

**COMPENSATED DENSITY
NEUTRON
LOG**

Company	Pioneer Natural Resources	Company	Pioneer Natural Resources
Well	Brake Handle 24-22	Well	Brake Handle 24-22
Field	Purgatoire River	Field	Purgatoire River
County	Las Animas	County	Las Animas
State	Colorado	State	Colorado
Location:	API # : 05 071 09659-00 658' FSL & 2002' FWL		
SEC 22 TWP 32S RGE 67W	SIL		
Permanent Datum	Ground Level	Elevation	7801'
Log Measured From	Kelly Bushing 12' AGL		
Drilling Measured From	Kelly Bushing		
Date	6-8-11	6-9-11	
Run Number	One	Two	
Depth Driller	2986'	2986'	
Depth Logger	2240'	2957'	
Bottom Logged Interval	2224'	2955'	
Top Log Interval	Surface Casing	5 1/2" Casing	
Casing Driller	8 5/8" @ 832'	2238'	
Casing Logger	833'	2238'	
Bit Size	7 7/8"	7 7/8"	
Type Fluid in Hole	Airated Water	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	4:15 P.M.	4:15 P.M.	
Time Logger on Bottom	11:00 P.M.	5:00 A.M.	
Maximum Recorded Temperature	80 DEG F	///	
Equipment Number	T590	T590	
Location	Trinidad	Trinidad	
Recorded By	C. Sisneros	C. Sisneros	
Witnessed By	Mr. Derrick Berry	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

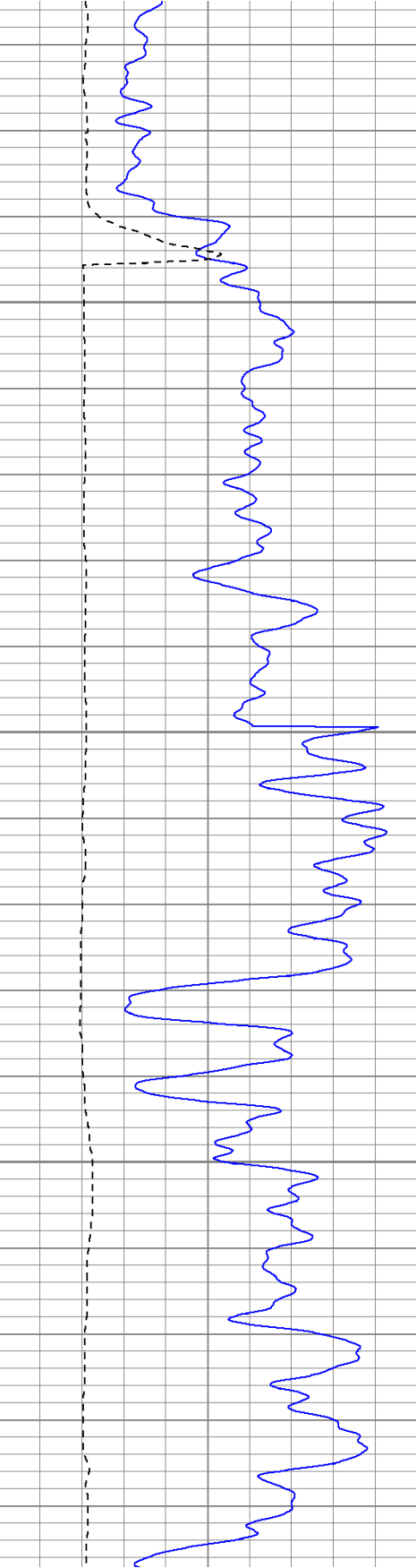
Density Porosity Presented On Sandstone Matrix.
ABHV Calculated For 5.5" Casing.

Neutron Porosity invalid from 1020' to 833' due to foam.

Database File: brakehandle.db
Dataset Pathname: pass2cdnl
Presentation Format: cdnl
Dataset Creation: Sun Jun 12 18:29:57 2011
Charted by: Depth in Feet scaled 1:240

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

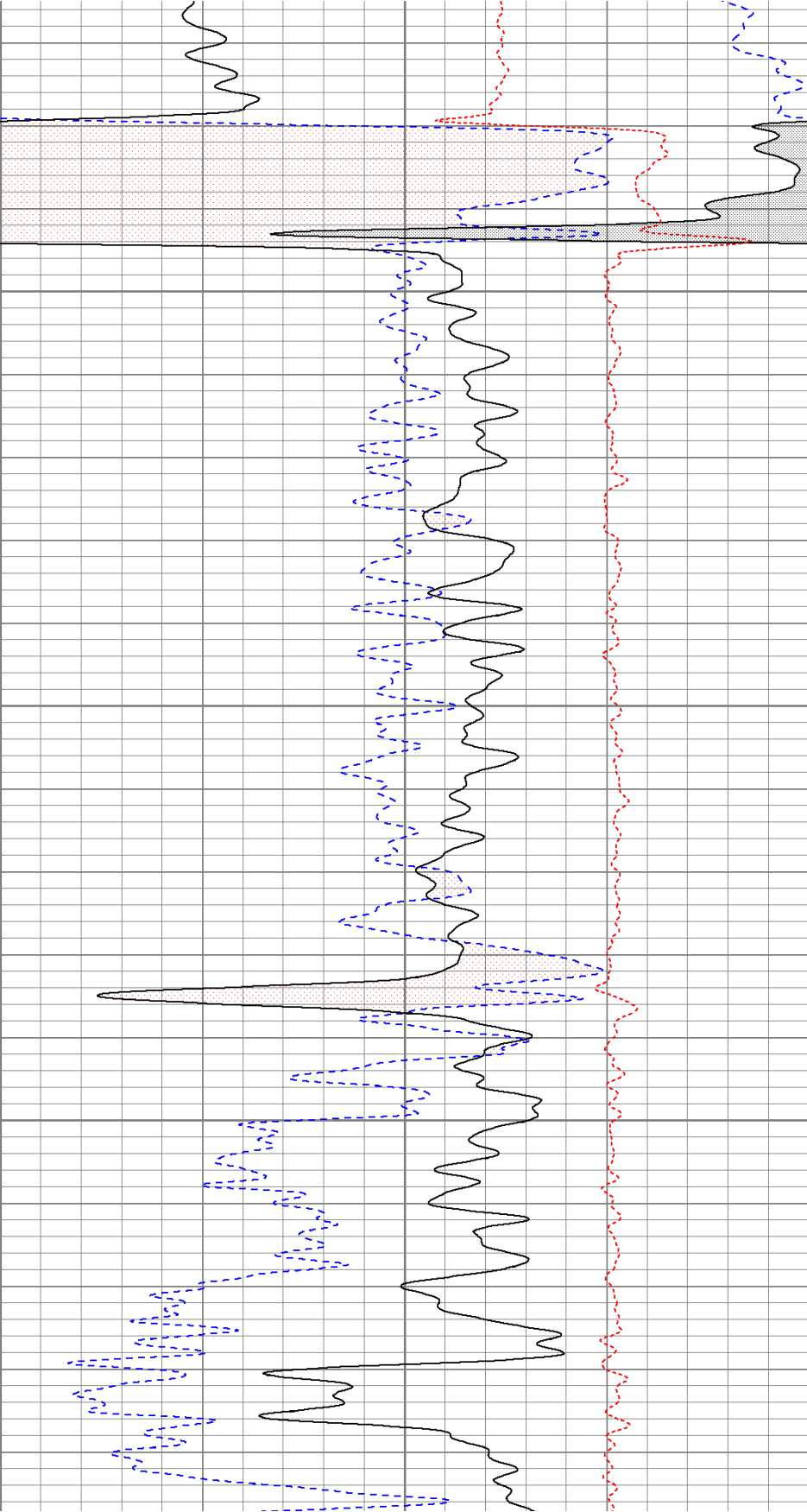
30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5

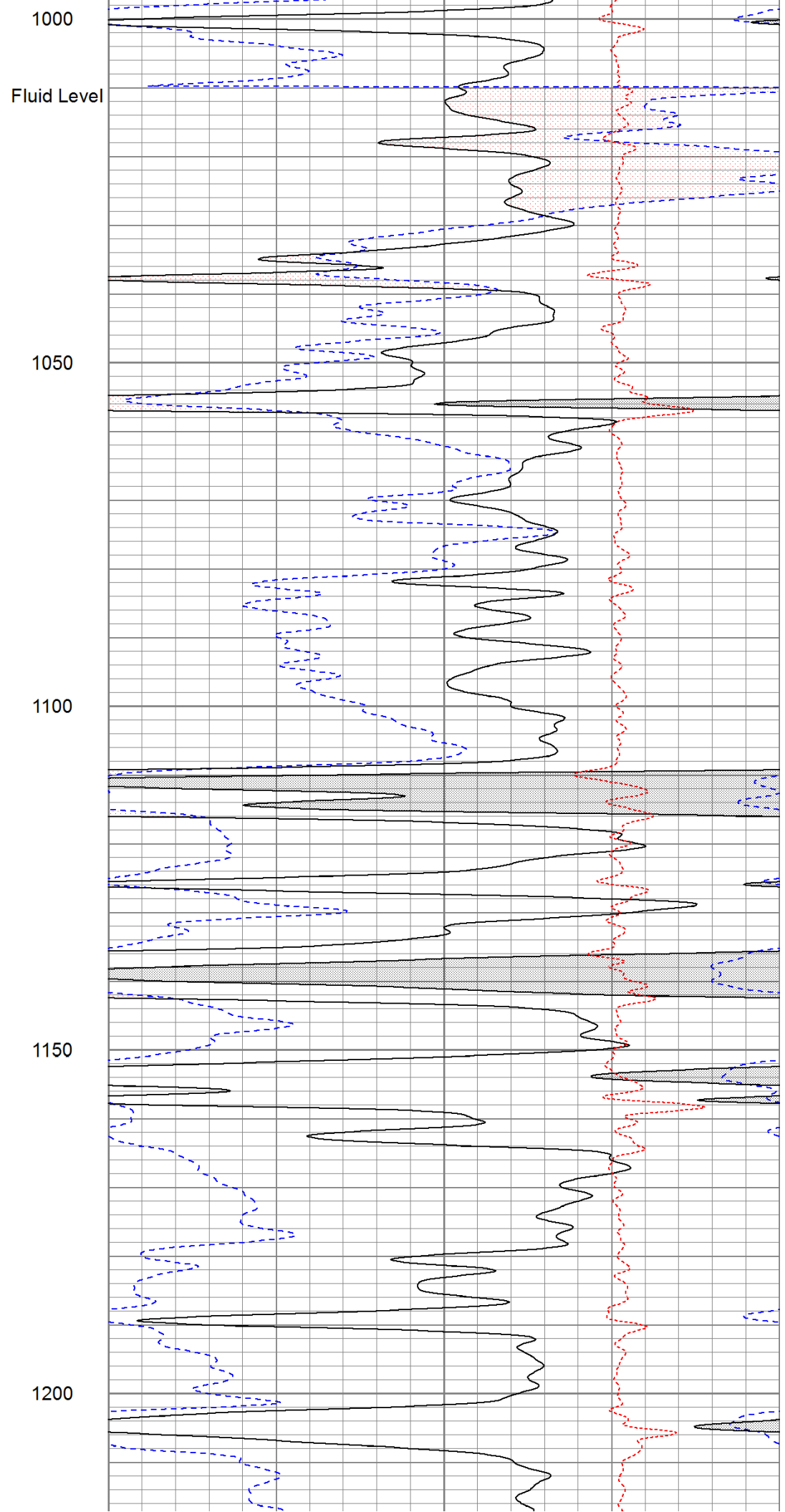
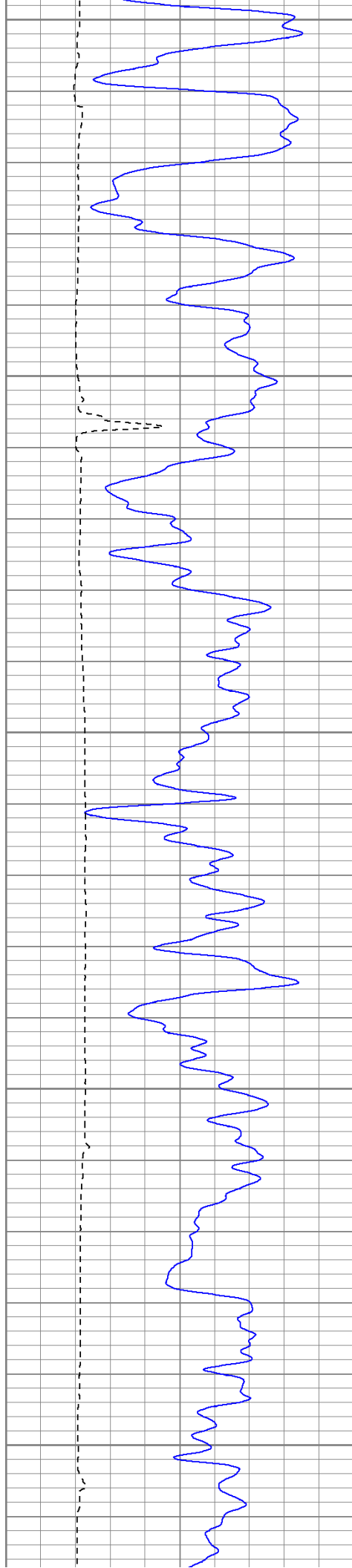


