



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

# COMPENSATED DENSITY NEUTRON LOG

Company XTO Energy Inc.  
Well Apache Canyon 32-14  
Field Purgatoire River  
County Las Animas State Colorado

Location: API # : 05 071 09129 00

716' FSL & 2071' FWL

SEC 32 TWP 33S RGE 67W

Permanent Datum Ground Level Elevation 7983'  
Log Measured From Ground Level  
Drilling Measured From Ground Level

Other Services  
dill  
Elevation  
K.B. -----  
D.F. -----  
G.L. 7983'

Date 6-15-07

Run Number One

Depth Driller 2600'

Depth Logger 2598'

Bottom Logged Interval 2596'

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 9:45 P.M.

Time Logger on Bottom 12:45 A.M.

Maximum Recorded Temperature 112 DEG F

Equipment Number T697

Location Trinidad

Recorded By M. Norton

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

Density Neutron Porosity Presented On Sandstone Matrix.

ABHV Calculated For 5 1/2" Casing

Well Directions:

First Bosque entrance just before Weston, first right at Cherry Canyon,  
stay left at Y, stay on main road approx. four and half miles, take road to left, first location.

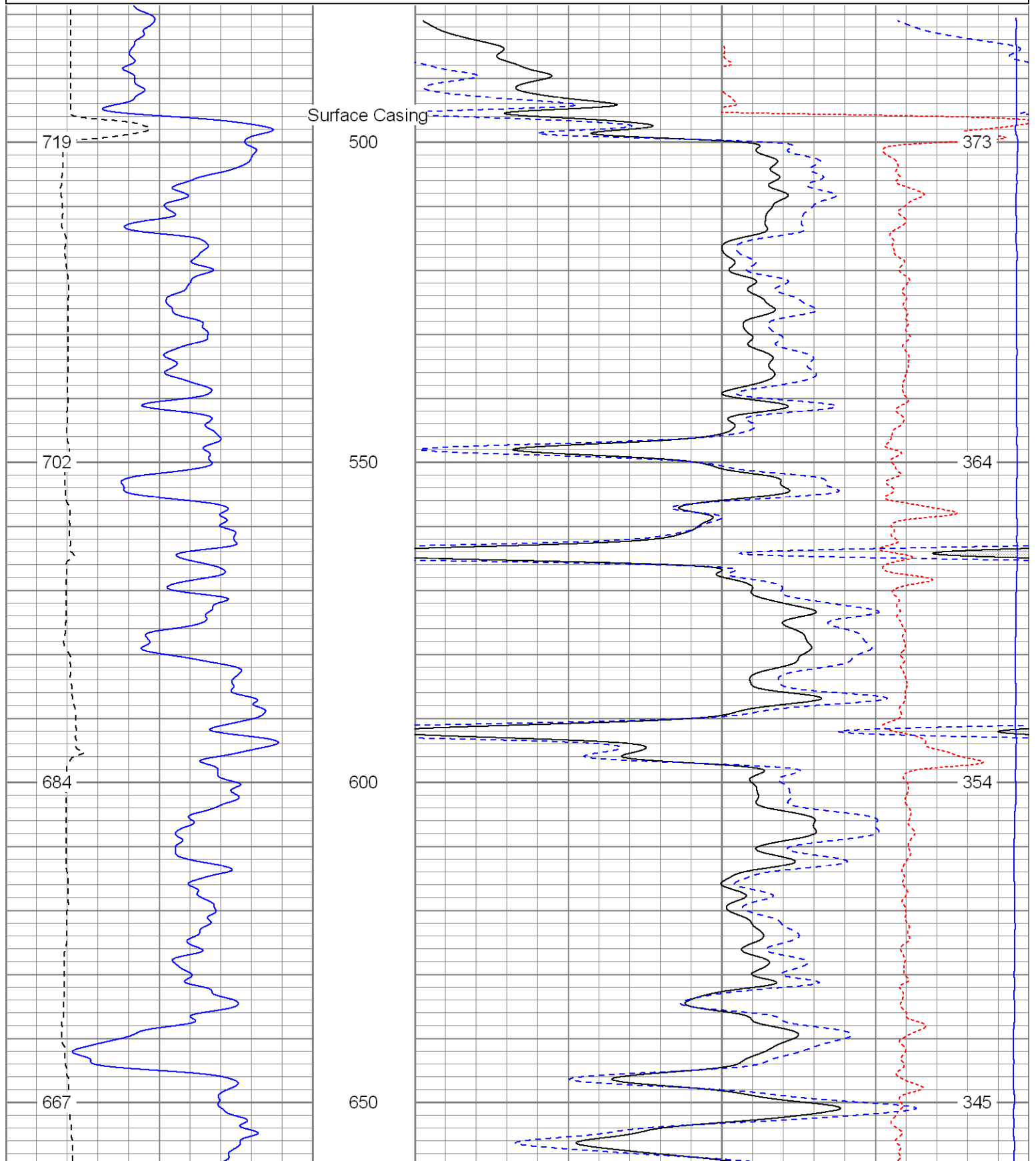


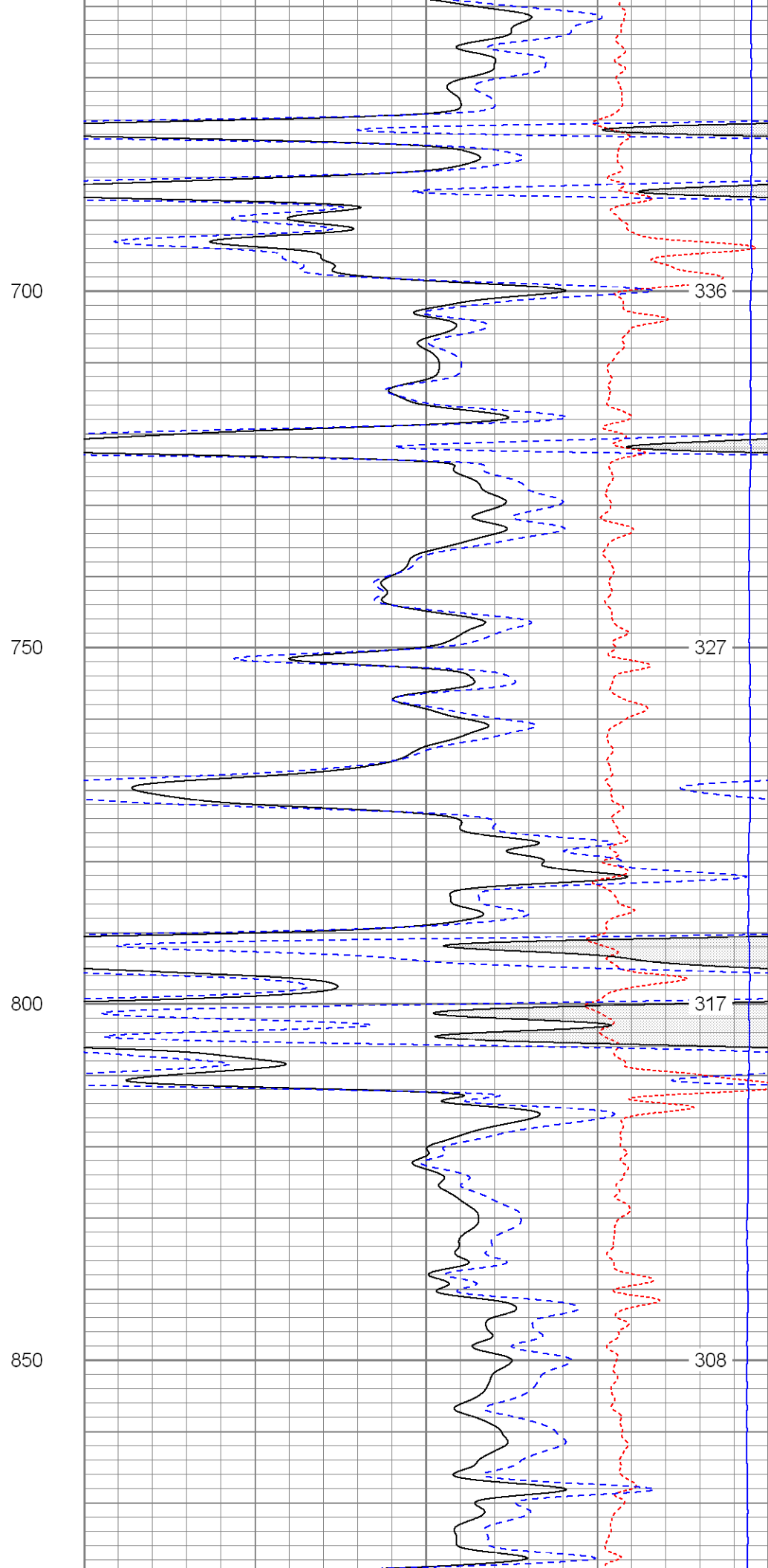
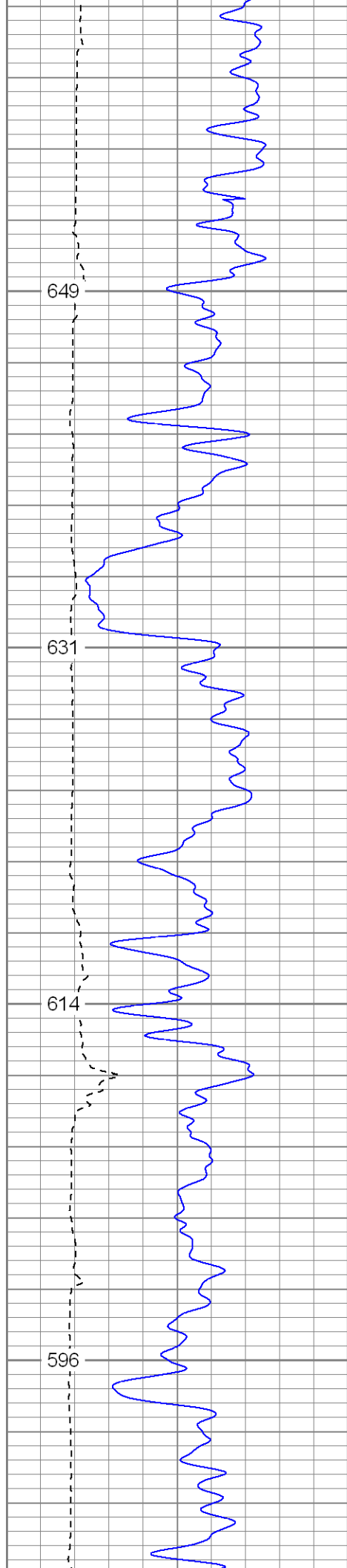
**SUPERIOR**  
Black Lick, Pa.  
Mercer, Pa.  
Wooster, Oh.  
Cleveland, Ok.  
Trinidad, Co.

