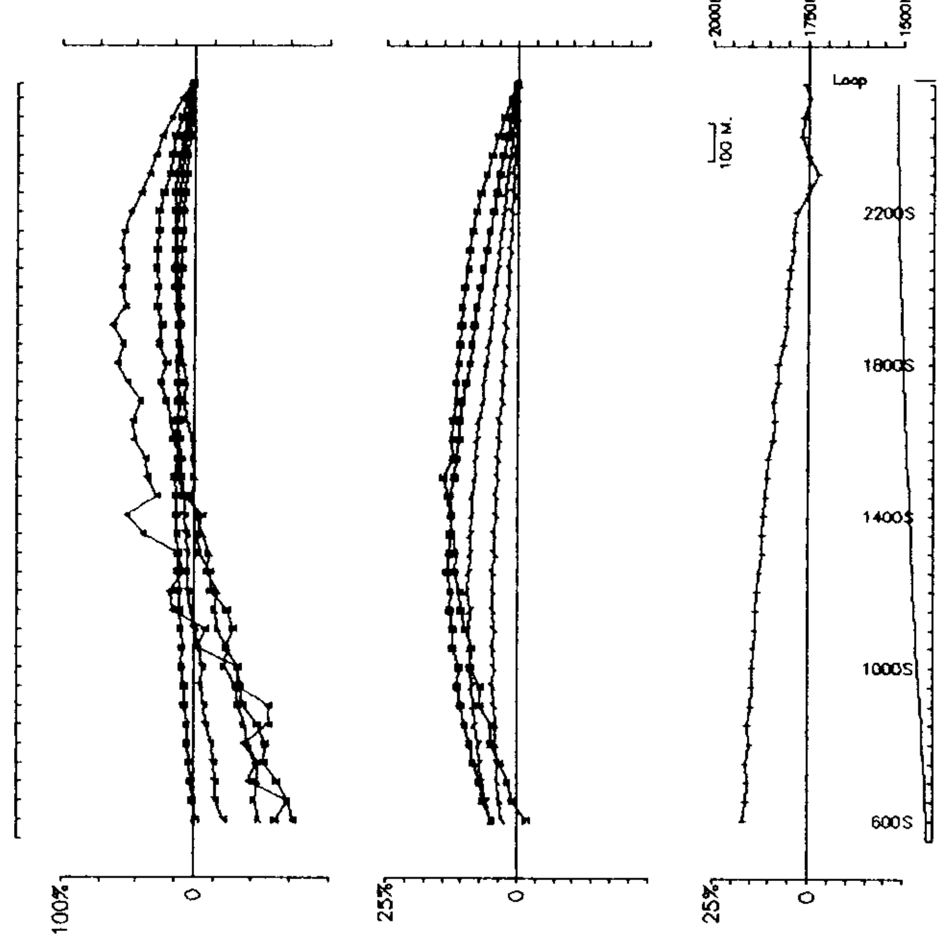
Ch1 reduced. Ch1 normalized. Totals:P-1895M./L-1945M. Line Azim.: 0 . Rx Label: 12 . Base Shift: 5.0 % Point Norm

**Plate 360-92-190b**



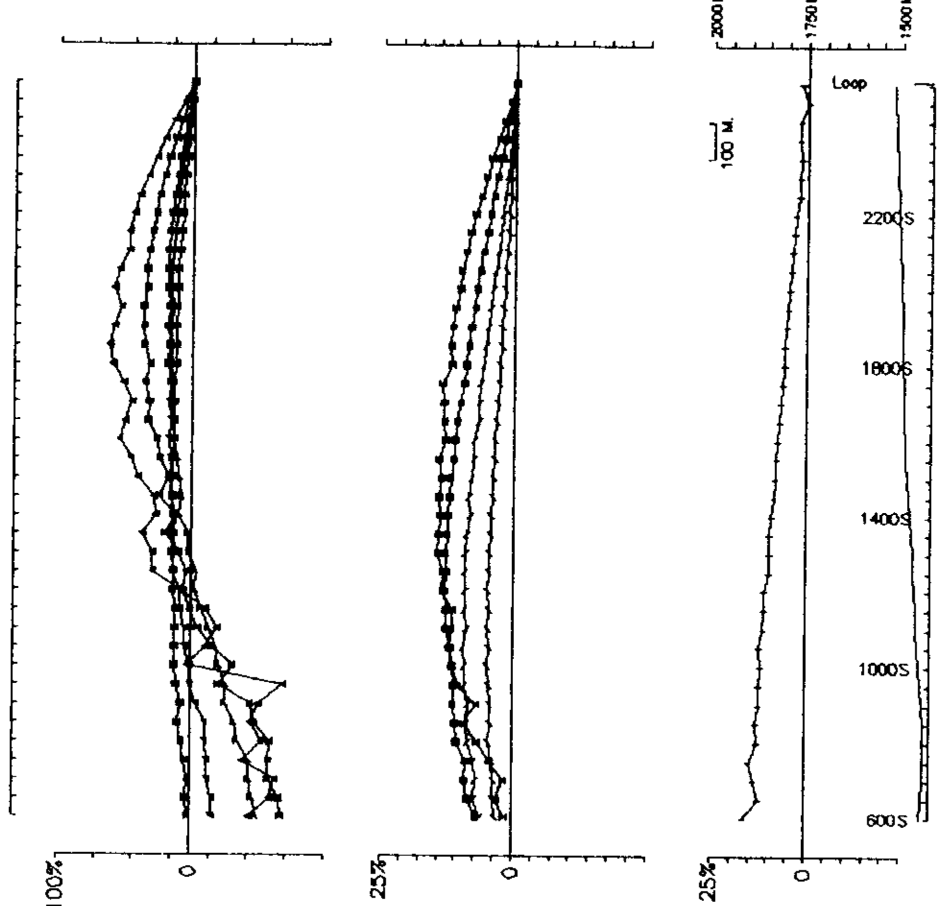

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 1600E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1941M./L- 1941M. Line Azim.: 0 . Rx Label: 16 . Base Shift: 12.0 %

Plate 360-92-191a



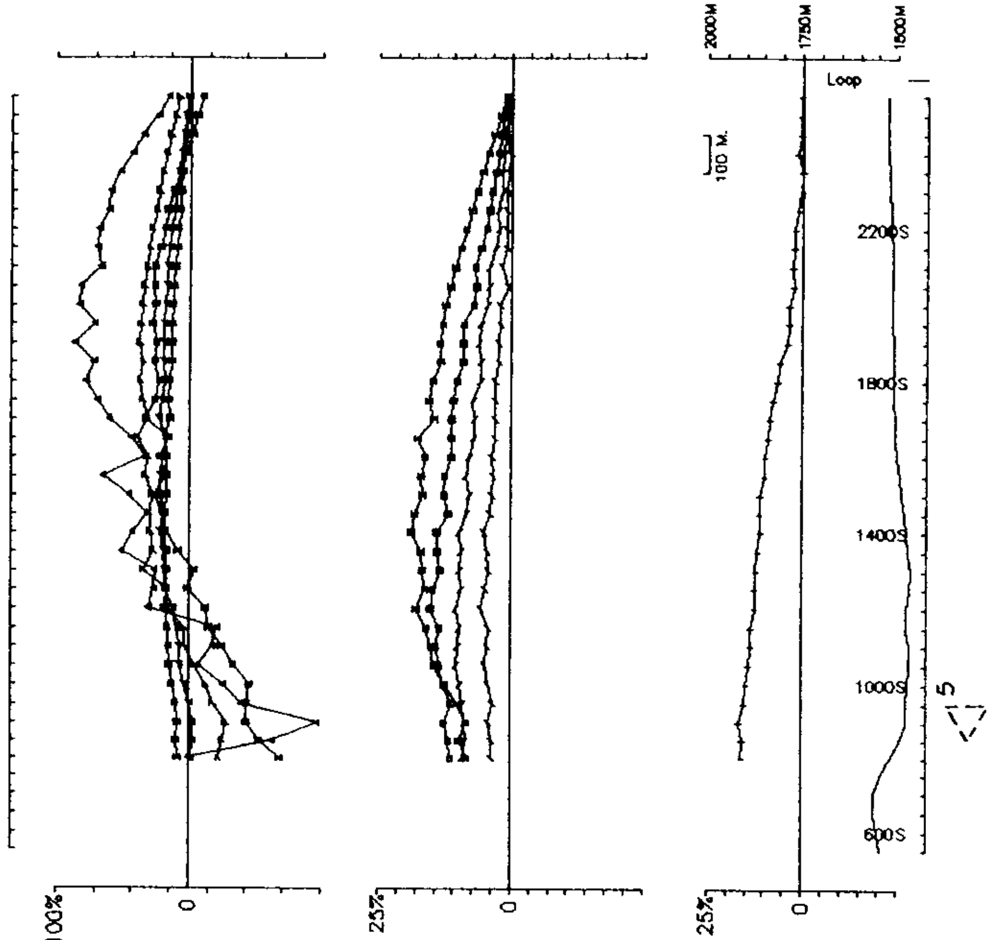

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 2000E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1936M./L- 1985M. Line Azim.: 0 . Rx Label: 20 . Base Shift: 5.0 %

Plate 360-92-192a



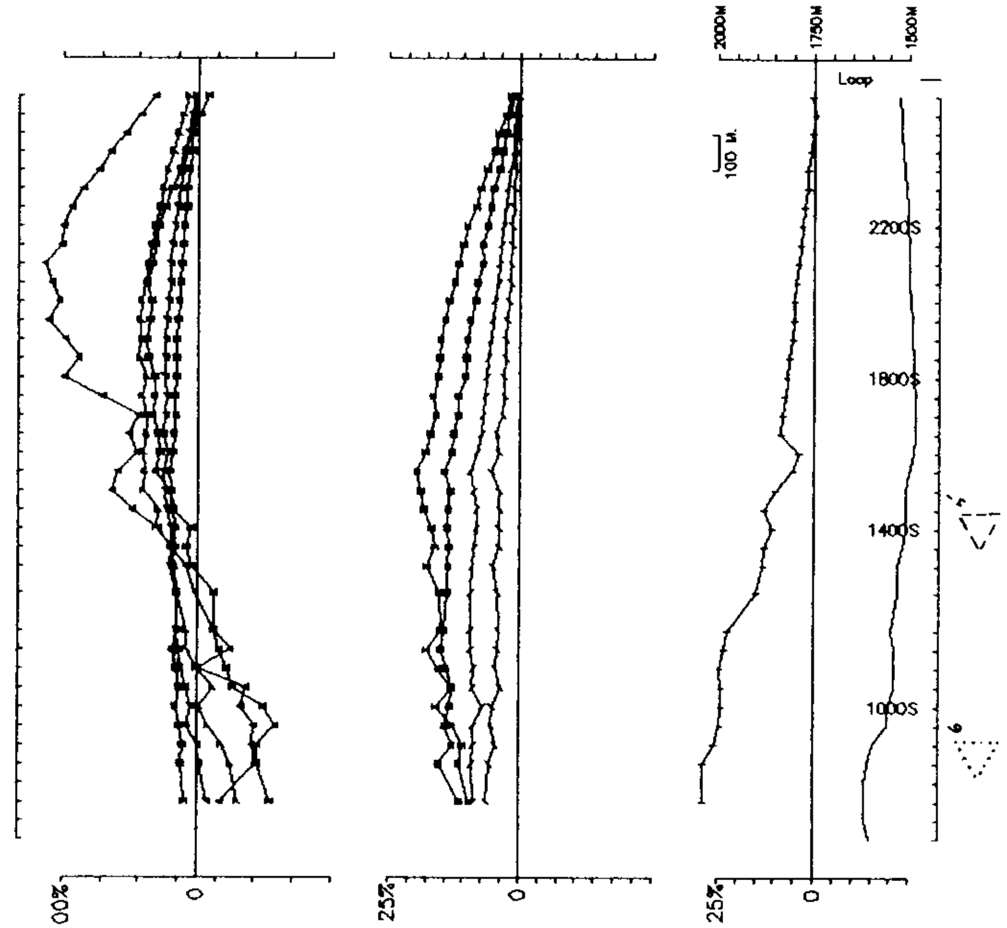

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 2200E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1947M./L- 1947M. Line Azim.: 0 . Rx Label: 22 . Base Shift: 2.0 %

Plate 360-92-193a



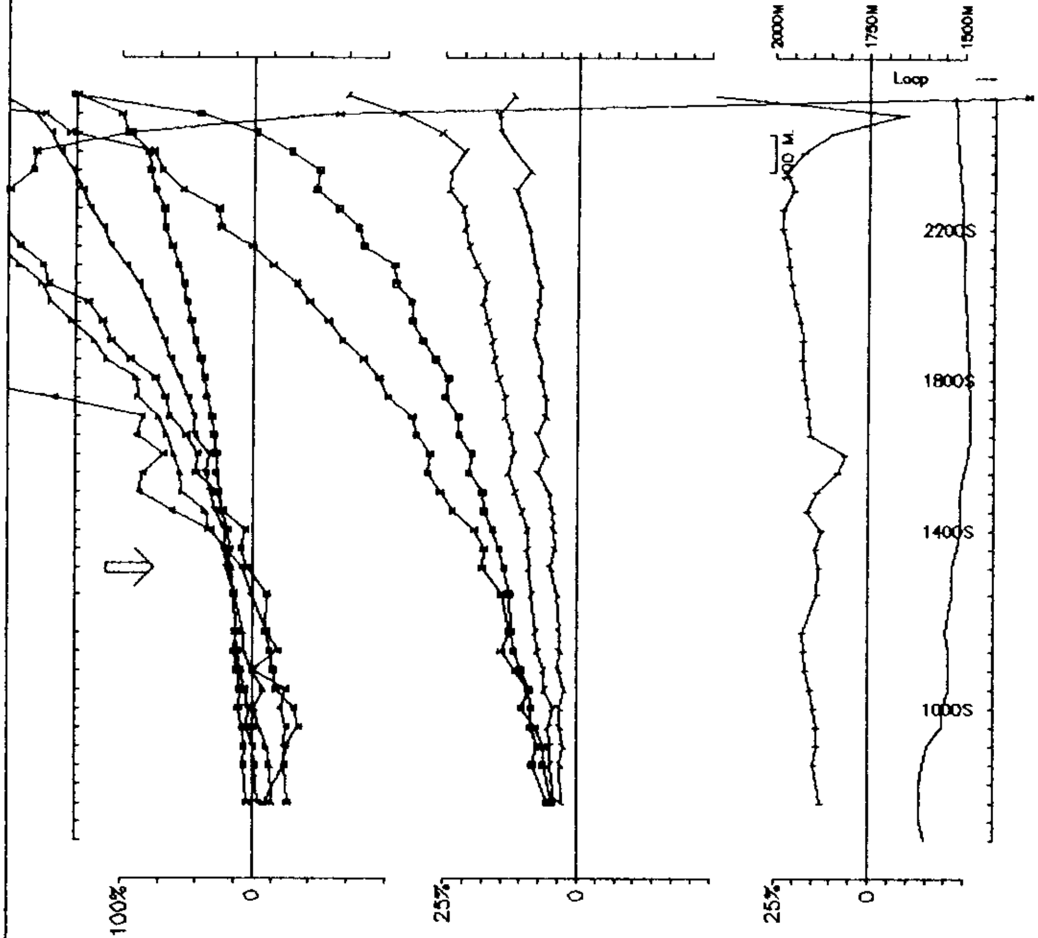

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 2400E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1741M./L-1983M. Line Azim.: 0 . Rx Label: 24 . Base Shift: 5.0 %

**Plate 360-92-194a**



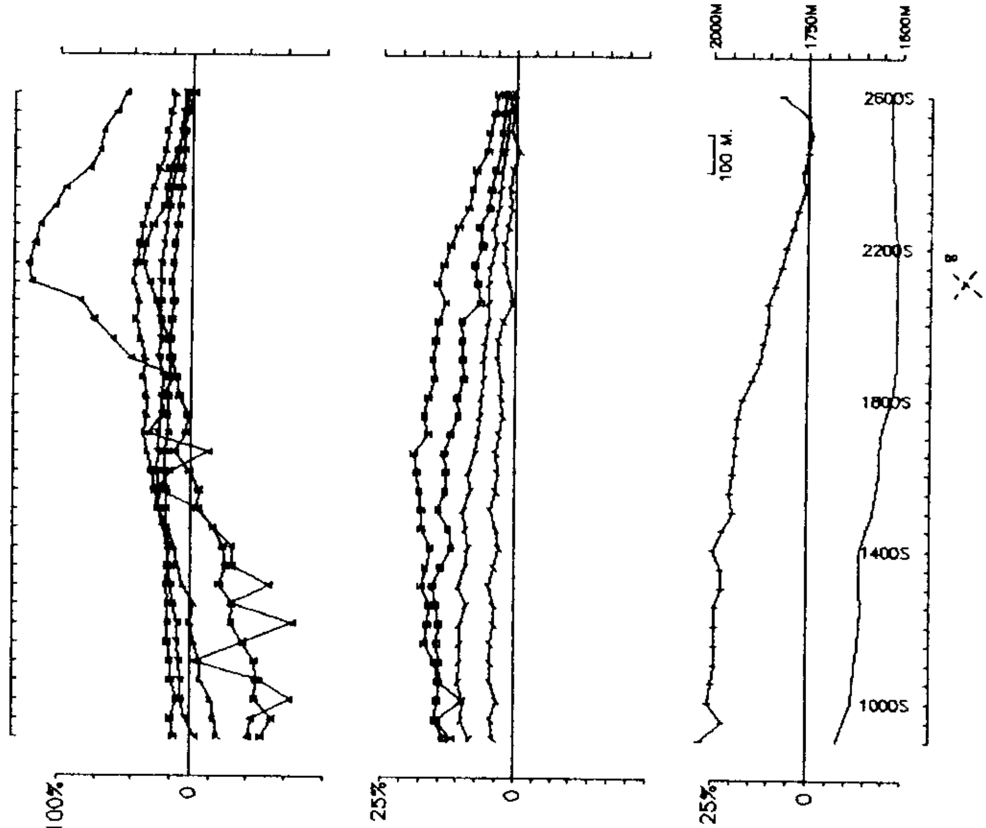

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 2600E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1871M./L-1971M. Line Azim.: 0 . Rx Label: 26

**Plate 360-92-195a**



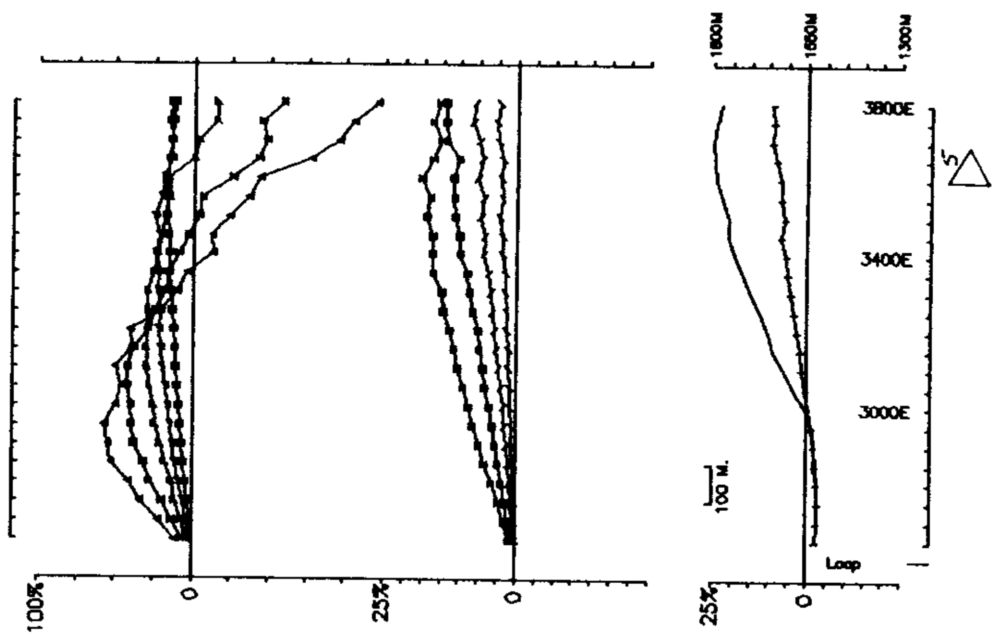

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 2600E DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1871M./L– 1971M. Line Azim.: 0 . Rx Label: 26 Point Normalized.

Plate 360-92-195b



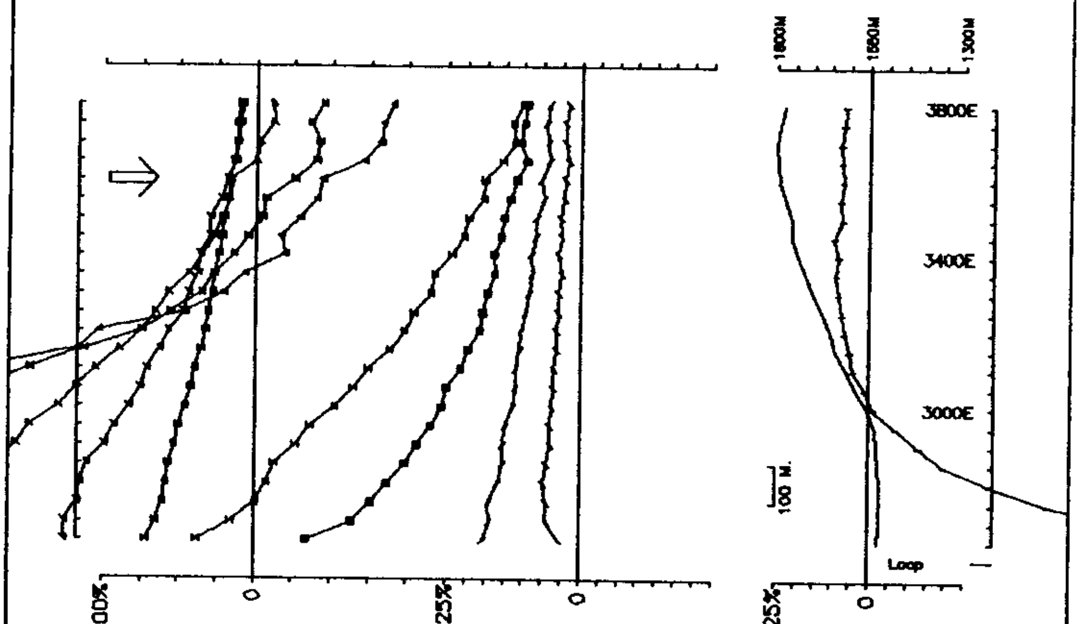

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21 Line: 2800E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1698M./L-1698M. Line Azim.: 0 . Rx Label: 28 . Base Shift: 25.0 %

Plate 360-92-196a



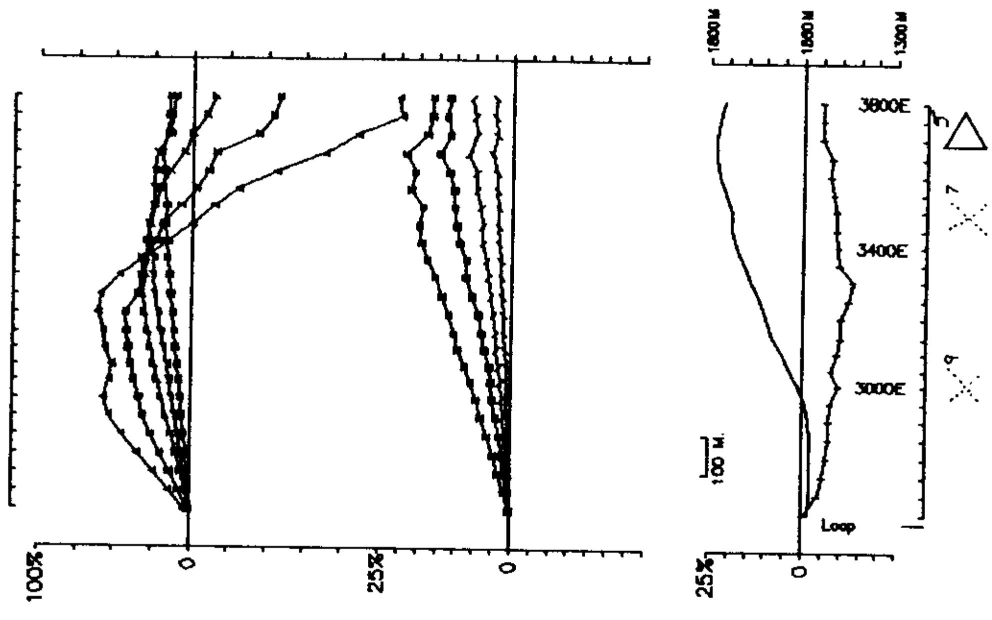

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 2600S DS:
Ch1 reduced. Ch1 normalized. Totals:P— 1151M./L—1151M. Line Azim.: 90 . Rx Label: 26 . Base Shift: 10.0 %

Plate 360-92-197a



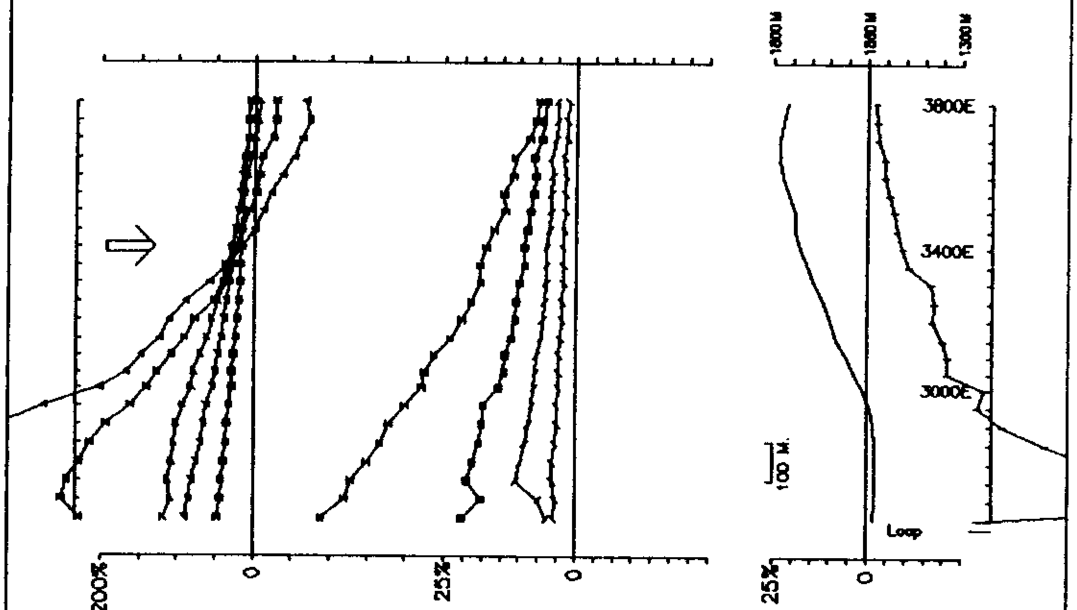

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 2600S DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1151M./L-1151M. Line Azim.: 90 . Rx Label: 26 . Base Shift: 10.0 % Point No

Plate 360-92-197b



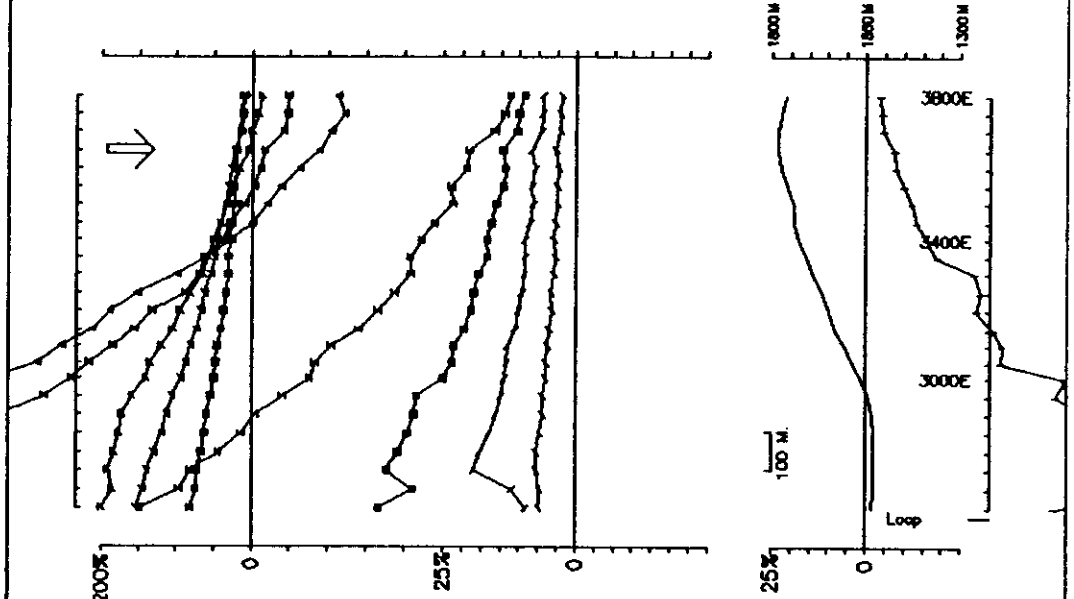

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 2800S DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1091M. /L– 1091M. Line Azim.: 90 . Rx Label: 28

Plate 360-92-198a



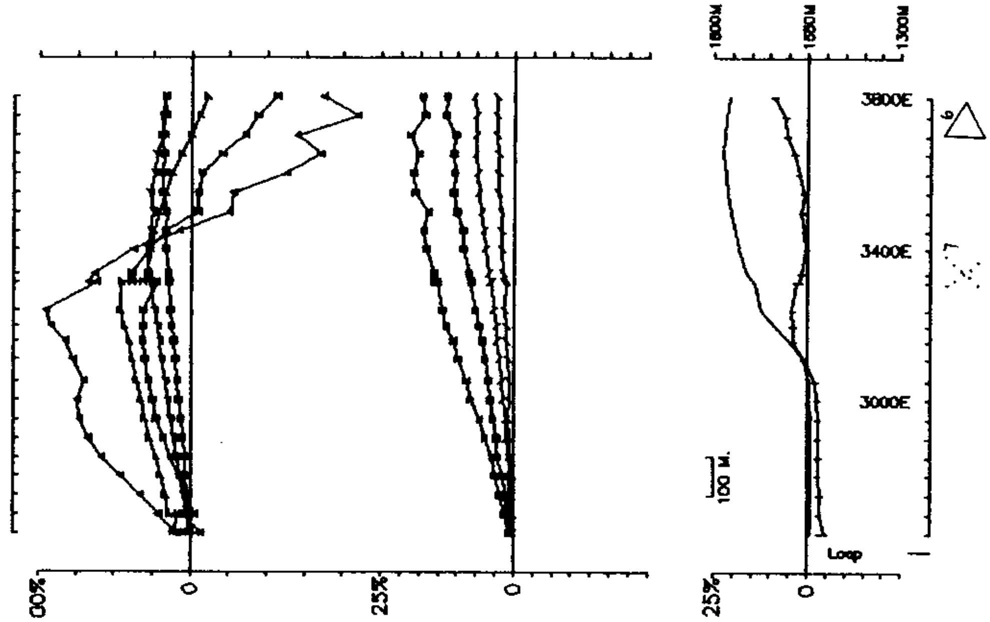

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 2800S DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1091M./L– 1091M. Line Azim.: 90 . Rx Label: 28 Point Normalized.

