



CEMENT BOND LOG

Company		NGL WATER SOLUTIONS DJ LLC					
Well		NGL C12					
Field		WATTENBERG					
County		WELD					
State		COLORADO					
Location:		API #: 05-123-41201-00					
Permanent Datum		NESE SHL 2312' FSL X 935' FEL					
Log Measured From		SEC 27 TWP 5N RGE 63W					
Drilling Measured From		GROUND LEVEL Elevation 4595'					
		KELLY BUSHING					
		KELLY BUSHING					
Other Services		GR/CCL/TEMP SET 7" RBT					
Elevation		K.B. 4608.5 D.F. 4595 G.L. 4607.5					
Date		MAY 15, 2015					
Run Number		ONE					
Depth Driller		9847'					
Depth Logger		9845'					
Bottom Logged Interval		9843'					
Top Log Interval		0'					
Open Hole Size		N/A					
Type Fluid		WATER					
Density / Viscosity		8.33					
Max. Recorded Temp		333.6					
Estimated Cement Top		N/A					
Time Well Ready		0700					
Time Logger on Bottom		0835					
Equipment Number		176					
Location		LONGMONT					
Recorded By		R. CRAWFORD					
Witnessed By		IVY MORSE					
Borehole Record		Tubing Record					
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size	Wgt/Ft		Top		Bottom	
Surface String							
Prod. String	7"						
Production String							
Liner	4.5"						

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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

THANK YOU FOR USING HIGH PLAINS INC.
YOUR CREW TODAY: R. CRAWFORD, M. REED, R. MARTIN
LOG CORRELATED TO: SCHLUMBERGER TRIPLE COMBO
DATED: 10-APR-15
MERGED CCL/GR LOG TO CBL AT : 8010'
LOGGED UNDER 1000 PSI TILL 155'
PBR TOP AT 8180'
AT CUSTOMER REQUEST DID NOT DO REPEAT PASS



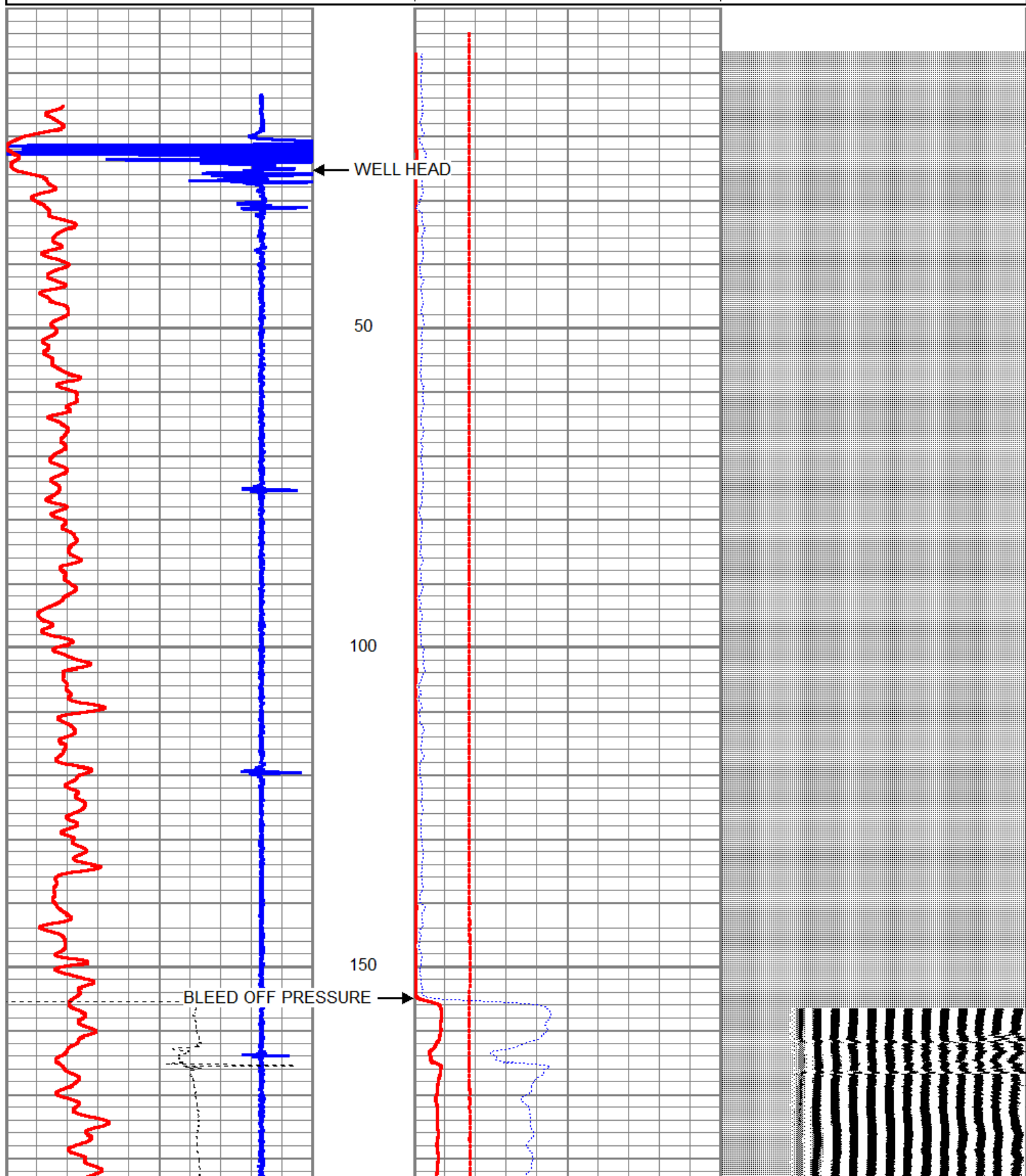
MAIN PASS

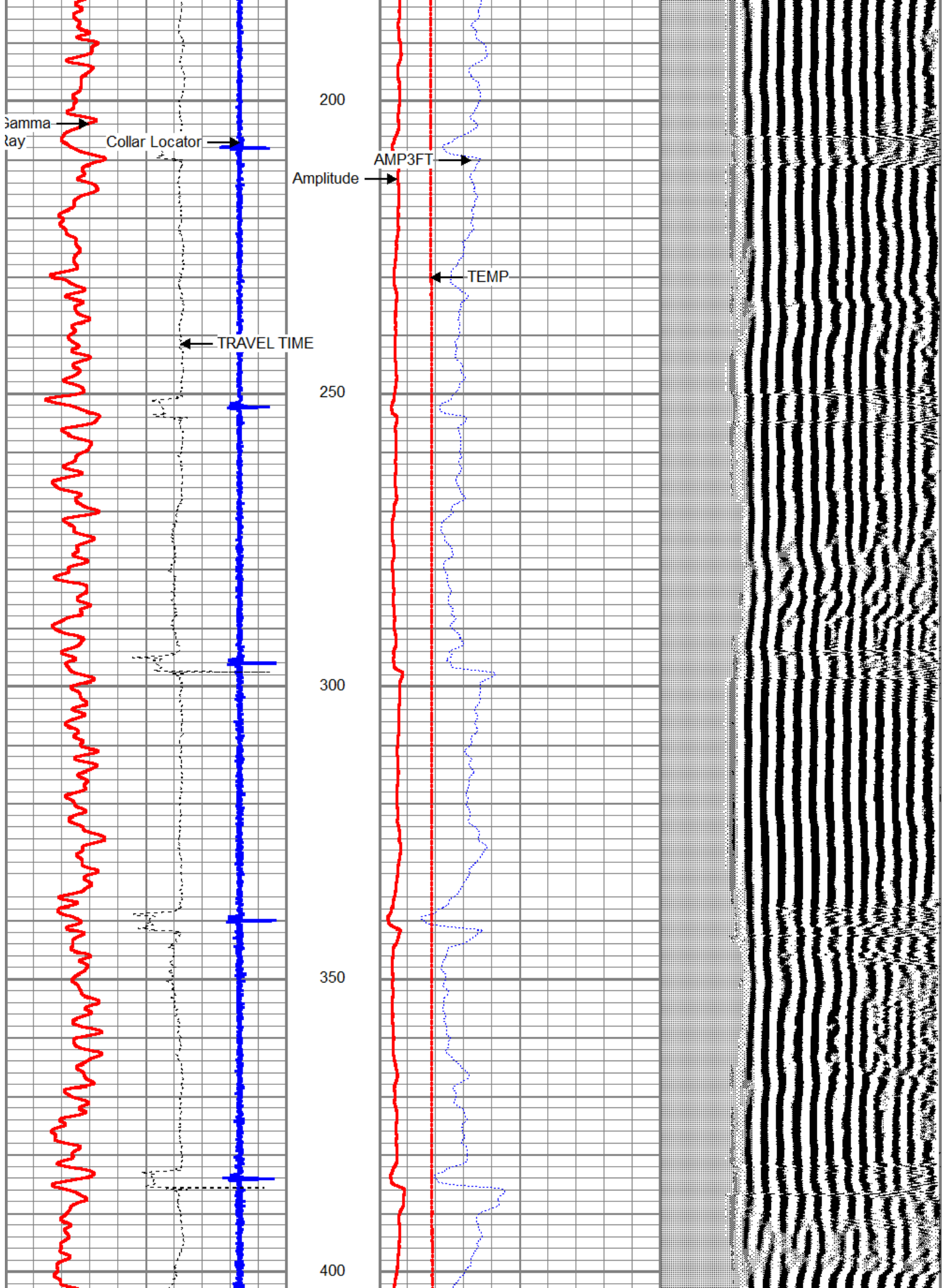
LOGGED AT 1000 PSI

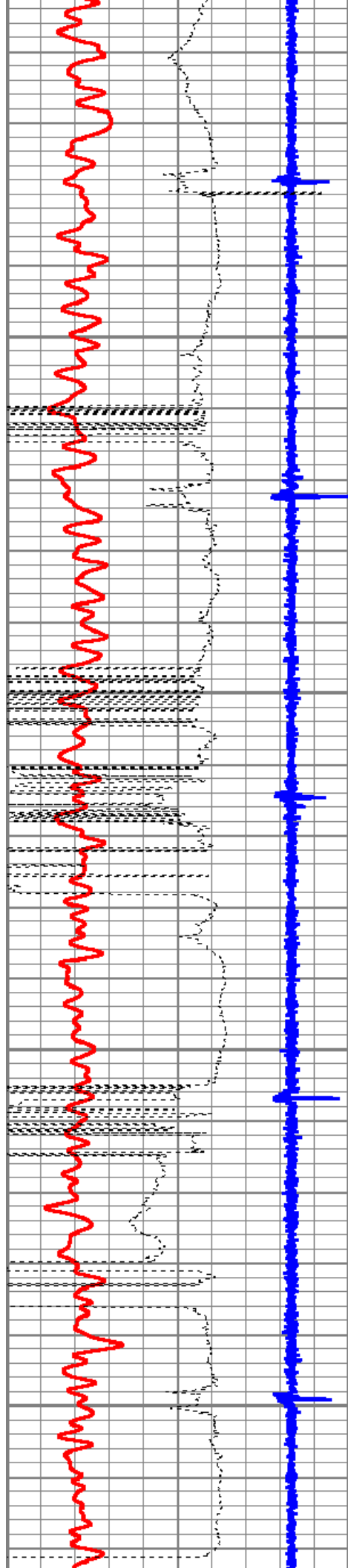
Database File ngl_c12.db
Dataset Pathname cbl/pass7B
Presentation Format cbl3x5
Dataset Creation Sat May 16 13:19:17 2015
Charted by Depth in Feet scaled 1:240

-5	Collar Locator	1
0	Gamma Ray (GAPI)	200
400	TT3FT (usec)	300

0	Amplitude (mV)	100	200	VDL	1200
0	AMP3FT (mV)	20			
0	Temp (degF)	350			
0	Temp (degF)	350			





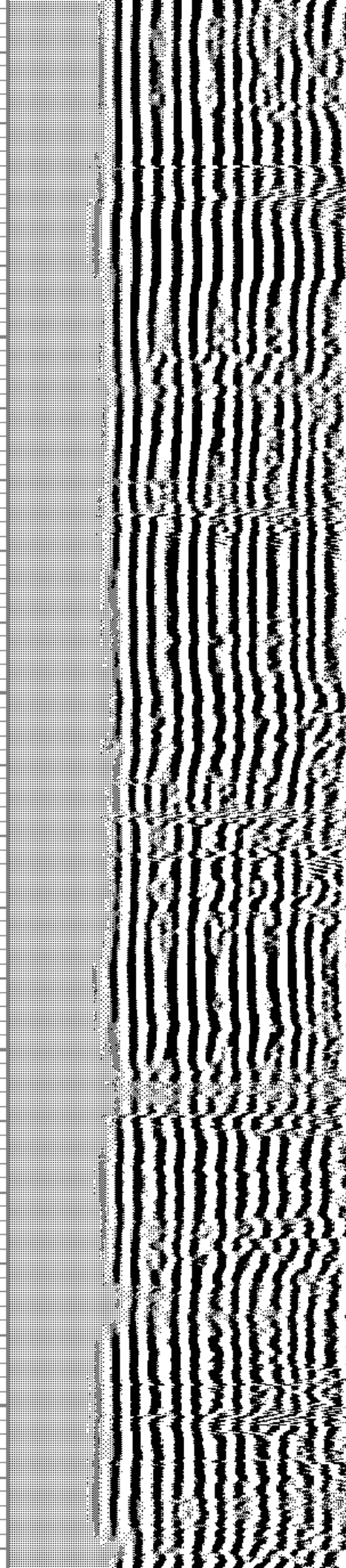
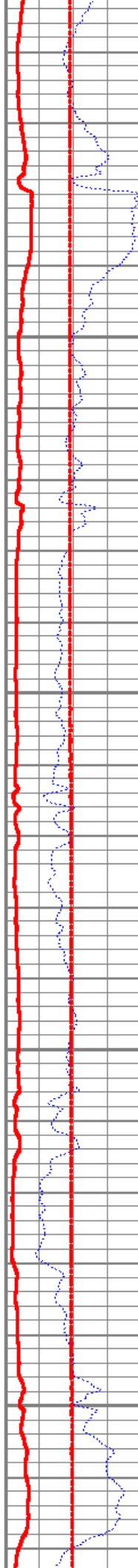


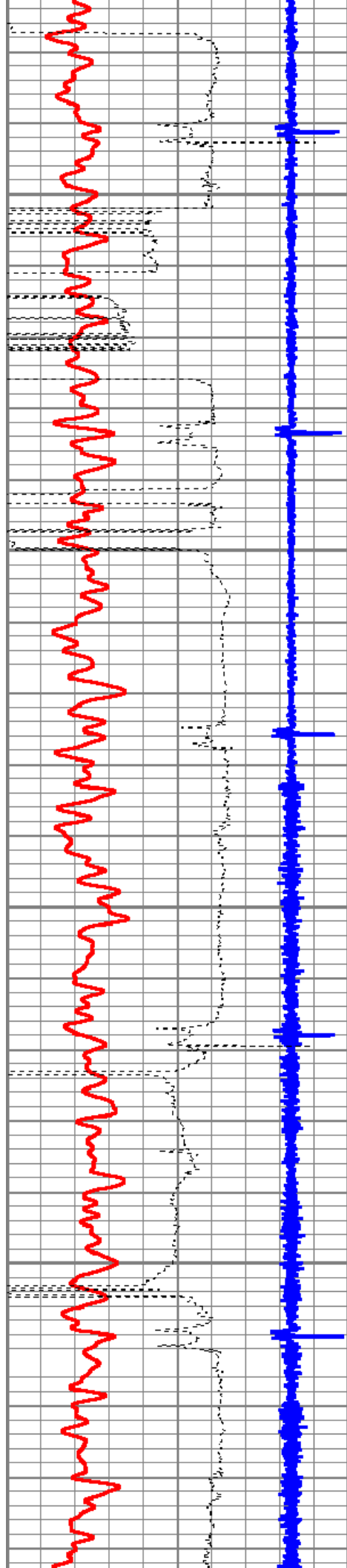
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600



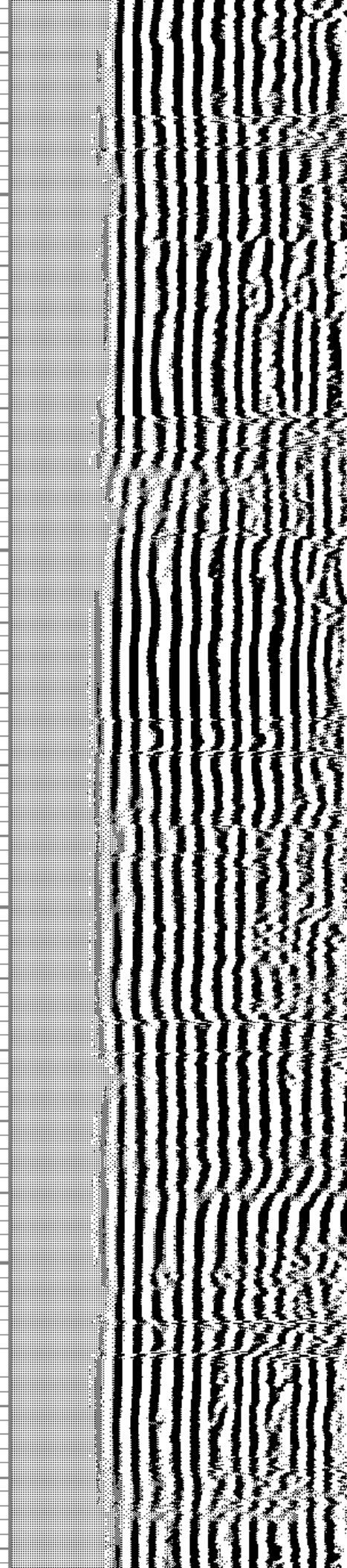
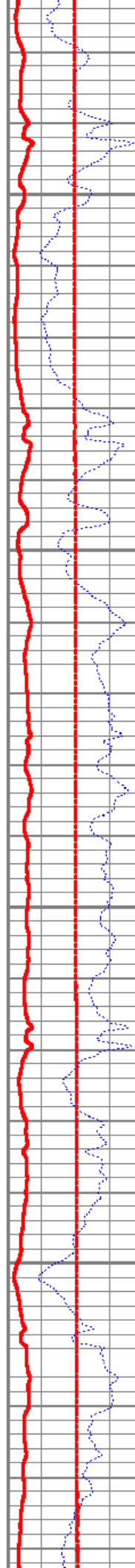


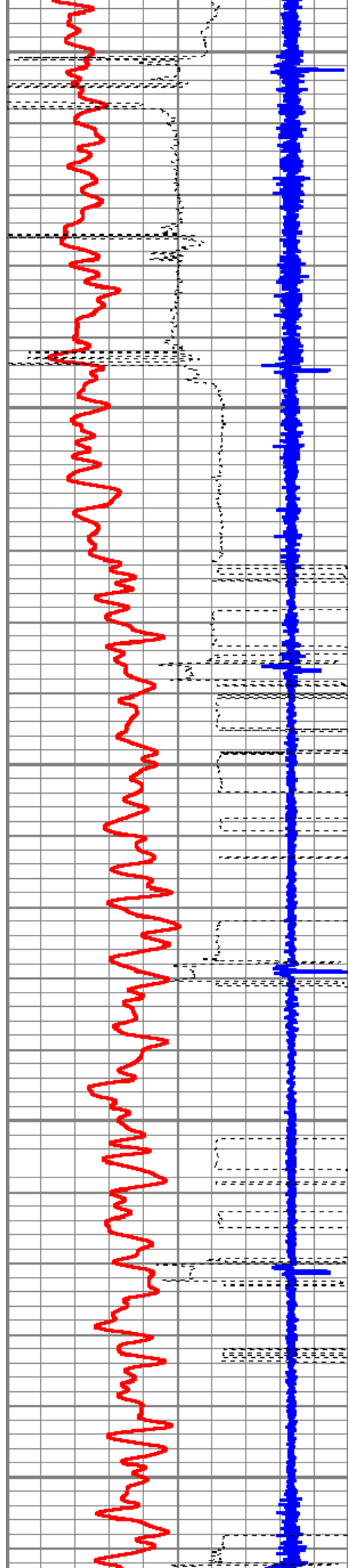
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700

750

800





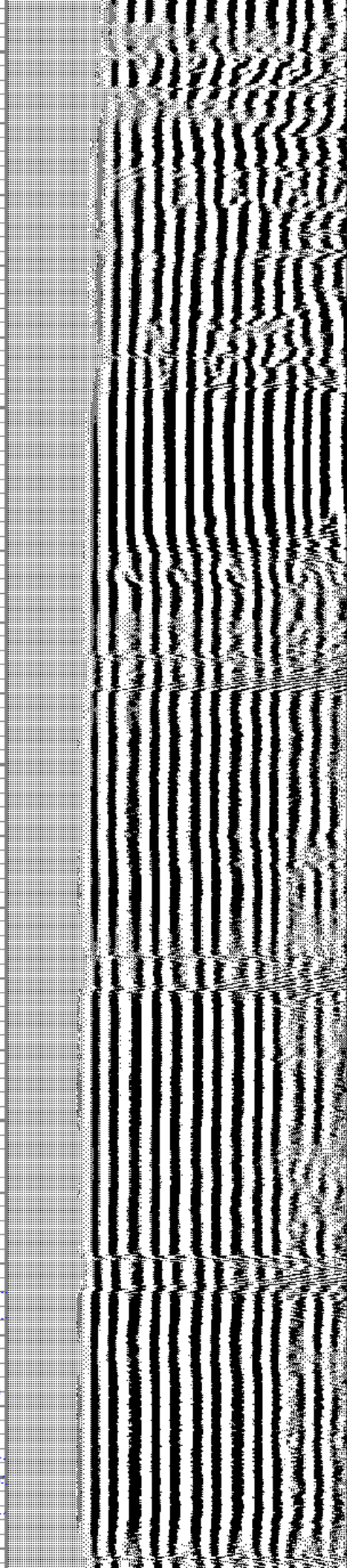
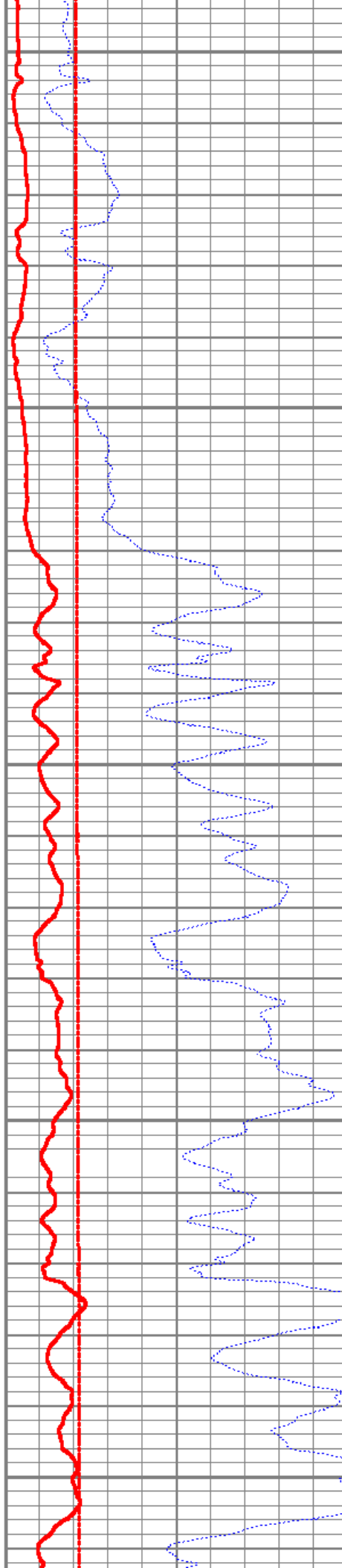
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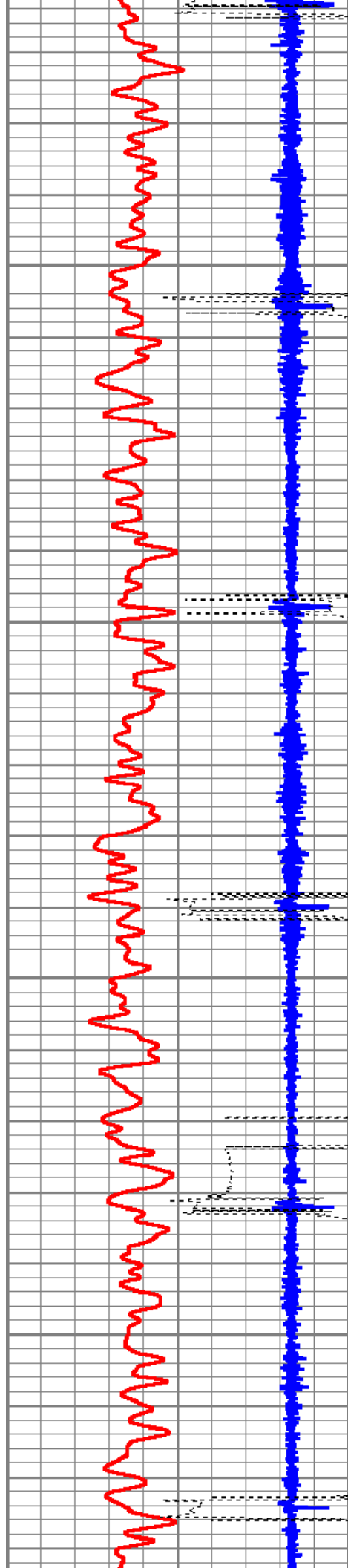
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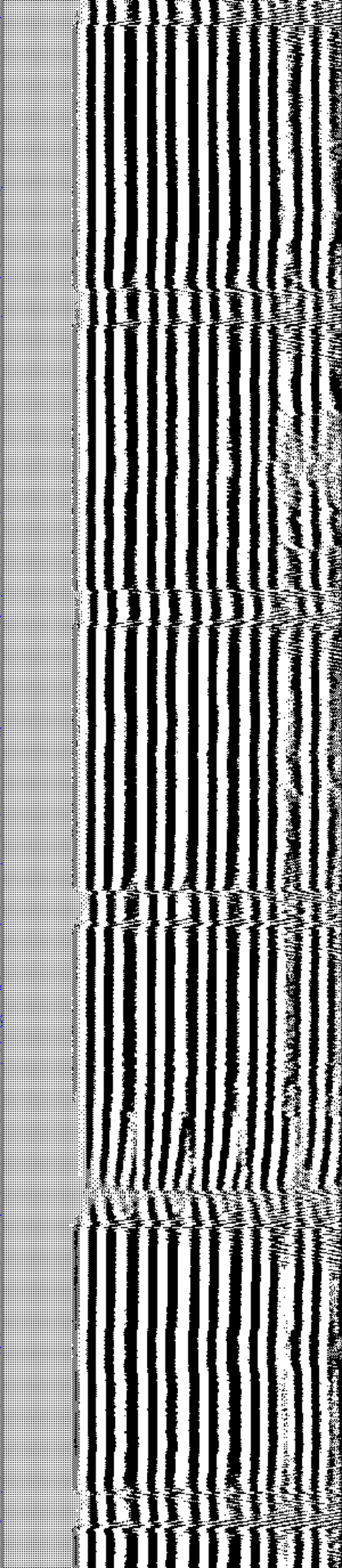
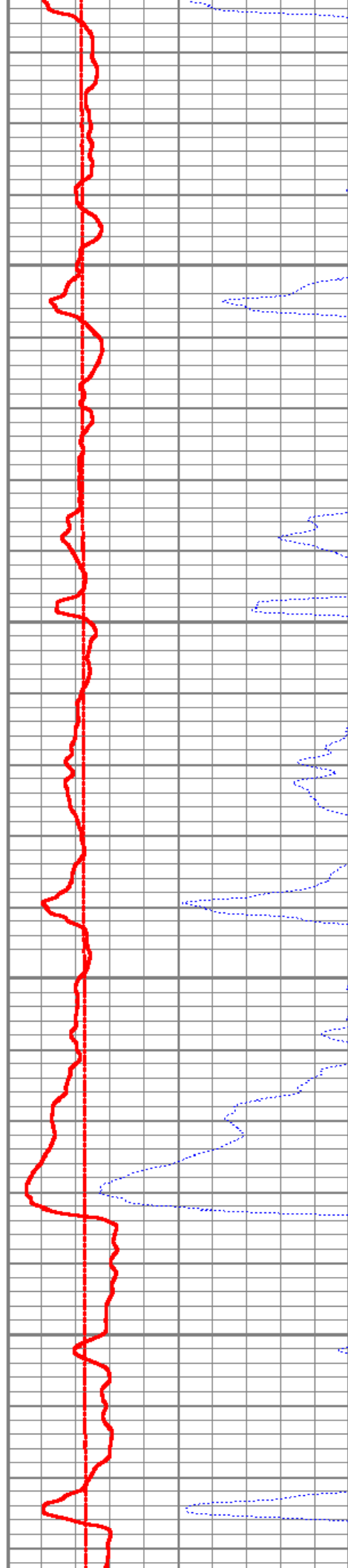


