



# HIGH RESOLUTION INDUCTION

Pioneer Energy Services

Company Wiekping-Fullerton Energy LLC  
Well War Eagle #16  
Field Wildcat  
County Lincoln State Colorado

Location: API #: 05 073 06617 0000  
660' FSL & 660' FEL SESE  
SEC 35 TWP 9S RGE 56W  
Permanent Datum GL Elevation 5266  
Log Measured From KB  
Drilling Measured From KB  
Other Services  
Density Neutron  
Elevation  
K.B. 5279  
D.F. 5278  
G.L. 5266

Date	October 24, 2014	
Run Number	1	
Depth Driller	7960	
Depth Logger	7948	
Bottom Logged Interval	7948	
Top Log Interval	Casing	
Casing Driller	413	
Casing Logger	413	
Bit Size	7-7/8"	
Type Fluid in Hole	Chem Gel	
Density / Viscosity	9.0 / 96	
pH / Fluid Loss	10.0 / 8.0	
Source of Sample	Flowline	
Rm @ Meas. Temp	1.6 @ 74 F	
Rmf @ Meas. Temp	1.3 @ 74 F	
Rmc @ Meas. Temp	1.85 @ 74 F	
Source of Rmf / Rmc	Measure / Calc	
Rm @ BHT	0.6 @ 196 F	
Time Circulation Stopped	1000	
Time Logger on Bottom	1745	
Maximum Recorded Temperature	196 F	
Equipment Number	36	
Location	Ft. Morgan, CO	
Recorded By	Shaun Stump	
Witnessed By	Gregg Smith	

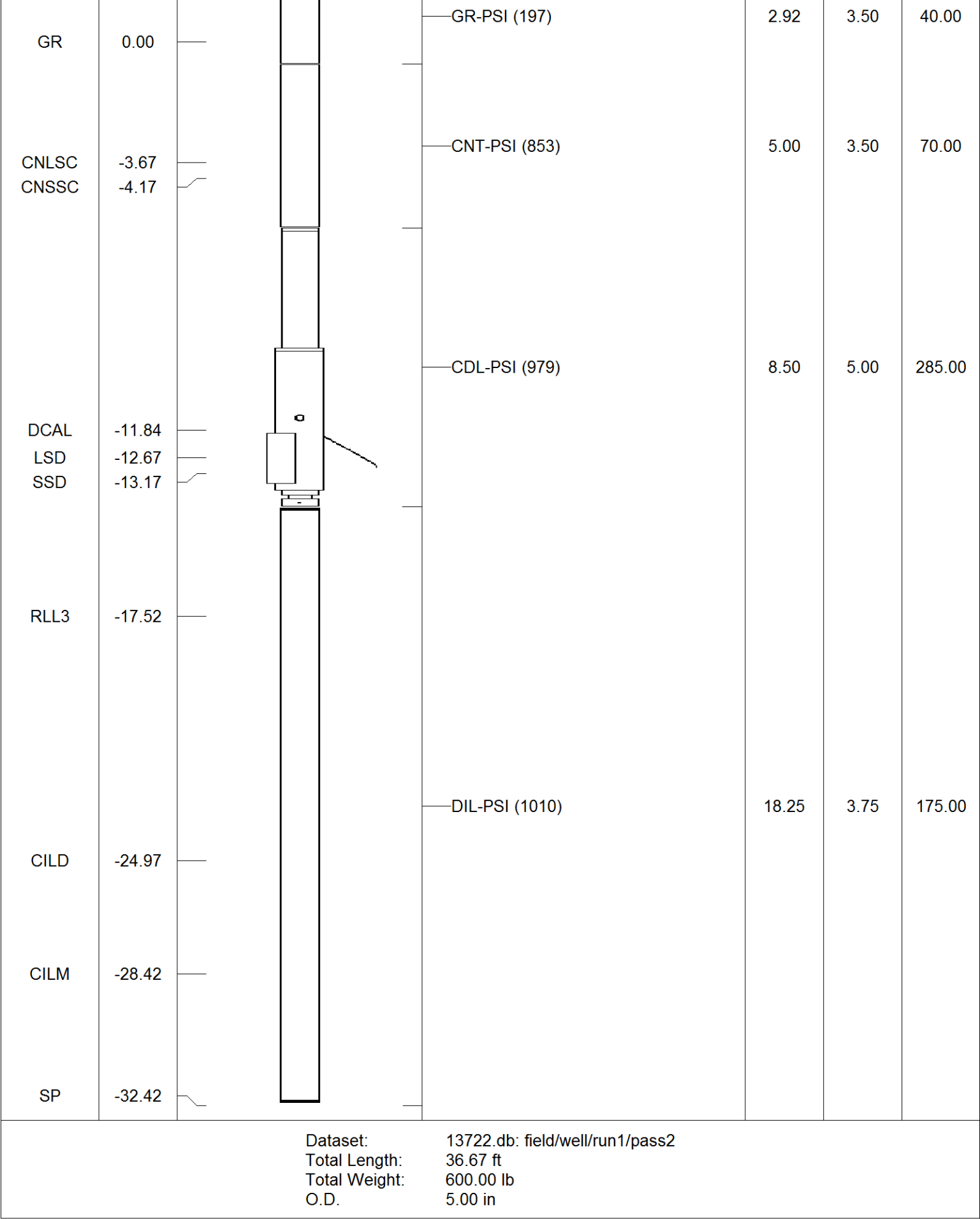
<<< Fold Here >>>

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

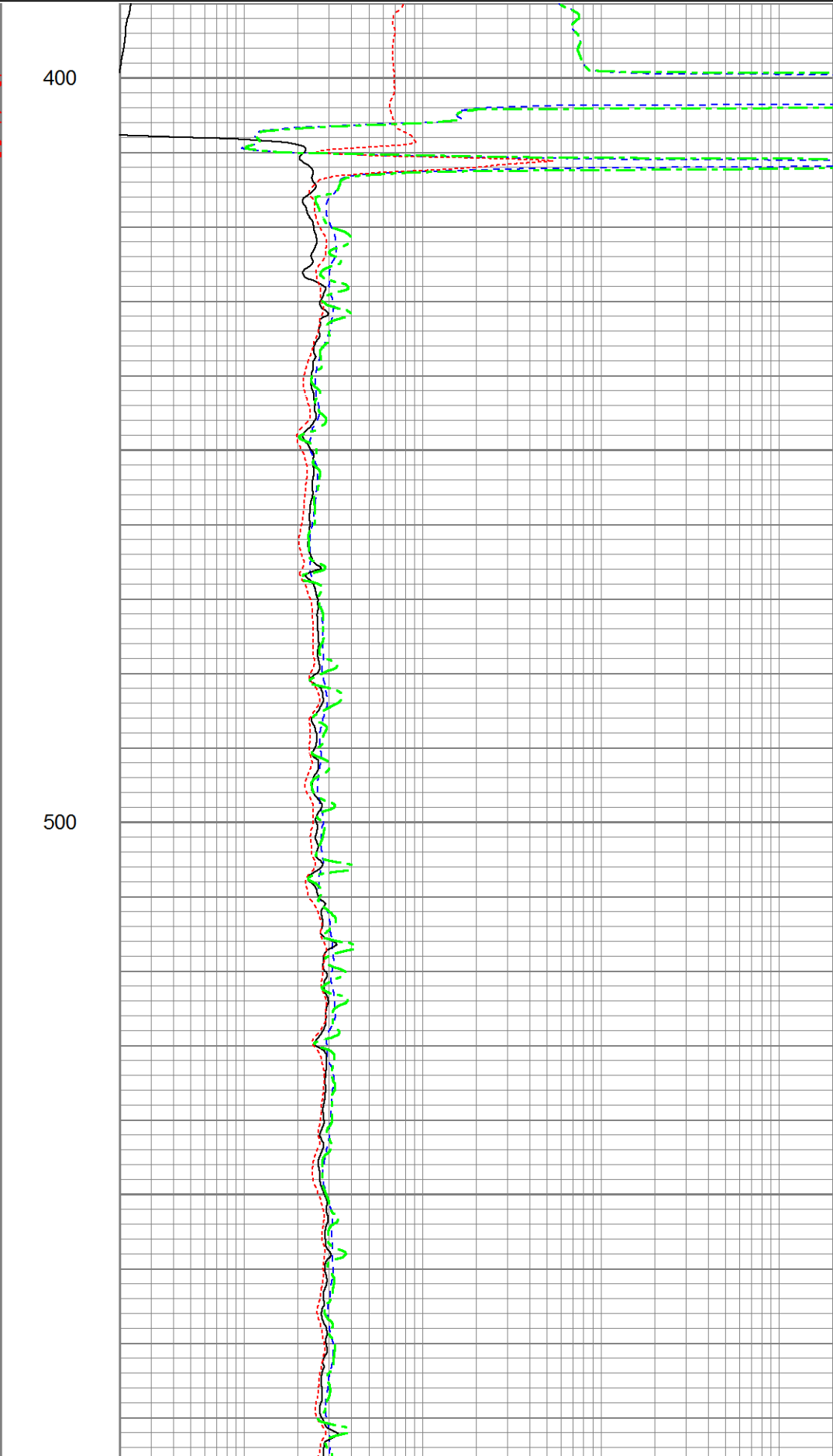
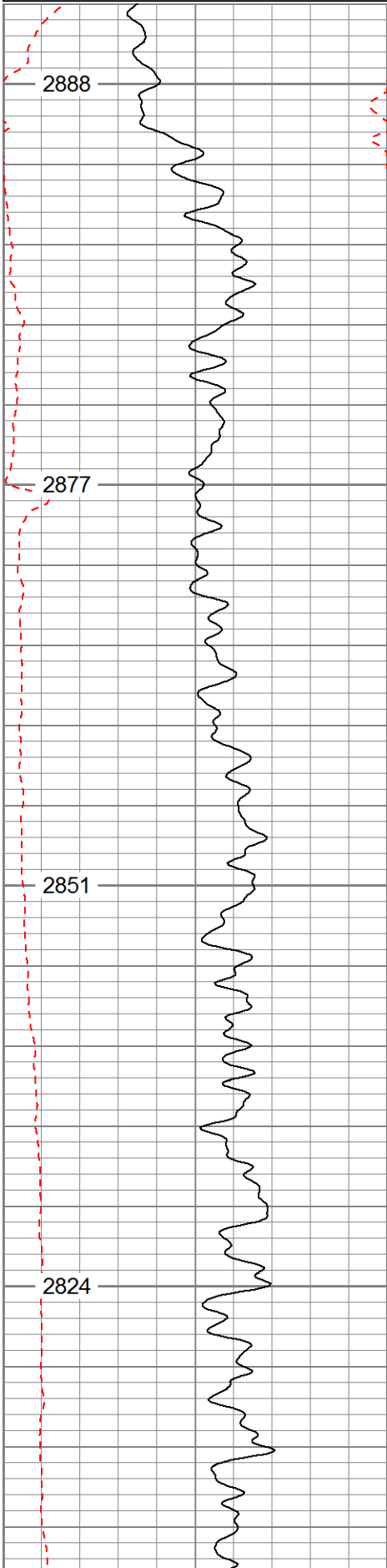
Annular volume calculated for 5.5" casing  
Murfin Drilling Rig 25  
Thank you for using Pioneer Energy Services  
Medium Resistivity Issue!!!

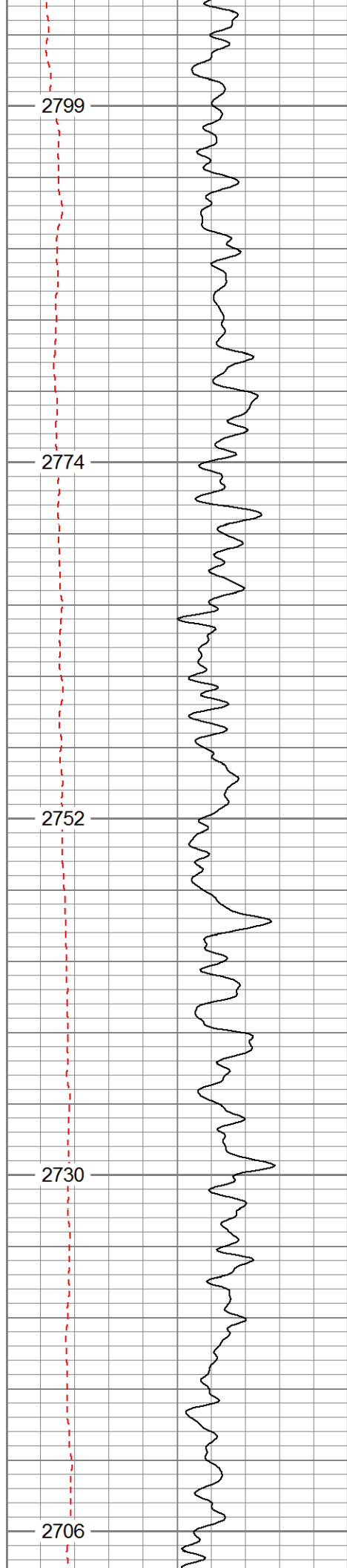
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD (~0)	2.00	3.50	30.00



0	Gamma Ray (GAPI)	200
0	SP (mV)	200
TBHV (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

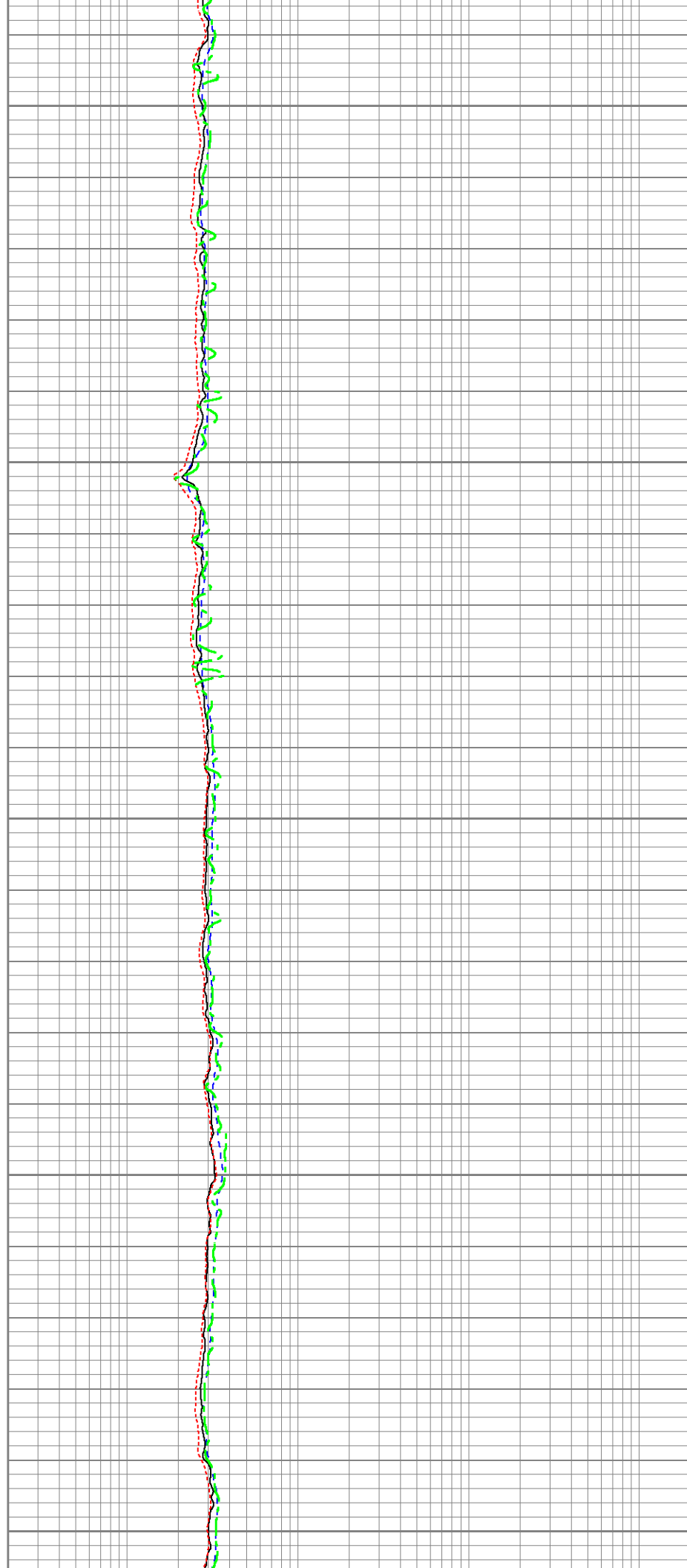


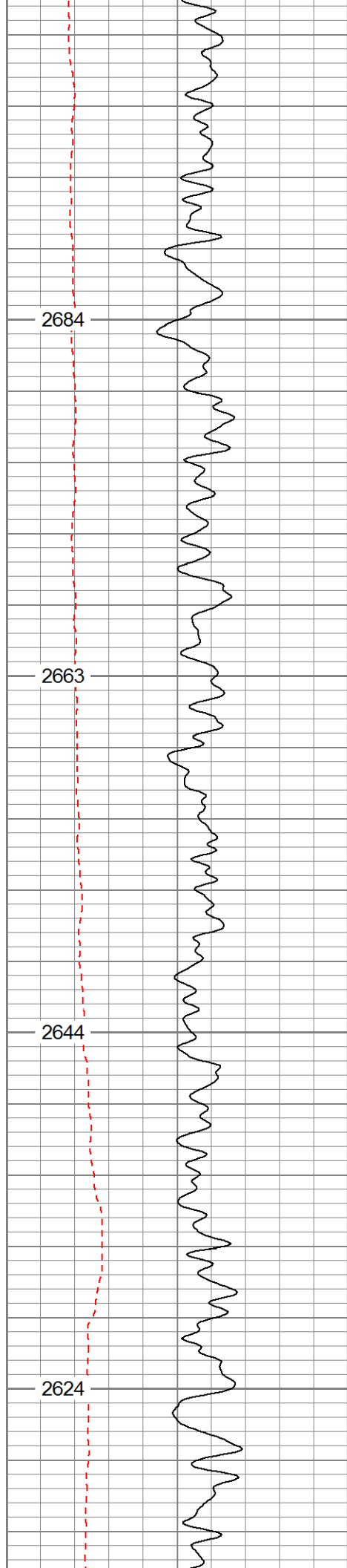


600

700

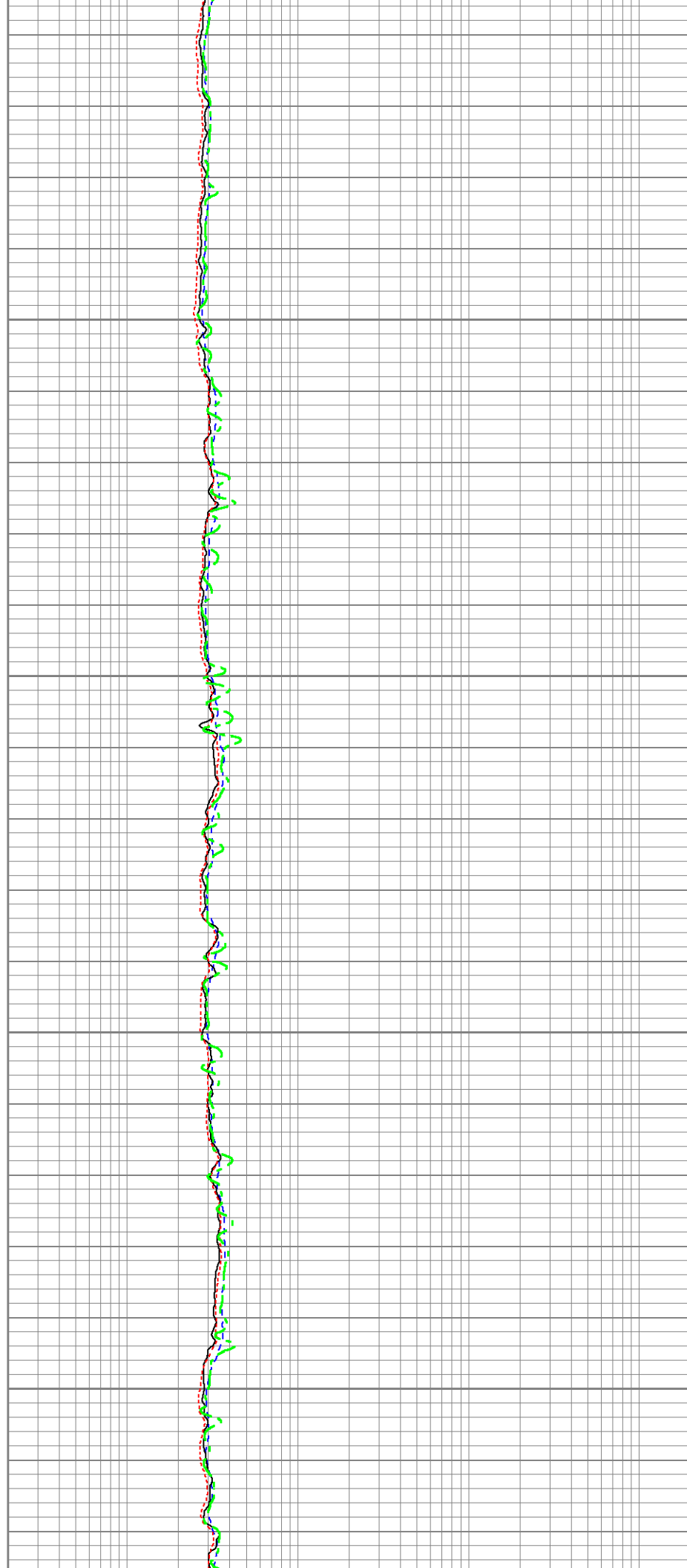
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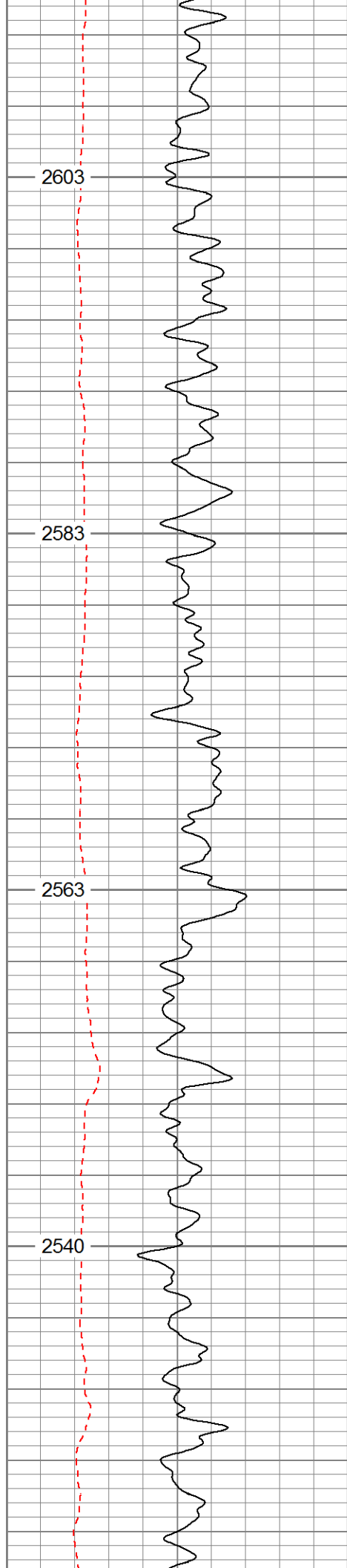