Plate 360-92-198b




FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 2800S DS:
Ch1 reduced. Ch1 normalized. TotalscP– 1091M./L– 1091M. Line Azim.: 90 . Rx Label: 28 Point Normalized.

Plate 360-92-198c

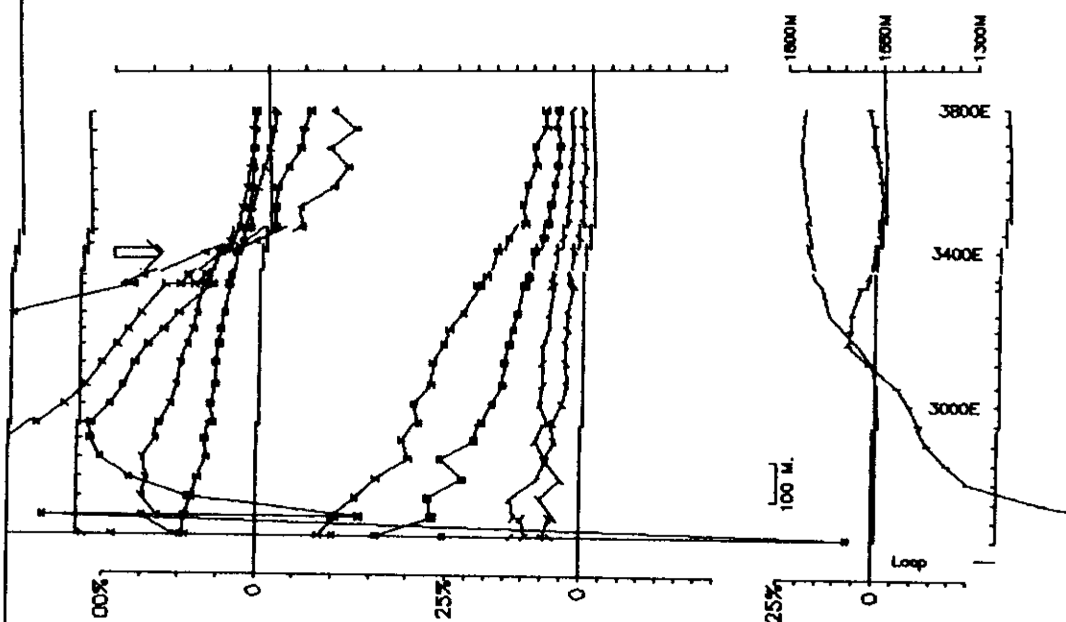



FOREMORE COMINCO Hz

Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 3000S DS:

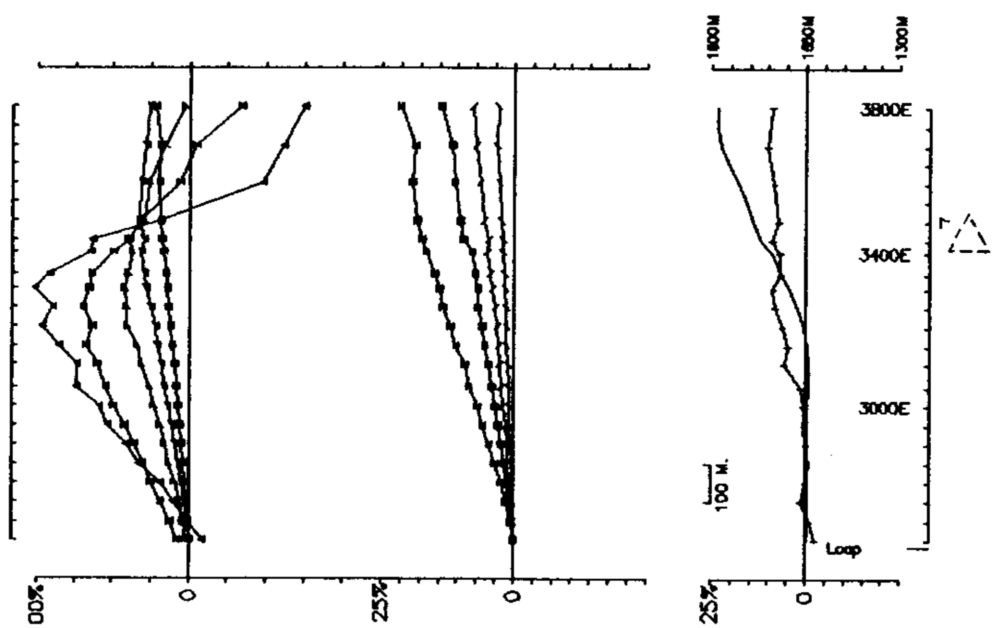
Ch1 reduced. Ch1 normalized. Totals:P– 1151M /L– 1151M. Line Azim.: 90 . Rx Label: 30

Plate 360-92-199a



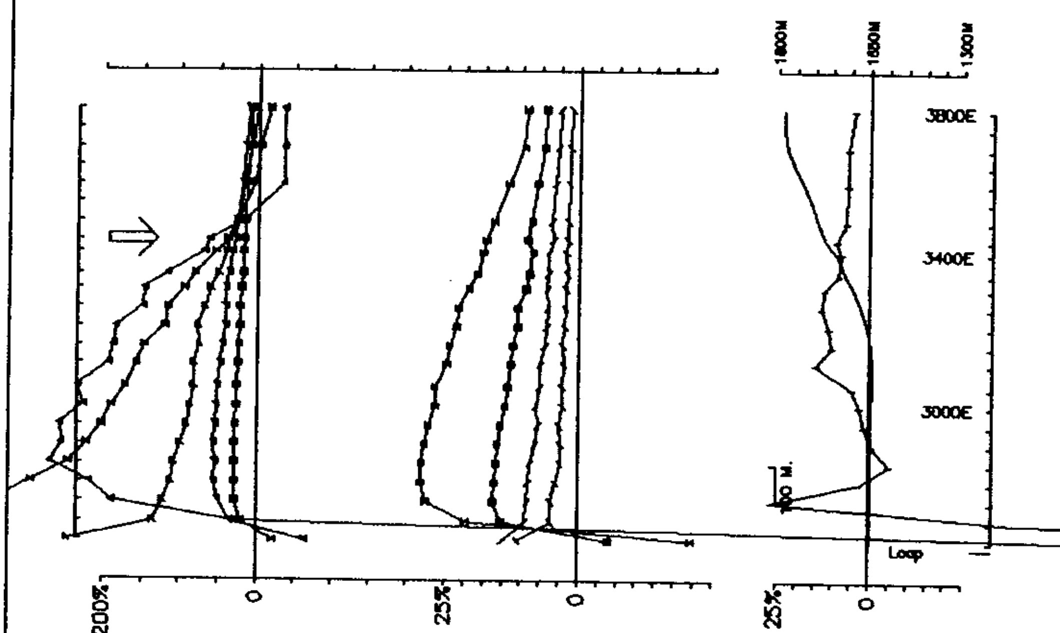

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 3000S DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1151M./L-1151M. Line Azim.: 90 . Rx Label: 30 Point Normalized.

Plate 360-92-199b



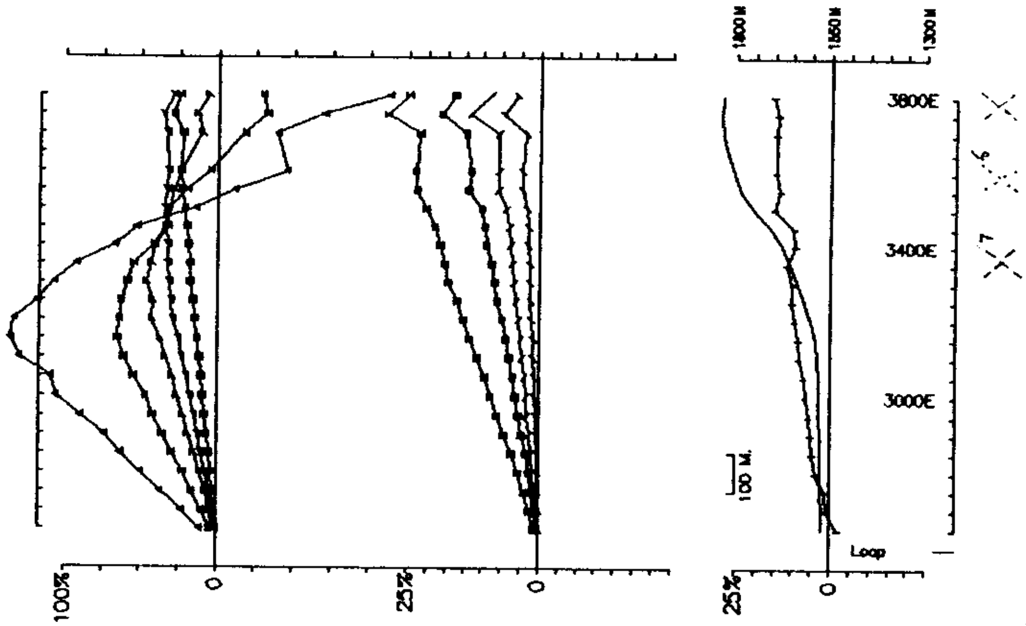

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 3200S DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1140M./L–1140M. Line Azim.: 90 , Rx Label: 32

Plate 360-92-200a



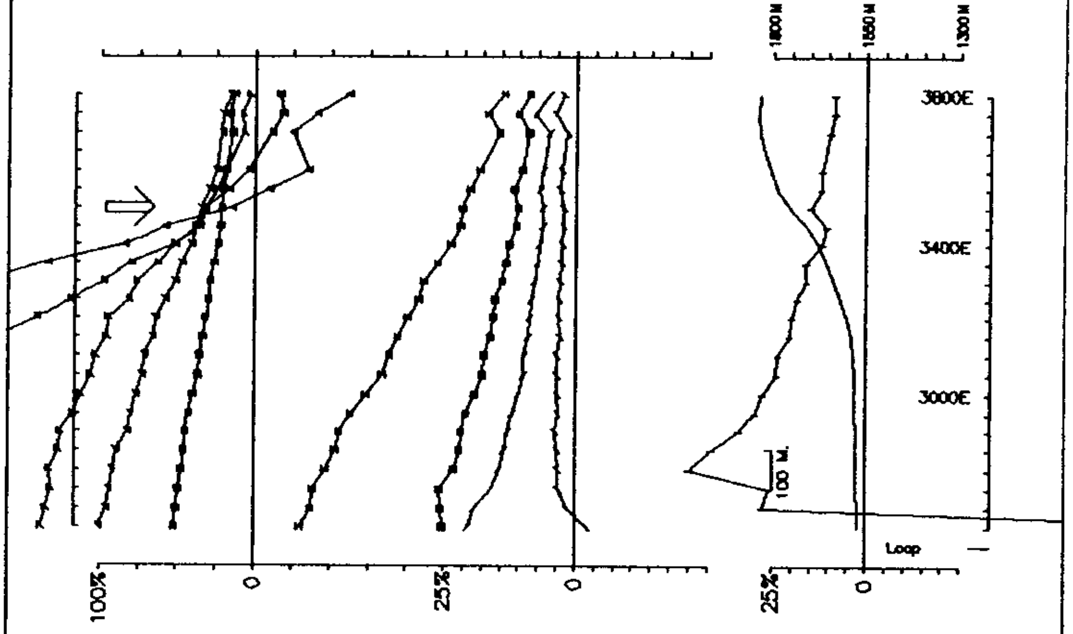

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 3200S DS:
Ch1 reduced. Ch1 normalized. Totals:P-1140M./L-1140M. Line Azim.: 90 . Rx Label: 32 Point Normalized.

Plate 360-92-200b



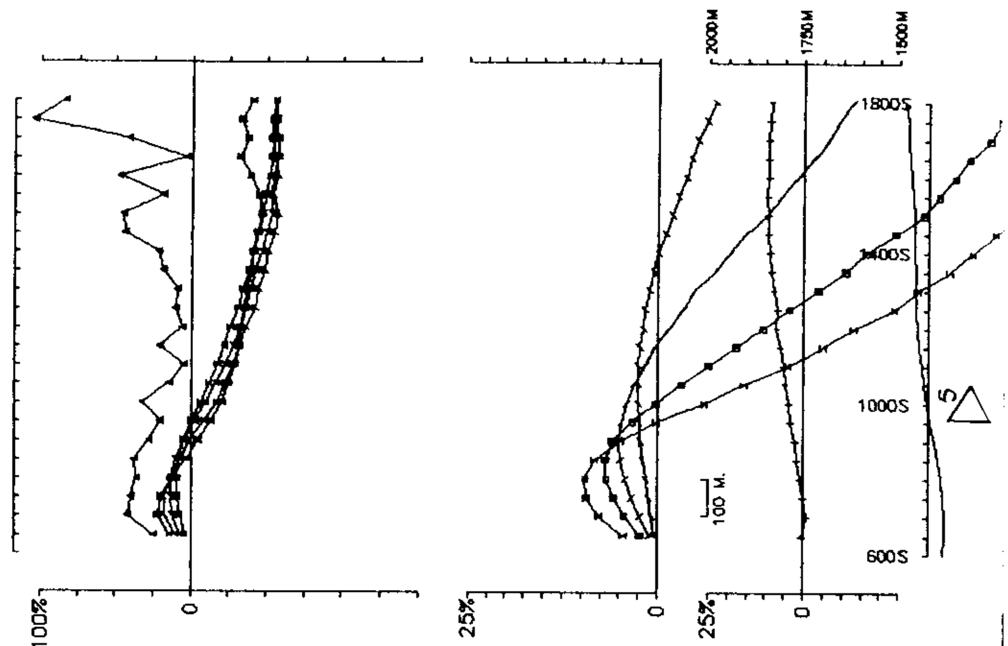

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 3400S DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1142M./L-1142M. Line Azim.: 90 . Rx Label: 34 . Base Shift: 10.0 %

Plate 360-92-201a



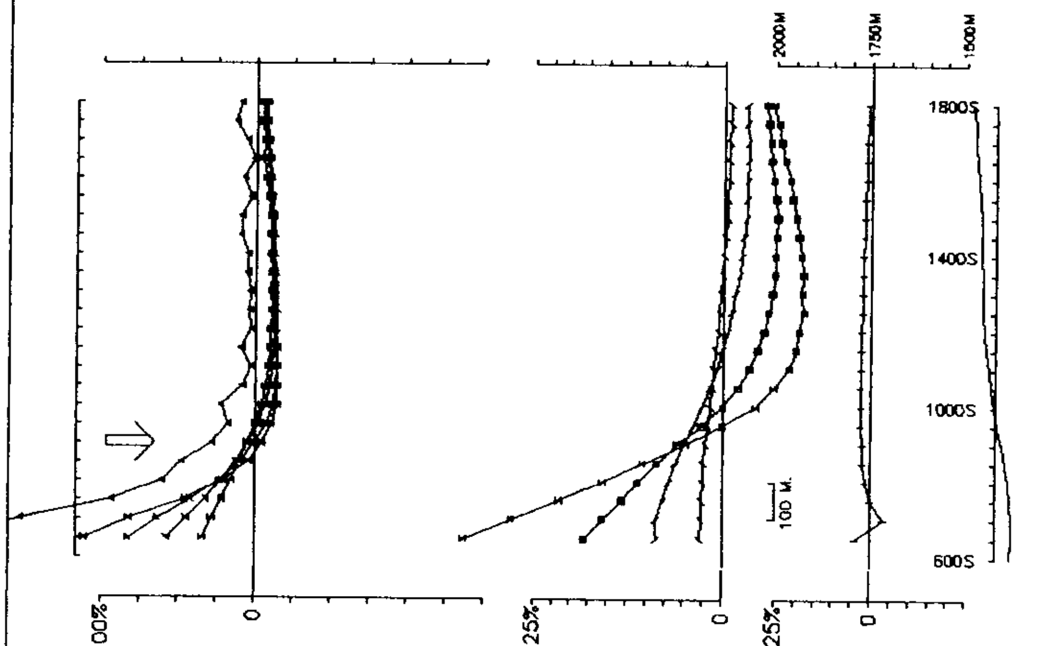

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 21a Line: 3400S DS:
Ch1 reduced. Ch1 normalized. TotalxP- 1142M./L- 1142M. Line Azim.: 90 . Rx Label: 34 . Base Shift: 10.0 % Point No

Plate 360-92-201b




FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 400E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1150M./L-1200M. Line Azim.: 0 . Rx Label: 4 . Base Shift: 22.0 %

Plate 360-92-202a

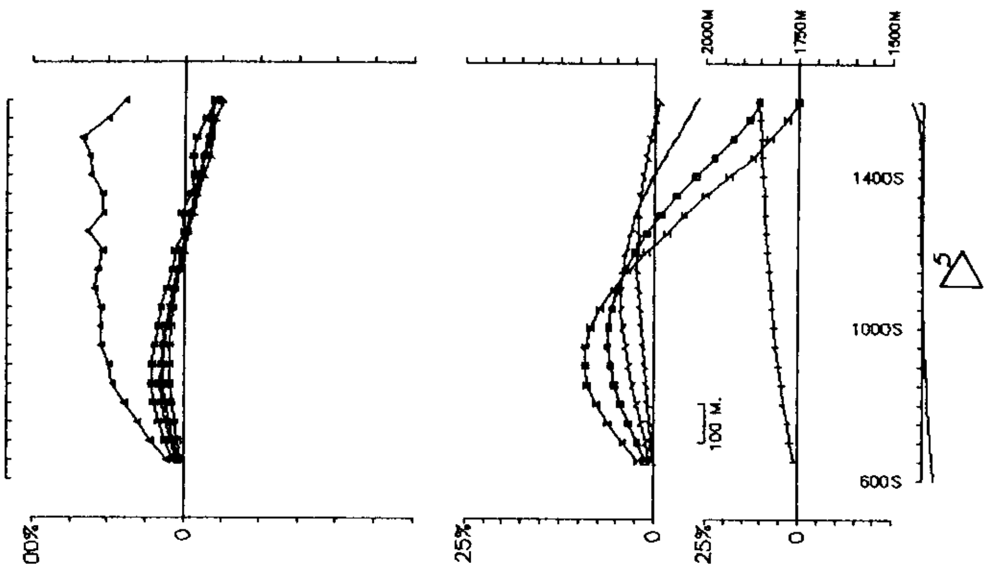



FOREMORE COMINCO Hz

Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 400E DS:

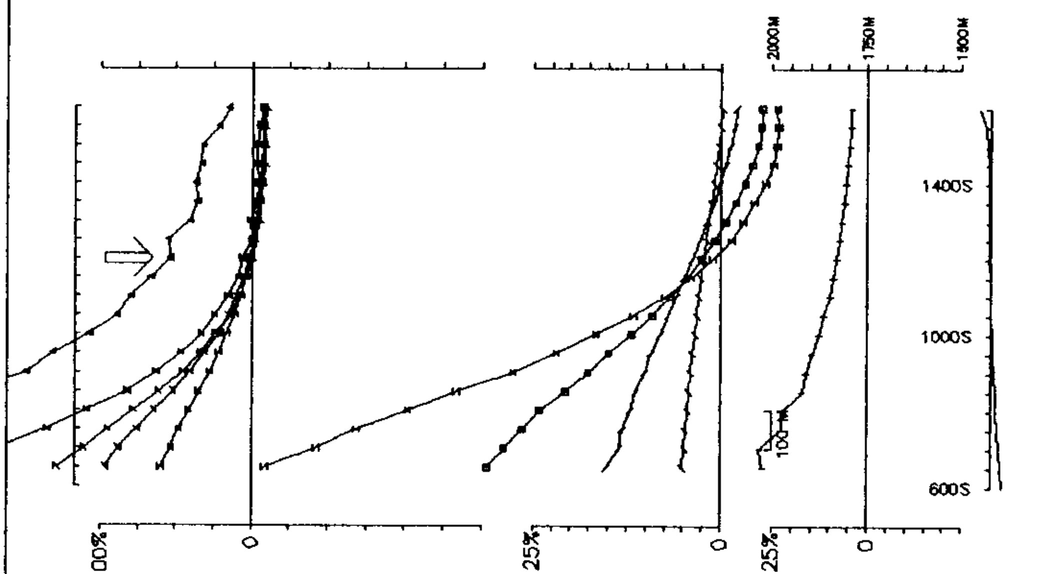
Ch1 reduced. Ch1 normalized. Totals:P-1150M./L-1200M. Line Azim.: 0 . Rx Label: 4 . Base Shift: 22.0 % Point Norm

**Plate 360-92-202b**



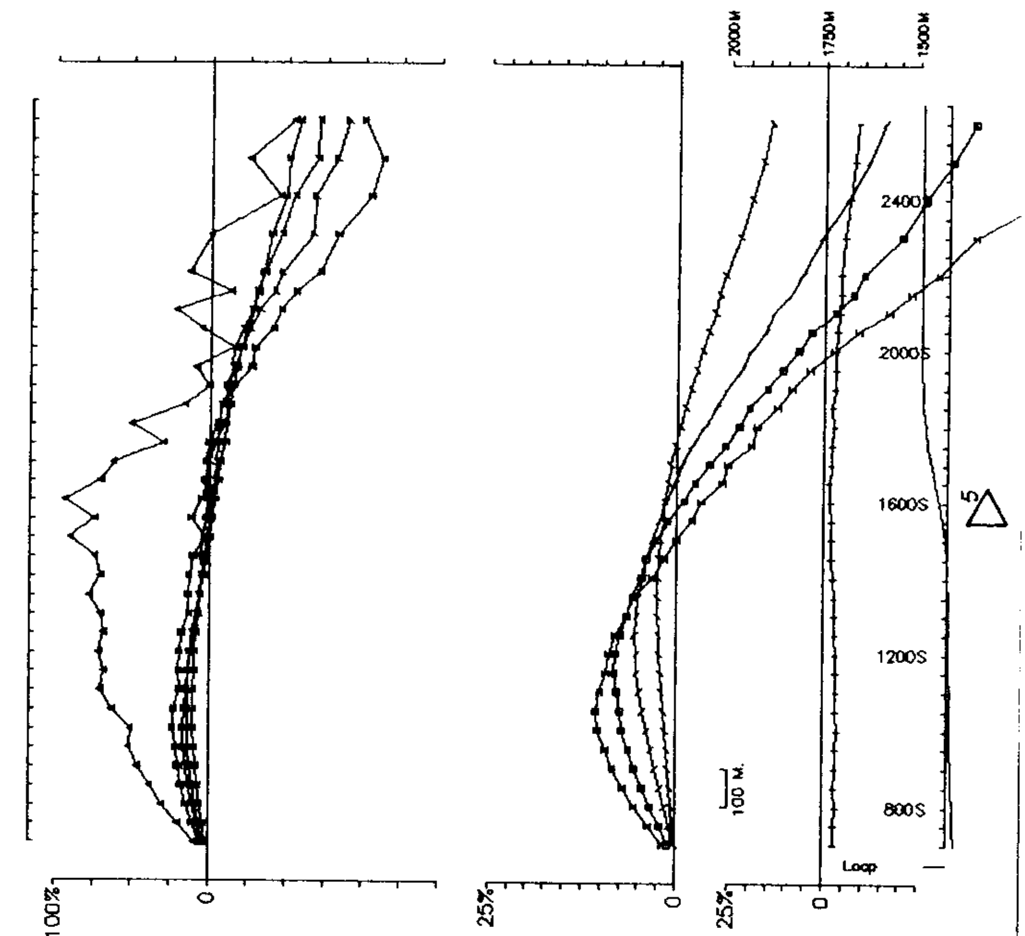

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 800E DS:
Ch1 reduced. Ch1 normalized. Totals:P-949M. /L-999M. Line Azim.: 0 . Rx Label: B . Base Shift: 20.0 %