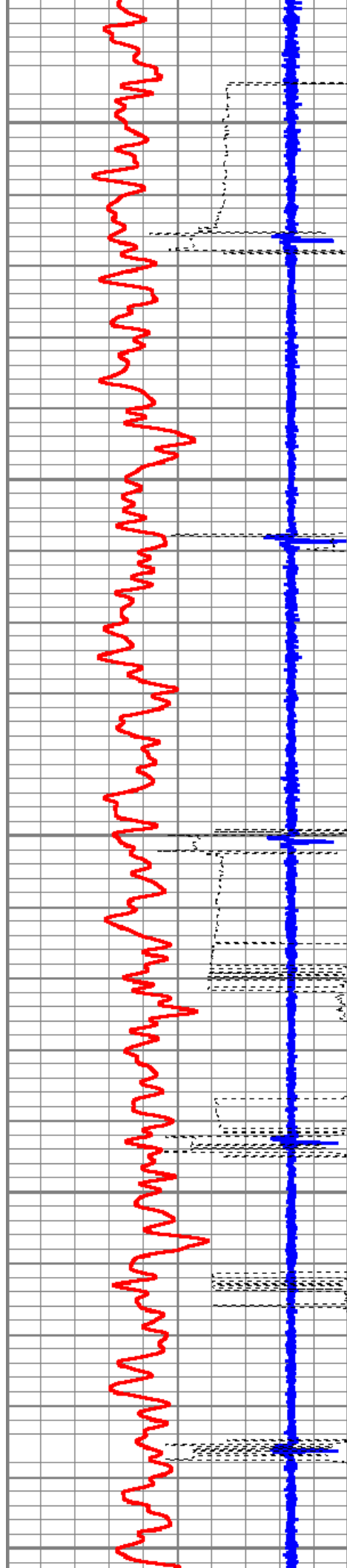
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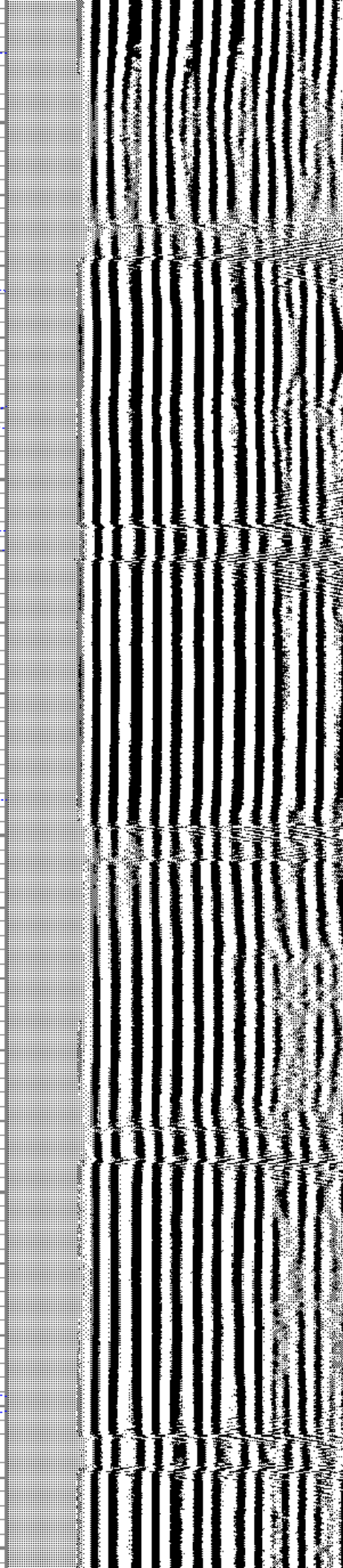
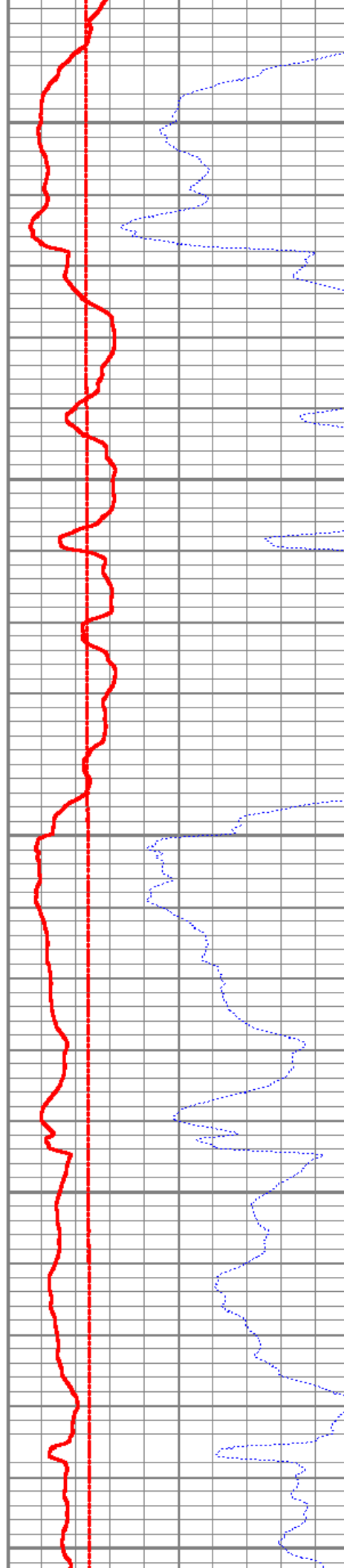
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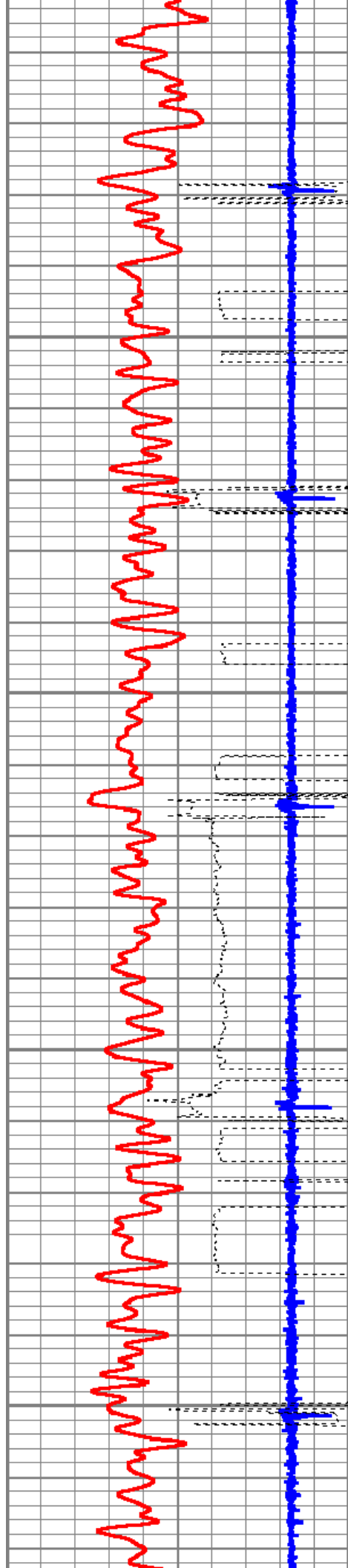
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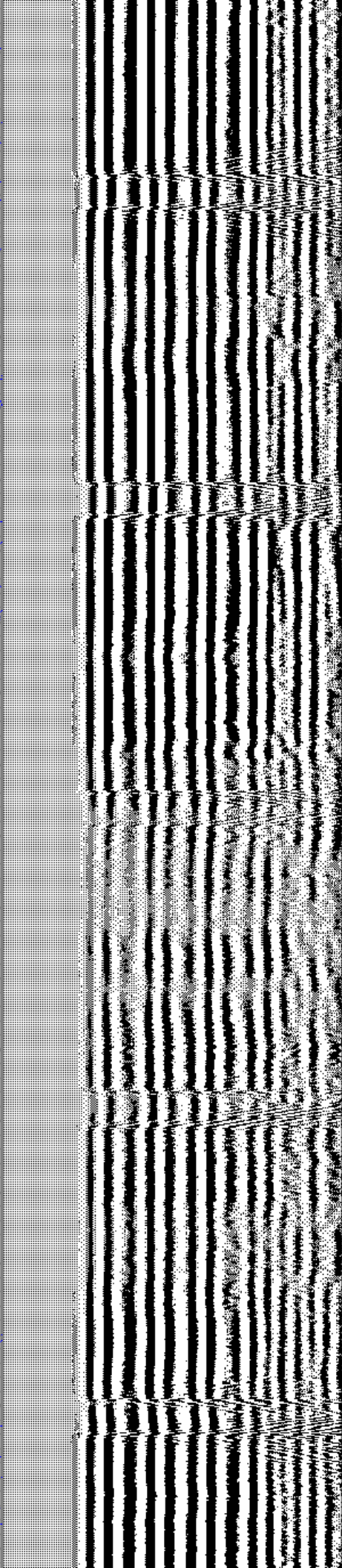
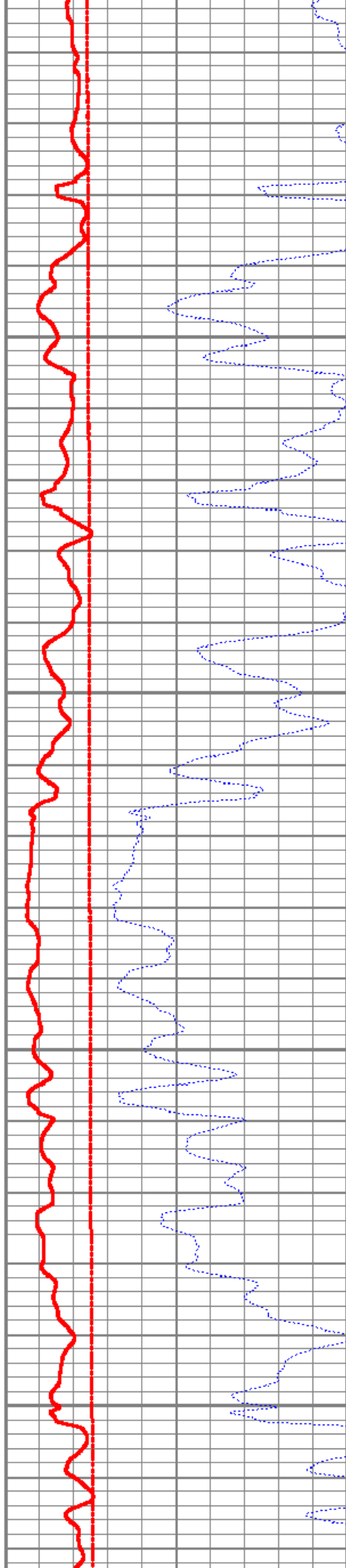


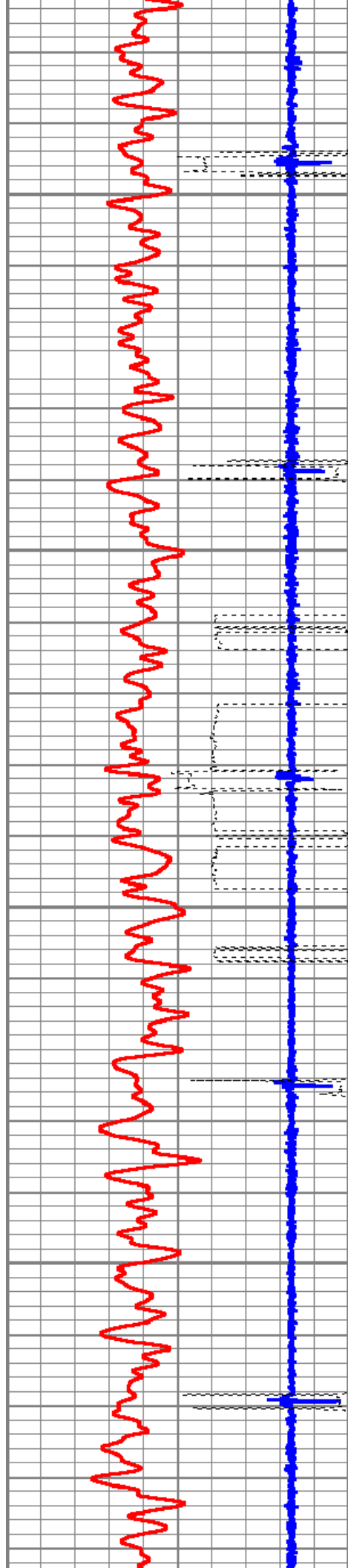
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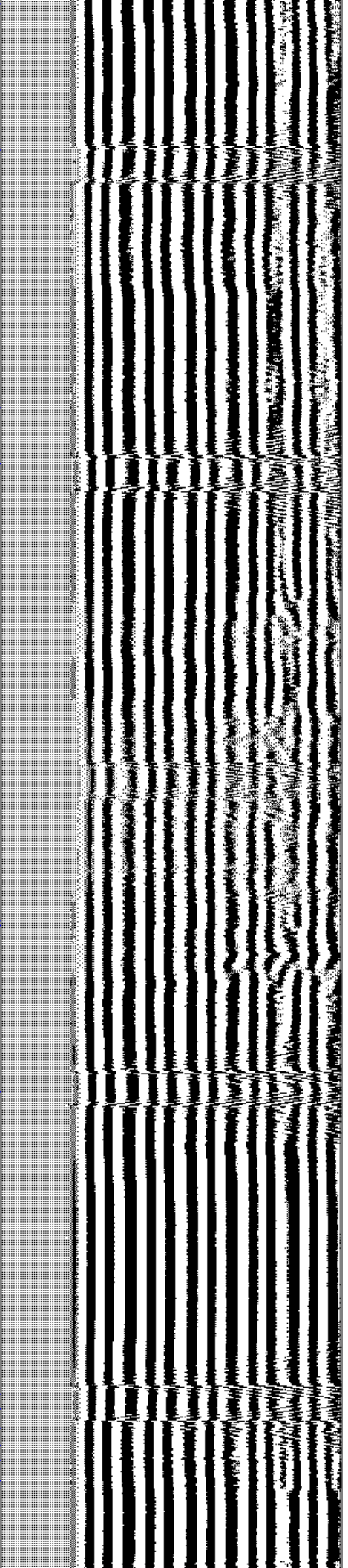
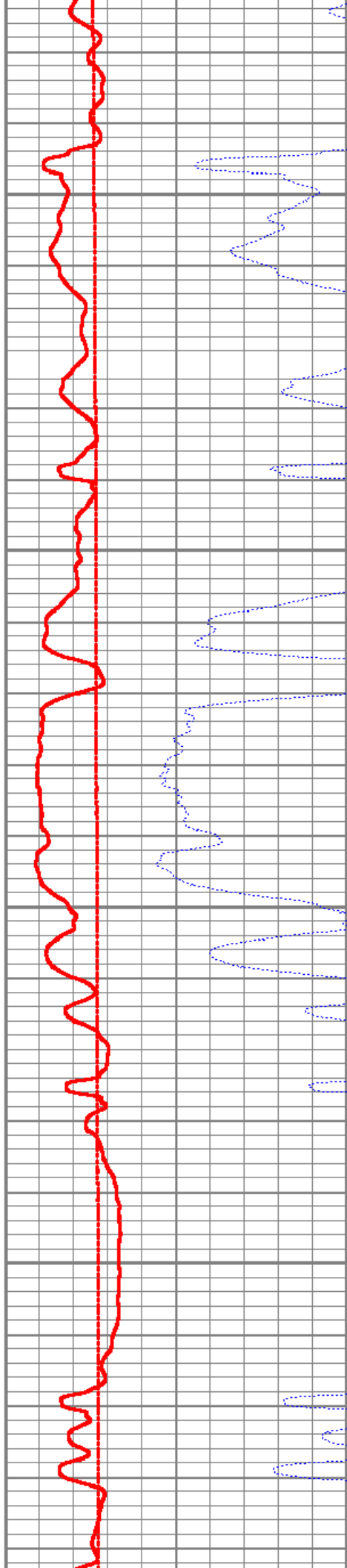


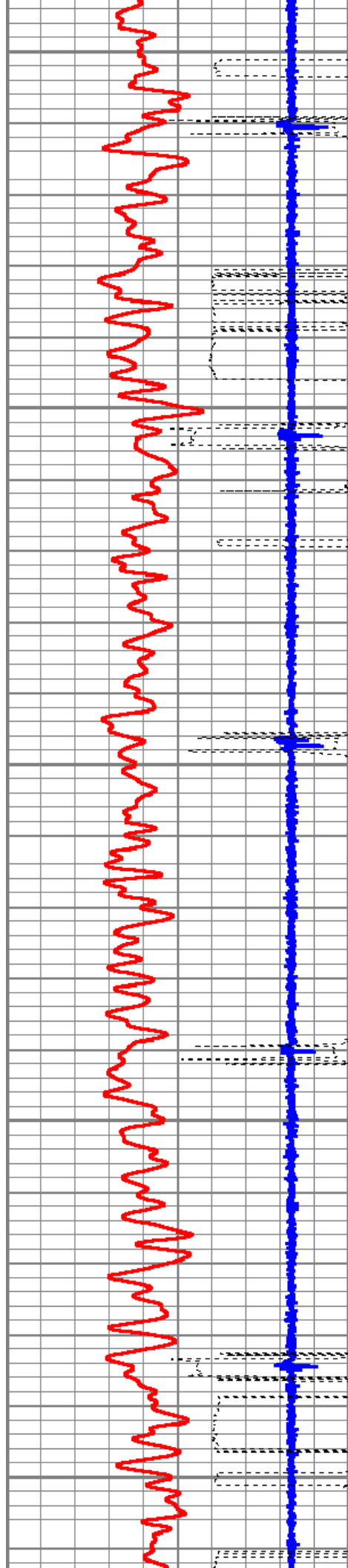
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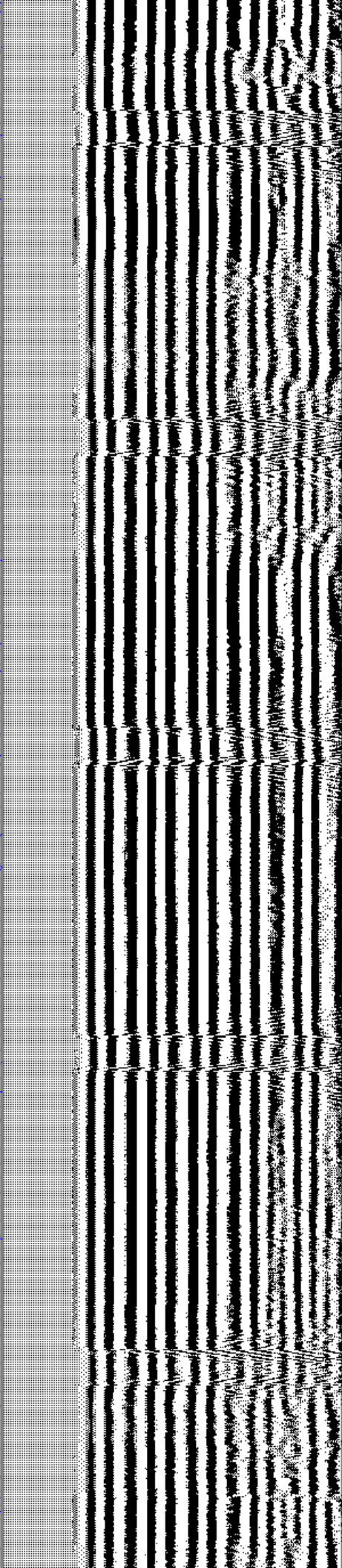
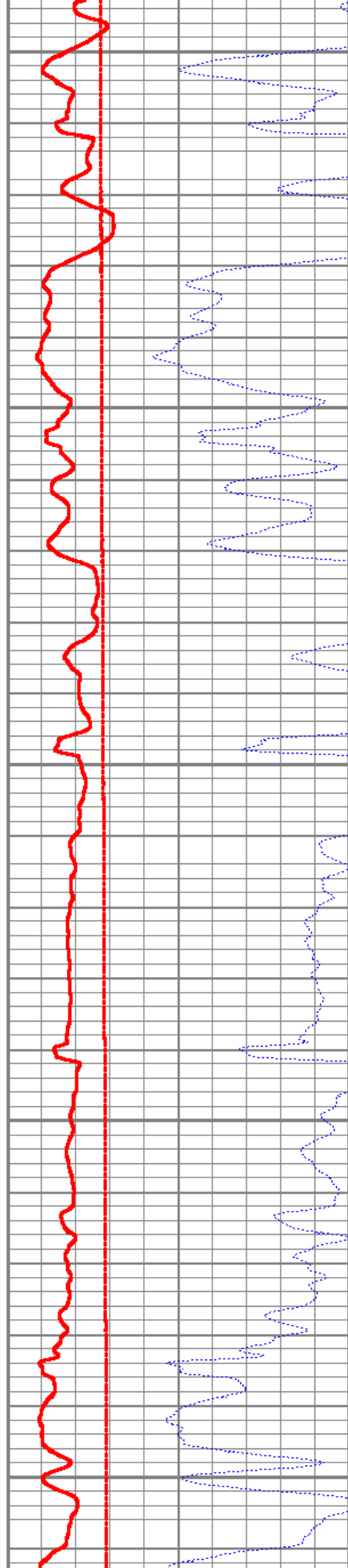
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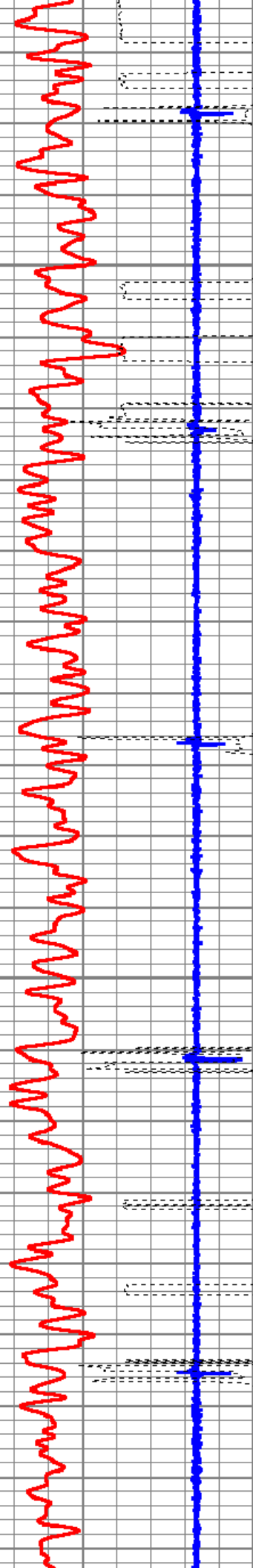
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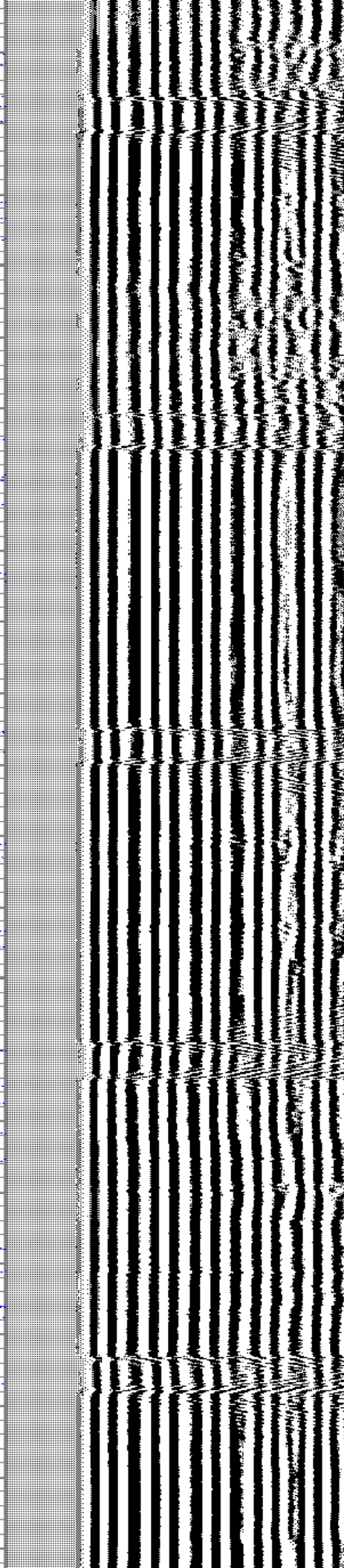
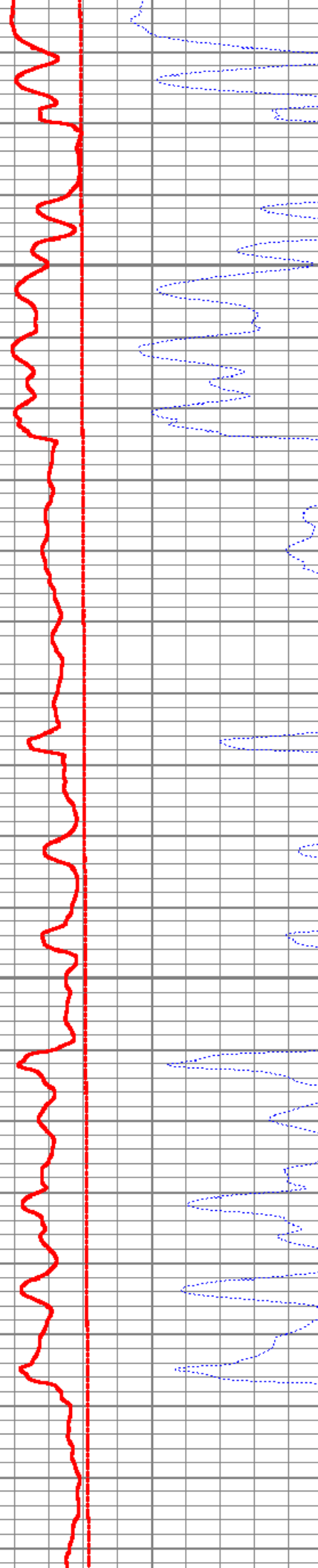


