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EL 873

PINE CREEK

PROGRESS AND FINAL REPORTS FOR THE PERIOD 13/9/81 TO 12/9/83

Submitted by
Esso Exploration and Production Australia Inc.
1983

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PRIMARY INDUSTRIES AND RESOURCES SA

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TENEMENT HOLDER: Esso Exploration & Production Inc.; Jones Mining N.L.

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EXPLORATION LICENCE 873 - CORELLA

QUARTERLY REPORT FOR THE PERIOD ENDING

DECEMBER 14, 1981

RECEIVED
5 MAR 1982
DEPT. OF MINES AND ENERGY
SECURITY
4514

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INTRODUCTION

Exploration activities in the quarter concentrated on evaluating an ironstone outcrop in the northern portion of the Exploration Licence. Rock chip samples were collected from the ironstone for geochemical assay and also petrological identification. A Crone PEM survey was also conducted over the ironstone.

DETAILS

A grid measuring 700m by 1000m has been emplaced over an ironstone with extremely poor outcrop, located in the northern portion of the Exploration Licence. A base line of 700m is orientated parallel to the strike of, and adjacent to the ironstone, with seven cross lines of 1km length centred on the base line. A locality map showing the grid is included as Figure 1.

Thirteen rock chip samples were collected from the ironstone and geochemical results are shown in Table 1. The copper and gold assays returned anomalous values, but lead, zinc and cadmium values were low. Two of the ironstone samples collected for assay were also submitted to I.R. Pontifex for petrological description, and the report is included as Appendix 1. It is significant to note the considerable accumulation of exotic goethite associated with the ironstone, and where gossan is reported it was formerly composed principally of pyrite.

A Crone Pulse EM survey consisting of 5.4 line kilometers was also conducted over the ironstone. Six lines were surveyed, using a 100m transmitter loop and "in loop" readings with 50m intervals between receiver stations. Profiles of individual lines and primary data collected during the survey are included as Appendix 2. As can be seen from the plots, the survey failed to detect any significant PEM conductor.

FUTURE WORK

A routine ground magnetometer survey shall be conducted over the existing grid shortly.

At present a regional assessment of tenements held by Esso in the Olary District is being conducted. It is anticipated that future targets within the Exploration Licence shall be defined by this work.

G.L. CLARKE

APPENDIX 1

Petrological Report, I.R. Pontifex

CORELLA

Pontifex & Associates Pty. Ltd.

0007

TEL. 332 6744
A.H. 31 3816

26 KENSINGTON ROAD, ROSE PARK
SOUTH AUSTRALIA

P.O. BOX 91, NORWOOD
SOUTH AUSTRALIA 5067

Cockburn

MINERALOGICAL REPORT NO. 3420

31st August, 1981

TO: Mr. P.C. Robinson,
Esso Australia Ltd.,
Minerals Division
153 Greenhill Road,
PARKSIDE S.A. 5063

YOUR REFERENCE: Order No. S64864

MATERIAL: Ironstone samples

IDENTIFICATION: 249022 and 249027

WORK REQUESTED: Examination in polished section, and interpretation of possible gossans

SAMPLES & SECTIONS: Returned to you with this report

PONTIFEX & ASSOCIATES PTY. LTD.

NOTE :

I apologise for the delay in returning this report to you. Shortly before receiving your samples however, a temporary commitment prevented my normal attention to this work, thus I referred it to Dr. A.W.G. Whittle, an independent mineralogical consultant with whom I work in close association.

Dr. Whittle is an acknowledged expert in gossan interpretation, and certainly my review of the sections leads me to exactly the same conclusions as he expresses in his written report herewith.

The invoicing for all aspects of this work will be from Pontifex & Associates Pty. Ltd.

I.R. Pontifex

249022 : quartz-pyrite-minor chalcopyrite vein gossan

The gossan consists entirely of oxidised-leached vein material, i.e. no host rock is included.

There is an abundance of coarse size (2 - 5 mm) pyrite boxwork which incorporates only 10% vein quartz as widely scattered aggregates of several mm size, as well as mica remnants.

Amongst the pyrite boxwork there are the replicas of occasional pyrite crystals which contained as 1.0 x 0.2 mm inclusions, subhedra of chalcopyrite. The latter is seen as elongate quadrangular boxwork within that of the larger pyrite host. No other types of sulphide boxwork can be distinguished.

The vein assemblage consisted of 85 - 90% pyrite, 10% quartz, about 1% chalcopyrite, and several % fine mica or chlorite.

Excessive leaching induced by the oxidising pyrite, may have greatly reduced the present level of anomalous copper.

249027 : exotic accumulative supergene goethite, with enclosed quartz fragments

The extensively cavernous ironstone consists mainly of colloform goethite. The colloform goethite is made up of numerous merged concentrically layered botryoidal goethite clusters of small size. All of this is exotic goethite which was transported to the site by groundwaters; from which it was deposited.

The accumulating exotic goethite incorporated as nuclei of deposition, small and larger residual fragments of fractured quartz, as well as fine clay minerals.

There are in the quartz fragments, neither oxidised fine phase sulphides, nor sulphide boxwork. Although it is coarse grained, this was simply barren quartz. The clay minerals are residuals of weathered rock silicates.

No boxwork of any kind exists within the colloform goethite; hence, if anomalies exist in this ironstone, they are due only to accumulations of groundwater - transported metals which co-precipitated with the goethite.

APPENDIX 2

Primary data and profiles for PEM survey

System for Pulse EM (PEM)   File series M   Date 2/12/81

NUMBER OF VALID LINE RECORDS = 56
NUMBER OF USED LINE RECORDS = 56
MAXIMUM LINE RECORDS = 60
NUMBER OF POINT RECORDS = 1080
MAXIMUM POINT RECORDS = 1200

****
* CHANNEL MEASUREMENT REPORT FOR PULSE EM LINES   2/12/81
****

PROJECT	PROSPECT	LINE AZIMUTH	LINE COORD	LINE INDEX NO
CORELLA	CORELLA	0	50N	51
CORELLA	CORELLA	0	150N	47
CORELLA	CORELLA	0	250N	48
CORELLA	CORELLA	0	350N	49
CORELLA	CORELLA	0	450N	50
CORELLA	CORELLA	0	550N	52

****
* CHANNEL MEASUREMENT REPORT FOR PULSE EM LINES   2/12/81
****

PROJECT	PROSPECT	LINE AZIMUTH	LINE COORD	LINE INDEX NO
CORELLA	CORELLA	0	50N	51

Station Number	Station Coord	Loop Size	Gain	Time Base	Channel measurements							
1	1450	100	800	20	730	240	61	21	8	3	1	1
2	1400	100	800	20	750	250	63	23	10	5	2	2
3	1350	100	800	20	660	210	55	17	5	1	0	0
4	1300	100	800	20	600	200	54	20	6	2	1	0
5	1250	100	800	20	560	200	49	15	3	0	0	0
6	1200	100	800	20	540	190	54	19	6	1	0	0
7	1150	100	800	20	530	185	53	19	6	1	0	0
8	1100	100	800	20	490	160	49	17	5	0	0	0
9	1050	100	800	20	380	140	43	16	5	0	0	0
10	1000	100	800	20	320	140	40	16	5	0	0	0
11	950	100	800	20	350	140	46	18	5	0	0	0
12	900	100	800	20	390	150	48	16	4	0	0	0
13	850	100	800	20	380	150	46	16	4	0	0	0
14	800	100	800	20	400	160	52	19	7	1	0	0
15	750	100	800	20	510	200	56	20	6	1	1	1
16	700	100	800	20	690	240	67	21	6	1	0	0
17	650	100	800	20	800	280	79	23	6	1	0	0
18	600	100	800	20	1020	400	110	26	8	2	0	0
19	550	100	800	20	1100	470	110	25	4	-1	-1	-1

PROJECT		PROSPECT			LINE AZIMUTH		LINE COORD			LINE INDEX NO		
CORELLA		CORELLA			0		150N			47		
Station Number	Station Coord	Loop Size	Gain	Time Base	Channel measurements							
1	1450	100	800	20	750	230	59	70	6	1	0	0
2	1400	100	800	20	760	250	82	35	16	8	5	4
3	1350	100	800	20	650	200	59	21	6	1	0	0
4	1300	100	800	20	560	190	50	15	2	0	0	0
5	1250	100	800	20	550	190	55	16	2	-1	-1	-1
6	1200	100	800	20	500	180	55	16	2	-1	-1	-1
7	1150	100	800	20	480	180	55	20	5	0	0	0
8	1100	100	800	20	470	180	54	19	6	1	0	0
9	1050	100	800	20	450	160	51	16	3	0	0	0
10	1000	100	800	20	400	150	44	14	1	-2	-1	0
11	950	100	800	20	450	160	51	18	3	0	0	0
12	900	100	800	20	530	200	58	20	0	0	0	0
13	850	100	800	20	540	210	58	20	6	1	0	0
14	800	100	800	20	630	240	67	22	6	1	0	0
15	750	100	800	20	740	260	76	25	8	1	0	0
16	700	100	800	20	860	310	89	26	7	0	0	0
17	650	100	800	20	1020	410	120	28	7	0	0	0
18	600	100	800	20	1100	540	140	33	8	0	0	0
19	550	100	800	20	1200	670	130	41	10	1	0	0

PROJECT	PROSPECT	LINE AZIMUTH	LINE COORD	LINE INDEX NO
CORELLA	CORELLA	0	250N	48

Station Number	Station Coord	Loop Size	Gain	Time Base	Channel measurements							
1	550	100	800	20	1100	560	160	46	13	1	0	0
2	600	100	800	20	1100	540	160	43	12	1	0	0
3	650	100	800	20	1150	550	160	41	12	1	0	0
4	700	100	800	20	1120	490	110	34	8	0	-1	-1
5	750	100	800	20	1090	410	105	30	7	0	0	0
6	800	100	800	20	850	290	76	23	5	0	0	0
7	850	100	800	20	760	260	71	22	7	1	0	0
8	900	100	800	20	750	250	66	20	5	-1	-2	-1
9	950	100	800	20	700	230	61	20	5	0	-1	-1
10	1000	100	800	20	600	190	56	19	5	0	0	0
11	1050	100	800	20	710	260	79	26	7	0	0	0
12	1100	100	800	20	600	240	76	25	6	1	0	0
13	1150	100	800	20	550	220	73	23	5	0	0	0
14	1200	100	800	20	530	210	72	23	5	-1	-2	-2
15	1250	100	800	20	530	210	71	26	9	1	0	0
16	1300	100	800	20	500	190	60	20	5	0	0	0
17	1350	100	800	20	600	210	66	23	5	0	0	0
18	1400	100	800	20	730	250	69	24	6	0	0	0
19	1450	100	800	20	800	250	68	23	6	0	0	0

PROJECT	PROSPECT	LINE AZIMUTH	LINE COORD	LINE INDEX NO
CORELLA	CORELLA	0	350N	49

Station Number	Station Coord	Loop Size	Gain	Time Base	Channel measurements							
1	550	100	800	20	1050	460	150	43	12	0	-1	-1
2	600	100	800	20	960	400	130	36	11	0	-1	-1
3	650	100	800	20	900	350	110	35	10	0	-1	-1
4	700	100	800	20	900	340	100	31	8	0	0	0
5	750	100	800	20	950	340	100	30	7	-1	-2	-1
6	800	100	800	20	900	330	97	30	7	0	-1	-1
7	850	100	800	20	760	300	91	29	9	1	0	0
8	900	100	800	20	760	300	84	26	8	1	0	0
9	950	100	800	20	890	330	100	30	9	0	-1	-1
10	1000	100	800	20	1000	430	130	33	9	0	0	0
11	1050	100	800	20	700	240	65	19	4	-2	-1	0
12	1100	100	800	20	810	310	90	26	6	1	0	0
13	1150	100	800	20	750	310	100	28	6	0	0	0
14	1200	100	800	20	660	290	92	31	9	3	1	1
15	1250	100	800	20	600	260	84	29	9	3	1	1
16	1300	100	800	20	540	210	72	22	4	0	0	0
17	1350	100	800	20	600	220	75	24	5	-1	-3	-3
18	1400	100	800	20	620	220	75	27	9	2	1	1
19	1450	100	800	20	700	250	72	26	8	0	0	0

PROJECT		PROSPECT			LINE AZIMUTH	LINE COORD	LINE INDEX NO
CORELLA		CORELLA			0	450N	50

Station Number	Station Coord	Loop Size	Gain	Time Base	Channel measurements							
1	1450	100	800	20	490	150	53	19	4	-1	-1	-1
2	1400	100	800	20	460	180	54	19	4	-1	-1	-1
3	1350	100	800	20	540	210	66	21	5	0	0	0
4	1300	100	800	20	600	240	69	21	4	-1	-1	-1
5	1250	100	800	20	700	280	82	28	9	4	1	1
6	1200	100	800	20	780	290	81	24	4	-1	-1	-1
7	1150	100	800	20	840	300	81	25	8	3	1	1
8	1100	100	800	20	840	290	76	25	8	2	1	1
9	1050	100	800	20	1000	400	130	34	10	2	1	1
10	1000	100	800	20	950	390	120	34	9	0	0	0
11	950	100	800	20	800	350	130	39	10	0	-1	-1
12	900	100	800	20	700	310	120	39	11	0	-2	-2
13	850	100	800	20	760	320	130	39	12	1	0	0
14	800	100	800	20	800	320	110	39	12	1	0	0
15	750	100	800	20	800	330	115	41	12	2	1	0
16	700	100	800	20	900	380	140	41	14	4	2	1
17	650	100	800	20	990	400	140	41	14	2	0	0
18	600	100	800	20	910	350	110	37	10	0	-2	-2
19	550	100	800	20	950	350	105	28	2	-6	-5	-3

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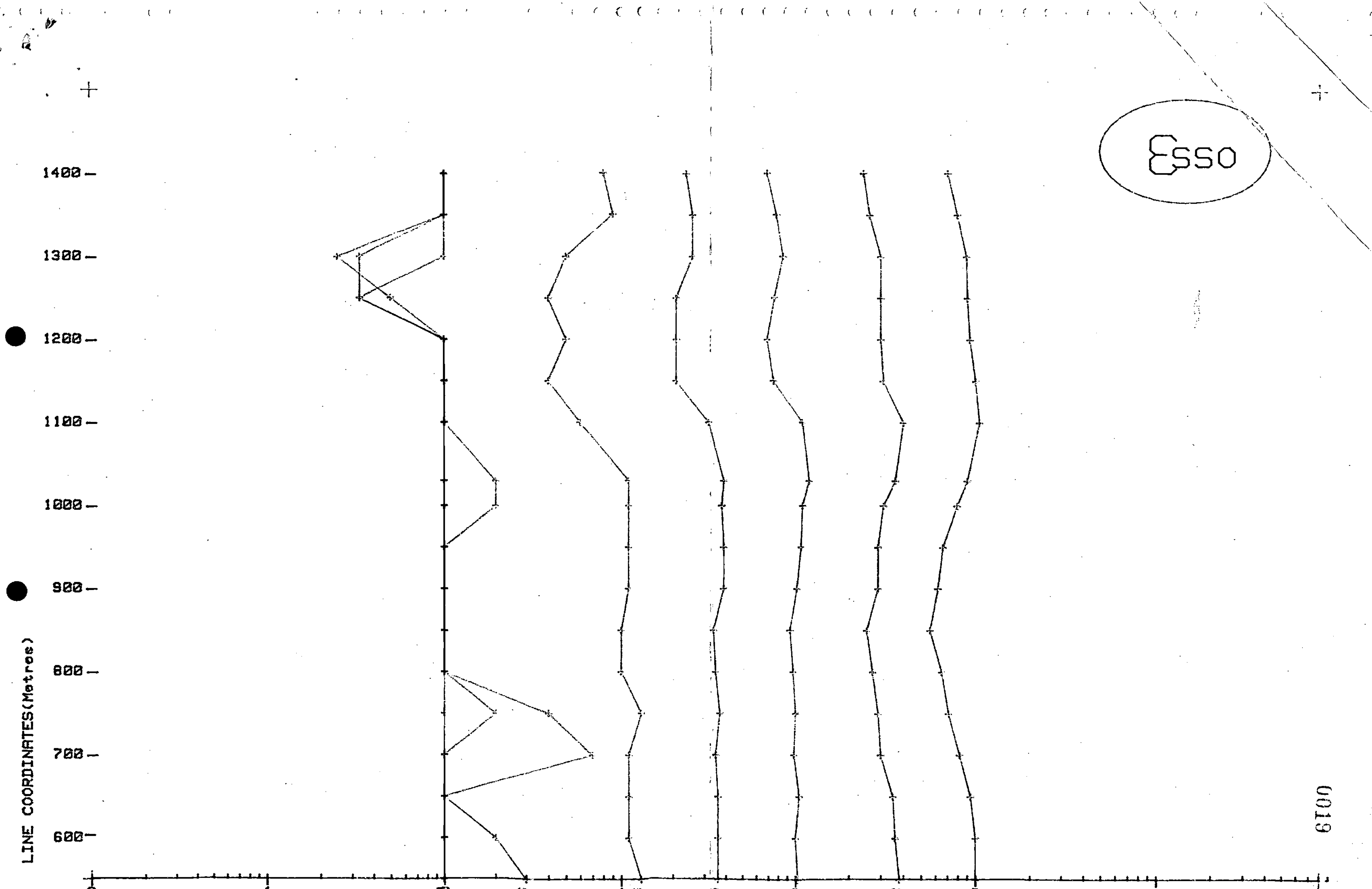
PROJECT		PROSPECT			LINE AZIMUTH	LINE COORD			LINE INDEX NO			
CORELLA		CORELLA			0	550N			52			

Station Number	Station Coord	Loop Size	Gain	Time Base	Channel measurements							
1	1450	100	800	20	600	210	66	24	9	1	0	0
2	1400	100	800	20	700	240	69	24	8	1	0	0
3	1350	100	800	20	790	260	78	26	9	1	1	1
4	1300	100	800	20	890	300	85	26	5	-1	-3	-4
5	1250	100	800	20	900	300	76	21	4	-3	-3	-2
6	1200	100	800	20	930	300	69	21	5	0	0	0
7	1150	100	800	20	1000	310	75	21	4	-1	-1	-1
8	1100	100	800	20	1050	400	110	32	6	-1	-1	-1
9	1030	100	800	20	900	360	120	39	11	2	1	1
10	1000	100	800	20	790	310	110	38	11	2	1	1
11	950	100	800	20	660	290	108	39	11	0	-1	-1
12	900	100	800	20	620	290	102	39	11	1	-1	-1
13	850	100	800	20	560	250	93	34	10	1	-1	-1
14	800	100	800	20	650	270	97	35	10	0	0	0
15	750	100	800	20	710	290	100	37	13	4	2	1
16	700	100	800	20	820	300	98	35	11	7	1	0
17	650	100	800	20	940	350	105	36	11	0	-1	0
18	600	100	800	20	1000	360	100	36	11	2	0	0
19	550	100	800	20	1000	380	103	36	13	3	1	0



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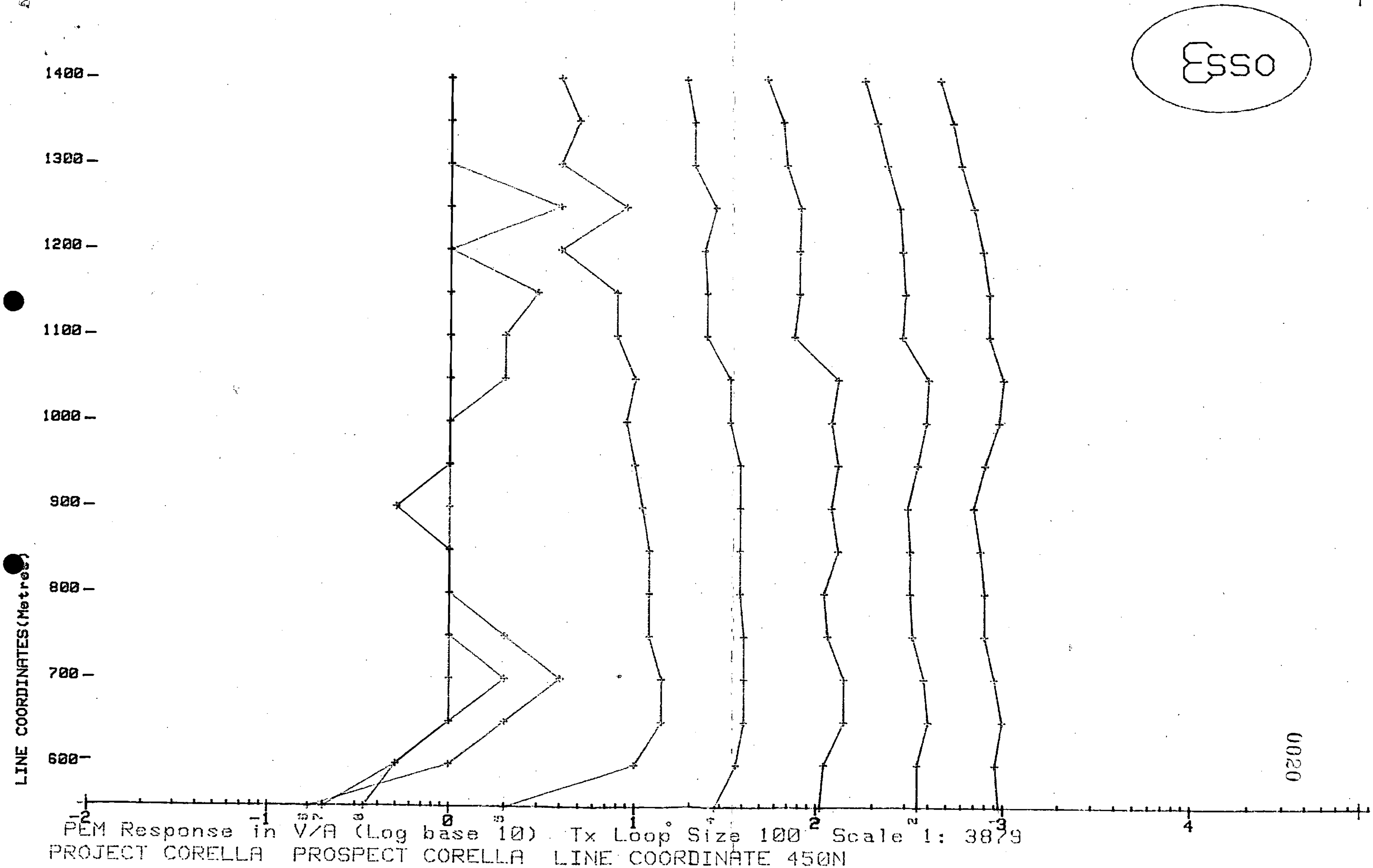
PROJECT CORELLA   PROSPECT CORELLA   LINE COORDINATE 550N



Esso
LINE COORDINATES(Metres)
1400
1300
1200
1100
1000
900
800
700
600
-2
-1
0
1
2
3
4
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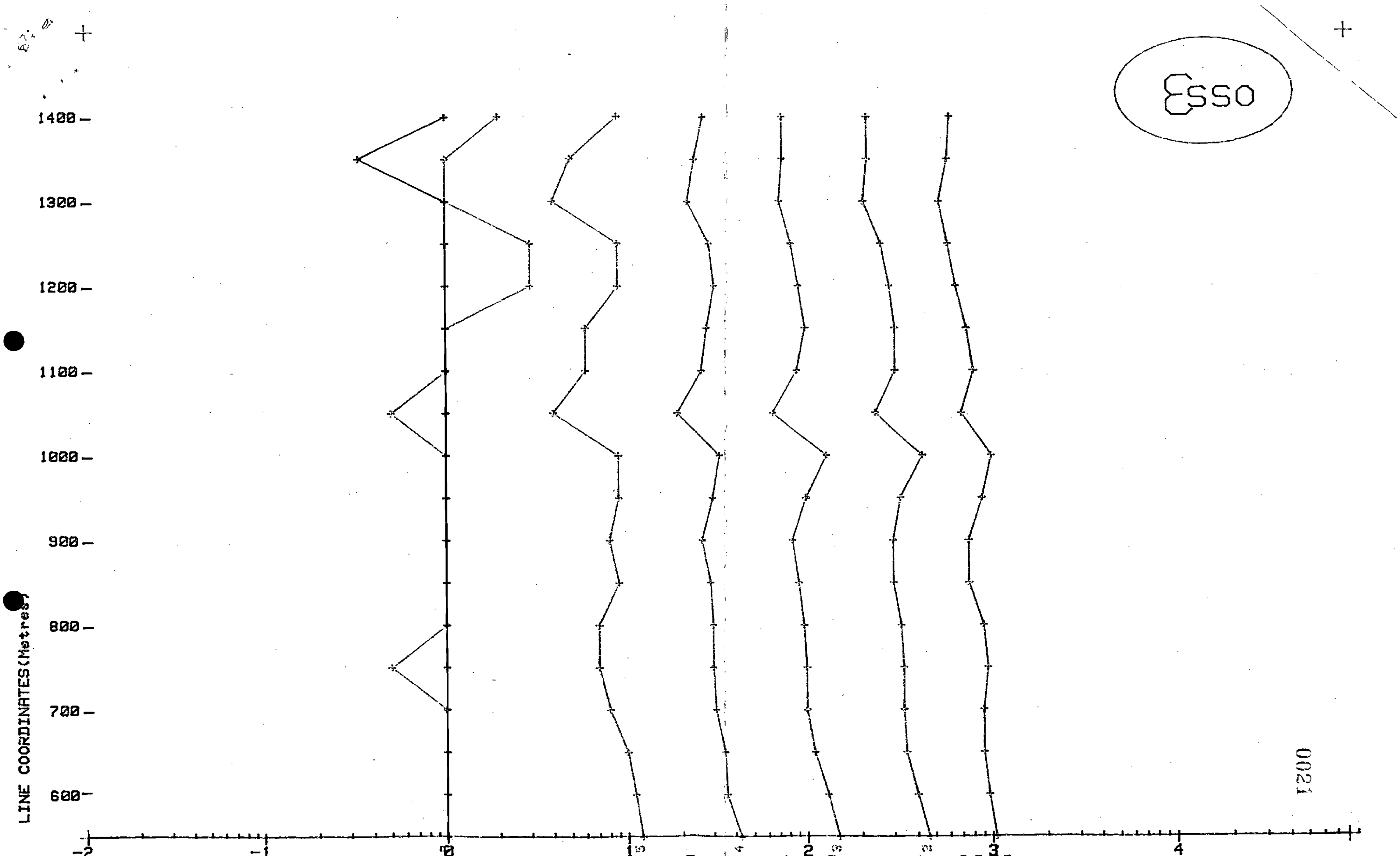
0200



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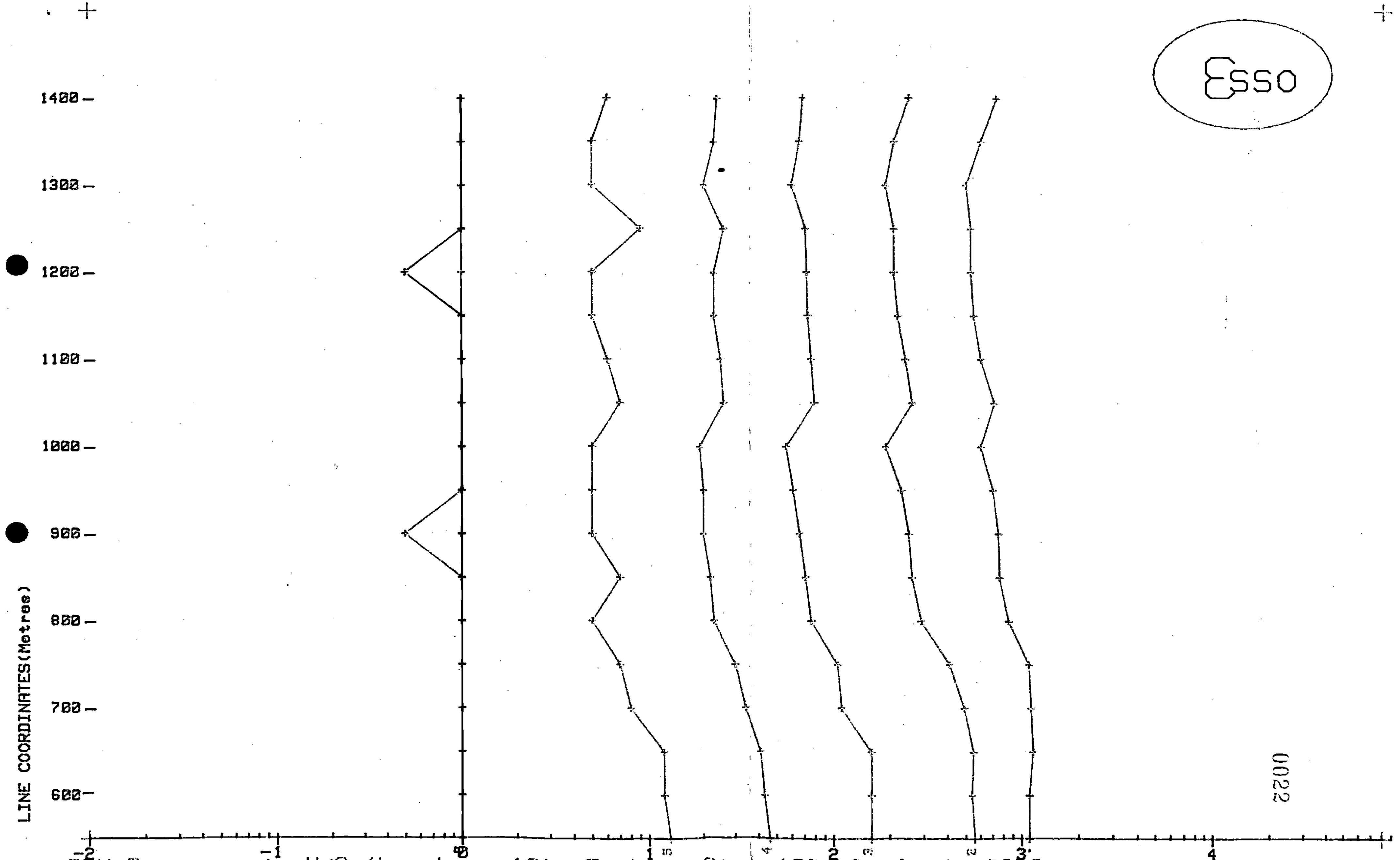
HEWLETT-PACKARD



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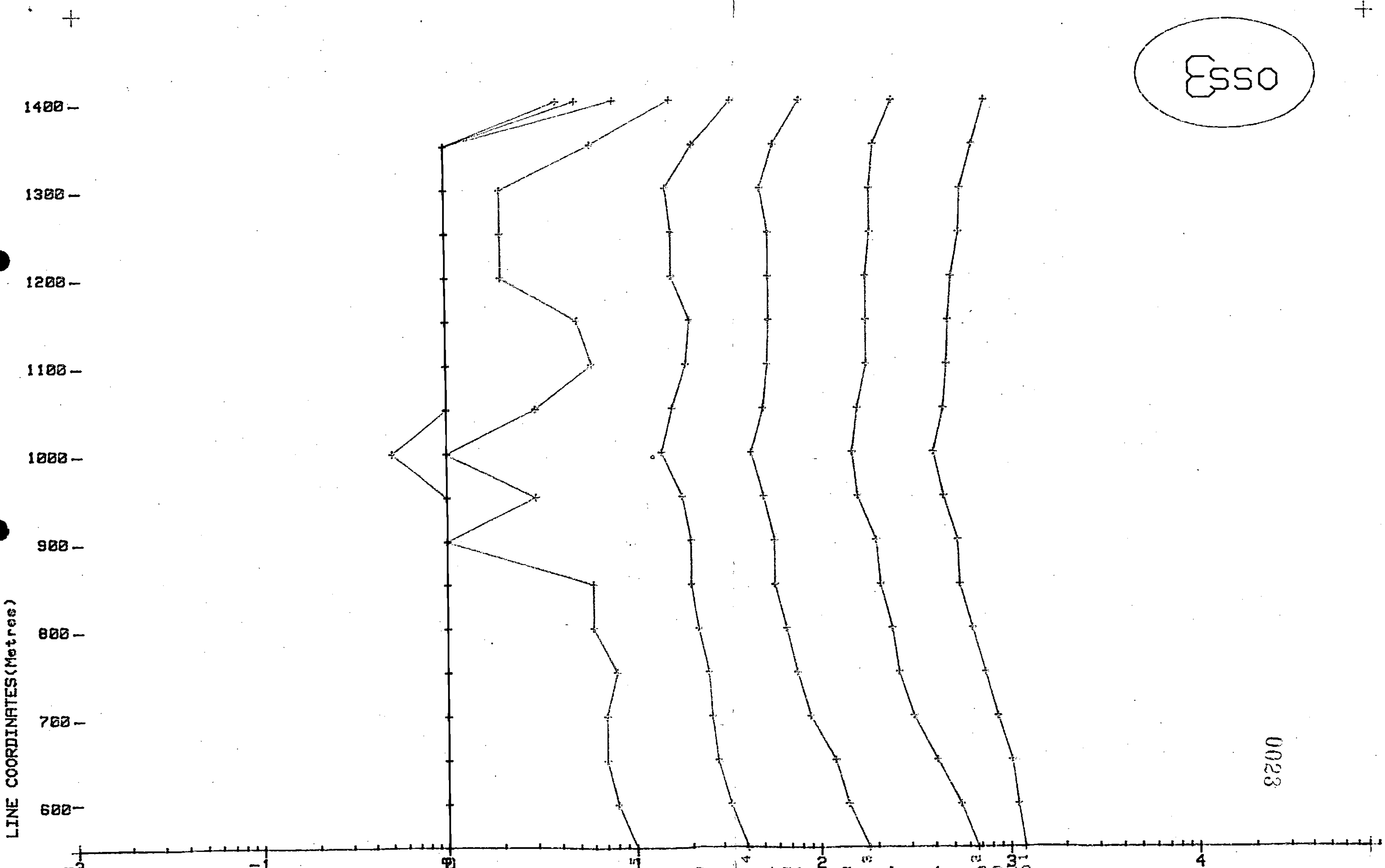
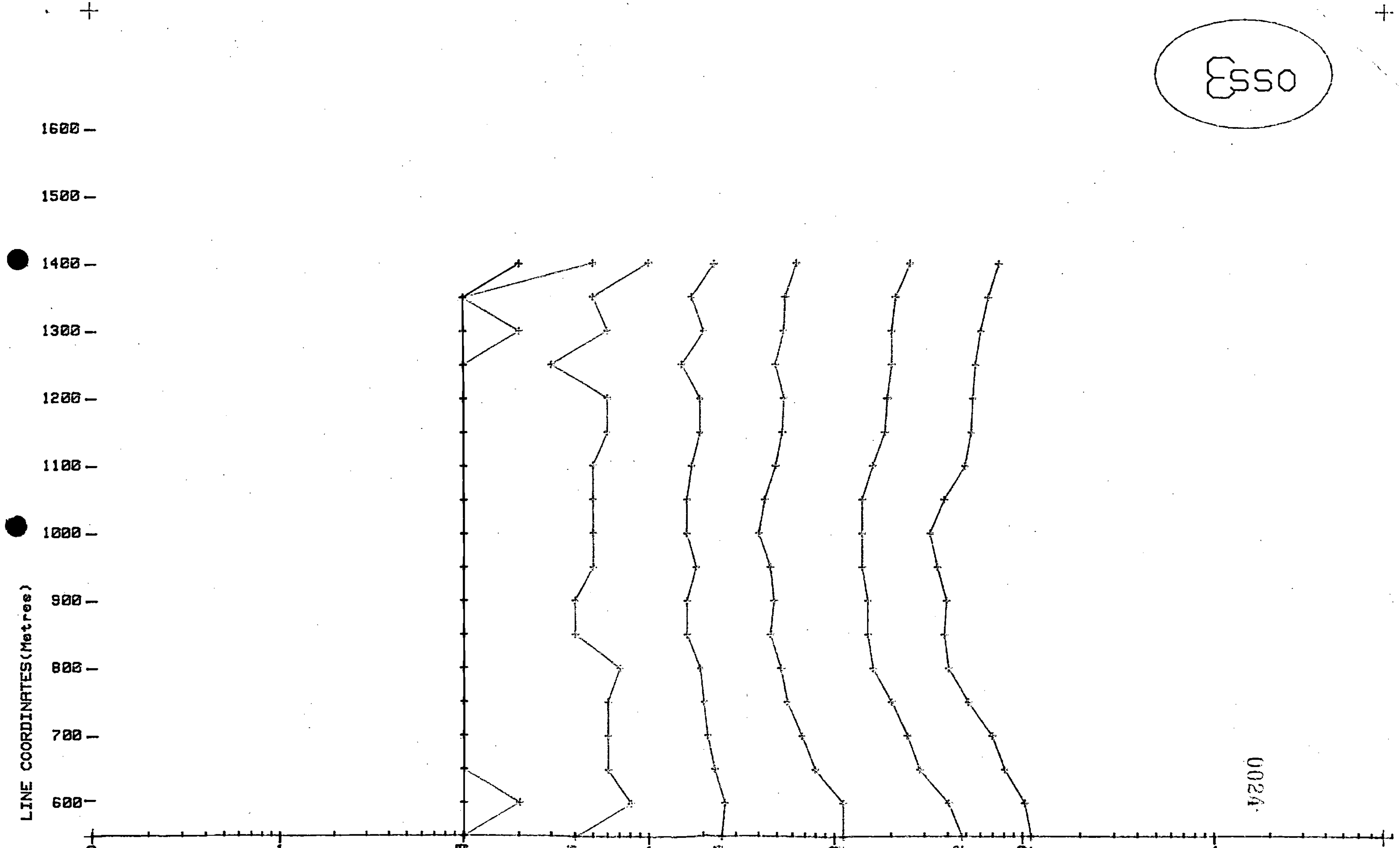


PEM Response in V/A (Log base 10) Tx Loop Size 100 Scale 1: 3879
PROJECT CORELLA PROSPECT CORELLA LINE COORDINATE 150N



PEM Response in V/A (Log base 10) Tx Loop Size 100 Scale 1: 5000
PROJECT CORELLA PROSPECT CORELLA LINE COORDINATE50N

SAMPLE	Mo	Bi	Au	%P	%Ca	Ba	Sn	Cu	Pb	Zn	Co	Cd	Mn	Ag
	Results in ppm							Results in ppm						
249021	28	32	0.15	0.24	0.29	880	<4	1650	32	24	75	<1	210	1
249022	20	90	0.60	0.16	0.13	430	<4	1250	30	26	440	<1	90	2
249023	55	115	0.05	0.22	0.21	420	10	4400	38	32	28	<1	44	<1
249024	55	85	0.20	0.35	0.18	400	14	2400	26	55	105	<1	36	<1
249025	32	24	0.05	0.18	0.17	120	4	1400	20	44	20	<1	70	<1
249026	16	90	0.45	0.11	0.12	390	<4	590	75	12	28	<1	40	3
249027	16	24	0.10	0.14	0.14	450	8	560	30	12	36	<1	55	<1
249028	24	55	1.25	0.21	0.10	580	<4	610	20	24	440	<1	44	1
249029	44	28	0.10	0.12	0.12	940	8	1400	30	24	920	<1	65	1
249030	65	32	0.15	0.13	0.18	740	14	840	36	14	500	<1	125	1
249031	4	<4	0.05	0.33	0.30	3500	<4	85	75	60	<4	<1	60	<1
249032	12	<4	0.20	0.15	0.25	2000	4	380	26	12	<4	<1	155	<1
249033	12	<4	0.20	0.27	0.10	1600	8	430	36	22	<4	<1	85	<1

Method of Analysis :
Ba Sn : XRF1
Bi : AAS1
Mo : AAS3
Au : AAS5 Special
P : COL1
Ca : AAS6

Method of Analysis :
Cu Pb Zn Co Cd : AAS1
Mn : AAS2
Ag : AAS3

TABLE 1.

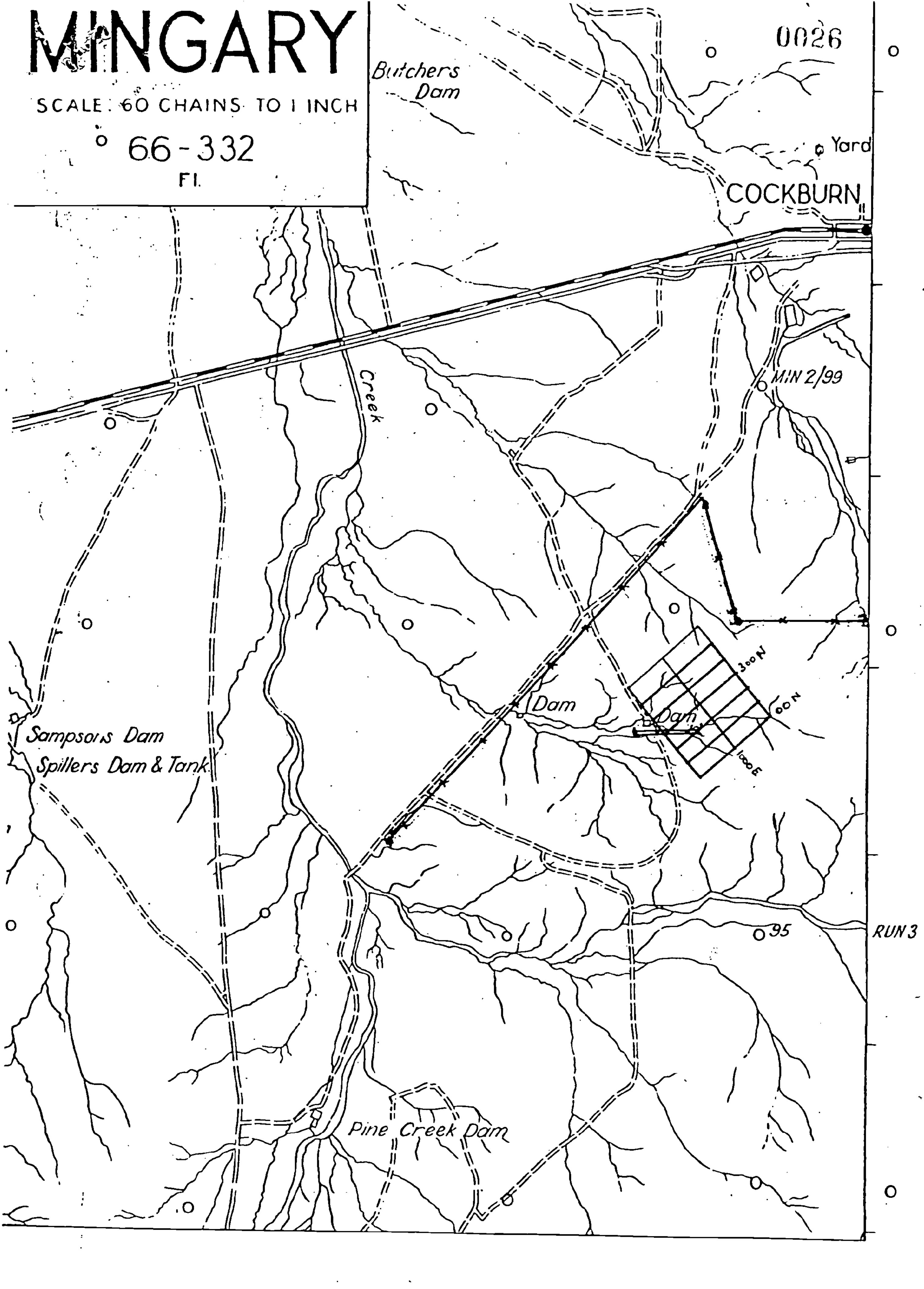

MINGARY
SCALE: 60 CHAINS TO 1 INCH
66-332
F1.
0026
Butchers Dam
Yard
COCKBURN
Creek
MIN 2/99
300 N
00 N
1000 E
Dam
Dam
Sampsons Dam
Spillers Dam & Tank
95
RUN 3
Pine Creek Dam

FIG. 1.

I

0027

EXPLORATION LICENCE 873 - CORELLA

QUARTERLY REPORT FOR THE PERIOD ENDING

MARCH 14, 1982

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INTRODUCTION

Exploration Licence 873 covers an area of 566 square kilometers, located south of Cockburn on the South Australian side of the New South Wales border. Exploration on the licence is a joint-venture with Jones Mining N.L., with Esso as the operator.

CURRENT EXPLORATION

At present Esso holds title to most of the outcropping Willyama Sequence in South Australia, with other Exploration Licences to the north and northwest or Corella. A regional assessment of the geology and geophysics of the Olary Block is currently being conducted. This involves the interpretation of all available photocoverage, coupled with information from existing geological maps and geological and geophysical data compiled by EEPA and previous explorers. It is anticipated that the results of this work will lead to a better knowledge and understanding of the regional geology of this area and produce areas of interpreted geological interest where further exploration activities could be concentrated. As much of this E.L. has negligible surface exposure this interpretive phase is of considerable importance for future programmes. An attempt will be made to match stratigraphy from the recent work carried out on the N.S.W. section of the Willyama Complex and extrapolate units into South Australia.

G.L. CLARKE

I

0029

ESSO AUSTRALIA LTD.

MINERALS DEPARTMENT

EXPLORATION LICENCE 873 - CORELLA

QUARTERLY REPORT FOR THE PERIOD ENDING

JUNE 14, 1982

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10 AUG 1982
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SECURITY
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INTRODUCTION

Exploration Licence 873 covers an area of 566 square kilometers, located south of Cockburn on the South Australian side of the New South Wales border. Exploration on the Licence is a joint venture with Jones Mining N.L., with Esso as the operator.

CURRENT EXPLORATION

Work completed during the quarter has continued to concentrate on evaluating the regional geology and geophysics of the E.L. Ground checking of geological maps compiled by previous explorers has been conducted and confirmation of aeromagnetic trends completed at the same time. This confirmation involved reconnaissance style traverses, mainly relating magnetic intensity to rock types and no profiles were prepared.

Two mineralized belts, oriented sub-parallel and striking north-east are evident within the E.L. The western belt is contained within a sequence of staurolite and sillimanite schists with bedded amphibolites. Limited chalcopyrite, sphalerite and galena mineralisation was encountered in drilling by previous explorers at the Birthday, McBrides and Ballara prospects. Located approximately 2-4 kms east is the second belt, contained within a sequence of quartzofeldspathic gneisses and schists and amphibolites. The Mutooroo copper mine is contained within this belt and numerous other copper workings evident where the belt is cut by retrograde shear zones (e.g. Trinity Mine).

Many localities within the belt show encouraging features when contrasted with Broken Hill. Garnetiferous amphibolites (present near Broken Hill mineralization) are common in certain areas and garnet-quartz-feldspar-biotite ("Potosi" type) gneisses also associated with some of these amphibolites.

Further work is warranted at certain localities along these two belts and targets are presently being evaluated. Ground electromagnetic (EM) and magnetometer surveys will be completed over the most viable prospects, to define anomalies for percussion drilling. In an absence of outcrop, gravity surveys may also be conducted to ensure EM conductors are not shear zones. The EM and magnetometer surveys will be completed in the next quarter.

G.L. CLARKE

I

0031

ESSO AUSTRALIA LTD.

MINERALS DEPARTMENT

EXPLORATION LICENCE 873 - CORELLA

QUARTERLY REPORT FOR THE PERIOD ENDING

SEPTEMBER 14, 1982.

INTRODUCTION

Exploration Licence 873 covers an area of 566 square kilometers, located south of Cockburn on the South Australian side of the New South Wales border. Exploration on the Licence is a joint venture with Jones Mining N.L., with Esso as the operator.

CURRENT EXPLORATION

Due to the unavailability of geophysical contractors to carry out the proposed EM and magnetometer surveys, the work accomplished during this quarter consisted of 93.7 line kilometres of gridding and preparation and field checking of 4 x 1:25,000 scale base maps (Plans 1 - 4).

Some reconnaissance geology was carried out in the course of the base map field checks.

Lamontagne Geophysics commenced the EM survey on September 5, 1982 using a UTEM III system. To the end of this reporting period they had completed the initial survey work on Birthday, Birthday East and parts of Pine Creek prospects (Plan 2).

At present the results of the survey are being compiled and interpreted. Preliminary examination of the data suggests that a strong and laterally continuous conductor exists on the Birthday prospect at approximately 10500m north on lines 8500E, 9000E, 9500E, 10000E, 10500E with a more subdued, deeper response on the remaining two lines.

Infill lines at 9250mE, 9750mE and 10250mE will be surveyed to better define this conductor.

The EM survey and ground magnetic surveys will be completed on all the prospects during the next quarter.

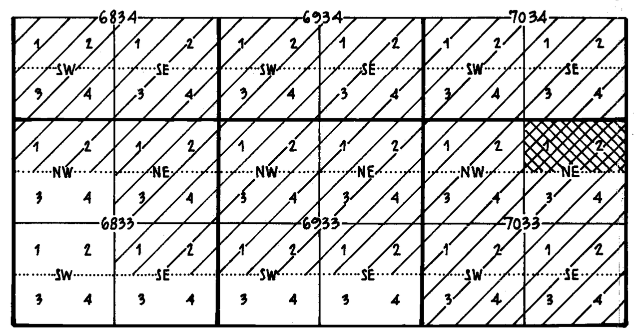
It is anticipated that testing of the conductor at Birthday by percussion drilling will also commence next quarter.

Copies of all EM and ground magnetic profiles will be presented in the next quarterly report along with any percussion drill logs and assays that are available at the time.

Richard Newport.

Legend:

- EL Boundary
- Main Road
- Secondary Road
- Track
- Gate, grid.
- Fence
- Dam, tank
- Creek
- House - Dwelling etc.
- Railway line
- Shaft
- Mine



AREA COVERED BY 1:25.000 SCALE MAPS

SHEET LOCATION

MINERALS DEPARTMENT ESSO AUSTRALIA LTD.

Corella 588

WILLYAMA COMPLEX S.A.

PROSPECT GRID LOCATION

SCALE 1:25.000

0 500 1000 1500 2000 2500M

AUTHOR: R. Newport

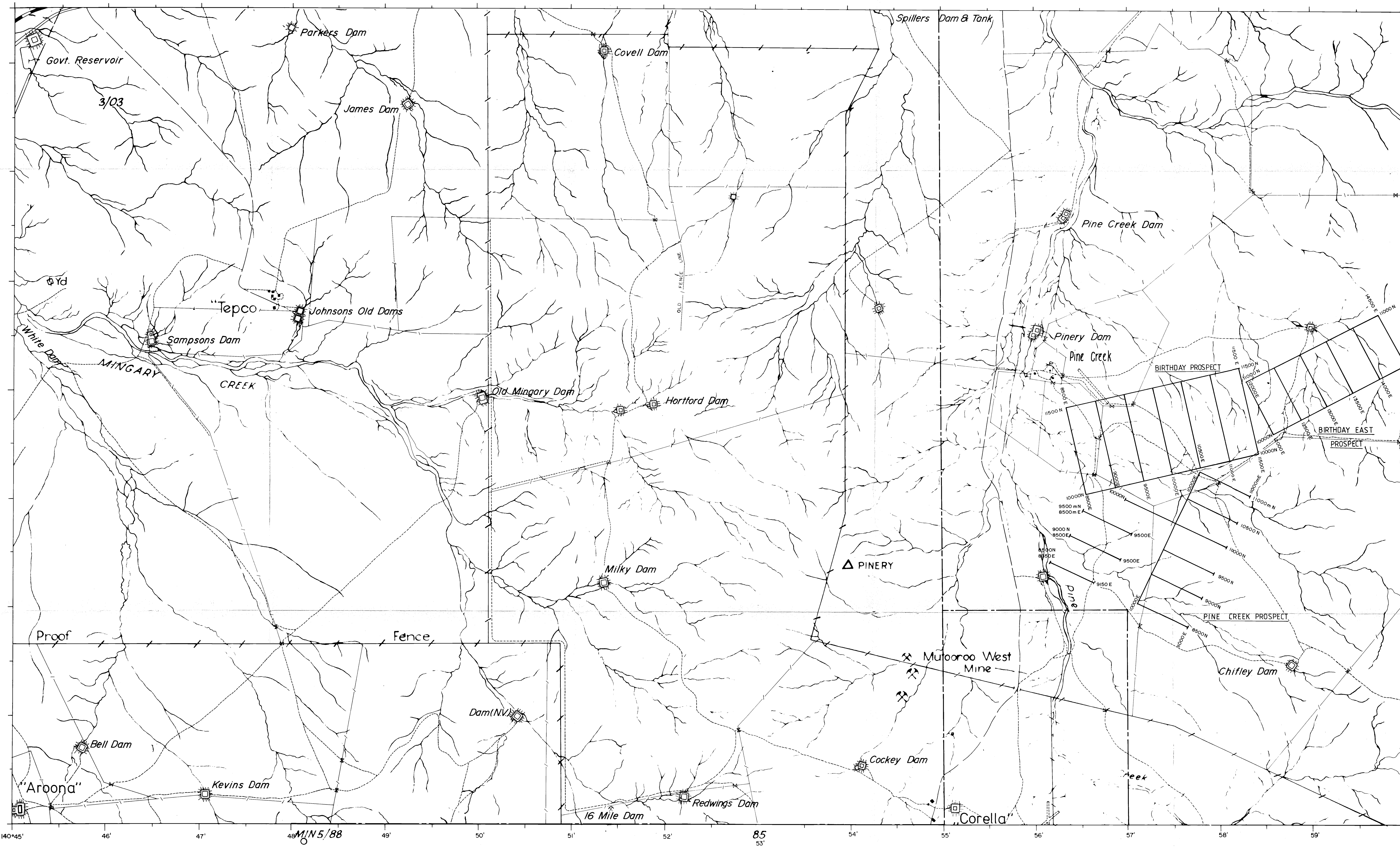
DWG. Nº 588-9

DATE:

REVISED:

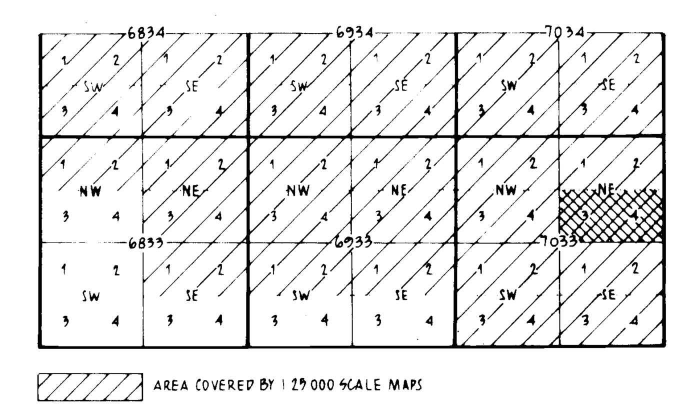
4514-1

PLAN 1



Legend

- EL Boundary
- Main Road
- Secondary Road
- Track
- Gate, grid
- Fence
- Dam, tank
- Creek
- House - Dwelling etc.
- Railway line
- Shaft
- Mine



AREA COVERED BY 1:25 000 SCALE MAPS

SHEET LOCATION

MINERALS DEPARTMENT ESSO AUSTRALIA LTD.

Corella 588

WILLYAMA COMPLEX S.A.

PROSPECT GRID LOCATION

SCALE 1:25.000

0 500 1000 1500 2000 2500 M

AUTHOR R Newport

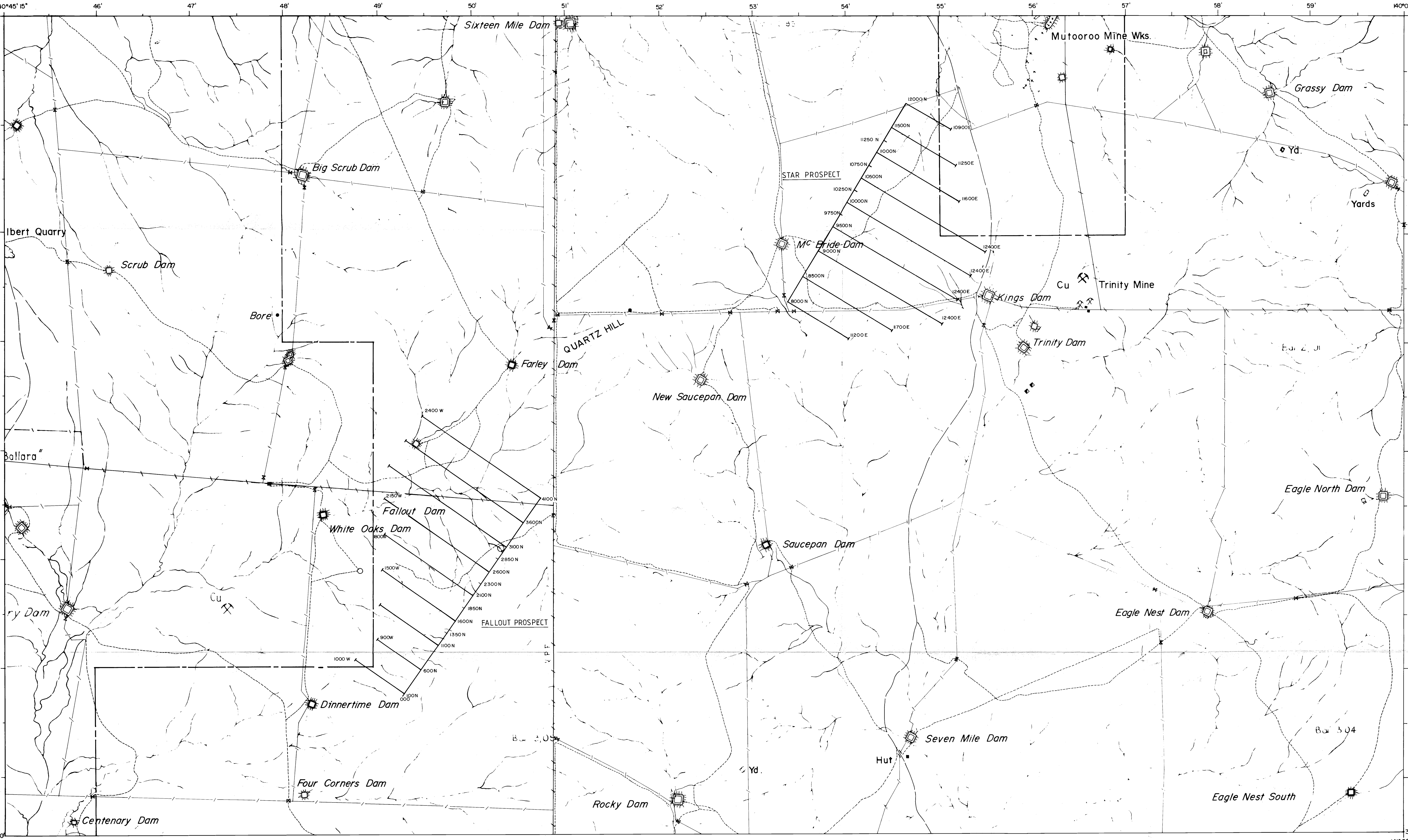
DATE:

DWG. Nº 588 - 10

REVISED:

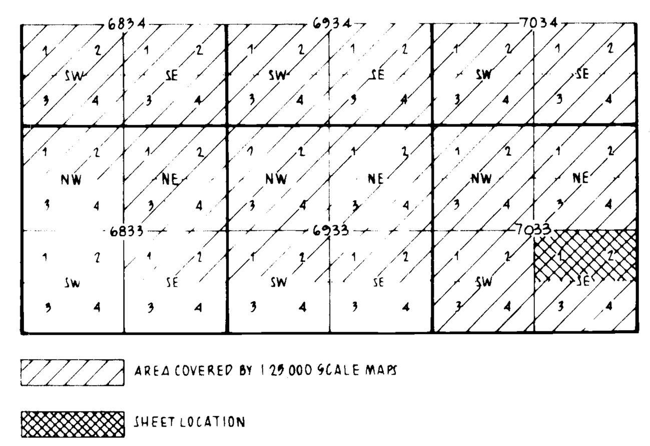
4514 -2

PLAN 2



Legend :

- EL Boundary
- Main Road
- Secondary Road
- Track
- Gate, grid.
- Fence
- Dam, tank
- Creek
- House - Dwelling etc.
- Railway line
- Shaft
- Mine



MINERALS DEPARTMENT ESSO AUSTRALIA LTD.

Corella 588

WILLYAMA COMPLEX S.A.

PROSPECT GRID LOCATION

SCALE 1:25,000
0 500 1000 1500 2000 2500M

AUTHOR: R. Newport

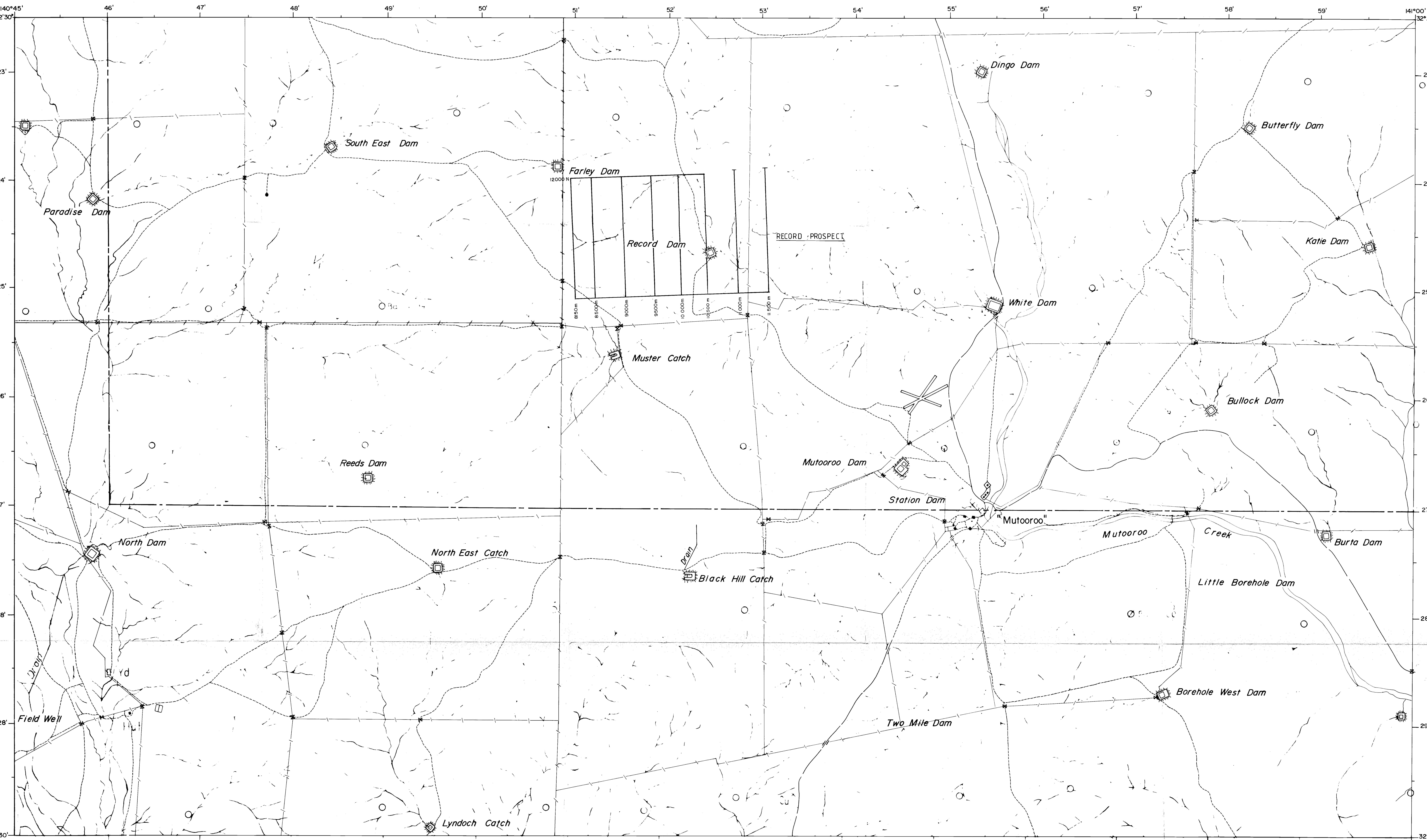
DATE:

DWG Nº 588 - 11

REVISED:

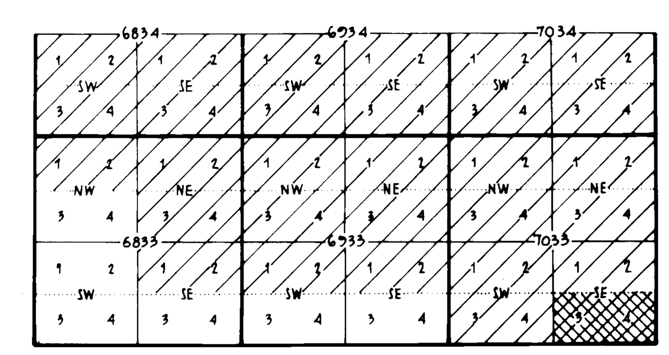
PLAN 3

AS 14 -3



Legend :

- EL Boundary
- Main Road
- Secondary Road
- Track
- Gate, grid.
- Fence
- Dam, tank
- Creek
- House - Dwelling etc.
- Railway line
- Shaft
- Mine



AREA COVERED BY 1:25.000 SCALE MAPS

SHEET LOCATION

MINERALS DEPARTMENT ESSO AUSTRALIA LTD.

CORELLA 588

WILLYAMA COMPLEX S.A.

PROSPECT GRID LOCATION

SCALE 1:25.000

0 500 1000 1500 2000 2500M

AUTHOR: R. Newport

DWG. Nº 588-12

DATE:

REVISED:

4514-4

PLAN 4

DECLARATION OF ENVIRONMENTAL FACTORS

I

FALLOUT PROSPECT - EL 873

0033

PROPOSAL: To drill two (2) percussion drill holes to obtain subsurface geological information over areas of possible mineral potential recently defined by geological and geophysical surveys. While two holes are currently planned further drilling may be undertaken if warranted.

LOCATION: As shown on the attached map the proposed drilling will be within the Ballara Pastoral Lease.

ACCESS: Access will be by way of existing station tracks and approved gridline tracks (refer DEF dated 11th August, 1982). Company and contractor vehicles will be restricted to the existing and approved tracks.

TOPOGRAPHY: The area is generally made up of flat alluvial plains with "island" type rock outcrops on low hills.

VEGETATION: Vegetation within the area of proposed activity consists of an average cover of salt bush and/or blue bush with a few small trees. Every effort will be made to minimize any impact our programme may have on this vegetation.

SOIL EROSION: It is unlikely the proposed programmed will create any soil erosion problems; however should this occur the necessary steps will be taken to correct the problem.

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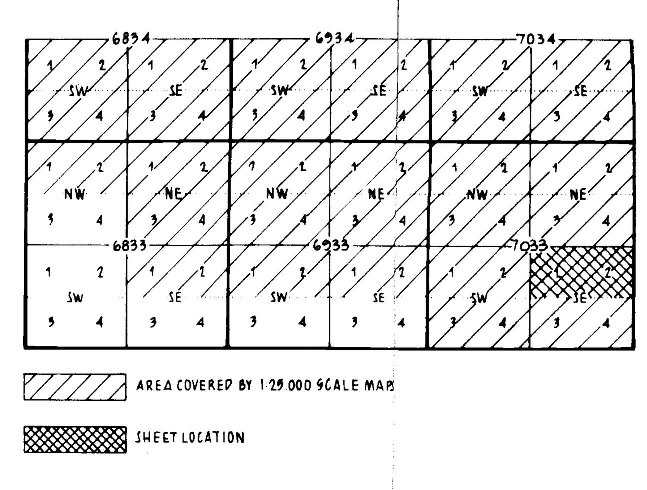
M.R.M. JONES
ADELAIDE
15th November, 1982



MINERALS DEPARTMENT ESSO AUSTRALIA LTD.

Corella 588

WILLYAMA COMPLEX S.A.

PROSPECT GRID LOCATION

SCALE 1:25.000

0 500 1000 1500 2000 2500M

AUTHOR: R. Newport

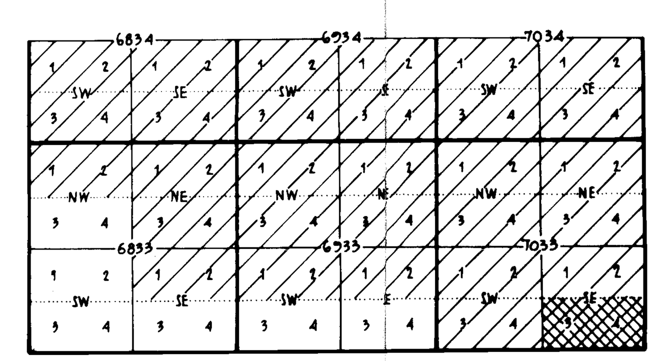
DWG Nº 070-

DATE:

REVISED:

4514-5

S.E. 182



AREA COVERED BY 1:25.000 SCALE MAPS

SHEET LOCATION

MINERALS DEPARTMENT ESSO AUSTRALIA LTD.

CORELLA 588

WILLYAMA COMPLEX S.A.

PROSPECT GRID LOCATION

SCALE 1:25.000

0 500 1000 1500 2000 2500M

AUTHOR: R. Newport

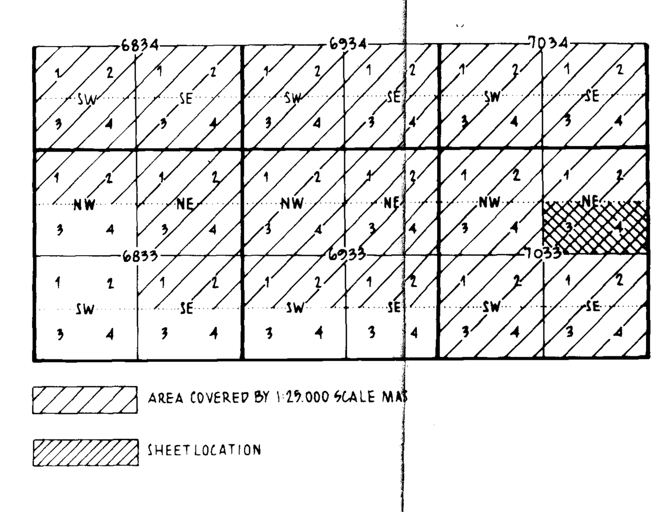
DWG.Nº 070-

DATE:

REVISED:

A514-6

S.E. 384



MINERALS DEPARTMENT ESSO AUSTRALIA LTD.

Corella 588

WILLYAMA COMPLEX S.A.

PROSPECT GRID LOCATION

SCALE 1:25.000

0 500 1000 1500 2000 2500 M

AUTHOR R Newport

DWG Nº 070-

DATE

REVISED:

4514-7

N.E.

I

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MINERALS DEPARTMENT

EXPLORATION LICENCE 873 - CORELLA

QUARTERLY REPORT FOR THE PERIOD ENDING

DECEMBER 14, 1982.

INTRODUCTION

Exploration Licence 873 covers an area of 566 square kilometers, located south of Cockburn on the South Australian side of the New South Wales border. Exploration on the Licence is a joint venture with Jones Mining N.L., with Esso as the operator.

CURRENT EXPLORATION

Lamontagne Geophysics continued the UTEM III survey on Pine Creek, Star, Record and Fallout prospects in the Corella EL (Plans 1-4). The whole survey was completed on October 30, 1982 including infill lines on Birthday, Record, Star and Fallout grids.

A summary of the survey data for each prospect and the sum total are as follows.

1.	BIRTHDAY:	9 loops	11 lines	18.25 km
2.	BIRTHDAY EAST:	5 loops	6 lines	7.6 km
3.	PINE CREEK:	8 loops	6 lines	10.55 km
4.	STAR:	11 loops	13 lines	23.4 km
5.	RECORD:	11 loops	13 lines	27.9 km
6.	FALLOUT:	8 loops	12 lines	21.2 km
TOTAL:	6 prospects,	52 loops,	61 lines,	108.9 km

UTEM III measurements of the secondary vertical magnetic field component (H_Z) were taken at 50m intervals along the lines, and some secondary horizontal magnetic field component (H_X) measurements were taken where anomalies were encountered. Some detailing of anomalies included measurements of both components at 25m stations.

Total field ground magnetic measurements were taken at 50m intervals along all the grid lines of each prospect and profiles are at present being drafted for each survey line.

A percussion drilling program consisting of 7 holes totalling approximately 1600m was commenced on November 27, 1982 and completed on December 14, 1982 for a total of 1,536m.

A summary of the drilling statistics are as follows.

PROSPECT	CO-ORDINATES	AZIMUTH (°M)	INCLINATION	TOTAL DEPTH
BIRTHDAY BP-1	10,500m E 10,625m N	160°	60°	250m
BIRTHDAY BP-2	9,500m E 10,575m N	160°	60°	276m
RECORD RP-1	9,000m E 10,825m N	175°	60°	200m
RECORD RP-2	10,250m E 11,580m N	355°	60°	210m
RECORD RP-3	11,000m E 11,650m N	175°	60°	216m
FALLOUT FP-1	2,600m NE 1,975m NW	120°	60°	204m
FALLOUT FP-2	1,600m NE 850m NW	120°	60°	180m

All holes were sampled at 2m intervals with an assay and reference sample split from each interval.

All samples are currently being assayed for copper, lead, zinc, silver and cobalt.

At present all the UTEM III data, the ground magnetics and percussion drill hole logs and sections are being drafted or collated into a comprehensive report.

It is anticipated that this report, along with the assay data will constitute the next quarterly report on the Corella EL.

Richard Newport.

1157e-25/ps

37 DM C138

Department of Mines and Energy-South Australia

WATER SAMPLE ANALYSIS ADVICE

Bore Reference E.L. 873 - FOP1 . . . Analysis No. W 2768/83

Hundred. . . . . Section . . . .

Sample collected by. . . . . Date 24/2/83 . . .

Depth sample taken 142 m Name MR M. JONES. . . . .

Dept. Mines Results Address Mineral Dept

Conductivity 34500 µS at 25°C 127 kent Str 11 Floor

Salinity 24840 mg/l Sydney

To AMDEL for analysis. . . .

pH 7.5 . . . AMDEL No. . . . .

Remarks. SS . . .

- 1 MAR 1983 DEPT. OF MINES ENGINEERING DIVISION

Unit No. . . . . Bore Folder No. . . . . . .

C2012

DM C138

Department of Mines and Energy-South Australia

WATER SAMPLE ANALYSIS ADVICE

Bore Reference E.L. 873- BP2 . Analysis No. W. 2770/83

Hundred. . . . . Section . . . .

Sample collected by. . . . . Date 24/2/83 . . .

Depth sample taken 60 m Name MRM JONES. . . . .

Dept. Mines Results Address Mineral Dept.

Conductivity 42500 µS at 25°C 127 kent Str. 11 Floor

Salinity 31100 mg/l Sydney

To AMDEL for analysis.

pH 7.5 AMDEL No. . . . . . .

Remarks. . . . .

RECEIVED - 1 MAR 1983 DEPT. OF MINES ENGINEERING DIVISION

2 MAR 1983 DEPT. OF MINES AND ENERGY SECURITY

Unit No. . . . . Bore Folder No. 4514 .

C2012

DM C138

Department of Mines and Energy-South Australia

WATER SAMPLE ANALYSIS ADVICE

Bore Reference. E.L 873 - B.P1 . . Analysis No. W 2769/83

Hundred . . . . Section . . . .

Sample collected by . . . . Date 24/2/83 . .

Depth sample taken 138 m Name MRM JONES.

Dept. Mines Results Address Mineral Dept 127 kent St.

Conductivity 42500 µS at 25°C 11 Floor Sydney .

Salinity. 31700 mg/l To AMDEL for analysis.

pH 7.5 . AMDEL No.

Remarks . . . . .

RECEIVED - 1 MAR 1983 DEPT. OF MINES ENGINEERING DIVISION

Unit No. . . . . Bore Folder No. . . . .

C2012

0038 DM C138

Department of Mines and Energy-South Australia

WATER SAMPLE ANALYSIS ADVICE

Bore Reference E.L. 873 - FOP1 . . Analysis No. W 2768/83

Hundred. . . . . Section . . . .

Sample collected by. . . . . Date 24/2/83 . . .

Depth sample taken 142 m Name MR.M. JONES. . . . .

Dept. Mines Results Address Mineral Dept . . .

Conductivity 34500 μS at 25°C 127 kent Str. 11 Floor

Salinity. 24840 . mg/l Sydney To AMDEL for analysis. . . .

pH 7.5 . . . AMDEL No. . . . .

Remarks. 58 . . . .

. . . .

. . . .

Unit No. . . . . . . Bore Folder No. . . . . . .

C2012

1 MAR 1983 DEPT OF MINES ENGINEERING DIVISION

DM C138

Department of Mines and Energy-South Australia

WATER SAMPLE ANALYSIS ADVICE

Bore Reference E.L. 873 - BP2 . Analysis No. W. 2770/83

Hundred. . . . . Section . . . .

Sample collected by. . . . . Date 24/2/83 . . .

Depth sample taken 60. m Name MRM JONES. . . . .

Dept. Mines Results Address Mineral. Dept. . . .

Conductivity 42500 μS at 25°C 127 kent Str. 11 Floor . . .

Salinity. 31700 . mg/l Sydney To AMDEL for analysis. . . .

pH 7.5 . . . AMDEL No. . . . .

Remarks. . . . .

. . . .

. . . .

Unit No. . . . . Bore Folder No. . . . . . .

C2012

DEPT OF MINES ENGINEERING DIVISION

DM C138

Department of Mines and Energy-South Australia

WATER SAMPLE ANALYSIS ADVICE

Bore Reference. E.L. 873 - B.P.1 . . Analysis No. W 2769/83

Hundred . . . . Section . . . .

Sample collected by . . . . Date 24/2/83. .

Depth sample taken 138. m Name MRM JONES. . . .

Dept. Mines Results Address Mineral Dept 127 kent Str.

Conductivity 42500 μS at 25°C 11 Floor Sydney

Salinity. 31700 . mg/l

To AMDEL for analysis. . . .

pH 7.5 . . . . . AMDEL No. . . . . .

Remarks . . . .

. . . .

. . . .

Unit No. . . . . Bore Folder No. . . . . . .

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1 MAR 1983 DEPT OF MINES ENGINEERING DIVISION

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MINERALS DEPARTMENT

EXPLORATION LICENCE 873 - CORELLA

QUARTERLY REPORT FOR THE PERIOD ENDING

MARCH 14, 1983

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1714e:27pp

INTRODUCTION

Exploration Licence 873 covers an area of 566 square kilometres, located south of Cockburn on the South Australian side of the New South Wales - South Australian border. Exploration on the Licence is a joint venture with Jones Mining NL., with Esso as the operator.

CURRENT EXPLORATION

No active exploration was carried out on the Corella EL during this quarter.

Geochemical results from the percussion drilling of the Birthday, Record, and Fallout prospects are still being evaluated, but generally these assays returned low values of base metals.

ESSO AUSTRALIA LTD.

INCORPORATED IN NEW SOUTH WALES
G.P.O. BOX 4047 SYDNEY 2001 ★ TELEPHONE 236 2911 (AREA CODE 02)
ESSO HOUSE, 127 KENT STREET, SYDNEY, NEW SOUTH WALES
TELEGRAMS "ESSO" ★ CABLES "ESSOEAST"

SYDNEY May 6, 1982

YOUR REF:

OUR REF: 6180/588

SUBJECT Corella
EL873

Department of Mines,
191 Greenhill Road,
PARKSIDE. S.A. 5063

Dear Sir,

We advise expenditures on the above Exploration License for the period three months to March 1983 and cumulative to March 1983 are as follows:

	Cumulative Previous Periods	This Period	Cumulative to Date
Geological	104,201	2,546	106,747
Geophysical	33,899	-	33,899
Geochemical	3,025	(53)	2,972
Drilling	43,615	-	43,615
Technical Service	646	-	646
Other	89	262	351
Overheads (5%)	9,273	138	9,411
TOTAL	194,748	2,893	197,641

Very truly yours,

Frank Hardim

for D.R. Waller,
Accounting Manager,
Minerals Department.

1101-4/ps

II

0042

EXPLORATION LICENCE 873

CORELLA

QUARTERLY REPORTS
FOR PERIODS ENDING
15 JUNE 1983
AND 15 SEPTEMBER 1983

MINERALS DEPARTMENT
ESSO AUSTRALIA LTD
IN JOINT VENTURE WITH
JONES MINING NL

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1714e:43pp

CONTENTS

0043

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SUMMARY REPORT

CONCLUSIONS & RECOMMENDATIONS

APPENDICES

APPENDIX 1 - REPORT & DATA ON UTEM III SURVEY

APPENDIX 2 - ROCK CLASSIFICATION

APPENDIX 3 - ASSAY RESULTS

PLATES		SCALE
1.	LOCATION MAP	1:250,000
2.	GRID LOCATIONS	1:13,333
3.	GRID & DRILL HOLE LOCATIONS	1:250,000
4.	GRID & DRILL HOLE LOCATIONS	1:250,000
5.	GRID & DRILL HOLE LOCATIONS	1:250,000
6.	BP-PDH 001 SECTION	1:1,000
7.	BP-PDH 002 SECTION	1:1,000
8.	RP-PDH 001 SECTION	1:1,000
9.	RP-PDH 002 SECTION	1:1,000
10.	RP-PDH 003 SECTION	1:1,000
11.	FP-PDH 001 SECTION	1:1,000
12.	FP-PDH 002 SECTION	1:1,000

1714e:44pp

INTRODUCTION

Esso Exploration and Production Australia Inc entered into a joint venture with Jones Mining NL to explore the Corella EL for base metals. This report covers exploration over the quarters ending June and September 1983, and includes data gathered from exploration over the two previous quarters.

SUMMARY REPORT

The seven percussion holes that tested UTEM III anomalies on the Birthday, Record and Fallout prospects returned fairly poor geochemical assays (Appendix 3).

Briefly:

BP-PDH 001 Had overall very poor assays in base metals and the UTEM III anomaly apears to have been caused by a shear zone containing highly saline water (Plate 6).

BP-PDH 002 Contains strong quartz-feldspar pyrite development at 70-74m downhole. The high cobalt values probably suggests that the unit is a quartz-albite pyrite horizon Pl_3. It also explains the UTEM III anomaly (Plate 7).

RP-PDH 001 This hole intersected a sequence of quartz-feldspar rocks (Pl) containing elevated cobalt values. The UTEM III anomaly is probably related to quartz-albite, pyrite and magnetite horizon at 80m or the magnetite-pyrite horizon at 126m (Plate 8).

RP-PDH 002 Several zones of quartz-magnetite pyrite were intersected in this hole probably causing the UTEM III anomaly (Plate 9).

RP-PDH 003 This hole did not intersect sufficient pyrite or magnetite or saline water to account for the UTEM III anomaly. It may be that the hole was drilled sub parallel to dip and did not intersect the conductor (Plate 10).

FP-PDH 001 This hole contained a large amount of garnet, suggesting that the area contains a major retrograde shear zone. Highly saline-water was intersected at 140m in quartzo-feldspathic rocks (Plate 11). This zone may explain the UTEM III anomaly.

FP-PDH 002 This final hole intersected a major zone of amphibolite containing trace chalcopyrite and massive to disseminated pyrite and pyrrhotite. This zone easily explains the UTEM III anomaly.

CONCLUSIONS & RECOMMENDATIONS

The poor results of the assays from the holes that tested some of the UTEM III anomalies has downgraded the potential of the EL to the extent that no further exploration work is anticipated.

APPENDIX 1

CORELLA EL 873 S.A.

UTEM III SURVEY

0047

BRIEF INTERPRETATION OF UTEM III DATA FROM THE MUTOOROO DISTRICT OF SOUTH AUSTRALIA

for

ESSO AUSTRALIA LTD

by

GEOPHYSICAL EXPLORATION CONSULTANTS PTY LTD

GUIDO STALTARI

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0048

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0049

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14. Survey plan - Fallout prospect.

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NOTE: ALL PLAN SCALES ARE 1:25,000

ALL PLAN LEGENDS AS FOR FIGURES 1 and 2.

A - INTRODUCTION

During the period 4th September to 31st October, 1982, a Utem III transient electromagnetic programme was completed in the Mutooroo district of South Australia. The programme consisted of a number of small surveys at the Birthday, Birthday-East, Pine Creek, Fallout, Record and Star prospects, which all lie in close proximity to each other.

The general aim of the programme was to provide a cost-effective coverage over areas which are considered prospective for large Broken Hill-type base metal deposits.

Several small mineral occurrences are known within the region and these generally fall within three categories, namely:

1. Broken Hill lode type. This, for example, occurs at Broken Hill itself and at the Pinnacles.

2. Thackaringa-style. This is ubiquitous in the western part of the Broken Hill block and is generally manifest as vein and disseminated sulphide mineralisation associated with retrograde shear zones - a number of these shear zones are known to occur within several of the surveyed prospect areas.

3. Mutooroo-style. The type locality of this style of mineralisation occurs at the Mutooroo mine itself, south of the general area of Utem surveys. It is not clear whether this mineralisation is syngenetic stratabound or simply vein-type. It generally comprises a chalcopyrite-pyrite-quartz assemblage and is found to be conformable with its host psammites. It is interesting to note that it is known to be conductive and detectable by T.E.M. techniques.

The operational aspects of the Utem surveys have been discussed by the writer in a separate report and will not be covered here. In addition, a considerable amount of data assessment and discussion on the geological and economic implications of the Utem results obtained has taken place between the writer and Mr R. Newport of Esso Minerals - only the salient aspects together with a summary interpretation will be presented here.

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1. See "OPERATIONS REPORT ON UTEM III SURVEYS IN THE MUTOOROO AND WEEKEROO DISTRICTS OF SOUTH AUSTRALIA" FOR ESSO AUSTRALIA LTD. BY G.E.C. Pty Ltd, 6th December, 1982 - Guido Staltari.

B - THE UTEM III SURVEY SYSTEM

The Utem III Survey System and interpretation methods have been outlined in various literature generated from the University of Toronto. However, it still is the least known T.E.M. system to the majority of practitioners in Australia.

A summary of Utem III field instrumentation and computer specifications can be seen in Appendix 1 and a brief description of the system is as follows:

The measuring system is a time-domain E.M. system using a large fixed transmitter and a portable receiver capable of measuring both magnetic and electric field components. The actual source is a large square or rectangular loop (Turam-style) energised by a triangular current waveform. This waveform is not of a precise triangular nature but is modified by advanced pre-whitening circuitry which optimises the frequency content of the output so as to improve signal/noise ratio.

Resultant total fields - note that the receiver measures in the presence of the primary field - can be detected by a flexible and portable three-component coil (H field measurements) and grounded electrodes (E field measurements). The resultant waveform is sampled by 10 channels whose windows have widths and delay times logarithmically spaced by factors of two.

An important feature of Utem is the fact that the system response is a step rather than an impulse. This results in a direct relationship between amplitude of response and inductance and better resolution of time constants. In addition, the power spectrum of the transmitted triangular waveform shows relatively high power levels at low frequencies when compared to square waveforms.

Quantification of anomalies is made easier by the fact that the inductive limit can be seen in the data and a series of valid approximations are available to enable calculations of depth, dip and conductivity-thickness product.

C - UTEM SURVEY DESIGN

Grid layouts for the various prospect areas are shown in Figures 1,5, 7,9,11,14 and 17. These show the actual transmitter loop positions which are labelled by respective loop numbers. The latter are also included on the title block of each Utem profile plot (Appendix II).

In general, loops were laid on the up-dip side of stratigraphy so as to ensure optimum coupling to steeply dipping conductors. In the Birthday prospect area (Fig. 1) lines 10,000E, and 10250E were also surveyed in opposing directions as a check on coupling sensitivity and to check on the screening effect of the main conductor.

The surveyed lines are also shown in the above figures together with infill traverses. The latter were sited in order to better define anomaly strike extents and, in a number of cases, vertical magnetic field (Hz) measurements were supplemented by horizontal field (Hx) measurements to aid lateral resolution of various conductor locations.

In general, measurements were taken at 50m. station intervals and, where follow-up or infill work was necessary, an interval of 25 metres was generally applied. In several instances, a 10-metre detailing interval was applied to provide accurate positioning of anomalies.

Most of the survey work was done using a base transmitter frequency of 26 Hz. Delay times for this frequency are shown in the legend for Utem plots (Appendix II). In most instances, all anomalous effects had decayed by the latest channel (15 msec) but in the Birthday prospect area, several anomalies were re-traversed using a base frequency of 13 Hz (whose maximum mean delay time measurement is 30 msec) to provide additional decay amplitude control.

As seen in the above mentioned figures, transmitter loop sizes were varied, according to overall ground conductivity, ease of access, and amount of coverage needed. Sizes varied in shape, from square to rectangular, and in size, from 500m. x 500m.to, say, 1000m. x 5C0m. In some instances, distorted loop shapes arose due to inaccuracies in the various grids. An example of the latter is seen in Figure 7 (loop 17). As most of these distortions were not realised until commencement of traversing, it was decided to effect simple data corrections rather than to delay productivity by changing loop positions.

D - DATA PRESENTATION

The profiles of the field survey plots are presented in Appendix II together with a legend showing channel mean delay times and information on normalisation procedure.

The magnetic field data plots have three axes. The top axis is used to plot the early delay time channels 9 to 5, the centre axis covers the later delay time channels 5 to 2, and the latest channel, number 1, is plotted alone on the bottom axis.

Channel 1 is normalised with respect to the calculated primary field and is plotted as a secondary field. Anomalies on this channel may be due to magnetostatic responses and grid location errors (leading to incorrect calculation of the primary field) as well as inductive responses.

Channels 2 to 9 are generally normalised as secondary fields with respect to Channel 1, thus correcting to a first order for location errors and magnetostatic responses.

In the Mutooroo data, it appears that all significant inductive responses have decayed completely by Channel 1.

E - BRIEF DATA INTERPRETATION

1. General

The following section basically represents generalised interpretation of the Utem data in the various prospect areas.

In each case, the data has been subject to the following procedure:

a) An examination of the more regional overburden/oxidation response with a view to determining survey effectiveness.

b) A categorisation of anomaly types into shallow overburden/oxidation zone variations, wide stratigraphic conductive zones and discrete conductors of dimensions and conductivity consistent with a target of economic interest.

c) Semi-quantitative estimates of conductivity-thickness product, depth, width and dip in order to provide some geological perspective.

In virtually all of the data collected there is evidence of an overburden/ oxidation layer. This is seen as a broad laterally-migrating cross-over (in the Hz component) which reaches an early-time limit of -200% at distances generally greater than 250 metres from the loop edge. This value of -200% is diagnostic and actually represents the full Utem step amplitude of +100% to -100%, indicating that complete blanking of the primary field occurs at early times at these stations.

An examination of several decay curves in the general district suggests overall conductances in the range 0.5 to 2.0 siemens. For depths of 50 metres these figures represent resistivities in the range 25 to 100 ohm metres. It should be noted that variations in the shallow layer conductance occur and even though no attempt has been made to refine the conductance estimates in each area, the more significant variations have been mapped. These generally show linear trends sub-parallel to the more conductive units suggesting that the surficial layer conductivity variations are at least in part caused by preferential weathering of various stratigraphic units.

A good example of a surficial inhomogeneity is seen as a Utem low centred at 11200N on Birthday prospect line 11500E. In this case, the gradient on the loop side and the diagnostic reverse cross-over on the southern side suggests a horizontal eddy current system within a zone of enhanced surficial conductivity some 250 metres wide.

2. Birthday Prospect

The data in this area is dominated by the effect of a conductor some 3.5 kilometres long (Figure 2). It is clearly seen on line 10,000E as the strong cross-over at 10,530N and several relevant observations can be made from the shape of the anomaly.

Firstly the strong blanking effect on the southern side of the conductor and its time constant character suggest considerable depth and strike extent (the latter is obvious from the aerial extent of the anomaly). Also, the peak to peak horizontal distance suggests shallow depth, in the range 25 to 50 metres. These observations are summarised in Figure 2 together with positions of other conductivity variations.

Conductance estimates are derived from the decay character and examples are shown in Figures 3 and 4 for the main anomaly on lines 9,500E and 10,000E respectively. Of particular interest in both decays is the extremely strong enhancement in the early-to-middle time range due to current gathering. This is a diagnostic feature and suggests that:

(i) the conductor is regionally continuous and probably of a sheet-like nature, and

(ii) the conductor is likely to be in contact with the overburden/ oxidation zone.

The above points suggest that the conductivity-thickness estimates made on the basis of assuming pure inductive response are likely to be over-estimates. Thus, figures of 25 to 30 siemens should be considered as maxima.

The features of the conductor are consistent with a uniform weakly mineralised unit or a poorly conductive mineral assemblage within a large disseminated "sheet".

Other geological explanations such as shearing or graphite are possible but no firm guidelines are apparent. Further interest appears warranted.

A number of weak conductivity inhomogeneities also occur and generally serve to provide additional stratigraphic information. However, they are mostly shallow, thin, and of conductances in the range 1 to 3 siemens.

3. Birthday-East Prospect

In this area, there are several lower order responses which are of generally limited strike. The most significant occurs on line 13,000E at 10,075N and its conductance is estimated to be in the range 5 to 10 siemens. It is around 25 metres in depth, probably at the base of the weathering profile.

When compared to the main anomaly in the Birthday prospect, this anomaly is of secondary interest. It may, however, be on the strike extension of the Birthday zone and as such requires further consideration.

All other anomalies in the area are caused by small and shallow conductivity changes.

4. Pine Creek Prospect

This area is characterised by a general lack of significant conductors (Figure 8). Weak responses were recorded throughout and no anomalies of primary interest were noted.

The main (weak) conductive feature occurs on line 9500N at 10475N and possibly extends over a strike length of some 1500 metres. Its conductance varies in the range 2 to 6 siemens, possibly reflecting a more conductive stratigraphic unit. Its depth is generally in the order of 25 metres.

5. Star Prospect

The Utem data in this area shows a series of subdued anomalies which can be correlated to various degrees of reliability, from line to line (Figure 10).

Their low order of conductance and their strike character suggest a series of stratigraphically controlled rocktype changes. Upon detailed traversing, the weak crossover on line 11000N at 10725E appears as the western edge of a wide conductive rock unit. This also appears to be the case for the anomaly on line 10,000N at 11375E.

Conductance estimates for the various shallow inhomogeneities vary in the range 1 to 3 siemens and depth estimates are generally in the order of 25 metres.

6. Record Prospect

In the Record prospect area, there are several conductors of primary interest. These, together with relevant conductance and depth estimates, are shown in Figure 12.

One anomalous zone lies in the western part of the area and extends over a strike length of some 1500 metres. It reflects a thin conductor some 25 to 50 metres deep, dipping steeply to the north and with a maximum conductance of around 10 siemens. The strongest response occurs on line 8500E at around 10675N.

In the north-eastern part of the area, three sub-parallel anomalous zones occur. The main one is seen on line 10500E at around 11900N. On this particular profile, the positive shoulder of the anomaly appears strongly enhanced due to the eddy current flow along the southern edge of a wide conductive zone between 11950N and 12075N. In addition, the lack of a clear crossover on the southern side of the anomaly suggests a composite conductive zone. Bulk conductance estimates vary between 10 and 20 siemens while depth estimates yield values of 25 metres or so.

Localised anomalies (of limited strike extent) also occur on line 11,000E at 11525N and line 10,500E at 12075N. Their conductances are in the order of 17 and 8 siemens respectively while their depths are in the order of 25 metres.

For illustrative purposes, the decays of the latter anomalies are shown in Figure 13. In both cases a strong current gathering component is evident and suggests that the above conductance figures are probably over-estimated.

All the main anomalies in the Record prospect area appear to be partly caused by current gathering, probably as a result of their strike continuity and their contact with the oxidation zone.

Although the conductance estimates derived are not of major significance, further interest is warranted and geological/geochemical screening is required.

7. Fallout Prospect

The salient features of the Utem data in this prospect area are shown in Figure 15.

Two main conductive zones are apparent, while on line 3600N there is an isolated anomaly of secondary interest.

The two main zones have strike lengths of around 1000 metres and of the same order of conductance. Their decay character is shown in Figure 16 and it is interesting to note the relative reduction of the current gathering component (in comparison to the main conductive units in the adjacent prospect areas). This is probably as a result of the shorter strike length of the conductive zones. Depths are generally shallow, as shown.

0060

F - CONCLUSIONS AND RECOMMENDATIONS

A number of Utem anomalies have been detected and highlighted in several of the Mutooroo prospect areas. In general, however, there is no evidence of a body of conductance in the range of several hundred to several thousand siemens - the latter might be expected from a continuous and very conductive massive sulphide body of economic size and grade.

The main anomaly shapes and strike characteristics outlined suggest that their causes are stratabound. Several of the long strike length anomalies (for example, the Birthday anomaly) have decay characteristics that suggest regional continuity, shallow depth and response enhancement due to gathering of regional halfspace currents.

Because of their size and location within prospective stratigraphy, further explanatory testing is required. This is also justified on the basis that the Broken Hill deposit is of variable conductivity, ranging from strongly conductive to resistive depending upon the distribution and relative amounts of galena, sphalerite and pyrrhotite within the massive sulphide assemblage.

It is recommended that closer scrutiny of the Utem data be considered if the next phase of testing (i.e. drilling) results in further encouragement. This may involve more detailed decay analysis and/or modeling, depending upon the particular problem at hand.

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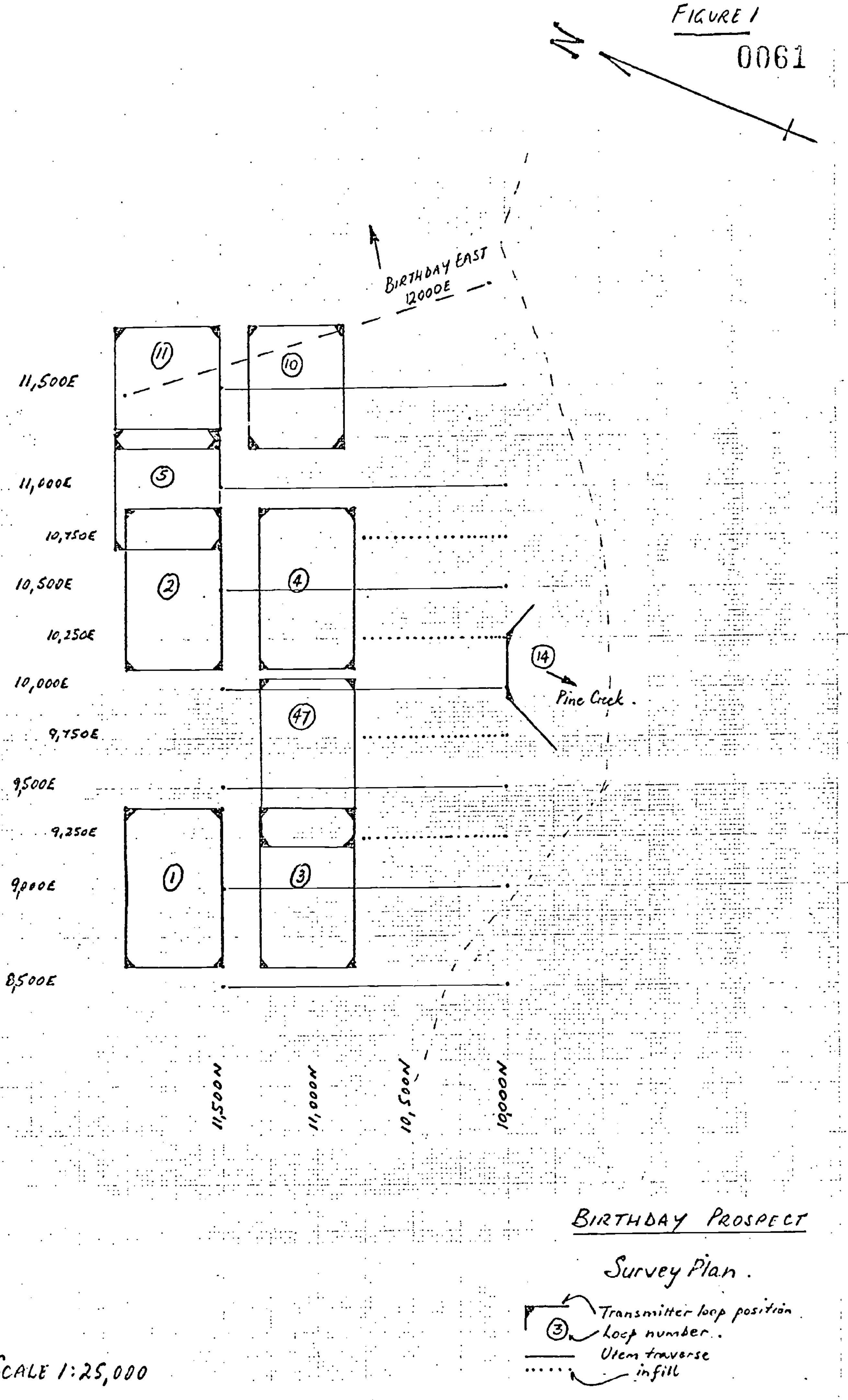
FIGURE 1

0061



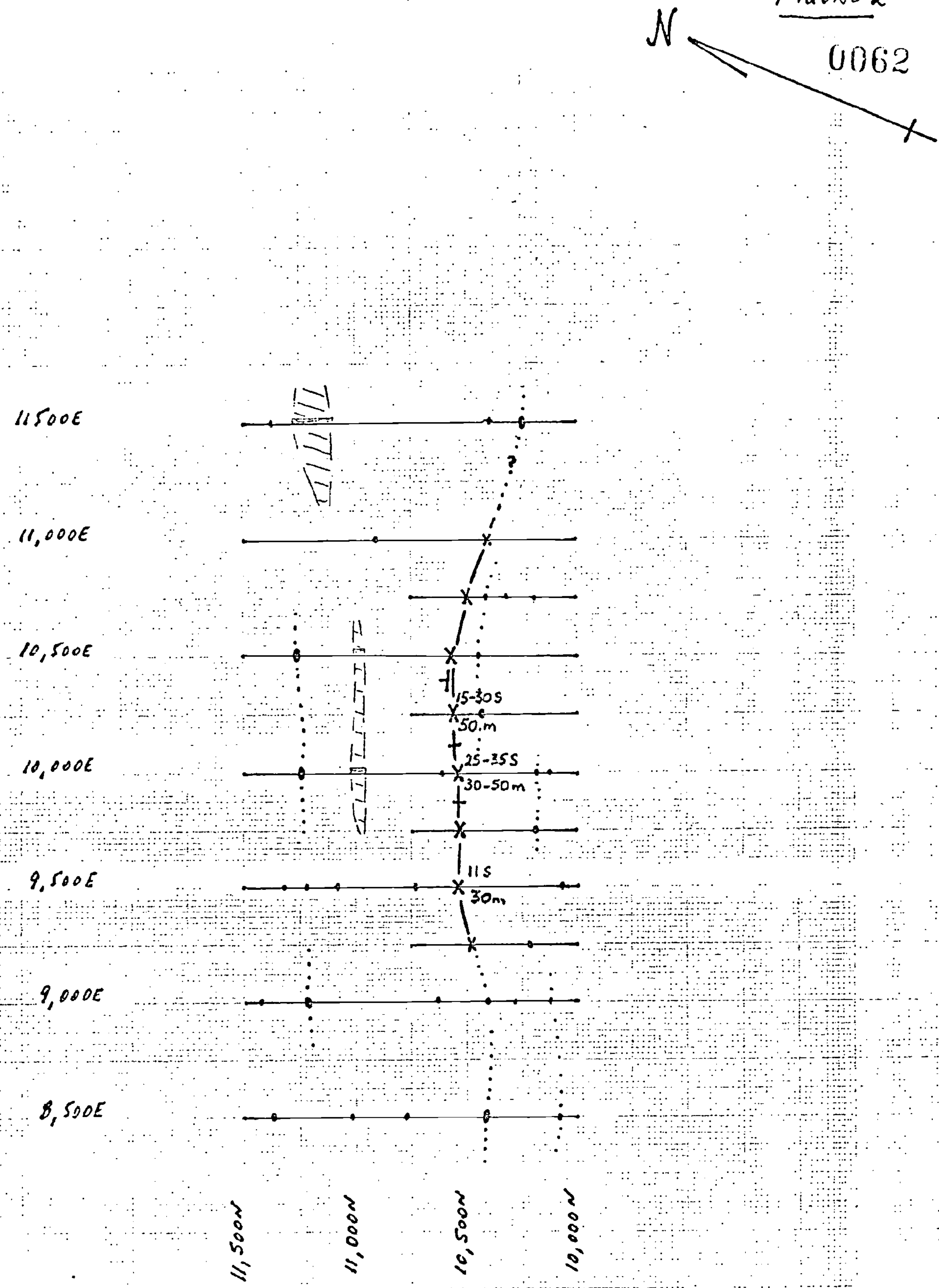
BIRTHDAY PROSPECT

Survey Plan.

