

# CEMENT BOND LOG

# Mesa Wireline

Company ENCANA OIL & GAS (USA) INC.  
Well COSTIGAN 43-20  
Field WATTENBERG  
County WELD  
State COLORADO

Company ENCANA OIL & GAS (USA) INC.  
Well COSTIGAN 43-20  
Field WATTENBERG  
County WELD State COLORADO

Location: API #: 05-123-30058-0000  
SHL: 966' FSL & 1078' FEL  
BHL: 1980' FSL & 510' FEL  
SEC. 20 TWP. 1N RGE. 68W  
Permanent Datum GROUND LEVEL Elevation 5212'  
Log Measured From KELLY BUSHING = 13'  
Drilling Measured From KELLY BUSHING  
Other Services  
Elevation  
K.B. 5224'  
D.F. 5223'  
G.L. 5212'

Date	7 JULY 2011		
Run Number	ONE		
Depth Driller	8758'		
Depth Logger	8717'		
Bottom Logged Interval	8717'		
Top Log Interval	3850'		
Open Hole Size	7.875"		
Type Fluid	WATER		
Density / Viscosity	~8.3#		
Max. Recorded Temp.	270 DEG F		
Estimated Cement Top	4270'		
Time Well Ready	N/A		
Time Logger on Bottom	N/A		
Equipment Number	10901 PR2		
Location	AULT. CO		
Recorded By	B. MAYNARICH		
Witnessed By	T. MAJORS		
Borehole Record			
Run Number	Bit	From	To
ONE	12.25"	0'	1300'
TWO	7.875"	0'	8758'
Tubing Record			
Casing Record	Size	Wgt/Ft	Top
Surface String	8.625"	24#	0'
Prot. String			
Production String	4.5"	11.6#	0'
Liner			

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

## Comments

LOG CORRELATED TO PSI HIGH RESOLUTION INDUCTION LOG DATED 26 JUNE 2011  
SHORT JOINT 7630' - 7652'

WE APPRECIATE YOUR BUSINESS, MESA WIRELINE LLC, GRAND JUNCTION CO. (970) 257-0458

## SURFACE CASING PASS

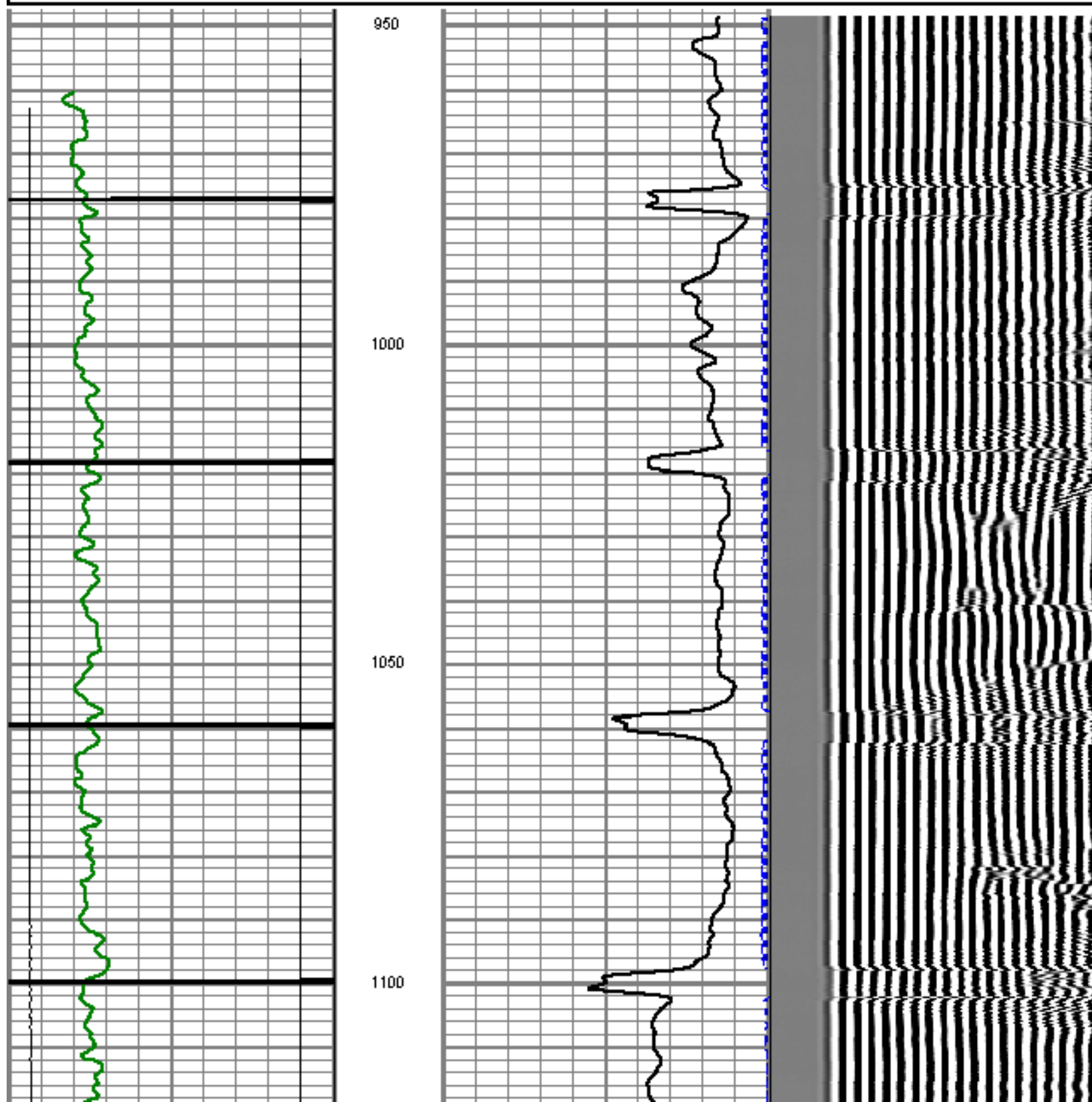


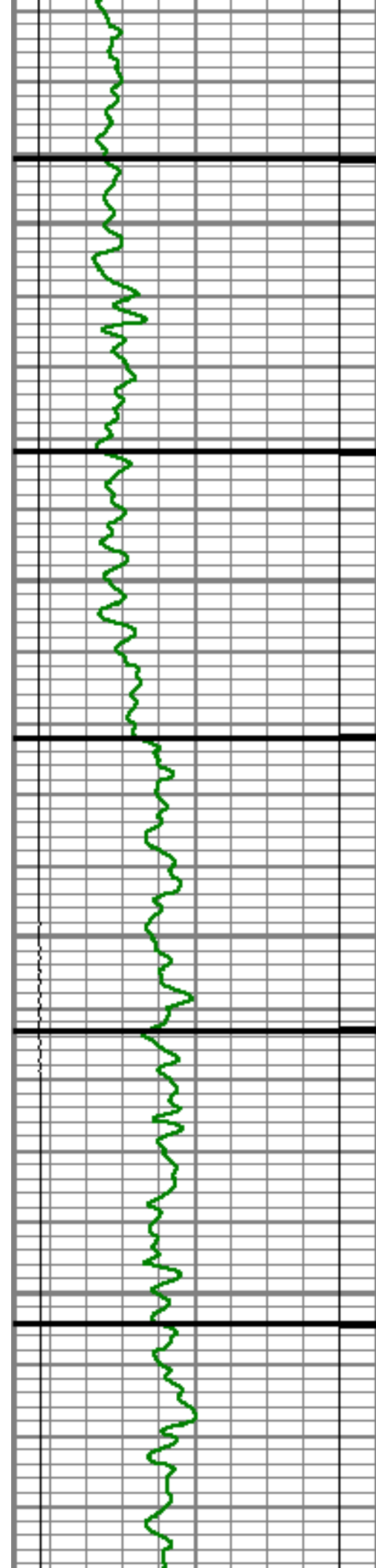
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Dataset Pathname: pass8  
Presentation Format: dcbl\_prb  
Dataset Creation: Thu Jul 07 11:14:38 2011 by Log Std Casedhole 09061  
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	300
0	LTEN (lb)	5000
9	CCL	-1

0	Amplified Amplitude (mV)	20
0	Amplitude (mV)	100
0	TT3 (usec)	280

200 Variable Density 1200



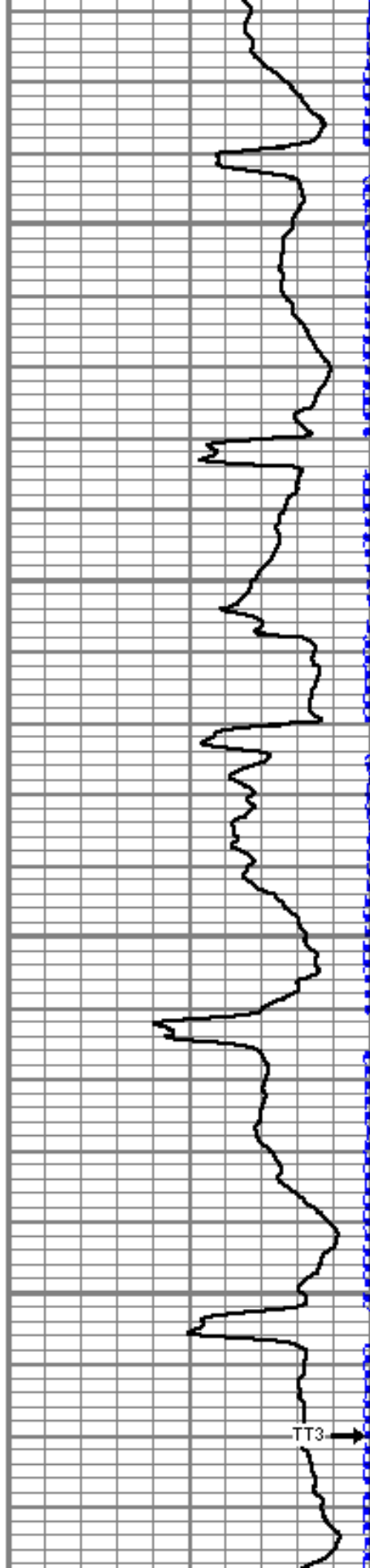


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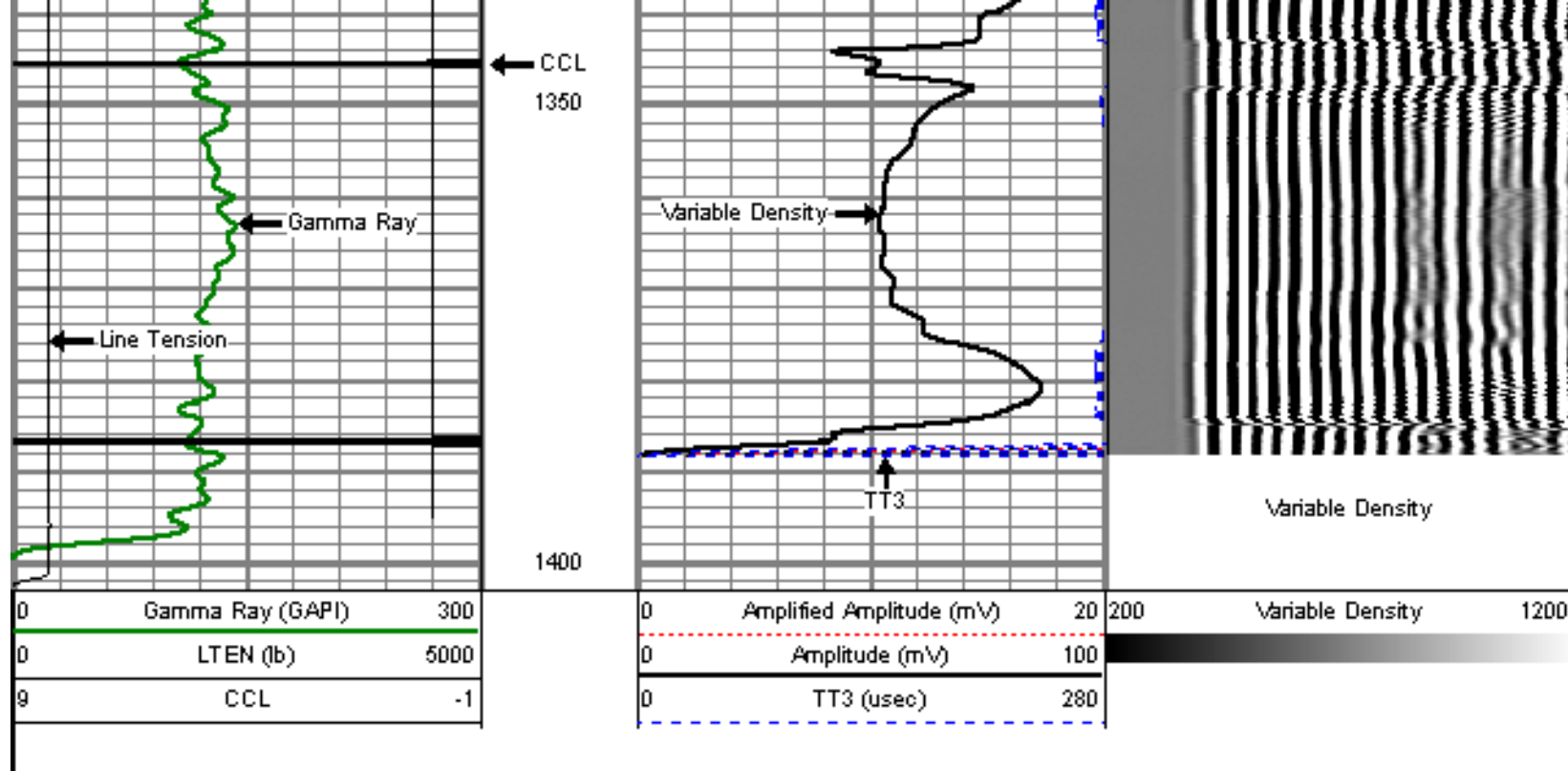
1200

1250

1300



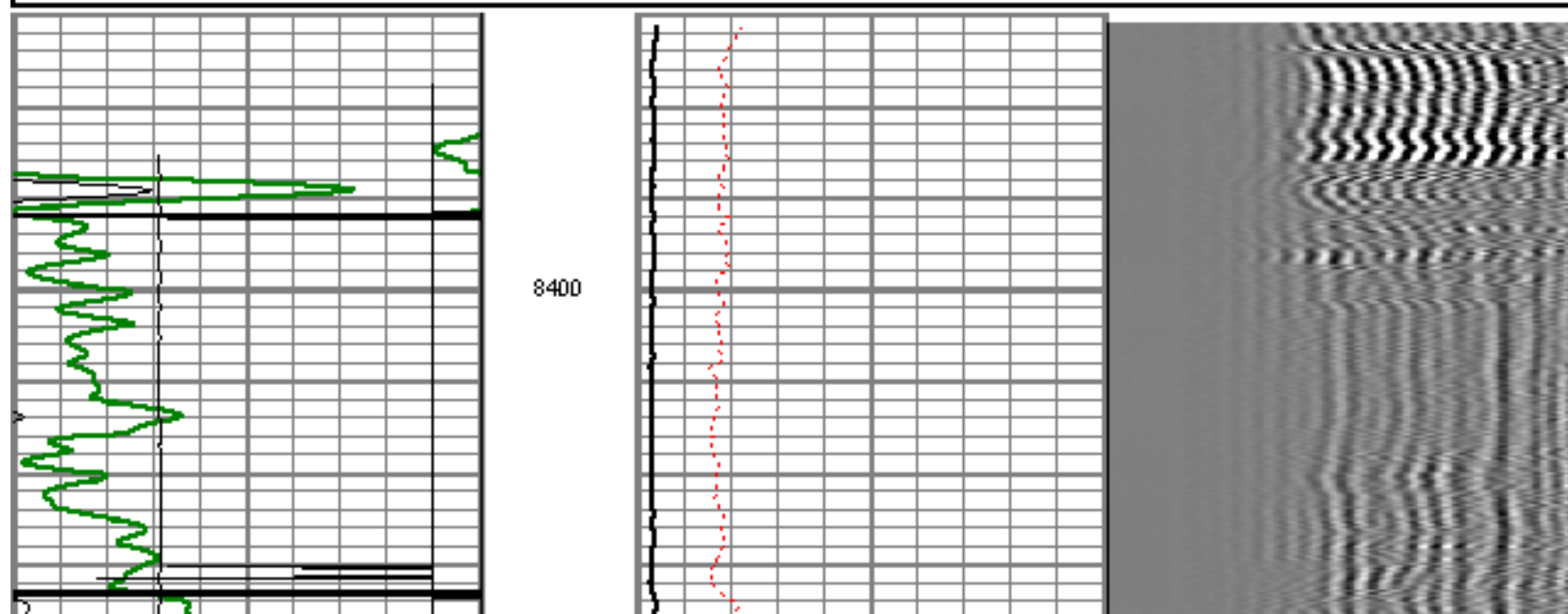
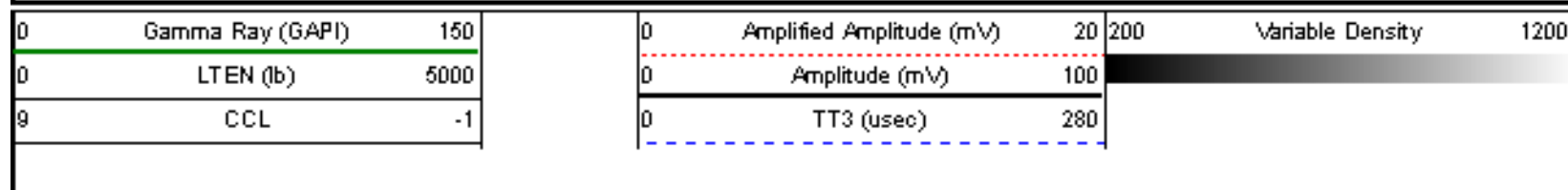
TT3