Plate 360-92-203a



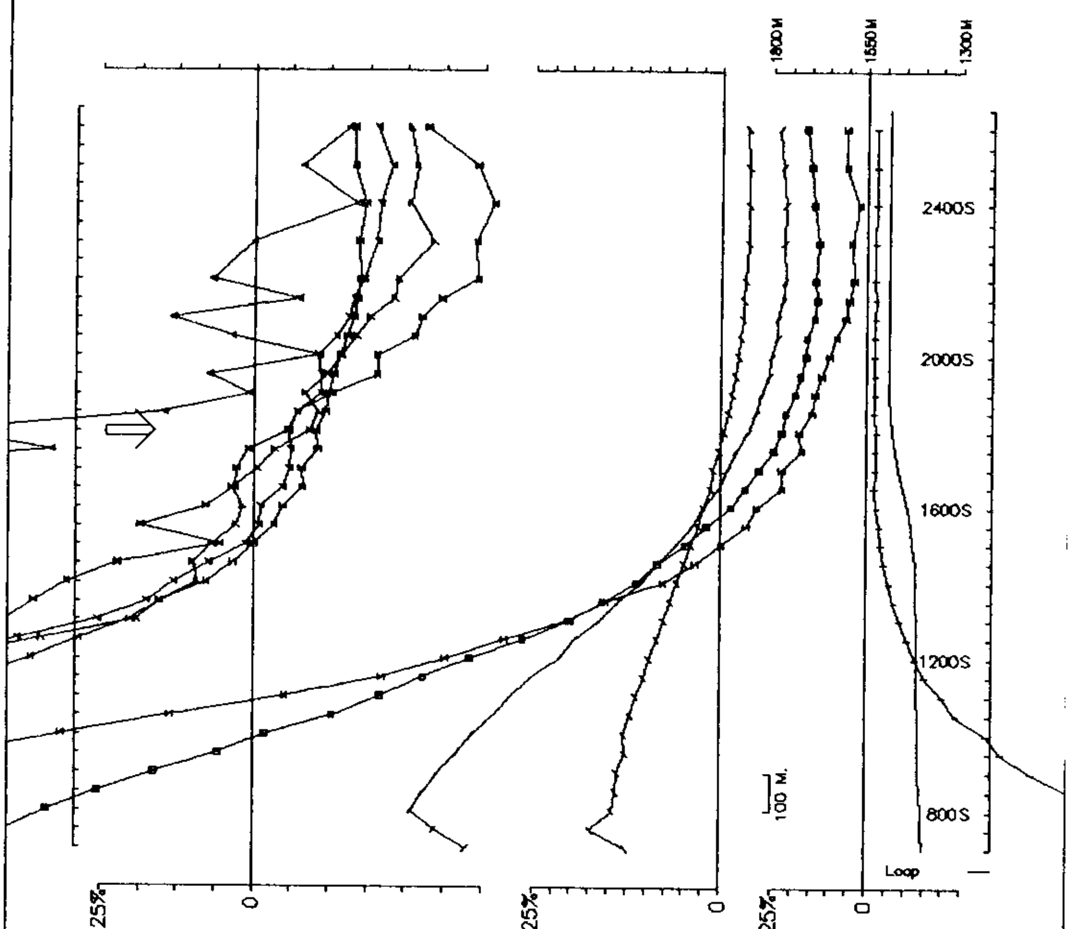

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 800E DS:
Ch1 reduced. Ch1 normalized. Totals:P-949M./L-999M. Line Azim.: 0 . Rx Label: 8 . Base Shift: 20.0 % Point Normaliz

Plate 360-92-203b



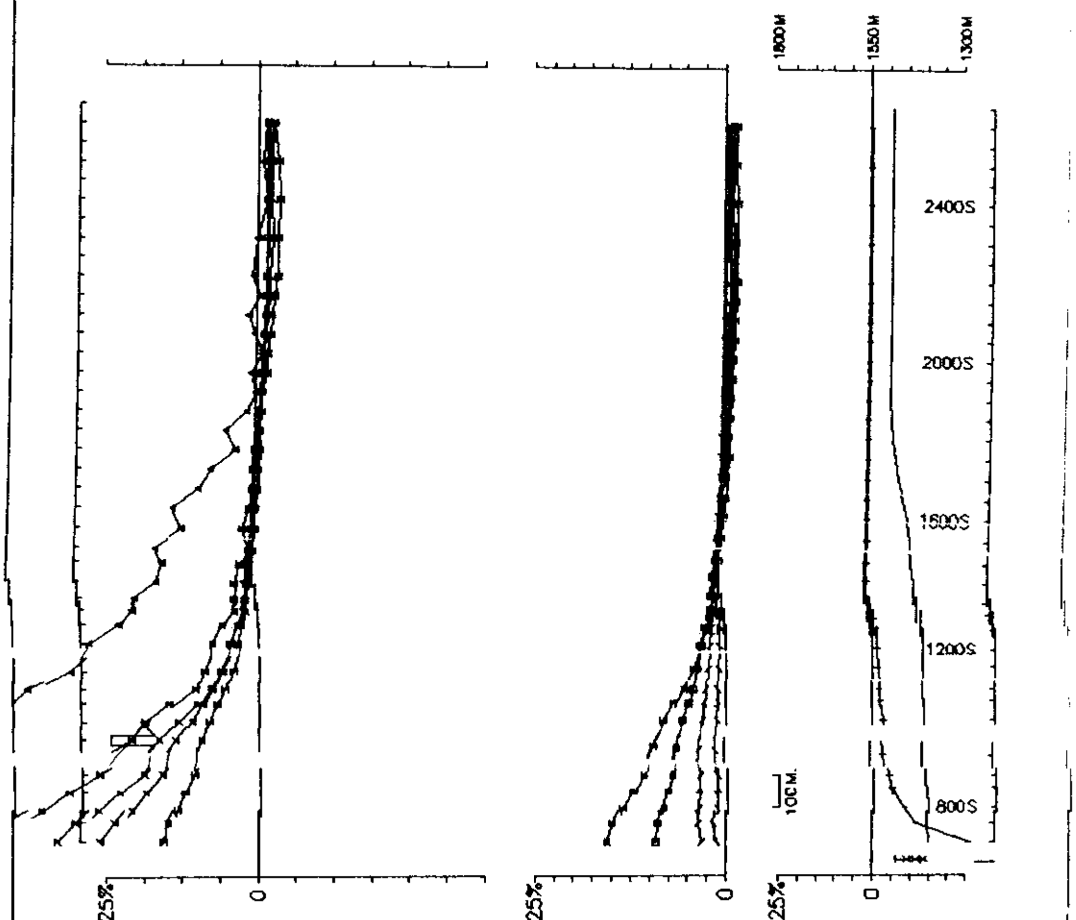

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 1000E DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1899M./L–1949M. Line Azim.: 0 , Rx Lobel: 10

**Plate 360–92–204a**



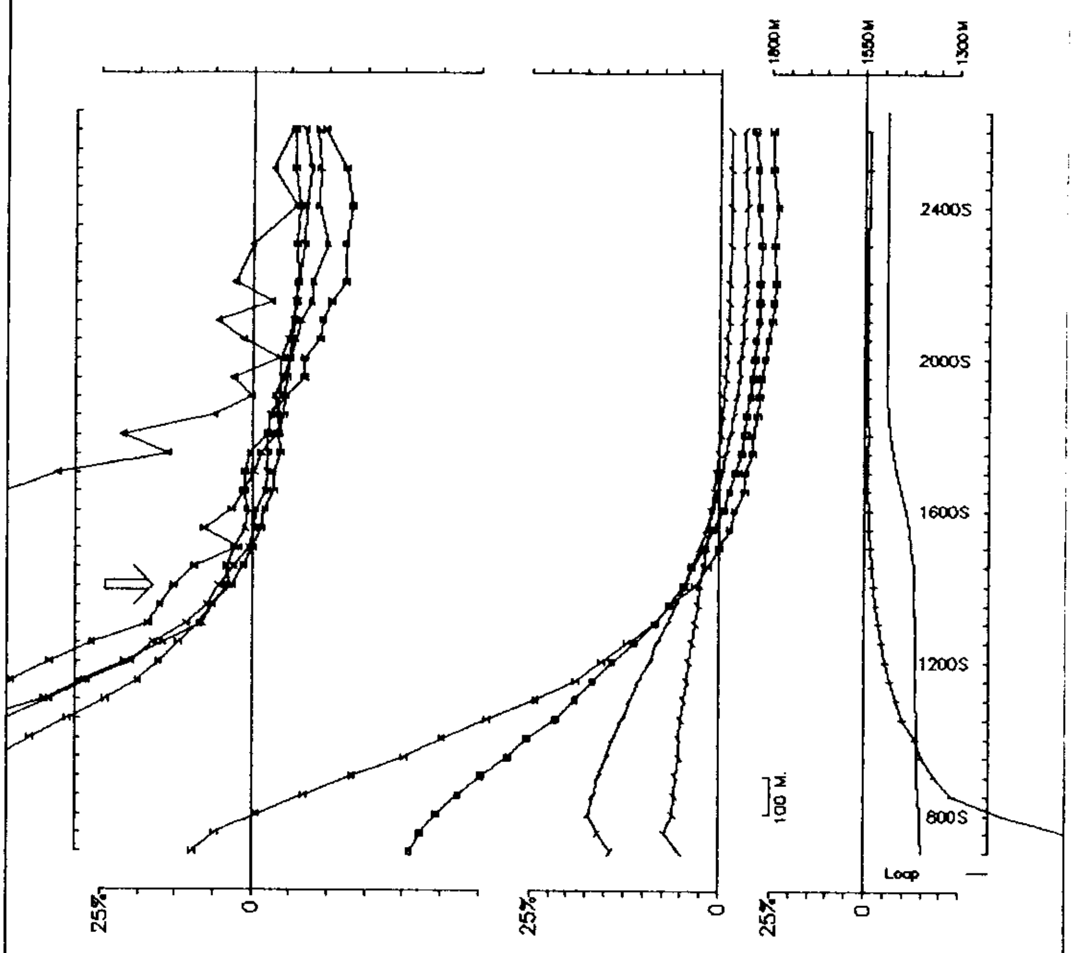

FOREMORE COMINCO Hz
Dp: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 1000E DS:
Ch1 reduced. Ch1 normalized. Totals:P-1899M./L-1949M. Line Azim.: 0 . Rx Label: 10 Point Normalized.

**Plate 360-92-204b**




FOREMORE COMINCO Hz
Dp: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 1000E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1899M./L-1949M. Line Azim.: 0 . Rx Label: 10 Point Normalized.

Plate 360-92-204c

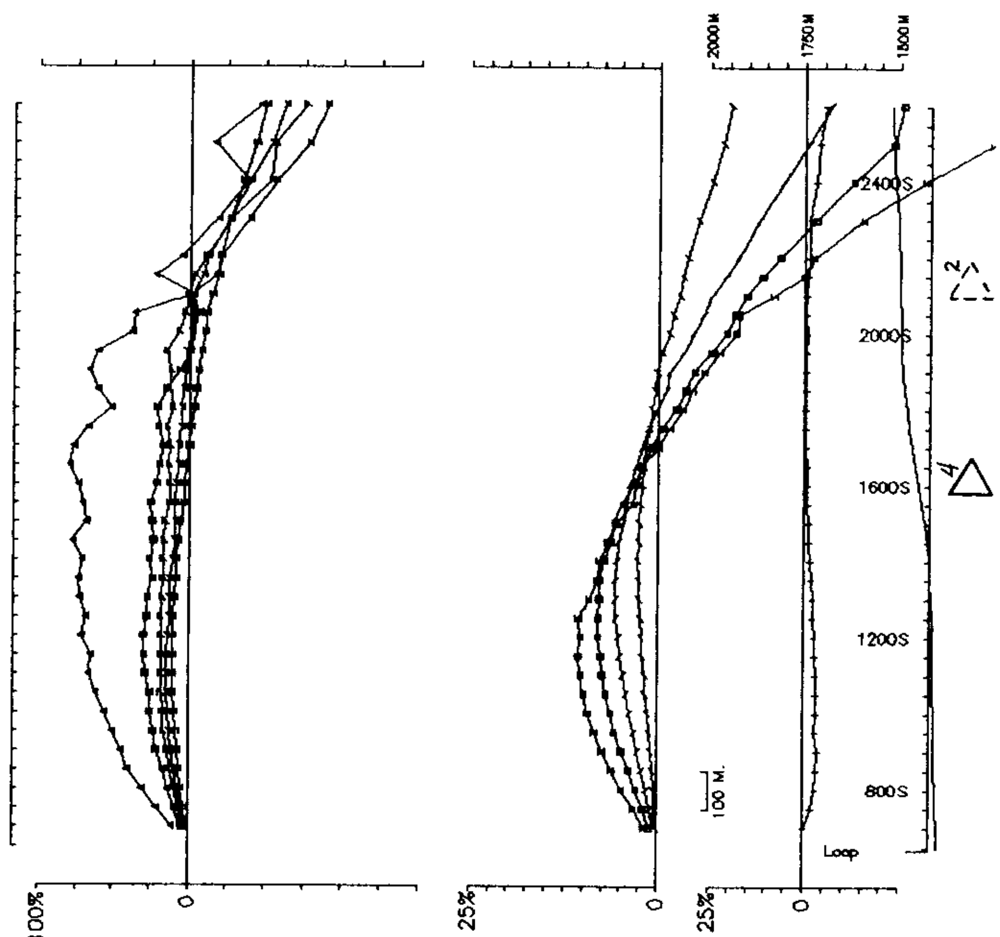



FOREMORE COMINCO Hz

Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 1000E DS:

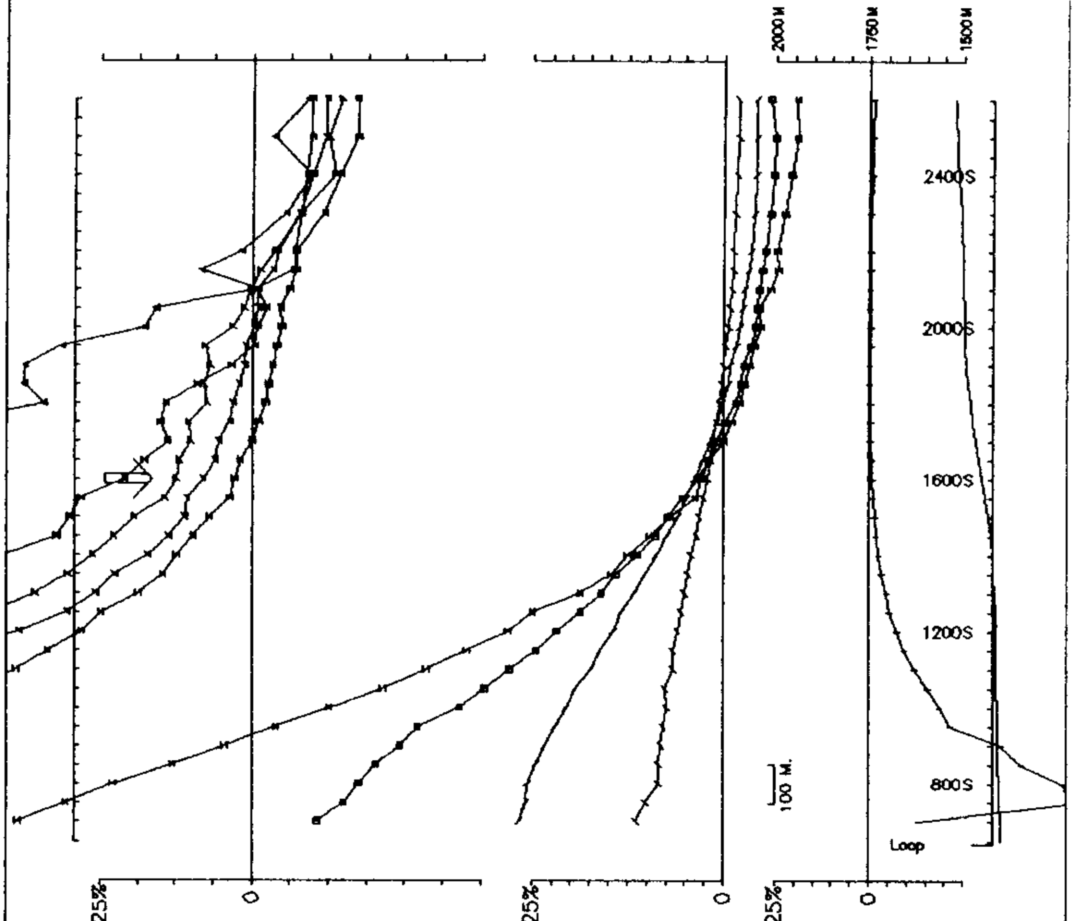
Ch1 reduced. Ch1 normalized. Totals:P– 1899M./L– 1949M. Line Azim.: 0 . Rx Label: 10 Point Normalized.

Plate 360–92–204d



FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 1200E DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1900M./L– 1953M. Line Azim.: 0 . Rx Label: 12

Plate 360-92-205a

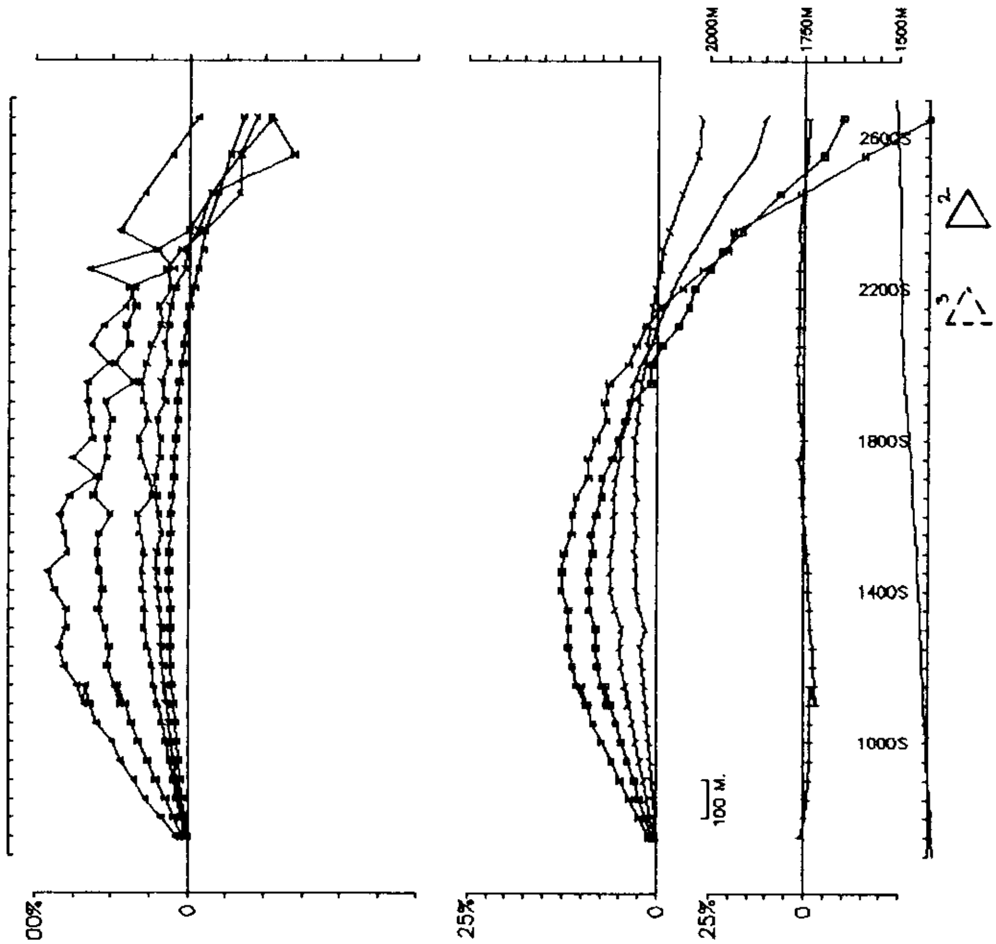



FOREMORE COMINCO Hz

Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 1200E DS:

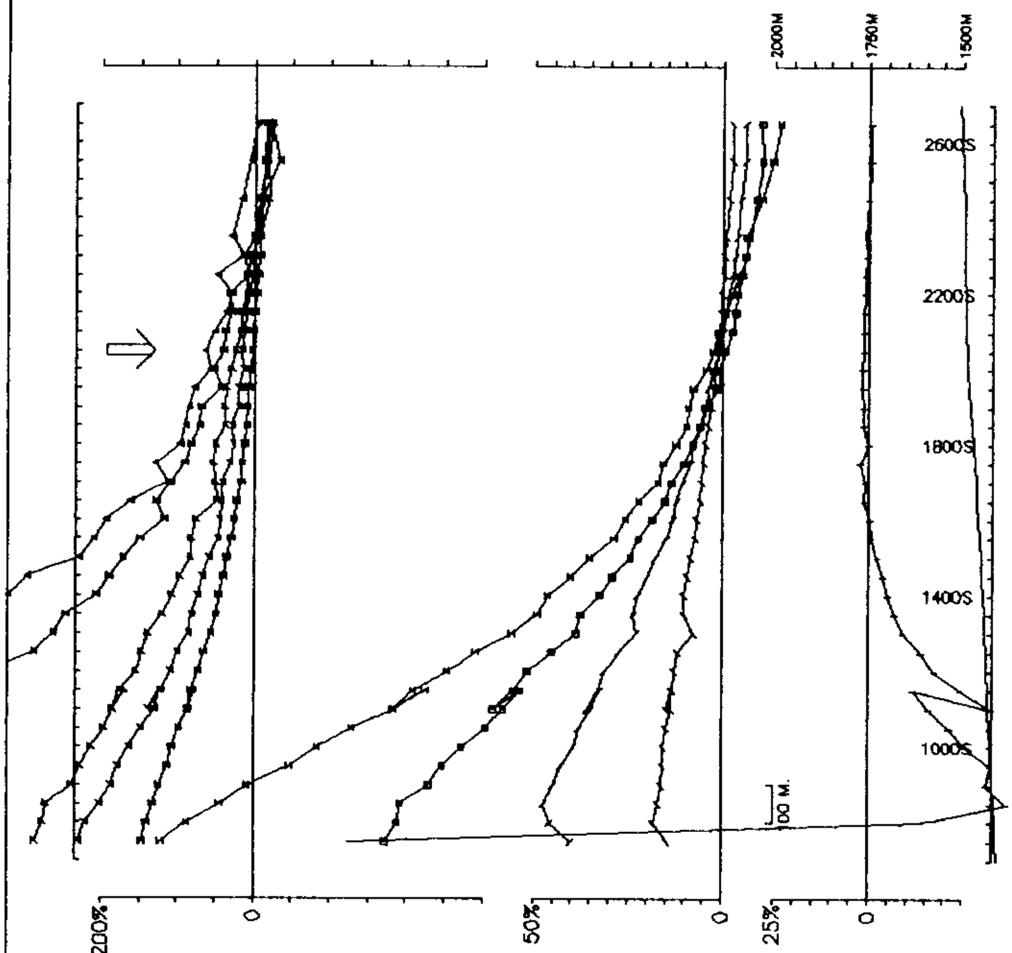
Ch1 reduced. Ch1 normalized. Totals:P- 1900M./L-1953M. Line Azim.: 0 . Rx Label: 12 Point Normalized.

Plate 360-92-205b




FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 1600E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1897M./L-1997M. Line Azim.: 0 . Rx Label: 26

Plate 360-92-206a

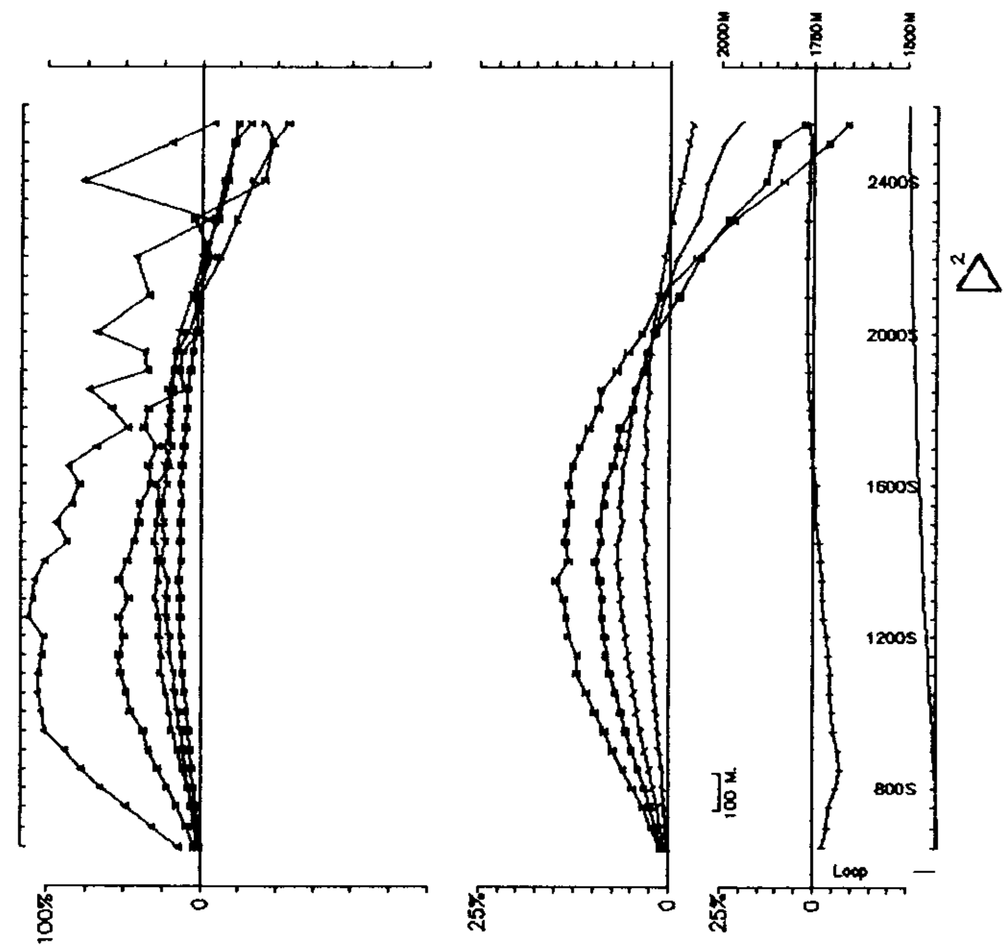



FOREMORE COMINCO Hz

Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 1600E DS:

Ch1 reduced. Ch1 normalized. Totals:P– 1897M./L.–1997M. Line Azim.: 0 . Rx Label: 25 Point Normalized.

