



CEMENT BOND, V.D.L.
GAMMA-RAY & C.C.L.

Pioneer Energy Services

Company GREAT WESTERN OIL & GAS LLC
Well HCW FD 24-20 D
Field WATTENBERG
County WELD
State COLO.

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Well HCW FD 24-20 D
Field WATTENBERG
County WELD State COLO.

Location: API #: 05123355980000
SHL: 35' FSL & 2365' FWL SESW
BHL: 1342' FSL & 2622' FWL NESW
SEC 25 TWP 6N RGE 67W
Permanent Datum GL Elevation 4744
Log Measured From KB
Drilling Measured From KB
Other Services
K.B. 4758
D.F. 4757
G.L. 4744

Date	11-5-12
Run Number	1
Depth Driller	7399
Depth Logger	7402
Bottom Logged Interval	7390
Top Log Interval	1600
Open Hole Size	7 7/8"
Type Fluid	
Density / Viscosity	
Max. Recorded Temp.	231
Estimated Cement Top	1906
Time Well Ready	ROA
Time Logger on Bottom	AM
Equipment Number	24
Location	FT. MORGAN
Recorded By	NATHAN BIVENS
Witnessed By	SHAWN ARMSTRONG

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record		Size		Wgt/Ft		Top	Bottom
Surface String							
Prot. String							
Production String		4.5"		11.6#			
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

S.O. # 2-203640

THANK YOU FOR USING PIONEER ENERGY SERVICES.
64 3/4 & 23 3/4 NORTH ACROSS TRACKS WEST .2 MILES

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			SDSCHD Cable Head for Testing	1.00	1.44	1.00

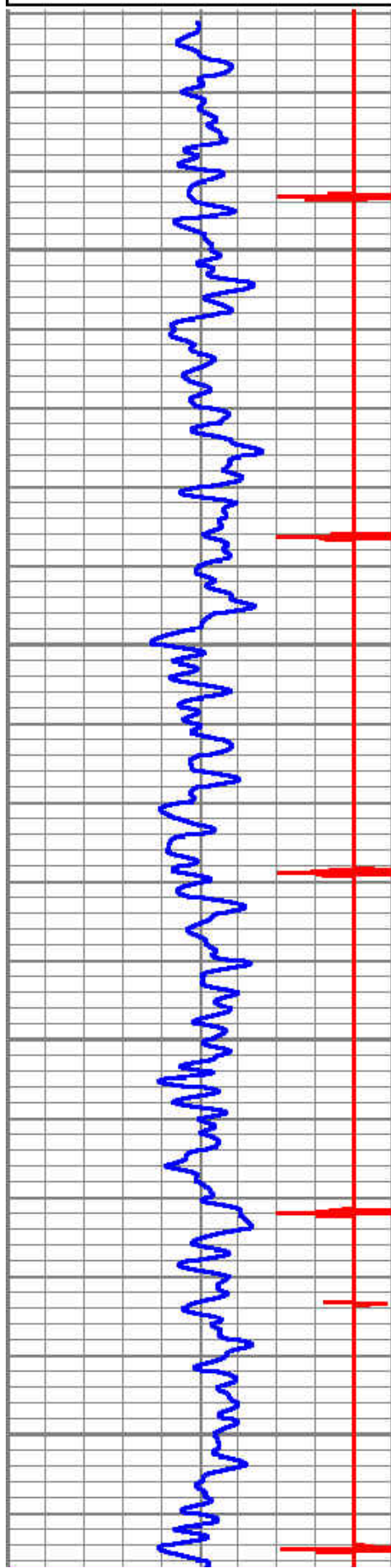
			cent.-Probe (cent) probe cent.	2.88	2.75	25.00
WVF3	12.48					
WVF5	11.48		CBL-Probe (110215) 2.75 digital probe	8.75	2.75	106.50
			cent.-Probe (cent) probe cent.	2.88	2.75	25.00
CCL	4.13		CCL-Probe (081119)	2.02	2.75	
GR	0.79		GR-Probe275dig (110249) Probe Digital Gamma-Ray	3.33	2.75	57.00
Dataset: hcw fd 24-20 d.db: field/well/run1/pass3 Total Length: 20.85 ft Total Weight: 214.50 lb O.D.: 2.75 in						

Database File: hcw fd 24-20 d.db
 Dataset Pathname: pass3
 Presentation Format: cbl_dr
 Dataset Creation: Mon Nov 05 16:03:57 2012 by Log SCH 120420

9	Collar Locator	-1
0	Gamma Ray (GAPI)	150

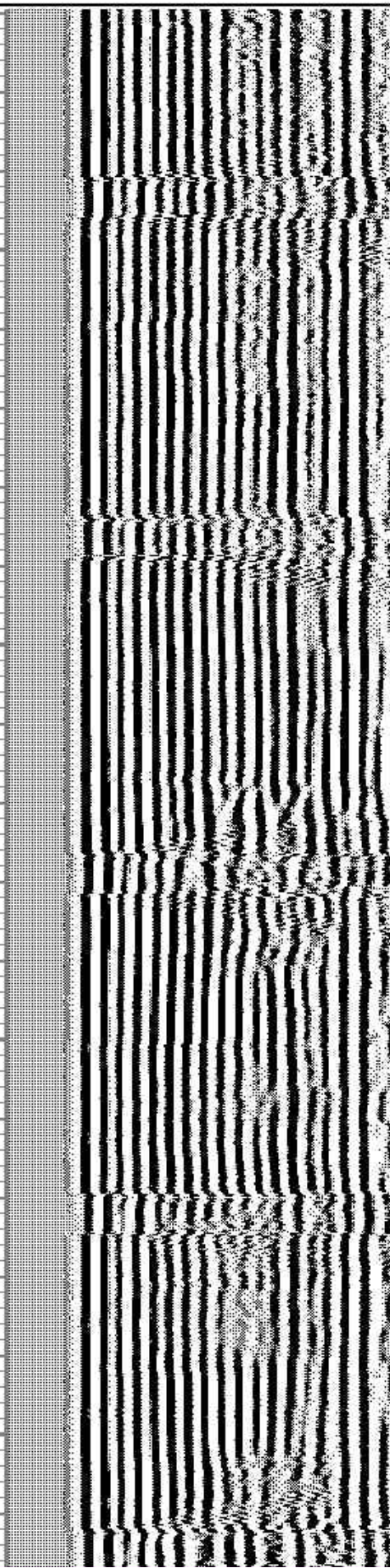
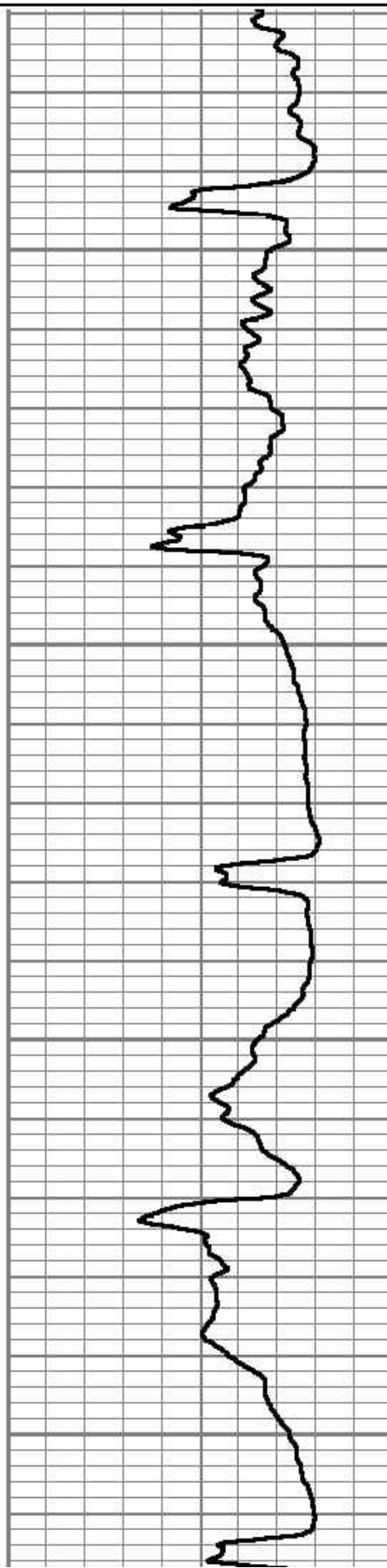
0	Amplified Amplitude (mV)	10
0	Amplitude (mV)	100

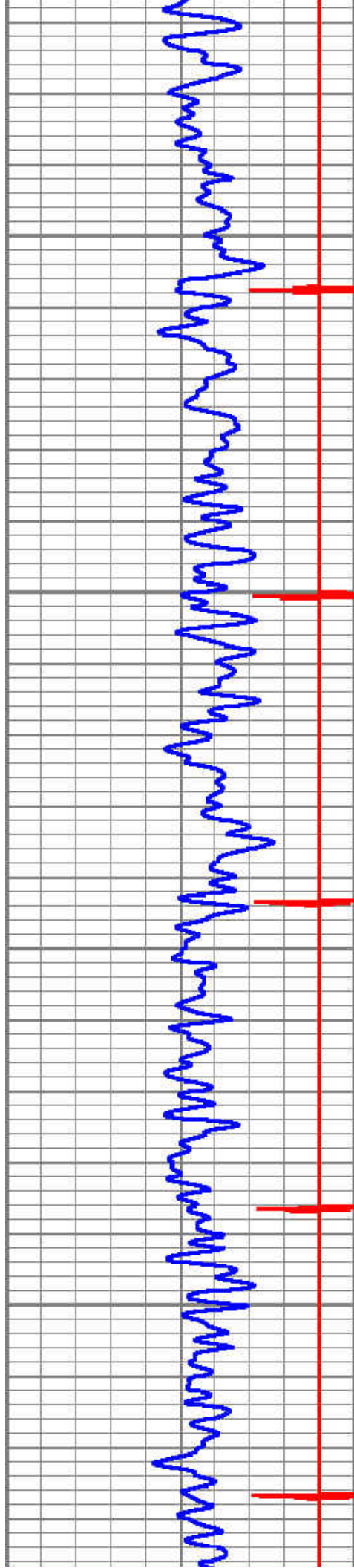
200 Variable Density 1200



1600

1700

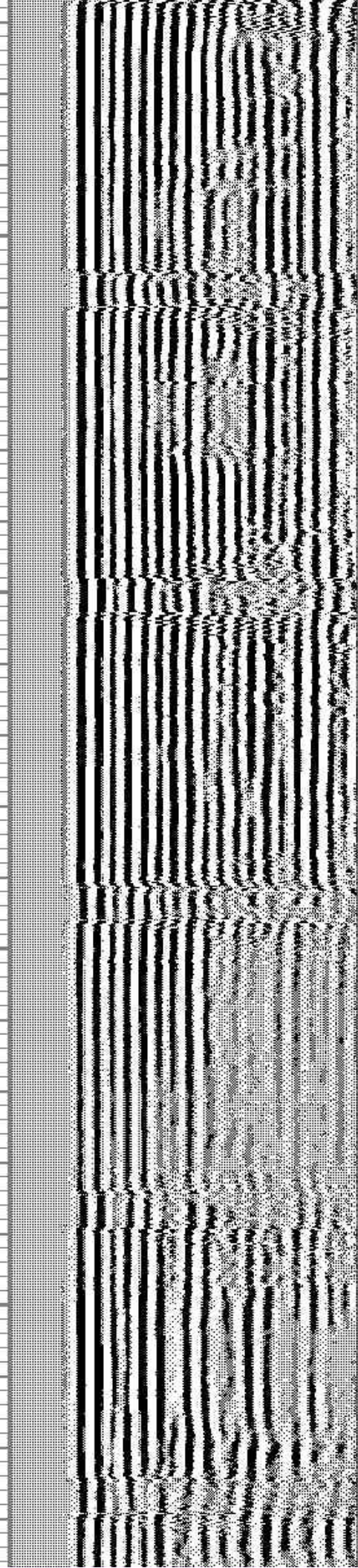
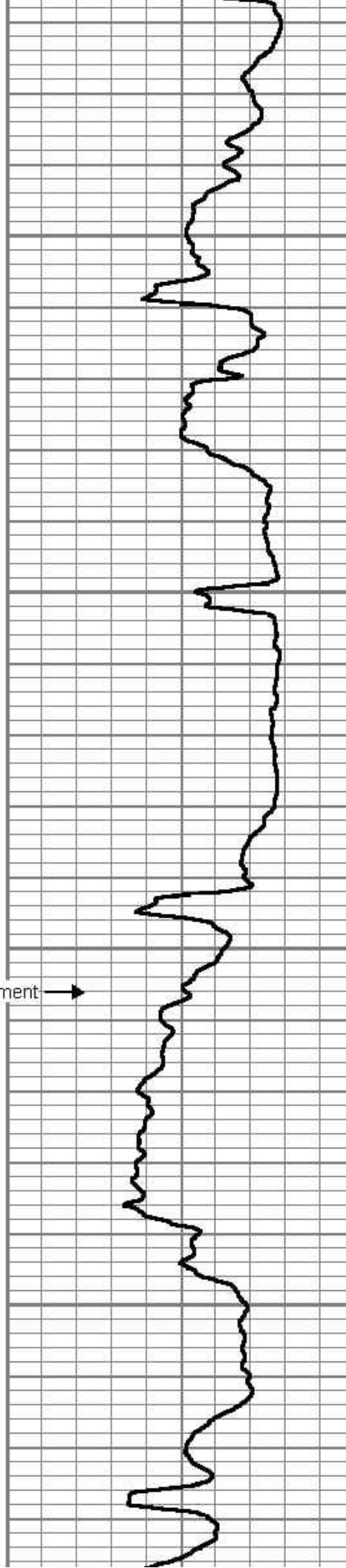


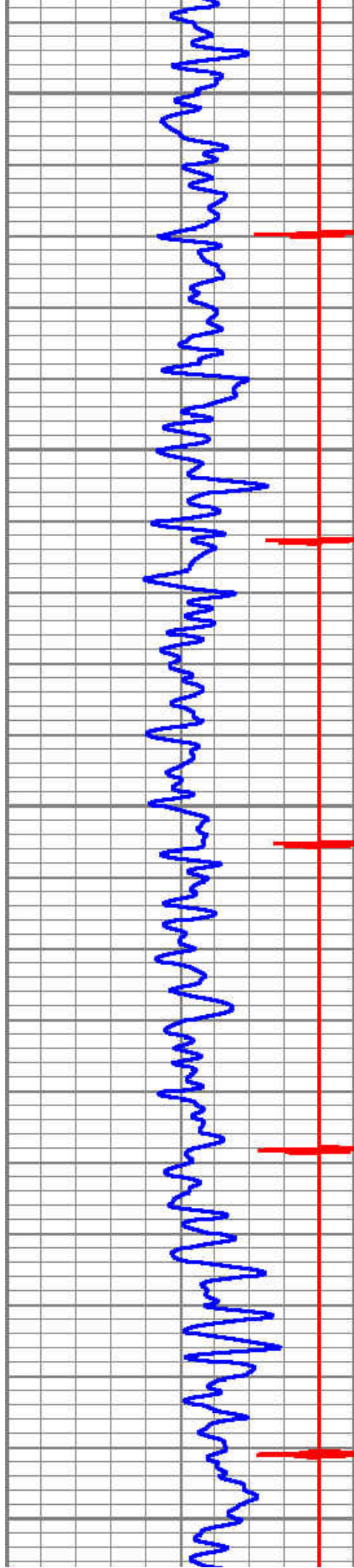


1800

1900

Top of Cement →

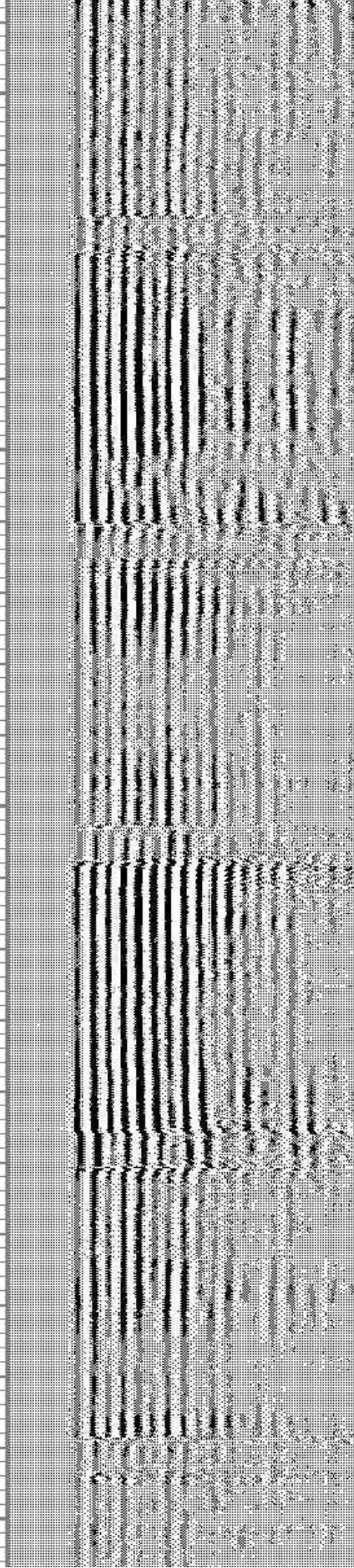
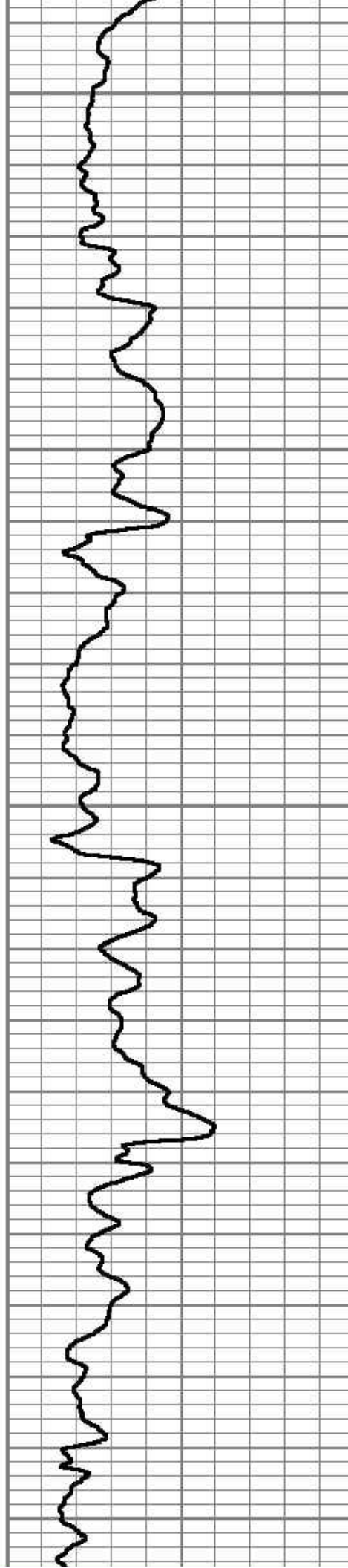


