



# HIGH RESOLUTION INDUCTION GUARD LOG - SP GAMMA RAY

Company	EnCana Oil & Gas (USA) Inc.	Company	EnCana Oil & Gas (USA) Inc.
Well	VOGL-GEIST #2B-5H-E267	Well	VOGL-GEIST #2B-5H-E267
Field	Wattenberg	Field	Wattenberg
County	Colorado	County	Colorado
State	USA	State	USA
Location:	API # : 05-123-37816	Other Services	None
Permanent Datum	SEC 5 TWP 2N RGE 67W	Elevation	4836
Log Measured From	KB	K.B. 4866	
Drilling Measured From	KB	D.F. 4865	
		G.L. 4836	
Date	April 22, 2014		
Run Number	1		
Depth Driller	7632		
Depth Logger	7159		
Bottom Logged Interval	7159		
Top Log Interval	Casing		
Casing Driller	856		
Casing Logger	856		
Bit Size	8-3/4"		
Type Fluid in Hole	Chem Gel		
Density / Viscosity	10.7 / 41		
pH / Fluid Loss	9.2 / 4.8		
Source of Sample	Mudpit		
Rm @ Meas. Temp	2.77 @ 70 F		
Rmf @ Meas. Temp	2.19 @ 70 F		
Rmc @ Meas. Temp	3.39 @ 70 F		
Source of Rmf / Rmc	Measure / Calc		
Rm @ BHT	0.89 @ 219 F		
Time Circulation Stopped	2000 4/21		
Time Logger on Bottom	0315		
Maximum Recorded Temperature	219 F		
Equipment Number	48		
Location	Ft. Morgan		
Recorded By	Clint Christensen		
Witnessed By	Roy Hunt		

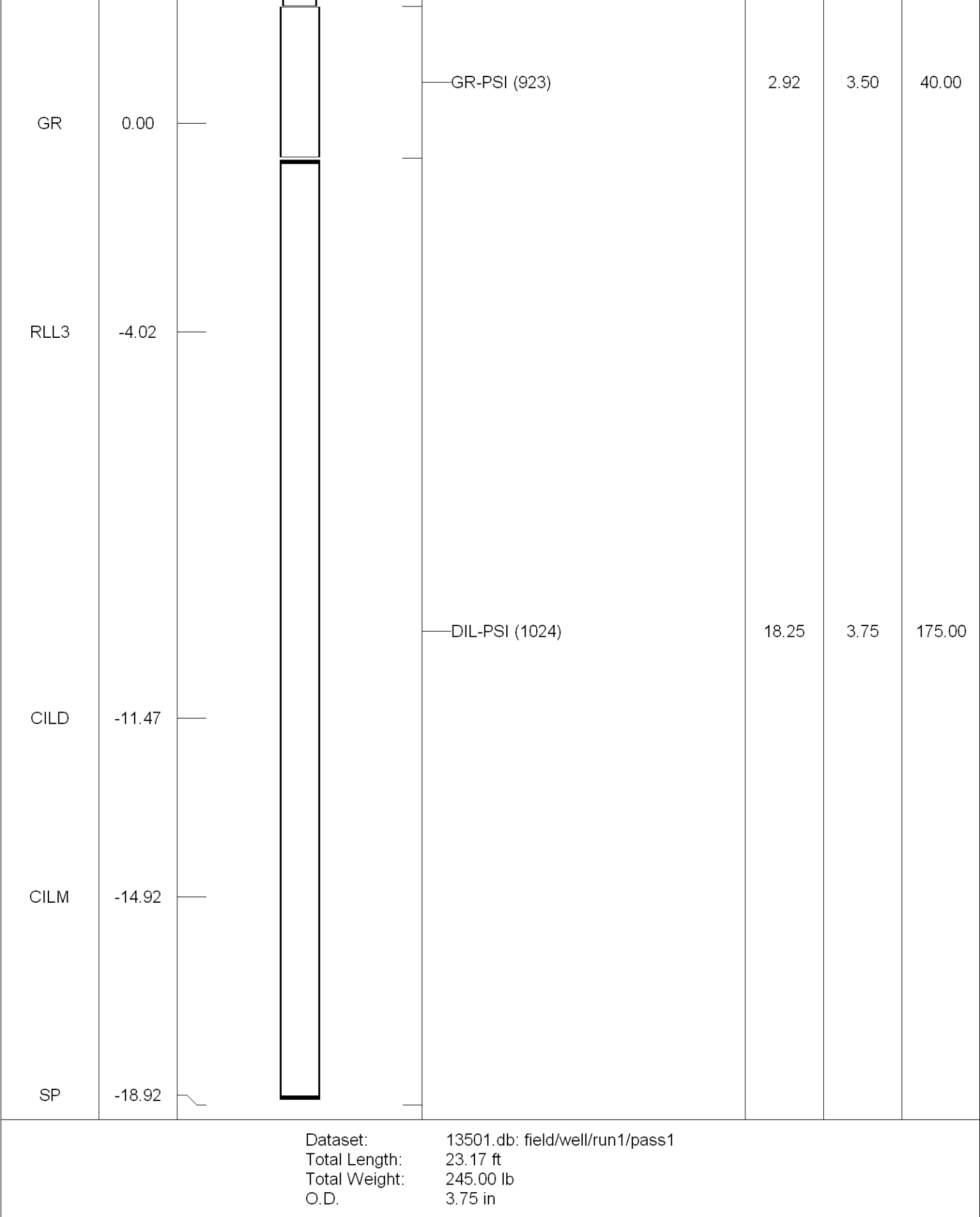
<<< Fold Here >>>

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

Thank You for using Pioneer Energy Services  
H & P Drilling Rig 522

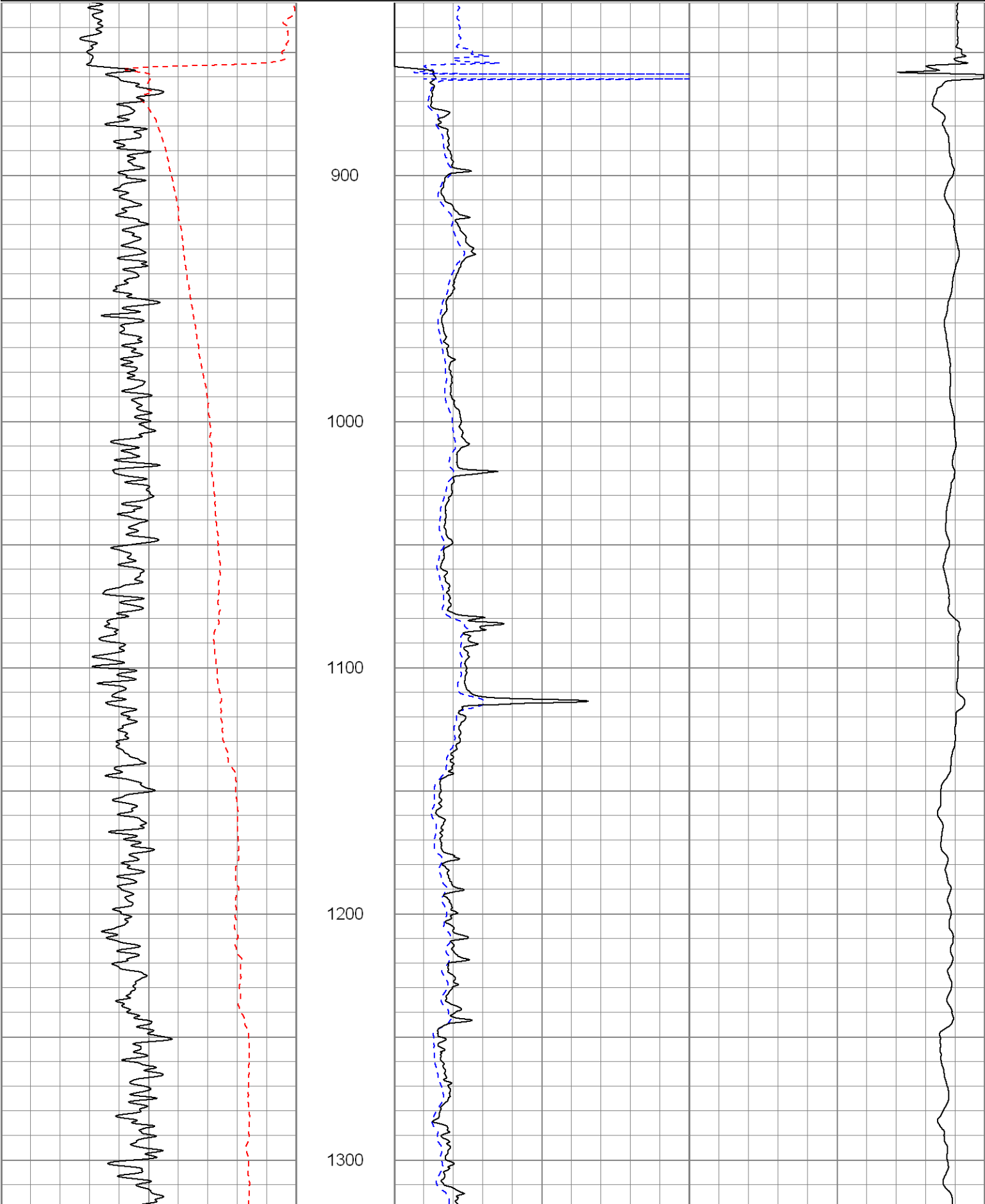
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD (~0)	2.00	3.50	30.00