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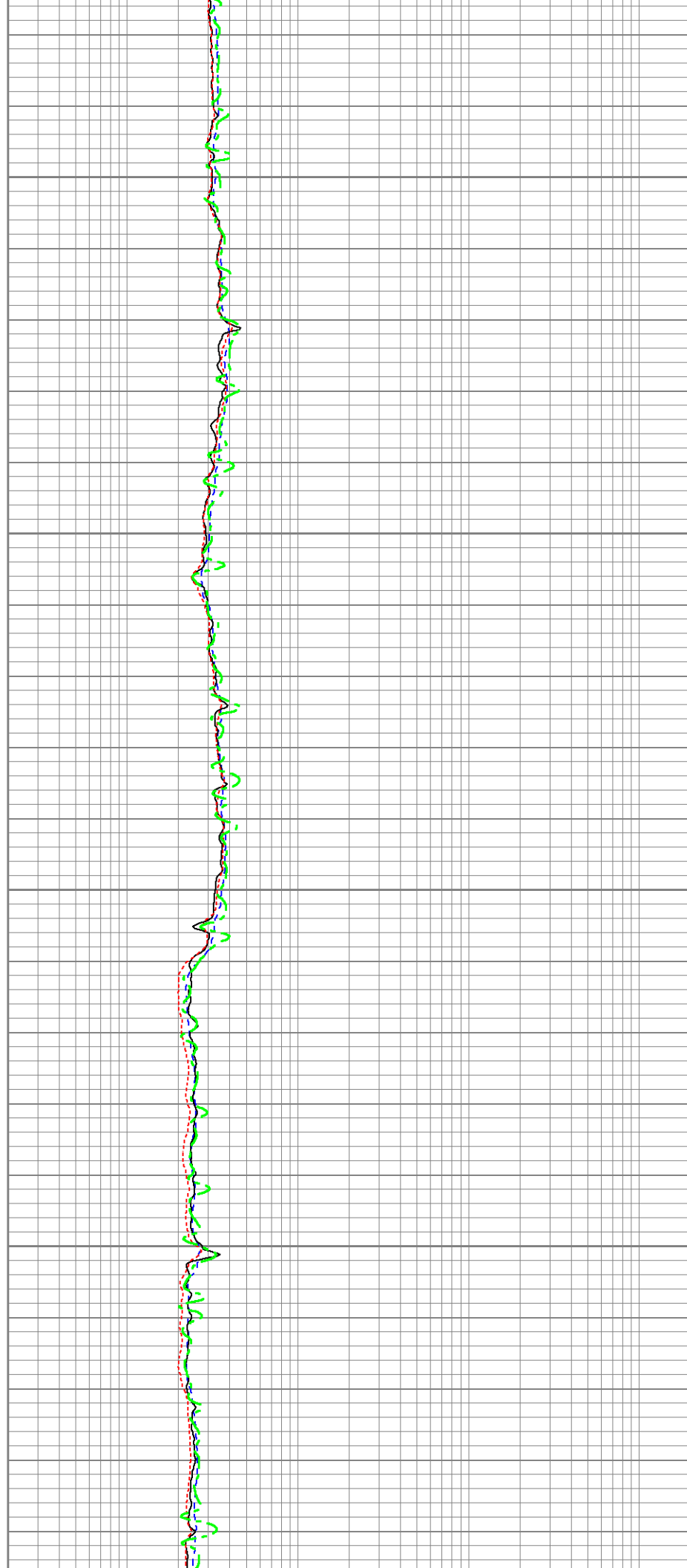
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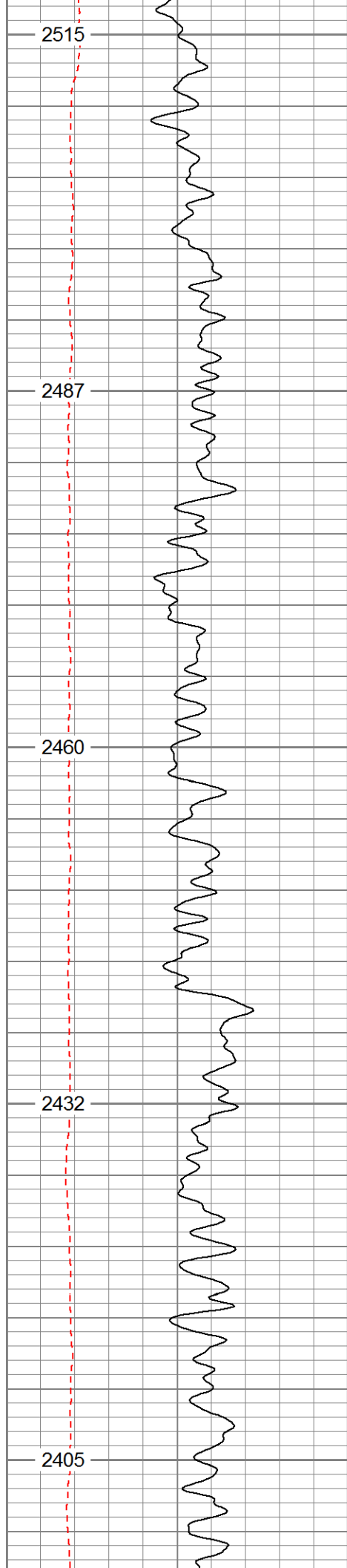




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1200

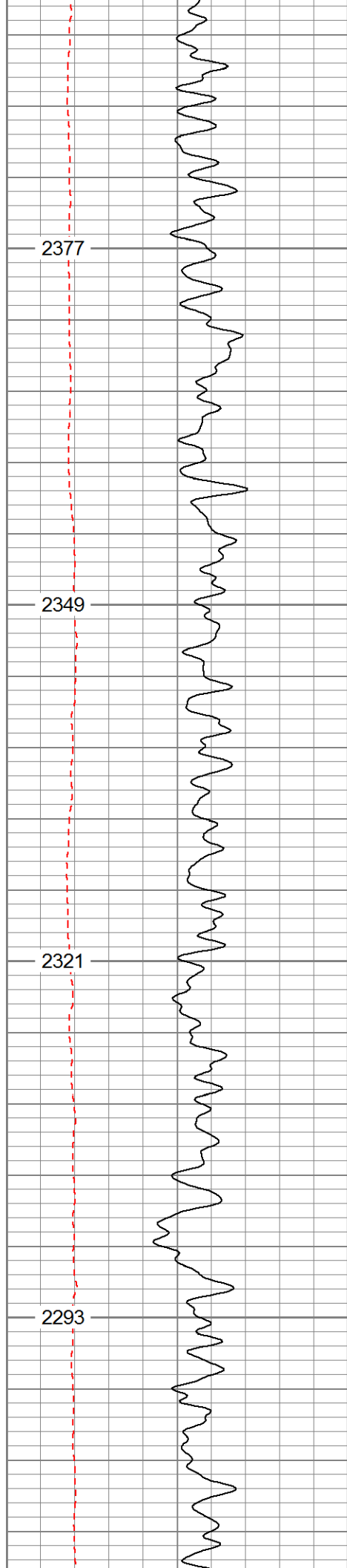




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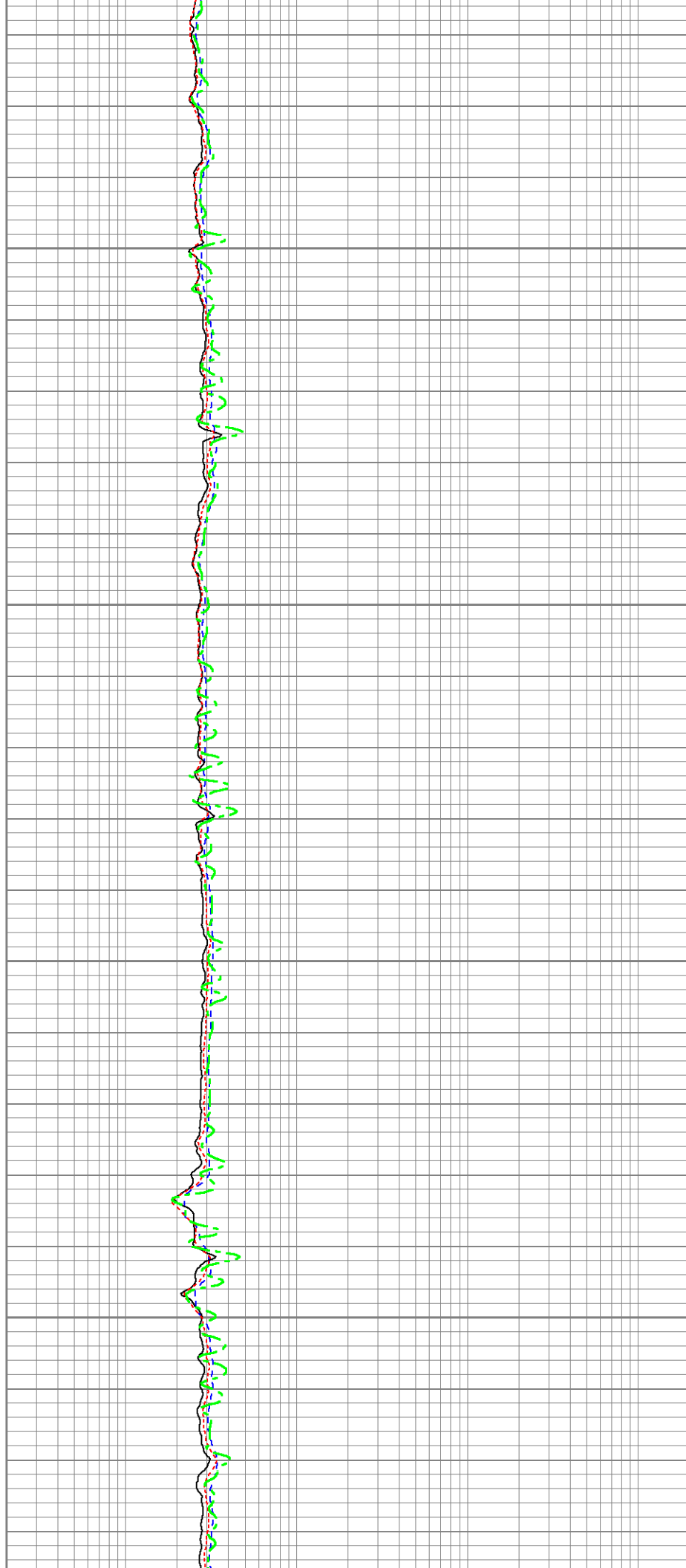
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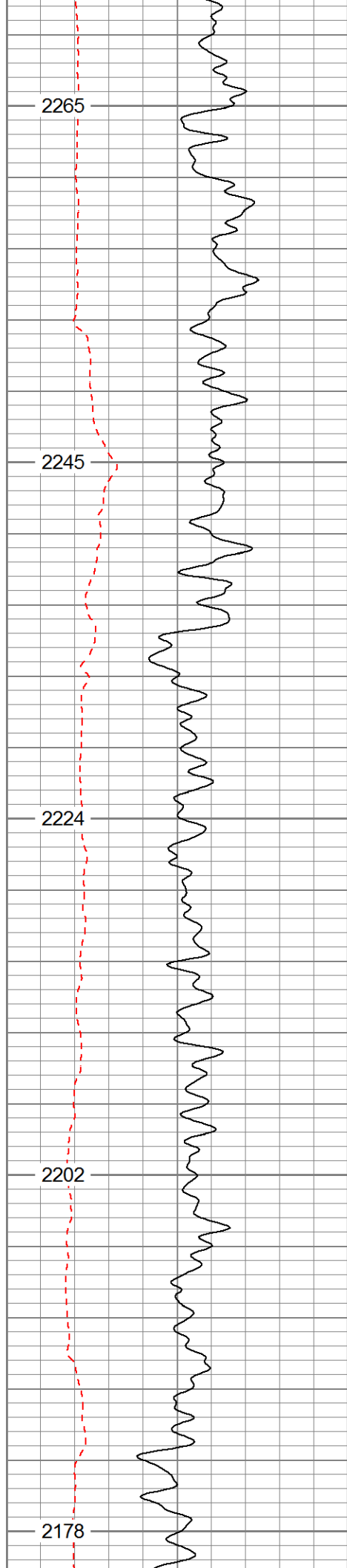


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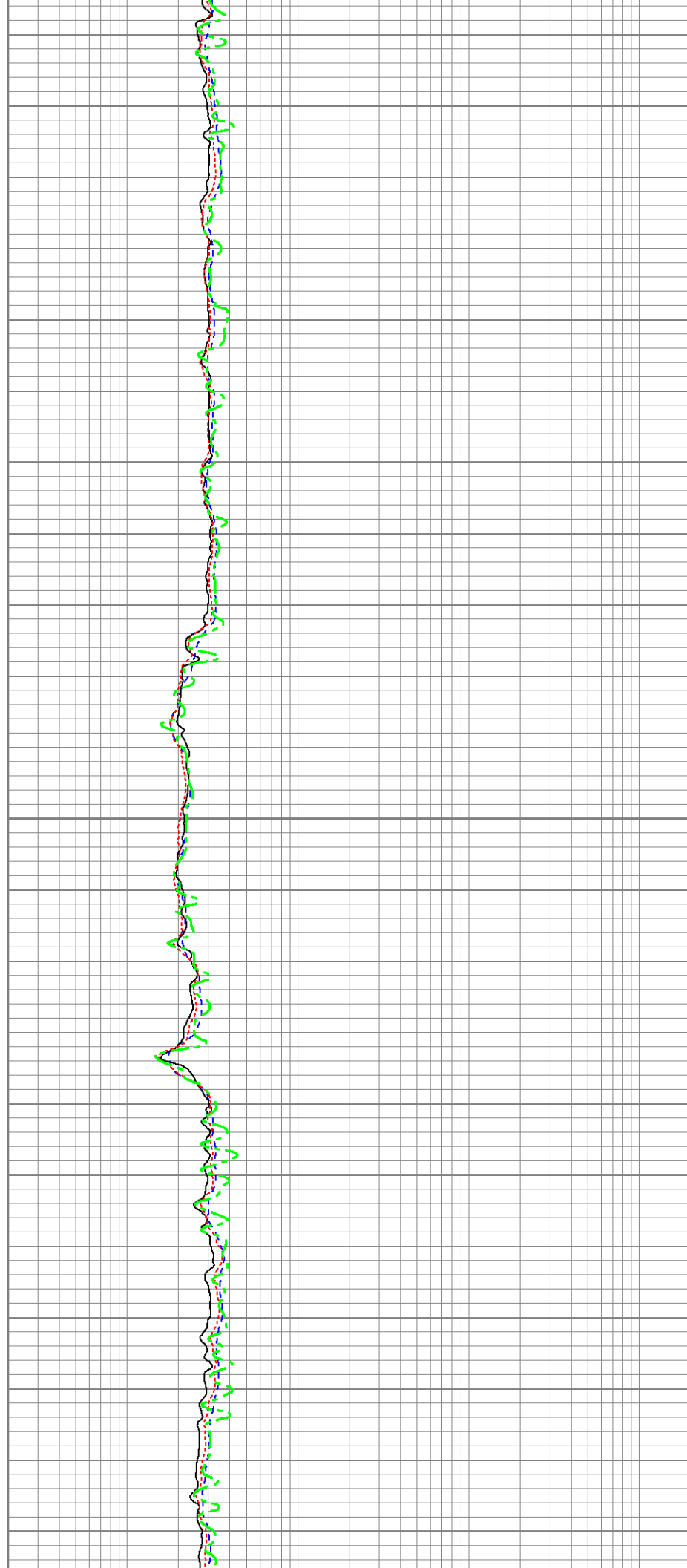


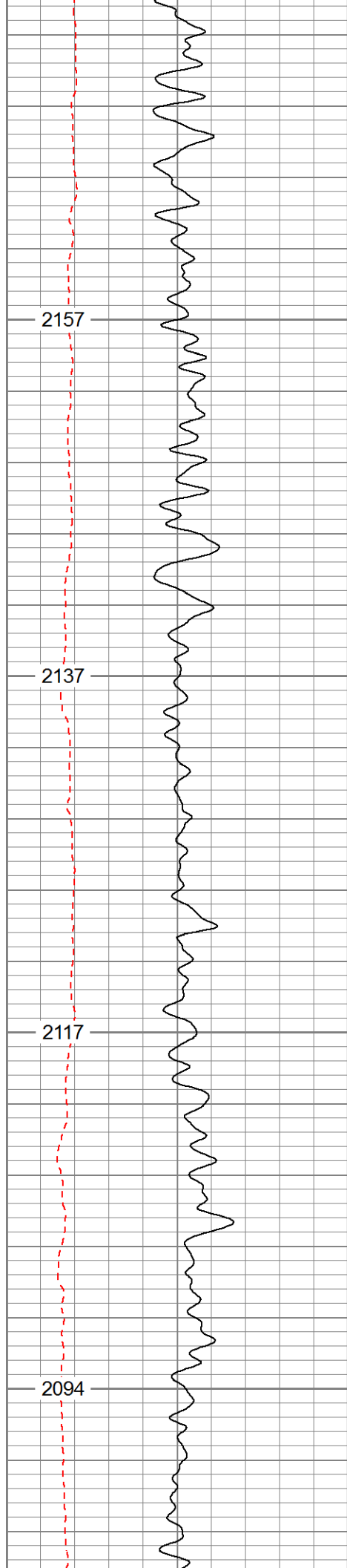


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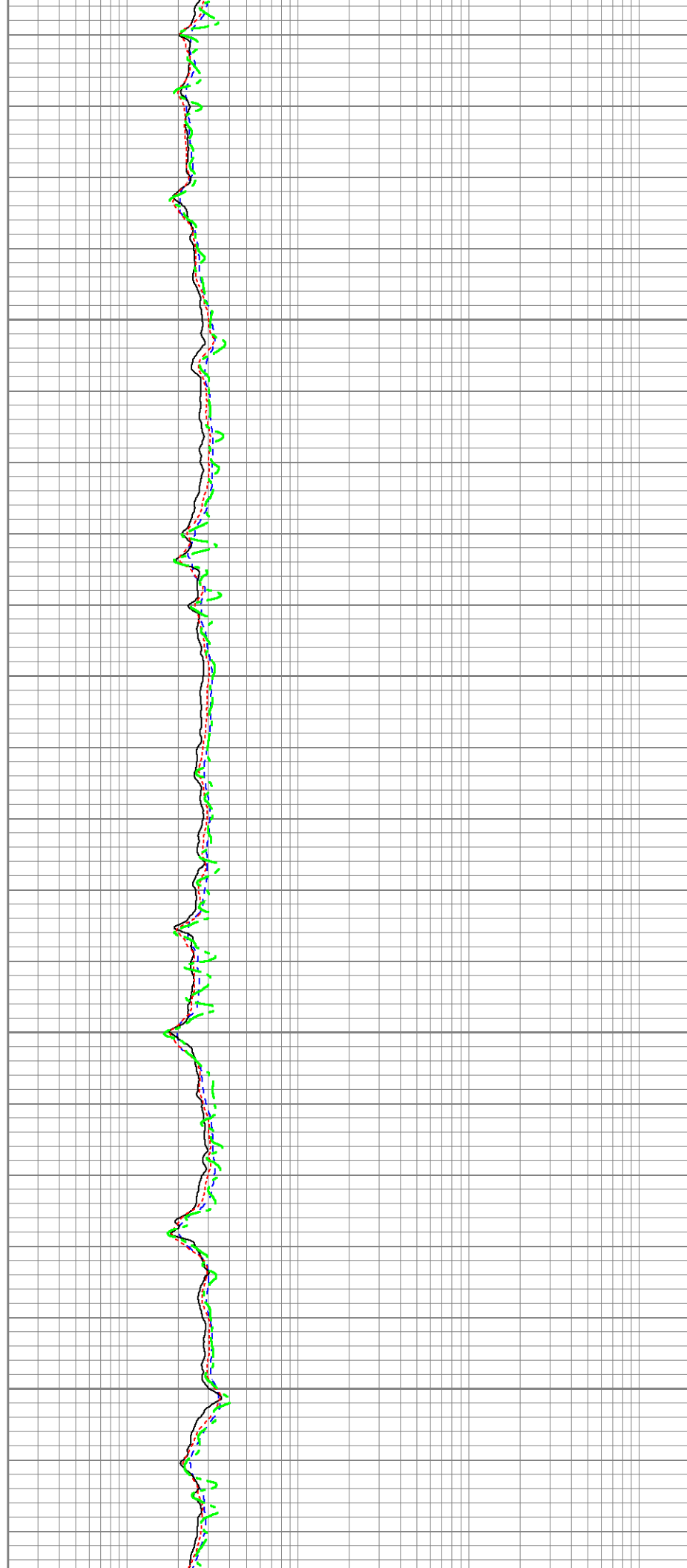
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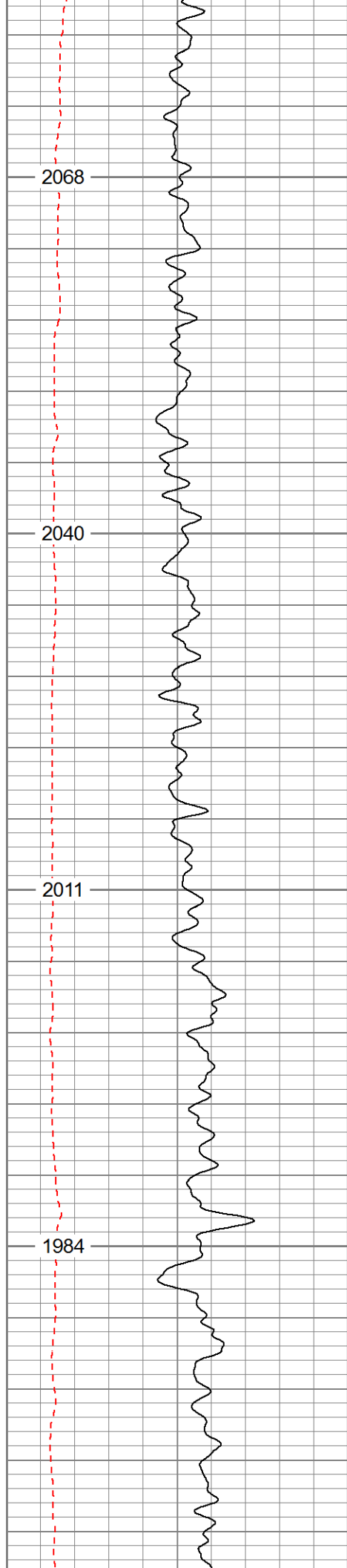