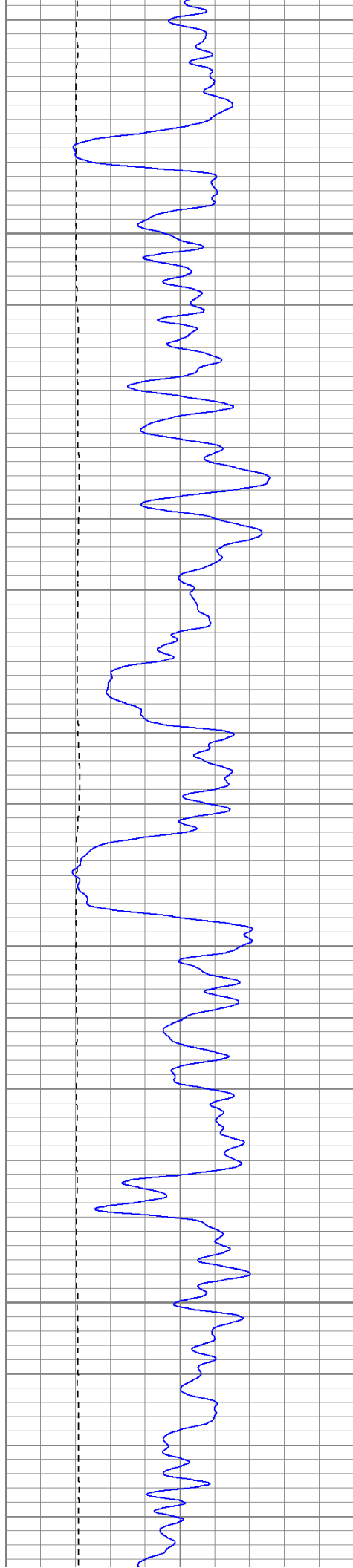
850

900

950





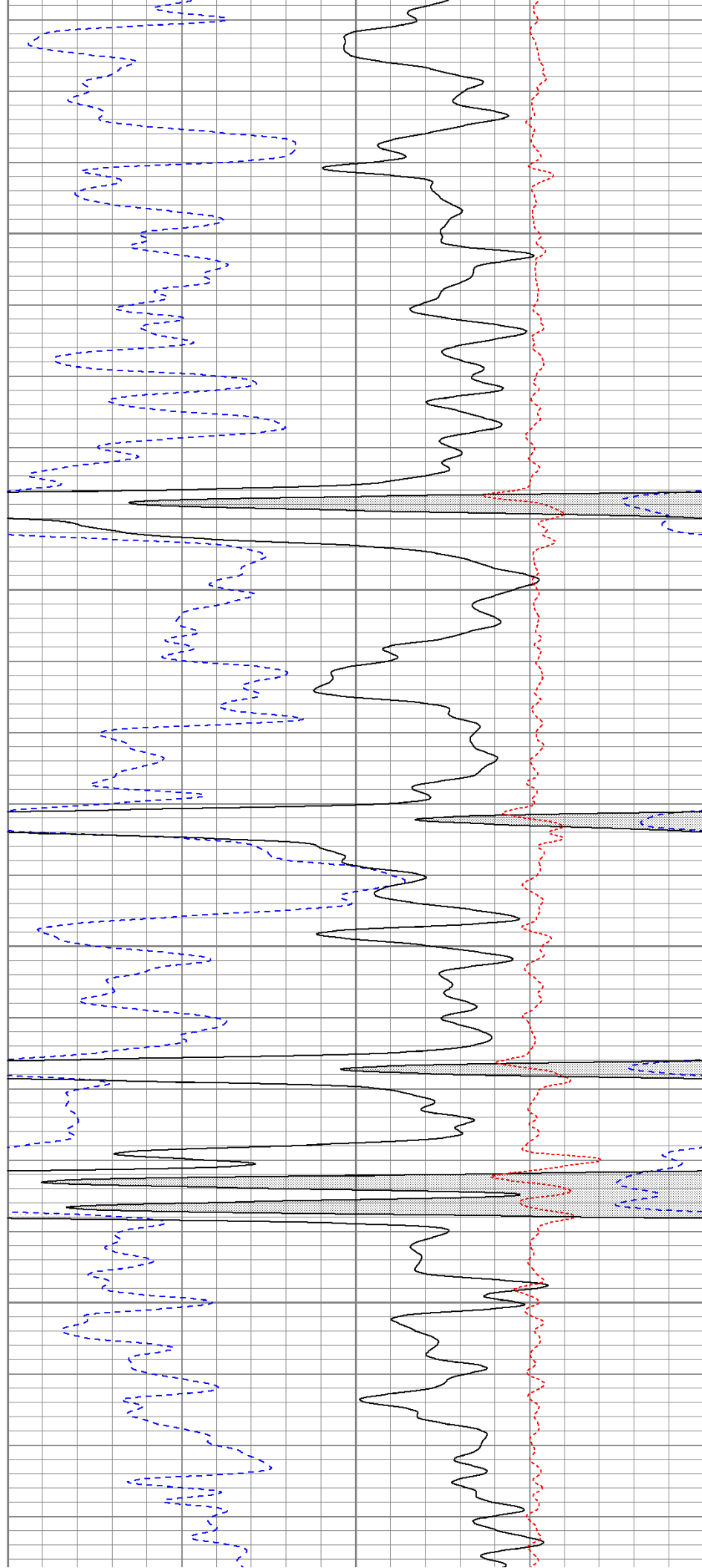


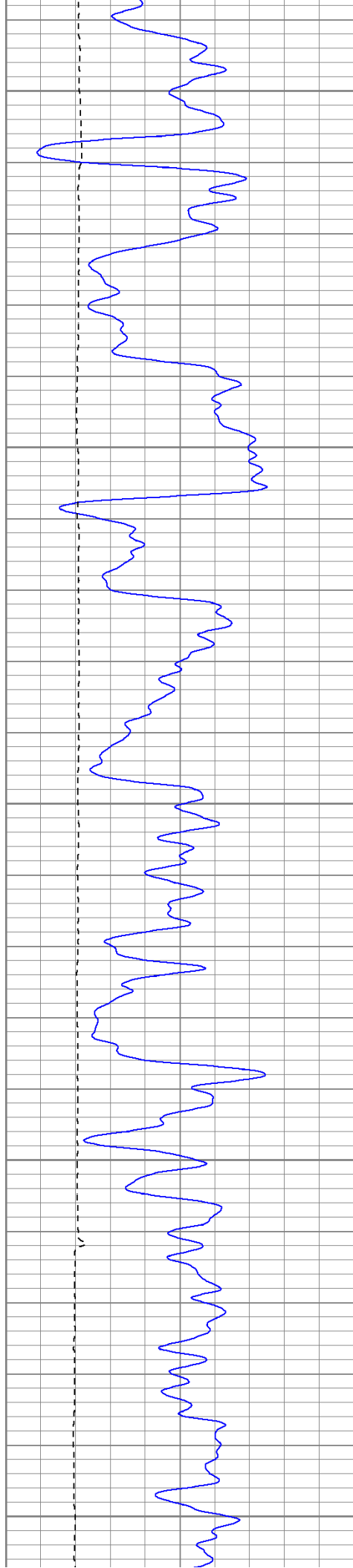
1250

1300

1350

1400





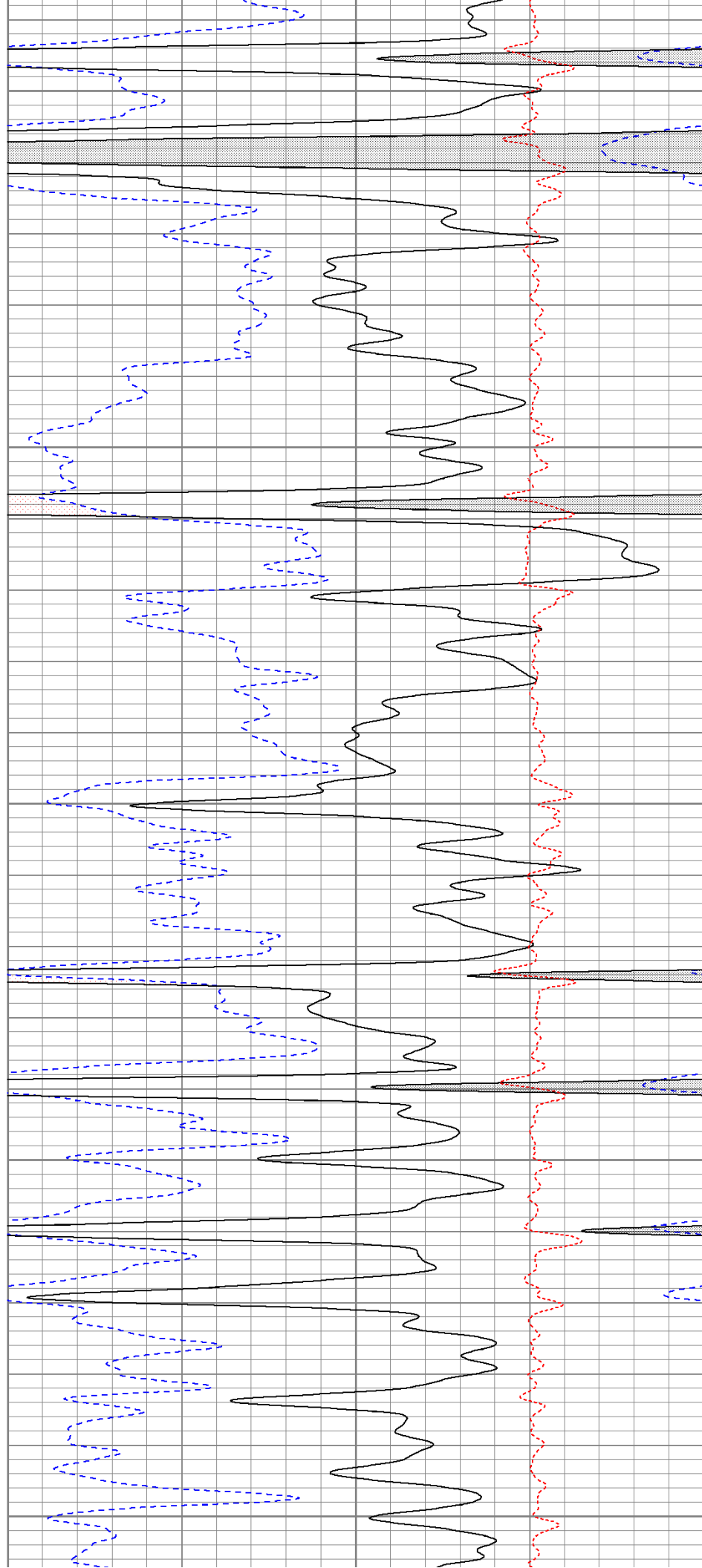
1450

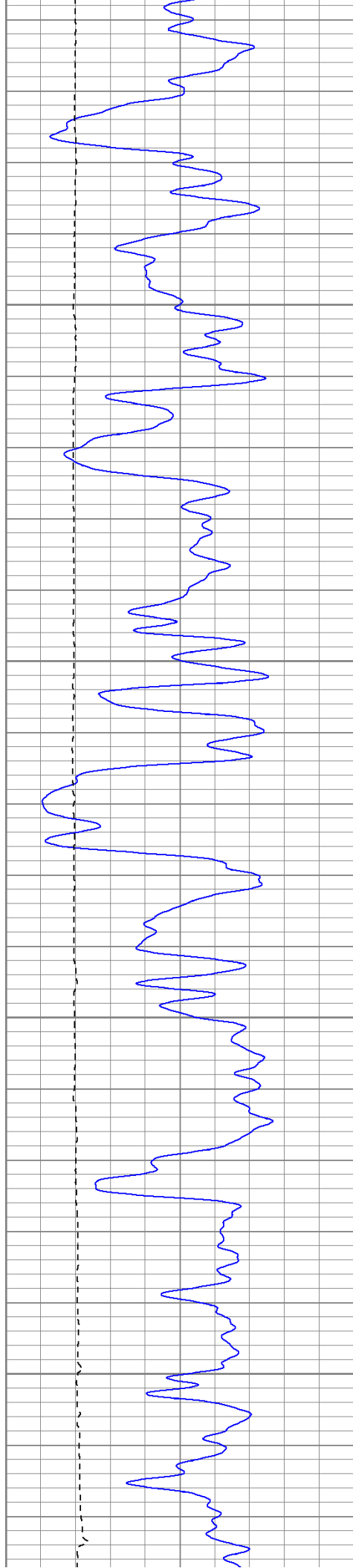
1500

1550

1600

1650



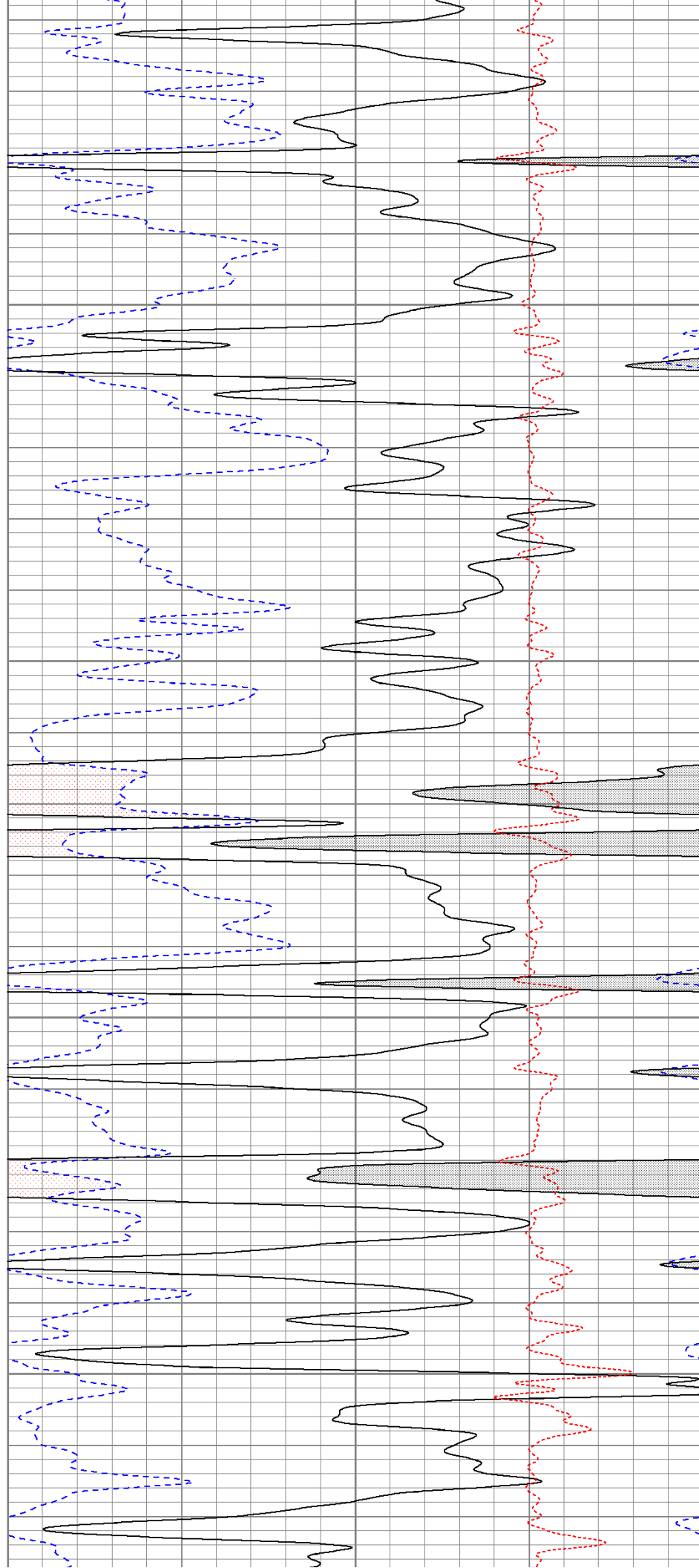


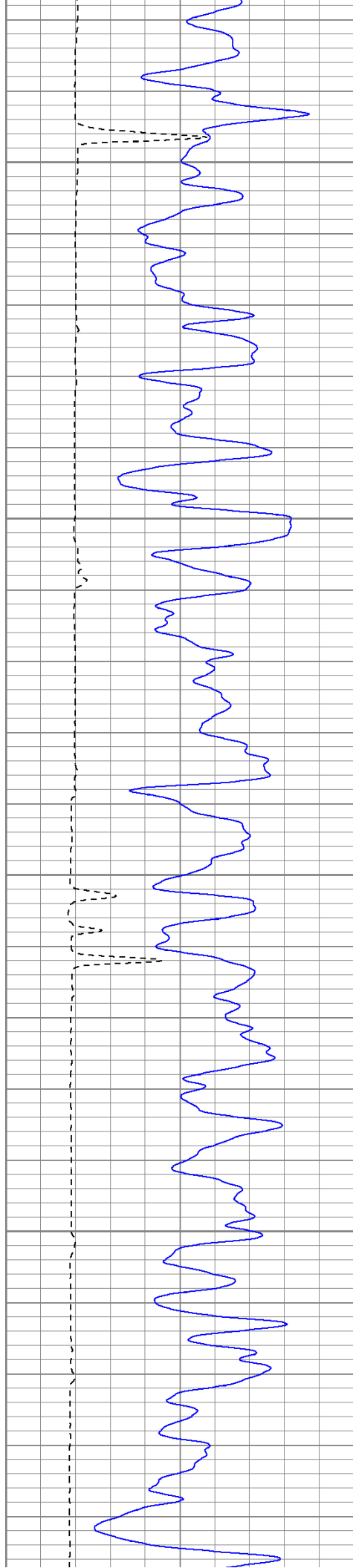
1700

1750

1800

1850



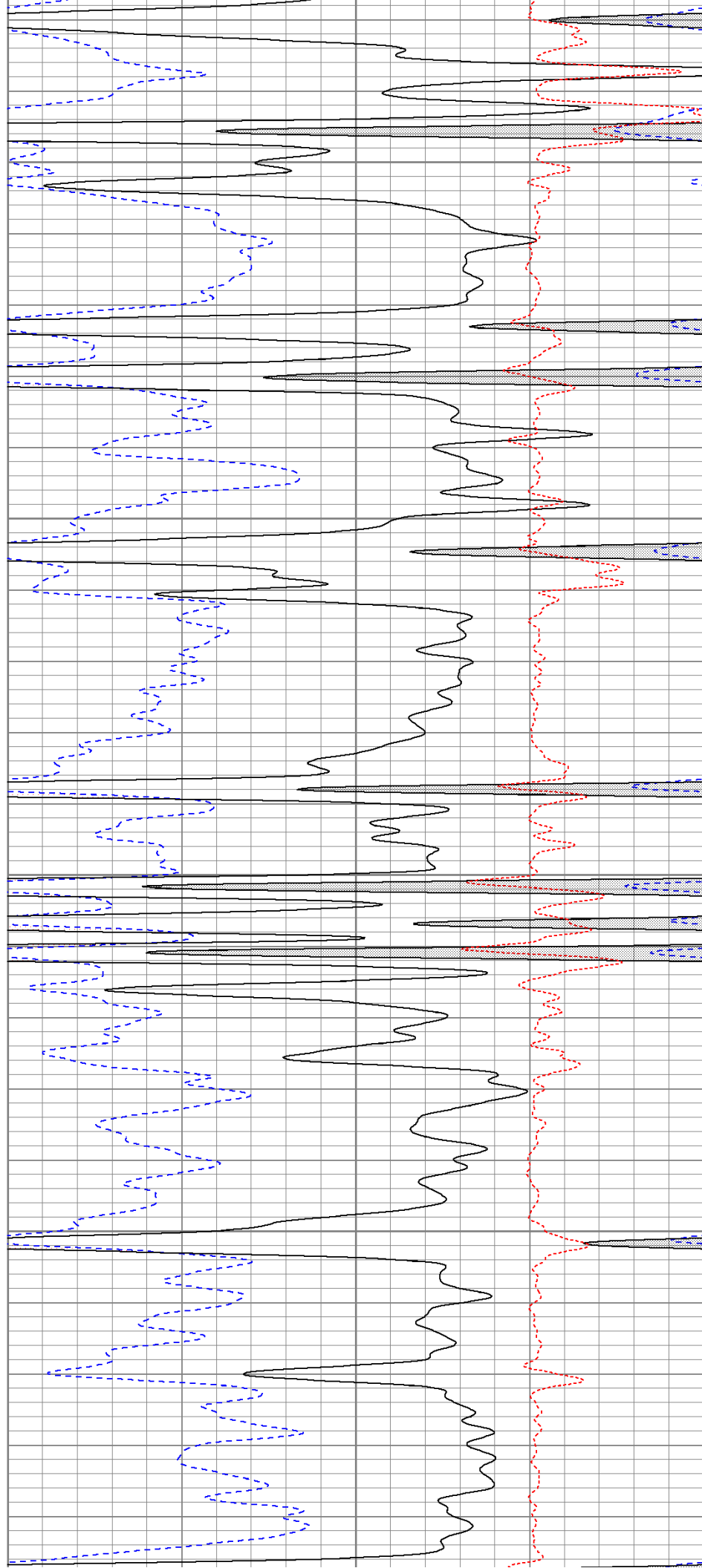


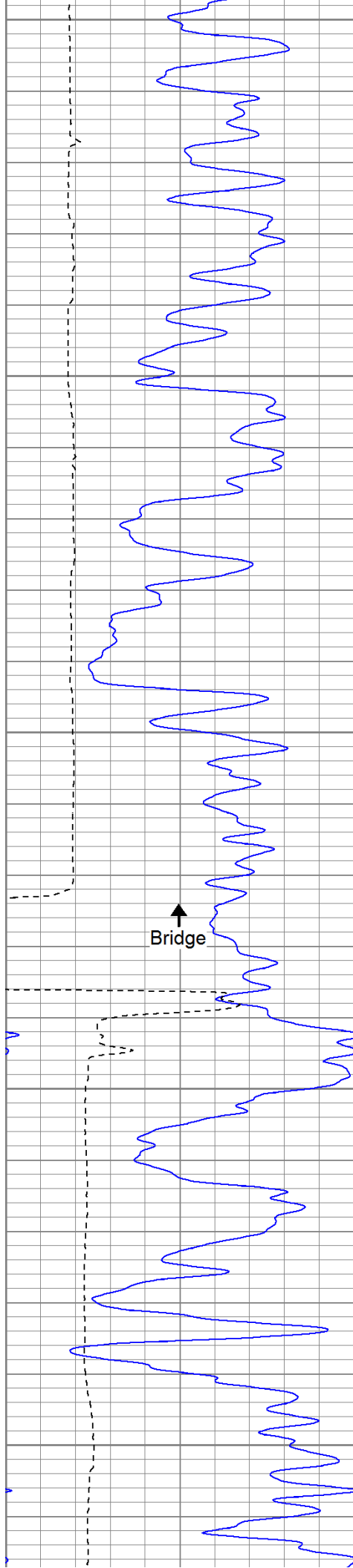
1900

1950

2000

2050





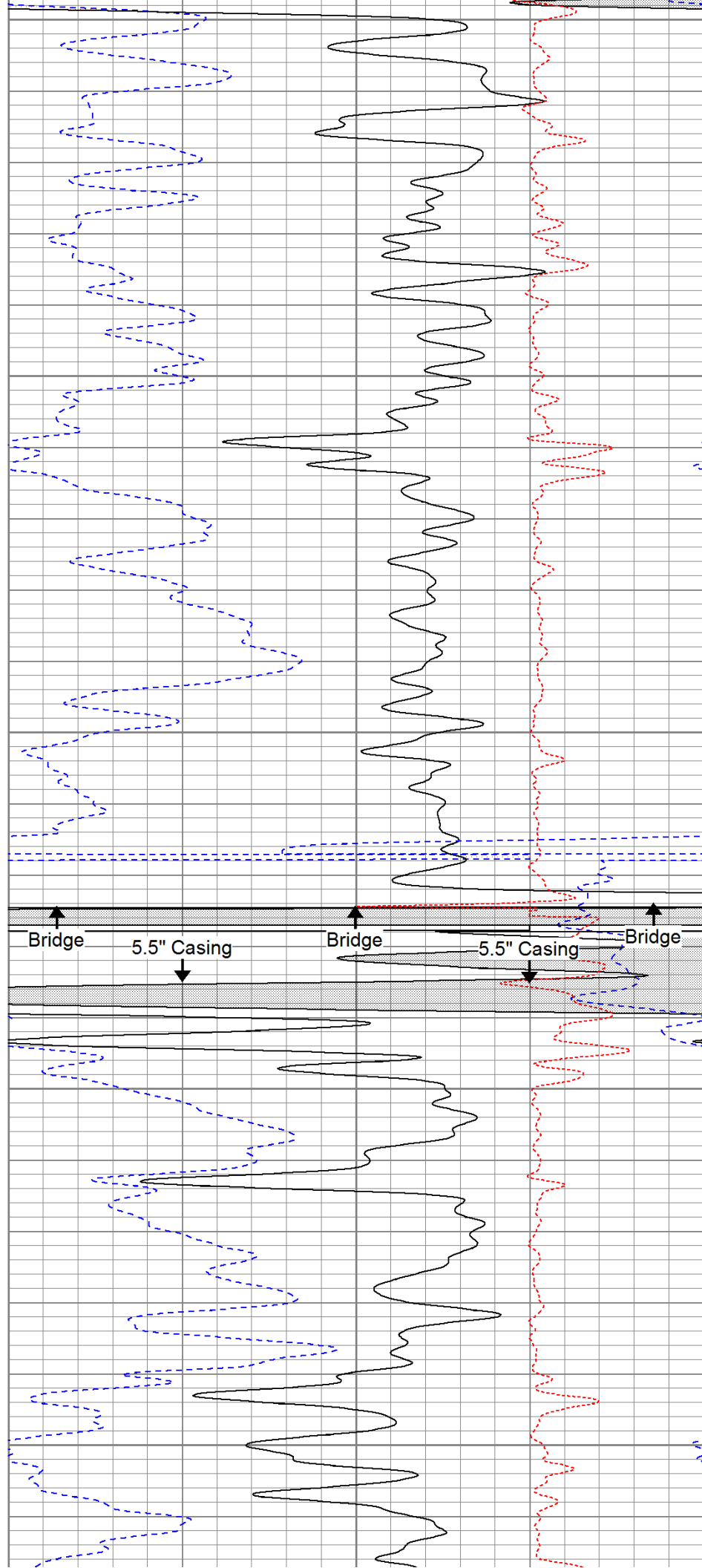
2100

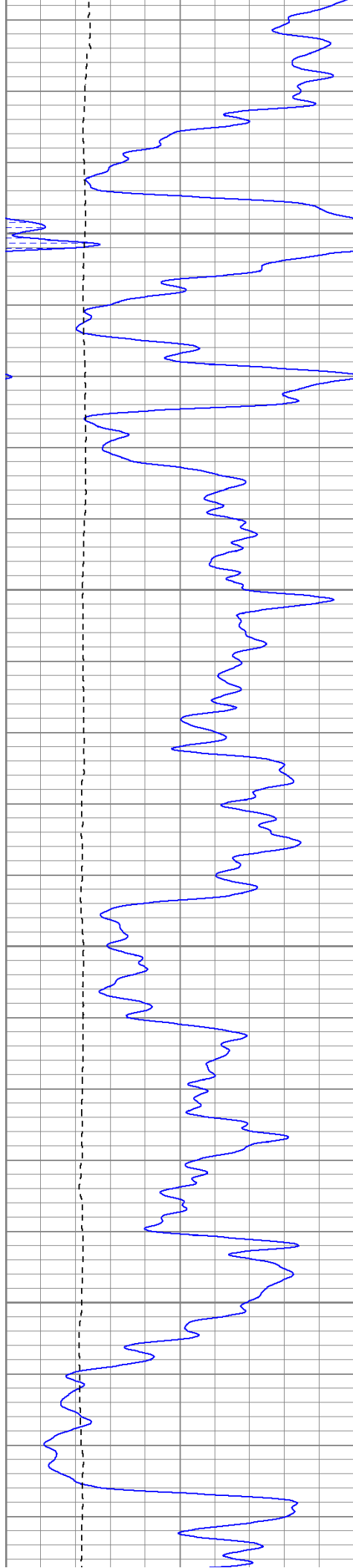
