



42A14SW0327 2.14671 REID

010

**COMINCO LTD.**

**EXPLORATION**

**EASTERN DISTRICT**

**NTS : 42-A-11,12,13,14**

**GEOPHYSICAL REPORT  
ON THE 1992  
UTEM AND MAGNETIC SURVEYS  
ON THE  
PYKE PROPERTY**

**ONTARIO**

**LATITUDE: 48° 47' N  
LONGITUDE: 81° 30' E**

**JUNE 1992**

*2.14671*

*Dreal B. LUM  
23438*

**RECEIVED**

**JUL 29 1992**

**MINING LANDS BRANCH**



42A14SW0327 2.14671 REID

010C

**PYKE PROP**  
**NTS : 42-A-11,12,13,14**  
**REPORT ON 1992 GEOPHYSICAL SURVEYS**

TABLE OF CONTENTS

- I. INTRODUCTION
- II. 1992 GEOPHYSICS EXPENDITURES
- III. INSTRUMENTATION & DATA PRESENTATION
- IV. DISCUSSION OF THE DATA
- V. CONCLUSIONS & RECOMMENDATIONS

LIST OF PLATES

**PLATE**

- |   |                          |             |
|---|--------------------------|-------------|
| 1 | PROPERTY LOCATION MAP    | 1 : 250,000 |
| 2 | GRID & CLAIM MAP         | 1 : 20,000  |
| 3 | MAGNETIC SURVEY PROFILES |             |
| 4 | MAGNETIC SURVEY POSTINGS |             |
| 5 | INTERPRETATION PLAN      | 1 : 10,000  |

**APPENDIX A - 1992 UTEM DATA SECTIONS**

**CONTINUOUSLY NORMALIZED H<sub>z</sub> Component**

LOOP	LINES	PLATES
1	00W to 1200W	PY-92-1C to PY-92-7C
2	00W to 1200W	PY-92-8C to PY-92-14C
3	00W to 1400W	PY-92-15C to PY-92-22C
4	00W to 1400W	PY-92-23C to PY-92-29C
5	00W to 1400W	PY-92-30C to PY-92-37C
6	00W to 1400W	PY-92-38C to PY-92-45C

**POINT NORMALIZED H<sub>z</sub> Component**

LOOP	LINES	PLATES
1	200W & 400W	PY-92-2P & PY-92-3P
2	200W	PY-92-9P
4	600W to 1000W	PY-92-26P to PY-92-28P
5	200W to 800W	PY-92-31P to PY-92-34P

**POINT NORMALIZED H<sub>x</sub> Component**

LOOP	LINES	PLATES
1	00W & 200W	PY-92-1X & PY-92-2X

## PYKE PROPERTY

NTS : 42-A-11,12,13,14  
REPORT ON 1992 GEOPHYSICAL SURVEYS

### I. INTRODUCTION

During the period of March 22 to April 1, 1992, Cominco Ltd. conducted 48.5 km of UTEM survey and 34.4 km of magnetic survey on the Pyke property in Ontario. The objective of the project was to explore for deeply buried volcanogenic massive sulphide deposits using a deep penetrating fixed loop transient EM method, UTEM. The magnetic survey would provide information on stratigraphy and structure.

The work was carried out under the supervision of B. Lum, Geophysicist. The survey personnel consisted of the following: B. Lum, Geophysicist, P.M. Smith, Geologist; B. MacAllister, Technician; R. Clarke, Technician; G. Lafortune, Technician; R. MacAllister, helper; and B. Pallantyne, helper.

The Pyke property is located 35 km northwest of Timmins, Ontario which accessible by snow machine off an all weather road to the Sturgeon Falls Dam. Linecutting and geophysical surveys were done over 36 contiguous claims which are 100% owned by Comstate Resources. A listing of the claims with the 1992 work is found in Table 1 below and a 1 : 20,000 claim location map showing the 1992 survey grid is presented in Plate 2.

Table 1. Claims with 1992 Work

# of Claims	Claim Number(s)
4	1169742 to 1169744 and 1169754
4	1169675 to 1169678
3	1160480 to 1160482
9	1170358 to 1170366
8	1170297 to 1170304
2	1177367 & 1177368
2	1027146 & 1027147
1	1029147
2	1029150 & 1029151
1	1029154
TOTAL	36

### II. 1992 GEOPHYSICS EXPENDITURES

Listed below in Table 2 is an itemized list of the geophysical and linecutting expenditures for 1992. The total exploration expenditure was \$35,088.00.

TABLE 2. 1992 EXPENDITURES

#### Geophysics Costs

(1) Staff .....	\$ 10,185.00
(2) Operating Day Charges .....	\$ 4,228.00
(3) Equipment Rental.....	\$ 3,500.00
(4) Room & Board.....	\$ 1,200.00
(5) Transportation (fuel incl). .	\$ 2,000.00
(6) Shipping & Freight .....	\$ 1,500.00
Sub-total	\$ 22,613.00

#### Linecutting Cost

(8) Linecutting .....	\$ 12,475.00
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TOTAL COST .....	\$ 35,088.00
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### III. INSTRUMENTATION AND DATA PRESENTATION

#### A. TOTAL FIELD MAGNETIC SURVEY

EDA OMNI Plus magnetometers were used for the total field and vertical gradient magnetic surveys. A base station was employed on site to record the diurnal drift. All readings were taken using the staff mounted gradient sensor (2.5m above ground level) at 12.5m stations. In the data transfer procedure, the field recorder is mated with the base station recorder and the field data along with the time corresponding base station value is then dumped to the field portable computer. A reference field of 58500 nT was used for the base station recorder in the data reduction.

The results were then computer plotted on two 1 : 10,000 scale plans of the profiles and posted data values which are found in Plates 3 and 4. A datum of 58,500 nT was removed from the total field data for both profile and posting presentations. A contoured plan of the total field data with contour intervals of 20 nT is presented in the interpretation plates 5.

#### B) UTEM SURVEY

The UTEM survey was conducted using a Lamontagne Geophysics Limited UTEM 3 system. The UTEM 3 (University of Toronto Electro-Magnetometer) is a broad band time domain EM system designed for deeper depth penetration over conventional EM methods like the horizontal loop EM survey. The system was developed by Dr. Yves Lamontagne (1975) while he was a graduate student at that university.

The field procedure consists of first laying out a large loop of single strand insulated wire and energizing it with current from a transmitter which is powered by a motor generator. Survey lines are generally oriented perpendicular to one side of the loop and surveying can be performed both inside and outside the loop. The loop dimensions are usually 1000m by 1000m square depending upon the size and depth of the exploration target, and the host rock and overburden conductivities.

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

The receiver sensor coil measures the vertical and horizontal components of the electromagnetic field and responds to its time derivatives,  $H_z$  and  $H_x$ . Since the transmitter current waveform is a triangular sawtooth, the receiver coil will sense a perfect square wave in the absence of geologic 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 channels of information at each station. In this report, the earliest time channel 10 is not presented. The higher number channels (7-8-9) correspond to early times or high frequency while the lower number channels (1-2-3) correspond to late time or low frequency. Therefore, poor or weak conductors will respond on channels 9,8,7, and 6. Progressively better conductors will give responses on progressively lower number channels as well. For example, highly conductive, massive sulphides or graphite will produce a response on all early, mid and late time channels.

The Pyke 1992 survey was carried out using two pairs of receiver and coil operators to optimize survey efficiency.

In the real life situations, massive, conducting sulphides and graphitic zones often occur in slightly conductive host rocks and/or are overlain by conductive overburden. These environments will produce a complex response due to several conductive sources. Usually, the overburden and /or conductive host rocks will saturate the early time channels, while the deeper and better conductors will

appear on later time channels.

It was mentioned above that the UTEM receiver records data digitally on a cassette and onto internal memory chips. The field data is transferred from the receiver to a field portable computer. All data reduction and processing is done on the portable computer and the results are then plotted by a Roland DXY 1300 flatbed plotter. All IBM-PC software for the UTEM processing and plotting were developed by Cominco Ltd.

The magnetic field amplitudes from both transmitter loop (primary field) and from the electric currents induced in the ground (secondary field) vary considerably from the beginning of the line near the transmitter loop wire, to the end of the line away from the transmitter loop. To present such data, a normalization scheme must be used. In this survey, the primary field from the loop is used for normalizing and presenting the data according to the following schemes :

#### A. Continuous Normalized Plots

This is the standard normalization scheme.

a) For channel 1 :

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

where  $P$  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 :

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

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

#### B. Point Normalized Plots

These plots display an arrow at the top of the section indicating the station to which all data on the lines are normalized. The purpose of point normalized plots is to display only the relative amplitude variation of the secondary field along the line, that is, only that magnetic field from the currents induced in the ground.

a) For Channel 1 :

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

where  $P_{pn}$  is the primary field from the loop at the point norm 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 :

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

where Ch.n is the observed amplitude of Channel n and  
Ch.1<sub>norm</sub> is the observed Channel 1 amplitude at the point norm station.

Point Normalized plots are usually produced on data sections containing anomalies for interpretation.

The above normalization procedures will present any error chaining errors in the Channel 1 profiles only.

The locations of the transmitting loops used for the UTEM survey are presented in the 1 : 20,000 scale UTEM Loop Location Map in Plate 5.

The UTEM data are presented in the continuous normalization format with an interpretation of the conductors and resistivity contacts. These data sections are found in Appendix A.

Conductors are located at the inflection points of the Hz cross-overs in the Point Normalized plots or at the peaks of the Hx profiles. As mentioned in the above, the weaker conductors are seen only on the early time channels and the better conductors are seen on the early time channels and as well as progressively more later time channels. The symbol, "X", is used to represent a conductor.

Contacts between regions of different resistivities (or geological units) are represented on the data sections as triangles. The apex of the triangle points towards the region of lesser resistivities. Resistivity contacts are located at the junction of different slopes in the continuous normalization curves.

#### IV. DISCUSSION OF THE DATA

The main objective of the 1992 geophysics was to explore for deeply buried VMS type deposits over a region of well altered felsic and intermediate volcanics located between 800N and 1000S.

Previous geophysical work had been restricted to an effective exploration depth of 100 m below surface by conventional EM methods like HLEM. In 1987, an airborne time domain EM (GEOTEM) and magnetic surveys were flown for the OGS by Geoterrrex. A re-examination of the Geotem profiles suggested the channel 12 AEM conductor(s), located immediately west of Pyke, extends east onto the property within the region of chloritoid alteration.

Six loops were employed in the 1992 UTEM survey which provided two fold coverage over this region of favourable stratigraphy and single fold coverage over northern and southern loops. The results of the survey defined three bedrock conductors which correlated well with the Geotem anomalies. These conductors are labelled as A to C from north to south. The location of these conductors are shown in magnetic profiles in Plate 3 and in the interpretation plan in Plate 5. A summary the physical properties of the three conductors is presented in Table 3 below.

TABLE 3. SUMMARY OF UTEM CONDUCTORS

CONDUCTOR	LOCATION	COMMENT
A	400W to 800W; 1300N	Ch.1; d= 50-65m, ctp= 25 siemens
B	1400W; 40N	Ch. 2; shallow depth, weak
C	1000W to 1200W; 1100S	Ch. 2; d= 30m; ctp= 6 siemens

Conductor A, a channel 1 feature, exhibited the strongest EM response of the three conductors with CTP of up to 25 siemens. It is limited in strike length, 400 m, with a depth to top estimation of 50 to 65 m and is located along south flank of a magnetic high (<300 nT.) Weak and shallow channel 2 features extend east along strike of A. Previous exploration drilling has explained the source of the conductivities to be graphite. No further work is warranted.

The UTEM survey defined a single line, channel 2 conductor, B, on line 1400W which is the eastern limit of an extensive cluster of Geotem anomalies situated just west of the property. The interpreted eastern extension of B from the Geotem data is reconciled by the resistive contacts seen in the UTEM data.

The third conductor, C, detected as a 200+ m long, channel 2 (CTP = 6 siemens) UTEM anomaly, is found on the southern portion of the property on lines 1000W and 800W. Like B, C is situated in a region of moderately low relief magnetics. Prior drilling has revealed the source of C to be pyrite and pyrrhotite mineralization.

There are several single line shallow channel 2 UTEM anomalies through the grid that are probably due to conductive variations with the overburden cover.

The magnetic results show a gentle regional gradient increasing to the north that is dominated by two strong (500+ Nt) NE trending highs and two E trending highs in the north.

#### V. CONCLUSIONS AND RECOMMENDATIONS

The results of the UTEM did not show any new and deeply buried conductors within the favourable region of chloritoid alteration. The three bedrock conductors found, all had been previously tested by drilling and explained as graphitic or iron sulphide mineralization.

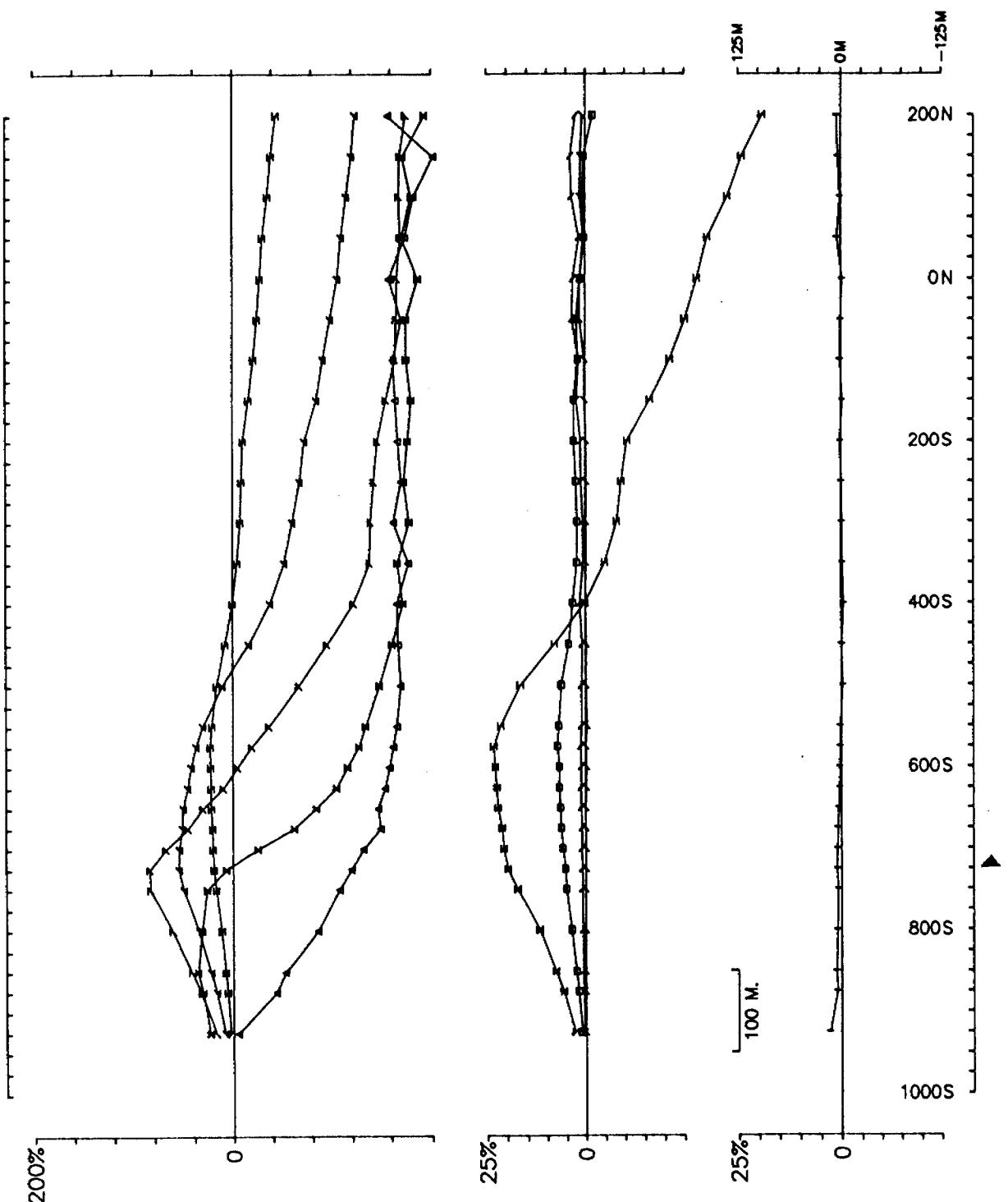
In conclusion, there were no new, untested and/or deeply buried conductors within 300 m of surface in the western portion of the Pyke property as defined by the UTEM coverage. Therefore, no further work is warranted in this half of Pyke.

Respectfully submitted,

  
\_\_\_\_\_  
Boris Lum

Geophysicist, Exploration  
Cominco Ltd. Eastern District

Distribution :      Ontario Assessment Office.....(1)  
                      E.D. Central .....(1)  
                      E.D. Geophysics .....(1)  
                      Vancouver Admin. .....(1)  
                      Chief Geophysicist .....(1)  
                      Comstate Resources .....(1)



PYKE 1992

Op: BRGB

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized. Totals:P- 1125M./L- 1200M. Line Azim.: 0 . Rx Label: 1 . Base Shift: -6.0 %

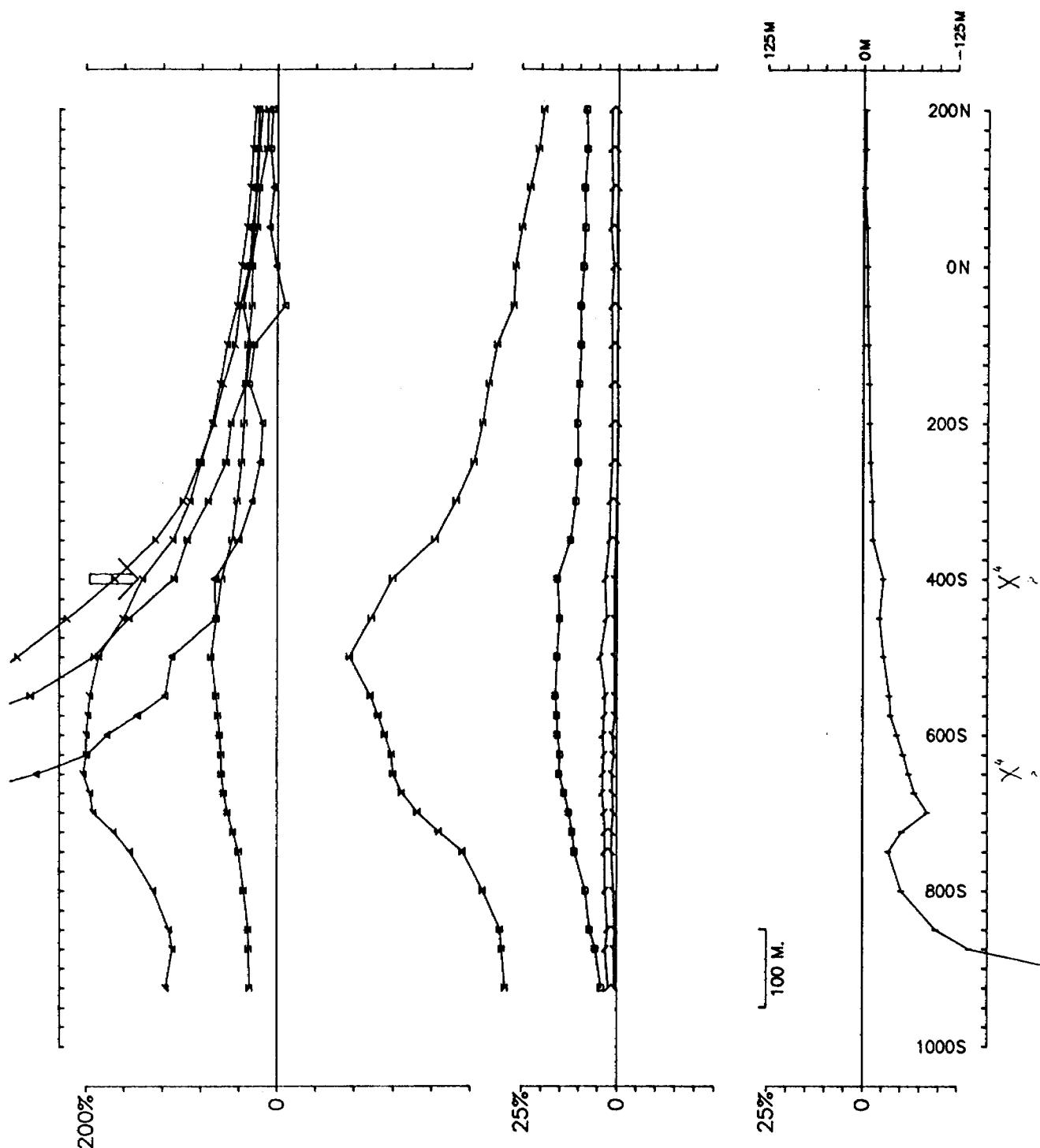
COMINCO LTD.

Hz

Loop: 1 Line: 0W

DS:

PY-92-1C



PYKE 1992

Op: BRGB

Freq(Hz): 30.974

Ch1 reduced. Prim. normalized. Totals:P- 1125M./L- 1200M. Line Azim.: 0. Rx Label: 1 Point Normalized.

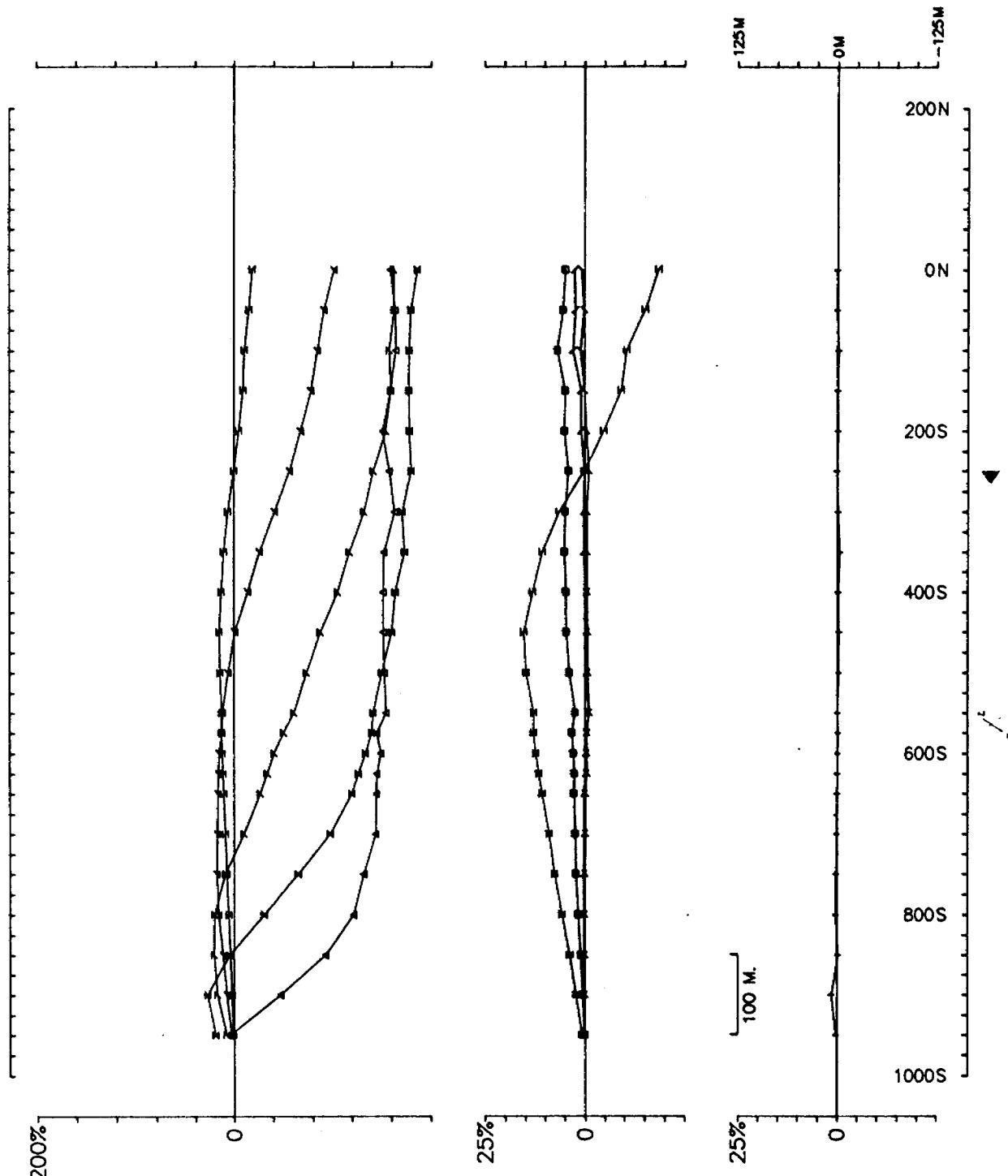
COMINCO LTD.

Hx

Loop: 1 Line: 0W

DS:

PY-92-1X



PYKE 1992

Op: BRGB

COMINCO LTD.

Freq(Hz): 30.974

Hz

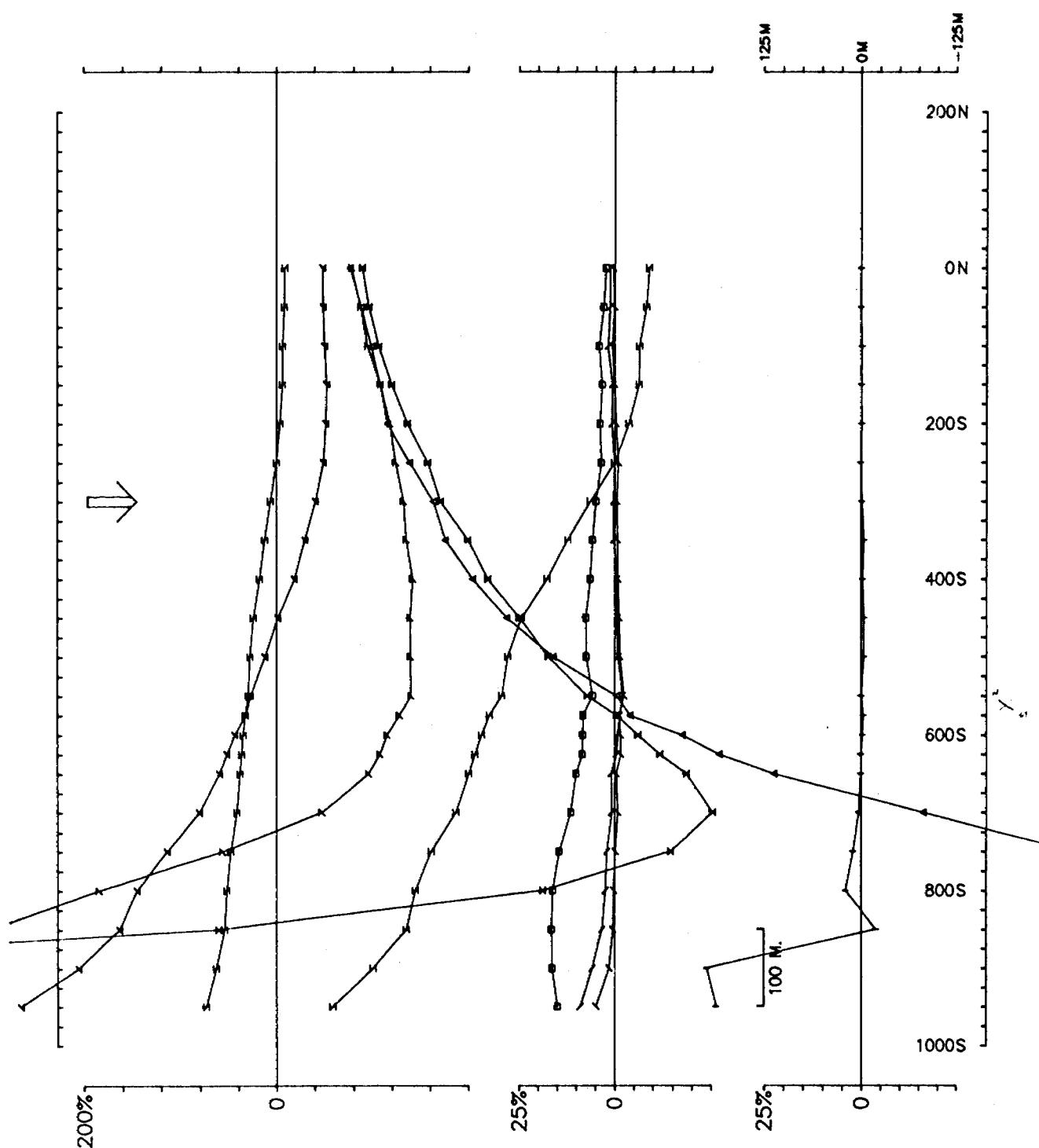
Loop: 1 Line: 200W

DS:

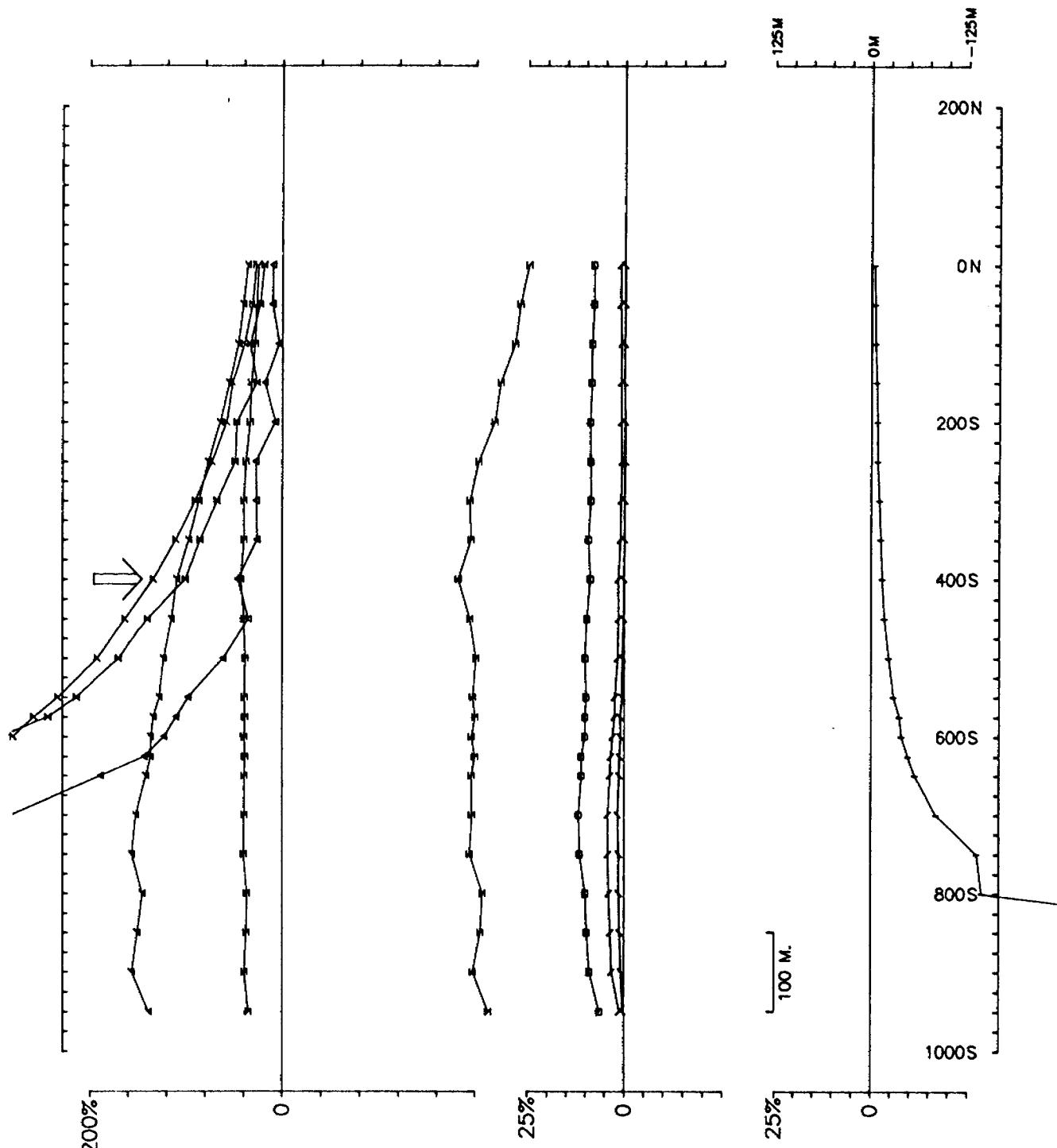
Ch1 reduced. Ch1 normalized.

Totals:P- 950M. /L- 1200M. Line Azim.: 0 . Rx Label: 2 . Base Shift: -5.0 %

PY-92-2C



PY-92-2P



PYKE 1992

Op: BRGB

COMINCO LTD.  
Freq(Hz): 30.974

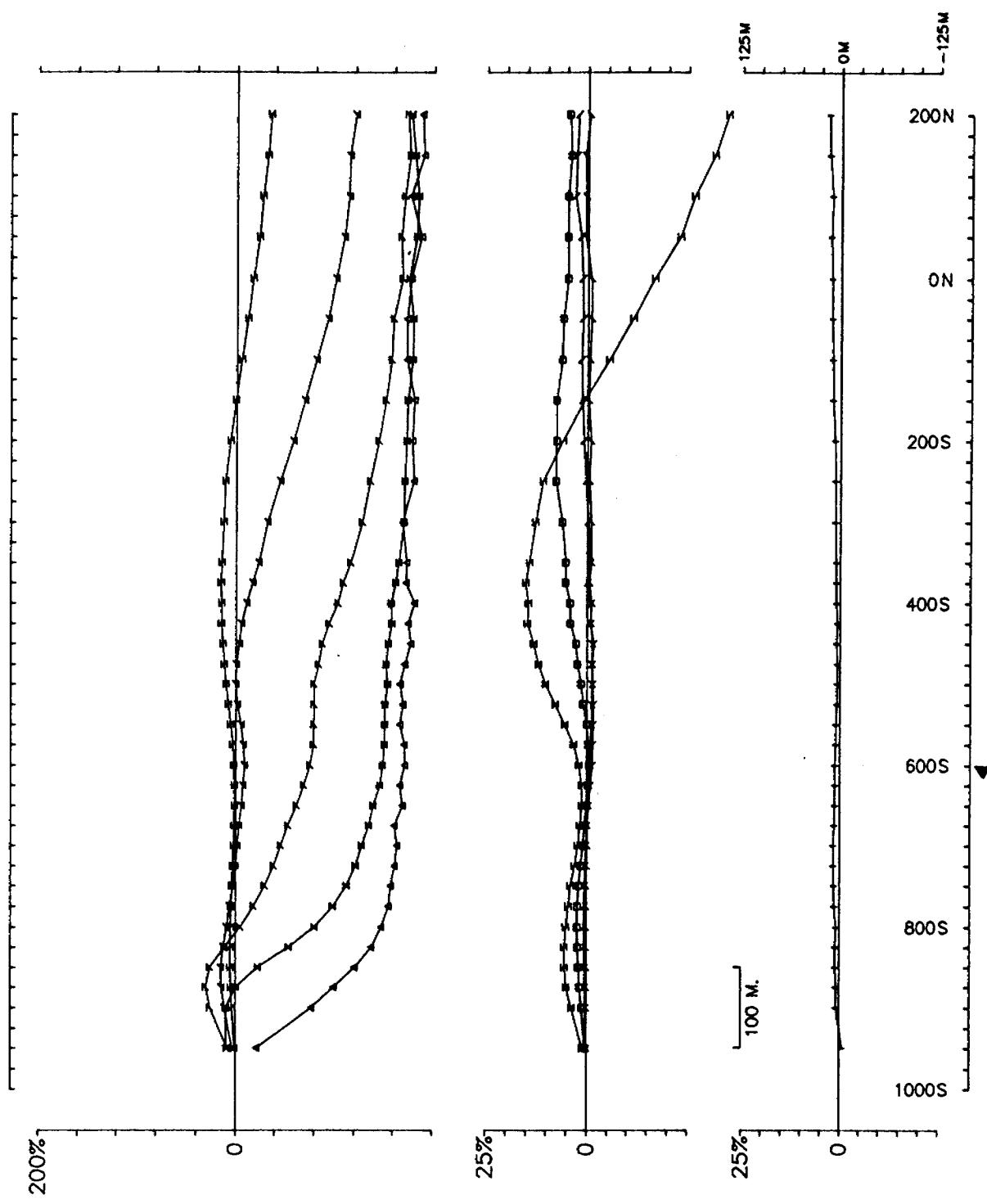
Ch1 reduced. Prim. normalized. Totals:P-950M./L-1200M. Line Azim.: 0 . Rx Label: 2 Point Normalized.

