

CUSTOMER	OREGON NATURAL GAS DEVELOPEMENT CORP.	WORK ORDER NO.	131783	DATE	12-18-88
LEASE/WELL NO.	COLUMBIA COUNTY No. 1	REDRILL #1	CUSTOMER ORDER NO.		
FIELD	MIST - NAHALEM BASIN	COUNTY	COLUMBIA	STATE	OREGON
CASING O.D.	4-1/2"	WEIGHT(S)	10.5#	NOMINAL WALL THICKNESS	GRADE K-55
TOTAL FOOTAGE INSPECTED	2475'	FROM	SURFACE	TO	2475'
					DEPTH

SUBSURFACE CASING INSPECTION REPORT

SUMMARY

49	LENGTHS WERE FOUND TO SHOW NO EVIDENCE OF CORROSION EXCEEDING 20 PERCENT OF THE NOMINAL BODY WALL.	CLASS 1
7	LENGTHS WERE FOUND TO SHOW EVIDENCE OF CORROSION EXCEEDING 20 PERCENT BUT LESS THAN 41 PERCENT OF THE NOMINAL BODY WALL.	CLASS 2
8	LENGTHS WERE FOUND TO SHOW EVIDENCE OF CORROSION EXCEEDING 40 PERCENT BUT LESS THAN 61 PERCENT OF THE NOMINAL BODY WALL.	CLASS 3
0	LENGTHS WERE FOUND TO SHOW EVIDENCE OF CORROSION EXCEEDING 60 PERCENT OF THE NOMINAL BODY WALL.	CLASS 4
64	TOTAL LENGTHS	
2475'	TOTAL FOOTAGE	

REFERENCE FOR FOOTAGE MEASURE	GROUND LEVEL + 10.5'
LENGTHS ARE NUMBERED FROM	SUREFACE
COMMENTS	DID NOT TAG BOTTOM DUE TO FISH AT 2490' PERFS. 2448' - 2460'
SERVICED BY	

WA-1363 (10/87)

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					DEPTH

SUBSURFACE CASING DEFECT REPORT

LENGTH NO.	TYPE DEFECT	PENETRATION	LENGTH NO.	TYPE DEFECT	PENETRATION
INSIDE 7" SURFACE CASING					
2	OD IP	41 - 60			
3	OD IP	41 - 60			
4	OD IP	41 - 60			
5	OD IP	41 - 60			
6	OD IP	41 - 60			
7	OD IP	41 - 60			
8	OD IP	41 - 60			
9	OD IP	41 - 60			
OUTSIDE 7" SURFACE CASING					
15	OD IP	21 - 40			
16	OD IP	21 - 40			
47	OD IP	21 - 40			
53	OD IP	21 - 40			
59	ID IP	21 - 40			
60	OD IP	21 - 40			
63	OD IP	21 - 40			

ABBREVIATIONS:

O.D. - OUTSIDE DIAMETER
I.D. - INSIDE DIAMETER

I.S. - INSIDE SURFACE PIPE
T.L. - THROUGHOUT LENGTH

I.P. - ISOLATED PITTING
C.C. - CIRCUMFERENTIAL CORROSION
G.C. - GENERAL CORROSION

WA-1364-C (10/87)



VERTILLOG®

FILE NO. _____
 PC-VRL-1338
 API NO. _____

COMPANY OREGON NATURAL GAS DEVELOPMENT CORP.
 WELL COLUMBIA COUNTY NO.1 REDRILL NO.1
 FIELD MIST-MARPLEN BRGIN
 COUNTY COLUMBIA STATE OREGON

LOCATION: 310' N. & 812' W. FROM THE CENTER OF:
 SEC 11 TWP 6N. RGE 5W.

OTHER SERVICES
 NEUTRON 3 1/8" PERF.

PERMANENT DRITUM G.L. _____ ELEV. 1021.0
 LOGGING MEASURED FROM K.B. 10.5 FT. ABOVE P.D. KB 1031.5'
 DRILLING MEASURED FROM K.B. _____ OF GL 1021.0'

DATE	DEC 18, 1988
RUN	1
SERVICE ORDER	131783
DEPTH-DRILLER	2490'
DEPTH-LOGGER	2480'
BOTTOM LOGGED INTERVAL	2475'
TOP LOGGED INTERVAL	SURFACE
TYPE FLUID IN HOLE	BRINE
SRLINITY PPM CL.	20000PPM
DENSITY LB/GR.	---
LEVEL	FULL
HRX. REC. TEMP. DEG. F	NOT RECORDED
OPR. RIG TIME	1 HR.
EQUIP. NO. / LOC.	HL 6301 BRANKF.LD.
RECORDED BY	T. THONEY
WITNESSED BY	MR. THOMAS

BOREHOLE RECORD

NO.	BIT	FROM	TO
1	N/A	360'	3105'
2	6 1/4"		

IN MAKING INTERPRETATIONS OF LOGS OUR EMPLOYEES WILL GIVE CUSTOMER THE BEST-FIT OF THEIR BEST JUDGMENT, BUT SINCE ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS, WE CANNOT, AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COST, DAMAGES, OR EXPENSES WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

Western Atlas International
 A LITTON/DESSER COMPANY

ATLAS WIRELINE SERVICES

FOLD HERE

SIZE	WGT	FROM	TO
7"	20	SURF.	359' K-55
4 1/2"	10.5	SURF.	2590' K-55

CRISING RECORD

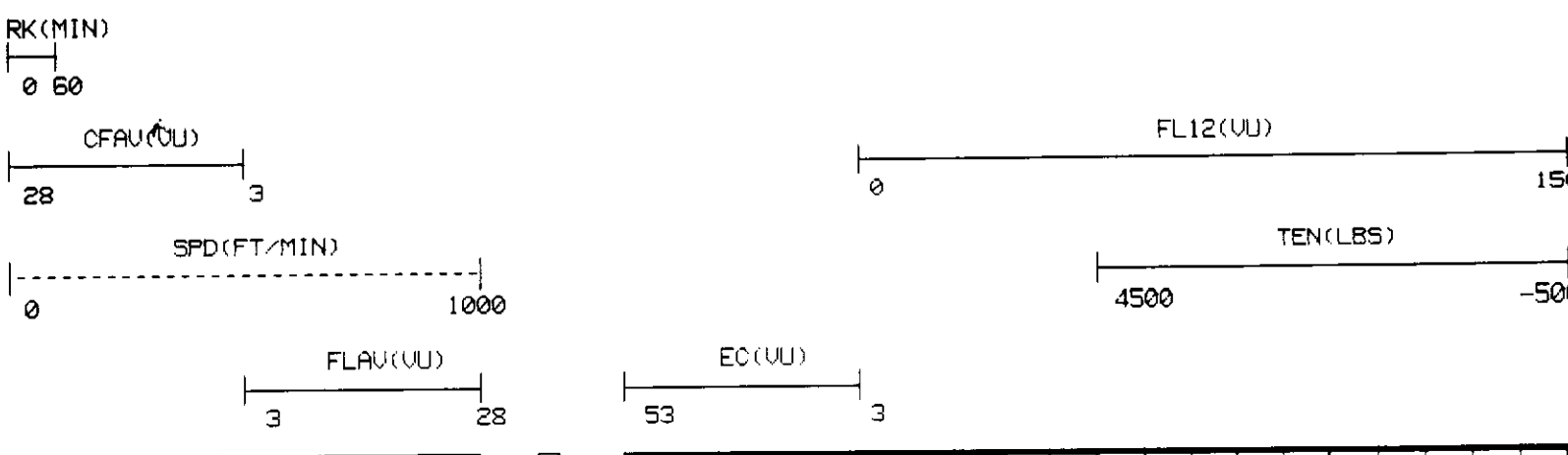
REMARKS RUN (1)

CENTRALIZERS NOT USED!!
 SURF COMMAND USED @ 360'.
 DID NOT TAG BOTTOM DUE TO FISH @ 2490'.
 PERFS: 2448'-2460'.

