

ARIS SUMMARY SHEET

District Geologist, Nelson

Off Confidential: 90.12.14

ASSESSMENT REPORT 19671

MINING DIVISION: Fort Steele

PROPERTY: Estella
LOCATION: LAT 49 46 10 LONG 115 36 15
UTM 11 5513712 600514
NTS 082G13W
CAMP: 001 Purcell Belt (Sullivan)
CLAIM(S): Stel 1-15, TC 1-2, MBN 1, Cashier, Estella, Rover, Skylark
Mountain Daisy, Morning Crescent
OPERATOR(S): Cominco Ltd.
AUTHOR(S): Jackisch, I.
REPORT YEAR: 1990, 113 Pages
COMMODITIES
SEARCHED FOR: Lead, Zinc, Silver
KEYWORDS: Proterozoic, Purcell Supergroup, Quartzites, Felsites
WORK
DONE: Geophysical
EMGR 45.0 km; UTEM
Map(s) - 1; Scale(s) - 1:10 000
RELATED
REPORTS: 00068
MINFILE: 082GNW008

FILMED

SUB-RECORDER
RECEIVED

FEB 14 1990

COMINCO LTD.

M.R. # _____ \$ _____

VANCOUVER, B.C.

EXPLORATION

WESTERN CANADA

NTS: 82G/13

LOG NO: 0220 RD.

ACTION:

FILE NO:

GEOPHYSICAL REPORT
ON A UTEM SURVEY
ON THE ESTELLA PROPERTY
FORT STEELE M.D., B.C.

- ASSESSMENT REPORT -

Latitude : 49°46'N

Longitude : 115°36'W

Work Performed by : I. Jackisch & J.G. Parkinson

Time Interval of Field Work : August 23 to September 5, 1989
: September 15 to September 20, 1989
: October 2 to October 6, 1989

Claims Covered : Crown Grant Nos. 6363, 6409, 6411,
6413, 6579, 6580, 6853, 6854-6856
Claim Nos. TC-1, TC-2, MN-1,
STEL 1-3, 9, 11-15

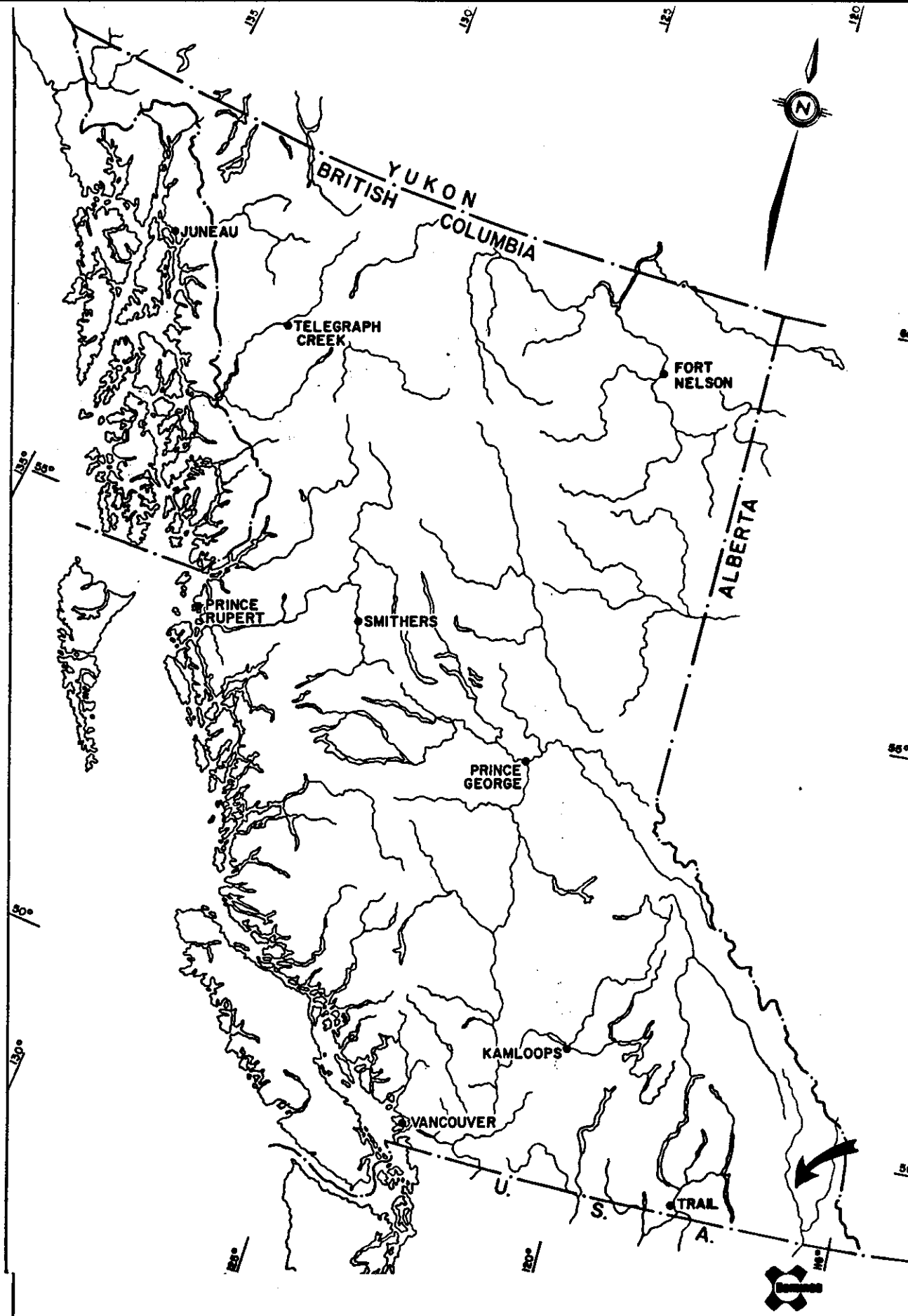
Claim Operator : COMINCO LTD.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,671

FEBRUARY 1990

I. JACKISCH



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

ESTELLA PROPERTY
LOCATION MAP
FT. STEELE M.D., B.C.

TABLE OF CONTENTS

PLATE 368-89-1	LOCATION MAP	(in text)
LIST OF CLAIMS SURVEYED		
INTRODUCTION		1
LOCATION AND ACCESS		1
DESCRIPTION OF THE UTEM SYSTEM		2
SURVEY GRID, RECONNAISSANCE LINES AND LOGISTICS		4
INTERPRETATION		5
CONCLUSIONS		5
REFERENCES		6

APPENDIX I	STATEMENT
APPENDIX II	STATEMENT OF EXPENDITURES
APPENDIX III	CERTIFICATE OF QUALIFICATIONS

LEGEND FOR UTEM DATA SECTIONS

DATA SECTIONS - D.S. 1 to 53

PLATES 368-89-2 Claim, Grid and Geophysics (in envelope)
Compilation Map

LIST OF CLAIMS SURVEYED

The claims listed below have been surveyed by UTEM in the data submitted with this report.

Bethlehem Crown Grants:

Claim Nos. 6363, 6409, 6411, 6412, 6413, 6579, 6580, 6853
6854, 6855, 6856

Bakra Resources : TC-1, TC-2, MBN-1

Cominco Ltd. : STEL 1, 2, 3, 9, 11 to 15

COMINCO LTD.

EXPLORATION

WESTERN CANADA

NTS: 82G/13

GEOPHYSICAL REPORT
ON AN UTEM SURVEY
ON THE ESTELLA PROPERTY
FORT STEELE M.D., B.C.

- ASSESSMENT REPORT -

INTRODUCTION

The Estella Property is underlain by rocks of the Fort Steele (oldest), Aldridge, and Creston (youngest) Formations. The Estella Mine occurs as a vein deposit in the Aldridge Formation sediments near a felsite (or quartz monzonite) plug. The mine produced approx. 118,000 tons roughly estimated to average 1.6 oz. Ag, 8% Zn and 3.5% Pb.

A geophysical program consisting of UTEM surveying was carried out directly over and peripheral to the Estella Mine. The purpose was to test for a large conductor below the mineralized vein.

UTEM surveying totalled 45 kms and was carried out both on grid lines and in a reconnaissance mode. This work was performed by Cominco Ltd. personnel under the direction of geophysicists, I. Jackisch and J.G. Parkinson.

This report discusses the operation of the deep penetrating UTEM system and presents the results.

LOCATION AND ACCESS

The Estella Property is located 28 km east-northeast of Kimberley, B.C. and 17 km north of Ft. Steele, B.C. It is in the front range of the Rocky Mtns., 2 km north of Mt. Bill Nye (2,429 m).

The Estella Mine site can be reached by dirt road from Wasa, B.C., which is on the Kootenay River, 17 km north-northwest of Ft. Steele, B.C. This road roughly follows Lewis Creek up into the mountains. The numerous switchbacks provided adequate access to a large portion of the survey lines. Helicopter support was not used, but resulted in very slow progress on the more inaccessible reconnaissance lines.

The vegetation varies from very thick to open (in talus areas) and the topography is steep everywhere, and treacherous on the slope to the west and south of the mine site. Elevations over the survey area vary from 1,300 m to 2,400 m.

DESCRIPTION OF UTEM SYSTEM

UTEM is an acronym for "University of Toronto ElectroMagnetometer". The system was developed by Dr. Y. Lamontagne (1975) while he was a graduate student of 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 1.7 kW motor generator. The loop is generally square shaped, wherever possible, with sides between 500 metres and 1,500 metres long. In this survey, the loop dimension was 1,000 m x 600 m. Survey lines are generally oriented perpendicular to one side of the loop and surveying can be performed both inside and outside the loop. The field procedure is similar to Turam, a better known electromagnetic surveying method.

The transmitter loop is energized with a precise triangular current waveform at a carefully controlled frequency (30.9 Hz for this survey). The receiver system includes a sensor coil and backpack portable 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 50 years.

The receiver sensor coil measures the vertical magnetic 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 geologic conductors. Deviations from a 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 9 channels of data at each station. 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. Progressively better conductors will give responses on progressively lower number channels as well. For example, massive, highly conducting sulphides or graphite will produce a response on all nine channels.

The UTEM receiver records data digitally on a cassette. This tape is played back into a computer at the base camp. The mini computer processes the data and controls the plotting on a small (11" x 15") graphics plotter. Data are portrayed as profiles of each of the nine channels, shown for each survey line of each transmitter loop. These profiles and an interpretive plan are appended to this report.

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

1. Continuously 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) For the remaining channels (n=2 to 9)

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

where Ch.n is the observed amplitude of Channel 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 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 Ppn 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:

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

where Ch.n is the observed amplitude of Channel n and Ch.1pn is the observed Channel 1 amplitude at the point norm station

Point normalized plots are usually produced on data sections containing anomalies in order to help interpretation by providing a different perspective to the data. In this survey, all the Data Section numbers containing a "p" are point normalized plots.

The above normalizing procedures result in chaining errors displayed in Channel 1 only, since all other channels are normalized to Channel 1.

SURVEY GRID, RECONNAISSANCE LINES, AND LOGISTICS

The plotted grid lines on Plate 368-89-2 show good agreement with creek and road intersections. The only exception is Line 1800S where Tracy Creek is out by 100 m. The grid over the mine site (Loops 1,2,3) is correctly tied in to the Tracy Creek grid (Loops 4 and 6) as shown on the map.

The loop fronts to Loops 1, 2 and 3 are fairly accurately known because they follow a cut baseline or tie line. The sides and backs to these loops were laid out by bush-wacking and climbing wherever it was possible to maneuver, and are only roughly located.

Grid stations are 50 m apart horizontally. Slope corrections were made using an inclinometer and were measured in by compass and nylon chain, not topo chain.

The reconnaissance lines used the same loops as the grid lines, but were surveyed starting from the side or back of the loop. Line locations are estimated from topography, compass direction, creeks, direction of distant peaks, etc. Station locations were recorded for direction (compass), for distance (topo chain), and change in elevation (inclinometer). These lines were put in by the UTEM receiver operator and his assistant, concurrent with the UTEM survey. Line direction and distance between stations were changed occasionally to avoid difficult terrain.

One assistant was always present at the transmitter site. This was to prevent theft from passing vehicles, to provide assistance in the event of an accident on the cliffy terrain, and to disconnect the loop from the transmitter in case of lightning activity (which was frequent).

INTERPRETATION

Plate 368-89-2 shows the UTEM crossovers and contact responses along with the survey grid and claim map.

CONCLUSIONS

45 kms of UTEM surveying was completed on the Estella Property in the time period from August 23rd to October 6th, 1989. Several crossover and contact responses were detected which need to be followed up by geological mapping.

Report by : Ingo Jackisch
Ingo Jackisch
Geophysicist
Cominco Ltd.

Approved
for Release : W. J. Wolfe
W. J. Wolfe
Manager, Exploration
Western Canada
Cominco Ltd.

Distribution:

Mining Recorder	(2)
Kootenay Expl. Office	(1)
Bakra Resources	(1)
Bethlehem Resources	(1)
Western District Files	(1)
Geophysics Files	(1)

REFERENCES

Lamontagne, Y., 1975

Applications of Wideband, Time Domain EM
Measurements in Mineral Exploration: Doctoral
Thesis, University of Toronto

A P P E N D I X I

IN THE MATTER OF THE B.C. MINERAL ACT
AND THE MATTER OF A GEOPHYSICAL PROGRAMME
CARRIED OUT ON THE ESTELLA PROPERTY
LOCATED 28 KMS EAST-NORTHEAST OF KIMBERLEY, B.C.
IN THE FORT STEELE MINING DIVISION OF THE
PROVINCE OF BRITISH COLUMBIA,
MORE PARTICULARLY
N.T.S. 82G/13

S T A T E M E N T

I, Ingo Jackisch, of 424 Somerset Street, in the City of North Vancouver, in the Province of British Columbia, make oath and say:

1. THAT I am employed as a geophysicist by Cominco Ltd. and, as such have a personal knowledge of the facts to which I hereinafter depose;
2. THAT annexed hereto and marked as "Exhibit A" to this statement is a true copy of expenditures incurred on a geophysical survey on the ESTELLA Property;
3. THAT the said expenditures were incurred from Aug. 23 to Sept. 5, 1989 Sept. 15 to 20, and Oct. 2 to 6, 1989 for the purpose of mineral exploration on the above-noted property.

Ingo Jackisch

Ingo Jackisch
Geophysicist, Cominco Ltd.

Dated this 6 day of February, 1990
at Vancouver, B.C.

A P P E N D I X I I

E X H I B I T "A"

STATEMENT OF EXPENDITURES

ESTELLA PROPERTY - August 23 to October 6, 1989

1. STAFF COSTS

a) H.C. Schultze, geologist		
7 days @ \$200/day	1,400.00	
b) I. Jackisch, geophysicist		
31 days @ \$330/day	10,230.00	
c) J.J. Lajoie, geophysicist		
1 day @ \$415/day	415.00	
d) J.G. Parkinson, geophysicist		
23 days @ \$210/day	4,830.00	
e) N.E. Murphy, assistant		
28 days @ \$120/day	3,360.00	
f) J.V. Bjelica, assistant		
26 days @ \$ 85/day	2,210.00	
g) J. Donoghue, helper		
28 days @ \$ 85/day	<u>2,380.00</u>	24,825.00

2. OPERATING DAY CHARGES

Note: This charge is applied for those days on which useful data are acquired, to cover the cost of data compilation, drafting, interpretation and report.

20 days @ \$375/day		7,500.00
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3. EQUIPMENT RENTAL

UTEM System : 29 days @ \$150/day	4,350.00	
Rental UTEM Receiver 8 days @ \$ 75/day	600.00	
Two 4x4 Trucks 30 days @ \$40/day for each truck	<u>2,400.00</u>	7,350.00

4. EXPENSE ACCOUNTS

(Meals, Gas for Trucks & Motor/Generators, etc.)

I. Jackisch	3,405.02	
J.G. Parkinson	618.46	
N.E. Murphy	546.18	
J.V. Bjelica	<u>525.00</u>	5,094.66

	Carried Forward	\$ 44,769.66
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STATEMENT OF EXPENDITURES cont'd

ESTELLA PROPERTY - August 23 to October 6, 1989

Carried Forward \$ 44,769.66

5. MISCELLANEOUS

Freight Charges	1,042.80	
Use of UTEM Wire	375.00	
Domicile	514.08	
Linecutting	<u>7,675.00</u>	<u>9,606.88</u>

Total \$ 54,376.54

Less: \$9,220.30 for work done off claims - 9,220.30

Total Assessment Credits \$ 45,156.24

A P P E N D I X III

CERTIFICATE OF QUALIFICATIONS

I, INGO JACKISCH, of 424 Somerset Street, in the City of North Vancouver, Province of British Columbia, do hereby certify:

- i. THAT I graduated with a B.Sc. in Geophysics from the University of British Columbia in 1975,
- ii. THAT I am a member of the British Columbia Geophysical Society.
- iii. THAT I have been practising Geophysics from 1975 to 1990, and have been an employee of Cominco Ltd. from 1980 to 1990.

Ingo Jackisch
Ingo Jackisch, B.Sc.
Geophysicist, Cominco Ltd.

FEBRUARY 1990

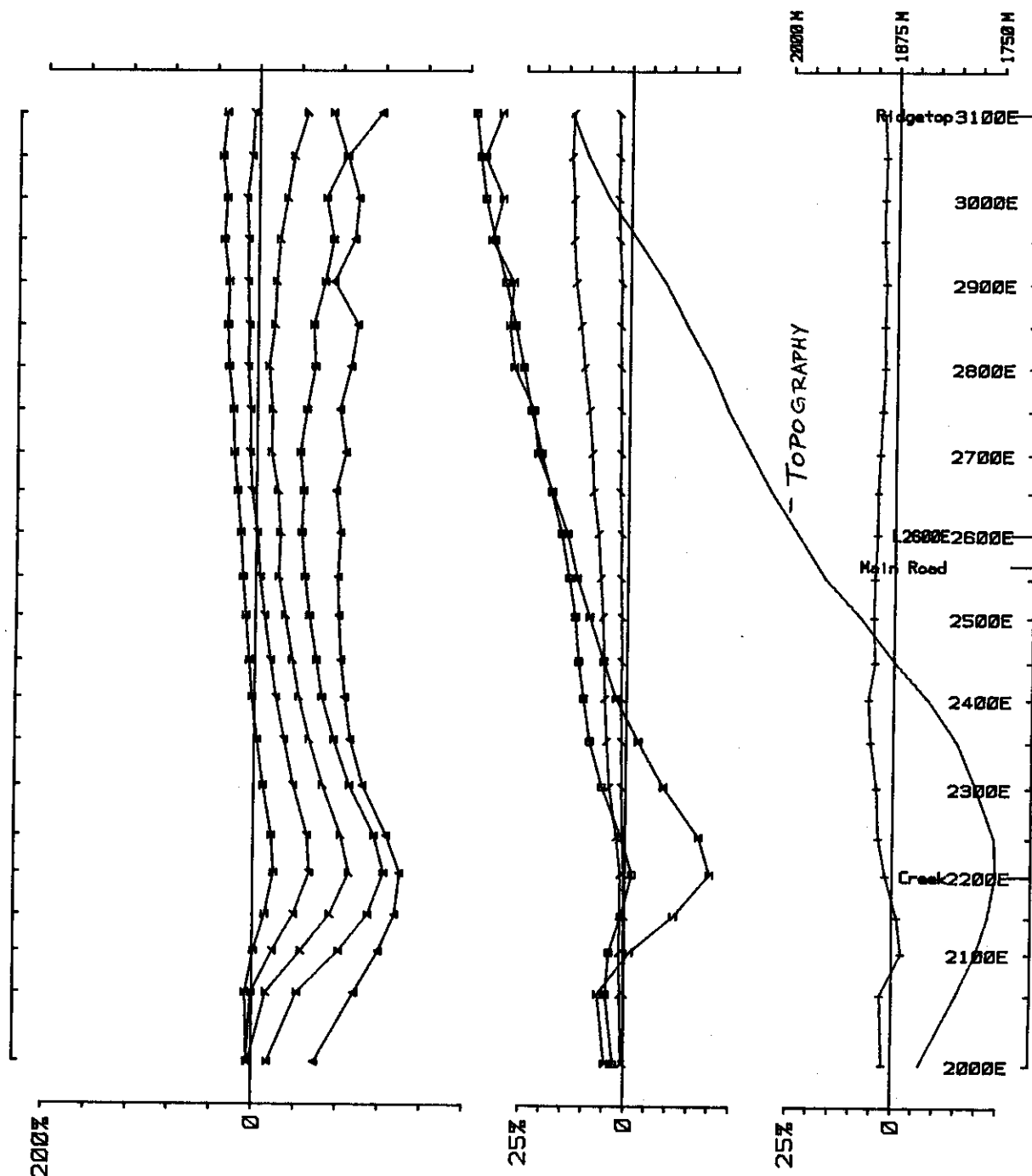
LEGEND

UTEM DATA SECTIONS

ORDINATE: Amplitude scale is given in %

ABSCISSA: Station or Picket Numbers in Hundreds of Meters

SYMBOL	CHANNEL	MEAN DELAY TIME	
		15 Hz	30 Hz
	1	25.6 ms	12.8 ms
/	2	12.8	6.4
\	3	6.4	3.2
□	4	3.2	1.6
Σ	5	1.6	0.8
△	6	0.8	0.4
7	7	0.4	0.2
X	8	0.2	0.1
△	9	0.1	0.05
◇	10	0.05	0.025



Estella 89

Op: IJ&JGP

Freq(Hz): 30.974

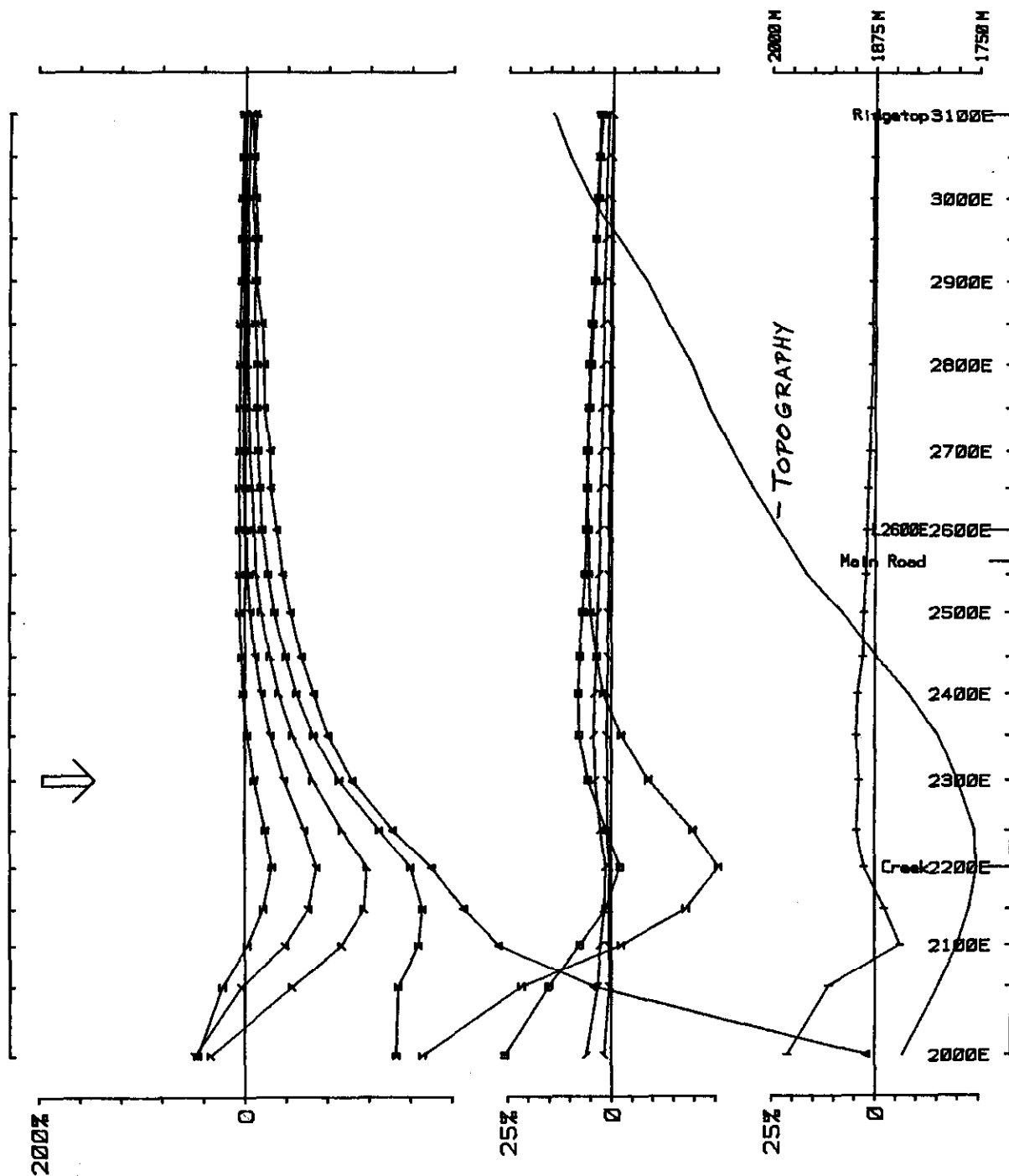
COMINCO

Hz

Loop: 1 Line: 2000S

Ch1 reduced. Ch1 normalized.

D.S. I



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

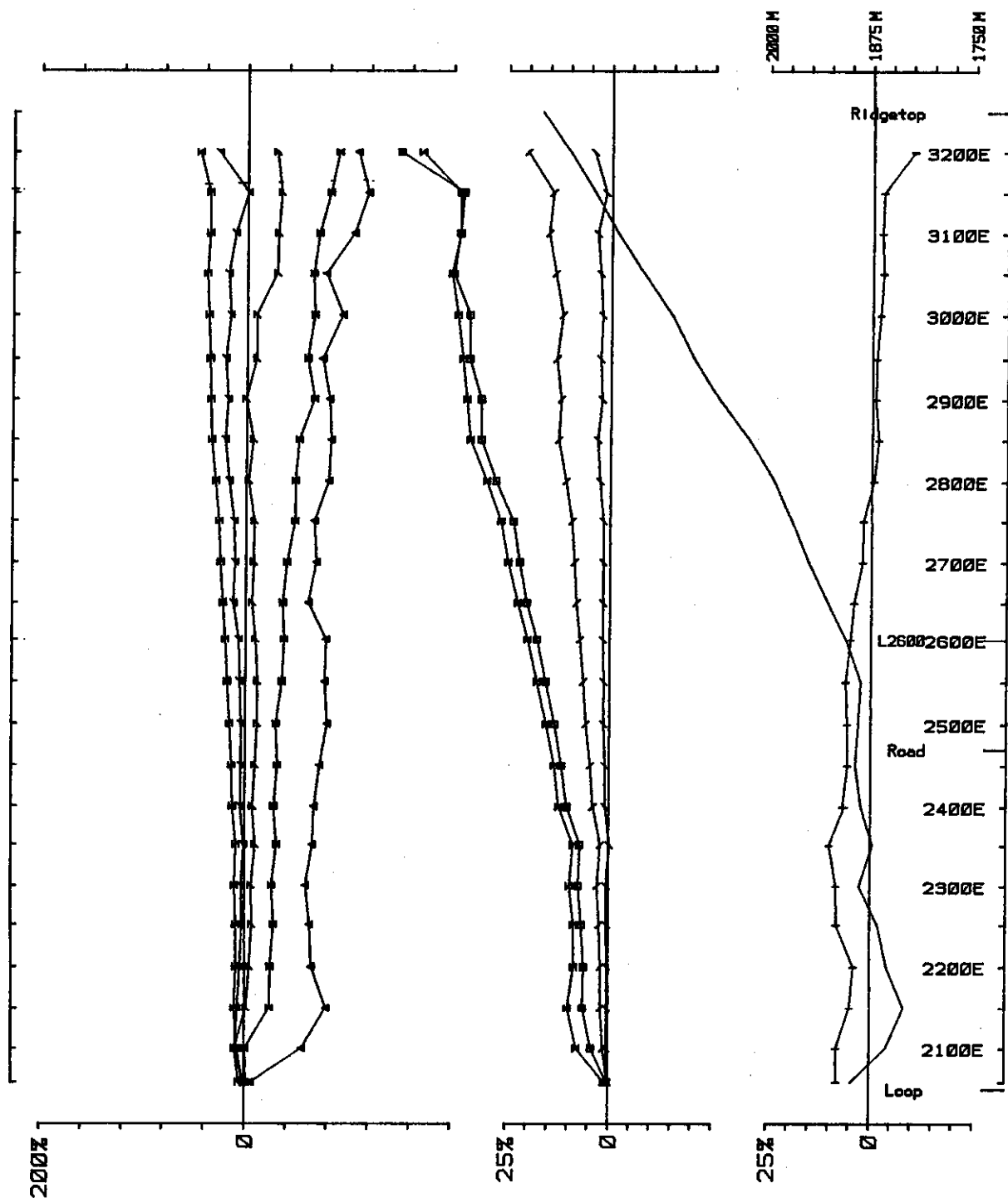
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Hz

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D.S. Ip



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

COMINCO

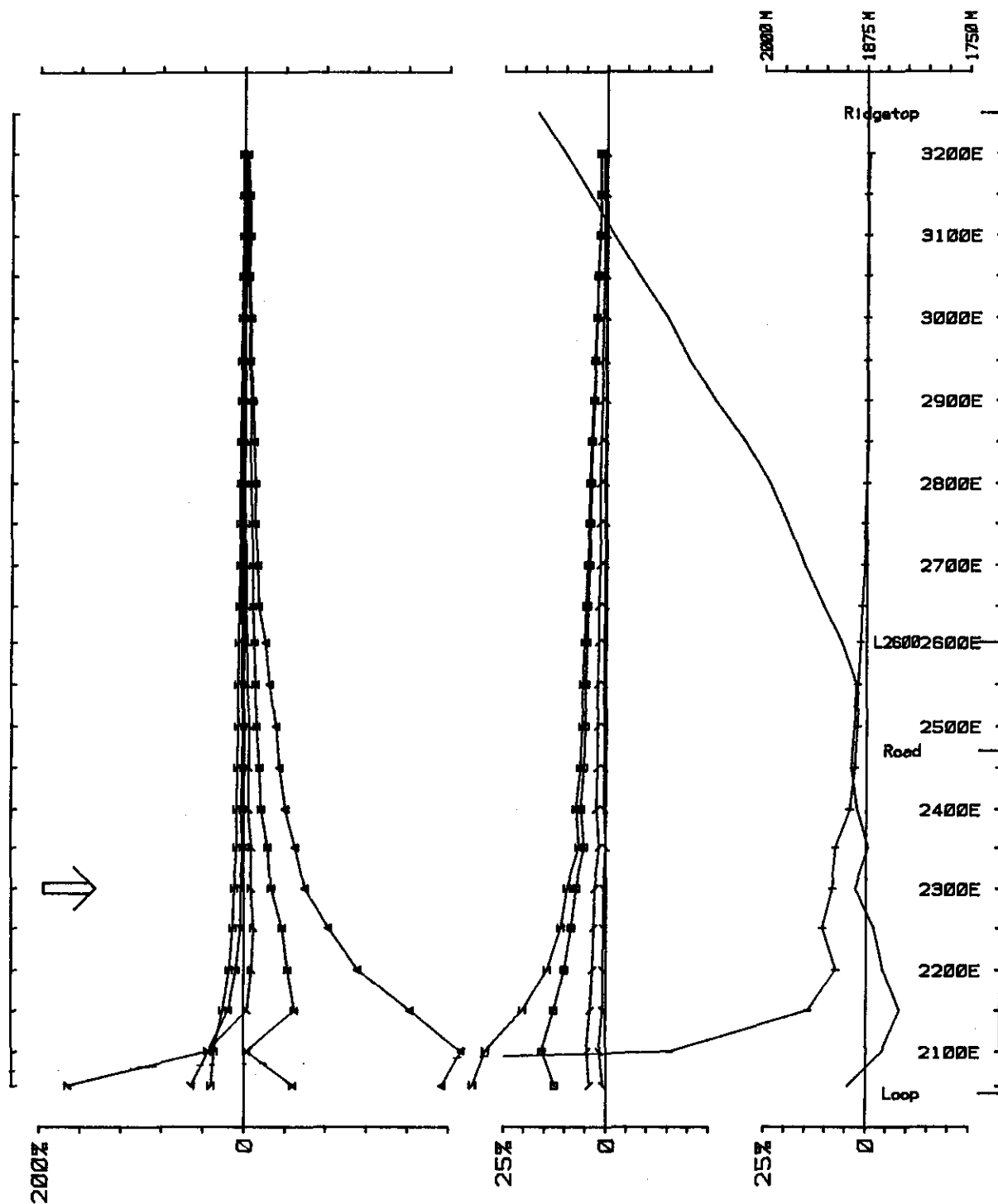
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Hz

Loop: 1

Line: 22505

D.S. 2



Estella 89

Op: IJ&JGP

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COMINCO

Freq(Hz): 30.974

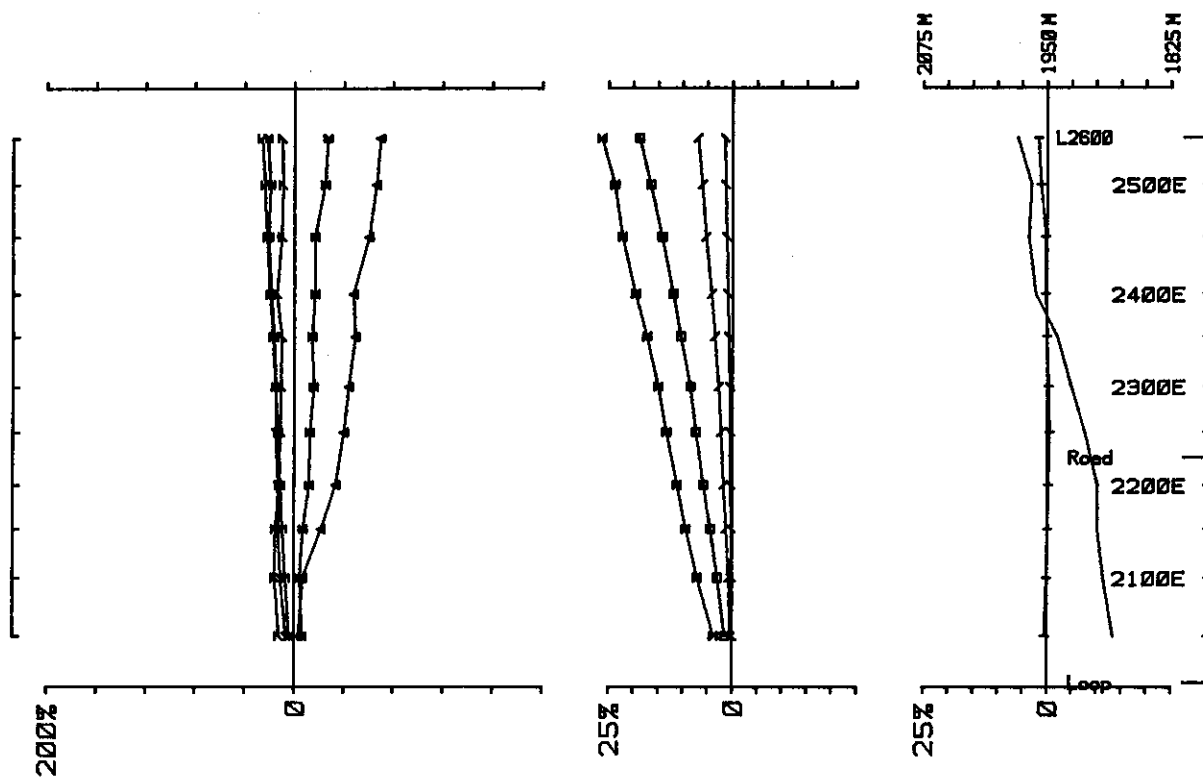
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Hz

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Line: 2250S

D.S. 2p



Estella 89

Op: IJ&JGP

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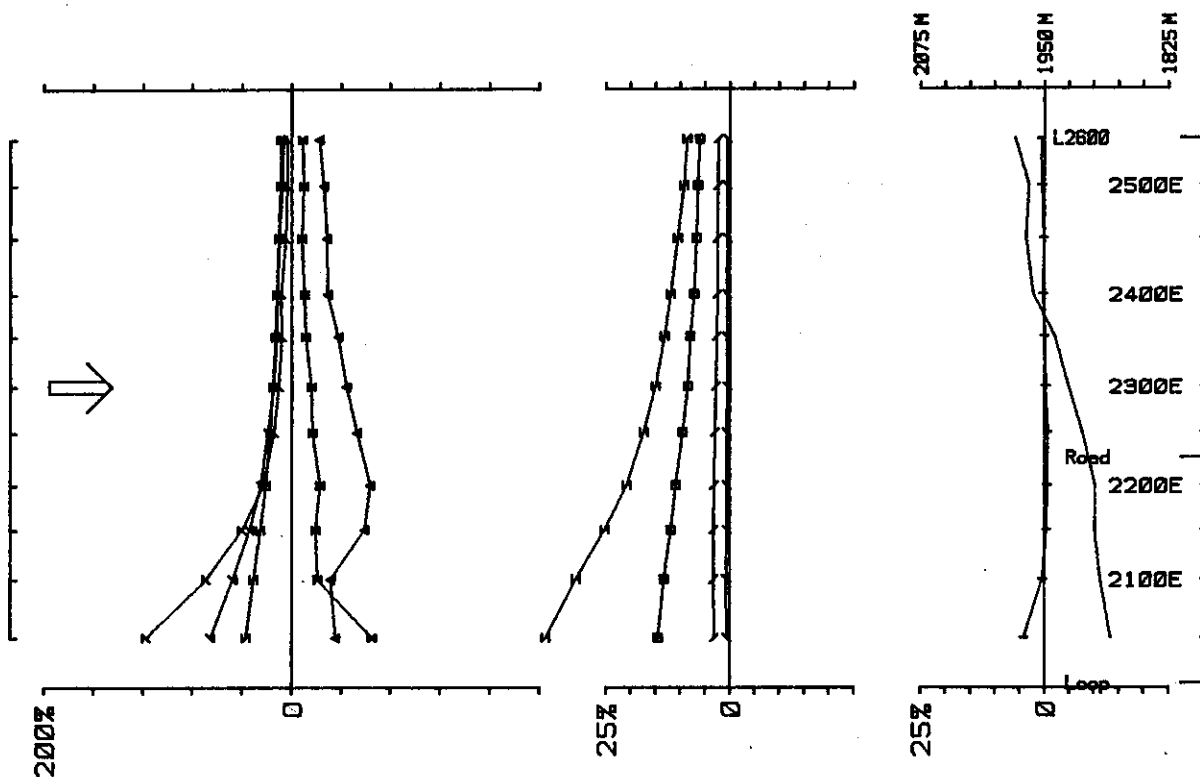
Freq(Hz): 30.974

COMINCO

Loop: 1 Line: 2500S

Hz

D.S. 3



Estella 89

Op: IJ&JGP

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COMINCO

Freq(Hz): 30.974

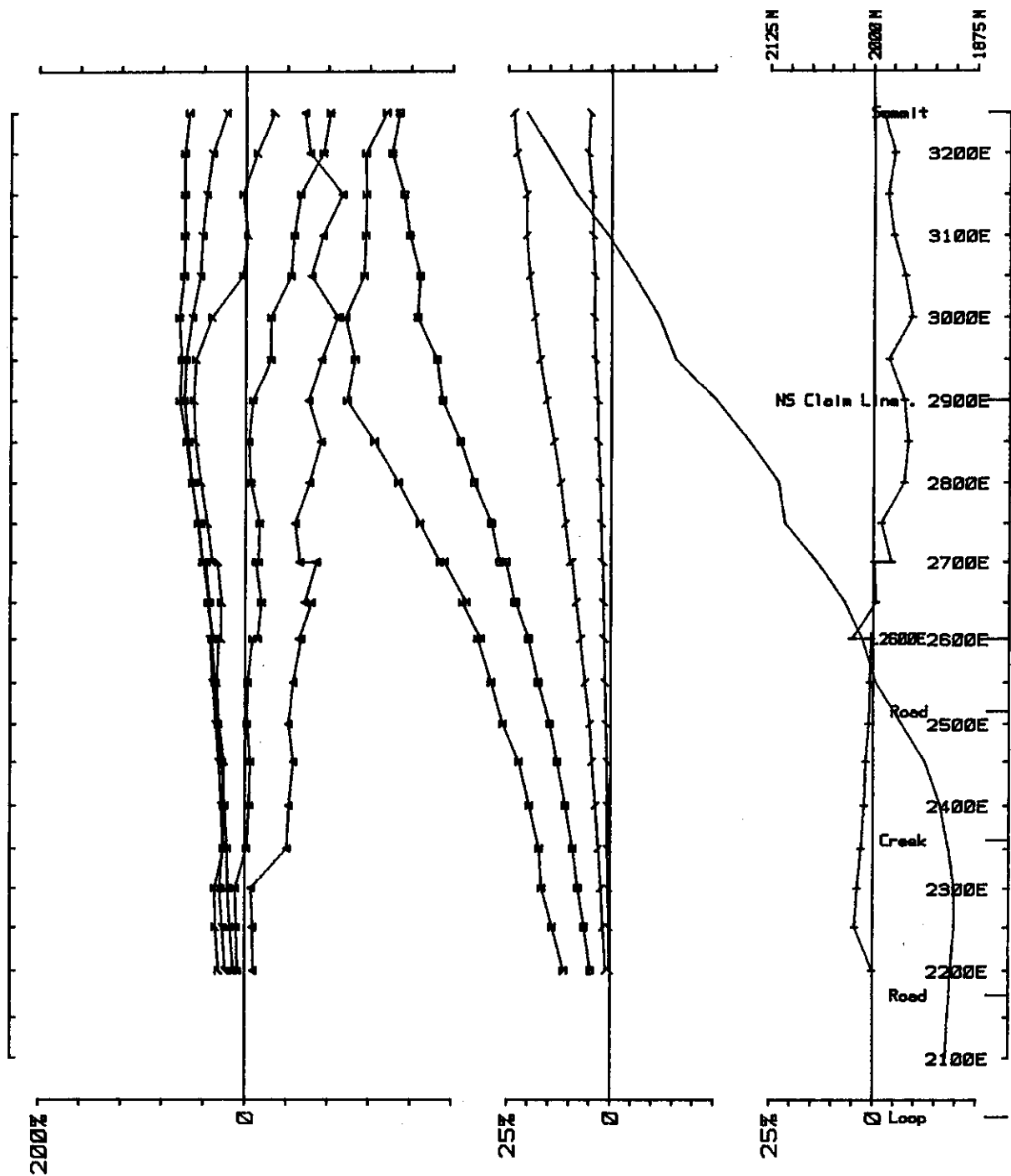
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Hz

Loop: 1

Line: 25005

D.S. 3p



Estella 89

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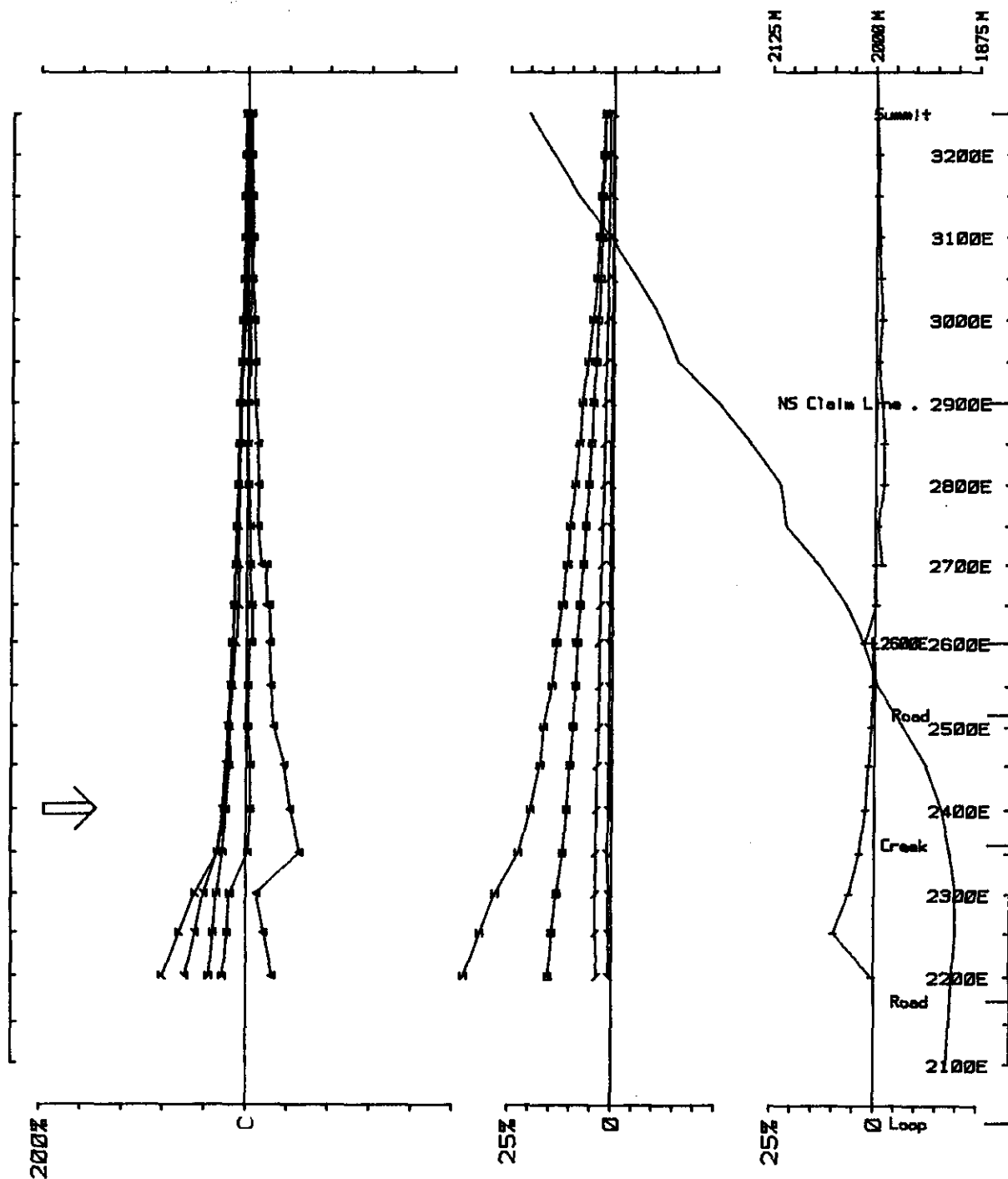
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Freq(Hz): 30.974

COMINCO

Loop: 1 Line: 26255

D.S. 4



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COMINCO

Freq(Hz): 30.974

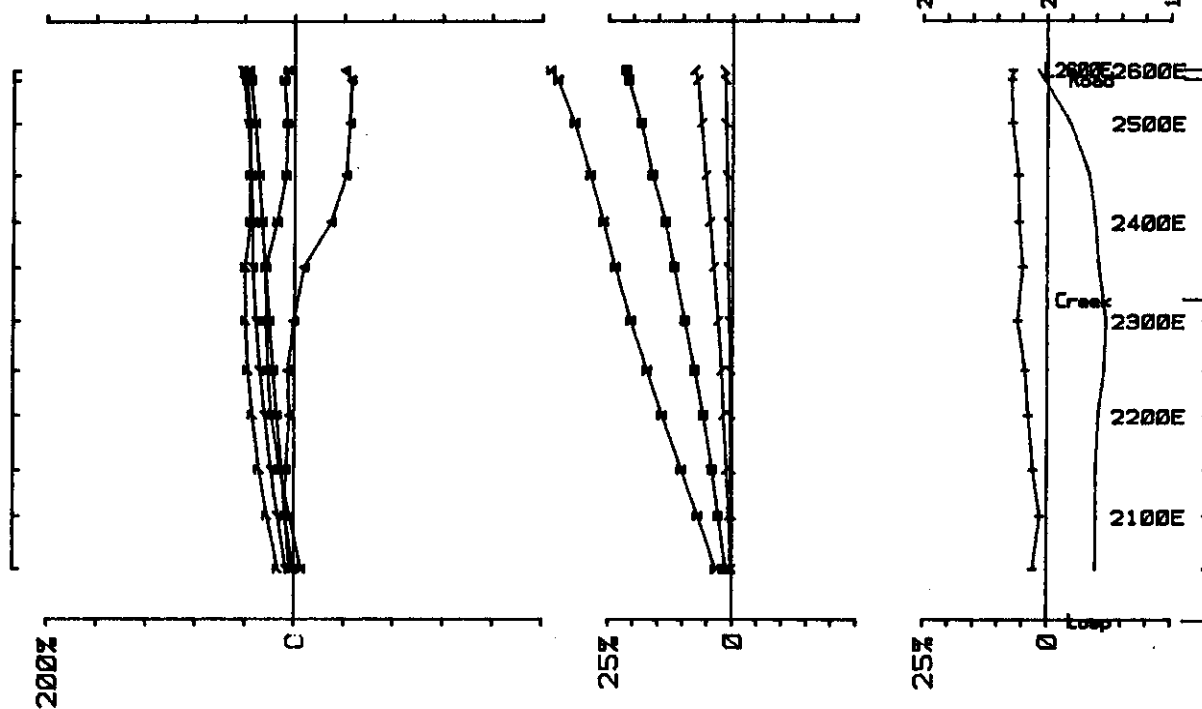
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Hz

Line: 26255

D.S. 4p



Estello 89

Op: IJ&JGP

Freq(Hz): 30.974

COMINCO

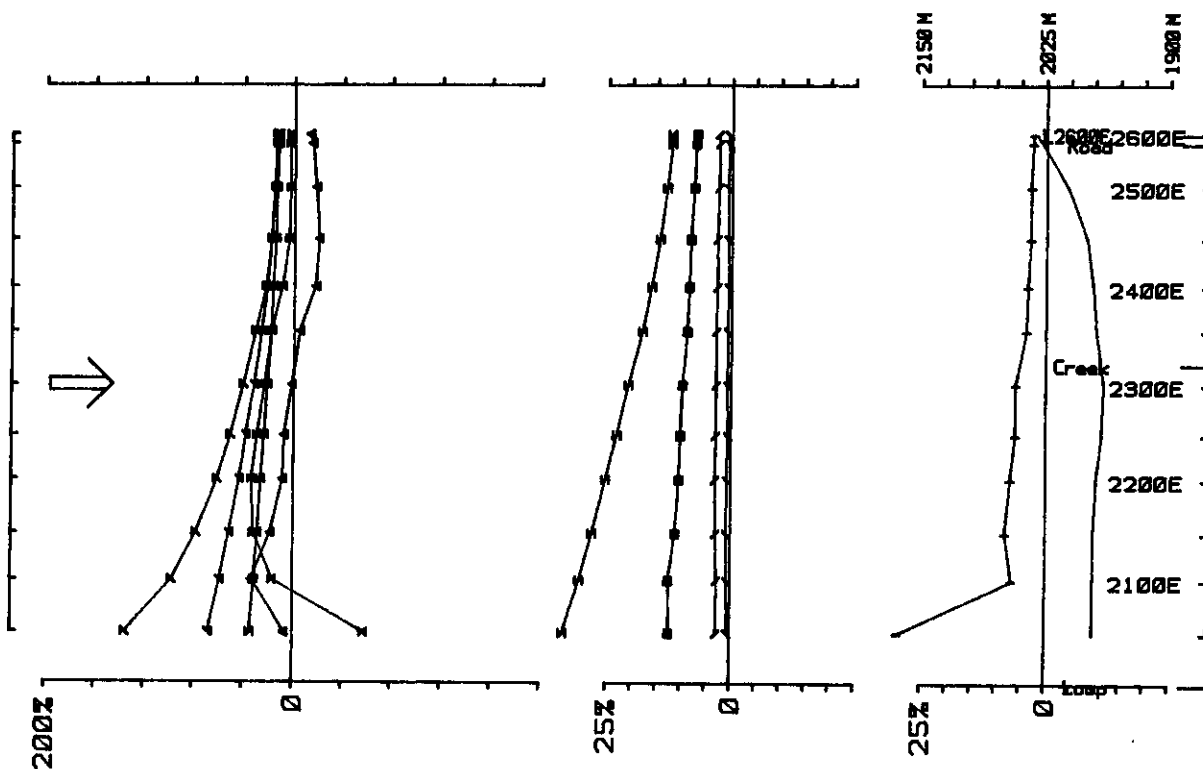
Loop: 1

Hz

Line: 27505

Ch1 reduced. Ch1 normalized.

