

COMPENSATED DENSITY NEUTRON LOG

Company	Pioneer Natural Resources	Company	Pioneer Natural Resources
Well	Djembe 21-12	Well	Djembe 21-12
Field	Purgatoire River	Field	Purgatoire River
County	Las Animas	County	Las Animas
State	Colorado	State	Colorado
Location:	API #: 05 071 09814 00	Other Services	SIL
Permanent Datum	788' FNL & 2203' FWL	Elevation	
Log Measured From	SEC 12 TWP 33S RGE 68W	K.B. 7721'	
Drilling Measured From	Ground Level	D.F. -----	
	Kelly Bushing 4' AGL	G.L. 7717'	
	Kelly Bushing		
Date	8-26-11		
Run Number	One		
Depth Driller	2350'		
Depth Logger	2350'		
Bottom Logged Interval	2338'		
Top Log Interval	Surface Casing		
Casing Driller	8 5/8" @ 437'		
Casing Logger	438'		
Bit Size	7 7/8"		
Type Fluid in Hole	Water		
Density / Viscosity	///		
pH / Fluid Loss	///		
Source of Sample	///		
Rm @ Meas. Temp	///		
Rmf @ Meas. Temp	///		
Rmc @ Meas. Temp	///		
Source of Rmf / Rmc	///		
Rm @ BHT	///		
Time Circulation Stopped	1:00 P.M.		
Time Logger on Bottom	5:15 P.M.		
Maximum Recorded Temperature	96 DEG F		
Equipment Number	T590		
Location	Trinidad		
Recorded By	C. Sisneros		
Witnessed By	Mr. Derrick Berry		

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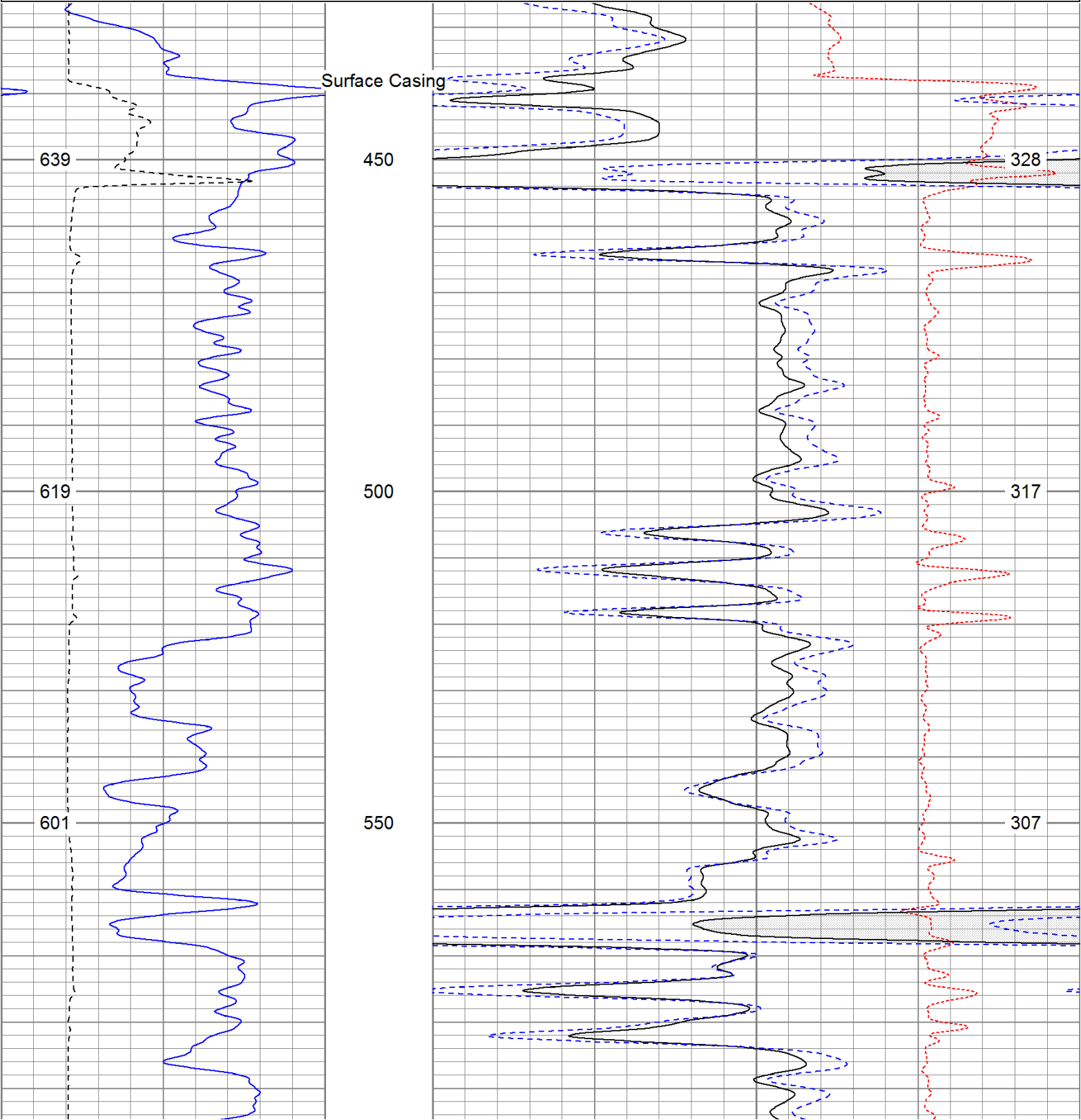
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

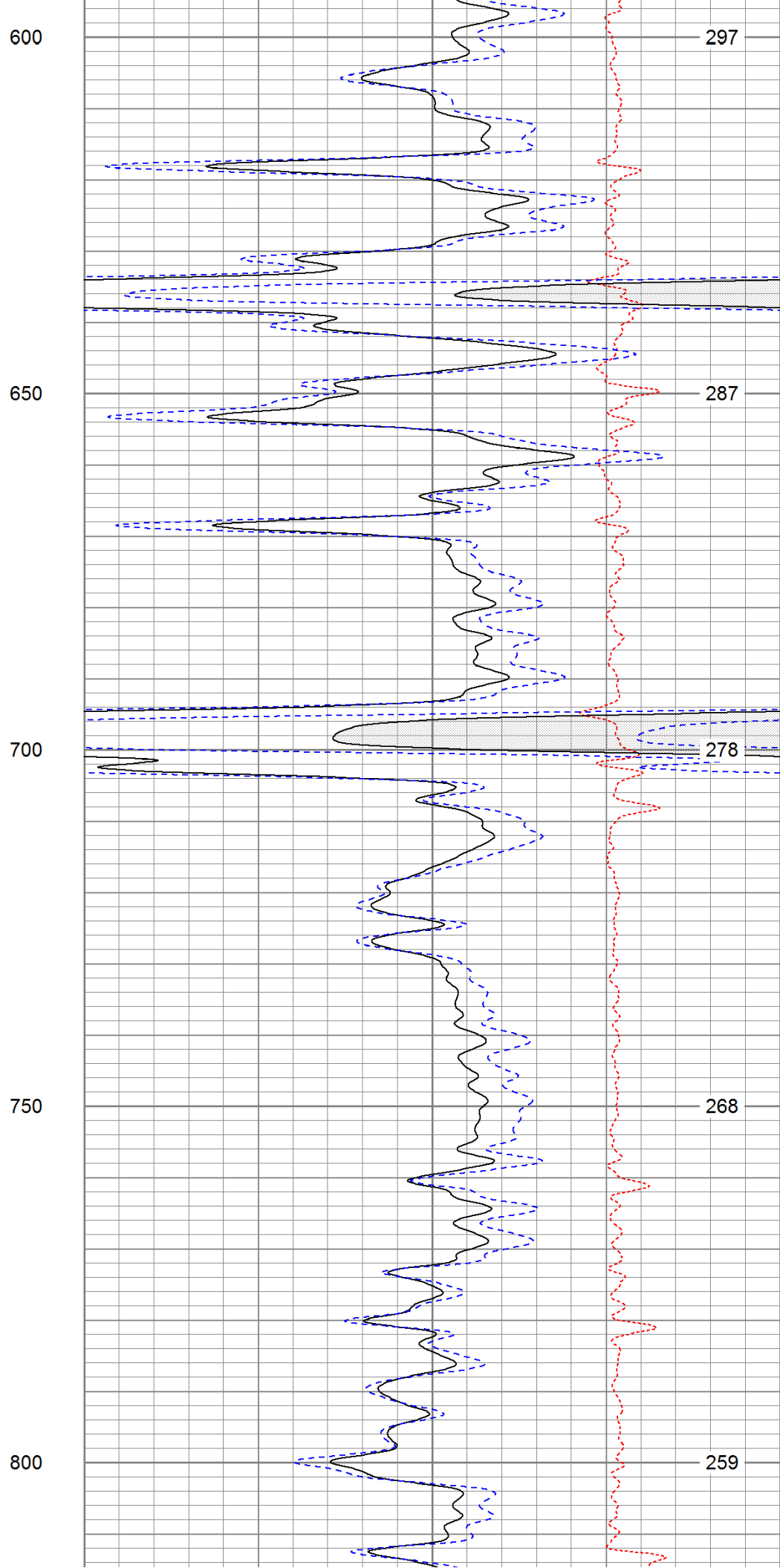
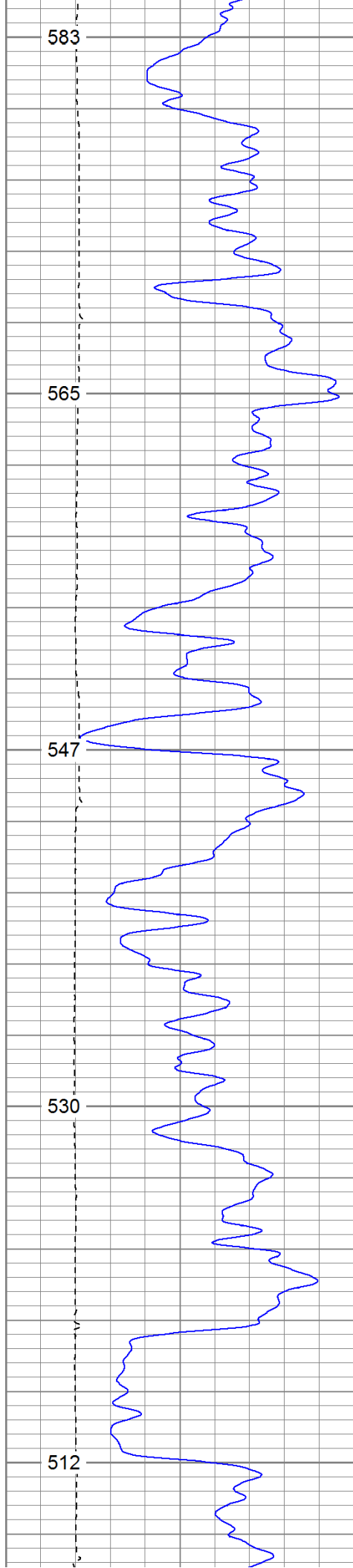
Comments

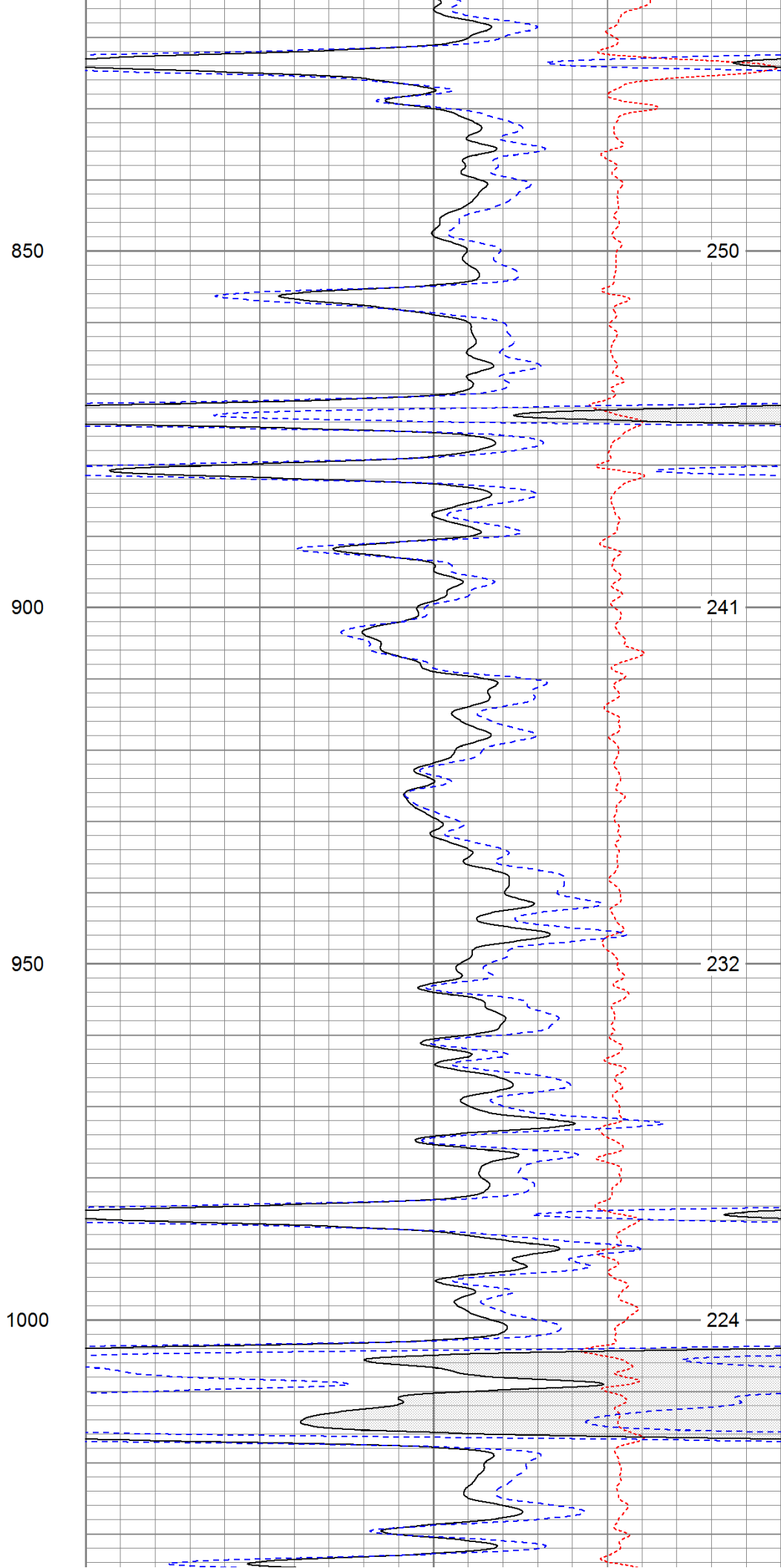
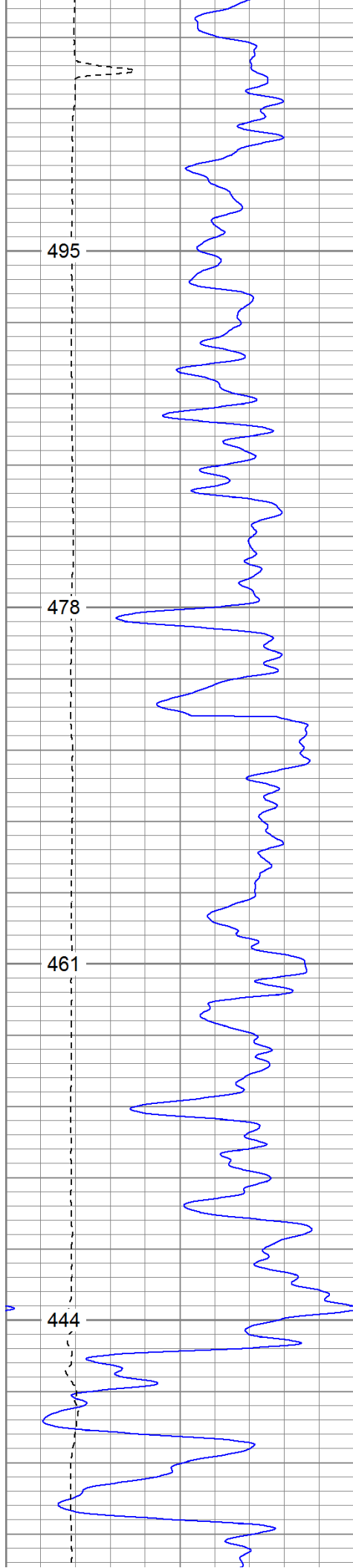
Density Porosity Presented On Sandstone Matrix.
 ABHV Calculated For 5.5" Casing.
 Neutron Porosity invalid from 1002' to 928' due to foam.
 Directions:
 Rancho Escondido, at dumpsters go left , go thru yellow pole gate, go to top of hill,
 stay right, first right, drive thru Montoya 44-1 location, take left down hill, @ Y
 go left, 2nd left, dead end on location.

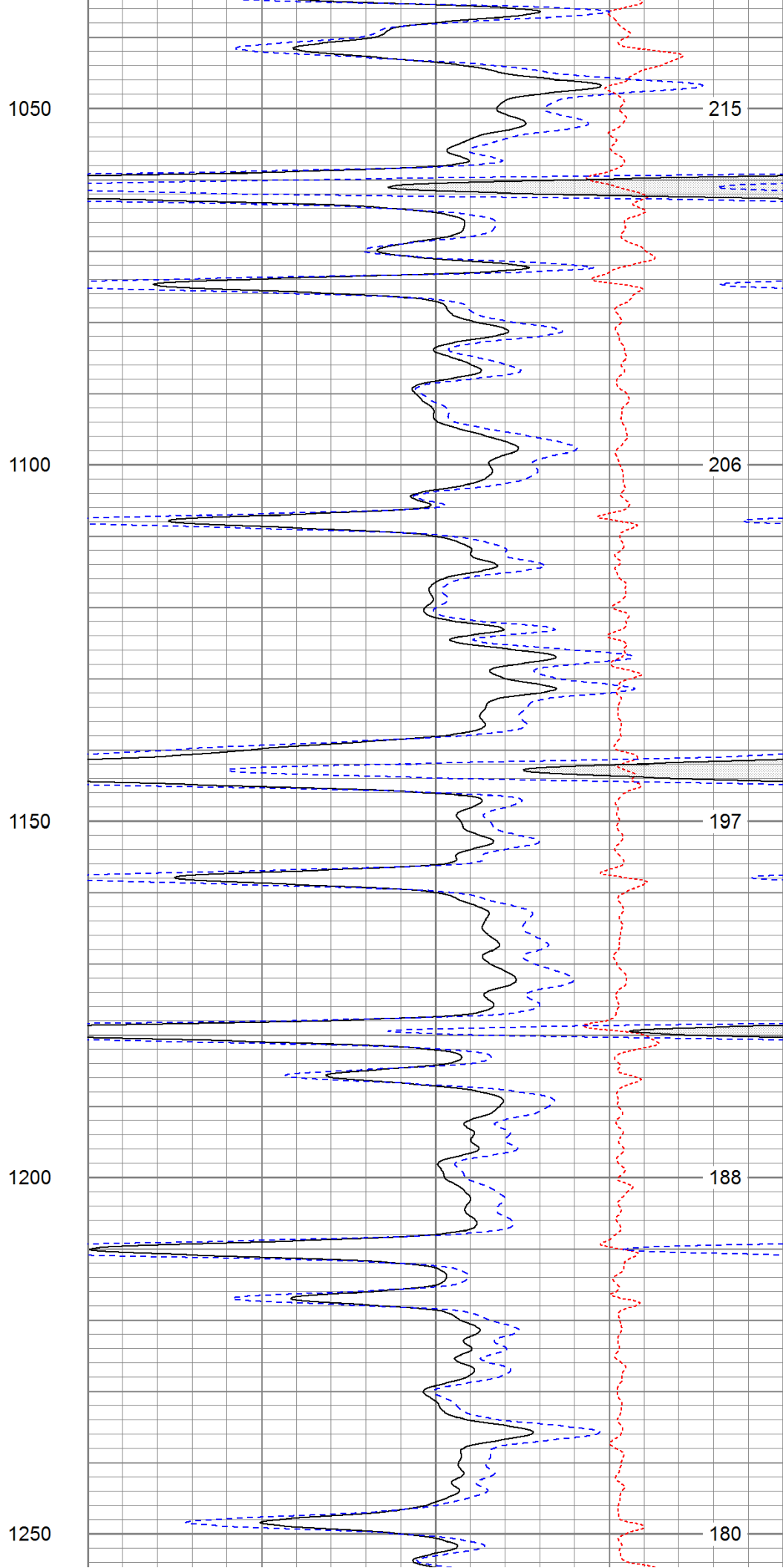
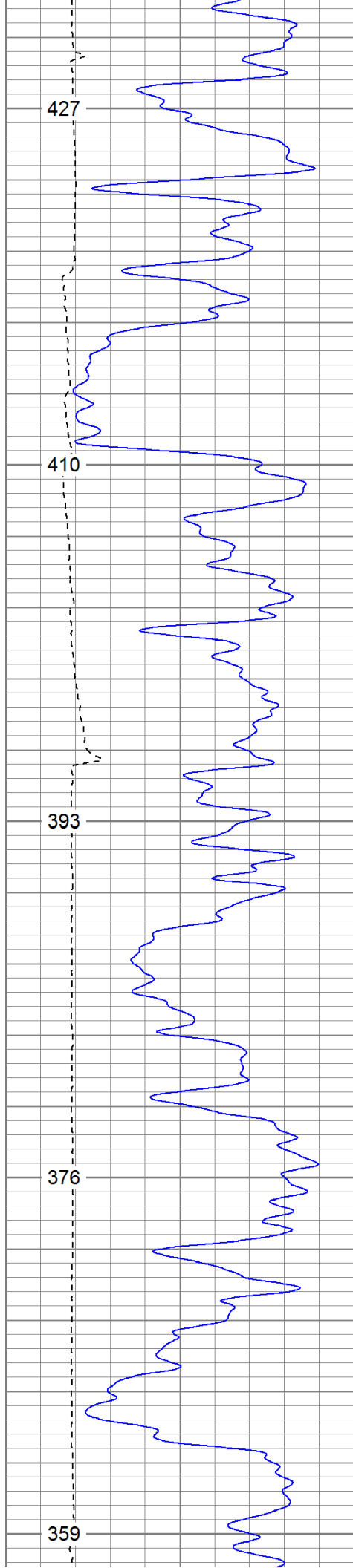
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Dataset Pathname: pass2.1
Presentation Format: cdl
Dataset Creation: Fri Aug 26 18:34:16 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

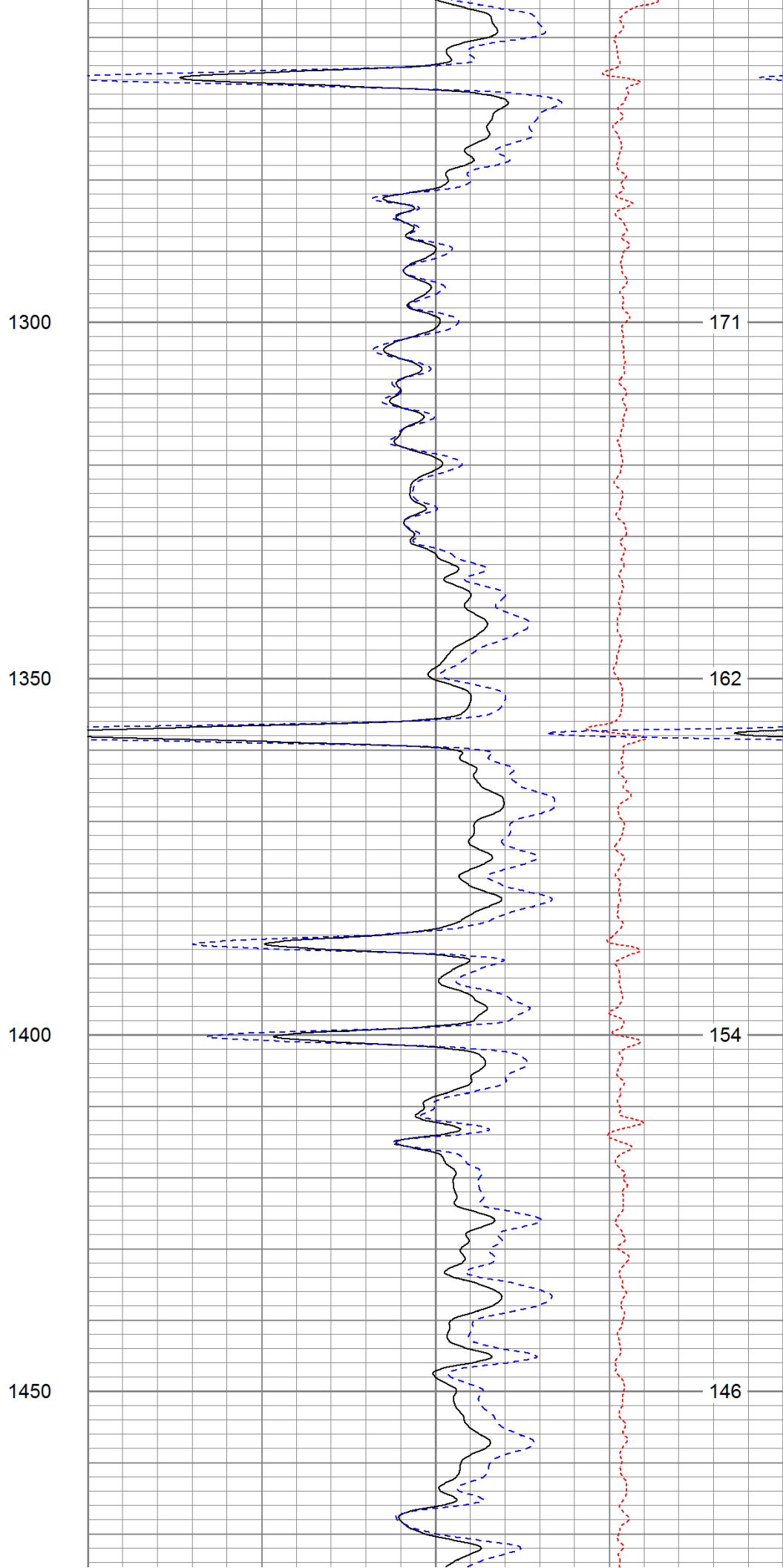
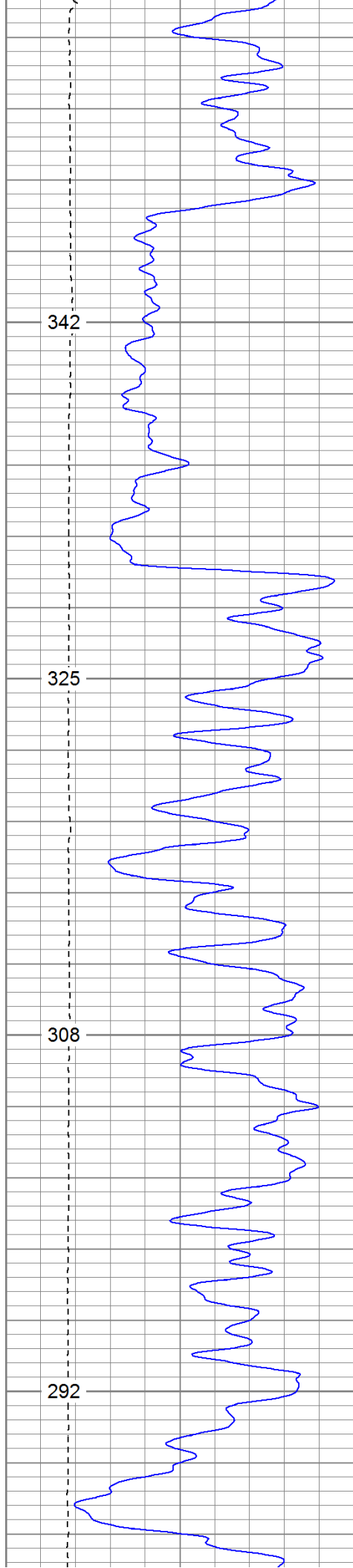
0	GR (GAPI)	200	2	RHOB (g/cc)	3
6	DCAL (in)	16	1	RHOB (g/cc)	2
TBHV (ft3)			30	DPOR (pu)	-10
			-0.5 RHOC (g/cc) 0.5		
			7000 LTEN (lb) 0		
			ABHV (ft3)		