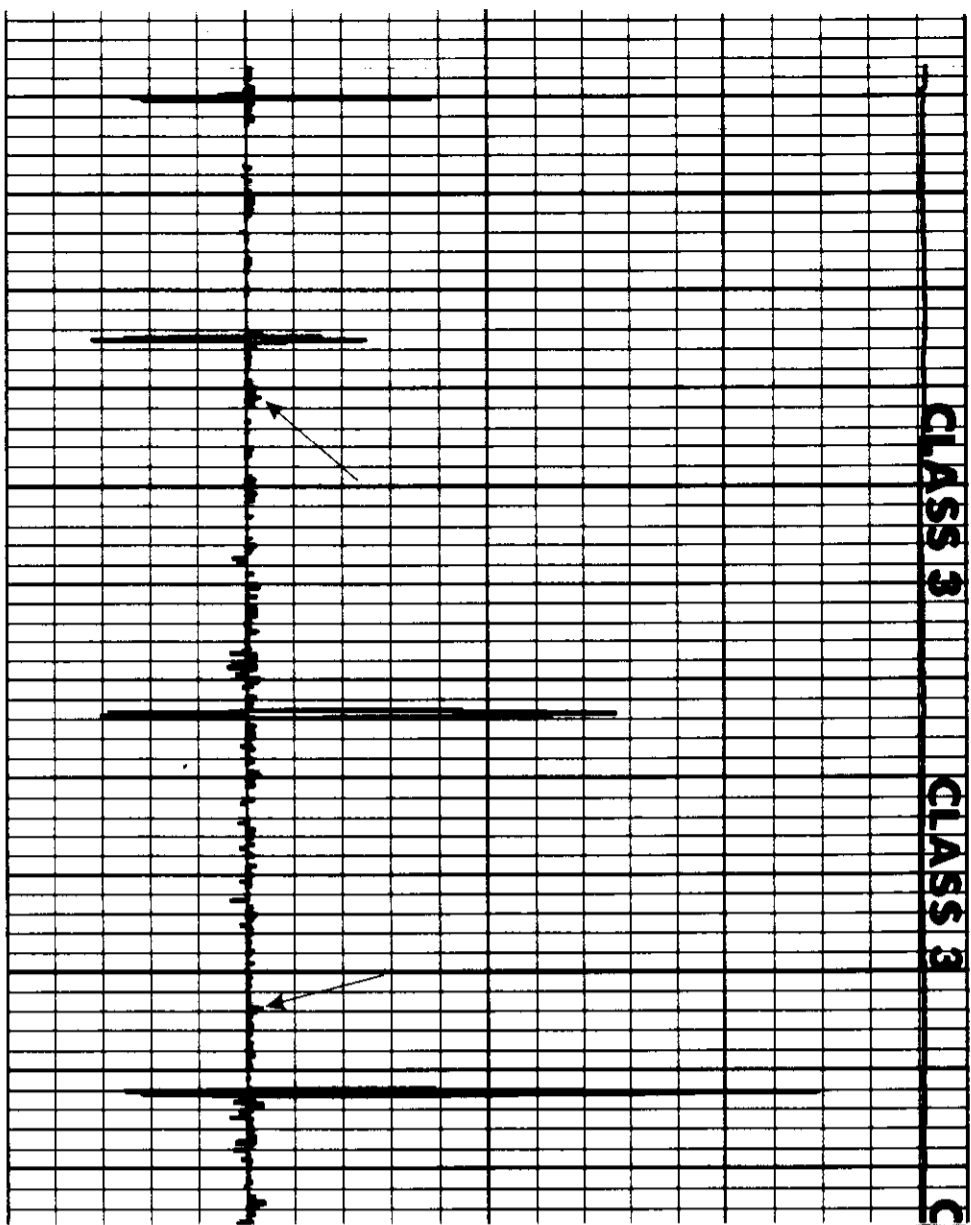
EQUIPMENT DATA

RUN	TRIP	TOOL	SERIAL NO.	SERIES NO.	POSITION
1	1	VRT	79490	2904MA	FREE

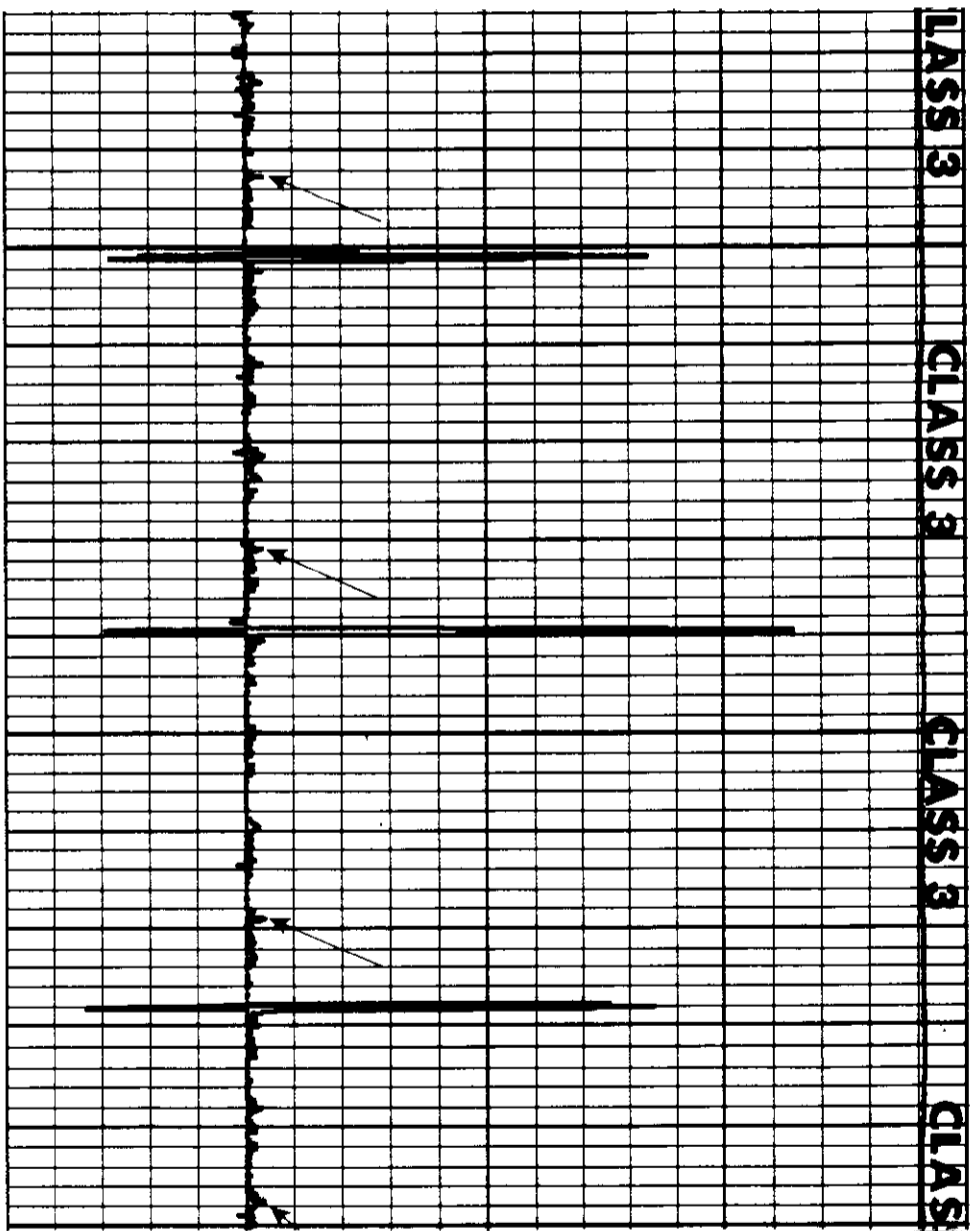
COMPANY: OREGON NATURAL GAS DEVELOPMENT CORP. RUN: 1
 WELL NAME: COLUMBIA COUNTY NO.1 REDRILL NO.1 TRIP: 1
 SERVICE: U VRT1 FILE: 2 DATE: 12/18/88 TIME: 9:55: 5
 REVISION: FSYSAL REV 0508 VER 2 MODE: PLAYBACK



CLASS 3 CLASS 3 C

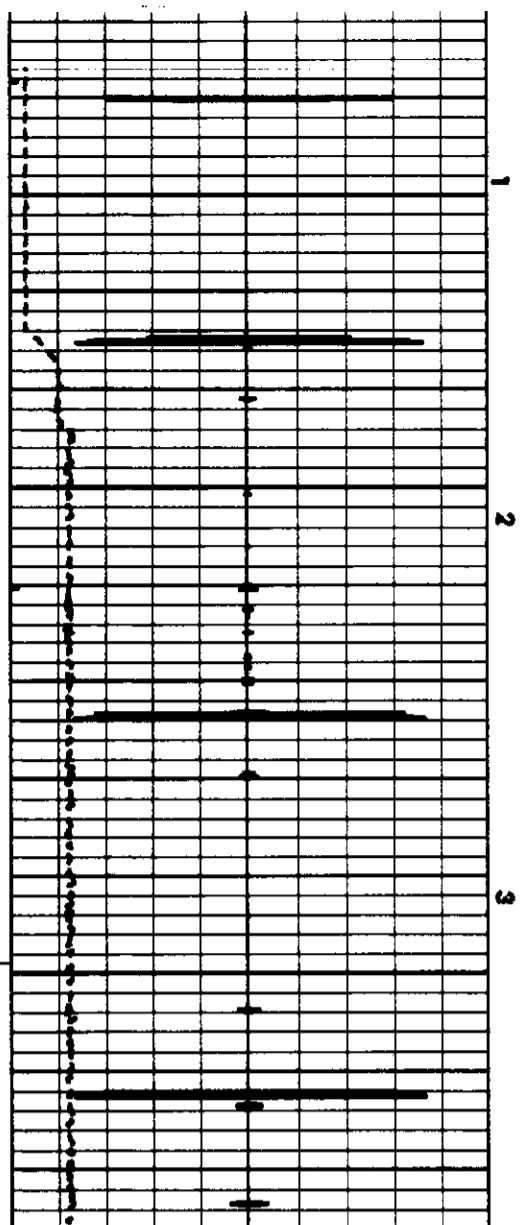


CLASS 3 CLASS 3 CLASS 3



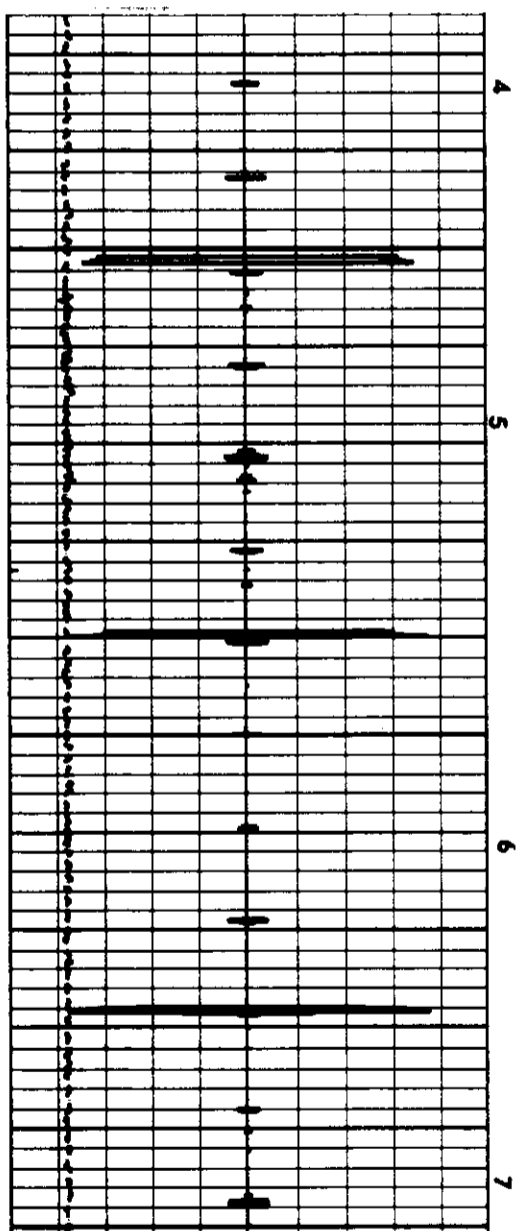
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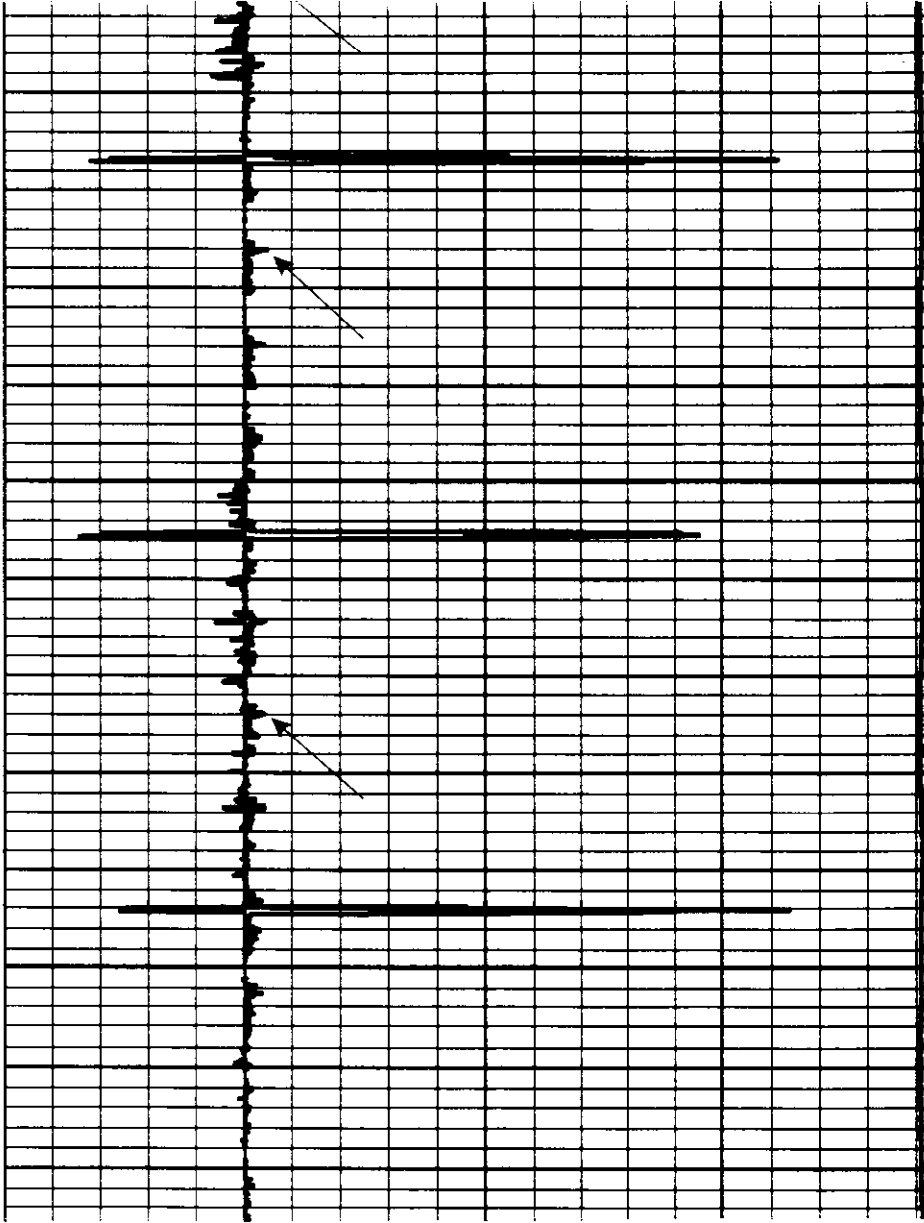
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S 3

