

New

Schlumberger

Company: KERR-MCGEE OIL AND GAS ONSHORE LP

Well: CARMA 12-35

Field: WATTENBERG

County: WELD State: COLORADO

CEMENT BOND LOG GAMMA RAY CCL

County: WELD
Field: WATTENBERG
Location: NWSW
Well: CARMA 12-35
Company: KERR-MCGEE OIL AND GAS O

LOCATION			
NWSW	Elev.: K.B. 4900 ft G.L. 4880 ft D.F. 0 ft		
Permanent Datum:	GROUND LEVEL	Elev.: 4880 ft	
Log Measured From:	KELLY BUSHING	20.0 ft above Perm. Datum	
Drilling Measured From:	KELLY BUSHING		
API Serial No.	05-123-24922-00	Section 35	Range 68W

Logging Date	10-Jun-2008
Run Number	1
Depth Driller	75.10 ft
Schlumberger Depth	7432 ft
Bottom Log Interval	7432 ft
Top Log Interval	2800 ft
Casing Fluid Type	FRESH WATER
Salinity	
Density	
Fluid Level	
BIT/CASING/TUBING STRING	
Bit Size	7.875 in
From	
To	
Casing/Tubing Size	4.500 in
Weight	11.6 lbm/ft
Grade	N-80
From	
To	
Maximum Recorded Temperatures	235 degF
Logger On Bottom	10-Jun-2008
Unit Number	309
Location	6850
Recorded By	KEITH KRENTZ
Witnessed By	LEWIS CAMP

Run 1		Run 2
Oil Density		
Water Salinity		
Gas Gravity		
Bo		
Bw		
1/Bq		
Bubble Point Pressure		
Bubble Point Temperature		
Solution GOR		
Maximum Deviation		
CEMENTING DATA		
Primary/Squeeze	Primary	
Casing String No		
Lead Cement Type		
Volume		
Density		
Water Loss		
Additives		
Tail Cement Type		
Volume		
Density		
Water Loss		
Additives		
Expected Cement Top	1500 ft	
Logging Date		
Run Number		
Depth Driller		
Schlumberger Depth		
Bottom Log Interval		
Top Log Interval		
Casing Fluid Type		
Salinity		
Density		
Fluid Level		
BIT/CASING/TUBING STRING		
Bit Size		
From		
To		
Casing/Tubing Size		
Weight		
Grade		
From		
To		
Maximum Recorded Temperatures		
Logger On Bottom		
Unit Number		
Location		
Recorded By		
Witnessed By		

Run 3
Run 4

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1

OS1: MAST
OS2: CBL
OS3: PERF
OS4:
OS5:

OTHER SERVICES2

OS1:
OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 1

DEPTH REFERENCE TO SLB LOG DATED 30/APRIL/2008

REMARKS: RUN NUMBER 2

PERF 7362-7382' AT 3 SPF, 60 SHOTS, 3 3/8 POWER JET, 23gm, EH 45°
pene 36", 120 deg

CREW: KEITH & ROGER

THANK YOU FOR CHOOSING SCHULMBERGER

RUN 1

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

12080211
15C0-309

RUN 2

SERVICE ORDER #:
PROGRAM VERSION:
FLUID LEVEL:

LOGGED INTERVAL

START

STOP

LOGGED INTERVAL

START

STOP

EQUIPMENT DESCRIPTION

RUN 1

RUN 2

SURFACE EQUIPMENT

WITM-A

DOWNHOLE EQUIPMENT

MH-22
MH-22

29.3

PSPT-A/B

PSC-A

PSPT-A

PSTC

PBMS-A

10k Sapphire Mano

RTD Thermometer

GR

CCL

PBMS

Detail MT
TelStatus
CTEM

27.8

27.8

GR

24.0

Well Temp
Manometer

21.0

20.9

CCL

20.2

PBMS PSTC

19.5

19.5

SCMT-BB

SCMC-BB 8022

SECH-CA 8158

SCME-J

SCMS-BB

SCMX-BA

SCMH-BA

DT

10.4

CBL5 DTSC

8.9

CBL3

7.9

MAP

7.4

AUX

6.4

Tension SCMT

0.0

TOOL ZERO

MAXIMUM STRING DIAMETER 1.69 IN
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN FEET

Output DLIS Files

DEFAULT

SCMT_PSP_038LUP

FN:22

PRODUCER

10-Jun-2008 10:22

7470.0 FT

-18.0 FT

OP System Version: 15C0-309

MCM

SCMT-BB

SRPC-3525-DEC_2007_OP15

P8PT-A/B

SRPC-3525-DEC_2007_OP15

Transit Time (TT)

280 (US) 60

Gamma Ray (GR)

0 (GAPI) 150

Discriminated CCL (CCLD)

-19 (V) 1

Tension

(TENS)

(LBF)

3000 0

CBL Amplitude (CBL)

(MV)

0 20

CBL Amplitude (CBL)

(MV)

0 100

Min

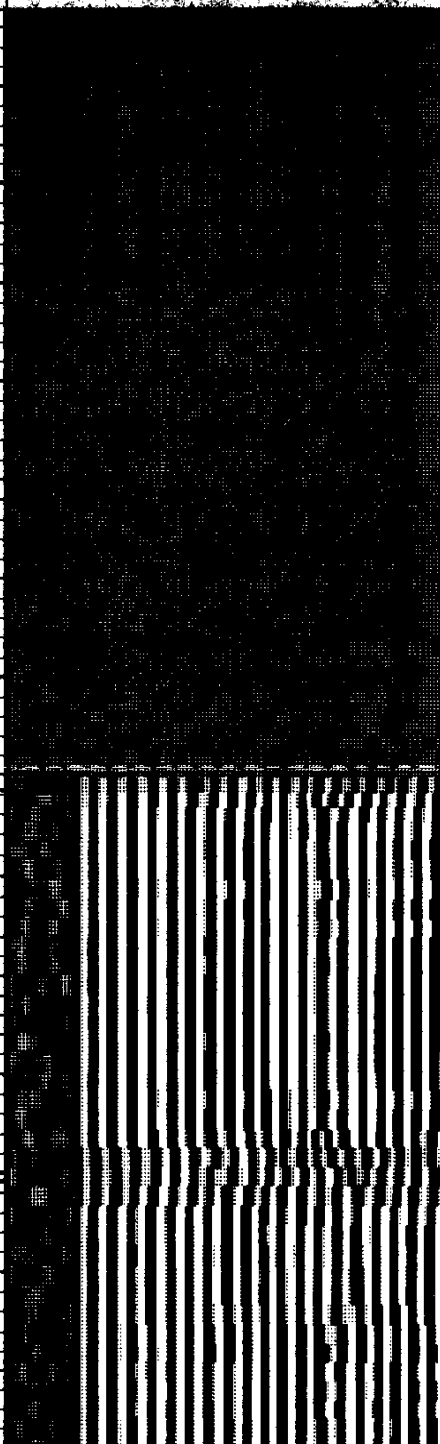
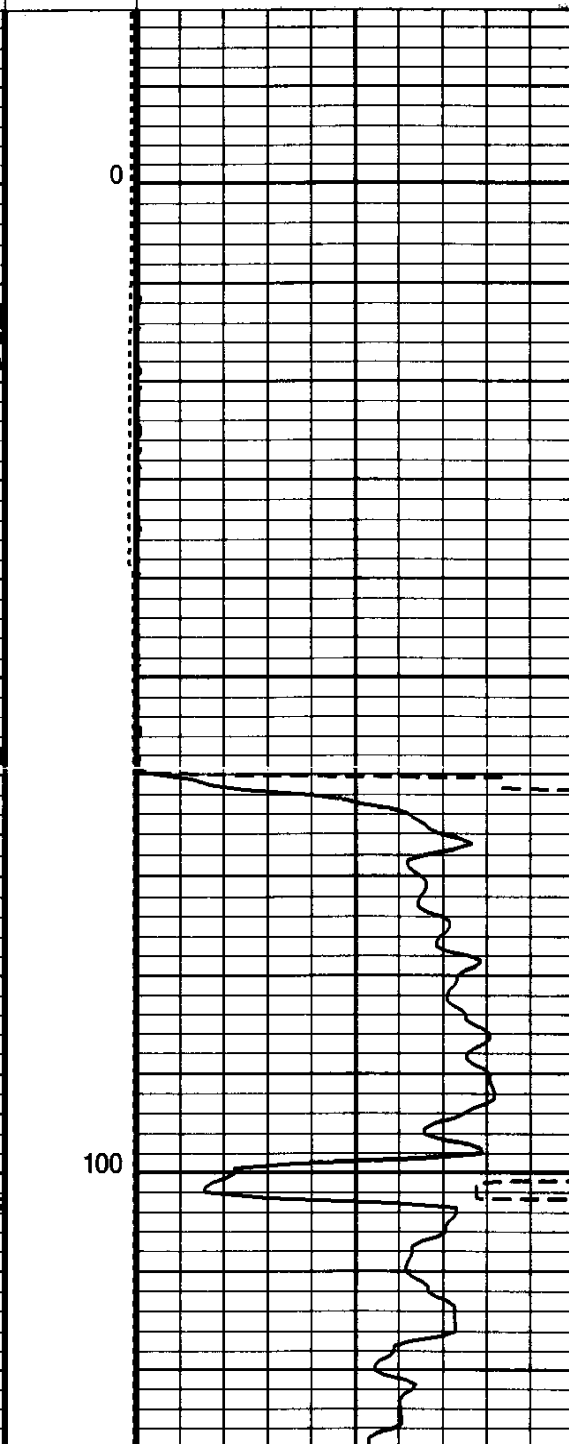
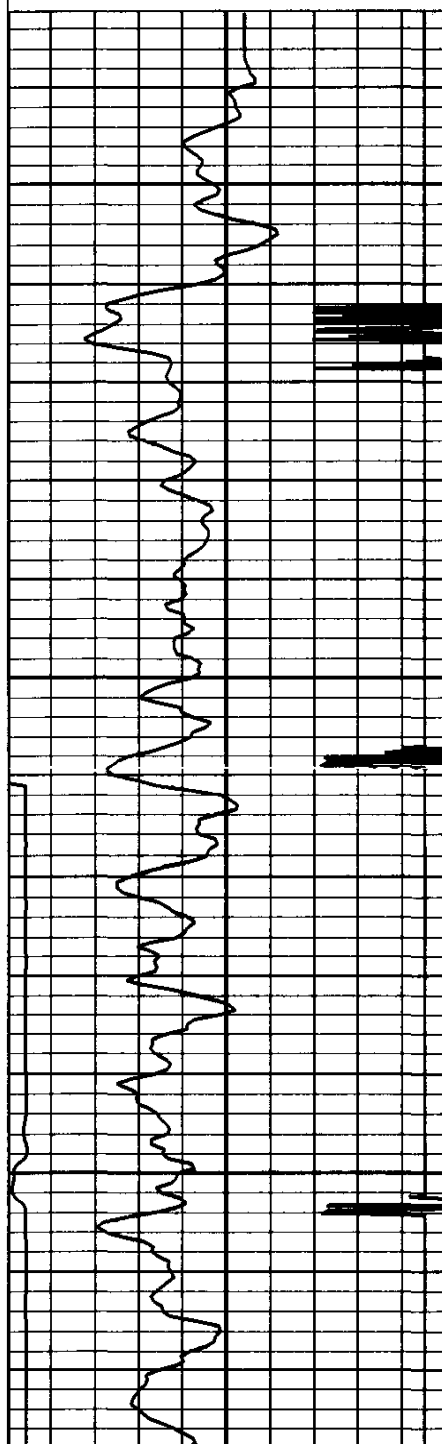
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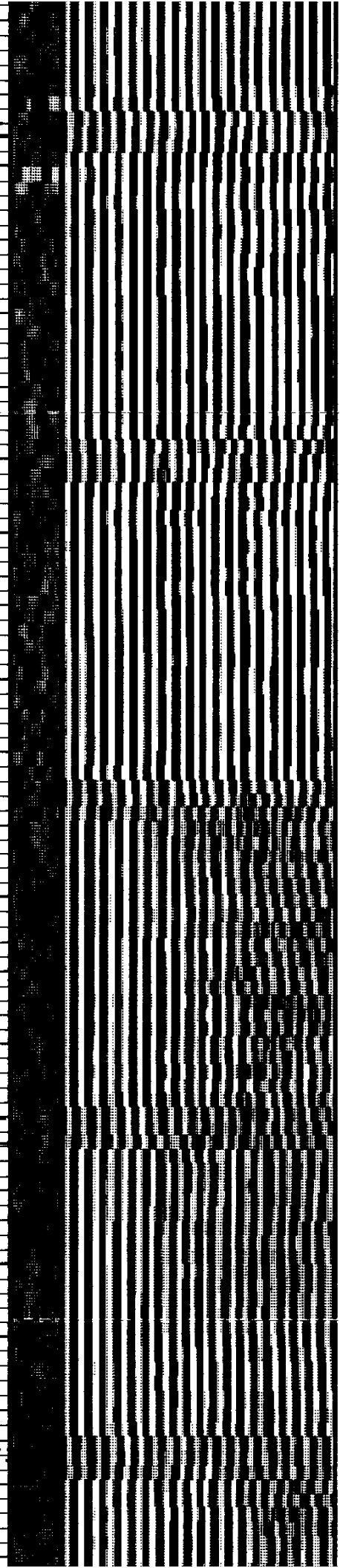
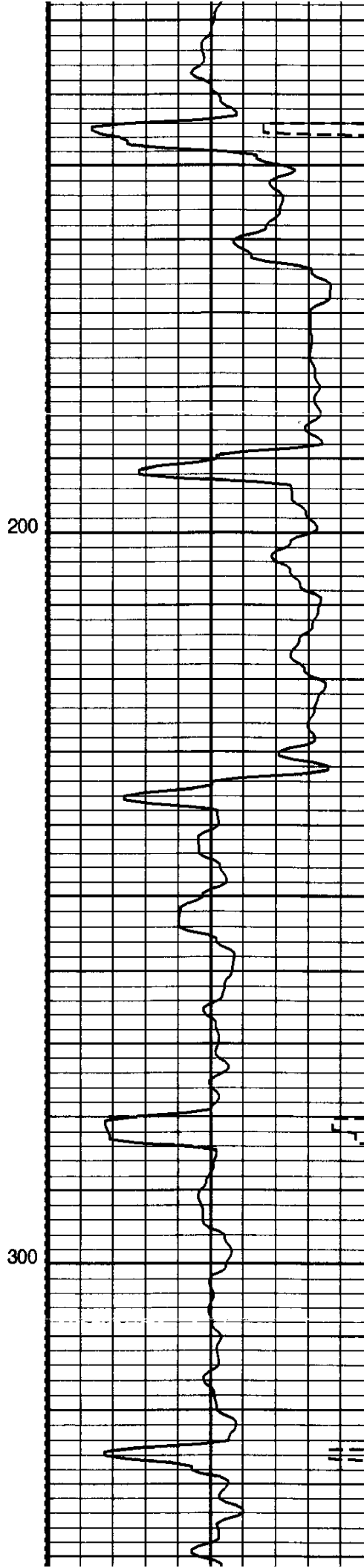
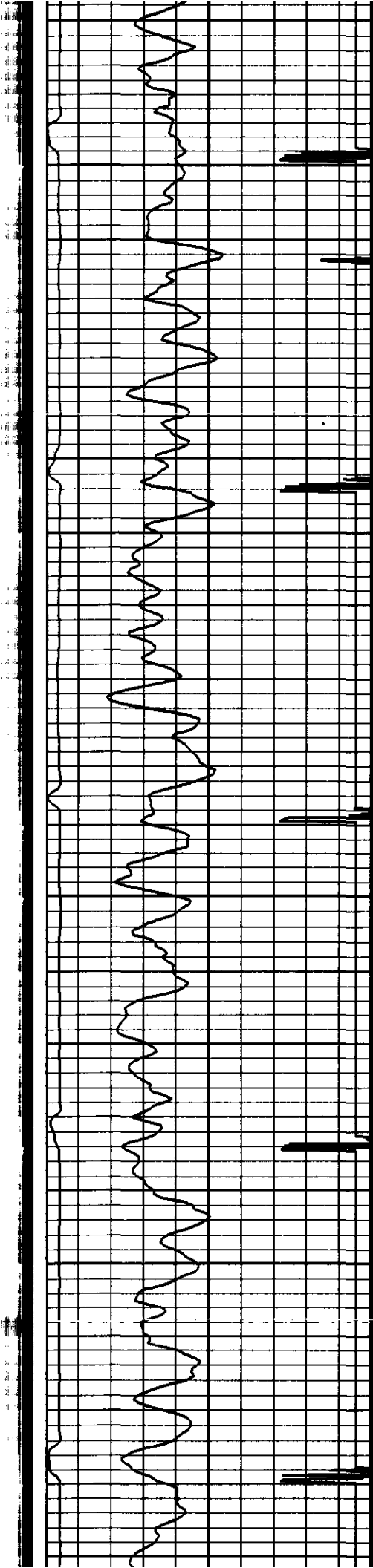
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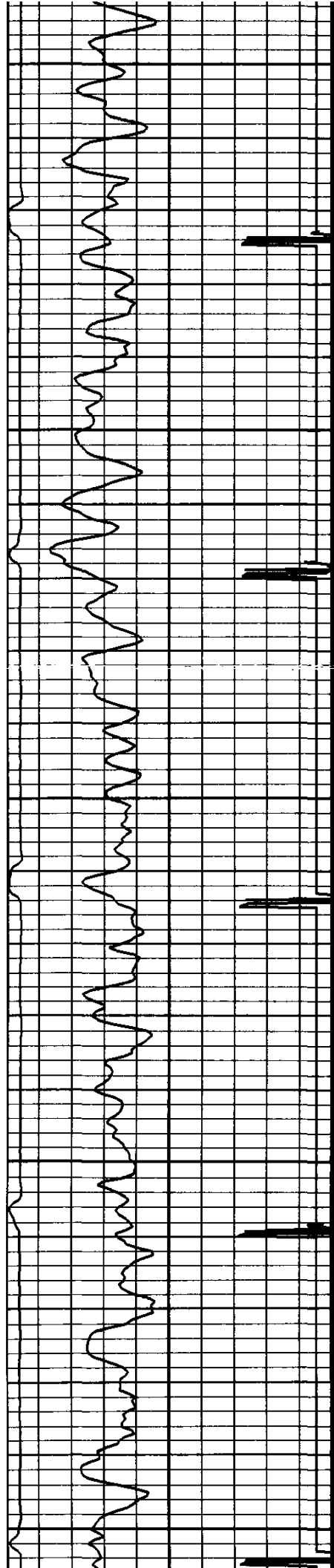
VDL Variable Density (VDL)

(US)

200 1200

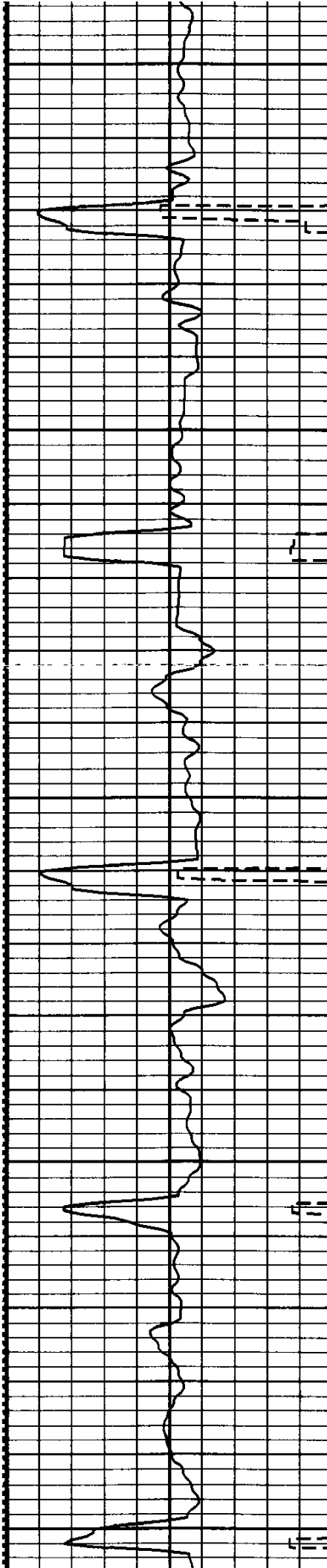


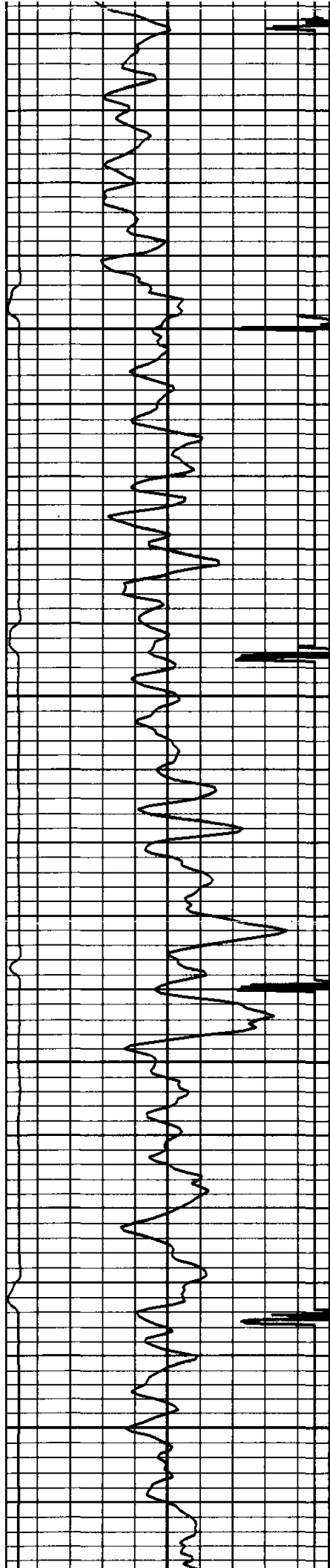




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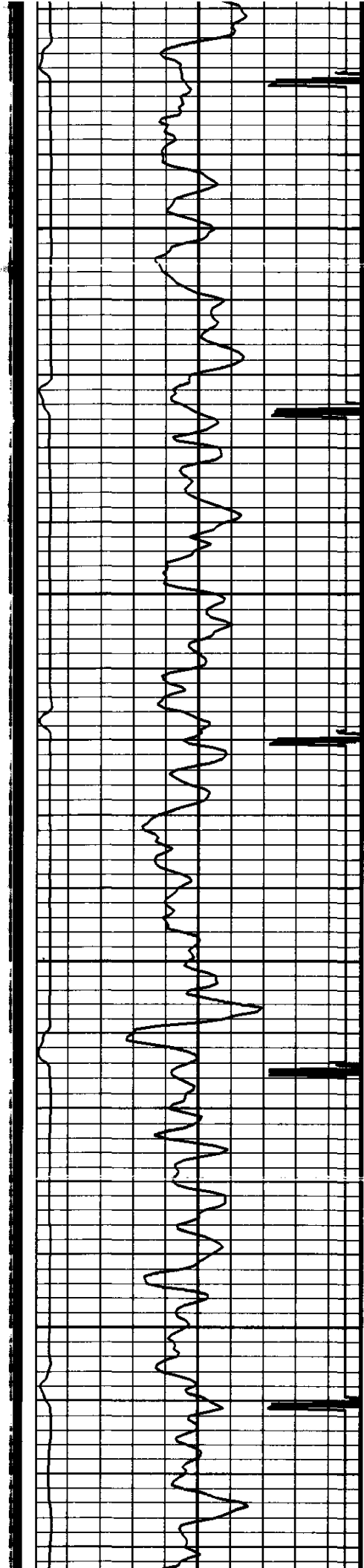