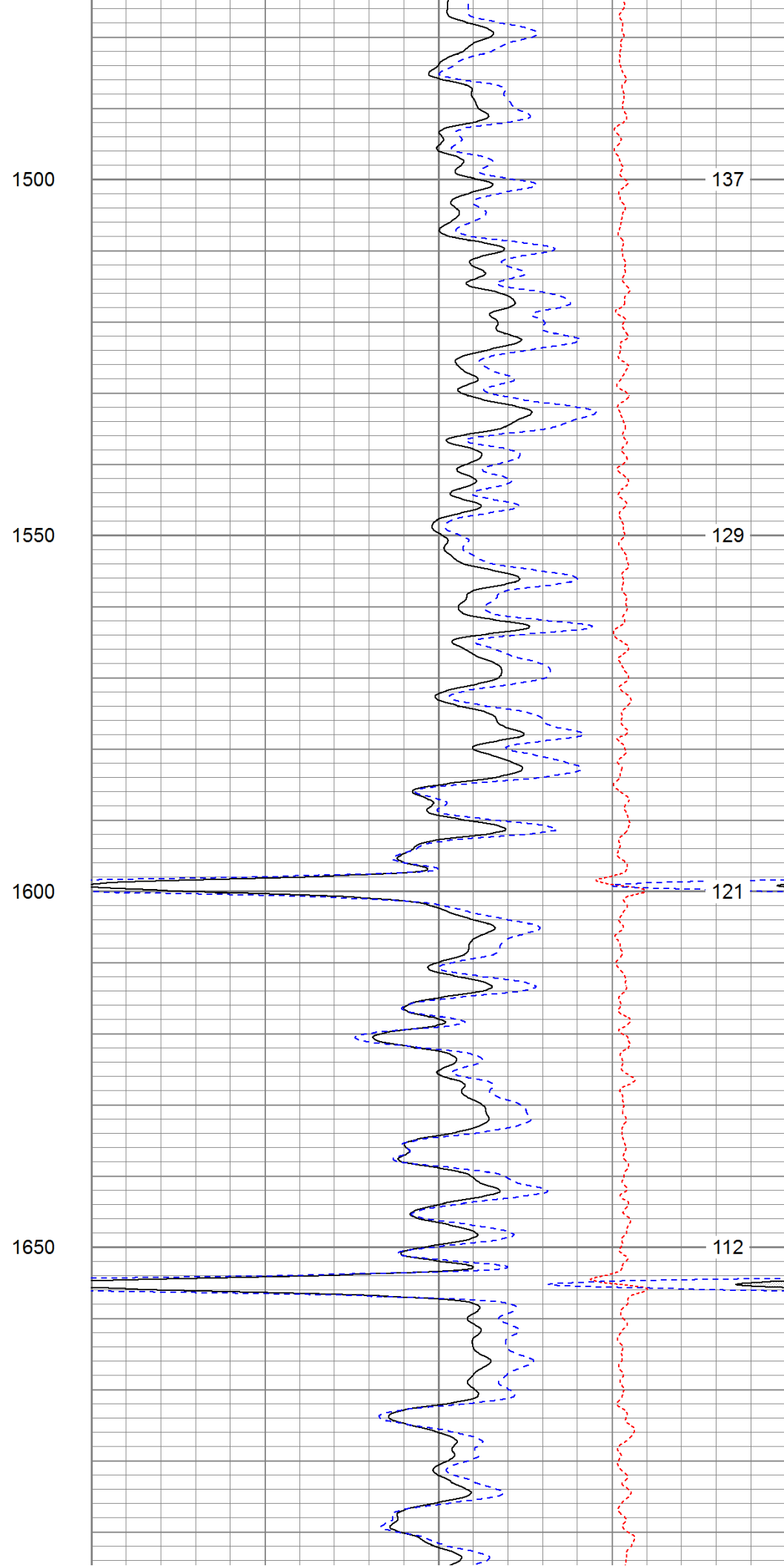
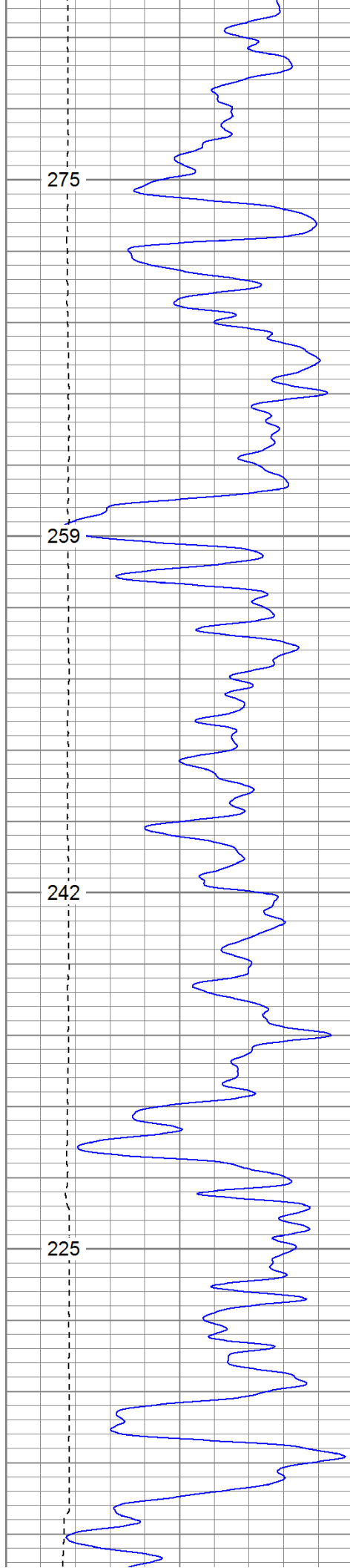


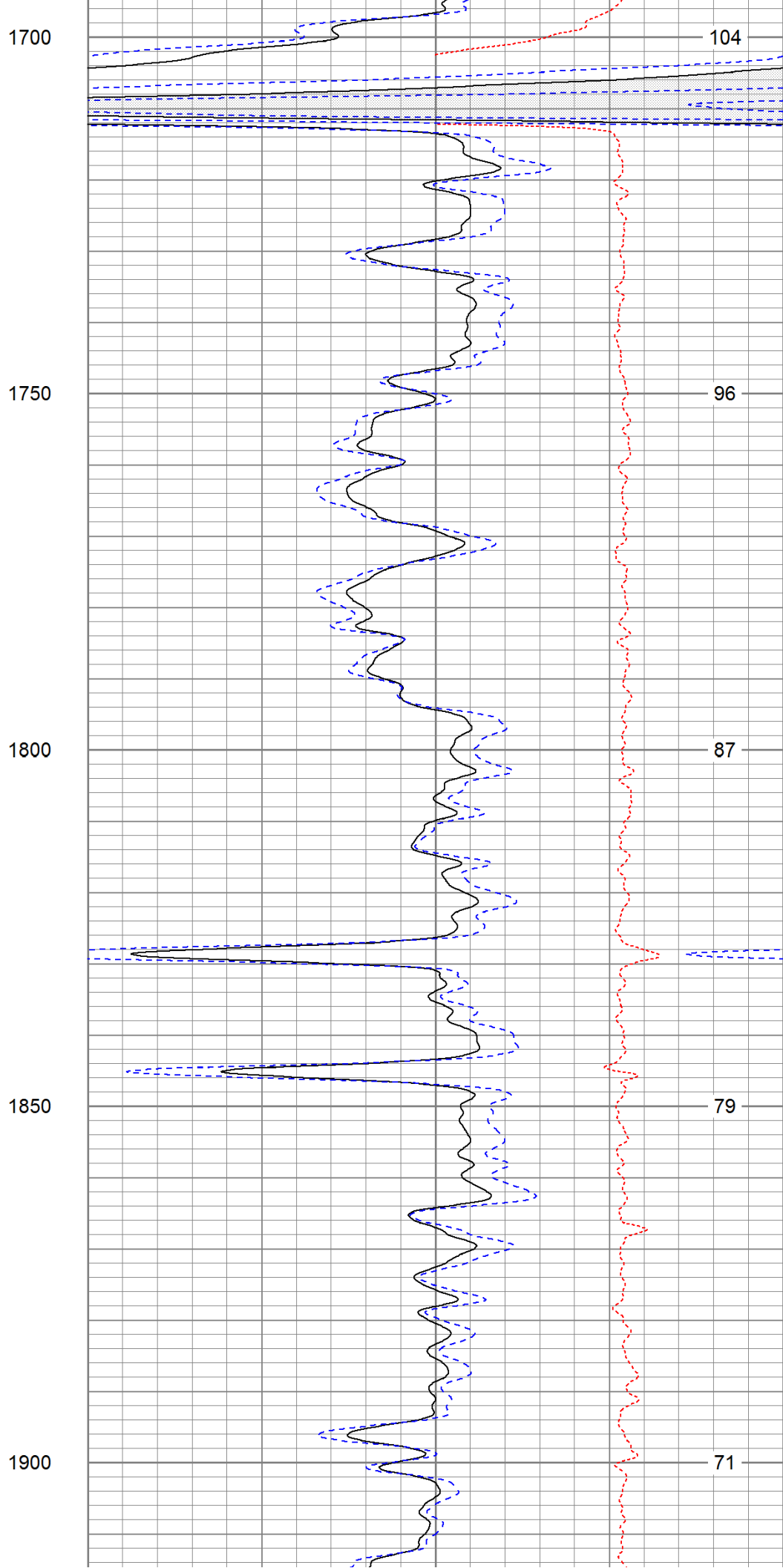
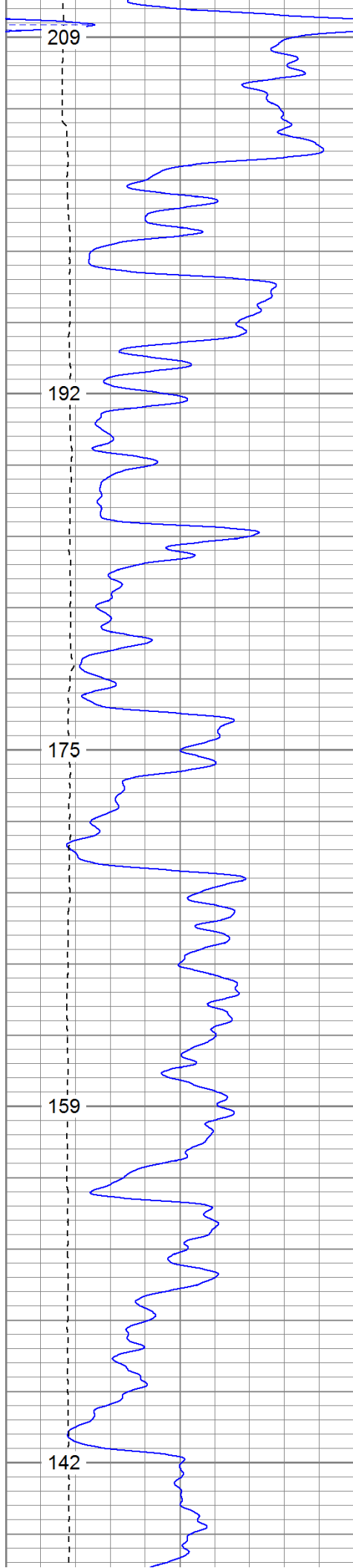


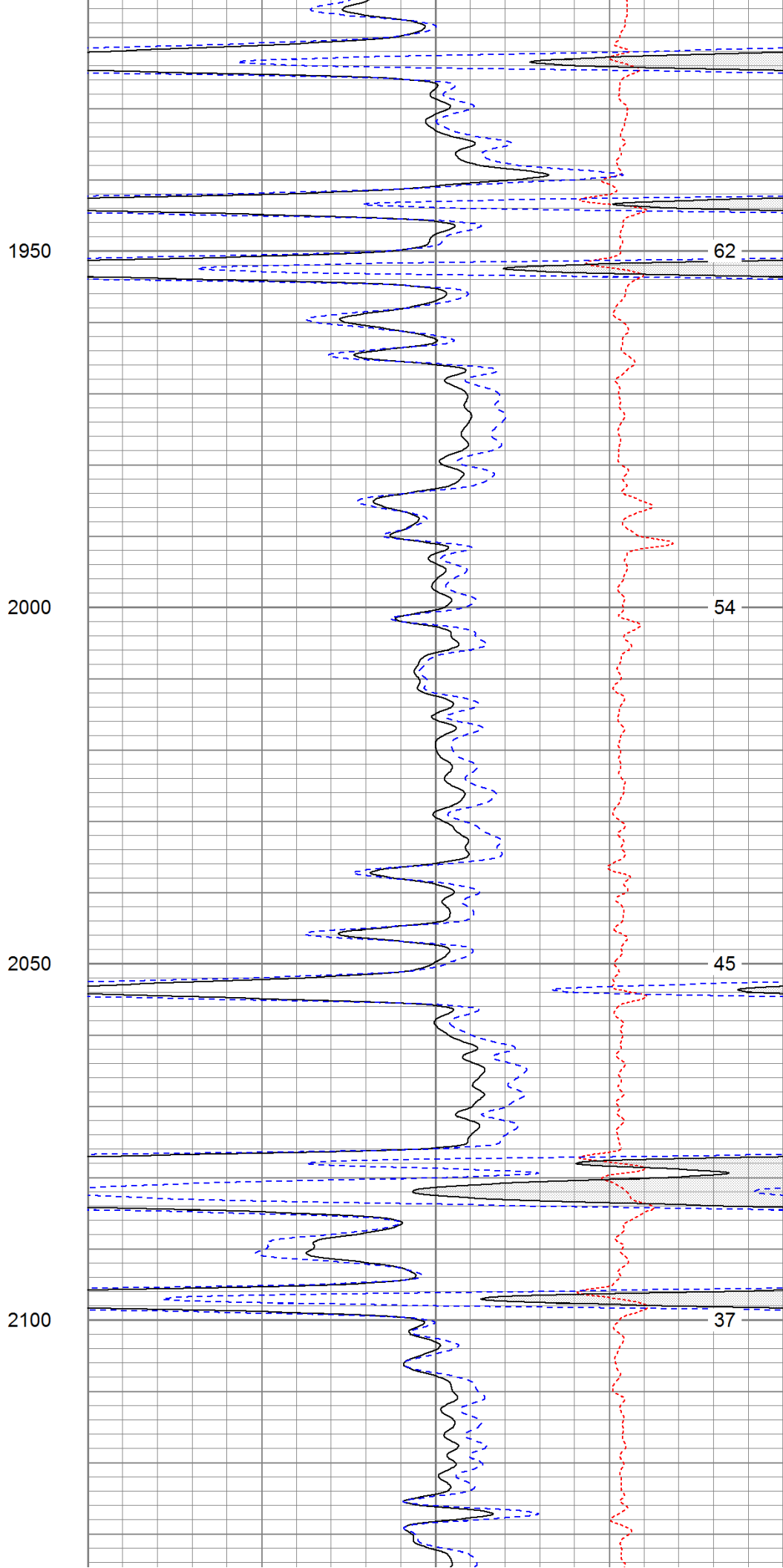
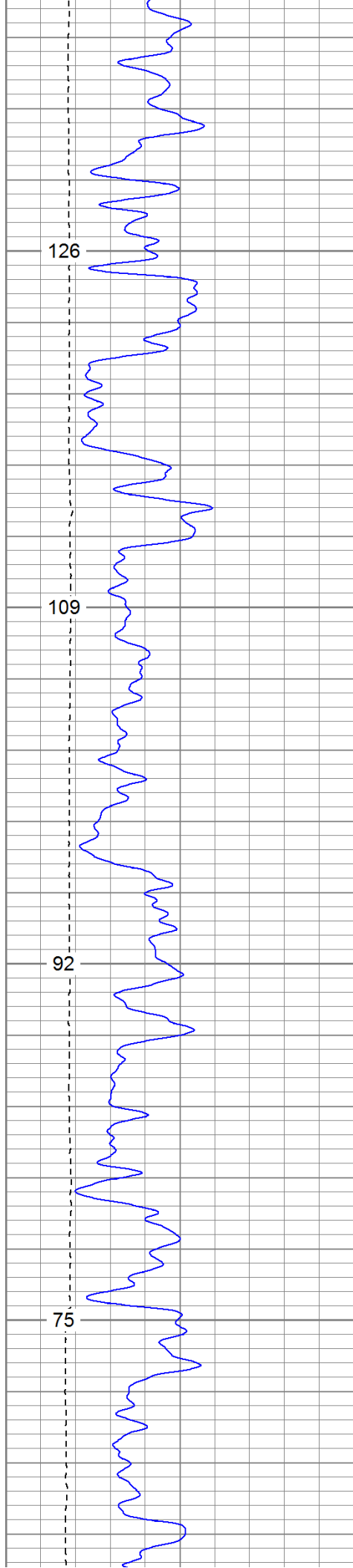


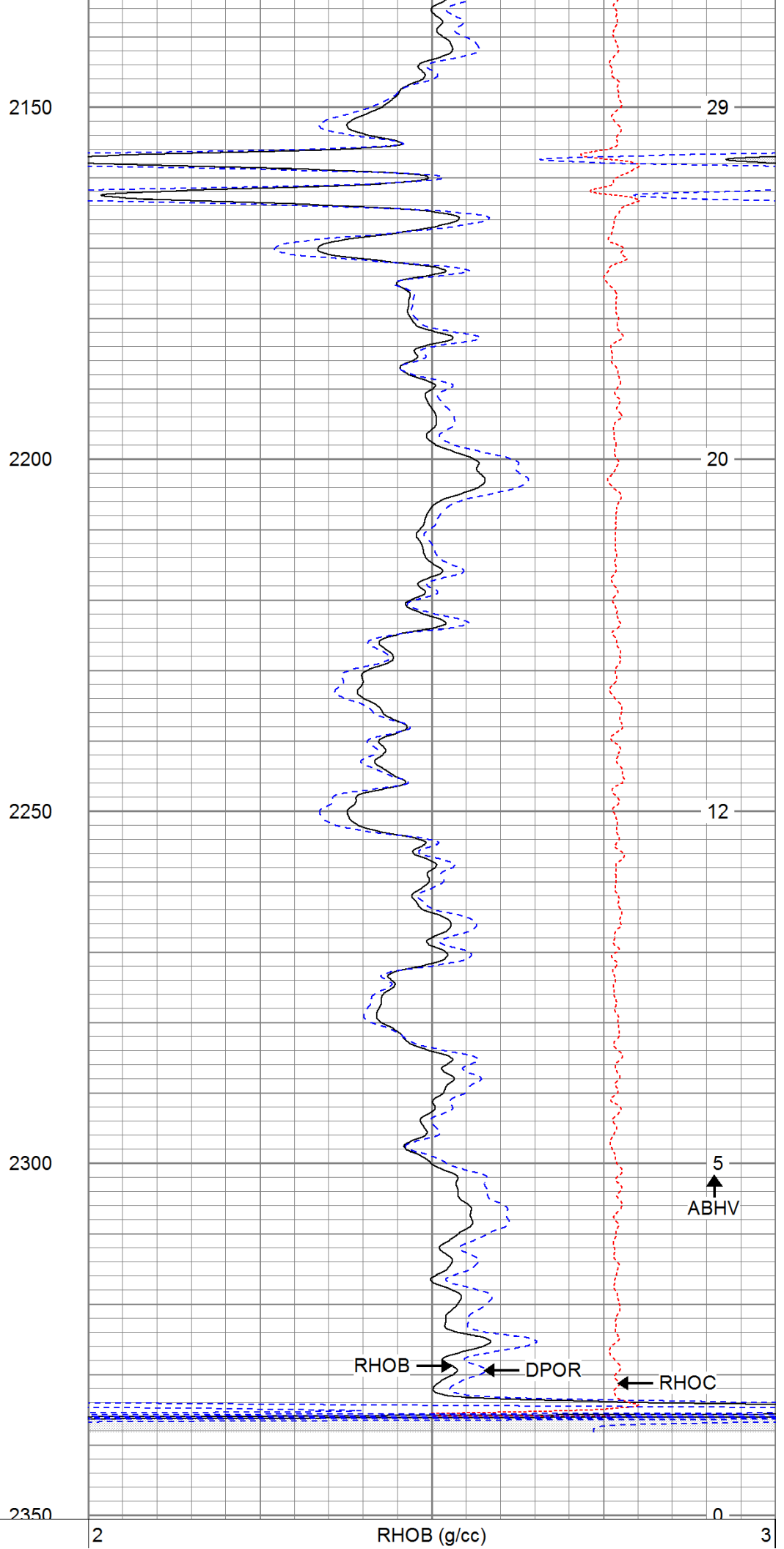
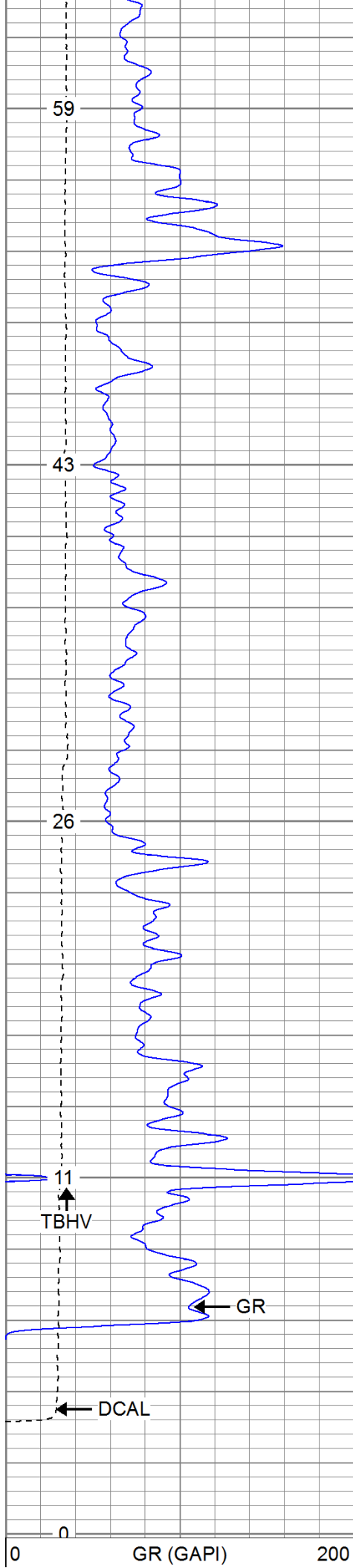