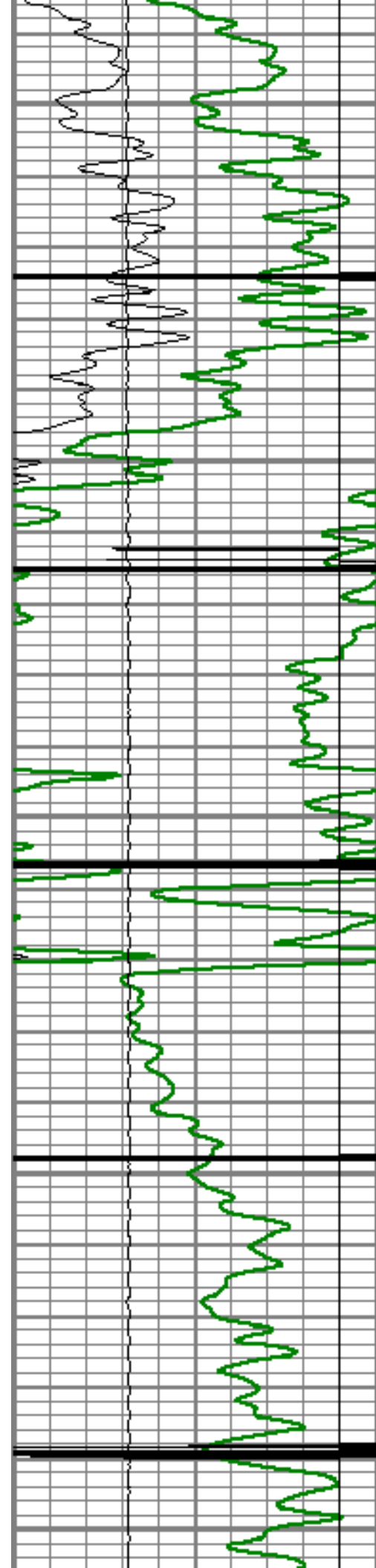


## REPEAT PASS

5" = 100'

Database File: costigan 43-20.db  
 Dataset Pathname: pass6  
 Presentation Format: dobl\_prb  
 Dataset Creation: Thu Jul 07 09:35:51 2011 by Log Std Casedhole 09061  
 Charted by: Depth in Feet scaled 1:240





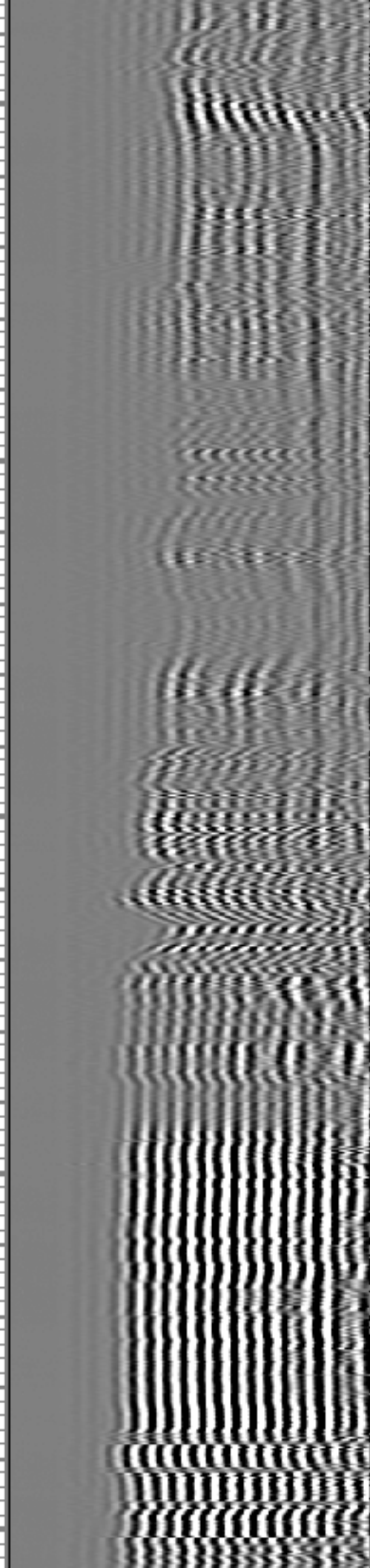
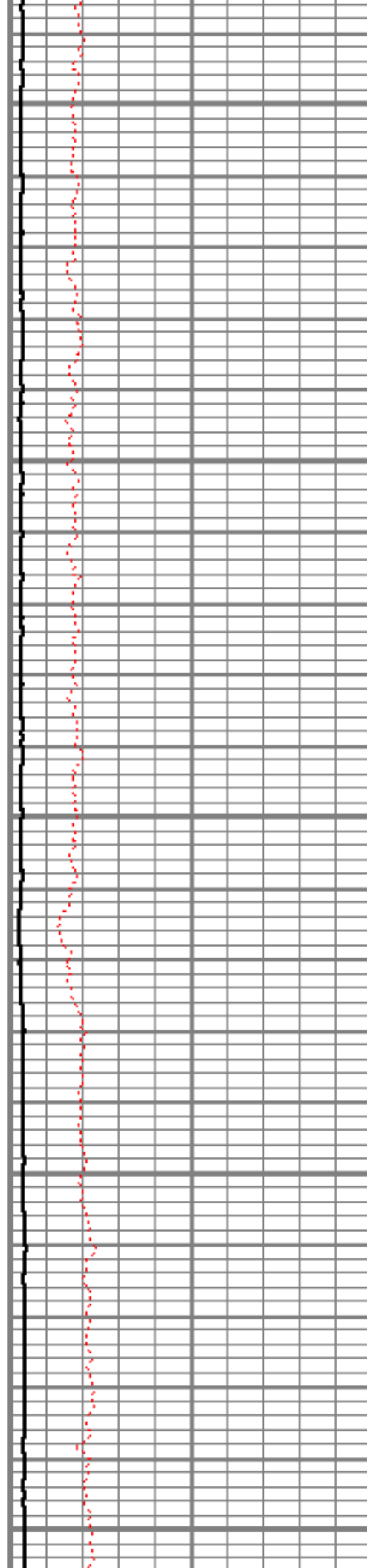
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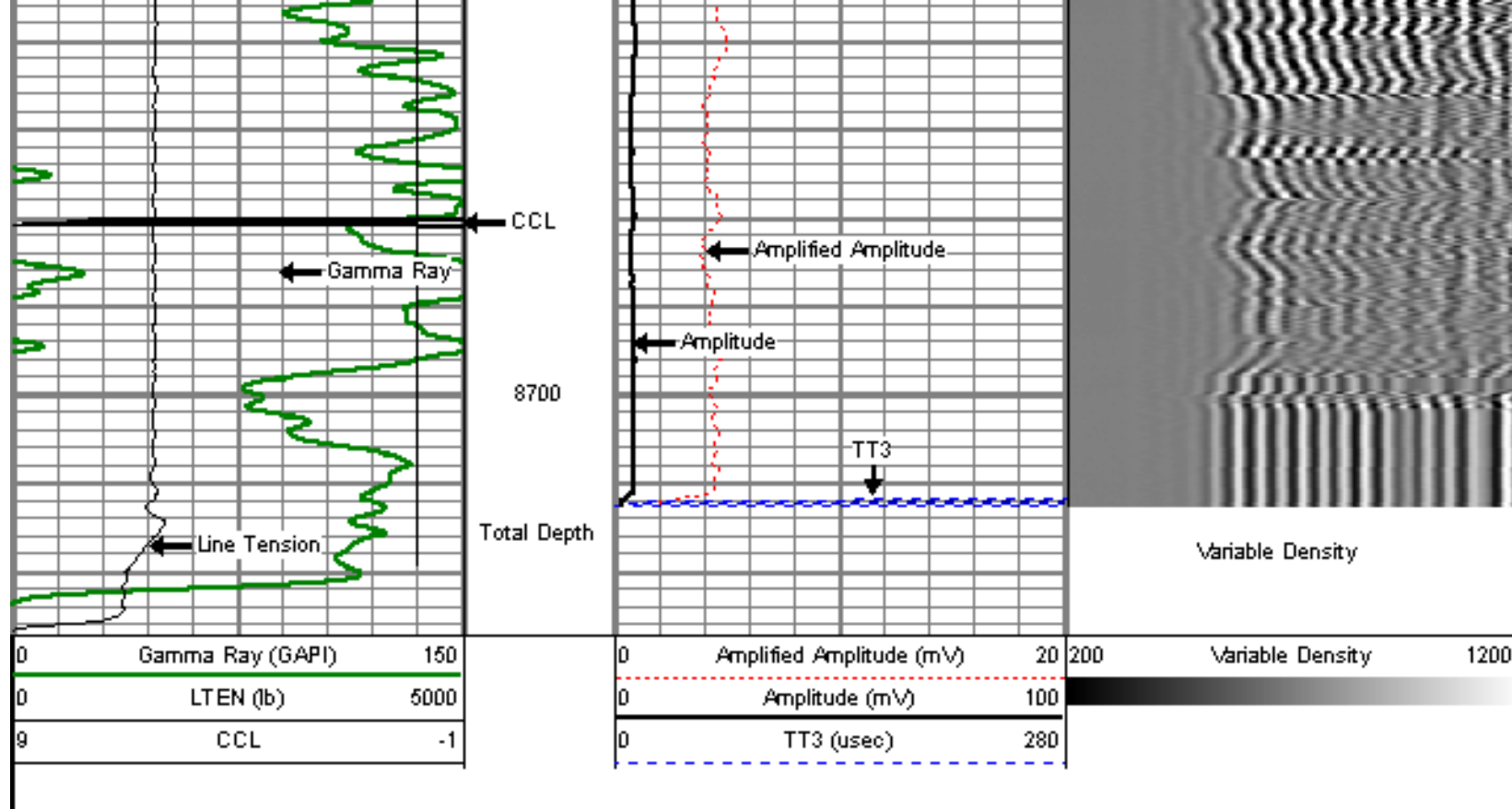
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8600

8650



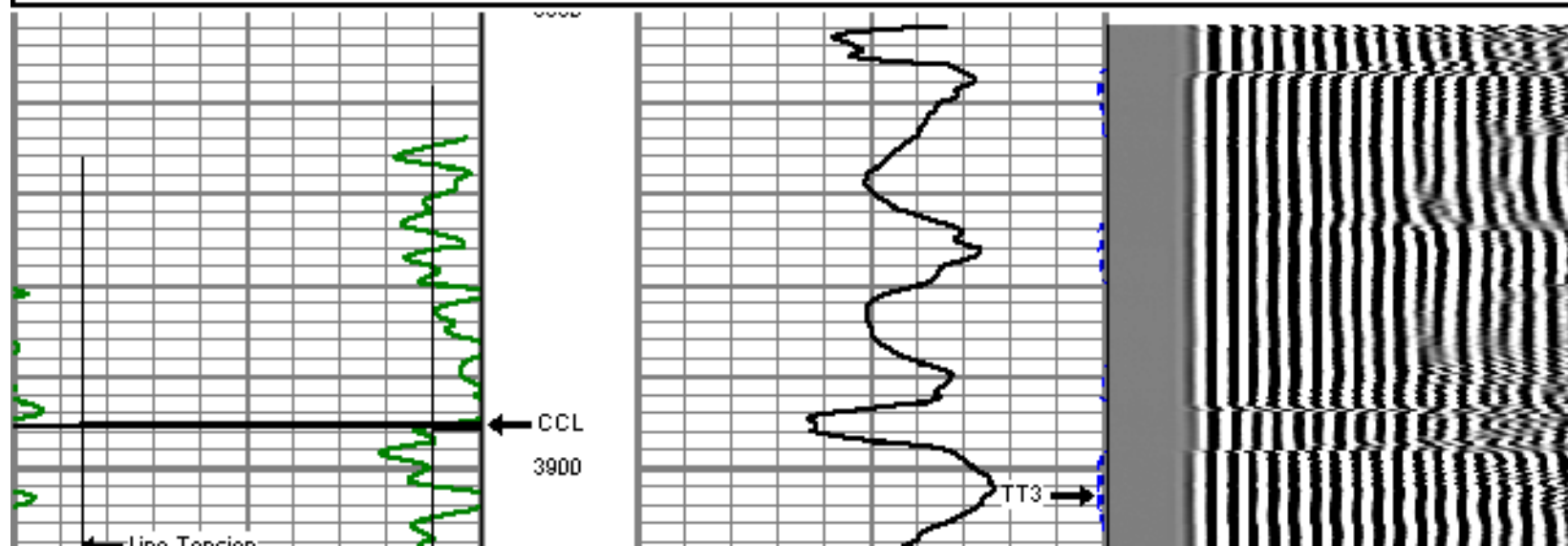
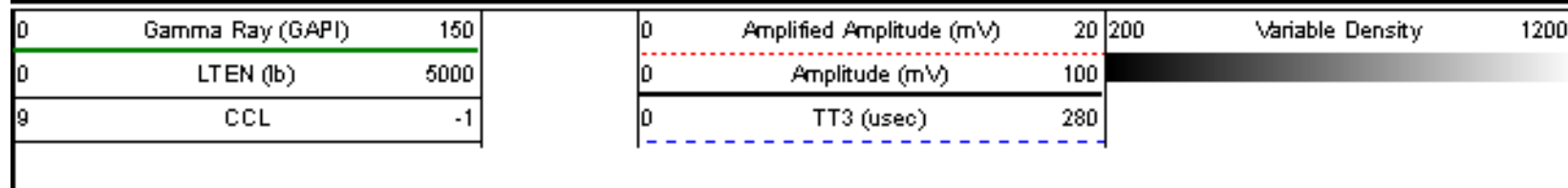


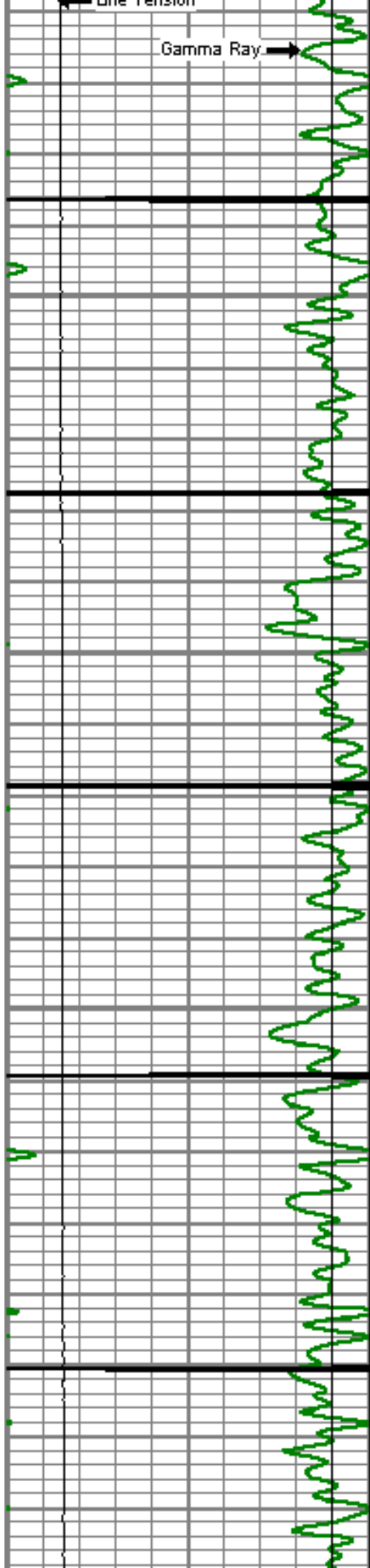


## MAIN PASS

5" = 100'

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 Dataset Pathname: pass7oh  
 Presentation Format: dcbl\_prb  
 Dataset Creation: Thu Jul 07 11:42:19 2011  
 Charted by: Depth in Feet scaled 1:240



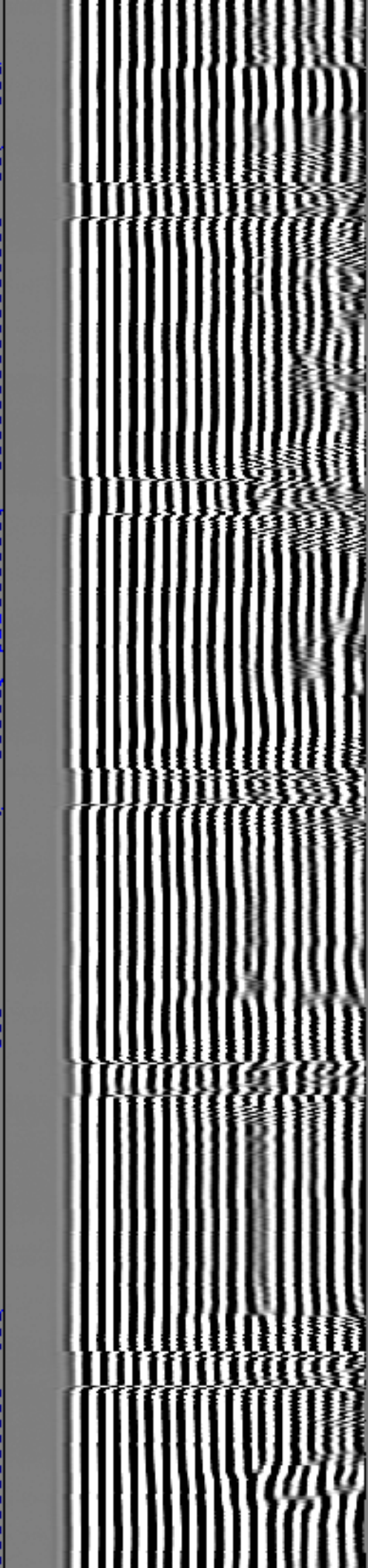
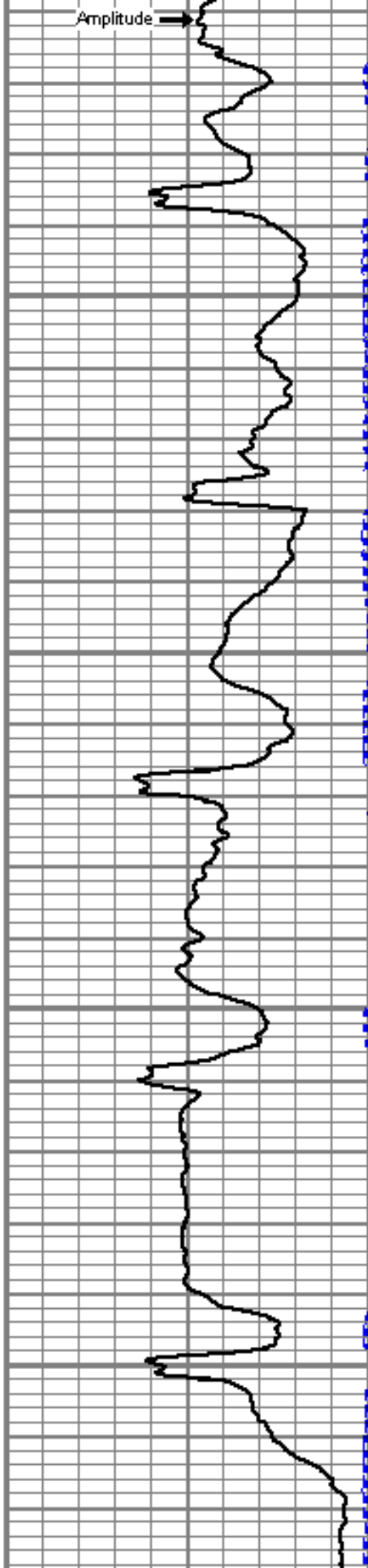


