



**SUPERIOR**  
WELL SERVICES  
Black Lick, Pa.  
Mercer, Pa.  
Wooster, Oh.  
Cleveland, Ok.  
Trinidad, Co.

# COMPENSATED DENSITY NEUTRON LOG

Company XTO Energy Inc.  
Well New Elk 24-16  
Field Purgatoire River  
County Las Animas State Colorado

Location: API #: 05 071 09473 00

517' FSL & 1045' FSL

DIL

SEC 24 TWP 33S RGE 68W

Permanent Datum Ground Level Elevation 7693'  
Log Measured From Ground Level  
Drilling Measured From Ground Level

Elevation  
K.B. -----  
D.F. -----  
G.L. 7693'

Date 3-13-08

Run Number One

Depth Driller 2305'

Depth Logger 2298'

Bottom Logged Interval 2275'

Top Log Interval Surface Casing

Casing Driller 8 5/8" @ 496'

Casing Logger 496'

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 3:30 P.M.

Time Logger on Bottom 6:30 P.M.

Maximum Recorded Temperature DEG F

Equipment Number T697

Location Trinidad

Recorded By J. Cappellucci

Witnessed By Mr. Don Johnson

<<< Fold Here >>>

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

Neutron Density Porosity Presented On Sandstone Matrix.  
ABHV Calculated For 5 1/2" Casing.

## Well Directions:

Second Bosque Entrance, straight across railroad tracks, at Y stay left to  
Apache canyon, take first right past windmill, follow up the hill,  
through one location, at fork stay left to location.

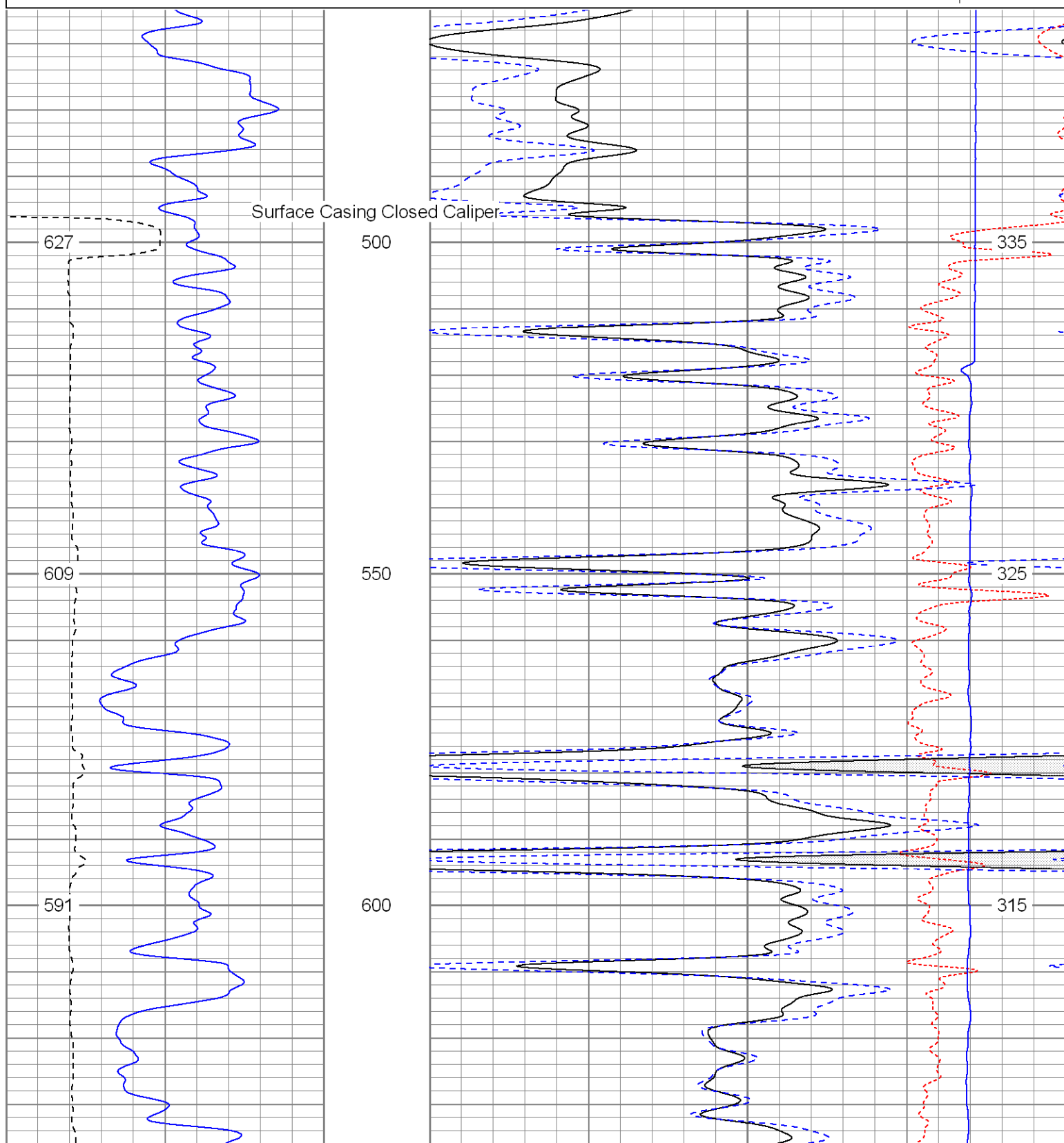


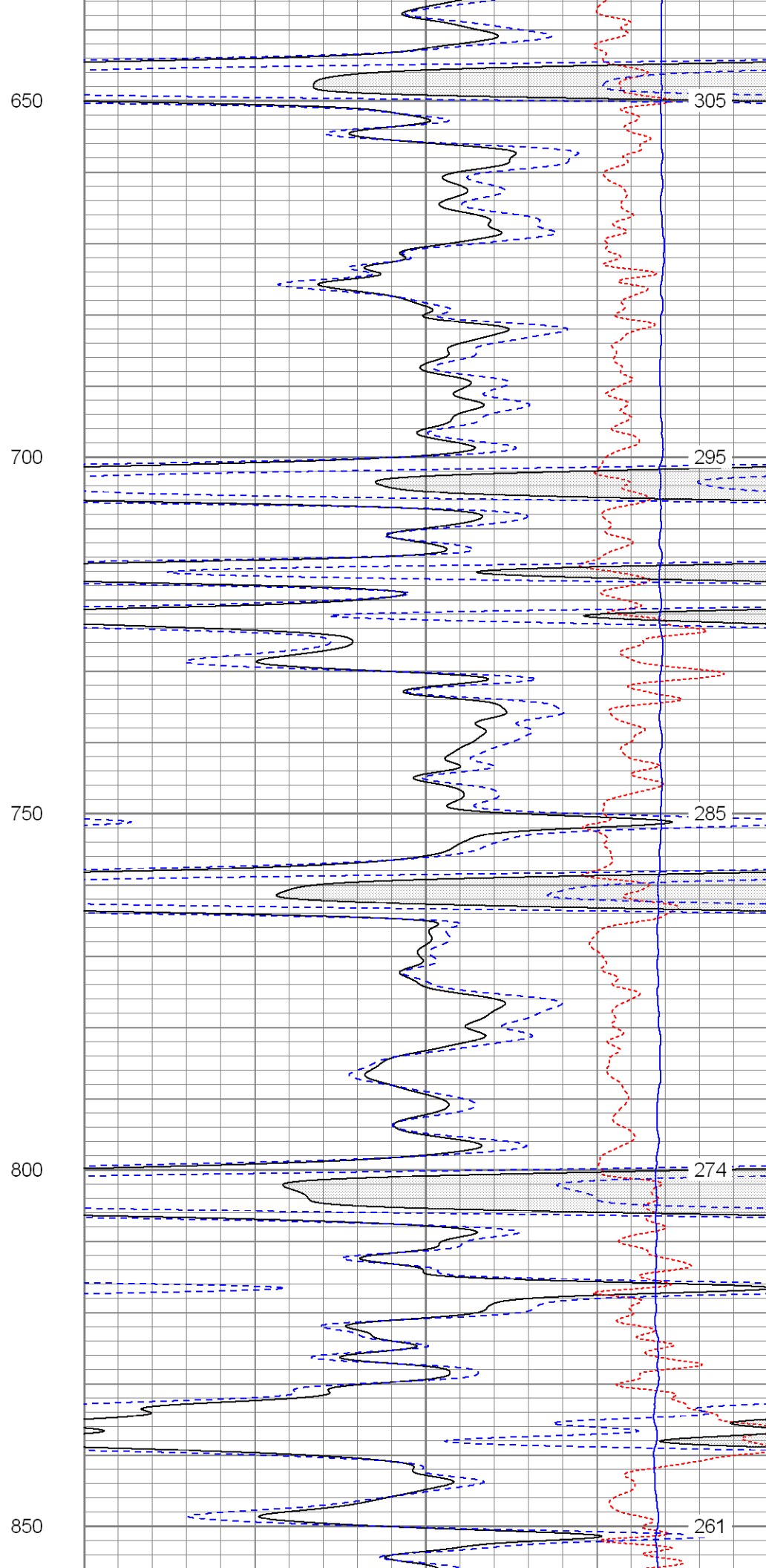
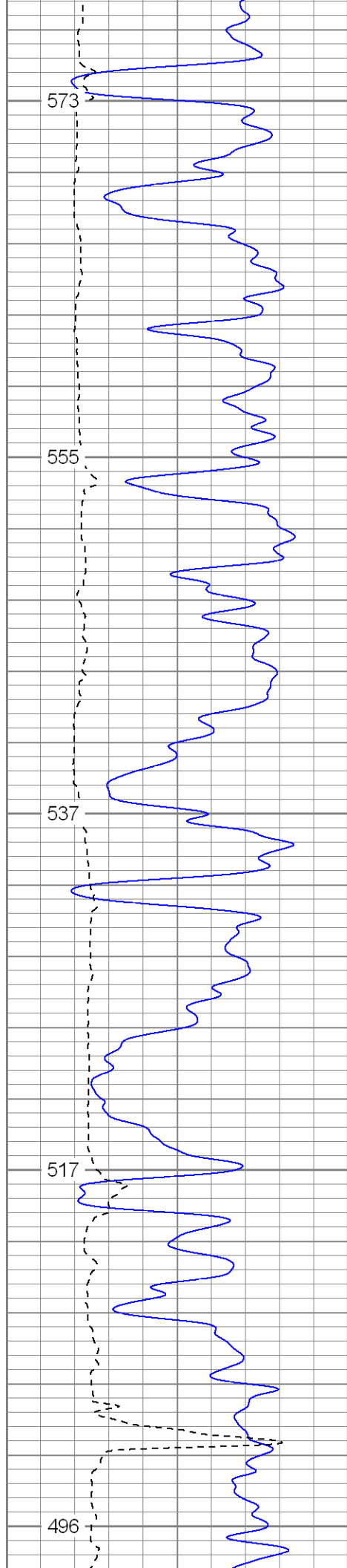
**SUPERIOR**  
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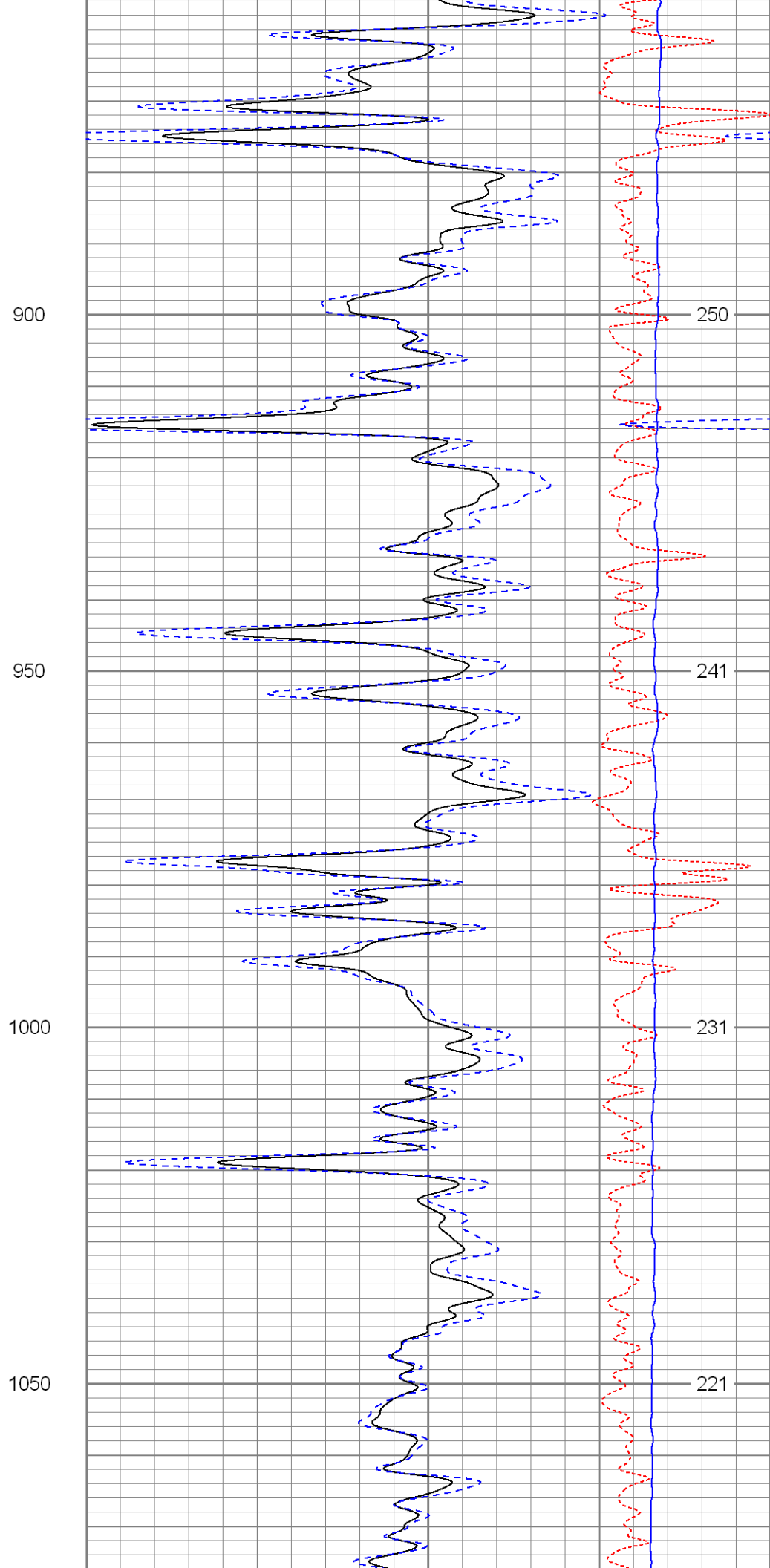
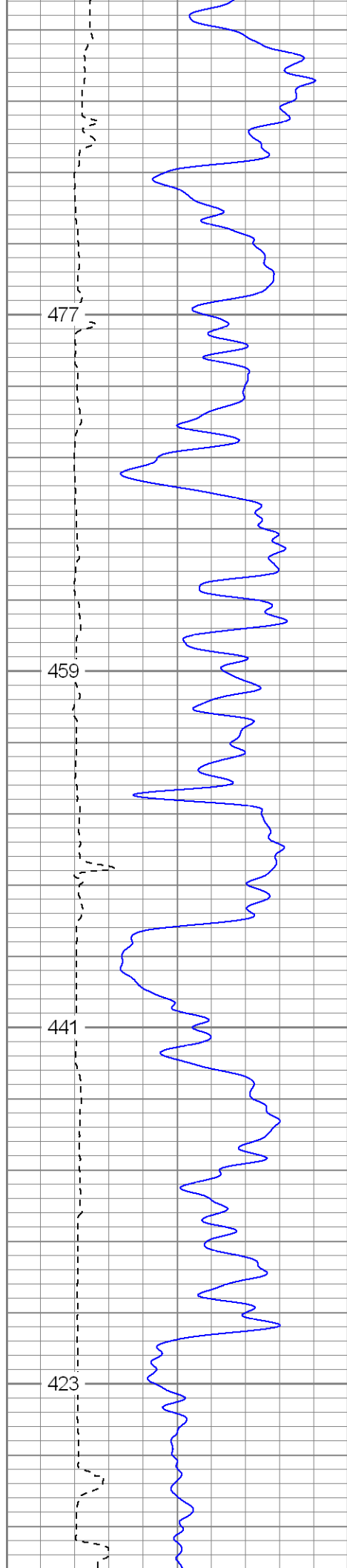
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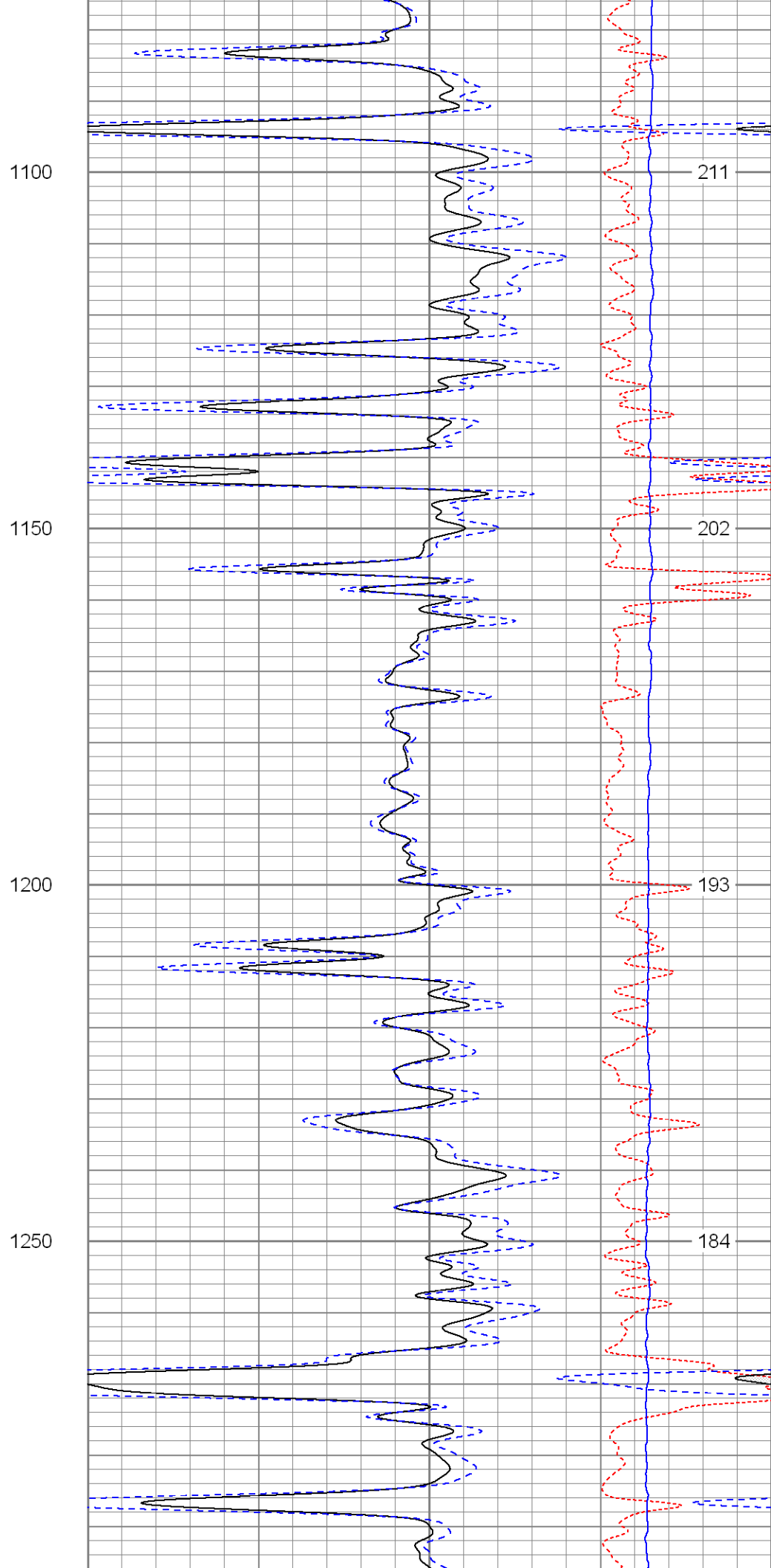
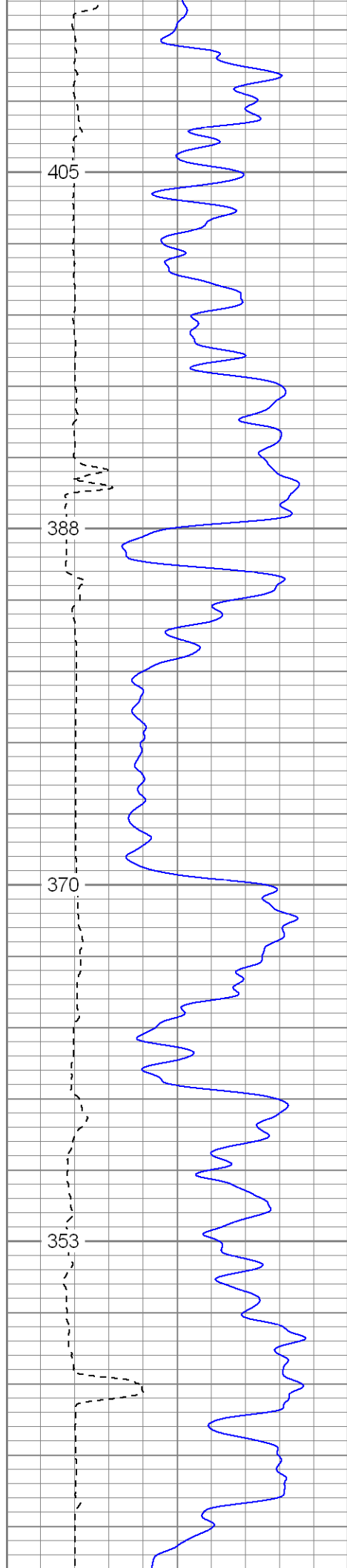
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Dataset Pathname: pass2.1  
Presentation Format: cdl  
Dataset Creation: Fri Mar 14 09:18:13 2008  
Charted by: Depth in Feet scaled 1:240