2150

2200

2250

2300



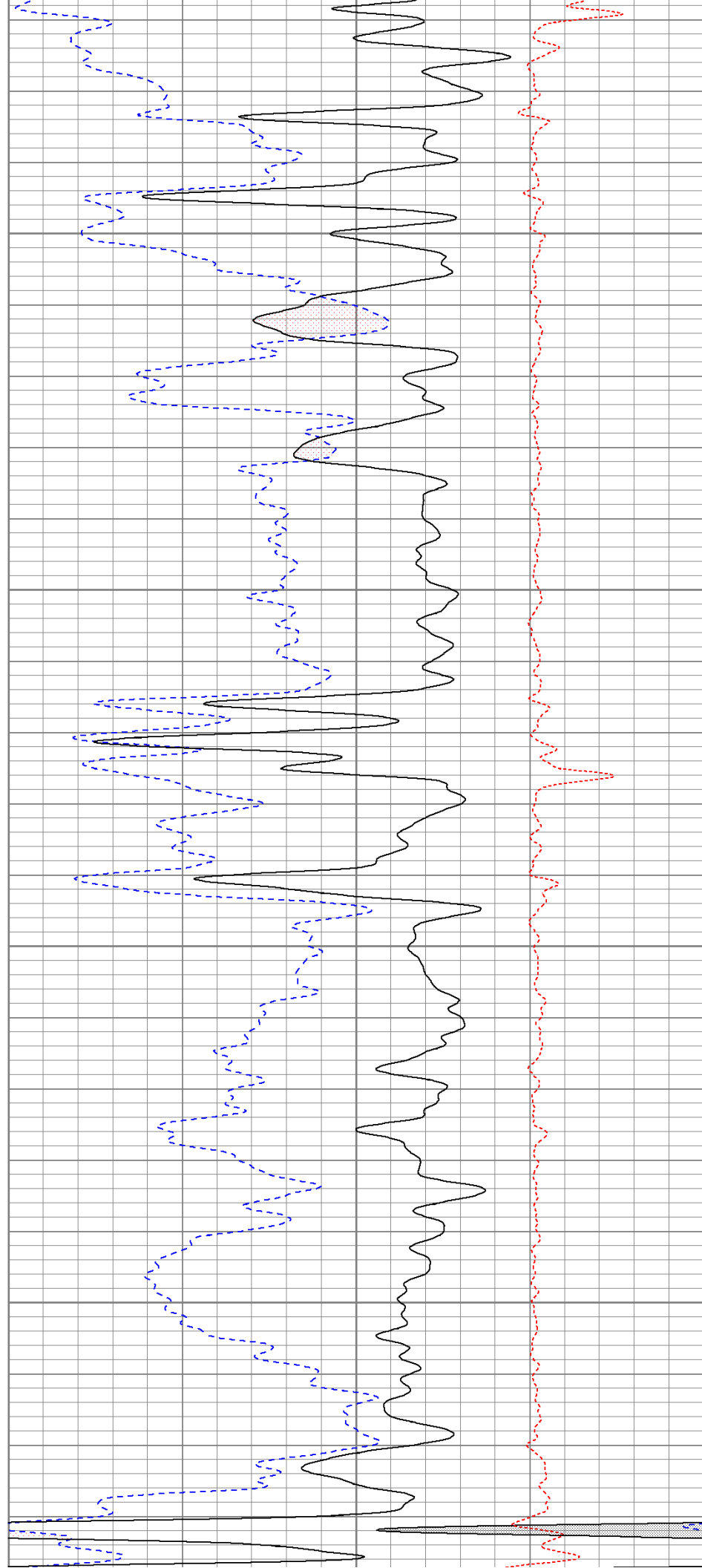


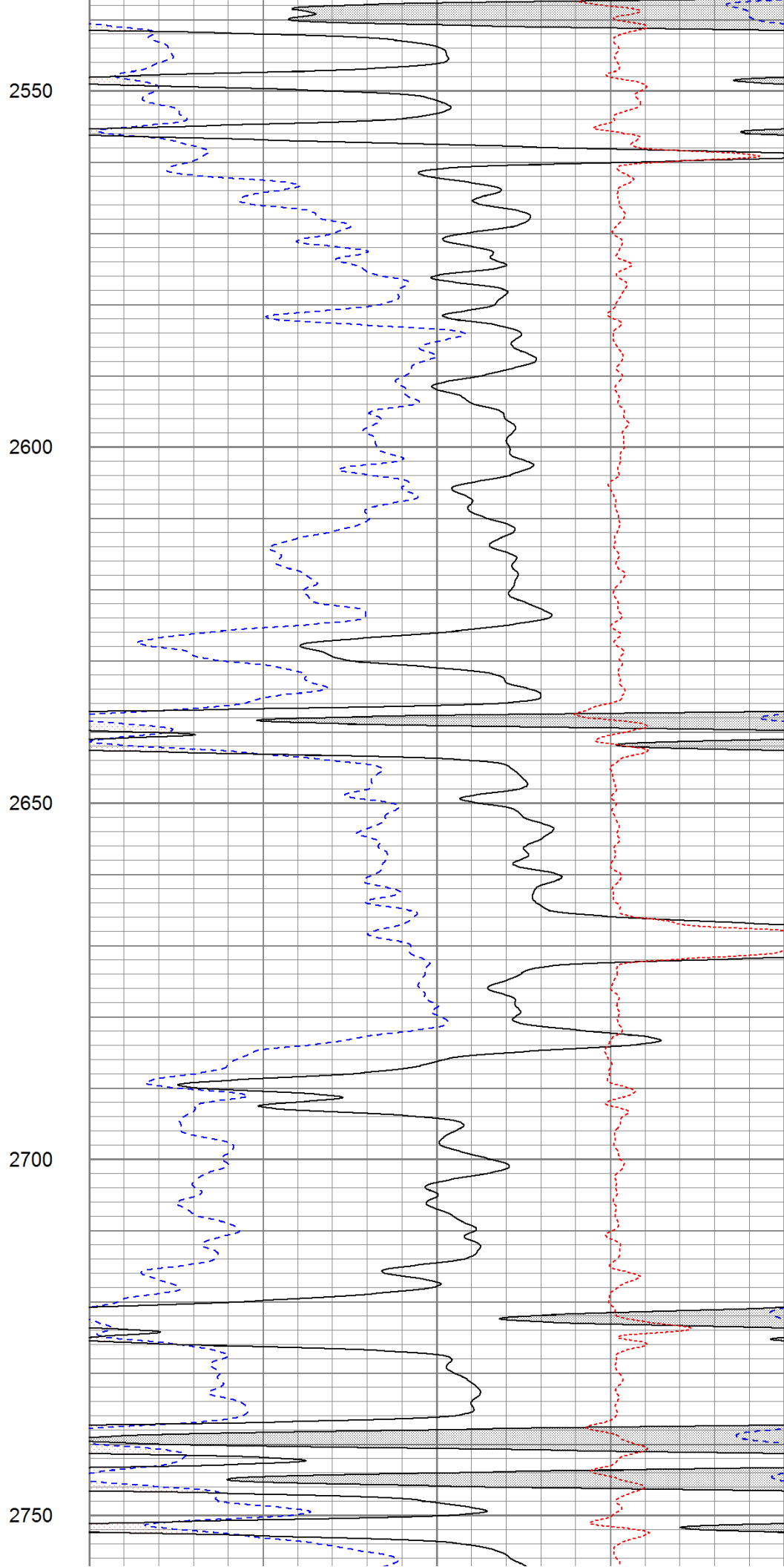
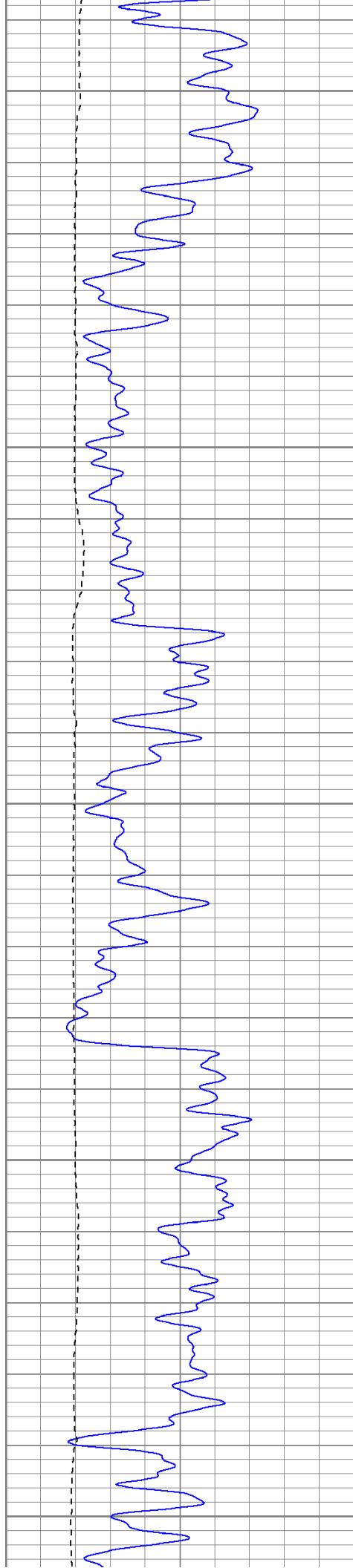
2350

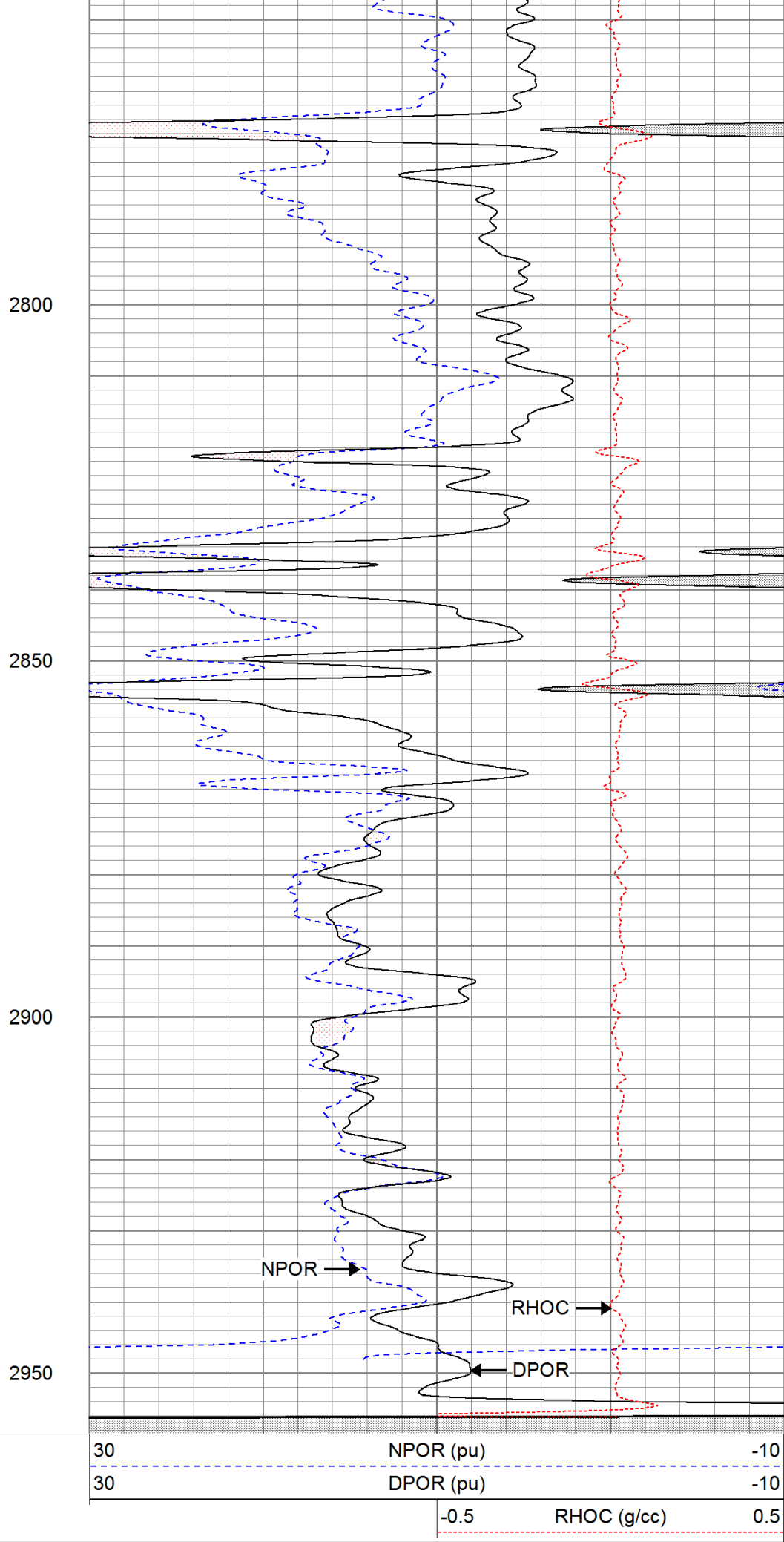
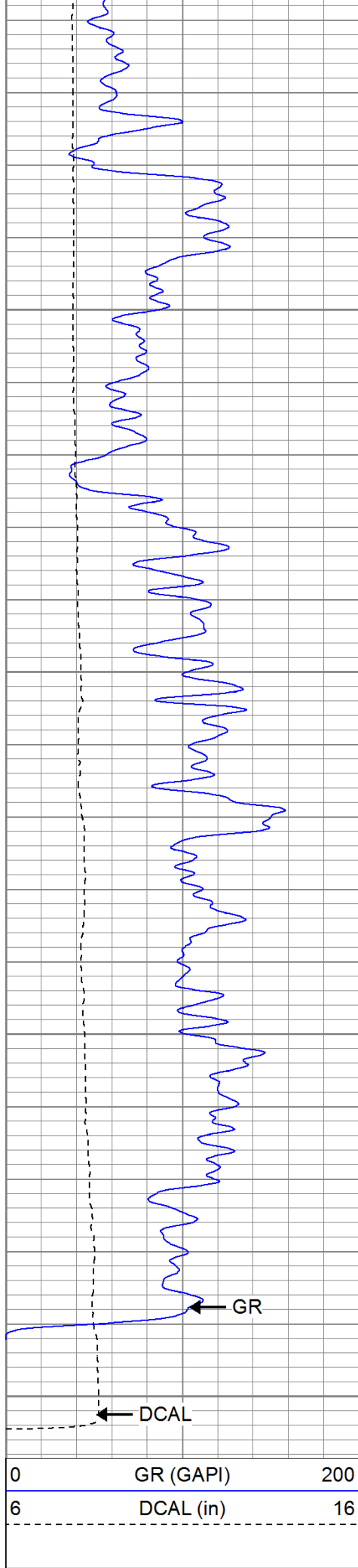
2400

2450

2500





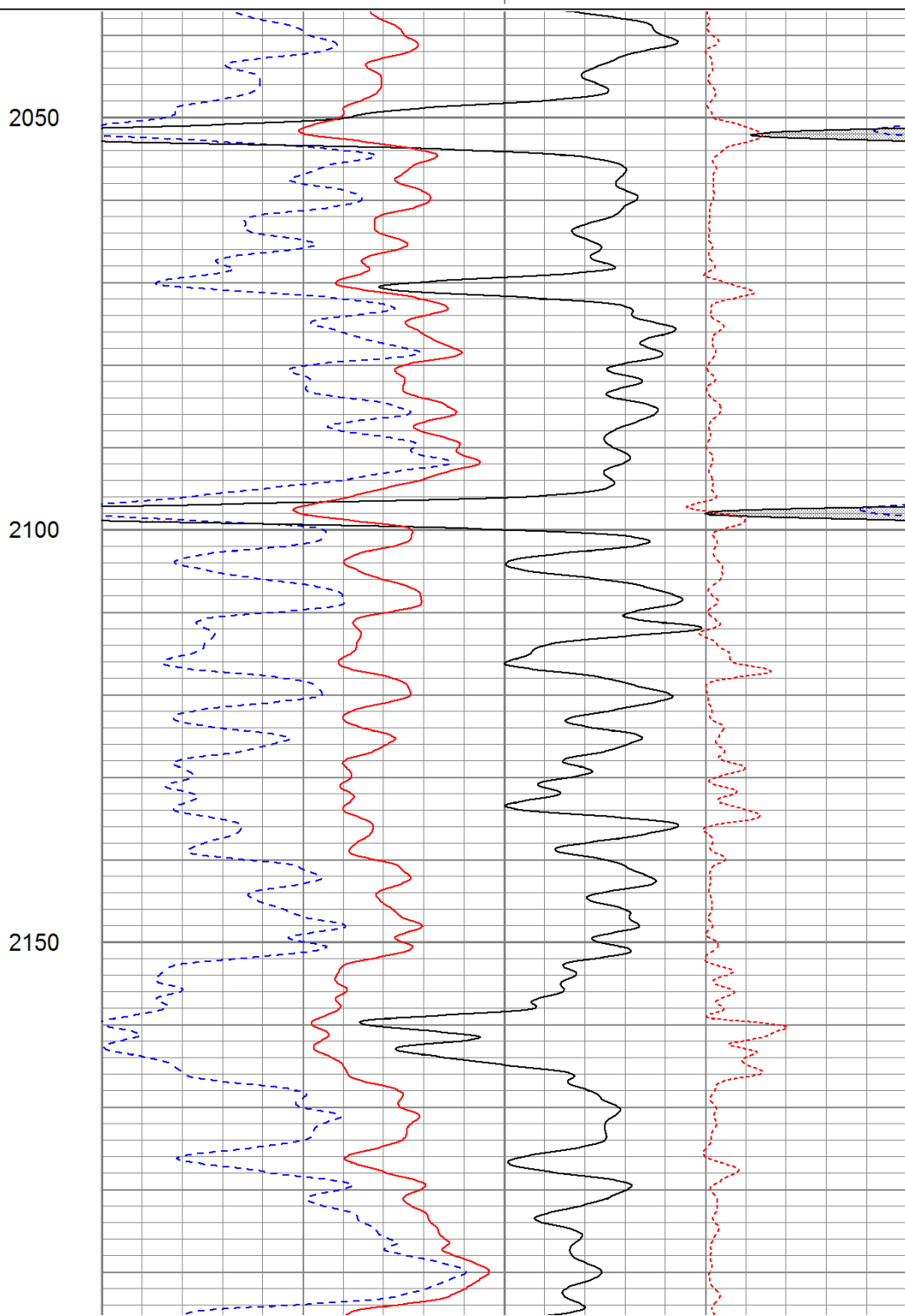
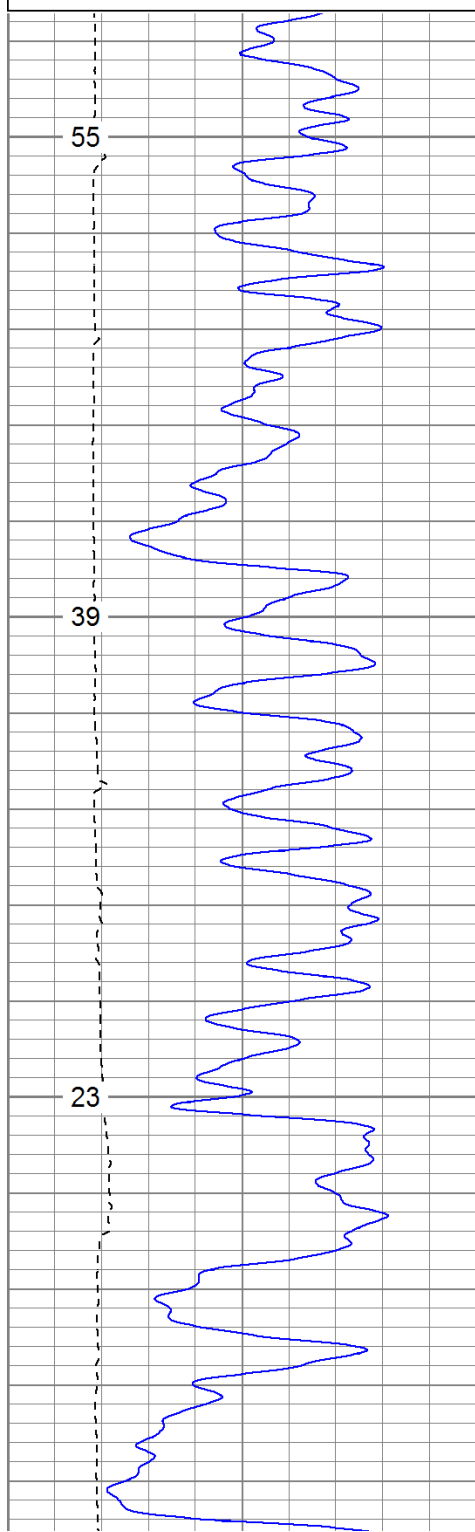


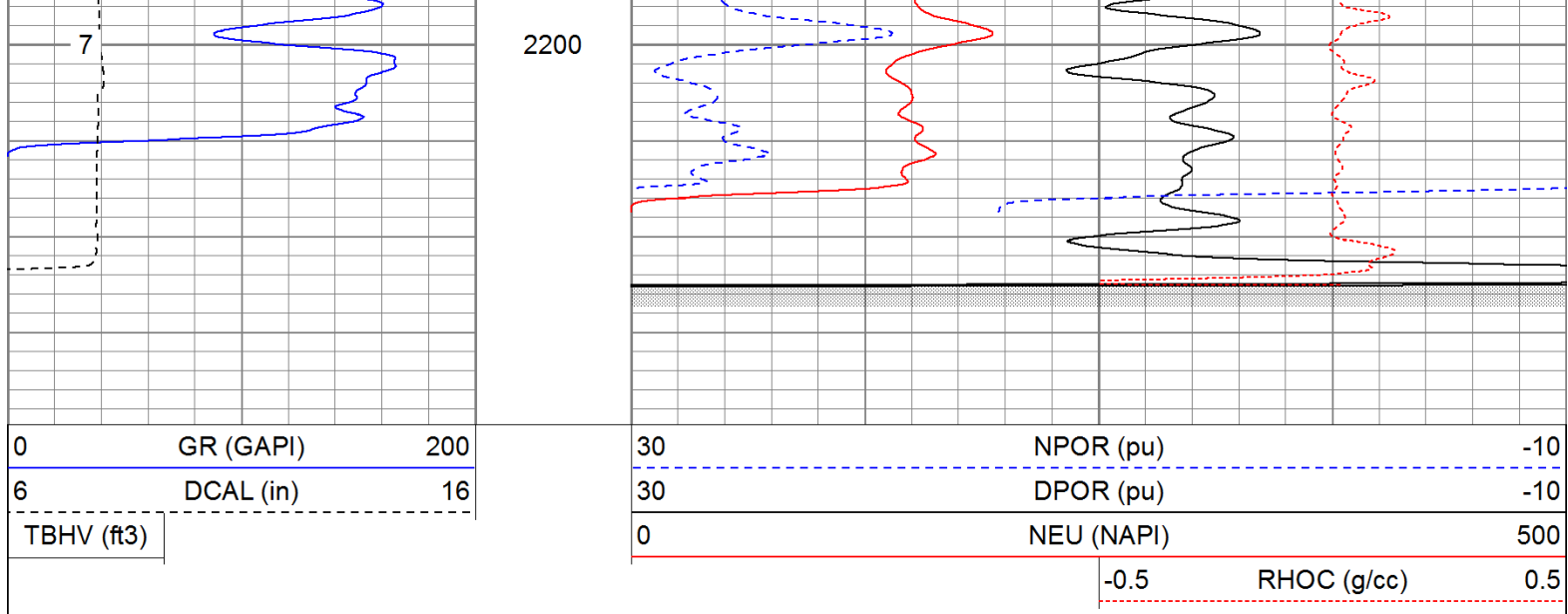
Repeat Pass

Database File: brakehandle.db
 Dataset Pathname: pass1.1
 Presentation Format: cdnl
 Dataset Creation: Sun Jun 12 19:23:40 2011 by Calc Open-Cased 110302
 Charted by: Depth in Feet scaled 1:240