6	DCAL (in)	16
TBHV (ft3)		

1	RHOB (g/cc)	2
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
7000	LTEN (lb)	0
	ABHV (ft3)	

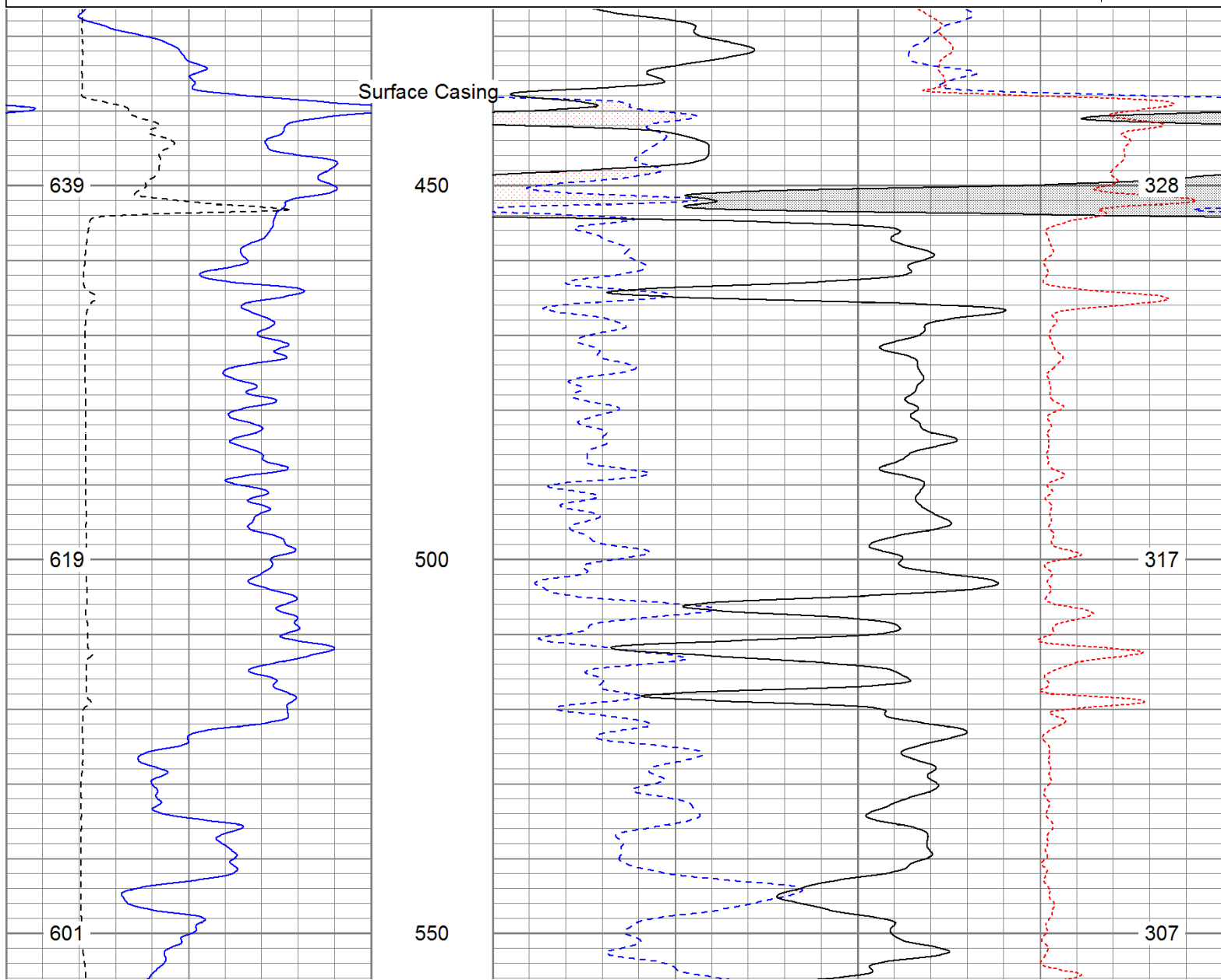


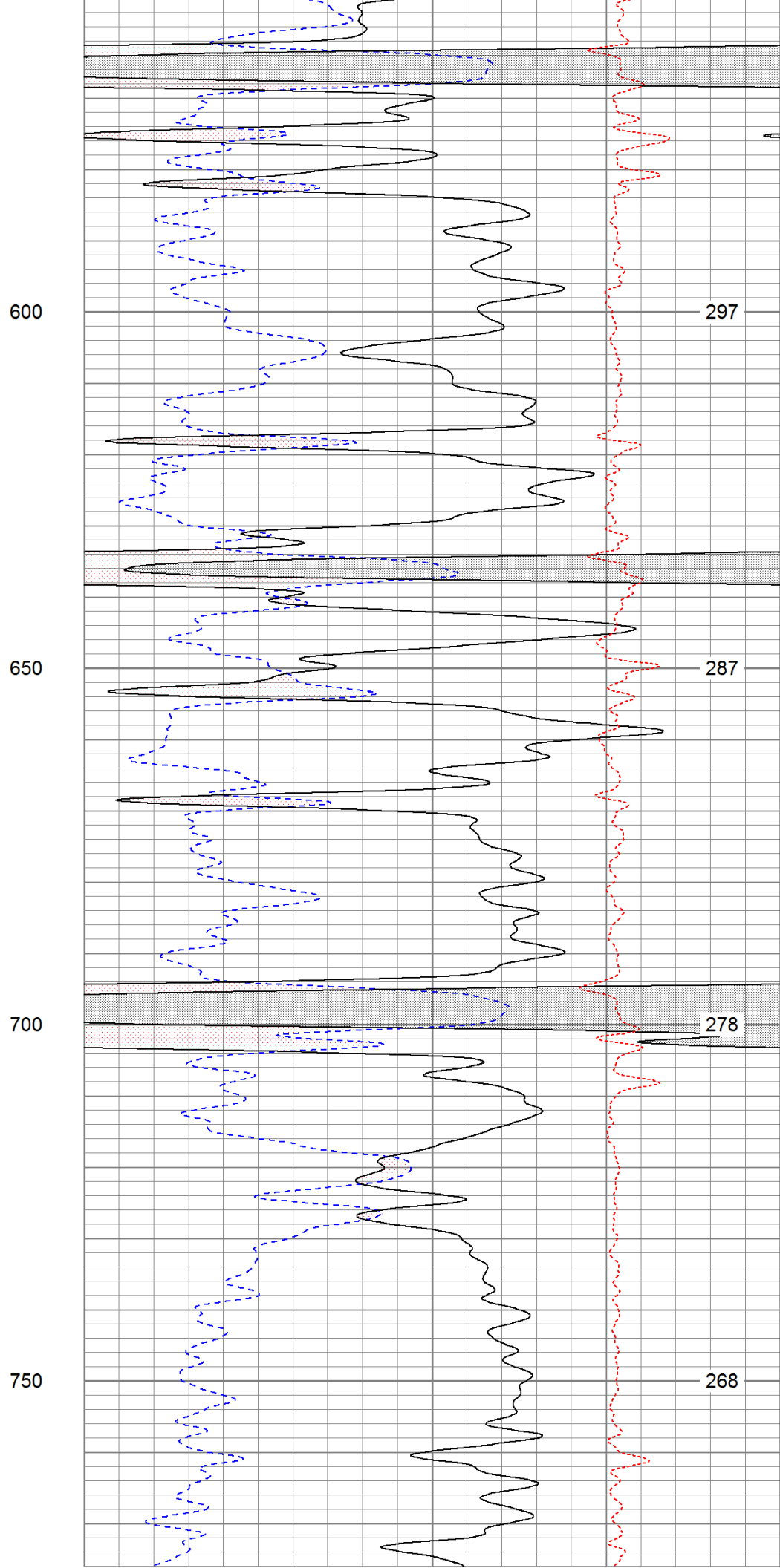
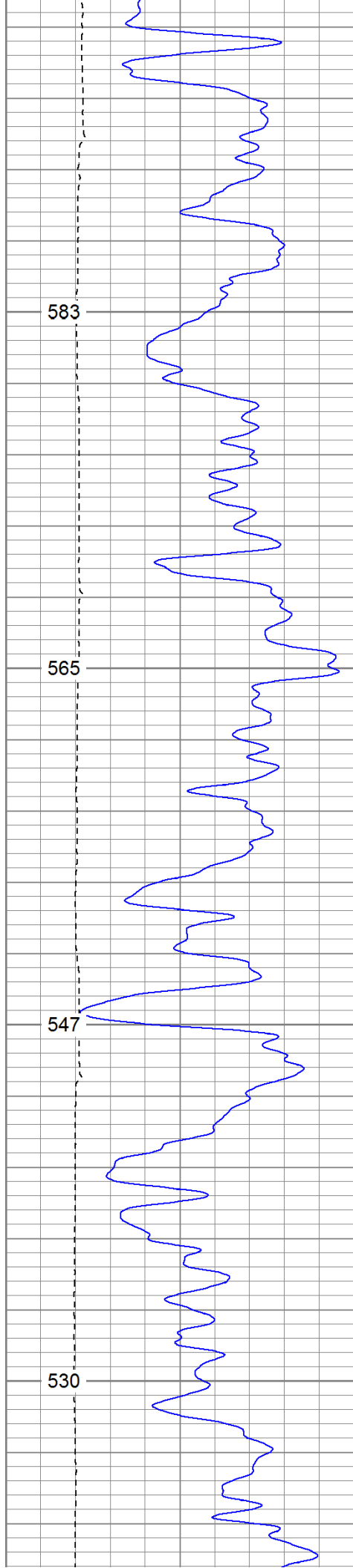
Main Pass

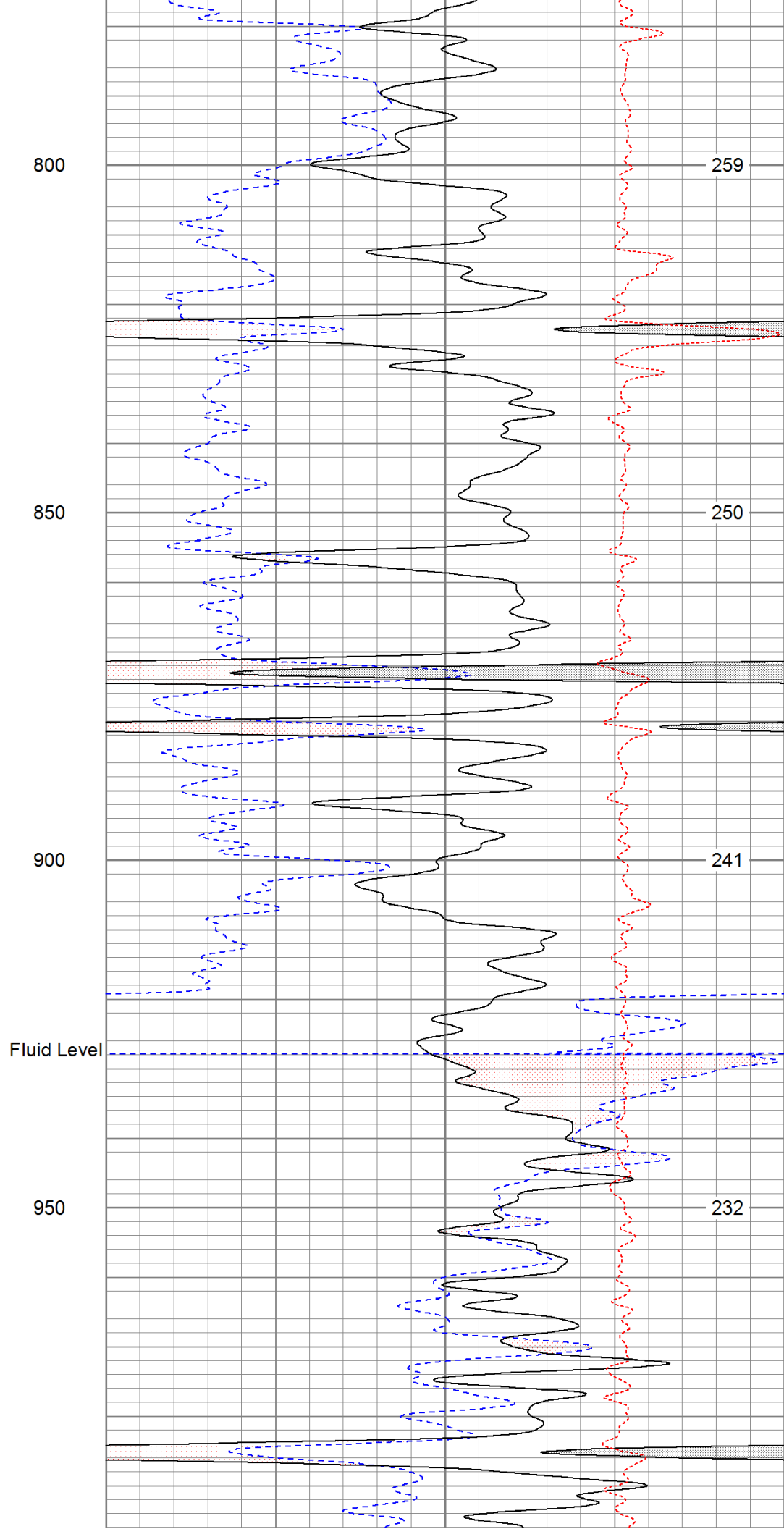
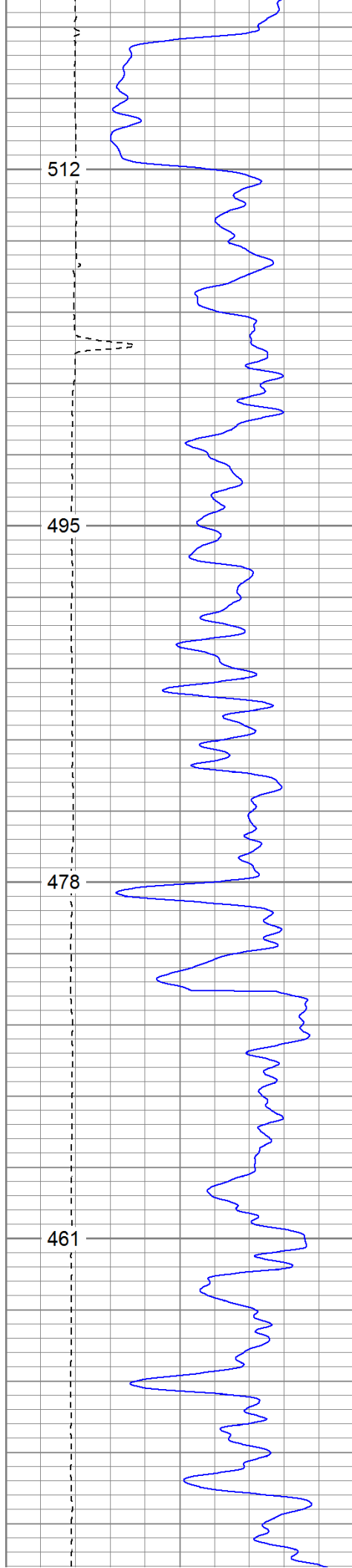
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 Dataset Pathname: pass2.1
 Presentation Format: cdnl
 Dataset Creation: Fri Aug 26 18:34:16 2011 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

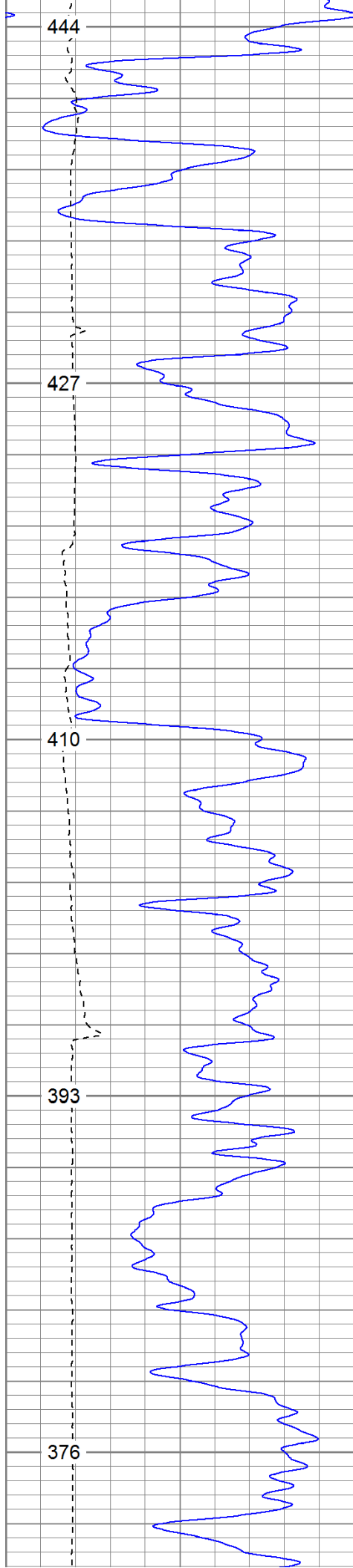
0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		

30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
	ABHV (ft3)	









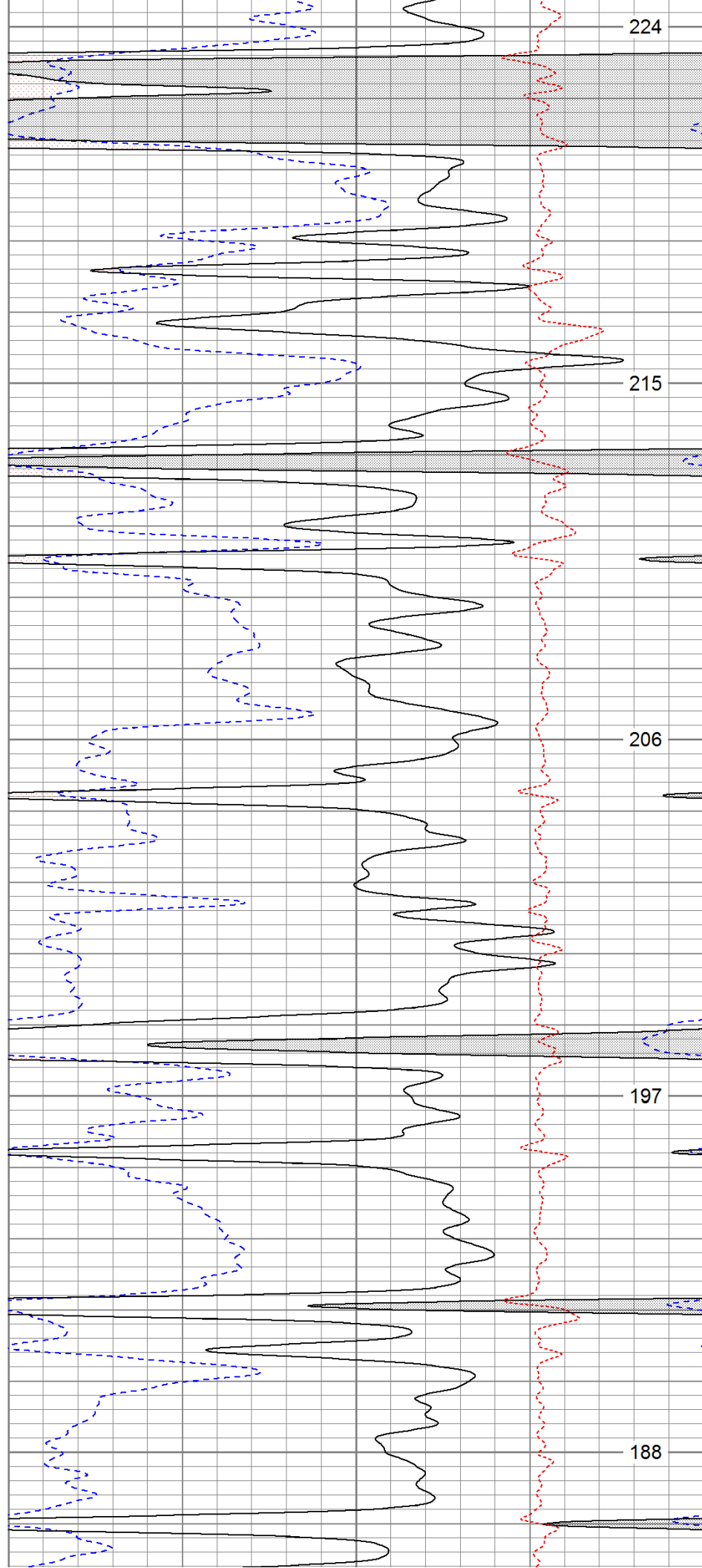
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FOAM