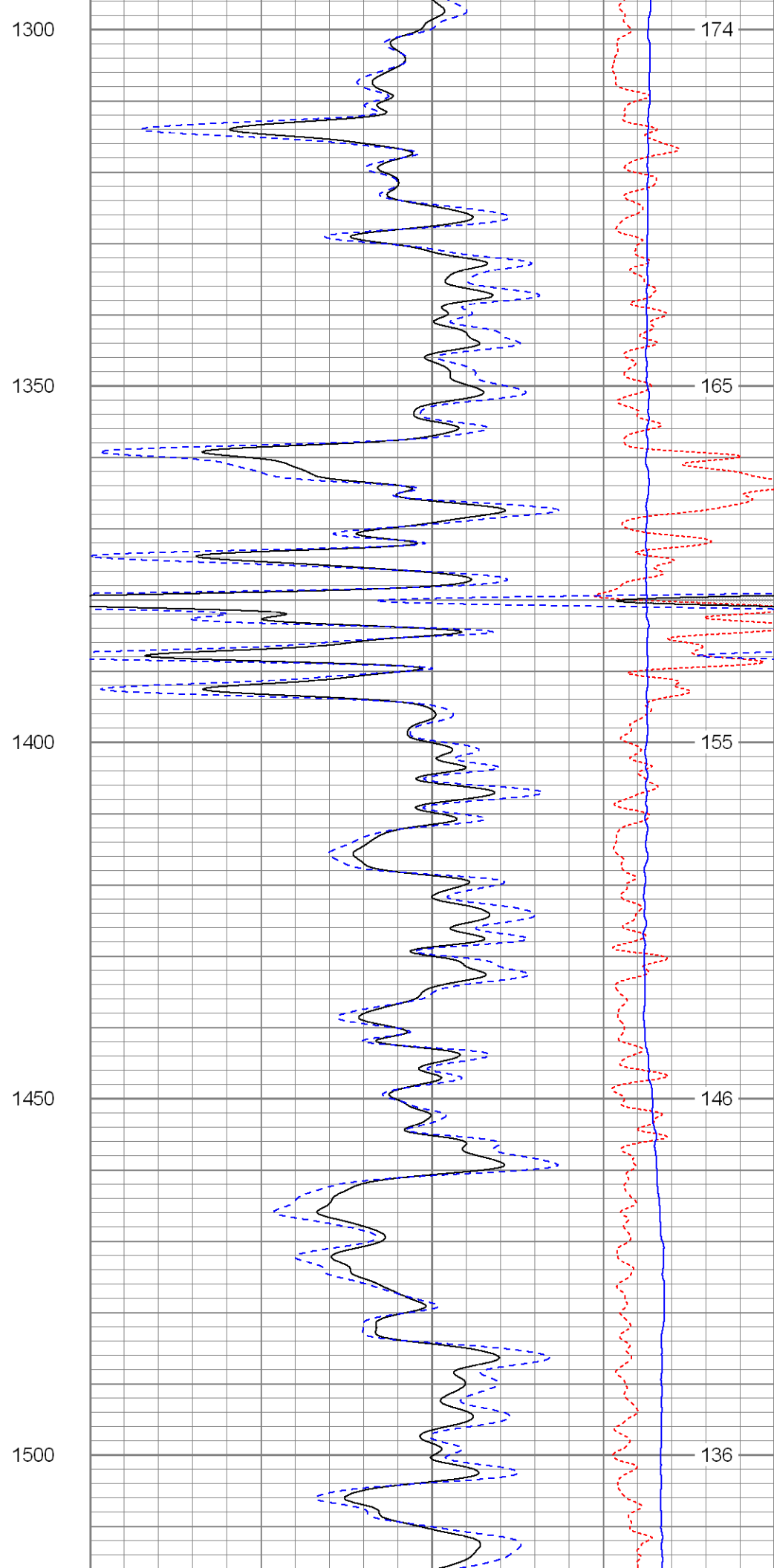
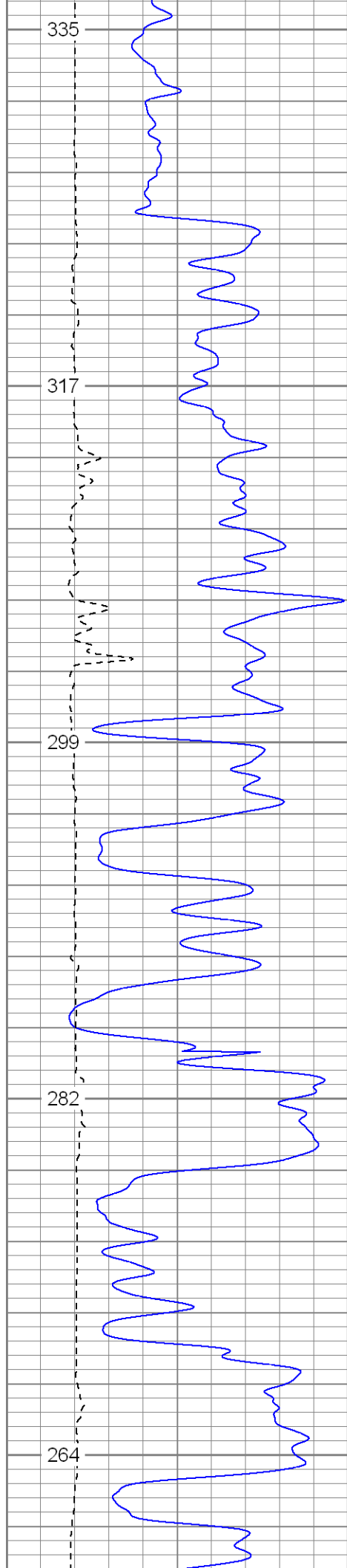
0	GR (GAPI)	200	2	RHOB (g/cc)	3
6	DCAL (in)	16	1	RHOB (g/cc)	2
TBHV (ft3)			30	DPOR (pu)	-10
			-0.5 RHOC (g/cc) 0.5		
			4000 LTEN (lb) 0		
			ABHV (ft3)		

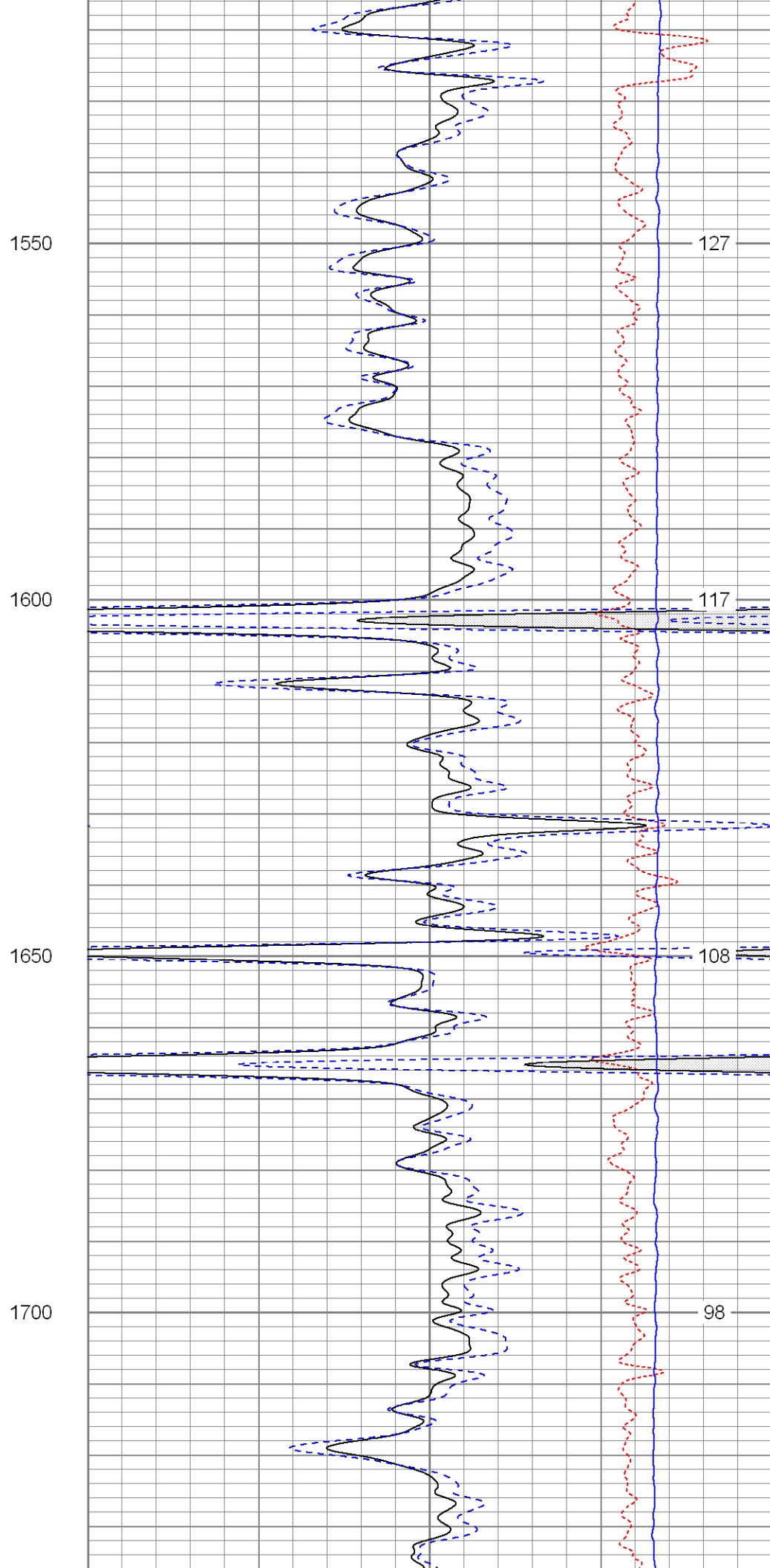
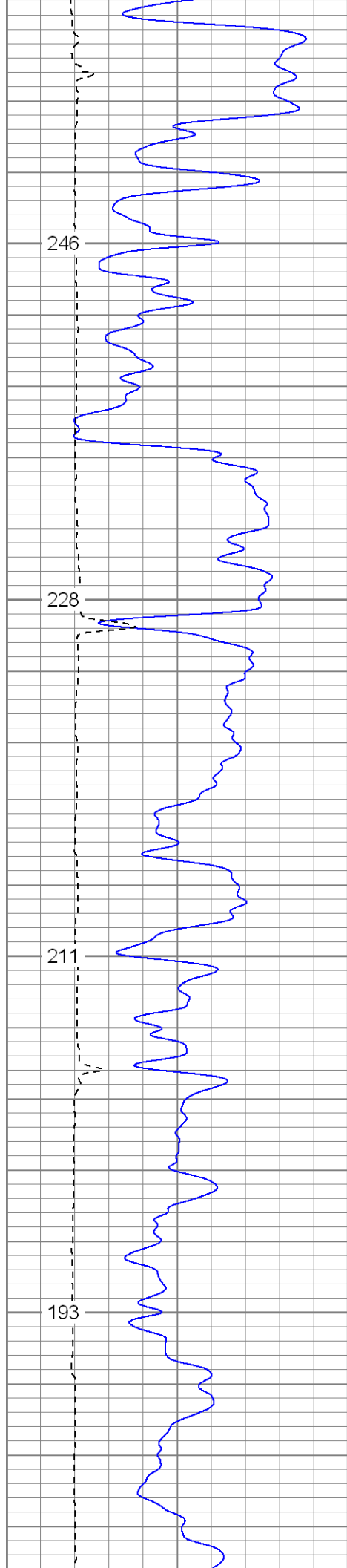


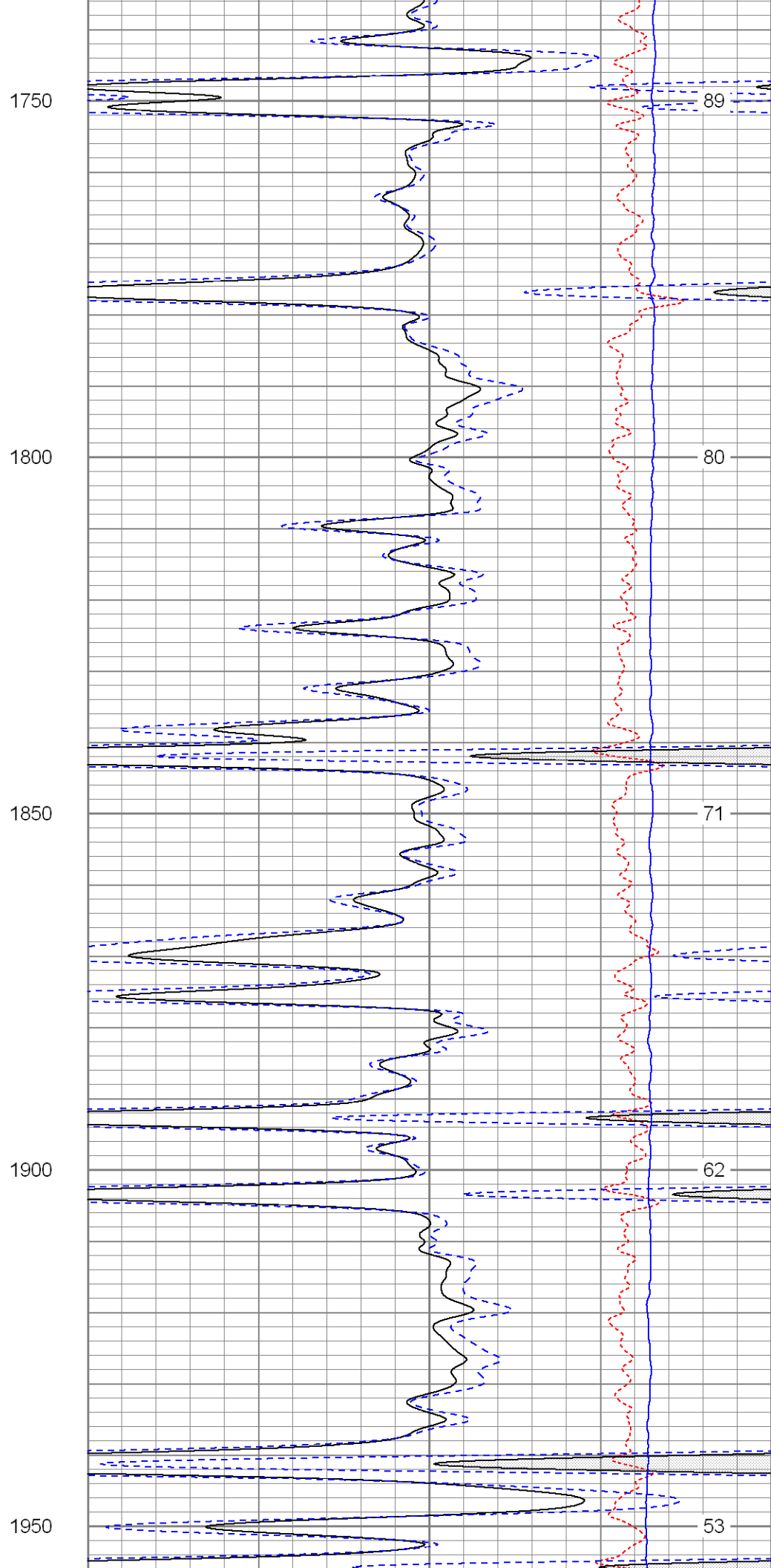
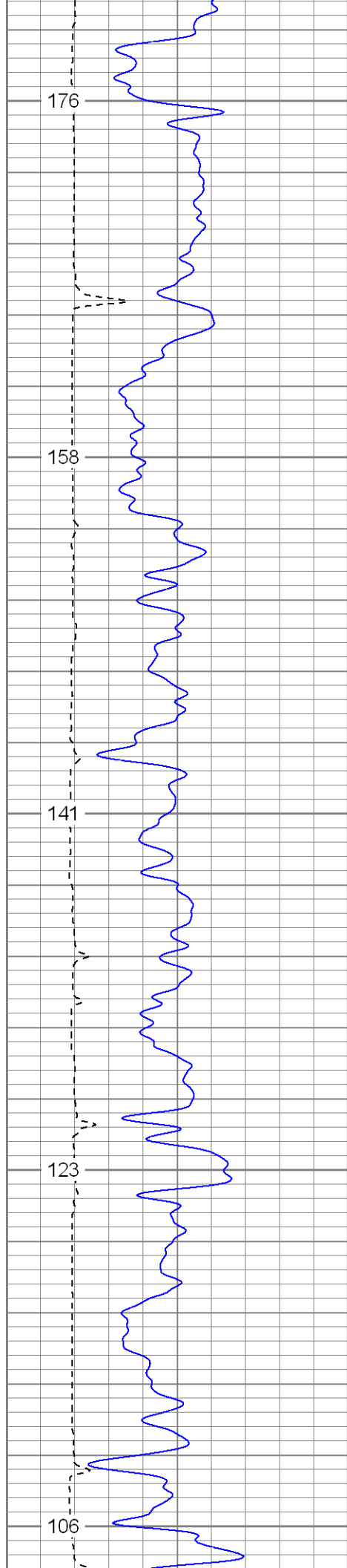




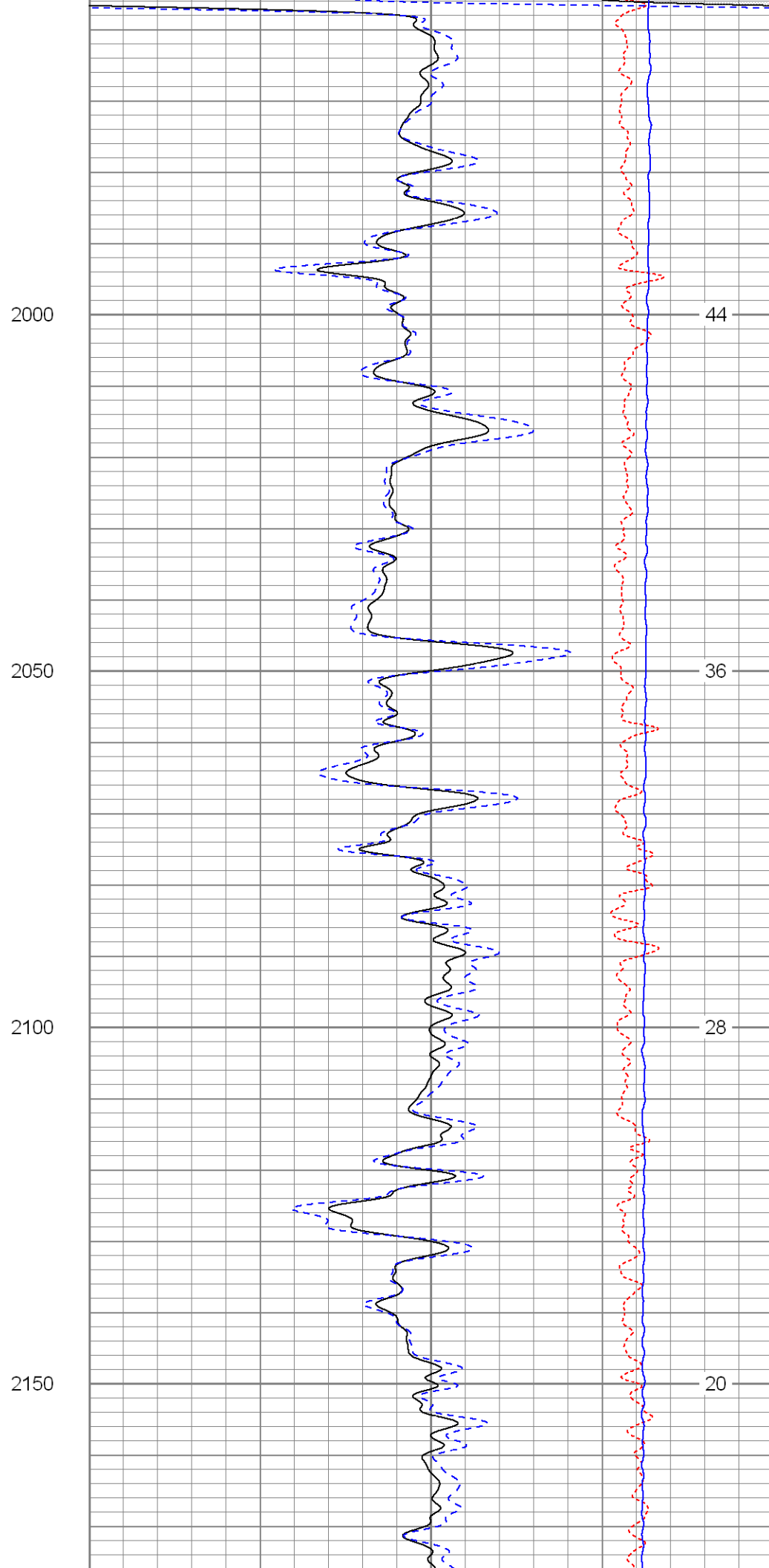
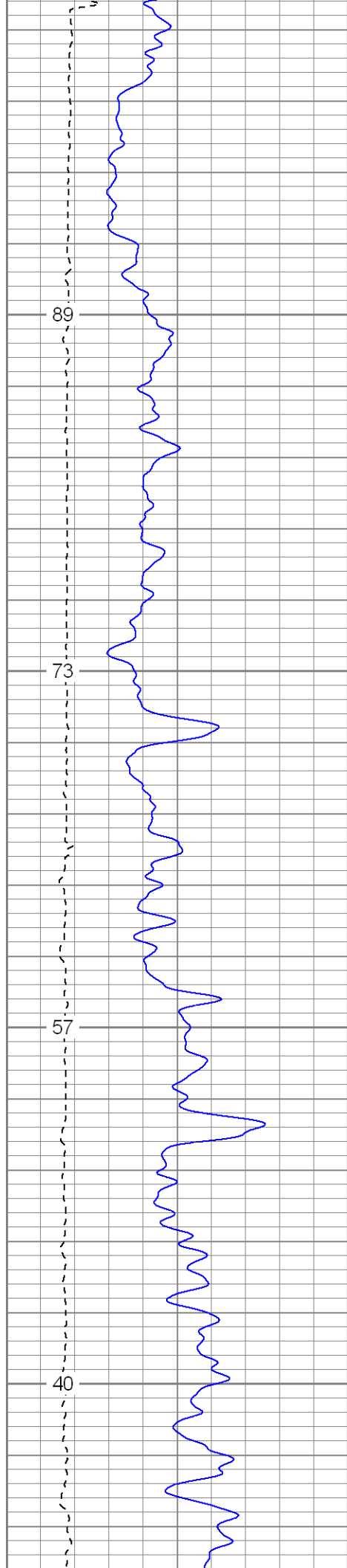


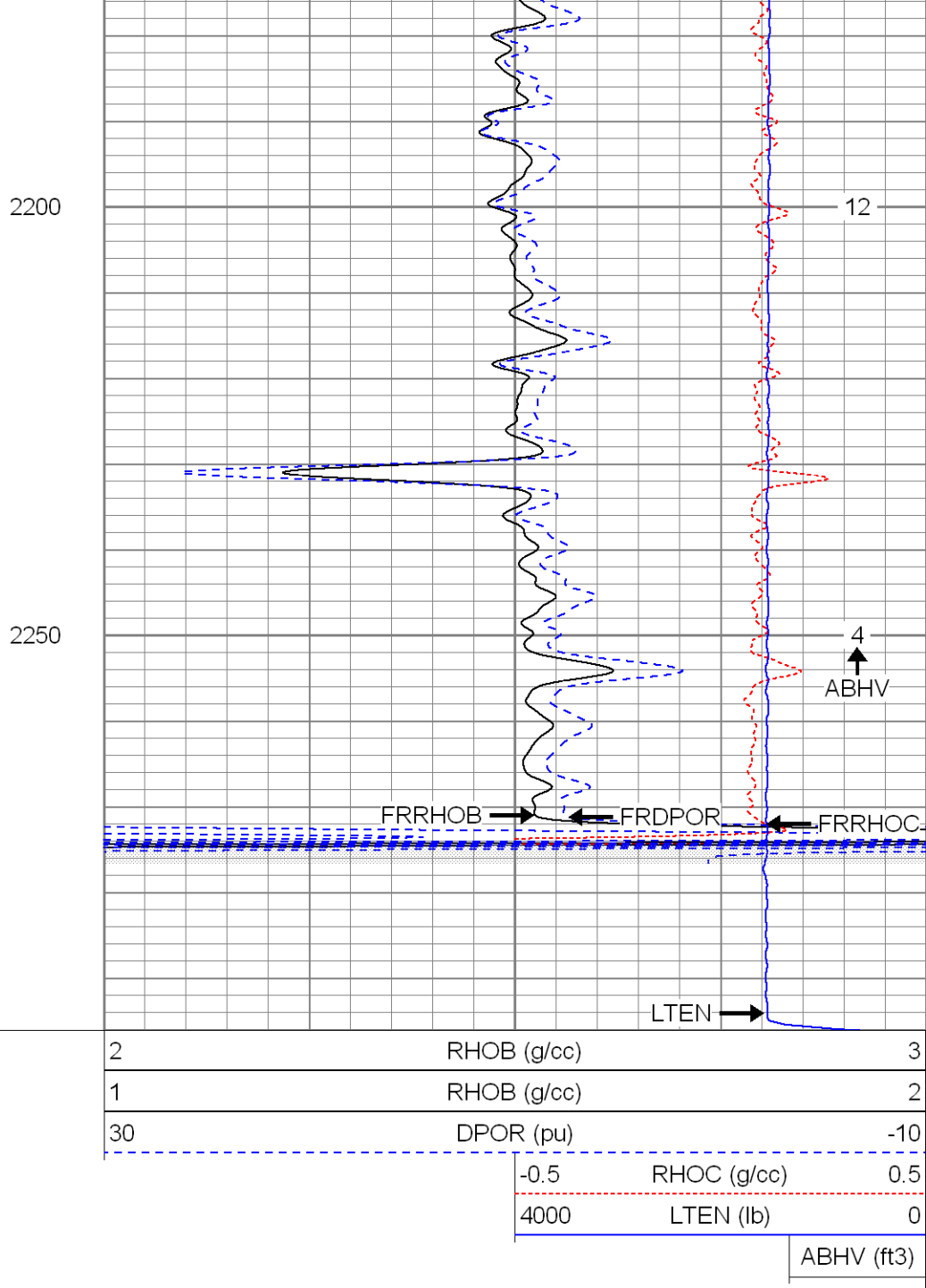
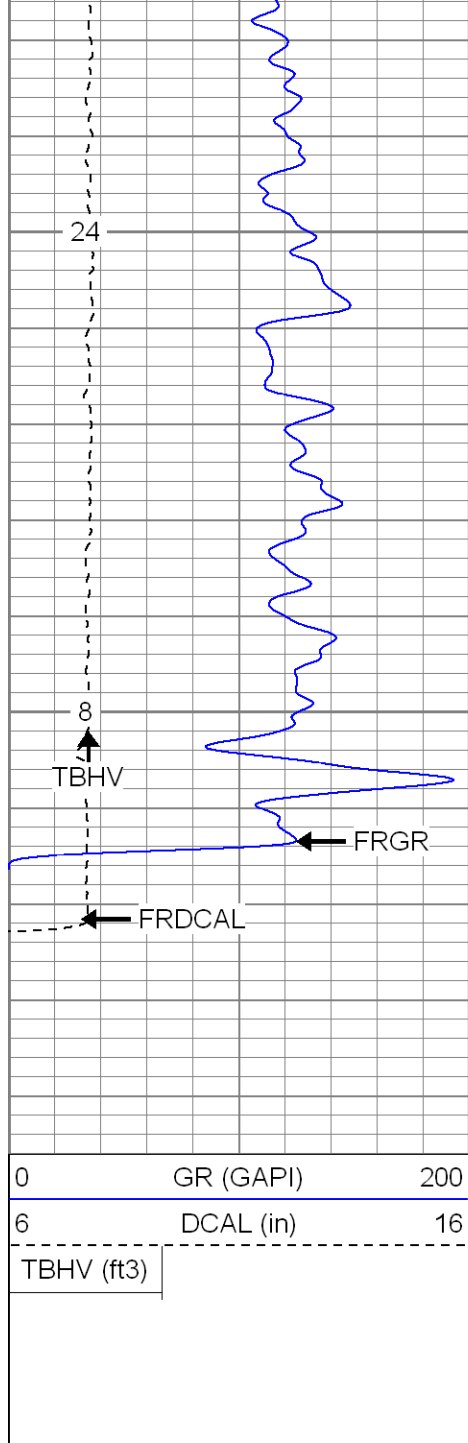