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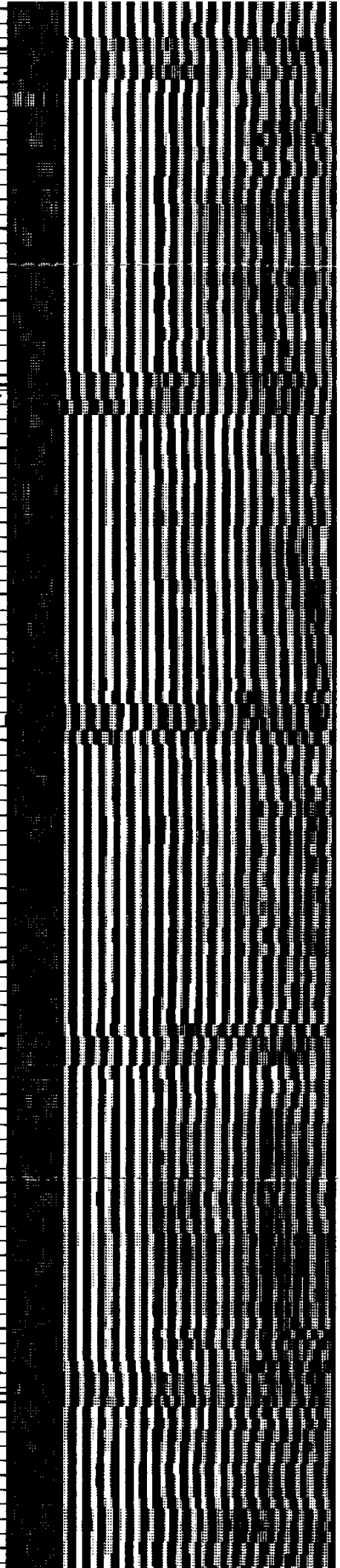
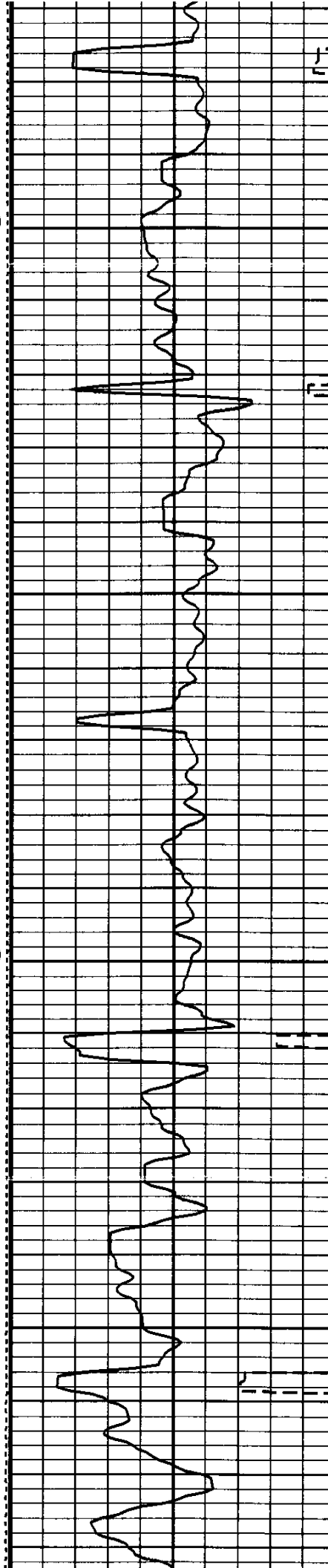
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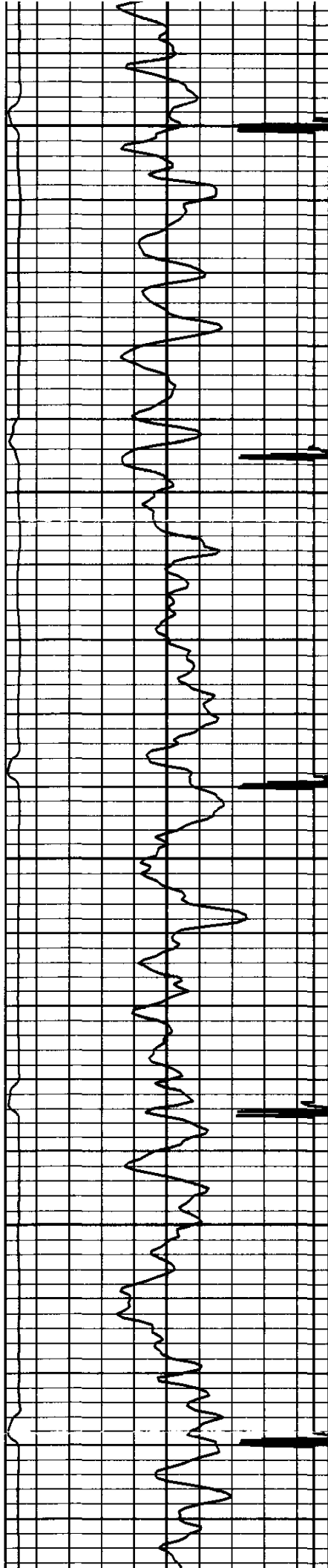




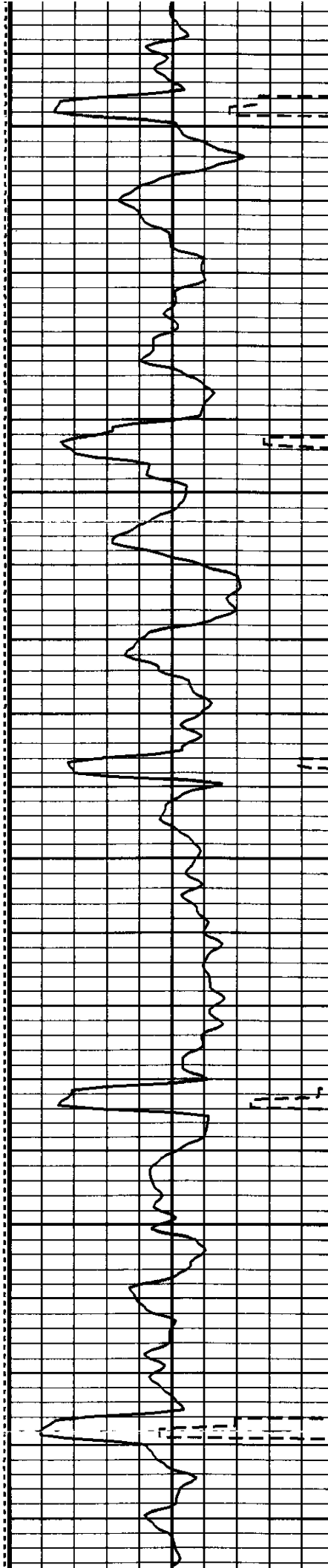
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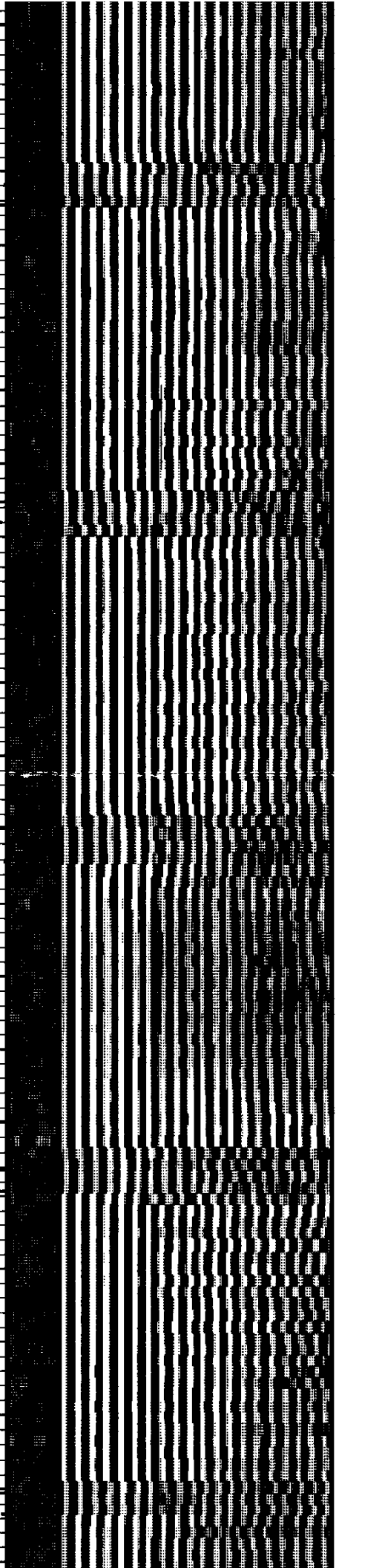
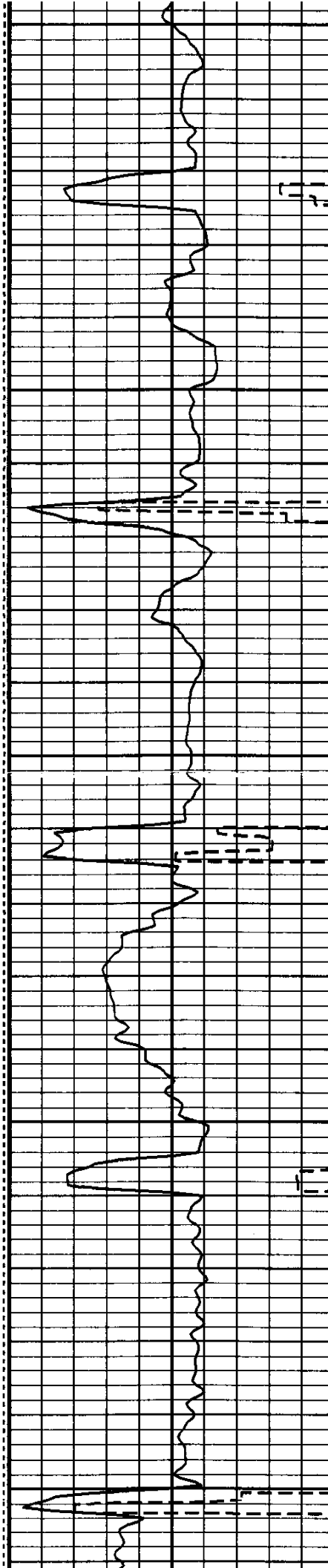


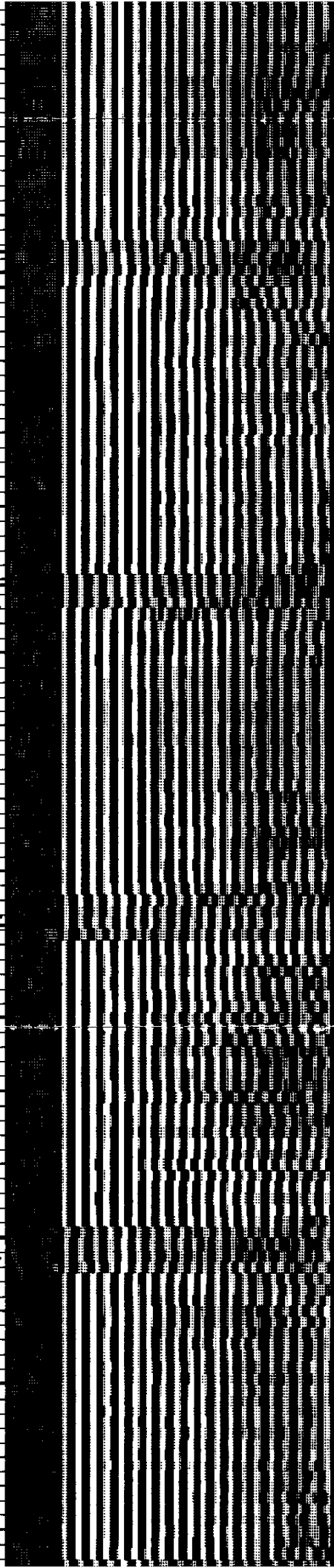
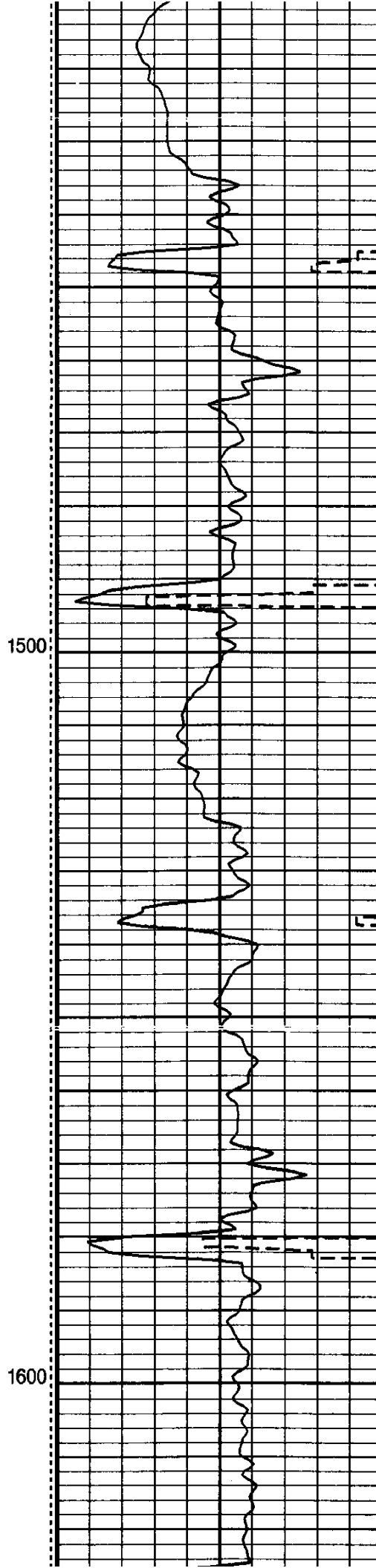
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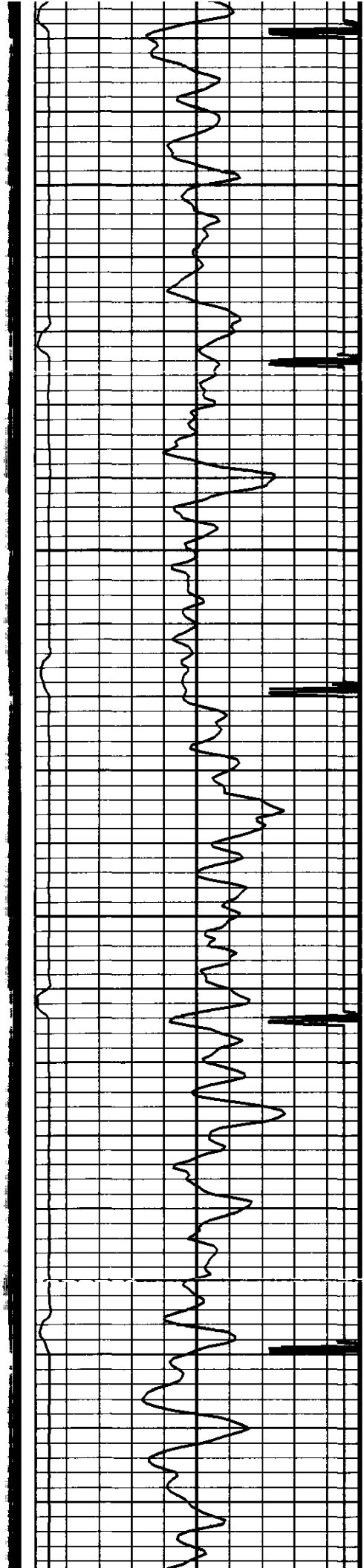
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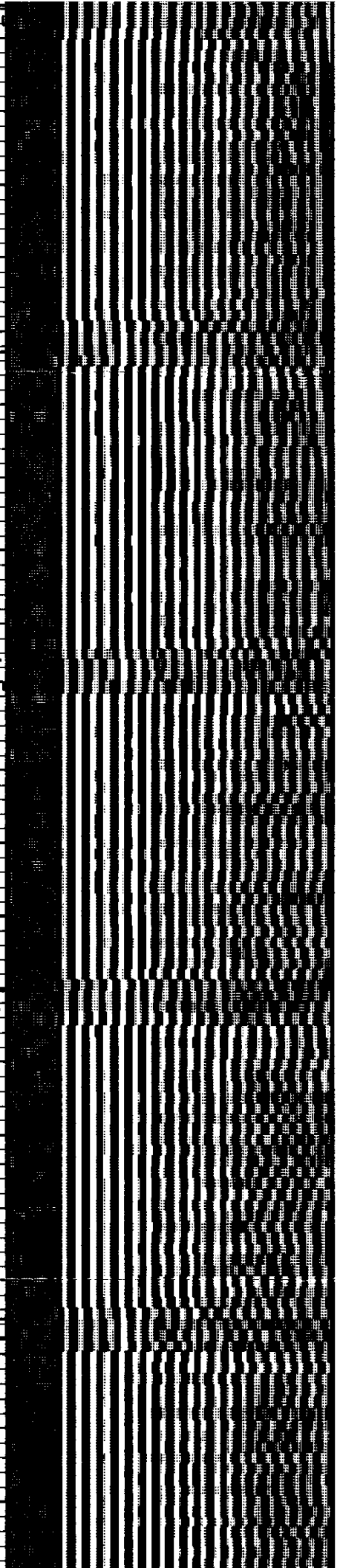
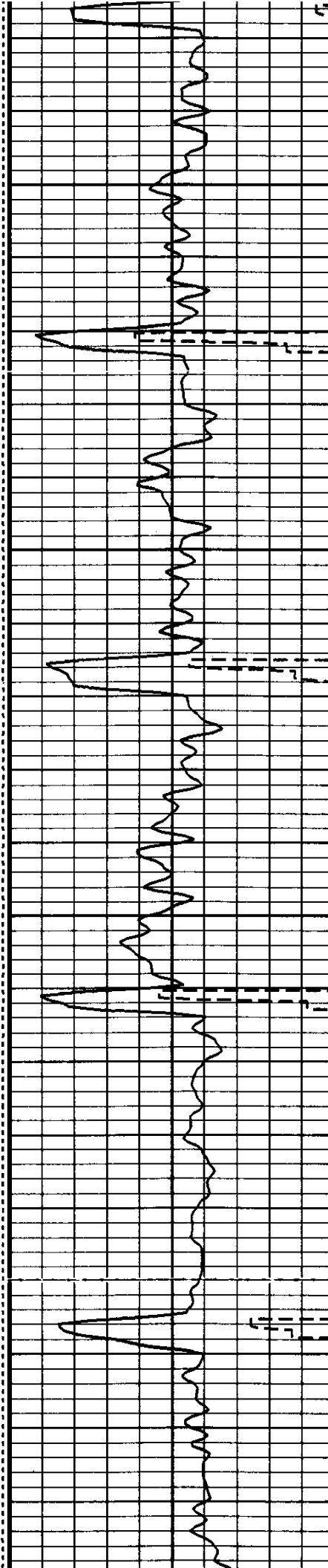