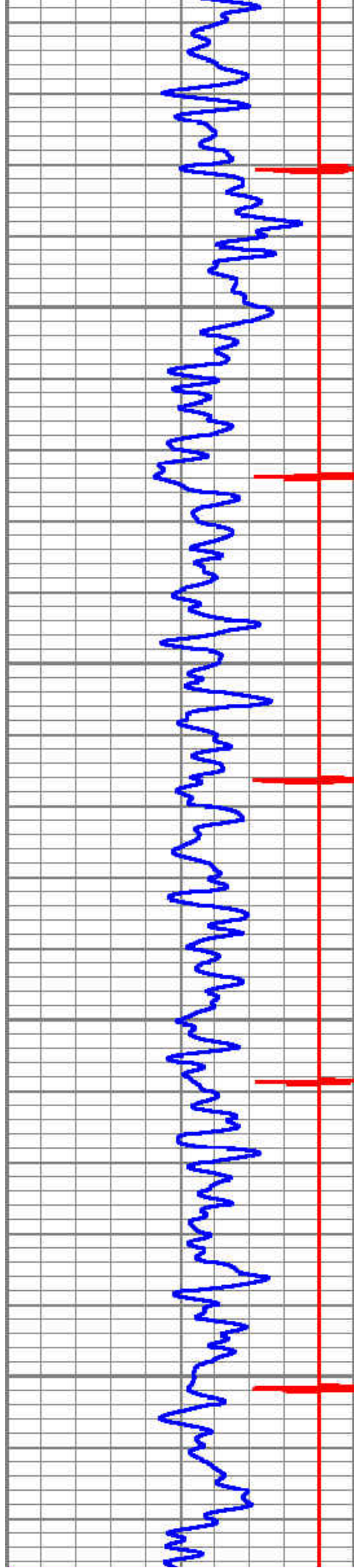


2000

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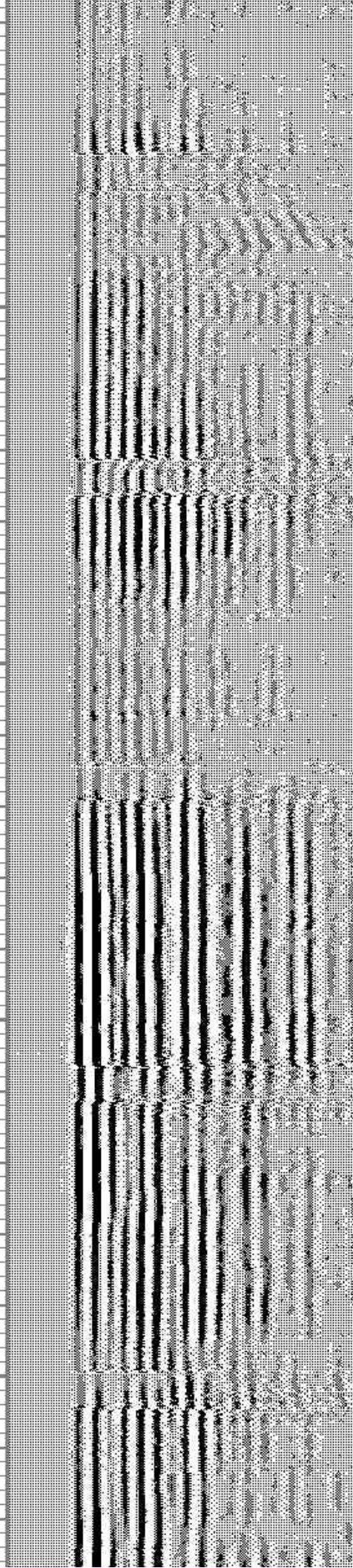
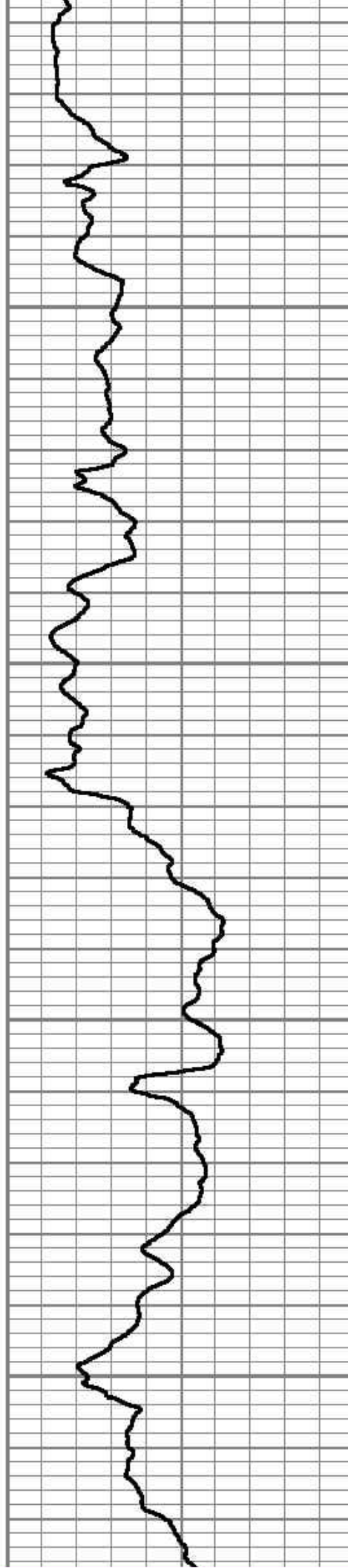
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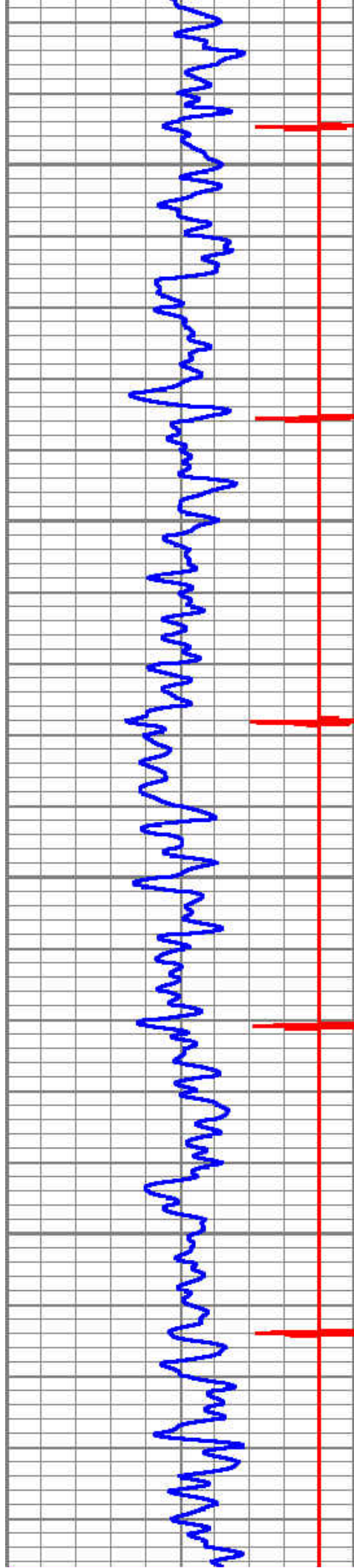




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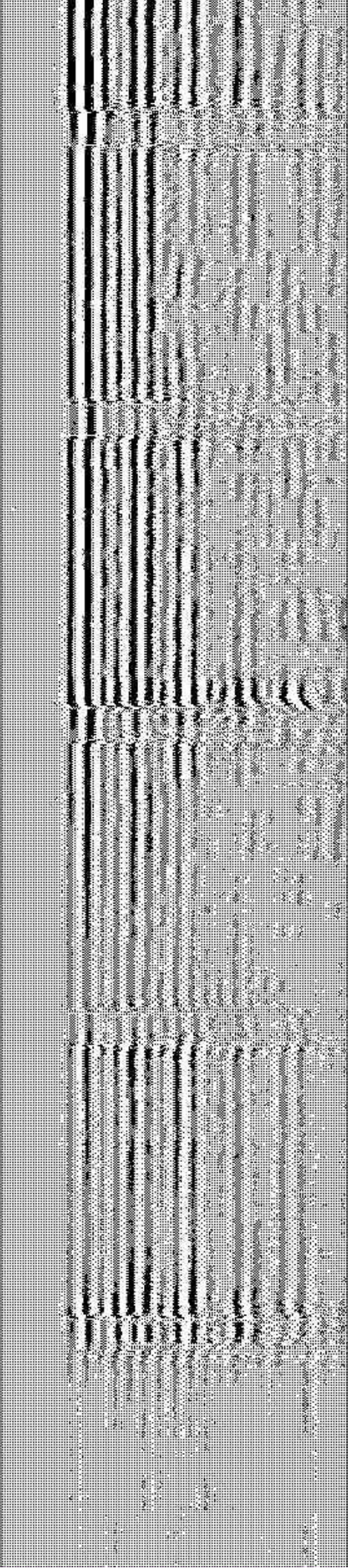
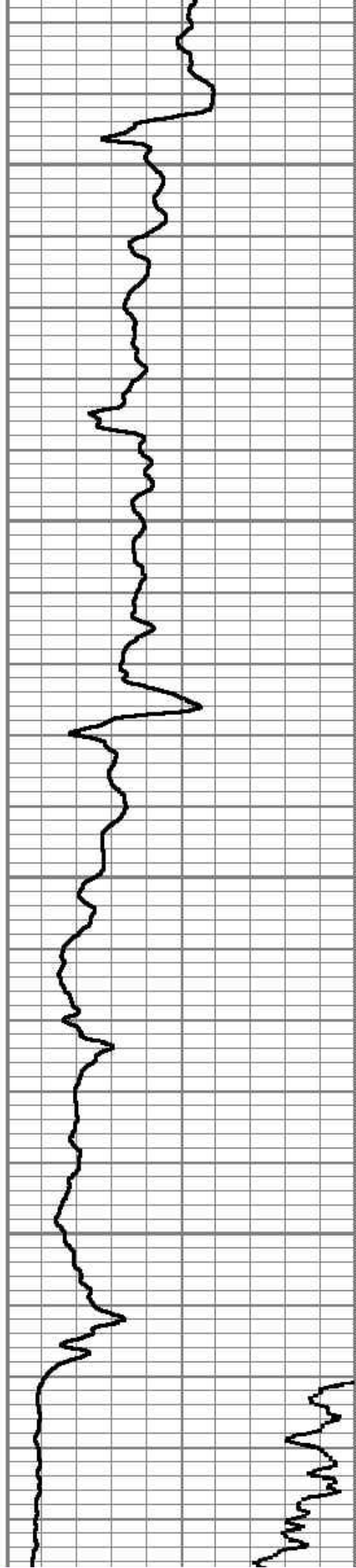
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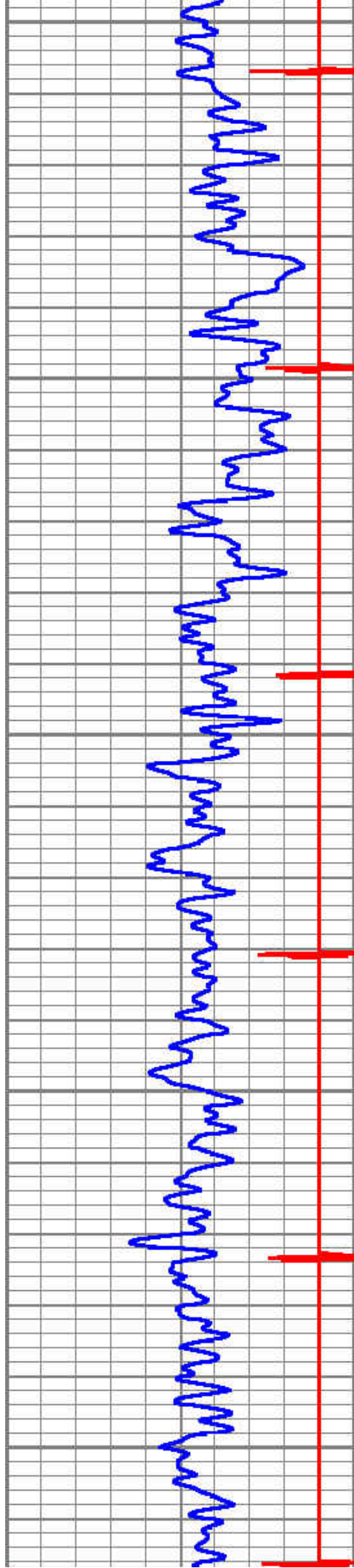




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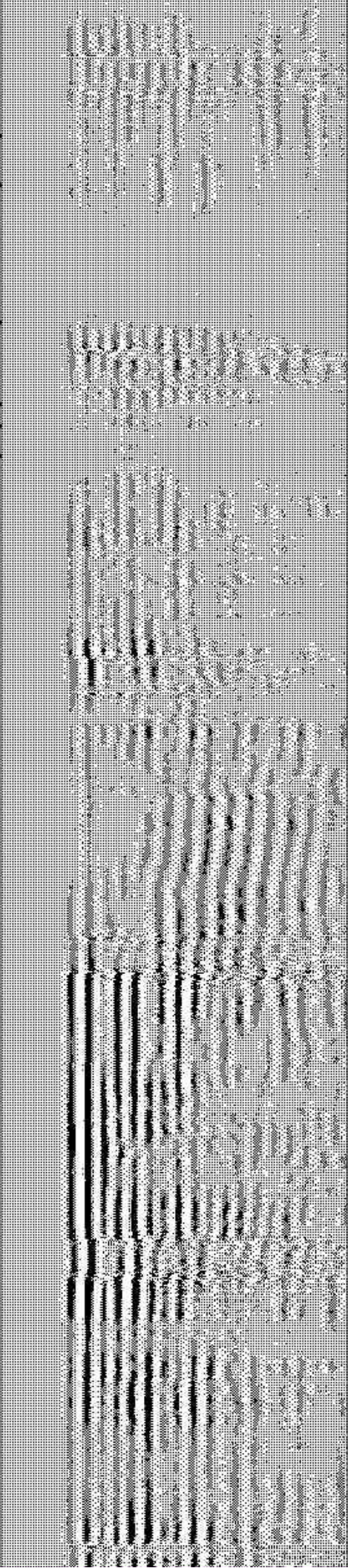
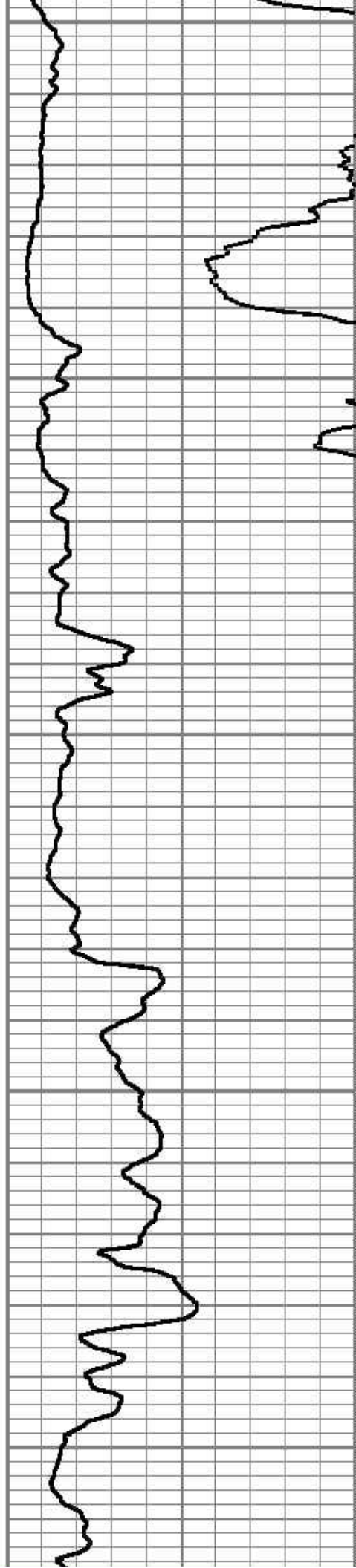
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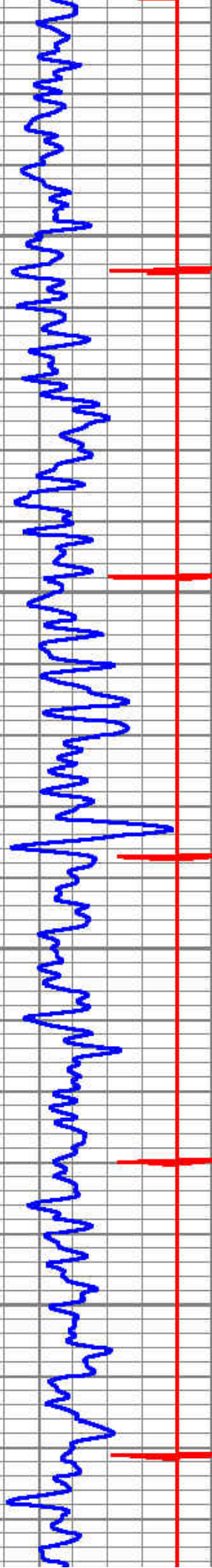