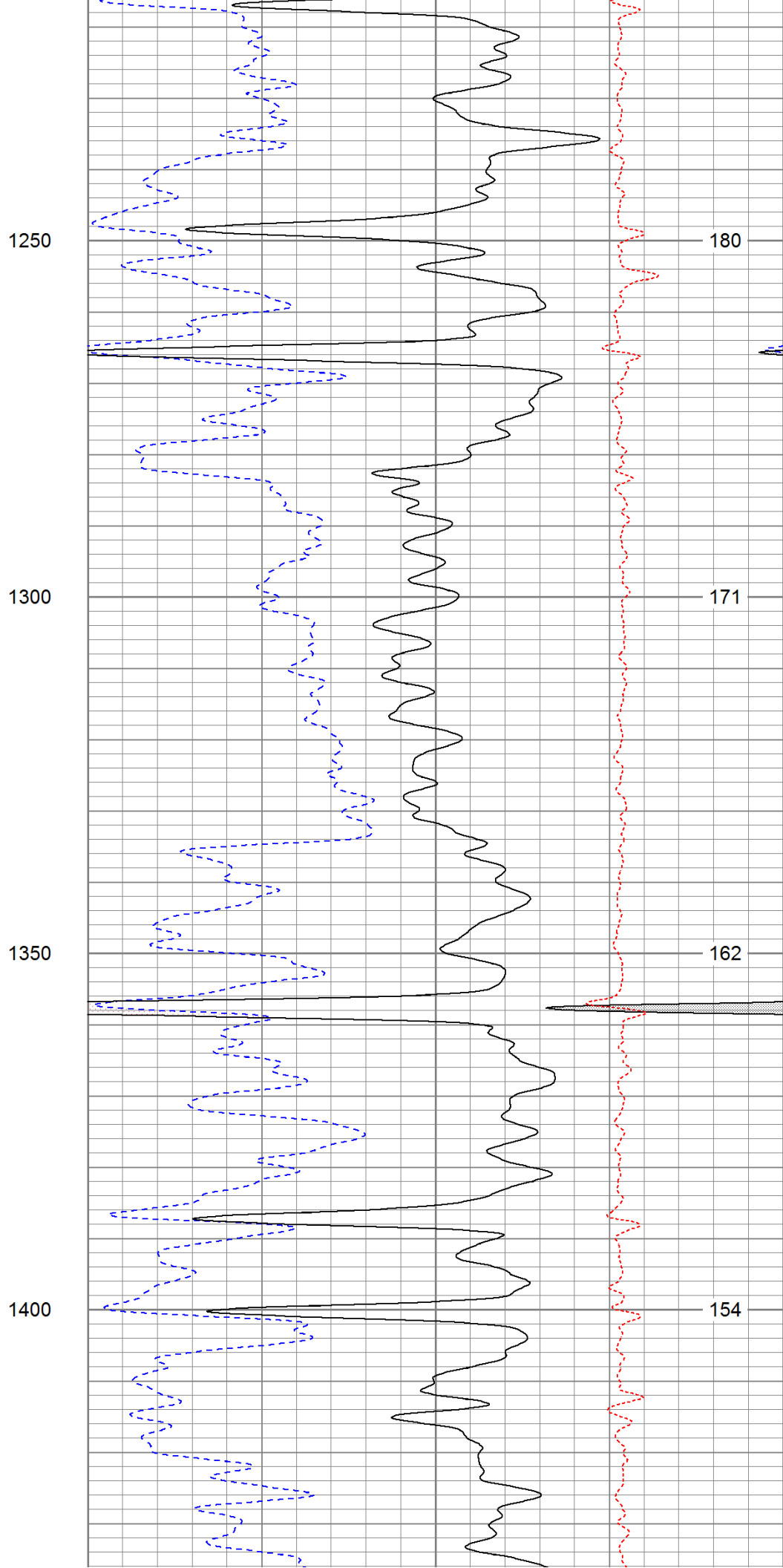
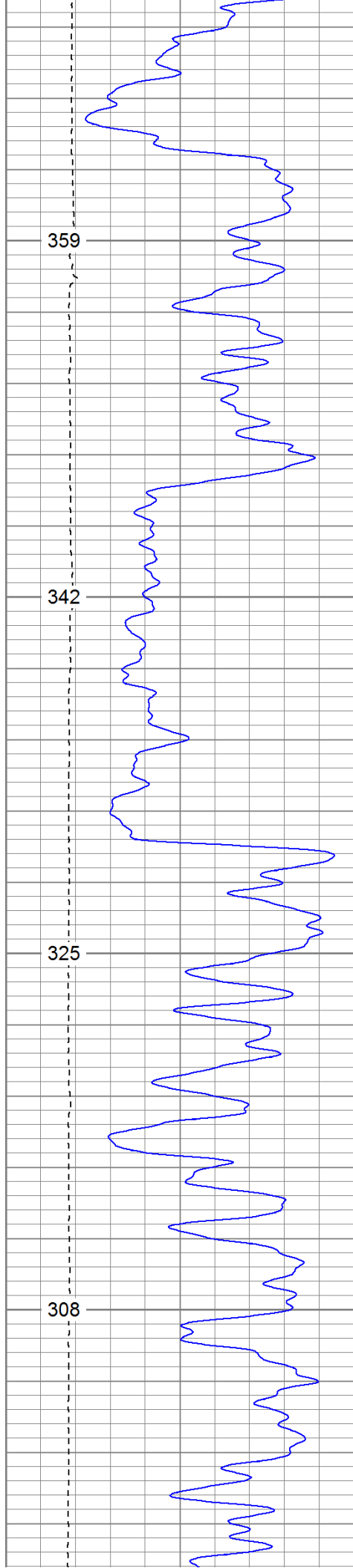
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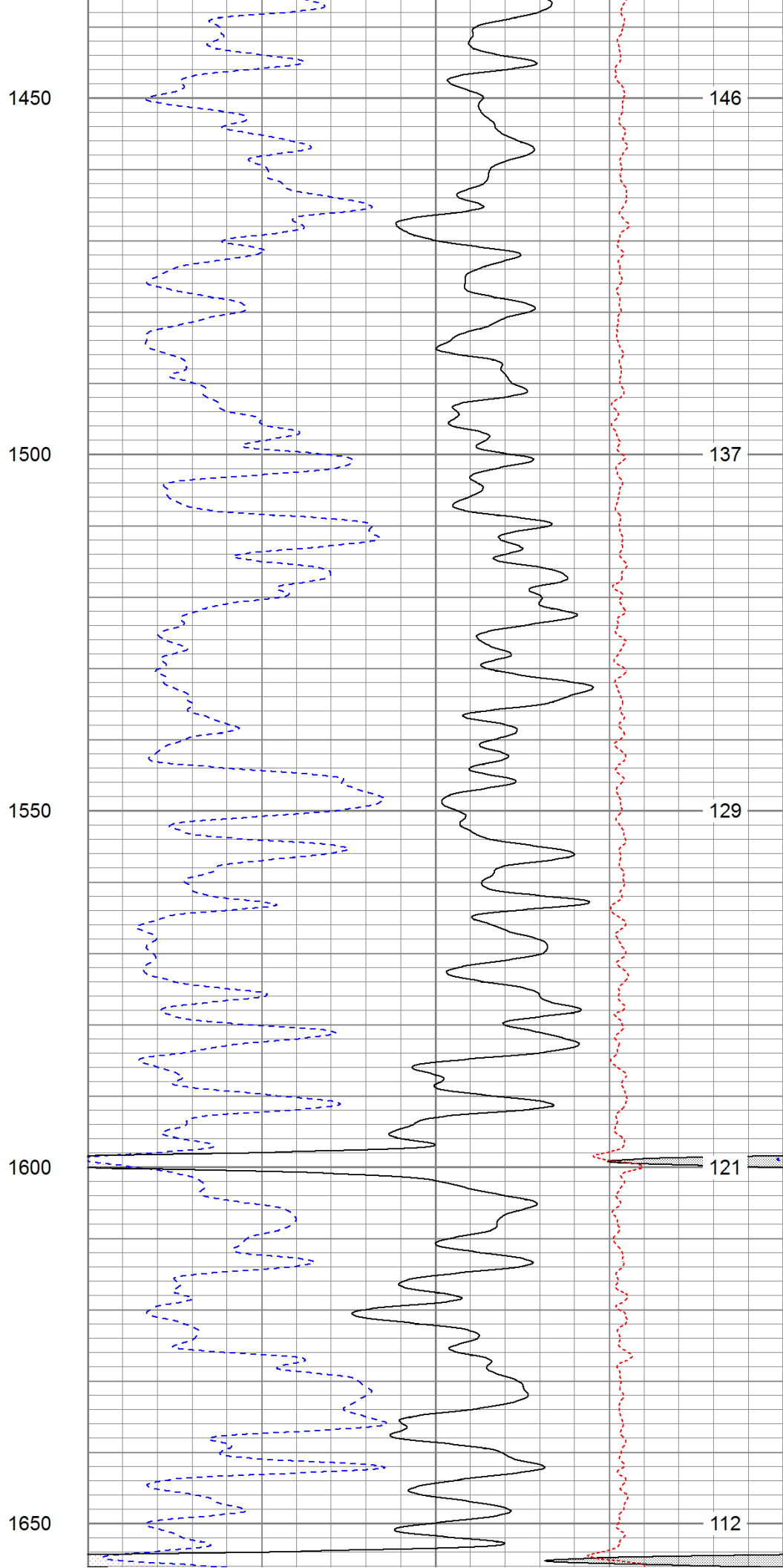
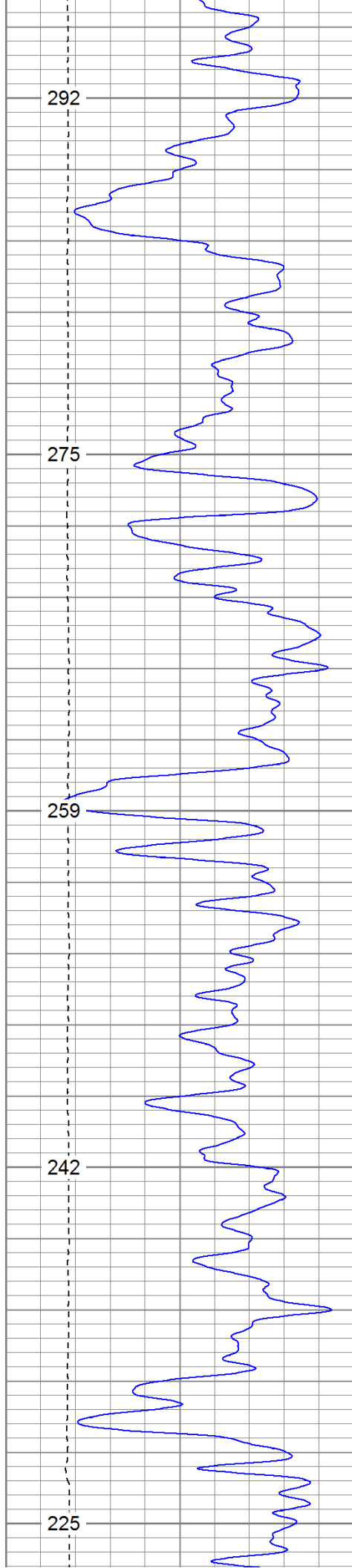
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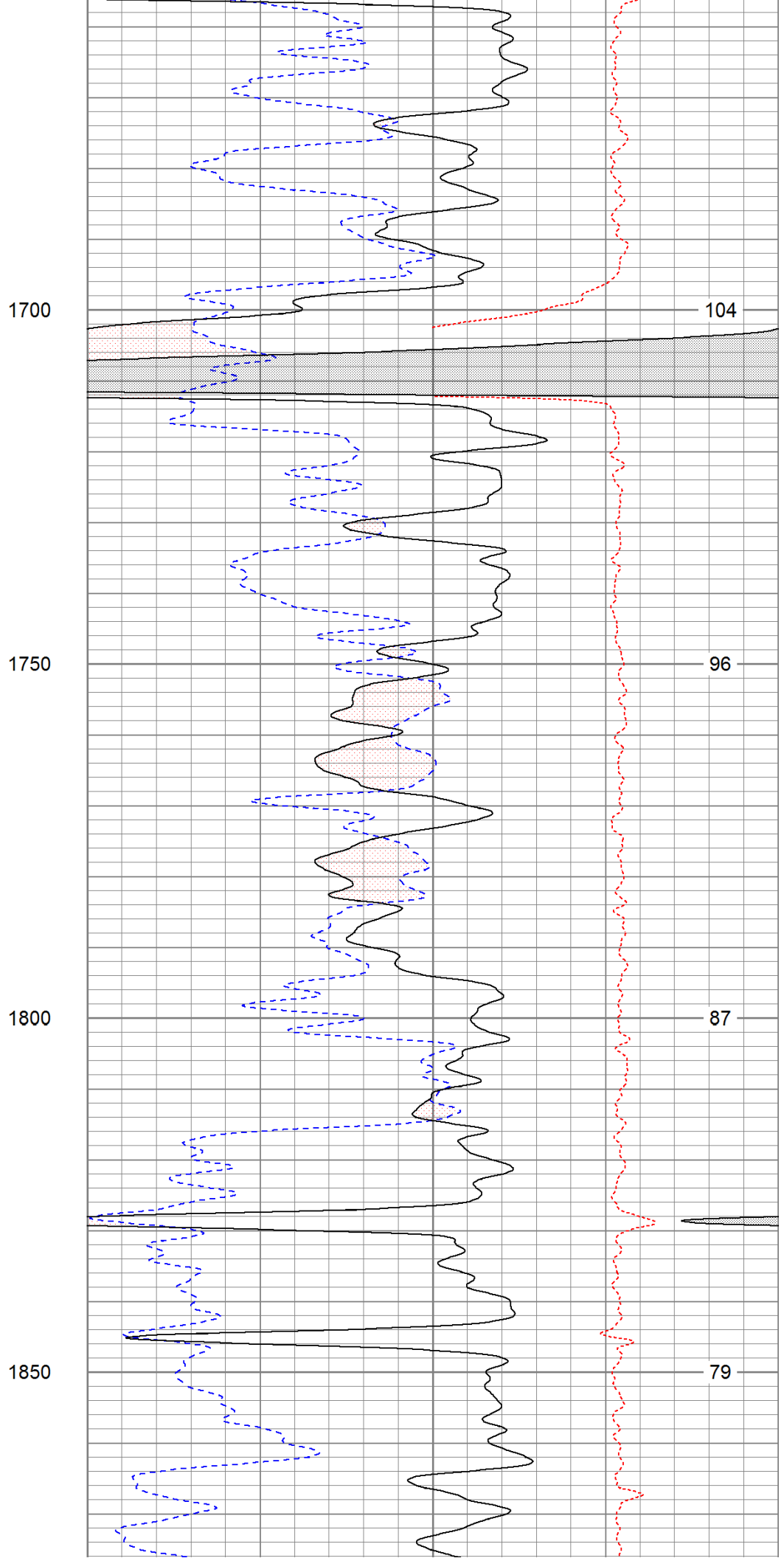
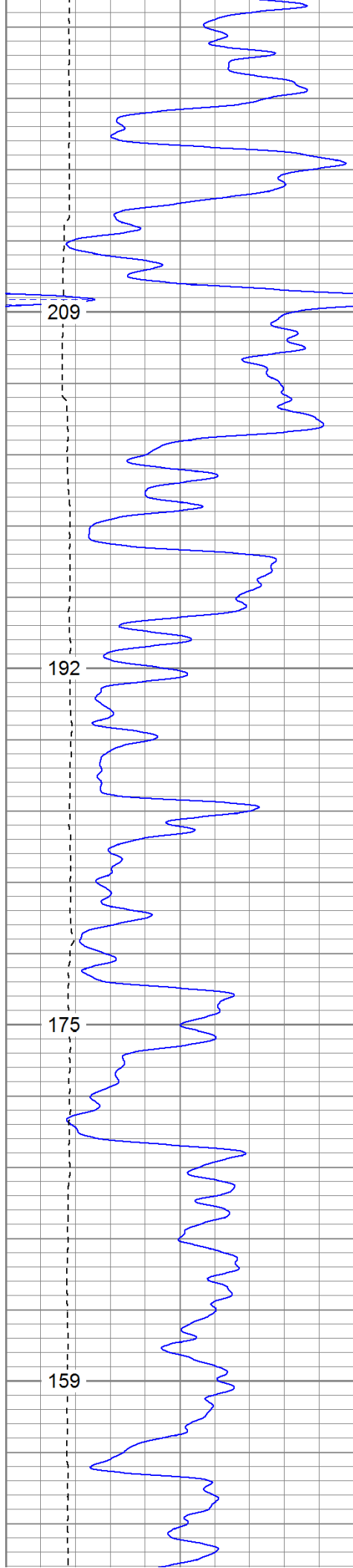
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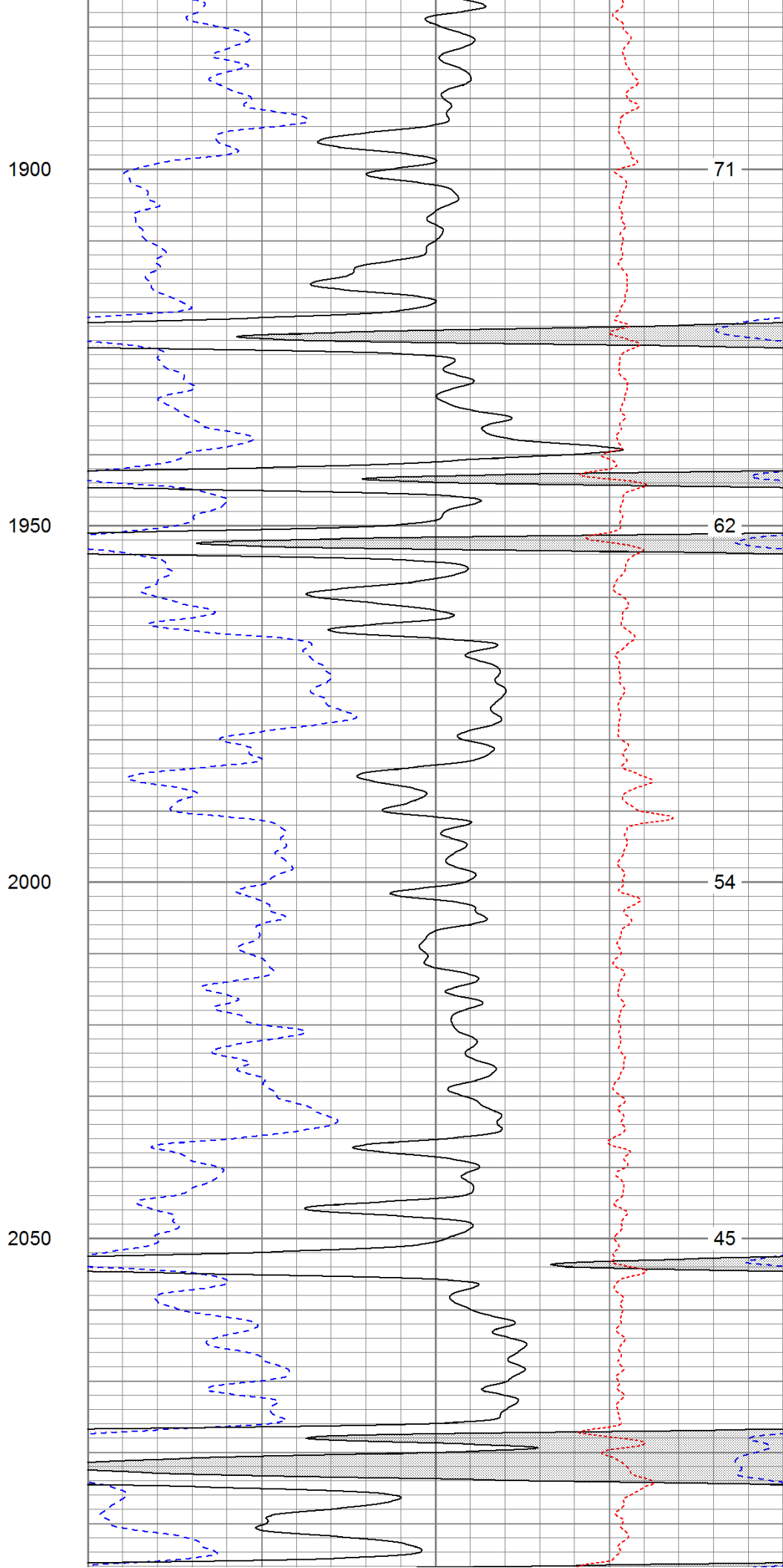
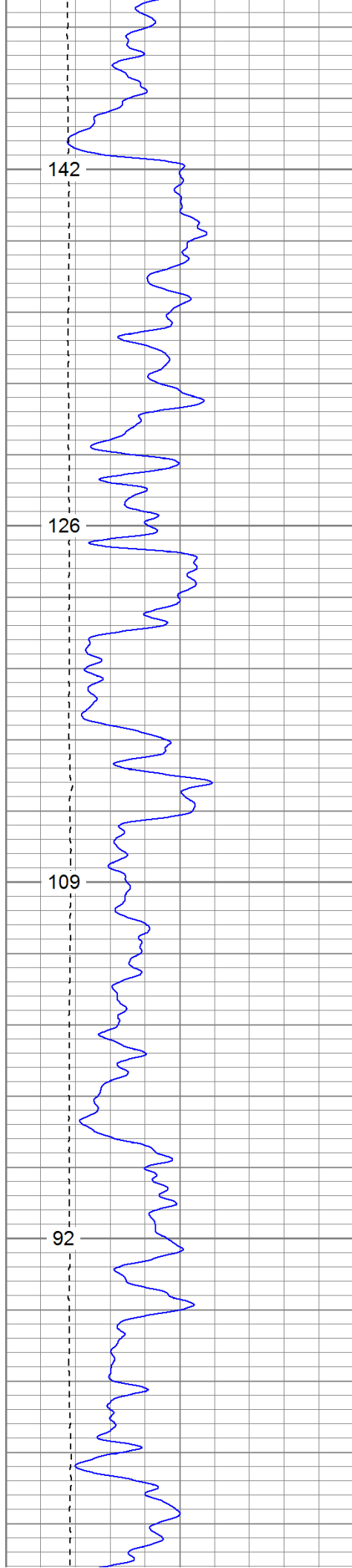
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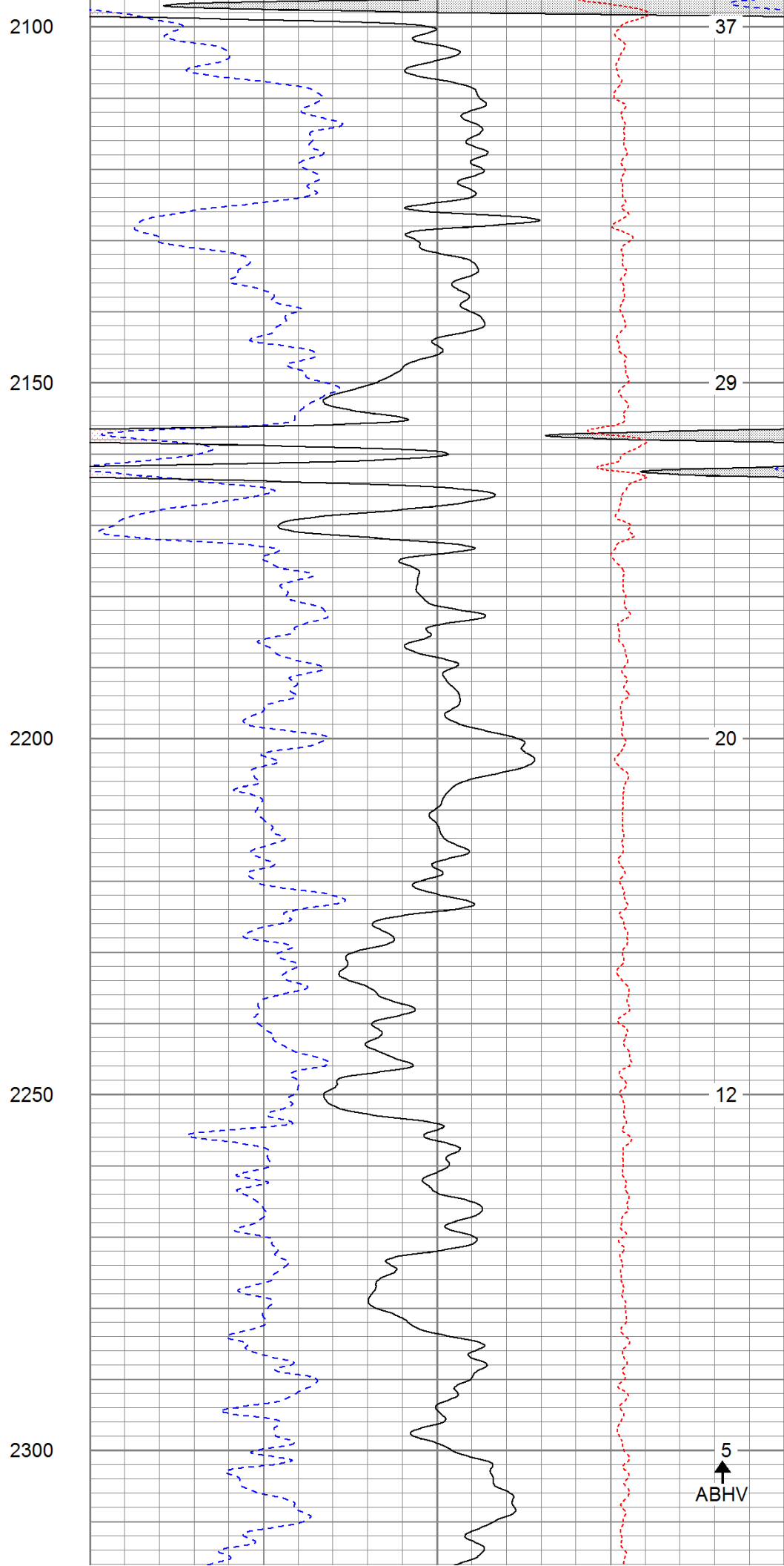
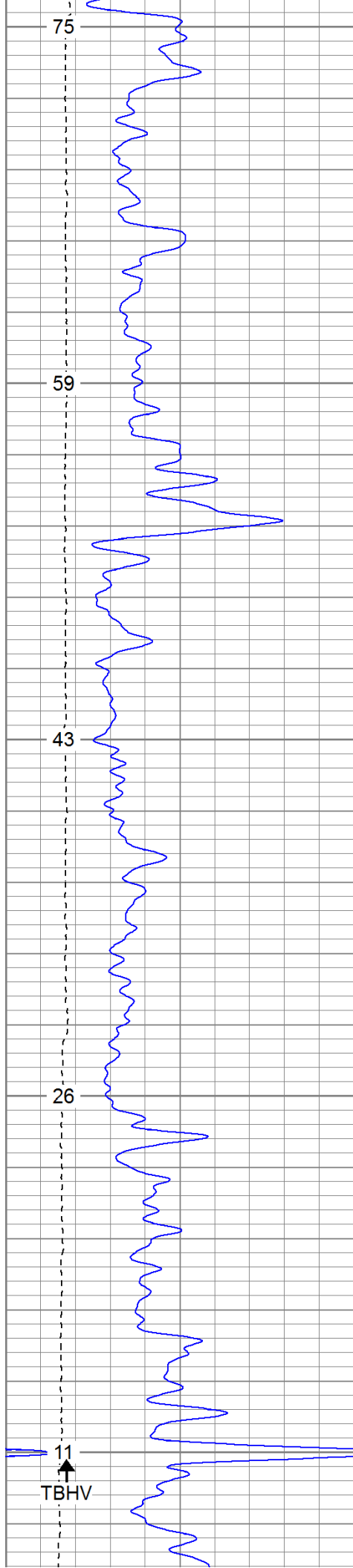


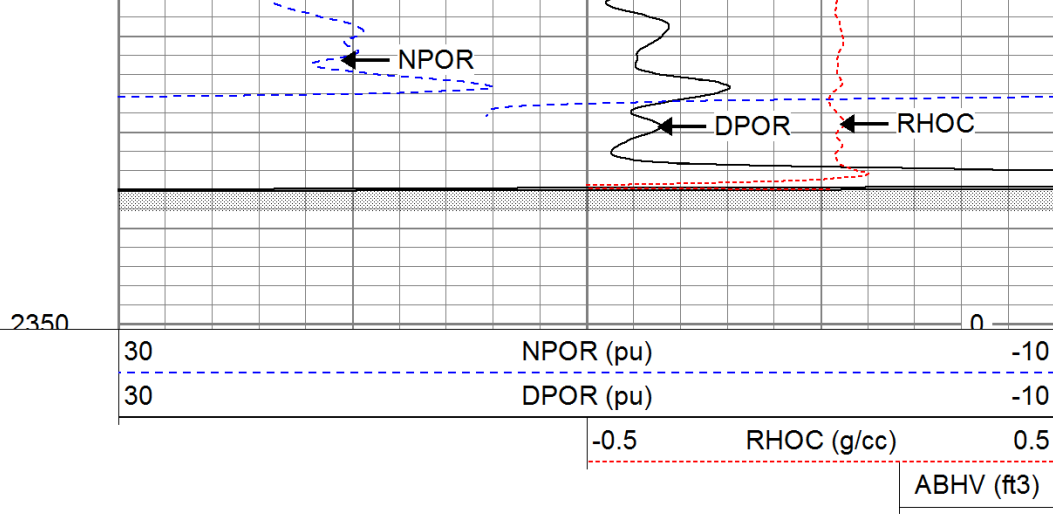
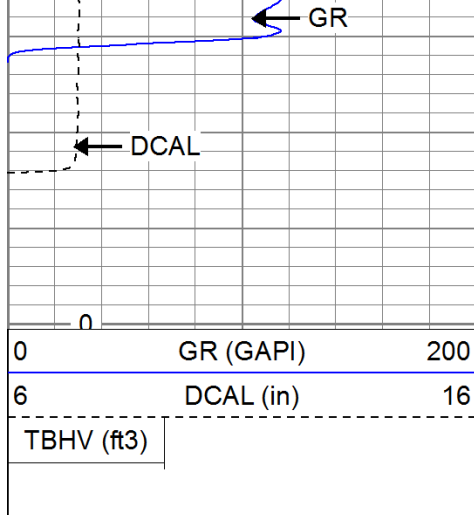






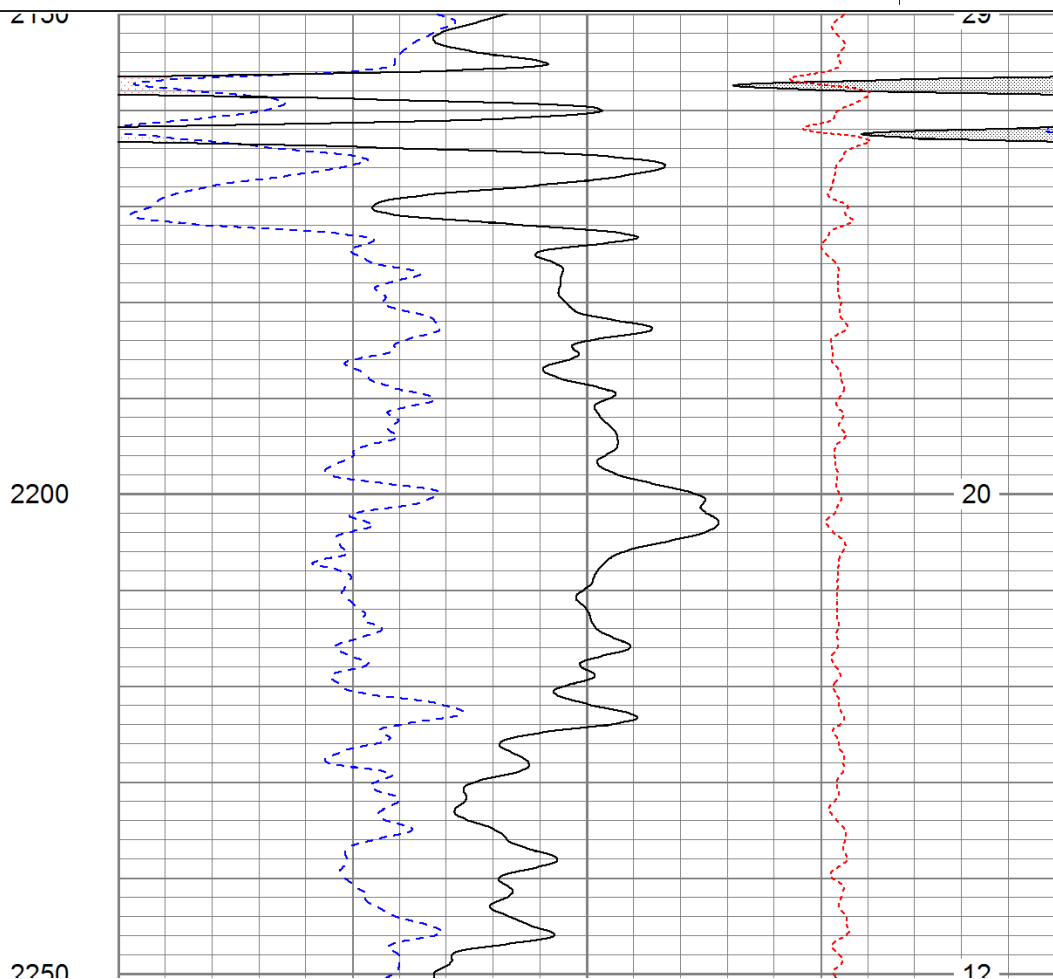
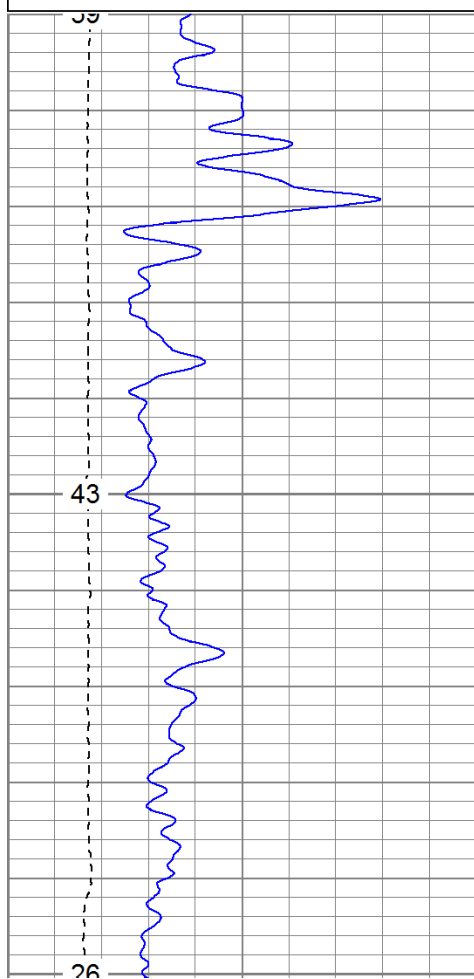
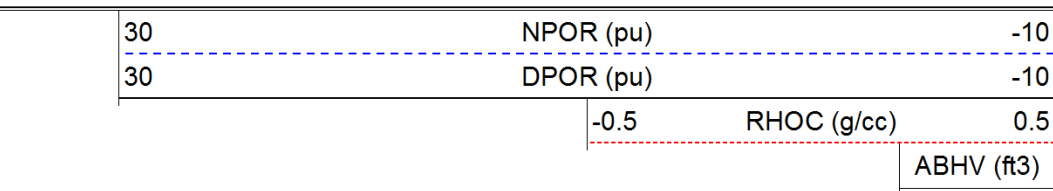
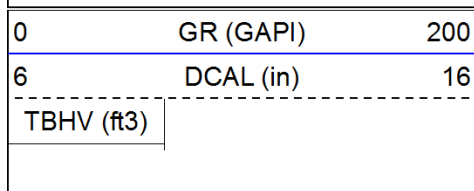