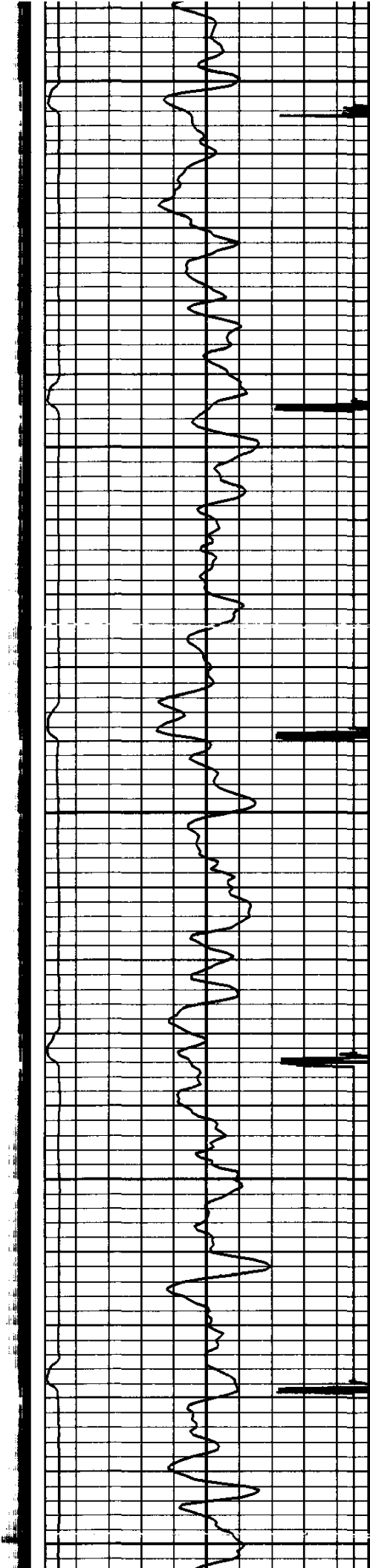




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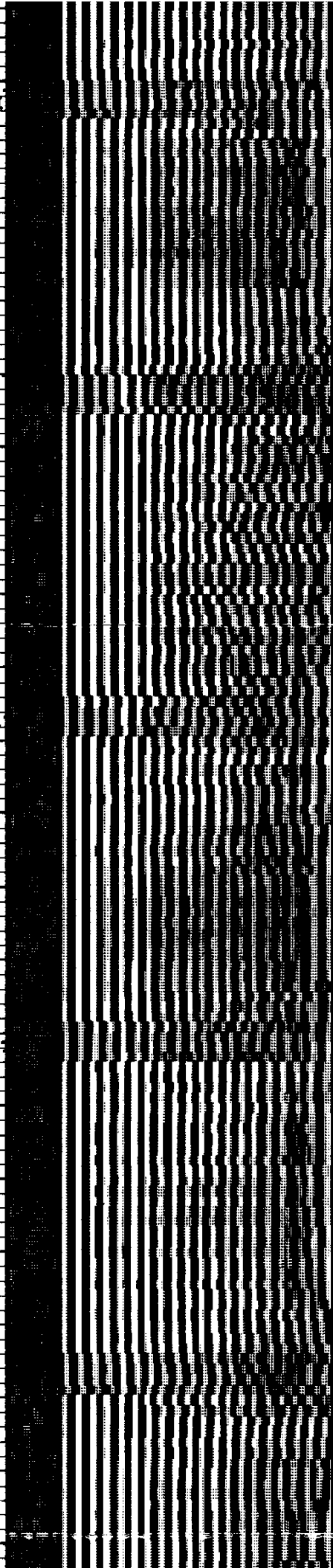
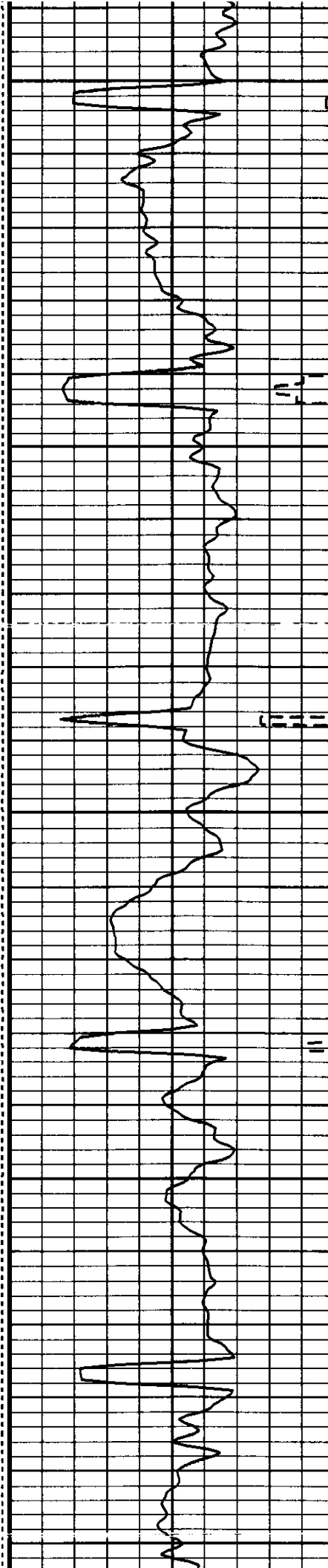
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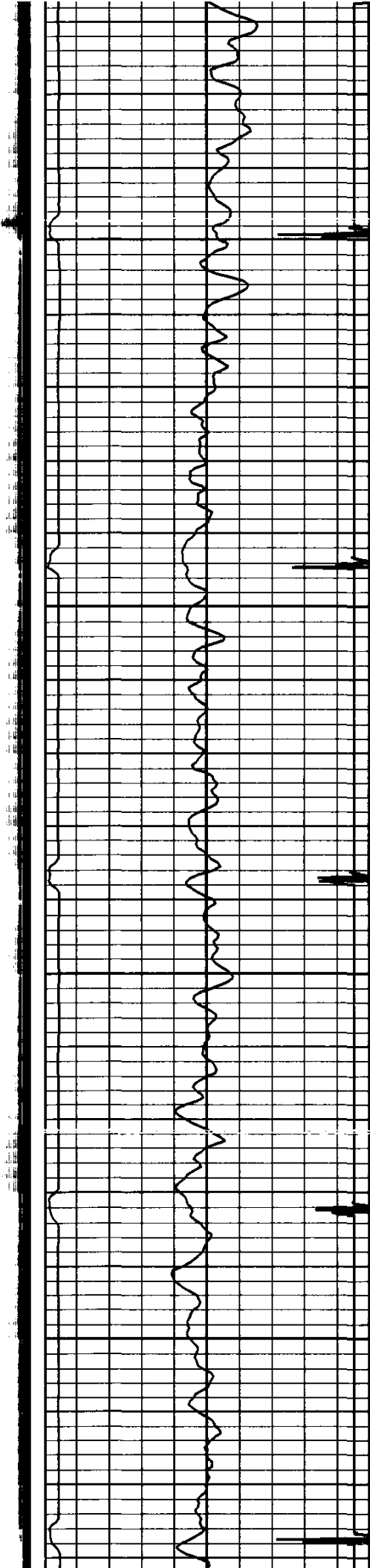


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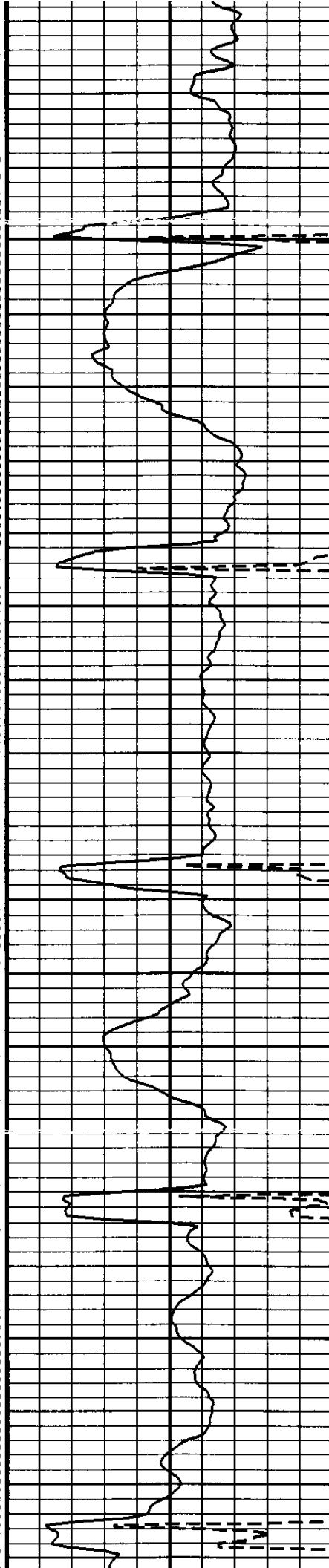


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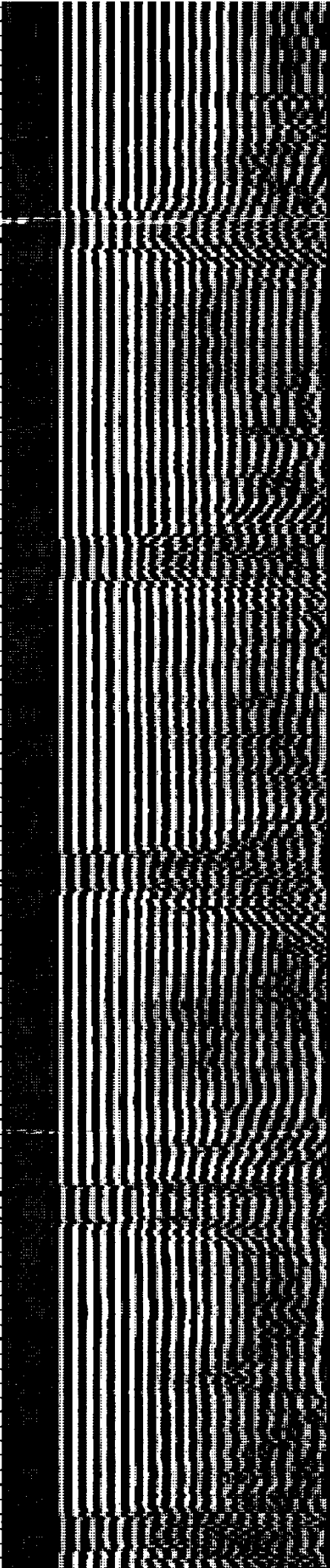


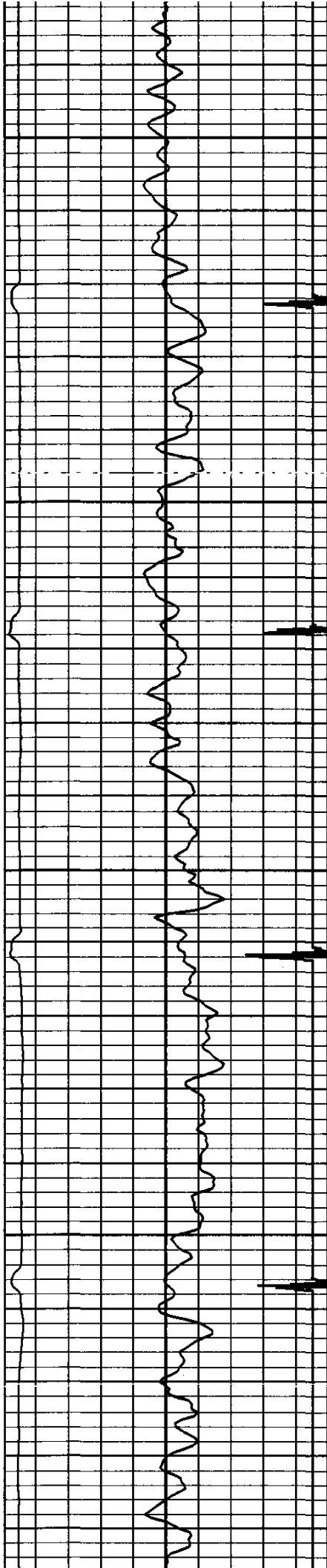


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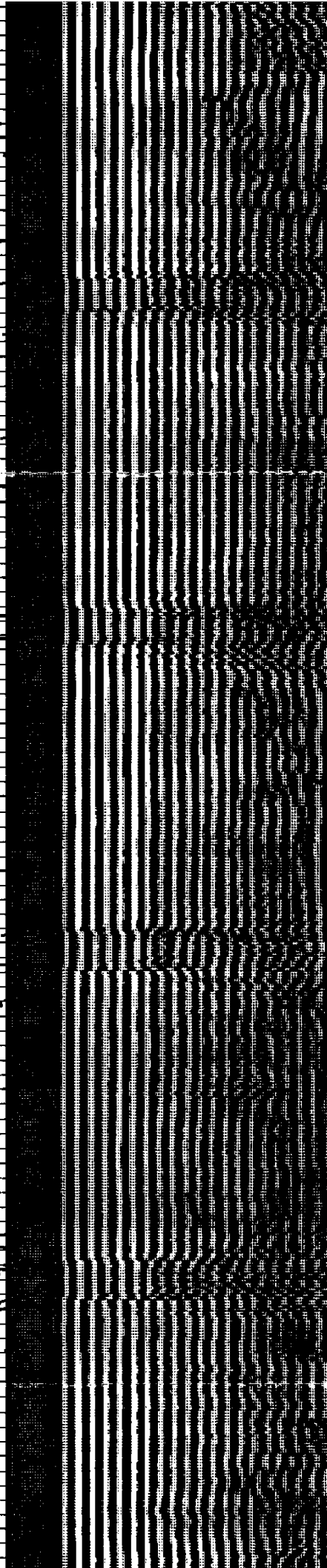
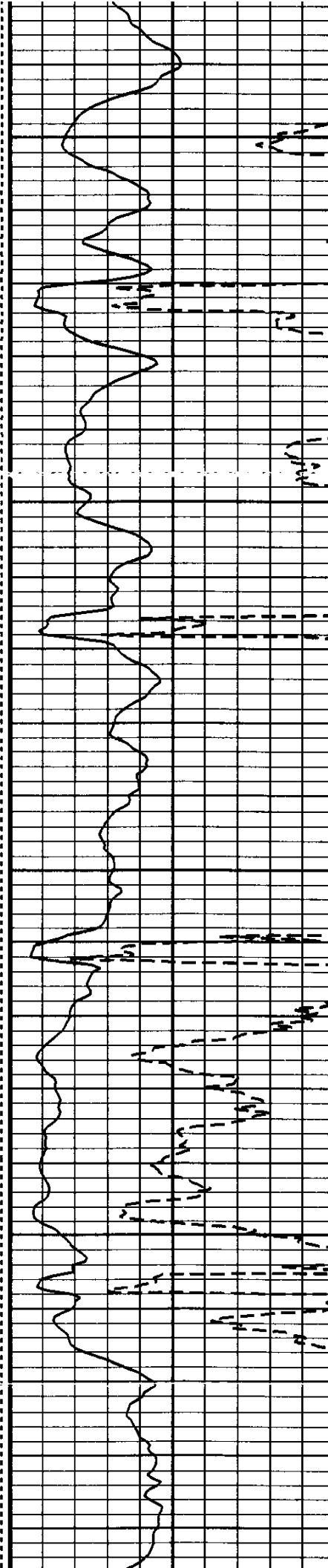
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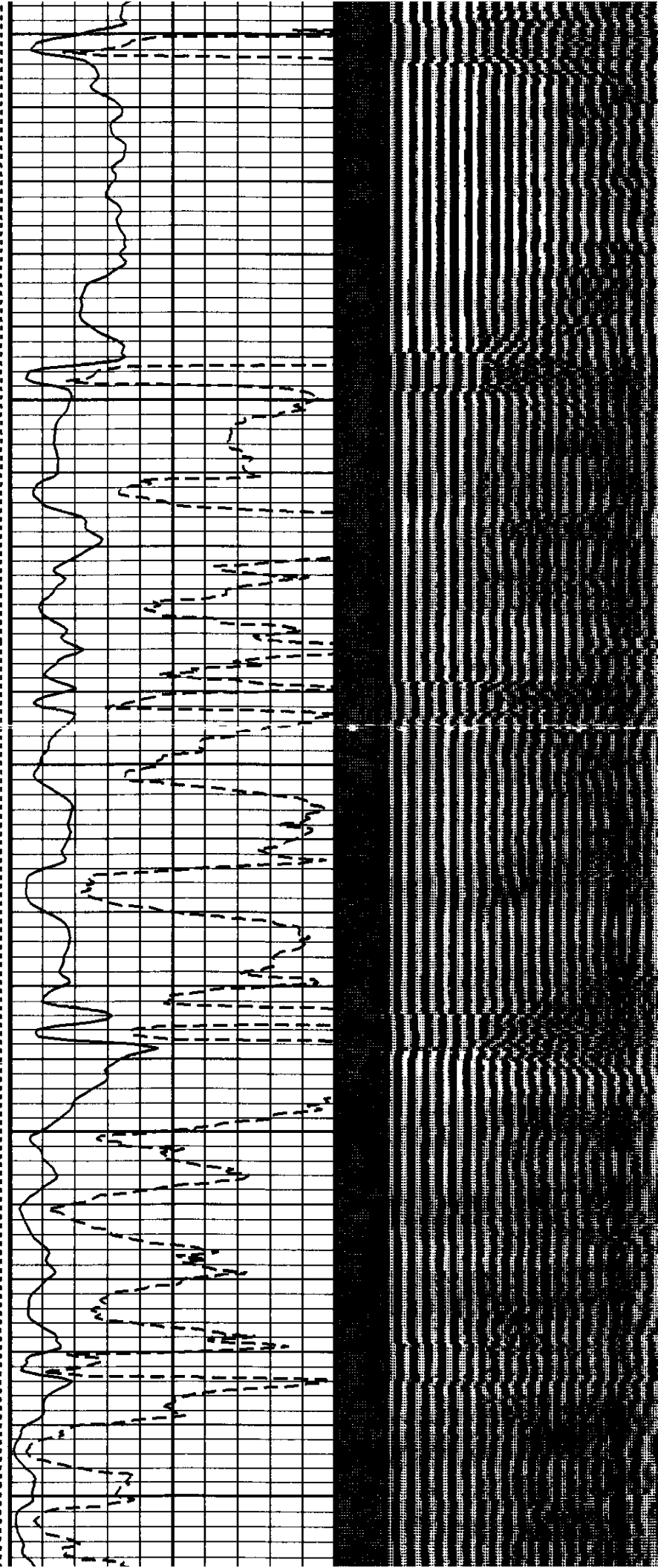
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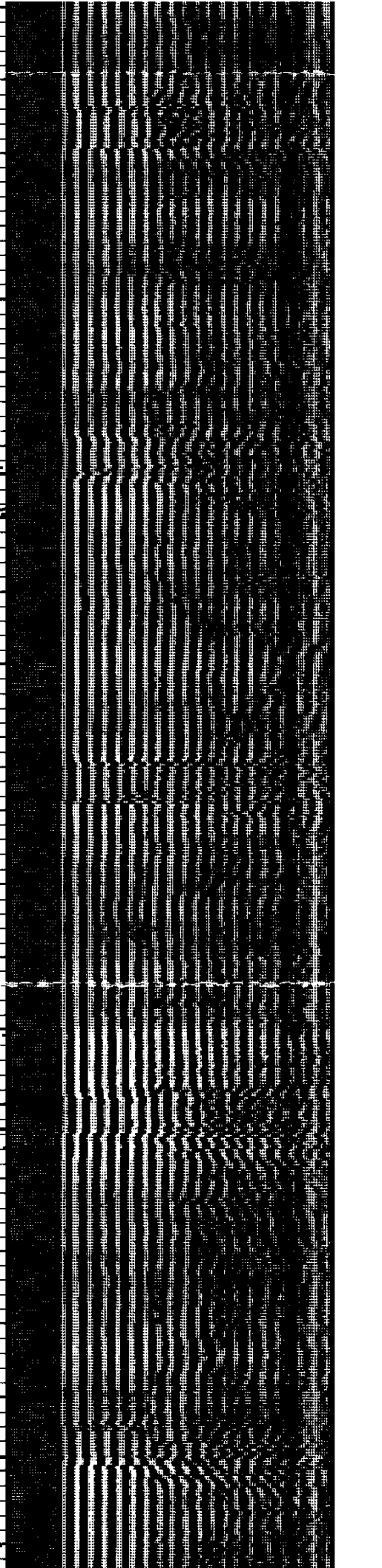
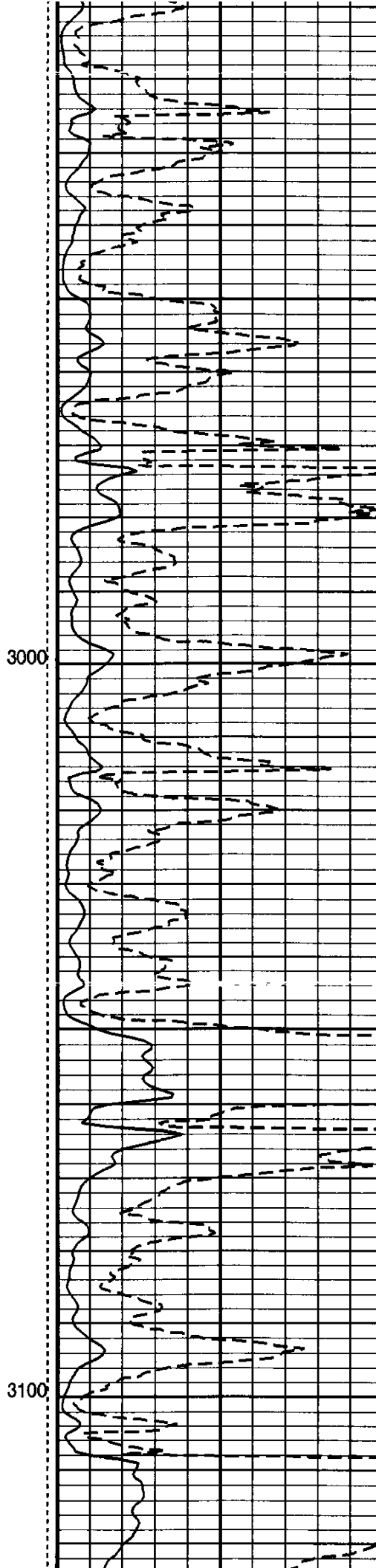
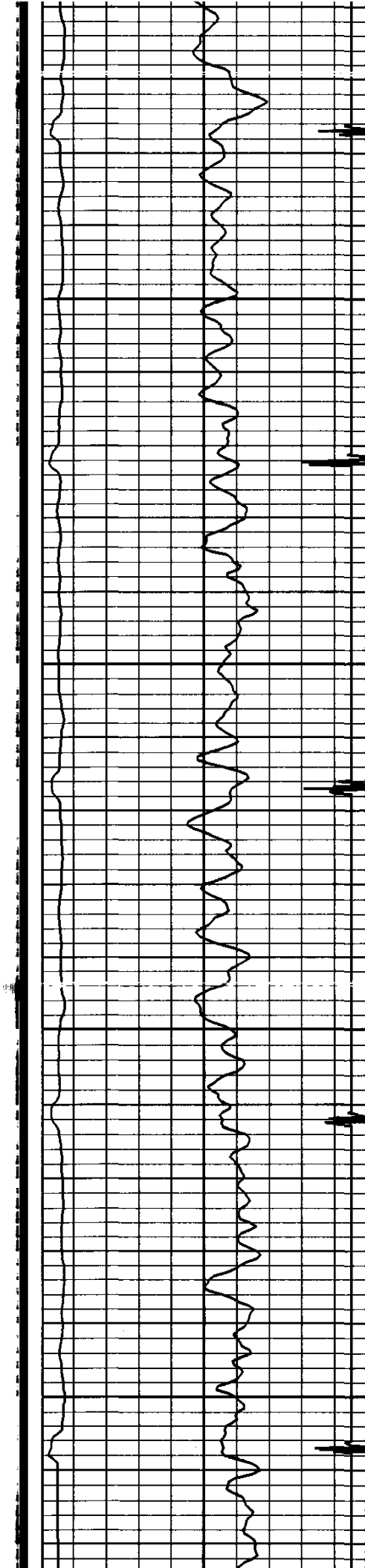