Hx

Loop: 1 Line: 200W

DS:

PY-92-2X



PYKE 1992

Op: BRGB

Ch1 reduced. Ch1 normalized.

COMINCO LTD.

Freq(Hz): 30.974

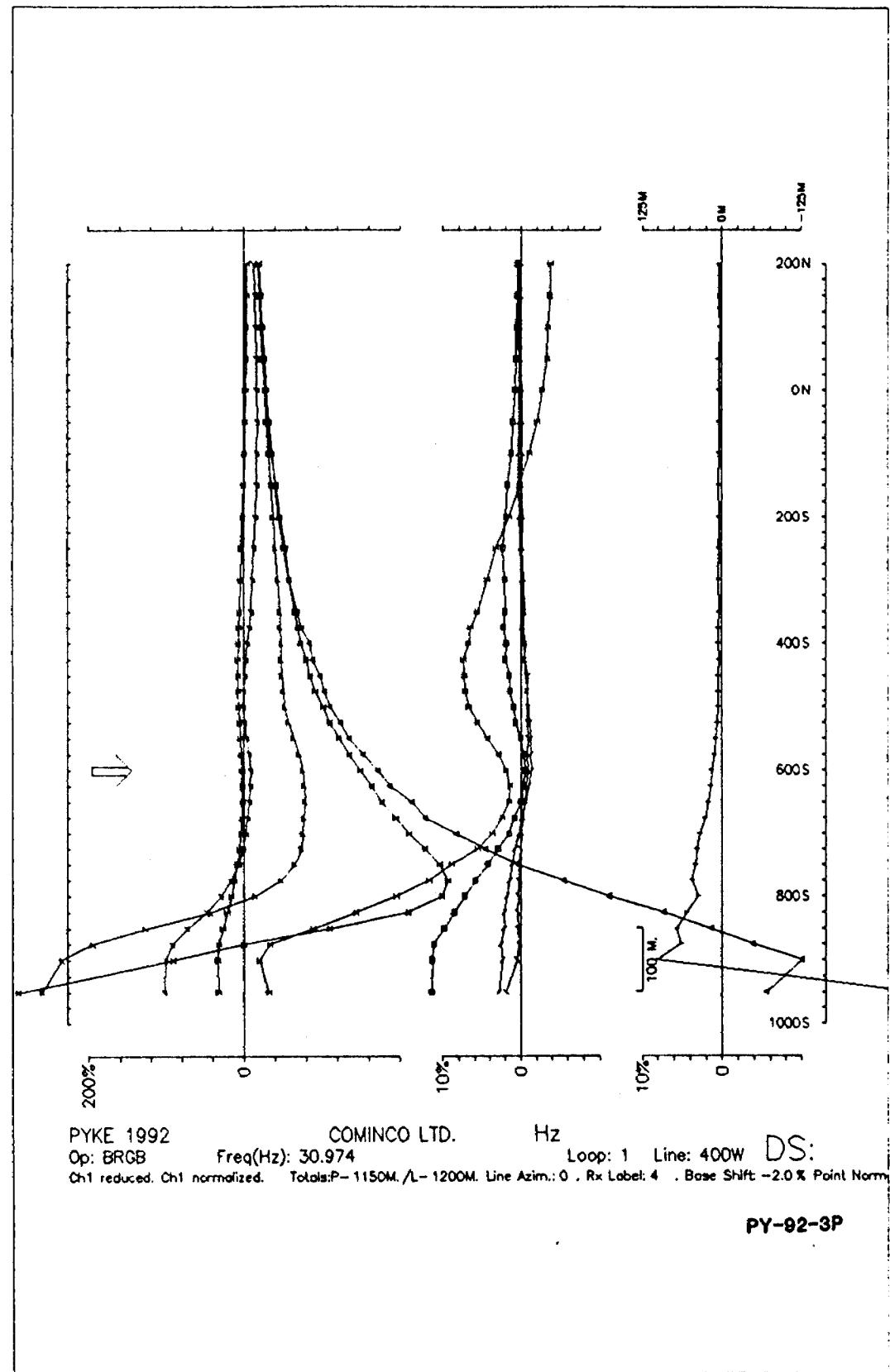
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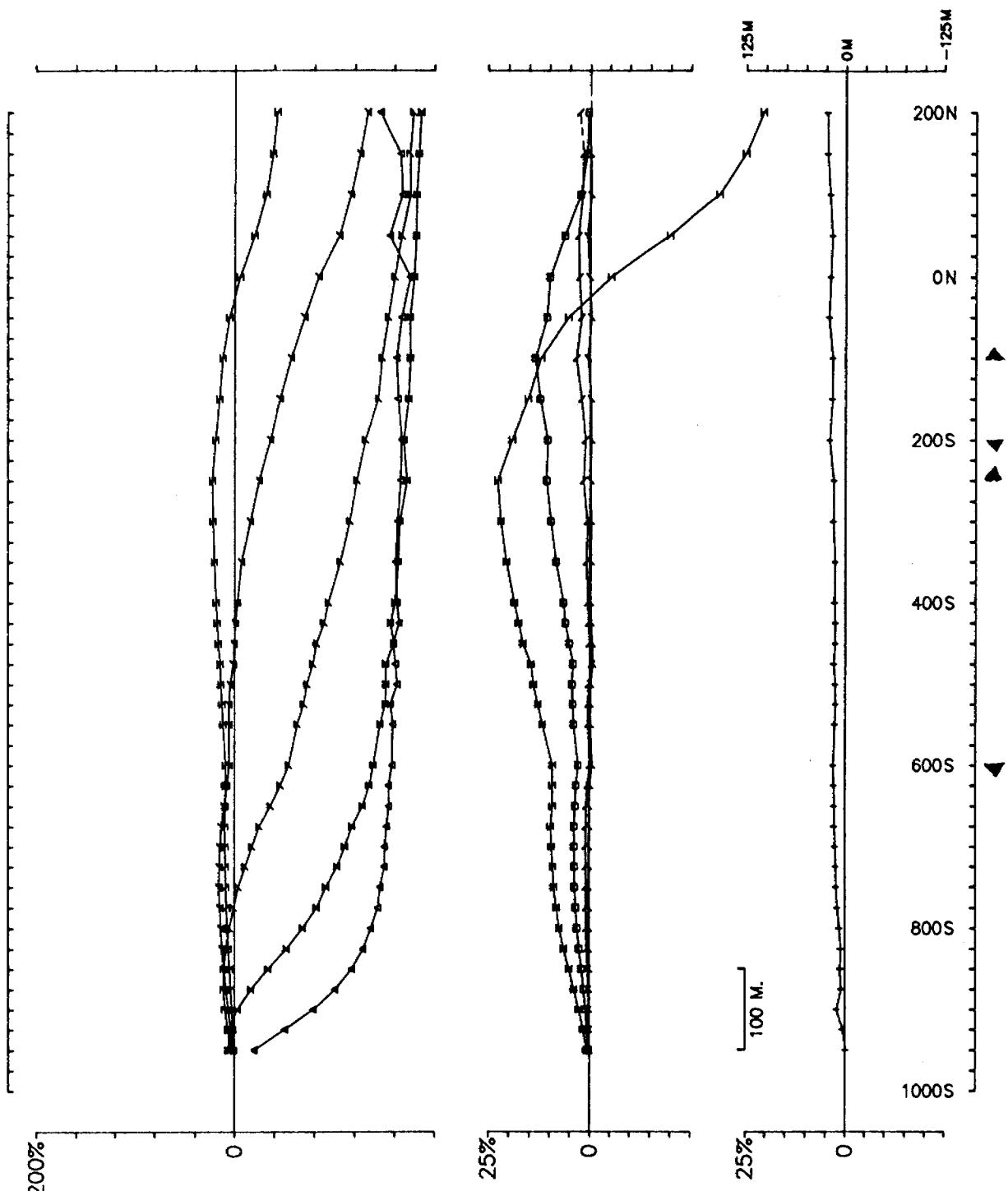
Hz

Loop: 1 Line: 400W

DS:

PY-92-3C





PYKE 1992

Op: BRGB

COMINCO LTD.

Freq(Hz): 30.974

Hz

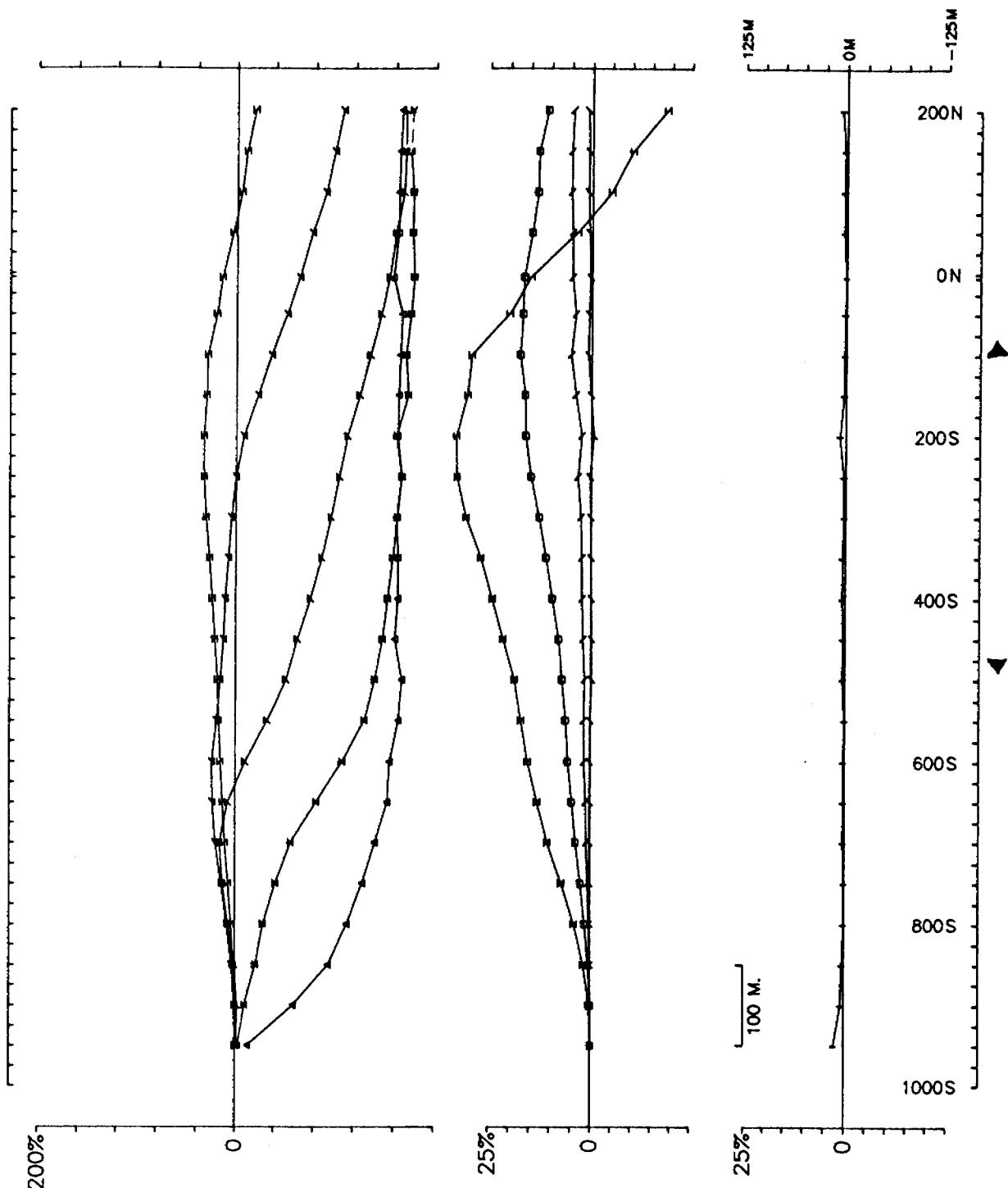
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Totals:P-1150M./L-1200M. Line Azim.:0 , Rx Label: 6

PY-92-4C



PYKE 1992

Op: BRGB

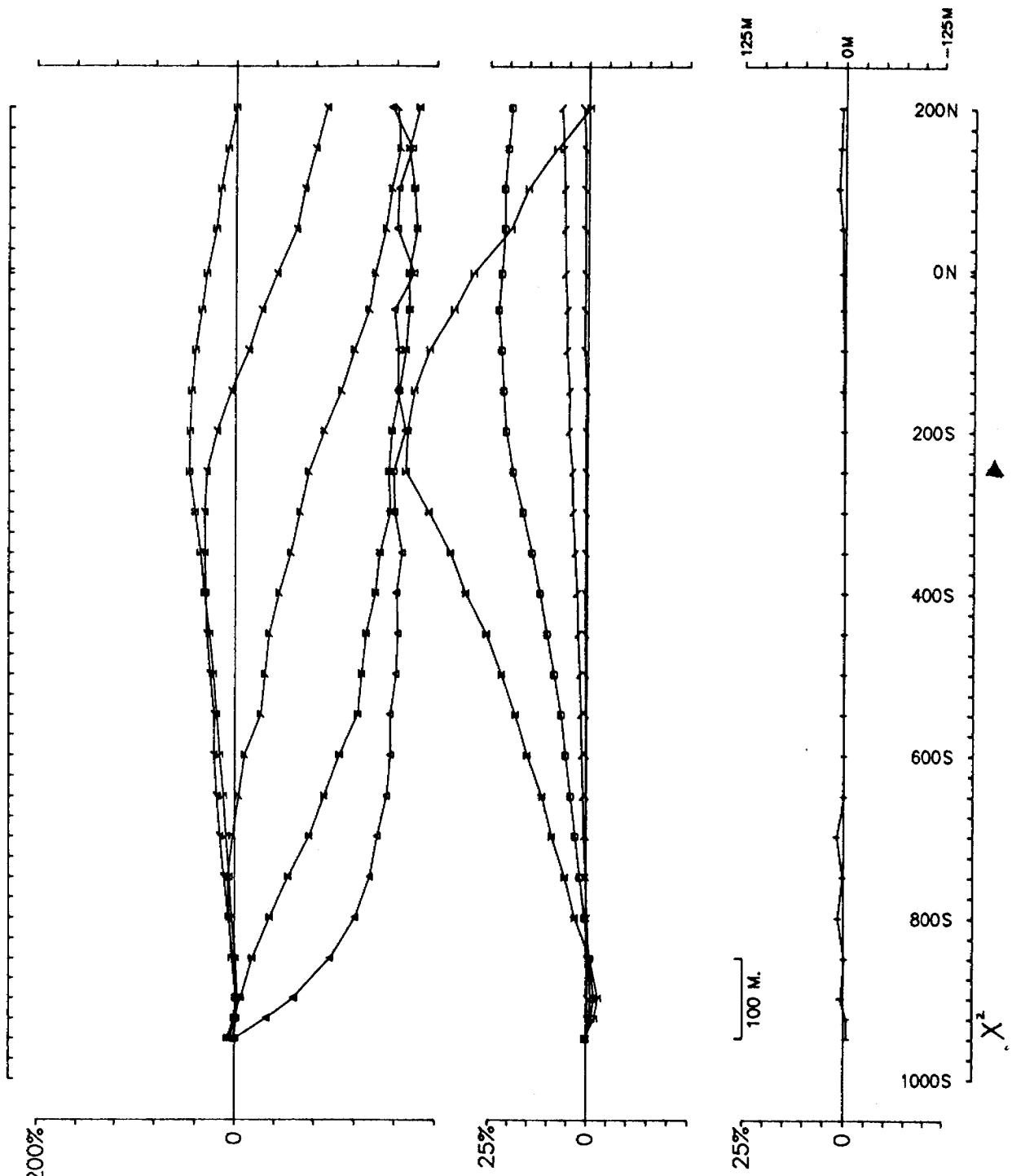
Freq(Hz): 30.974

COMINCO LTD.

Hz

Ch1 reduced, Ch1 normalized. Totals:P- 1150M./L- 1200M. Line Azim.: 0 . Rx Label: 8 . Base Shift: -5.0 % DS:

PY-92-5C



PYKE 1992

Op: BRGB

Freq(Hz): 30.974

COMINCO LTD.

Hz

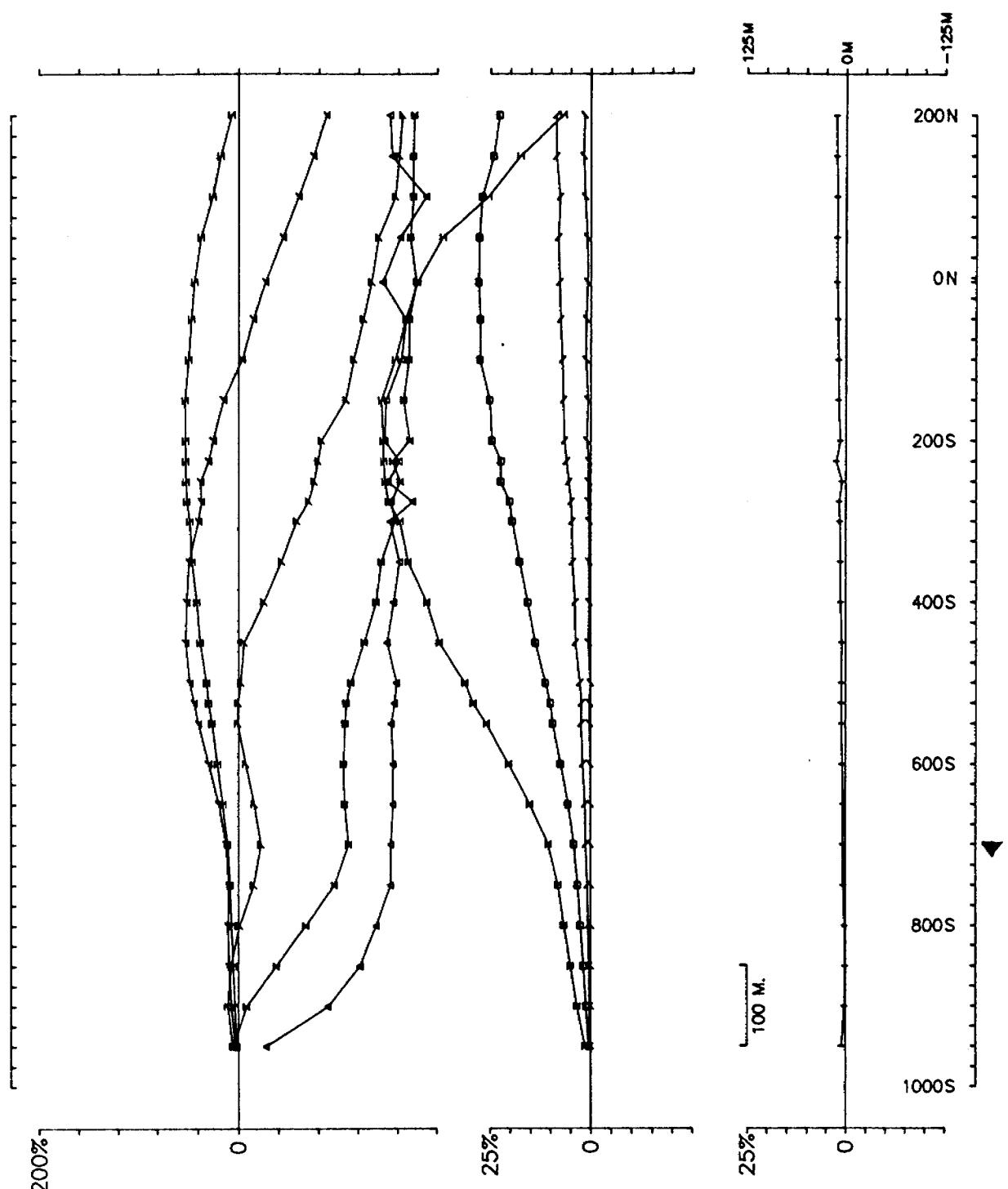
Loop: 1 Line: 1000W

DS:

Ch1 reduced. Ch1 normalized.

Totals:P-1150M./L-1200M. Line Azim.: 0 . Rx Label: 10 . Base Shift: -5.0 %

PY-92-6C



PYKE 1992

Op: BRGB

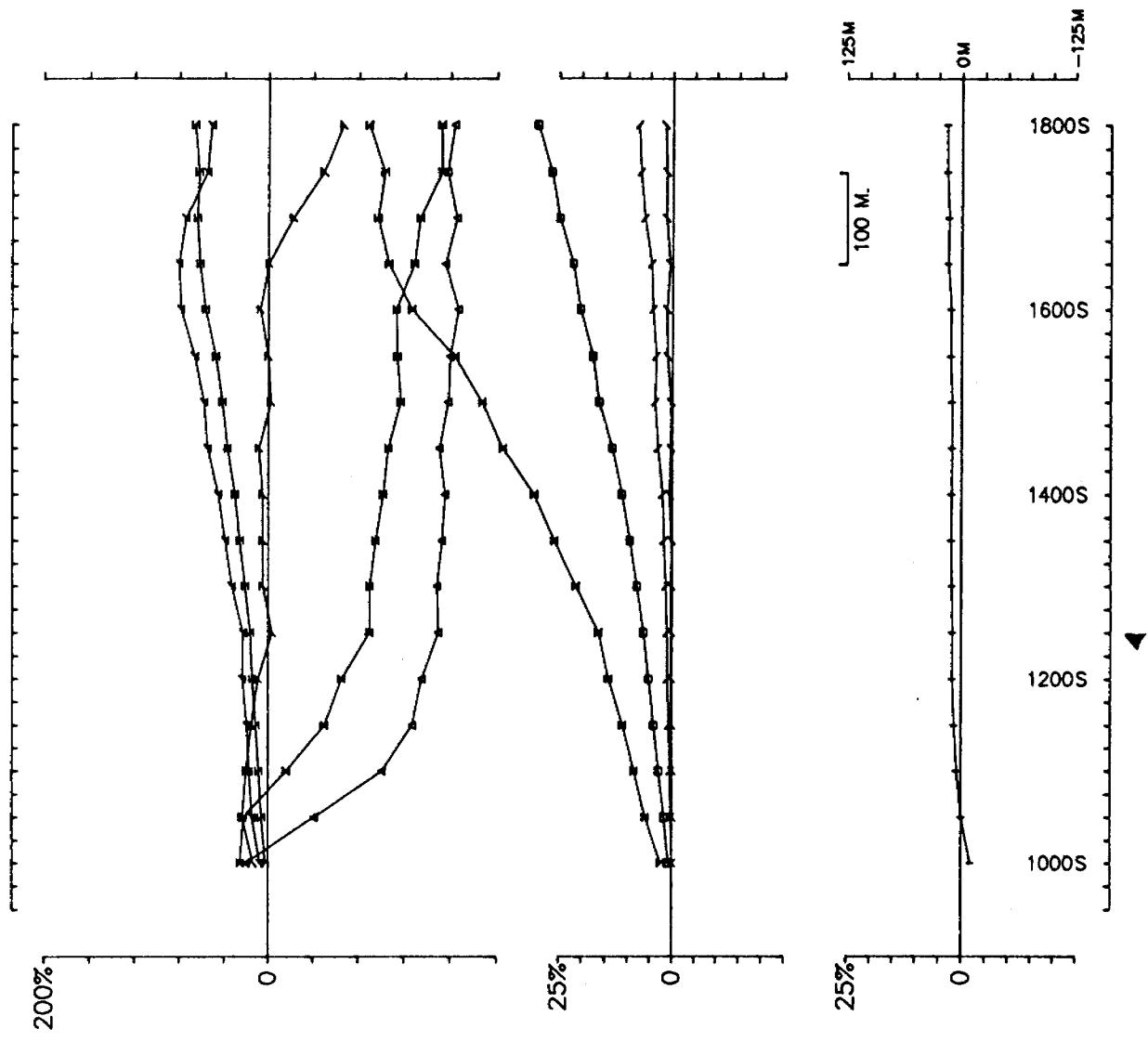
Freq(Hz): 30.974

COMINCO LTD.

Hz

Ch1 reduced. Ch1 normalized. Totals:P- 1150M./L- 1200M. Line Azim.: 0 . Rx Label: 12 . Base Shift: -3.0 % DS:

PY-92-7C



PYKE 1992

Op: BBGR

COMINCO LTD.

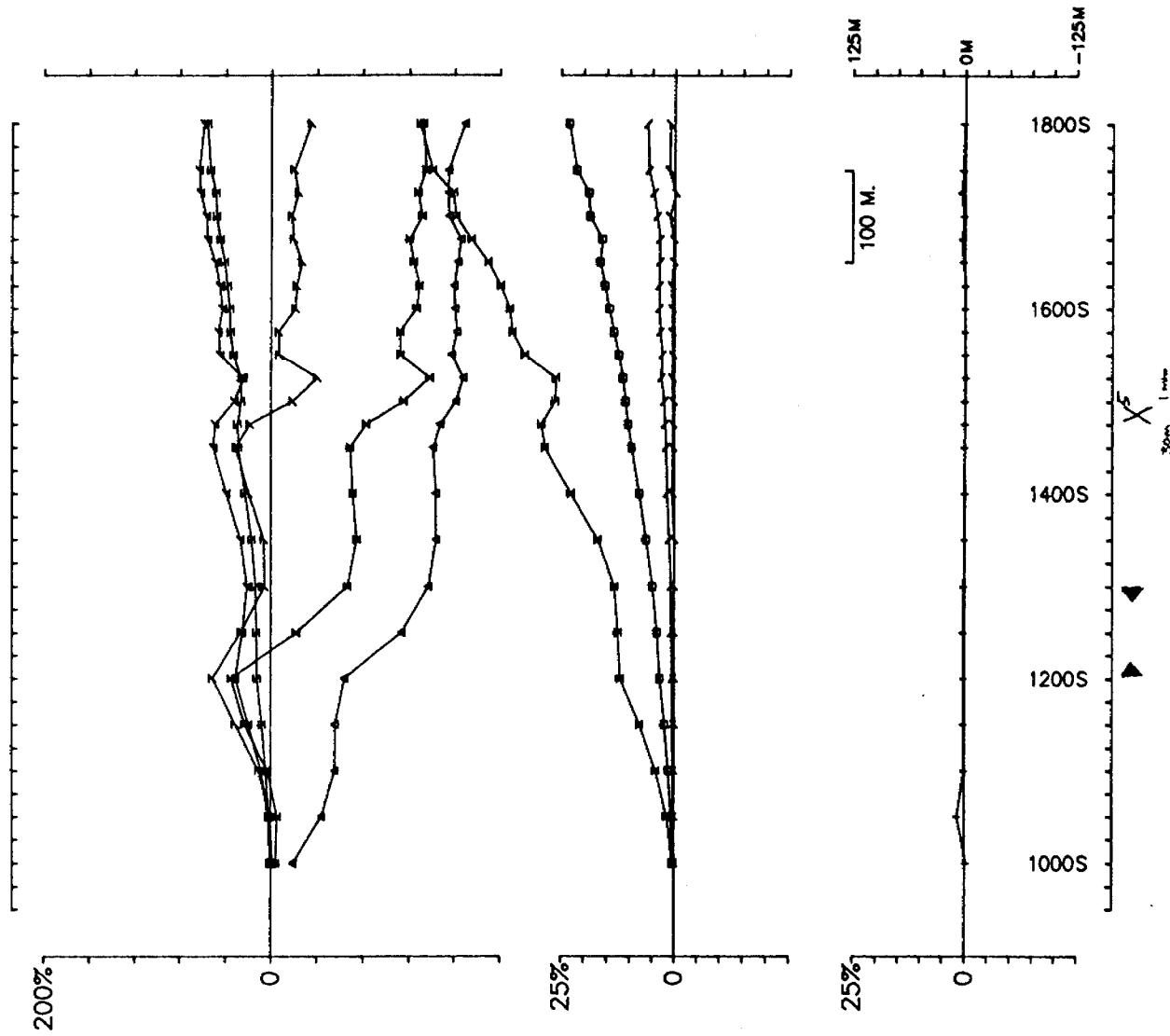
Freq(Hz): 30.974

Hz

Loop: 2 Line: 0E DS:

Ch1 reduced. Ch1 normalized. Totals:P-800M./L-850M. Line Azim.: 0 . Rx Label: 1 . Base Shift: -1.0 %

PY-92-8C



PYKE 1992

Op: BBGR

COMINCO LTD.

Freq(Hz): 30.974

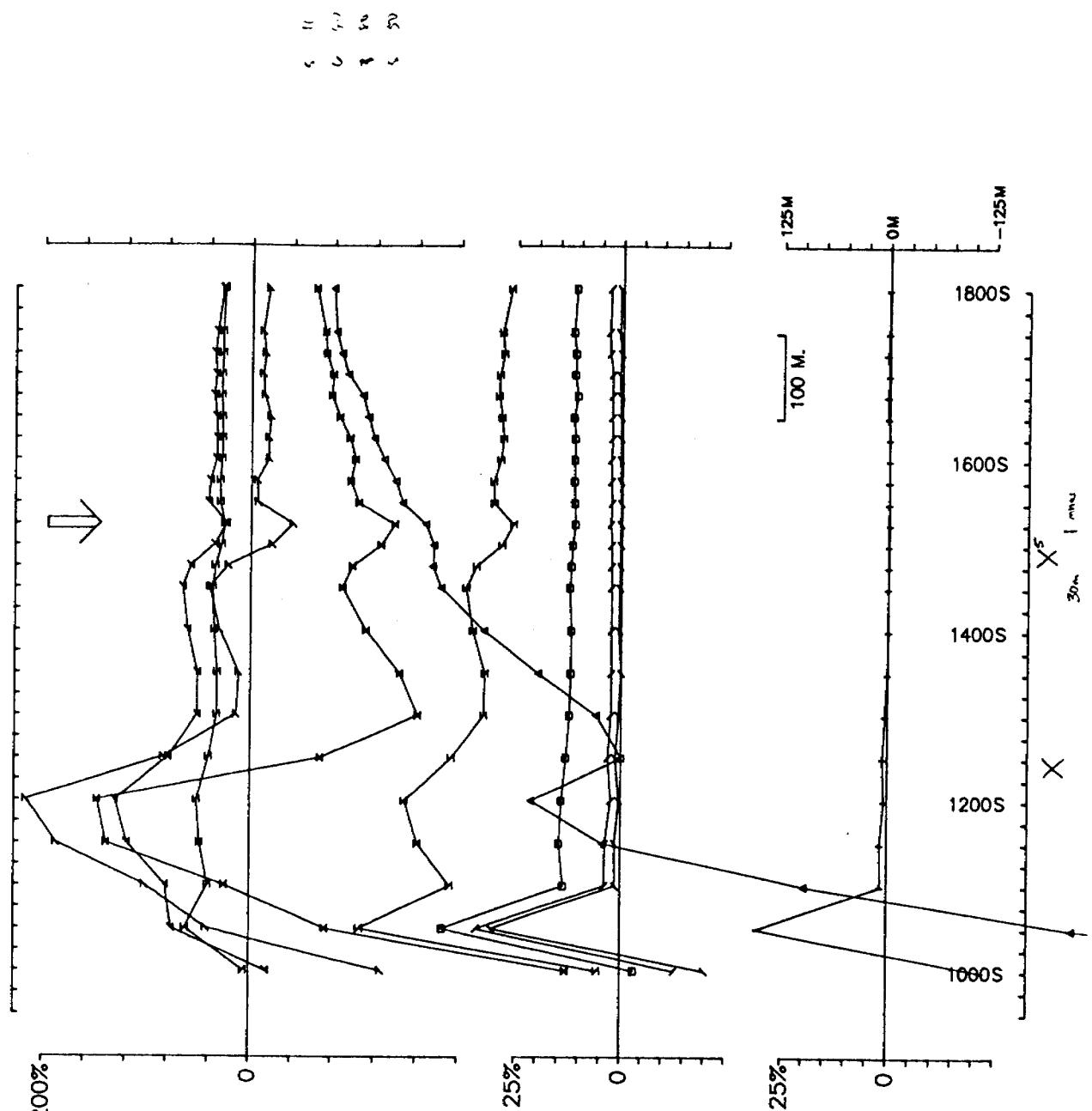
Hz

Loop: 2 Line: 200W

DS:

Ch1 reduced. Ch1 normalized. Totals:P-800M./L-850M. Line Azim.:0 . Rx Label:2 . Base Shift: -17.0 %

PY-92-9C



PYKE 1992

Op: BBGR

COMINCO LTD.

Freq(Hz): 30.974

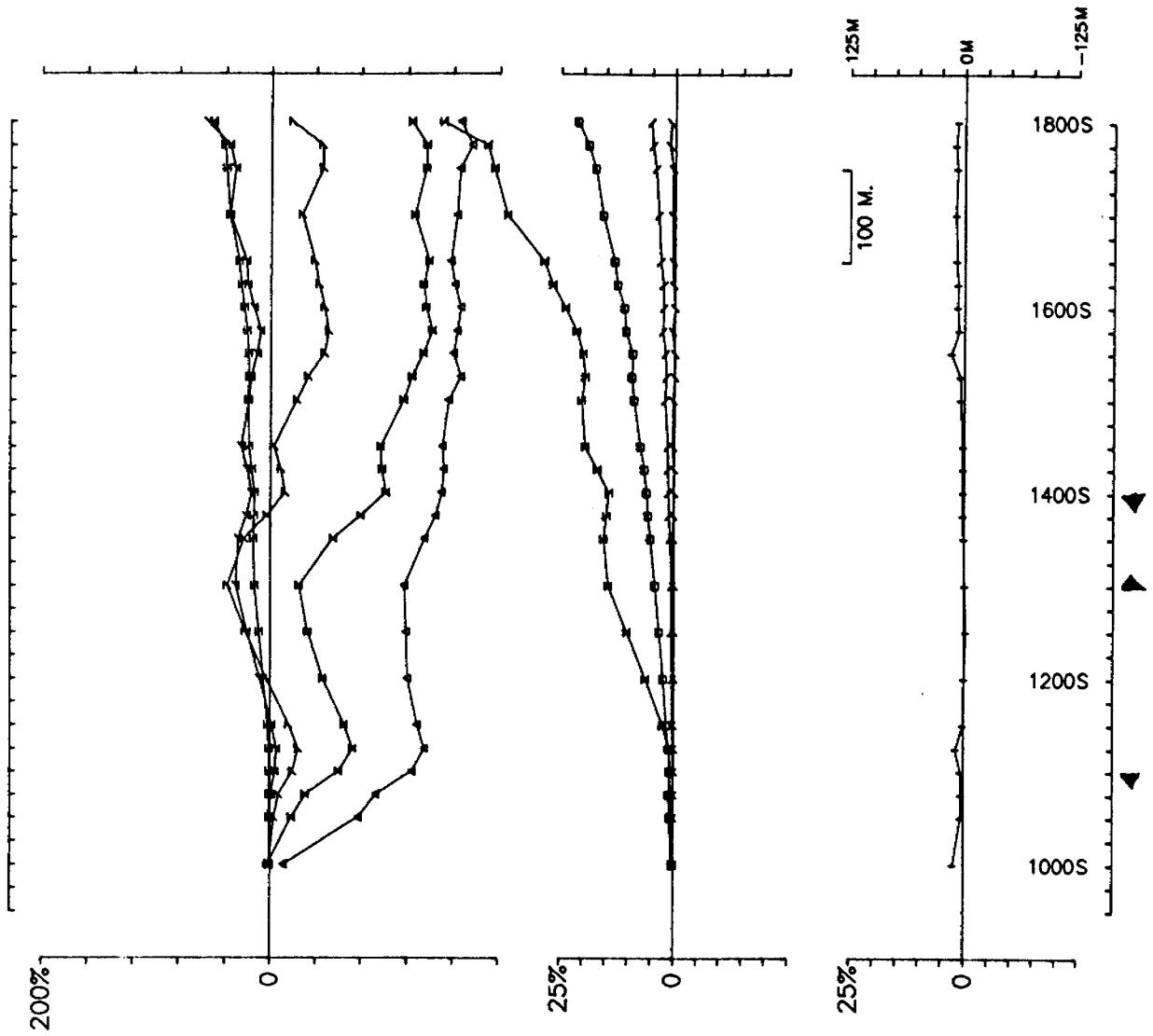
Hz

Loop: 2 Line: 200W

DS:

Prim. reduced. Prim. normalized.Totals:P- 800M. /L- 850M. Line Azim.: 0 . Rx Label: 2 . Base Shift: -17.0 % Point Normc

PY-92-9P



PYKE 1992

Op: BBGR

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.