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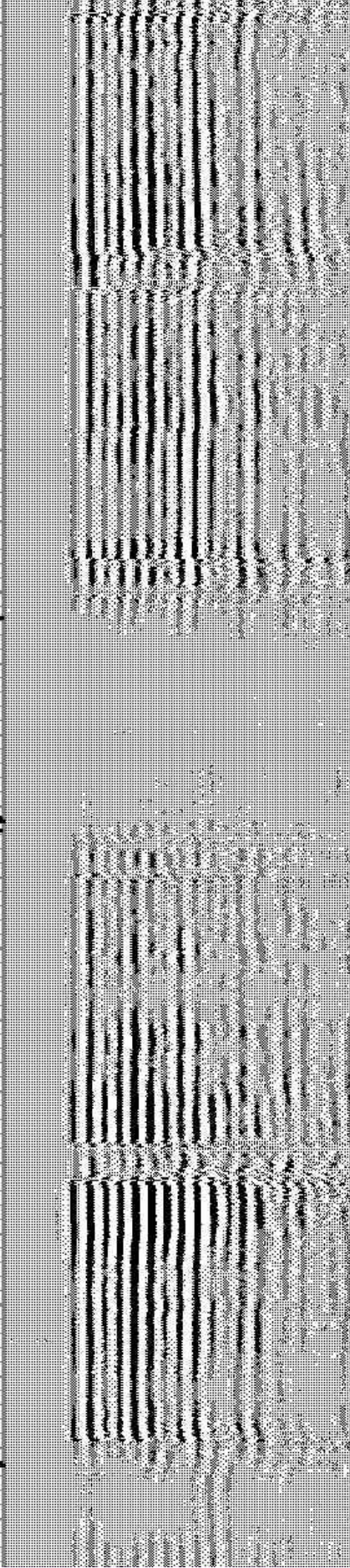
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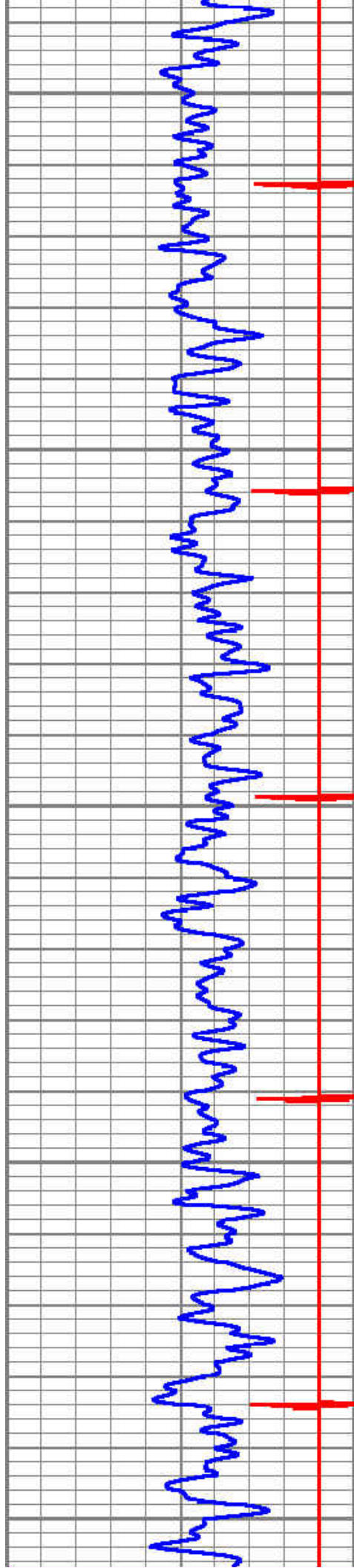




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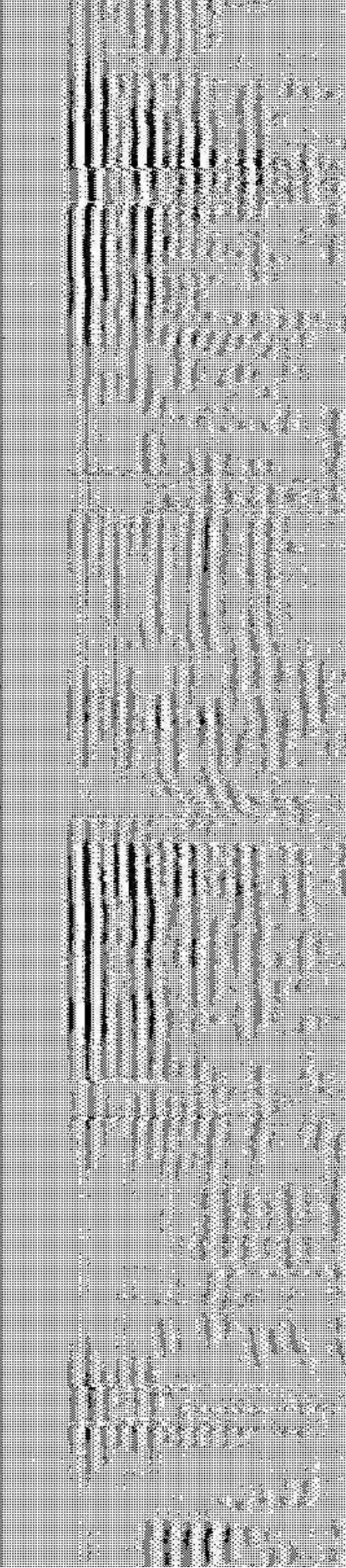
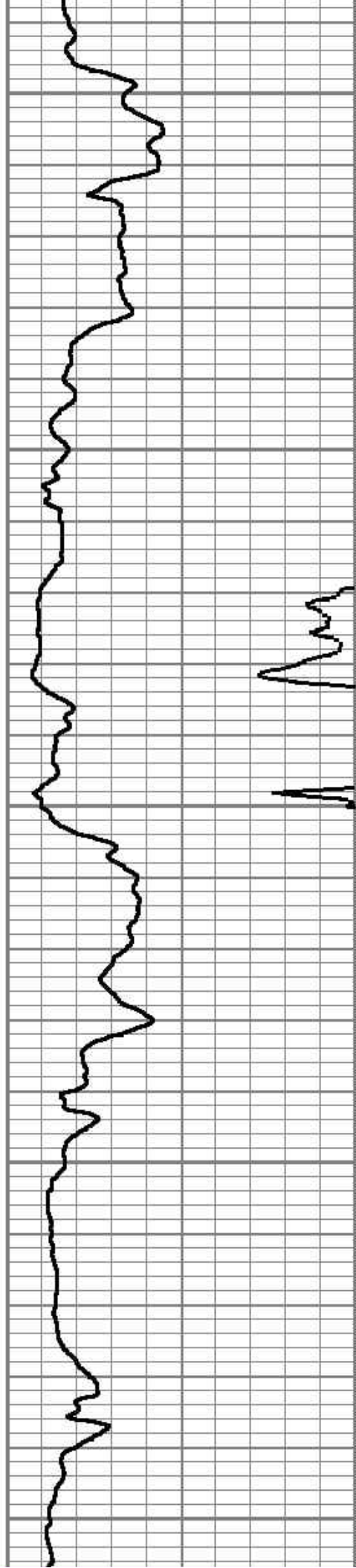


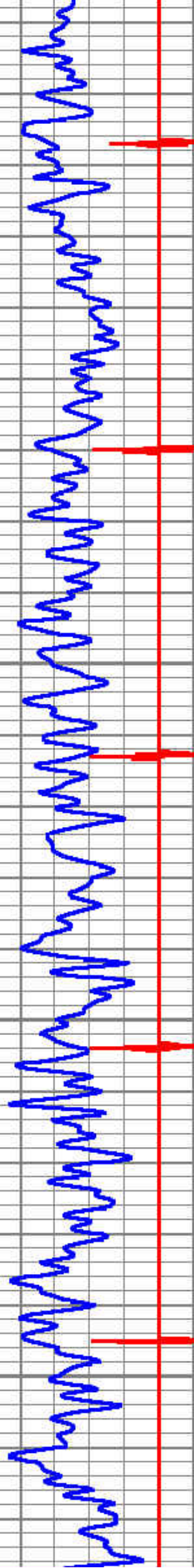


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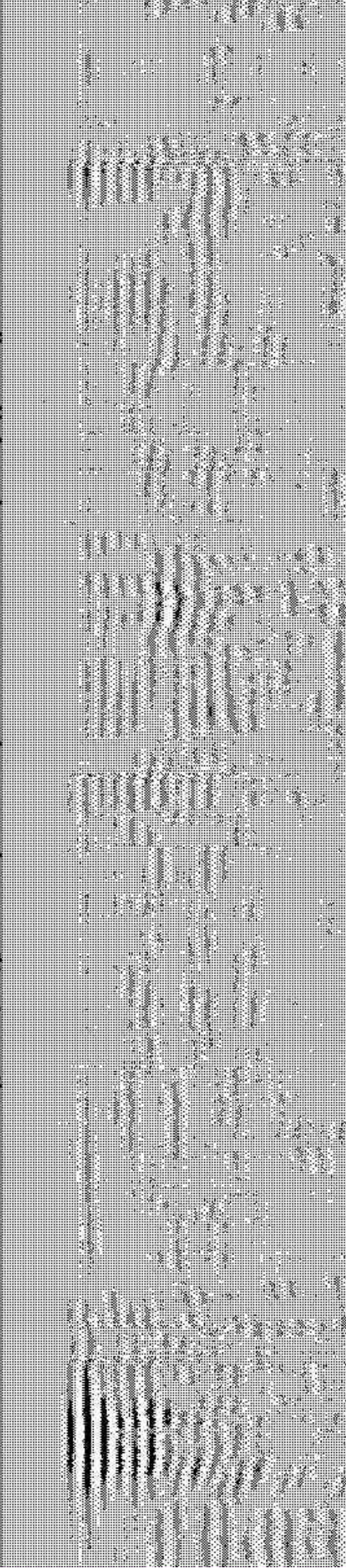
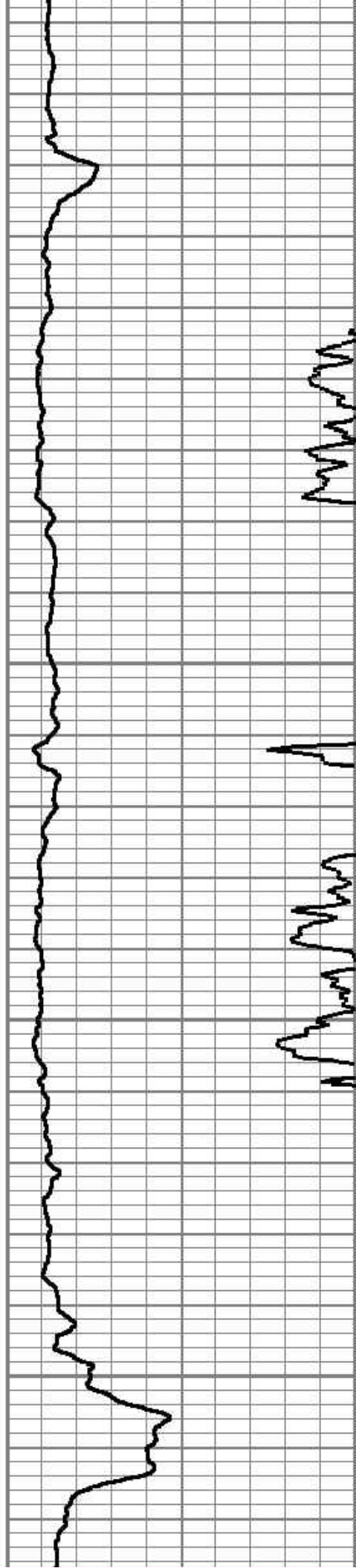
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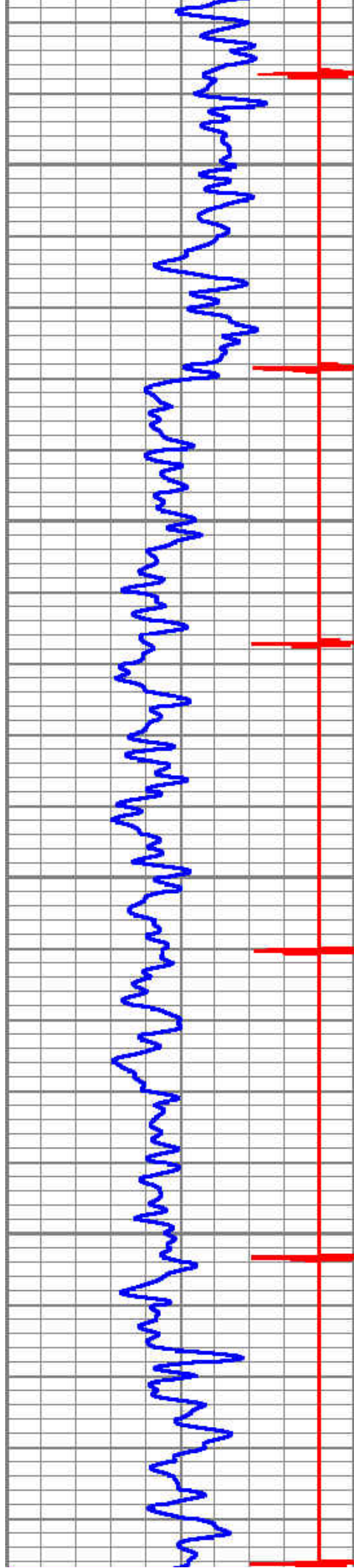