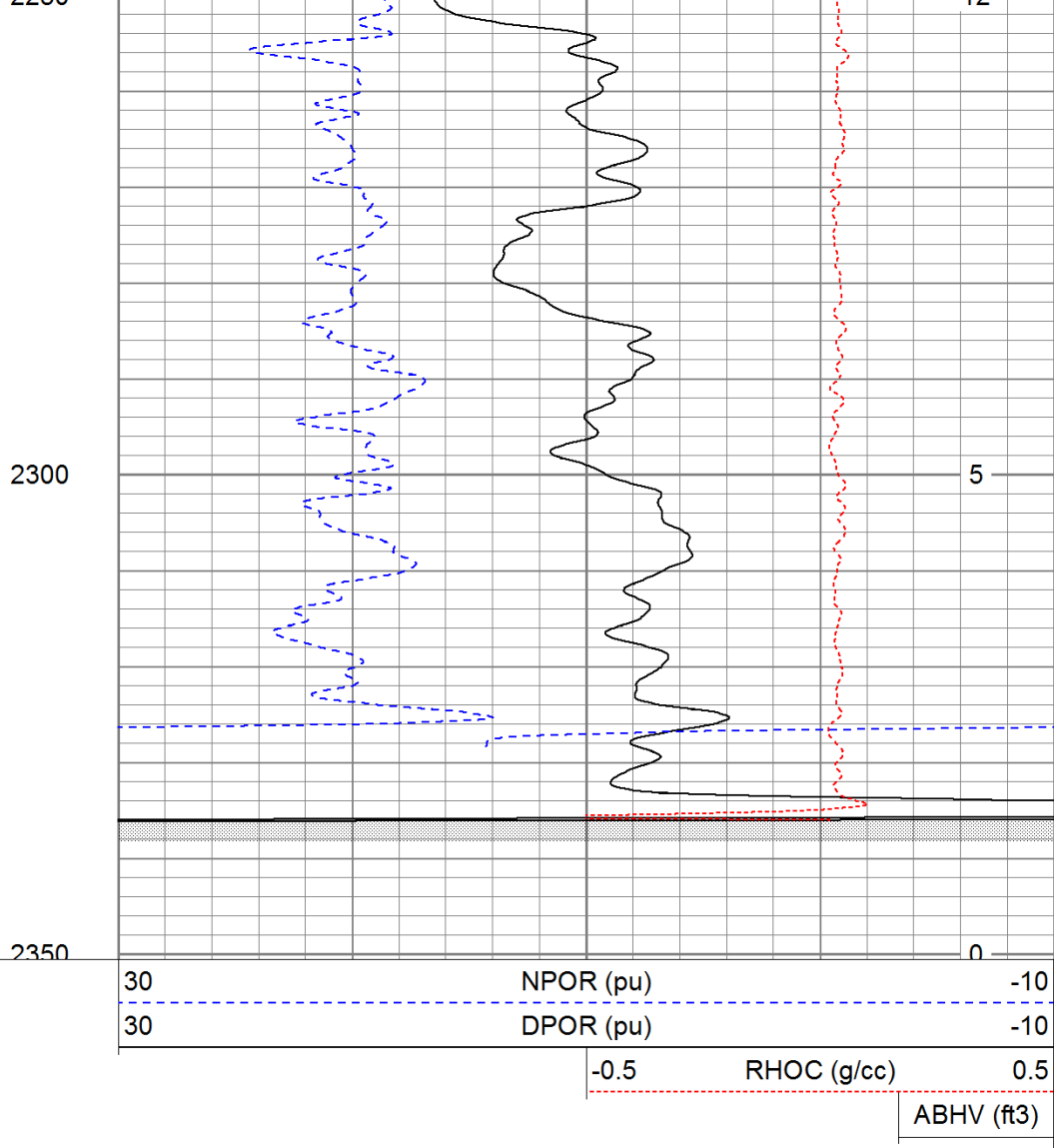
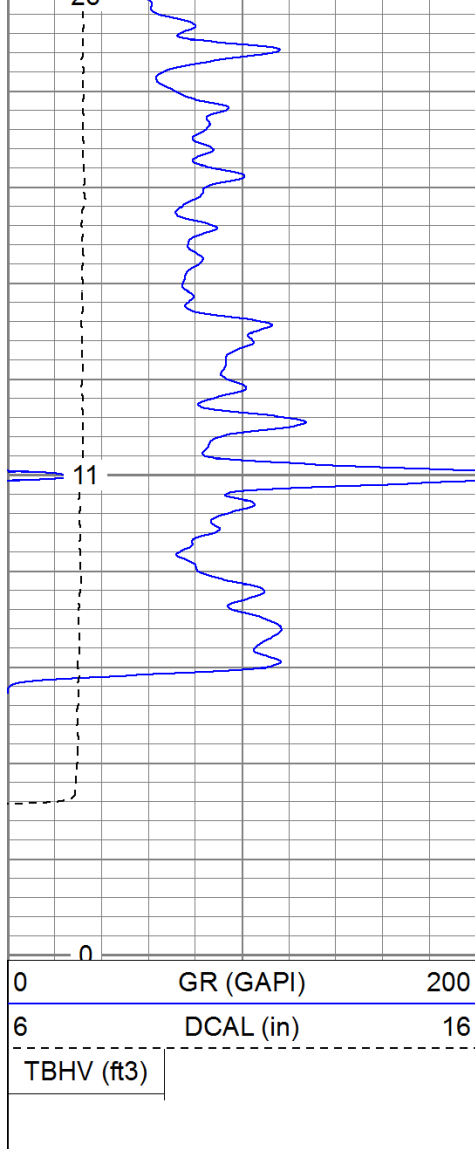




Repeat Pass

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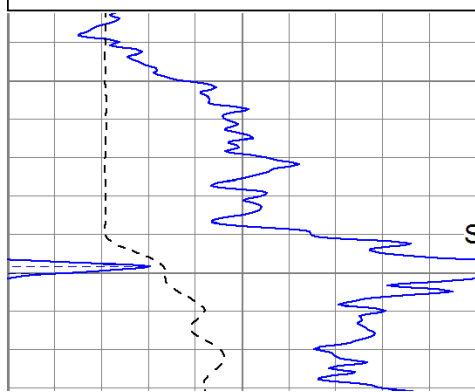


High Resolution Pass

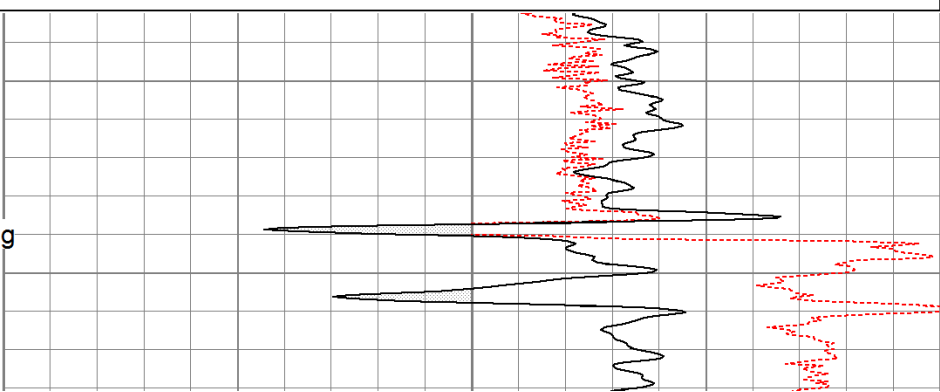
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 Charted by: Depth in Feet scaled 1:120

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6	DCAL (in)	16

1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5



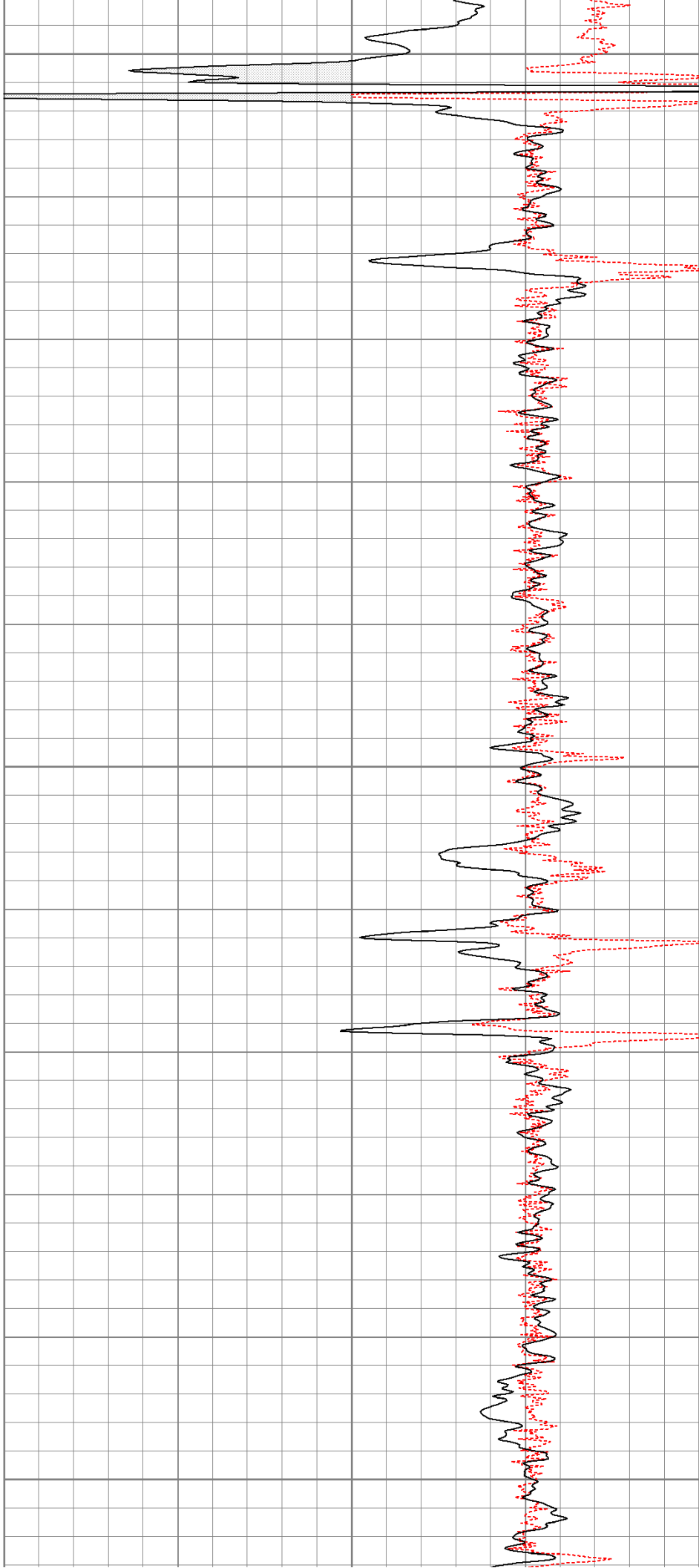
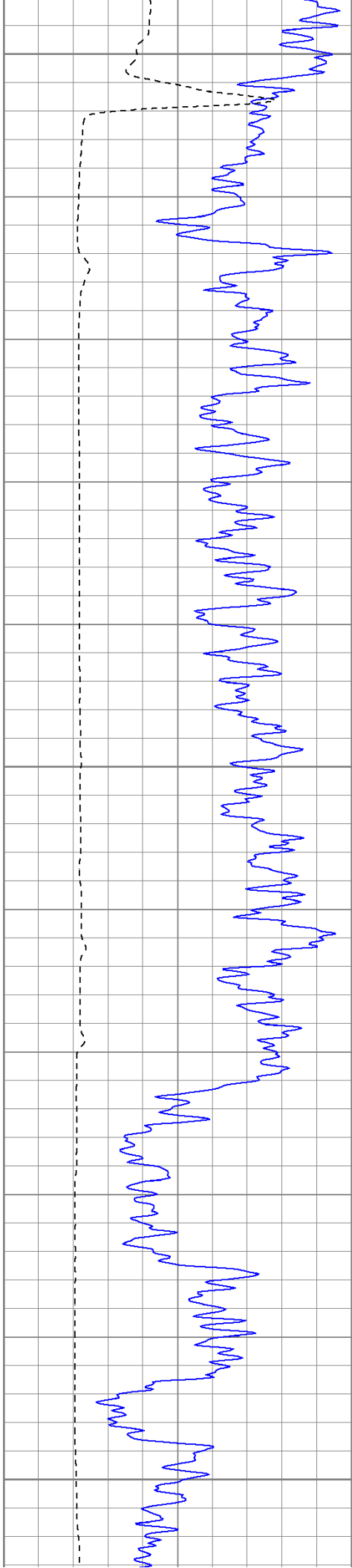
Surface Casing

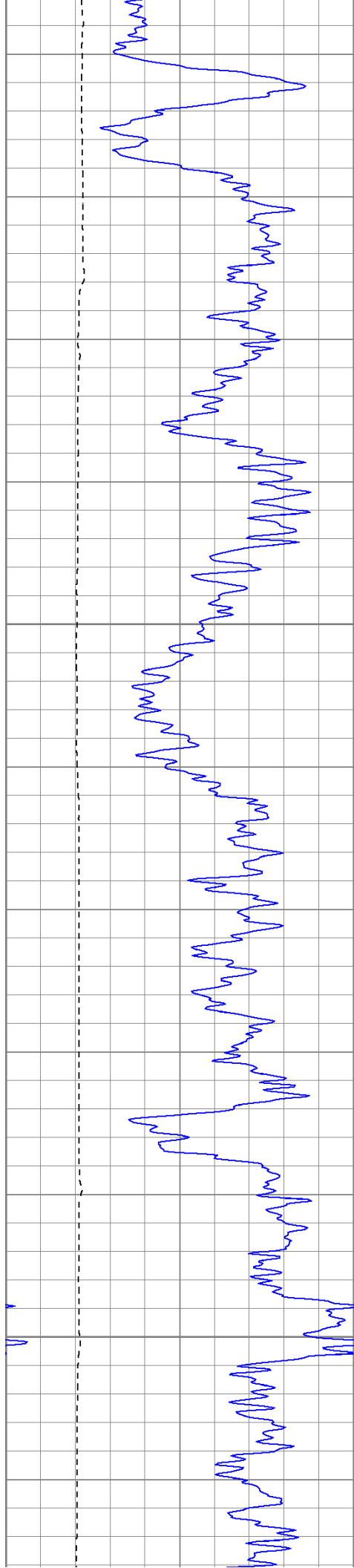


450

500

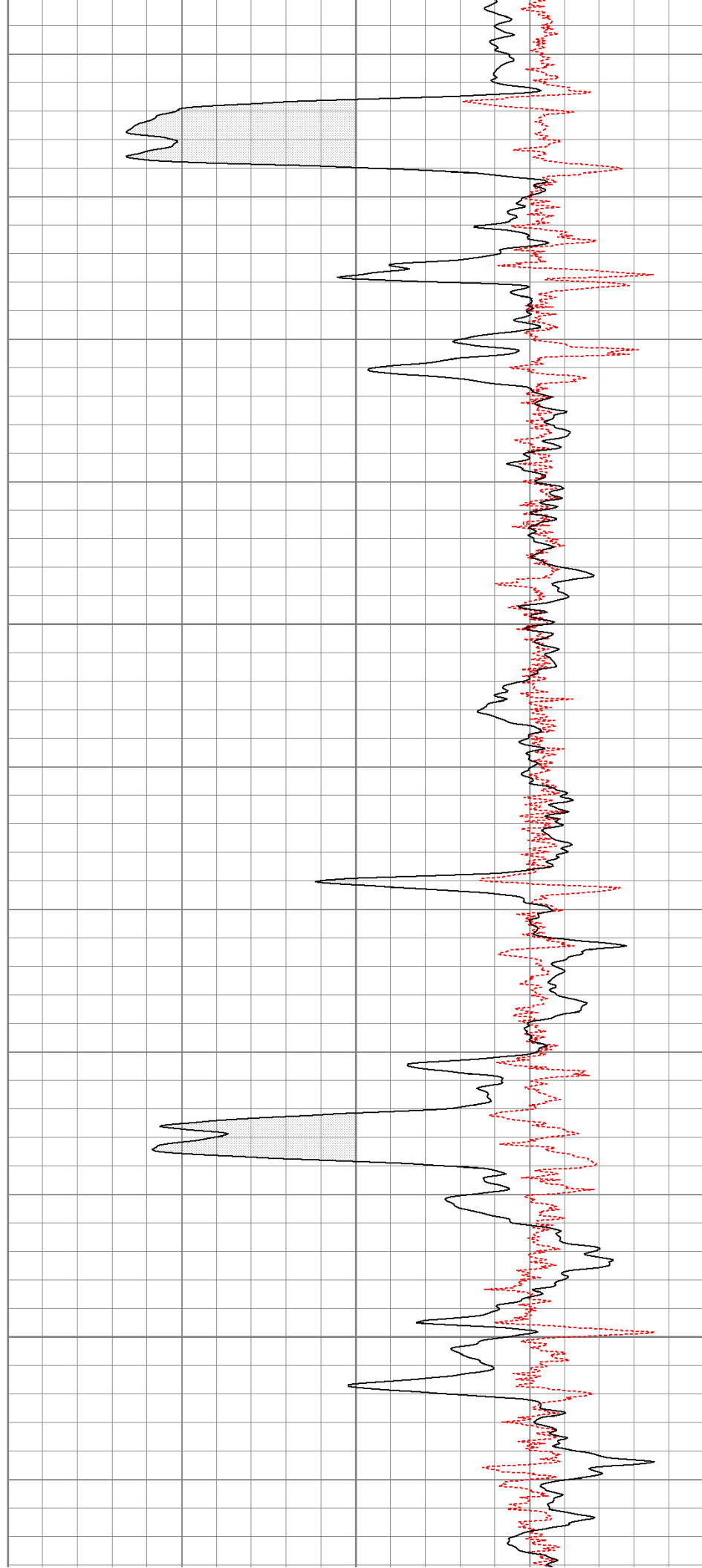
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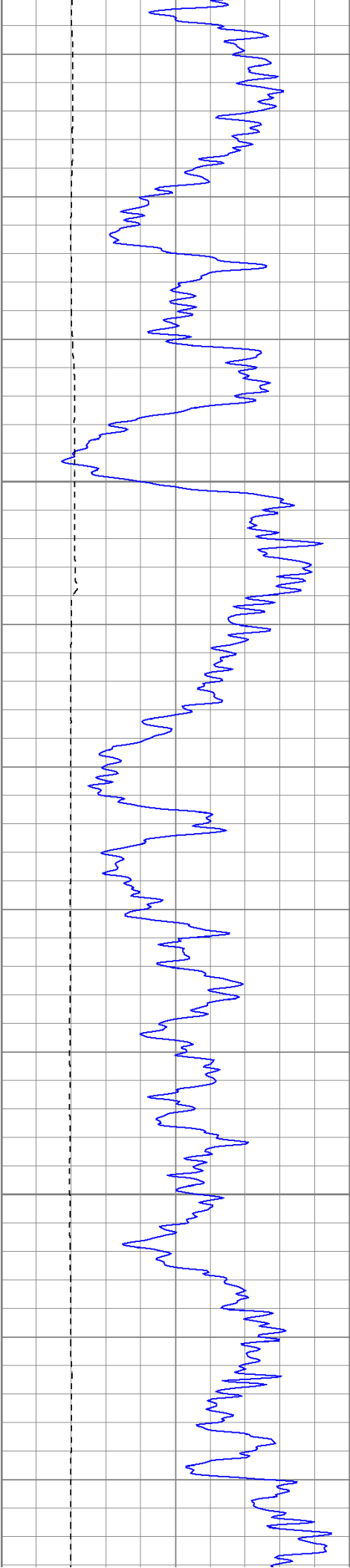




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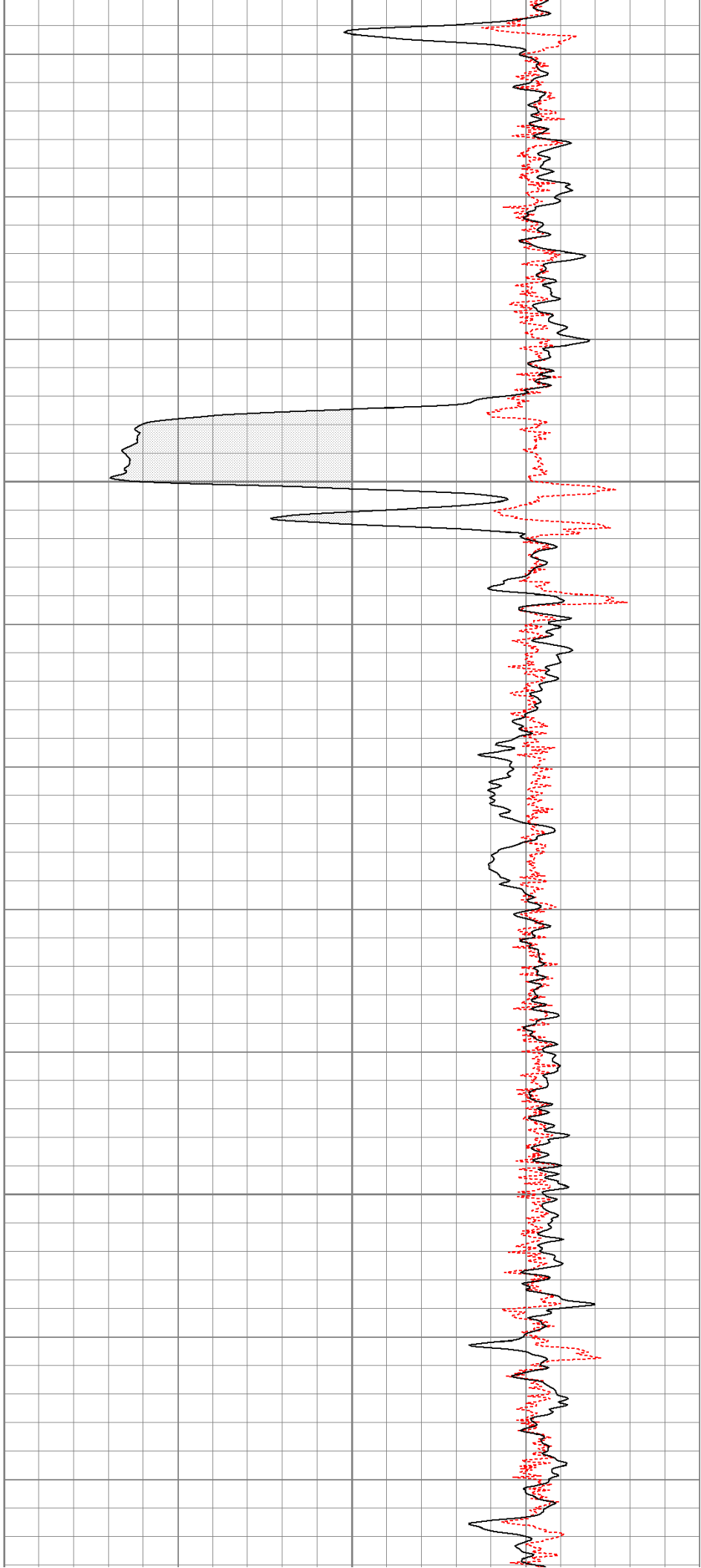
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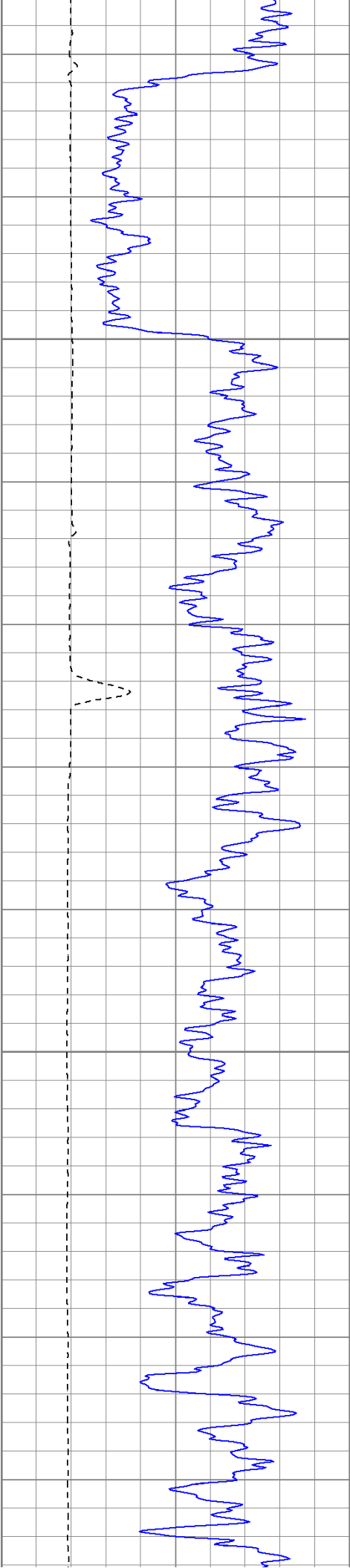