D.S. 5



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

COMINCO

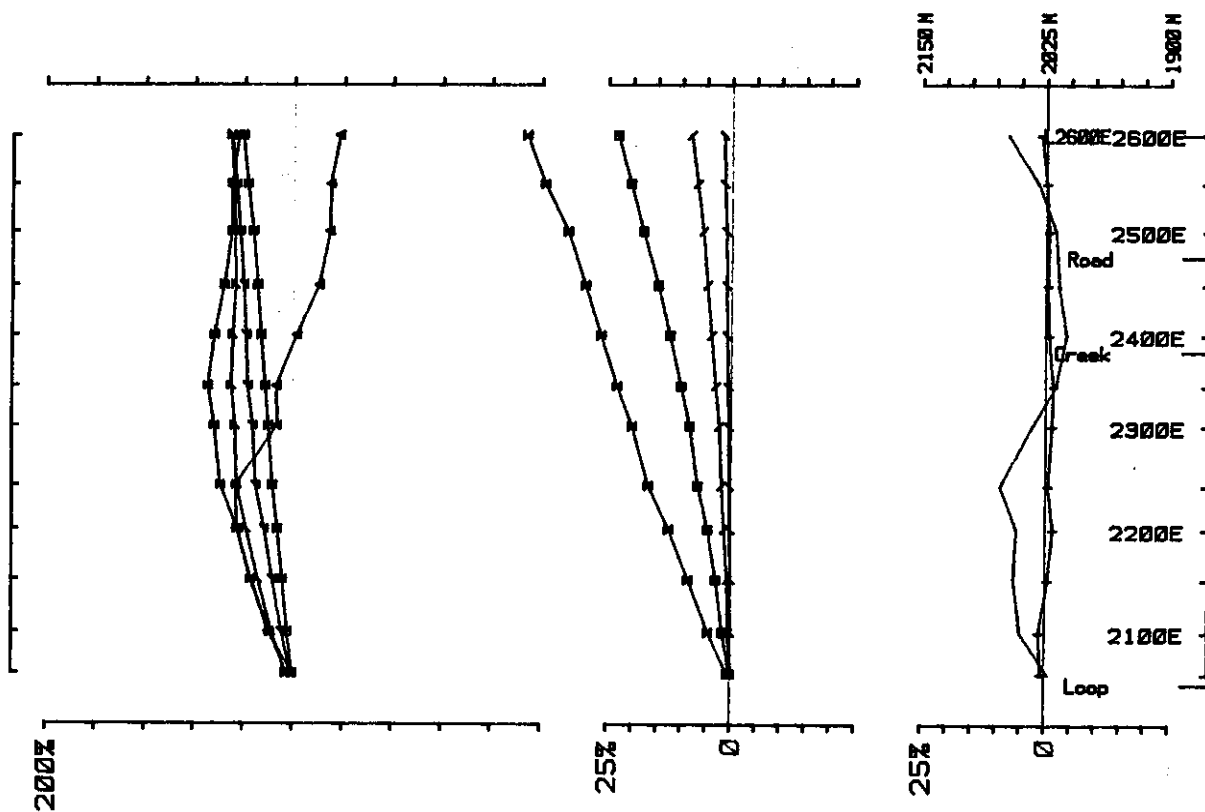
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Point Normalized.

Hz

Loop: 1 Line: 27505

D.S. 5p



Estella 89

Op: IJ&JGP

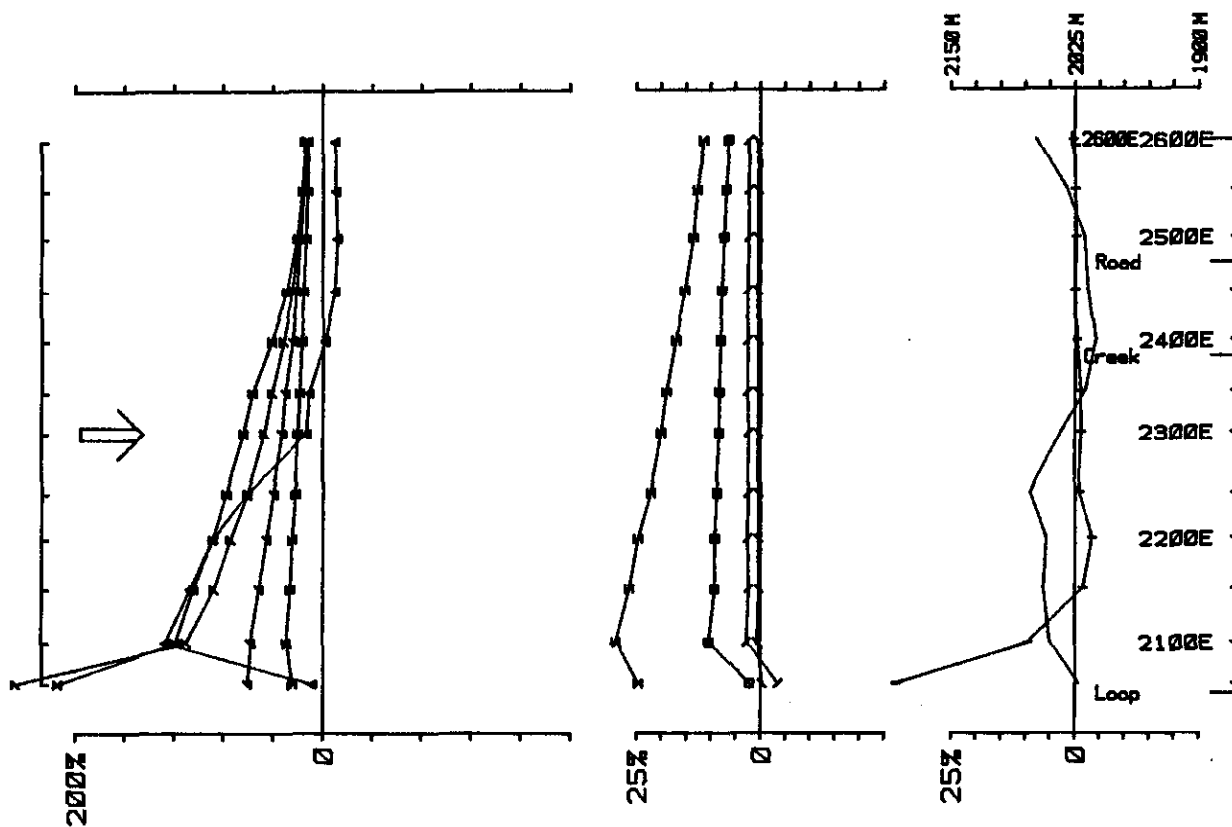
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Freq(Hz): 30.974

COMINCO

Hz
Loop: 1 Line: 28755

D.S. 6



Estella 89

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COMINCO

Freq(Hz): 30.974

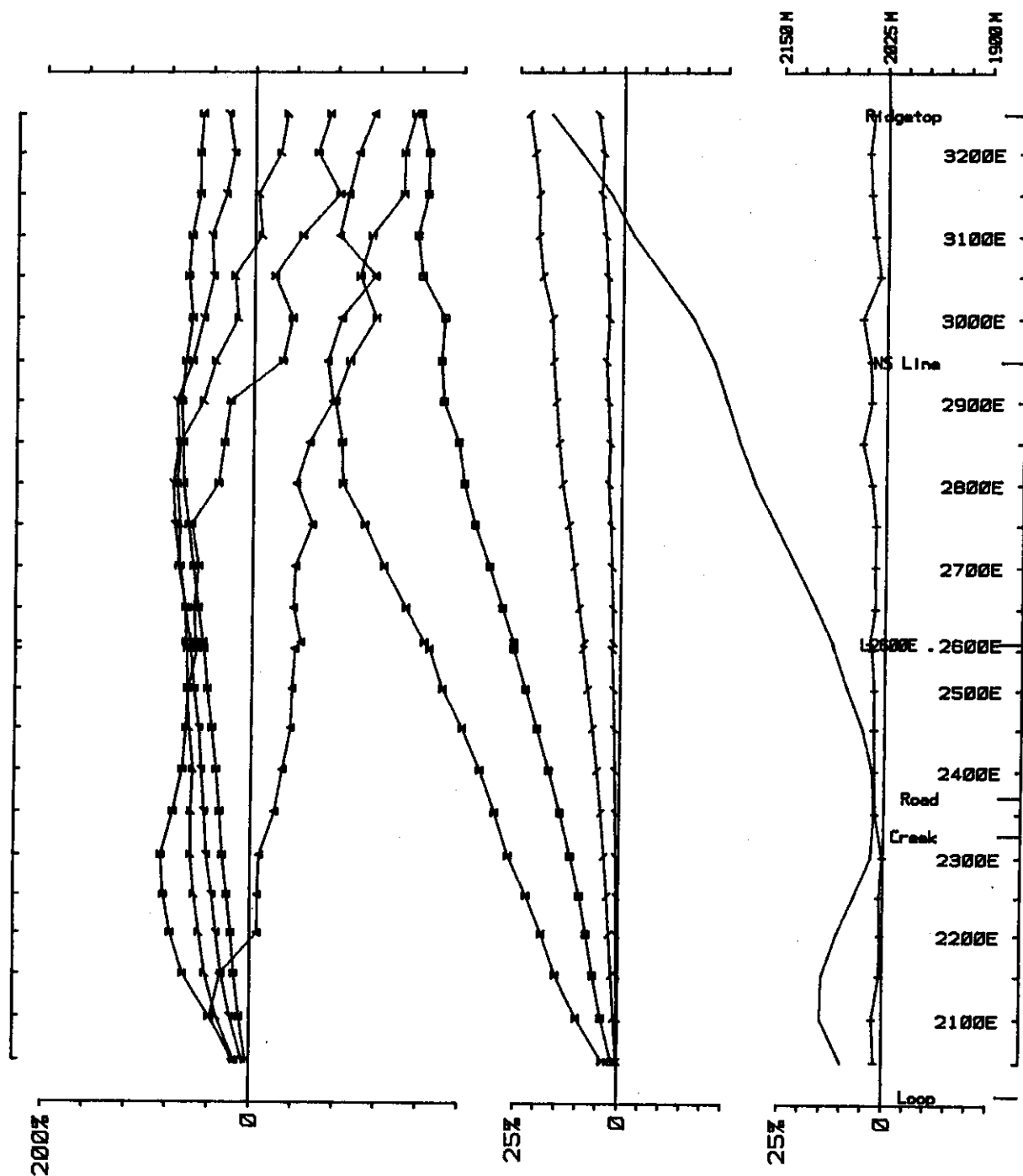
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Line: 28755

D.S. 6p



Estella 89

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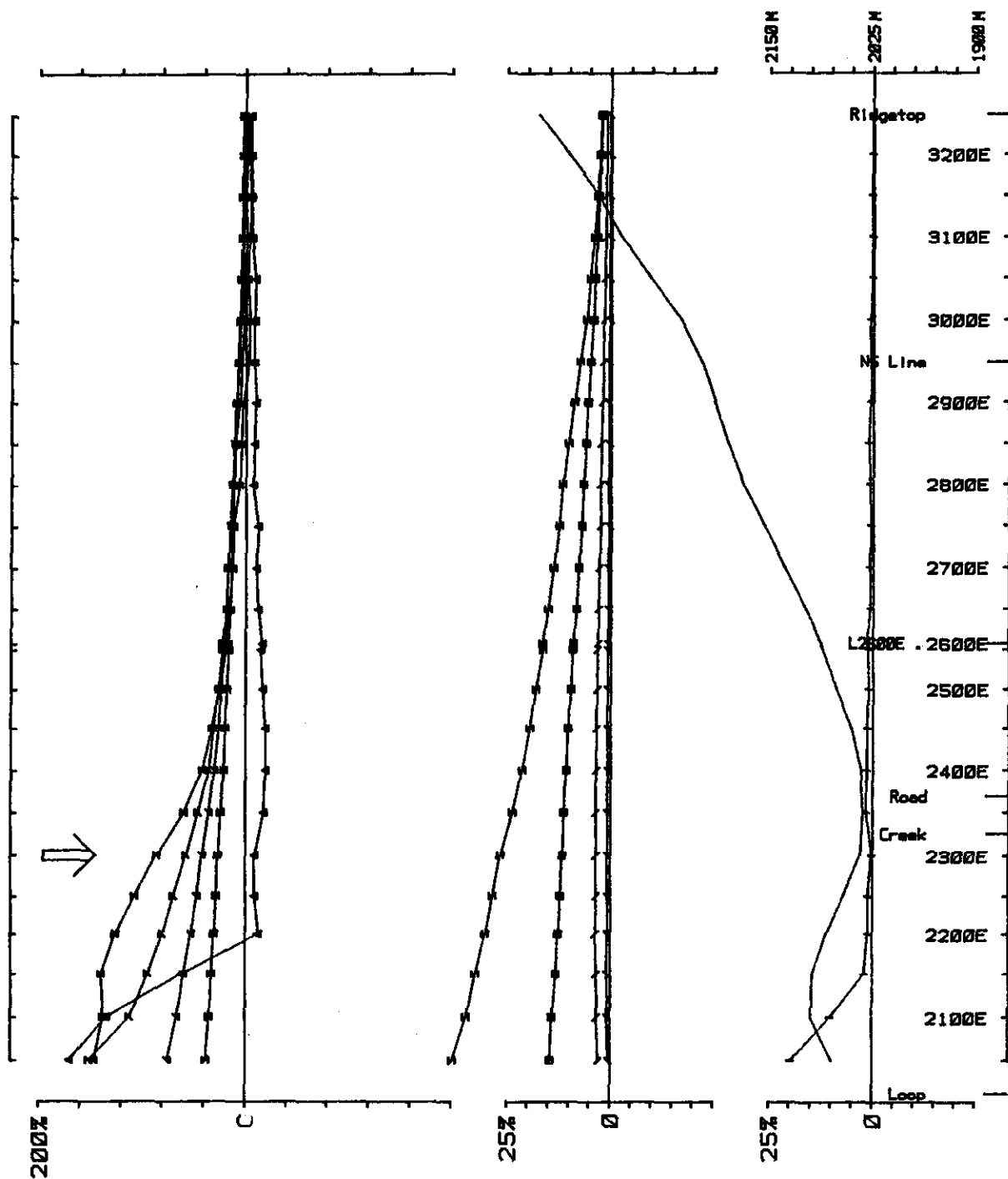
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COMINCO

Hz
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D.S. 7



Estella 89

Op: IJ&JGP

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COMINCO

Freq(Hz): 30.974

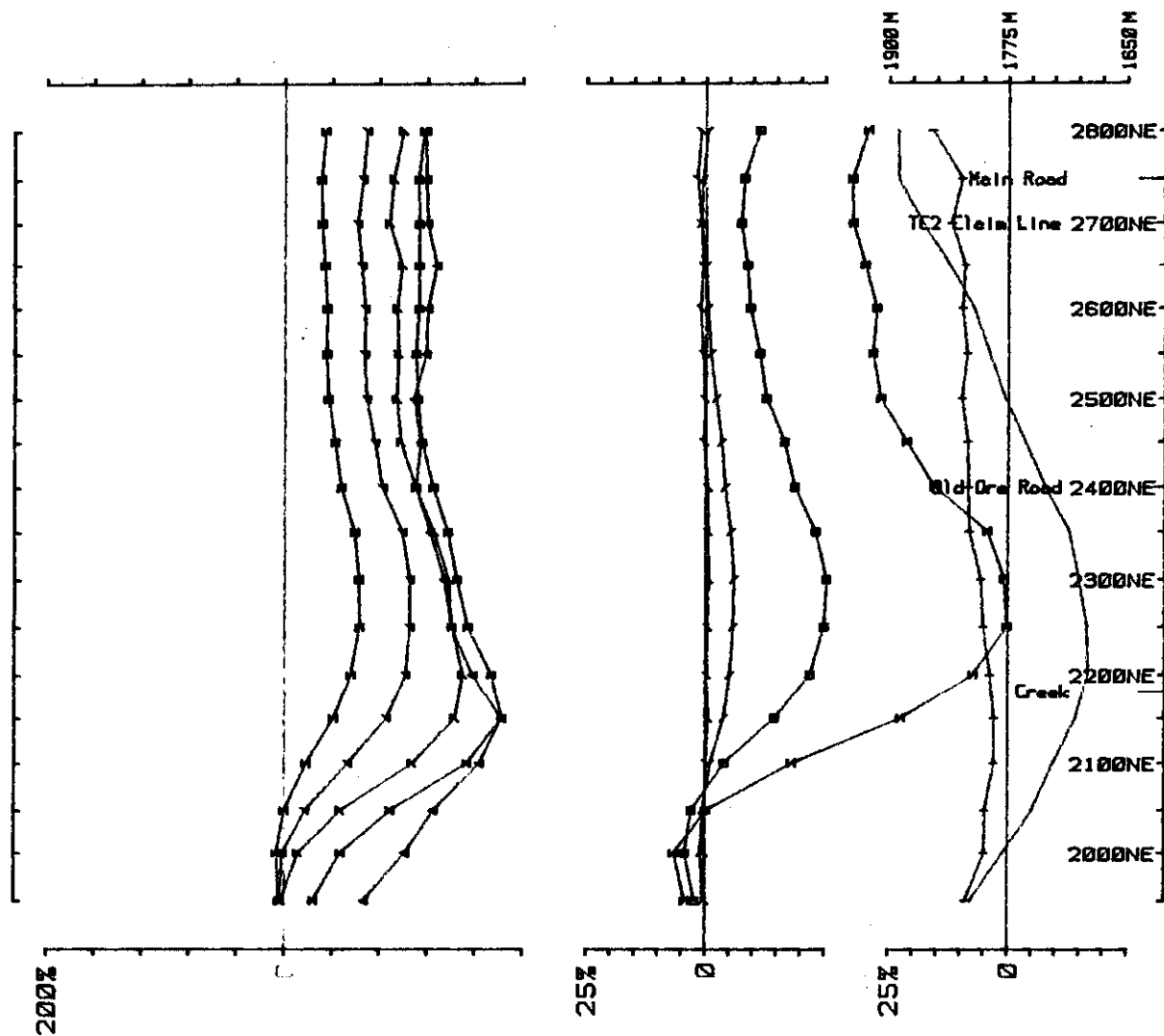
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Hz

Loop: 1

Line: 3000S

D.S. 7p



Estella 89

Op: IJ&JGP

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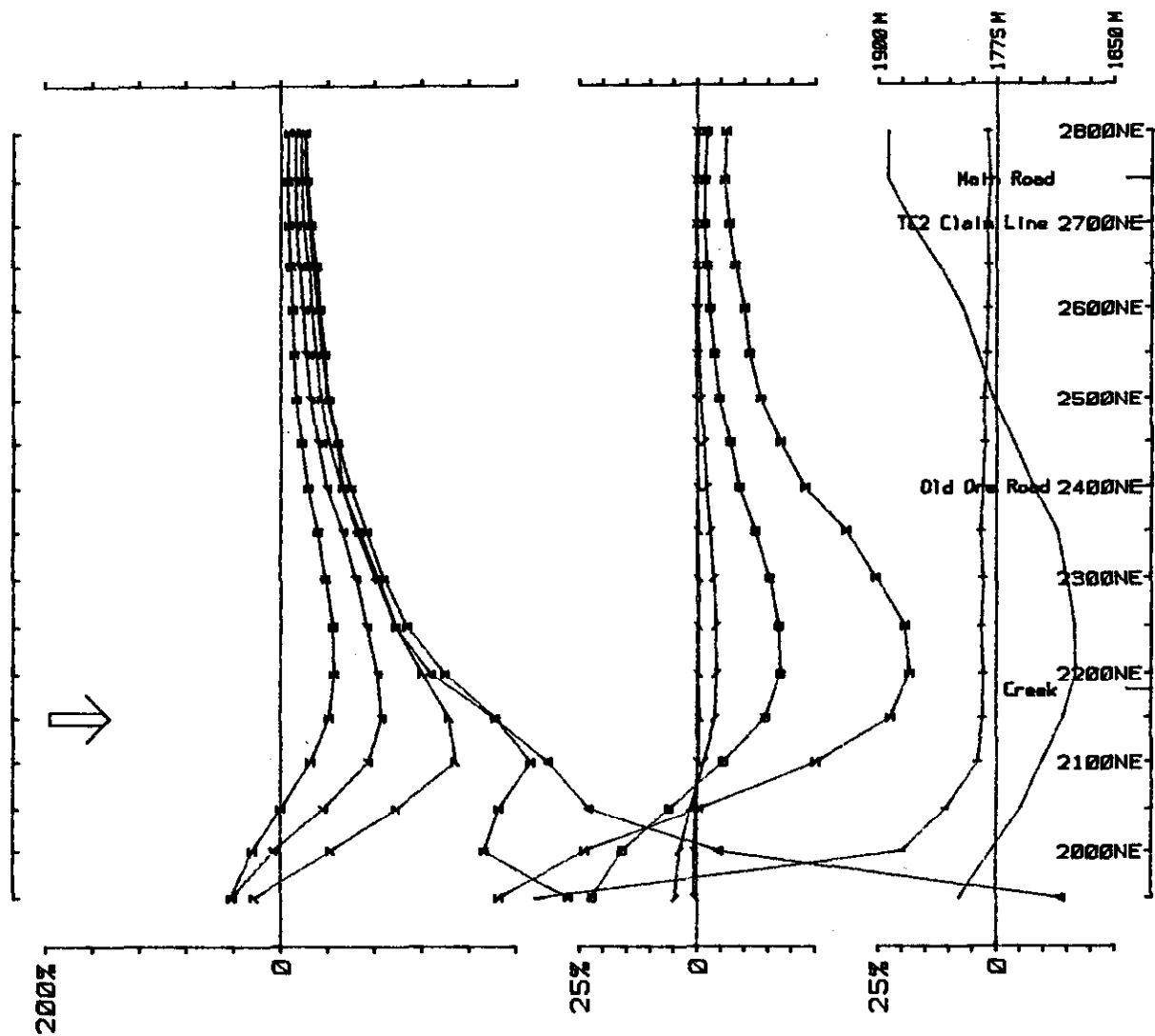
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Hz

Loop: 1

Line: 19005

D.S. 8



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

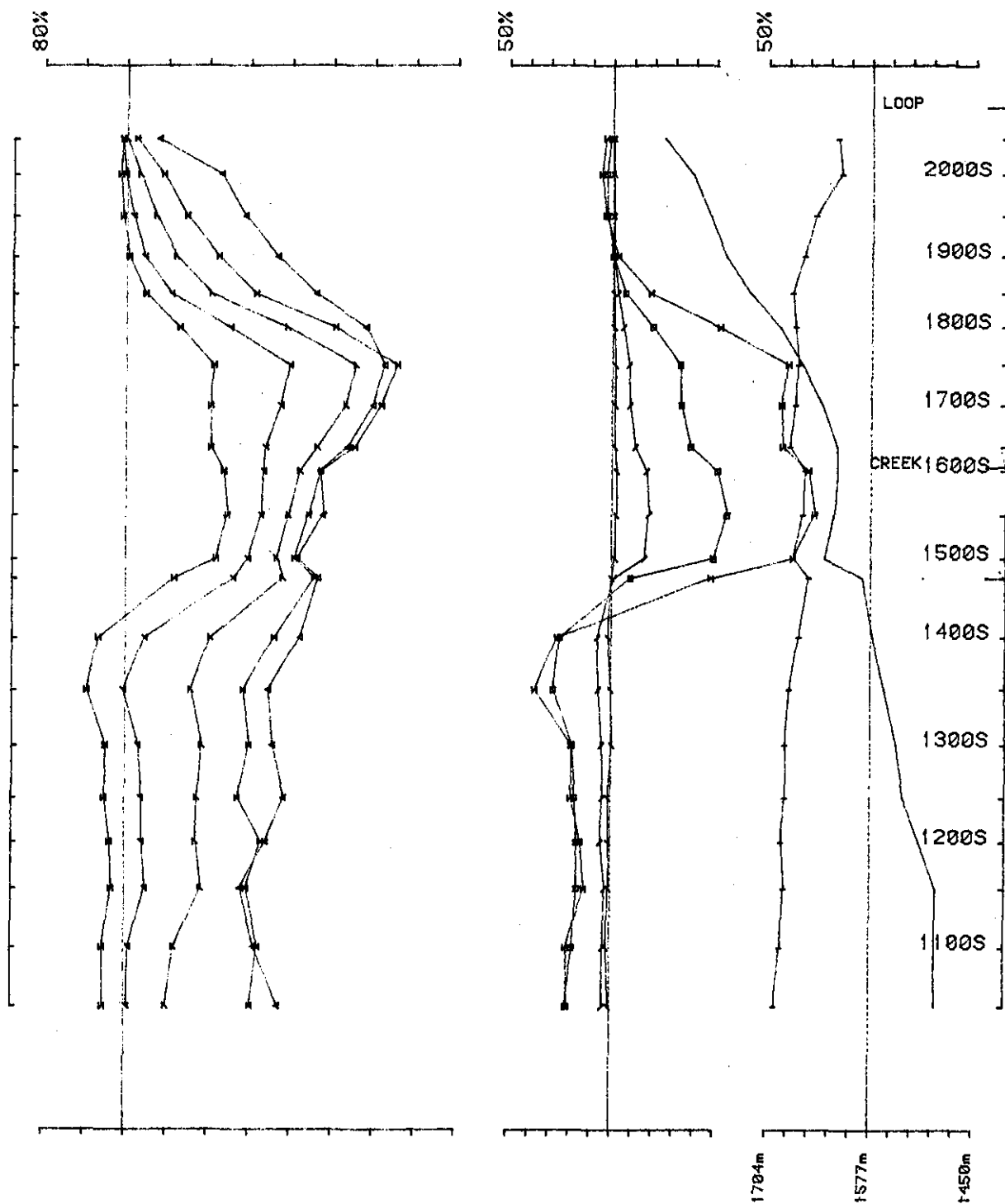
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Hz

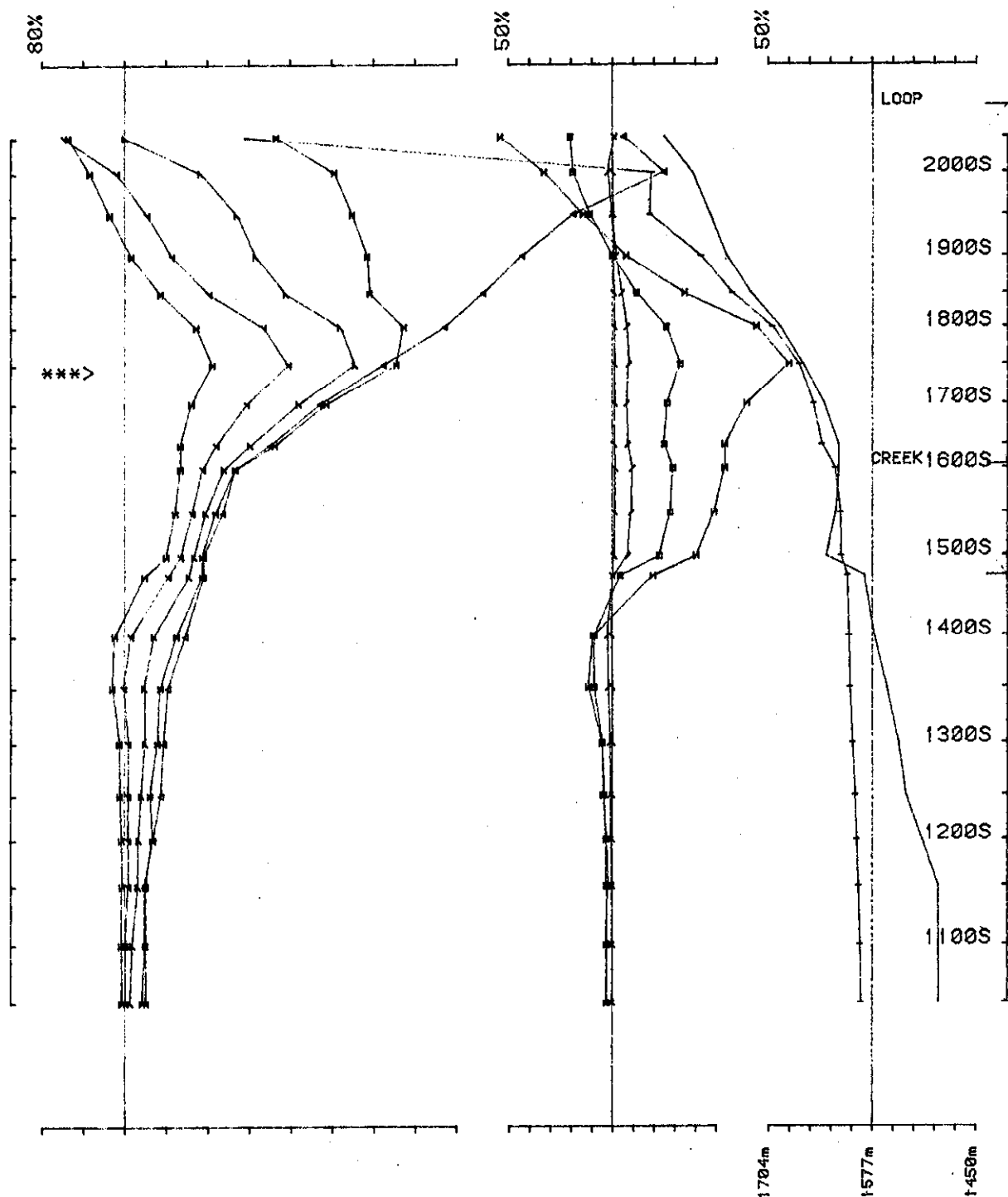
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D.S. 8p

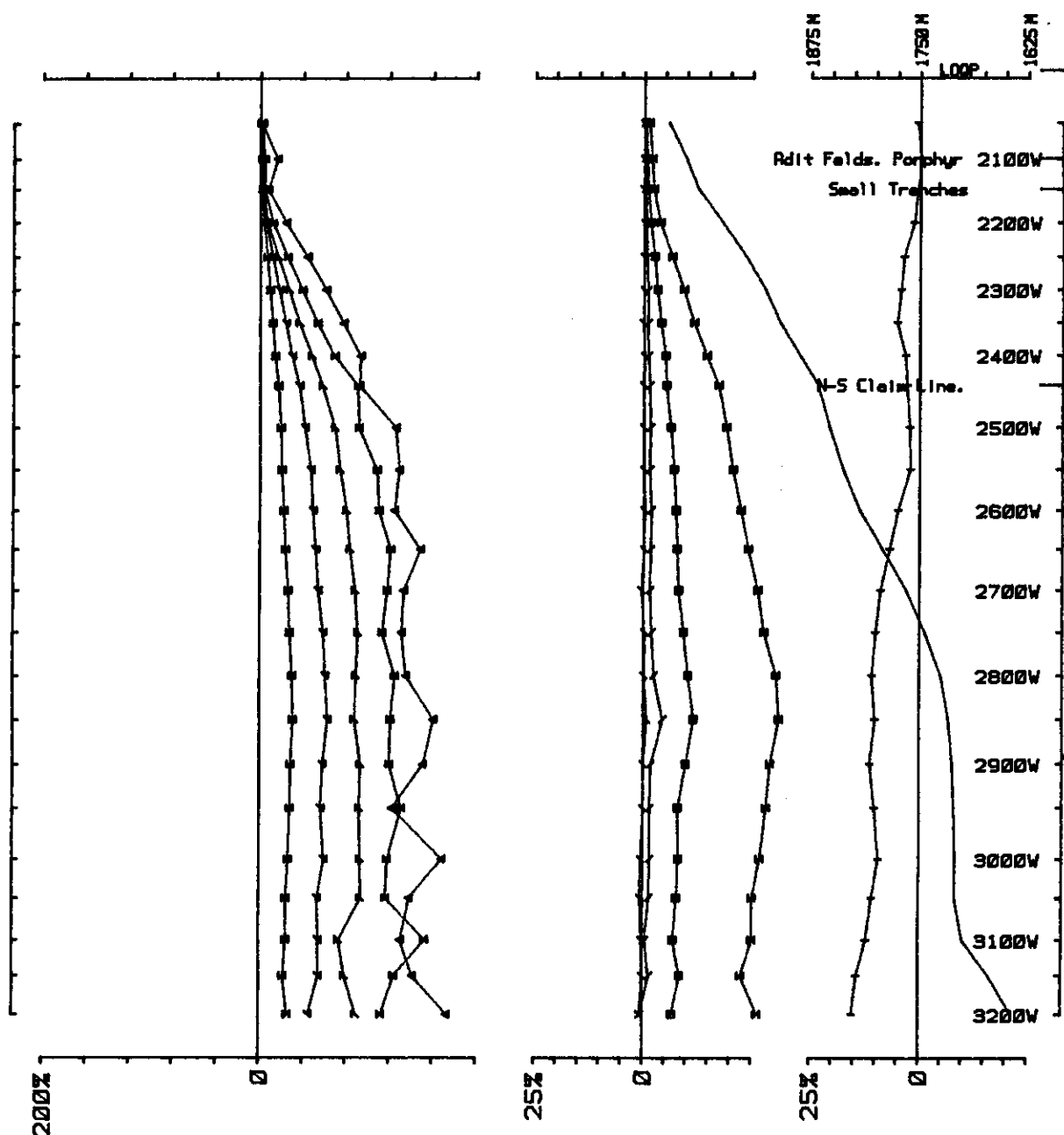


Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 1 Line 2100 S.component Hz secondary Ch 1 normalized Ch 1 reduced



Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
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D.S. 9p



Estella 89

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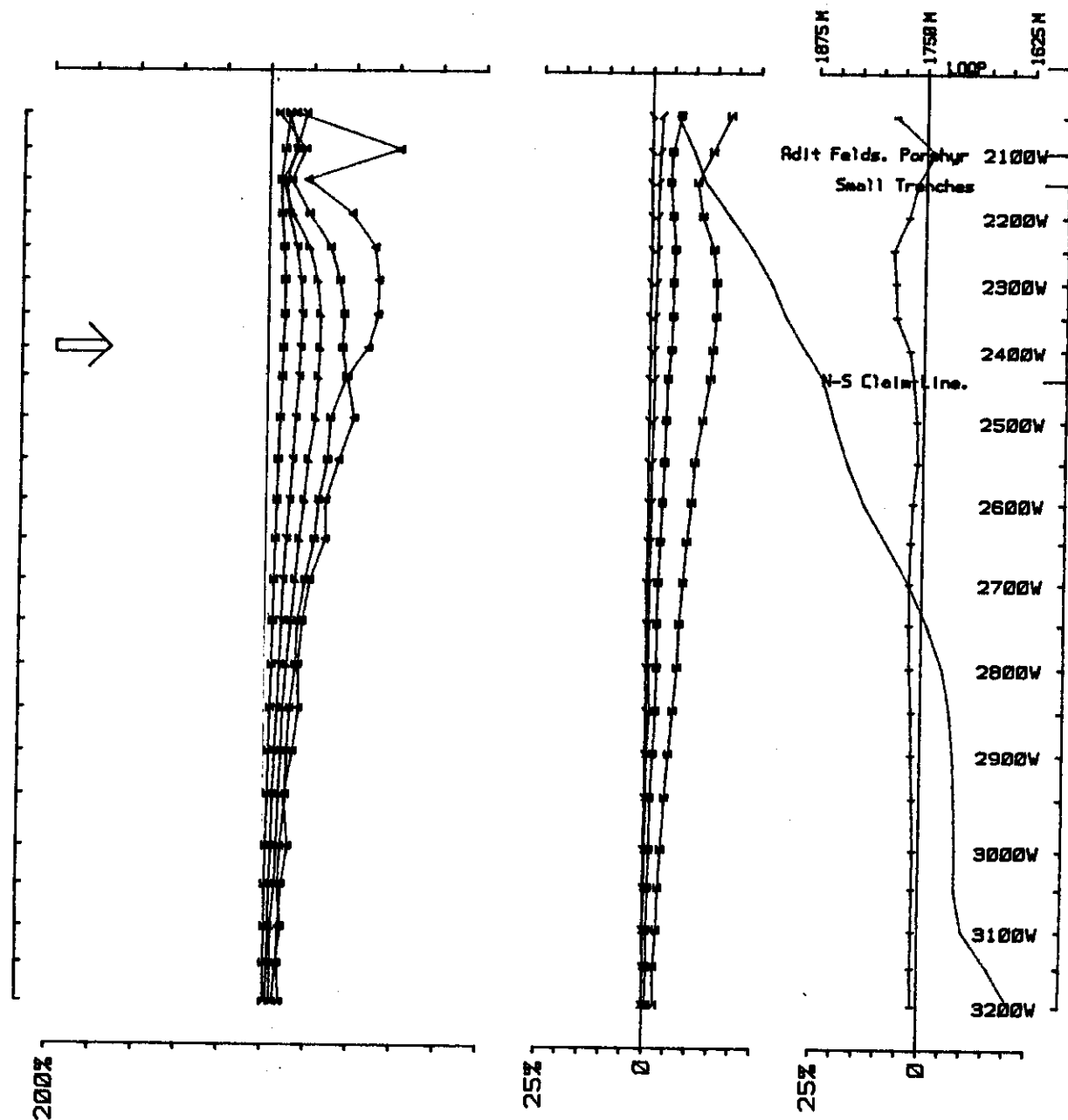
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COMINCO

Loop: 1 Line: 4100S

D.S. 10



Estella 89

Op: IJ&JGP

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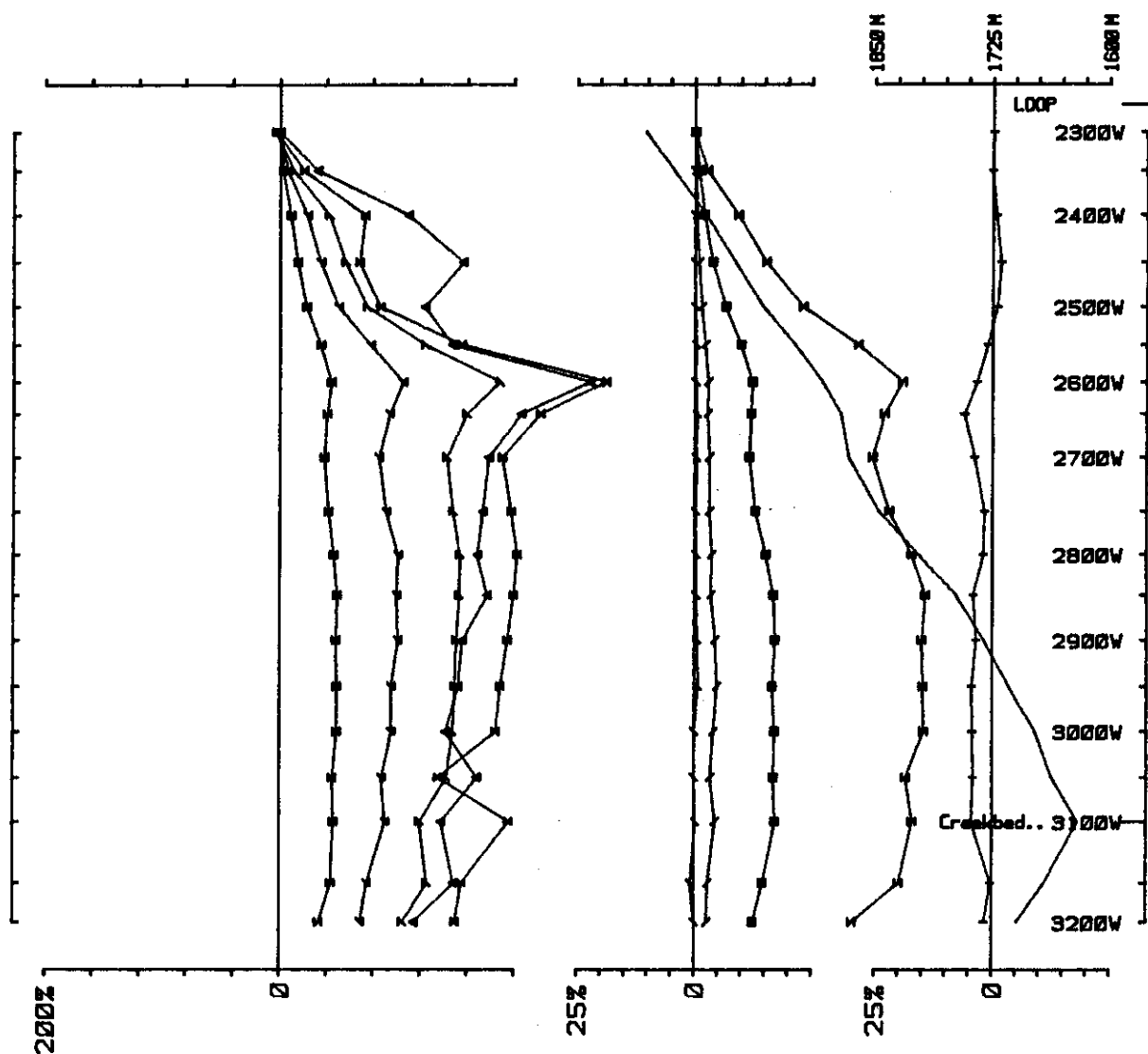
Freq(Hz): 30.974

COMINCO

Point Normalized.