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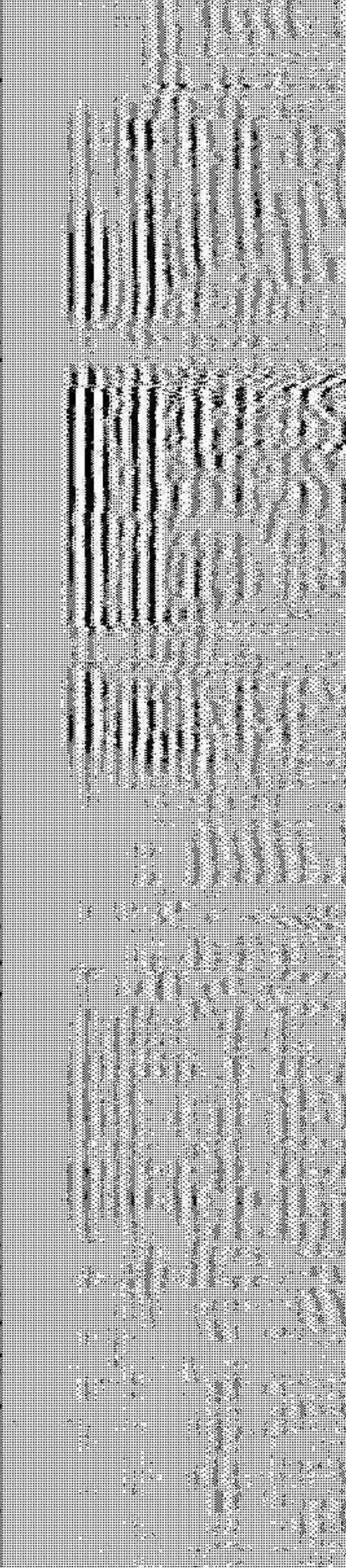
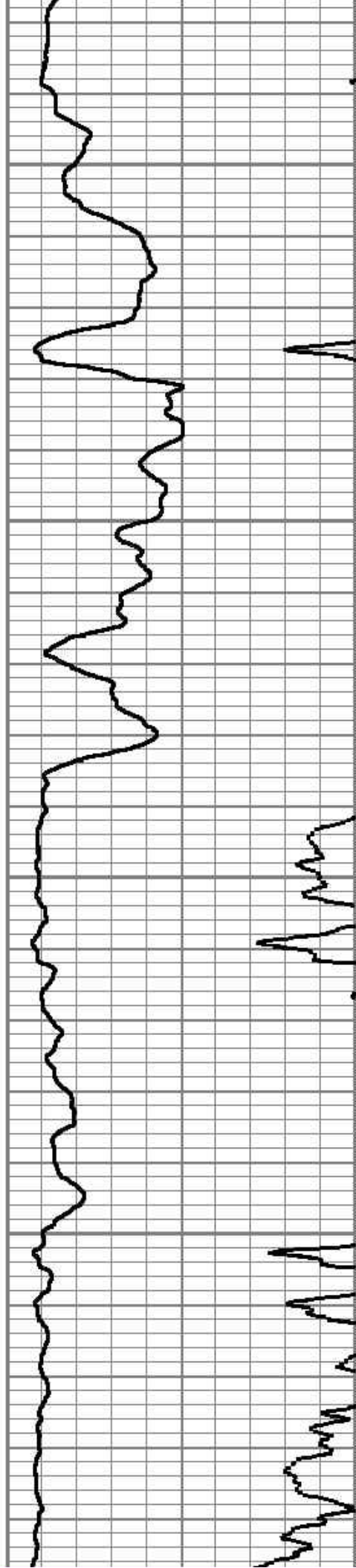
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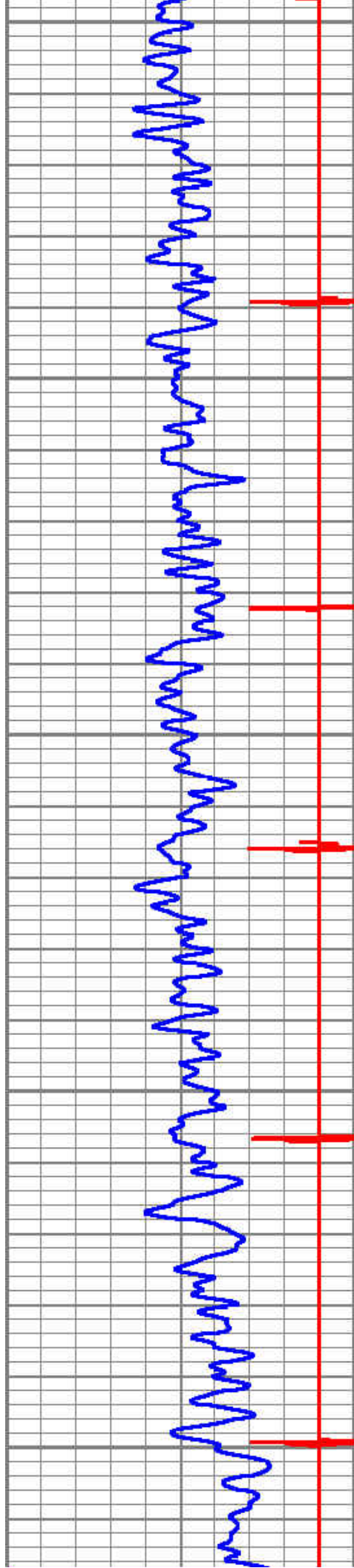




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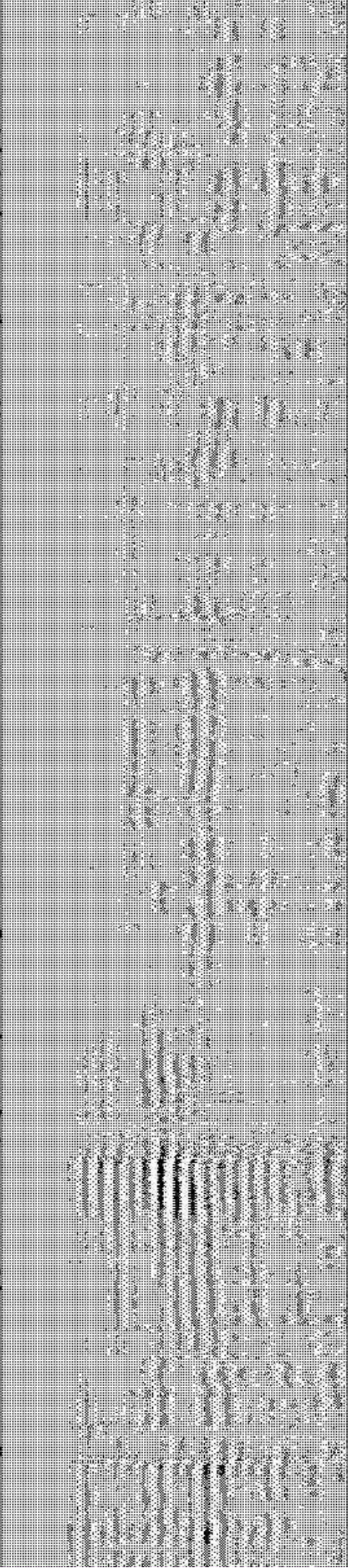
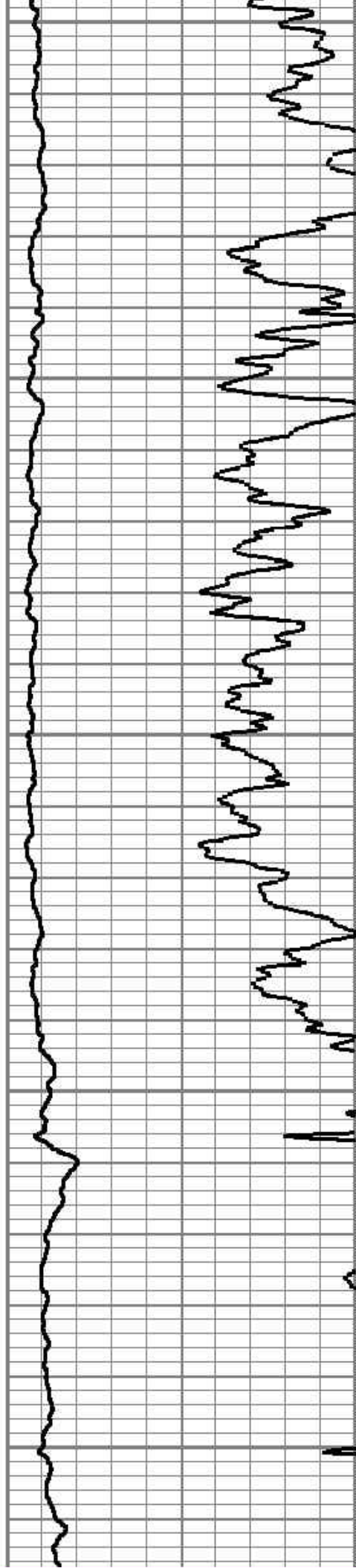
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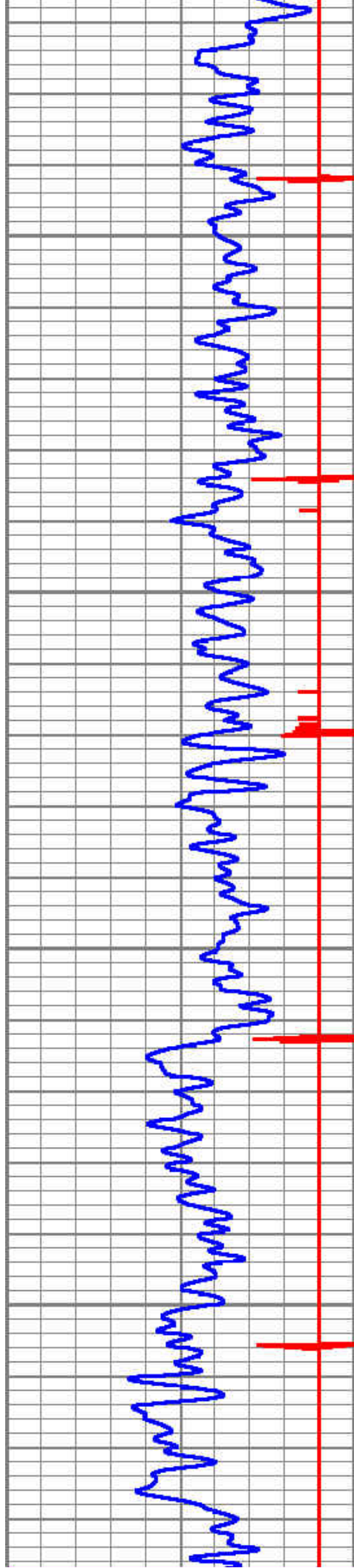




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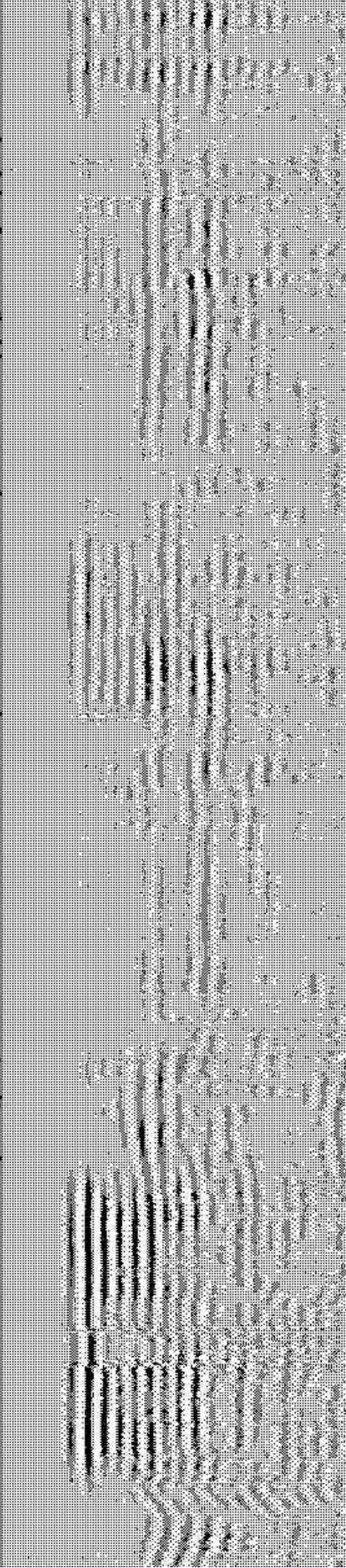
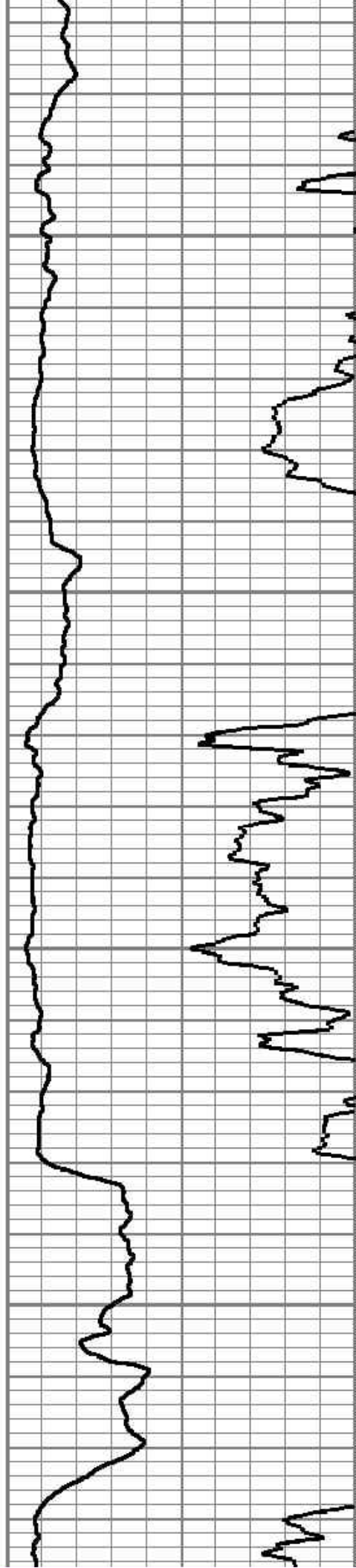
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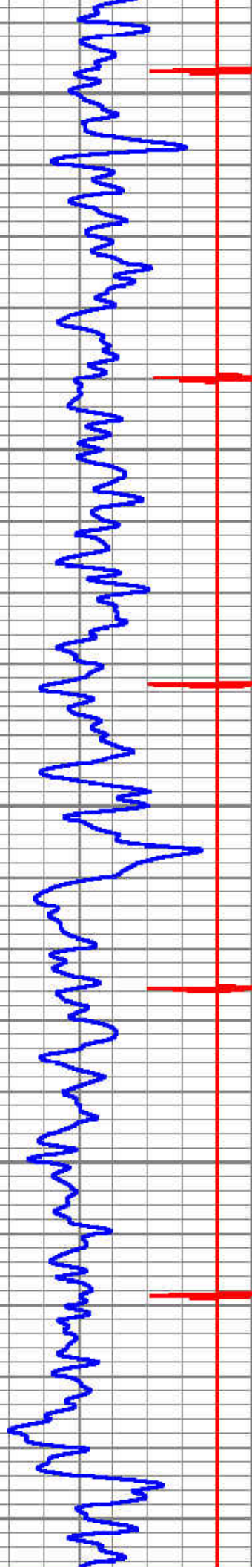




4000

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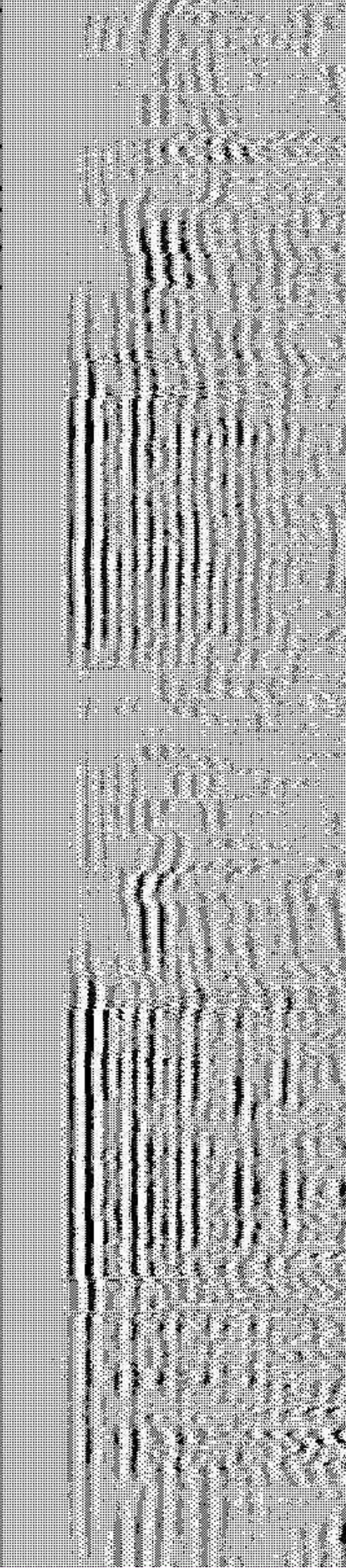
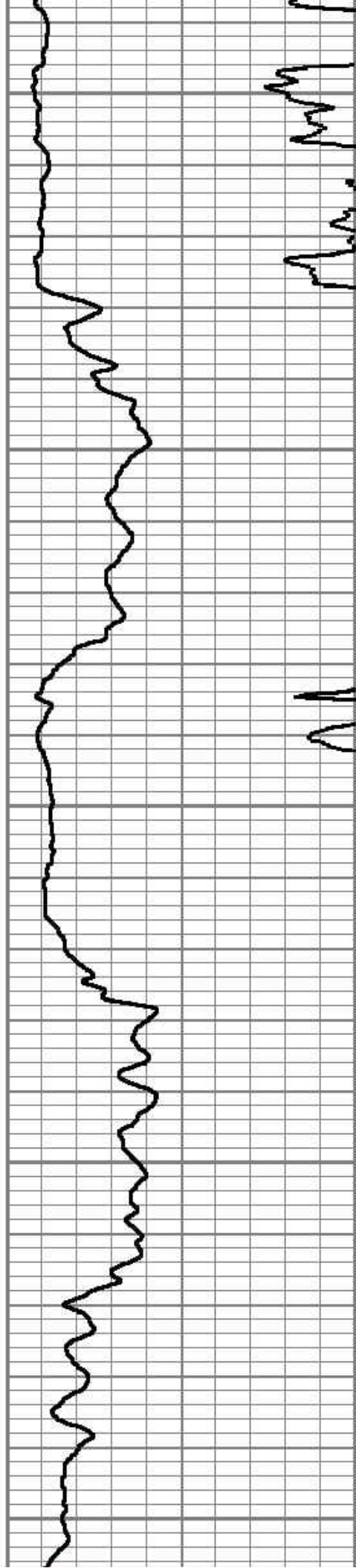


