



Pioneer Energy Services

## HIGH RESOLUTION INDUCTION

Company	Wiepking-Fullerton Energy LLC	Company	Wiepking-Fullerton Energy LLC
Well	Aloha Mula #16	Well	Aloha Mula #16
Field	Great Plains	Field	Great Plains
County	Lincoln	County	Lincoln
State	Colorado	State	Colorado
Location:	API # : 05-073-06590	Other Services	Density Neutron
Permanent Datum	GL	Elevation	5286
Log Measured From	KB	K.B. 5299	
Drilling Measured From	KB	D.F. 5298	
		G.L. 5286	
Date	August 6, 2014		
Run Number	1		
Depth Driller	8065		
Depth Logger	8065		
Bottom Logged Interval	8065		
Top Log Interval	Casing		
Casing Driller	336		
Casing Logger	336		
Bit Size	7-7/8"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	9.3 / 66		
pH / Fluid Loss	8.5 / 9.6		
Source of Sample	Flowline		
Rm @ Meas. Temp	1.56 @ 65 F		
Rmf @ Meas. Temp	1.25 @ 65 F		
Rmc @ Meas. Temp	1.84 @ 65 F		
Source of Rmf / Rmc	Calc / Calc		
Rm @ BHT	0.51 @ 198 F		
Time Circulation Stopped	2030 8/5/2014		
Time Logger on Bottom	0200		
Maximum Recorded Temperature	198 F		
Equipment Number	49		
Location	Ft. Morgan		
Recorded By	Clint Christensen		
Witnessed By	Gregg Smith		

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

### Comments

Annular volume calculated for 5.5" casing  
Murfin Drilling Rig 25  
Thank you for using Pioneer Energy Services

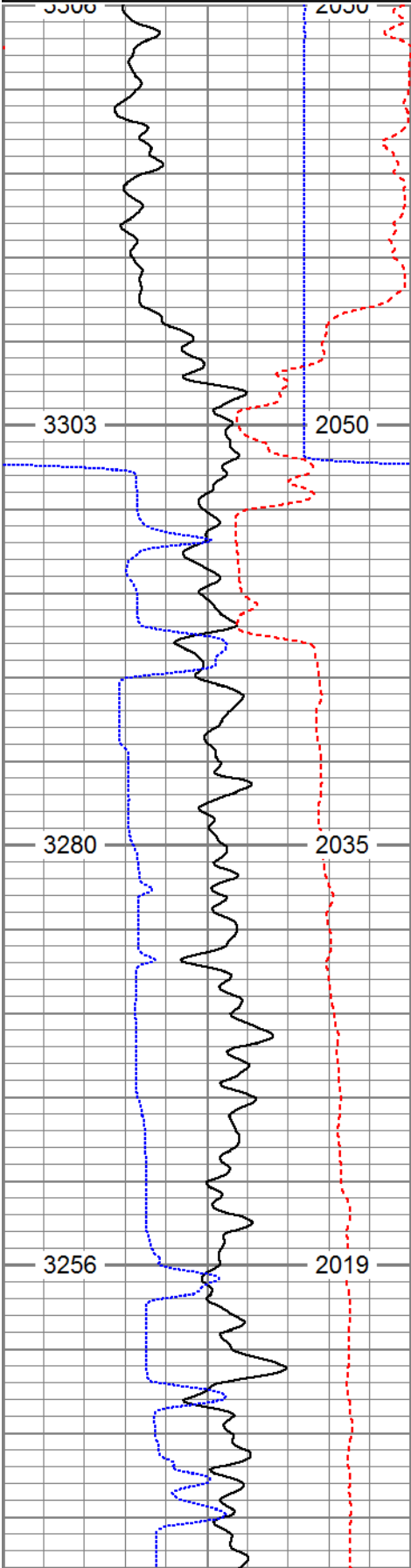
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD (~0)	2.00	3.50	30.00

GR	0.00		GR-PSI (939)	2.92	3.50	40.00
CNLSC	-3.67		CNT-PSI (826)	5.00	3.50	70.00
CNSSC	-4.17					
			CDL-PSI (998)	8.50	5.00	285.00
DCAL	-11.84					
LSD	-12.67					
SSD	-13.17					
RLL3	-17.52					
			DIL-PSI (1011)	18.25	3.75	175.00
CILD	-24.97					
CILM	-28.42					
SP	-32.42					
Dataset: 13618.db: field/well/run1/pass2 Total Length: 36.67 ft Total Weight: 600.00 lb O.D. 5.00 in						

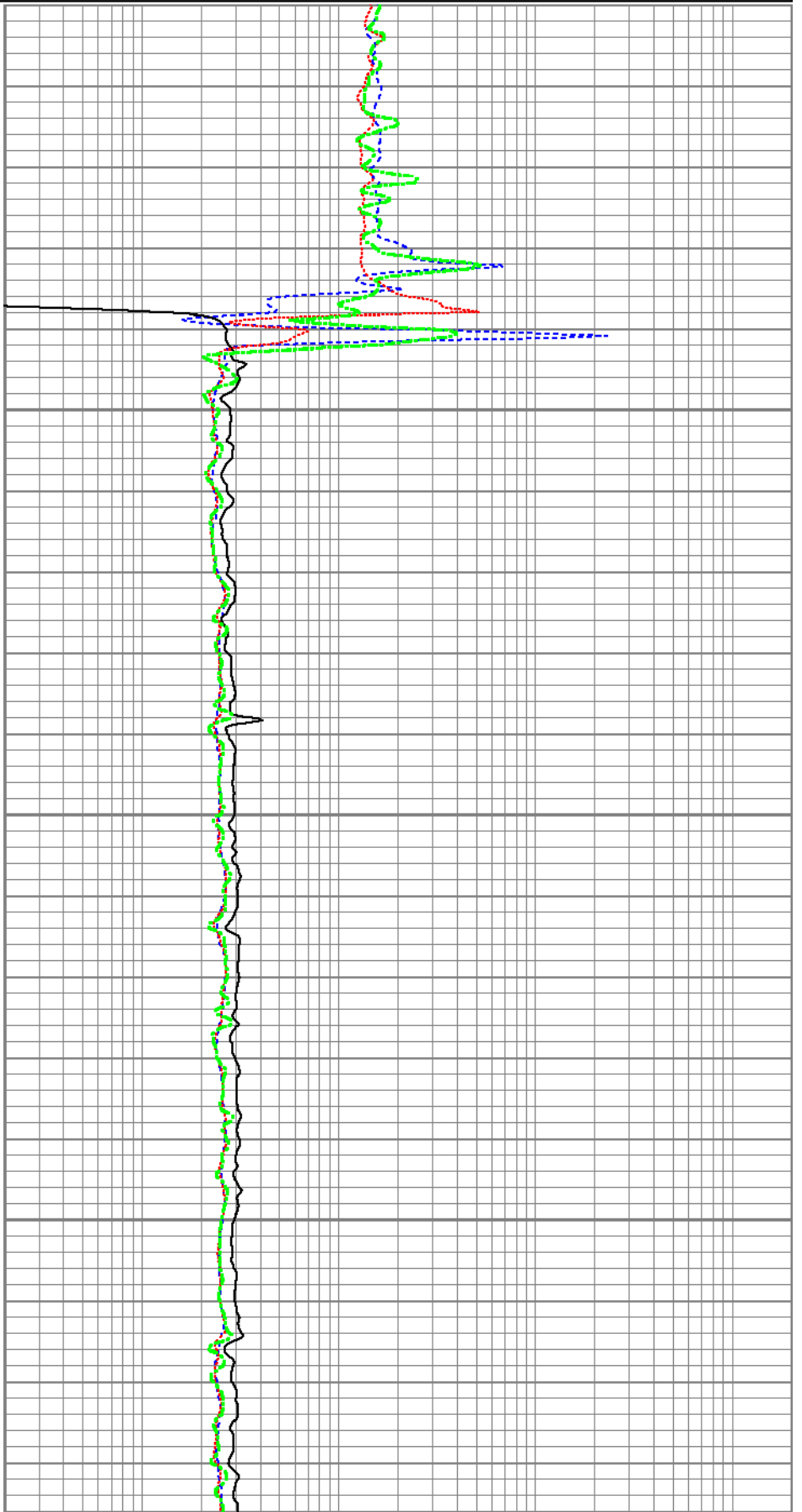
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 Dataset Pathname: Final  
 Presentation Format: dil  
 Dataset Creation: Wed Aug 06 04:08:35 2014

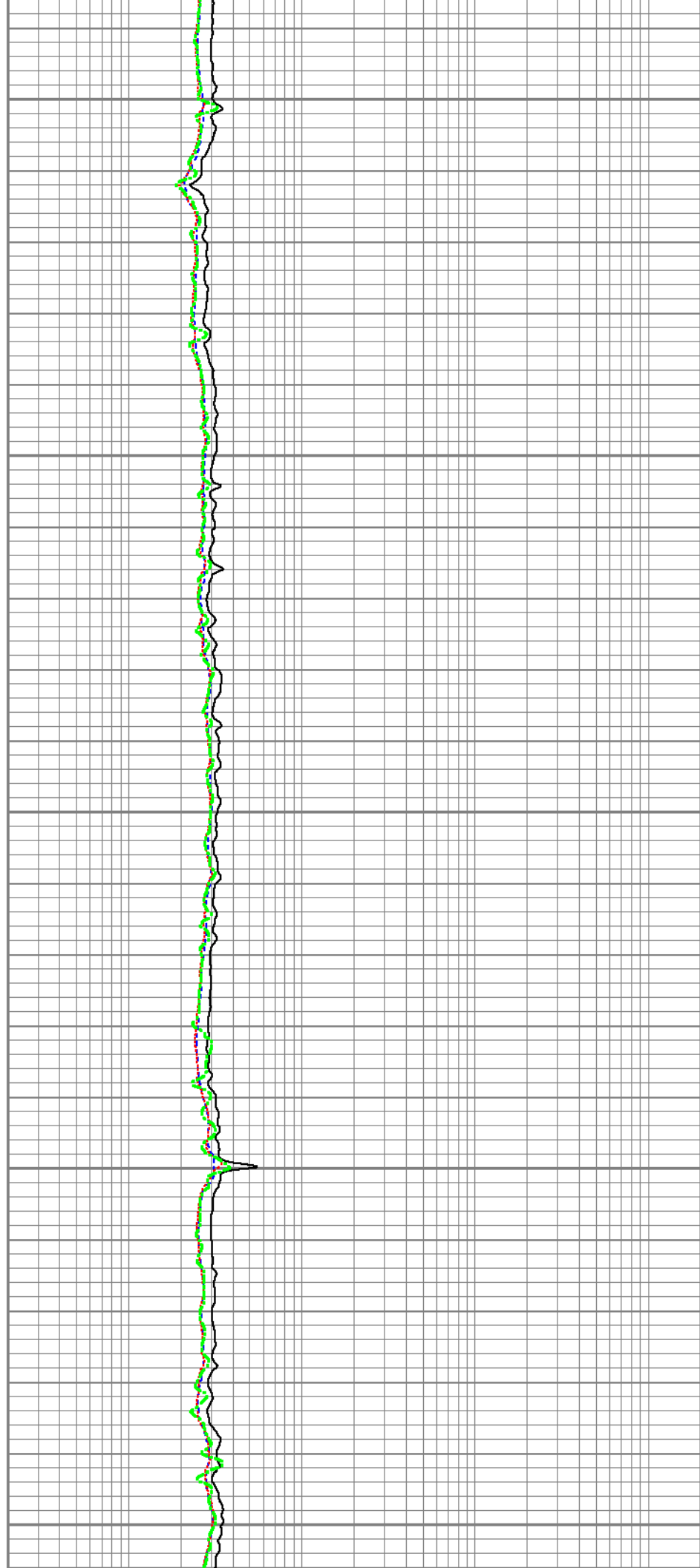
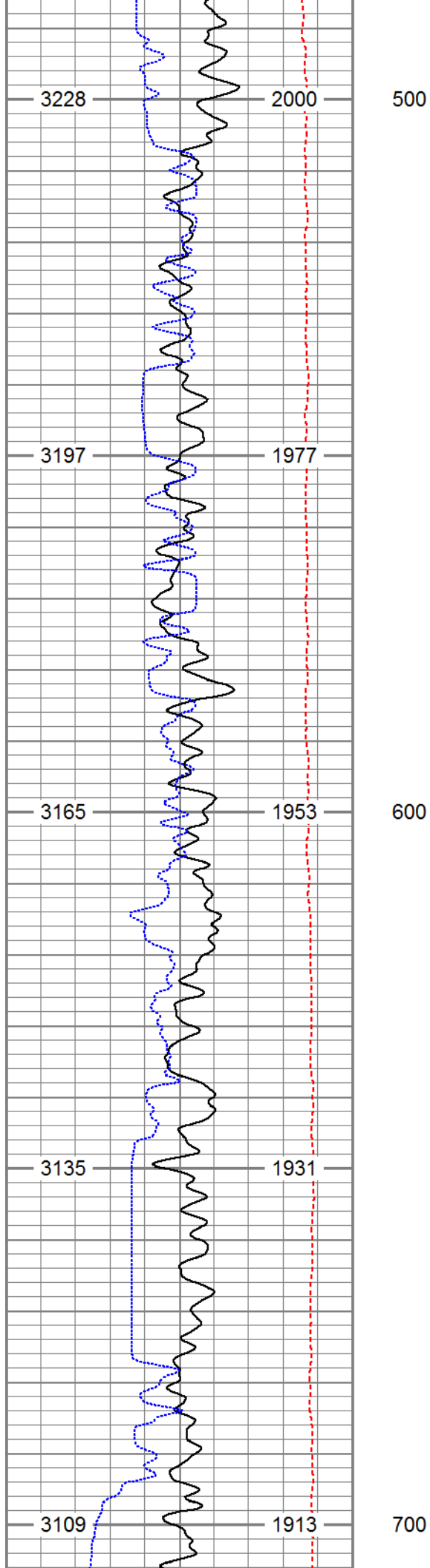
0	Gamma Ray (GAPI)	200
0	SP (mV)	200
6	Caliper (in)	16
TBHV (ft3)		ABHV (ft3)

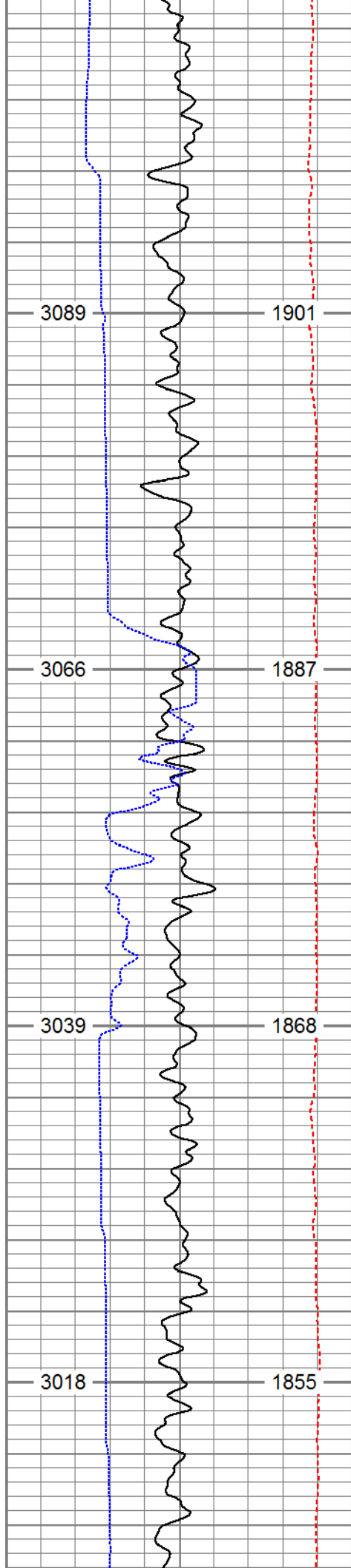
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Rt (Ohm-m)	2000



300  
400

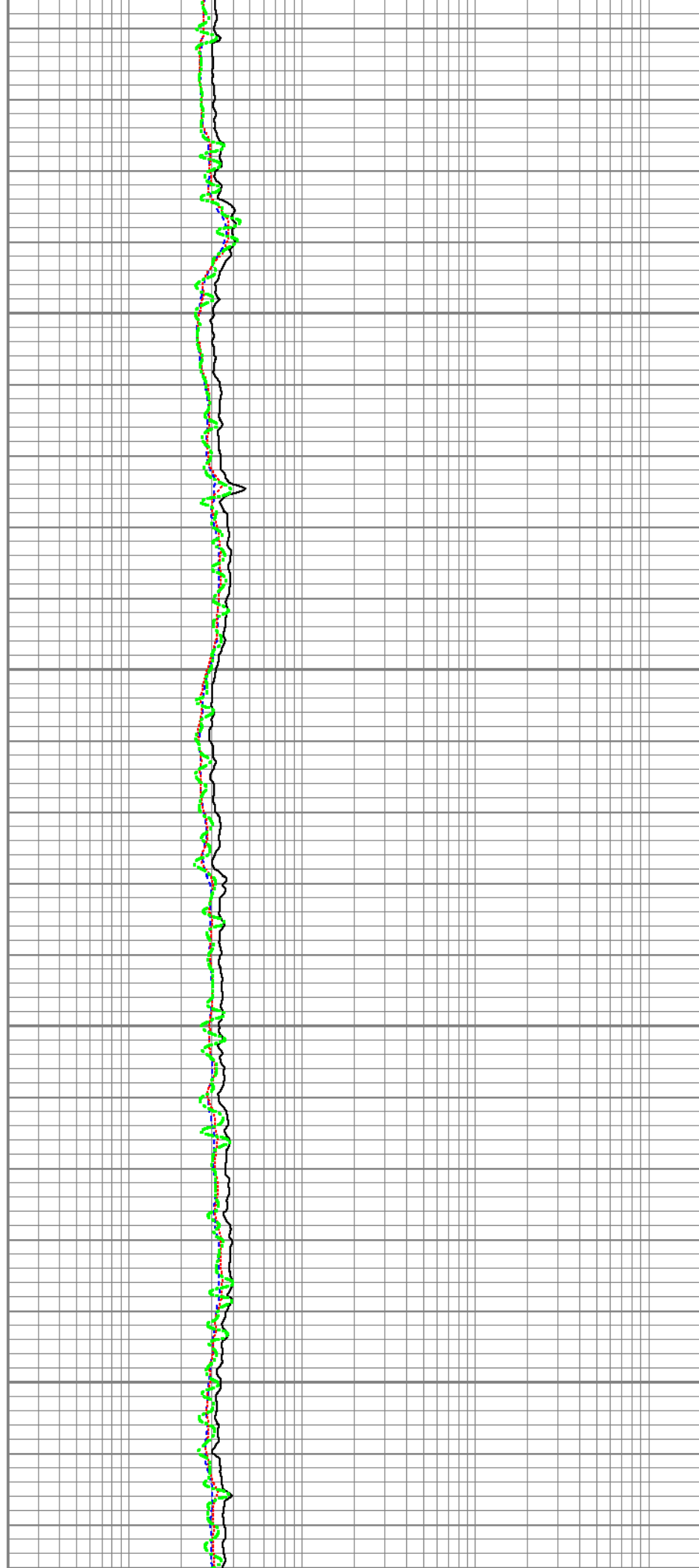


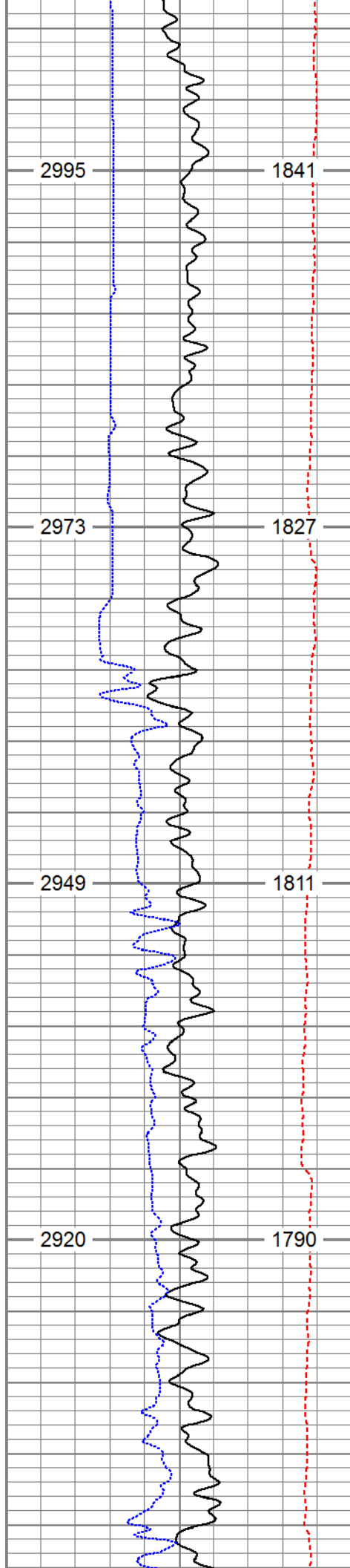




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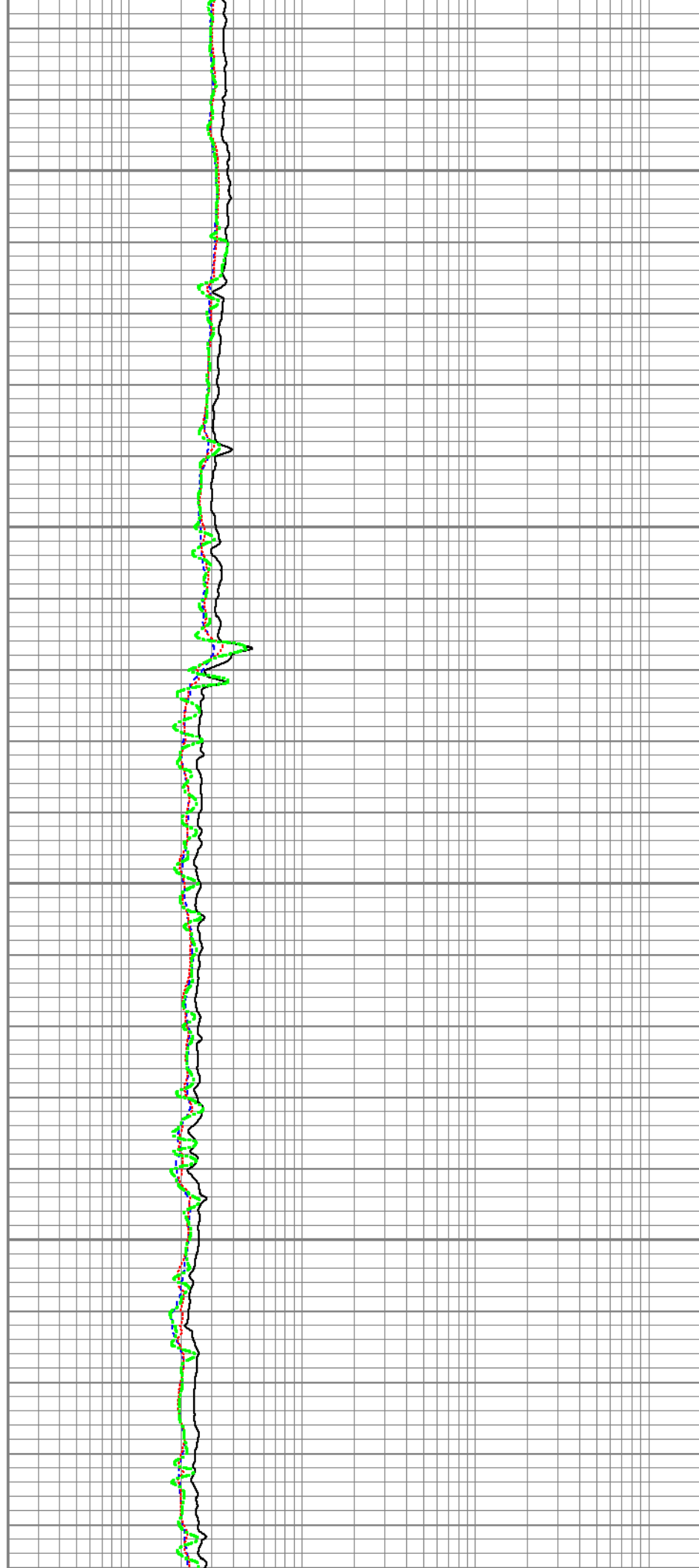
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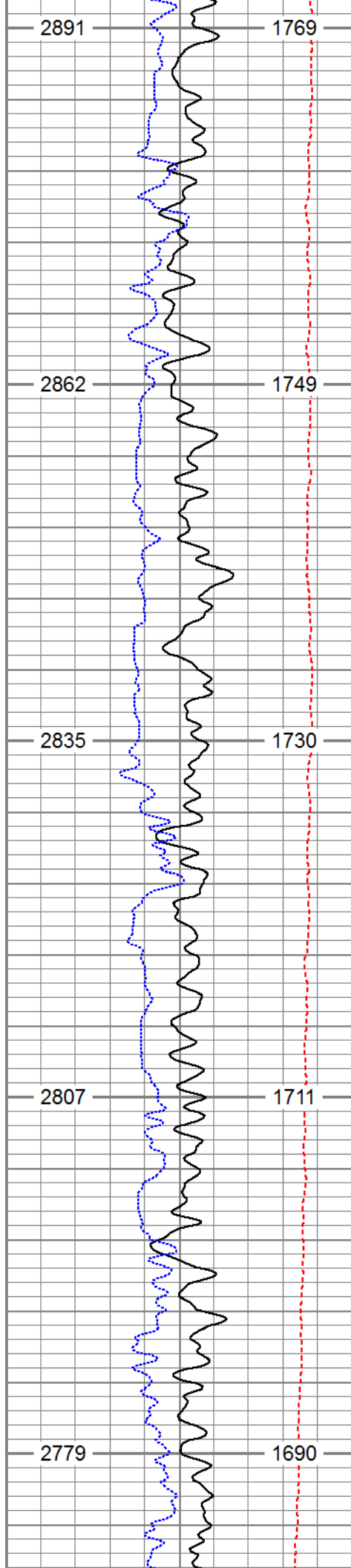