Loop: 1 Line: 41005

D.S. 10p



Estella 89

Op: IJ&JGP

Freq(Hz): 30.974

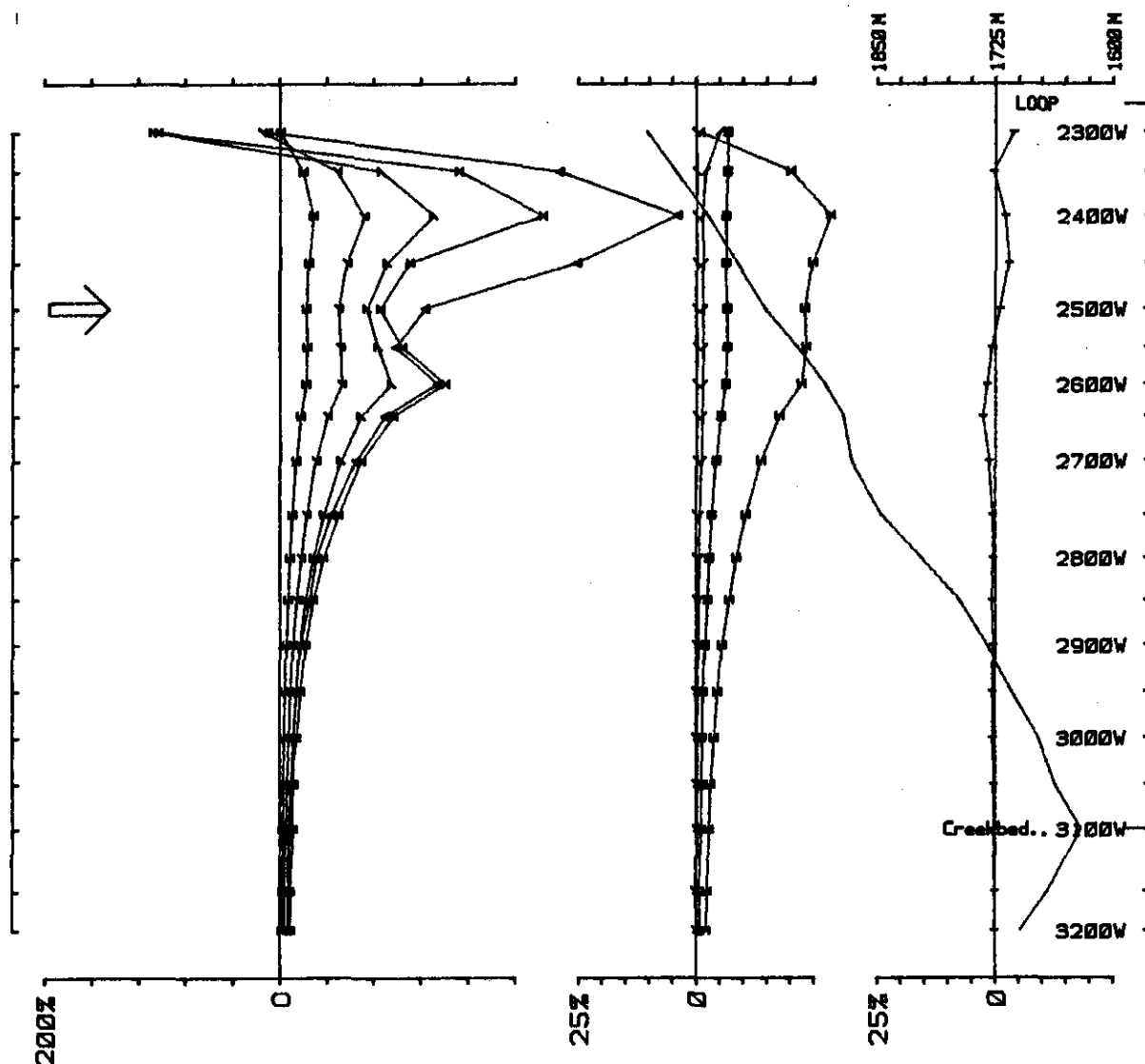
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COMINCO

Hz

Loop: 1 Line: 51005

D.S. II



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

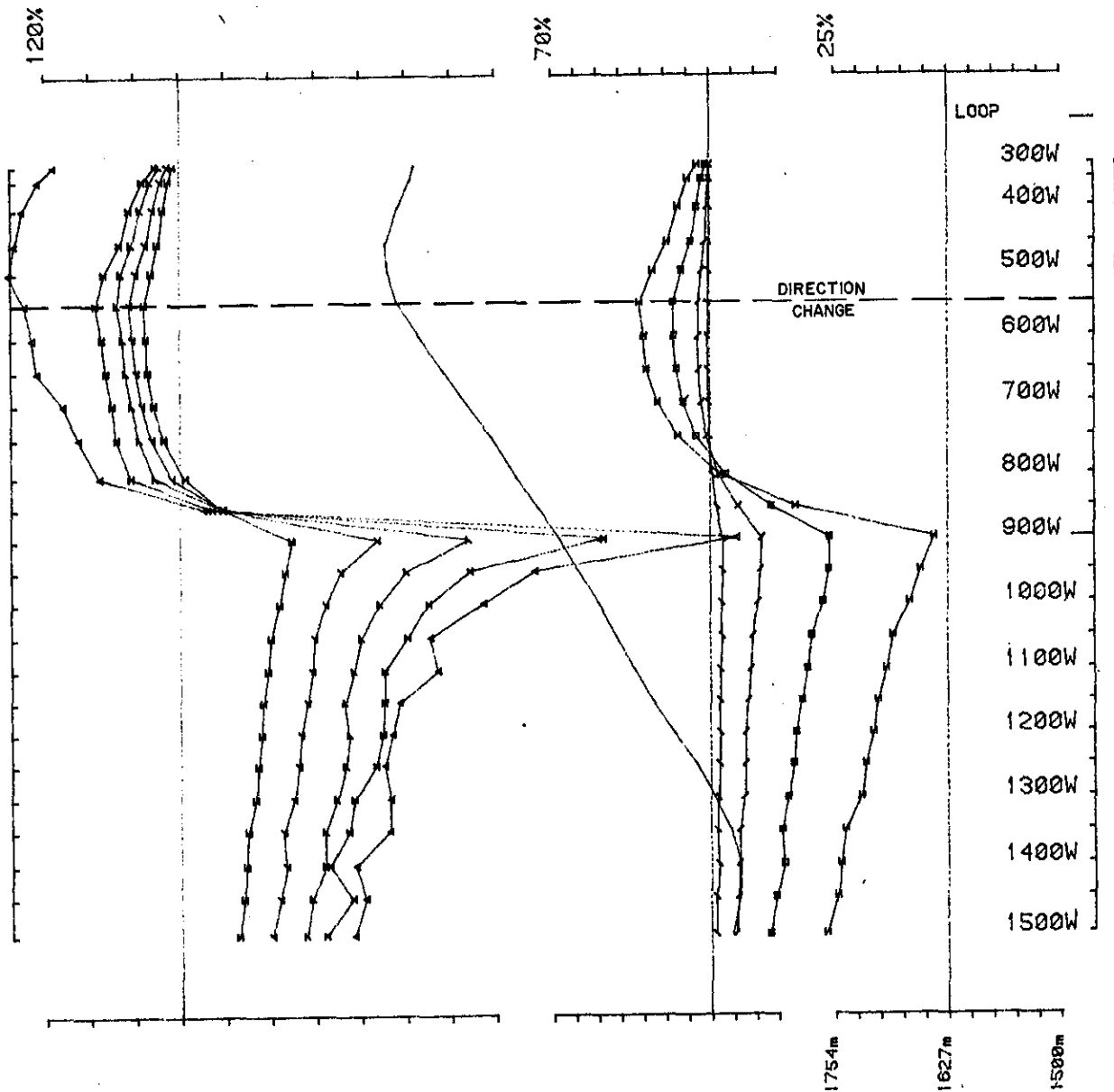
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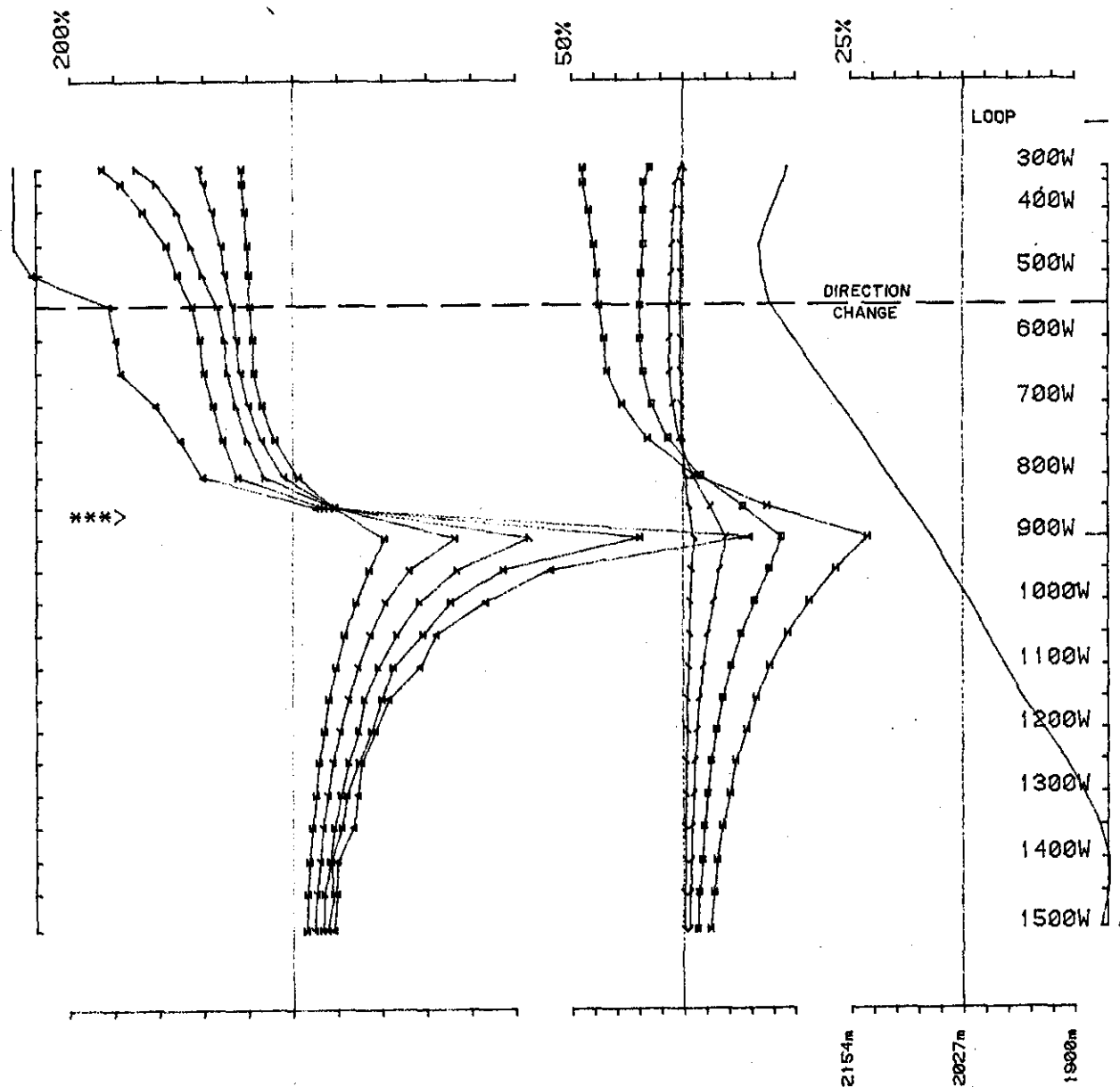
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D.S. 11p



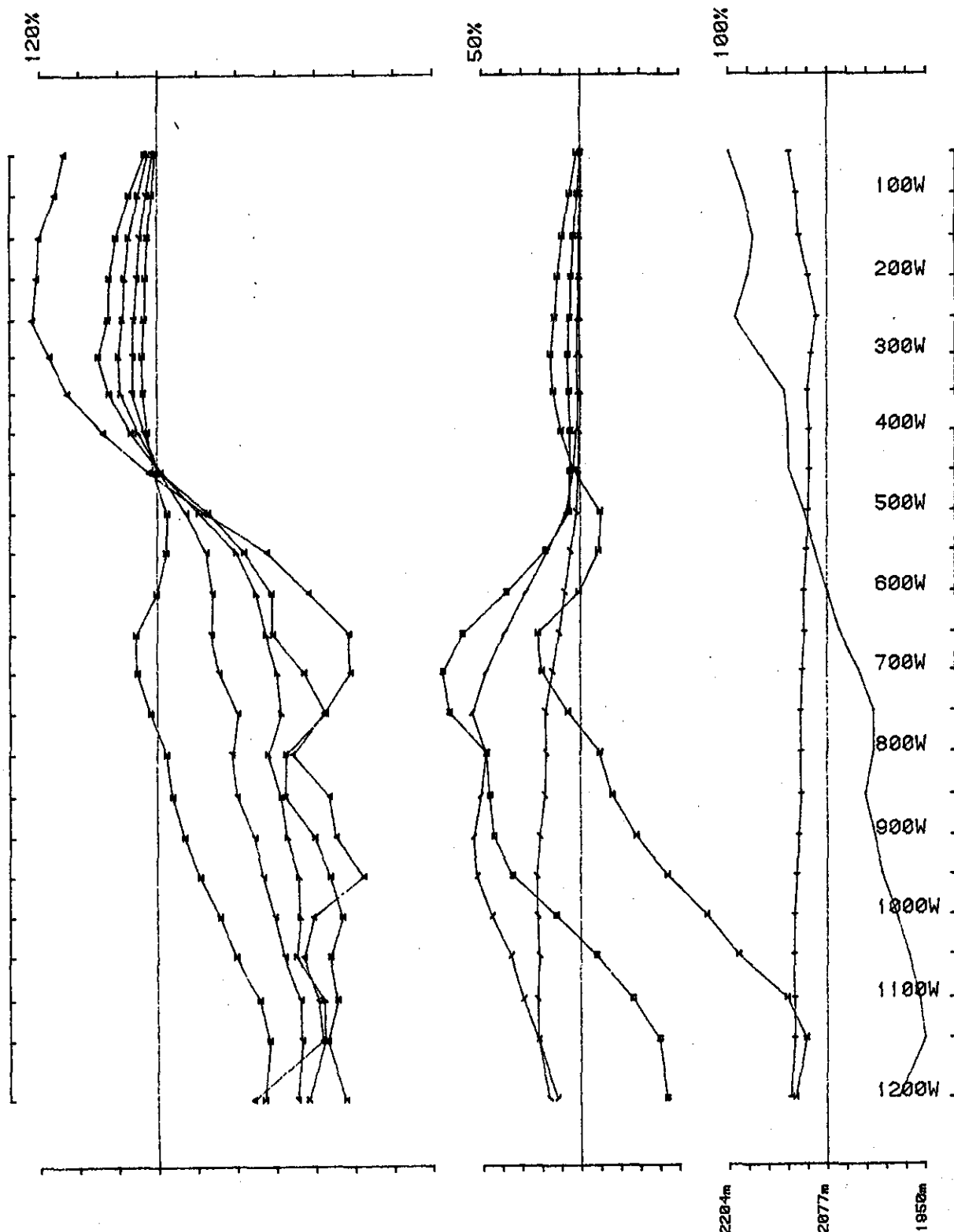
Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 1 Line 6100S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 12

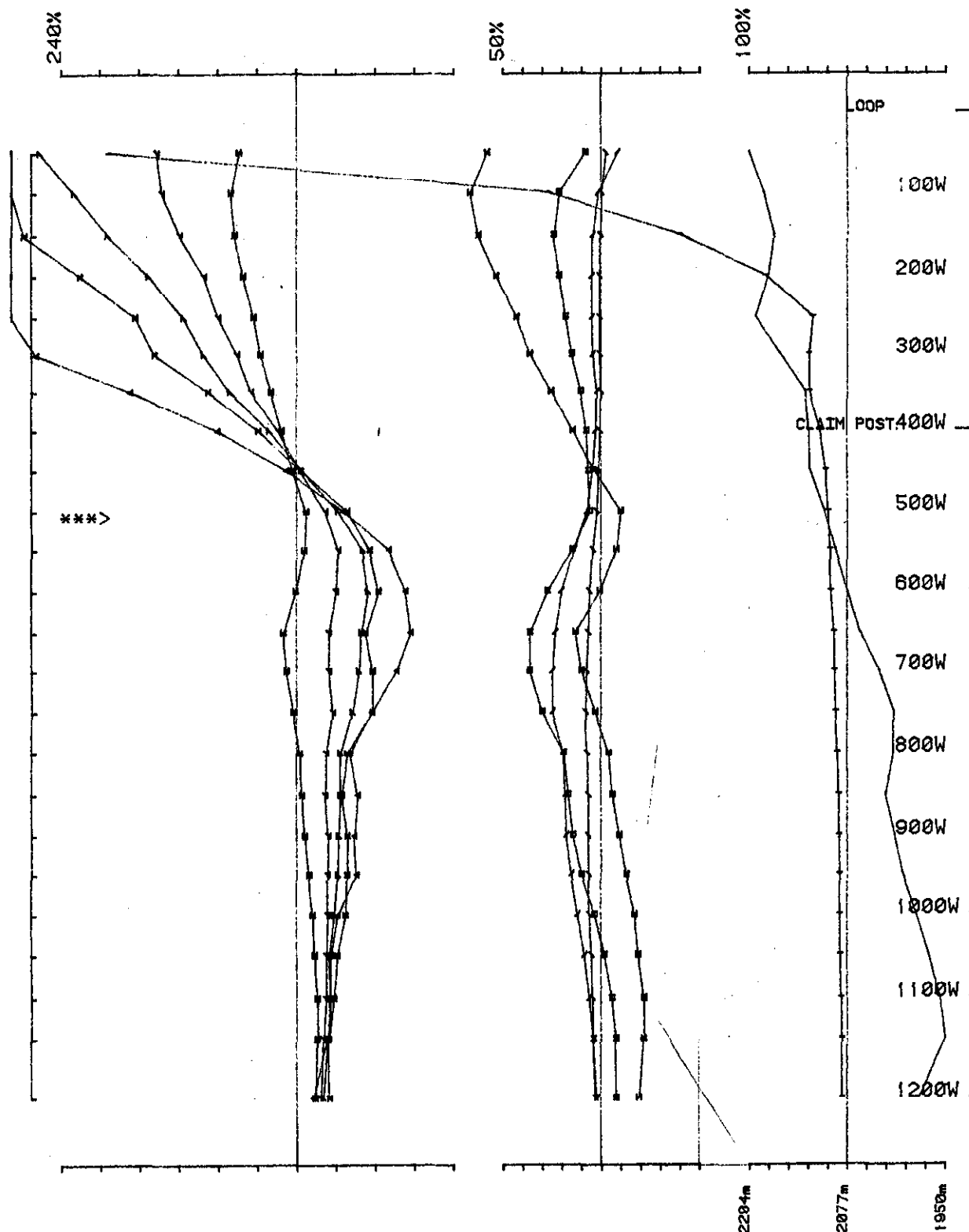


Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Loopno 1 Line 6100S component Hz secondary Ch 1 normalized Ch 1 reduced

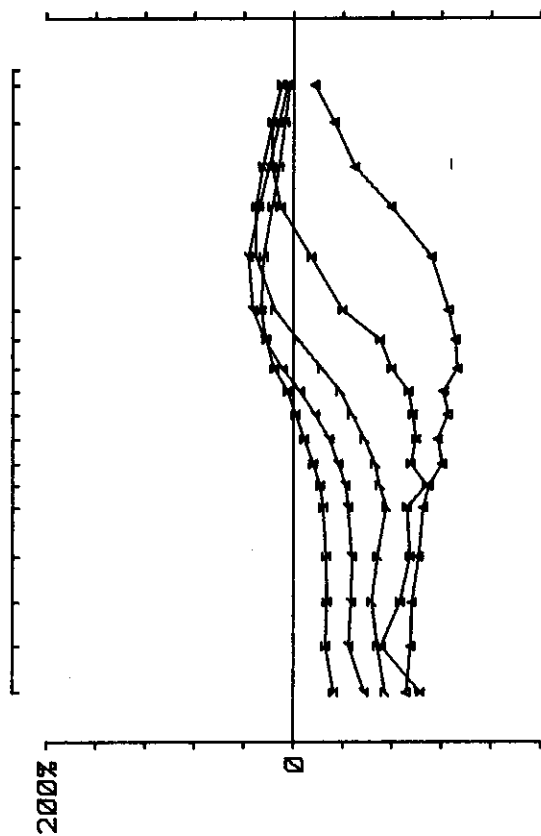
D.S. 12p



Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 1 Line 7100S component Hz secondary Ch 1 normalized Ch 1 reduced



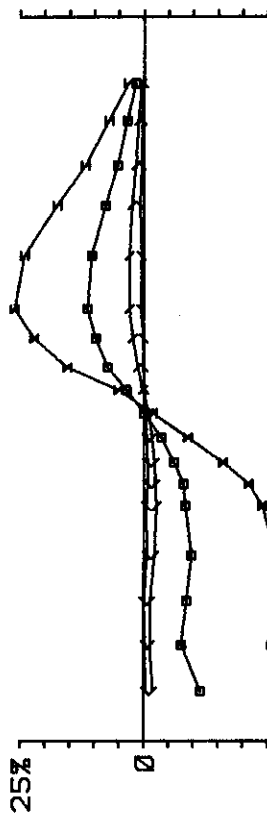
Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 1 Line 7100S component Hz secondary Ch 1 normalized Ch 1 reduced



Estella 89

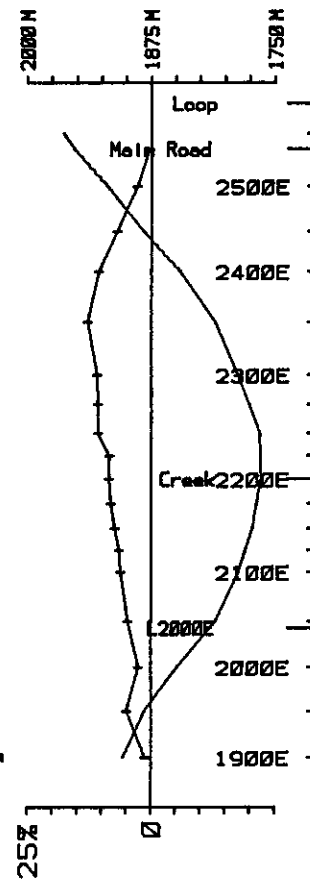
Op: IJ&JGP

Ch1 reduced. Ch1 normalized.



COMINCO

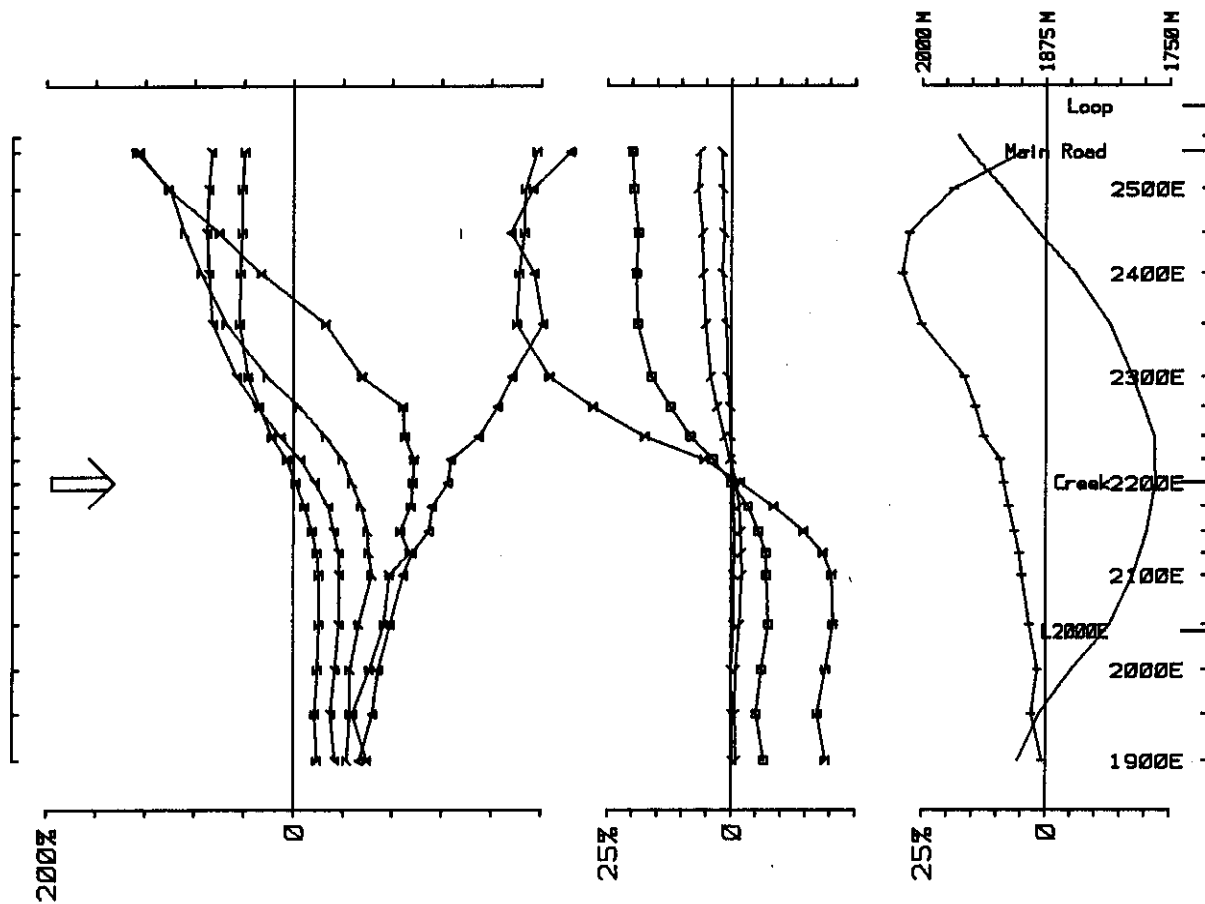
Freq(Hz): 30.974



Hz

Loop: 2 Line: 2000S

D.S. 14



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

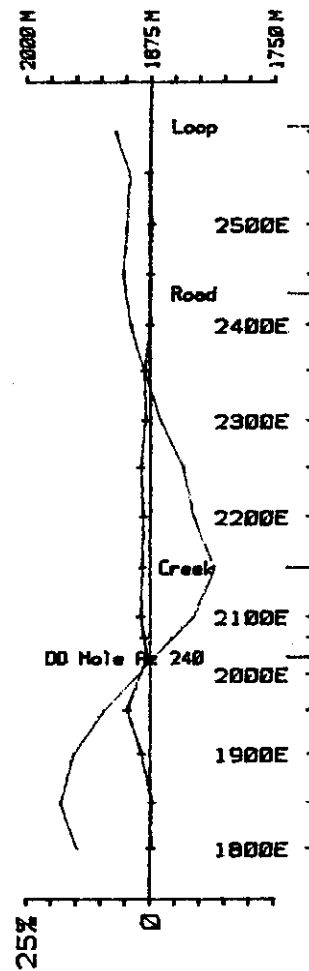
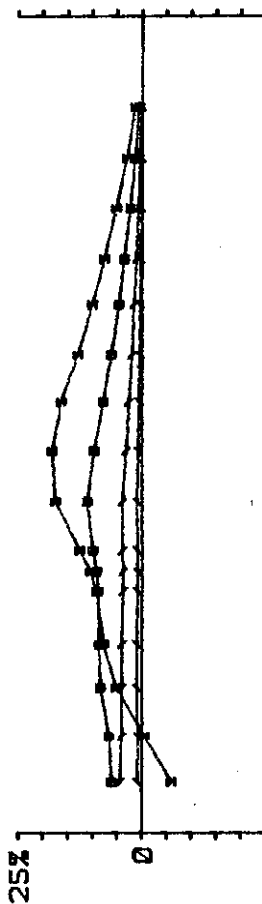
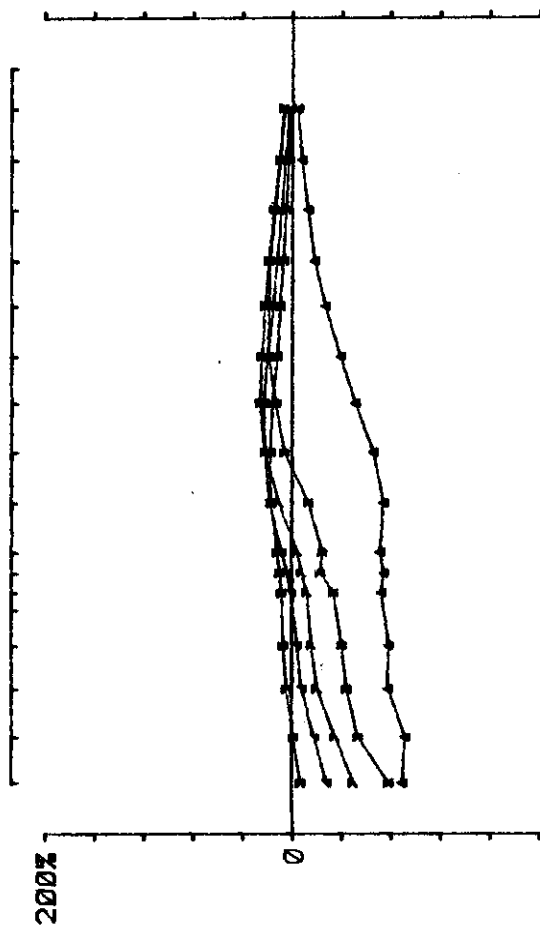
Point Normalized.

Hz

Loop: 2

Line: 2000S

D.S. 14p



Estello 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

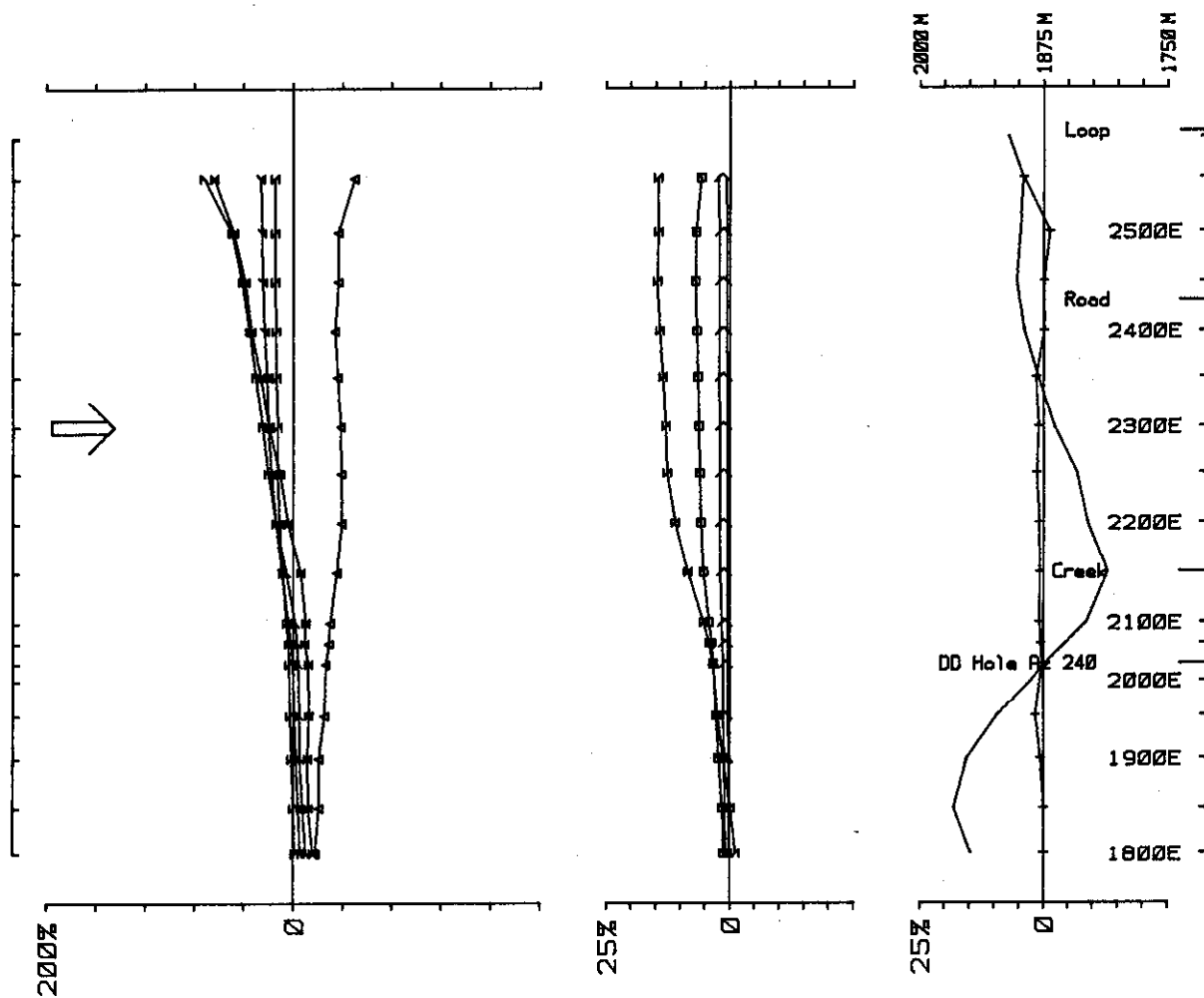
Freq(Hz): 30.974

COMINCO

Loop: 2 Line: 22505

Hz

D.S. 15



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

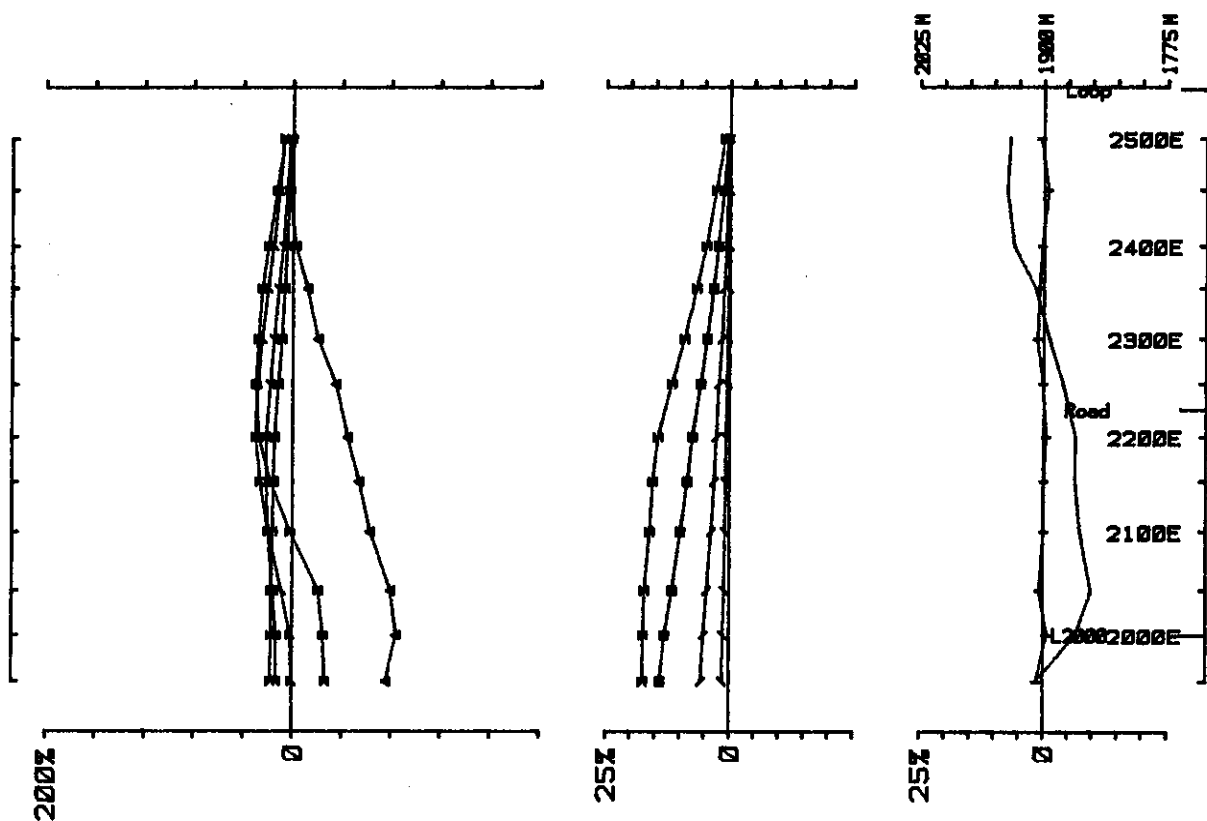
COMINCO

Freq(Hz): 30.974

Point Normalized.

Hz
Loop: 2 Line: 22505

D.S. 15p



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

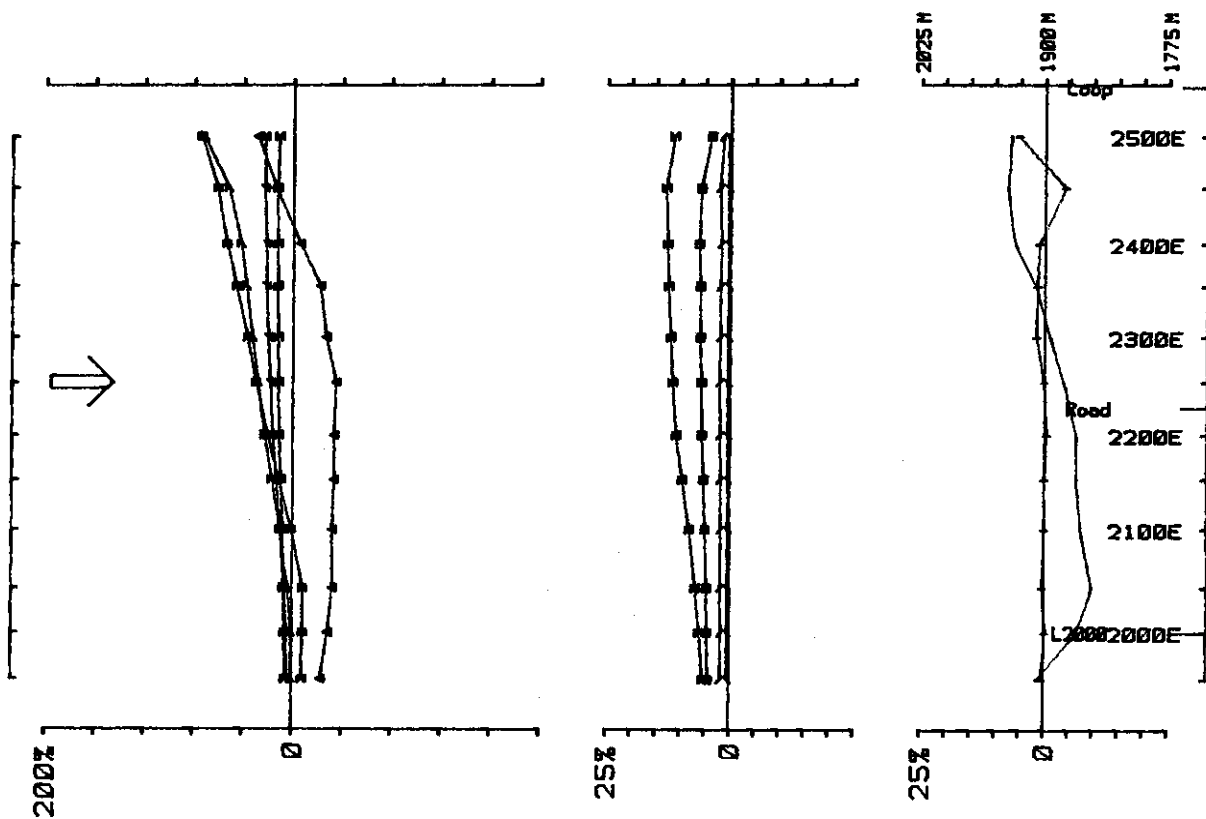
COMINCO

Freq(Hz): 30.974

Hz

Loop: 2 Line: 2500S

D.S. 16



Estella 89

COMINCO

Hz

Op: IJ&JGP

Freq(Hz): 30.974

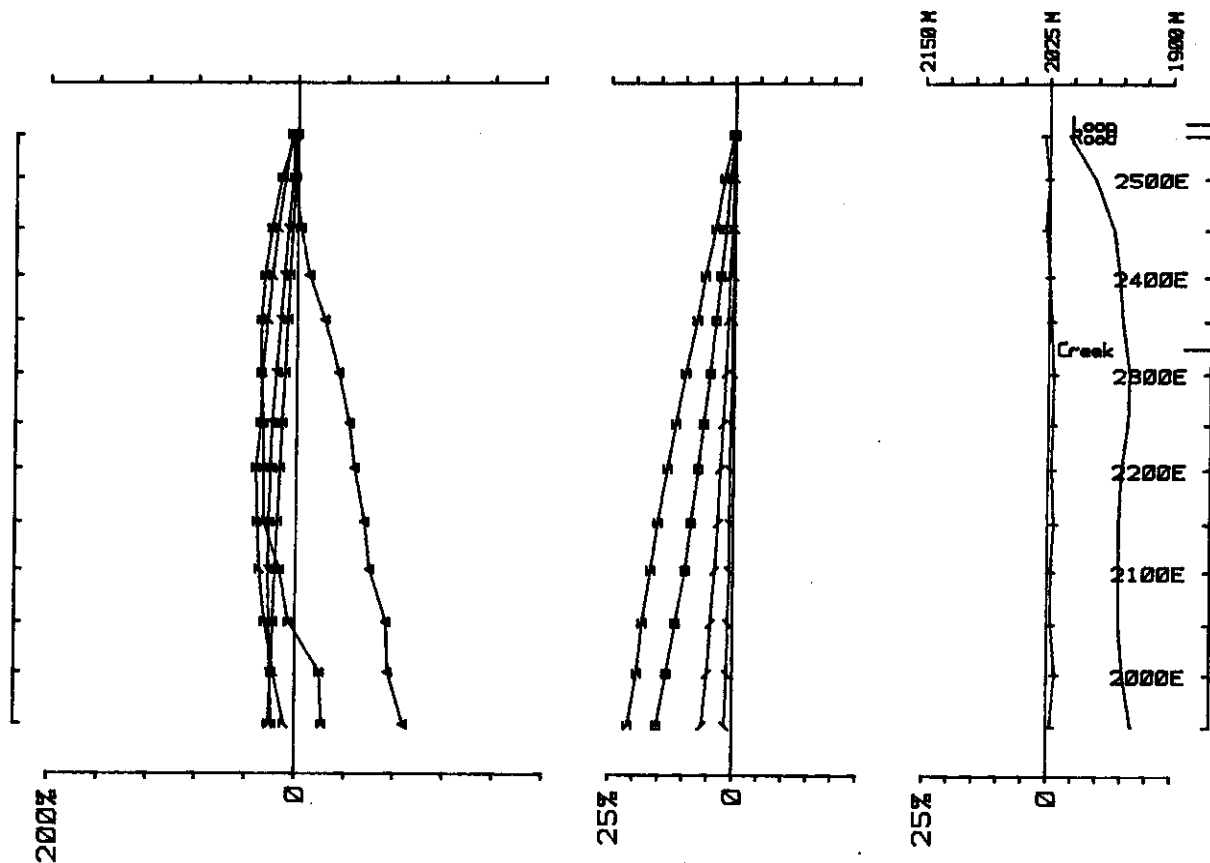
Loop: 2

Line: 2500S

Ch1 reduced. Ch1 normalized.

Point Normalized.