SCALE 1:25,000

FIGURE 2

0062



BIRTHDAY PROSPECT

Plan of conductive units

15S 25m Conductor with conductance depth estimate

Shallow conductivity inhomogeneity

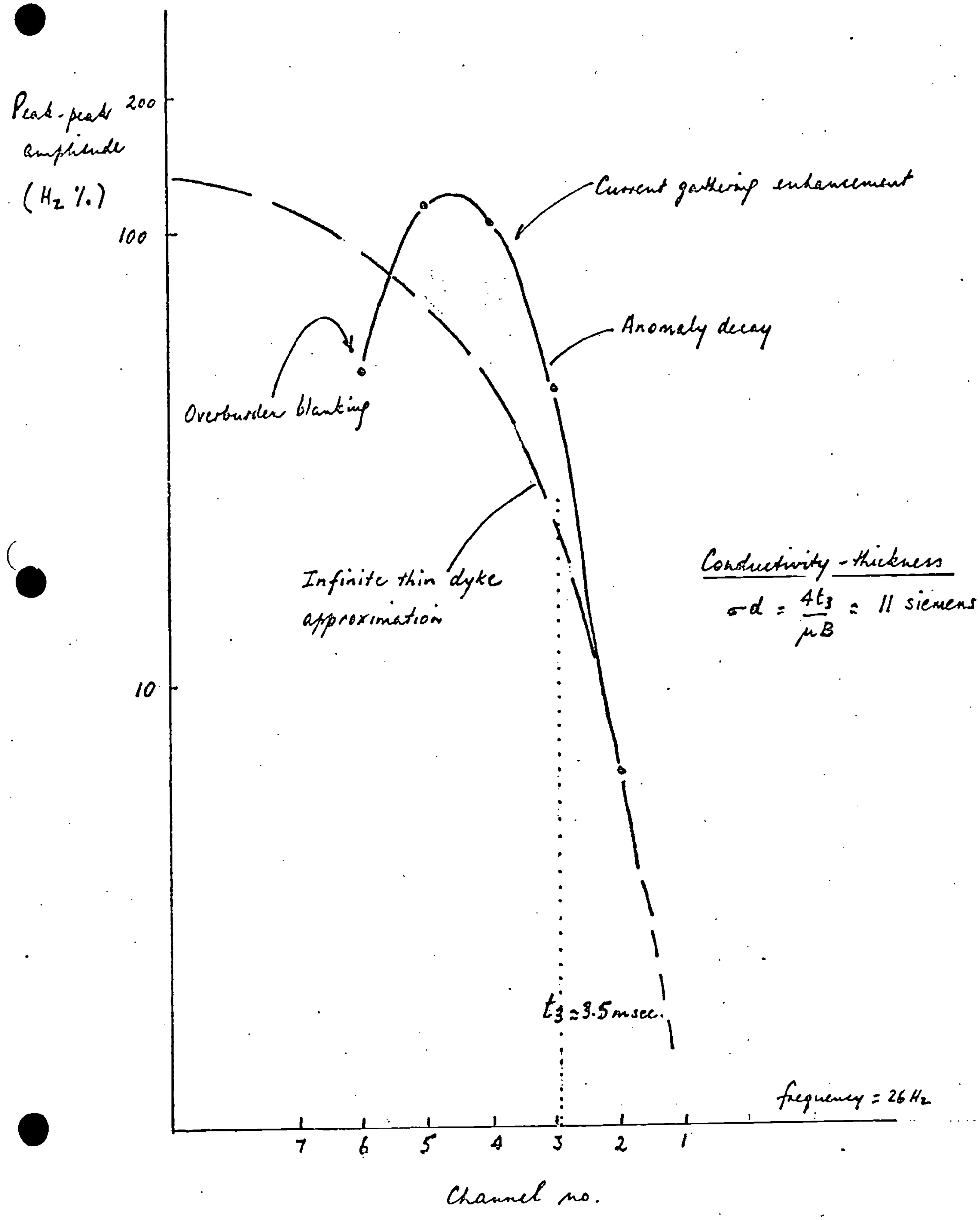
Wide conductive rockunits and/or overburden/oxidation conductivity enhancement

SCALE : 1:25,000

BIRTHDAY PROSPECT

0063

Loop (020)3 Decay Curve for peak-to-peak anomaly at 9500E, 10530N



BIRTHDAY PROSPECT

Loop (02)4 Decay Curve for peak-to peak anomaly at 10,000E , 10,520N

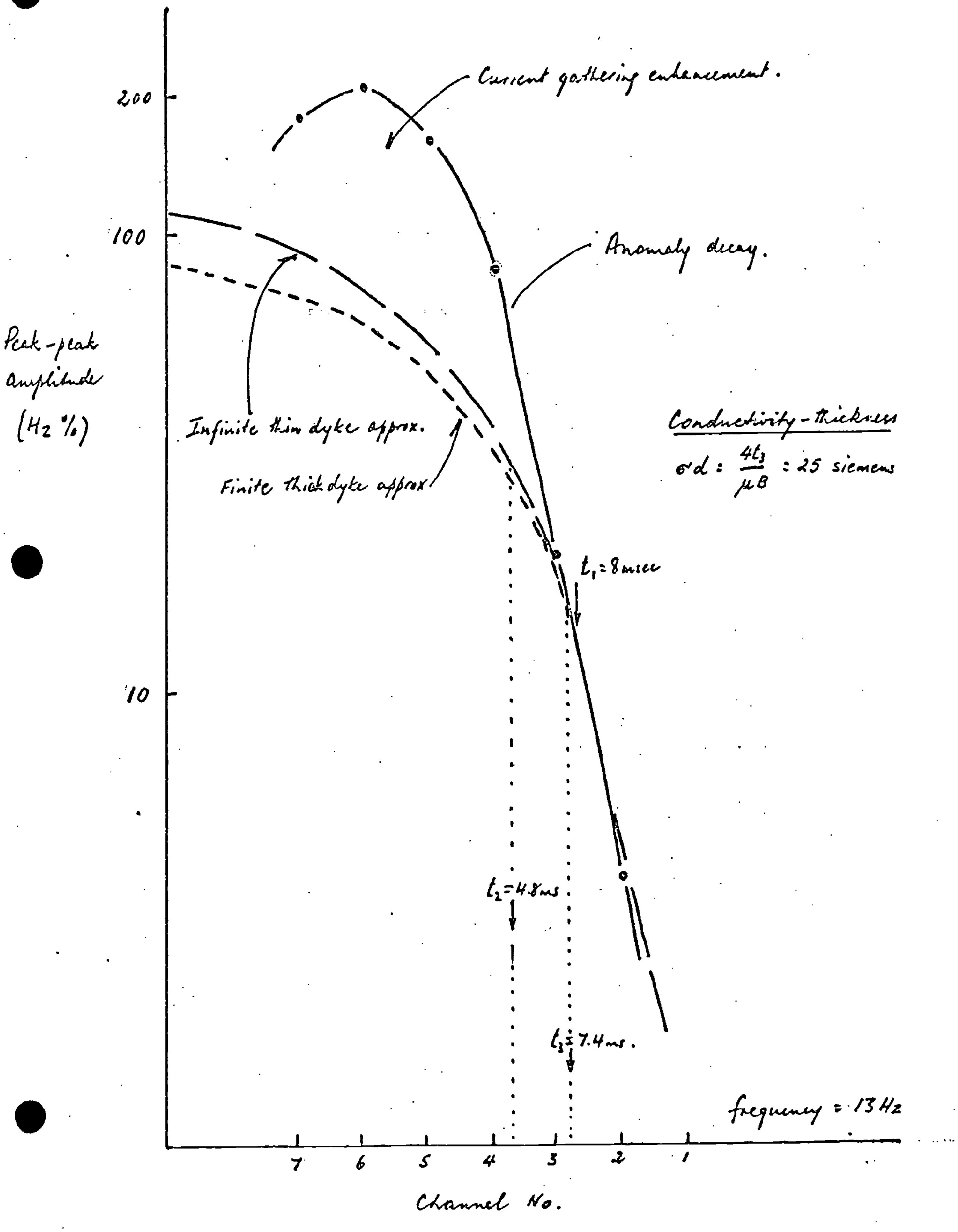
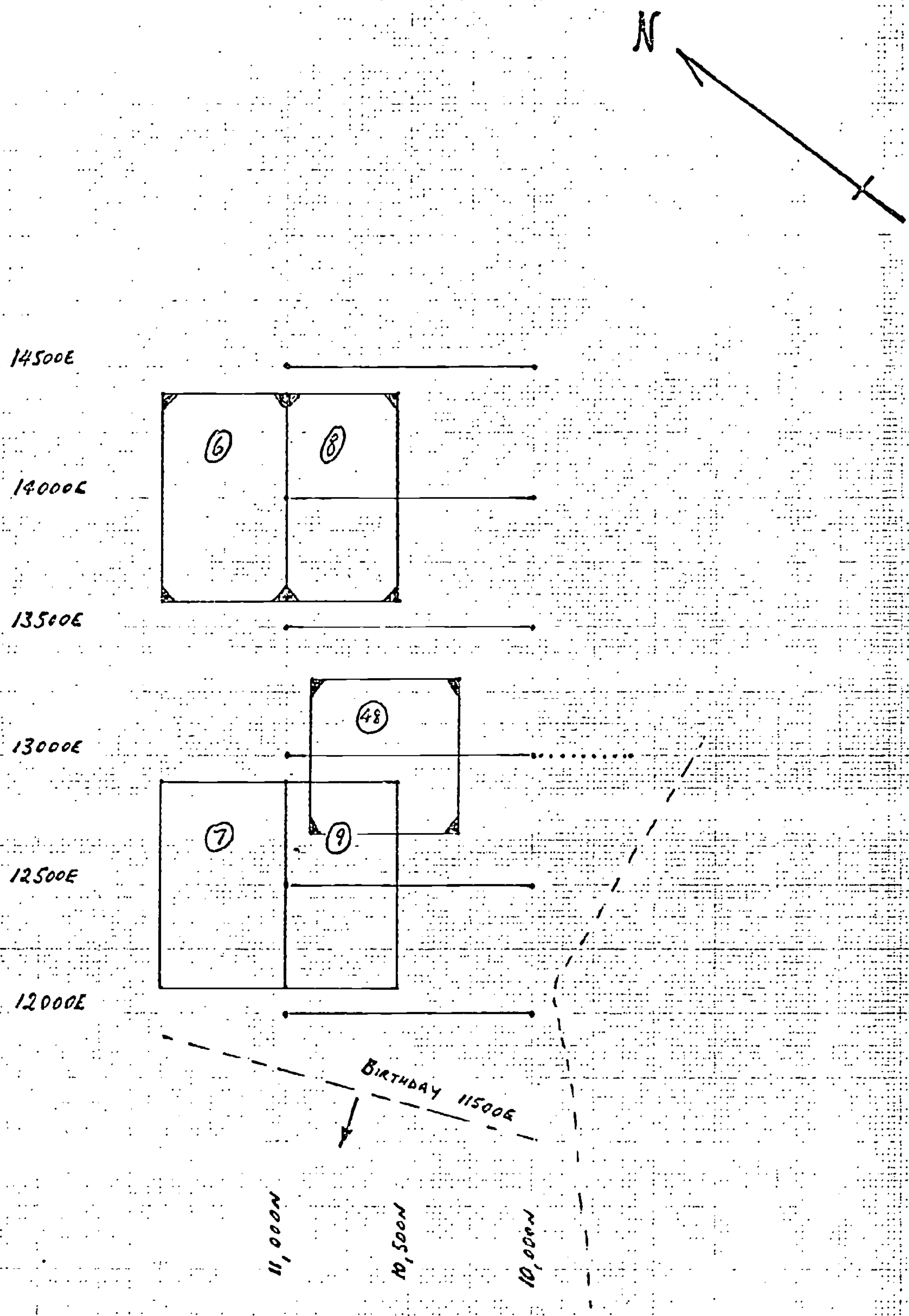


FIGURE 5

0065



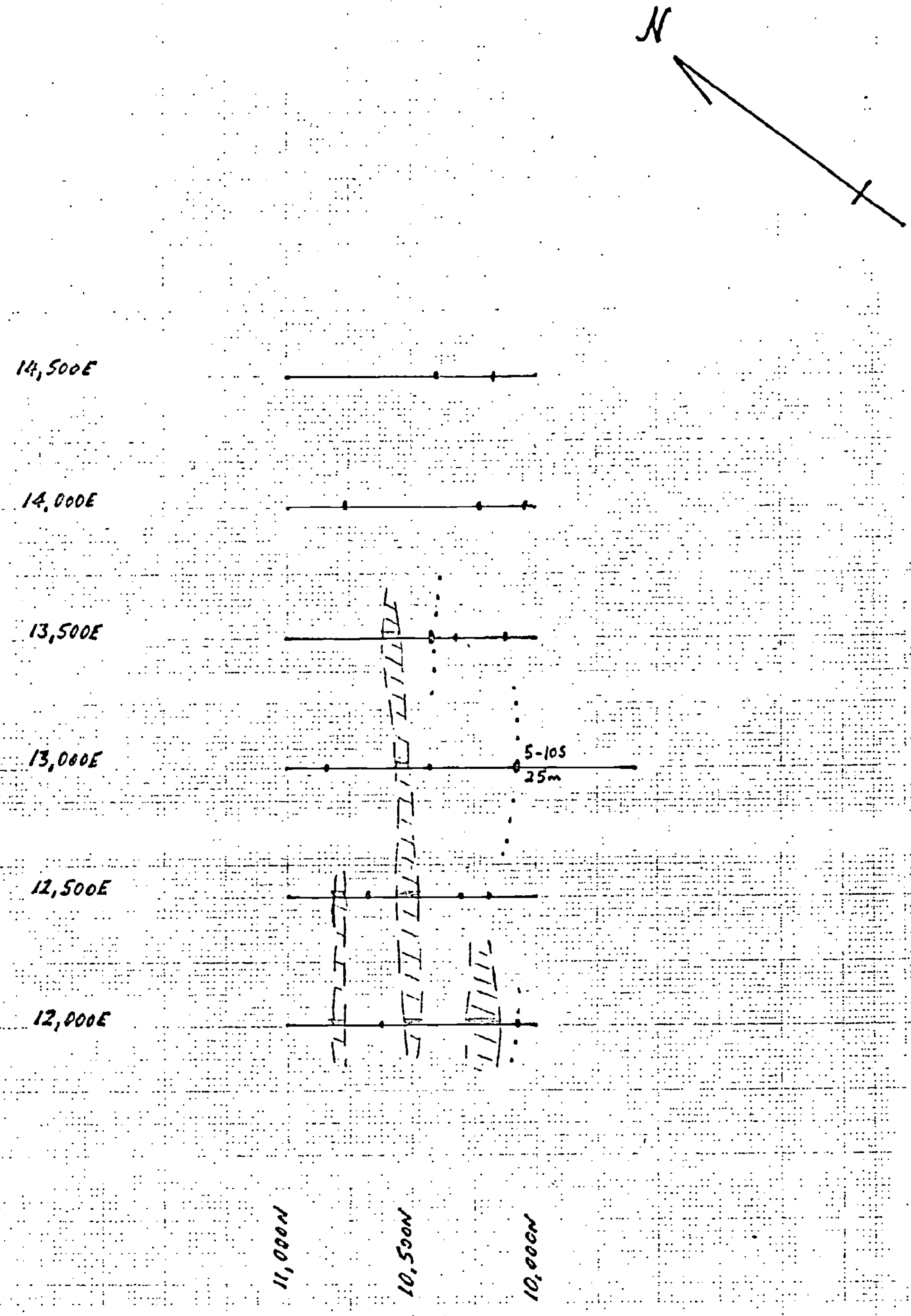
BIRTHDAY-EAST PROSPECT

Survey plan..

SCALE 1:25,000

FIGURE 6

0066

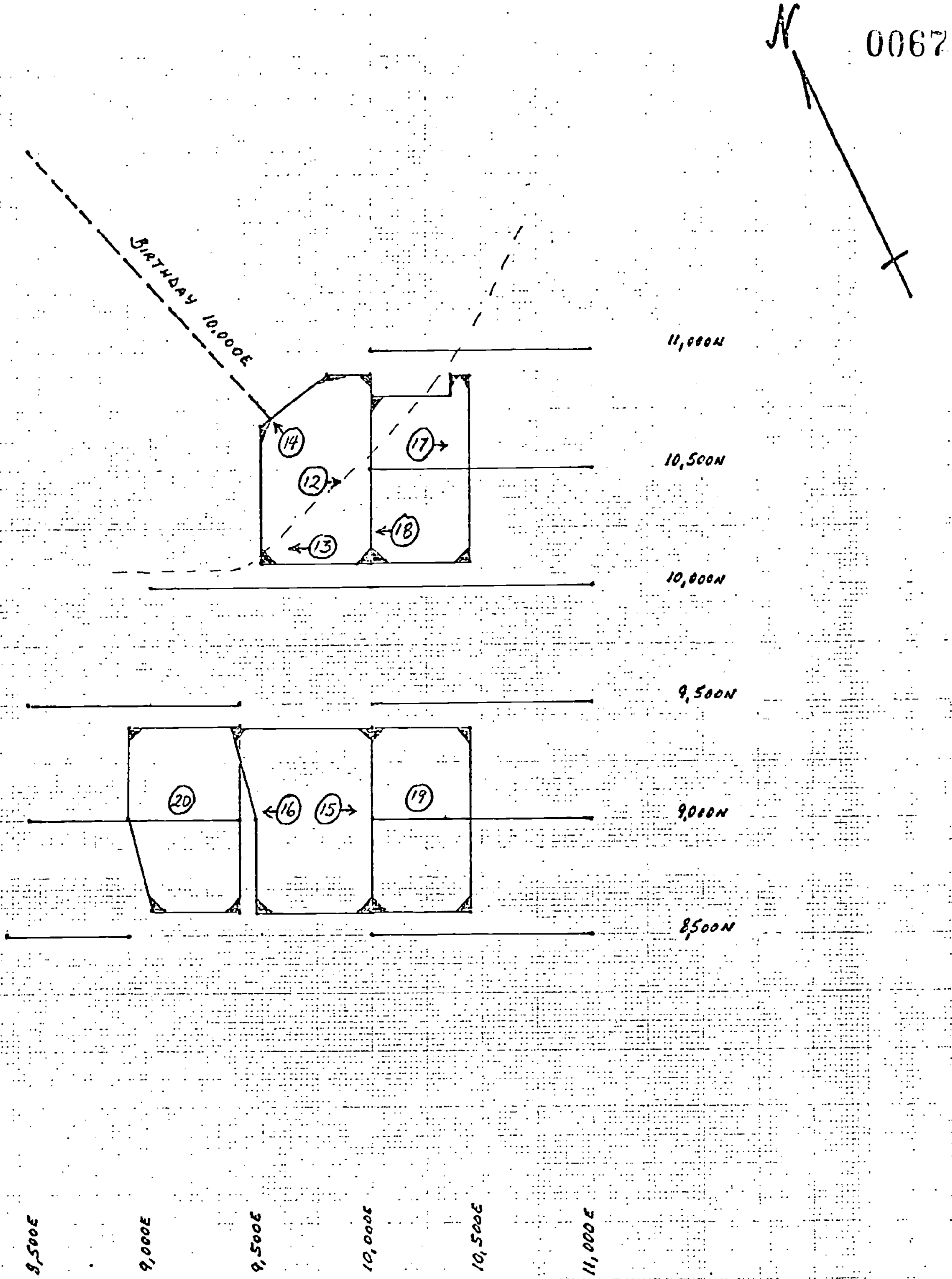


BIRTHDAY - EAST PROSPECT

Plan of conductive units

FIGURE 7

0067

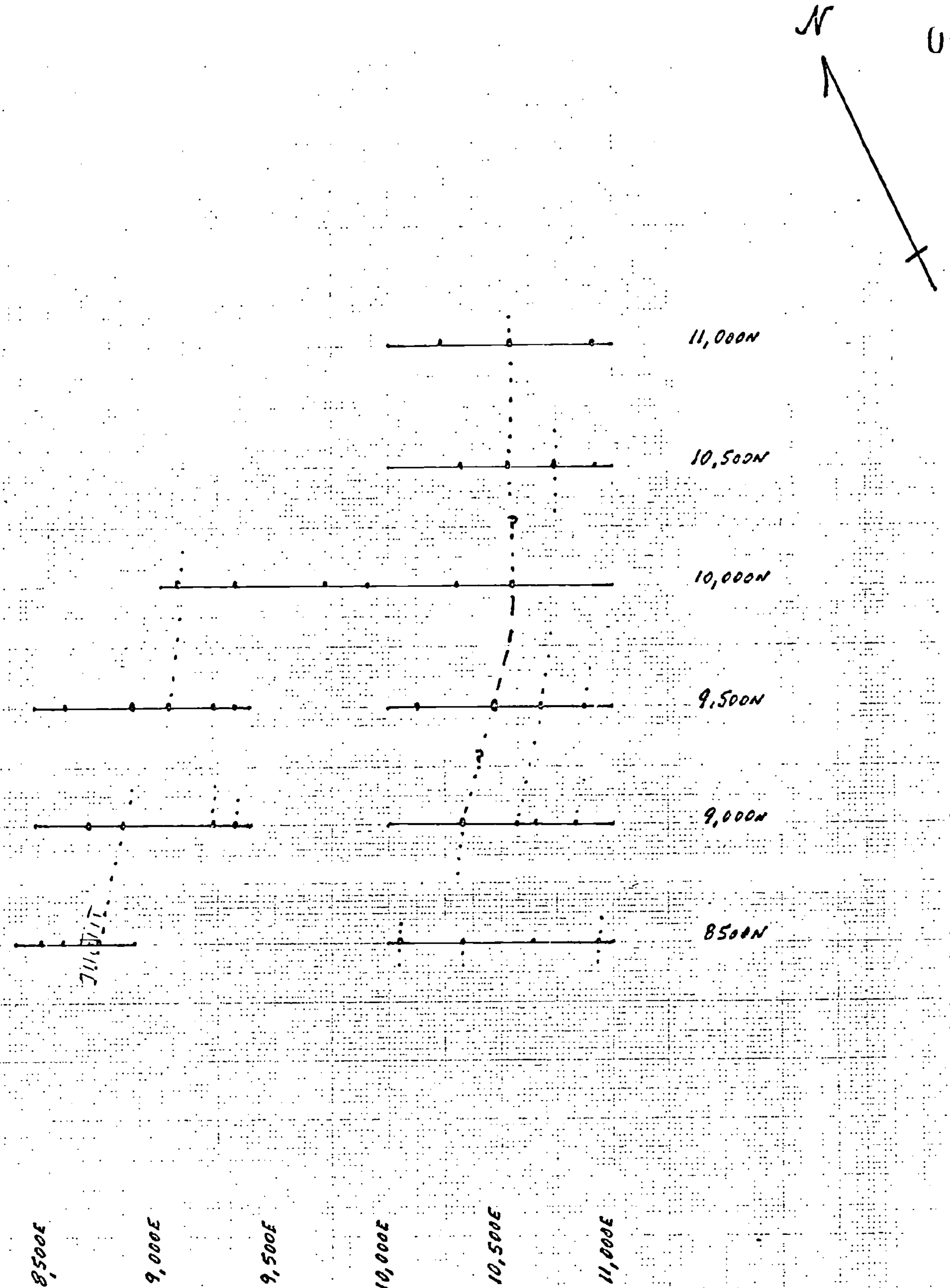


PINE CREEK PROSPECT

Survey Plan.

FIGURE 8

0068

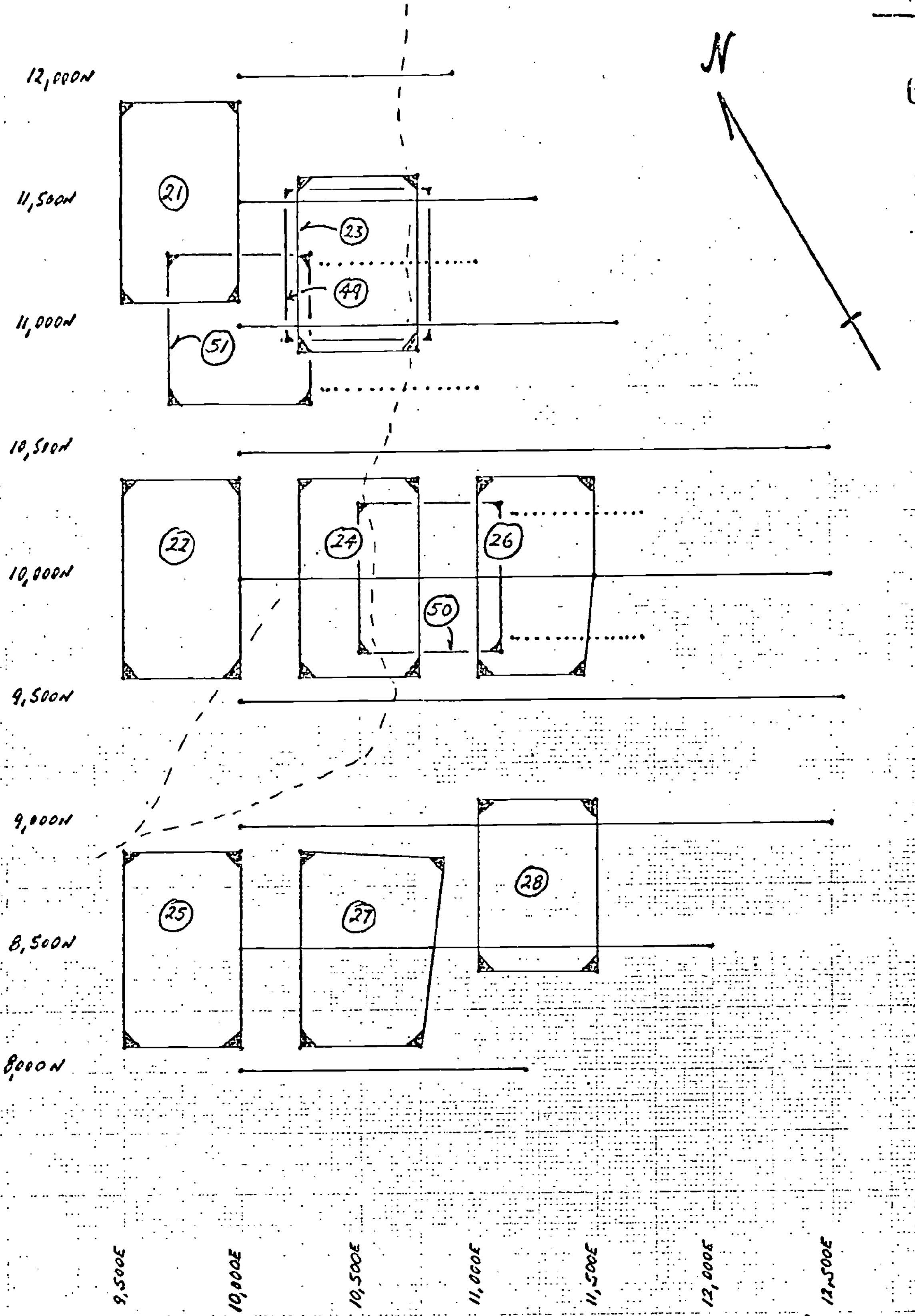


PINE CREEK PROSPECT

Plan of conductive units

FIGURE 9

0069

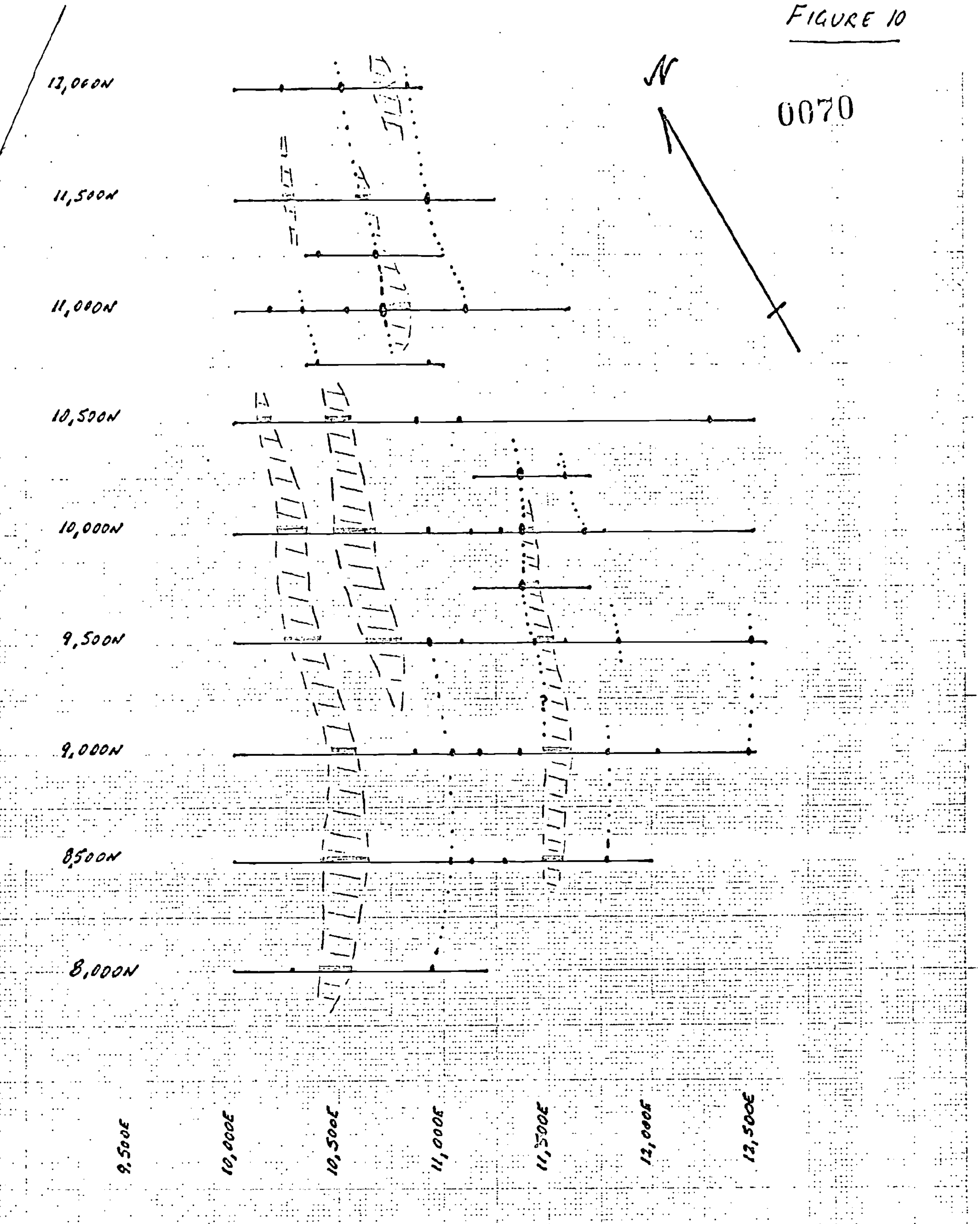


STAR PROSPECT

Survey Plan

FIGURE 10

0070

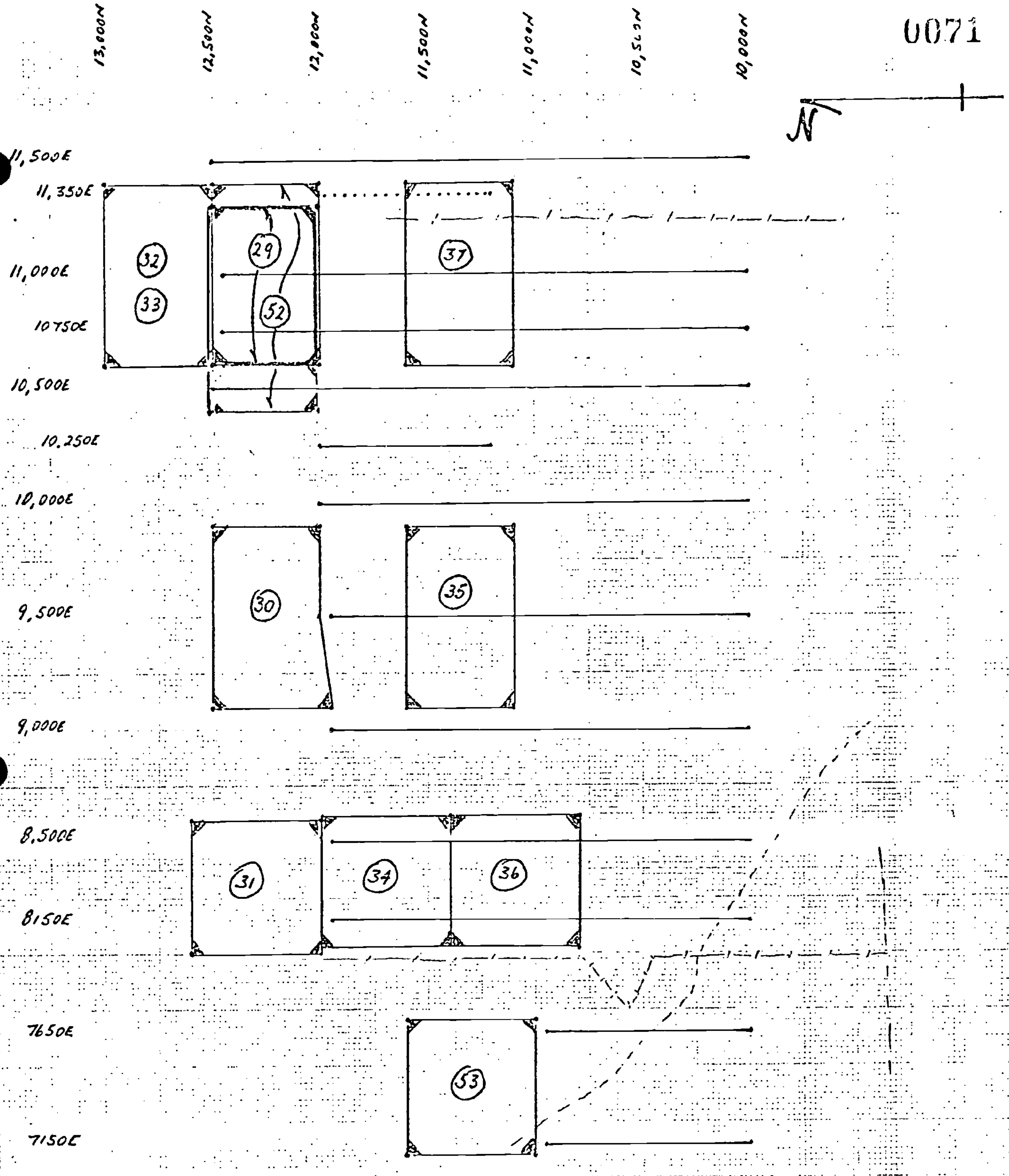


STAR PROSPECT

Plan of conductive units

FIGURE 11

0071

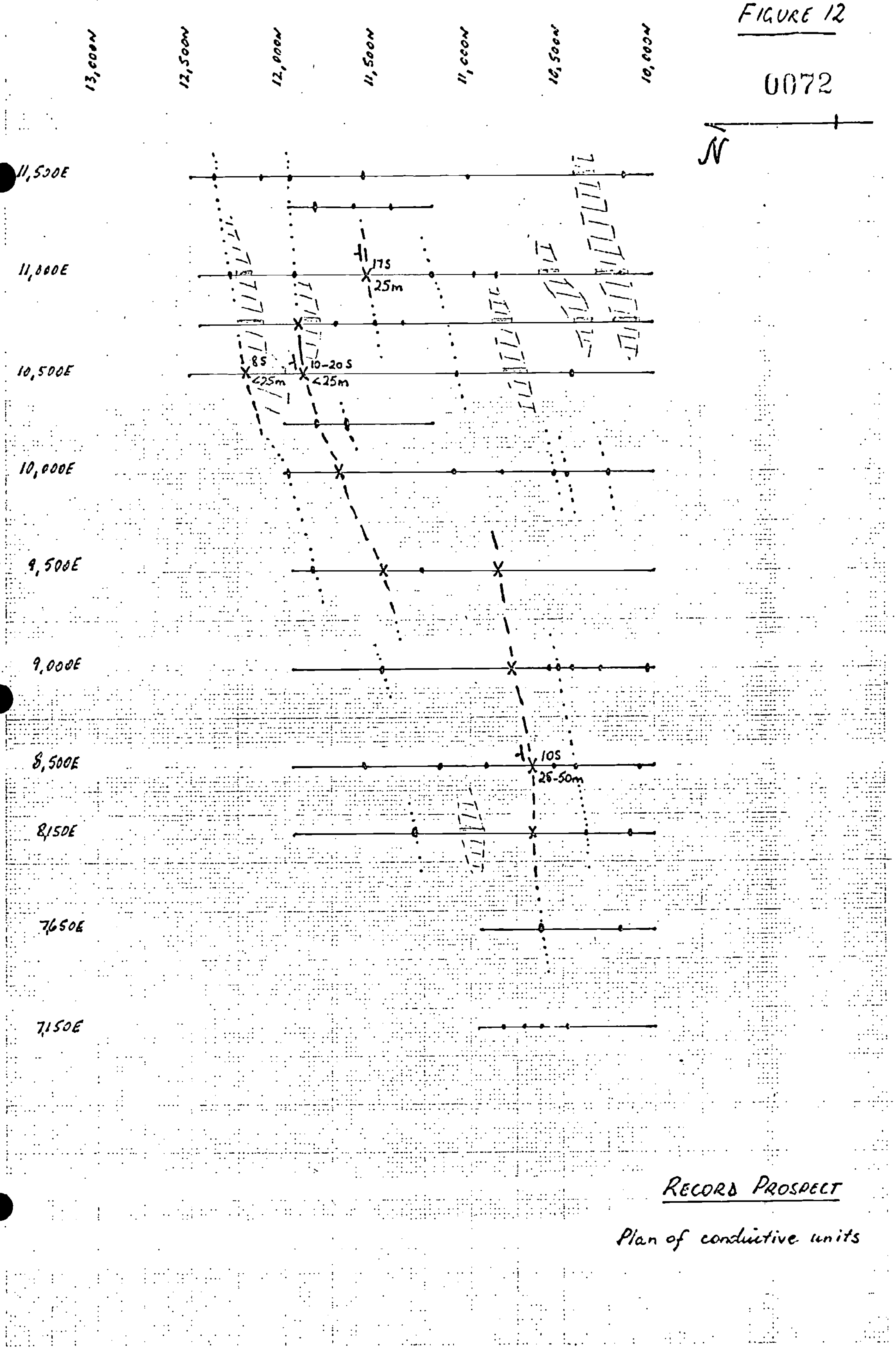


RECORD PROSPECT

Survey Plan

FIGURE 12

0072



RECORD PROSPECT

Plan of conductive units

FIGURE 13

0073

RECORA PROSPECT

Decay curves for peak-to-peak anomalies at
∘ 11,000E, 11525N
x 10,500E, 12,075N

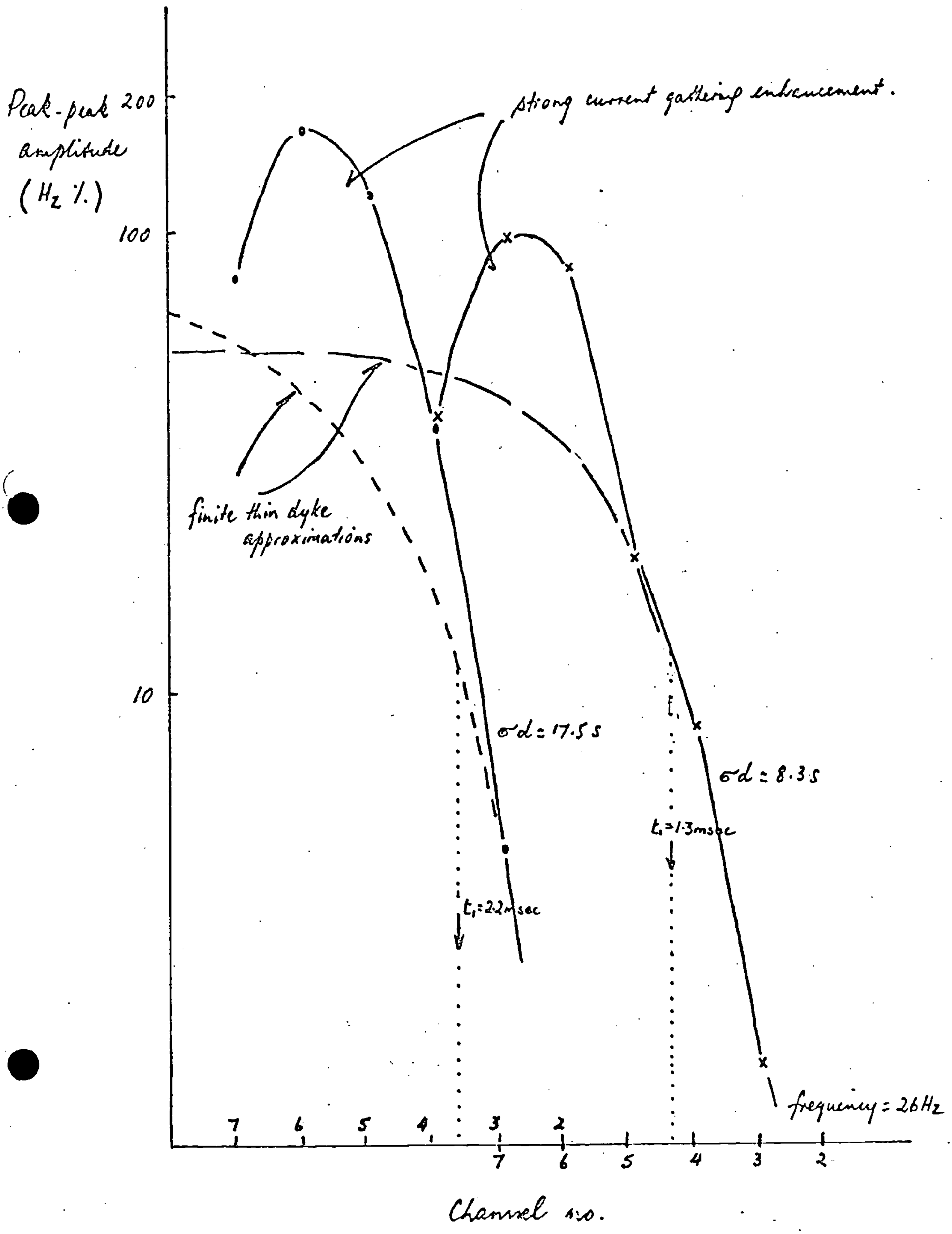
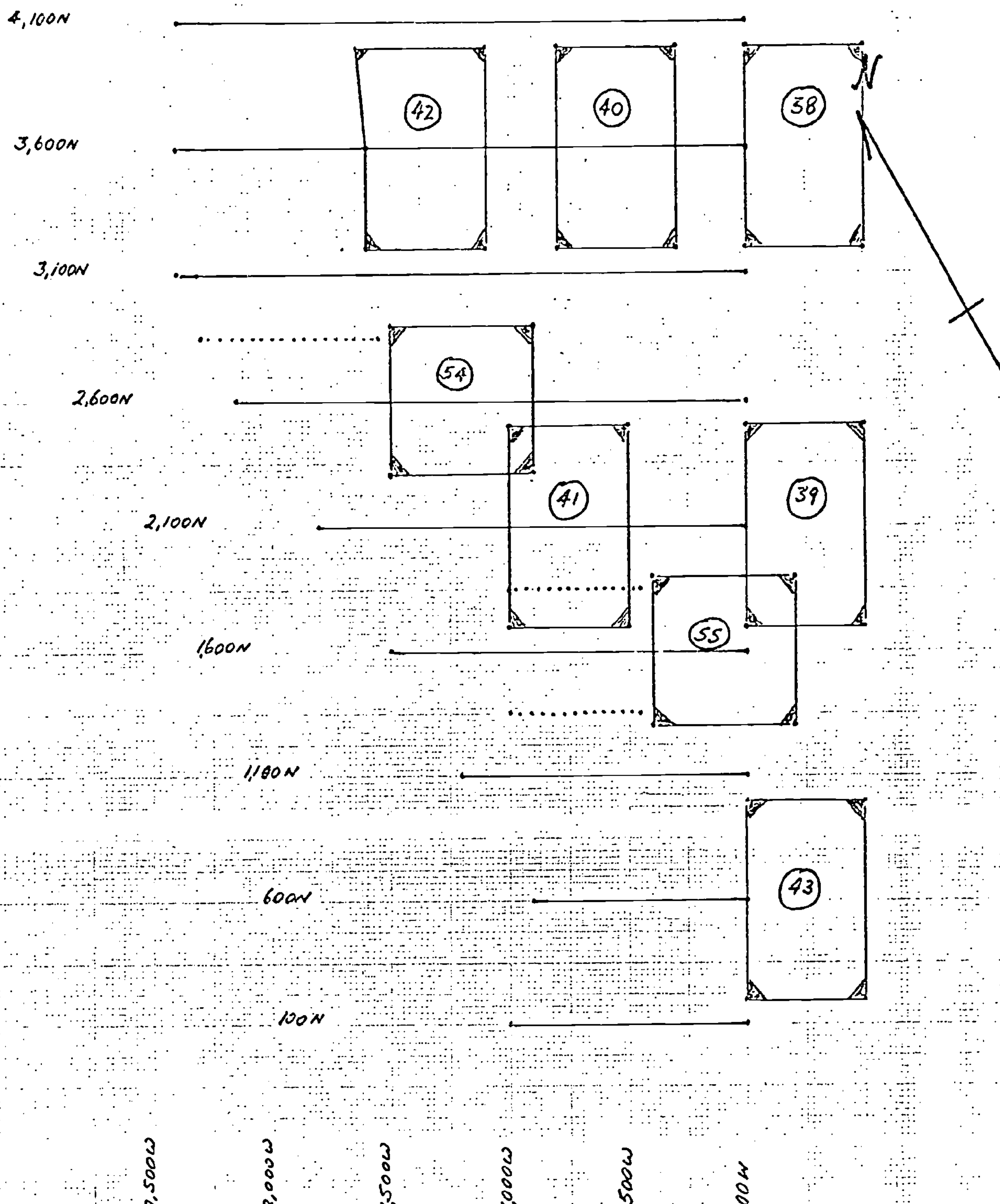


FIGURE 14

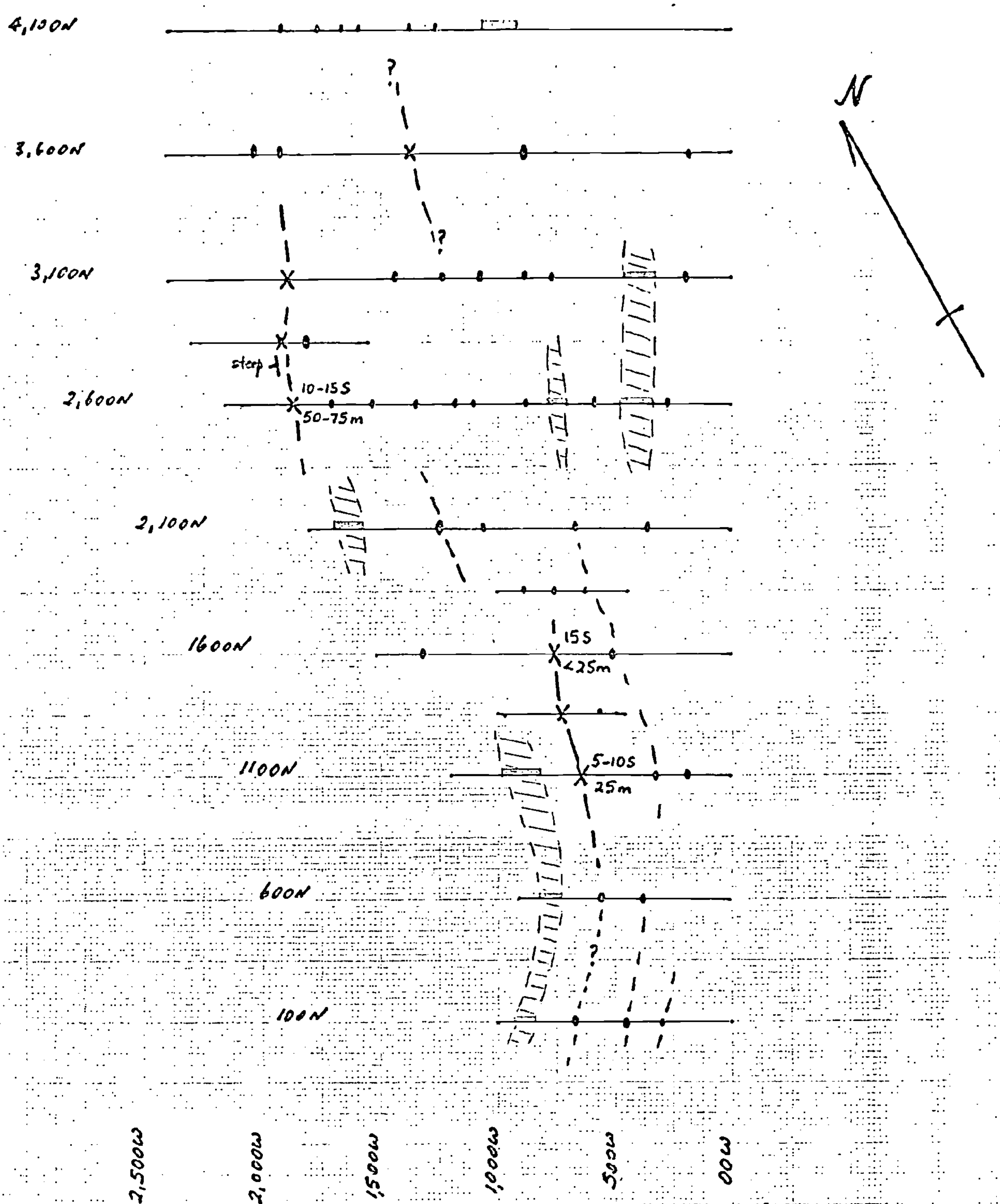


FALLOUT PROSPECT

Survey Plan

FIGURE 15

0075



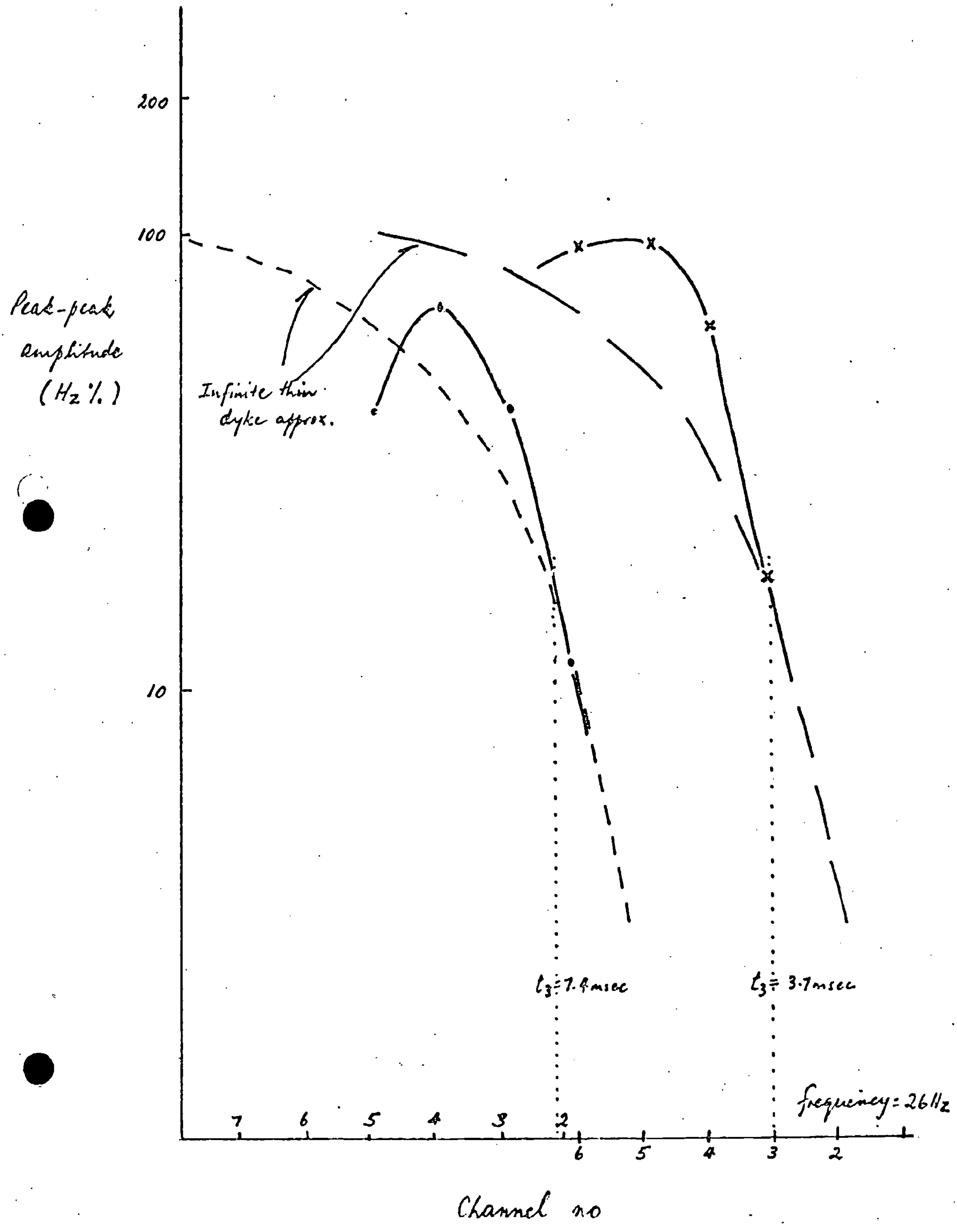
FALLOUT PROSPECT

Plan of conductive units

FIGURE 16

FALLOUT PROSPECT

Decay curves for peak-to-peak anomalies at
∘ 2600N, 1850W
x 1600N, 775W



APPENDIX II

Utem III data, Mutooroo district

LEGEND FOR UTEM PLOTS

Symbol	Channel number	Mean Delay Time (milliseconds) f=30Hz	f=26Hz	f=15Hz	f=13Hz
◇	10	0.025	0.029	0.05	0.058
A	9	0.05	0.058	0.1	0.115
X	8	0.1	0.115	0.2	0.231
7	7	0.2	0.231	0.4	0.462
∆	6	0.4	0.462	0.8	0.923
Σ	5	0.8	0.923	1.6	1.85
□	4	1.6	1.85	3.2	3.69
\	3	3.2	3.69	6.4	7.38
/	2	6.4	7.38	12.8	14.77
l	1	12.8	14.77	25.6	29.54

All channels are plotted as:

$$\frac{\text{Channel} - \text{reference}}{\text{base}} \times 100\%$$

For total field normalization: reference = 0
secondary : reference = primary component or Channel 1.

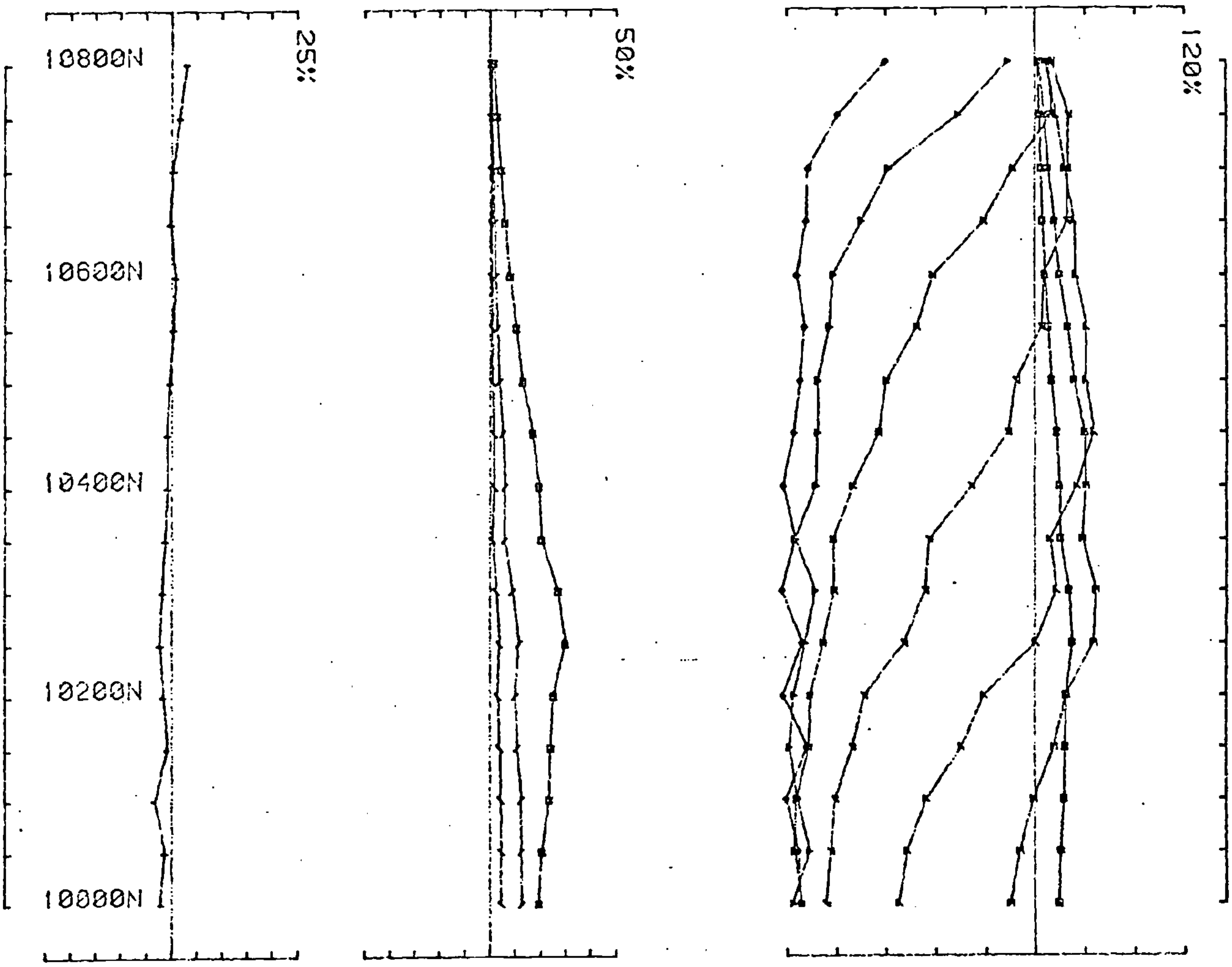
If Ch 1 symbol appears on plot then:
reference = primary for Chan 1
reference = Chan 1 for all other channels.

If no Ch 1 symbol is present then:
reference = primary component for all channels.

Normally base = primary field (total) at reading station.

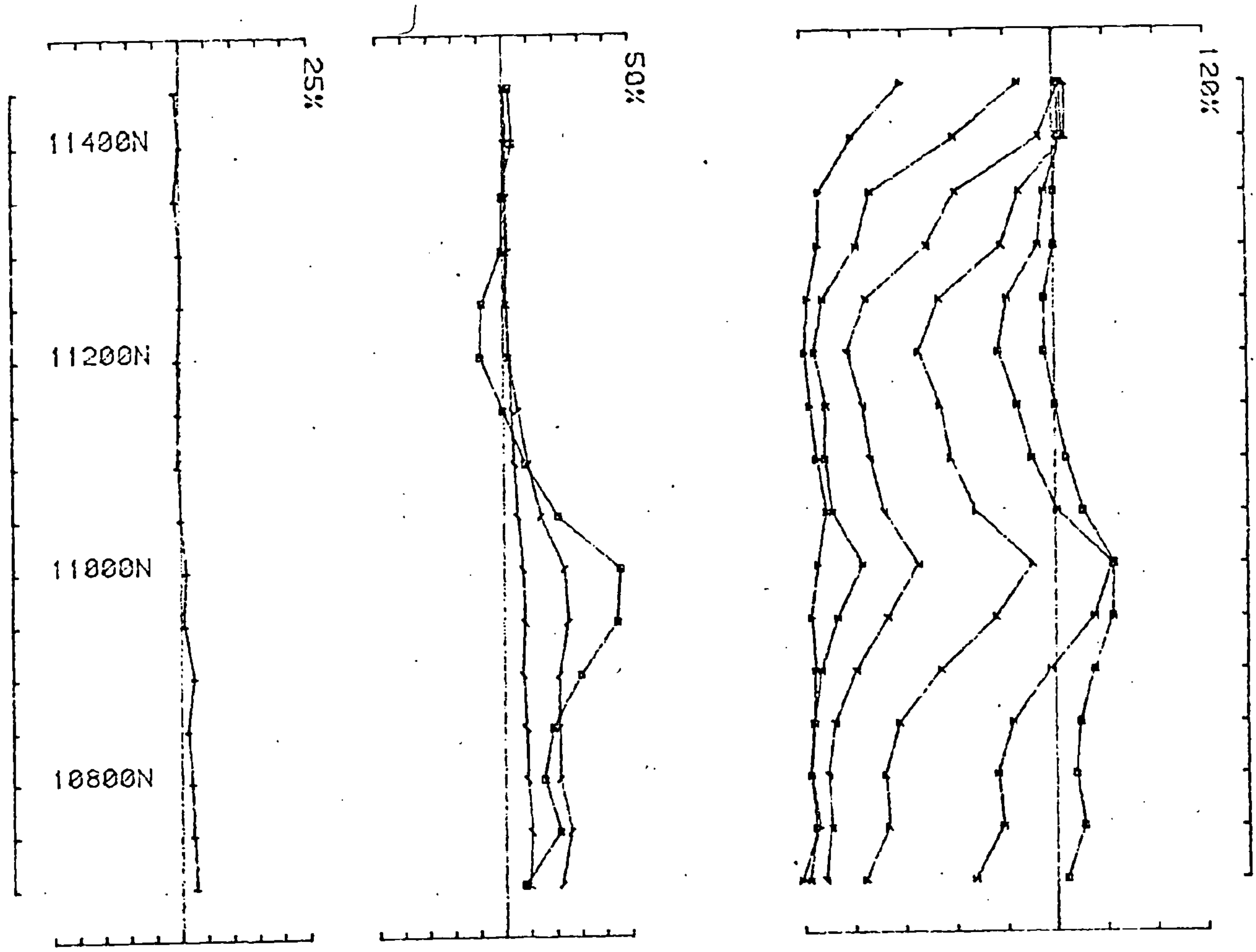
If symbol ***> appears then base = primary field at reference station marked with symbol.

BIRTHDAY PROSPECT



Area BIRTHDAY PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 13.115

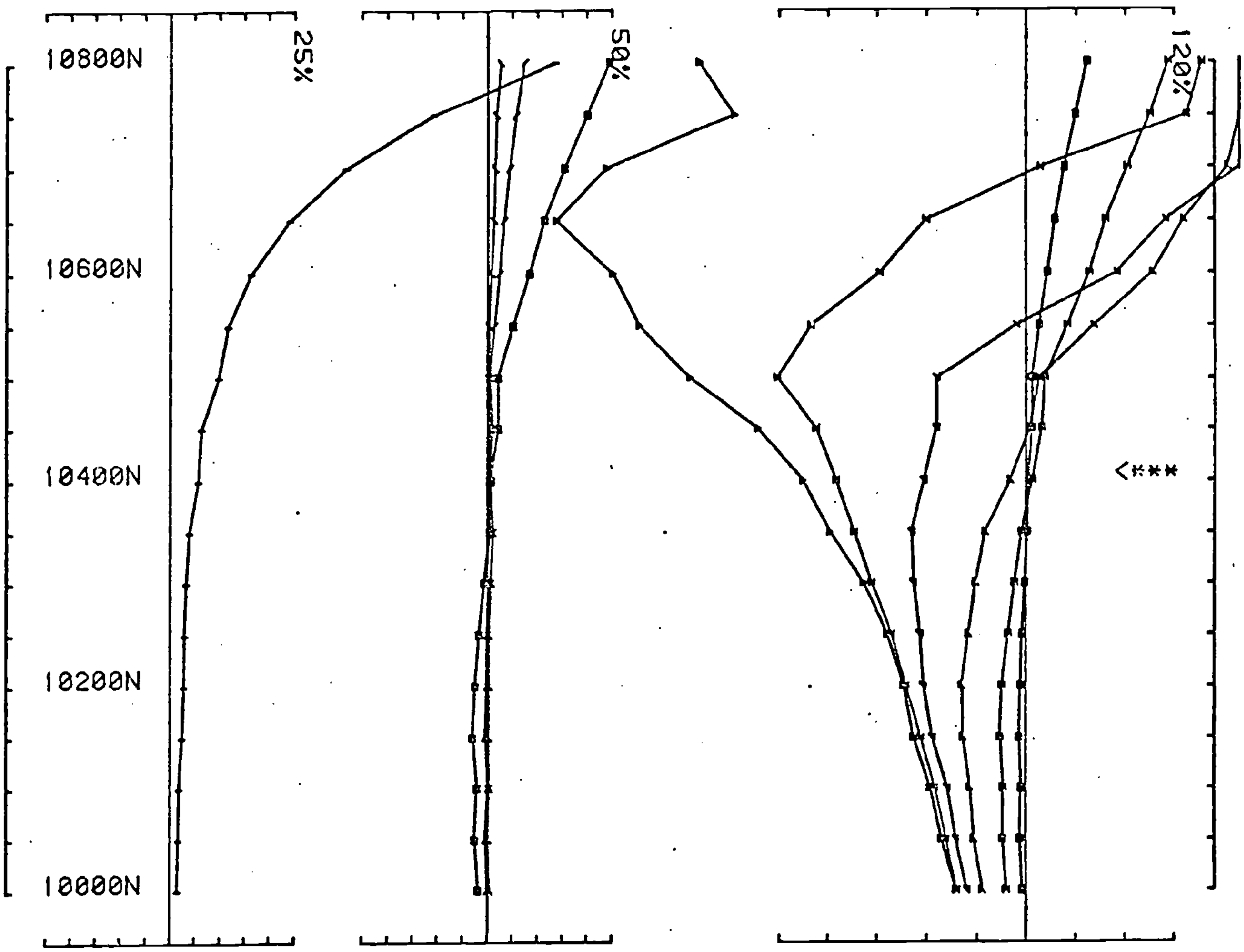
Loopno 0210   Line 11500E   component Hz   secondary   Ch.1



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0211 Line 11500E component Hz secondary Ch 1

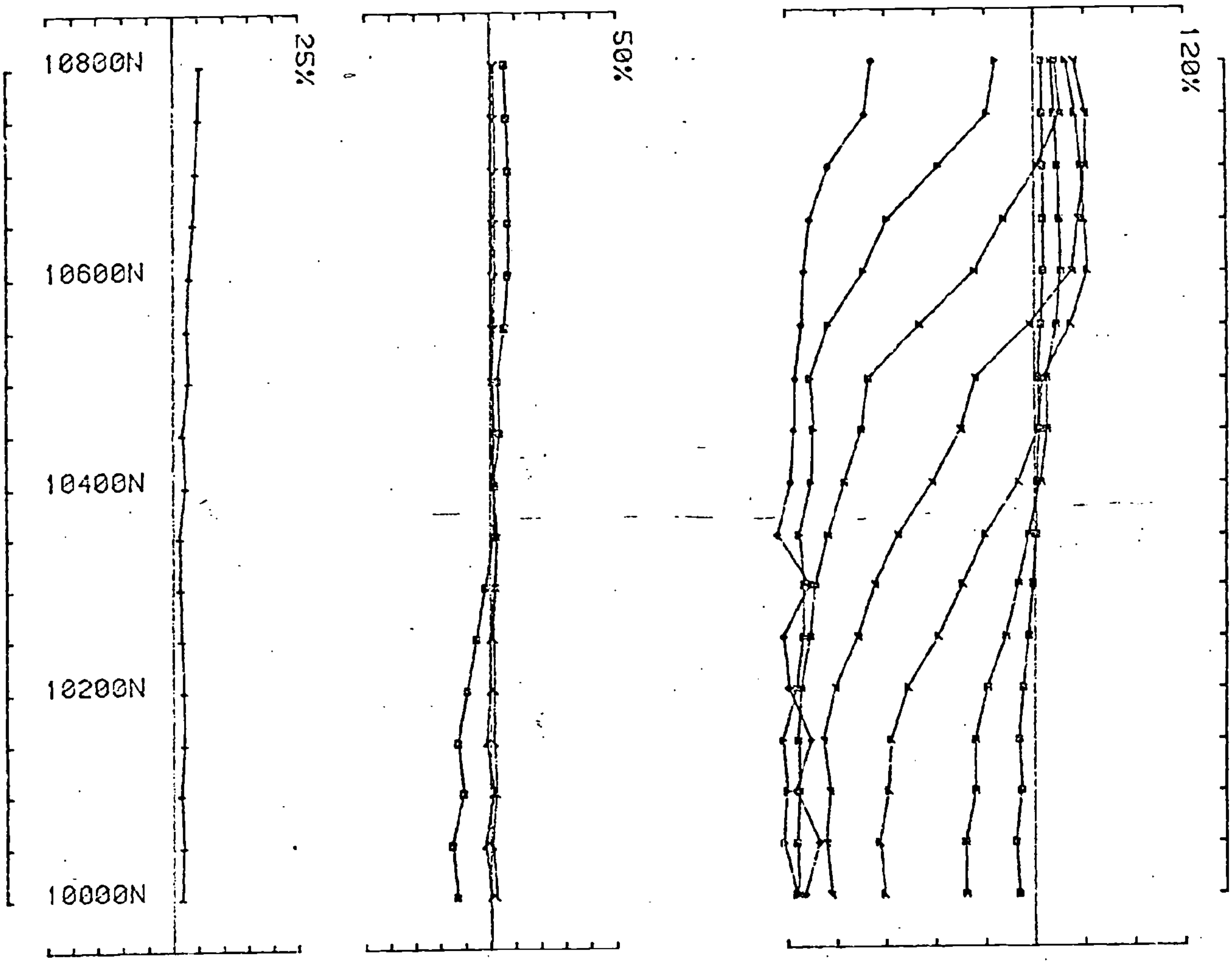
0082



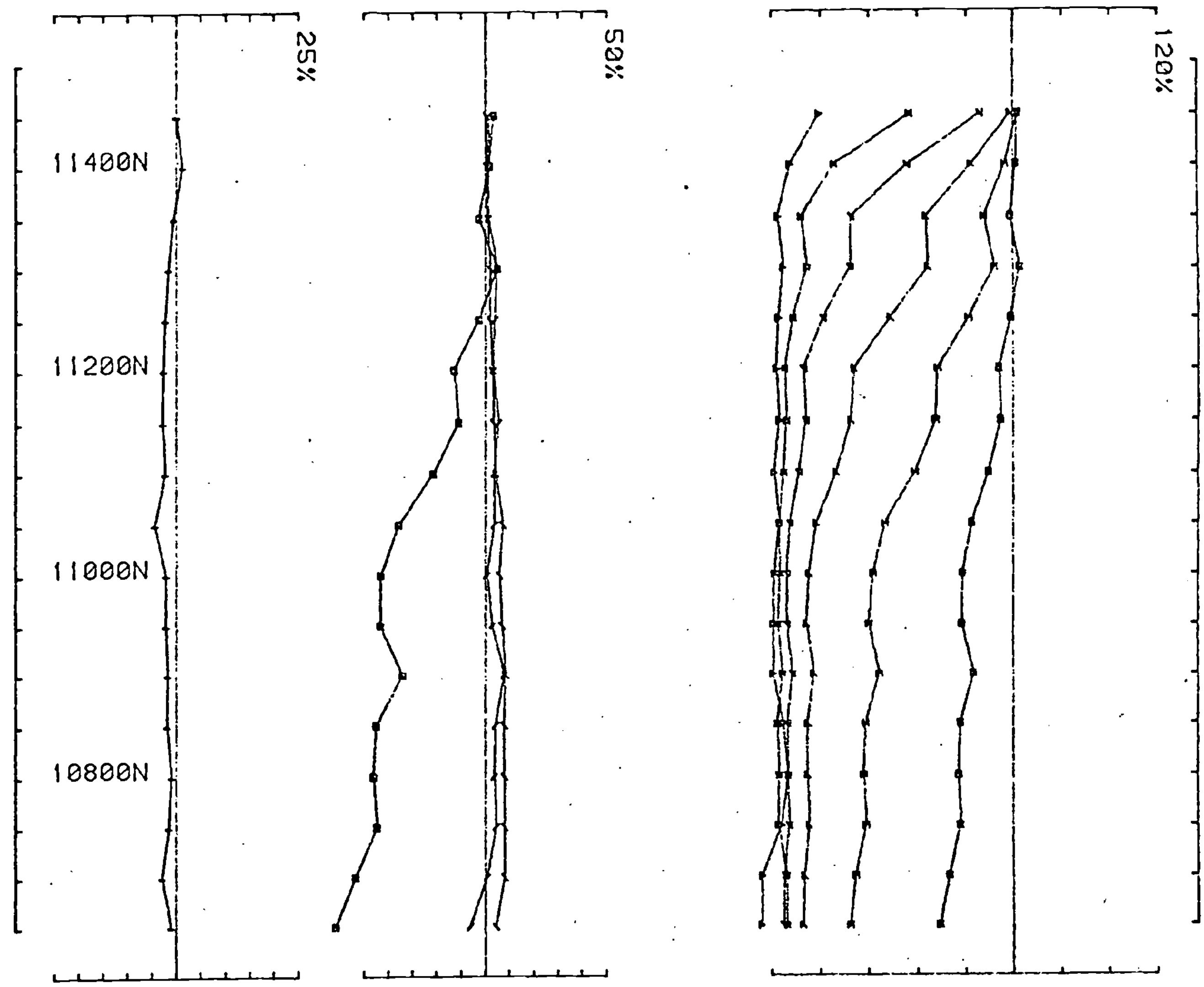
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115

Loopno 0204 Line 11000E component Hz secondary Ch 1

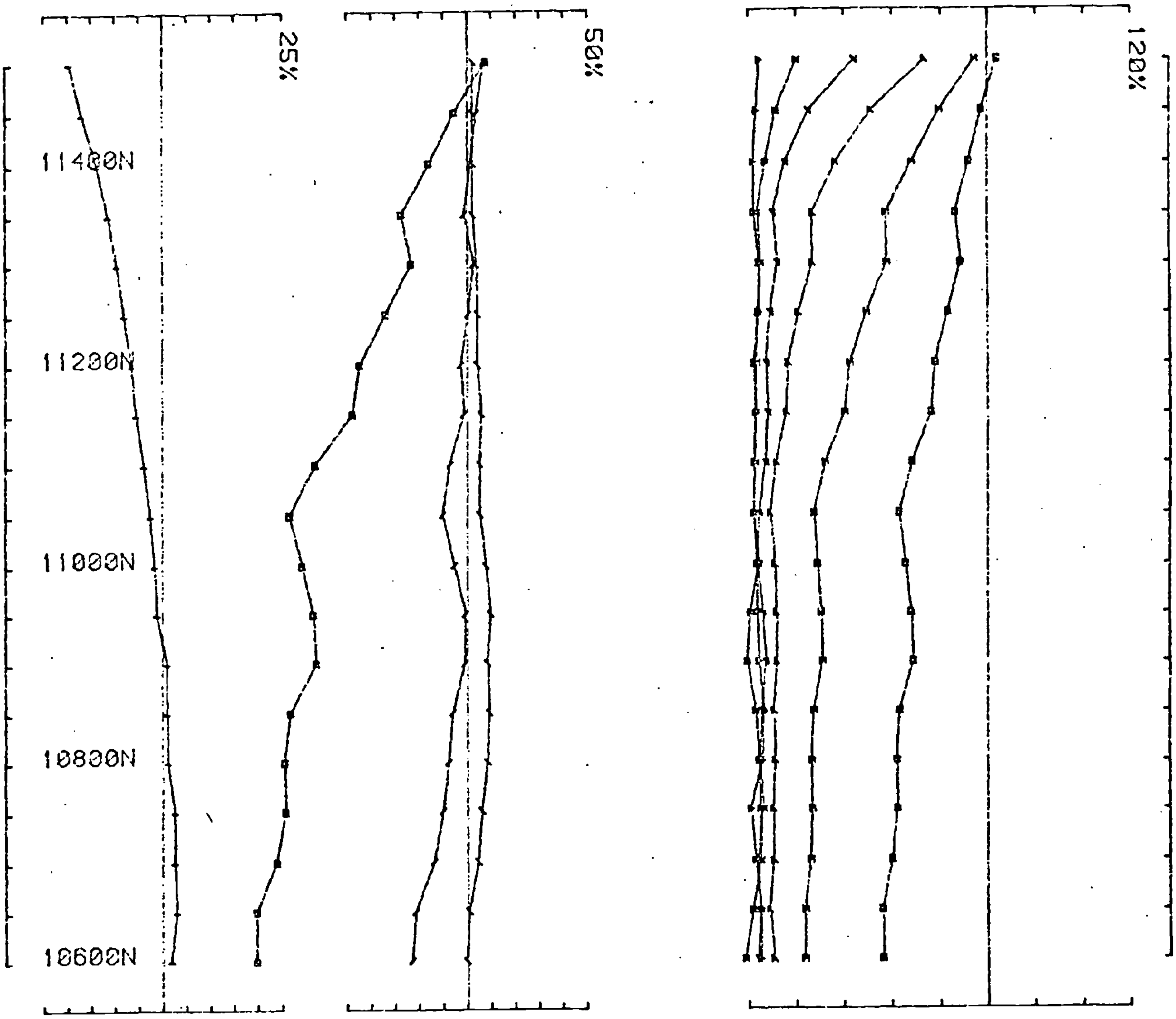
0083



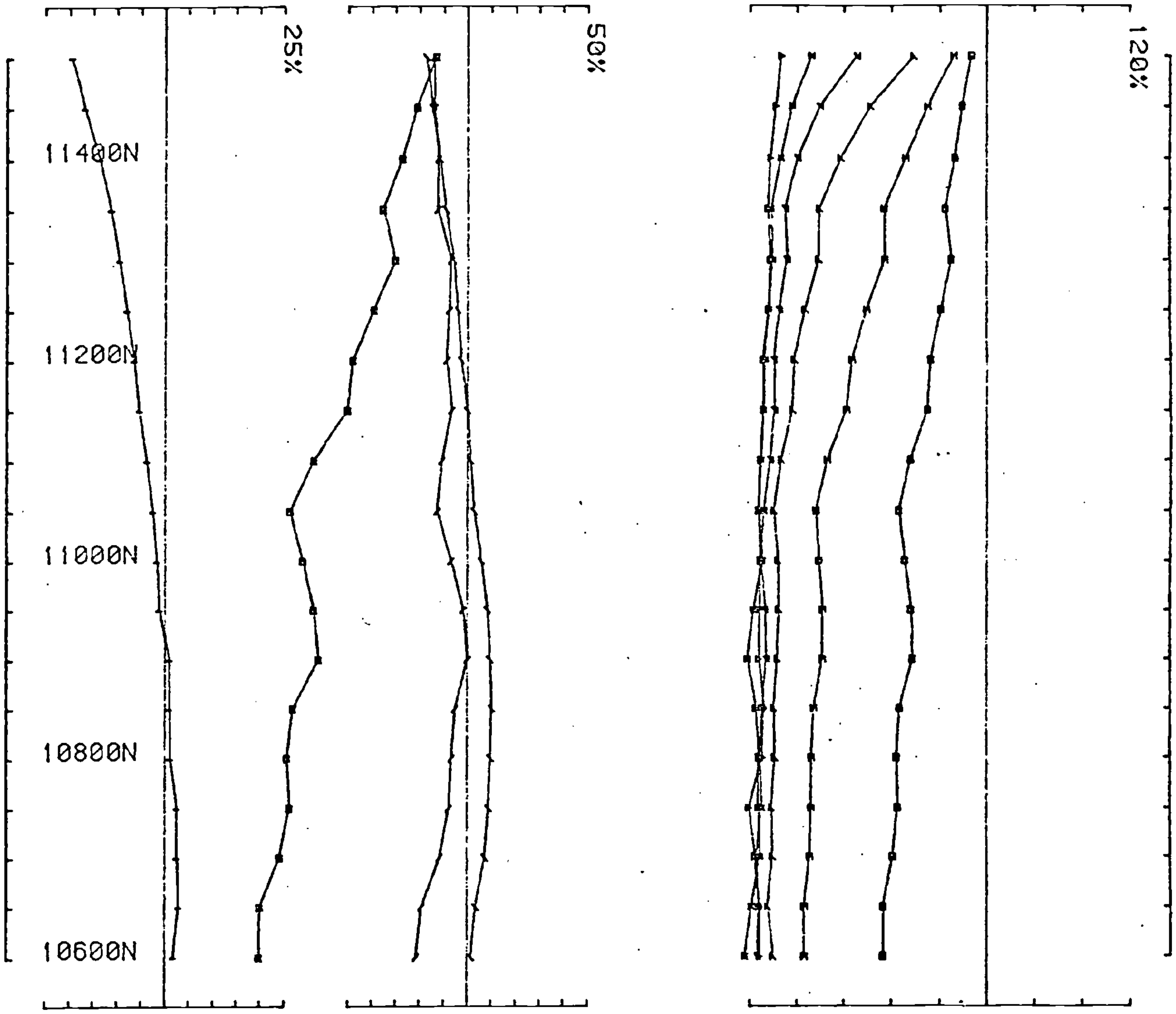
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115
Loopno 0204 Line 11000E component Hz secondary Ch 1



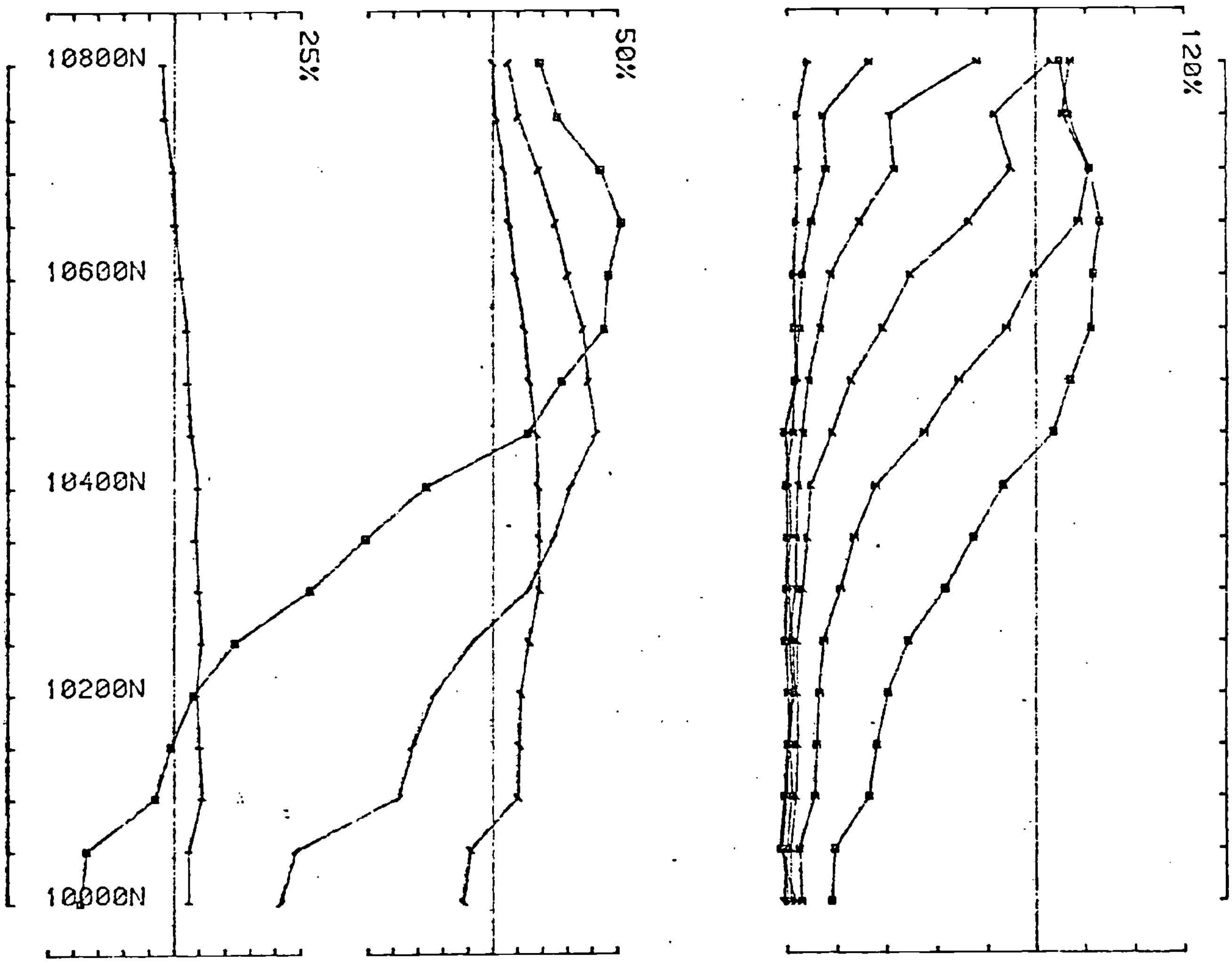
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0205 Line 11000E component Hz secondary Ch 1



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0202 Line 11000E component Hz secondary Ch 1

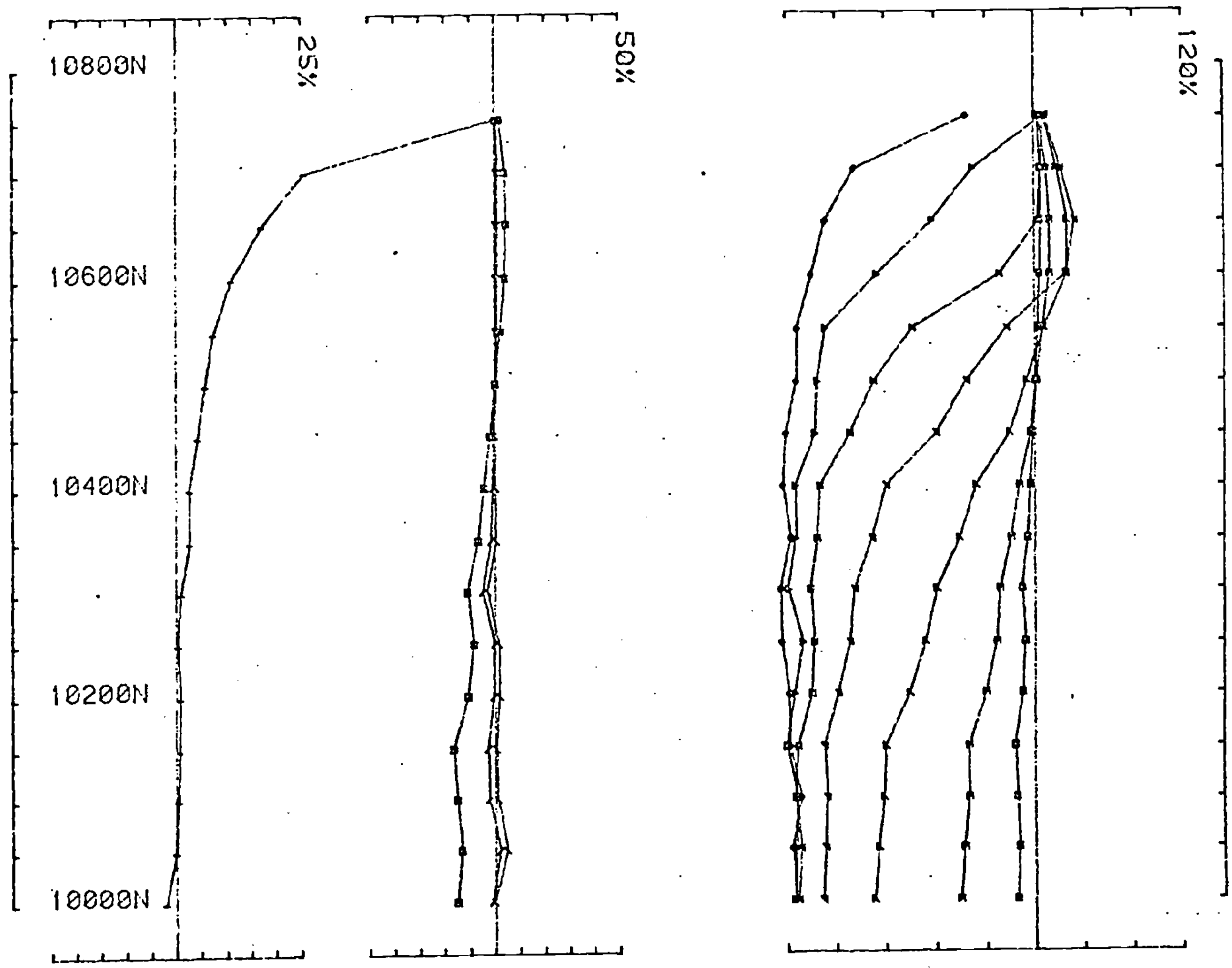


Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0202 Line 11000E component Hz secondary



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0203 Line 8500E component Hz secondary

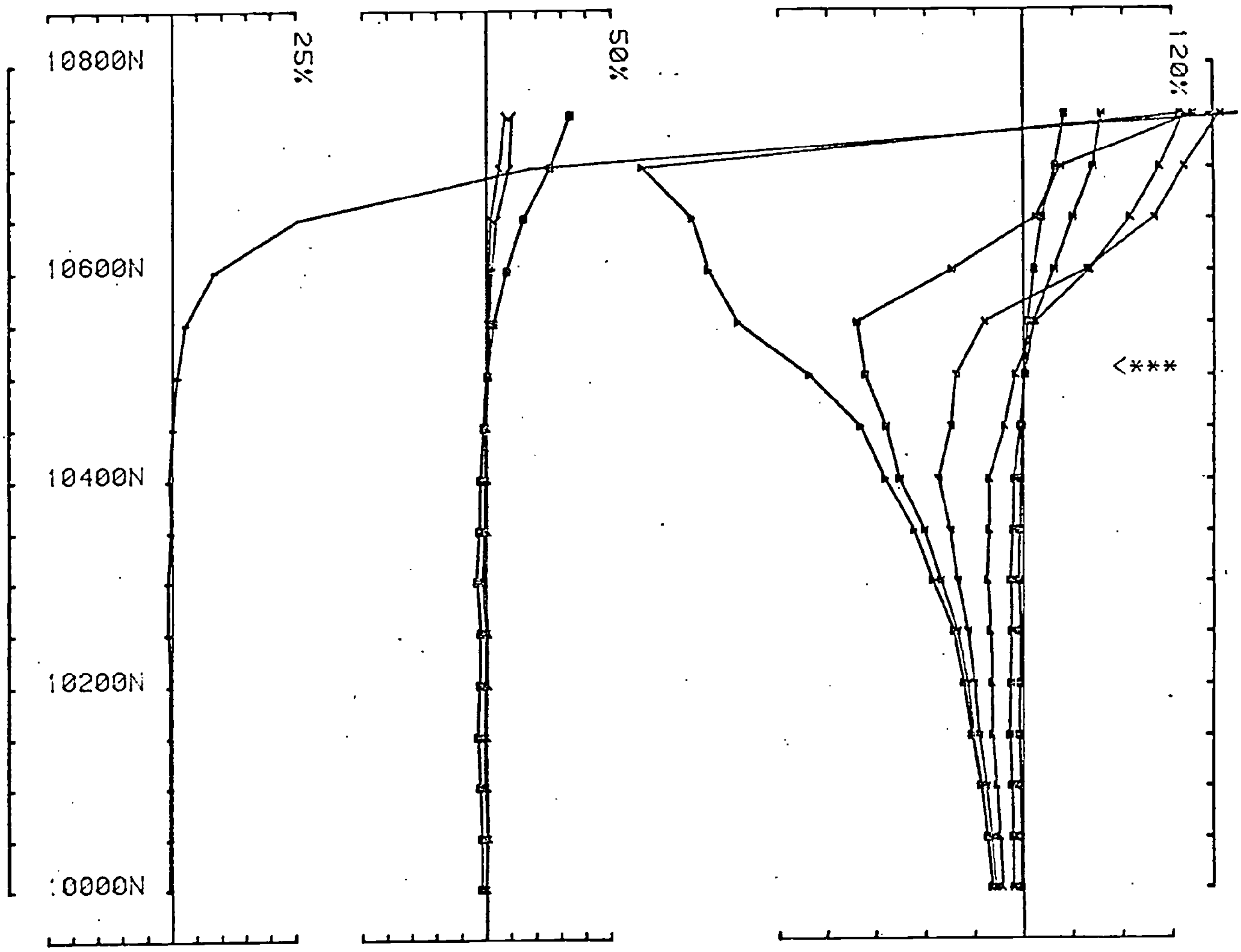
0088



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115

Loopno 0204 Line 10750E component Hz secondary Ch 1

0089



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115
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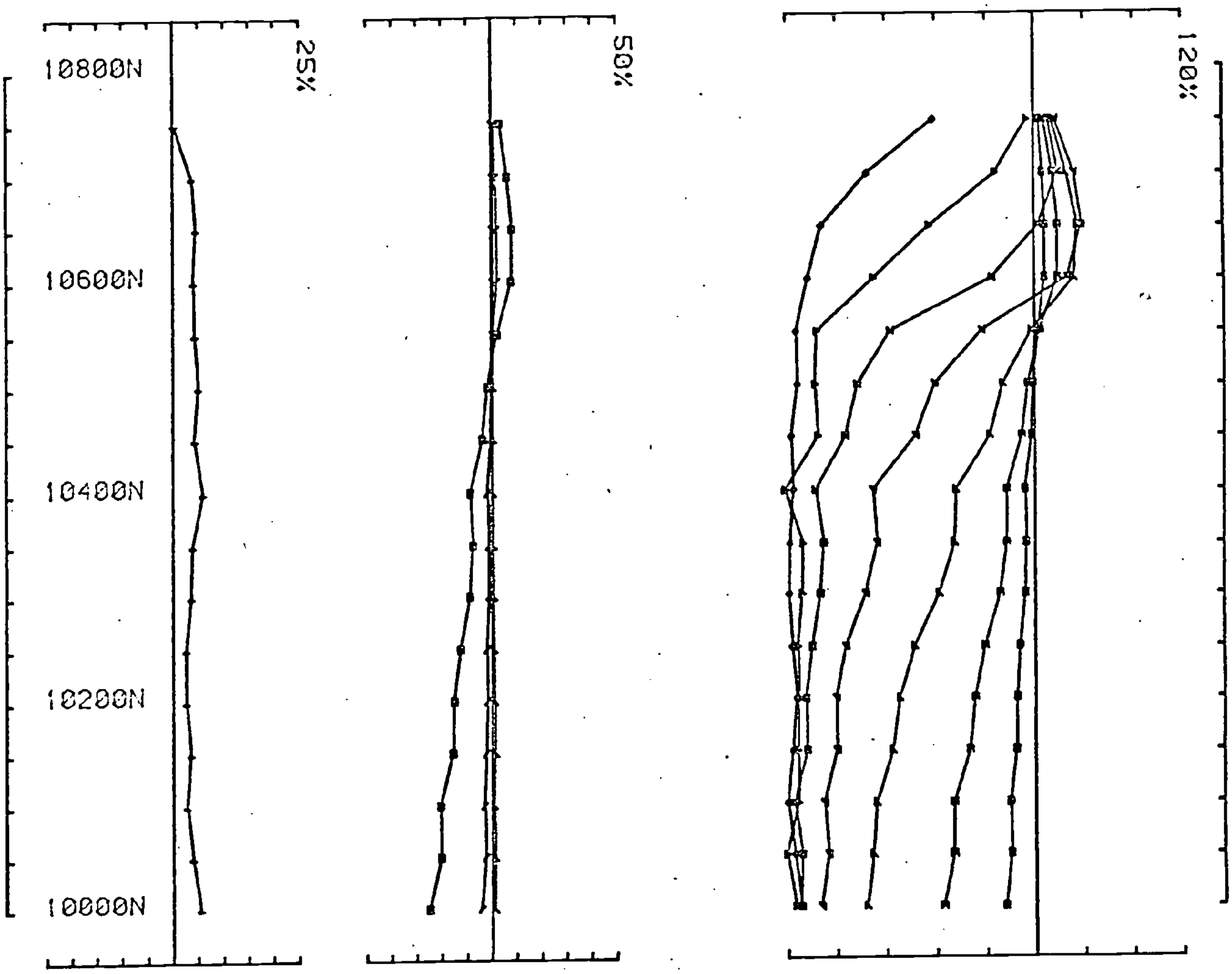
0090



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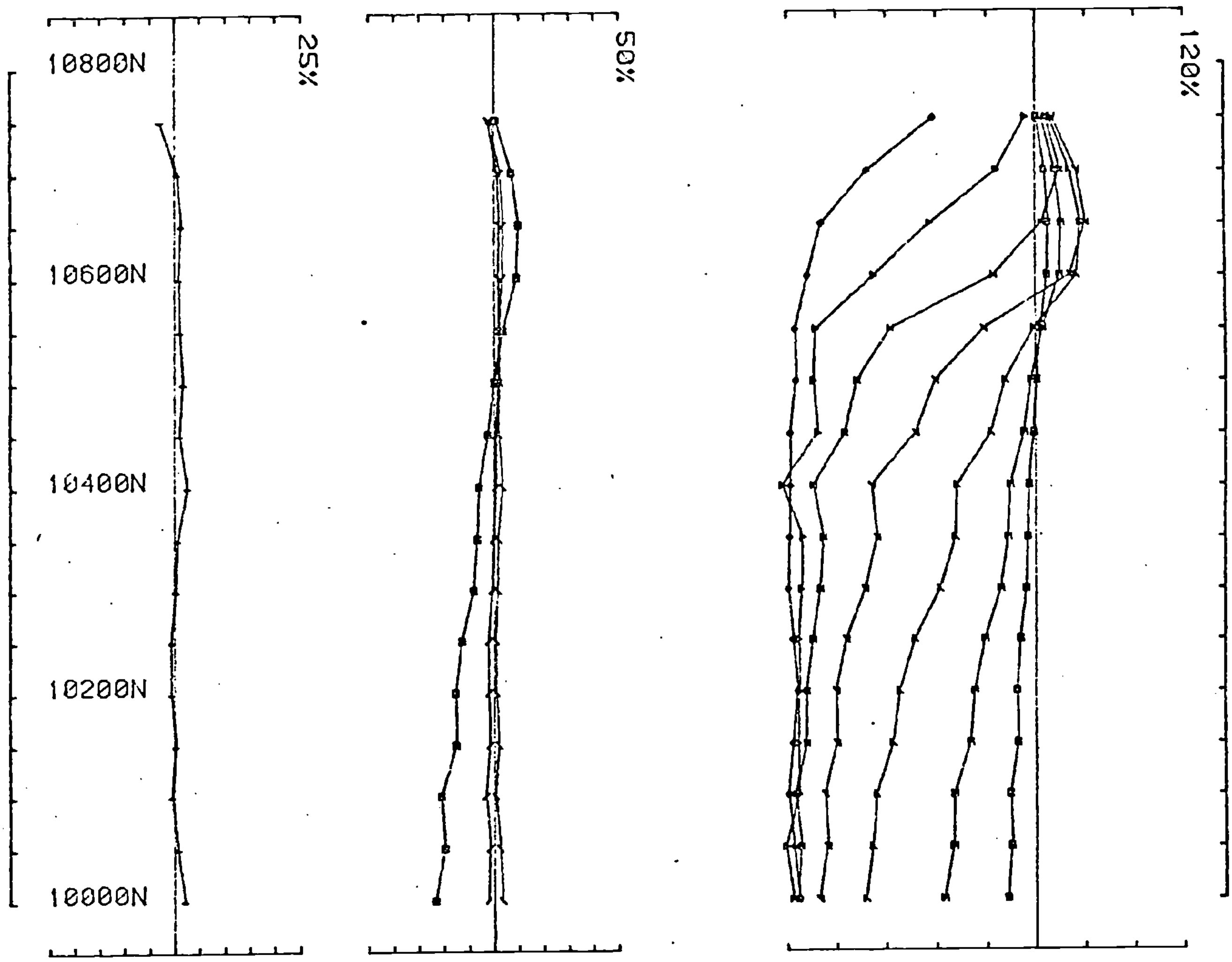
Loopno 0204 Line 10500E component Hz secondary Ch 1

0091



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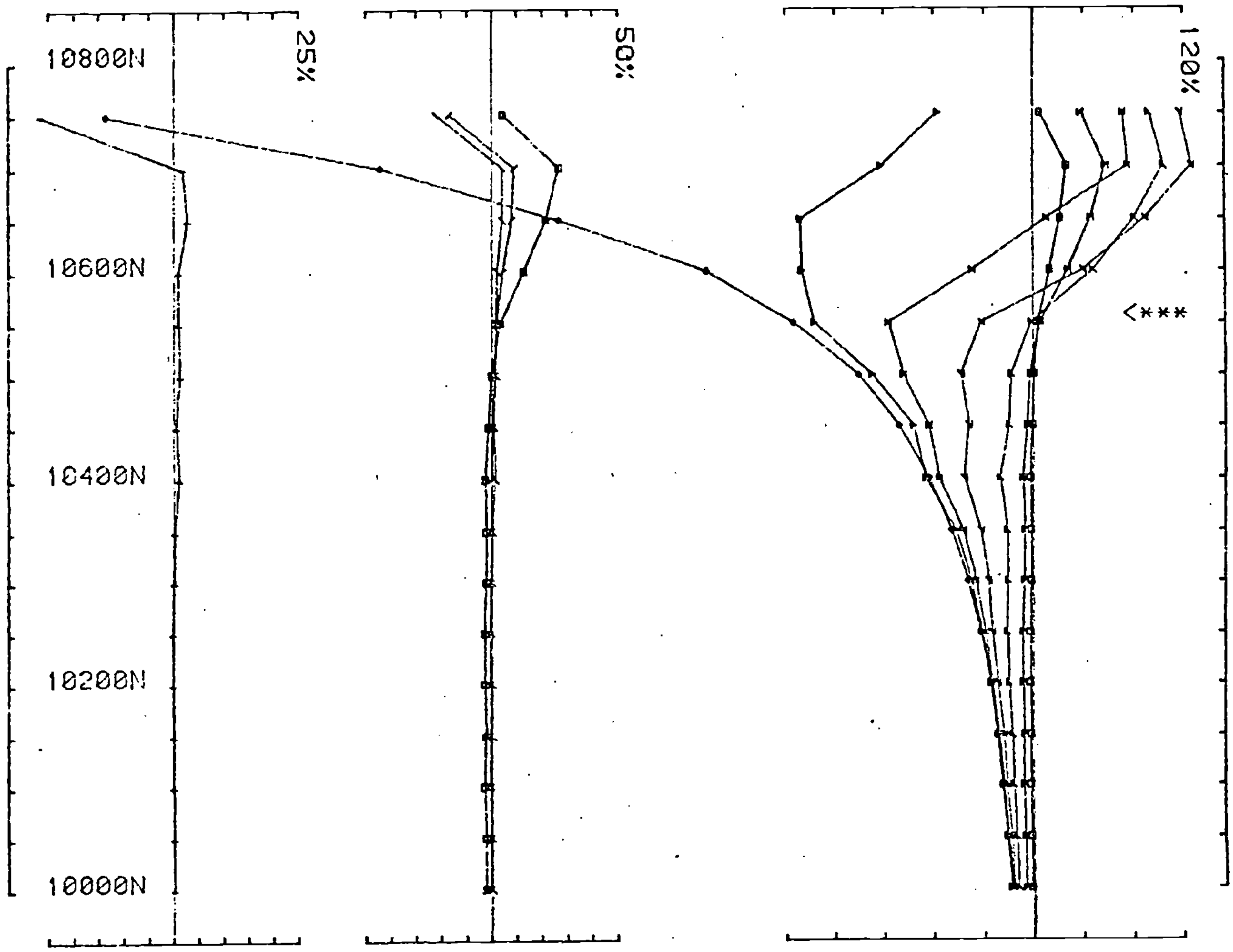
Loopno 0204 Line 10500E component Hz secondary

0092



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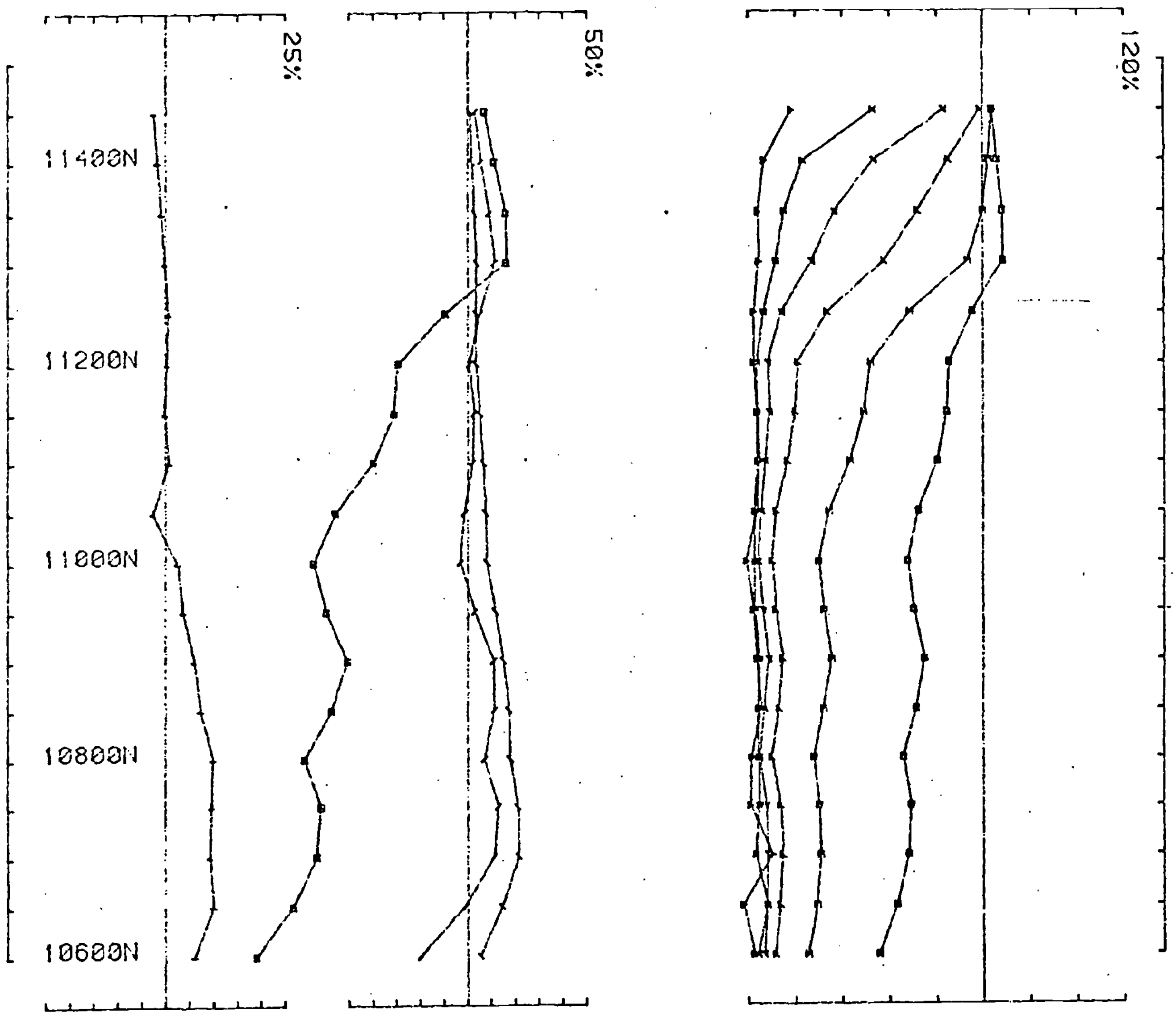
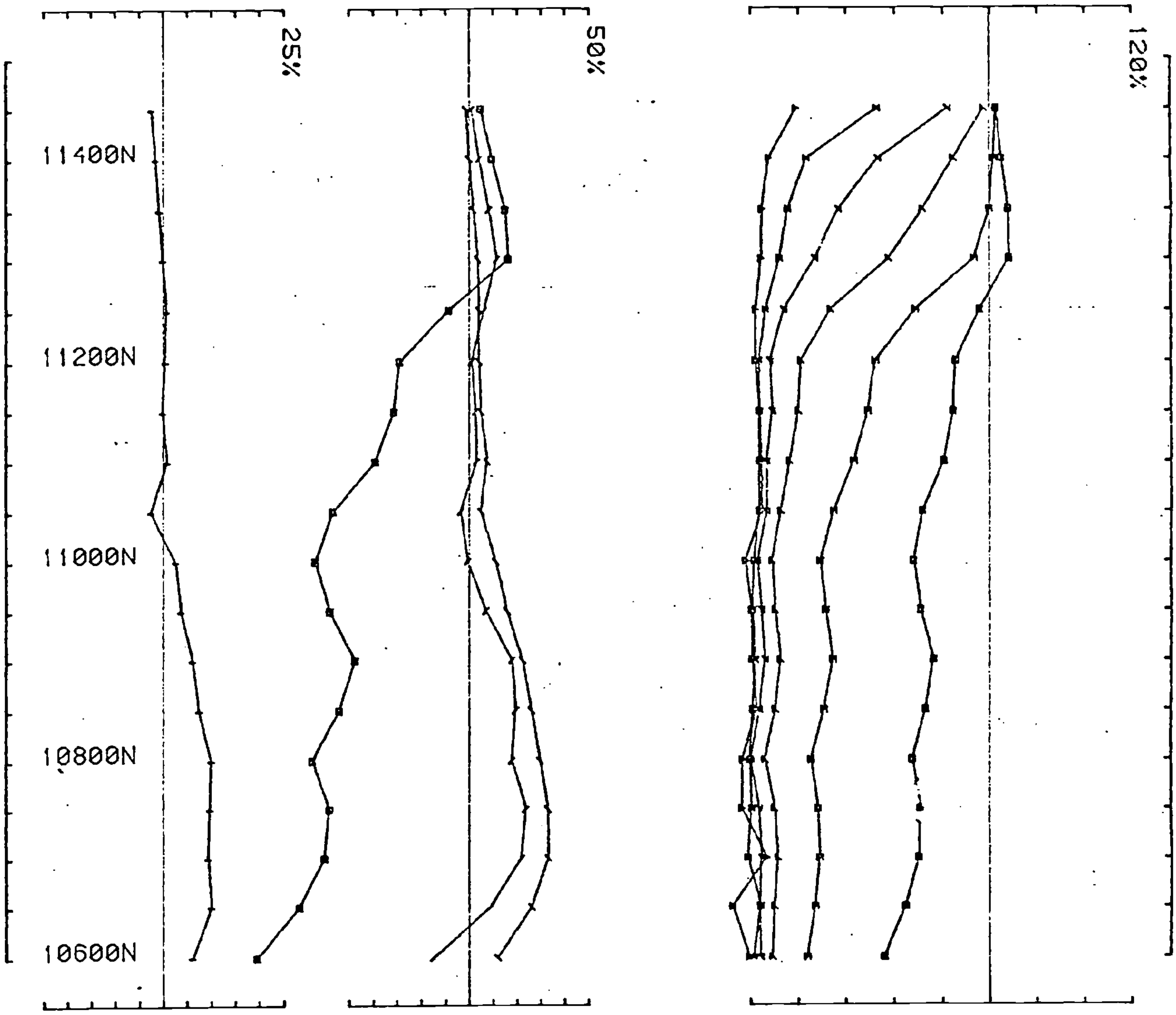
Loopno 0204 Line 10500E component Hz secondary

0093



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0202 Line 10500E component Hz secondary Ch 1



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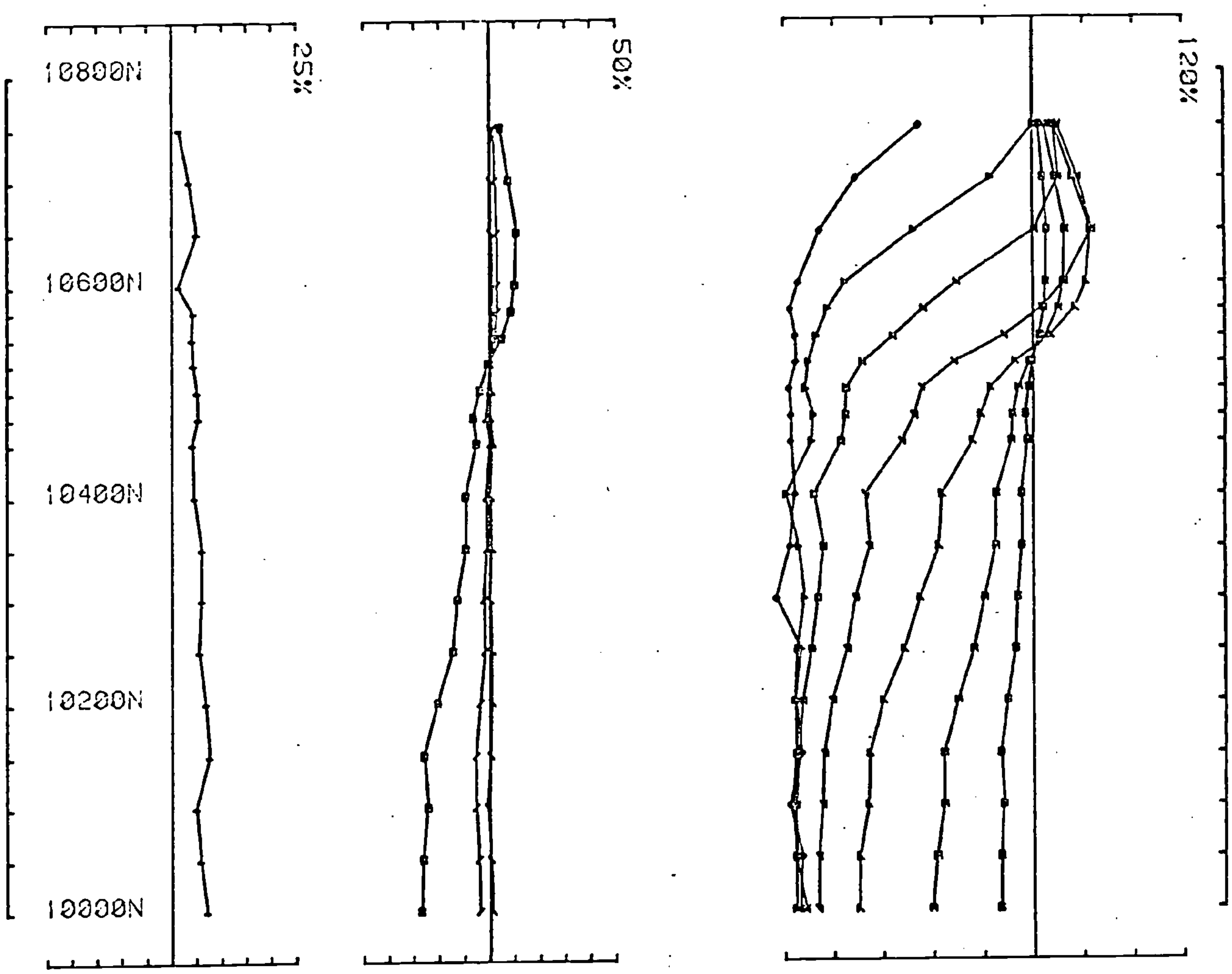