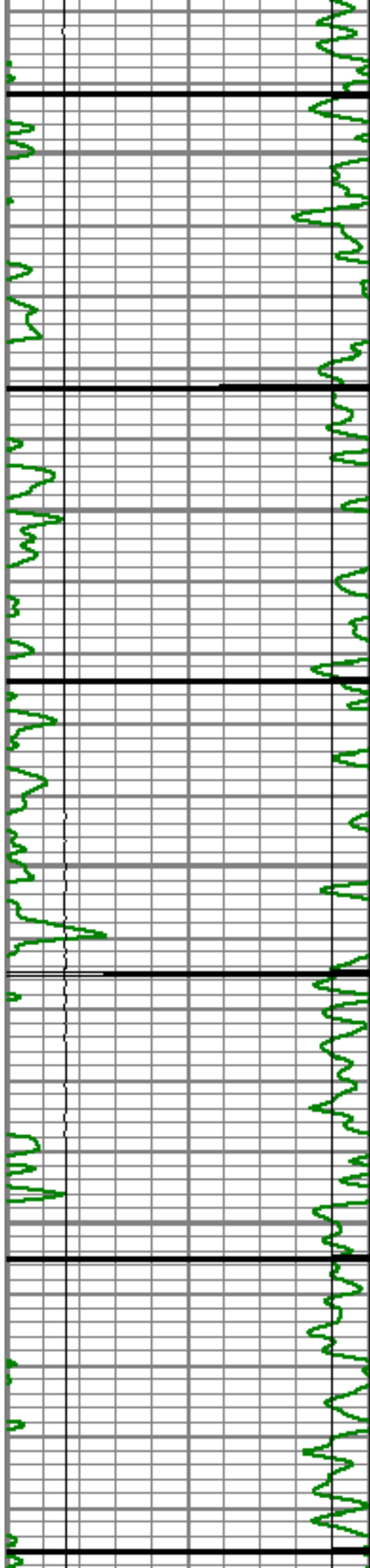
3950

4000

4050

4100





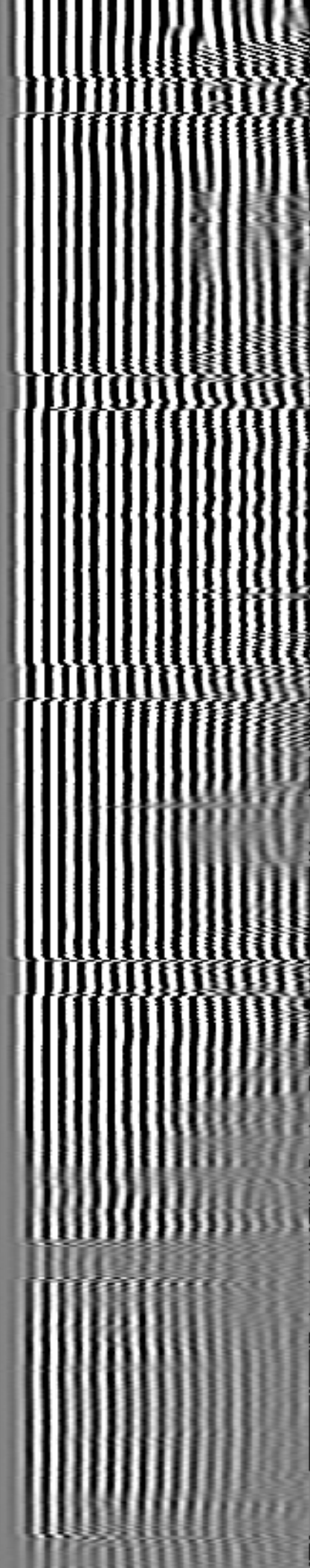
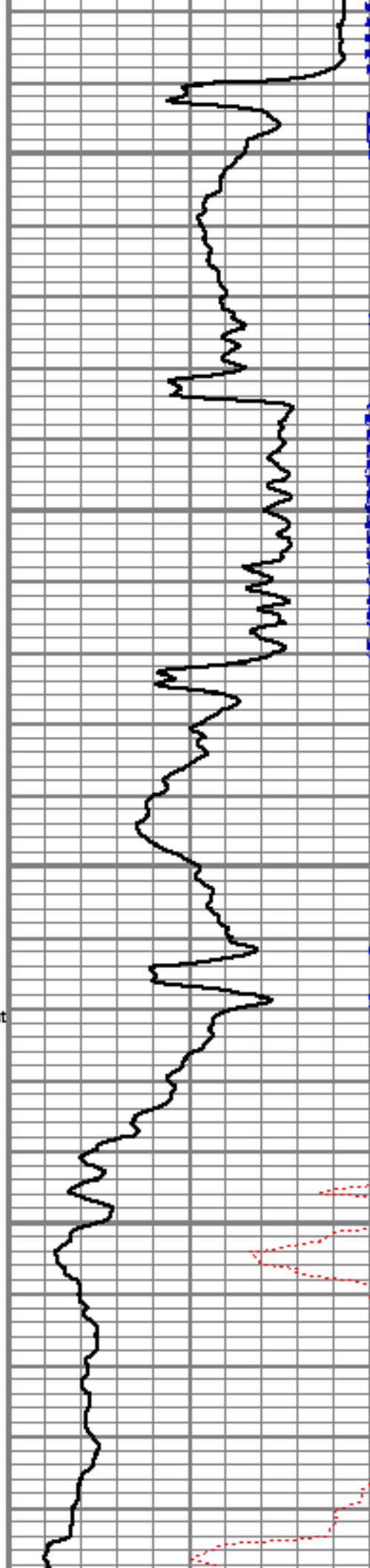
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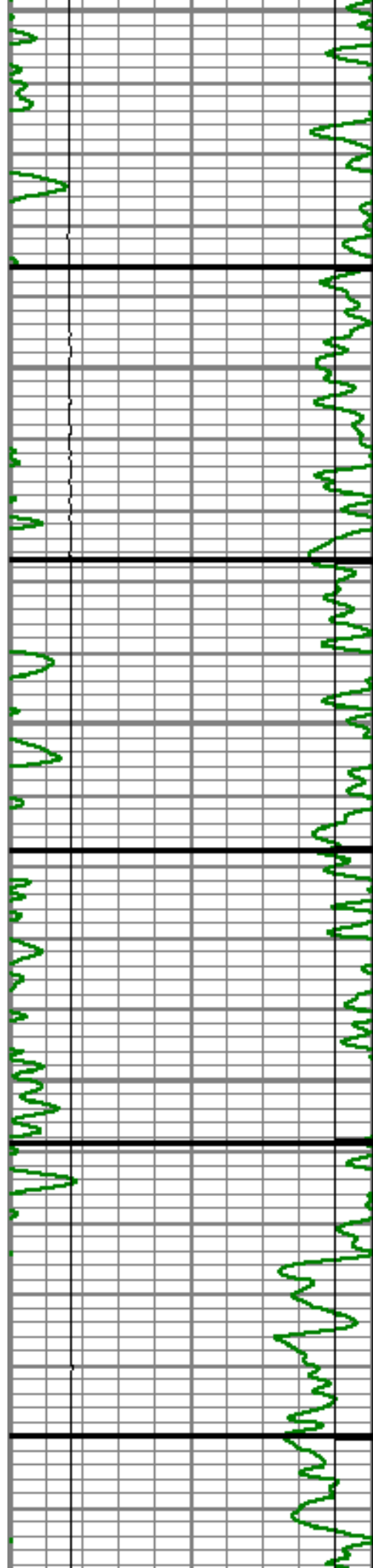
4250

Top of Cement

4300







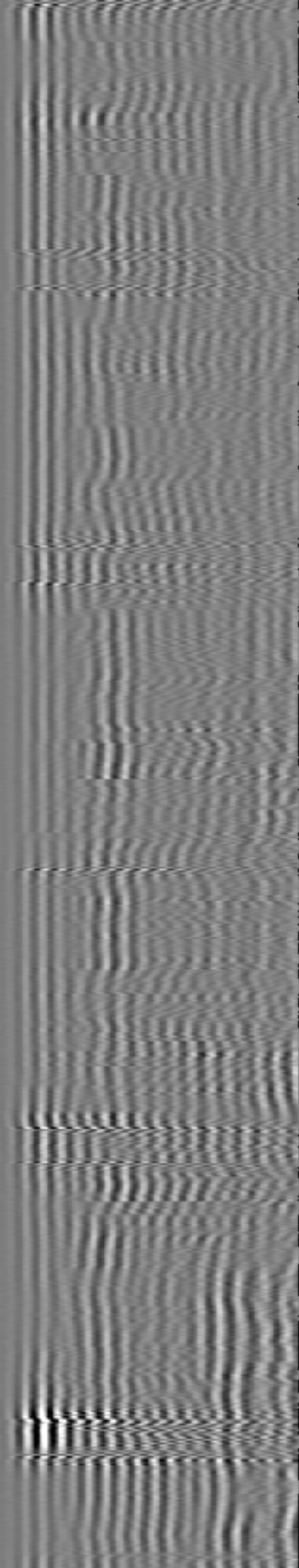
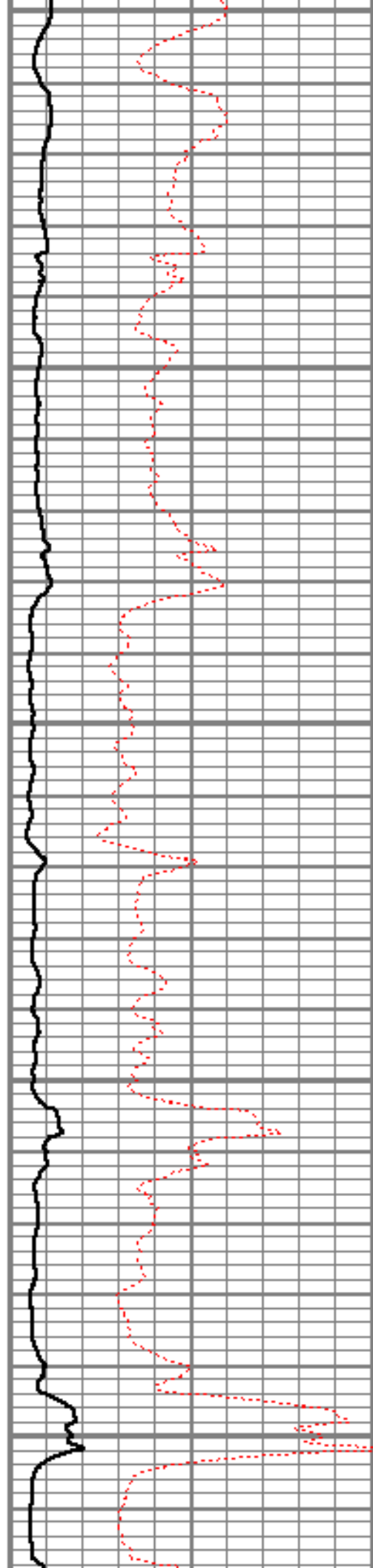
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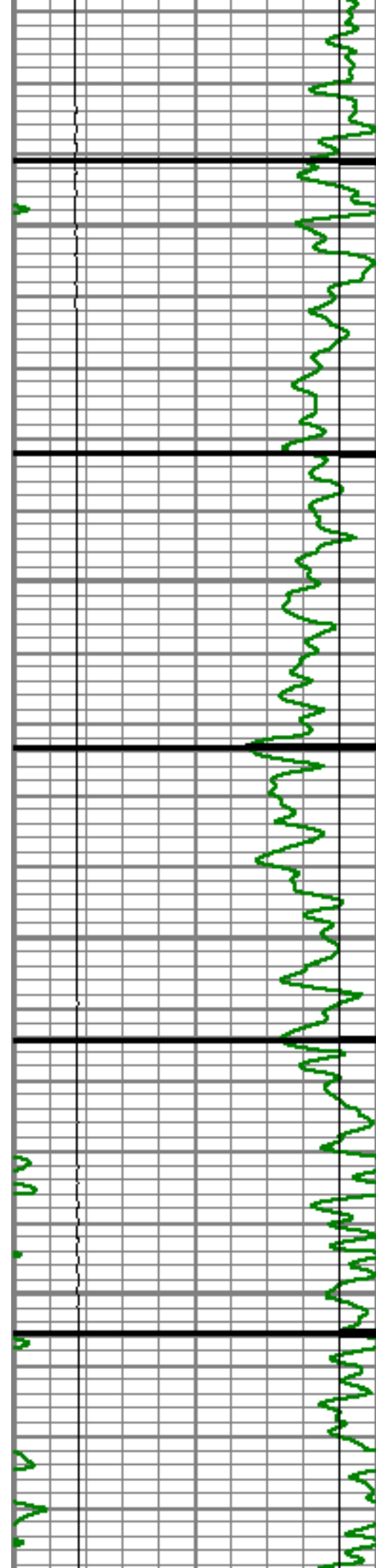
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4450

4500

4550



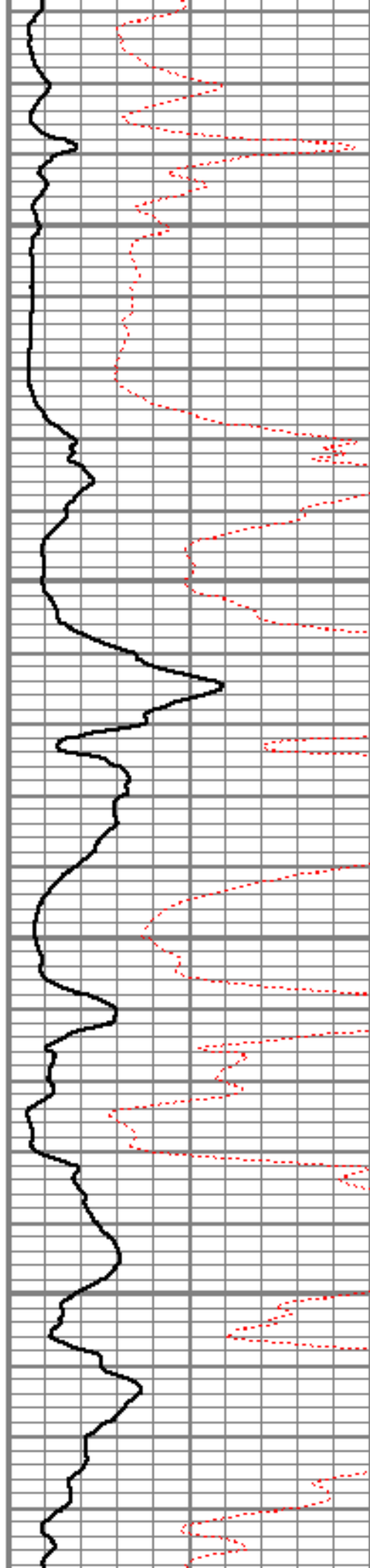


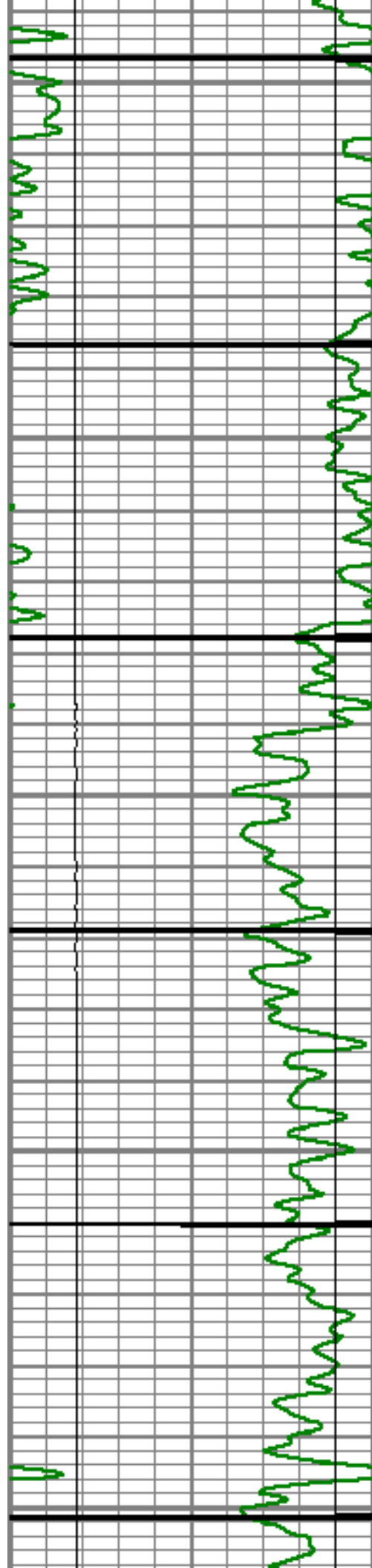
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4650