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

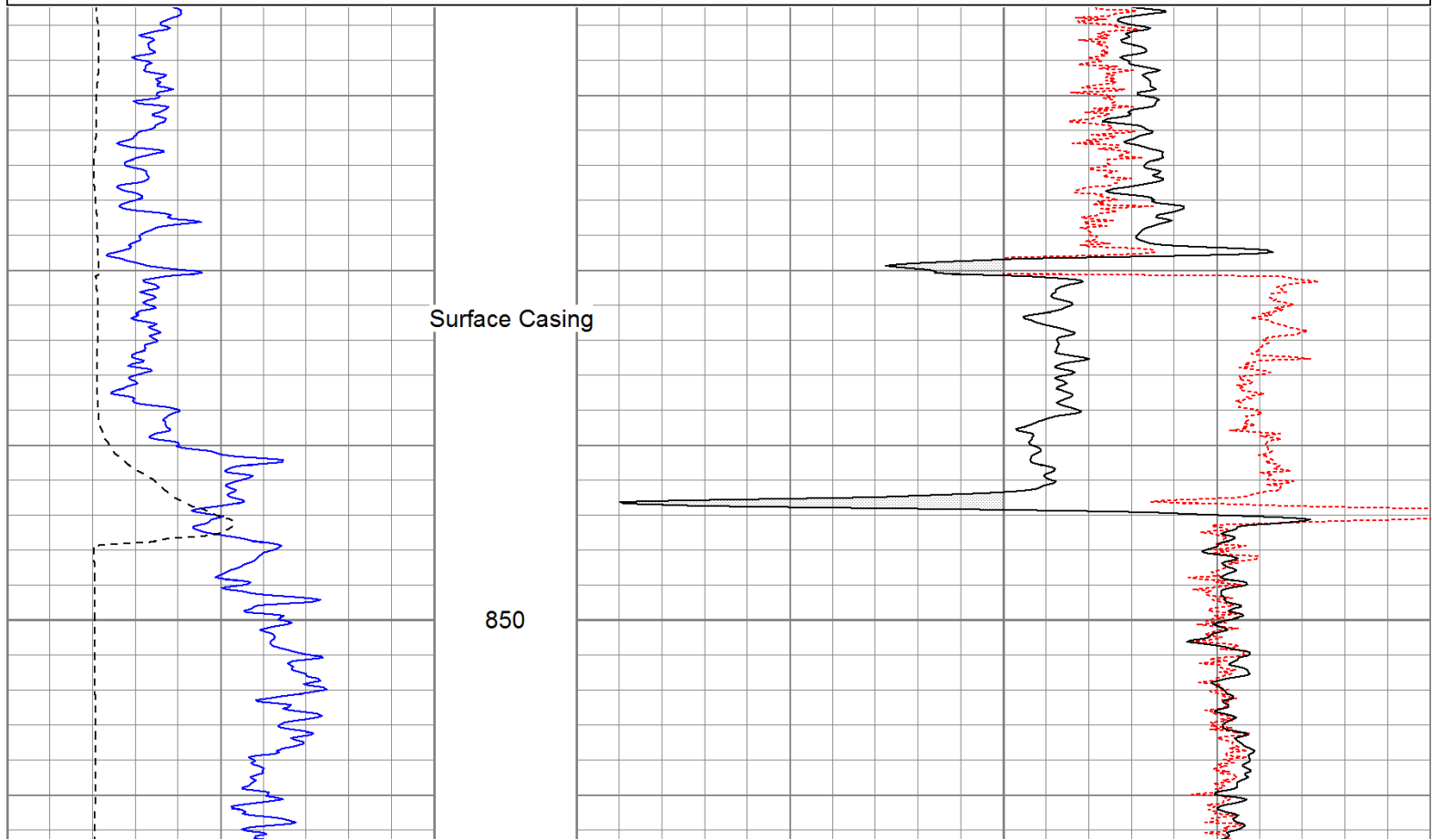
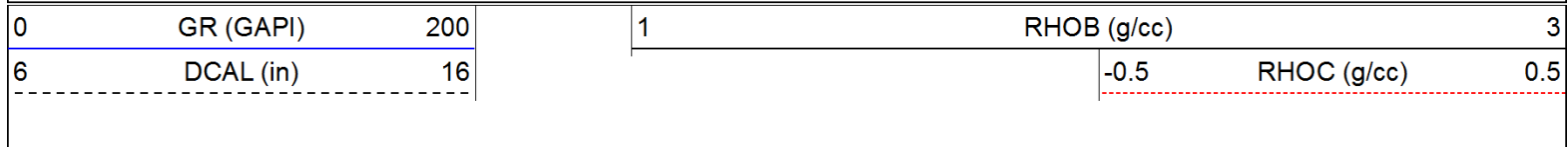
30	NPOR (pu)		-10
30	DPOR (pu)		-10
0	NEU (NAPI)		500
	-0.5	RHOC (g/cc)	0.5

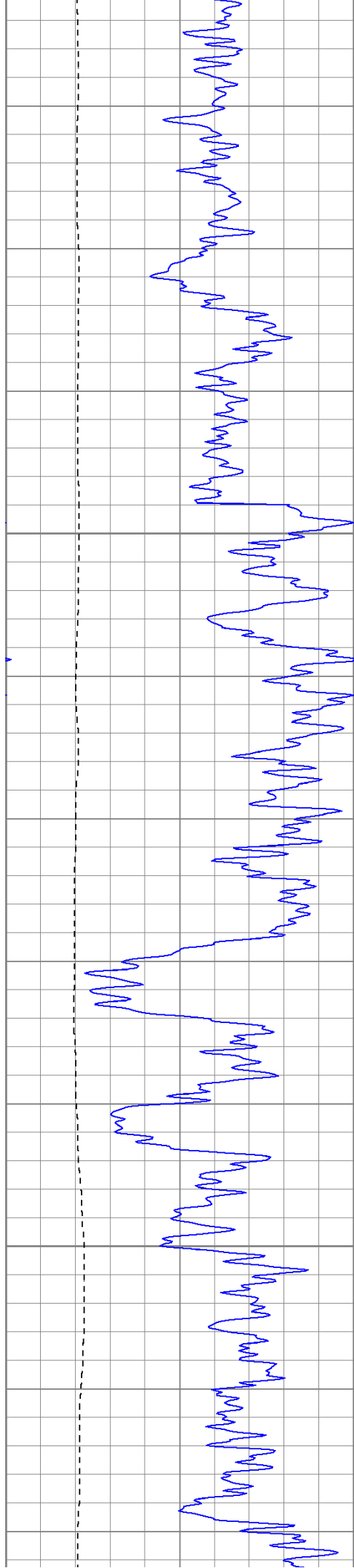




Merged High Resolution Pass

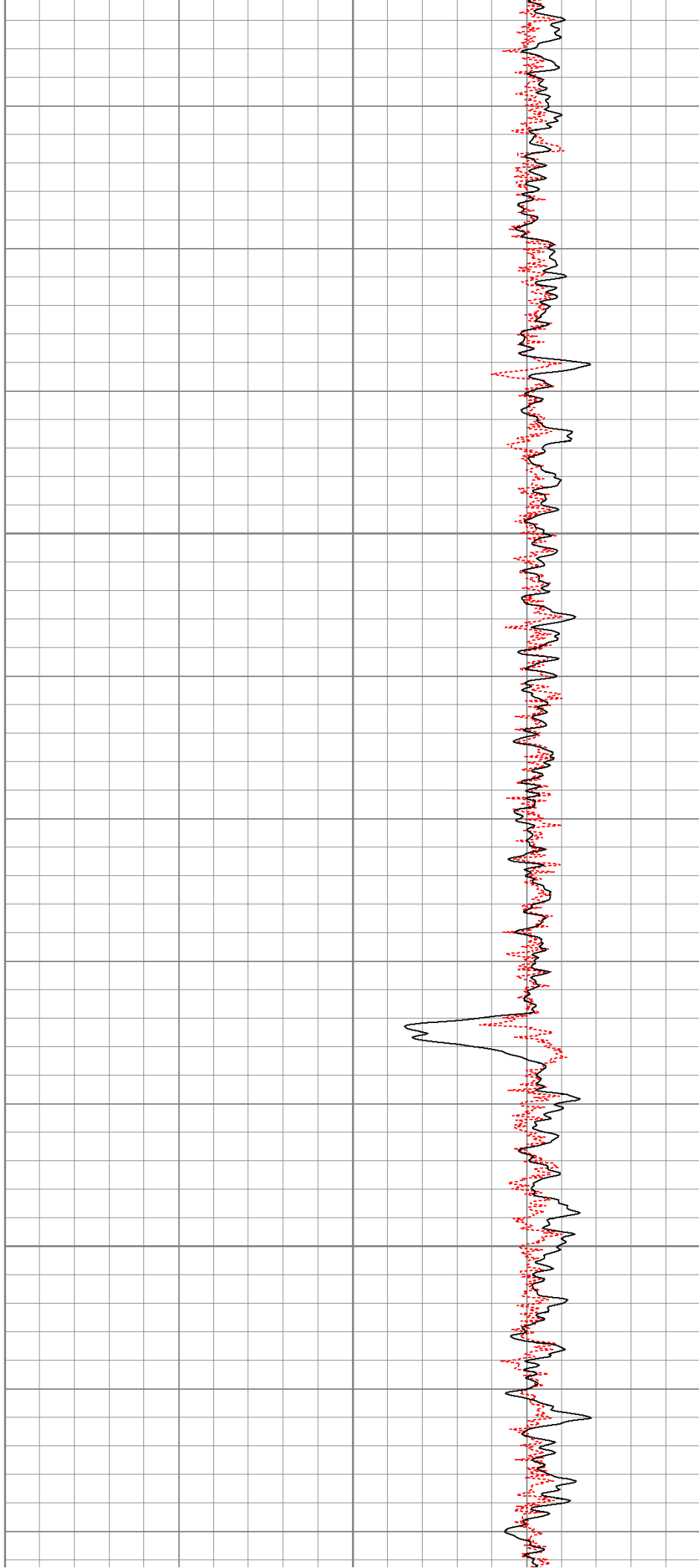
Database File: brakehandle.db
 Dataset Pathname: pass2hr
 Presentation Format: cdlhr
 Dataset Creation: Sun Jun 12 19:36:37 2011
 Charted by: Depth in Feet scaled 1:120