Plate 360-92-206b

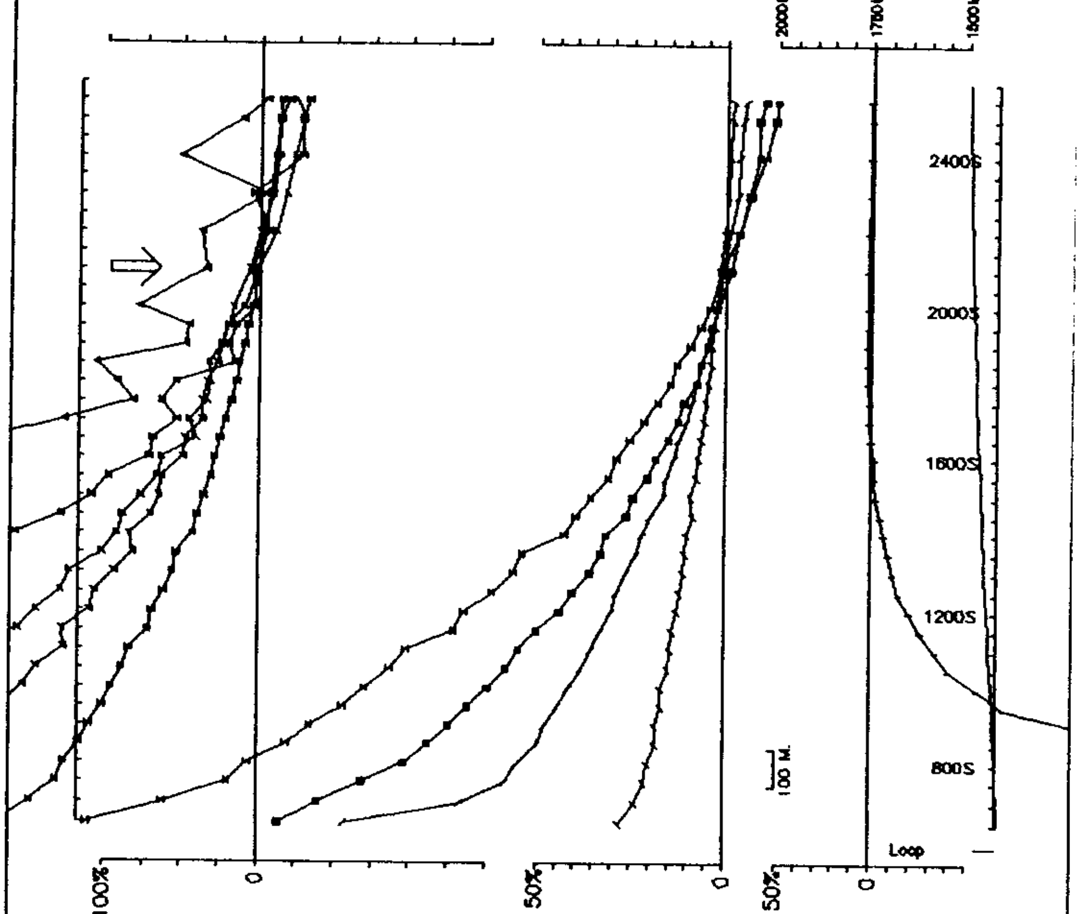



FOREMORE COMINCO Hz

Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 2000E DS:

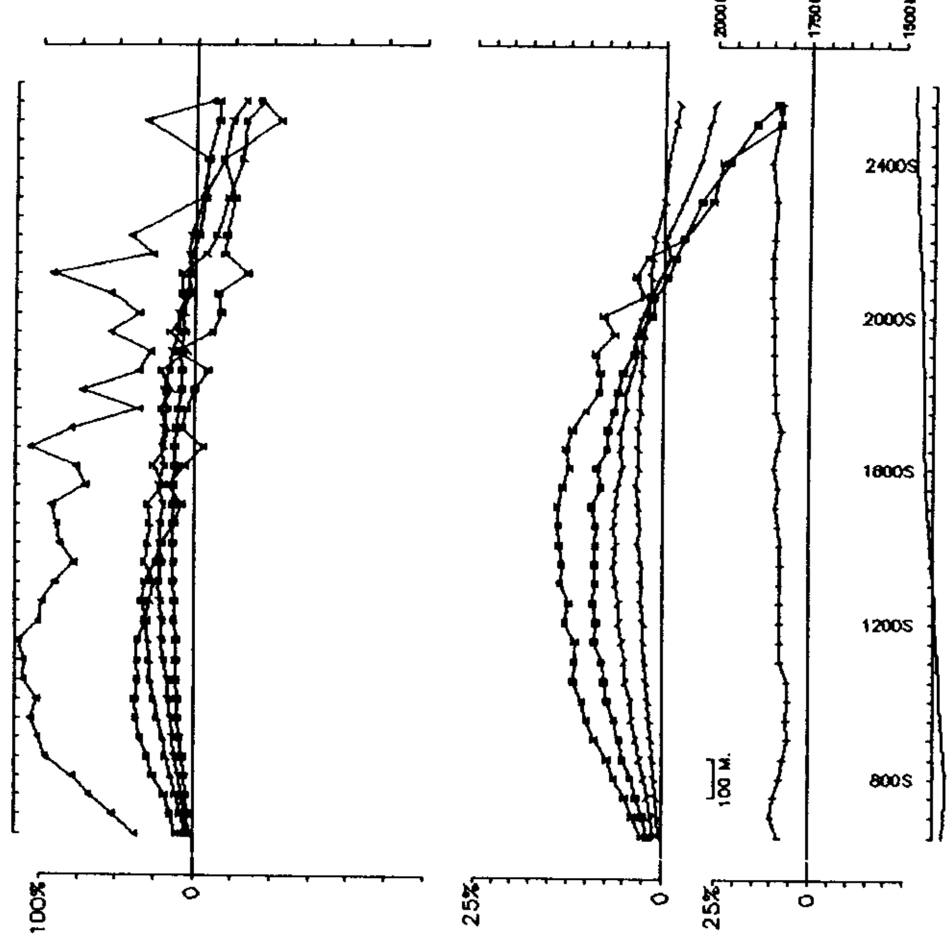
Ch1 reduced. Ch1 normalized. Totals:P– 1910M. /L– 1960M. Line Azim.: 90 . Rx Label: 20

Plate 360-92-207a

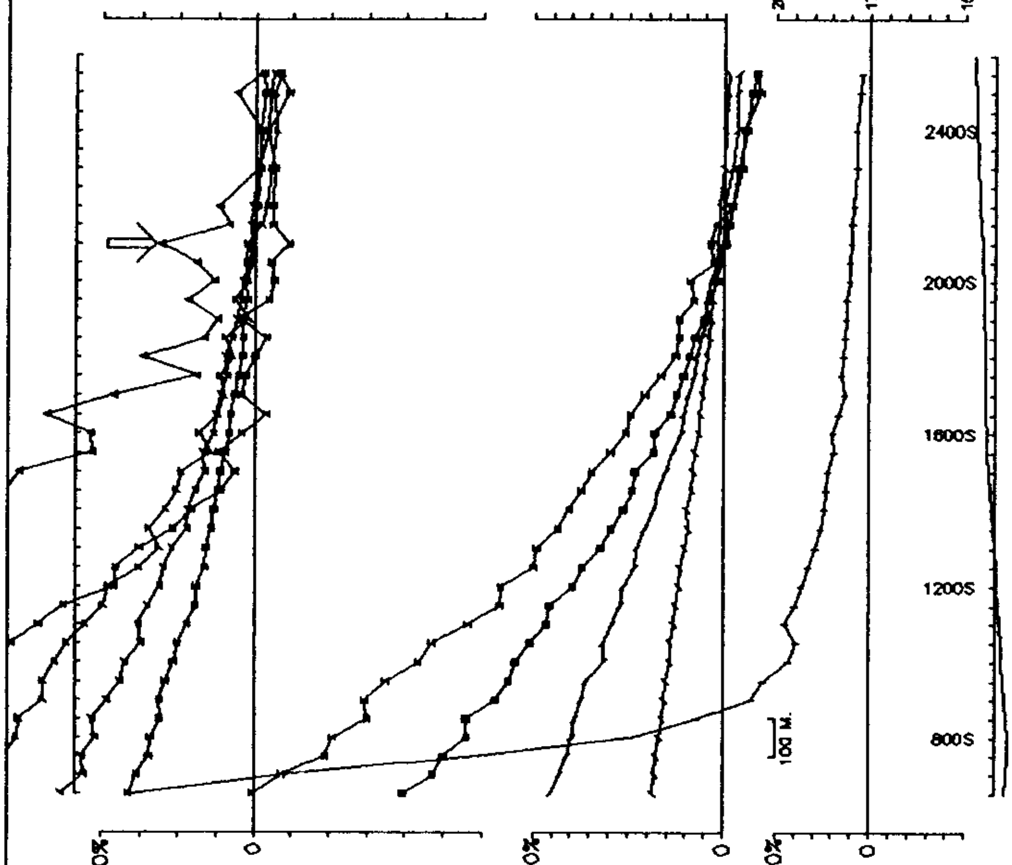



FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 2000E DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1910M./L– 1960M. Line Azim.: 90 . Rx Label: 20 Point Normalized.

Plate 360-92-207b

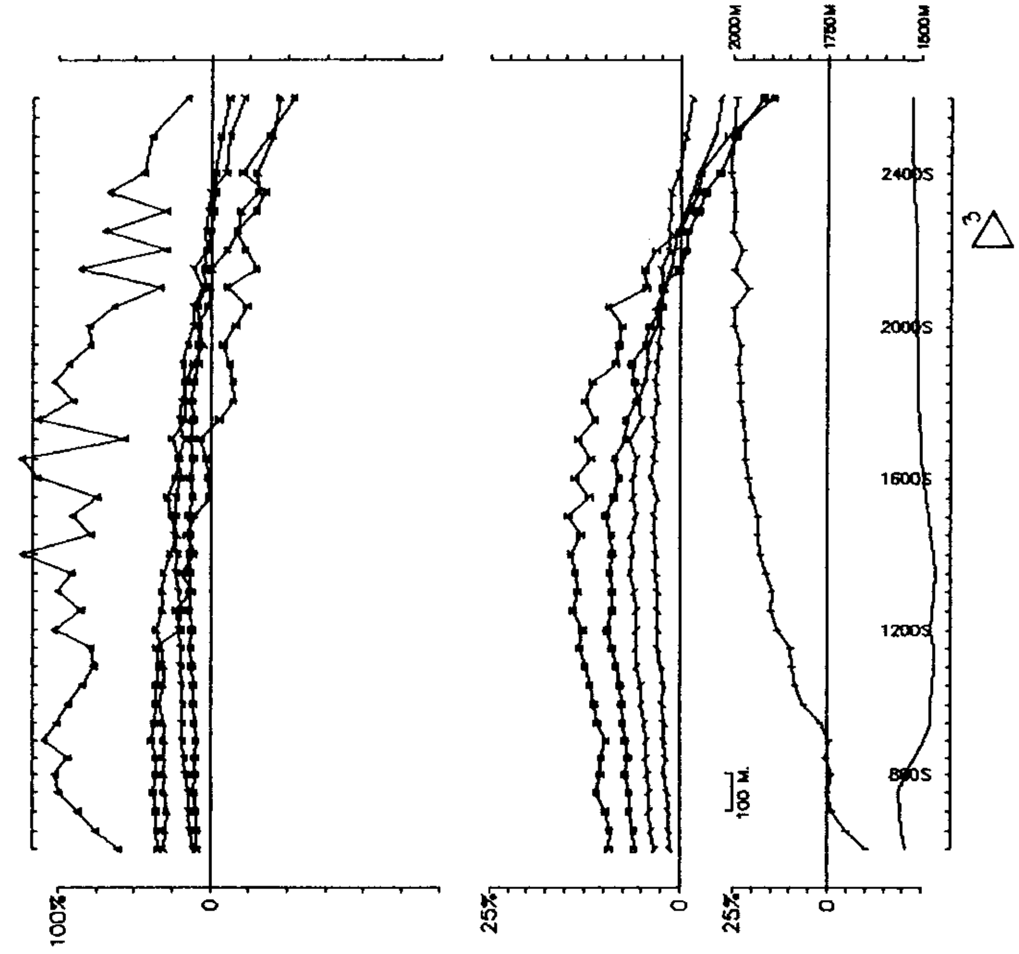



FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 2200E DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1897M./L– 1947M. Line Azim.: 90 . Rx Label: 22



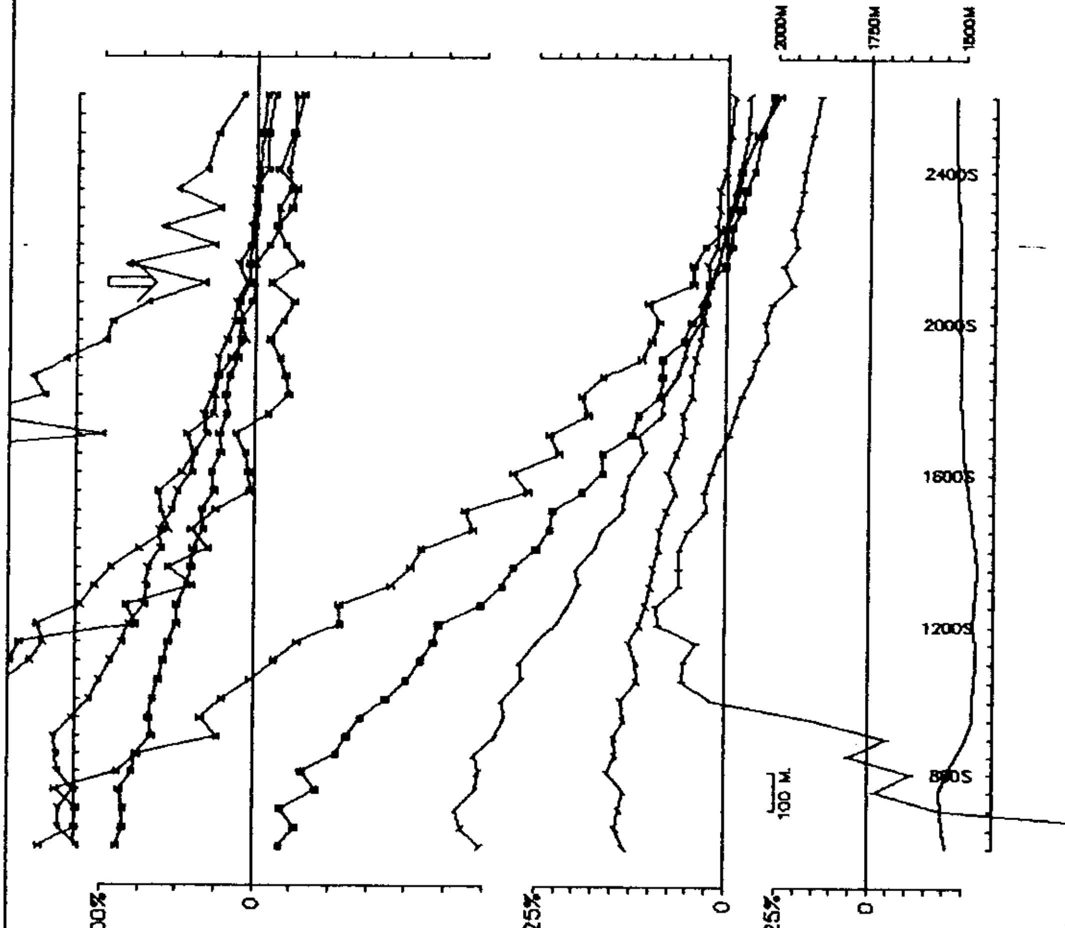

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 2200E DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1897M./L– 1947M. Line Azim.: 90 . Rx Label: 22 Point Normalized.

Plate 360–92–208b



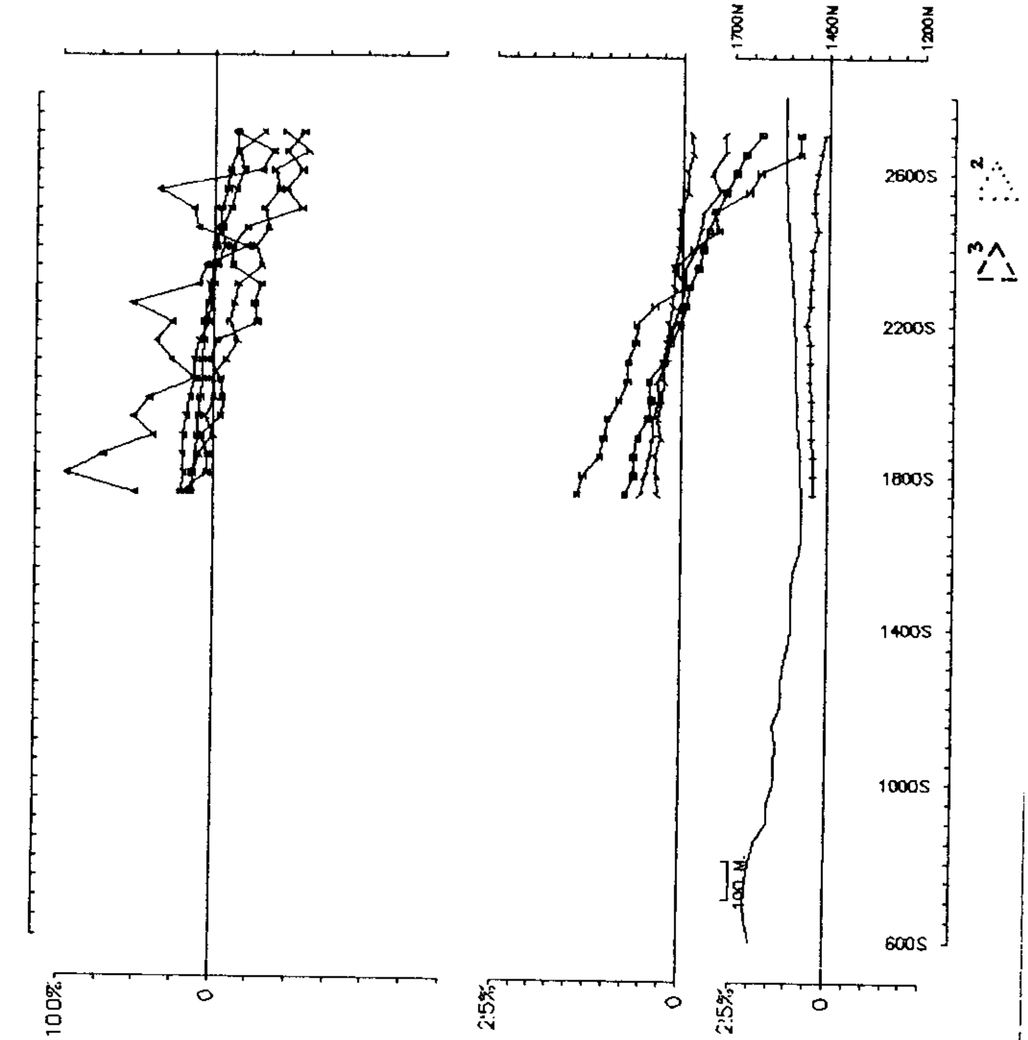

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 2400E DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1983M./L– 1983M. Line Azim.: 90 . Rx Label: 24 . Base Shift: 20.0 %

Plate 360-92-209a



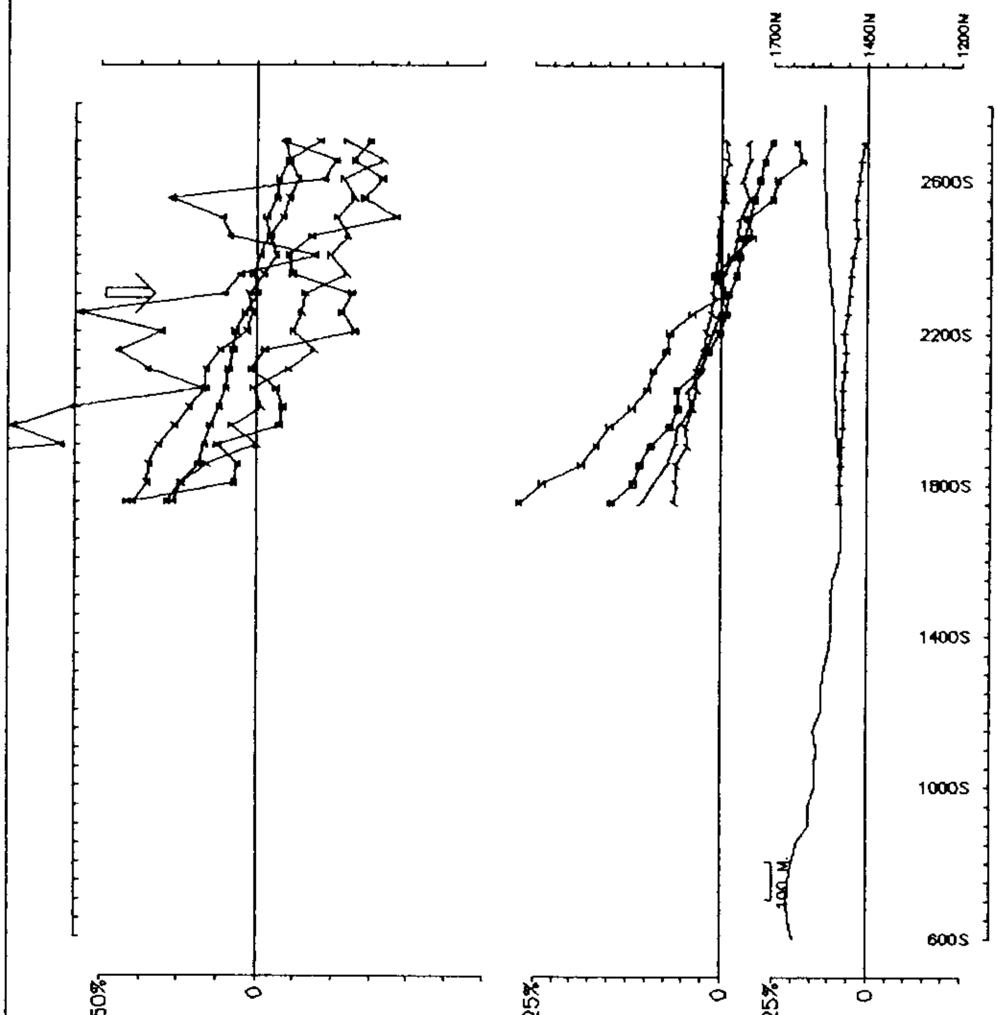

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 2400E DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1983M./L- 1983M. Line Azim.: 90 . Rx Label: 24 . Base Shift: 20.0 % Point Nor

Plate 360-92-209b



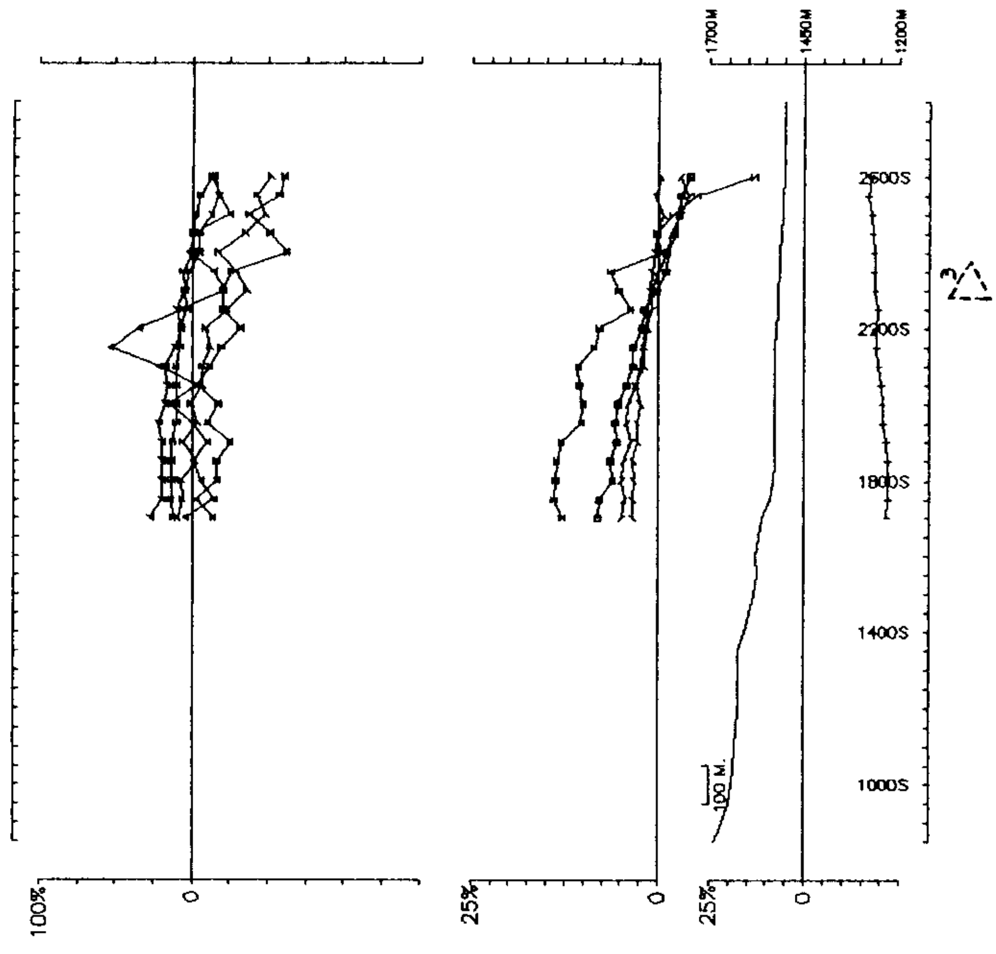

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 2600E DS:
Ch1 reduced. Ch1 normalized. Totals:P-950M. /L-2199M. Line Azim.: 0 . Rx Label: 26

**Plate 360-92-210a**



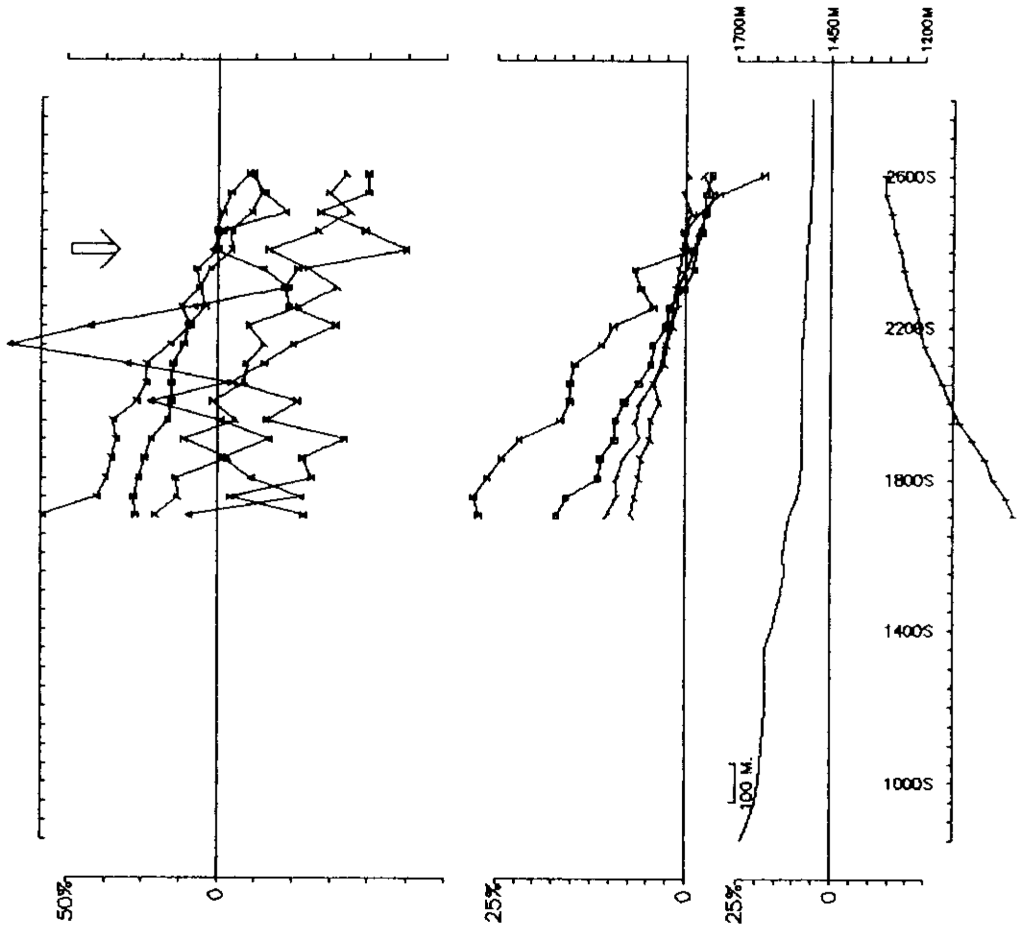

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 2600E DS:
Ch1 reduced. Ch1 normalized. Totals:P-950M. /L-2199M. Line Azim.: 0 . Rx Label: 26 Point Normalized.