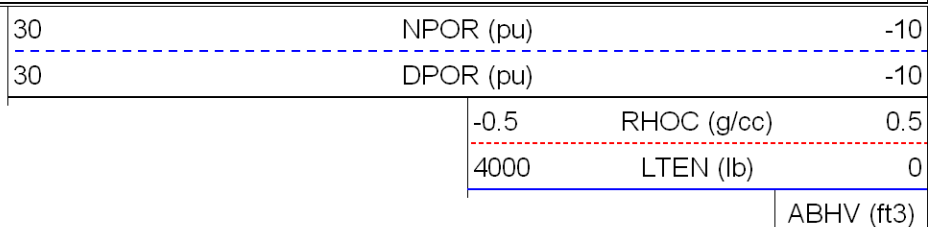
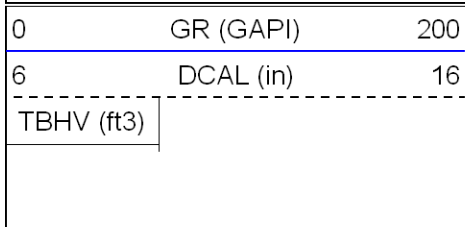


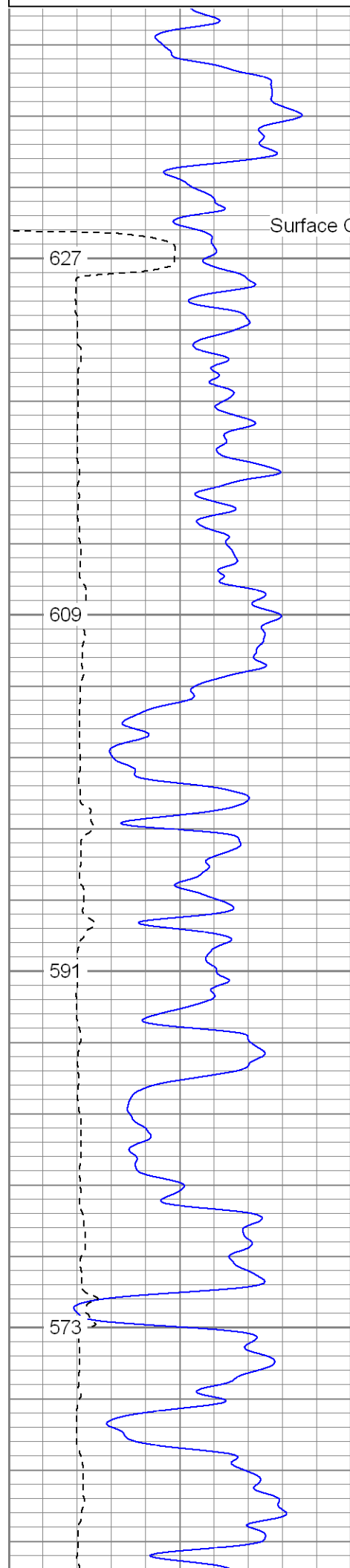
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# Main Pass

Database File: xtone2416.db  
Dataset Pathname: pass2.1  
Presentation Format: cdnl  
Dataset Creation: Fri Mar 14 09:18:13 2008  
Charted by: Depth in Feet scaled 1:240





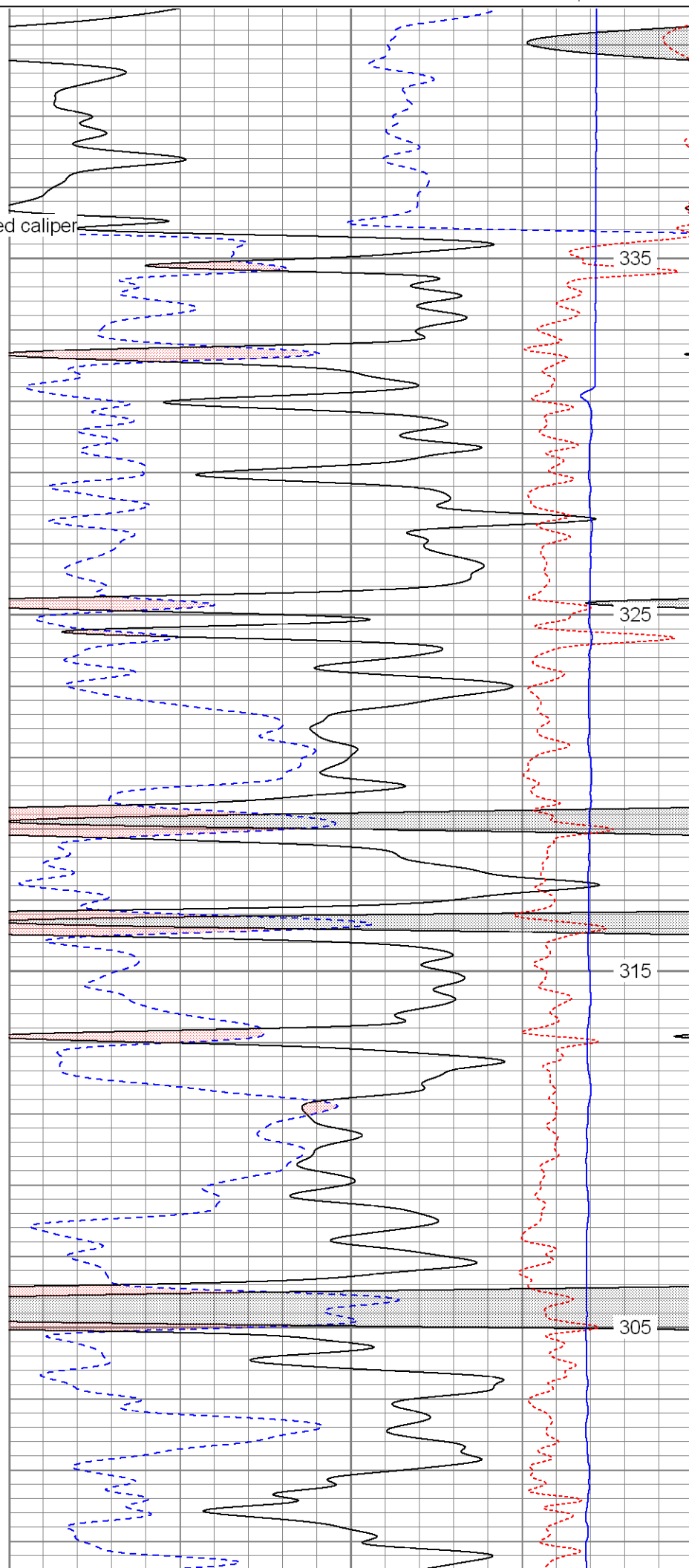
Surface Casing Closed caliper

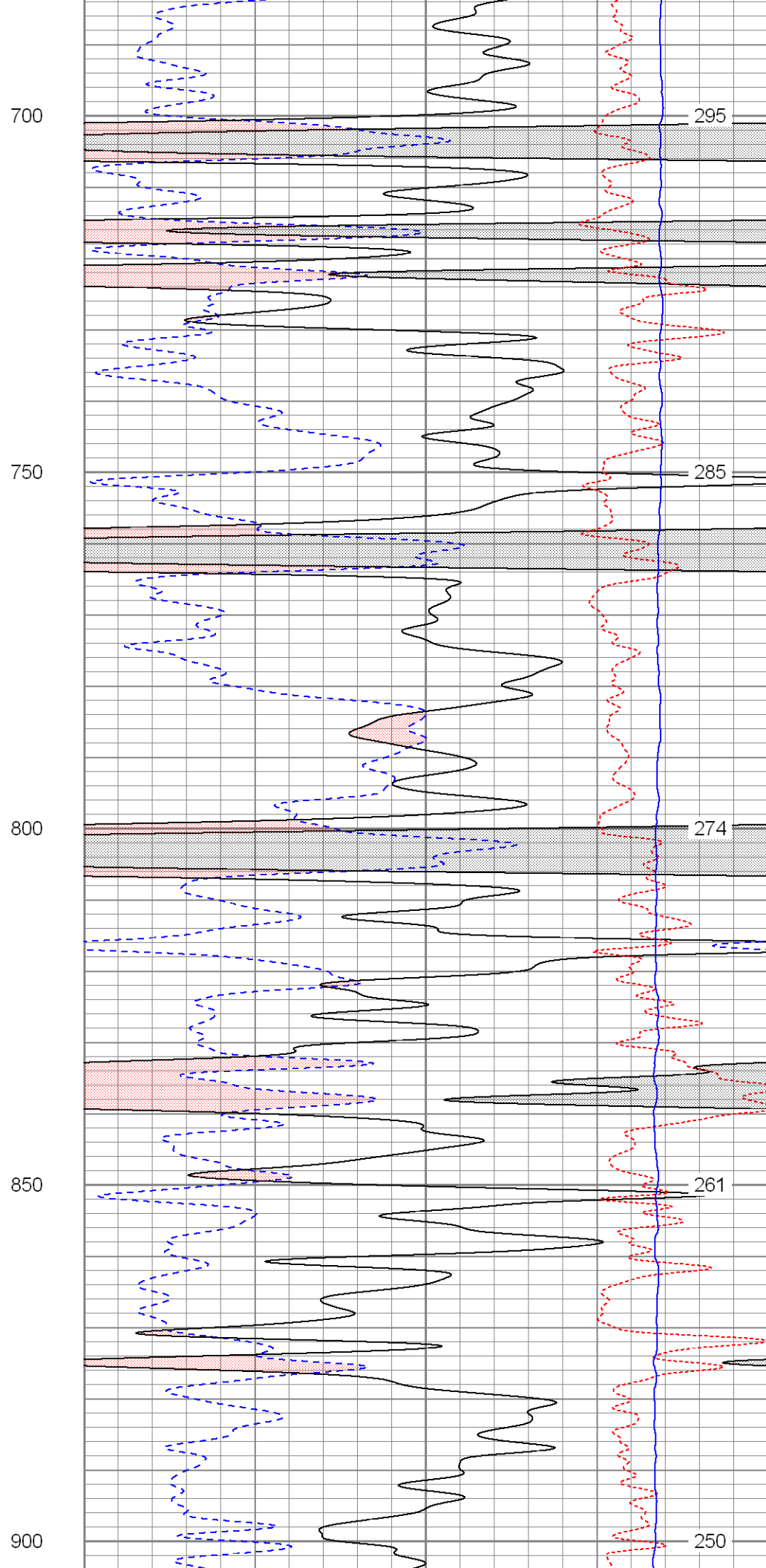
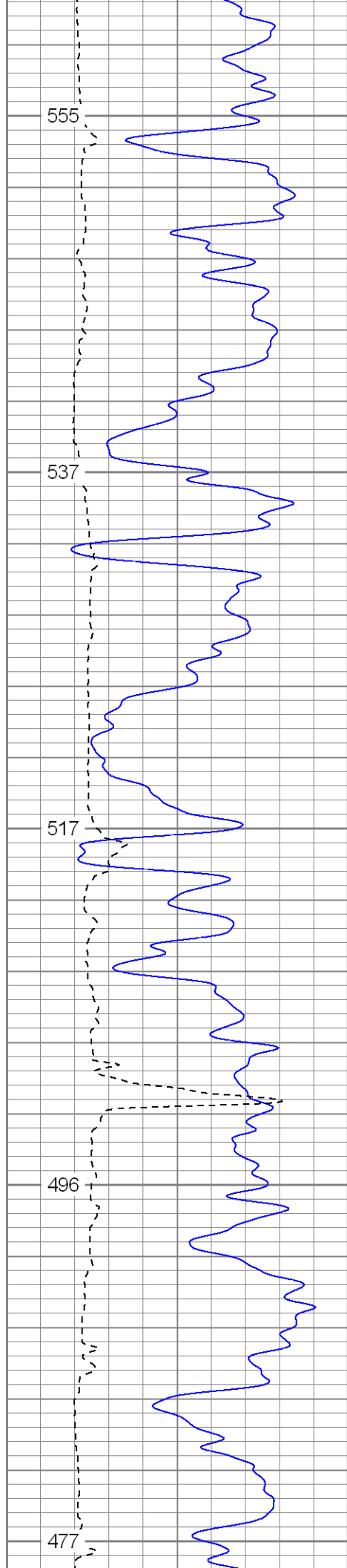
500

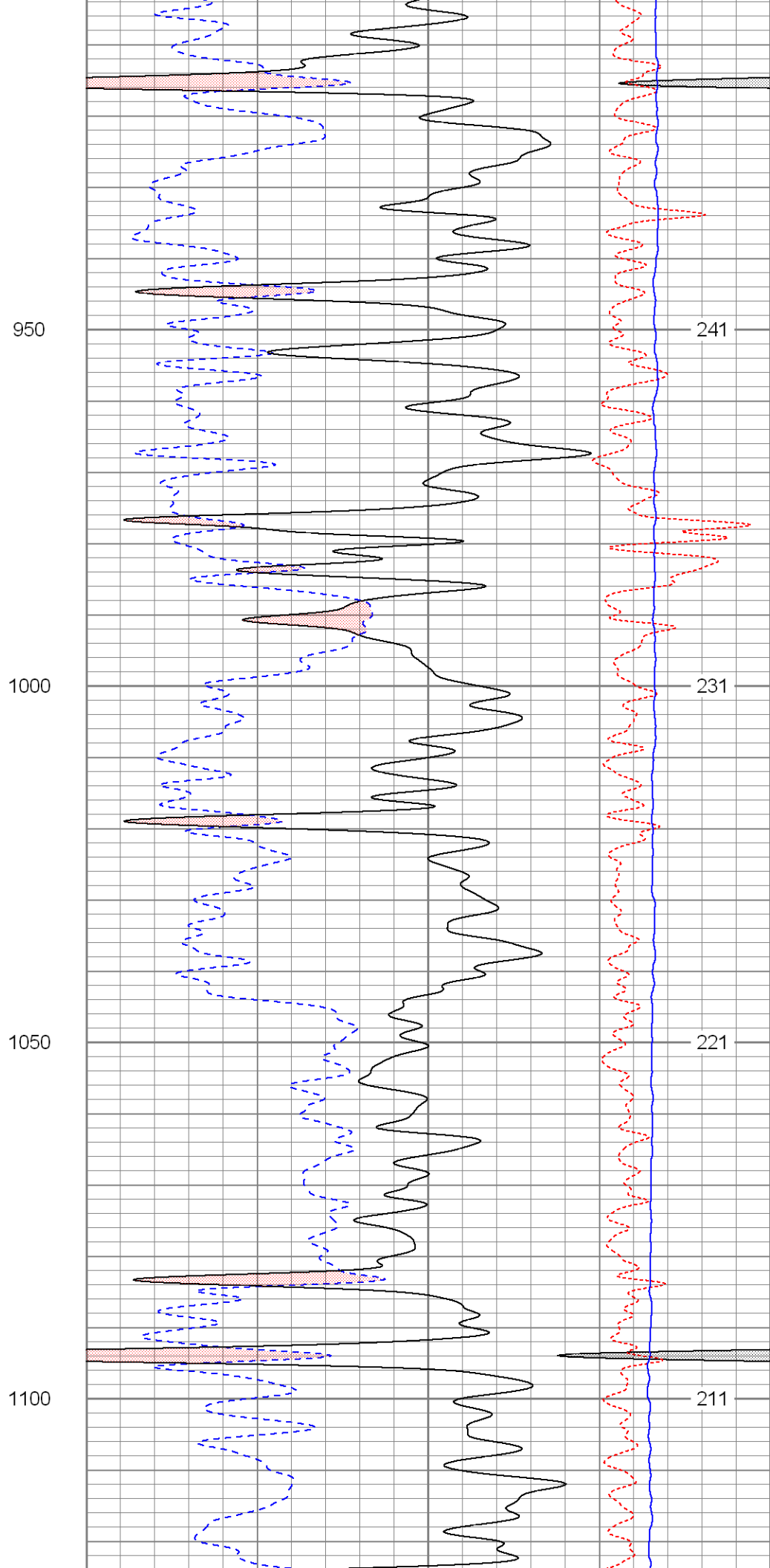
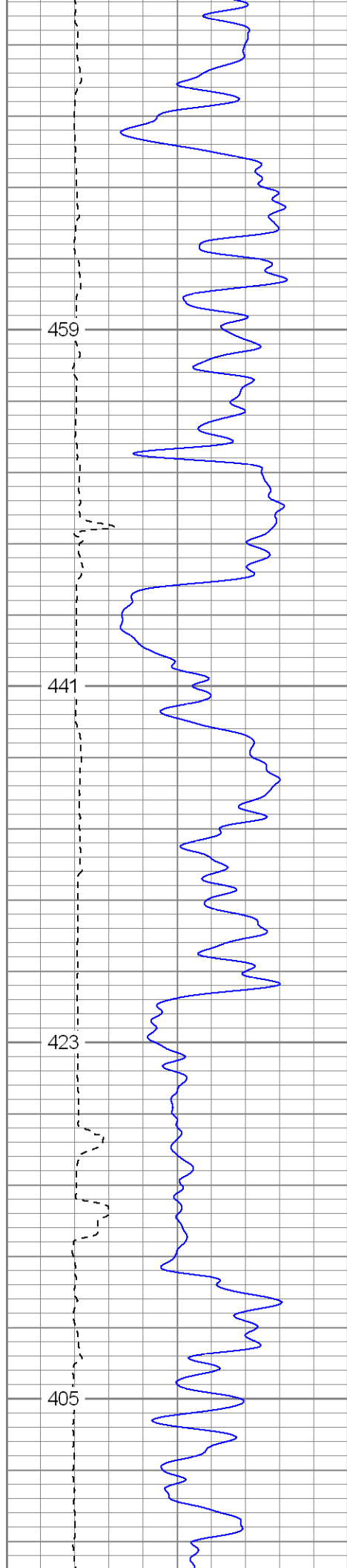
550

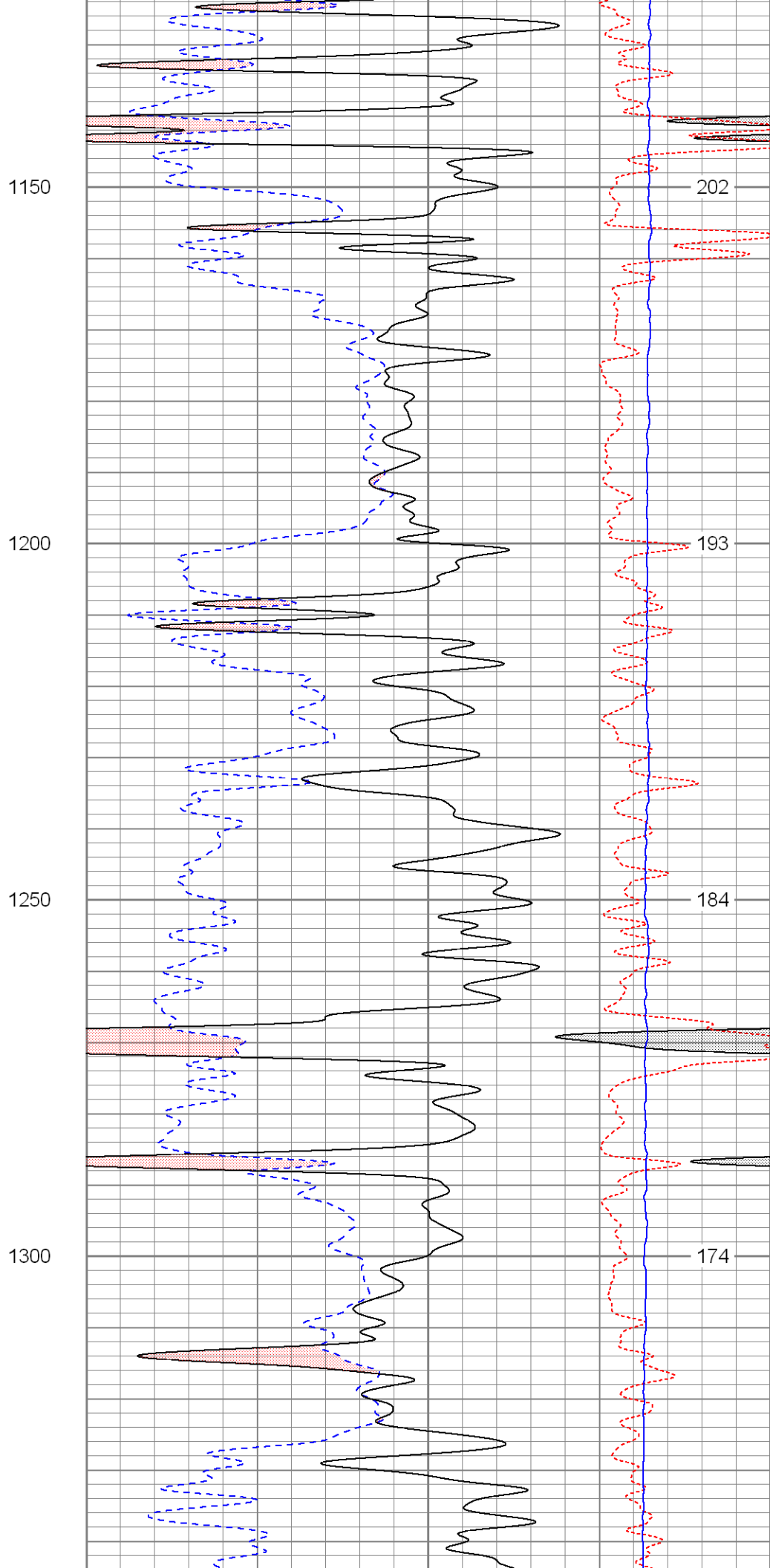
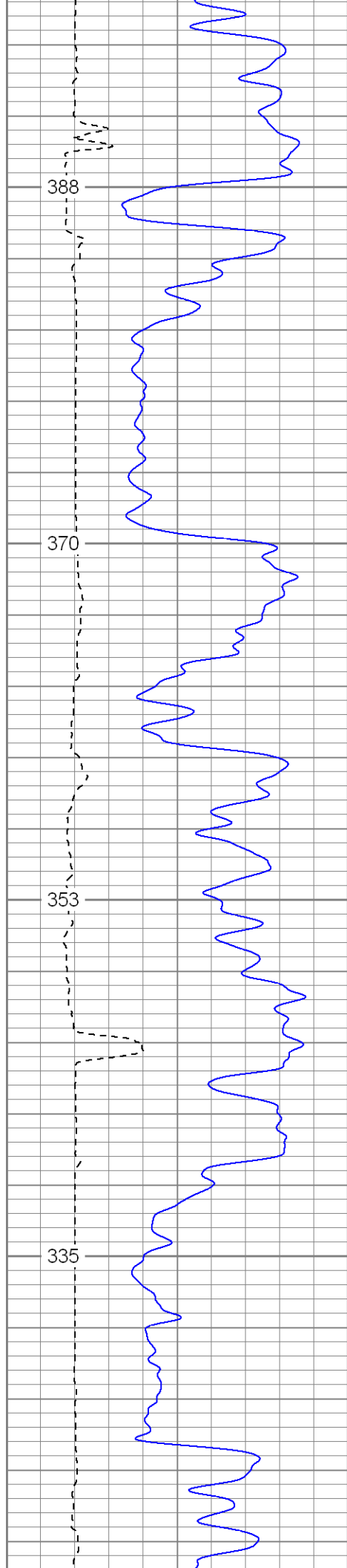
600