COMINCO LTD.

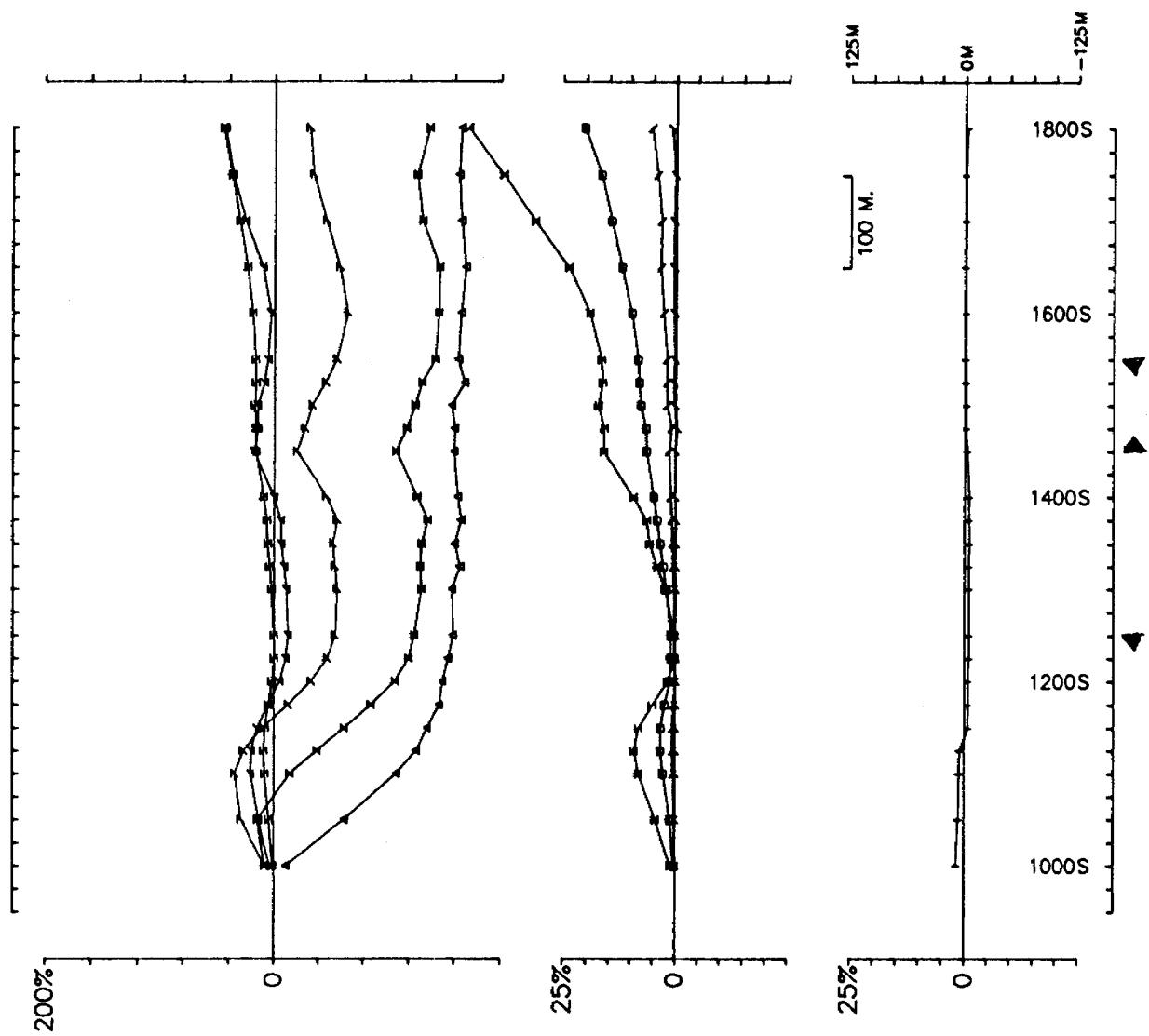
Hz

Loop: 2 Line: 400W

DS:

Totals:P-800M./L-850M. Line Azim.: 0 . Rx Label: 4 . Base Shift: -4.0 %

PY-92-10C



PYKE 1992

Op: BBGR

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized. Totals:P-800M. /L-850M. Line Azim.: 0 . Rx Label: 6 . Base Shift: -6.0 %

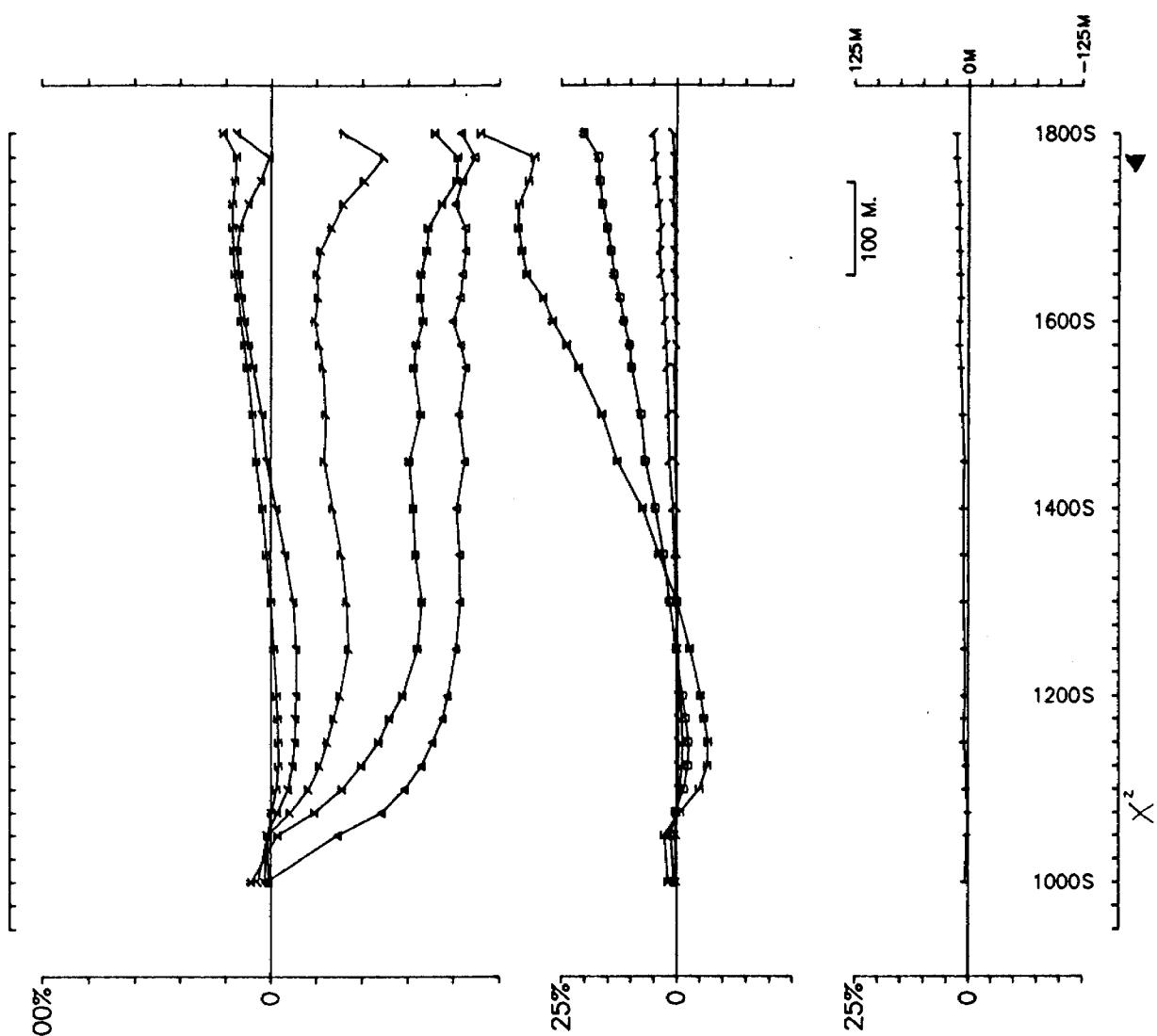
COMINCO LTD.

Hz

Loop: 2 Line: 600W

DS:

PY-92-11C



PYKE 1992

Op: BBGR Freq(Hz): 30.974

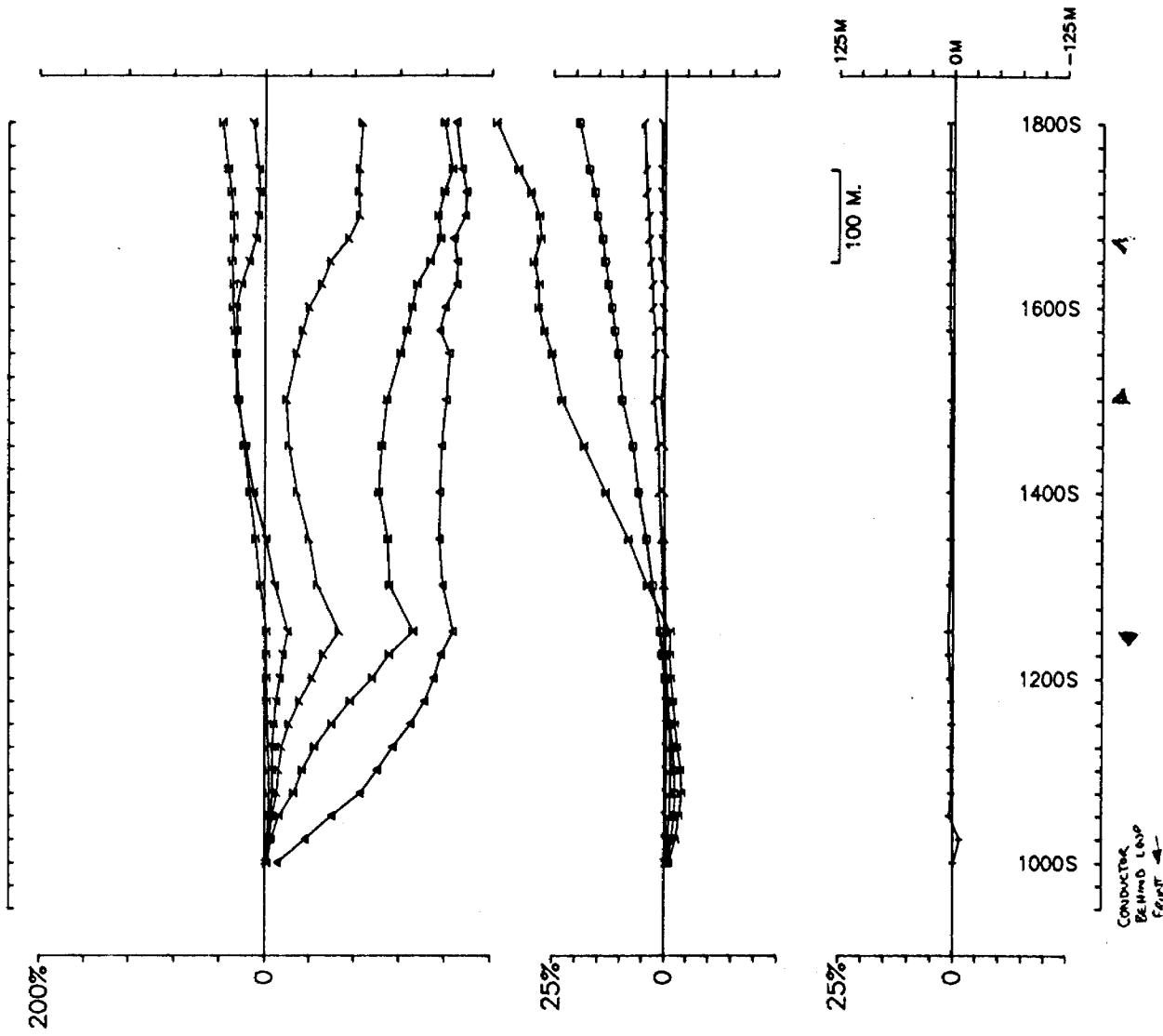
Ch1 reduced. Ch1 normalized. Totals:P-800M./L-850M. Line Azim.: 0 . Rx Label: 8 . Base Shift: -3.0 % DS:

COMINCO LTD.

Hz

Loop: 2 Line: 800W

PY-92-12C



PYKE 1992

Op: BBGR

Freq(Hz): 30.974

COMINCO LTD.

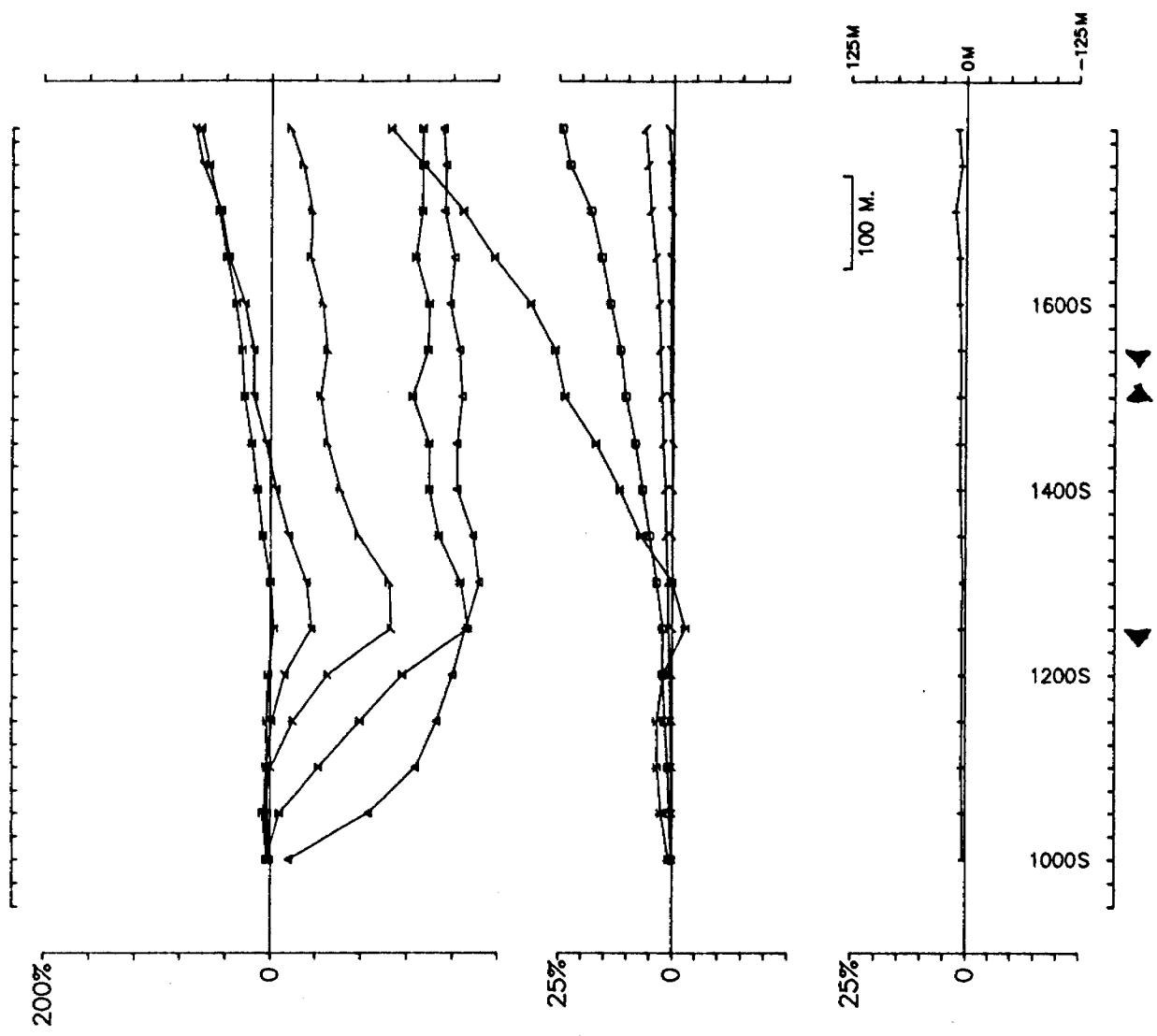
Hz

Loop: 2 Line: 1000W

DS:

Ch1 reduced. Ch1 normalized. Totals:P-800M./L-850M. Line Azim.: 0 . Rx Label: 10 . Base Shift: -5.0 %

PY-92-13C



PYKE 1992

Op: BBGR

Freq(Hz): 30.974

COMINCO LTD.

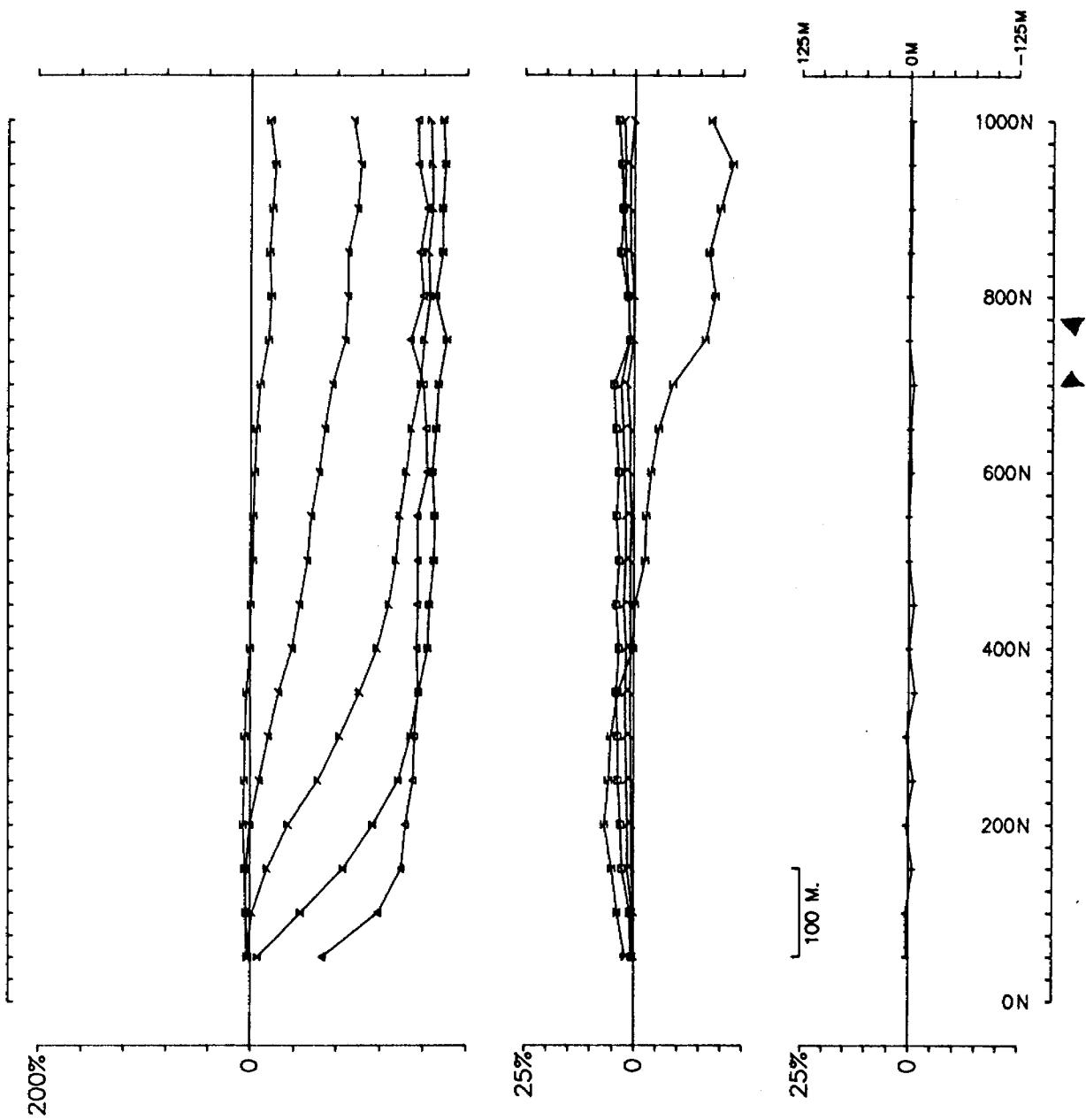
Hz

Loop: 2 Line: 1200W

DS:

Ch1 reduced. Ch1 normalized. Totals:P- 789M. /L- 839M. Line Azim.: 0 . Rx Label: 12 . Base Shift: -17.0 %

PY-92-14C



PYKE 1992

Op: BRGB

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized. Totals:P- 950M. /L- 1000M. Line Azim.: 0 . Rx Label: 1 . Base Shift: -8.0 %

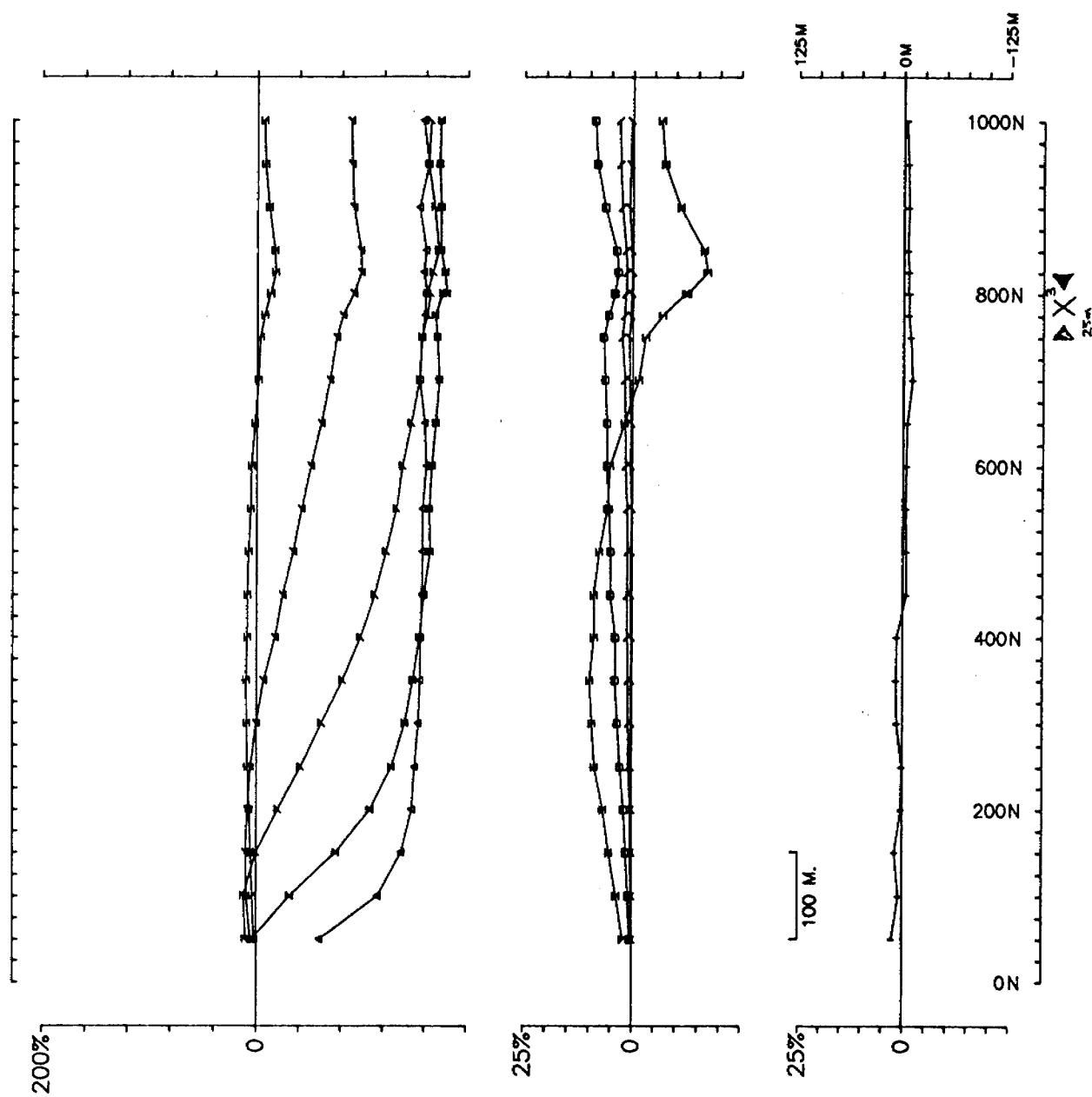
COMINCO LTD.

Hz

Loop: 3 Line: 0W

DS:

PY-92-15C



PYKE 1992

Op: BRGB

COMINCO LTD.  
Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.

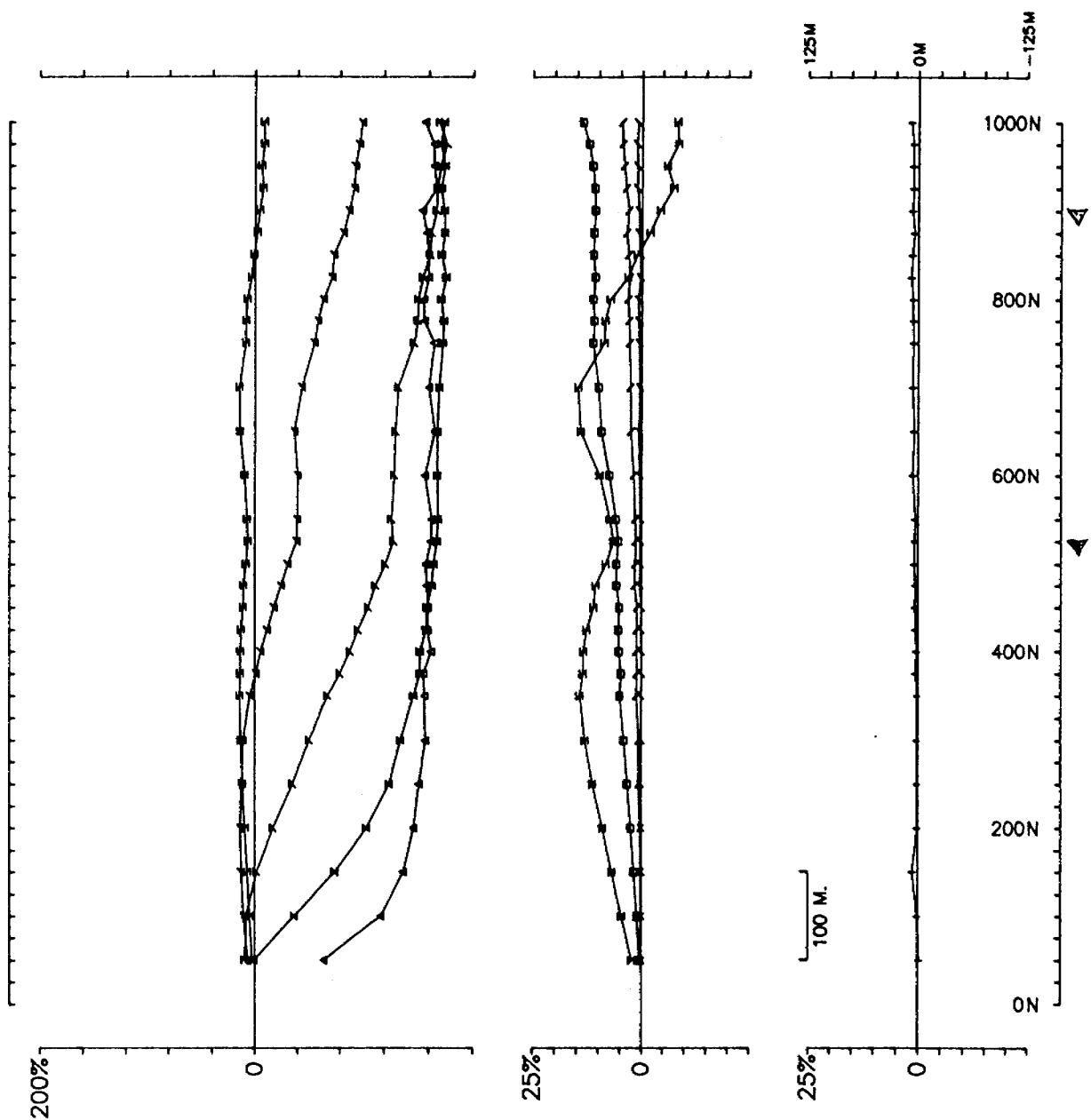
Hz

Loop: 3 Line: 200W

DS:

Totals:P-950M./L-1000M. Line Azim.: 0 , Rx Label: 2 , Base Shift: -7.0 %

PY-92-16C



PYKE 1992

Op: BRGB

COMINCO LTD. Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.

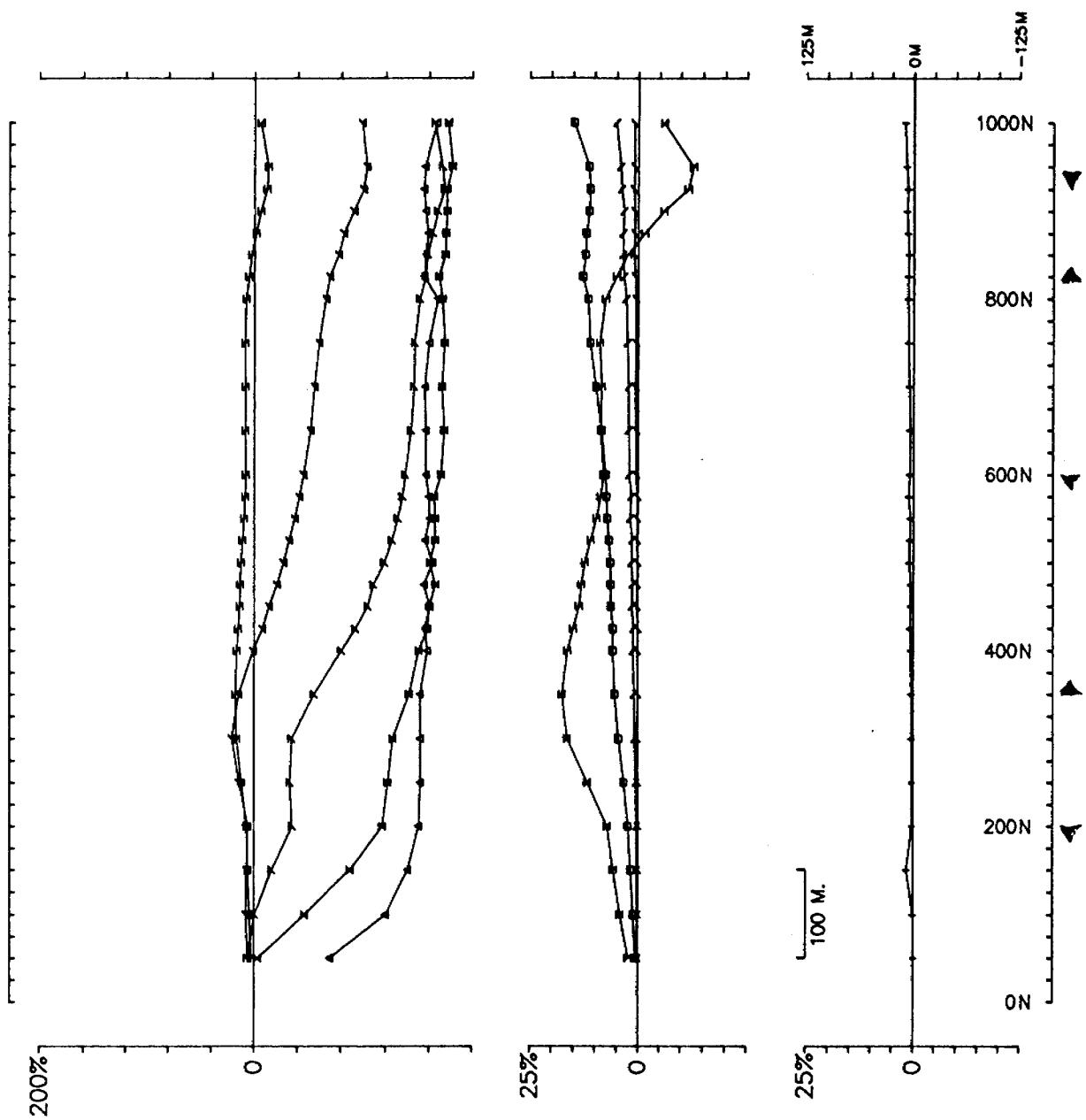
Hz

Loop: 3 Line: 400W

DS:

Totals:P-950M./L-1000M. Line Azim.: 0 . Rx Label: 4 . Base Shift: -3.0 %

PY-92-17C



PYKE 1992

Op: BRGB

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.      Totals:P- 950M. /L- 1000M. Line Azim.: 0 . Rx Label: 6 . Base Shift: -2.0 %

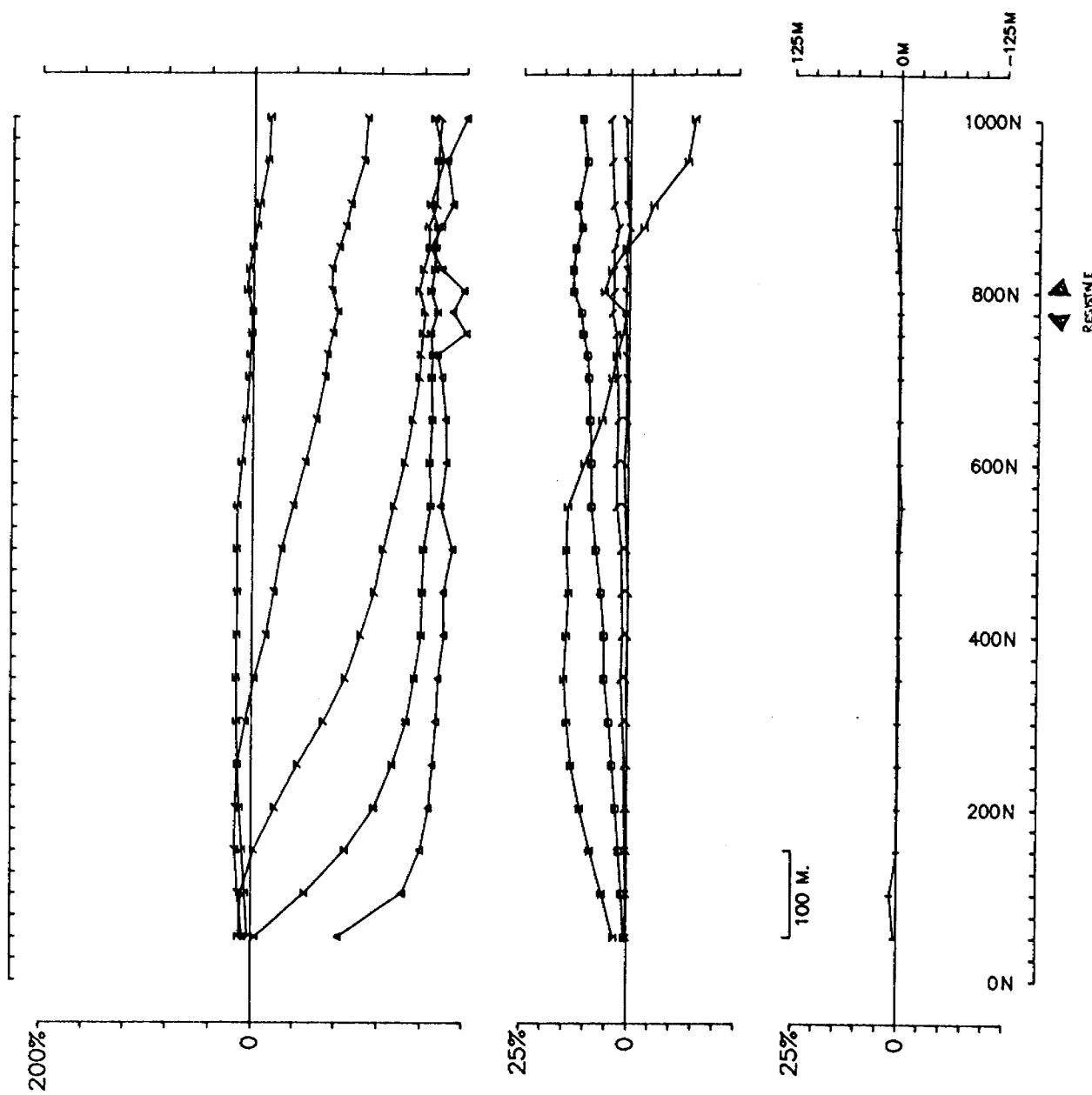
COMINCO LTD.