4700

4750





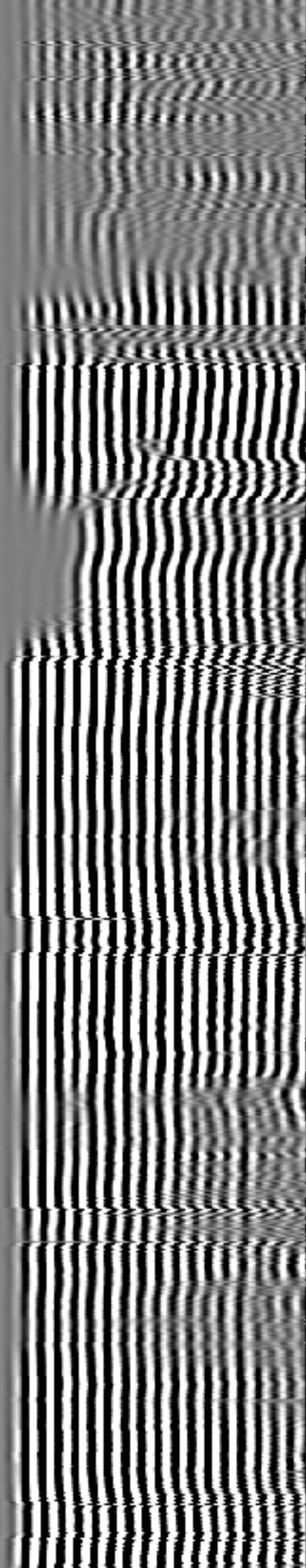
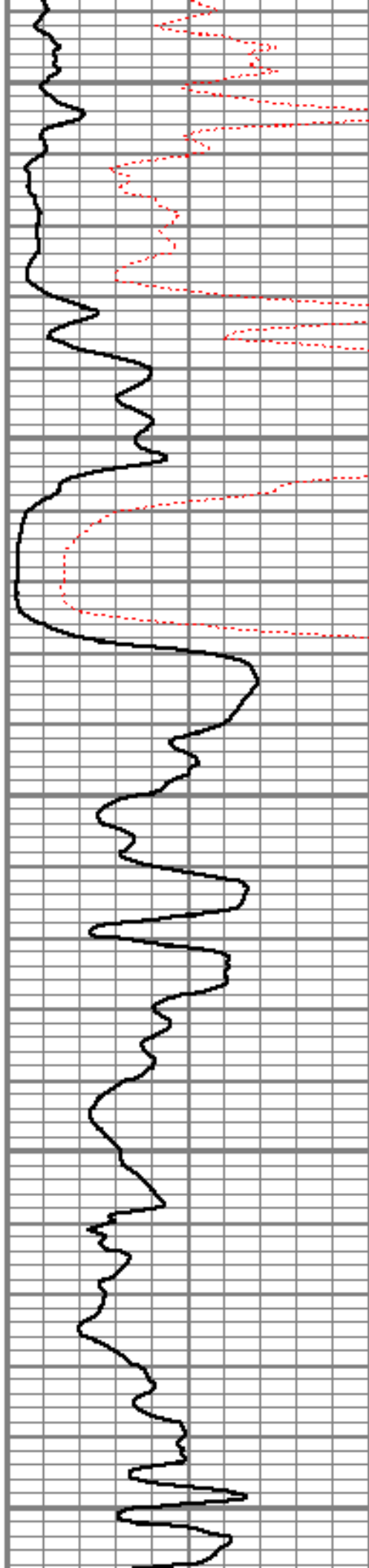
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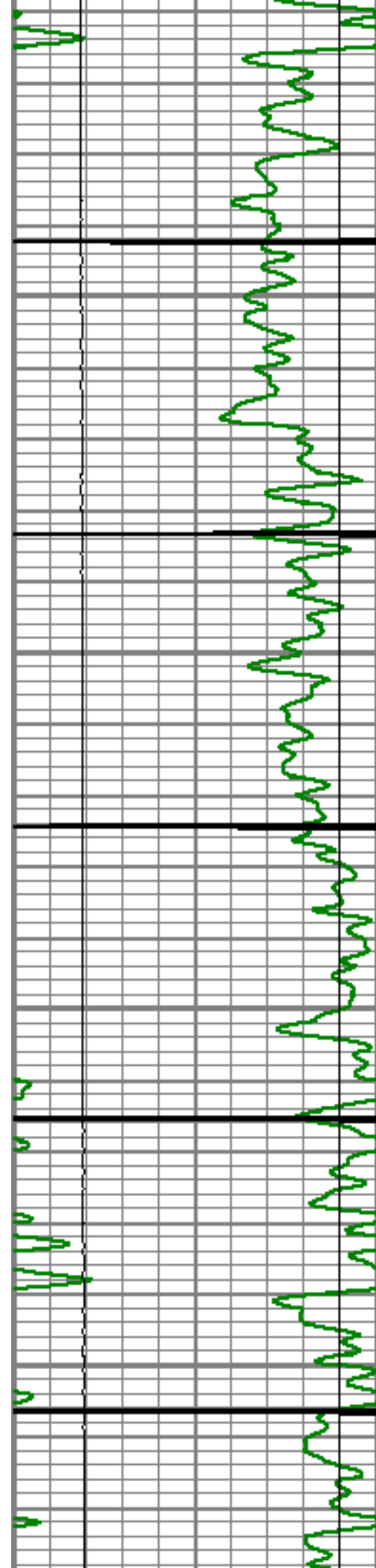
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4950

5000





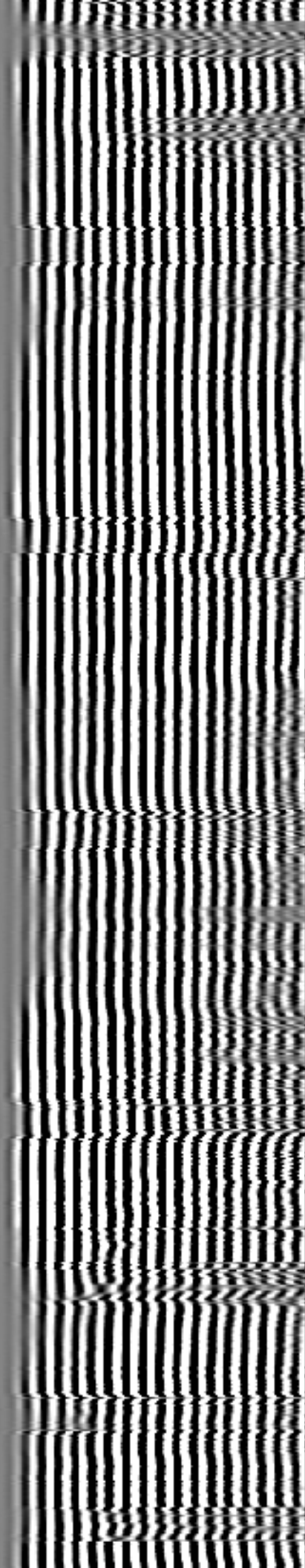
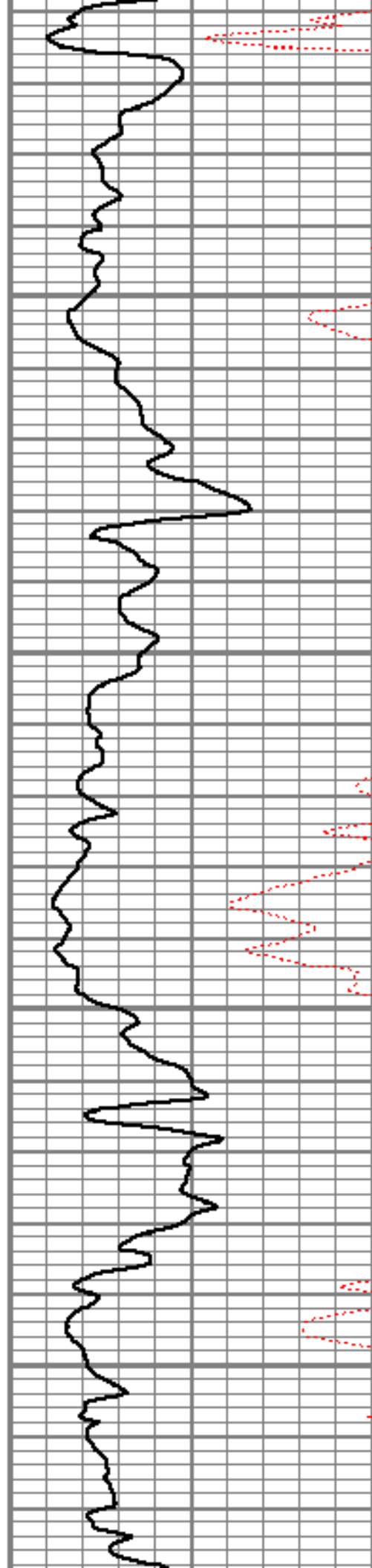


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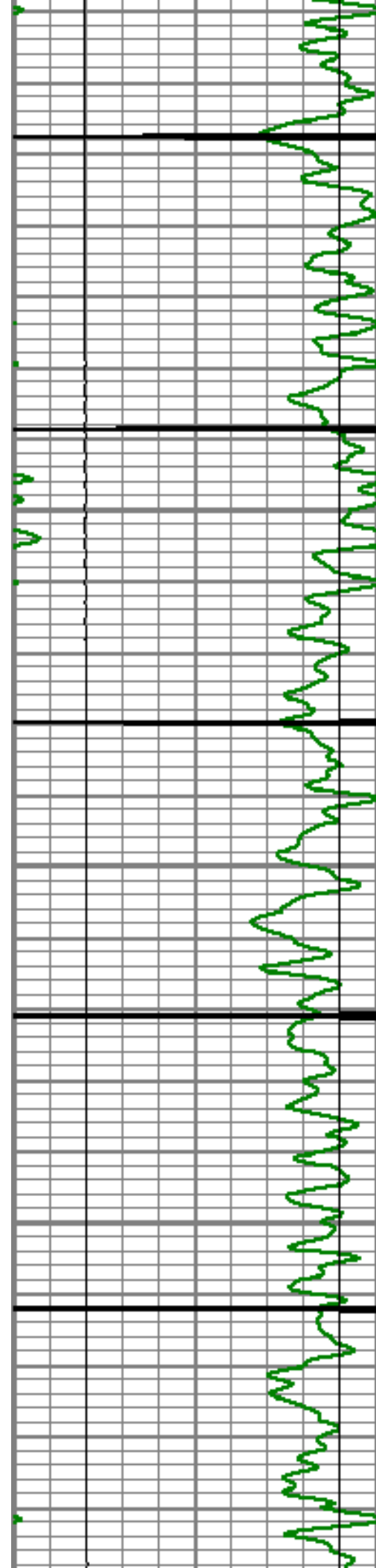
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5200





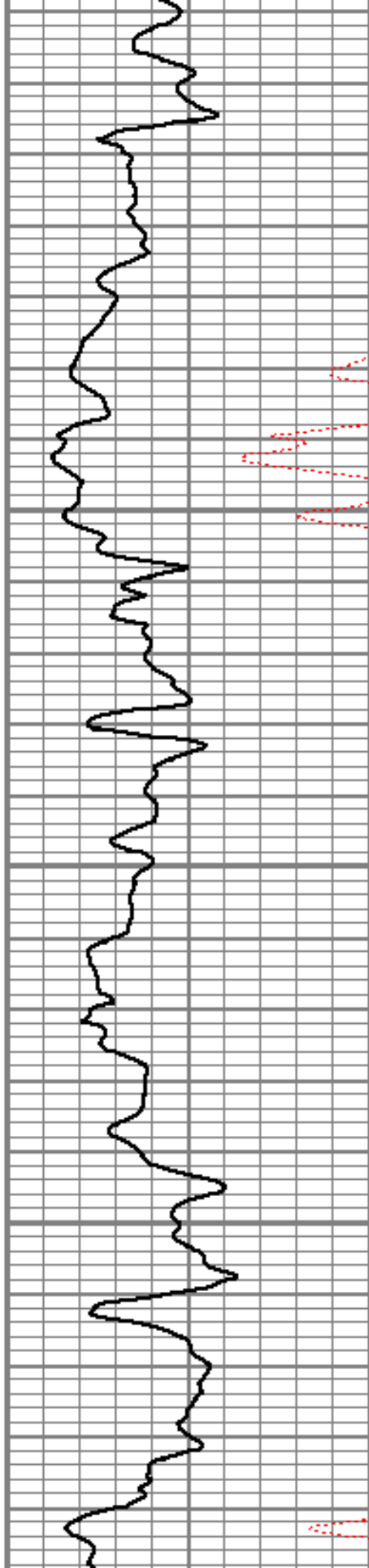


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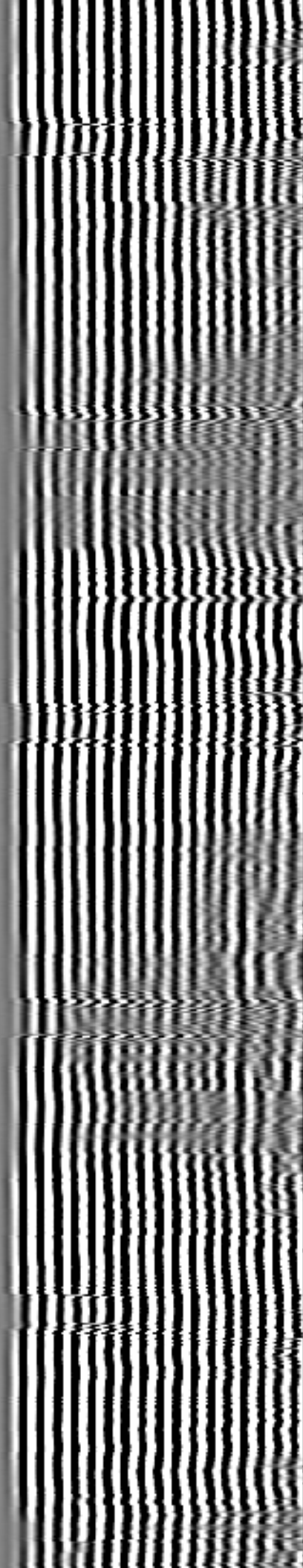
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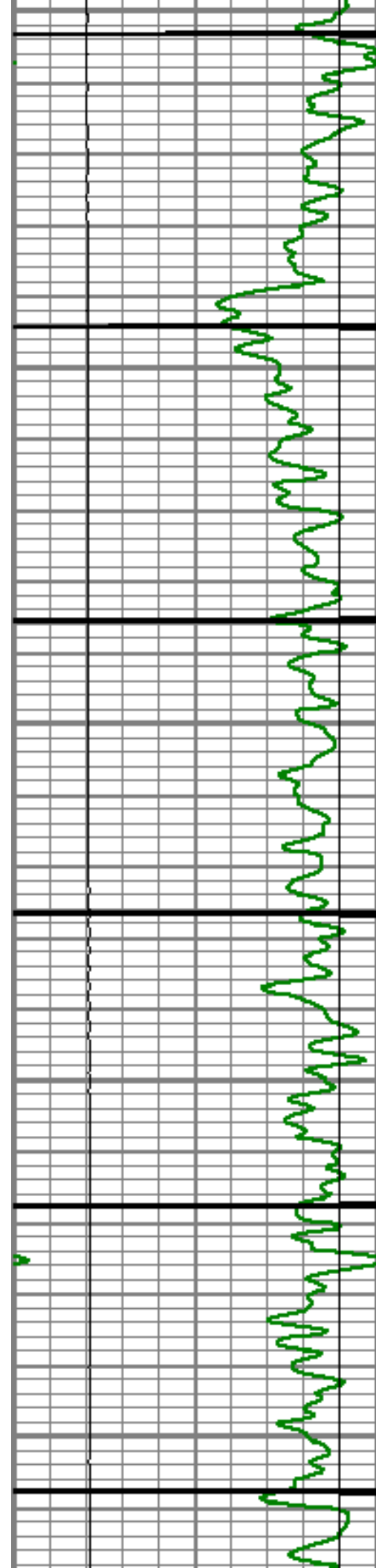
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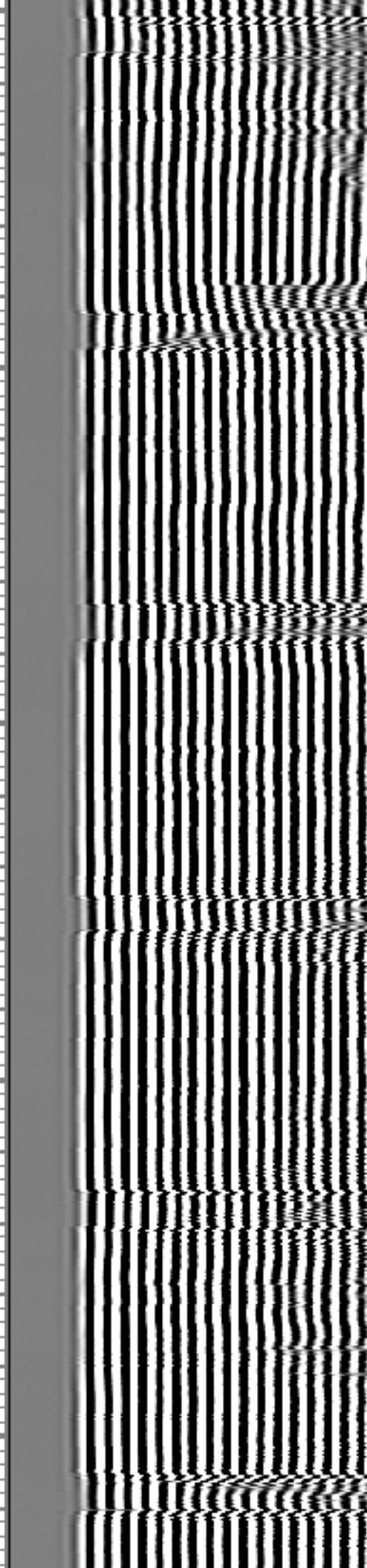
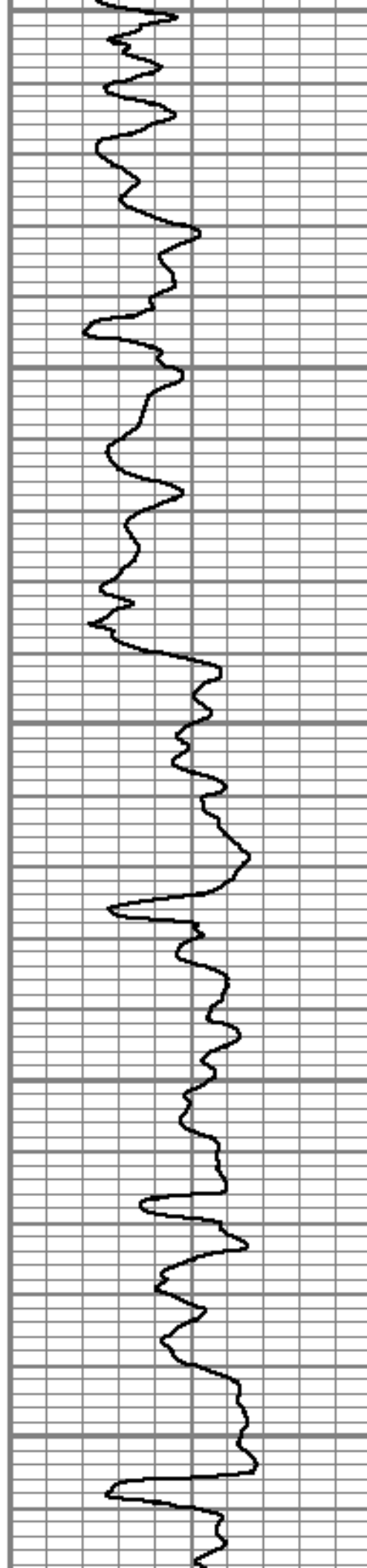
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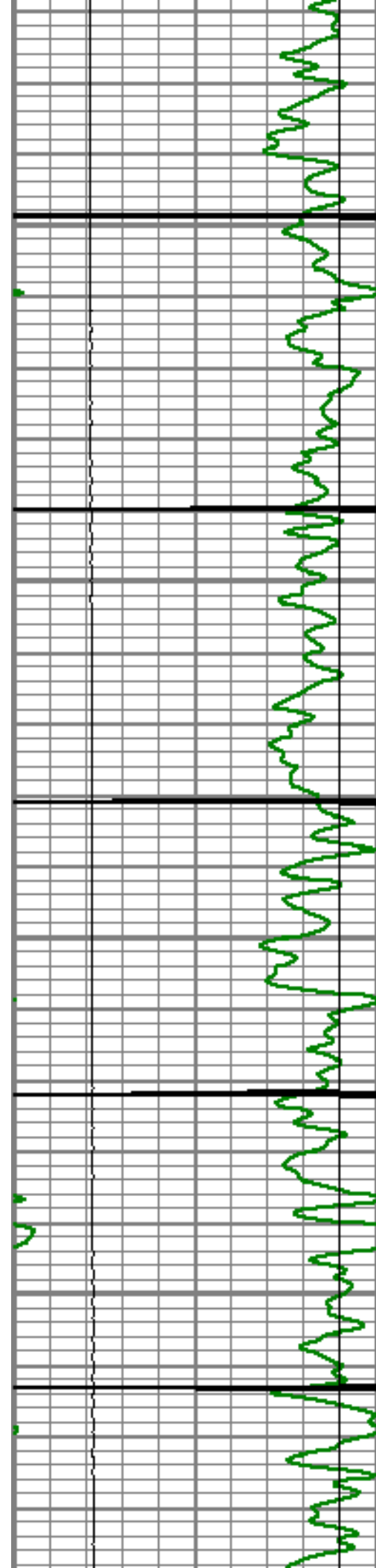
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5650