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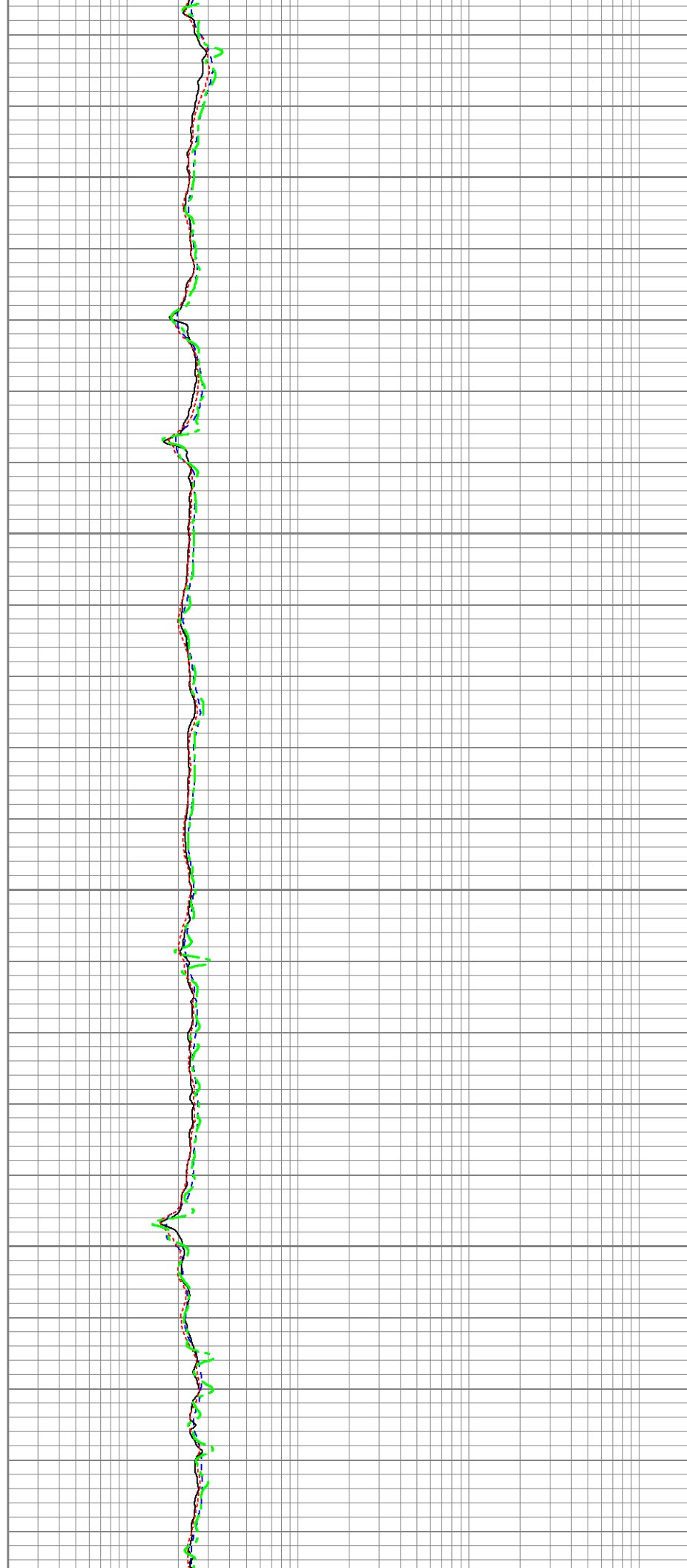
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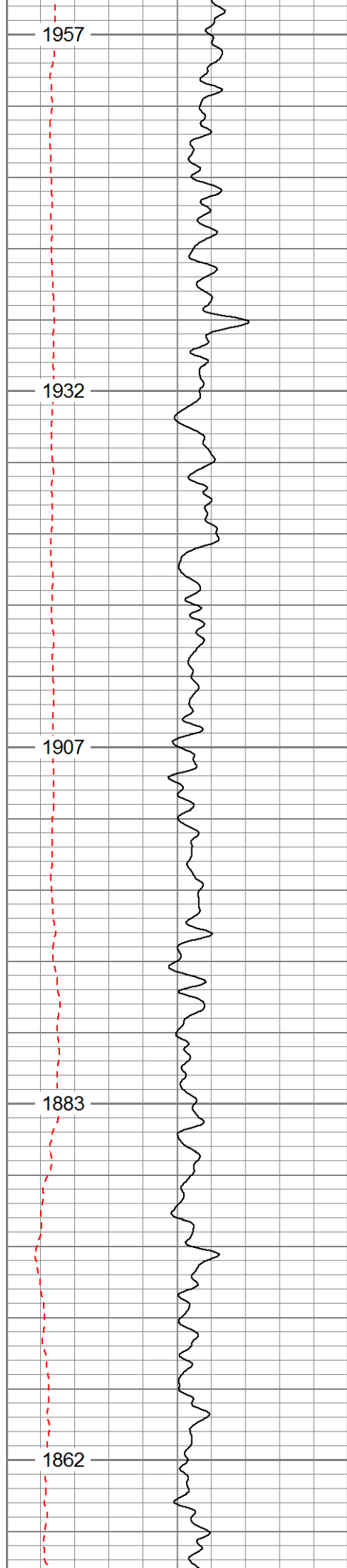




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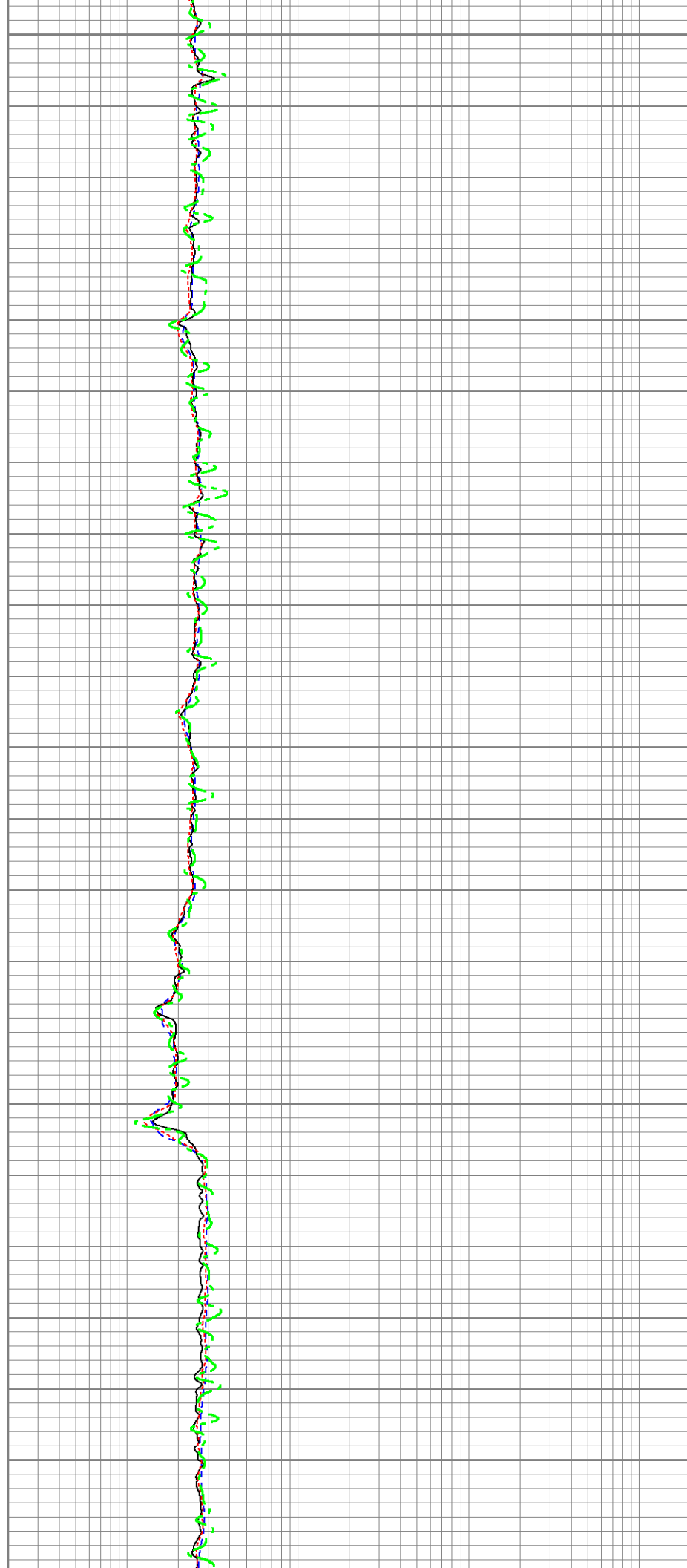
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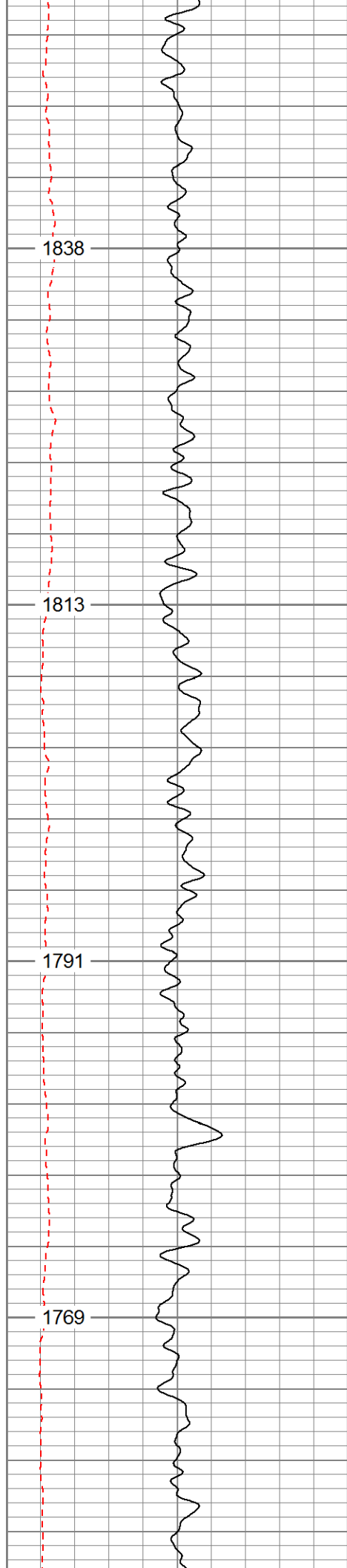




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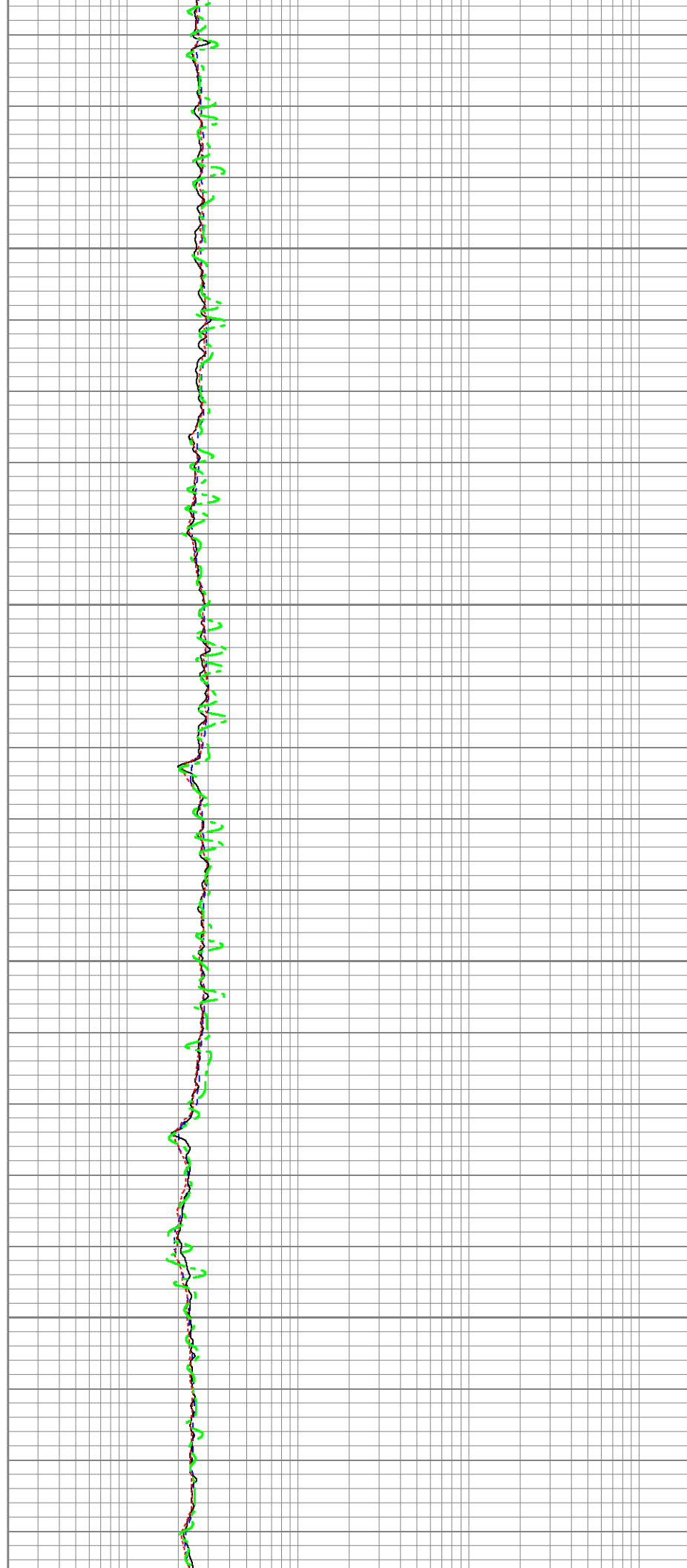
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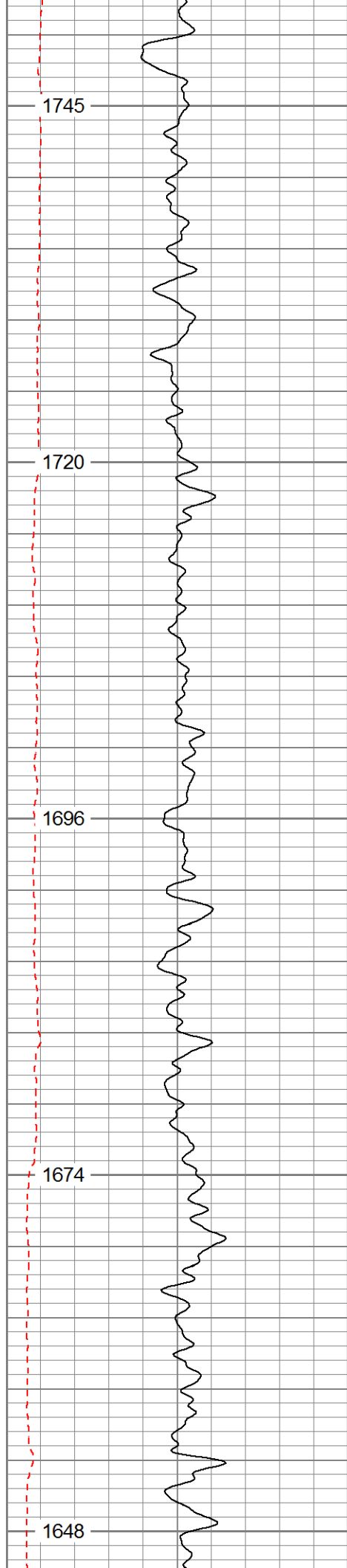




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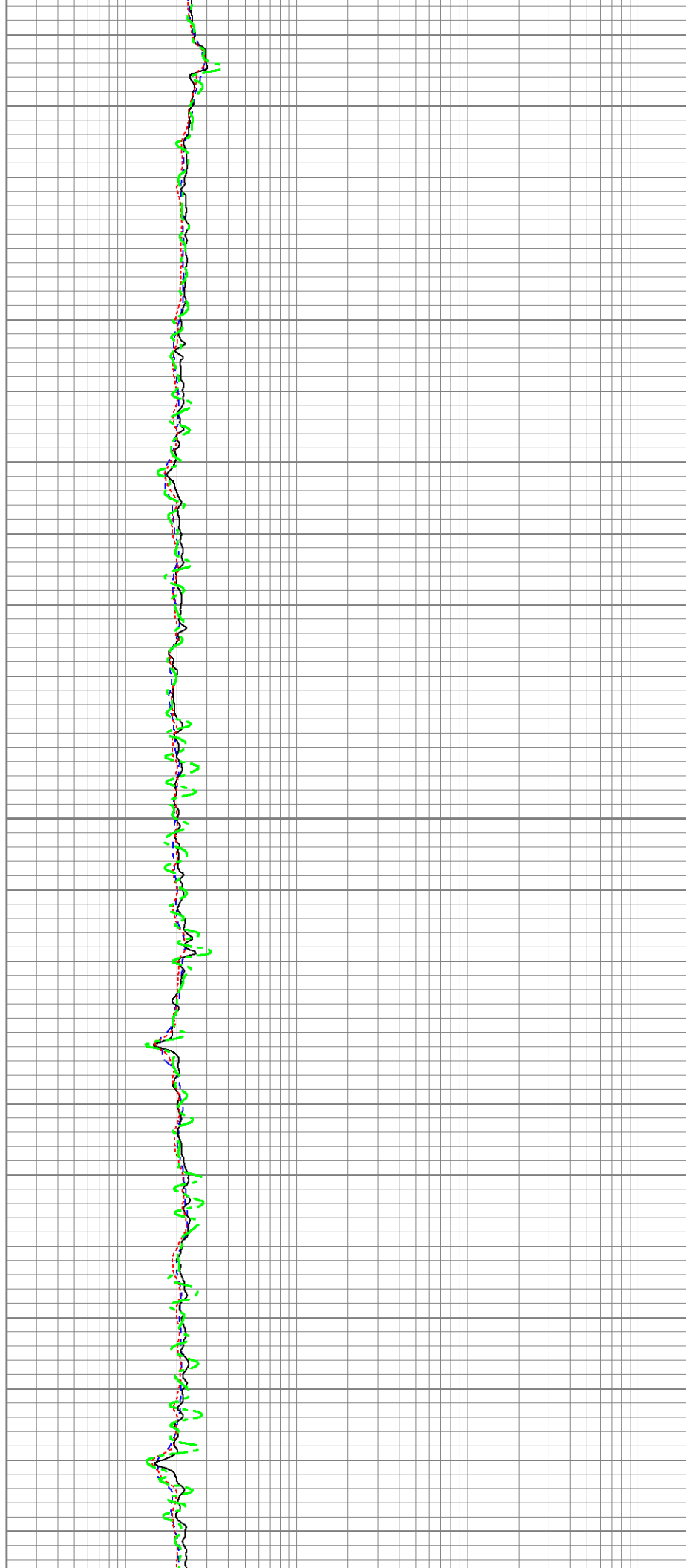


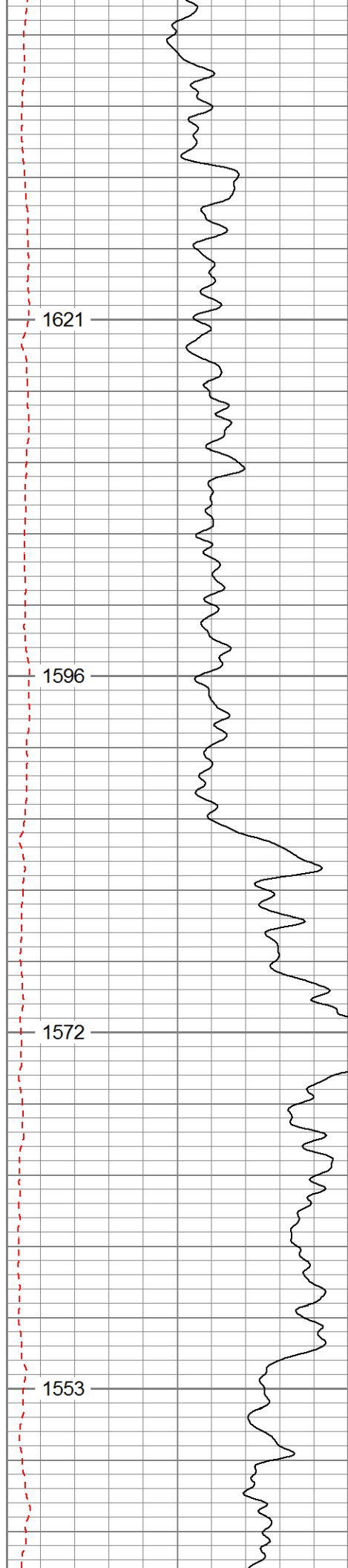


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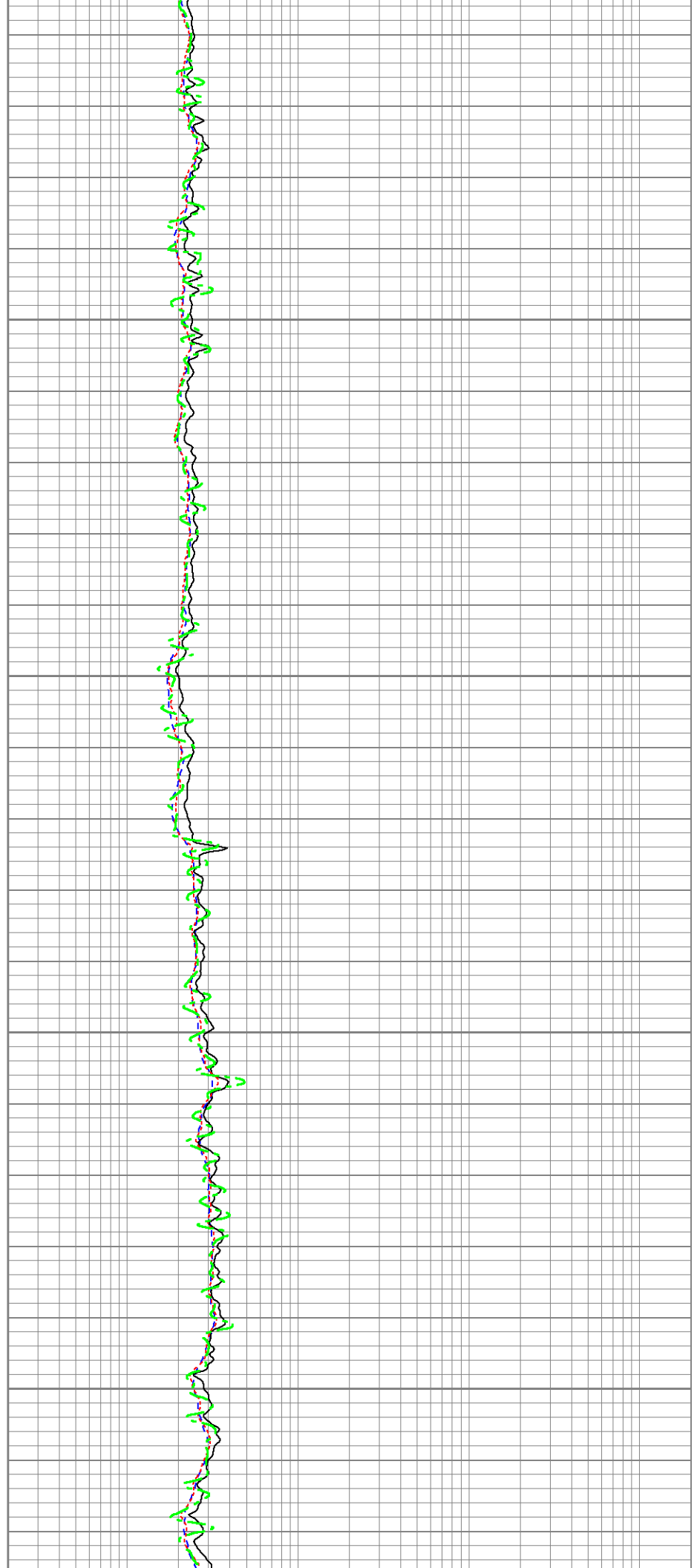
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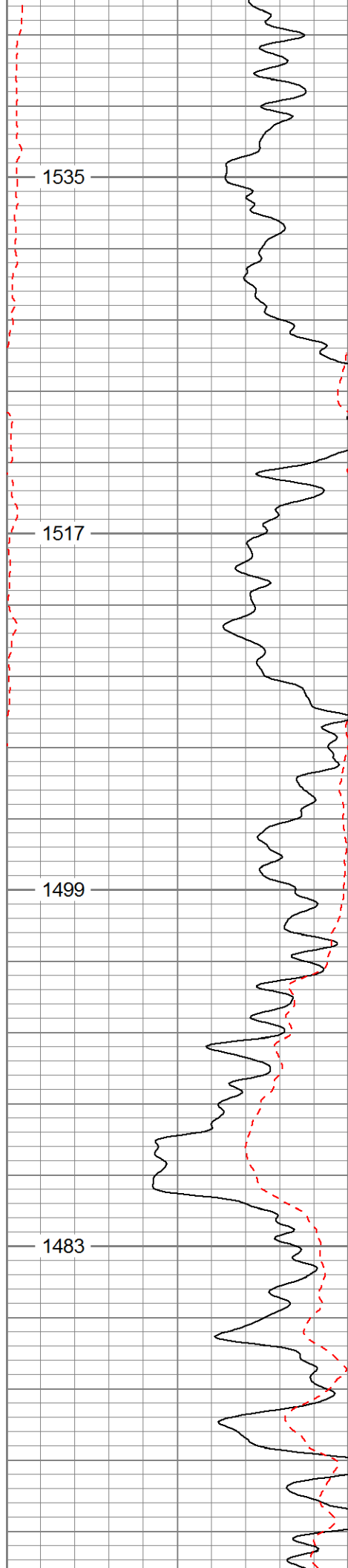