CLASS 3

CLASS 3

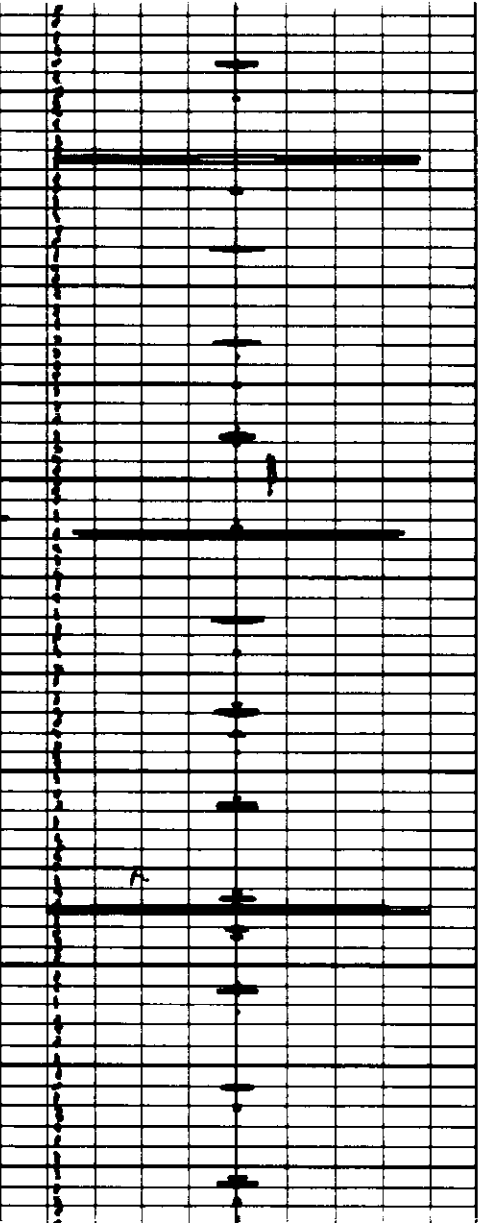


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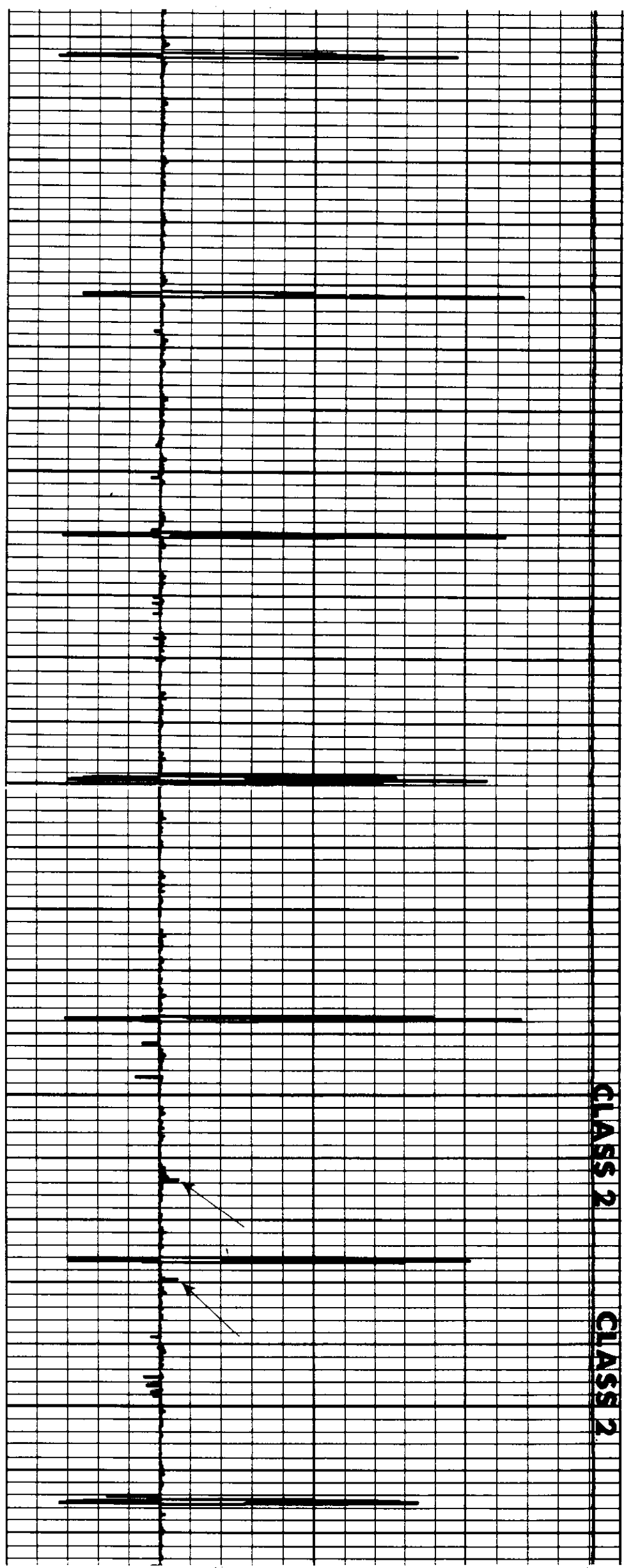
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CLASS 2

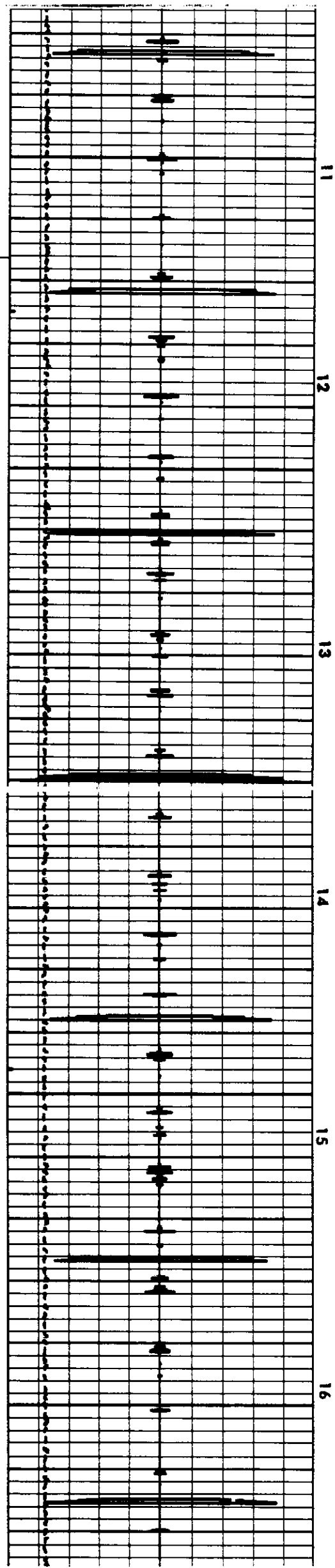
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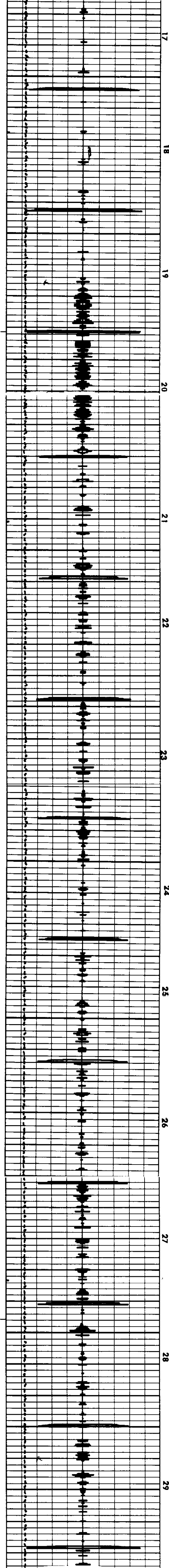
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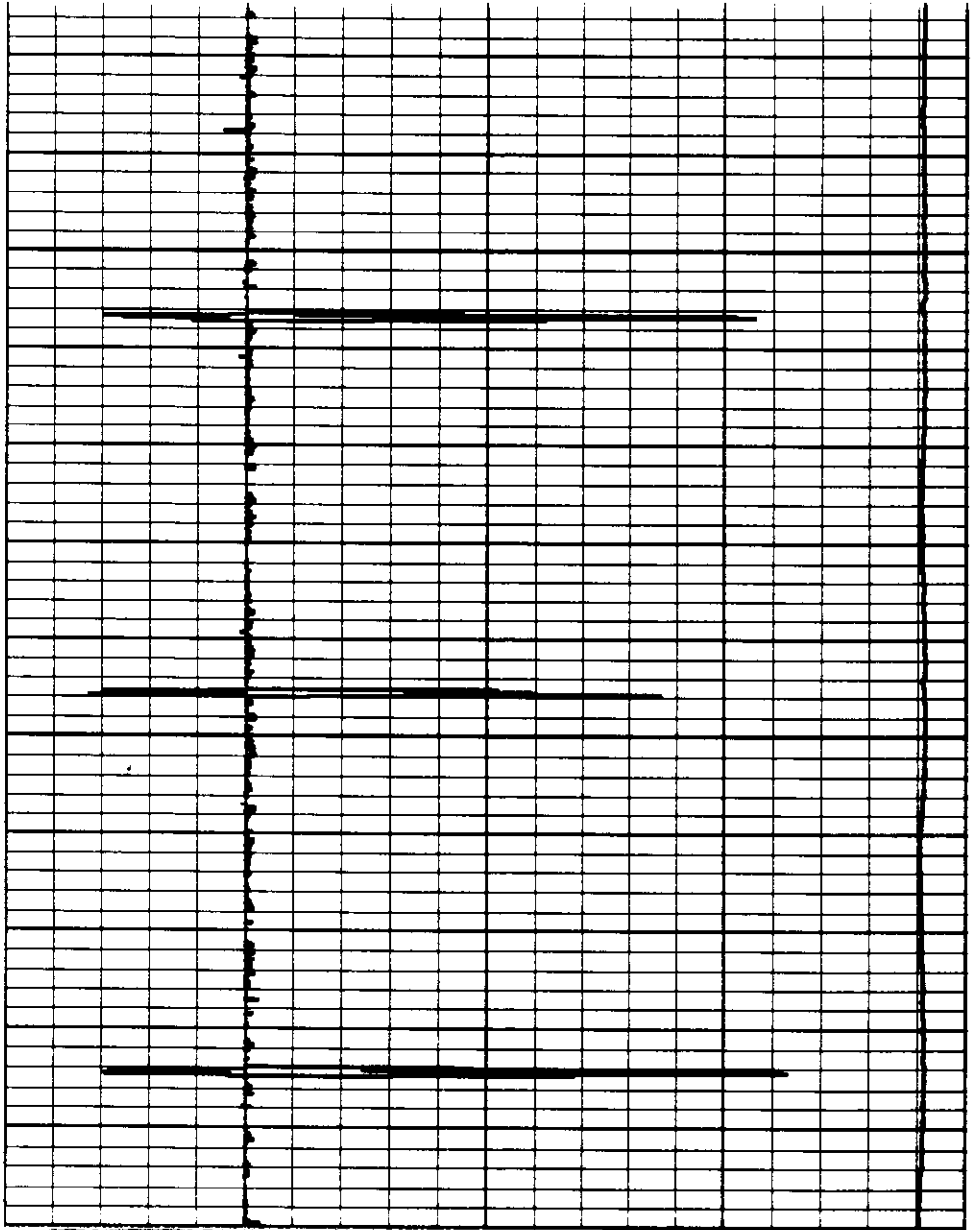
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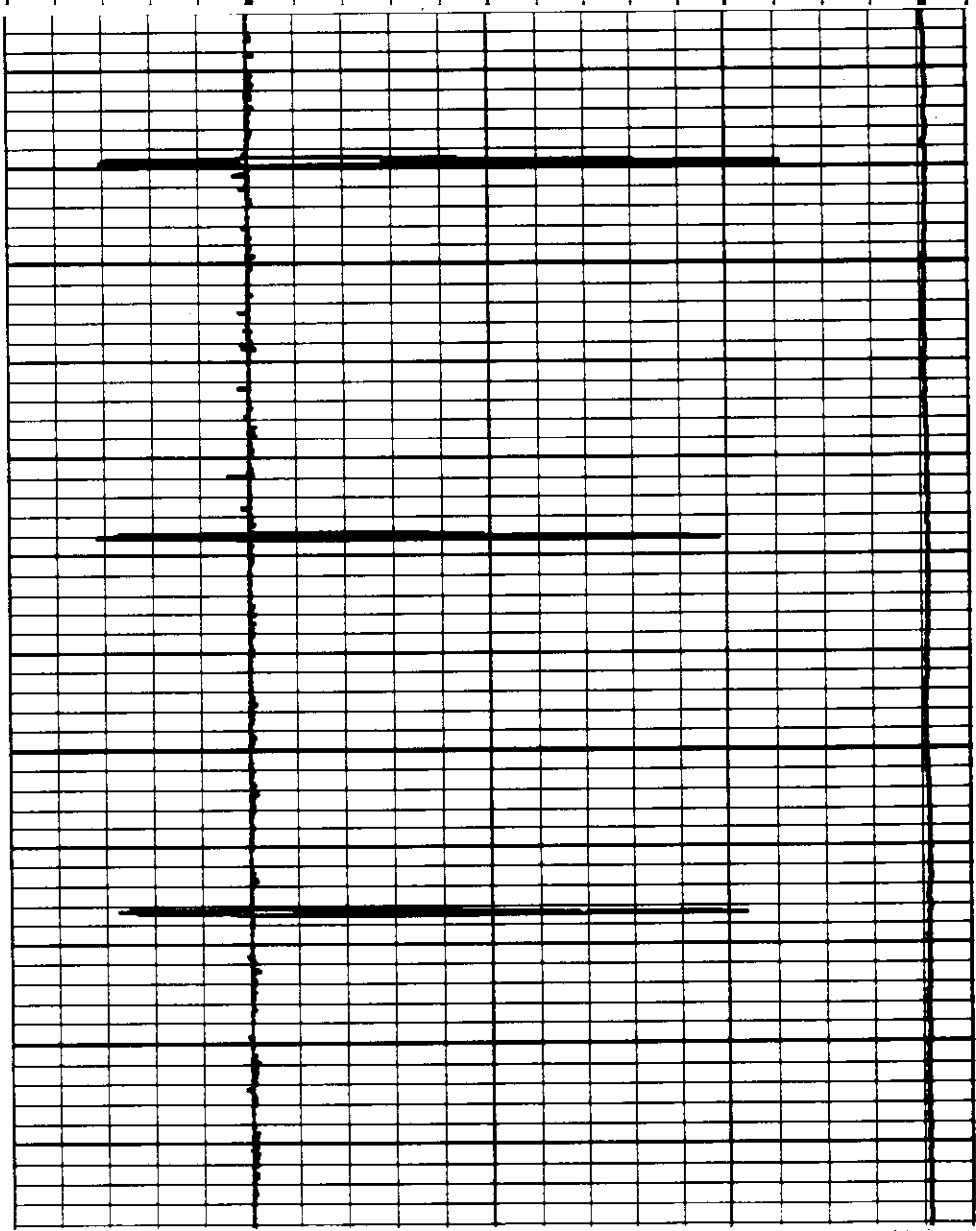