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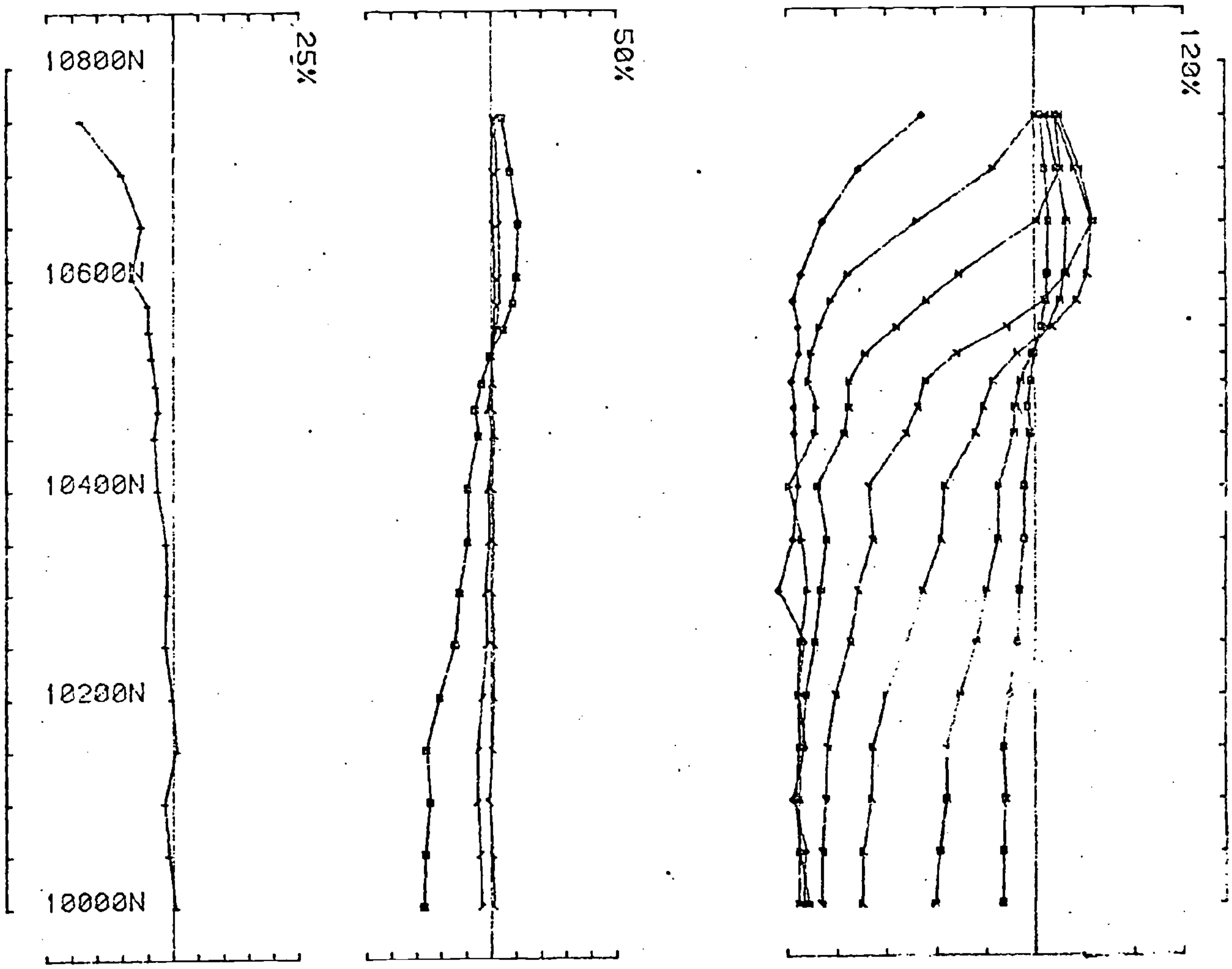

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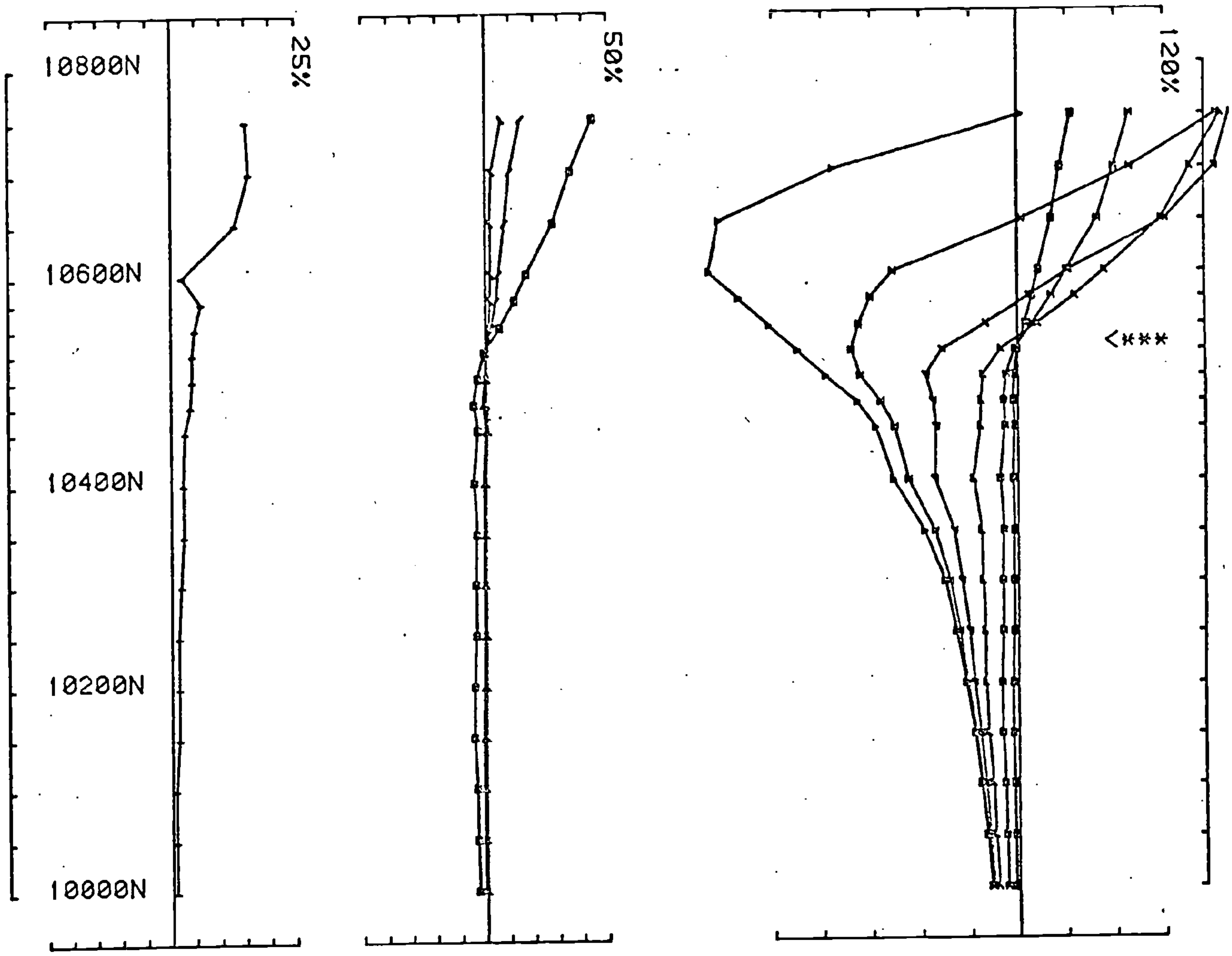
Loopno 0204 Line 10250E component Hz secondary Ch 1



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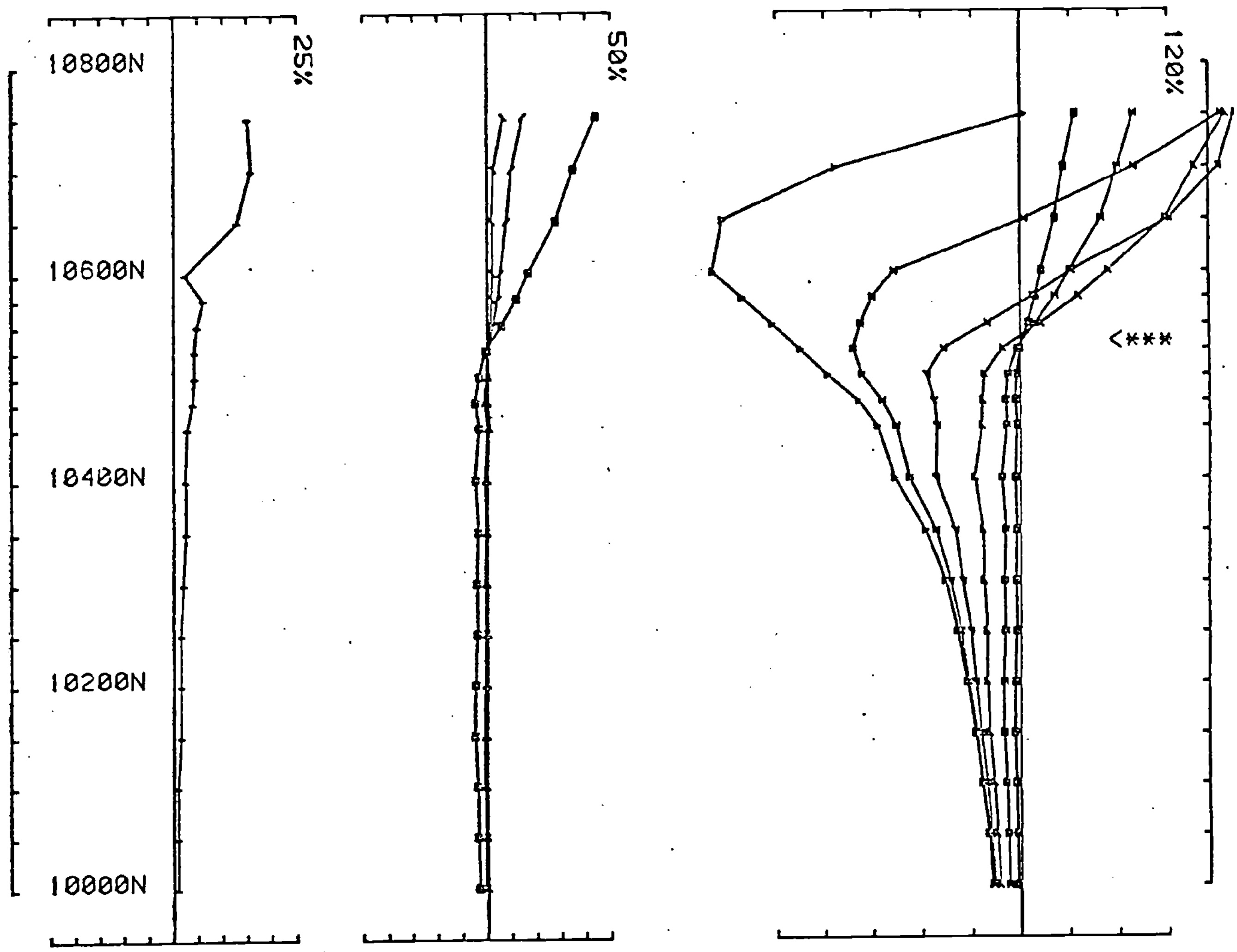
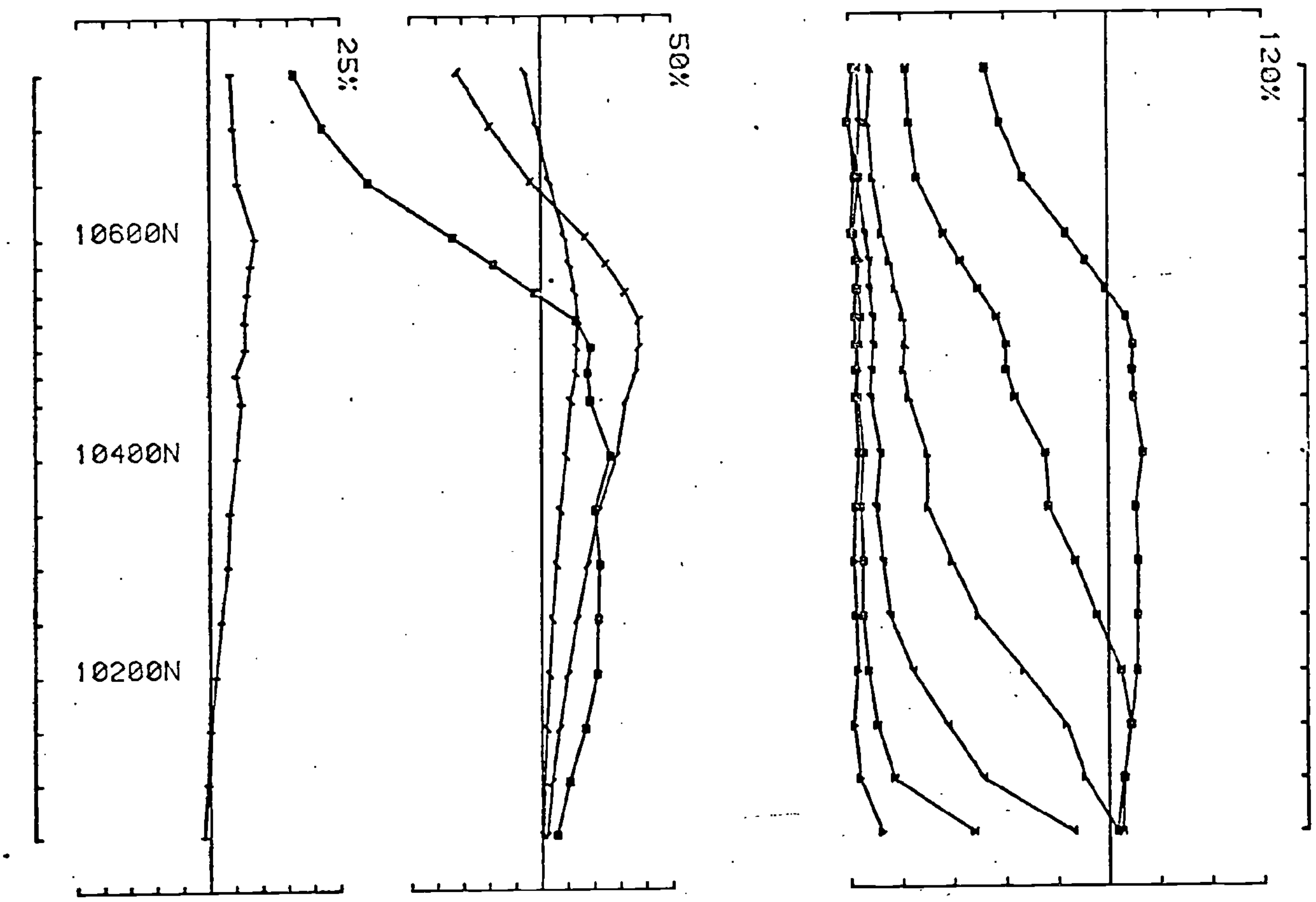
Loopno 0204 Line 10250E component Hz secondary Ch 1

0098



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115

Loopno 0204 Line 10250E component Hz secondary Ch 1



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
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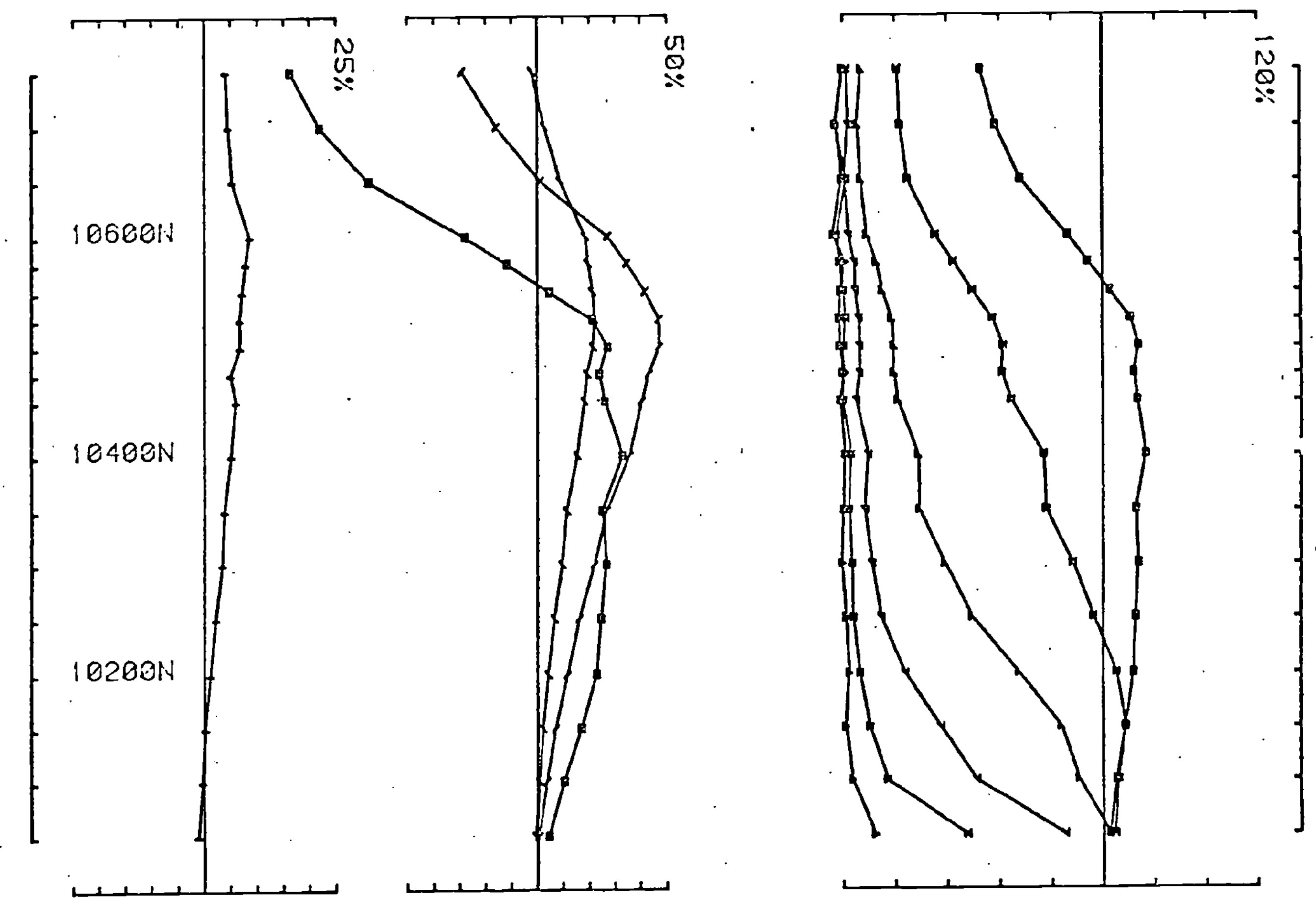

Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
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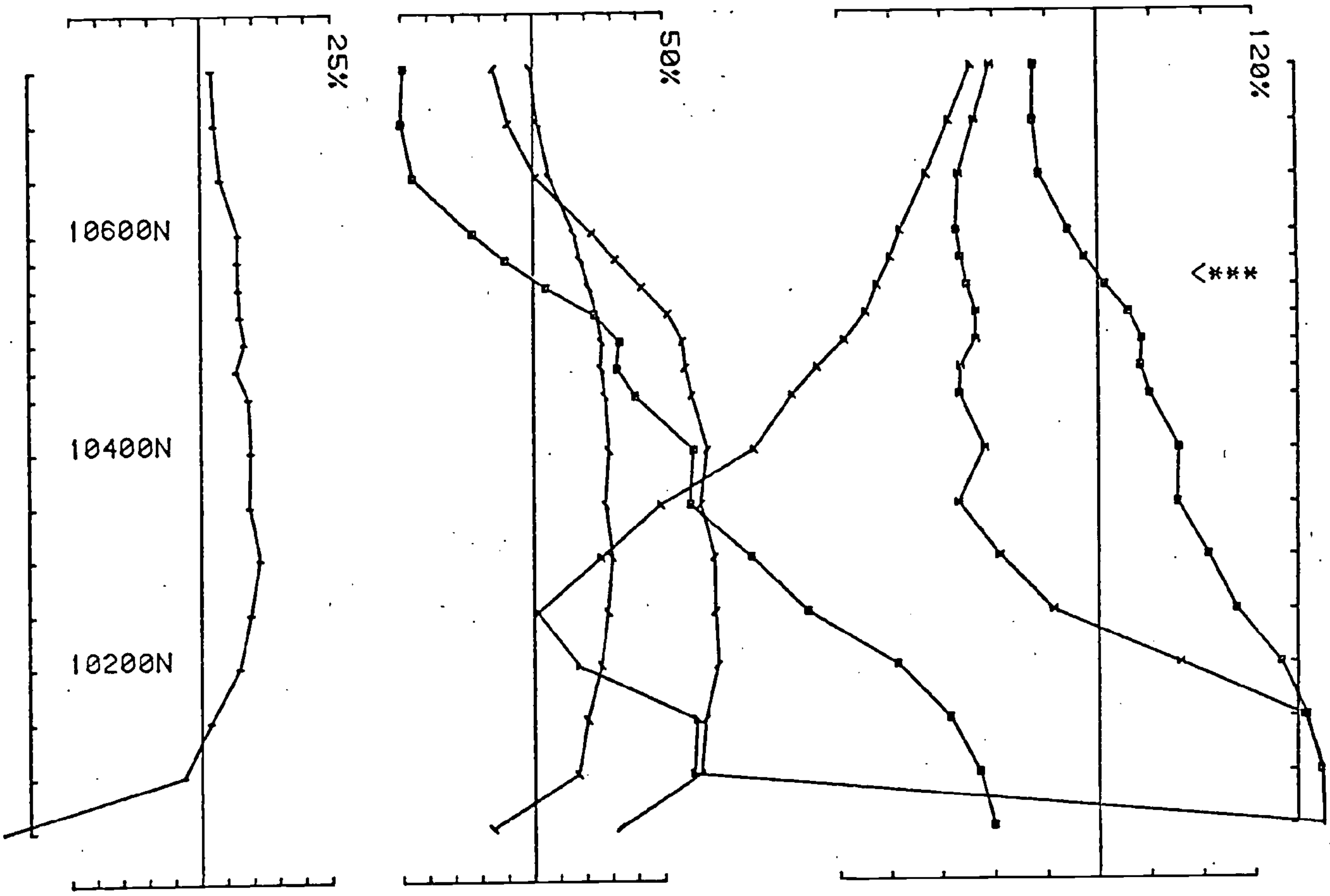

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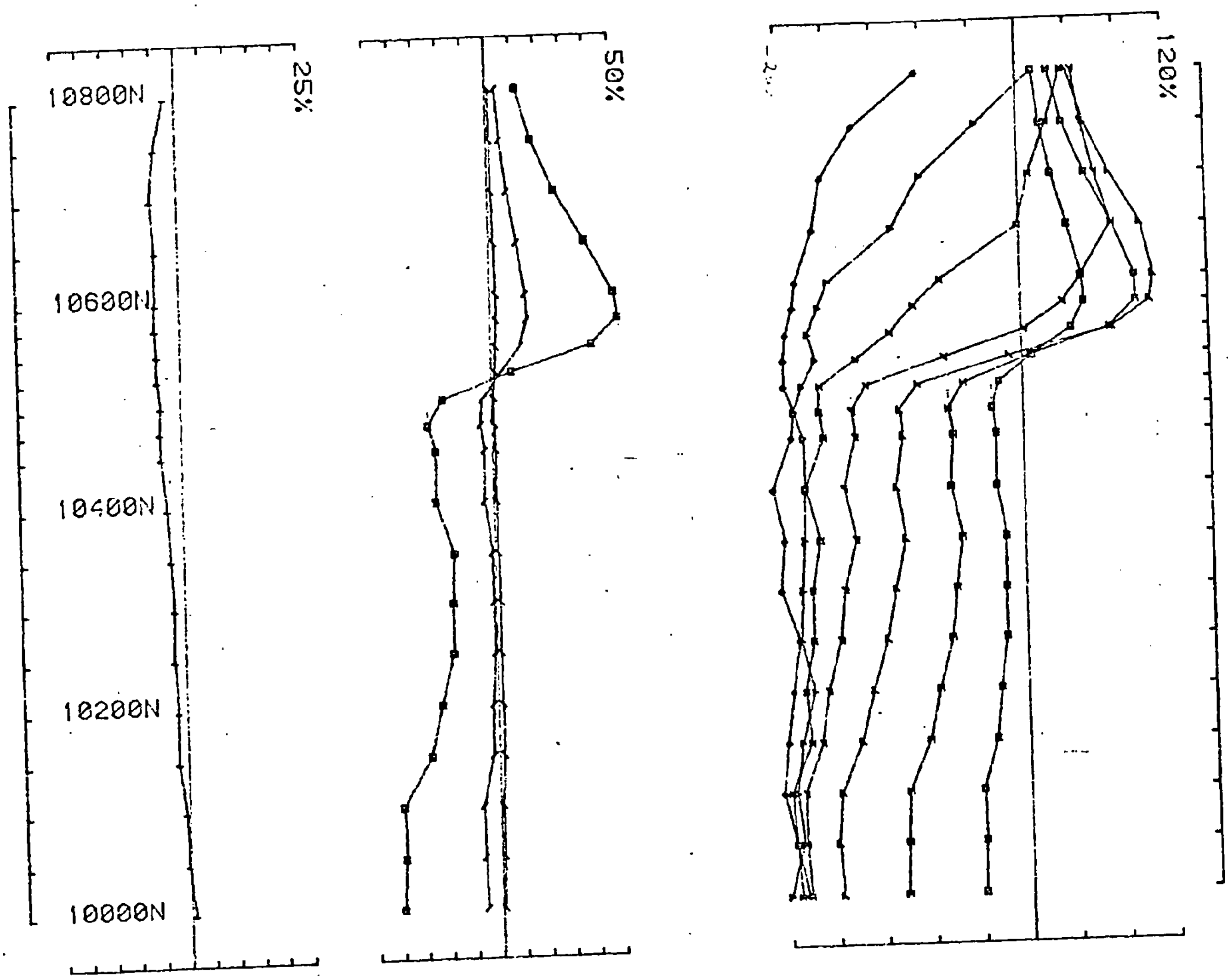
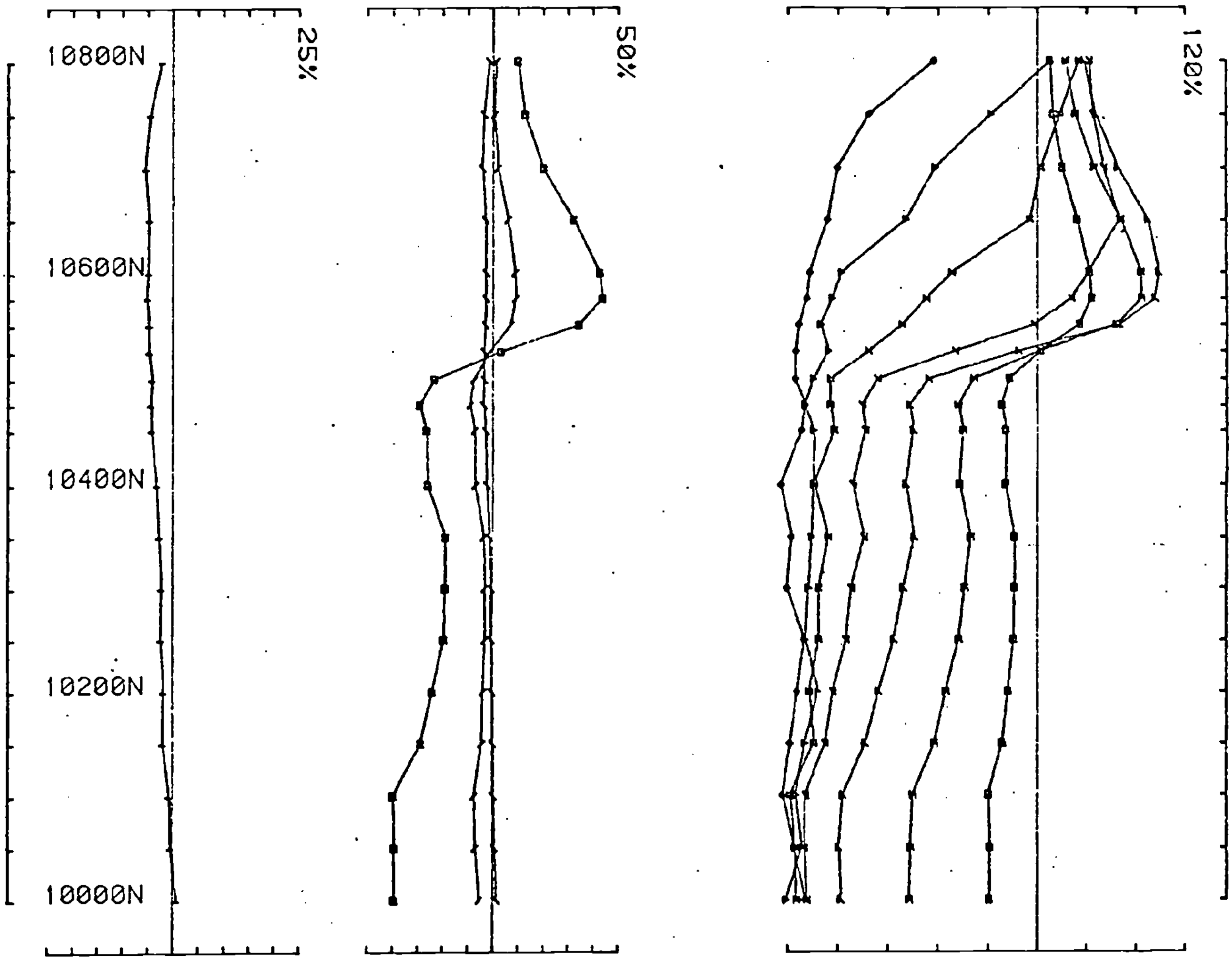


Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115

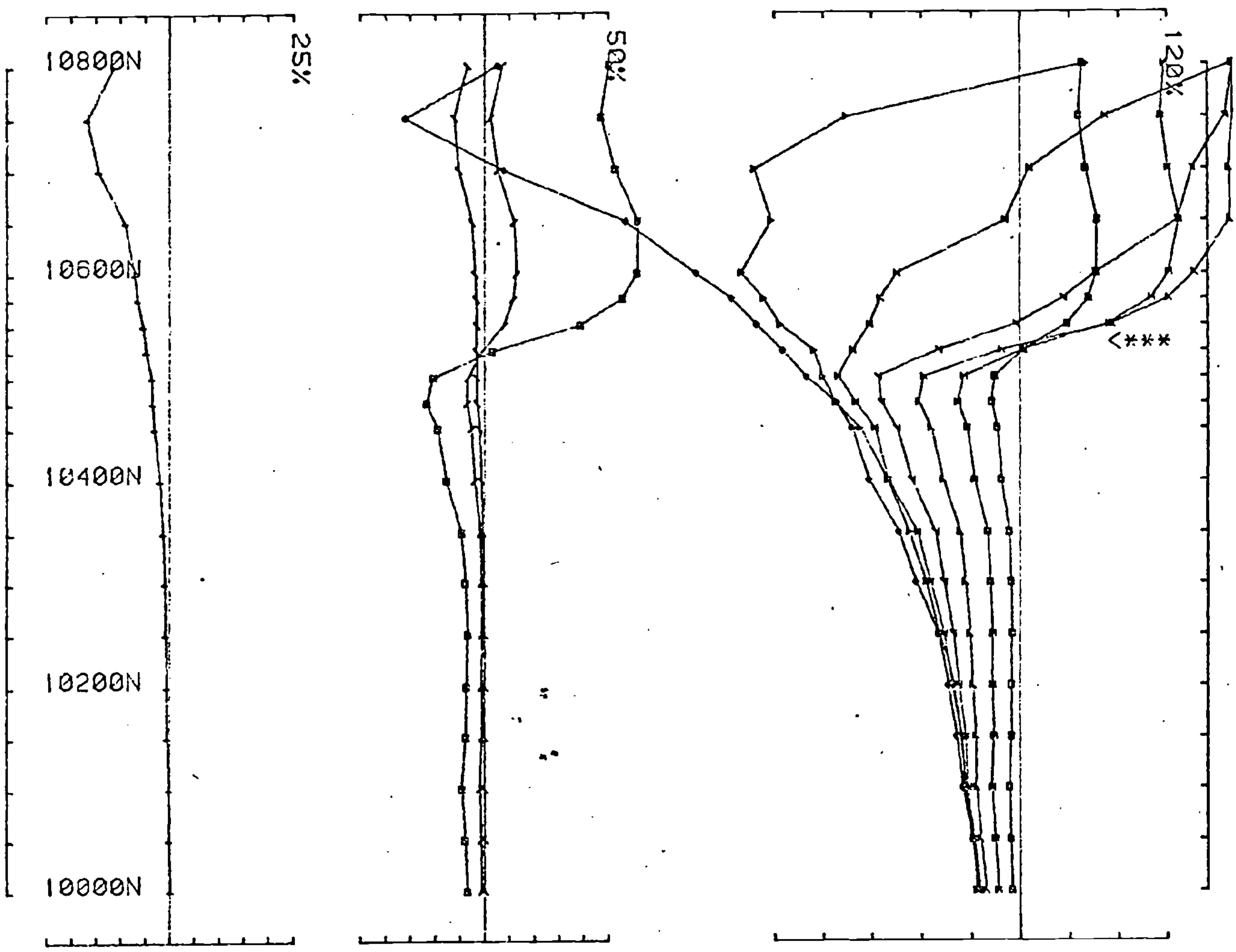
Loopno 0204 Line 10000E component Hz secondary Ch 1

0103



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115

Loopno 0204 Line 10000E component Hz secondary



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115
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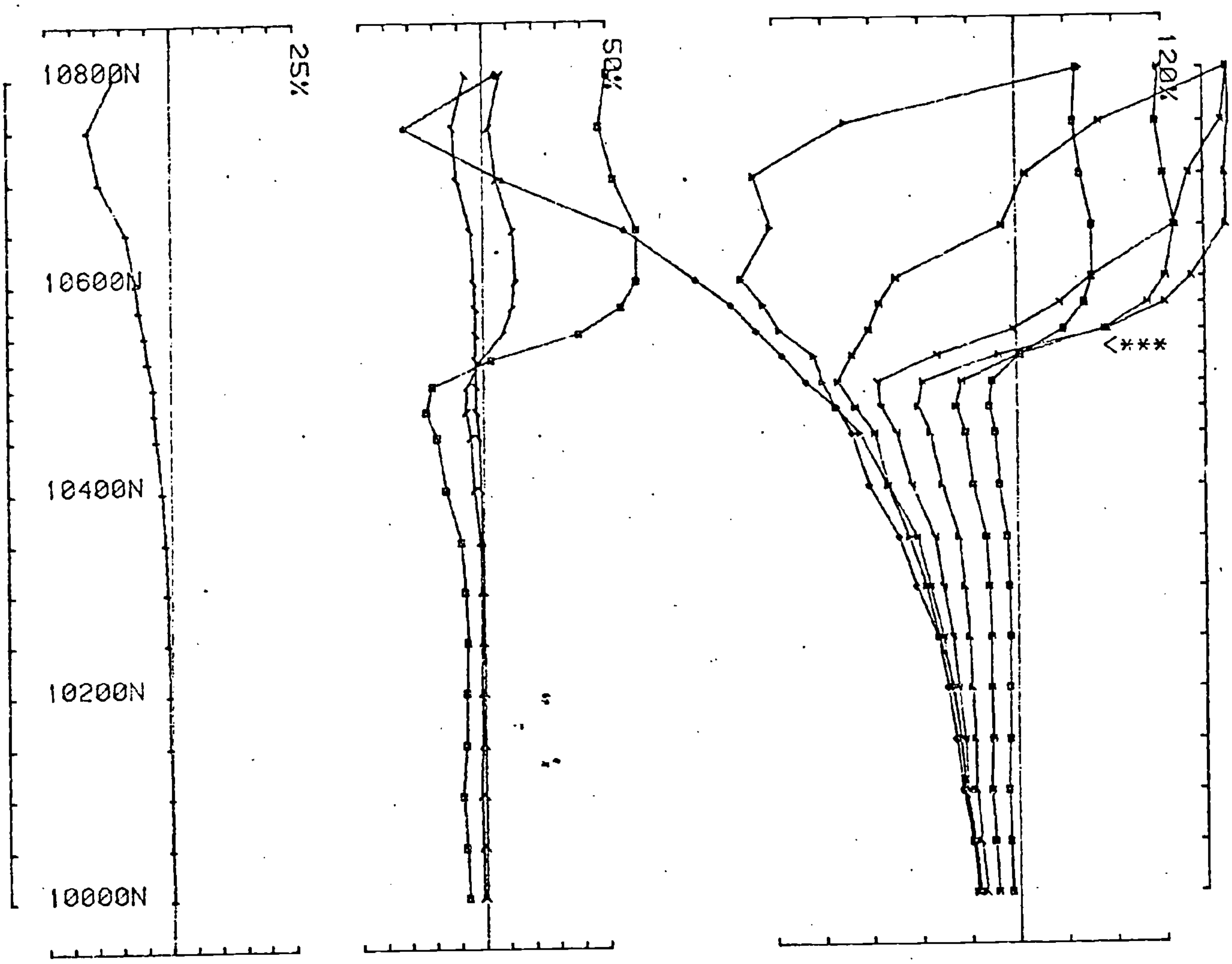

Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115
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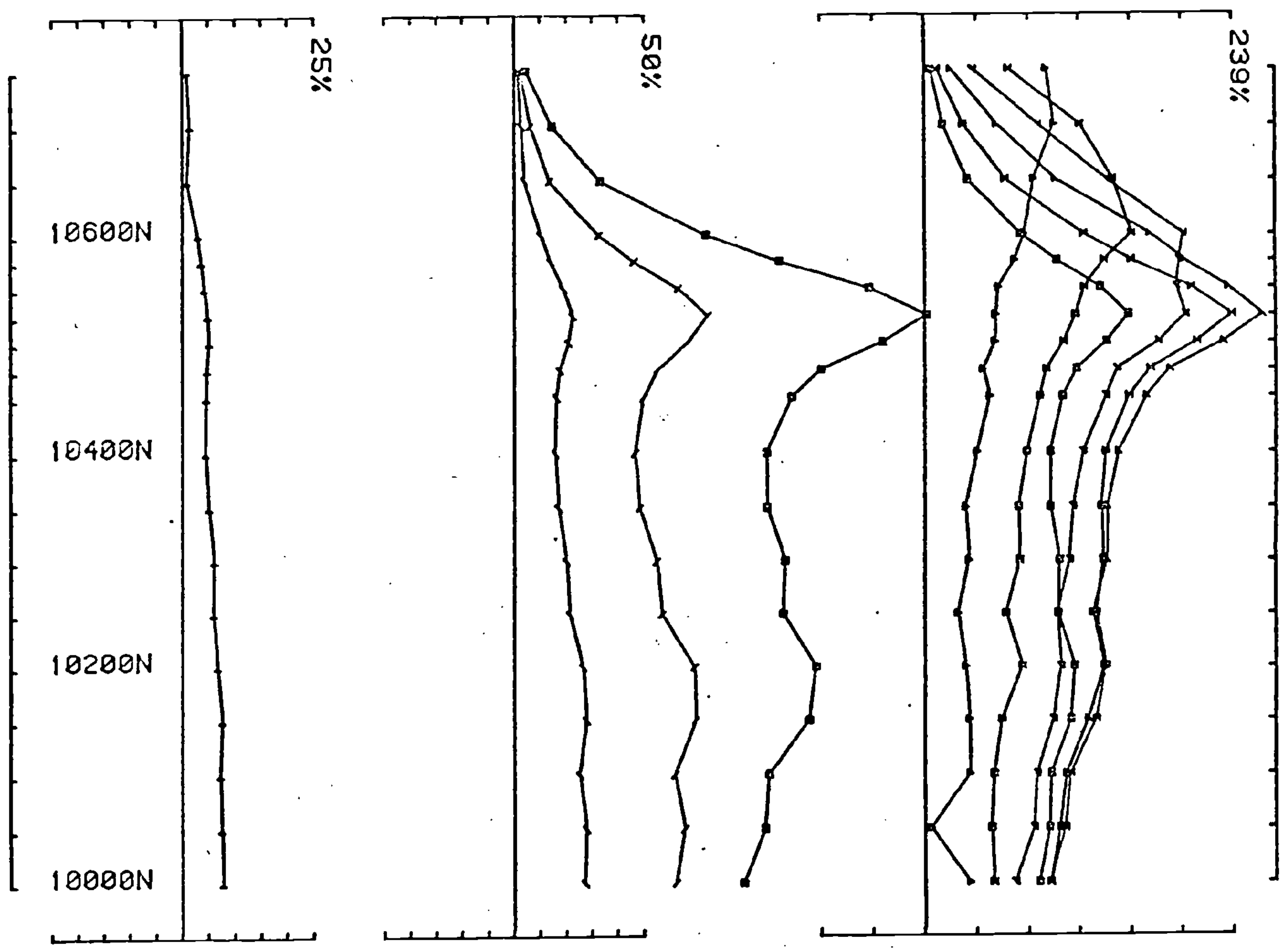
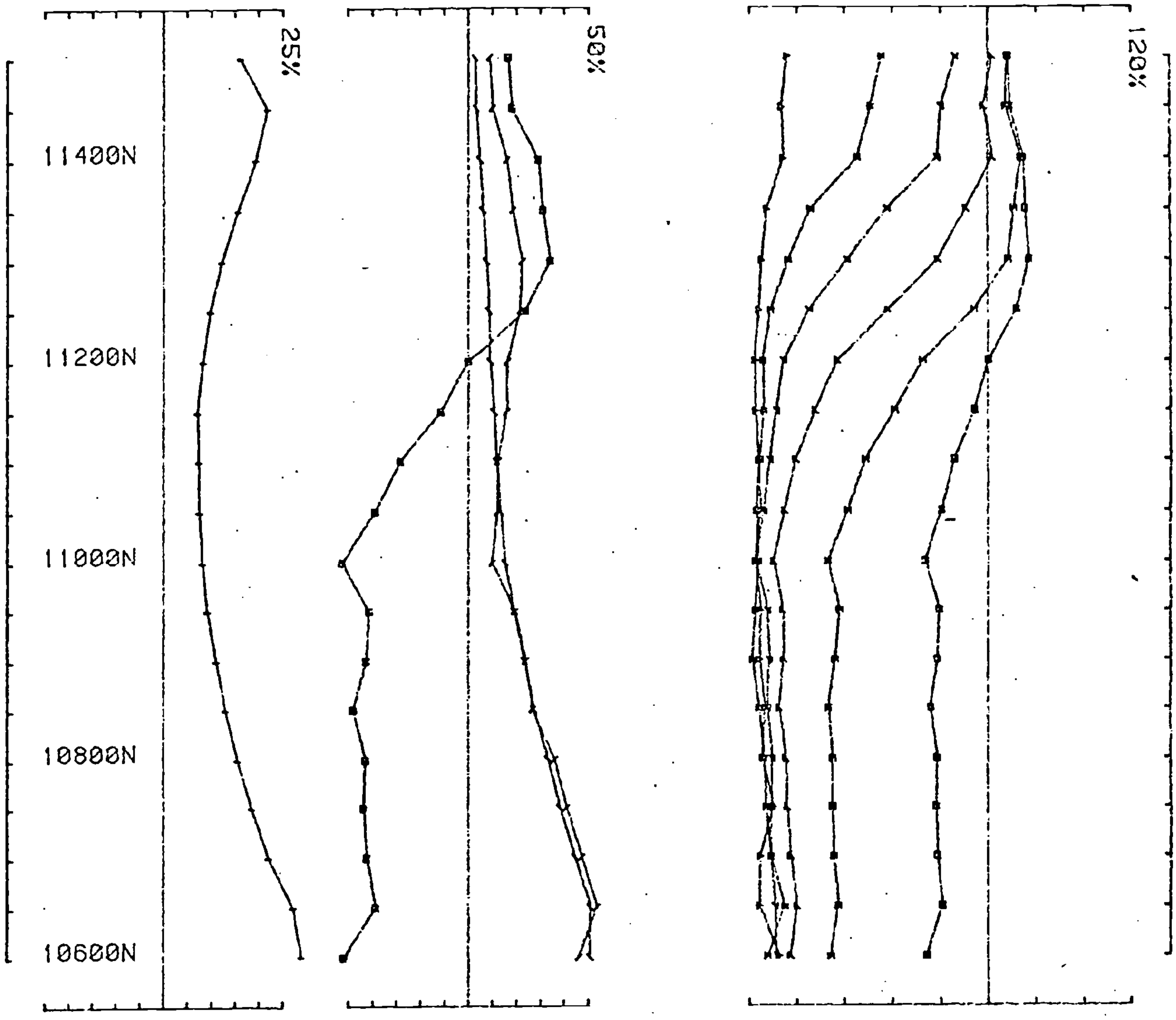
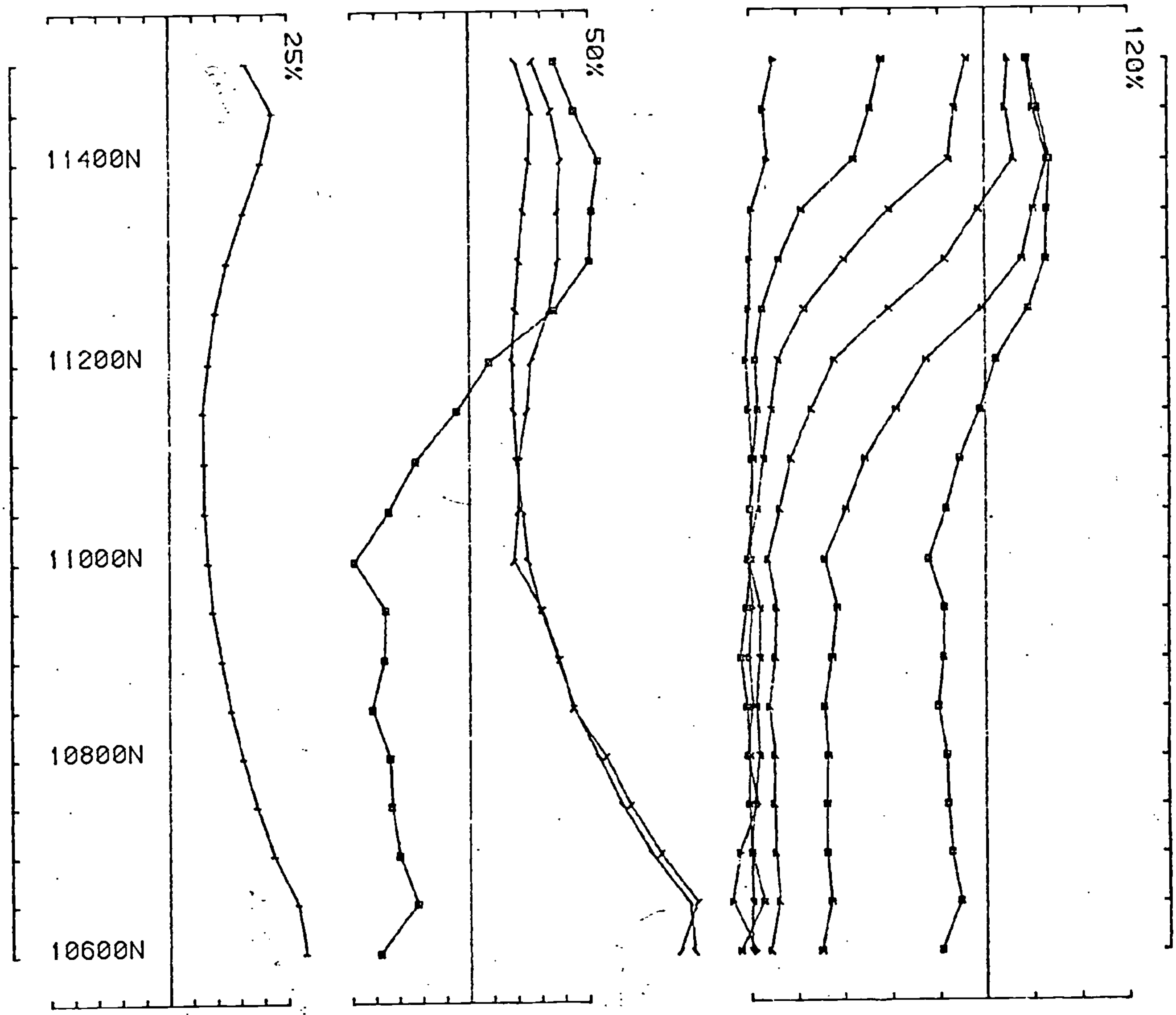


Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0247 Line 10000E component Hx total



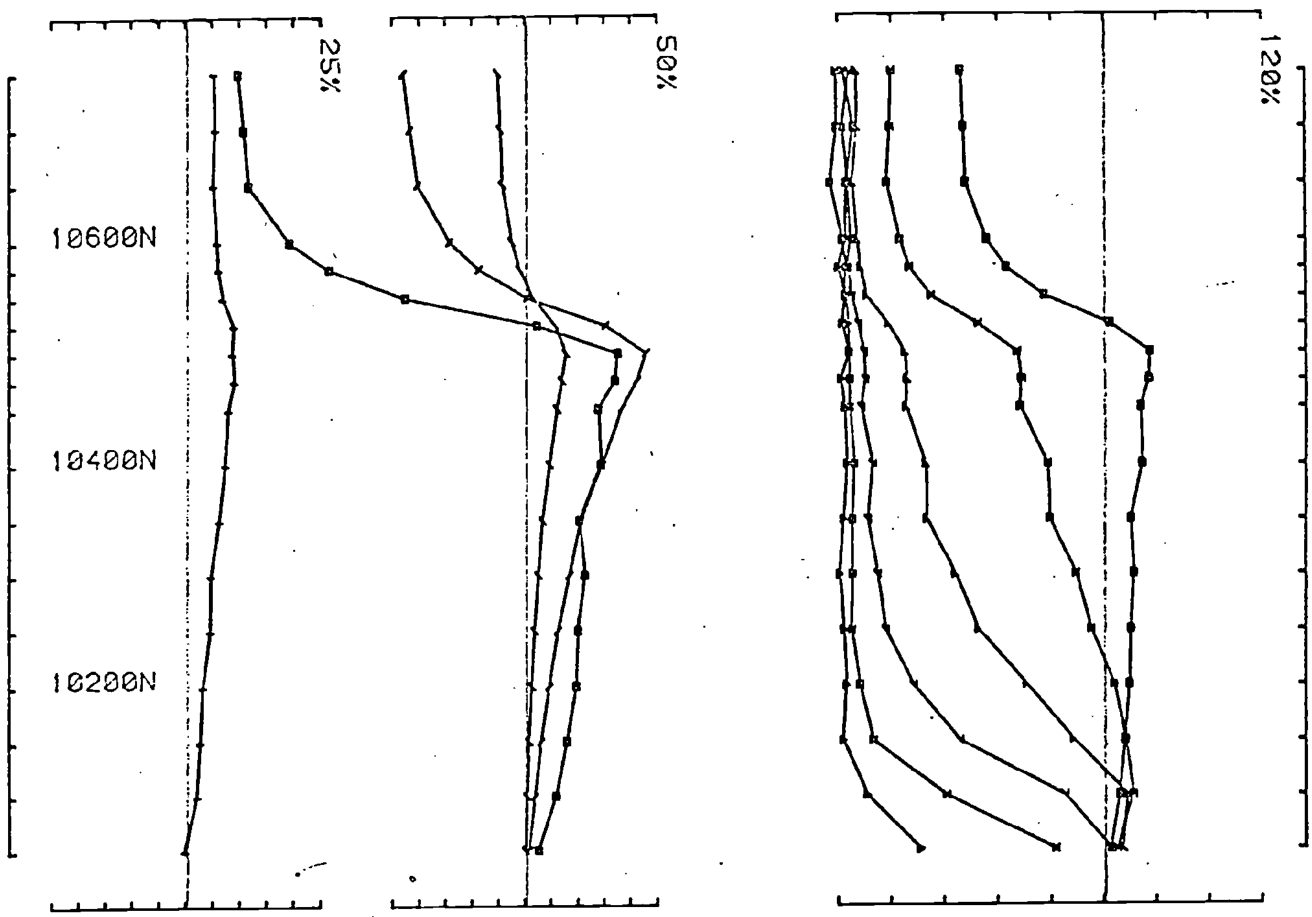
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0202 Line 10000E component Hz secondary Ch 1



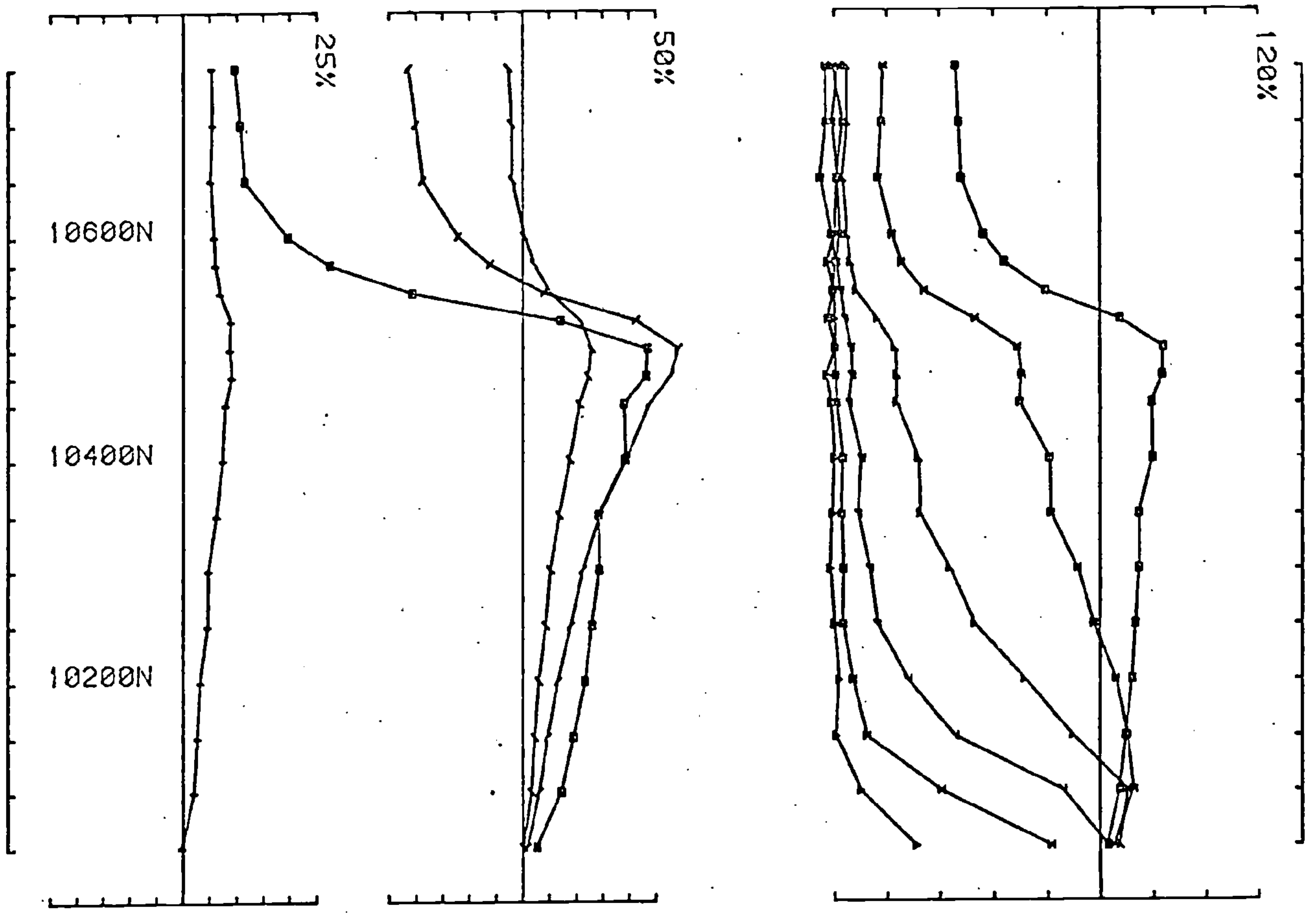
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0202 Line 10000E component Hz secondary

0109

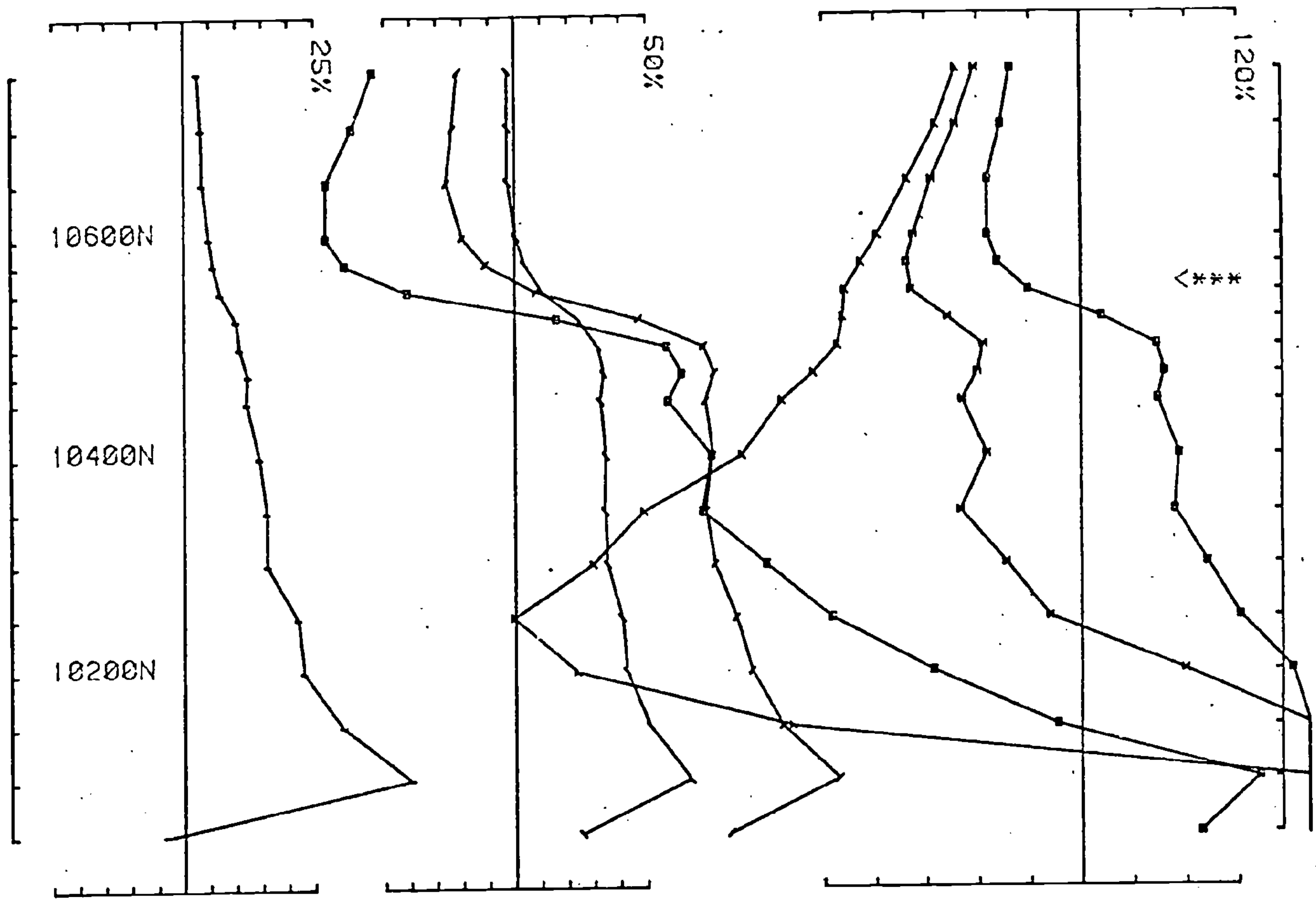


Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0214 Line 10000E component Hz secondary Ch 1



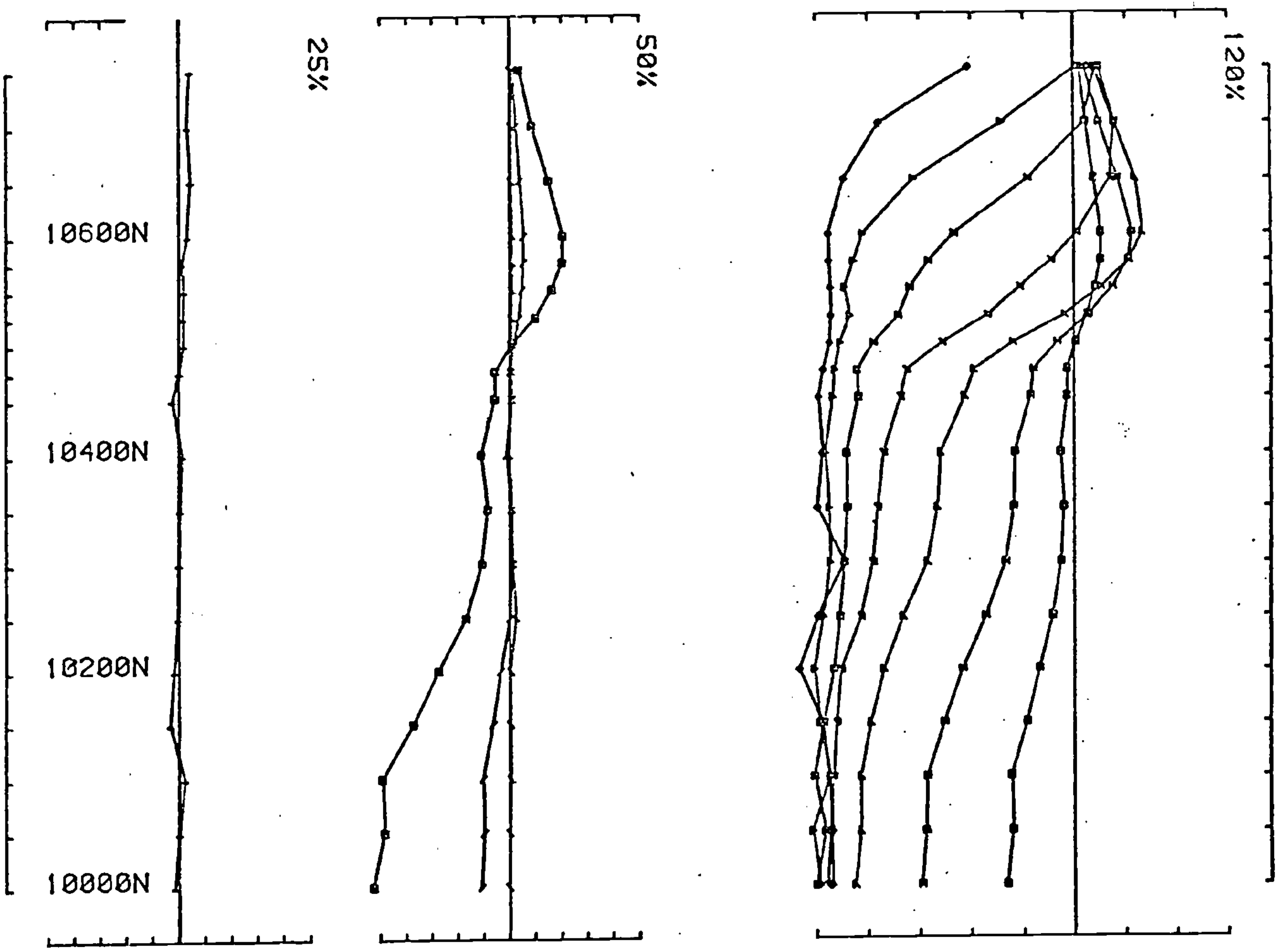
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0214 Line 10000E component Hz secondary

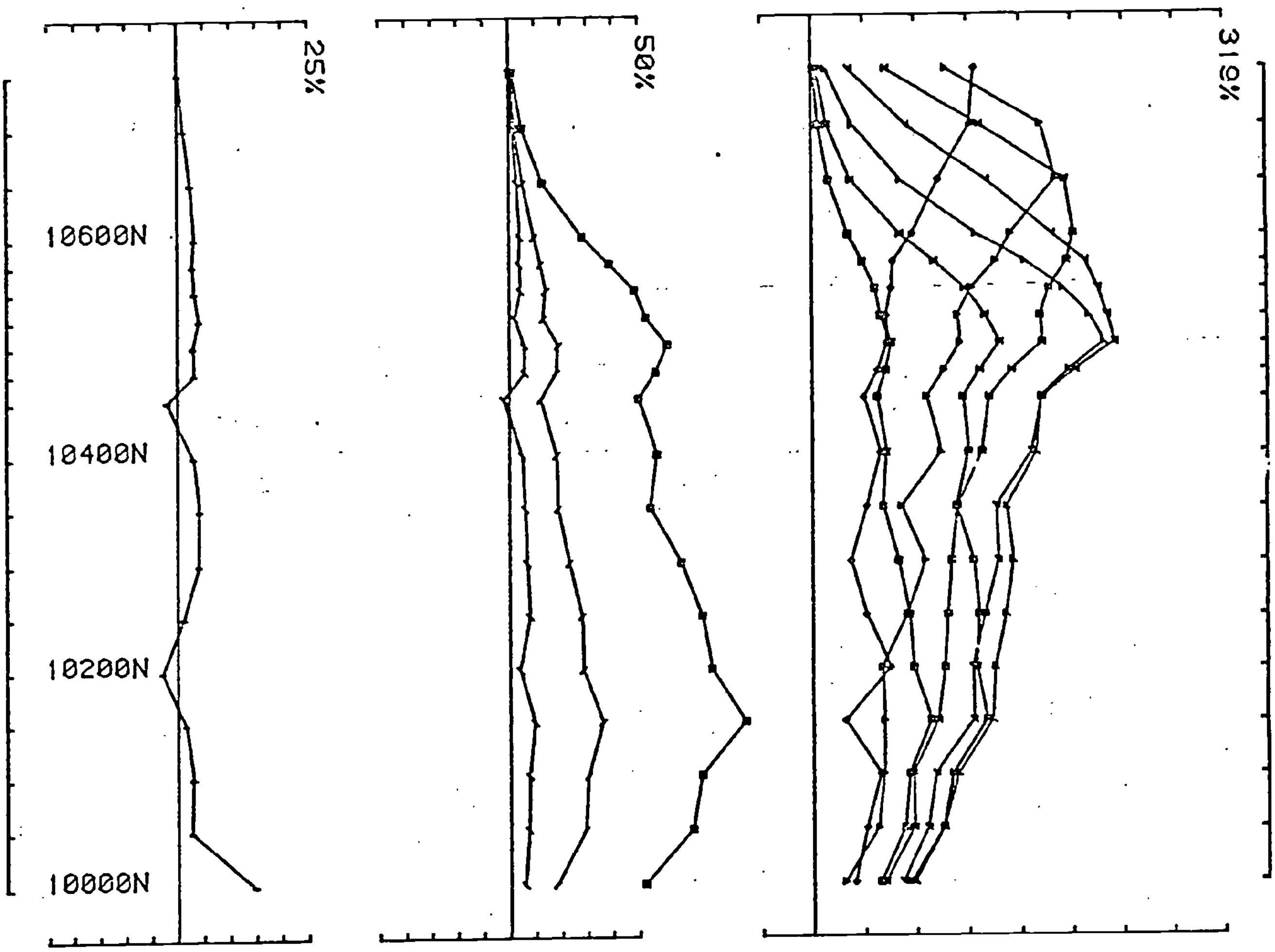


Area BIRTHDAY PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 26.230
Loopno 0214 Line 10000E component Hz secondary .

0112



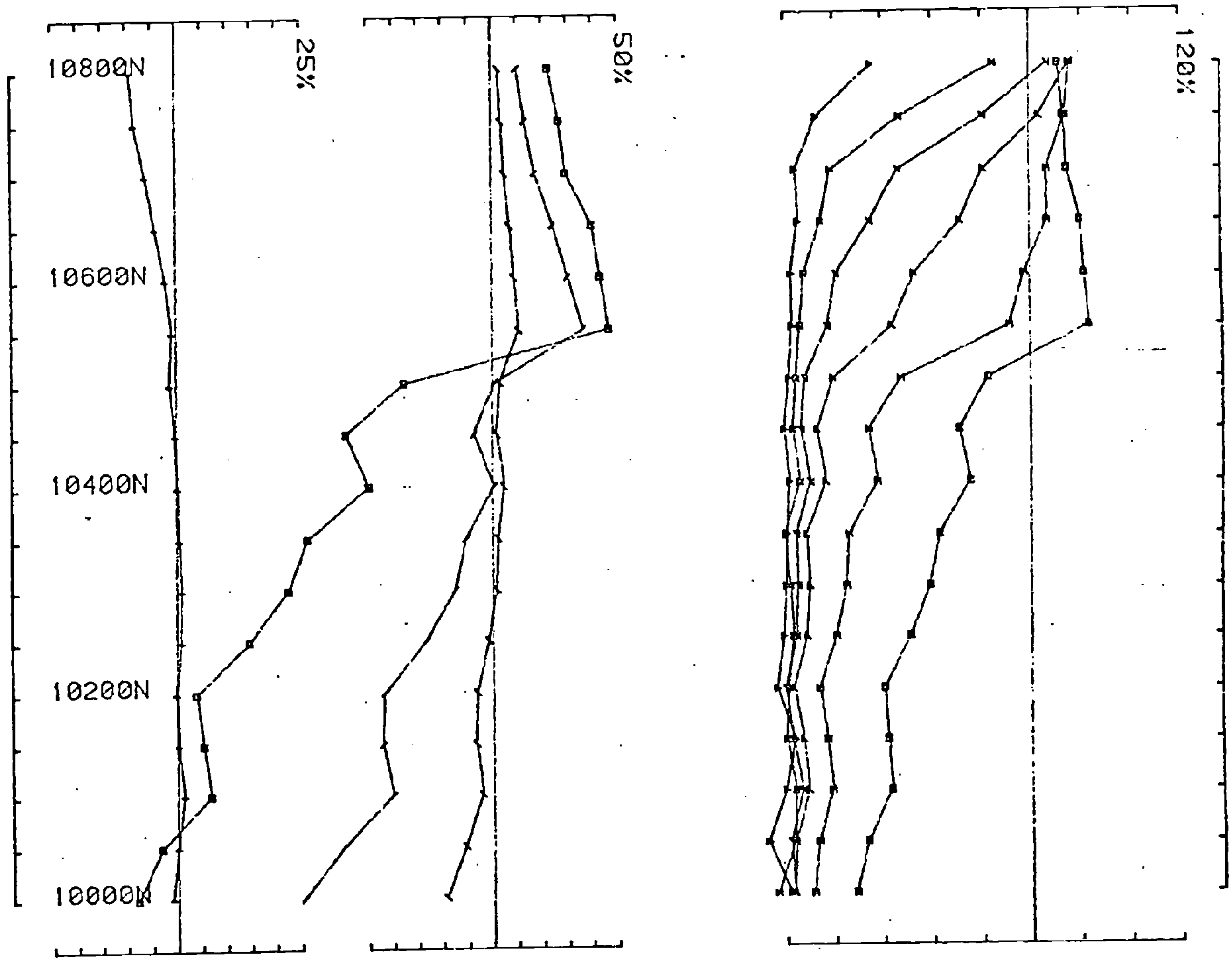
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115
Loopno 0247 Line 9750E component Hz secondary Ch 1



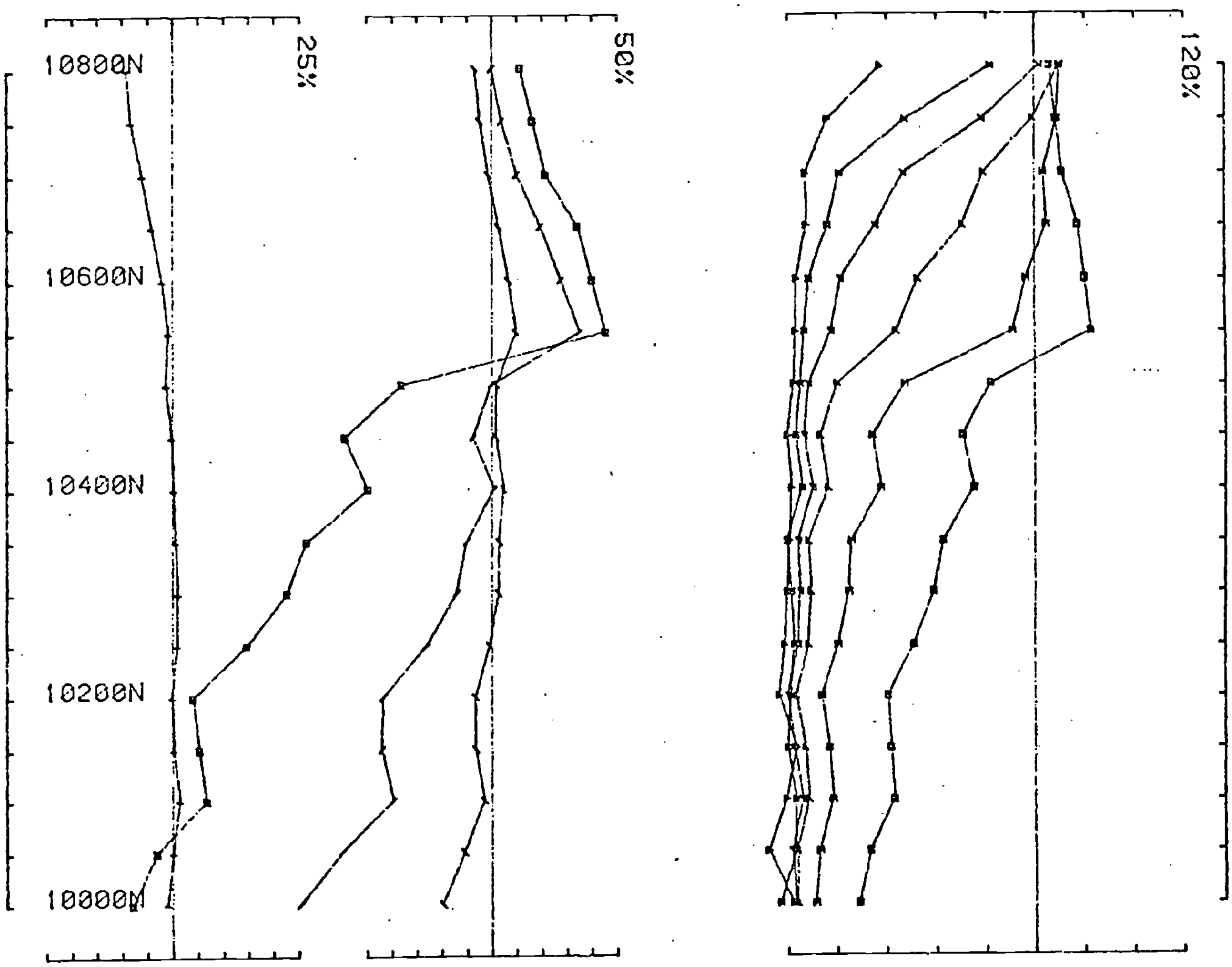
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115

Loopno 0247 Line 9750E component Hx total

0114



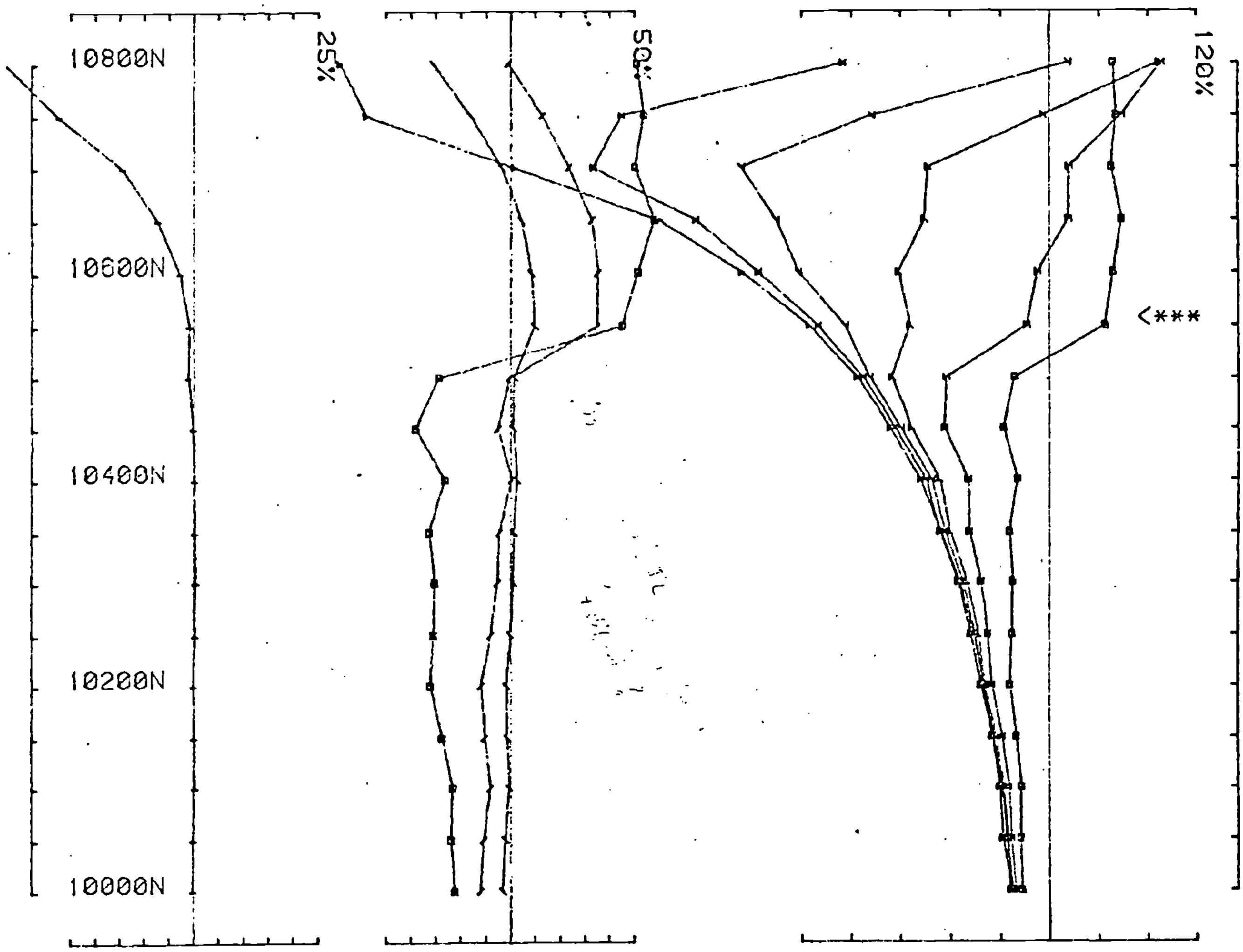
Area BIRTHDAY PROSPECT ESSO MINERALS , Job 2702 freq(hz) 26.230
Loopno 0203 Line 9500E component Hz secondary Ch 1



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

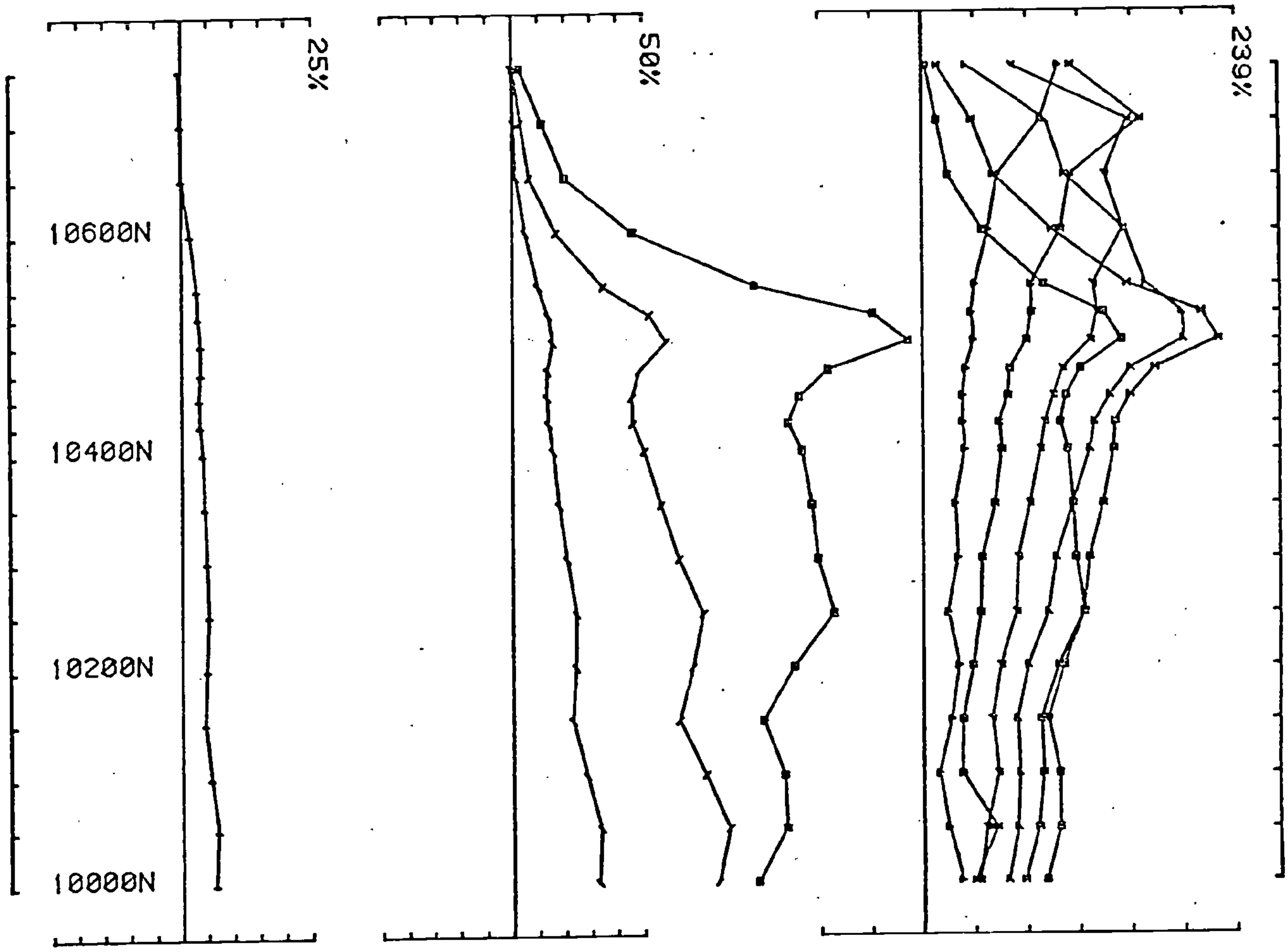
Loopno 0203 Line 9500E component Hz secondary

0116



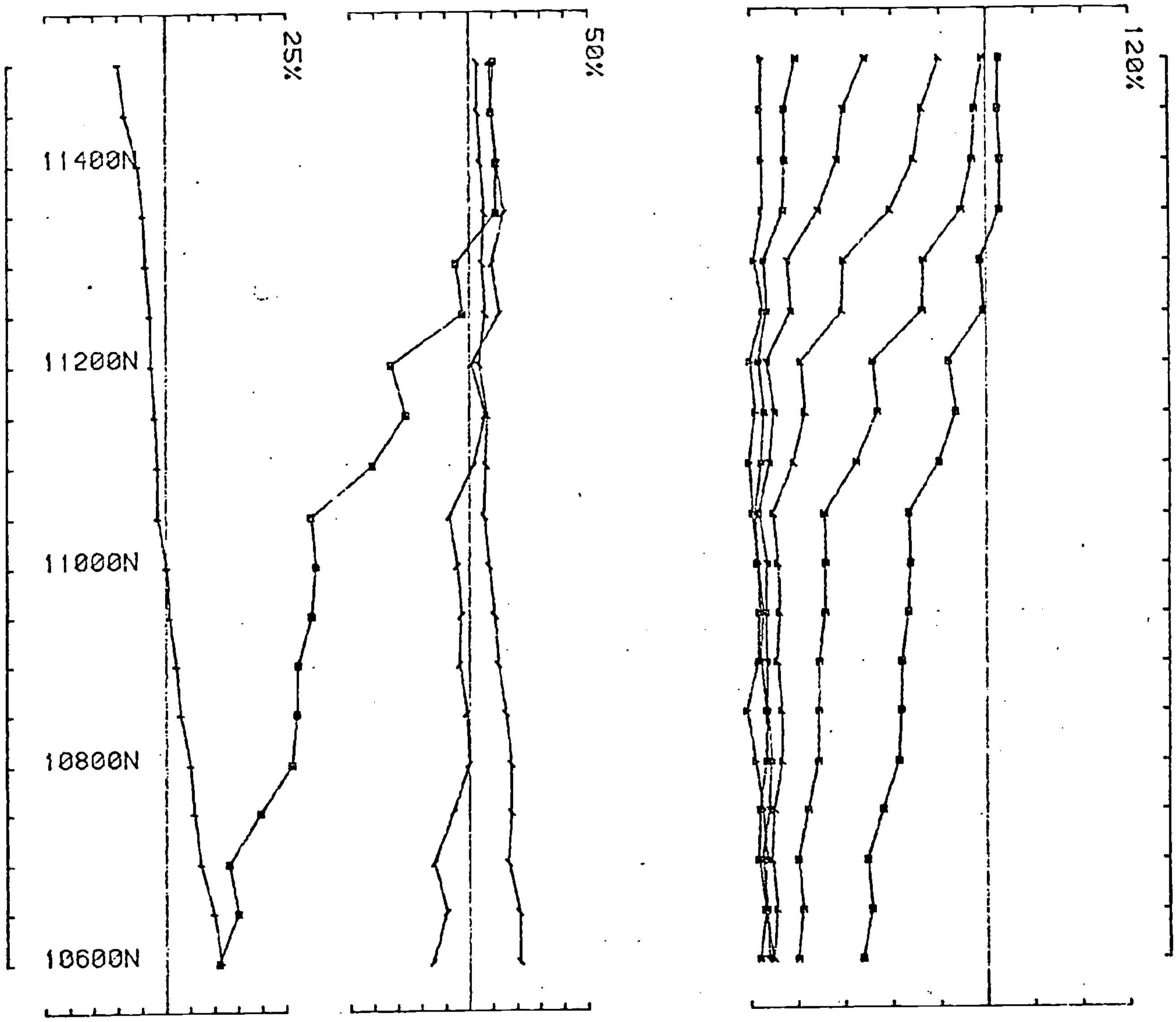
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0203 Line 9500E component Hz secondary

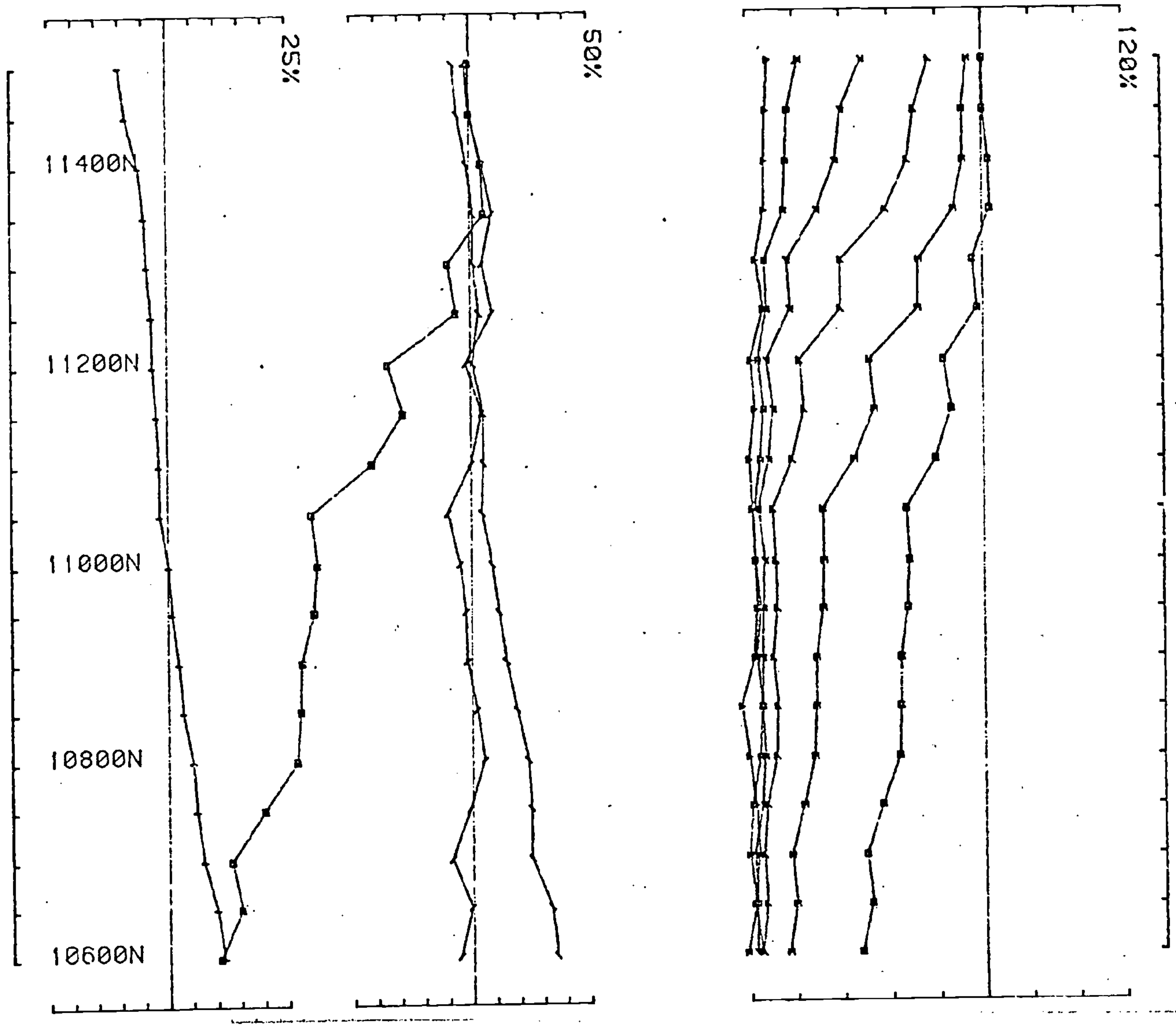


Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0247 Line 9500E component Hx total

0118

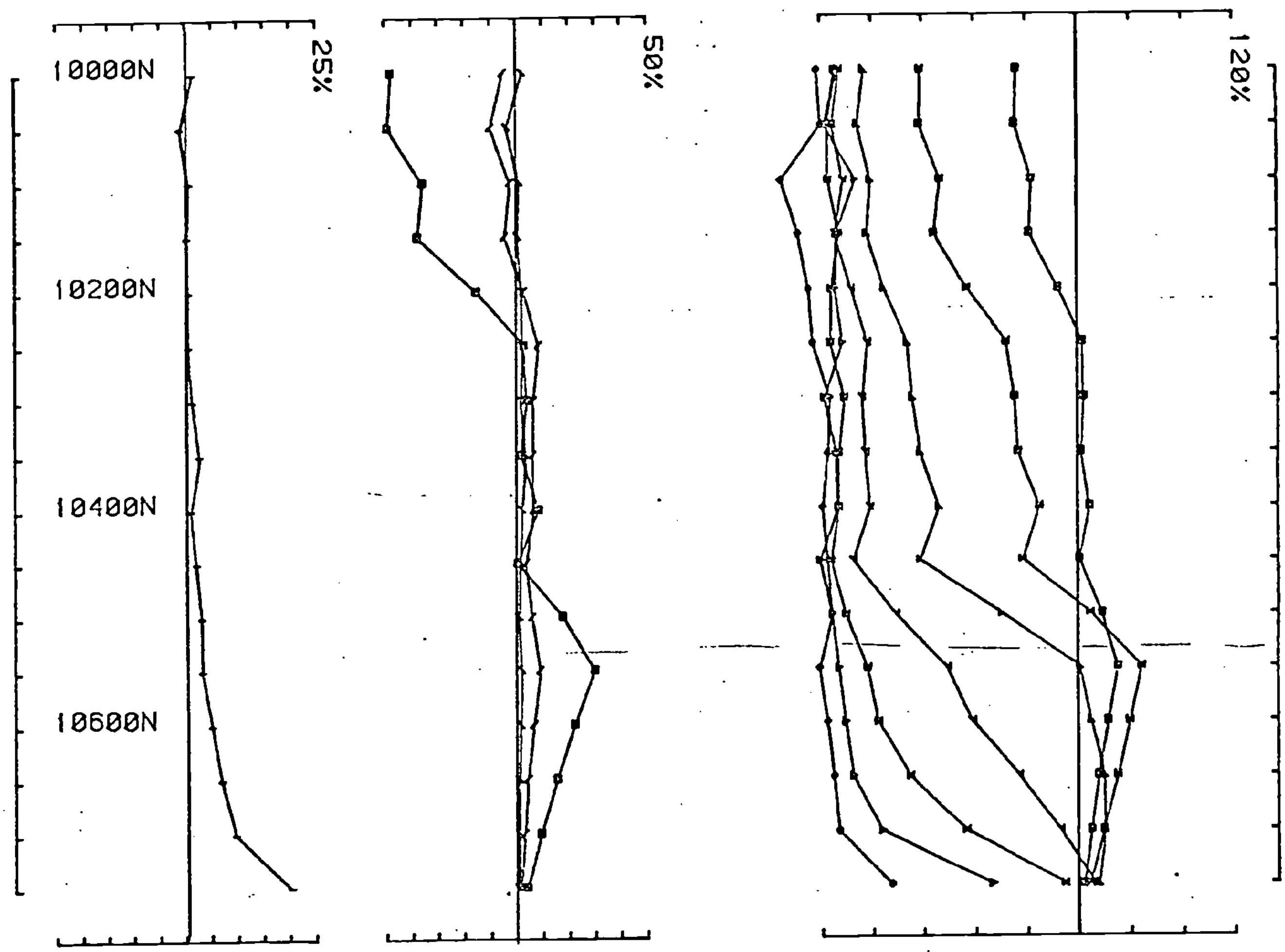


Area BIRTHDAY PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 26.230
Loopno 0201   Line 9500E component Hz secondary   Ch 1



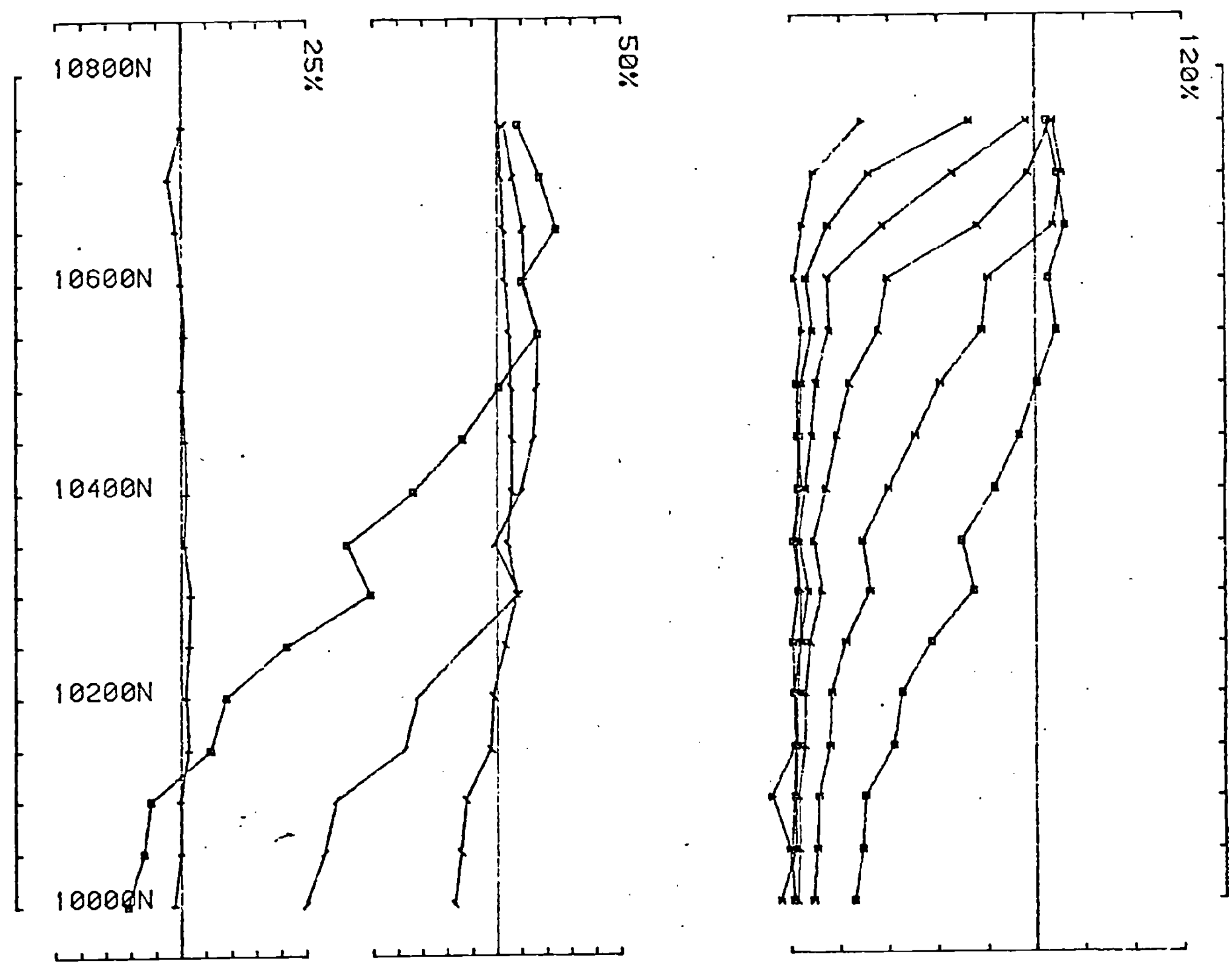
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0201 Line 9500E component Hz secondary

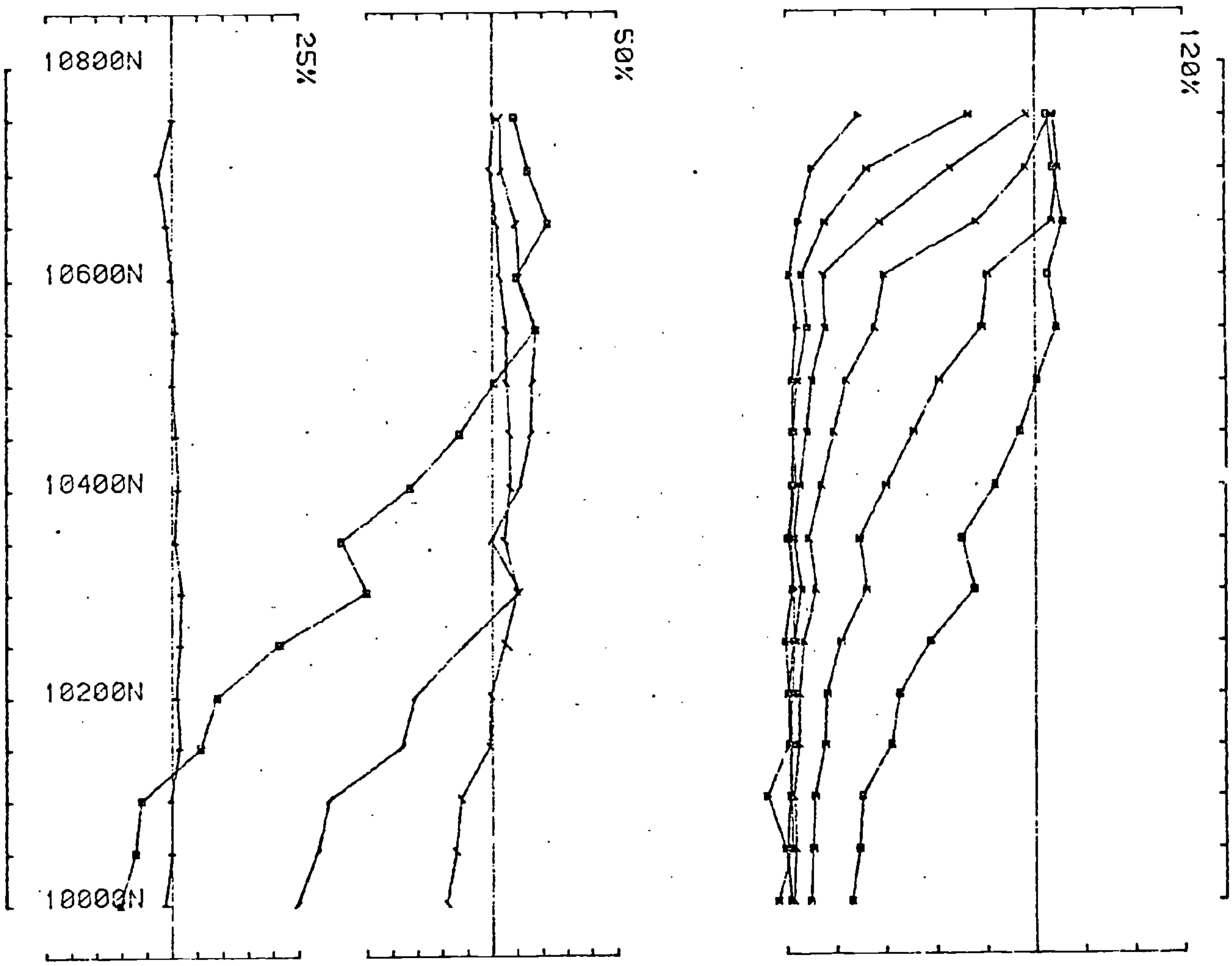


Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115

Loopno 0247 Line 9250E component Hz secondary Ch 1

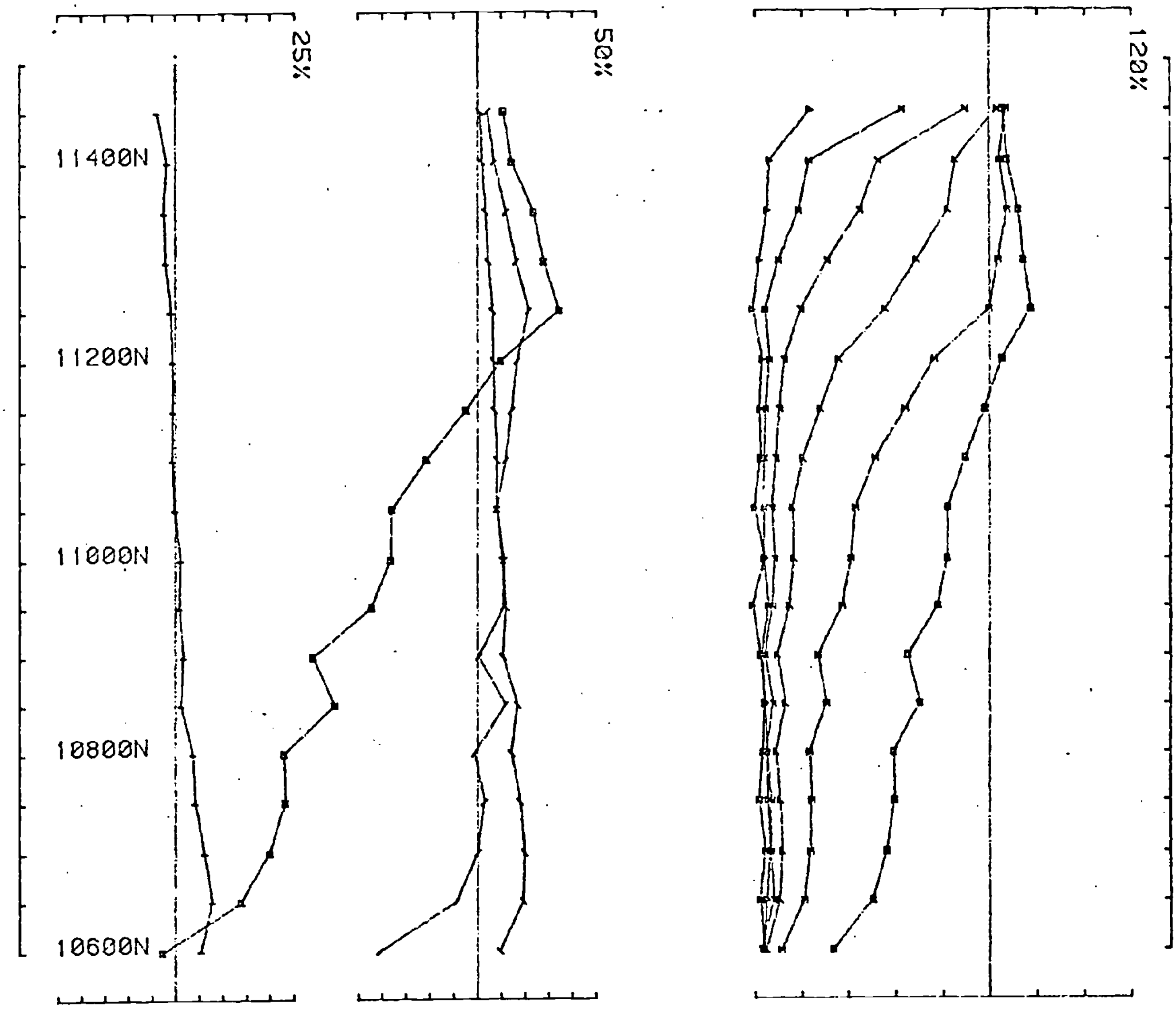


Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0203 Line 9000E component Hz secondary Ch 1

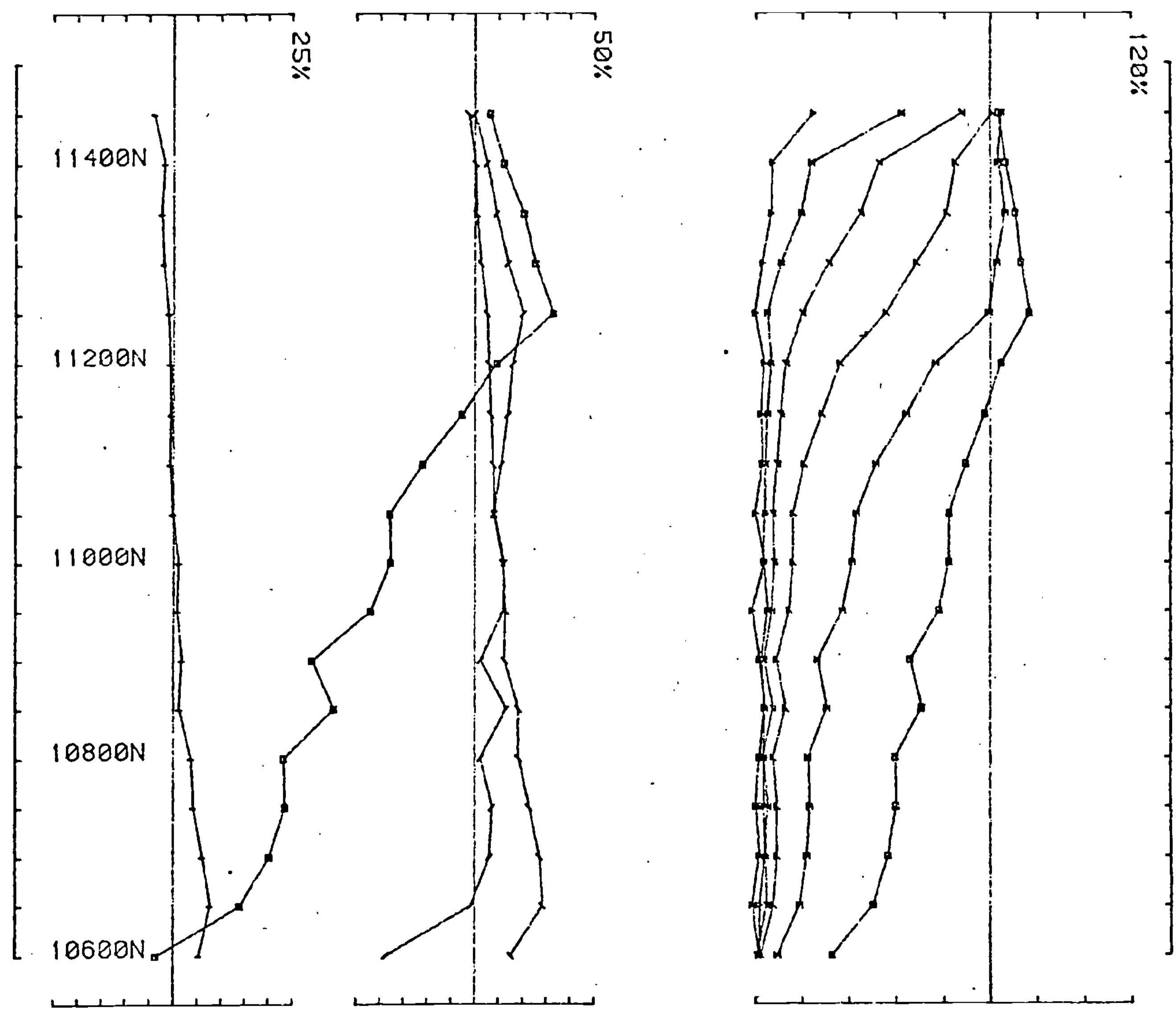


Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0203 Line 9000E component Hz secondary