Hz

Loop: 3 Line: 600W

DS:

PY-92-18C



PYKE 1992

Op: BRGB

COMINCO LTD.

Freq(Hz): 30.974

Hz

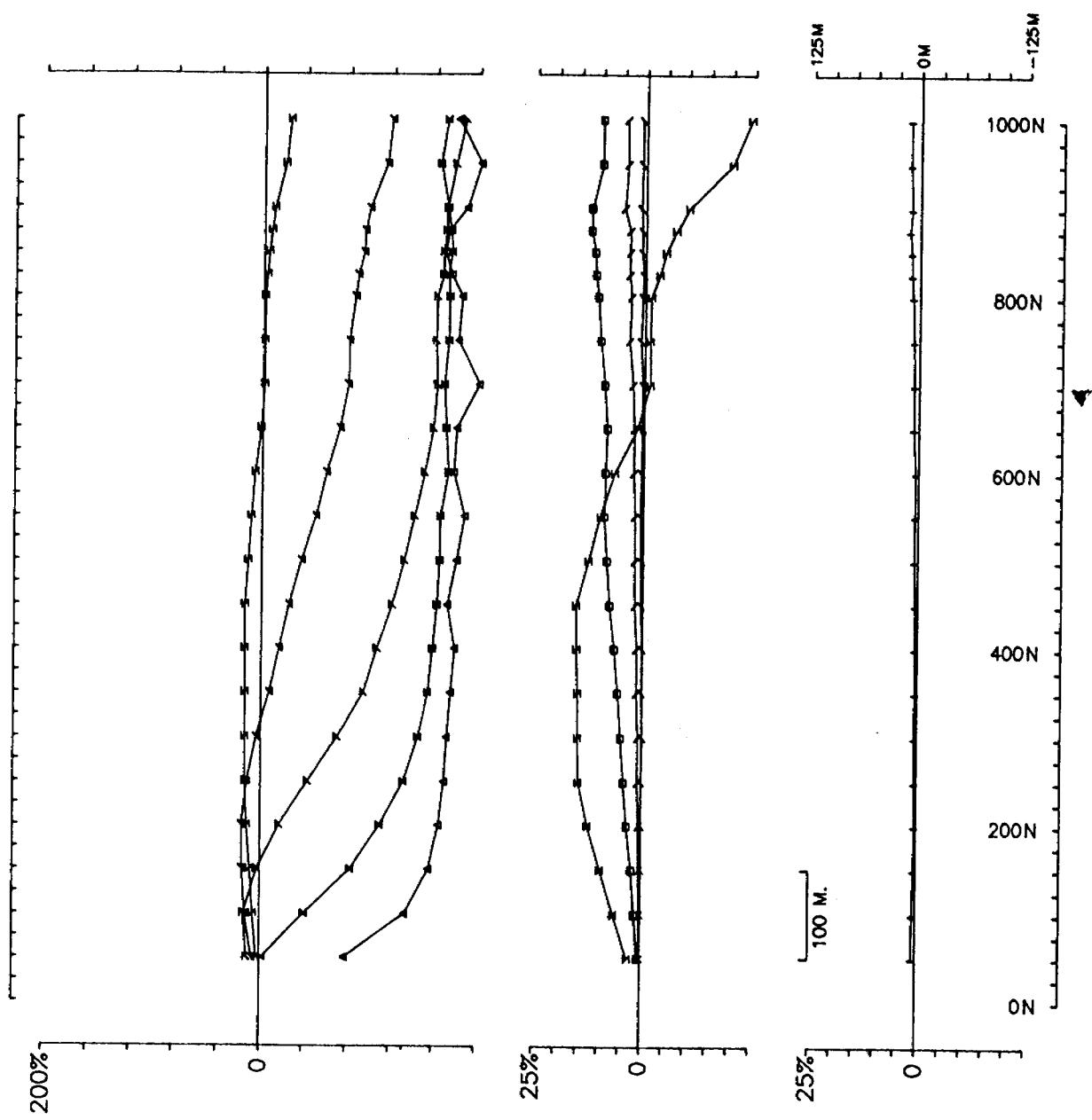
Loop: 3 Line: 800W

DS:

Ch1 reduced. Ch1 normalized.

Totals:P- 950M./L- 1000M. Line Azim.: 0 . Rx Label: 8 . Base Shift: -3.0 %

PY-92-19C



PYKE 1992

Op: BRGB

COMINCO LTD.  
Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.

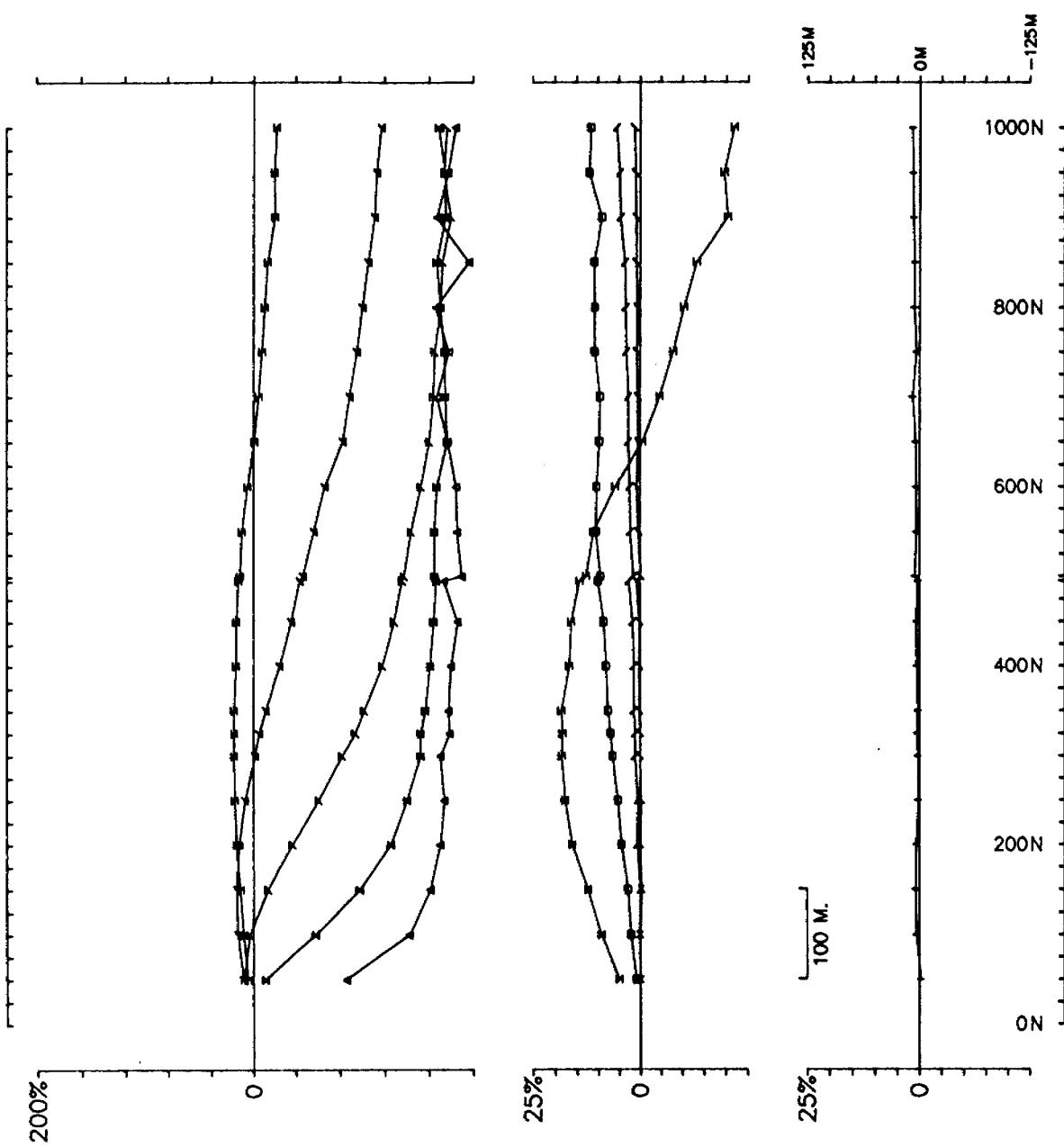
Totals:P- 950M. /L- 1000M. Line Azim.: 0 . Rx Label: 10 . Base Shift: -2.0 %

Hz

Loop: 3 Line: 1000W

DS:

PY-92-20C



PYKE 1992

Op: BRGB

COMINCO LTD.

Freq(Hz): 30.974

Hz

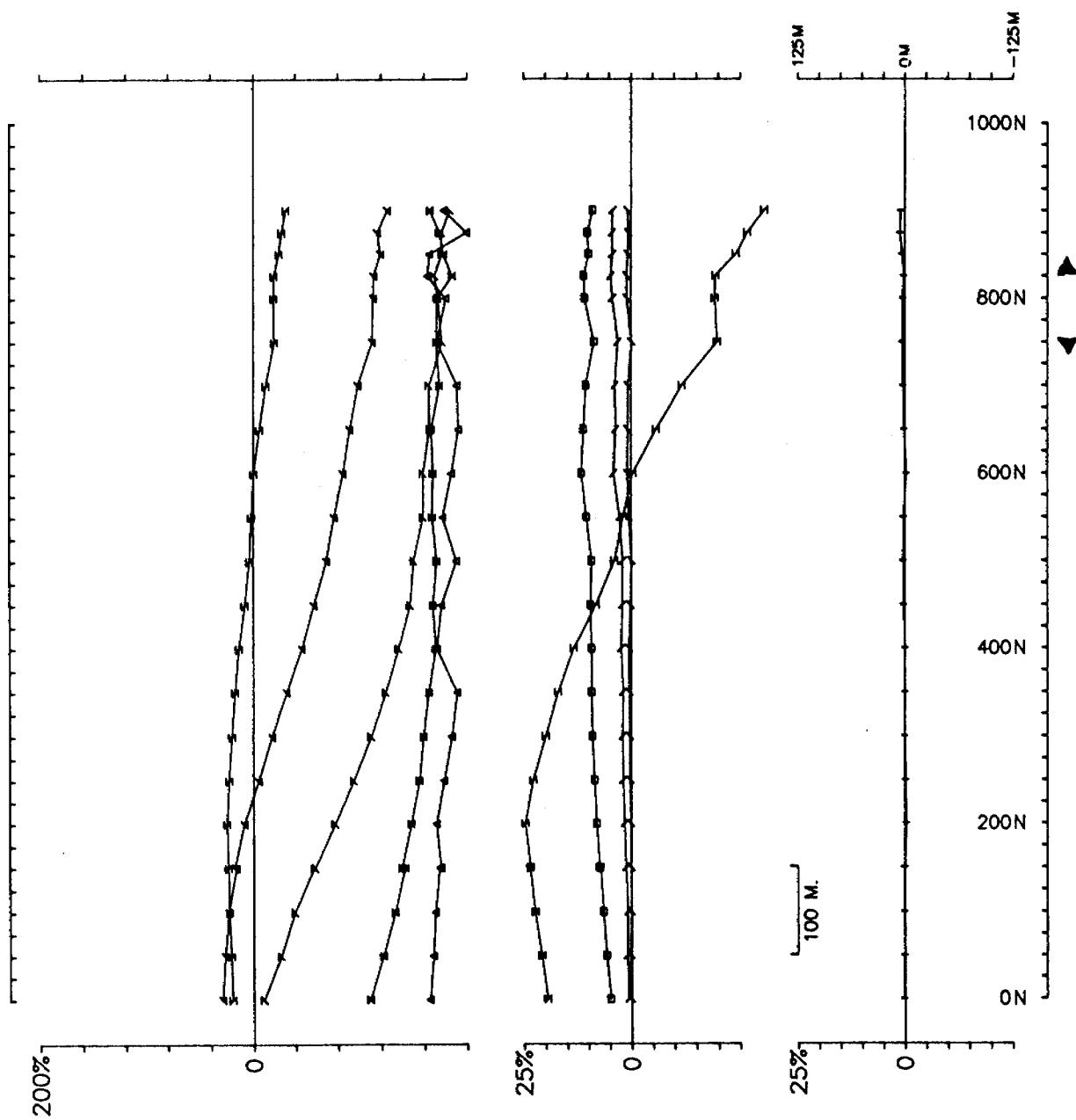
Loop: 3 Line: 1200W

DS:

Ch1 reduced. Ch1 normalized.

Totals:P-950M./L-1003M. Line Azim:0 Rx Label:12 Base Shift:-1.0%

PY-92-21C



PYKE 1992

Op: BRGB

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized. Totals:P- 900M. /L- 1000M. Line Azim.: 0 . Rx Label: 14 . Base Shift: -3.0 %

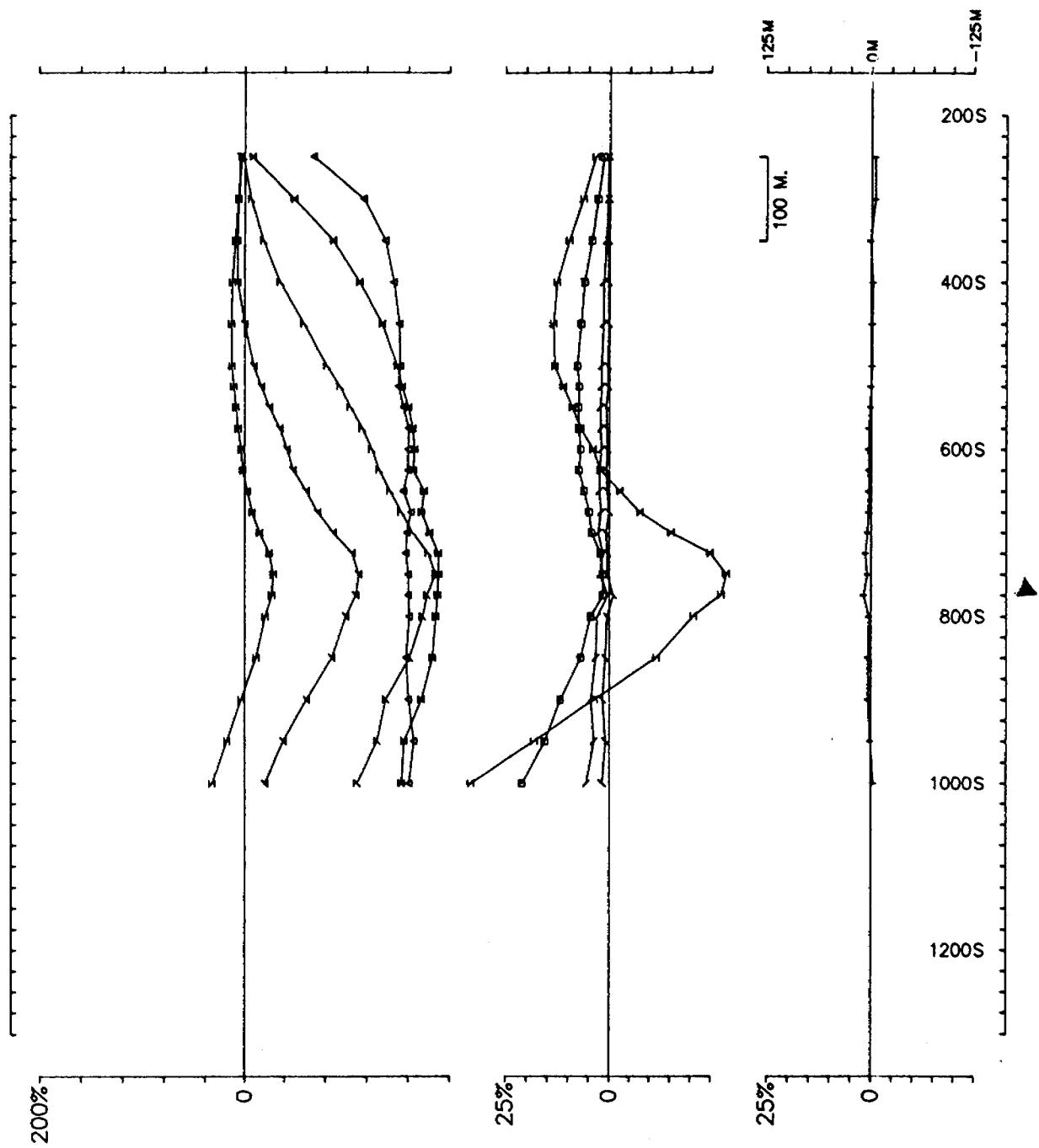
COMINCO LTD.

Hz

Loop: 3 Line: 1400W

DS:

PY-92-22C



PYKE 1992

Op: RGB

Freq(Hz): 30.974

COMINCO LTD.

Hz

Loop: 4

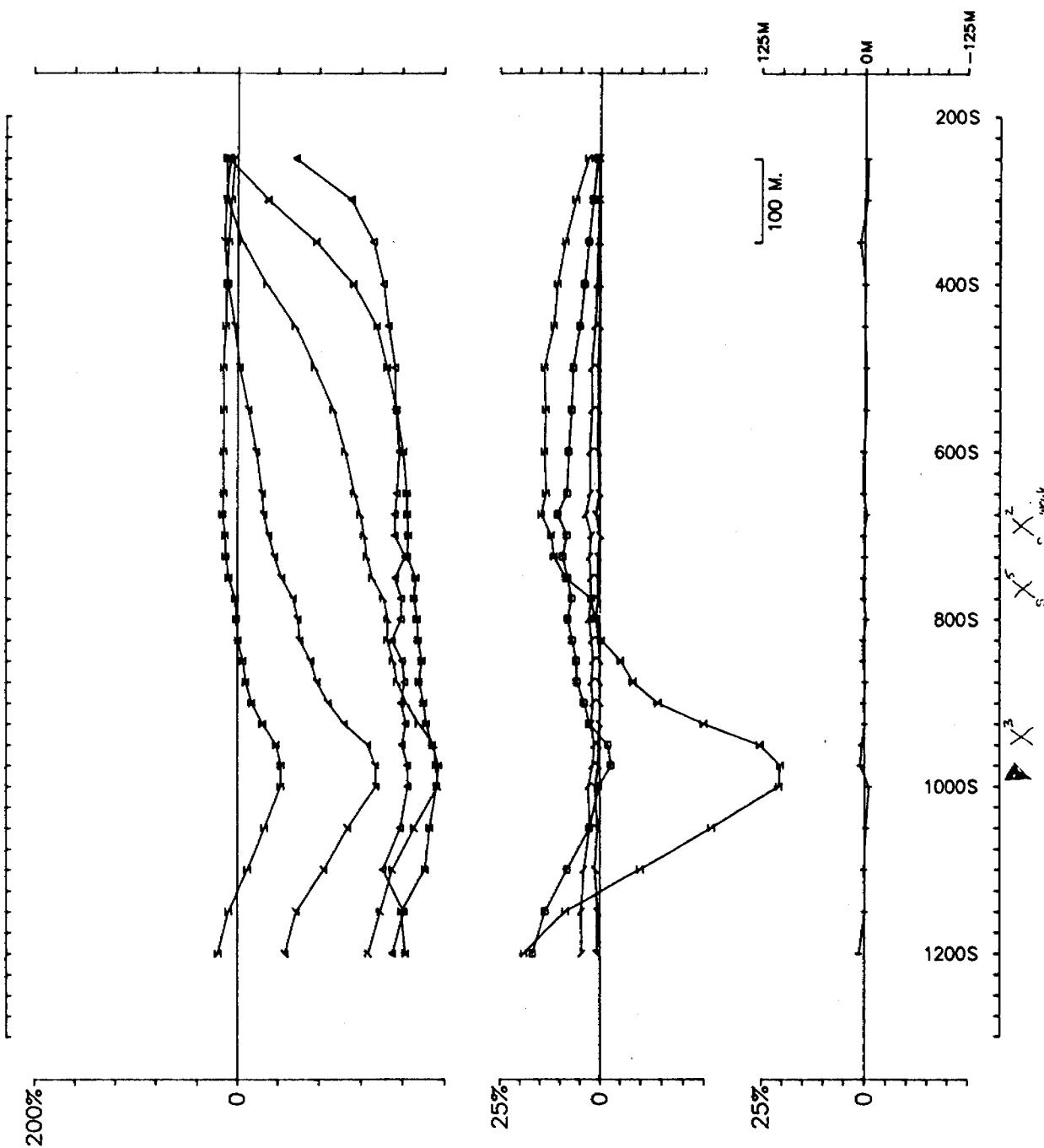
Line: 0E

DS:

Ch1 reduced. Ch1 normalized.

Totals:P- 750M. /L- 1100M. Line Azim.: 180 . Rx Label: 1 . Base Shift: -3.0 %

PY-92-23C



PYKE 1992

Op: RGB

Freq(Hz): 30.974

COMINCO LTD.

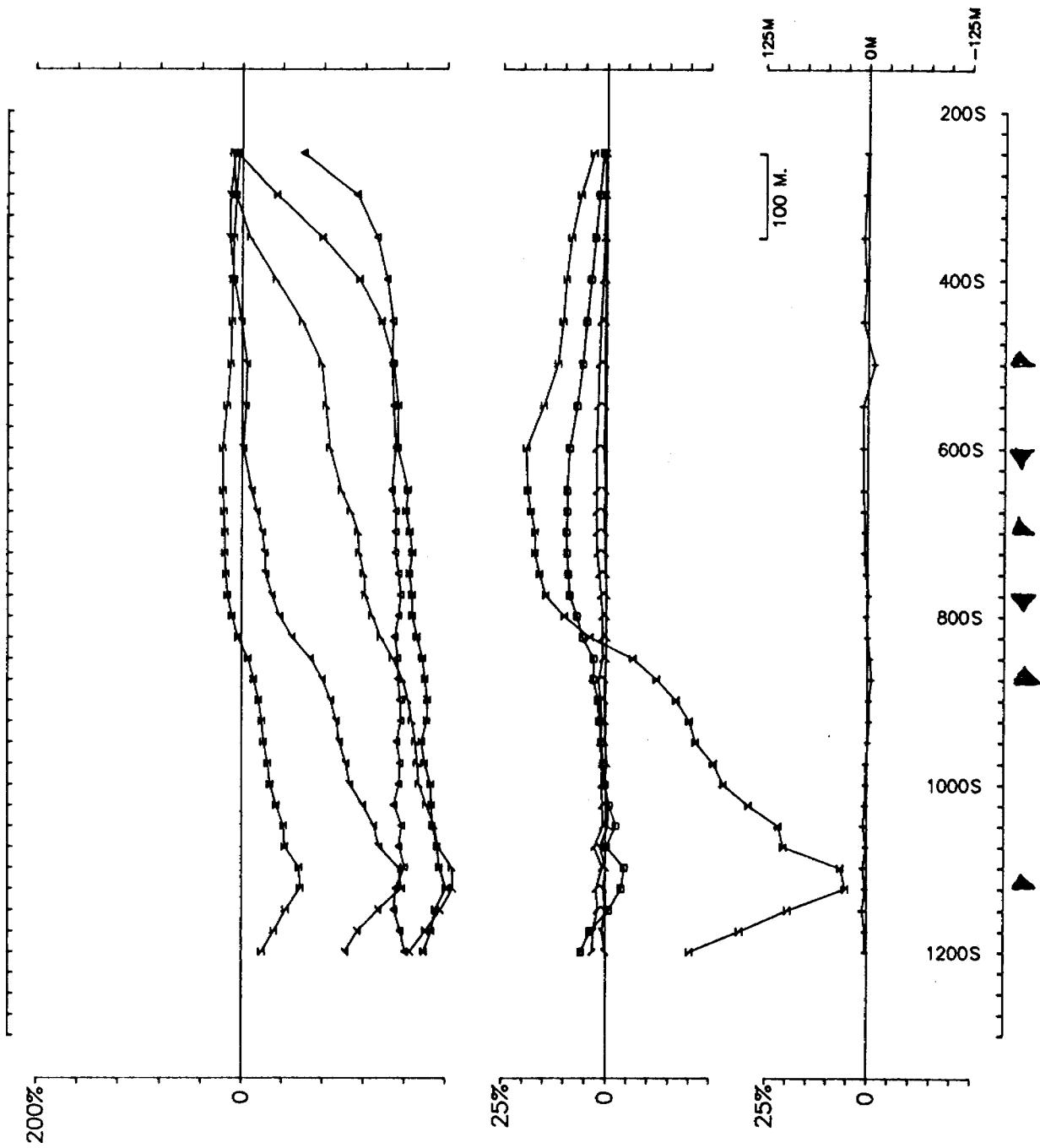
Hz

Loop: 4 Line: 200W

DS:

Ch1 reduced. Ch1 normalized. Totals:P- 950M./L- 1100M. Line Azim.: 180 . Rx Label: 2 . Base Shift: -3.0 %

PY-92-24C



PYKE 1992

Op: RGB

COMINCO LTD.

Freq(Hz): 30.974

Hz

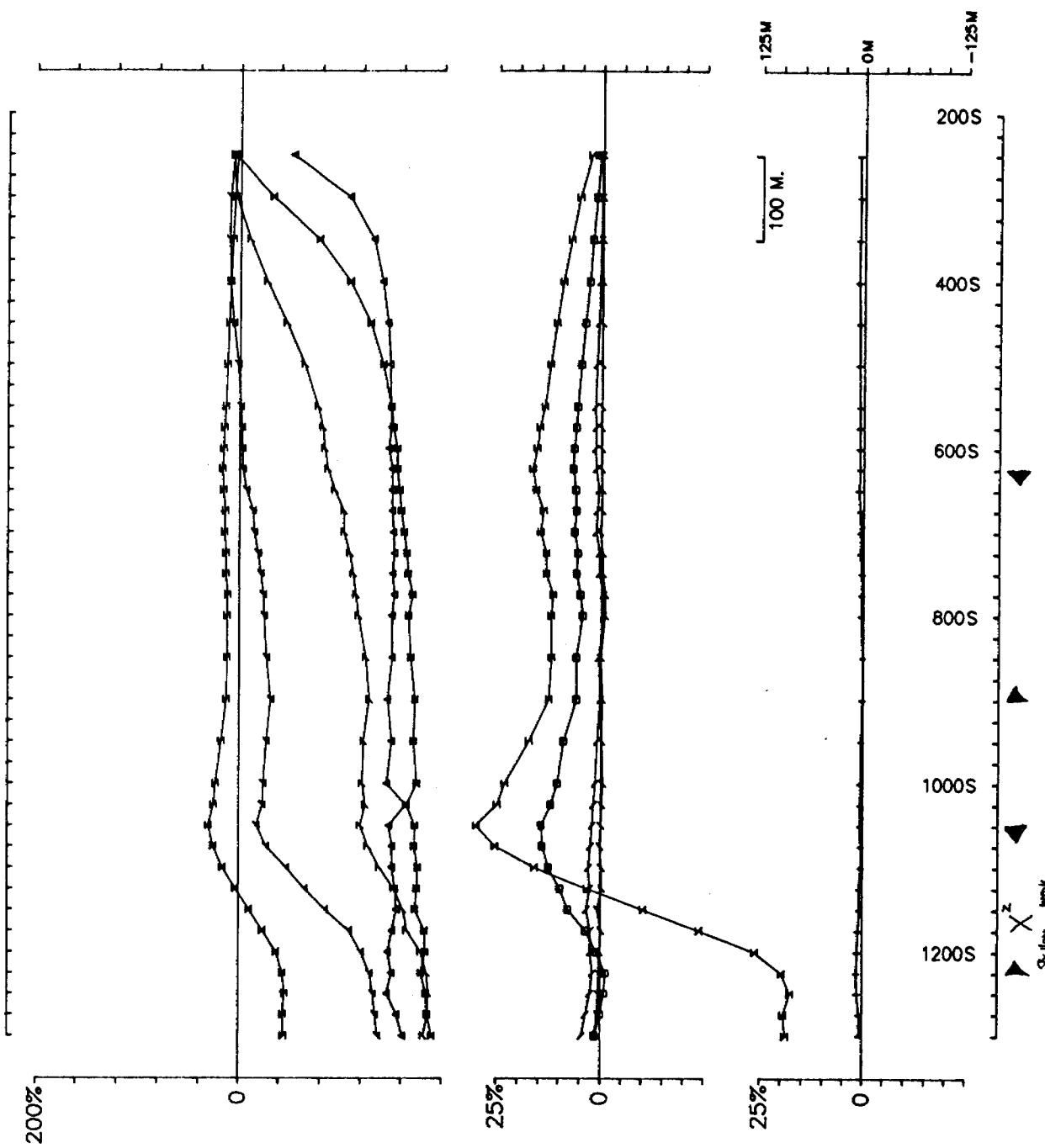
Loop: 4 Line: 400W

DS:

Ch1 reduced. Ch1 normalized.

Totals:P-950M./L-1100M. Line Azim.: 180 . Rx Label: 4 . Base Shift: -2.0 %

PY-92-25C



PYKE 1992

Op: RGB Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized. Totals:P- 1050M, /L- 1100M. Line Azim.: 180 . Rx Label: 6 . Base Shift: -3.0 %

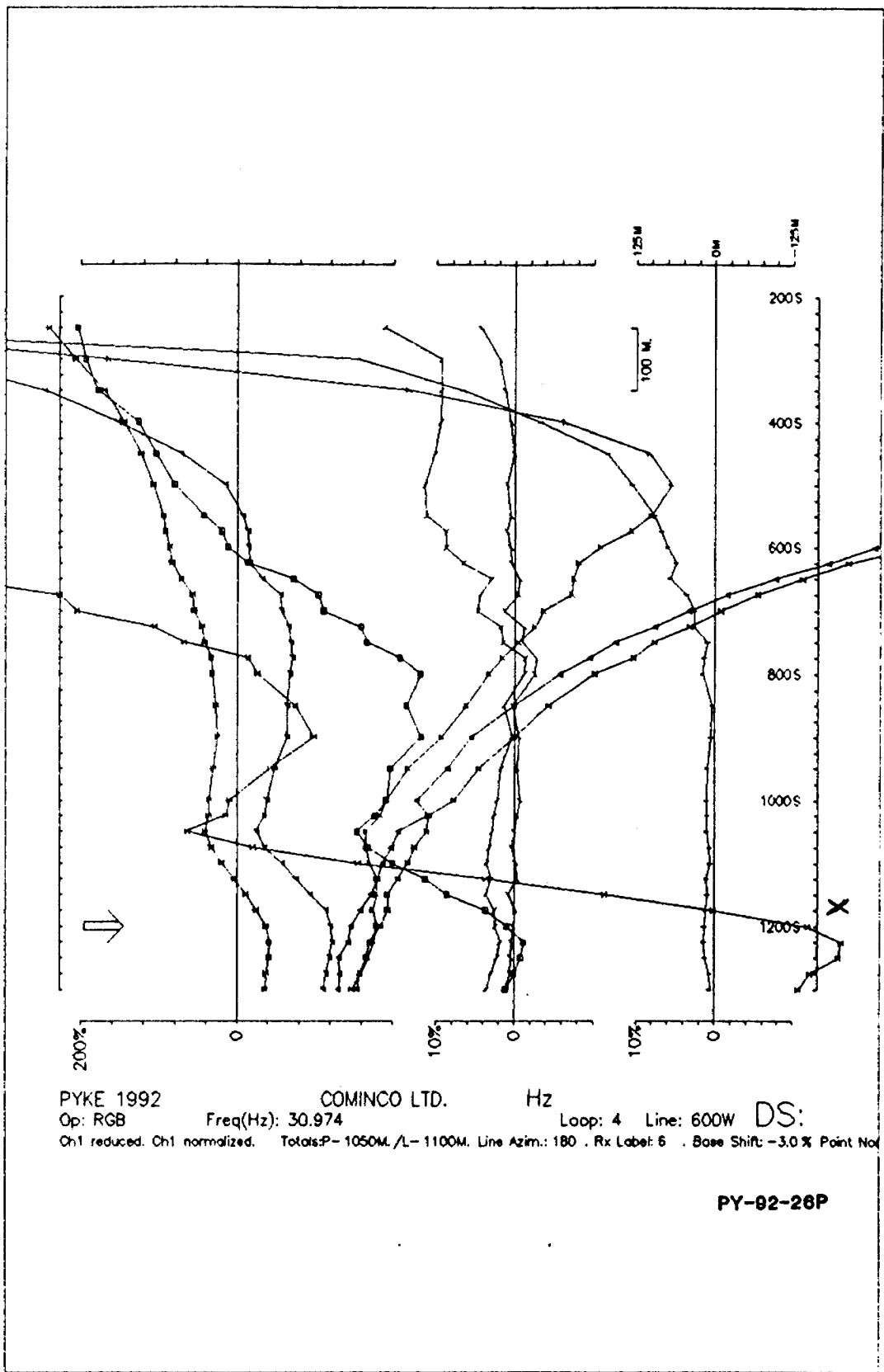
COMINCO LTD.

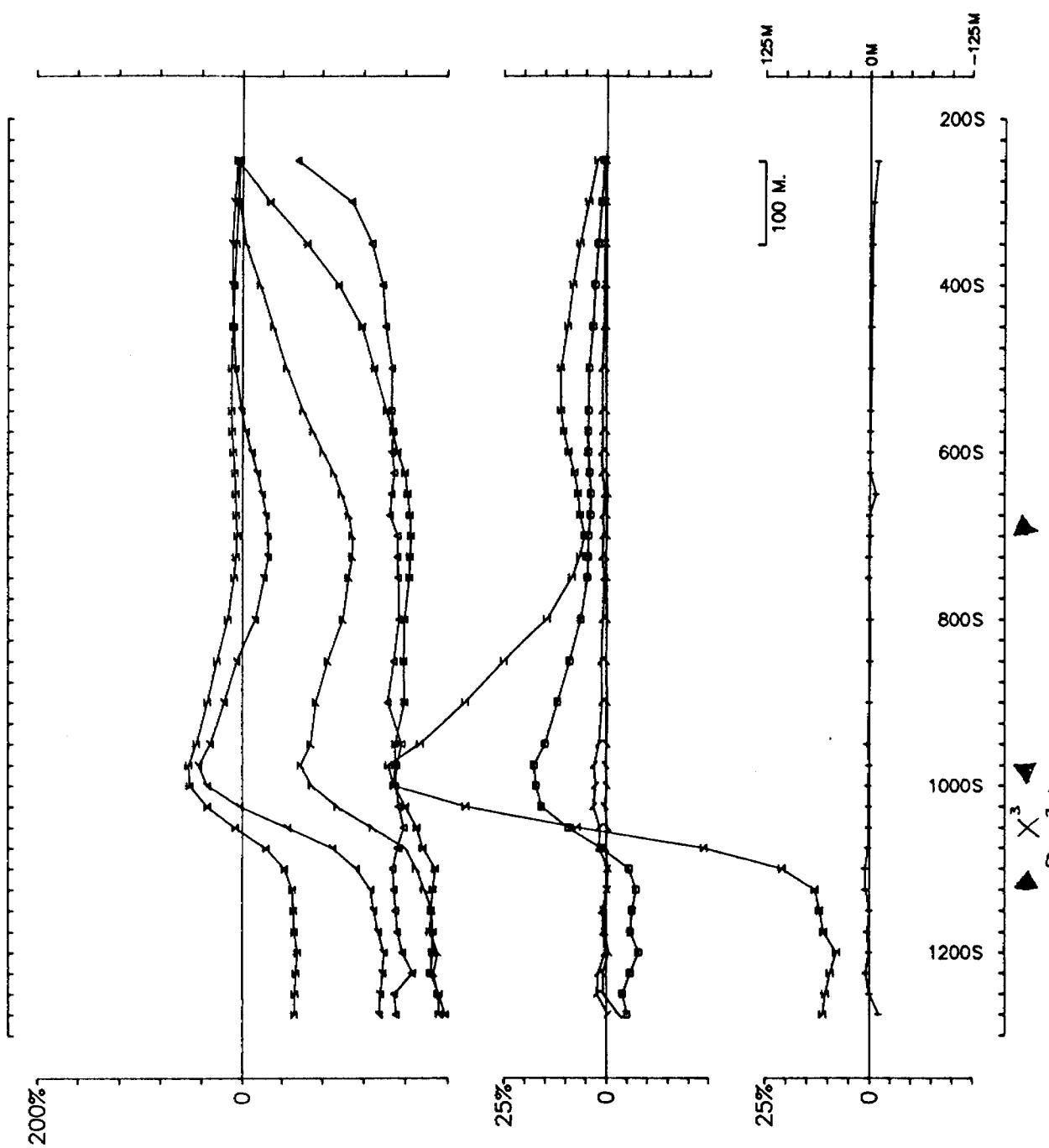
Hz

Loop: 4 Line: 600W

DS:

PY-92-26C





PYKE 1992

Op: RGB

Freq(Hz): 30.974

COMINCO LTD.