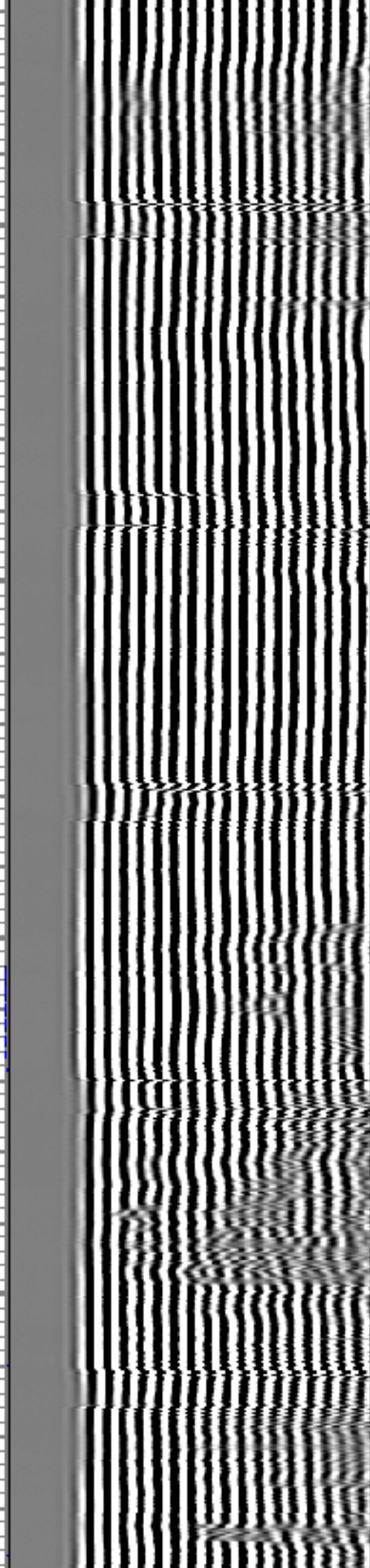
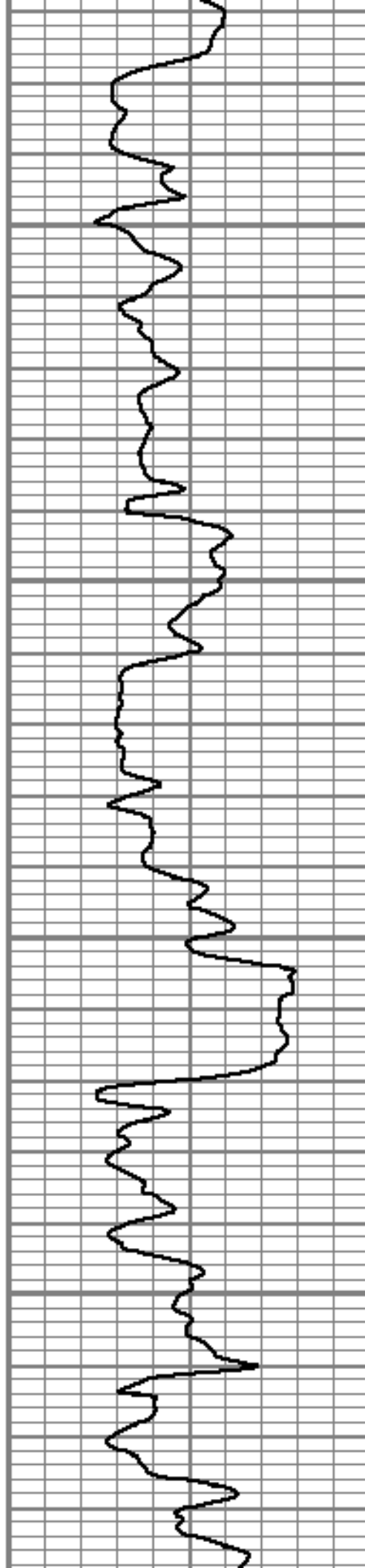


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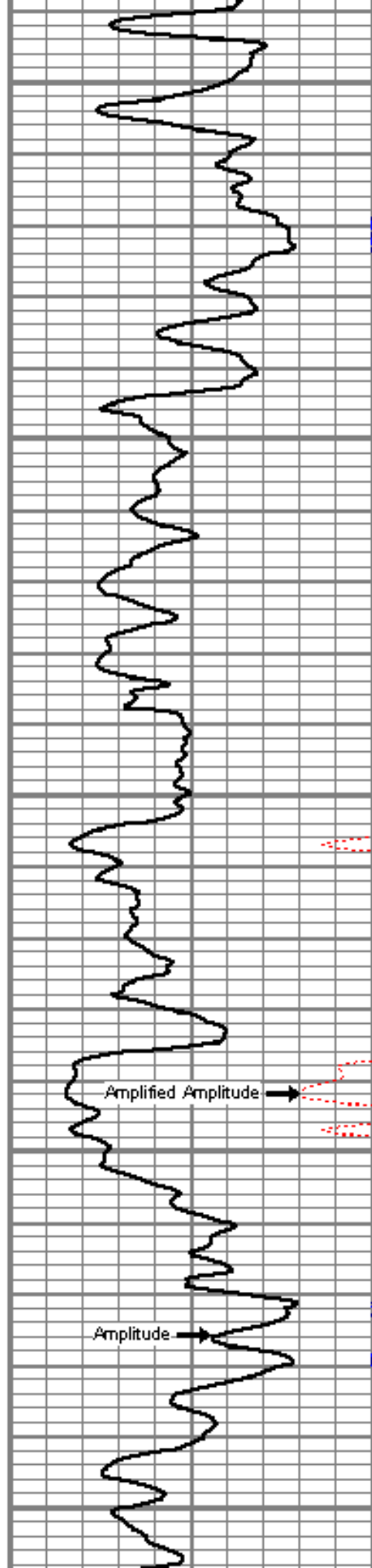
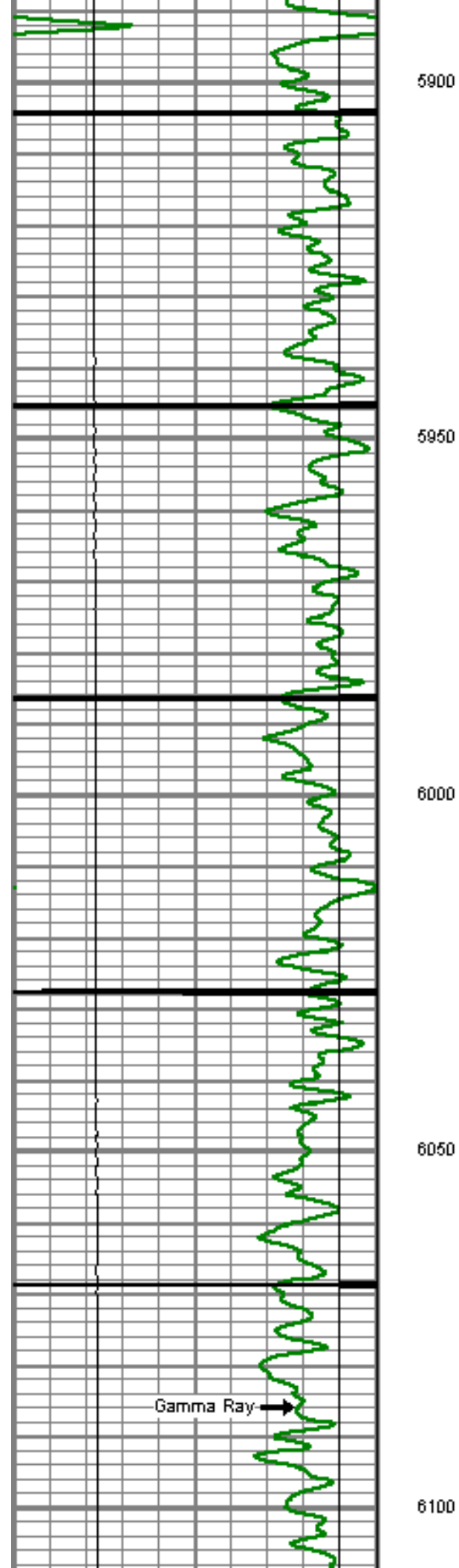
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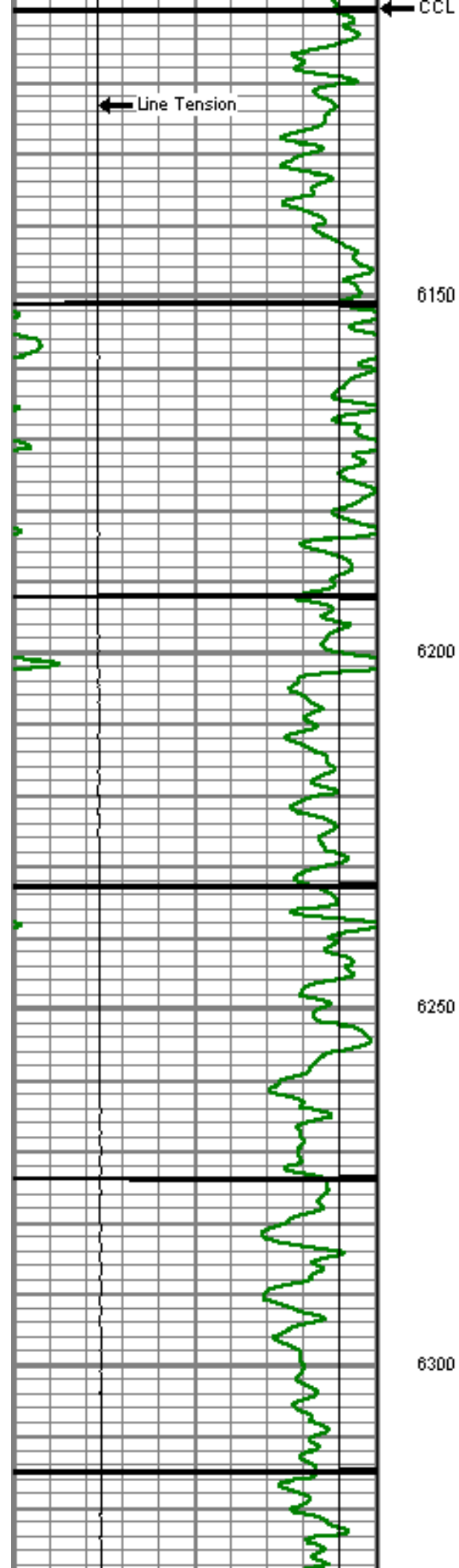
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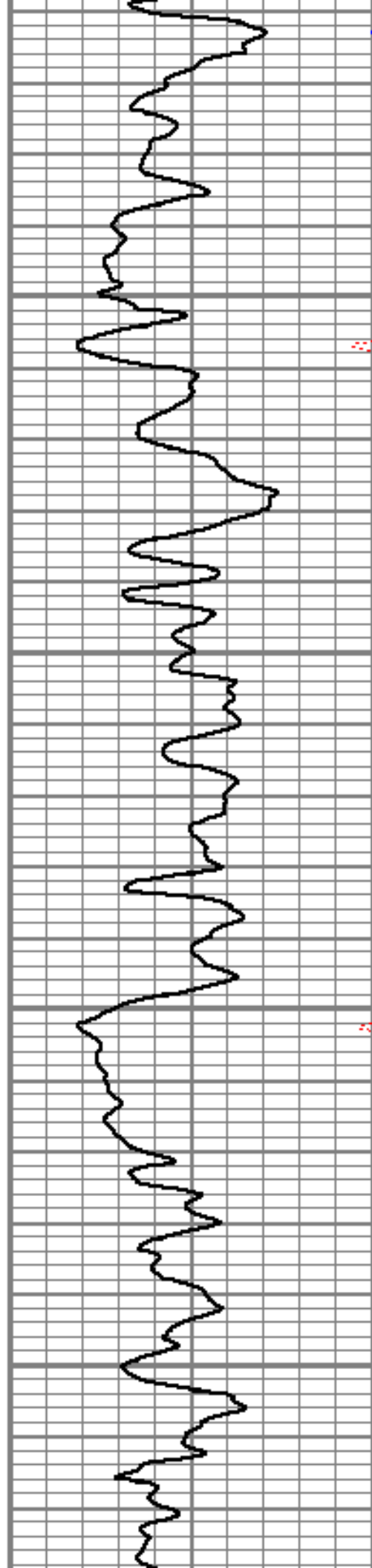


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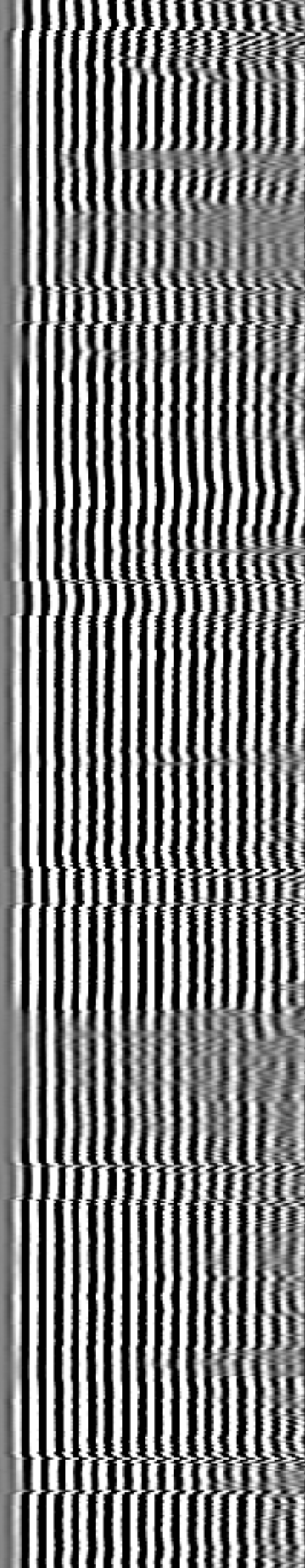
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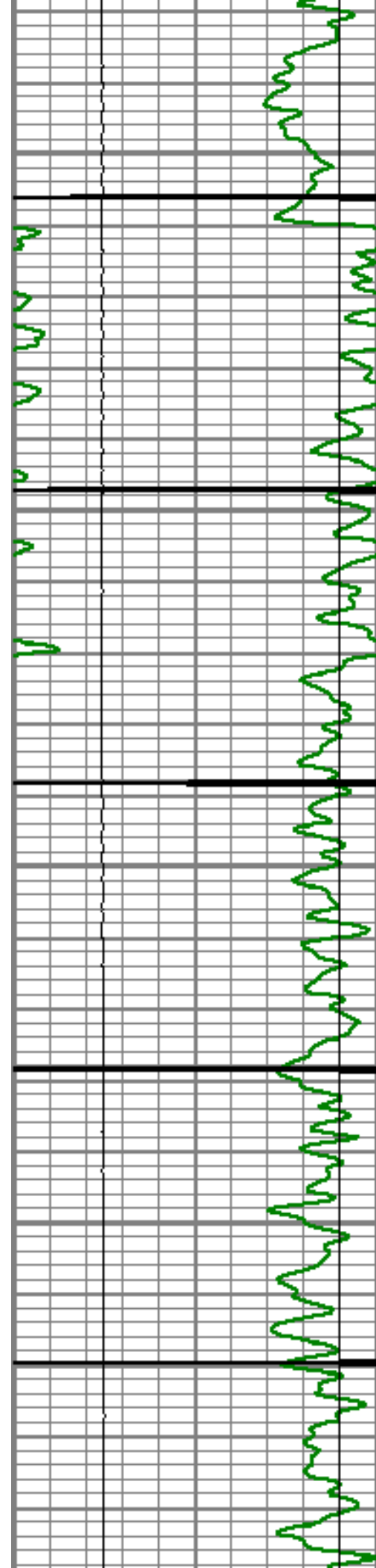
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20