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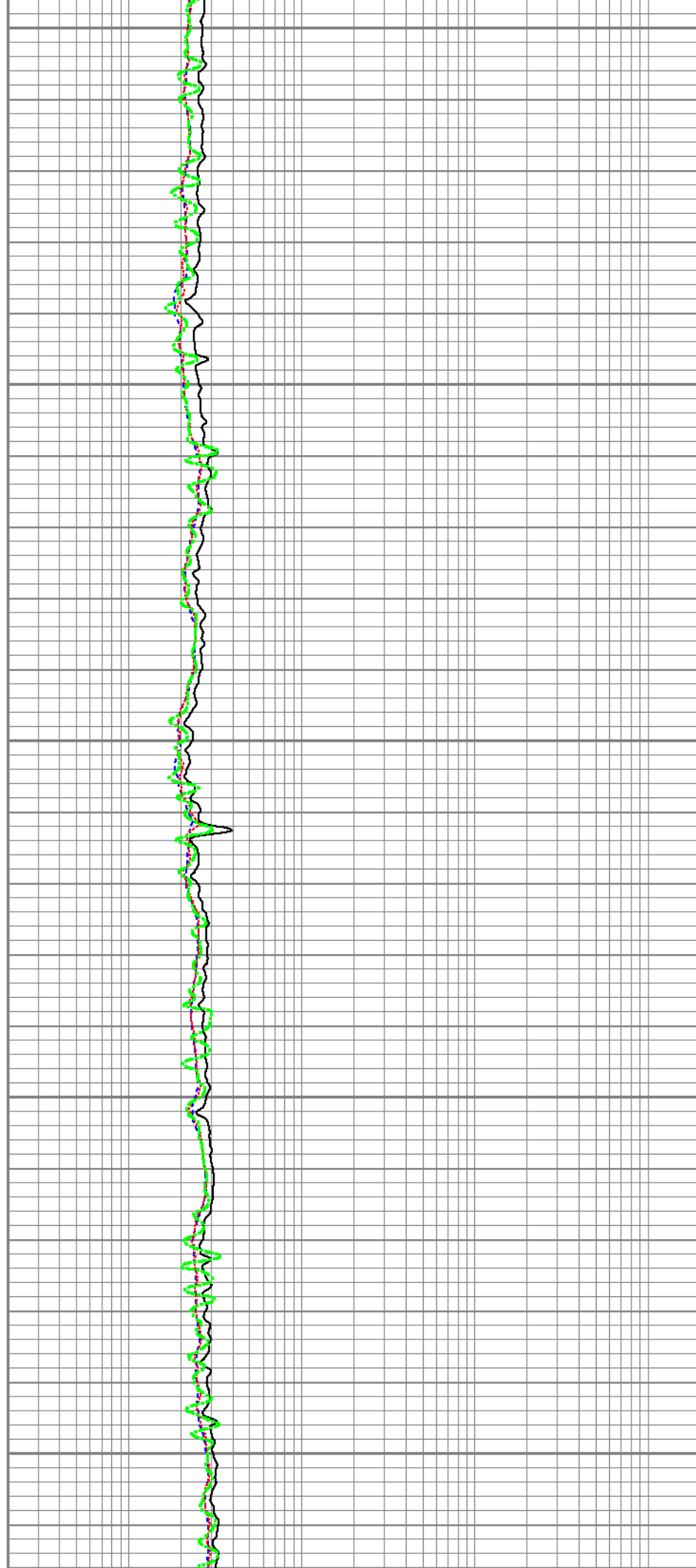
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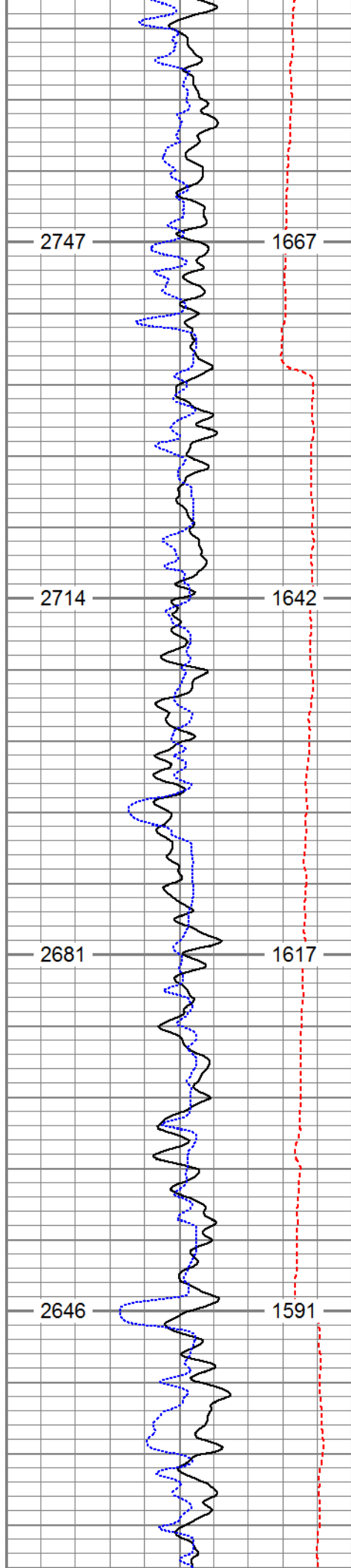




1200

1300





1400

2714

1642

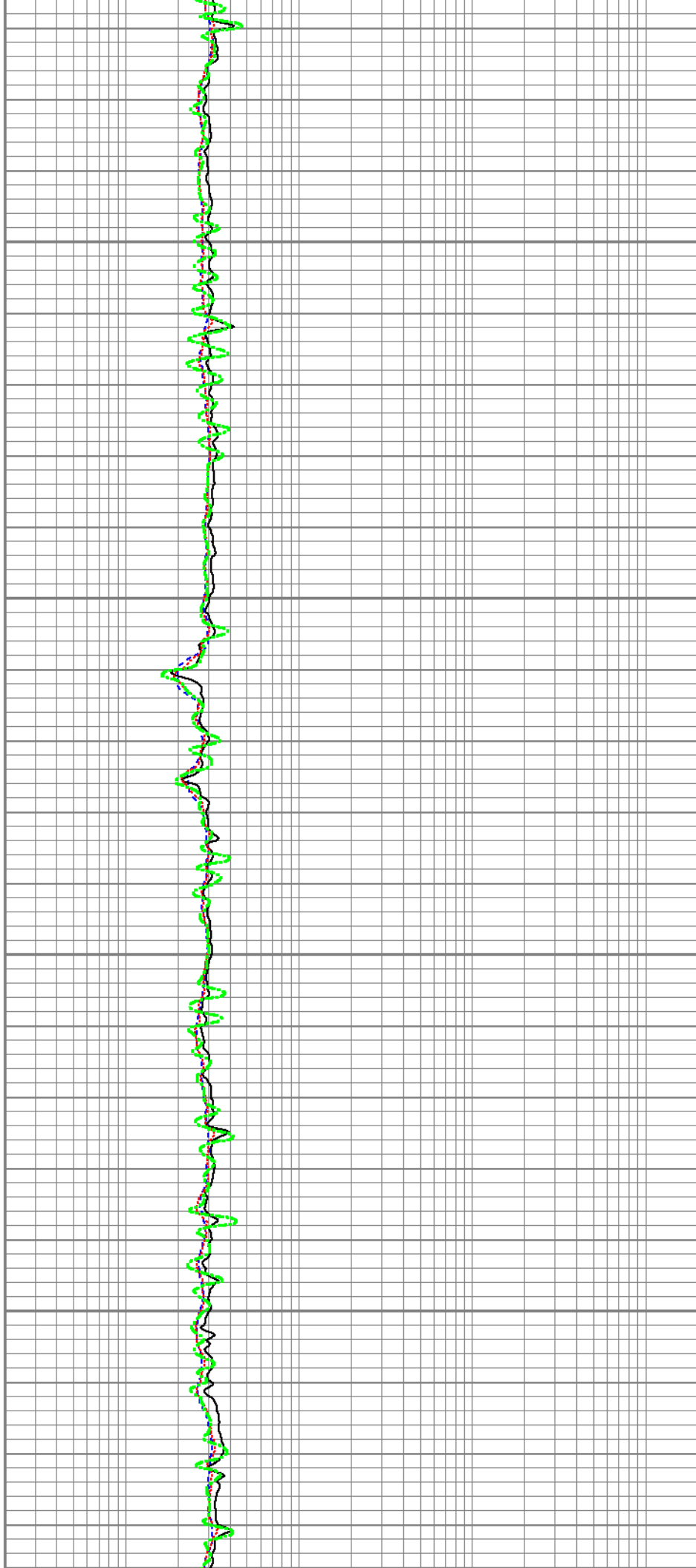
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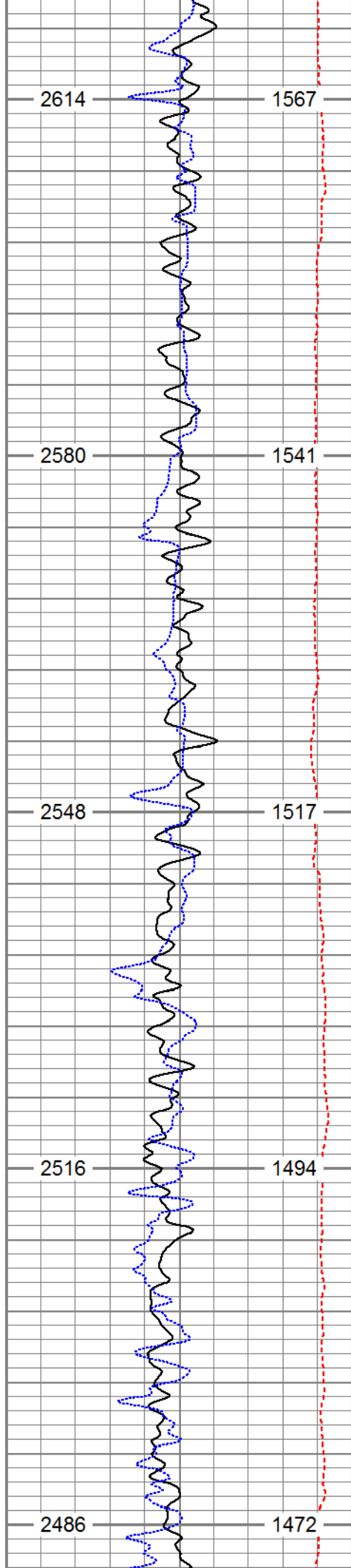
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2646

1591



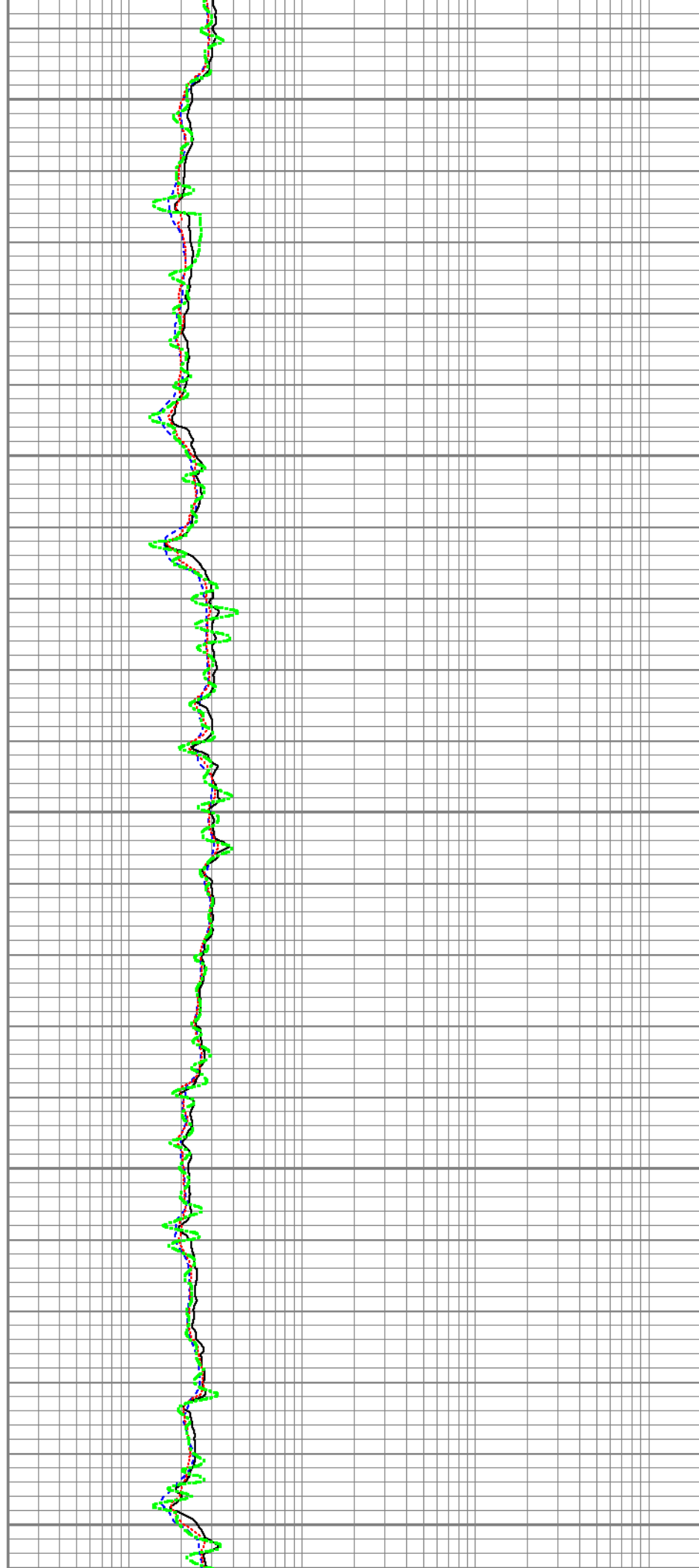


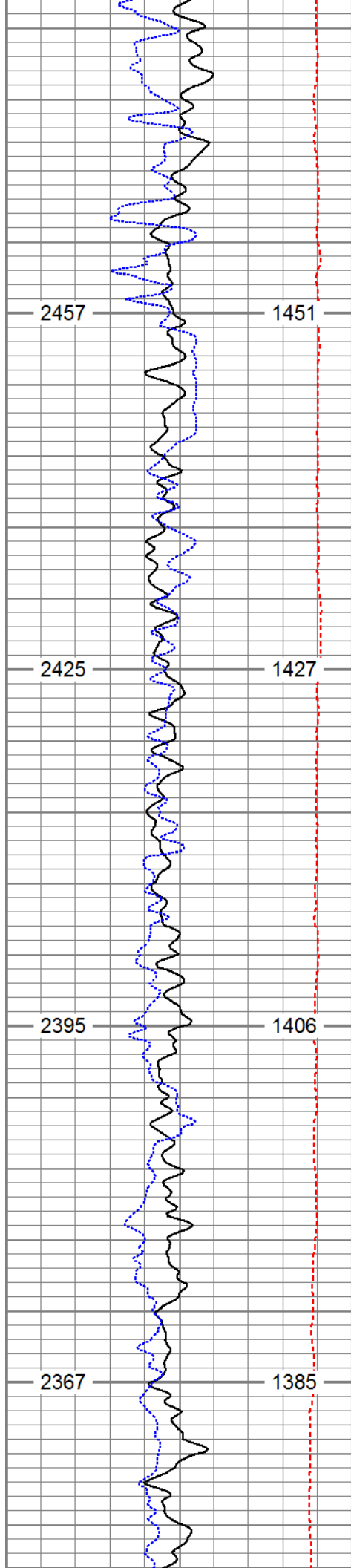


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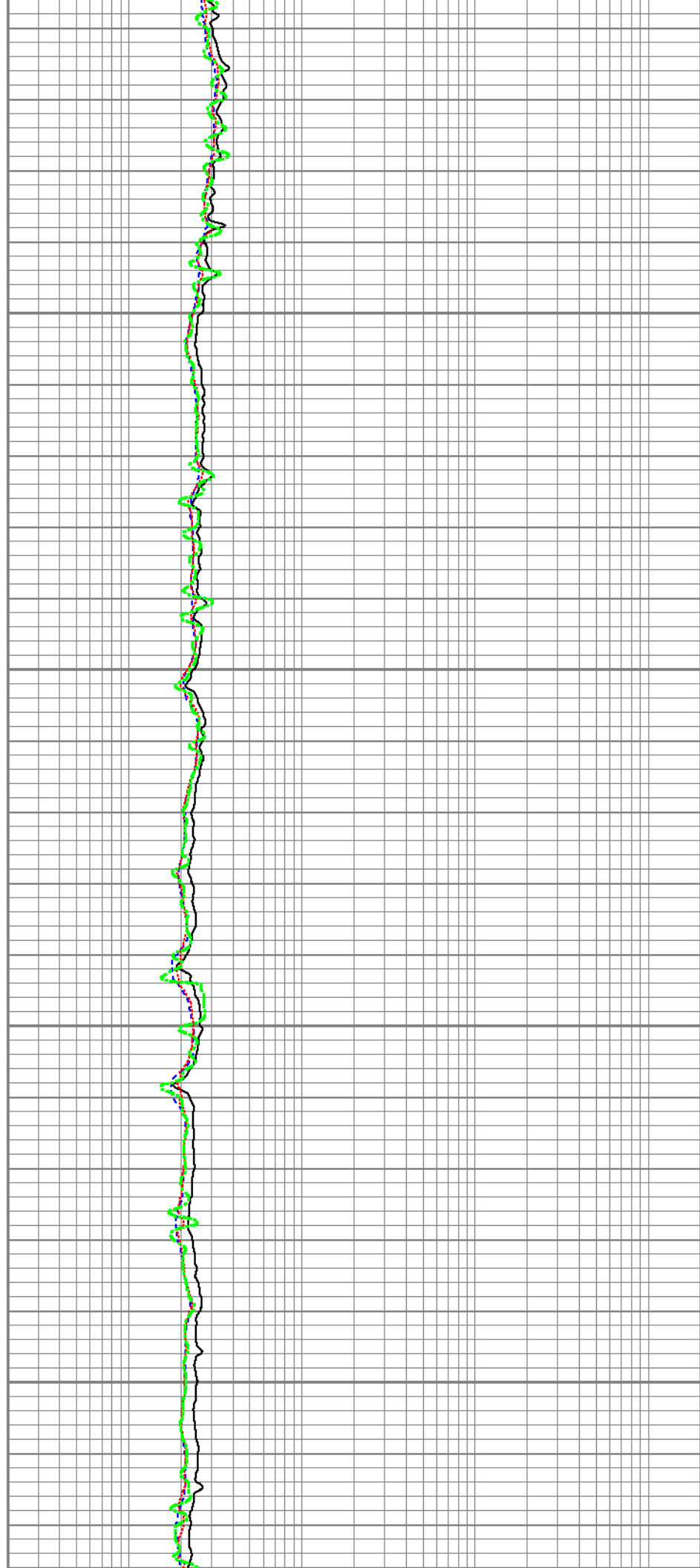
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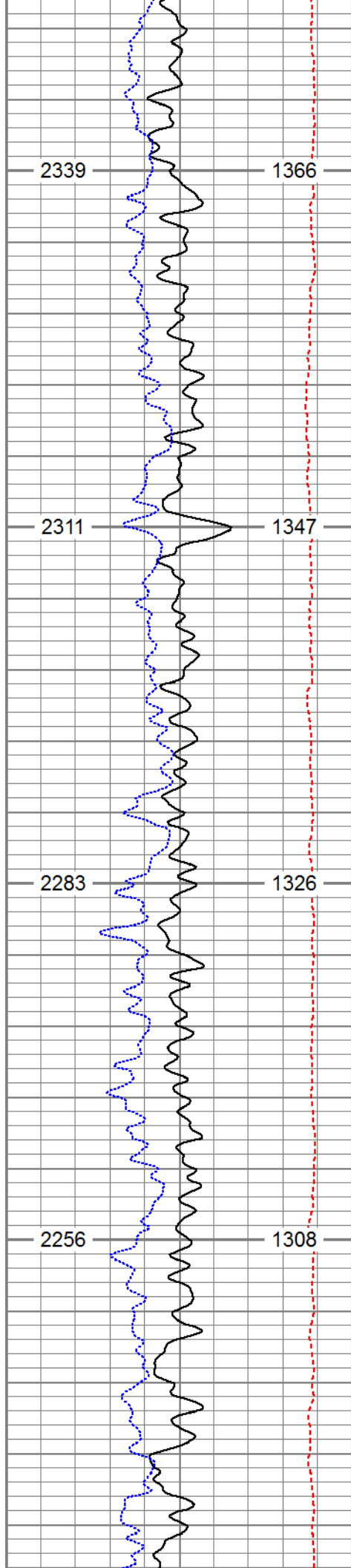




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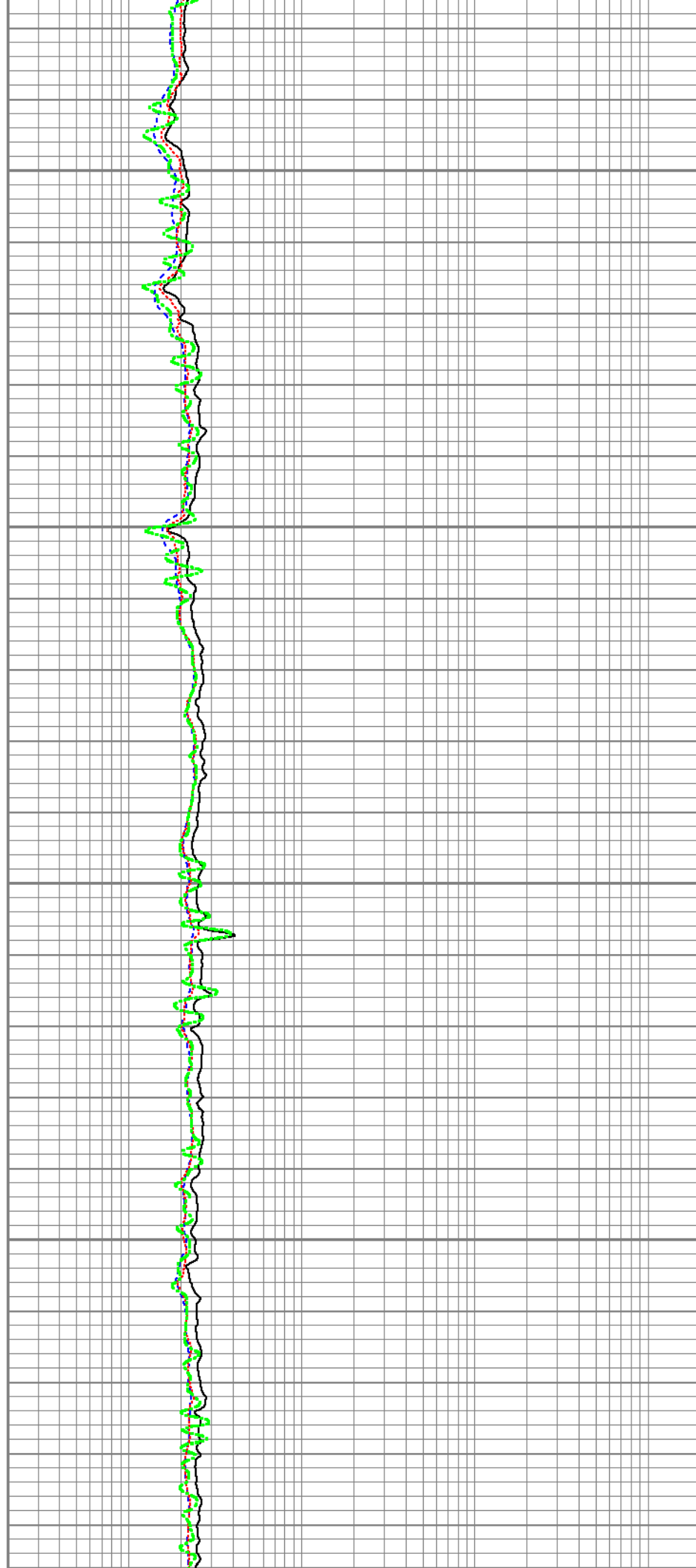
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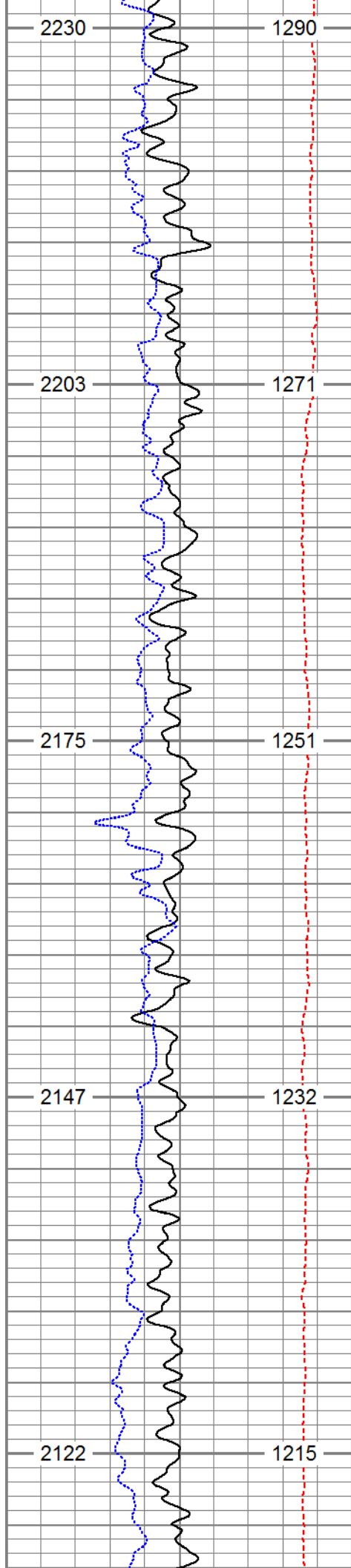