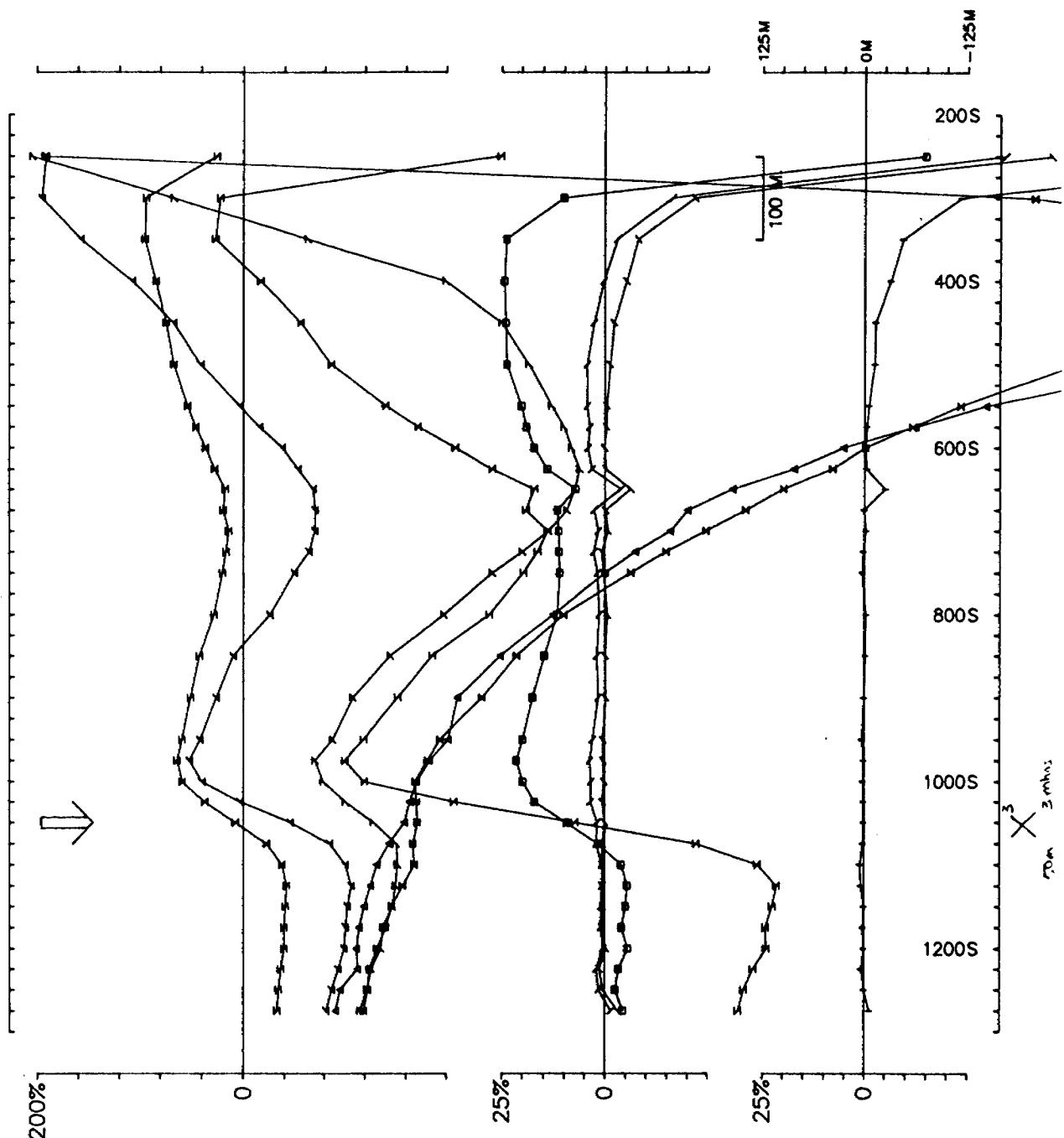
Hz

Loop: 4 Line: 800W

DS:

Ch1 reduced. Ch1 normalized. Totals:P- 1025M./L- 1100M. Line Azim.: 180 . Rx Label: 8 . Base Shift: -3.0 %

PY-92-27C



PYKE 1992

Op: RGB

COMINCO LTD.

Freq(Hz): 30.974

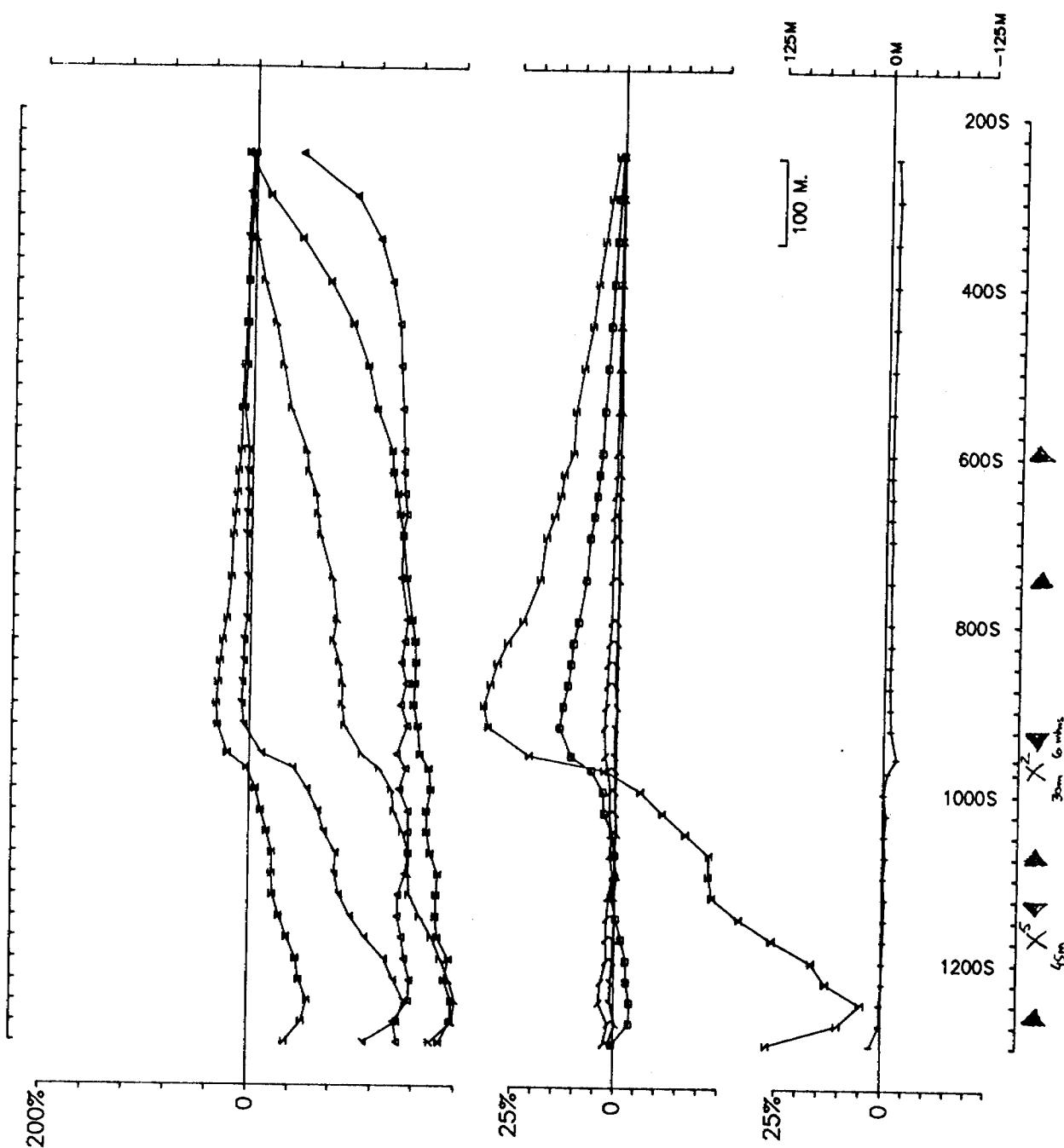
Hz

Loop: 4 Line: 800W

DS:

Prim. reduced. Prim. normalized.Totals:P- 1025M./L- 1100M. Line Azim.: 180 . Rx Label: 8 . Base Shift: -3.0 % Point No:

PY-92-27P



PYKE 1992

Op: RGB

COMINCO LTD.

Freq(Hz): 30.974

Hz

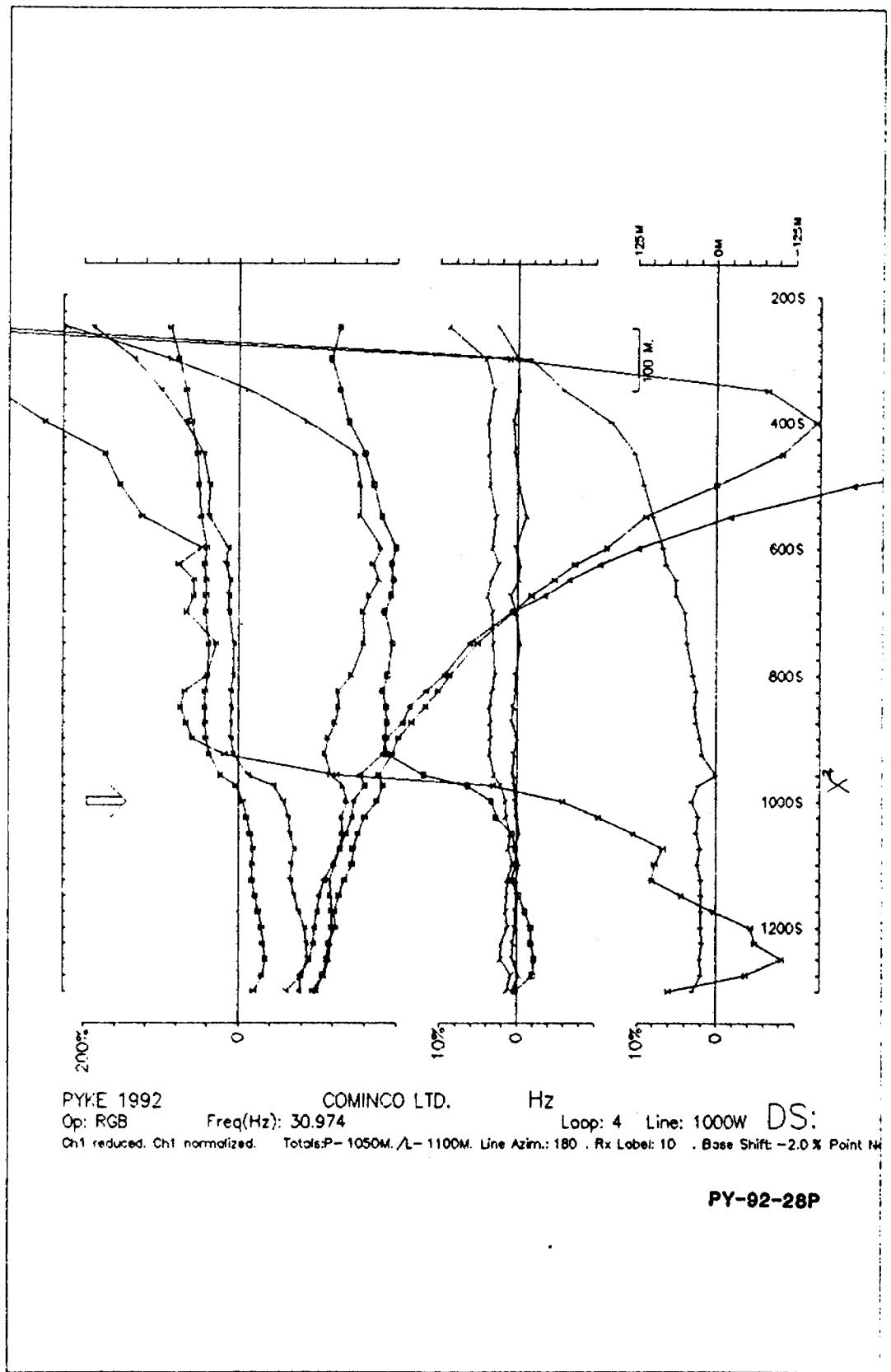
Loop: 4 Line: 1000W

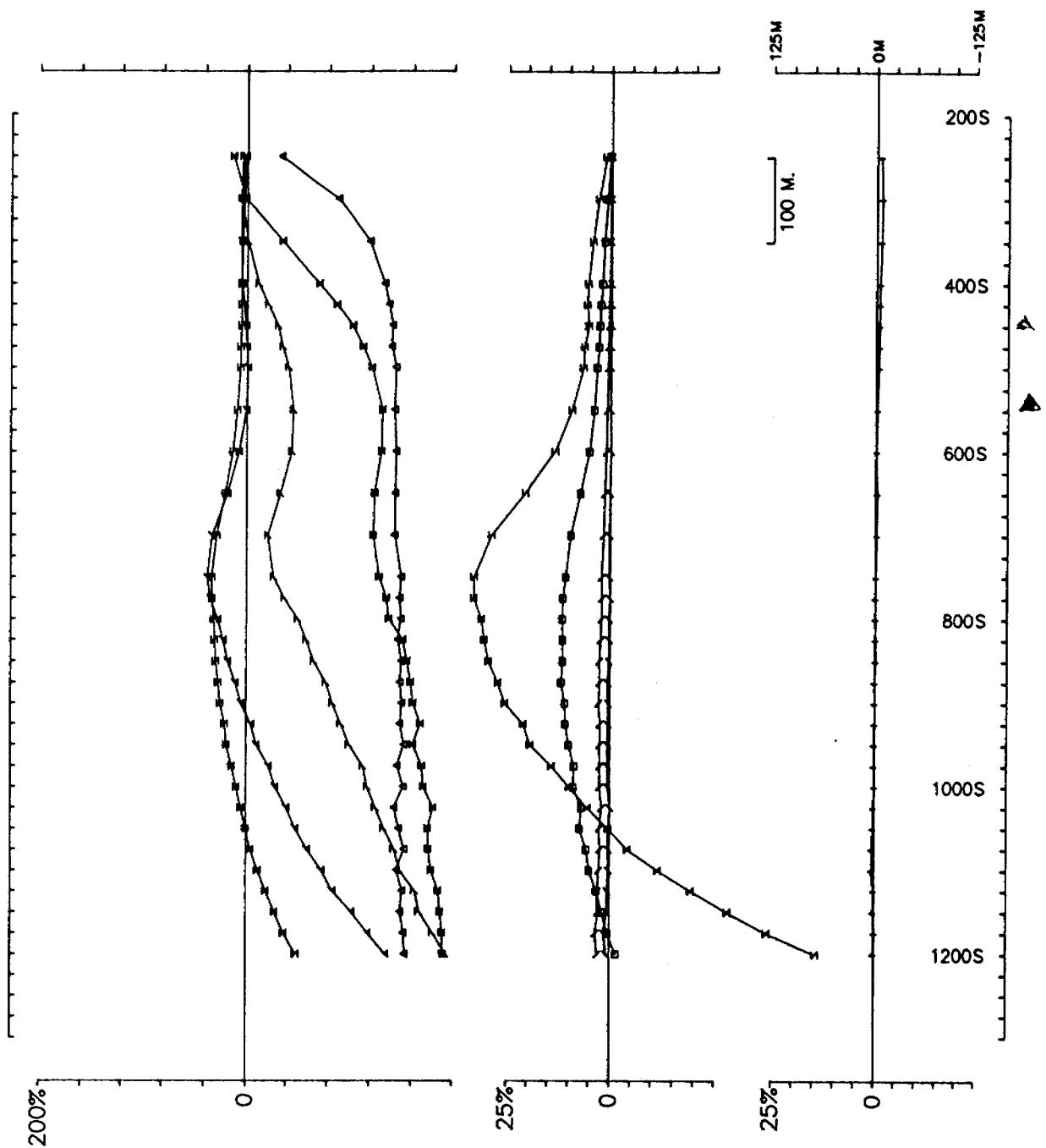
DS:

Ch1 reduced. Ch1 normalized.

Totals:P- 1050M. /L- 1100M. Line Azim.: 180 . Rx Label: 10 . Base Shift: -5.0 %

PY-92-28C





PYKE 1992

Op: RGB

COMINCO LTD.

Freq(Hz): 30.974

Hz

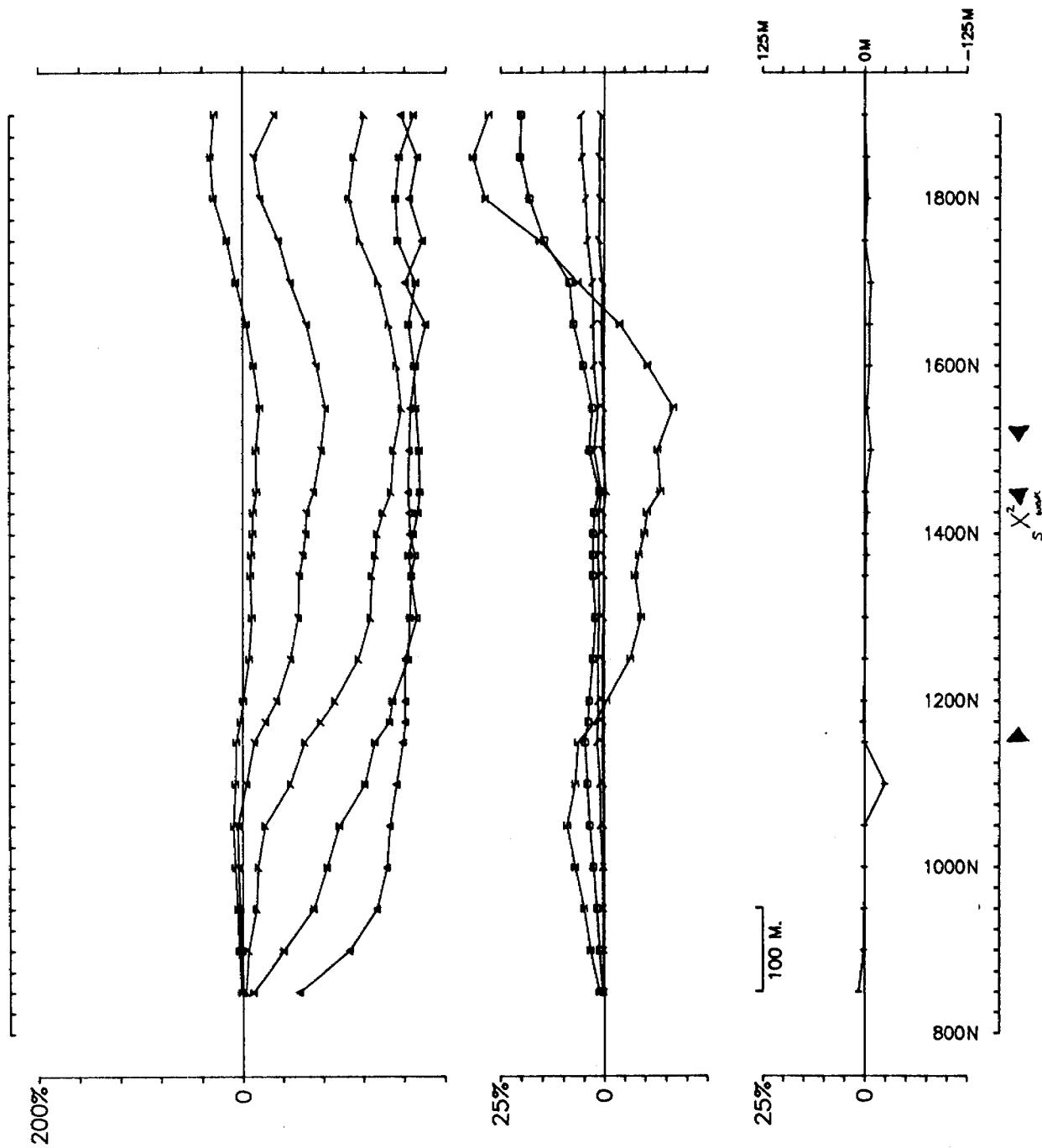
Ch1 reduced. Ch1 normalized.

Totals:P- 950M. /L- 1100M. Line Azim.: 180 . Rx Label: 12 . Base Shift: -4.0 %

Loop: 4 Line: 1200W

DS:

PY-92-29C



PYKE 1992

Op: BRG

COMINCO LTD.

Freq(Hz): 30.974

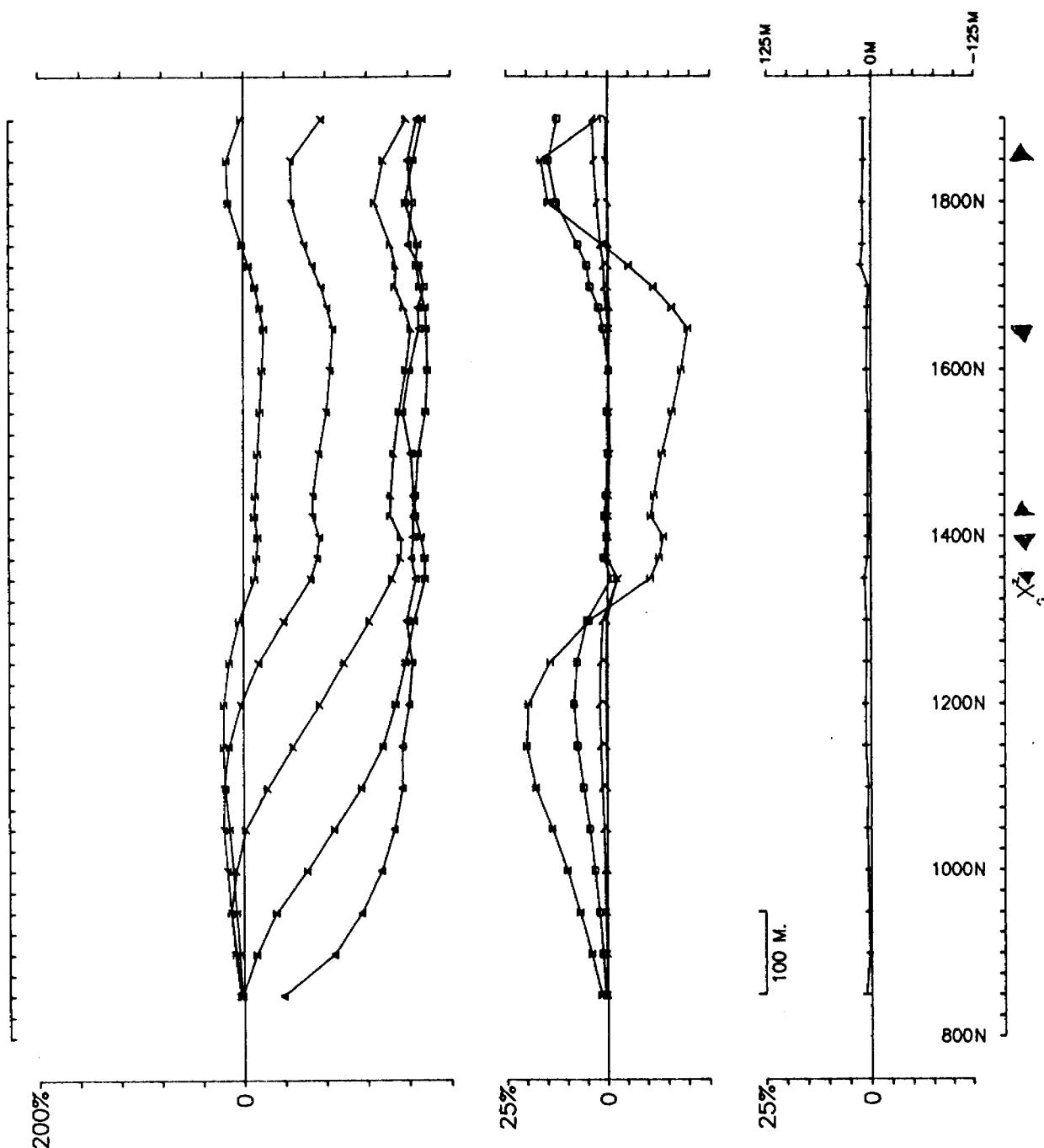
Hz

Loop: 5 Line: 0W

DS:

Ch1 reduced. Ch1 normalized. Totals:P- 1050M. /L- 1100M. Line Azim.: 0 . Rx Label: 1 . Base Shift: -8.0 %

PY-92-30C



PYKE 1992

Op: BRG

Freq(Hz): 30.974

COMINCO LTD.

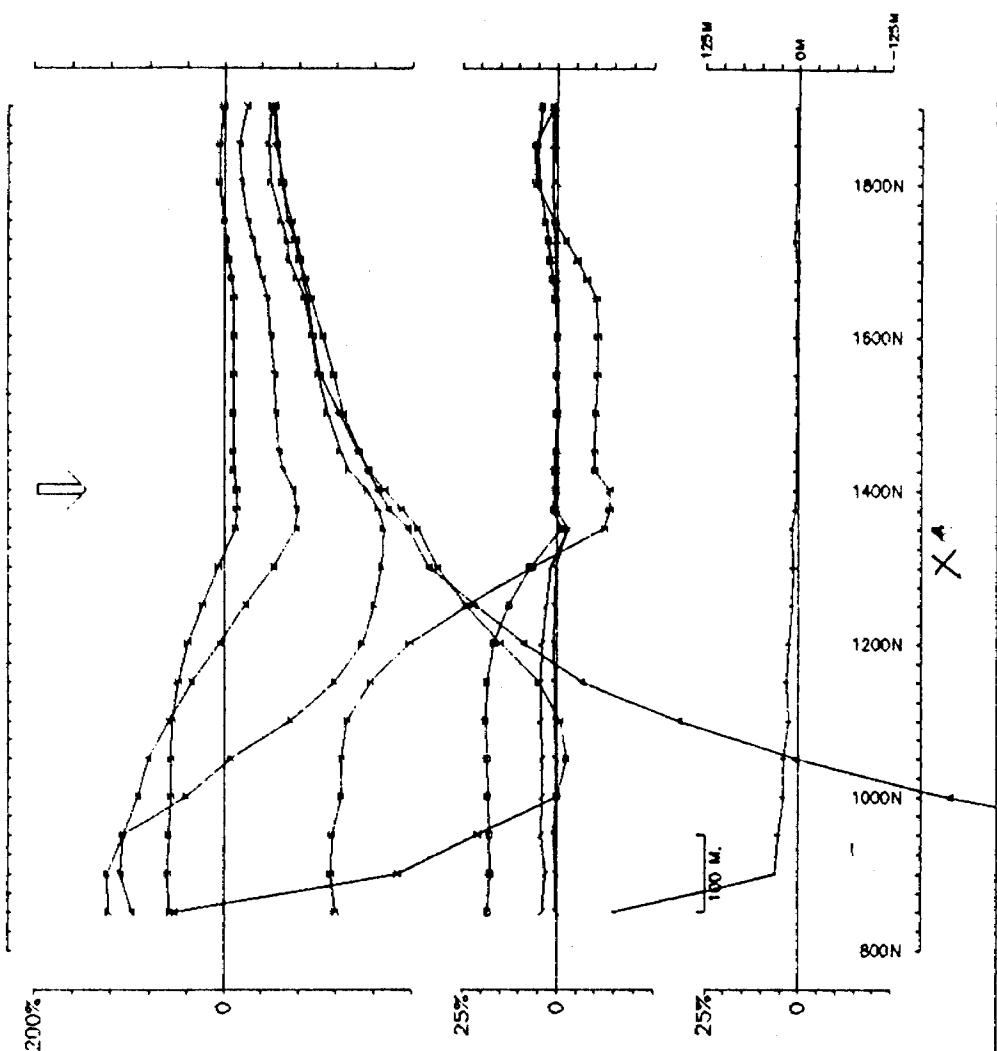
Hz

Loop: 5 Line: 200W

DS:

Ch1 reduced, Ch1 normalized. Totals:P-1050M./L-1100M. Line Azim.: 0 . Rx Label: 2 . Base Shift: -5.0 %

PY-92-31C



PYKE 1992

Op: BRG

COMINCO LTD.

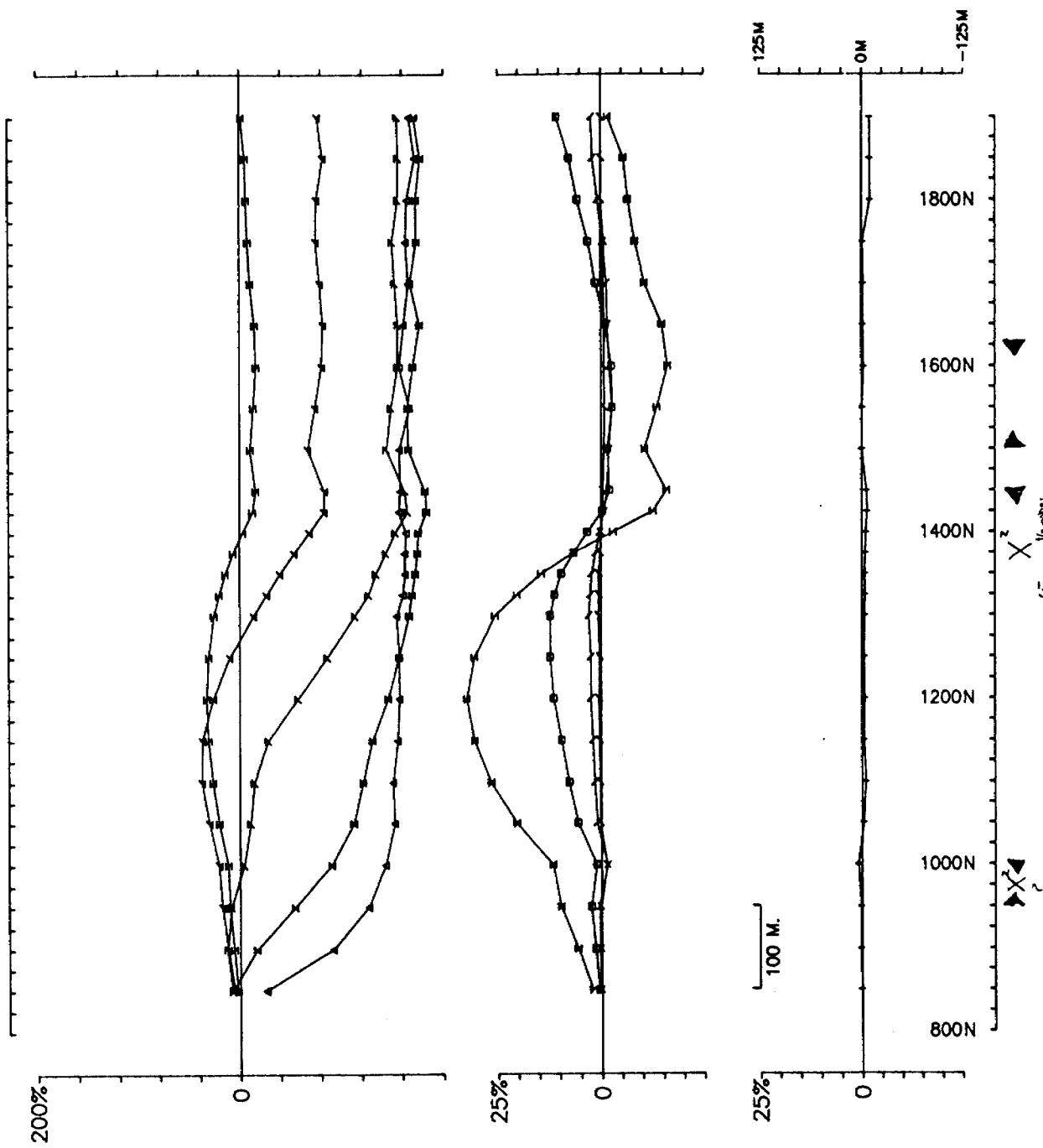
Freq(Hz): 30.974

Hz

Loop: 5 Line: 200W DS:

Ch1 reduced. Ch1 normalized. Totals:P- 1050M. /L- 1100M. Line Azim.: 0 . Rx Label: 2 . Base Shift: -5.0 % Point Norm

P-92-31P



PYKE 1992

Op: BRG

Freq(Hz): 30.974

COMINCO LTD.