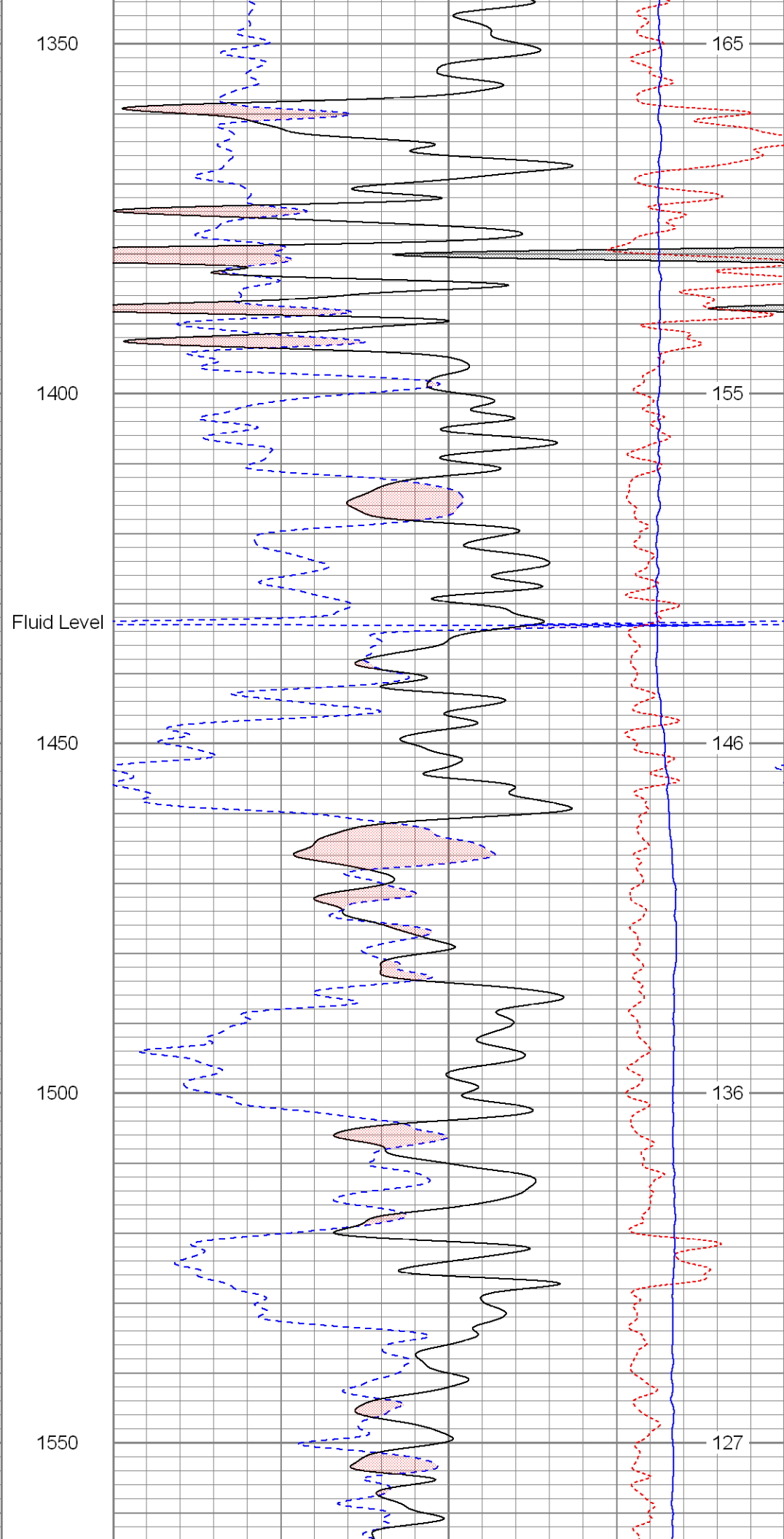
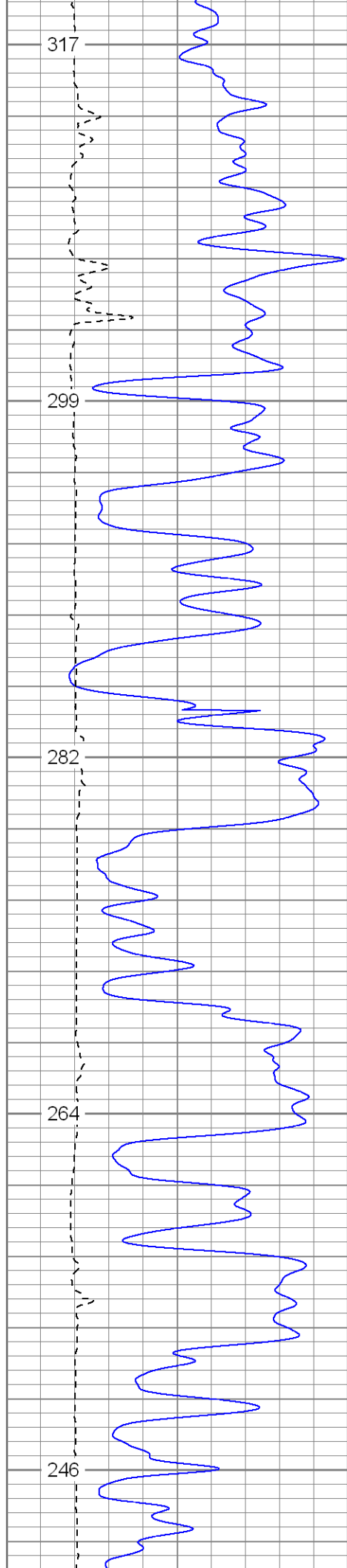
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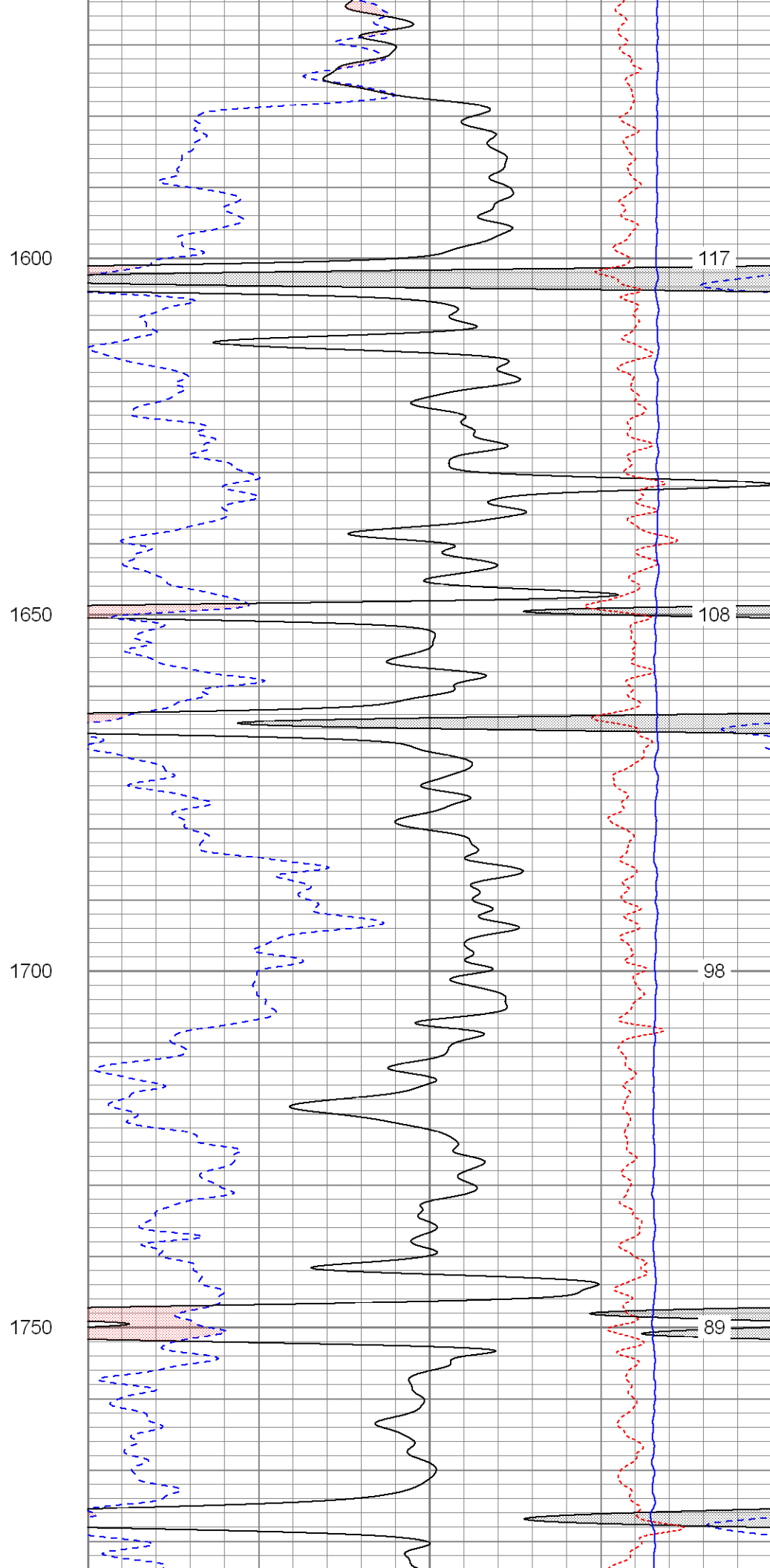
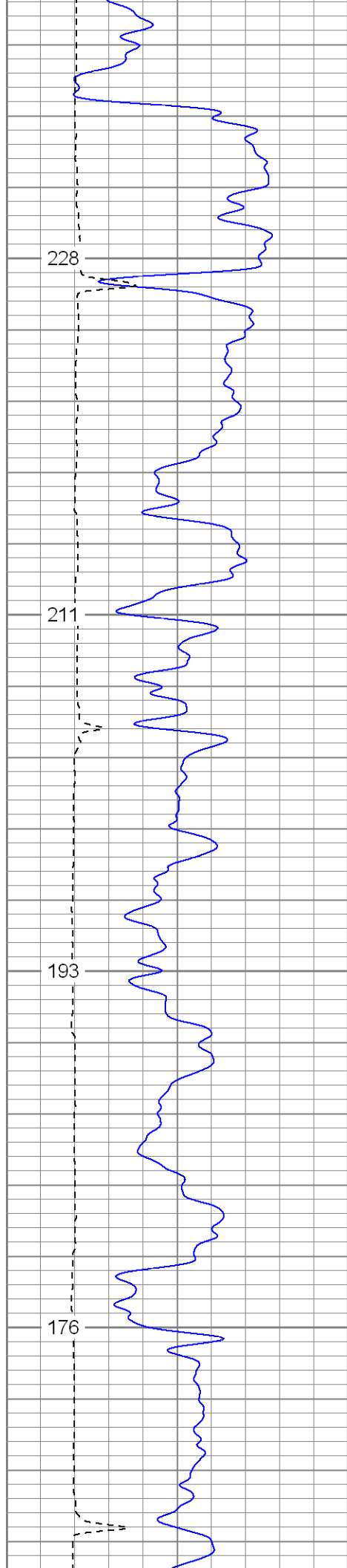




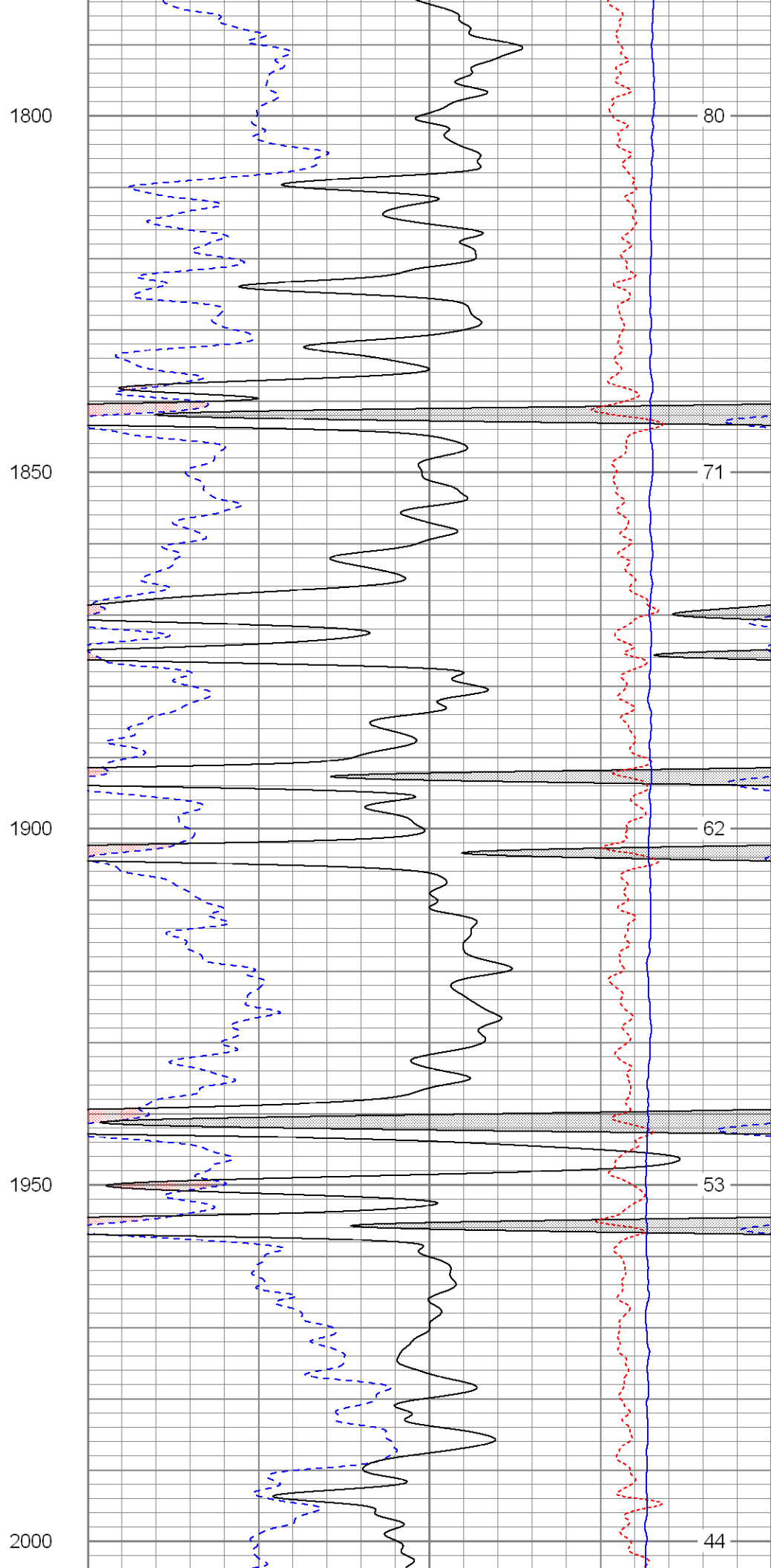
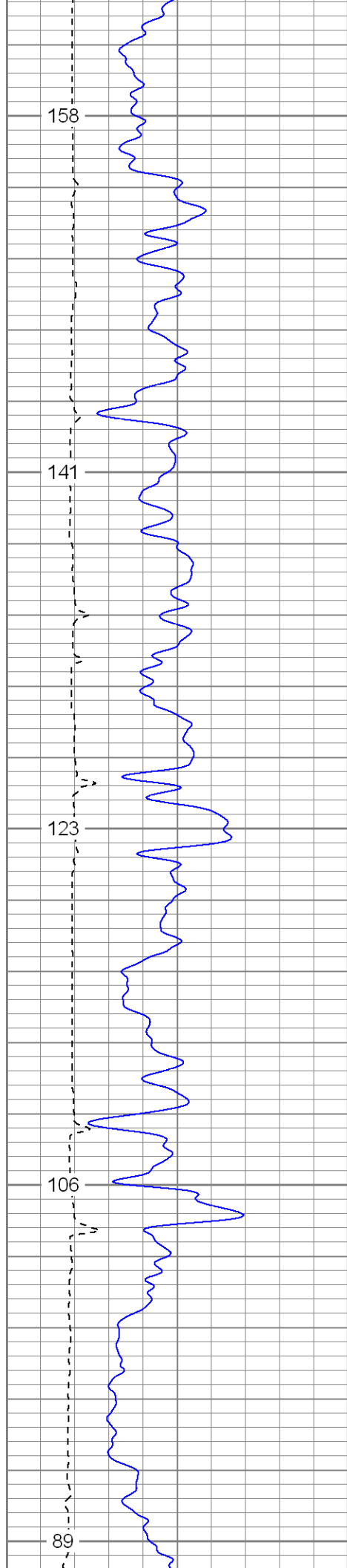


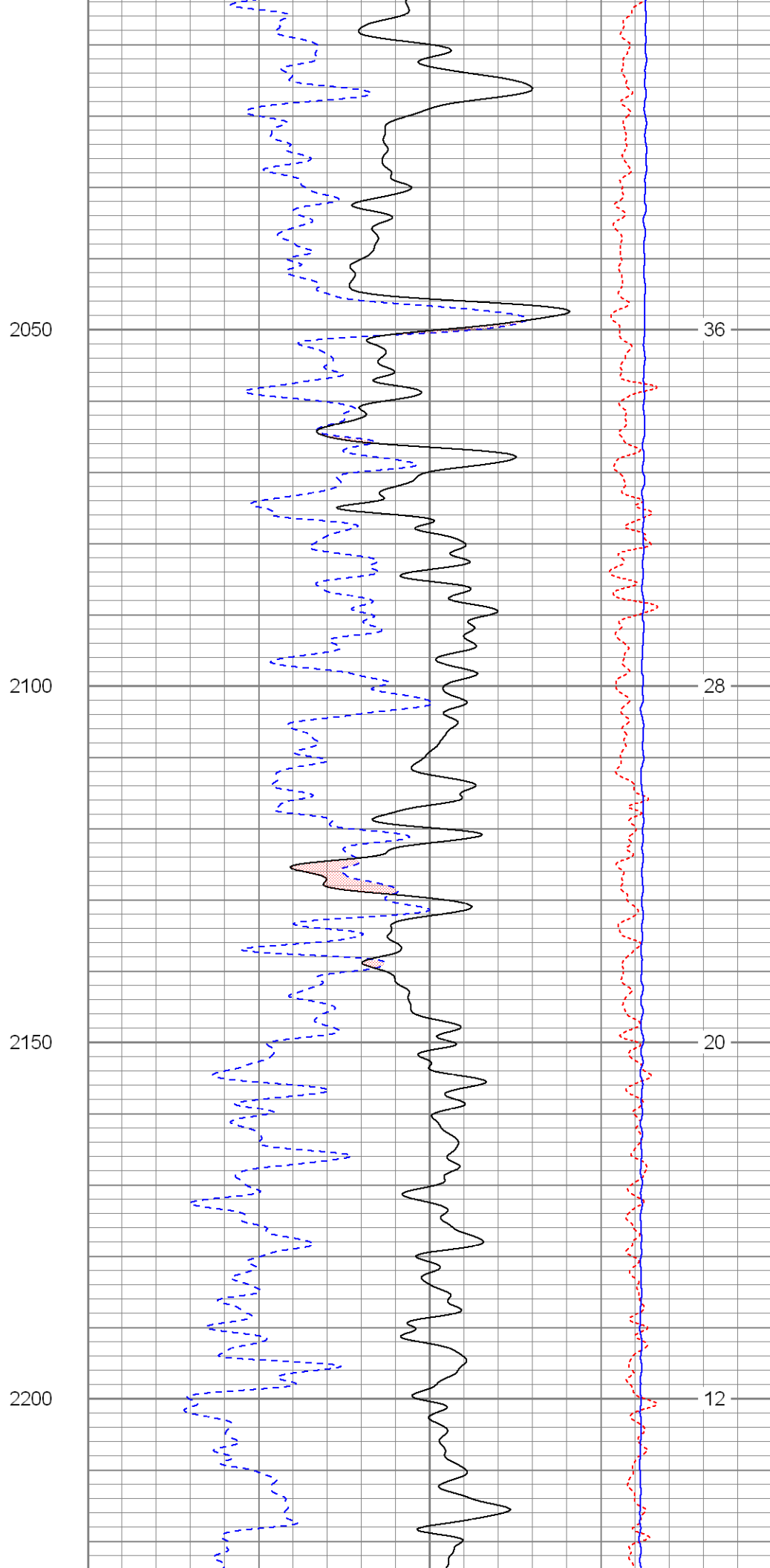
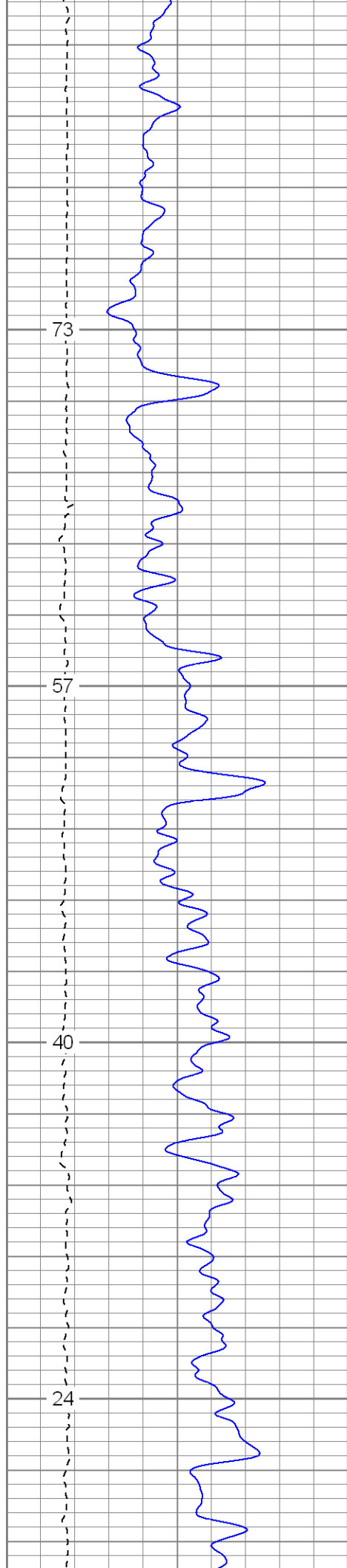


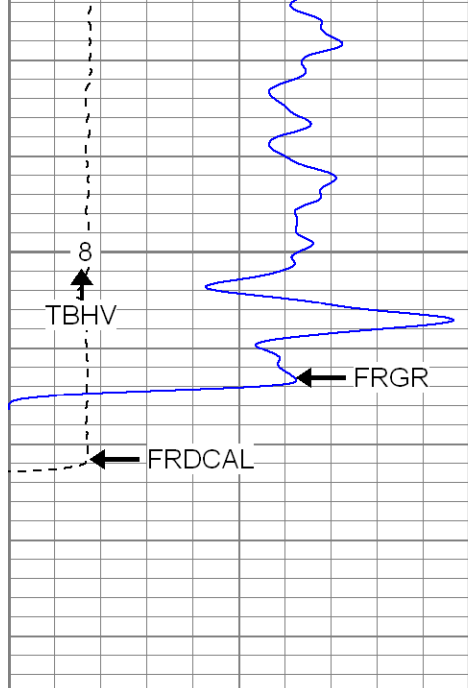






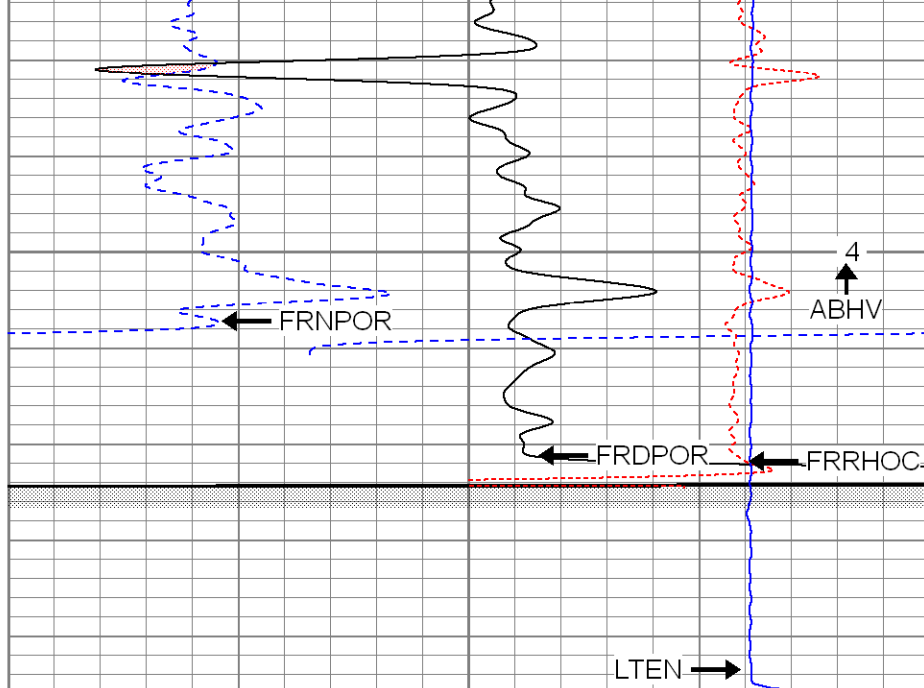






0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		

2250



30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
ABHV (ft3)		



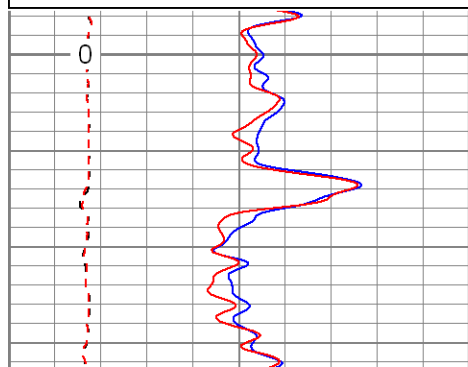
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# Repeat Pass