Plate 360-92-210b



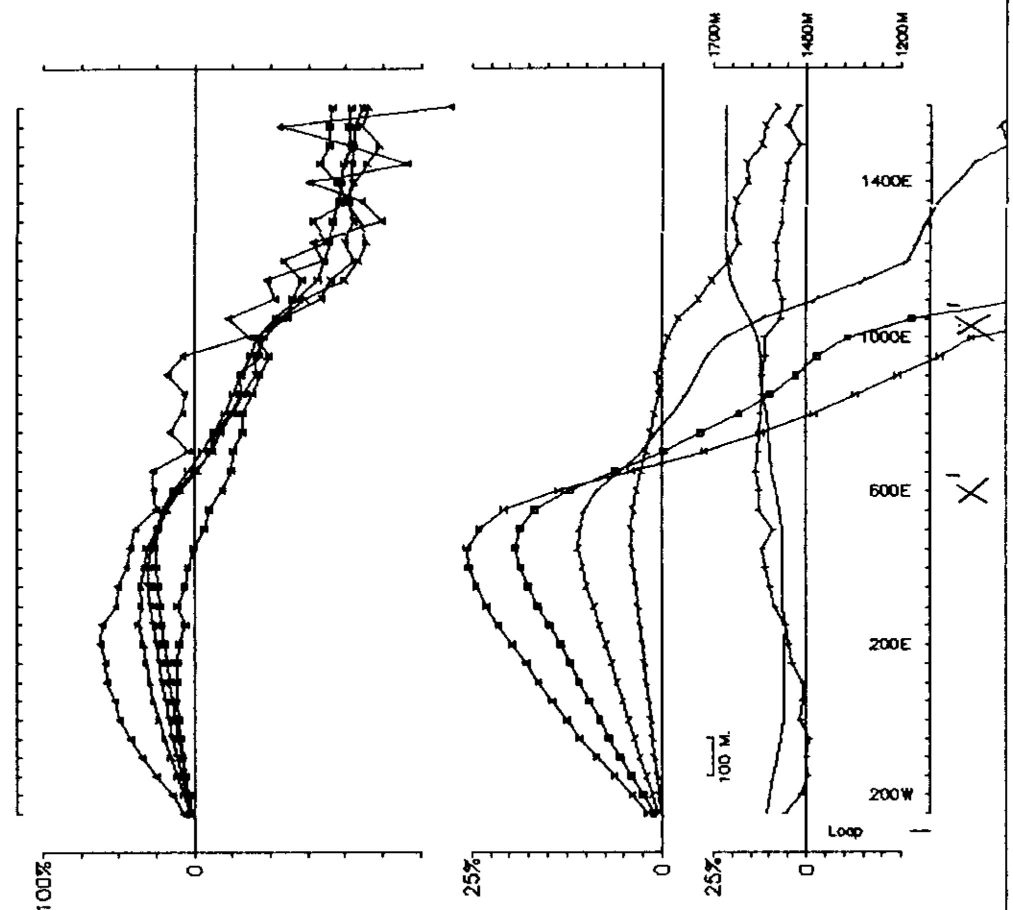

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 2800E DS:
Ch1 reduced. Ch1 normalized. Totals:P-900M./L-1952M. Line Azim.: 0 . Rx Label: 28

Plate 360-92-211a



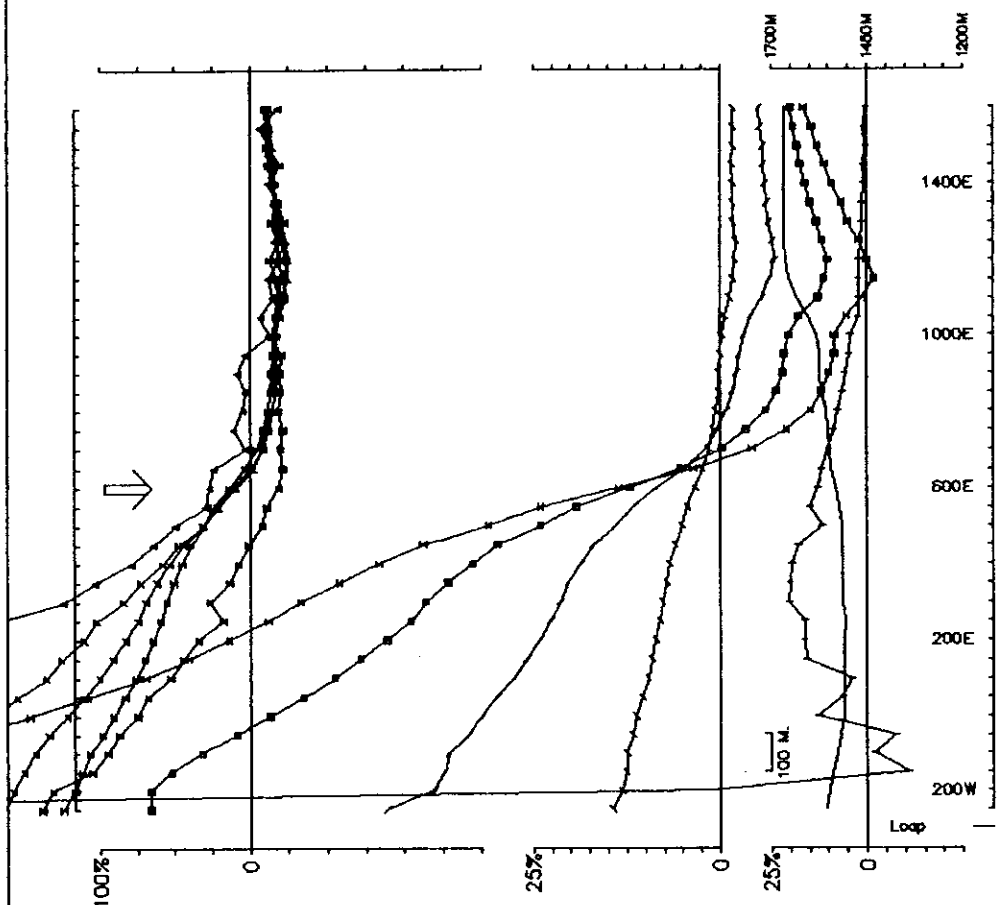

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 22 Line: 2800E DS:
Ch1 reduced. Ch1 normalized. Totals:P-900M./L-1952M. Line Azim.: 0 . Rx Label: 28 Point Normalized.

**Plate 360-92-211b**



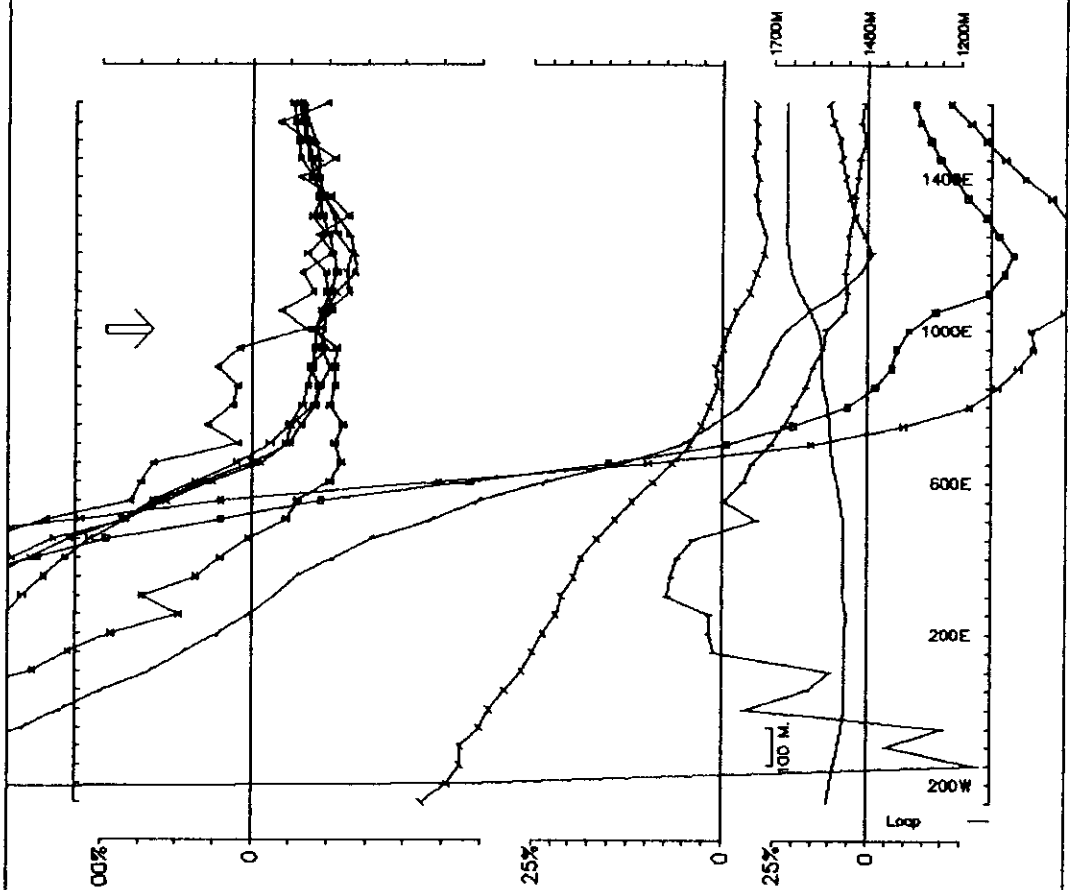

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 23 Line: 0N DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1848M. /L- 1848M. Line Azim.: 130 . Rx Label: 0 . Base Shift: -40.0 %

Plate 360-92-212a



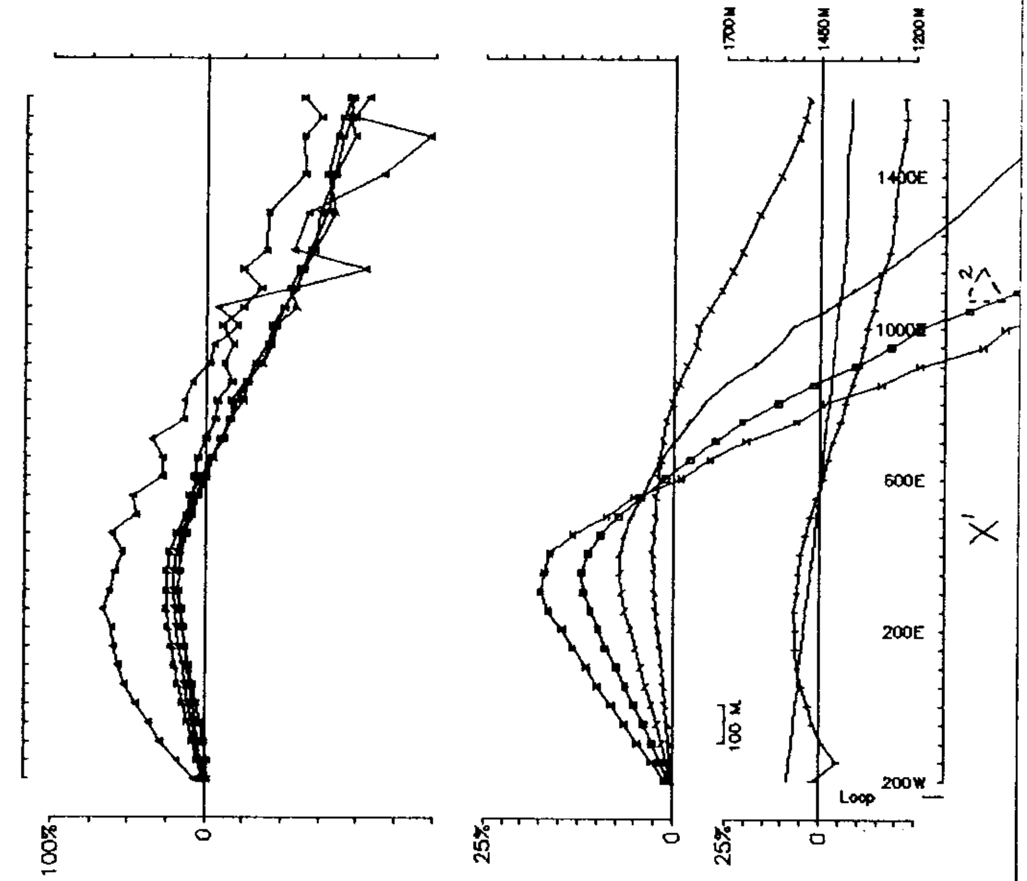

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 23 Line: 0N DS:
Ch1 reduced. Ch1 normalized. TotalsP- 1848M./L- 1848M. Line Azim.: 130 . Rx Label: 0 . Base Shift: -40.0 % Point N

Plate 360-92-212b



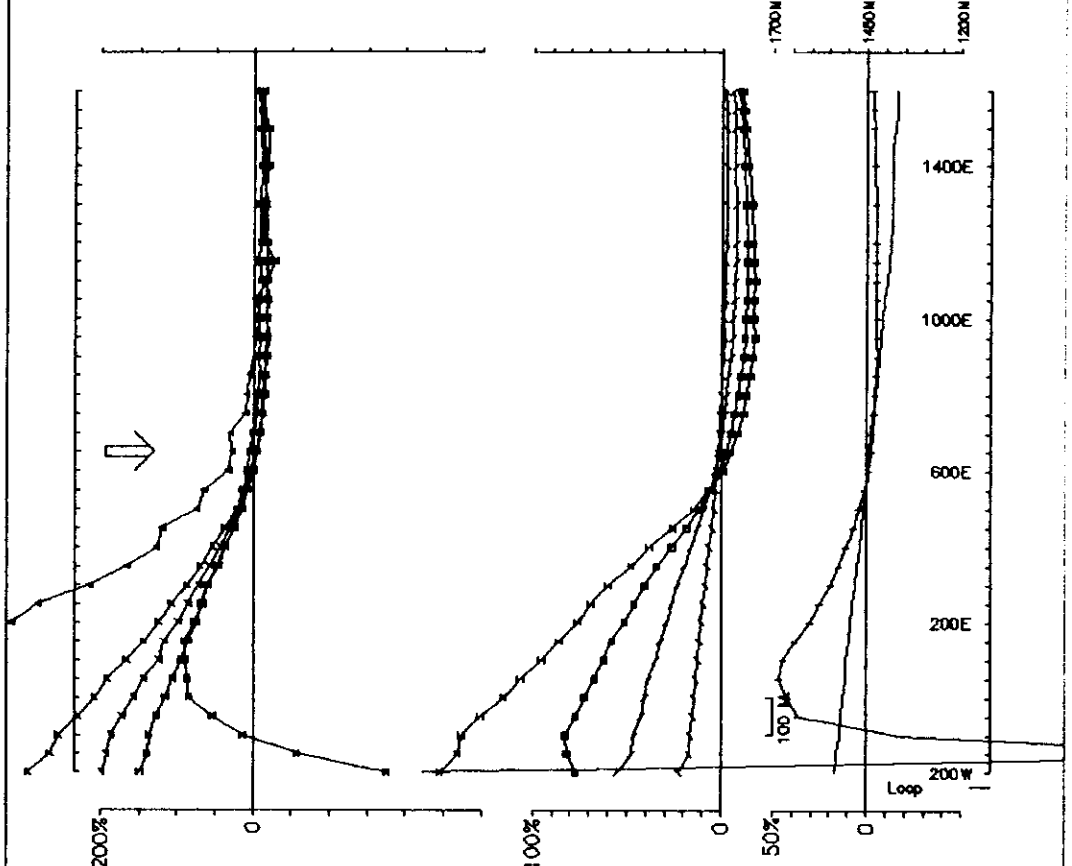

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 23 Line: 0N DS:
Ch1 reduced. Ch1 normalized. Totals:P- 1848M./L- 1848M. Line Azim.: 130 . Rx Label: 0 . Base Shift: -40.0% Point N

Plate 360-92-212c



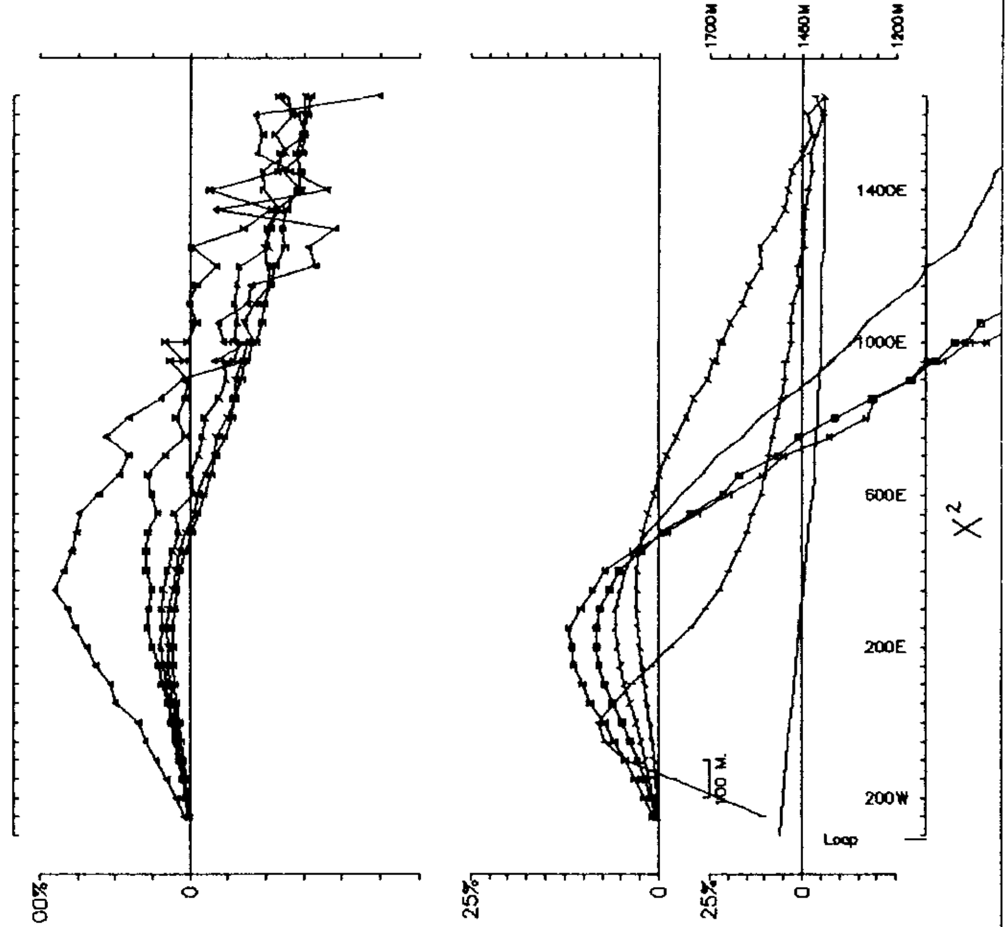

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 23 Line: 400S DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1797M./L– 1797M. Line Azim.: 130 . Rx Label: 4 . Base Shift: -50.0%

Plate 360-92-213a



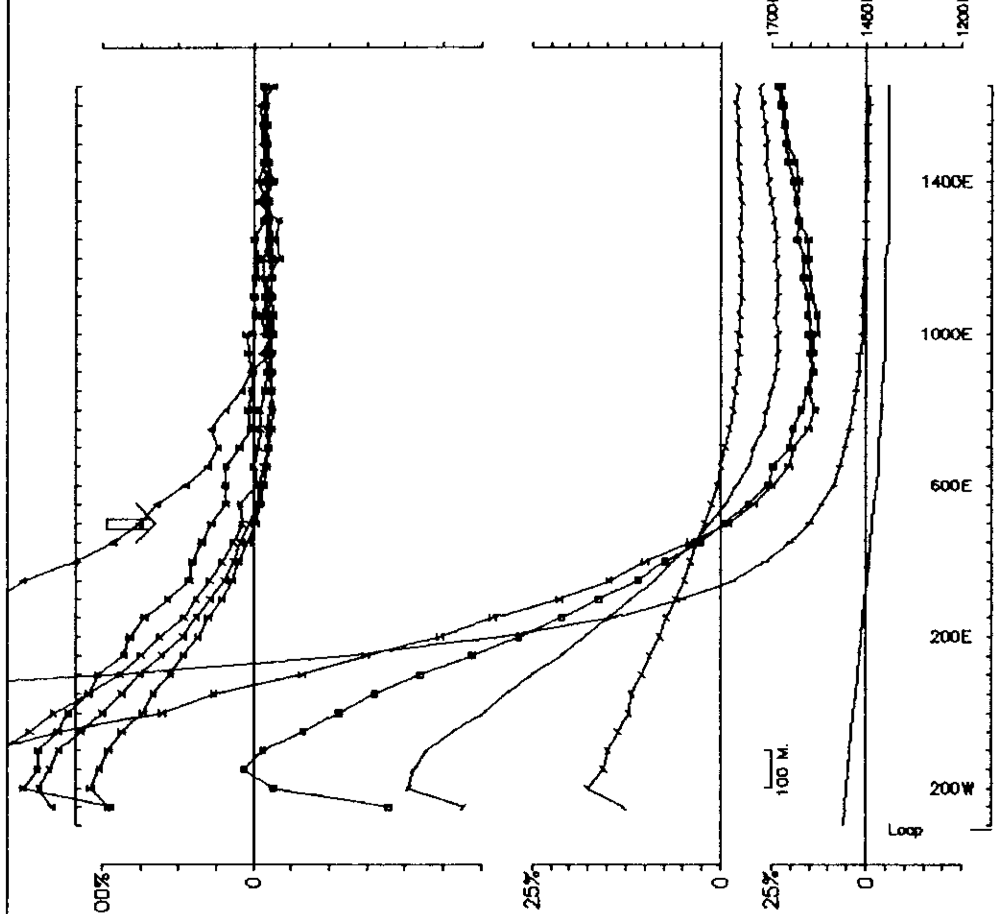

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 23 Line: 400S DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1797M./L–1797M. Line Azim.: 130 . Rx Label: 4 . Base Shift: –50.0% Point N

Plate 360-92-213b



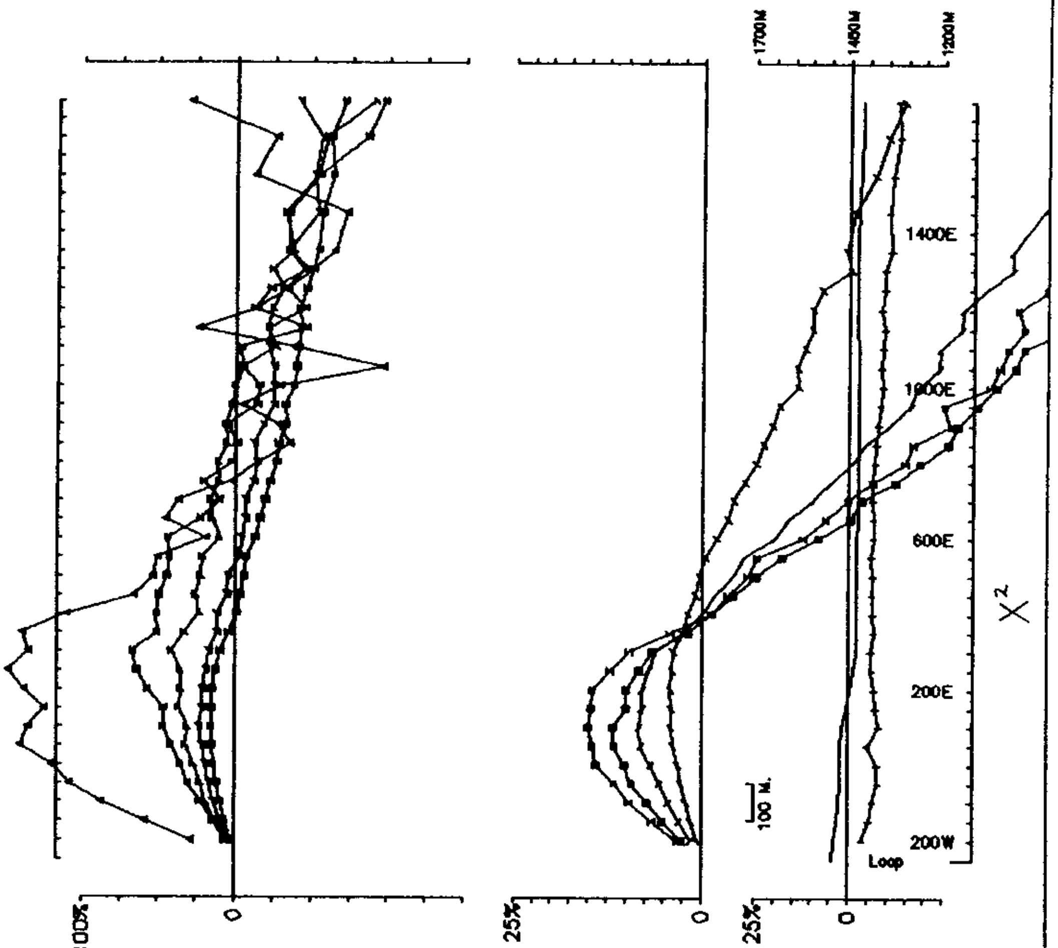

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 23 Line: 800S DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1899M./L– 1949M. Line Azim.: 130 . Rx Label: 8

Plate 360-92-214a



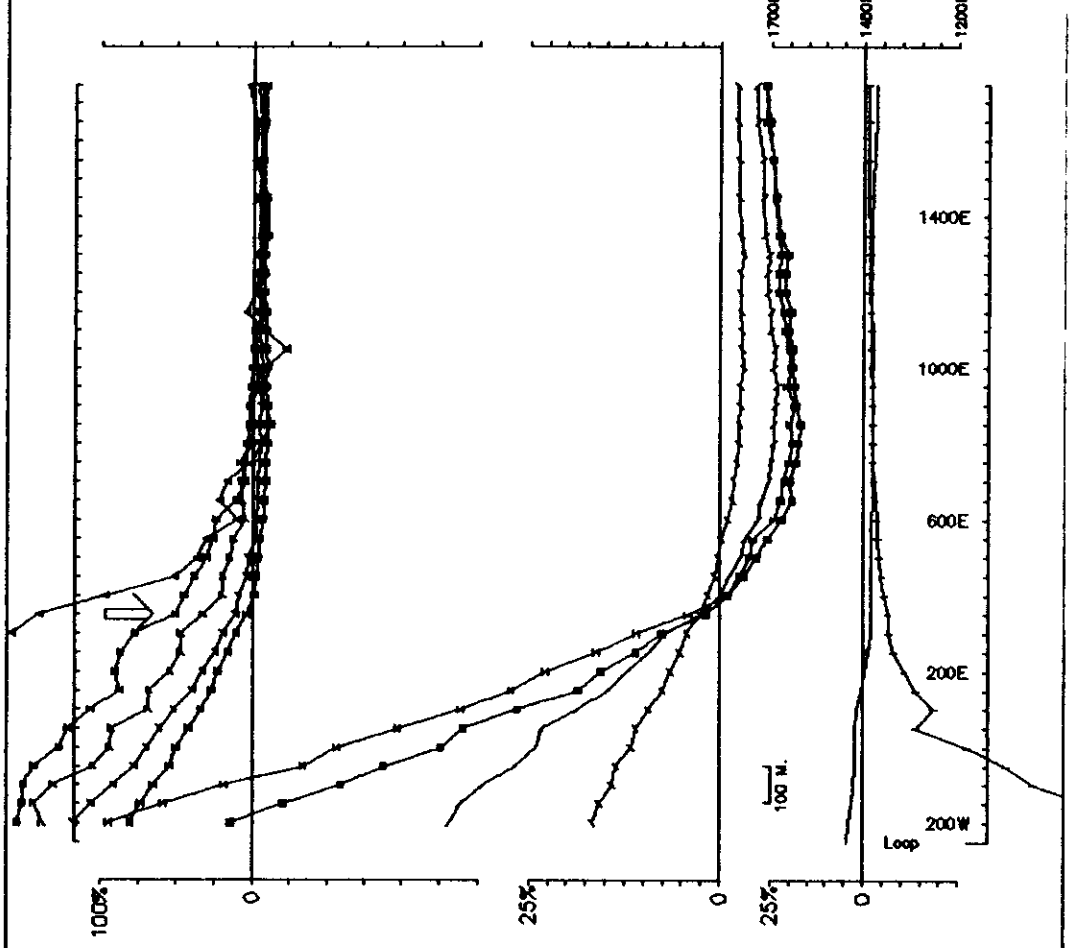

FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 23 Line: 800S DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1899M. /L– 1949M. Line Azim.: 130 . Rx Label: B Point Normalized.