D.S. 16p



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

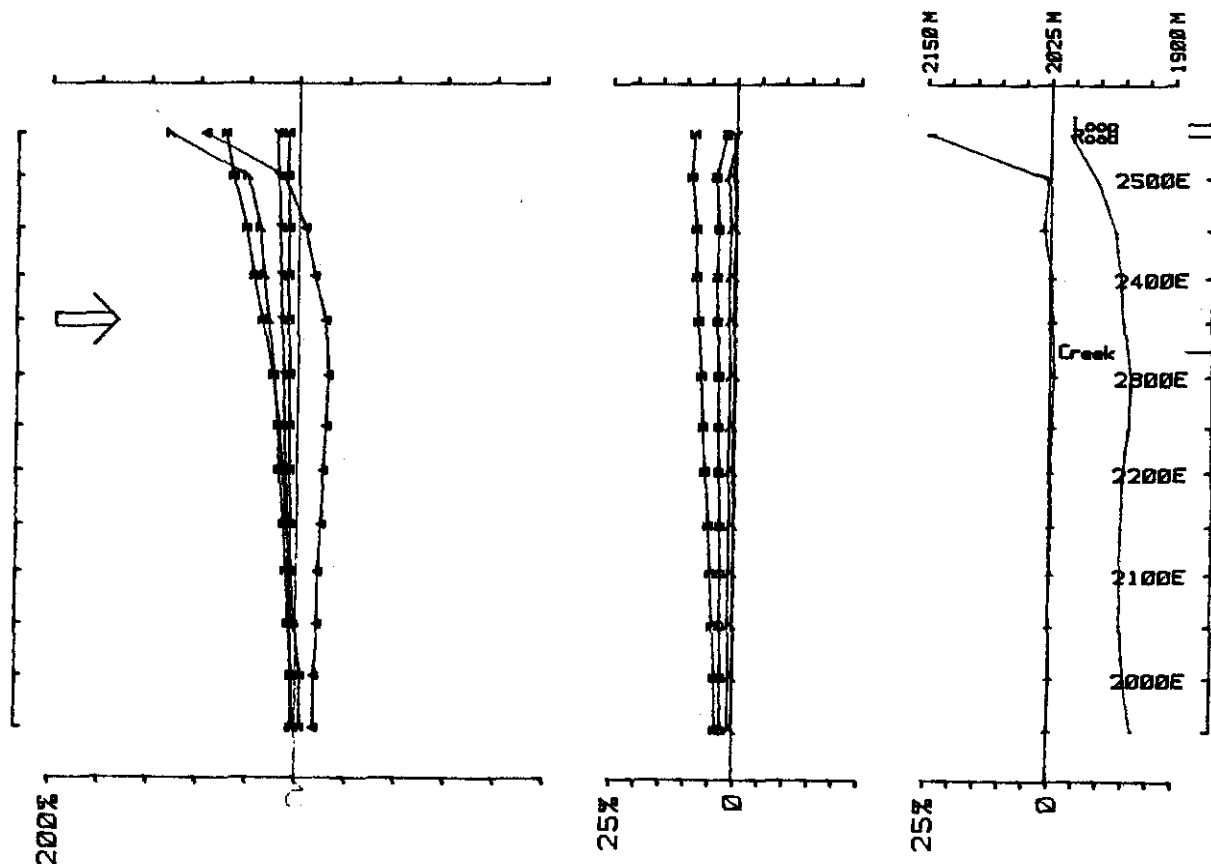
Freq(Hz): 30.974

COMINCO

Hz

Loop: 2 Line: 27505

D.S. 17



Estella 89

Op: IJ&JGP

Chi reduced. Chi normalized.

COMINCO

Freq(Hz): 30.974

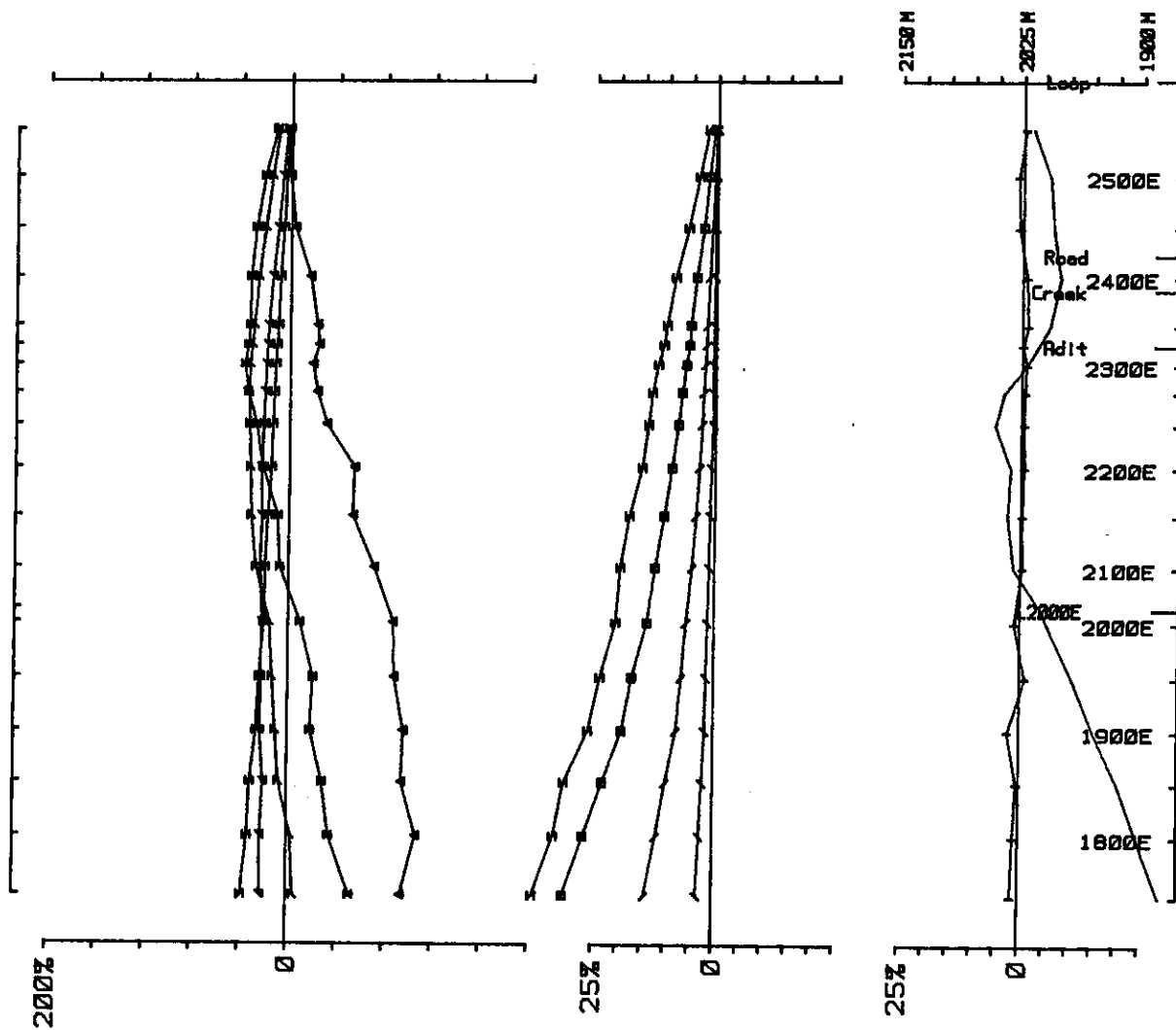
Point Normalized.

Hz

Loop: 2

Line: 27505

D.S. 17p



Estella 89

Op: IJ&JGP

Freq(Hz): 30.974

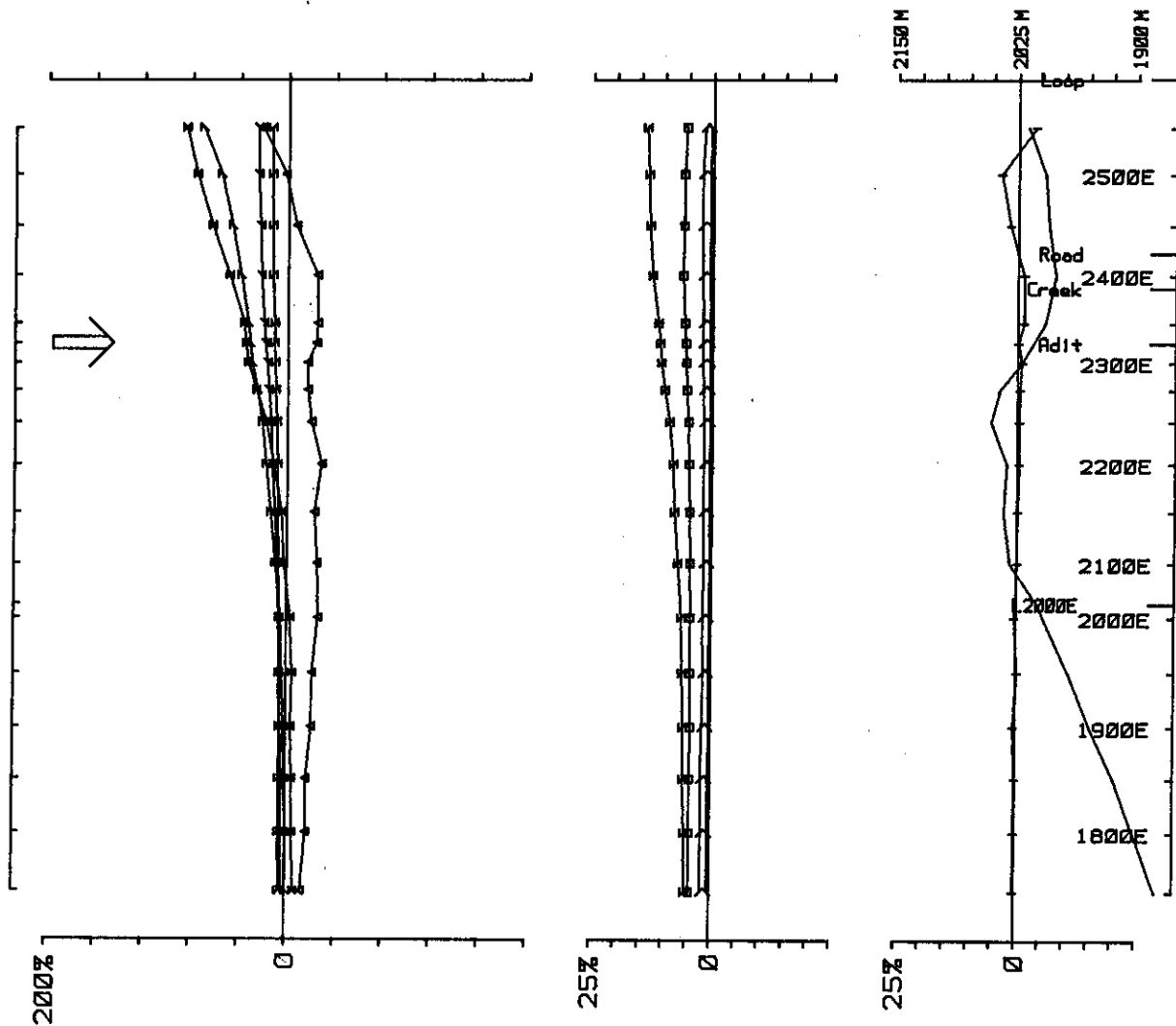
Ch1 reduced. Ch1 normalized.

COMINCO

Hz

Loop: 2 Line: 28755

D.S. 18



Estella 89

COMINCO

Hz

Op: IJ&JGP

Freq(Hz): 30.974

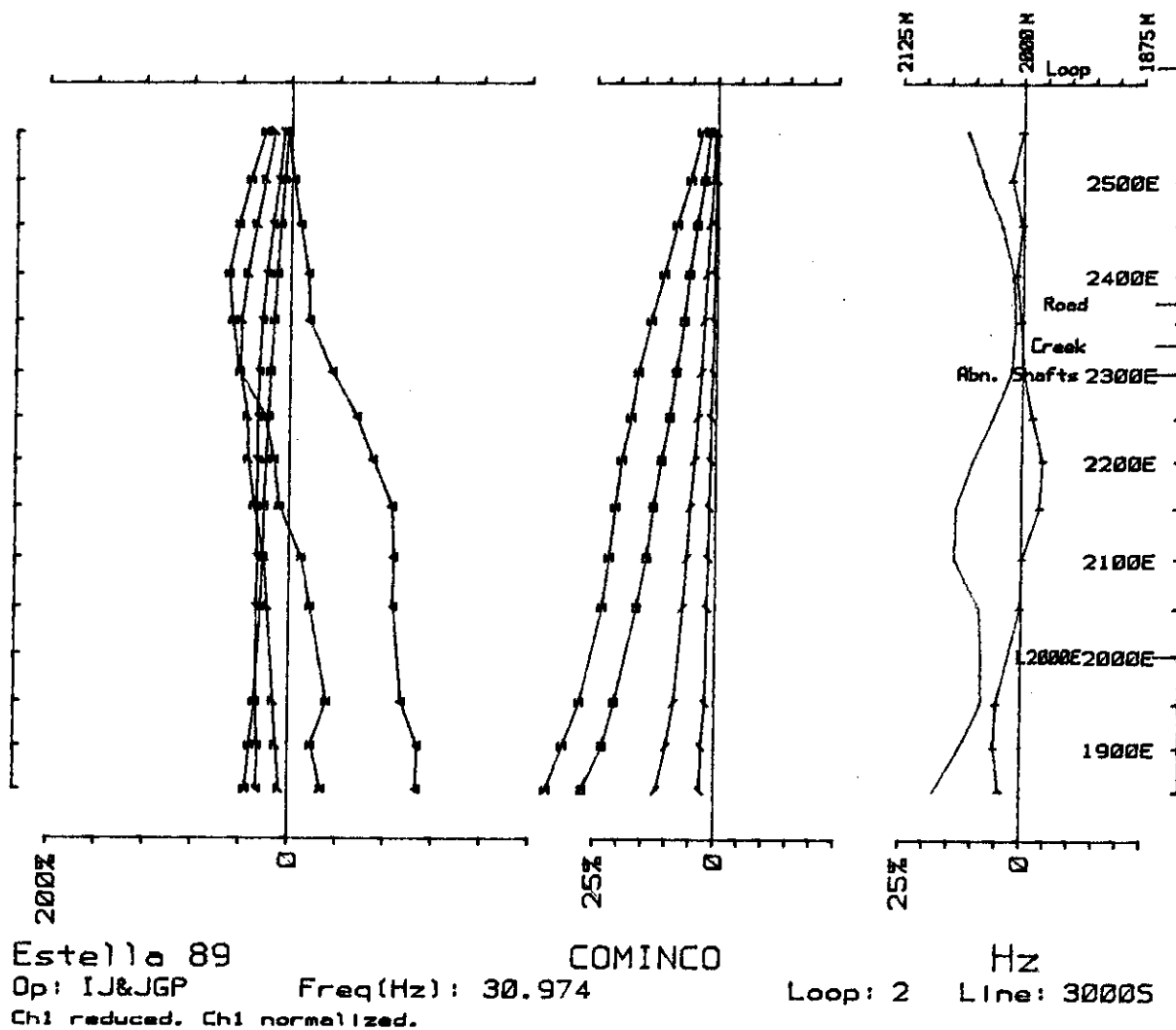
Loop: 2

Line: 28755

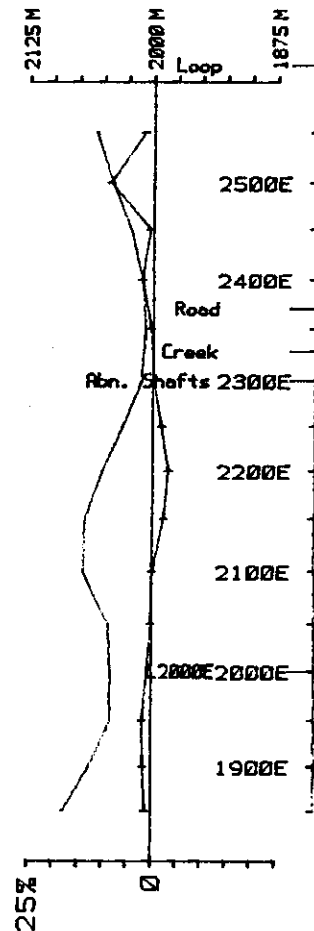
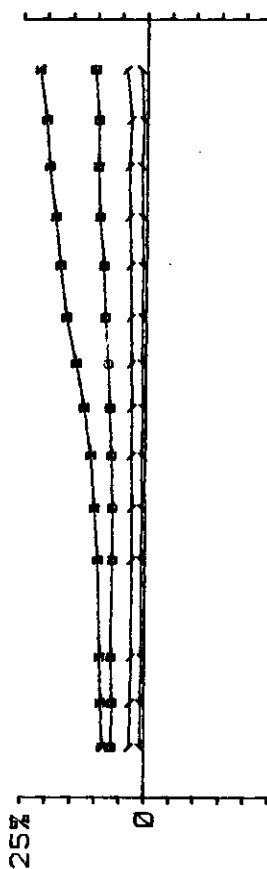
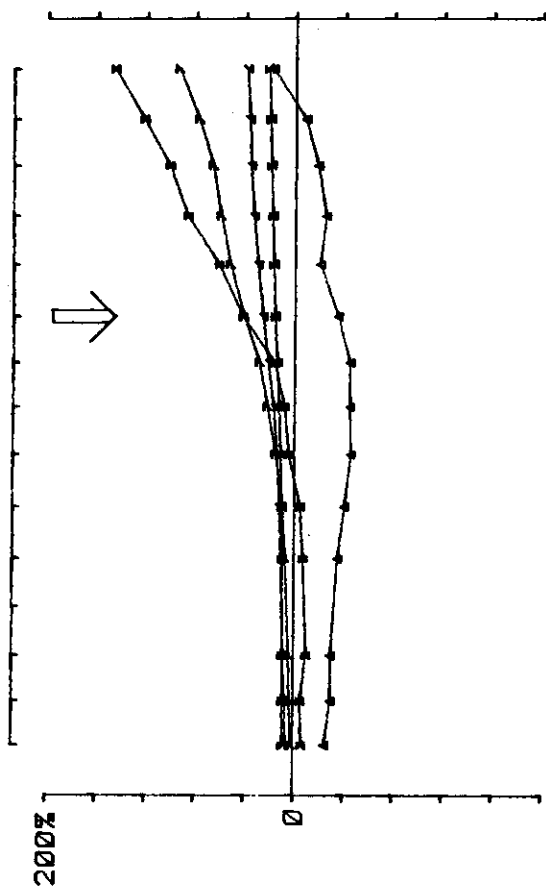
Ch1 reduced. Ch1 normalized.

Point Normalized.

D.S. 18p



D.S. 19



Estella 89

COMINCO

Hz

Op: IJ&JGP

Freq(Hz): 30.974

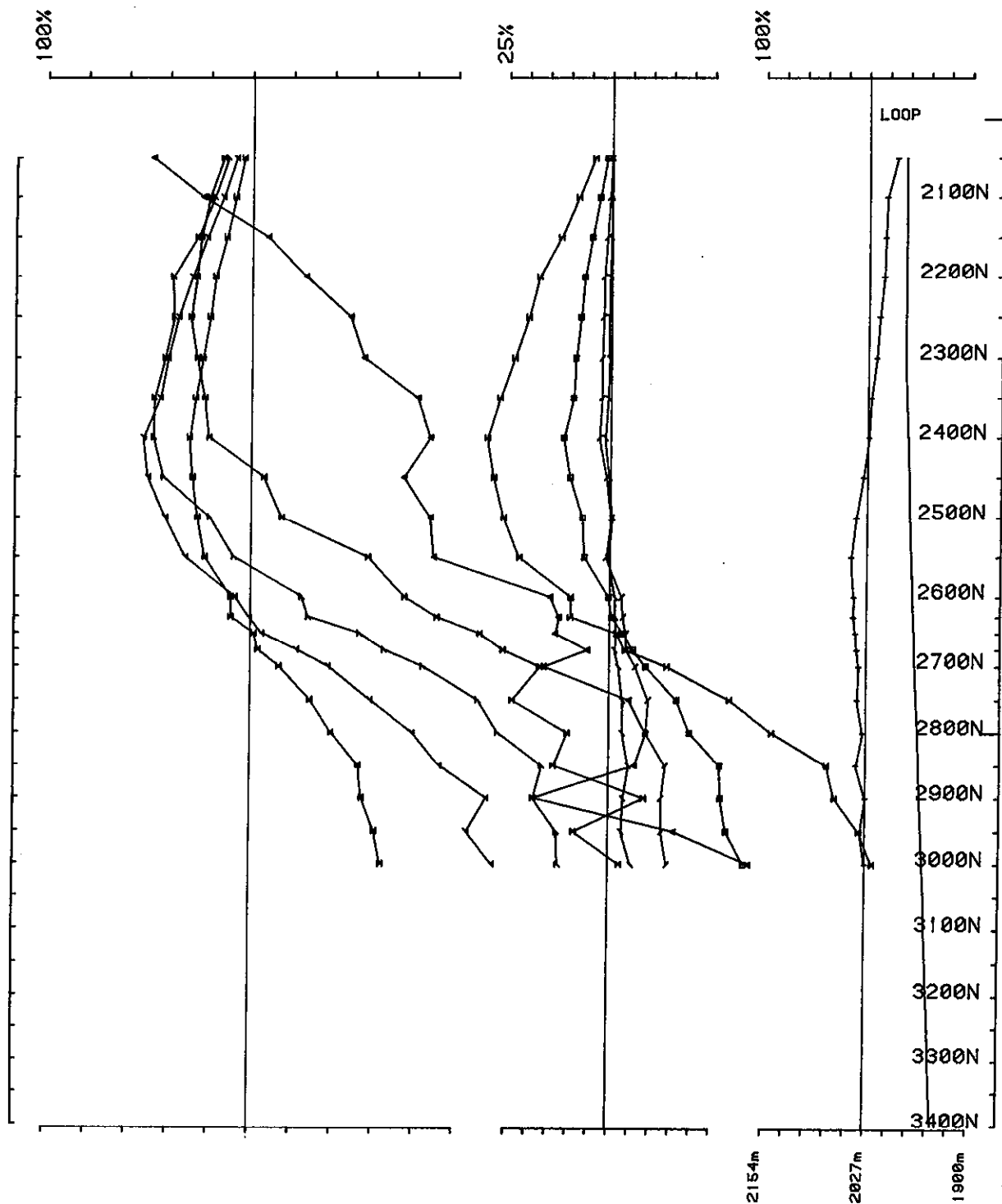
Loop: 2

Line: 3000S

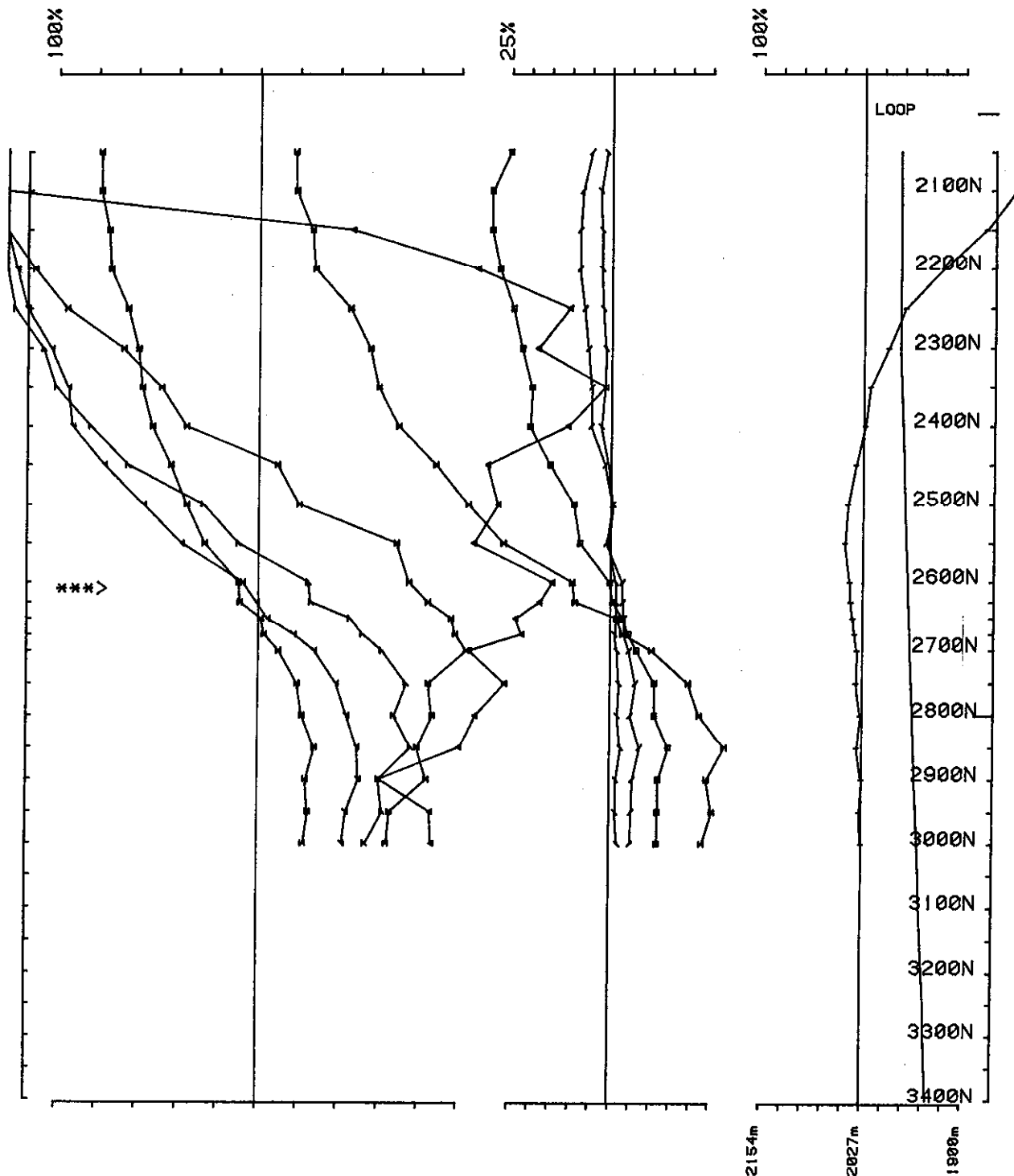
Ch1 reduced. Ch1 normalized.

Point Normalized.

D.S. 19p

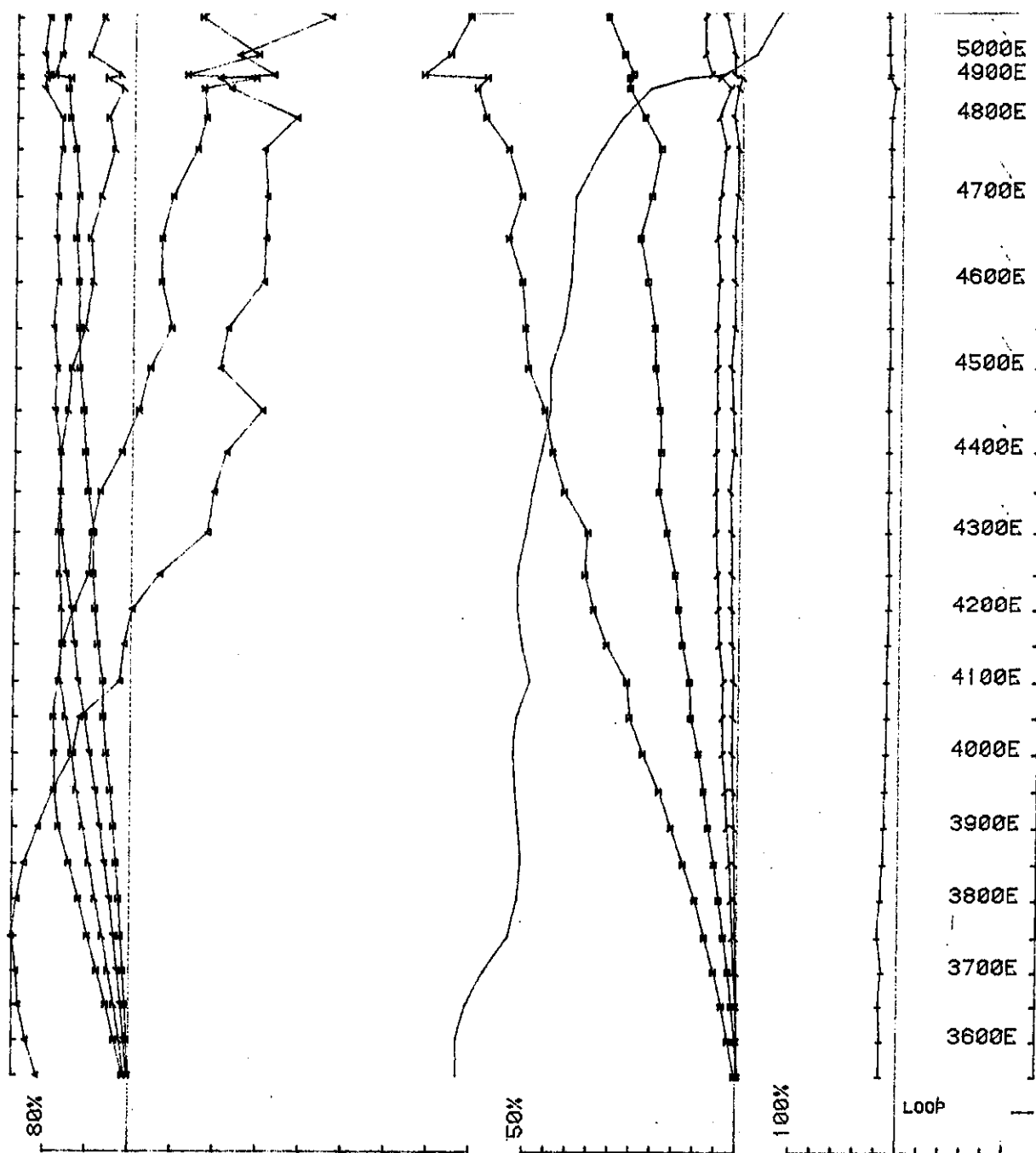


Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 2 Line 500S component Hz secondary Ch 1 normalized Ch 1 reduced

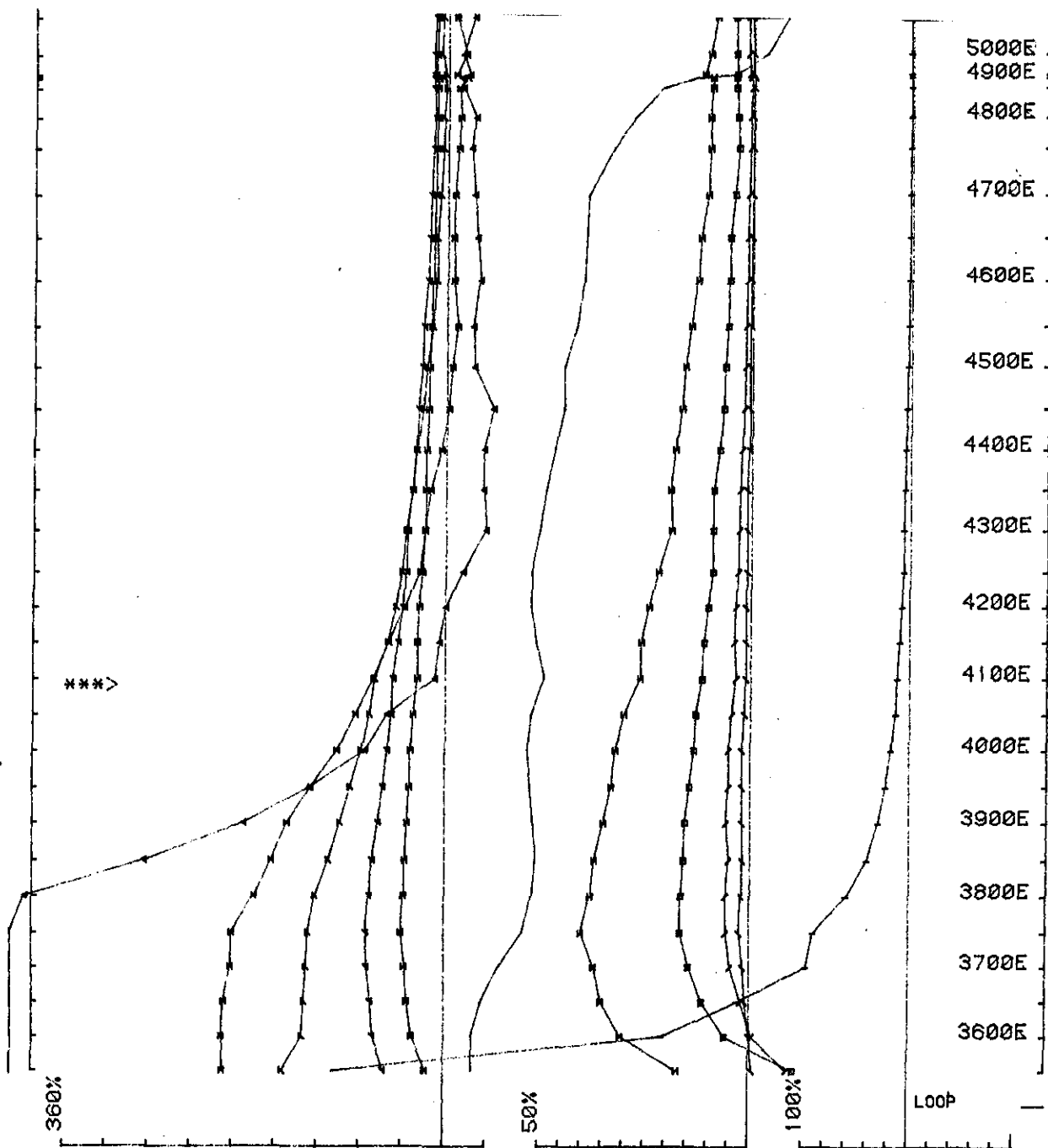


Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Loopno 2 Line 500S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 20p

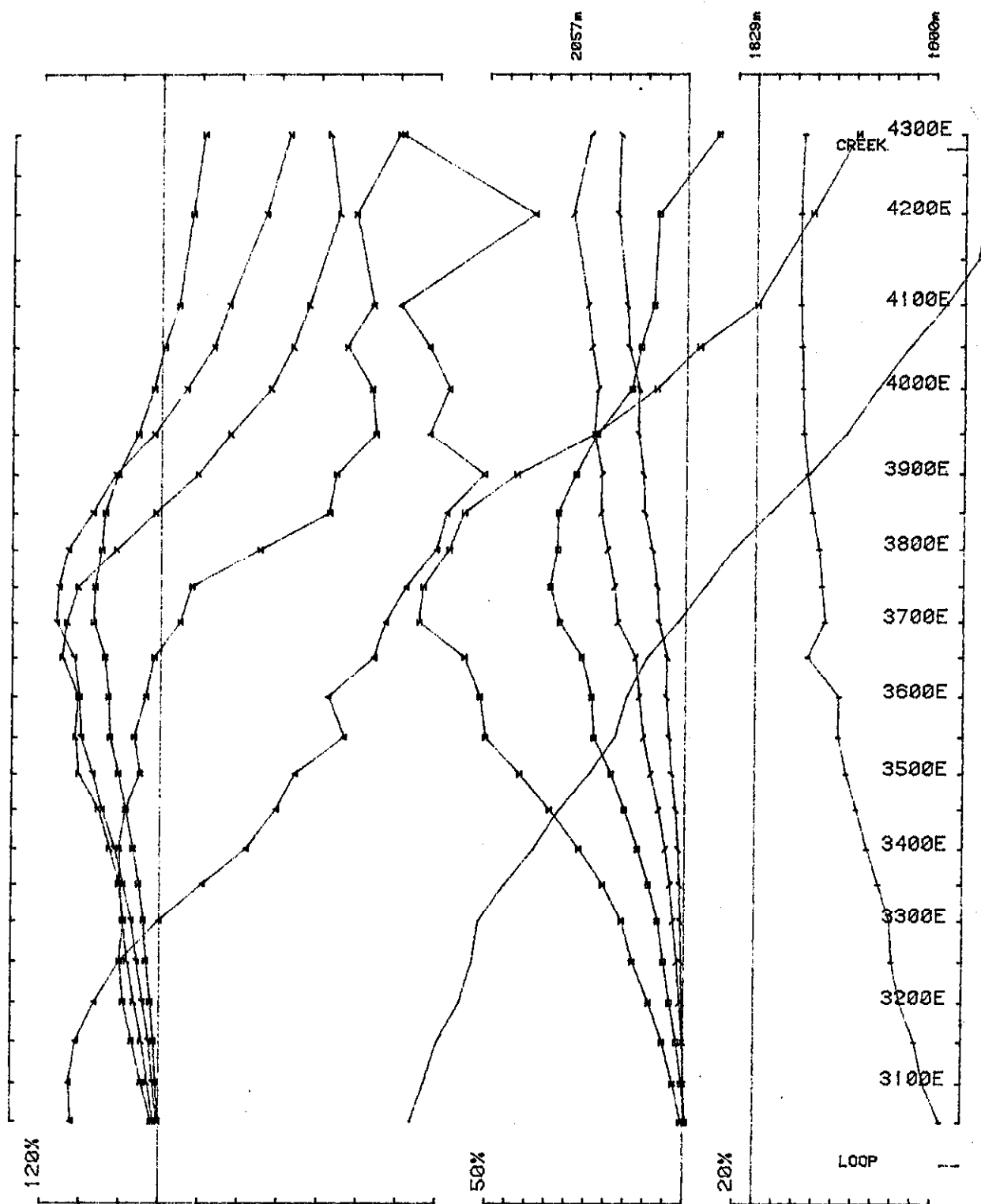


Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Locone 2 Line 1000S component Hz secondary Ch 1 normalized Ch 1 reduced

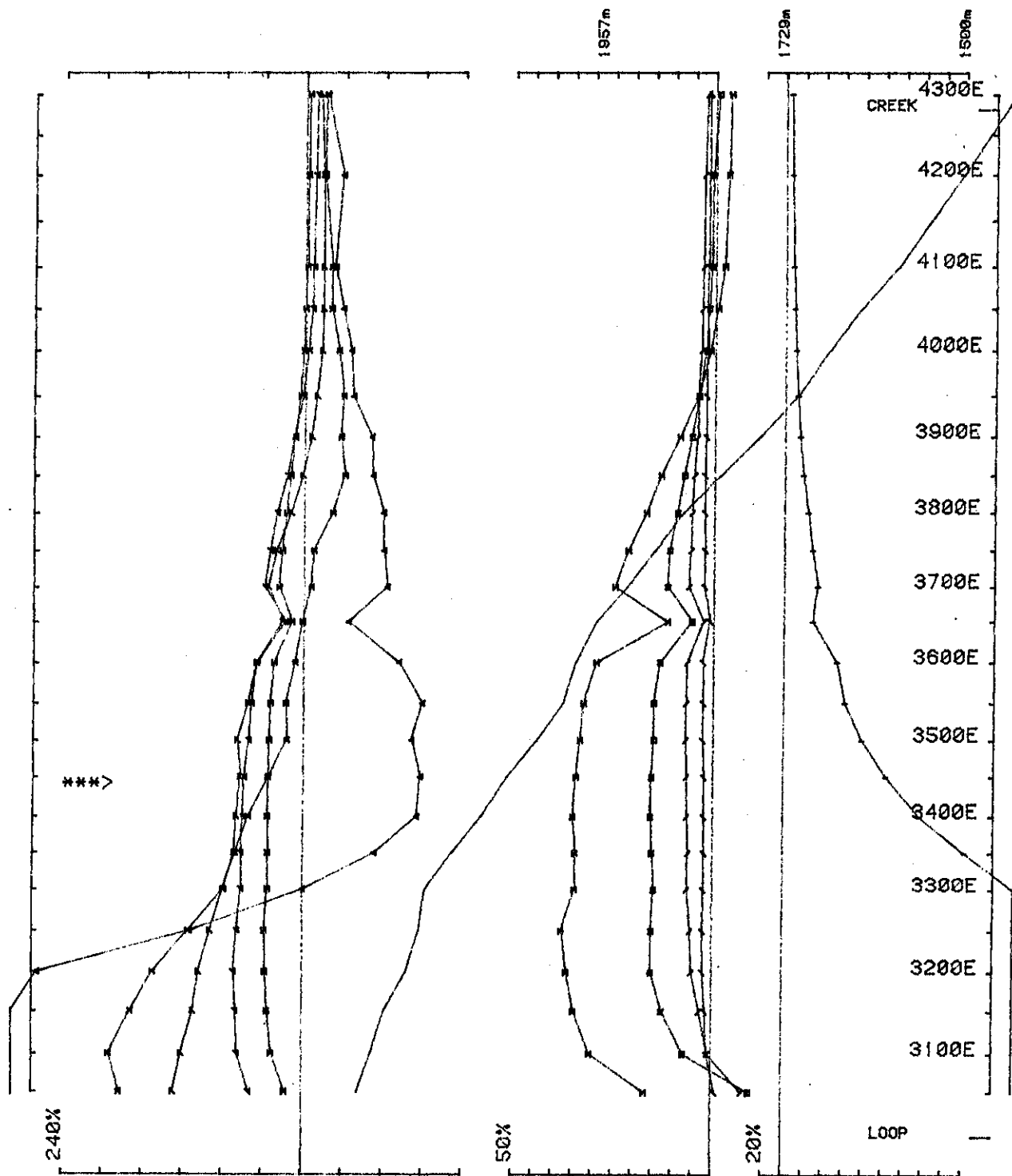


Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Locono 2 Line 1000S component Hz secondary Ch 1 normalized Ch 1 reduced

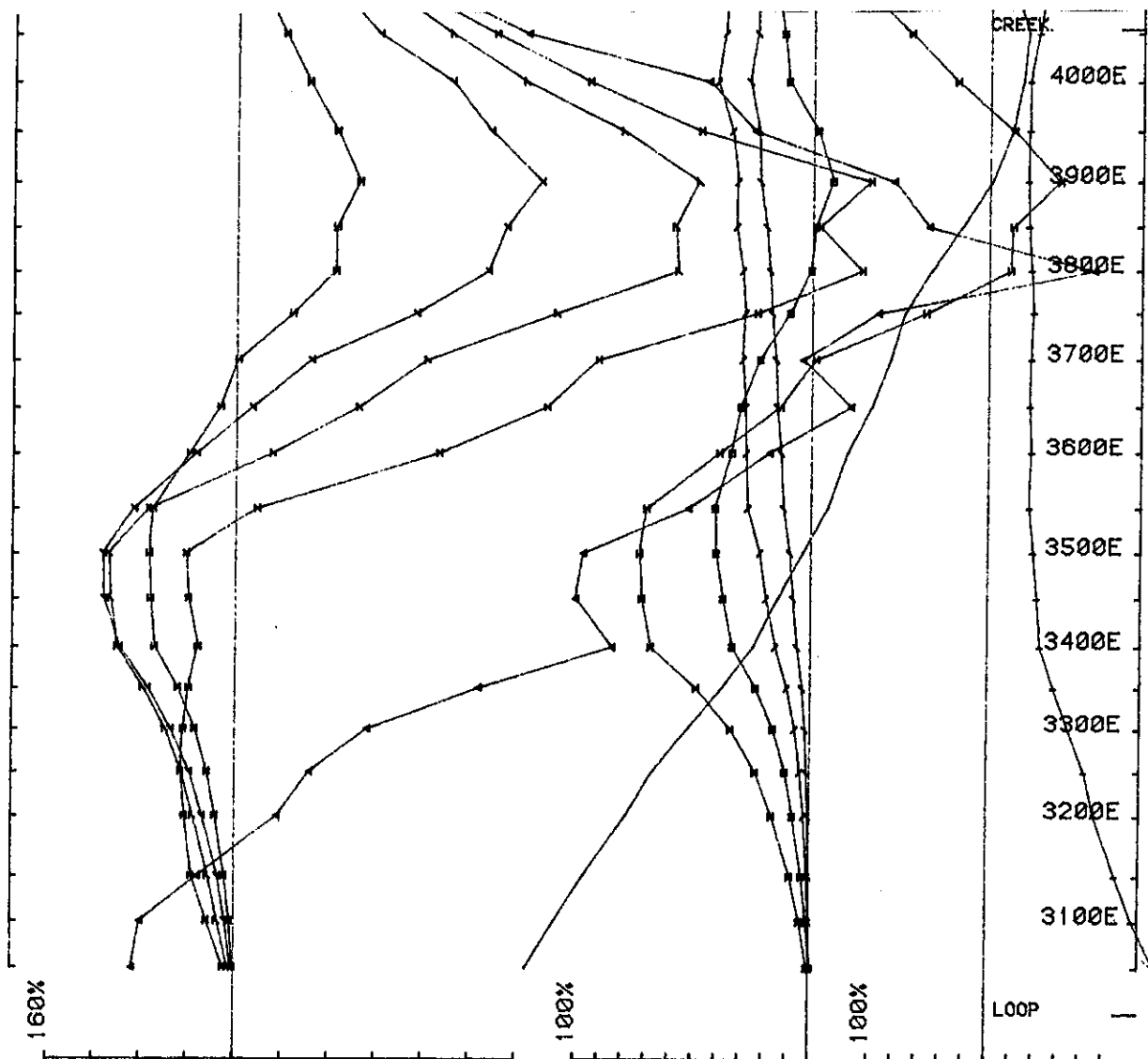
7



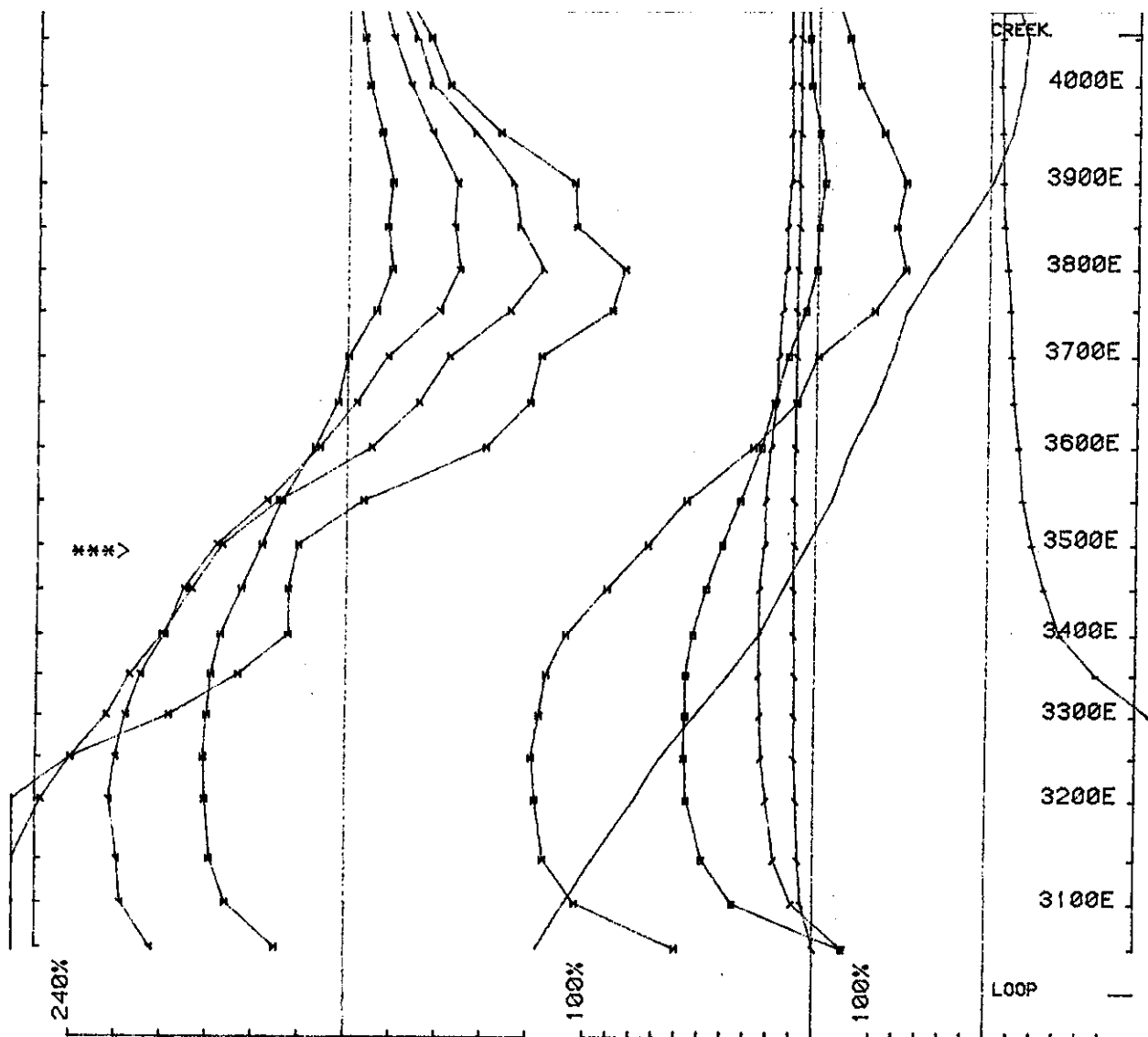
Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Loopno 2 Line 1500S component Hz secondary Ch 1 normalized Ch 1 reduced