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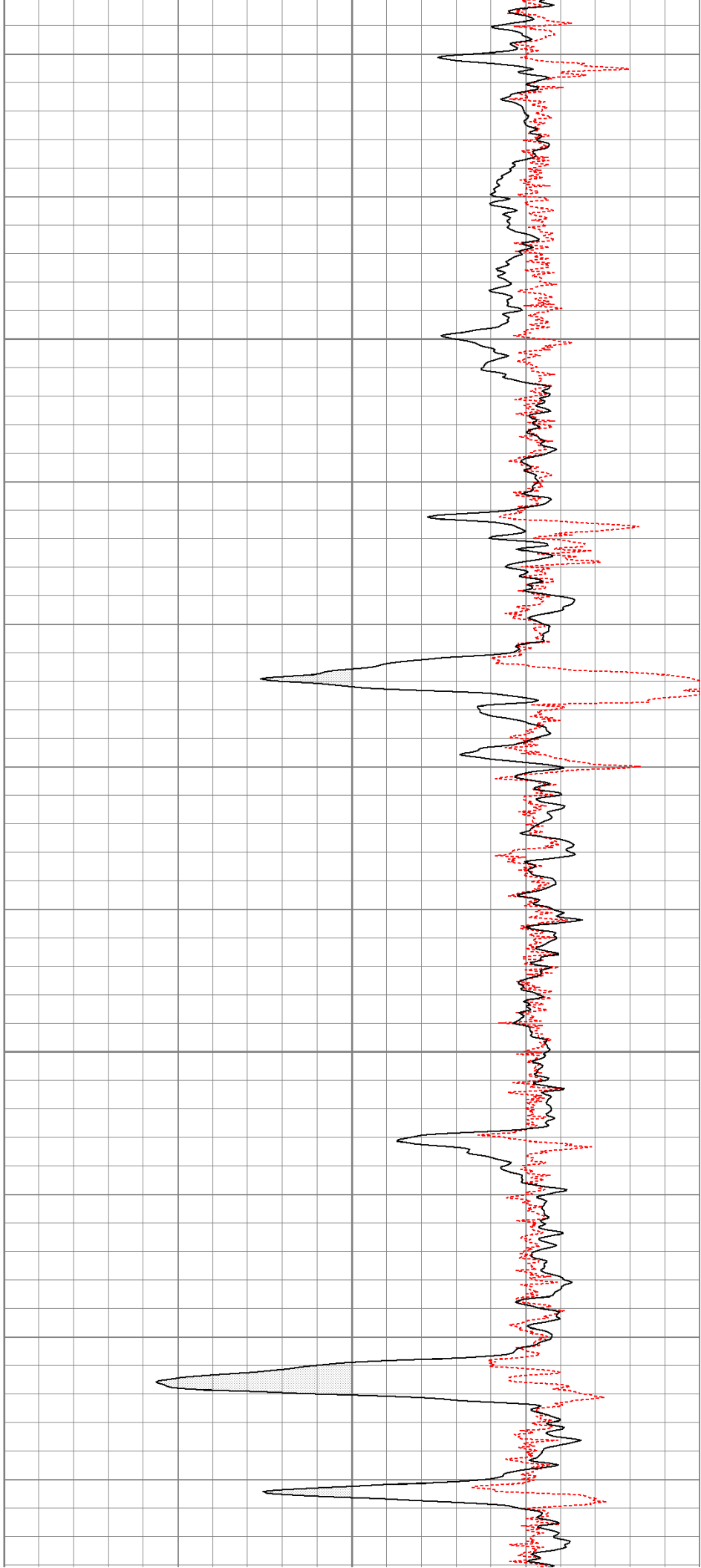
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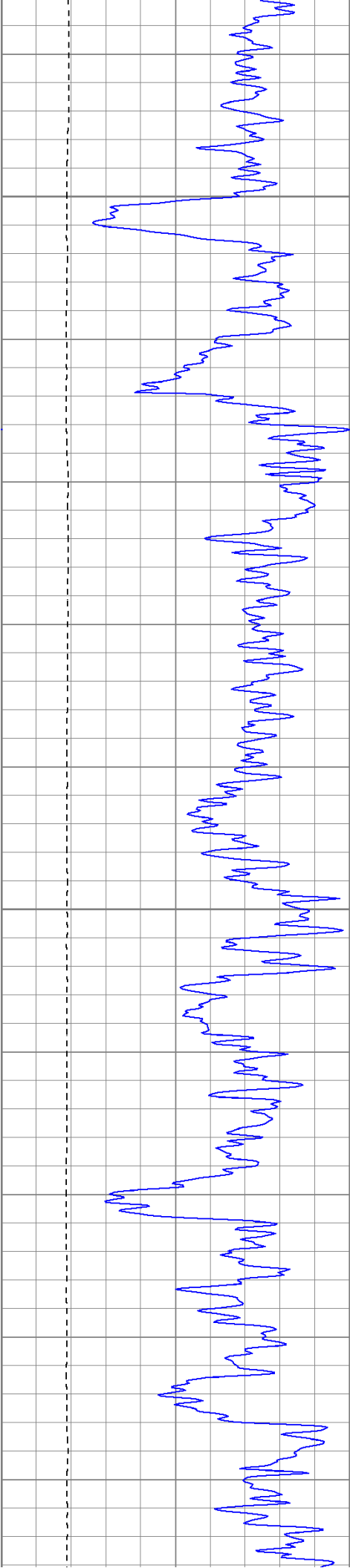




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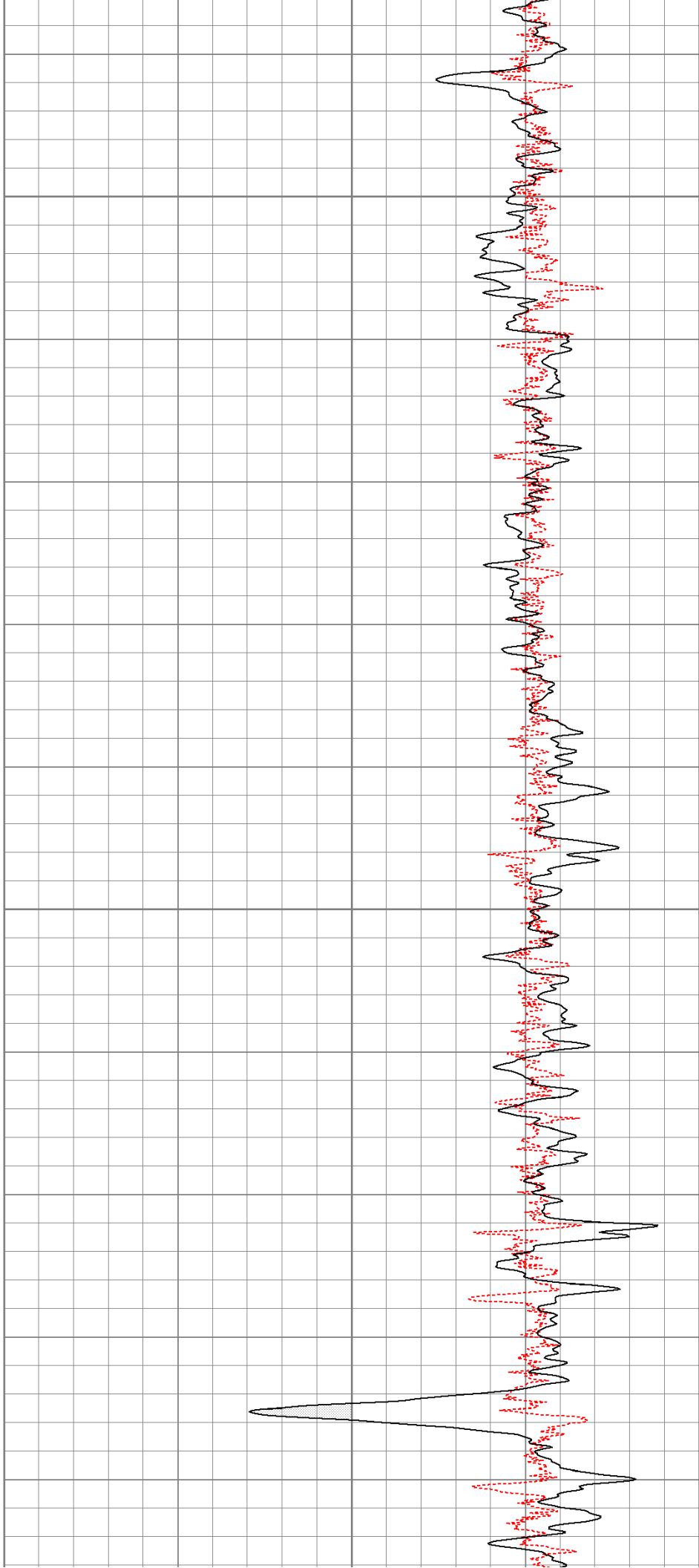
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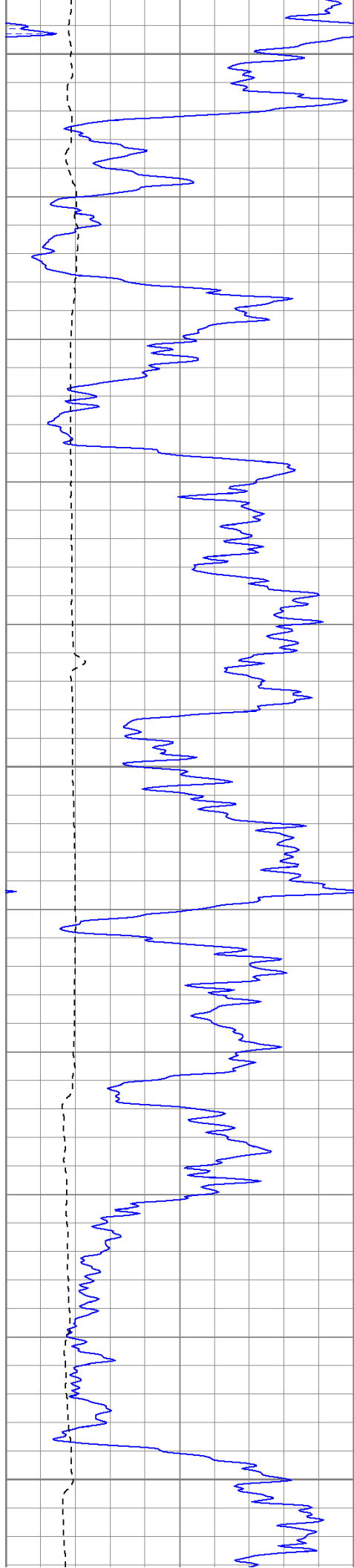




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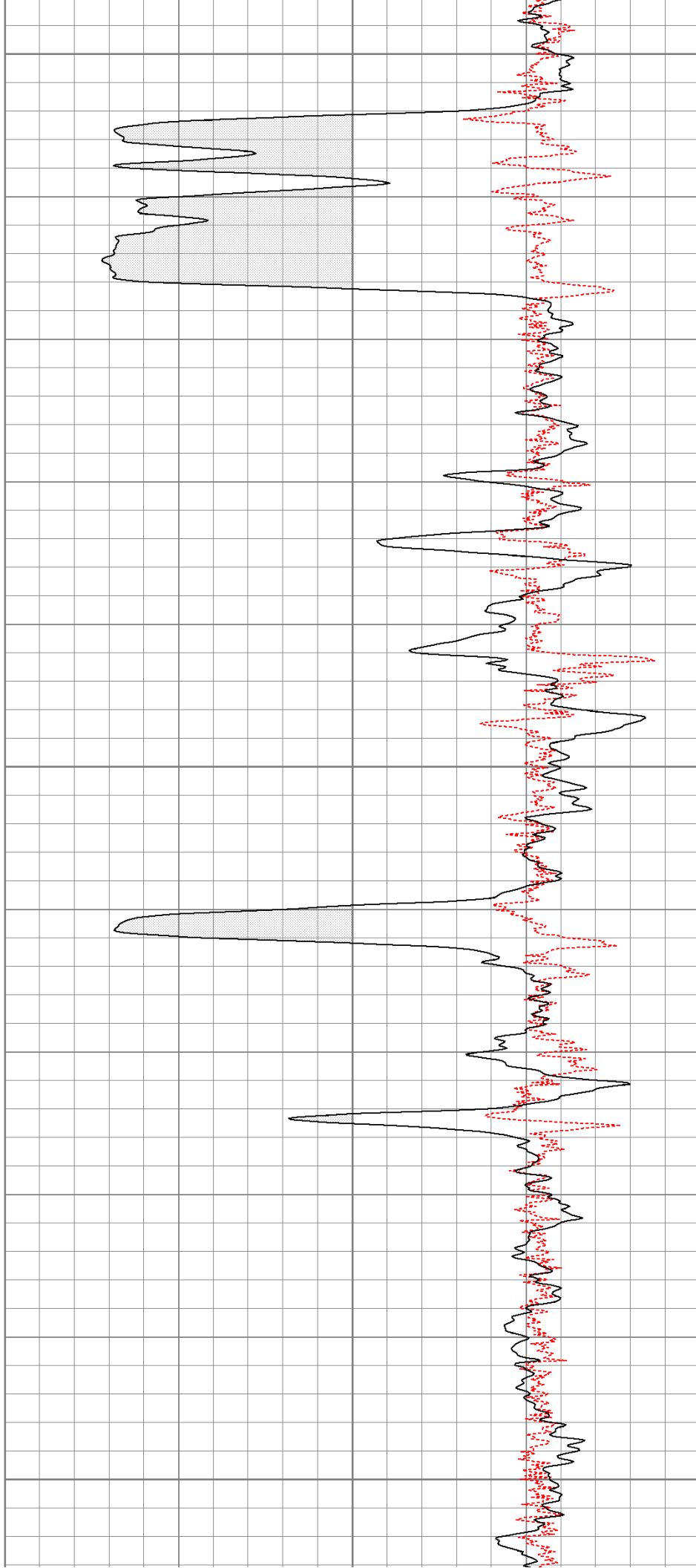


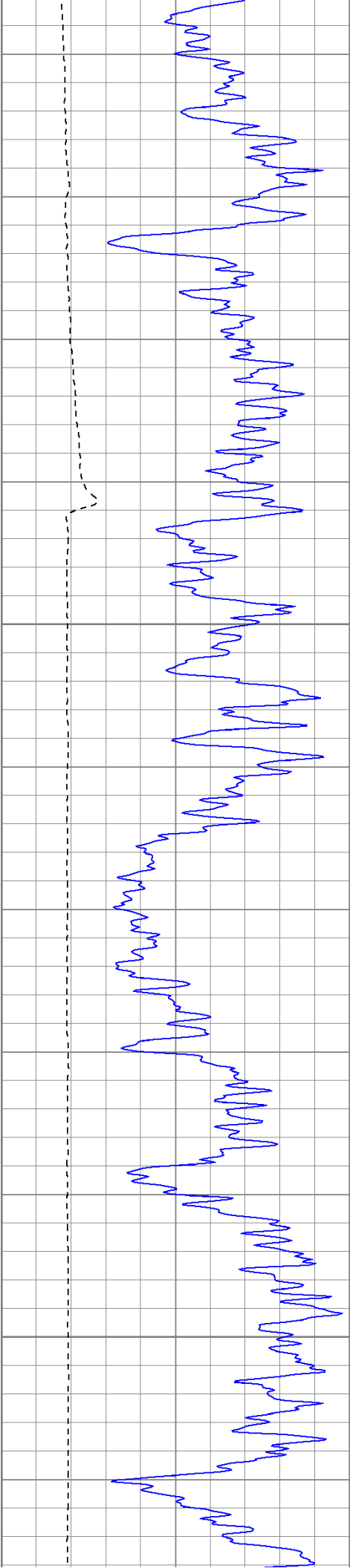


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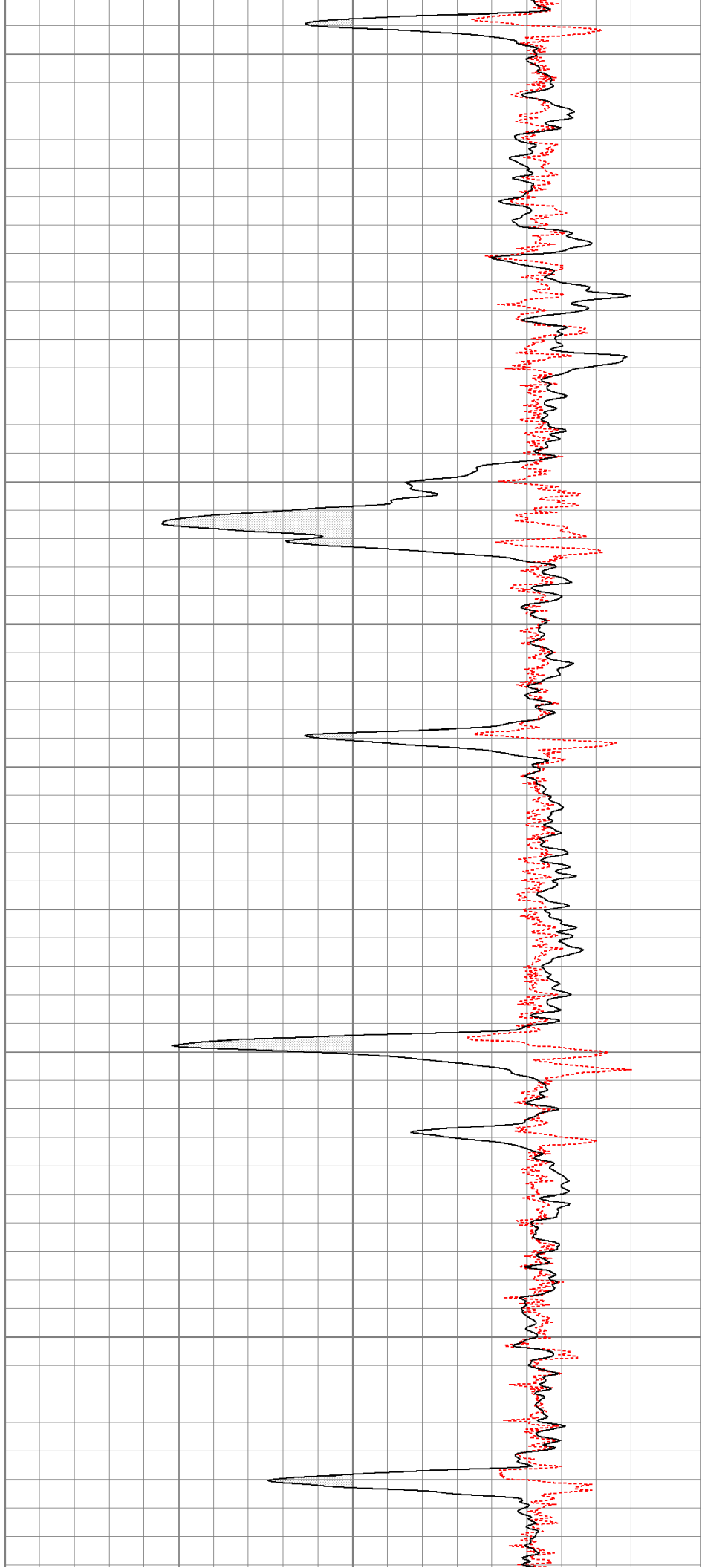
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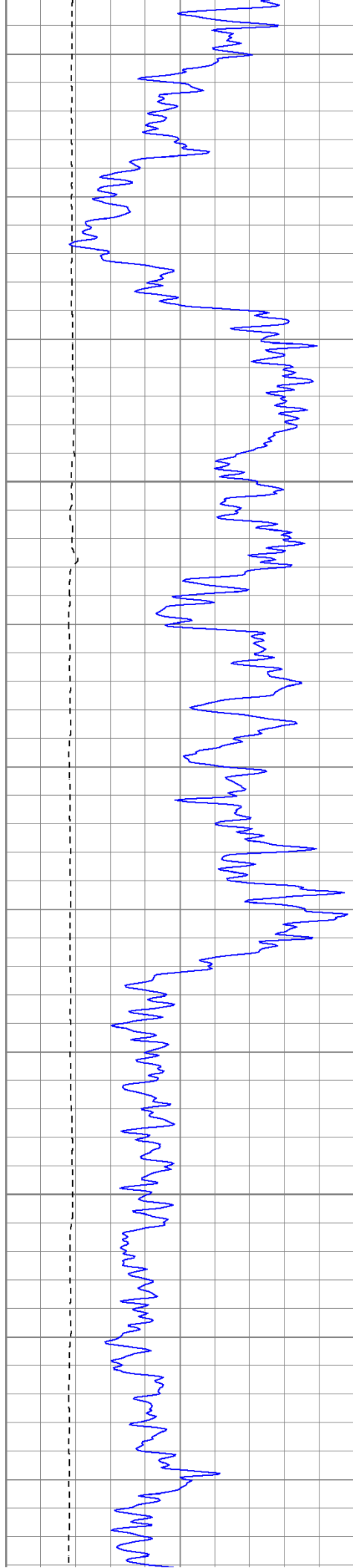




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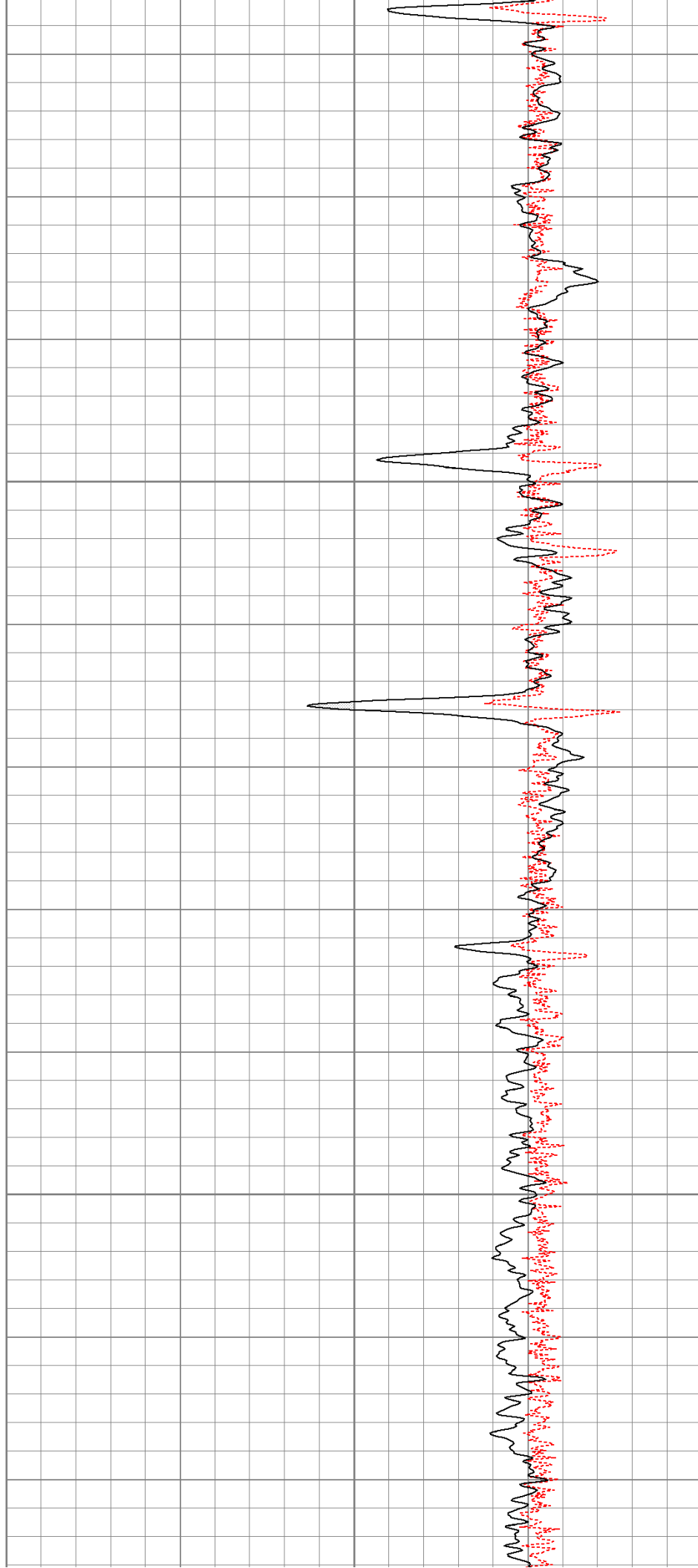
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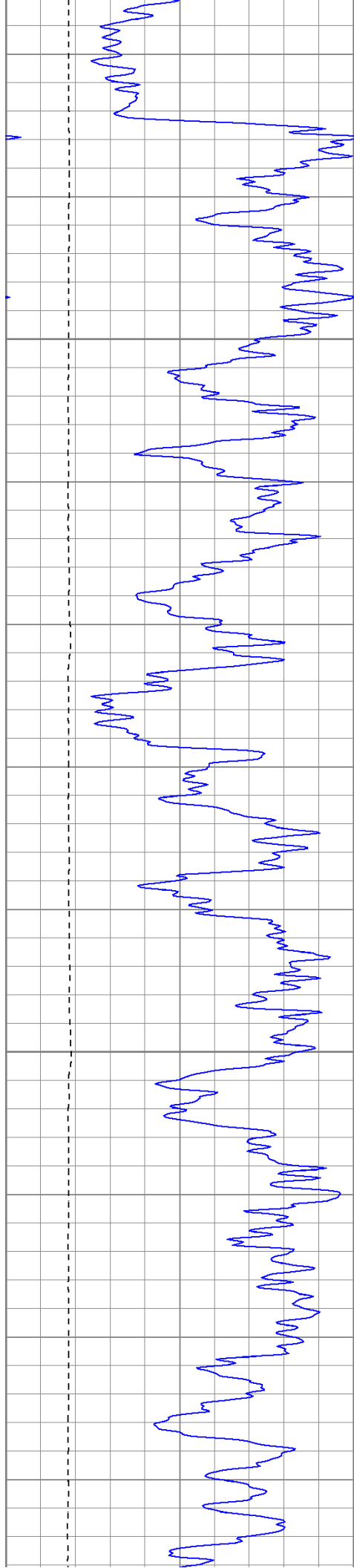