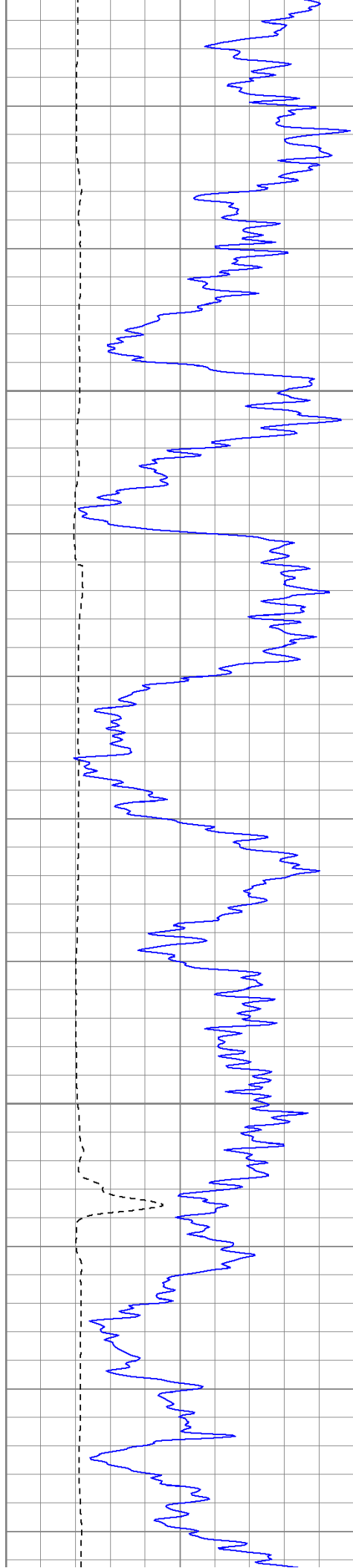




900

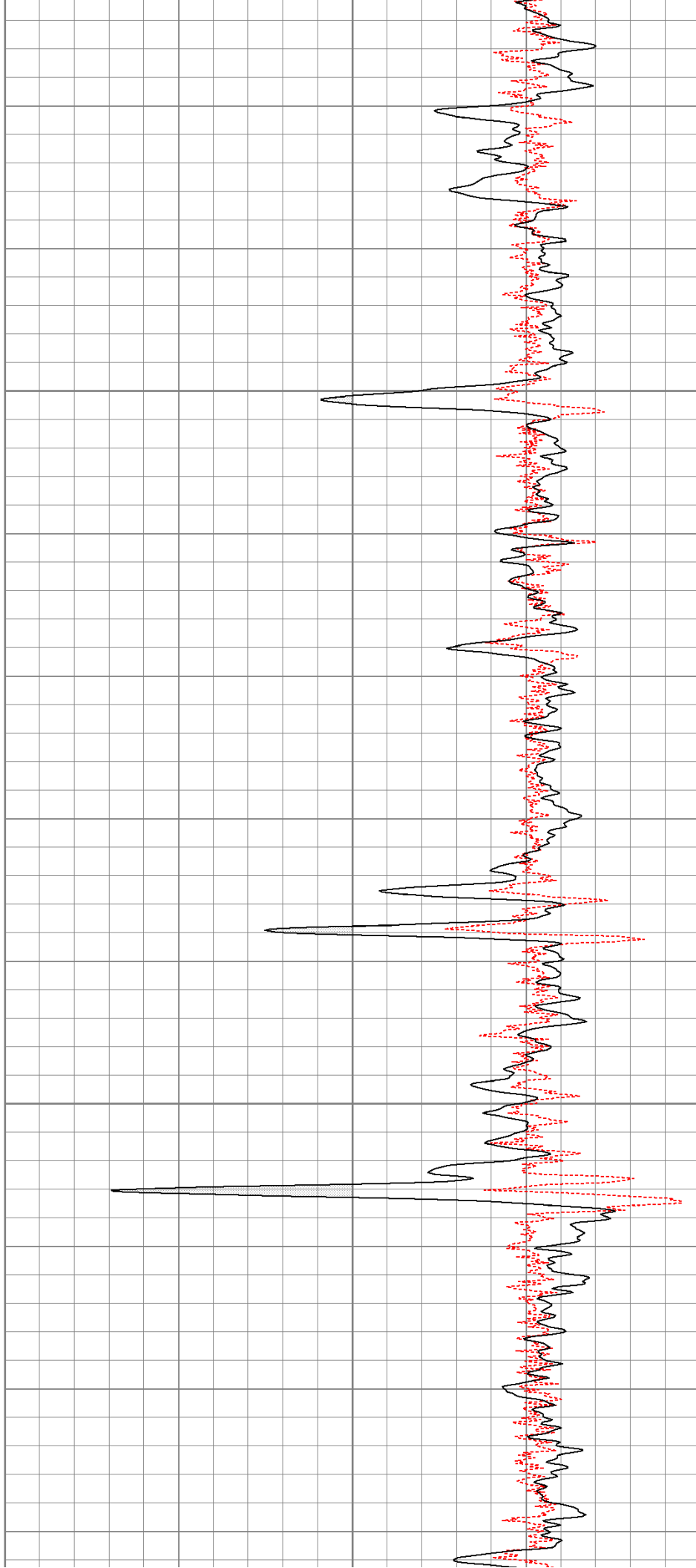
950

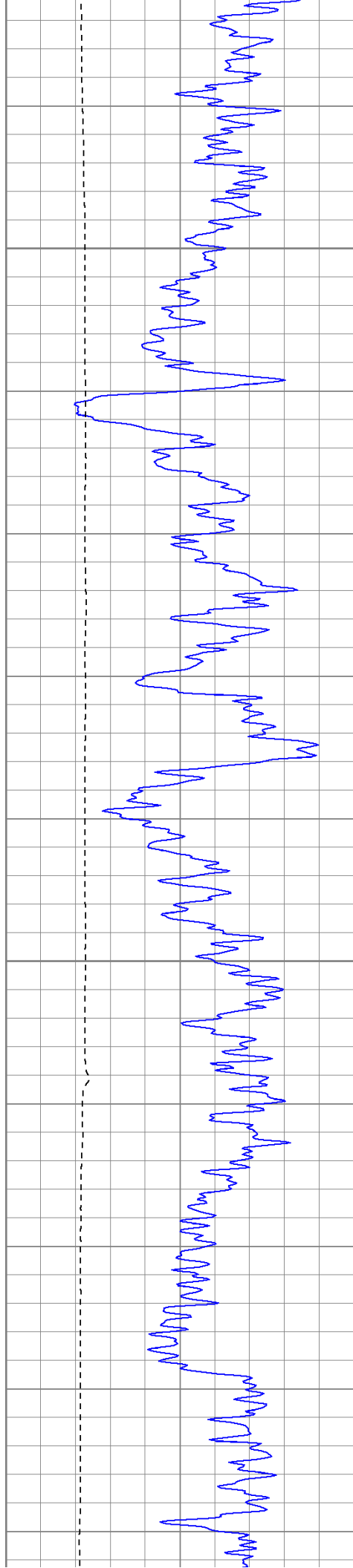




1000

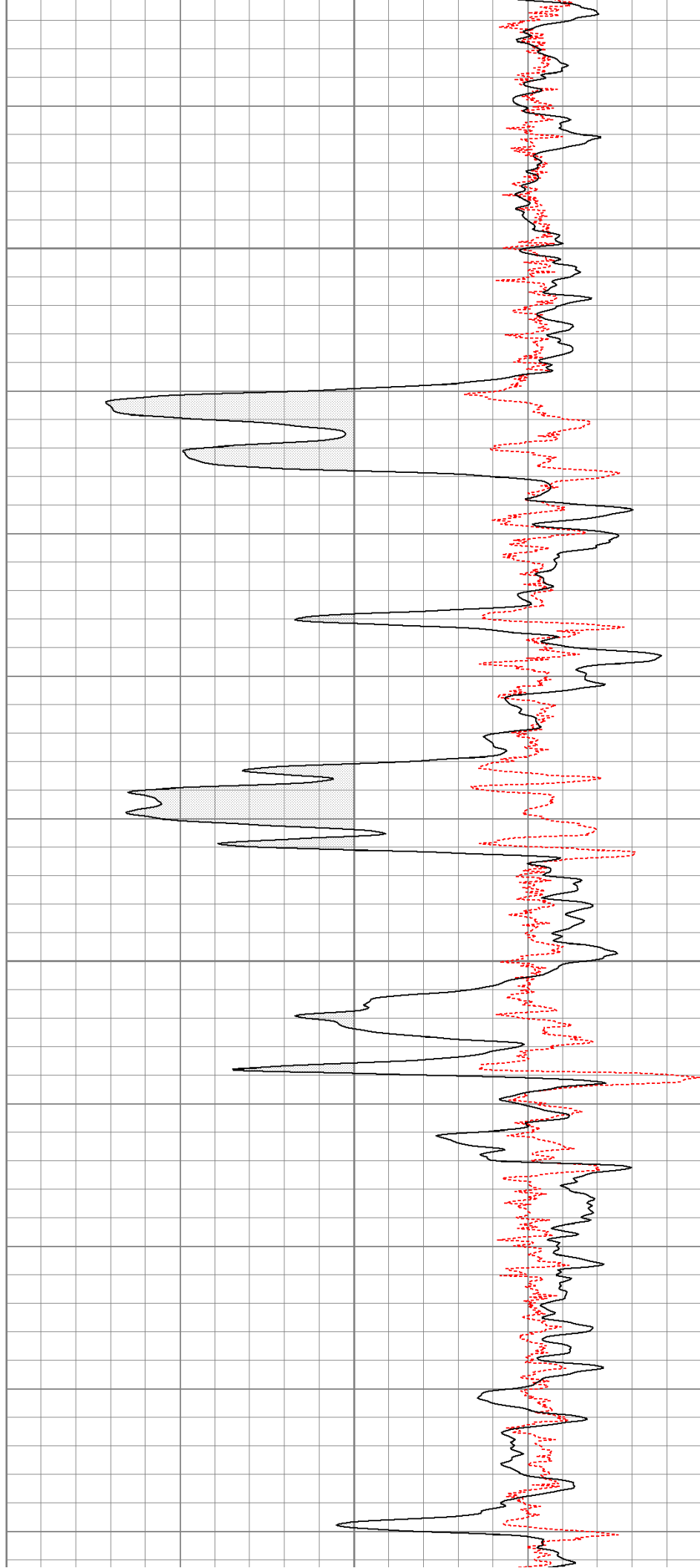
1050

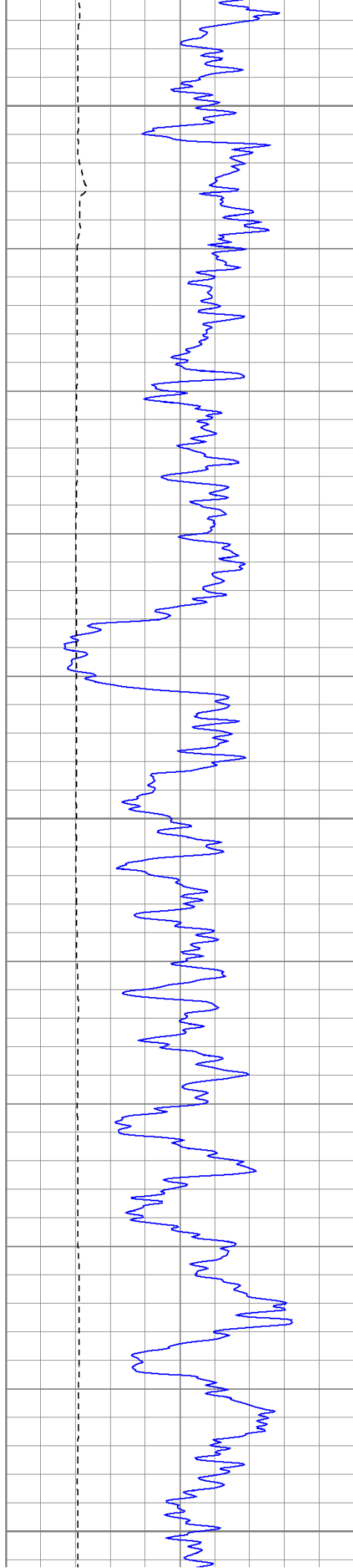




1100

1150

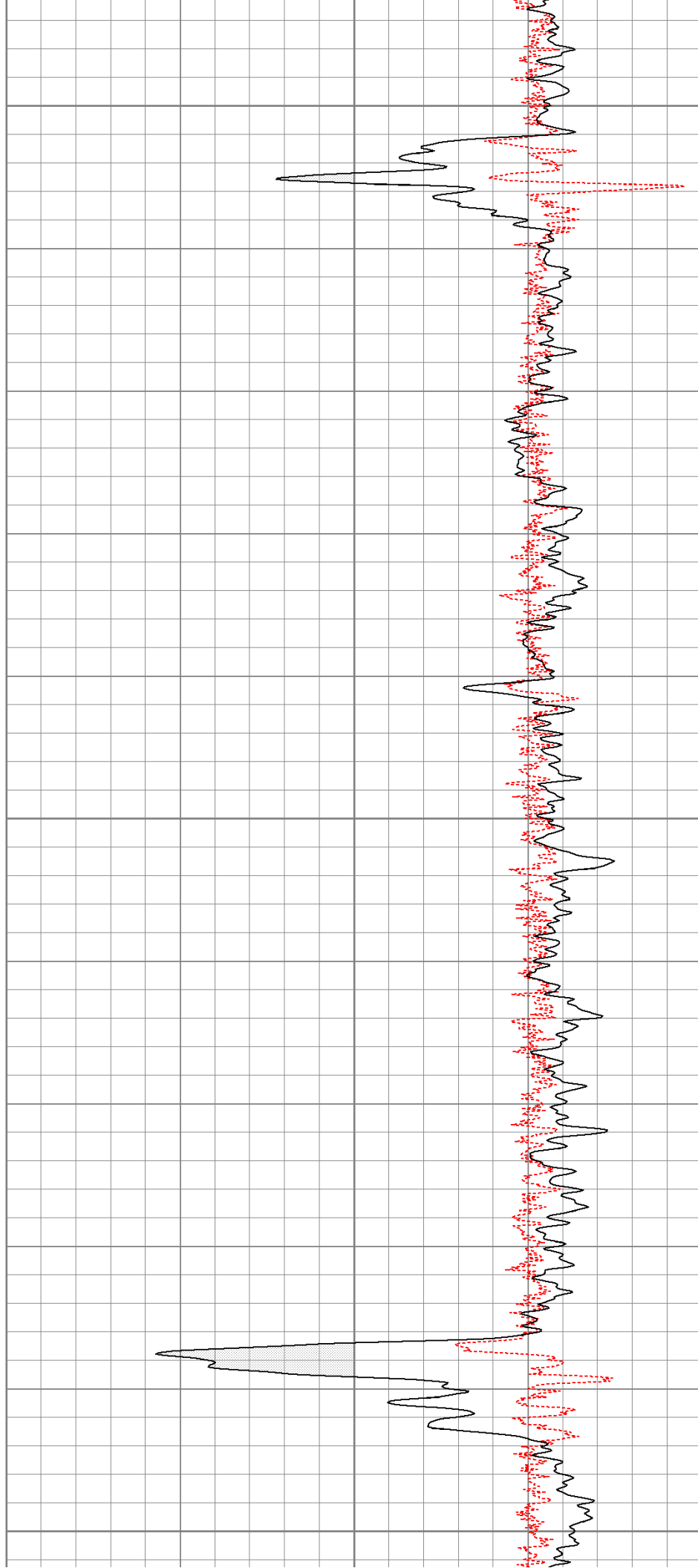


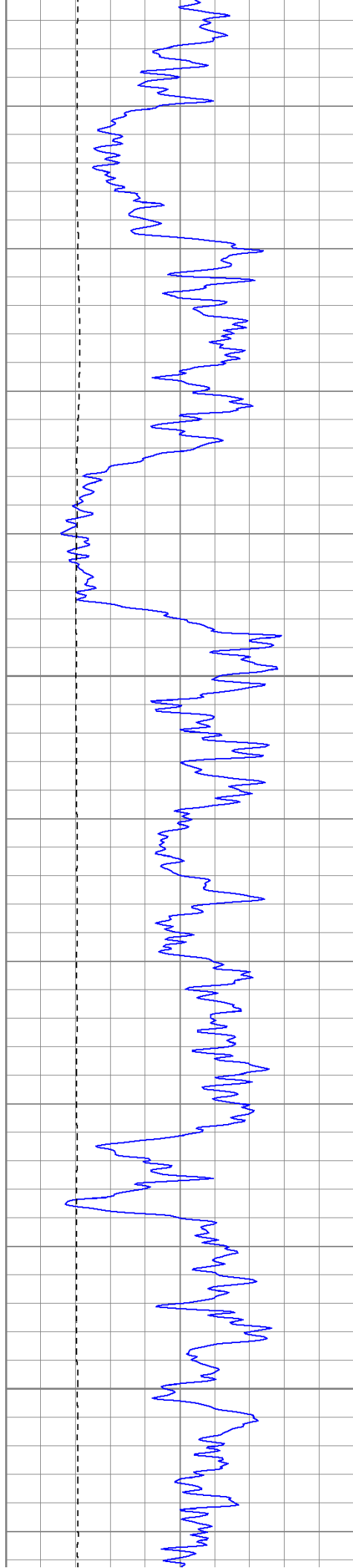


1200

1250

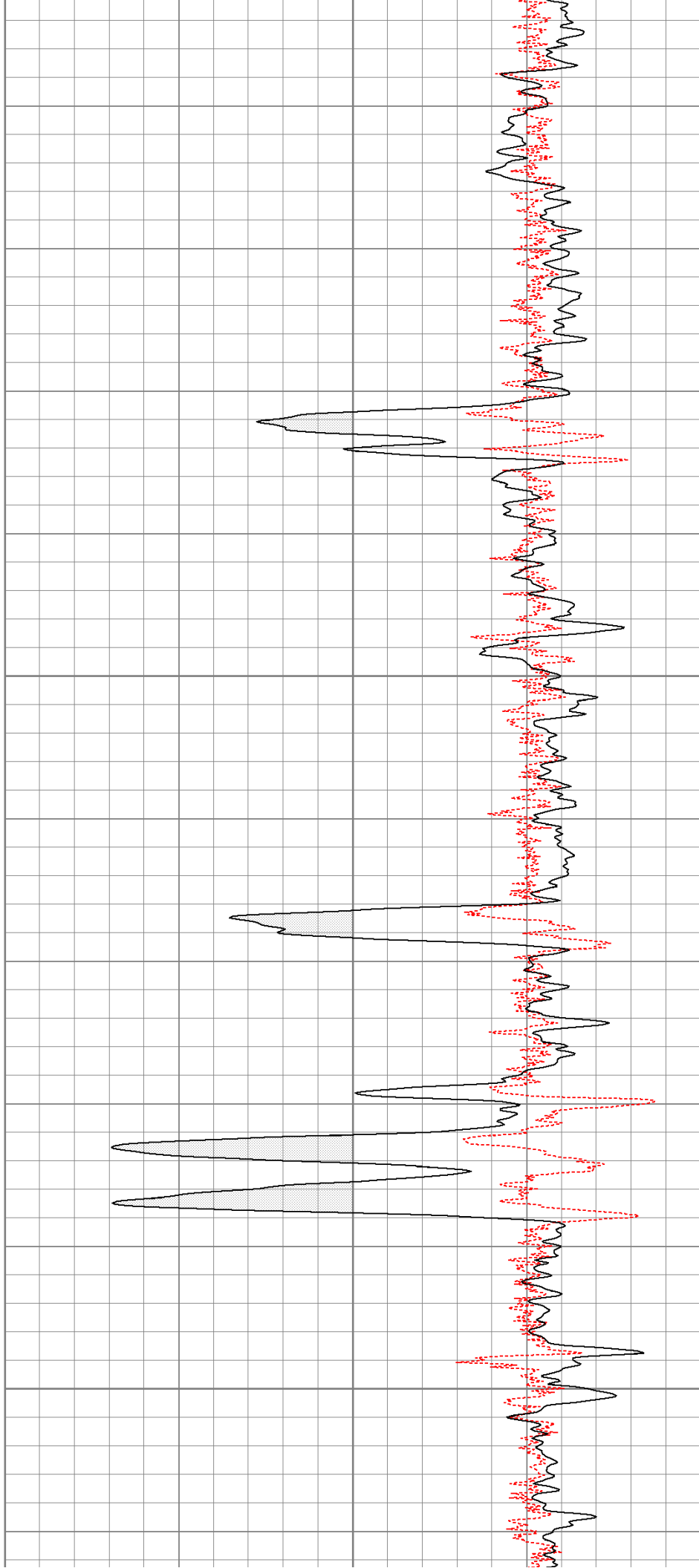
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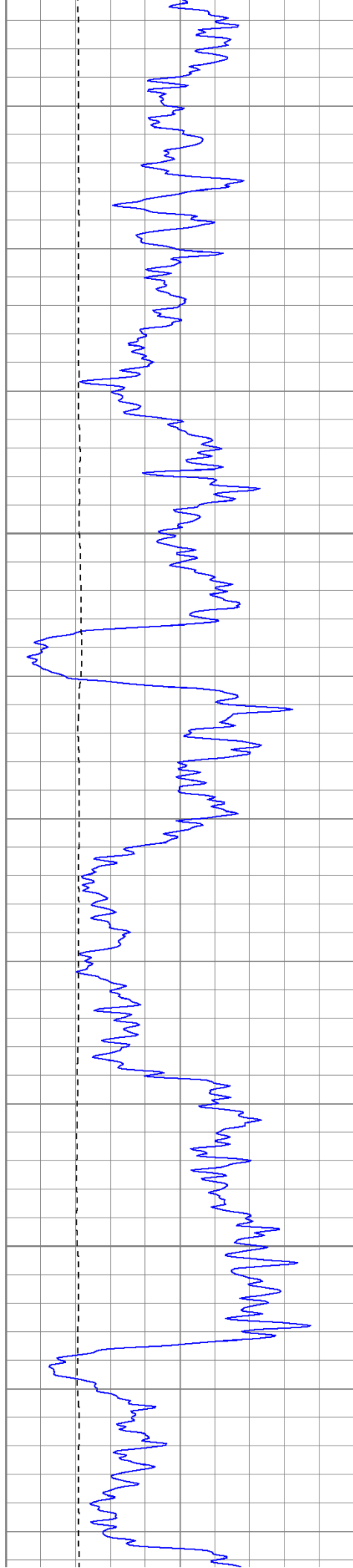