20



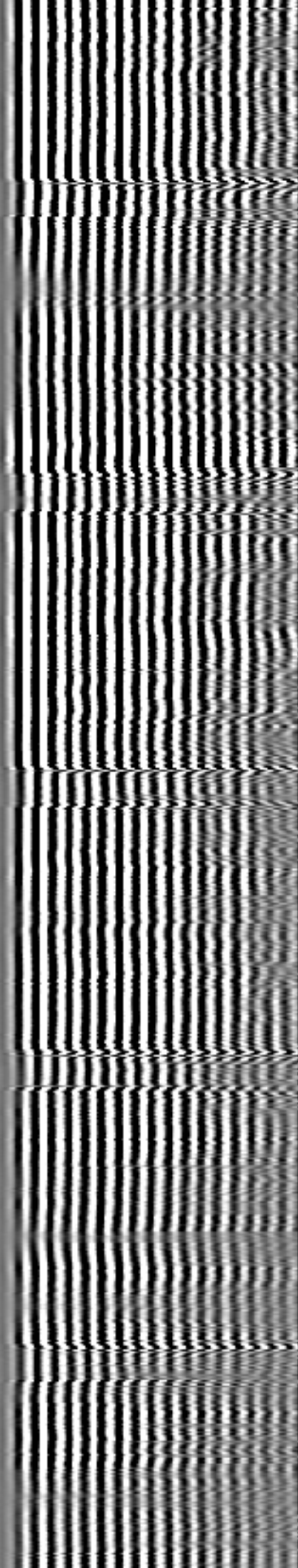
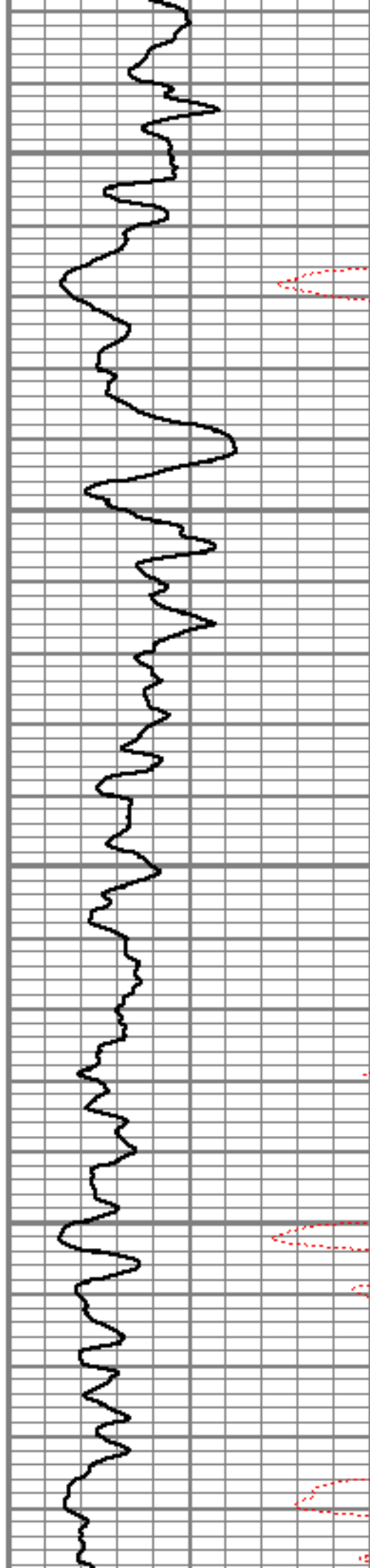


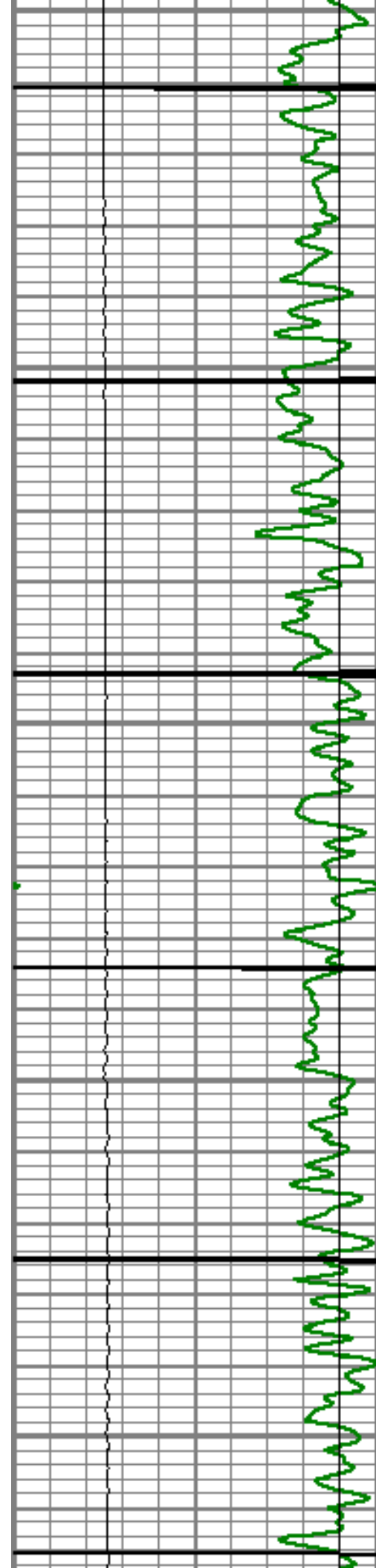
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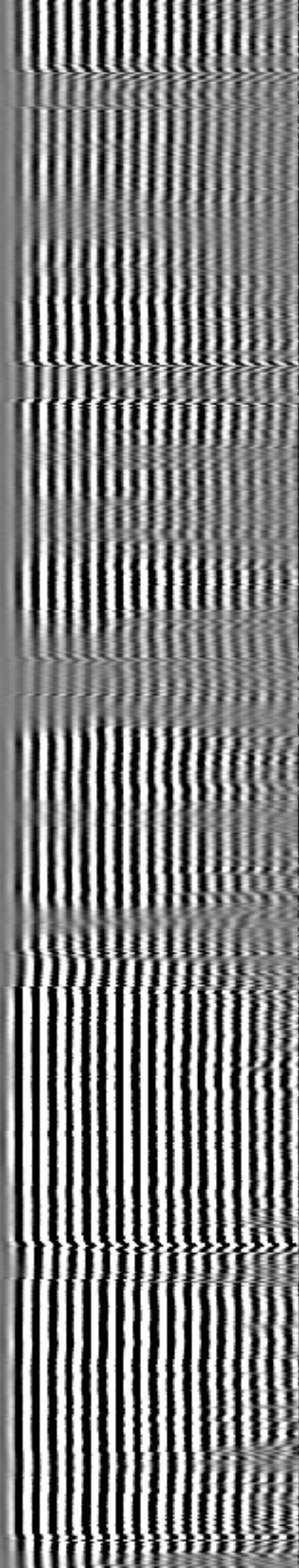
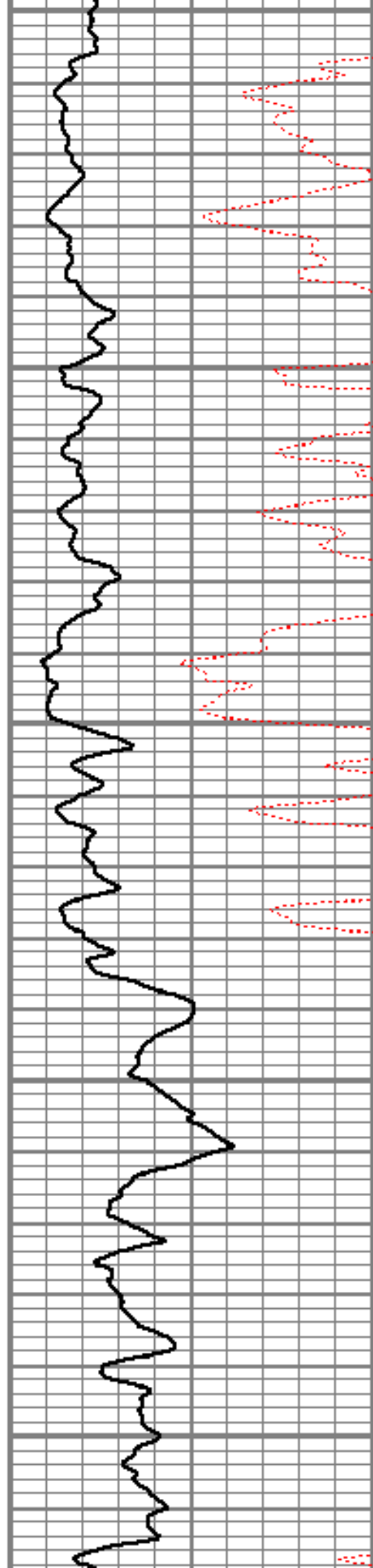
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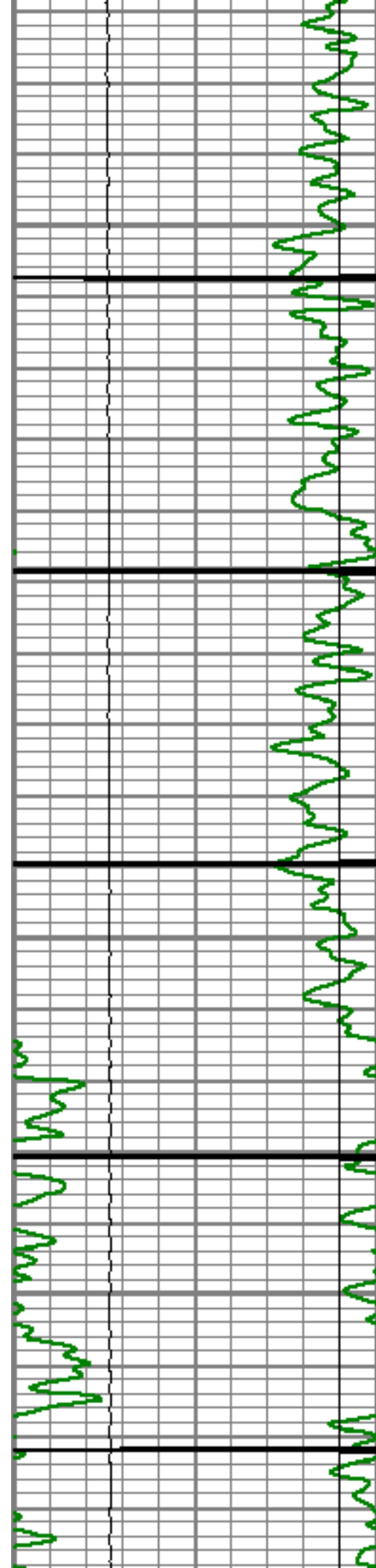
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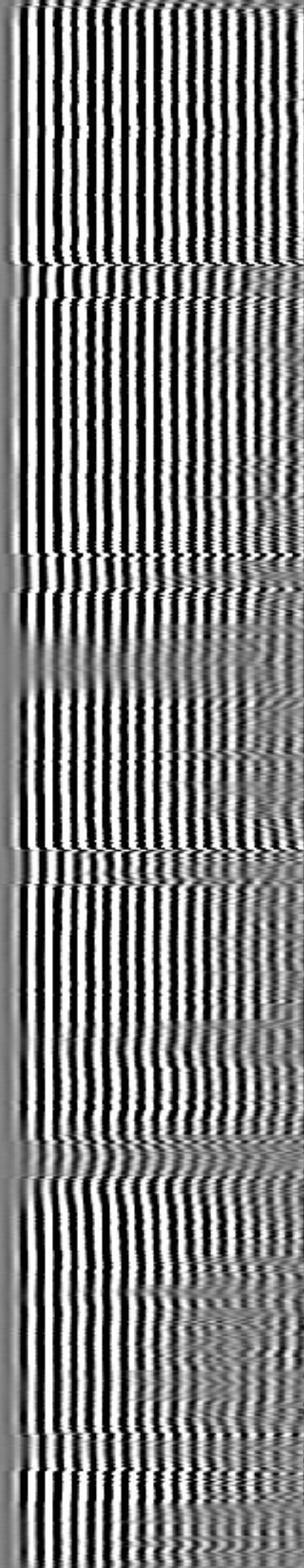
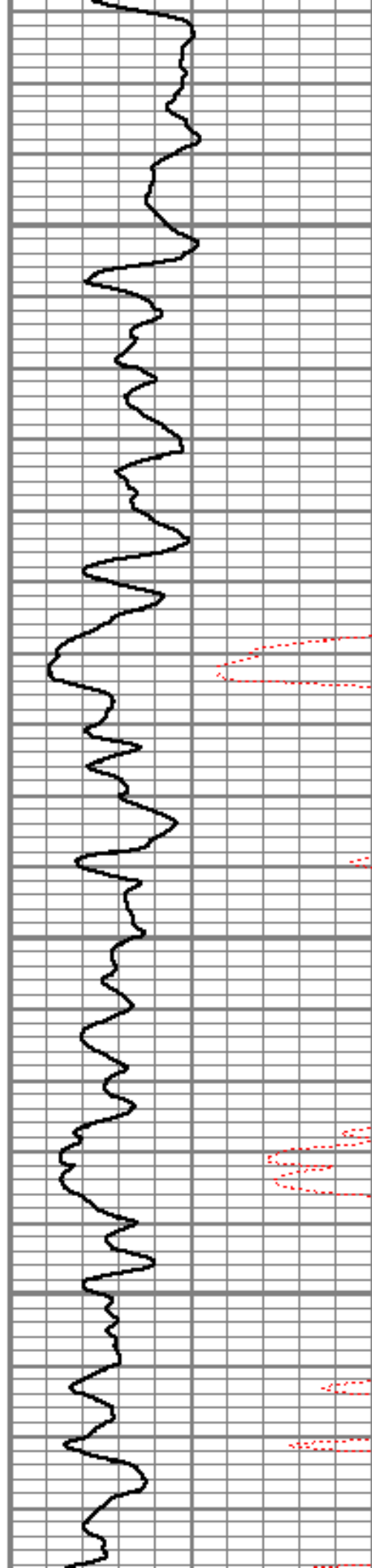


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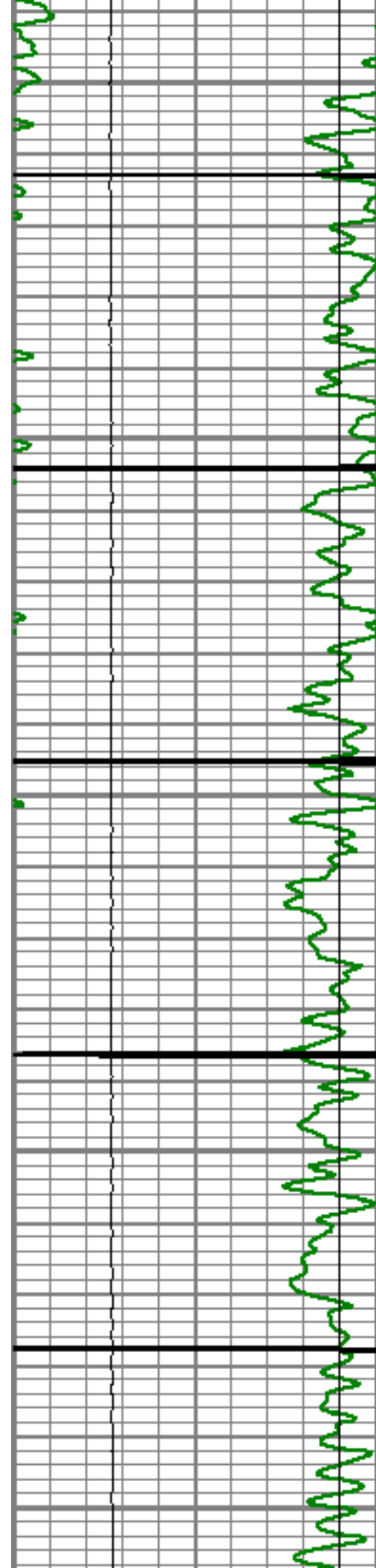
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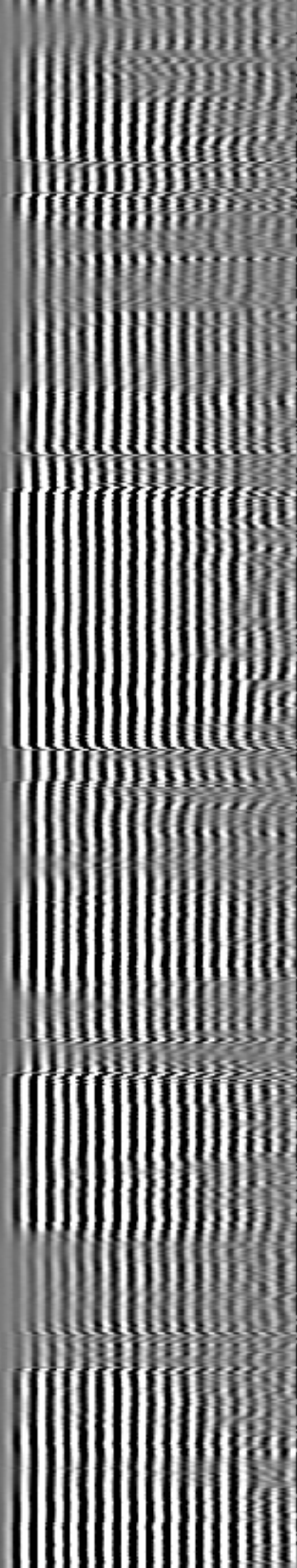
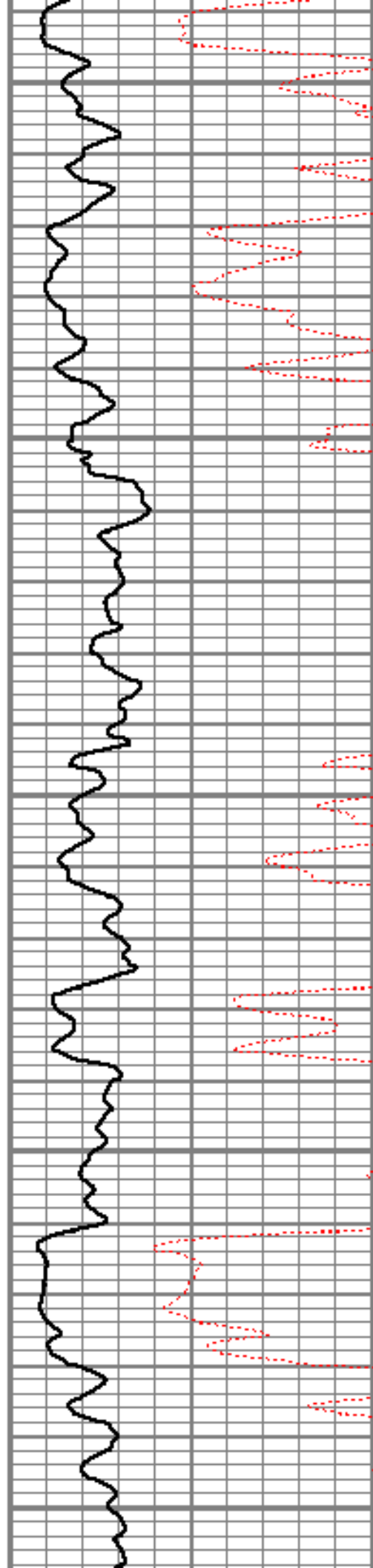
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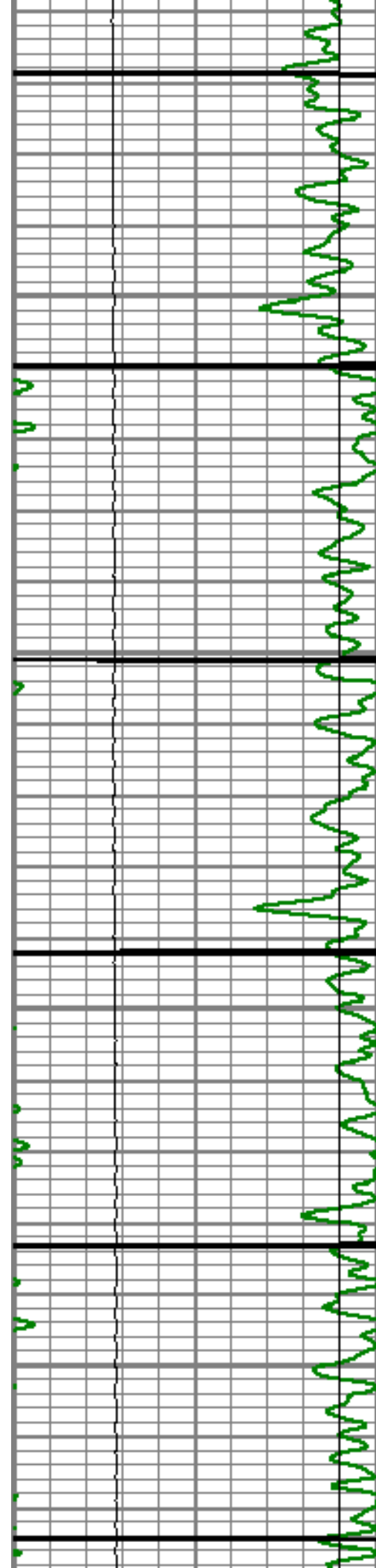
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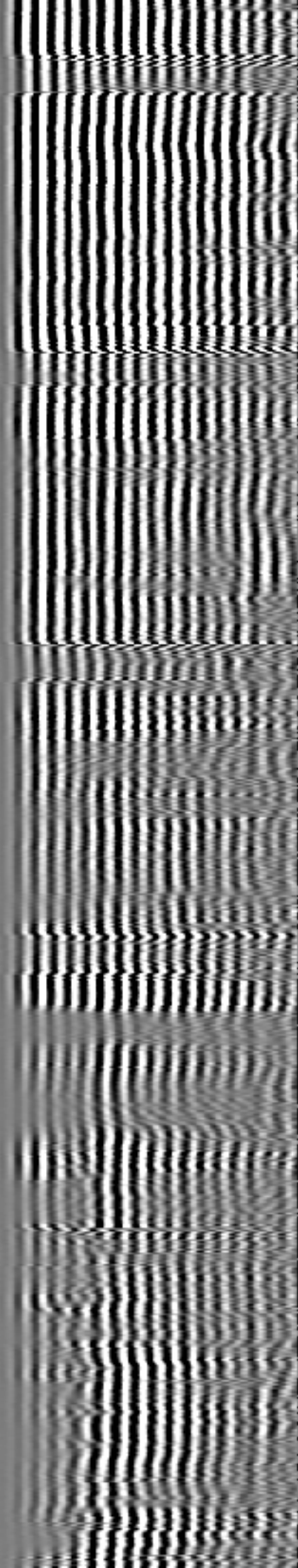
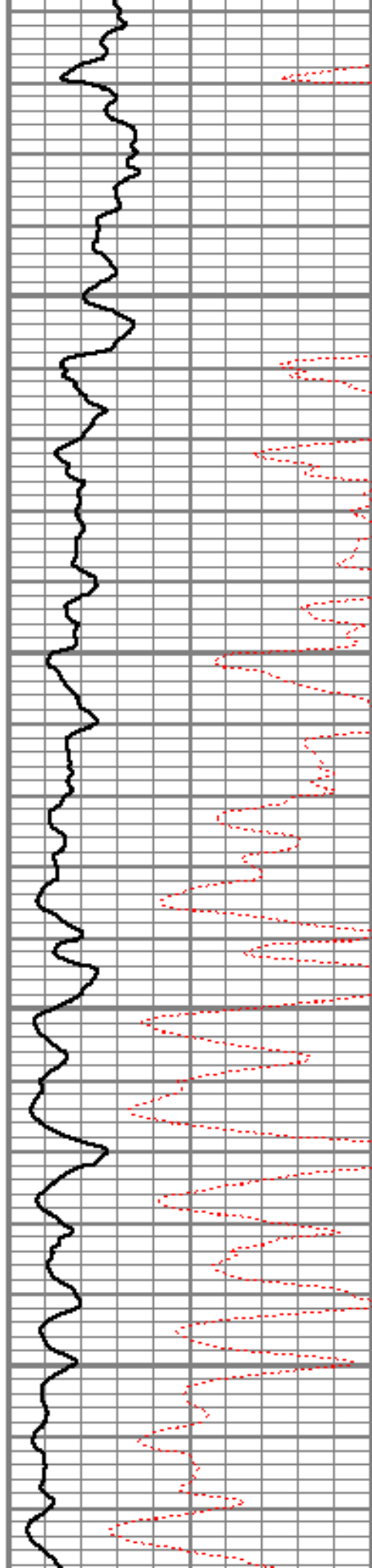