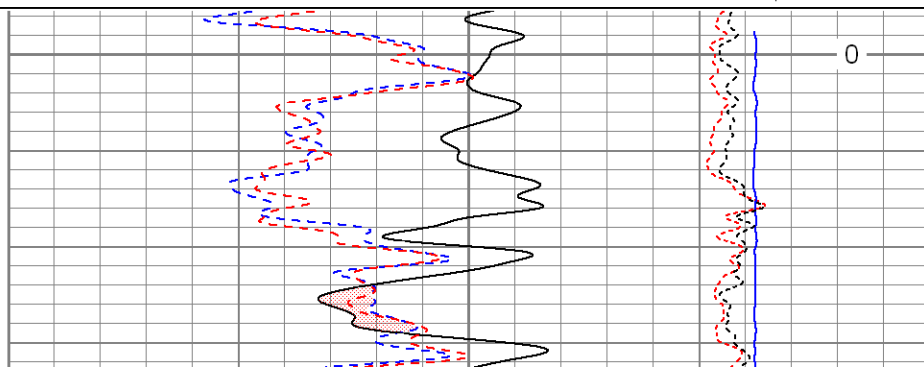
Database File: xtone2416.db  
Dataset Pathname: pass1.1  
Presentation Format: cdnl  
Dataset Creation: Thu Mar 13 19:22:12 2008 by Calc Open-Cased 070814  
Charted by: Depth in Feet scaled 1:240

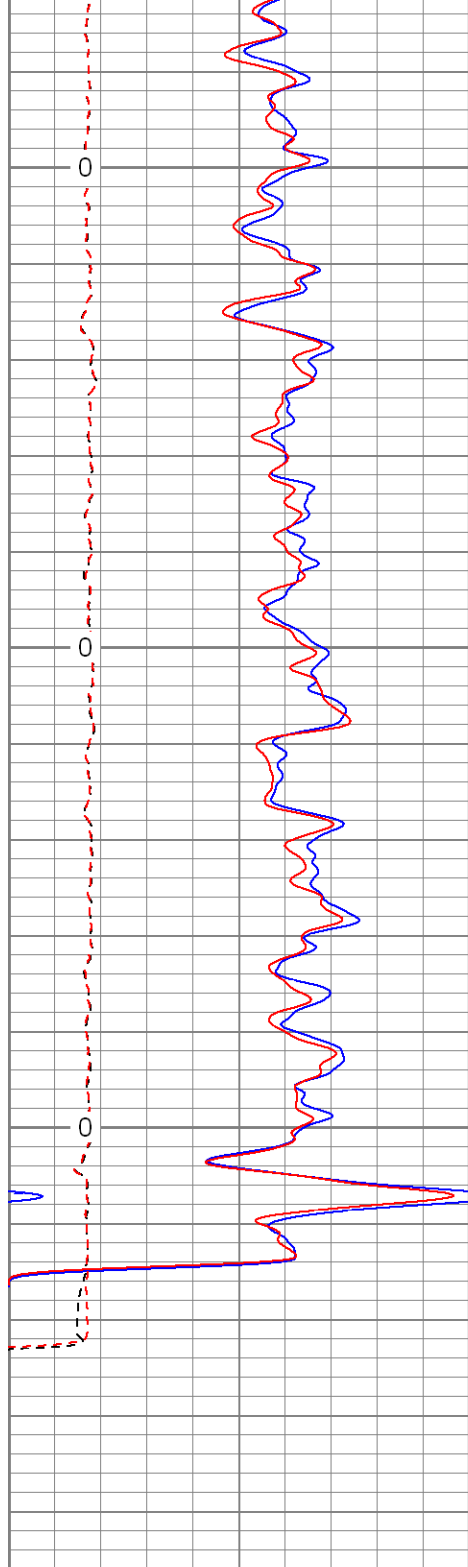
0	GR (GAPI)	200
6	DCAL (in)	16
0	GR-repeat (GAPI)	200
6	DCAL-repeat (in)	16
TBHV (ft3)		

30	NPOR (pu)	-10
30	DPOR (pu)	-10
500	NEU (NAPI)	1500
30	NPOR-repeat (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
-0.5	RHOC-repeat (g/cc)	0.5
ABHV (ft3)		

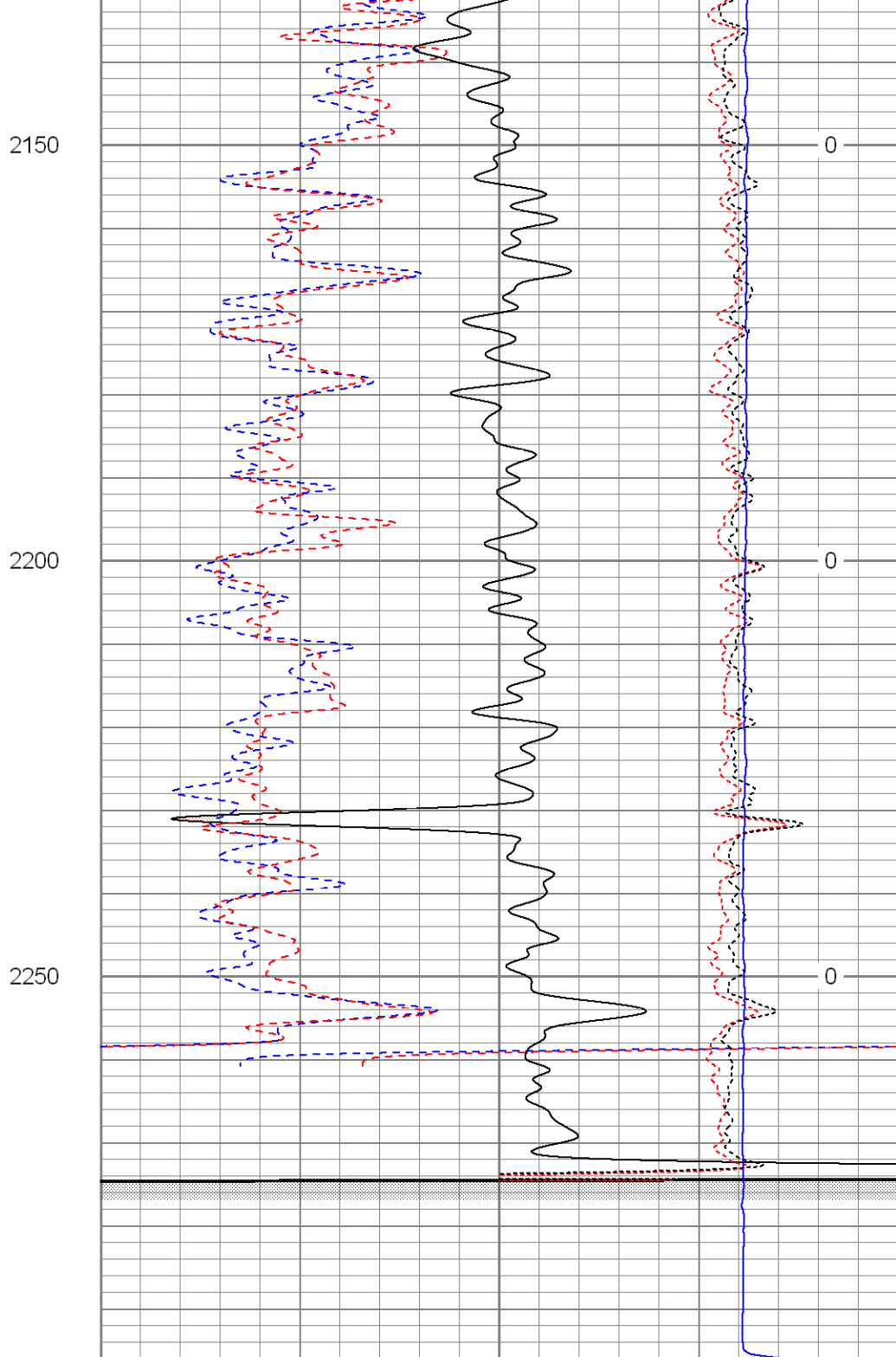


2100





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



30	NPOR (pu)	-10
30	DPOR (pu)	-10
500	NEU (NAPI)	1500
30	NPOR-repeat (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
-0.5	RHOC-repeat (g/cc)	0.5
ABHV (ft3)		



**SUPERIOR**  
Black Lick, Pa.  
Morgan, Pa.

# High Resolution Pass



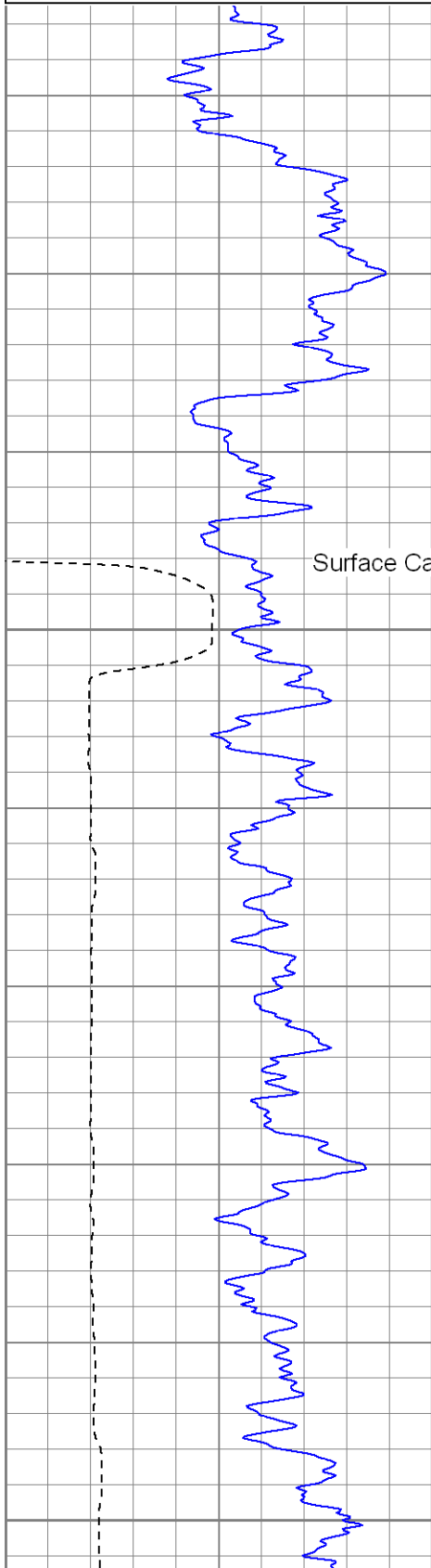
Merced, Pa.  
Wooster, Oh.  
Cleveland, Ok.  
Trinidad, Co.

# High Resolution Pass

Database File: xtone2416.db  
Dataset Pathname: pass2.3  
Presentation Format: cdlhr  
Dataset Creation: Fri Mar 14 09:05:32 2008 by Calc Open-Cased 070814  
Charted by: Depth in Feet scaled 1:120

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

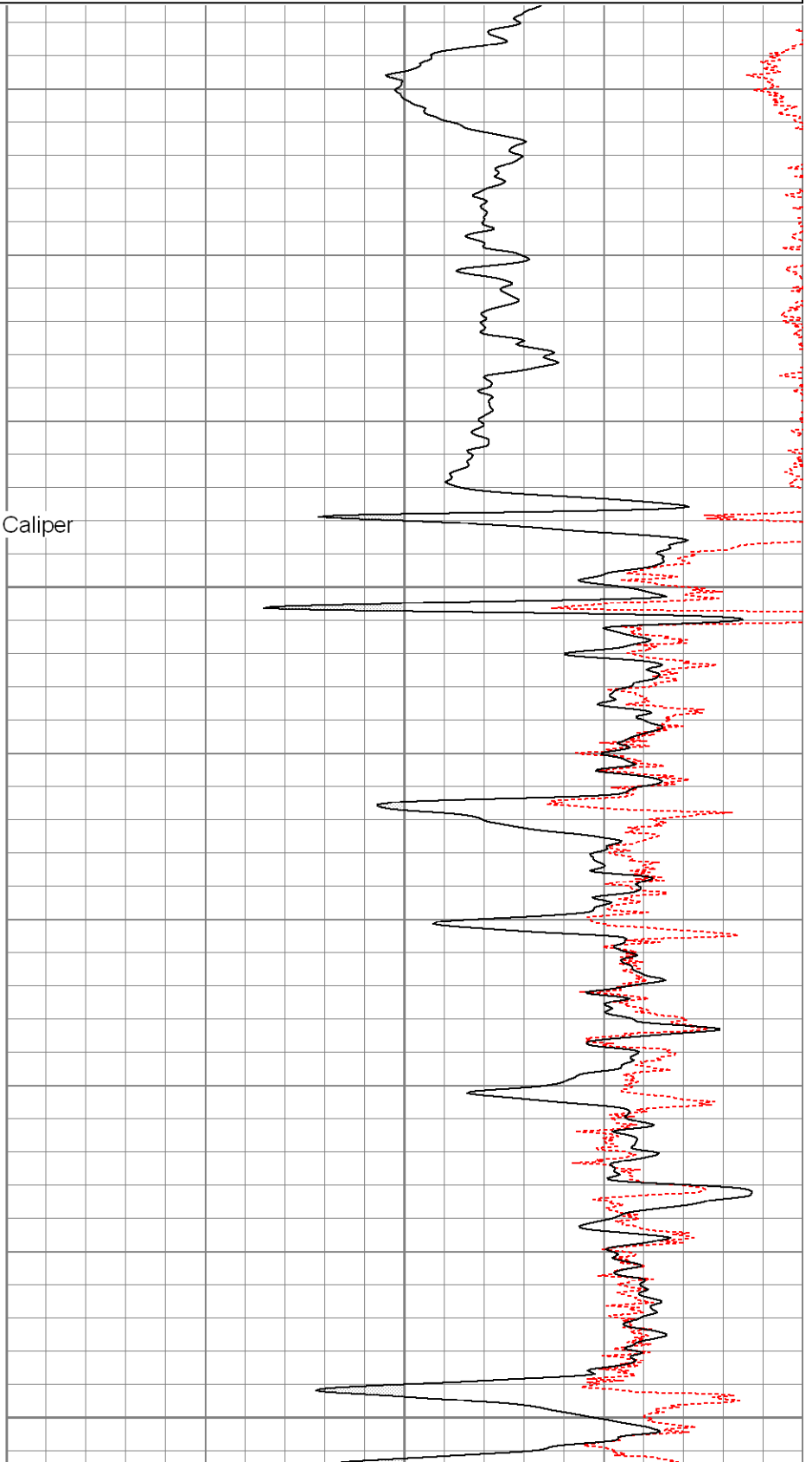
1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5