1350

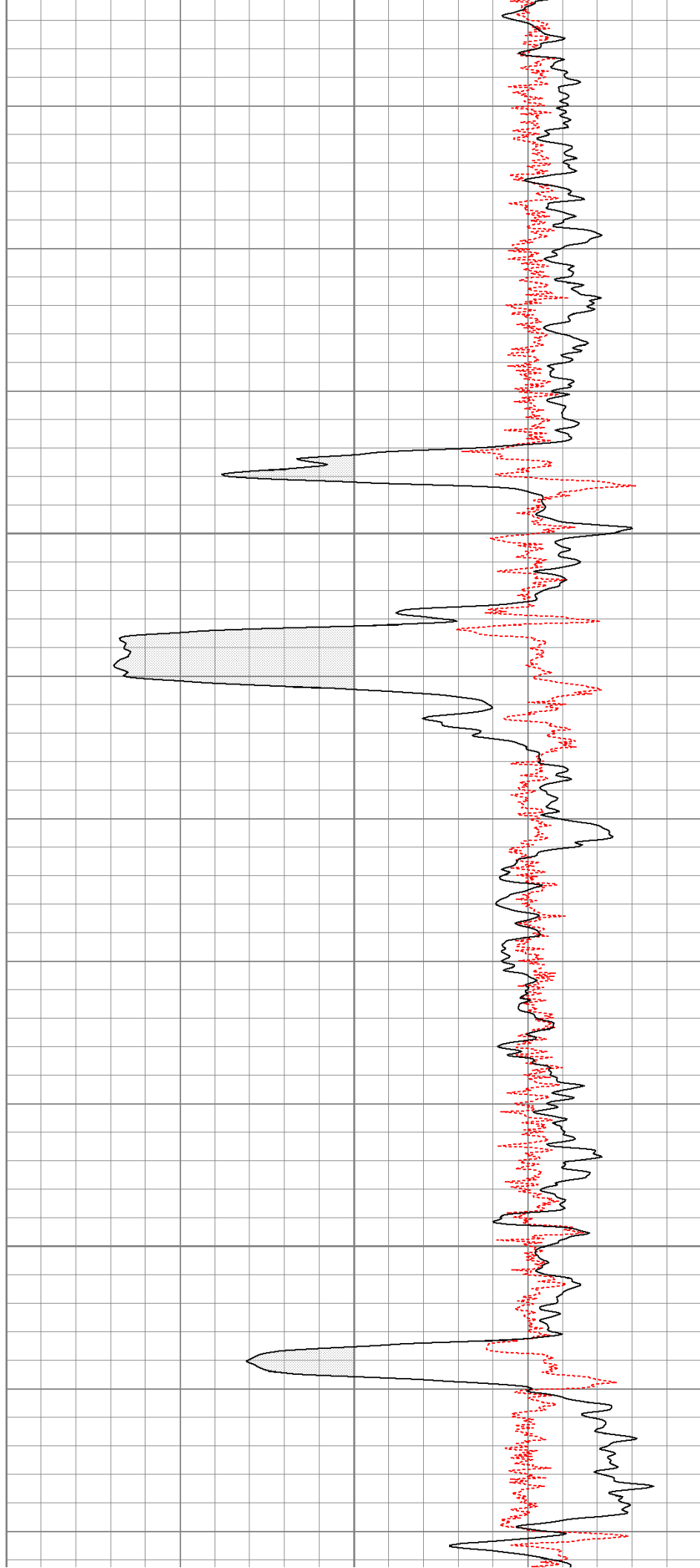
1400

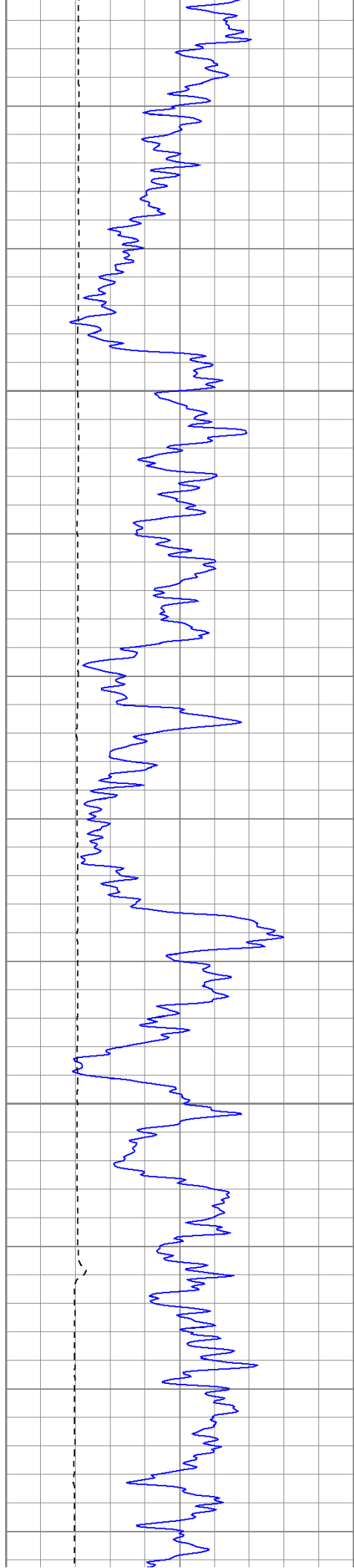




1450

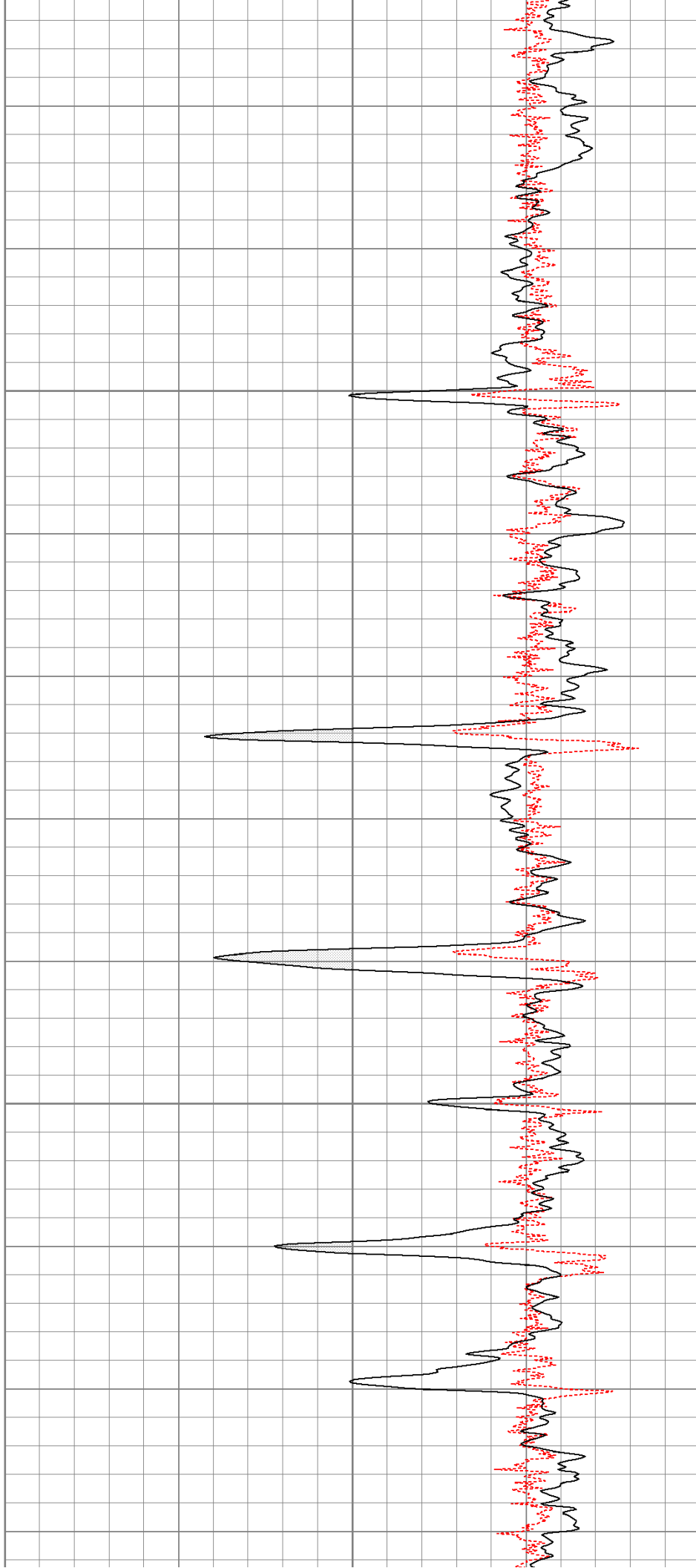
1500

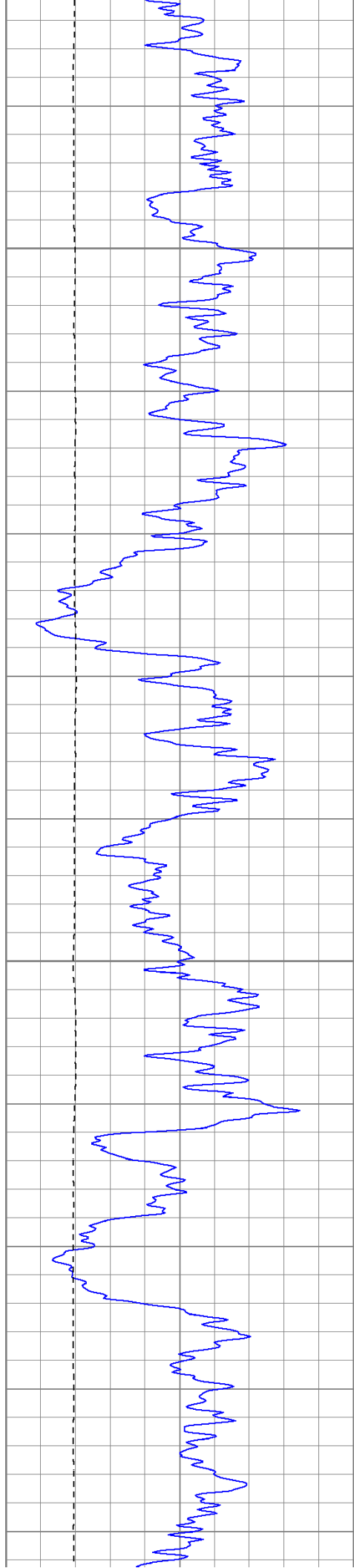




1550

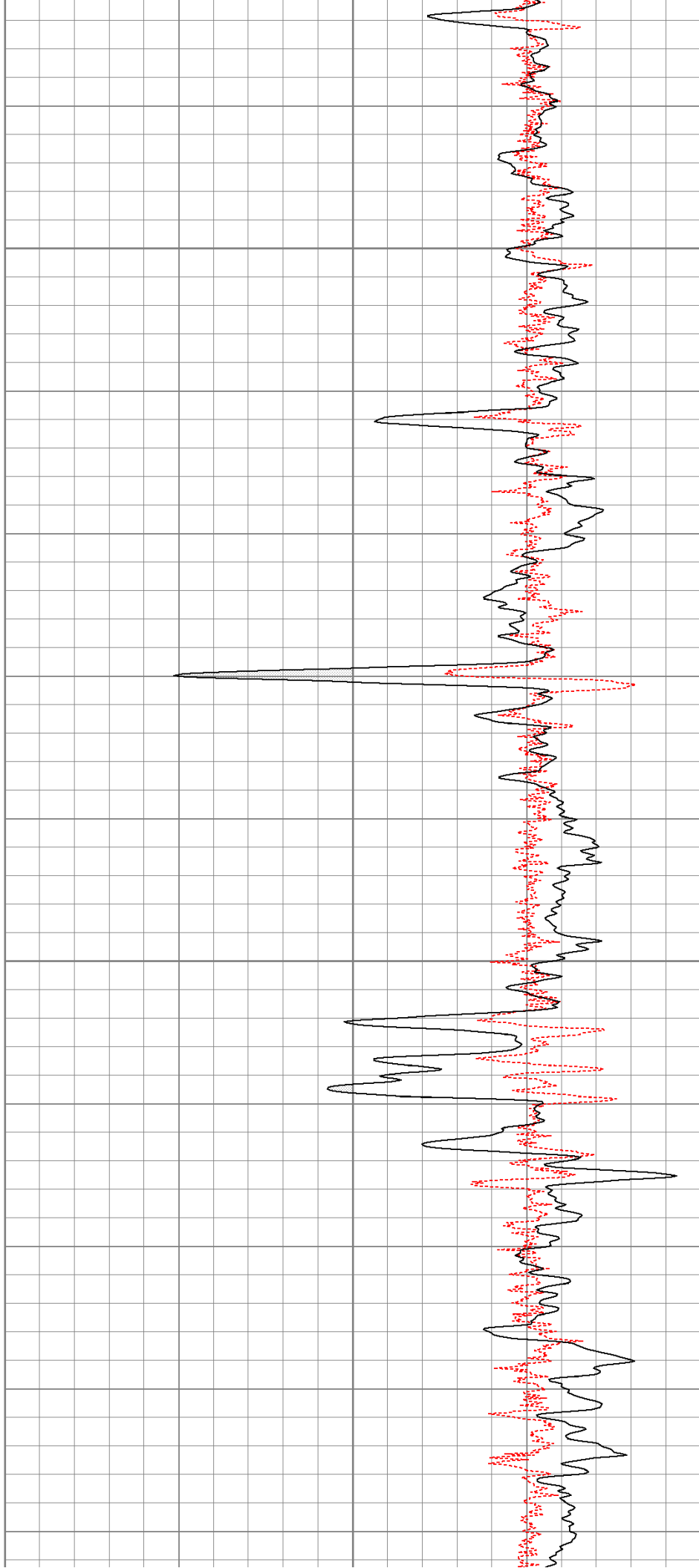
1600

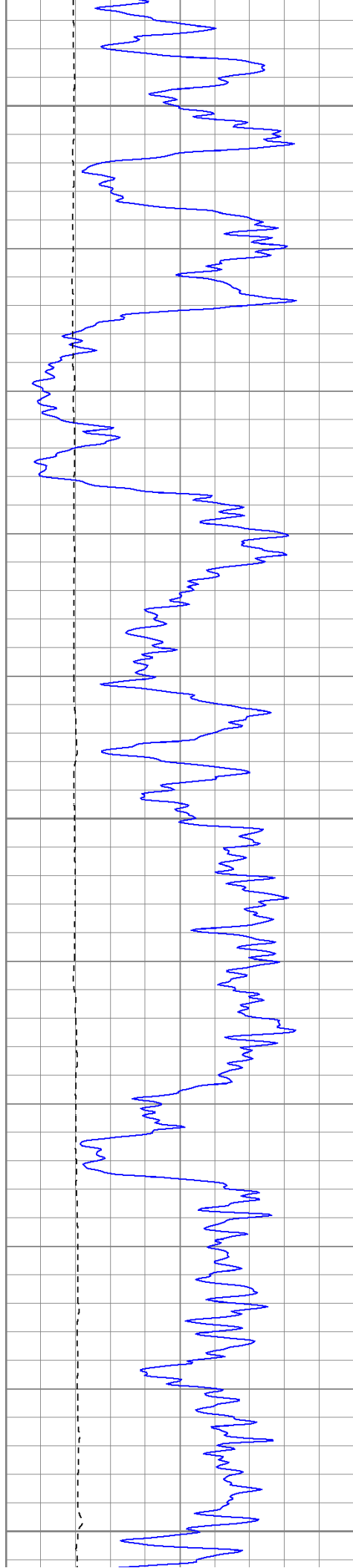




1650

1700

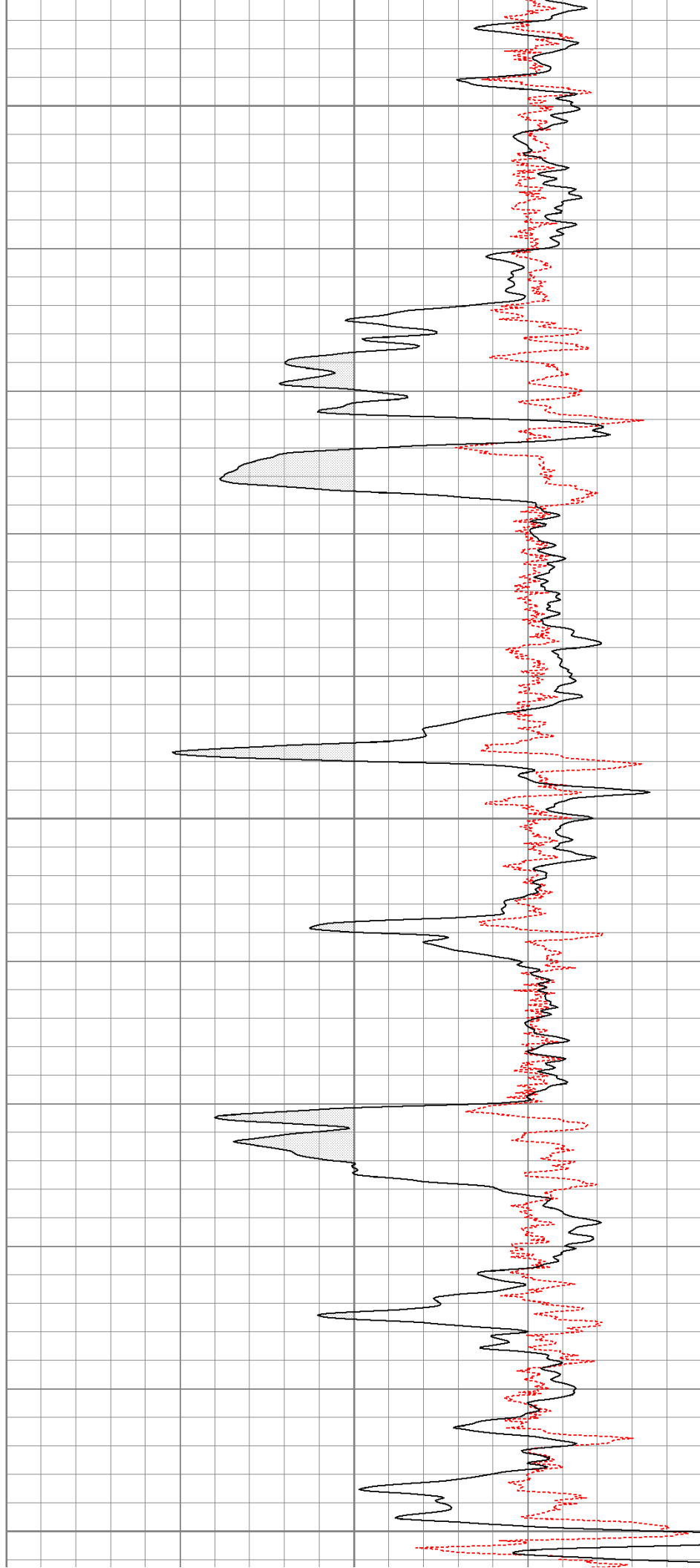


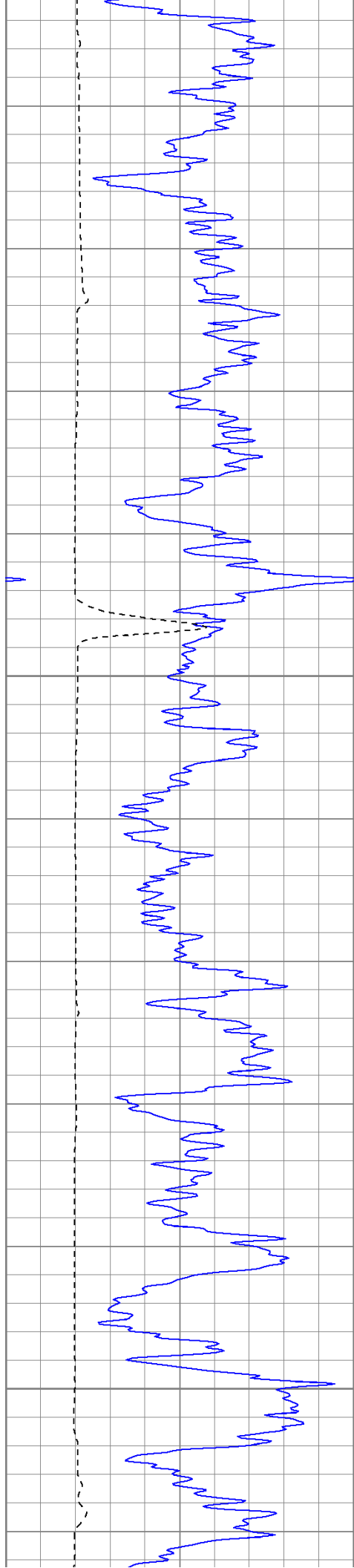


1750

1800

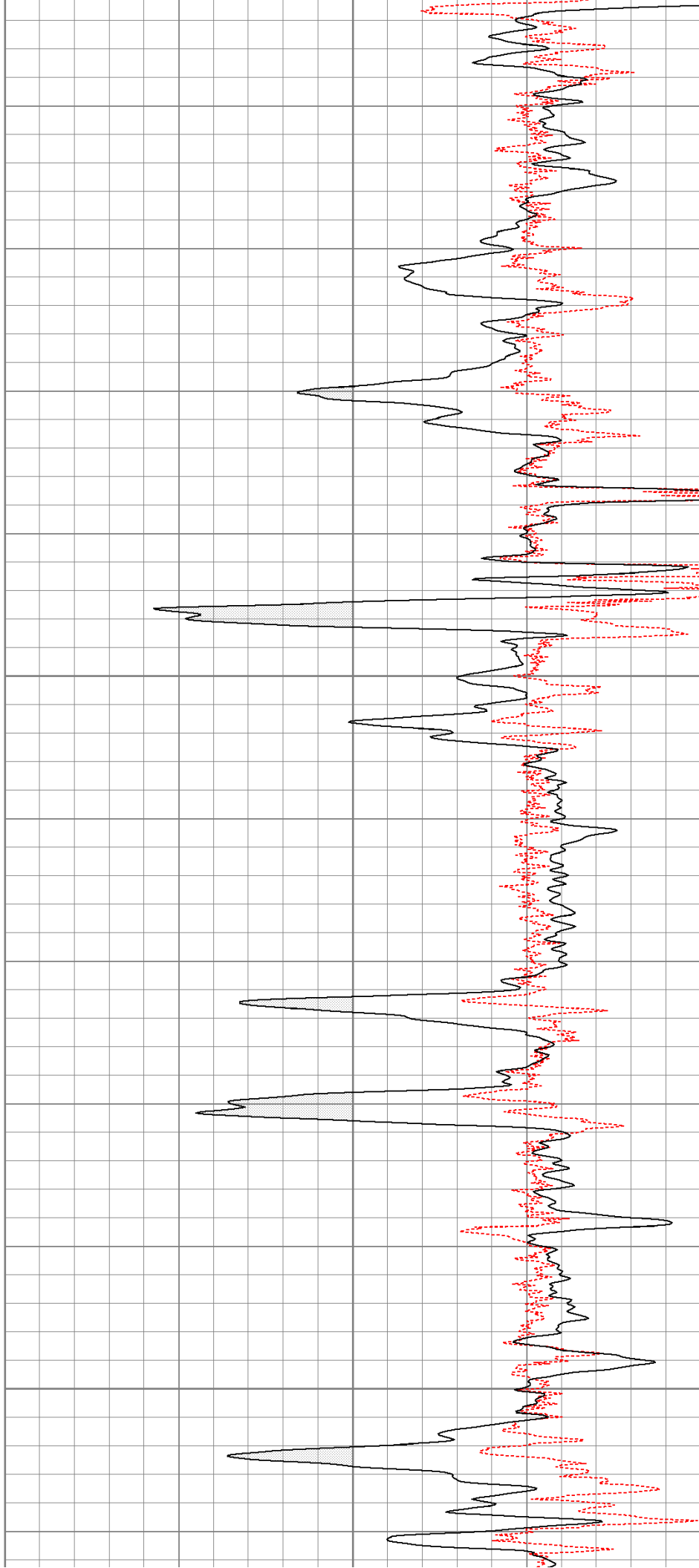
1850

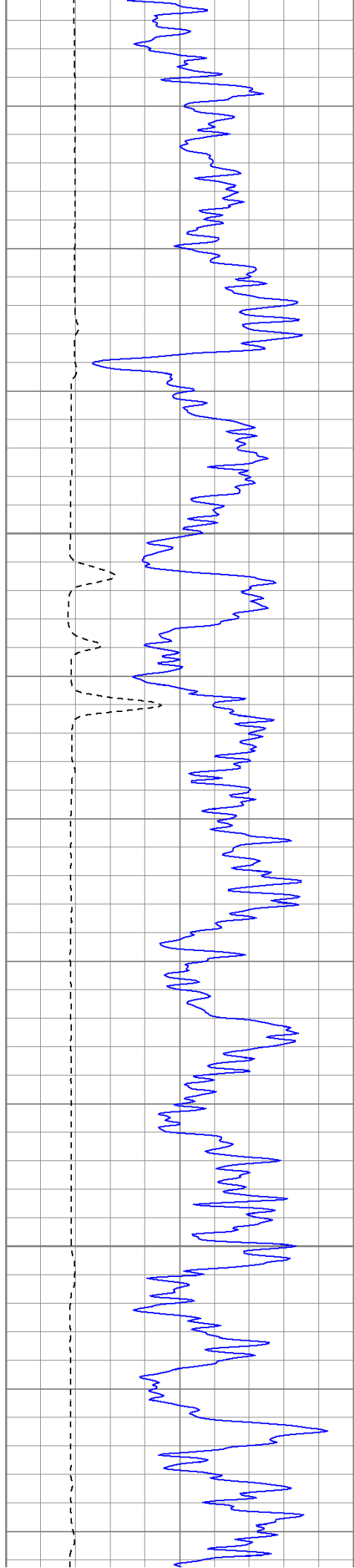




1900

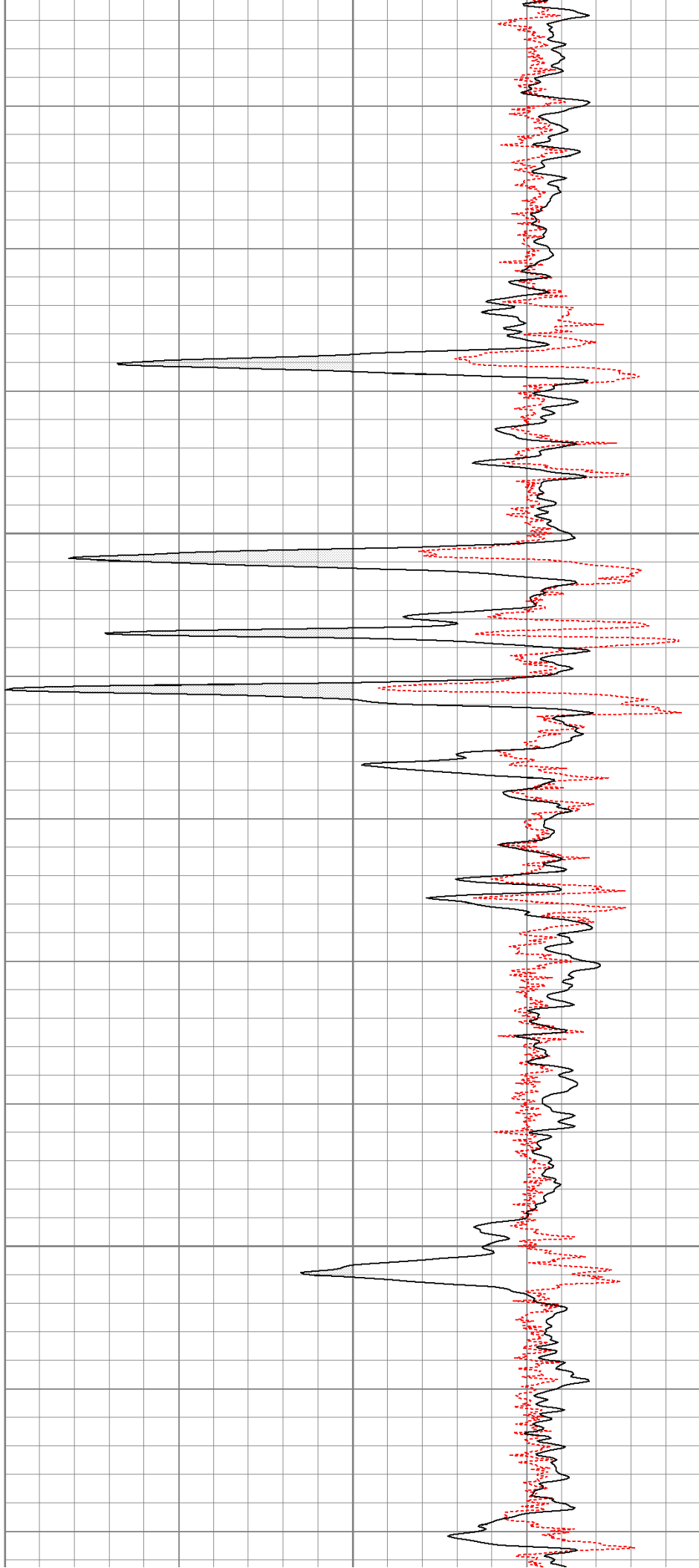
1950

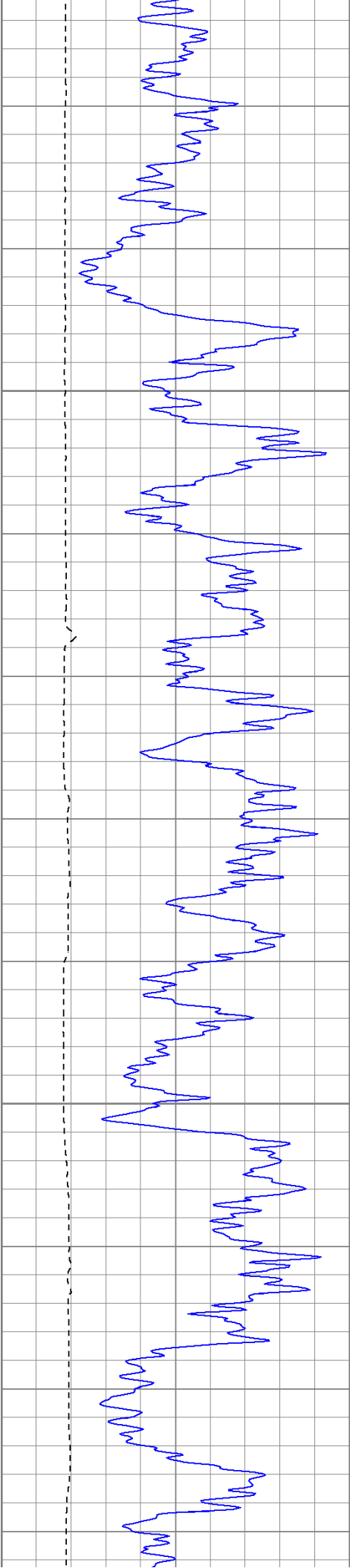




2000

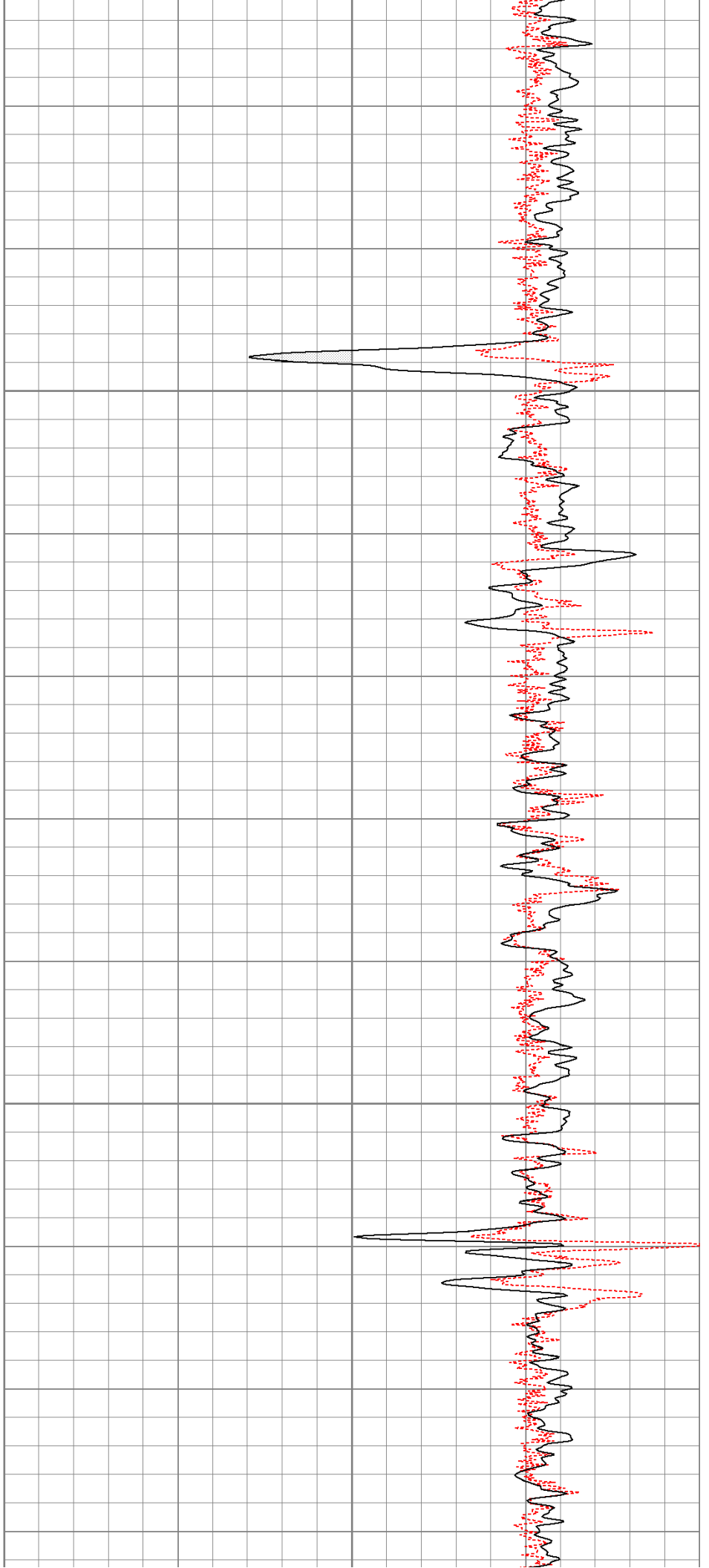
2050

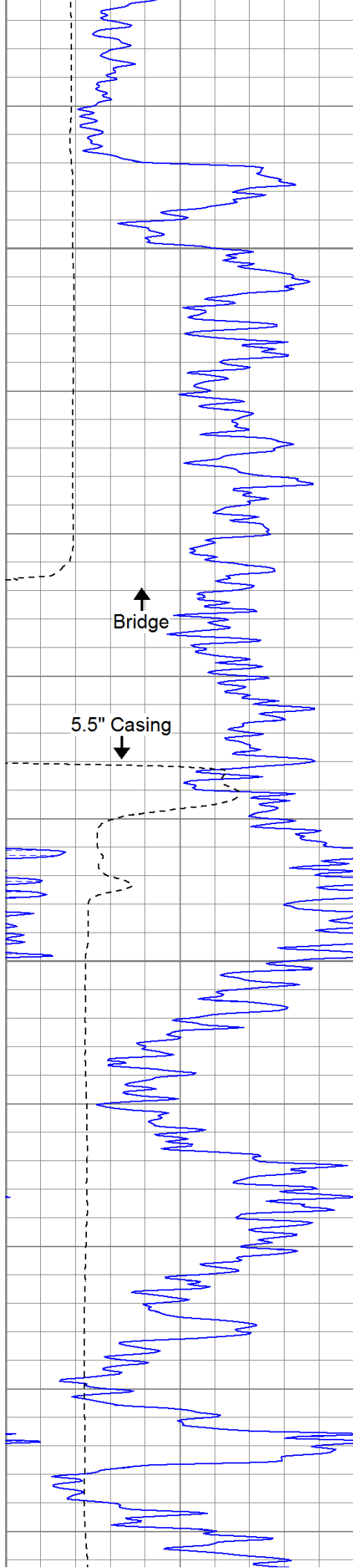




2100

2150



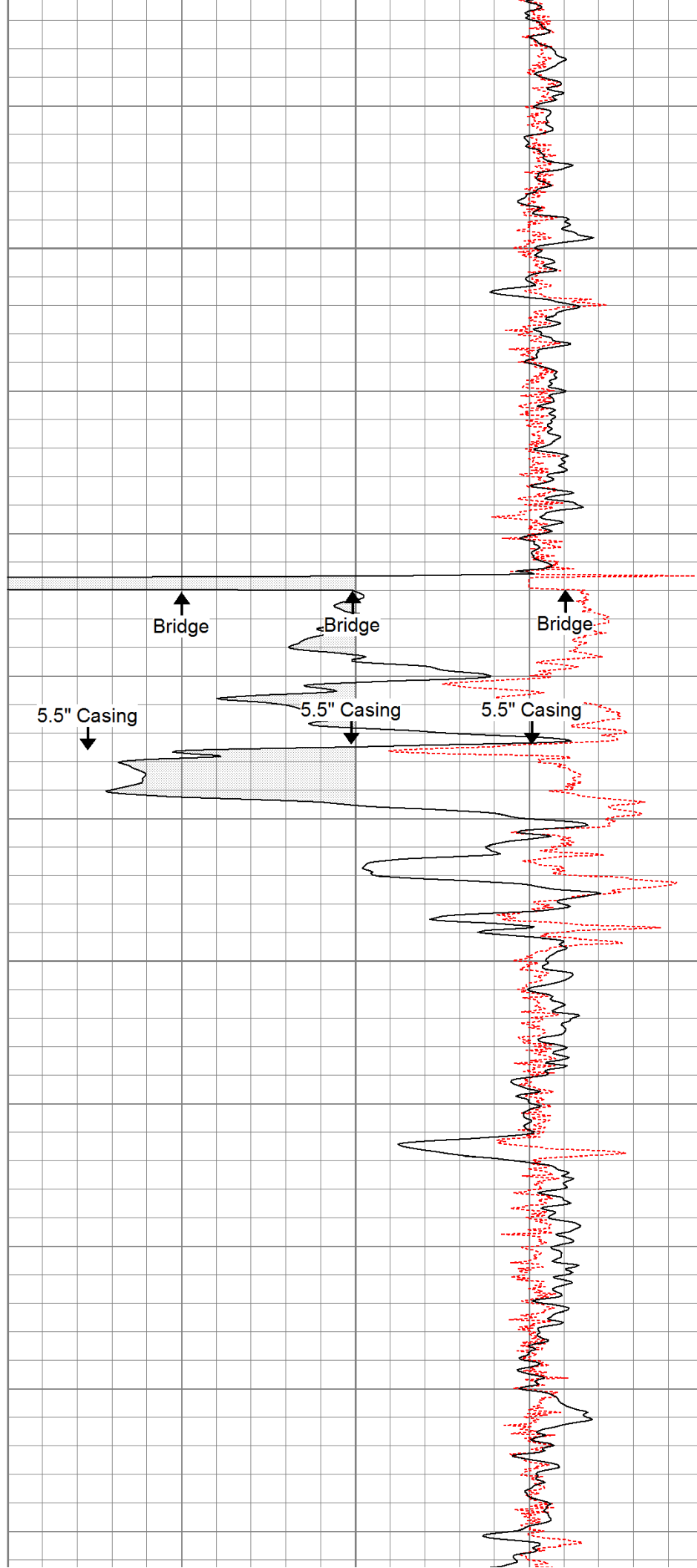


2200

Bridge

5.5" Casing

2250



Bridge

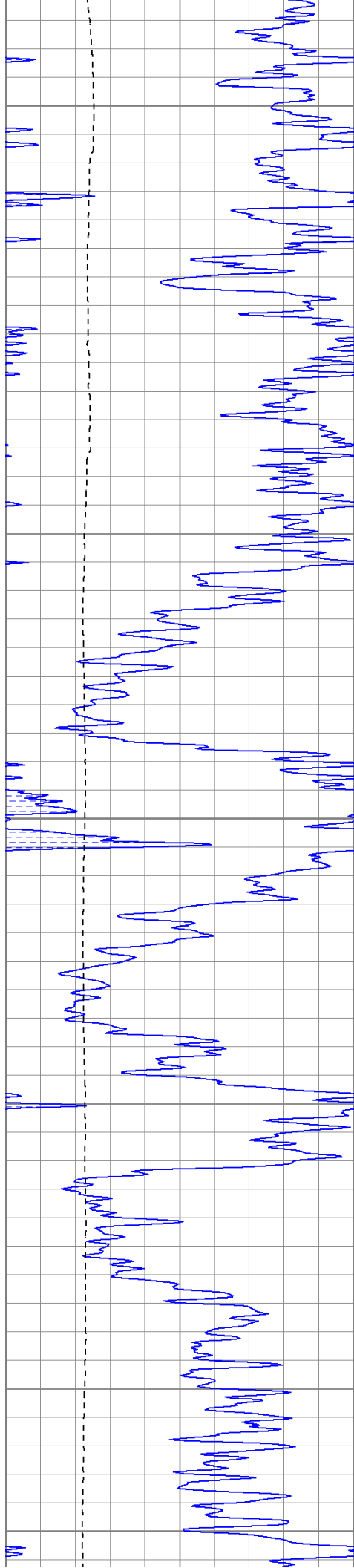
Bridge

Bridge

5.5" Casing

5.5" Casing

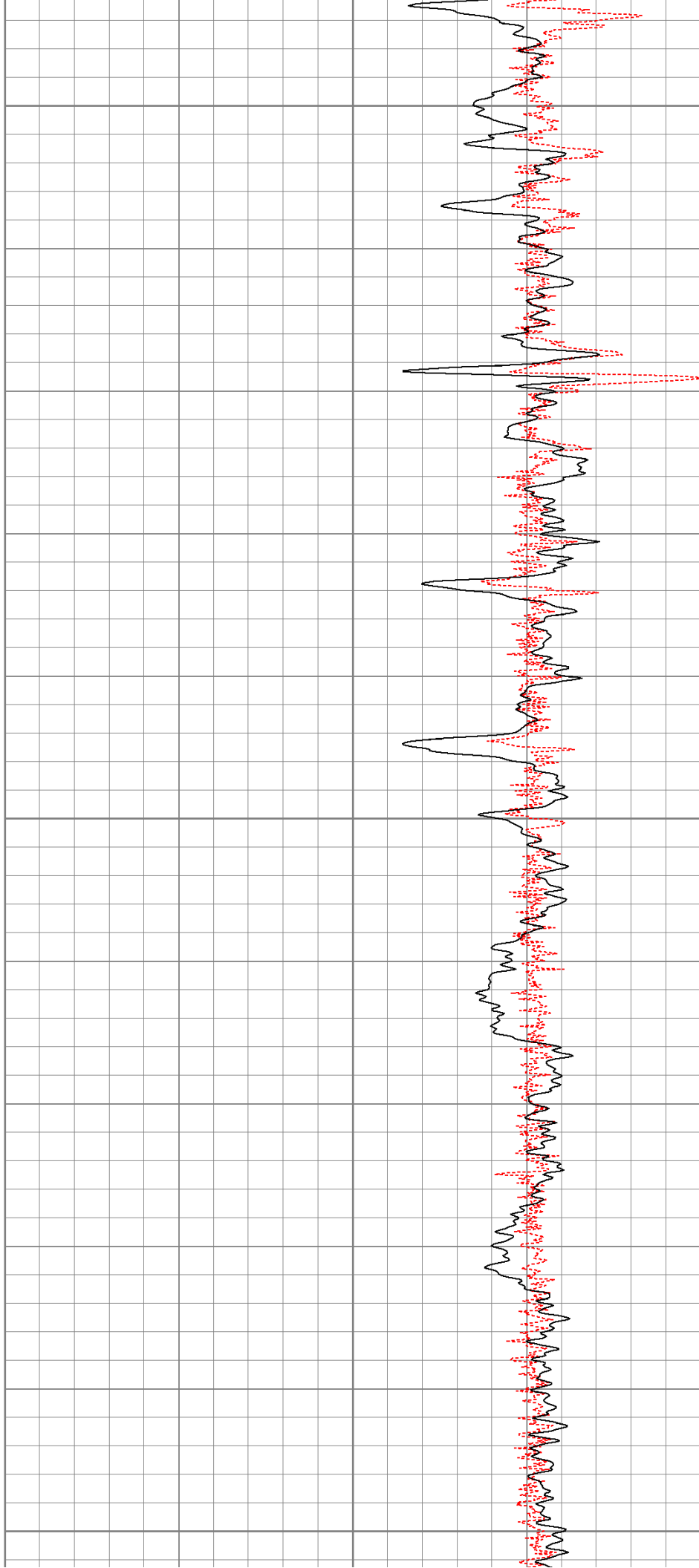
5.5" Casing

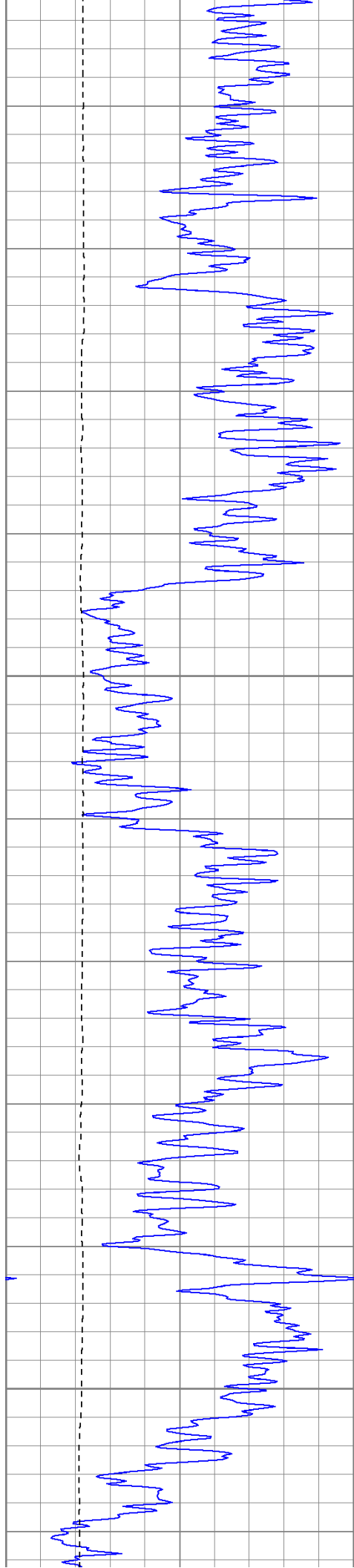


2300

2350

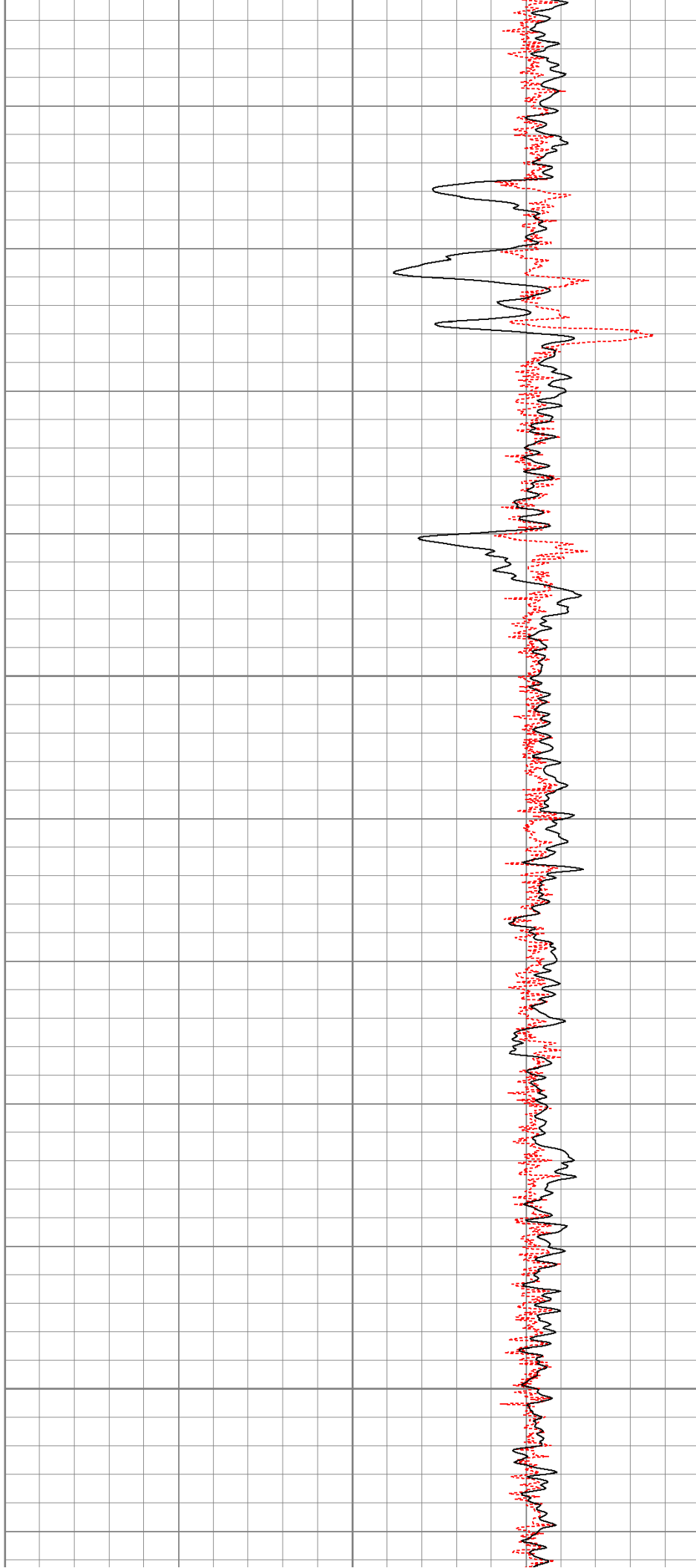
2400

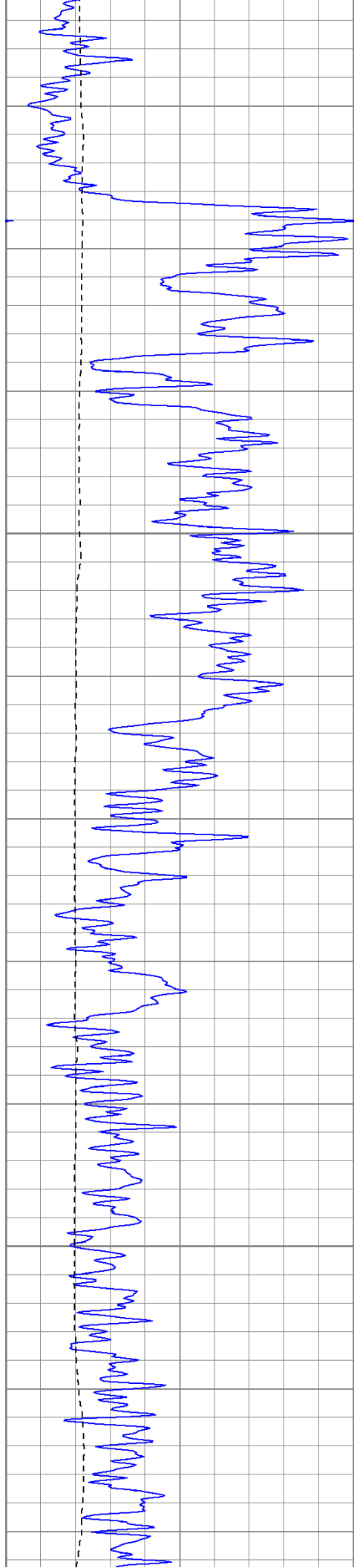




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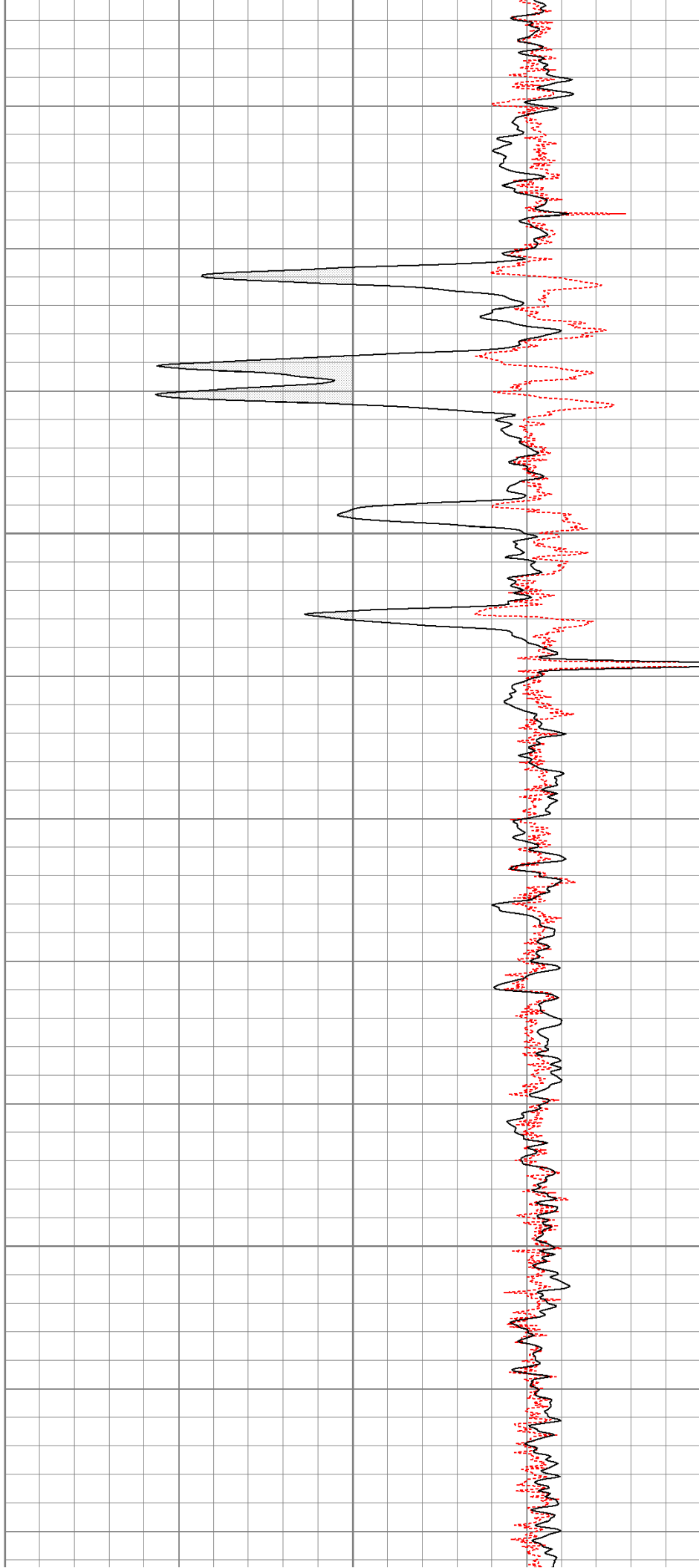