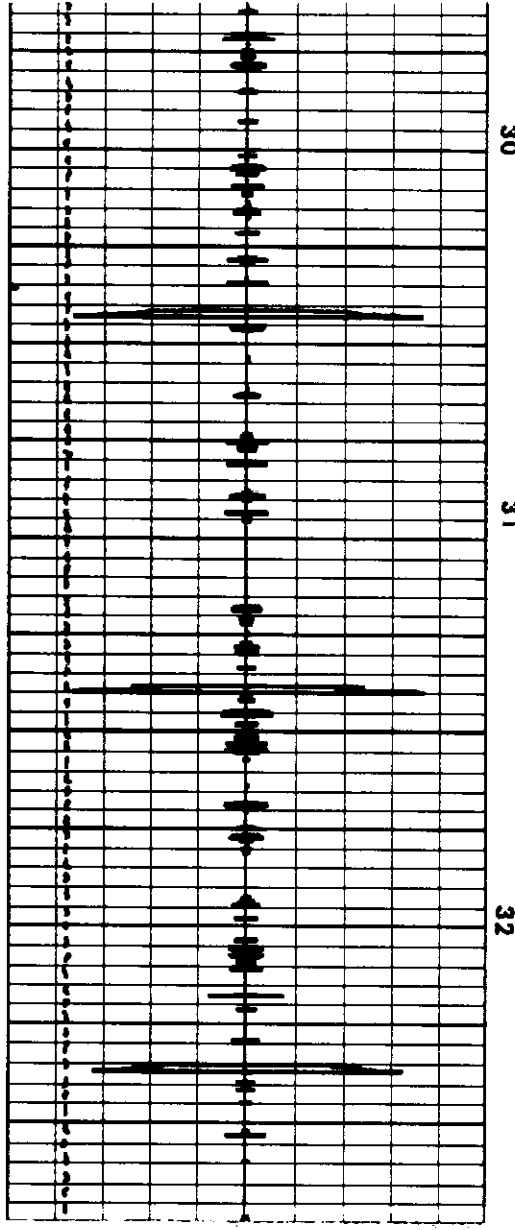
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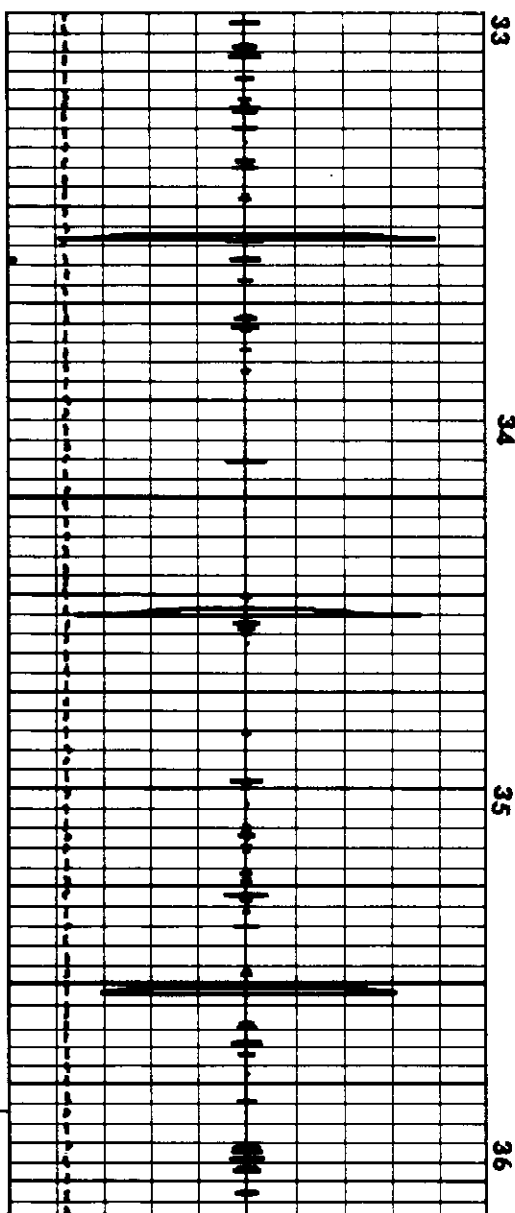
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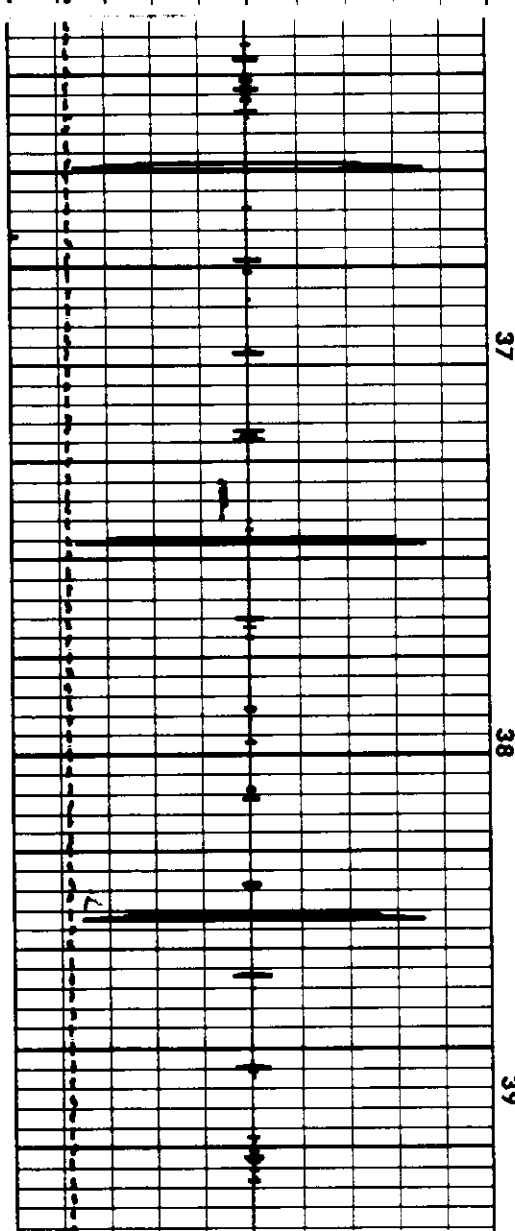