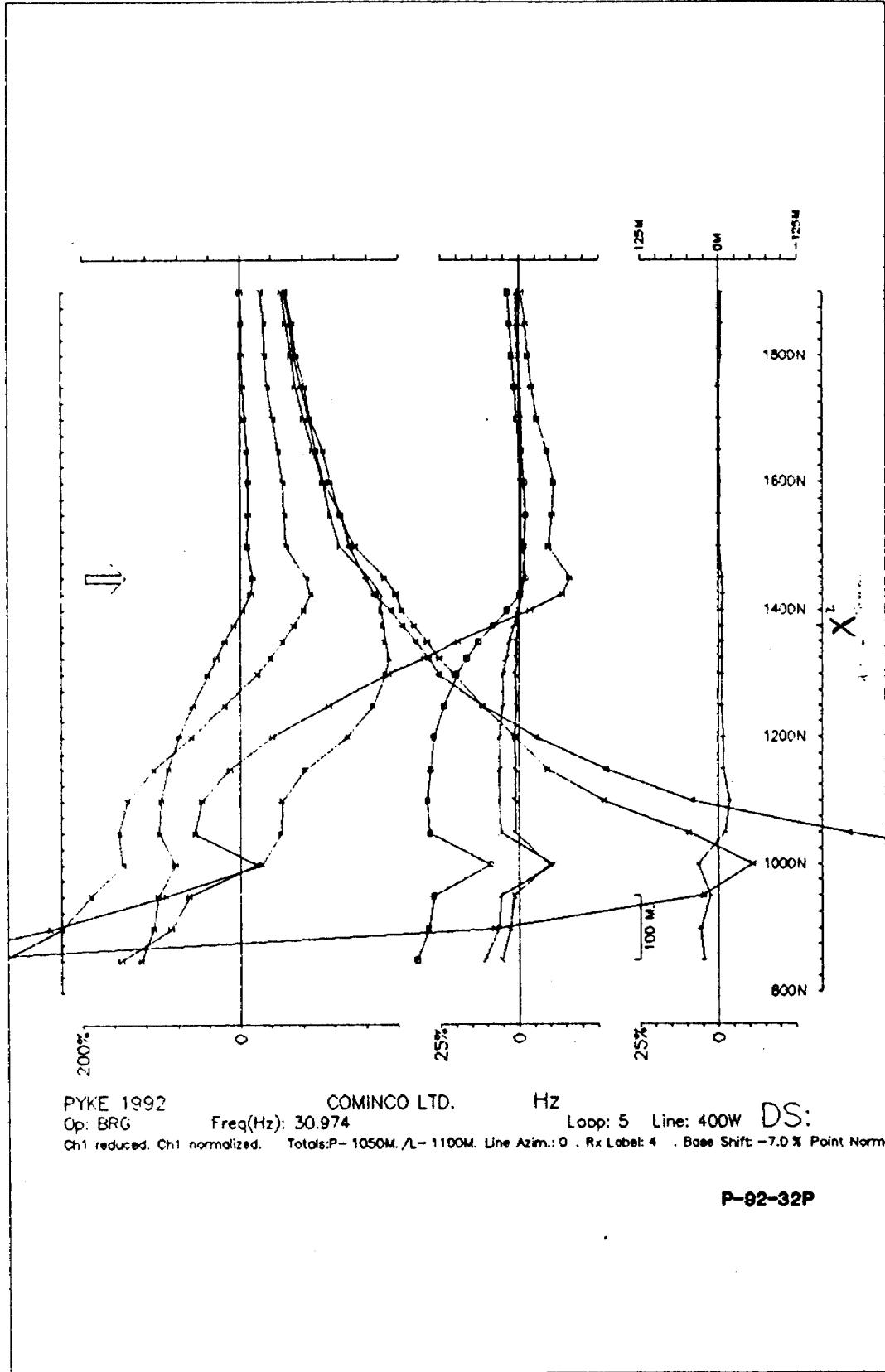
Hz

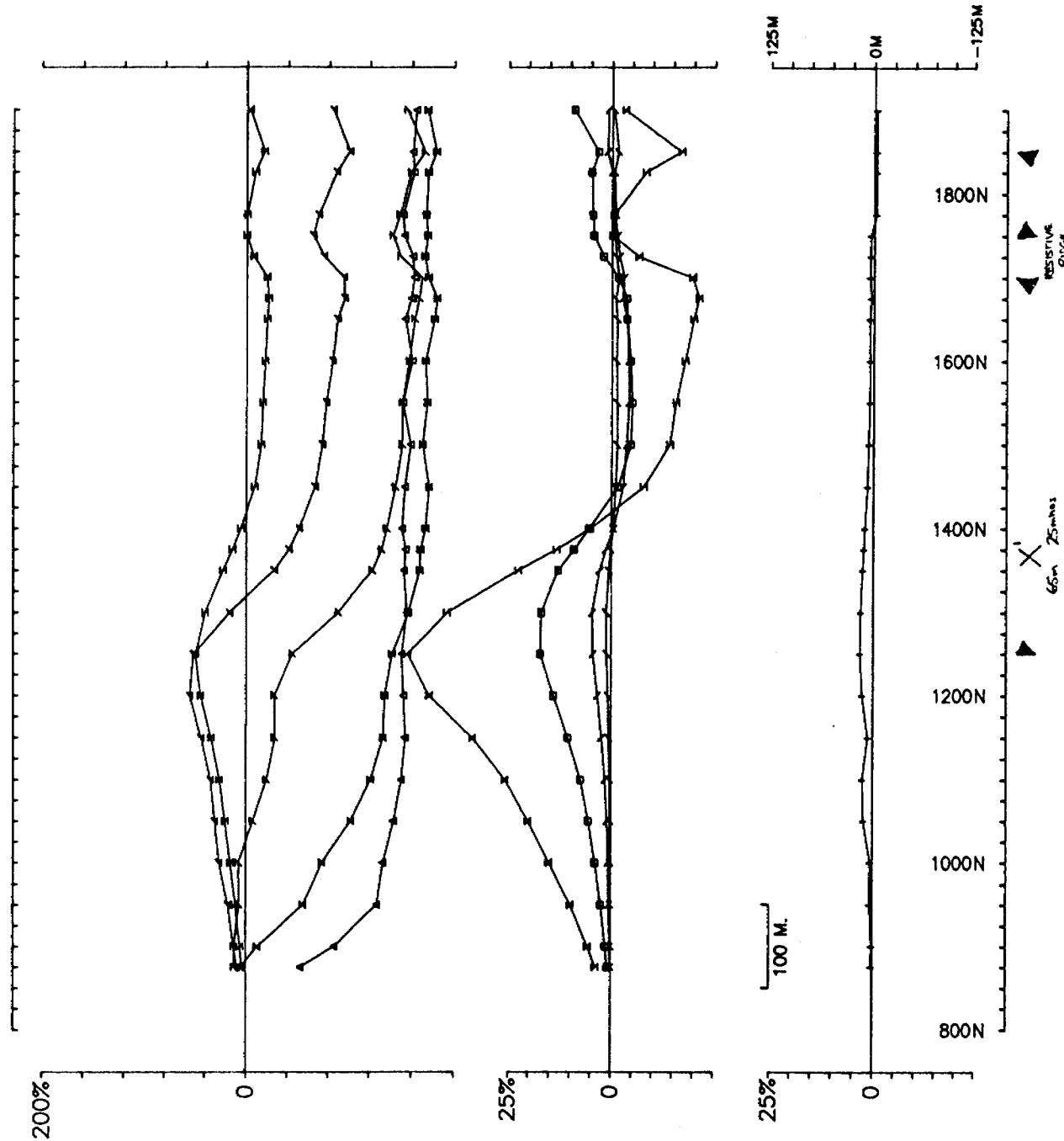
Ch1 reduced. Ch1 normalized. Totals:P-1050M./L-1100M. Line Azim.: 0 . Rx Label: 4 . Base Shift: -7.0 %

Loop: 5 Line: 400W

DS:

PY-92-32C





PYKE 1992

Op: BRG

Freq(Hz): 30.974

COMINCO LTD.

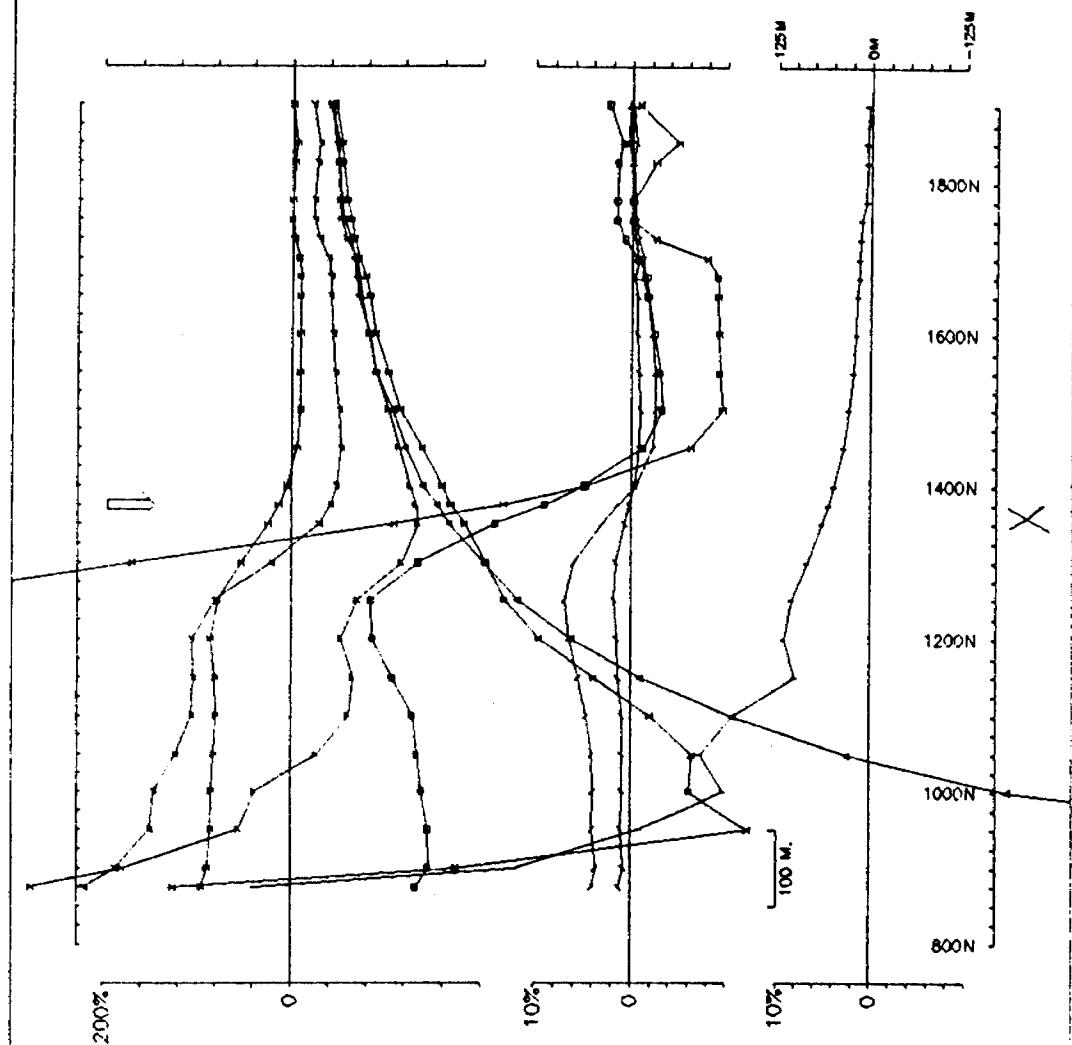
Hz

Loop: 5 Line: 600W

DS:

Ch1 reduced. Ch1 normalized. Totals:P- 1025M, /L- 1100M, Line Azim.:0 . Rx Label: 6 . Base Shift: -5.0 %

PY-92-33C



PYKE 1992

Op: BRG

COMINCO LTD.

Freq(Hz): 30.974

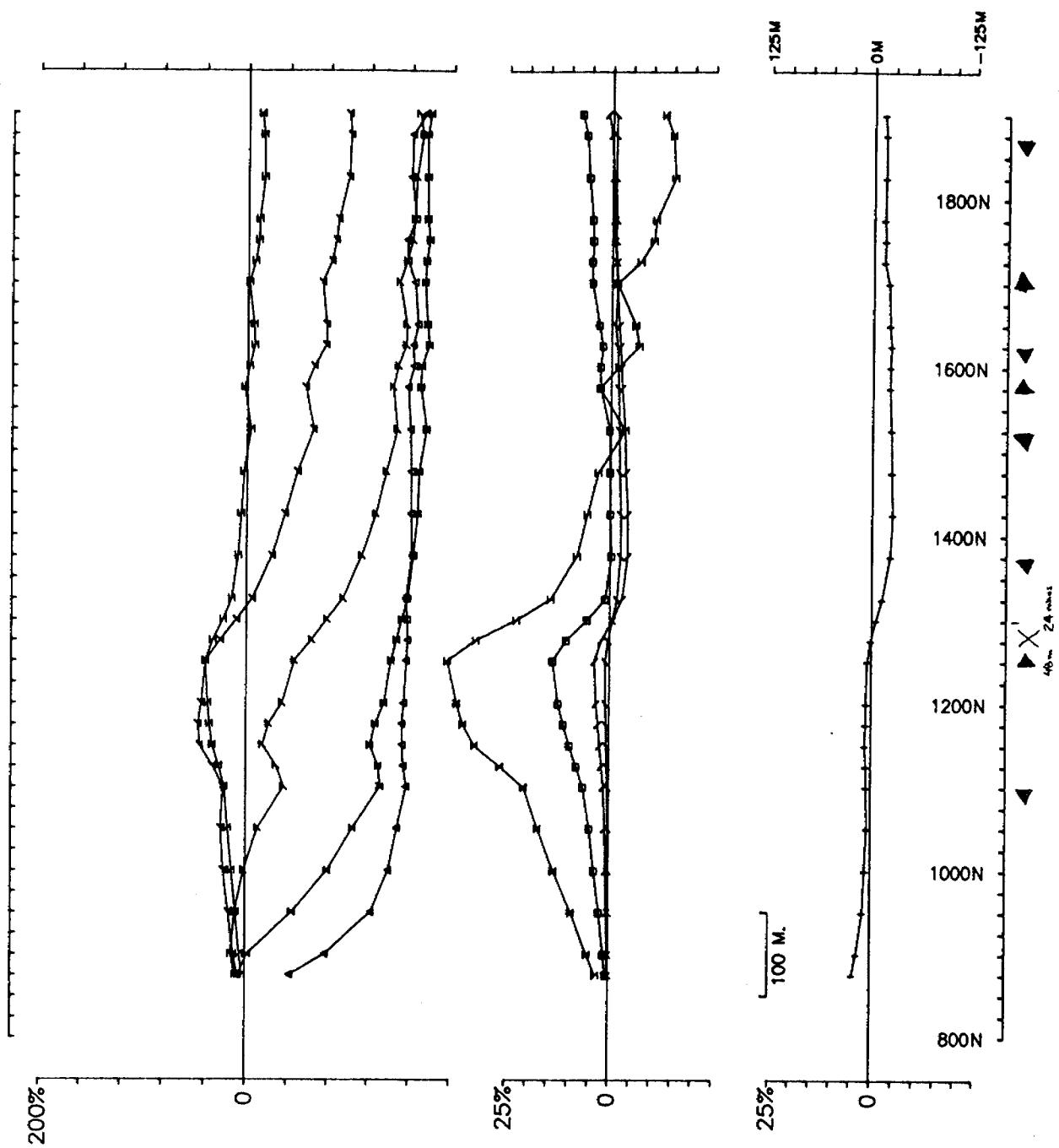
Hz

Loop: 5 Line: 600W

DS:

Ch1 reduced. Ch1 normalized. TotalsP- 1025M. /L- 1100M. Line Azim.: 0 . Rx Label: 6 . Base Shift: -3.0 % Point Normi

PY-92-33P



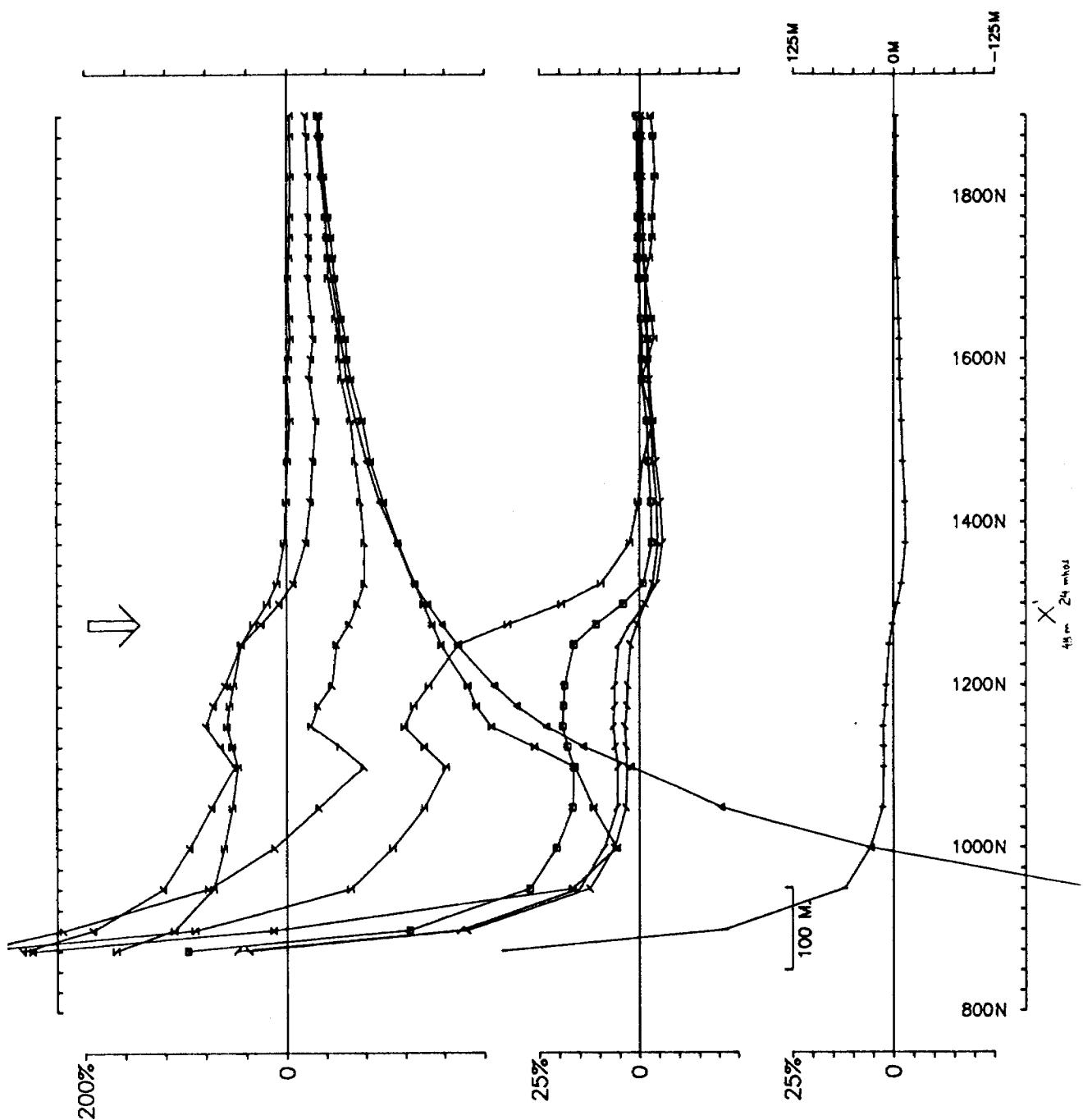
PYKE 1992  
Op: BRG

COMINCO LTD.  
Freq(Hz): 30.974

Hz

Loop: 5 Line: 800W DS:  
Ch1 reduced. Ch1 normalized. Totals:P- 1025M. /L- 1100M. Line Azim.: 0 . Rx Label: 8 . Base Shift: -9.0 %

PY-92-34C



PYKE 1992

Op: BRG

Freq(Hz): 30.974

COMINCO LTD.

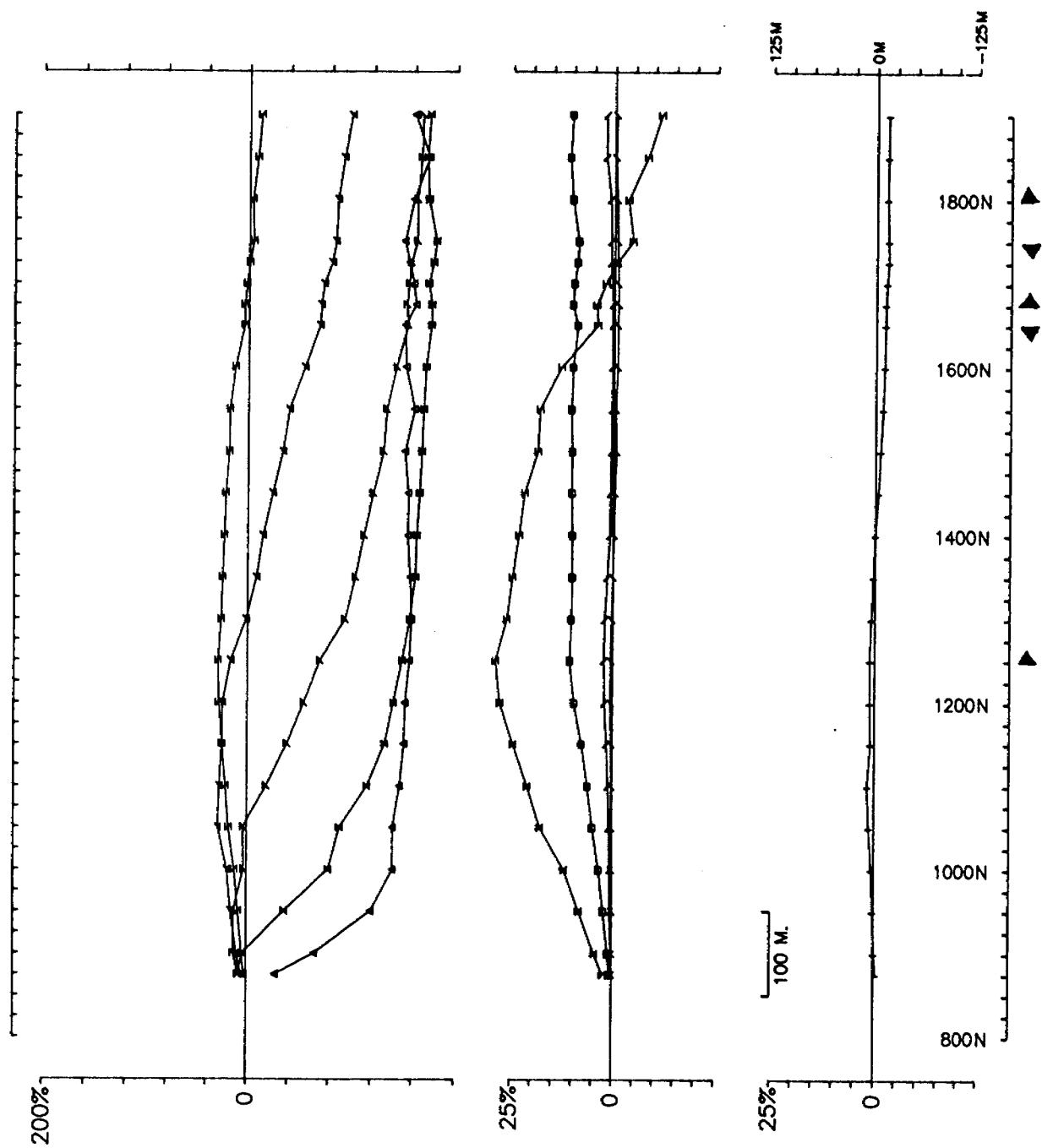
Hz

Loop: 5 Line: 800W

DS:

Prim. reduced. Prim. normalized.Totals:P-1025M./L-1100M. Line Azim.:0 Rx Label: 8 . Base Shift: -9.0 % Point Non

PY-92-34P



PYKE 1992

Op: BRG

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.

COMINCO LTD.

Totals:P- 1025M. /L- 1100M.

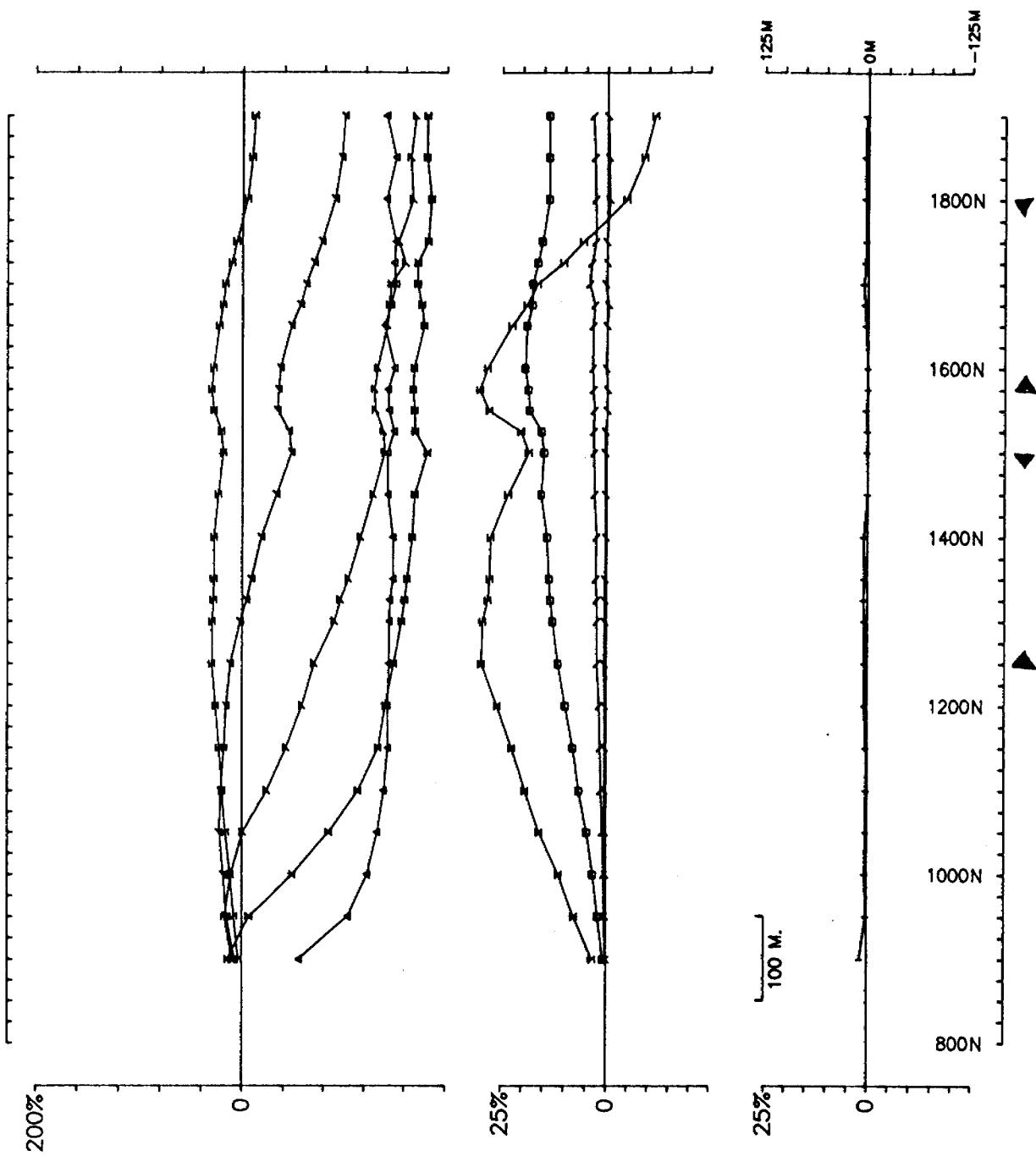
Line Azim.: 0 . Rx Label: 10 . Base Shift: -7.0 %

Hz

Loop: 5 Line: 1000W

DS:

PY-92-35C



PYKE 1992

Op: BRG

Ch1 reduced.

COMINCO LTD.

Freq(Hz): 30.974

Ch1 normalized.

Hz

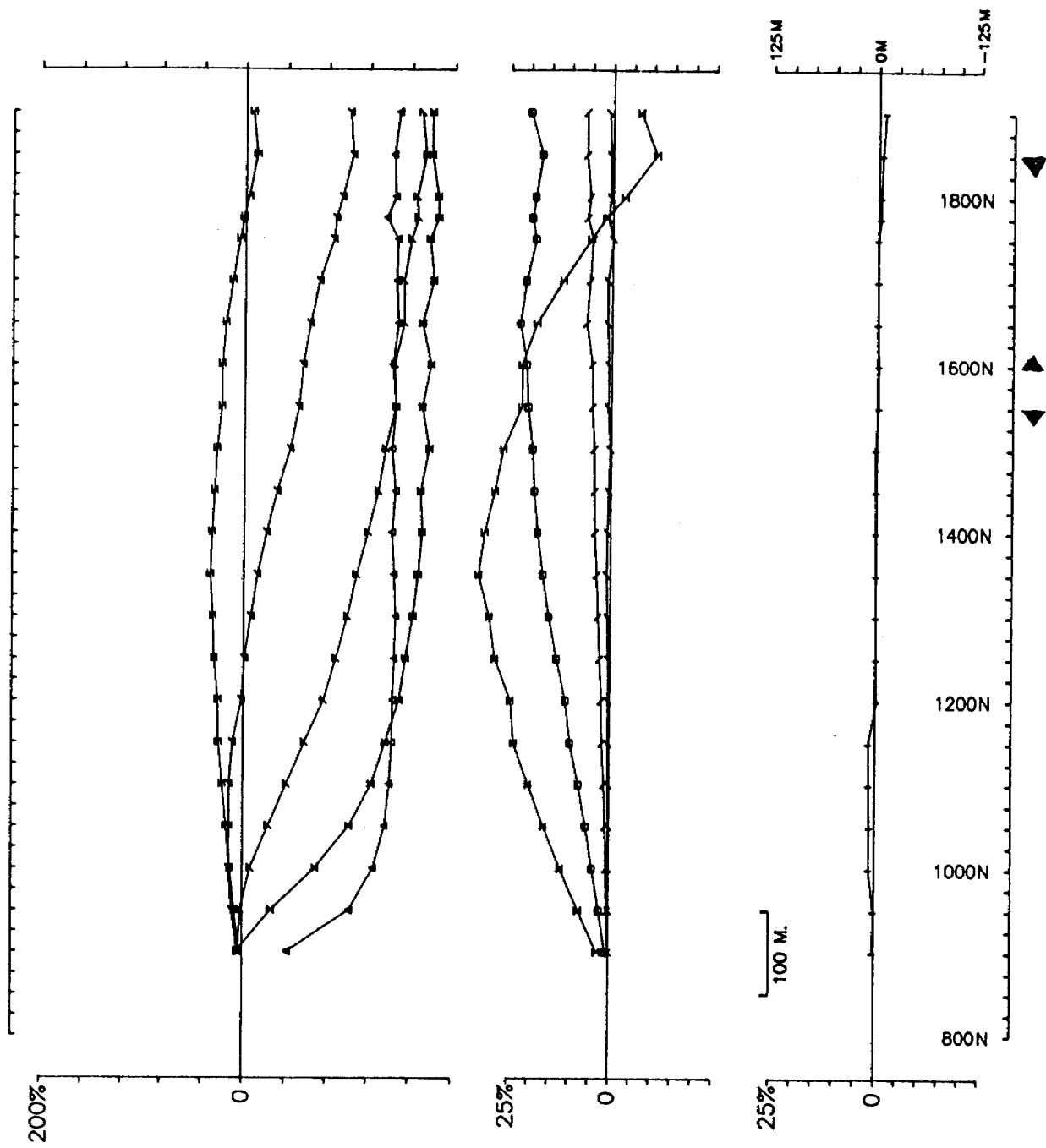
Loop: 5 Line: 1200W

DS:

Totals:P-1000M./L-1100M.

Line Azim.: 0 Rx Label: 12 Base Shift: -4.0 %

PY-92-36C



PYKE 1992

Op: BRG

Freq(Hz): 30.974

COMINCO LTD.

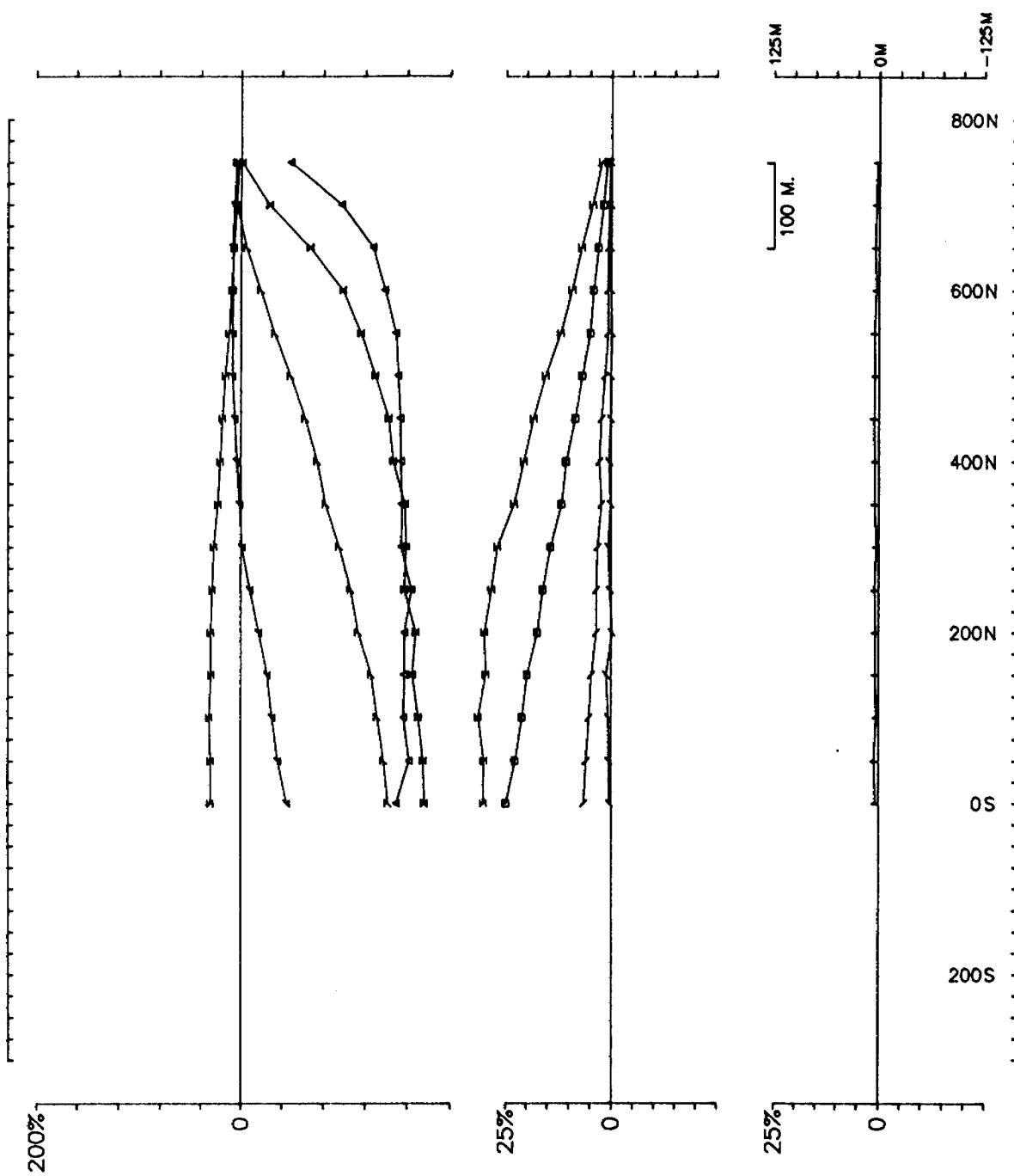
Hz

Loop: 5 Line: 1400W

DS:

Ch1 reduced. Ch1 normalized. Totals:P-1000M./L-1100M. Line Azim.: 0 . Rx Label: 14 . Base Shift: -7.0 %

PY-92-37C



PYKE 1992

Op: RBG

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.

COMINCO LTD.

Hz

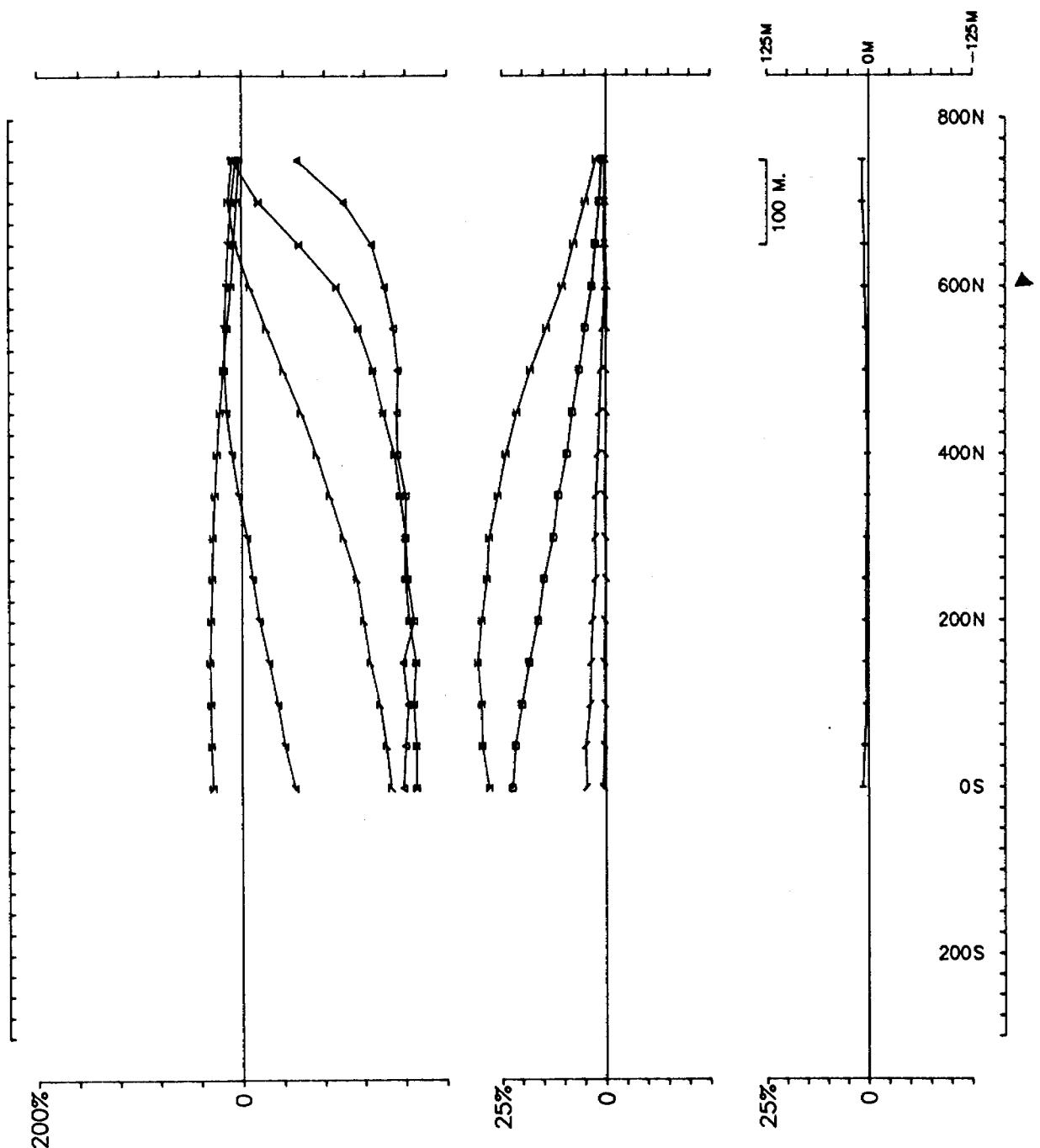
Totals:P- 750M.,L- 1100M.