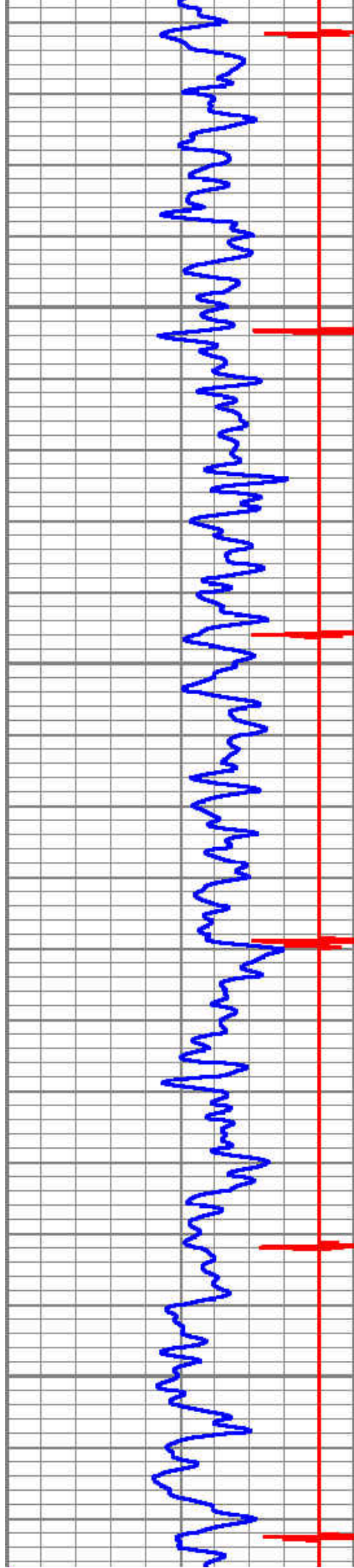


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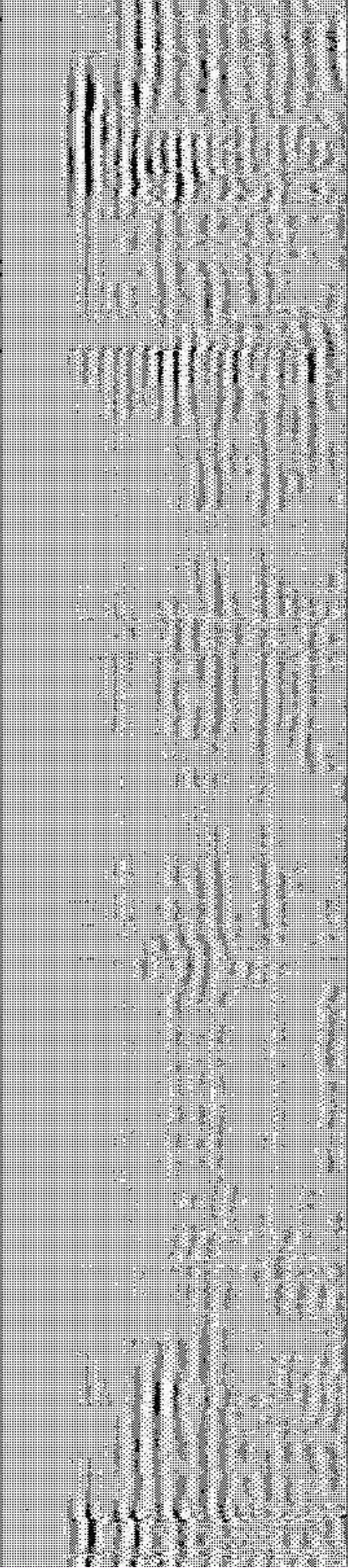
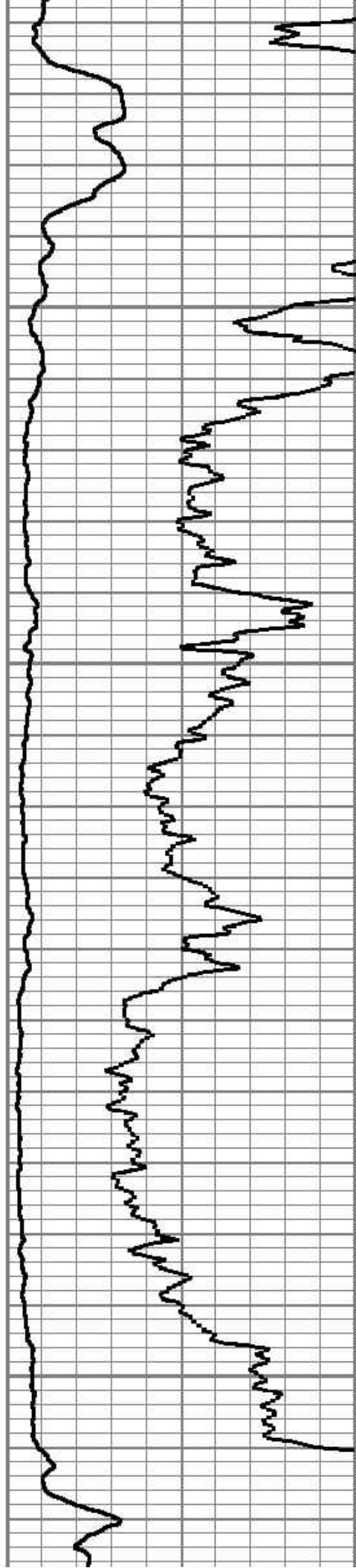
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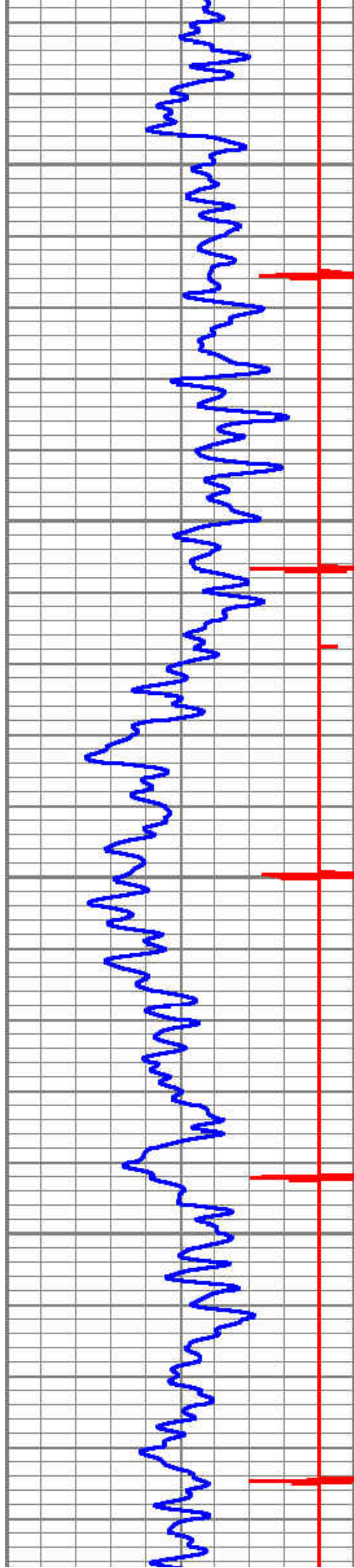




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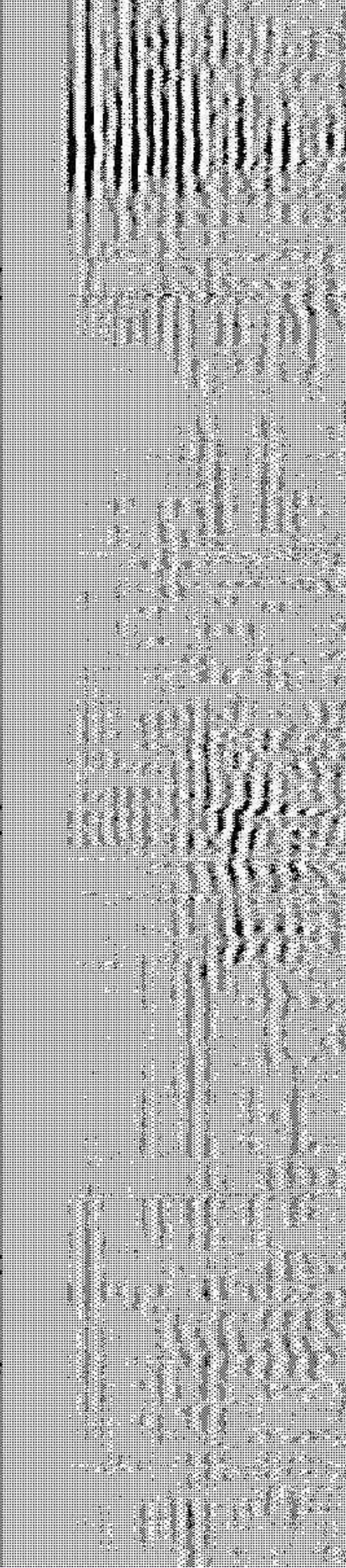
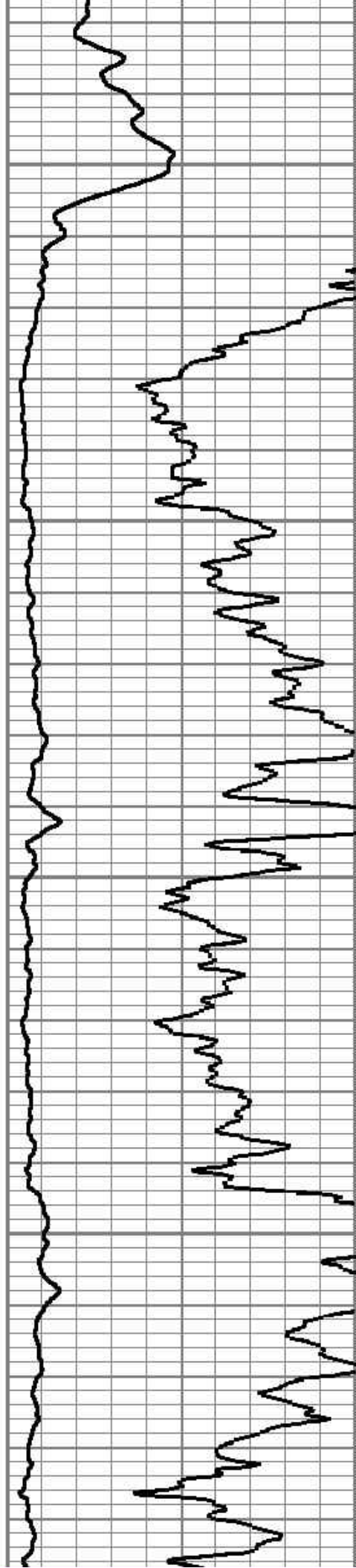
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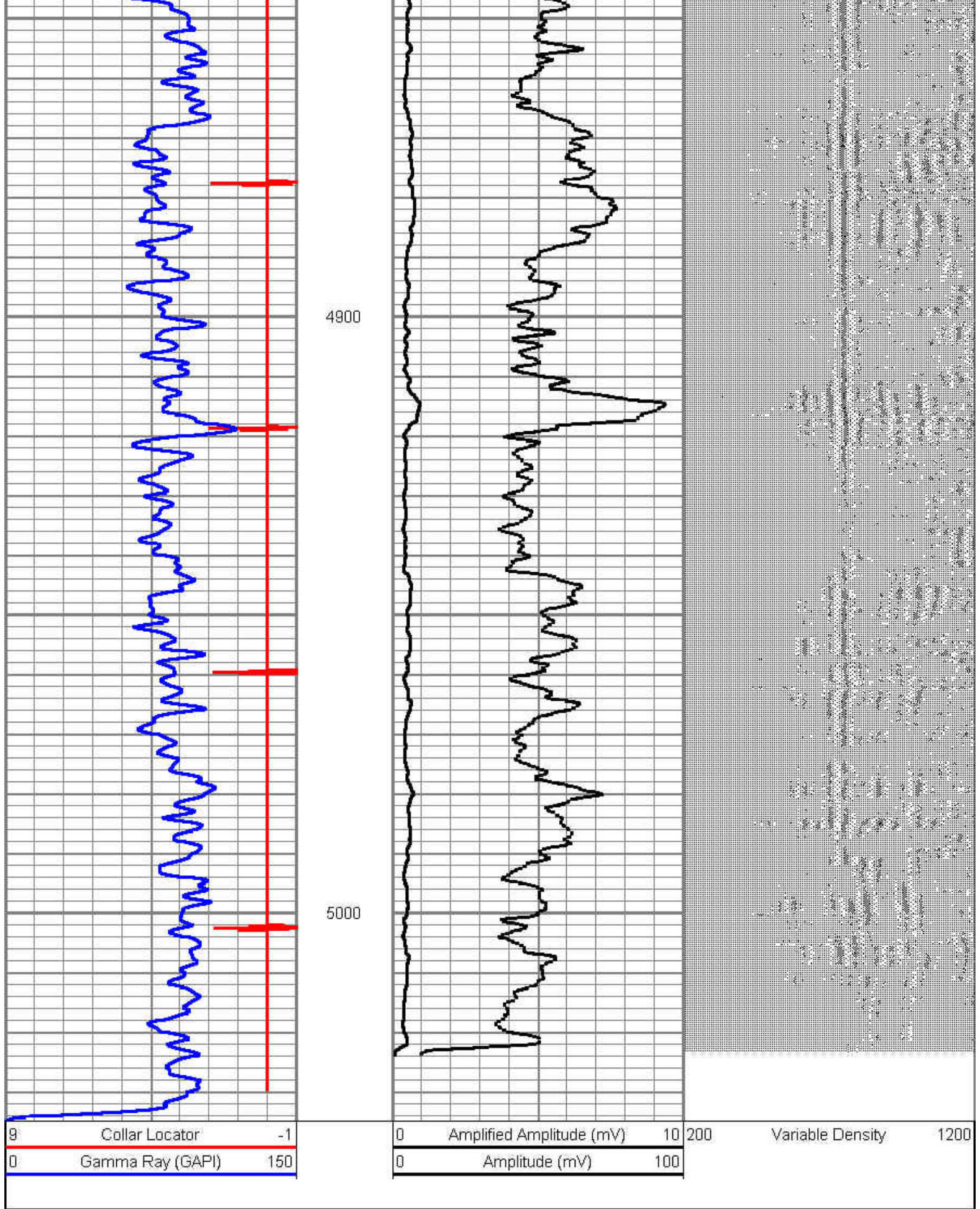




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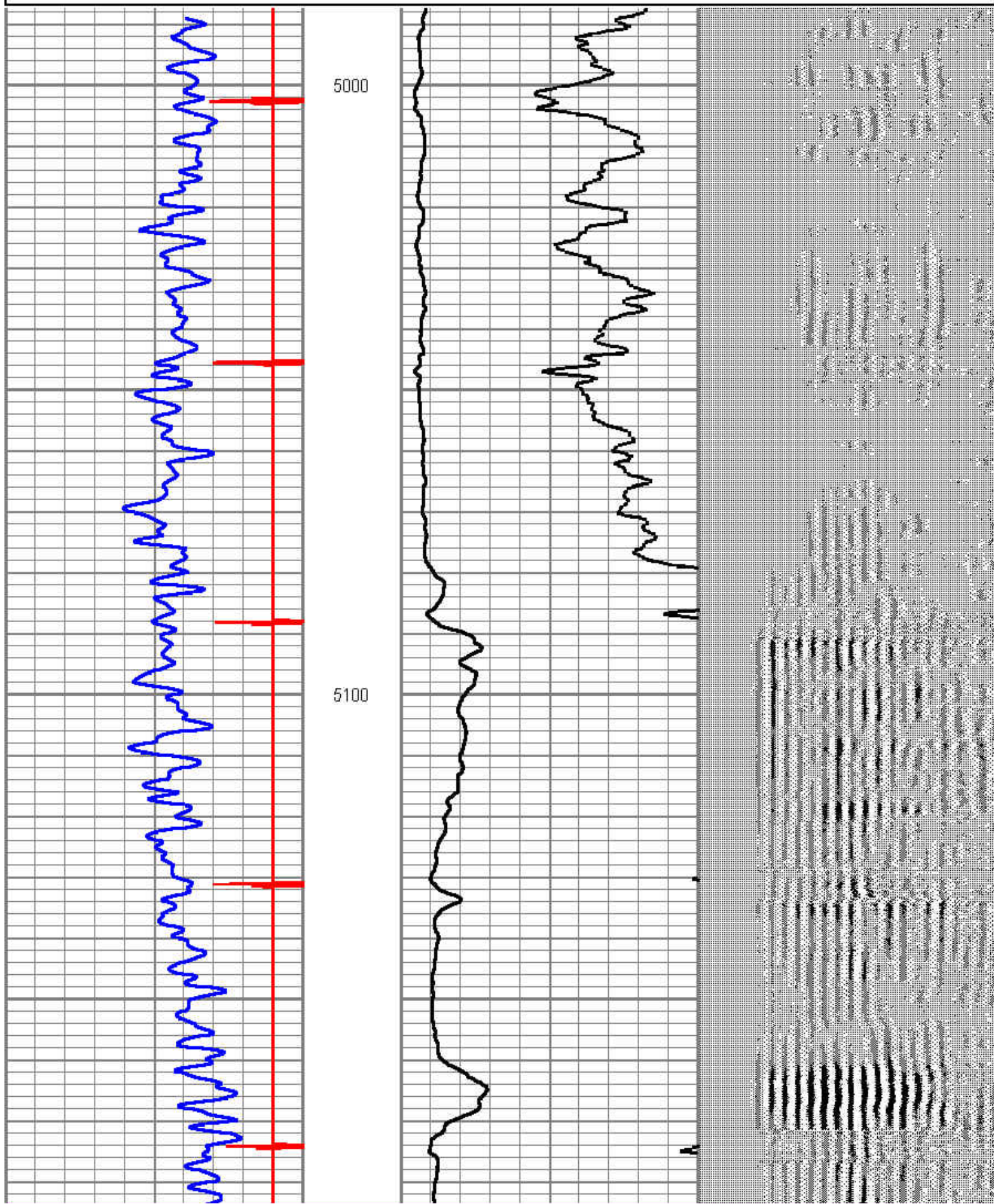