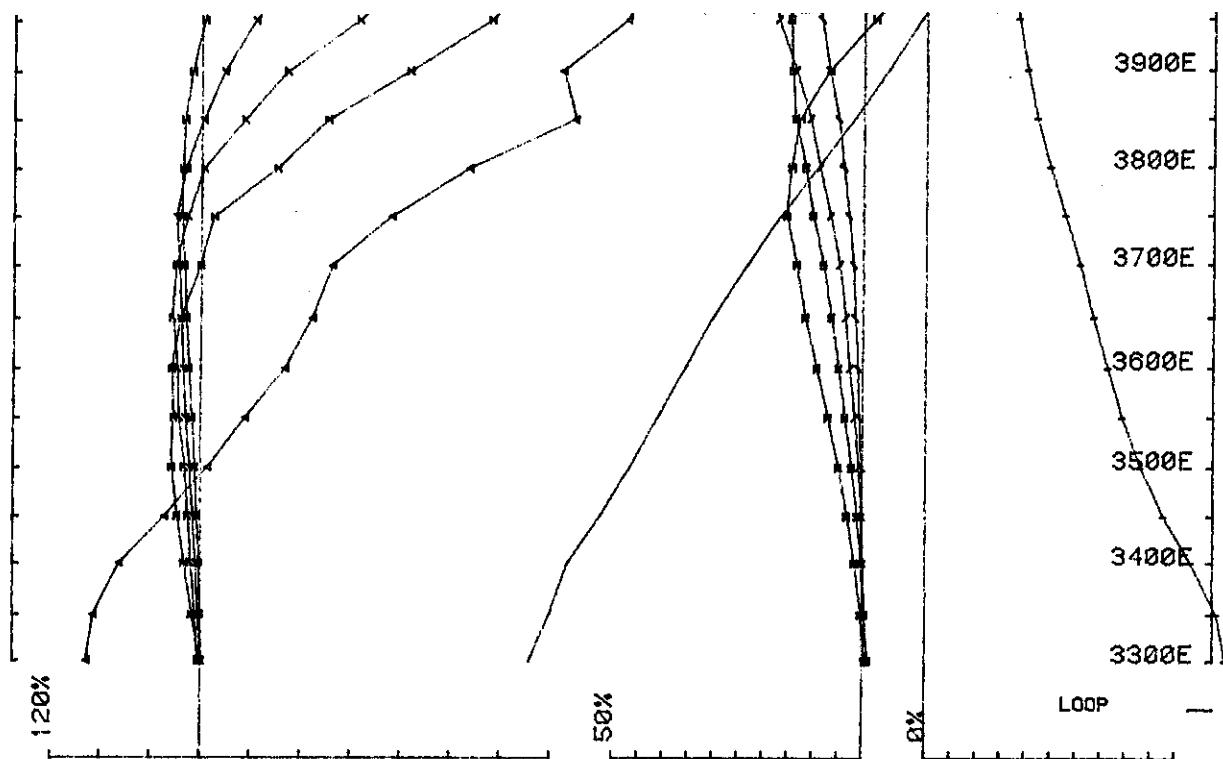
Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Loopno 2 Line 1500S component Hz secondary Ch 1 normalized Ch 1 reduced



Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Loopno 2 Line 2000S component Hz secondary Ch 1 normalized Ch 1 reduced

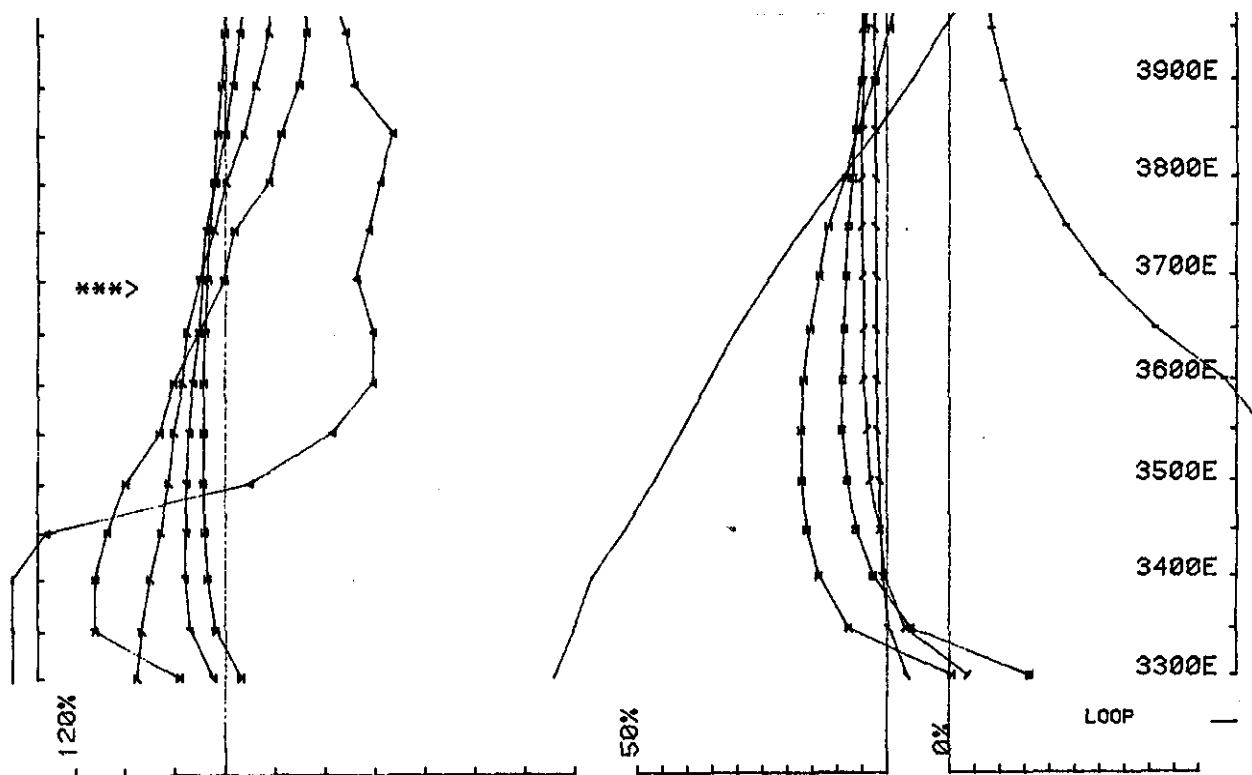


Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Loopno 2 Line 2000S component Hz secondary Ch 1 normalized Ch 1 reduced



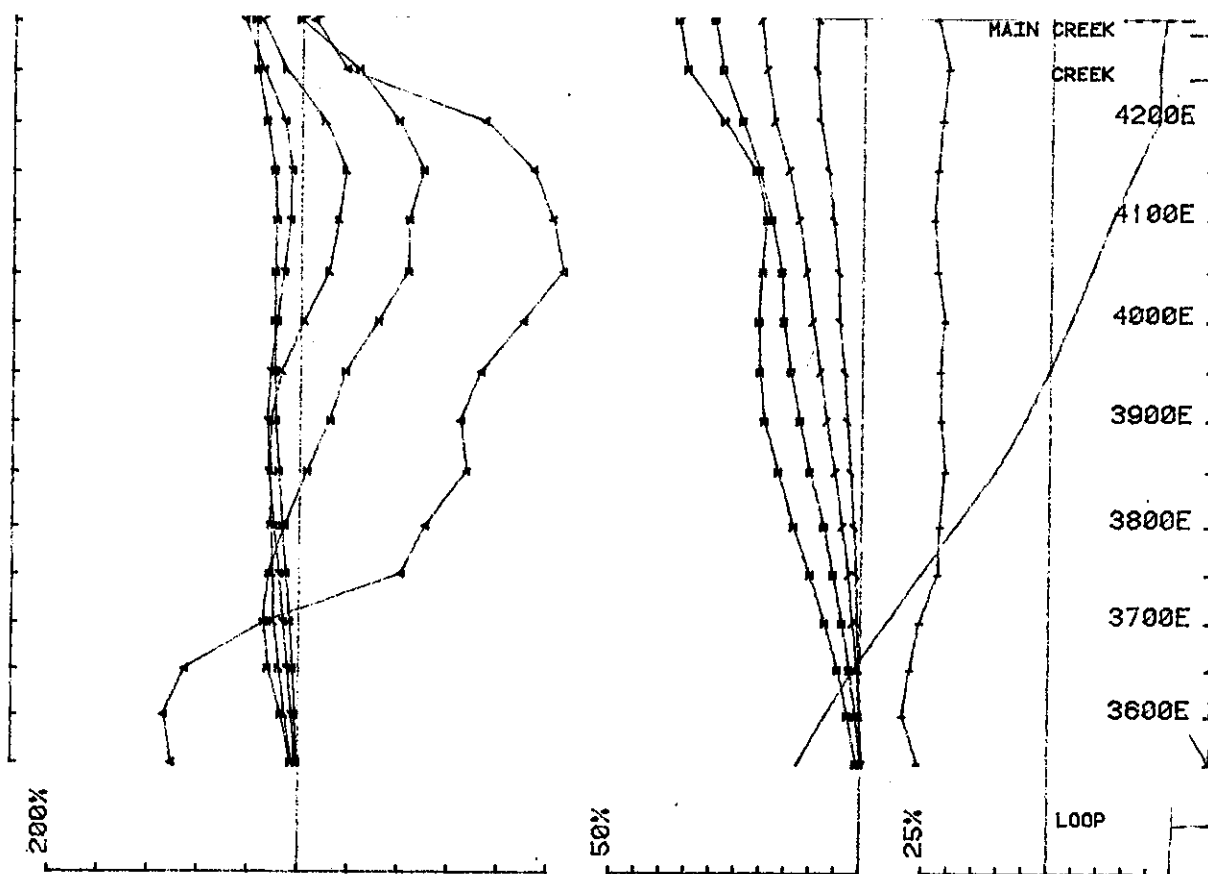
Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 2 Line 2400S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 24



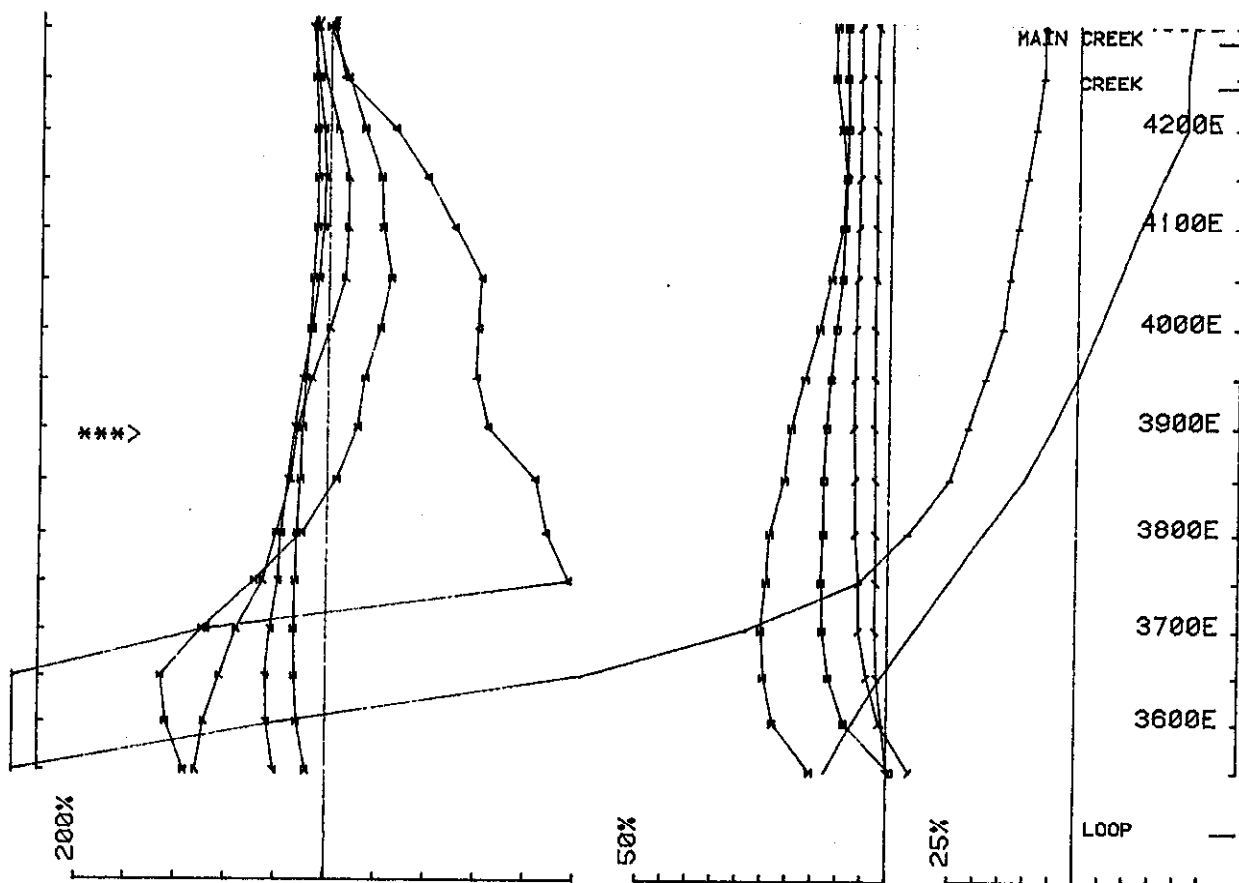
Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 2 Line 2400S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 24p



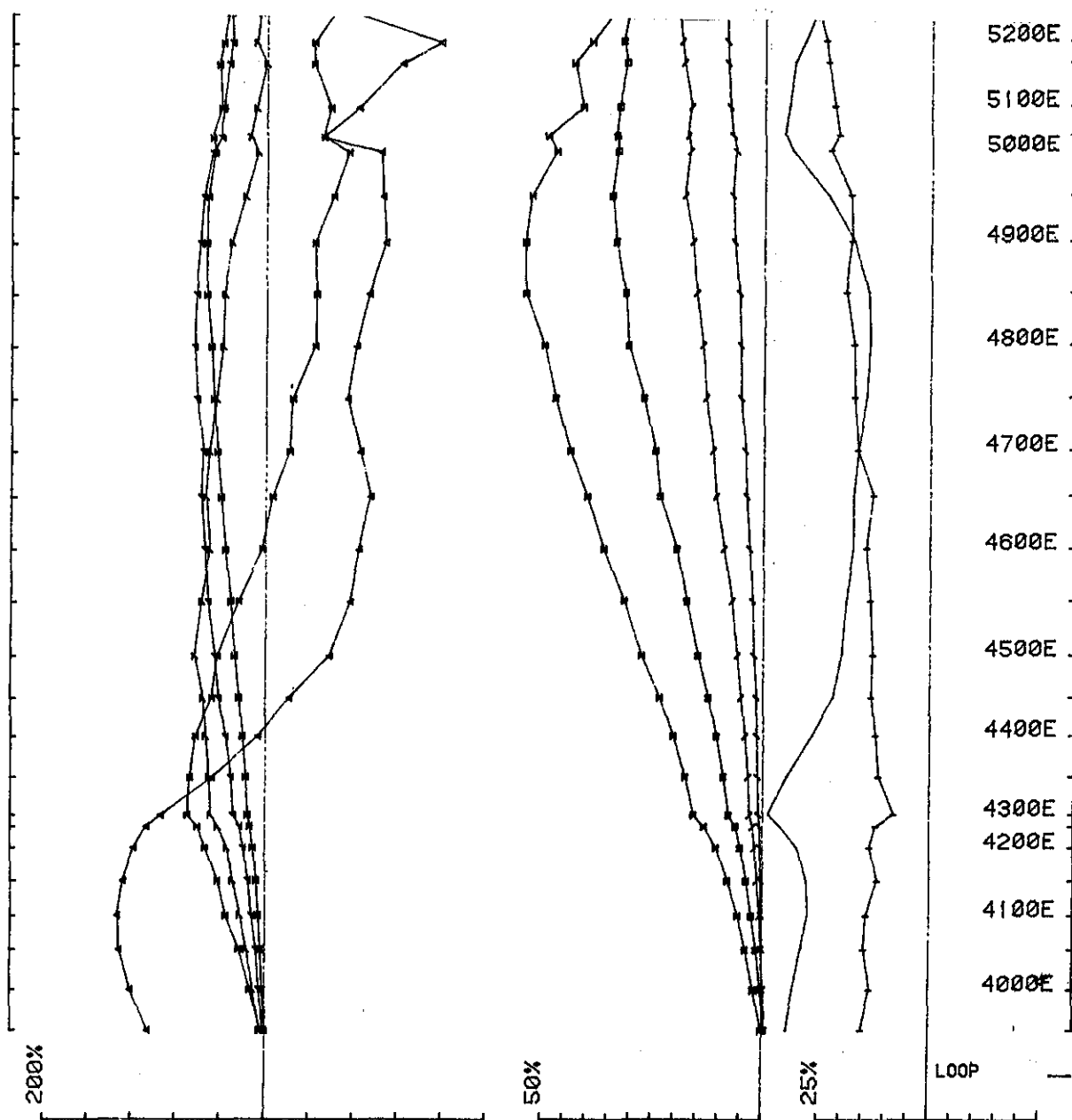
Area ESTELLA COMINCO operator IJ GP freq(hz) 3.097 x 10
 Loopno 2 Line 3000S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 25

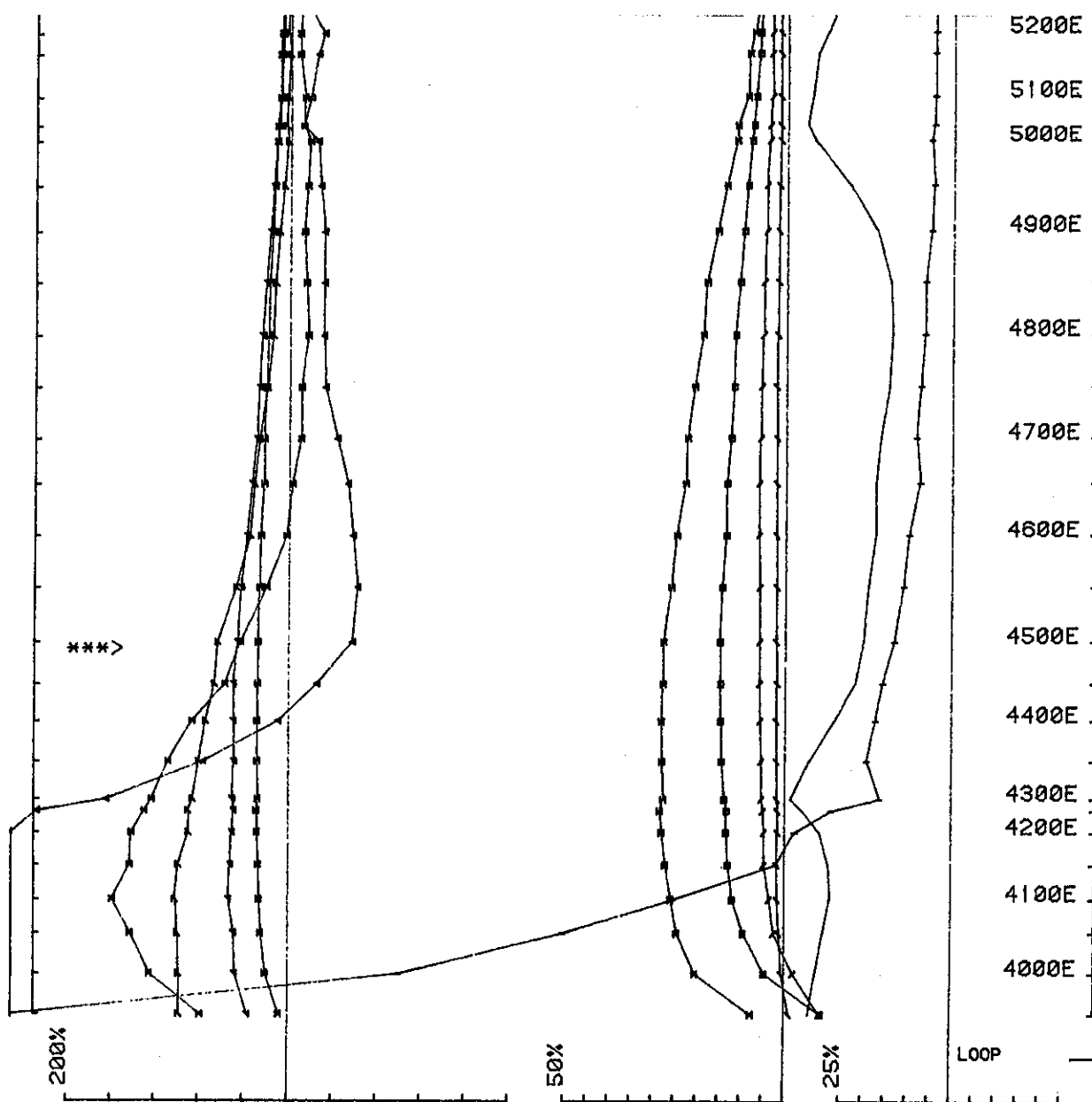


Area ESTELLA COMINCO operator IU GP freq(hz) 3.097×10
 Loopno 2 Line 3000S component Hz secondary Ch 1 normalized Ch 1 reduced

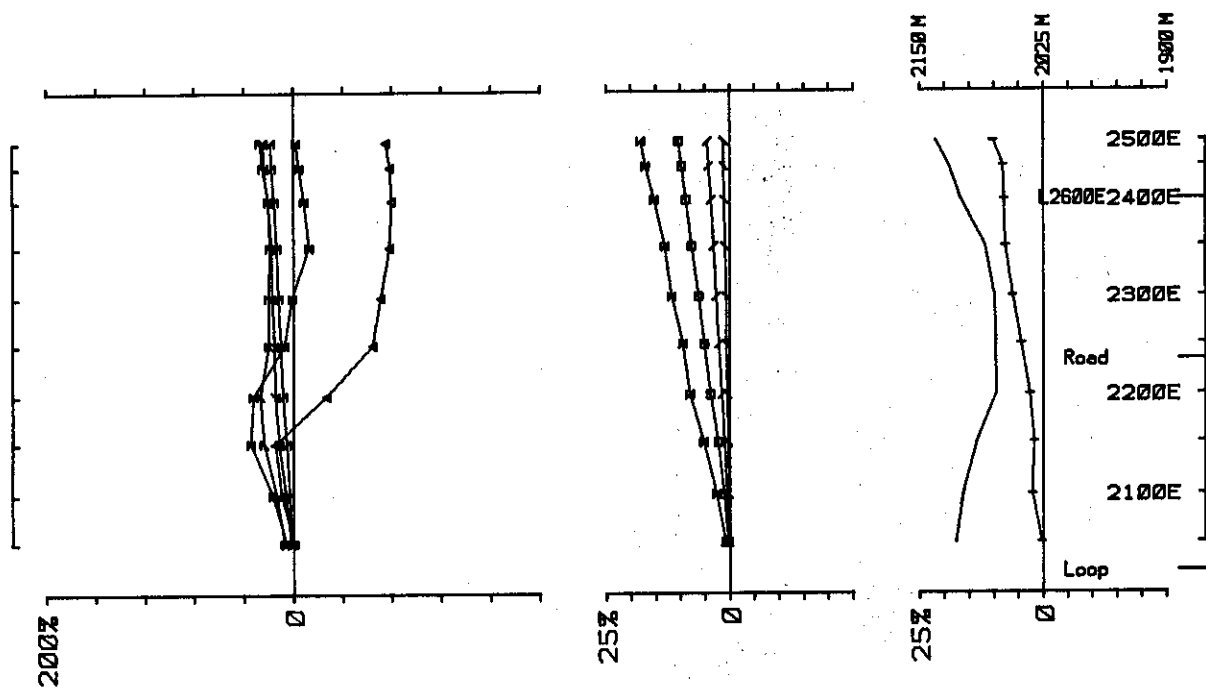
D.S. 25 p



Area ESTELLA COMINCO operator IU GP freq(hz) 3.097 x 10
 Loono 2 Line 3500S component Hz secondary Ch 1 normalized Ch 1 reduced



Area ESTELLA COMINCO operator IJ GP freq(hz) 3.097×10
 Loono 2 Line 3500S component Hz secondary Ch 1 normalized Ch 1 reduced



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

Freq(Hz): 30.974

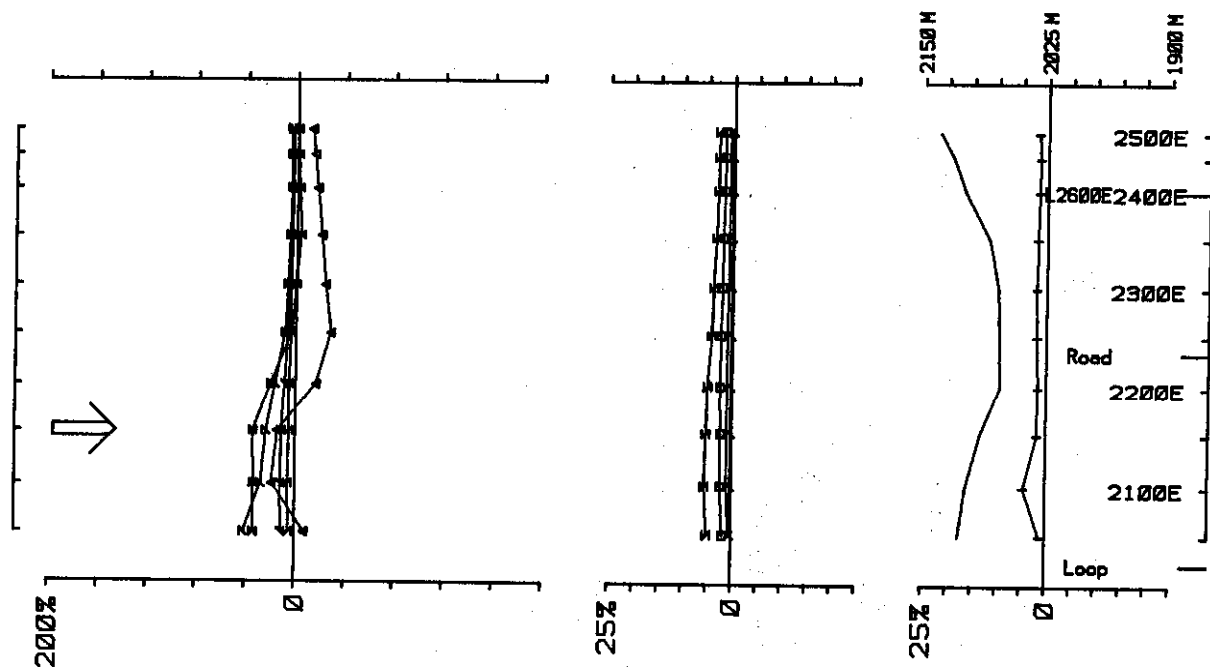
COMINCO

Hz

Loop: 3

Line: 32505

D.S. 27



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

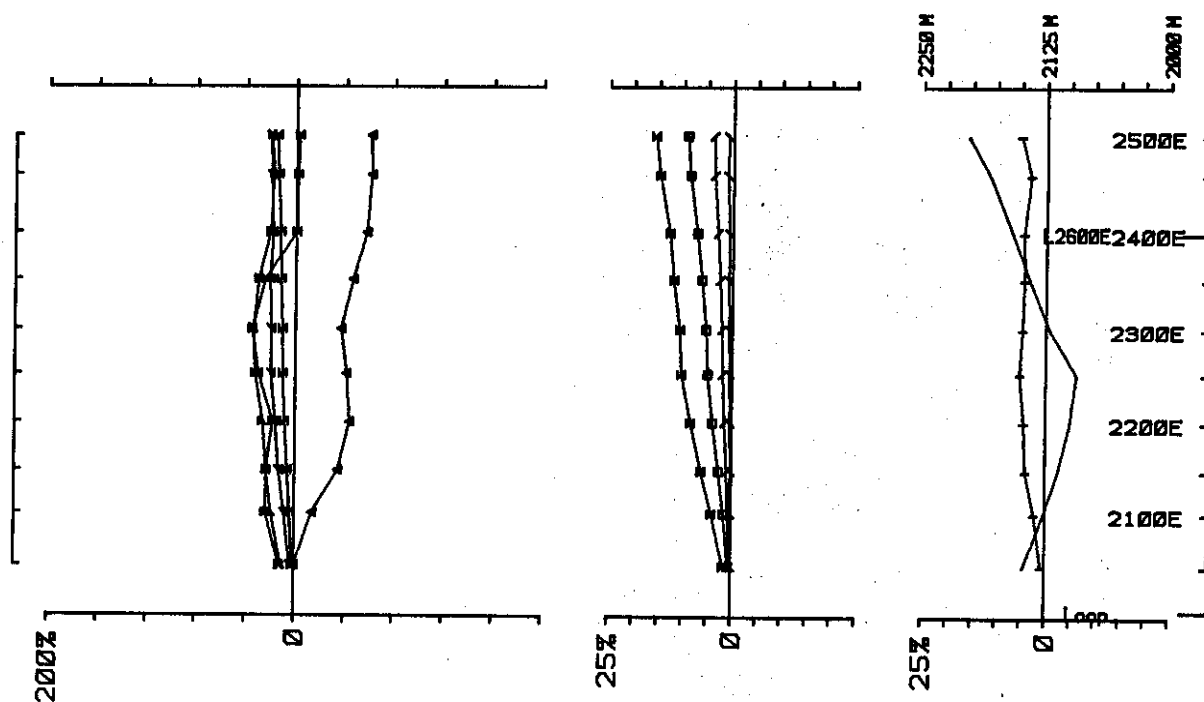
Point Normalized.

Loop: 3

Hz

Line: 32505

D.S. 27p



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

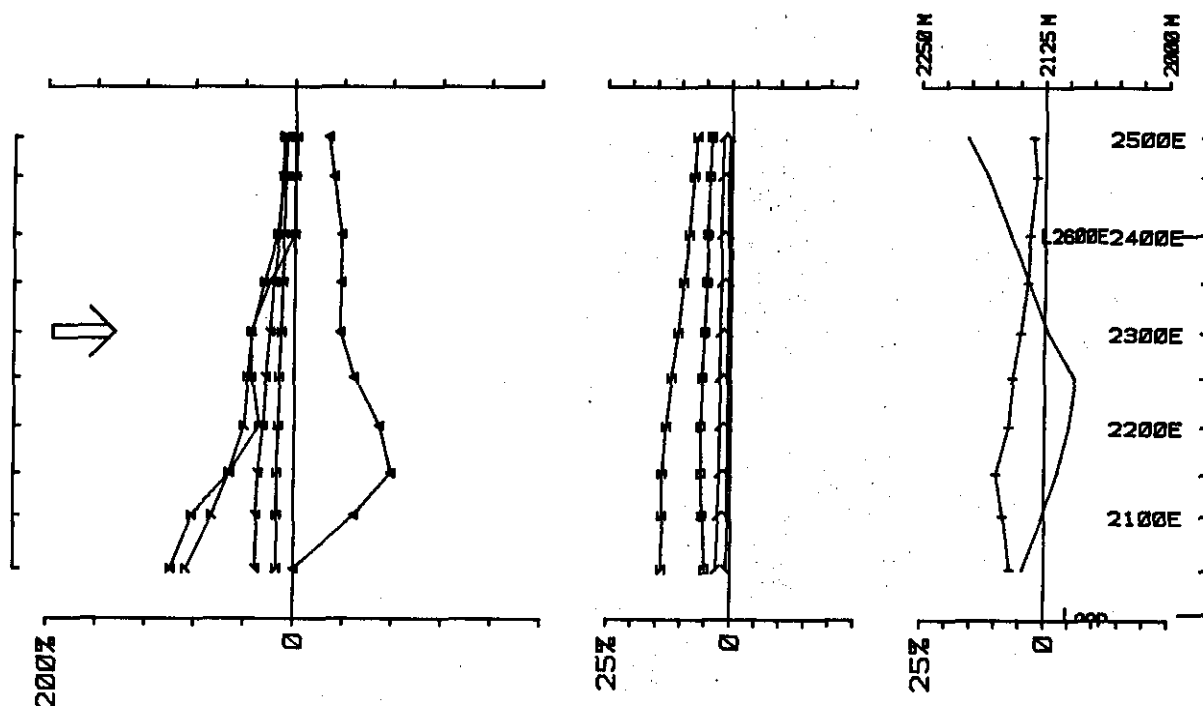
Freq(Hz): 30.974

COMINCO

Loop: 3 Line: 35005

Hz

D.S. 28



Estella 89

COMINCO

Hz

Op: IJ&JGP

Freq(Hz): 30.974

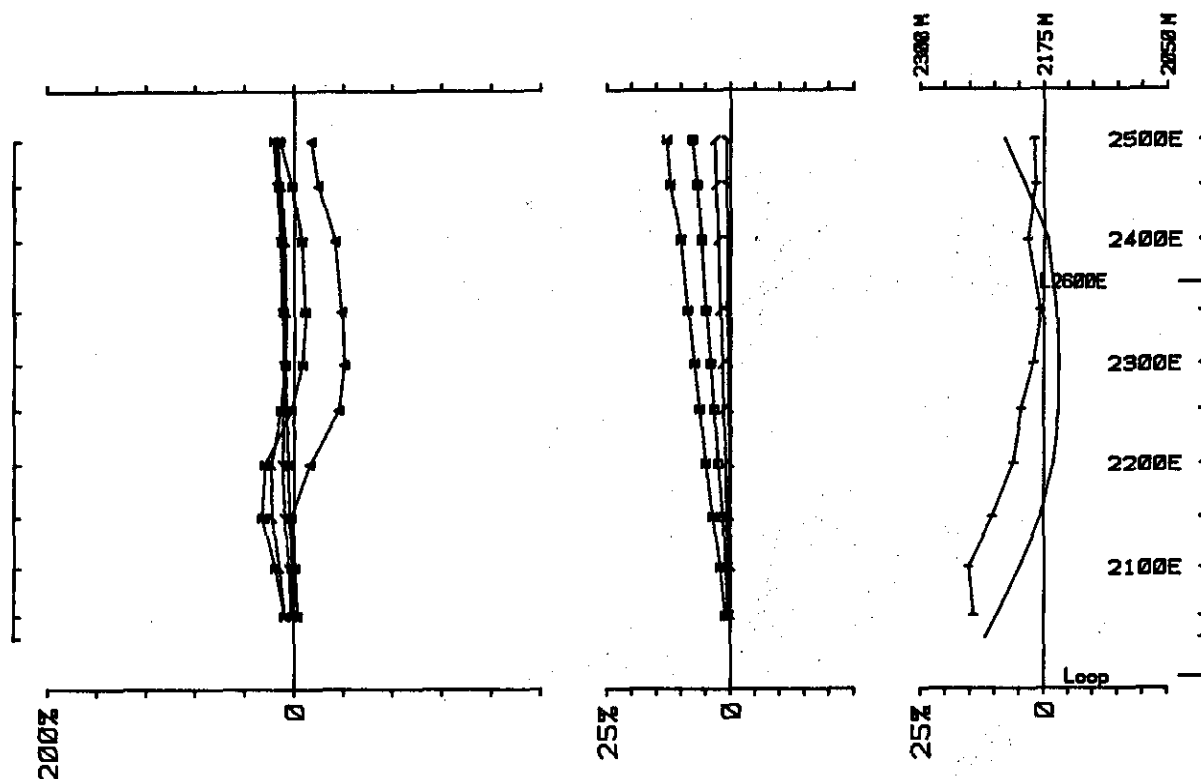
Loop: 3

Line: 35005

Ch1 reduced. Ch1 normalized.

Point Normalized.

D.S. 28 p



Estella 89

Op: IJ&JGP

Ch1 reduced. Ch1 normalized.

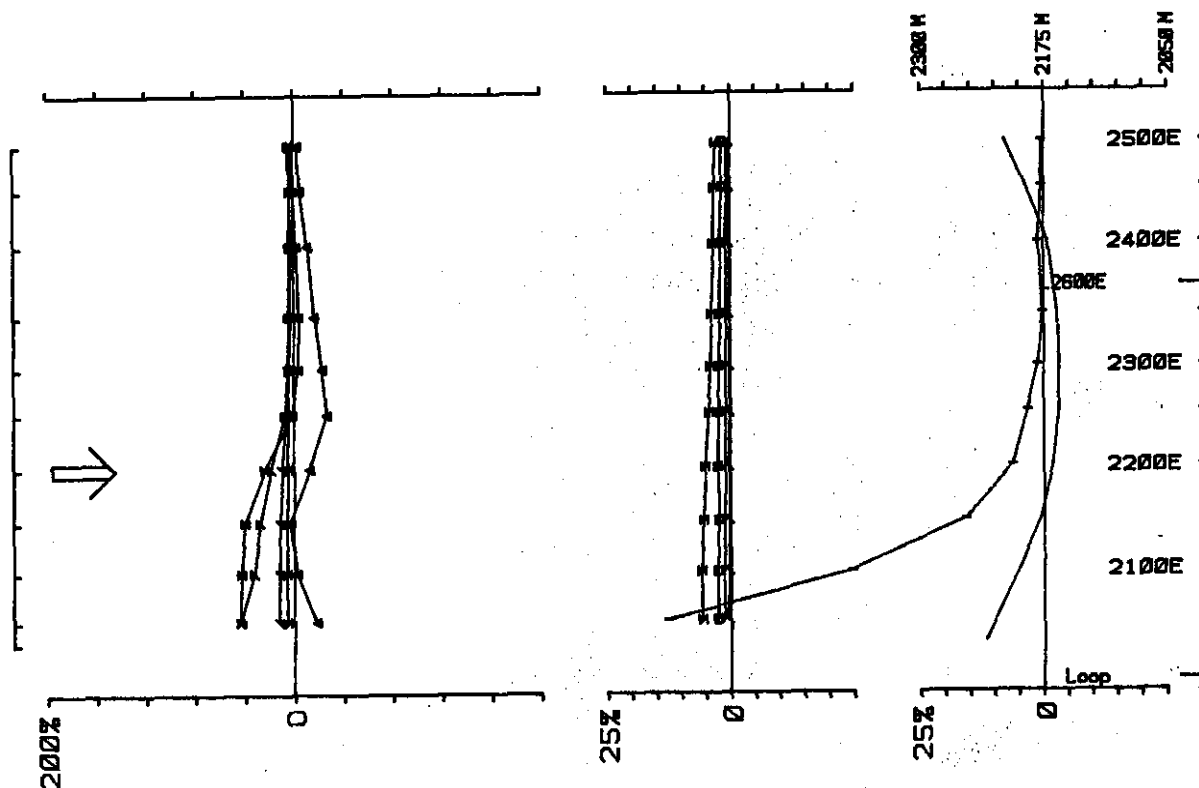
Freq(Hz): 30.974

COMINCO

Loop: 3 Line: 37505

Hz

D.S. 29



Estella 89

COMINCO

Hz

Op: IJ&JGP

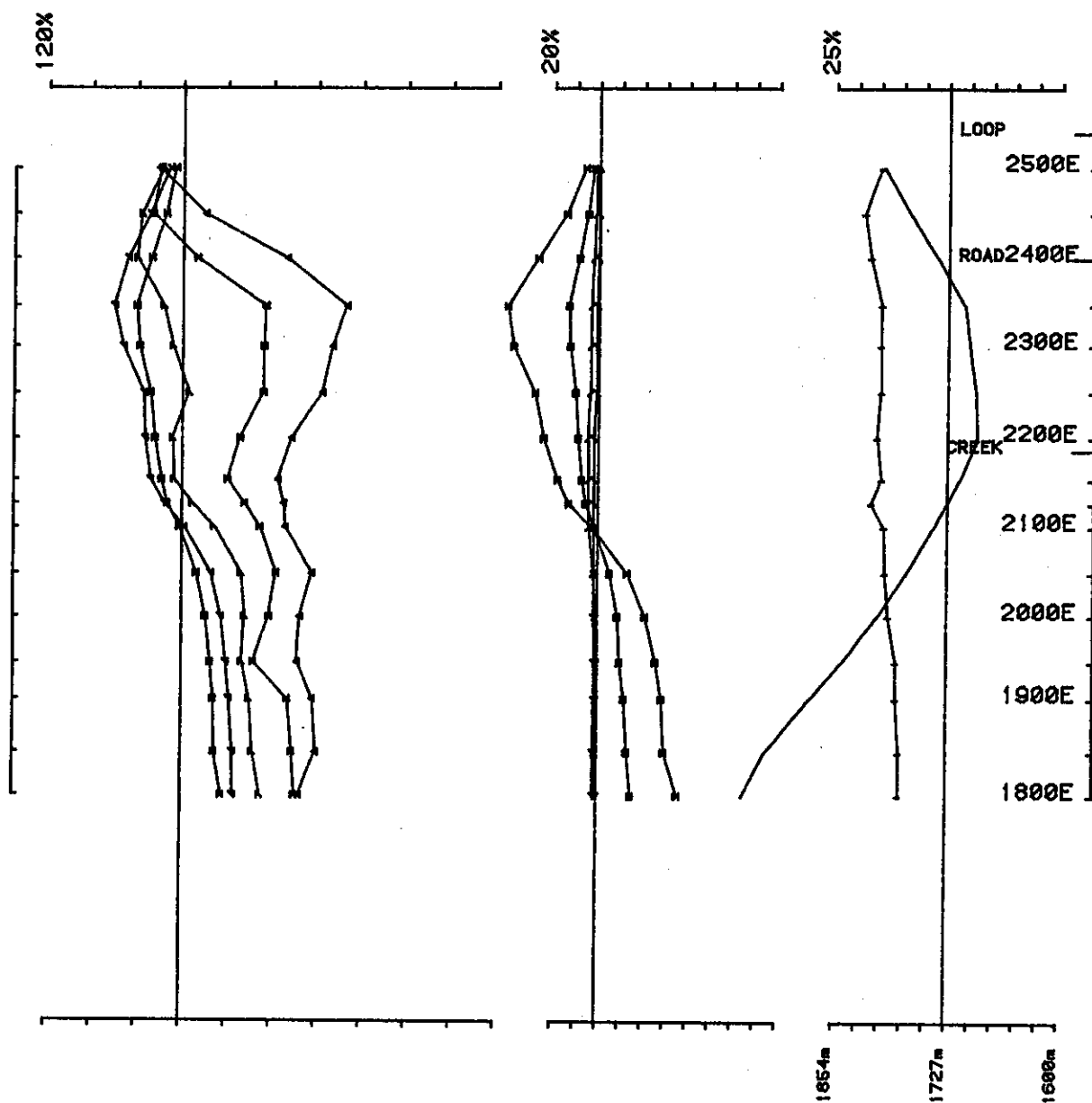
Freq(Hz): 30.974

Loop: 3 Line: 37505

Ch1 reduced. Ch1 normalized.