Plate 360-92-214b




FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 23 Line: 1200S DS:
Ch1 reduced. Ch1 normalized. Totals:P– 1947M./L–1998M. Line Azim.: 130 . Rx Label: 12 . Base Shift: 20.0 %

Plate 360-92-215a

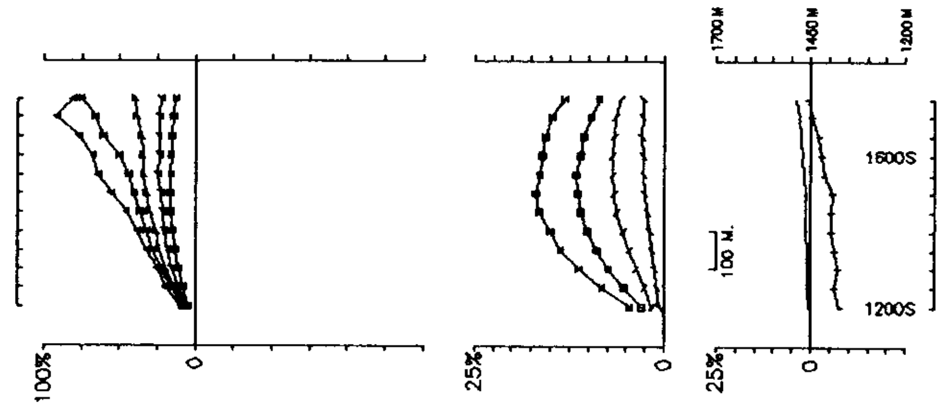



FOREMORE COMINCO Hz

Op: RWH/GW Freq(Hz): 30.974 Loop: 23 Line: 1200S DS:

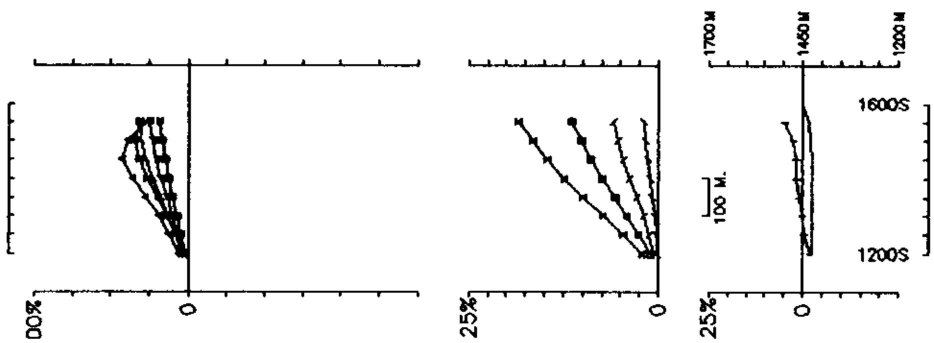
Ch1 reduced. Ch1 normalized. Totals:P– 1947M./L–1998M. Line Azim.: 130 . Rx Label: 12 . Base Shift: 20.0% Point No

Plate 360-92-215b



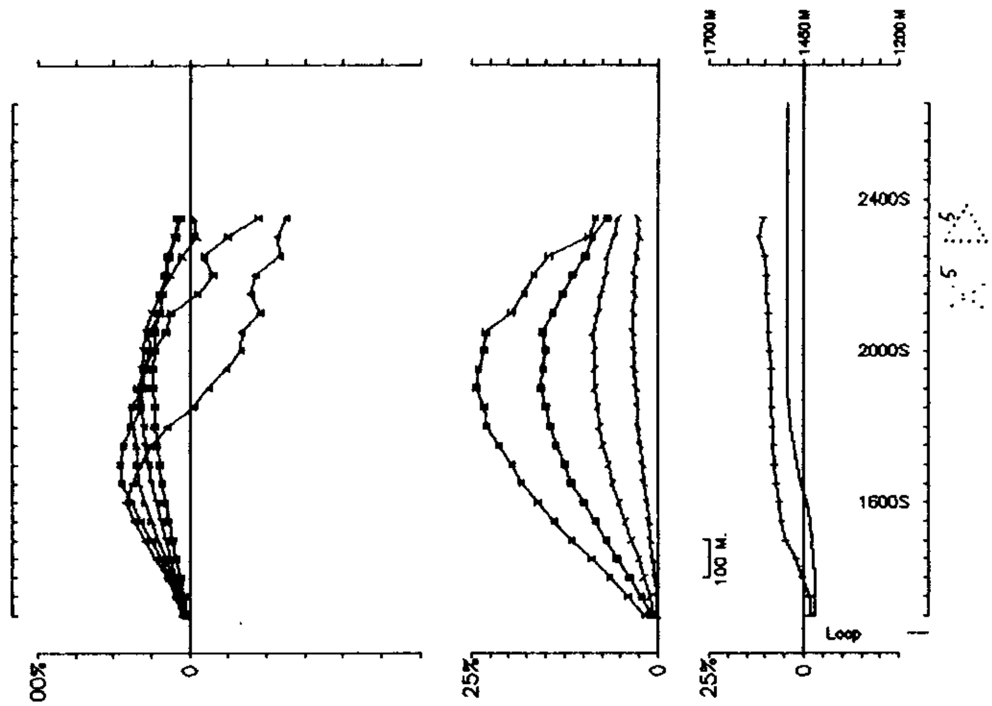

FOREMORE COMINCO Hz
Dp: RWH/GW Freq(Hz): 30.974 Loop: 24 Line: 400E DS:
Ch1 reduced. Ch1 normalized. Totals:P-550M. /L-550M. Line Azim.: 90 . Rx Label: 4

Plate 360-92-216a




FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 24 Line: 800E DS:
Ch1 reduced. Ch1 normalized. Totals:P-350M./L-397M. Line Azim.: 90 . Rx Label: 8

Plate 360-92-217a

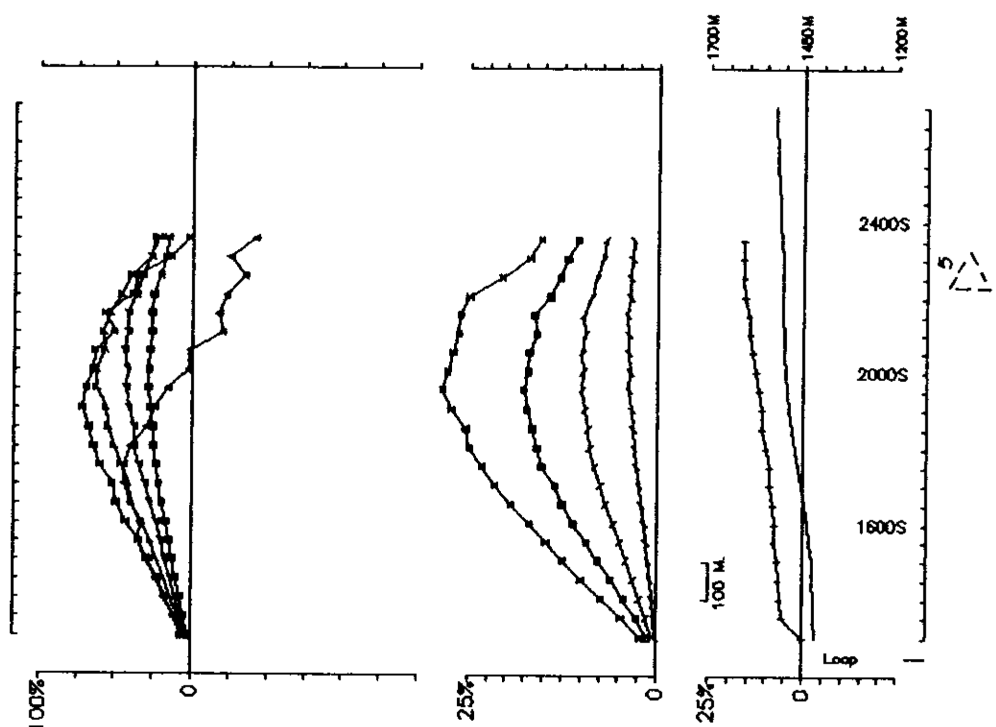



FOREMORE COMINCO Hz

Op: RWH/GW Freq(Hz): 30.974 Loop: 24 Line: 1000E DS:

Ch1 reduced. Ch1 normalized. Totals:P– 1049M./L– 1349M. Line Azim.: 90 . Rx Label: 10

Plate 360–92–218a




FOREMORE COMINCO Hz
Op: RWH/GW Freq(Hz): 30.974 Loop: 24 Line: 1200E DS:
Ch1 reduced. Ch1 normalized. Totals:P-1053M./L-1403M. Line Azim.: 90 , Rx Label: 12

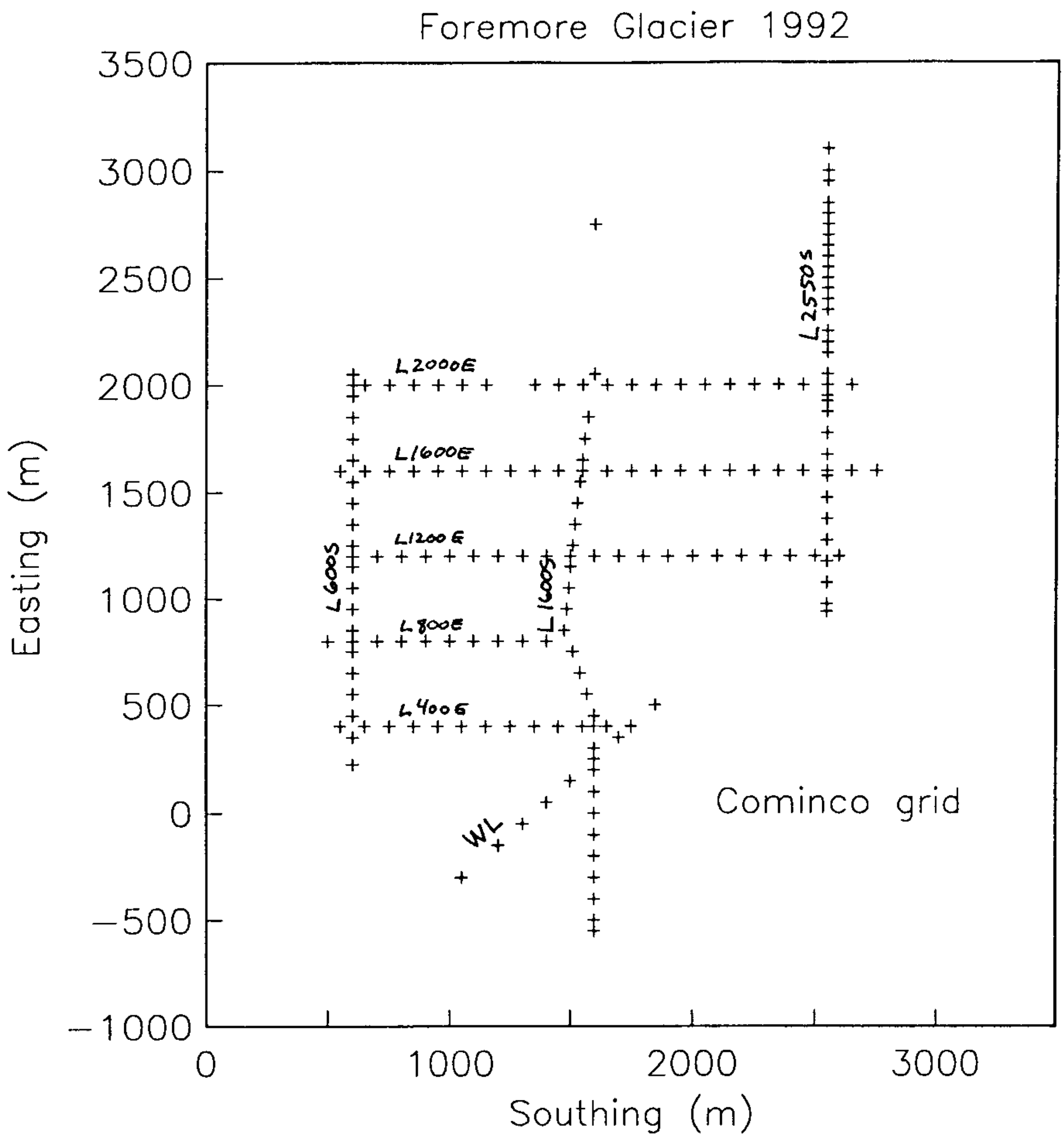



Plate 360-92-220

(See 1992 Geophysical Grid Map for more detail)