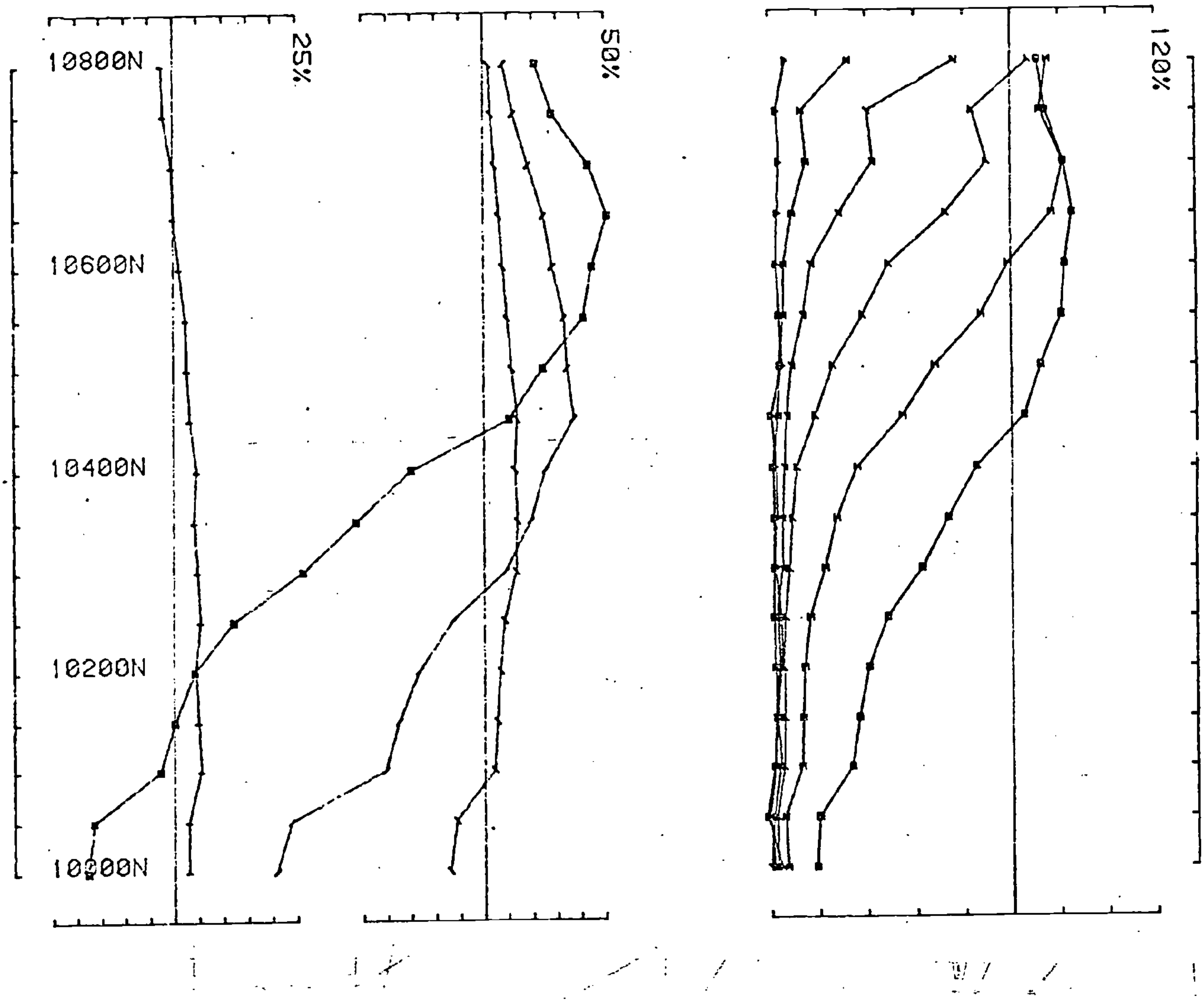


Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0201 Line 9000E component Hz secondary Ch 1

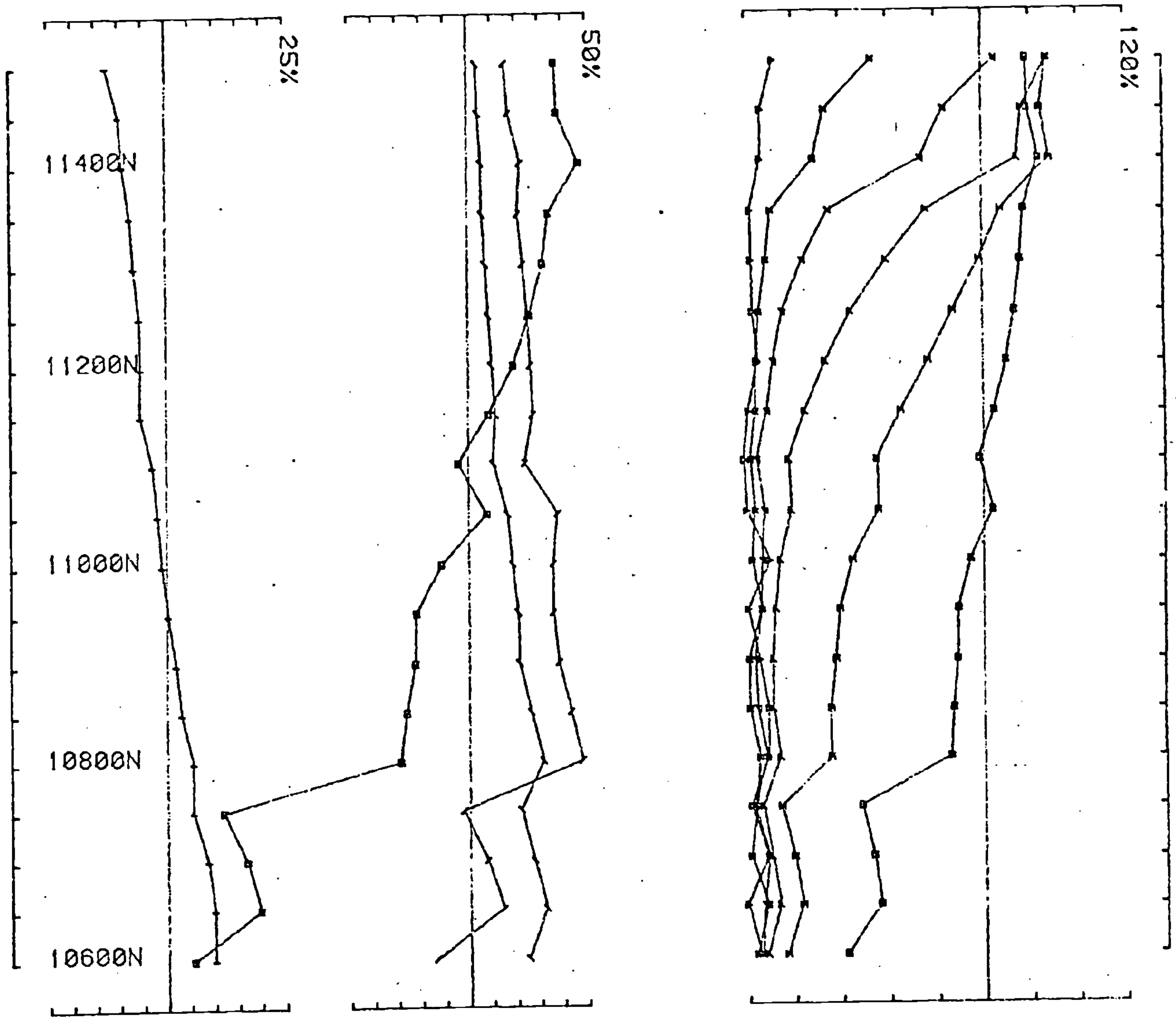


Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

- 0201 Lin 9000E



Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0203 Line 8500E component Hz secondary Ch 1



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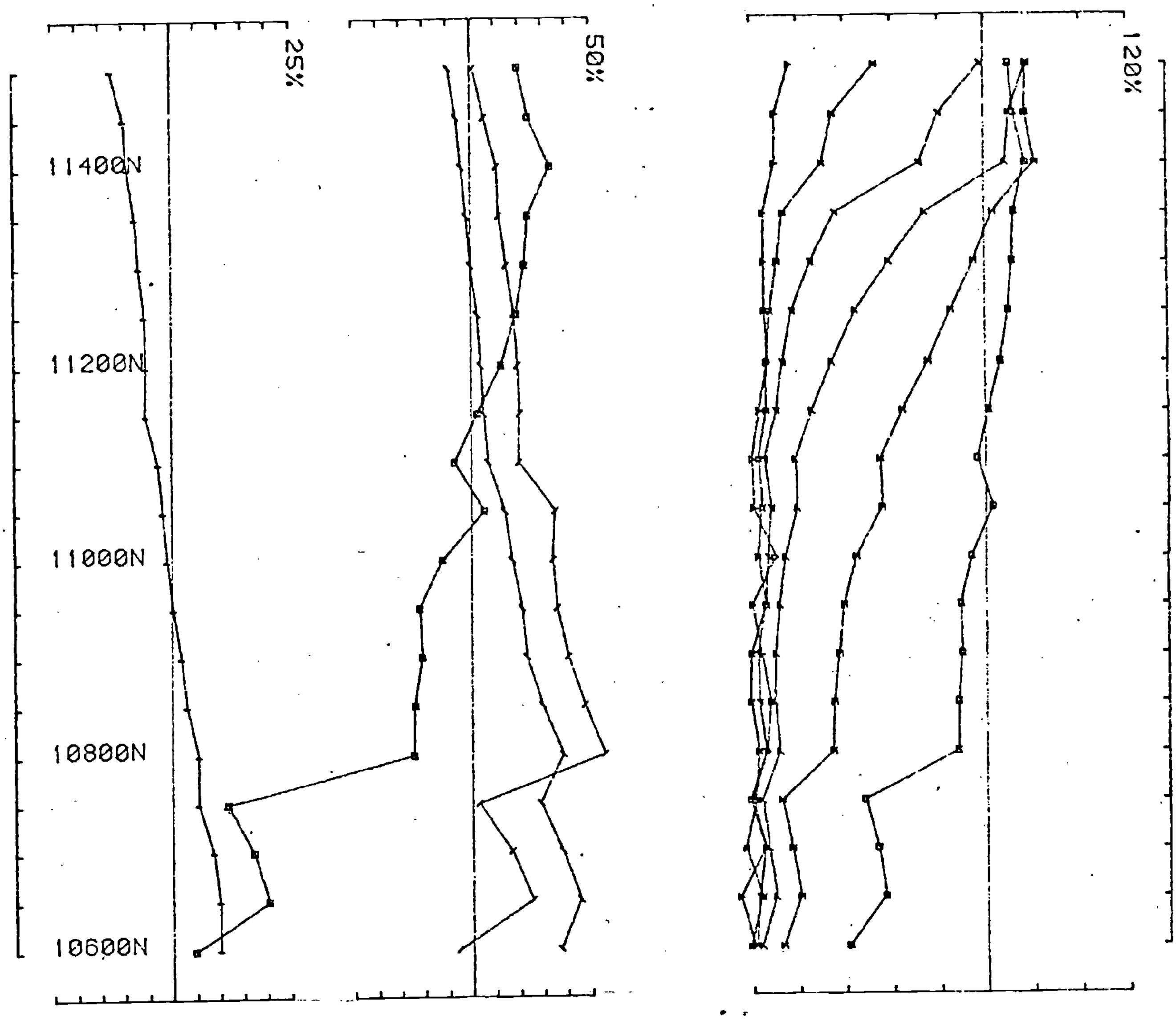
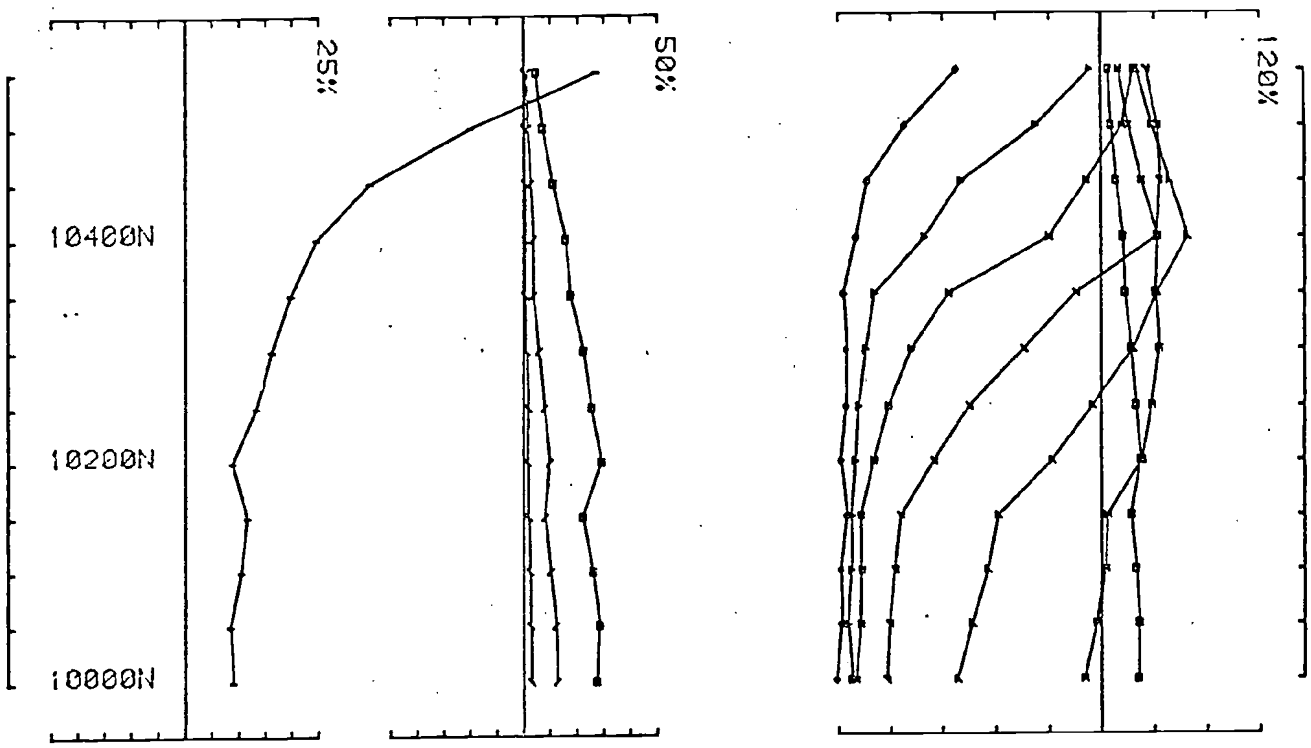
Loopno 0201 Line 8500E component Hz secondary Ch 1



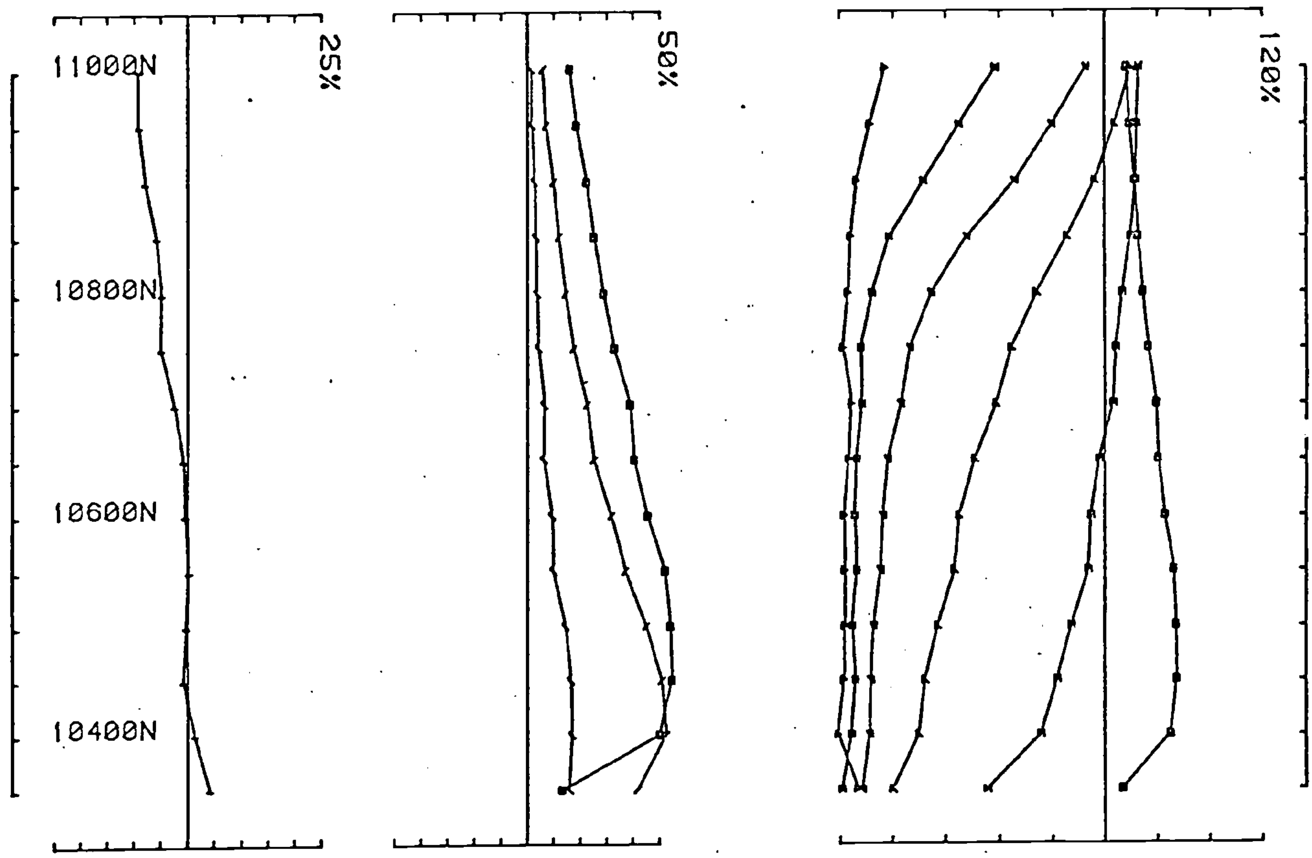
Area BIRTHDAY PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0201 Line 8500E component Hz secondary

BIRTHDAY EAST PROSPECT



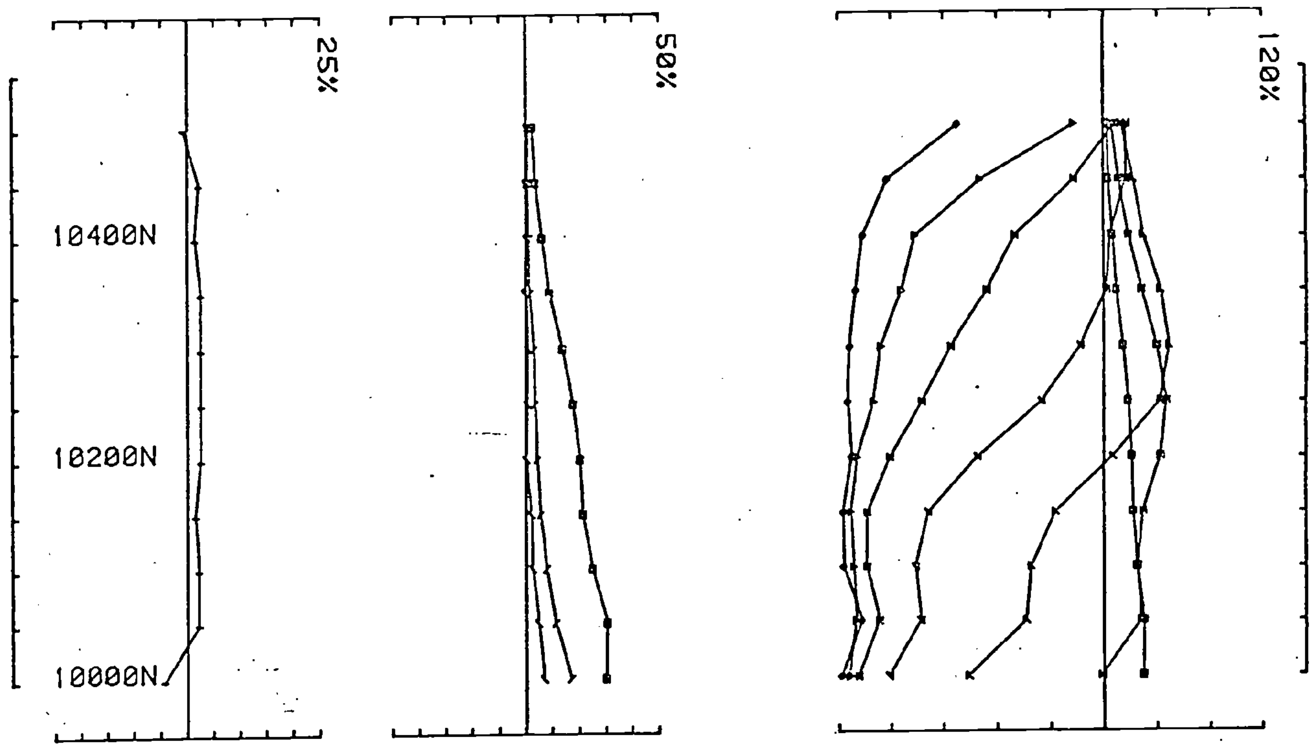
Area BIRTHDAY EAST PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 13.115

Loopno 0208 Line 14500E component Hz secondary   Ch 1 .

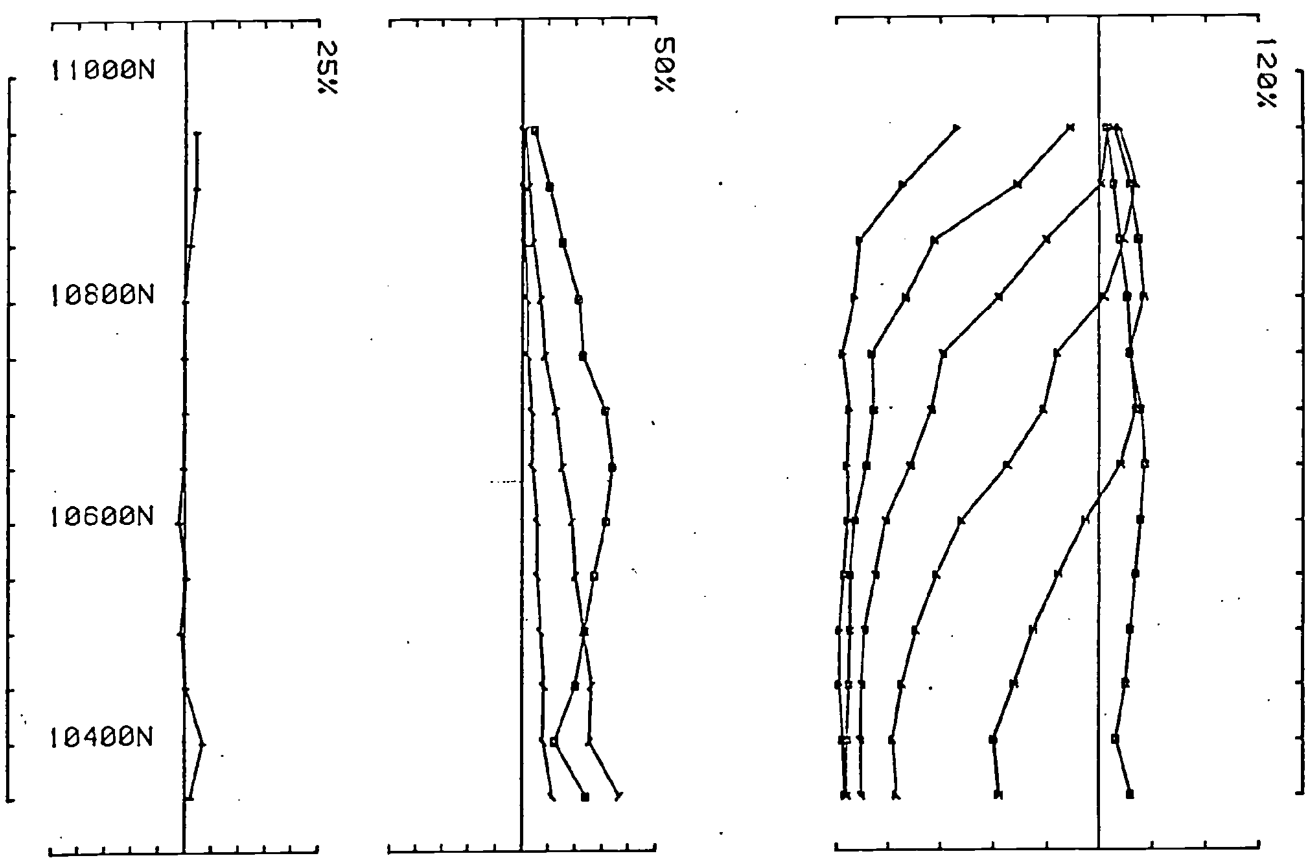


Area BIRTHDAY PROSPECT EAST ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0206 Line 14500E component Hz secondary Ch 1

0131

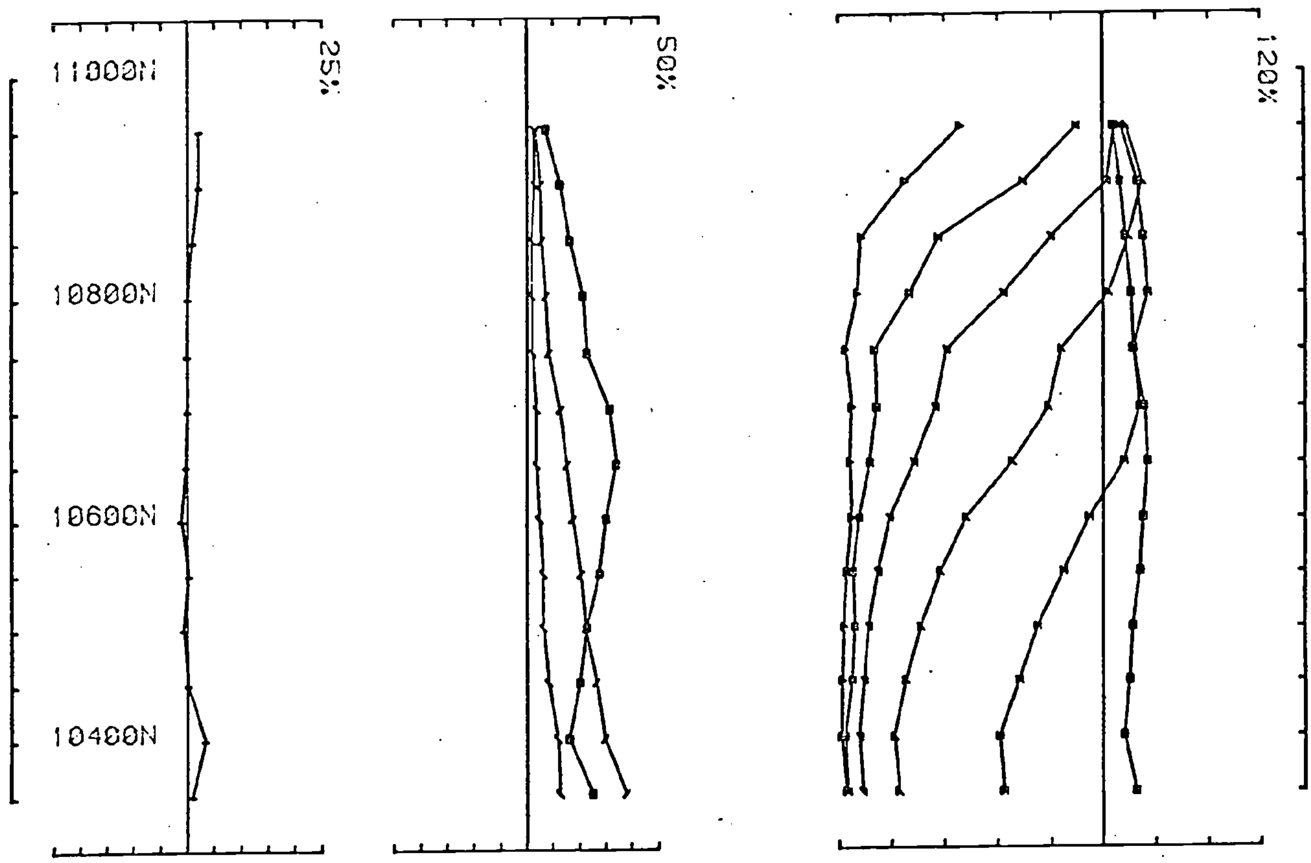


Area BIRTHDAY EAST PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115
Loopno 0208 Line 14000E component Hz secondary Ch 1



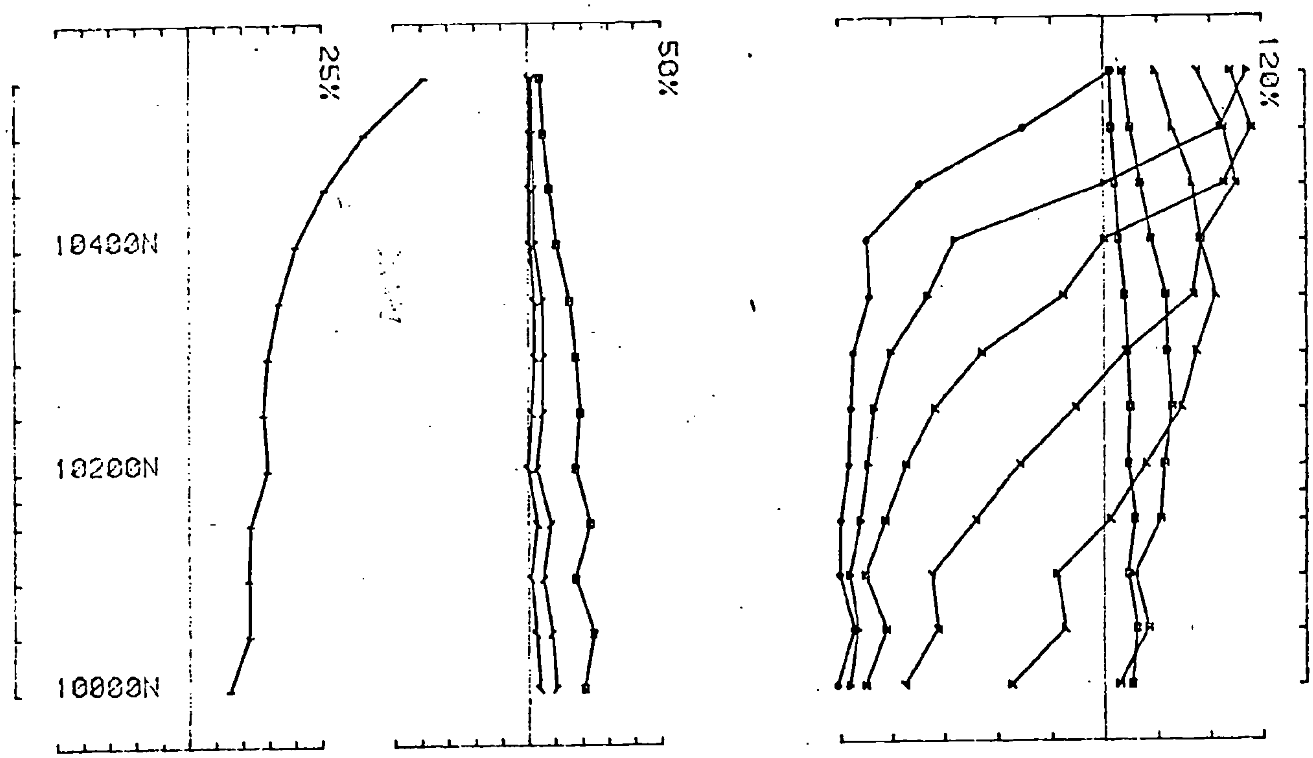
Area BIRTHDAY PROSPECT EAST ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0206 Line 14000E component Hz secondary Ch 1

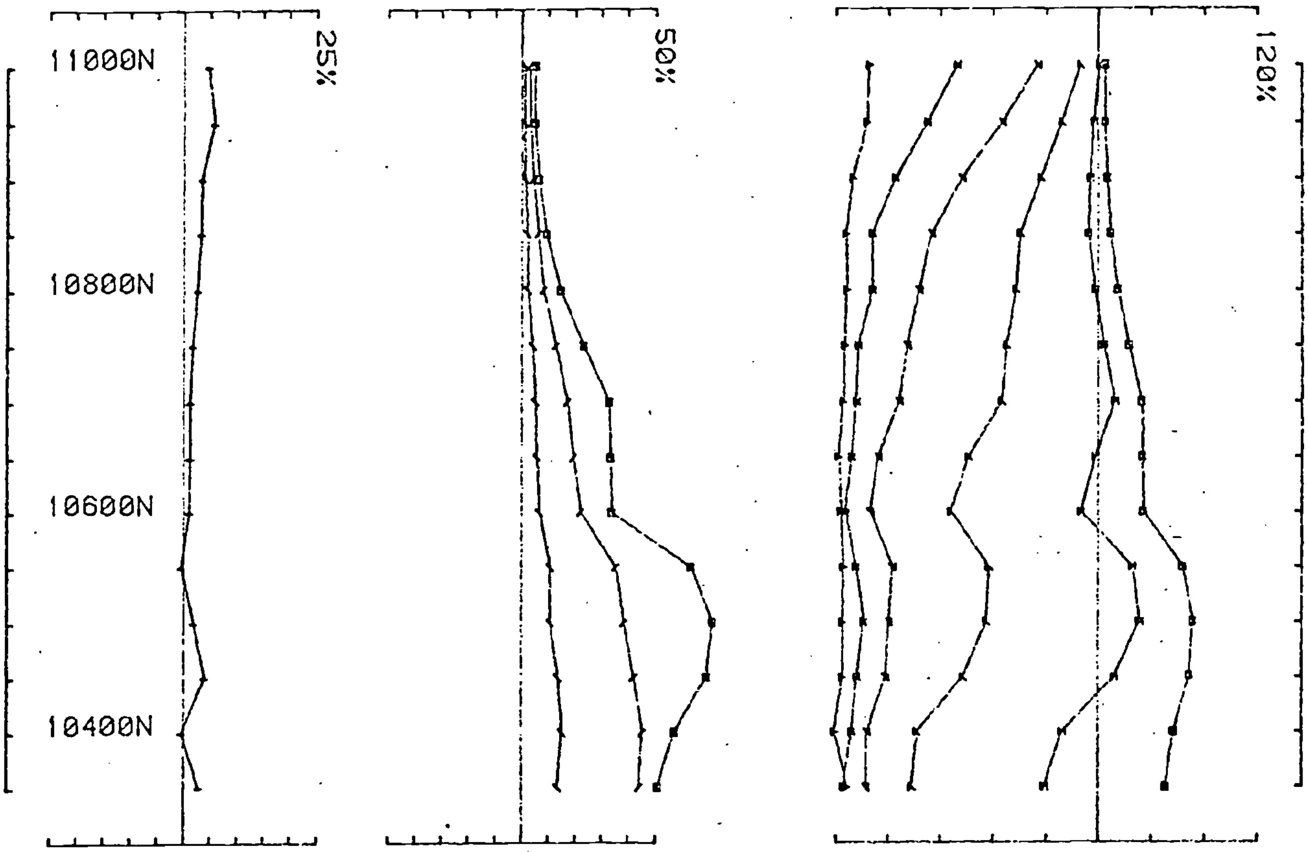


Area BIRTHDAY PROSPECT EAST   ESSO MINERALS   Job 2702   freq(hz) 26.230

Loopno 0206   Line 14000E   component   Hz   secondary

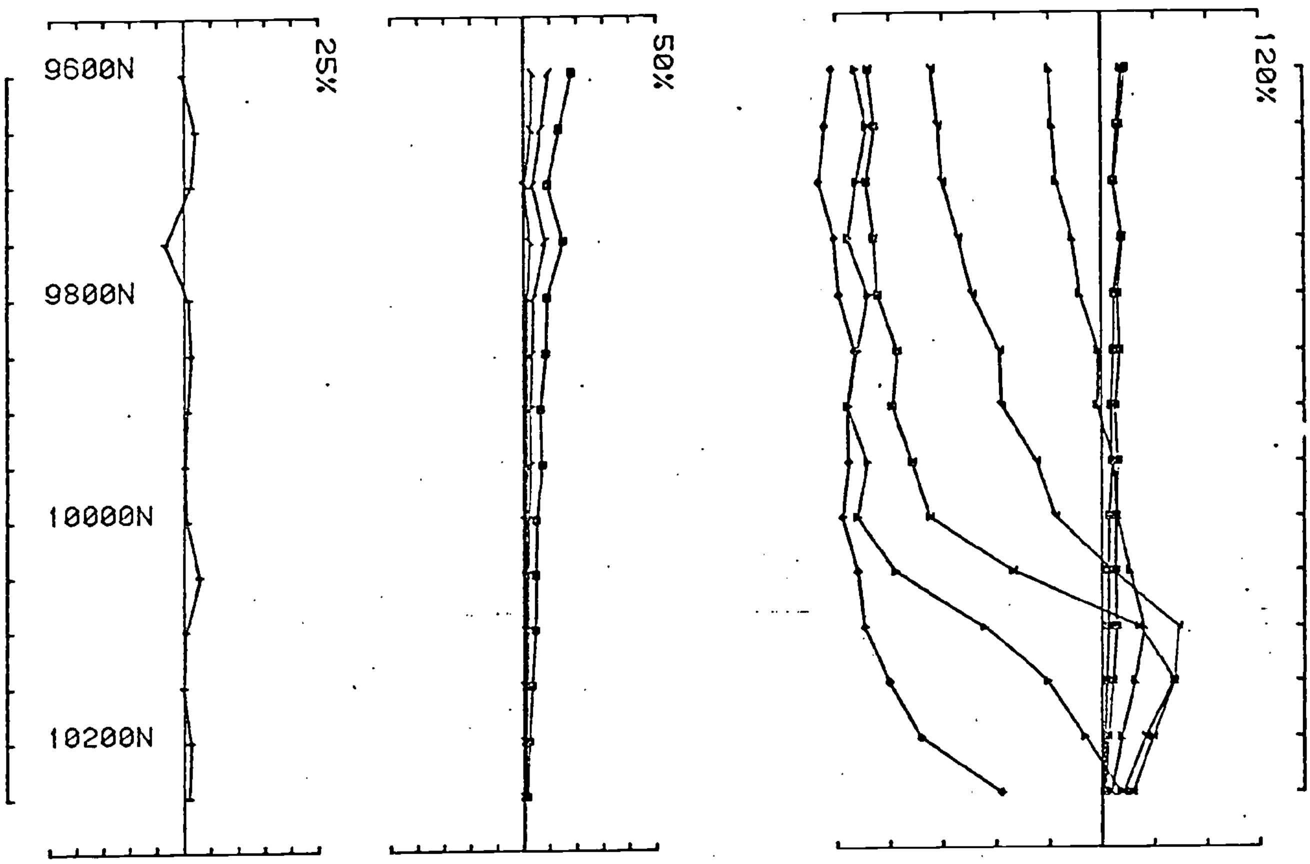


Area BIRTHDAY EAST PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115
Loopno 0208 Line 13500E component Hz secondary Ch 1

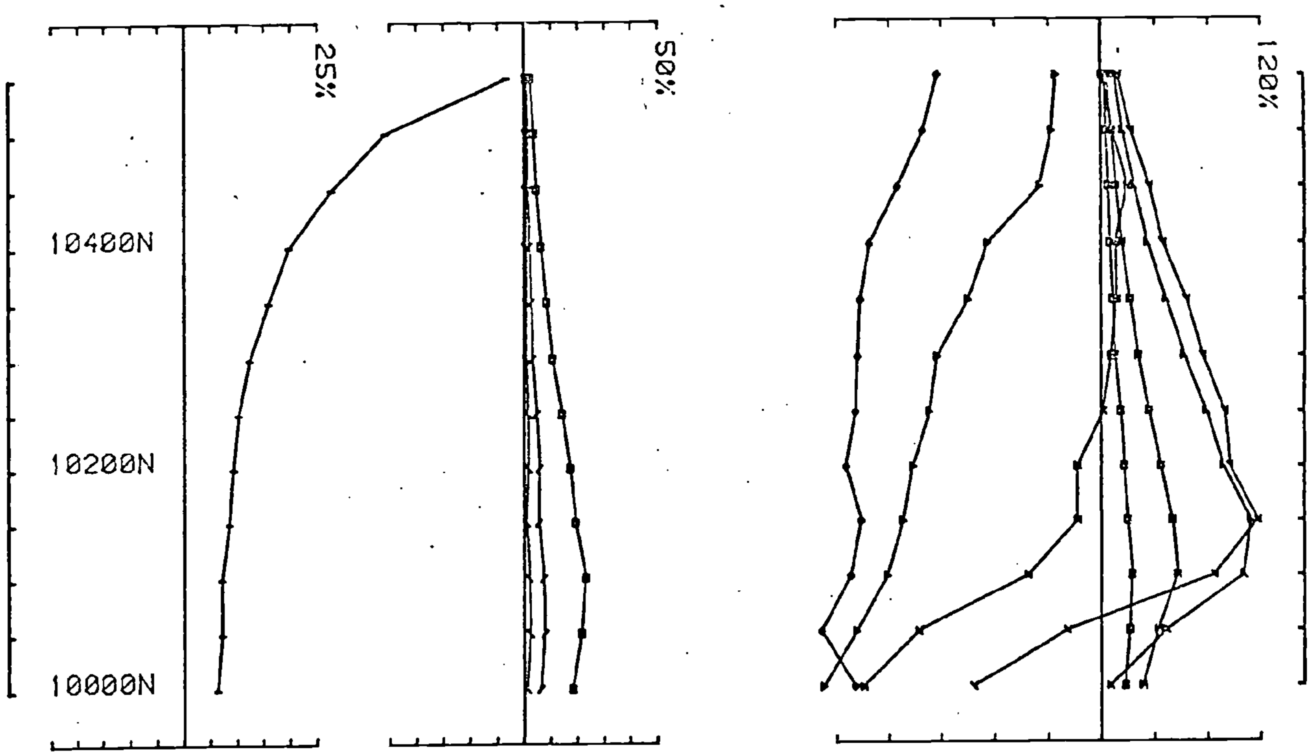


Area BIRTHDAY PROSPECT EAST ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0206 Line 13500E component Hz secondary Ch 1 .

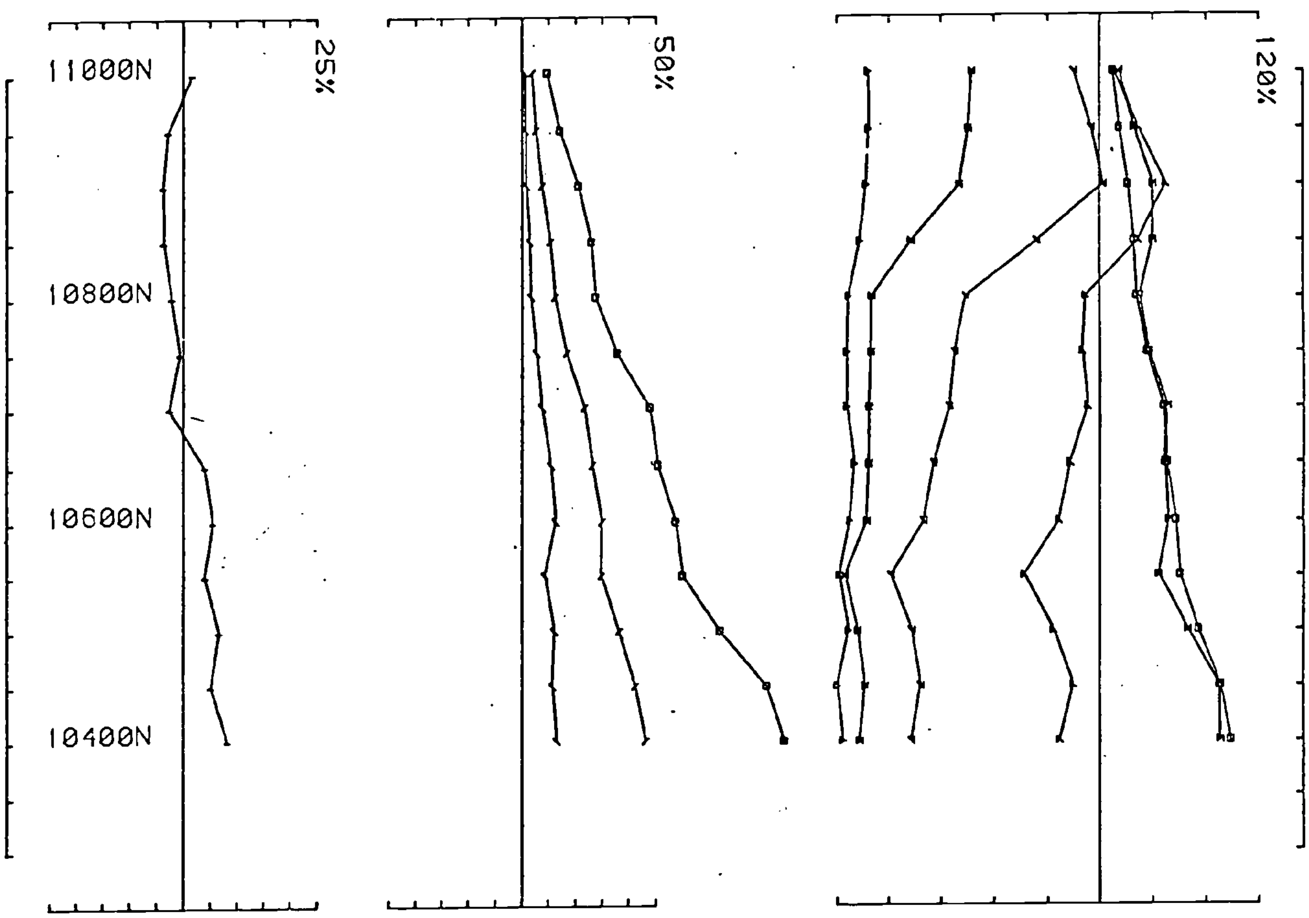
0136



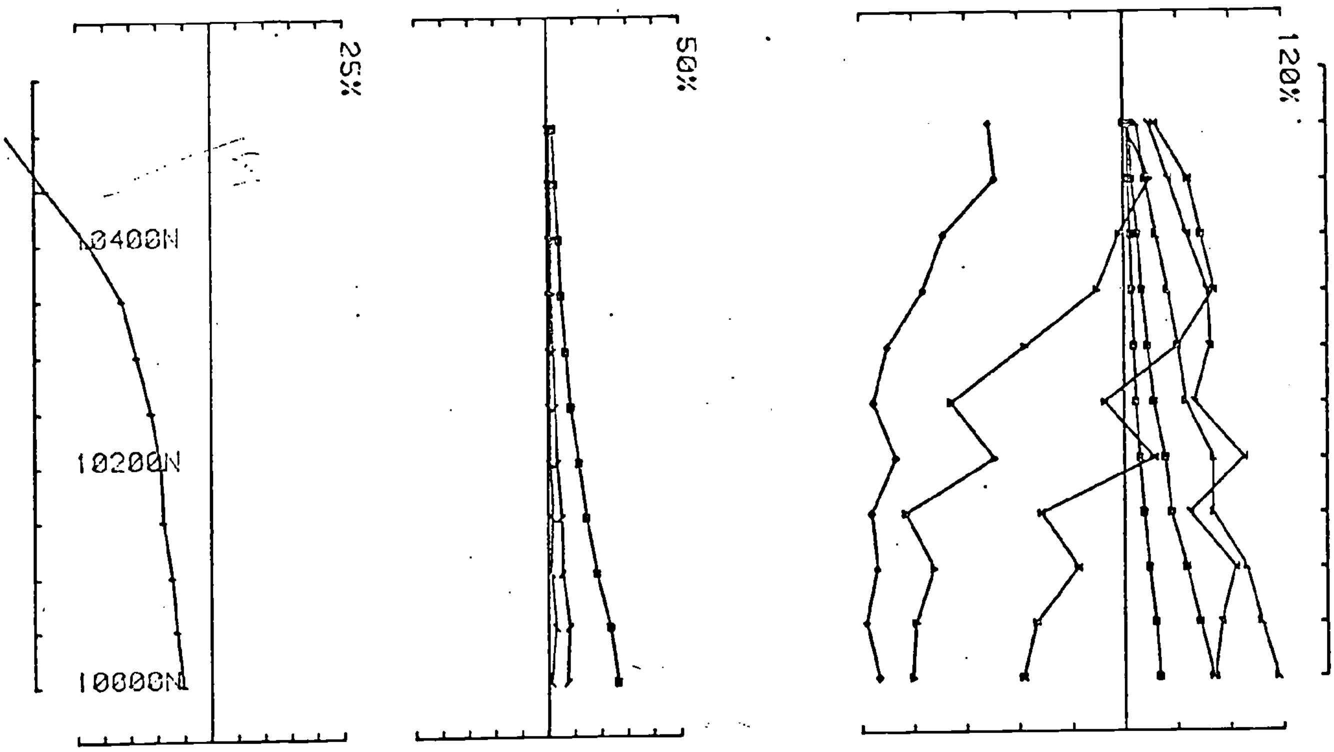
Area BIRTHDAY EAST PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115
Loopno 0248 Line 13000E component Hz secondary Ch 1



Area BIRTHDAY EAST PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115
Loopno 0209 Line 13000E component Hz secondary Ch 1

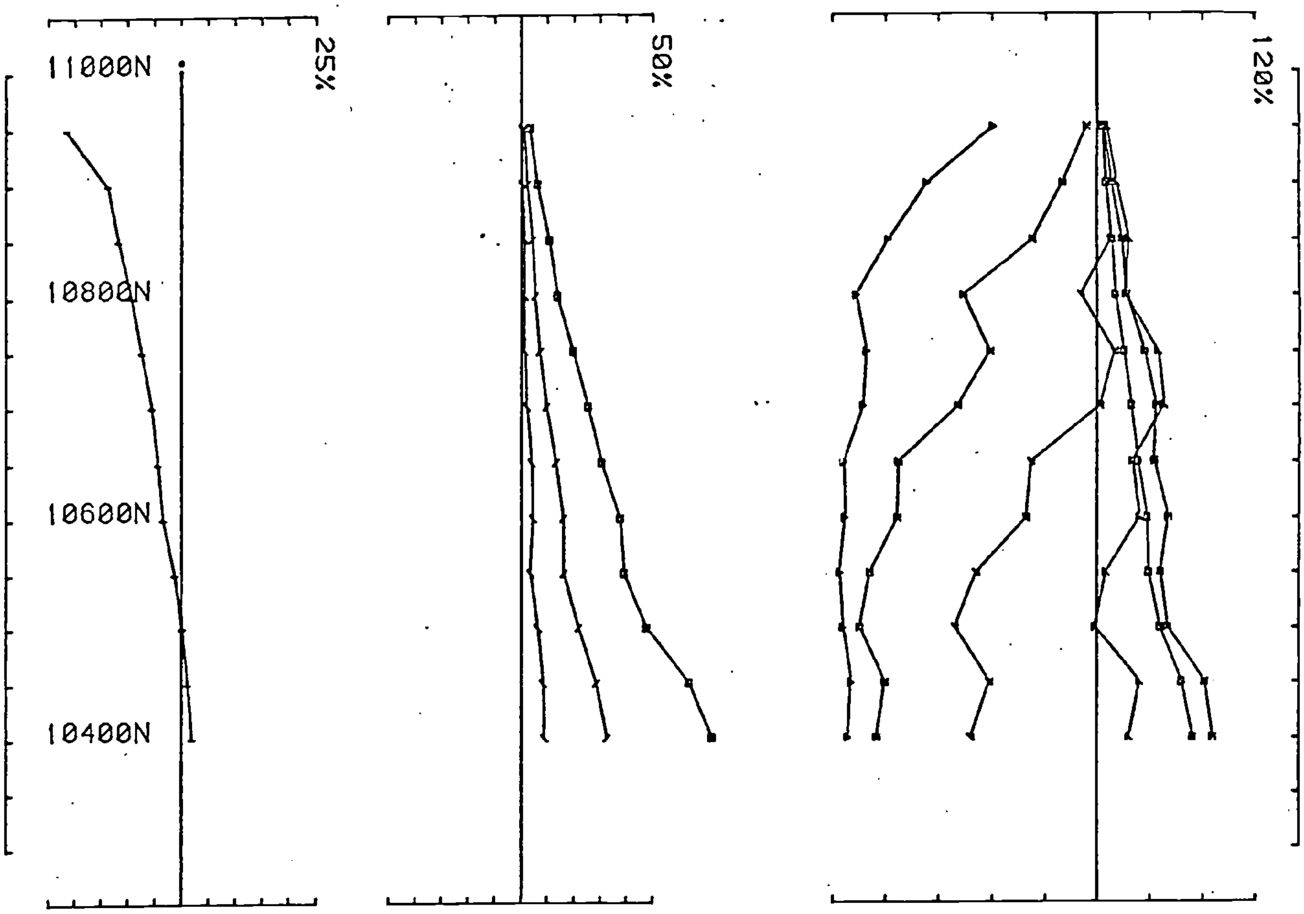


Area BIRTHDAY EAST PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0207 Line 13000E component Hz secondary Ch 1



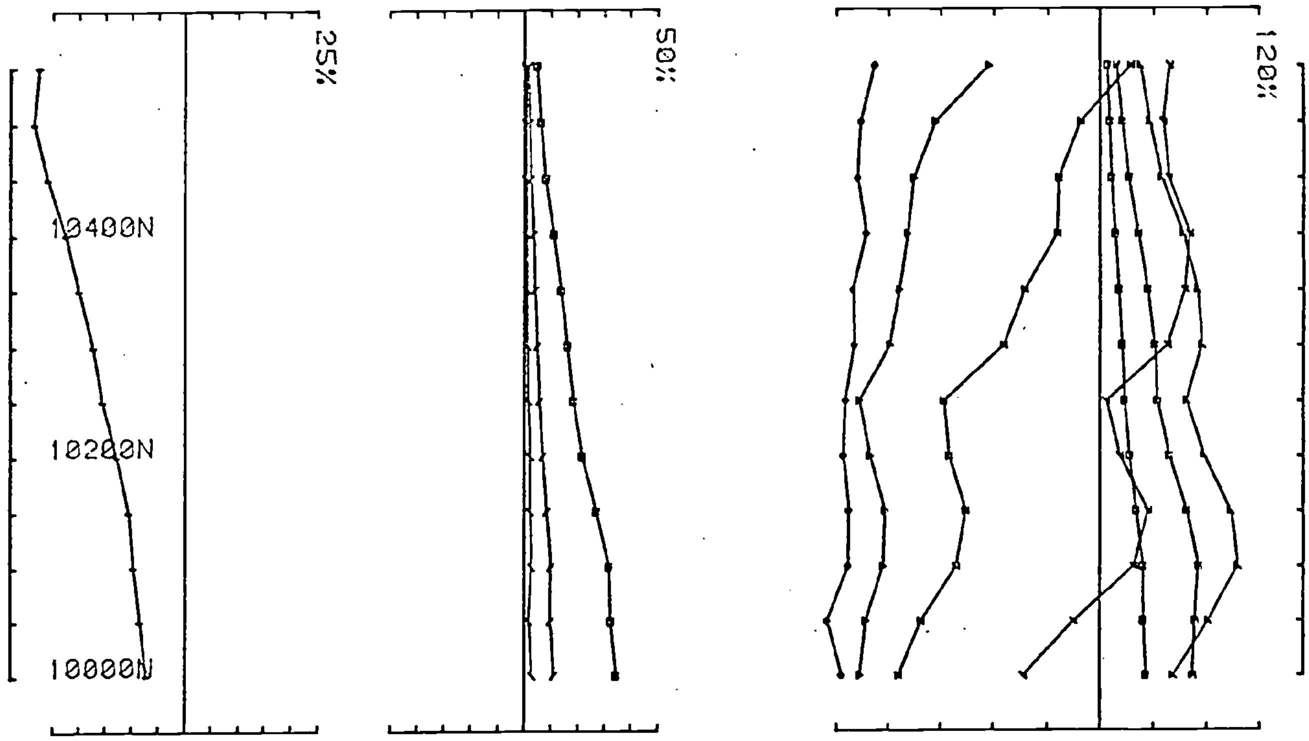
Area BIRTHDAY EAST PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 13.115

Loopno 0209 Line 12500E component Hz secondary   Ch 1



Area BIRTHDAY EAST PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 26.230

Loopno 0207   Line 12500E component Hz secondary   Ch 1



Area BIRTHDAY EAST PROSPECT ESSO MINERALS Job 2702 freq(hz) 13.115
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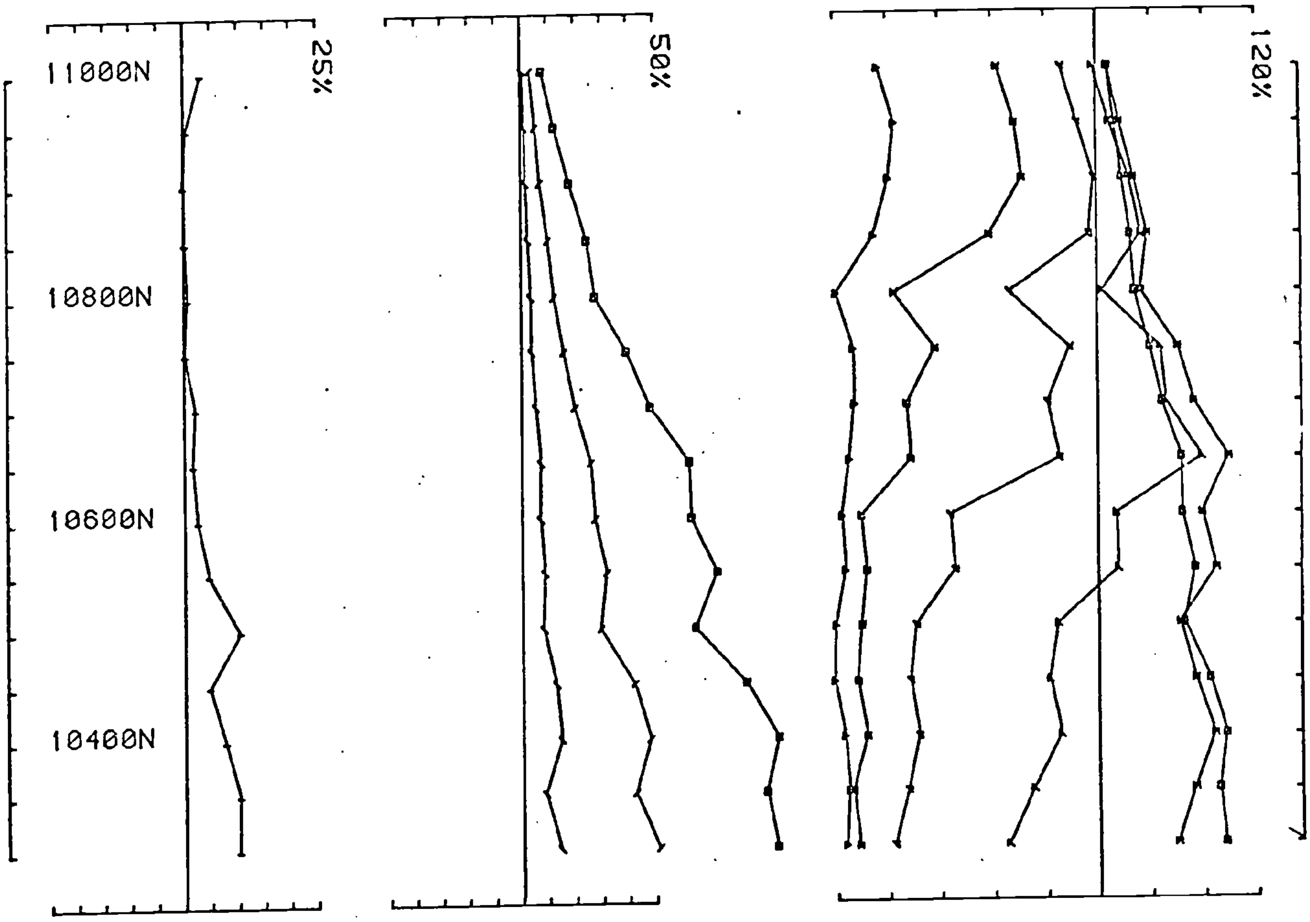
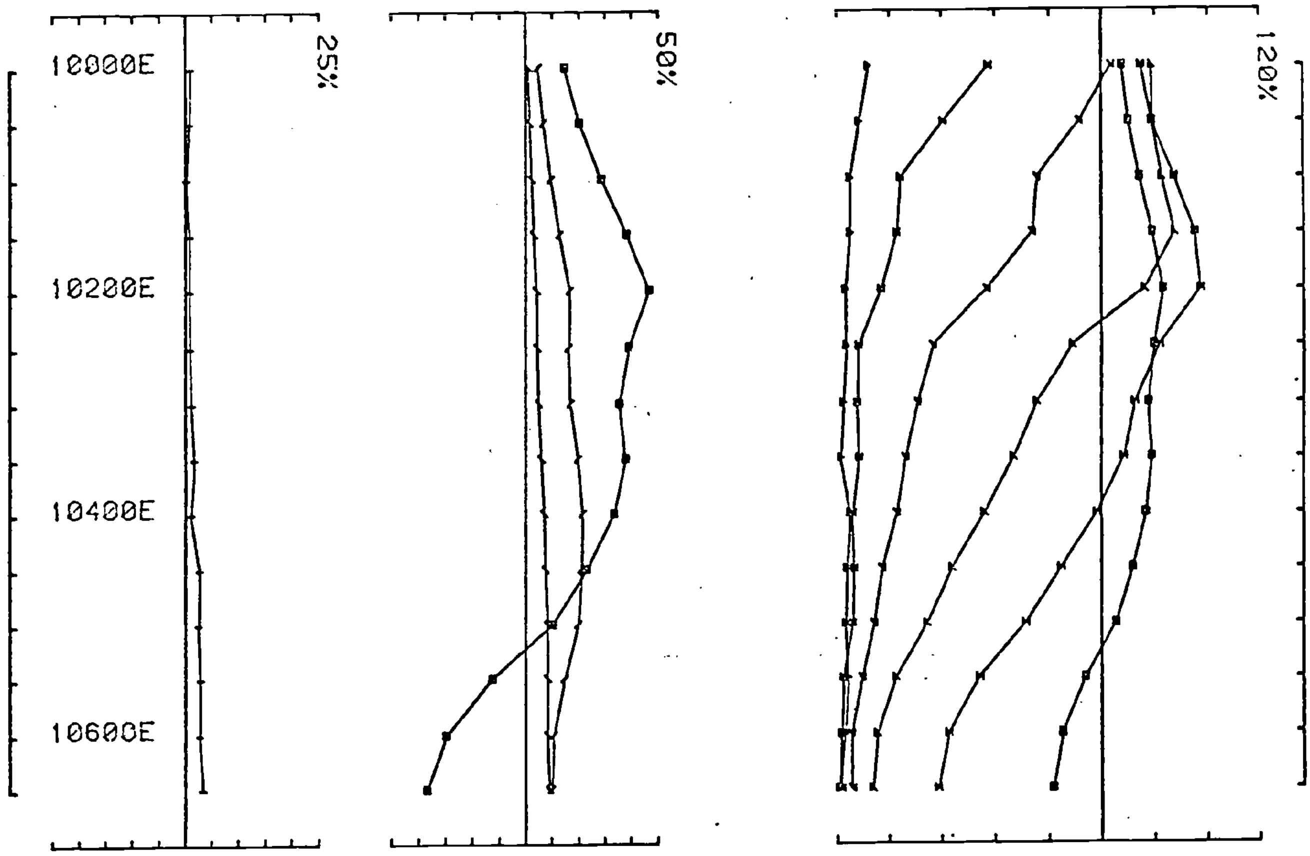
0142



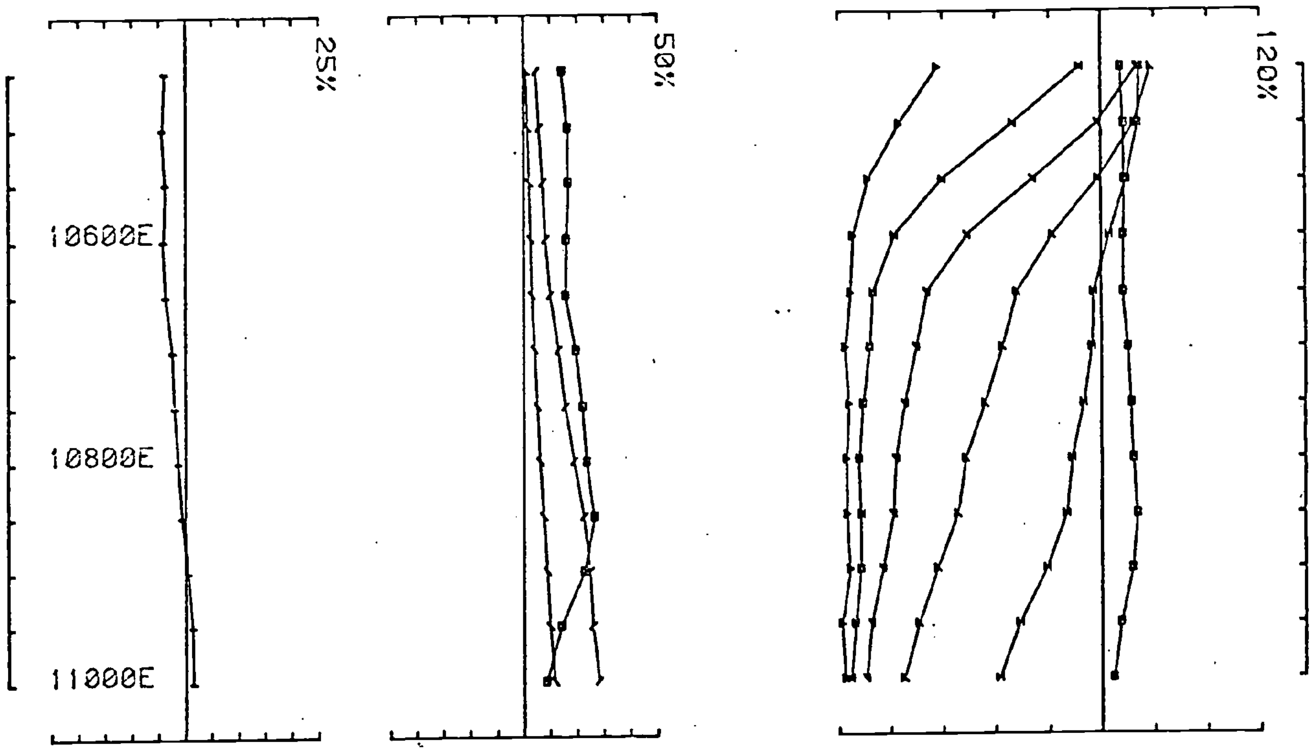
Area BIRTHDAY EAST PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0207 Line 12000E component Hz secondary Ch 1

PINE CREEK PROSPECT



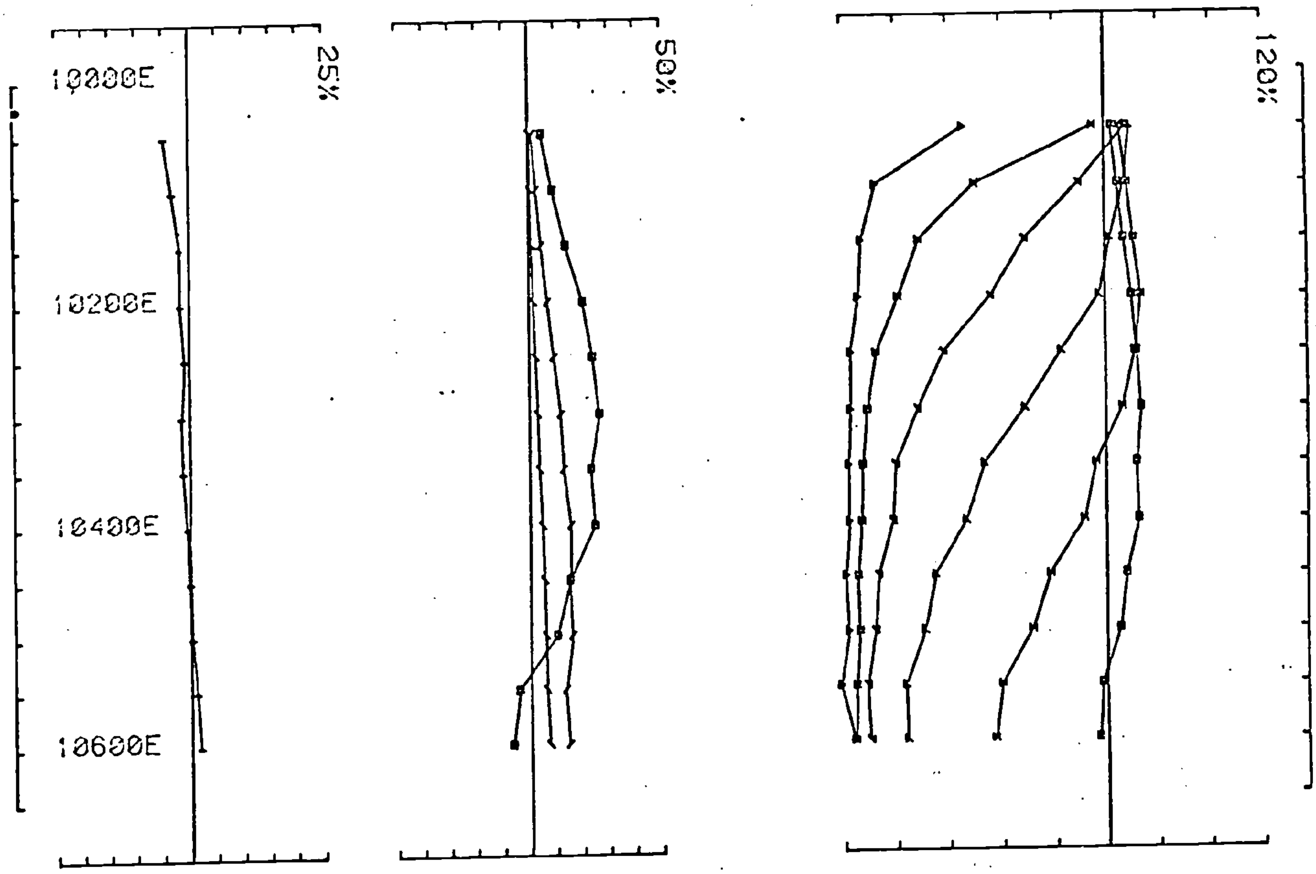
Area PINE CREEK PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0212 Line 11000N component Hz secondary Ch 1

0145



Area PINE CREEK PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 26.230
Loopno 0217 Line 11000N component Hz secondary   Ch 1 .

0146



Area PINE CREEK PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
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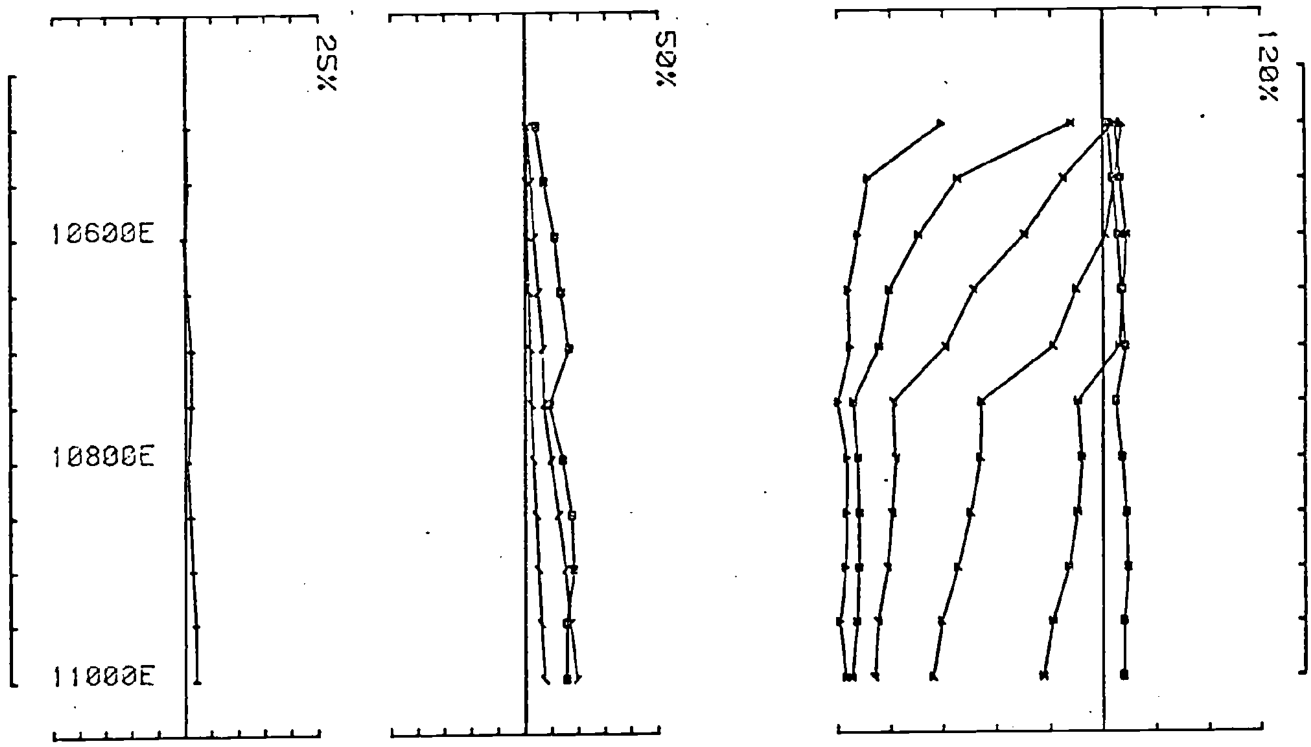
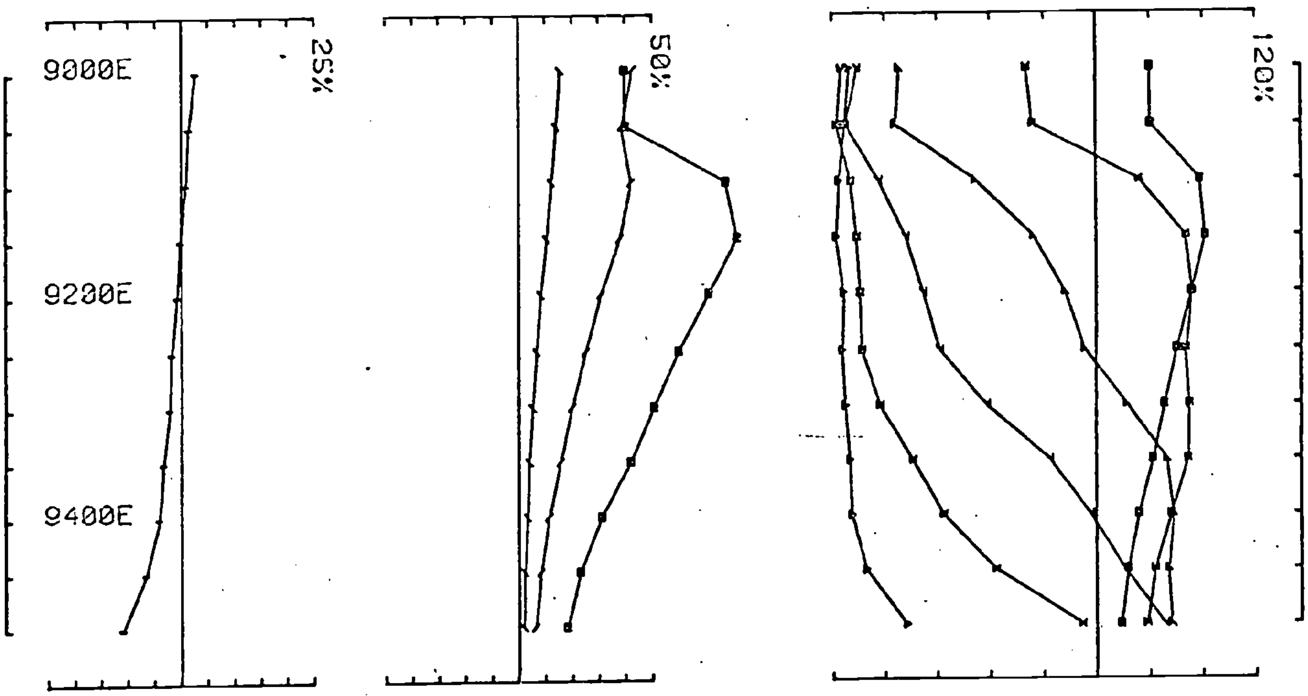
0147



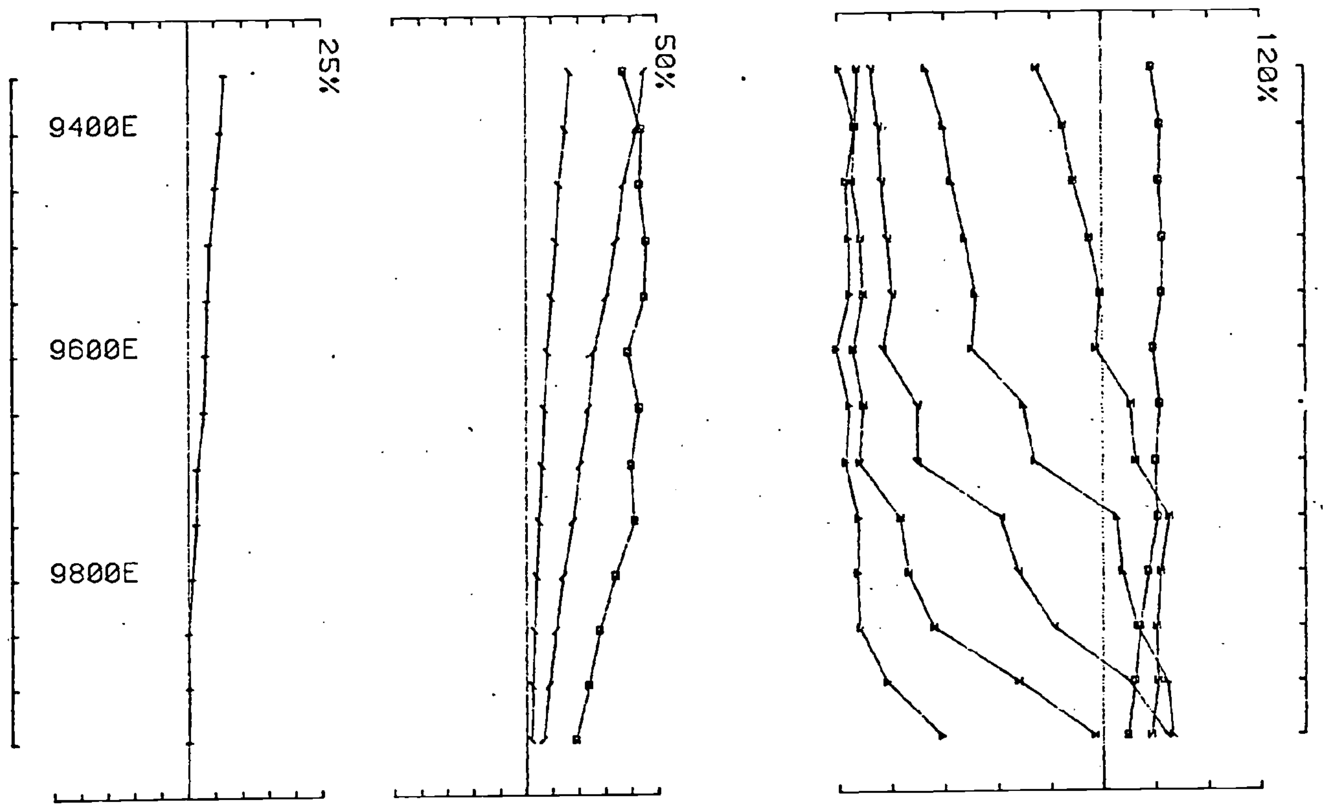
Area PINE CREEK PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 26.230

Loopno 0217 Line 10500N component Hz secondary   Ch 1



Area PINE CREEK PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0213 Line 10000N component Hz secondary Ch 1 .



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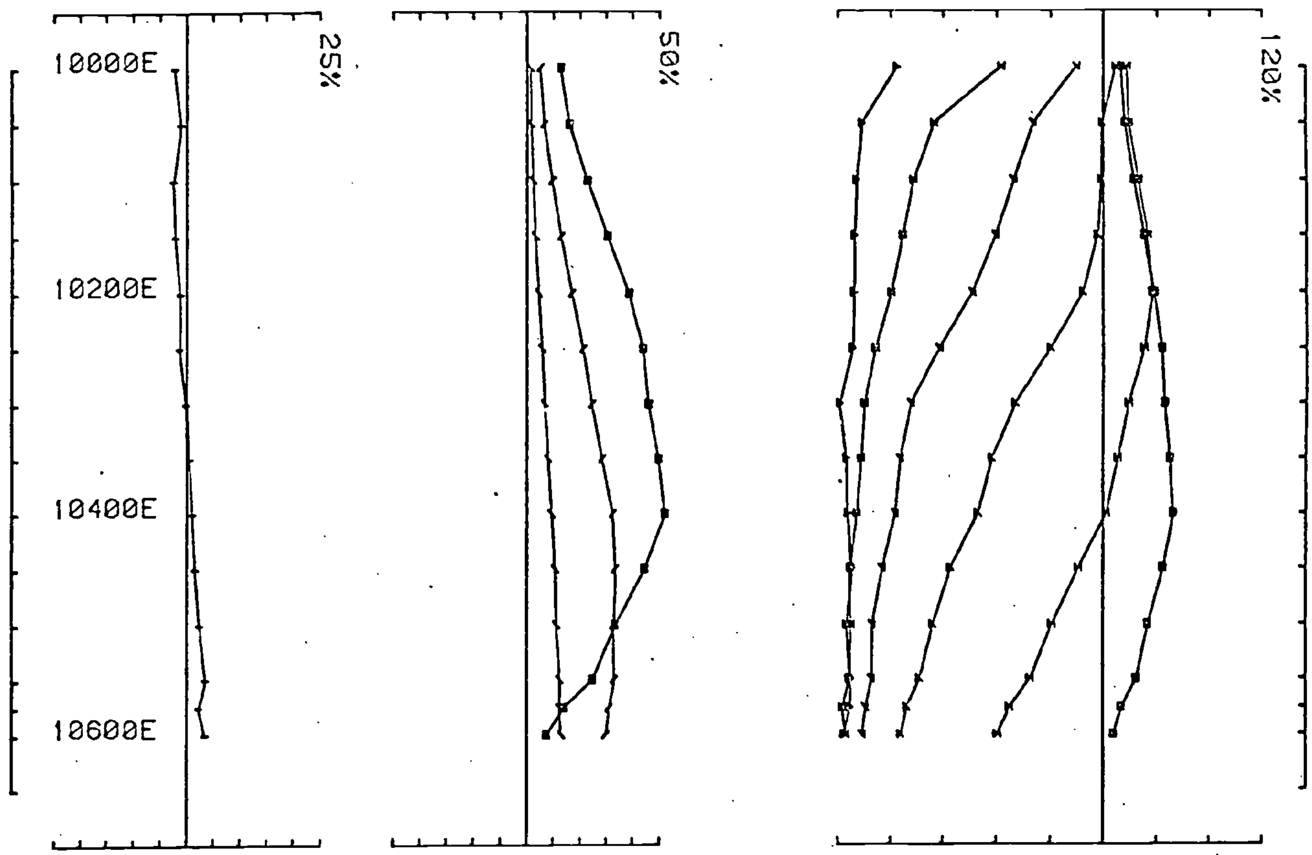
0150



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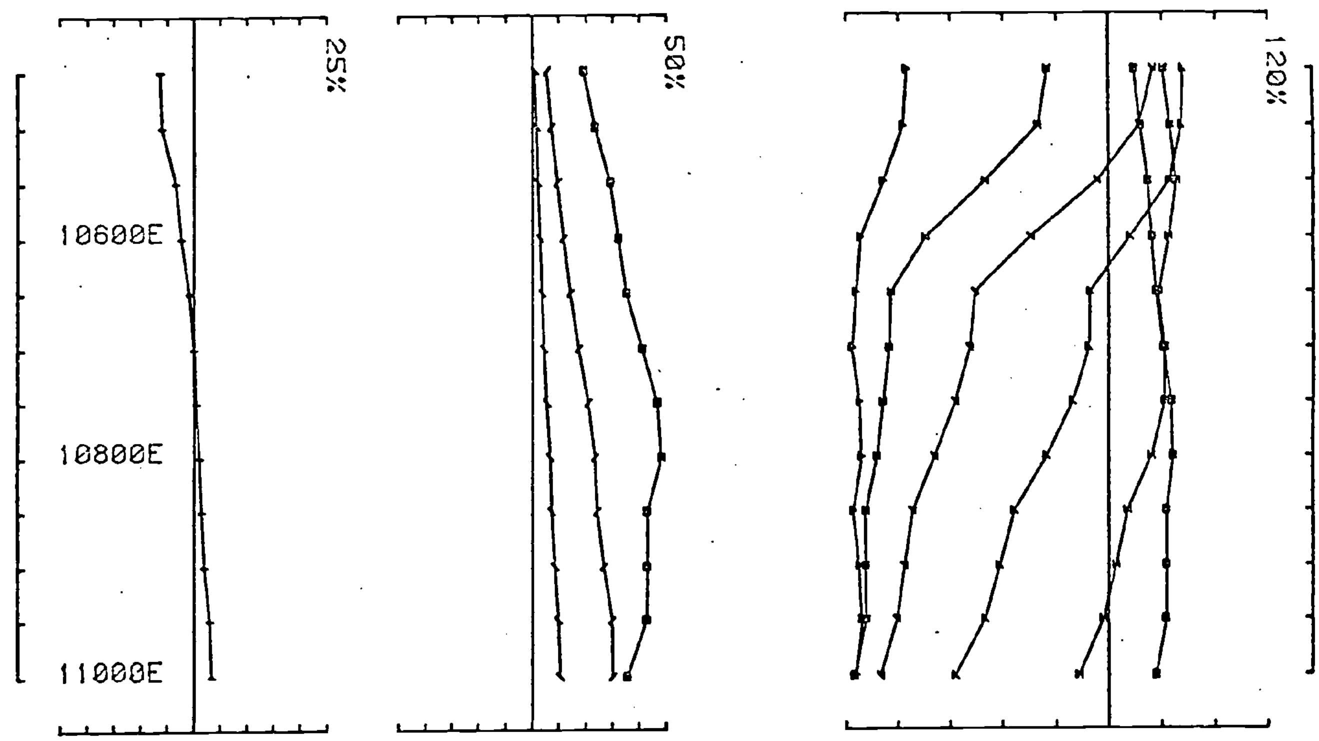

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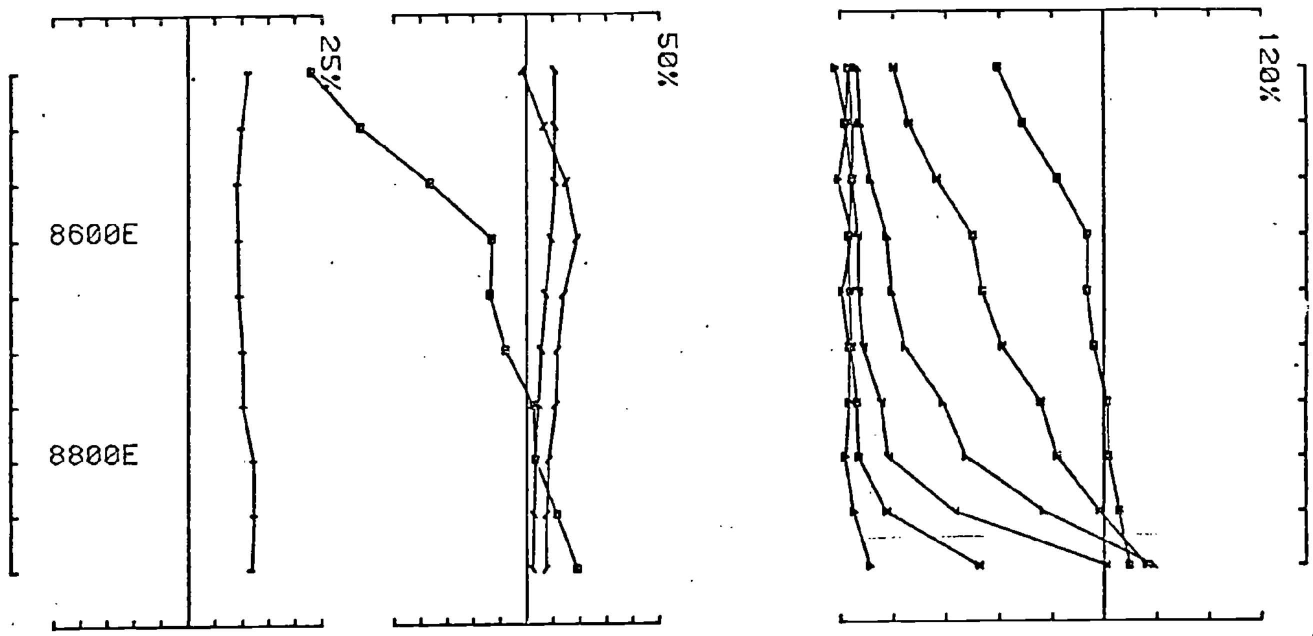
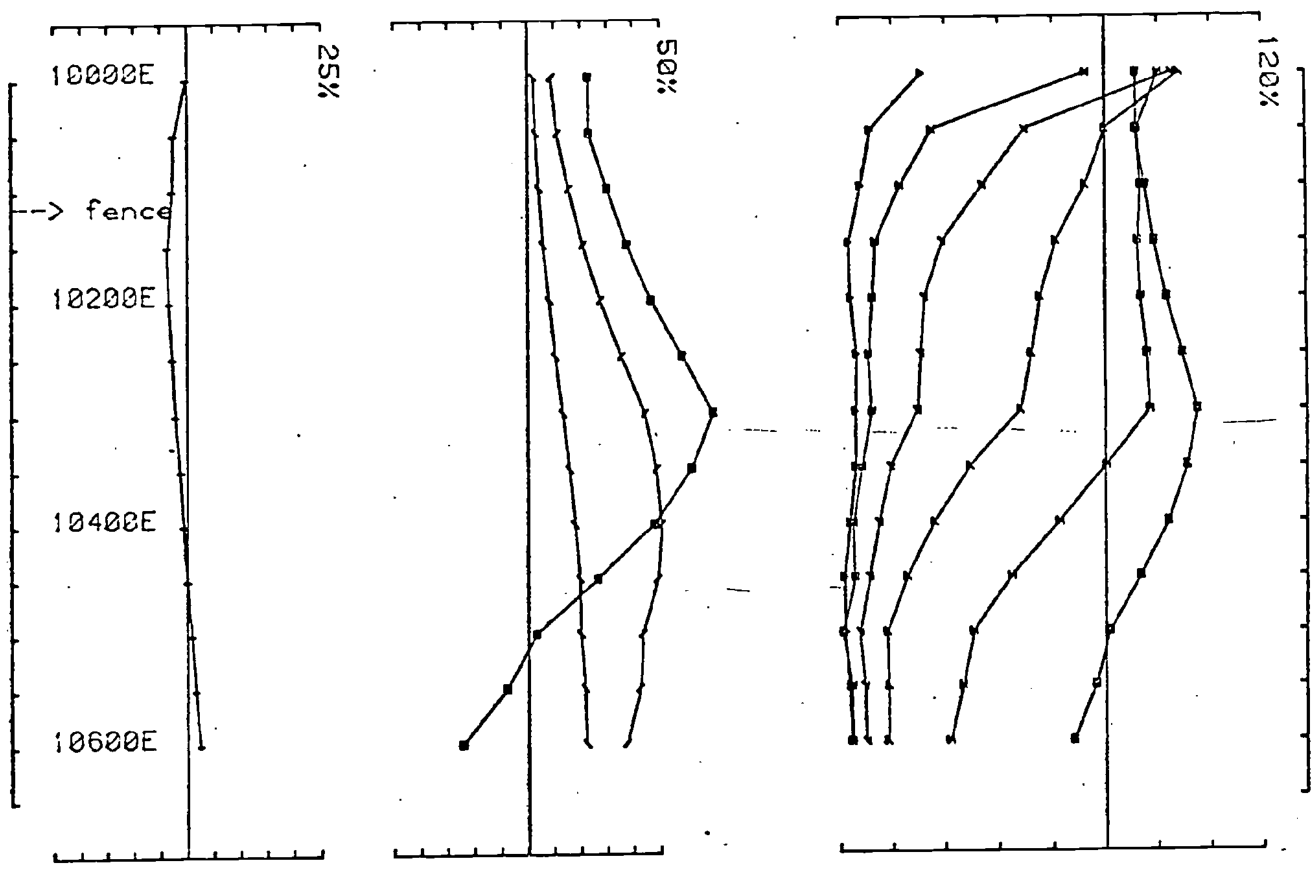


Area PINE CREEK PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0220 Line 9500N component Hz secondary Ch 1

153



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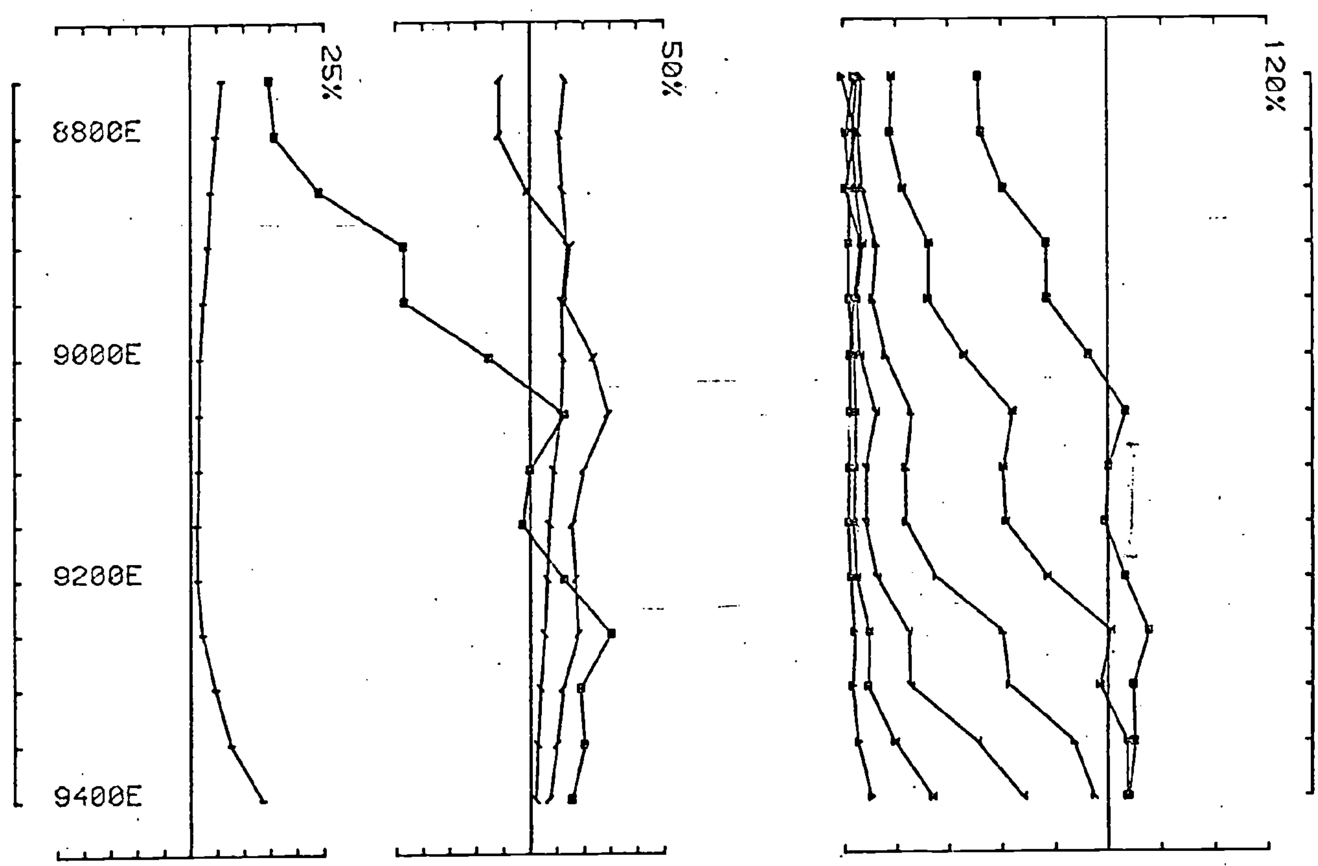
Loopno 0215 Line 8500N component Hz secondary Ch 1



Area PINE CREEK PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
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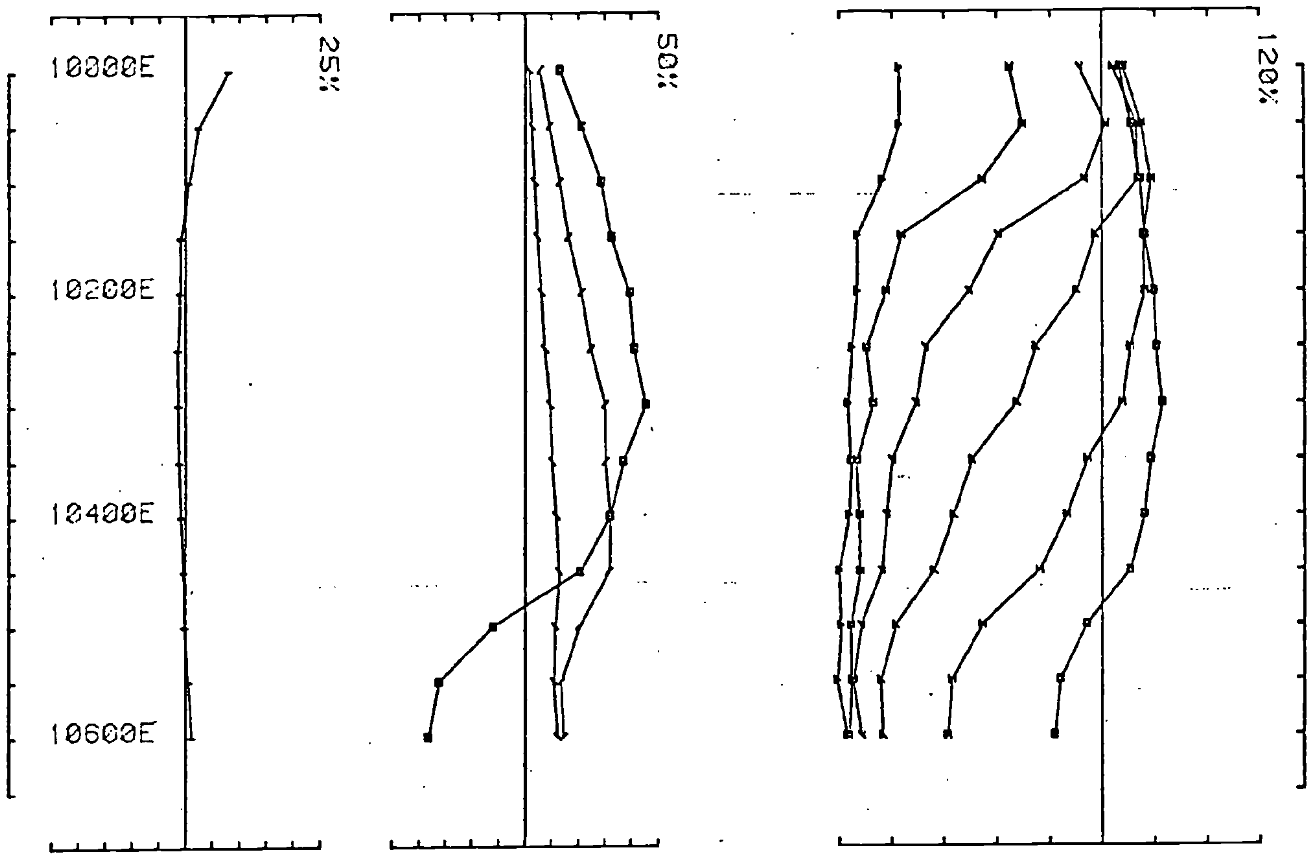

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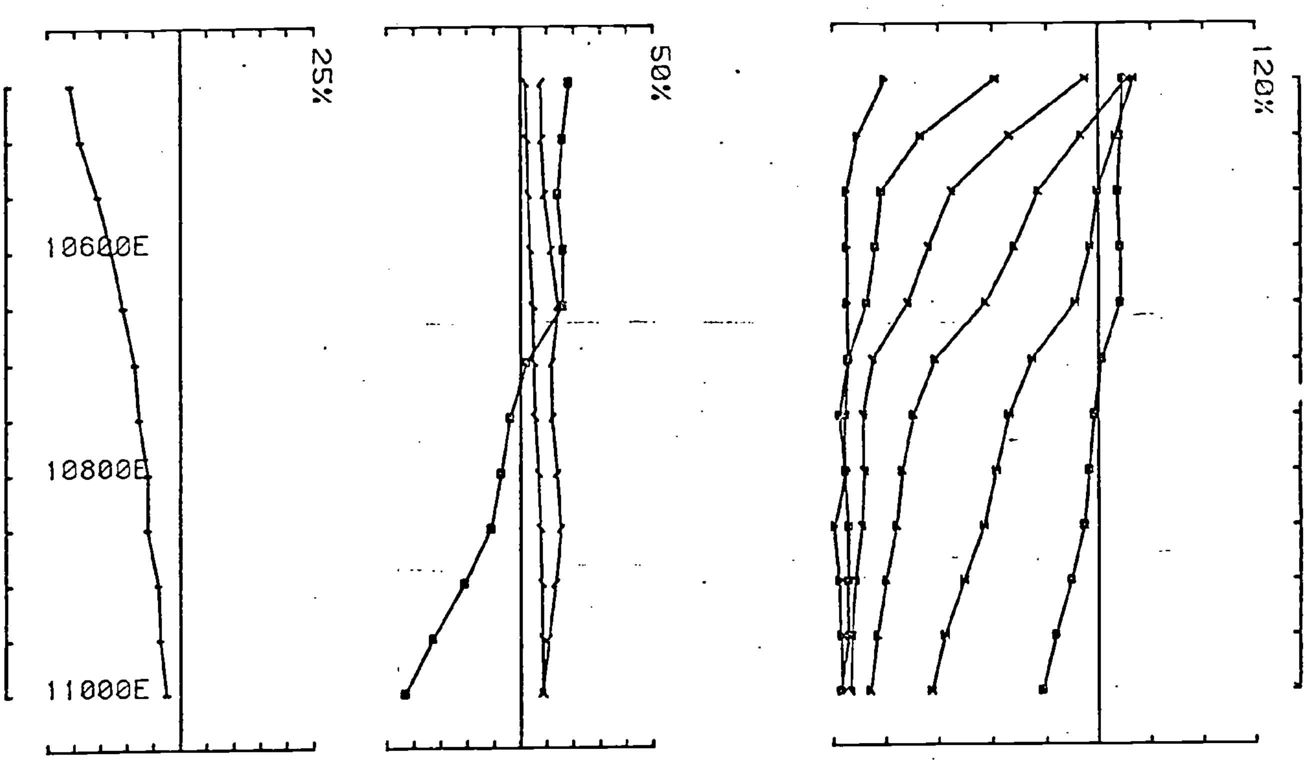
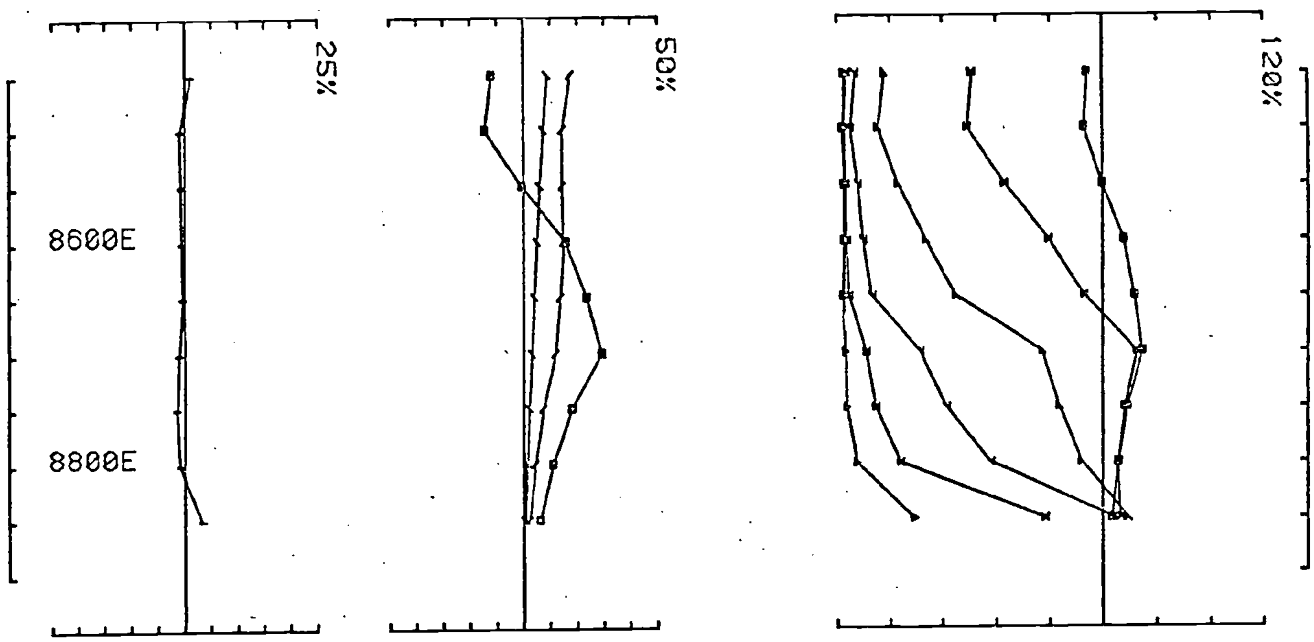
Loopno 0215 Line 9500N component Hz secondary Ch 1 .