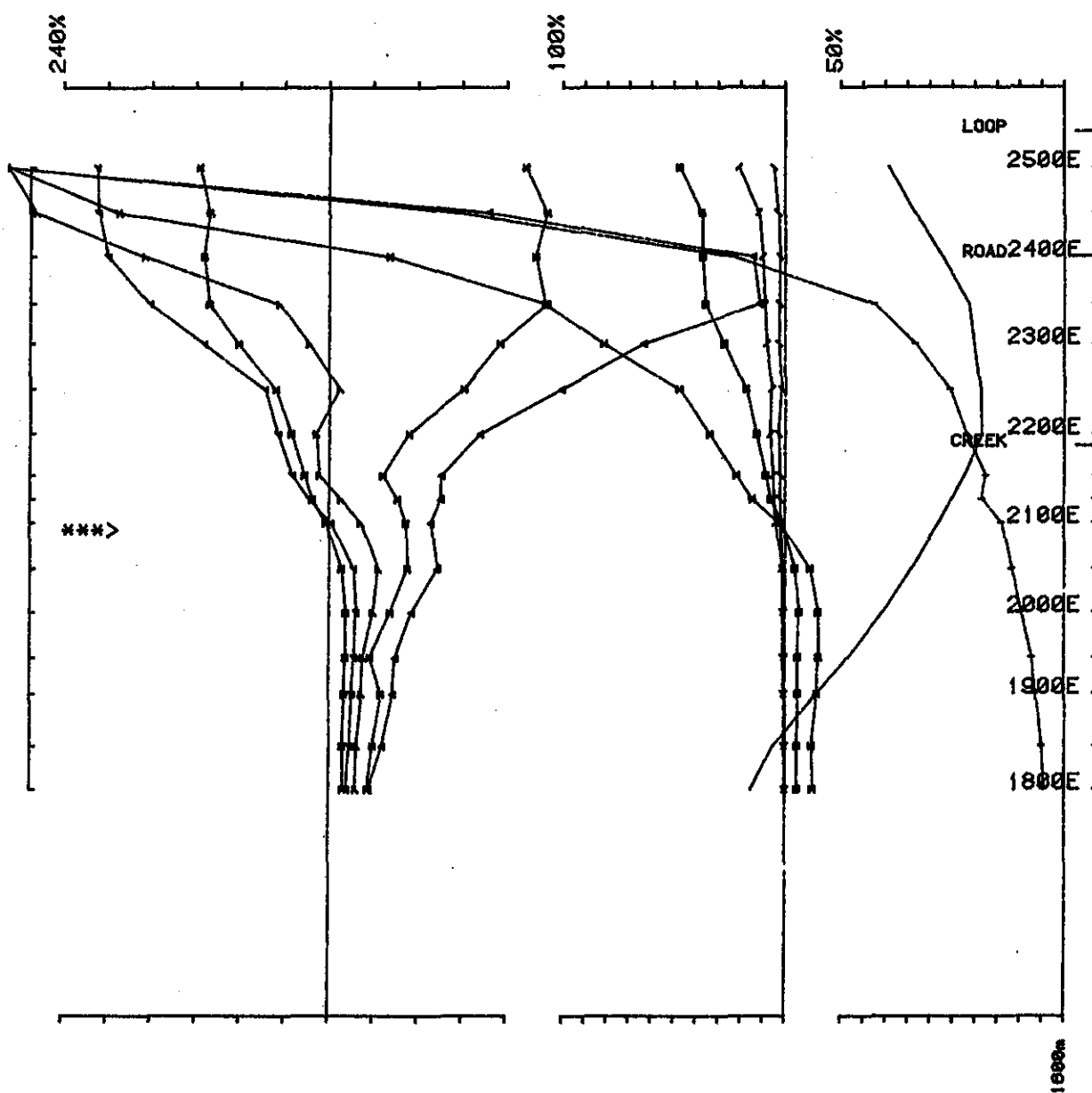
Point Normalized.

D.S. 29 p

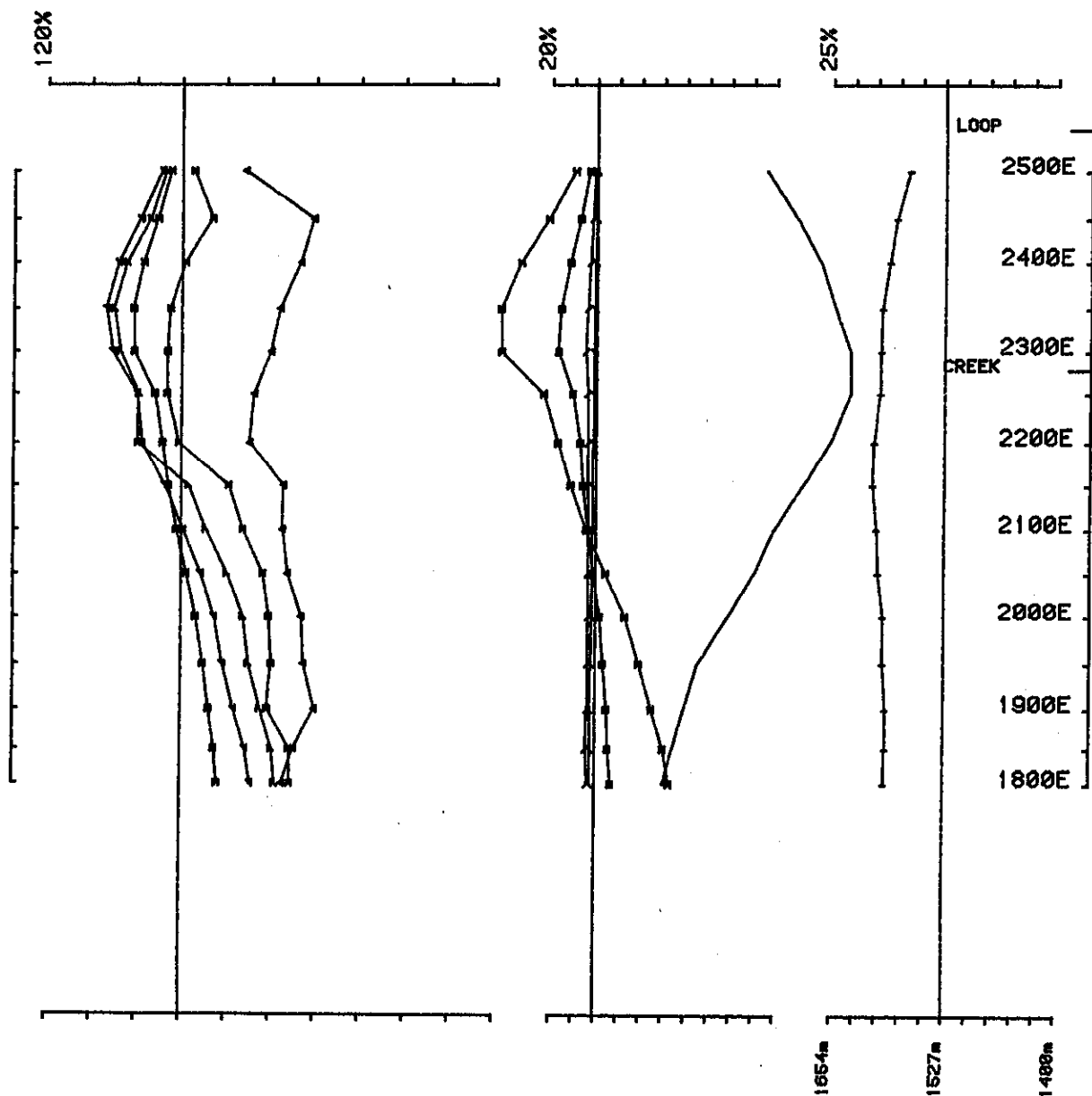


Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 1800S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 30

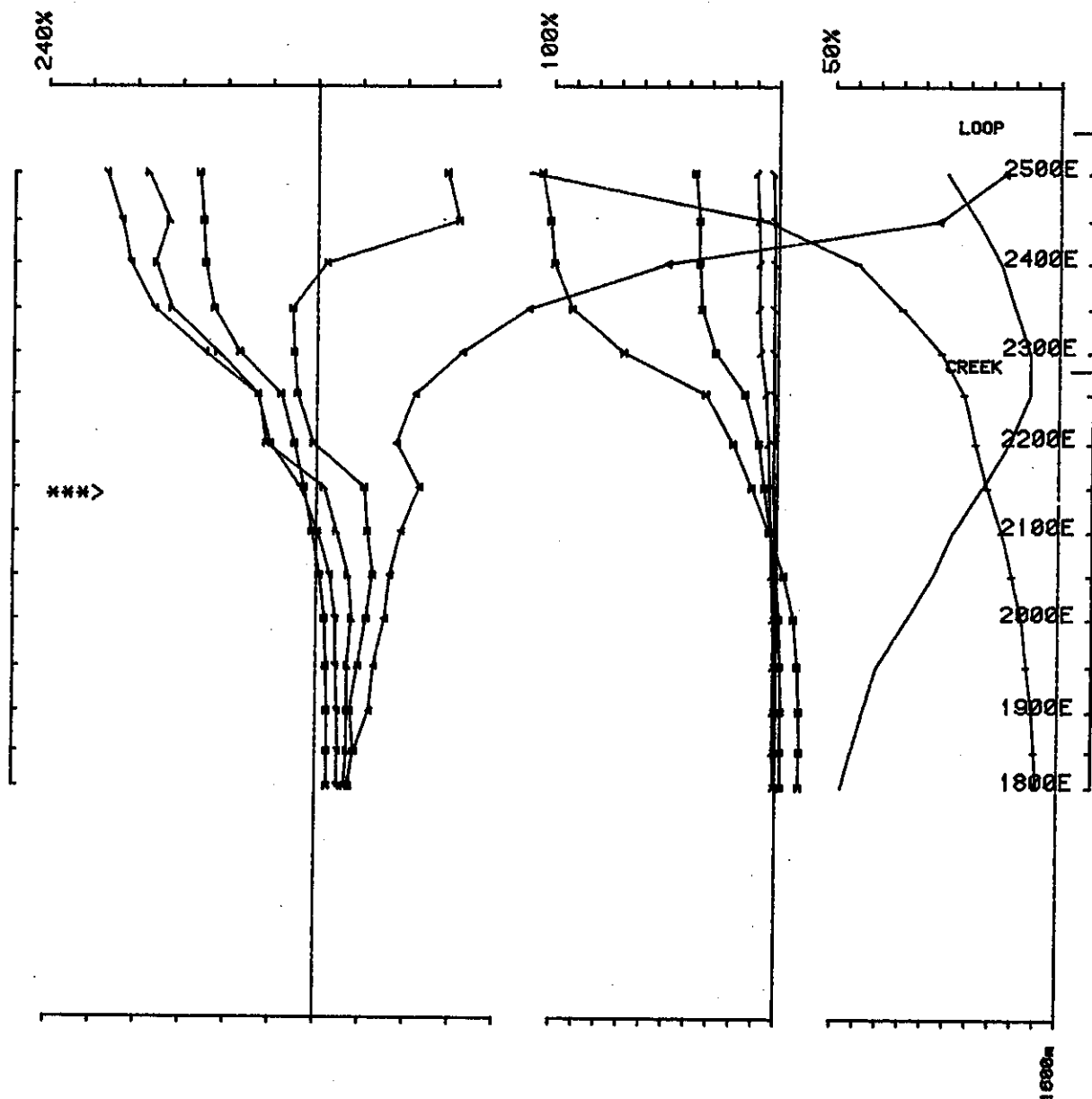


D.S. 30 p



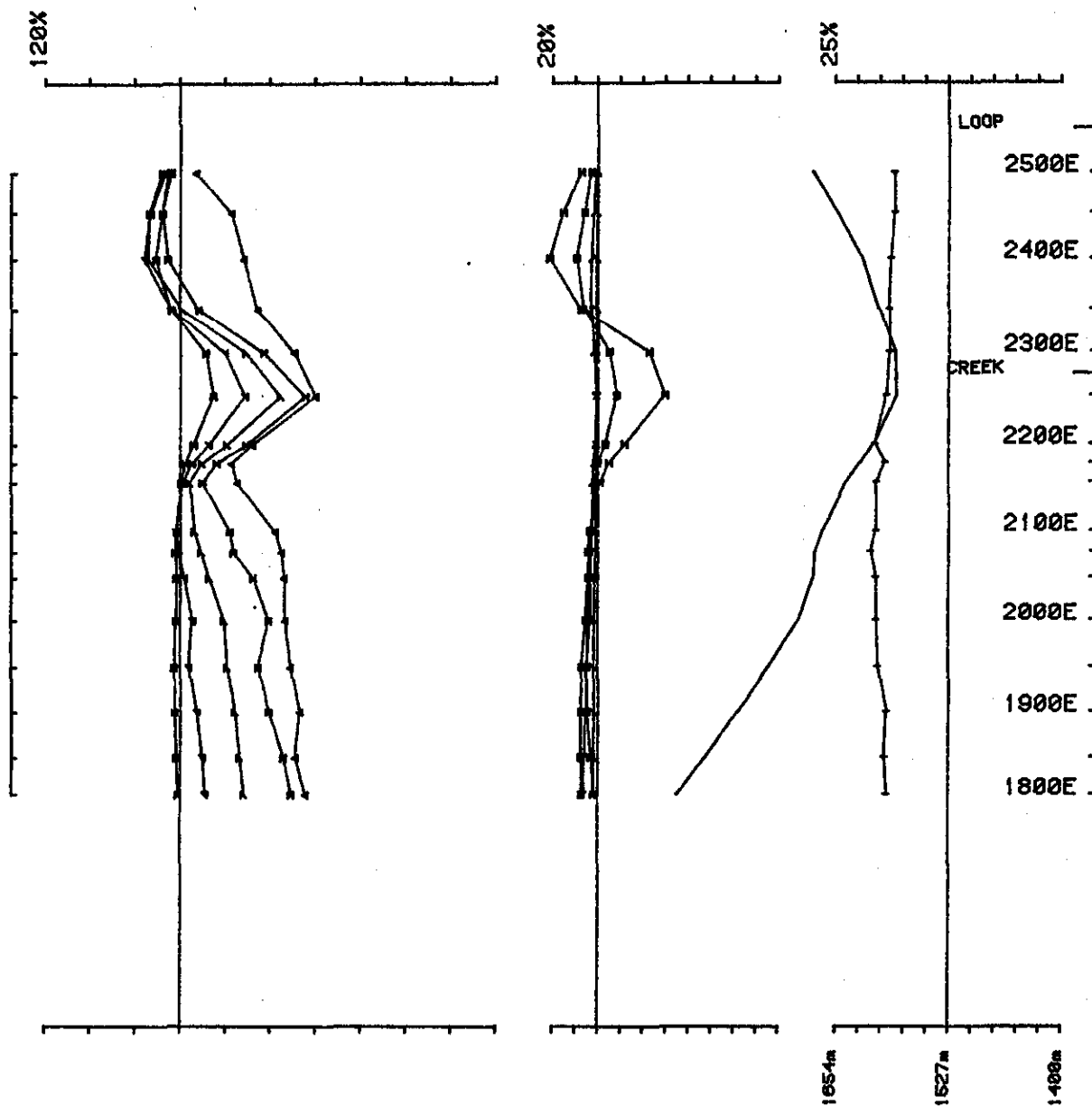
Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Loopno 4 Line 1600S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 31



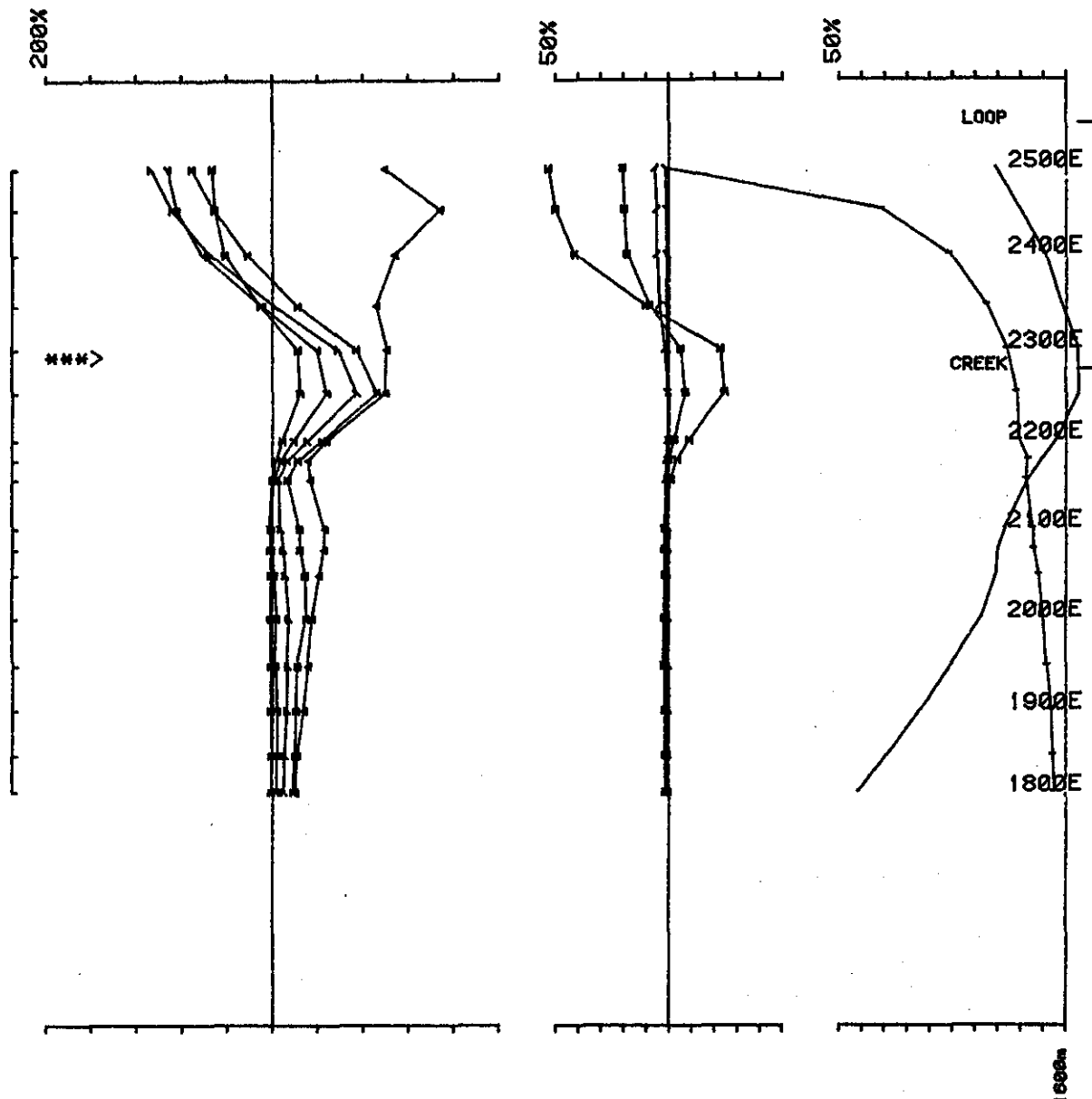
Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 1800S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 3lp

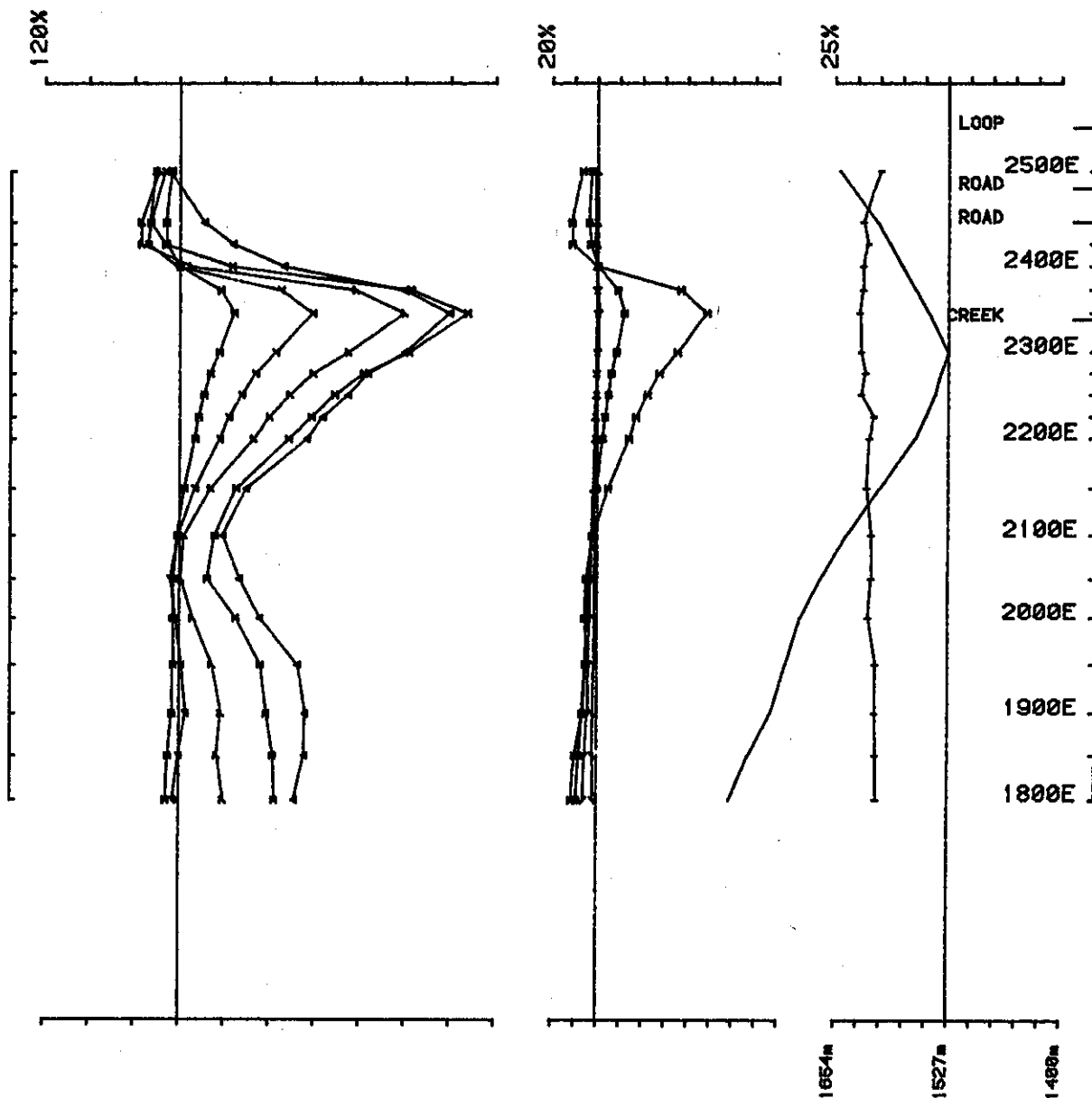


Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 1400S component Hz secondary Ch 1 normalized Ch 1 reduced

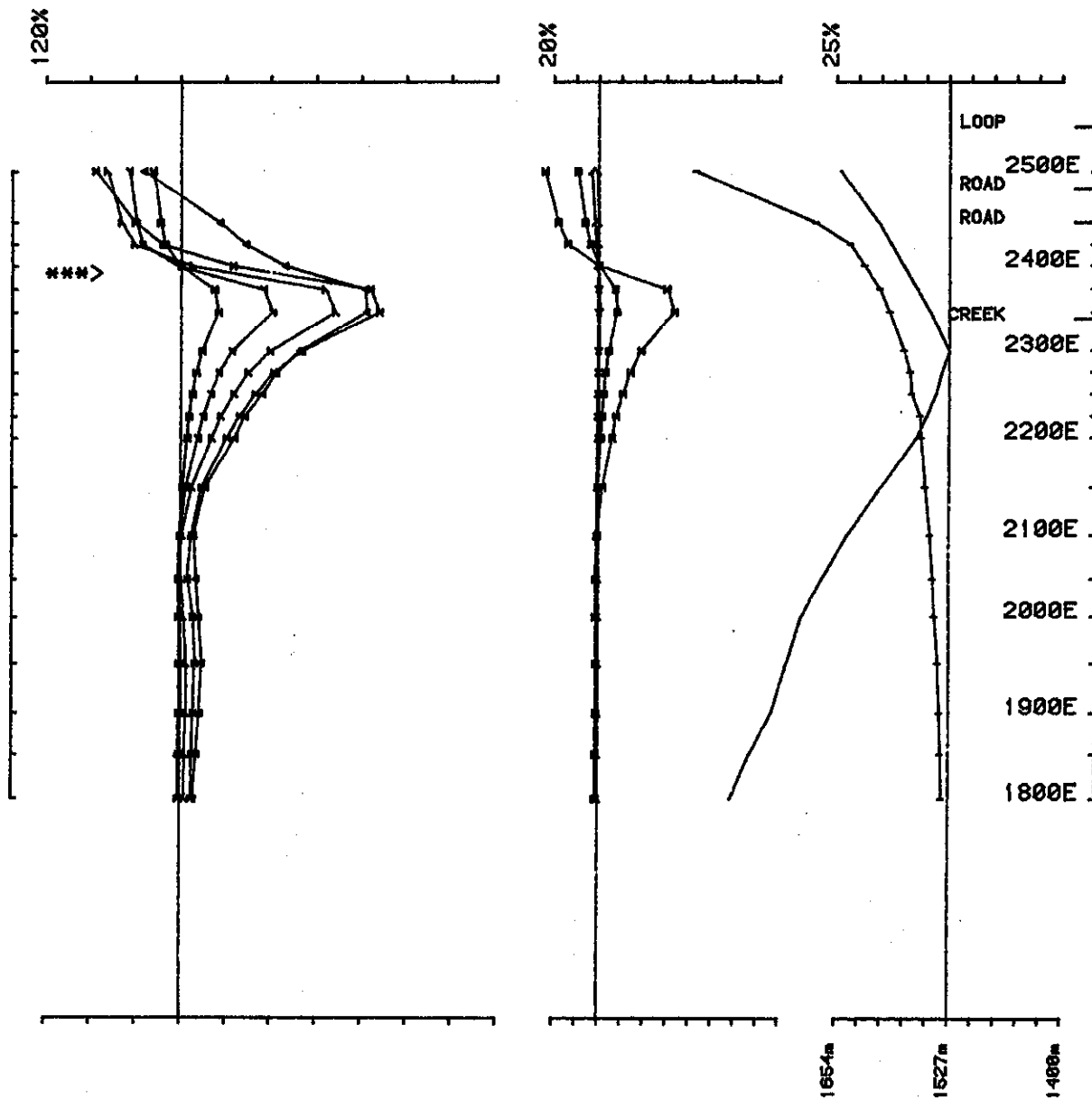
D.S. 32



Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 1400S component Hz secondary Ch 1 normalized Ch 1 reduced

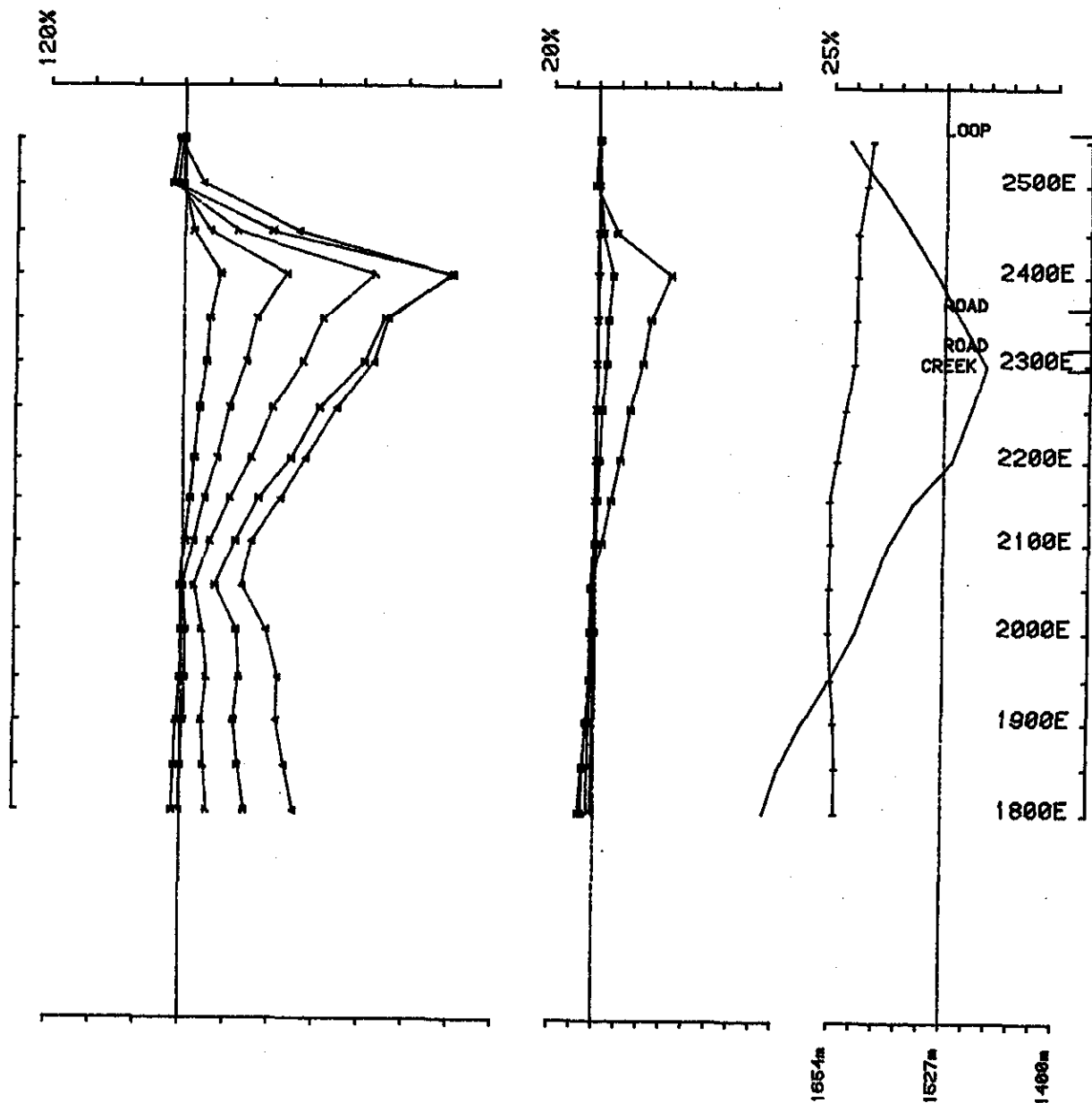


Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 1200S component Hz secondary Ch 1 normalized Ch 1 reduced

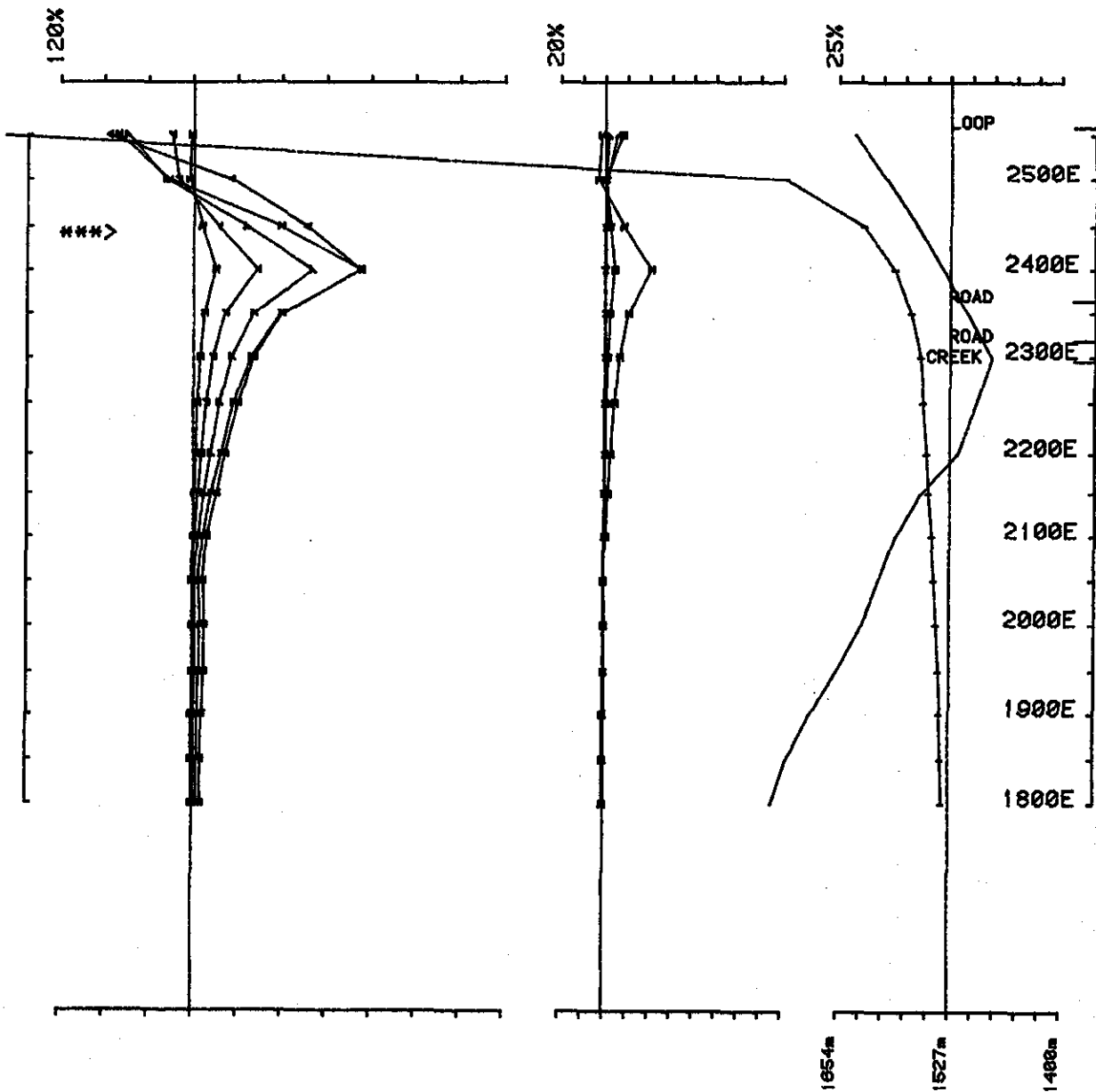


Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 1200S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 33 p

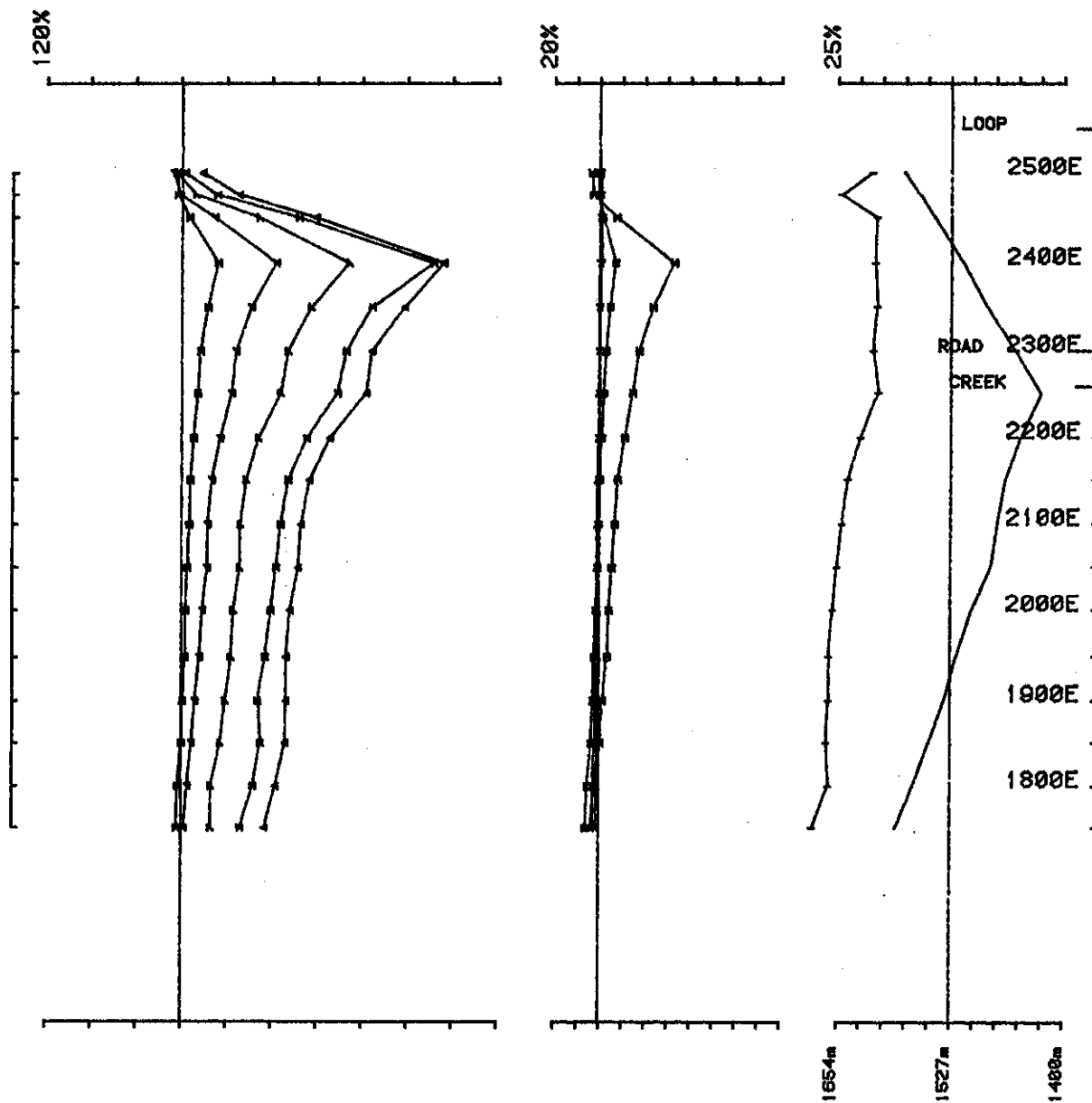


Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Loopno 4 Line 1000S component Hz secondary Ch 1 normalized Ch 1 reduced

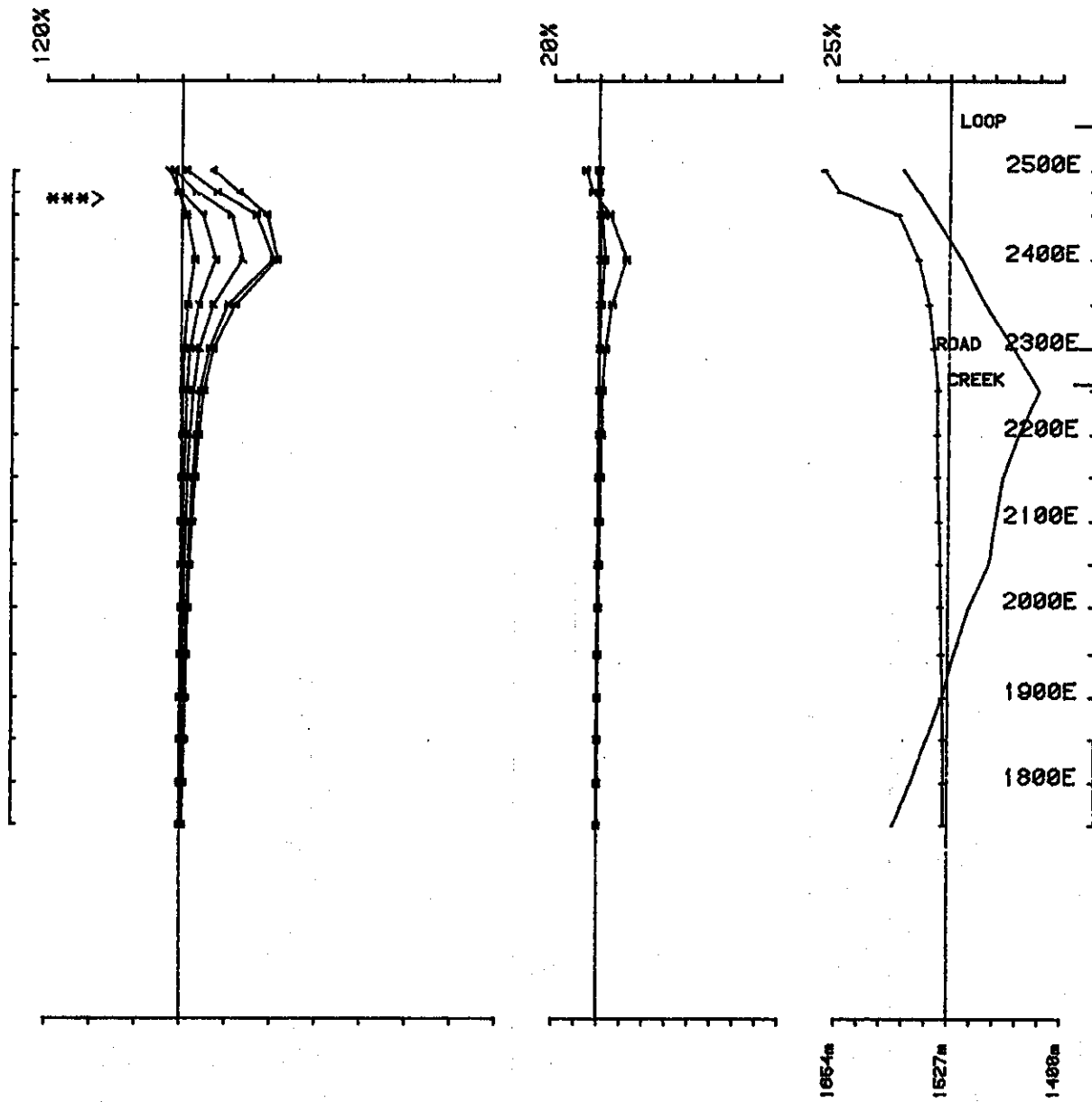


Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Loopno 4 Line 1000S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 34 p

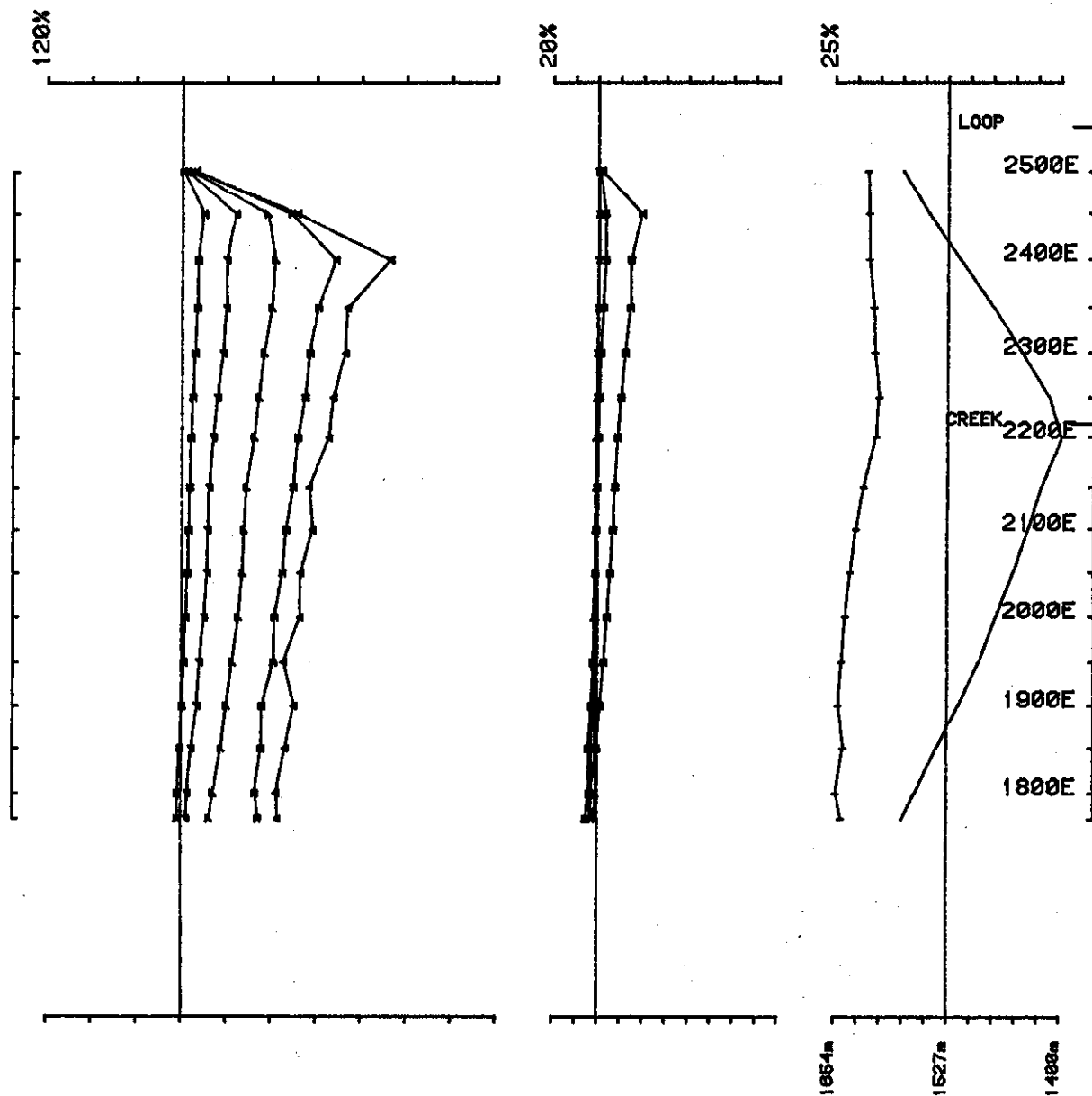


Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 800S component Hz secondary Ch i normalized Ch i reduced