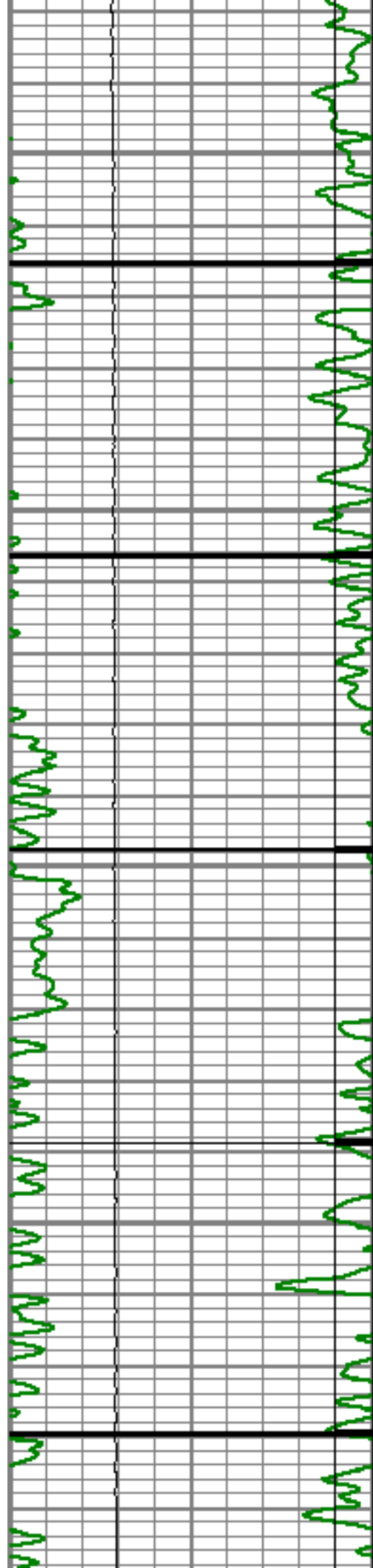
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7300

7350

7400





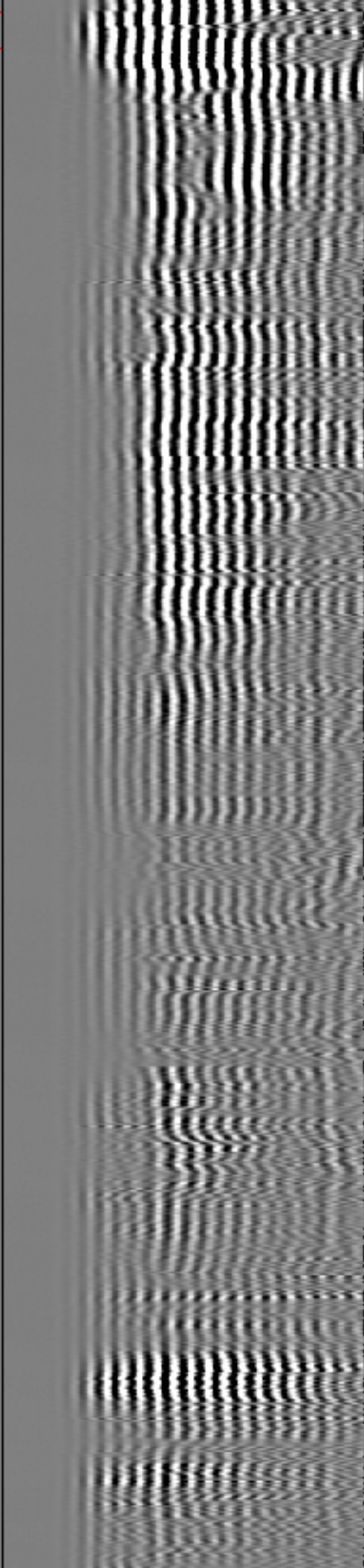
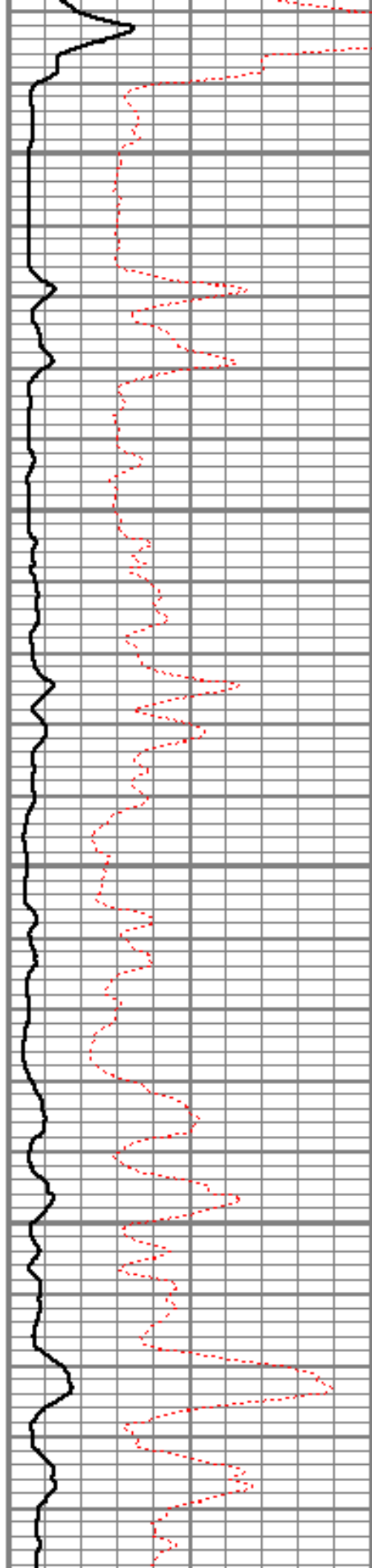
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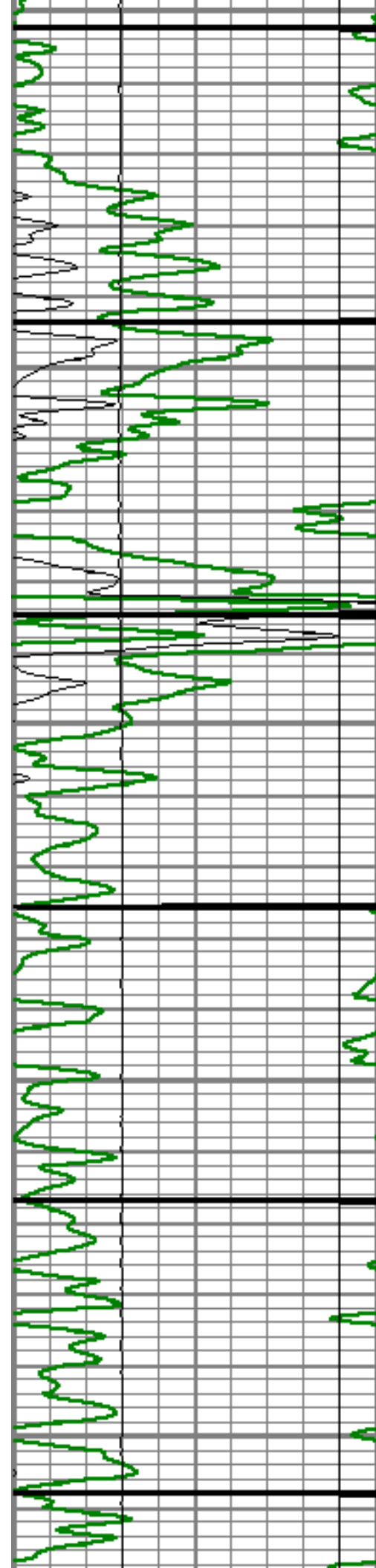
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7600

Short Joint







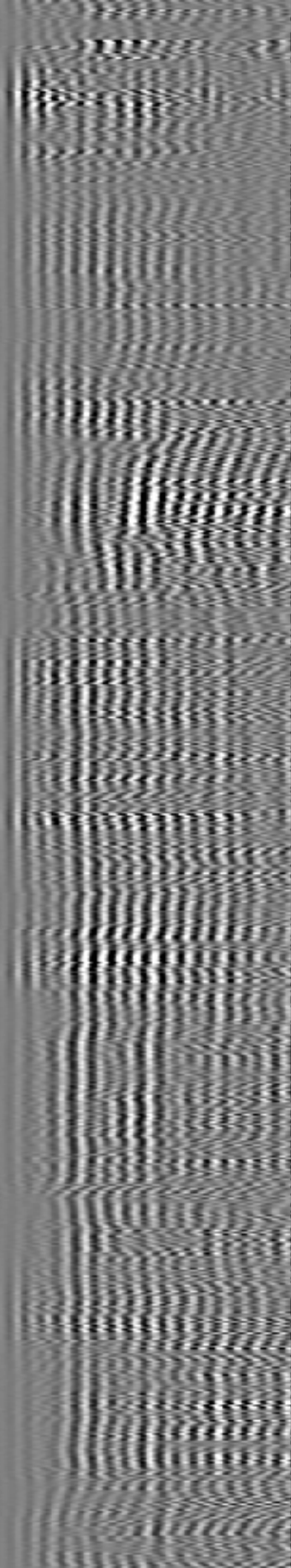
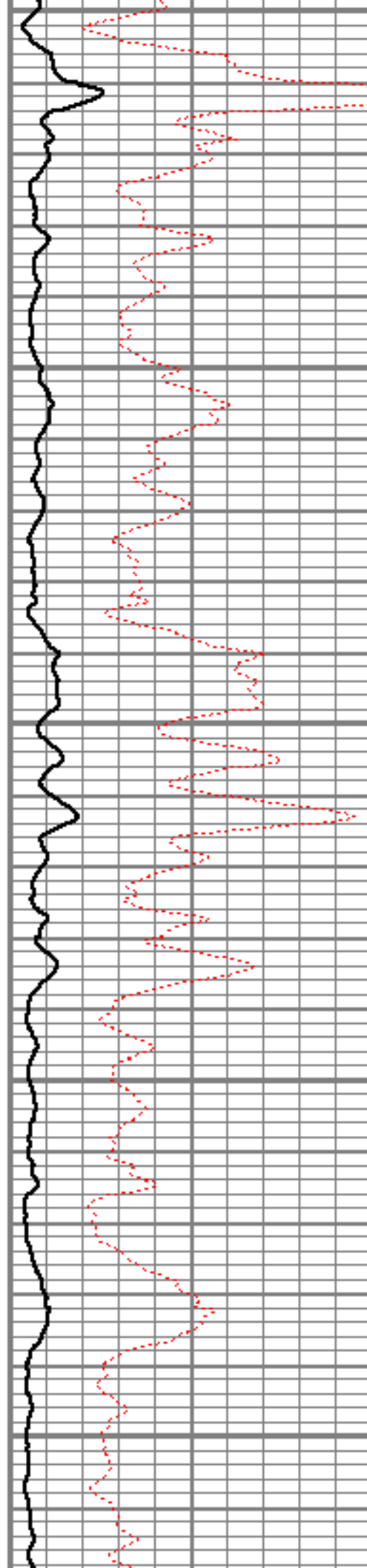
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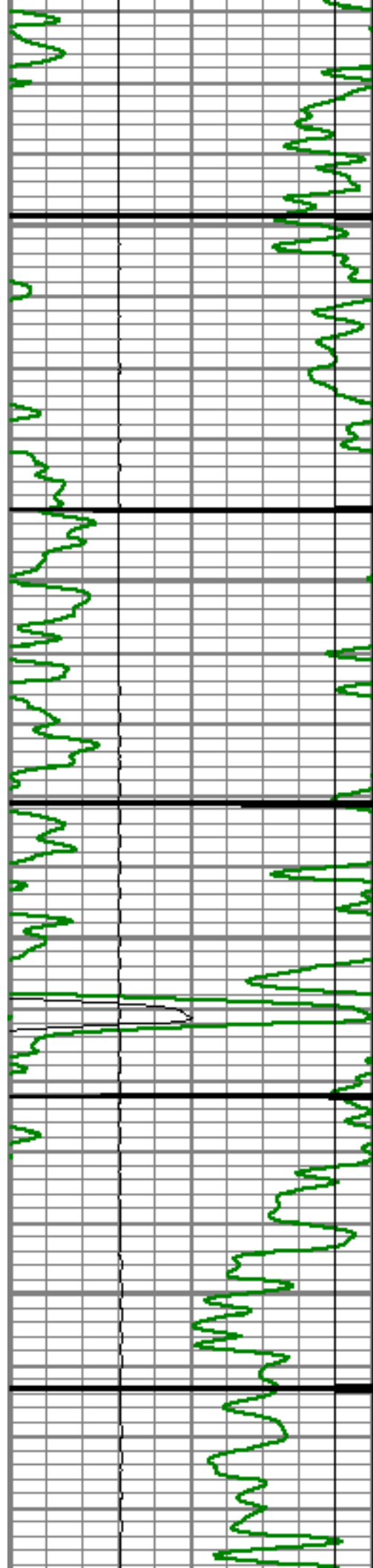
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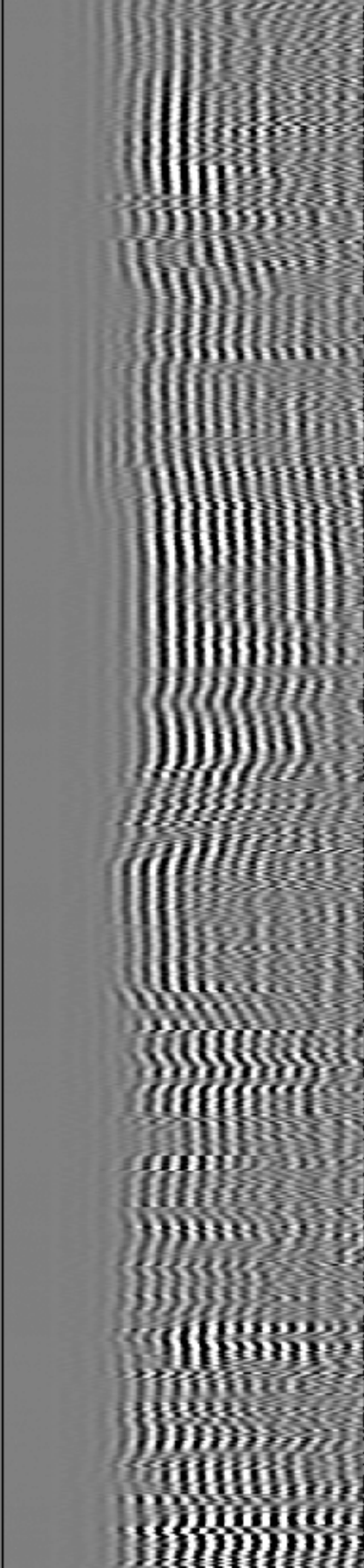
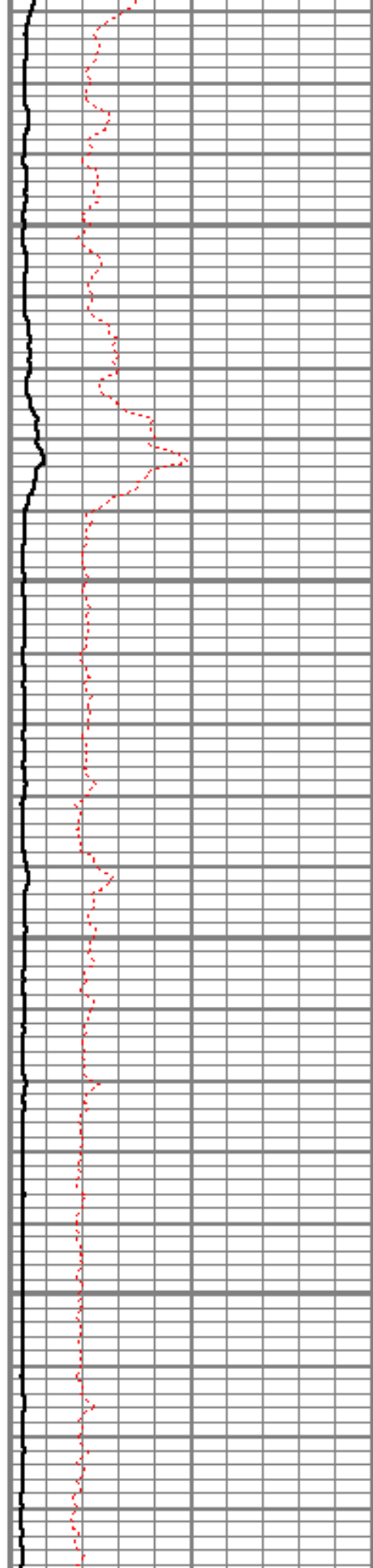