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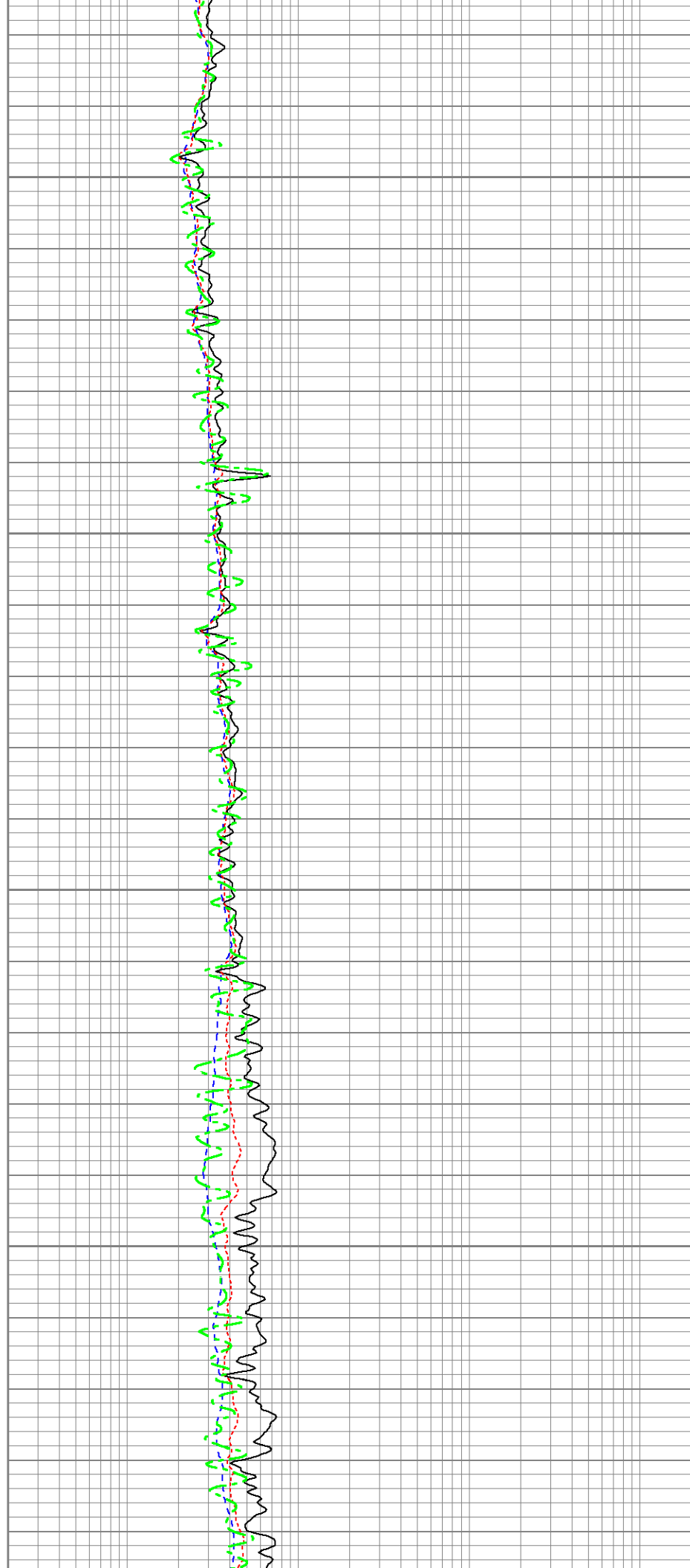
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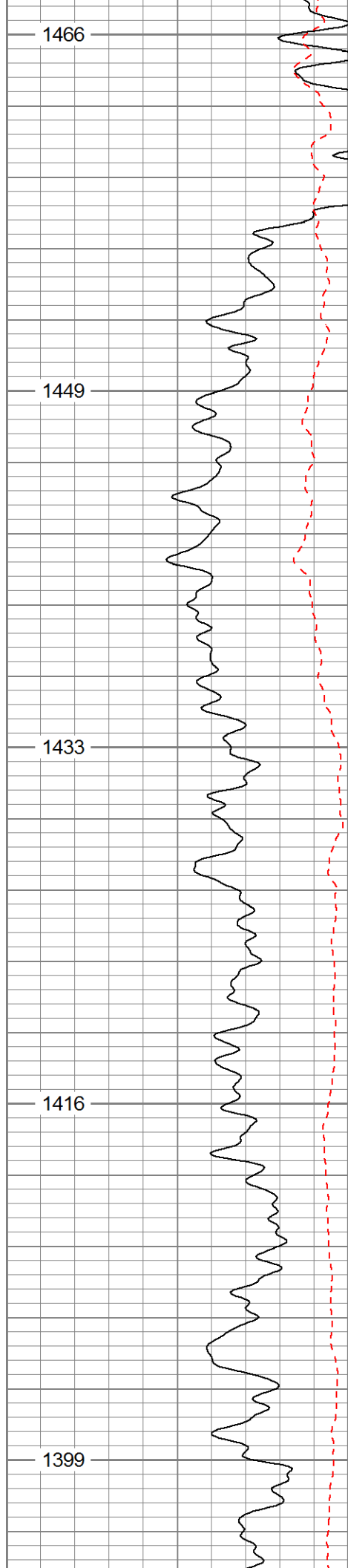


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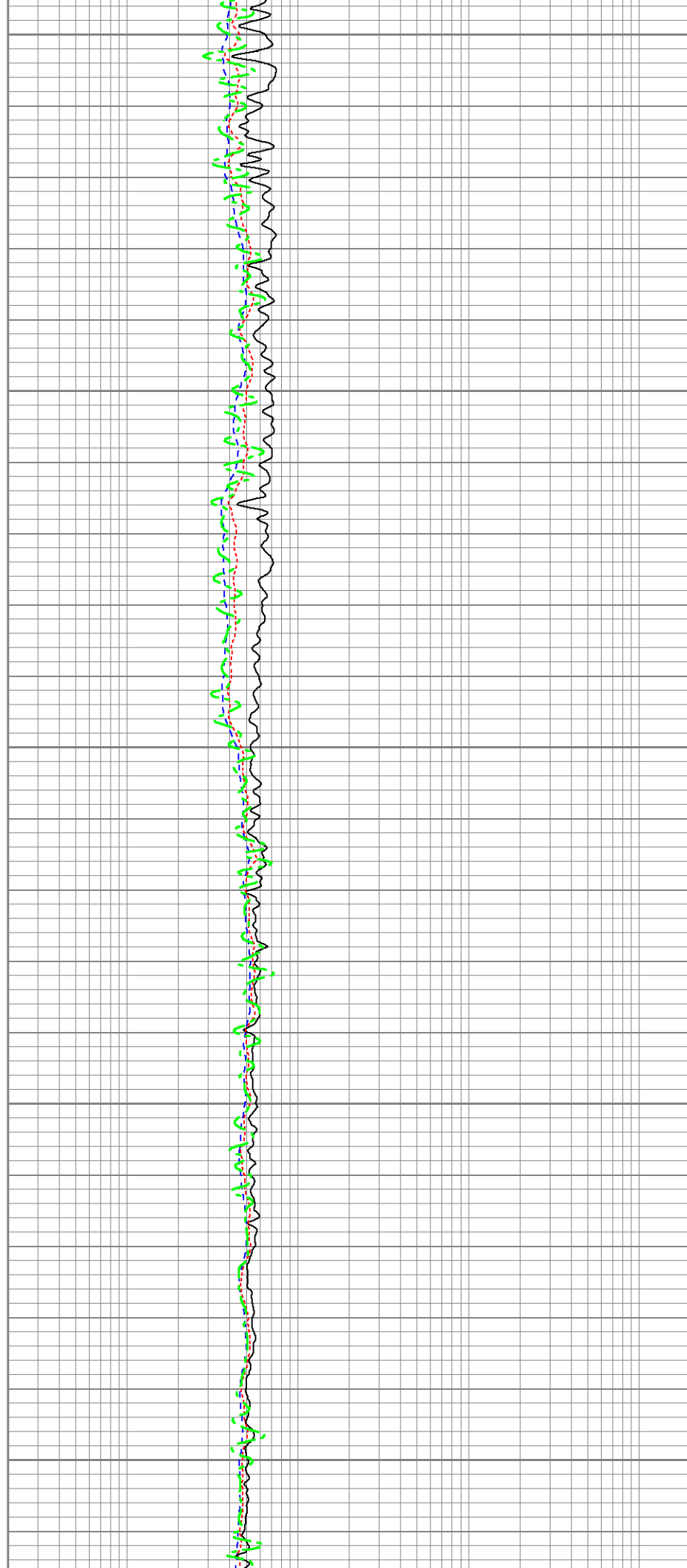


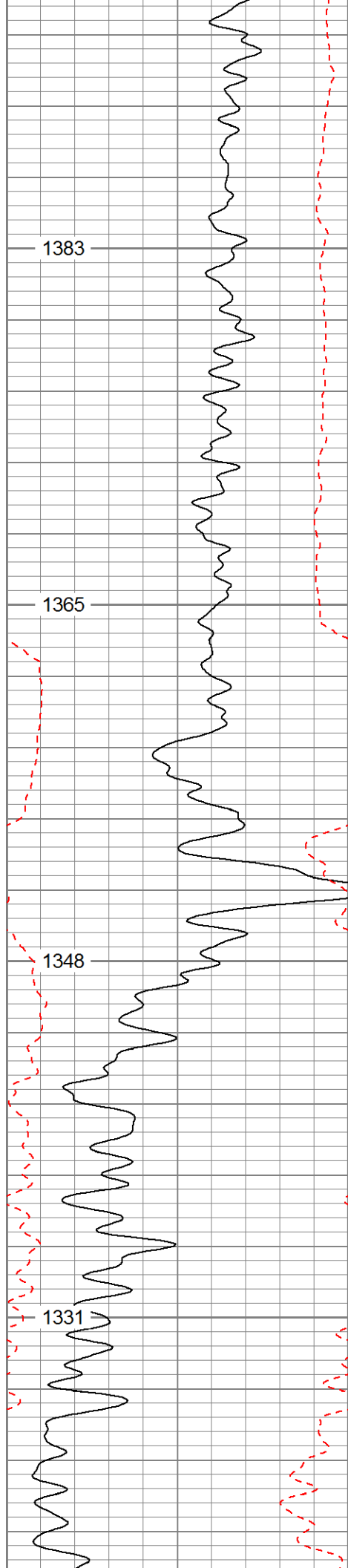




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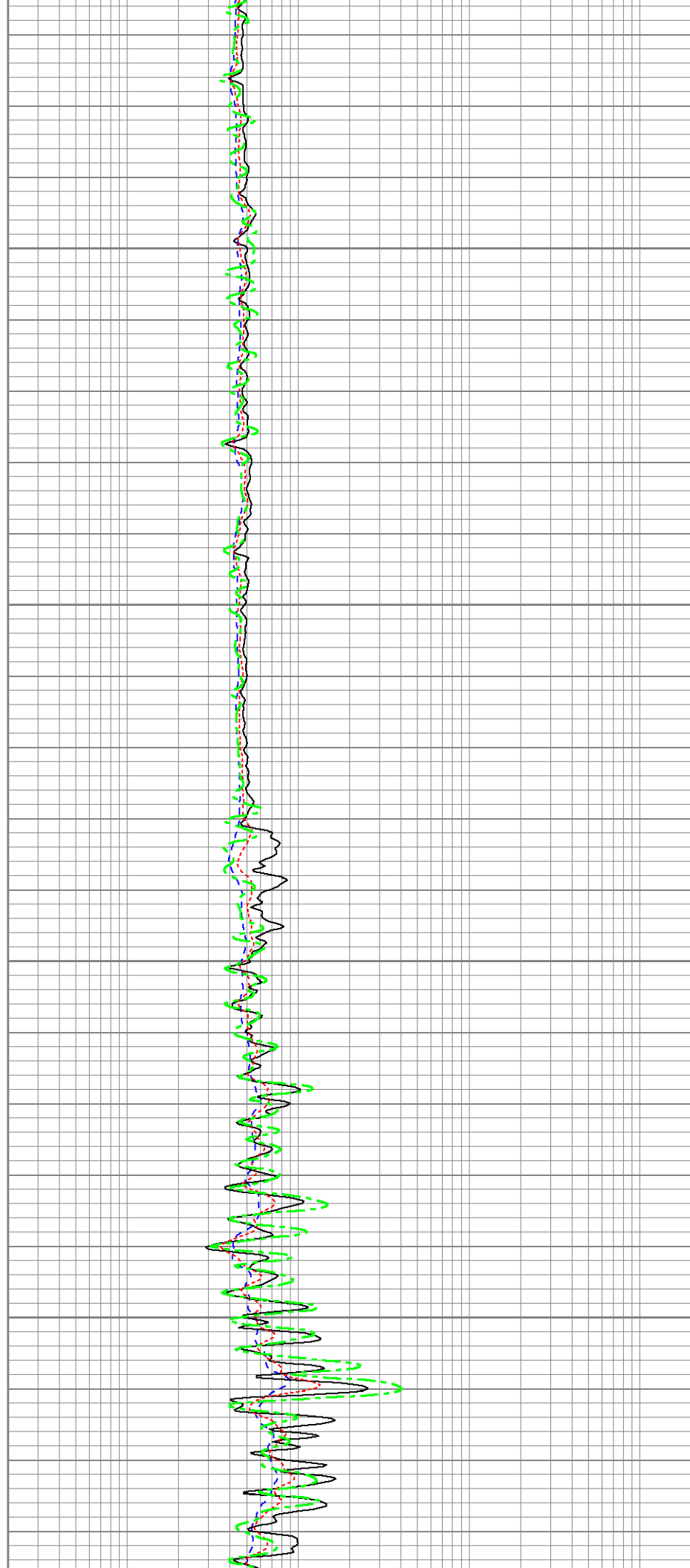
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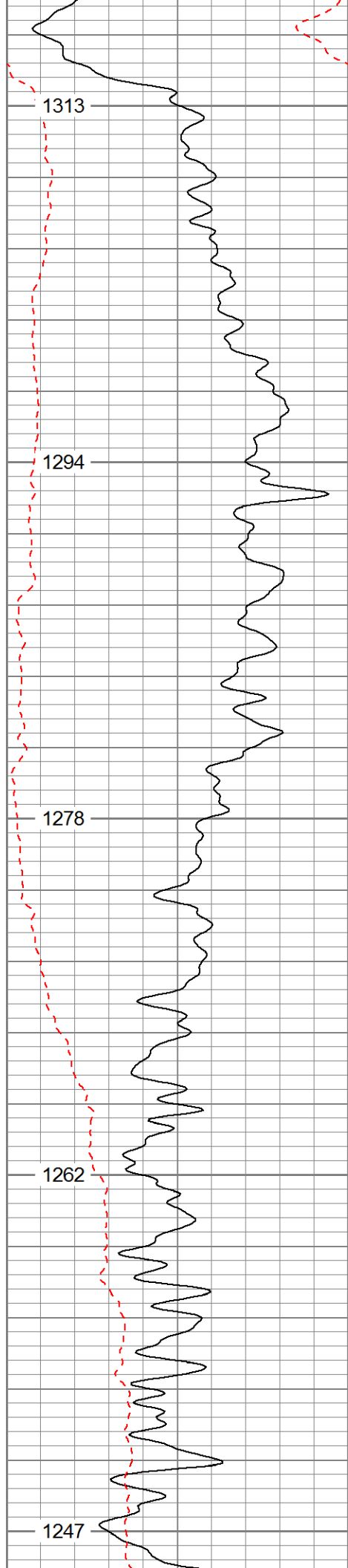




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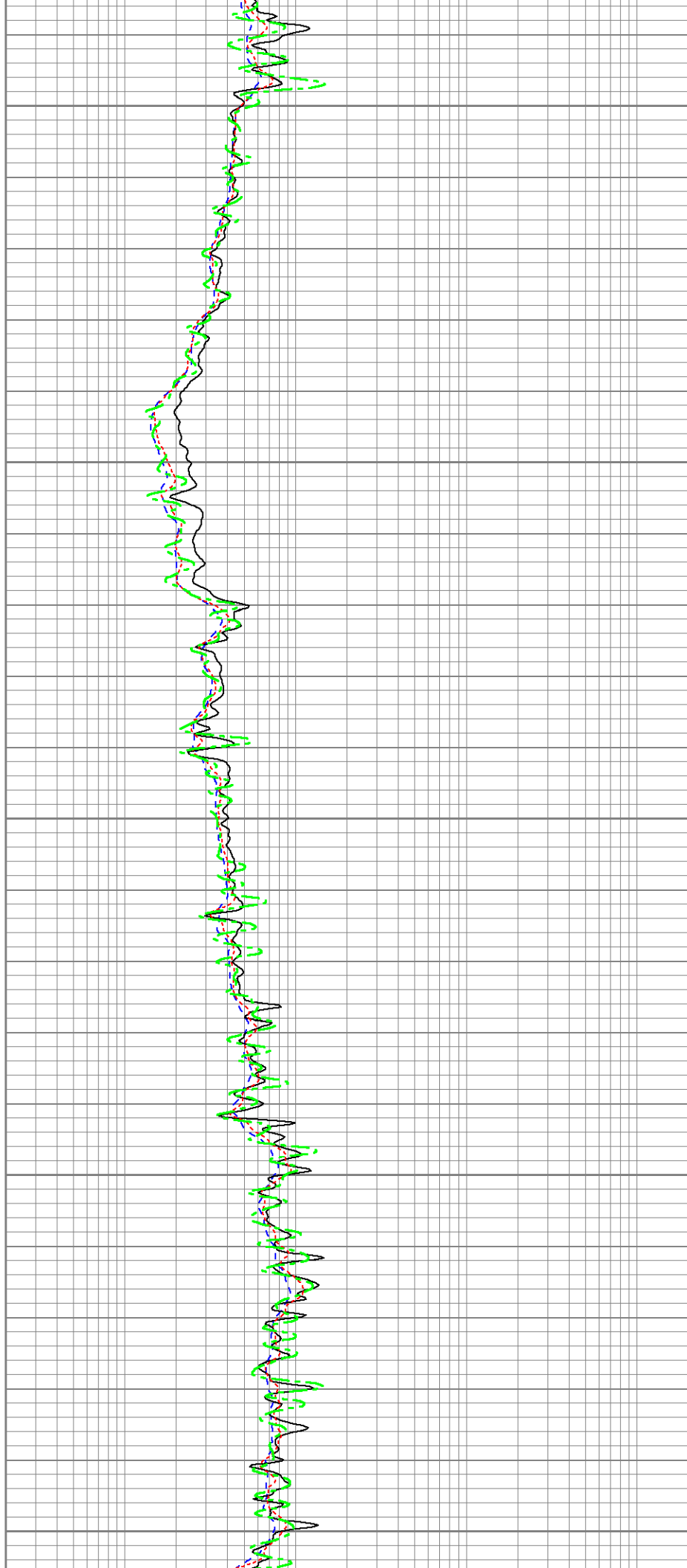