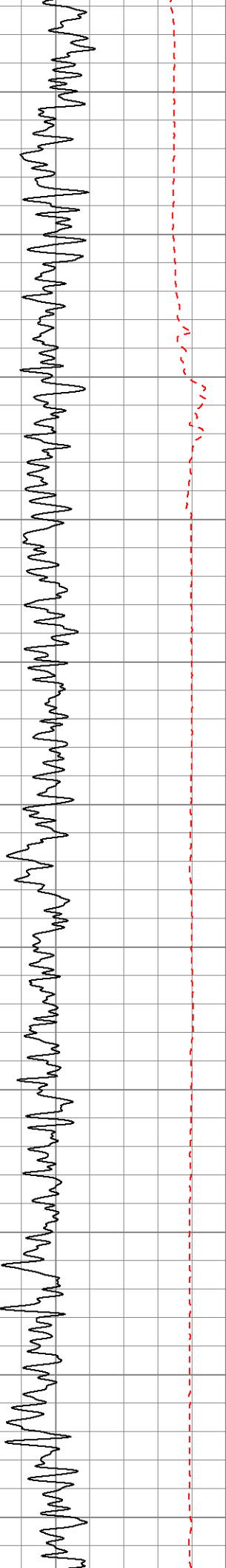


0	SP (mV)	200
0	Gamma Ray (GAPI)	200

0	Deep Resistivity (Ohm-m)	50
0	Shallow Resistivity (Ohm-m)	50
50	RILD (Ohm-m)	500
50	RLL3 (Ohm-m)	500

1000	CILD (mmho/m)	0
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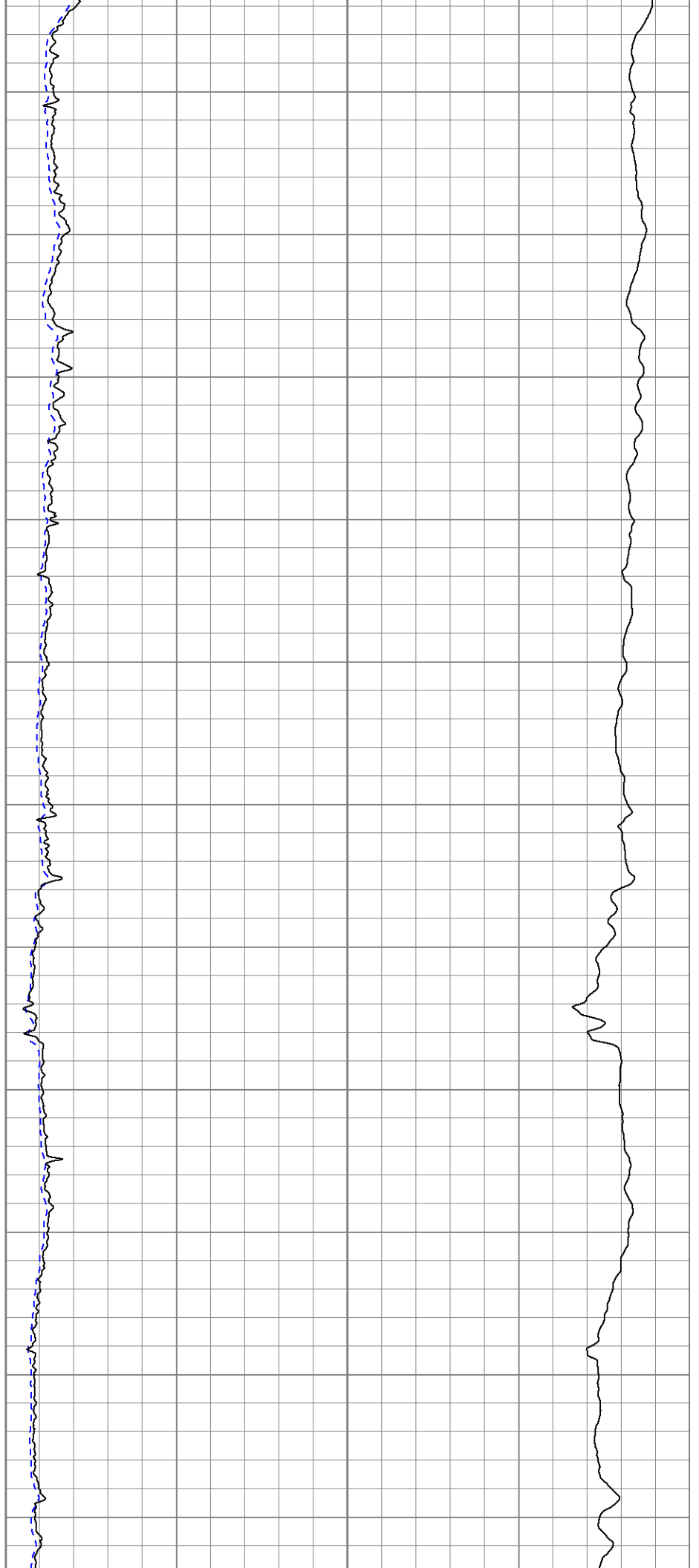
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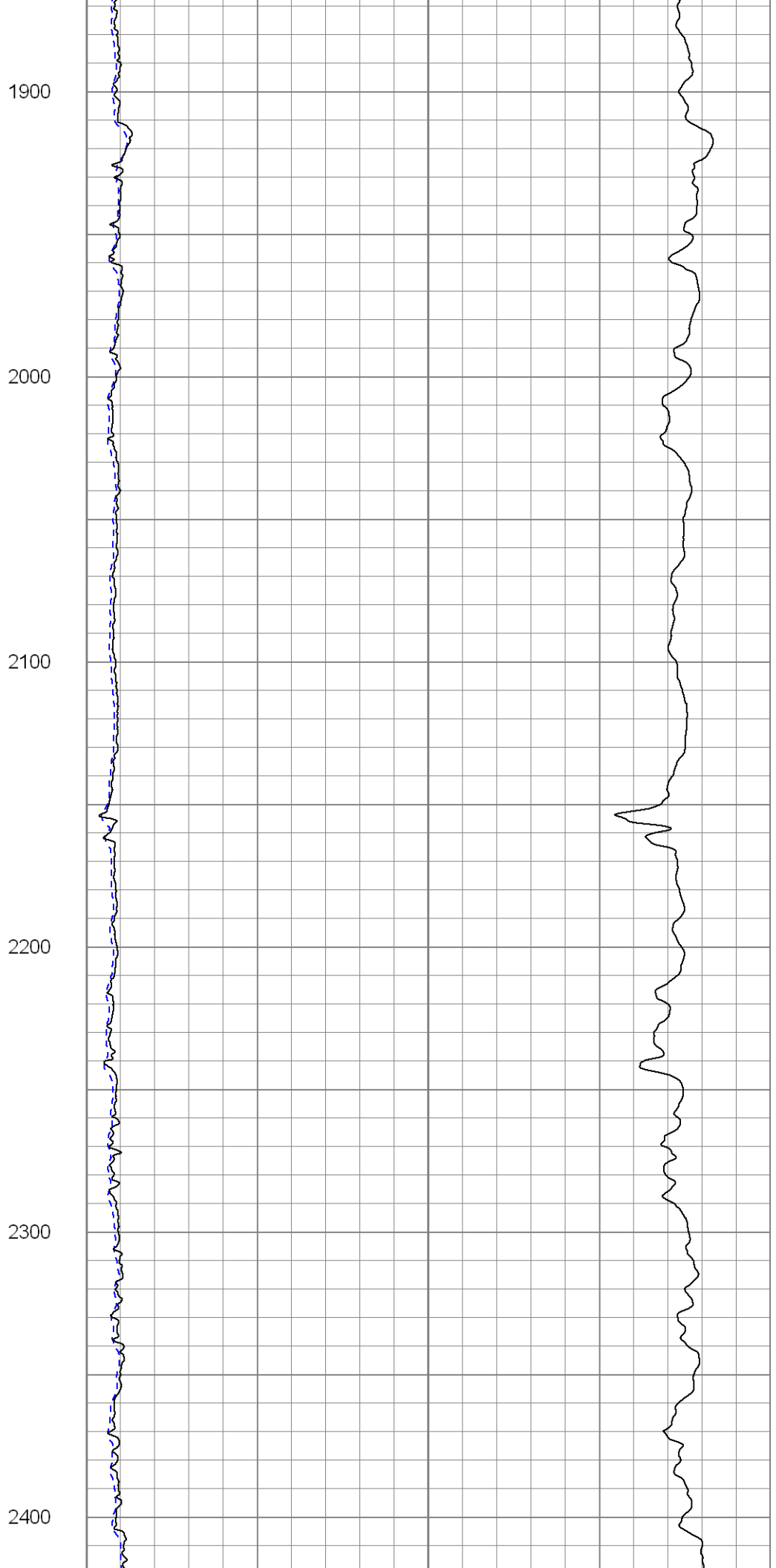
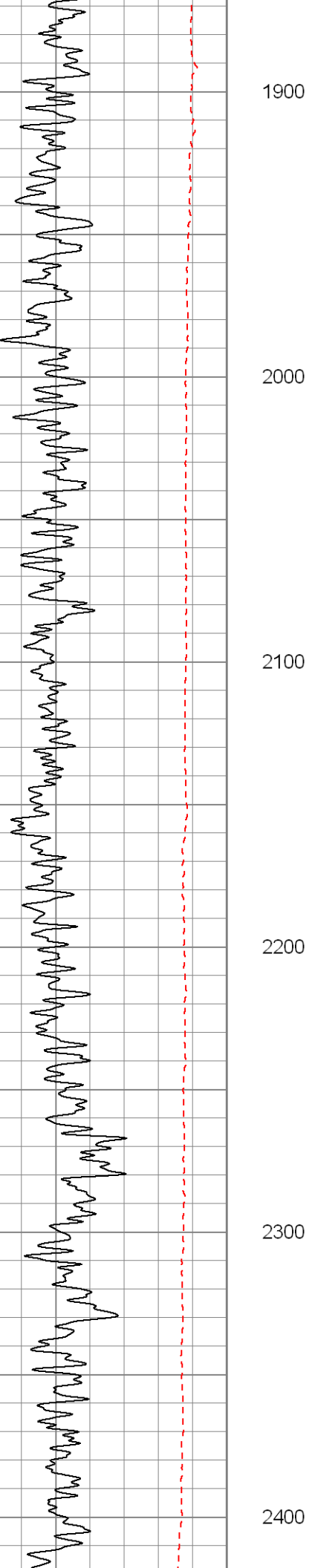
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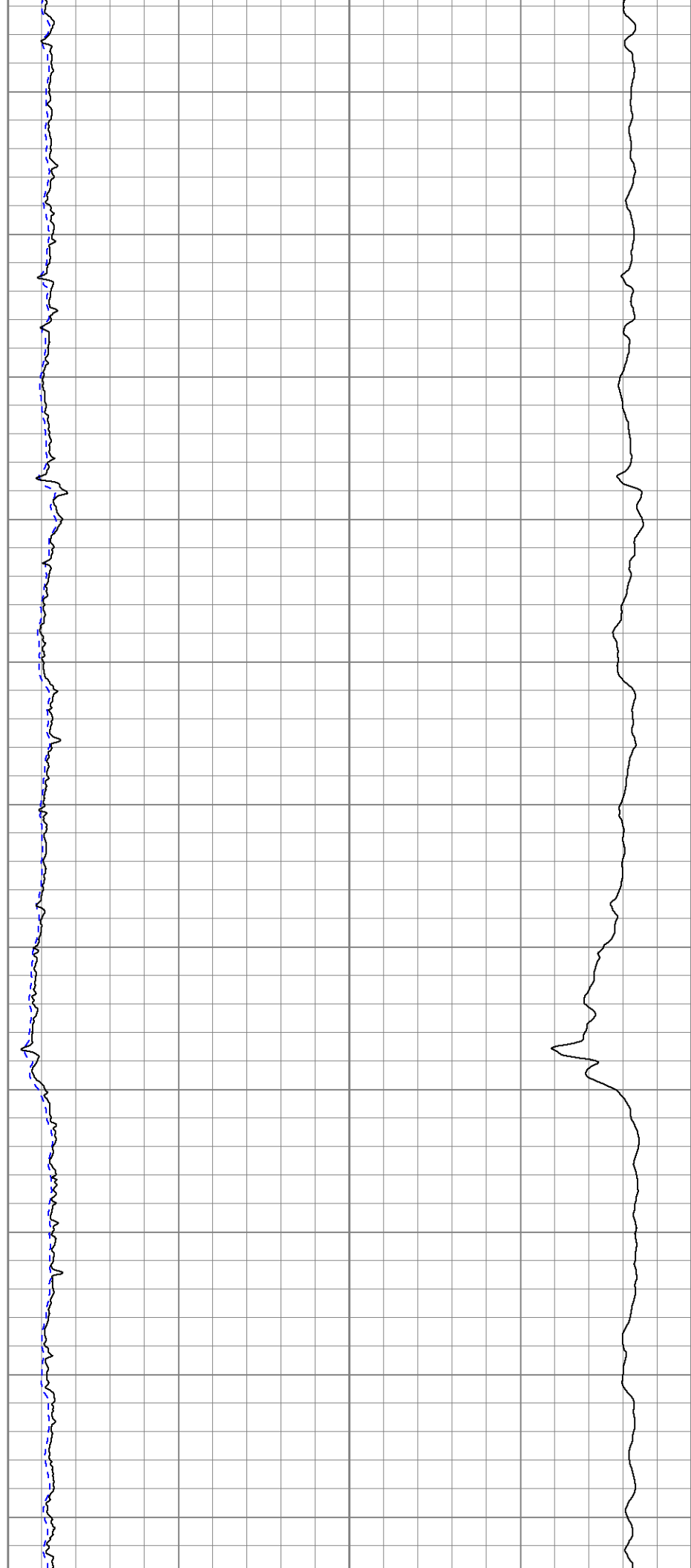
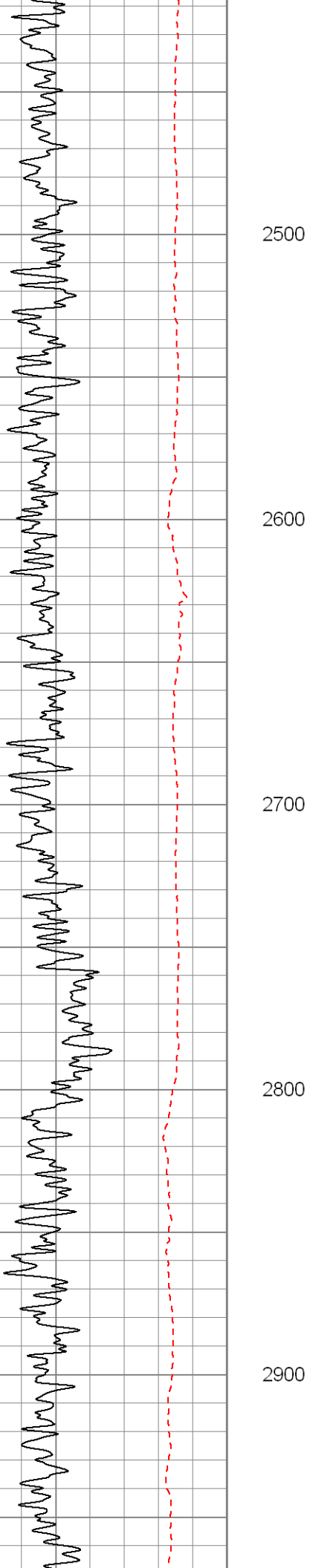
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1700