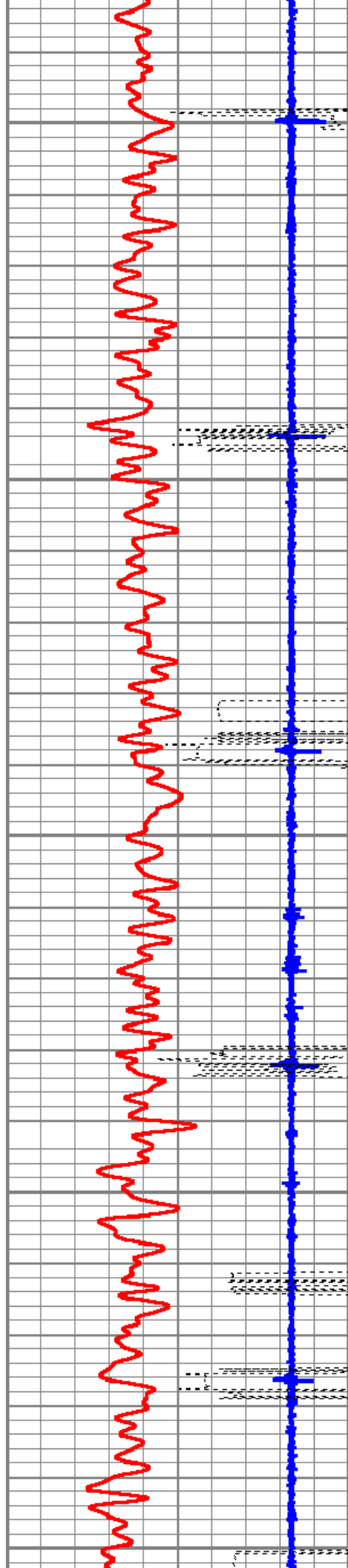
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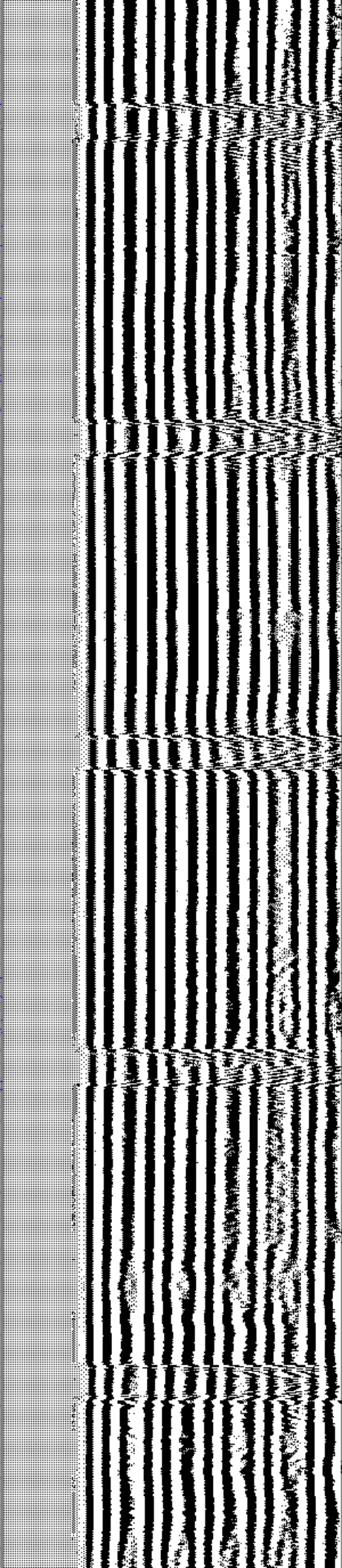
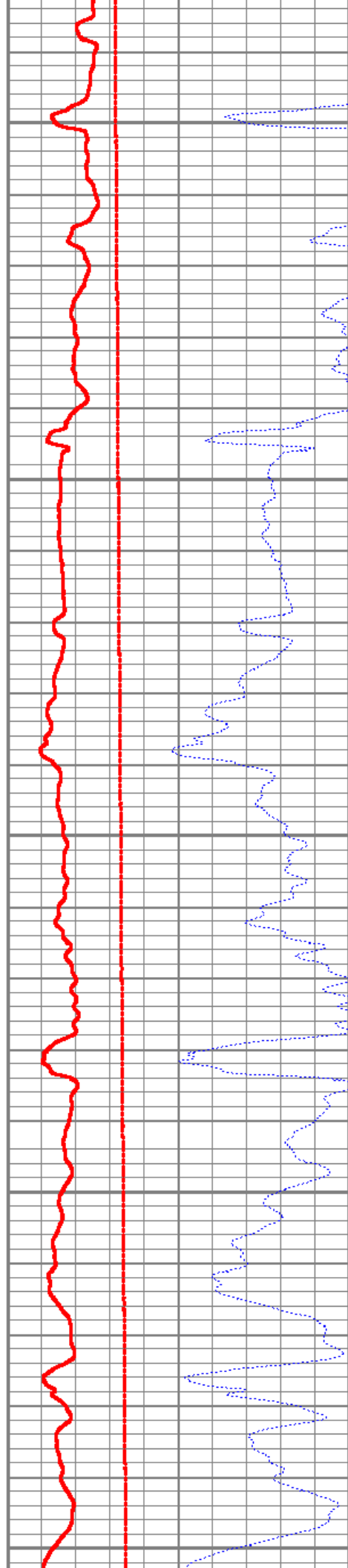
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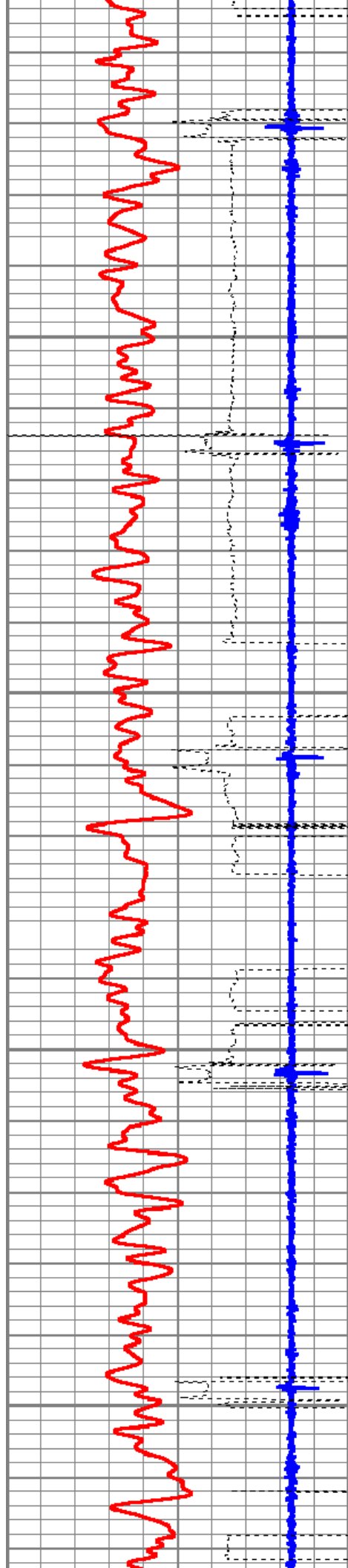
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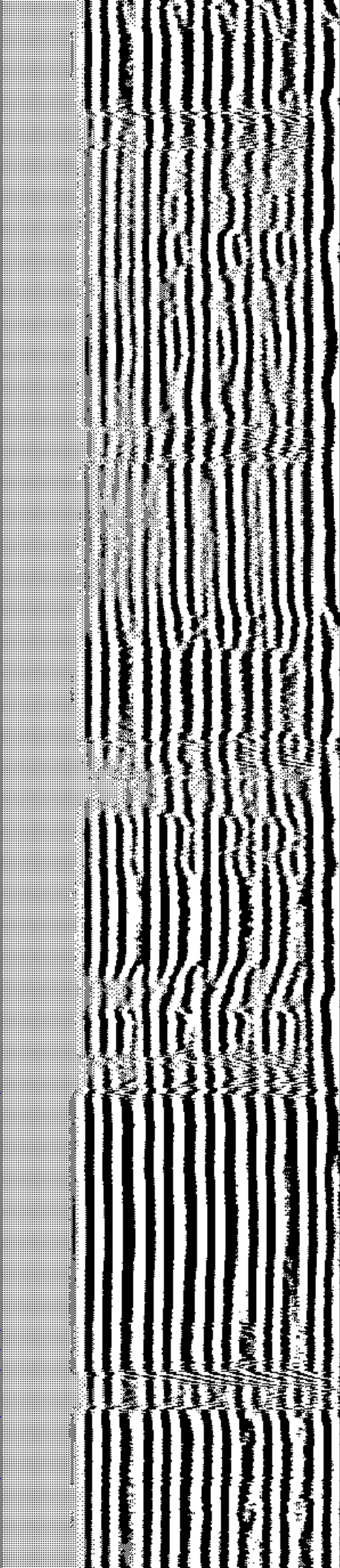
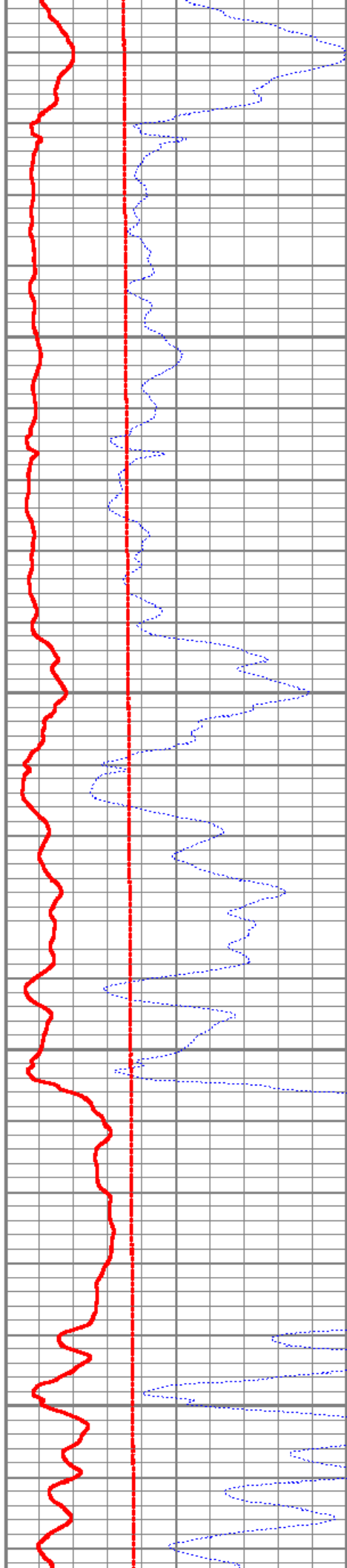


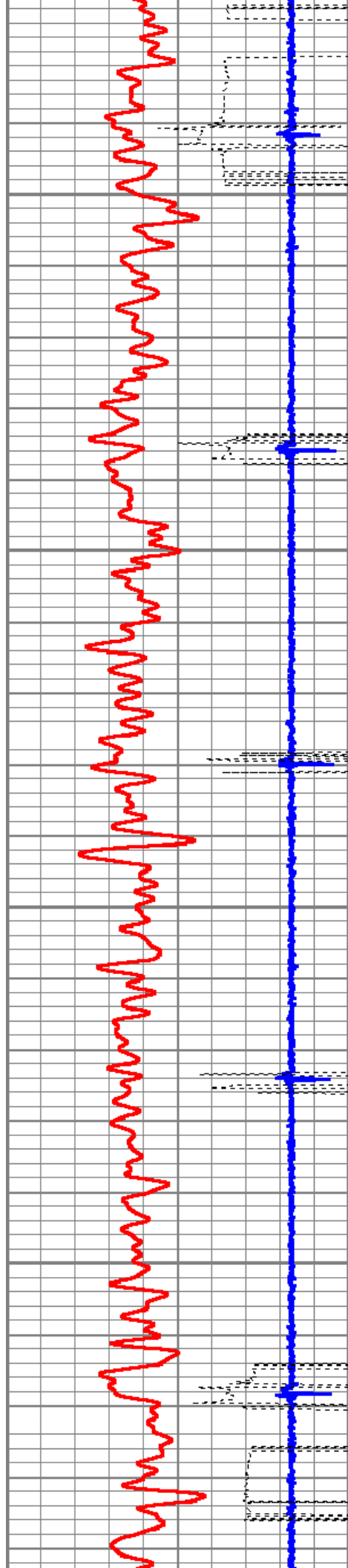
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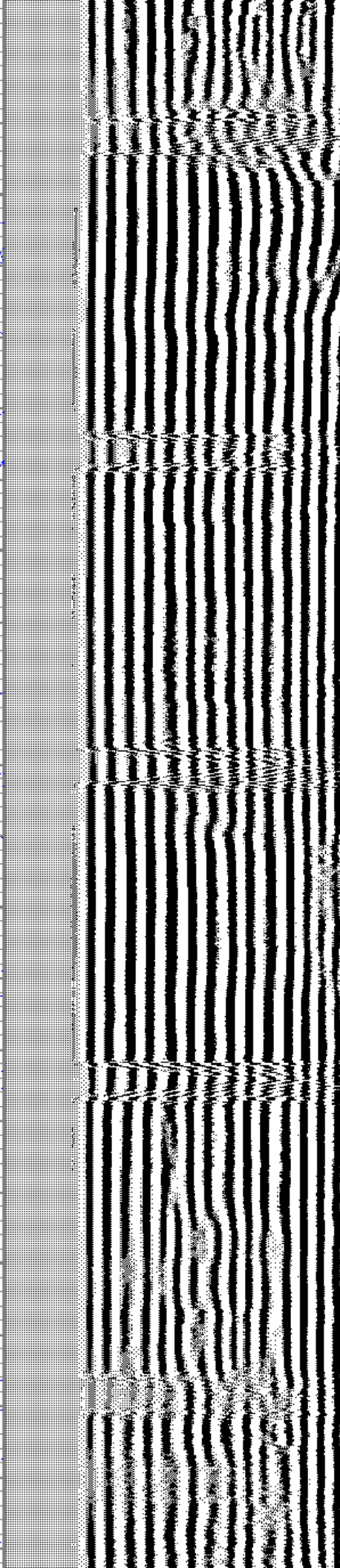
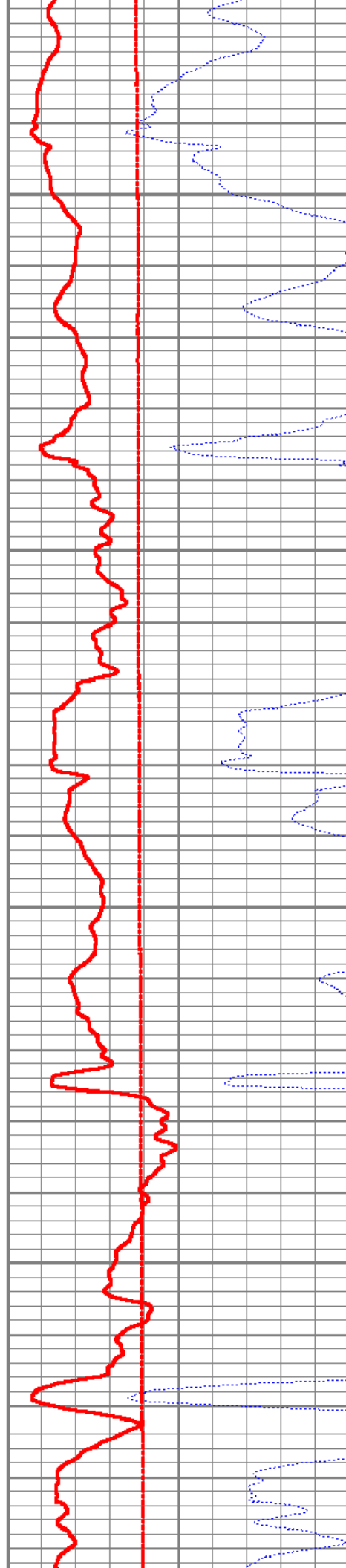


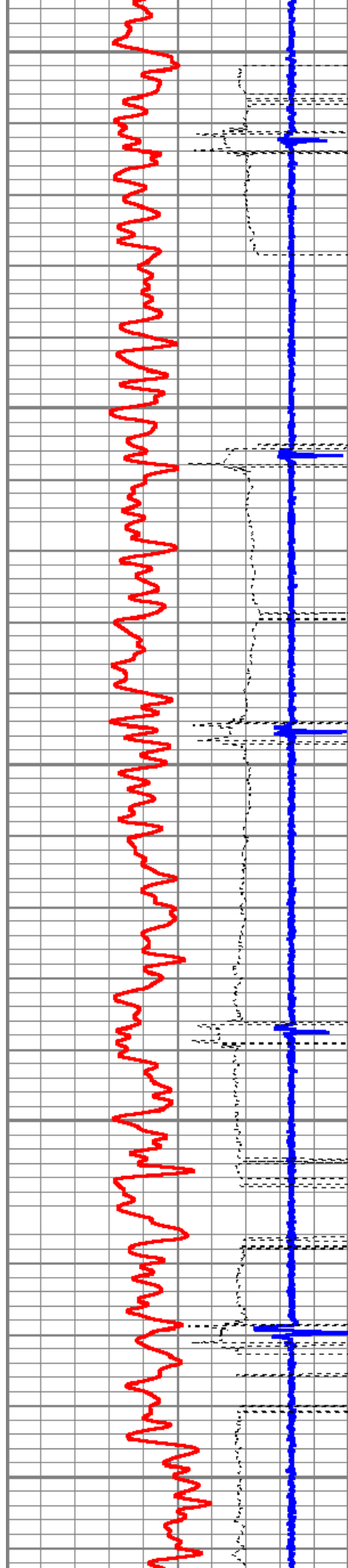
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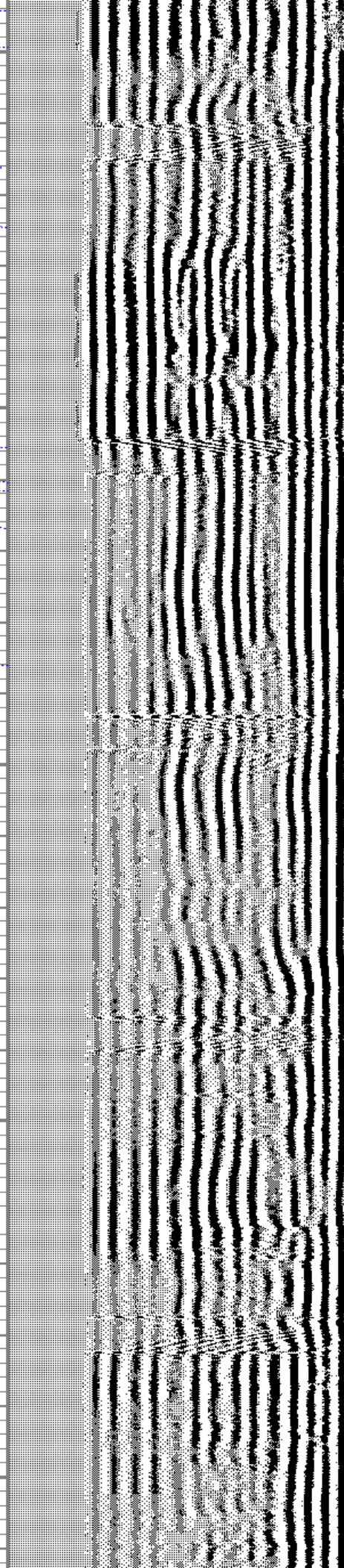
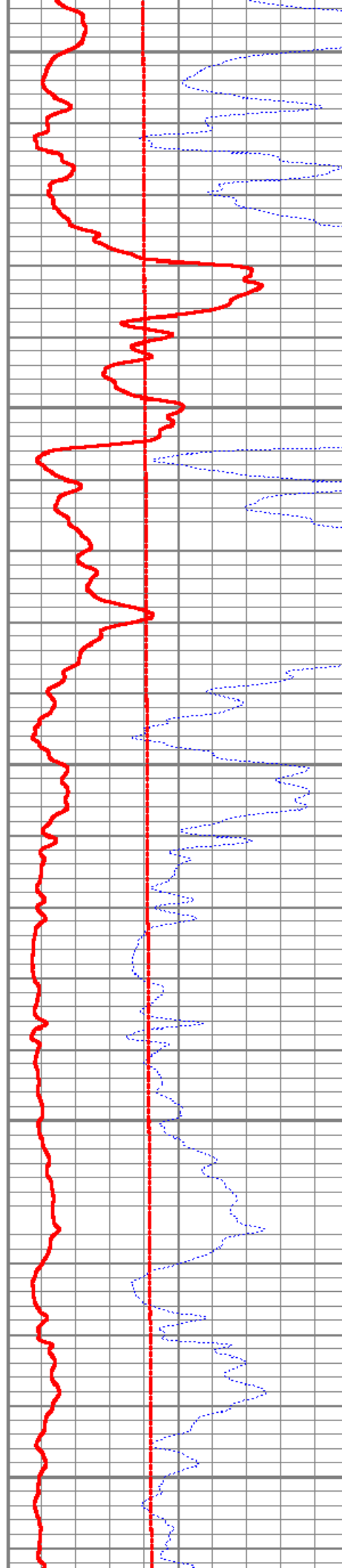
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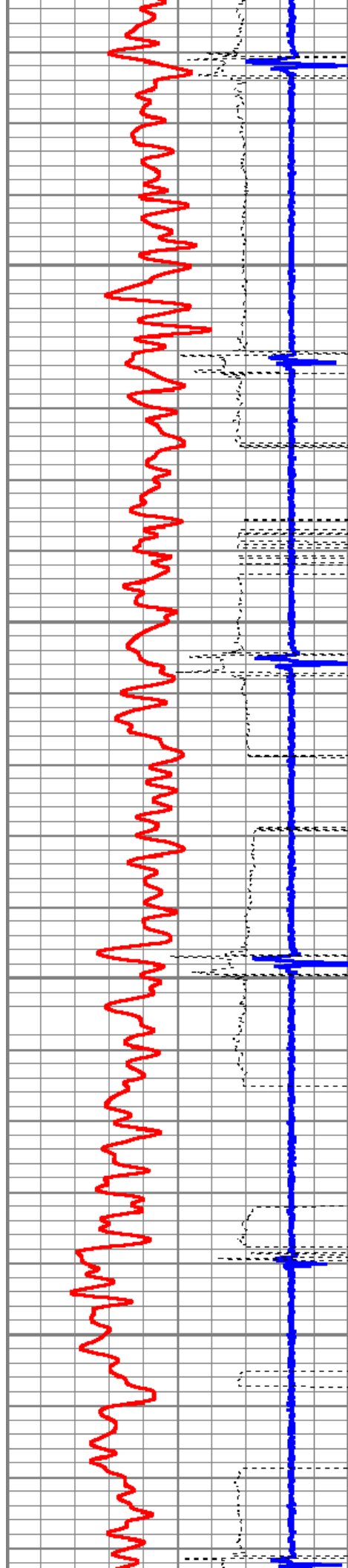
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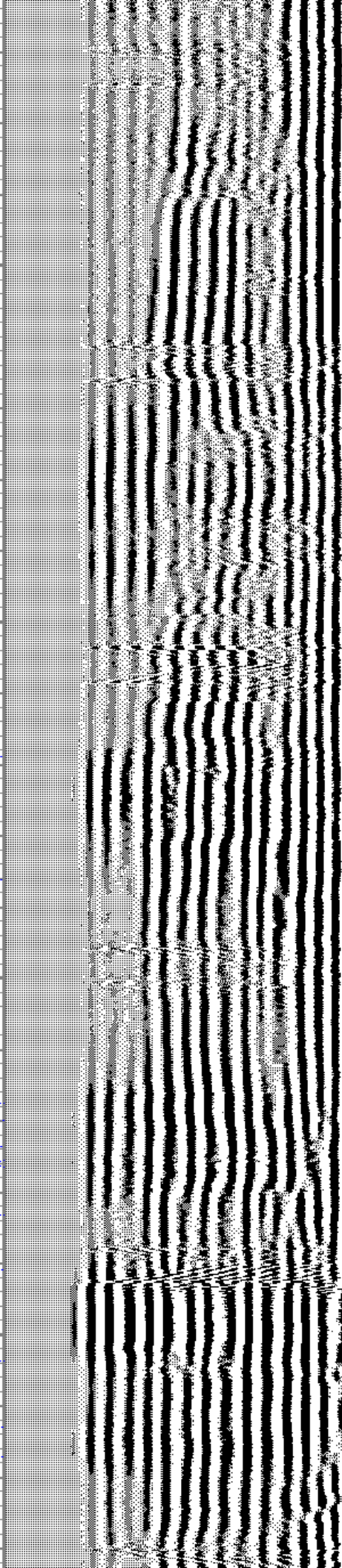