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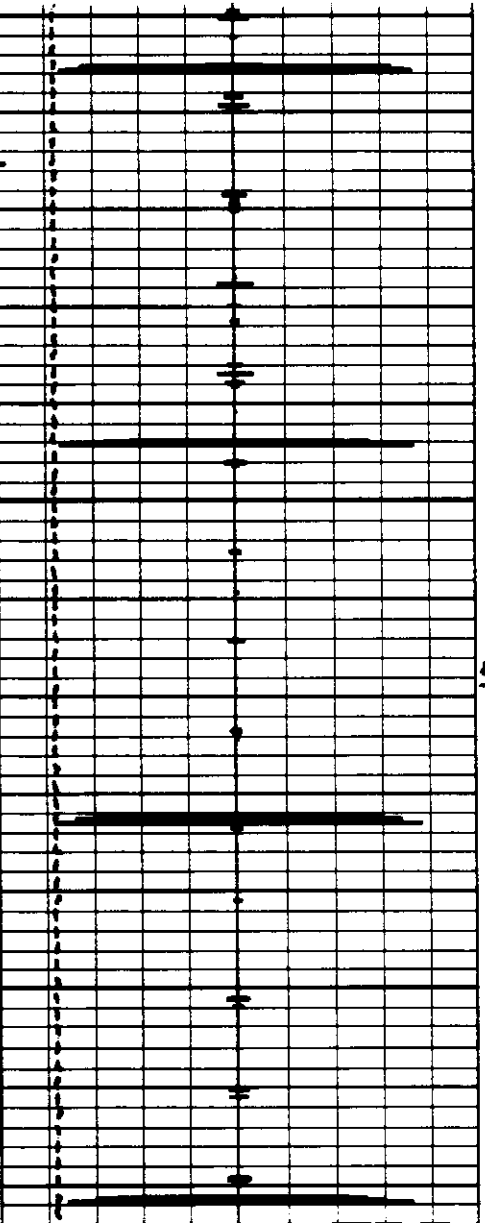
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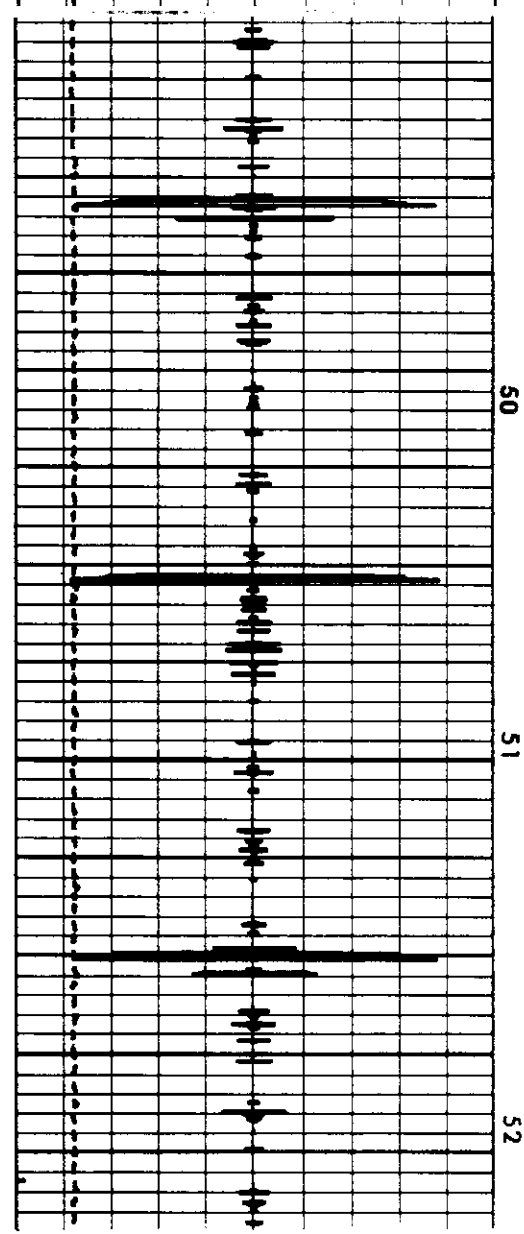
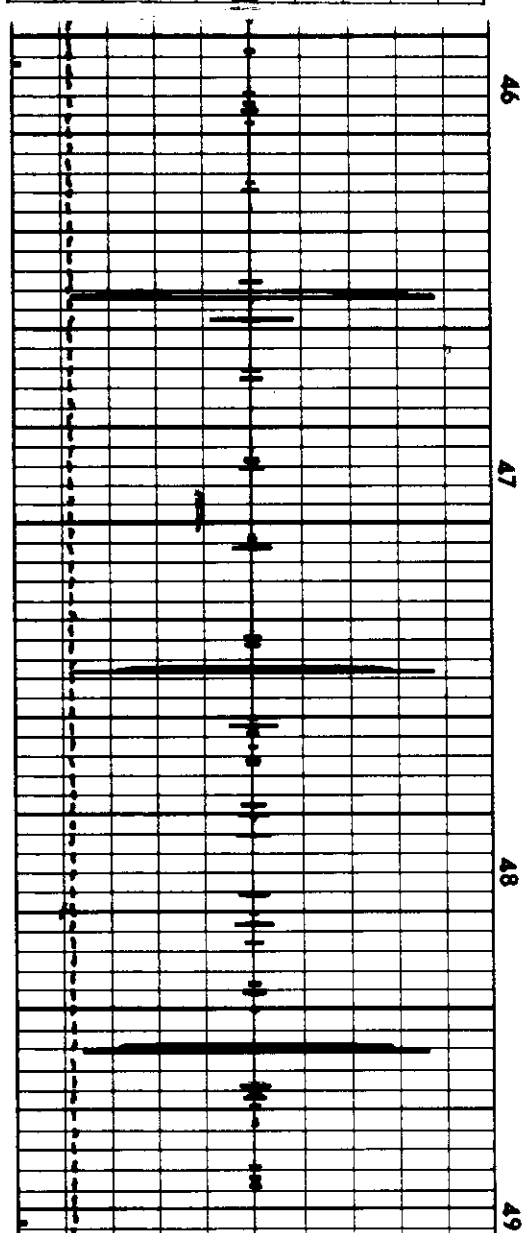
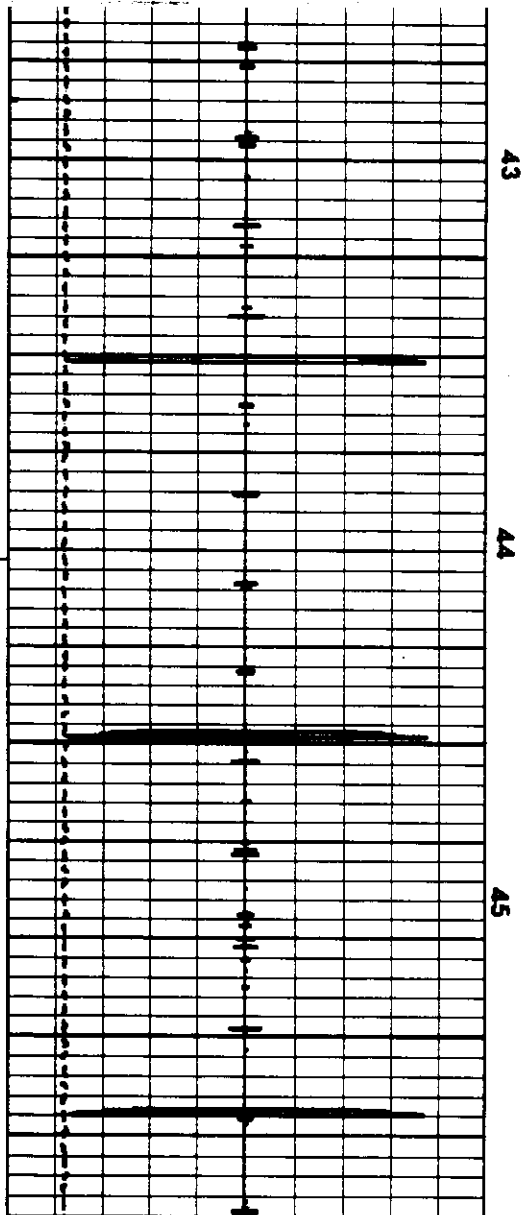
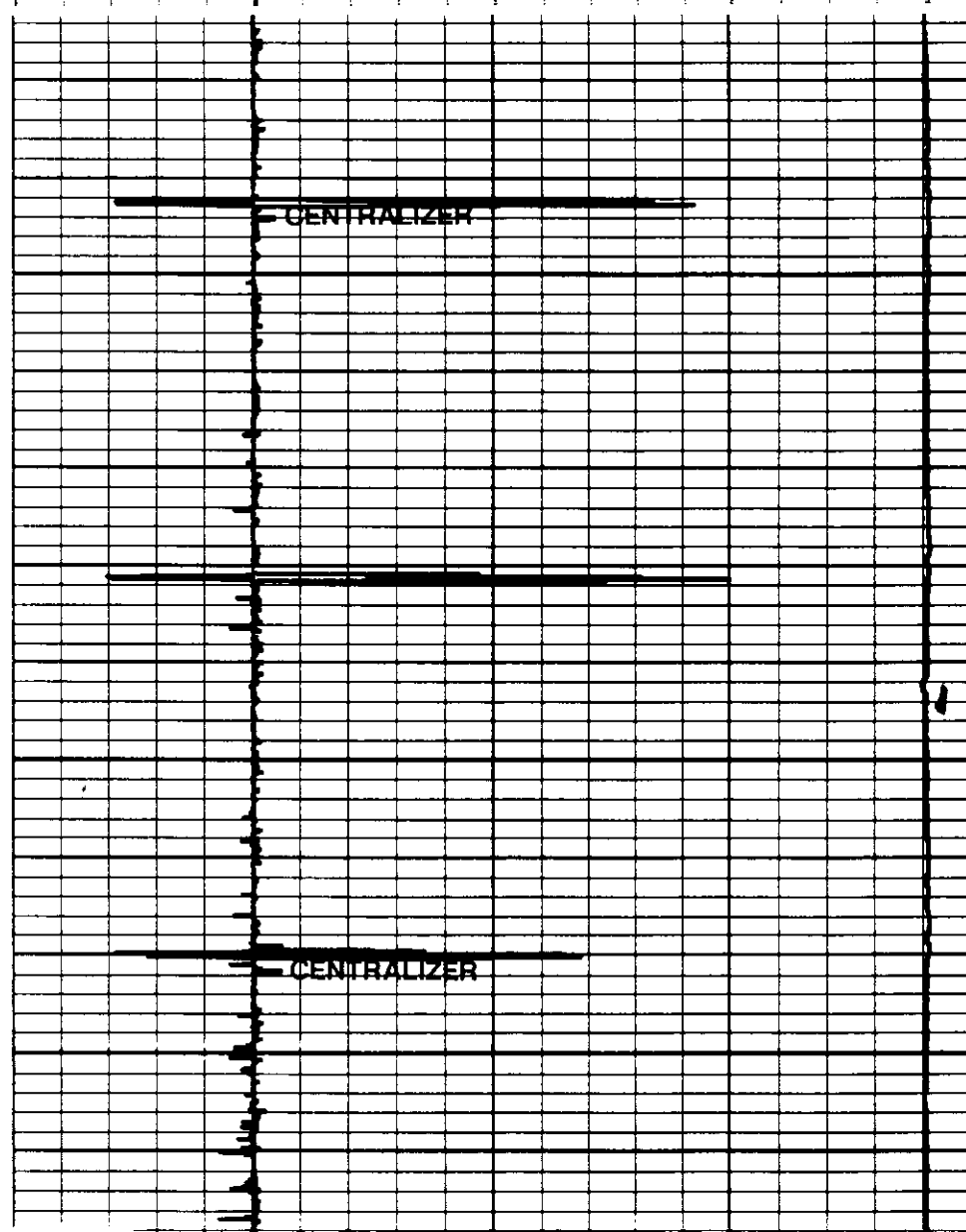
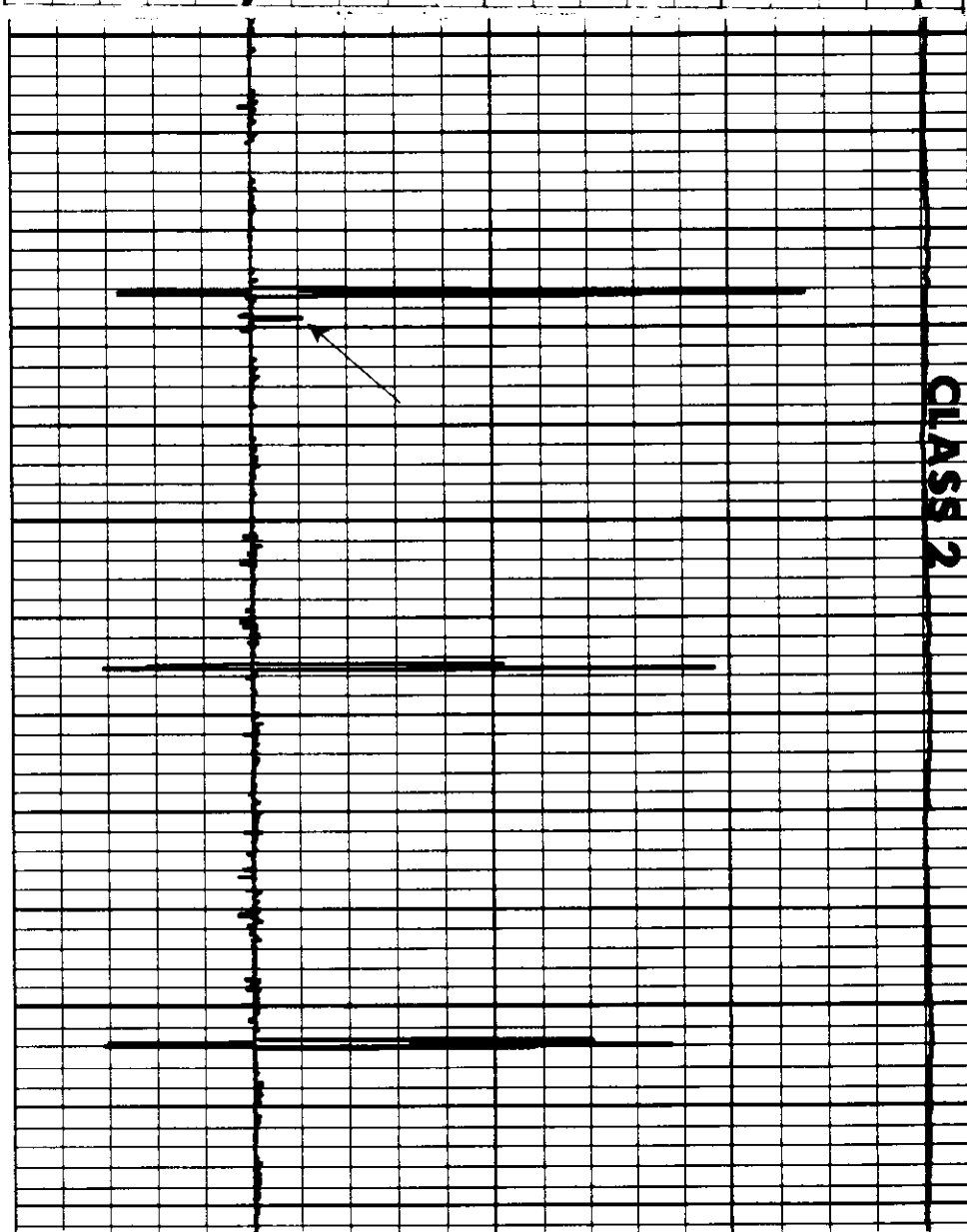
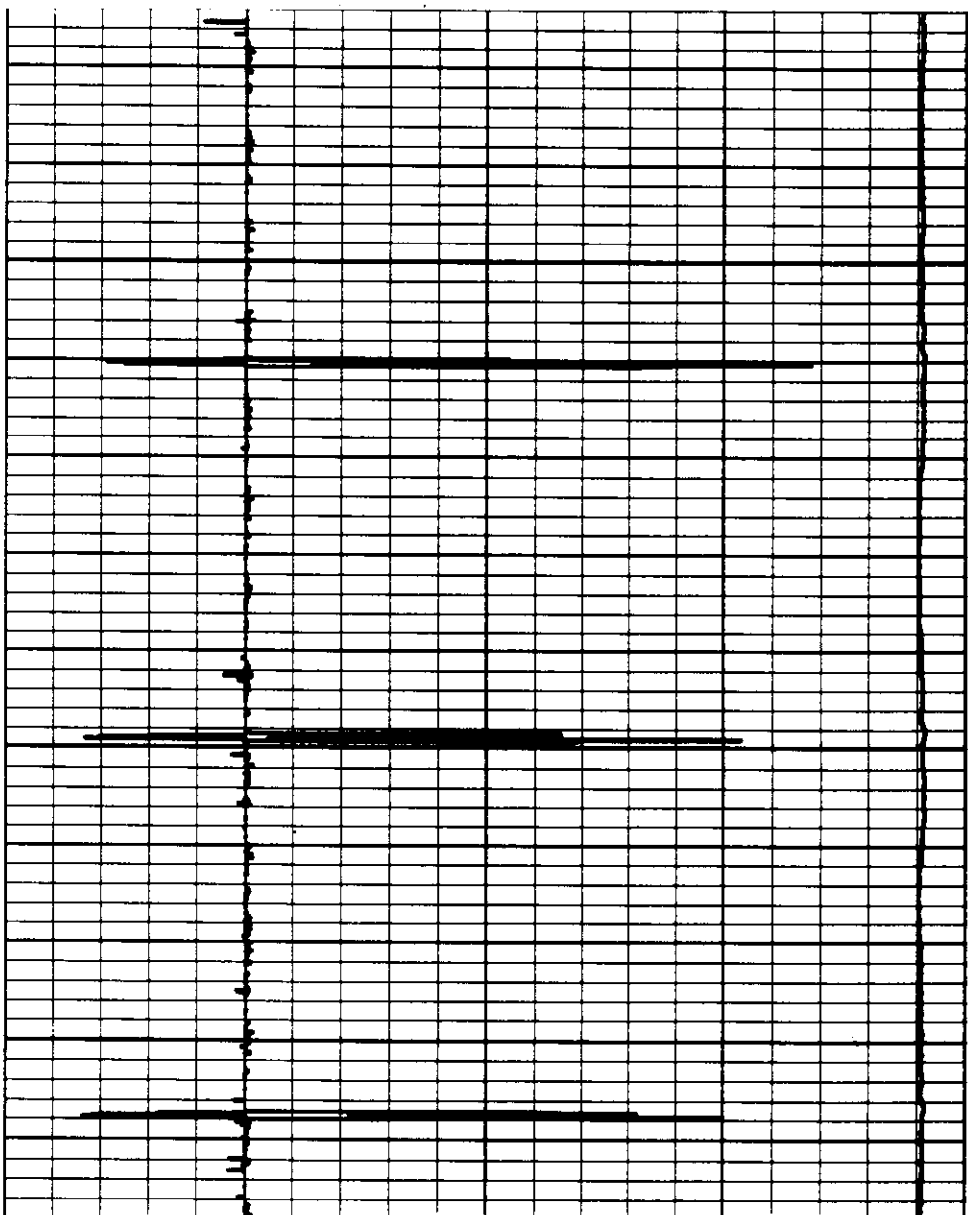
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CLASS 2