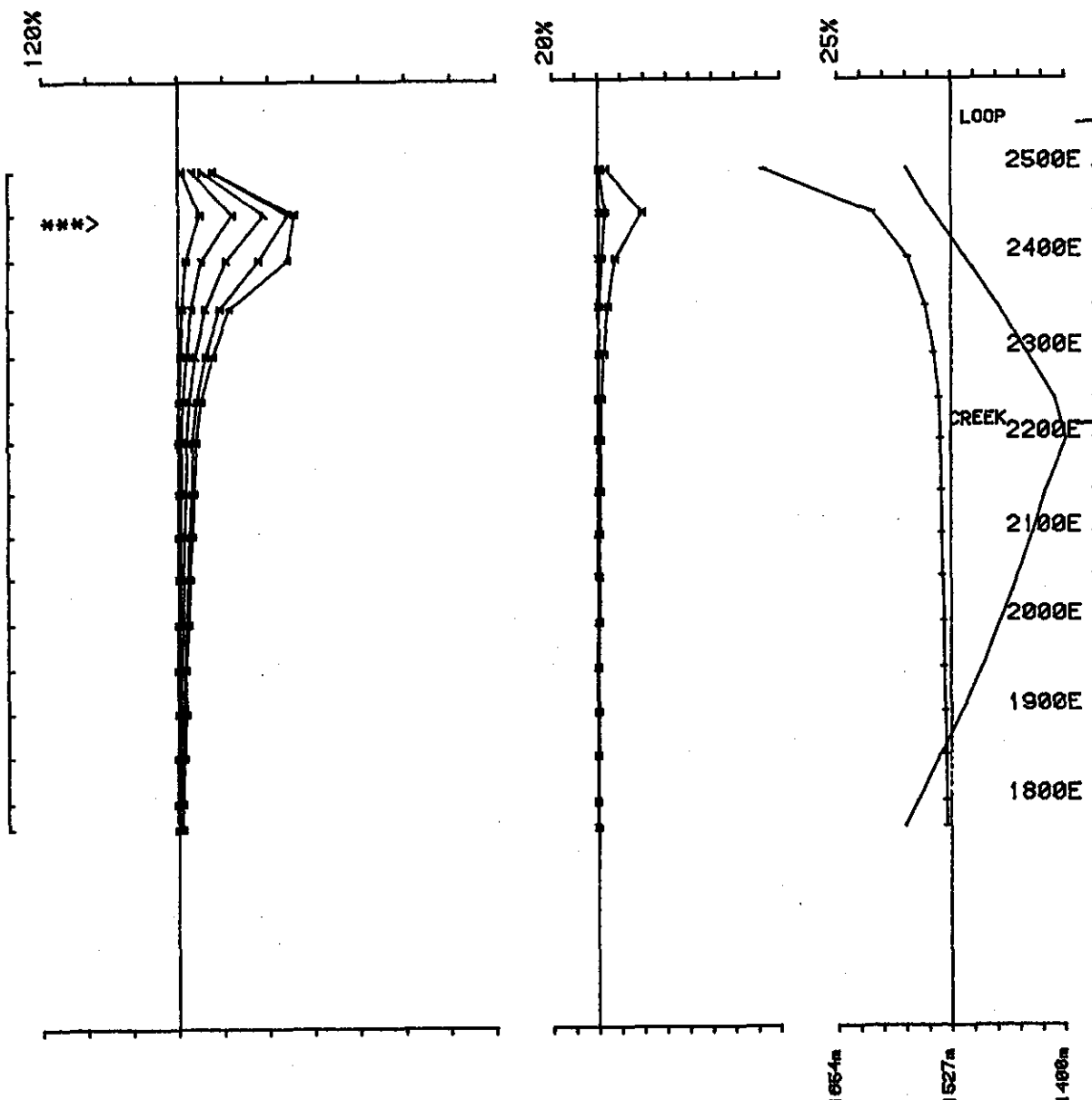


Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 800S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 35 p

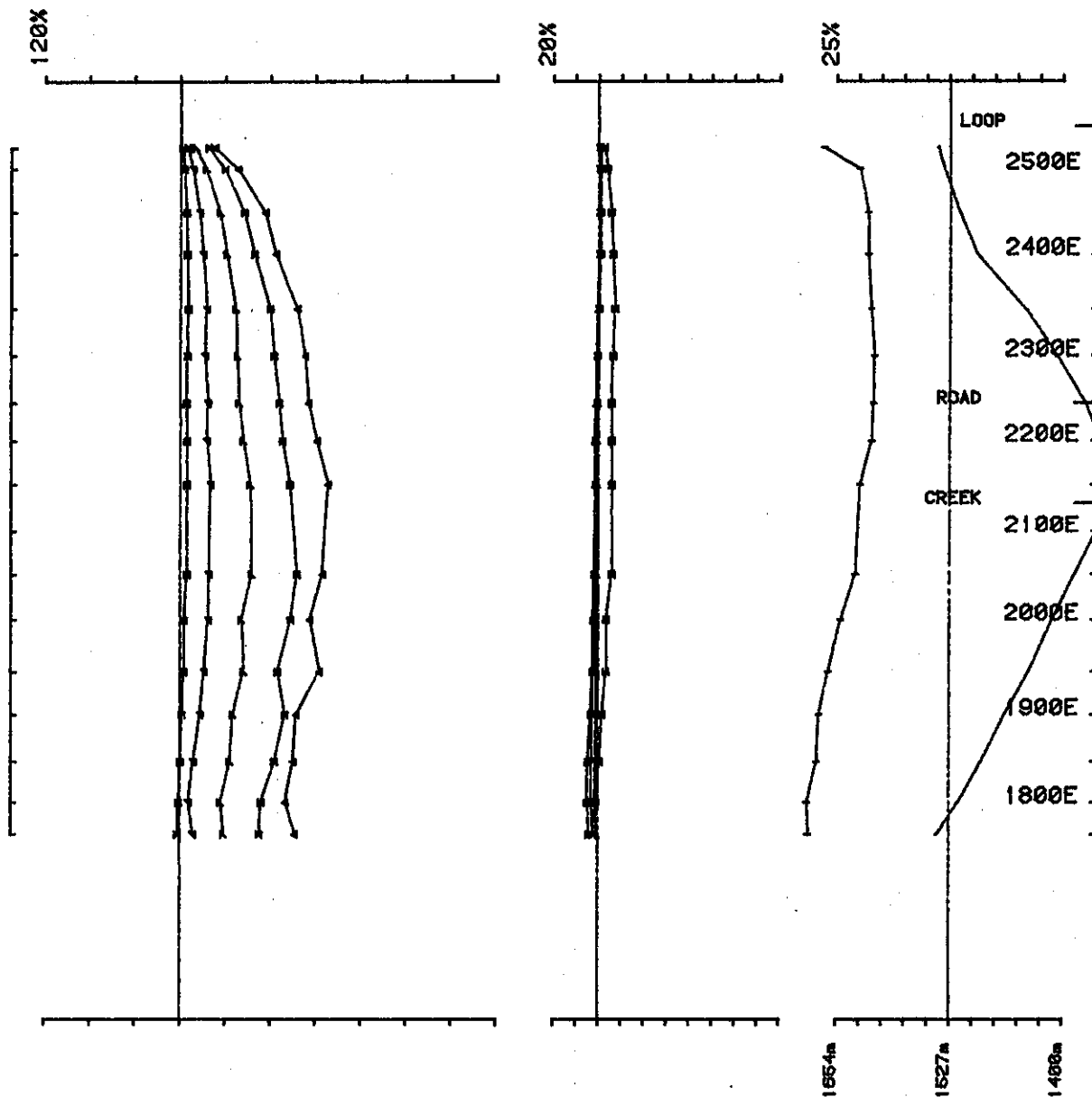


Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 600S component Hz secondary Ch 1 normalized Ch 1 reduced



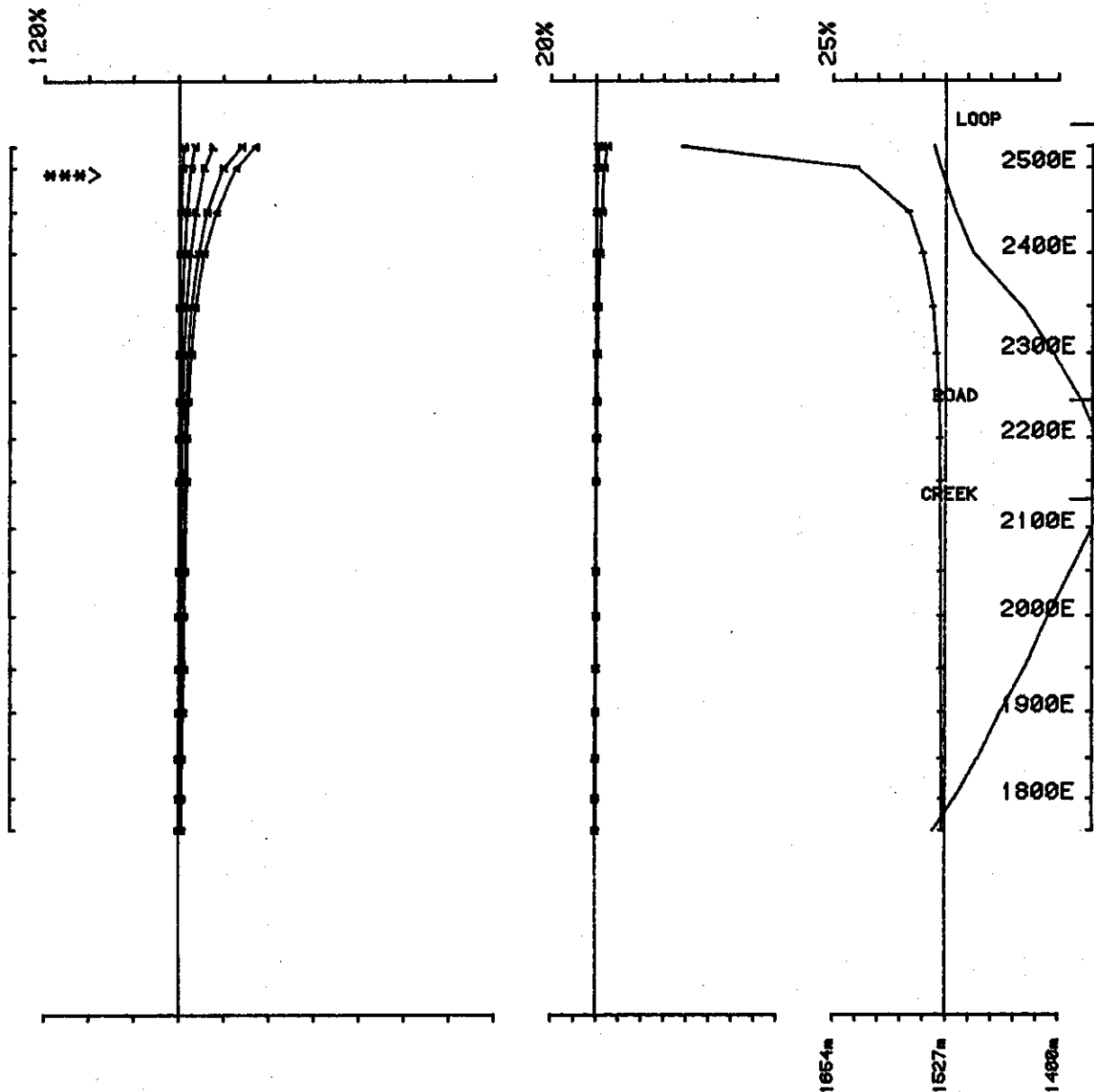
Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 600S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 36p



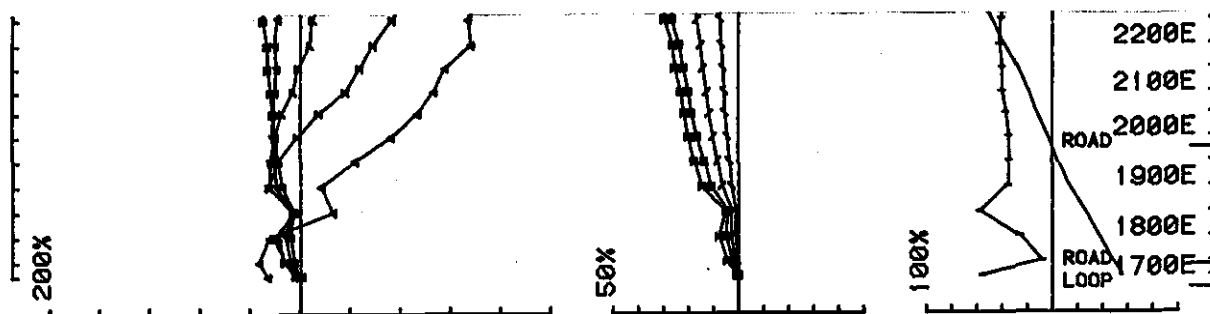
Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 400S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 37



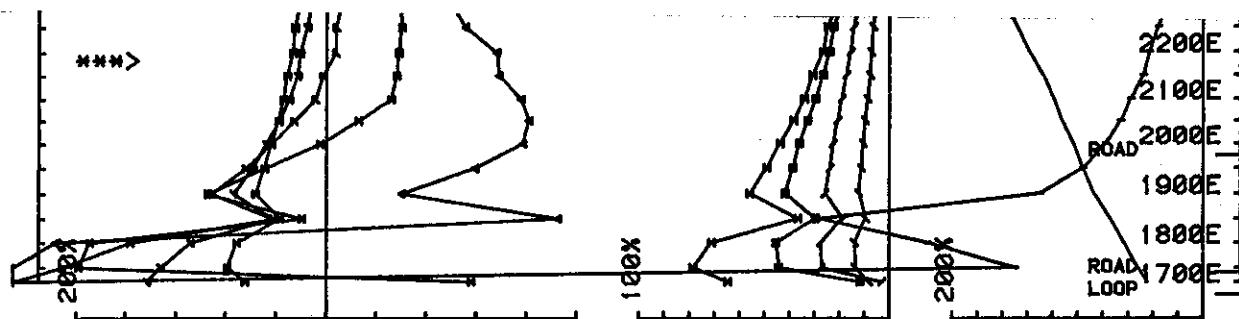
Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 4 Line 400S component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 37 p



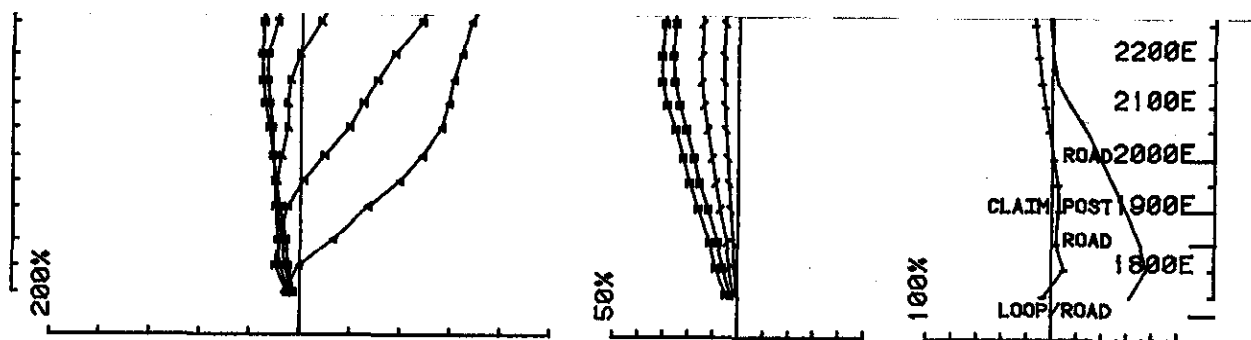
Area ESTELLA COMINCO operator IU GP freq(hz) 30.974
 Loopno 5 Line 5000N component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 39



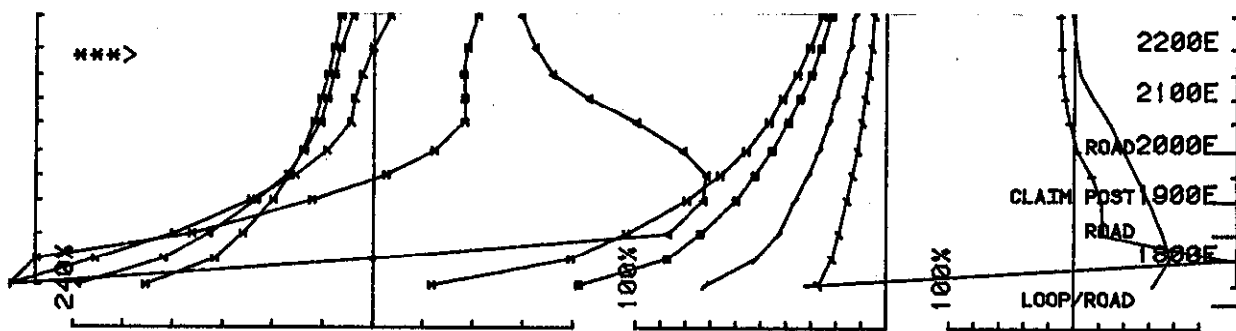
Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 5 Line 5000N component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 39 p



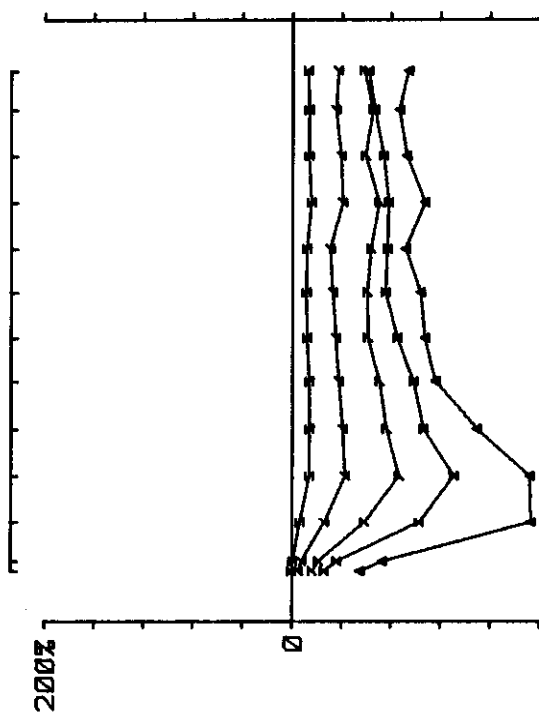
Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 5 Line 6000N component Hz secondary Ch 1 normalized Ch 1 reduced

D.S. 40



Area ESTELLA COMINCO operator IJ GP freq(hz) 30.974
 Loopno 5 Line 6000N component Hz secondary Ch 1 normalized Ch 1 reduced

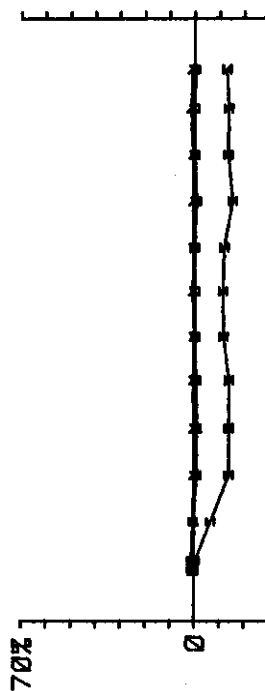
D.S. 40 p



ESTELLA

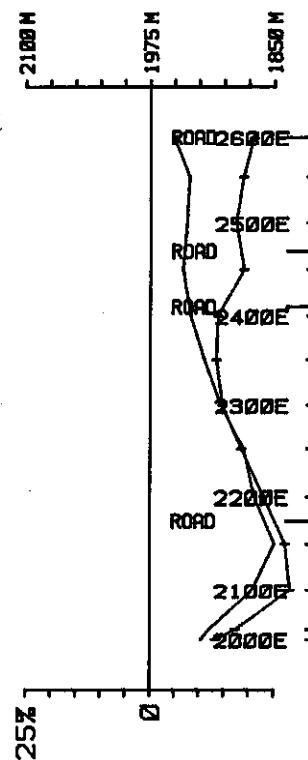
Op: IJ

Ch1 reduced. Ch1 normalized.



COMINCO

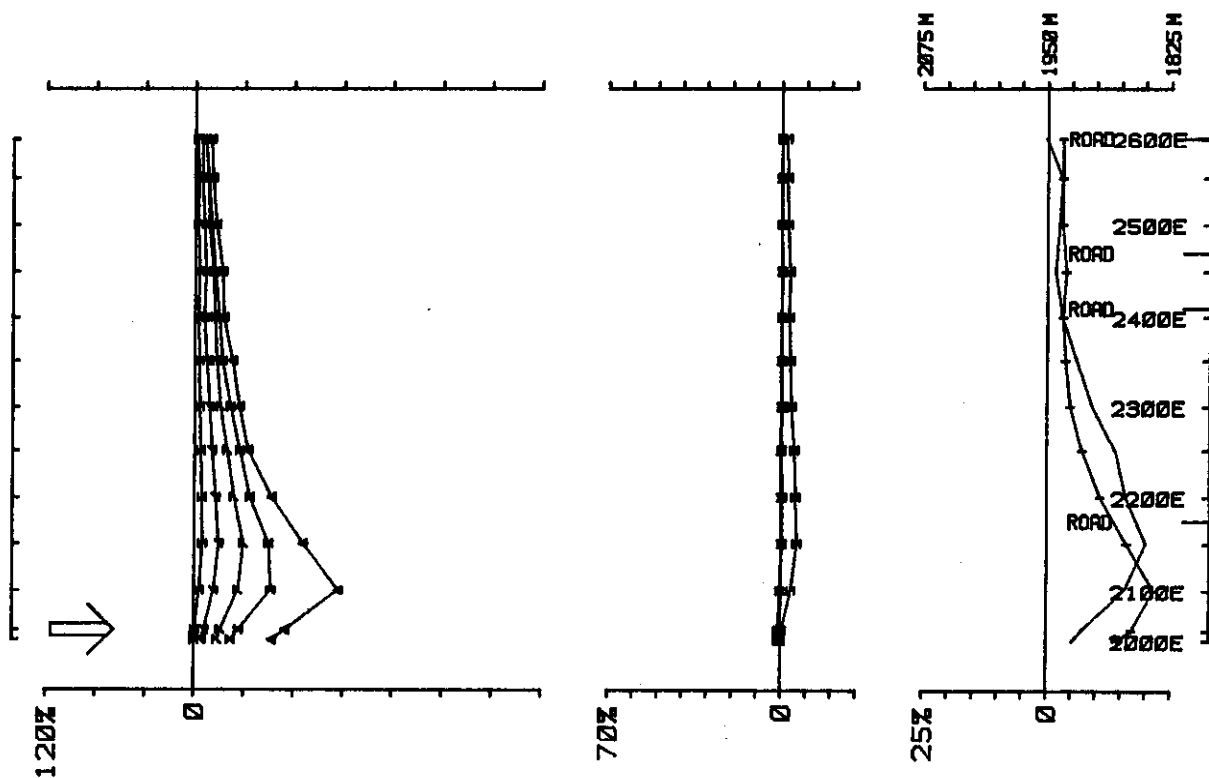
Freq(Hz): 30.974



Hz

Loop: 6 Line: 2250 S

D.S. 44



ESTELLA

Op: IJ

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

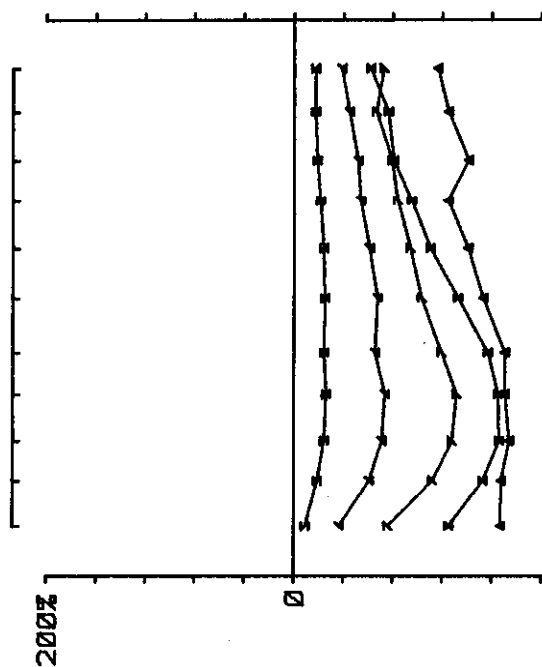
Point Normalized.

Hz

Loop: 6

Line: 2250 S

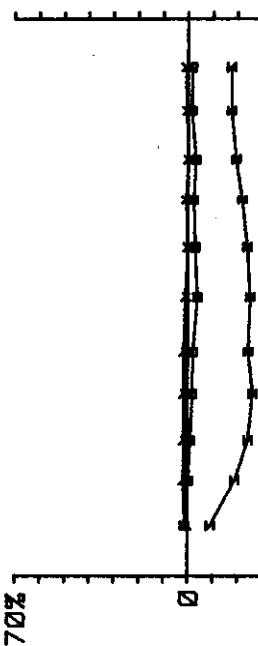
D.S. 44 p



ESTELLA

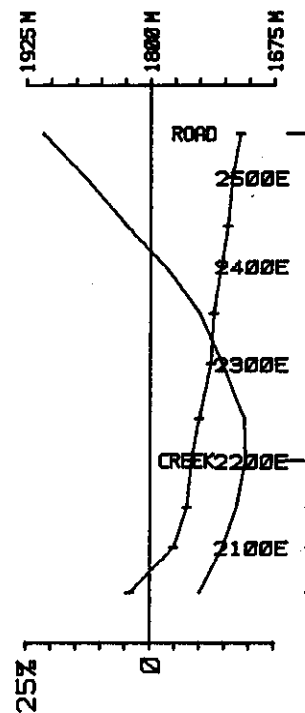
Op: IJ

Ch1 reduced. Ch1 normalized.



COMINCO

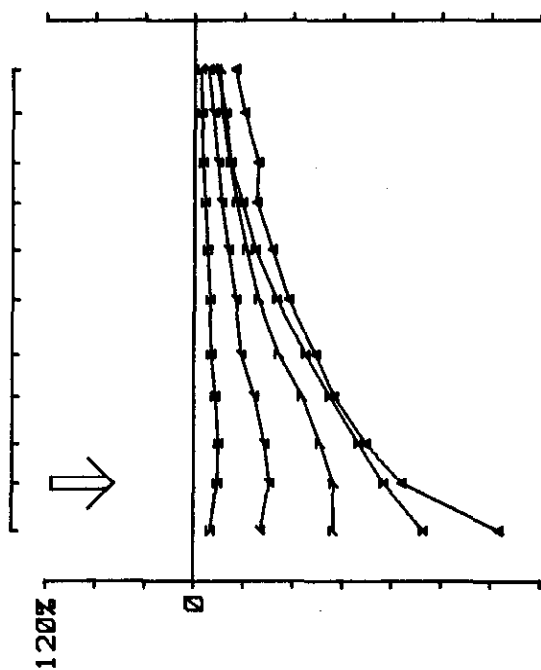
Freq(Hz): 30.974



Hz

Loop: 6 Line: 2000 S

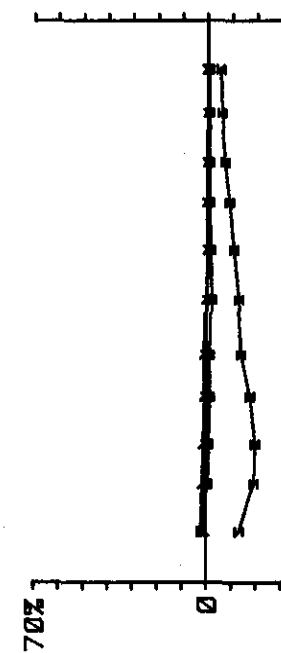
D.S. 45



ESTELLA

Op: IJ

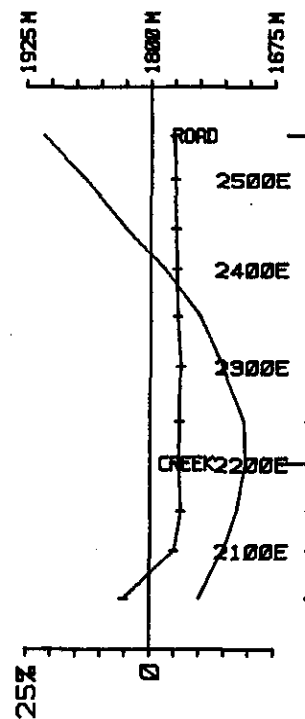
Ch1 reduced. Ch1 normalized.



COMINCO

Freq(Hz): 30.974

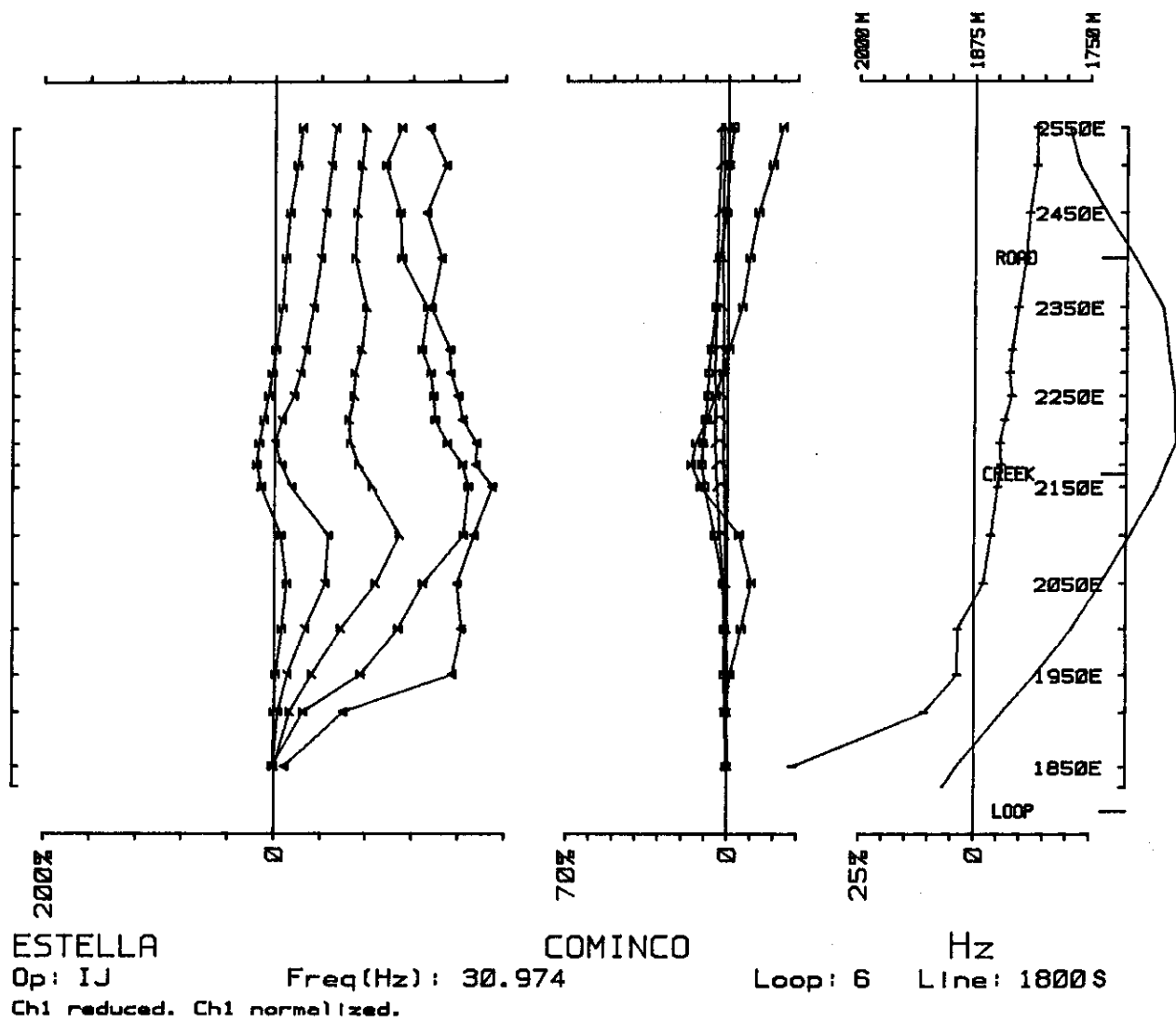
Point Normalized.



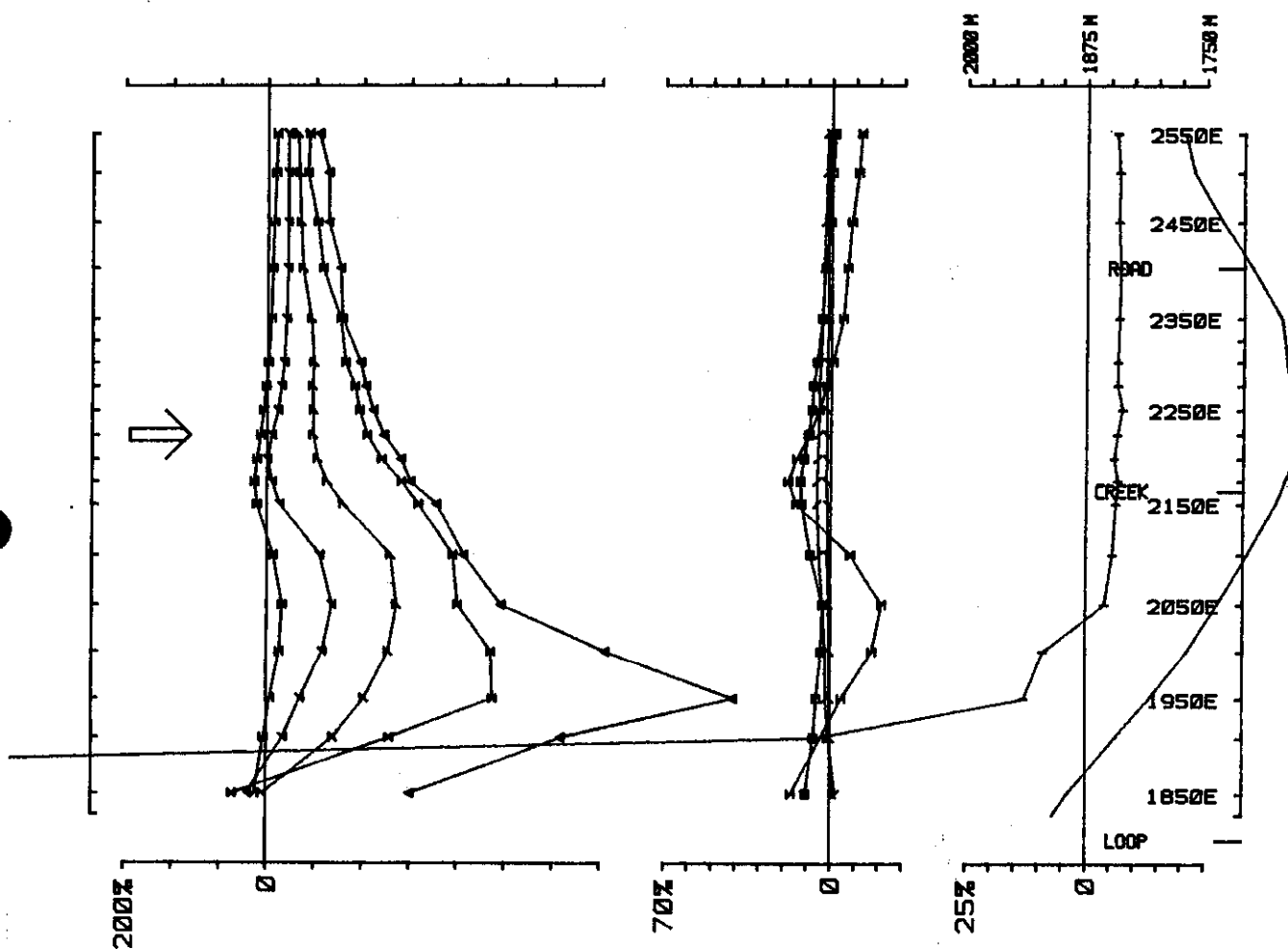
Hz

Loop: 6 Line: 2000 S

D.S. 45p



D.S. 46



ESTELLA

Op: IJ

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

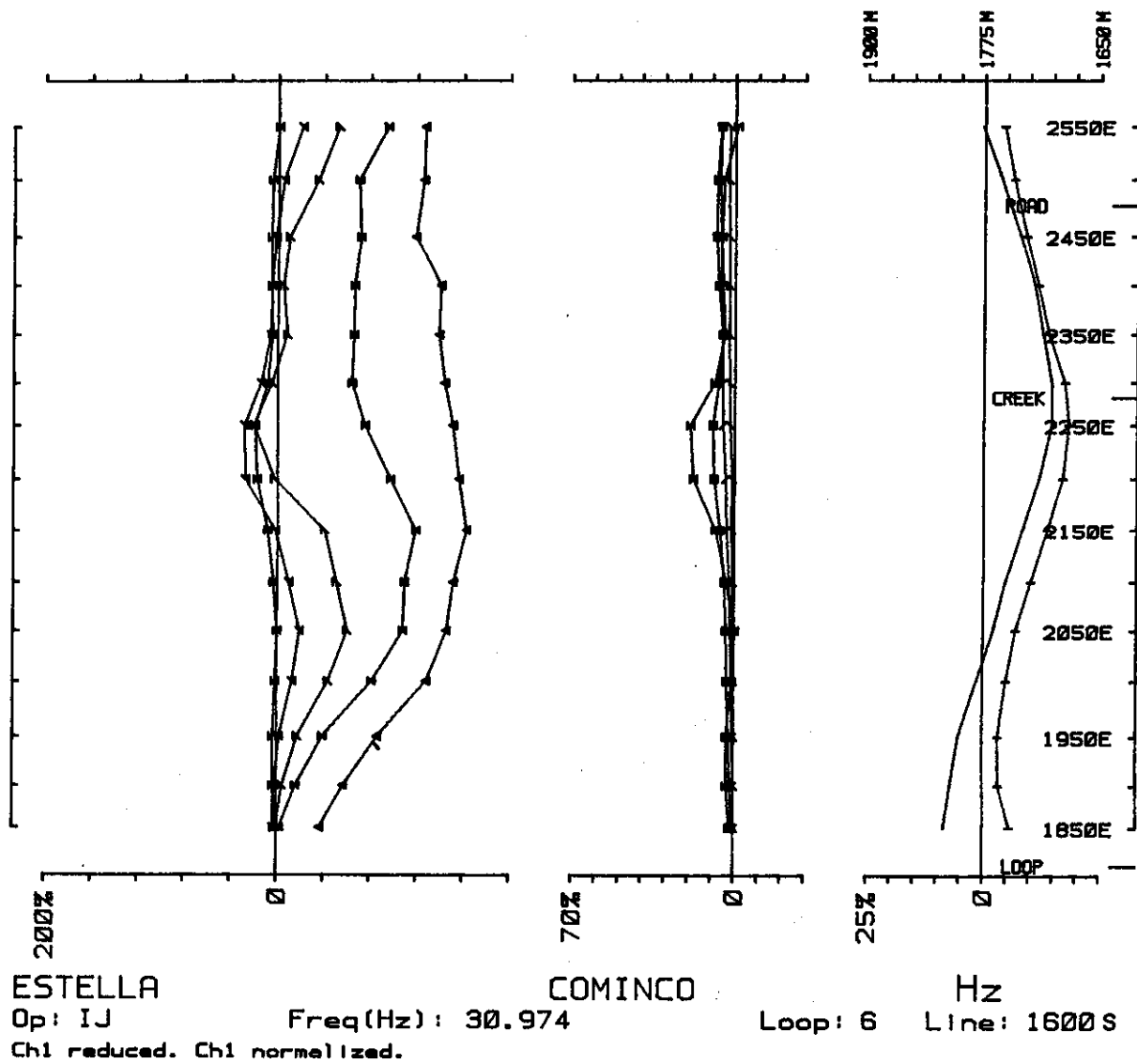
Point Normalized.

Hz

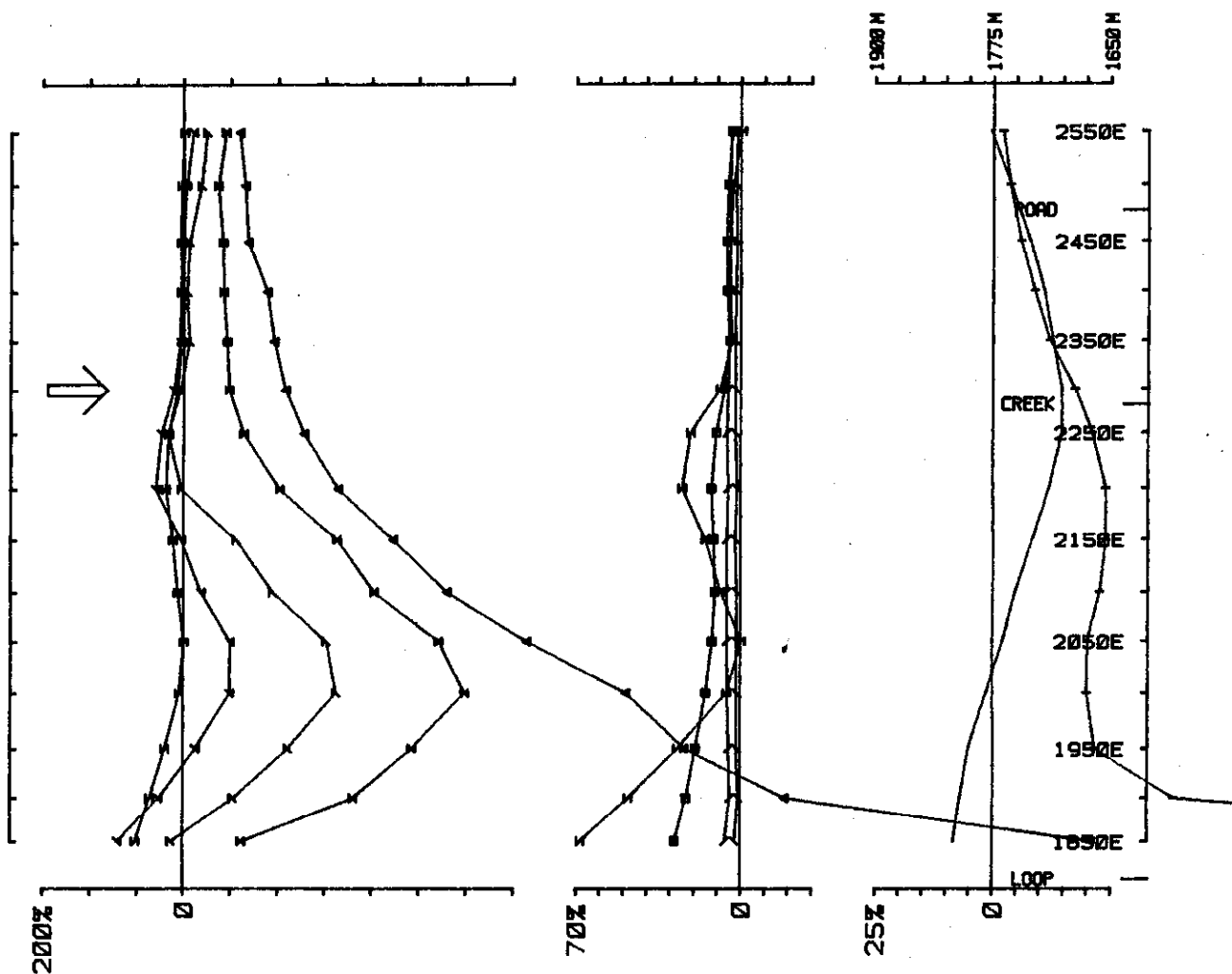
Loop: 6

Line: 1800S

D.S. 46p



D.S. 47



ESTELLA

Op: IJ

Chi reduced. Chi normalized.

COMINCO

Freq(Hz): 30.974

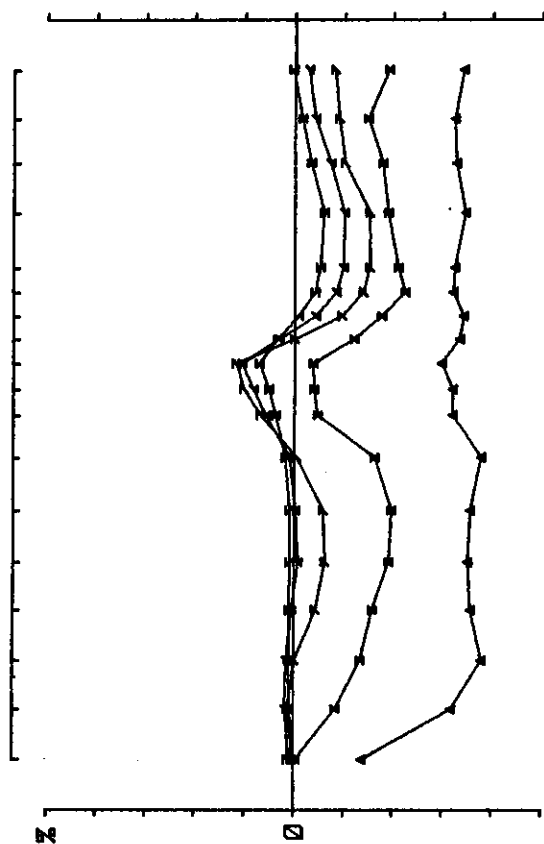
Point Normalized.