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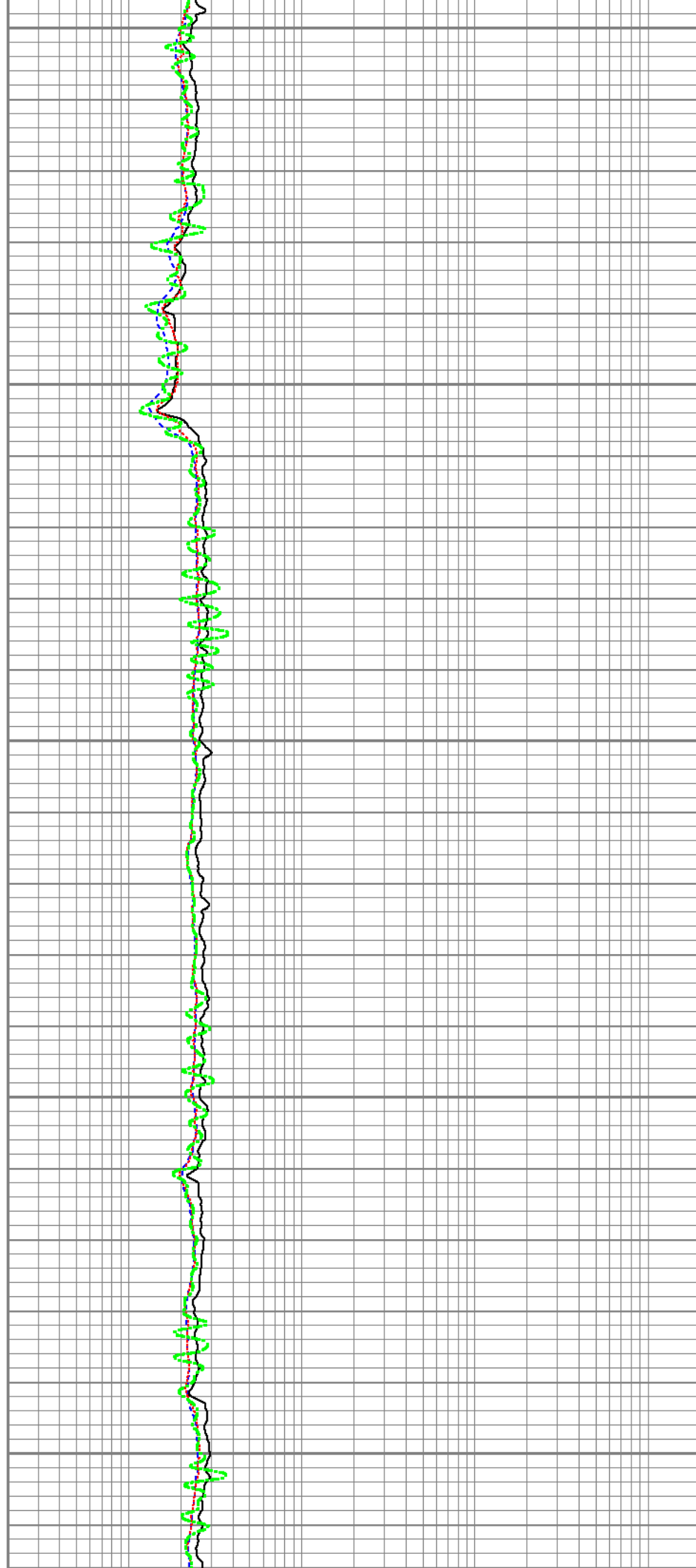
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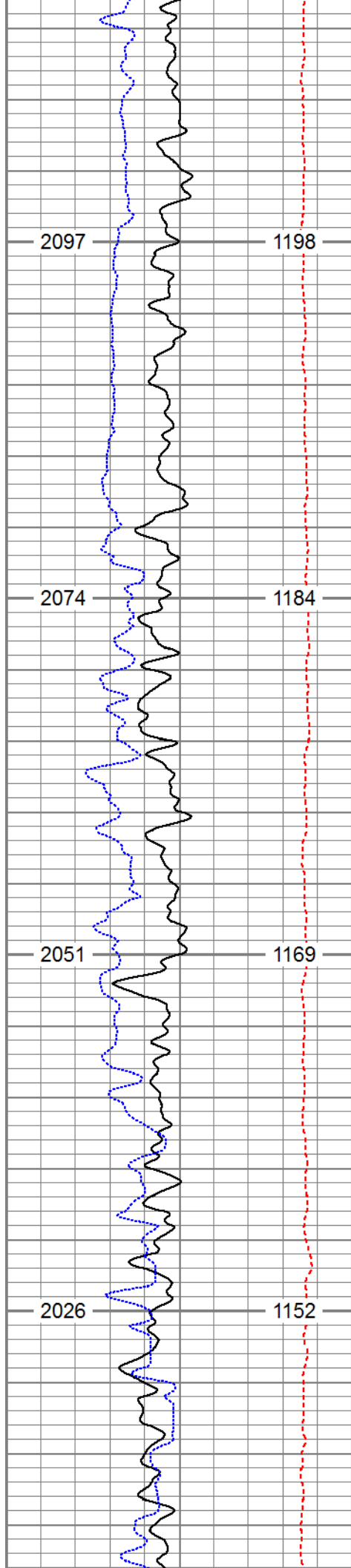




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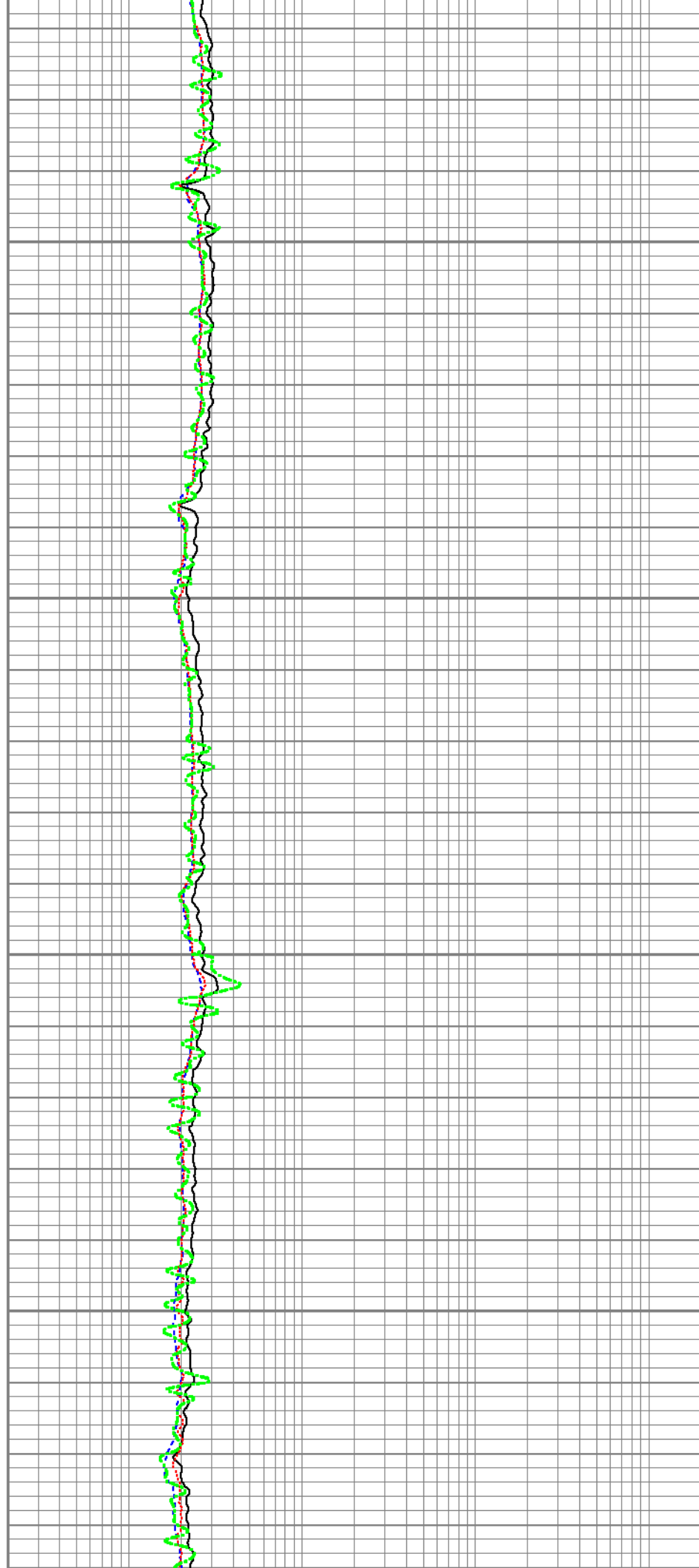
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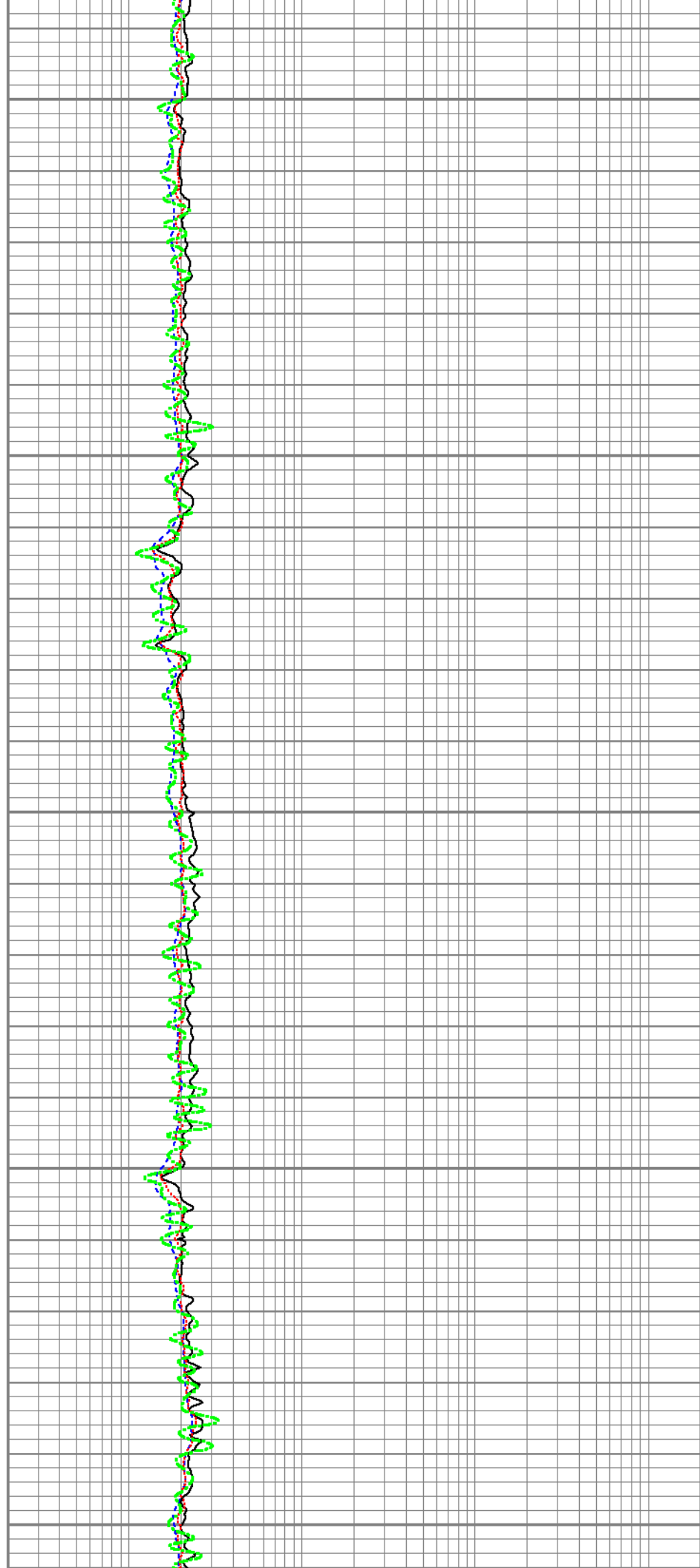
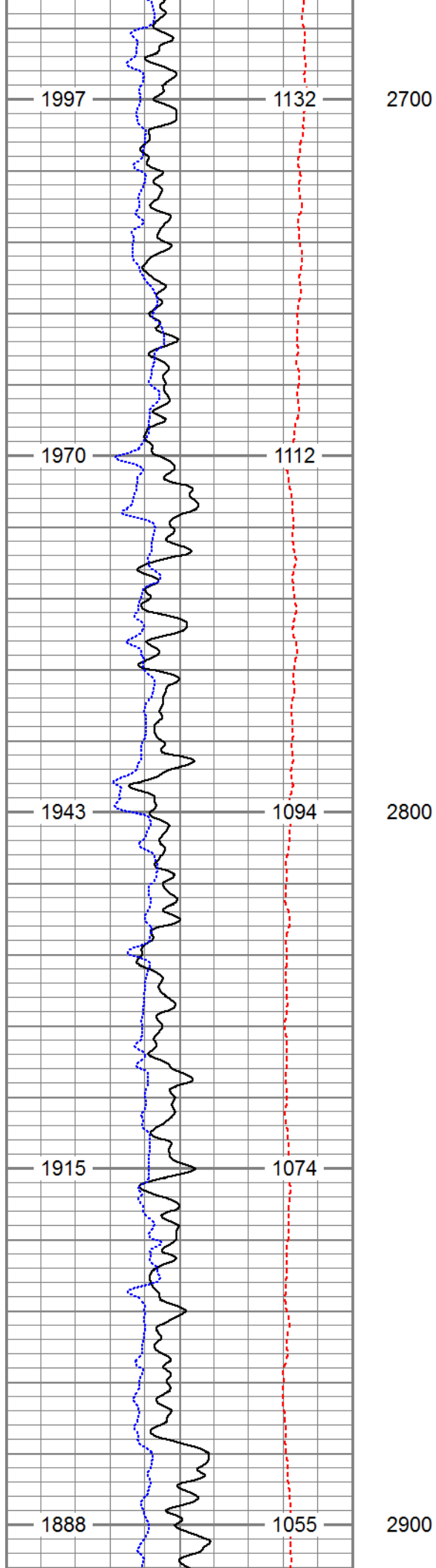


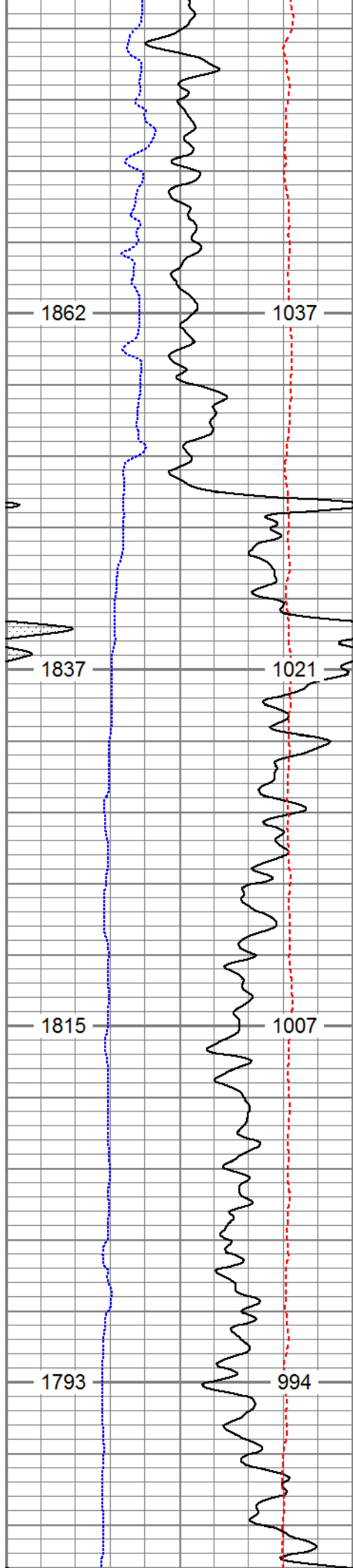


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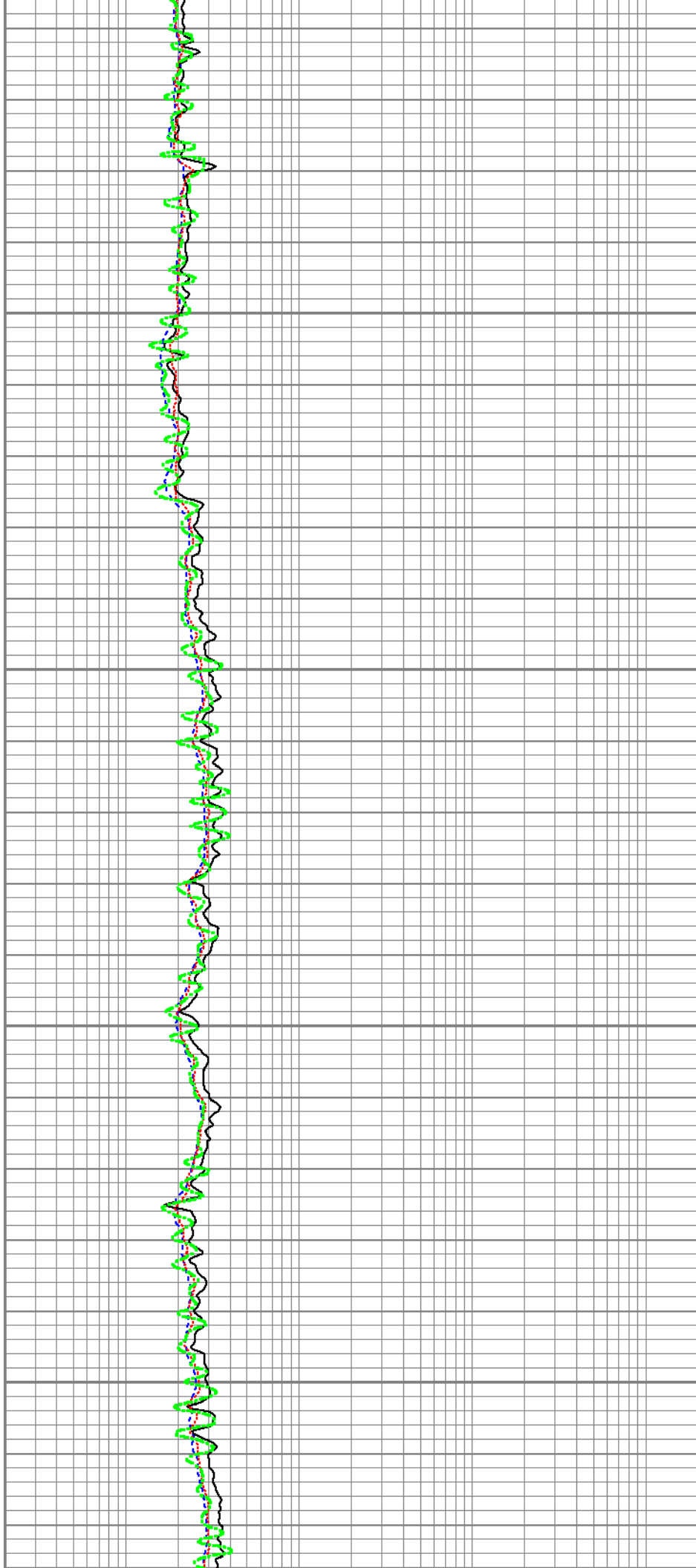


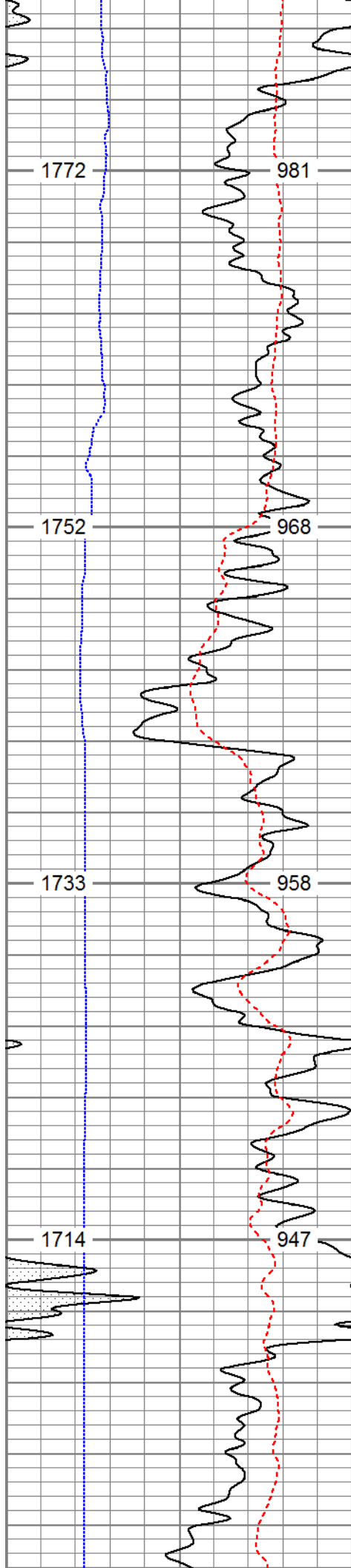




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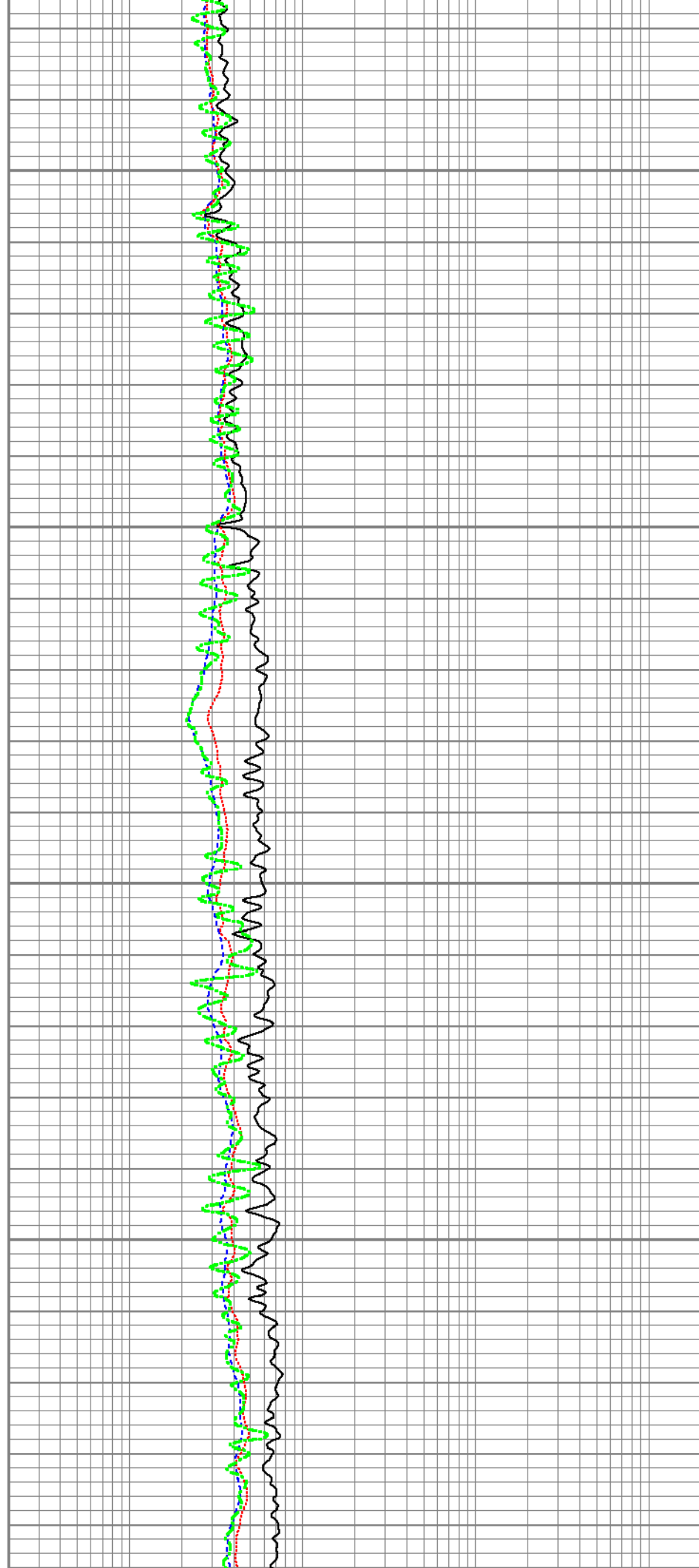
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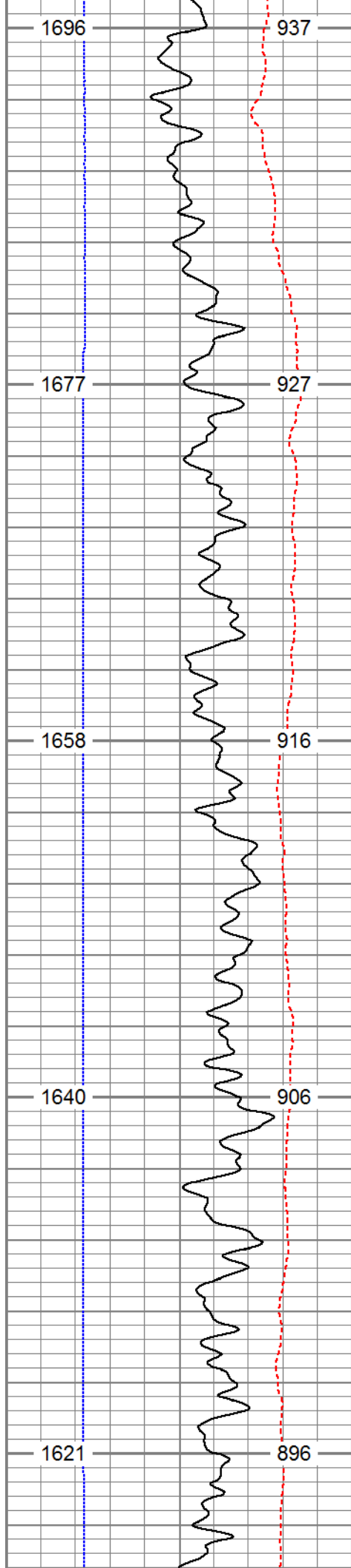