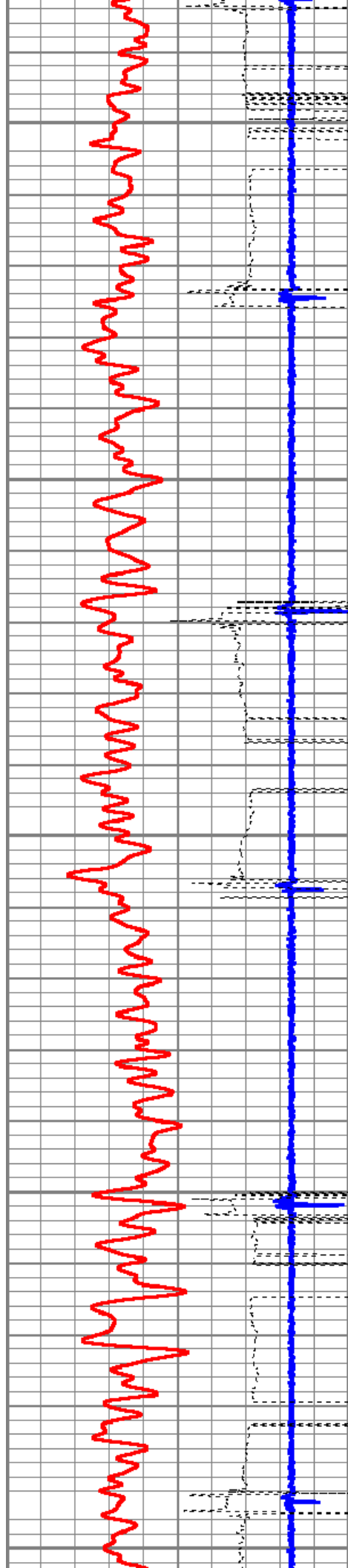
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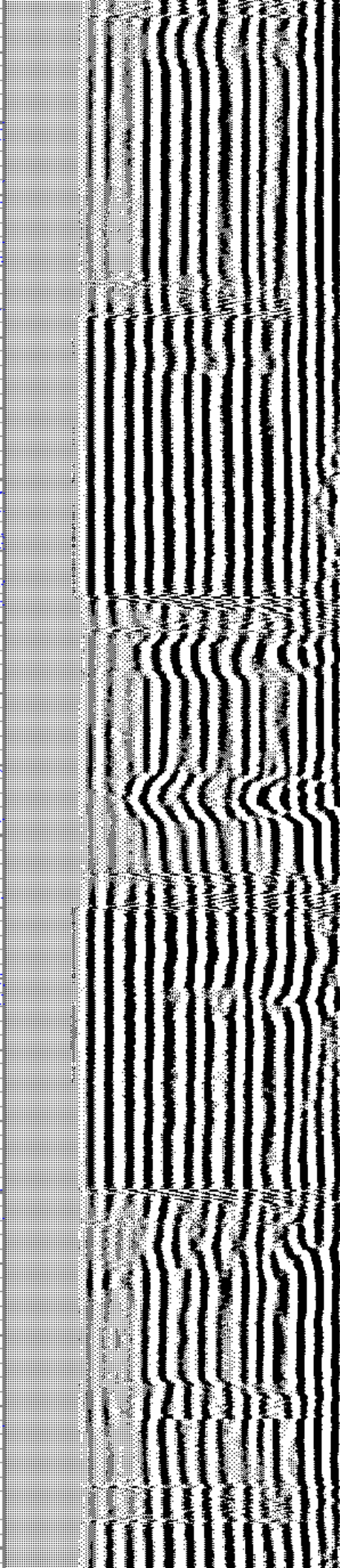
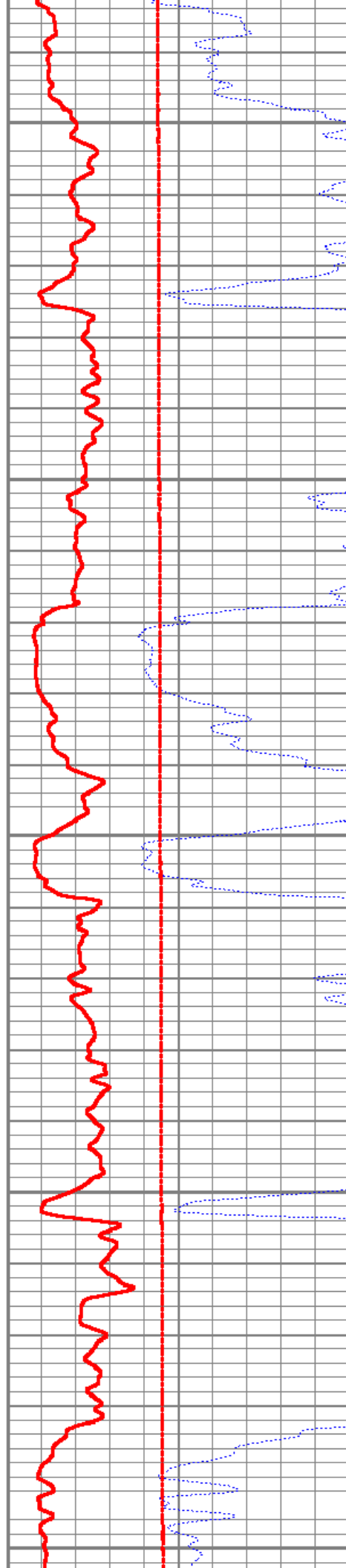
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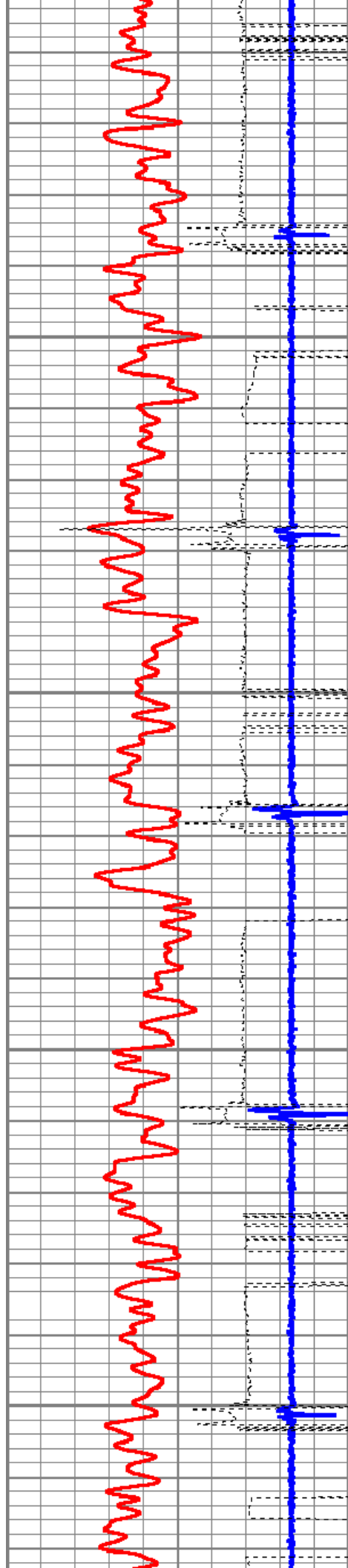
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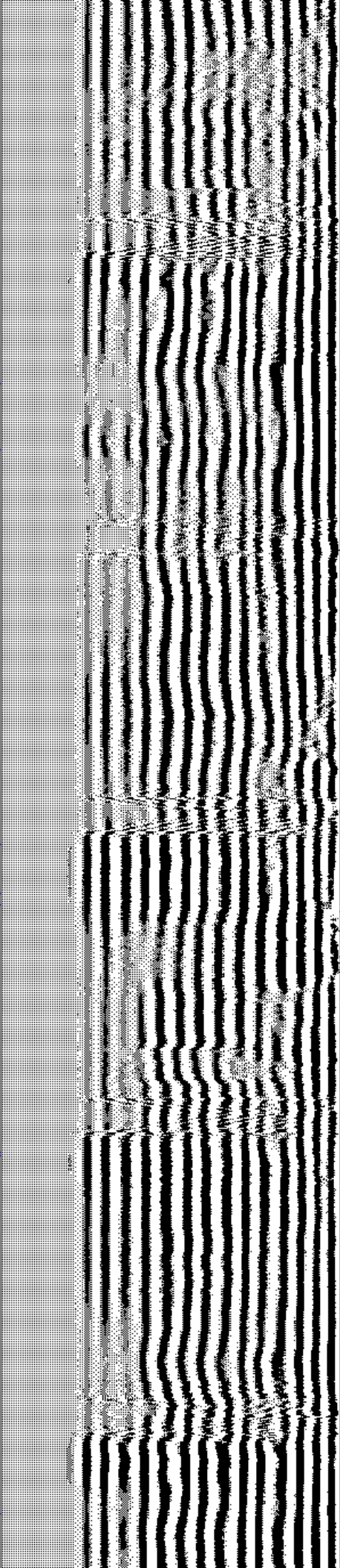


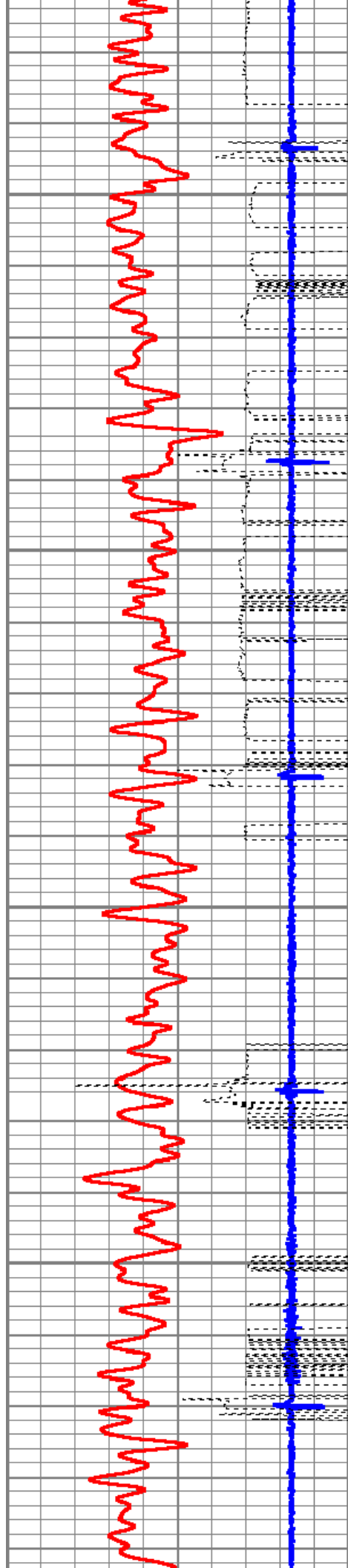
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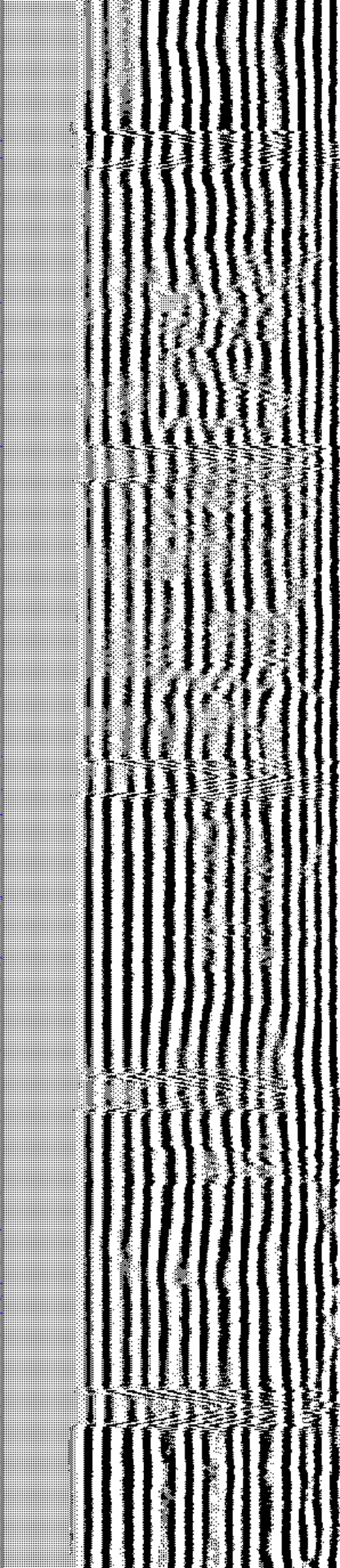
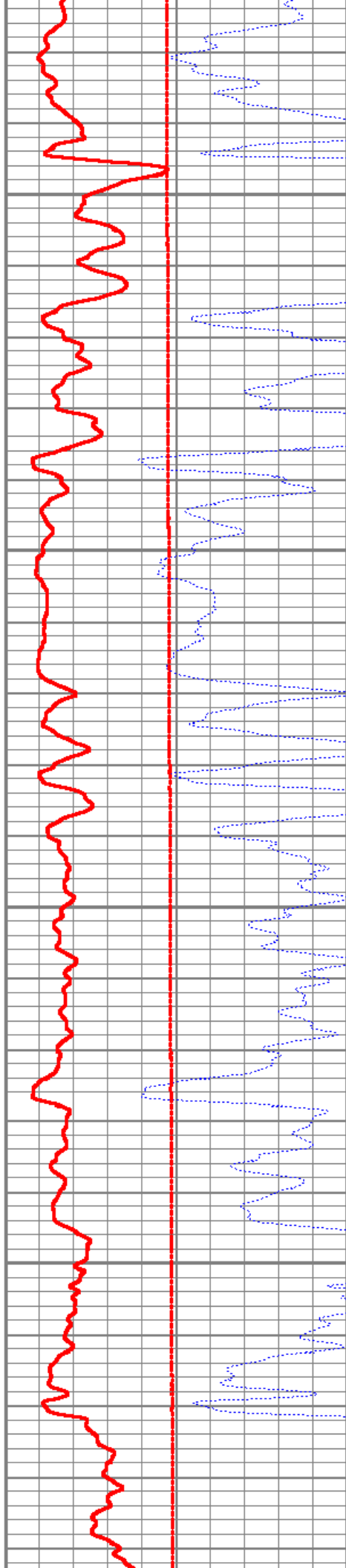


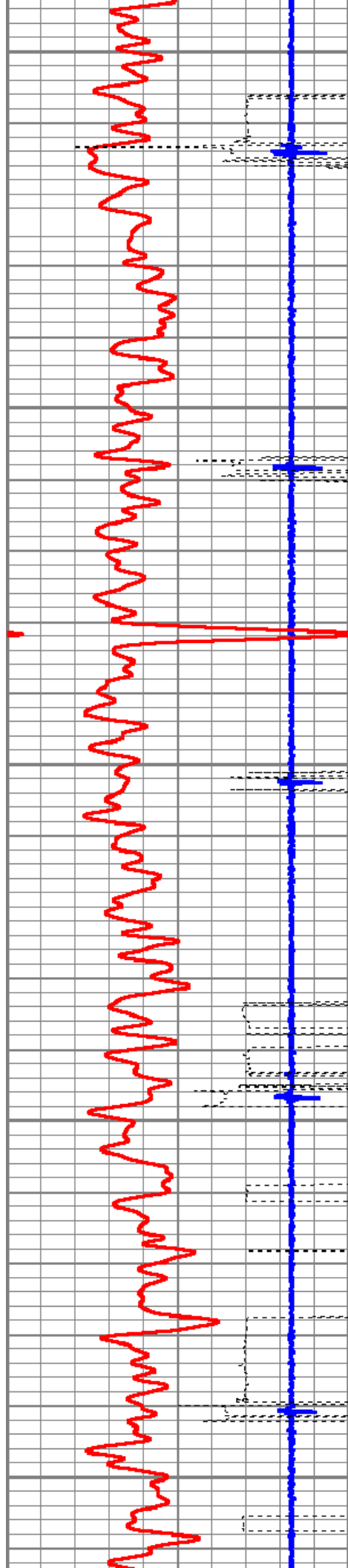
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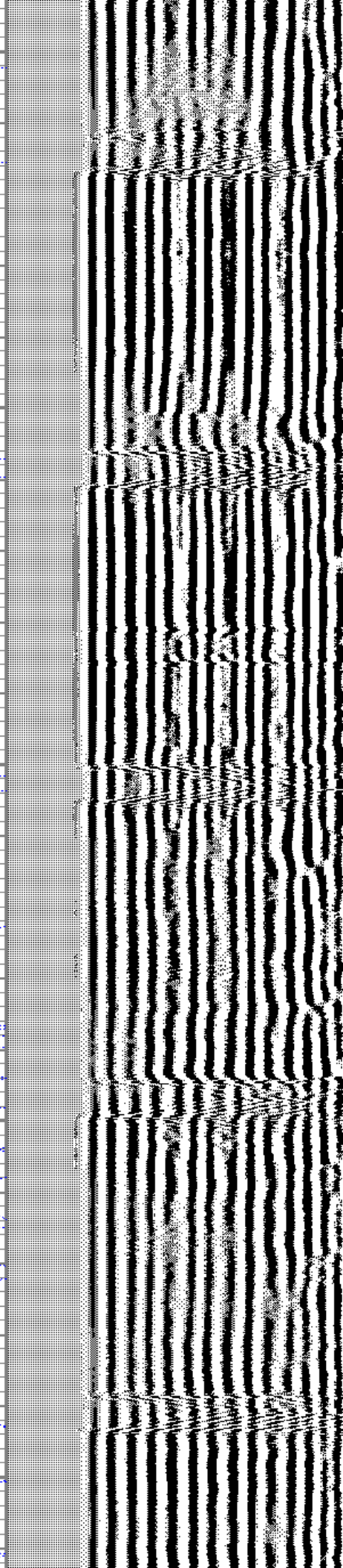
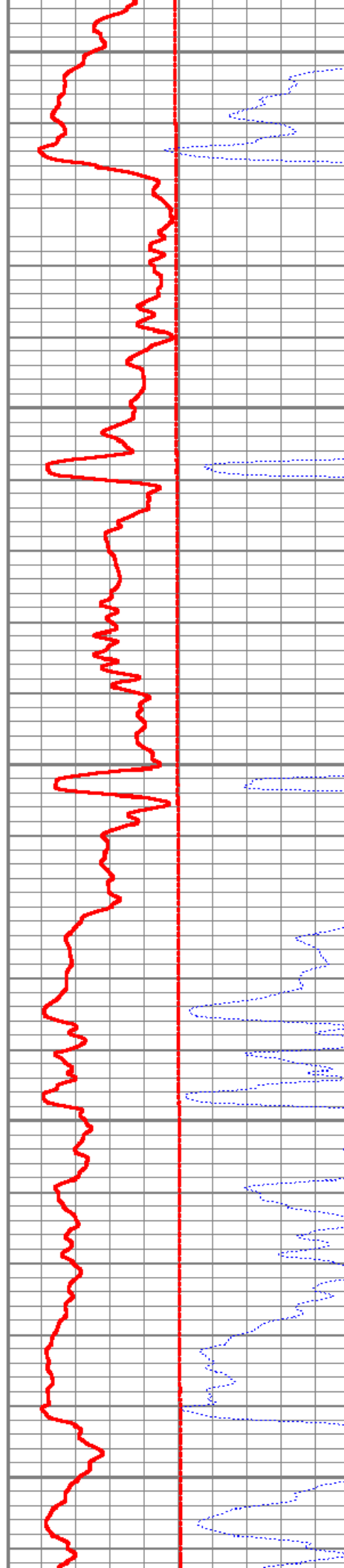
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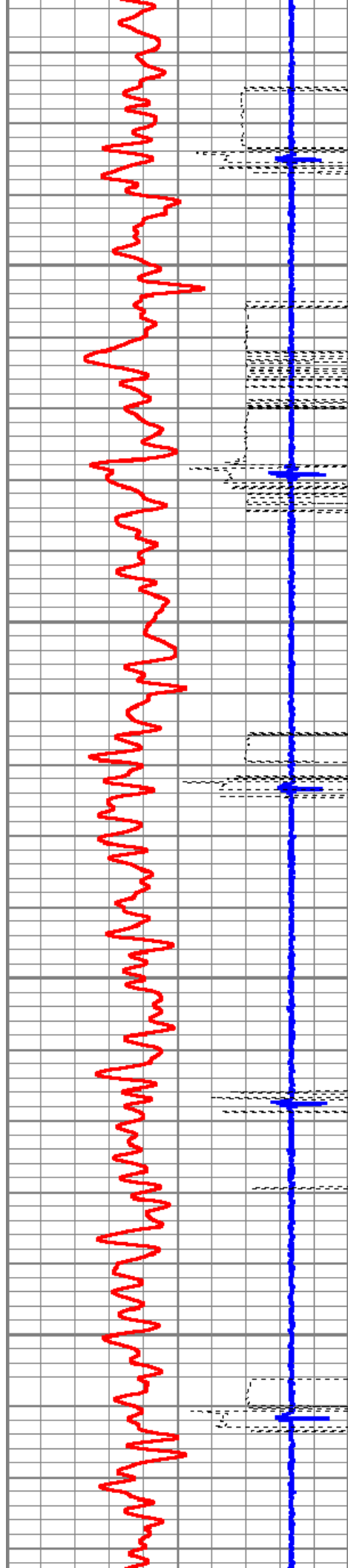
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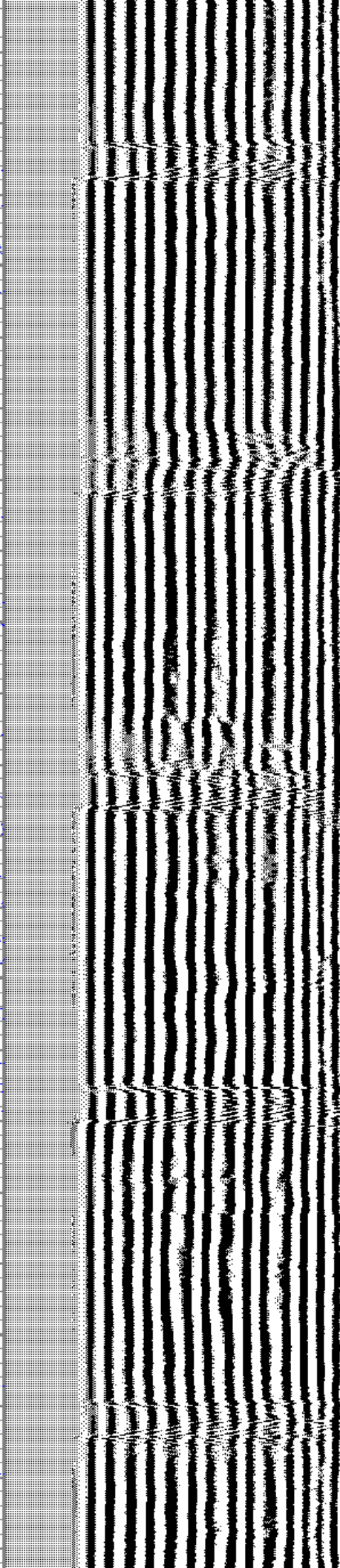
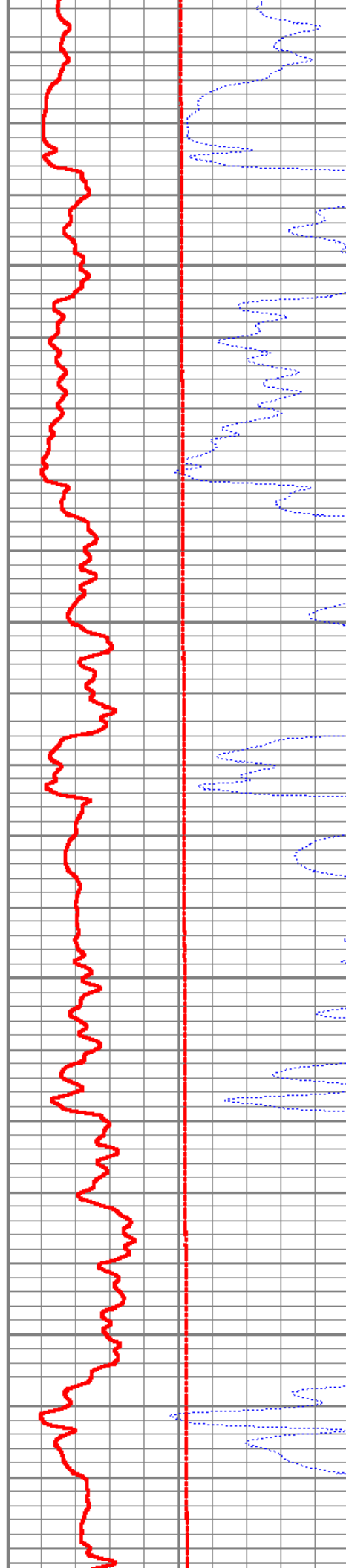