0156



Area PINE CREEK PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 26.230

Loopno 0219 Line 9500N component Hz secondary   Ch 1



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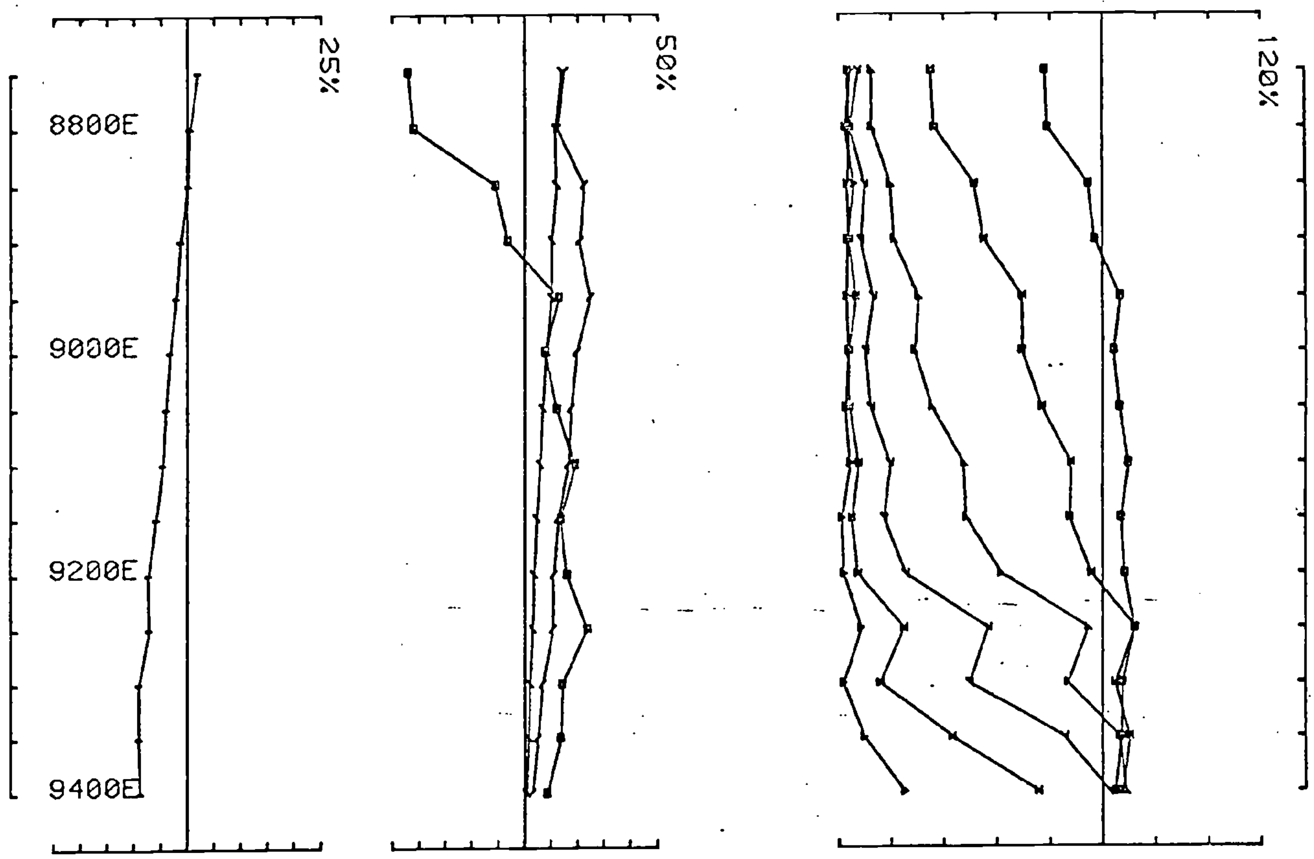
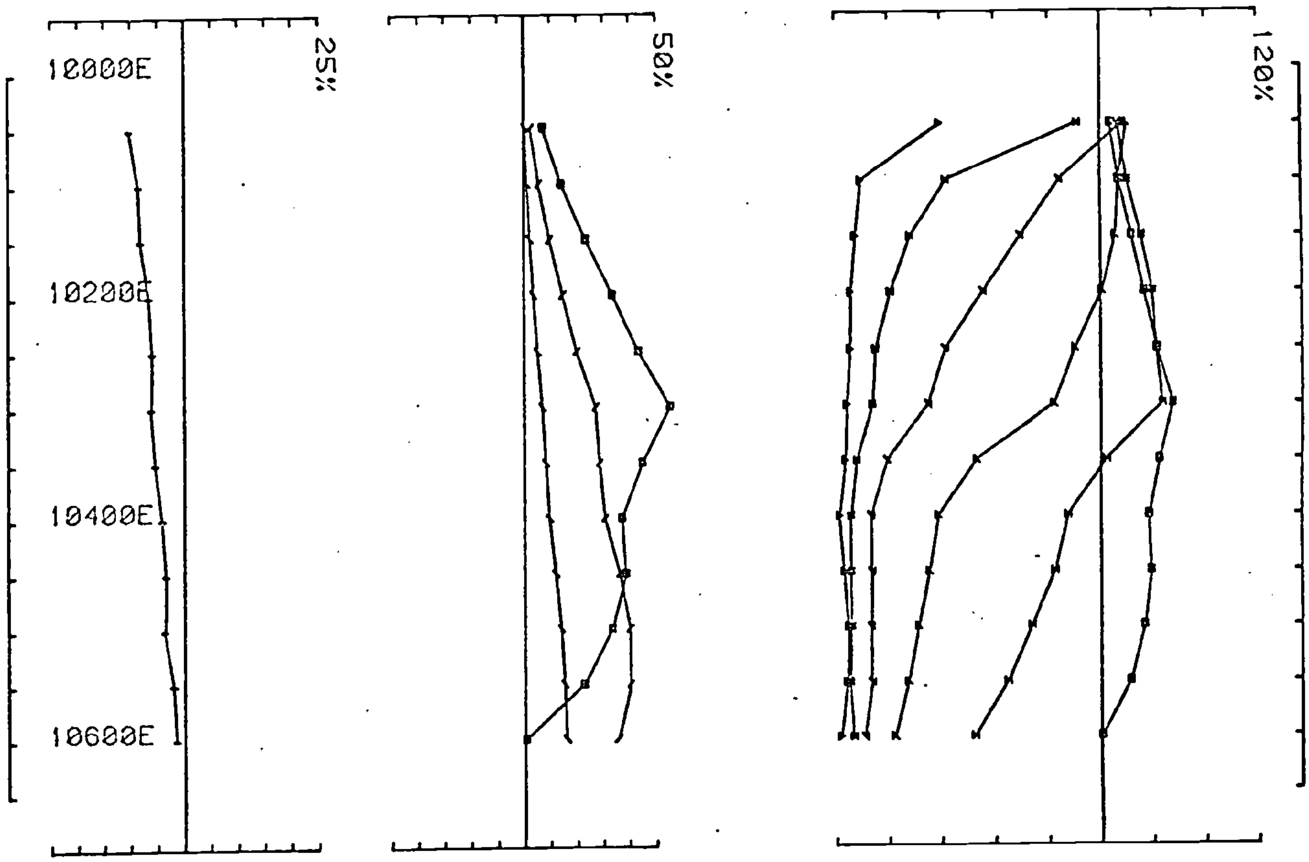
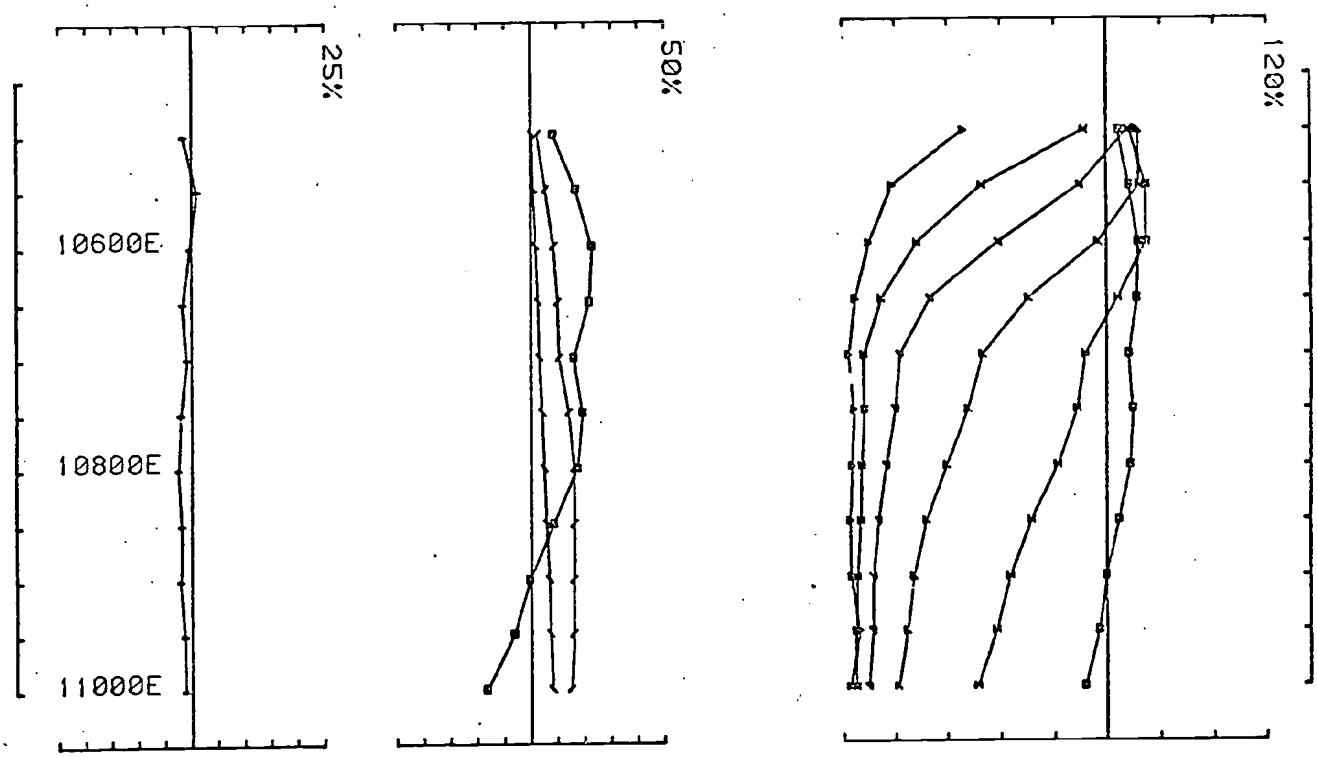
0158



Area PINE CREEK PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 26.230
Loopno 0216 Line 9000N component Hz secondary   Ch 1



Area PINE CREEK PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0215 Line 9000N component Hz secondary Ch 1



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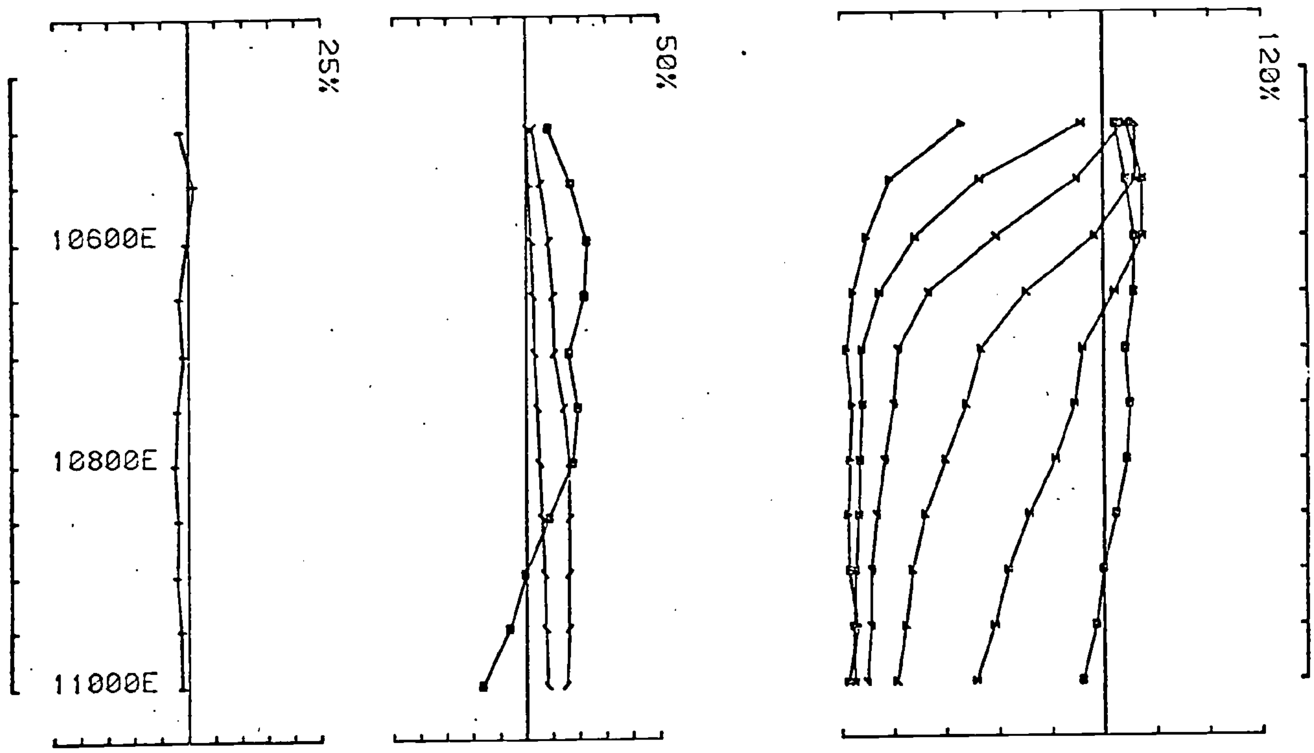
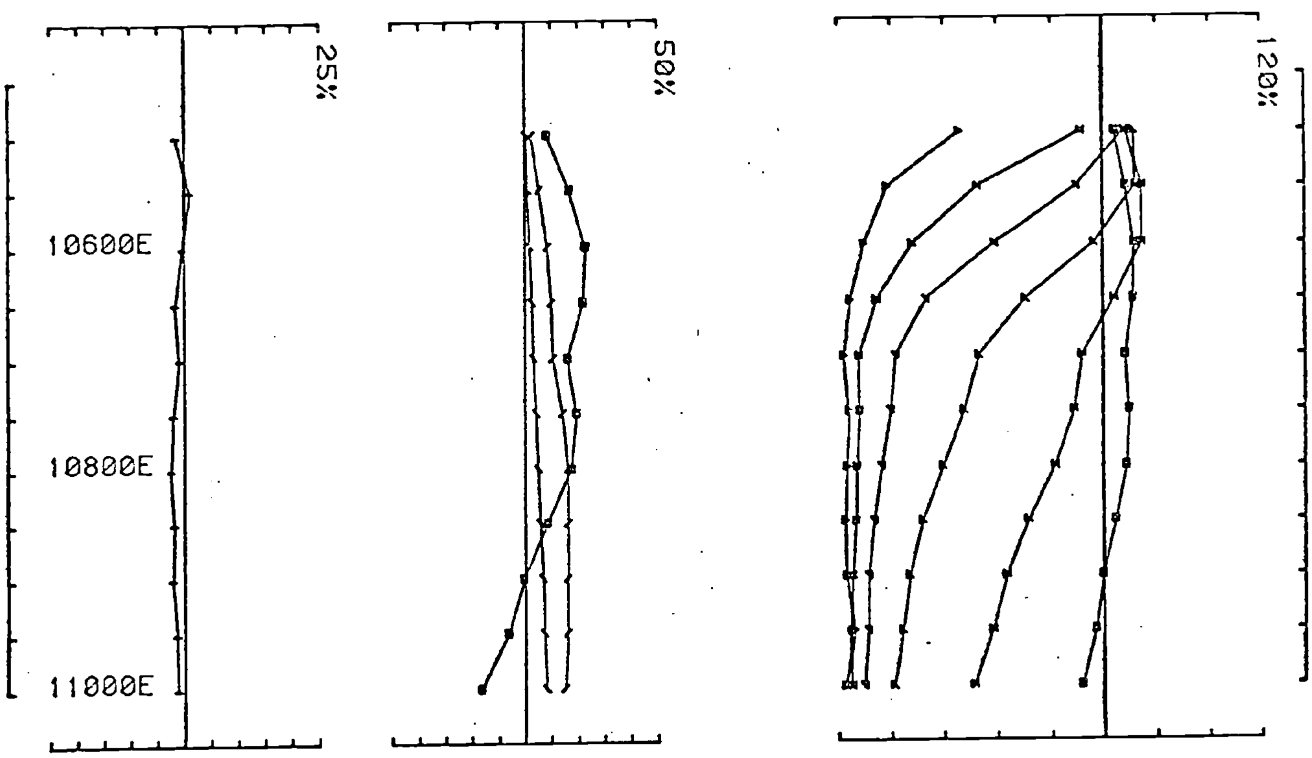
Loopno 0219 Line 9000N component Hz secondary Ch 1

0161



Area PINE CREEK PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 26.230

Loopno 0219   Line 9000N component   Hz   secondary   Ch 1



Area PINE CREEK PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

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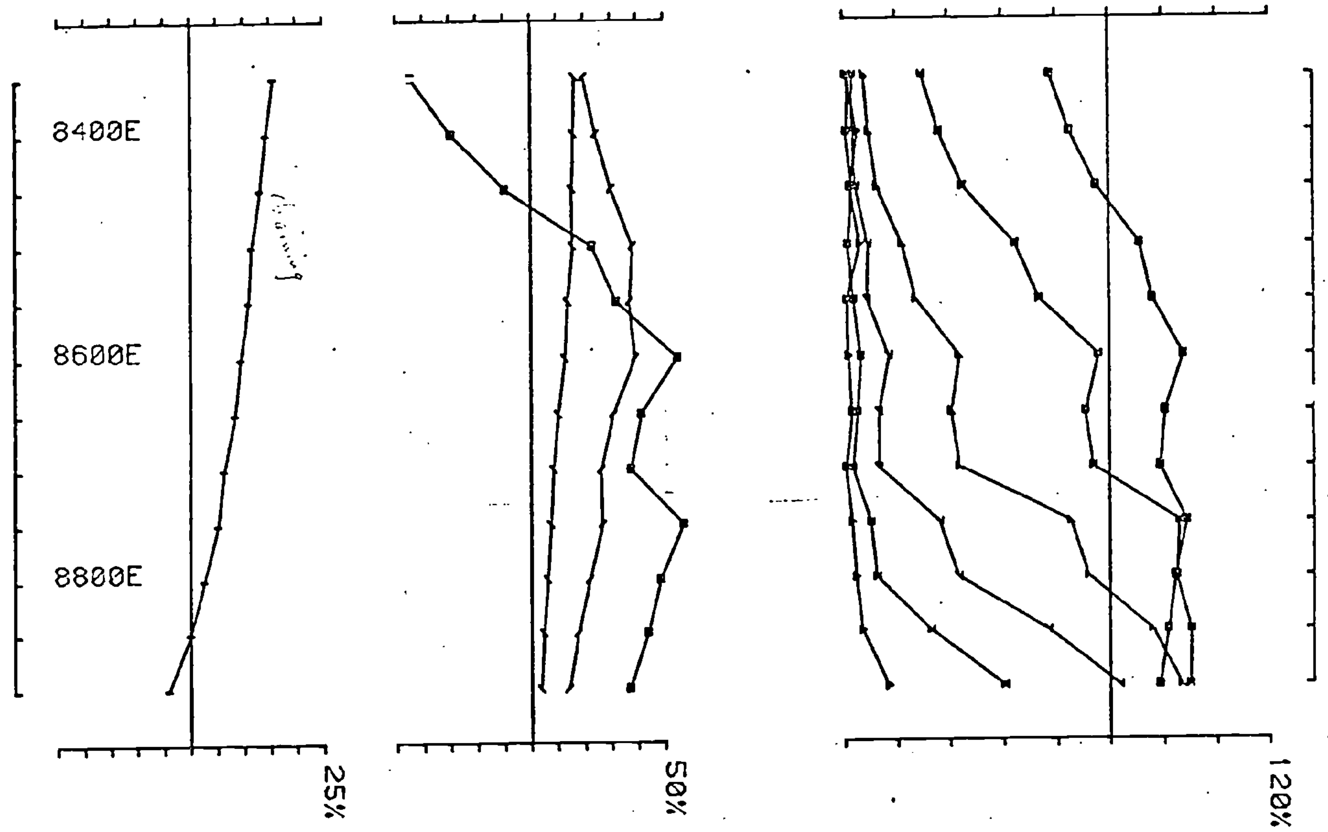

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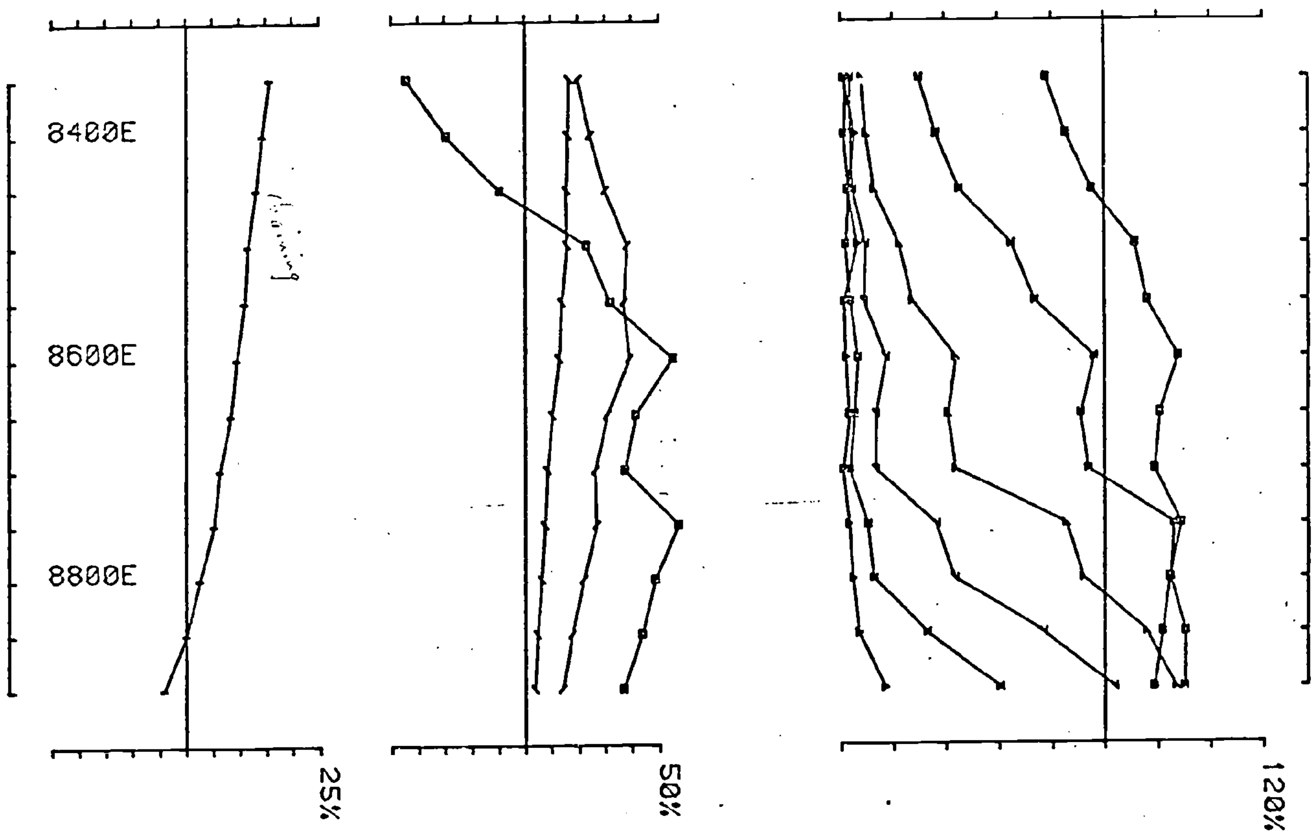

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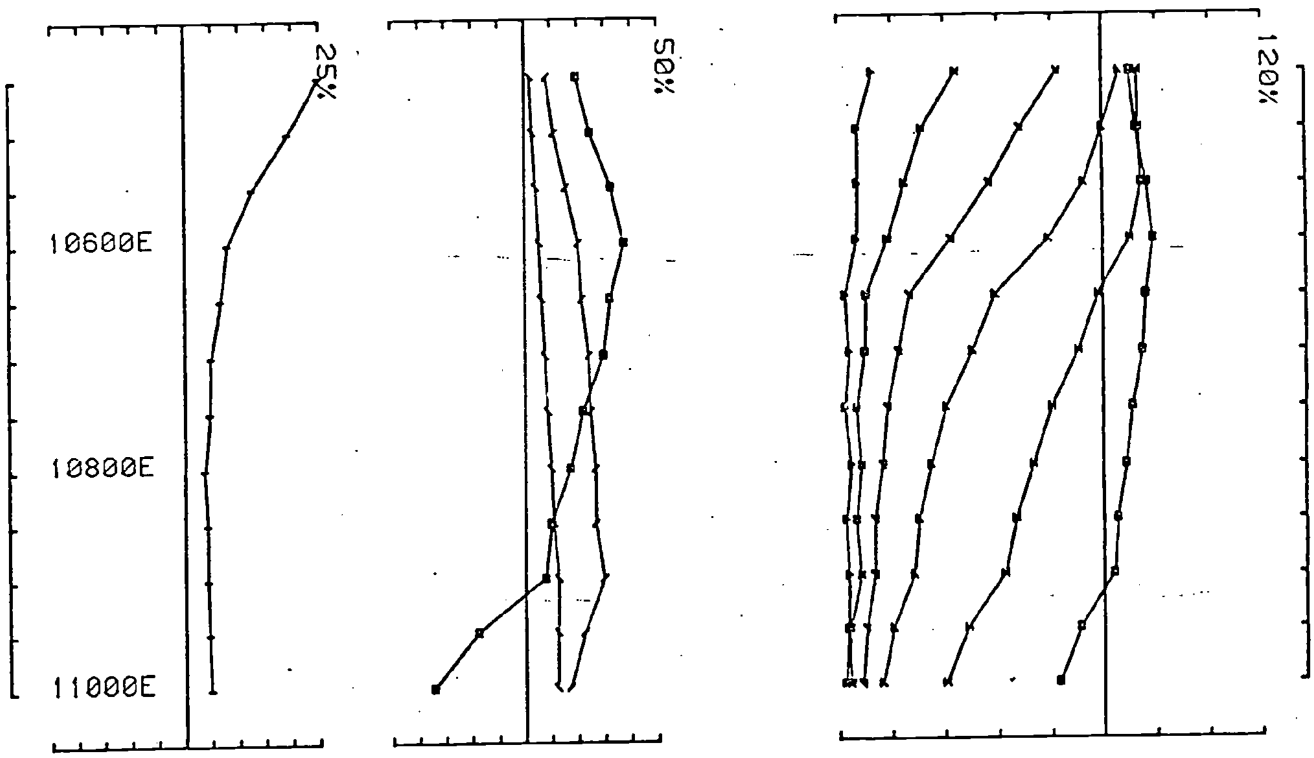
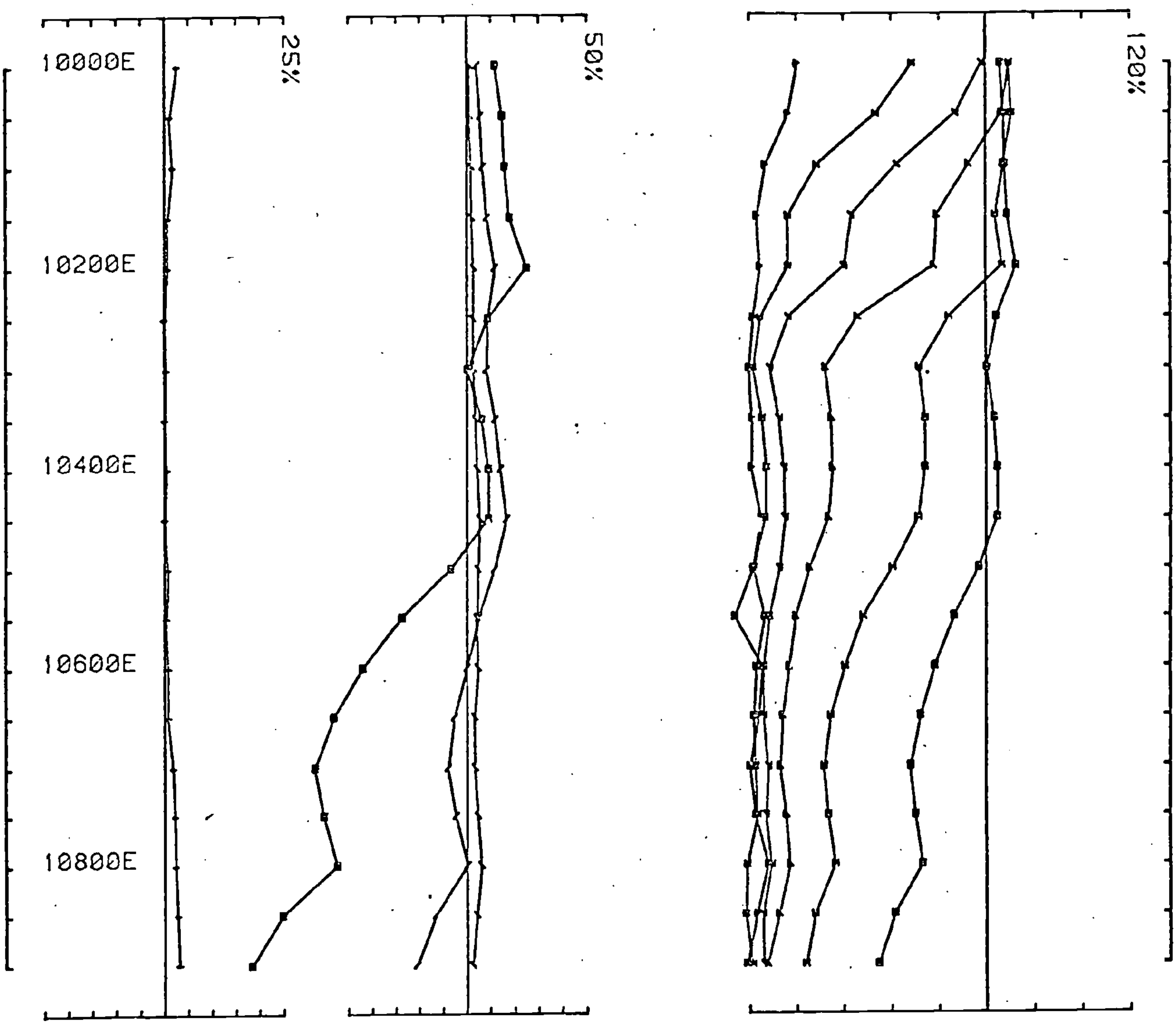
Loopno 0220 Line 8500N component Hz secondary Ch 1

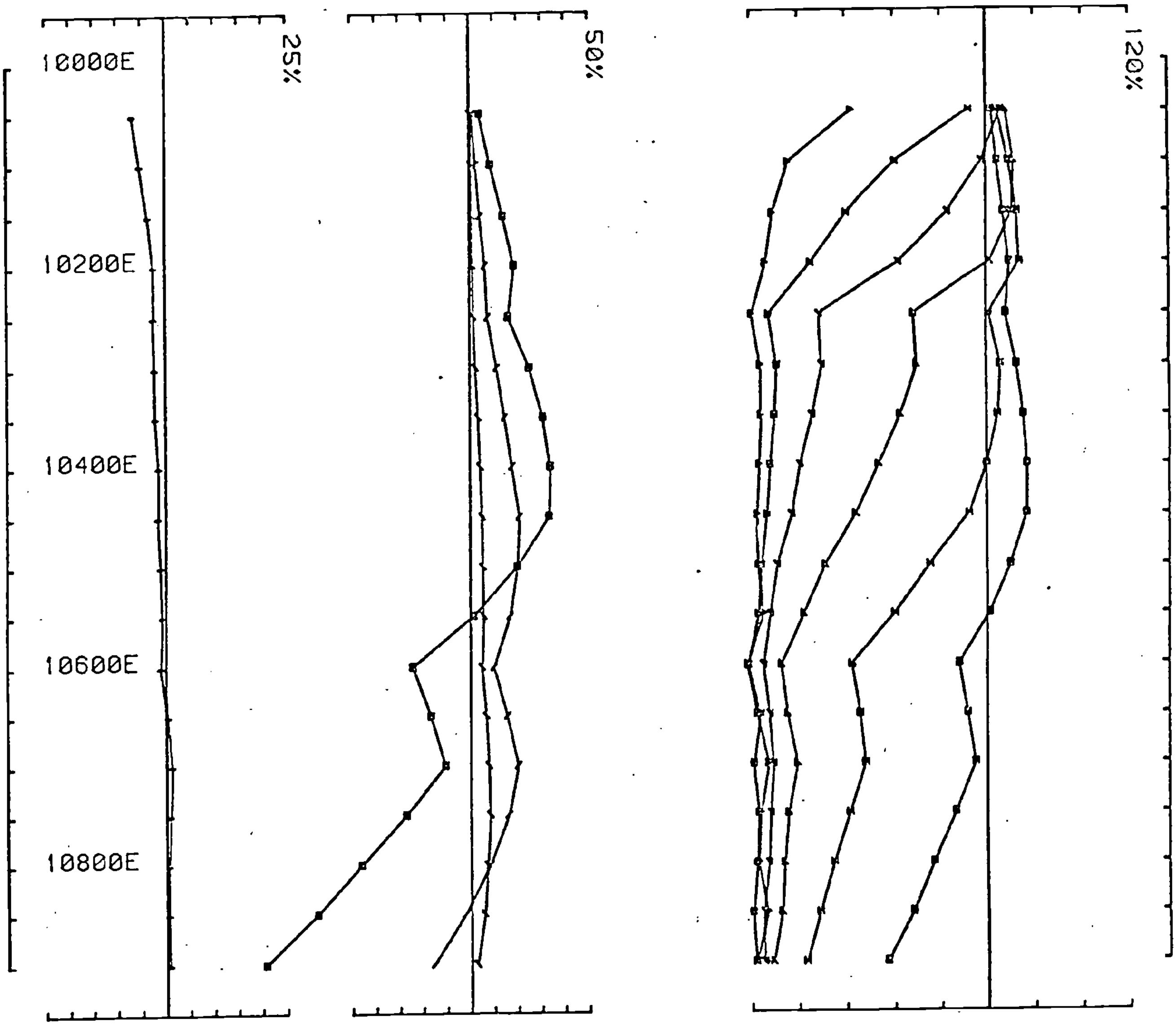


Area PINE CREEK PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0219 Line 8500N component Hz secondary Ch 1

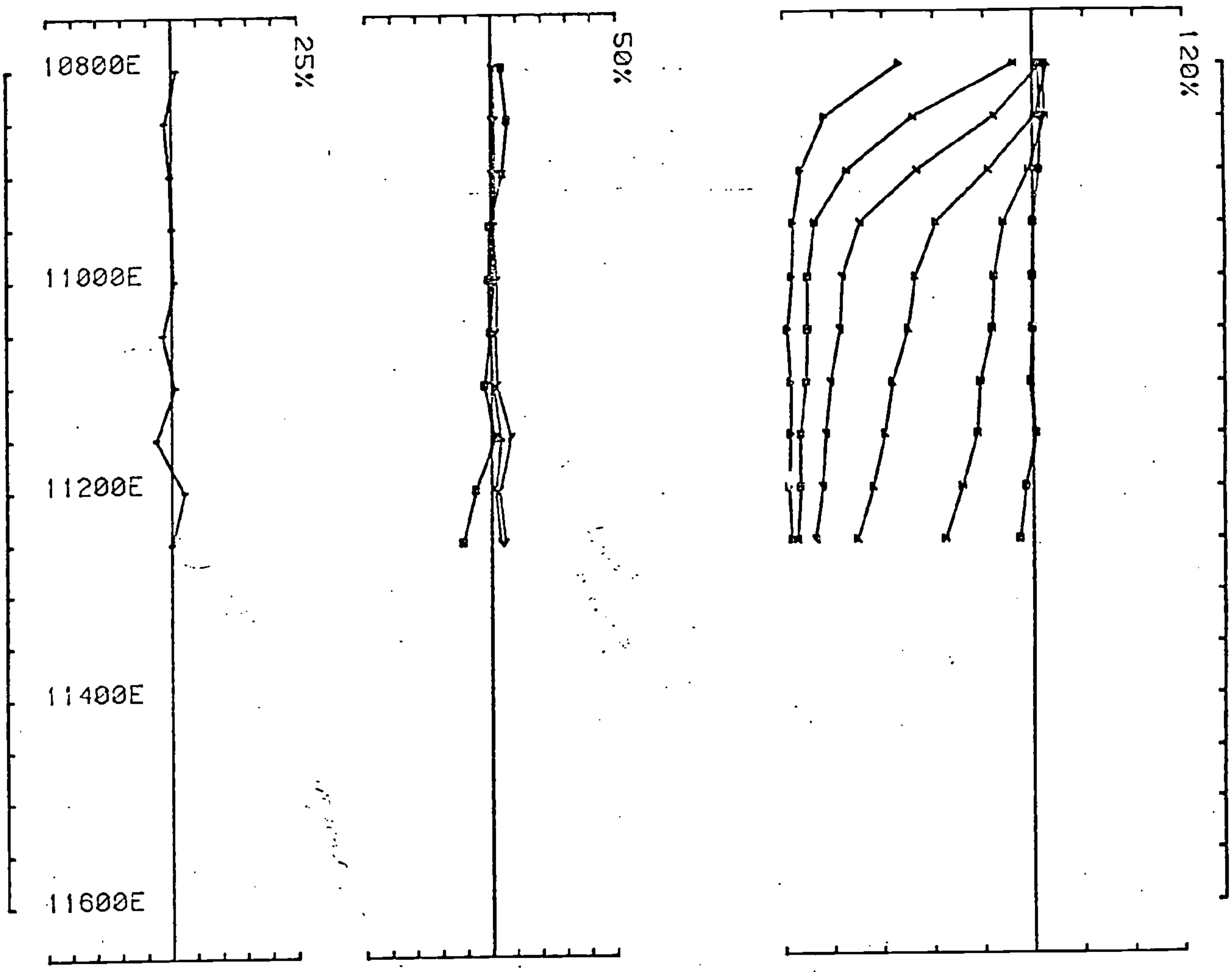
STAR PROSPECT



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0221 Line 12000N component Hz secondary Ch 1



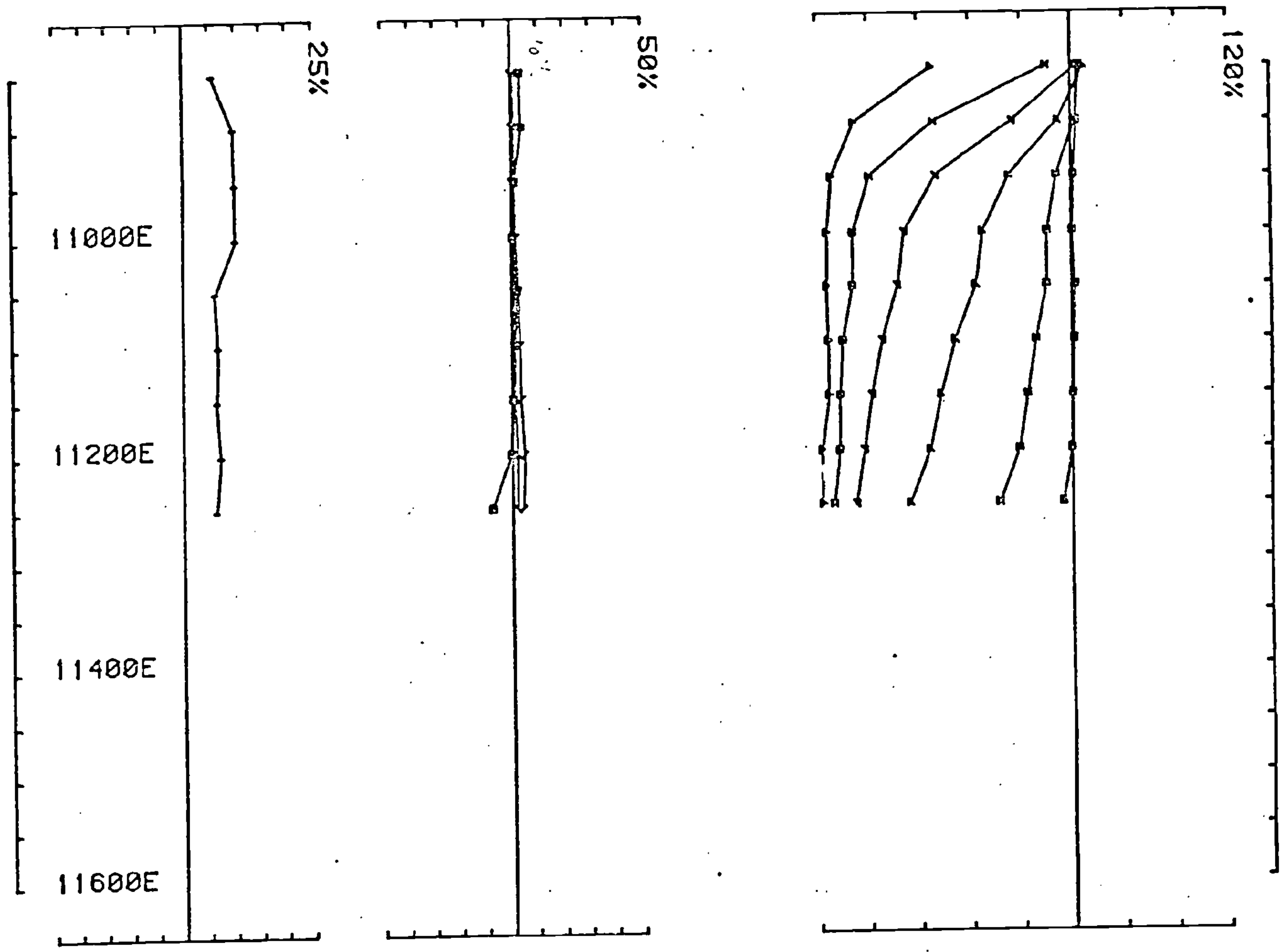
Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0221 Line 11500N component Hz secondary Ch 1



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0223 Line 11500N component Hz secondary Ch 1

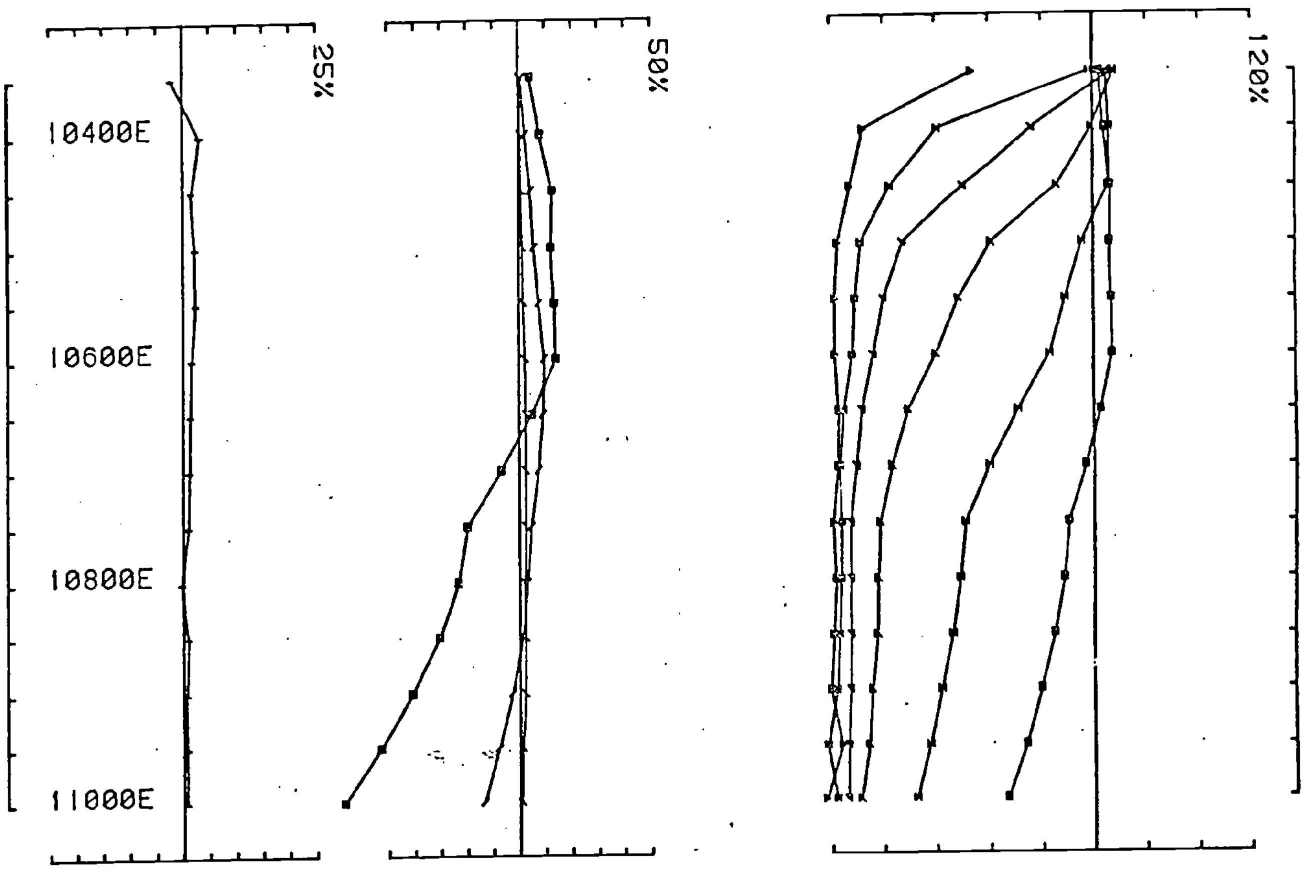
0170



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0249 Line 11500N component Hz secondary Ch 1

Replat



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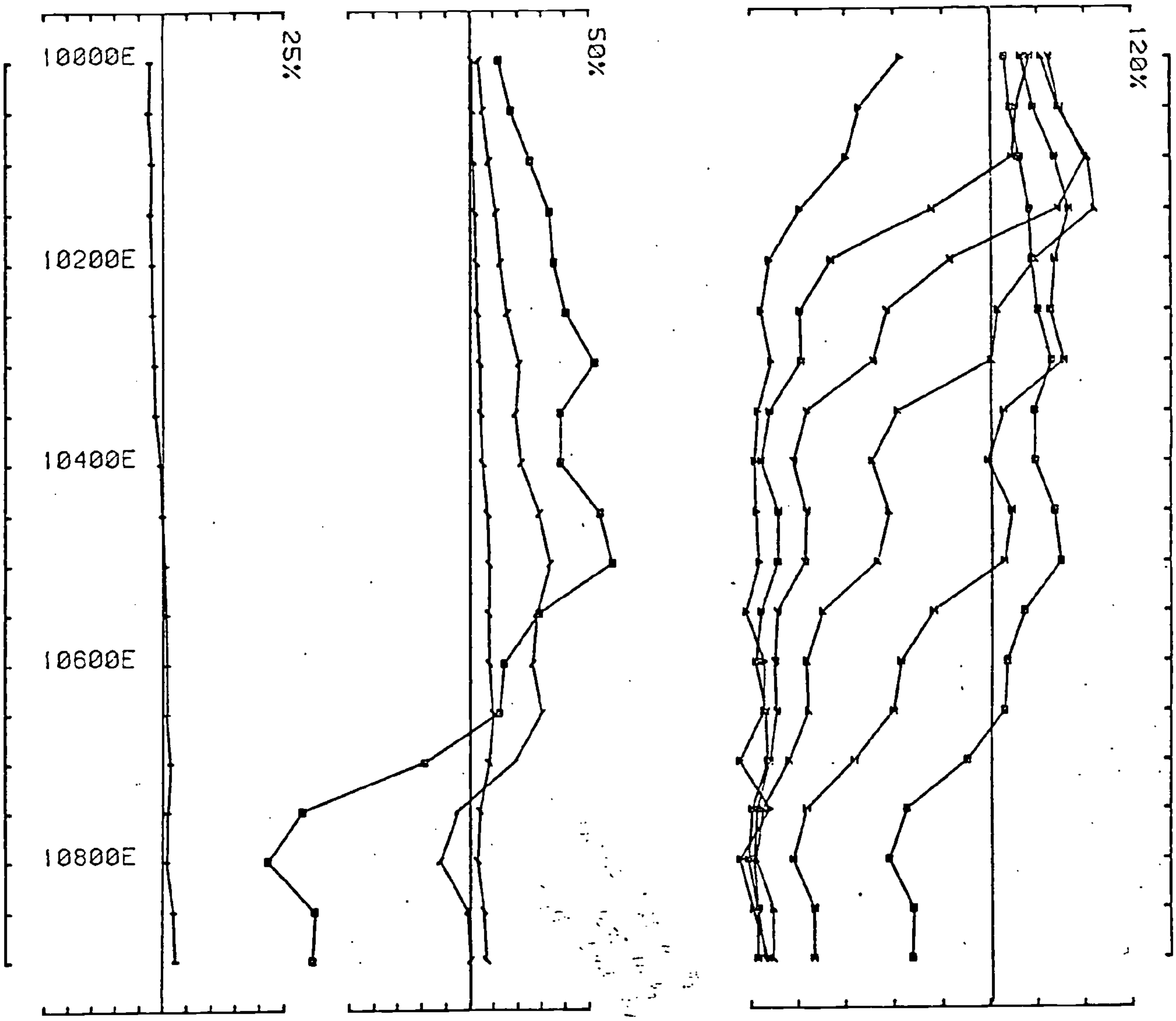
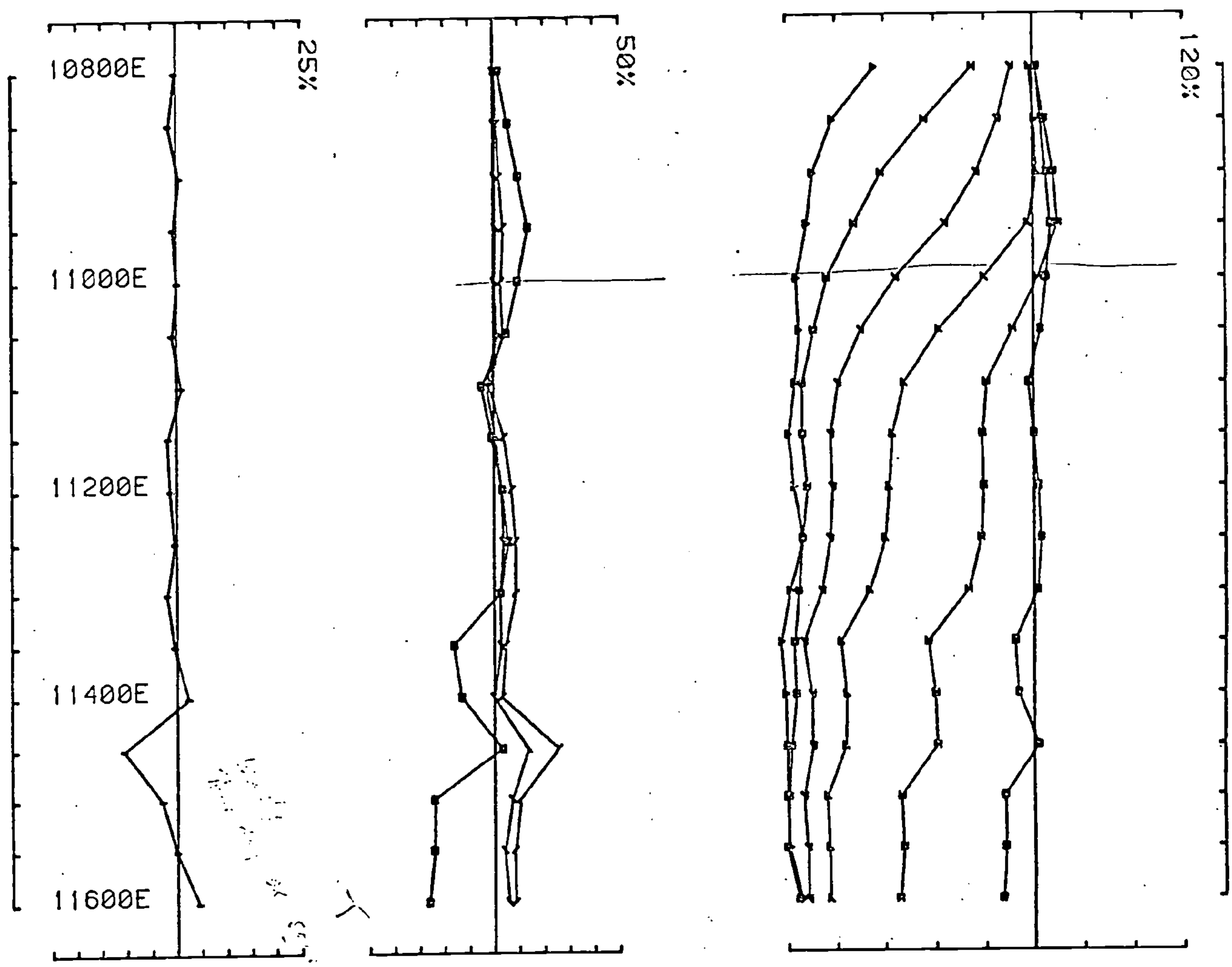
Loopno.0251 Line 11250N component Hz secondary Ch 1

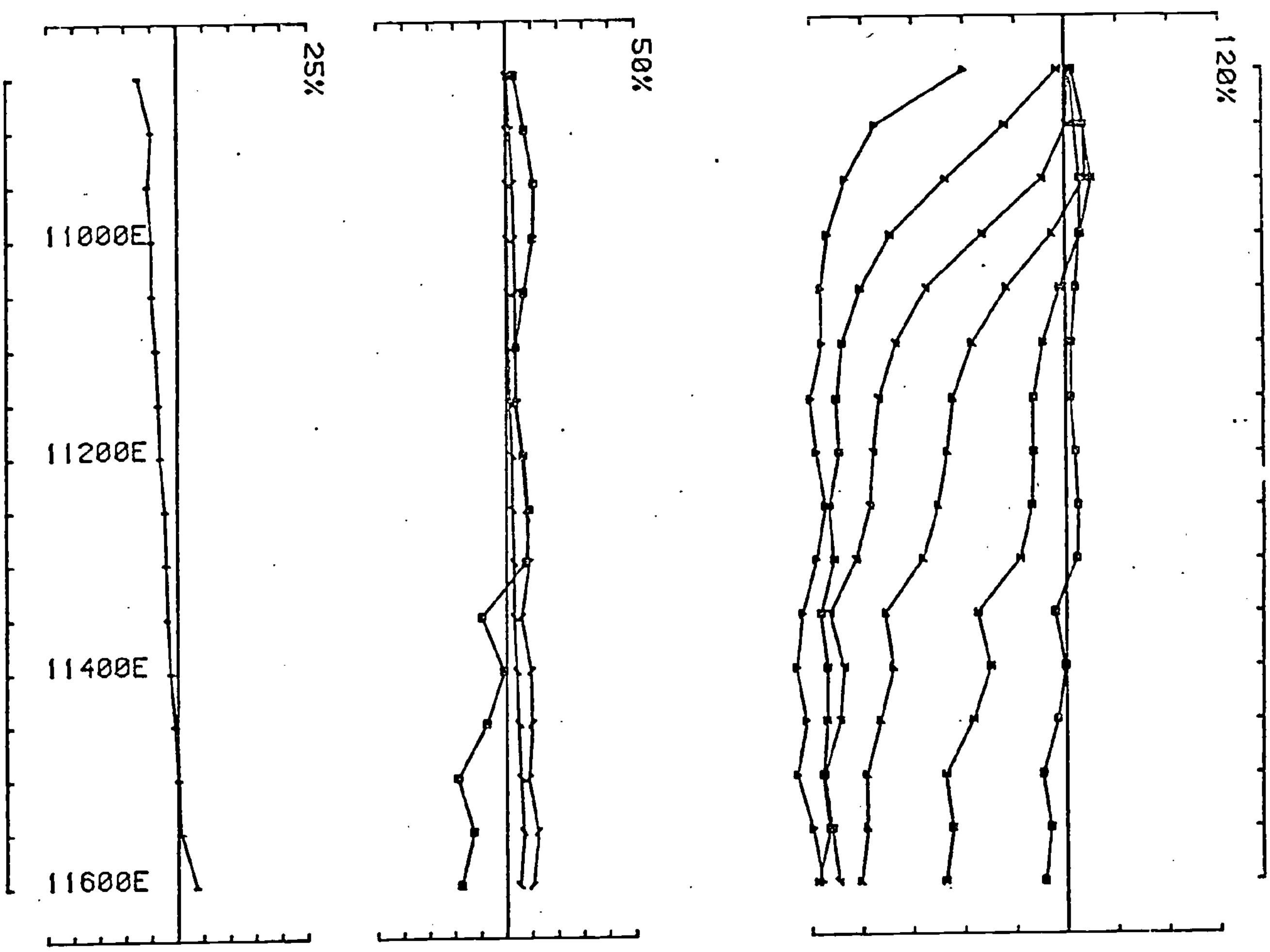


Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26..230

Loopno 0221 Line 11000N component Hz secondary Ch 1



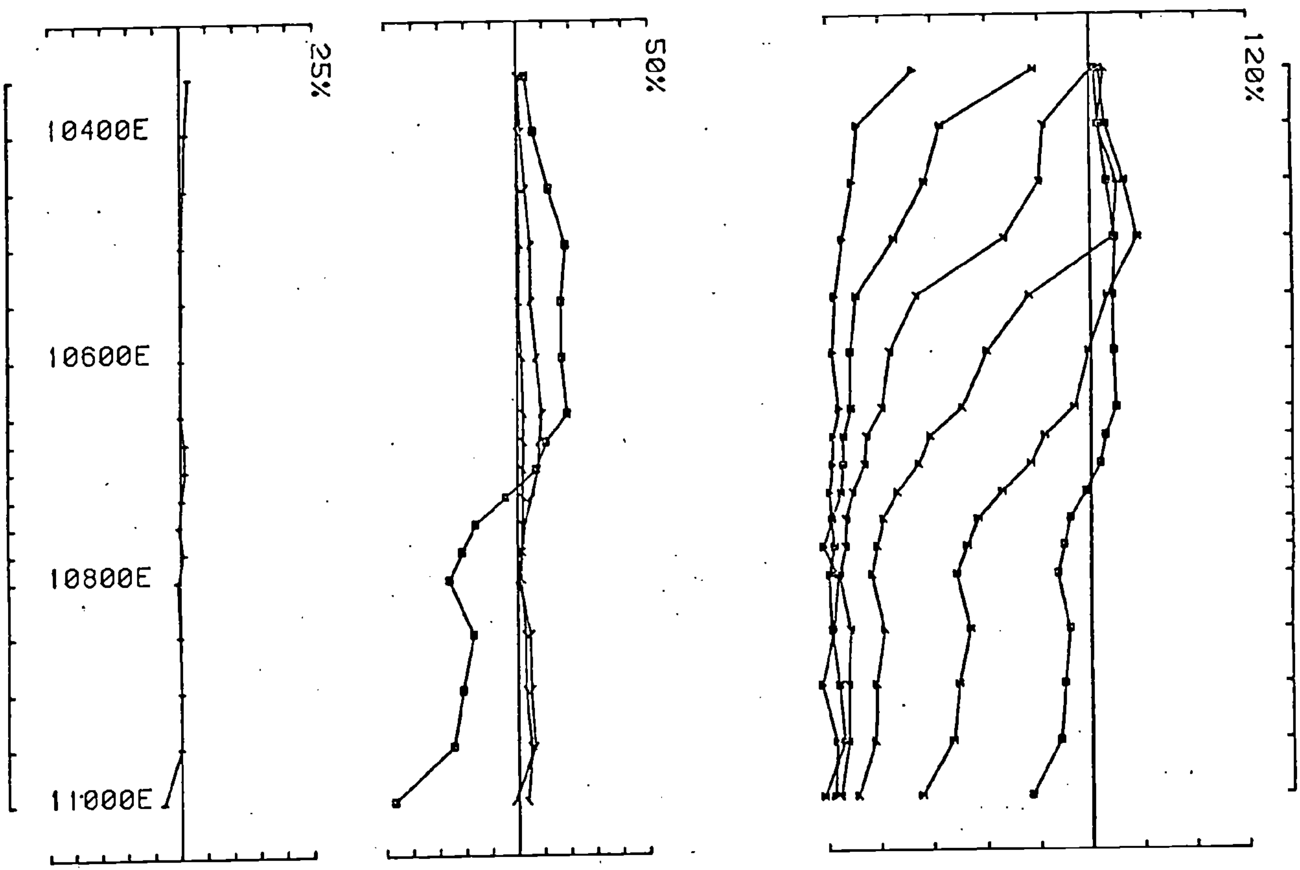
Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0223 Line 11000N component Hz secondary Ch 1



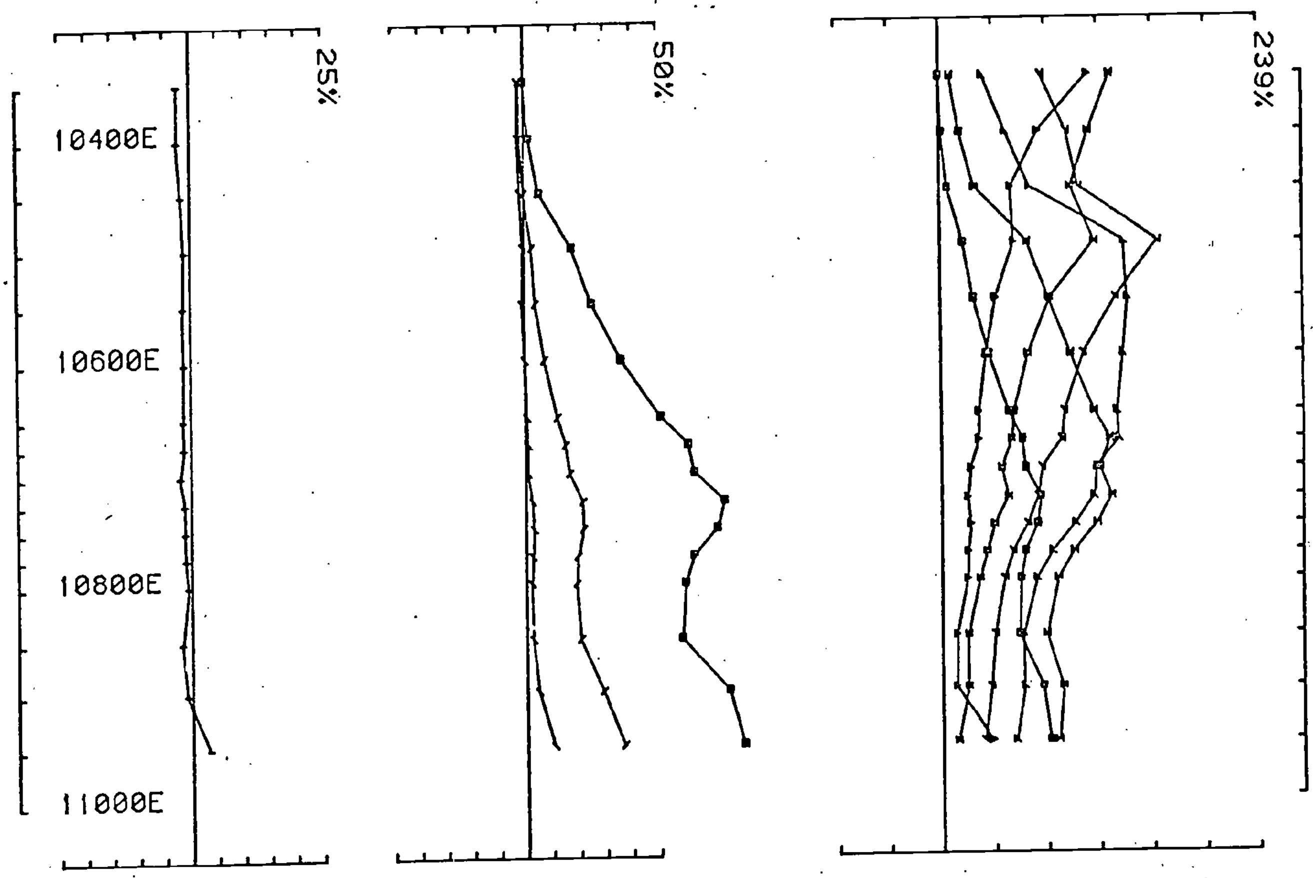
Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0249 Line 11000N component Hz secondary Ch 1

REPEAT

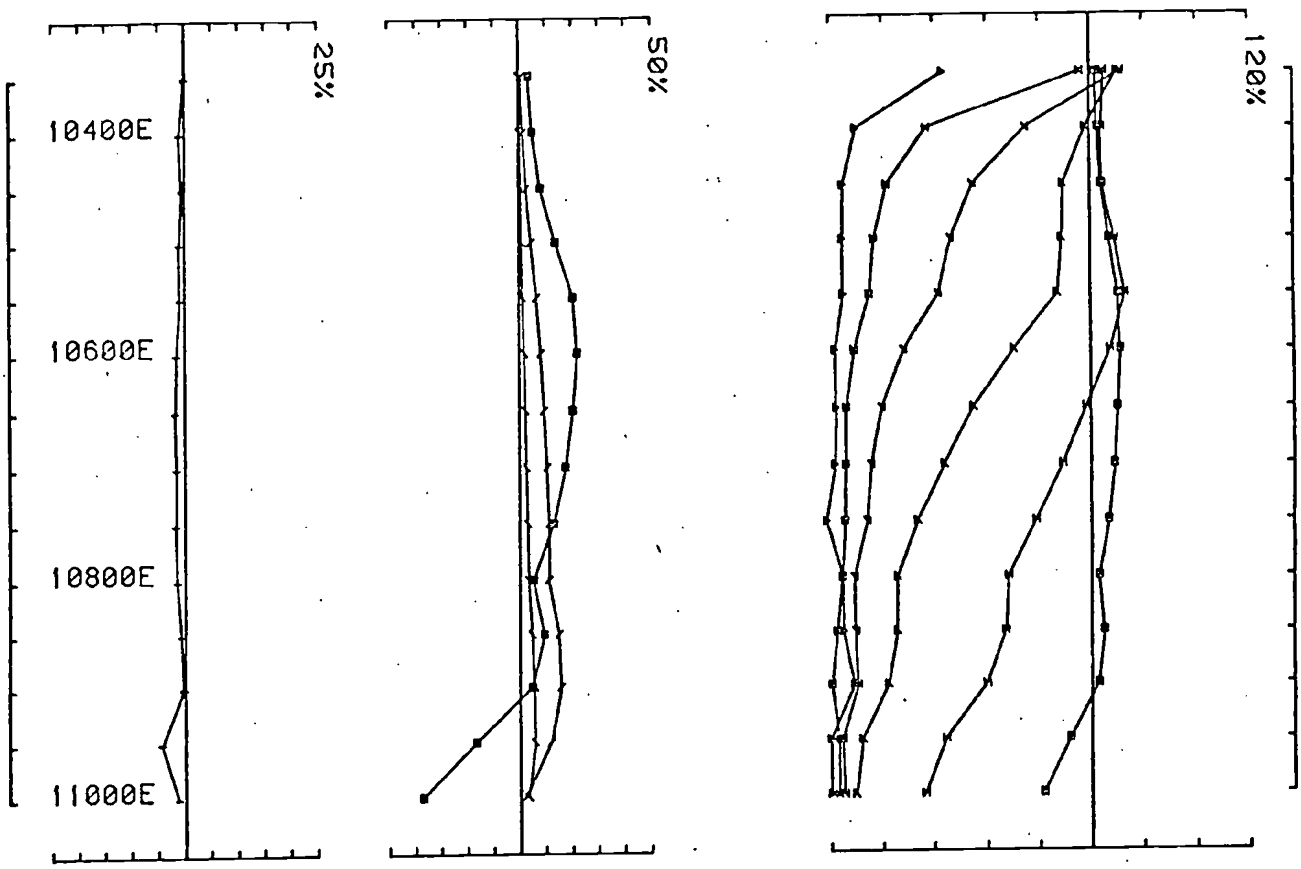


Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0251 Line 11000N component Hz secondary Ch 1

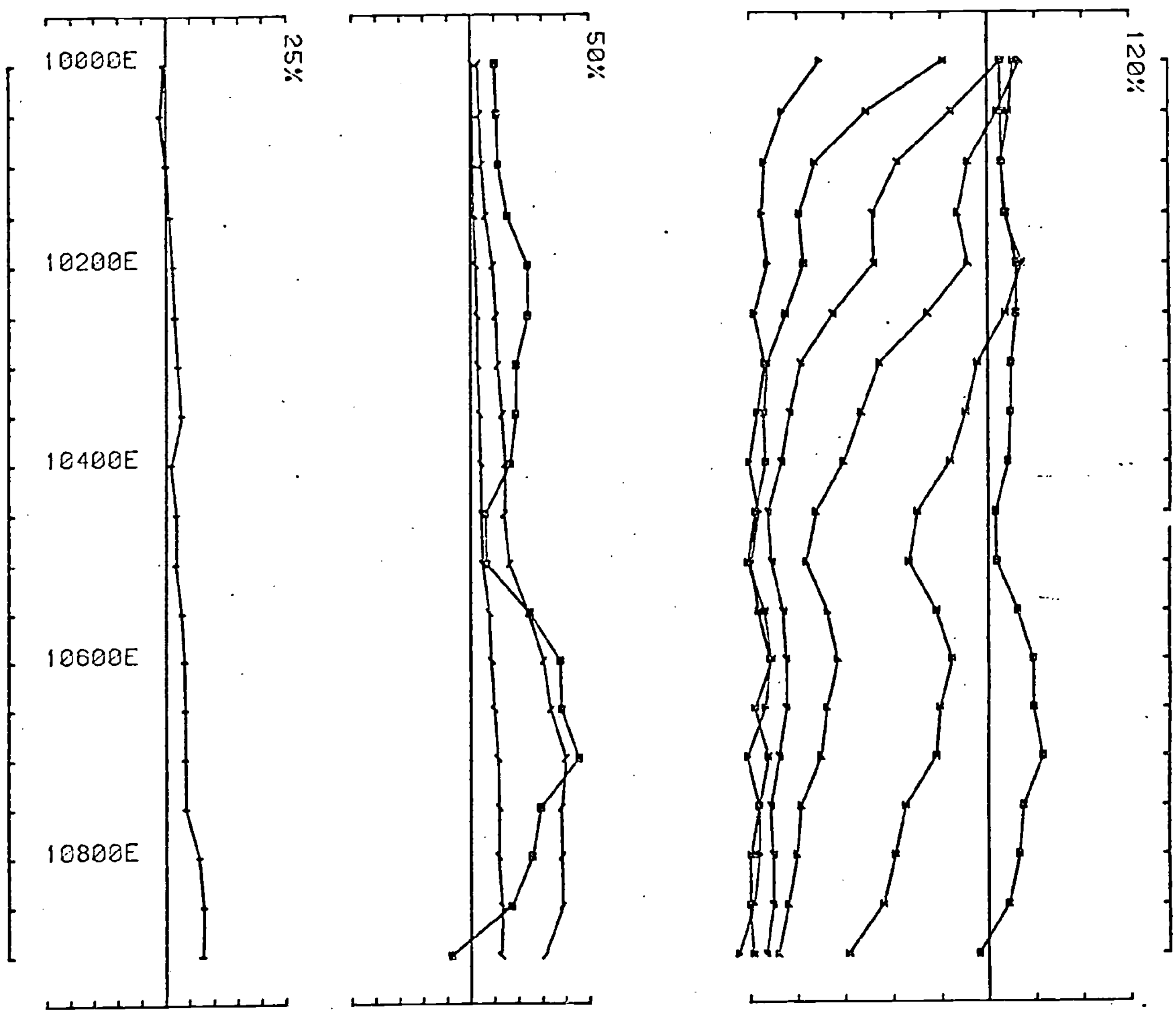


Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0251 Line 11000N component Hx total

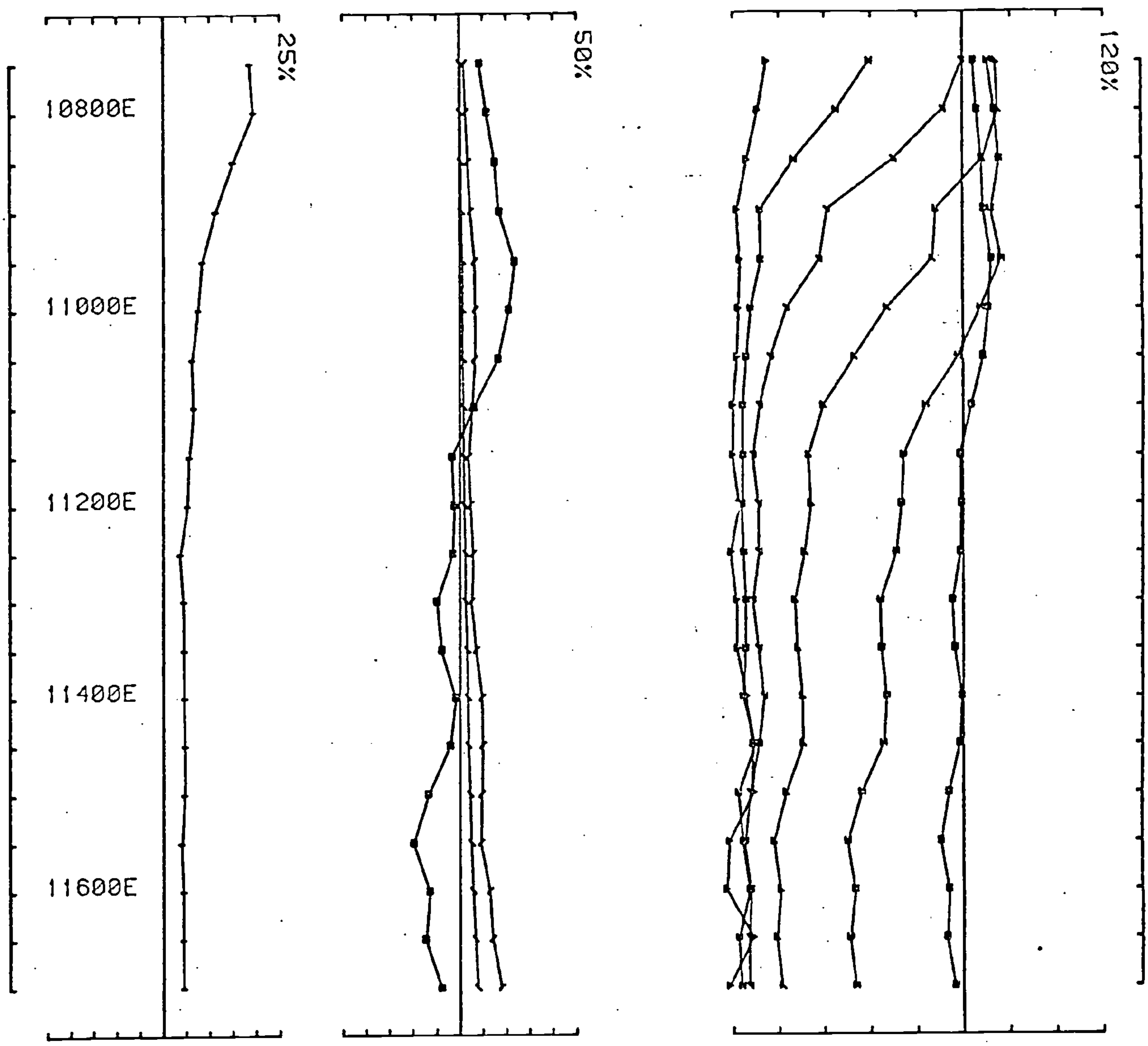


Area STAR PROSPECT   ESSO MINERALS   Job 2702   freq(hz) 26.230
Loopno 0251   Line 10750N   component Hz   secondary   Ch 1



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0222 Line 10500N component Hz secondary Ch 1



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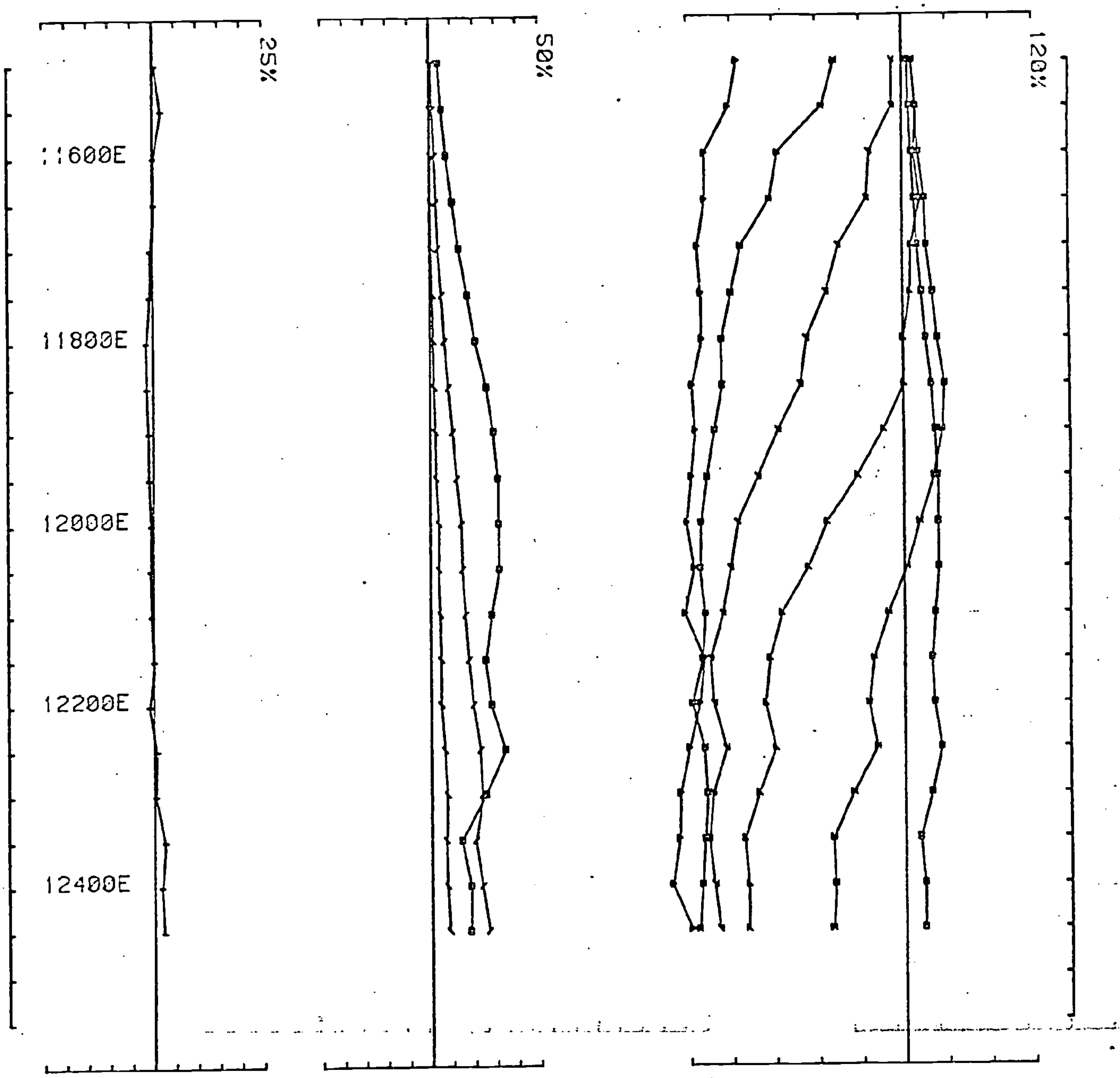
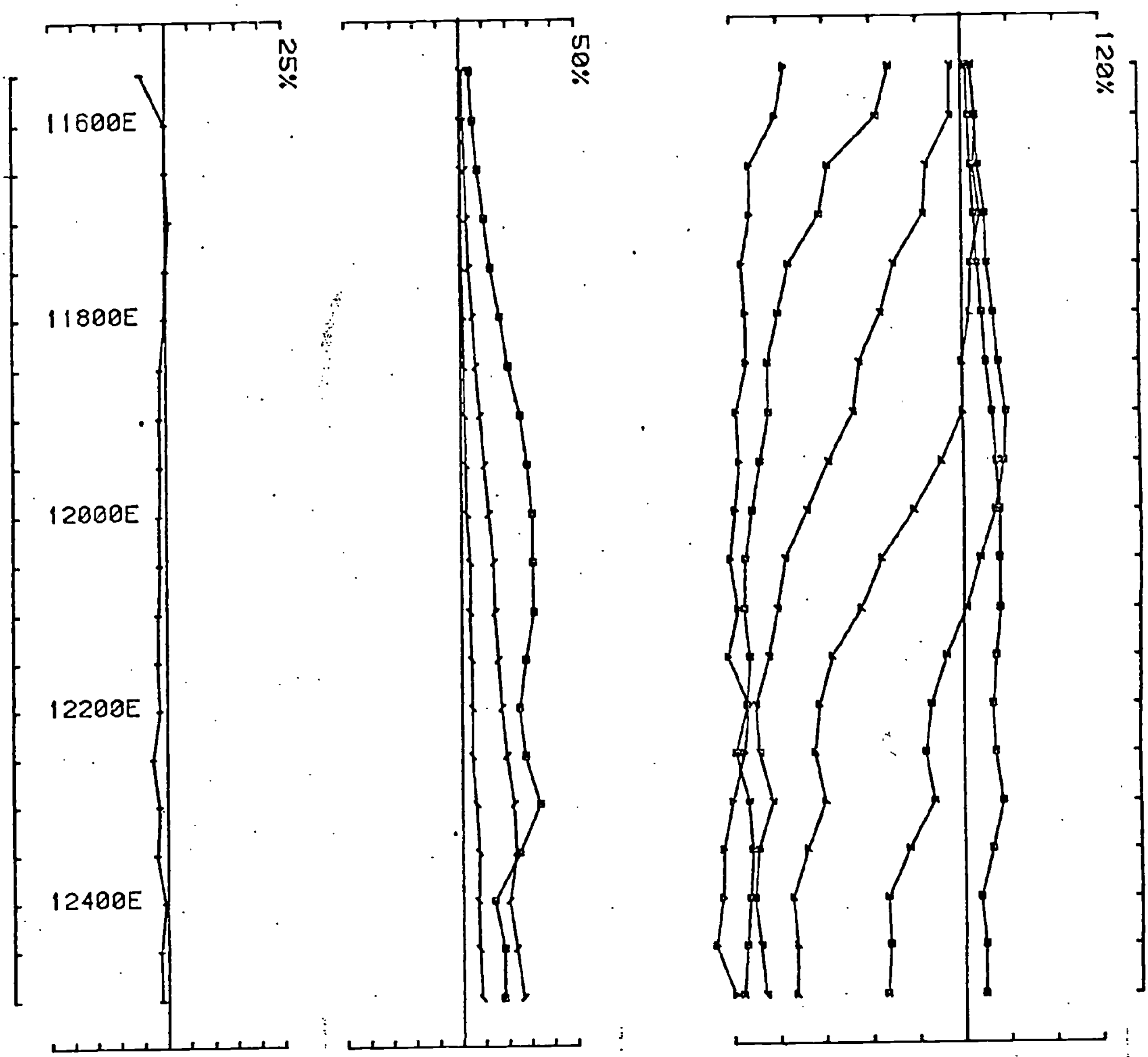
Loopno 0224 Line 10500N component Hz secondary Ch 1



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0226 Line 10500N component Hz secondary Ch 1

0181



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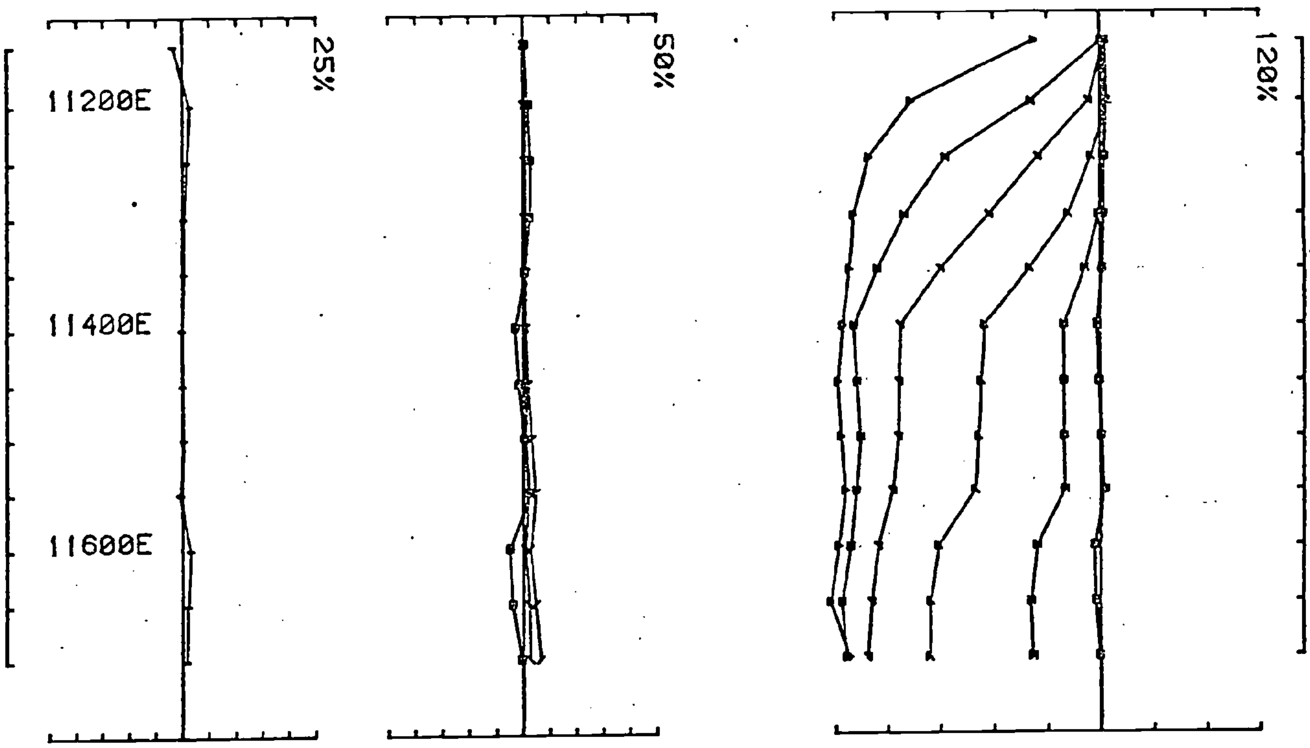
Loopno 0226 Line 10500N component Hz secondary Ch 1

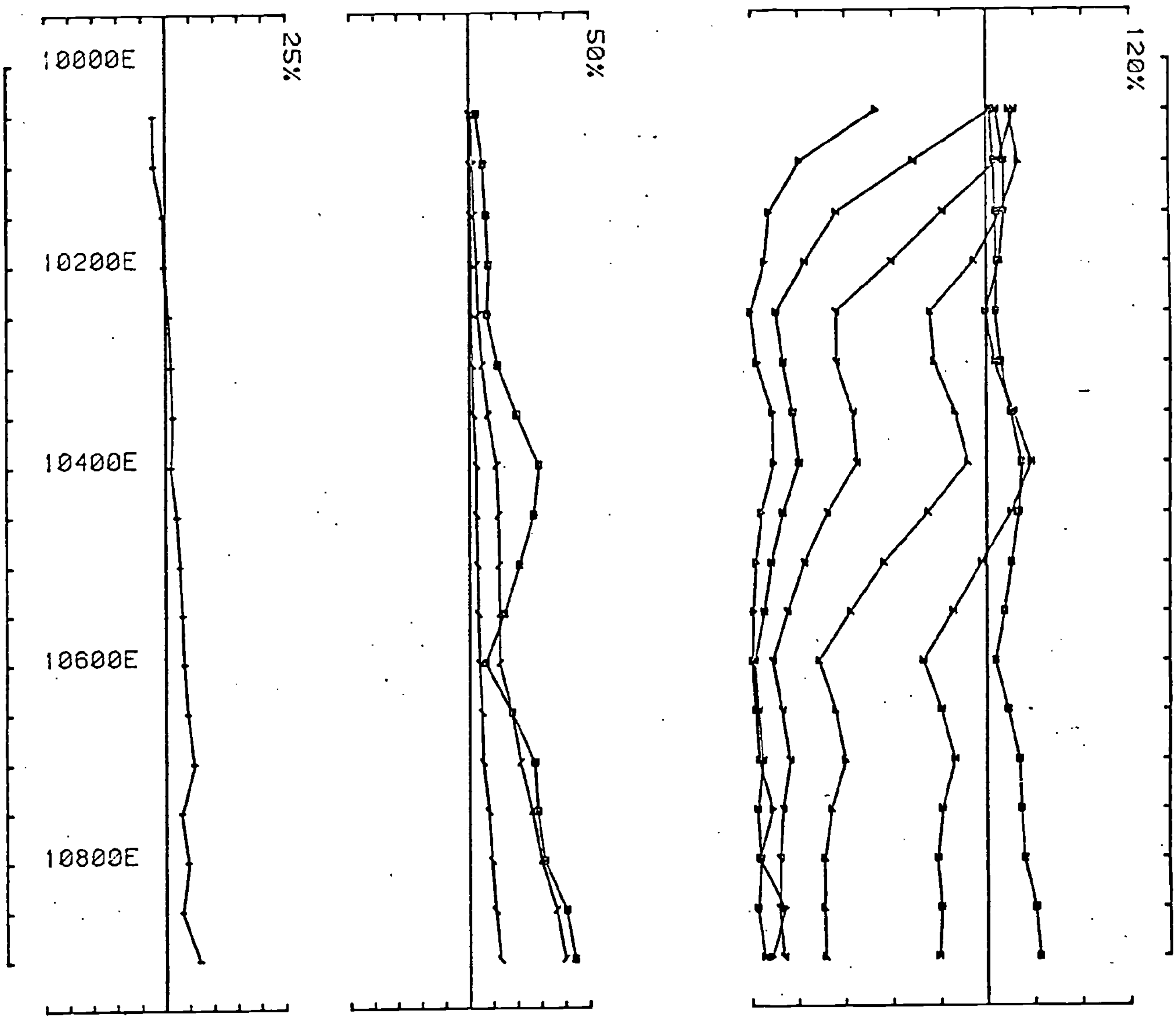
0182



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0250 Line 10 N component Hz secondary Ch 1

0183



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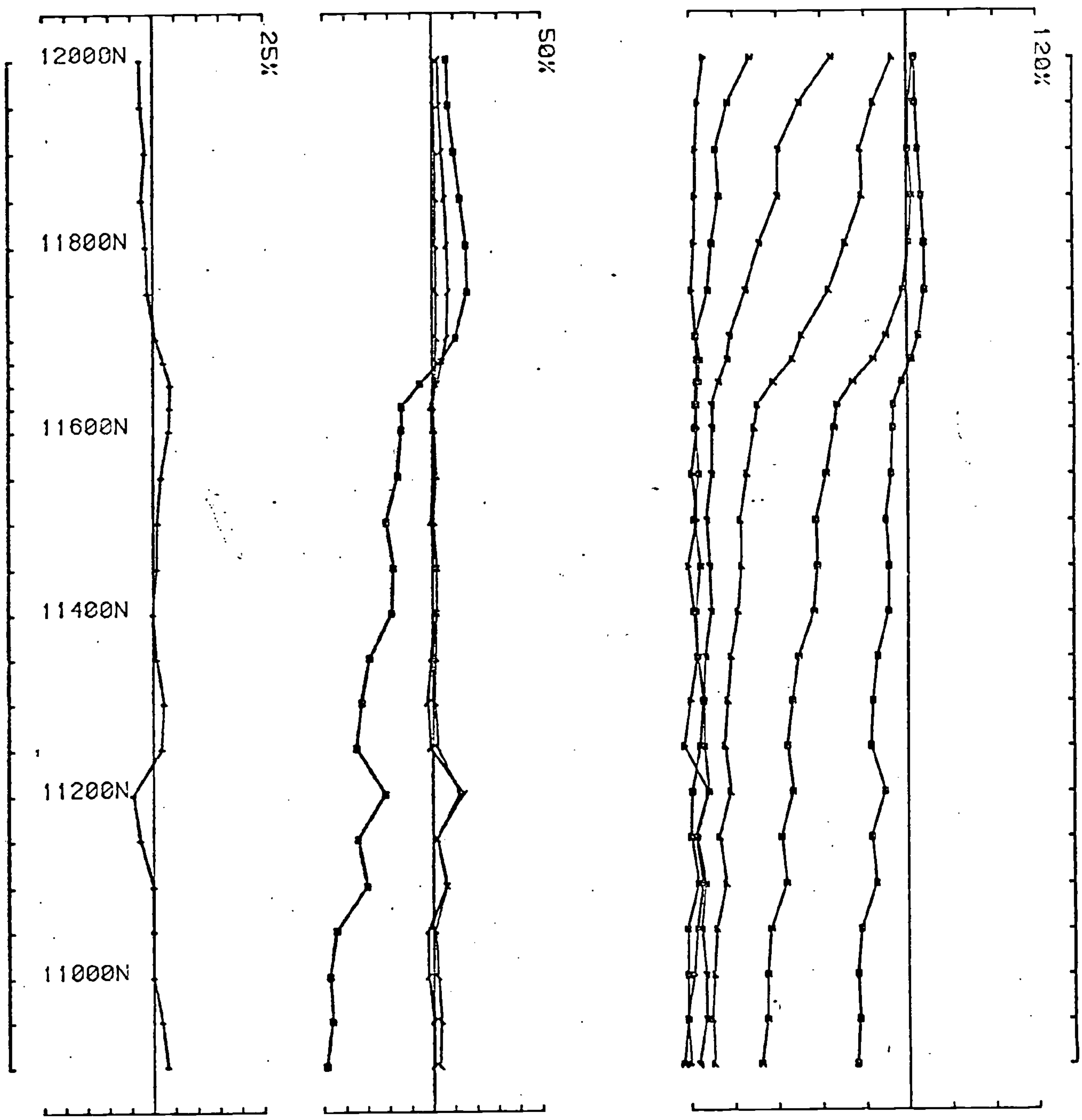
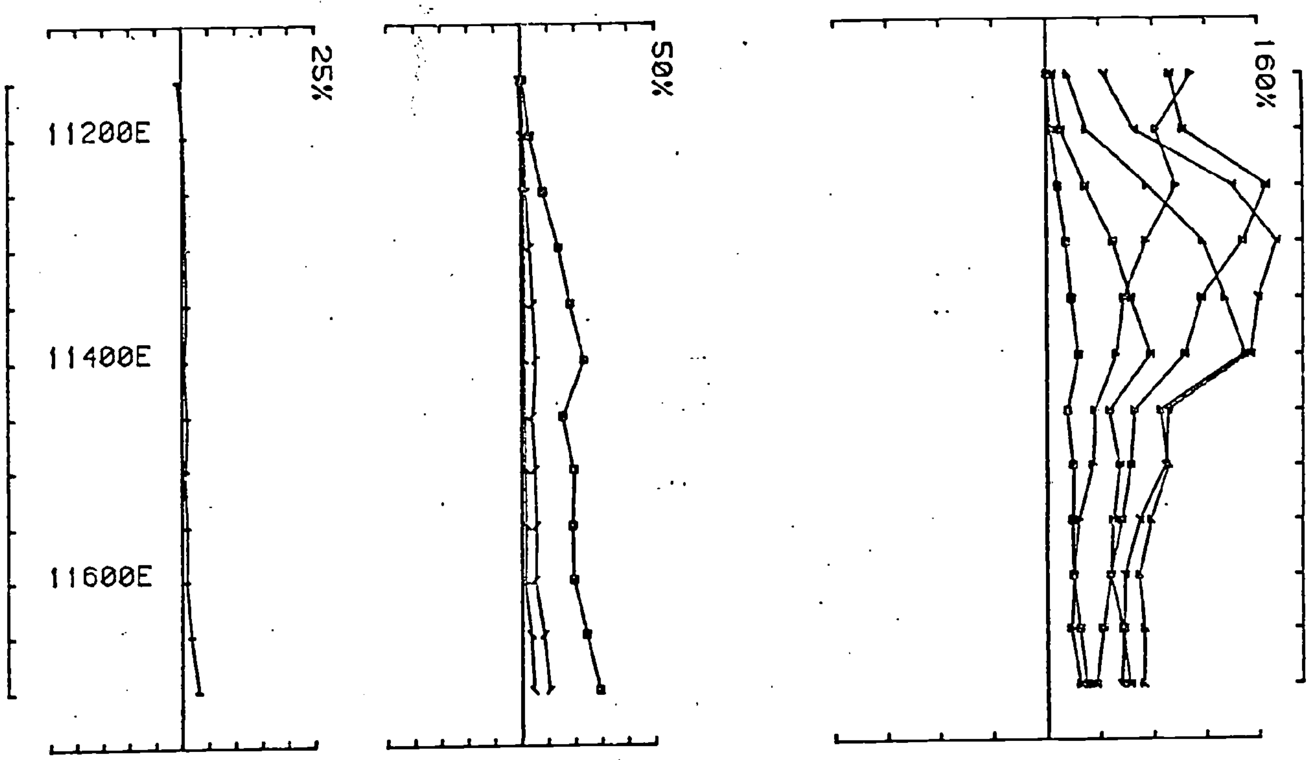
Loopno 0222 Line 10000N component Hz secondary Ch 1



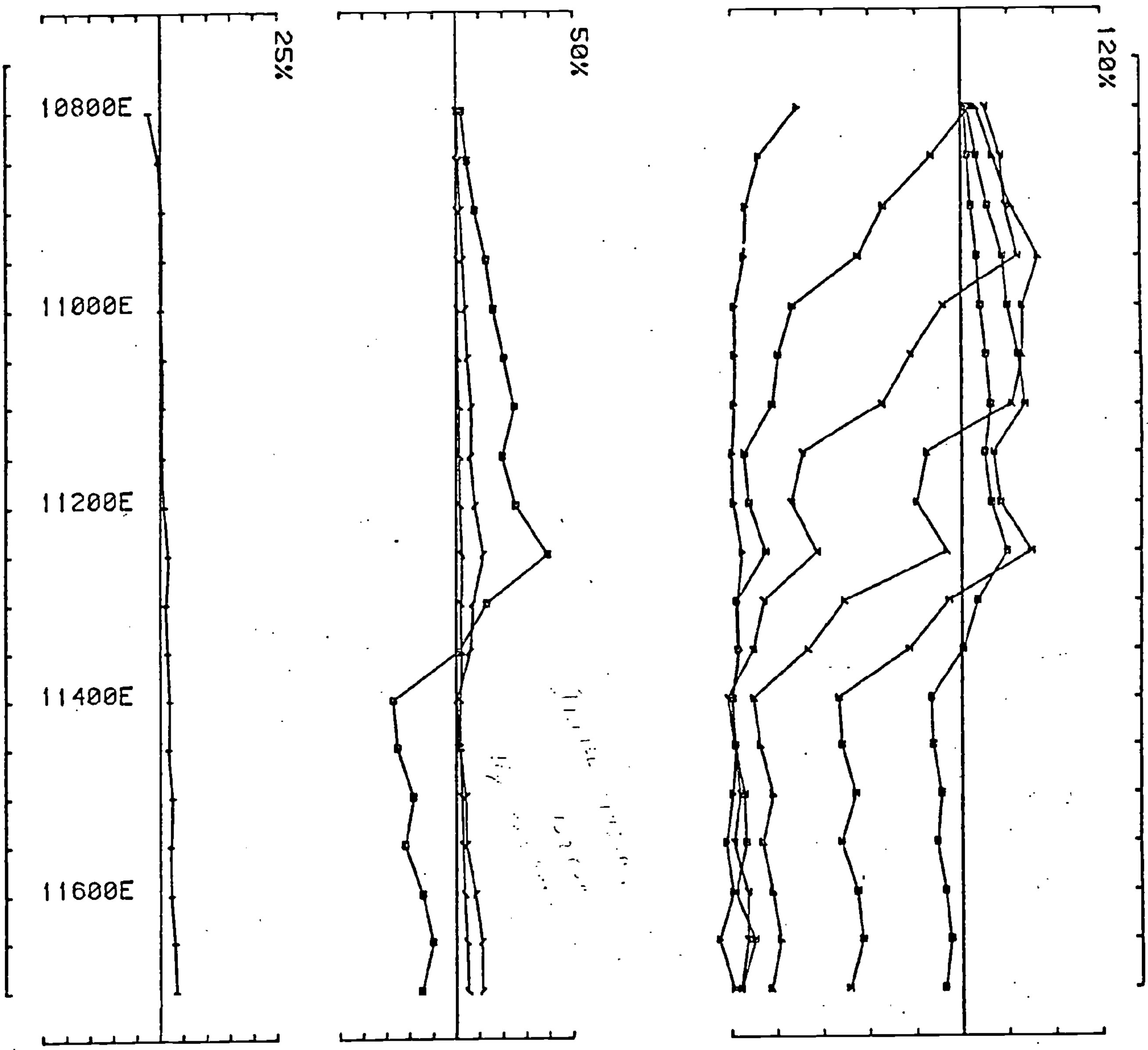
Area RECORD PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0230 Line 10000E component Hz secondary Ch 1



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0250 Line 10,000 N component Hx total .

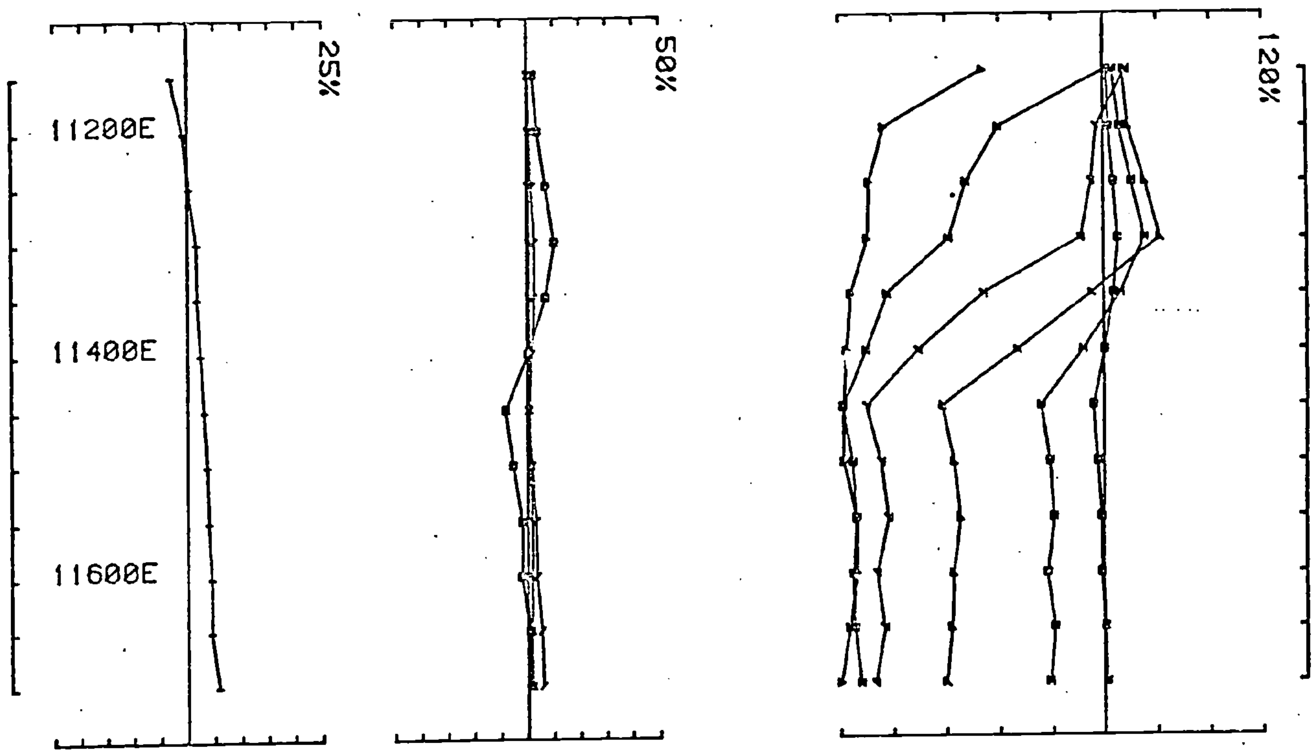
0186



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0224 Line 10000N component Hz secondary Ch 1

0187



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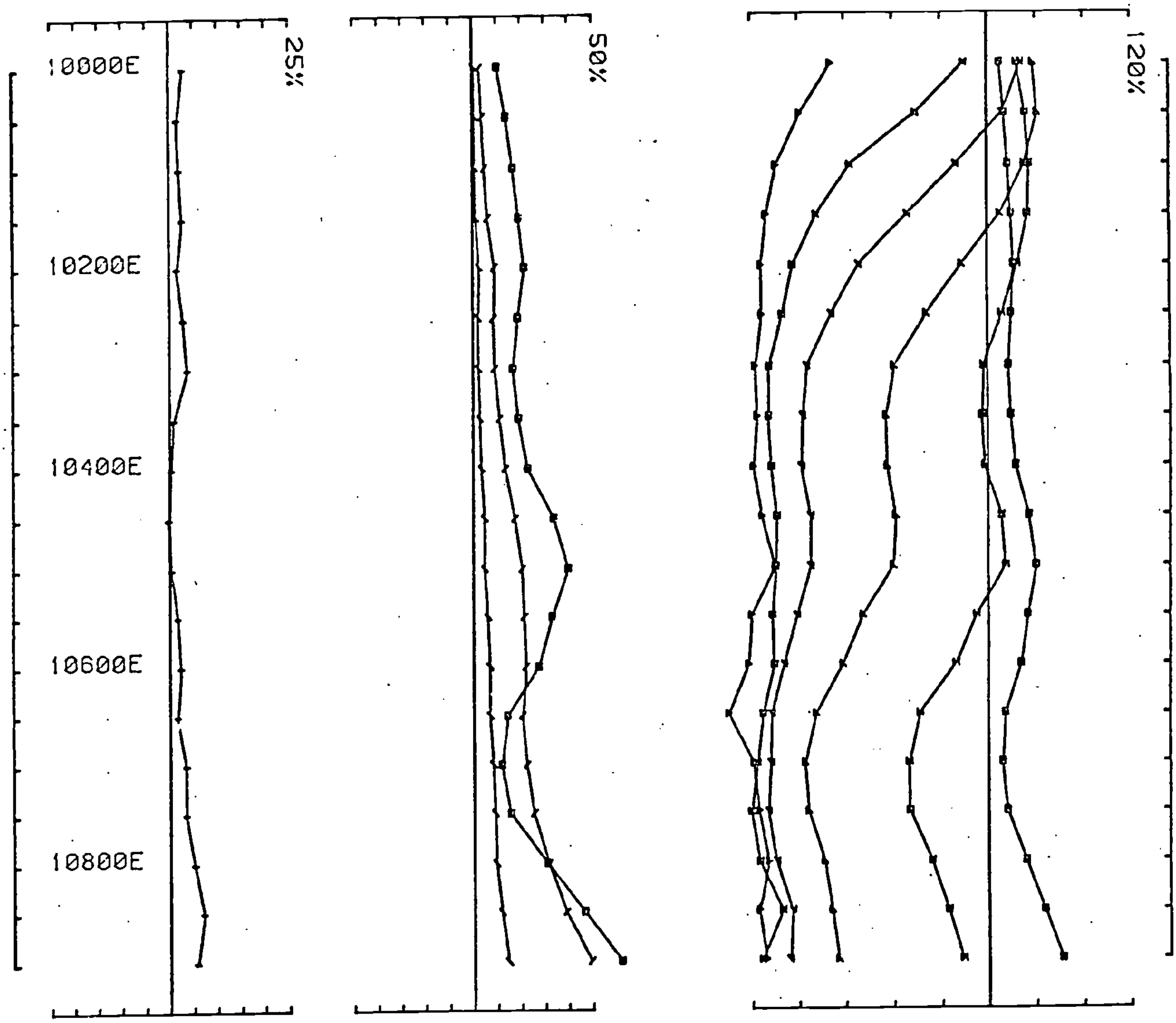
Loopno 0250 Line 9750N component Hz secondary Ch 1

0188



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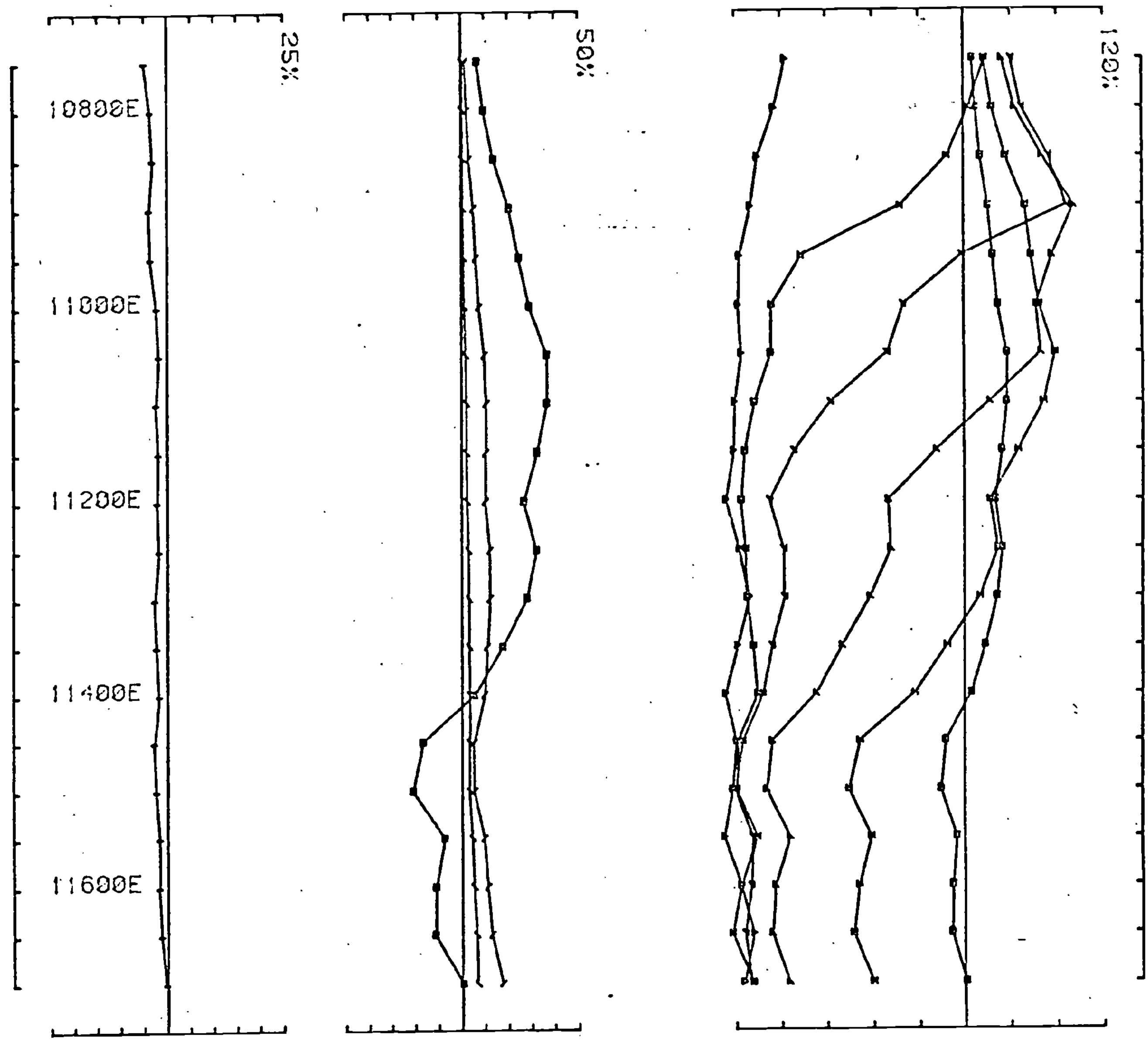
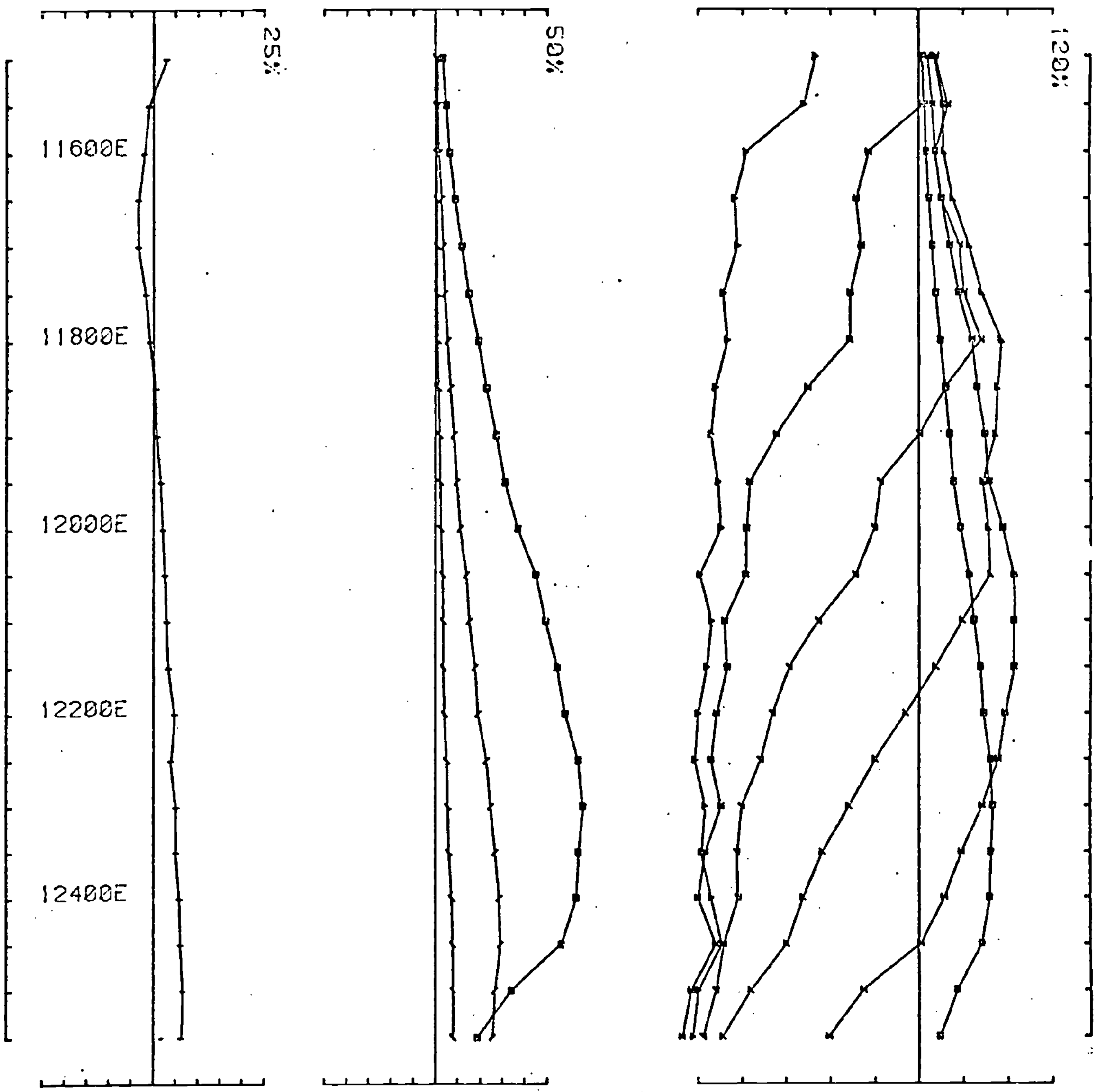


Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0224 Line 9500N component Hz secondary Ch 1 .