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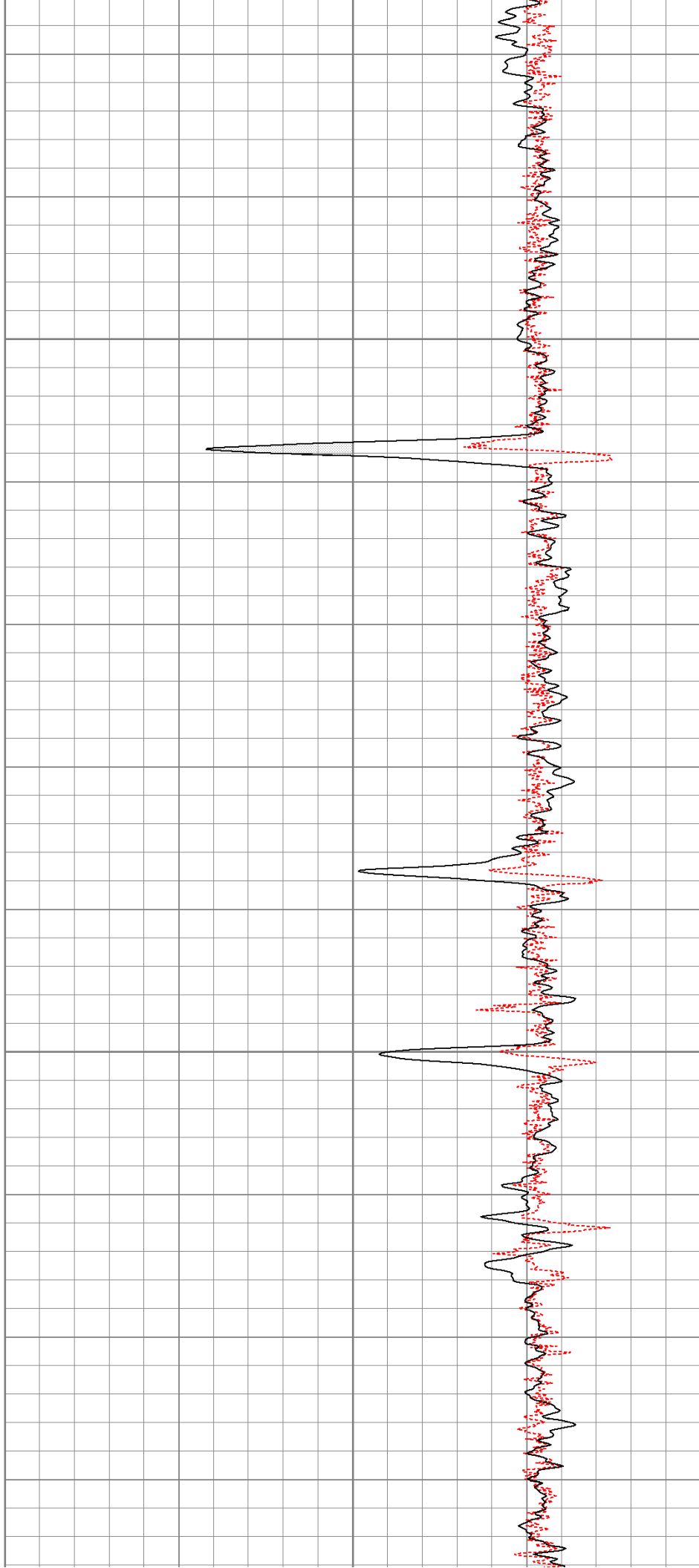
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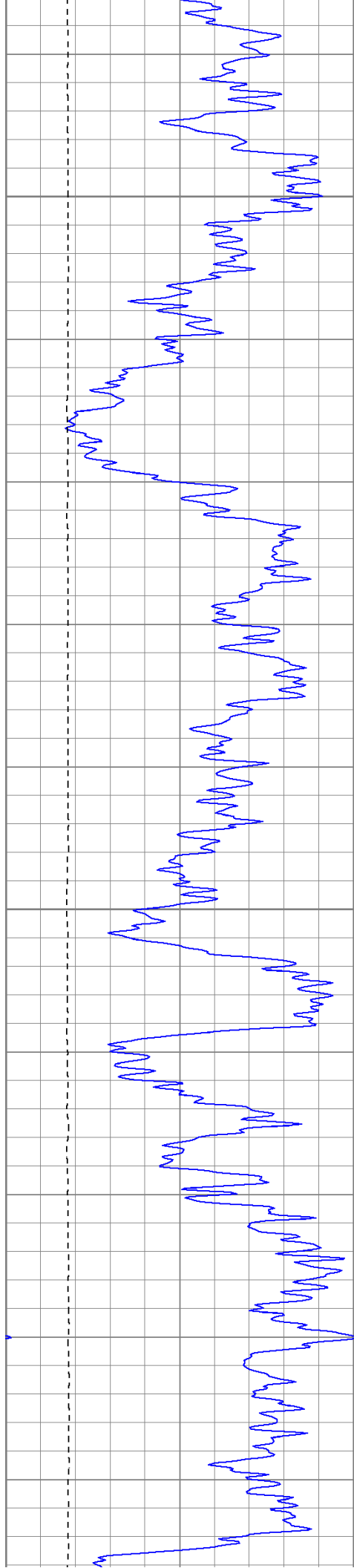




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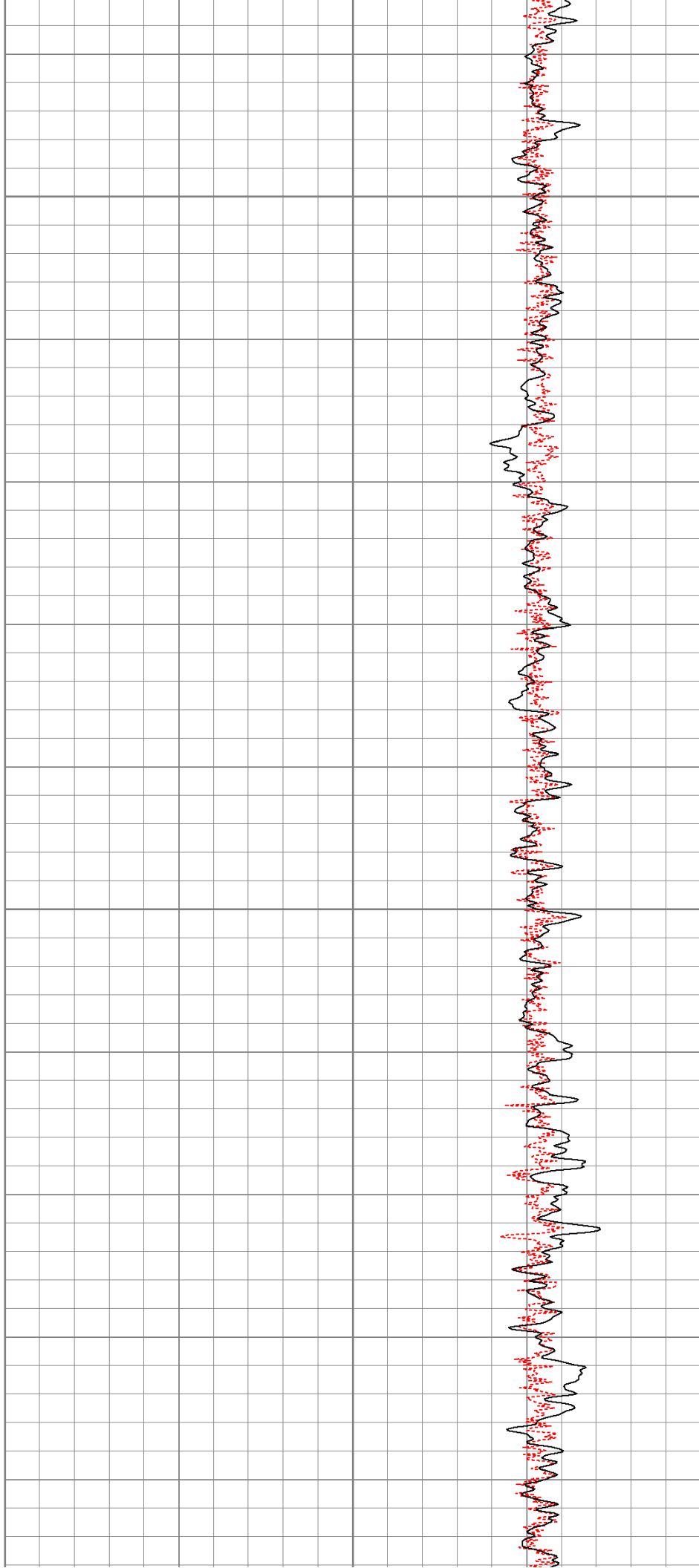
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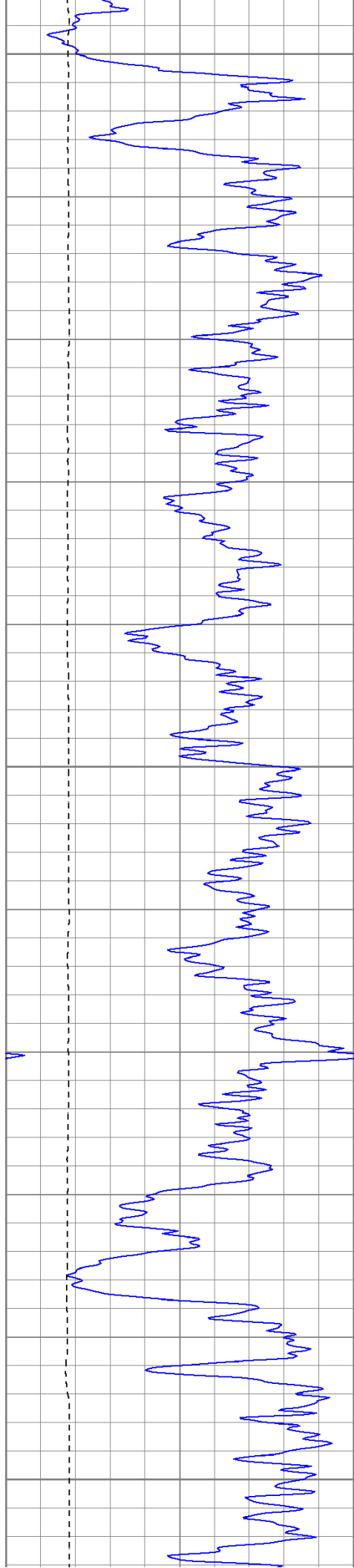




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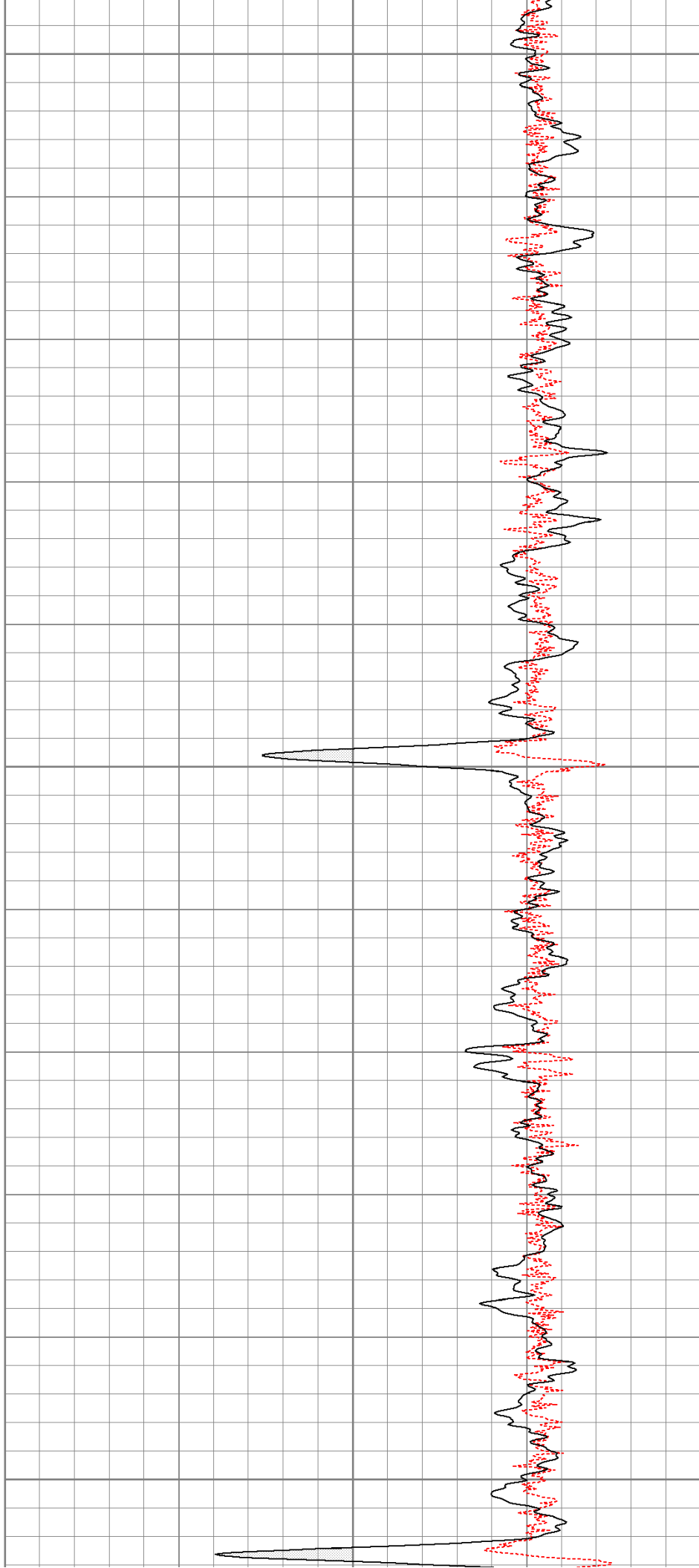


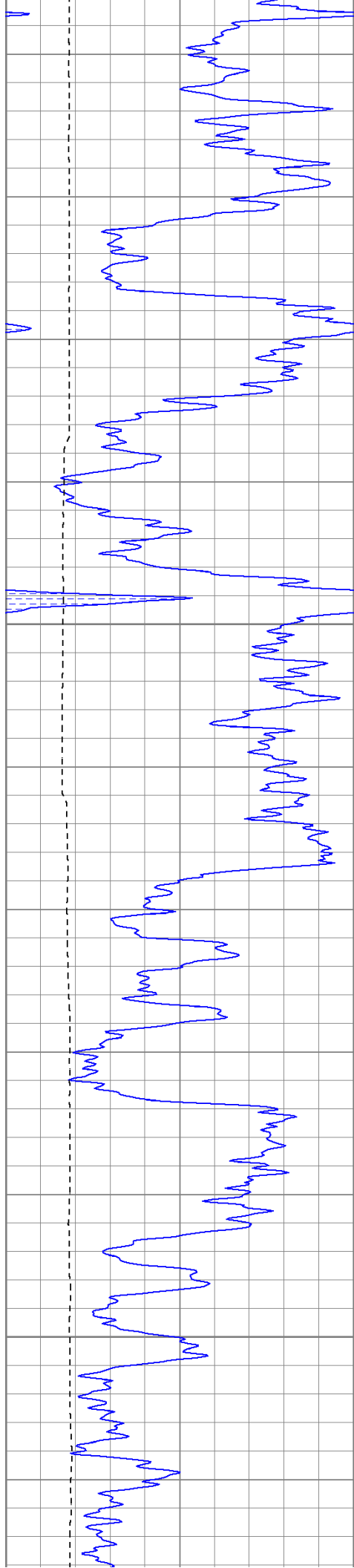


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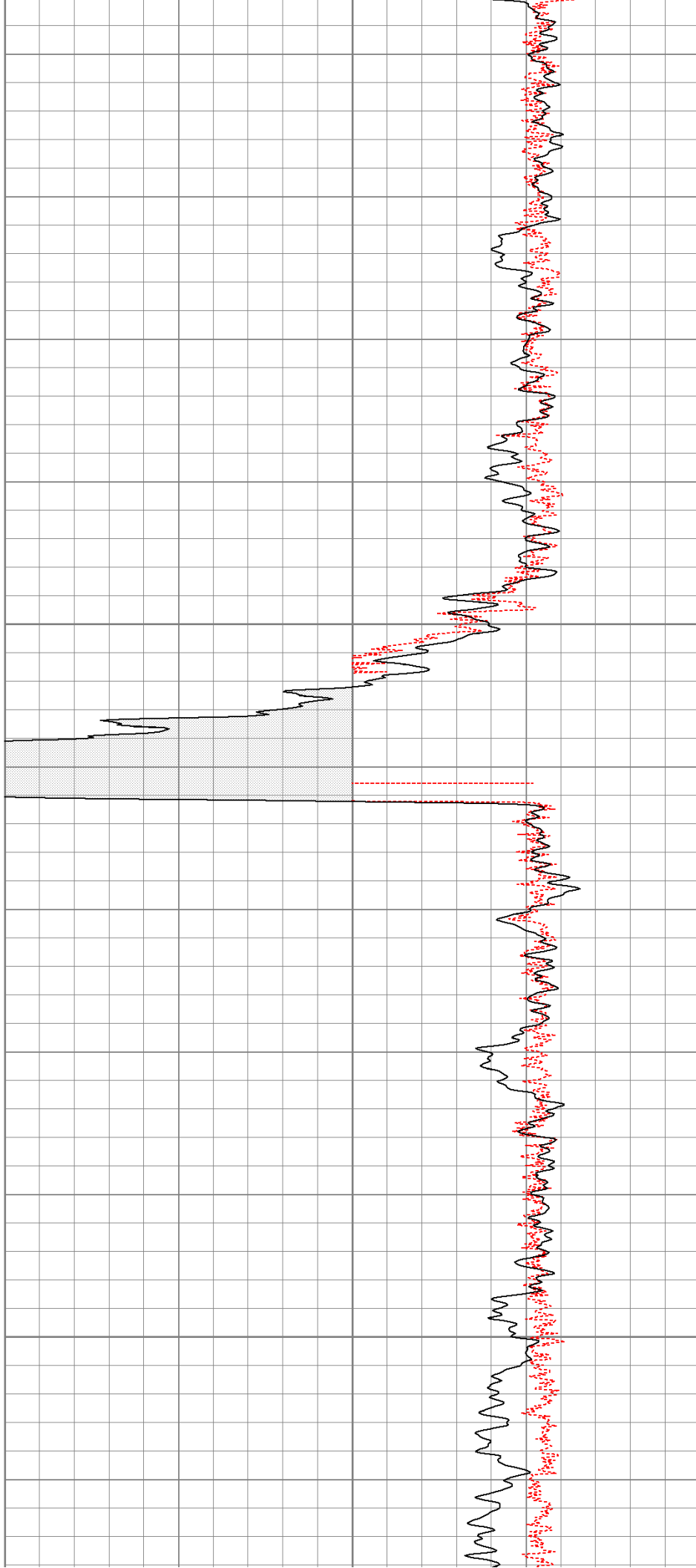
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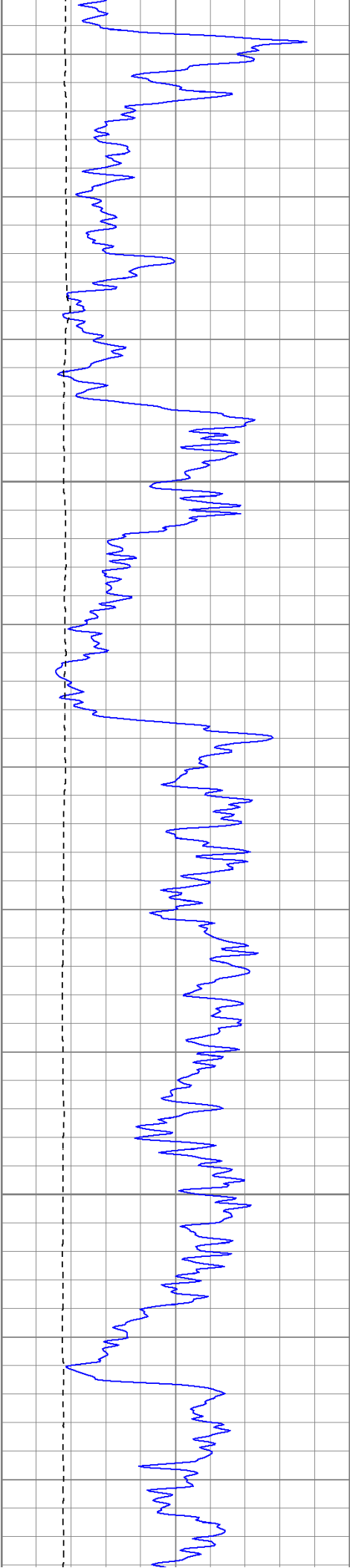




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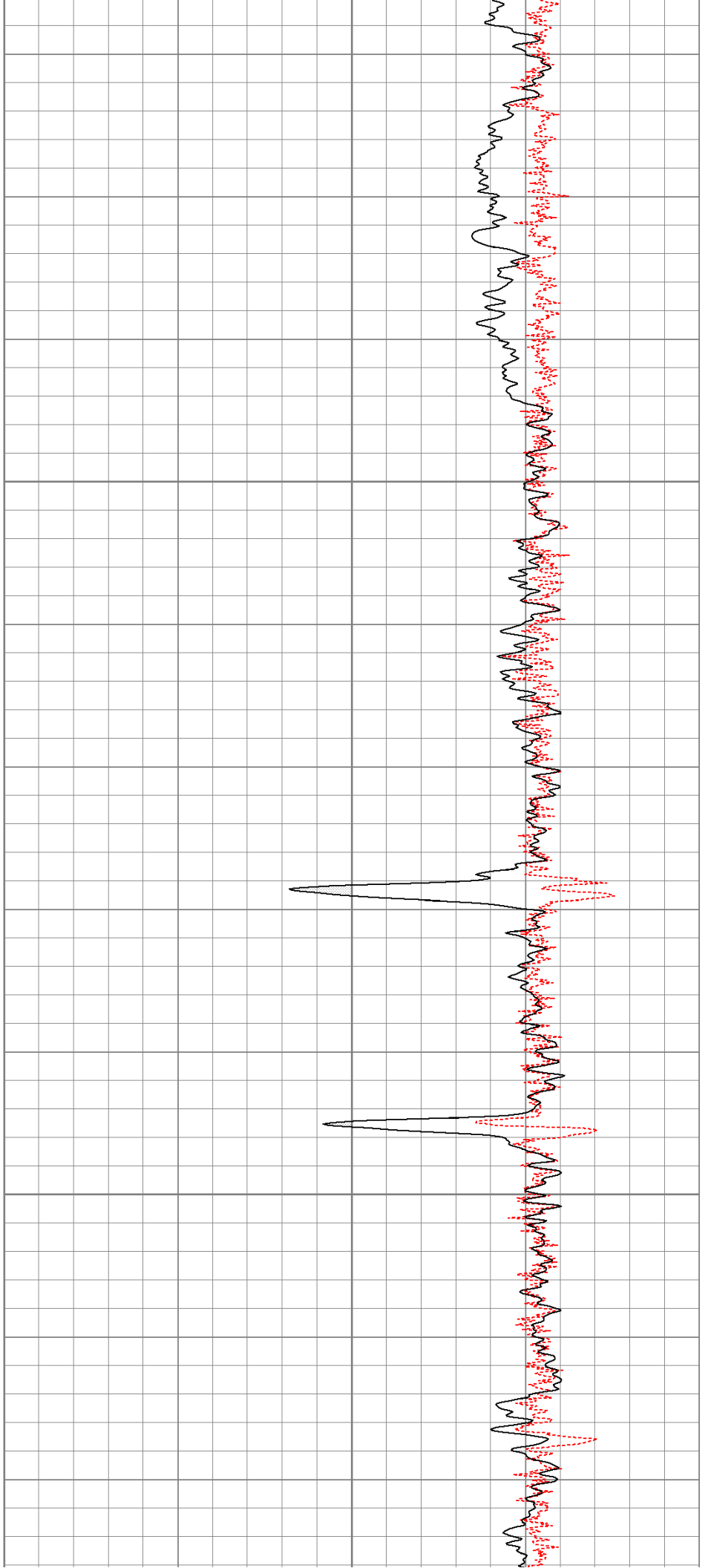
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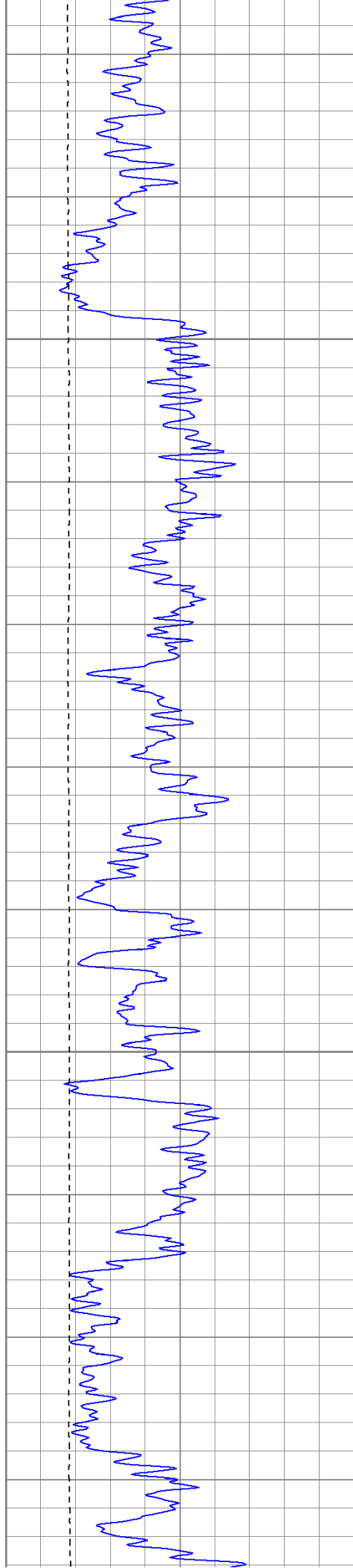