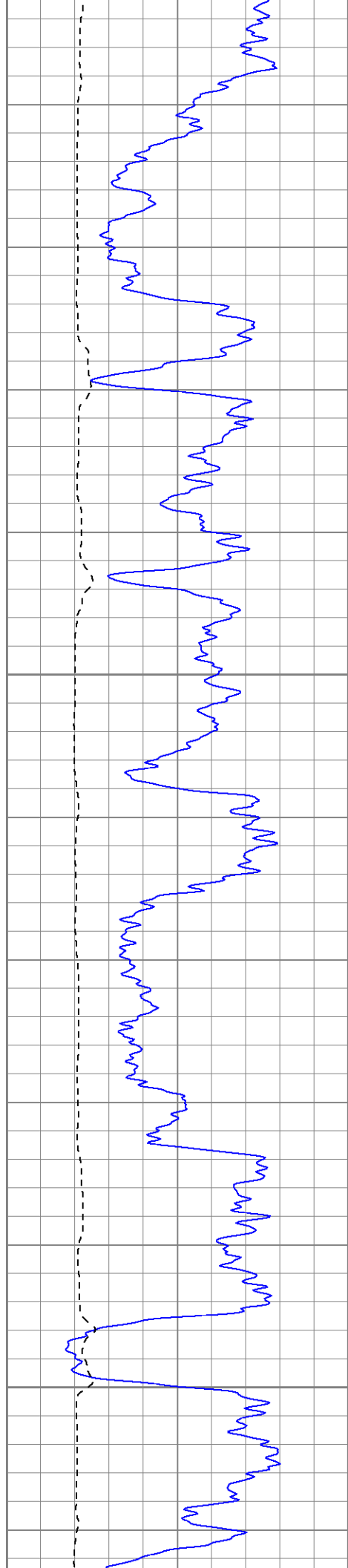


Surface Casing Closed Caliper

500

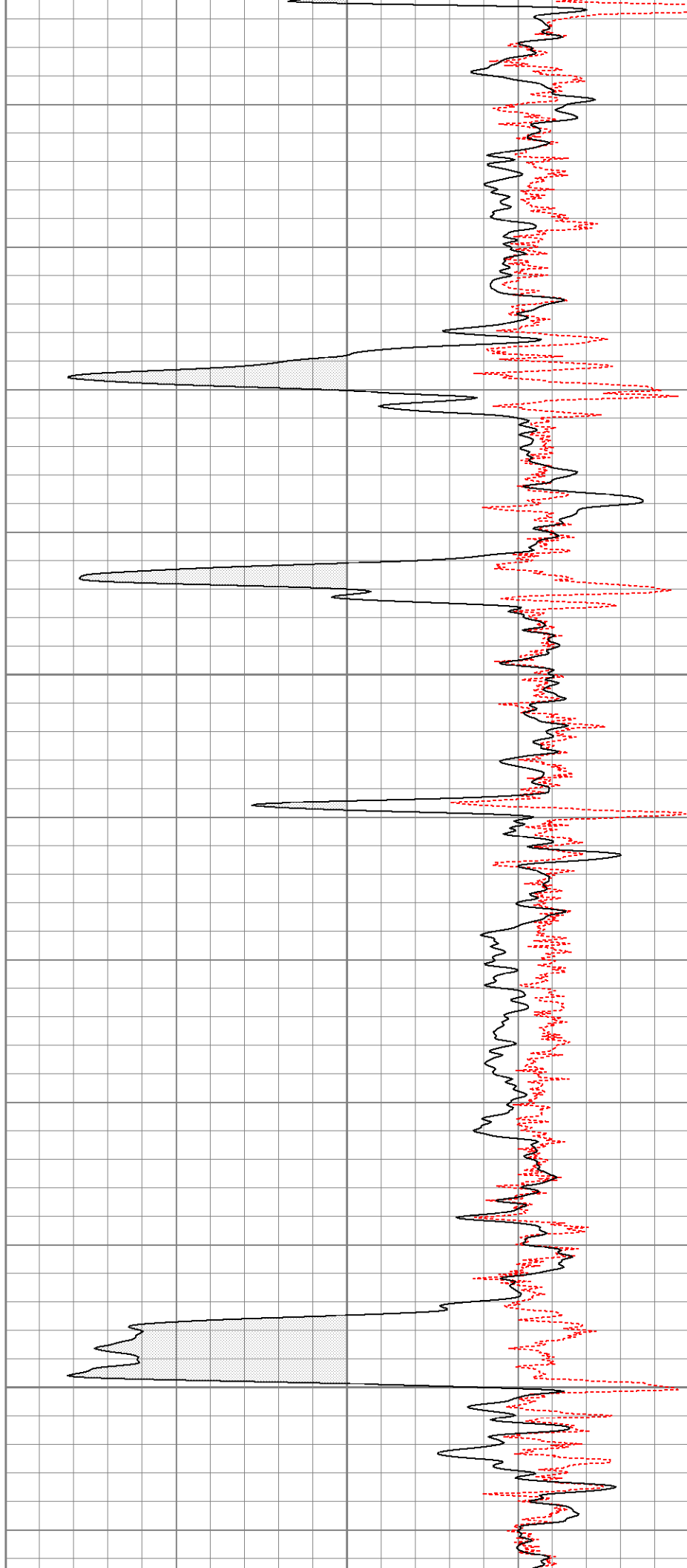
550

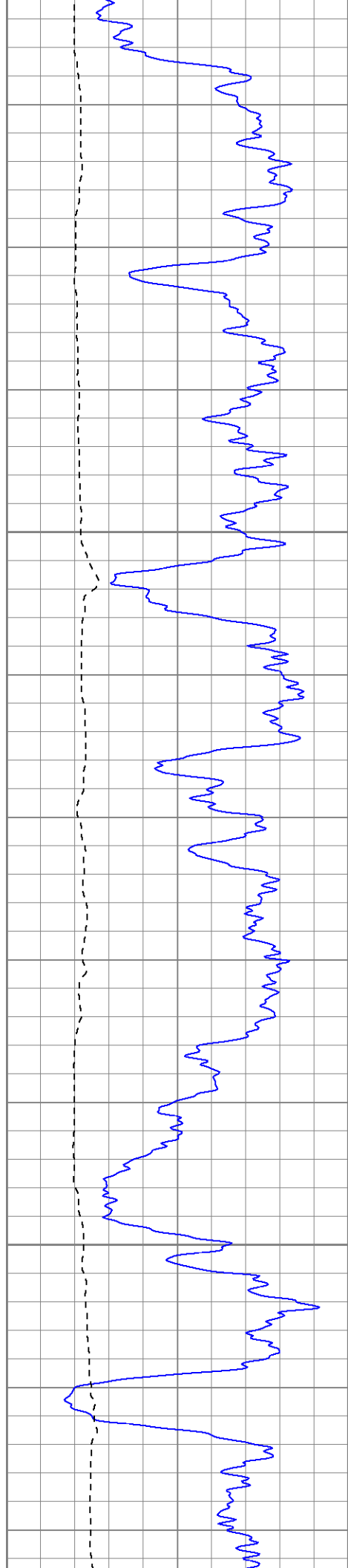




600

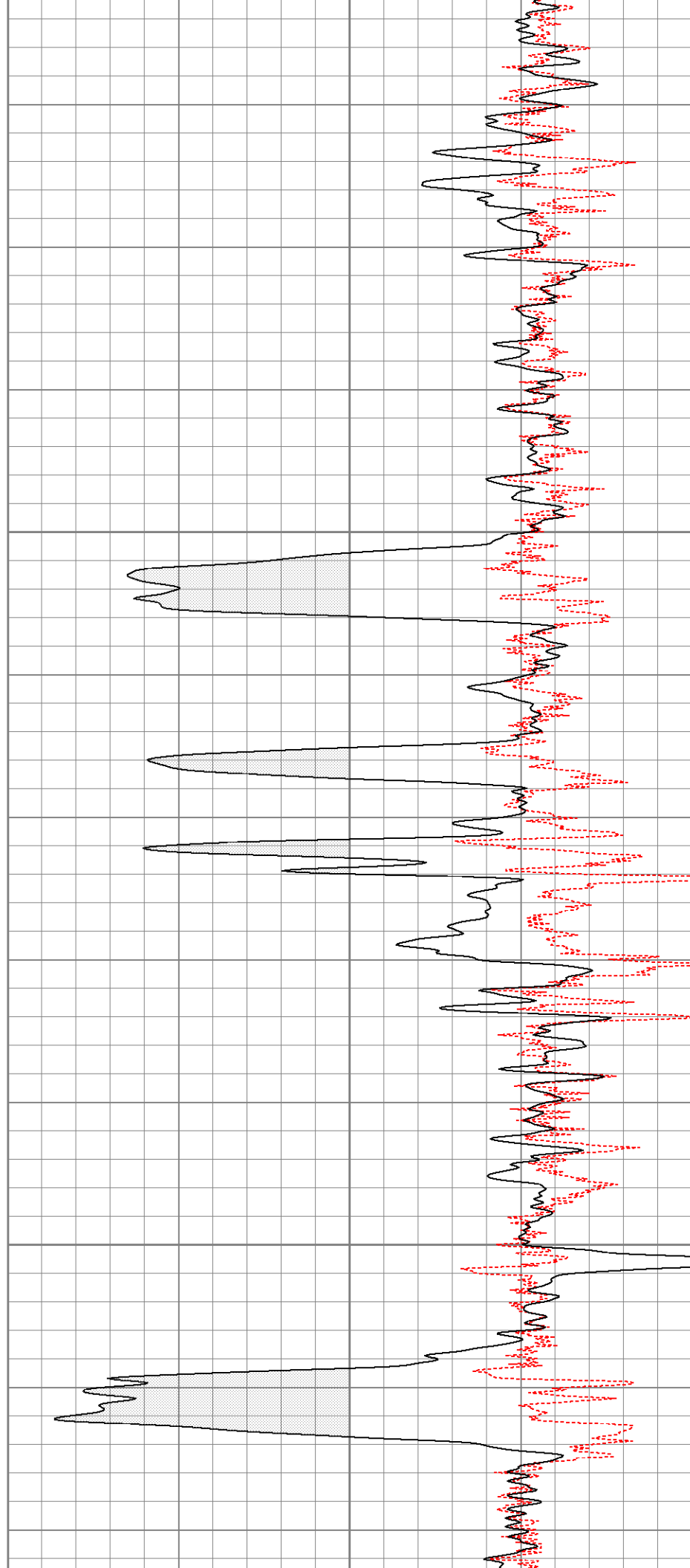
650

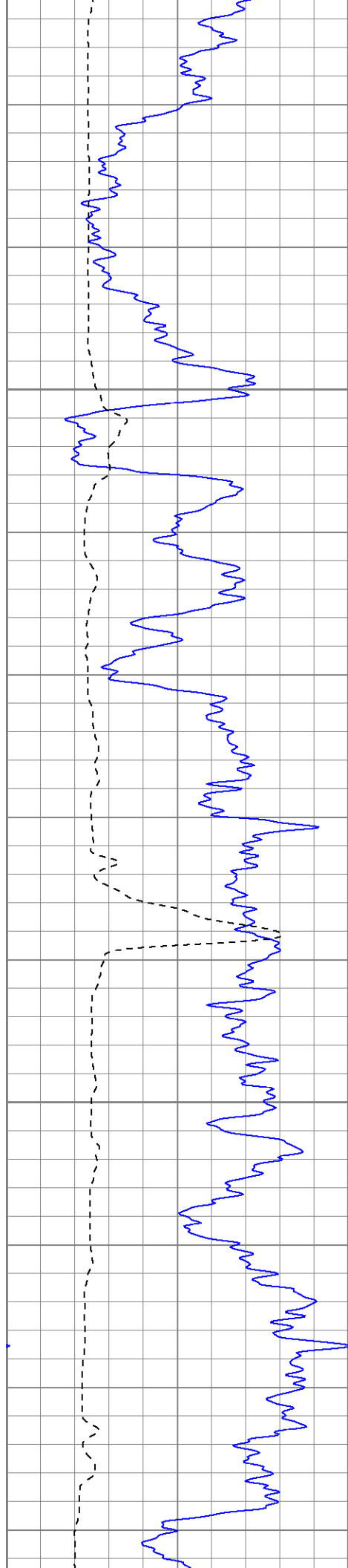




700

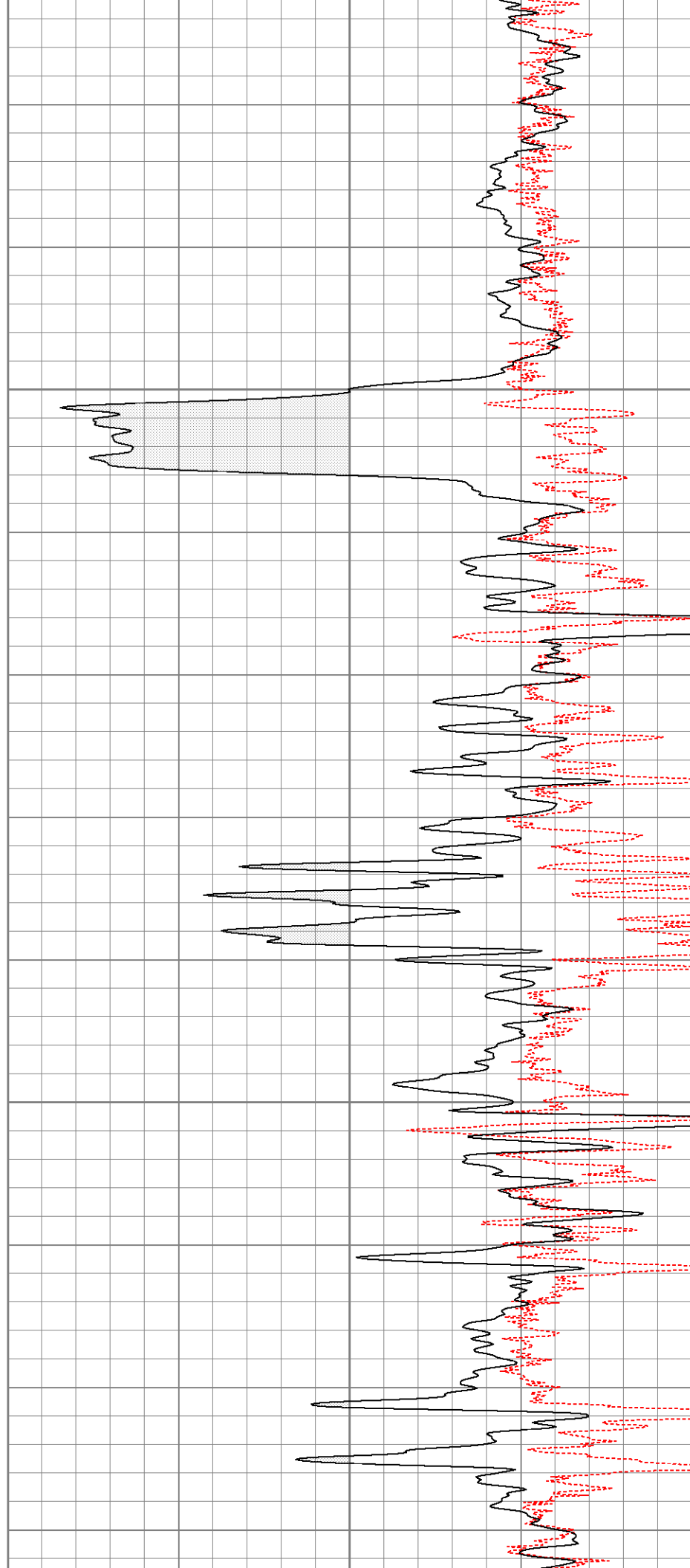
750



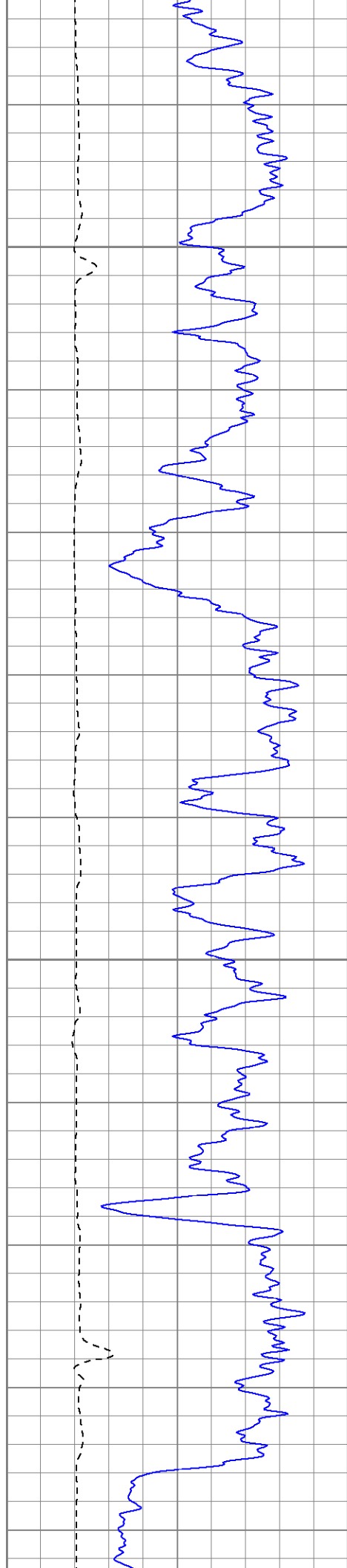


800

850

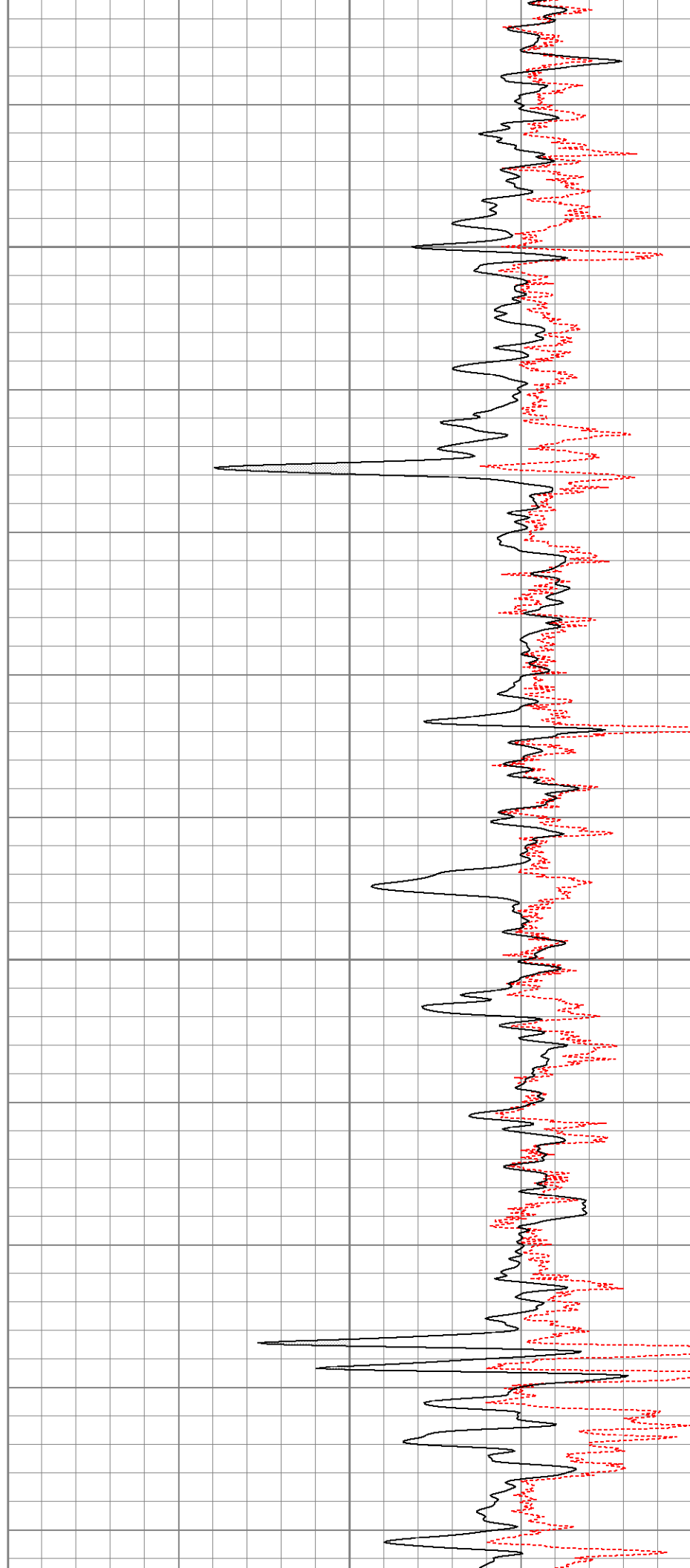


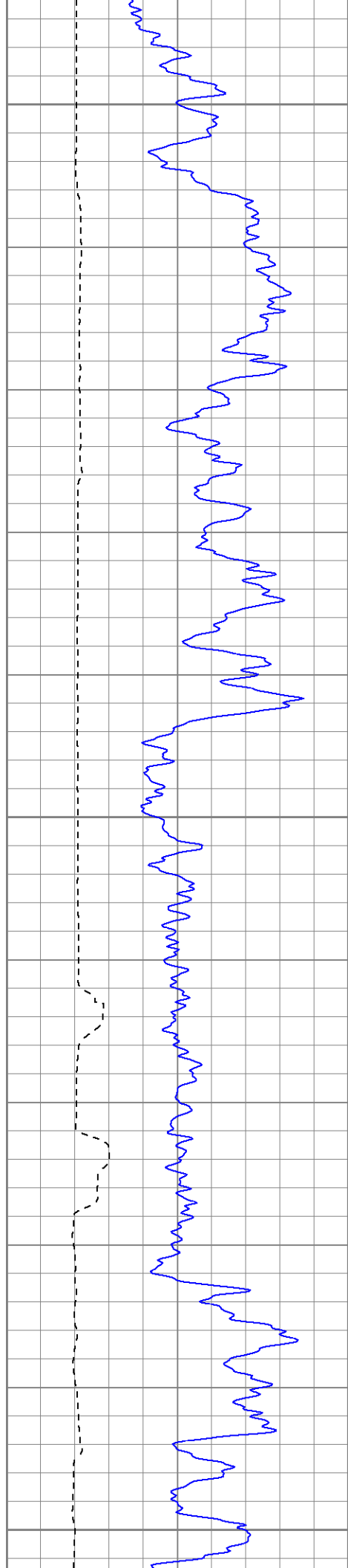




900

950

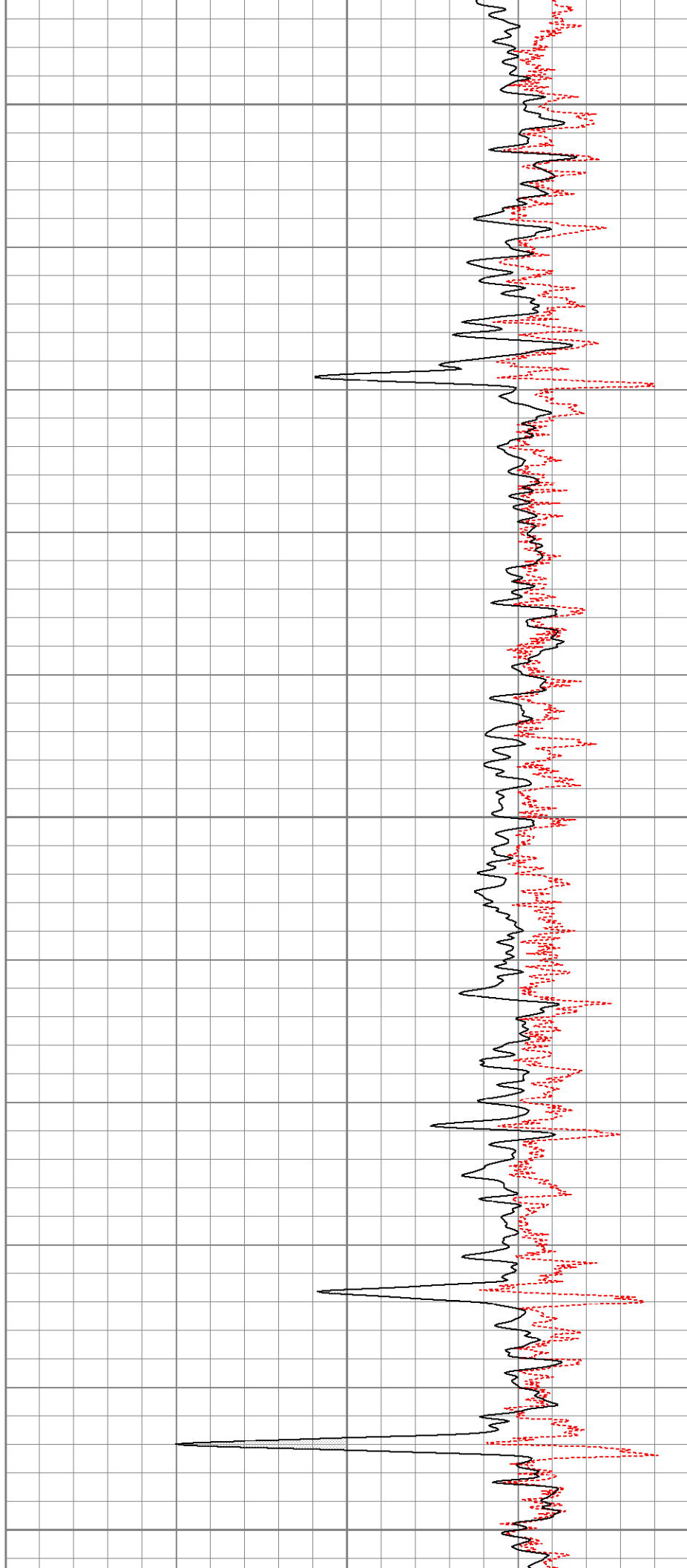


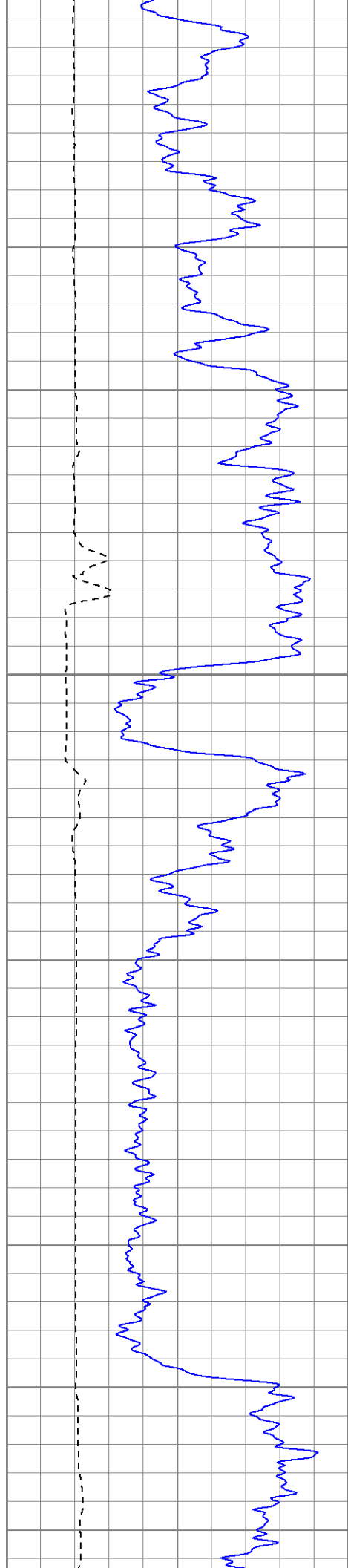


1000

1050

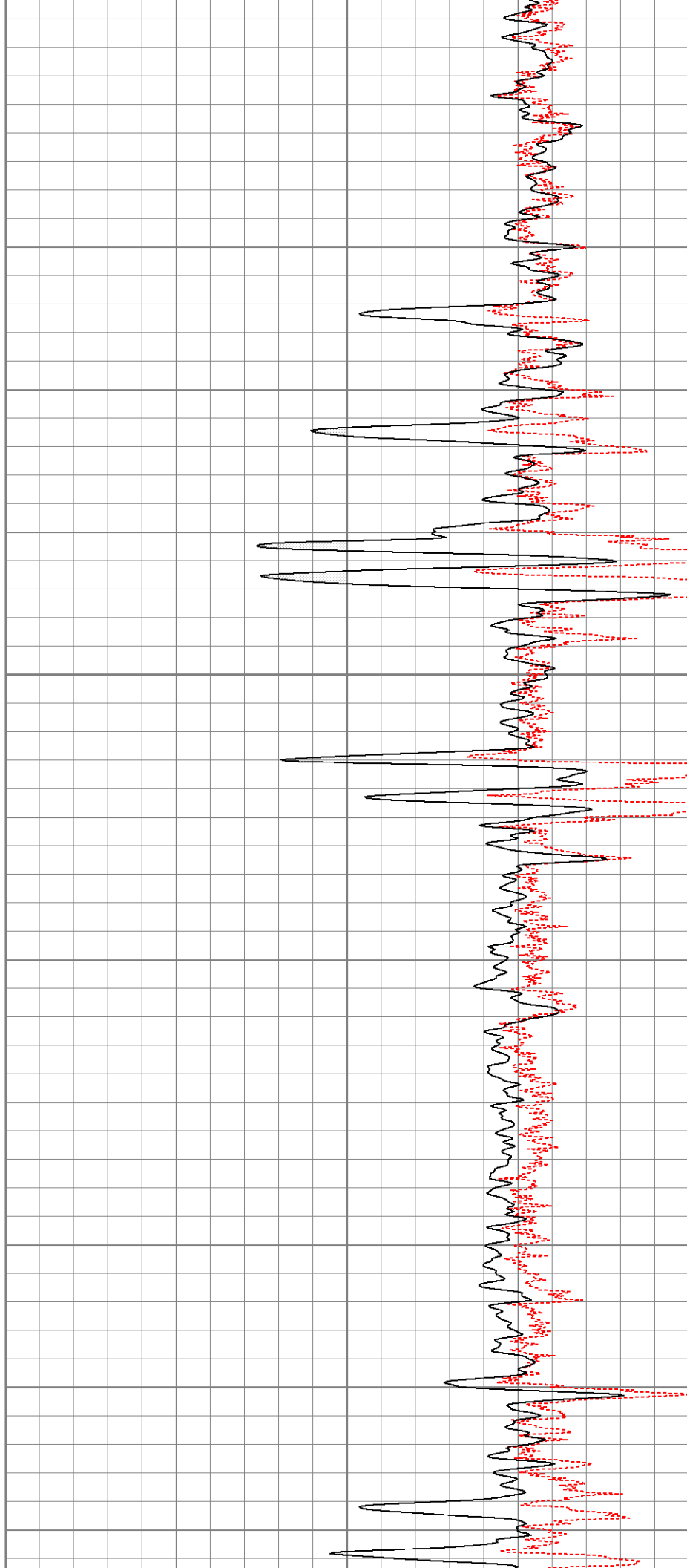
1100

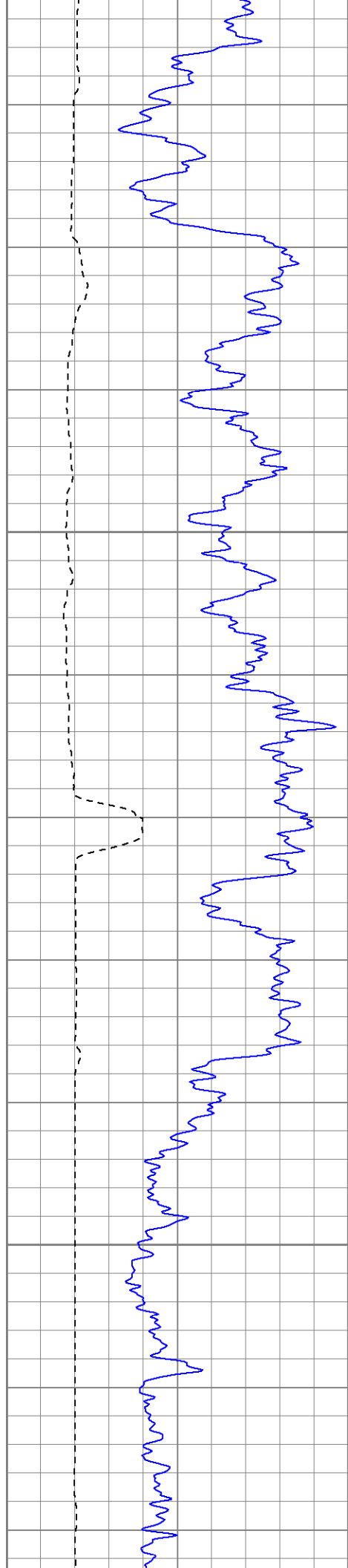




1150

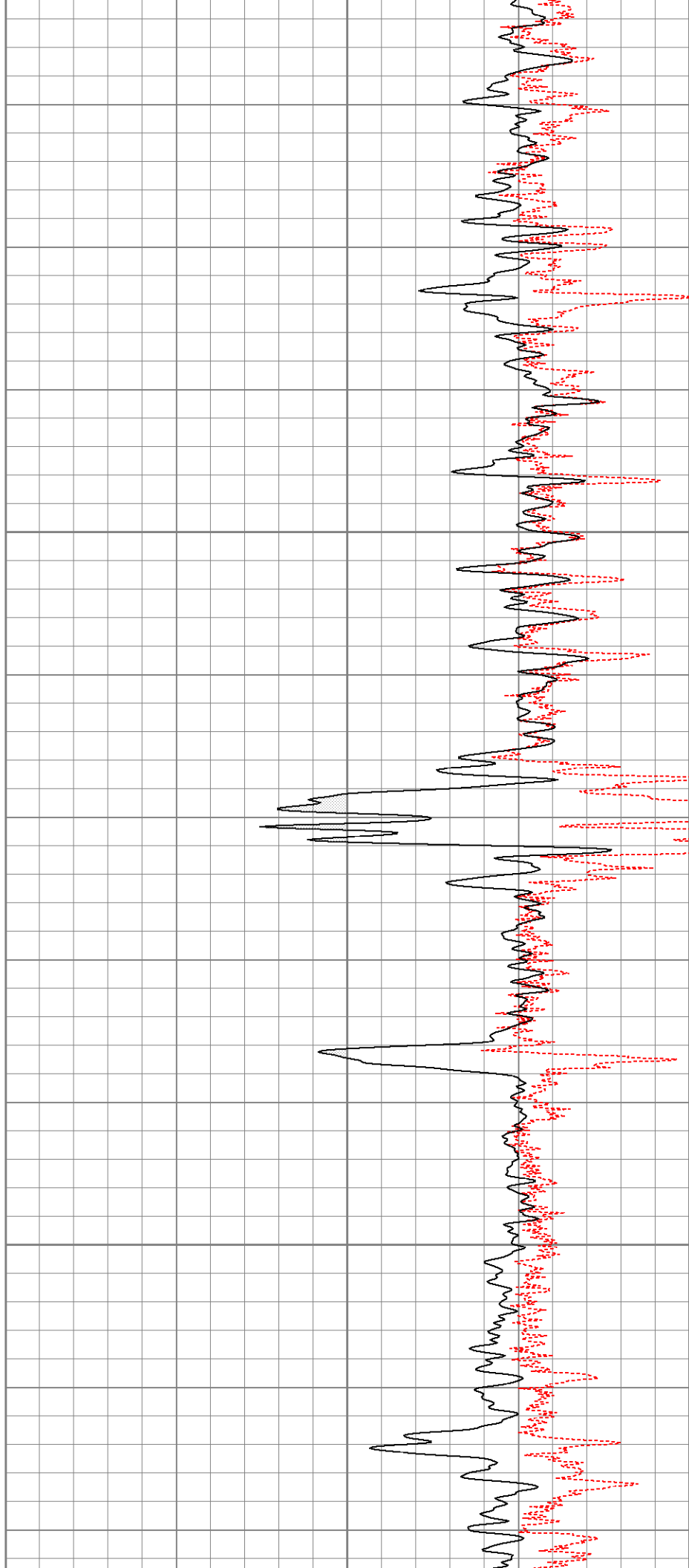
1200

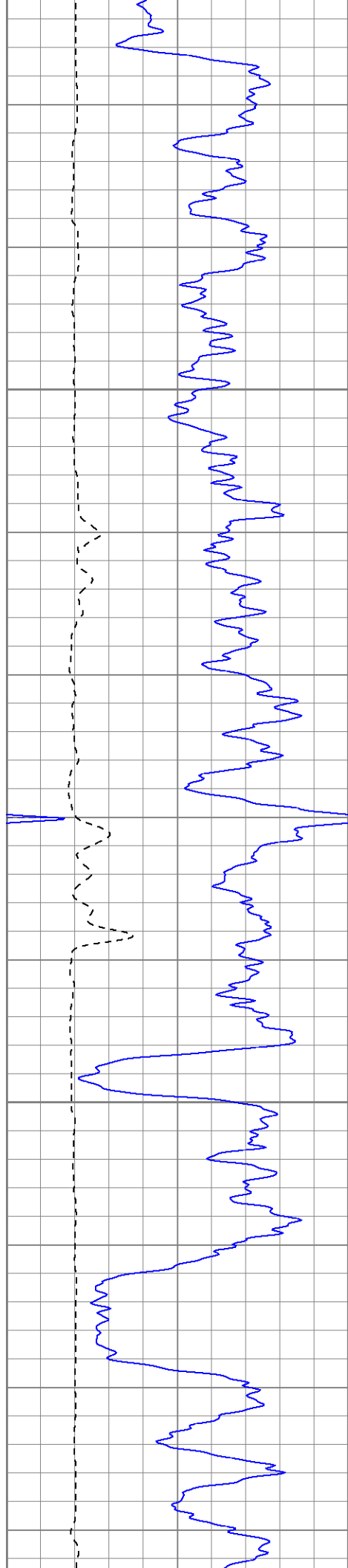




1250

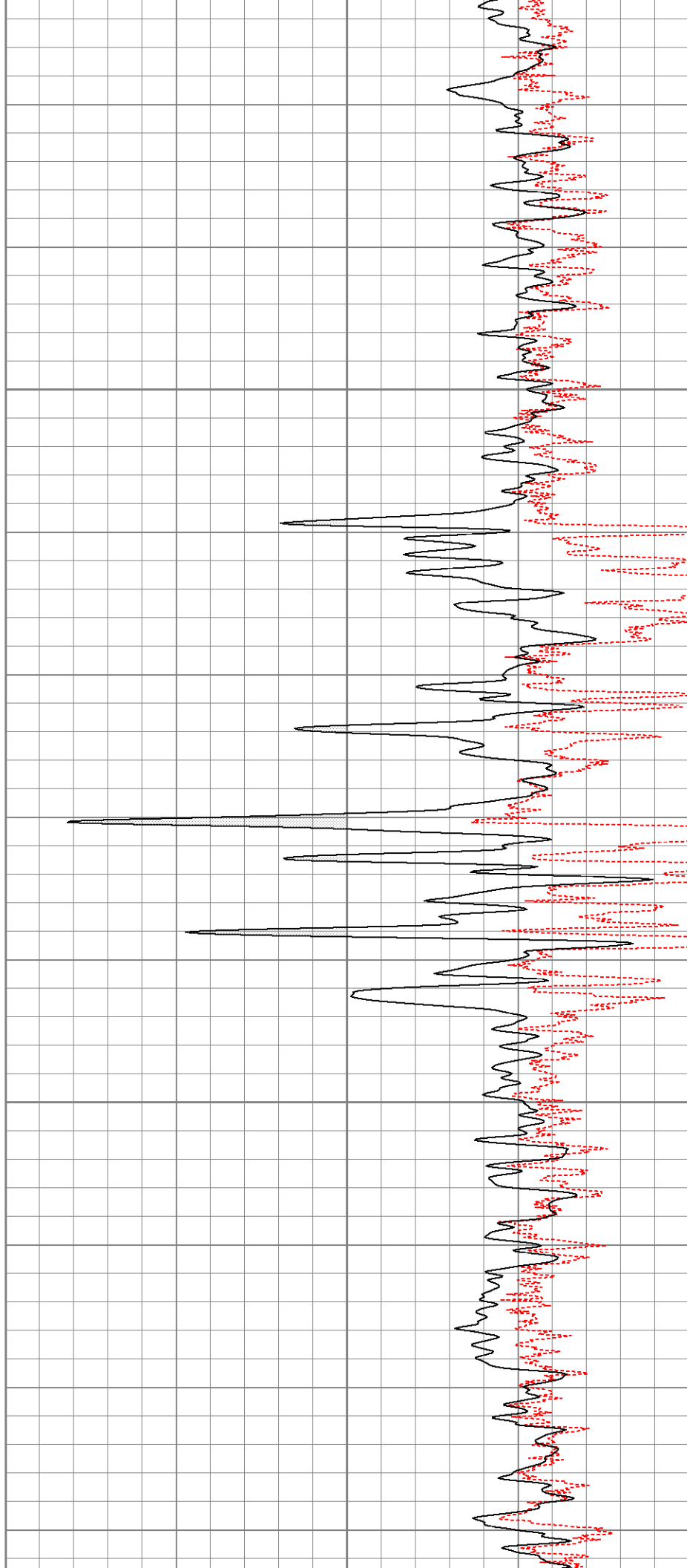
1300

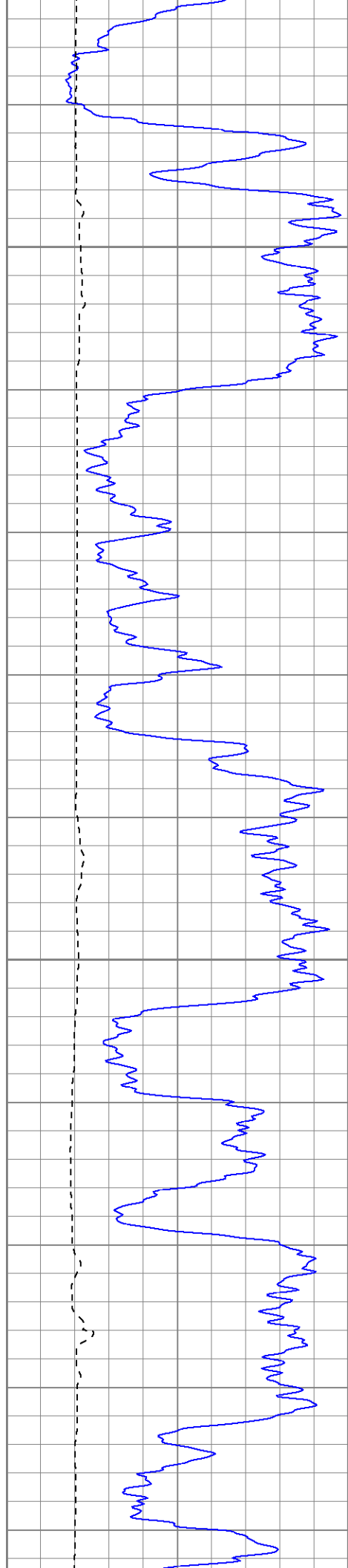




1350

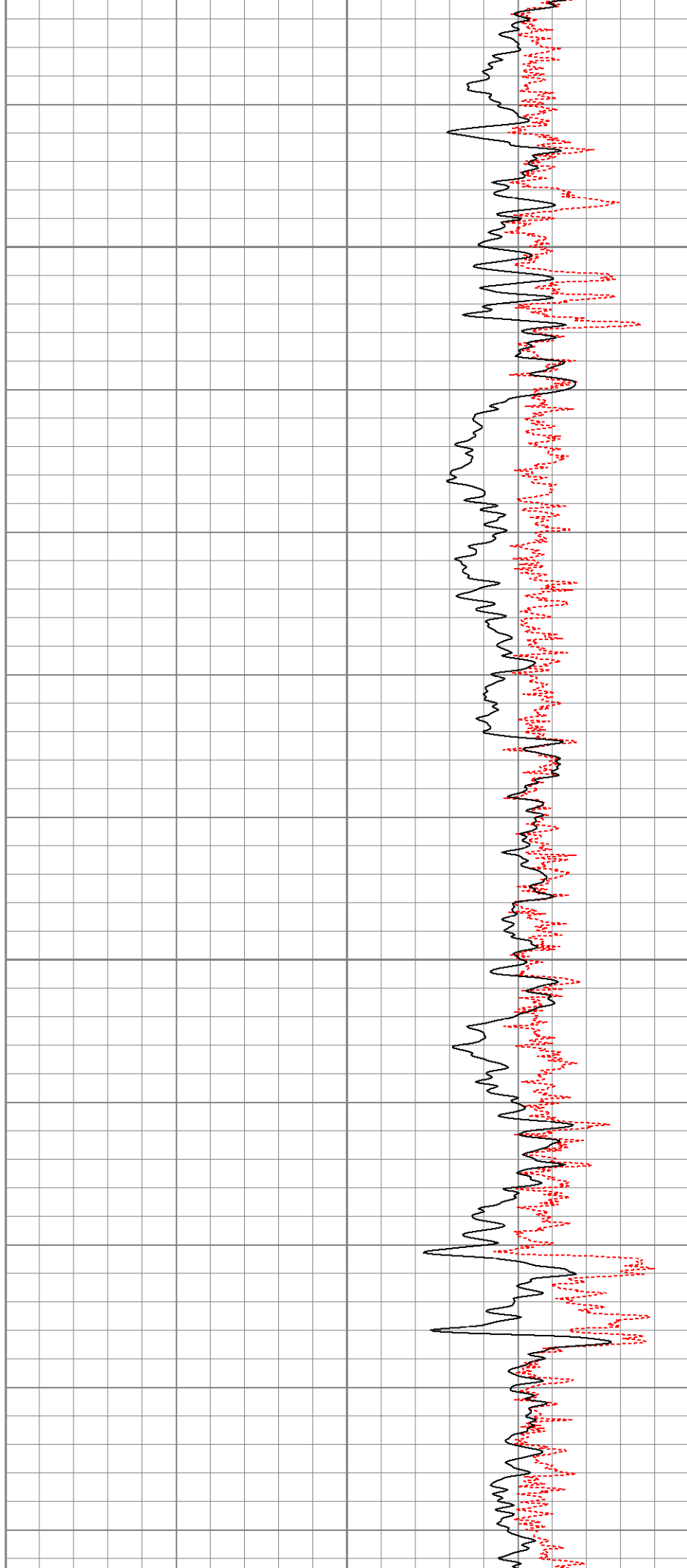
1400

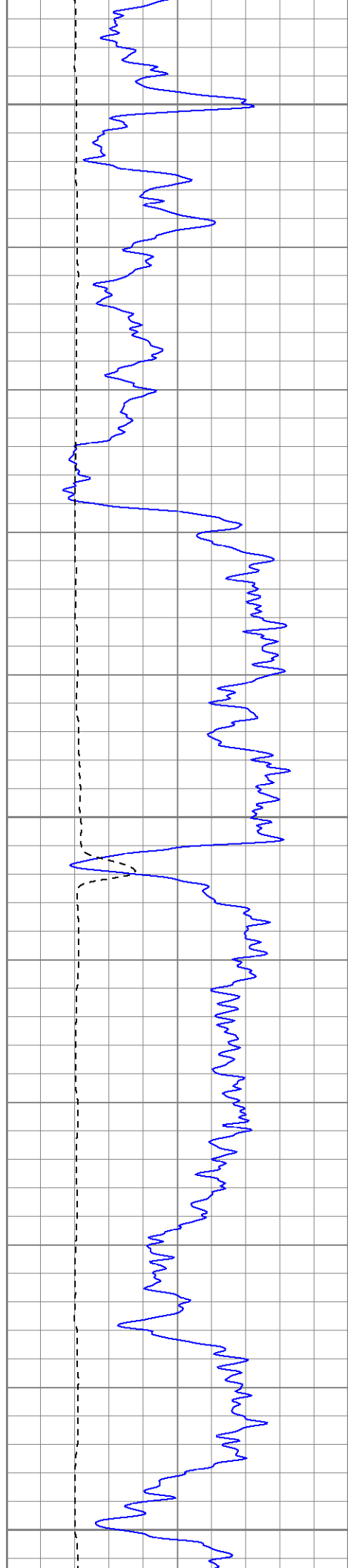




1450

1500

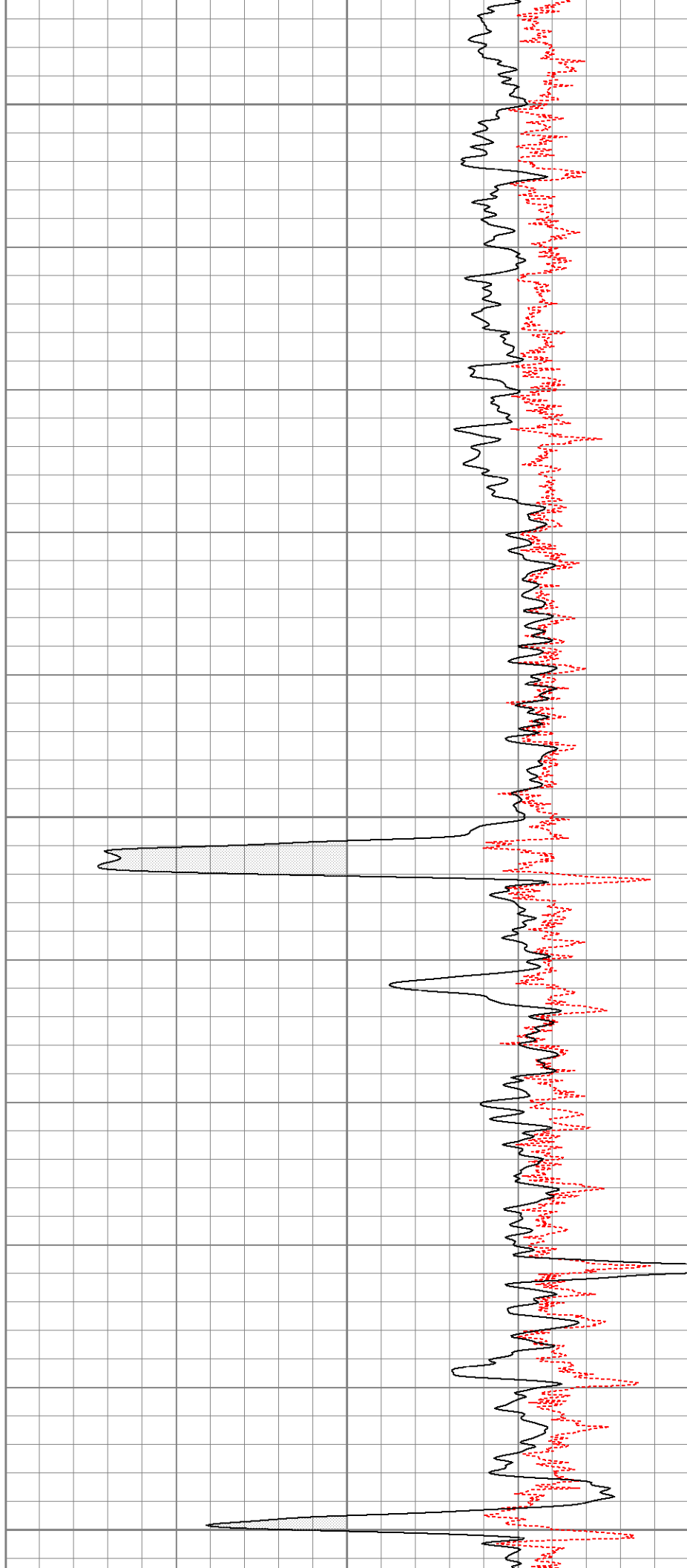