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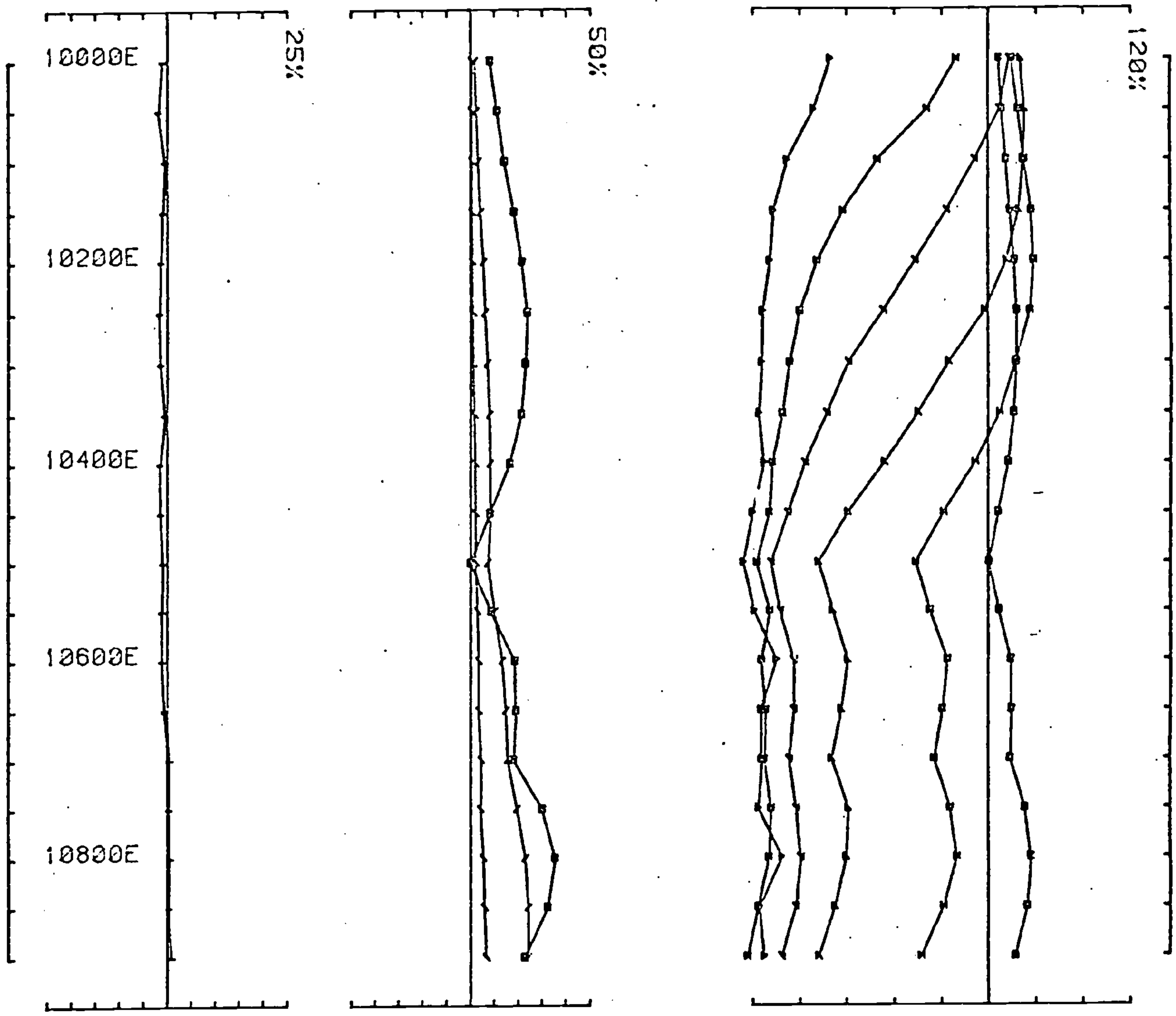
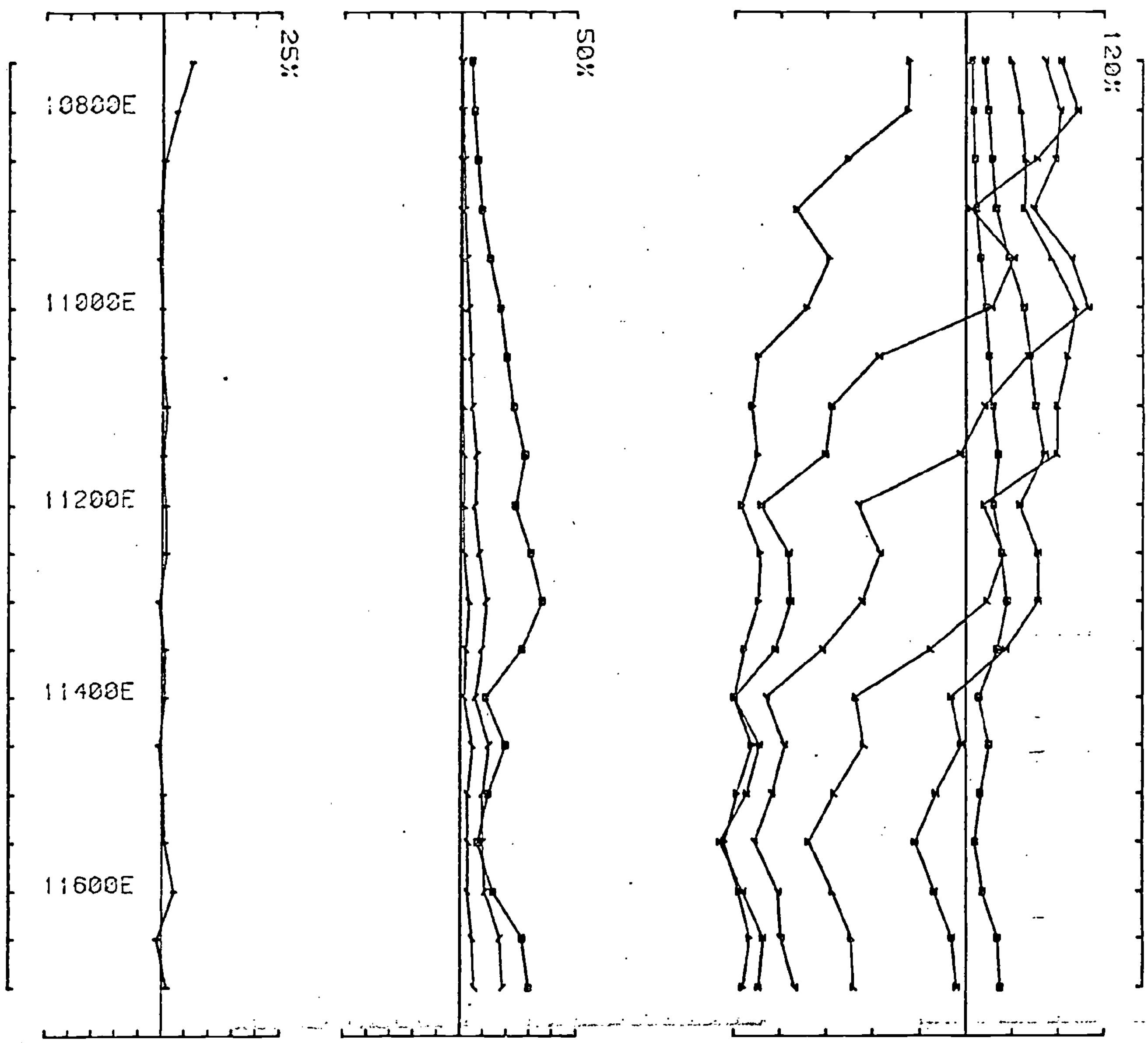
Loopno 0226 Line 9500N component Hz secondary Ch 1

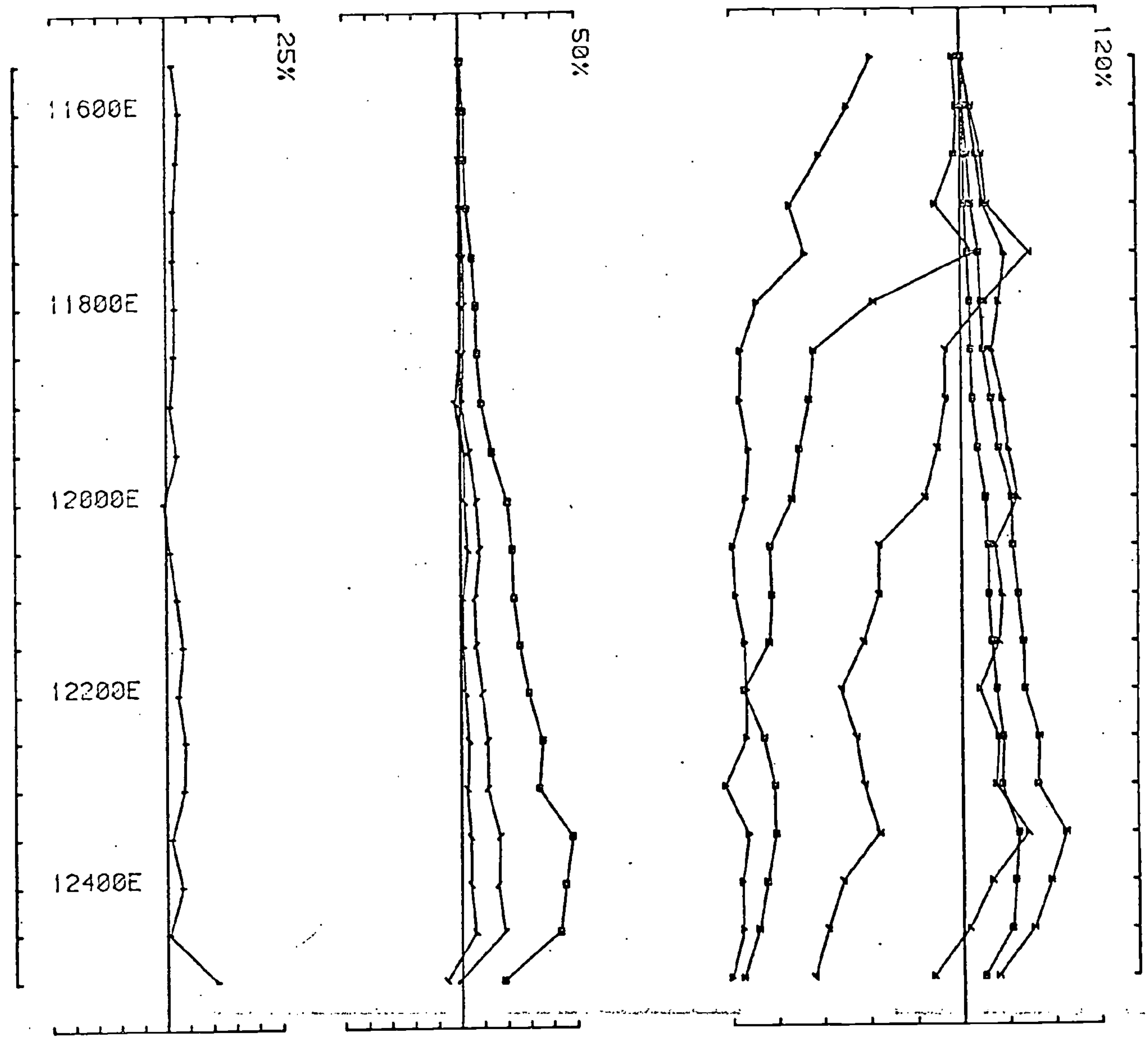
0191



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0225 Line 9000N component Hz secondary Ch 1



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.233
Loopno 0227 Line 9000N component Hz secondary Ch 1



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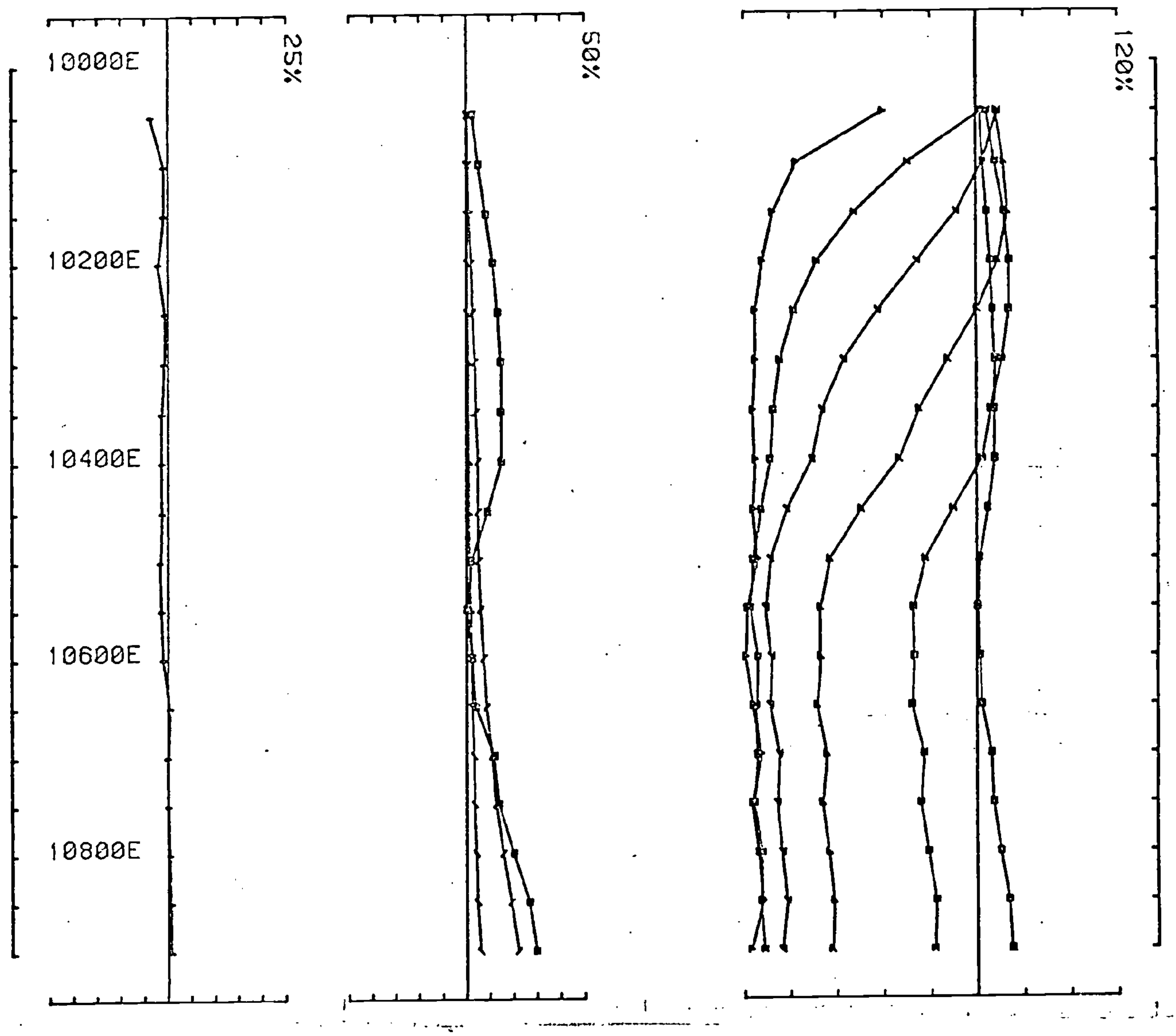
Loopno 0228 Line 9000N component Hz secondary Ch 1



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
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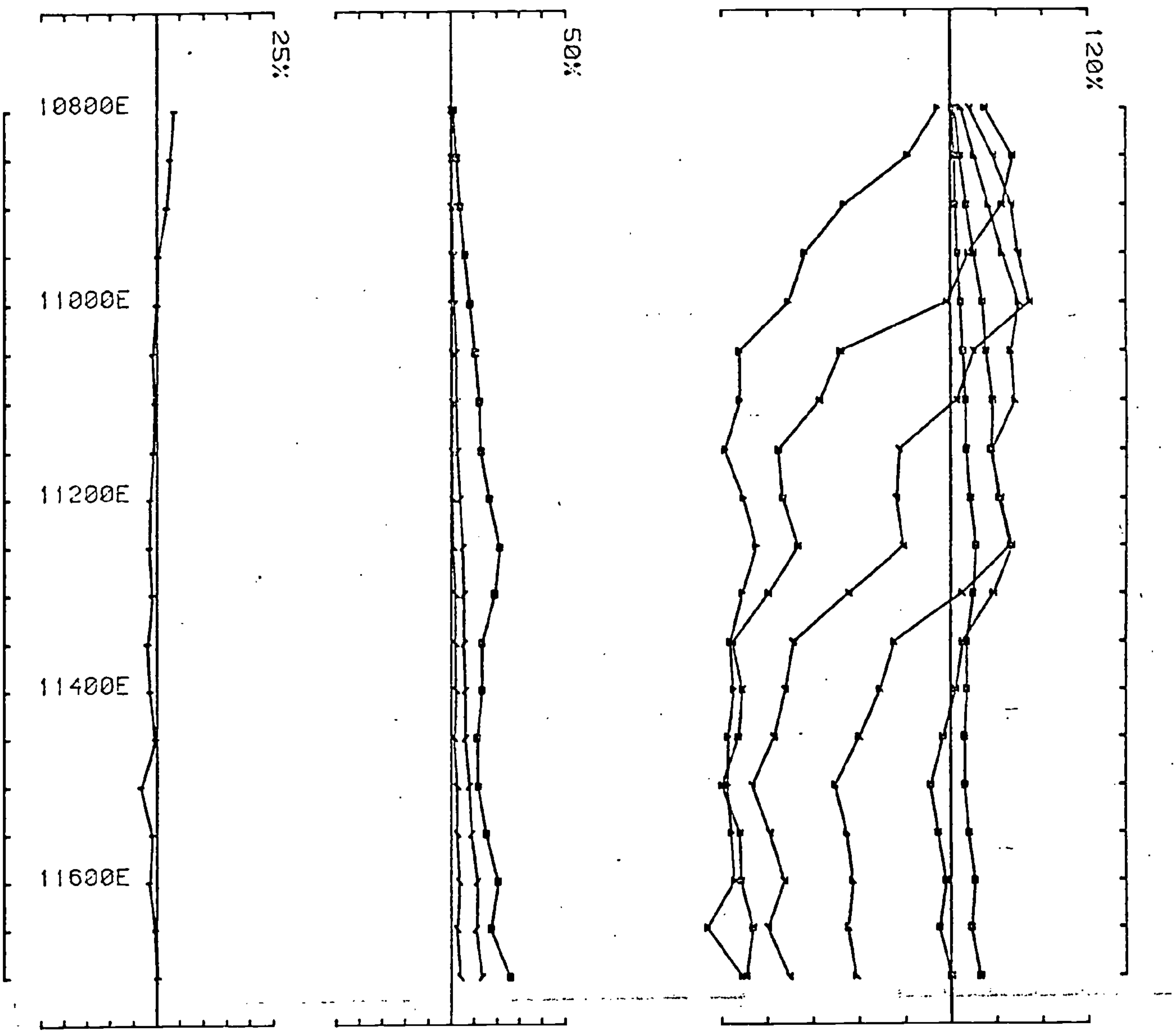
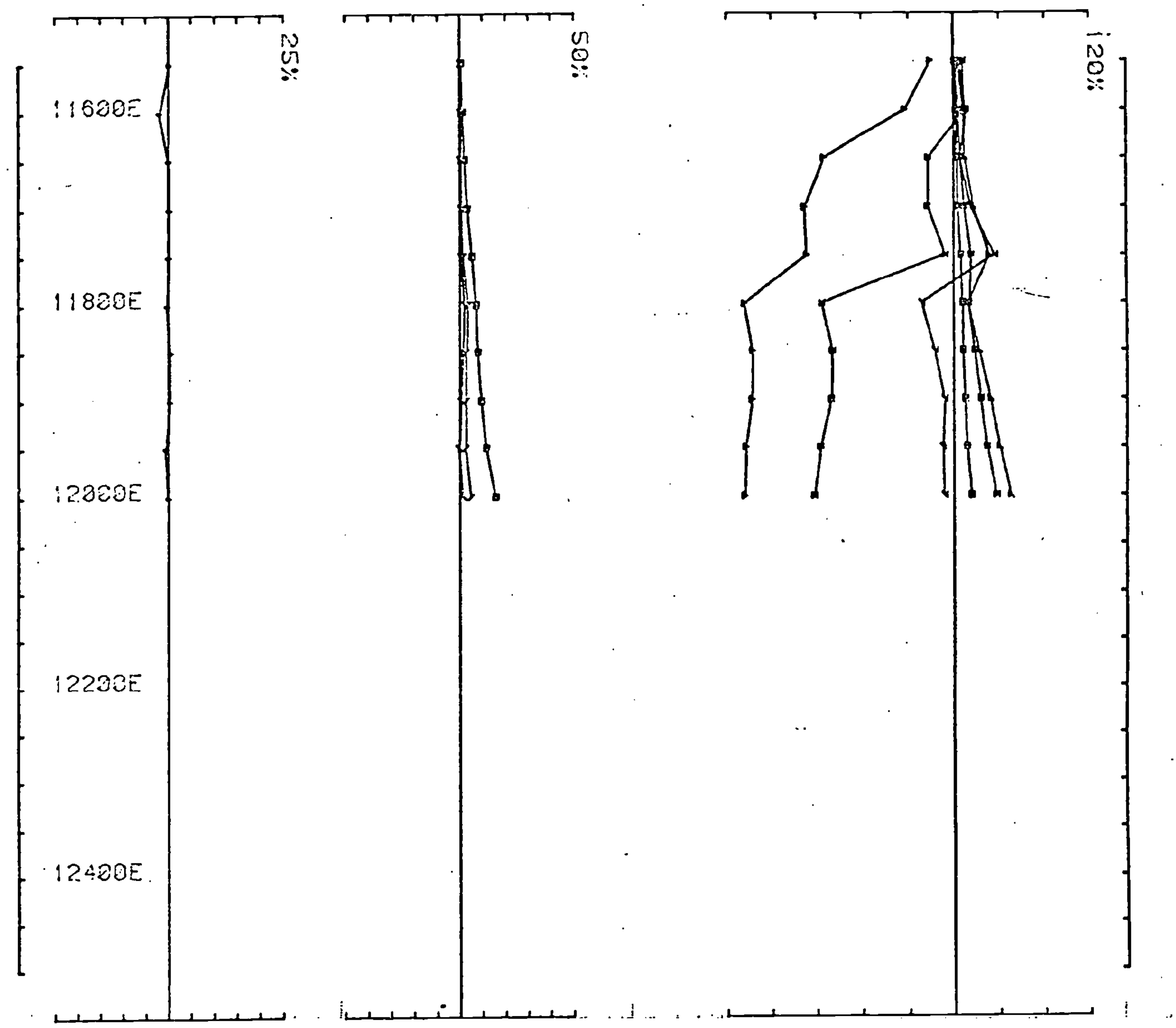


Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0227 Line 8500N component Hz secondary Ch 1

0196



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
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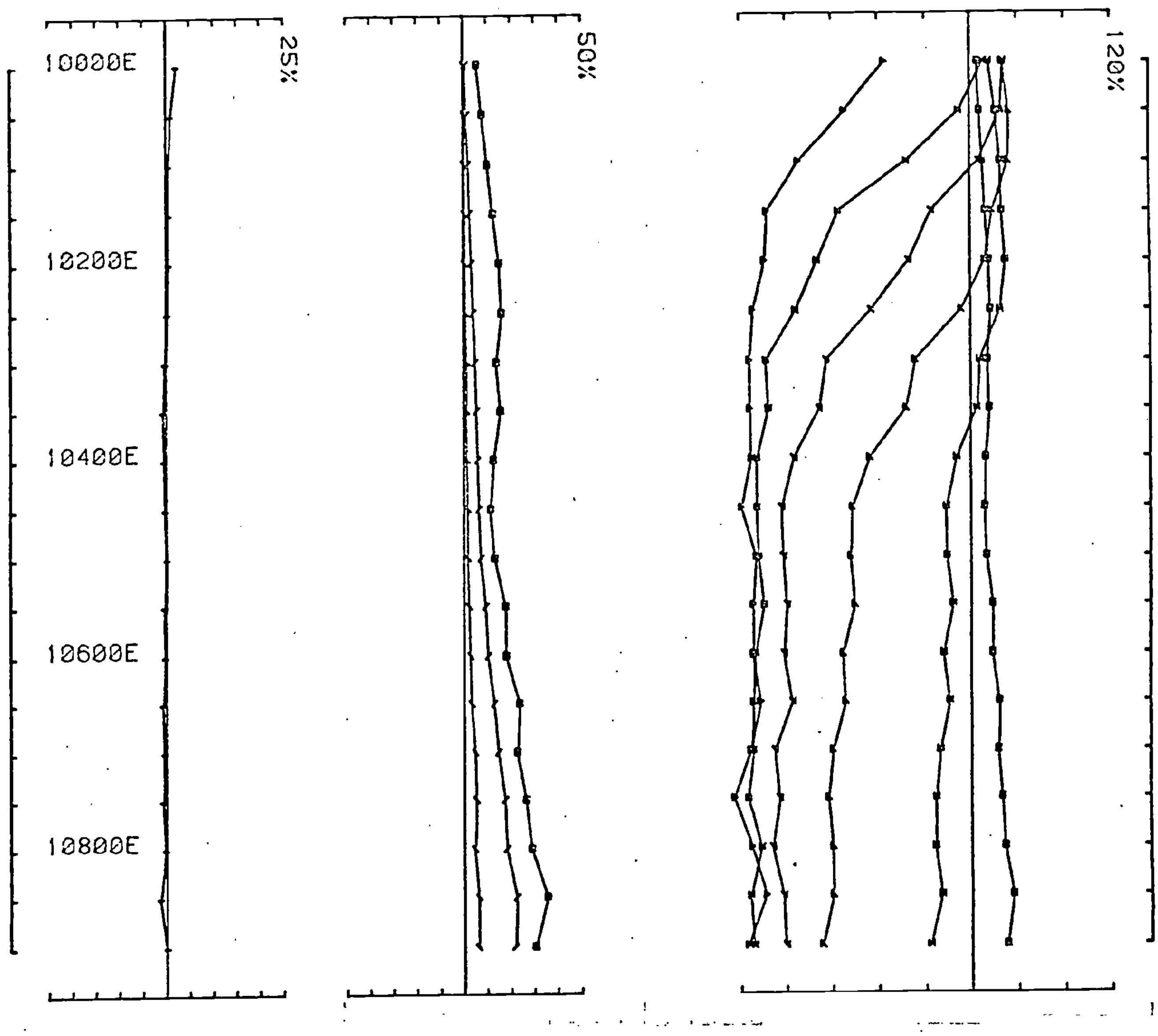
197



Area STAR PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
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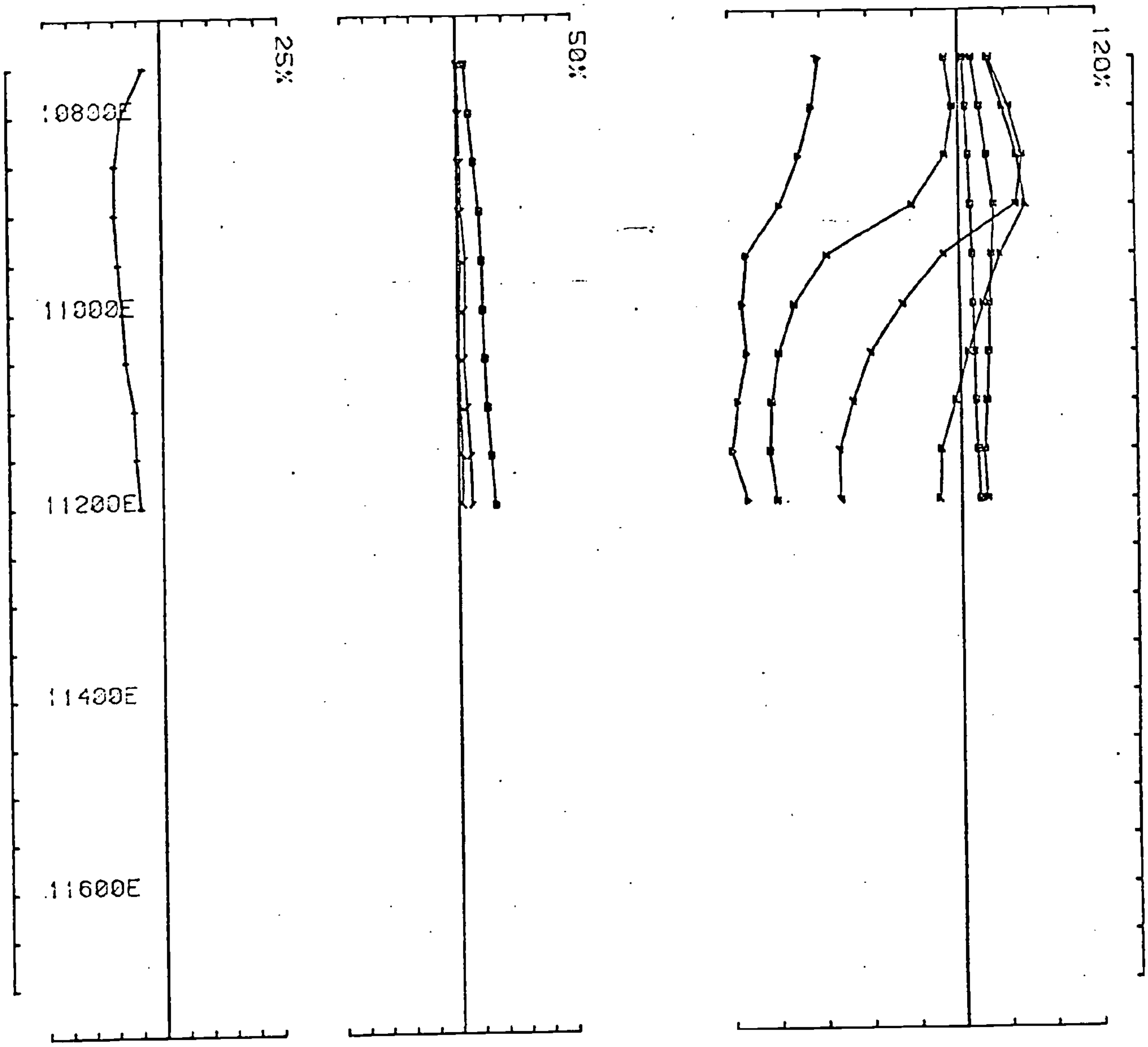
0198



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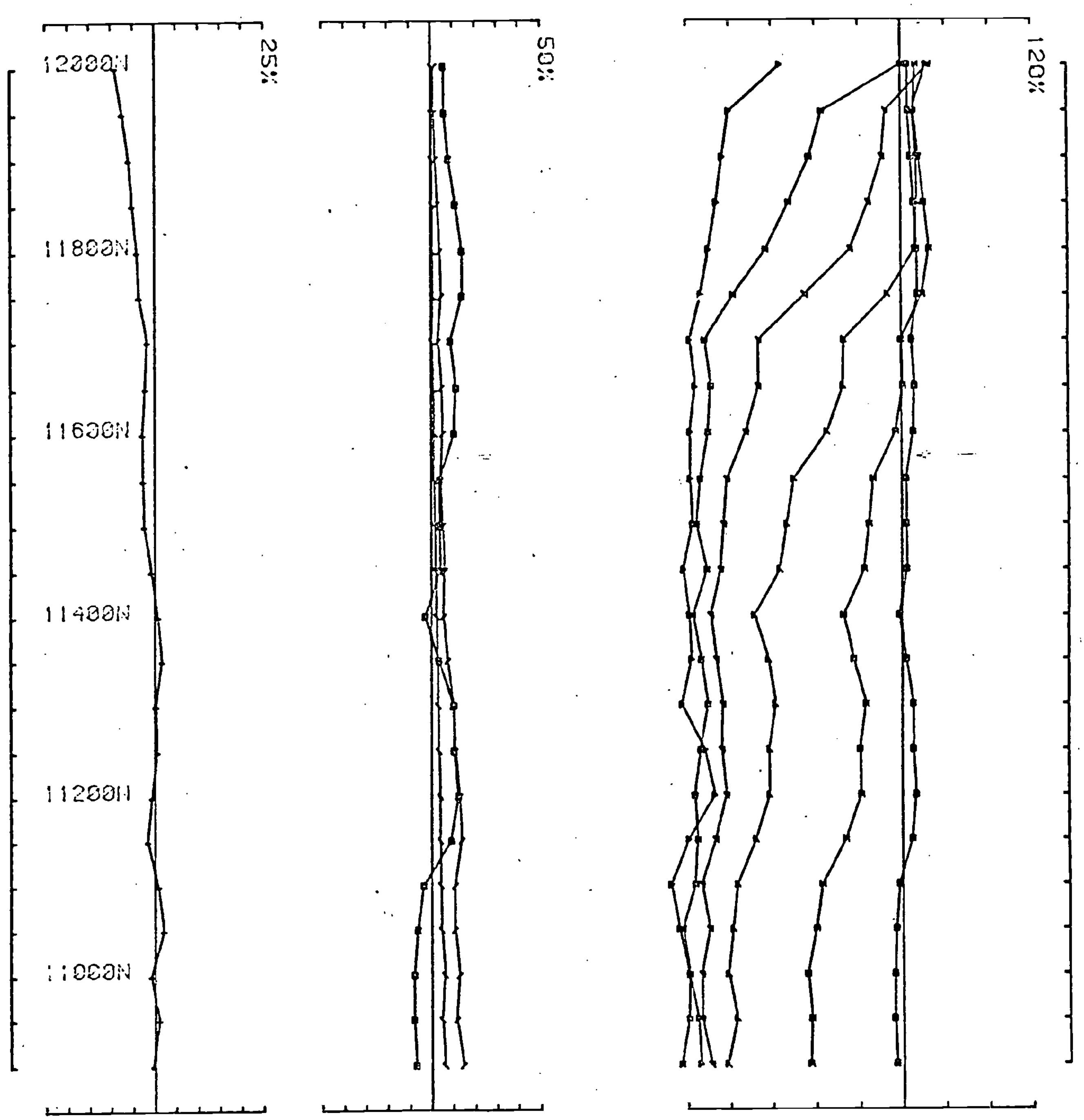
RECORD PROSPECT

200



Area RECORD PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
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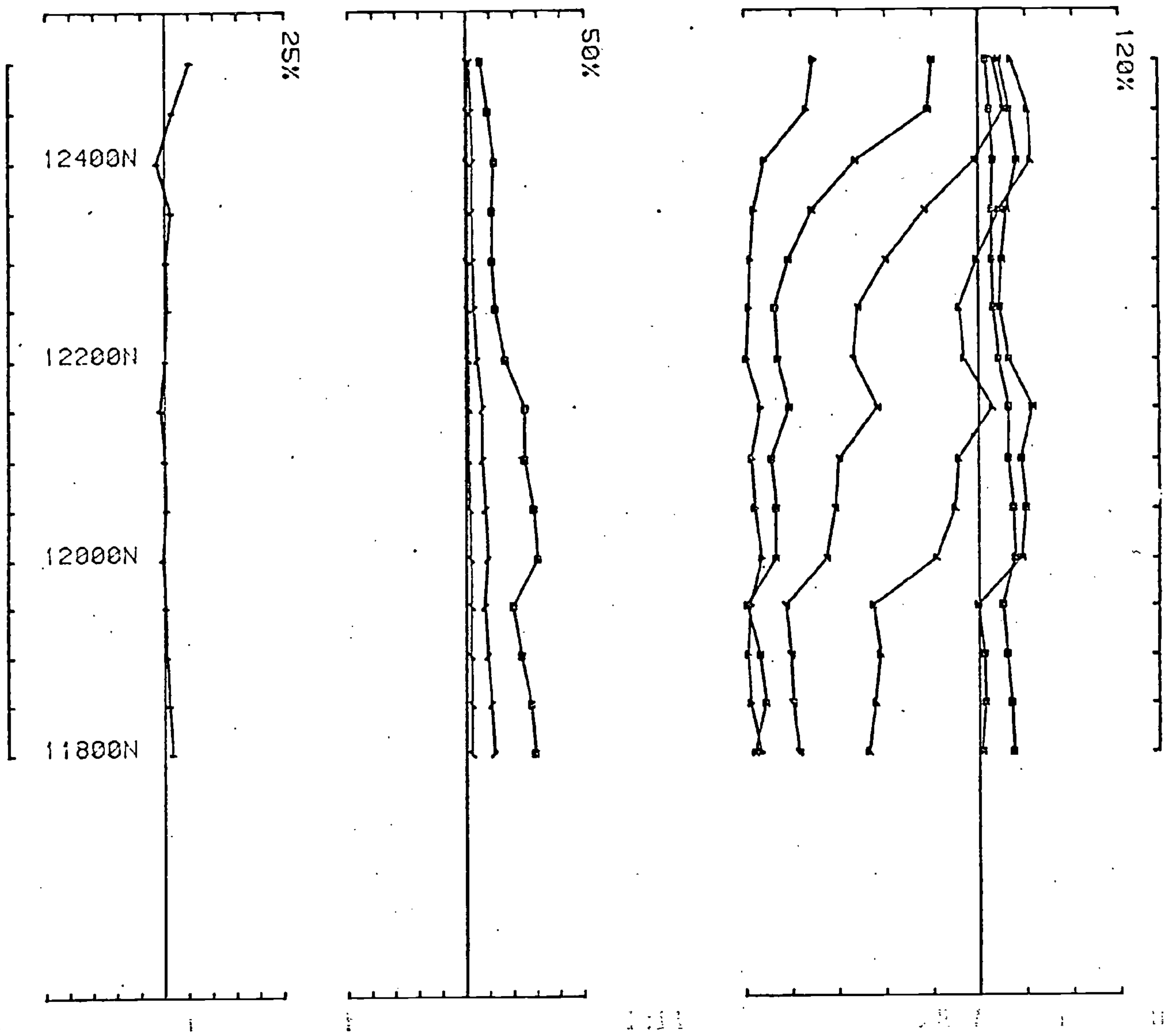
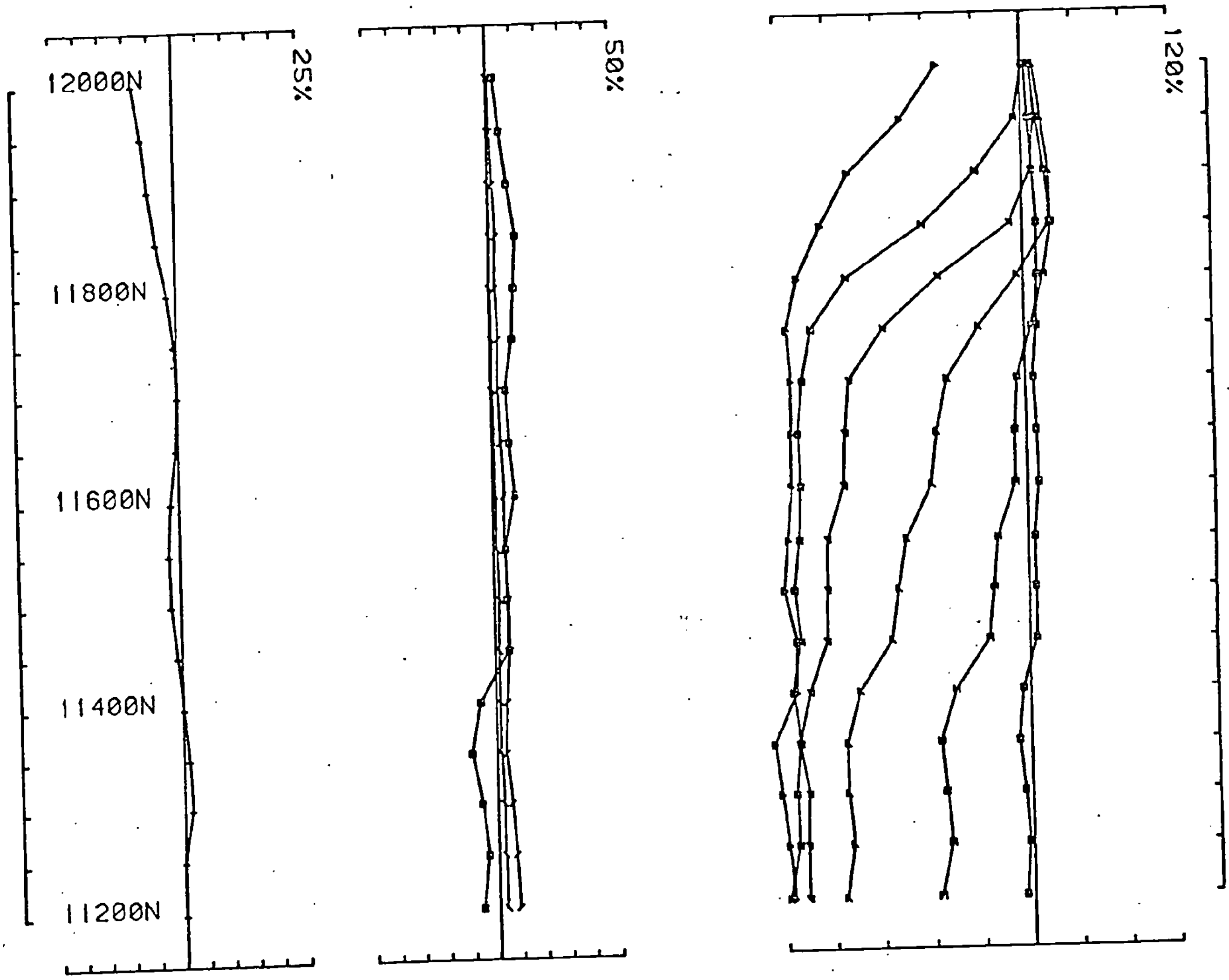
201



Area RECORD PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0232 Line 11500E component Hz secondary Ch 1

0202



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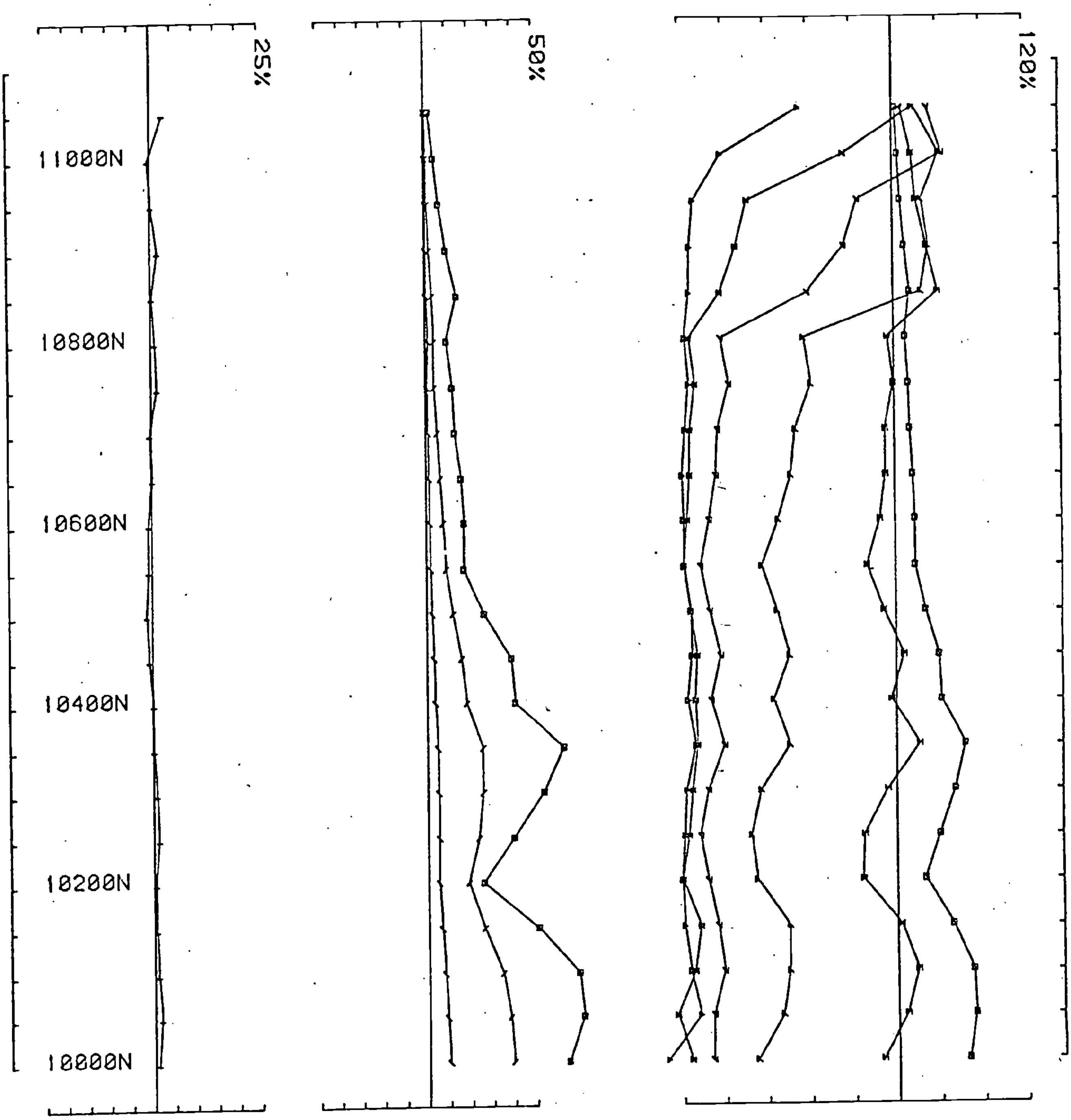
Loopno 0252 Line 11350E component Hz secondary Ch 1



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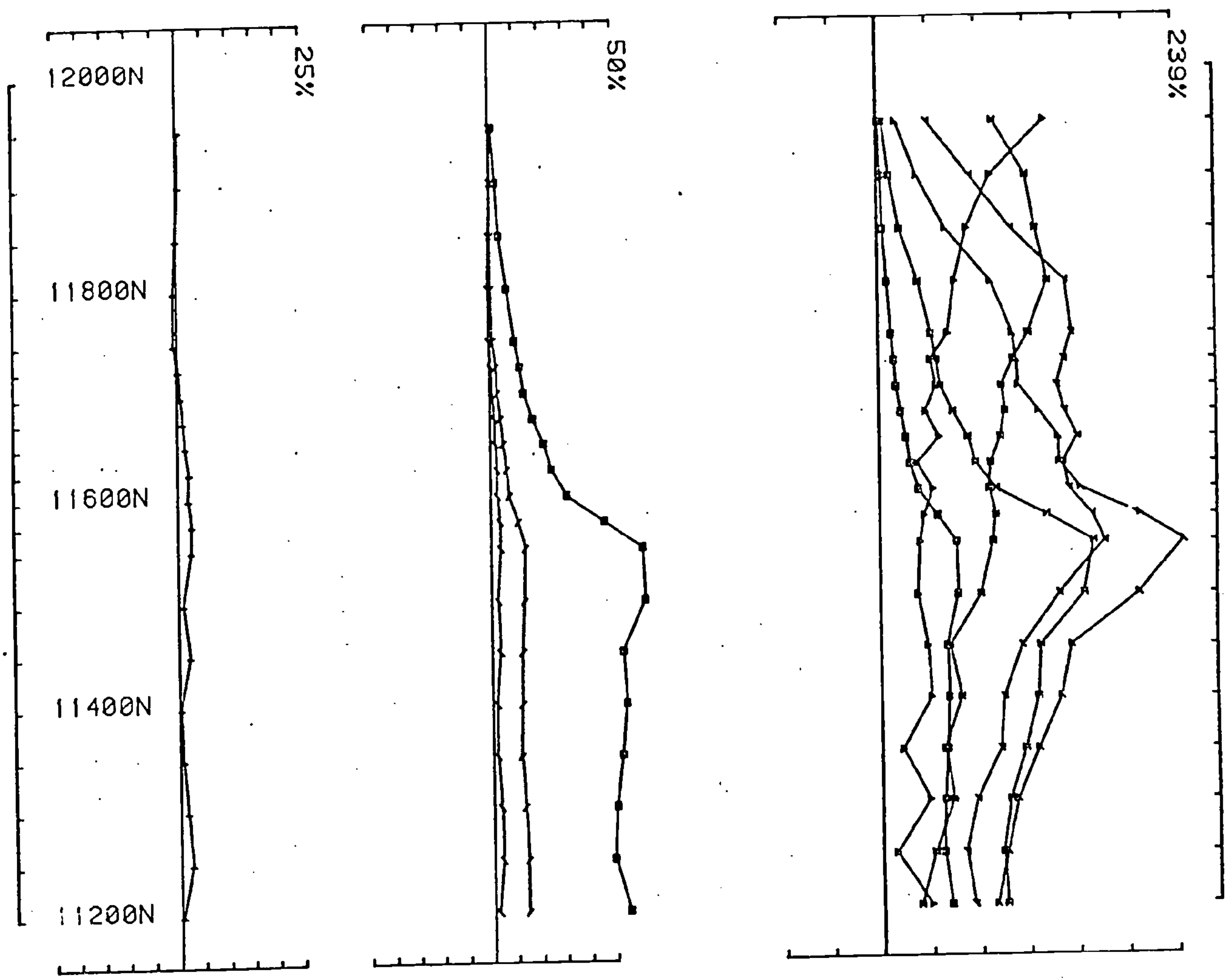

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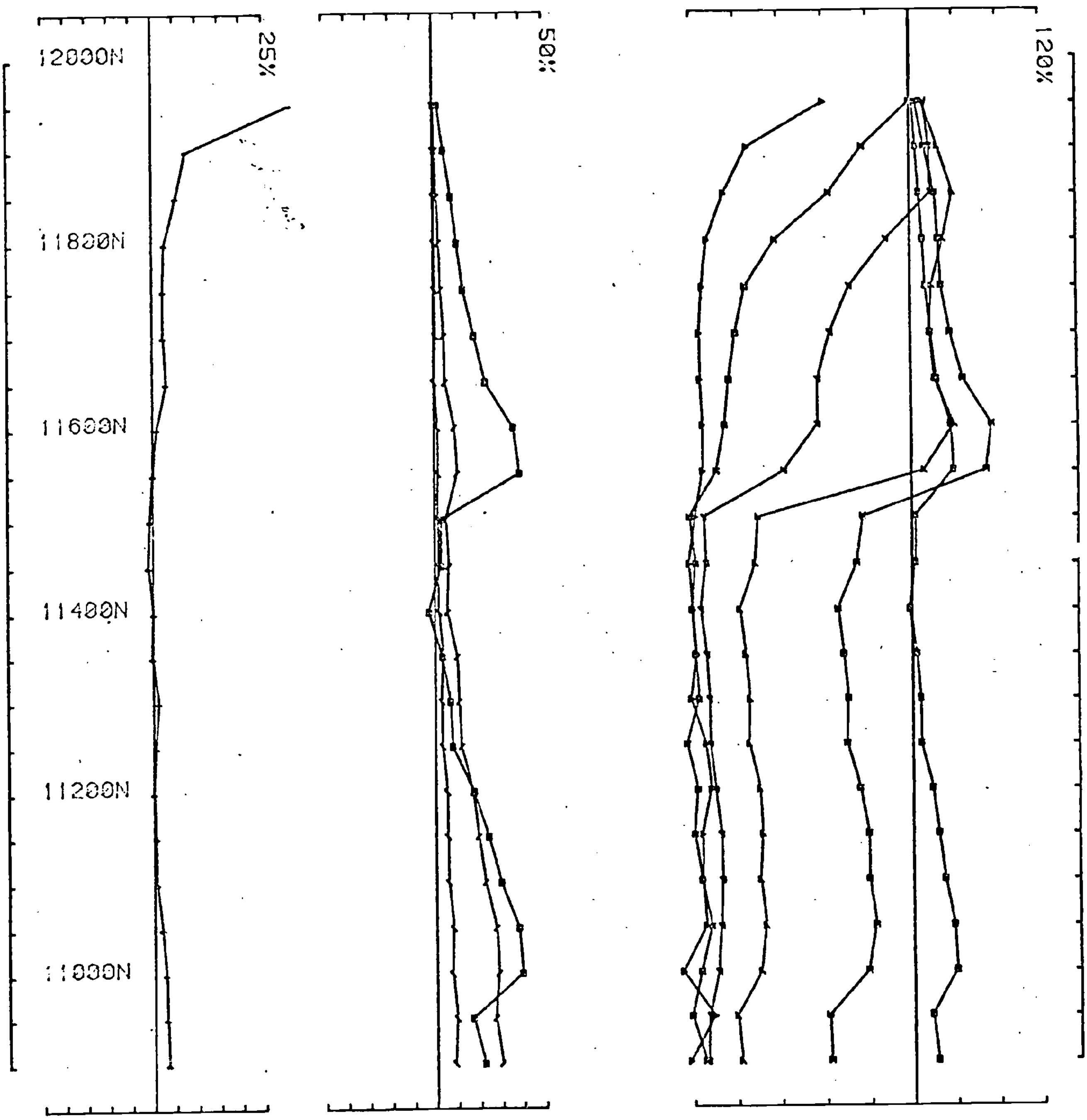

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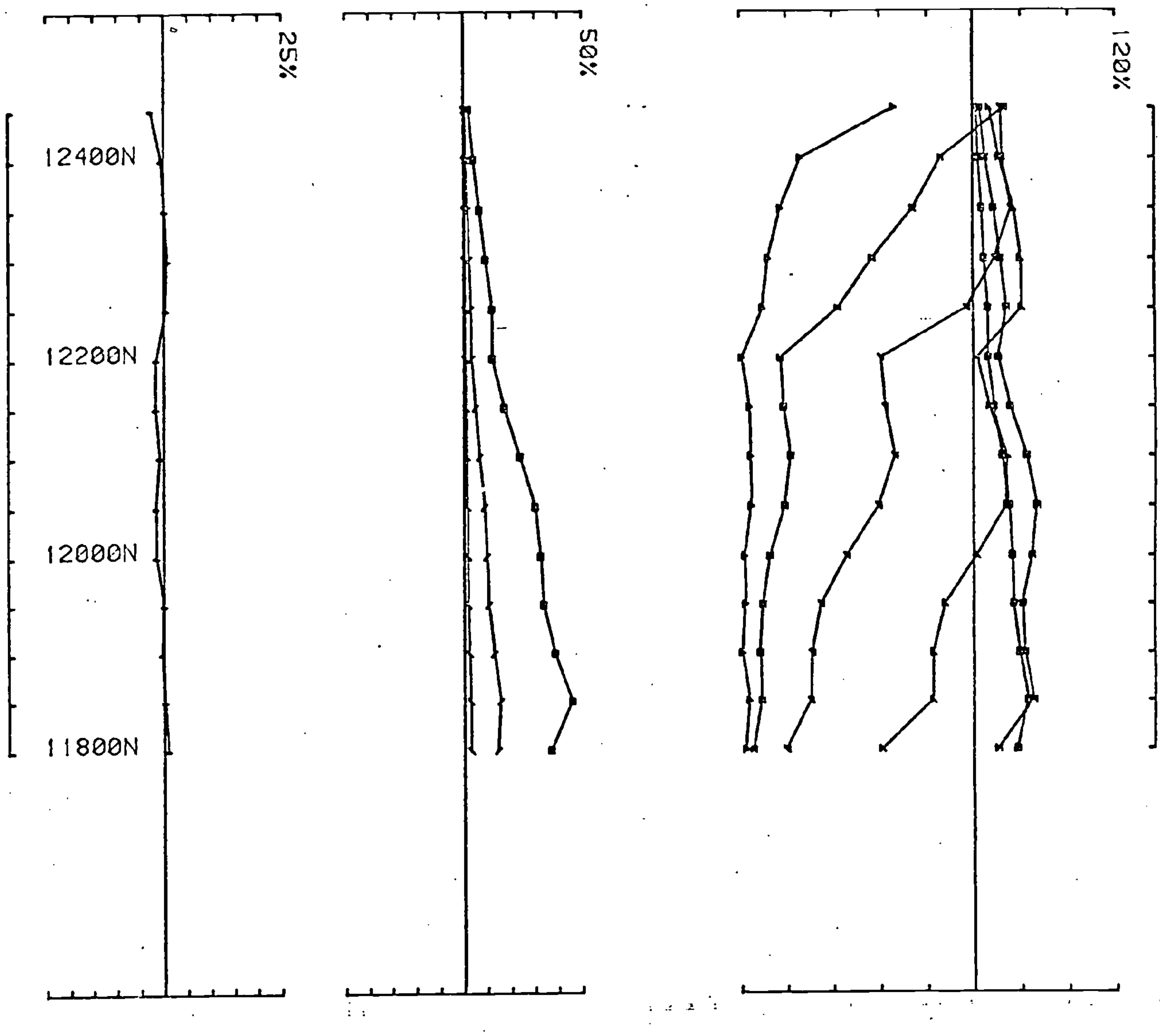

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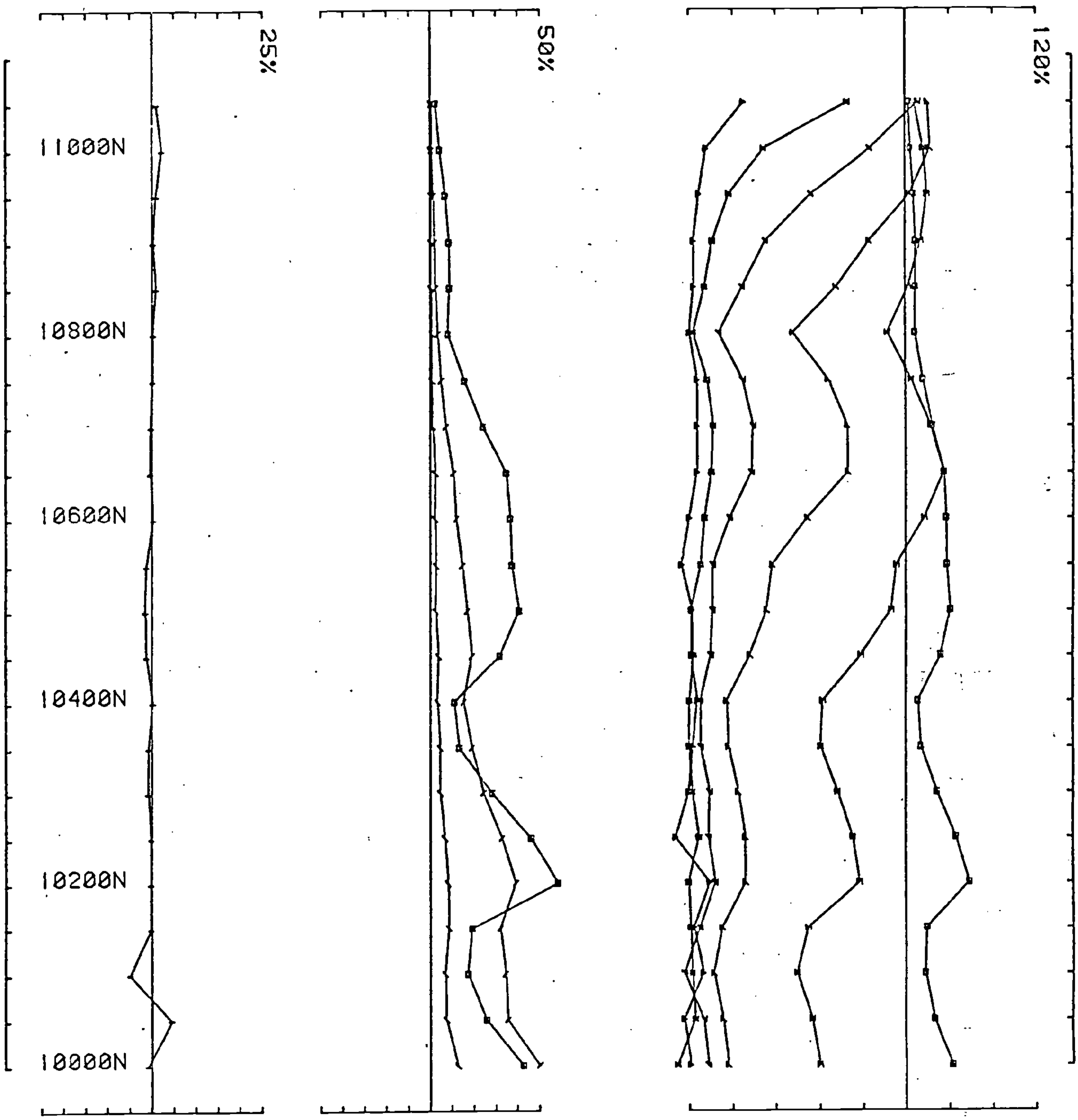

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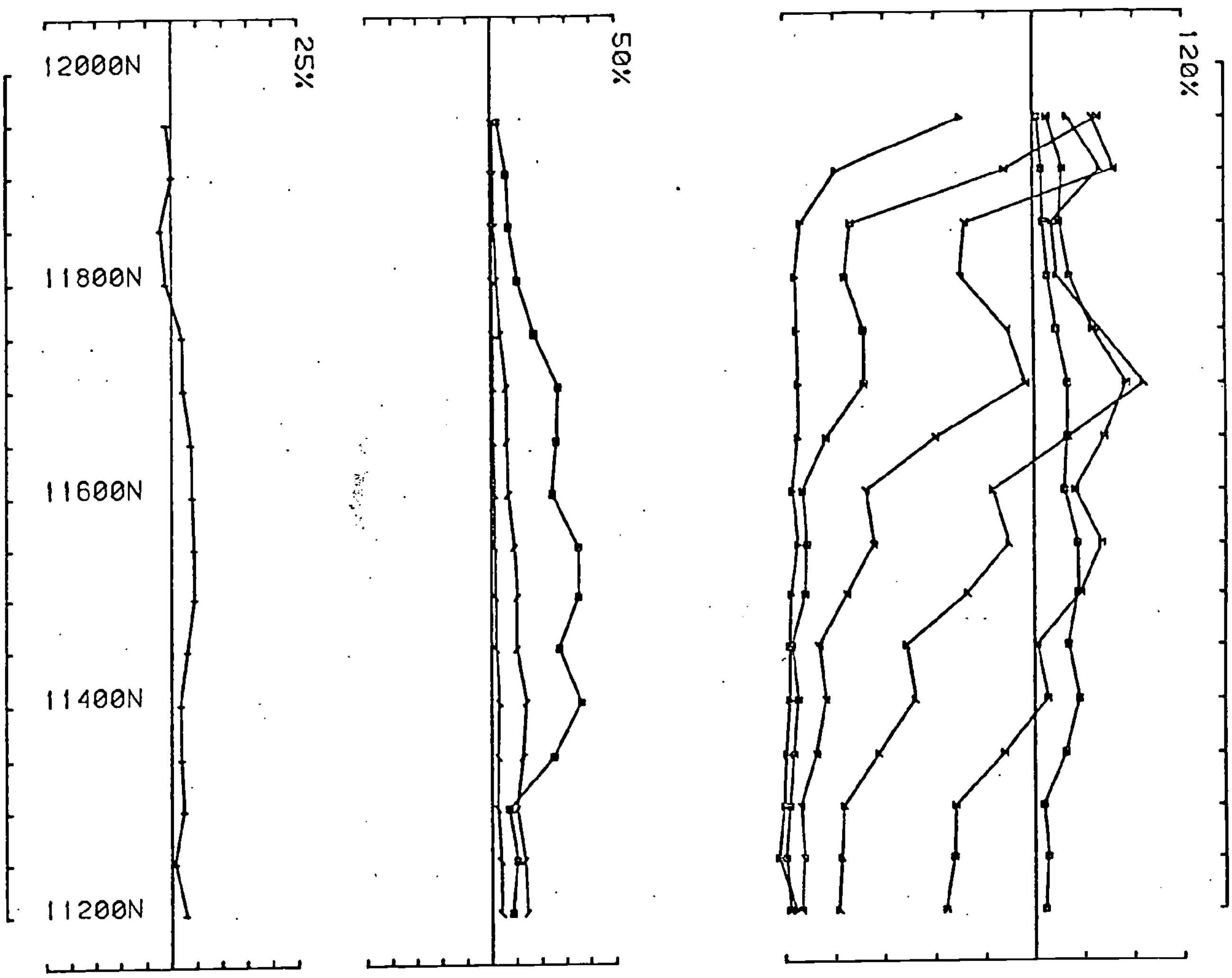

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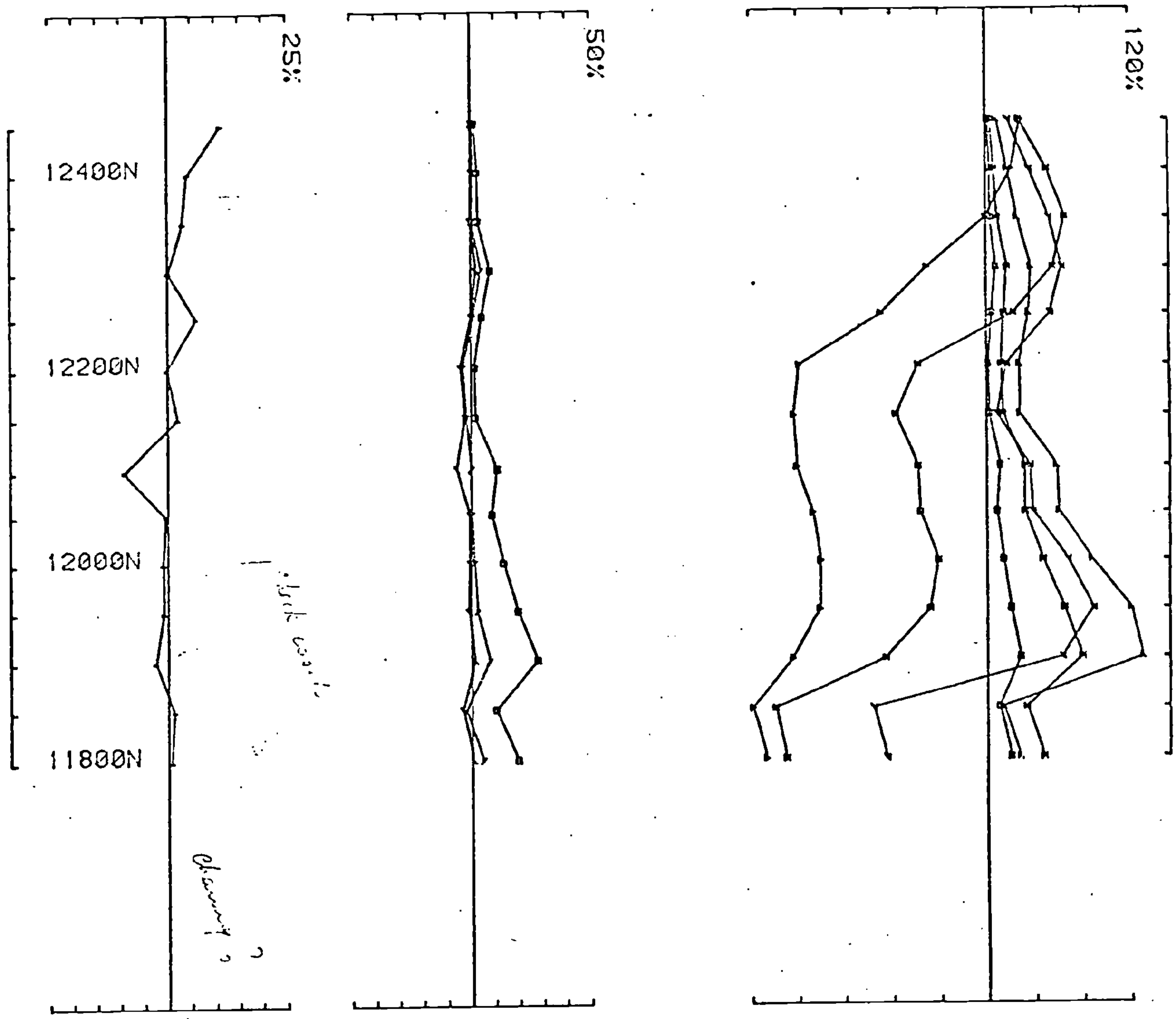
0209



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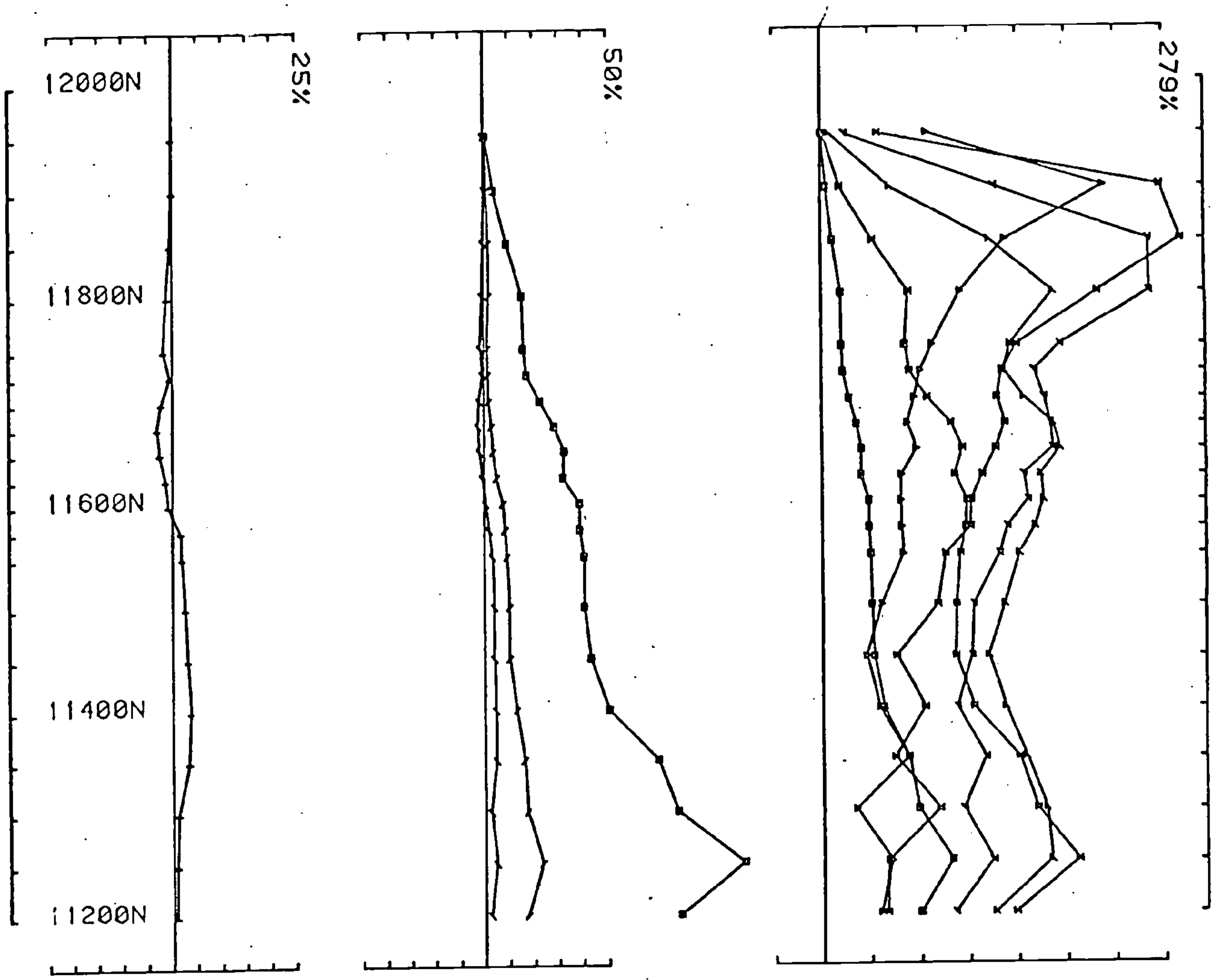
Loopno 0233 Line 10750E component Hz secondary Ch 1

0210



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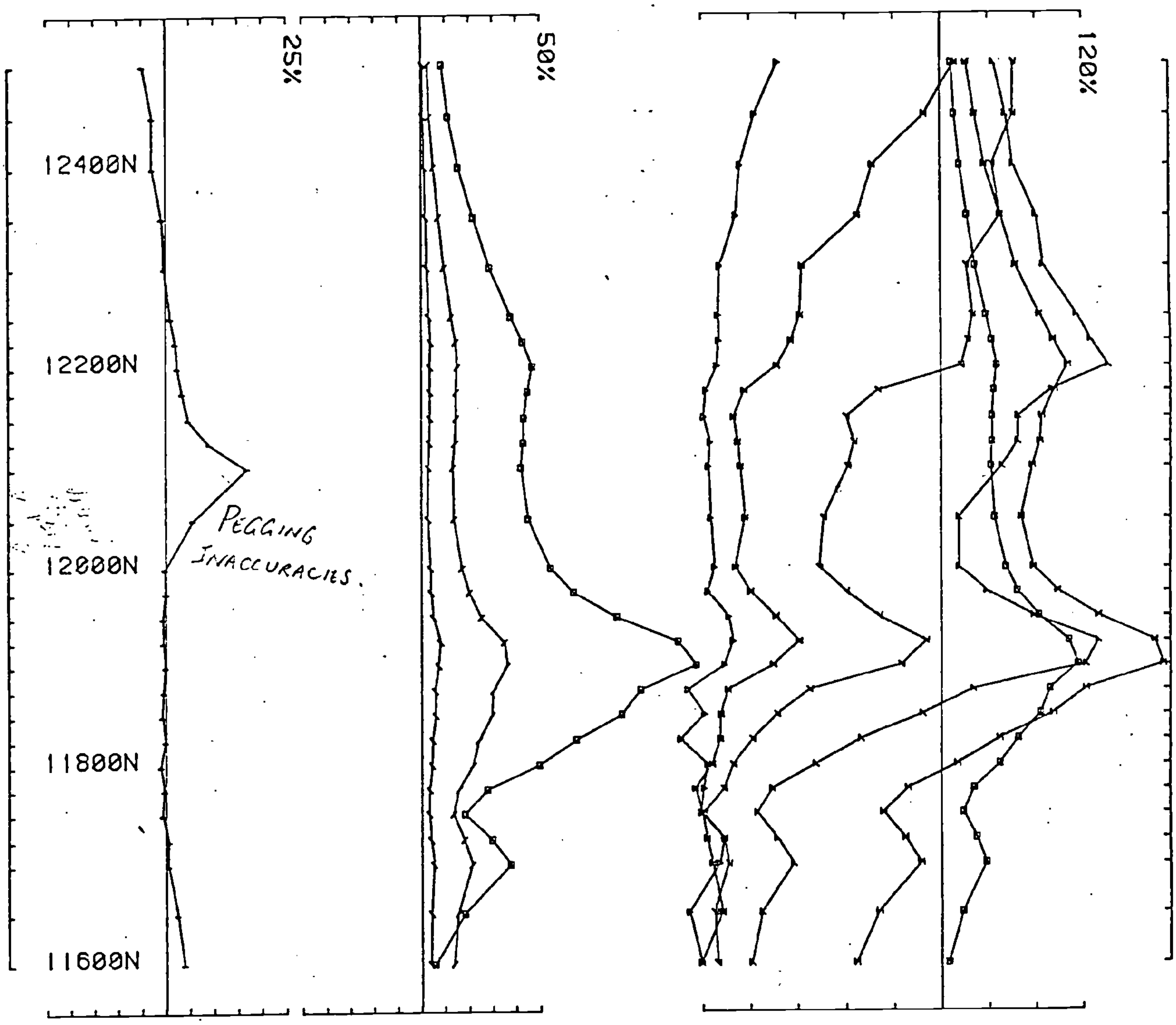
Loopno 0252 Line 10500E component Hx total Ch 1

0211



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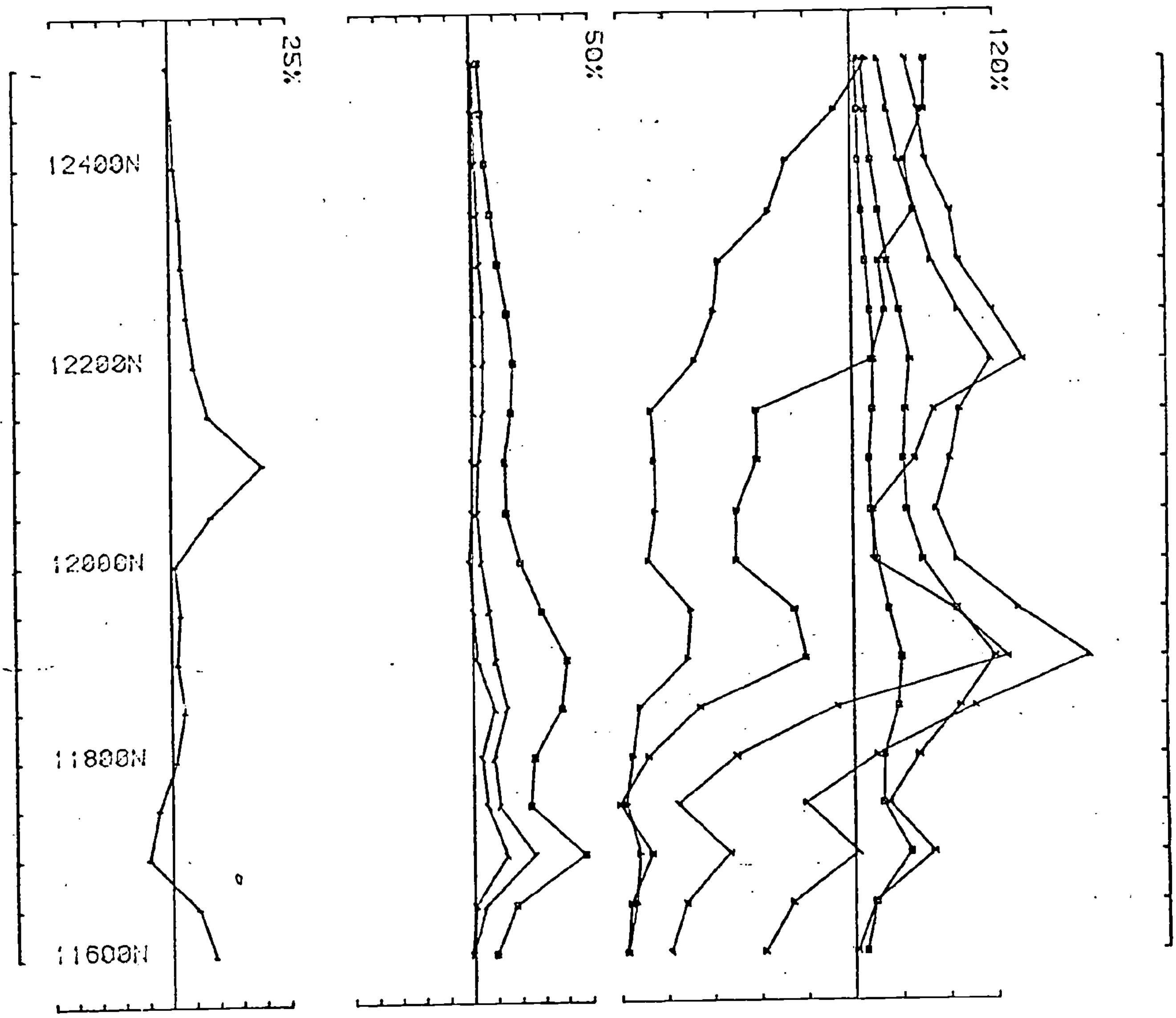

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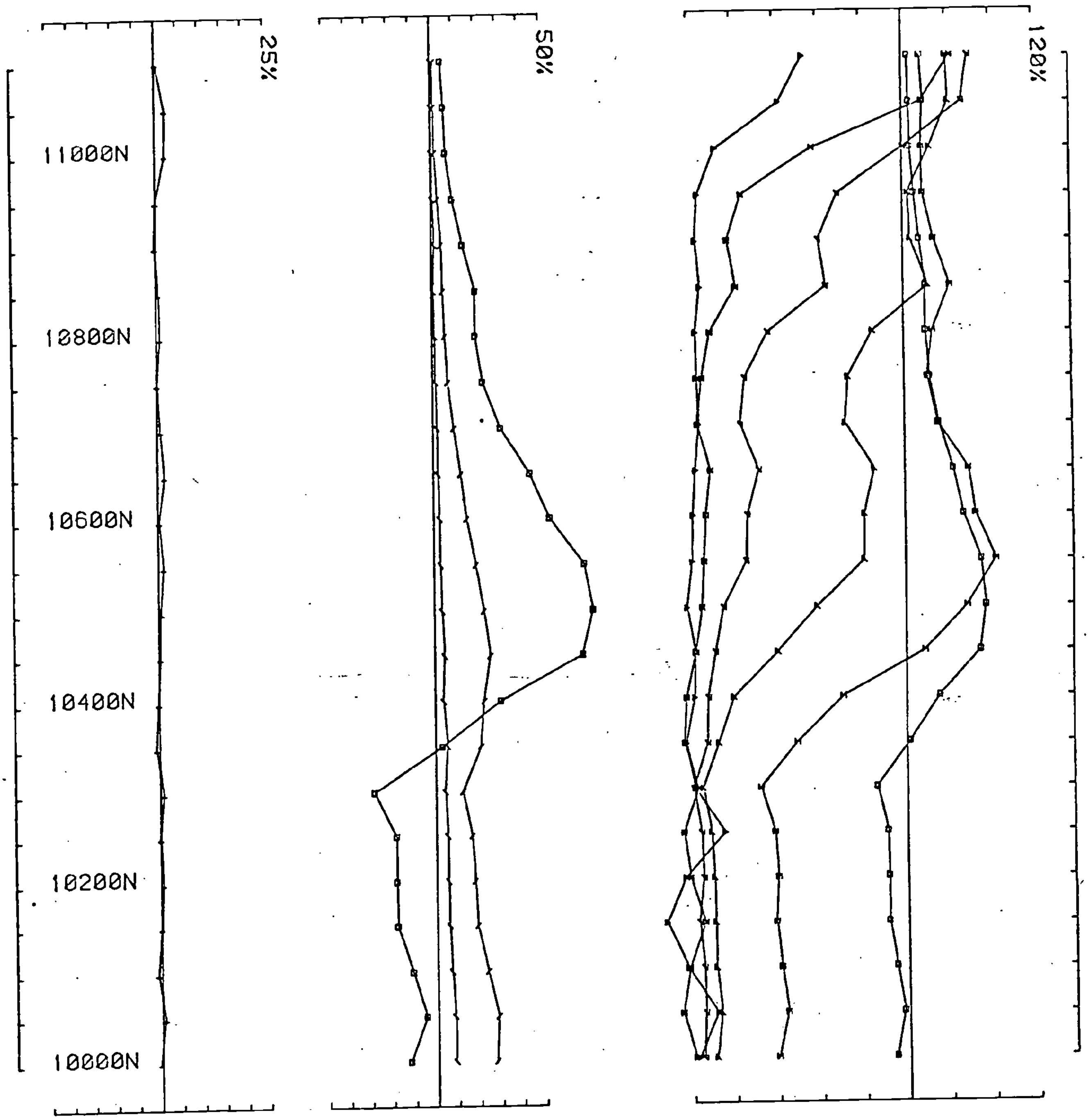

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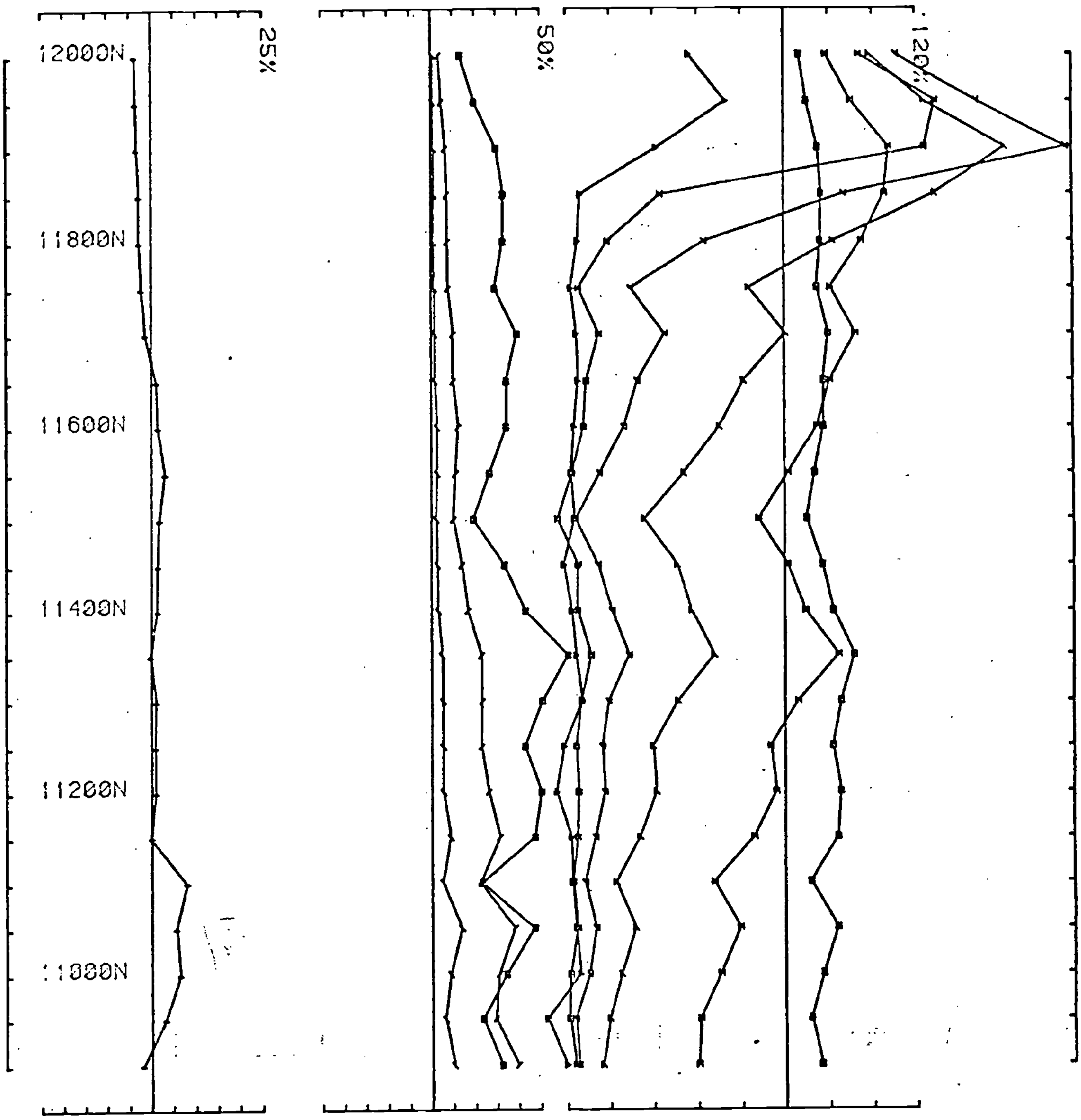

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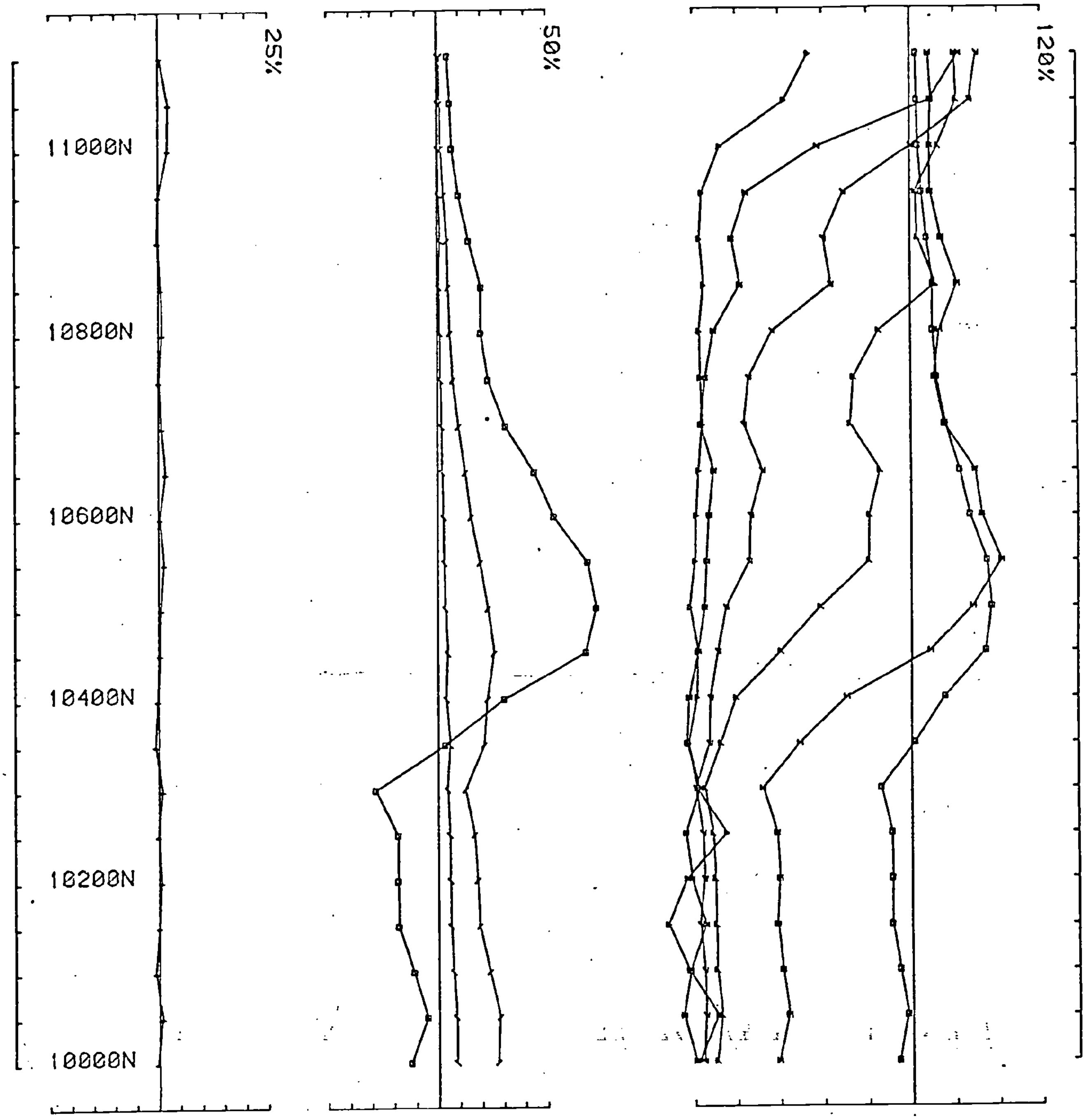

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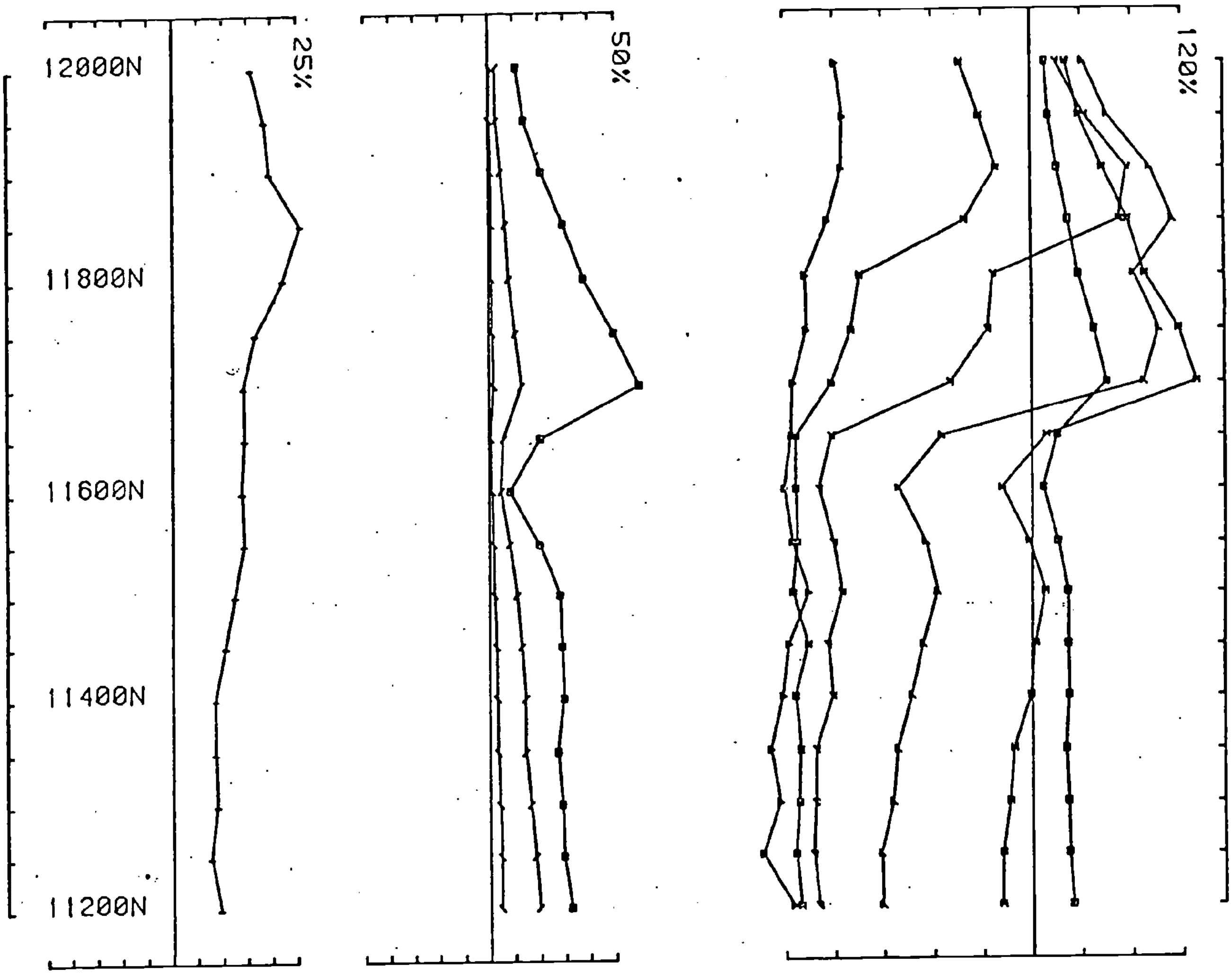

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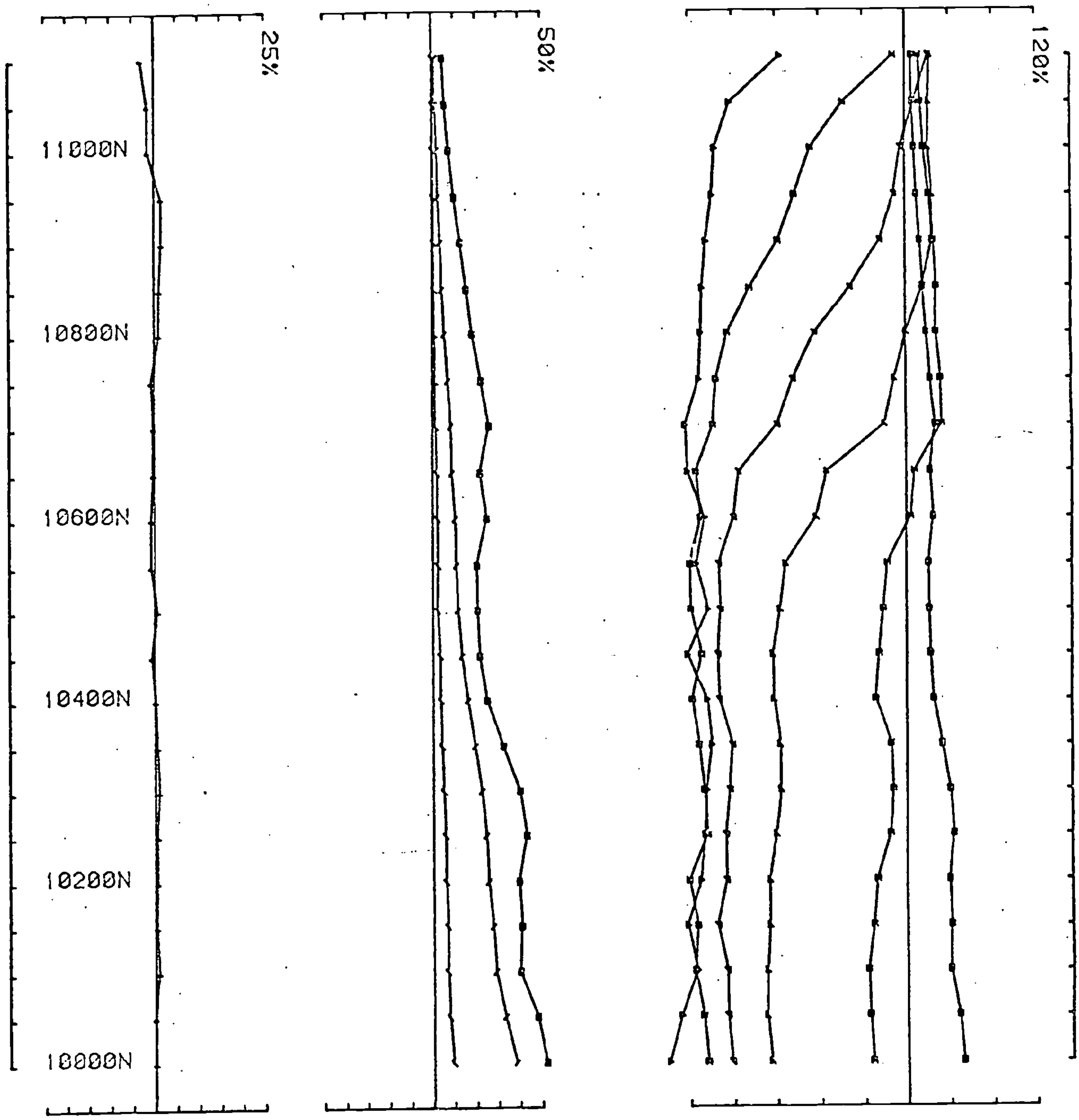
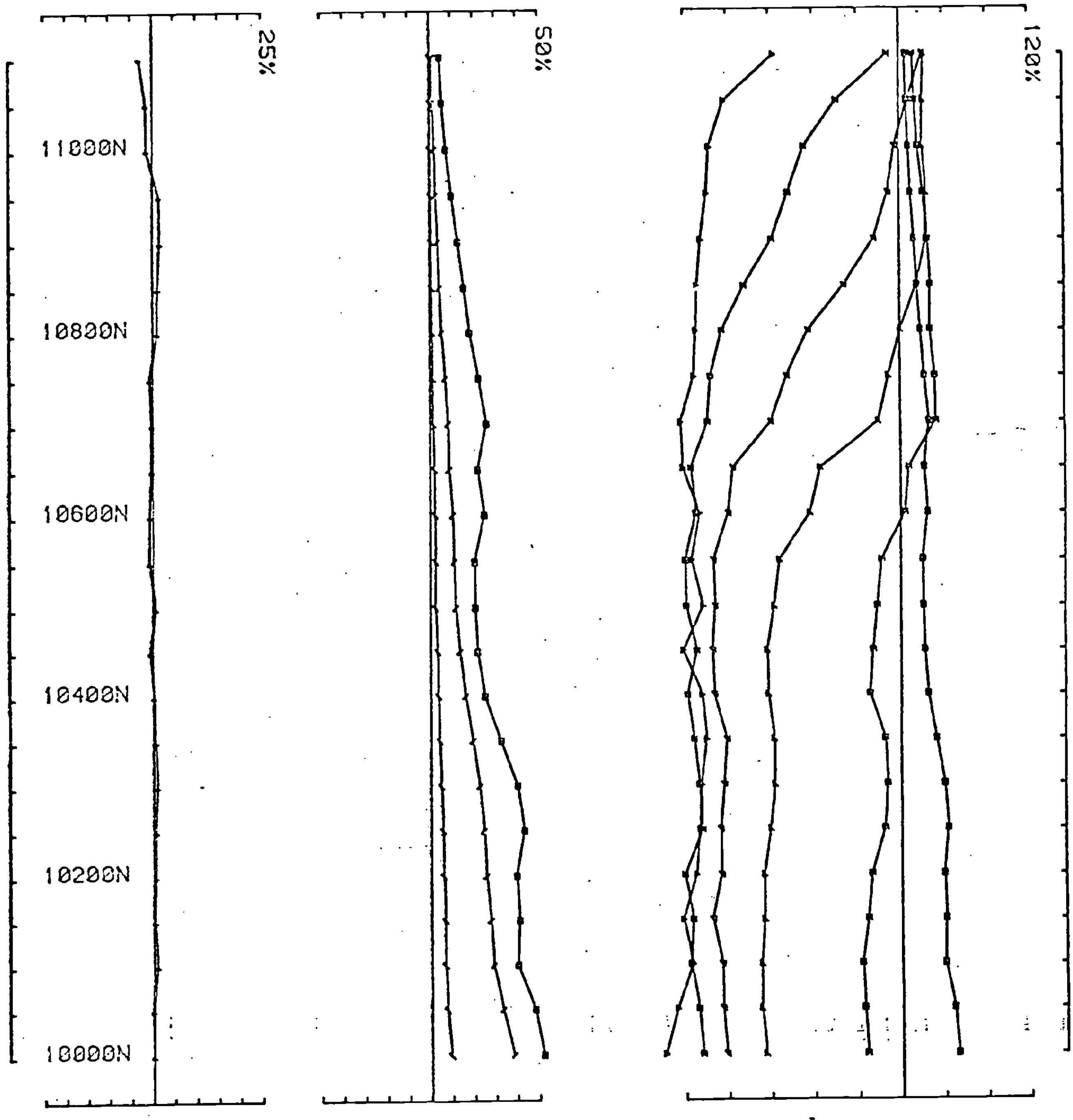
Loopno 0252 Line 10250E component Hz secondary Ch 1



Area RECORD PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0235 Line 10000E component Hz secondary Ch 1