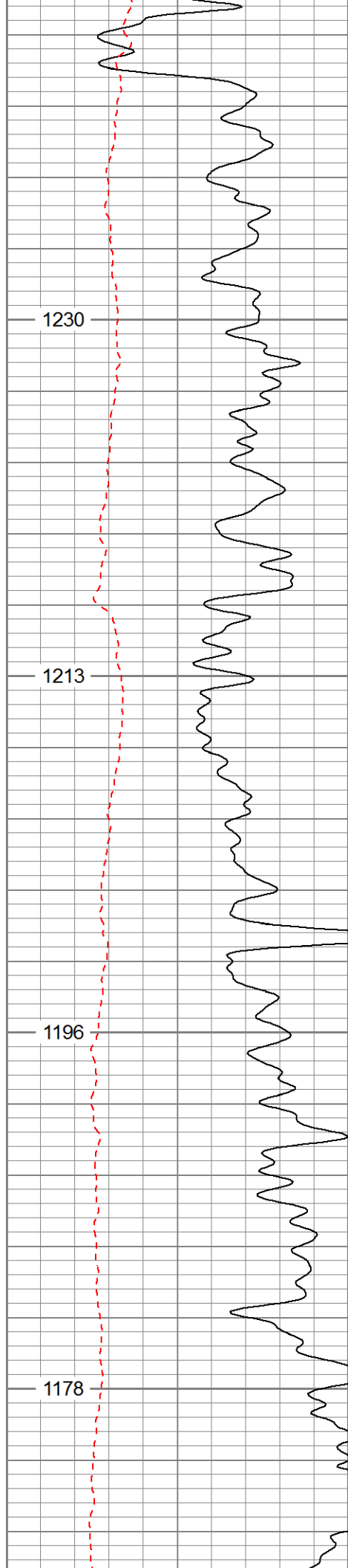


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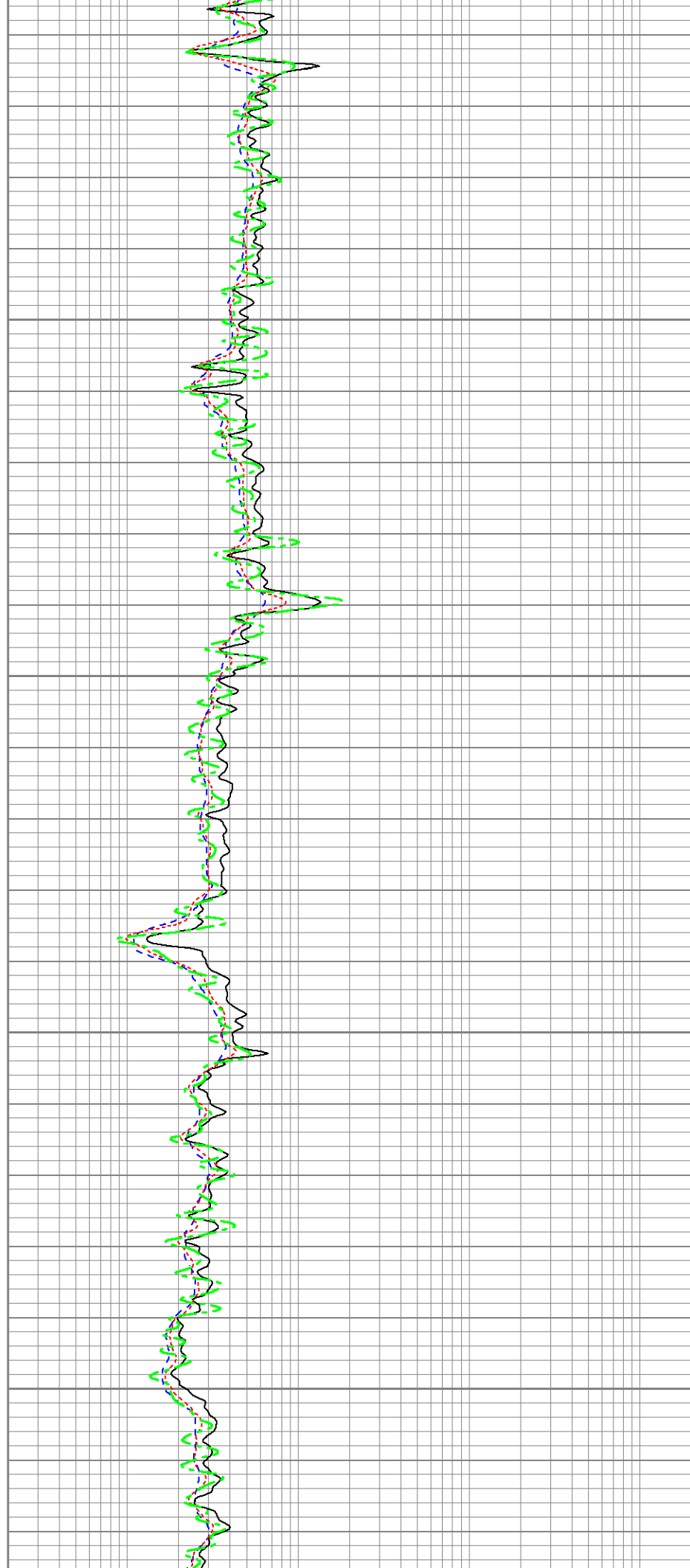
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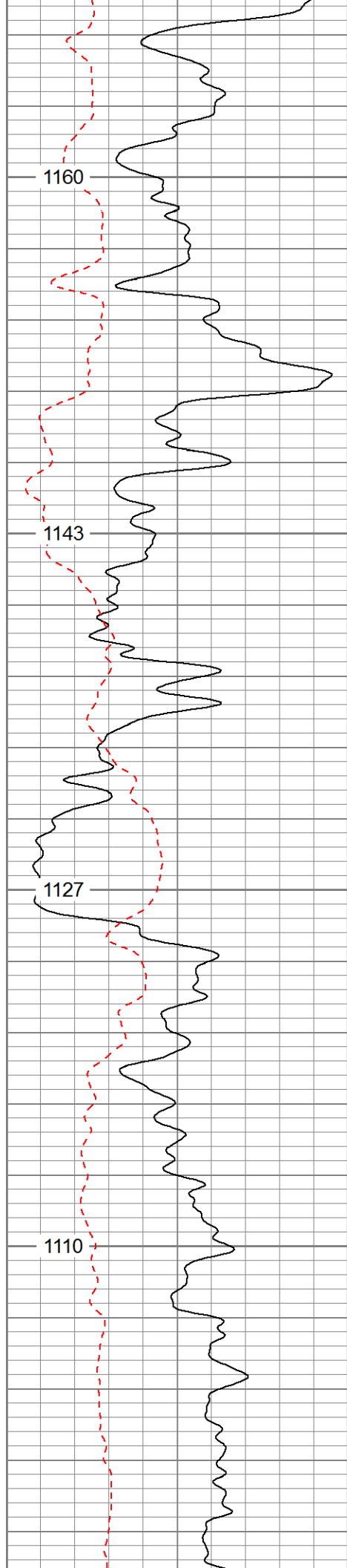




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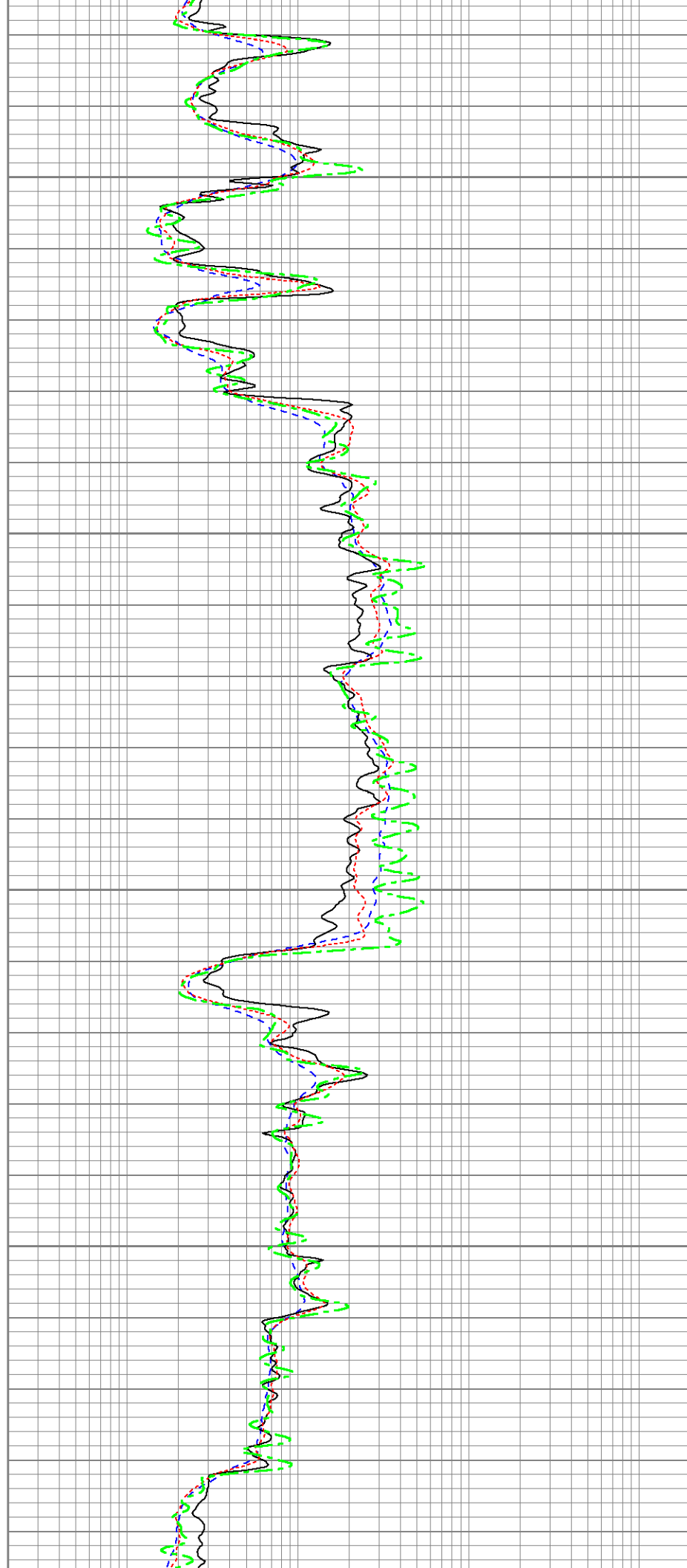
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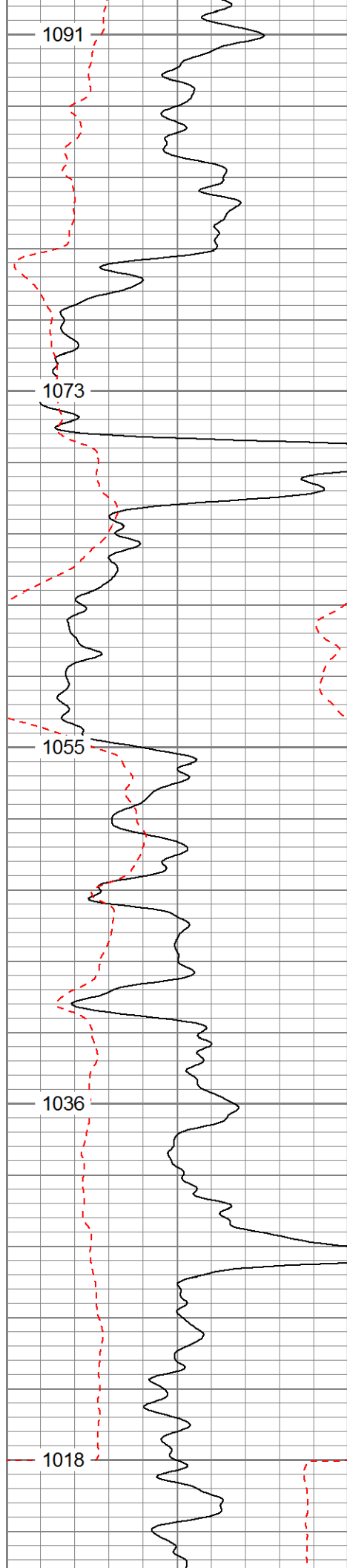




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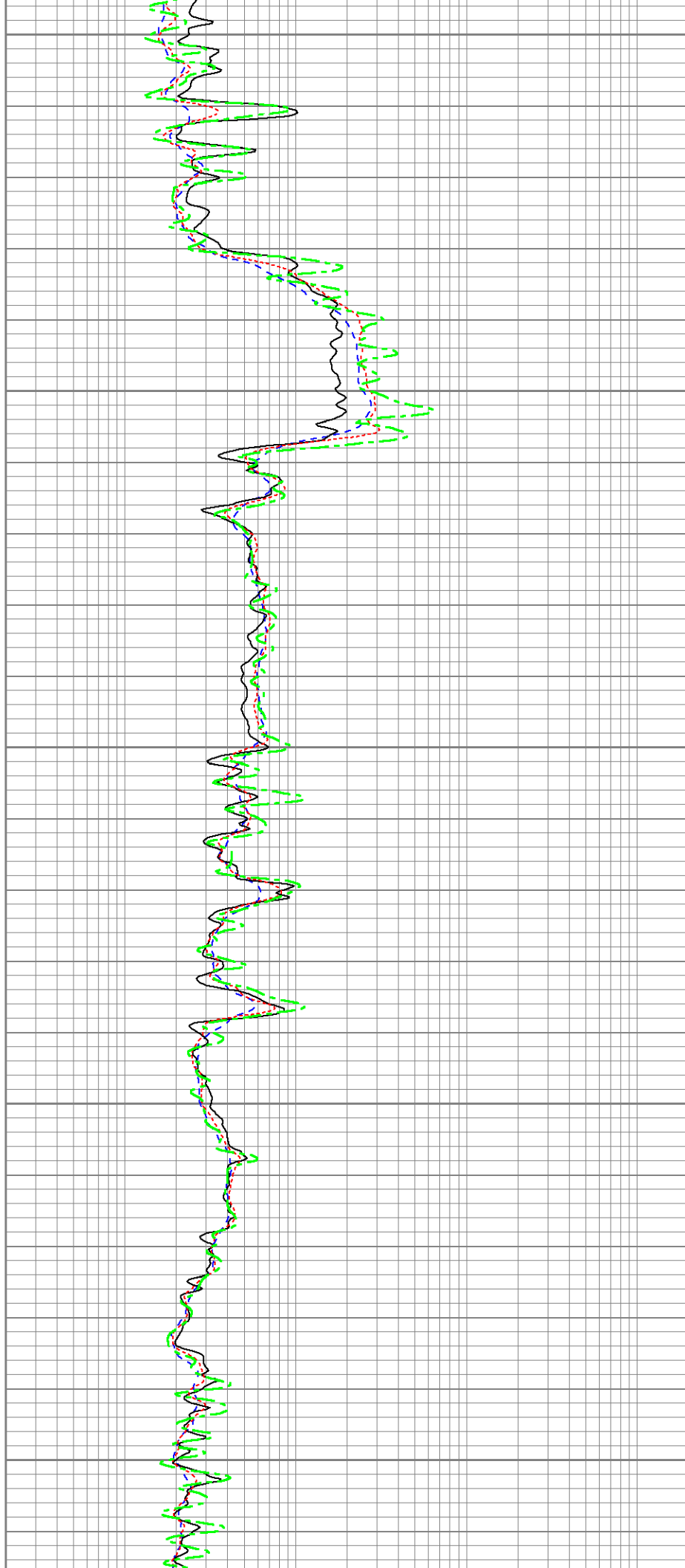
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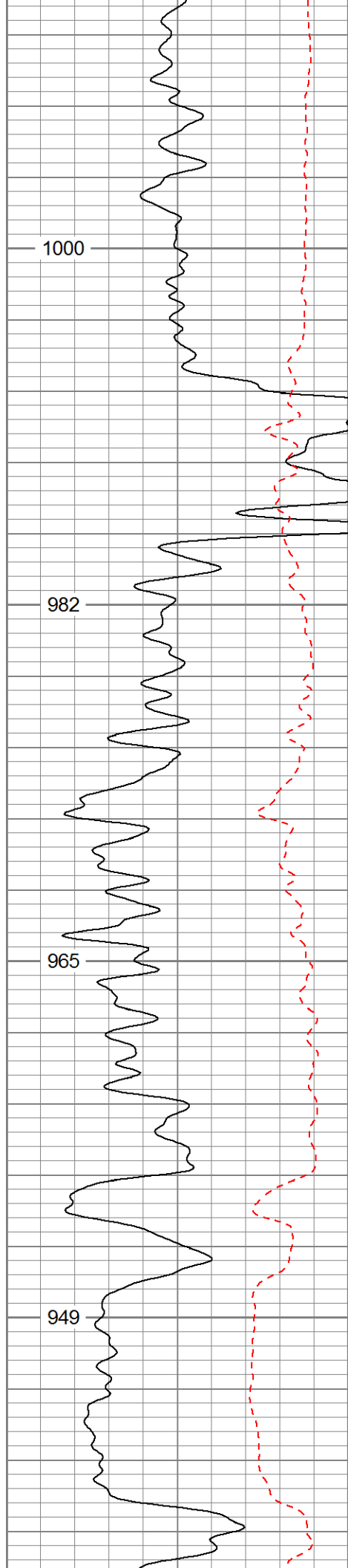




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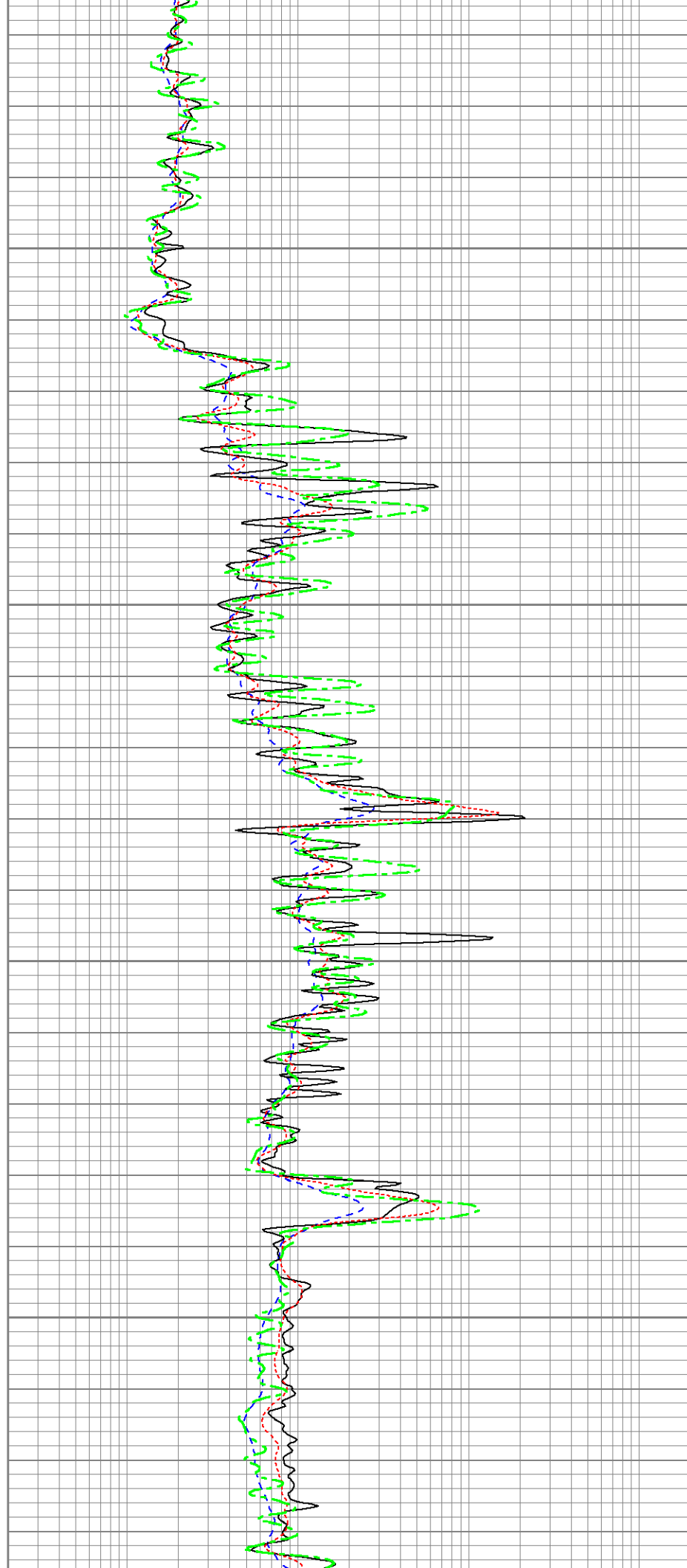
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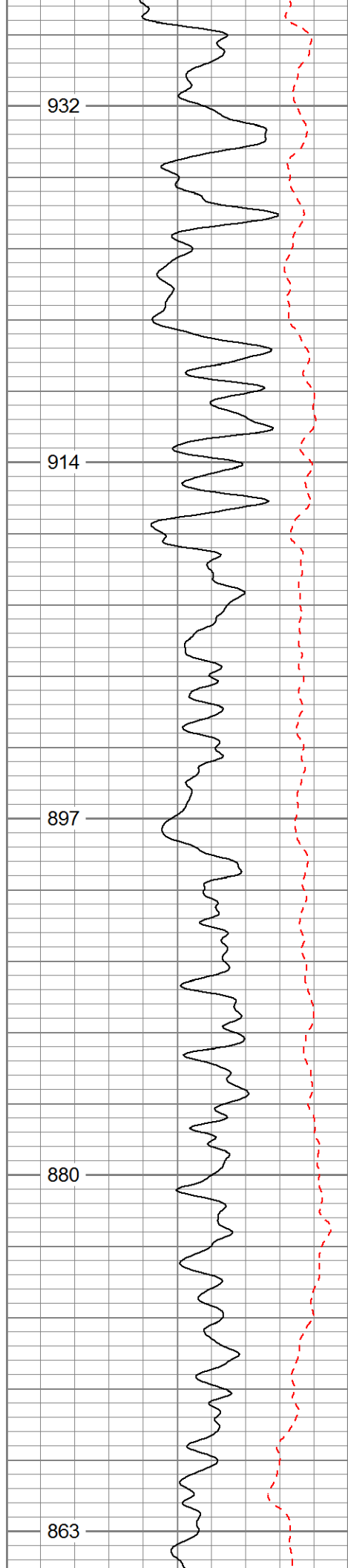




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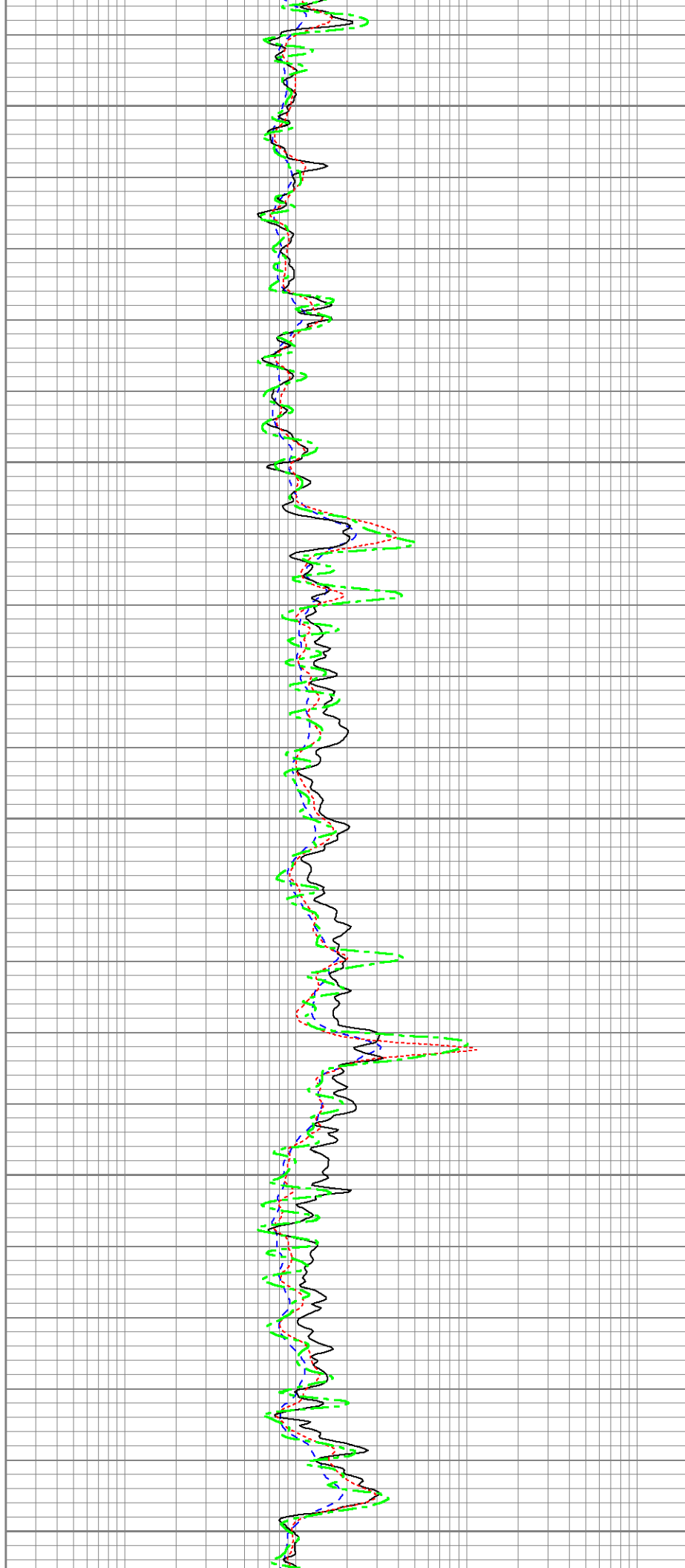