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3300

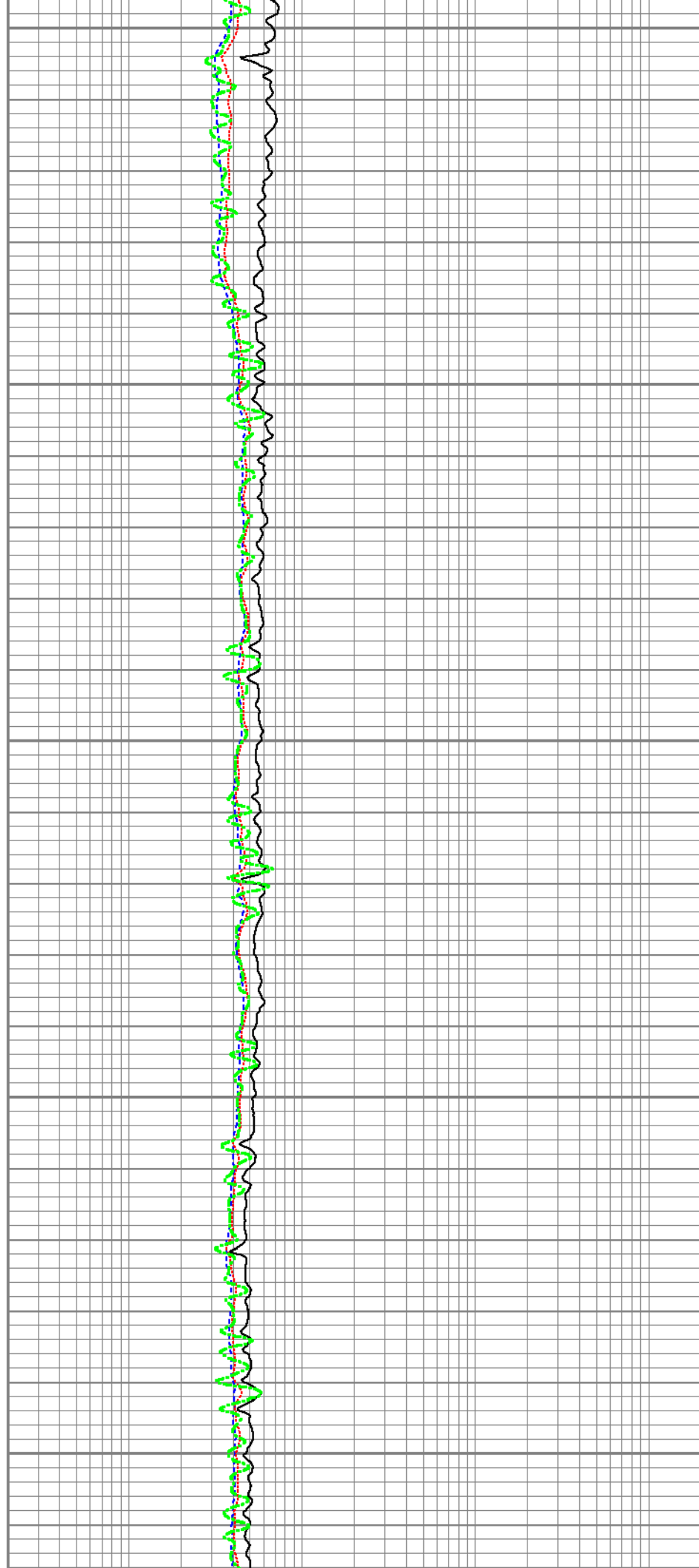


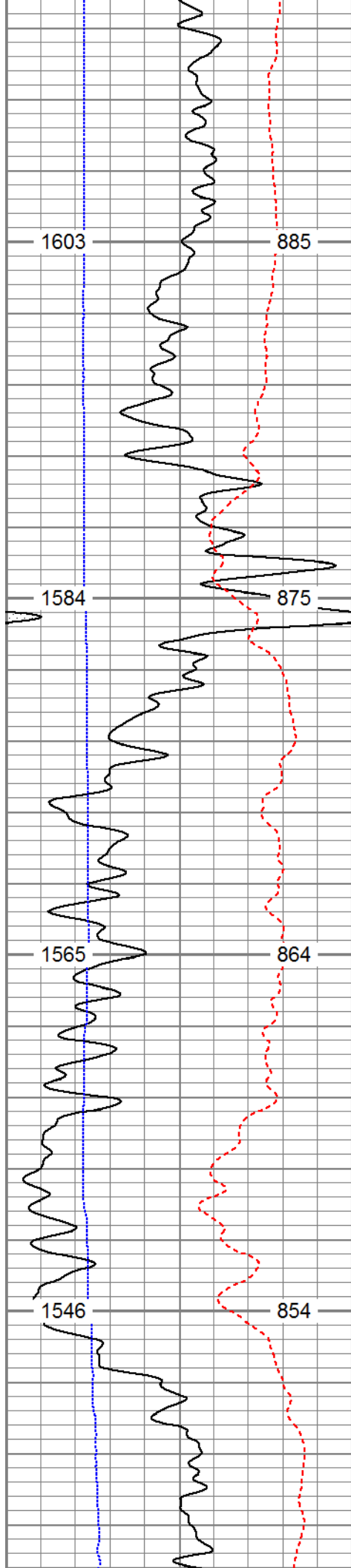




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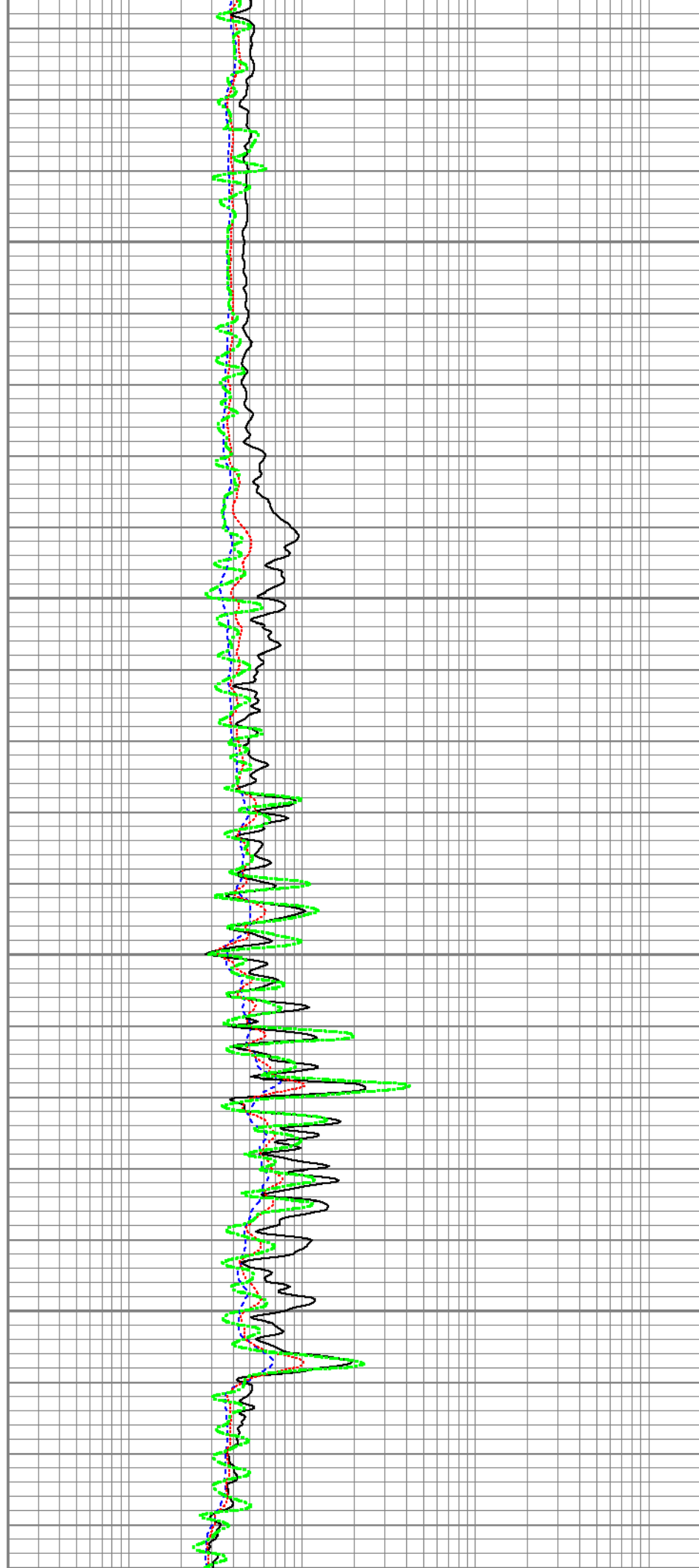
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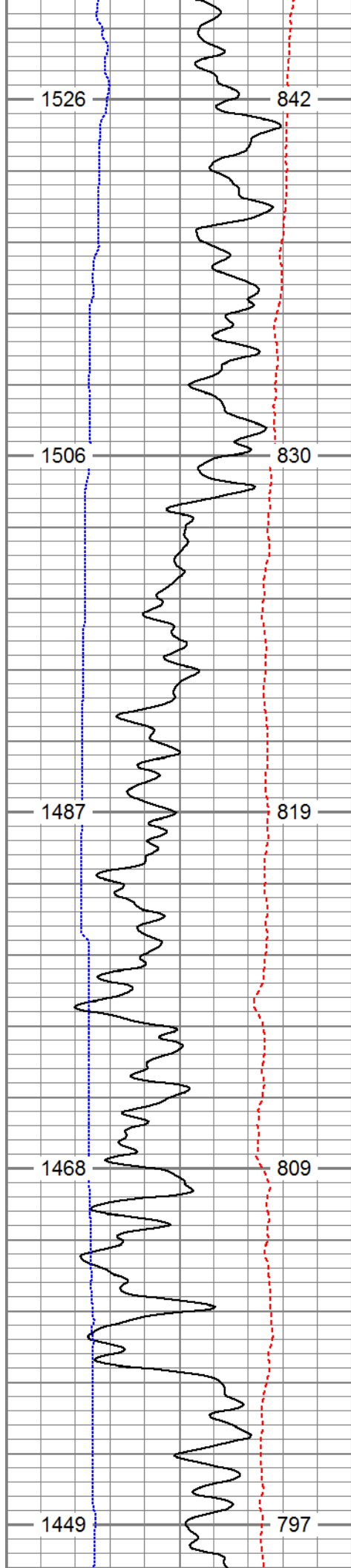




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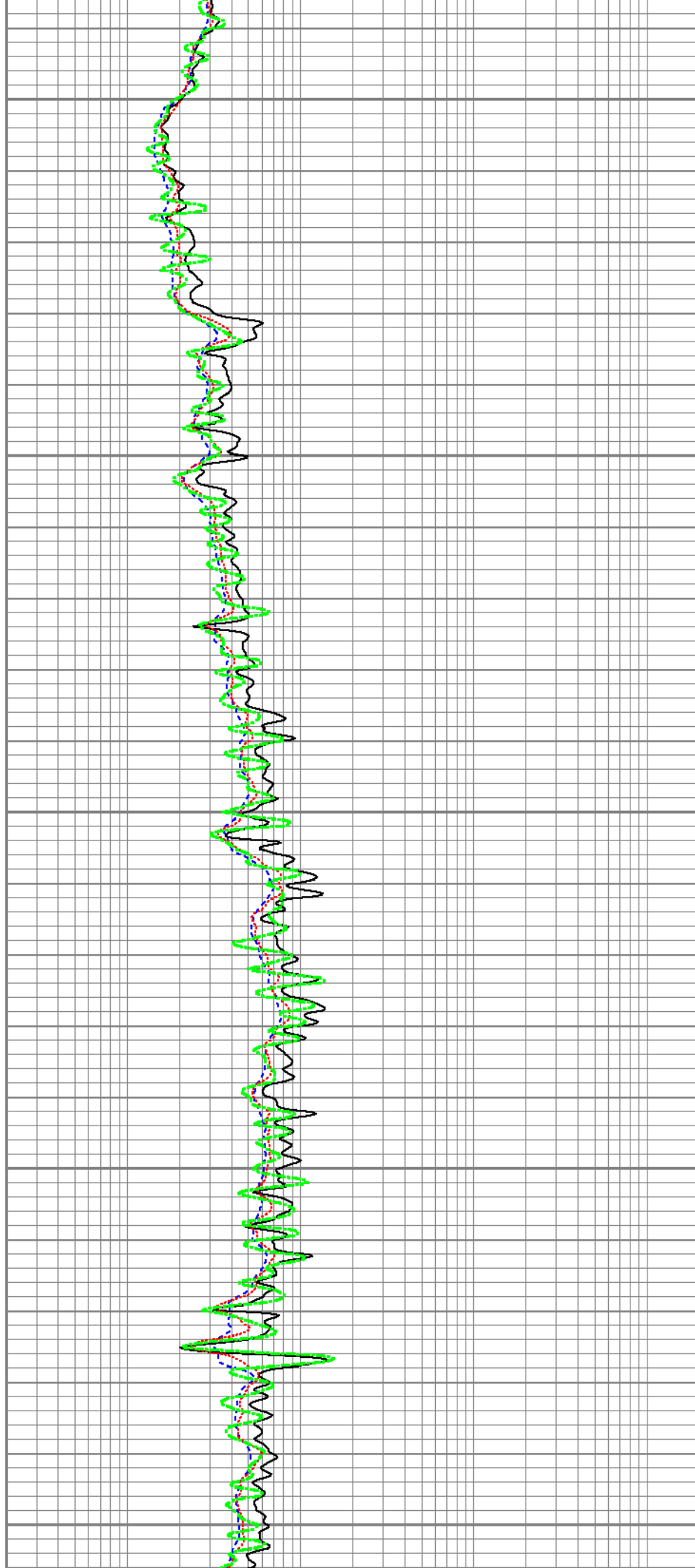


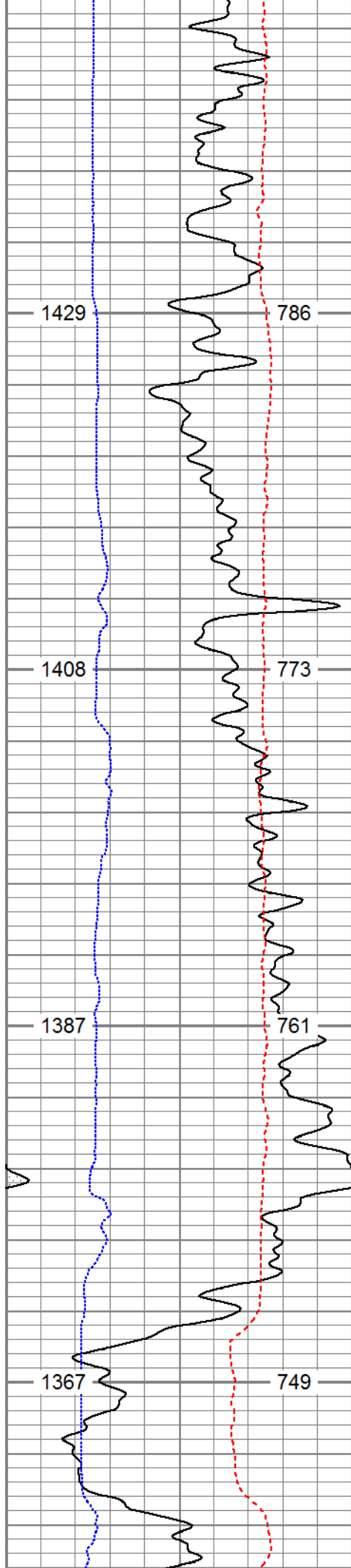


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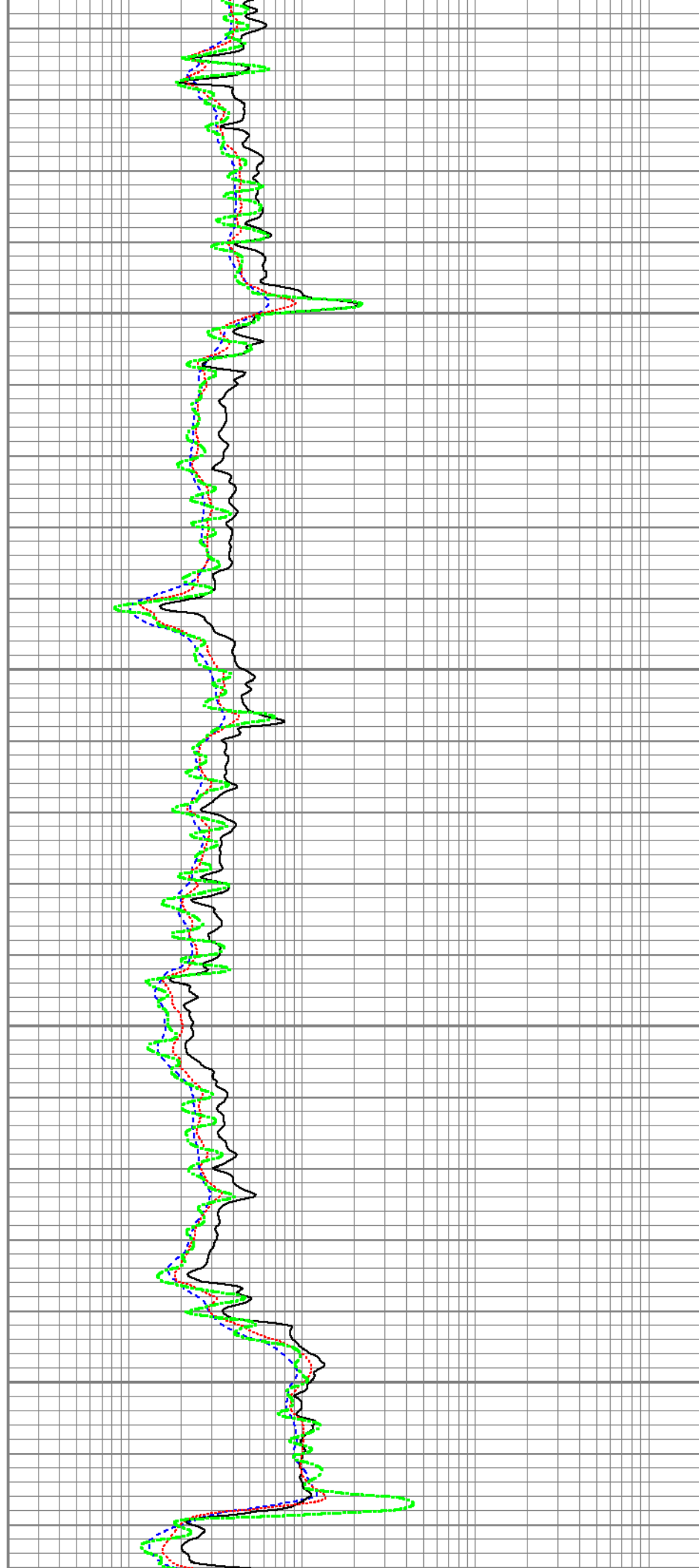
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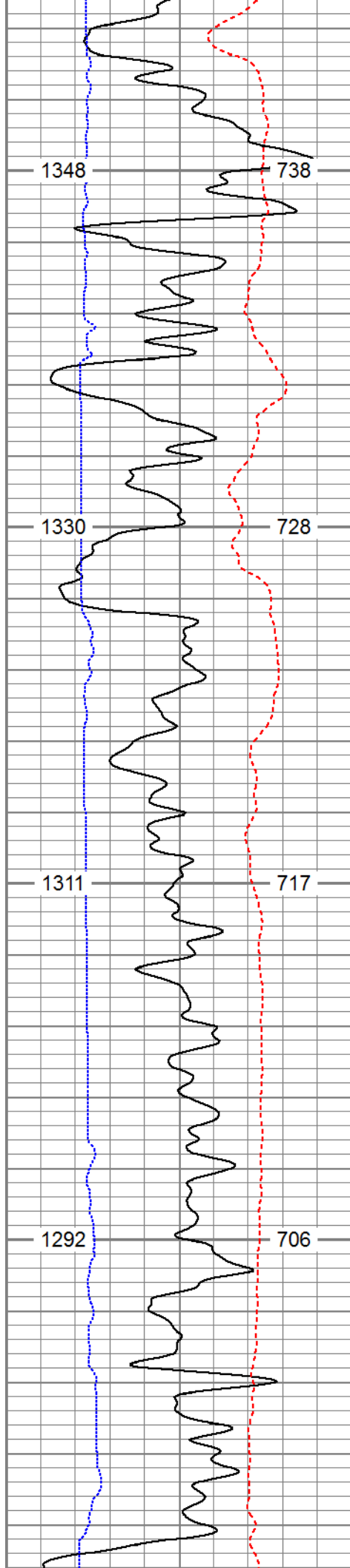




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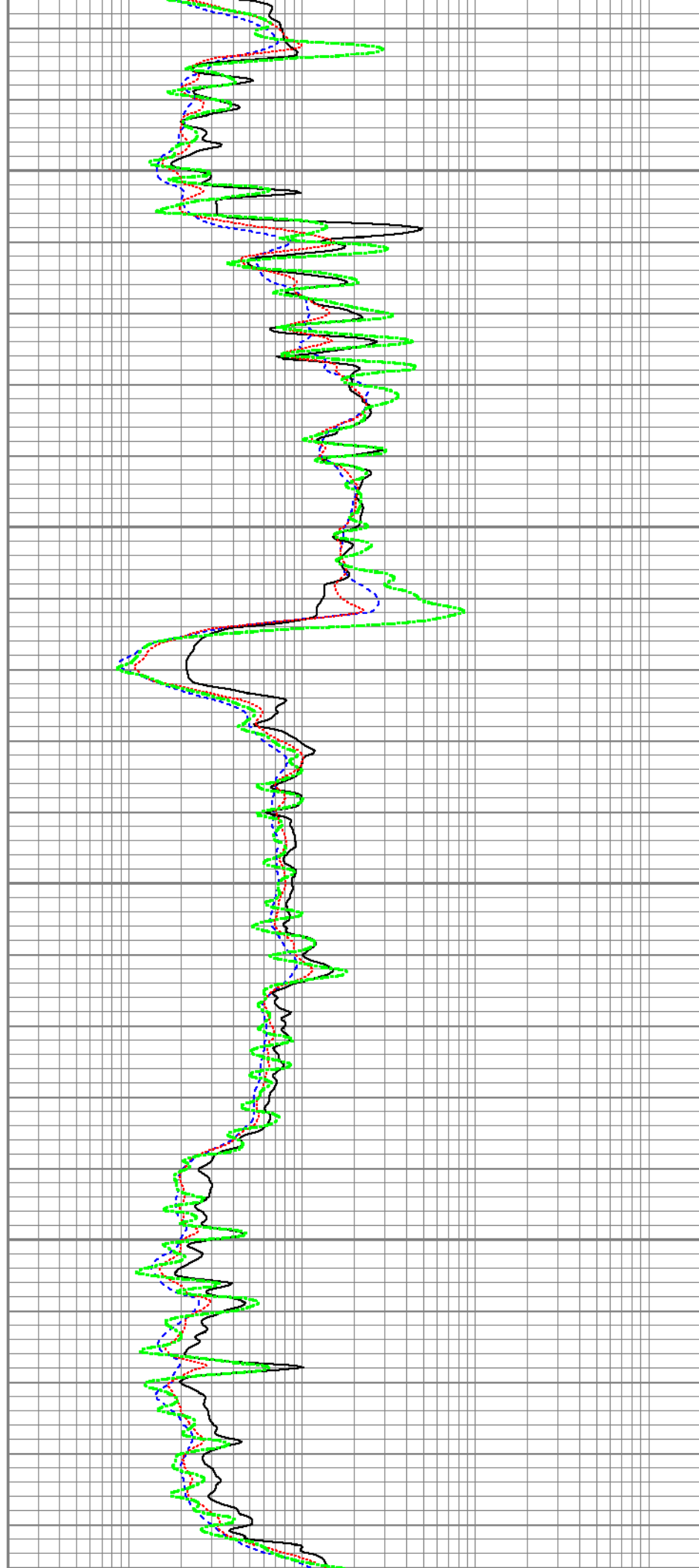
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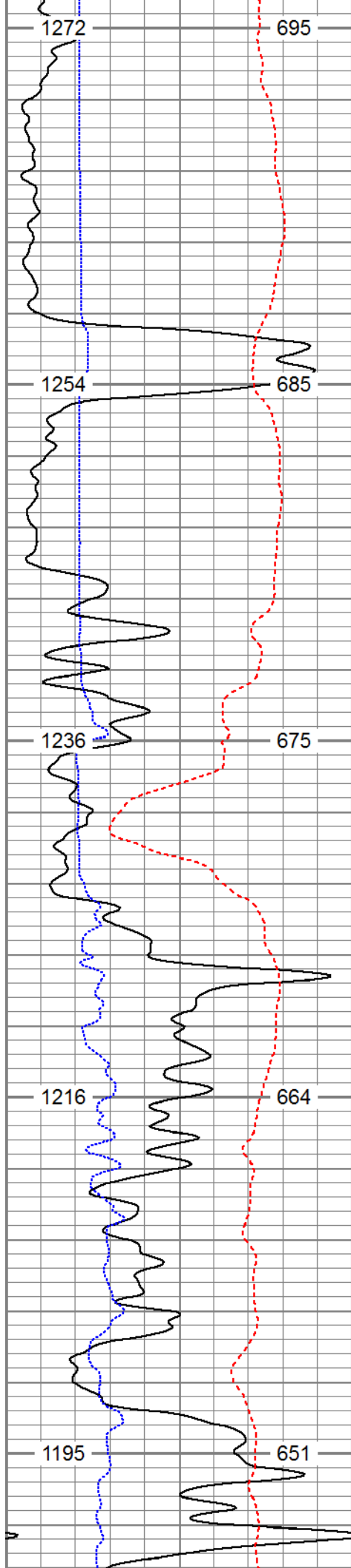