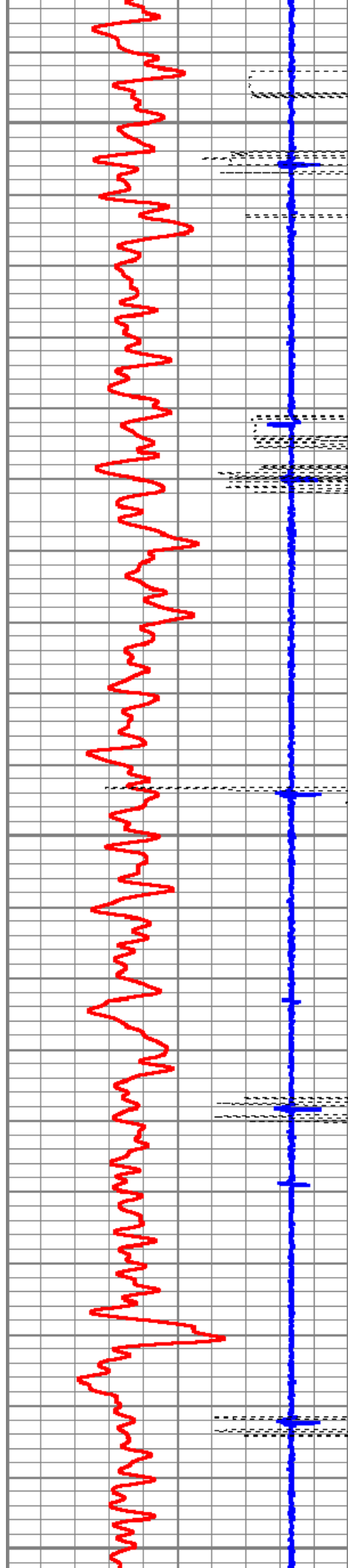
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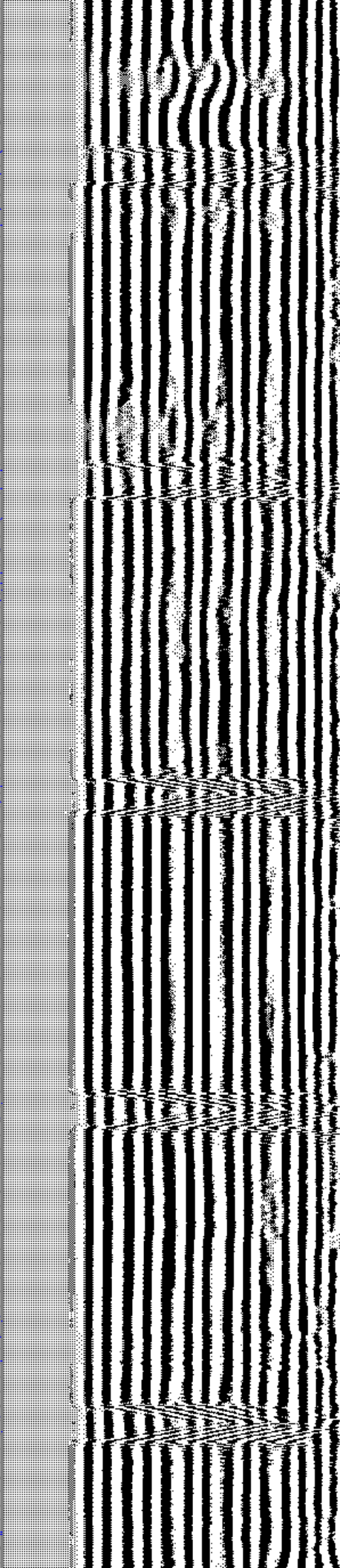
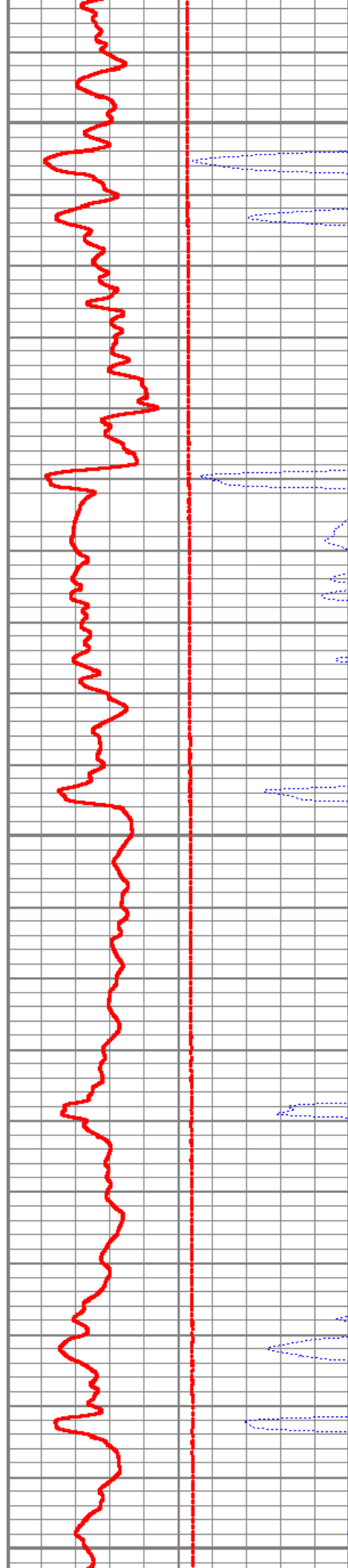
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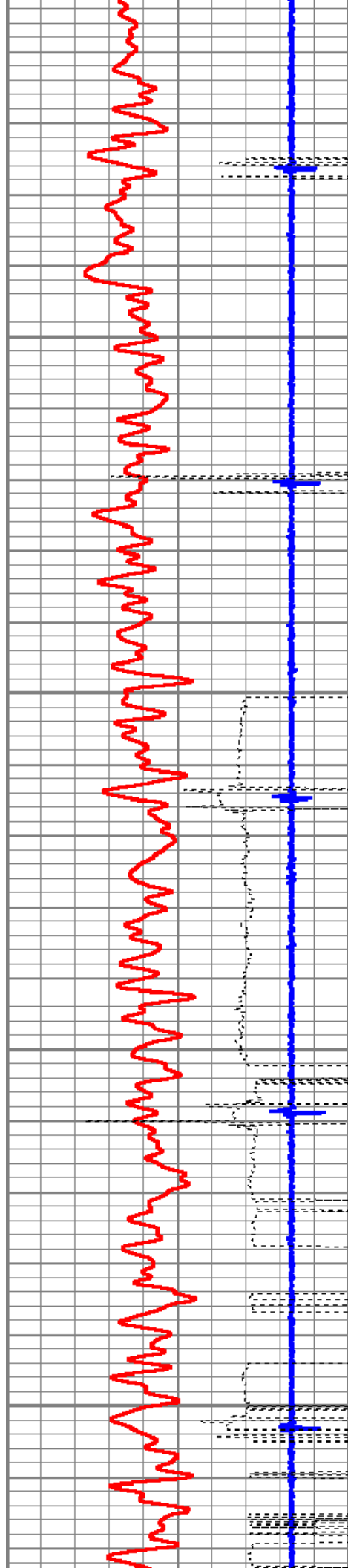
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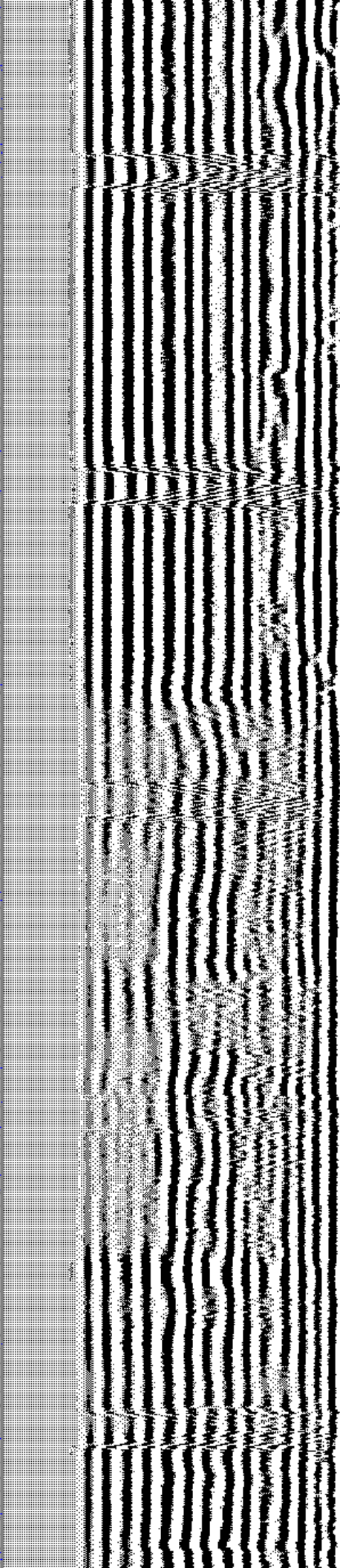
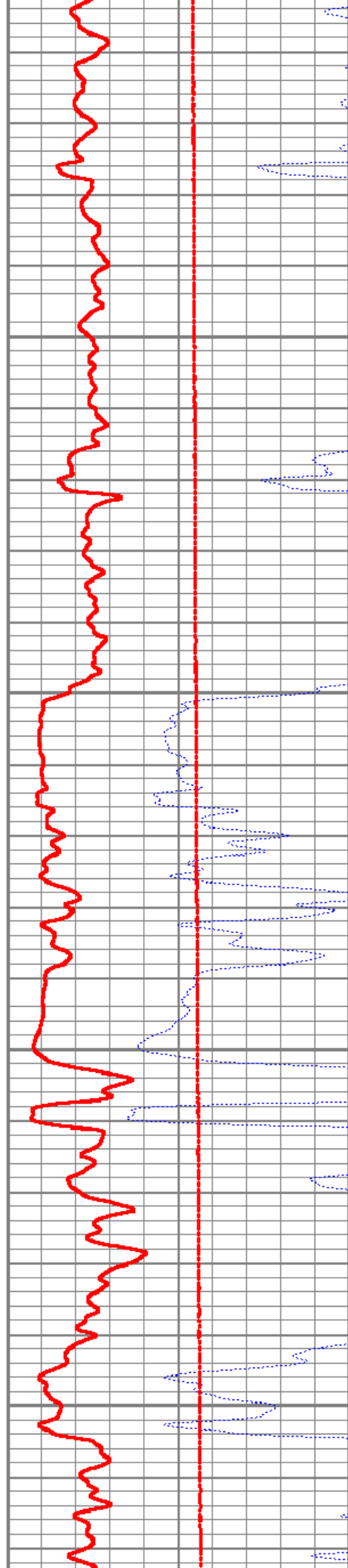


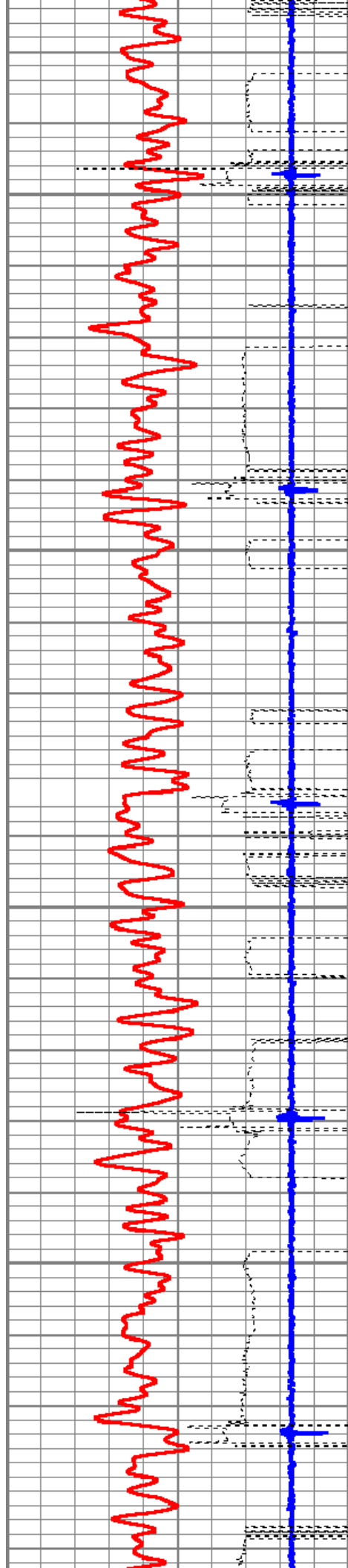
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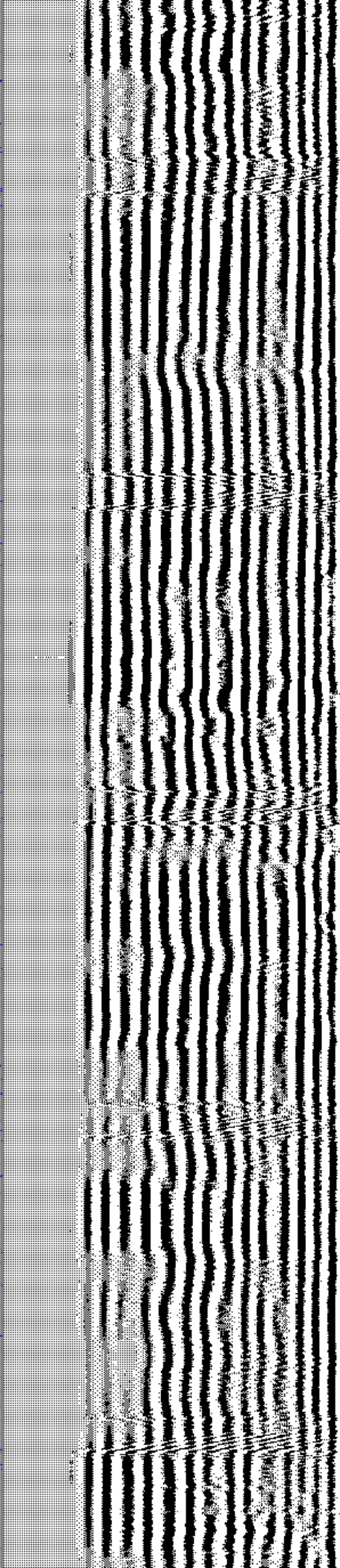
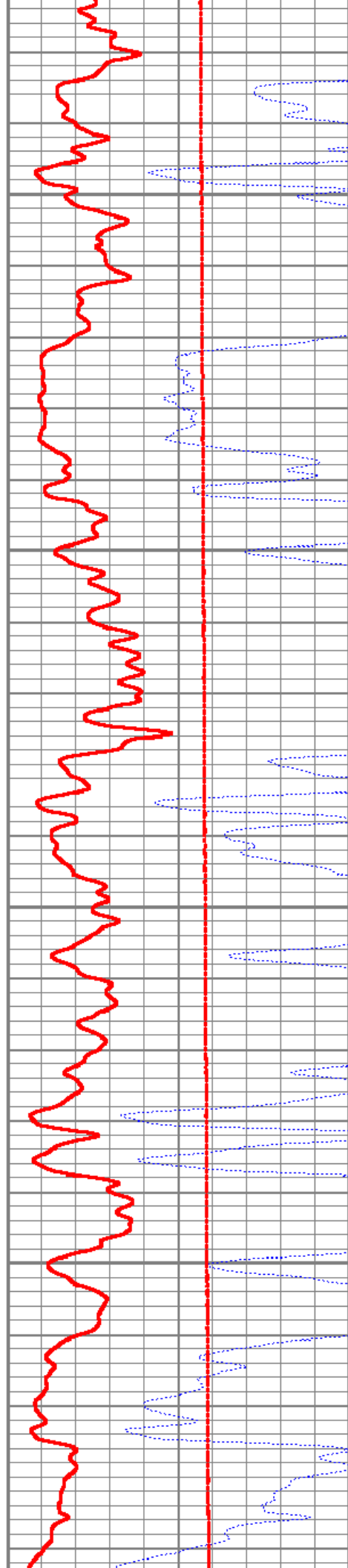


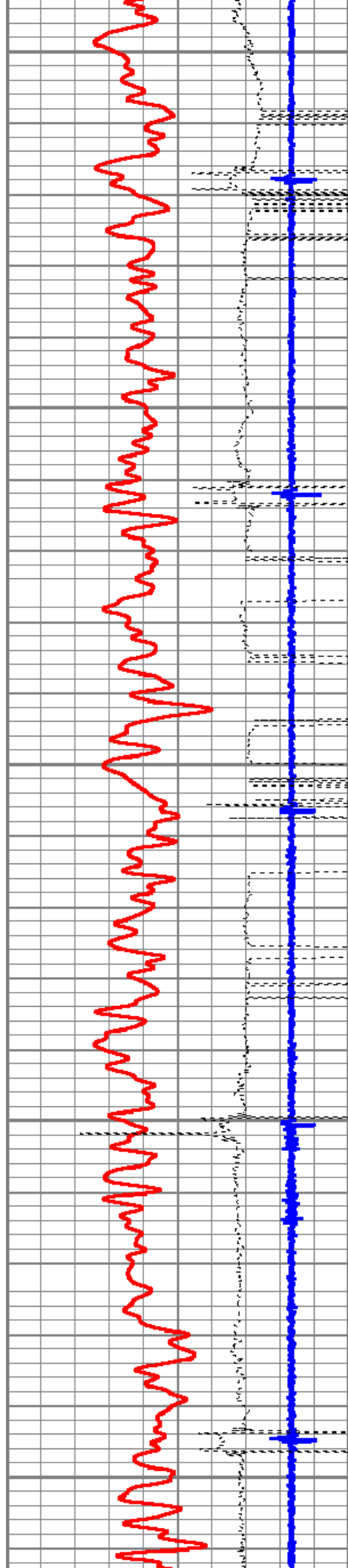
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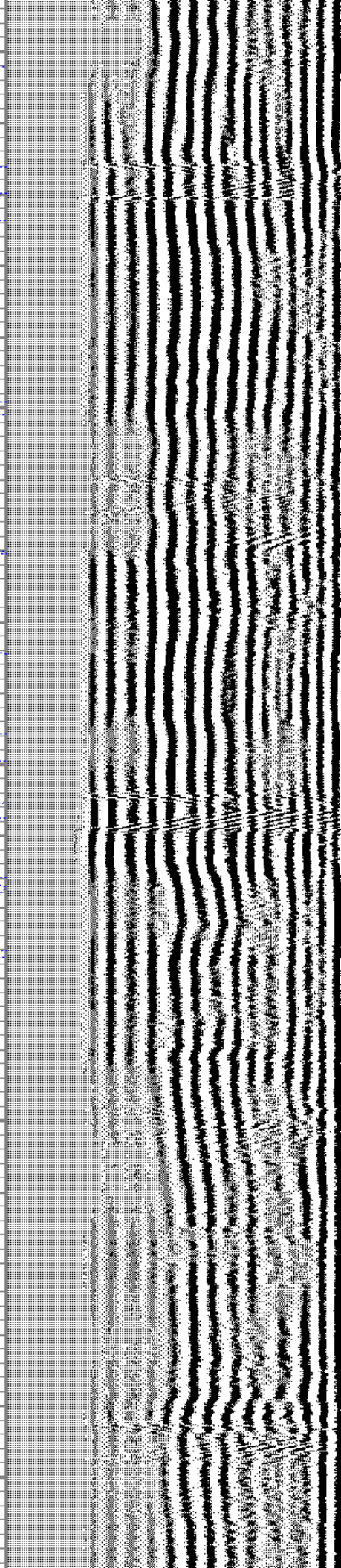
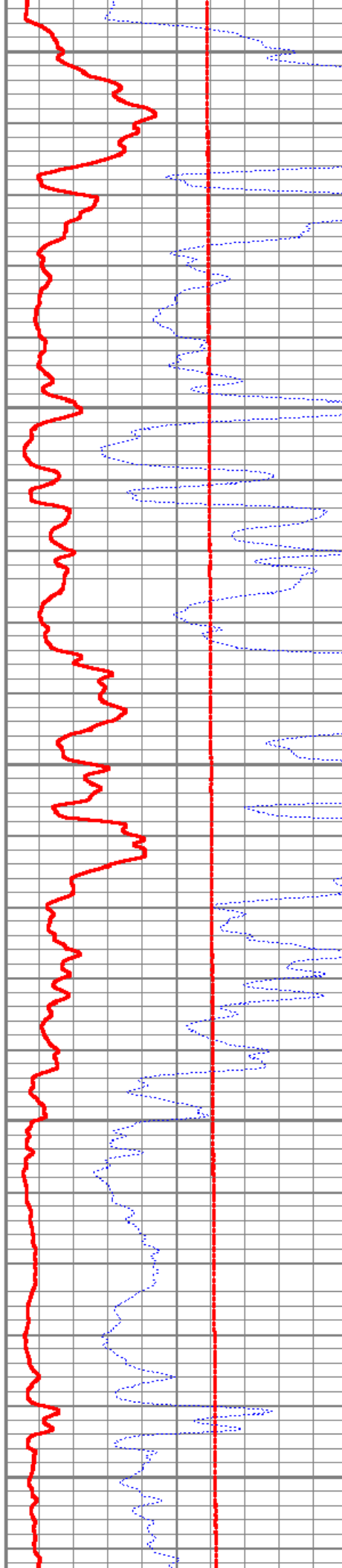
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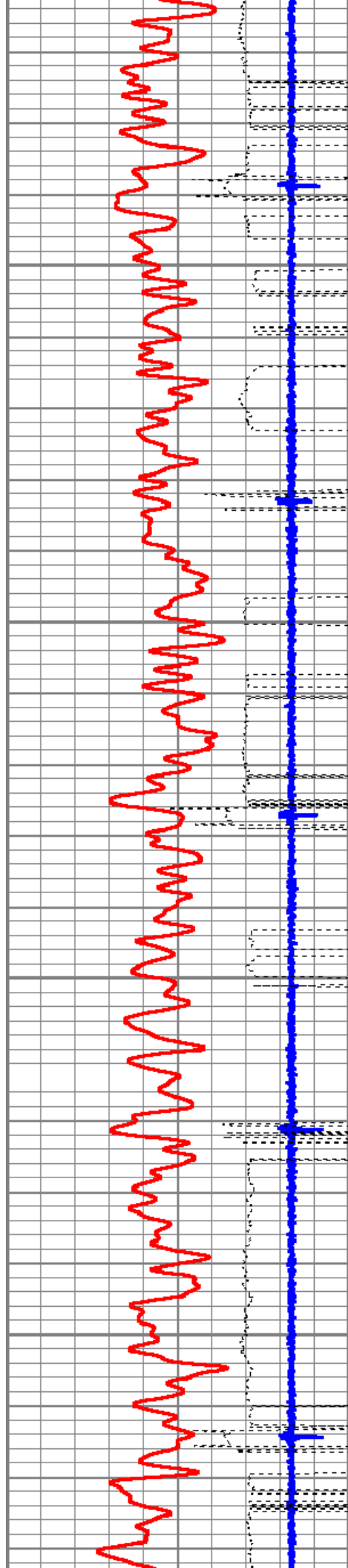
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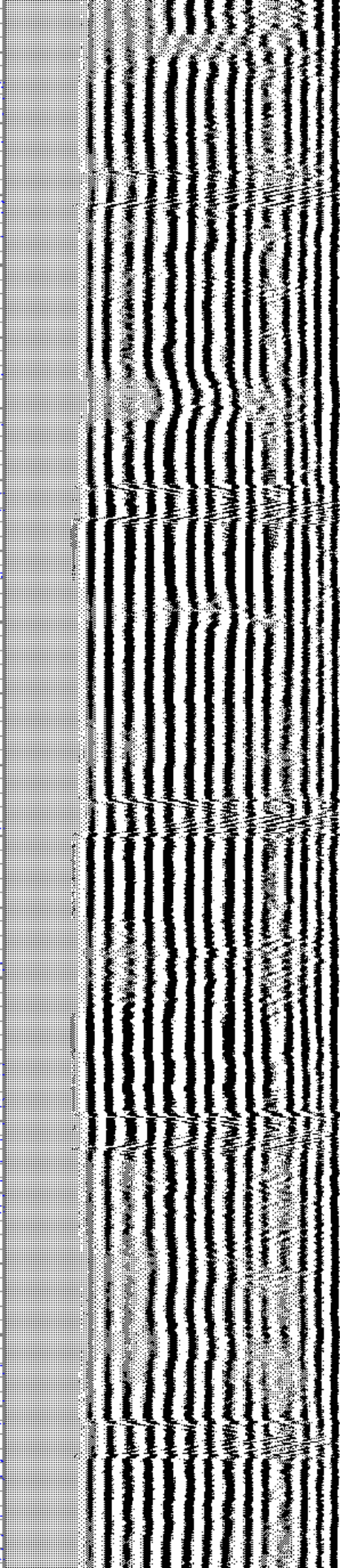
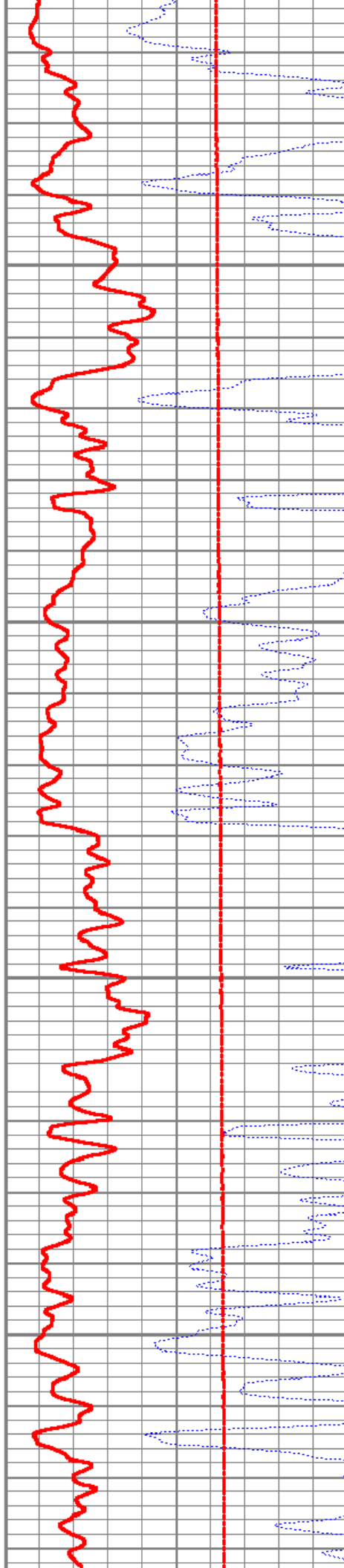