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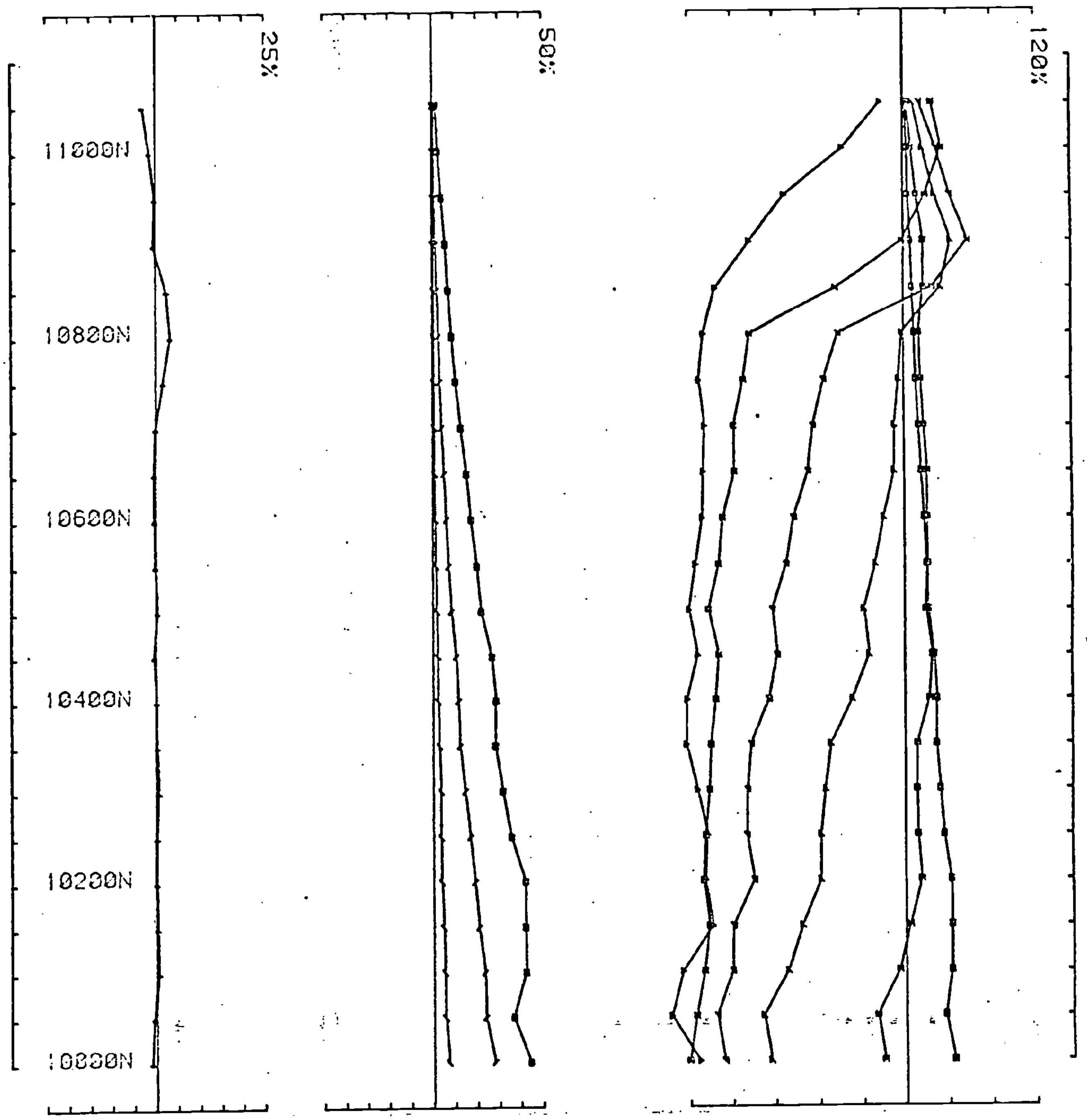
0219



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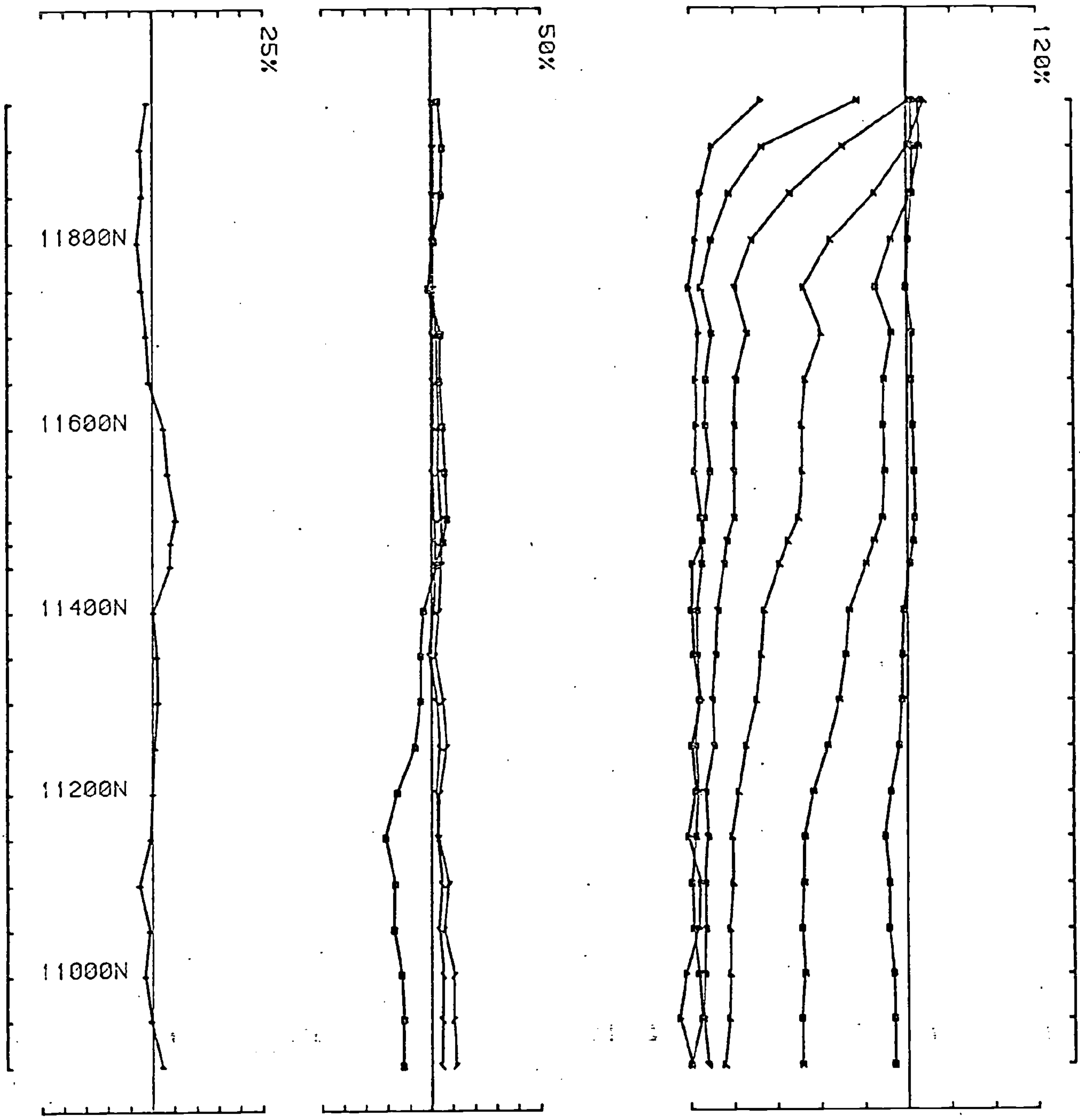

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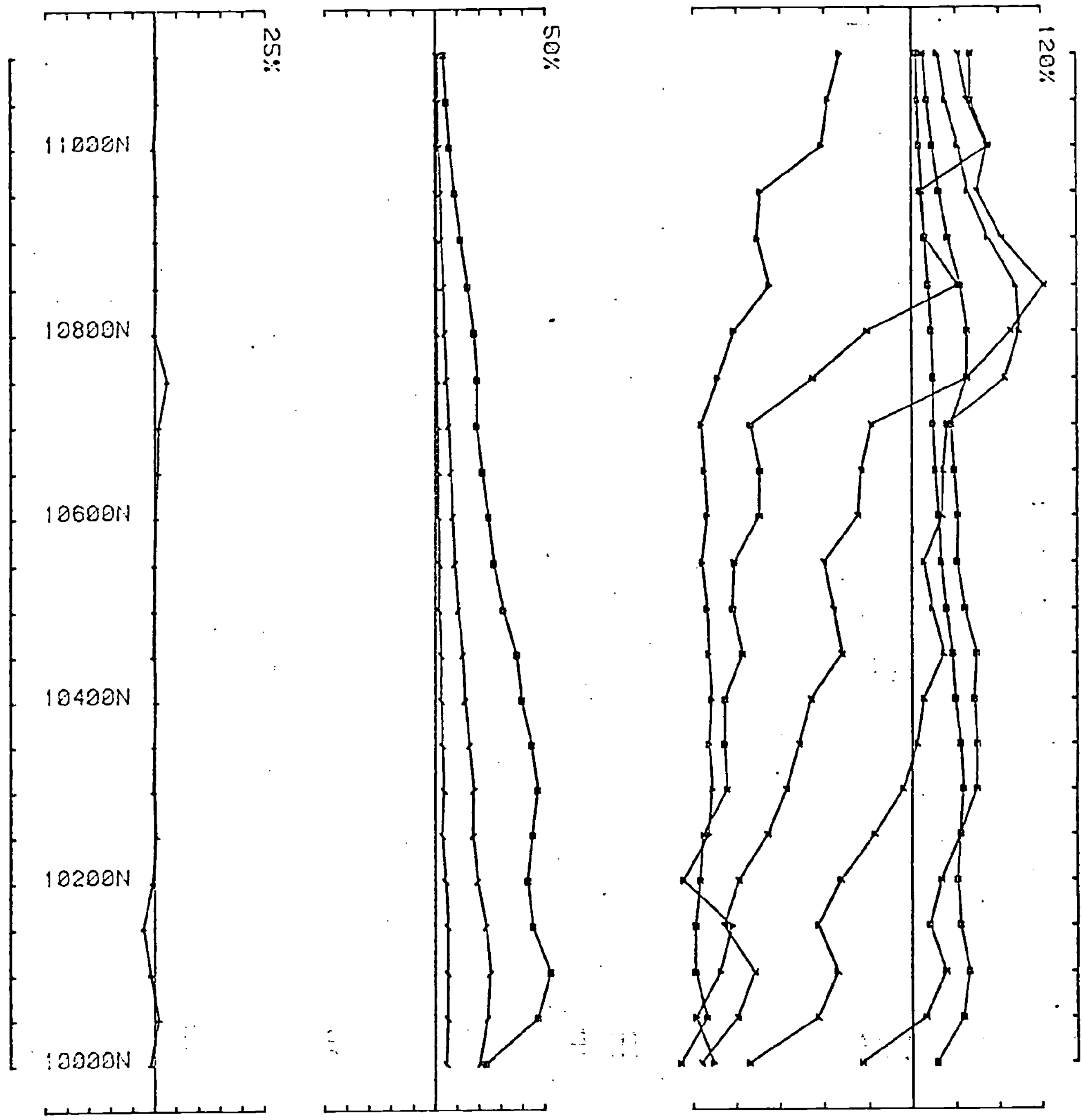

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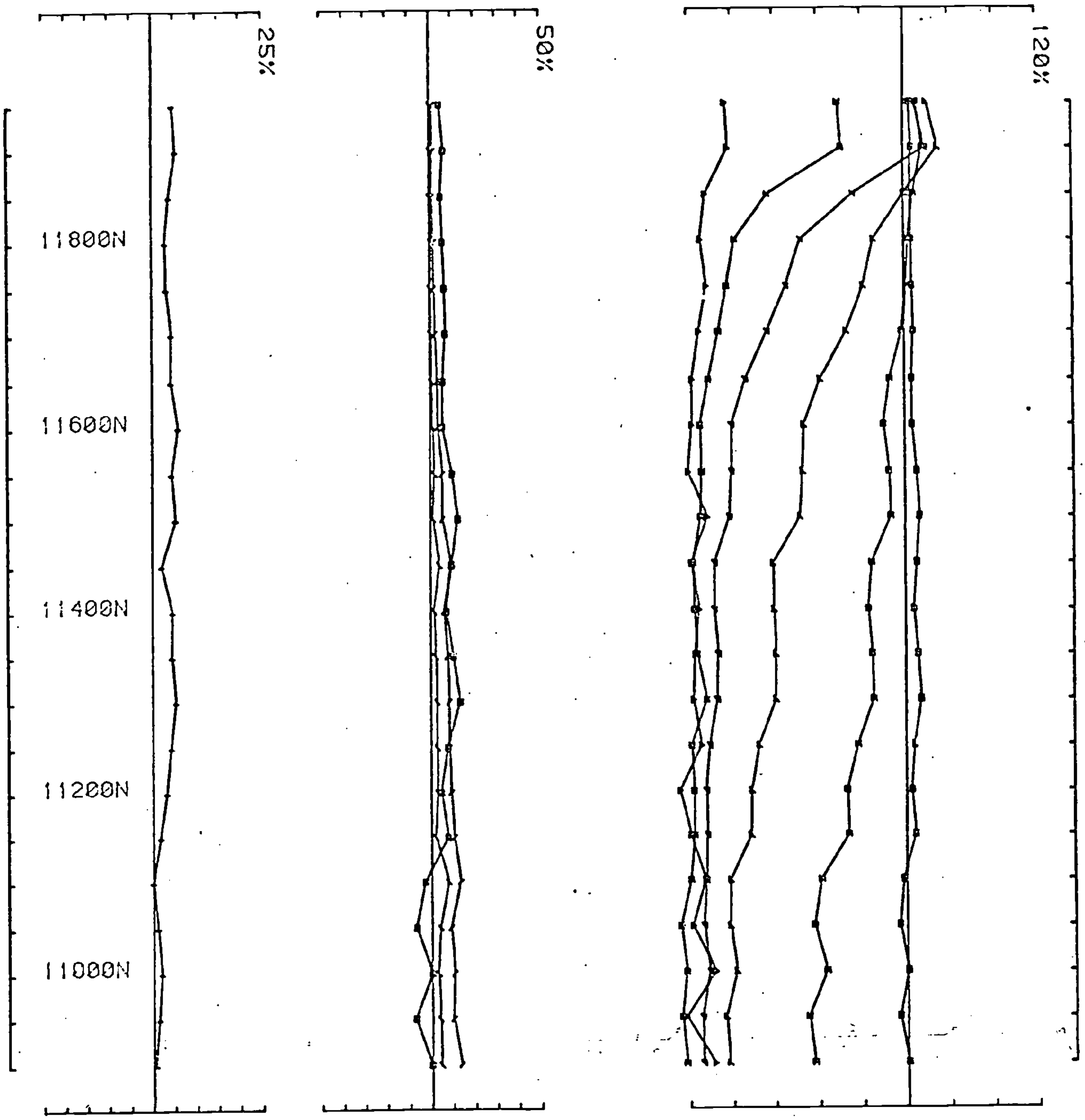

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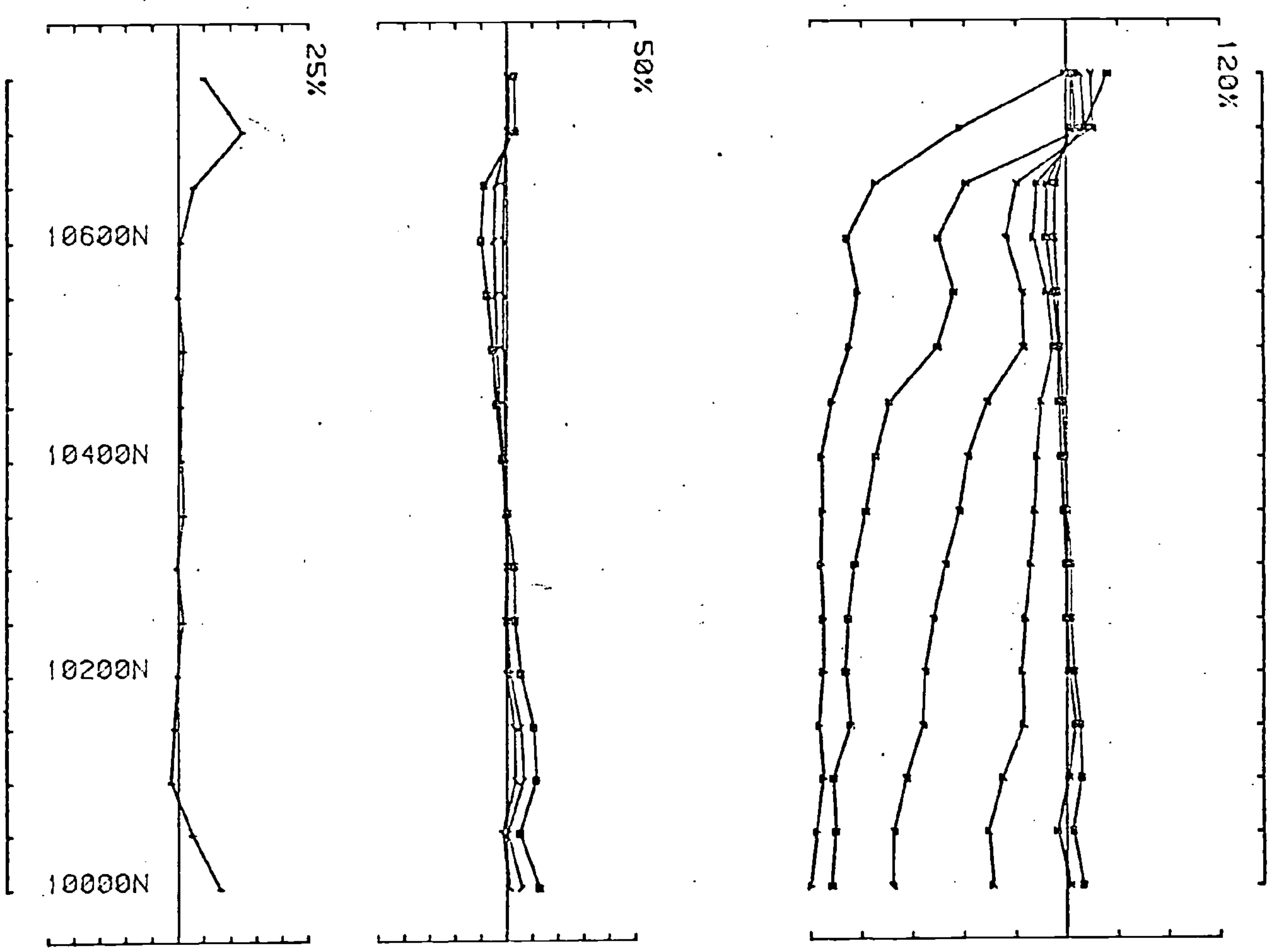
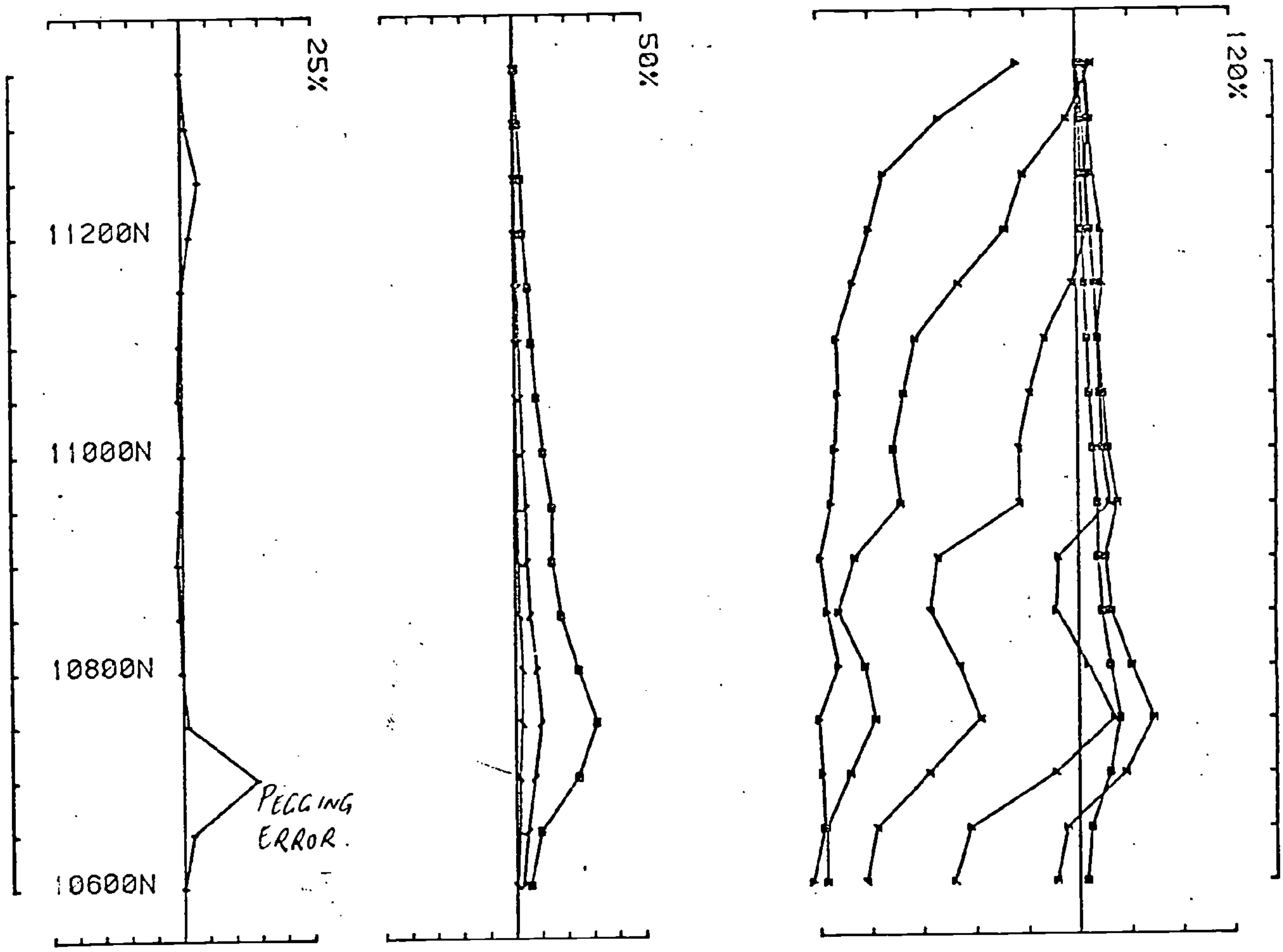


Area RECORD PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230
Loopno 0236 Line 8500E component Hz secondary Ch 1



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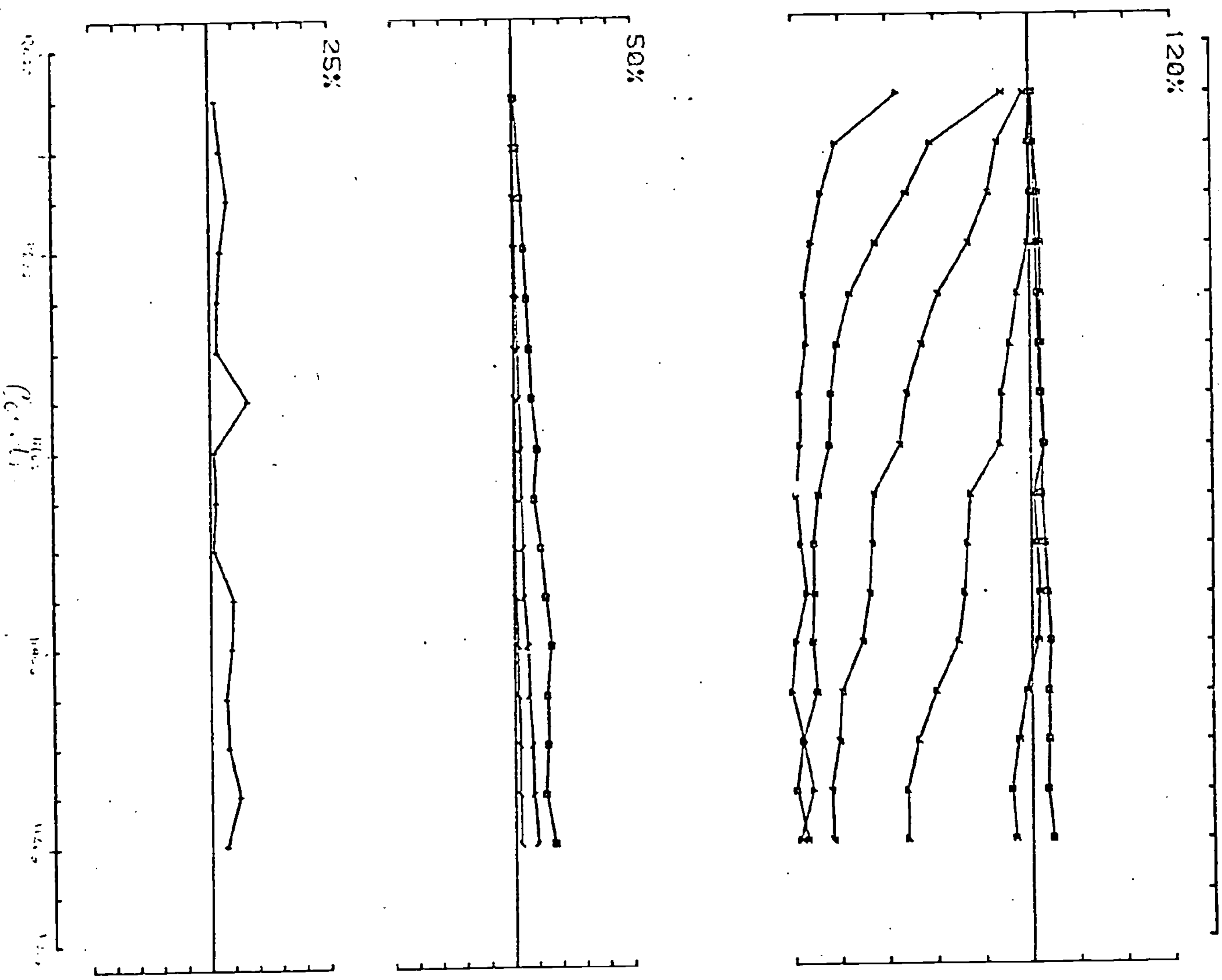

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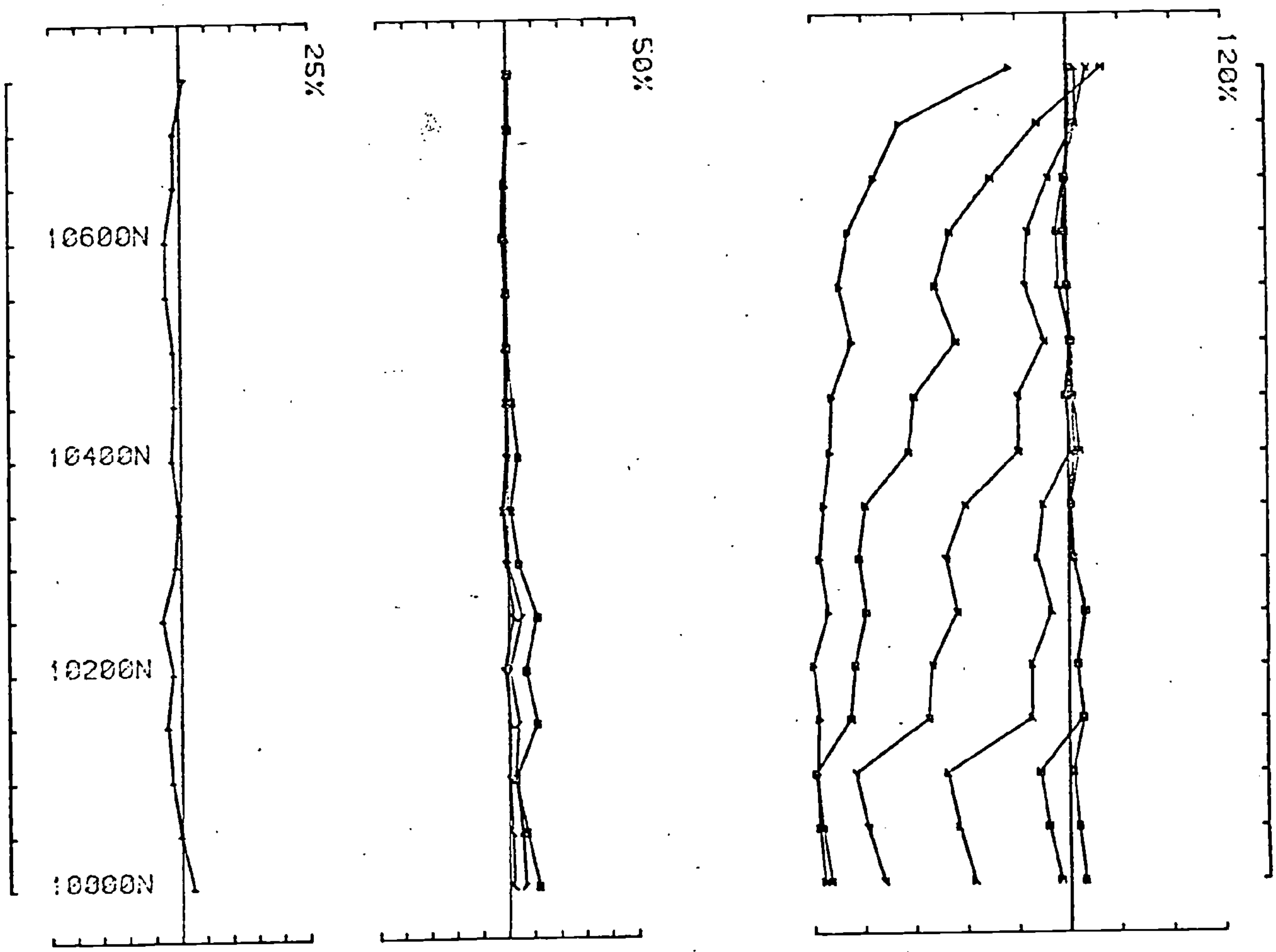
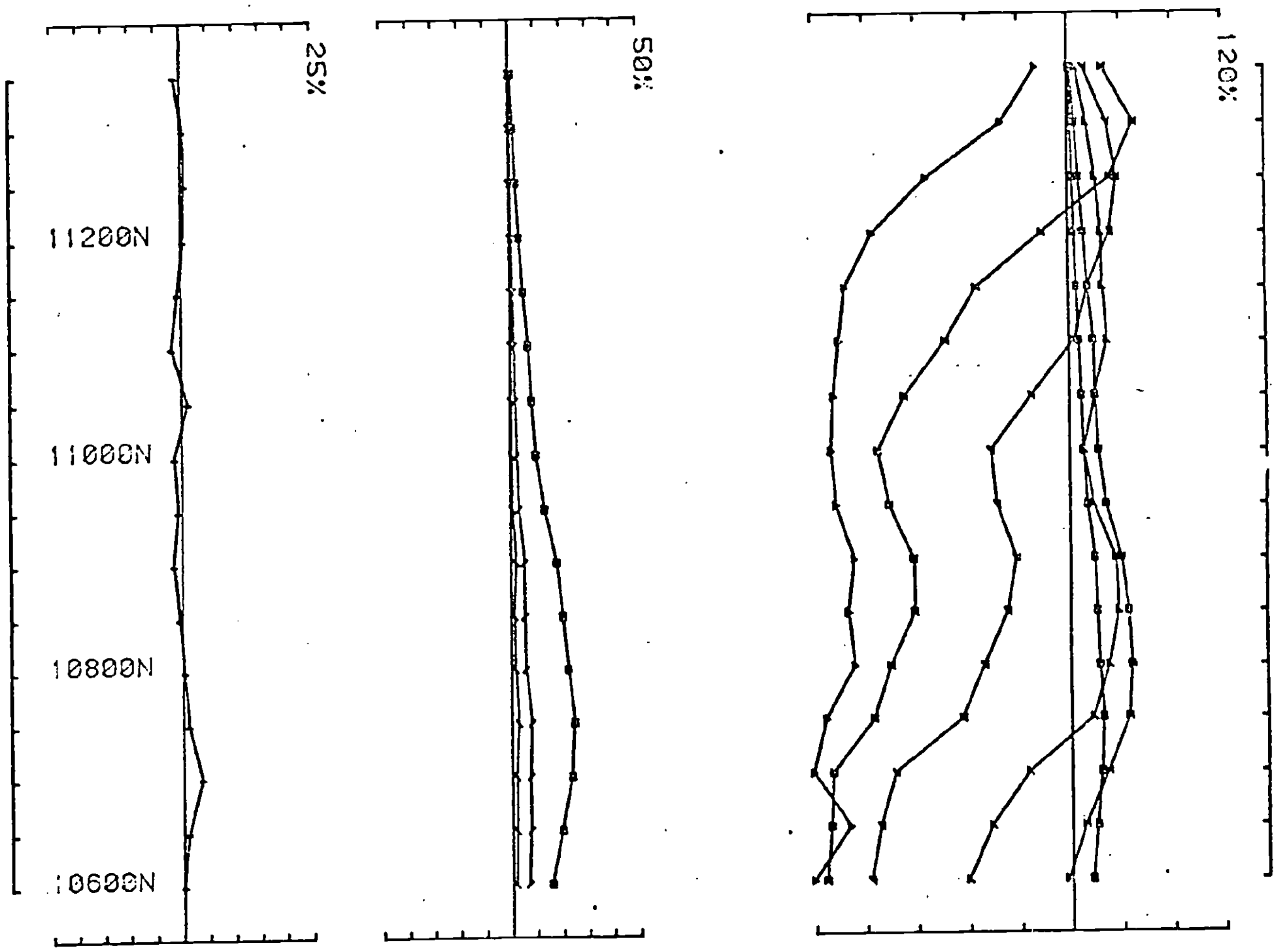
Loopno 0231 Line 8500E component Hz secondary Ch 1



Area RECORD PROSPECT   ESSO MINERALS   Job 2702 freq(hz) 26.230

Loopno 0236 Line 8150E component Hz secondary Ch 1



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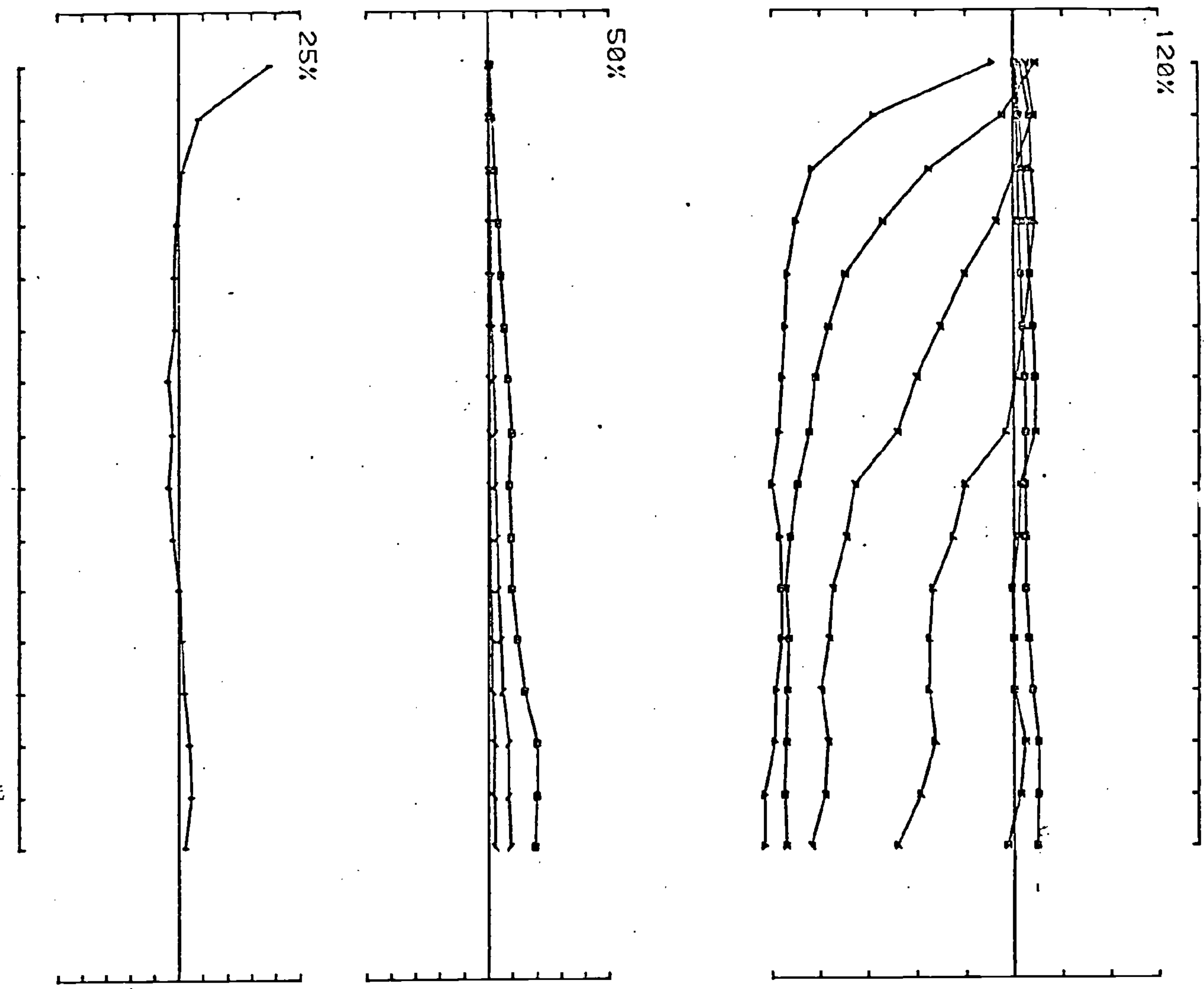
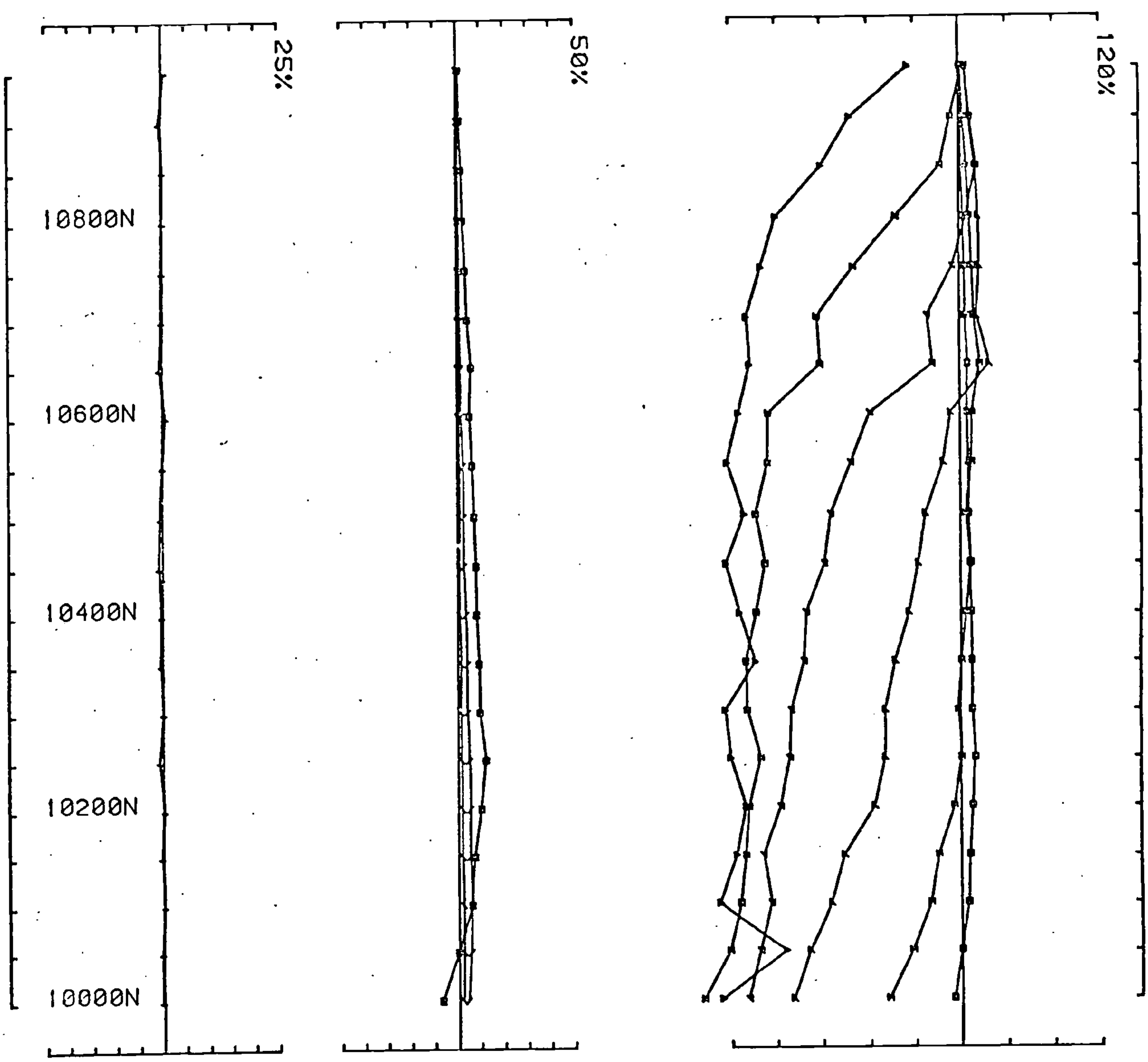


Area RECORD PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0231 Line 81[illegible]0E component Hz secondary Ch 1



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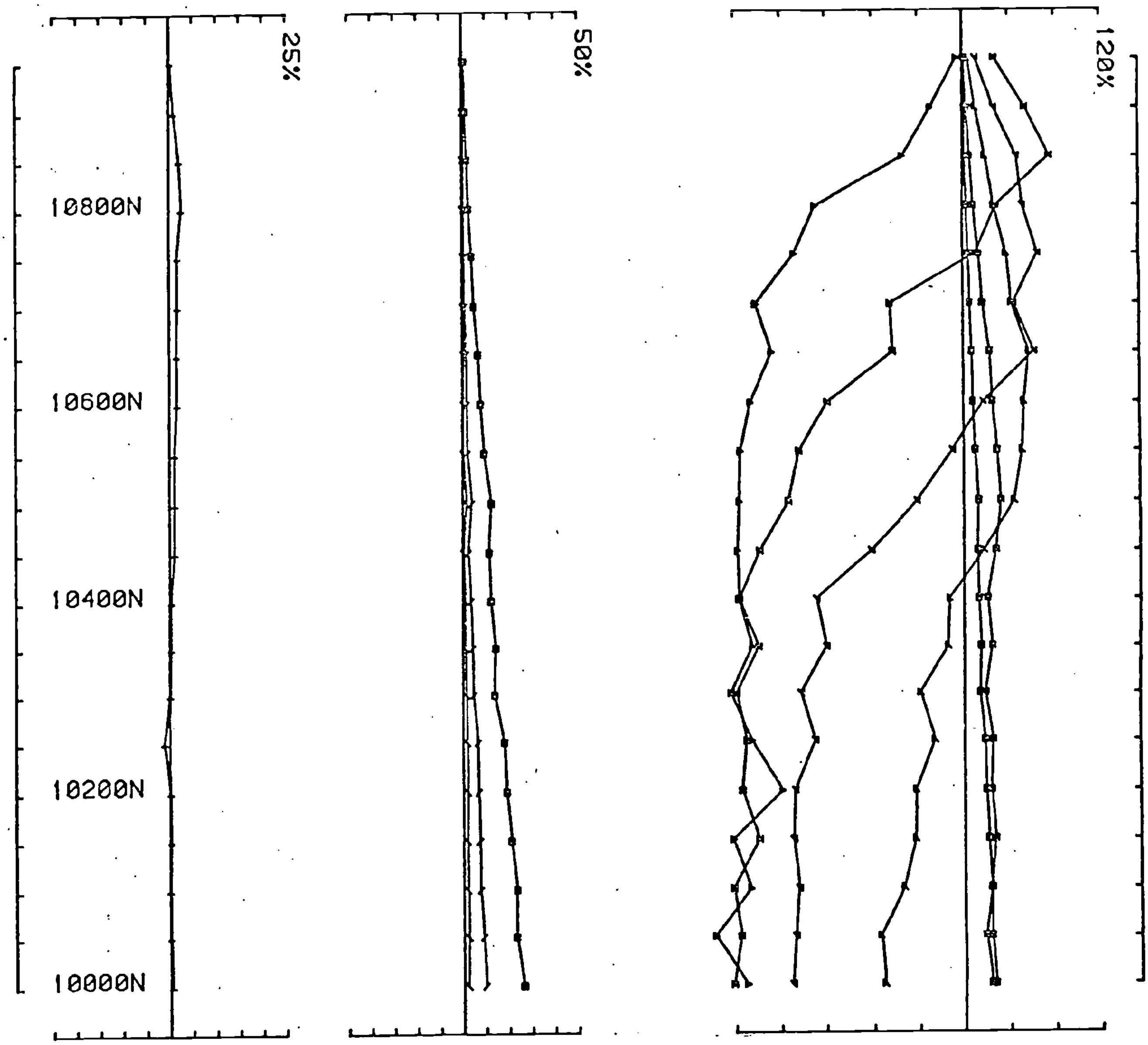

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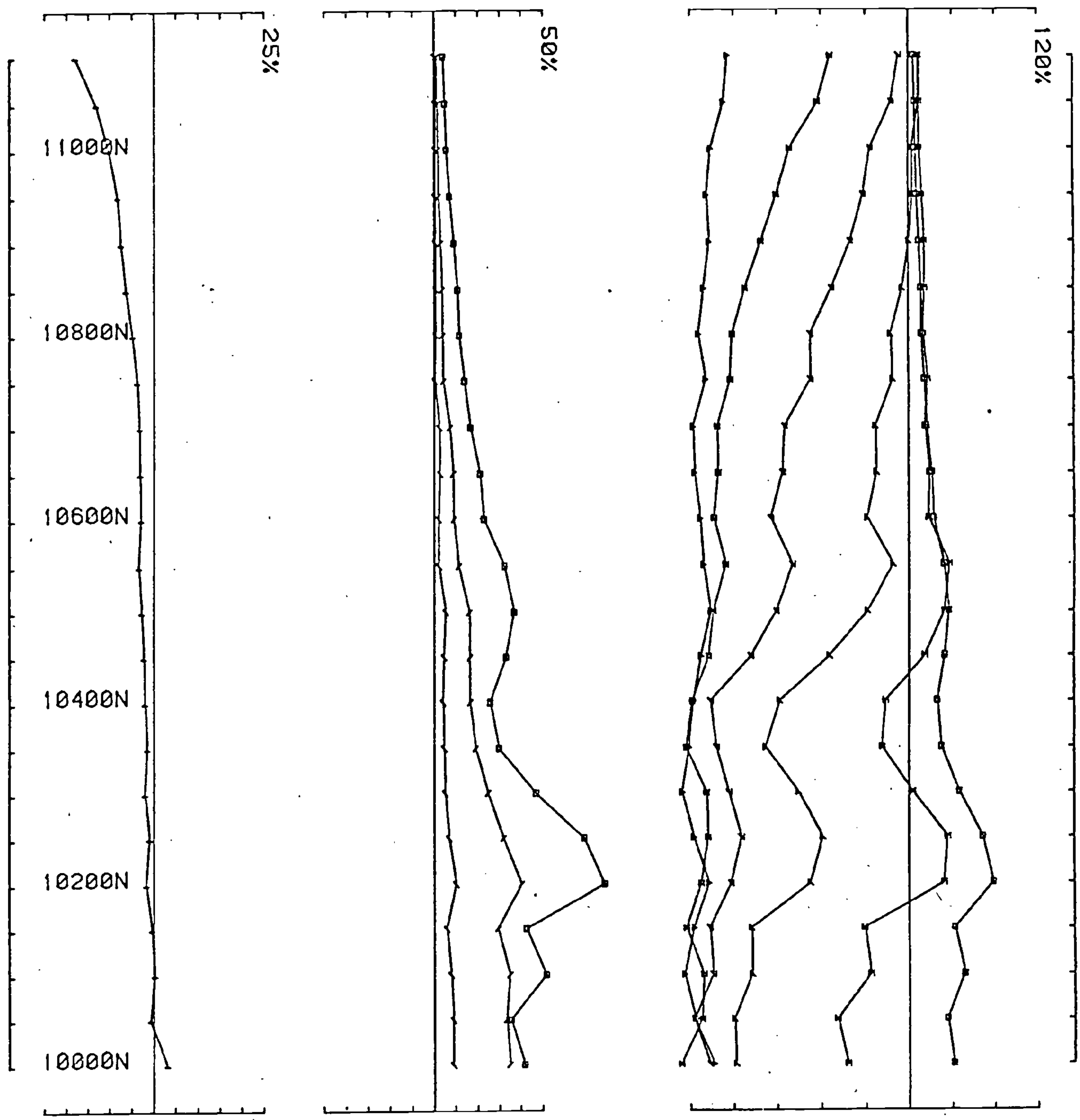

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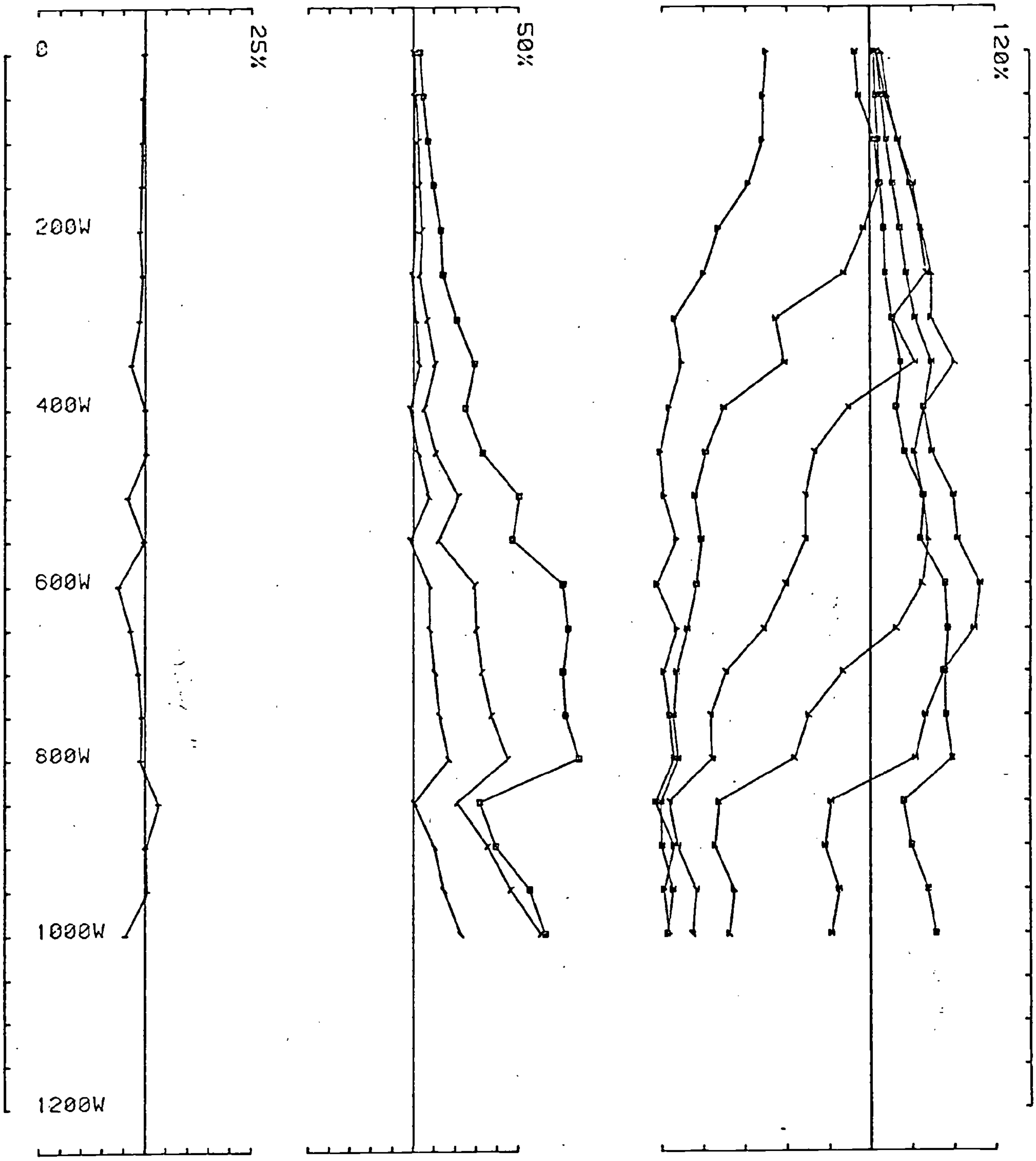
FALLOUT PROSPECT



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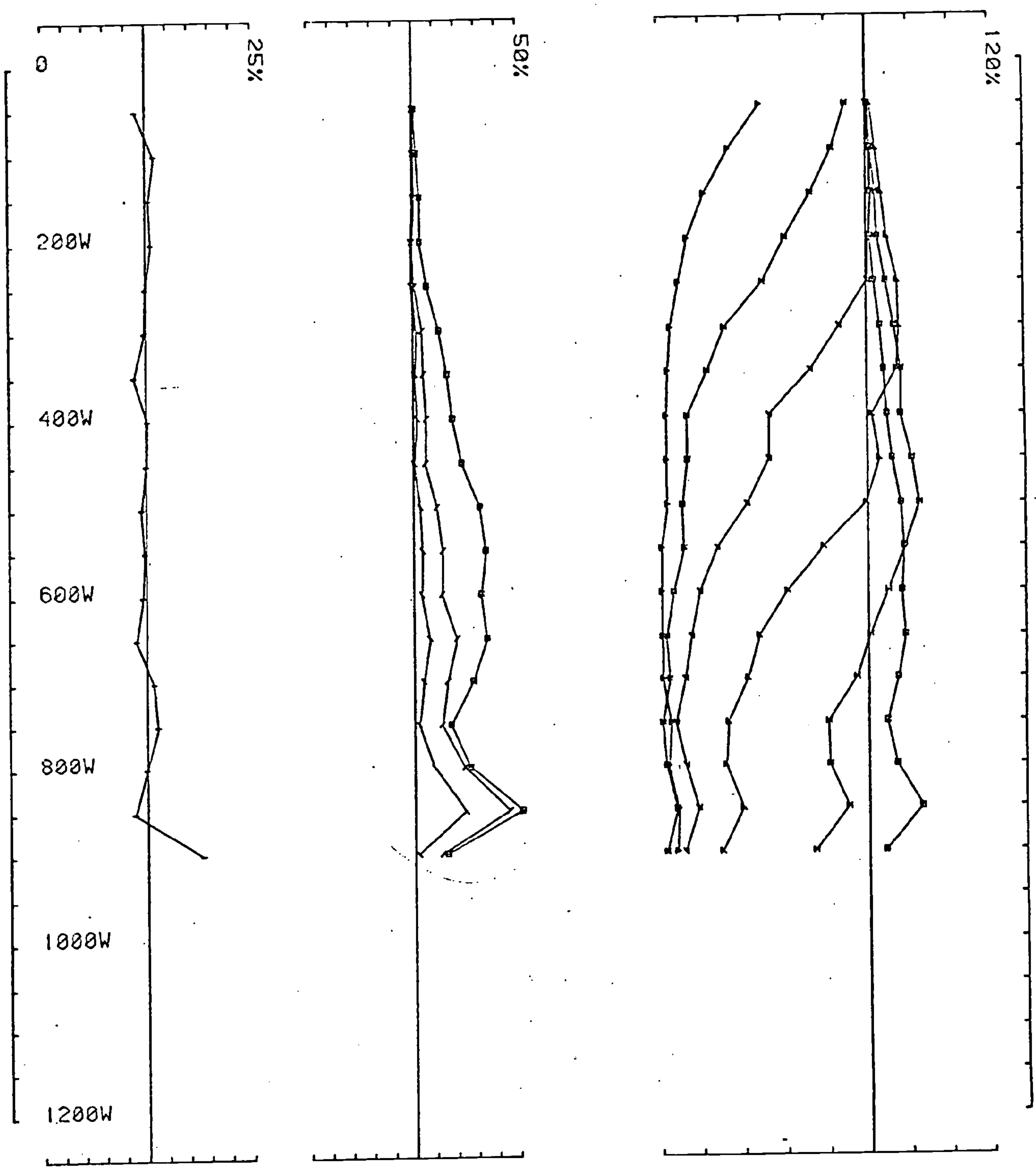

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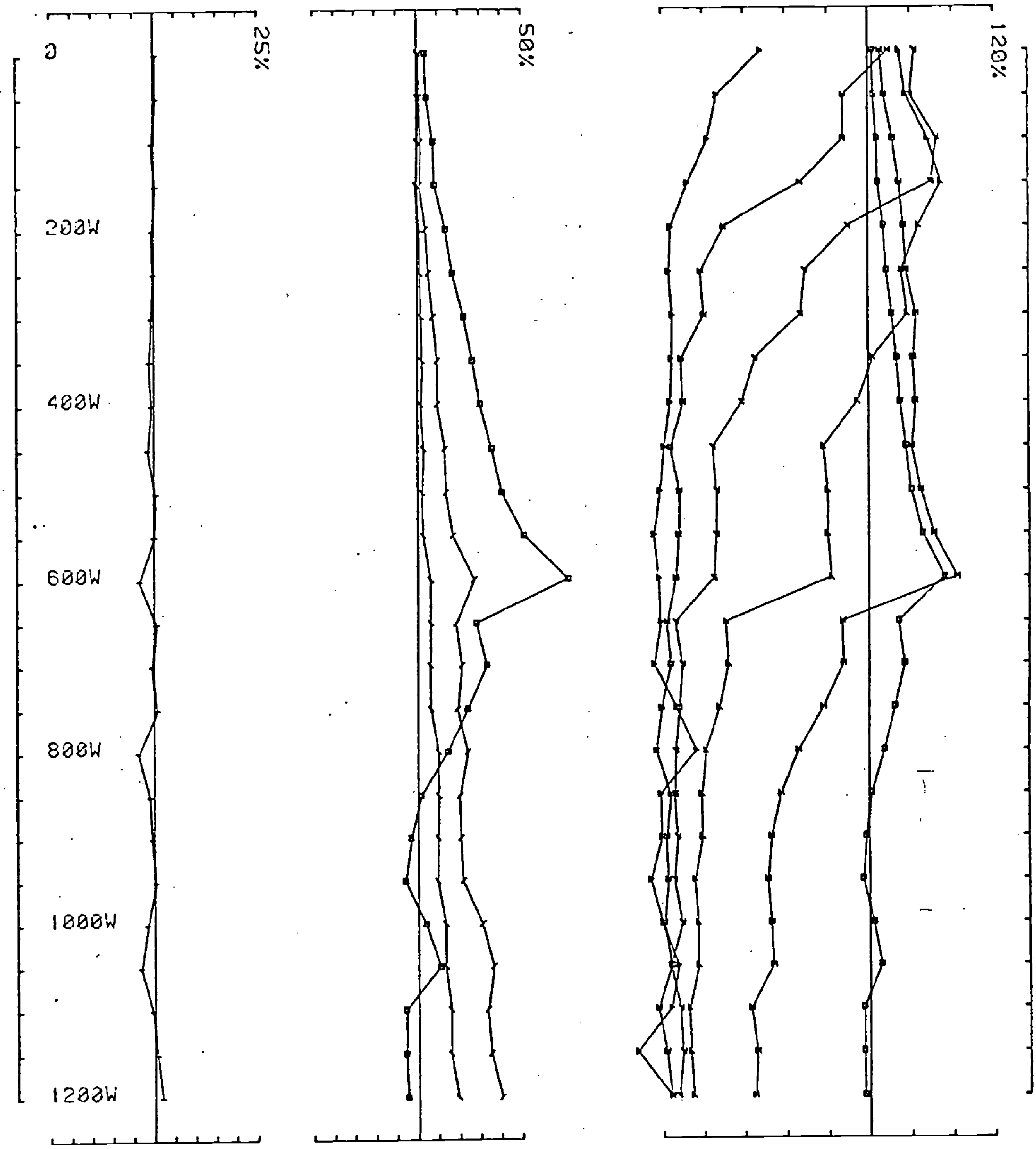

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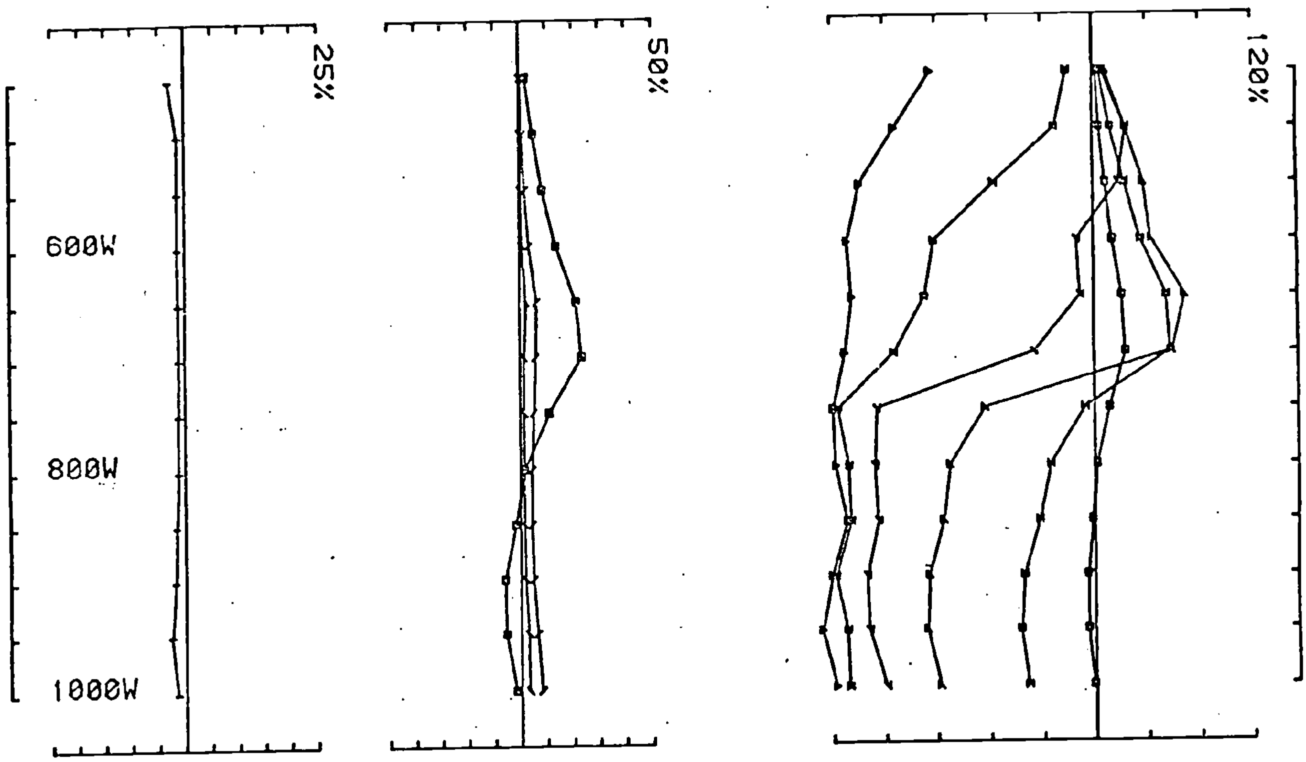
Loopno 0243 Line 1100N component Hz secondary Ch 1



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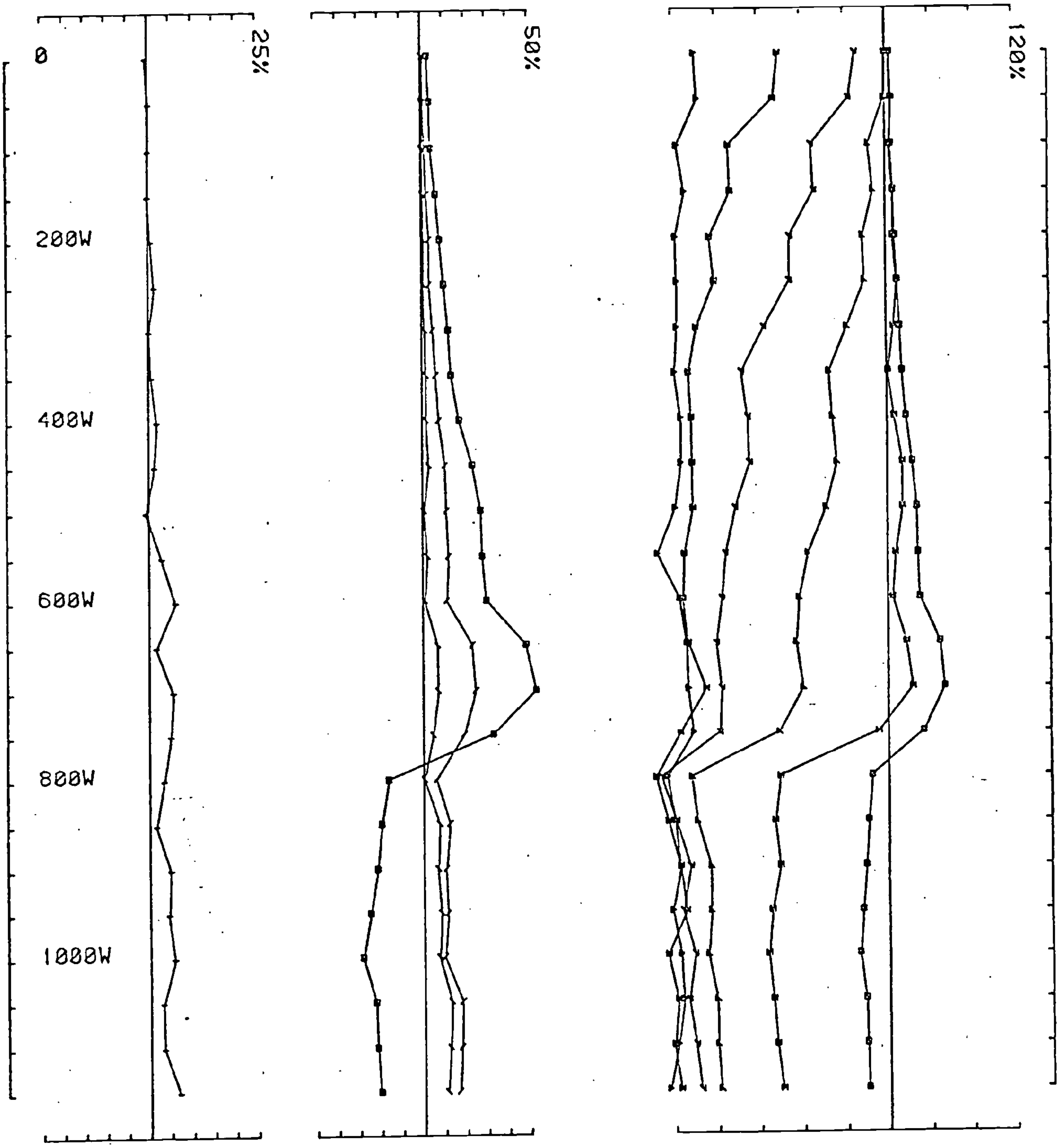

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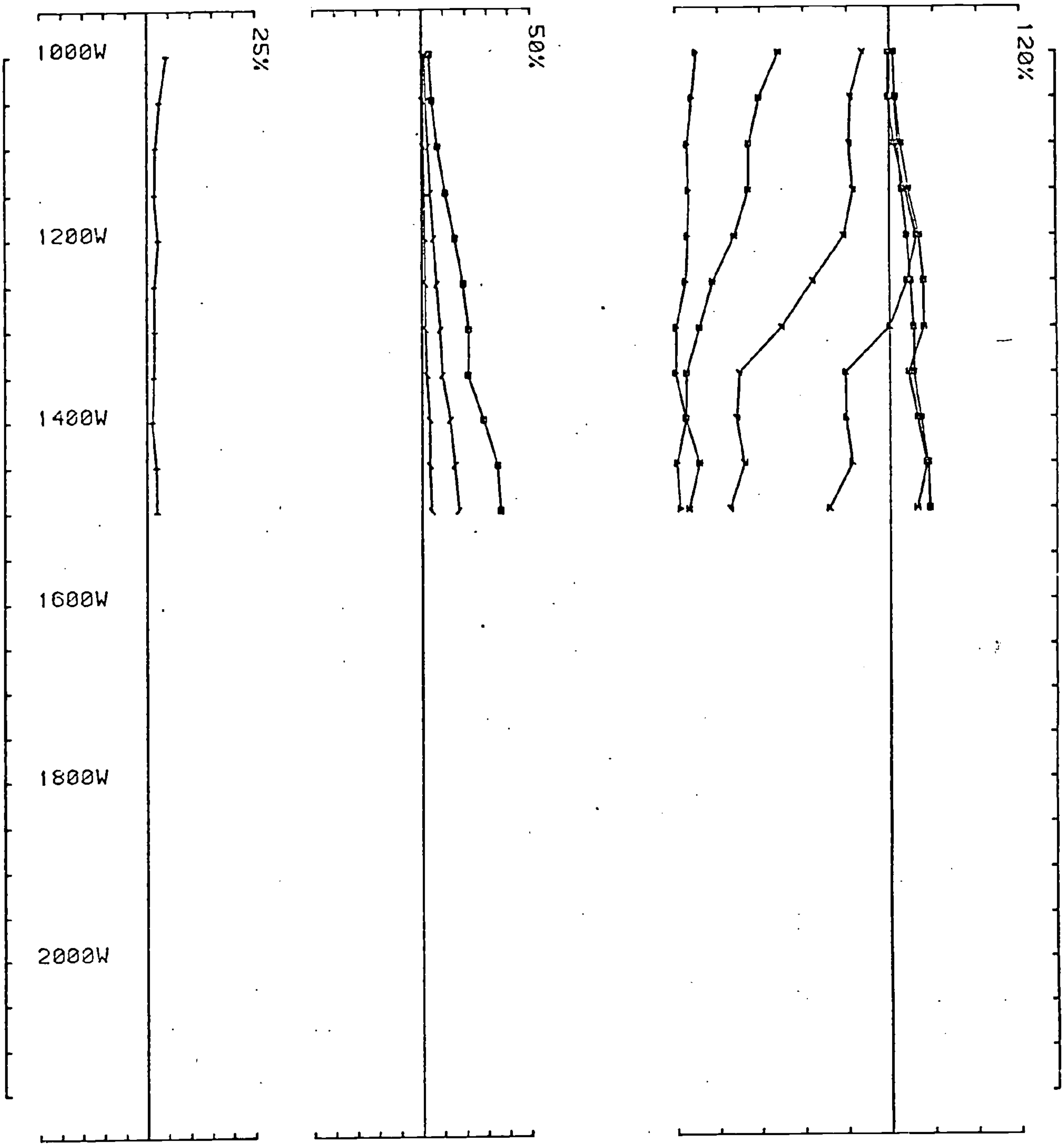

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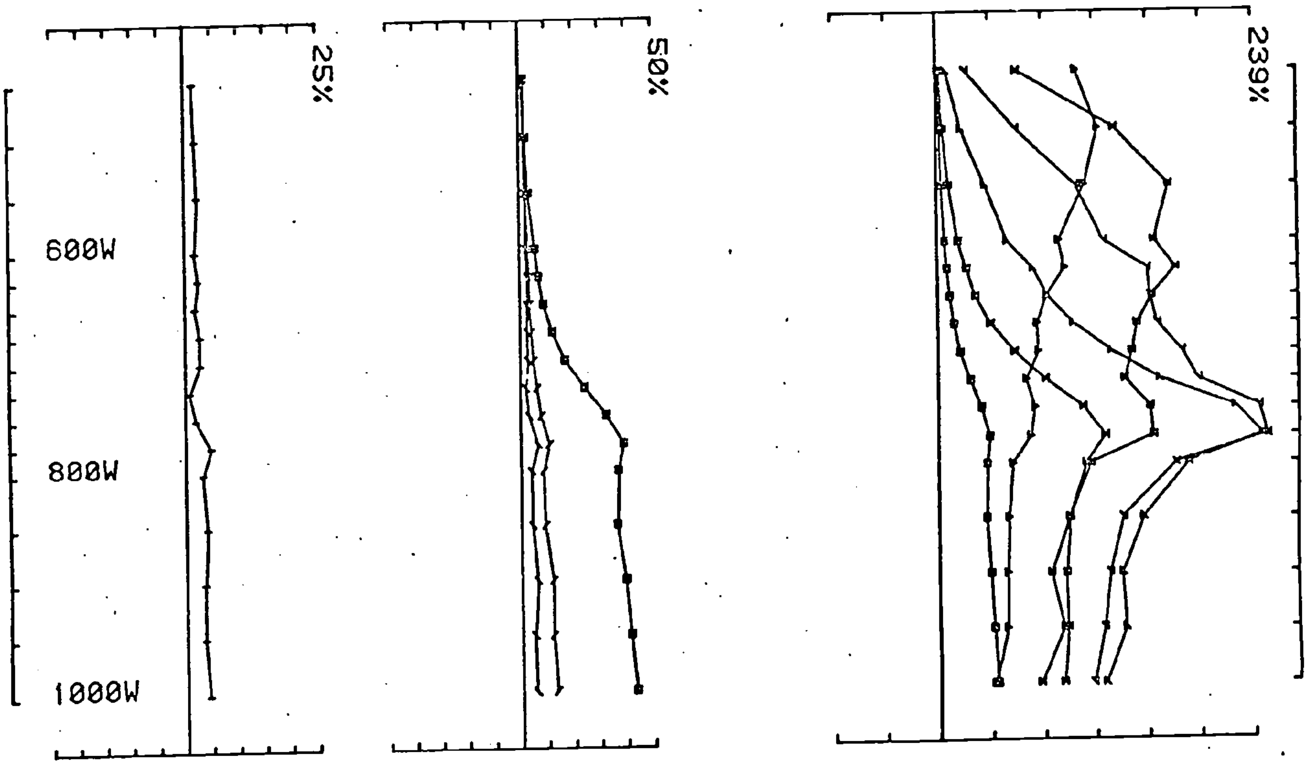

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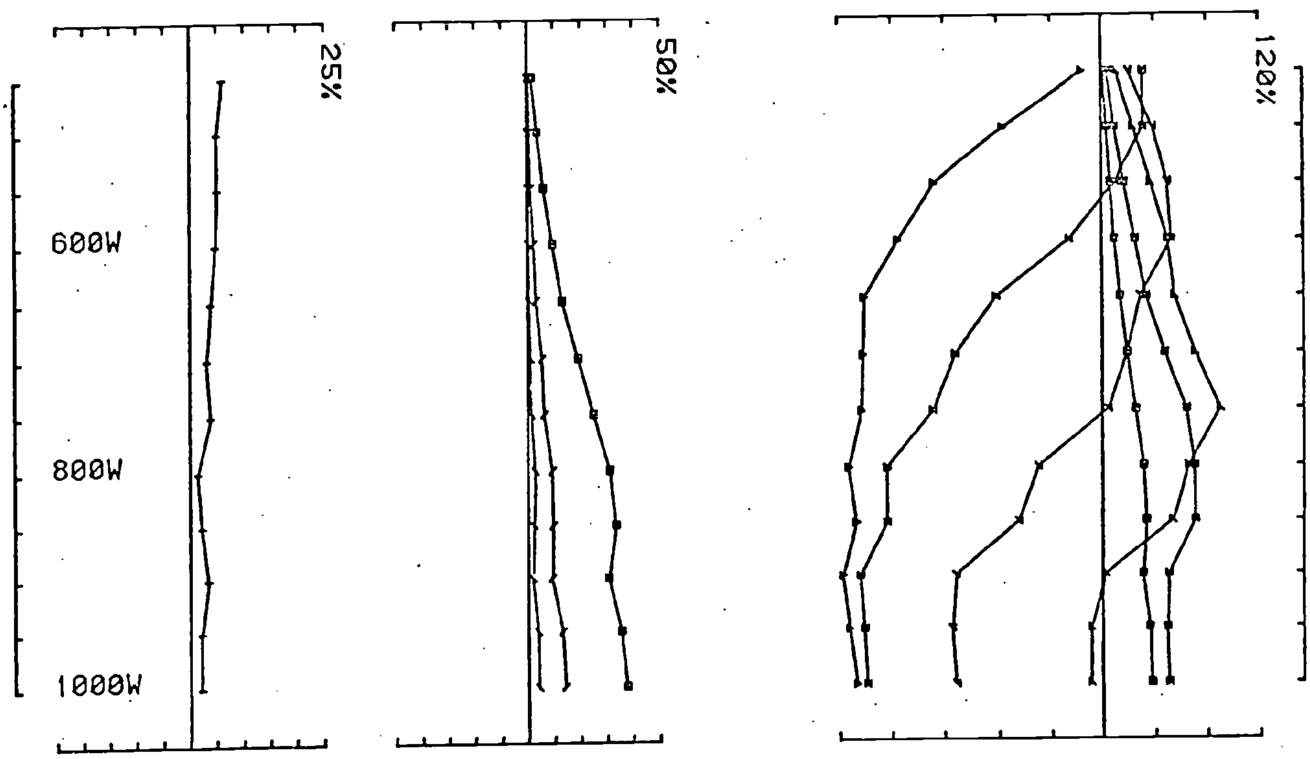
Loopno 0255 Line 1600N component Hx total Ch 1

0240



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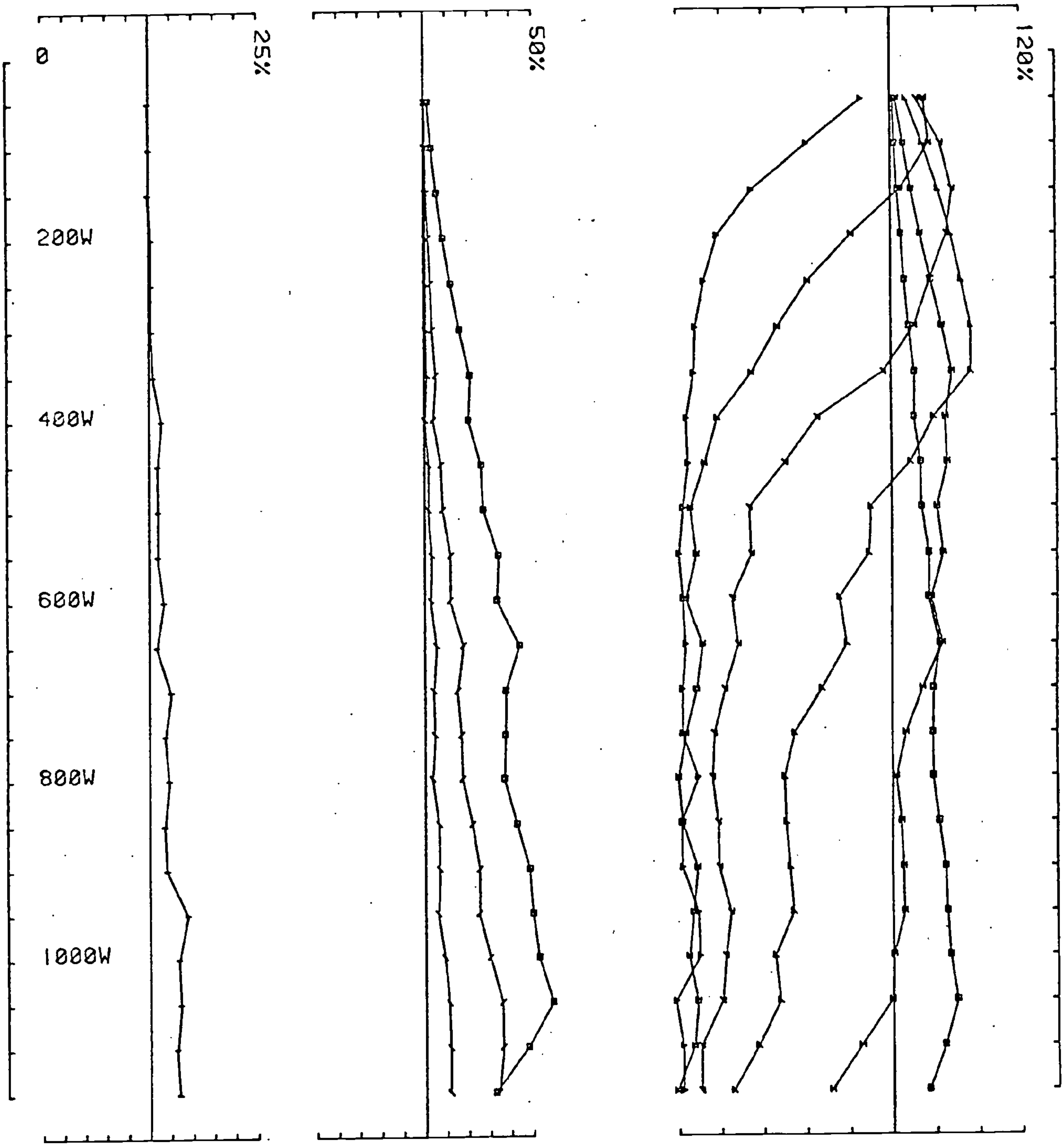
Loopno 0255 Line 1850N component Hz secondary Ch 1



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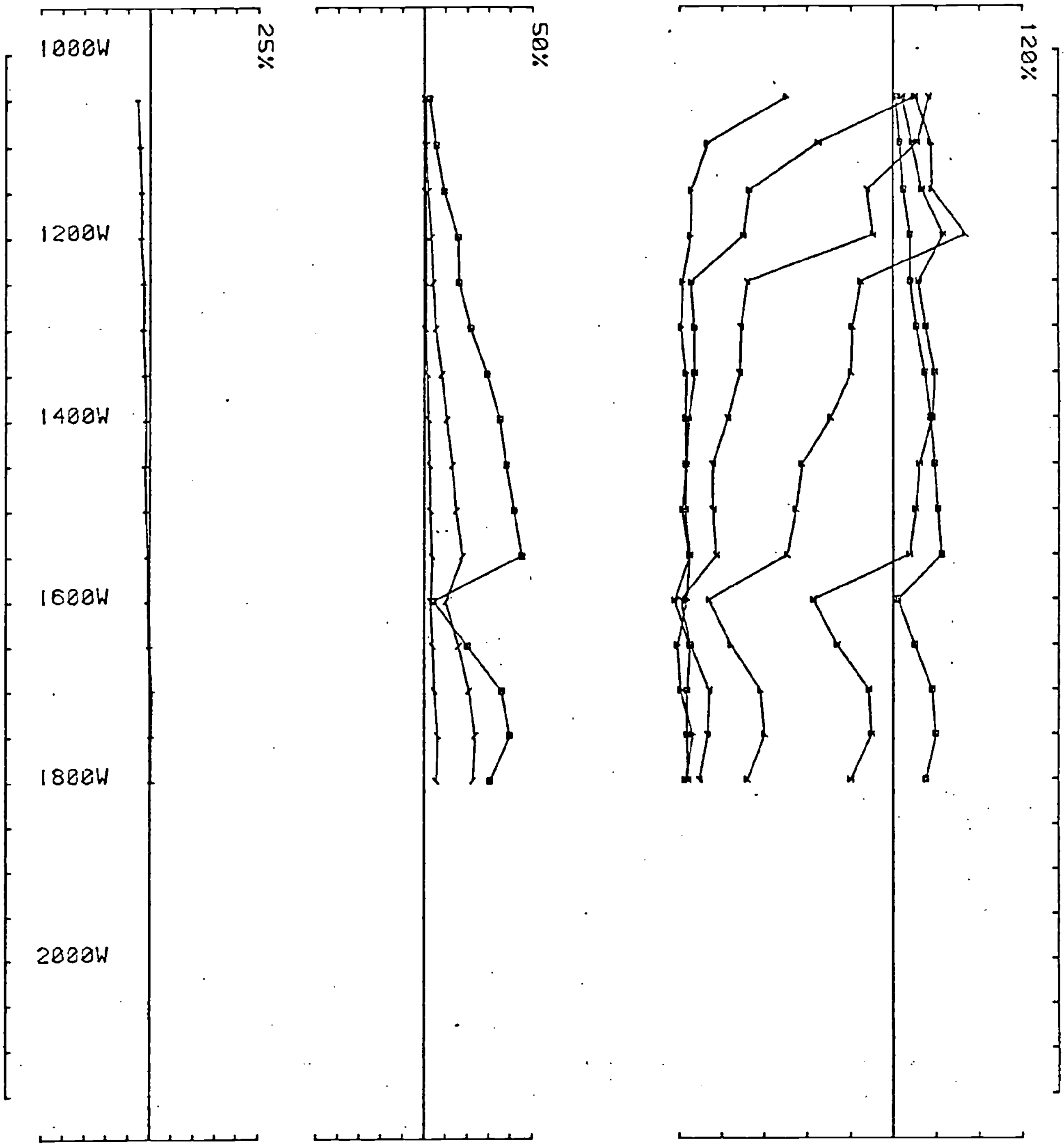

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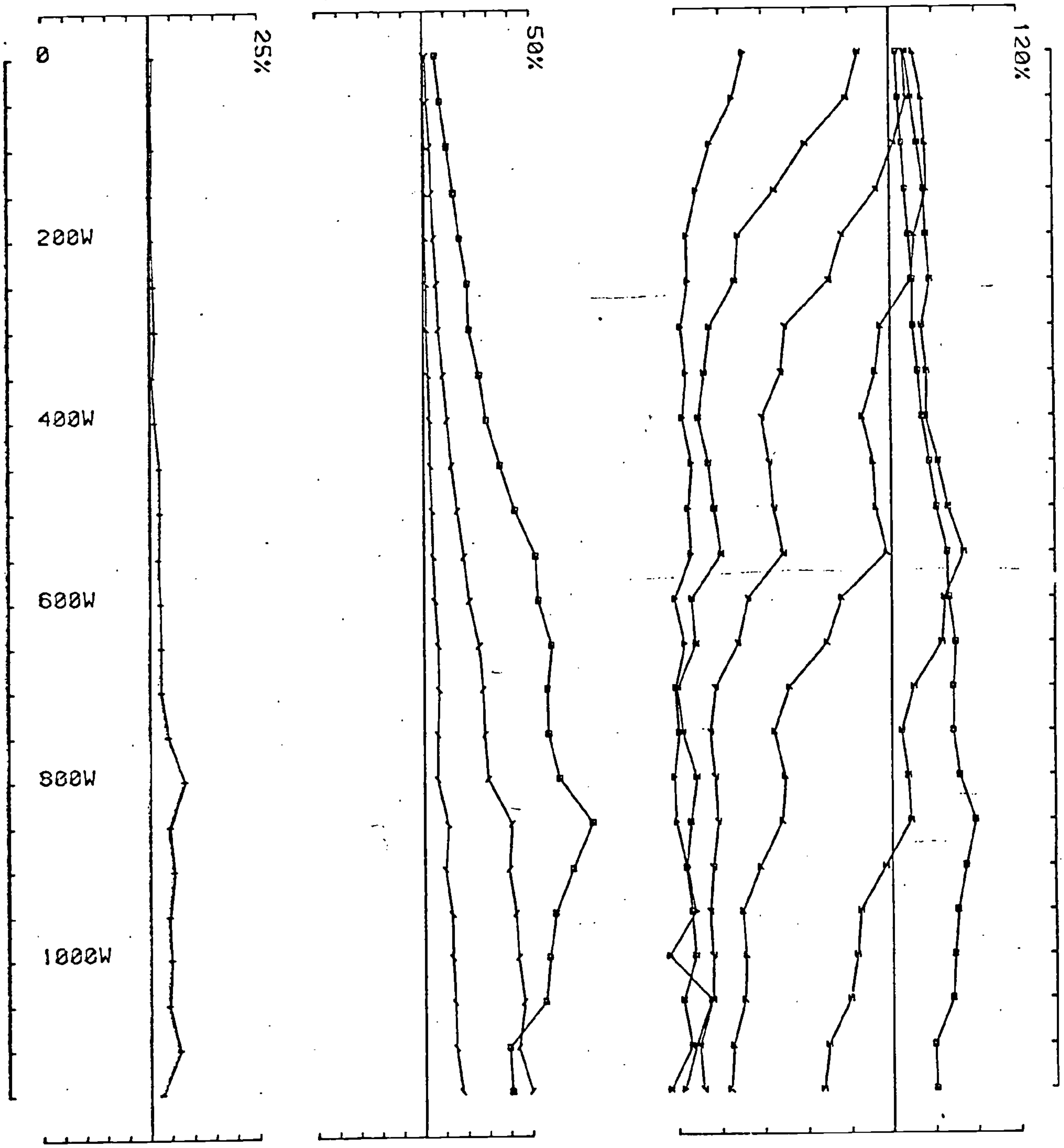

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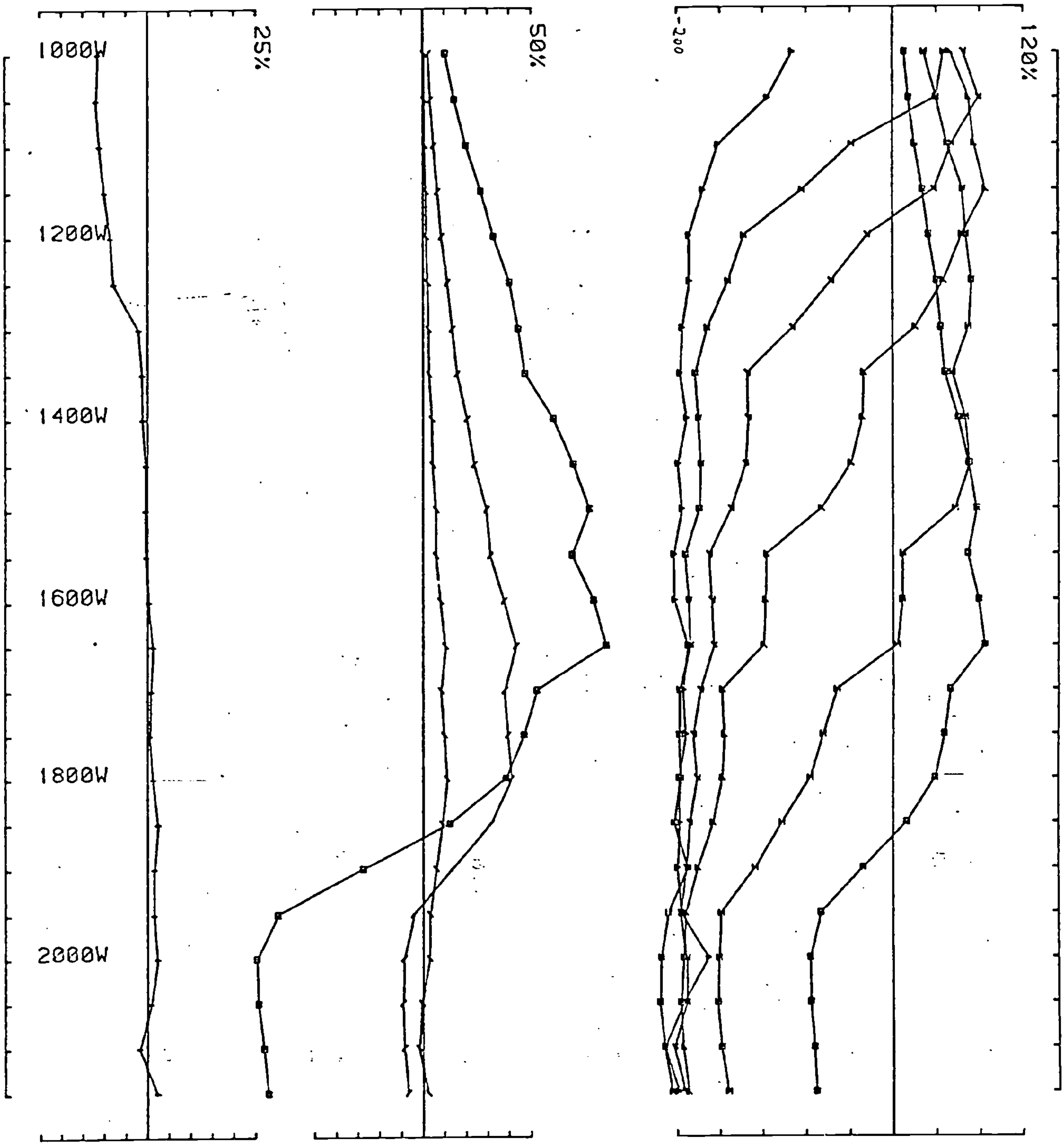
Loopno 0239 Line 2600N component Hz secondary Ch 1



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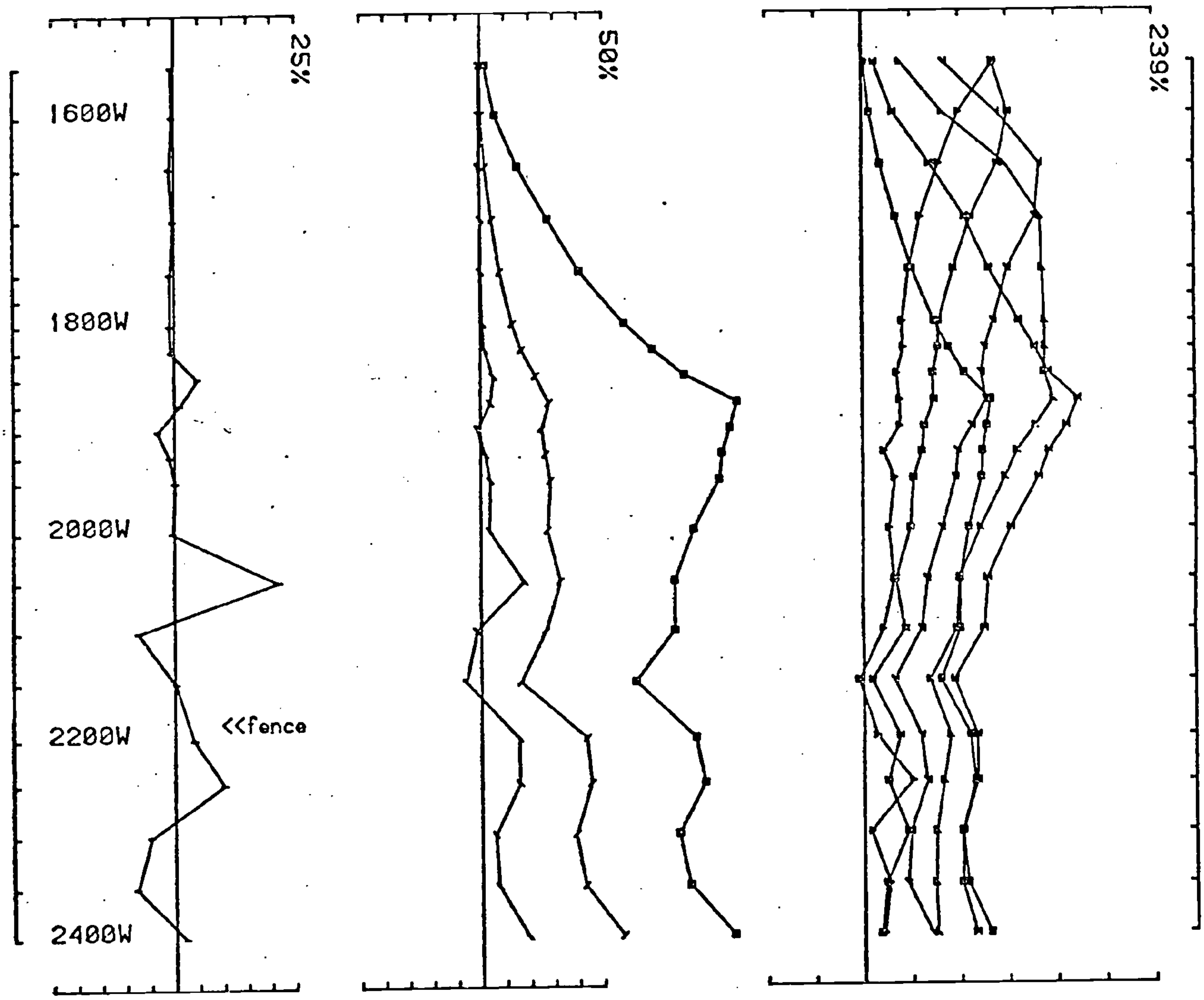
Loopno 0241 Line 2080N component Hz secondary Ch 1

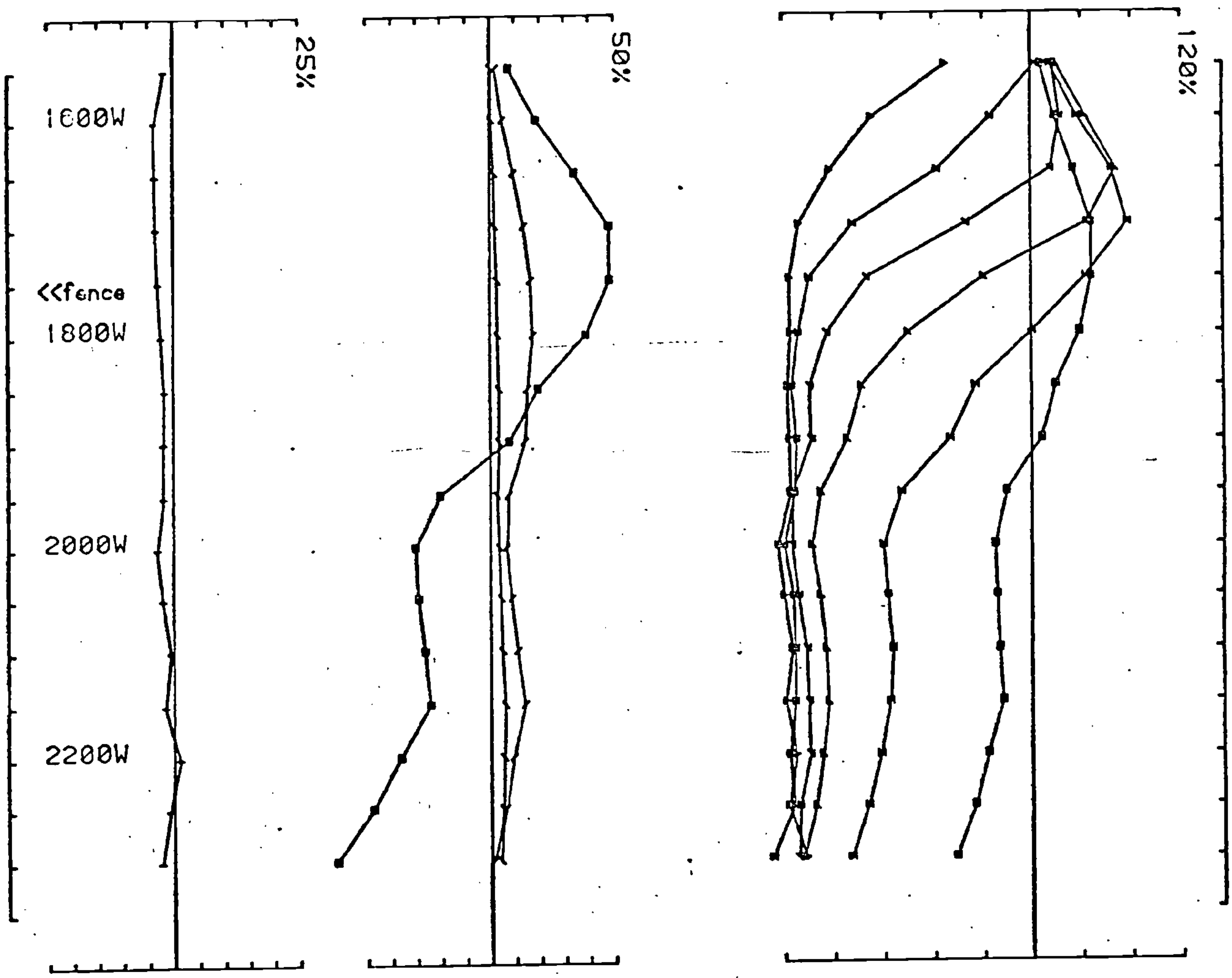
0245



Area FALLOUT PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0254 Line 2600N component Hx total

0246



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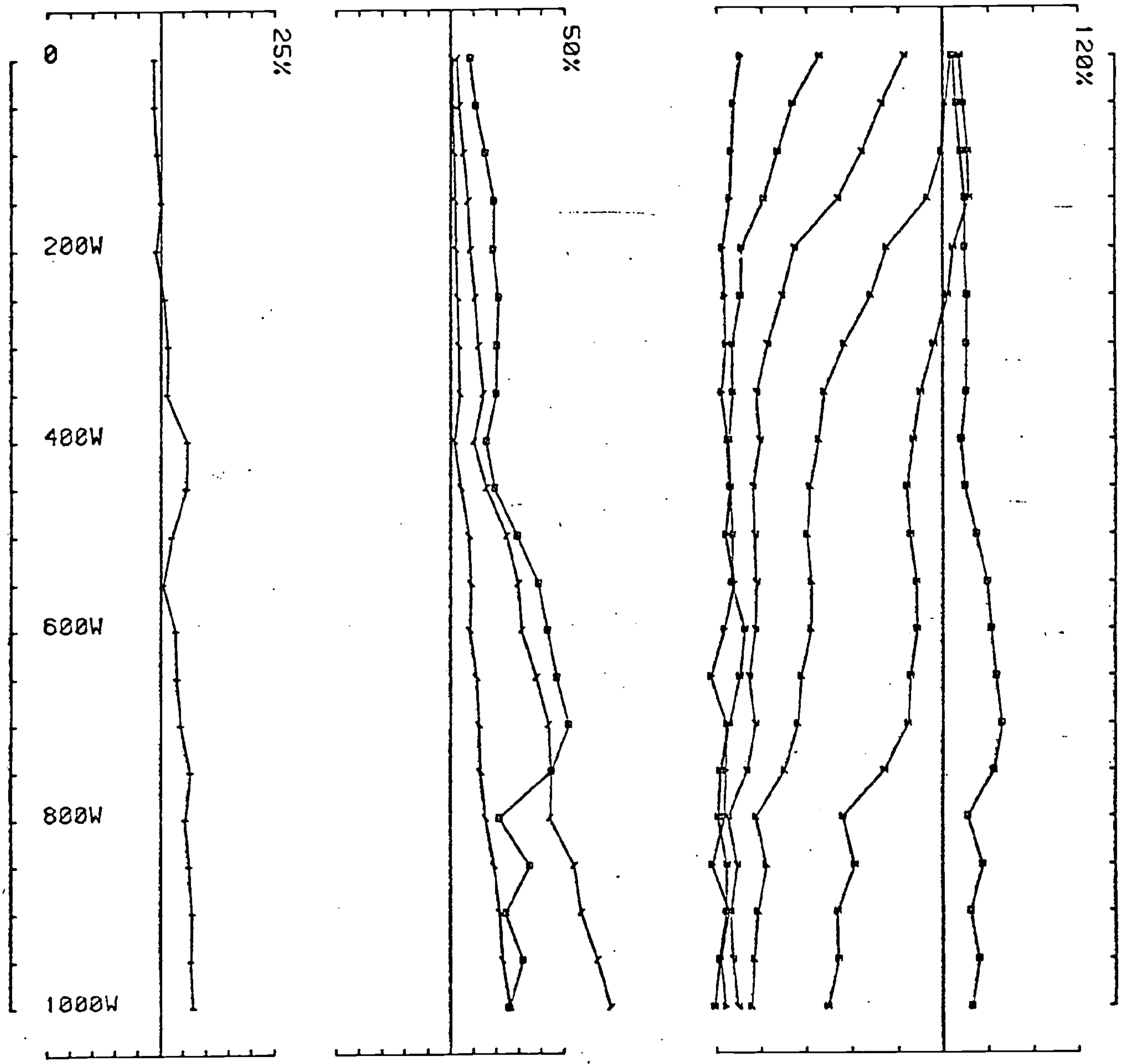
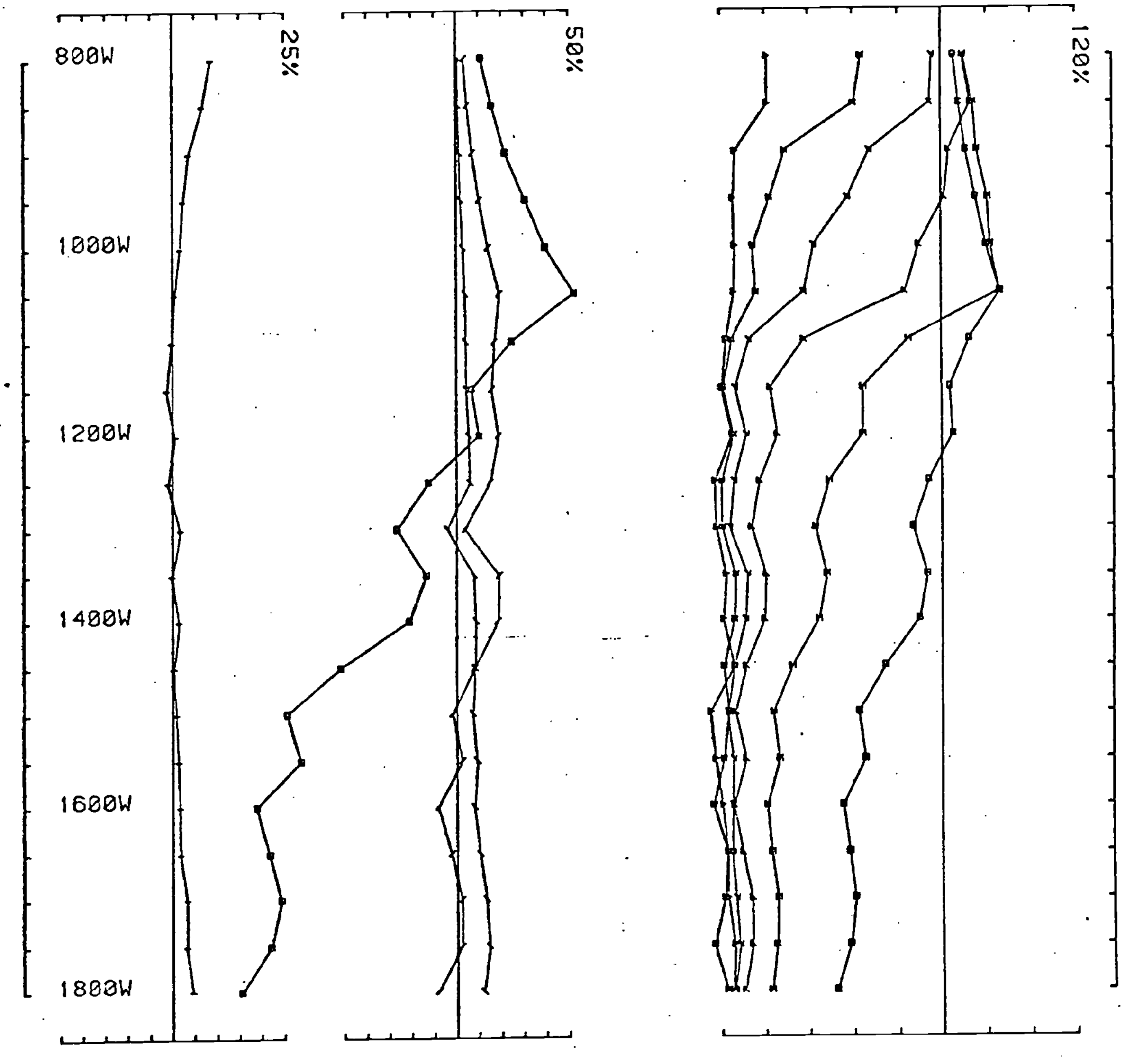
Loopno 0254 Line 2850N component Hz secondary Ch 1



Area FALLOUT PROSPECT FSSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0238 Line 3100N component Hz secondary Ch 1



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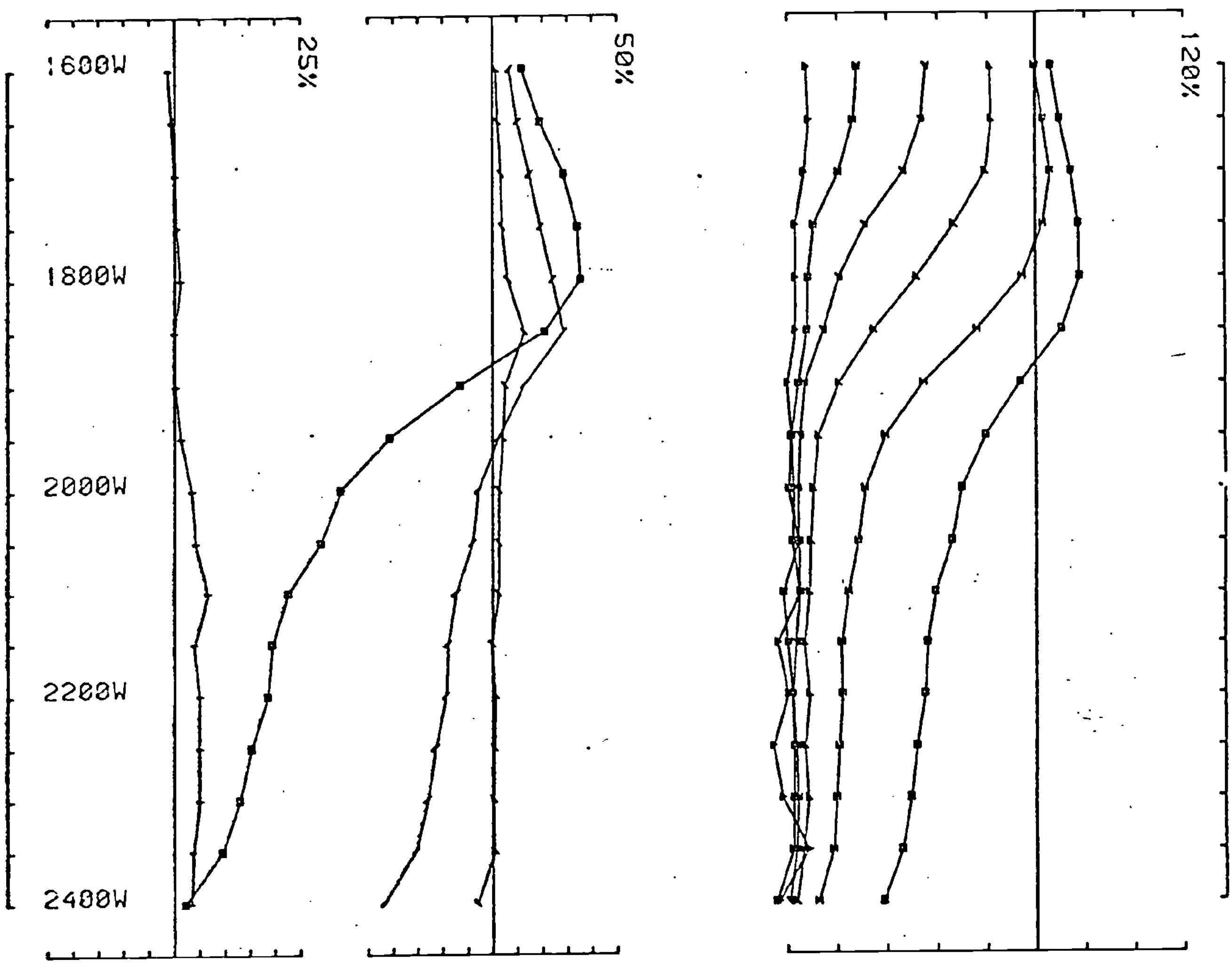