01700

01800

01900

02

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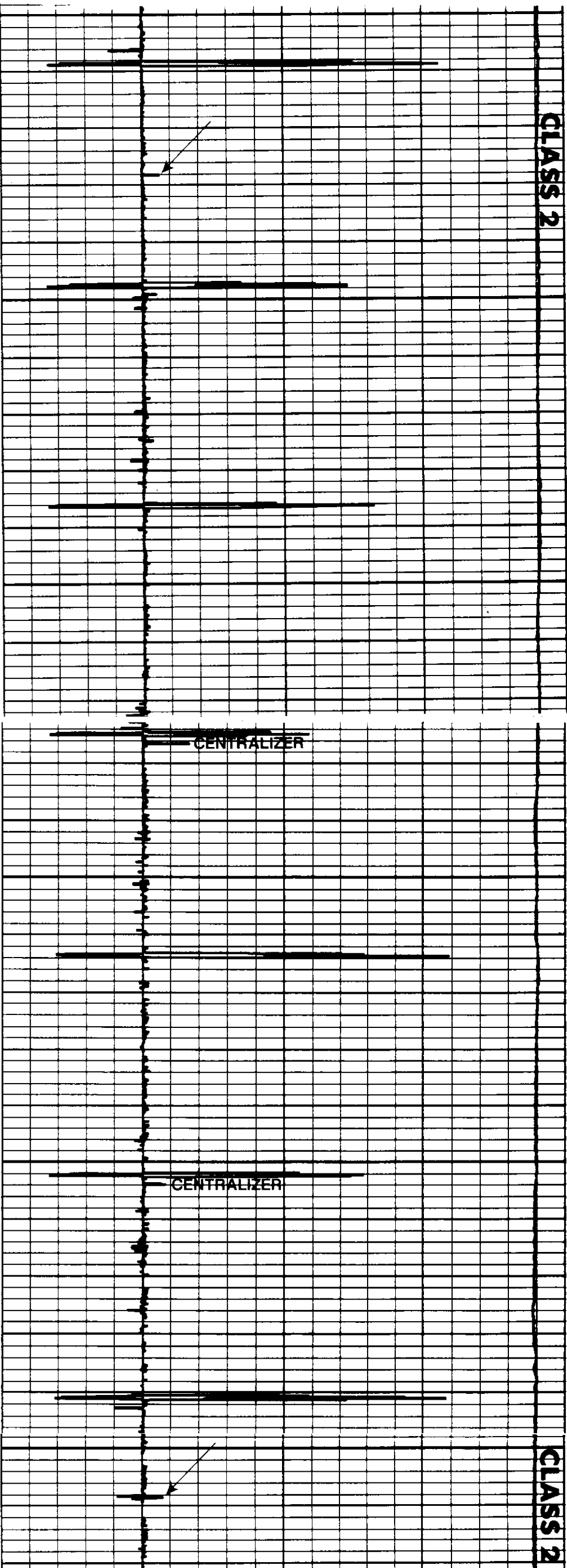
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CLASS 2



CLASS 2

0000

02100

02200

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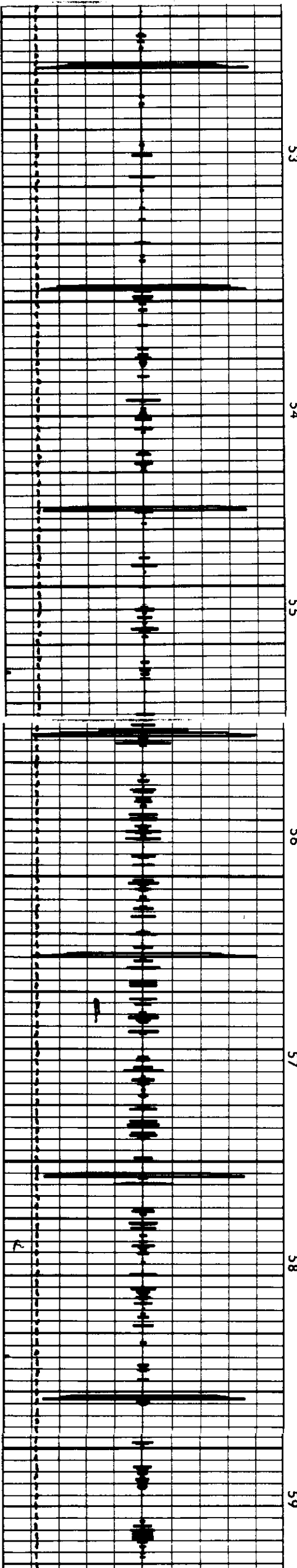
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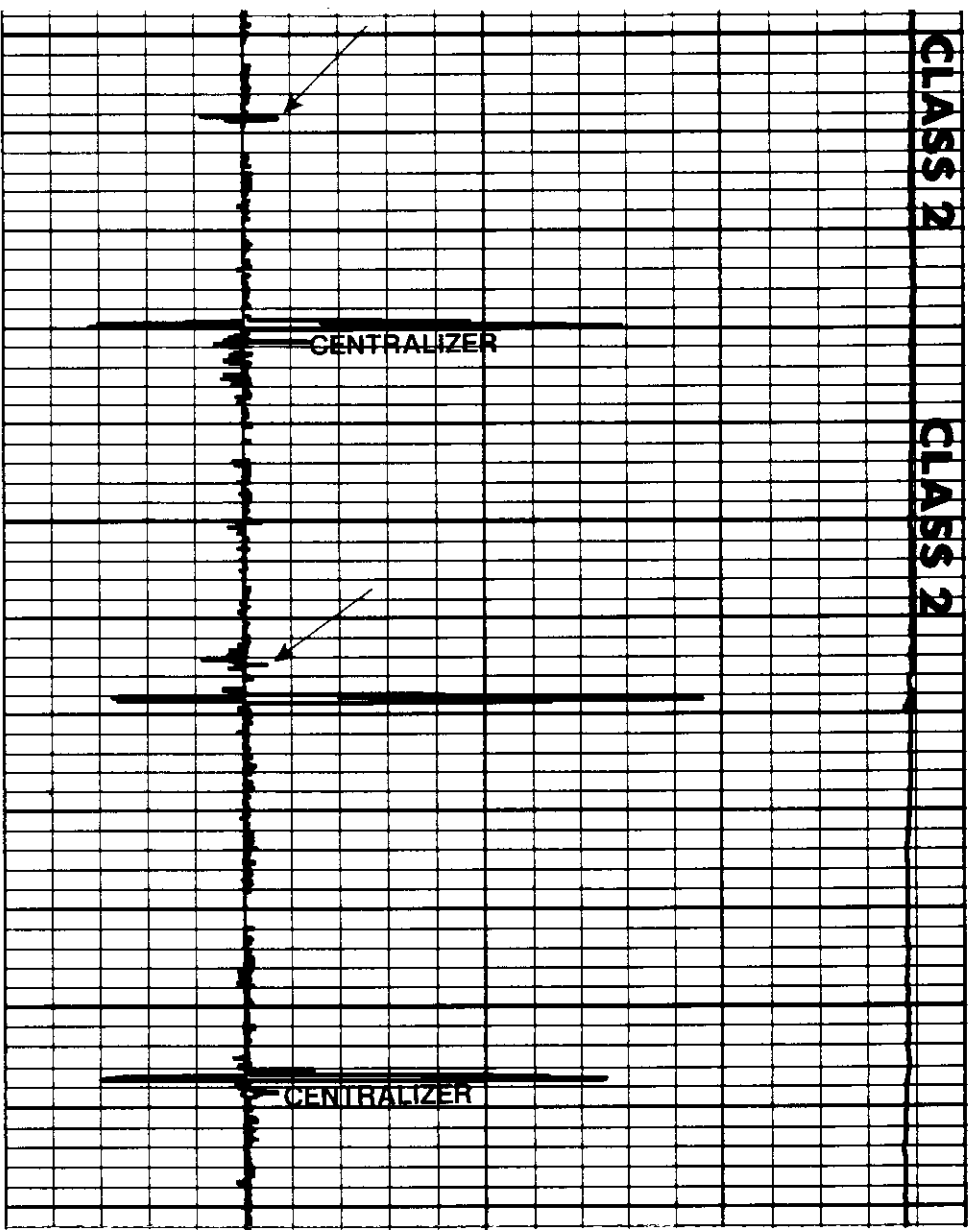
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CLASS 2