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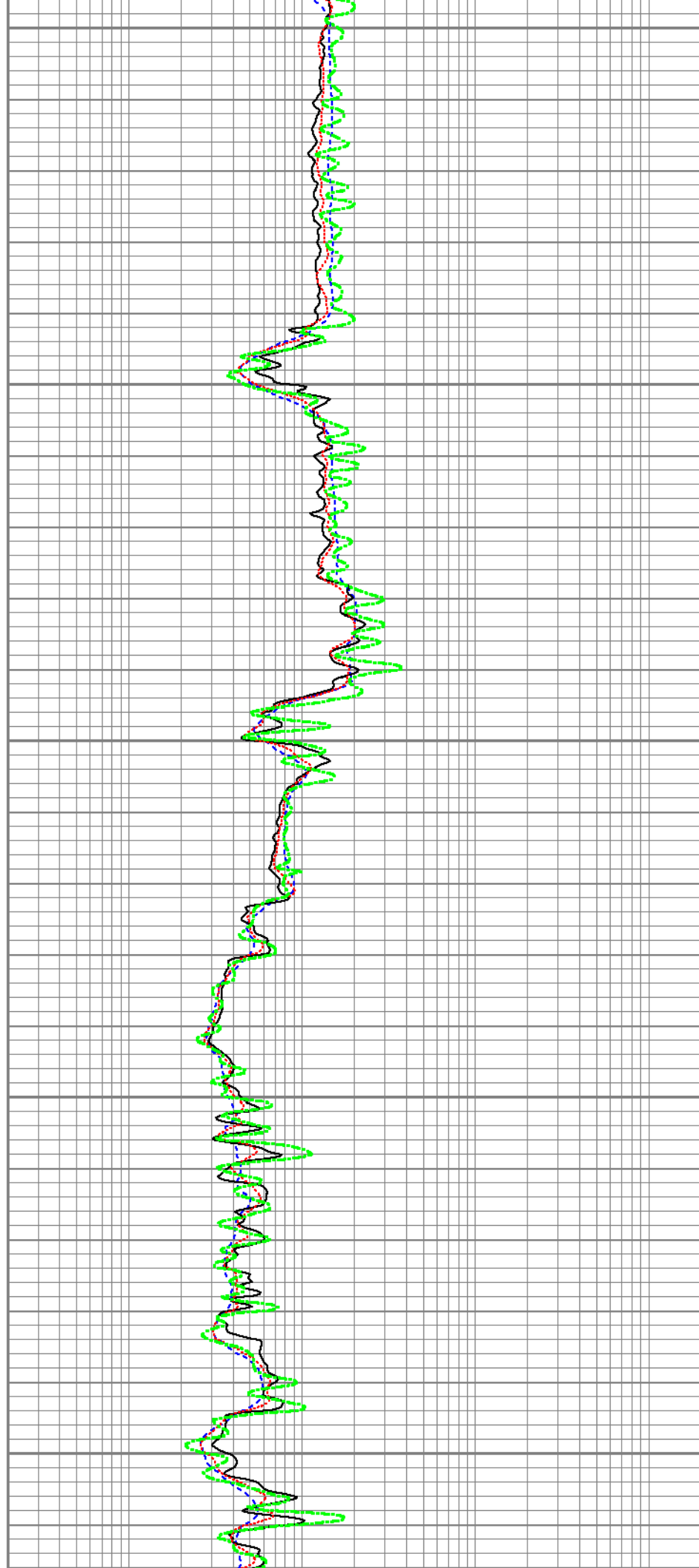
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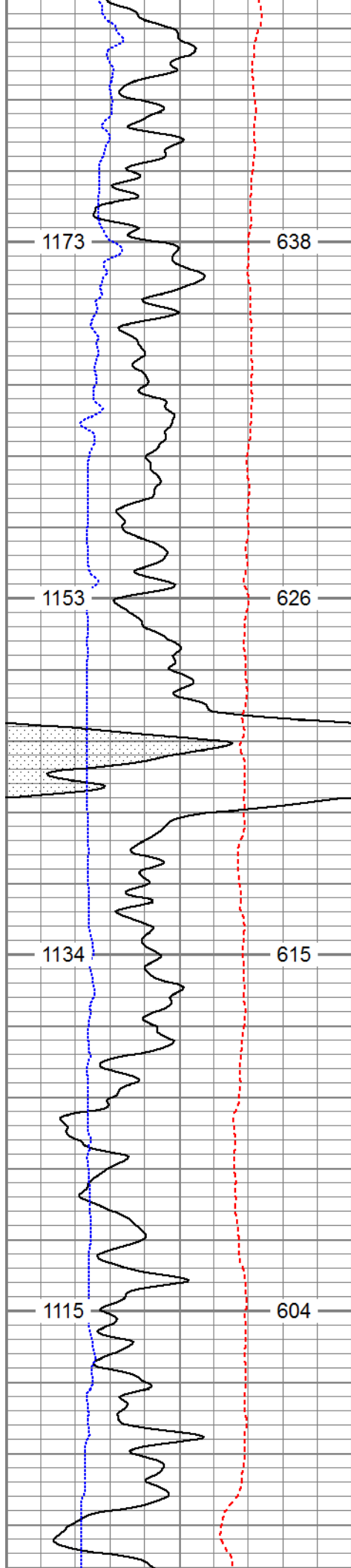




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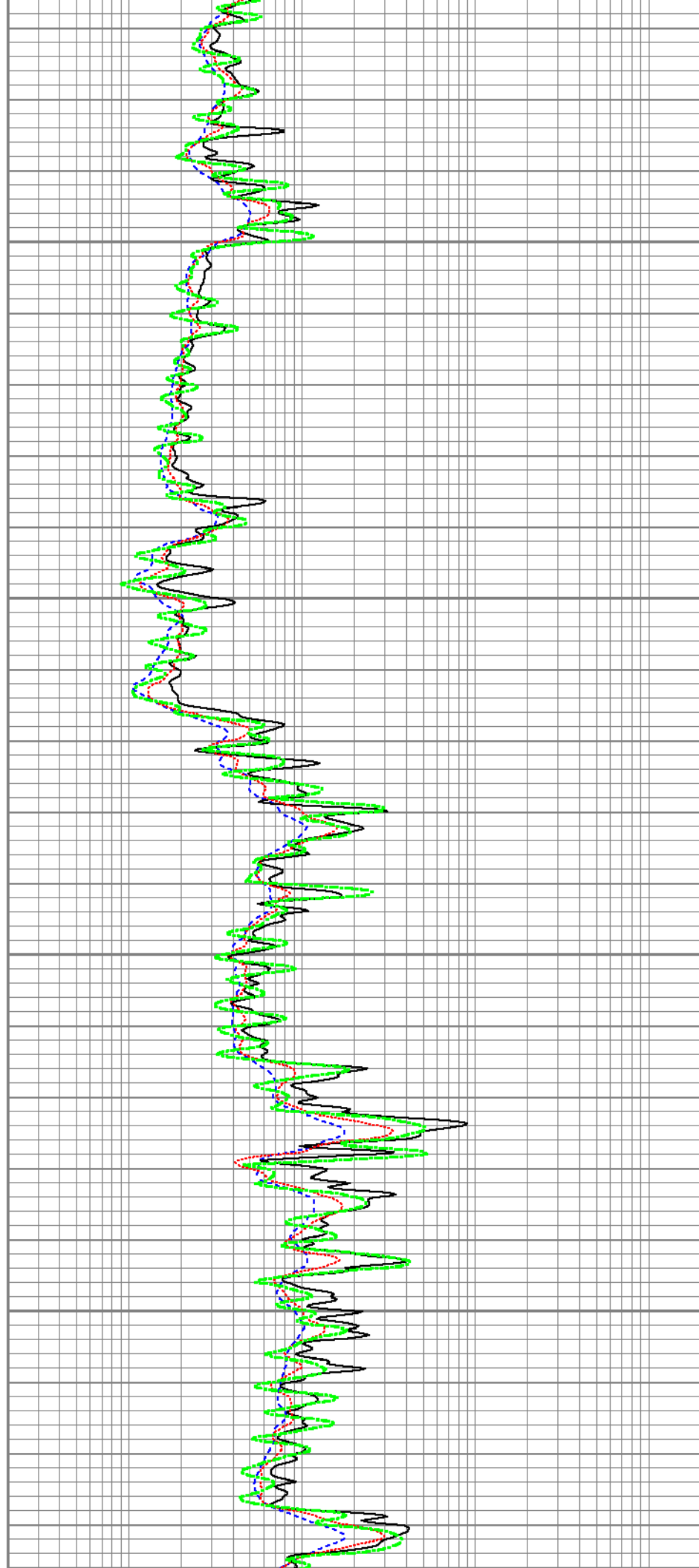
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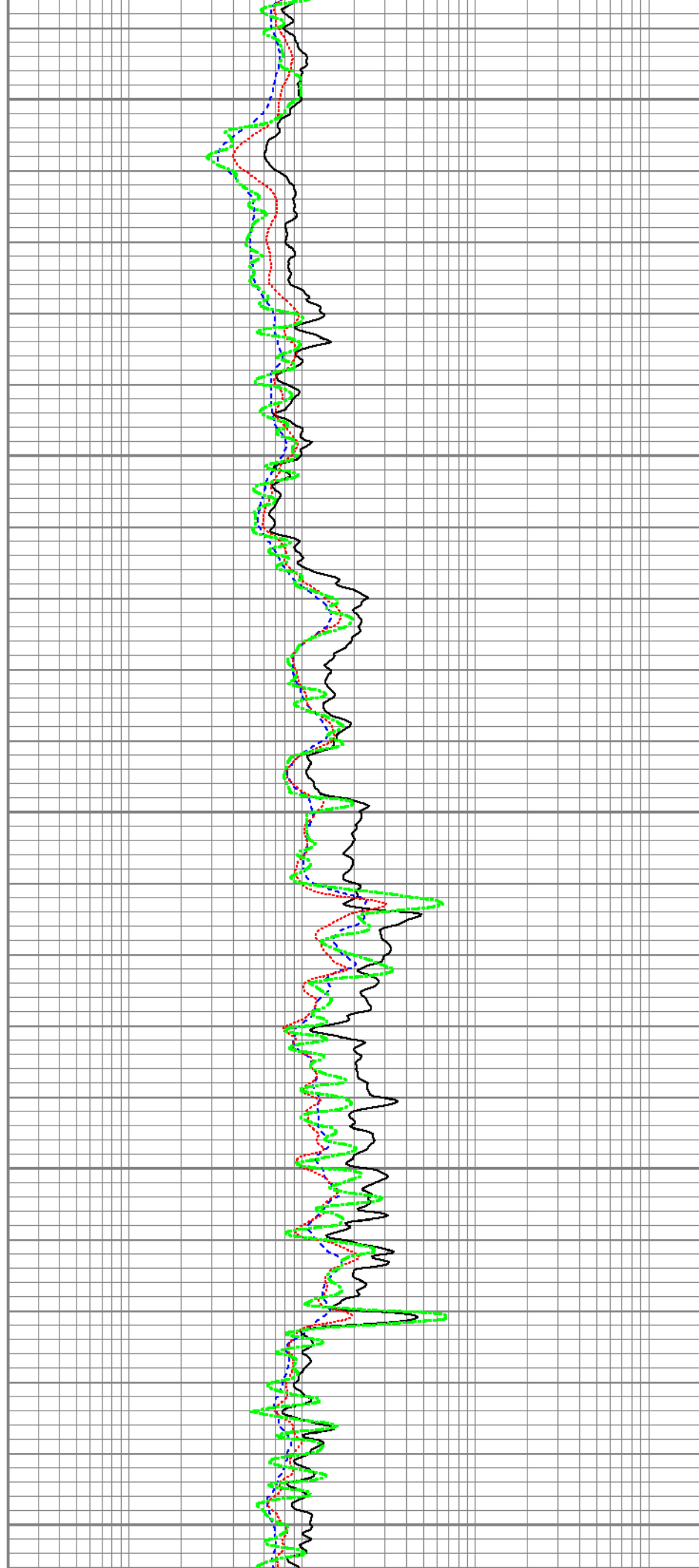
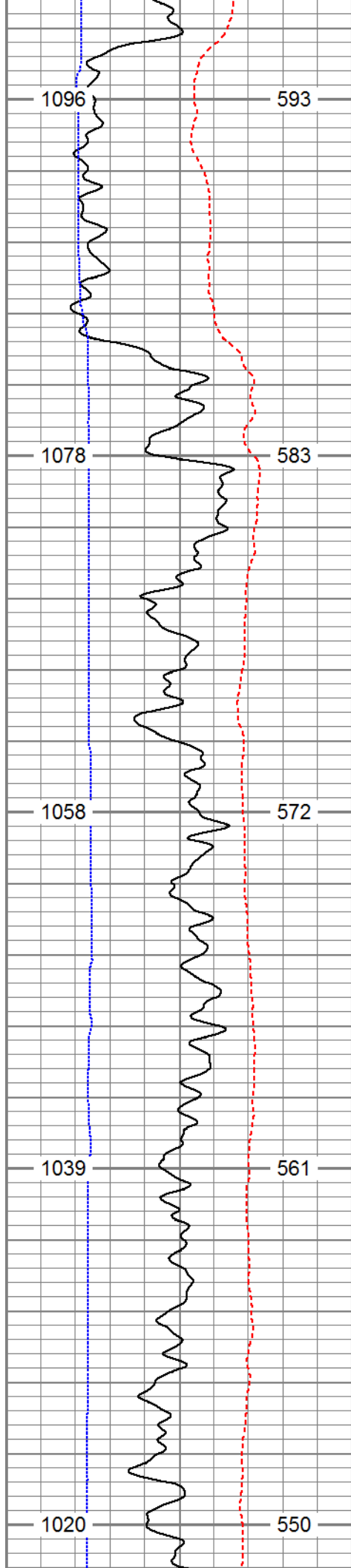




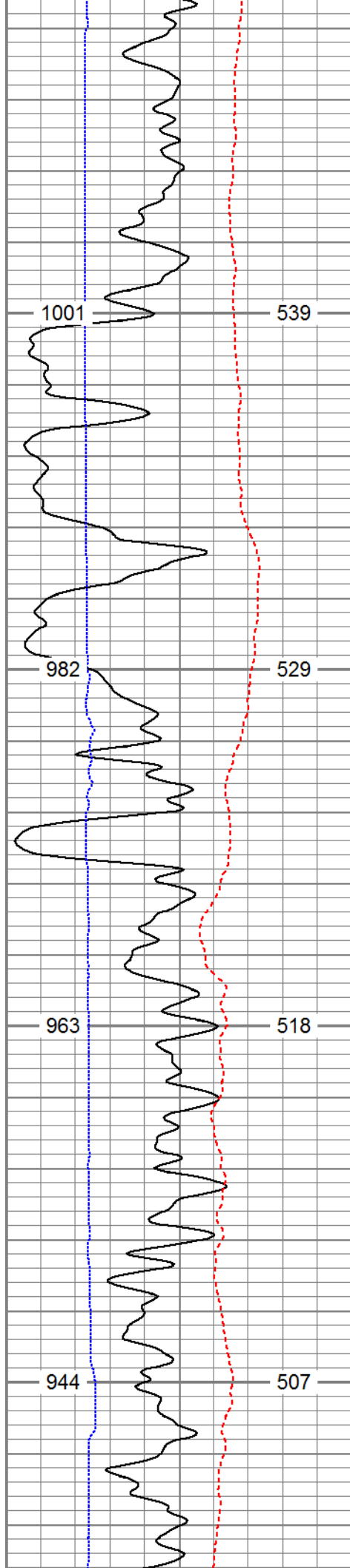
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4800



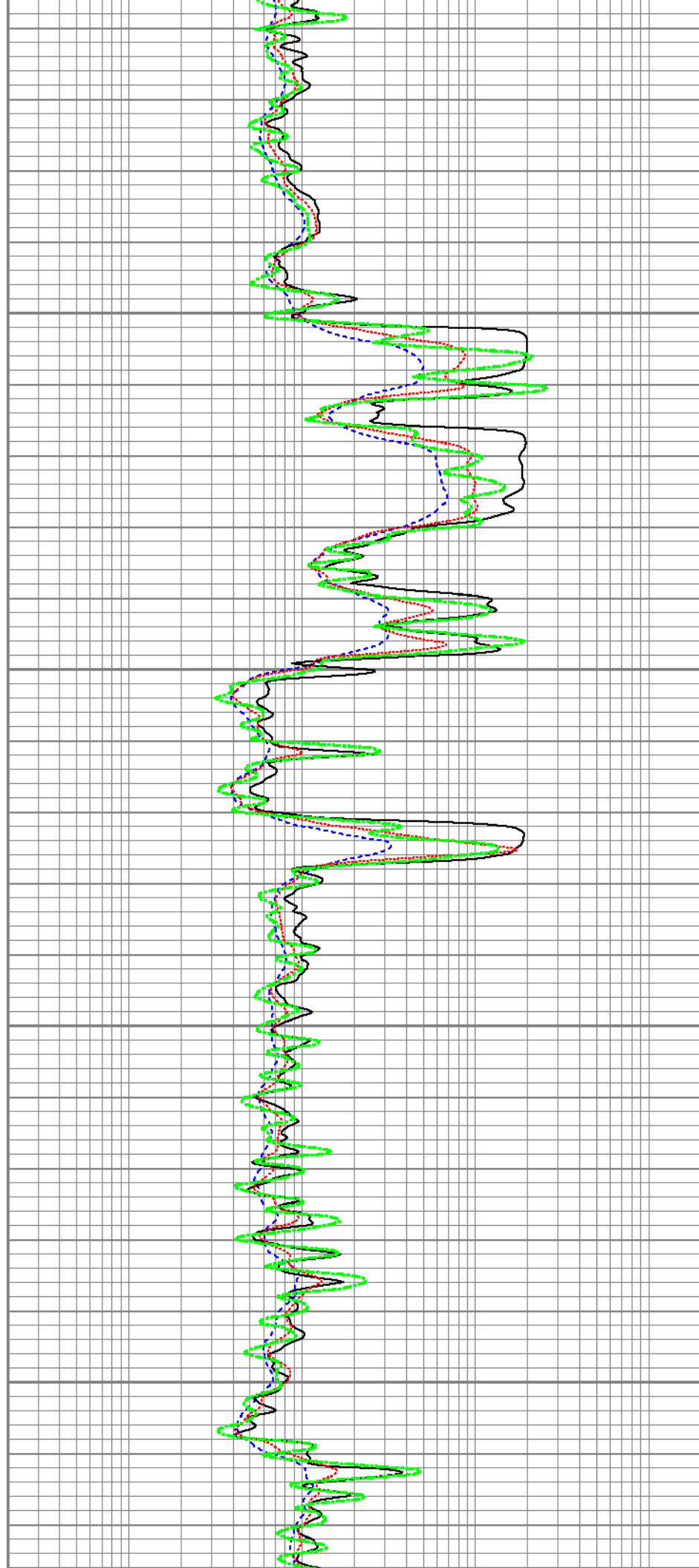


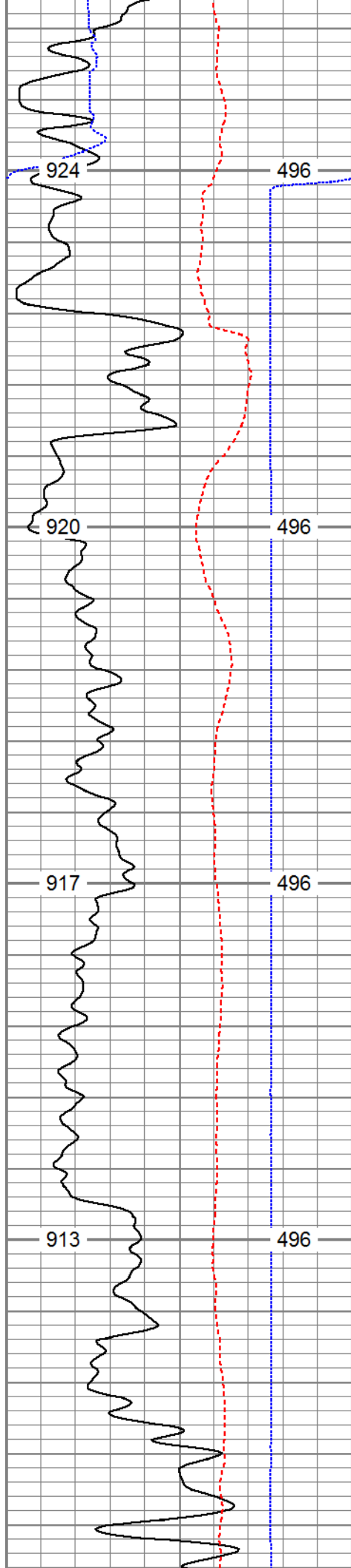




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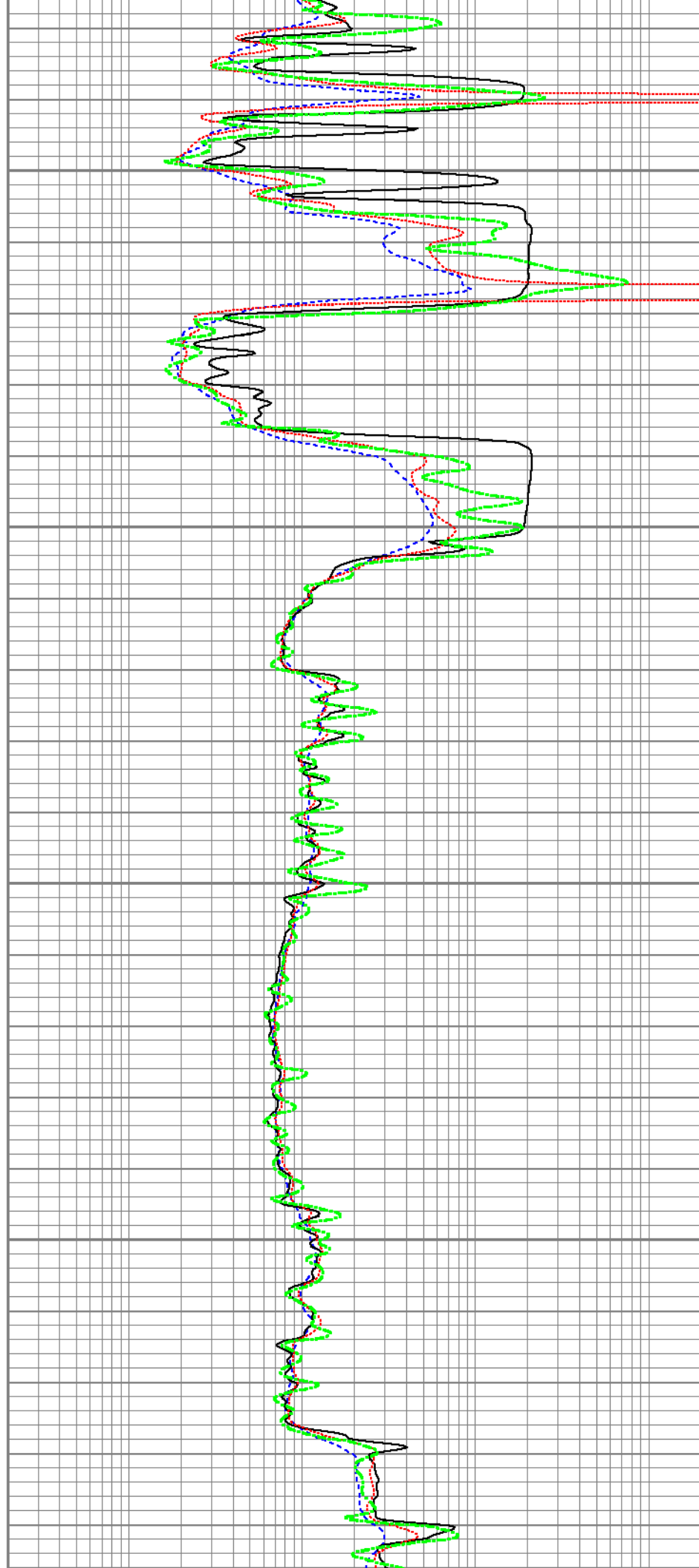
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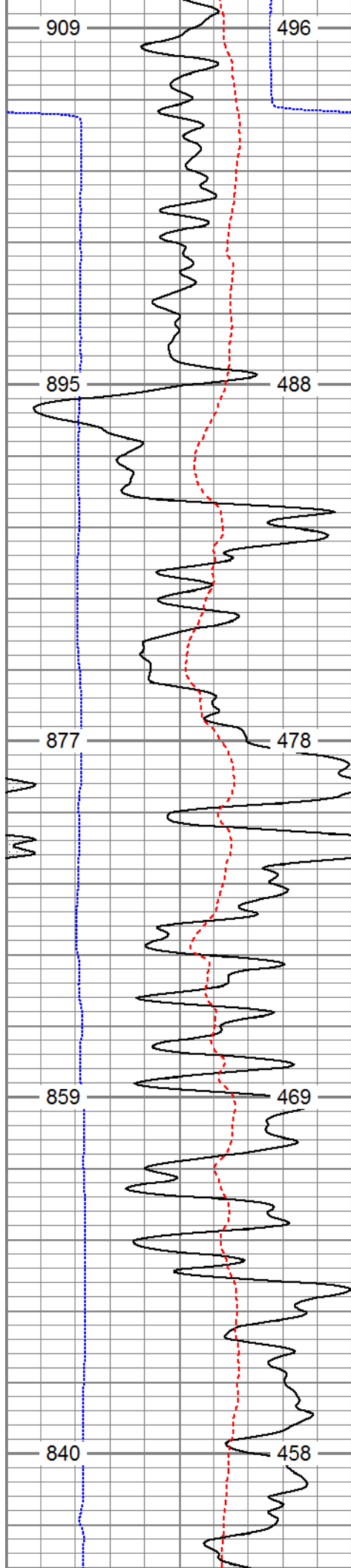