Loop: 6

Line: 0E

DS:

PY-92-38C



PYKE 1992

Op: RBG

Freq(Hz): 30.974

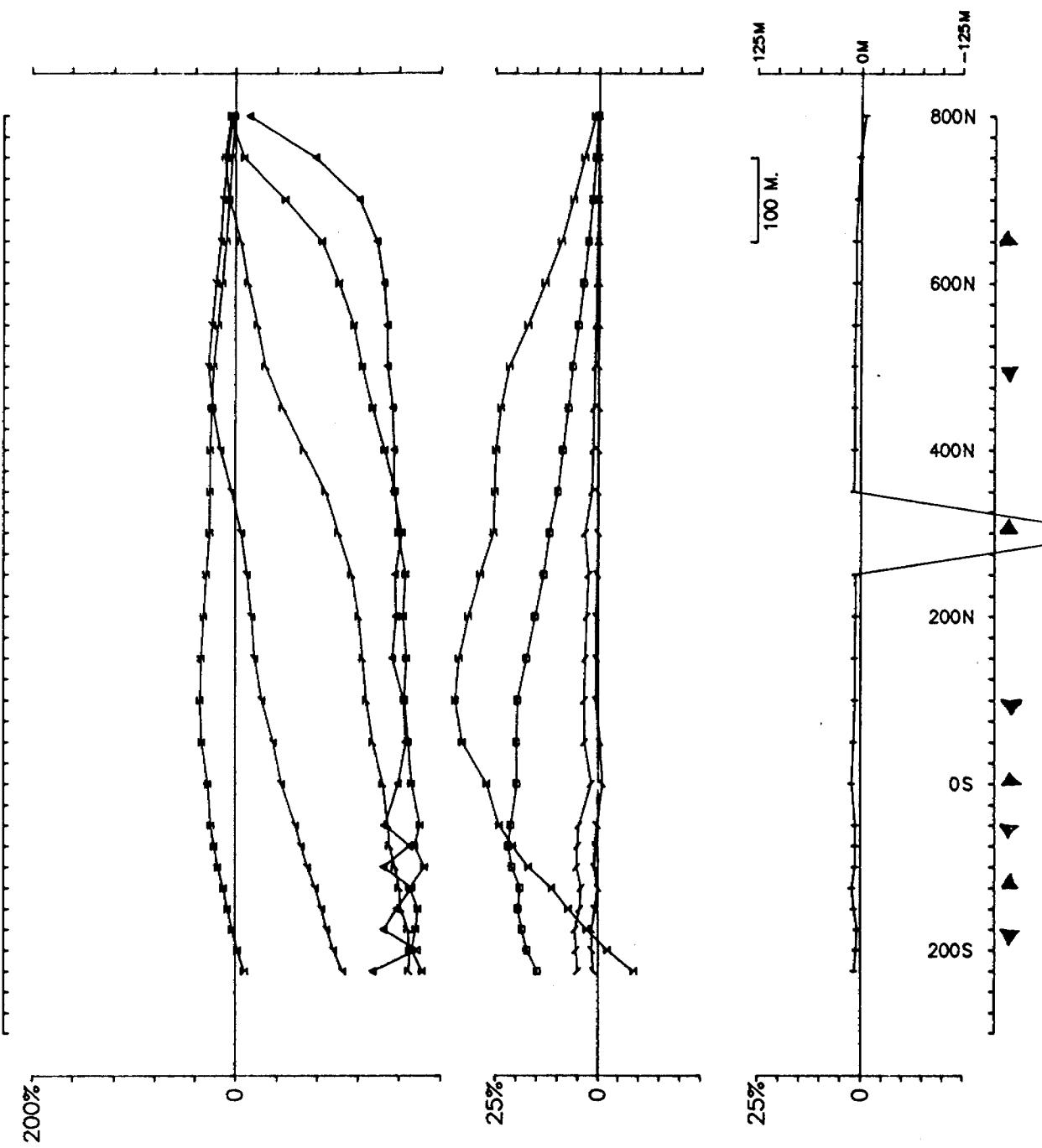
Ch1 reduced. Ch1 normalized.

COMINCO LTD.

Hz

Loop: 6 Line: 200W DS:  
Totals:P- 750M. /L- 1100M. Line Azim.: 180 . Rx Label: 2 . Base Shift: -3.0 %

PY-92-39C



PYKE 1992

Op: RBG

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.

COMINCO LTD.

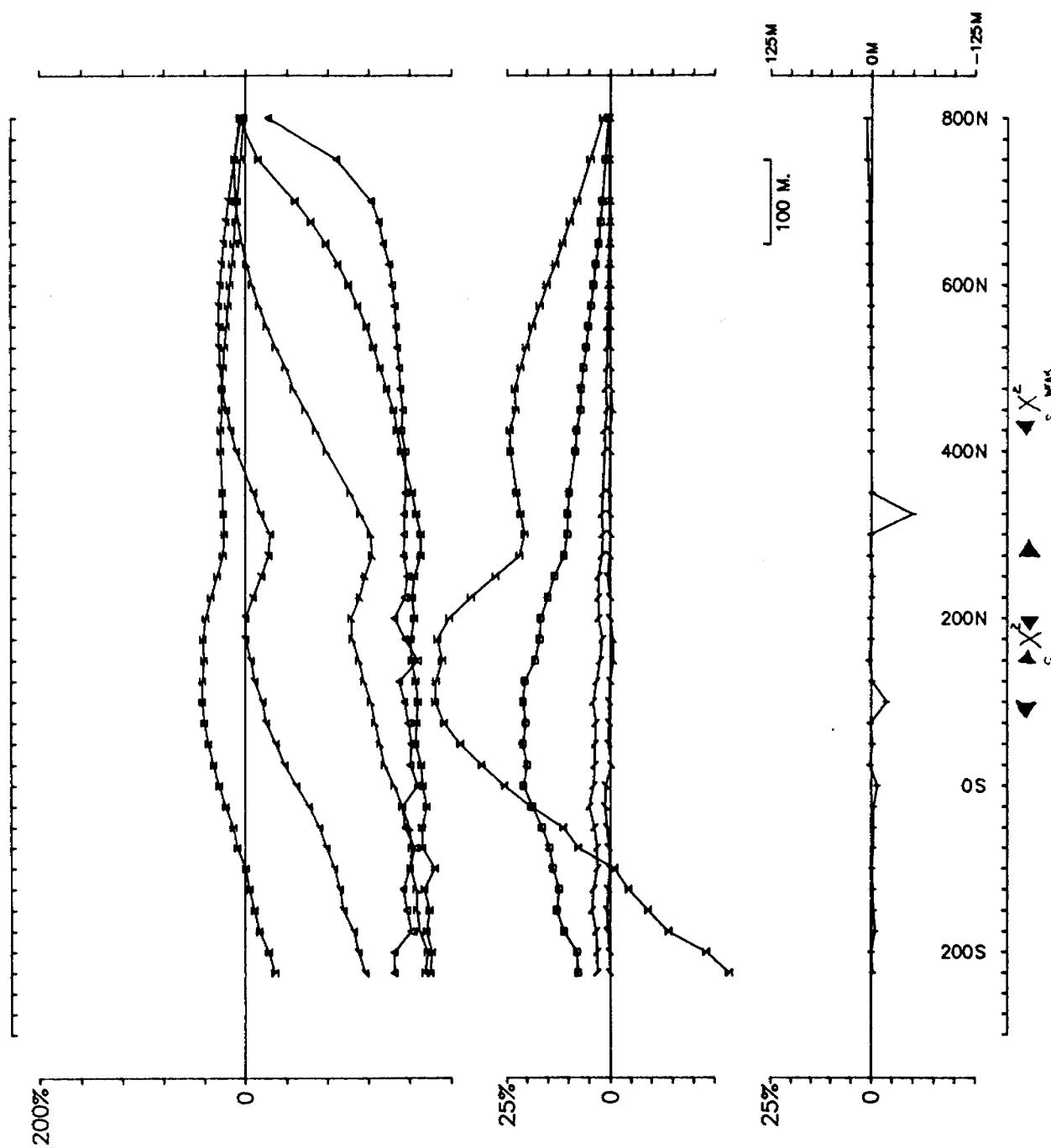
Hz

Loop: 6 Line: 400W

DS:

Totals:P- 1025M, /L- 1100M, Line Azim.: 180, Rx Label: 4, Base Shift: -3.0 %

PY-92-40C



PYKE 1992

Op: RBG

Freq(Hz): 30.974

COMINCO LTD.

Hz

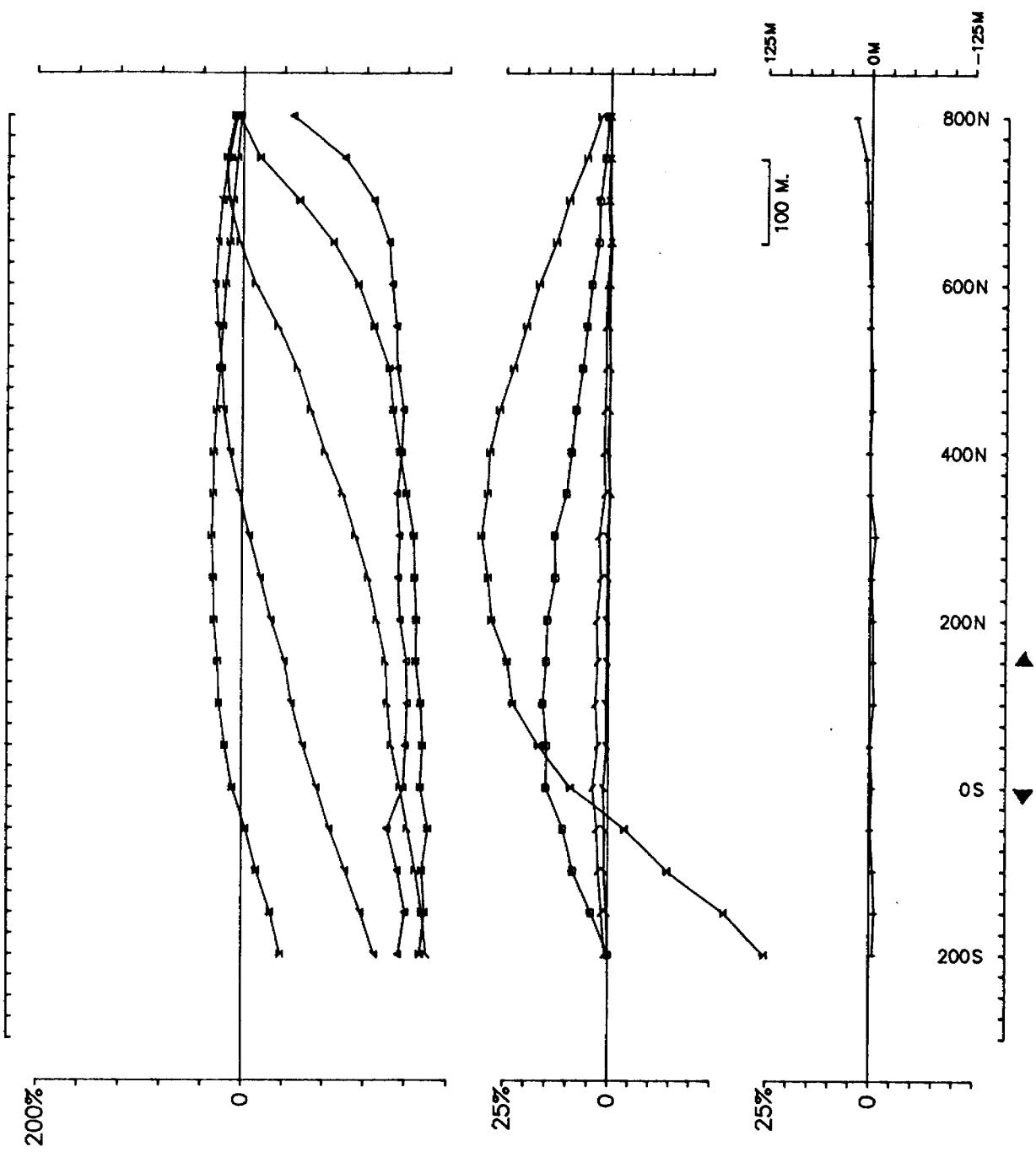
Ch1 reduced. Ch1 normalized.

Totals:P-1025M./L-1100M. Line Azim.: 180 . Rx Label: 6 . Base Shift: -5.0 %

Loop: 6 Line: 600W

DS:

PY-92-41C



PYKE 1992

Op: RBG

Freq(Hz): 30.974

COMINCO LTD.

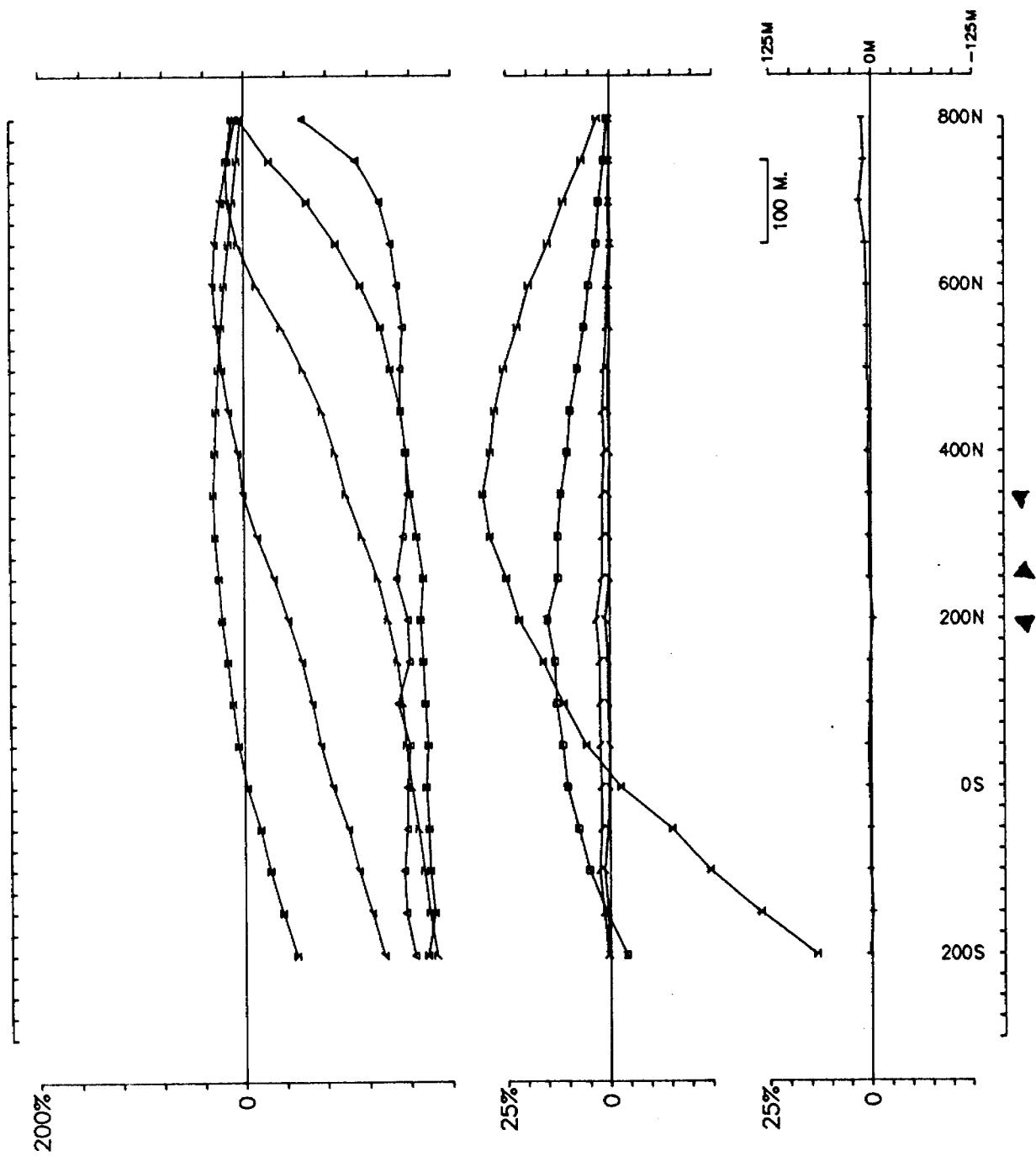
Hz

Loop: 6 Line: 800W

DS:

Ch1 reduced. Ch1 normalized. Totals:P-1000M, L-1100M, Line Azim.: 180, Rx Label: 8, Base Shift: -4.0 %

PY-92-42C



PYKE 1992

Op: RBG

Freq(Hz): 30.974

Ch1 reduced, Ch1 normalized.

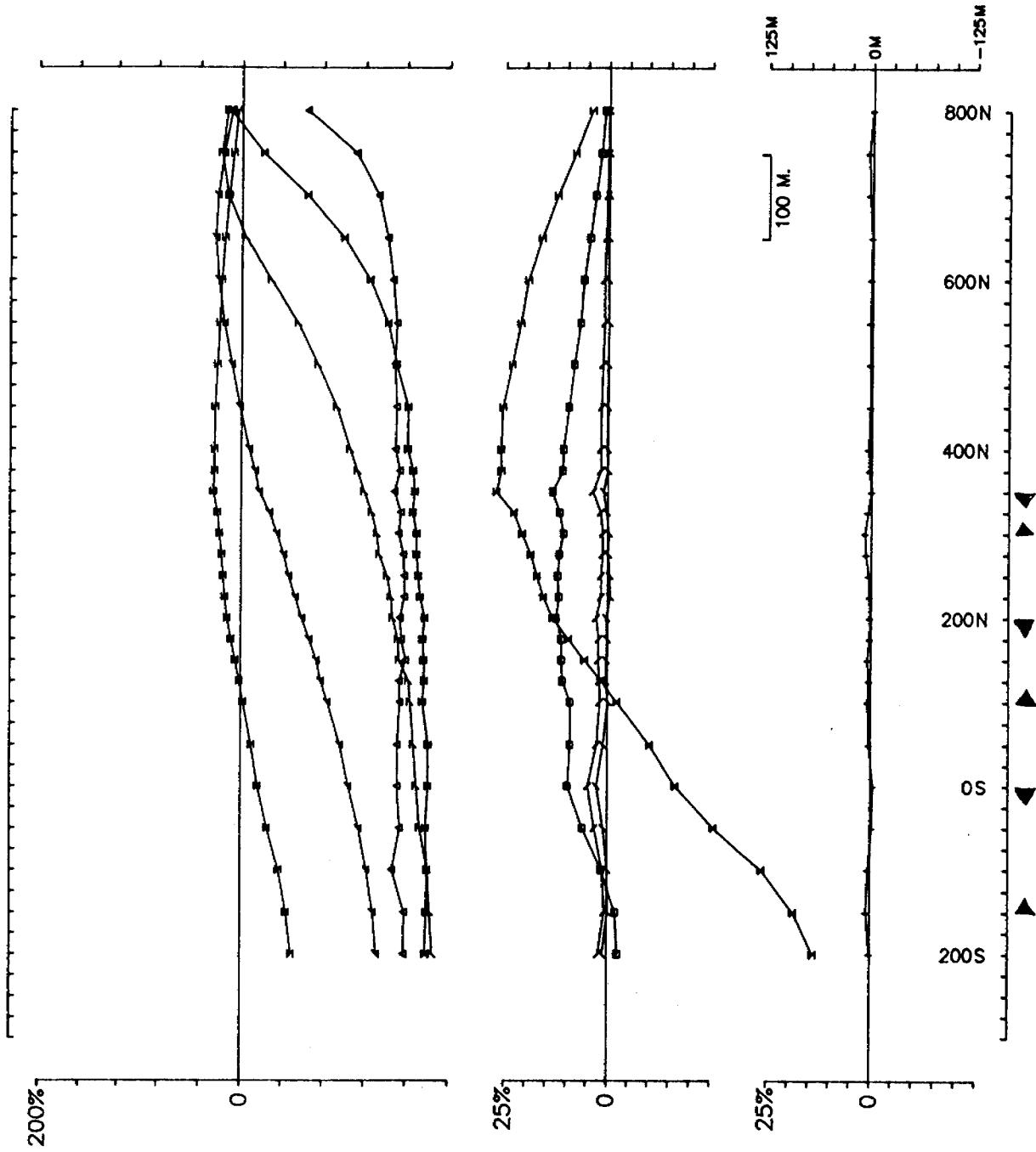
COMINCO LTD.

Hz

Loop: 6 Line: 1000W DS:

Totals:P- 1000M./L- 1100M. Line Azim.: 180 . Rx Label: 10 . Base Shift: -3.0 %

PY-92-43C



PYKE 1992

Op: RBG

Freq(Hz): 30.974

COMINCO LTD.

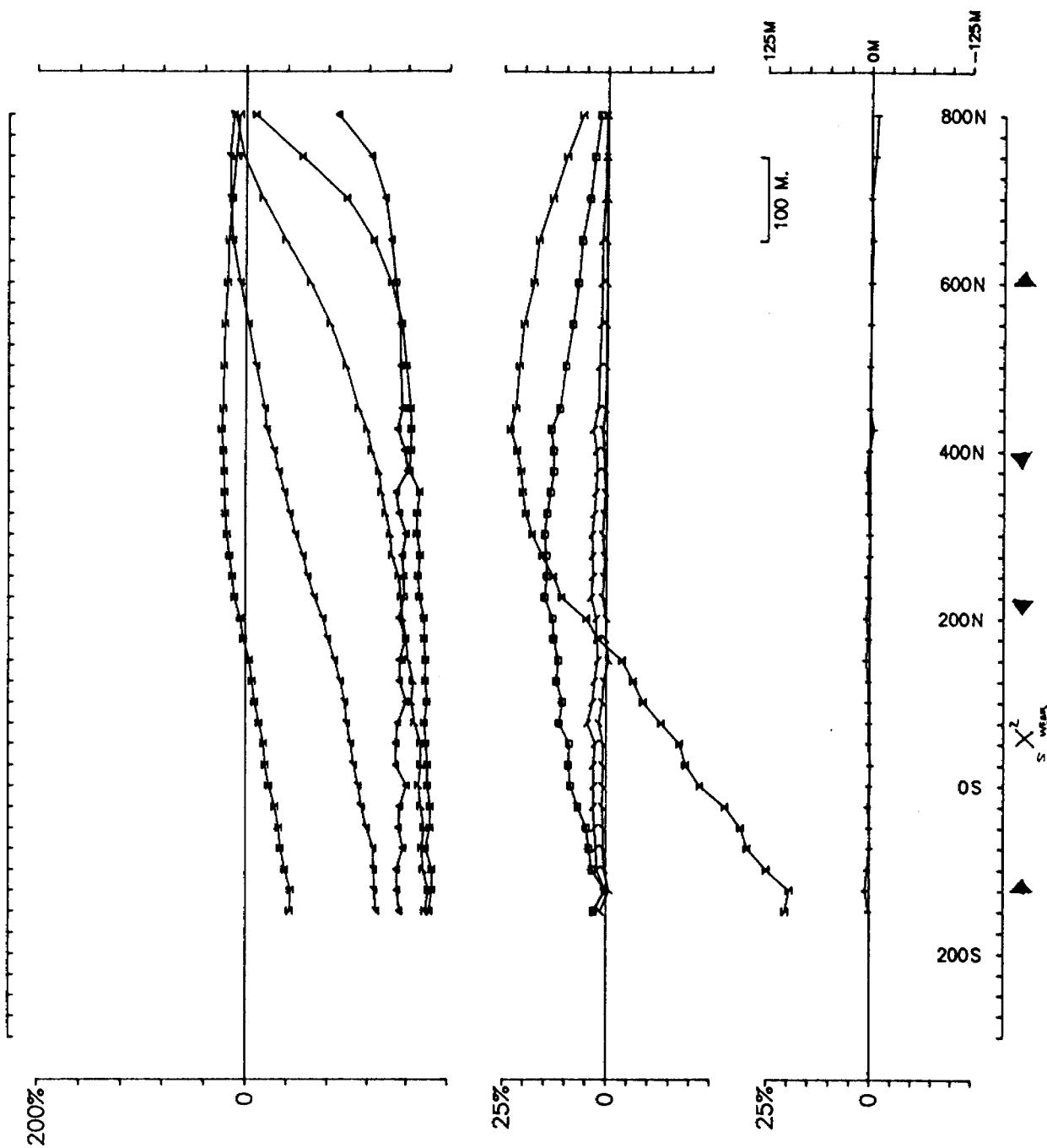
Hz

Loop: 6 Line: 1200W

DS:

Ch1 reduced. Ch1 normalized. Totals:P-1000M./L-1100M. Line Azim.: 180 . Rx Label: 12 . Base Shift: -3.0 %

PY-92-44C



PYKE 1992

Op: RBG

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.

COMINCO LTD.

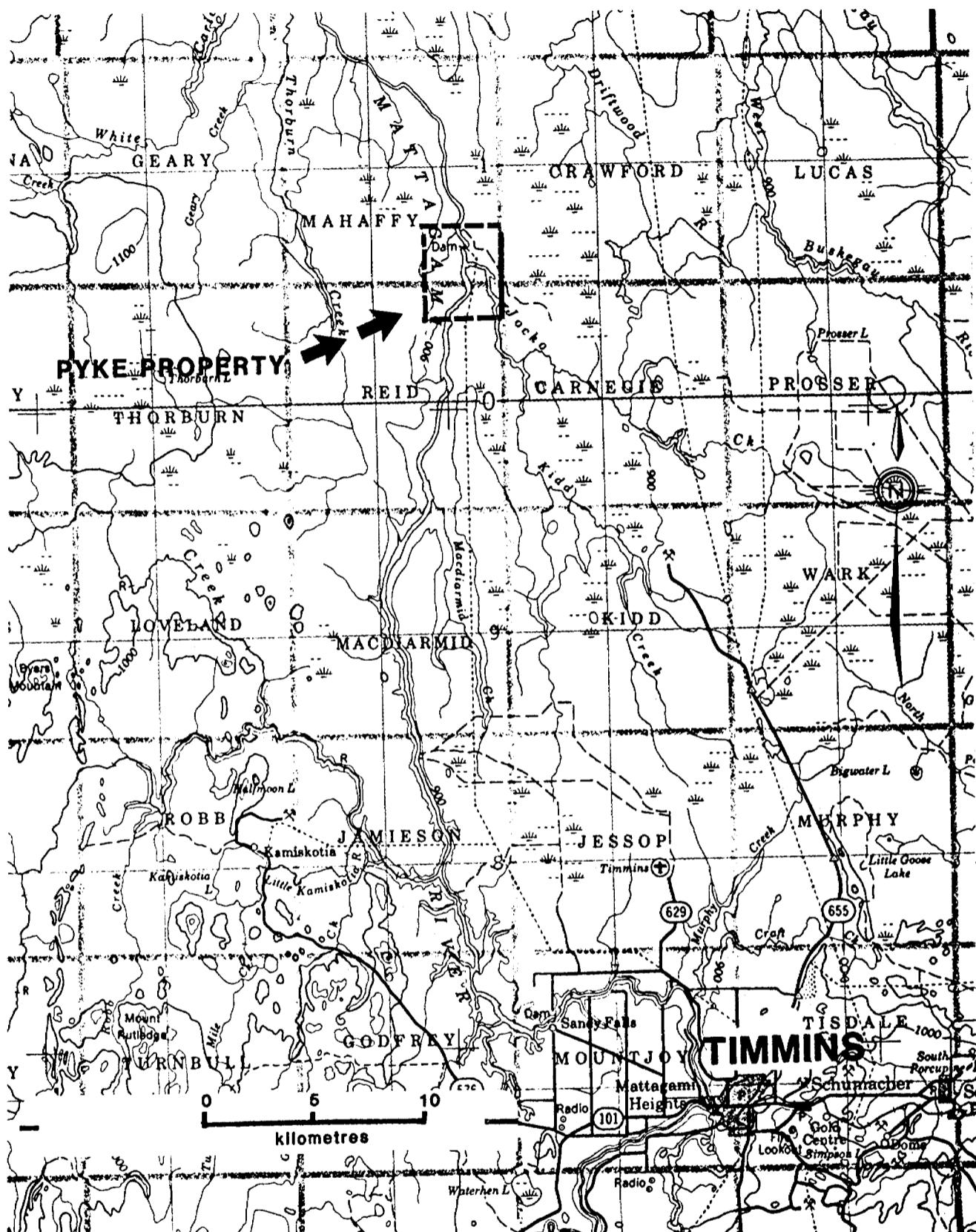
Hz

Loop: 6 Line: 1400W

DS:

Totals:P-950M./L-1100M. Line Azim.: 180 . Rx Label: 14 . Base Shift: -3.0 %

PY-92-45C



Drawn by:	BTL	Traced by:	
Revised by	Date	Revised by	Date

## PYKE PROPERTY LOCATION MAP

nts: 42A-11,12,13,14

Scale: 1 : 250,000

Date: JUNE 1992

Plate: 1



Ontario



42A14SW0327 2.14671 REID

900

Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

Geoscience Approvals Section  
Mining Lands Branch  
Willet Green Miller Centre  
933 Ramsey Lake Rd., 6th Flr  
Sudbury, Ontario  
P3E 6B5

Telephone: (705) 670-5853  
Fax: (705) 670-5863

Our File: 2.14671  
Transaction #: W9260.00116

November 25, 1992

Mining Recorder  
Ministry of Northern Development  
and Mines  
60 Wilson Avenue  
Timmins, Ontario  
P4N 1A2

Dear Sir/Madam:

**RE: Approval of Assessment Work on mining claims P 1027165 et al. in Mahaffey and Reid Townships.**

The assessment credits for geophysics, section 14 of the Mining Act Regulations, as listed on the original Report of Work, have been approved as of November 12, 1992.

If you have any questions regarding this file please contact Dale Messenger at (705) 670-5858.

Yours sincerely,

Ron C. Gashinski  
Senior Manager, Mining Lands Branch  
Mines and Minerals Division

DEM/jl  
Enclosures:

cc: Assessment Files Office  
Toronto, Ontario

Resident Geologist  
Timmins, Ontario

# Report of Work Conducted After Recording Claim

MINING LANDS  
Transaction Number

W 9260.00116

## Mining Act

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

2.14671

**Instructions:** - Please type or print and submit in duplicate.

- Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
- A separate copy of this form must be completed for each Work Group.
- Technical reports and maps must accompany this form in duplicate.
- A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s)		Client No.
COMSTATE RESOURCES LTD. - D.R. Pyke		120065 / 104975
Address		Telephone No.
901-1015 4 <sup>th</sup> STREET S.W., CALGARY, ALBERTA T2R 1J4		403-237-8868
Mining Division	Township/Area	M or G Plan No.
PORCUPINE	MAHAFFEY + REID TWPS.	
Dates Work Performed	From: MARCH 22, 1992	To: APRIL 1, 1992

**Work Performed (Check One Work Group Only)**

Work Group	Type
X Geotechnical Survey	UTEM AND MAGNETIC
Physical Work, Including Drilling	
Rehabilitation	
Other Authorized Work	RECEIVED
Assays	SEP 24 1992
Assignment from Reserve	MINING LANDS BRANCH
	RECORDED AUG 31 1992 Receipt _____

Total Assessment Work Claimed on the Attached Statement of Costs \$ 35,088

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

**Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)**

Name	Address
B. LUM - COMINCO LTD.	2200-120 ADELAIDE ST. W
P.M. SMITH; B. MACALLISTER	TORONTO, ONTARIO M5H 1T1
R. CLARKE; G. LAFORTUNE;	
R. MACALLISTER; B. PAILLARD	

(attach a schedule if necessary)

**Certification of Beneficial Interest \* See Note No. 1 on reverse side**

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date	Recorded Holder or Agent (Signature)
Aug 28/92.		D.R. Pyke

**Certification of Work Report**

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.		
Name and Address of Person Certifying		
DALE R. PYKE, 31 DELAIR CRES., THORNHILL, ONT. L3T 2M3		
Telephone No.	Date	Certified By (Signature)
416-731-1913	Aug 28/92	D.R. Pyke.

**For Office Use Only**

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp MINING DIVISION
\$ 35,088.00	AUG 31 / 92	S. White	RECEIVED
Deemed Approval Date		Date Approved	
Nov. 30 <sup>th</sup> / 92			
Date Notice for Amendments Sent			
AUG 31 1992 10:30 "C" SL			

Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units
	1027165	1
	1027166	1
	1029118	1
	1029119	1
	1029120	1
	1029121	1
	1029122	1
	1029123	1
	1029124	1
	1029147	1
	1029150	1
	1029151	1
	1029154	1
	1029704	1
	1029726	1
	1158566	1
	1158567	1
	1158568	1

Total Number of Claims

Value of Assessment Work Done on this Claim	Value Applied to this Claim
\$ 0	\$ 439
0	\$ 439
0	\$ 439
0	\$ 439
0	\$ 439
0	\$ 439
0	\$ 439
0	\$ 439
\$ 0	\$ 439
0	\$ 439
0	\$ 439
\$ 974	\$ 439
\$ 974	\$ 439
\$ 974	\$ 439
\$ 974	\$ 439
\$ 0	\$ 439
0	\$ 439
0	\$ 439
0	\$ 439
0	\$ 439

Total Value Work Done

Total Value Work Applied

Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
RECEIVER	MINING LANDS BRANCH
SEP 24 1992	

Total Assigned From

Total Reserve

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

- Credits are to be cut back starting with the claim listed last, working backwards.
- Credits are to be cut back equally over all claims contained in this report of work.
- Credits are to be cut back as prioritized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.