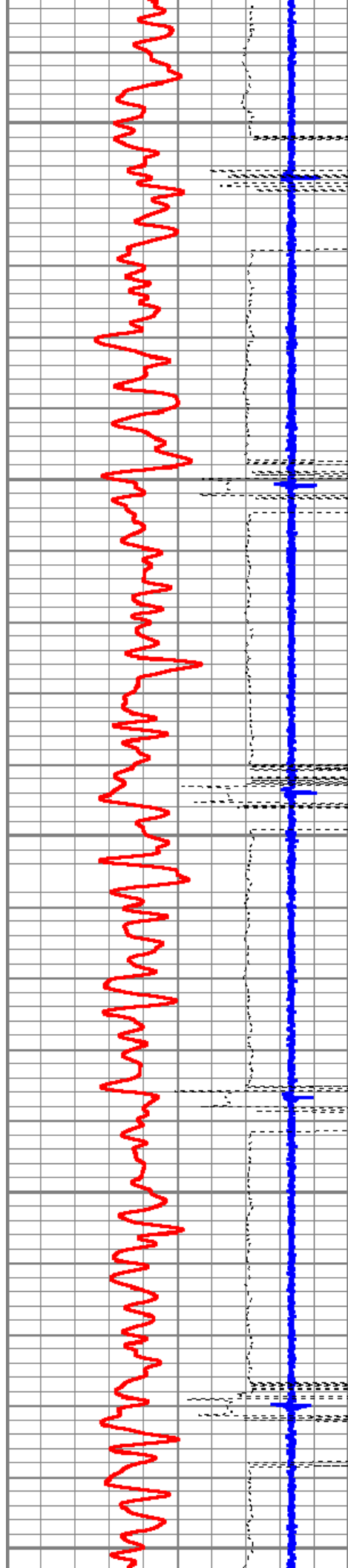
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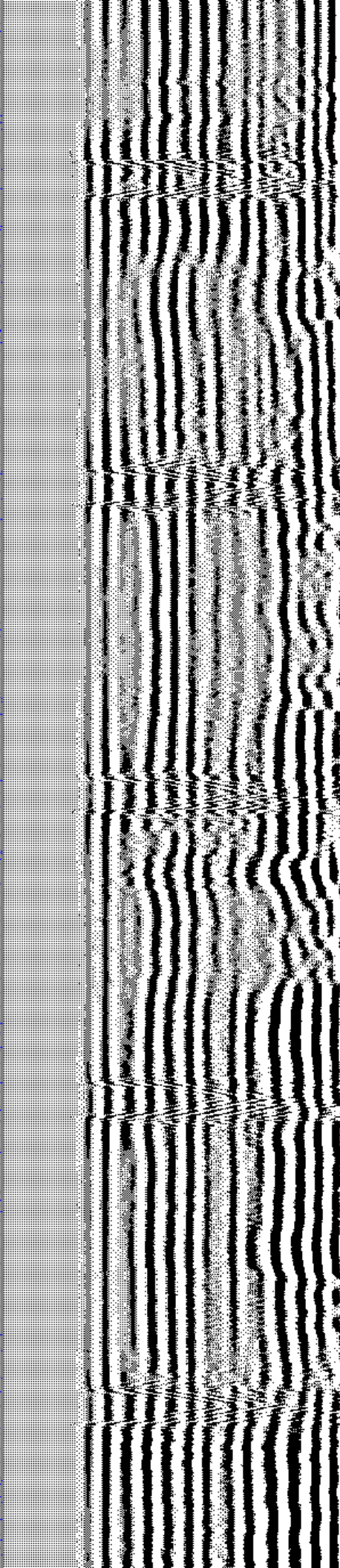
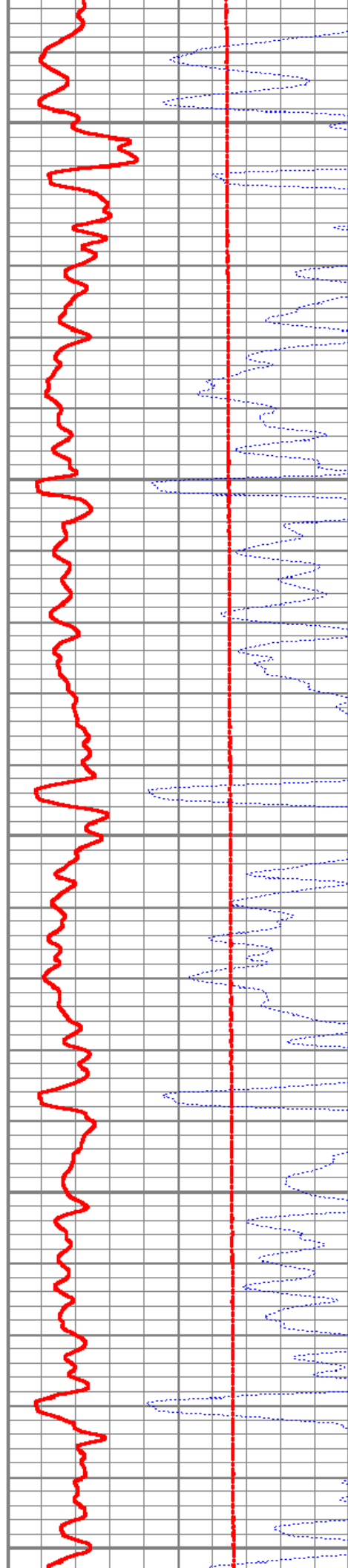
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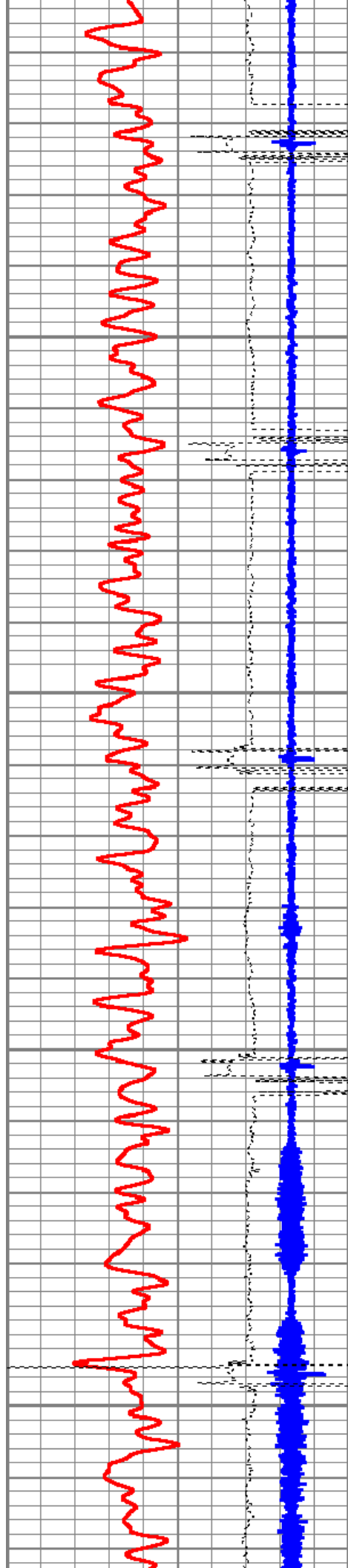
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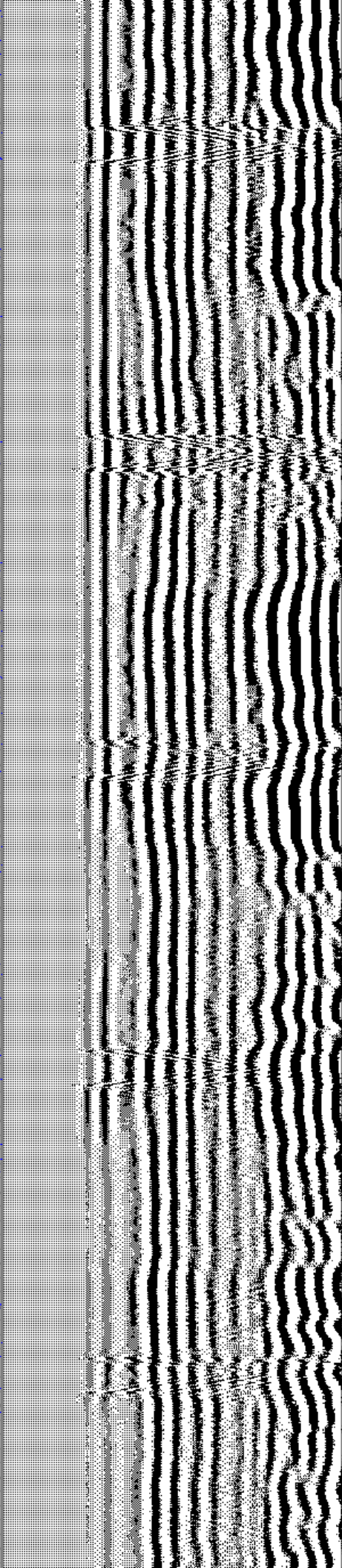
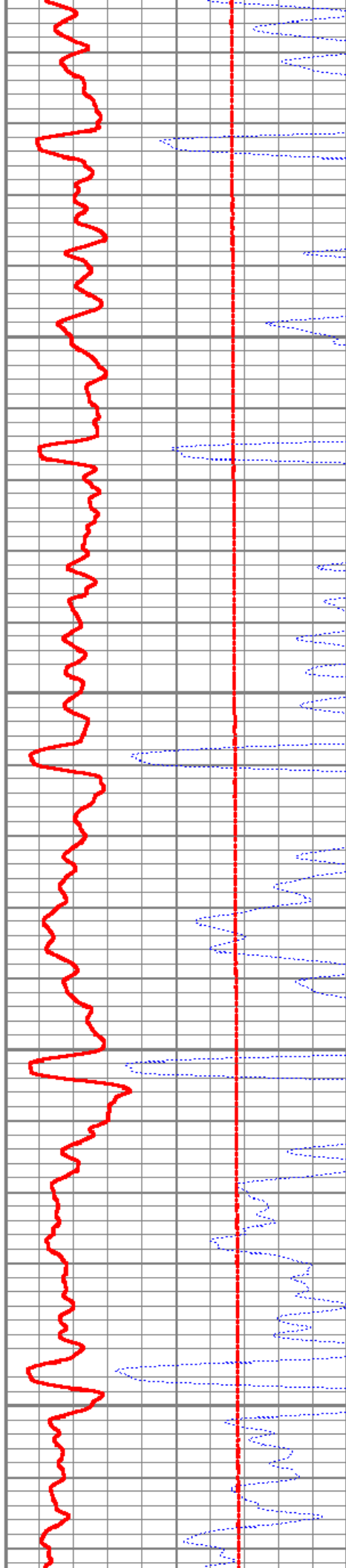


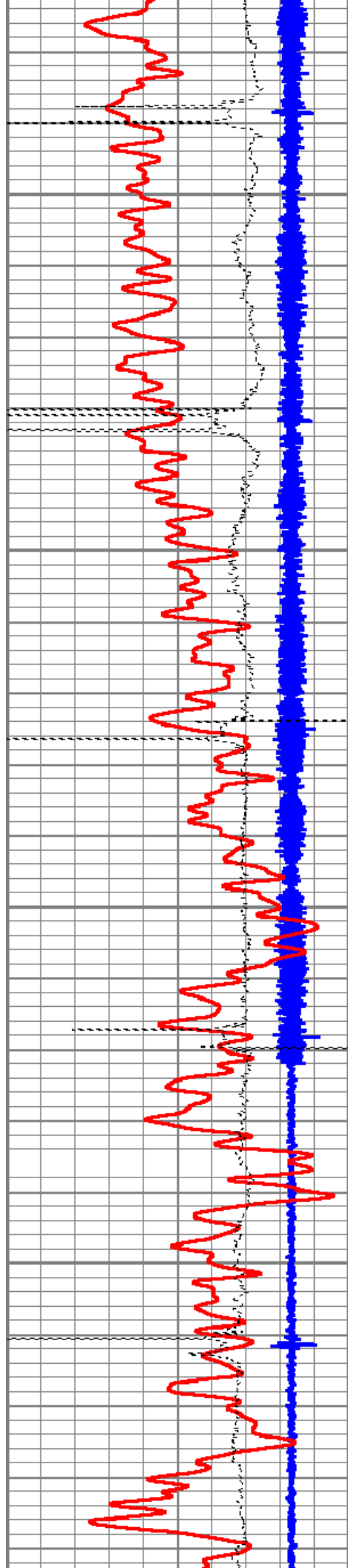
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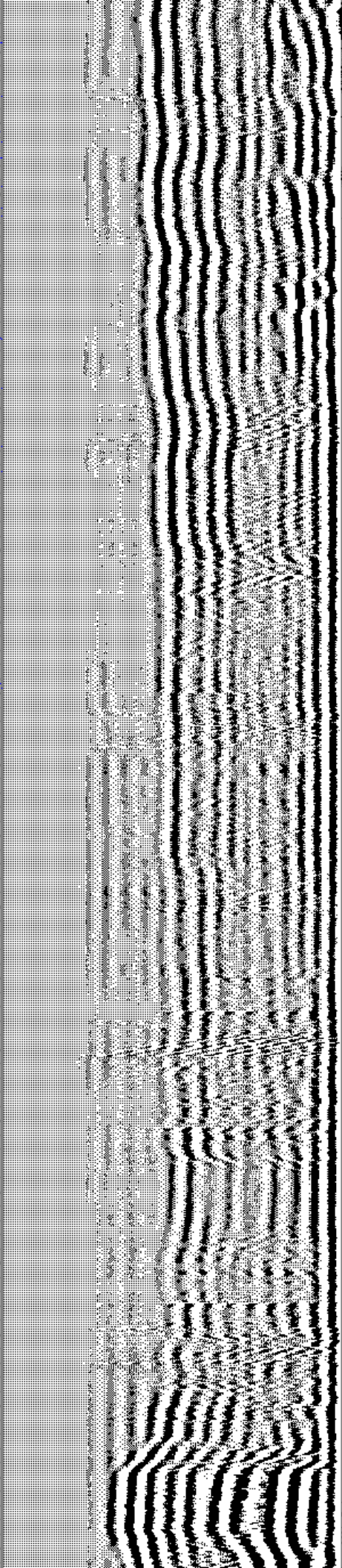
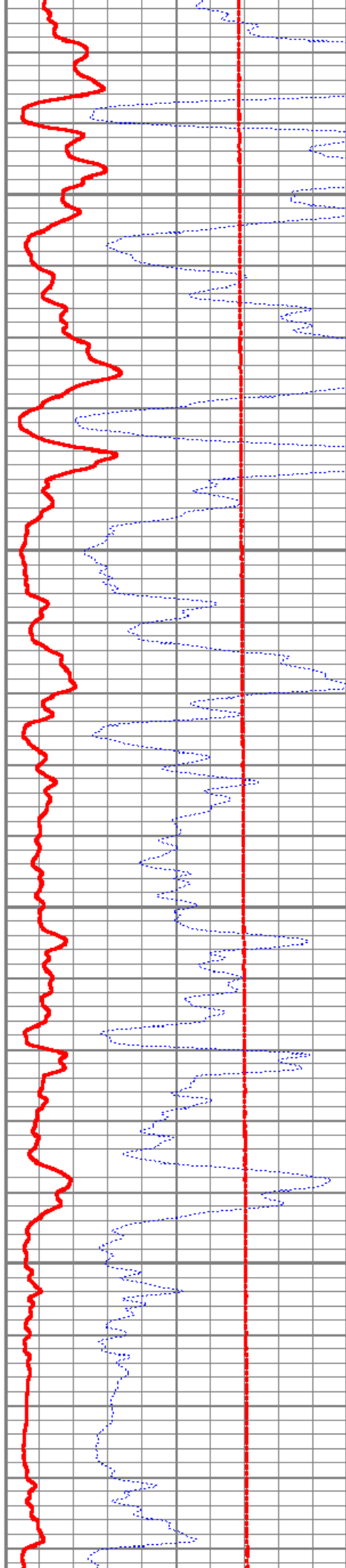


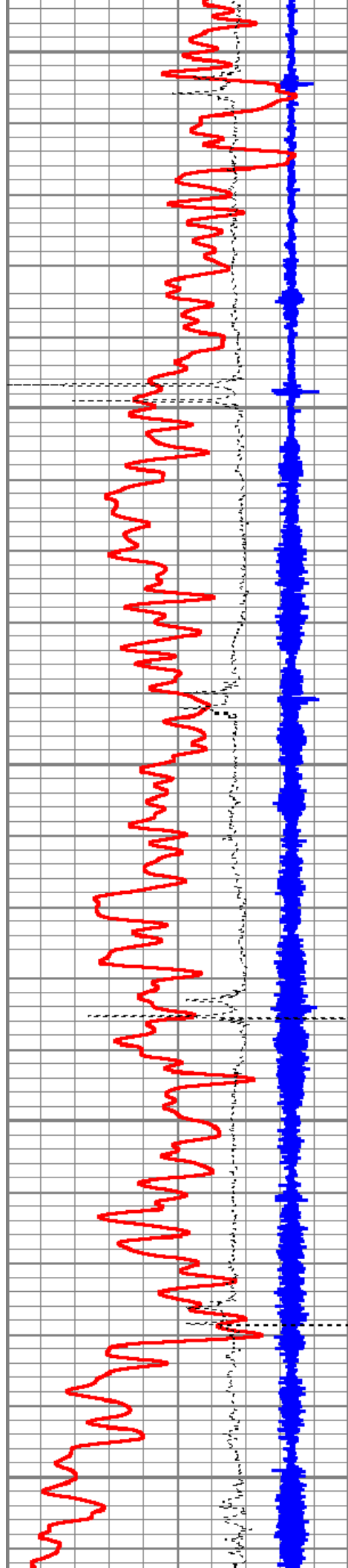
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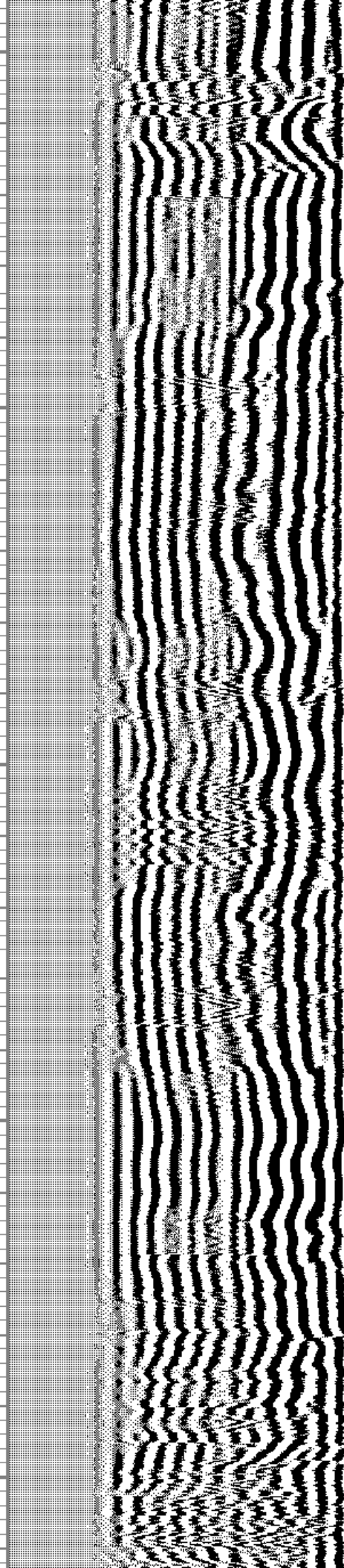
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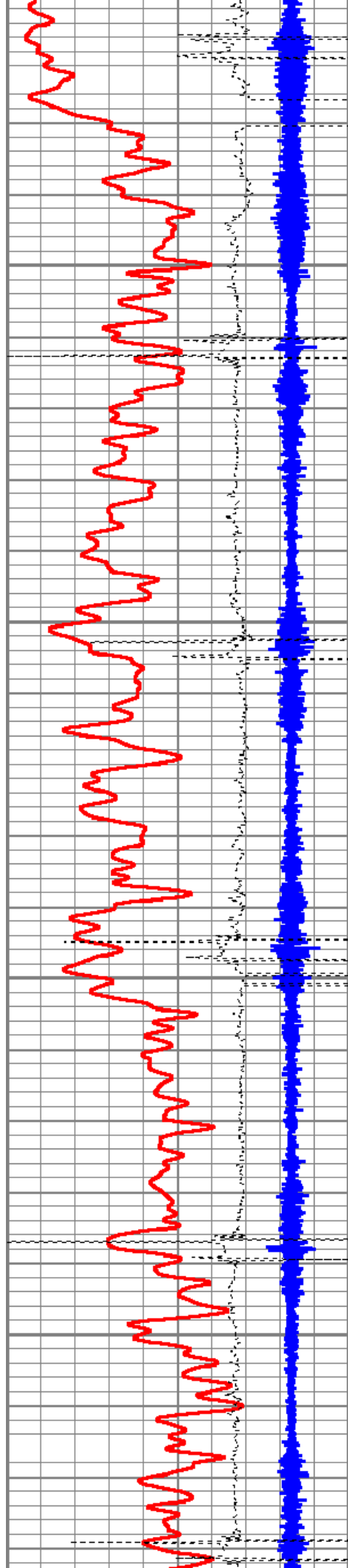
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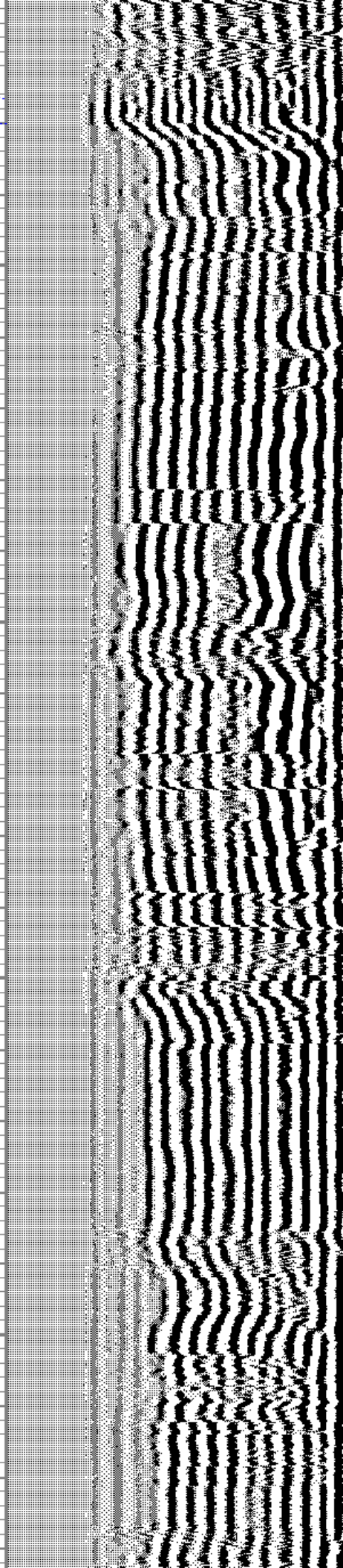
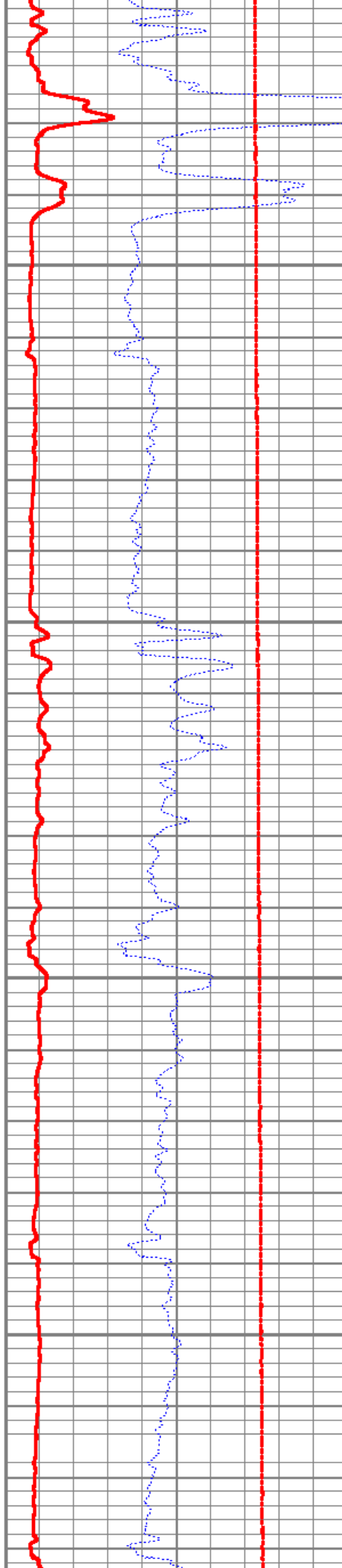


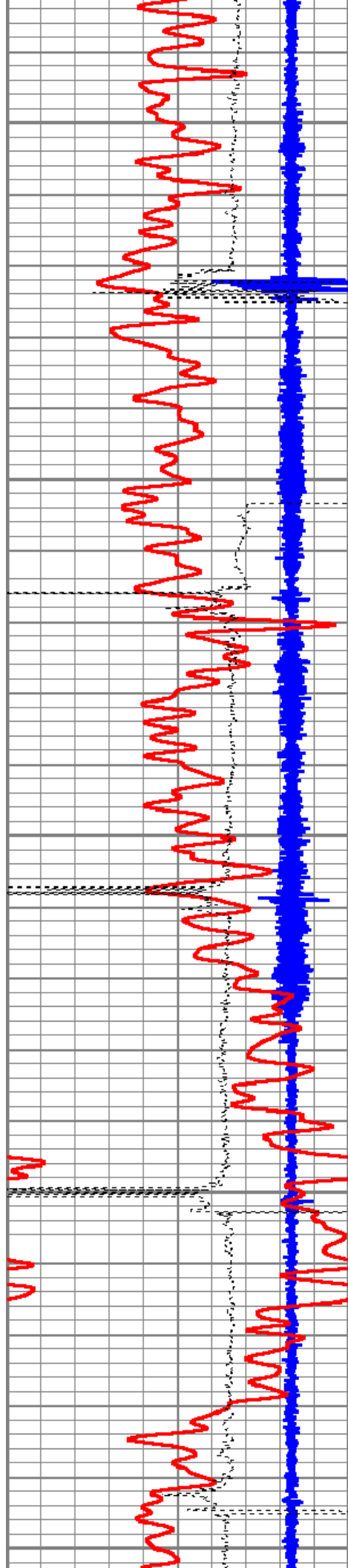
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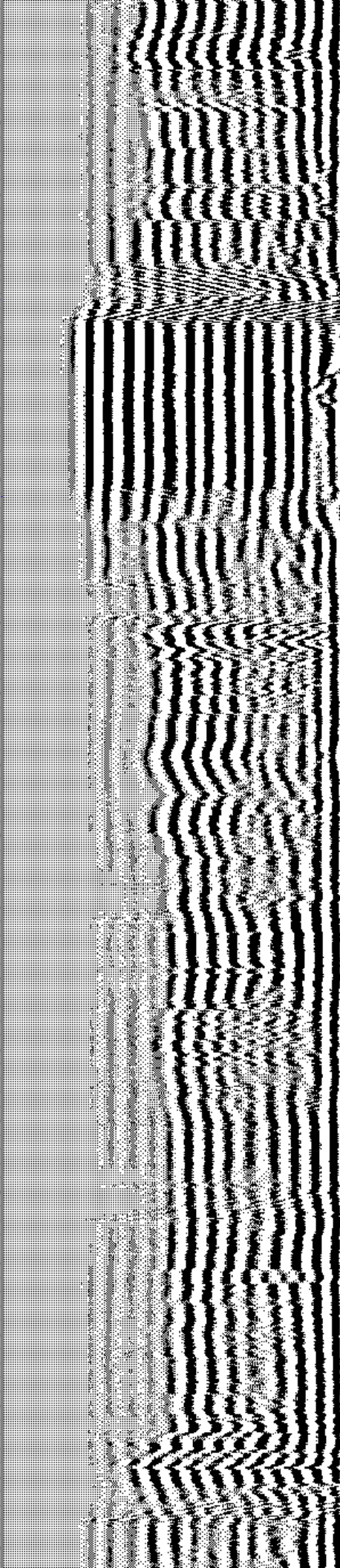
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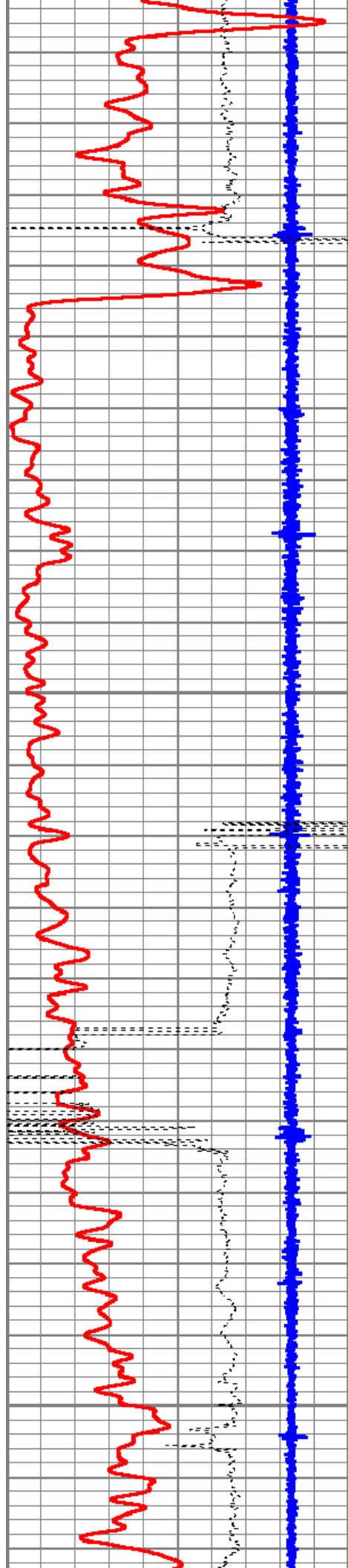
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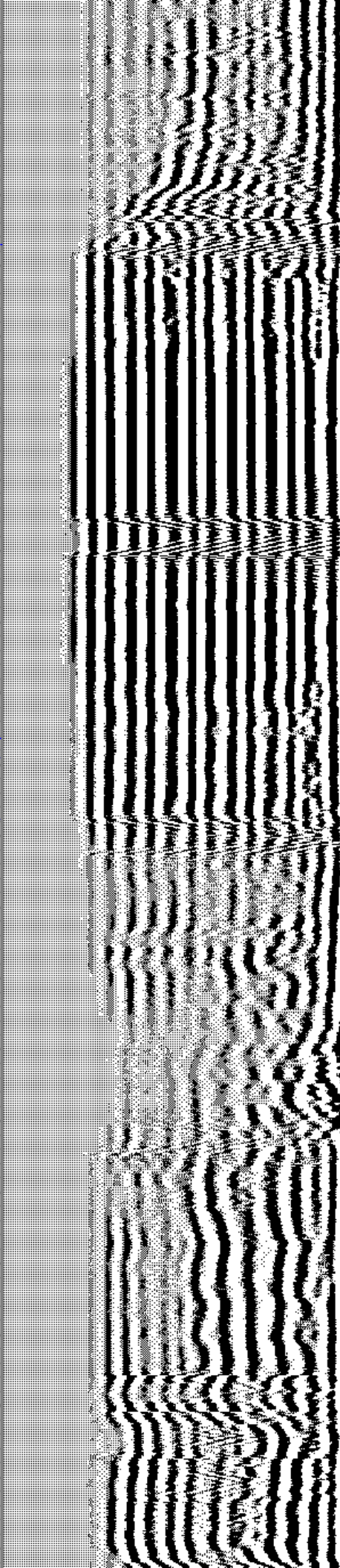
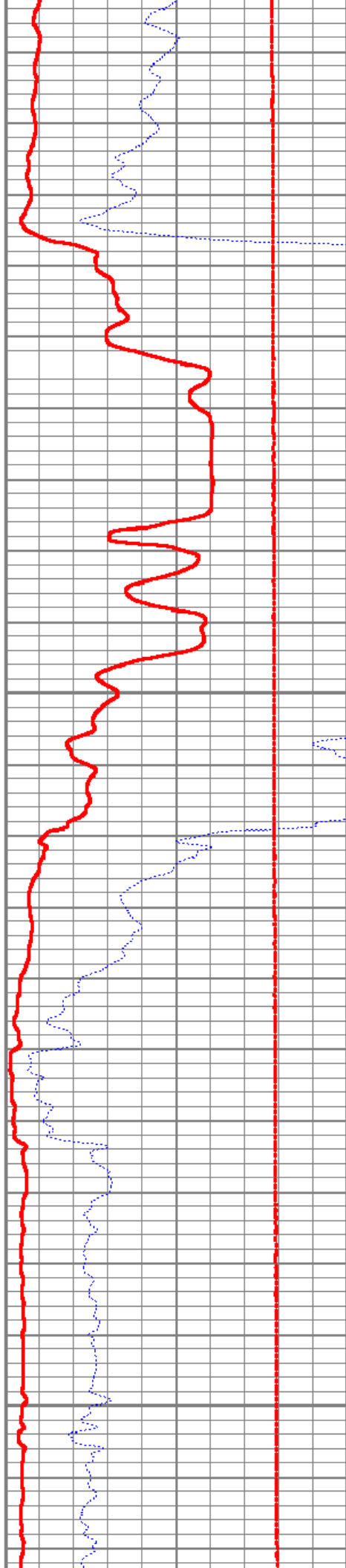