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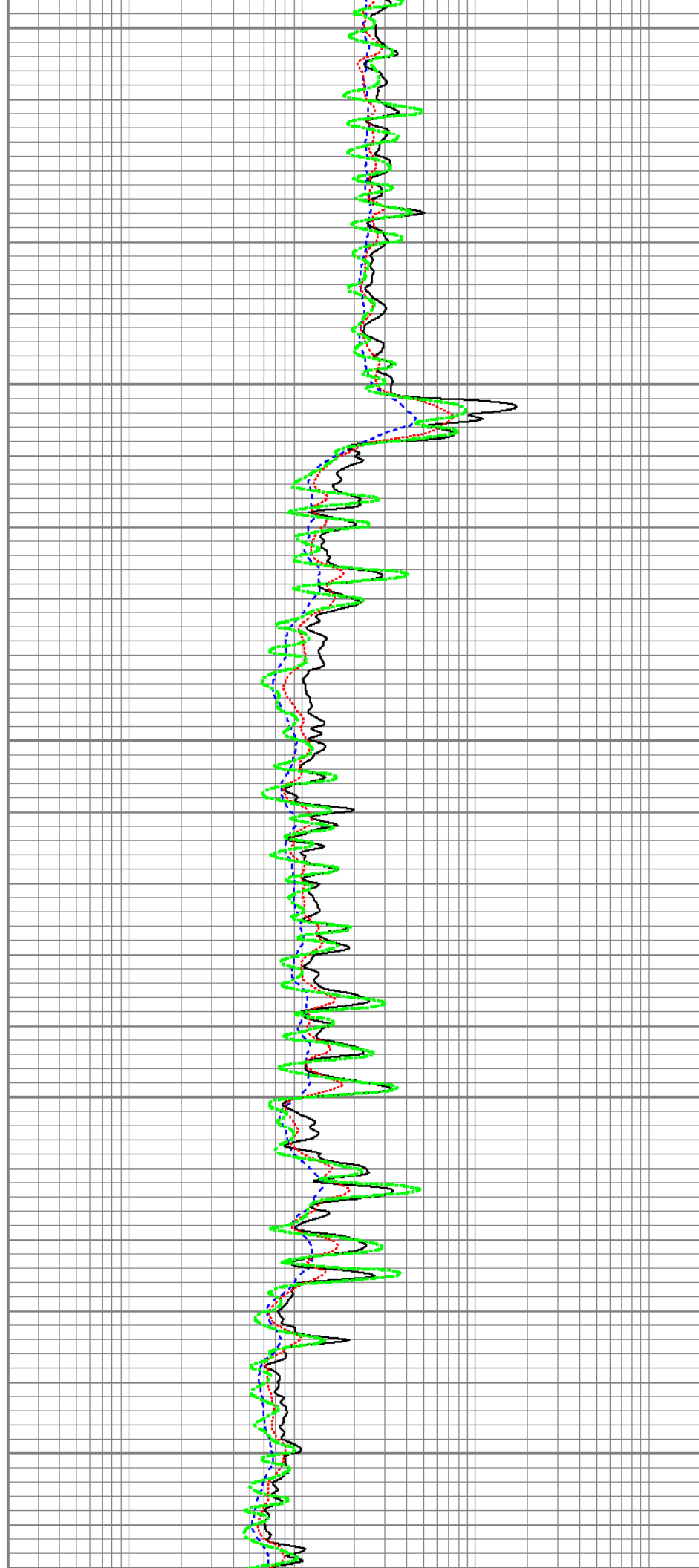
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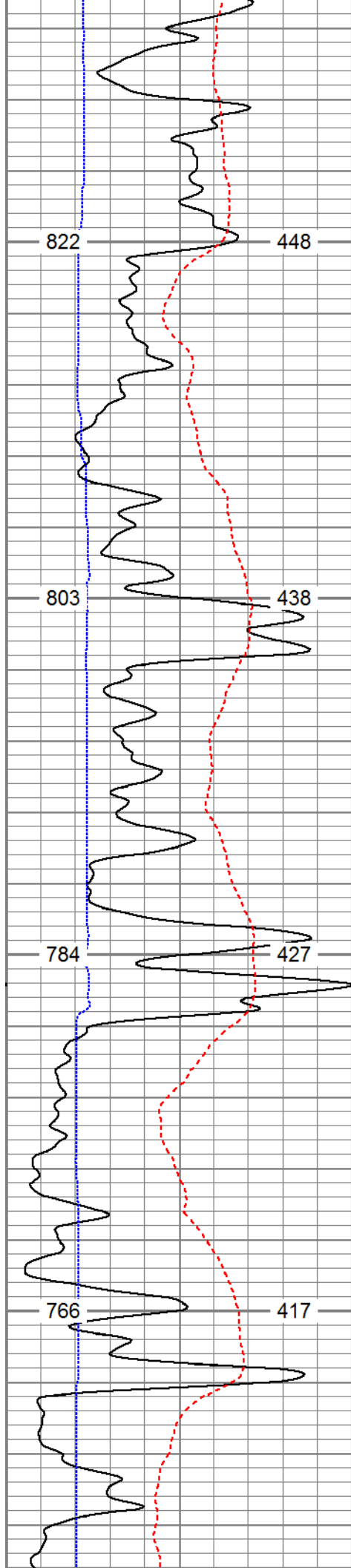




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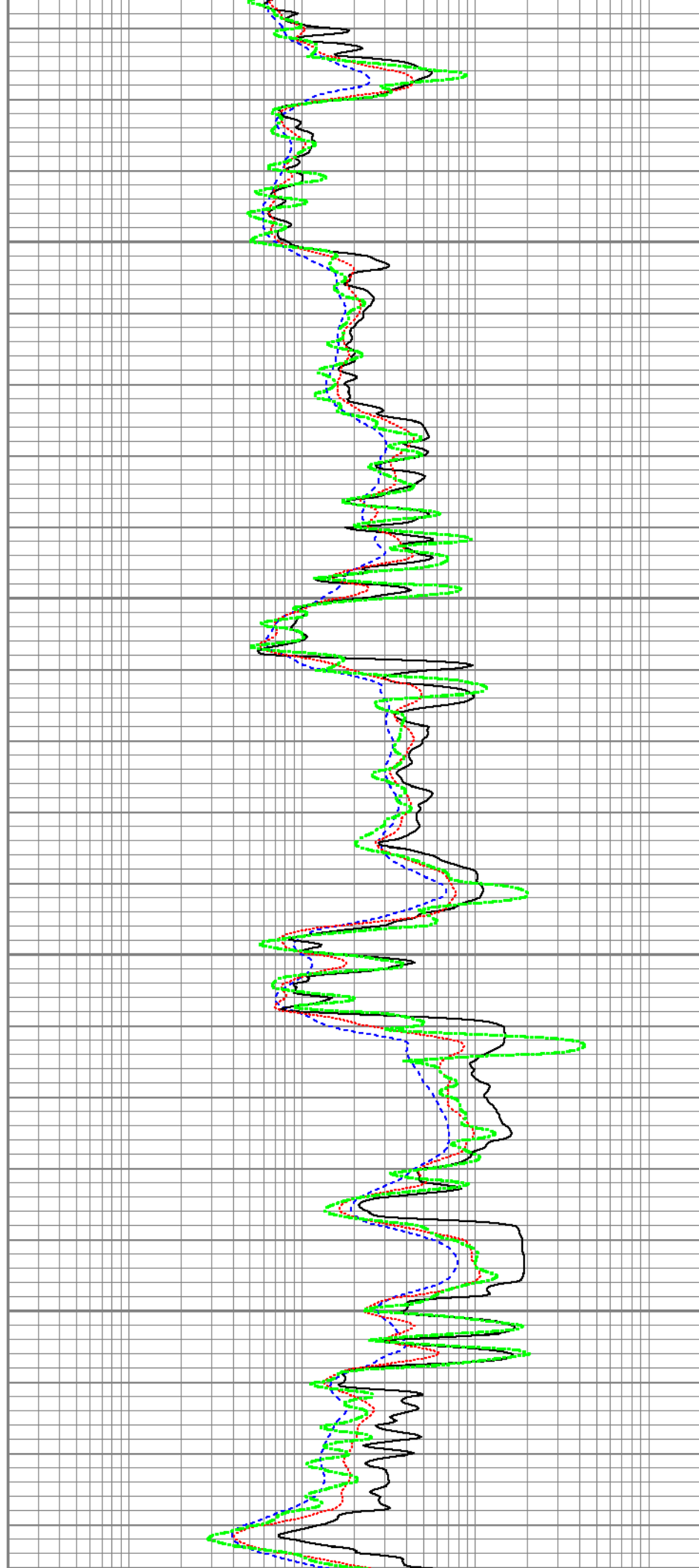
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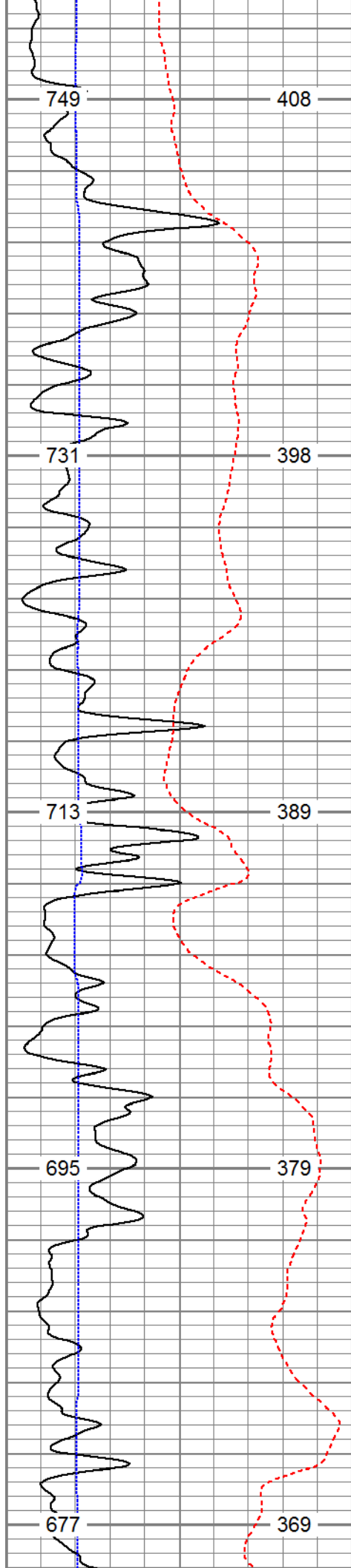




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5900

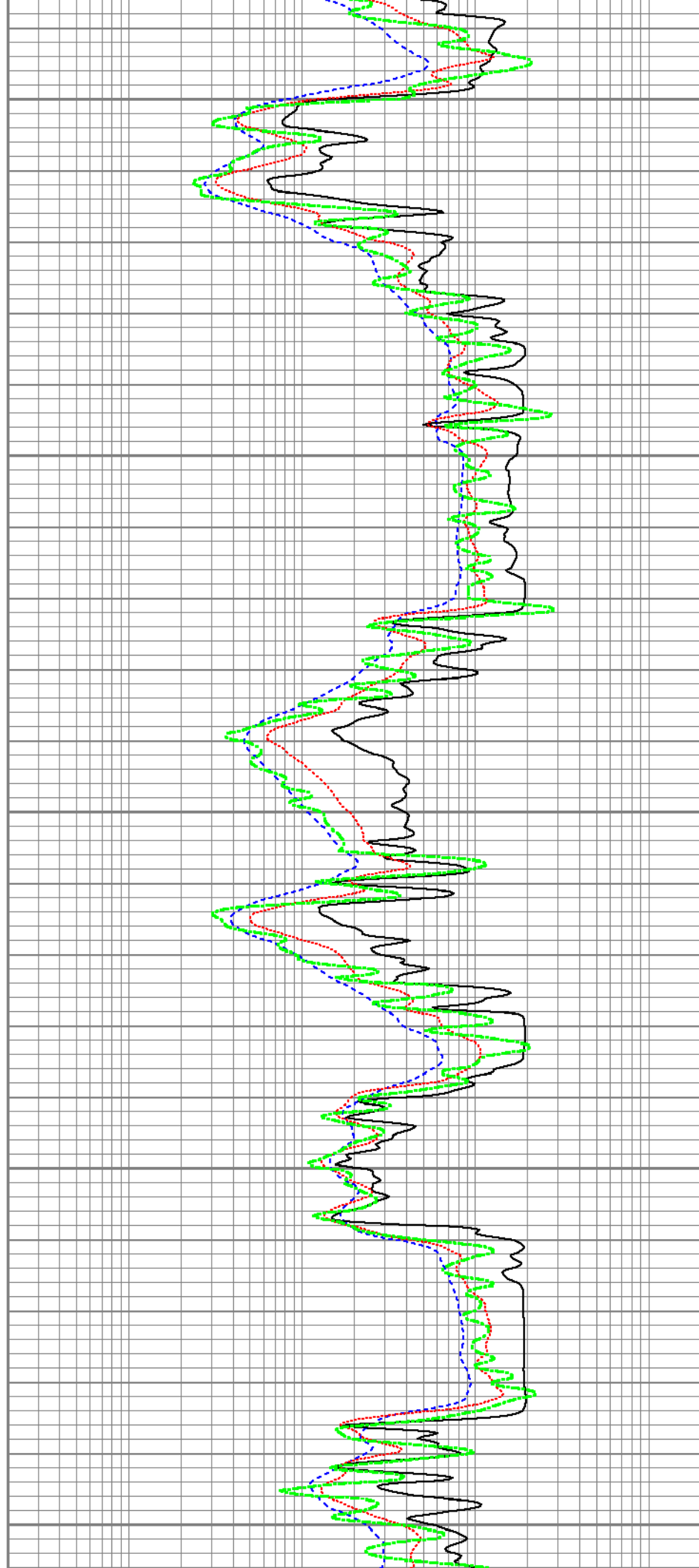


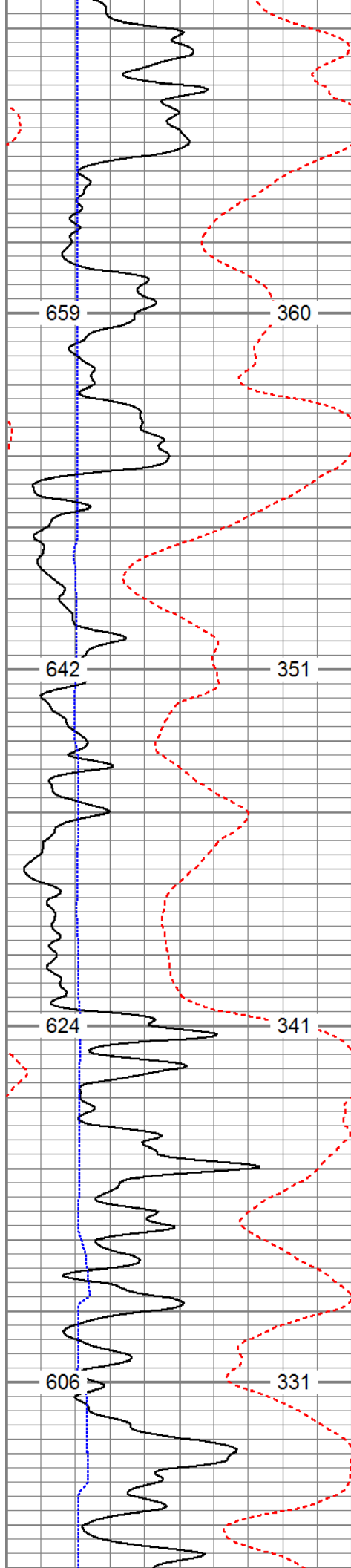


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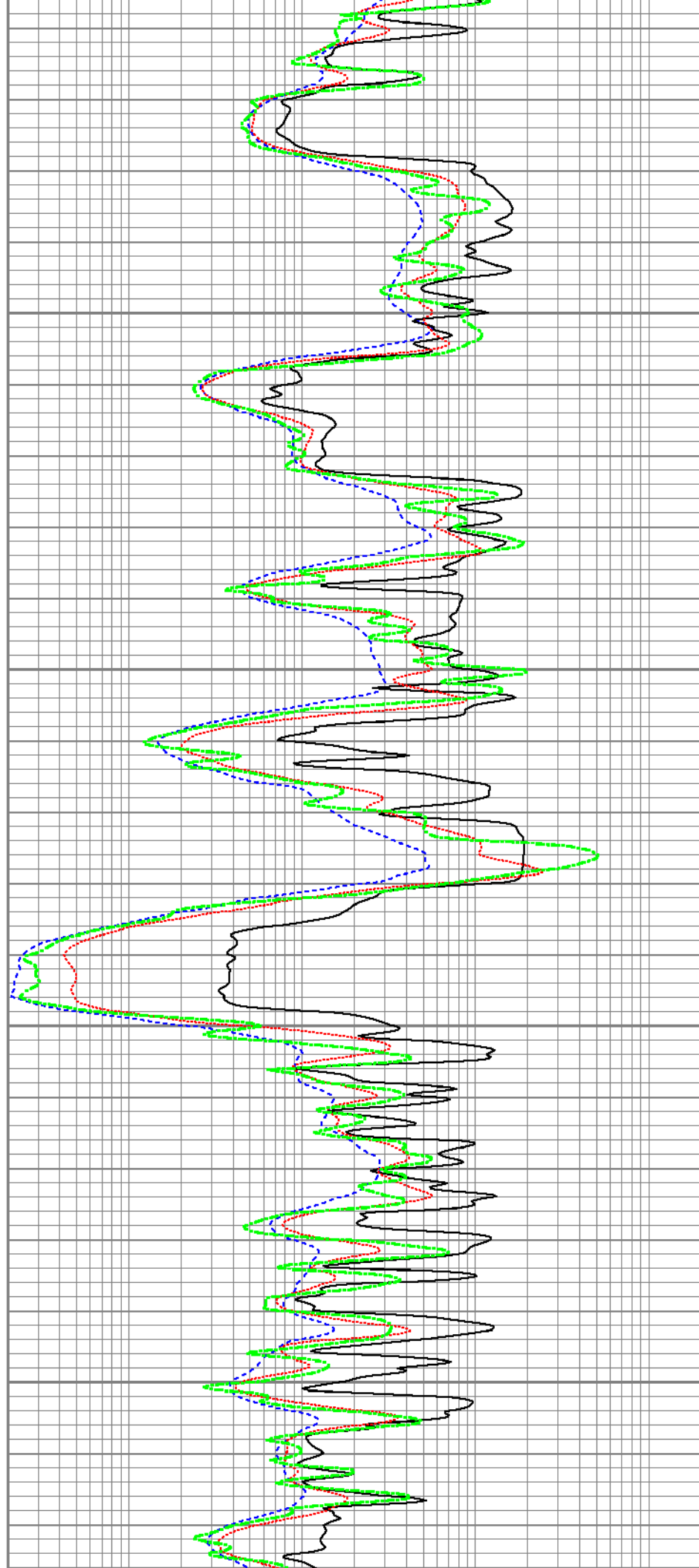
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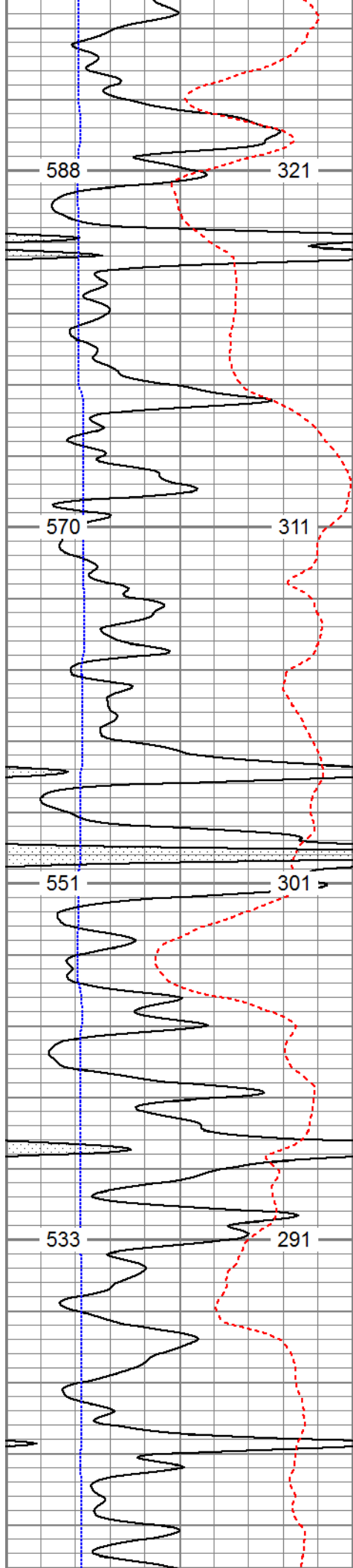