# Foremore Glacier 1992 Line BL600S

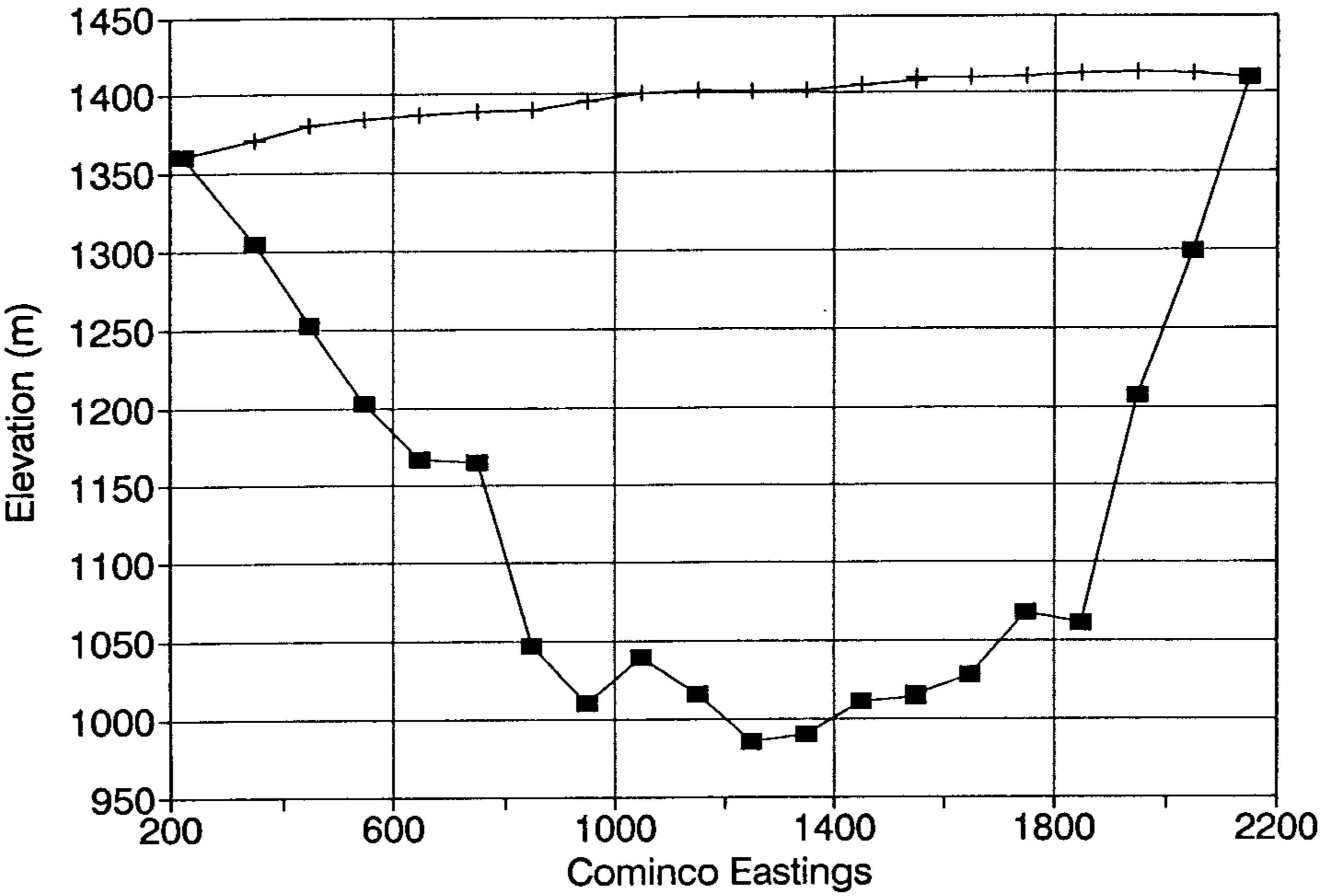



Plate 360-92-221

# Foremore 1992 L1600S

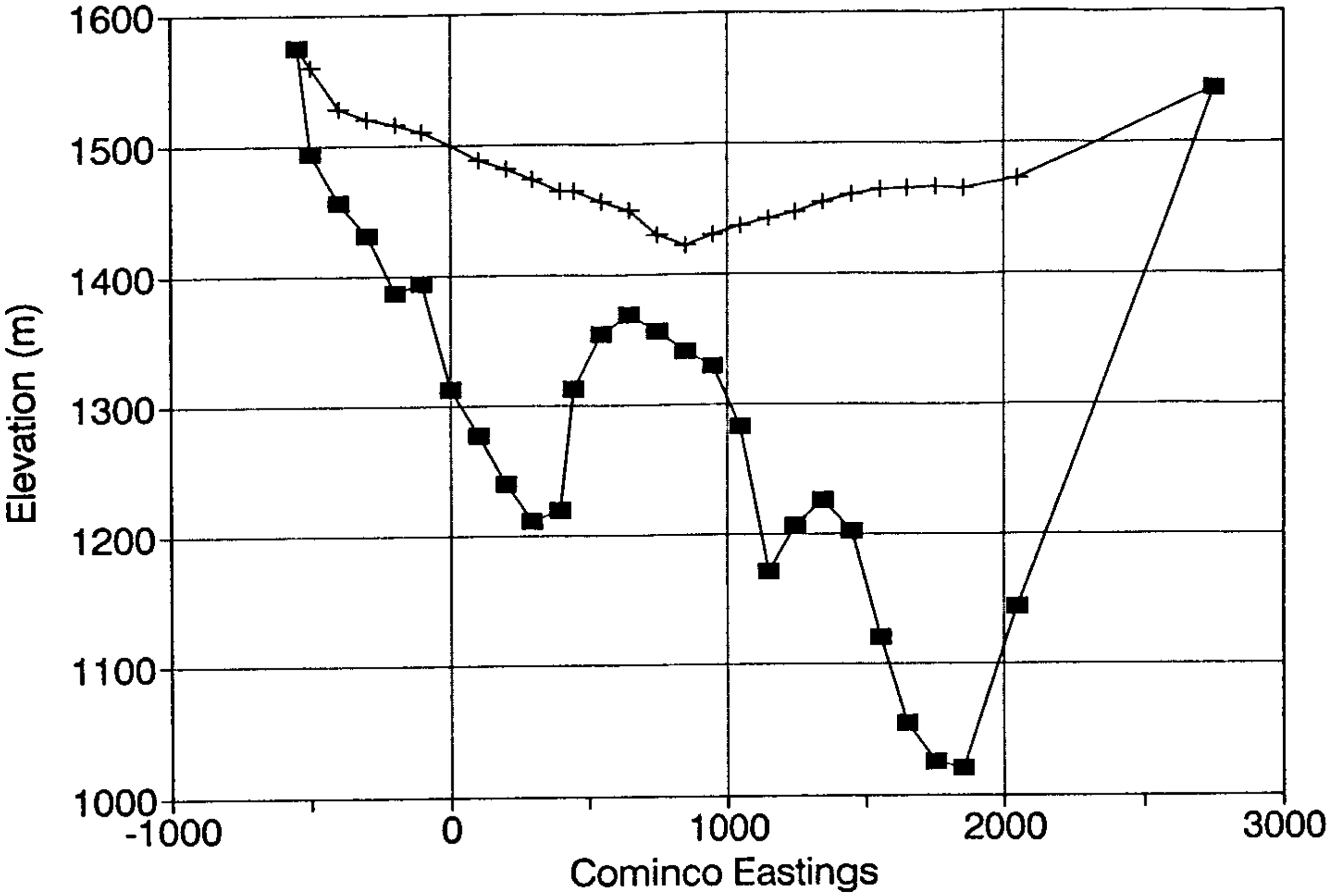



Plate 360-92-222

# Foremore Glacier 1992 Line 2550S

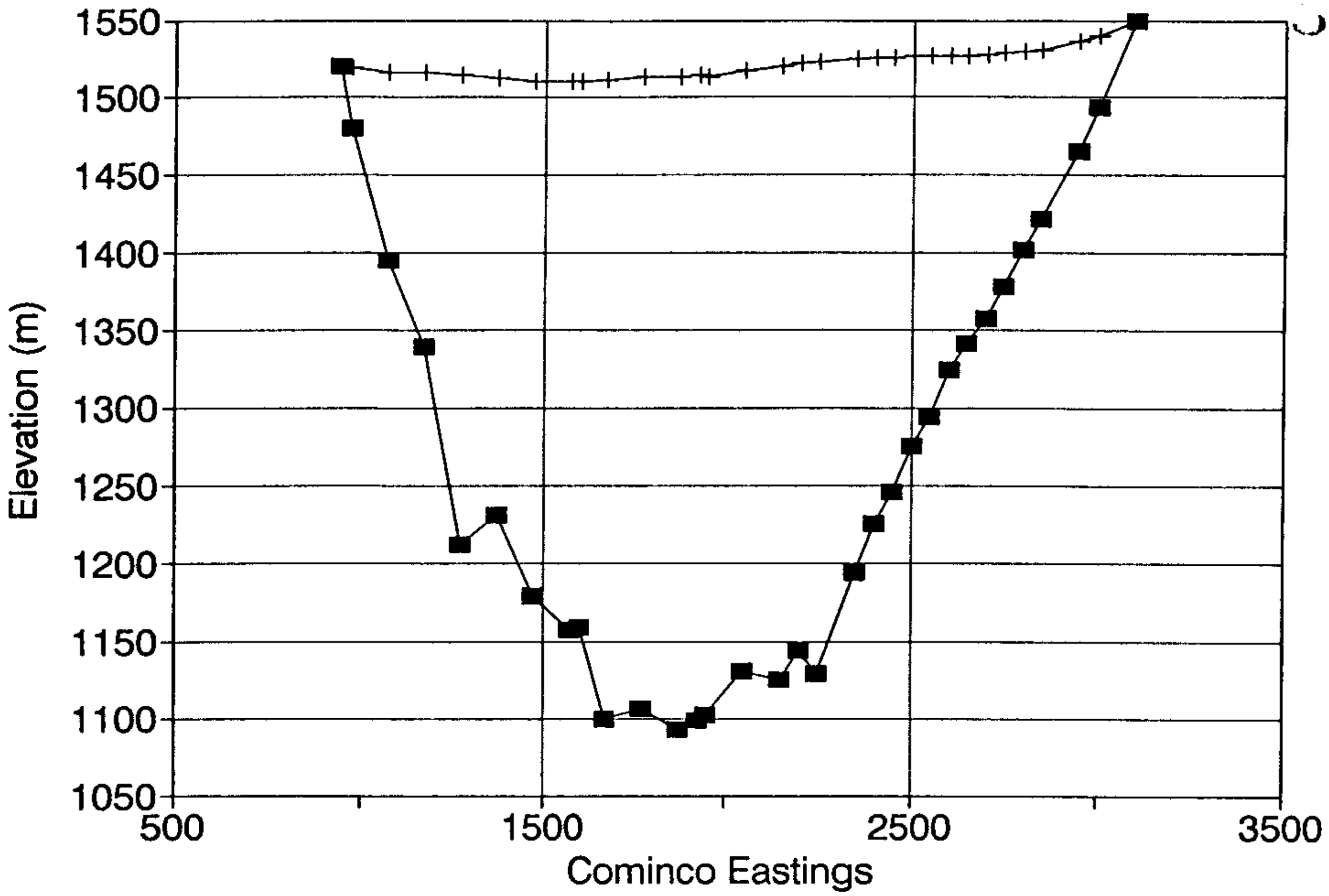



Plate 360-92-223

# Foremore Glacier 1992 West Line (WL)

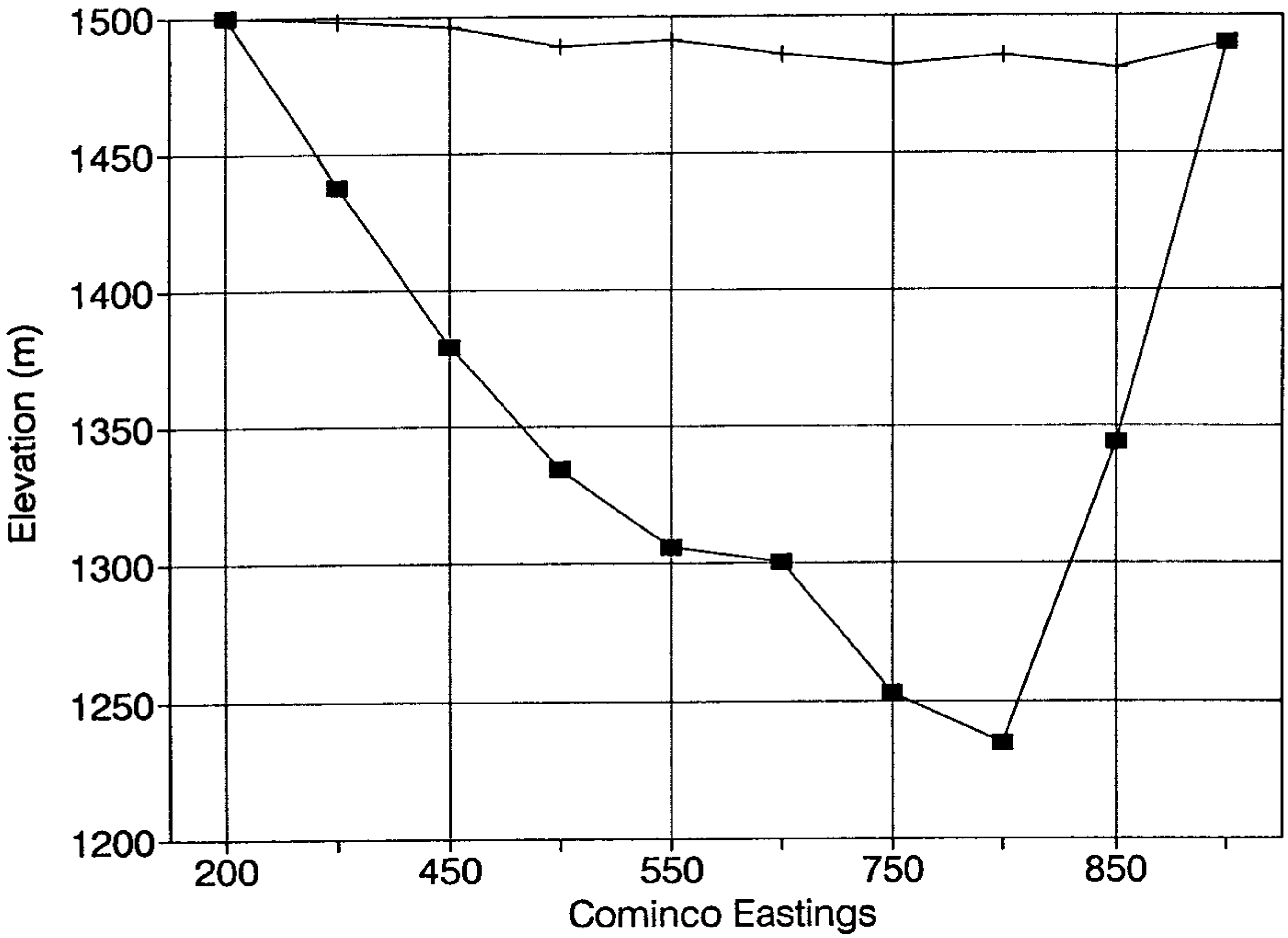



Plate 360-92-224

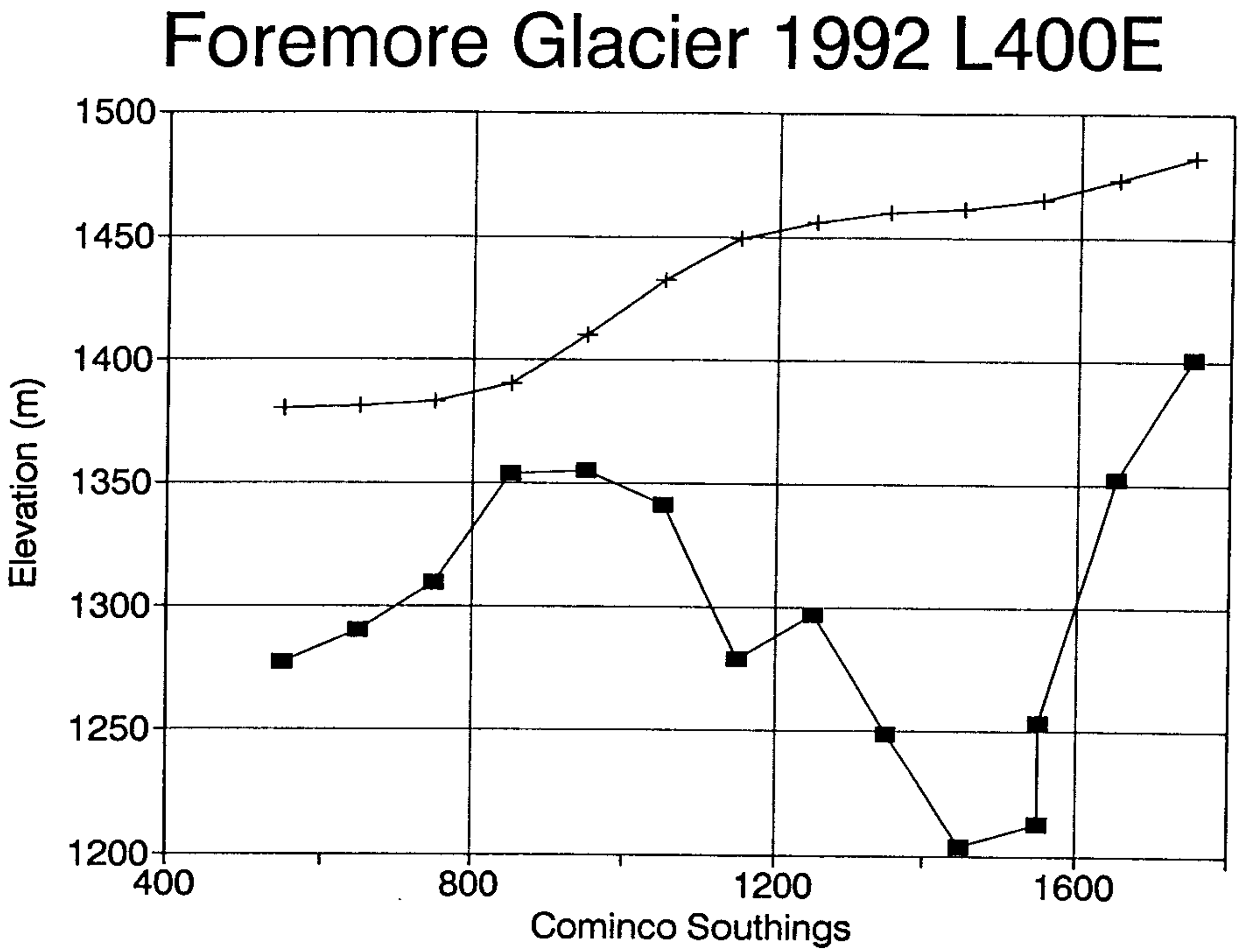



Plate 360-92-225

# Foremore Glacier 1992 L800E

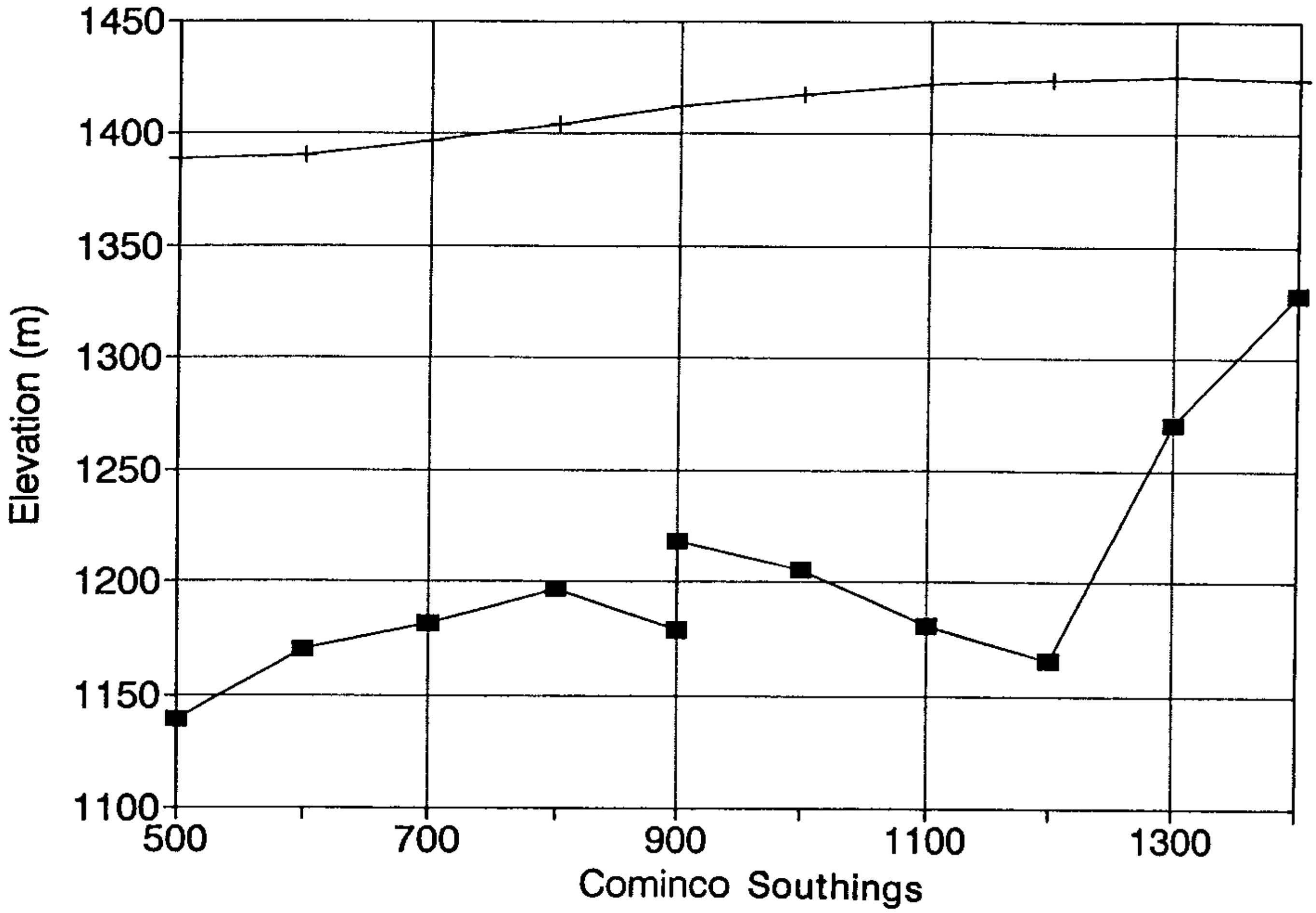



Plate 360-92-226

# Foremore Glacier 1992 L1200E

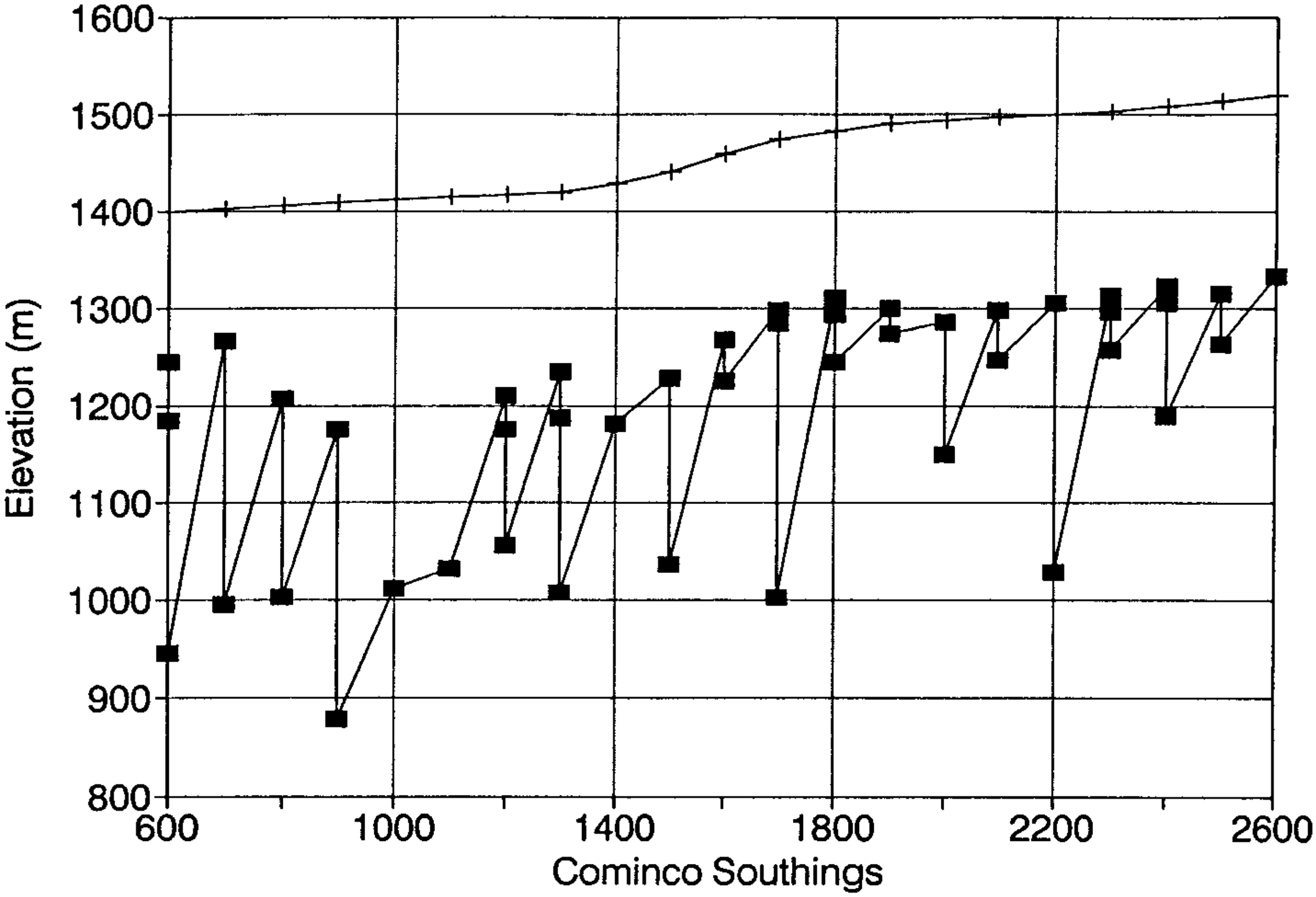



Plate 360-92-227

# Foremore Glacier 1992 Line 1600E

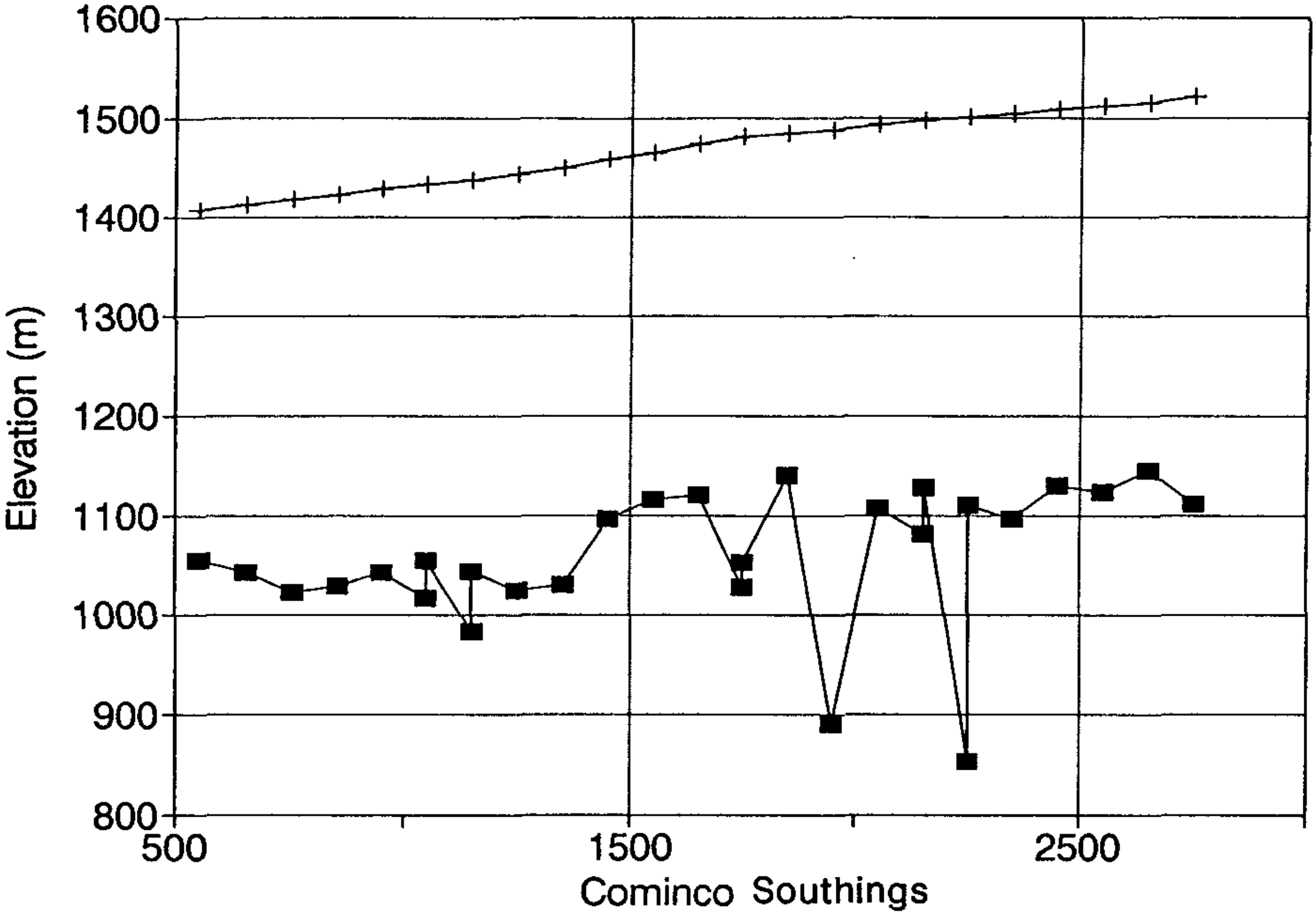



Plate 360-92-228

# Foremore Glacier 1992 L2000E

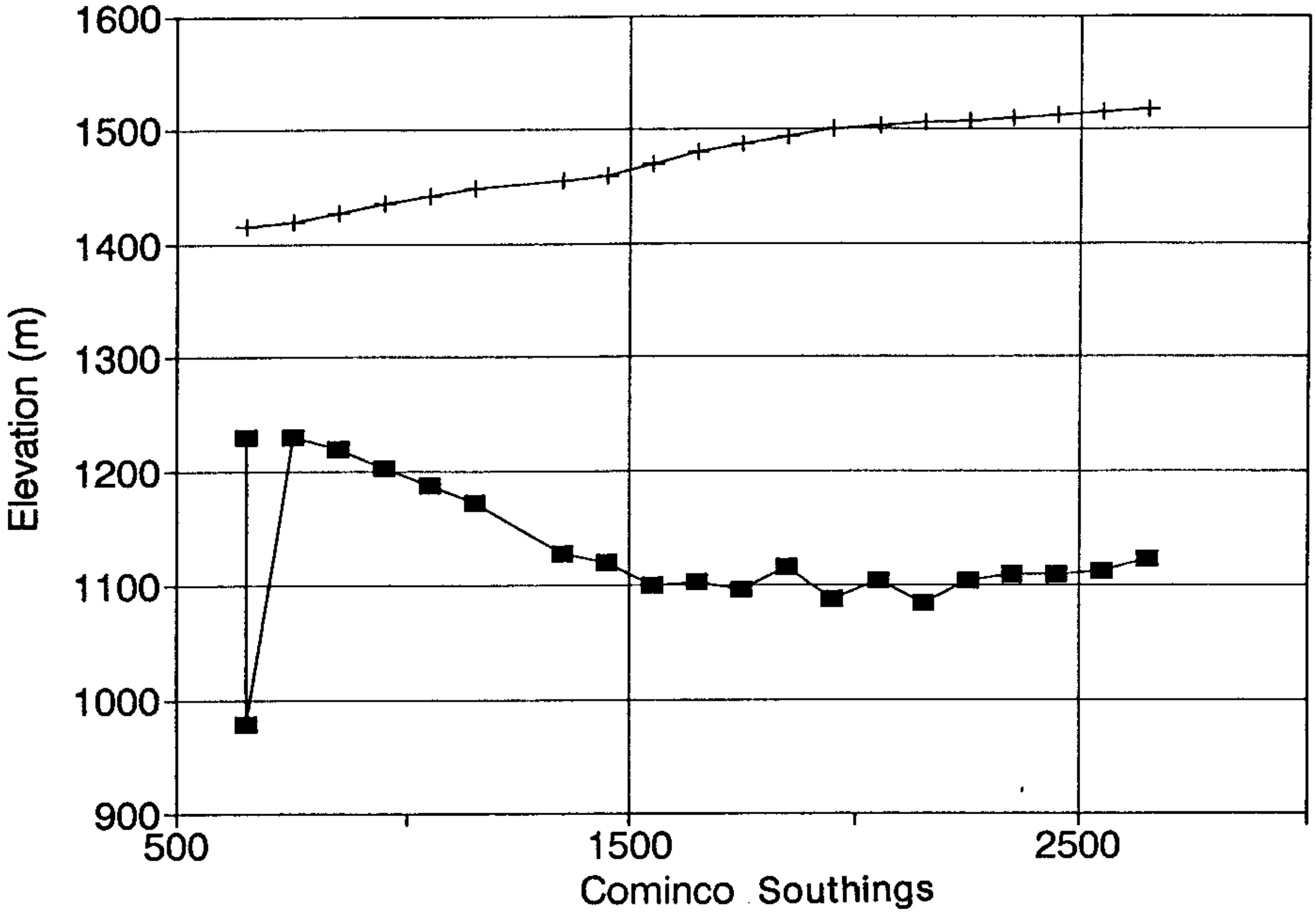
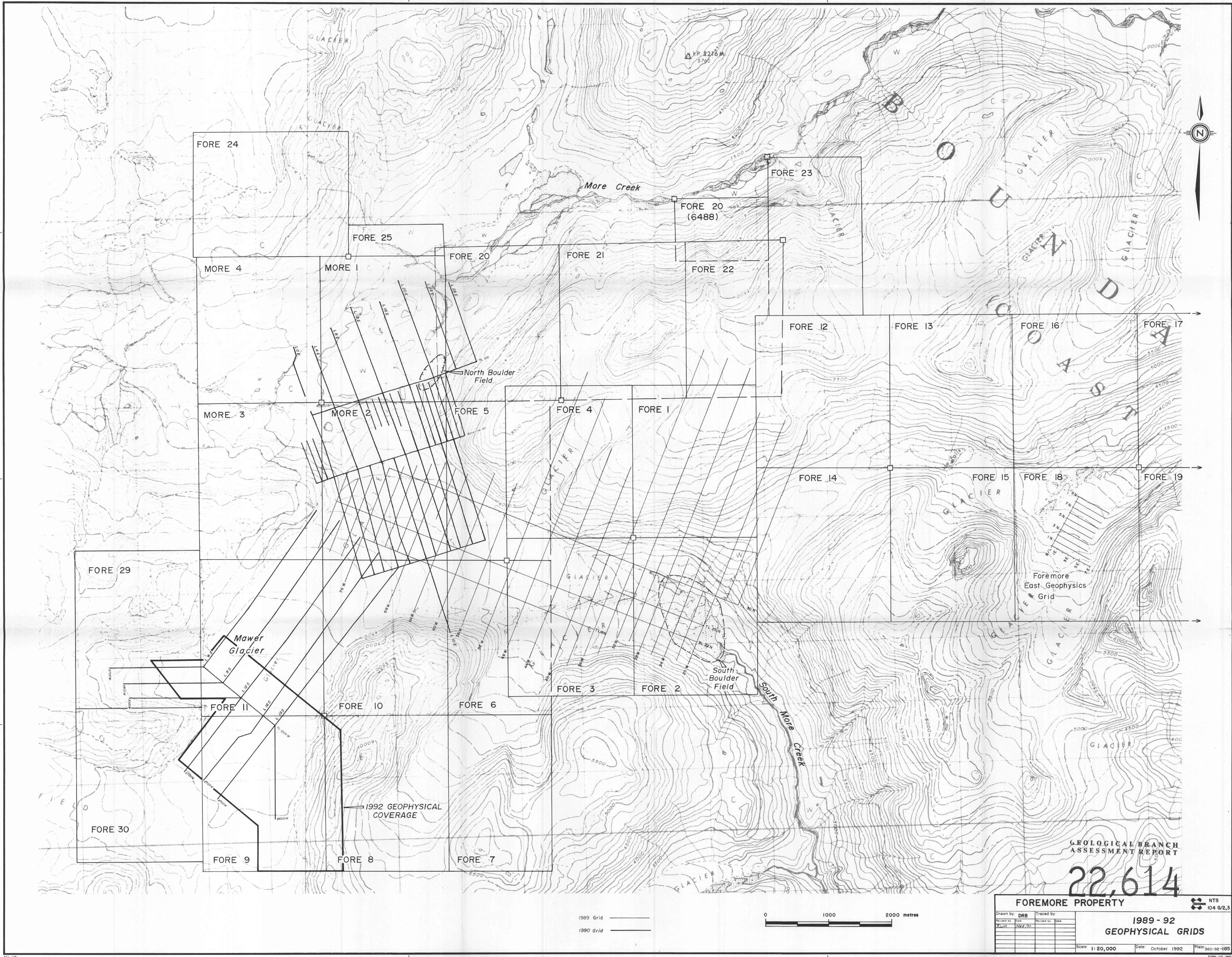
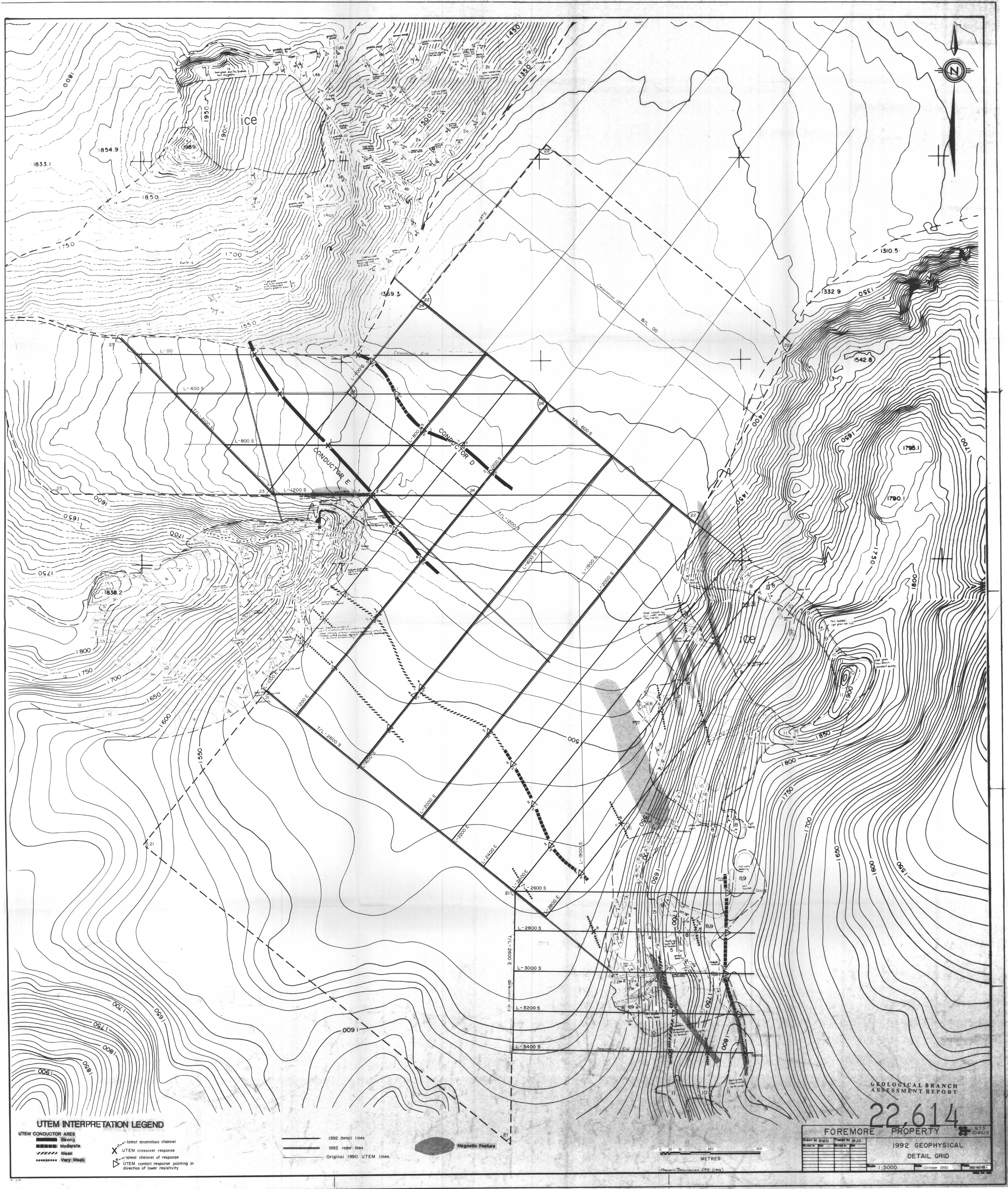
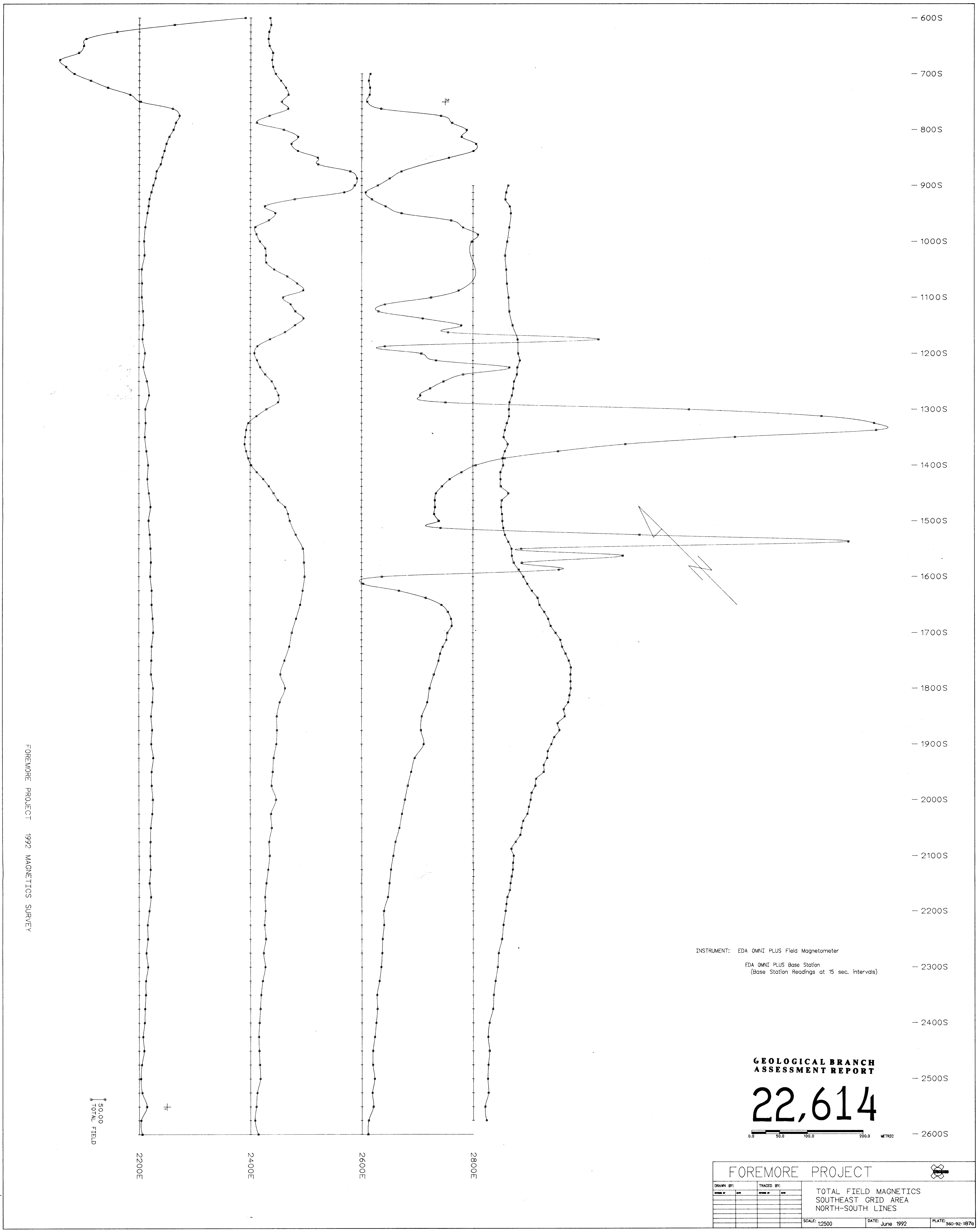