CLASS 2

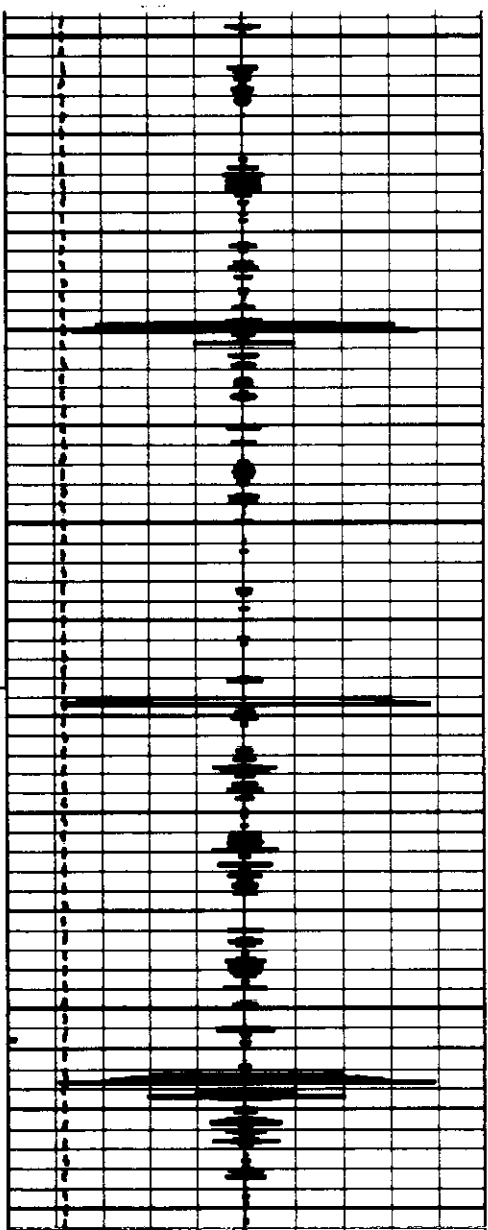


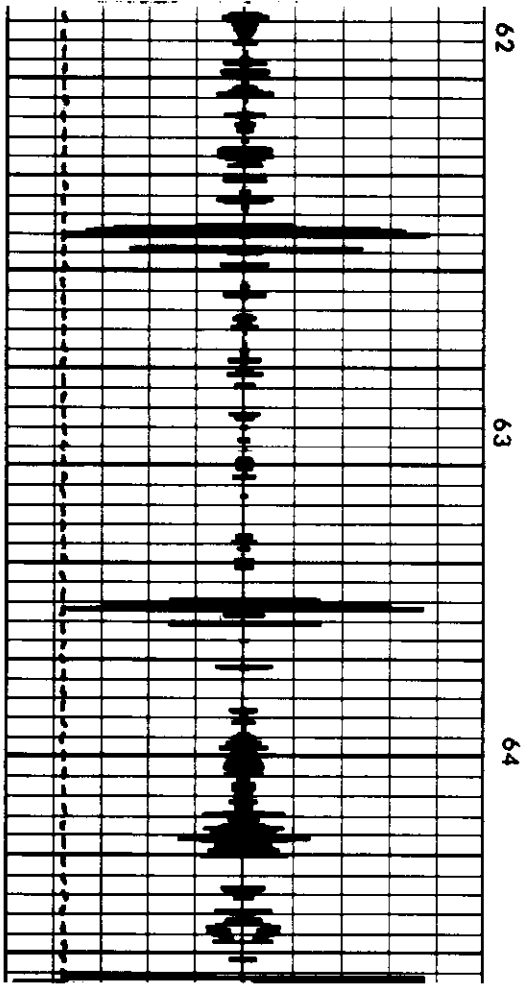
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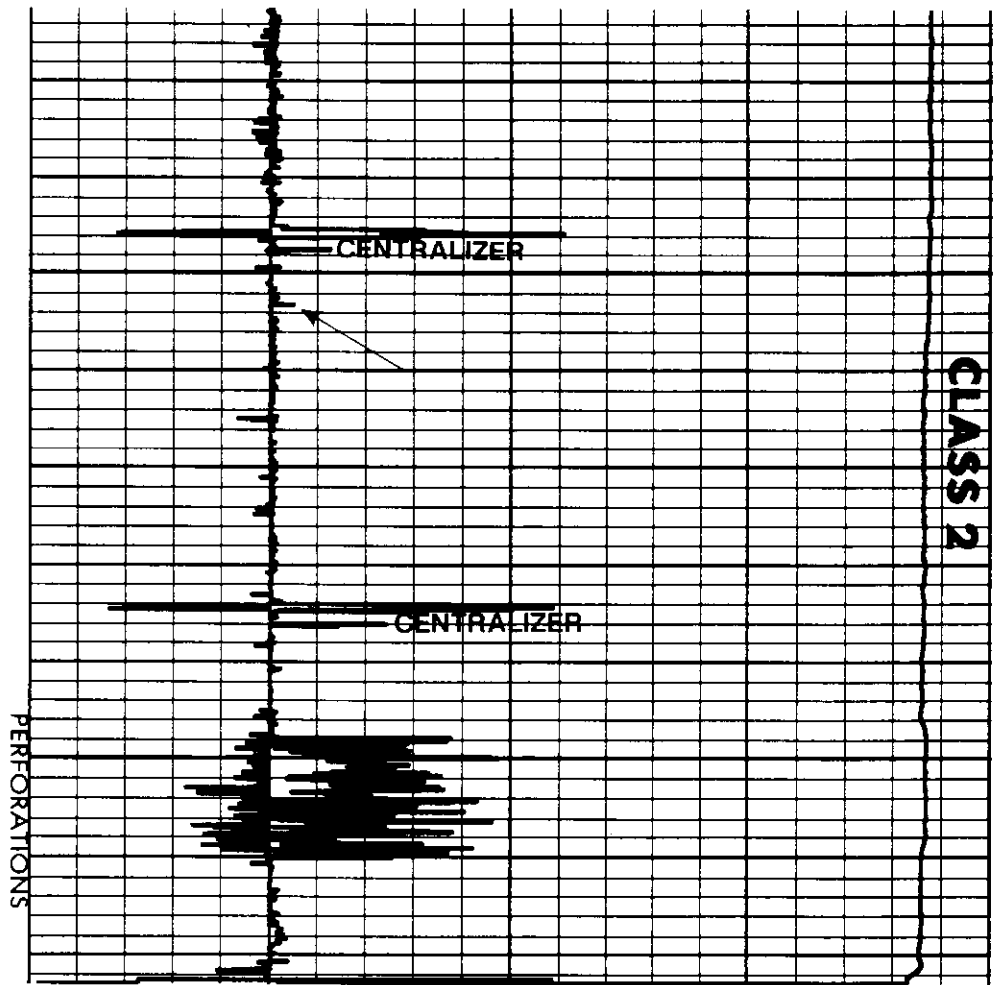
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61





02400



RK(MIN)

0 60

CFAU(UU)

28 3

FL12(UU)

0 150

SPD(FT/MIN)

0 1000

TEN(LBS)

4500 -500

FLAU(UU)

3 28

EC(UU)

53 3

REPEAT SECTION

PARAMETERS

*** NONE ***
DISPLAY SCALE CHANGES

COMPANY: OREGON NATURAL GAS DEVELOPEMENT CORP.