1800









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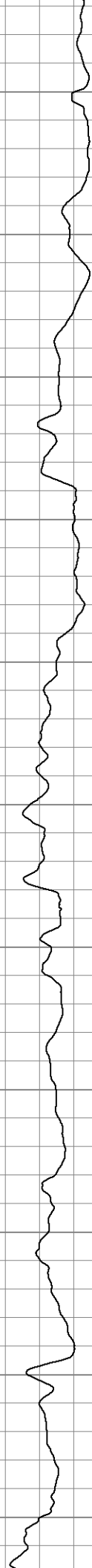
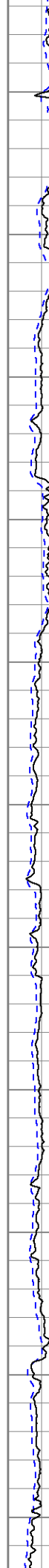
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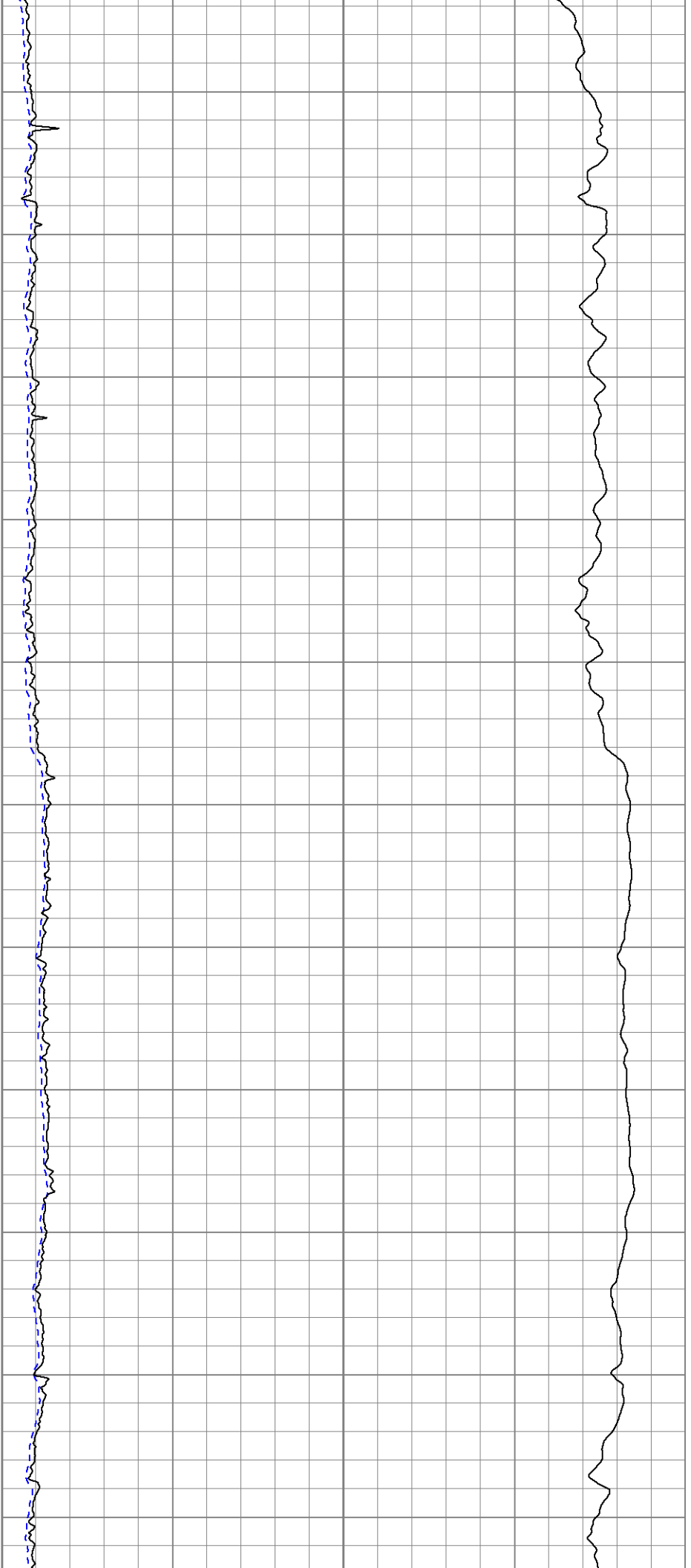
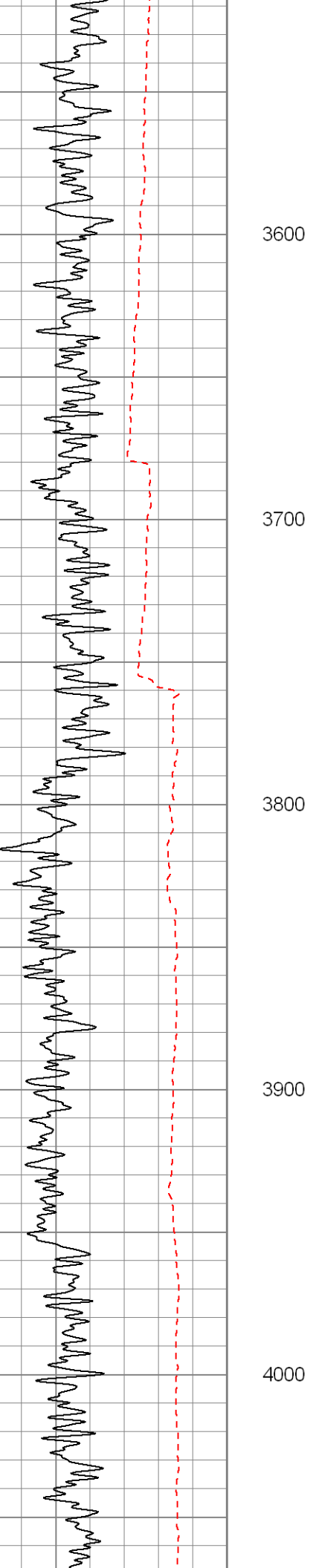
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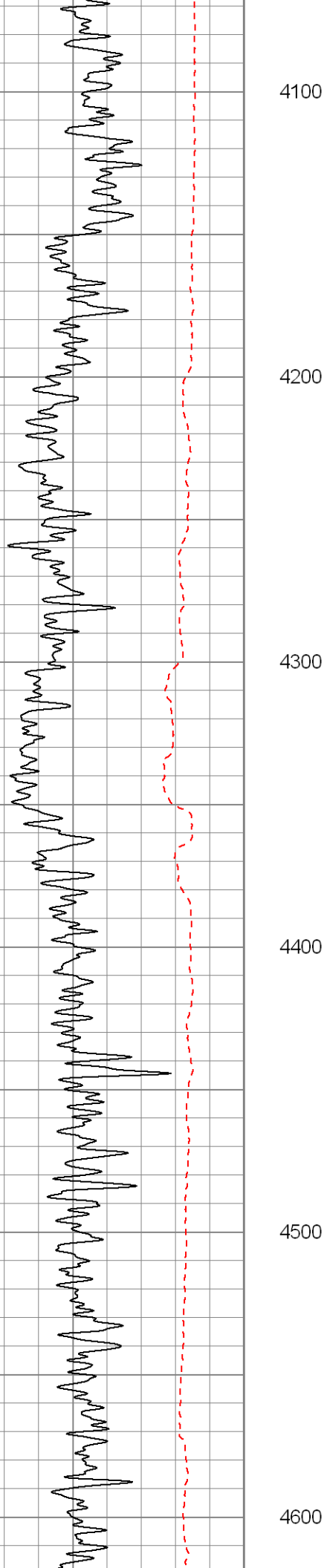
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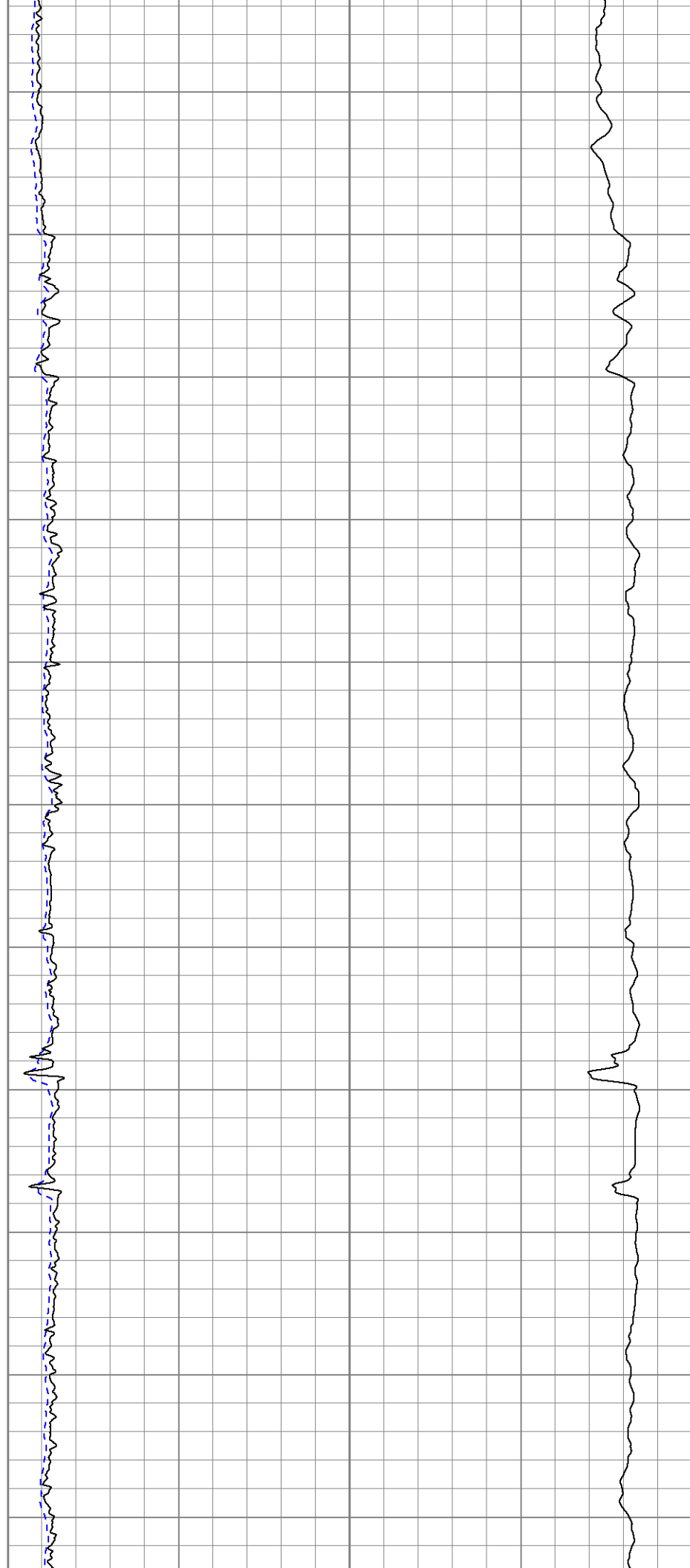
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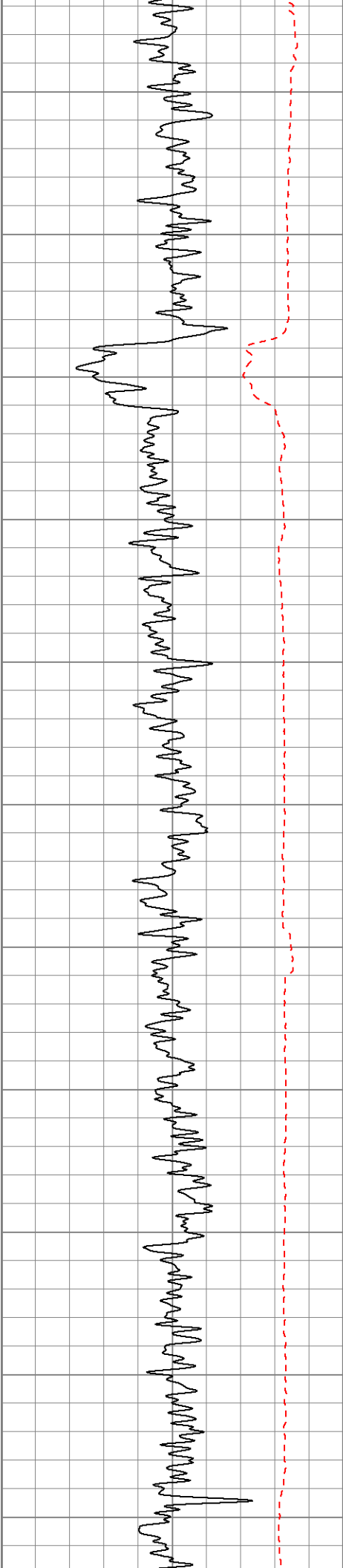
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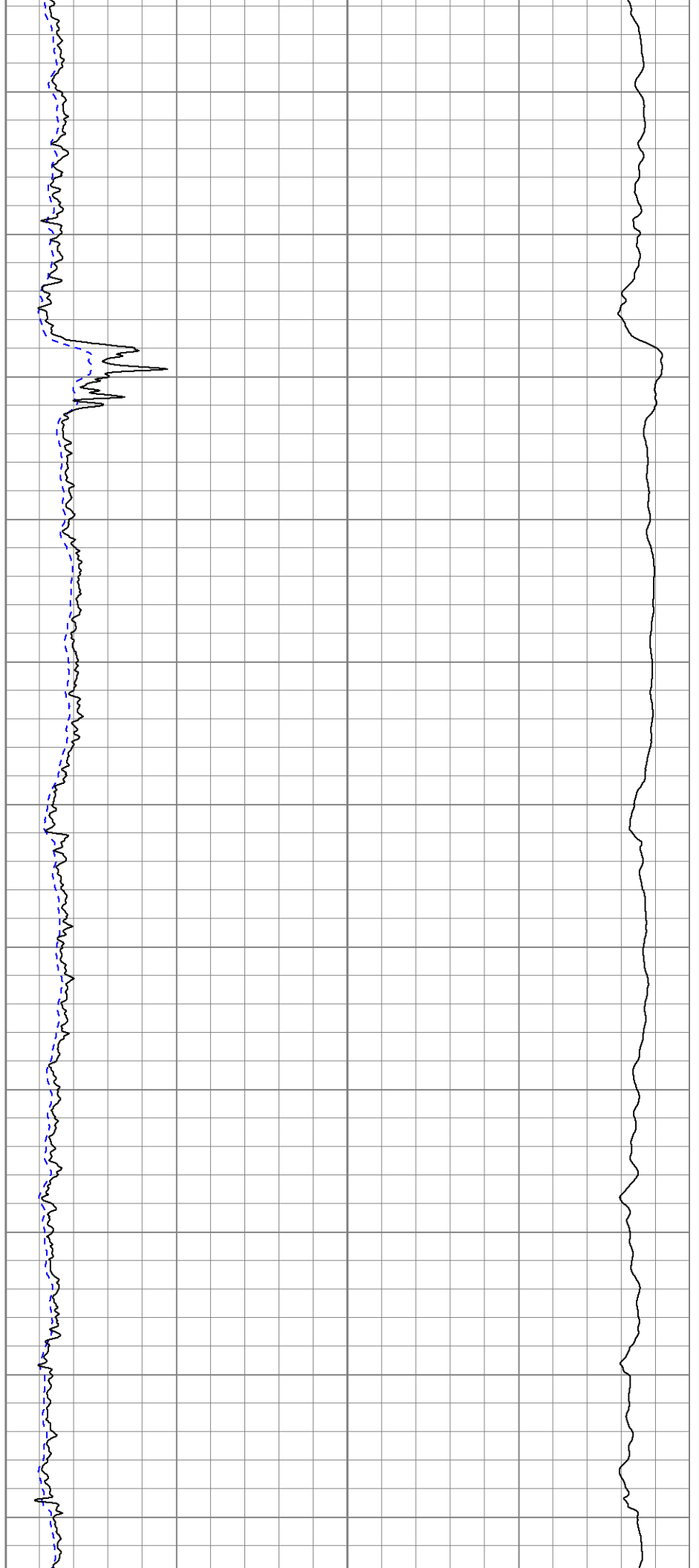
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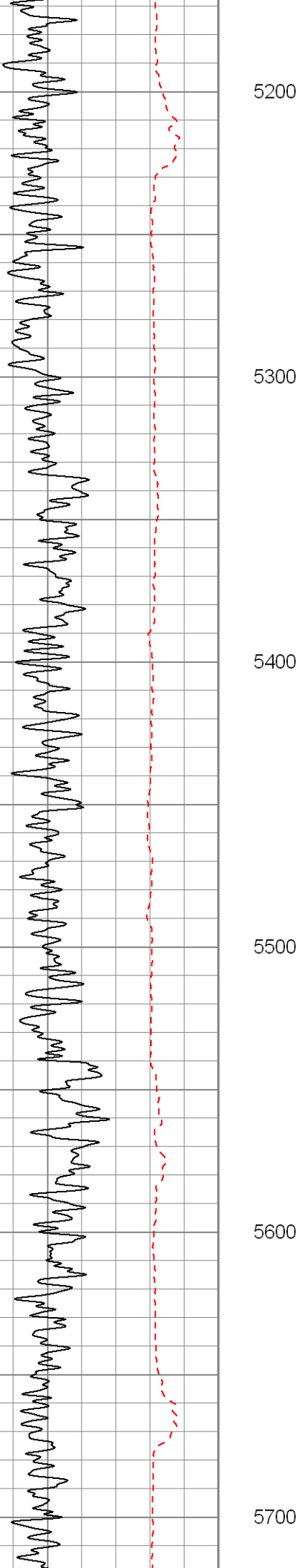
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5100