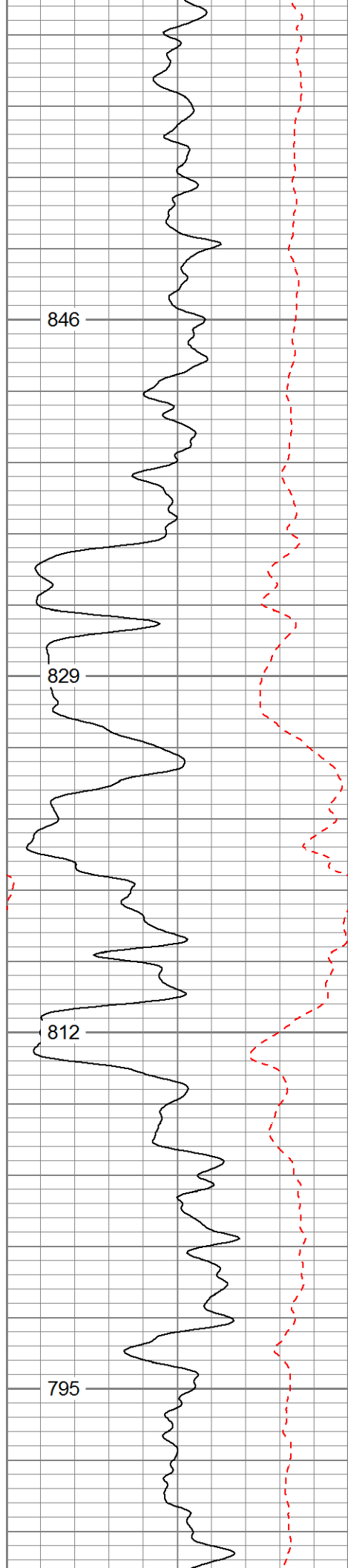
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5100

5200

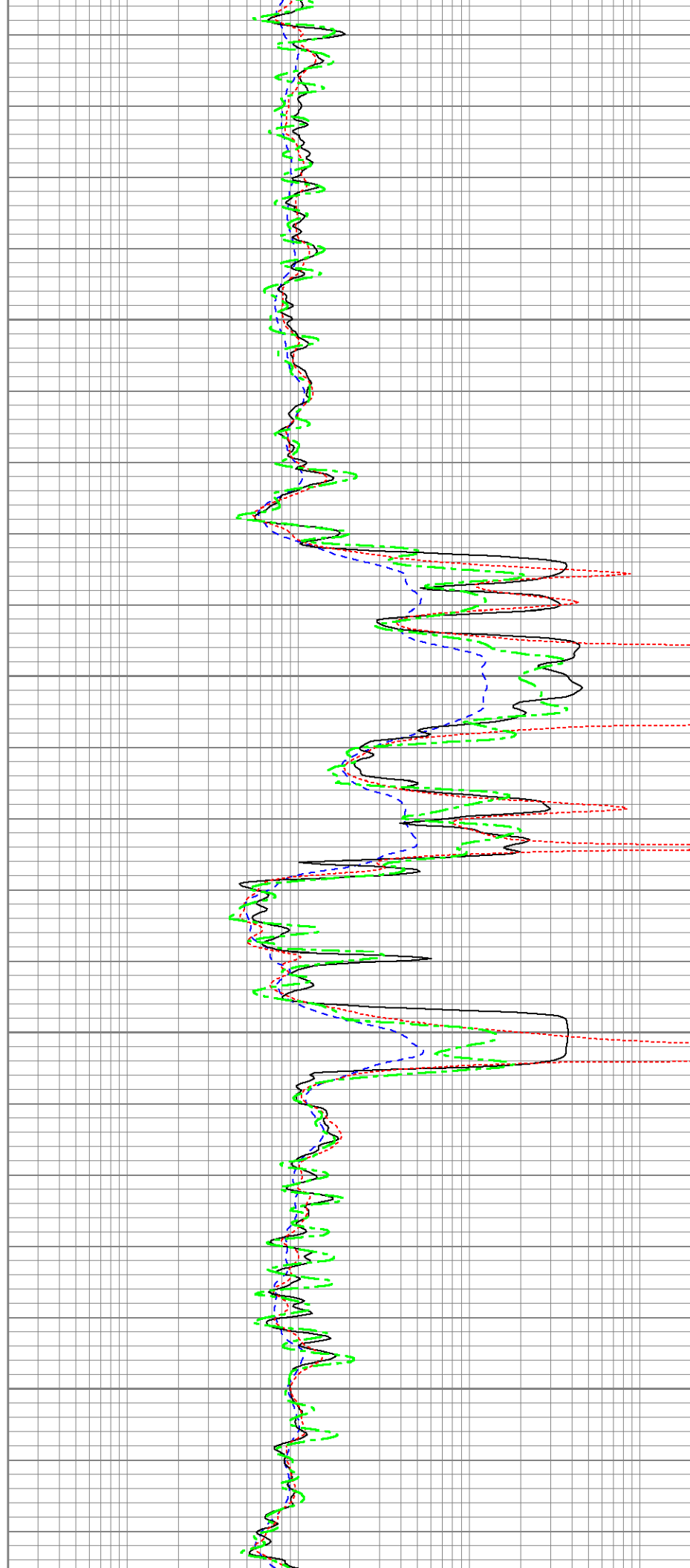


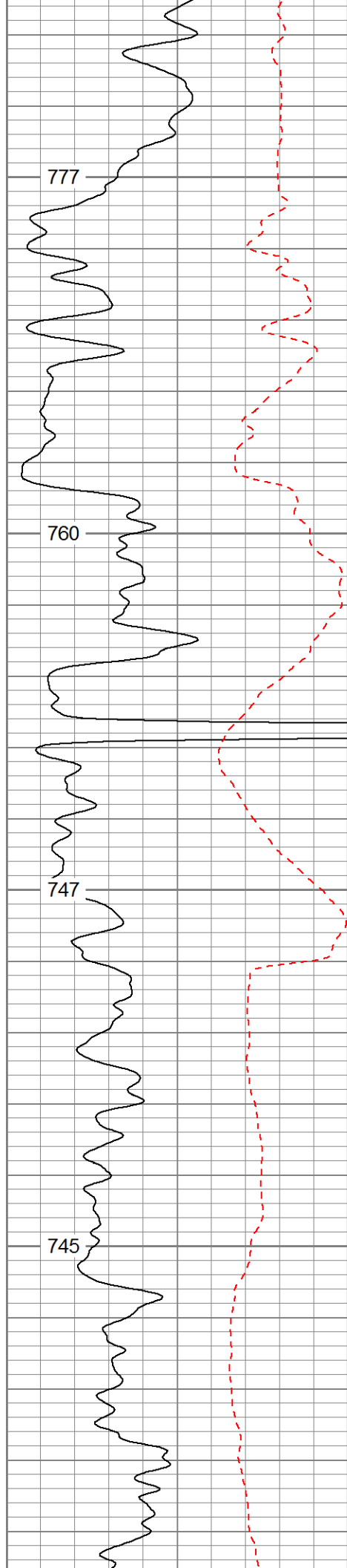




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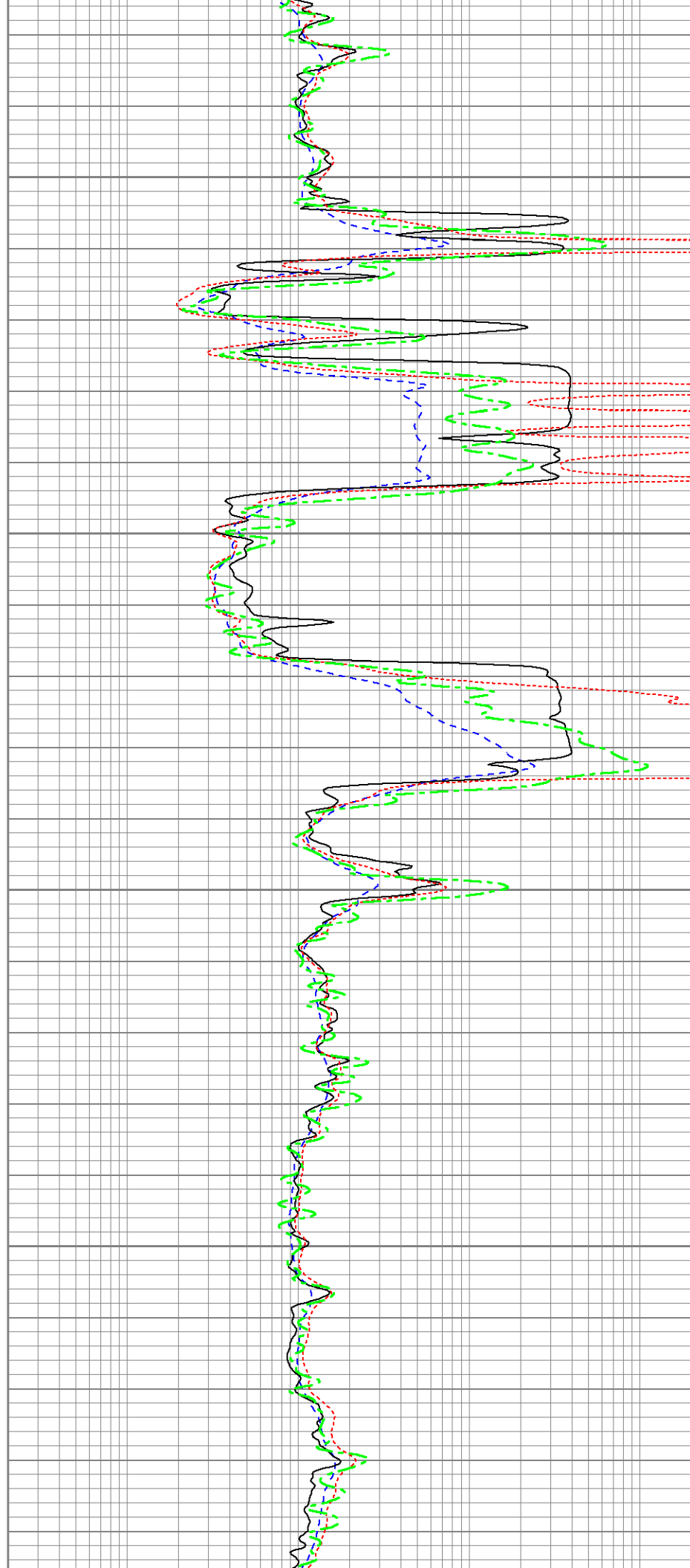
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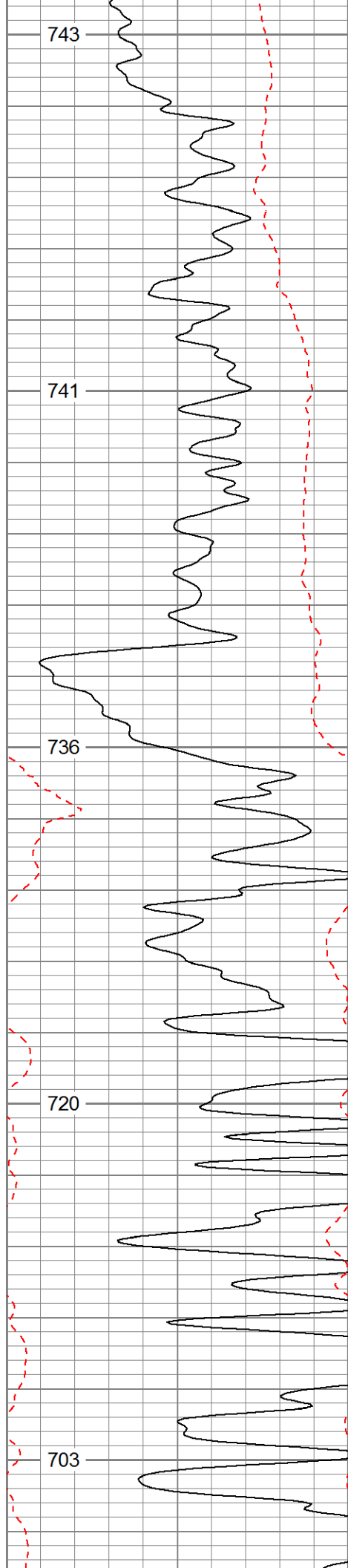




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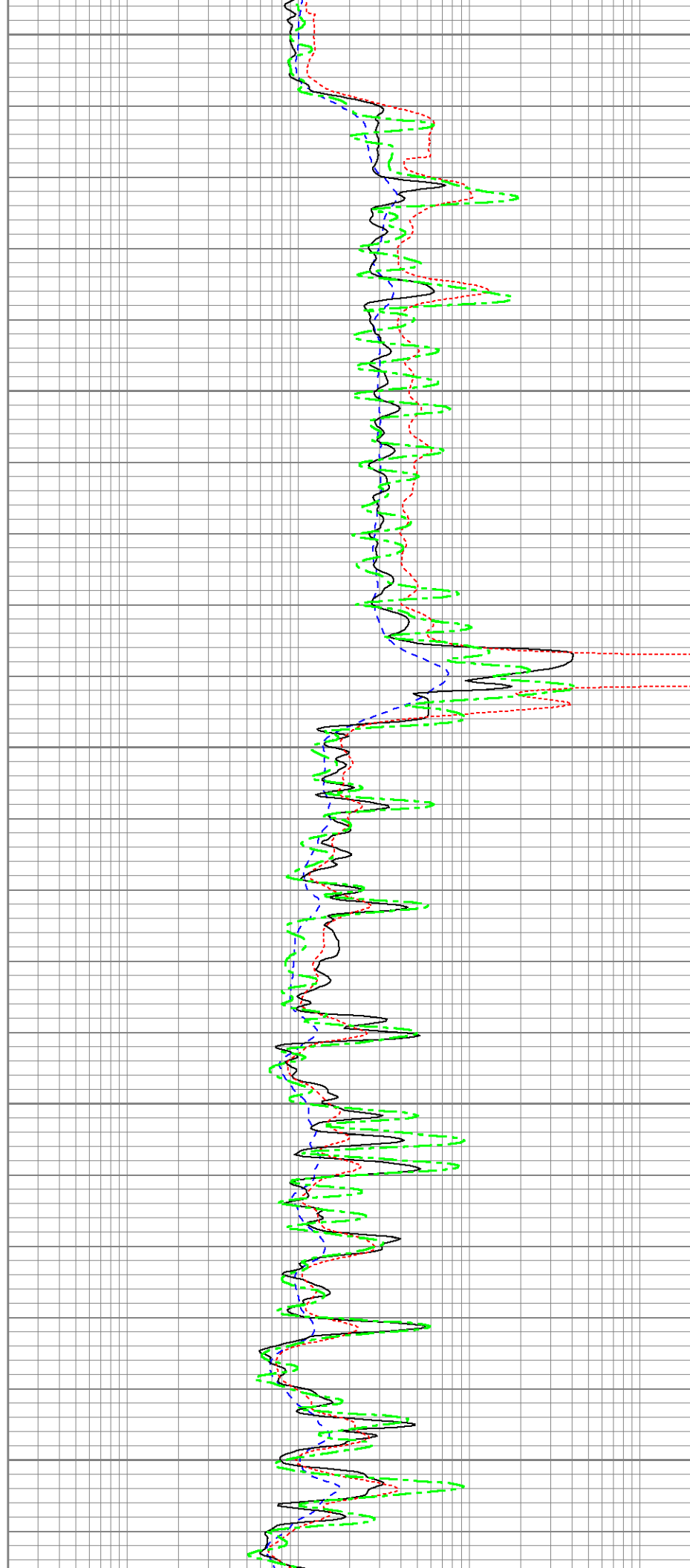
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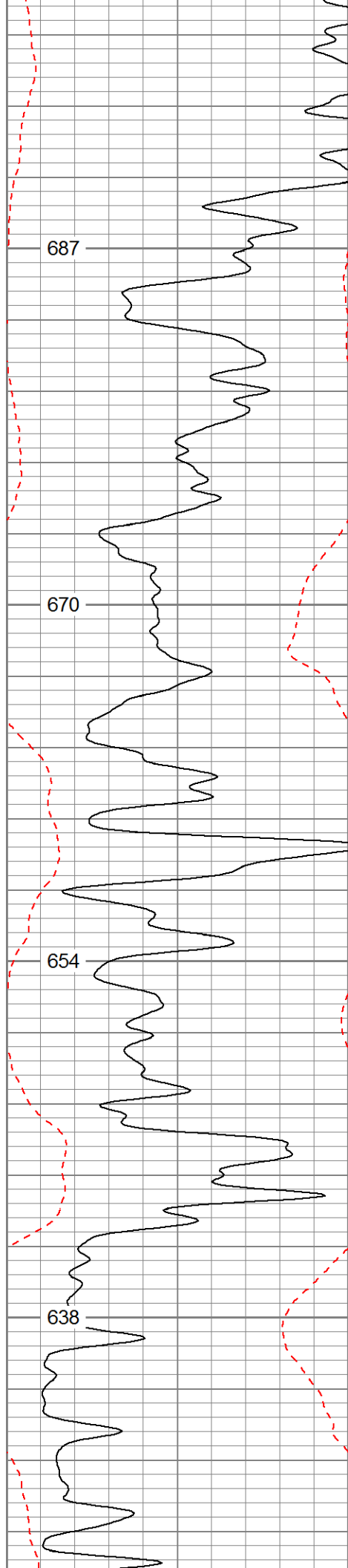




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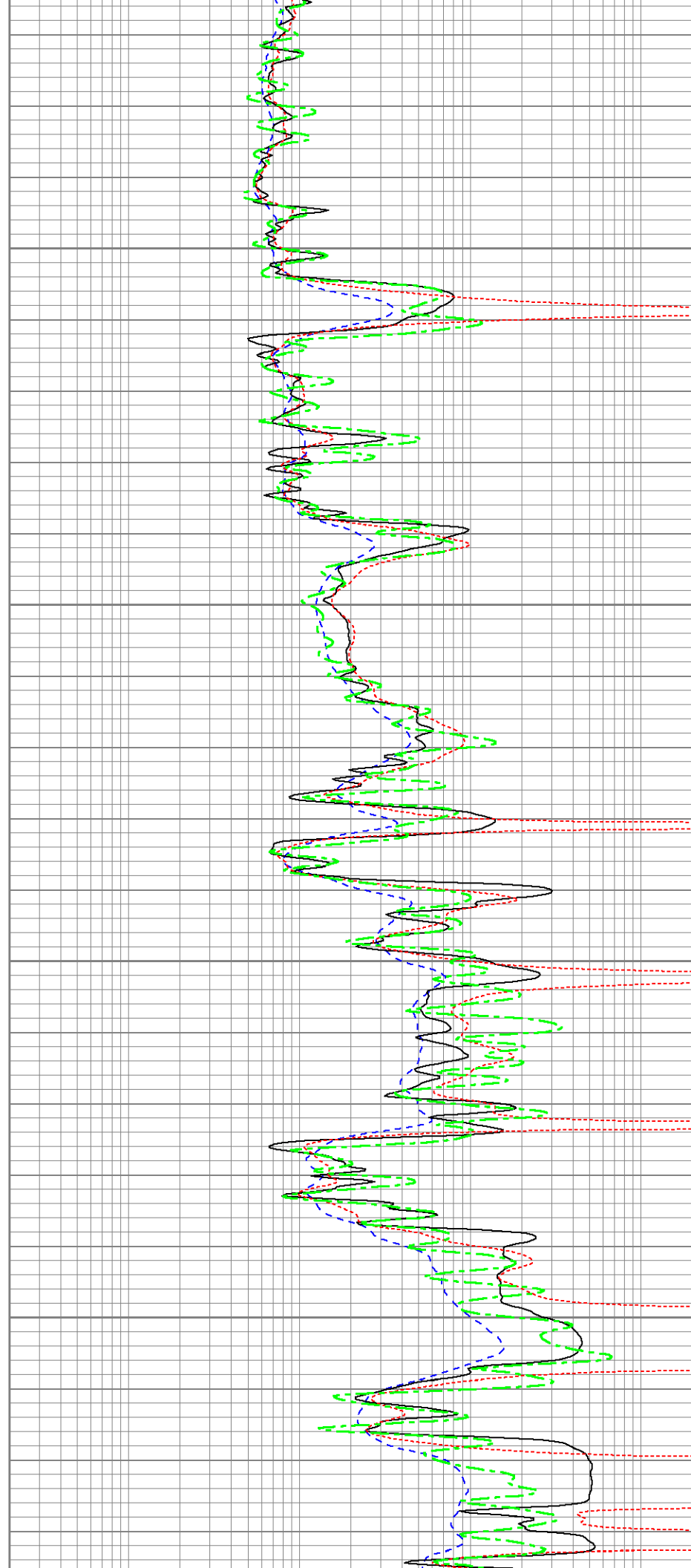
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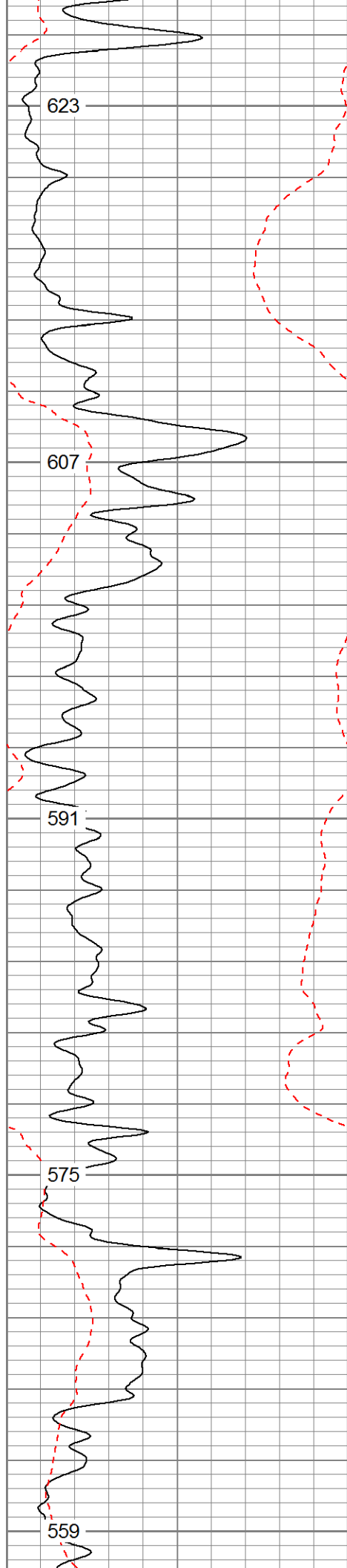