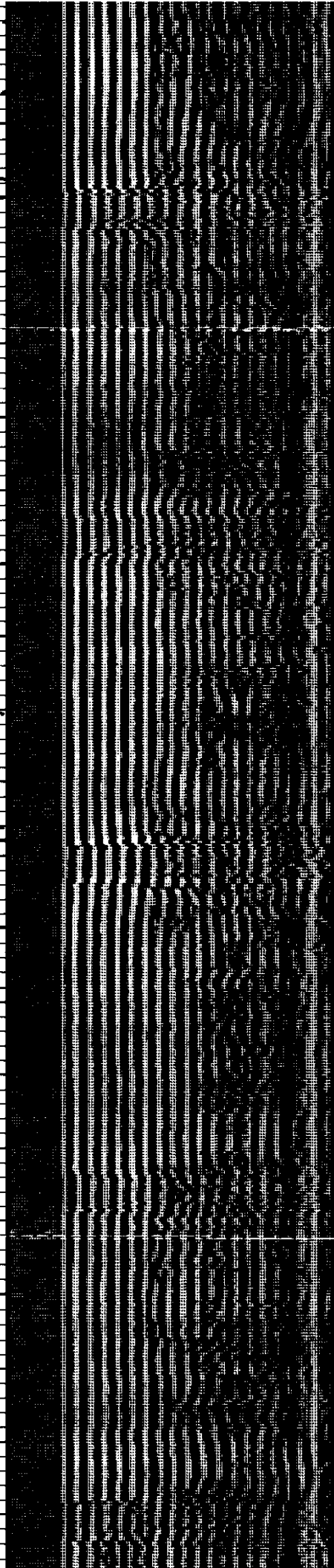
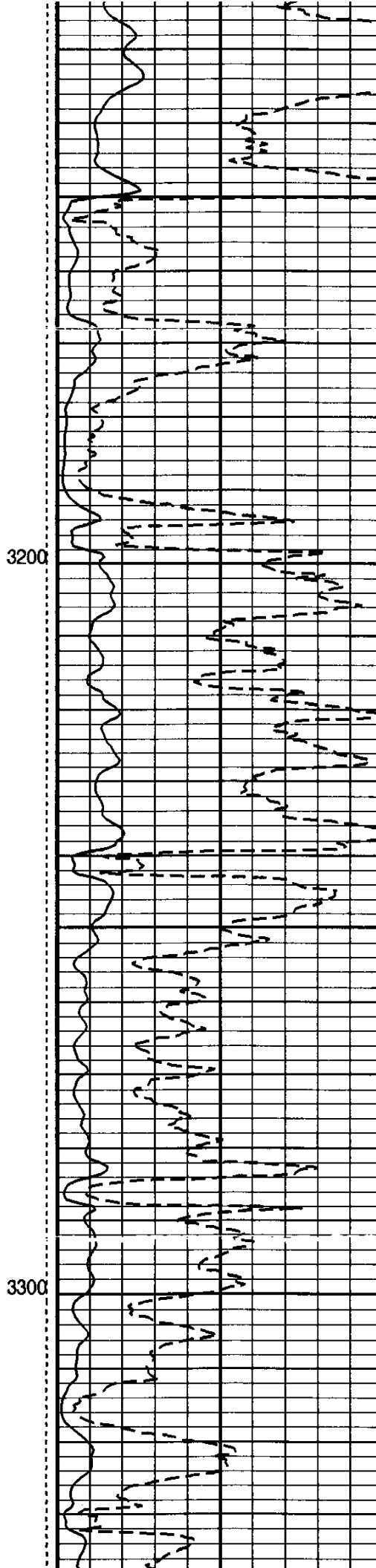
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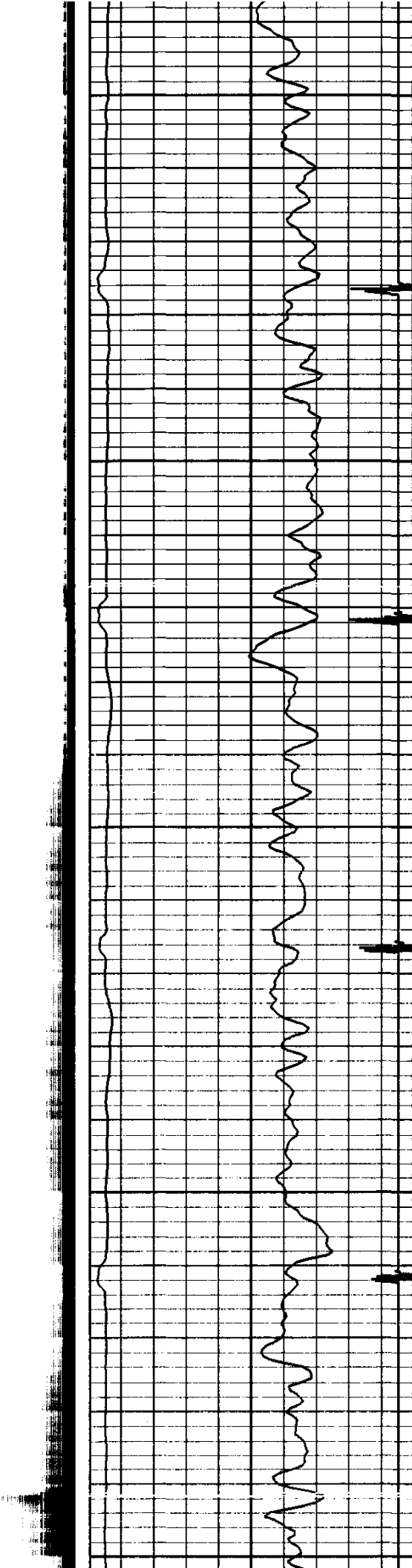
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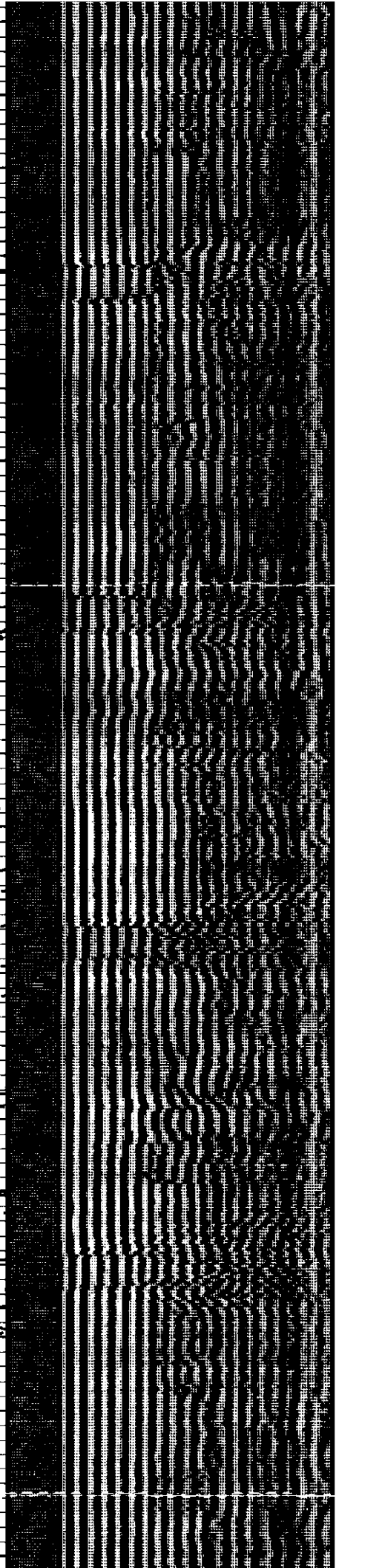
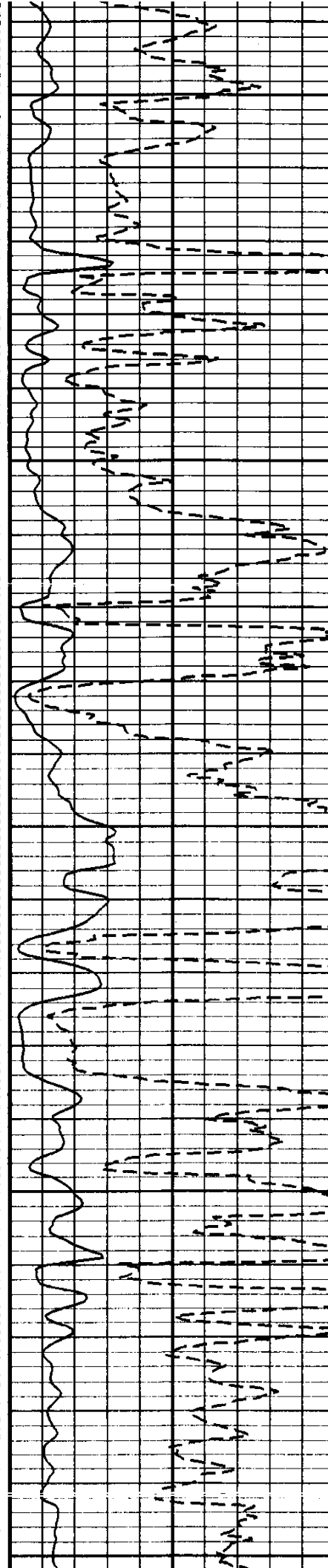


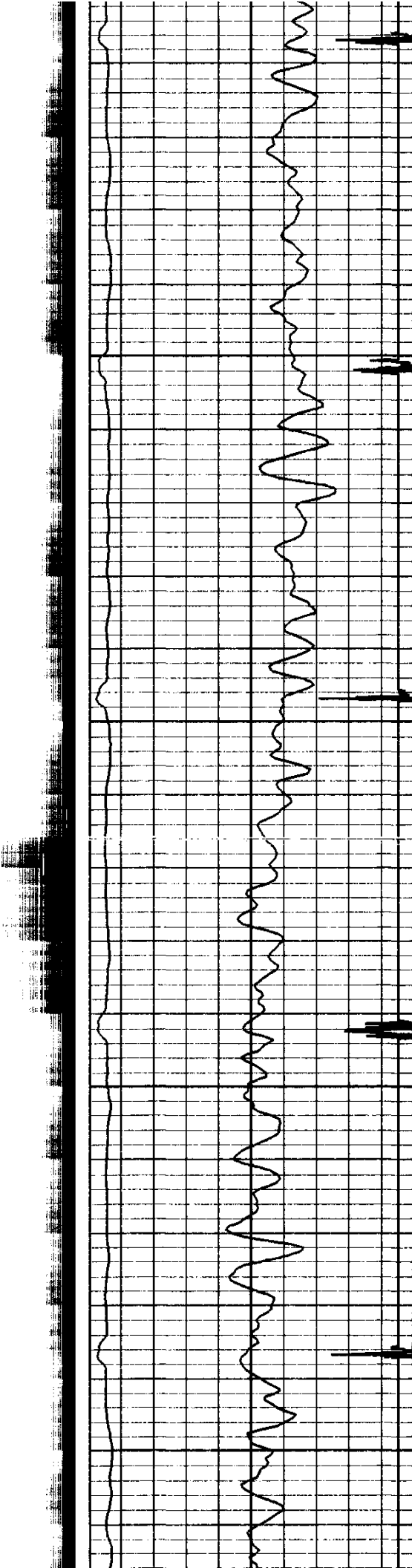




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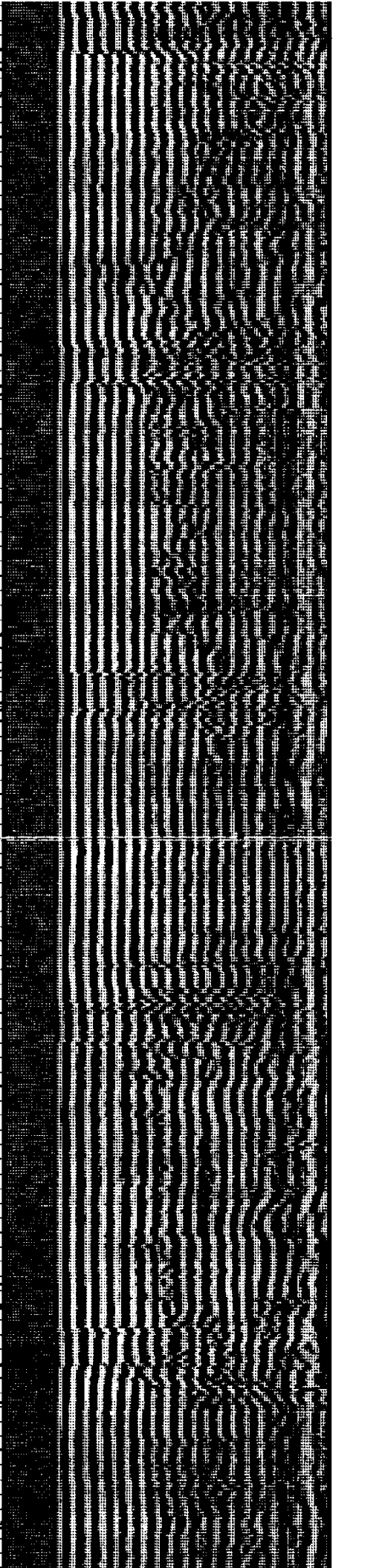
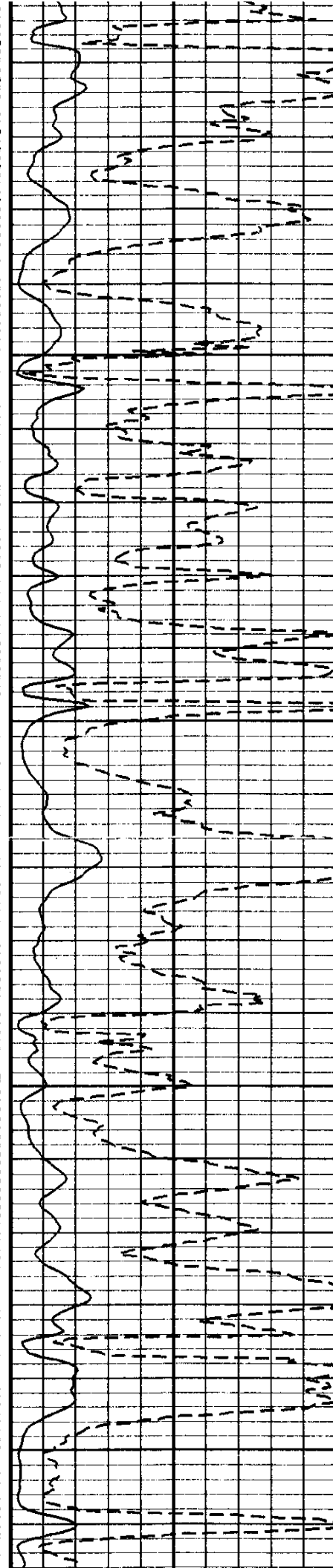
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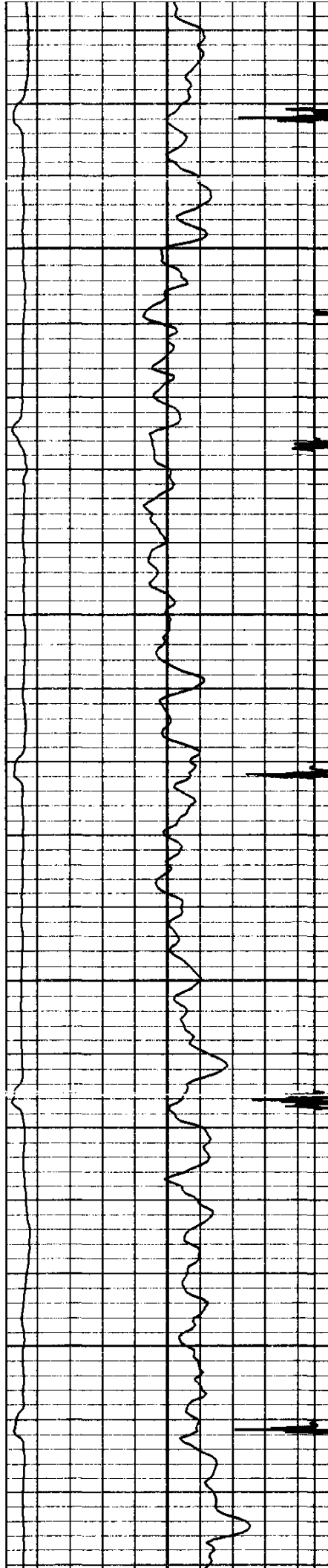