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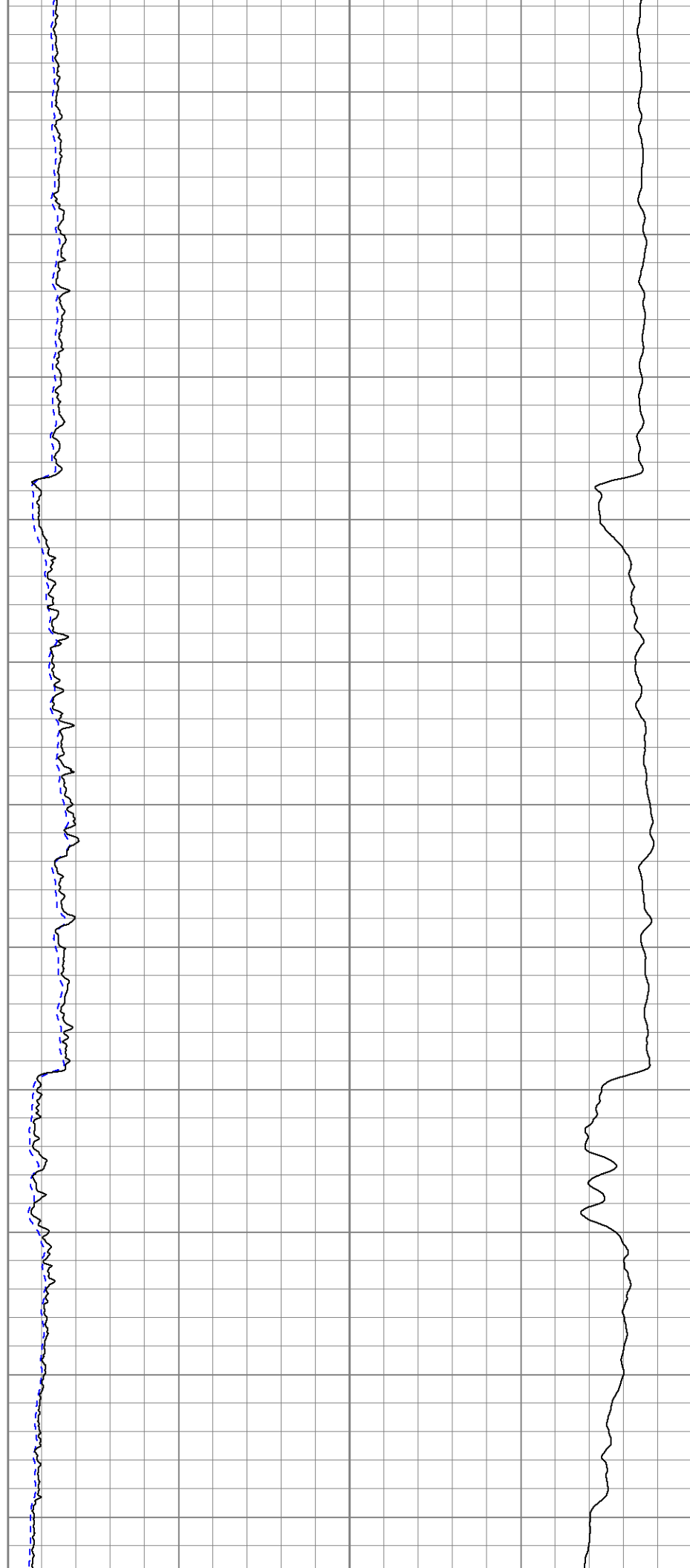
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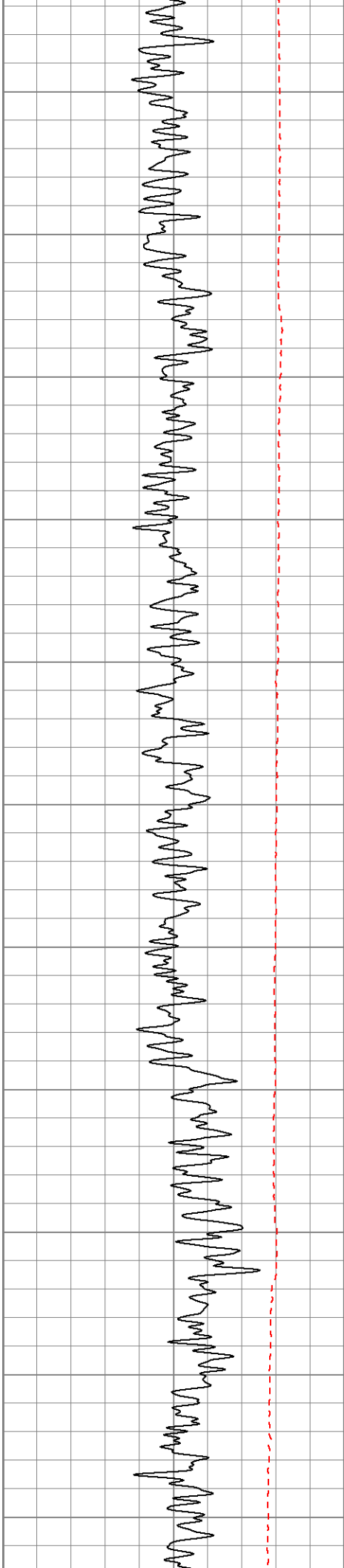
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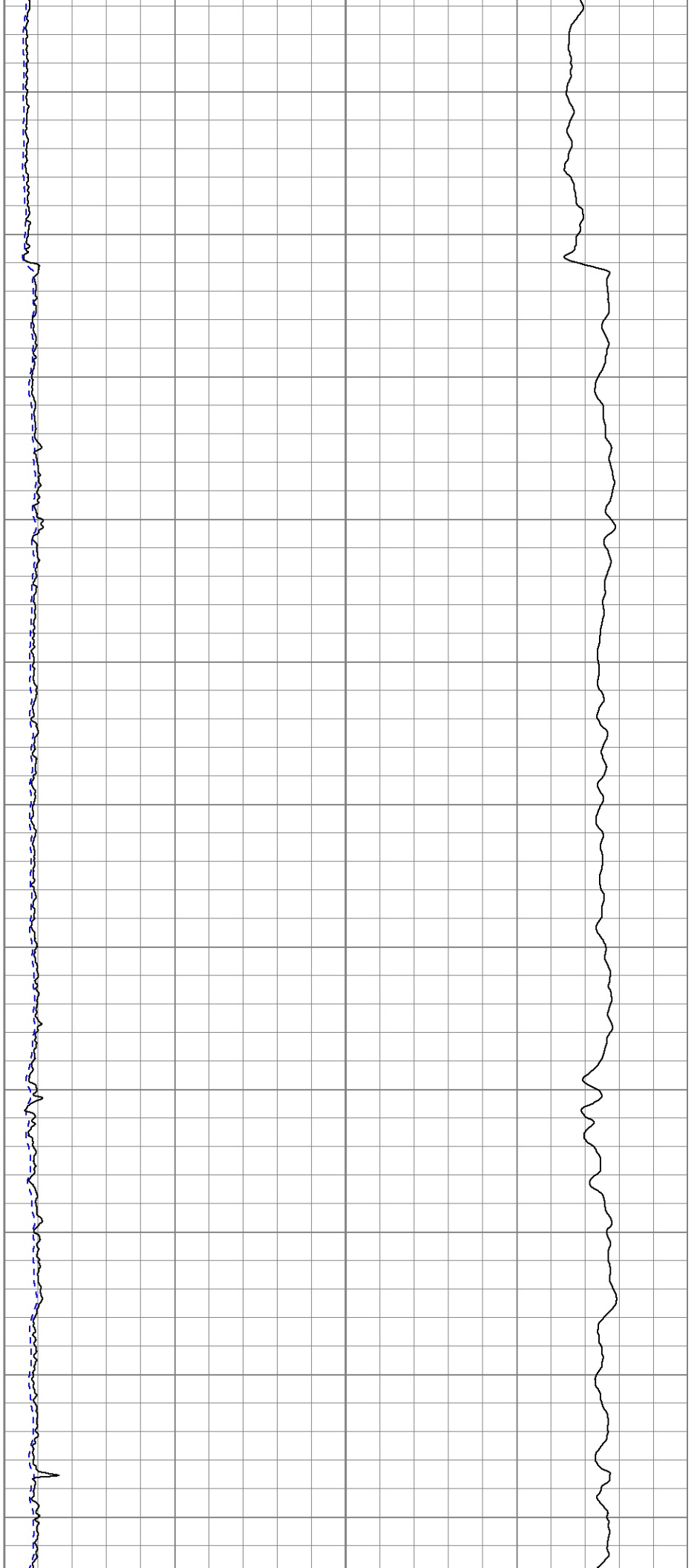
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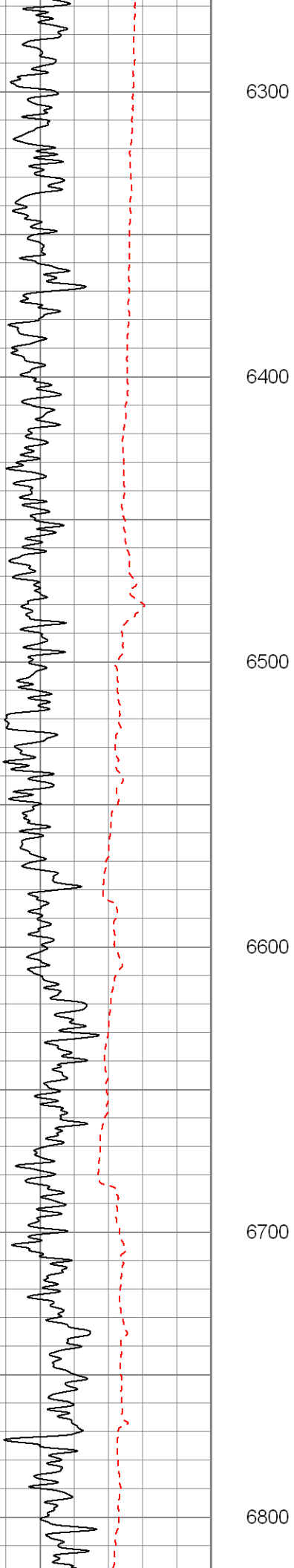
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6200