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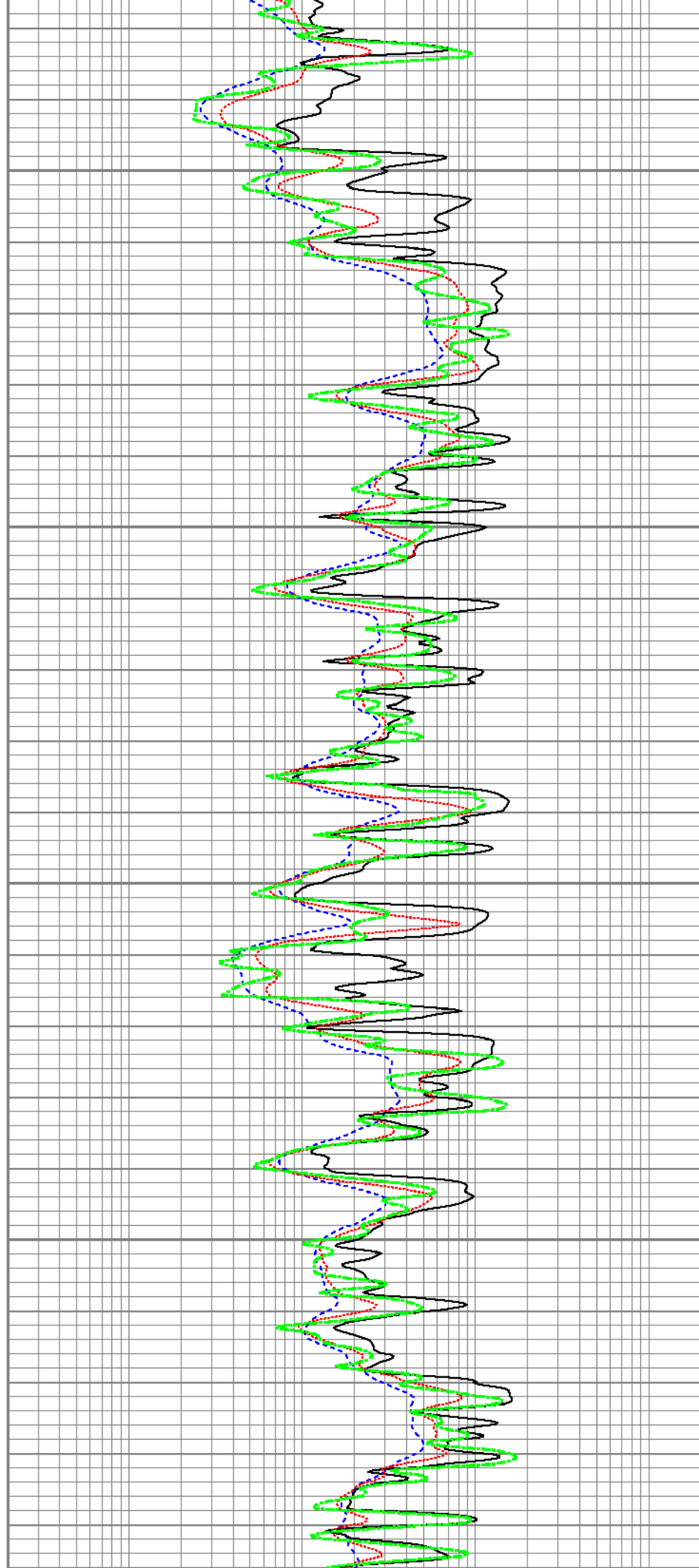
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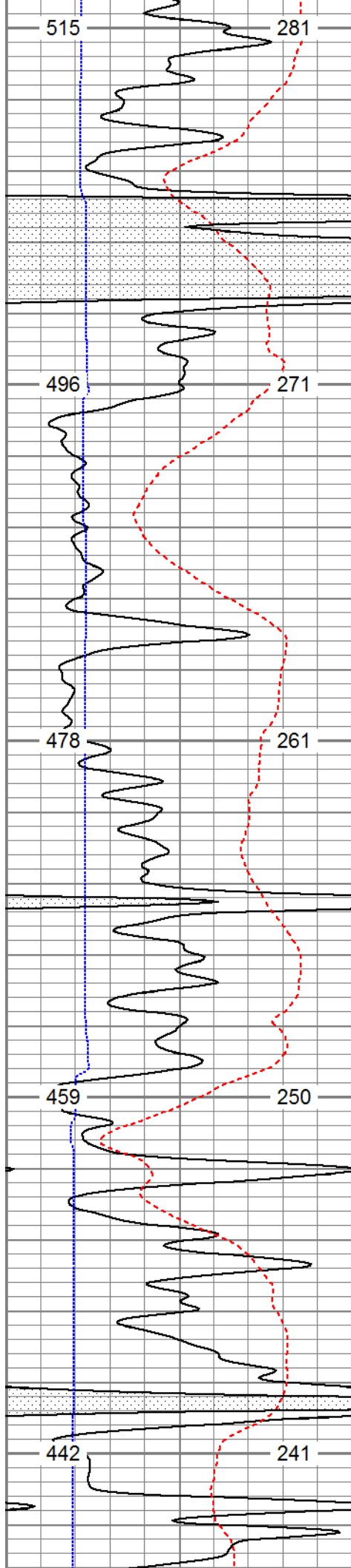


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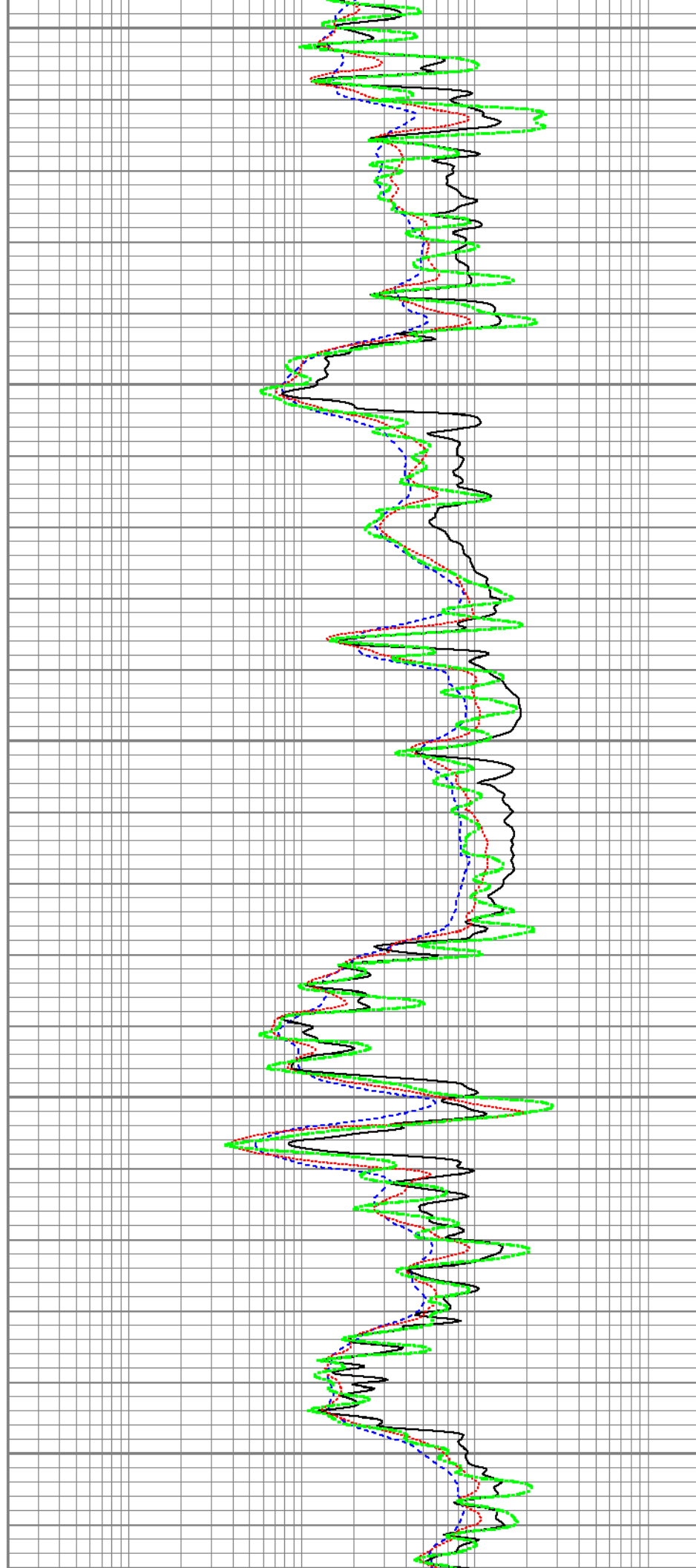




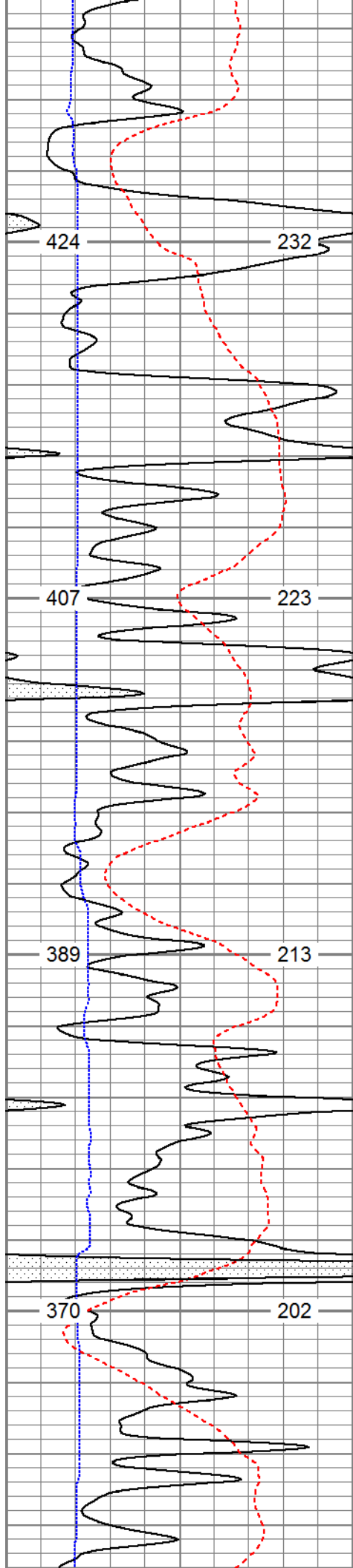


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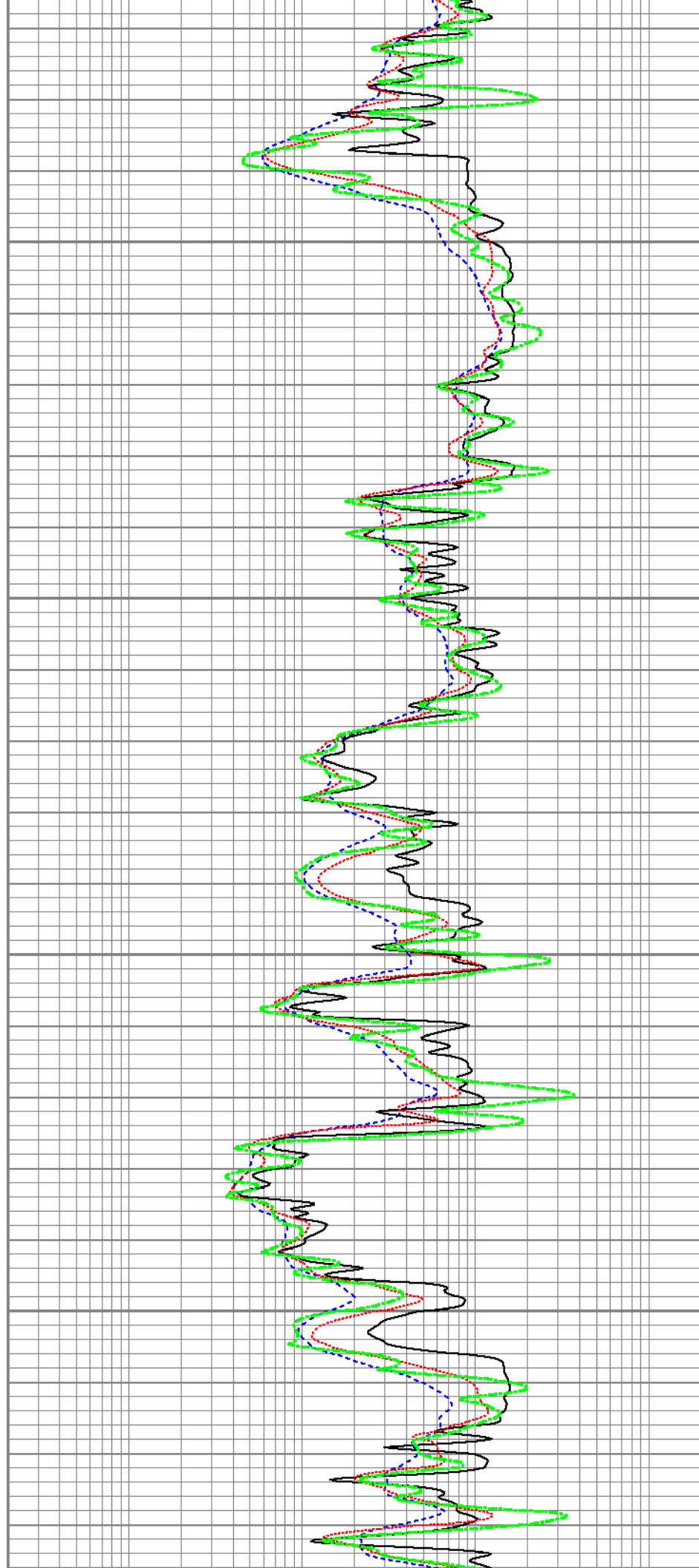


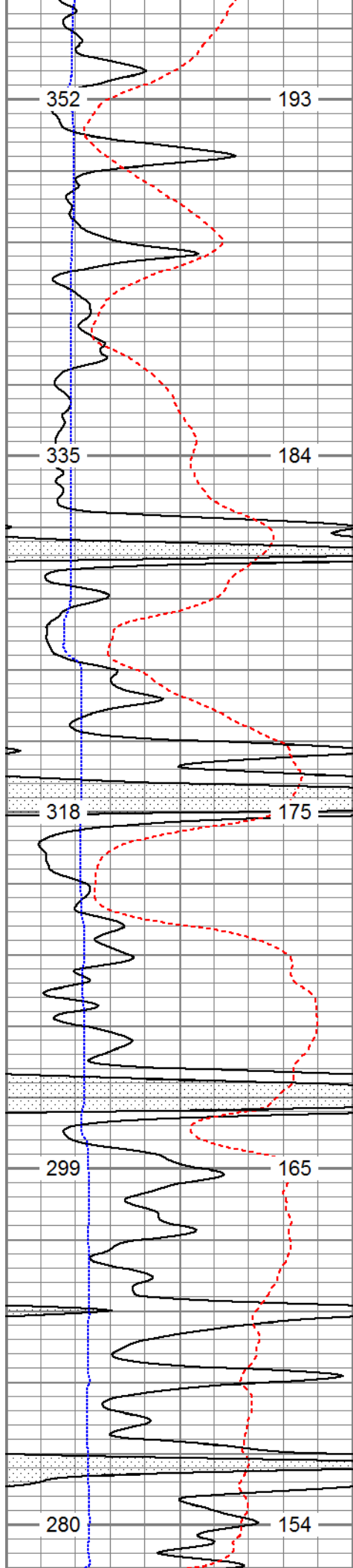




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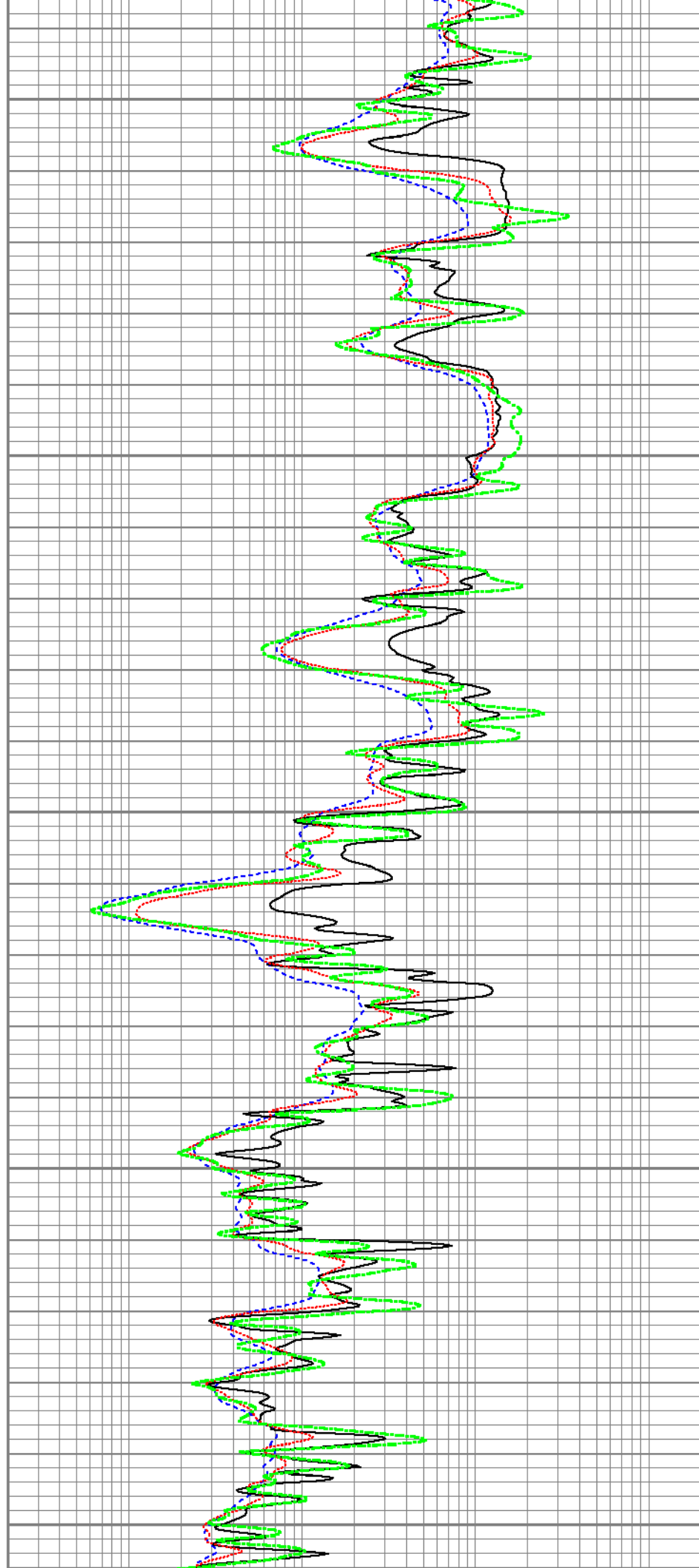


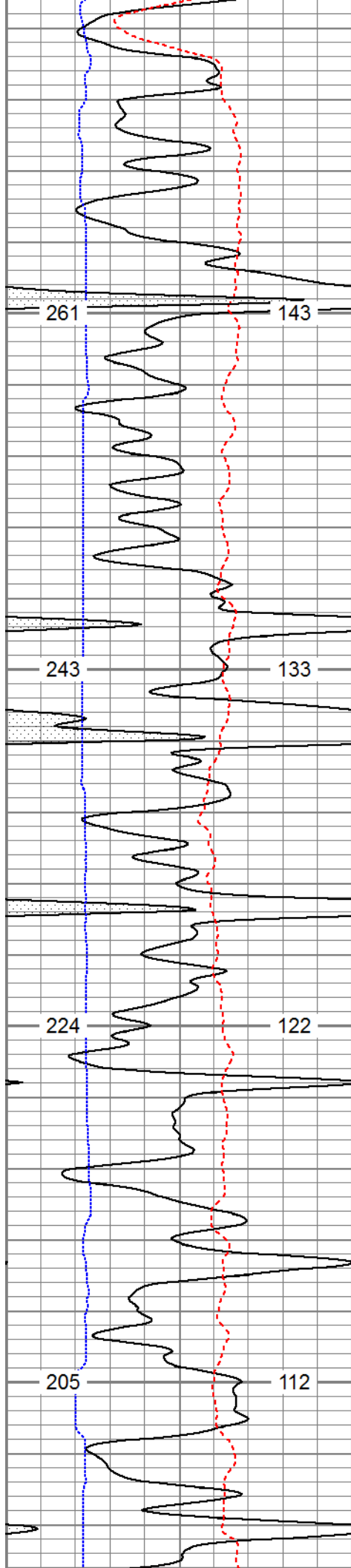


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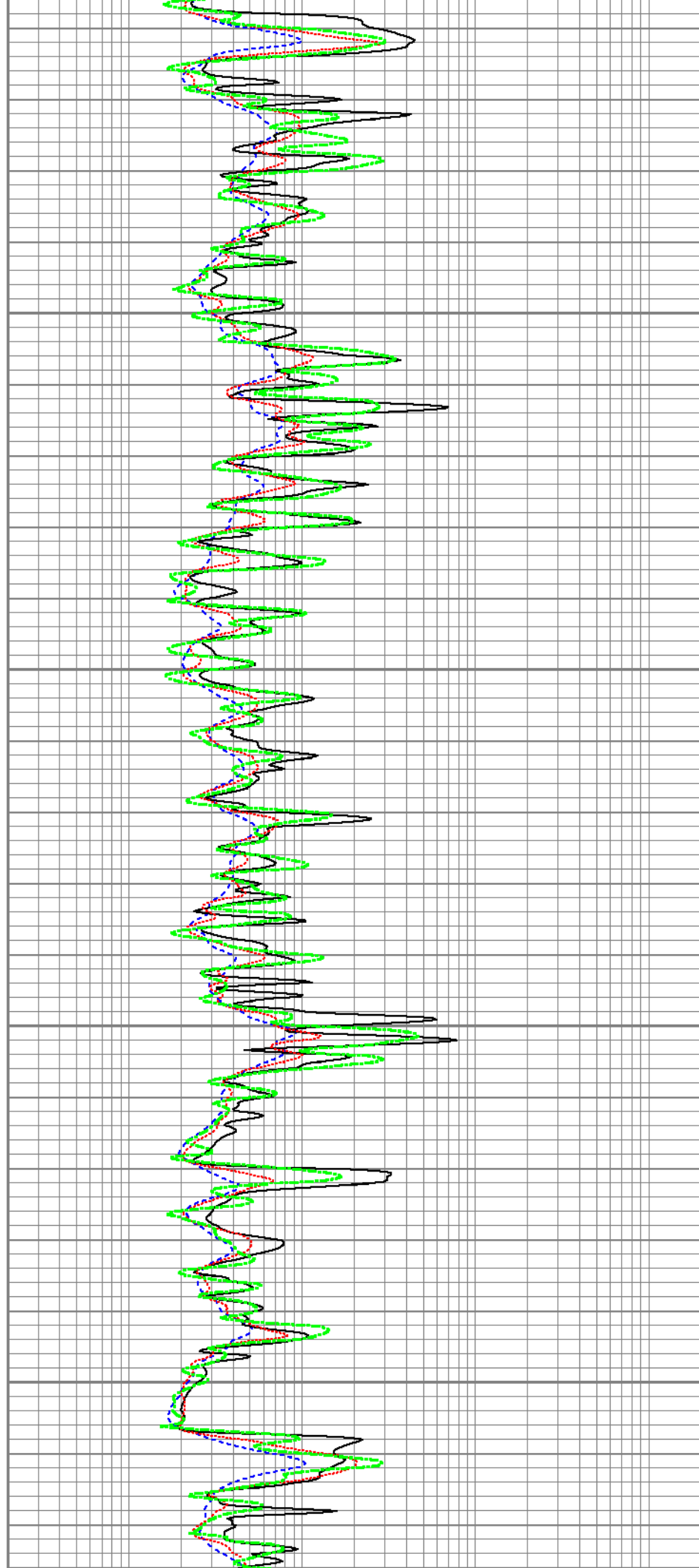
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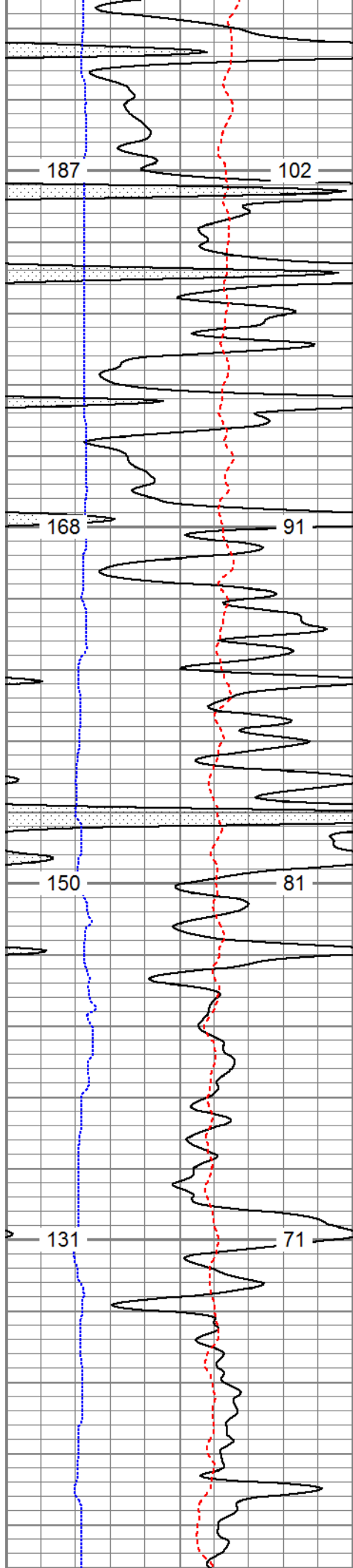