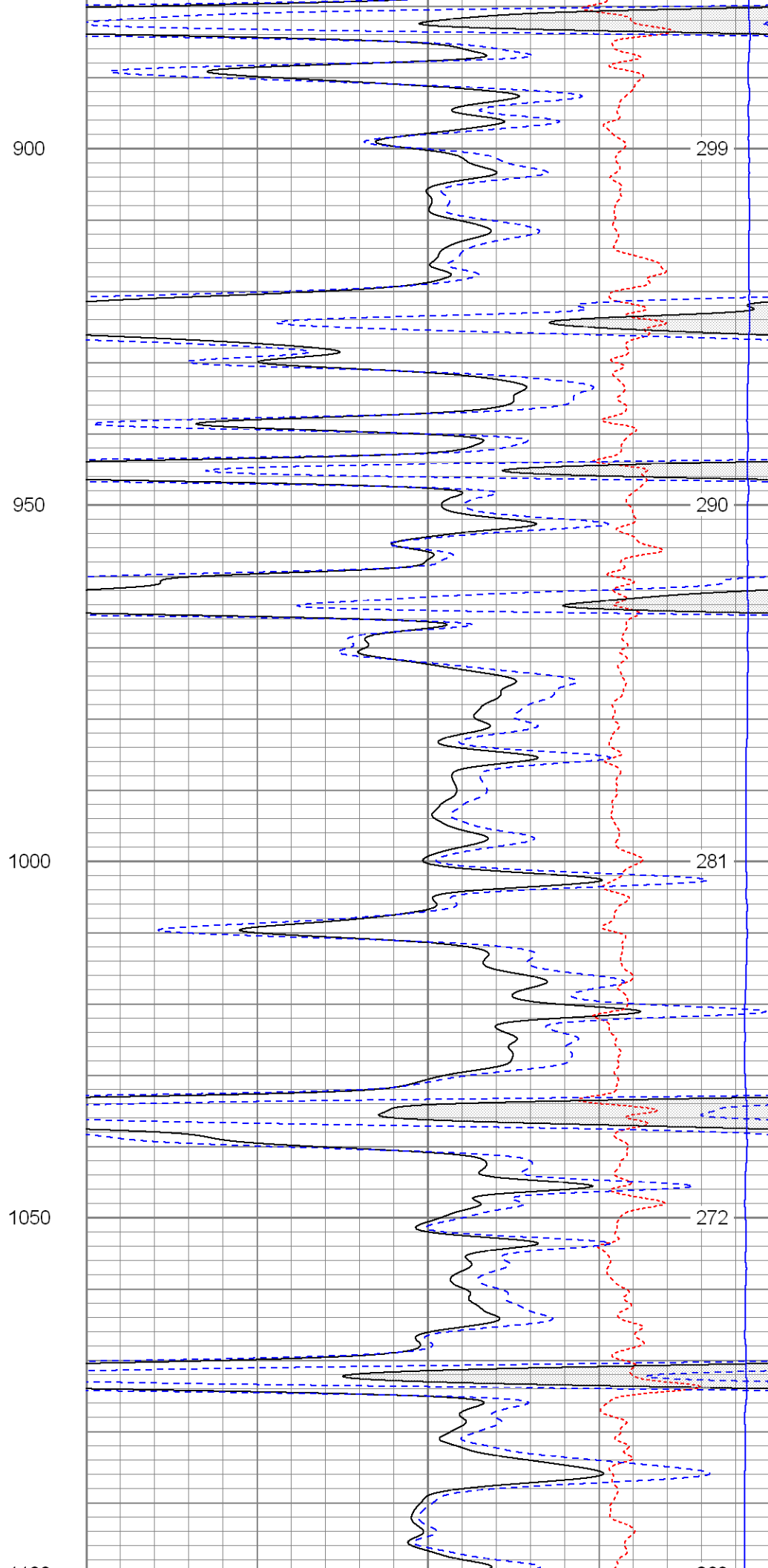
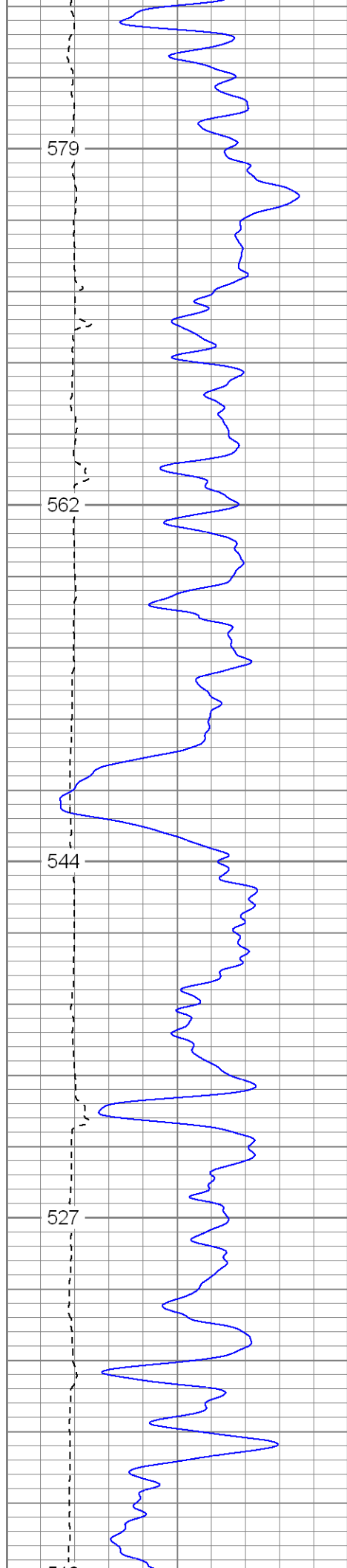
# Main Pass