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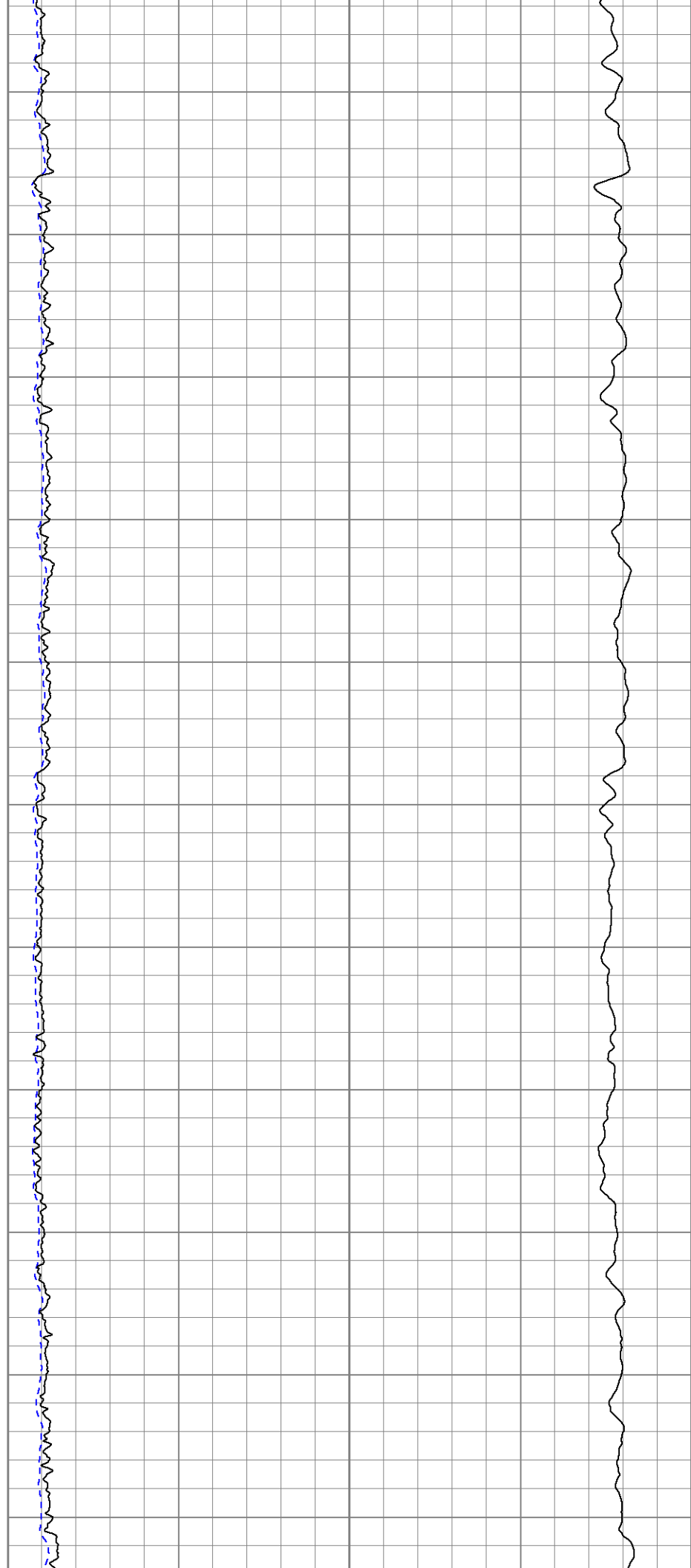
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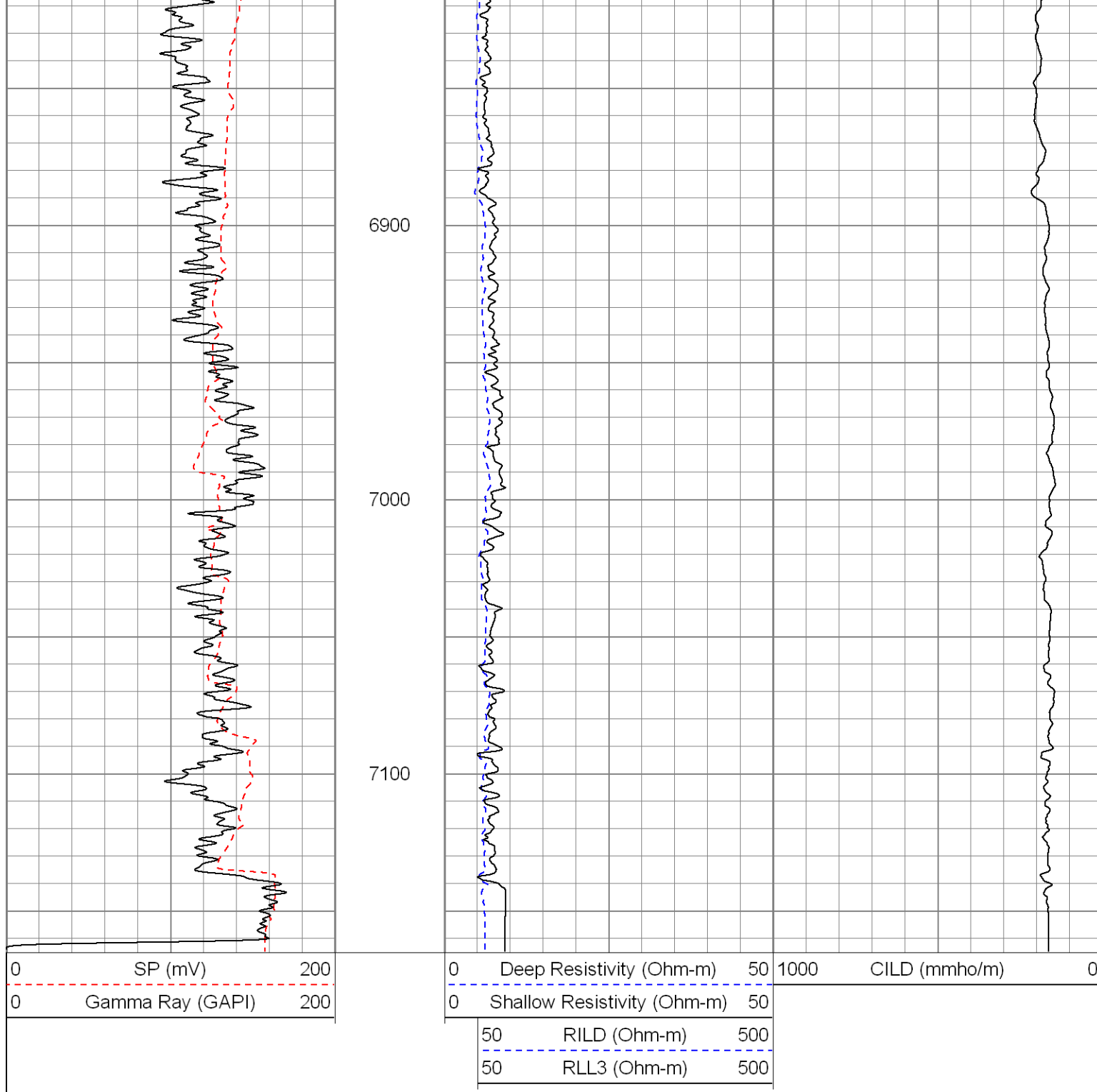
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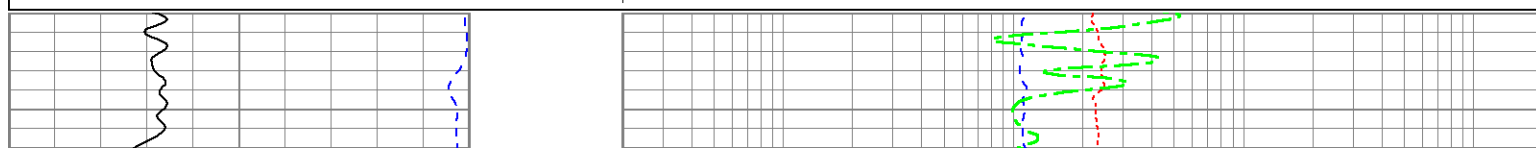
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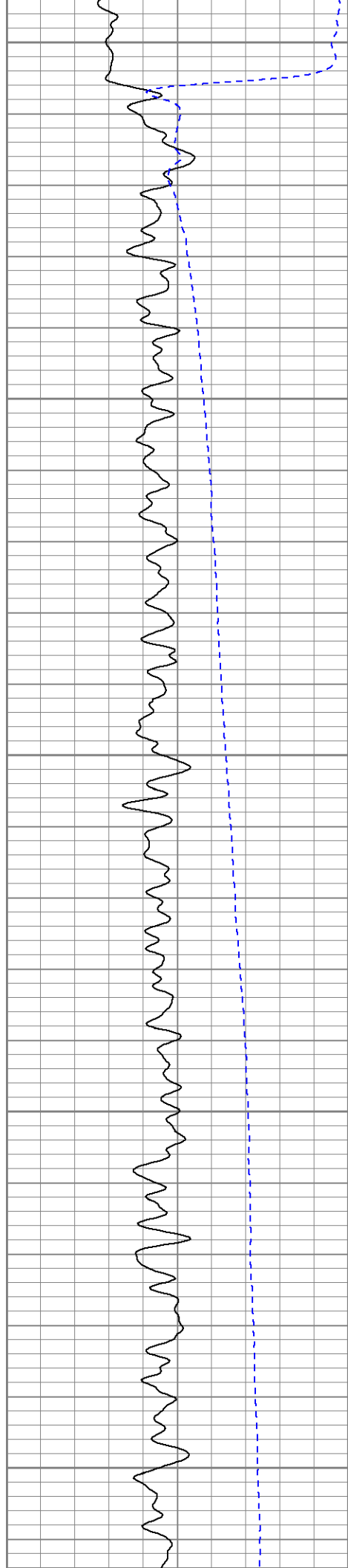




Database File: 13501.db  
 Dataset Pathname: Final  
 Presentation Format: dil  
 Dataset Creation: Tue Apr 22 05:24:08 2014  
 Charted by: Depth in Feet scaled 1:240

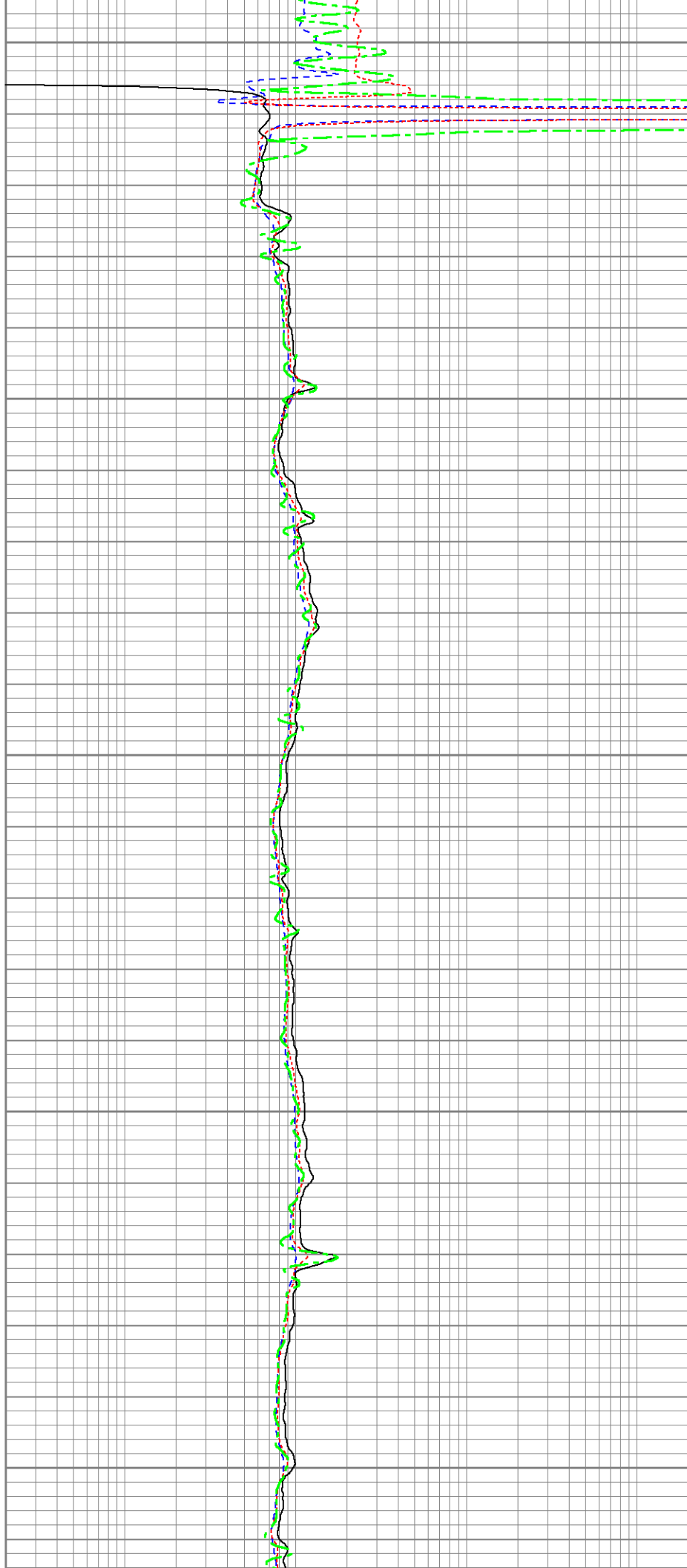
0	Gamma Ray (GAPI)	200	0.2	Deep Resistivity (Ohm-m)	2000
0	SP (mV)	200	0.2	Shallow Resistivity (Ohm-m)	2000
			0.2	Medium Resistivity (Ohm-m)	2000
			0.2	Rt (Ohm-m)	2000





900

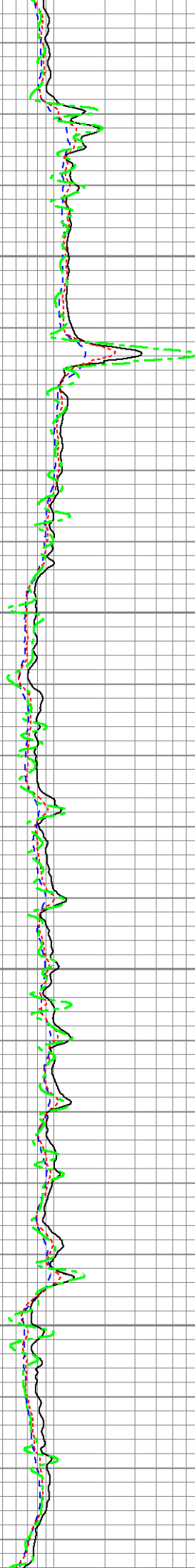
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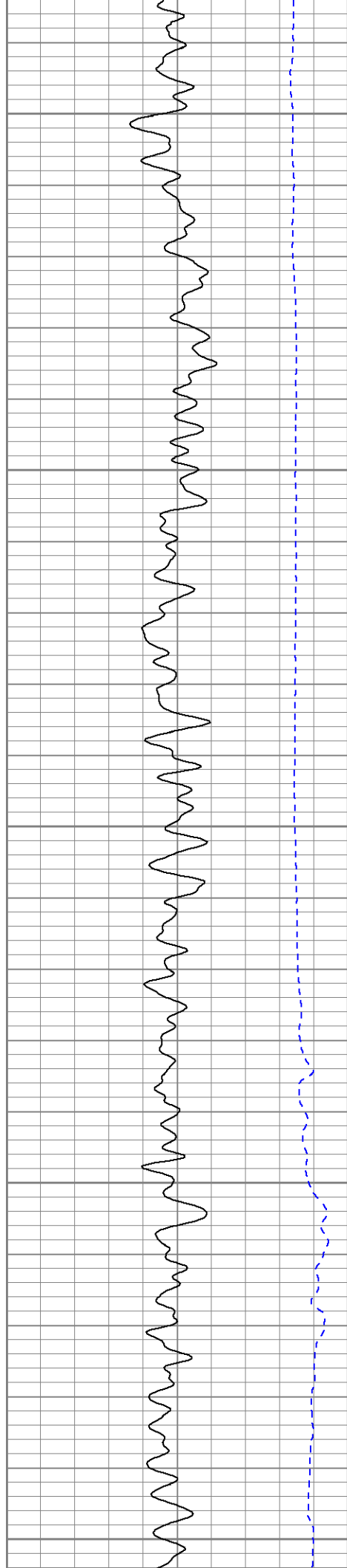