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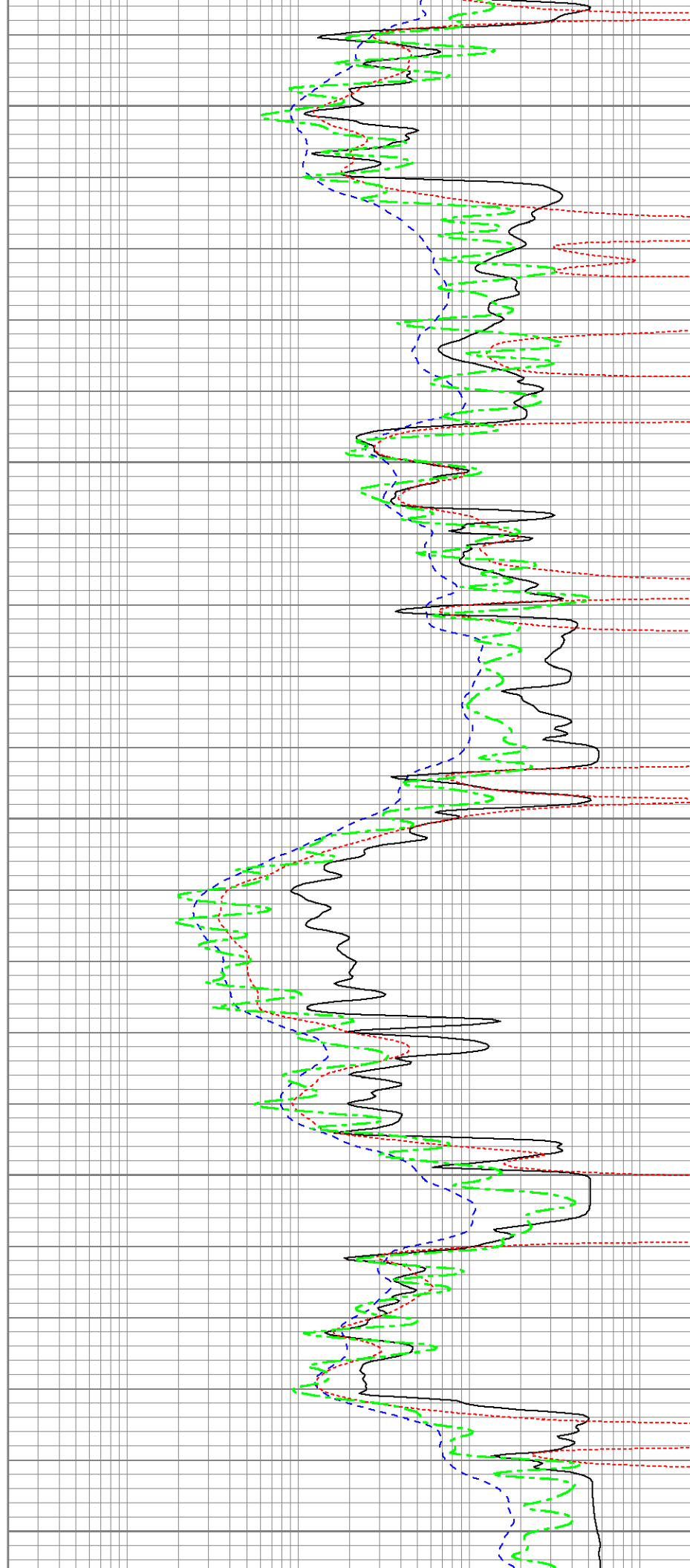


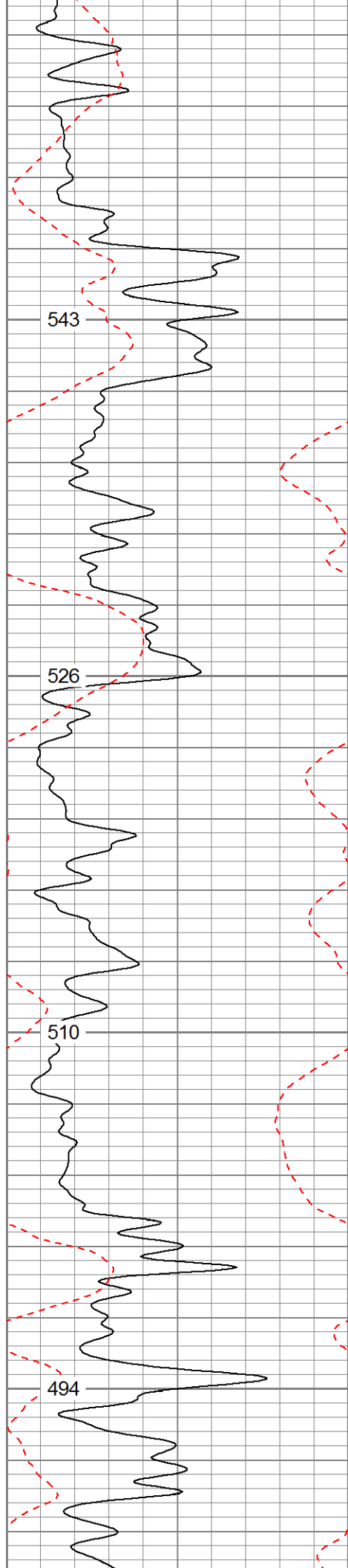


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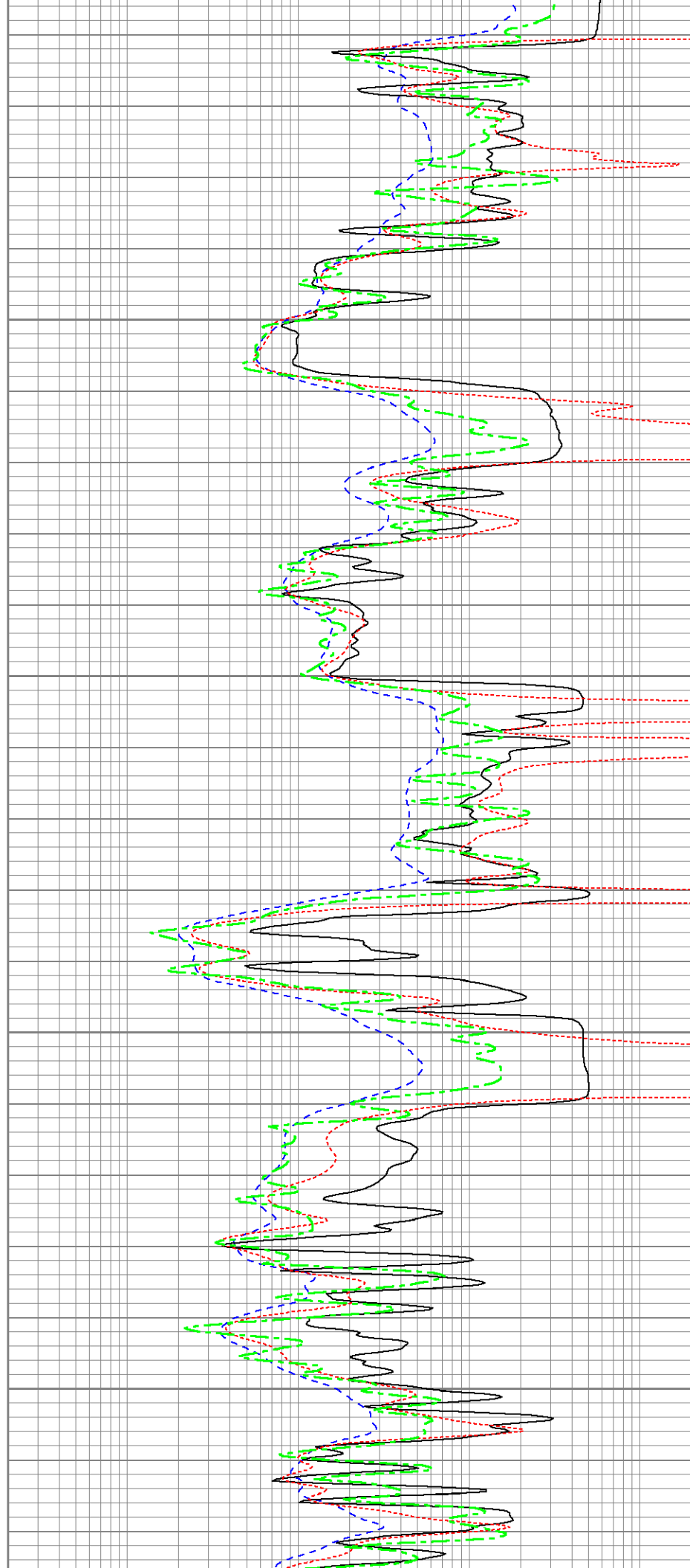
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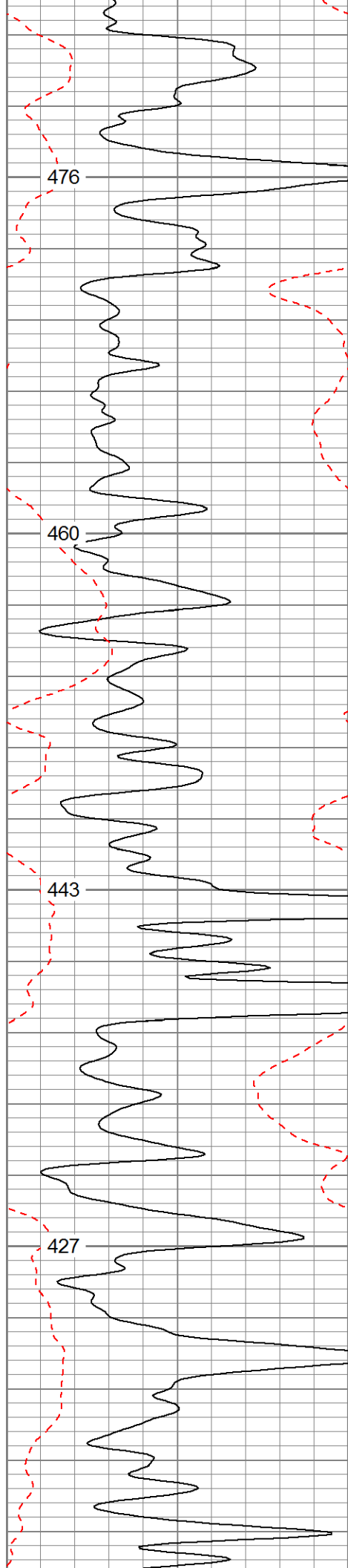




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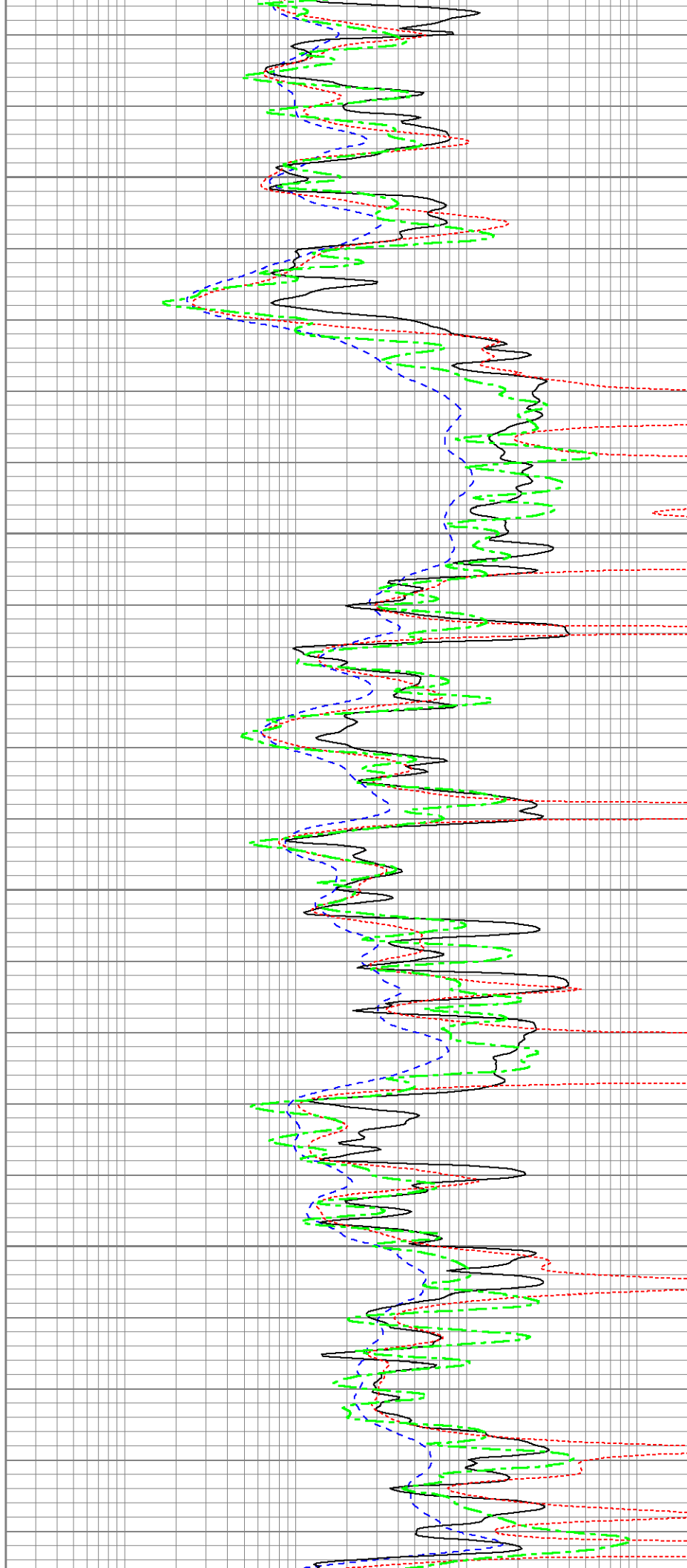
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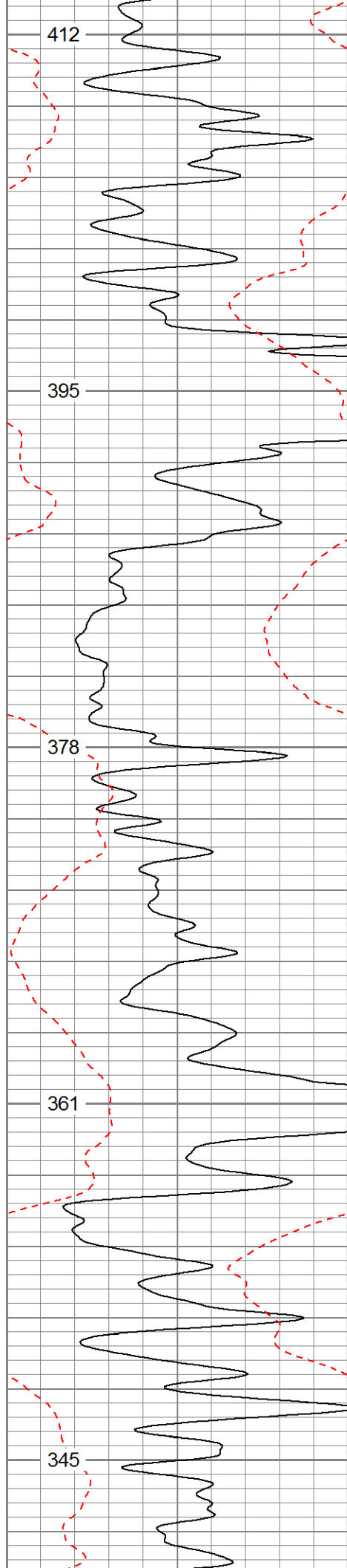




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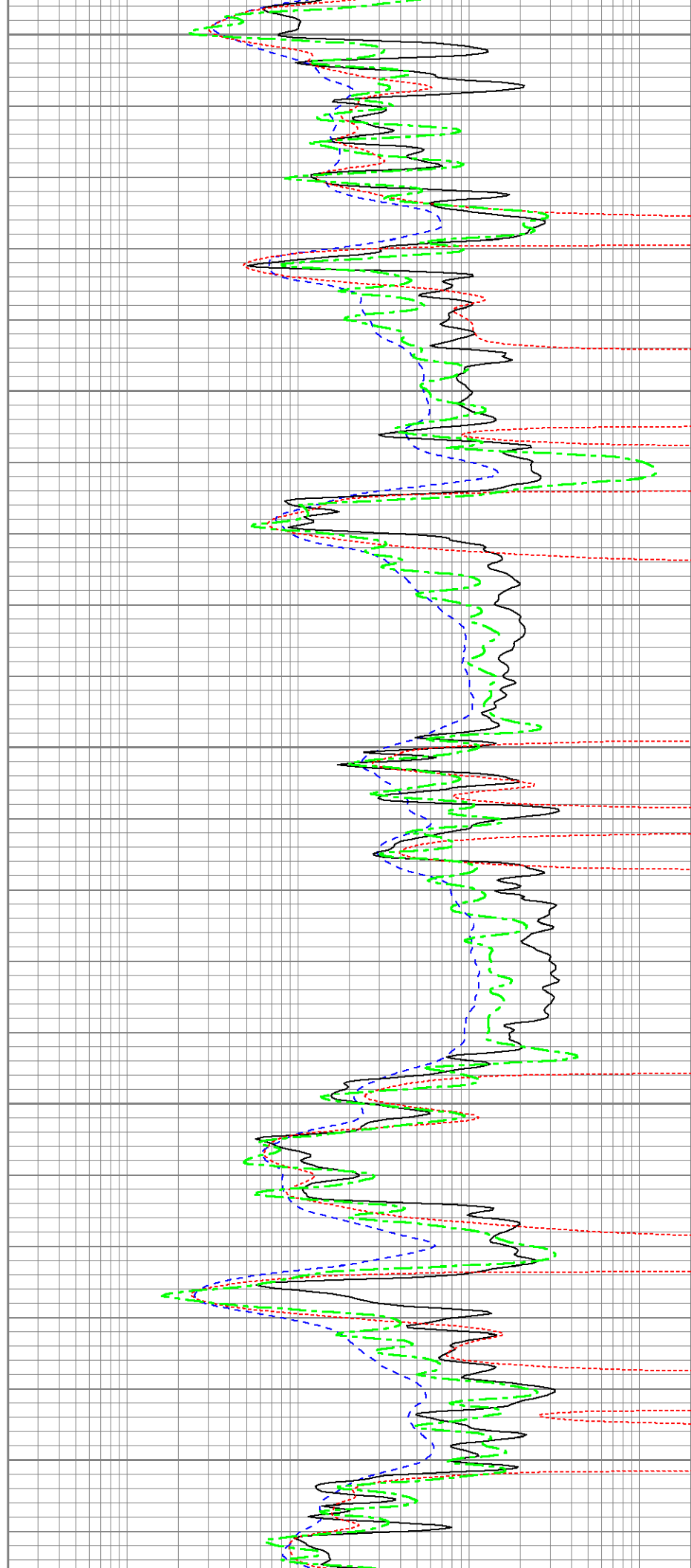
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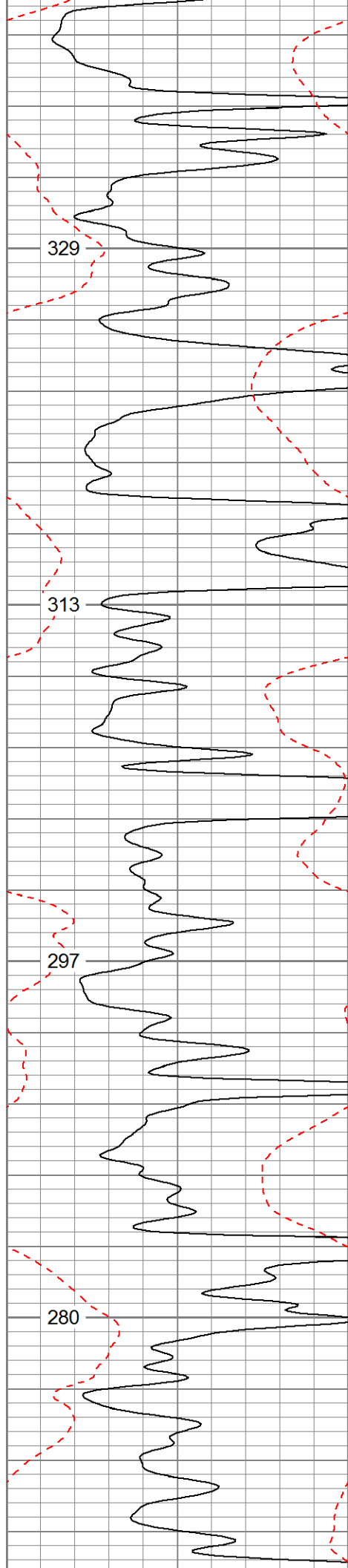