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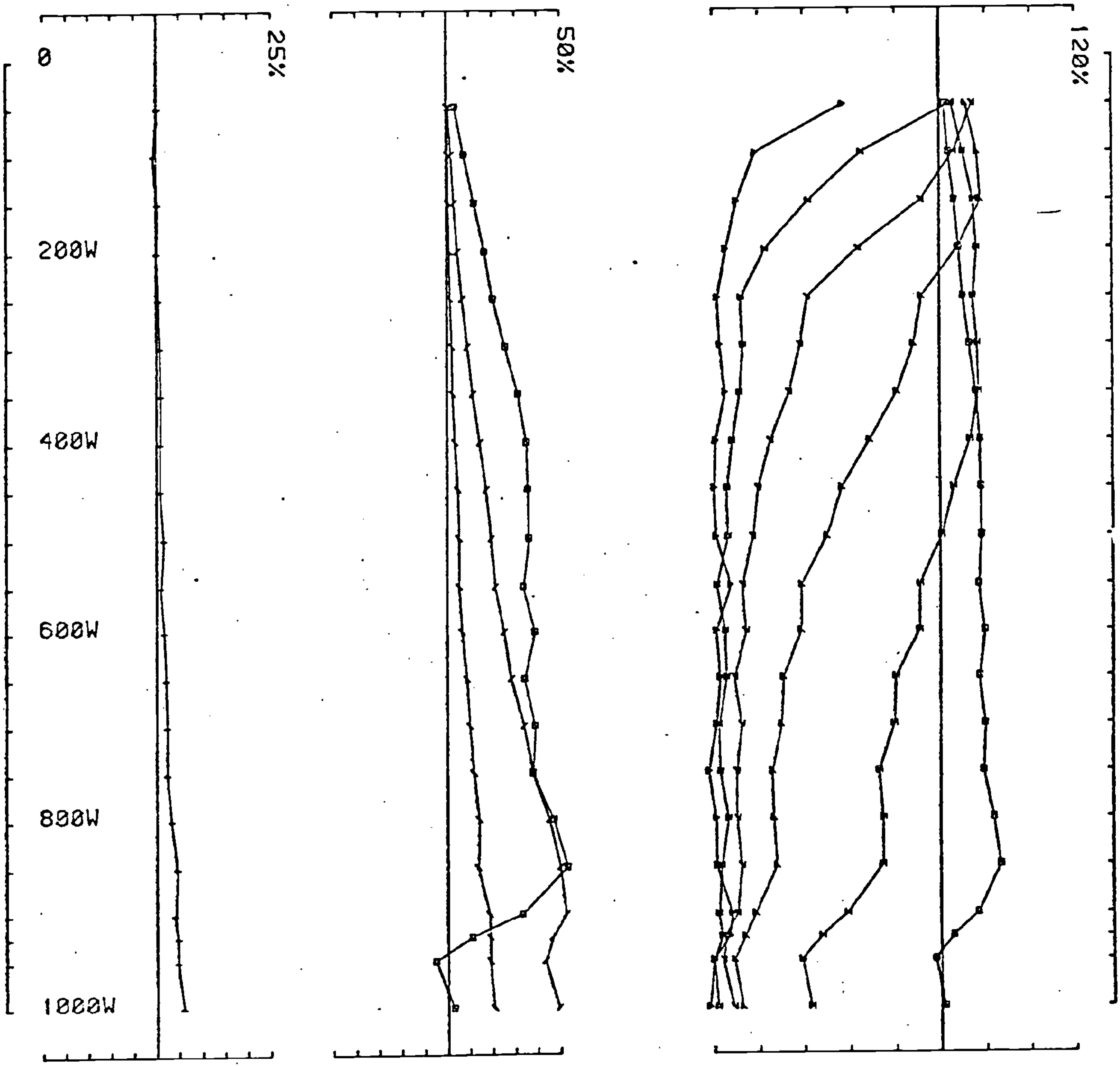
0250



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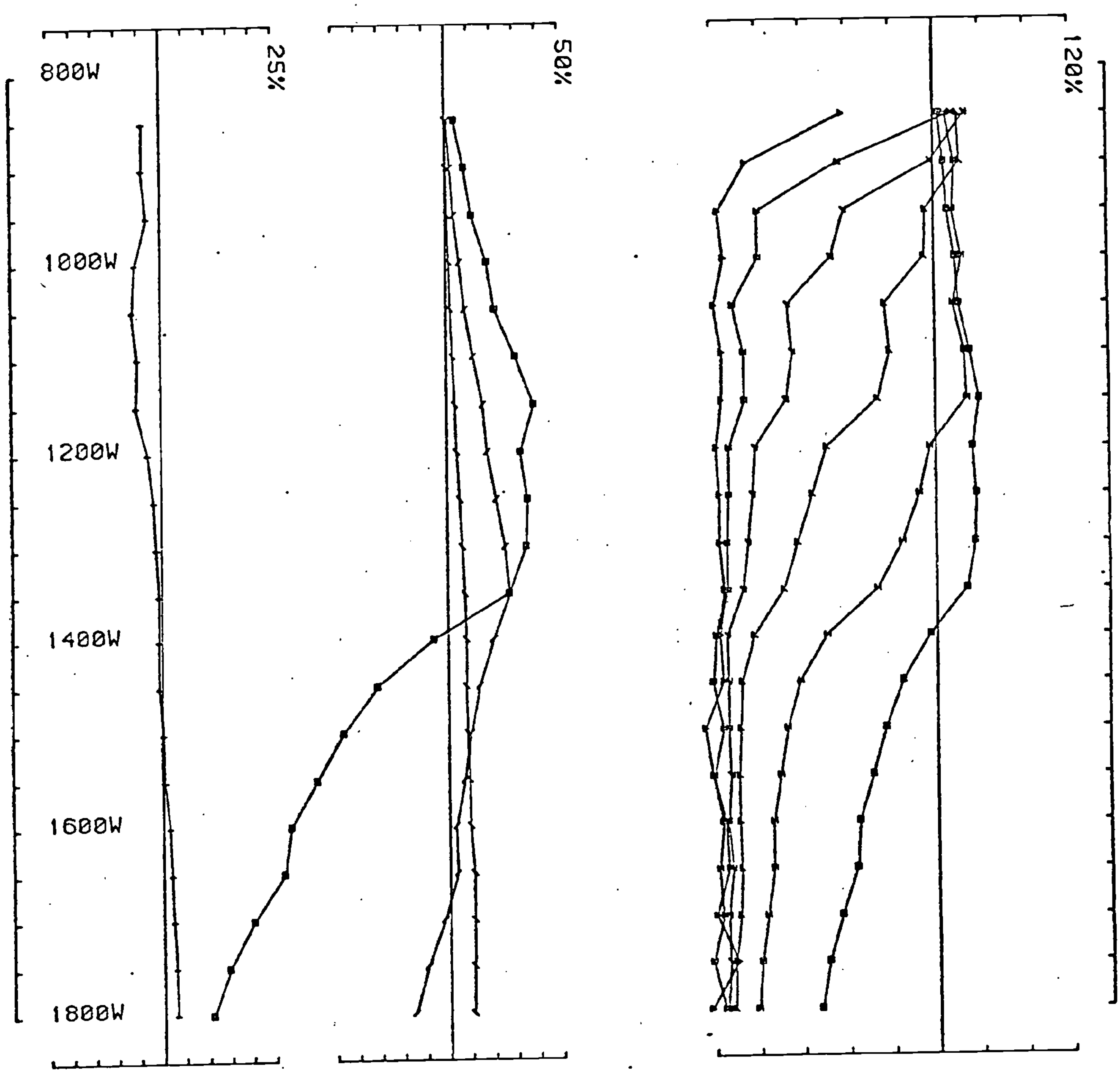
Loopno 023S Line 3600N component Hz secondary Ch 1



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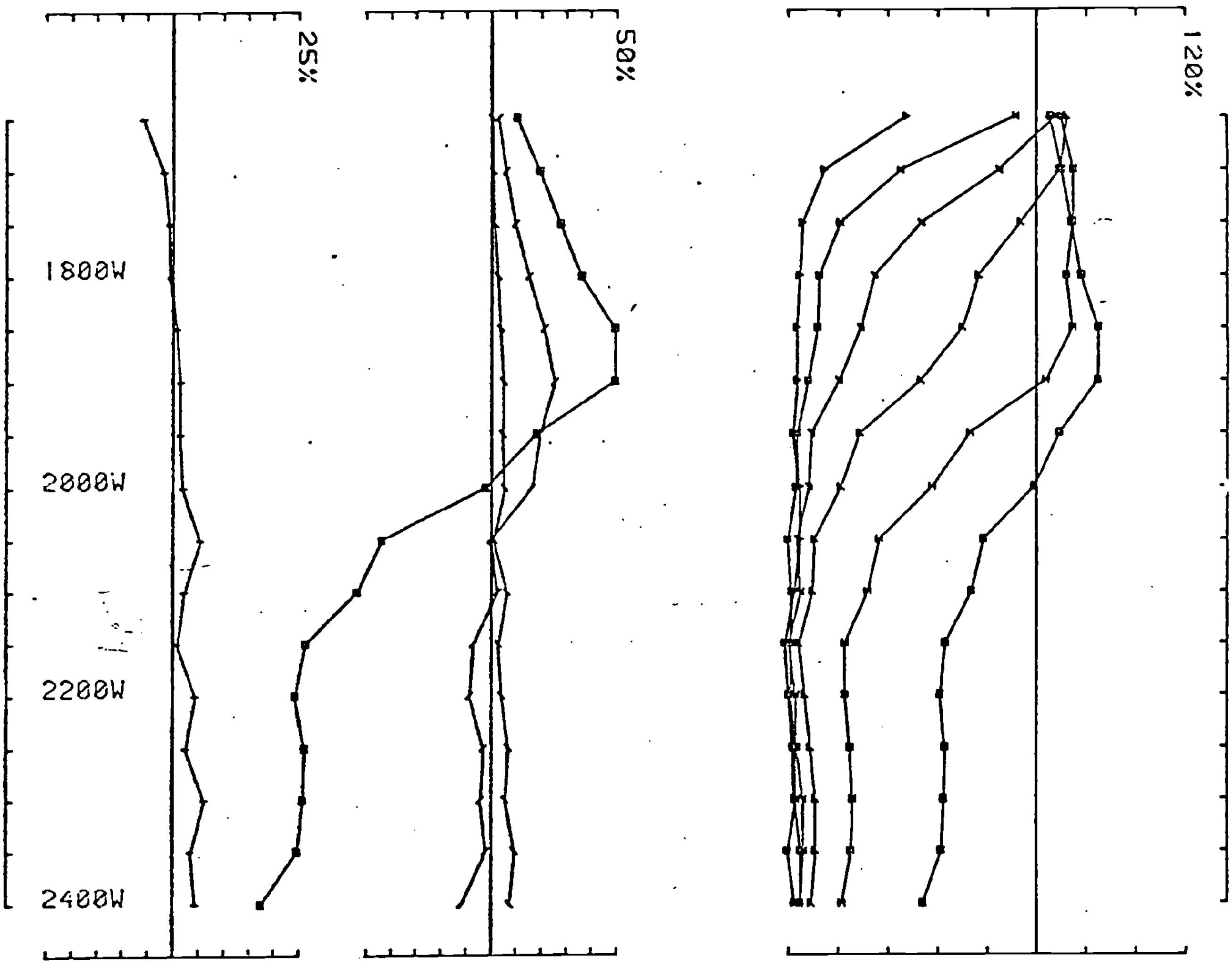
Loopno 0240 Line 3600N component Hz secondary Ch 1



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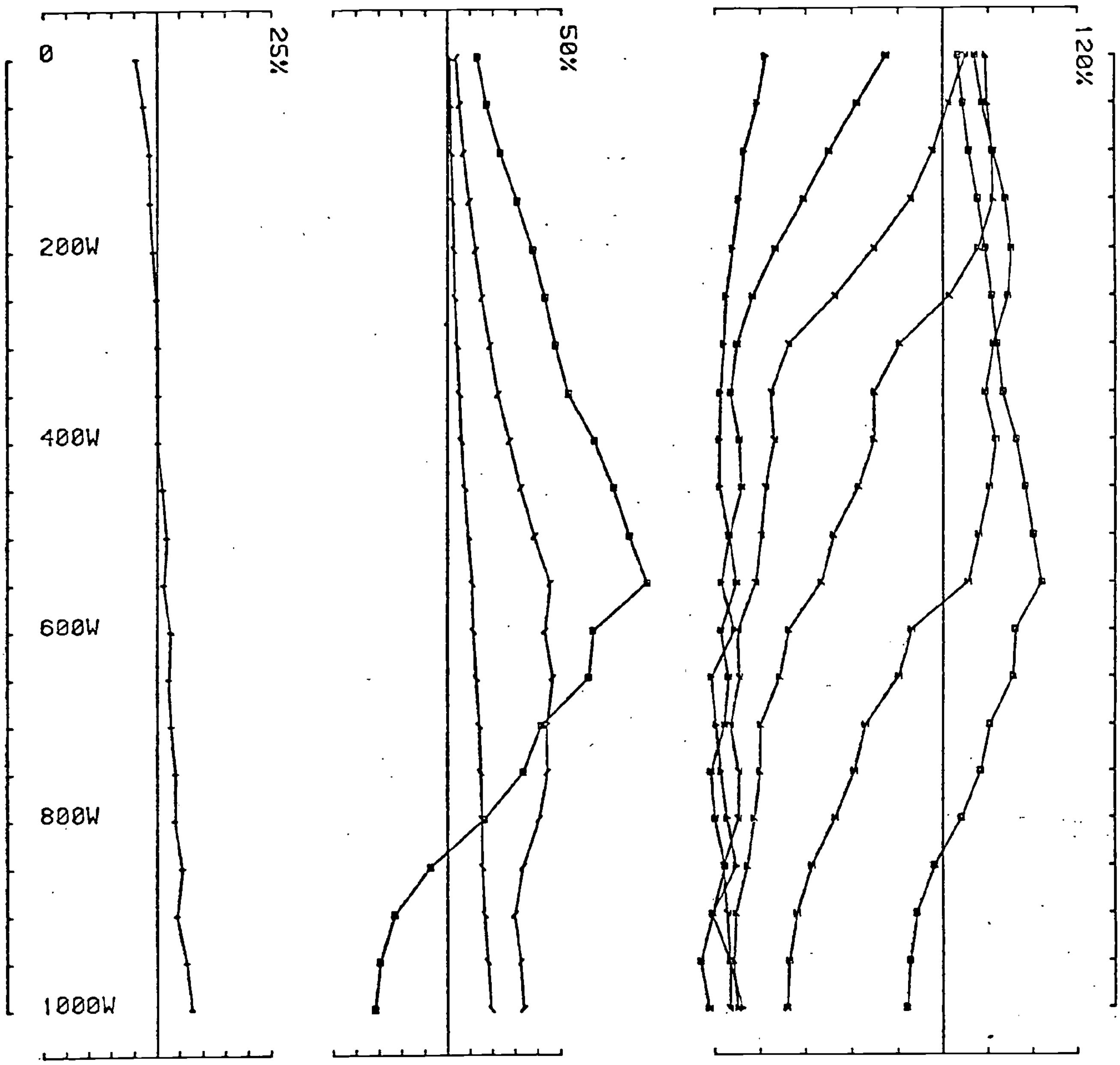

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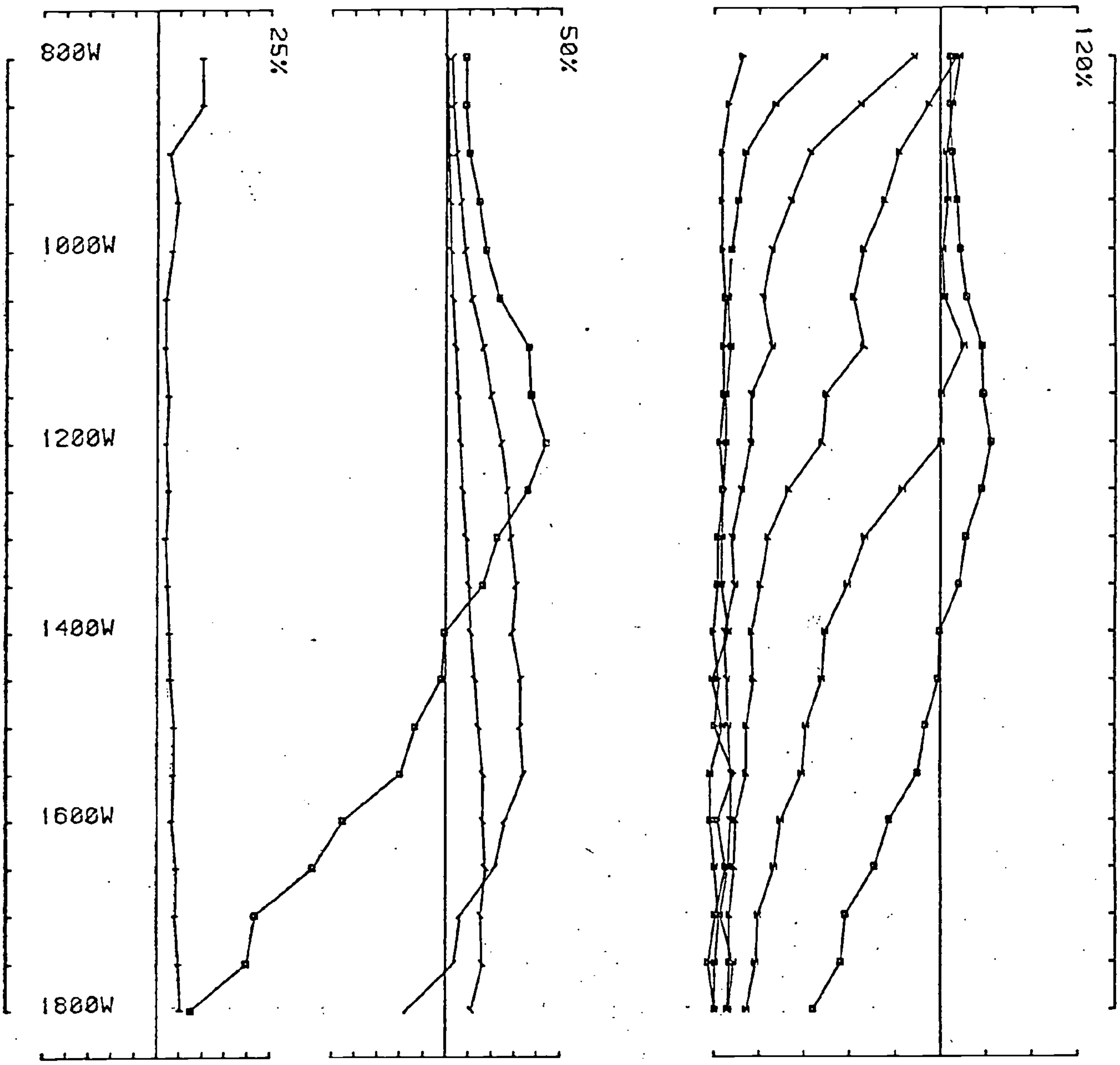
Loopno 0238 Line 4100N component Hz secondary Ch 1



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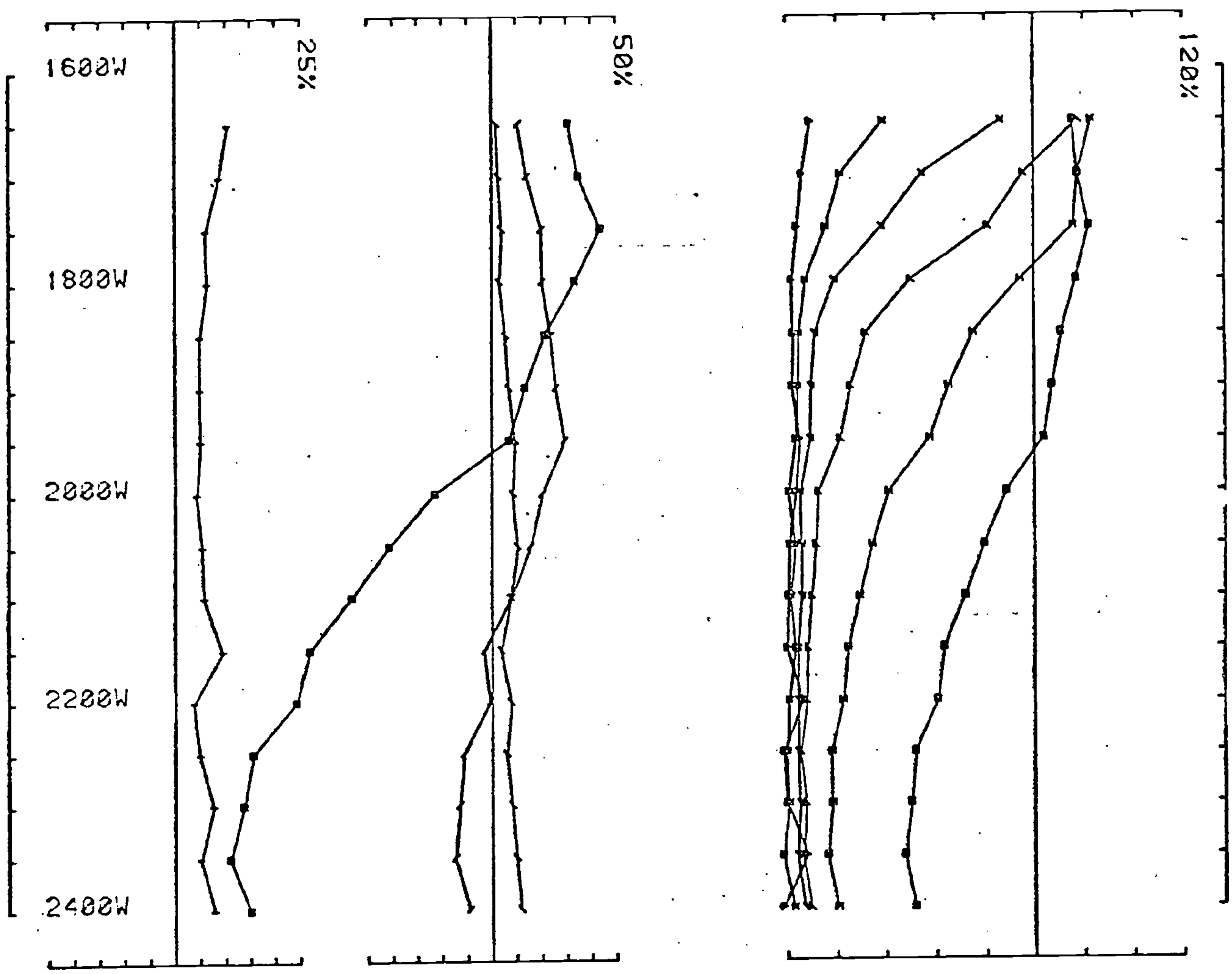
Loopno 0240 Line 4100N component Hz secondary Ch 1

0255



Area FALLOUT PROSPECT ESSO MINERALS Job 2702 freq(hz) 26.230

Loopno 0242 Line 4100N component Hz secondary Ch 1

APPENDIX 3

CORELLA EL 873 S.A.

PERCUSSION DRILLING PROGRAM

ASSAY RESULTS

FOR PERCUSSION HOLES BP-PDH 001, BP-PDH 002
RP-PDH 001, RP-PDH 002, RP-PDH 003
FP-PDH 001, FP-PDH 002

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ANALYTICAL REPORT

CORELLA PROJECT
PERCUSSION HOLE
BP-PDH 001

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778490	36	12	44	6	<1	0m- 2m
778491	70	8	115	6	<1	2m- 4m
778492	50	<4	130	6	<1	4m- 6m
778493	36	8	70	4	<1	6m- 8m
778494	30	6	90	6	<1	8m-10m
778495	24	<4	120	8	<1	10m-12m
778496	36	<4	90	6	<1	12m-14m
778497	36	<4	65	6	<1	14m-16m
778498	20	<4	50	6	<1	16m-18m
778499	18	<4	44	6	<1	18m-20m
778500	28	<4	50	6	<1	20m-22m
778501	65	<4	60	8	<1	22m-24m
778502	130	<4	80	12	<1	24m-26m
778503	90	<4	75	8	<1	26m-28m
778504	75	<4	48	8	<1	28m-30m
778505	50	<4	18	10	<1	30m-32m
778506	120	<4	16	34	<1	32m-34m
778507	90	<4	10	28	<1	34m-36m
778508	100	10	16	22	<1	36m-38m
778509	160	4	12	12	<1	38m-40m
778510	200	<4	16	8	<1	40m-42m
778511	22	<4	14	8	<1	42m-44m
778512	16	<4	22	12	<1	44m-46m
778513	24	<4	40	22	<1	46m-48m
778514	24	<4	38	46	<1	48m-50m

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ANALYTICAL REPORT

BP-PDH 001

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778515	14	<4	30	24	<1	50m-52m
778516	10	<4	16	20	<1	52m-54m
778517	12	<4	16	16	<1	54m-56m
778518	12	<4	8	32	<1	56m-58m
778519	16	<4	4	22	<1	58m-60m
778520	28	<4	14	22	<1	60m-62m
778521	16	<4	18	16	<1	62m-64m
778522	14	<4	20	22	<1	64m-66m
778523	26	<4	14	22	<1	66m-68
778524	14	<4	26	42	<1	68m-70m
778525	16	4	20	44	<1	70m-72m
778526	16	4	22	22	<1	72m-74m
778527	12	<4	22	14	<1	74m-76m
778528	14	4	18	14	<1	76m-78m
778529	130	<4	26	360	<1	78m-80m
778530	50	<4	30	75	<1	80m-82m
778531	42	<4	30	30	<1	82m-84m
778532	26	<4	16	16	<1	84m-86m
778533	28	<4	16	16	<1	86m-88m
778534	22	<4	18	24	<1	88m-90m
778535	26	<4	18	12	<1	90m-92m
778536	16	20	16	8	<1	92m-94m
778537	16	<4	16	8	<1	94m-96m
778538	20	<4	16	12	<1	96m-98m
778539	16	<4	16	12	<1	98m-100m

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ANALYTICAL REPORT

BP-PDH 001

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778540	18	<4	14	14	<1	100m-102m
778541	20	<4	14	12	<1	102m-104m
778542	20	<4	16	14	<1	104m-106m
778543	12	<4	16	6	<1	106m-108m
778544	12	<4	16	8	<1	108m-110m
778545	18	<4	14	10	<1	110m-112m
778546	14	<4	12	10	<1	112m-114m
778547	12	<4	14	6	<1	114m-116m
778548	16	<4	16	6	<1	116m-118m
778549	16	<4	16	4	<1	118m-120m
778550	36	<4	18	24	<1	120m-122m
778551	32	<4	22	16	<1	122m-124m
778552	20	<4	14	14	<1	124m-126m
778553	16	<4	14	10	<1	126m-128m
778554	22	<4	18	14	<1	128m-130m
778555	24	6	22	12	<1	130m-132m
778556	28	<4	20	16	<1	132m-134m
778557	18	8	26	18	<1	134m-136m
778558	12	4	16	14	<1	136m-138m
778559	14	6	14	10	<1	138m-140m
778560	16	<4	16	10	<1	140m-142m
778561	20	<4	18	8	<1	142m-144m
778562	16	<4	18	6	<1	144m-146m
778563	12	<4	26	8	<1	146m-148m
778564	20	<4	46	12	<1	148m-150m

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ANALYTICAL REPORT

BP-PDH 001

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778565	18	<4	34	8	<1	150m-152m
778566	24	<4	26	10	<1	152m-154m
778567	55	<4	38	16	<1	154m-156m
778568	36	<4	50	12	<1	156m-158m
778569	38	<4	100	12	<1	158m-160m
778570	46	<4	130	12	<1	160m-162m
778571	60	<4	90	10	<1	162m-164m
778572	55	6	110	10	<1	164m-166m
778573	30	12	150	8	<1	166m-168m
778574	36	6	100	8	<1	168m-170m
778575	46	6	90	12	<1	170m-172m
778576	42	6	50	12	<1	172m-174m
778577	50	4	32	14	<1	174m-176m
778578	38	6	42	16	<1	176m-178m
778579	55	<4	26	16	<1	178m-180m
778580	60	<4	48	18	<1	180m-182m
778581	55	<4	60	18	<1	182m-184m
778582	48	<4	70	18	<1	184m-186m
778583	36	<4	70	14	<1	186m-188m
778584	44	<4	65	14	<1	188m-190m
778585	38	<4	50	14	<1	190m-192m
778586	42	<4	48	16	<1	192m-194m
778587	50	<4	80	14	<1	194m-196m
778588	50	<4	70	14	<1	196m-198m
778589	42	<4	30	16	<1	198m-200m

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ANALYTICAL REPORT

BP-PDH 001

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778590	55	<4	22	16	<1	200m-202m
778591	32	<4	16	18	<1	202m-204m
778592	42	<4	14	32	<1	204m-206m
778593	18	<4	12	26	<1	206m-208m
778594	44	16	55	34	<1	208m-210m
778595	30	4	36	24	<1	210m-212m
778596	20	<4	32	20	<1	212m-214m
778597	46	16	70	32	<1	214m-216m
778598	20	<4	26	28	<1	216m-218m
778599	18	<4	24	24	<1	218m-220m
778600	16	<4	22	22	<1	220m-222m
778601	16	<4	22	22	<1	222m-224m
778602	16	<4	24	20	<1	224m-226m
778603	10	<4	20	20	<1	226m-228m
778604	12	<4	20	16	<1	228m-230m
778605	12	<4	18	12	<1	230m-232m
778606	16	<4	22	12	<1	232m-234m
778607	16	<4	26	14	<1	234m-236m
778608	20	<4	26	16	<1	236m-238m
778609	32	<4	28	16	<1	238m-240m
778610	28	<4	22	14	<1	240m-242m
778611	16	<4	22	16	<1	242m-244m
778612	26	<4	24	14	<1	244m-246m
778613	42	<4	22	14	<1	246m-248m
778614	38	<4	22	12	<1	248m-250m

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CORELLA PROJECT
PERCUSSION HOLE
BP-PDH 002

ANALYTICAL REPORT

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres.
778615	28	4	26	10	<1	0m- 2m
778616	32	<4	12	16	<1	2m- 4m
778617	38	<4	8	18	<1	4m- 6m
778618	30	<4	10	18	<1	6m- 8m
778619	22	<4	12	26	<1	8m-10m
778620	38	<4	10	24	<1	10m-12m
778621	46	<4	12	28	<1	12m-14m
778622	40	<4	14	38	<1	14m-16m
778623	22	<4	14	32	<1	16m-18m
778624	22	<4	18	28	<1	18m-20m
778625	46	<4	18	42	<1	20m-22m
778626	100	<4	20	60	<1	22m-24m
778627	34	<4	10	26	<1	24m-26m
778628	26	<4	10	18	<1	26m-28m
778629	12	<4	6	14	<1	28m-30m
778630	12	<4	4	10	<1	30m-32m
778631	16	<4	4	16	<1	32m-34m
778632	16	<4	6	16	<1	34m-36m
778633	18	14	16	14	<1	36m-38m
778634	12	6	14	8	<1	38m-40m
778635	10	<4	14	8	<1	40m-42m
778636	8	6	12	6	<1	42m-44m
778637	14	4	14	22	<1	44m-46m
778638	10	<4	12	14	<1	46m-48m
778639	6	<4	10	12	<1	48m-50m

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COMPUTERISED ANALYTICAL LABORATORIES

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ANALYTICAL REPORT

BP-PDH 002

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778640	6	<4	10	14	<1	50m-52m
778641	6	<4	12	12	<1	52m-54m
778642	8	<4	10	18	<1	54m-56m
778643	8	<4	12	16	<1	56m-58m
778644	10	<4	10	20	<1	58m-60m
778645	16	6	14	18	<1	60m-62m
778646	14	<4	18	16	<1	62m-64m
778647	14	<4	16	12	<1	64m-66m
778648	100	<4	24	22	<1	66m-68m
778649	185	<4	20	510	<1	68m-70m
778650	220	<4	20	1300	<1	70m-72m
778651	160	<4	20	1100	<1	72m-74m
778652	55	<4	16	550	<1	74m-76m
778653	26	<4	16	150	<1	76m-78m
778654	36	<4	20	55	<1	78m-80m
778655	34	<4	20	36	<1	80m-82m
778656	30	<4	22	32	<1	82m-84m
778657	22	<4	24	20	<1	84m-86m
778658	32	<4	24	16	<1	86m-88m
778659	16	<4	16	10	<1	88m-90-
778660	8	<4	8	12	<1	90m-92m
778661	10	<4	8	12	<1	92m-94m
778662	18	<4	16	16	<1	94m-96m
778663	20	<4	18	12	<1	96m-98m
778664	40	<4	18	12	<1	98m-100m

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ANALYTICAL REPORT

BP-PDH 002

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778665	65	6	18	16	<1	100m-102m
778666	65	<4	30	18	<1	102m-104m
778667	50	6	30	20	<1	104m-106m
778668	18	<4	14	36	<1	106m-108m
778669	85	<4	18	30	<1	108m-110m
778670	75	4	28	28	<1	110m-112m
778671	36	<4	28	16	<1	112m-114m
778672	50	<4	28	16	<1	114m-116m
778673	60	<4	40	16	<1	116m-118m
778674	70	<4	48	14	<1	118m-120m
778675	90	<4	30	16	<1	120m-122m
778676	55	<4	42	18	<1	122m-124m
778677	40	<4	42	24	<1	124m-126m
778678	44	<4	34	18	<1	126m-128m
778679	44	4	38	18	<1	128m-130m
778680	46	6	44	18	<1	130m-132m
778681	60	<4	24	22	<1	132m-134m
778682	38	6	26	20	<1	134m-136m
778683	48	<4	32	22	<1	136m-138m
778684	38	<4	38	16	<1	138m-140m
778685	34	<4	44	20	<1	140m-142m
778686	40	<4	46	20	<1	142m-144m
778687	80	<4	40	34	<1	144m-146m
778688	60	<4	36	20	<1	146m-148m
778689	50	<4	40	18	<1	148m-150m

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ANALYTICAL REPORT

BP-PDH 002

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778690	50	<4	70	14	<1	150m-152m
778691	50	<4	70	12	<1	152m-154m
778692	48	<4	70	14	<1	154m-156m
778693	60	<4	65	14	<1	156m-158m
778694	48	4	85	12	<1	158m-160m
778695	48	6	105	14	<1	160m-162m
778696	60	<4	75	14	<1	162m-164m
778697	105	<4	85	16	<1	164m-166m
778698	70	<4	65	14	<1	166m-168m
778699	55	<4	55	16	<1	168m-170m
778700	44	<4	32	22	<1	170m-172m
778701	44	4	20	32	<1	172m-174m
778702	46	<4	18	40	<1	174m-176m
778703	48	<4	24	40	<1	176m-178m
778704	70	16	16	44	<1	178m-180m
778705	85	<4	16	30	<1	180m-182m
778706	46	<4	16	32	<1	182m-184m
778707	28	<4	14	28	<1	184m-186m
778708	26	<4	14	20	<1	186m-188m
778709	20	<4	20	16	<1	188m-190m
778710	16	<4	8	14	<1	190m-192m
778711	16	<4	12	12	<1	192m-194m
778712	8	<4	18	12	<1	194m-196m
778713	6	<4	16	8	<1	196m-198m
778714	8	<4	14	10	<1	198m-200m

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ANALYTICAL REPORT

BP-PDH 002

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778715	8	<4	18	12	<1	200m-202m
778716	42	<4	20	16	<1	202m-204m
778717	50	<4	16	14	<1	204m-206m
778718	30	<4	12	14	<1	206m-208m
778719	24	<4	12	12	<1	208m-210m
778720	10	<4	12	10	<1	210m-212m
778721	20	<4	18	14	<1	212m-214m
778722	18	<4	18	12	<1	214m-216m
778723	16	<4	18	12	<1	216m-218m
778724	10	<4	16	10	<1	218m-220m
778725	6	<4	14	8	<1	220m-222m
778726	10	<4	14	10	<1	222m-224m
778727	8	<4	16	12	<1	224m-226m
778728	10	<4	16	12	<1	226m-228m
778729	10	<4	18	14	<1	228m-230m
778730	14	<4	18	14	<1	230m-232m
778731	12	<4	22	18	<1	232m-234m
778732	18	<4	24	14	<1	234m-236m
778733	18	<4	26	16	<1	236m-238m
778734	20	<4	26	16	<1	238m-240m
778735	30	<4	32	18	<1	240m-242m
778736	32	<4	28	16	<1	242m-244m
778737	34	<4	28	18	<1	244m-246m
778738	38	<4	24	18	<1	246m-248m
778739	28	<4	24	16	<1	248m-250m

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ANALYTICAL REPORT

BP-PDH 002

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778740	26	<4	22	16	<1	250m-252m
778741	14	<4	20	14	<1	252m-254m
778742	18	<4	18	14	<1	254m-256m
778743	18	<4	18	12	<1	256m-258m
778744	14	<4	14	10	<1	258m-260m
778745	14	<4	14	10	<1	260m-262m
778746	14	<4	16	10	<1	262m-264m
778747	32	<4	18	16	<1	264m-266m
778748	24	<4	20	12	<1	266m-268m
778749	18	<4	14	14	<1	268m-270m
778750	18	<4	14	16	<1	270m-272m
778751	20	<4	28	16	<1	272m-274m
778752	26	<4	48	26	<1	274m-276m
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CORELLA PROJECT
PERCUSSION HOLE
RP-PDH 001

ANALYTICAL REPORT

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778753	44	10	50	12	<1	0m- 2m
778754	55	14	70	10	<1	2m- 4m
778755	65	10	85	10	<1	4m- 6m
778756	90	12	100	8	<1	6m- 8m
778757	100	10	130	10	<1	8m-10m
778758	110	12	170	10	<1	10m-12m
778759	70	<4	180	10	<1	12m-14m
778760	38	6	160	12	<1	14m-16m
778761	55	8	180	14	<1	16m-18m
778762	70	10	170	26	<1	18m-20m
778763	34	6	120	20	<1	20m-22m
778764	20	10	110	12	<1	22m-24m
778765	12	10	110	16	<1	24m-26m
778766	16	8	120	22	<1	26m-28m
778767	16	10	120	14	<1	28m-30m
778768	16	14	110	12	<1	30m-32m
778769	16	22	120	10	<1	32m-34m
778770	26	14	110	14	<1	34m-36m
778771	50	14	105	14	<1	36m-38m
778772	28	<4	110	14	<1	38m-40m
778773	14	<4	110	12	<1	40m-42m
778774	18	8	120	14	<1	42m-44m
778775	20	6	110	14	<1	44m-46m
778776	16	6	100	12	<1	46m-48m
778777	18	8	110	12	<1	48m-50m

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RP-PDH 001

ANALYTICAL REPORT

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778778	36	28	150	12	<1	50m-52m
778779	26	8	120	8	<1	52m-54m
778780	140	8	120	20	<1	54m-56m
778781	90	<4	120	14	<1	56m-58m
778782	38	16	145	10	<1	58m-60m
778783	20	8	165	10	<1	60m-62m
778784	20	8	70	4	<1	62m-64m
778785	30	75	220	8	<1	64m-66m
778786	26	12	145	8	<1	66m-68m
778787	20	8	75	6	<1	68m-70m
778788	80	14	200	20	<1	70m-72m
778789	12	18	105	8	<1	72m-74m
778790	6	8	120	10	<1	74m-76m
778791	10	12	140	10	<1	76m-78m
778792	28	8	80	8	<1	78m-80m
778793	280	12	110	50	<1	80m-82m
778794	100	24	115	135	1	82m-84m
778795	110	18	140	550	<1	84m-86m
778796	24	18	160	190	<1	86m-88m
778797	60	28	160	100	1	88m-90m
778798	32	22	170	60	1	90m-92m
778799	14	24	60	50	<1	92m-94m
778800	8	20	28	42	<1	94m-96m
778801	12	14	48	185	<1	96m-98m
778802	6	<4	100	26	<1	98m-100m

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ANALYTICAL REPORT

RP-PDH 001

JOB COM822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778803	4	16	18	10	<1	100m-102m
778804	4	14	28	<4	<1	102m-104m
778805	12	16	42	16	<1	104m-106m
778806	10	22	40	6	<1	106m-108m
778807	4	12	24	<4	<1	108m-110m
778808	4	10	36	48	<1	110m-112m
778809	10	12	70	24	<1	112m-114m
778810	46	26	110	18	<1	114m-116m
778811	32	10	100	20	<1	116m-118m
778812	26	24	95	24	<1	118m-120m
778813	28	16	150	42	<1	120m-122m
778814	55	28	90	26	<1	122m-124m
778815	20	8	55	18	<1	124m-126m
778816	26	12	70	18	<1	126m-128m
778817	12	10	60	16	<1	128m-130m
778818	6	30	70	16	<1	130m-132m
778819	8	18	80	12	<1	132m-134m
778820	6	8	75	16	<1	134m-136m
778821	6	6	70	14	<1	136m-138m
778822	6	6	70	14	<1	138m-140m
778823	6	4	70	14	<1	140m-142m
778824	6	4	55	14	<1	142m-144m
778825	6	8	60	10	<1	144m-146m
778826	8	6	60	10	<1	146m-148m
778827	14	8	70	12	<1	148m-150m

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ANALYTICAL REPORT

0271

RP-PDH 001

JOB COM822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778828	10	6	70	10	<1	150m-152m
778829	8	10	70	10	<1	152m-154m
778830	6	6	70	10	<1	154m-156m
778831	12	8	80	12	<1	156m-158m
778832	10	6	80	12	<1	158m-160m
778833	10	4	95	14	<1	160m-162m
778834	14	4	70	18	<1	162m-164m
778835	10	6	60	12	<1	164m-166m
778836	12	6	60	12	<1	166m-168m
778837	14	8	80	10	<1	168m-170m
778838	14	8	90	14	<1	170m-172m
778839	16	6	70	12	<1	172m-174m
778840	20	6	70	14	<1	174m-176m
778841	18	6	60	12	<1	176m-178m
778842	10	6	70	10	<1	178m-180m
778843	80	10	90	14	<1	180m-182m
778844	24	8	80	14	<1	182m-184m
778845	16	8	90	10	<1	184m-186m
778846	14	10	90	12	<1	186m-188m
778847	24	8	70	10	<1	188m-190m
778848	80	6	100	16	<1	190m-192m
778849	80	14	110	16	<1	192m-194m
778850	34	8	85	14	<1	194m-196m
778851	20	8	70	18	<1	196m-198m
778852	34	16	100	16	<1	198m-200m
						E.O.H.

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CORELLA PROSPECT
PERCUSSION HOLE
RP-PDH 002

0272

ANALYTICAL REPORT

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778854	40	14	34	10	<1	0m- 2m
778855	70	16	32	6	<1	2m- 4m
778856	85	16	24	6	<1	4m- 6m
778857	120	14	46	12	<1	6m- 8m
778858	130	26	46	12	<1	8m-10m
778859	55	14	34	10	<1	10m-12m
778860	44	12	36	14	<1	12m-14m
778861	48	14	46	14	<1	14m-16m
778862	55	26	46	12	<1	16m-18m
778863	70	38	60	16	<1	18m-20m
778864	70	26	105	24	<1	20m-22m
778865	80	42	160	38	<1	22m-24m
778866	50	16	100	30	<1	24m-26m
778867	34	8	60	24	<1	26m-28m
778868	24	8	55	24	<1	28m-30m
778869	16	6	42	20	<1	30m-32m
778870	16	10	42	18	<1	32m-34m
778871	14	6	28	20	<1	34m-36m
778872	16	14	50	18	<1	36m-38m
778873	20	10	80	24	<1	38m-40m
778874	16	16	80	20	<1	40m-42m
778875	24	10	55	16	<1	42m-44m
778876	10	6	48	10	<1	44m-46m
778877	8	6	50	10	<1	46m-48m
778878	6	8	42	8	<1	48m-50m

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CORELLA PROSPECT
PERCUSSION HOLE
RP-PDH 002

0273

ANALYTICAL REPORT

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778879	8	10	38	10	<1	50m-52m
778880	10	10	46	12	<1	52m-54m
778881	6	10	26	12	<1	54m-56m
778882	10	8	50	10	<1	56m-58m
778883	26	12	80	16	<1	58m-60m
778884	28	28	130	16	<1	60m-62m
778885	14	10	70	12	<1	62m-64m
778886	28	12	70	12	<1	64m-66m
778887	24	12	75	14	<1	66m-68m
778888	60	16	95	8	<1	68m-70m
778889	28	14	60	18	<1	70m-72m
778890	65	14	46	30	<1	72m-74m
778891	28	12	48	14	<1	74m-76m
778892	20	16	65	18	<1	76m-78m
778893	16	16	65	16	<1	78m-80m
778894	22	10	55	14	<1	80m-82m
778895	28	12	55	14	<1	82m-84m
778896	24	12	60	12	<1	84m-86m
778897	18	8	46	12	<1	86m-88m
778898	12	6	60	16	<1	88m-90m
778899	26	<4	50	14	<1	90m-92m
778900	34	12	70	32	<1	92m-94m
778901	60	8	70	22	<1	94m-96m
778902	40	<4	75	14	<1	96m-98m
778903	32	6	46	20	<1	98m-100m

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ANALYTICAL REPORT

0274 RP-PDH 002

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778904	220	6	36	8	<1	100m-102m
778905	46	<4	55	18	<1	102m-104m
778906	75	<4	60	32	<1	104m-106m
778907	70	<4	55	26	<1	106m-108m
778908	18	60	44	18	<1	108m-110m
778909	30	8	60	12	<1	110m-112m
778910	24	6	50	8	<1	112m-114m
778911	16	6	38	32	<1	114m-116m
778912	26	6	38	20	<1	116m-118m
778913	12	10	26	48	<1	118m-120m
778914	24	6	46	32	<1	120m-122m
778915	60	6	46	32	<1	122m-124m
778916	16	4	42	22	<1	124m-126m
778917	30	6	46	22	<1	126m-128m
778918	30	10	55	75	<1	128m-130m
778919	24	6	36	20	<1	130m-132m
778920	12	8	34	14	<1	132m-134m
778921	16	<4	50	16	<1	134m-136m
778922	36	4	50	22	<1	136m-138m
778923	16	8	50	18	<1	138m-140m
778924	16	8	46	26	<1	140m-142m
778925	14	6	42	20	<1	142m-144m
778926	10	8	42	16	<1	144m-146m
778927	10	6	48	20	<1	146m-148m
778928	14	8	36	10	<1	148m-150m

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ANALYTICAL REPORT

0275 RP-PDH 002

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778929	12	6	48	14	<1	250m-252m
778930	12	<4	50	12	<1	252m-254m
778931	12	<4	42	16	<1	254m-256m
778932	24	<4	46	18	<1	256m-258m
778933	44	<4	60	18	<1	258m-260m
778934	38	<4	55	26	<1	260m-262m
778935	22	<4	65	22	<1	262m-264m
778936	26	<4	65	24	<1	264m-266m
778937	8	<4	65	24	<1	266m-268m
778938	8	<4	36	6	<1	268m-270m
778939	6	<4	38	8	<1	270m-272m
778940	6	6	42	12	<1	272m-274m
778941	10	<4	40	14	<1	274m-276m
778942	100	6	75	26	<1	276m-278m
778943	70	4	55	60	<1	278m-280m
778944	34	<4	70	170	<1	280m-282m
778945	42	8	60	740	<1	282m-284m
778946	14	10	55	145	<1	284m-286m
778947	6	<4	34	24	<1	286m-288m
778948	2	<4	36	18	<1	288m-290m
778949	4	<4	32	12	<1	290m-292m
778950	4	<4	44	18	<1	292m-294m
778951	4	6	60	18	<1	294m-296m
778952	6	<4	60	12	<1	296m-298m
778953	8	8	80	16	<1	298m-300m

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ANALYTICAL REPORT

0276 RP-PDH 002

JOB COM822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778954	12	6	85	16	<1	300m-302m
778955	26	<4	120	18	<1	302m-304m
778956	14	<4	110	24	<1	304m-306m
778957	8	<4	80	12	<1	306m-308m
778958	6	8	36	18	<1	308m-310m
						E.O.H.

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CORELLA PROJECT
PERCUSSION HOLES
RP-PDH 003

0277

ANALYTICAL REPORT

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778960	32	10	36	6	<1	0m- 2m
778961	46	20	44	6	<1	2m- 4m
778962	55	10	75	10	<1	4m- 6m
778963	36	6	65	6	<1	6m- 8m
778964	55	4	120	10	<1	8m-10m
778965	46	4	120	12	<1	10m-12m
778966	50	4	145	10	<1	12m-14m
778967	40	6	140	10	<1	14m-16m
778968	60	4	200	12	<1	16m-18m
778969	46	6	160	22	<1	18m-20m
778970	55	10	220	14	<1	20m-22m
778971	46	8	420	18	<1	22m-24m
778972	46	8	300	18	<1	24m-26m
778973	28	6	240	12	<1	26m-28m
778974	48	4	290	18	<1	28m-30m
778975	14	16	85	6	<1	30m-32m
778976	12	12	120	8	<1	32m-34m
778977	65	10	220	20	<1	34m-36m
778978	22	8	160	12	<1	36m-38m
778979	18	6	130	12	<1	38m-40m
778980	16	6	130	16	<1	40m-42m
778981	30	8	130	16	<1	42m-44m
778982	40	16	140	22	<1	44m-46m
778983	18	14	180	12	<1	46m-48m
778984	36	12	190	26	<1	48m-50m

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ANALYTICAL REPORT

RP-PDH 003 0278

JOB COM822608 O/N : N 077333

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
778985	16	10	130	12	<1	50m-52m
778986	24	6	150	16	<1	52m-54m
778987	36	12	200	18	<1	54m-56m
778988	32	12	190	22	<1	56m-58m
778989	10	6	140	12	<1	58m-60m
778990	24	8	200	22	<1	60m-62m
778991	24	<4	220	22	<1	62m-64m
778992	42	6	360	26	<1	64m-66m
778993	55	6	330	30	<1	66m-68m
778994	34	<4	220	18	<1	68m-70m
778995	50	6	195	20	<1	70m-72m
778996	44	6	150	18	<1	72m-74m
778997	12	18	46	<4	<1	74m-76m
778998	50	10	95	14	<1	76m-78m
778999	28	4	120	12	<1	78m-80m
779000	55	4	130	16	<1	80m-82m
774401	16	6	110	12	1	82m-84m
774402	14	<4	55	8	1	84m-86m
774403	10	8	14	<4	<1	86m-88m
774404	6	8	10	<4	<1	88m-90m
774405	20	20	110	30	1	90m-92m
774406	55	8	195	38	1	92m-94m
774407	30	8	210	48	1	94m-96m
774408	75	8	200	38	1	96m-98m
774409	60	10	110	26	1	98m-100m

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RP-PDH 0030279

ANALYTICAL REPORT

JOB COM822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
774410	90	8	190	55	1	100m-102m
774411	175	8	210	50	1	102m-104m
774412	40	18	75	10	1	104m-106m
774413	24	10	30	6	1	106m-108m
774414	14	24	26	8	<1	108m-110m
774415	24	36	44	<4	1	110m-112m
774416	16	46	32	<4	<1	112m-114m
774417	20	18	22	<4	<1	114m-116m
774418	32	16	26	<4	1	116m-118m
774419	120	14	260	50	1	118m-120m
774420	65	16	130	28	1	120m-122m
774421	24	10	75	20	1	122m-124m
774422	16	8	75	18	1	124m-126m
774423	28	10	90	18	1	126m-128m
774424	24	12	95	18	1	128m-130m
774425	28	14	135	18	1	130m-132m
774426	24	10	120	16	1	132m-134m
774427	30	10	170	14	1	134m-136m
774428	60	10	240	22	1	136m-138m
774429	170	30	210	22	1	138m-140m
774430	200	14	140	44	<1	140m-142m
774431	70	8	90	22	<1	142m-144m
774432	60	6	90	18	<1	144m-146m
774433	42	8	70	20	<1	146m-148m
774434	36	4	60	16	<1	148m-150m

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RP-PDH 003

ANALYTICAL REPORT

0280

JOB CON822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
774435	48	10	65	16	<1	150m-152m
774436	44	12	110	16	<1	152m-154m
774437	36	6	130	20	<1	154m-156m
774438	80	8	170	38	<1	156m-158m
774439	40	4	160	42	<1	158m-160m
774440	26	4	160	38	<1	160m-162m
774441	34	10	155	90	<1	162m-164m
774442	50	12	200	90	<1	164m-166m
774443	40	14	260	50	<1	166m-168m
774444	75	30	380	100	<1	168m-170m
774445	75	40	400	170	<1	170m-172m
774446	36	26	190	85	<1	172m-174m
774447	22	24	135	30	<1	174m-176m
774448	40	22	160	46	<1	176m-178m
774449	50	16	240	110	<1	178m-180m
774450	14	10	160	38	<1	180m-182m
774451	10	12	150	42	<1	182m-184m
774452	50	430	1400	260	1	184m-186m
774453	20	36	380	180	1	186m-188m
774454	30	20	320	240	<1	188m-190m
774455	30	12	140	70	<1	190m-192m
774456	34	18	95	38	<1	192m-194m
774457	26	12	70	30	<1	194m-196m
774458	16	10	60	24	<1	196m-198m
774459	LNR	LNR	LNR	LNR	LNR	198m-200m

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ANALYTICAL REPORT

0281 RP-PDH 003

JOB COM822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
774460	26	12	60	32	1	200m-202m
774461	18	22	115	24	<1	202m-204m
774462	10	30	170	24	<1	204m-206m
774463	2	10	70	10	<1	206m-208m
774464	10	70	320	14	<1	208-210m
774465	10	60	300	16	<1	210m-212m
774466	14	36	240	16	<1	212m-214m
774467	26	16	100	18	<1	214m-216m
						E.O.H.

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CORELLA PROSPECT
PERCUSSION HOLE
FP-PDH 001

ANALYTICAL REPORT

JOB COM830854

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	As	Sample Depth in metres
774469	20	10	20	6	<1	4	0m- 2m
774470	16	10	20	4	<1	2	2m- 4m
774471	12	8	10	<4	<1	<2	4m- 6m
774472	10	8	4	<4	<1	2	6m- 8m
774473	8	6	<2	<4	<1	<2	8m-10m
774474	8	12	<2	<4	<1	<2	10m-12m
774475	8	12	<2	<4	<1	<2	12m-14m
774476	8	24	<2	<4	<1	<2	14m-16m
774477	8	22	<2	<4	<1	<2	16m-18m
774478	10	28	2	<4	<1	<2	18m-20m
774479	16	18	16	<4	<1	<2	20m-22m
774480	22	12	28	6	<1	<2	22m-24m
774481	28	8	26	10	<1	2	24m-26m
774482	34	6	26	12	<1	2	26m-28m
774483	28	6	24	12	<1	<2	28m-30m
774484	20	<4	20	10	<1	<2	30m-32m
774485	18	<4	12	8	<1	3	32m-34m
774486	16	<4	14	6	<1	2	34m-36m
774487	14	12	20	6	<1	<2	36m-38m
774488	10	8	16	6	<1	<2	38m-40m
774489	10	<4	8	12	<1	<2	40m-42m
774490	8	6	8	12	<1	2	42m-44m
774491	12	<4	8	14	<1	3	44m-46m
774492	20	<4	10	12	<1	<2	46m-48m
774493	26	<4	18	14	<1	<2	48m-50m

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ANALYTICAL REPORT

FP-PDH 001

0283

JOB COM830854

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	As	Sample Depth in metres
774494	22	<4	22	16	<1	2	50m-52m
774495	8	12	18	6	<1	<2	52m-54m
774496	18	6	28	8	<1	<2	54m-56m
774497	22	6	42	12	<1	6	56m-68m
774498	12	<4	22	6	<1	<2	58m-60m
774499	20	4	8	8	<1	2	60m-62m
774500	10	4	14	8	<1	2	62m-64m
774501	12	10	14	8	1		64m-66m
774502	10	6	12	6	<1		66m-68m
774503	18	10	18	8	1		68m-70m
774504	26	8	34	10	1		70m-72m
774505	30	20	55	20	<1		72m-74m
774506	34	18	60	18	<1		74m-76m
774507	32	18	85	18	<1		76m-78m
774508	36	18	120	16	<1		78m-80m
774509	38	20	160	16	<1		80m-82m
774510	46	22	195	16	<1		82m-84m
774511	55	26	190	18	<1		84m-86m
774512	48	28	165	16	<1		86m-88m
774513	50	24	110	16	<1		88m-90m
774514	75	44	440	18	<1		90m-92m
774515	110	55	920	22	<1		92m-94m
774516	95	38	340	22	<1		94m-96m
774517	70	26	240	24	<1		96m-98m
774518	60	22	100	20	<1		98m-100m

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ANALYTICAL REPORT

0284

FP-PDH 001

JOB COM822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
774519	55	16	48	18	<1	100m-102m
774520	65	16	80	20	<1	102m-104m
774521	34	14	110	16	<1	104m-106m
774522	75	14	100	22	<1	106m-108m
774523	46	14	110	18	<1	108m-110m
774524	38	16	110	20	<1	110m-112m
774525	50	16	110	18	<1	112m-114m
774526	40	14	80	20	<1	114m-116m
774527	34	12	42	16	<1	116m-118m
774528	26	12	40	12	<1	118m-120m
774529	30	10	28	10	<1	120m-122m
774530	26	8	20	10	<1	122m-124m
774531	34	8	24	12	<1	124m-126m
774532	34	8	32	14	<1	126m-128m
774533	55	14	80	18	<1	128m-130m
774534	44	10	55	16	<1	130m-132m
774535	60	6	18	12	<1	132m-134m
774536	30	6	20	12	<1	134m-136m
774537	36	6	18	14	<1	136m-138m
774538	55	6	20	16	<1	138m-140m
774539	120	8	38	24	<1	140m-142m
774540	60	6	95	24	<1	142m-144m
774541	36	<4	42	14	<1	144m-146m
774542	28	<4	38	16	<1	146m-148m
774543	28	<4	46	10	<1	148m-150m
774544	32	<4	55	14	<1	150m-152m

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0285 FP-PDH 001

ANALYTICAL REPORT

JOB COM822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
774545	60	6	65	14	<1	152m-154m
774546	44	6	75	14	<1	154m-156m
774547	14	<4	70	14	<1	156m-158m
774548	42	4	100	14	<1	158m-160m
774549	70	6	150	12	<1	160m-162m
774550	65	4	95	14	<1	162m-164m
774551	40	<4	75	12	<1	164m-166m
774552	150	<4	60	20	<1	166m-168m
774553	90	<4	50	22	<1	168m-170m
774554	50	<4	50	20	<1	170m-172m
774555	70	6	46	16	<1	172m-174m
774556	100	8	44	36	<1	174m-176m
774557	80	6	50	32	<1	176m-178m
774558	75	10	60	24	<1	178m-180m
774559	100	10	85	20	<1	180m-182m
774560	95	10	95	18	<1	182m-184m
774561	65	10	65	12	<1	184m-186m
774562	120	10	65	24	<1	196m-188m
774563	135	12	65	24	<1	188m-190m
774564	100	12	65	20	<1	190m-192m
774565	70	14	80	18	<1	192m-194m
774566	90	14	95	16	<1	194m-196m
774567	130	14	130	14	<1	196m-198m
774568	105	16	130	18	<1	198m-200m
774569	105	12	120	14	<1	200m-202m
774570	110	10	65	12	<1	202m-204m E.O.H.

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ANALYTICAL REPORT

CORELLA PROSPECT
PERCUSSION HOLE
FP-PDH 002

0286

JOB COM822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
774572	38	10	42	12	<1	0m- 2m
774573	34	6	14	4	<1	2m- 4m
774574	12	<4	4	<4	<1	4m- 6m
774575	36	<4	14	4	<1	6m- 8m
774576	50	<4	22	6	<1	8m-10m
774577	26	<4	14	4	<1	10m-12m
774578	26	<4	26	6	<1	12m-14m
774579	32	<4	30	8	<1	14m-16m
774580	30	<4	28	8	<1	16m-18m
774581	24	<4	26	8	<1	18m-20m
774582	20	<4	22	8	<1	20m-22m
774583	20	<4	22	6	<1	22m-24m
774584	16	16	22	6	<1	24m-26m
774585	LNR	LNR	LNR	LNR	LNR	26m-28m
774586	18	<4	12	6	<1	28m-30m
774587	10	<4	10	<4	<1	30m-32m
774588	6	<4	6	<4	<1	32m-34m
774589	8	6	6	<4	<1	34m-36m
774590	10	10	32	6	<1	36m-38m
774591	10	12	28	4	<1	38m-40m
774592	12	<4	16	6	<1	40m-42m
774593	8	<4	16	<4	<1	42m-44m
774594	6	<4	12	<4	<1	44m-46m
774595	6	<4	16	<4	<1	46m-48m

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FP-PDH 002

ANALYTICAL REPORT

0287

JOB COM822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
774596	4	6	18	8	<1	48m-50m
774597	10	<4	20	6	<1	50m-52m
774598	2	<4	14	10	<1	52m-54m
774599	<2	6	6	4	<1	54m-56m
774600	<2	<4	10	8	<1	56m-58m
774601	<2	<4	12	6	<1	58m-60m
774602	<2	6	16	6	<1	60m-62m
774603	<2	<4	14	<4	<1	62m-64m
774604	<2	<4	14	10	<1	64m-66m
774605	<2	<4	14	6	<1	66m-68m
774606	<2	<4	20	8	<1	68m-70m
774607	2	6	36	24	<1	70m-72m
774608	16	<4	12	20	<1	72m-74m
774609	16	<4	10	16	<1	74m-76m
774610	4	<4	14	10	<1	76m-78m
774611	2	6	24	6	<1	78m-80m
774612	4	6	18	24	<1	80m-82m
774613	4	6	14	10	<1	82m-84m
774614	4	10	16	6	<1	84m-86m
774615	2	4	12	6	<1	86m-88m
774616	2	6	8	6	<1	88m-90m
774617	6	6	20	18	<1	90m-92m
774618	80	6	50	24	<1	92m-94m
774619	150	8	46	20	<1	94m-96m
774620	135	4	44	24	<1	96m-98m

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ANALYTICAL REPORT

FP-PDH 002

0288

JOB COM822649 O/N : N 077343

Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
774621	14	8	42	12	<1	98m-100m
774622	70	8	70	18	<1	100m-102m
774623	210	6	60	24	<1	102-104m
774624	250	6	65	26	<1	104m-106m
774625	290	6	100	34	1	106m-108m
774626	700	18	95	90	1	108m-110m
774627	3500	14	140	310	1	110m-112m
774628	3000	10	90	740	1	112m-114m
774629	600	<4	30	200	1	114m-116m
774630	150	6	16	150	1	116m-118m
774631	130	8	34	150	1	118m-120m
774632	100	4	60	65	1	120m-122m
774633	200	8	120	110	1	122m-124m
774634	170	6	90	44	1	124m-126m
774635	220	4	85	42	1	126m-128m
774636	230	<4	95	46	1	128m-130m
774637	340	6	120	55	1	130m-132m
774638	470	8	95	46	1	132m-134m
774639	220	14	75	38	1	134m-136m
774640	350	8	130	60	1	136m-138m
774641	330	6	60	34	<1	138m-140m
774642	140	4	75	24	1	140m-142m
774643	90	<4	50	20	1	142m-144m
774644	34	<4	36	14	1	144m-146m
774645	6	6	55	16	1	146m-148m

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ANALYTICAL REPORT

0289 FP-PDH 002

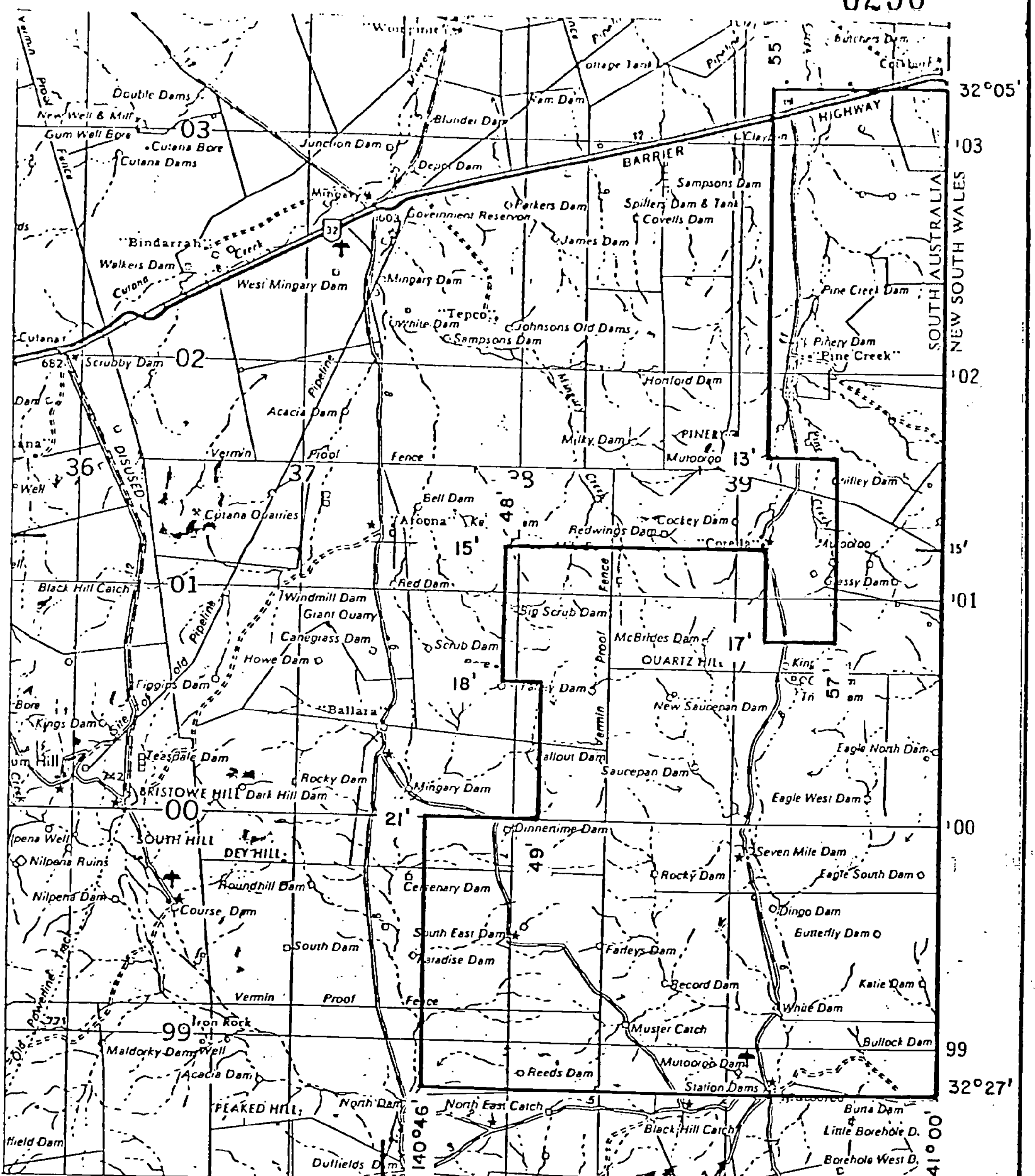
JOB COM822649 O/N : N 077343

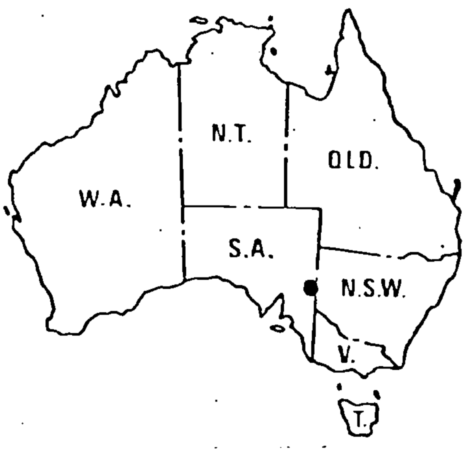
Results in ppm

SAMPLE	Cu	Pb	Zn	Co	Ag	Sample Depth in metres
774646	50	4	20	14	1	148m-150m
774647	42	<4	30	14	1	150m-152m
774648	10	<4	22	6	1	152m-154m
774649	6	<4	20	<4	1	154m-156m
774650	10	<4	26	4	1	156m-158m
774651	8	<4	18	<4	1	158m-160m
774652	6	4	38	16	1	160m-162m
774653	38	4	24	14	1	162m-164m
774654	60	4	28	14	1	164m-166m
774655	28	<4	24	14	1	166m-168m
774656	26	<4	26	14	<1	168m-170m
774657	40	<4	26	12	<1	170m-172m
774658	30	<4	32	12	<1	172m-174m
774659	30	4	30	18	<1	174m-176m
774660	60	4	20	18	<1	176m-178m
774661	36	4	26	18	<1	178m-180m

E.O.H.

0290





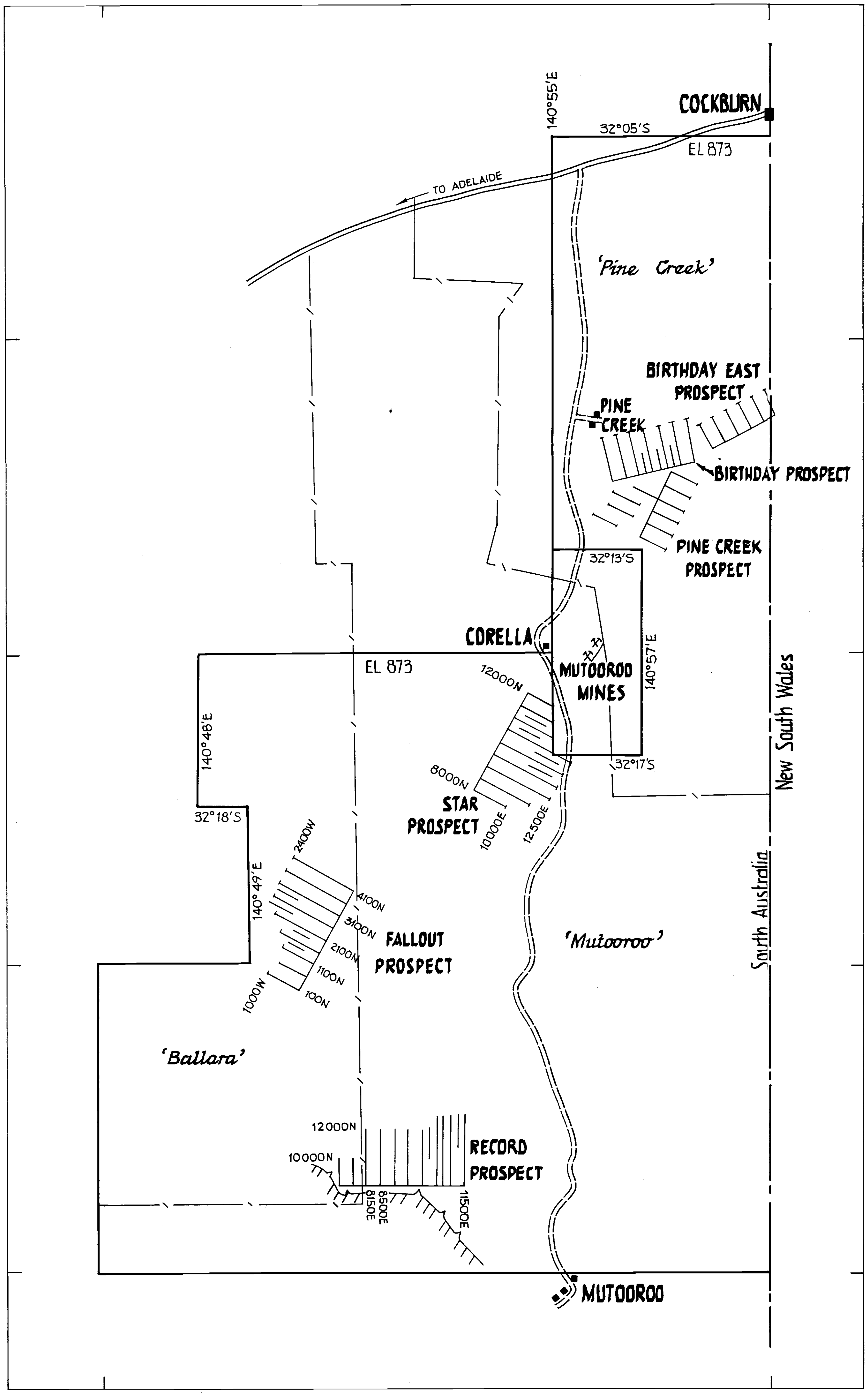
ESSO EXPLORATION AND PRODUCTION AUSTRALIA INC.

CORELLA - 588

SOUTH AUSTRALIA

EXPLORATION LICENCE

MAP USED: OLARY PLATE 1 1:250,000



LEGEND

- BOUNDARY FENCE
- TRACK
- STATION
- *'Pine Creek'* STATION NAME
- GRID
- ADELAIDEAN UNCONFORMITY
- MINES
- E.L. BOUNDARY
- STATE BOUNDARY

MINERALS DEPT., ESSO AUSTRALIA LTD.

CORELLA~PROJECT 588
EXPLORATION LICENCE 873 (S.A.)
GRID LOCATIONS

SCALE 1:13,333

0 5 10Km

AUTHOR: R. Newport

DRAWN: June '83

PLATE 2

Dwg 588-6

4514-9

MINERALS DEPARTMENT ESSO AUSTRALIA LTD.

Corella 588

WILLYAMA COMPLEX S.A.

PROSPECT GRID LOCATION

SCALE 1:25.000

0 500 1000 1500 2000 2500 M

AUTHOR: R. Newport

DWG. Nº 588-7

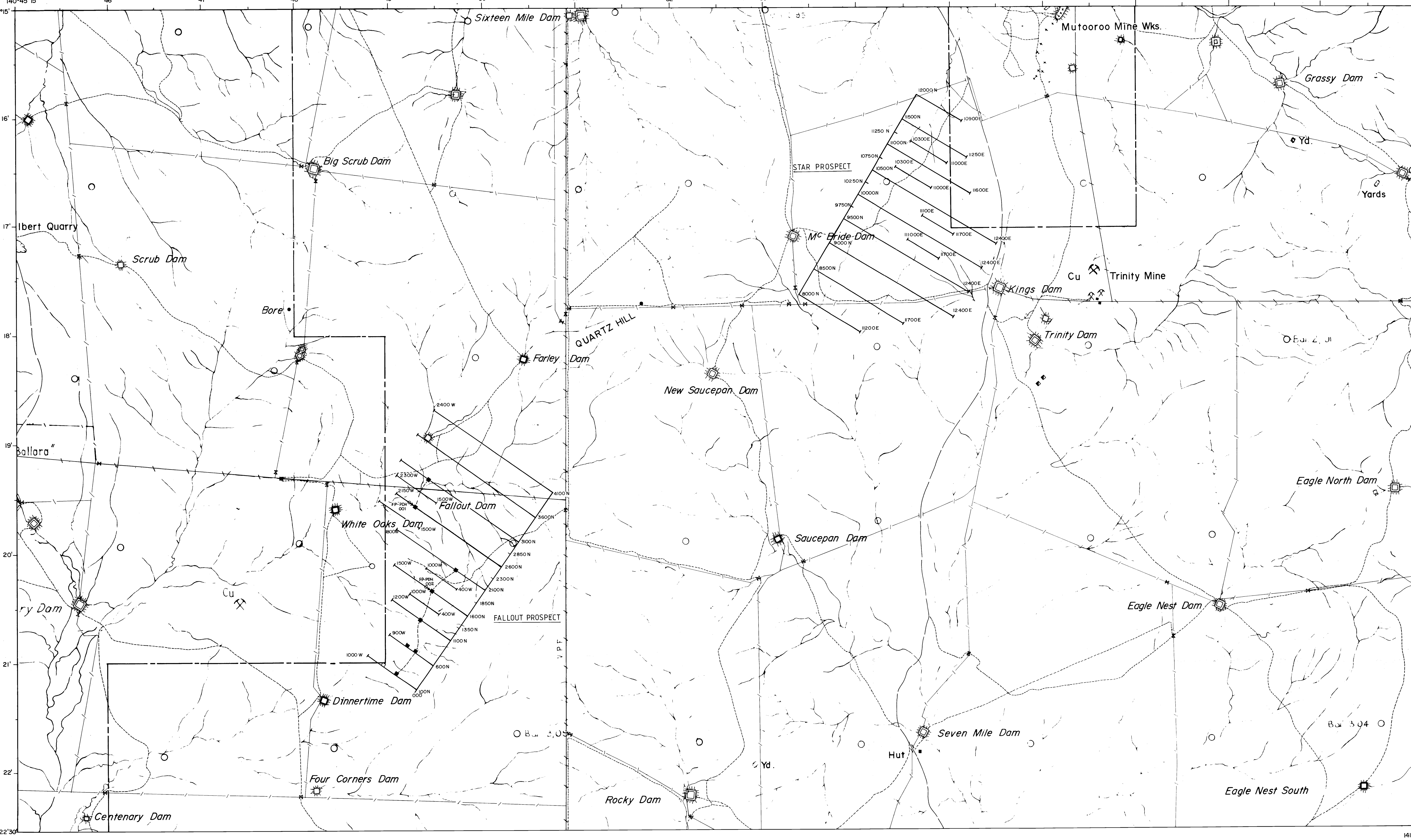
DATE: June 1983

REVISED:

PLATE 3

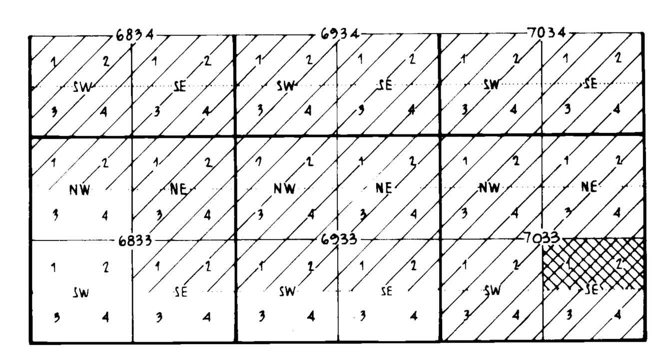
4514-10

Dingo Dam
Butterfly Dam
South East Dam
Farley Dam
Paradise Dam
Record Dam
RECORD PROSPECT
12500N
12000N
11000N
10000N
Katie Dam
White Dam
Muster Catch
Bullock Dam
Reeds Dam
Mutooroo Dam
Station Dam
"Mutooroo"
Mutooroo Creek
Burta Dam
North Dam
North East Catch
Black Hill Catch
Little Borehole Dam
Borehole West Dam
Field Well
Two Mile Dam
Lyndoch Catch
140°45'
141°00'
32°22'30"
32°30'
LEGEND
PERCUSSION HOLE
GRID
UTEM III ANOMALY
ROAD
TRACK
CREEK
BOUNDARY FENCE
FENCE AND GATE
DAM
BUILDING
MINE
E.L. BOUNDARY
AIRFIELD
AREA COVERED BY 1:25.000 SCALE MAPS
SHEET LOCATION
MINERALS DEPARTMENT ESSO AUSTRALIA LTD.
CORELLA 588
WILLYAMA COMPLEX S.A.
PROSPECT GRID LOCATION
SCALE 1:25.000
0 500 1000 1500 2000 2500M
AUTHOR: R. Newport
DATE: June 1983
DWG. Nº 588-8
REVISED:
PLATE 4
4514-11



LEGEND

- PERCUSSION HOLE
- GRID
- UTEM III ANOMALY
- ROAD
- TRACK
- CREEK
- BOUNDARY FENCE
- FENCE AND GATE
- DAM
- BUILDING
- MINE
- E.L. BOUNDARY
- AIRFIELD



AREA COVERED BY 1:25 000 SCALE MAPS

SHEET LOCATION

MINERALS DEPARTMENT ESSO AUSTRALIA LTD.

Corella 588

WILLYAMA COMPLEX S.A.

PROSPECT GRID LOCATION

SCALE 1:25,000

0 500 1000 1500 2000 2500M

AUTHOR: R.Newport

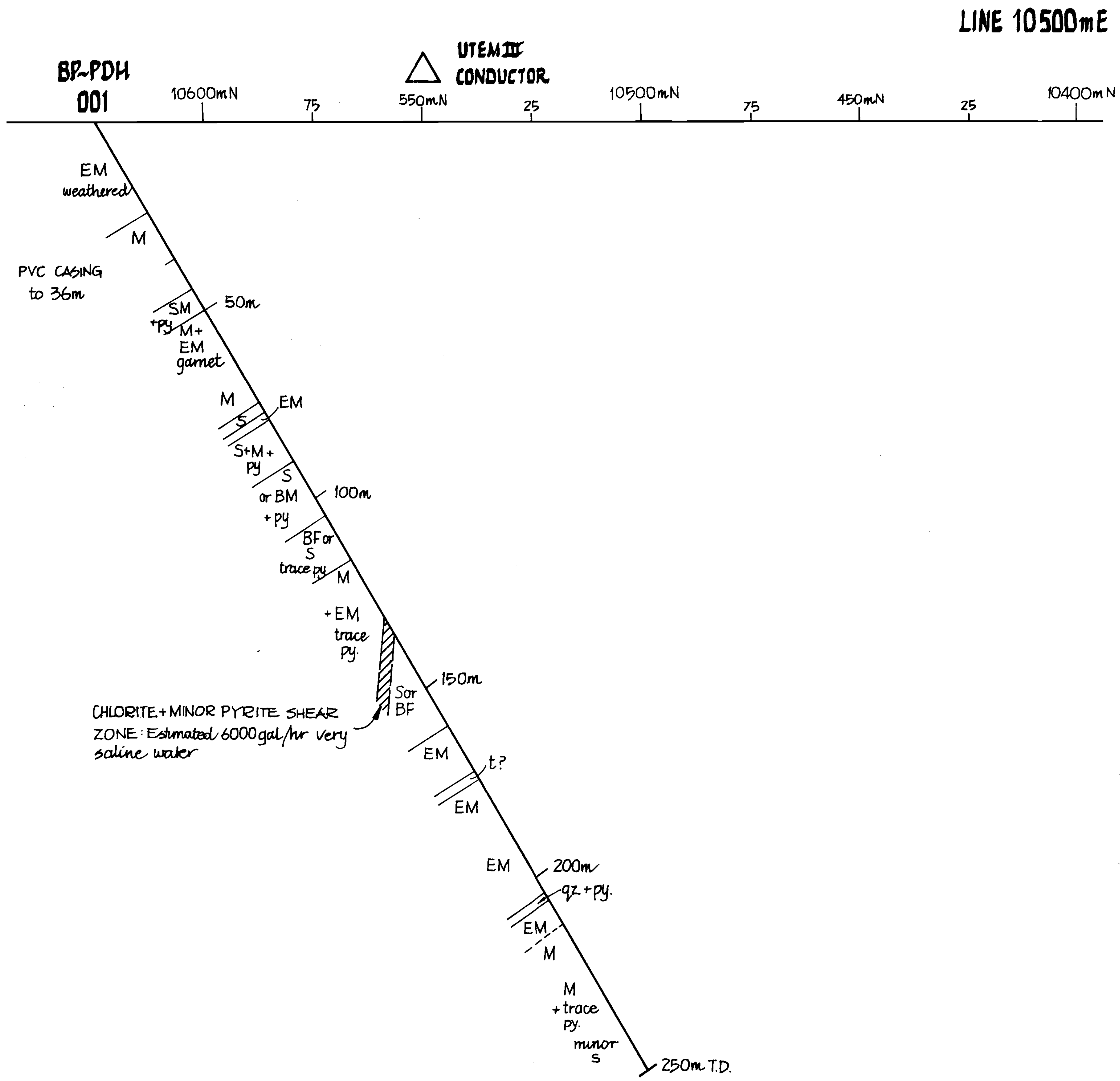
DWG Nº 588-9

DATE: June 1983

REVISED:

PLATE 5

4514-12



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CORELLA ~ PROJECT 588

EXPLORATION LICENCE 873 (S.A.)

BIRTHDAY PROSPECT

PERCUSSION DRILL HOLE SECTION

BP-PDH 001

SCALE 1:1000

0 20 40 60 80 100

METRES

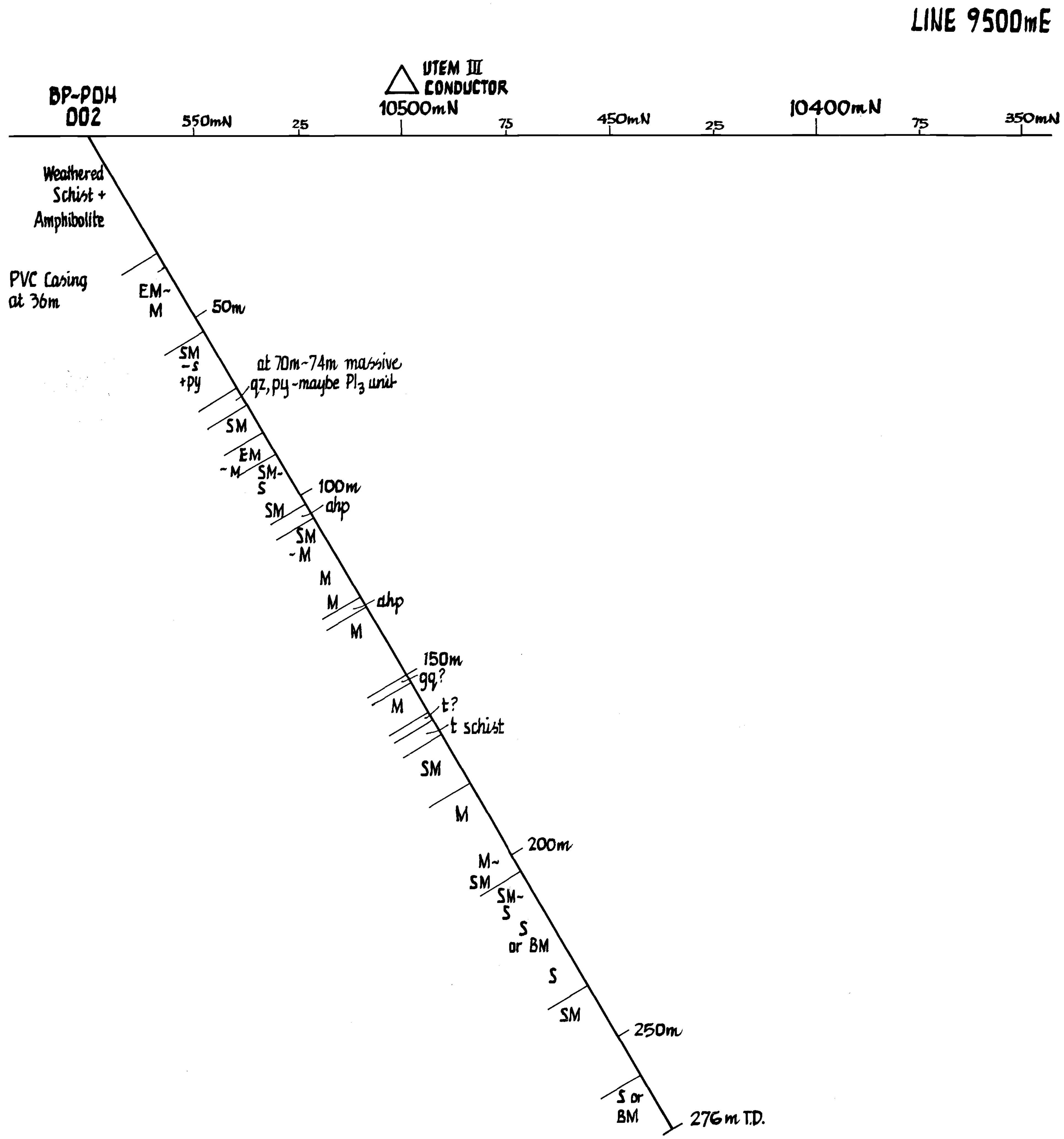
AUTHOR: R. Newport

DRAWN: June '83

PLATE 6

Dwg. 588-10

4514-13



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CORELLA ~ PROJECT 588

EXPLORATION LICENCE 873(S.A.)

BIRTHDAY PROSPECT

PERCUSSION DRILL HOLE SECTION

BP-PDH 002

SCALE 1:1000

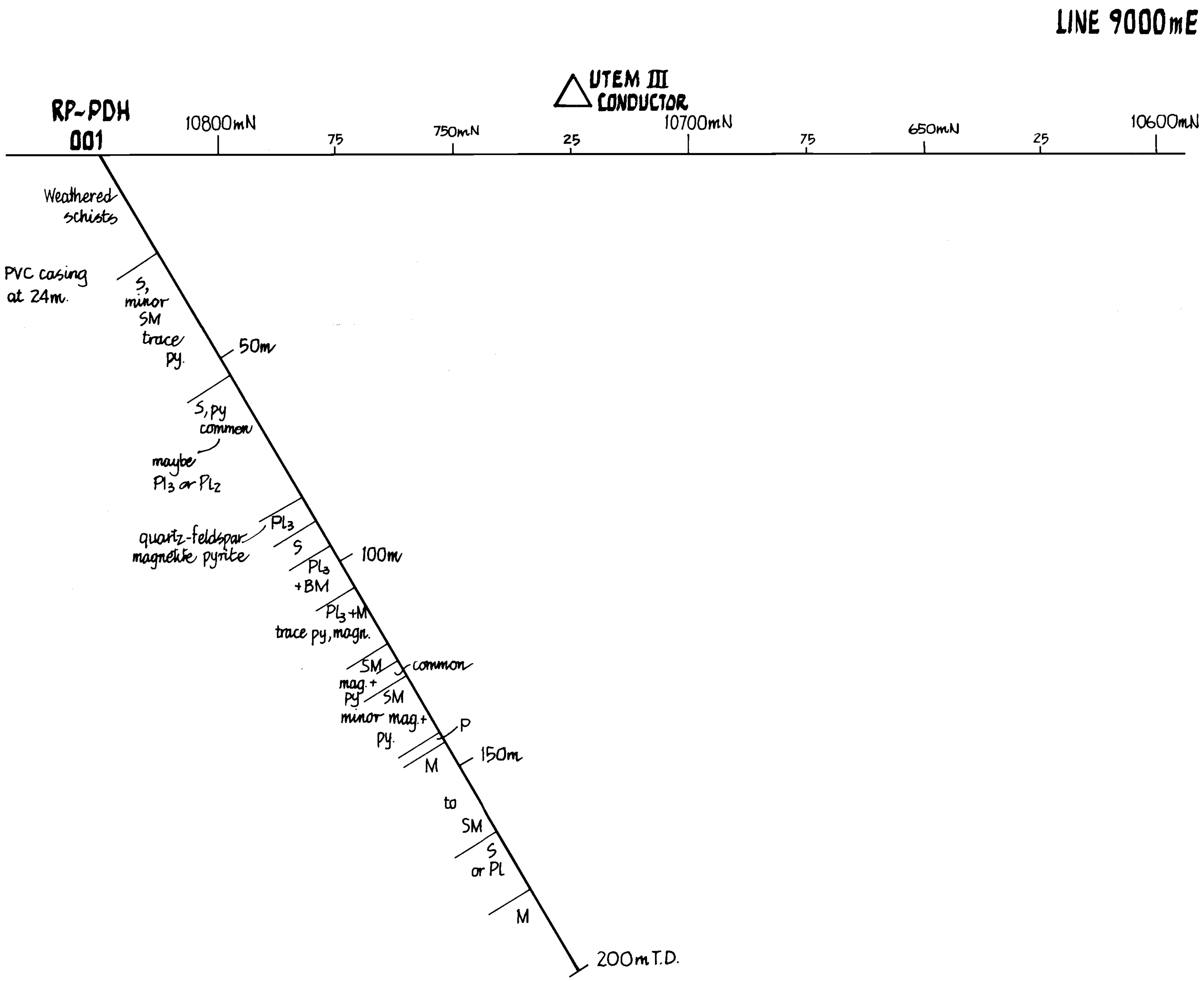
0 20 40 60 80 100

METRES

AUTHOR: R.Newport **DRAWN:** June '83

PLATE 7 Dwg.588-11

4514-14



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CORELLA ~ PROJECT 588
EXPLORATION LICENCE 873(S.A.)

RECORD PROSPECT

PERCUSSION DRILL HOLE SECTION

RP~PDH~001

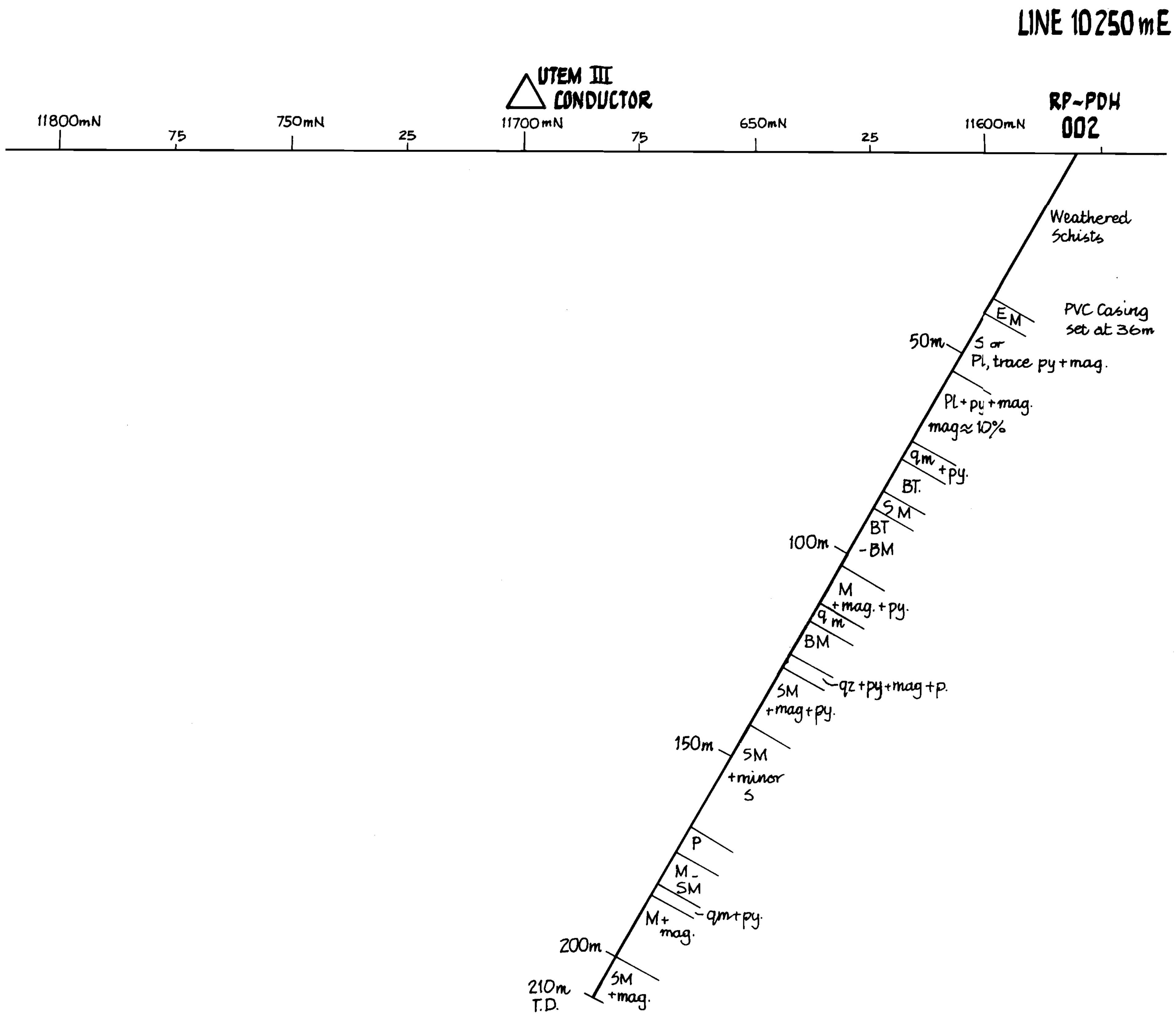
SCALE 1:1000

0 20 40 60 80 100
METRES

AUTHOR: R.Newport **DRAWN:** June '83

PLATE 8 Dwg. 588-12

4514-15



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CORELLA ~ PROJECT 588
EXPLORATION LICENCE 873(S.A.)
RECORD PROSPECT
PERCUSSION DRILL HOLE SECTION
RP~PDH 002

SCALE 1:1000

0 20 40 60 80 100

METRES

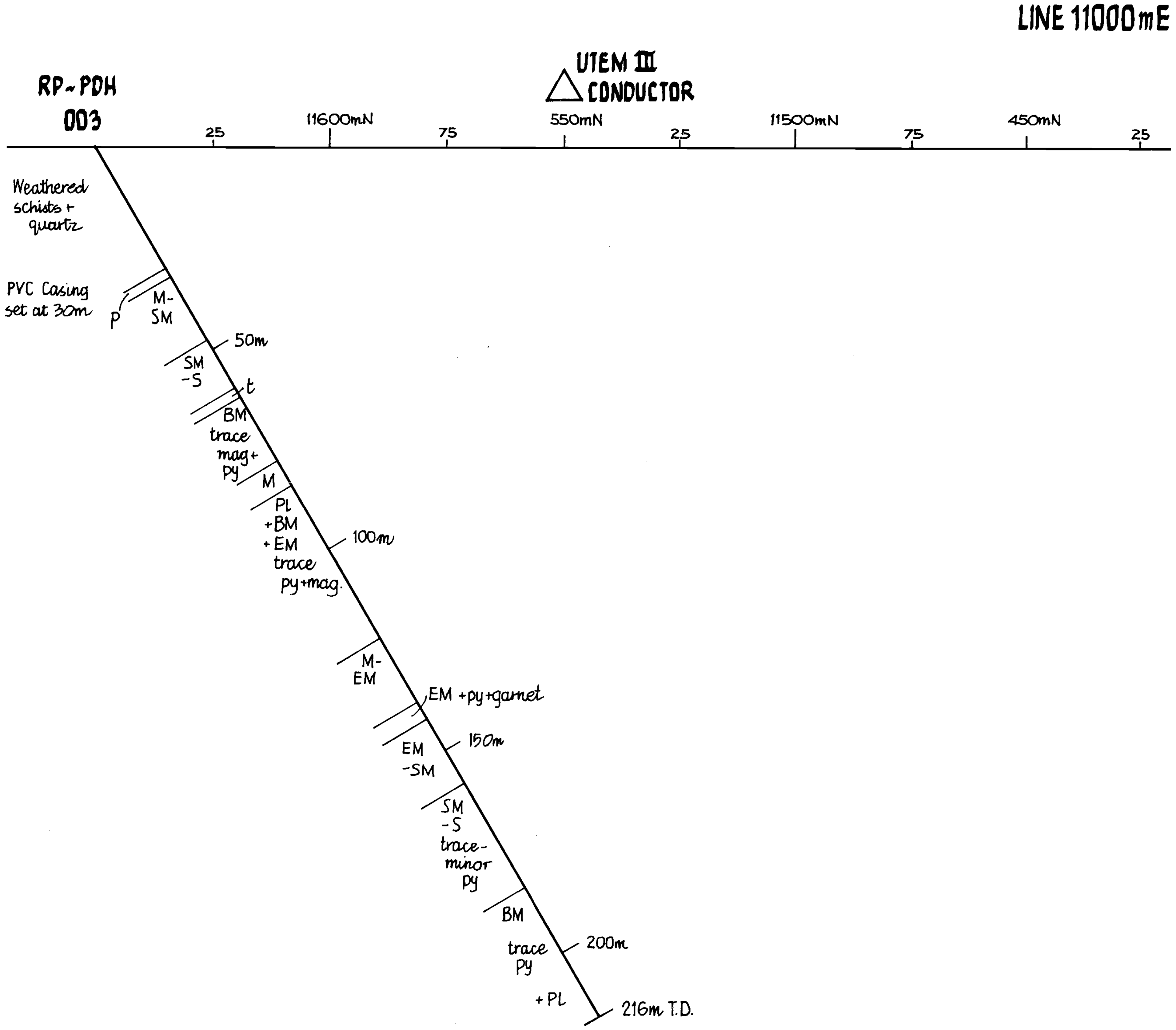
AUTHOR: R.Newport

DRAWN: June '83

PLATE 9

Dwg. 588-13

4514-16



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CORELLA ~ PROJECT 588

EXPLORATION LICENCE 873(S.A.)

RECORD PROSPECT

PERCUSSION DRILL HOLE SECTION

RP-PDH 003

SCALE 1:1000

0 20 40 60 80 100

METRES

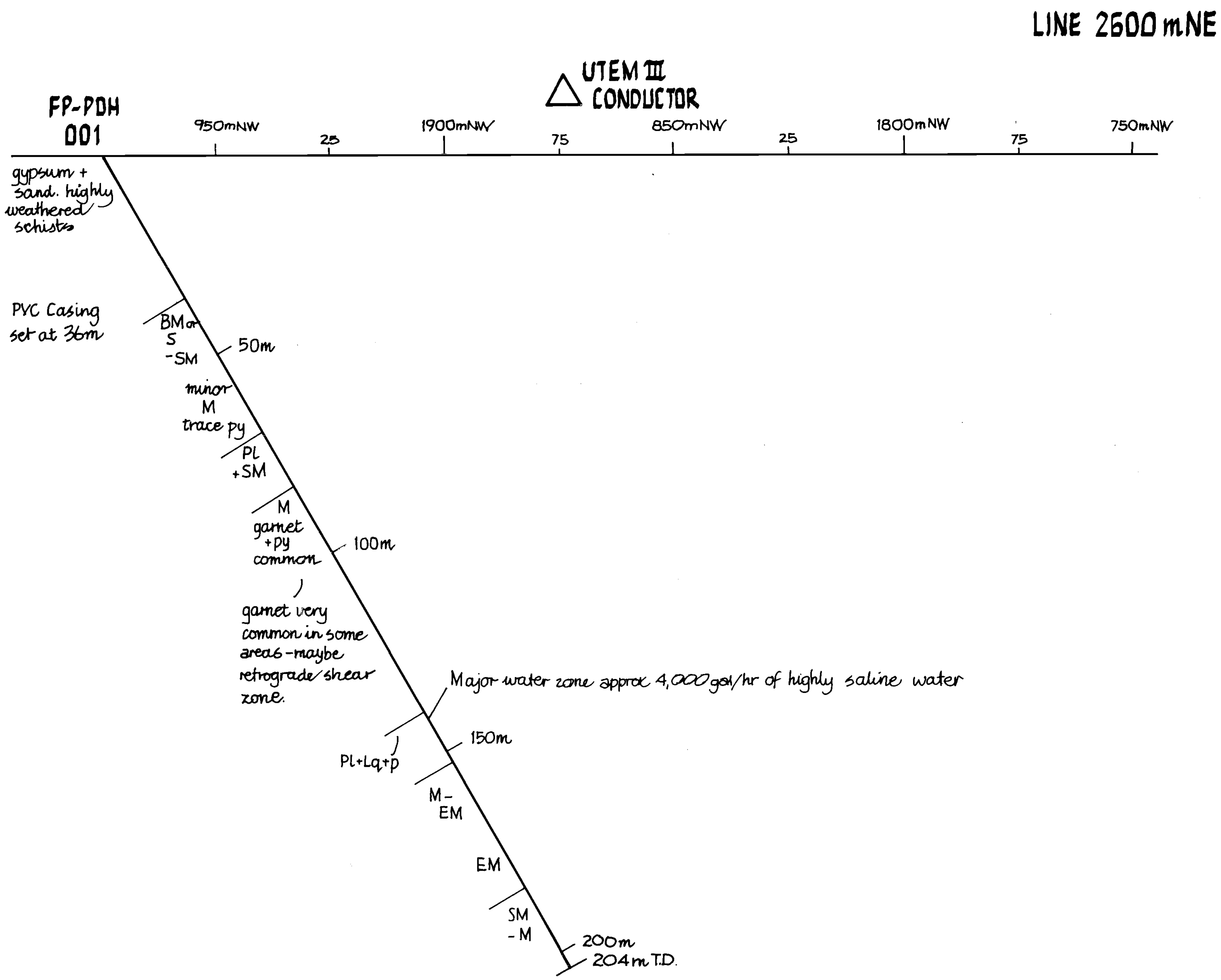
AUTHOR: R.Newport

DRAWN: June '83

PLATE 10

Dwg 588-14

4514-17



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CORELLA ~ PROJECT 588

EXPLORATION LICENCE 873 (S.A.)

FALL OUT PROSPECT

PERCUSSION DRILL HOLE SECTION

FP-PDH 001

SCALE 1:1000

0 20 40 60 80 100

METRES

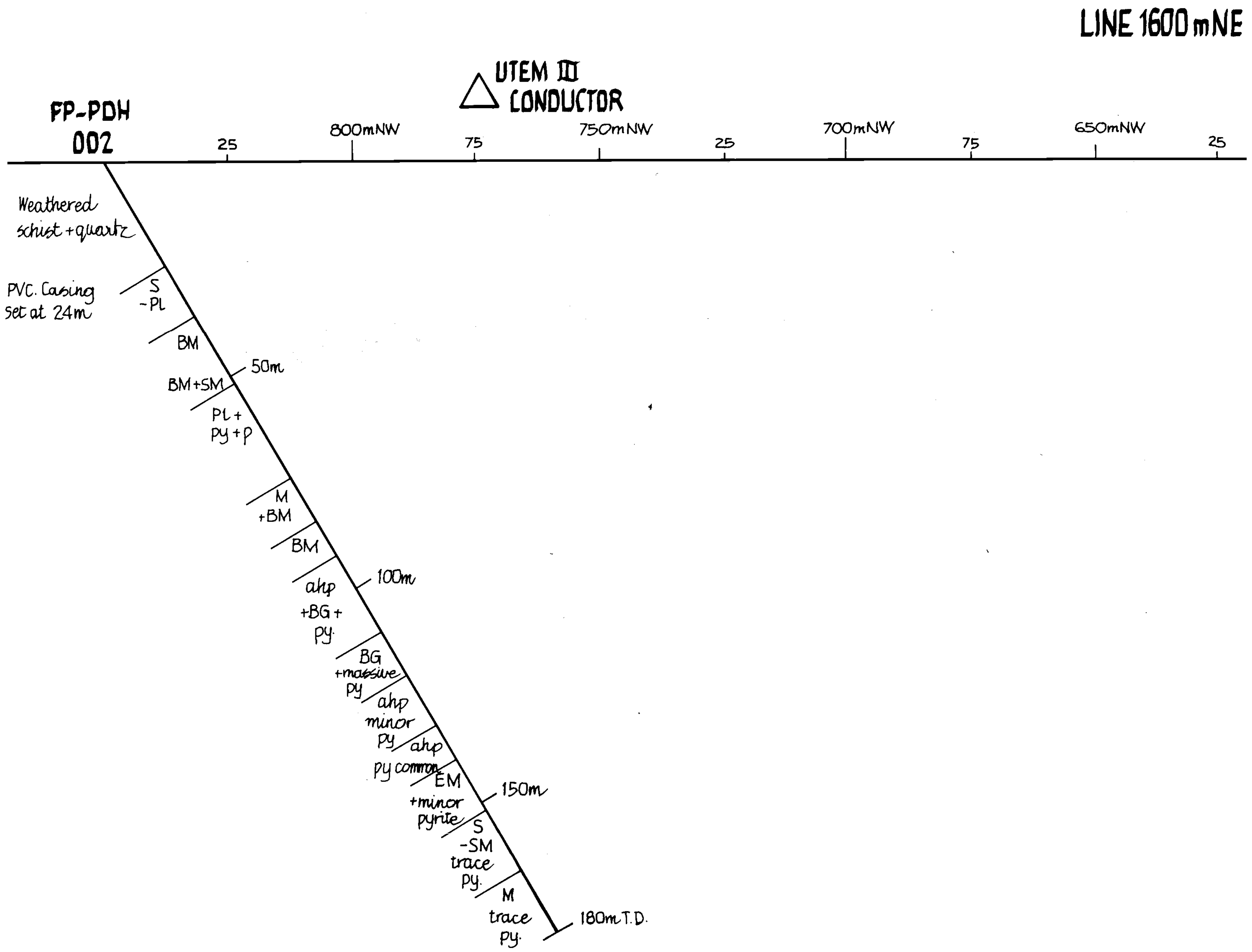
AUTHOR: R. Newport

DRAWN: June '83

PLATE 11

Dwg. 588-15

4514-18



MINERALS DEPT., ESSO AUSTRALIA LTD.

CORELLA ~ PROJECT 588

EXPLORATION LICENCE 873 (S.A.)

FALL OUT PROSPECT

PERCUSSION DRILL HOLE SECTION

FP-PDH 002

SCALE 1:1000

0 20 40 60 80 100

METRES

AUTHOR: R.Newport

DRAWN: June '83

PLATE 12

Dwg. 588-16

4514-19