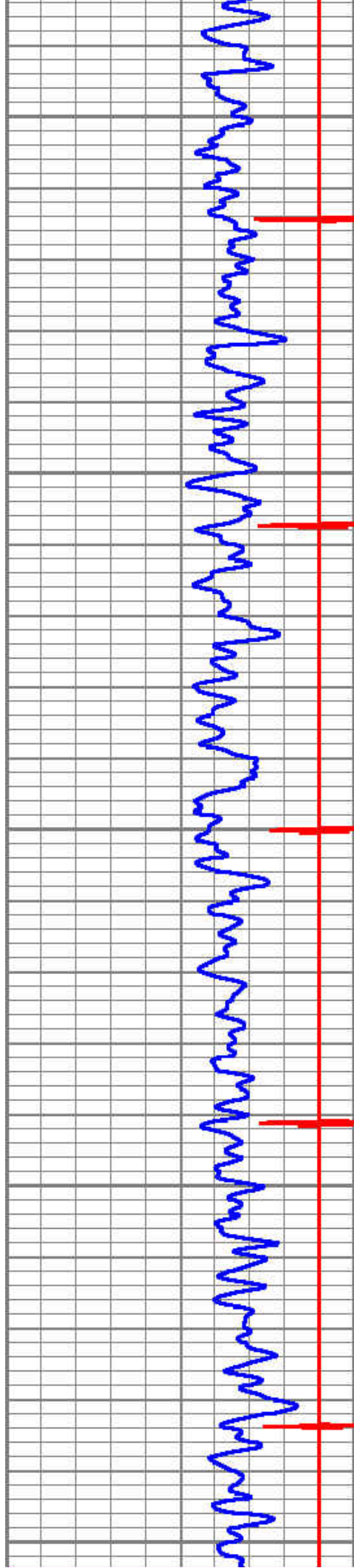


9	Collar Locator	-1
0	Gamma Ray (GAPI)	150

0	Amplified Amplitude (mV)	10
0	Amplitude (mV)	100

200 Variable Density 1200

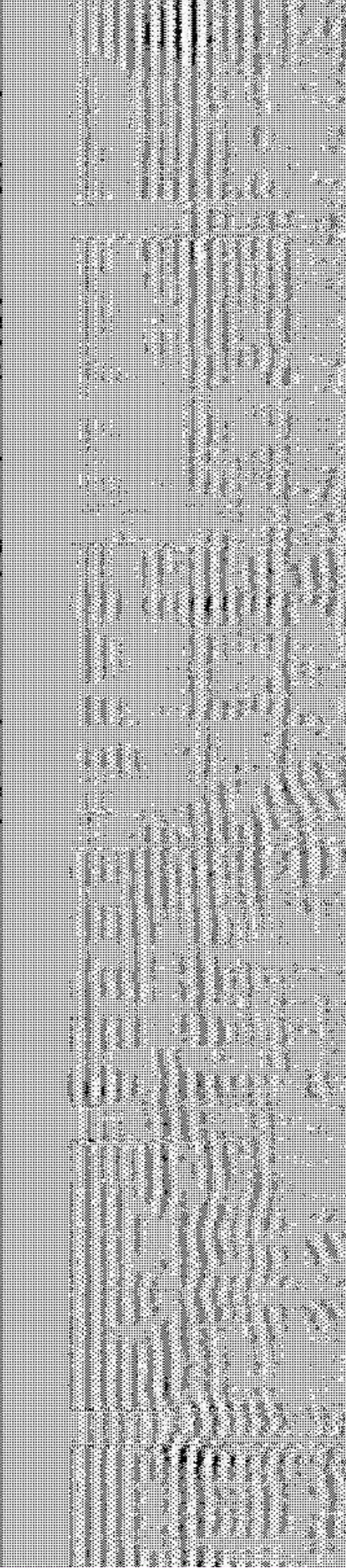
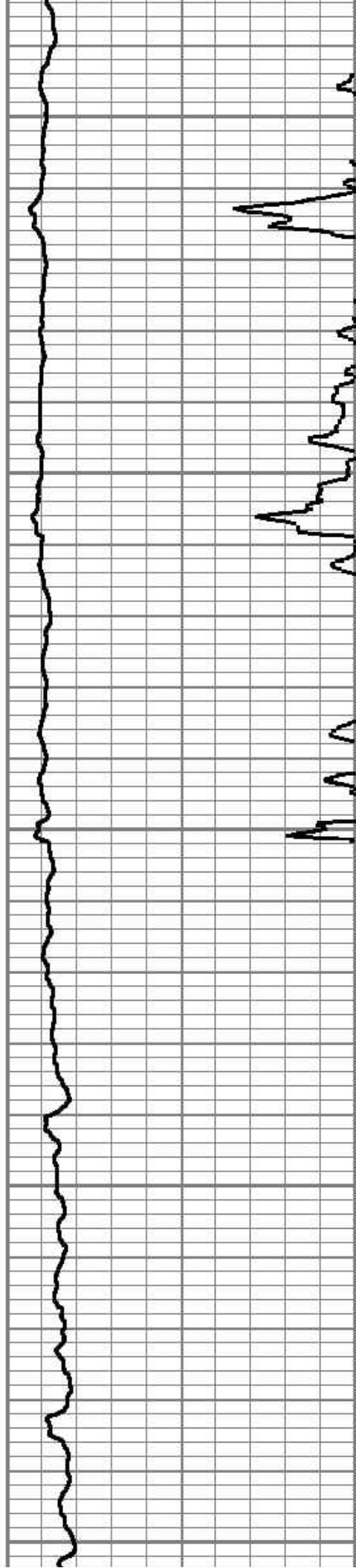


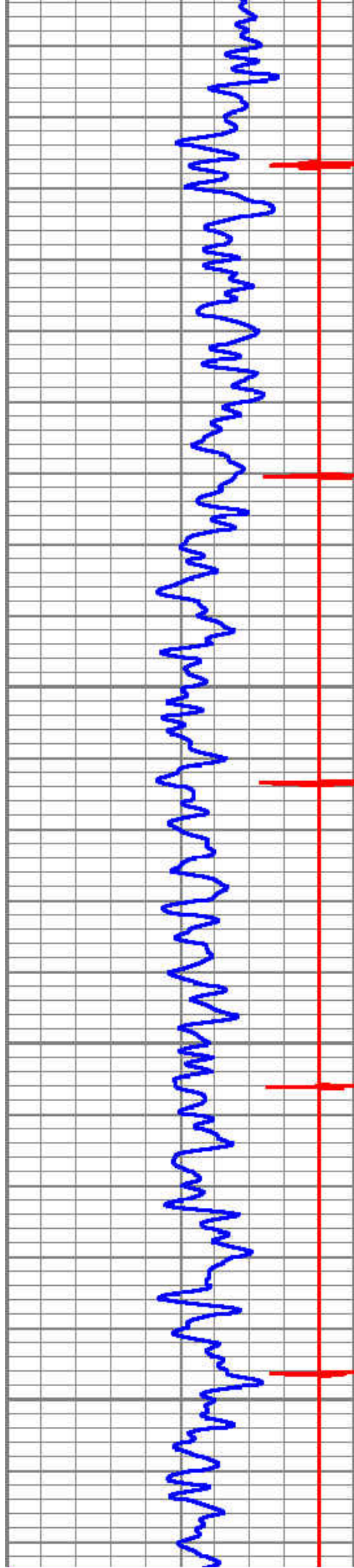


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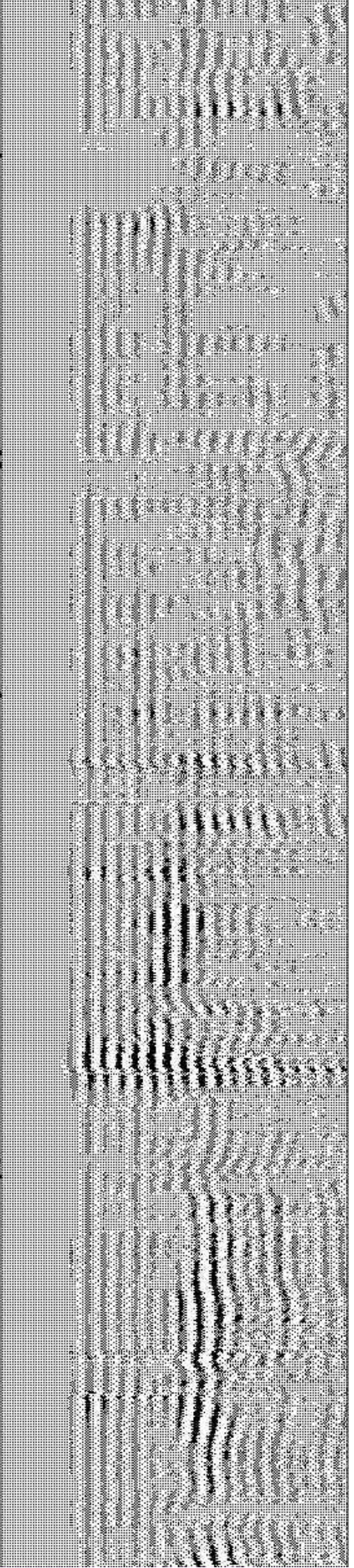
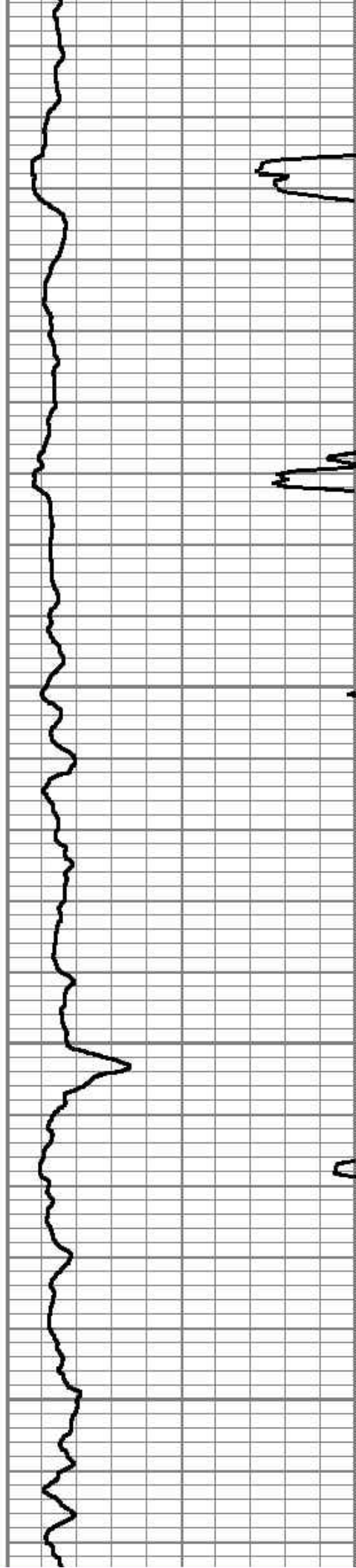
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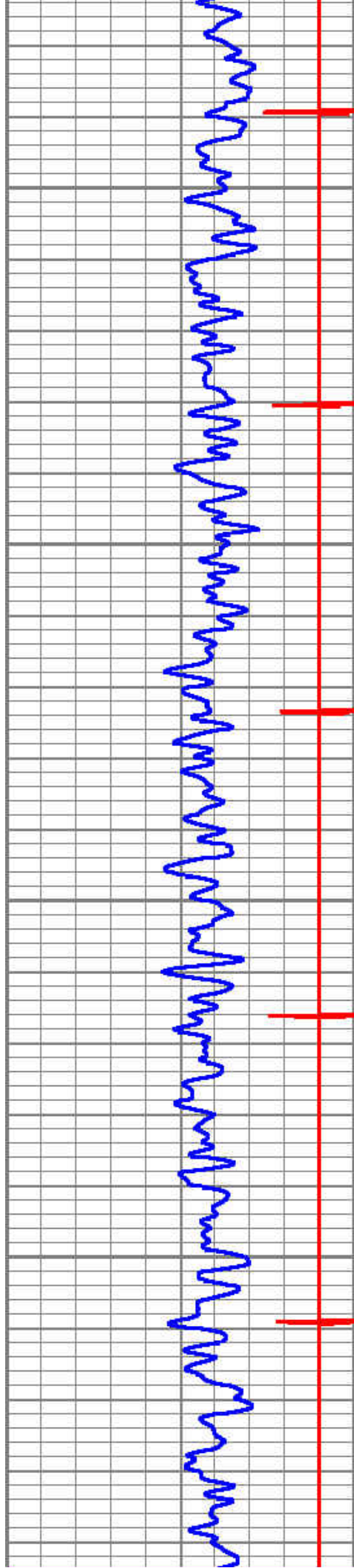




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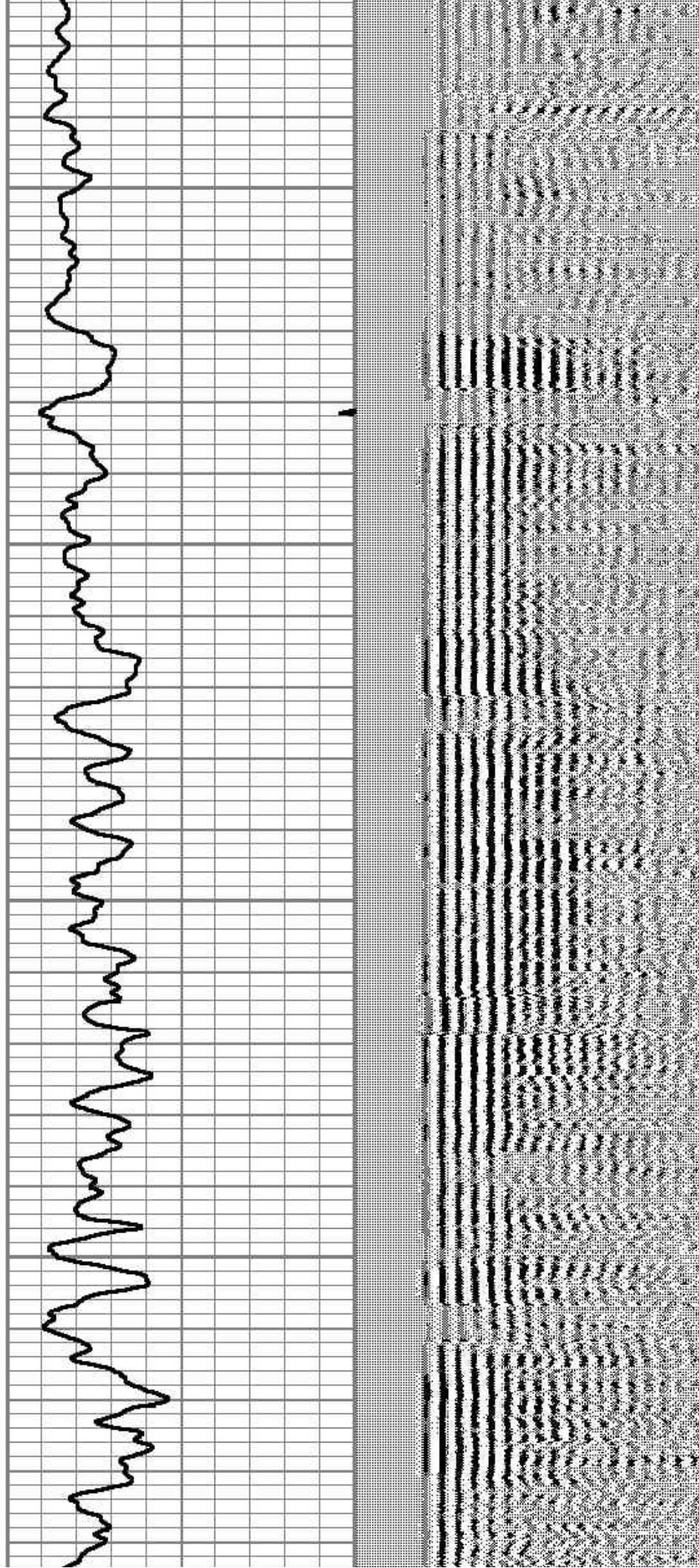
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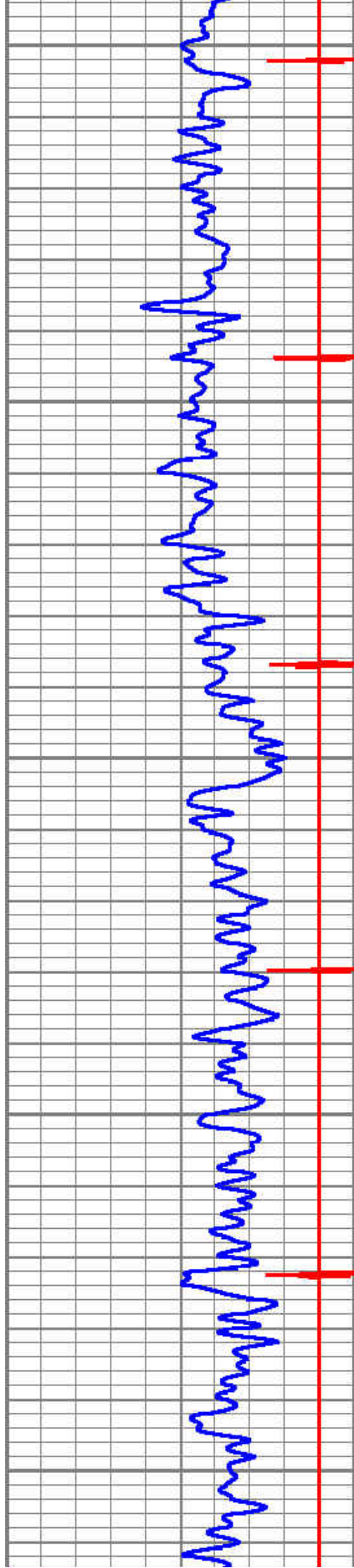