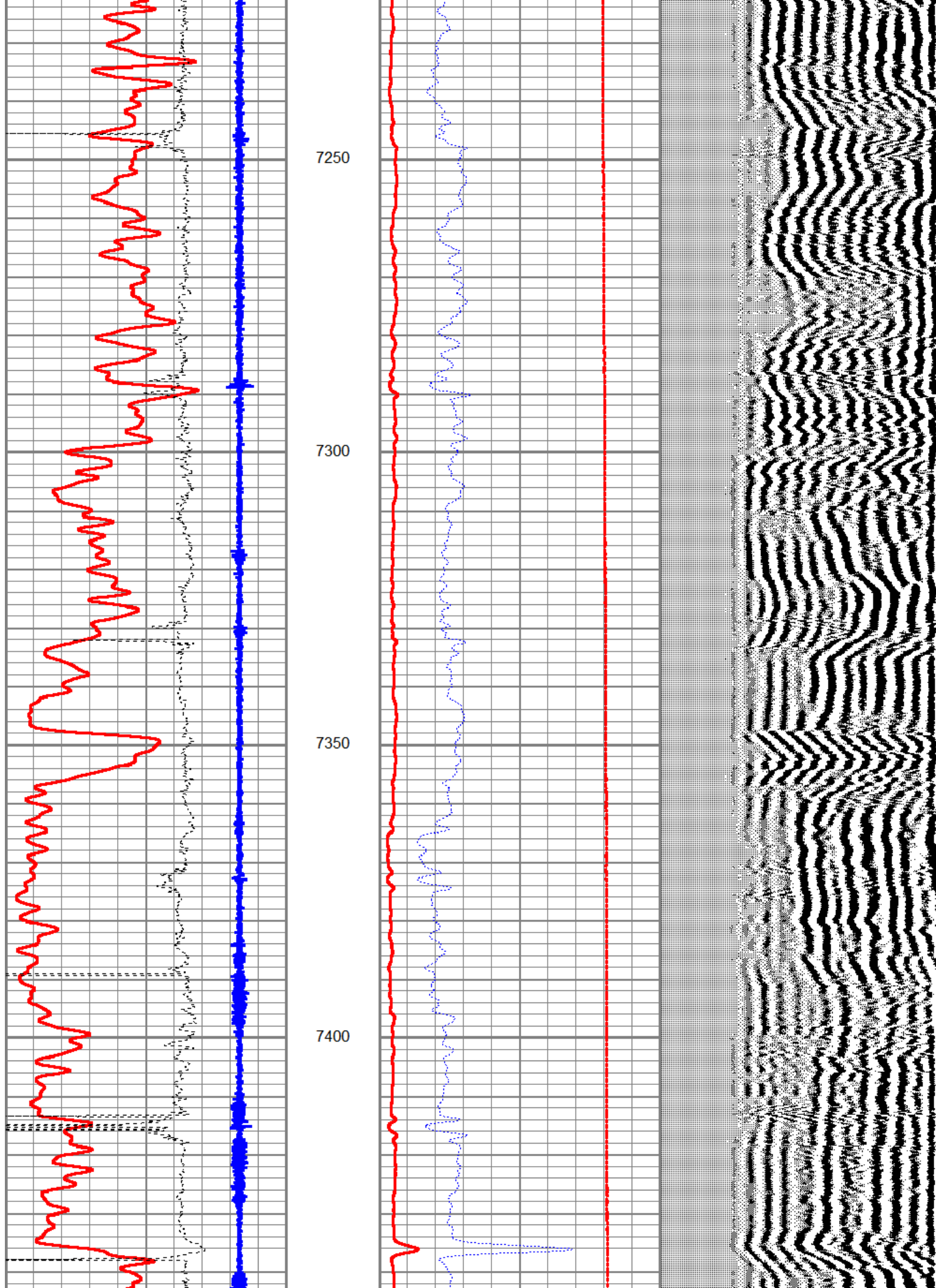
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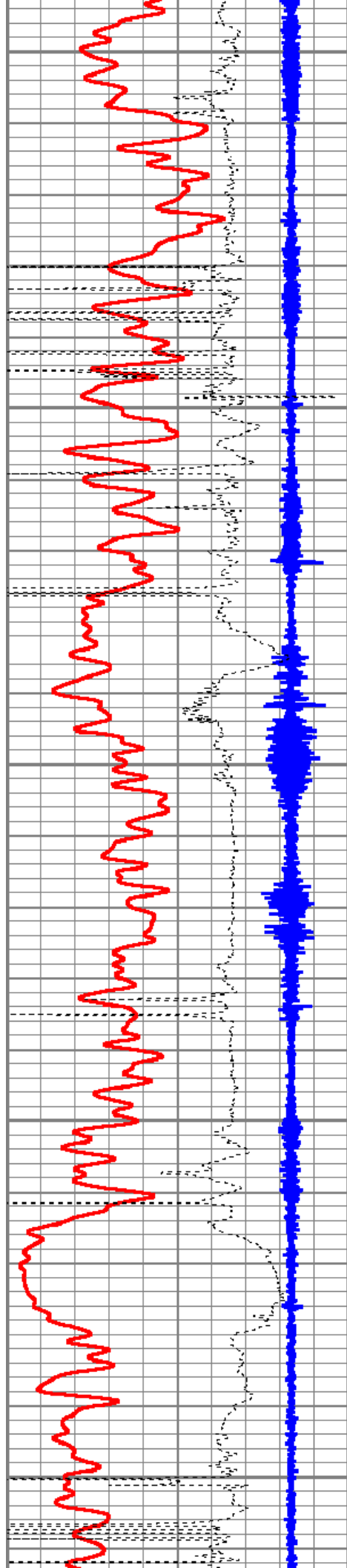
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7150

7200







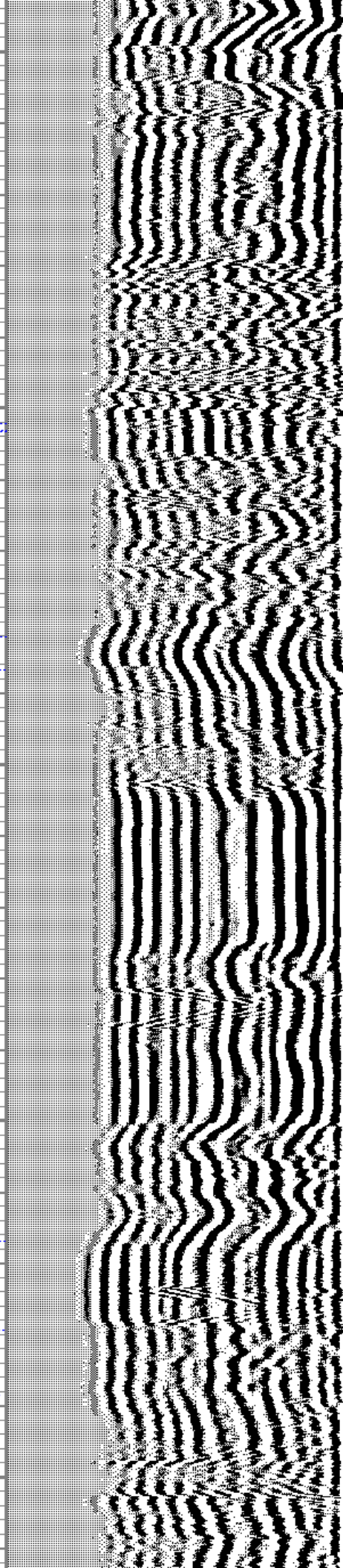
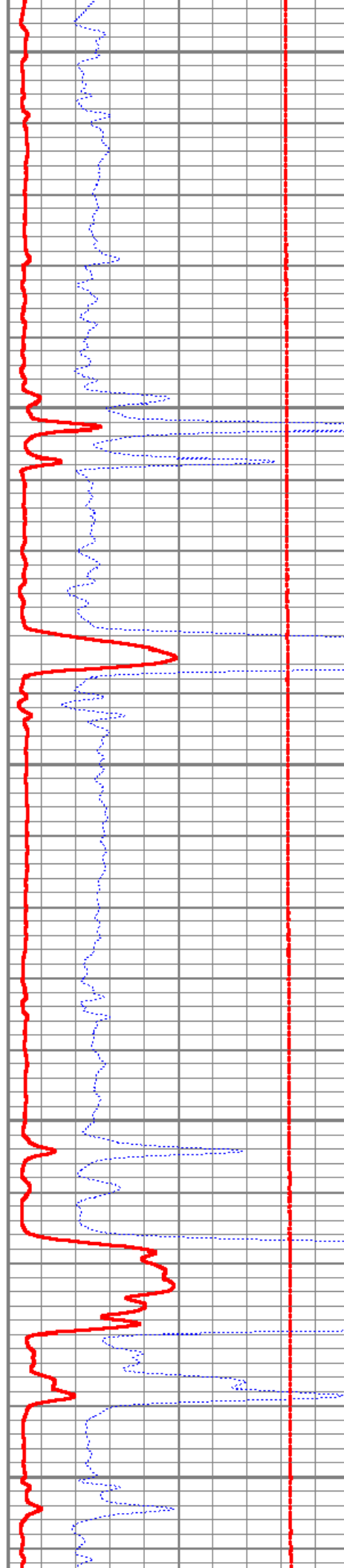
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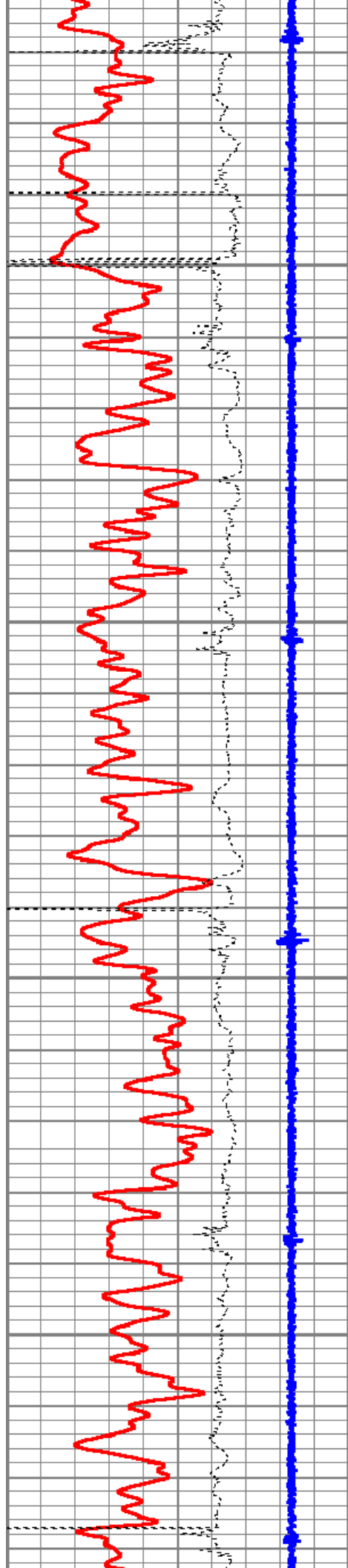
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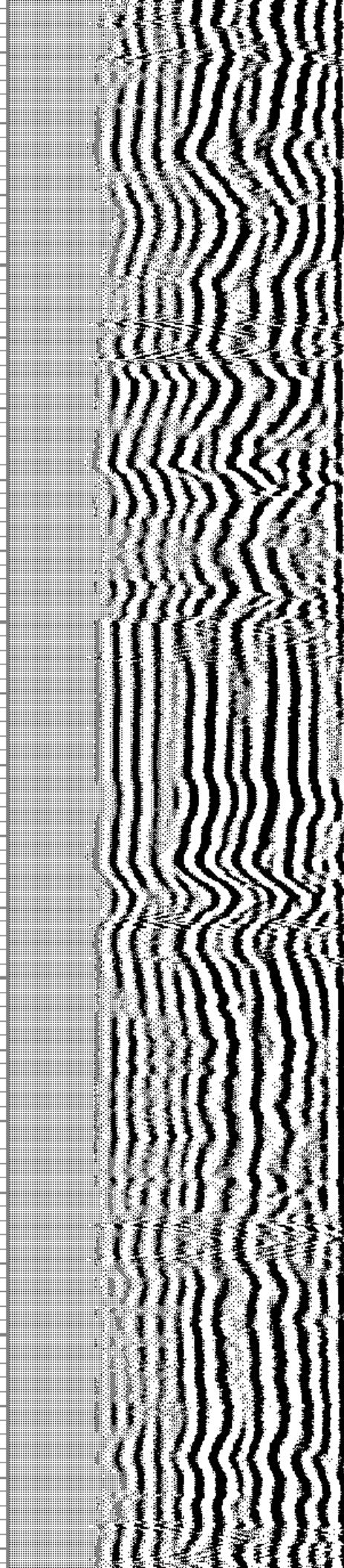
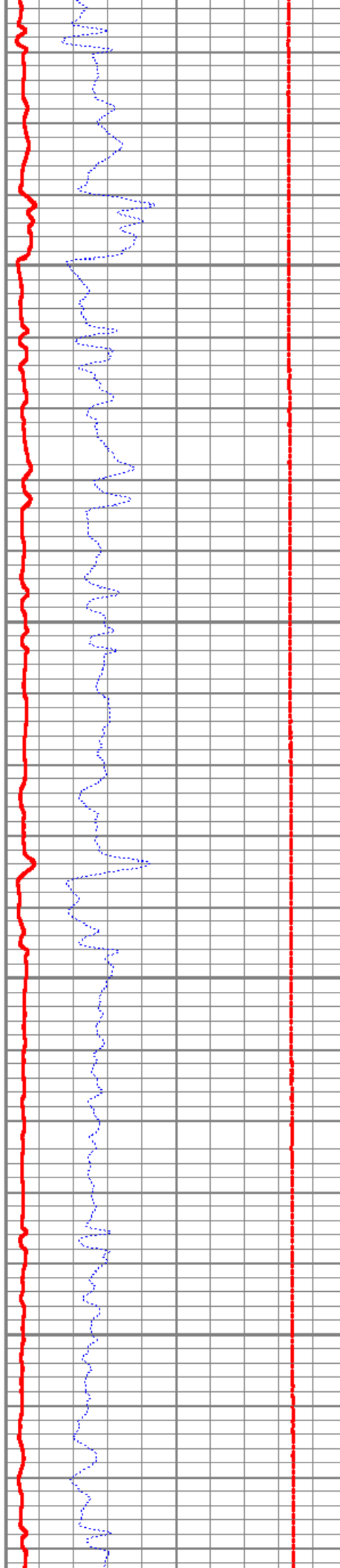