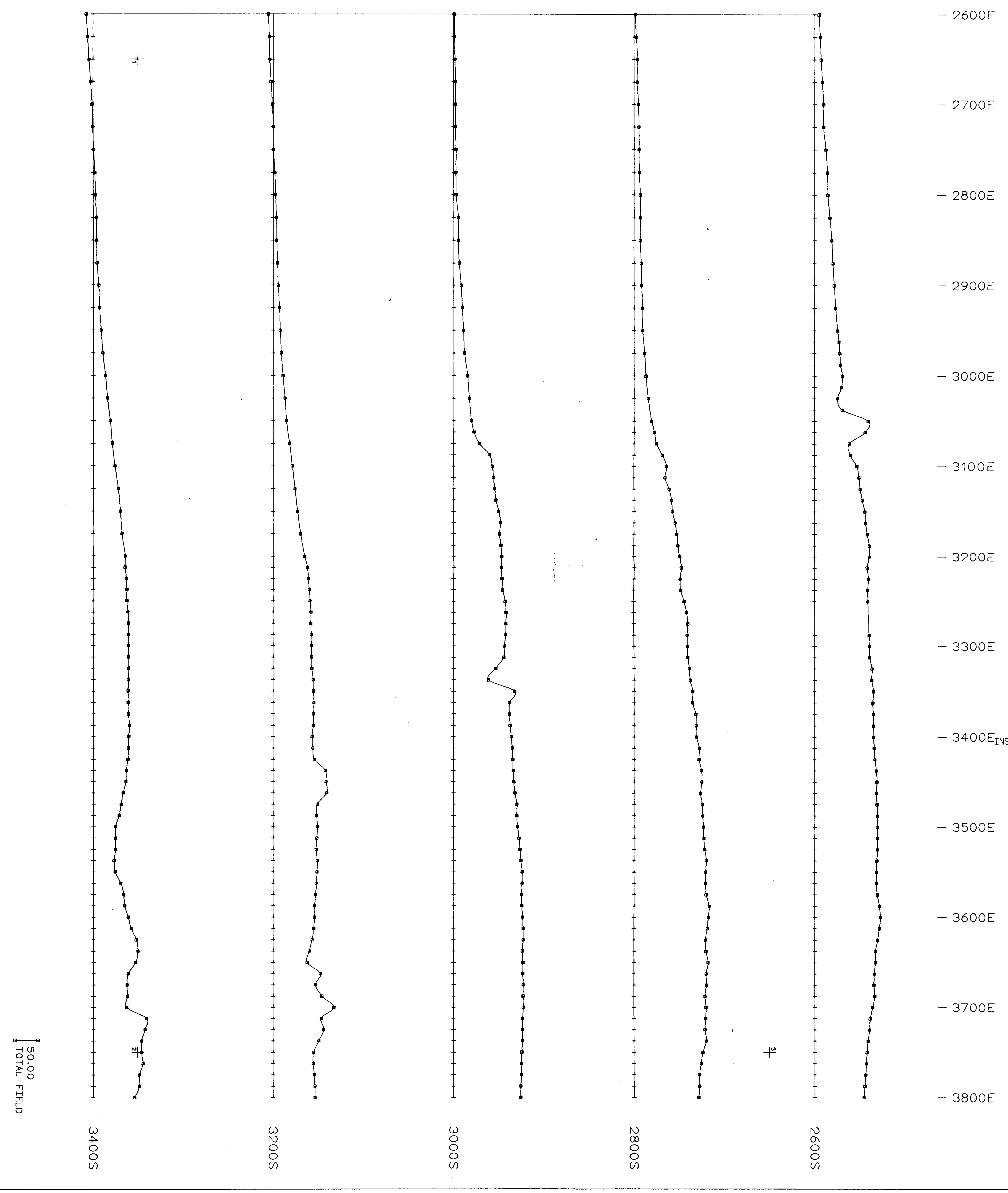

Plate 360-92-229


FORE 24
FORE 25
MORE 4
MORE 1
FORE 20
FORE 21
FORE 20
(6488)
FORE 22
FORE 23
More Creek
FORE 12
FORE 13
FORE 16
FORE 17
North Boulder
Field
MORE 3
MORE 2
FORE 5
FORE 4
FORE 1
FORE 14
FORE 15
FORE 18
FORE 19
Foremore
East Geophysics
Grid
FORE 29
Mawer
Glacier
South
Boulder
Field
South More Creek
FORE 11
FORE 10
FORE 6
FORE 3
FORE 2
1992 GEOPHYSICAL
COVERAGE
FORE 30
FORE 9
FORE 8
FORE 7
BOUNDARY
COAST
GLACIER
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,614
1989 Grid
1990 Grid
0
1000
2000 metres
FOREMORE PROPERTY
NTS
104 G/2,3
Drawn by: DRB
1989 - 92
GEOPHYSICAL GRIDS
Scale: 1:20,000
Date: October 1992
Plate: 360-92-185


ice
1854.9
1833.1
1989
1950
1900
1850
1750
1700
1550
1500
1450
1350
1369.3
1310.5
1332.9
1542.8
1795.1
1790.1
1838.2
B/L 00
L-00
L-400 S
L-800 S
L-1200 S
L-2600 S
L-2800 S
L-3000 S
L-3200 S
L-3400 S
T/L 600 S
T/L-1200 S
T/L-2100 S
T/L-2600 S
T/L-2600 E
CONDUCTOR D
CONDUCTOR E
L-1200 E
L-2000 E
L-2200 E
L-2400 E
L-1600 S
L-1900 S
L-2000 S
Orientation E-W
Orientation N-S
UTEM INTERPRETATION LEGEND
UTEM CONDUCTOR AXES
Strong
Moderate
Weak
Very Weak
latest anomalous channel
UTEM crossover response
latest channel of response
UTEM contact response pointing in direction of lower resistivity
1992 detail lines
1992 radar lines
Original 1990 UTEM lines.
Magnetic Feature
0 25 50 250 500
METRES
Magnetic Declination 29°E (1992)
GEOLOGICAL BRANCH ASSESSMENT REPORT
22,614
FOREMORE PROPERTY
NTS 104G/2
Drawn by RWH
Traced by MJD
1992 GEOPHYSICAL DETAIL GRID
Scale 1:5000
Date October 1992
360-92-186


600S
700S
800S
900S
1000S
1100S
1200S
1300S
1400S
1500S
1600S
1700S
1800S
1900S
2000S
2100S
2200S
2300S
2400S
2500S
2600S
2200E
2400E
2600E
2800E
50.00
TOTAL FIELD
FOREMORE PROJECT 1992 MAGNETICS SURVEY
INSTRUMENT: EDA OMNI PLUS Field Magnetometer
EDA OMNI PLUS Base Station
(Base Station Readings at 15 sec. intervals)
GEOLOGICAL BRANCH
ASSESSMENT REPORT
22,614
0.0 50.0 100.0 200.0 METRIC
FOREMORE PROJECT
DRAWN BY:
TRACED BY:
TOTAL FIELD MAGNETICS
SOUTHEAST GRID AREA
NORTH-SOUTH LINES
SCALE: 1:2500
DATE: June 1992
PLATE: 360-92-187a

FOREMORE PROJECT 1992 MAGNETICS SURVEY




INSTRUMENT: EDA OMNI PLUS Field Magnetometer

EDA OMNI PLUS Base Station
(Base Station Readings at 15 sec. intervals)

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

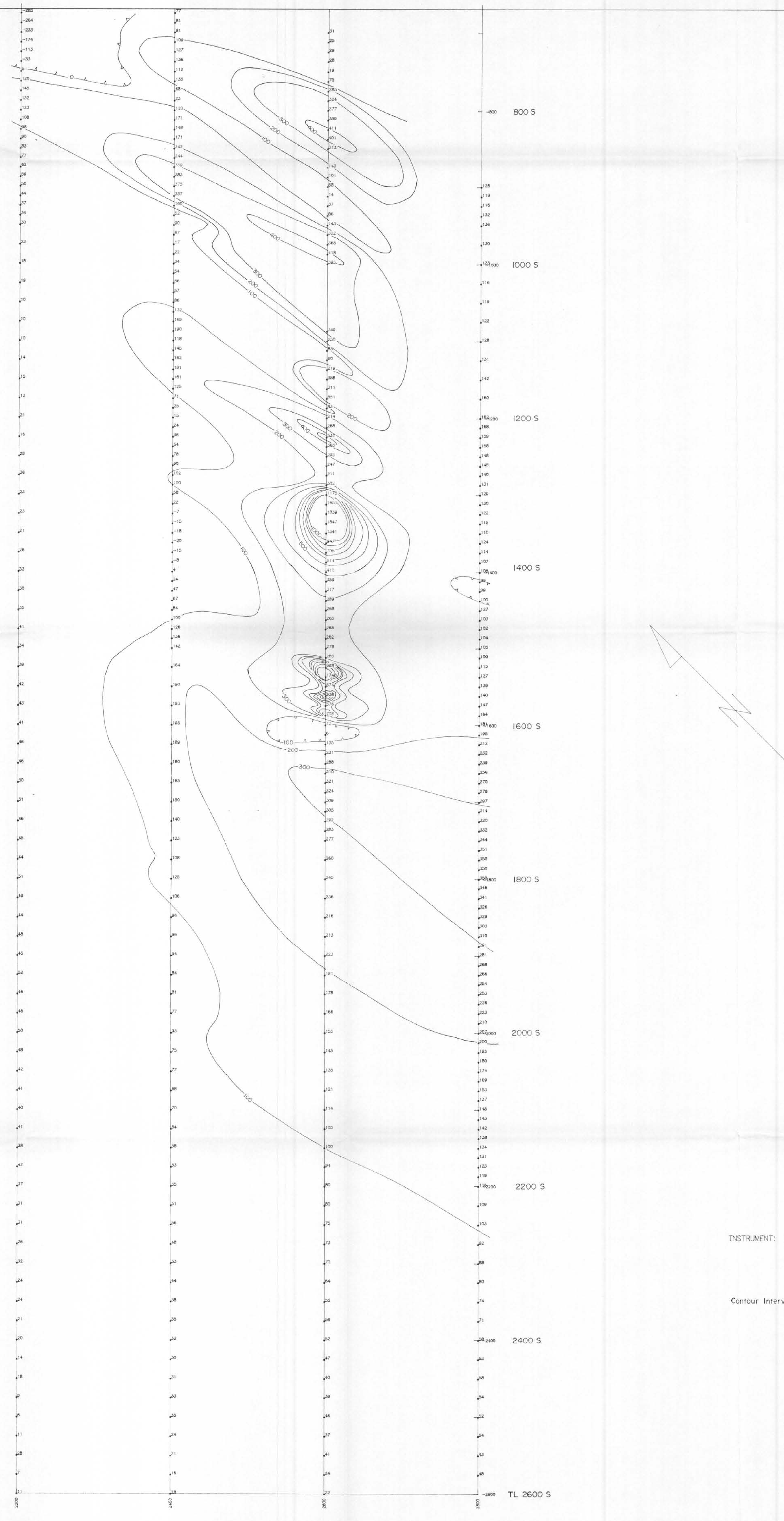
# 22,614

0.0 50.0 100.0 200.0 METRIC

## FOREMORE PROJECT

TOTAL FIELD MAGNETICS
SOUTHEAST GRID AREA
EAST-WEST LINES

| DRAWN BY: | TRACED BY: | SCALE: 1:2500 | DATE: June 1992 | PLATE: 360-92-187b |
|---|---|---|---|---|




INSTRUMENT: EDA OMNI PLUS Field Magnetometer

EDA OMNI PLUS Base Station
(Base Station Readings at 15 sec. Intervals)

Contour Interval : 100 nT

**GEOLOGICAL BRANCH**
**ASSESSMENT REPORT**

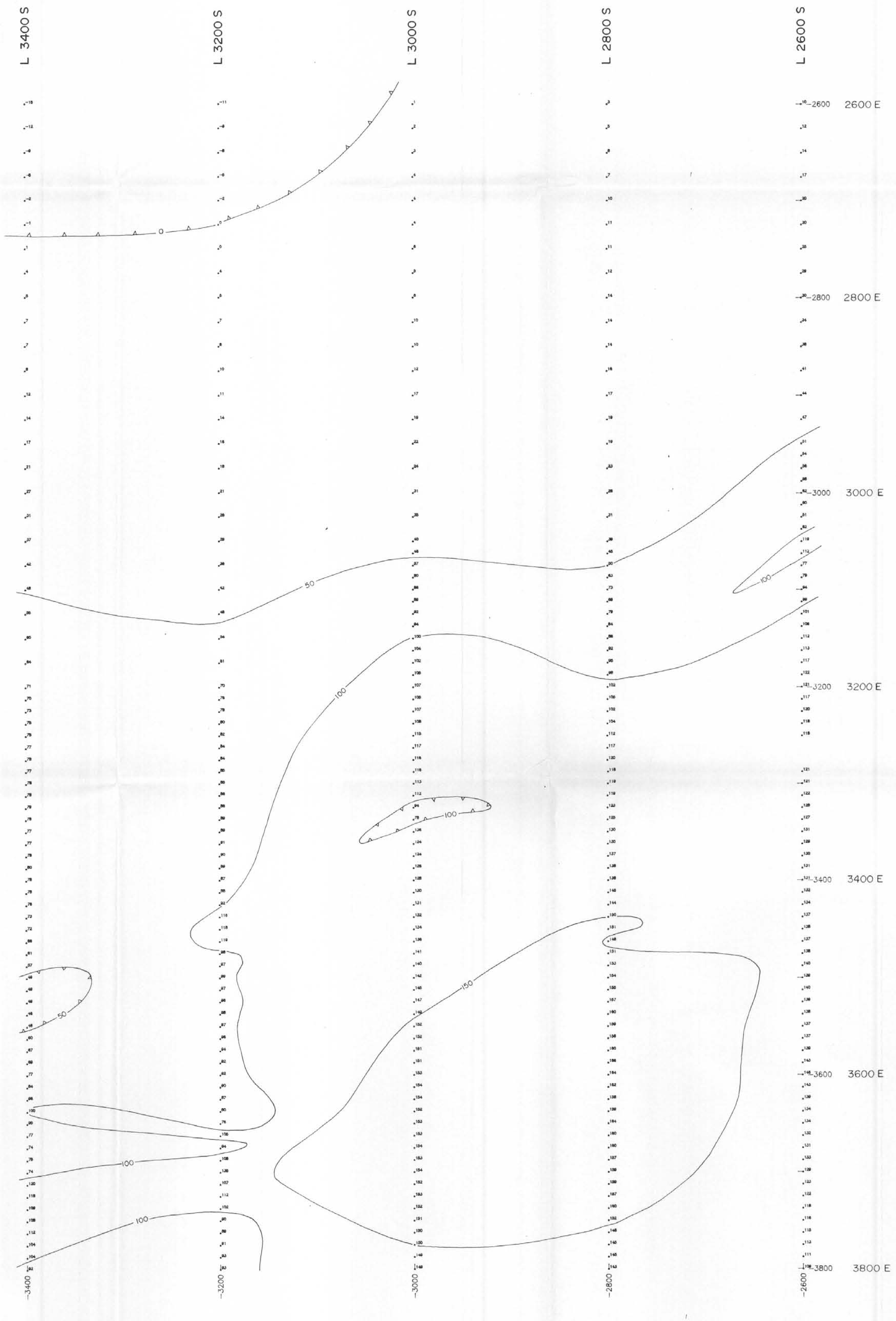
# 22,614

0.0 50.0 100.0 200.0 METRIC

## FOREMORE PROJECT

| DRAWN BY: | TRACED BY: | |
|---|---|---|
| | | TOTAL FIELD MAGNETICS<br>SOUTHEAST GRID AREA<br>NORTH-SOUTH LINES |

SCALE: 1:2500 DATE: June 1992 PLATE: 360-92-187c




INSTRUMENT: EDA OMNI PLUS Field Magnetometer

EDA OMNI PLUS Base Station
(Base Station Readings at 15 sec. intervals)

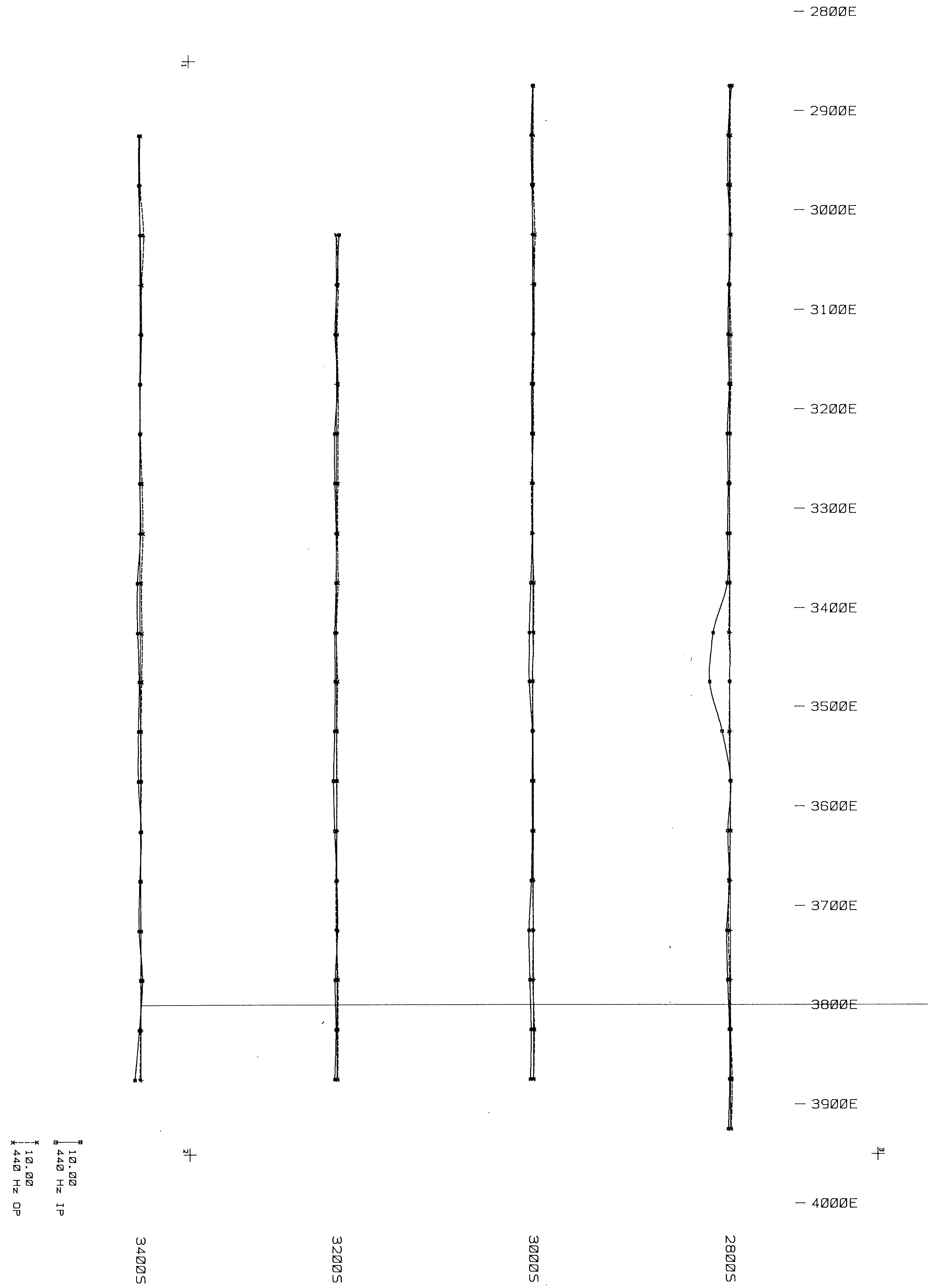
Contour Interval : 50 nT

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

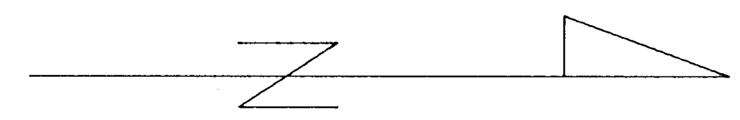
# 22,614

0.0 50.0 100.0 200.0 METRIC

| FOREMORE PROJECT | |
|---|---|
| DRAWN BY: / TRACED BY: | TOTAL FIELD MAGNETICS<br>SOUTHEAST GRID AREA<br>EAST-WEST LINES |
| SCALE: 1:2500 | DATE: June 1992 |
| PLATE: 360-92-187d | |




FOREMORE PROJECT 1992 HLEM SURVEY 150 m C.S.



INSTRUMENT: APEX Max Min 1-9

Maximum Coupled Mode
(Horizontal Loop)

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

# 22,614

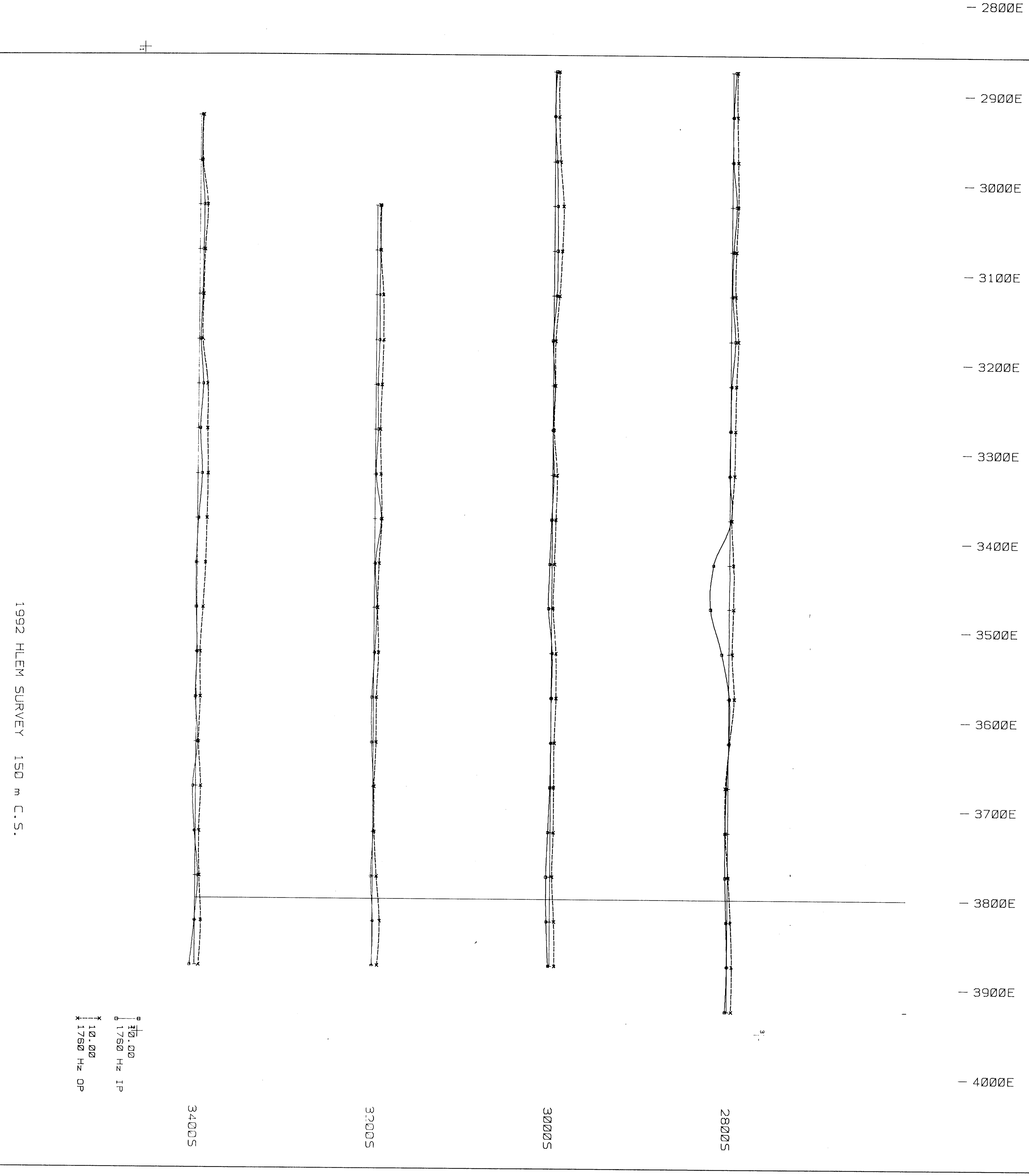
0.0 100.0 200.0 400.0 METRIC

# FOREMORE PROJECT

DRAWN BY: TRACED BY:

1992 HLEM SURVEY
SOUTHEAST GRID AREA
440 Hz 150 m C.S.

| SCALE: | DATE: | PLATE: |
|---|---|---|
| 1:2500 | June 1992 | 360-92-188a |




INSTRUMENT: APEX Max Min 1-9

Maximum Coupled Mode
(Horizontal Loop)

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

# 22,614

0.0 100.0 200.0 400.0 METRIC

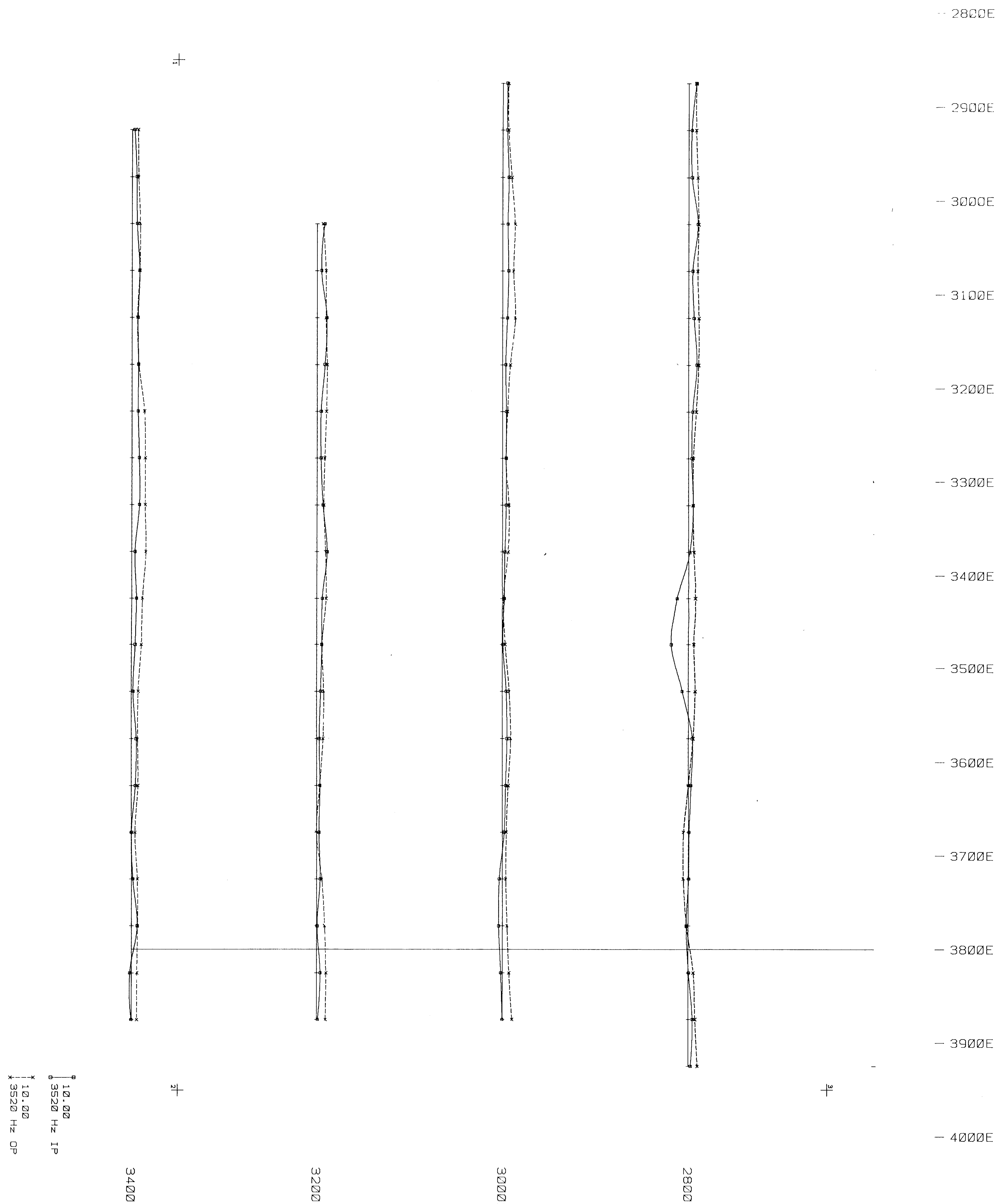
## FOREMORE PROJECT

DRAWN BY: TRACED BY:

1992 HLEM SURVEY
SOUTHEAST GRID AREA
1760 Hz 150 m C.S.

SCALE: 1:2500 DATE: June 1992 PLATE: 360-92-188b

FOREMORE PROJECT 1992 HLEM SURVEY 150 m C.S.




INSTRUMENT: APEX Max Min 1-9

Maximum Coupled Mode
(Horizontal Loop)

**GEOLOGICAL BRANCH ASSESSMENT REPORT**

# 22,614

0.0 100.0 200.0 400.0 METRIC

## FOREMORE PROJECT

| DRAWN BY: | TRACED BY: | |
|---|---|---|
| | | 1992 HLEM SURVEY<br>SOUTHEAST GRID AREA<br>3520 Hz 150 m C.S. |

SCALE: 1:2500 | DATE: June 1992 | PLATE: 360-92-188c