RUN: 1

WELL NAME: COLUMBIA COUNTY NO.1 REDRILL NO.1

TRIP: 1

SERVICE: U URT1 FILE: 1 DATE: 12/18/88

TIME: 9:50:12

REVISION: FSYSAL REV GS08 VER 2

MODE: PLAYBACK

RK(MIN)
0 50

CFAV(UU)
28 3

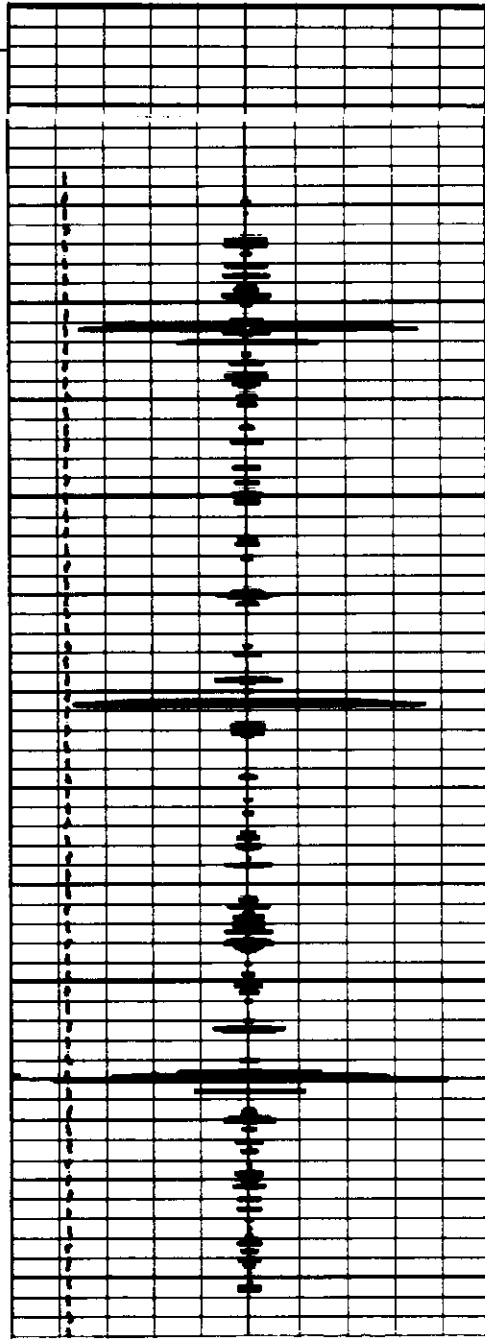
SPD(FT/MIN)
0 1000

FLAV(UU)
3 28

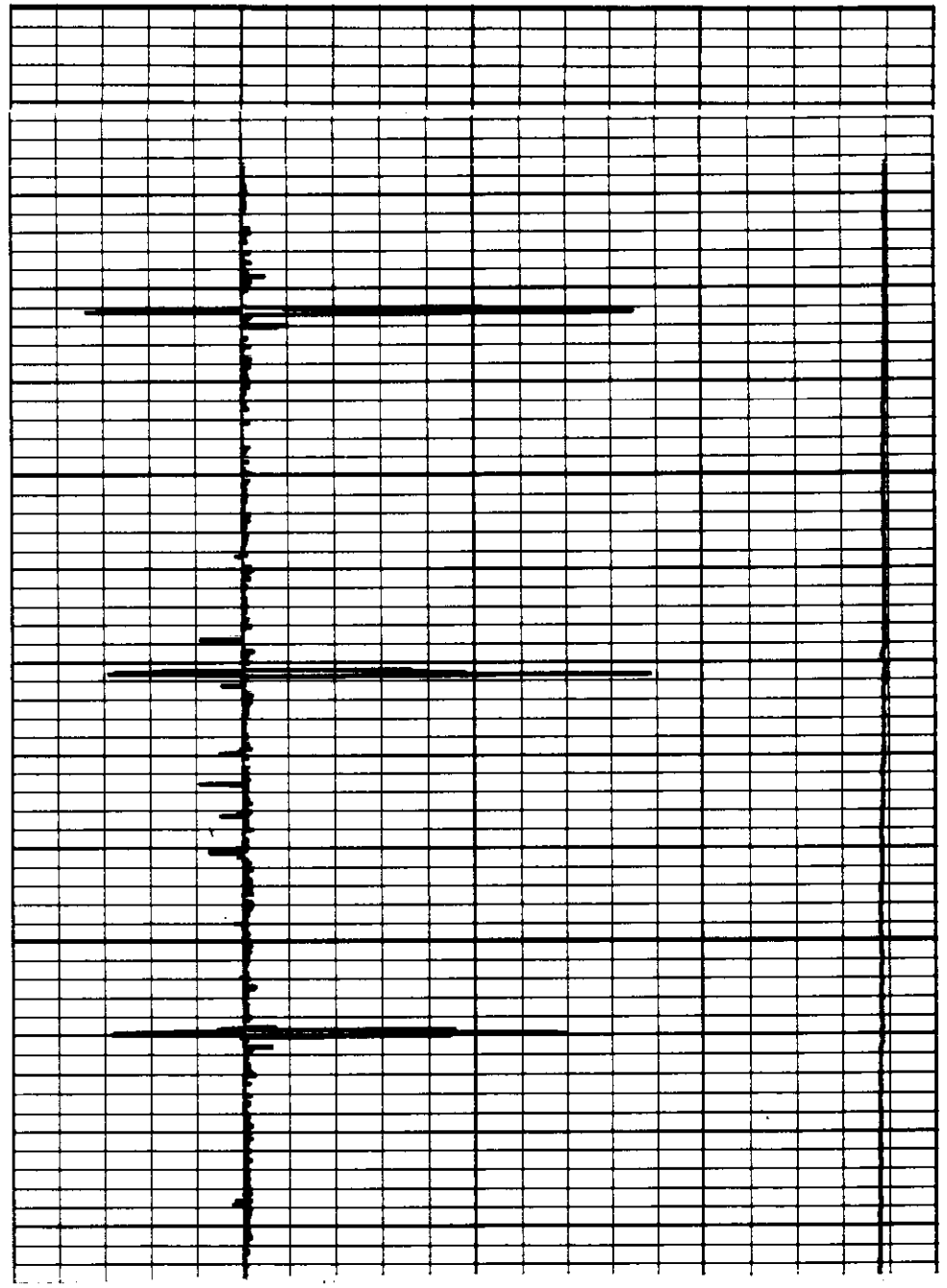
FL12(UU)
0 150

TEN(LBS)
4500 -500

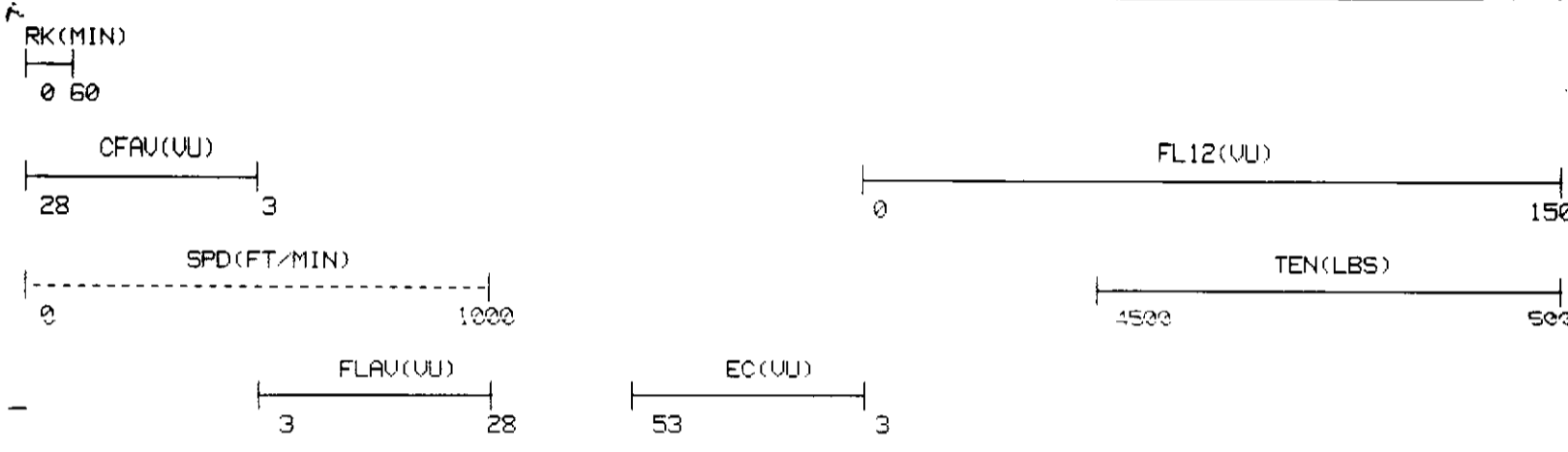
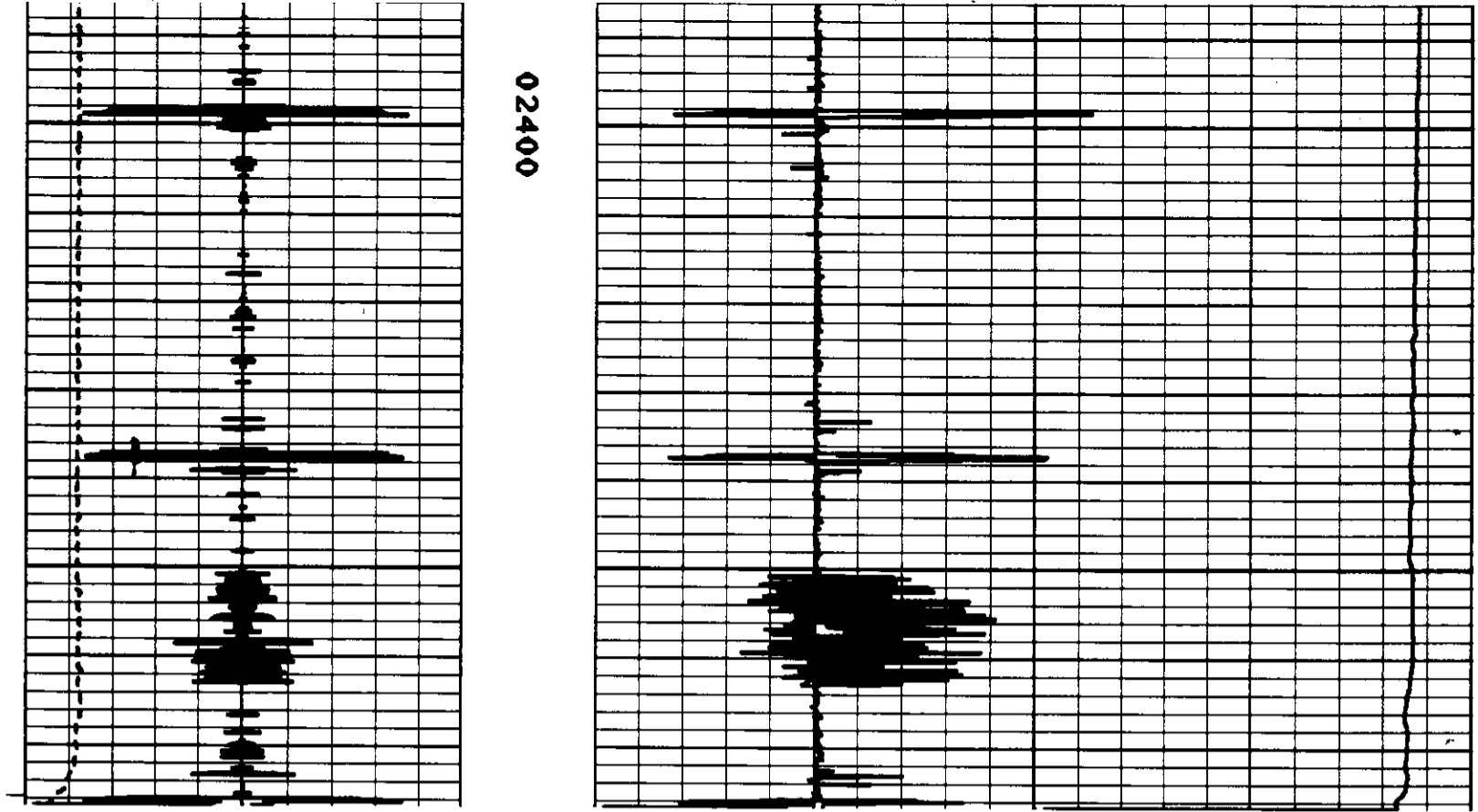
EC(UU)
53 3



02300



02400



CALIBRATION

```

*****
*                                     *
*          CALIBRATION SUMMARY        *
*  DATE 12/18/88      TIME 09:09:14  *
*  RUN  1             TRIP  1         *
*                                     *
*****
  
```

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LOG NAME URT      ASSET NO. 4.5E      UNIT NO. HL 6301
CALIBRATION ENTERED ON 12/18/88 AT 08:45:07      2904
PIPE O.D. = 4.5
  
```

CURVE	MILLIVOLTS		SCALING FACTORS		ENGINEERING VALUES		UNIT
	LOW	HIGH	ADD.	MULT.	LOW	HIGH	

DATE 12/13/88 CALIBRATION TIME 11:52:25

FL1	67.	1032.	0.000	-0.0732	0.673	10.316	UU
FL2	-236.	996.	0.000	0.0732	-2.364	9.960	UU
EC	0.	1921.	0.000	0.0366	0.000	9.603	UU
FLAV	4.	147.	0.000	0.0545	0.082	3.279	UU

DATE 12/13/88 CHANNEL SUMMARY TIME 11:52:25

CH. NO.	FL1 (MU)	FL2 (MU)	EC (MU)	FLAV (MU)
1	979.	E	1981.	150.
2	1067.	E	1944.	154.
3	1029.	E	1969.	140.
7	1057.	E	1867.	146.
8	1041.	E	1905.	146.
9	1016.	E	1889.	144.
13	E	997.	1912.	E
14	E	985.	1925.	E
15	E	1023.	1872.	E
19	E	991.	1896.	E
20	E	937.	1998.	E
21	E	1042.	1890.	E