Date \_\_\_\_\_

Signature \_\_\_\_\_

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units
	1158569	1
	1170307	1
	1170308	1
	1170309	1
	1170310	1
	1170362	1
	1170363	1
	1170364	1
	1170365	1
	1170366	1
	1170367	1
	1160480	1
	1160481	1
	1160482	1
	1169636	1
	1169637	1
	1169638	1
Total Number of Claims		

Value of Assessment Work Done on this Claim	Total Value Work Done	Value Applied to this Claim	Total Value Work Applied
\$ 0	\$ 439	\$ 439	\$ 439
0	\$ 439	\$ 439	\$ 439
0	\$ 439	\$ 439	\$ 439
0	\$ 439	\$ 439	\$ 439
\$ 975	\$ 439	\$ 439	\$ 439
\$ 975	\$ 439	\$ 439	\$ 439
\$ 975	\$ 439	\$ 439	\$ 439
\$ 975	\$ 439	\$ 439	\$ 439
\$ 975	\$ 439	\$ 439	\$ 439
0	\$ 439	\$ 439	\$ 439
\$ 975	\$ 439	\$ 439	\$ 439
\$ 975	\$ 439	\$ 439	\$ 439
0	\$ 439	\$ 439	\$ 439
0	\$ 439	\$ 439	\$ 439
0	\$ 439	\$ 439	\$ 439

Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	RECEIVED
	SEP 24 1992
	MINING LANDS BRANCH
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975
	\$ 975

Credits you are claiming in this report may be cut back in order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

- Credits are to be cut back starting with the claim listed last, working backwards.
- Credits are to be cut back equally over all claims contained in this report of work.
- Credits are to be cut back as prioritized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

**Note 1:** Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

**Note 2:** If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.

Date \_\_\_\_\_

Signature \_\_\_\_\_

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units
	116 9675	1
	116 9676	1
	116 9677	1
	116 9678	1
	116 9734	1
	116 9740	1
	116 9741	1
	116 9742	1
	116 9743	1
	116 9744	1
	116 9754	1
	118 9096	2
	102 7146	1
	102 7147	1
	102 7170	1
	102 7179	1
	102 7181	1
Total Number of Claims		

Value of Assessment Work Done on this Claim	Total Value Work Applied
\$ 975	\$ 439
\$ 975	\$ 439
\$ 975	\$ 439
\$ 975	\$ 439
\$ 0	\$ 439
0	\$ 439
0	\$ 439
\$ 975	\$ 439
\$ 975	\$ 439
\$ 975	\$ 439
\$ 975	\$ 439
\$ 0	\$ 878
\$ 974	\$ 438
\$ 974	\$ 438
\$ 0	\$ 438
0	\$ 438
0	\$ 438

Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
\$ 975	
\$ 975	
\$ 975	
\$ 975	
\$ 975	
\$ 975	
\$ 975	
\$ 975	
\$ 975	
\$ 974	
\$ 974	
\$ 974	
\$ 974	
\$ 974	
\$ 974	
\$ 974	
\$ 974	
\$ 974	

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

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In the event that you have not specified your choice of priority, option one will be implemented.

Note 2: If work has been performed on patented or leased land, please complete the following:  
to the mining claims.

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.

Date	Signature
------	-----------

Note 1: Examples of beneficial interests are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect

Numéro de rapport sur les travaux exécutés pour l'affectation de la réserve	Numéro de claim	Nombre d'unités
	1027182	1
	1156258	1
	1169735	1
	1170295	1
	1170296	1
	1170297	1
	1170298	1
	1170299	1
	1170300	1
	1170301	1
	1170302	1
	1170303	1
	1170304	1
	1170305	1
	1170306	1
	1170356	1
	1170357	1

Nombre total de claims

Valeur des travaux d'évaluation exécutés sur ce claim	Valeur affectée à ce claim
\$0	\$438
0	\$438
0	\$438
0	\$438
\$975	\$438
\$975	\$438
\$975	\$438
\$975	\$438
\$974	\$438
\$974	\$438
\$974	\$438
\$974	\$438
0	\$438
0	\$438
0	\$438
0	\$438

Valeur totale des travaux exécutés

Valeur totale des travaux qui a été affectée

Valeur transférée de ce claim	Réserve : travaux à réclamer à une date ultérieure

Total transféré

Réserve totale

Les crédits que vous réclamez dans le présent rapport peuvent être réduits. Afin de diminuer les conséquences défavorables de telles réductions, veuillez indiquer l'ordre dans lequel vous désirez au-delà soient appliquées à vos claims. Veuillez cocher (✓) l'une des options suivantes :

- Les crédits doivent être réduits en commençant par le dernier claim sur la liste.
- Les crédits doivent être réduits également entre tous les claims figurant dans le présent rapport.
- Les crédits doivent être réduits selon l'ordre donné en annexe.

Si vous n'avez pas choisi d'option, la première sera appliquée.

Note 1 : Examples d'intérêts bénéficiaires : cessions non enregistrées, ententes sur des options, protocoles d'entente, etc. relatifs aux claims.

Note 2: Si des travaux ont été exécutés sur un terrain faisant l'objet de lettres patentes ou d'un bail, veuillez remplir ce qui suit.

Je certifie que le titulaire enregistré possède un intérêt bénéficiaire sur le terrain faisant l'objet de lettres patentes ou d'un bail, au moment où les travaux ont été exécutés.	Date
---	------

Numéro de rapport sur les travaux exécutés pour l'affectation de la réserve	Numéro de claim	Nombre d'unités
	1170358	1
	1170359	1
	1170360	1
	1170361	1
	1177367	1
	1177368	1
	1177369	1
	1177370	1
	1177371	1
	1182364	1
Nombre total de claims		

Valeur des travaux d'évaluation exécutés sur ce claim	Valeur affectée à ce claim
\$ 975	\$ 438 -\$ 04
\$ 975	\$ 438
\$ 975	\$ 438
\$ 975	\$ 438
\$ 974	\$ 438
\$ 974	\$ 438
\$ 0	\$ 438
0	\$ 438
0	\$ 438
0	\$ 438
<b>\$ 35,088</b>	
Valeur totale des travaux exécutés	
Valeur totale des travaux qui a été affectée	

Valeur transférée de ce claim	Réserve : travaux à réclamer à une date ultérieure
\$ 975	
\$ 975	
\$ 975	
\$ 975	
\$ 974	
\$ 974	
\$ 974	
	<b>RECEIVER</b>
	SEP 24 1992
	<b>MINING LANDS BRANCH</b>
<b>\$ 35,088</b>	
Total transféré	
Réserve totale	

Les crédits que vous réclamez dans le présent rapport peuvent être réduits. Afin de diminuer les conséquences défavorables de telles réductions, veuillez indiquer l'ordre dans lequel vous désirez au-delà soit appliquées à vos claims. Veuillez cocher (✓) l'une des options suivantes :

- Les crédits doivent être réduits en commençant par le dernier claim sur la liste.
  - Les crédits doivent être réduits également entre tous les claims figurant dans le présent rapport.
  - Les crédits doivent être réduits selon l'ordre donné en annexe.
- Si vous n'avez pas choisi d'option, la première sera appliquée.

**Note 1 : Exemples d'intérêts bénéficiaires : cessions non enregistrées, ententes sur des options, protocoles d'entente, etc. relatifs aux claims.**

**Note 2 : Si des travaux ont été exécutés sur un terrain faisant l'objet de lettres patentes ou d'un bail, veuillez remplir ce qui suit :**

Je certifie que le titulaire enregistré possède un intérêt bénéficiaire sur le terrain faisant l'objet de lettres patentes ou d'un bail, au moment où les travaux ont été exécutés.

Date \_\_\_\_\_  
*11 Sept 1992*

Signature \_\_\_\_\_  
*Al R. Ryckie*

## NOTES

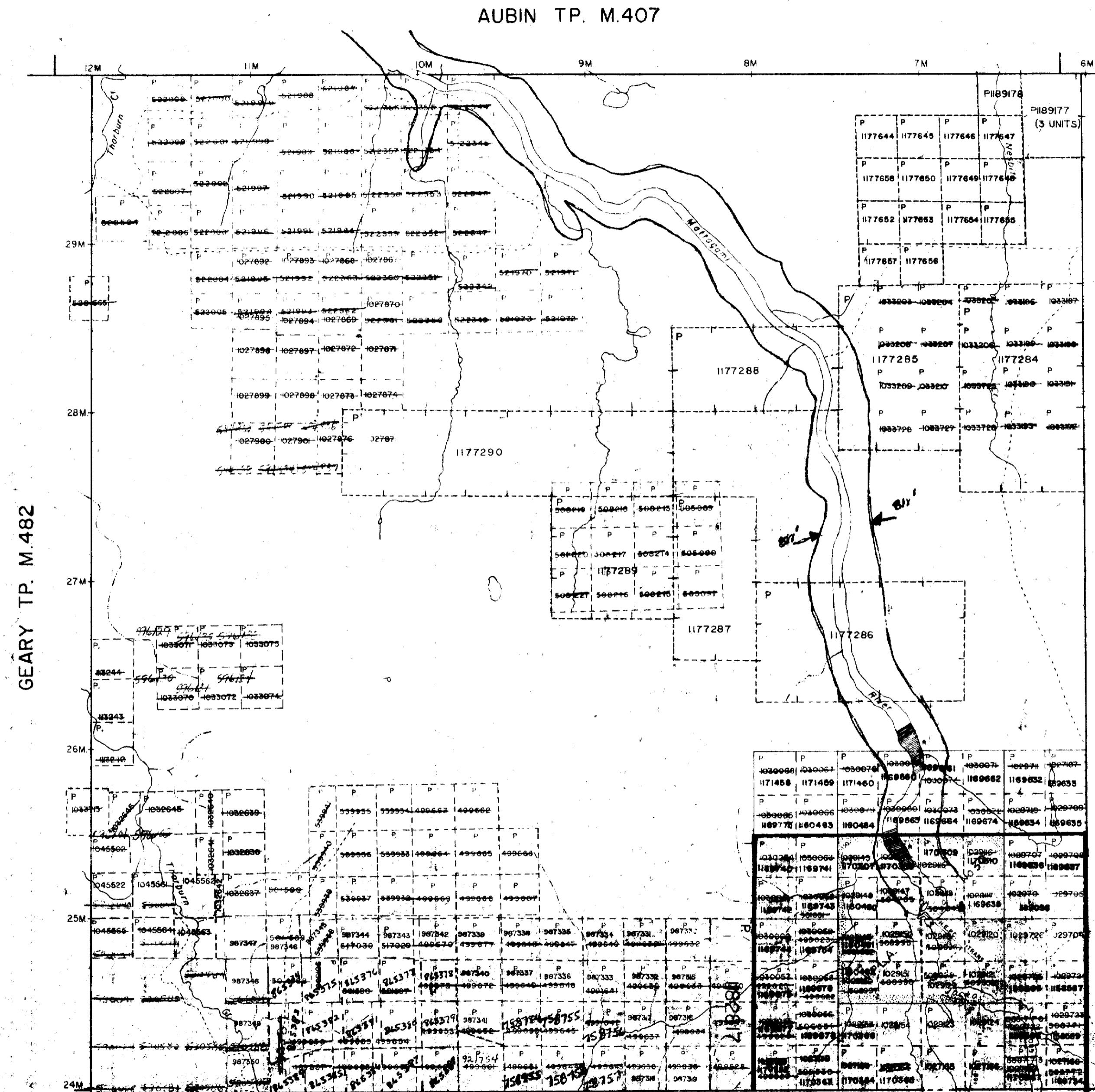
400' surface rights reservation along the shores of all lakes and rivers.

Subdivision of this township into lots and concessions is partially annulled July 2, 63

L.O. 7085 - Flooding Rights in lots 1,2 and 3, Con 4 Ig H.E.P.C.

*FLOODING RESERVE ON RIVER*  
ELEVATION 8417 ON RIVER AND  
RIVER RESERVE TO UNKNOWN HEIGHTS

## GEARY TP. M.482



## REID TR. M.575

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.

## LEGEND

HIGHWAY AND ROUTE NO.	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIPS, BASE LINES, ETC.	
LOTS, MINING CLAIMS, PARCELS, ETC.	
UNSURVEYED LINES	
LOT LINES	
PARCEL BOUNDARY	
MINING CLAIMS, ETC.	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBDIVISION	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	

## DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
CROWN LAND SALE	
ORDER IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

SCALE : 1 INCH 40 CHAINS  
FEET METRES

ACRES HECTARES

## TOWNSHIP

## MAHAFFY

## DISTRICT

### COCHRANE

## MINING DIVISION

### PORCUPINE

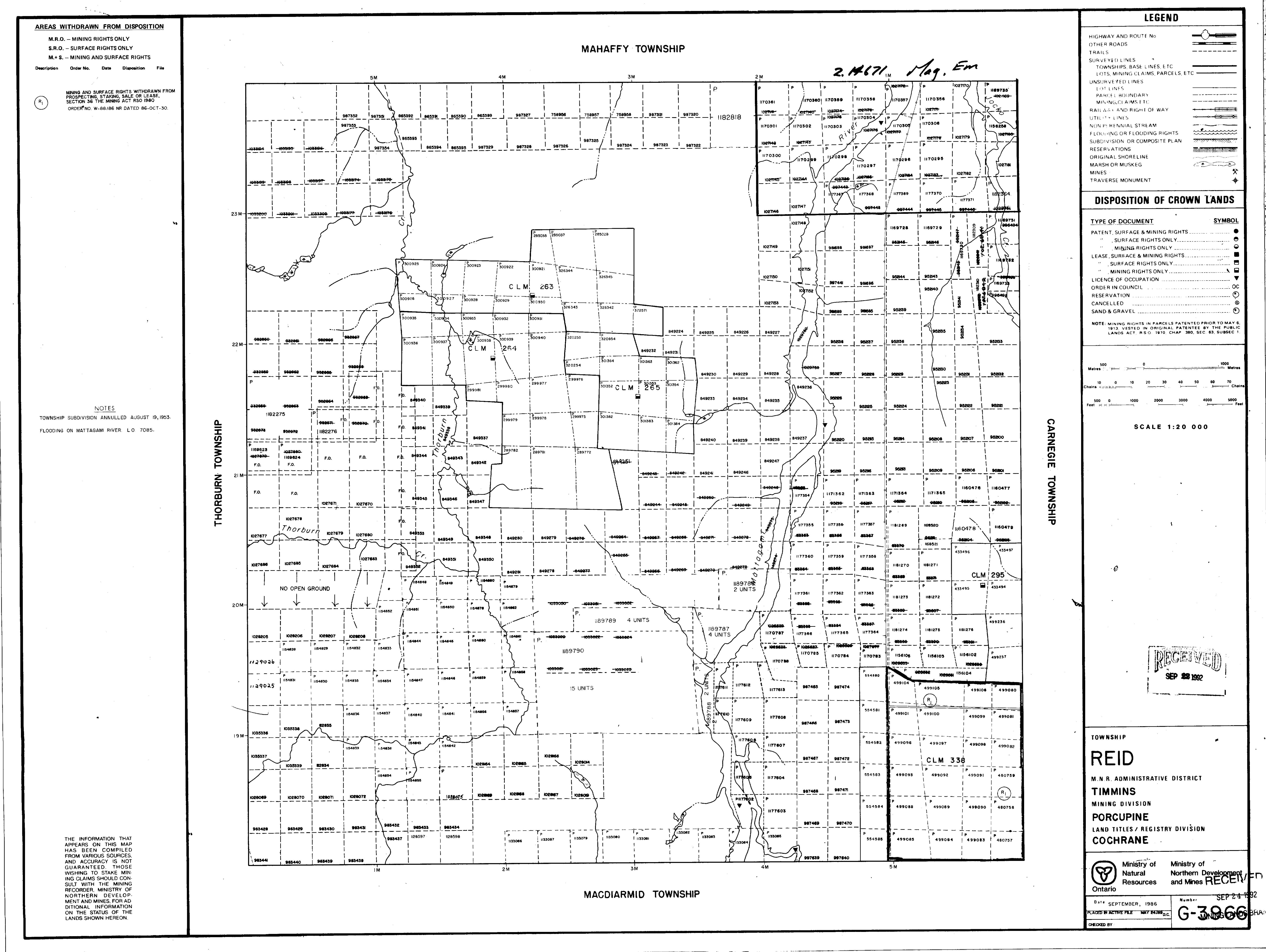
Received May 8/63  
Ministry of Natural Resources

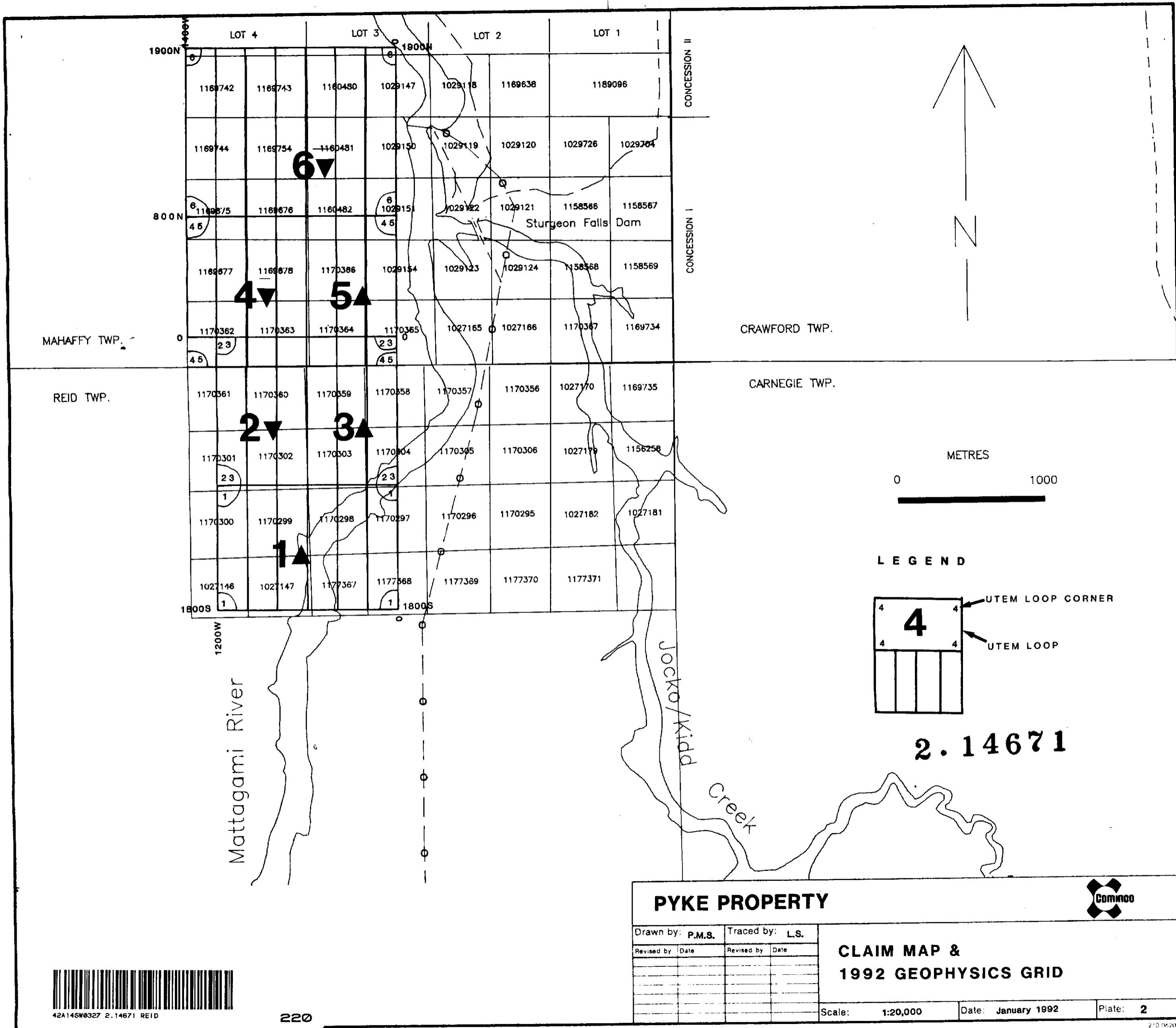
Ontario Surveys and Mapping Branch

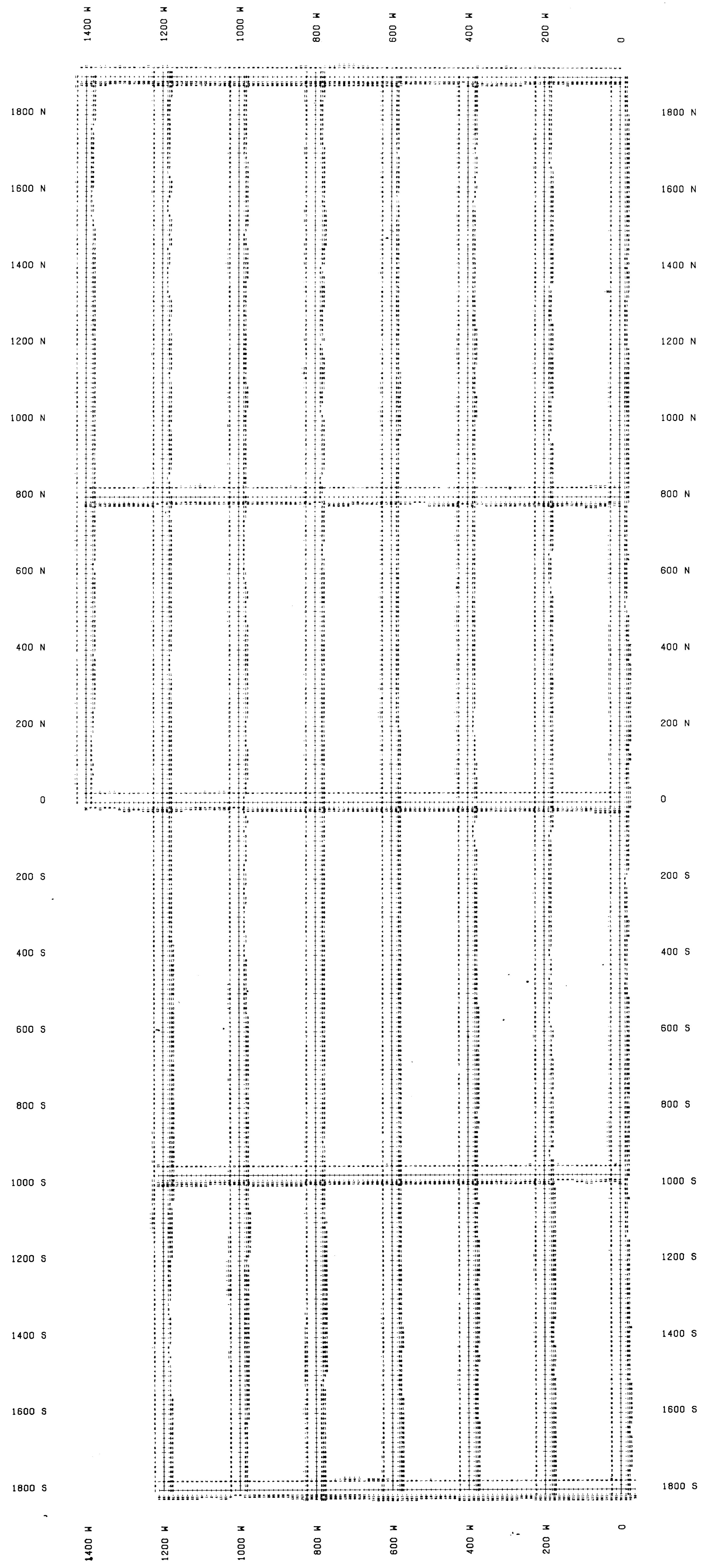
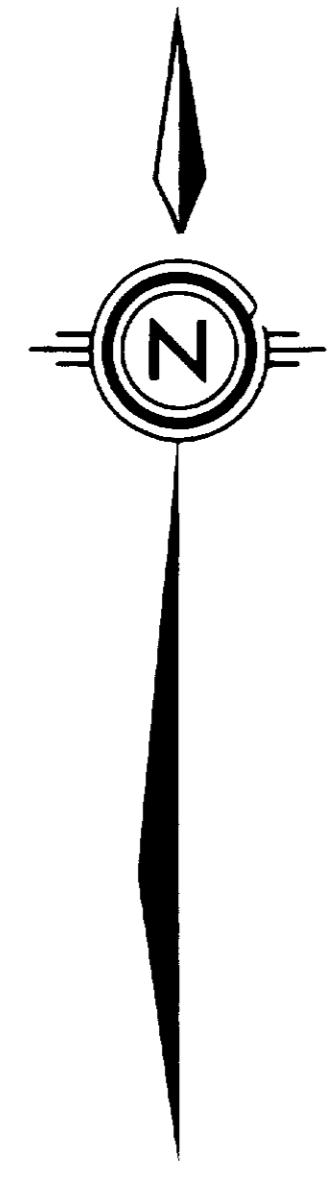
Date MAY 3, 1973 Plan No.  
Whitney Block Queen's Park, Toronto

M.540









2.14671

0m 200m 400m  
SCALE 1 : 50,000

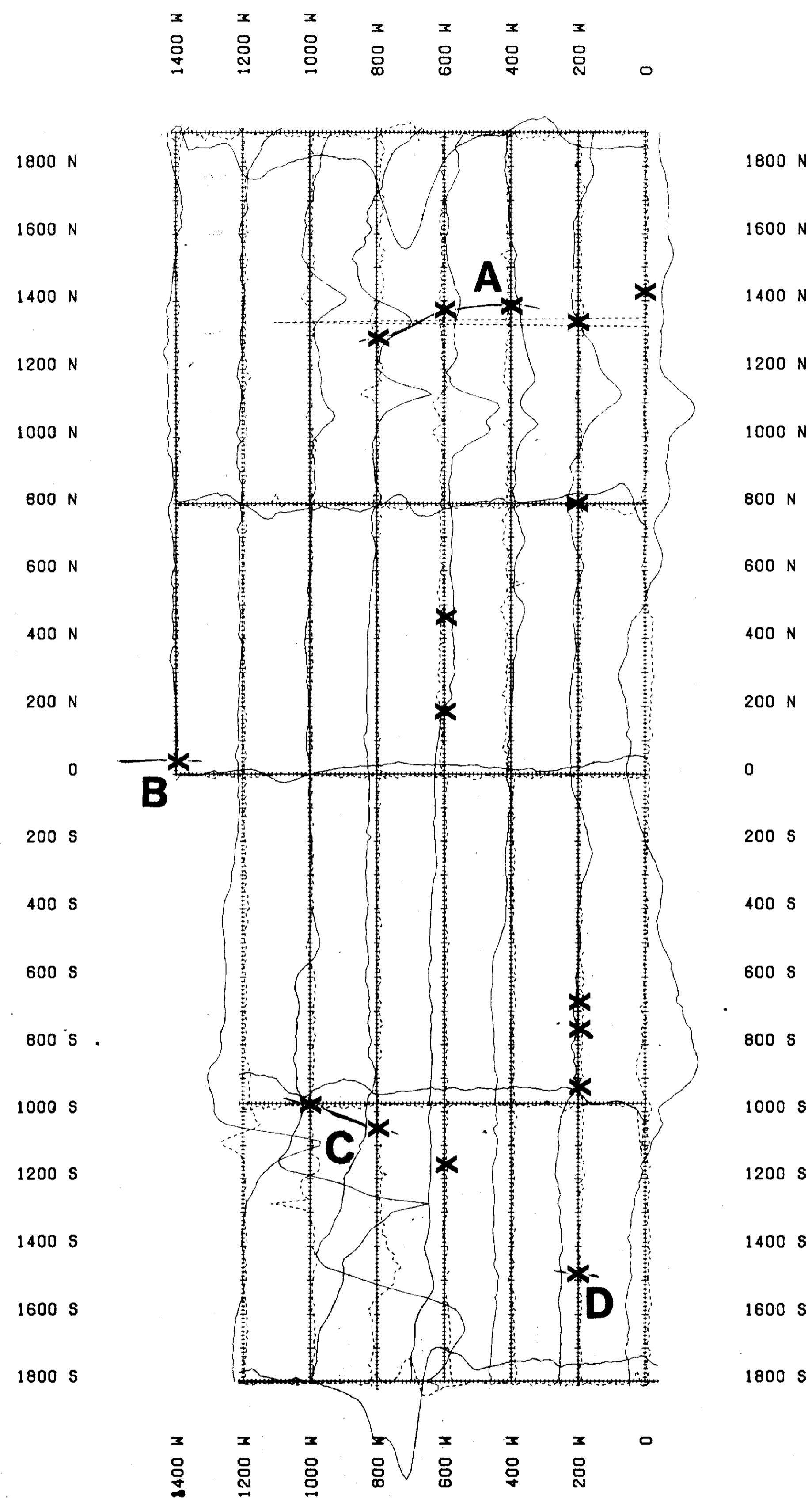
LEGEND  
INSTRUMENTATION field - OMNI PLUS  
base - OMNI PLUS  
56,500 nT removed from each total field reading

vertical gradient ( $nT/m$ )  
total field ( $nT$ )

PYKE

ONTARIO	
1992 MAGNETIC SURVEY	
TOTAL FIELD &	
VERTICAL GRADIENT POSTINGS	
NTS. 42-A-11,12,13,14	Date: APRIL 1992
Scale: 1 : 50,000	Date: APRIL 1992
Drawn By: btl	Traced By:
Surveyor by:	Surveyor to:
Survey Date:	Scale:
Surveyor Name:	Surveyor Name:
Surveyor Address:	Surveyor Address:
Surveyor Phone:	Surveyor Phone:





#### LEGEND

INSTRUMENTATION: base - OMNI PLUS  
field - OMNI PLUS

— total field  
- - - vertical gradient

X UTEM Conductor & Axis

SCALES: total field 1 cm = 200 nT  
vertical gradient 1 cm = 50 nT/m

0m 200m 400m 600m  
SCALE 1 : 10,000

2.14671

**PYKE**

ONTARIO X

Drawn by:	btl	Traced by:	
Revised by	Date	Revised by	Date

1992 MAGNETIC SURVEY  
TOTAL FIELD &  
VERTICAL GRADIENT PROFILES

NTS: 42-A-11,12,13,14

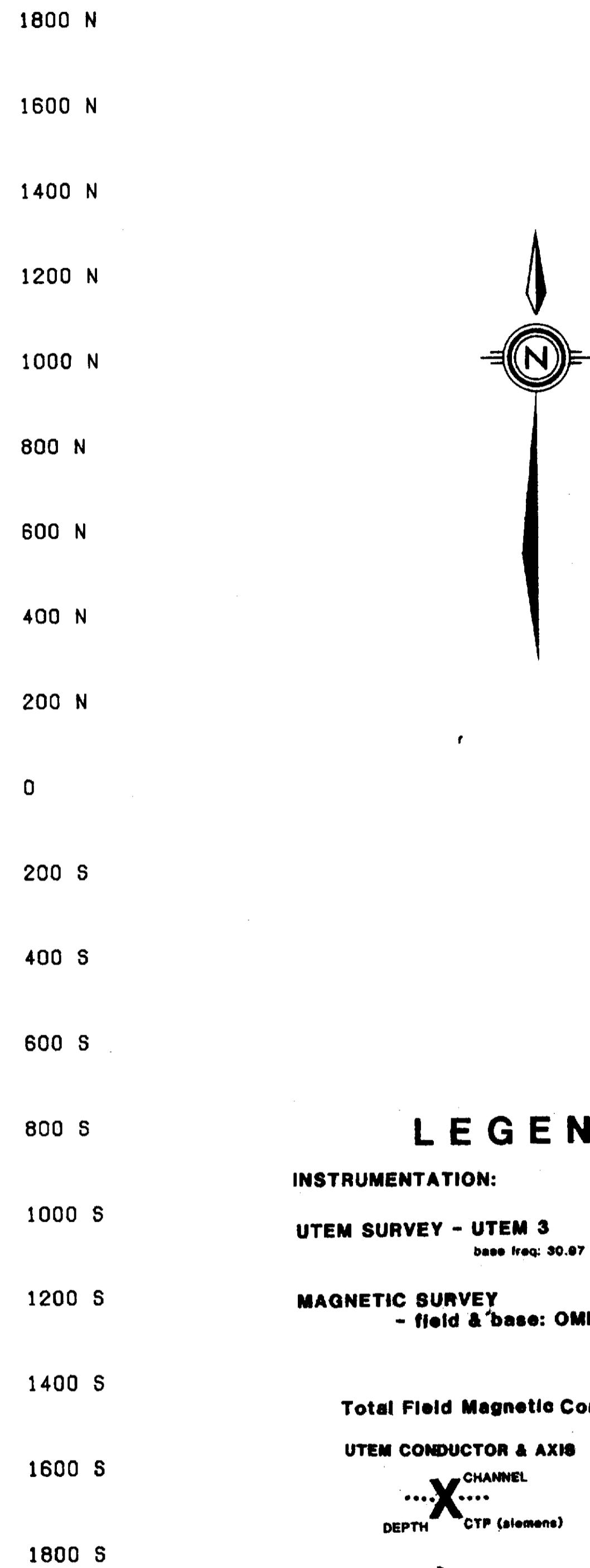
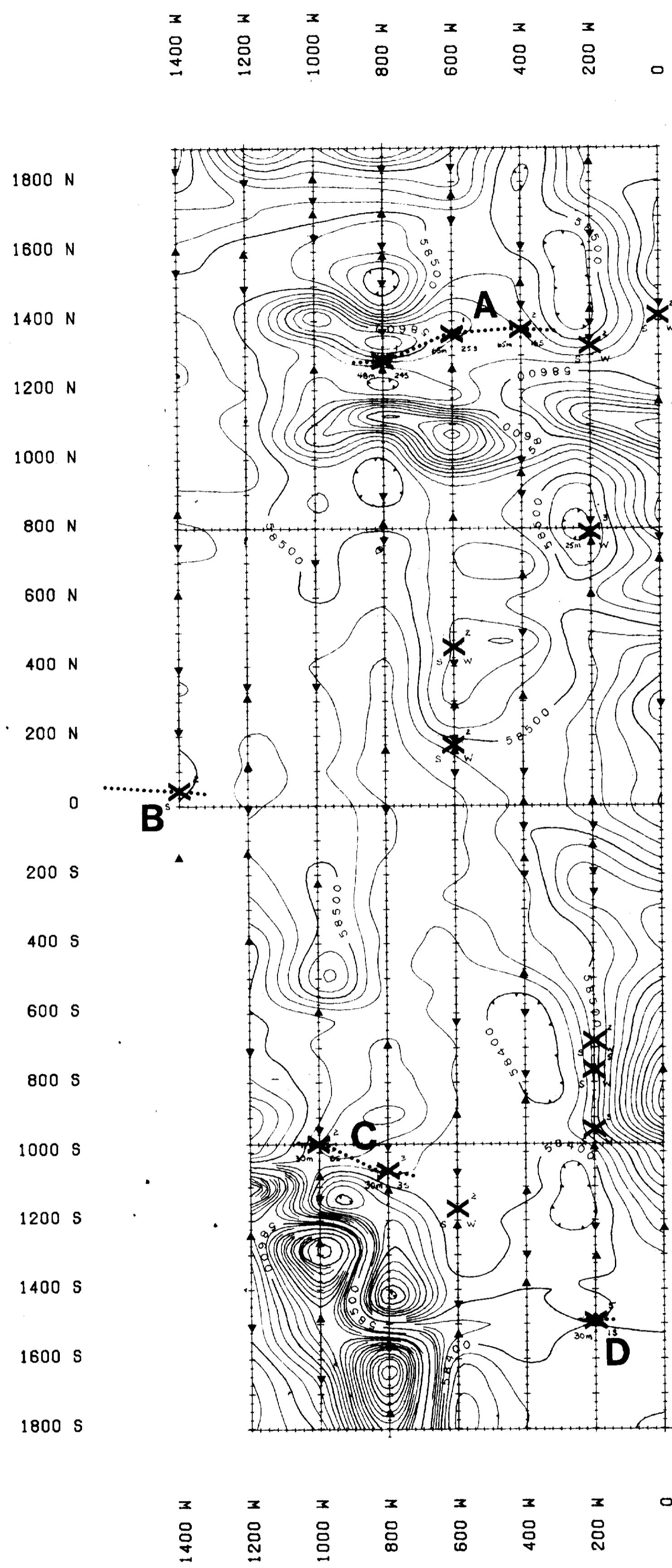
Scale: 1 : 10,000 Date: APRIL 1992 Plate: 3



42A145W0327 2.14671 REID

240

FORM 210-K6



## LEGEND

### INSTRUMENTATION:

**UTEM SURVEY - UTEM 3**  
base freq: 30.67 Hz

**MAGNETIC SURVEY**  
- field & base: OMNI PLUS

Total Field Magnetic Contour Interval: 20 nT

**UTEM CONDUCTOR & AXIS**

CHANNEL  
DEPTH

W - weak  
S - shallow

more resistive → less resistive

RESISTIVITY CONTACT

Scale - 1 : 10,000

2.14671

**PYKE**

ONTARIO

Drawn by: btl Traced by:

Revised by Date Revised by Date

**1992 GEOPHYSICS INTERPRETATION MAP**  
**CONTOURED TOTAL FIELD MAG &**  
**UTEM CONDUCTORS**

NTS: 42-A-11,12,13,14

Scale: 1 : 10,000 Date: APRIL 1992 Plate: 5



42A14SW0327 2.14671 REID

250

FORM 210-K6