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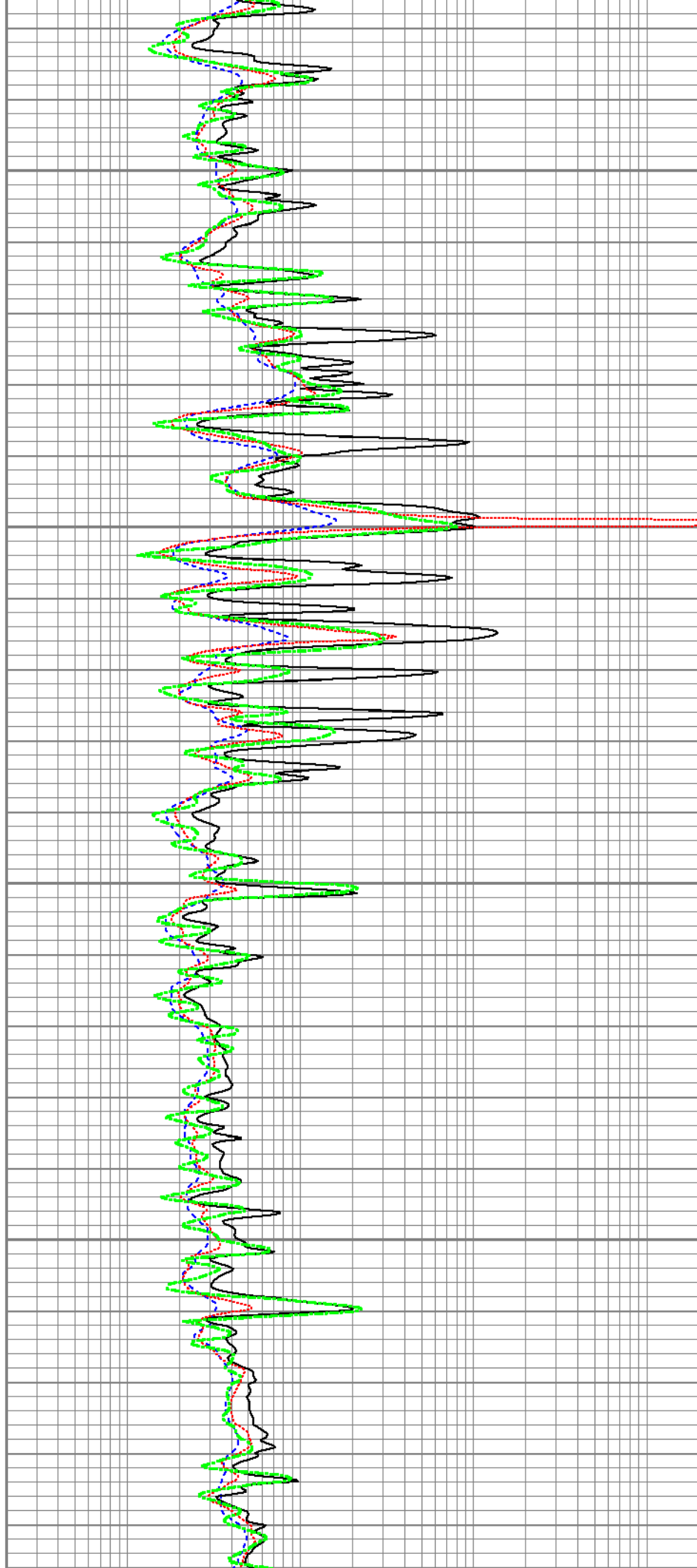
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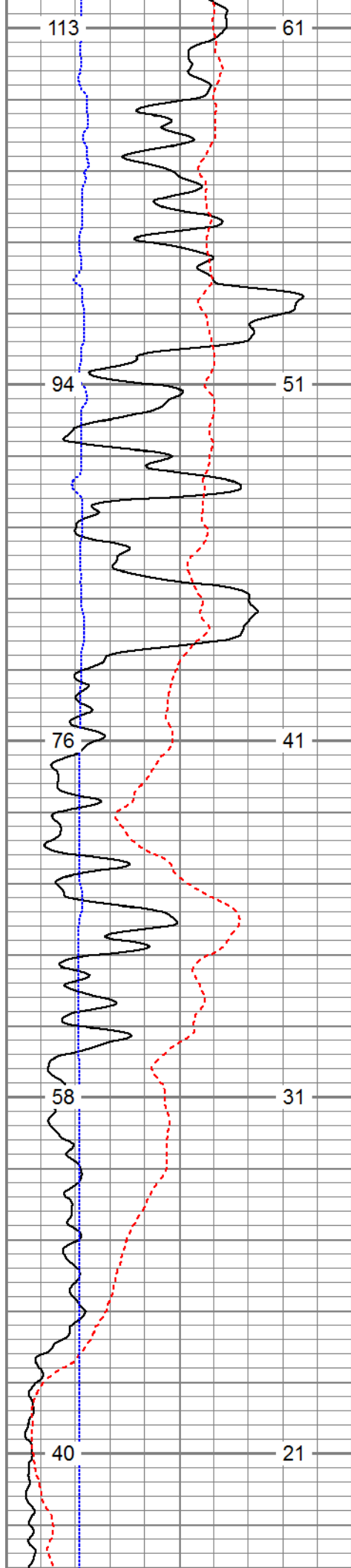




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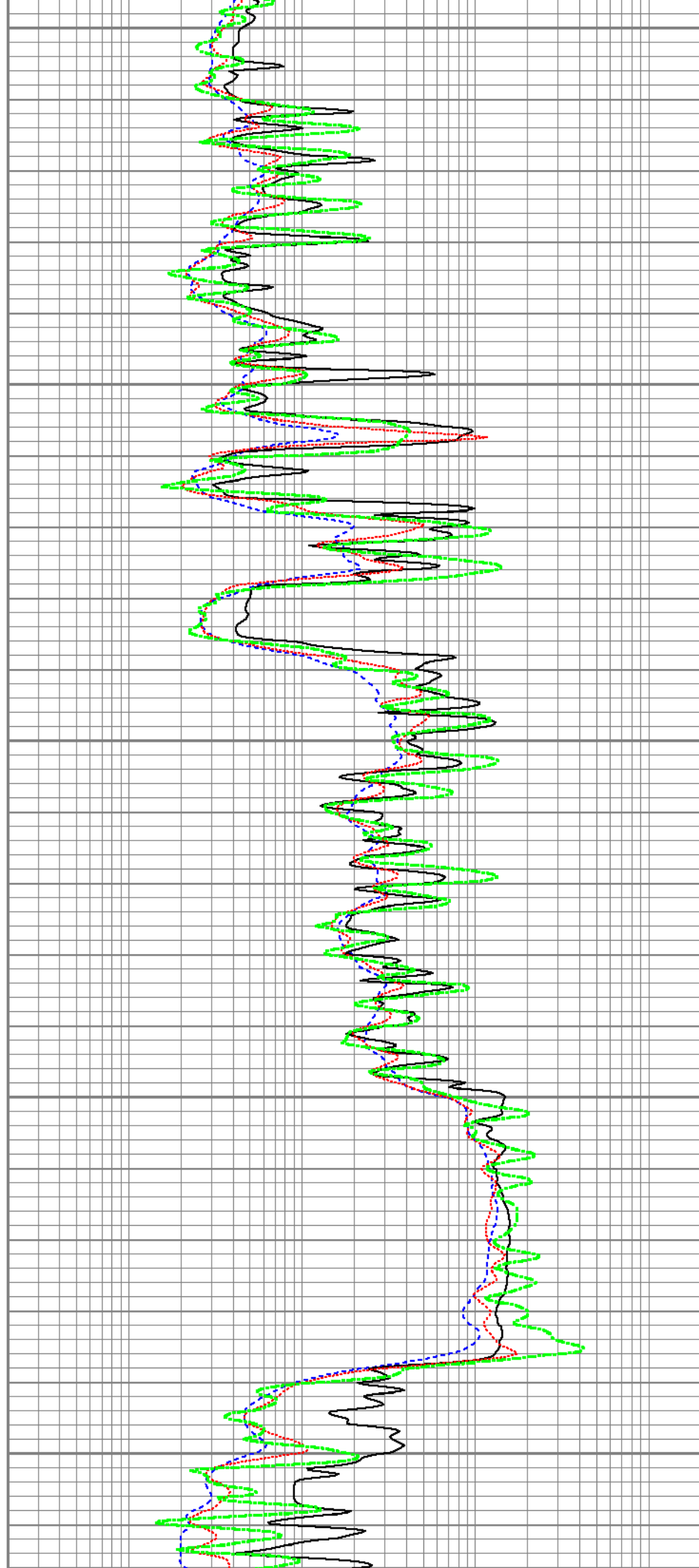
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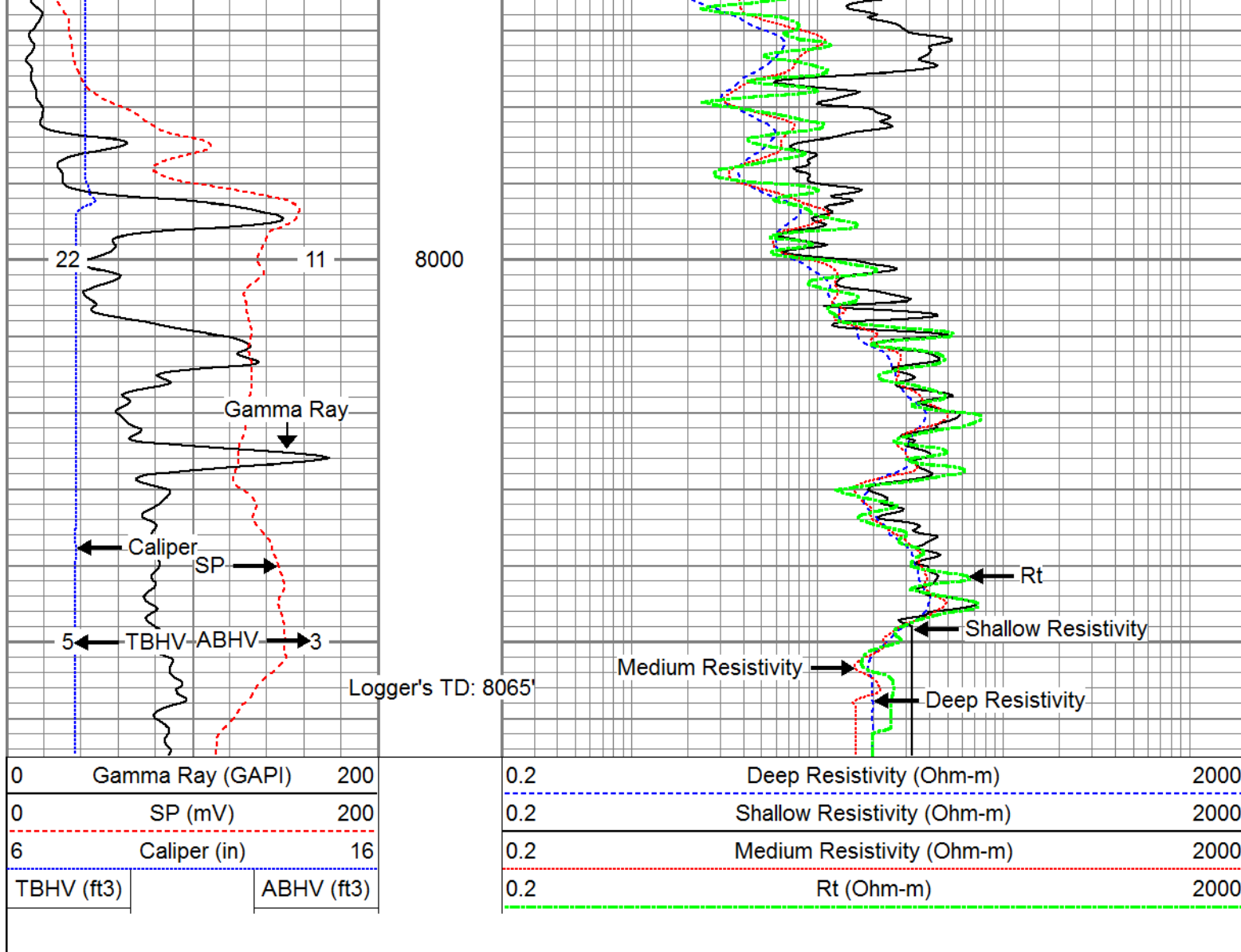




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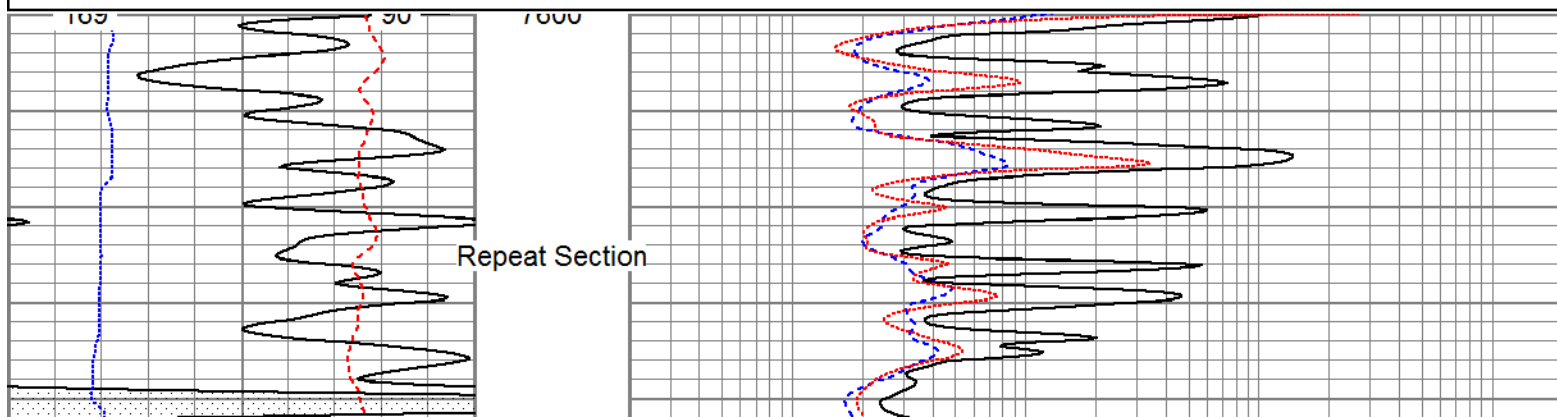
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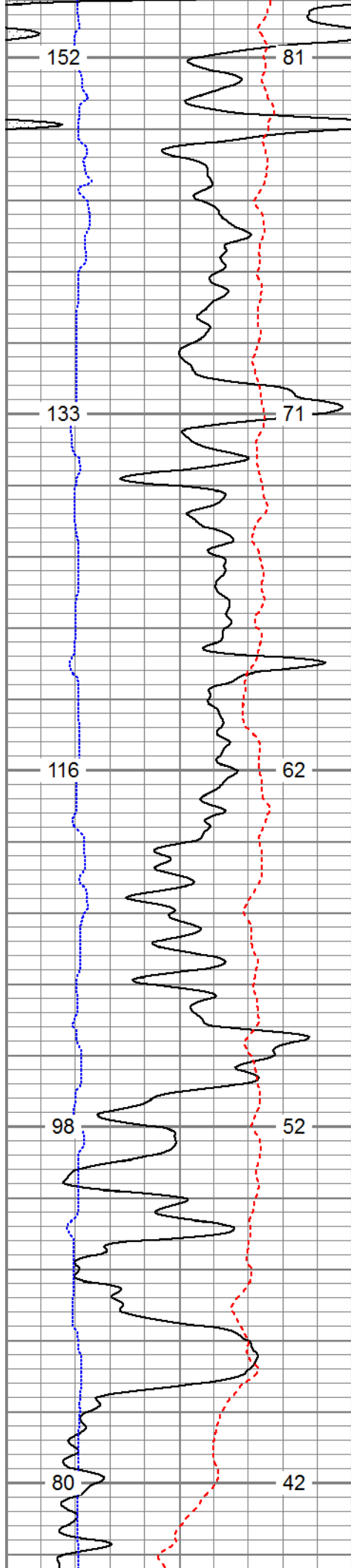




Database File: 13618.db  
 Dataset Pathname: repeat  
 Presentation Format: dil  
 Dataset Creation: Wed Aug 06 05:59:53 2014  
 Charted by: Depth in Feet scaled 1:240

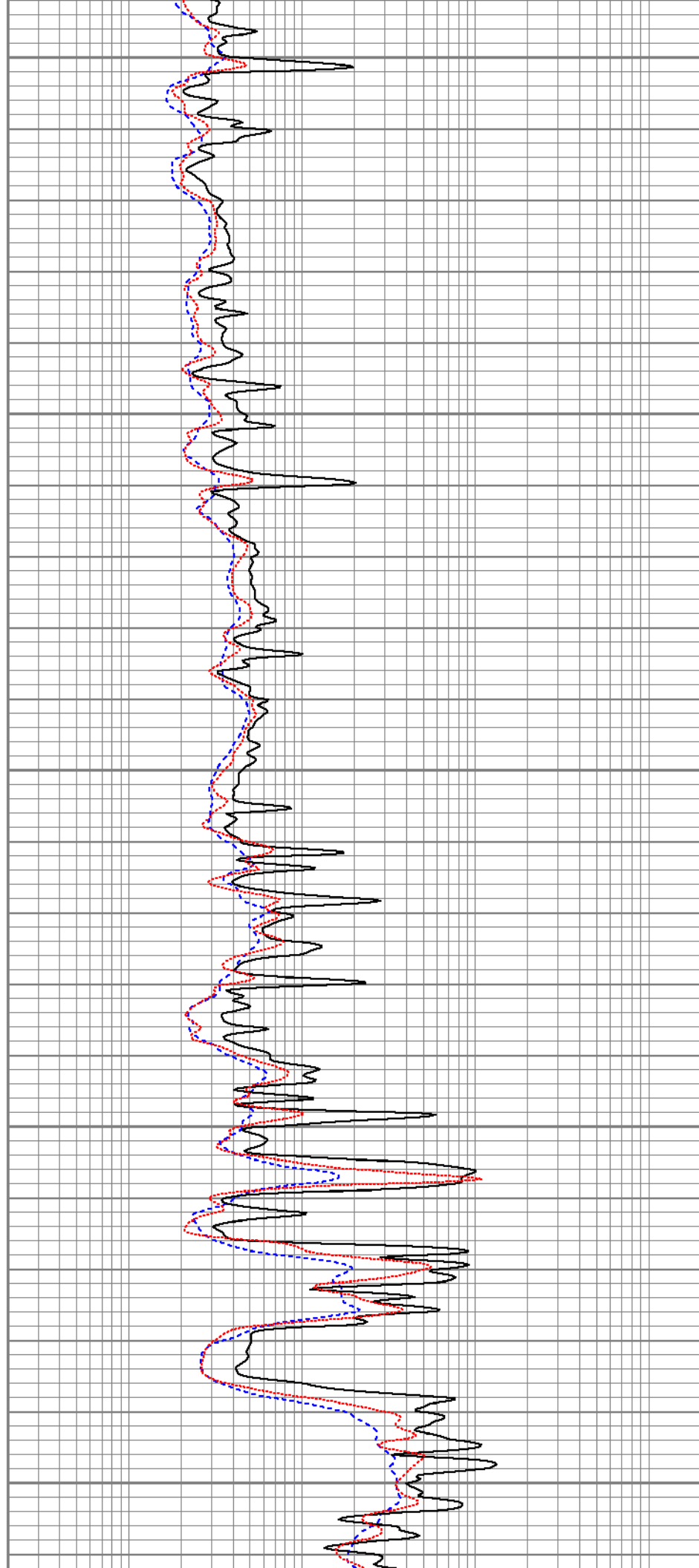
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0	SP (mV)	200	0.2	Shallow Resistivity (Ohm-m)	2000
6	Caliper (in)	16	0.2	Medium Resistivity (Ohm-m)	2000
TBHV (ft3)		ABHV (ft3)			



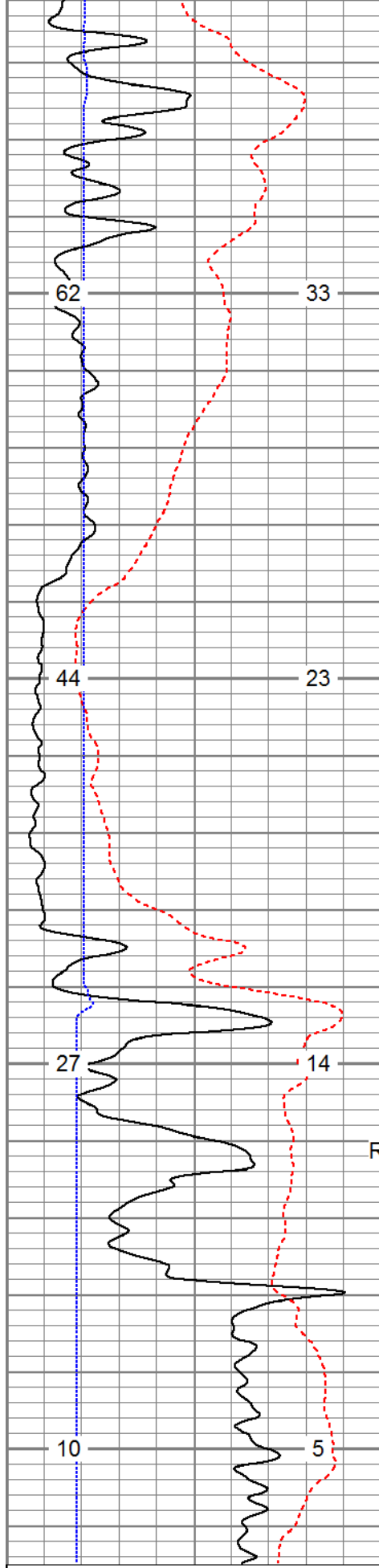


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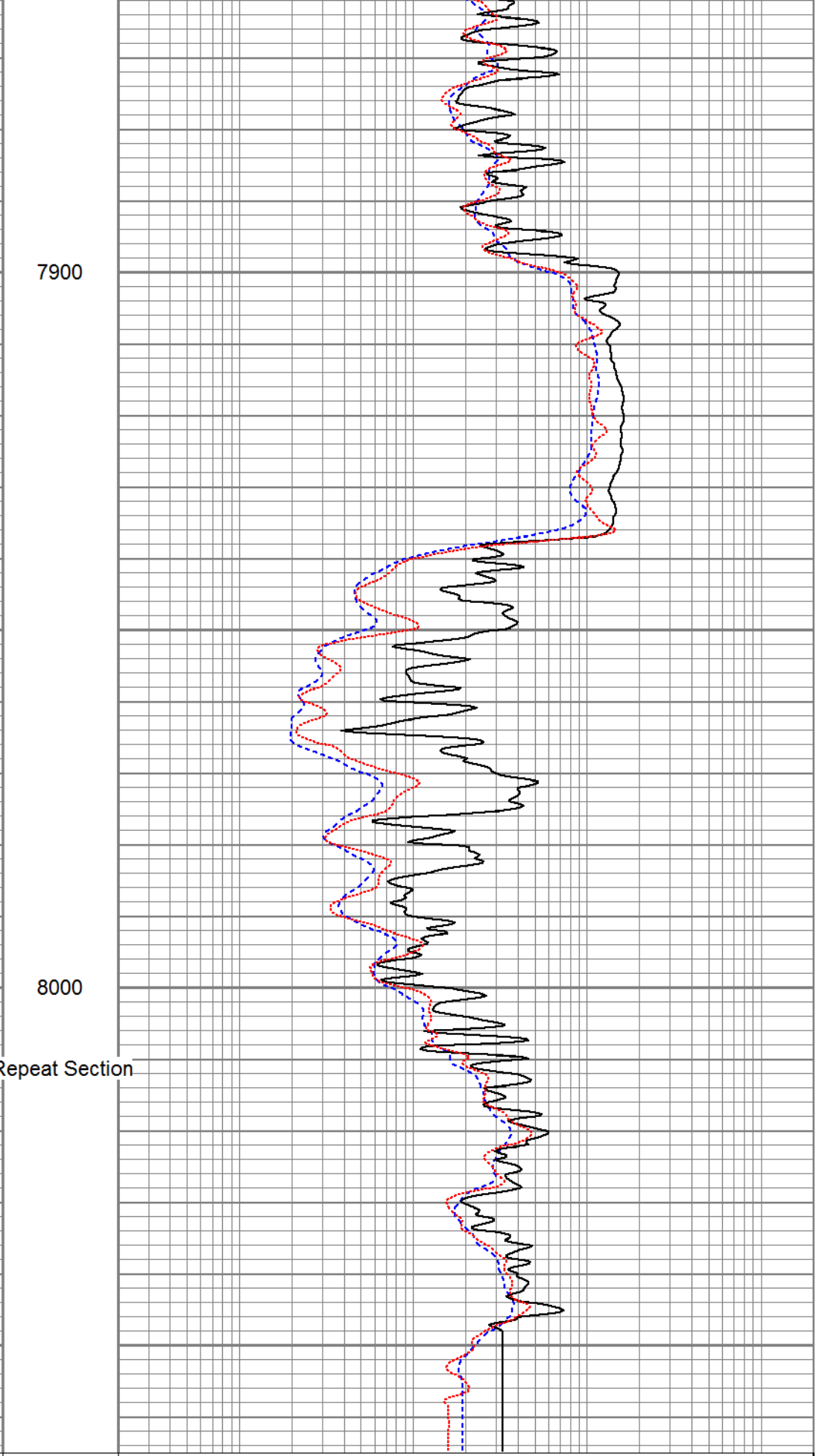
7800







0	Gamma Ray (GAPI)	200
0	SP (mV)	200
6	Caliper (in)	16
TRUV (#2)		ADUV (#2)



0.2	Deep Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000



ABHV (ITS)	ABHV (ITS)
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Calibration Report	
Database File:	13618.db
Dataset Pathname:	pass2
Dataset Creation:	Wed Aug 06 02:22:09 2014 by Log 0

Dual Induction Calibration Report
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Serial-Model:	1011-PSI
Surface Cal Performed:	

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	0.000	1.000	0.000	1.000	mmho/m	0.510	-27.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.440	-27.000

Compensated Density Calibration Report
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Serial-Model:	998-PSI
Master Calibration Performed:	Wed Aug 06 01:11:01 2014

Master Calibration					
	Density		Far Detector	Near Detector	
Magnesium	1.750	g/cc	7210.00	9816.00	cps
Aluminum	2.690	g/cc	1326.00	6231.00	cps
	Size		Reading		
Small Ring		in			
Medium Ring		in			
Large Ring		in			

Compensated Neutron Calibration Report
--

Serial Number:	826
Tool Model:	PSI

CALIBRATION						
Detector	Readings		Target		Normalization	
Short Space	1.00	cps	1.00	cps	1.9000	
Long Space	1.00	cps	1.00	cps	2.0900	

Gamma Ray Calibration Report
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Serial Number:	939	
Tool Model:	PSI	
Performed:	Wed Aug 06 01:11:14 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps

Sensitivity:

0.6200

GAPI/cps