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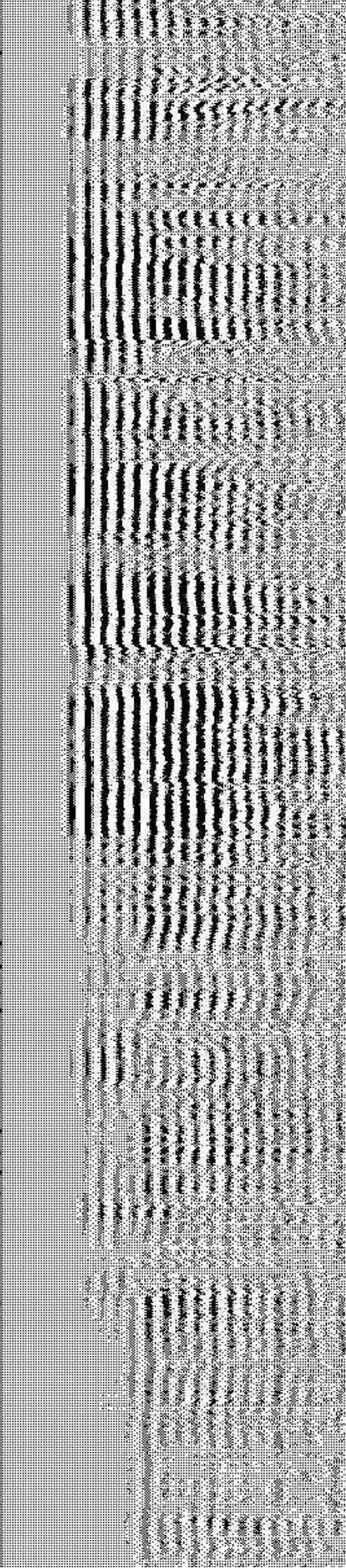
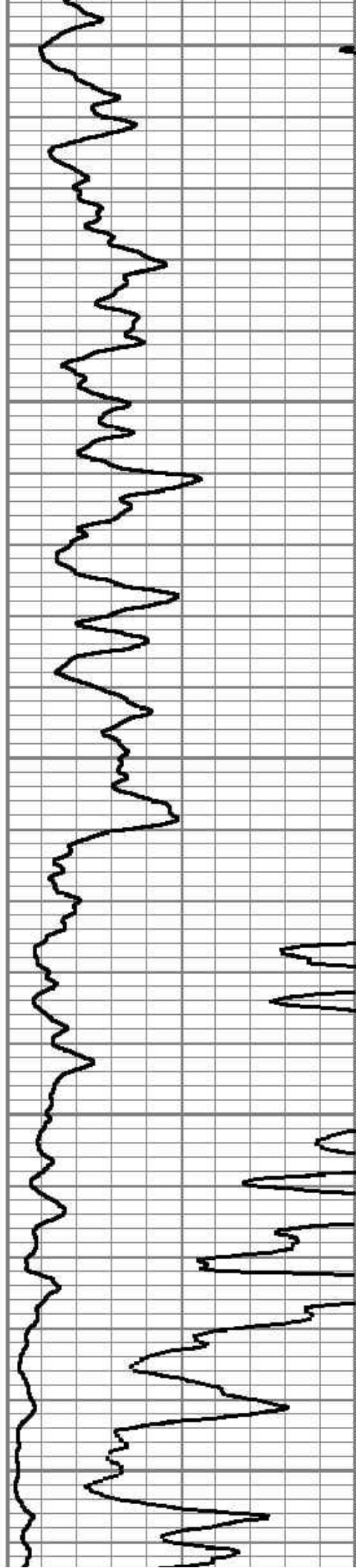
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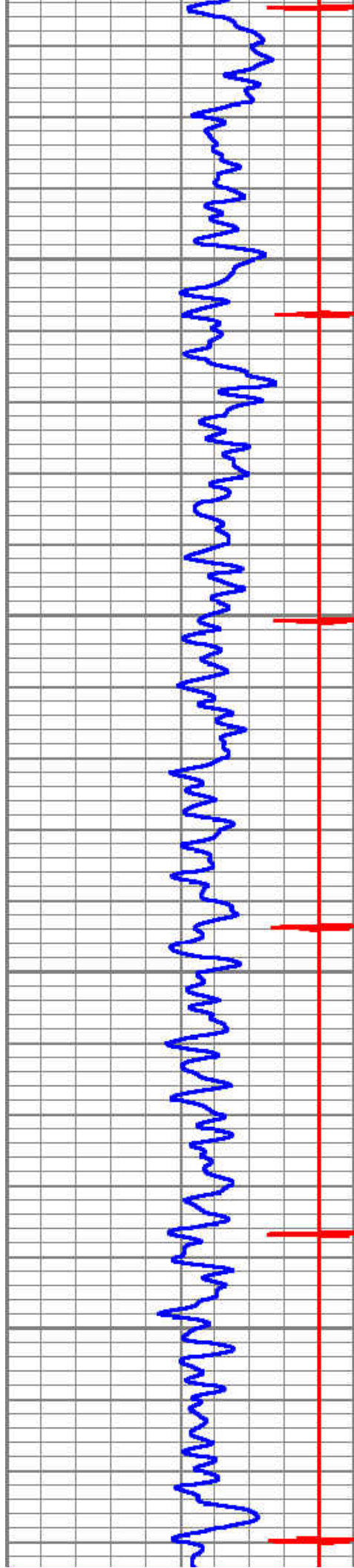




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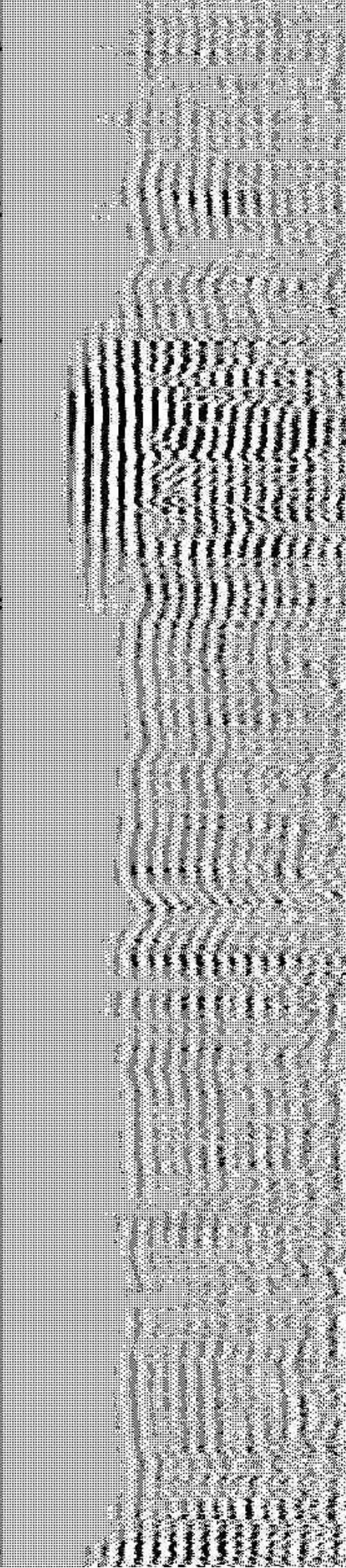
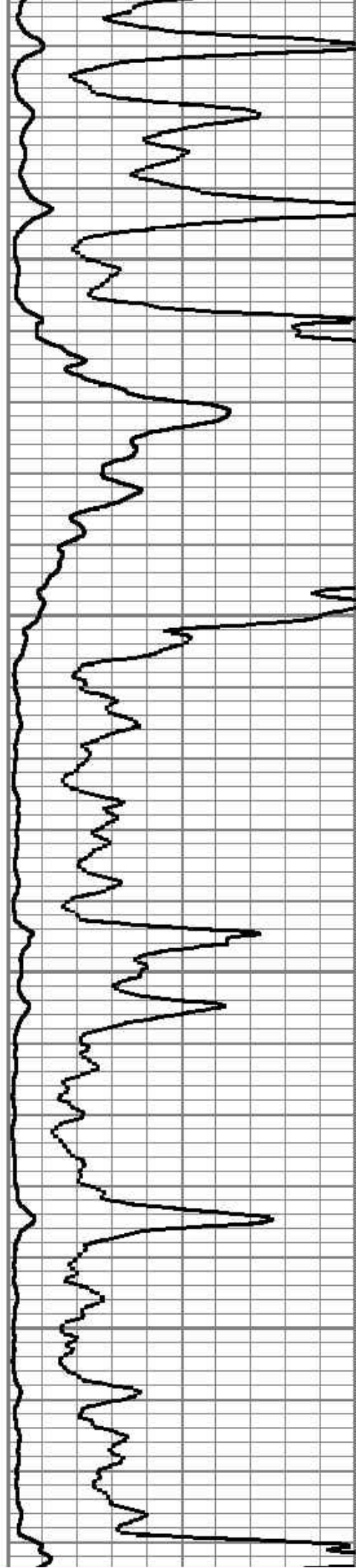
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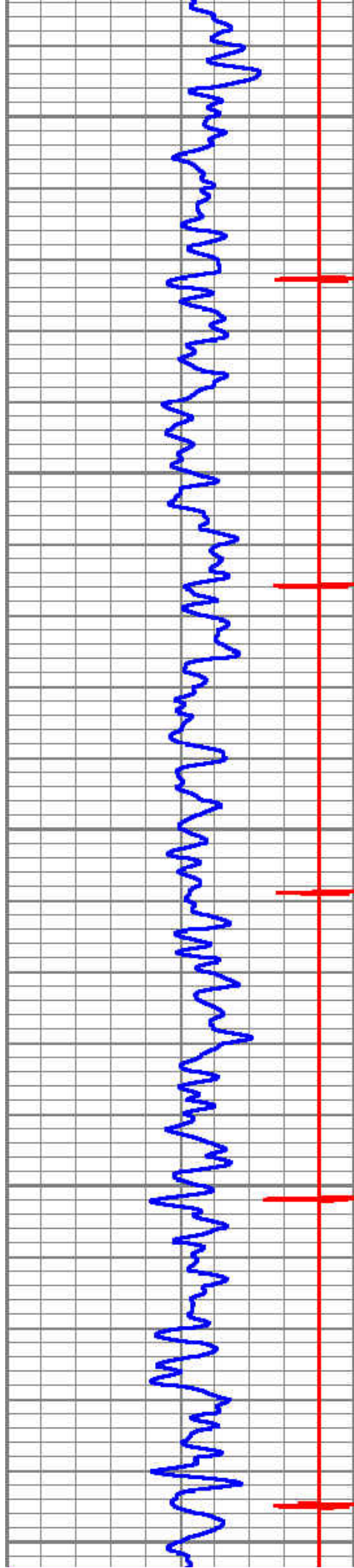




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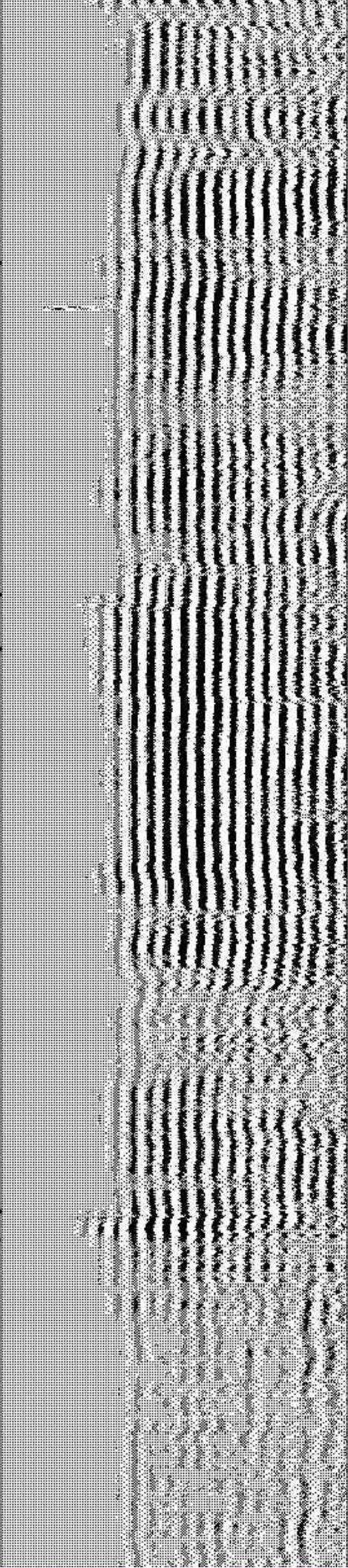
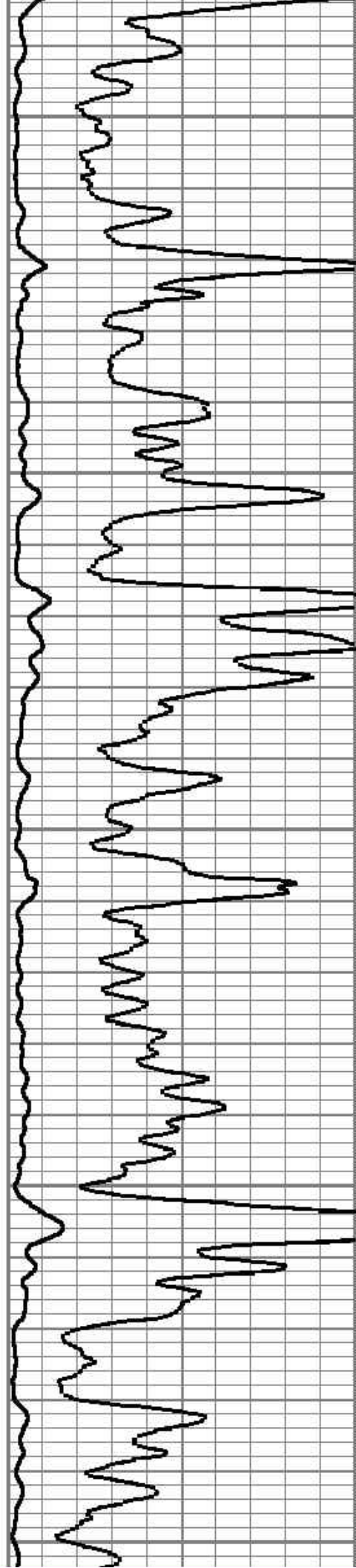