1100

1200

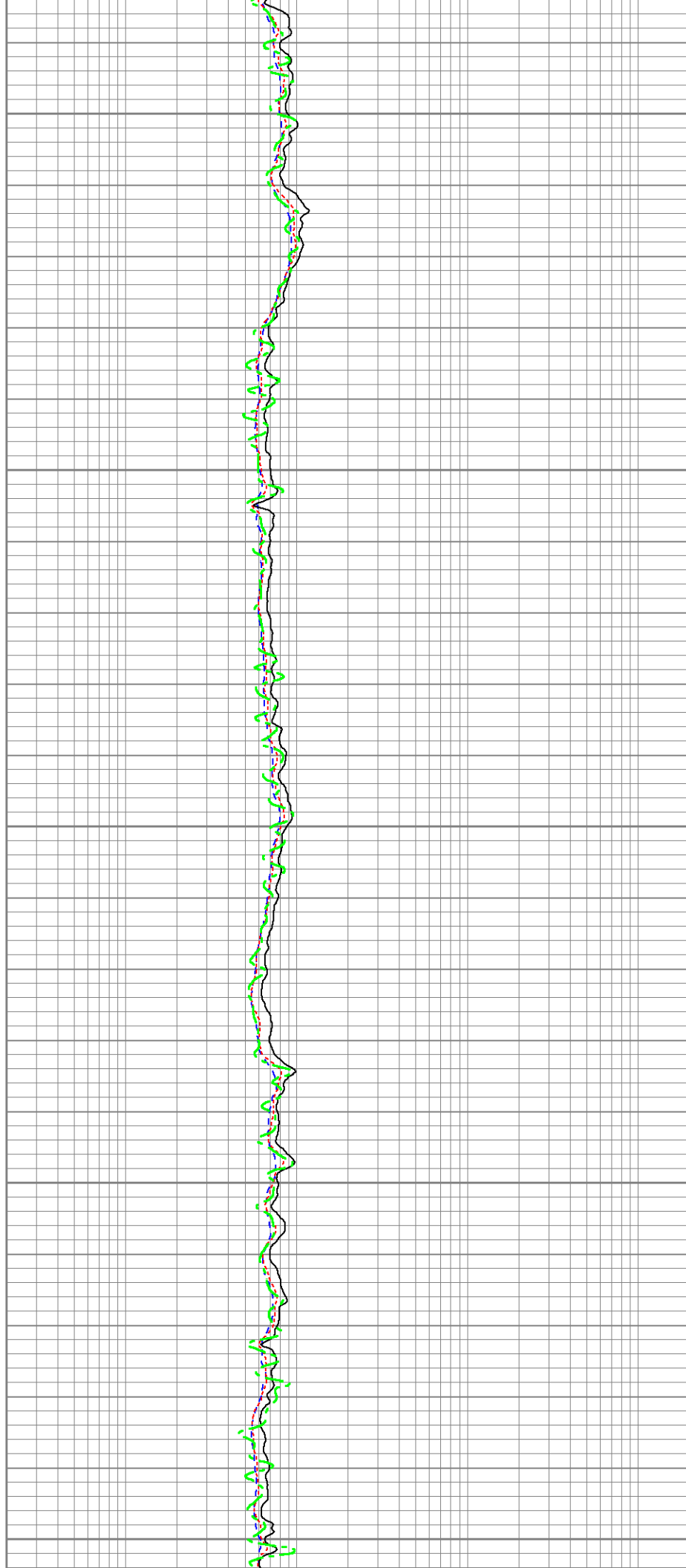


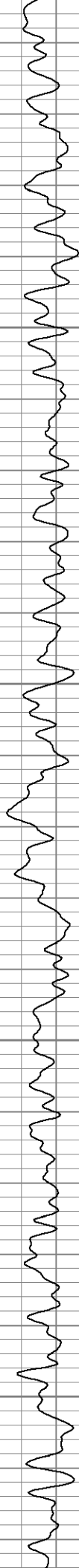


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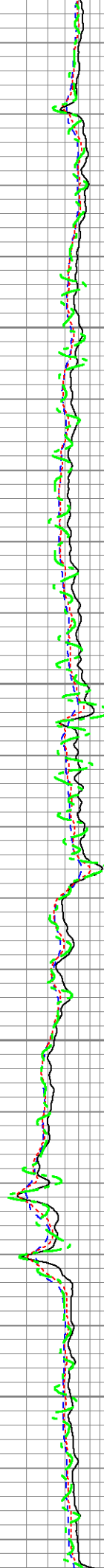
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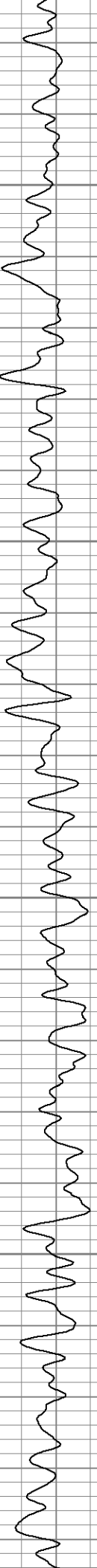




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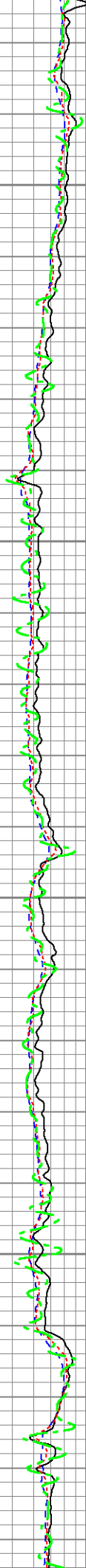
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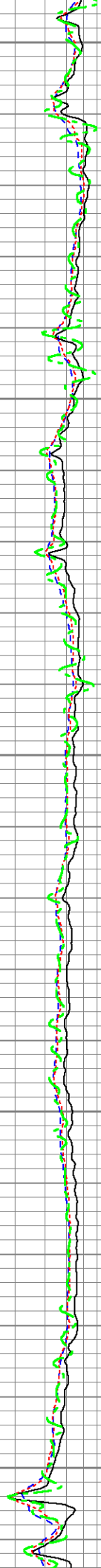
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2000

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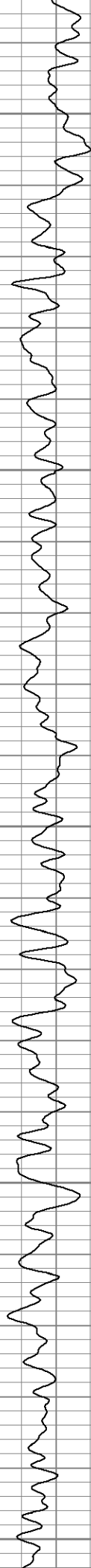




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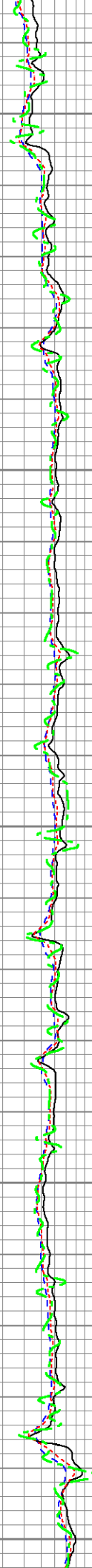


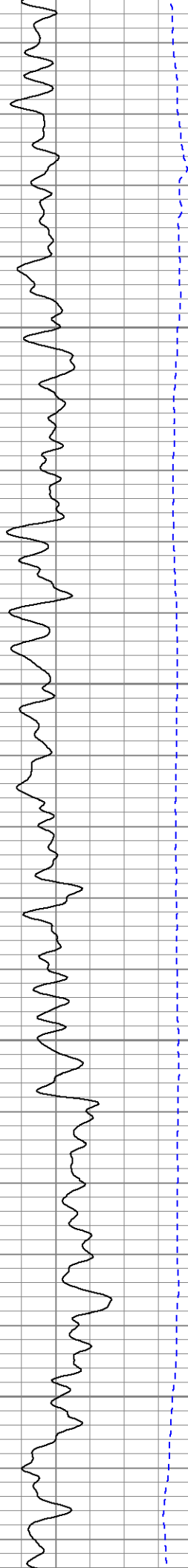


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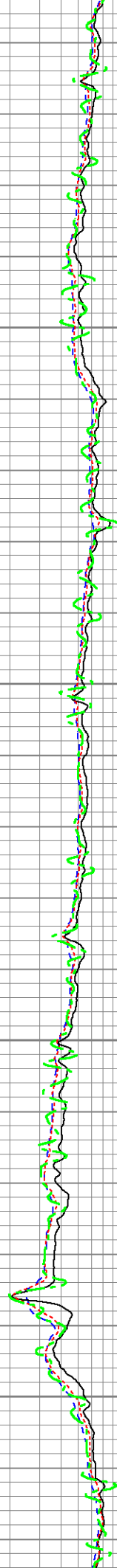
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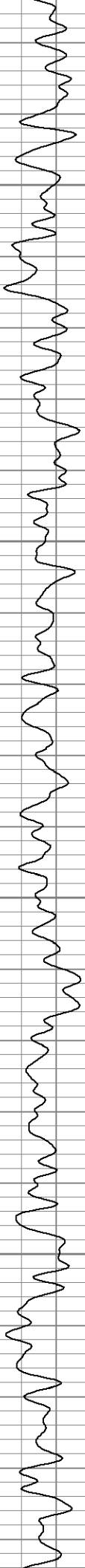




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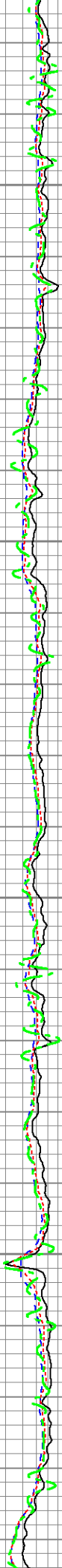
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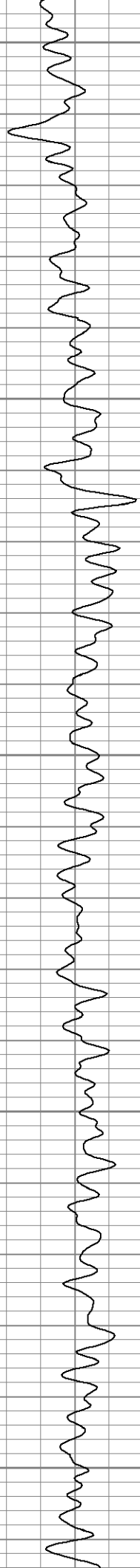




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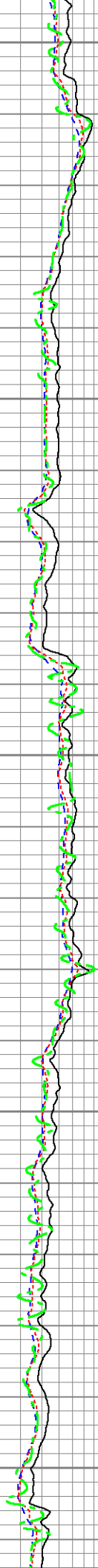
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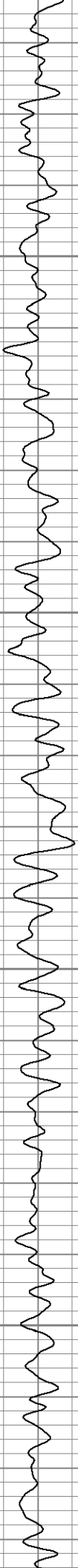




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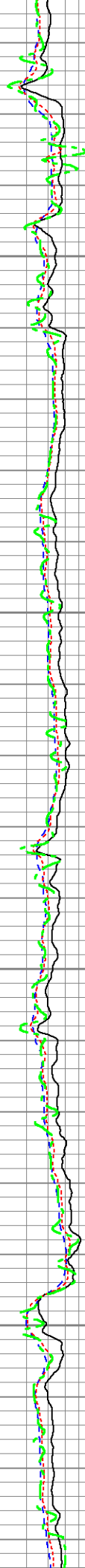
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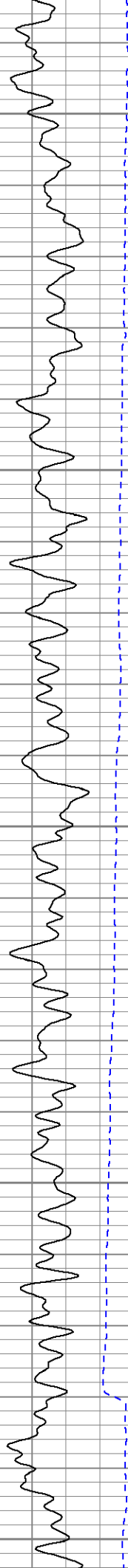




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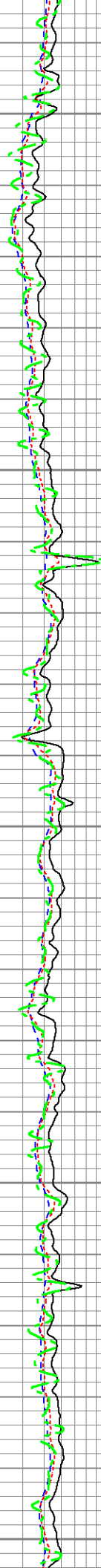