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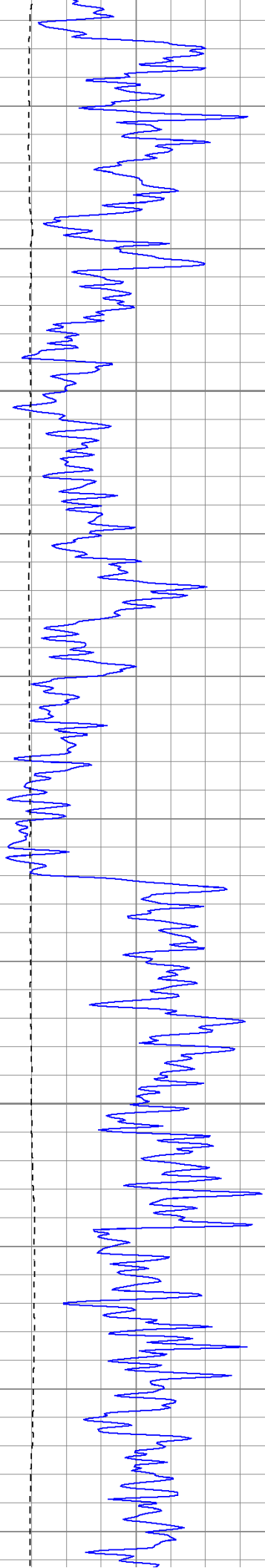


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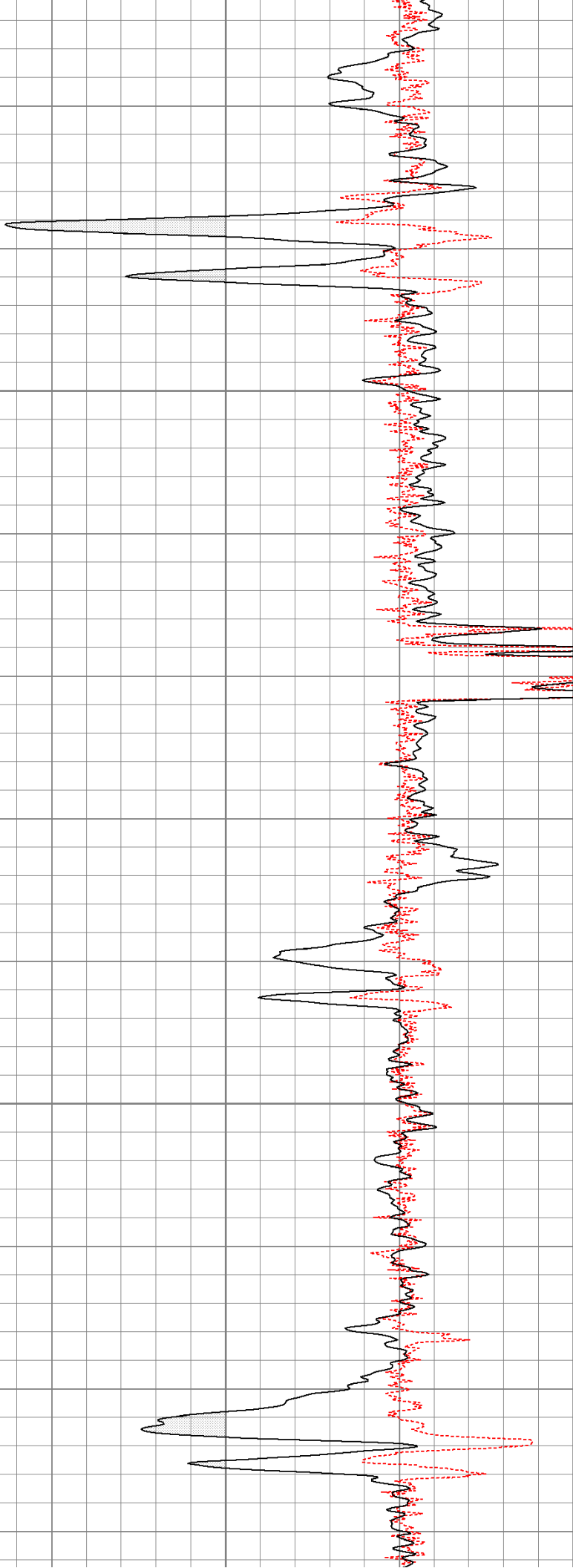
2600

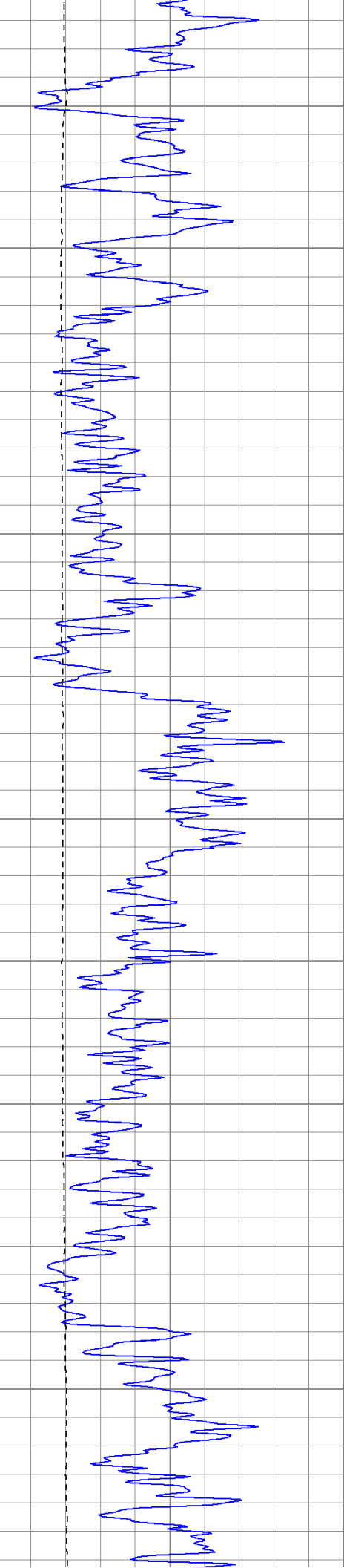


2650



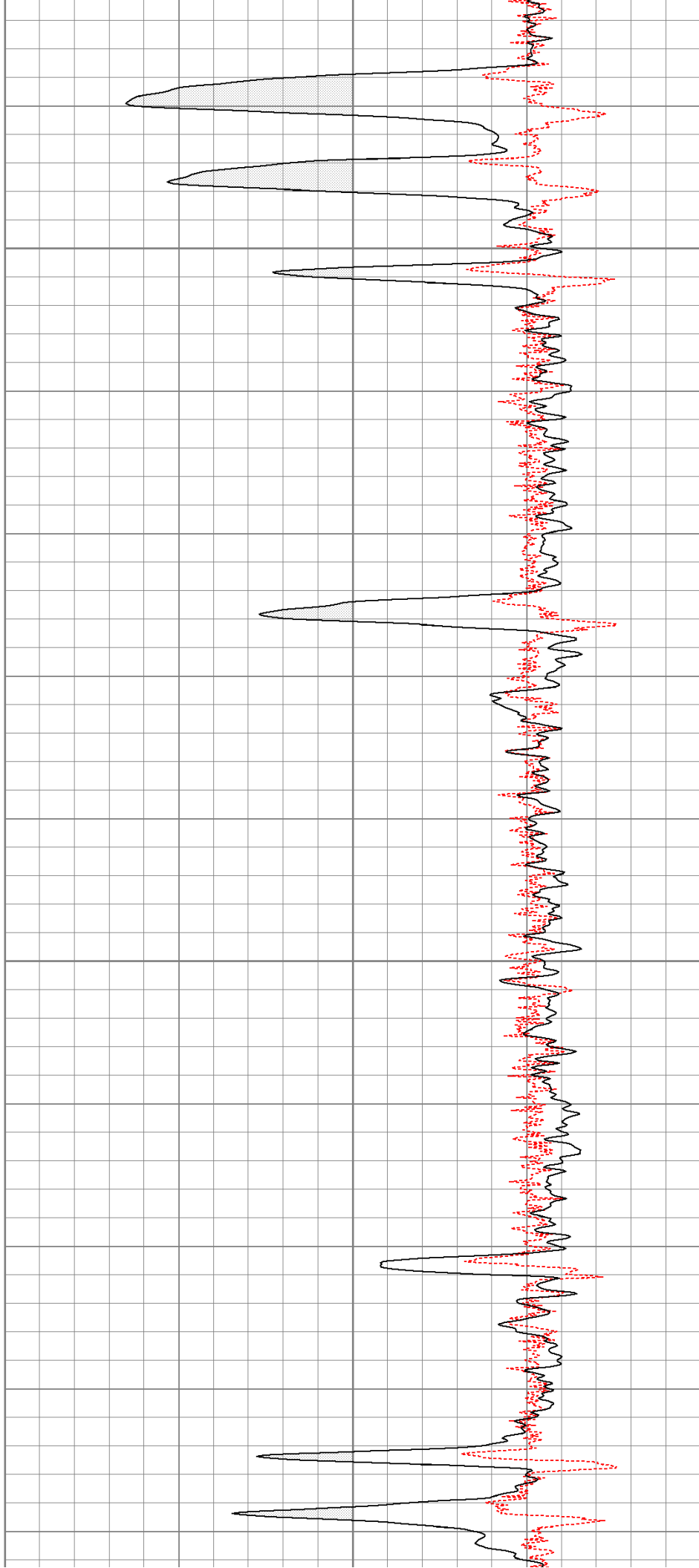
2700

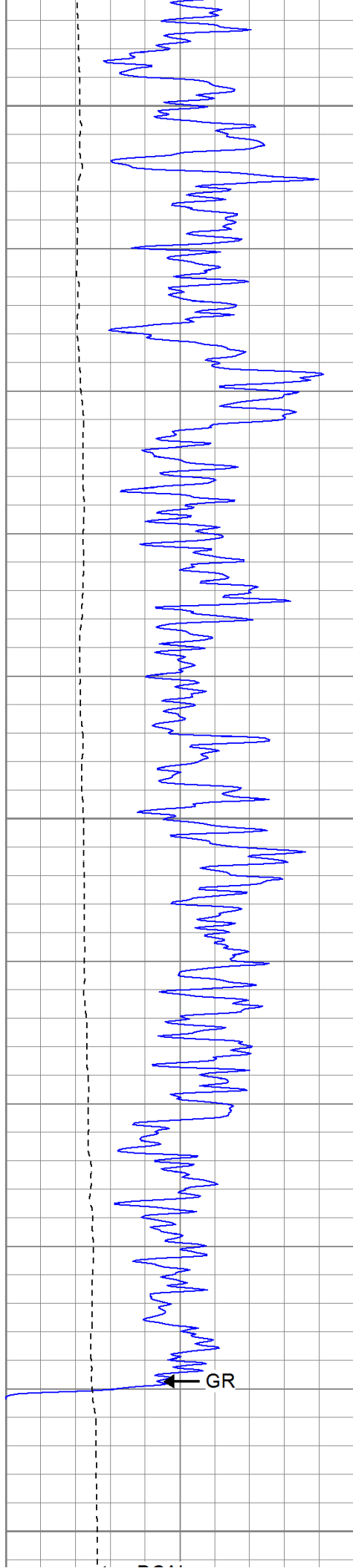




2750

2800

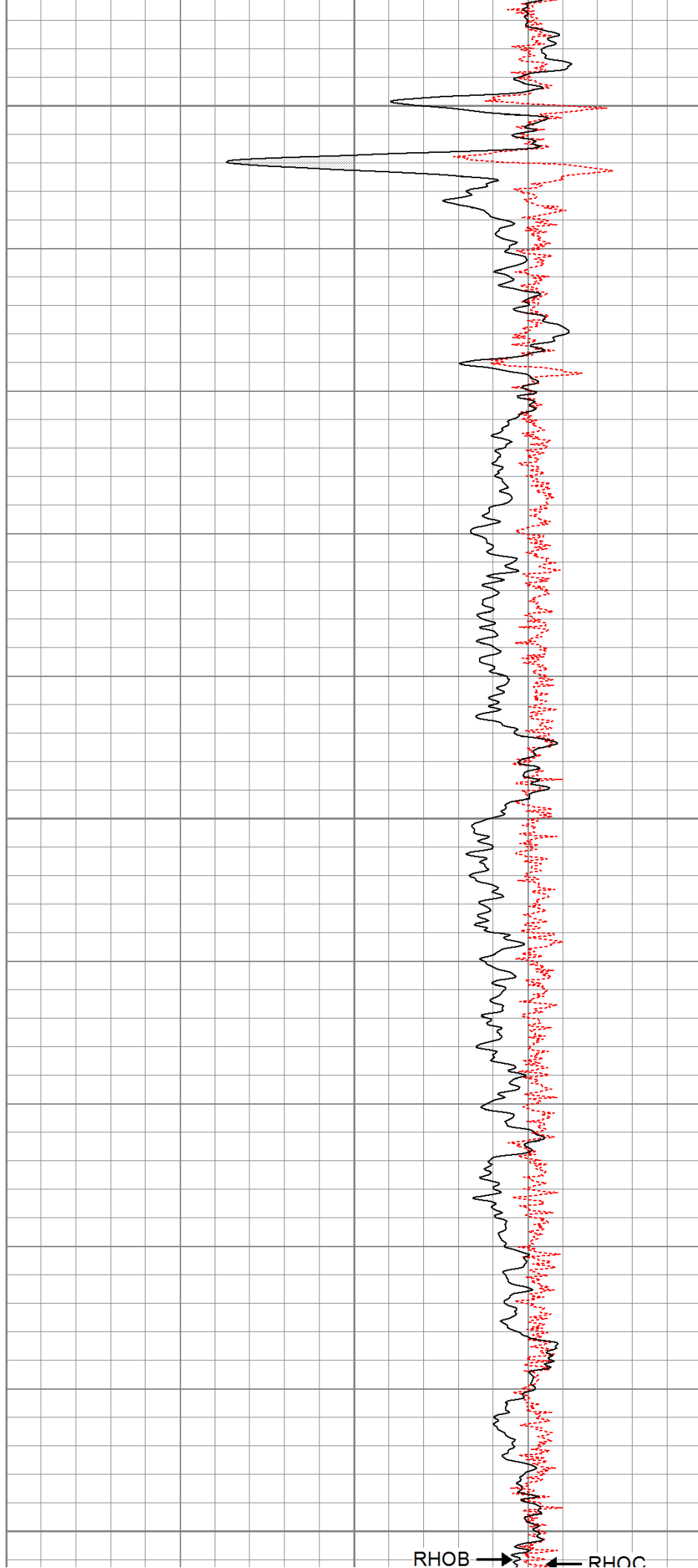




2850

2900

2950



0	GR (GAPI)	200	1	RHOB (g/cc)	3
6	DCAL (in)	16	-0.5	RHOC (g/cc)	0.5

Calibration Report					
Database File:	brakehandle.db				
Dataset Pathname:	pass1				
Dataset Creation:	Wed Jun 08 23:07:30 2011 by Log Open-Cased 110302				

Induction Tool Calibration Report					
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Serial Number:	701				
Tool Model:	Probe				
Downhole Cal Performed:	Wed Jun 08 22:14:25 2011				
Surface Cal Performed:	Wed Jun 08 22:14:40 2011				
After Survey Verification Performed:					

Surface Calibration:	Air	Loop		
Conductivity Reference:	0.000	500.000	mmho	
Conductivity Reading:	0.006	0.644	V	
Internal Reference:	Zero	Cal		
Conductivity Reference:	0.000	500.000	mmho	
Conductivity Reading:	0.007	0.643	V	

Downhole Calibration:	Internal Zero	Internal Cal		
Conductivity Reference:	0.703	499.163	mmho	
Conductivity Reading:	0.000	0.000	V	
Short Normal Reference:	0.000	20.000	Ohm-m	
Short Normal Reading:	0.005	0.214	V	

Results:	Gain	Offset		
Loop Conductivity:	783.886	-4.674		
Downhole Correction:	1.000	0.000		
Short Normal Resistivity:	95.281	-0.432		

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					
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Serial-Model:	901-2.75POH				
Source / Verifier:	/				
Master Calibration Performed:	Wed Jun 08 09:11:26 2011				
Before Survey Verification Performed:					
After Survey Verification Performed:					

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					
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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:	Wed Jun 08 14:13:25 2011		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.8000	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
NEU	24.04		NEU-2.75POH (803) Probe Epithermal	4.75	2.75	58.00
CDL			CDL-2.75POH (901) Probe	8.43	2.75	106.00
LSD	16.21					
DCAL	15.94					
SSD	15.69					

DIC	6.24		IEL-Probe (701)	13.46	2.75	93.00
SP	2.25					
SN	1.71					
Dataset: brakehandle.db: field/well/run1/pass1 Total Length: 31.11 ft Total Weight: 305.00 lb O.D. 2.75 in						