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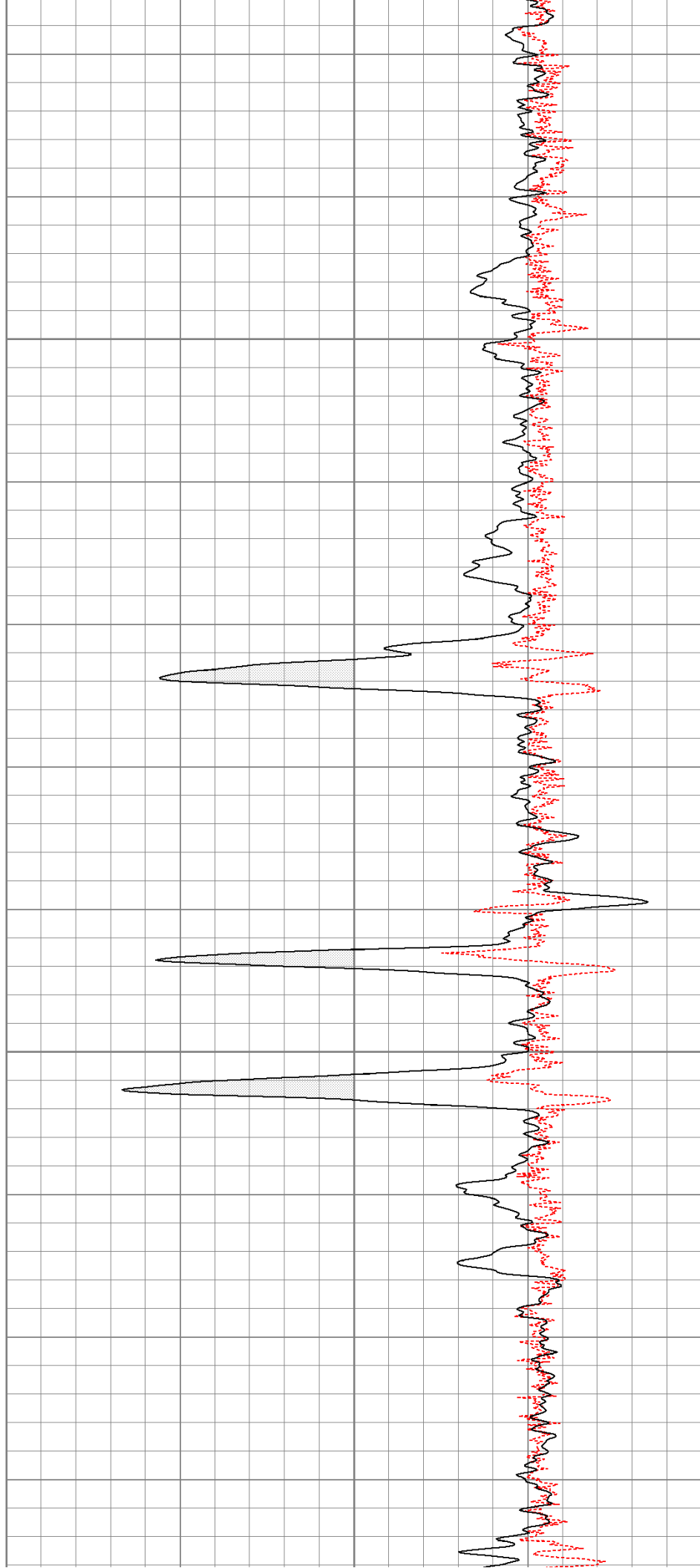
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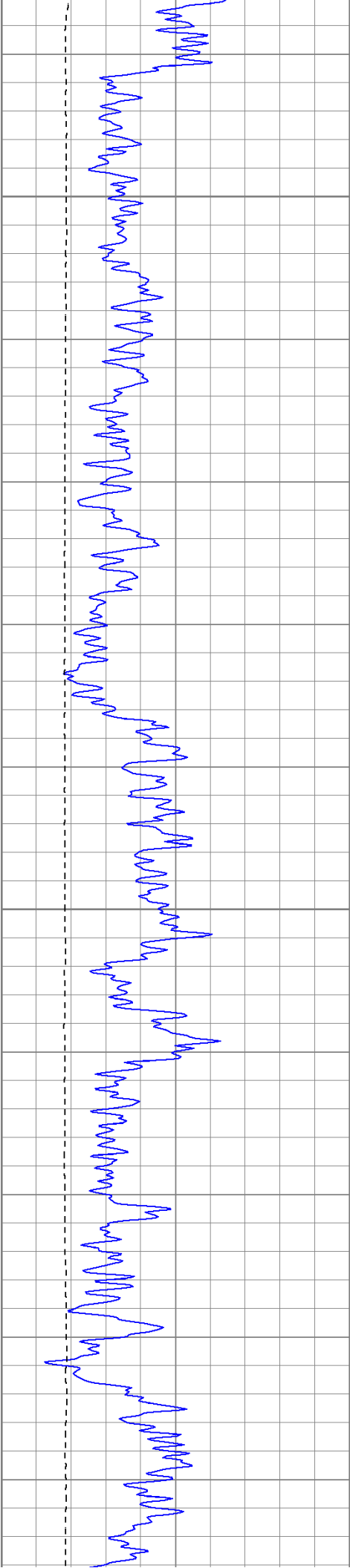




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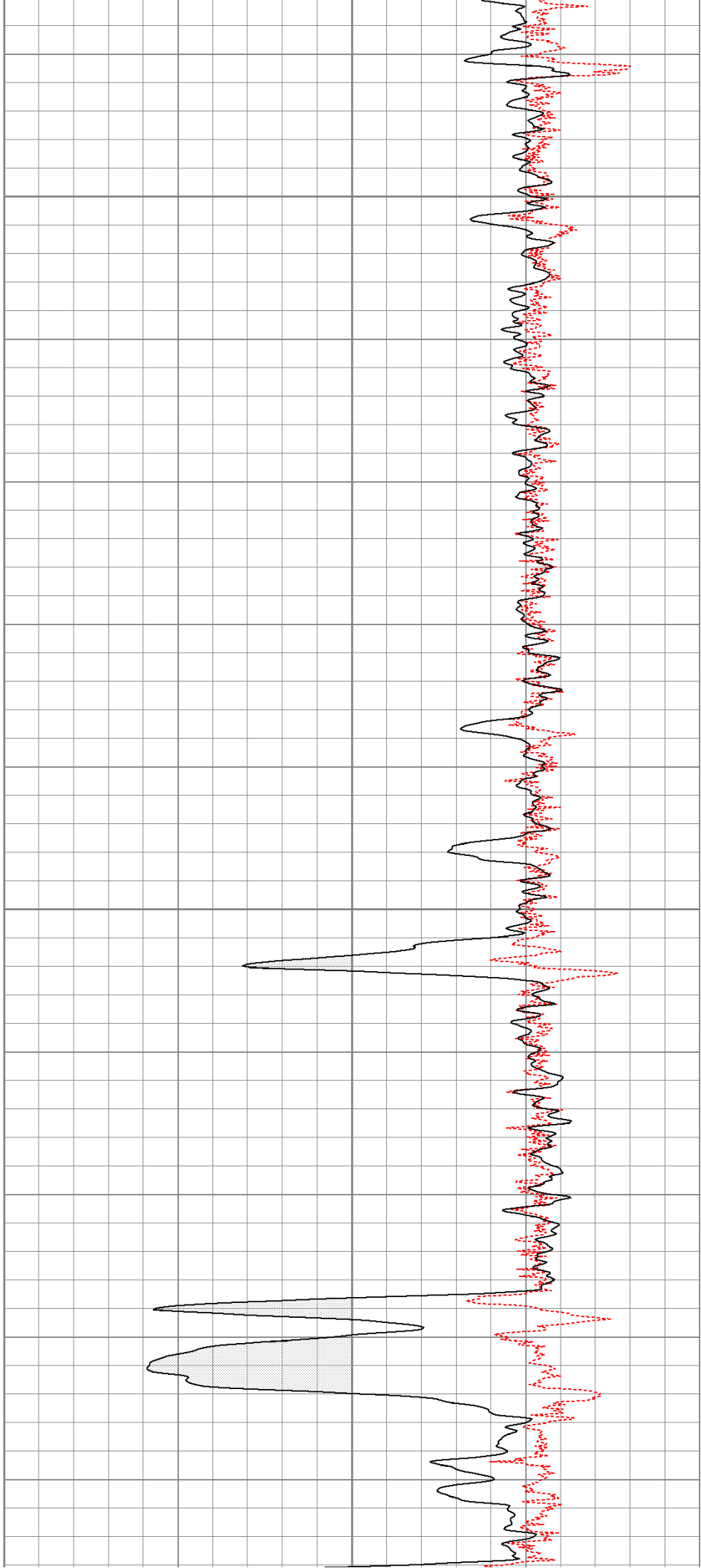
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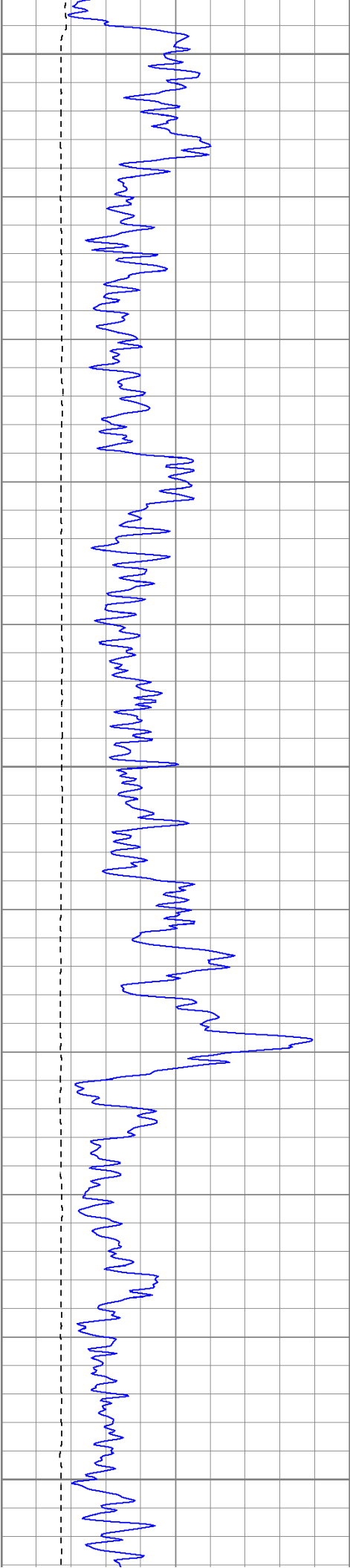




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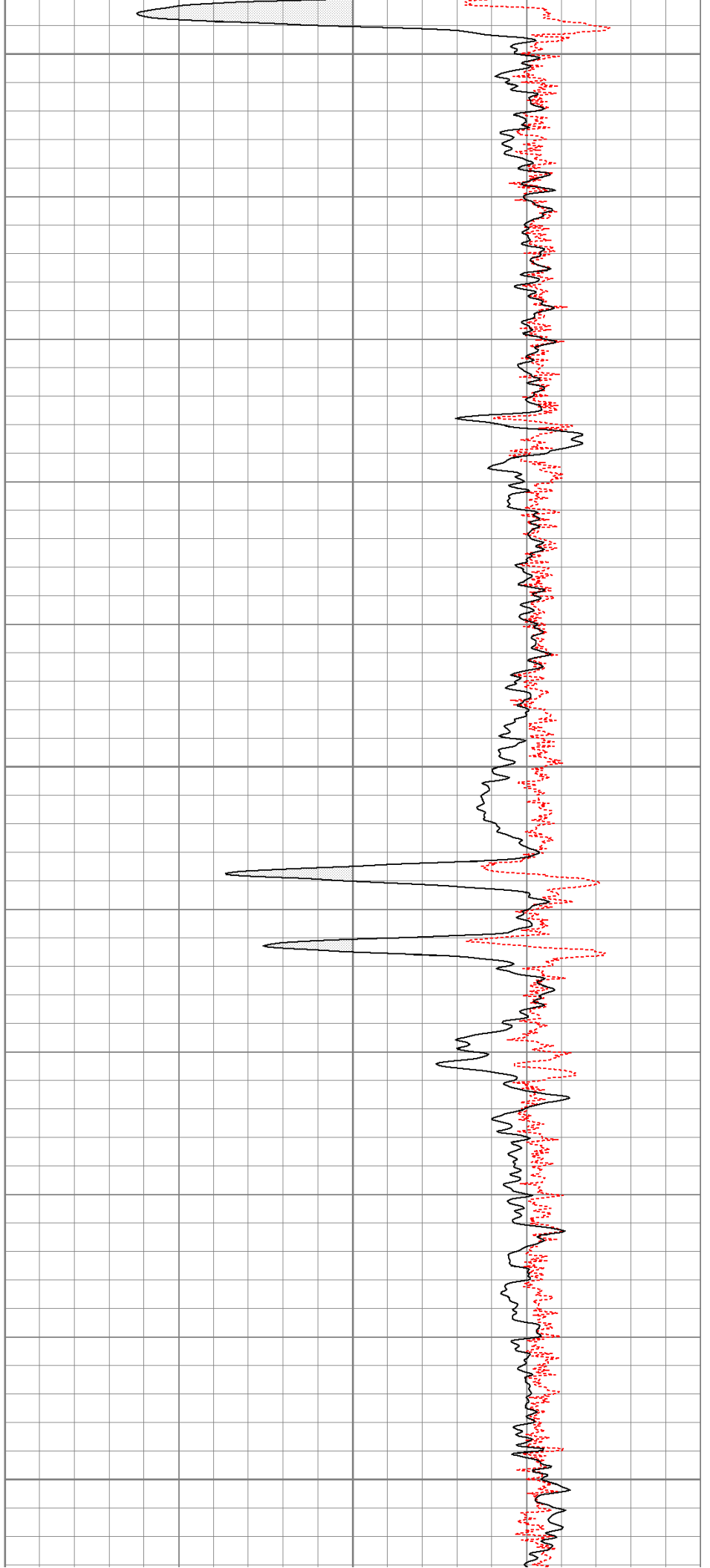


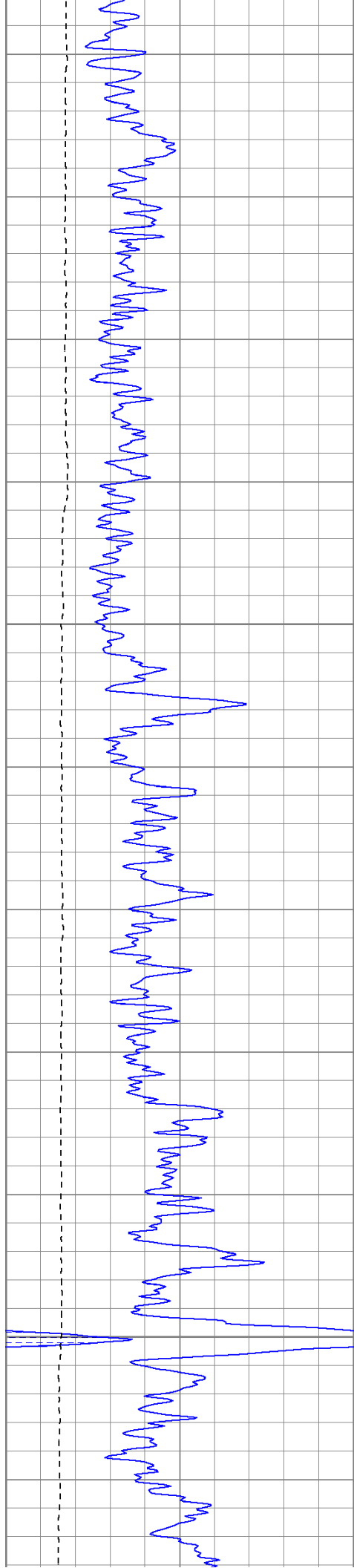


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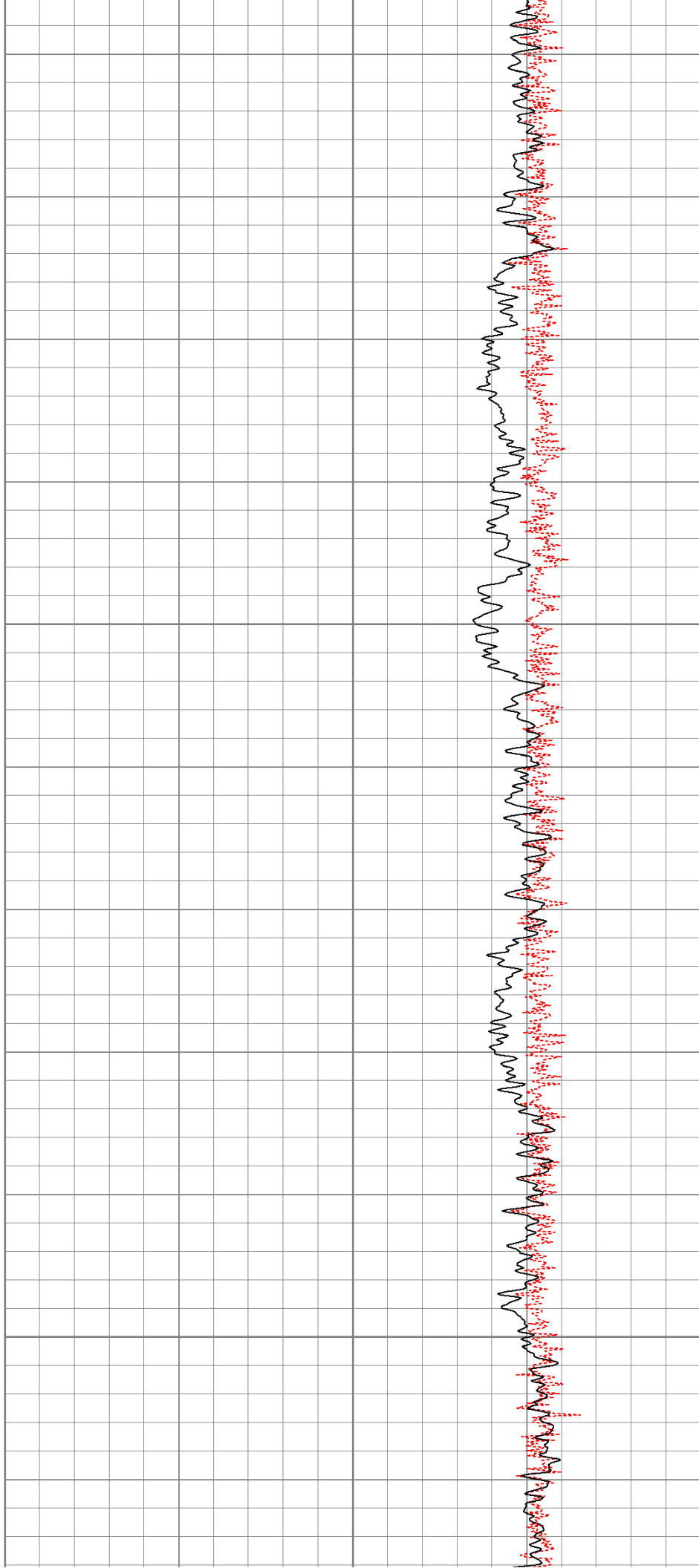
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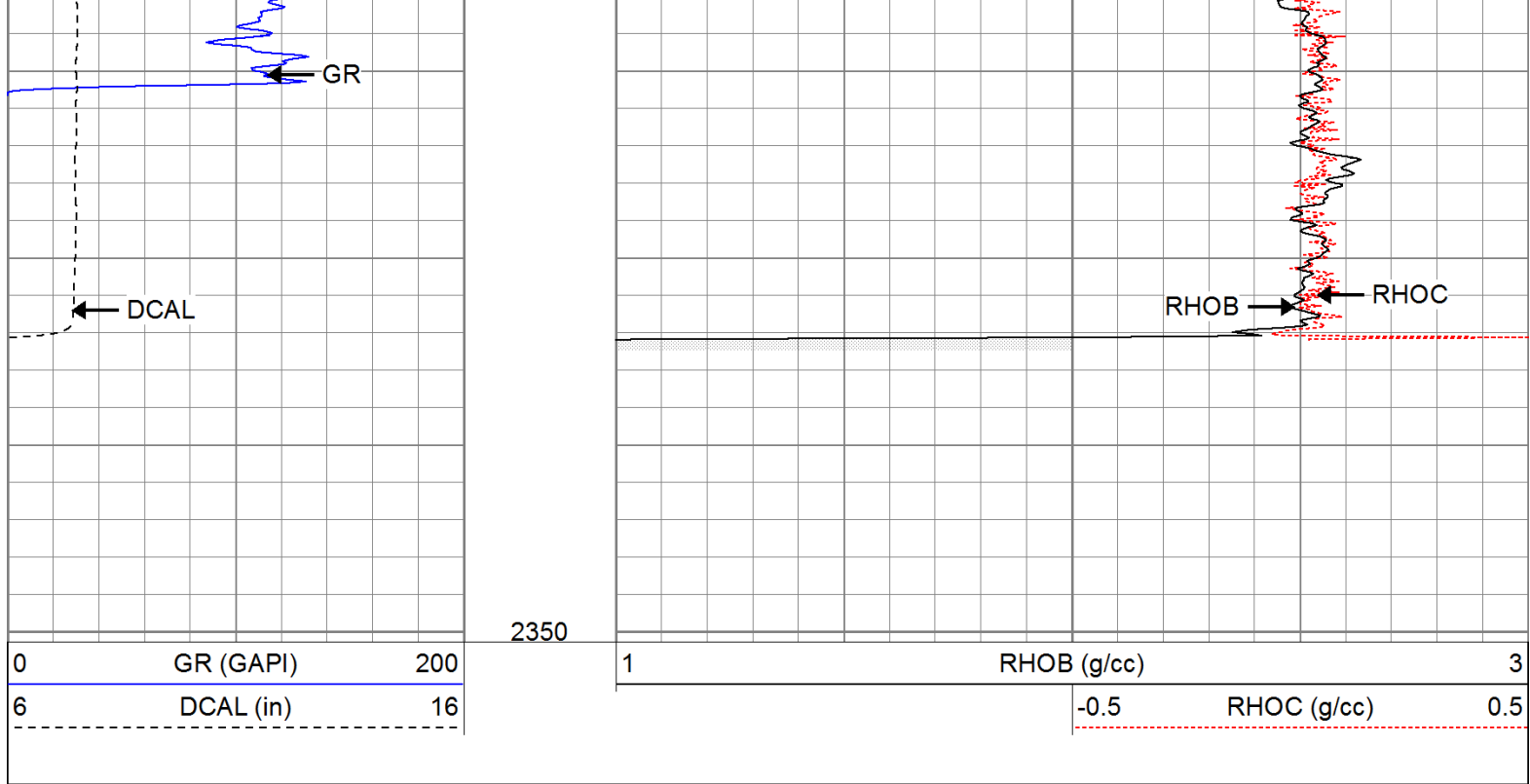




2250

2300





Calibration Report				
Database File:	djembe.db			
Dataset Pathname:	pass1			
Dataset Creation:	Fri Aug 26 17:18:34 2011 by Log Open-Cased 110302			
Induction Tool Calibration Report				
Serial Number:	903			
Tool Model:	Probe			
Downhole Cal Performed:	Sat Jun 18 15:02:12 2011			
Surface Cal Performed:	Sat Jun 18 17:40:00 2011			
After Survey Verification Performed:				
Surface Calibration:	Air	Loop		
Conductivity Reference:	0.000	500.000	mmho	
Conductivity Reading:	-0.045	0.642	V	
Internal Reference:	Zero	Cal		
Conductivity Reference:	0.000	500.000	mmho	
Conductivity Reading:	0.006	0.641	V	
Downhole Calibration:	Internal Zero	Internal Cal		
Conductivity Reference:	-0.702	499.904	mmho	
Conductivity Reading:	-0.082	503.319	V	
Short Normal Reference:	0.000	20.000	Ohm-m	
Short Normal Reading:	0.006	0.233	V	
Results:	Gain	Offset		
Loop Conductivity:	728.211	32.770		
Downhole Correction:	0.994	-0.621		
Short Normal Resistivity:	88.245	-1.000		
After Survey Verification	Internal Zero	Internal Cal		
Conductivity Reading:	0.000	0.000	V	
Conductivity Result:	0.000	0.000	mmho	
Short Normal Reading:	0.000	0.000	V	
Short Normal Result:	0.000	0.000	Ohm-m	
Compensated Density Calibration Report				
Serial-Model:	901-2.75POH			
Operator:	J. J. J.			

Source / Verifier:
 Master Calibration Performed:
 Before Survey Verification Performed:
 After Survey Verification Performed:

Wed Jun 08 09:11:26 2011

Master Calibration

	Density			Far Detector	Near Detector	
Magnesium	1.710	g/cc		1001.79	578.48	cps
Aluminum	2.590	g/cc		180.36	300.39	cps
Spine Angle = 69.08			Density/Spine Ratio = 0.479			
	Size			Reading		
Small Ring	8.00	in		2.50	V	
Large Ring	16.00	in		4.57	V	

Before Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

After Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

Neutron Calibration Report

Serial Number: 803
 Tool Model: 2.75POH
 Performed: Wed Jun 08 13:12:55 2011

Calibrator Value: 1 NAPI

Calibrator Reading: 1 cps

Sensitivity: 1 NAPI/cps


Gamma Ray Calibration Report

Serial Number: 804
 Tool Model: 2.75POH
 Performed: Fri Aug 12 08:39:59 2011

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.6500 GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	29.58		None	0.75	1.50	5.00
			GR-2.75POH (804) Probe 2.75" Probe Open Hole Gamma Ray	3.73	2.75	43.00

Tool Joint	Length (ft)	Weight (lb)	OD (in)	Remarks	Length (ft)	Weight (lb)	OD (in)	Remarks
NEU	24.04			NEU-2.75POH (803) Probe Epithermal	4.75	2.75	58.00	
LSD DCAL SSD	16.21 15.94 15.69			CDL-2.75POH (901) Probe	8.43	2.75	106.00	
DIC	6.24			IEL-Probe (903)	13.46	2.75	93.00	
SP SN	2.25 1.71							
Dataset:		djembe.db: field/well/run1/pass1						
Total Length:		31.11 ft						
Total Weight:		305.00 lb						
O.D.		2.75 in						