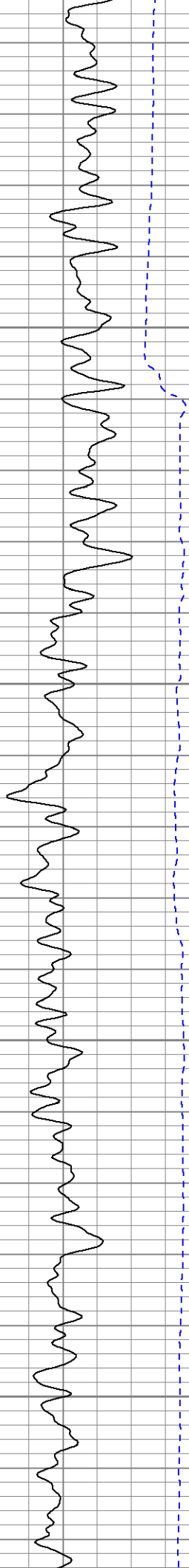


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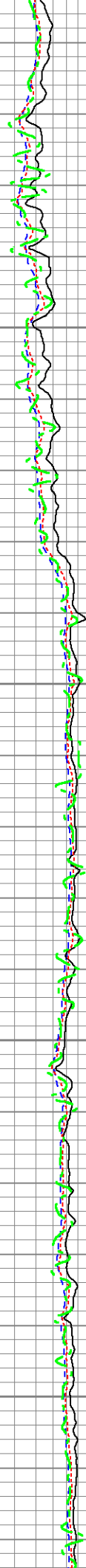
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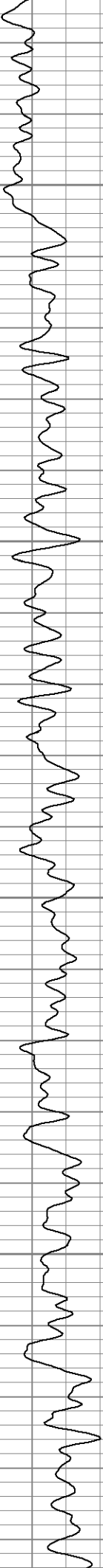




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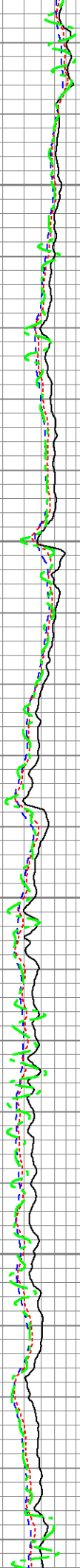
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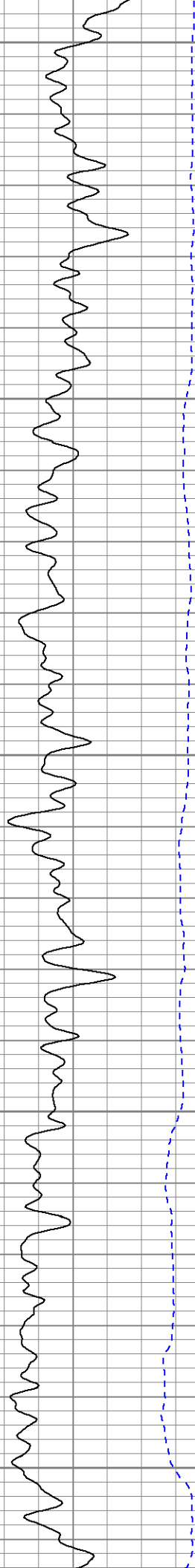




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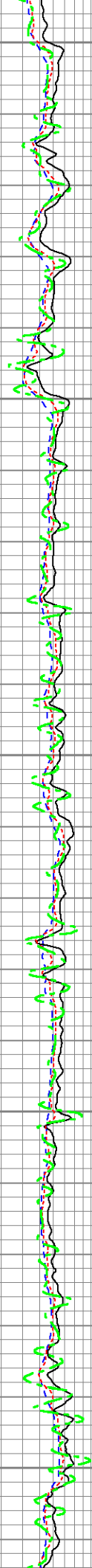
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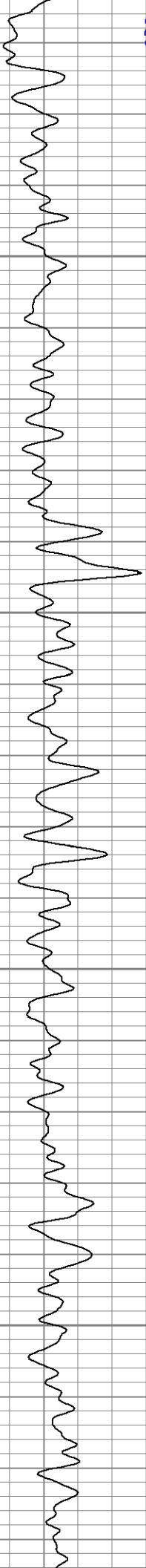




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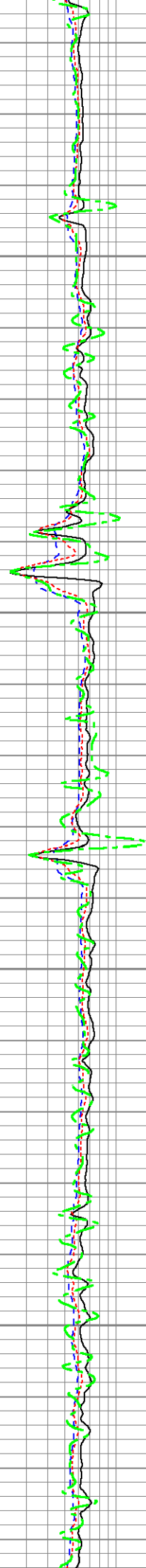
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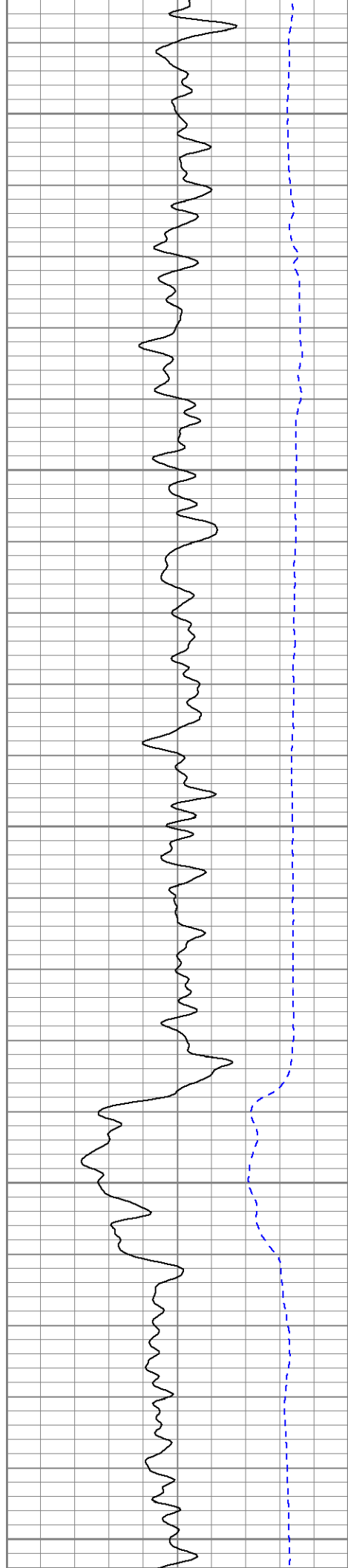




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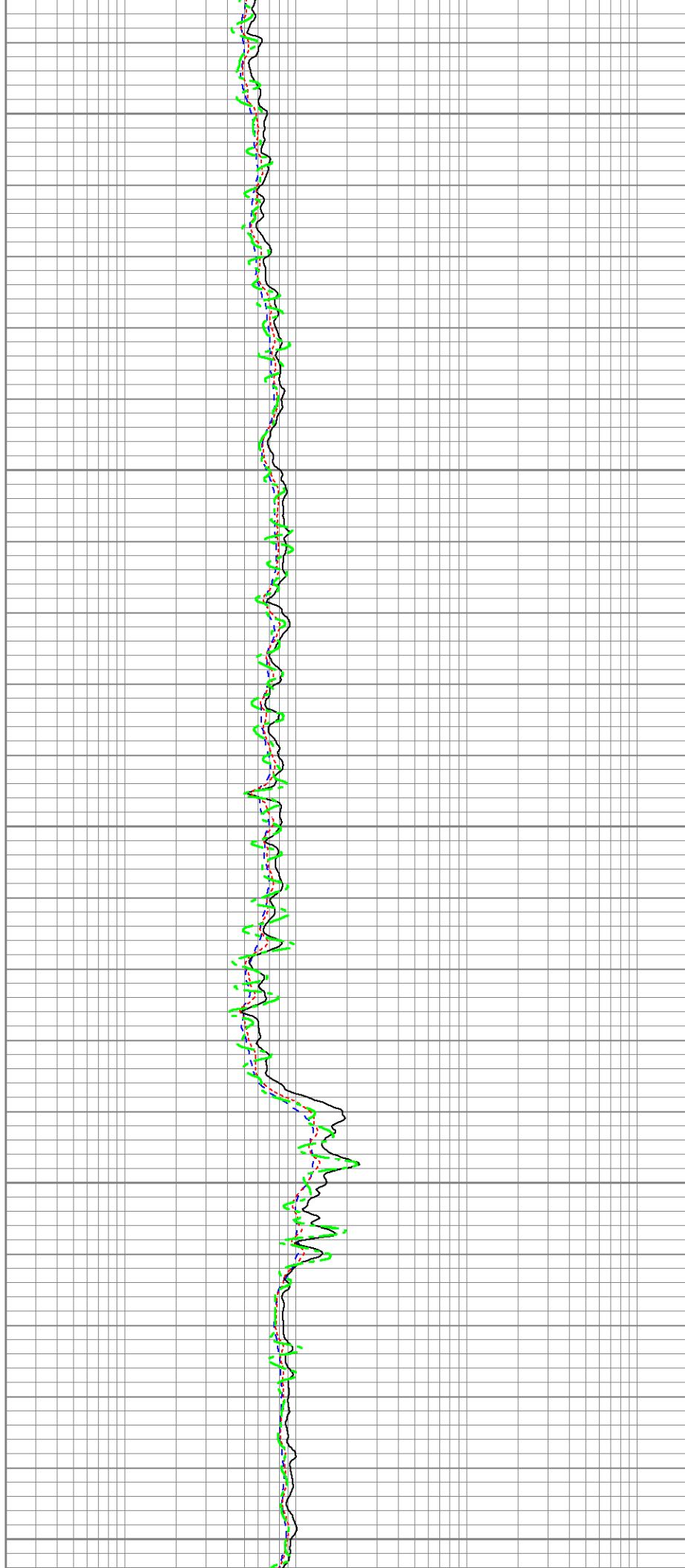




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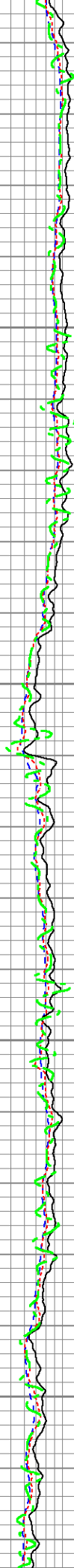
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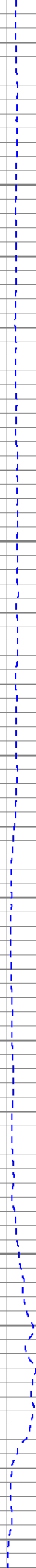
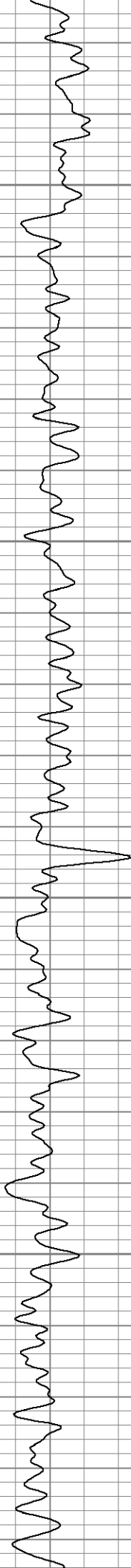




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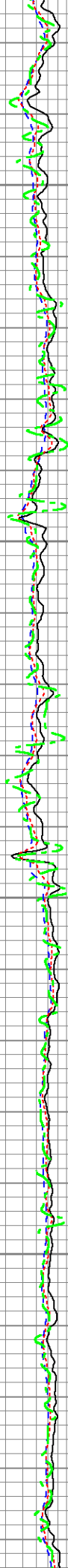
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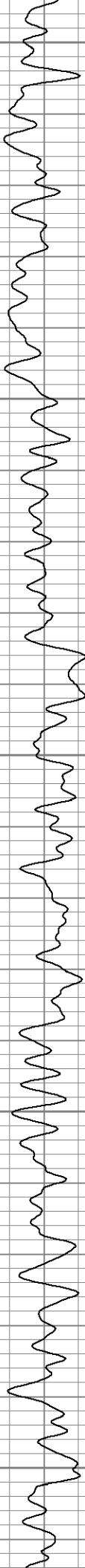




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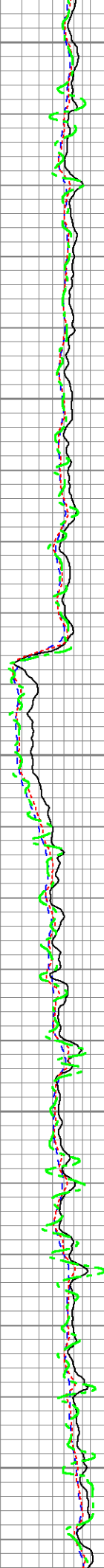
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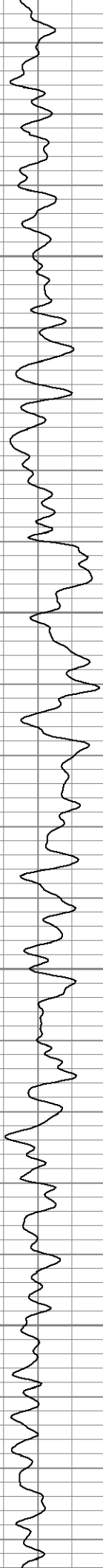