Loop: 6

Hz

Line: 1600 S

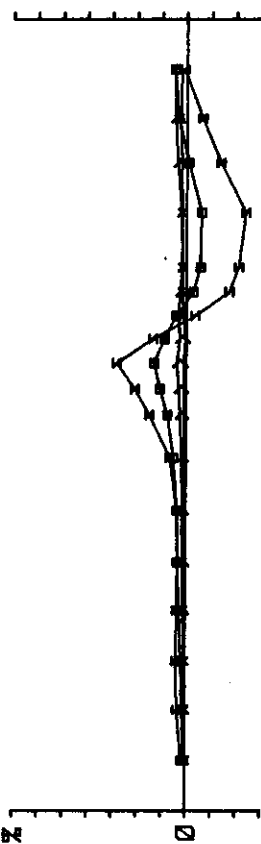
D.S. 47 p



ESTELLA

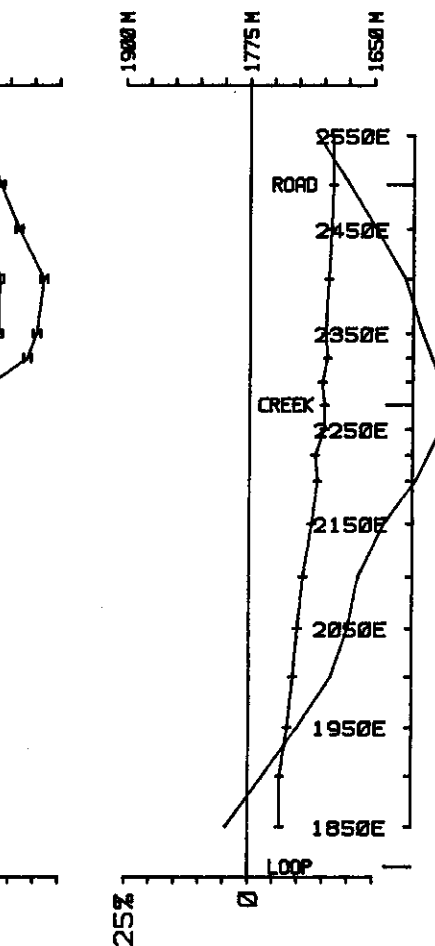
Op: IJ

Ch1 reduced. Ch1 normalized.



COMINCO

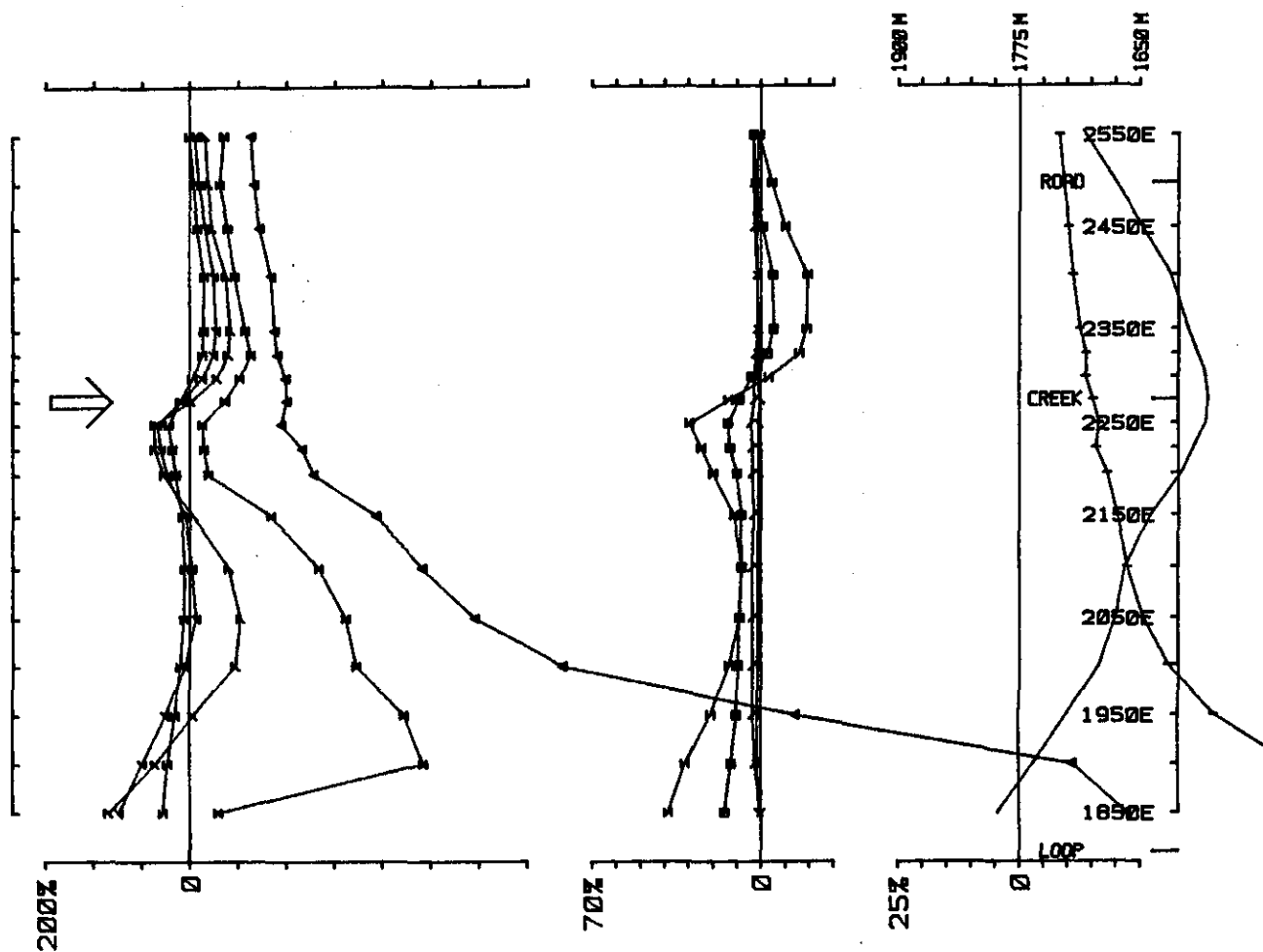
Freq(Hz): 30.974



Hz

Loop: 6 Line: 1400 S

D.S. 48



ESTELLA

Op: IJ

Ch1 reduced. Ch1 normalized.

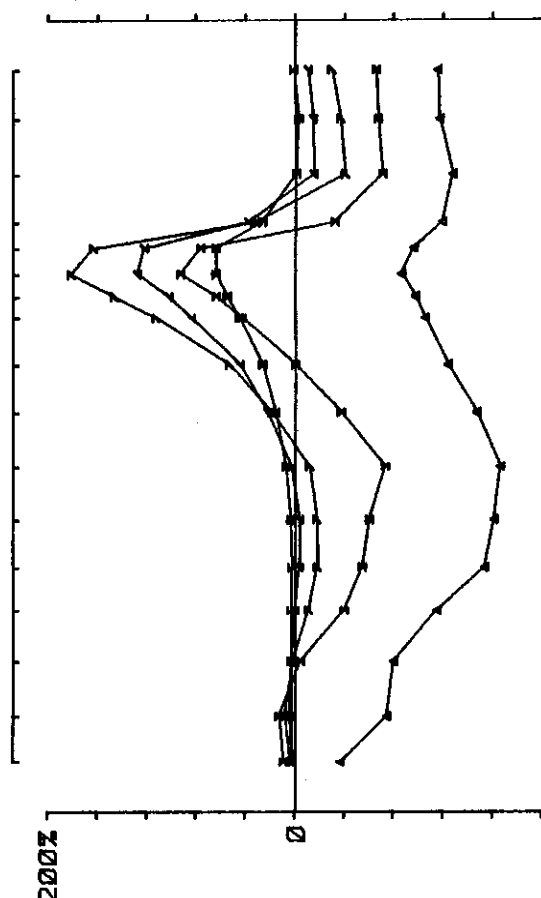
COMINCO

Freq(Hz): 30.974

Point Normalized.

Loop: 6 Line: 1400S

D.S. 48 p

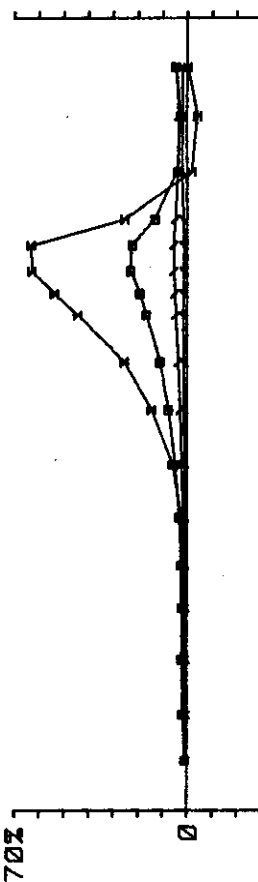


ESTELLA

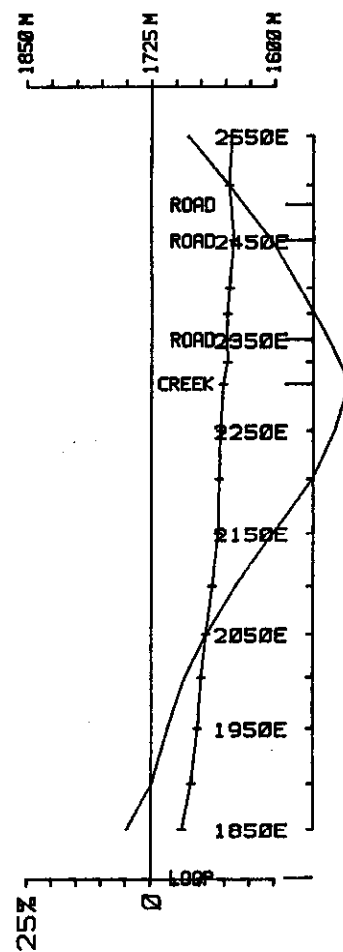
Op: IJ

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.



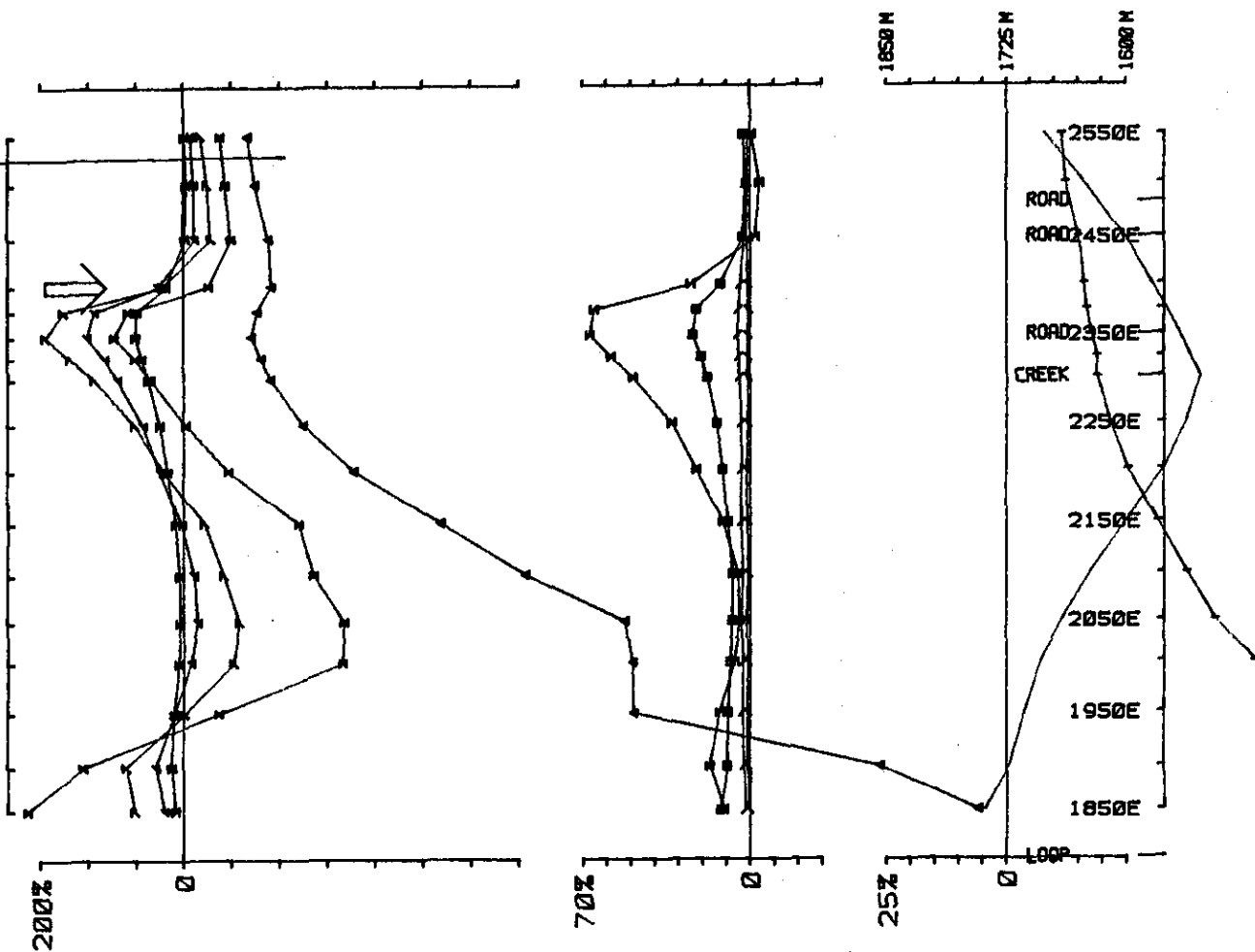
COMINCO



Hz

Loop: 6 Line: 1200S

D.S. 49



ESTELLA

Op: IJ

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

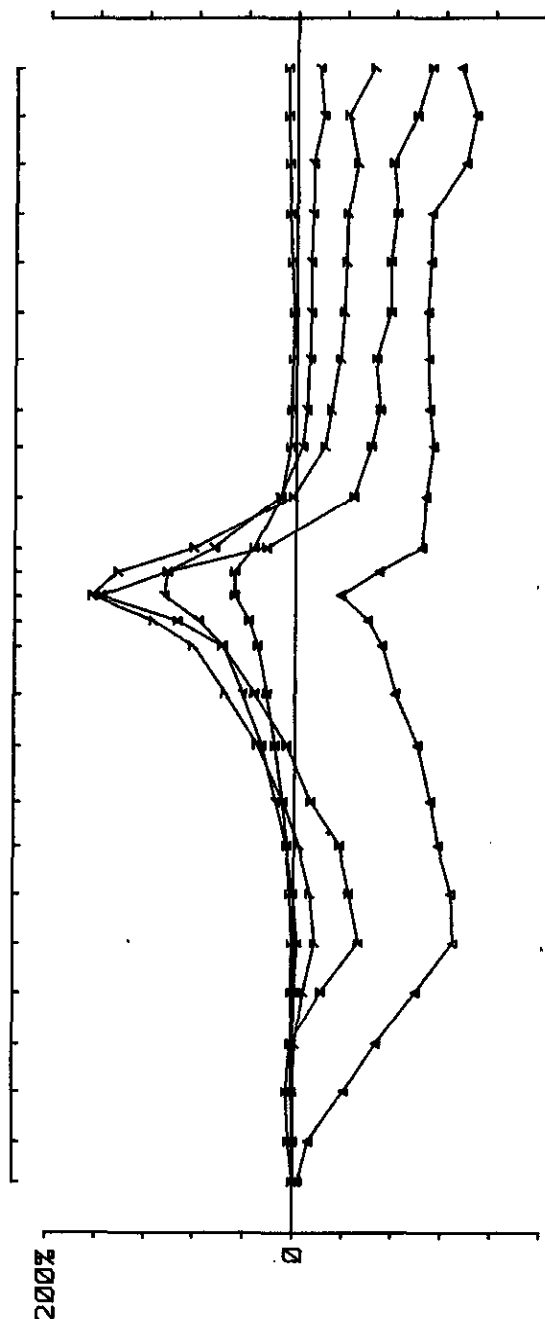
Point Normalized.

Hz

Loop: 6

Line: 1200S

D.S. 49p

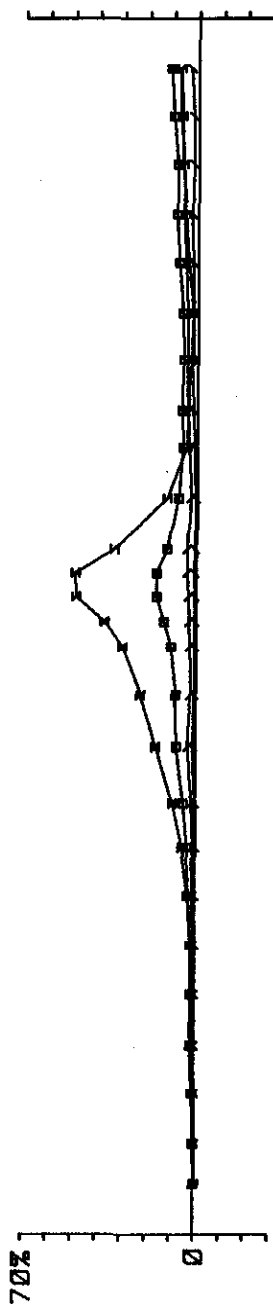


ESTELLA

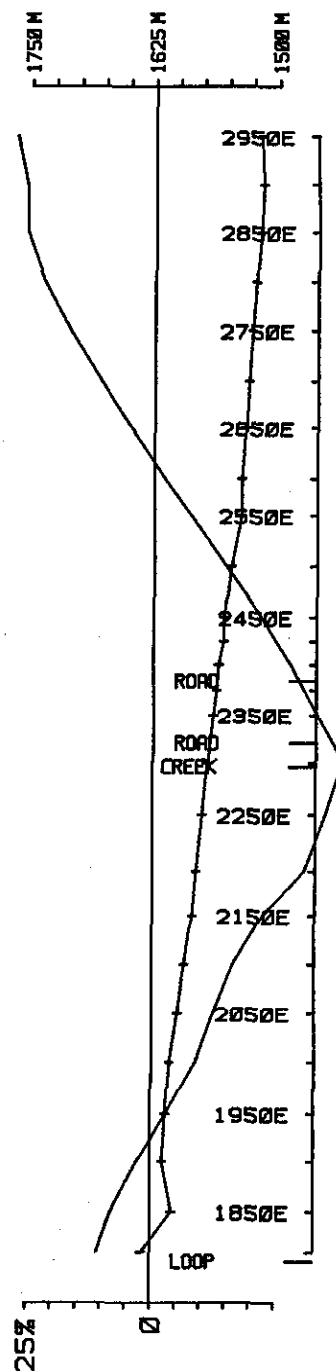
Op: IJ

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.



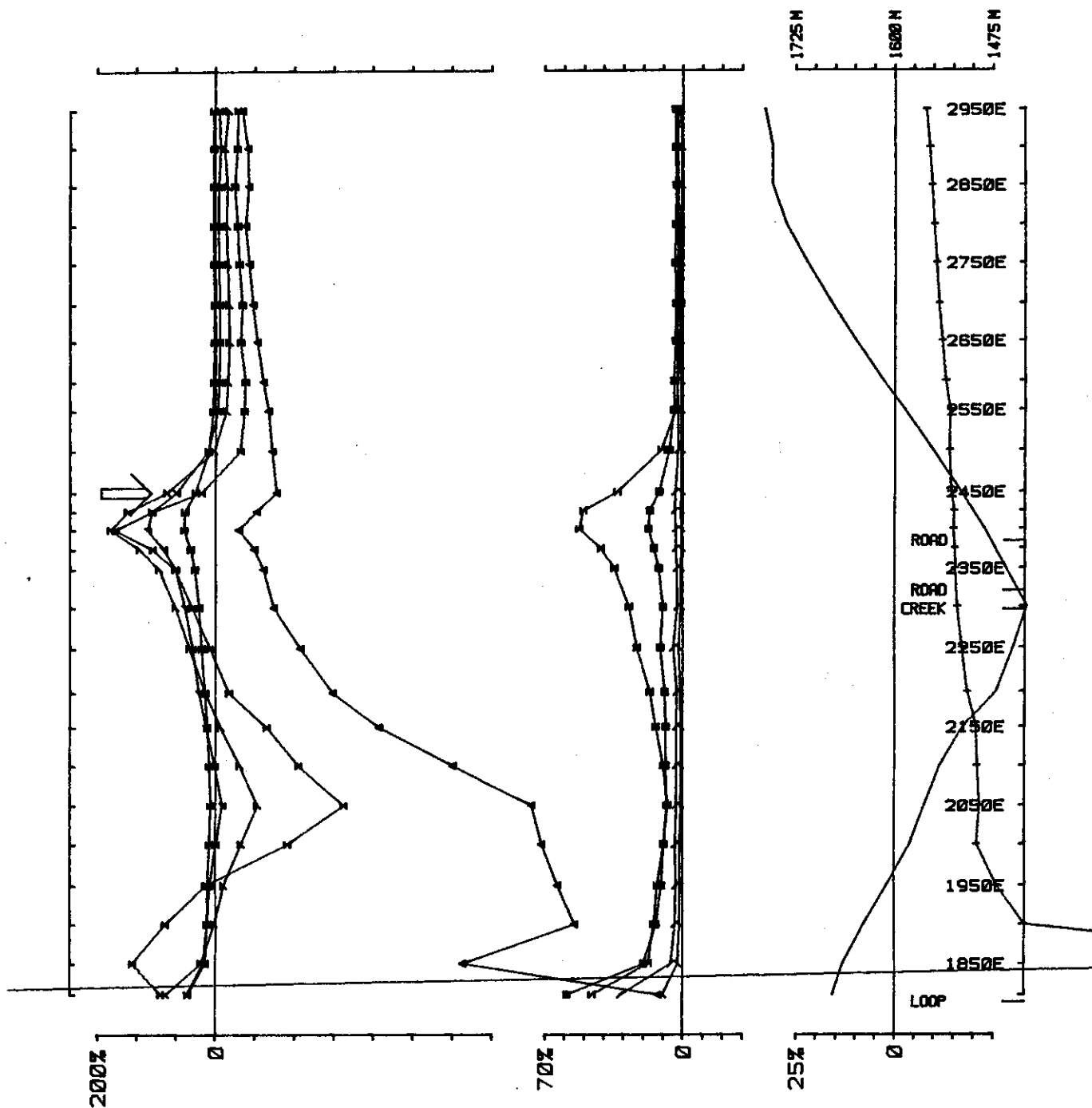
COMINCO



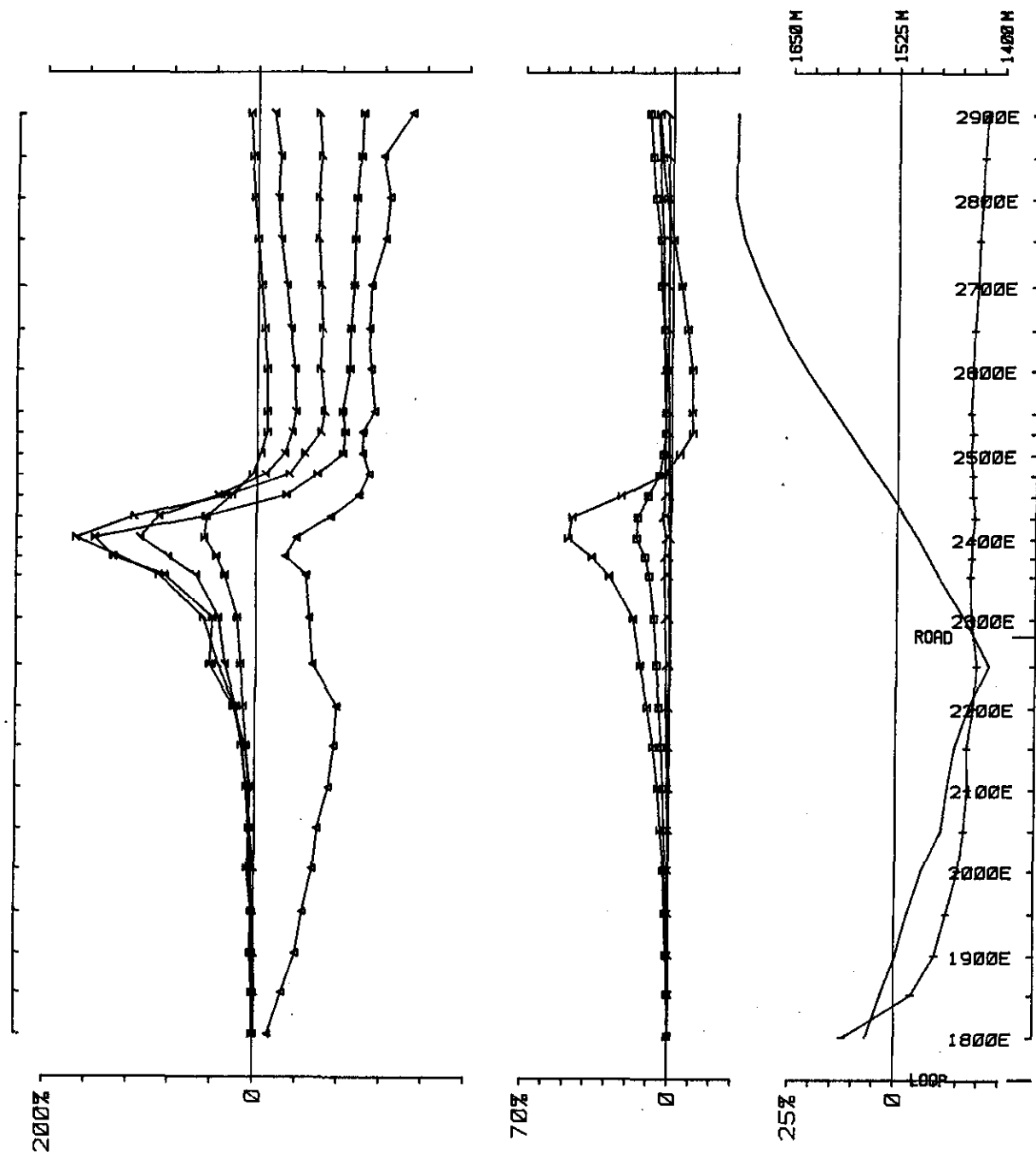
Hz

Loop: 6 Line: 1000S

D.S. 50



D.S. 50 p



ESTELLA

Op: IJ

Freq(Hz): 30.974

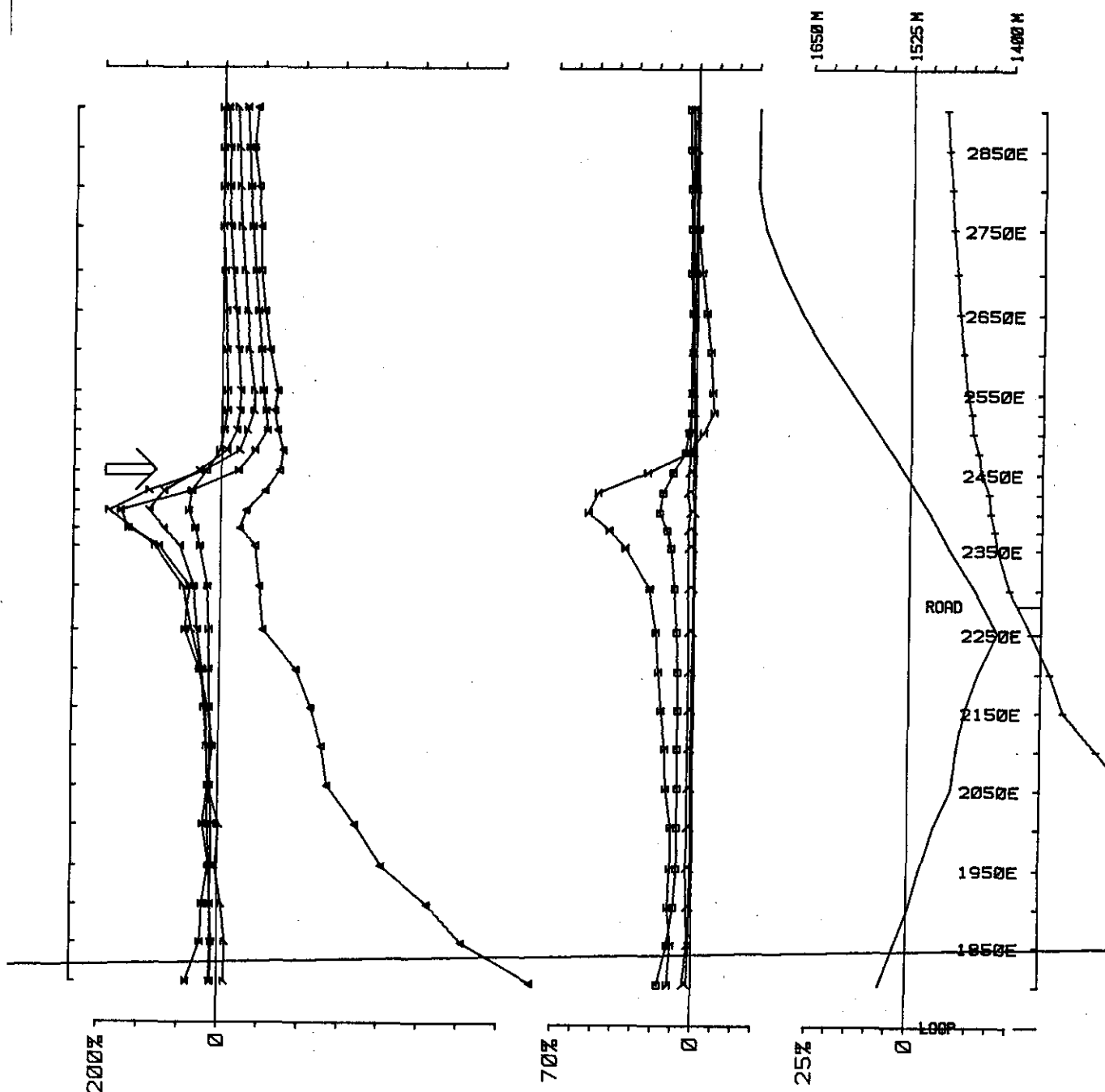
Ch1 reduced. Ch1 normalized.

COMINCO

Loop: 6 Line: 800S

Hz

D.S. 51



ESTELLA

Op: IJ

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

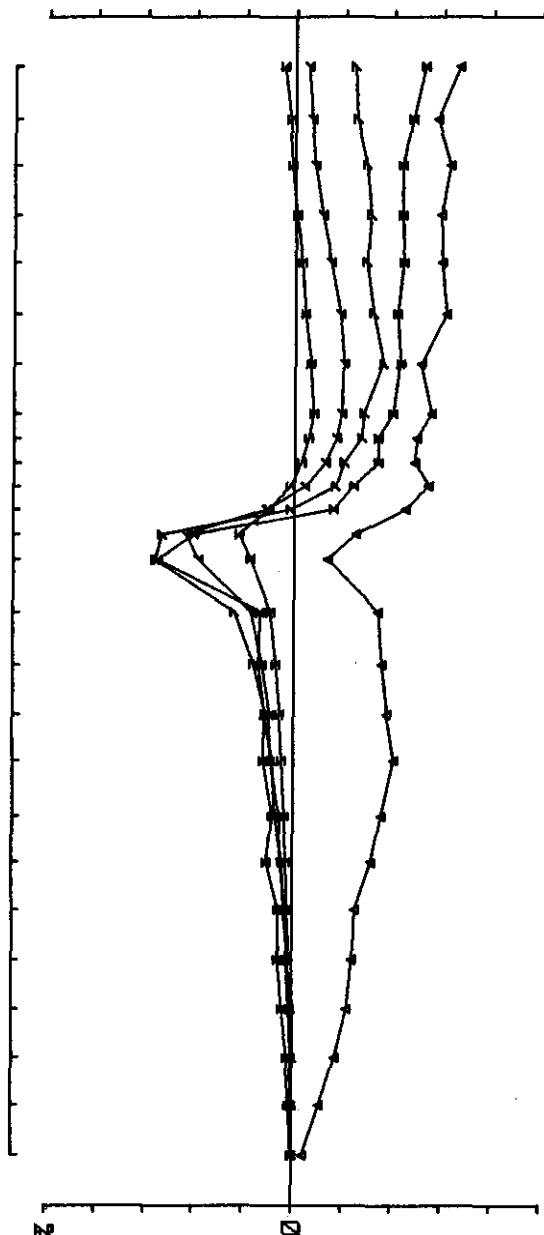
Point Normalized.

Hz

Loop: 6

Line: 800S

D.S. 51p

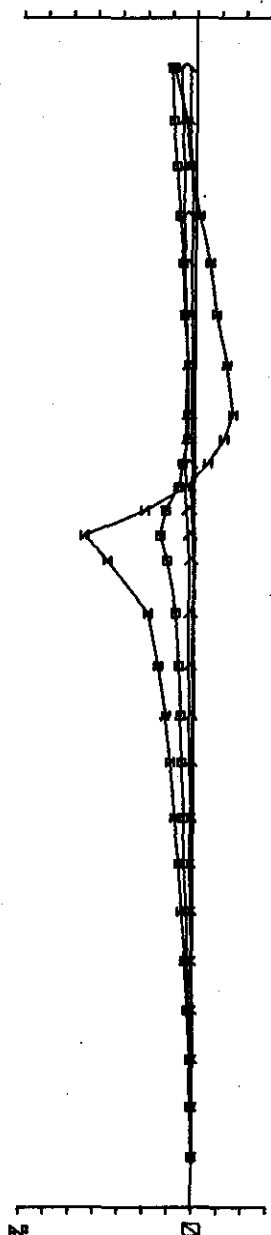


ESTELLA

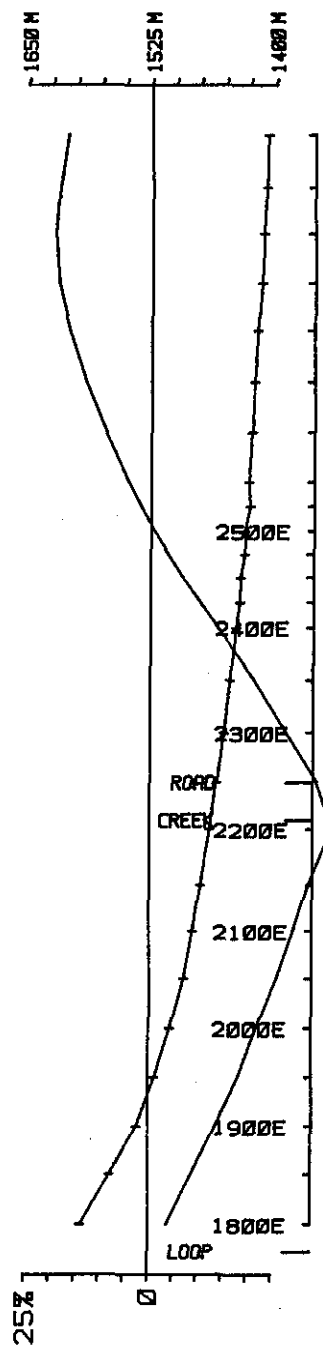
Op: IJ

Freq(Hz): 30.974

Ch1 reduced. Ch1 normalized.



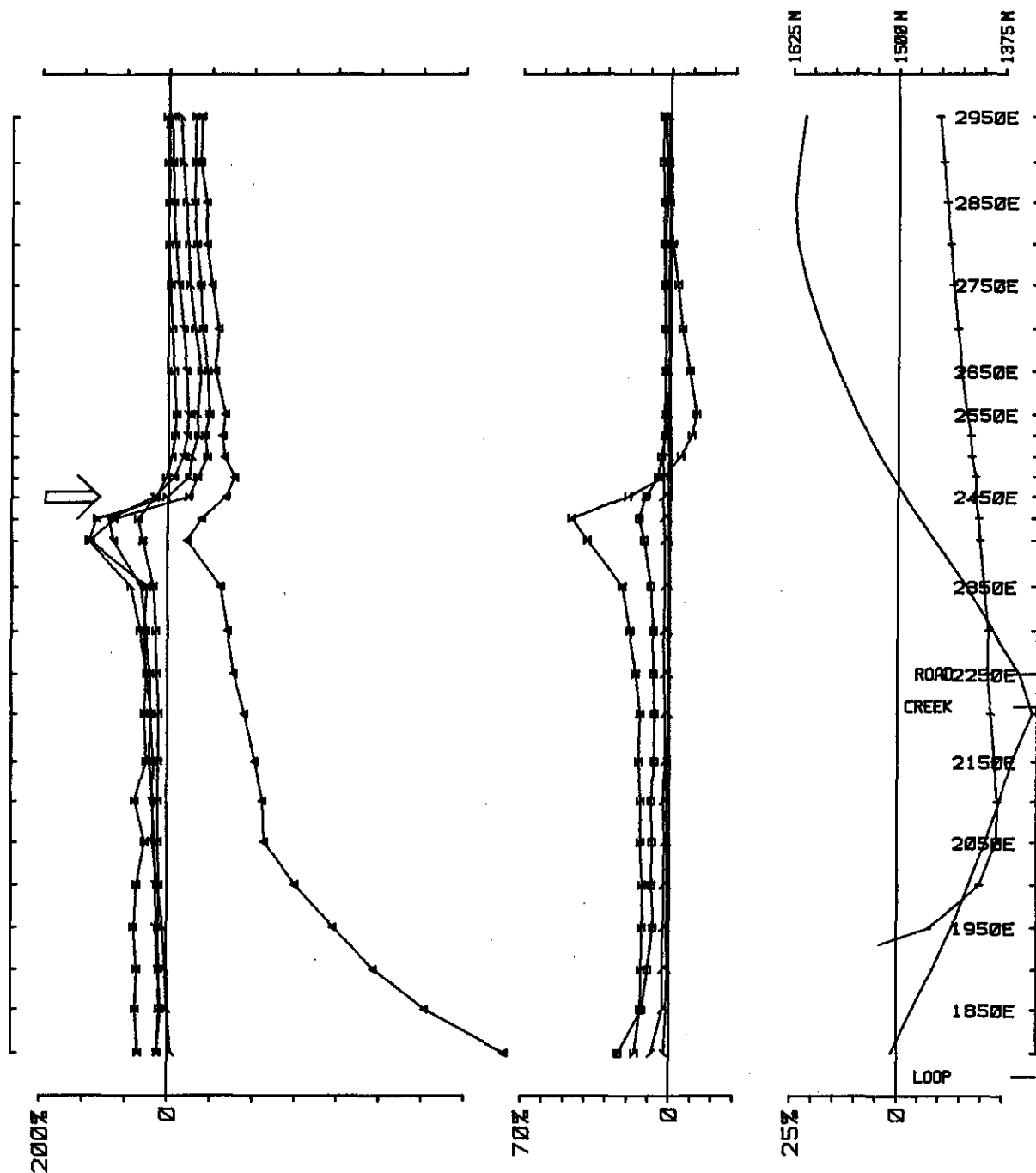
COMINCO



Hz

Loop: 6

Line: 600S



ESTELLA

Op: IJ

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

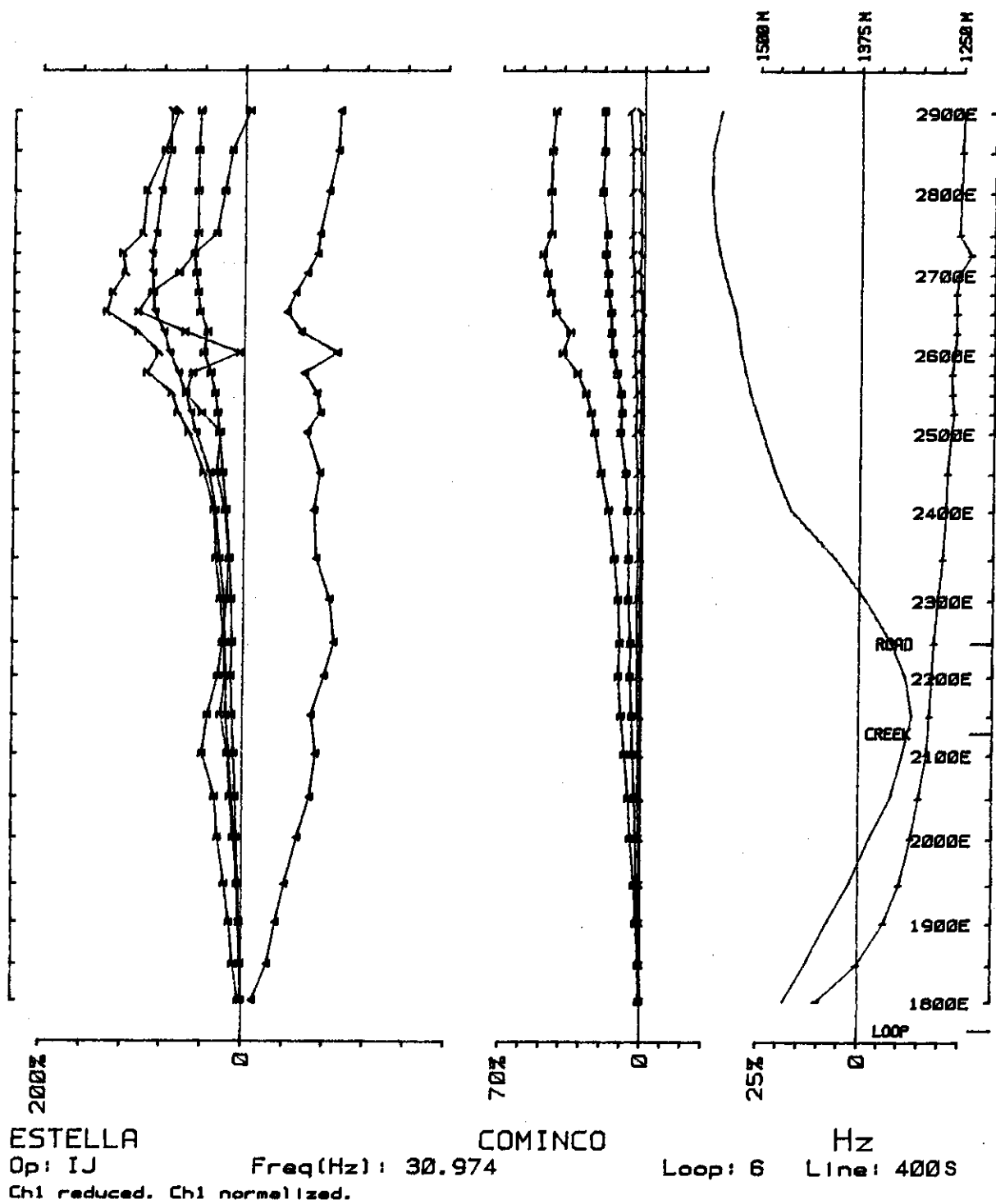
Point Normalized.

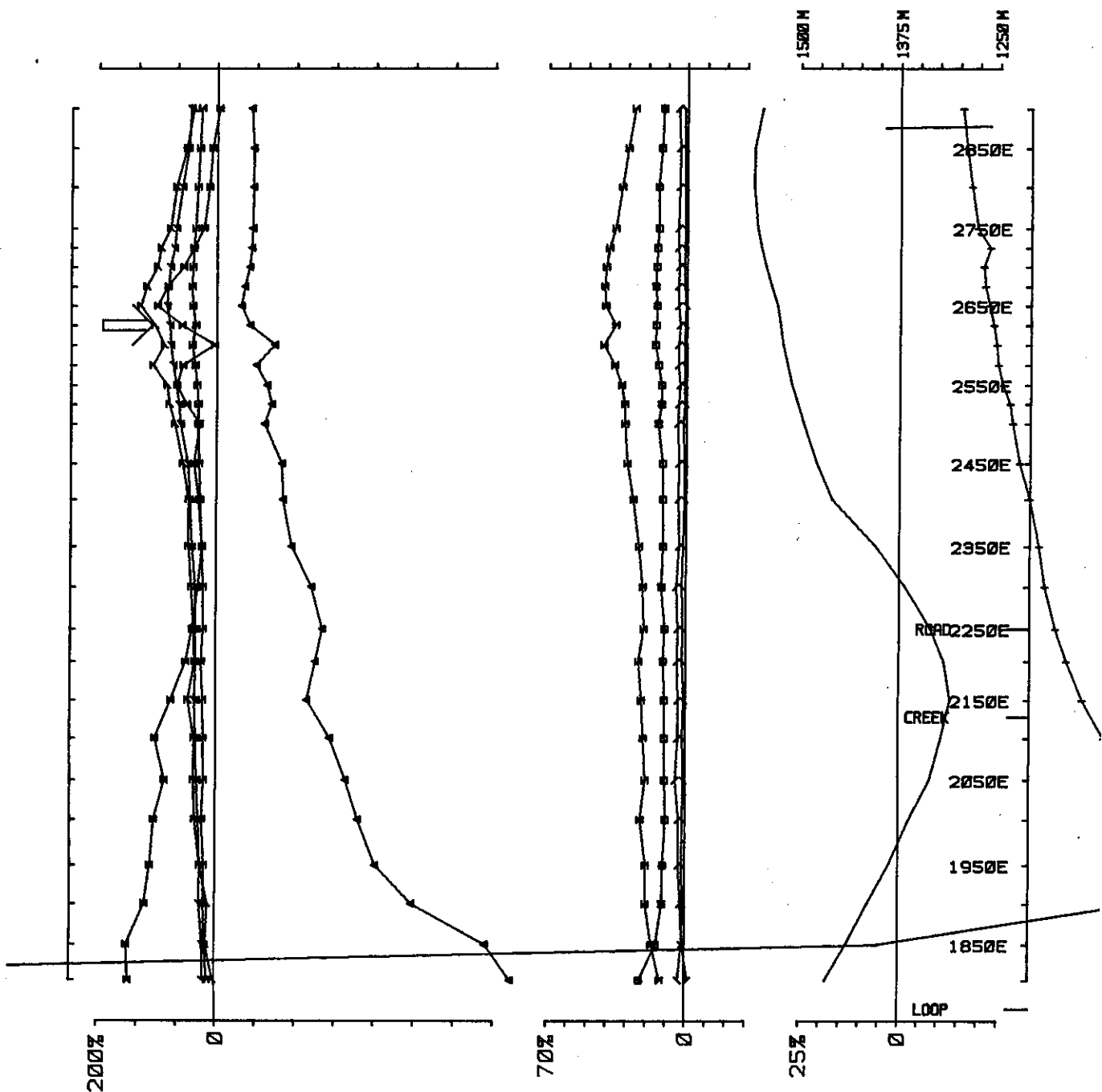
Hz

Loop: 6

Line: 600S

D.S. 52 p





ESTELLA

Op: IJ

Ch1 reduced. Ch1 normalized.

COMINCO

Freq(Hz): 30.974

Point Normalized.

Hz

Loop: 6

Line: 400 S

D.S. 53p