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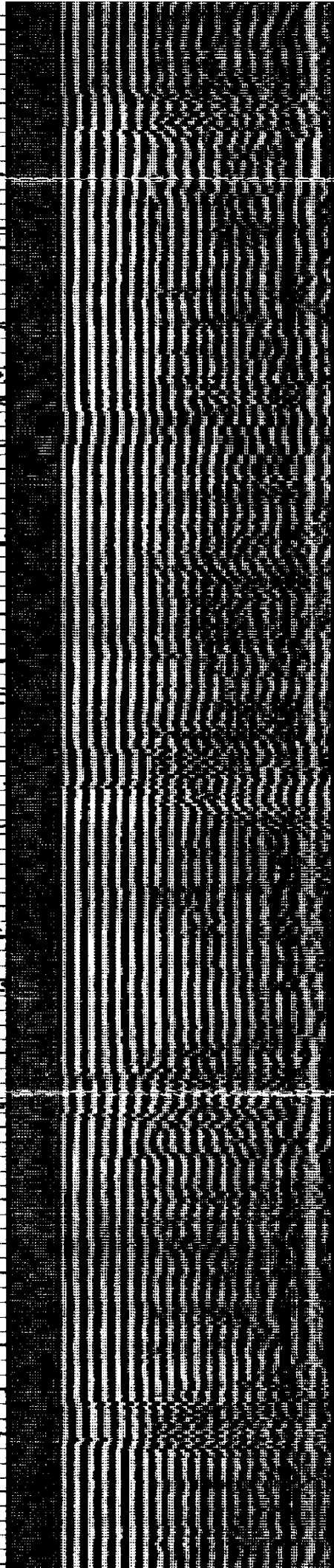
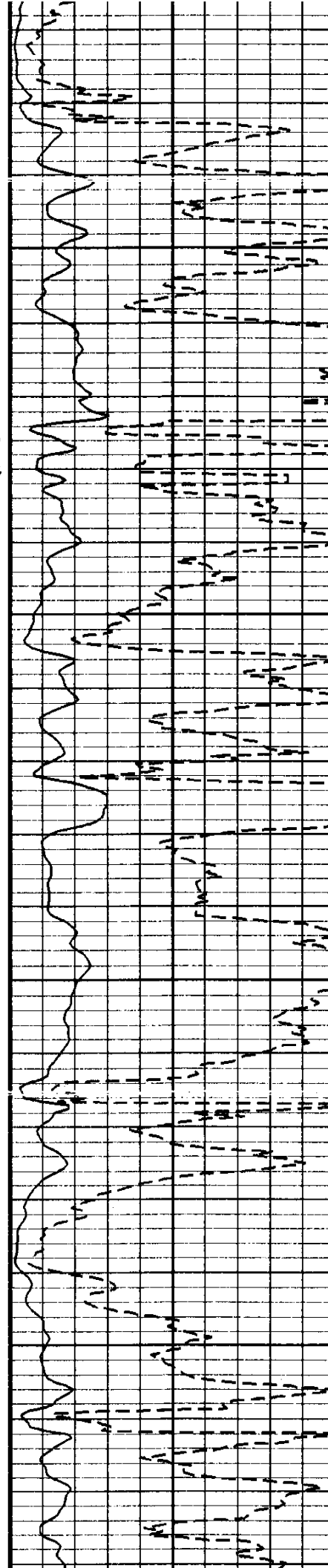
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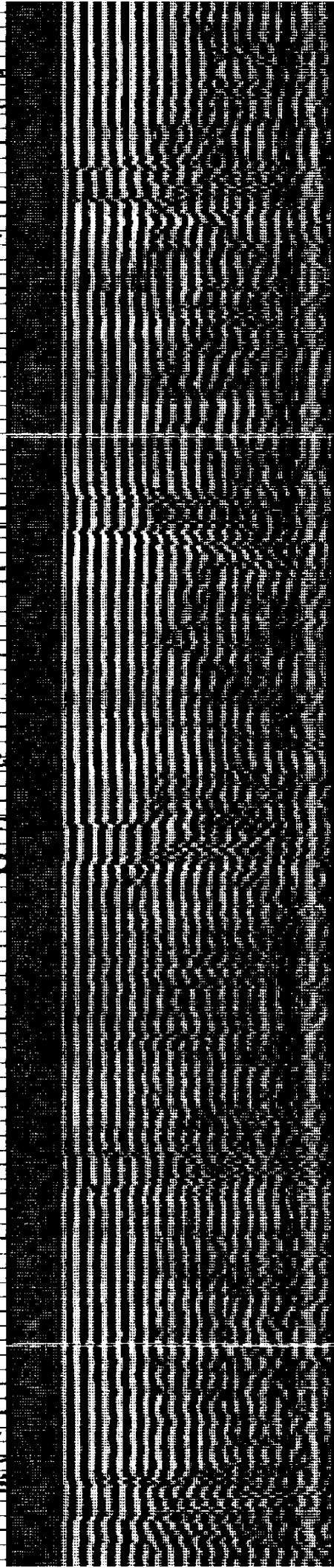
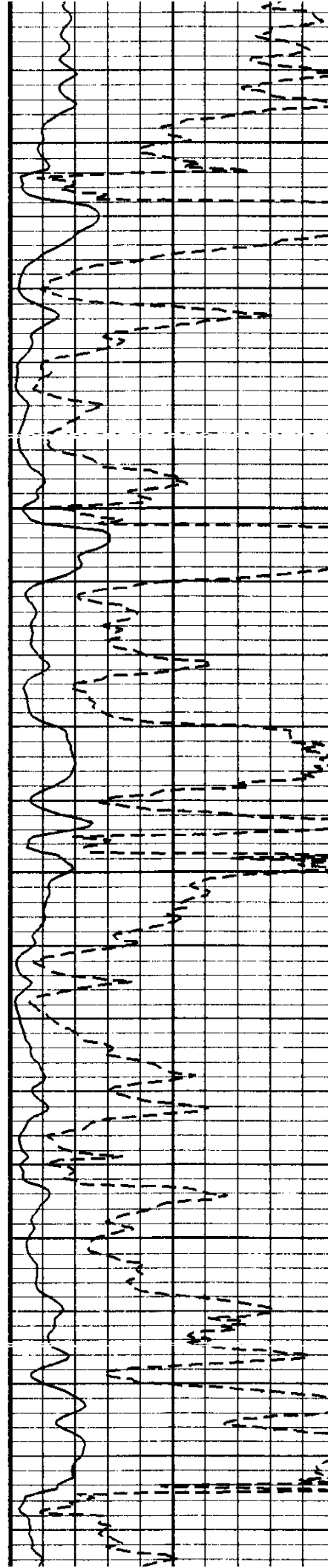
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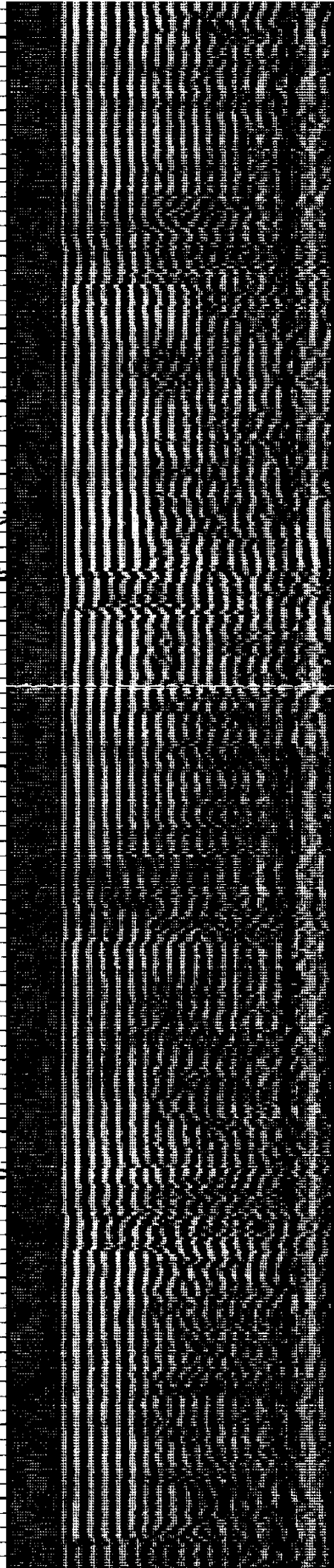
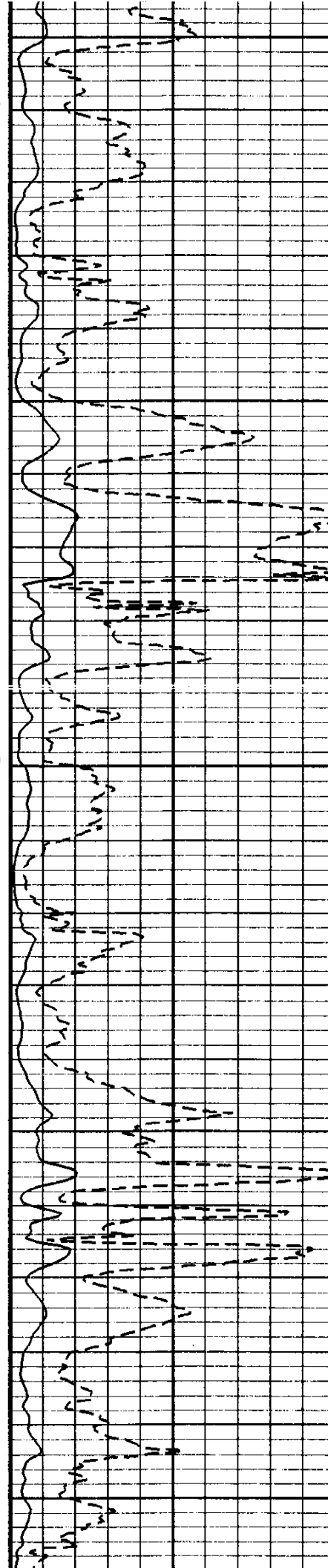
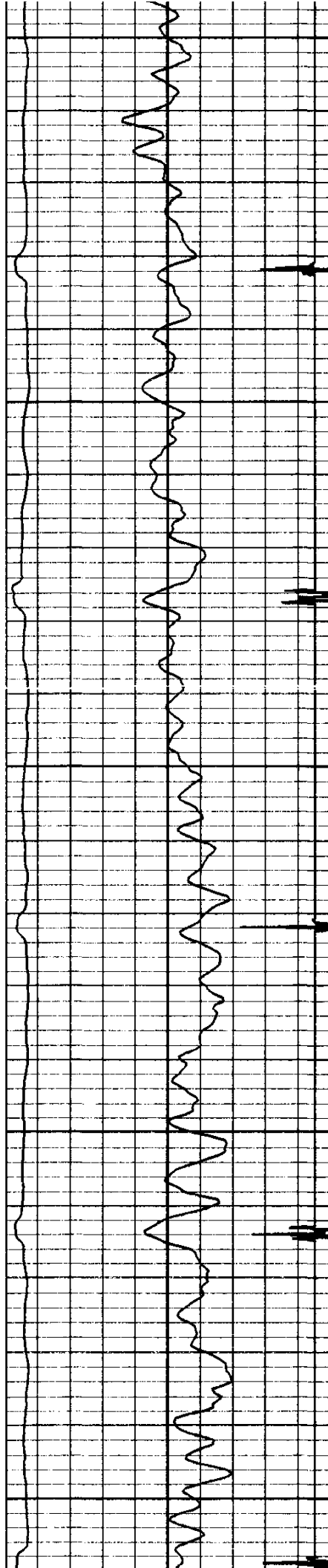
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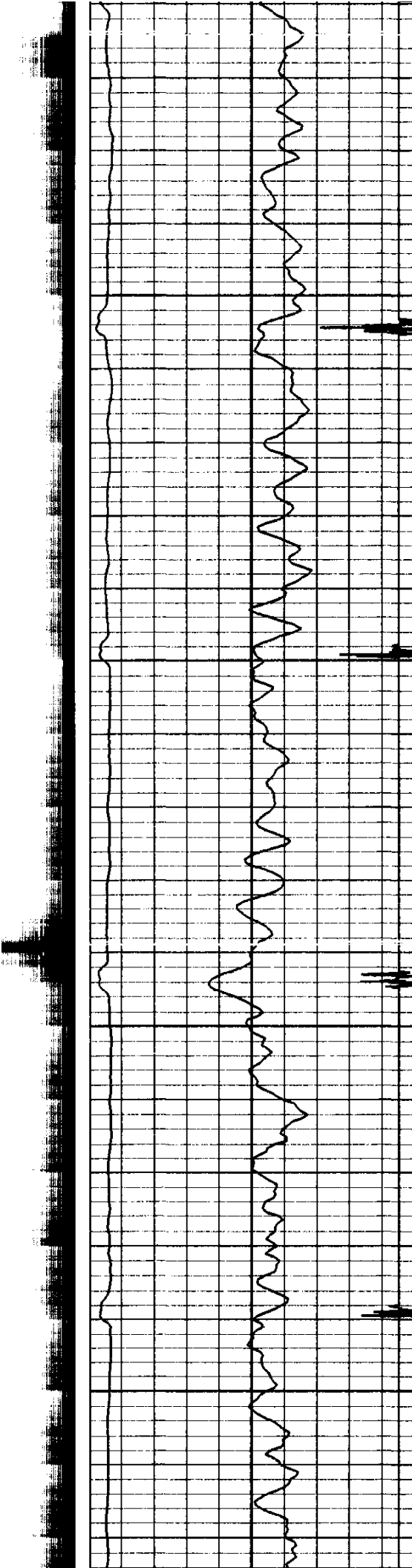


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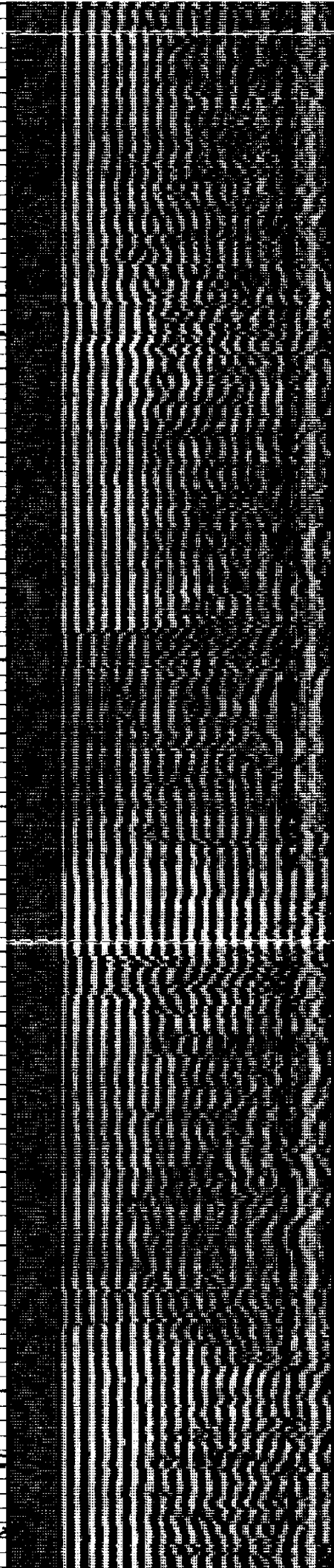
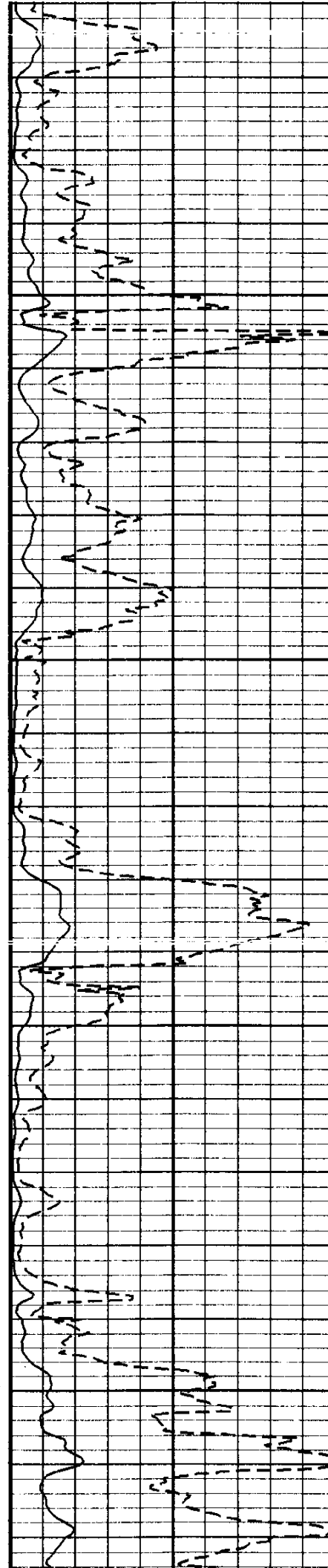
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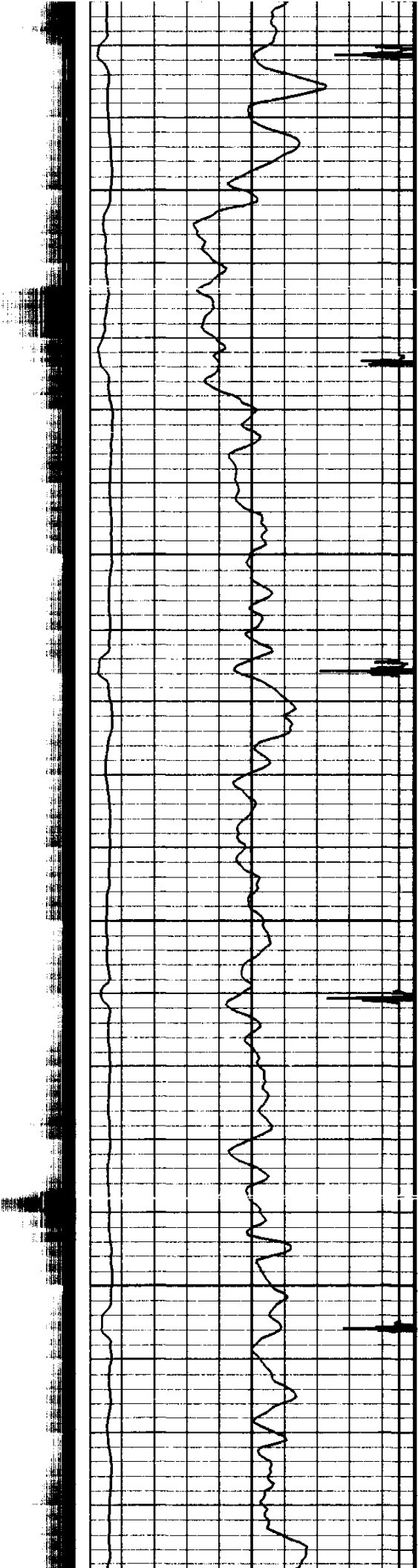




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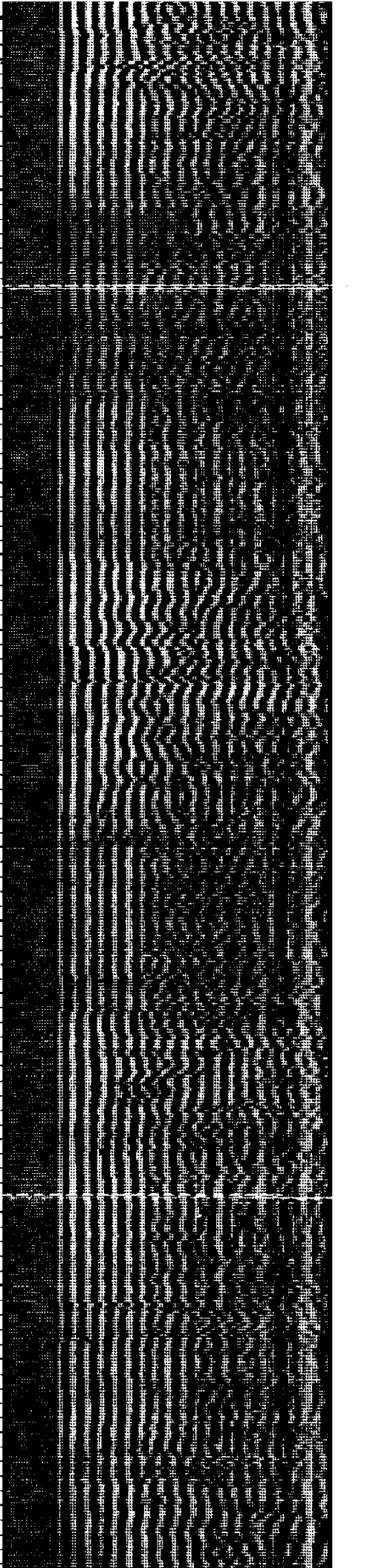
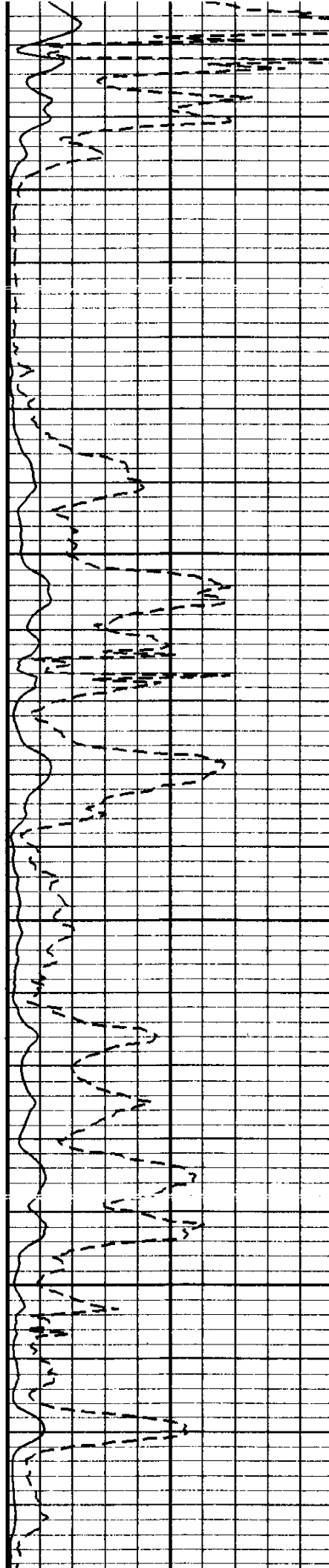
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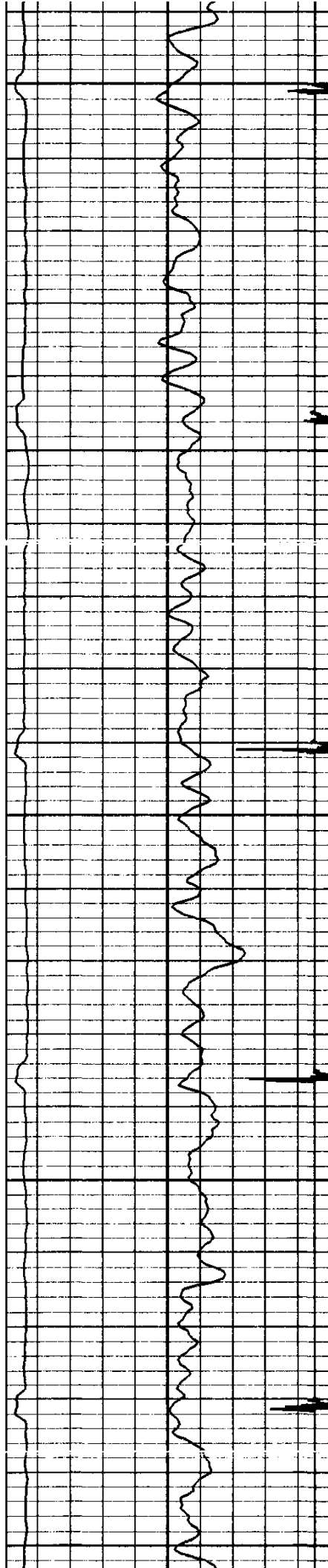