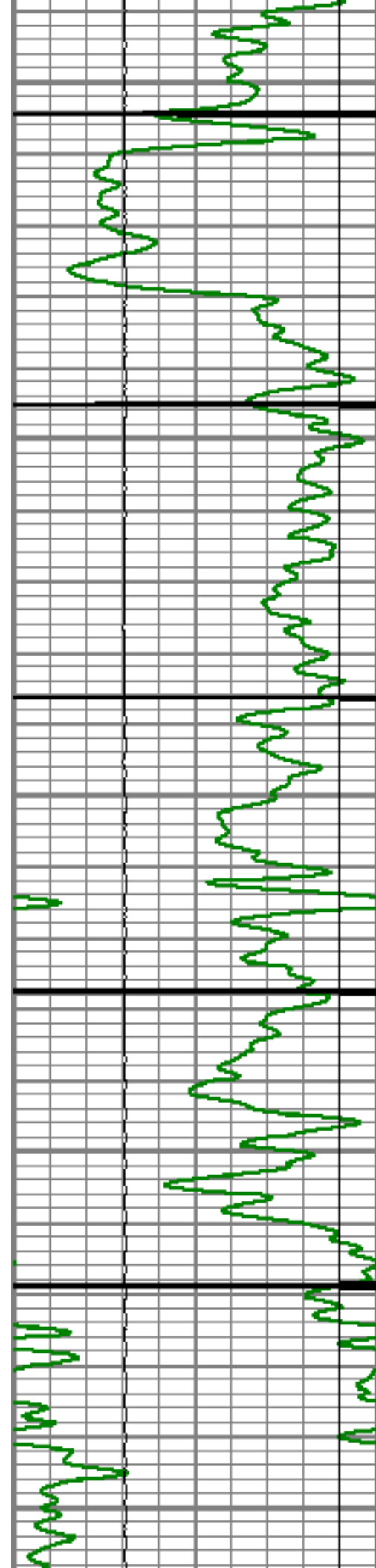
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7950

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8050





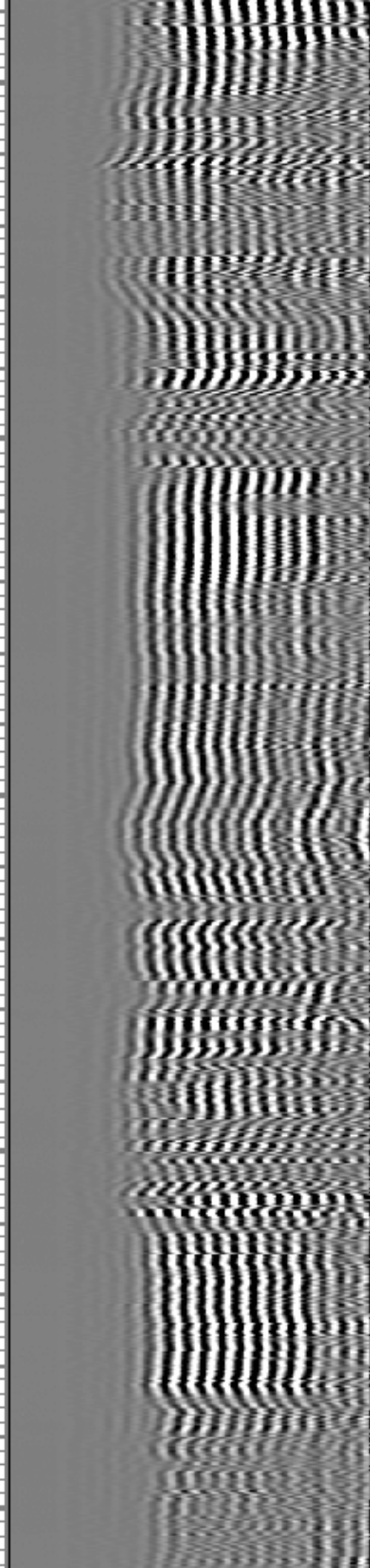
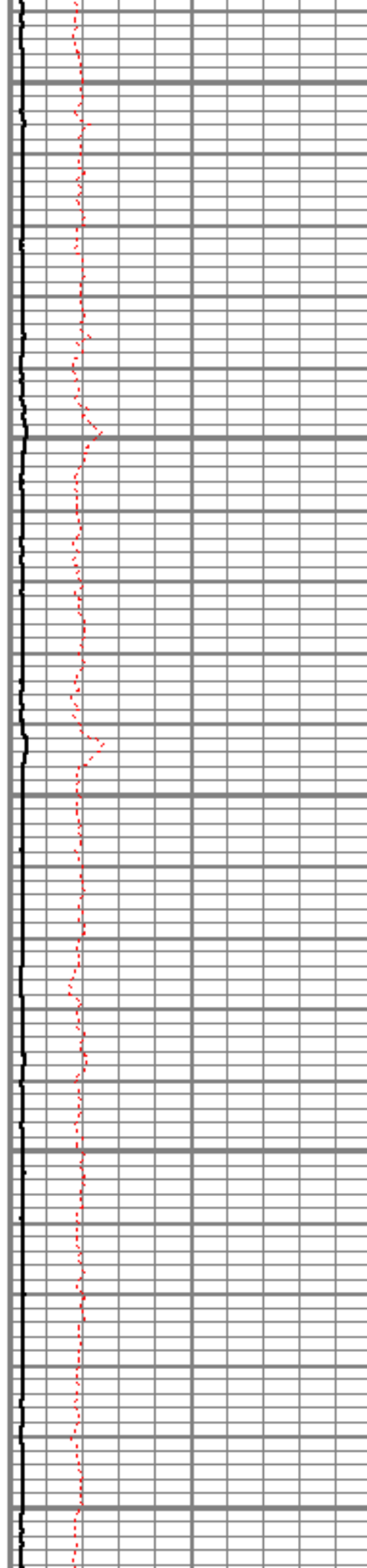
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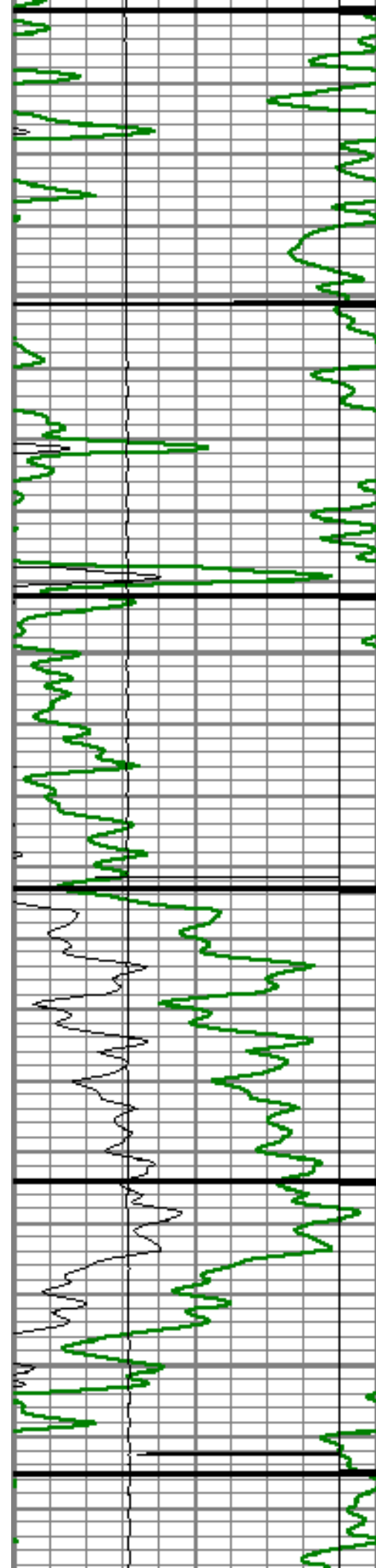
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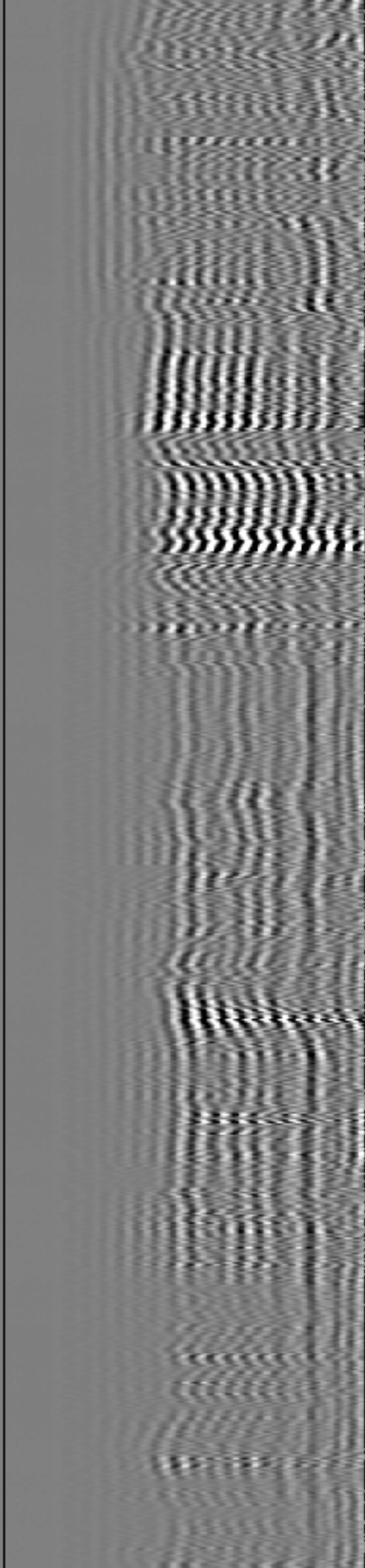
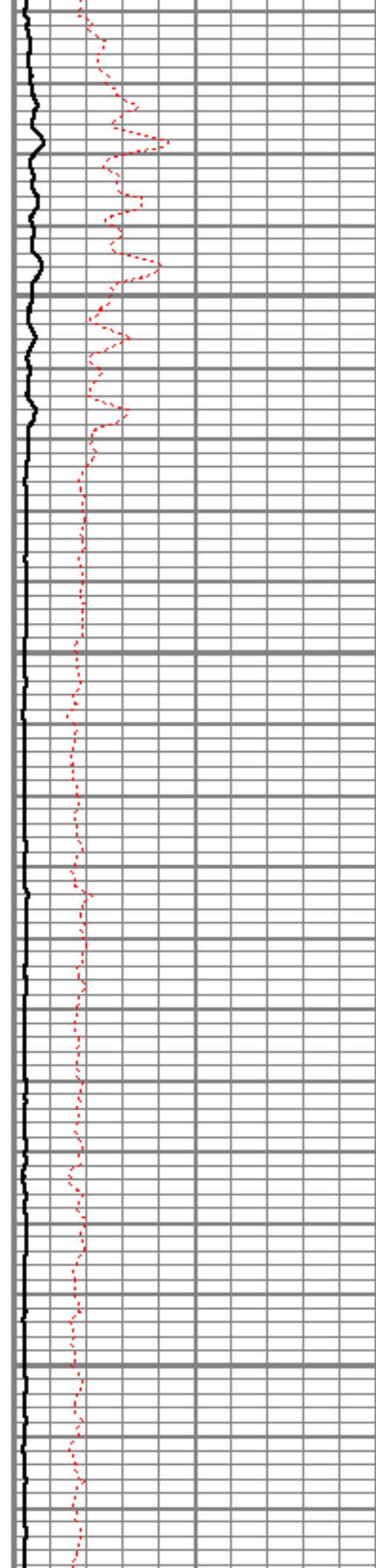


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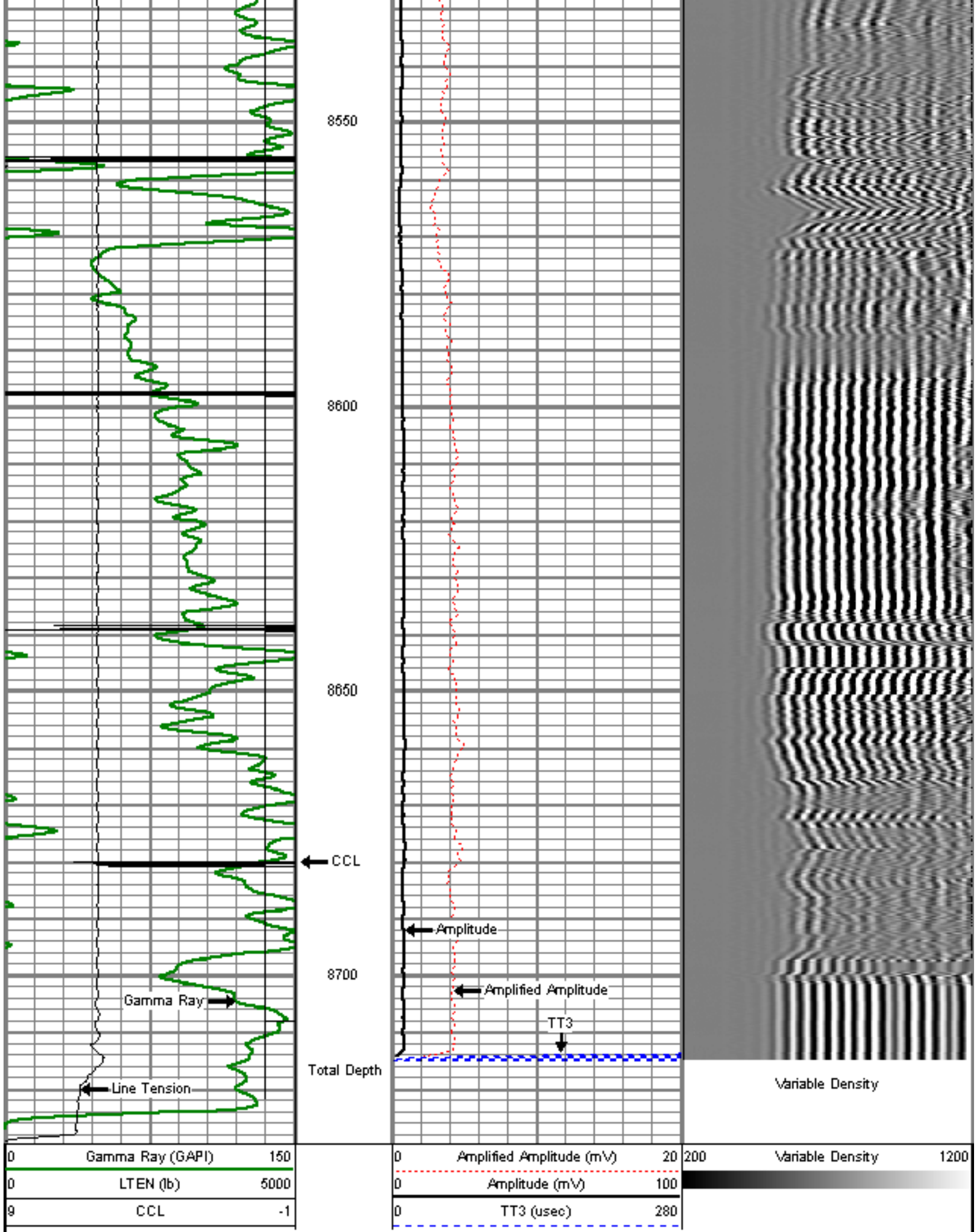
8400

8450

8500







Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
WVF3	14.54		titan	1.02	1.44	1.50
			Centralizer-Probe (CENT-PROBE-1) Probe Bowspring Centralizer	2.88	2.75	10.00
			CBL-Probe (DCBL_PRB_275_01) Probe 275" Dual Receiver Bond	8.77	2.75	60.00
			Centralizer-Probe (CENT-PROBE-2) Probe Bowspring Centralizer	2.88	2.75	10.00
			GR-Probe (GRCCL_PRB_275_01) Probe 275" 4 Channel Probe	4.54	2.75	30.00
WVF5	13.54					
CCL	6.50					
GR	3.77					
TEMP	0.17		TEMP-Comprobe (TEMP_CMPRB_1375_01) Positive probe Temp tool	12.88	1.38	15.00

Total Weight:	126.50 lb
O.D.	2.75 in



Company	ENCANA OIL & GAS (USA) INC.
Well	COSTIGAN 43-20
Field	WATTENBERG
County	WELD
State	COLORADO