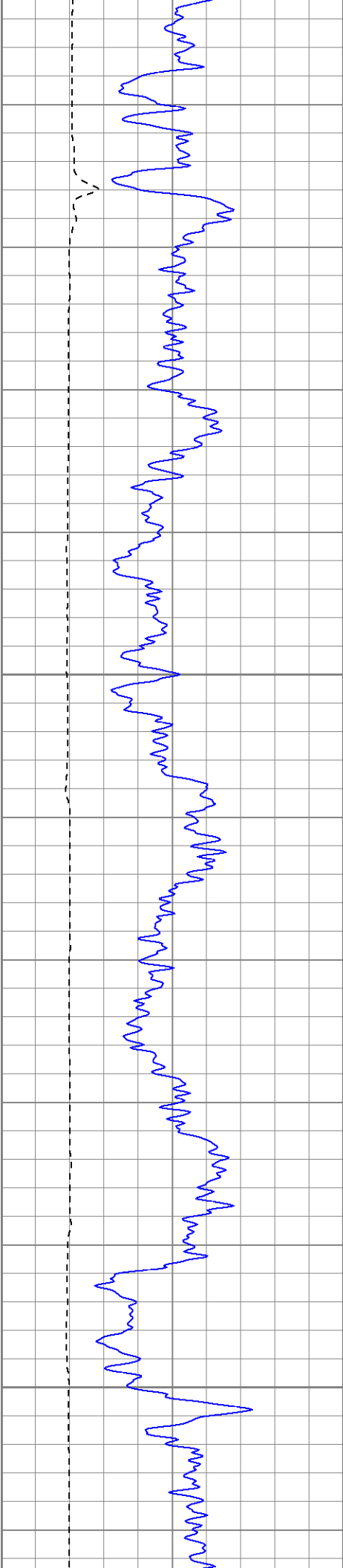


1550

1600

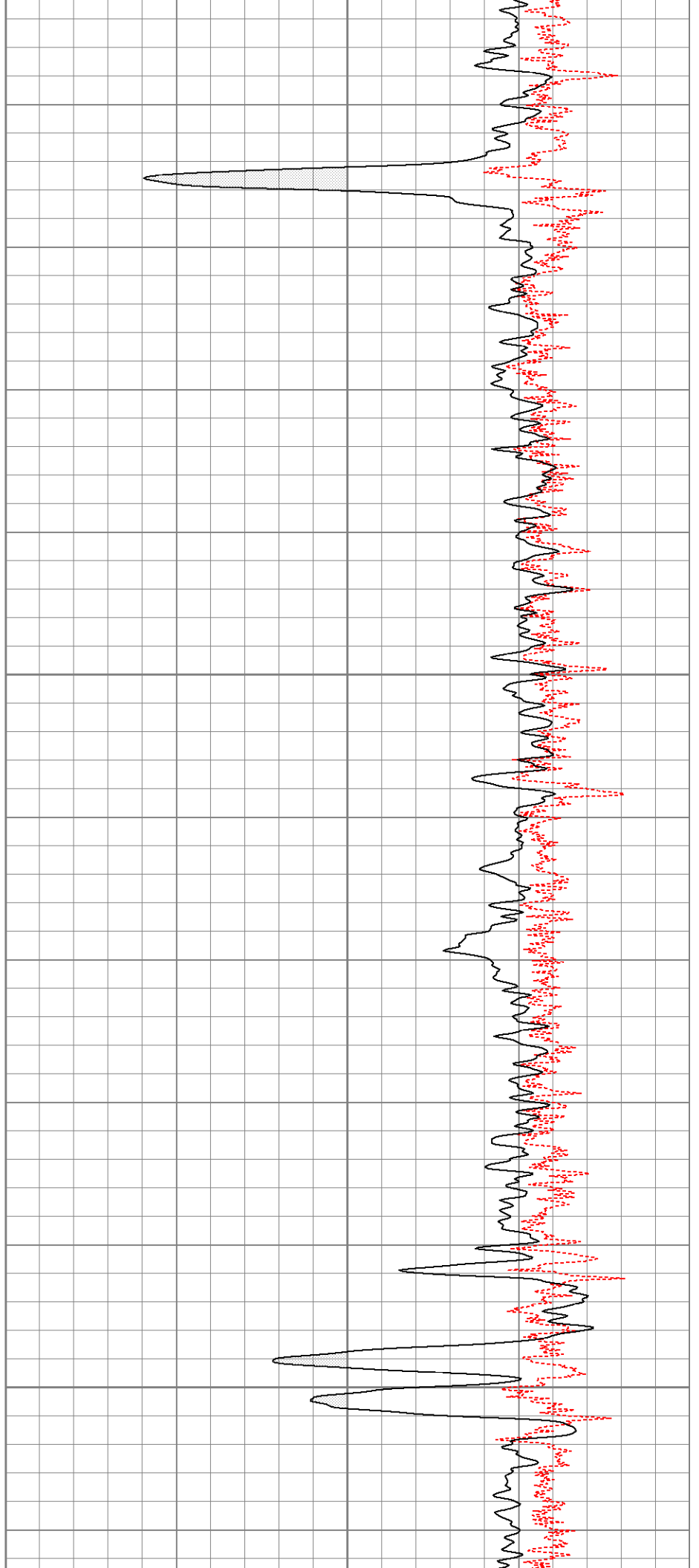
1650



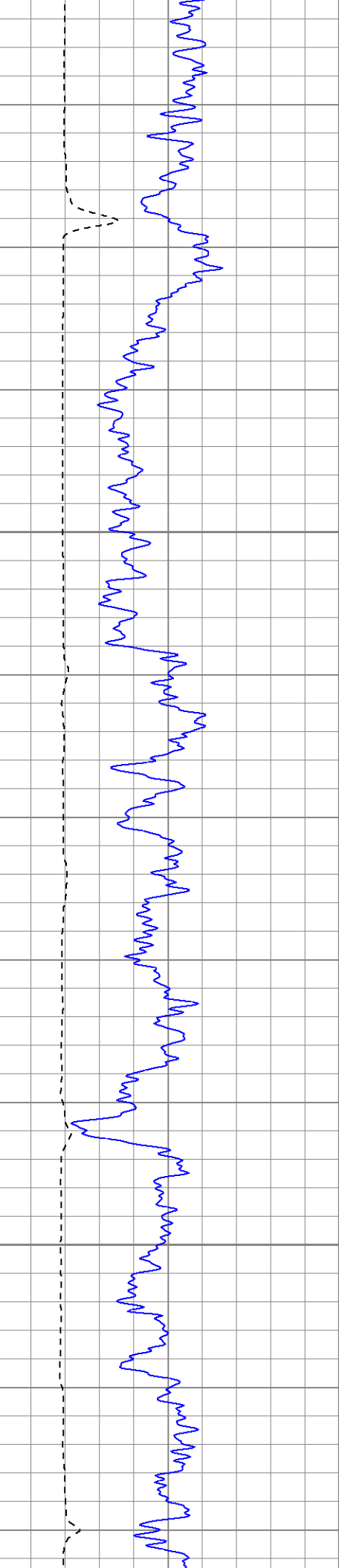


1700

1750

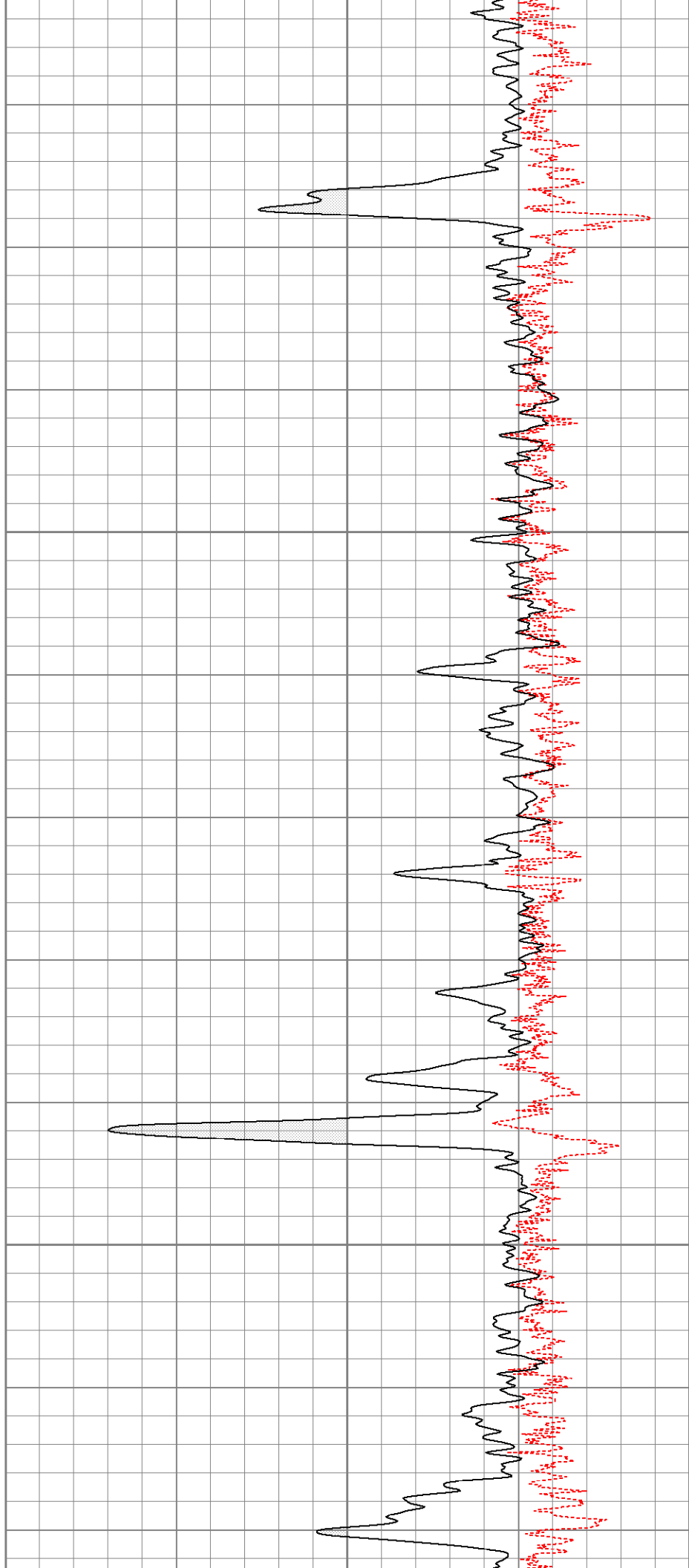


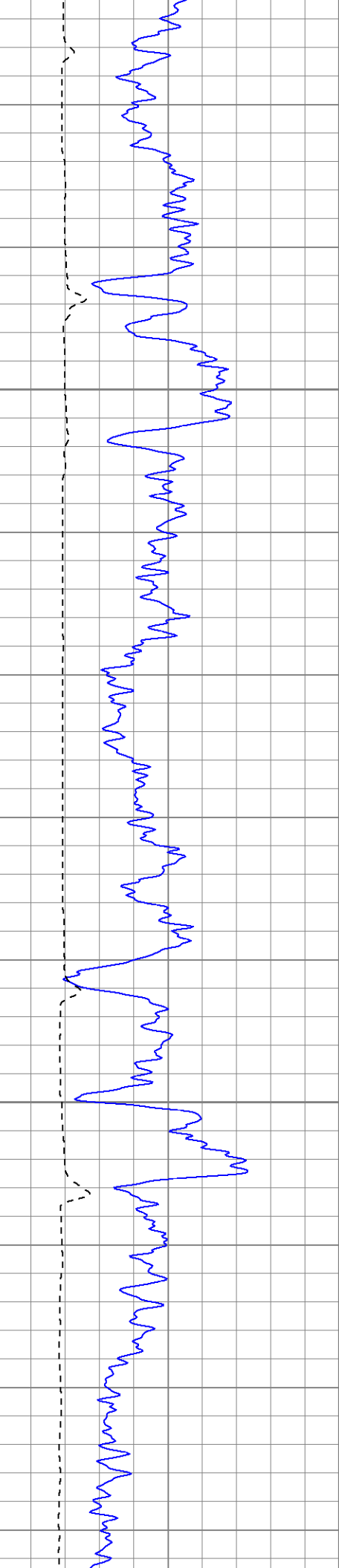




1800

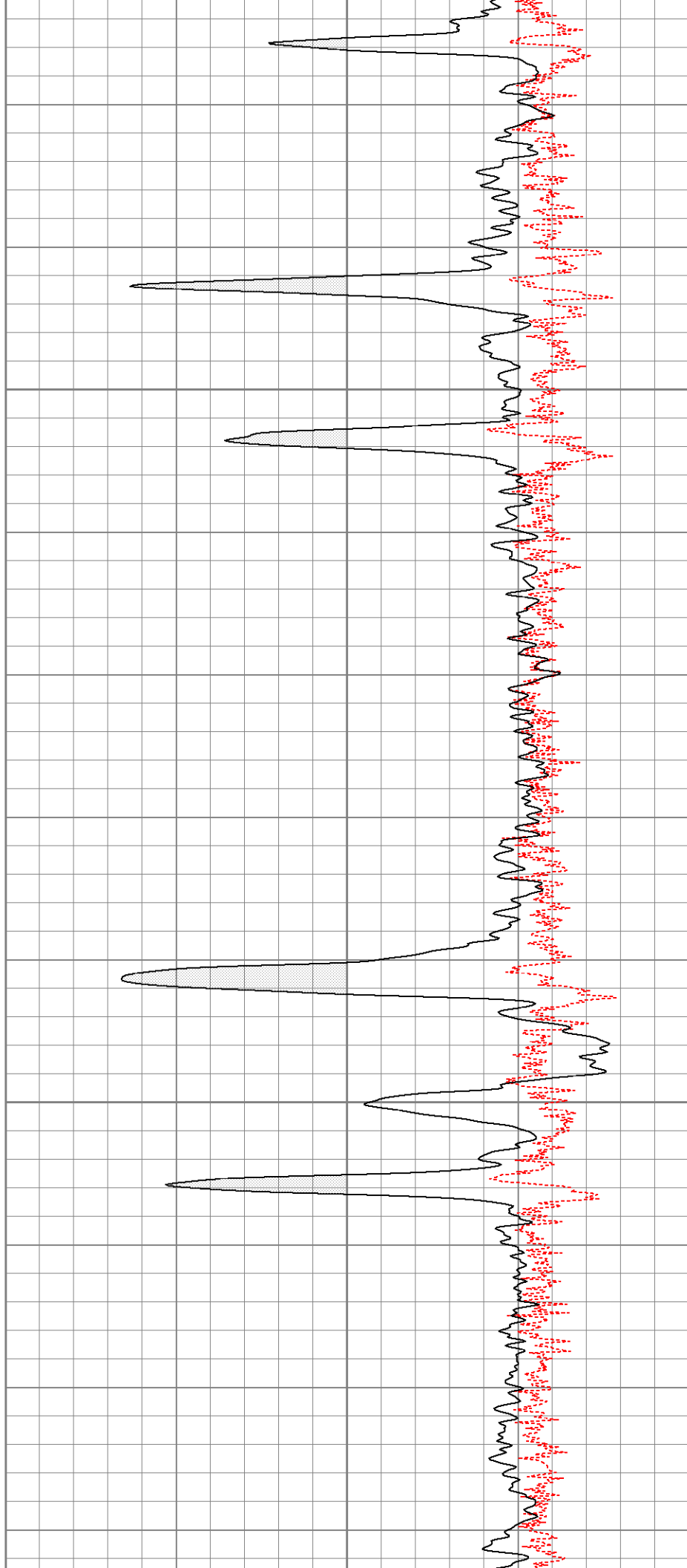
1850

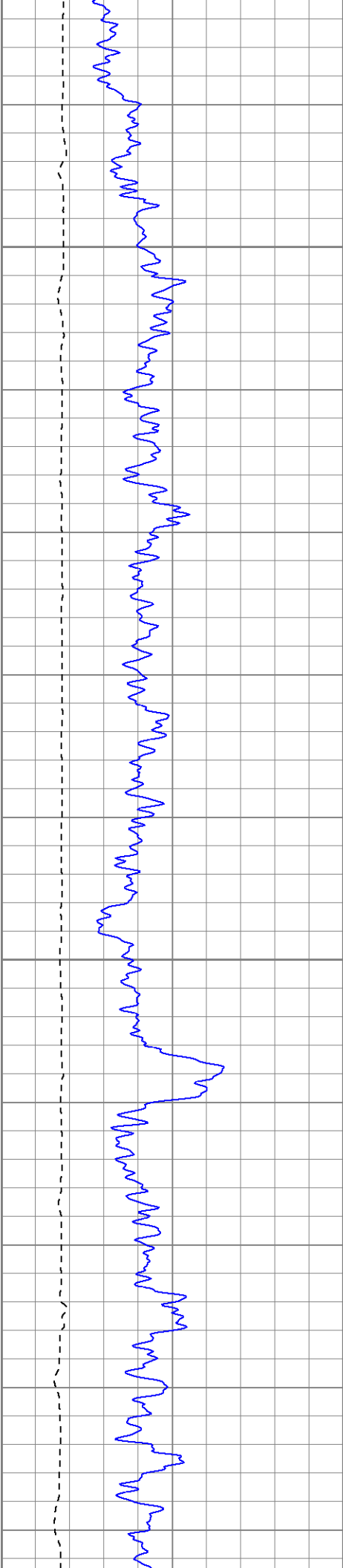




1900

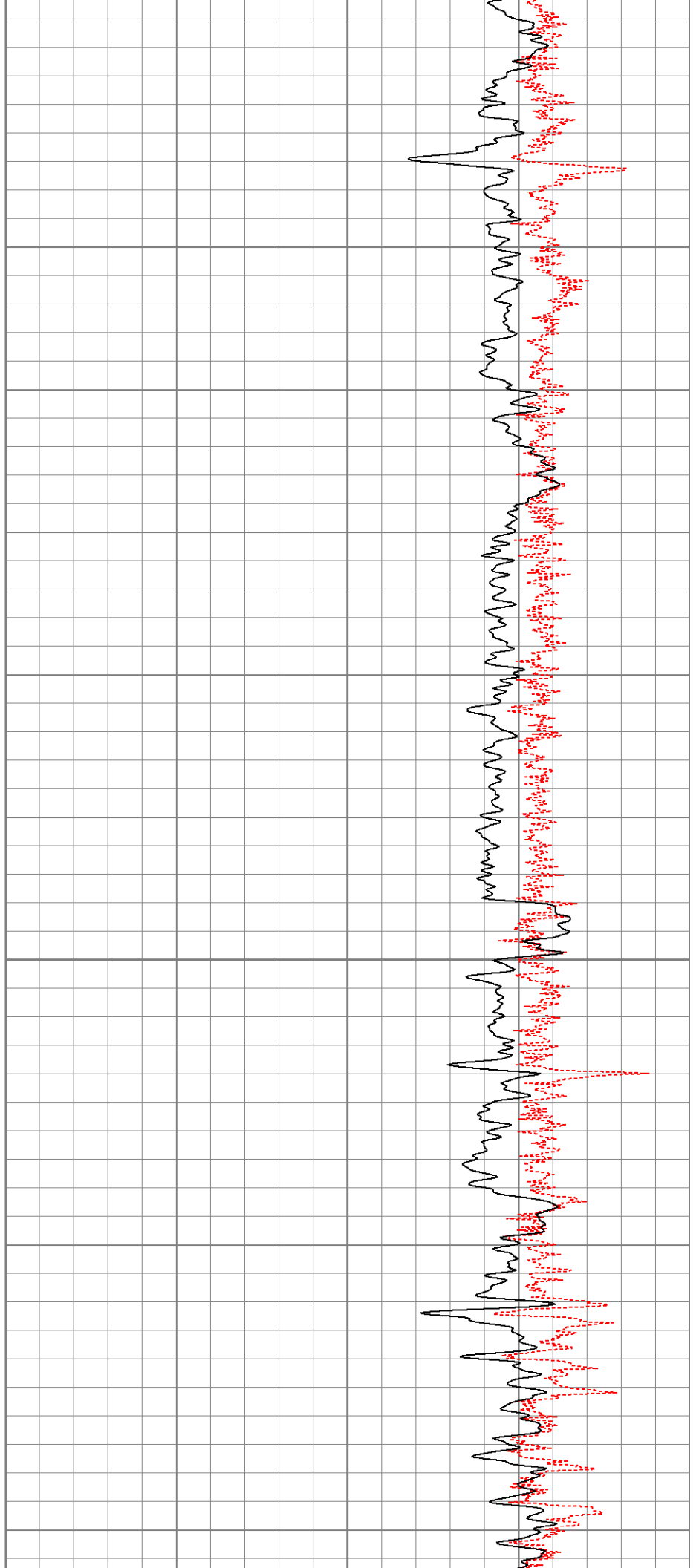
1950

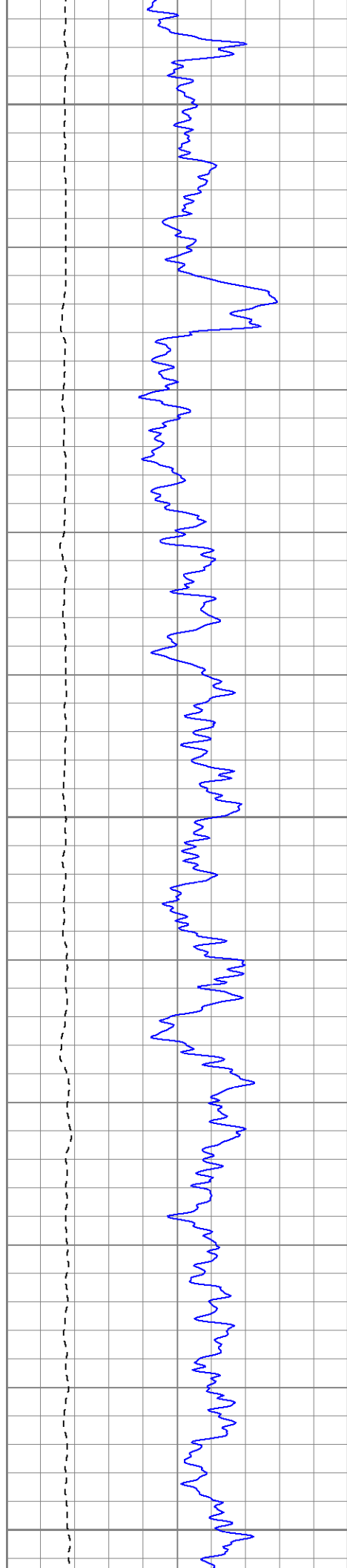




2000

2050

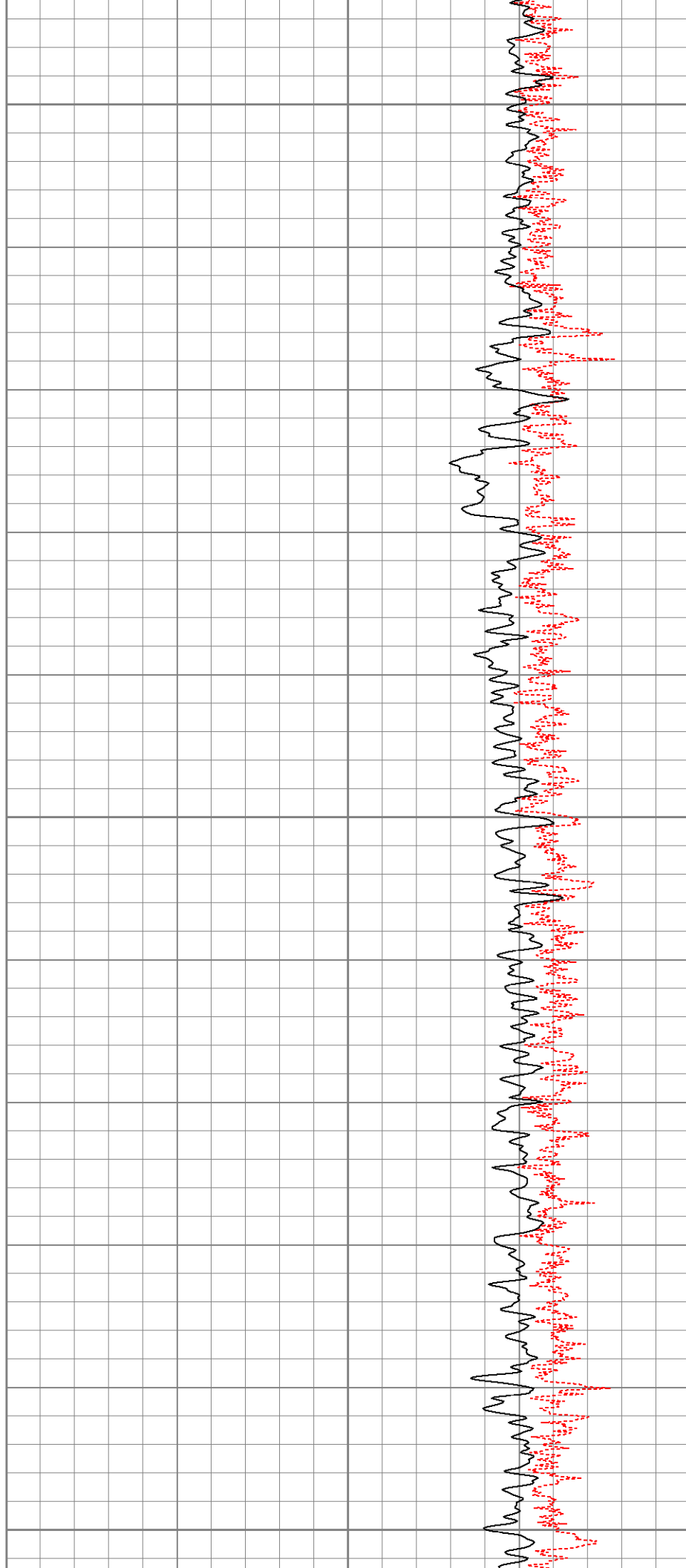


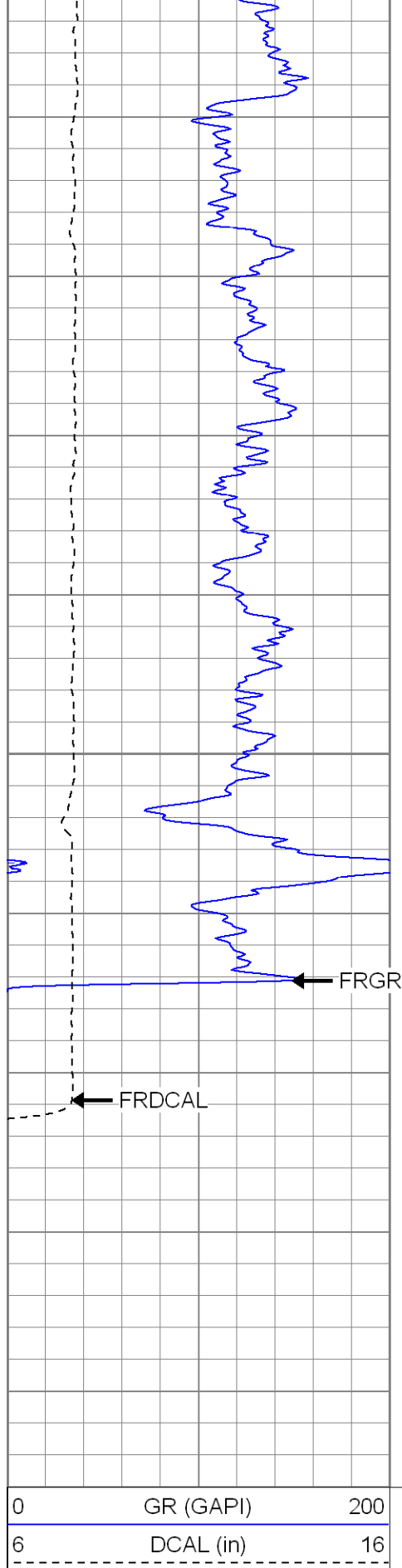


2100

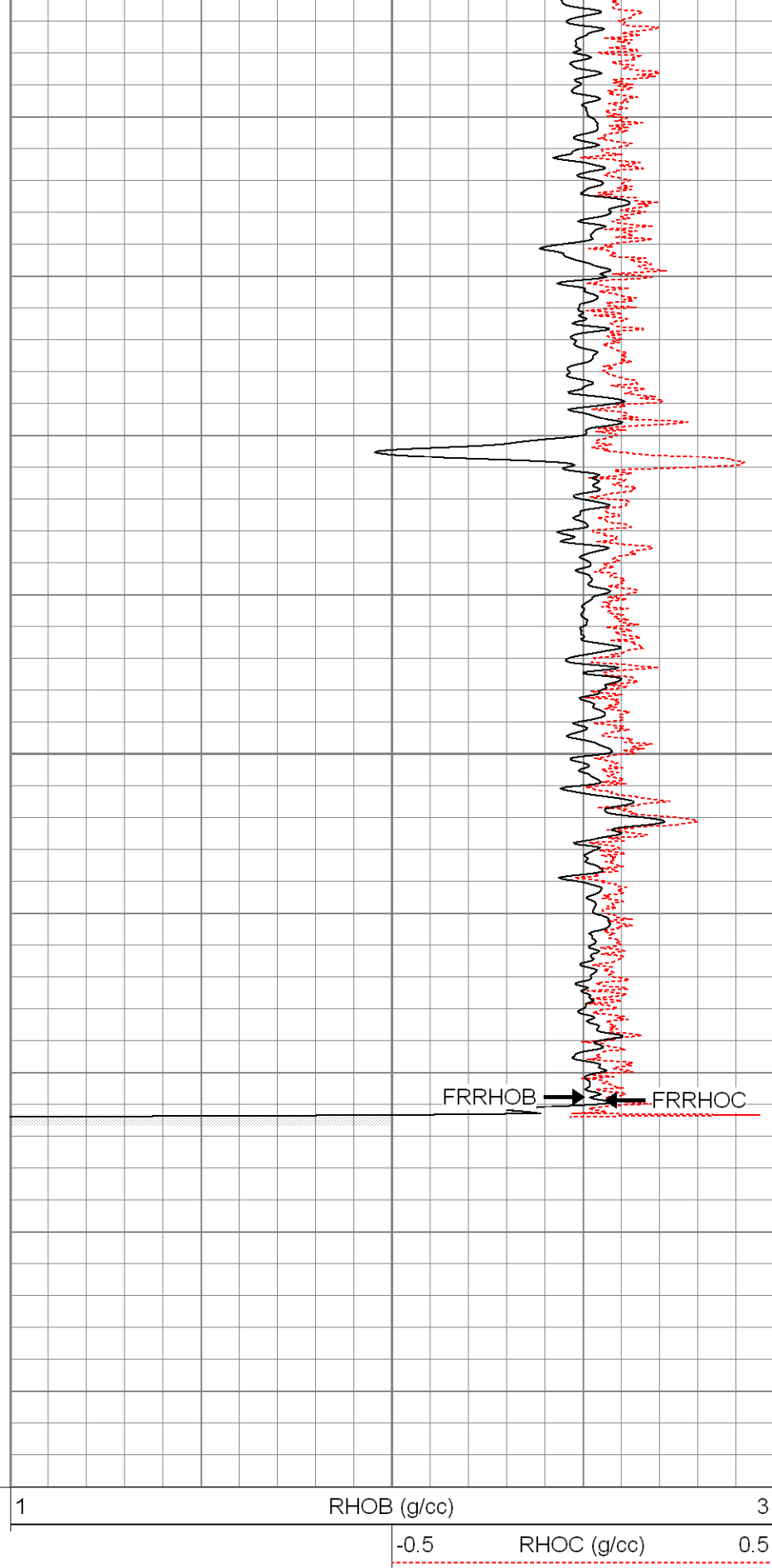
2150

2200





2250



### Calibration Report

Database File: xtone2416.db  
Dataset Pathname: pass1

## Dual Induction Calibration Report

Serial-Model: 5375-G  
 Surface Cal Performed: Wed Mar 05 01:17:28 2008  
 Downhole Cal Performed: Wed Mar 05 01:18:19 2008

## Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.000	0.619	V	0.000	500.000	mmho-m	808.416	-0.143
Medium	0.003	0.740	V	0.000	550.000	mmho-m	746.121	-2.291
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	0.618	V	0.000	500.000	mmho-m	809.686	-0.193
Medium	0.003	0.740	V	0.000	550.000	mmho-m	746.925	-2.612

## Downhole Calibration

Internal:	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Deep	0.133	499.798	mmho-m	0.049	499.265	mmho-m	0.999	-0.084
Medium	0.460	549.973	mmho-m	0.319	549.727	mmho-m	1.000	-0.141
Shallow	2.510	0.008	V	500.000	2.000	Ohm-m	199.015	0.480

## Compensated Density Calibration Report

Serial-Model: 2118-poilex  
 Source / Verifier: /  
 Master Calibration Performed: Tue Feb 19 13:14:22 2008

## Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	689.13	662.28	cps
Aluminum	2.590	g/cc	156.84	466.09	cps
Spine Angle = 76.65			Density/Spine Ratio = 0.578		
	Size		Reading		
Small Ring	8.50	in	4.33	V	
Large Ring	14.00	in	8.24	V	

## Gamma Ray Calibration Report

Serial Number: 2001  
 Tool Model: OH  
 Performed: Wed Mar 05 01:30:07 2008

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.2500 GAPI/cps

## Neutron Calibration Report