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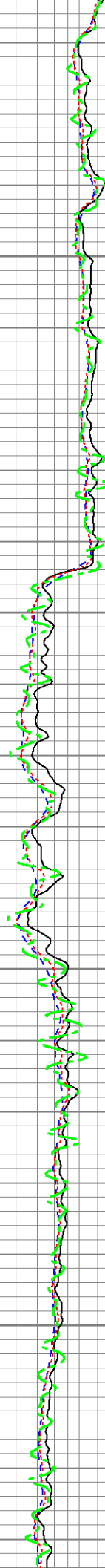
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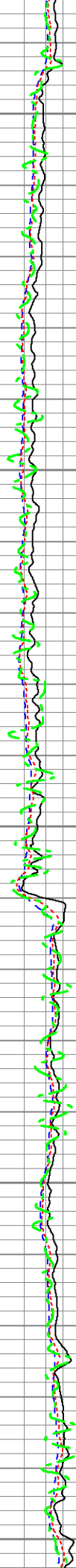




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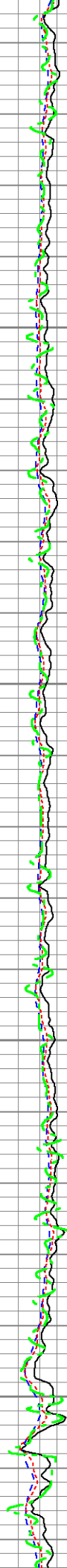
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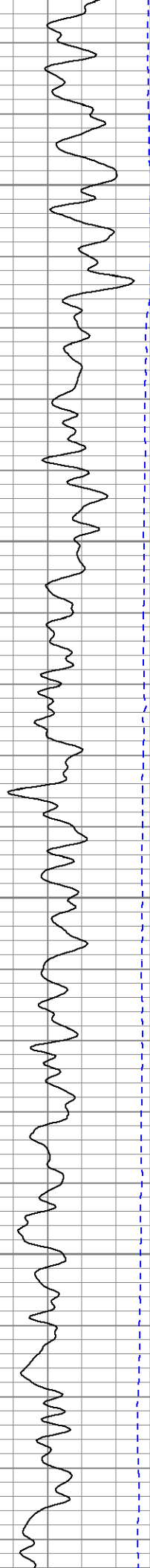




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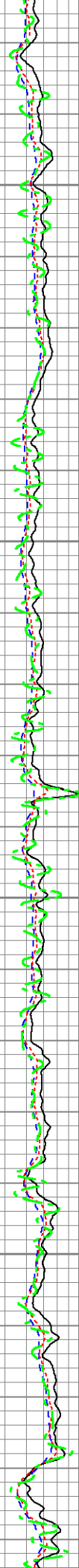
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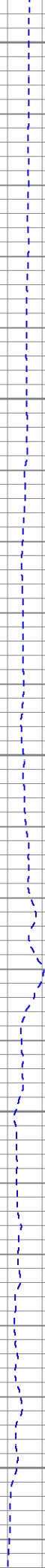
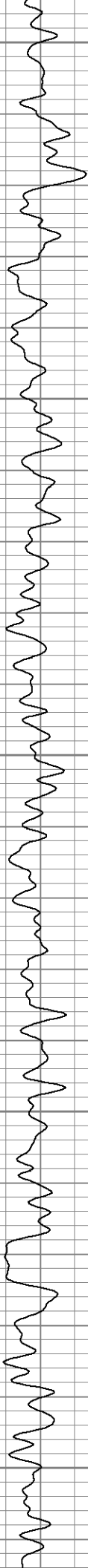




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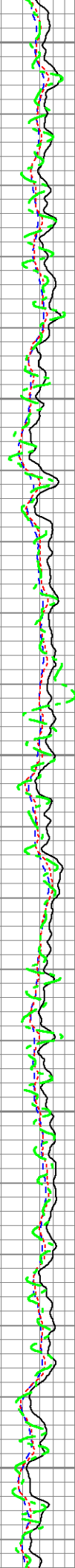
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6400

6500

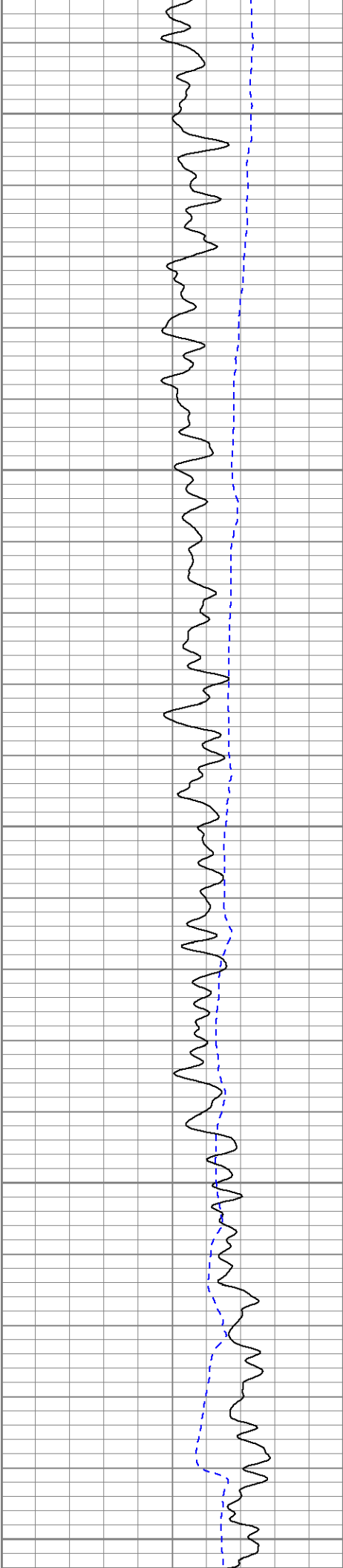




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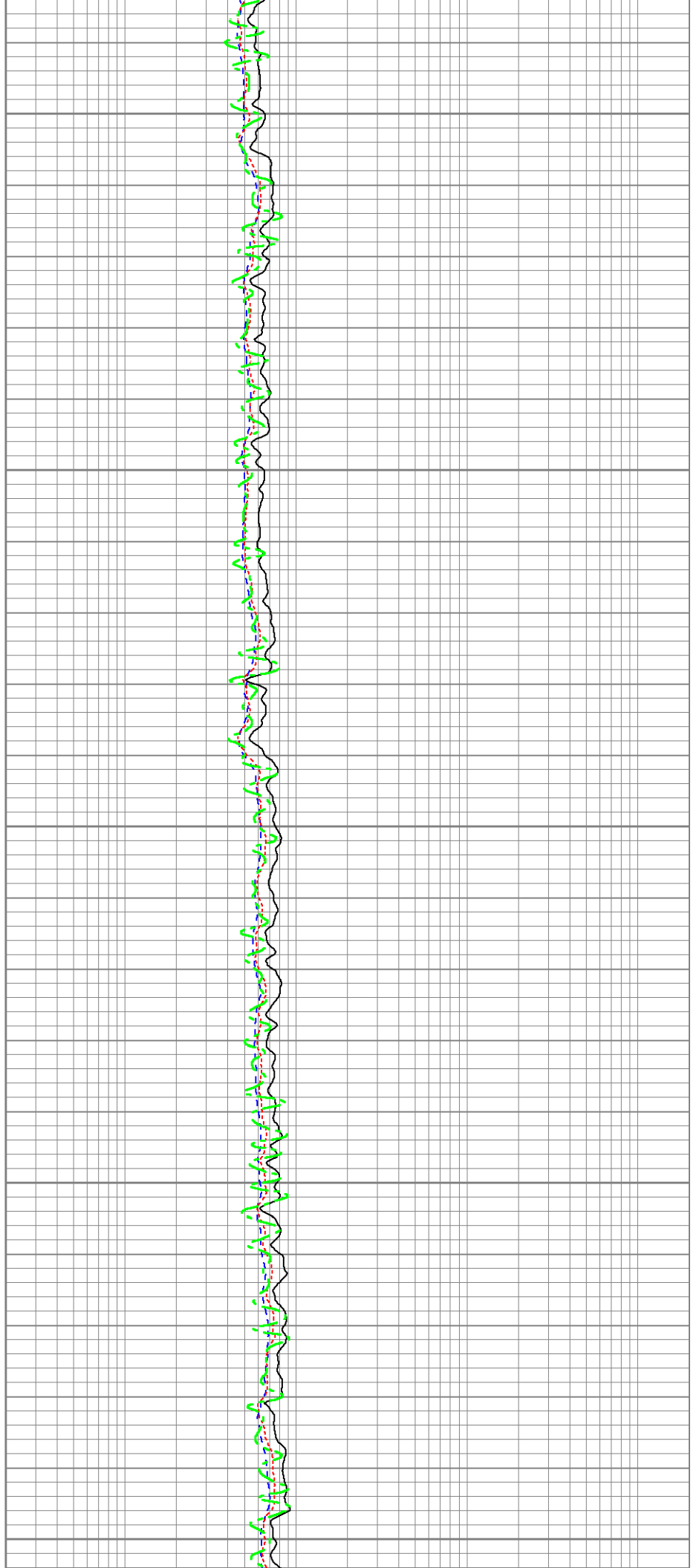


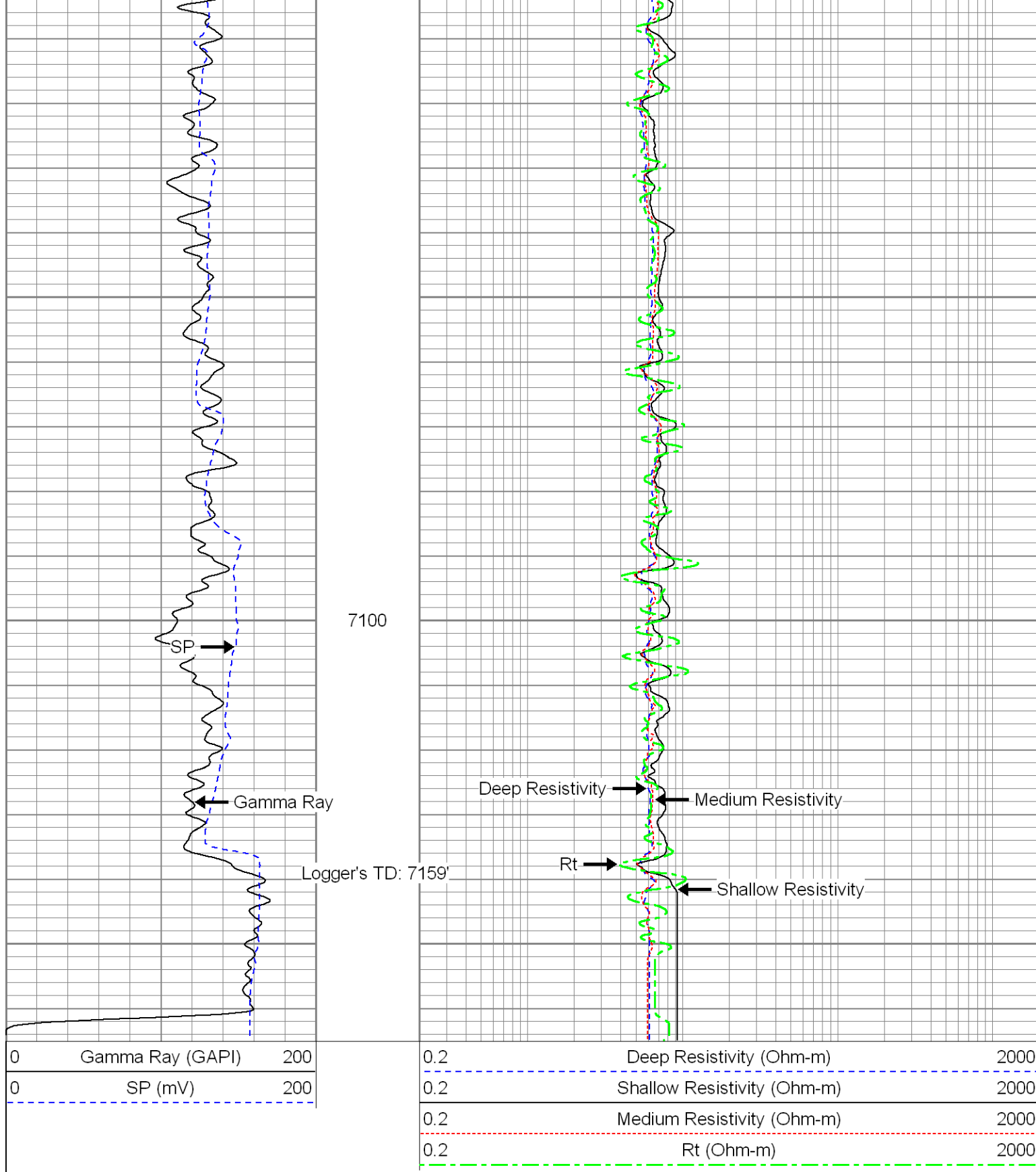


6800

6900

7000





### Calibration Report

Database File: 13501.db  
Dataset Pathname: pass1  
Dataset Creation: Tue Apr 22 02:15:14 2014 by Log Open-Cased 100827

### Dual Induction Calibration Report

Serial-Model: 1024-PSI  
Surface Cal Performed: Thu Apr 10 16:06:53 2014

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	0.000	1.000	0.000	1.000	mmho/m	0.570	-45.000
Medium	0.000	1.000	0.000	1.000	mmho/m	0.490	-40.000

Gamma Ray Calibration Report				
Serial Number:	923			
Tool Model:	PSI			
Performed:	Thu Apr 10 16:07:57 2014			
Calibrator Value:	1.0		GAPI	
Background Reading:	0.0		cps	
Calibrator Reading:	1.0		cps	
Sensitivity:	0.6100		GAPI/cps	