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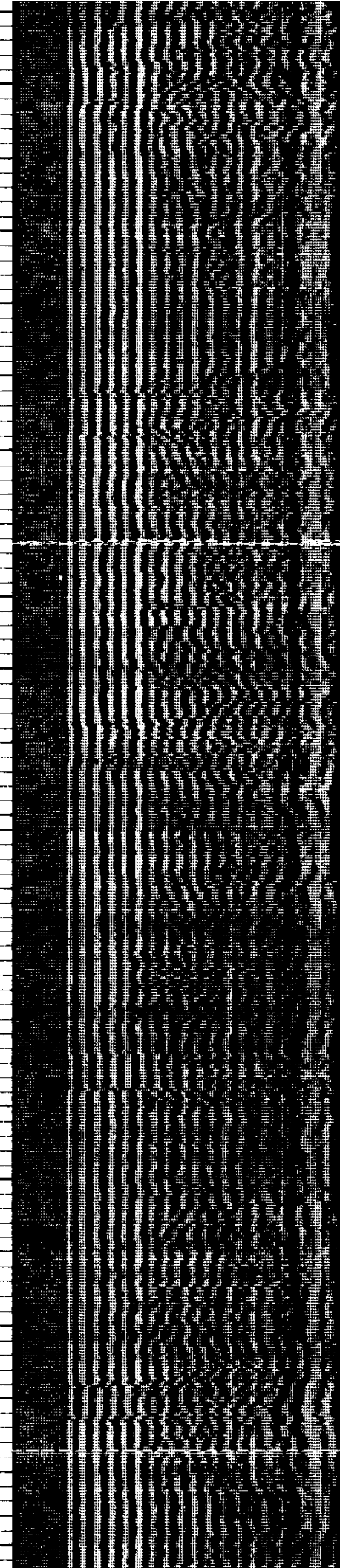
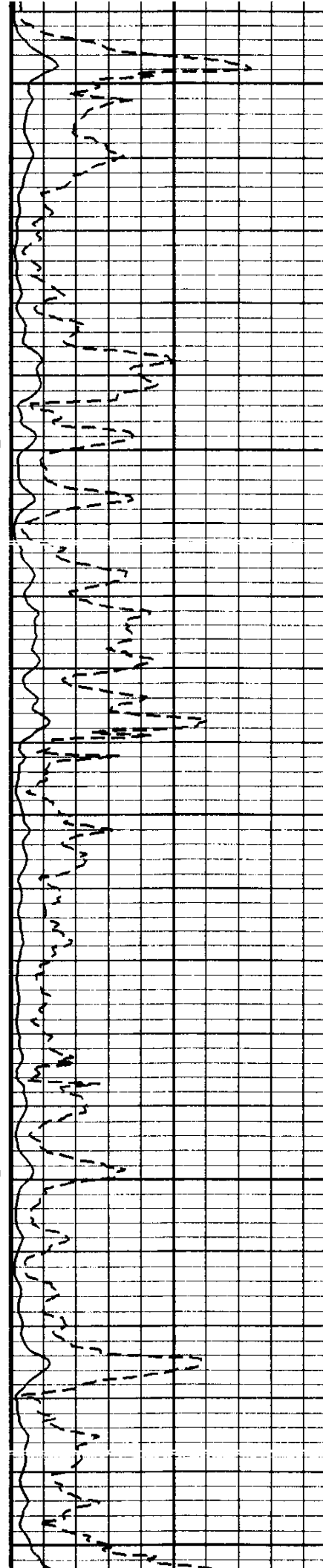
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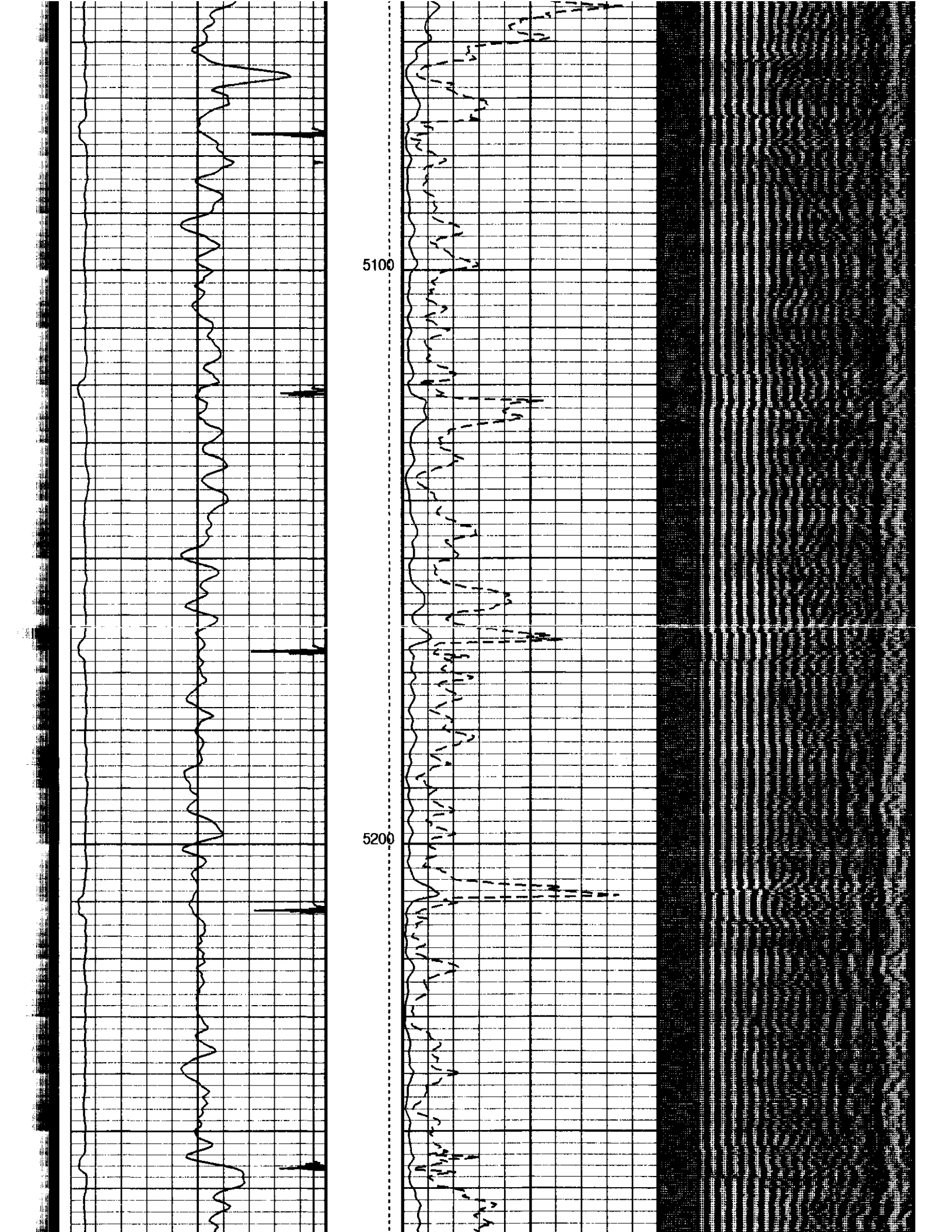
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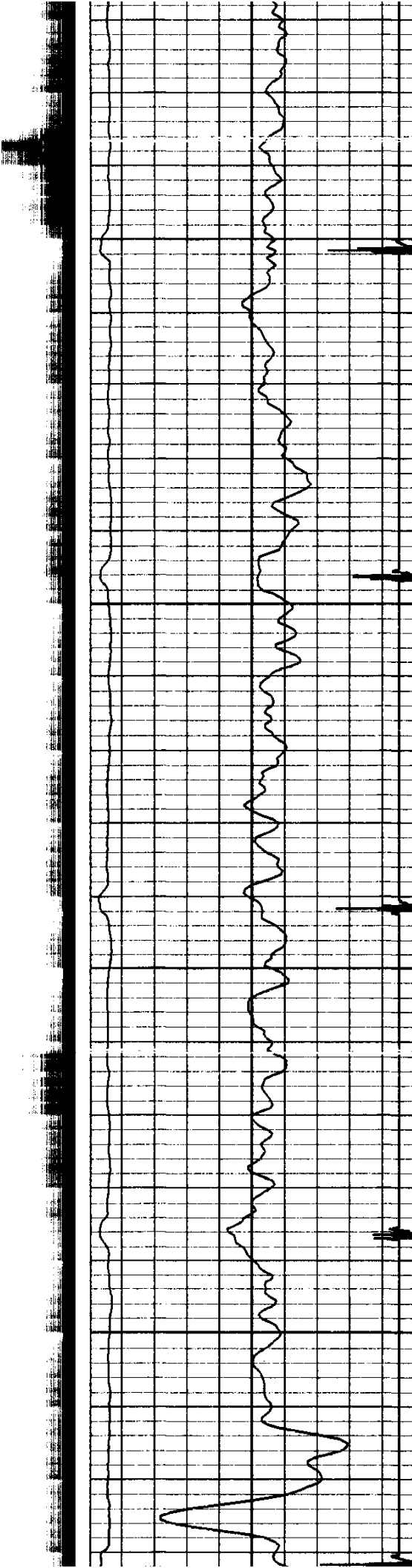
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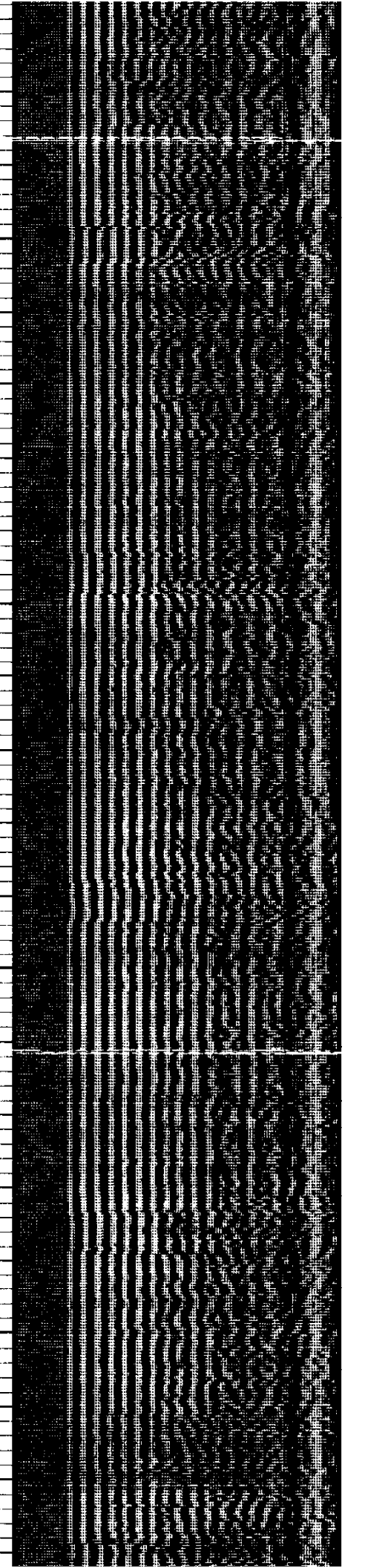
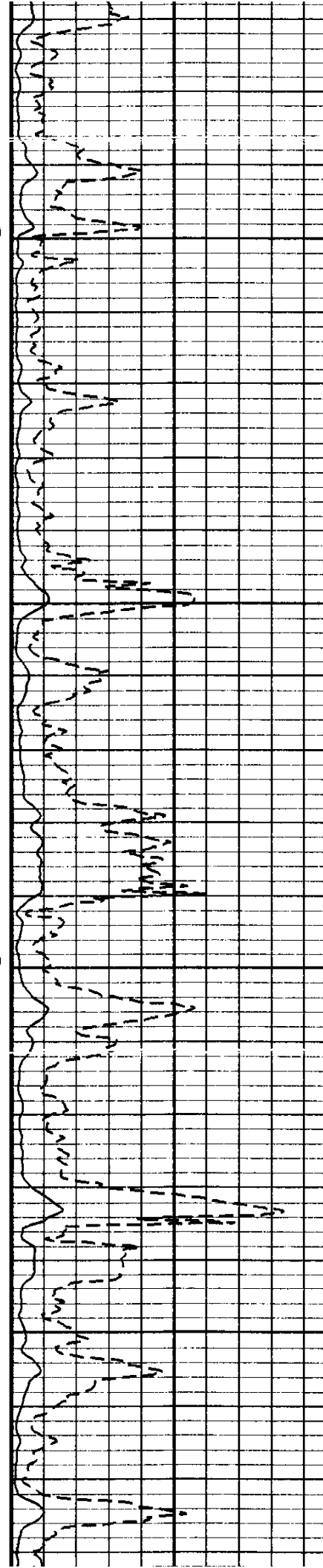
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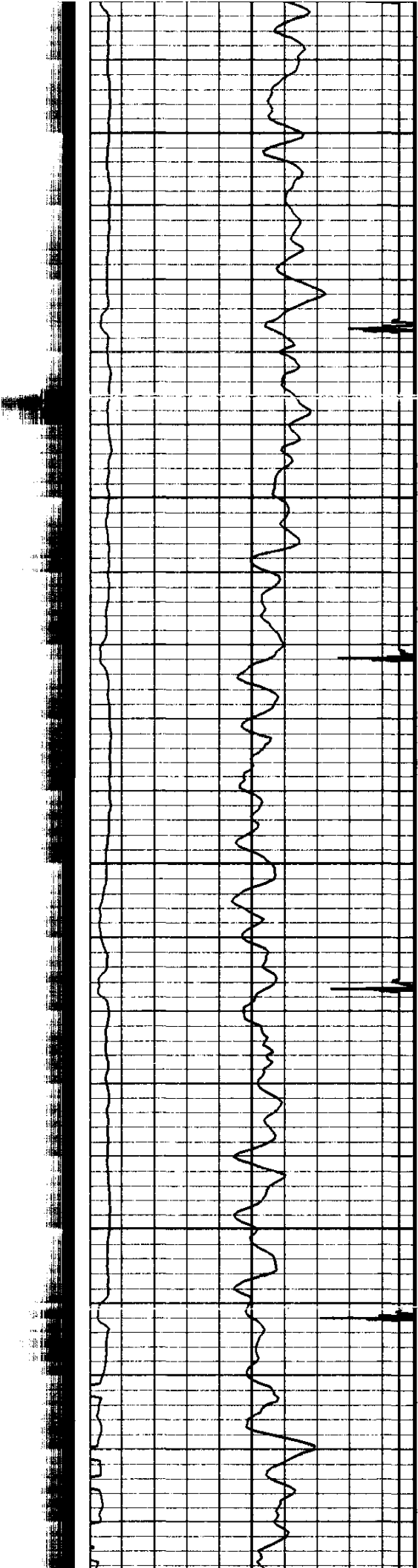




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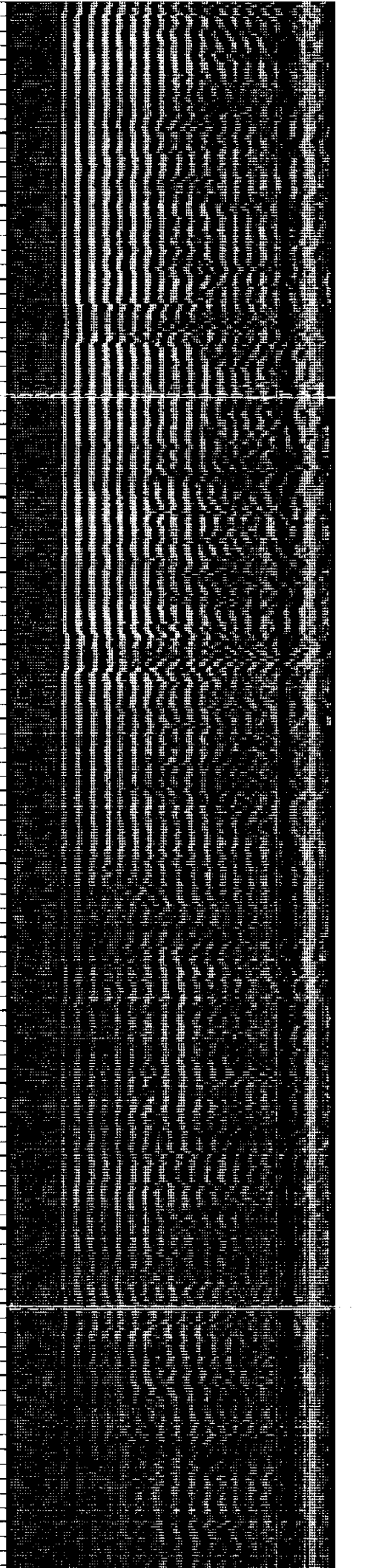
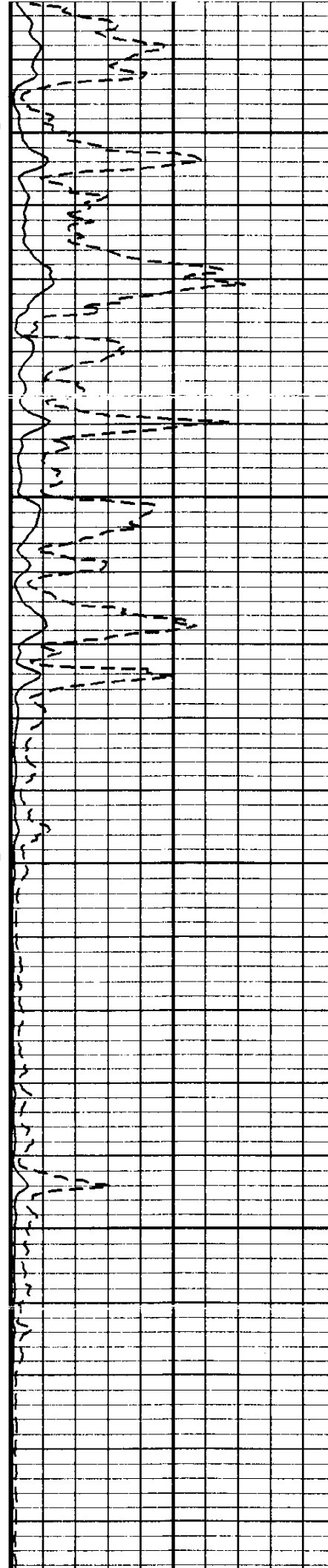
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5500