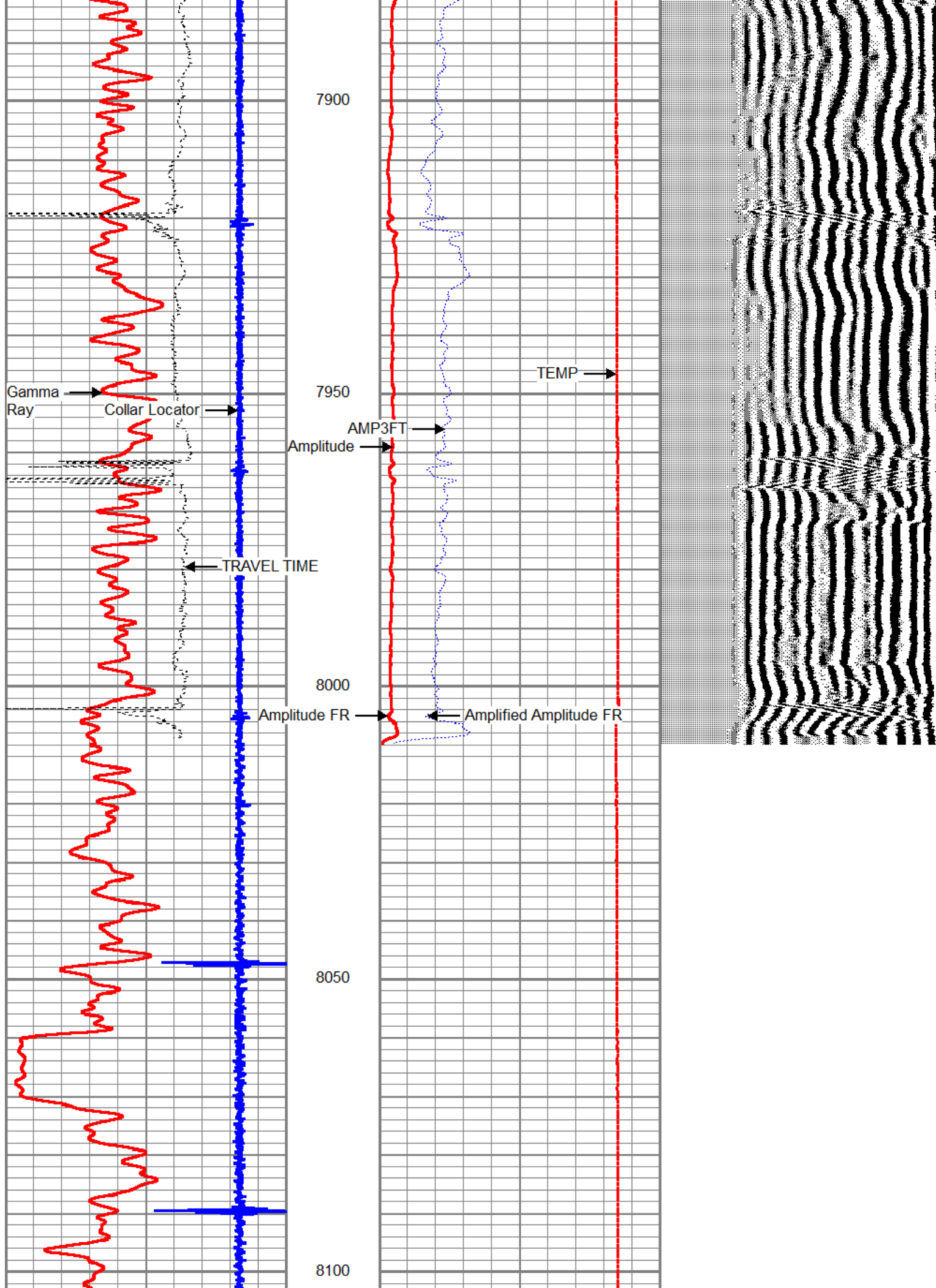
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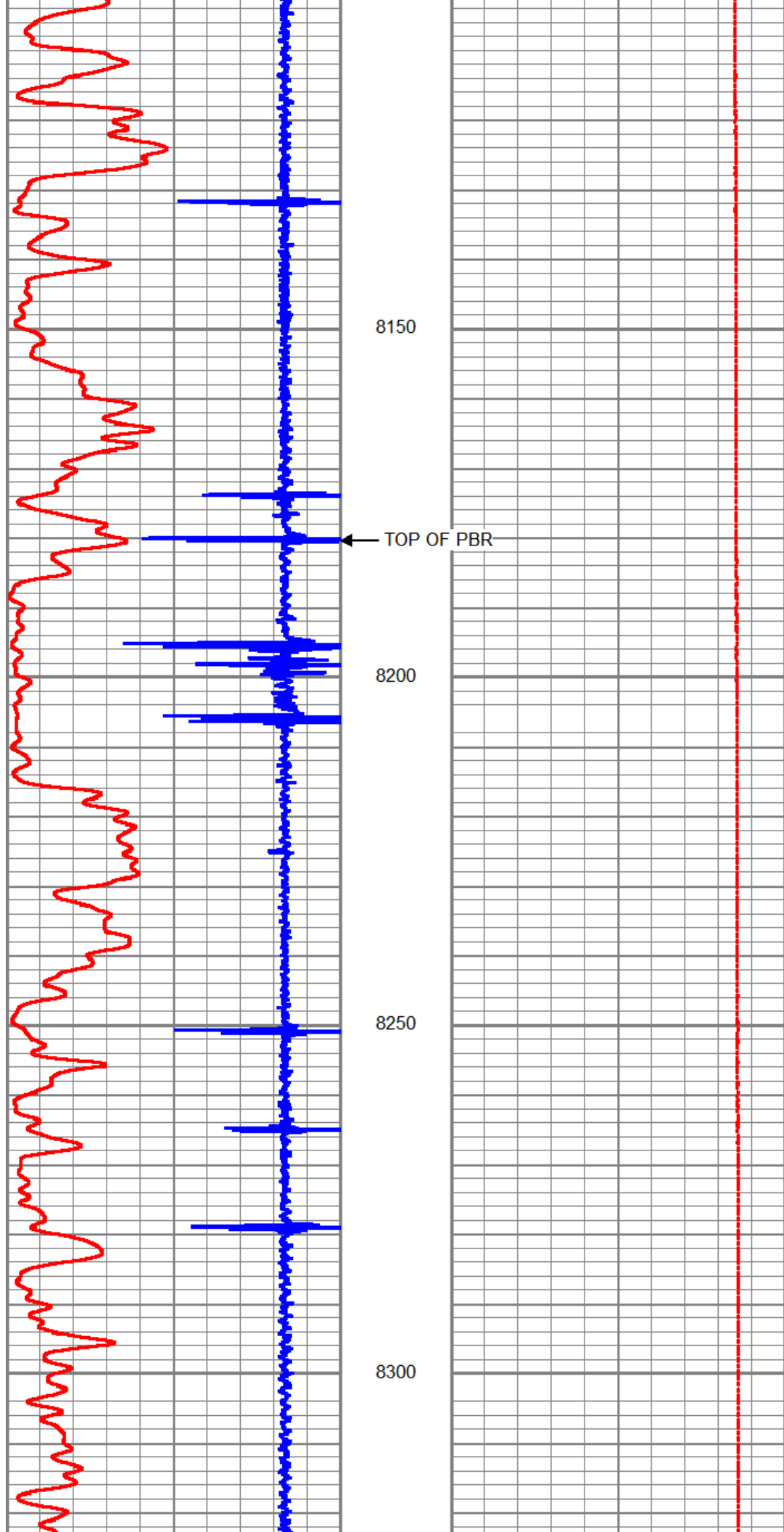
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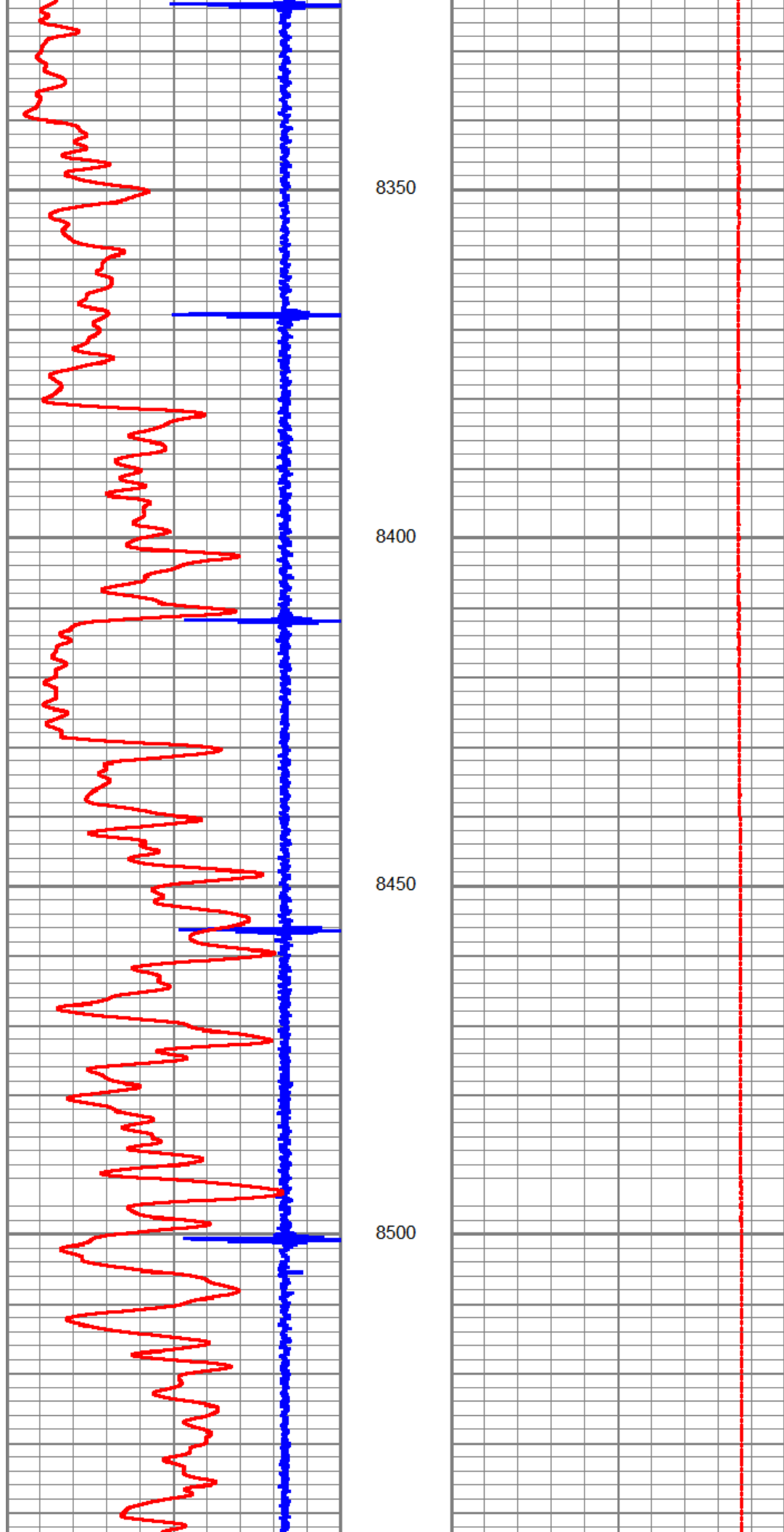
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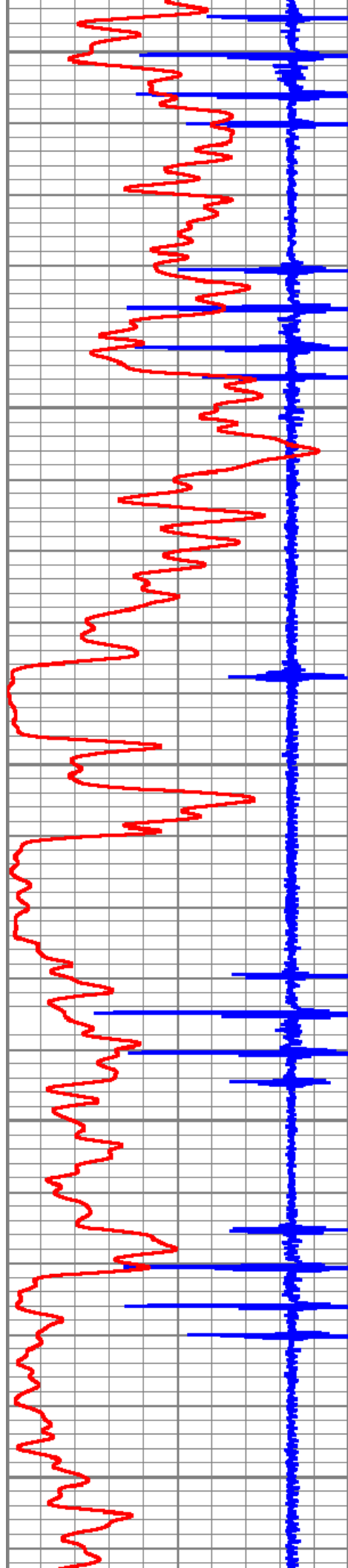
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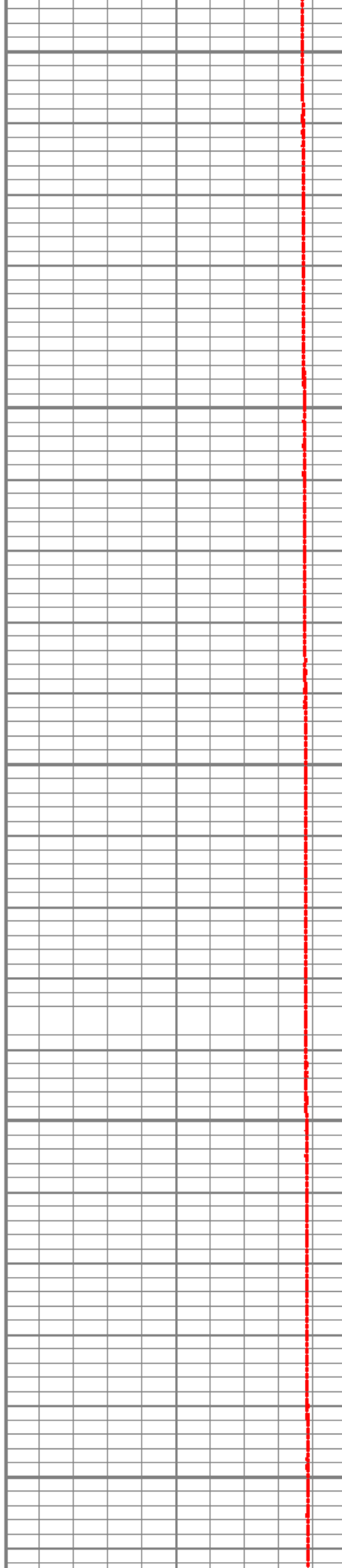
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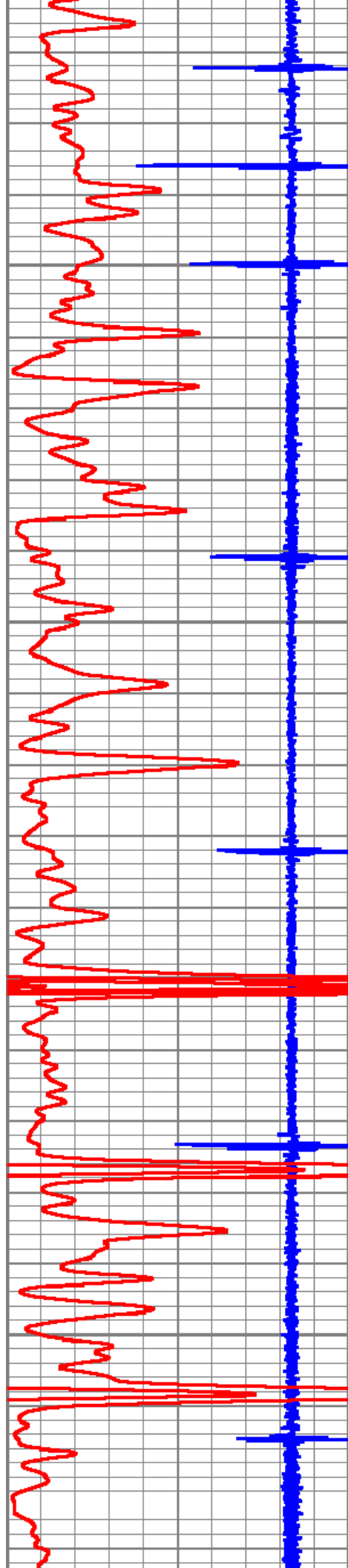
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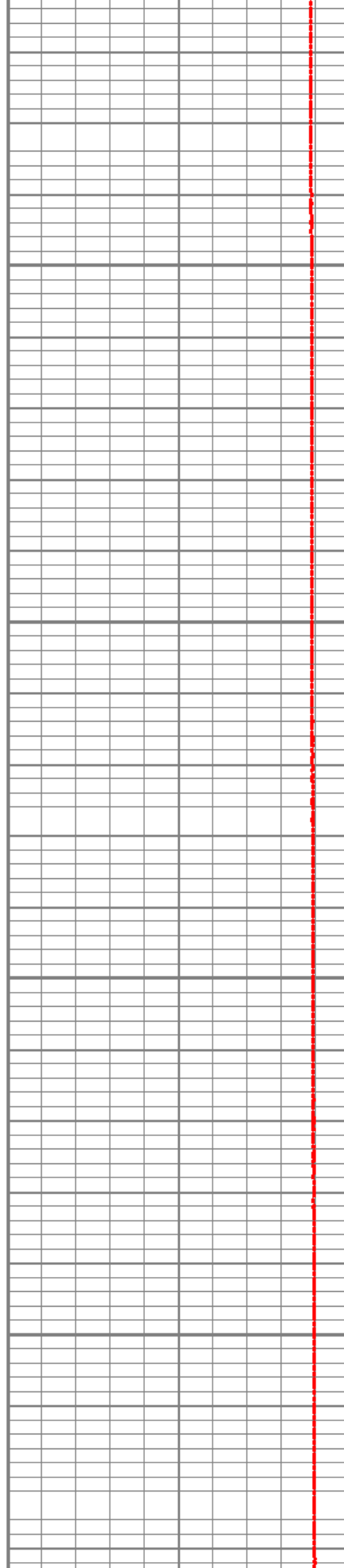


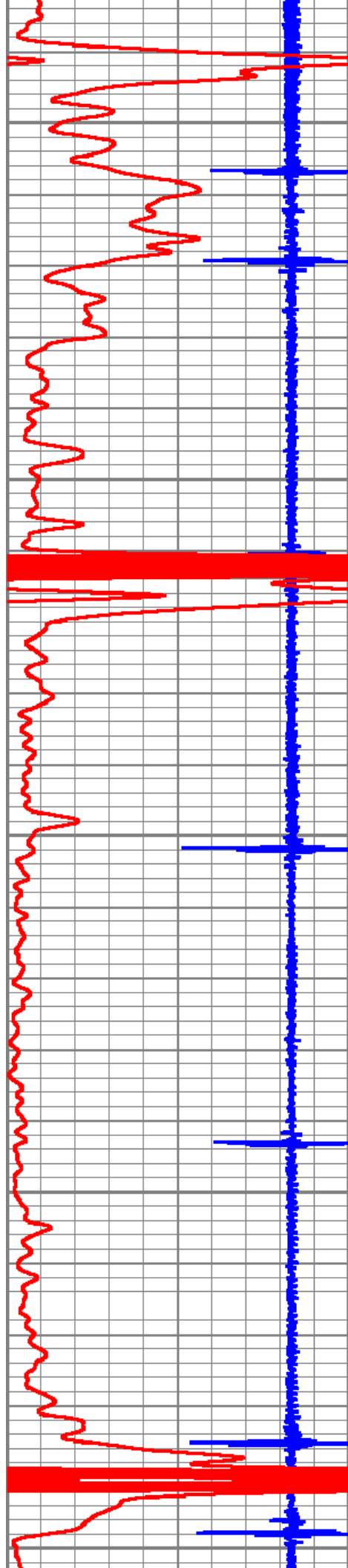
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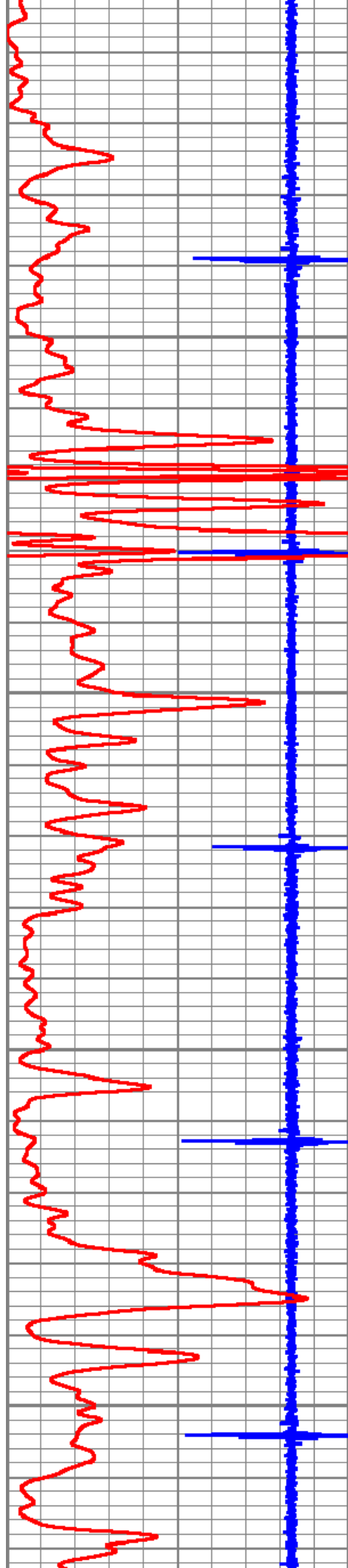
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9200



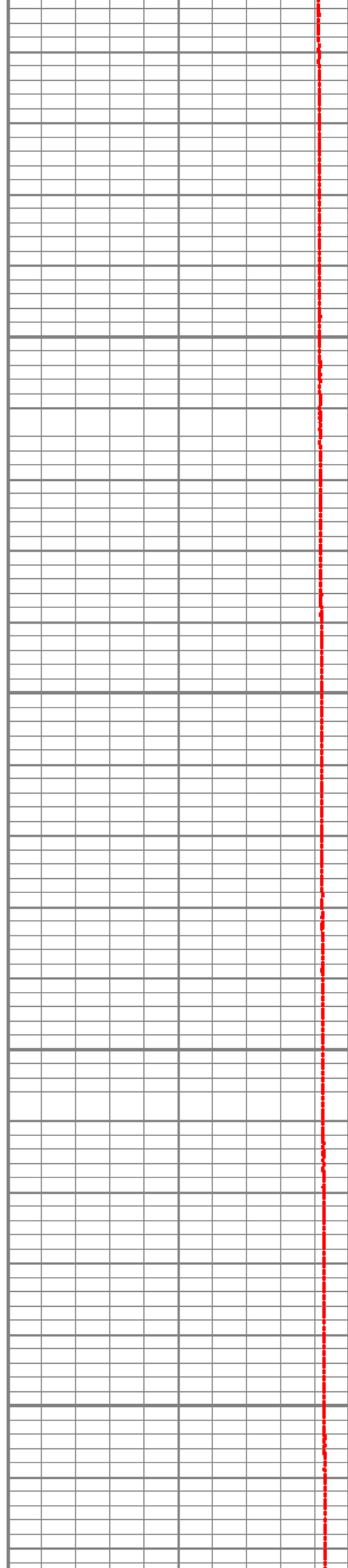


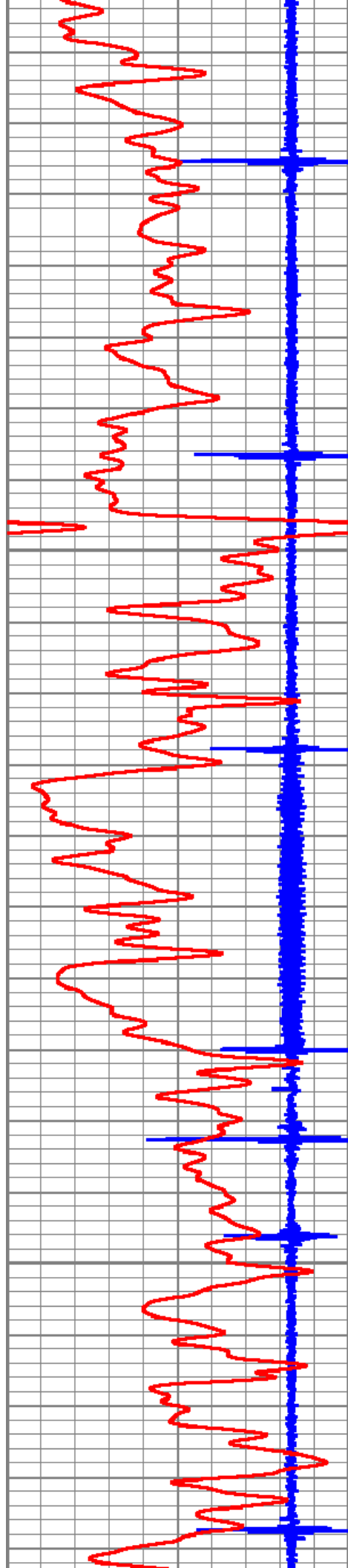
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9400



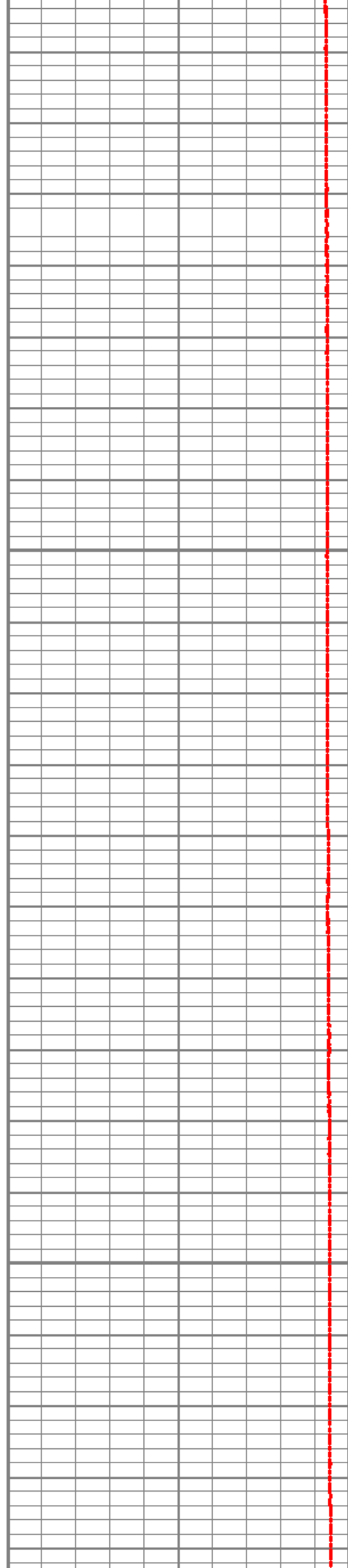


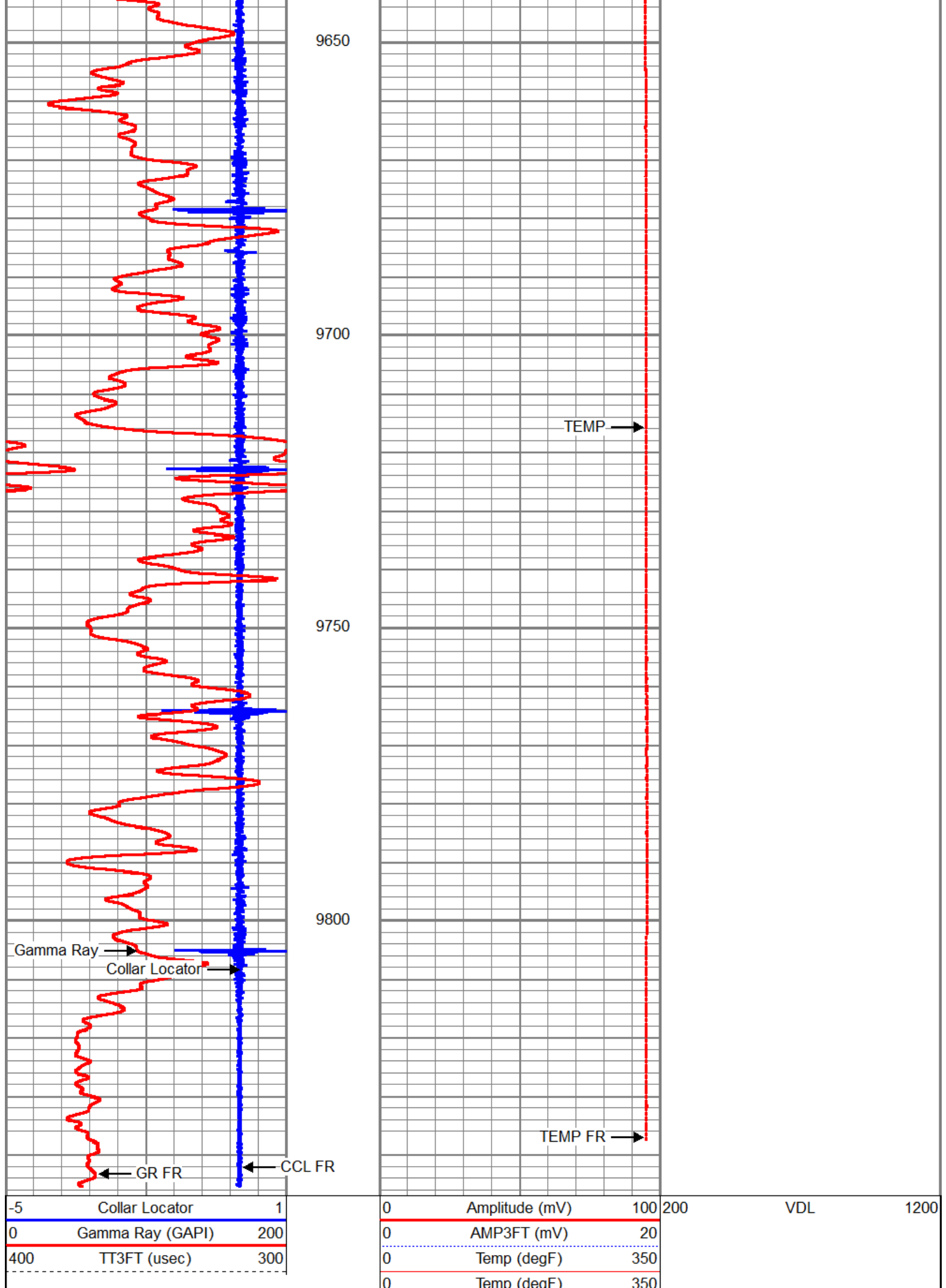
9450

9500

9550

9600







MAIN PASS

LOGGED AT 1000 PSI

Calibration Report

Database File ngl_c12.db
Dataset Pathname cbl/pass6C
Dataset Creation Fri May 15 18:03:46 2015

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 120607

SHOP CALIBRATION

Sun Nov 30 22:41:29 2014

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.7500			GAPI/cps

PRIMARY VERIFICATION

Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

BEFORE SURVEY VERIFICATION

Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

AFTER SURVEY VERIFICATION

Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Segmented Cement Bond Log Calibration Report

Serial Number: 120721_5.5
Tool Model: Probe275T

Calibration Casing Diameter: 7.000 in
Calibration Depth: 7082.508 ft

Master Calibration, performed Fri May 15 13:04:19 2015:

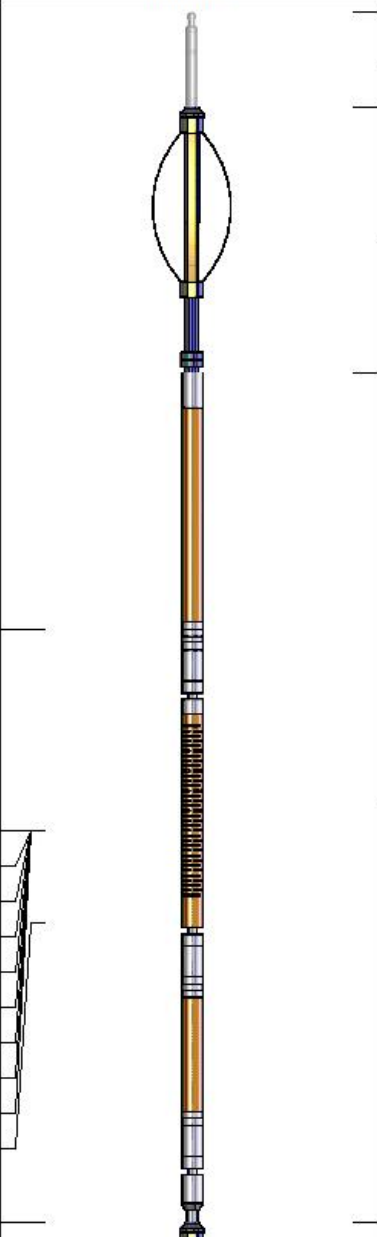
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.869	1.000	62.165	70.378	1.000
CAL	0.000	0.968				
5'	0.000	0.748	1.000	62.165	81.746	1.000
SUM						
S1	0.000	0.902	0.000	100.000	110.866	0.000
S2	0.000	0.935	0.000	100.000	106.997	0.000
S3	0.000	0.932	0.000	100.000	107.281	0.000
S4	0.000	0.904	0.000	100.000	110.616	0.000
S5	0.000	0.878	0.000	100.000	113.934	0.000
S6	0.000	0.853	0.000	100.000	117.174	0.000
S7	0.000	0.834	0.000	100.000	119.878	0.000
S8	0.000	0.862	0.000	100.000	115.968	0.000

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	0.968	1.000	0.000

Air Zero Calibration, performed Fri May 15 11:38:08 2015:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.000		0.000		0.000	
5'	0.000		0.000		0.000	
SUM						
S1	0.000		0.000		0.000	
S2	0.000		0.000		0.000	
S3	0.000		0.000		0.000	
S4	0.000		0.000		0.000	
S5	0.000		0.000		0.000	
S6	0.000		0.000		0.000	
S7	0.000		0.000		0.000	
S8	0.000		0.000		0.000	

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
Temp	13.81		CHD-Titan_2 Hunting Titan Cone Type II	1.03	1.44	2.00
			CENT-Probe275 Probe Adjustable Bow-Spring Centralizer	2.88	2.75	20.00
			RBT-Probe275T (120721_5.5) Probe 2.75" Radial with Integral Temperature Sub	9.19	2.75	100.00
	11.64					
	11.64					
	11.64					
	11.64					
	11.64					
	11.64					
	11.64					
	11.64					
	11.64					
	10.64					
WVFCAL	7.39					