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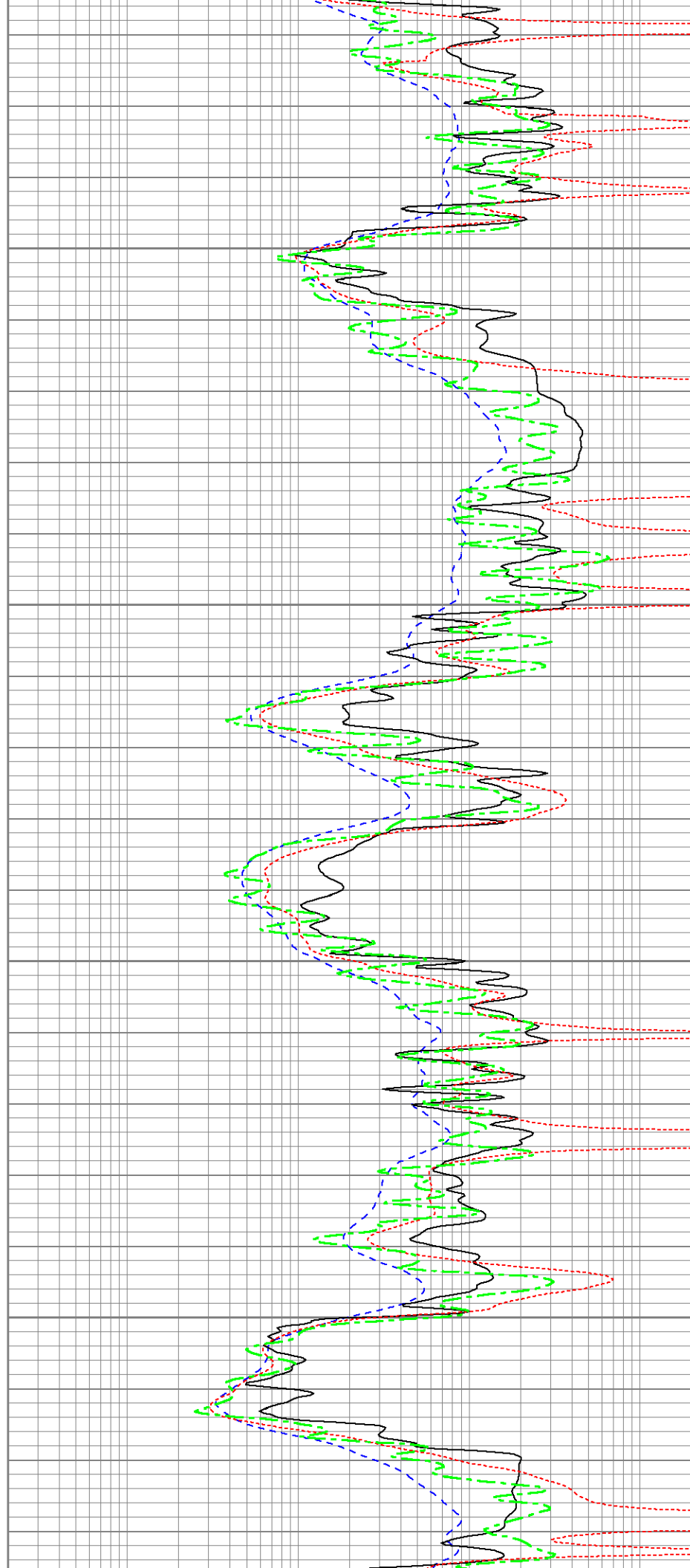


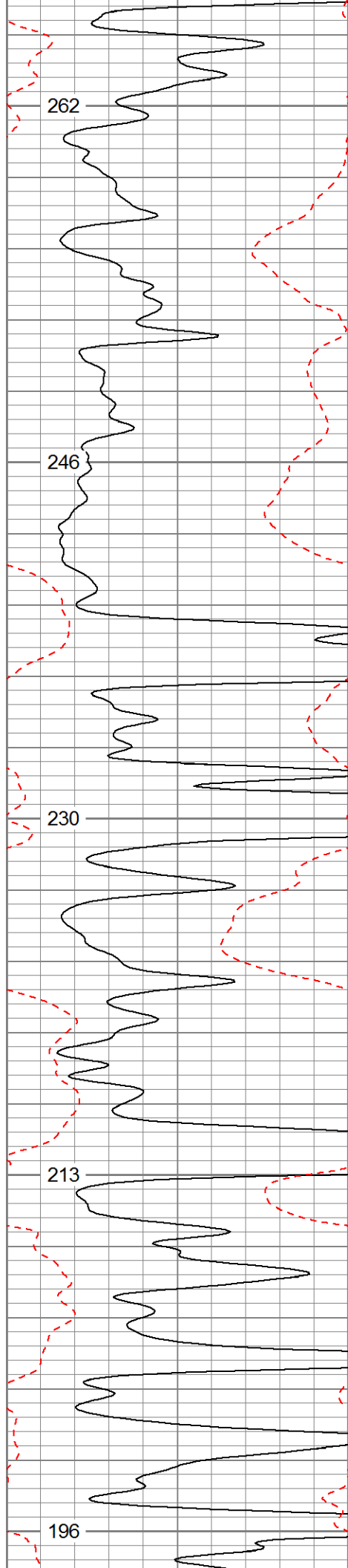




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7100

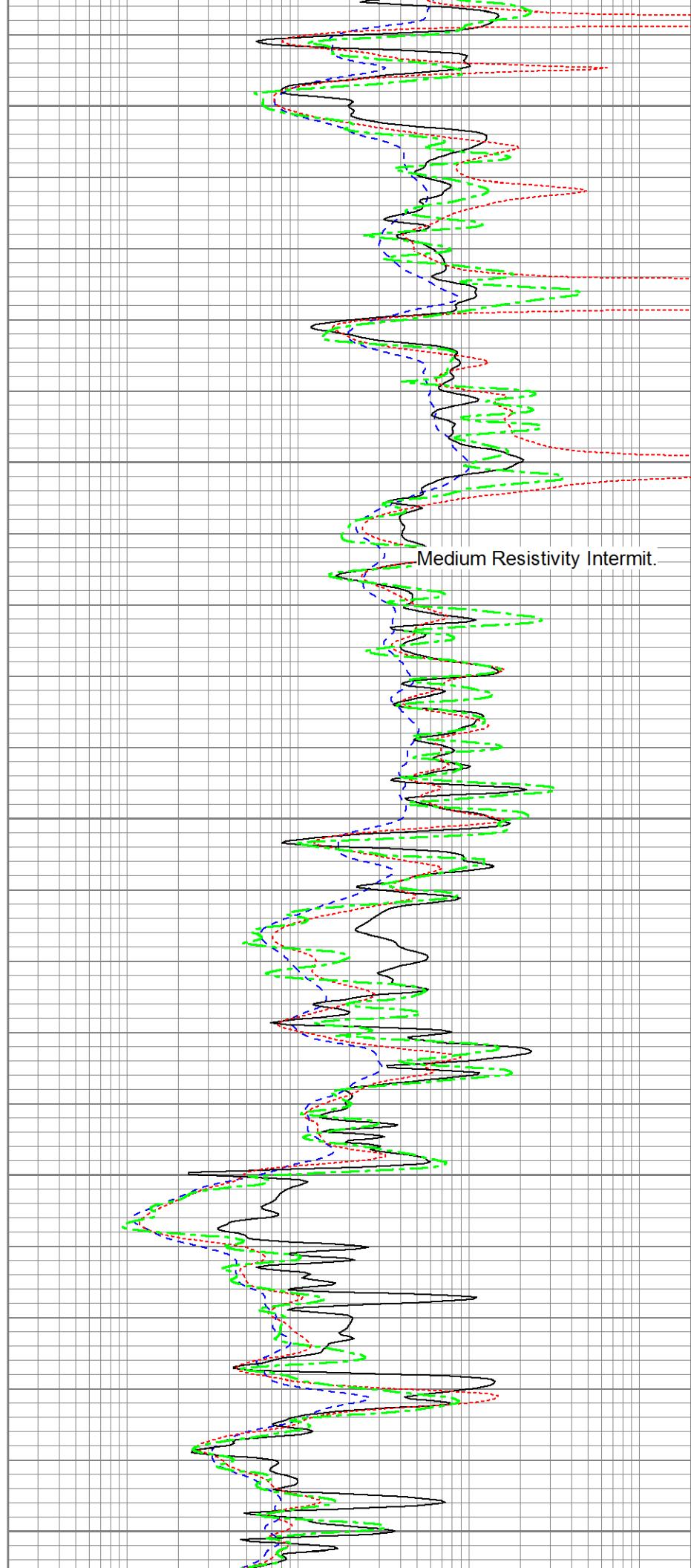


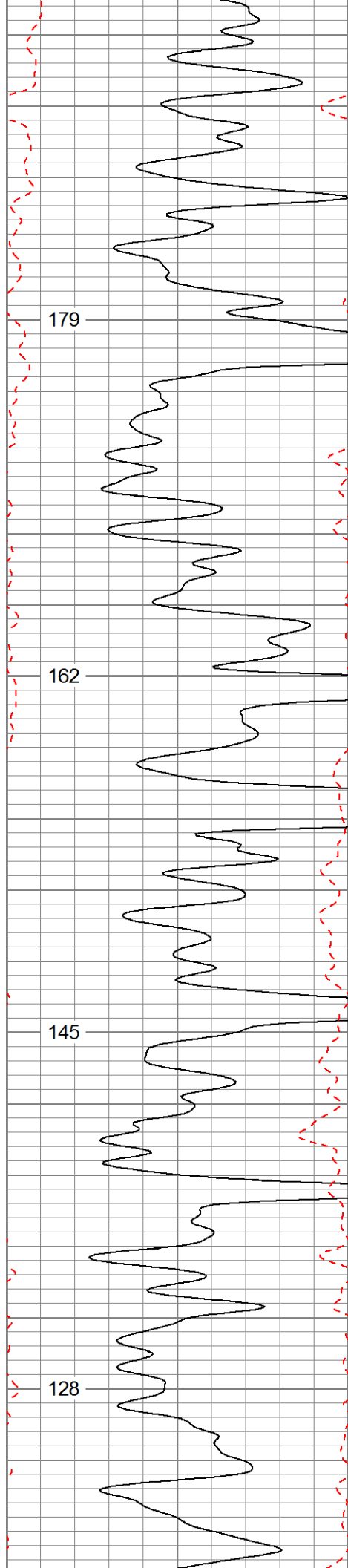


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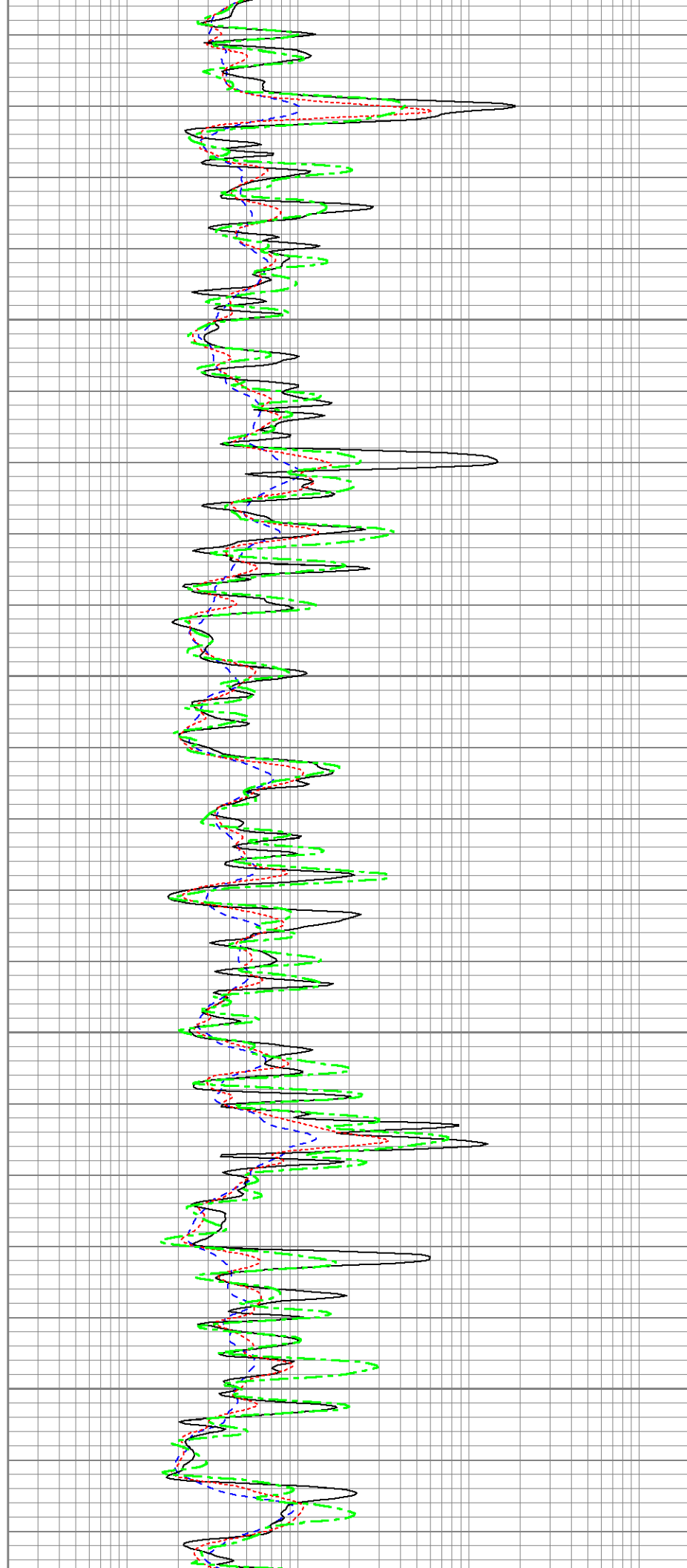
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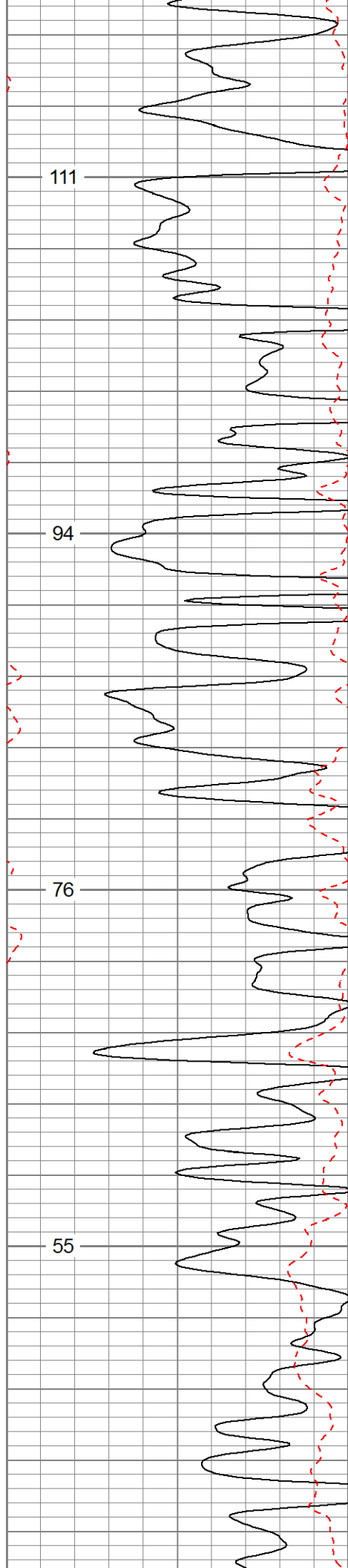




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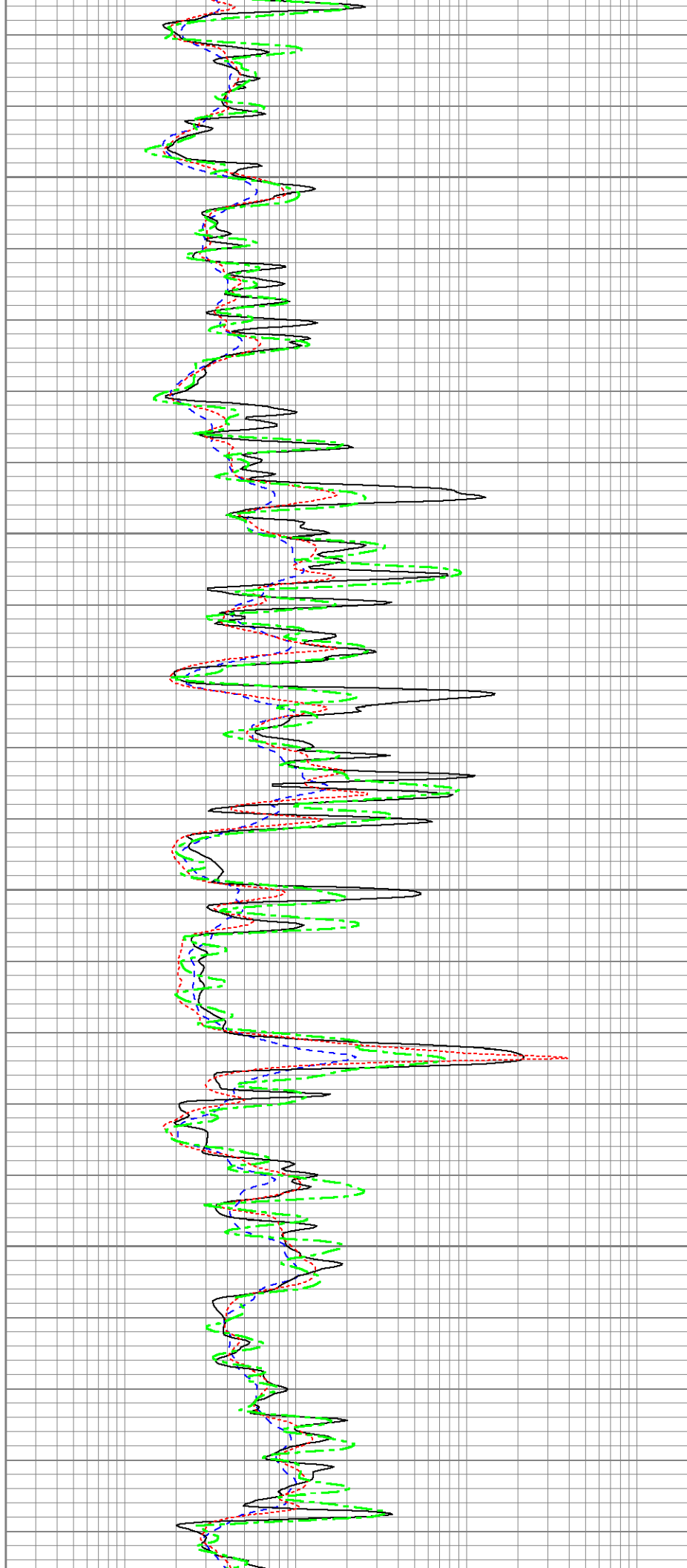
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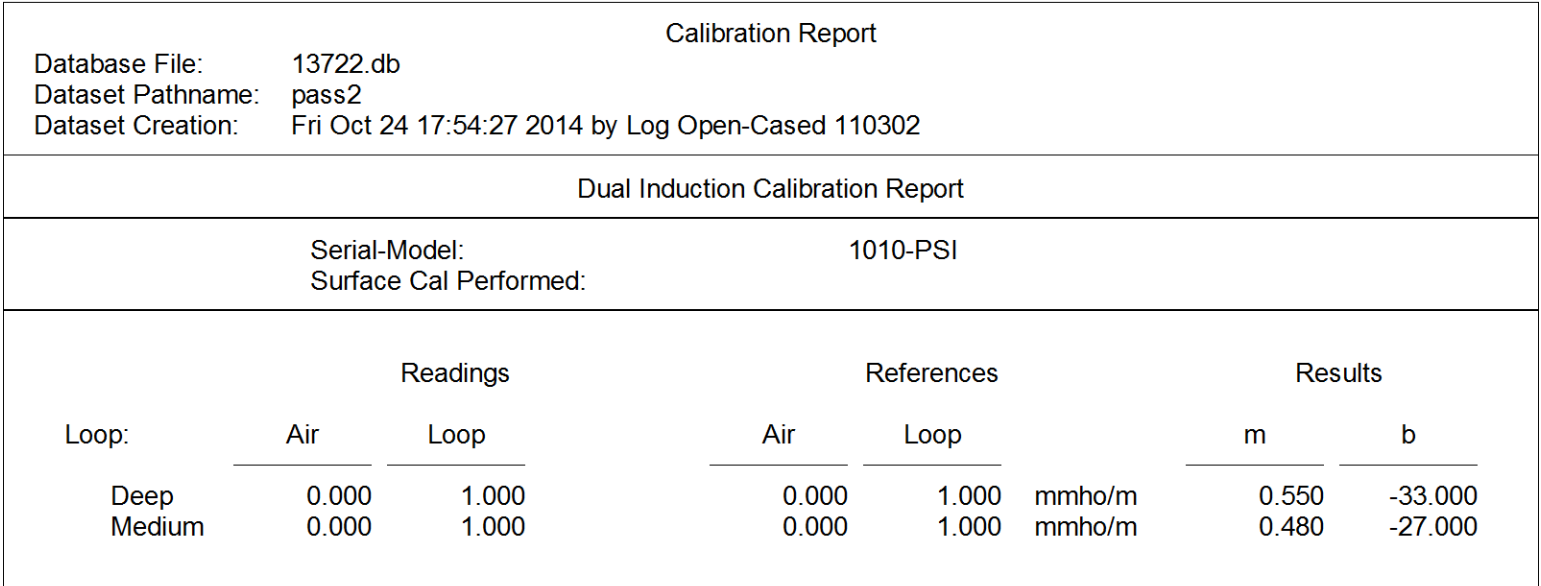




7700

7800





## Compensated Density Calibration Report

Serial-Model:  
Master Calibration Performed:

979-PSI  
Fri Oct 24 09:45:50 2014

### Master Calibration

	Density		Far Detector		Near Detector	
Magnesium	1.750	g/cc	11155.30		15203.70	cps
Aluminum	2.690	g/cc	2055.69		9842.01	cps
	Size		Reading			
Small Ring		in				
Medium Ring		in				
Large Ring		in				

### Compensated Neutron Calibration Report

Serial Number: 853  
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	1.9200

### Gamma Ray Calibration Report

Serial Number: 197  
Tool Model: PSI  
Performed: Tue Oct 18 17:42:20 2011

Calibrator Value: 275.0 GAPI

Background Reading: 32.0 cps  
Calibrator Reading: 340.0 cps

Sensitivity: 0.6000 GAPI/cps

## Log Variables

Database: C:\Warrior\Data\13722.db  
Dataset: field/well/run1/pass2

### Top - 4350.00 ft

SZCOR	NPORSEL	FLUIDDEN	MATRXDEN	SPSHIFT	SNDERRM	SNDERR	CASEOD
On	Limestone	g/cc 1	g/cc 2.71	mV 0	mmho/m 0	mmho/m 0	in 5.5
PERFS	TDEPTH	BOTTEMP	BOREID				
0	ft 0	degF 196	in 7.875				

### 4350.00 ft - 4750.00 ft

SZCOR	NPORSEL	FLUIDDEN	MATRXDEN	SPSHIFT	SNDERRM	SNDERR	CASEOD
On	Sandstone	g/cc 1	g/cc 2.68	mV 0	mmho/m 0	mmho/m 0	in 5.5
PERFS	TDEPTH	BOTTEMP	BOREID				
0	ft 0	degF 196	in 7.875				

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4750.00 ft - 7780.00 ft							
SZCOR On	NPORSEL Limestone	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	SPSHIFT mV 0	SNDERRM mmho/m 0	SNDERR mmho/m 0	CASEOD in 5.5
PERFS 0	TDEPTH ft 0	BOTTEMP degF 196	BOREID in 7.875				

7780.00 ft - Bottom							
SZCOR On	NPORSEL Sandstone	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.68	SPSHIFT mV 0	SNDERRM mmho/m 0	SNDERR mmho/m 0	CASEOD in 5.5
PERFS 0	TDEPTH ft 0	BOTTEMP degF 196	BOREID in 7.875				