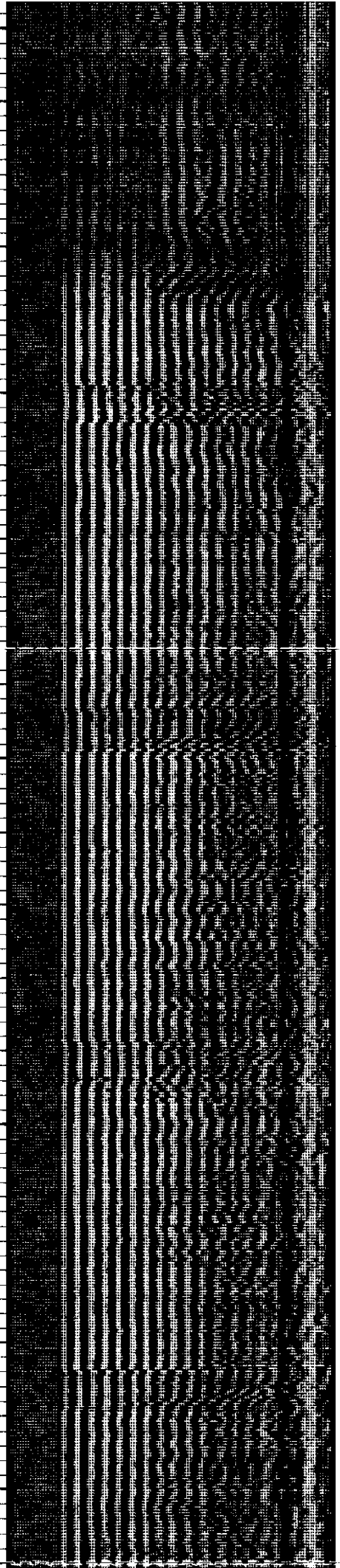
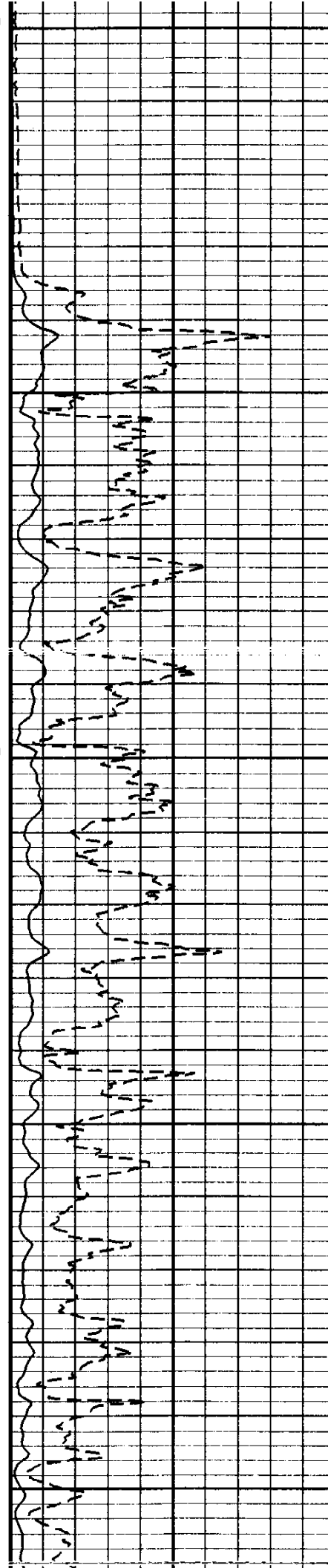
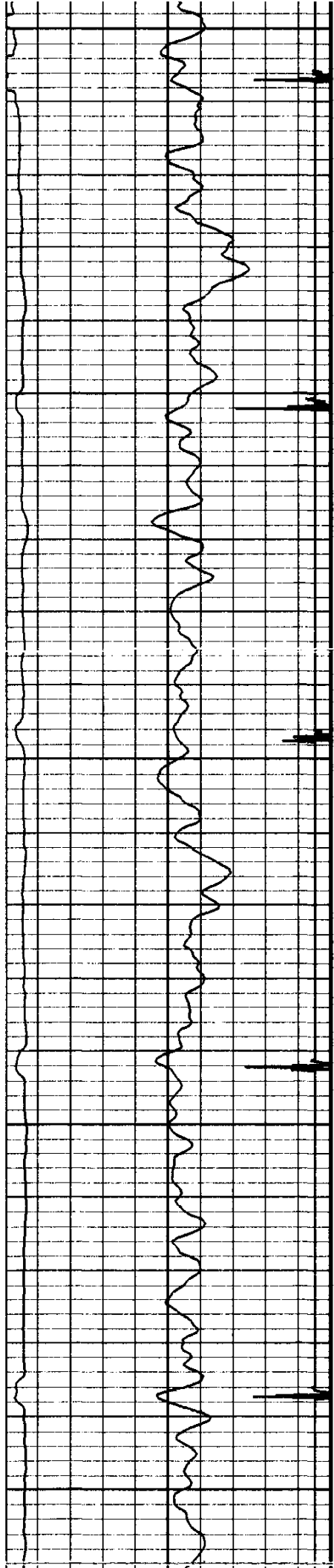
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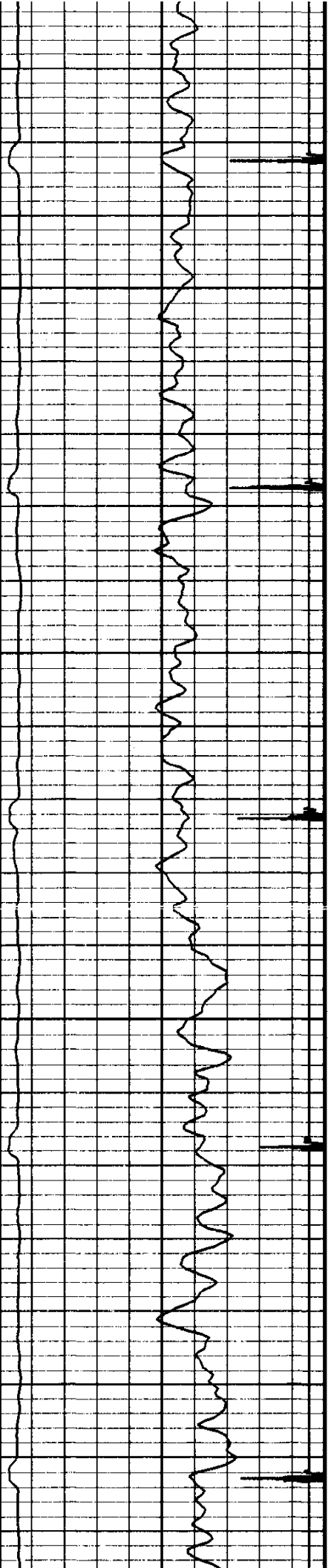


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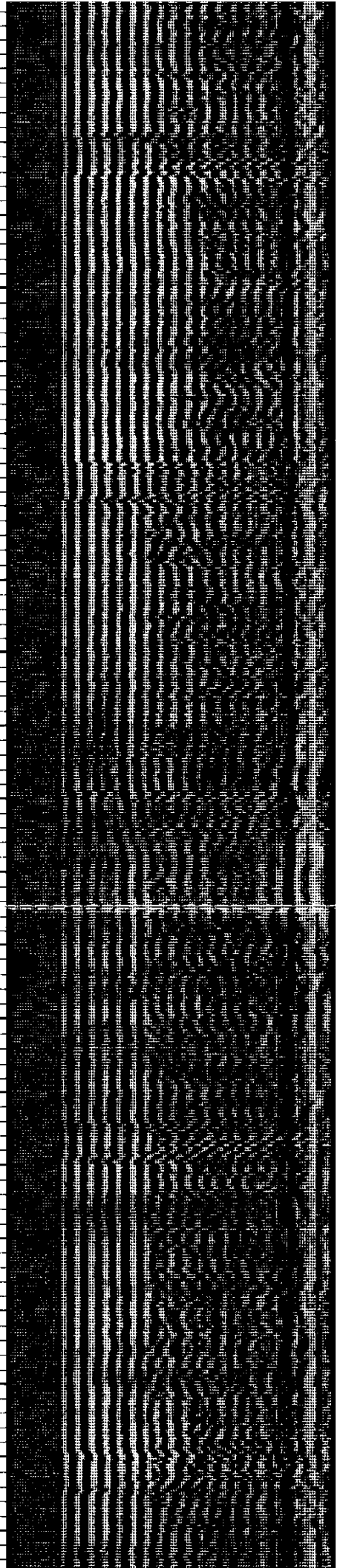
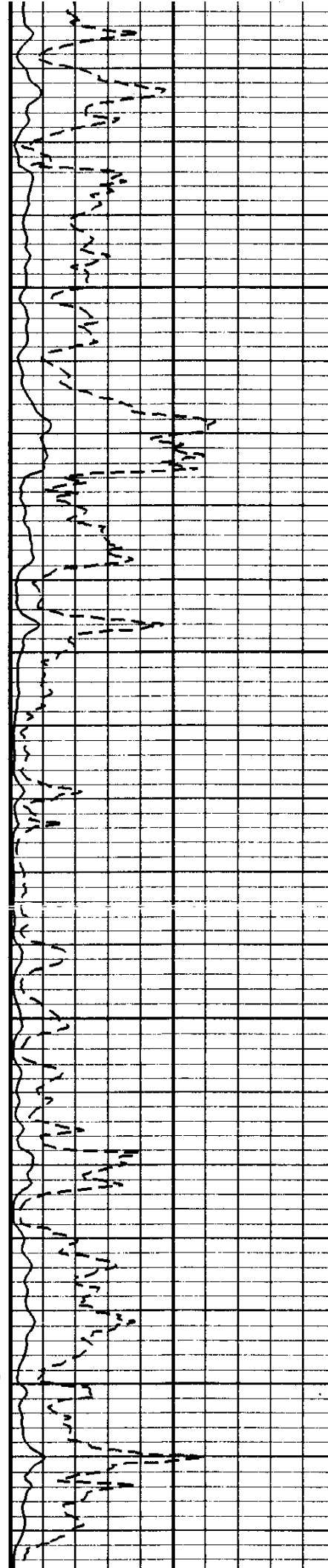
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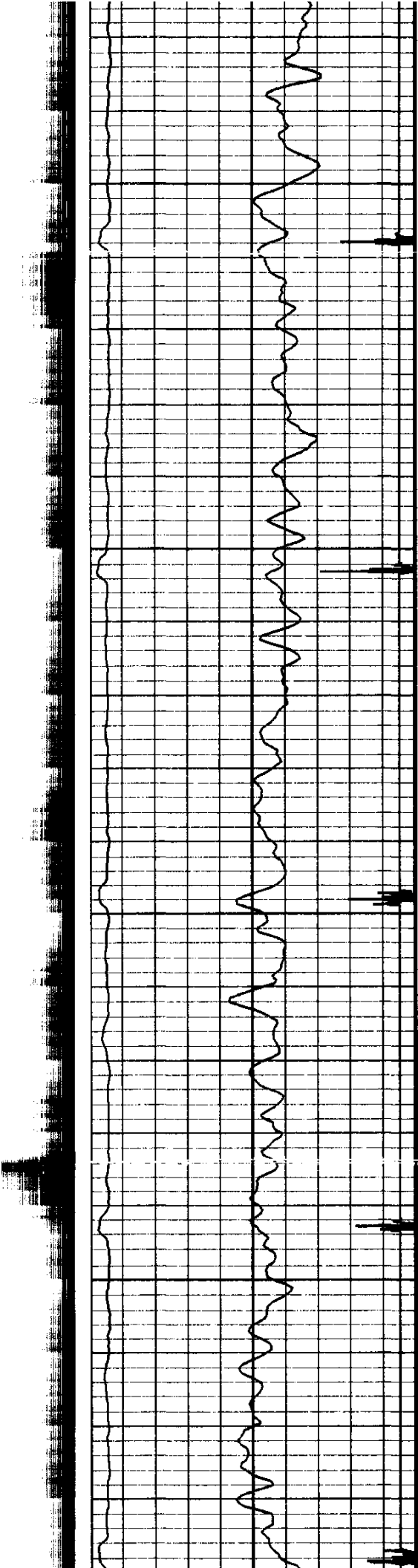




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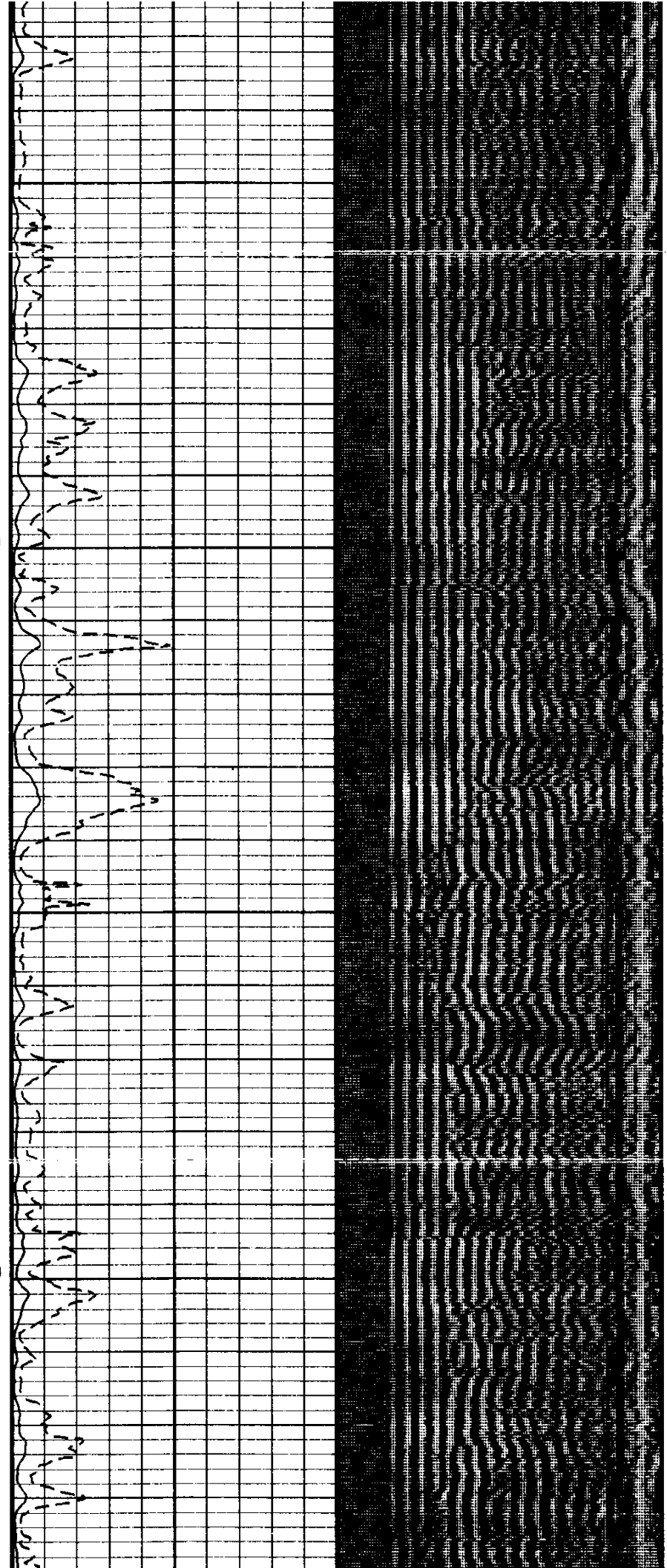
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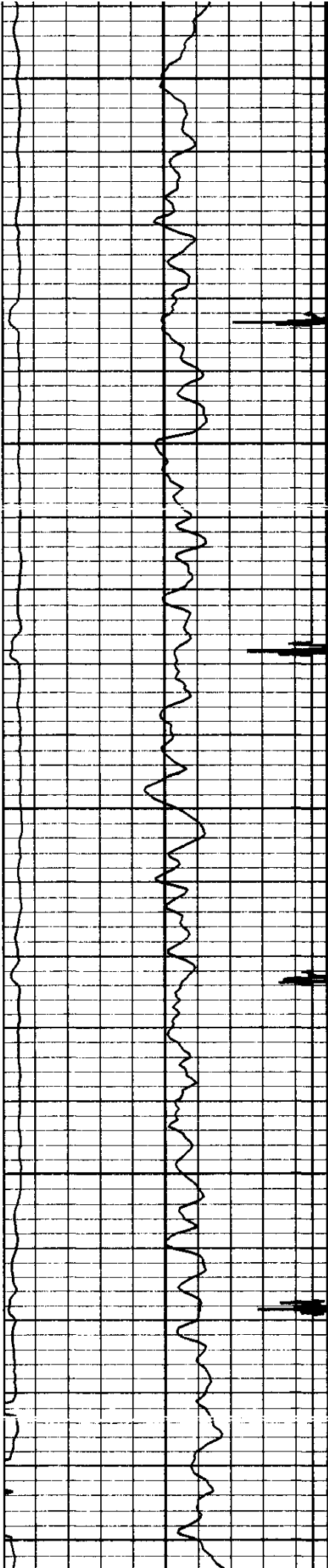




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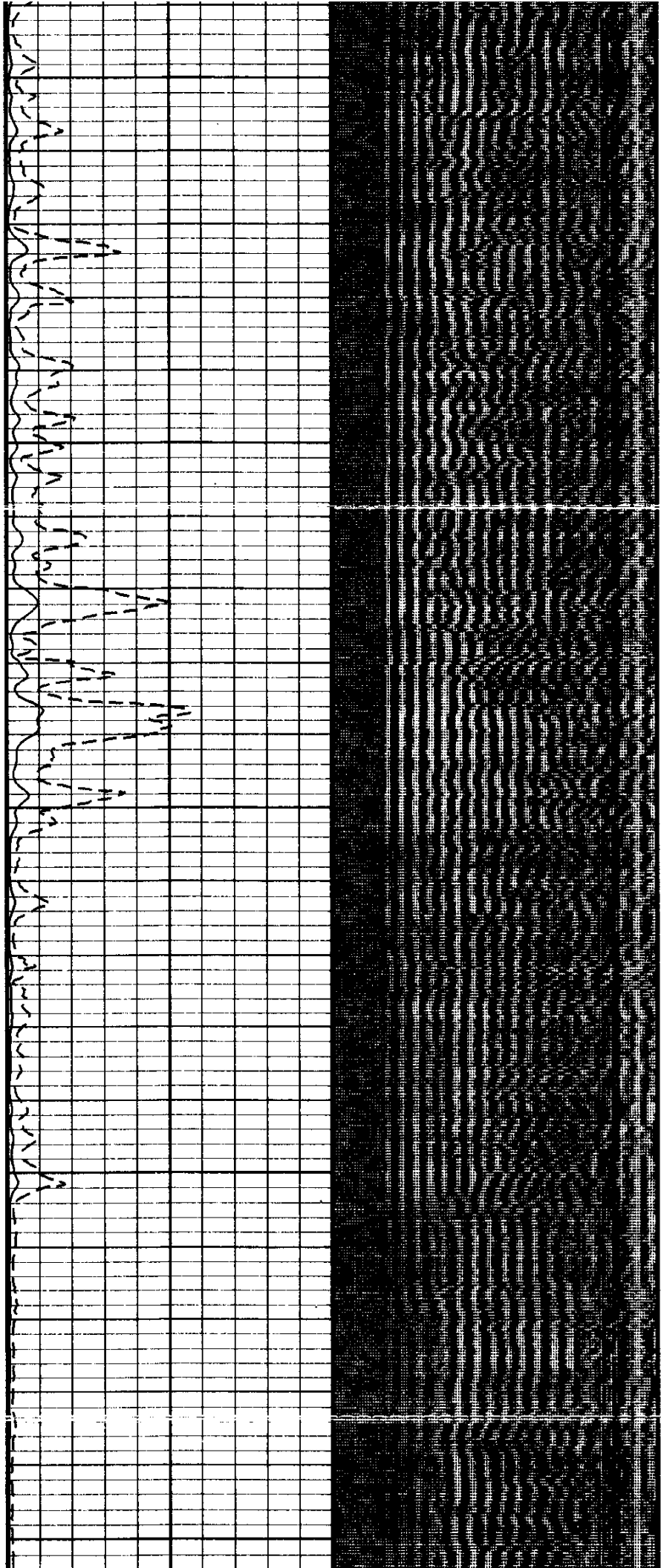
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6400

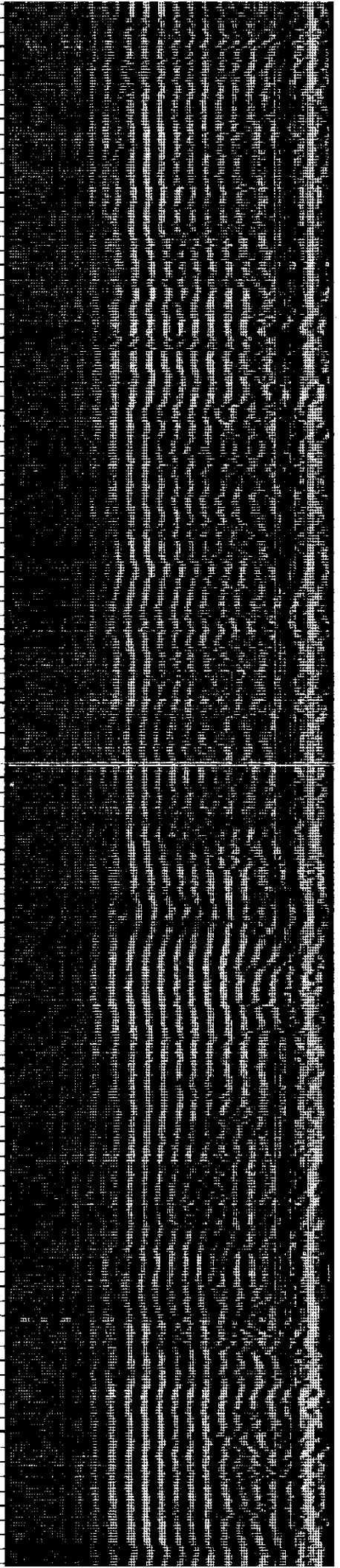
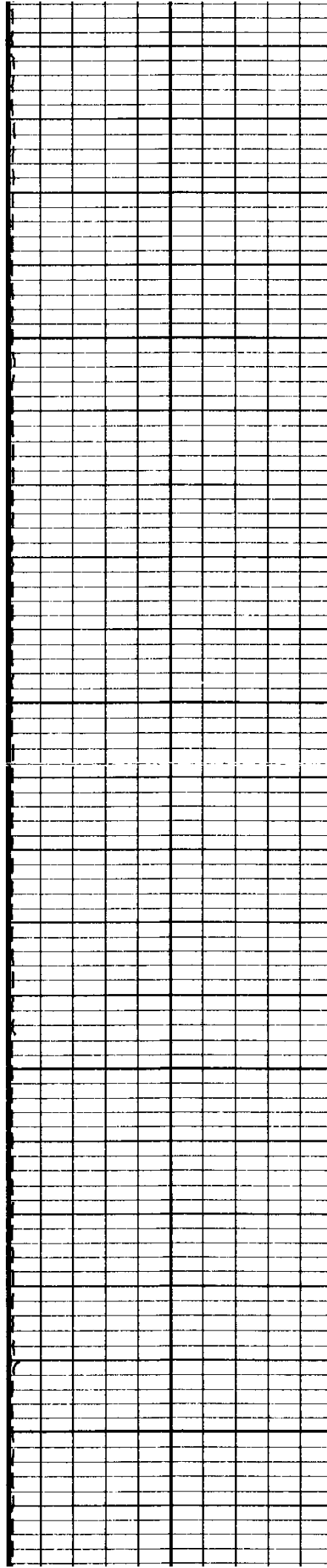
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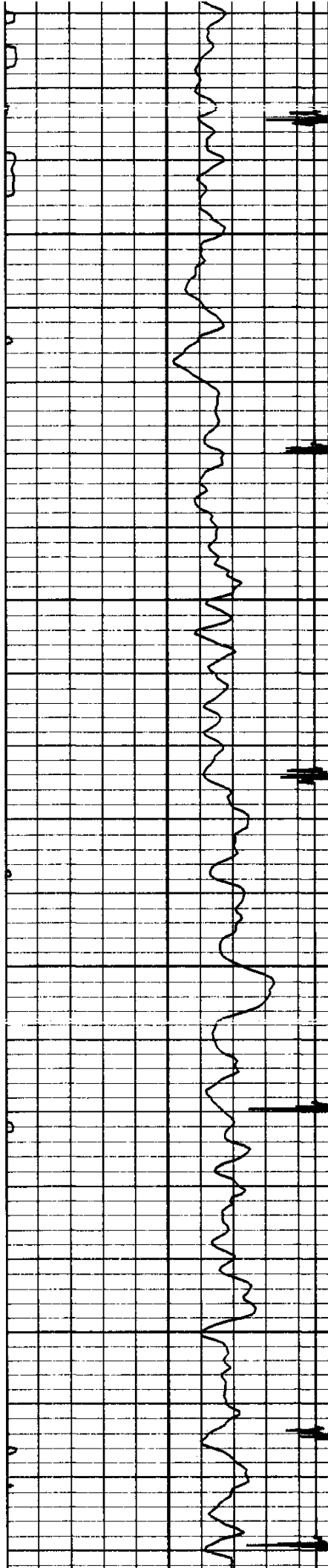