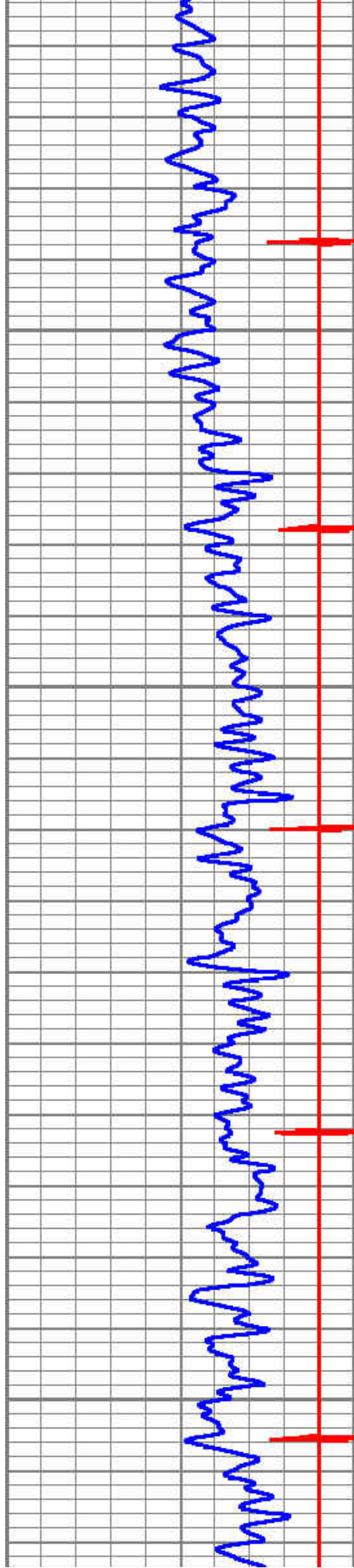


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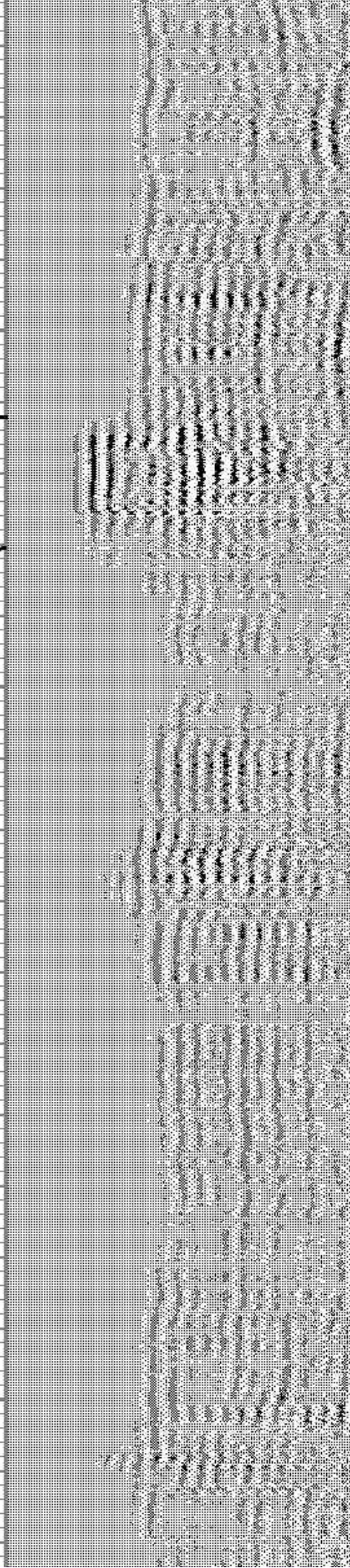
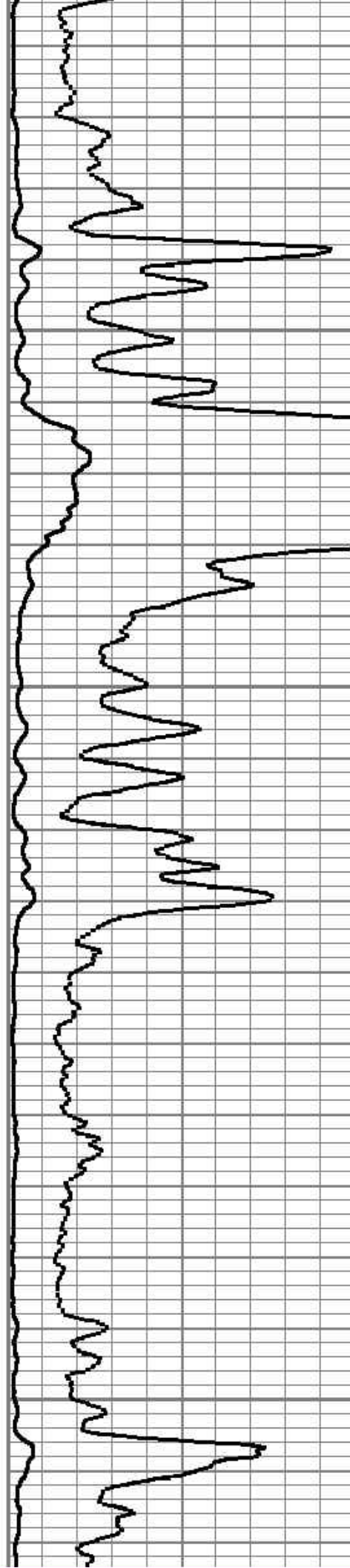
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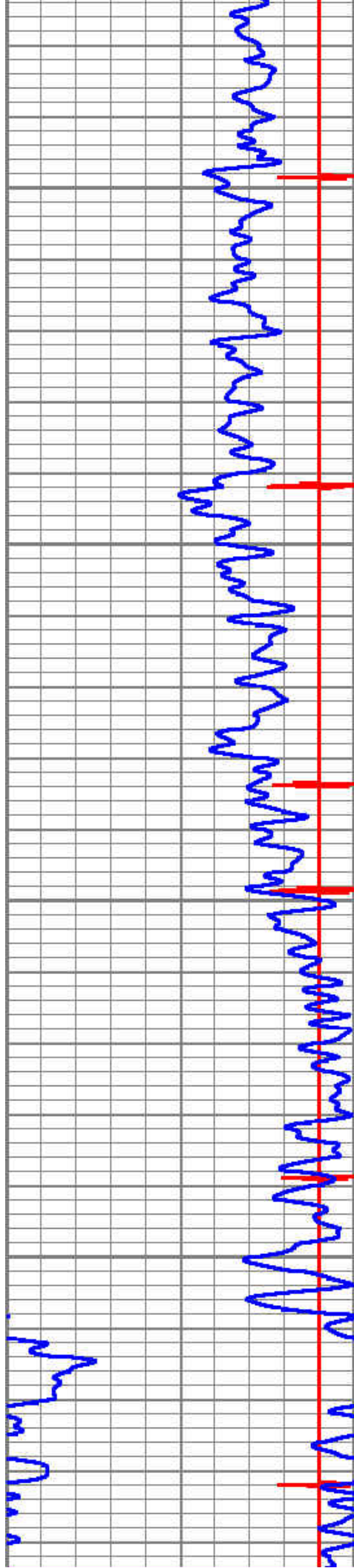




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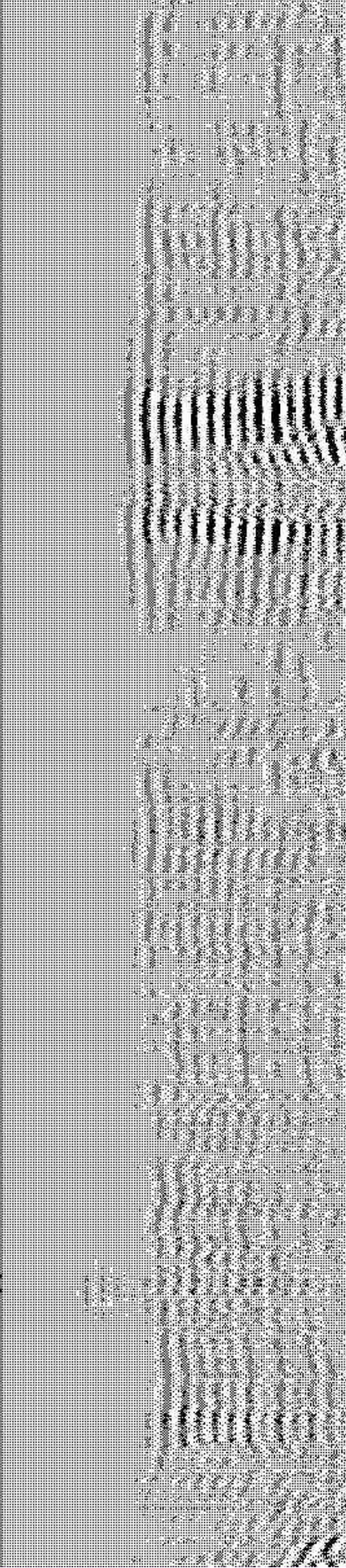
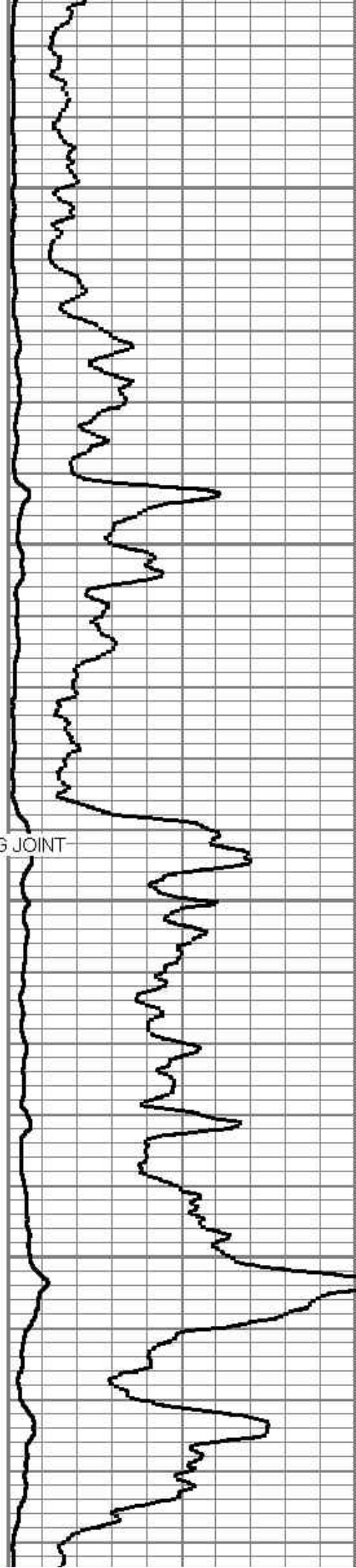


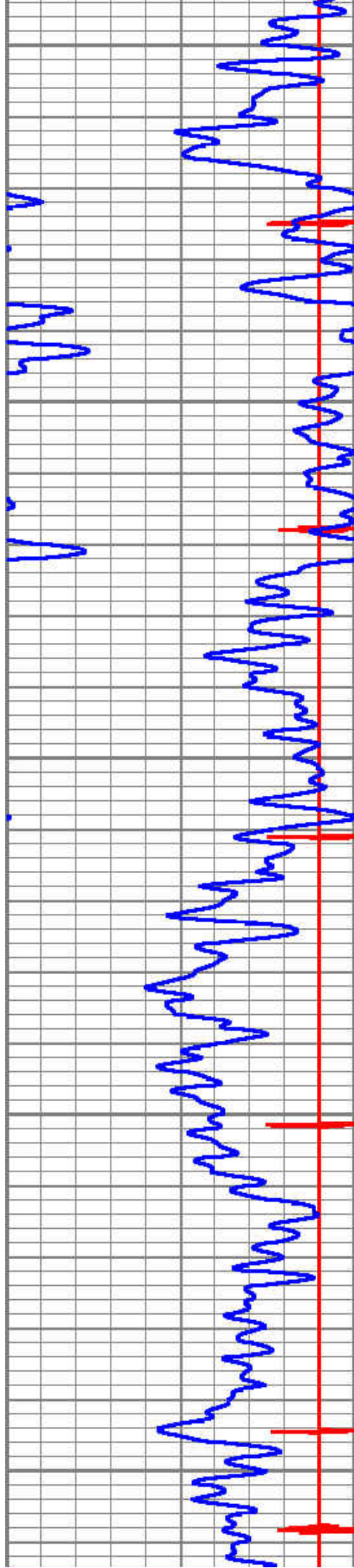


6800

← FLAG JOINT

6900

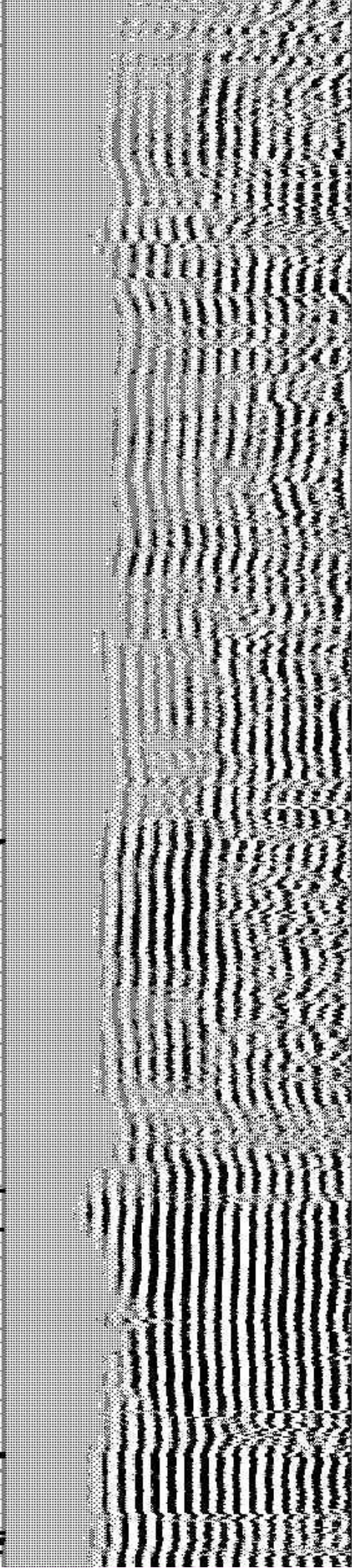
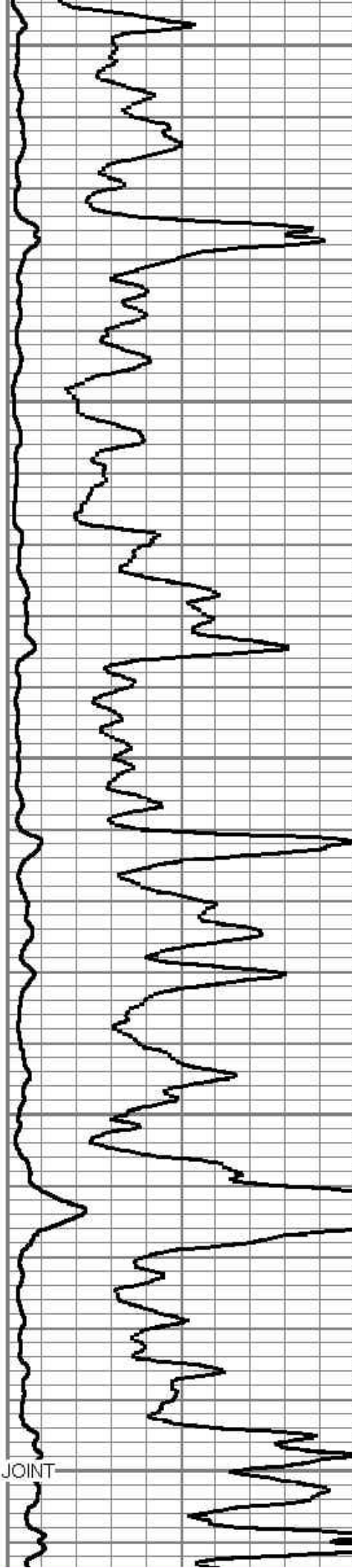


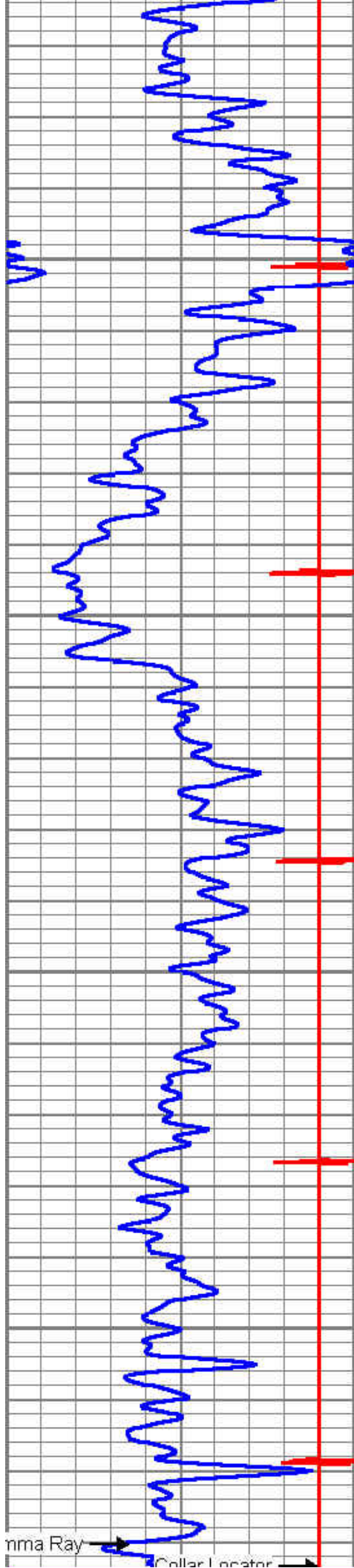


7000

7100

← FLAG JOINT





7200

7300