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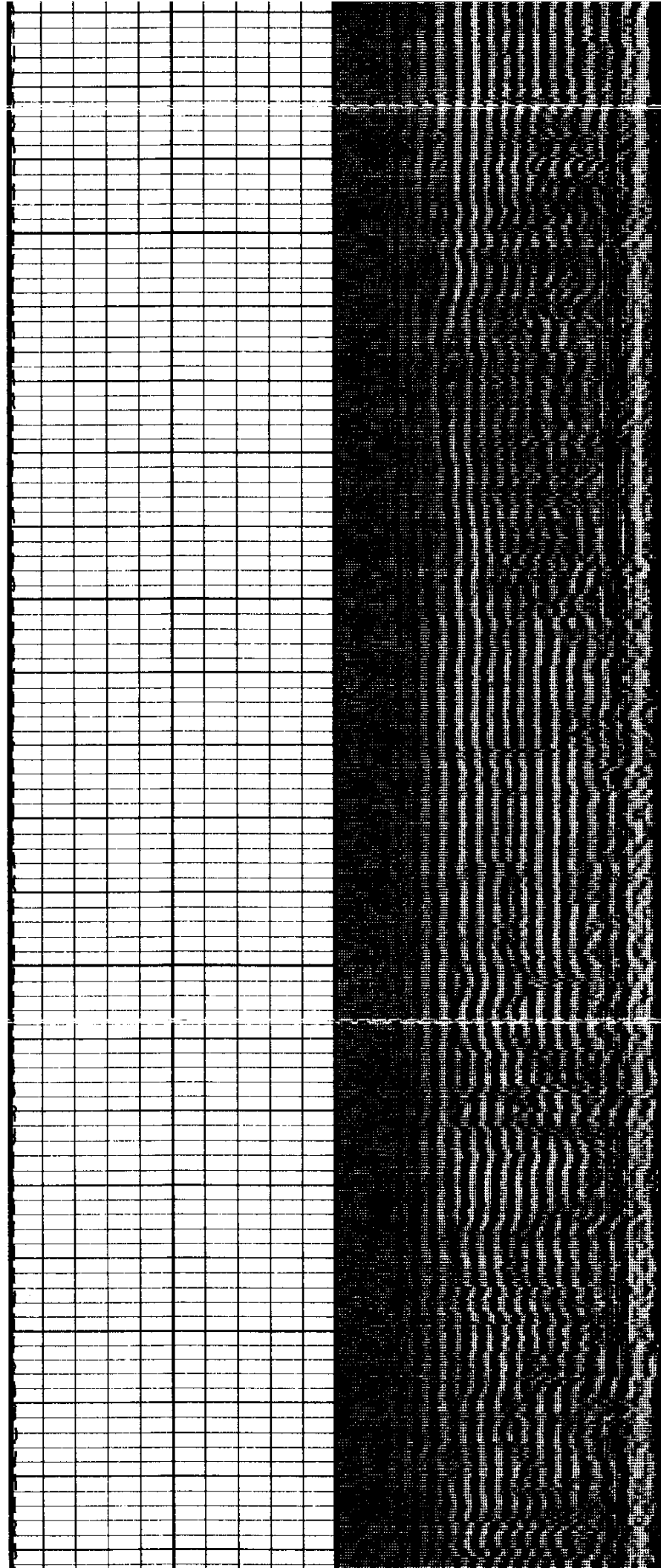
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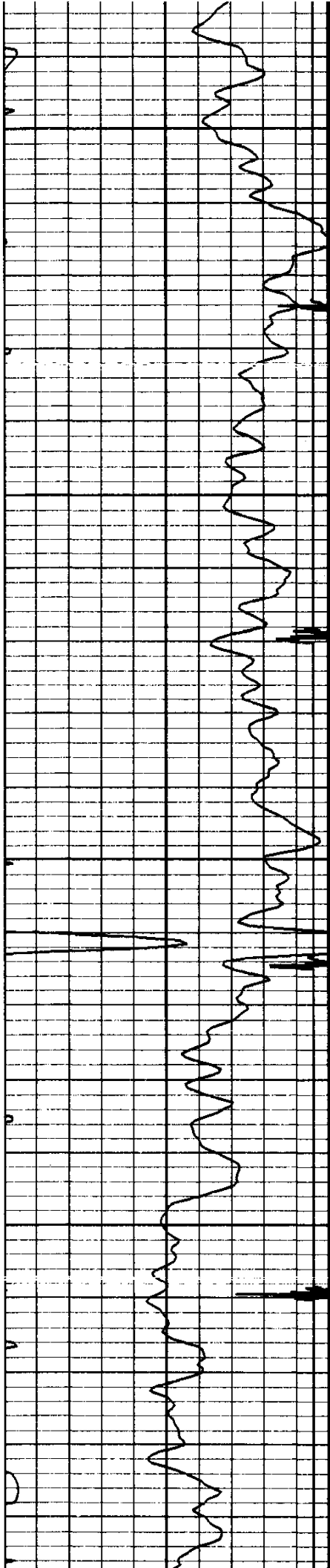




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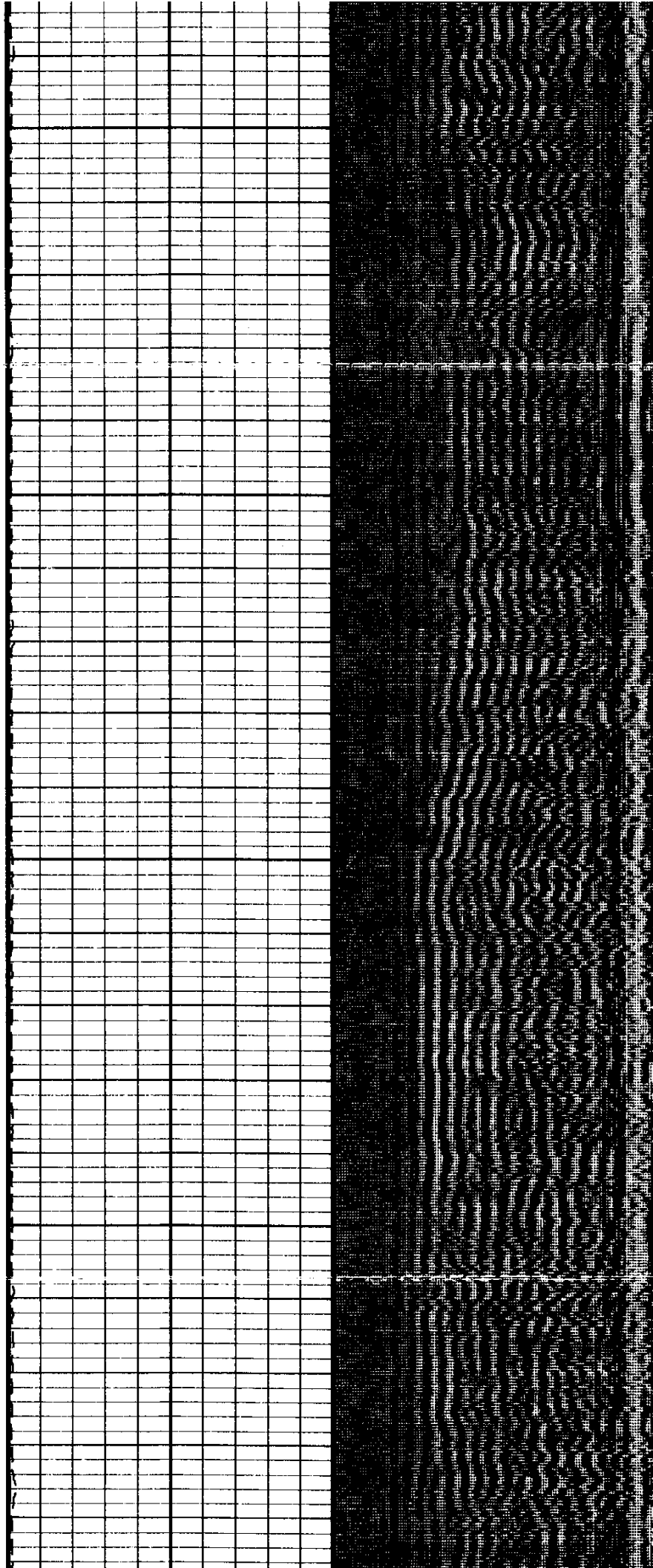
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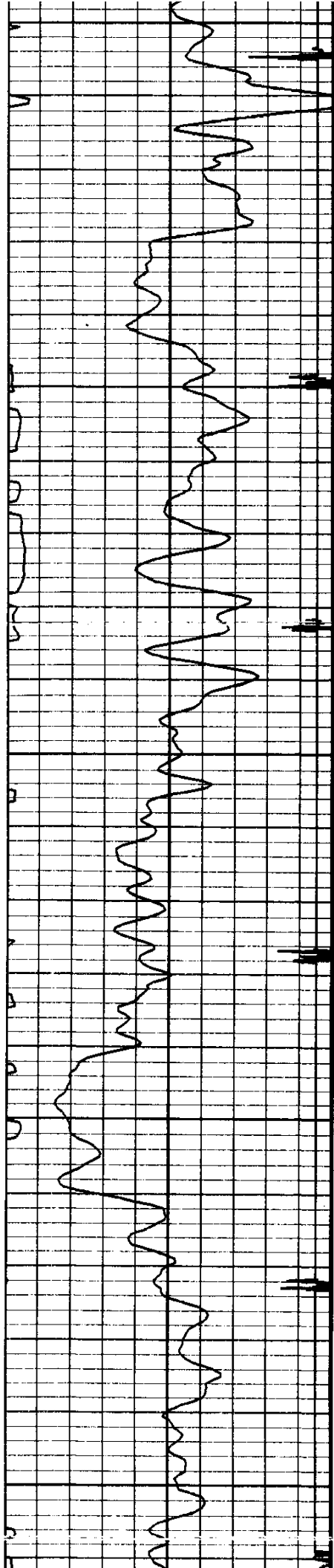




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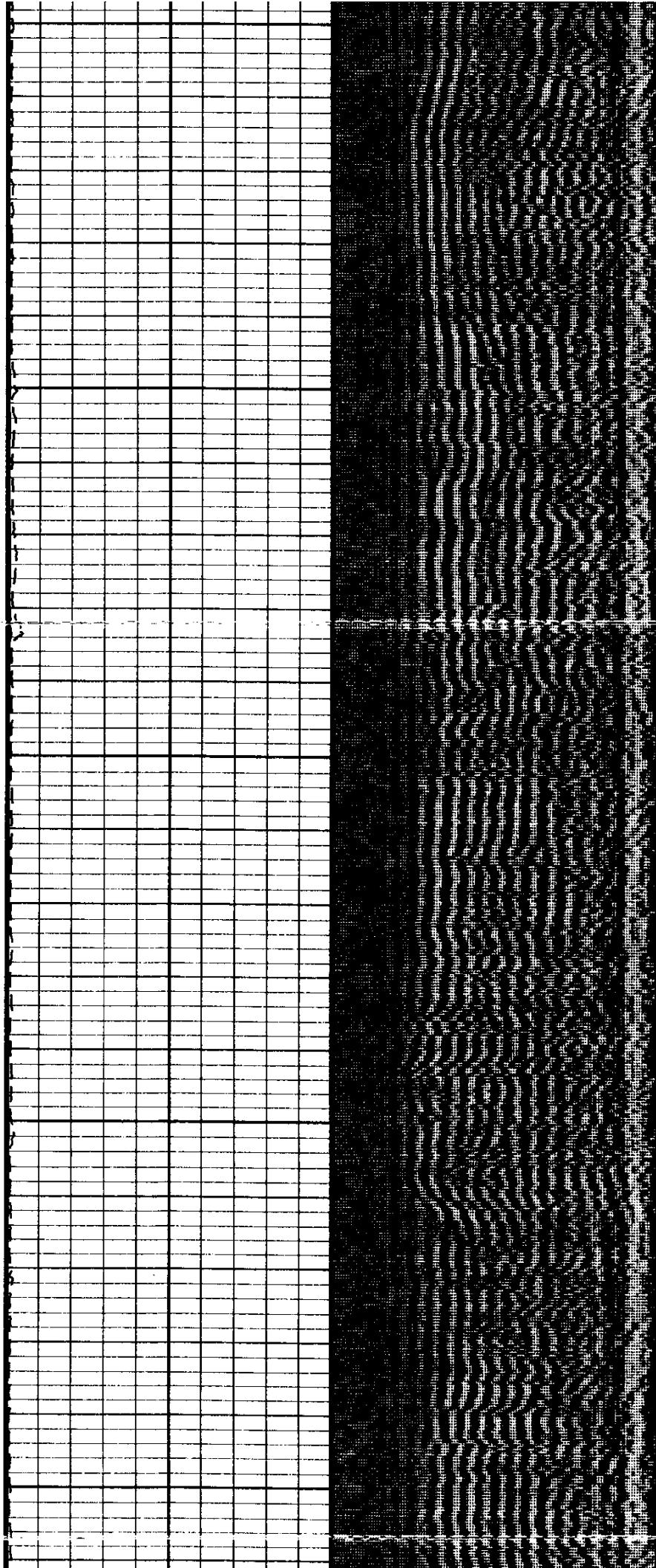


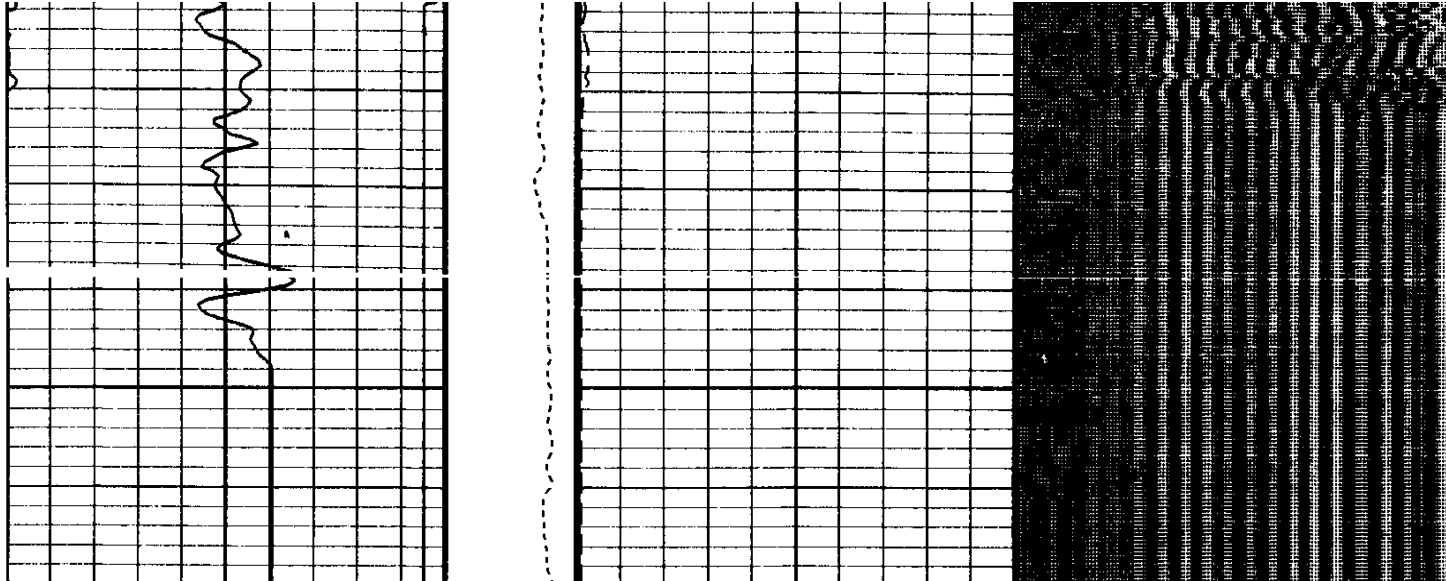


7200

7300

7400





Discriminated CCL (CCLD)	Tension (TENS) (LBF)	CBL Amplitude (CBL) (MV)	Min Amplitude Max	VDL Variable Density (VDL) (US)
-19 (V) 1	3000 0	0 100	200	1200
Gamma Ray (GR) (GAPI) 150		CBL Amplitude (CBL) (MV) 20		
Transit Time (TT) (US) 60				

Format: CBL_VDL Vertical Scale: 5" per 100' Graphics File Created: 10-Jun-2008 10:22

OP System Version: 15C0-309 MCM

SCMT-BB SRPC-3525-DEC_2007_OP15 PSPT-A/B SRPC-3525-DEC_2007_OP15

<<<SCMT Cement Evaluation Information Summary>>>

Sonde Serial Number	SCMS-CB 8195		
Current Casing Size	4.50000 IN		
Casing Weight	11.6000 LB/F		
Expected CBL Amplitude in Free Pipe Section	80 MV	Minimum Sonic Amplitude	0.572557 MV (100% Cement) 1.53770 MV (80% Cement)
		MAP Minimum Sonic Amplitude	4.27364 MV (100% Cement) 8.02657 MV (80% Cement)
Master Calibration (Normalization)		Before Calibration (Adjustment)	
Date of Master Calibration	7-FEB-2005		
CBL Correction Factor	0.0655663	CBL Adjustment Factor (CBAF)	1.20000
MAP 1 Correction Factor	0.0935772	MAP Adjustment Factor (MPAF)	1.0
MAP 2 Correction Factor	0.106967		
MAP 3 Correction Factor	0.106098		
MAP 4 Correction Factor	0.106723		
MAP 5 Correction Factor	0.106564		
MAP 6 Correction Factor	0.116069		
MAP 7 Correction Factor	0.117697		
MAP 8 Correction Factor	0.0625997		

Parameters

DLIS Name	Description	Value
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SCMT-BB: Slim Cement Mapping Tool, 1-11/16 OD

BILI	Bond Index Level for Zone Isolation	0.8	
CB3D	SCMT CBL 3 ft Peak Detection Mode	PEAK	
CB3G	SCMT CBL 3 ft Peak Detection T0 Delay and Noise Gate	228.549	US
CB3T	SCMT CBL 3 ft Fixed Threshold Level	20	MV
CB5D	SCMT CBL 5 ft Peak Detection Mode	PEAK	
CB5G	SCMT CBL 5 ft Peak Detection T0 Delay and Noise Gate	342.549	US
CB5T	SCMT CBL 5 ft Fixed Threshold Level	20	MV
CBLG	CBL Gate Width	40	US
CBRA	CBL LQC Reference Amplitude in Free Pipe	80	MV
CMCF	CBL Cement Type Compensation Factor	0.105354	
CMTG	SCMT Slow Channel Multiplexer Mode	SCAN	
CMTM	SCMT Operating Mode	LOG	
CSCS	SCMT Slow Channel Index	VCC	
CTHI	Casing Thickness	0.255617	IN
DTF	Delta-T Fluid	205	US/F
FATT	Acoustic Attenuation due to Fluid	0	DB/F
FCF	CBL Fluid Compensation Factor	1	
GOBO	Good Bond	1.5377	MV
MAPD	SCMT MAP Peak Detection Mode	PEAK	
MAPG	SCMT MAP Peak Detection T0 Delay and Noise Gate	171.549	US
MAPT	SCMT MAP Fixed Threshold Level	30	MV
MATT	Maximum Attenuation	9.47363	DB/F
MCCF	MAP Cement Type Compensation Factor	0.237802	
MCI	Minimum Cemented Interval for Isolation	1.25	FT
MMSA	MAP Minimum Sonic Amplitude	4.27364	MV
MSA	Minimum Sonic Amplitude	0.572557	MV
PEDE	Peak Detection On/Off Switch in Playback	OFF	
VDLG	VDL Manual Gain	5	
ZCMT	Acoustic Impedance of Cement	3.22	MRAY
System and Miscellaneous			
CSIZ	Current Casing Size	4.500	IN
CWEI	Casing Weight	11.60	LB/F
DFD	Drilling Fluid Density	-50000.00	LB/G
TD	Total Depth	-50000	FT

Output DLIS Files

DEFAULT SCMT_PSP_038LUP FN:22 PRODUCER 10-Jun-2008 10:22

Company: KERR-MCGEE OIL AND GAS ONSHORE LP

Schlumberger

Well: CARMA 12-35

Field: WATTENBERG

County: WELD

State: COLORADO

CEMENT BOND LOG

GAMMA RAY CCL