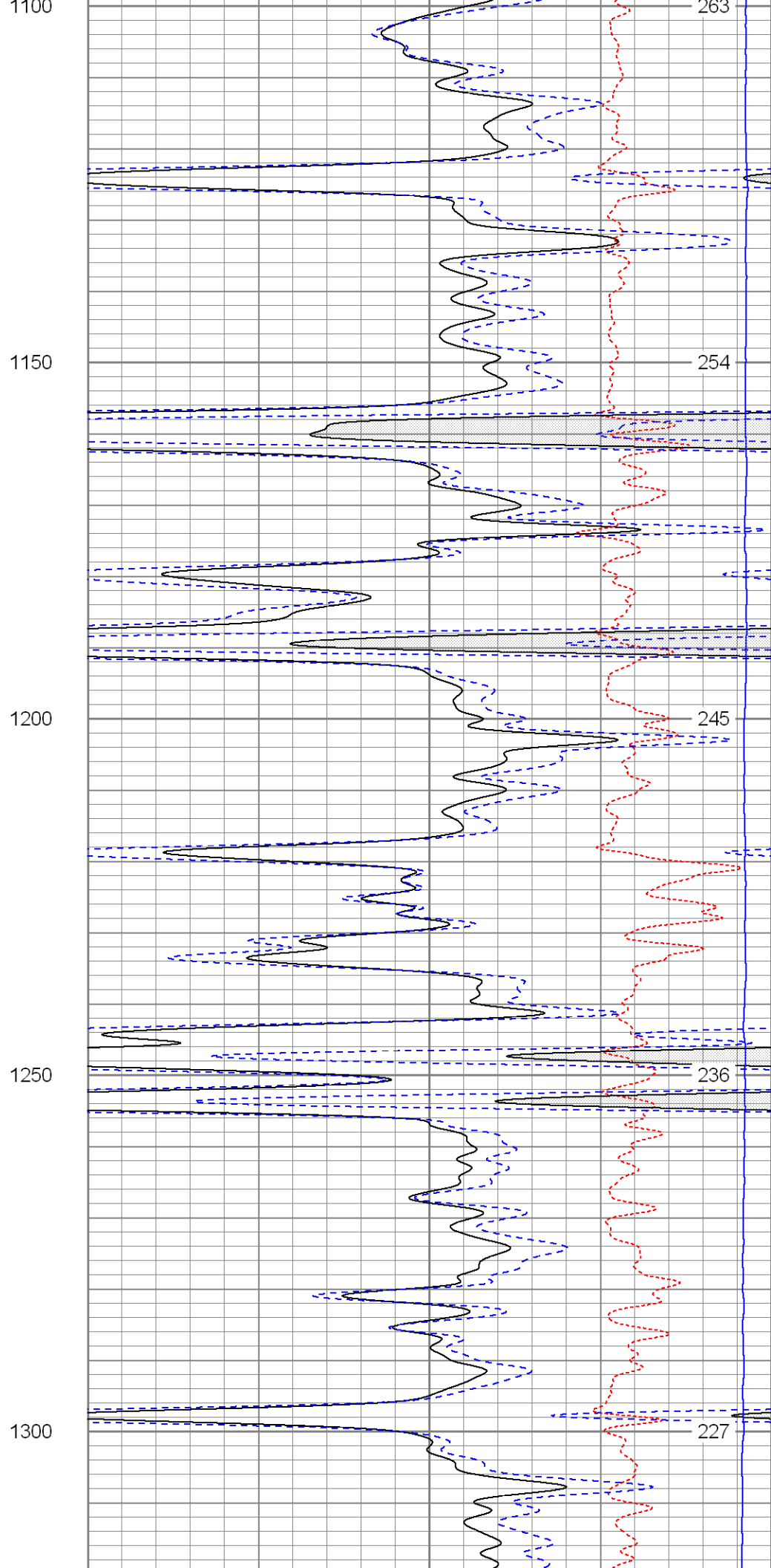
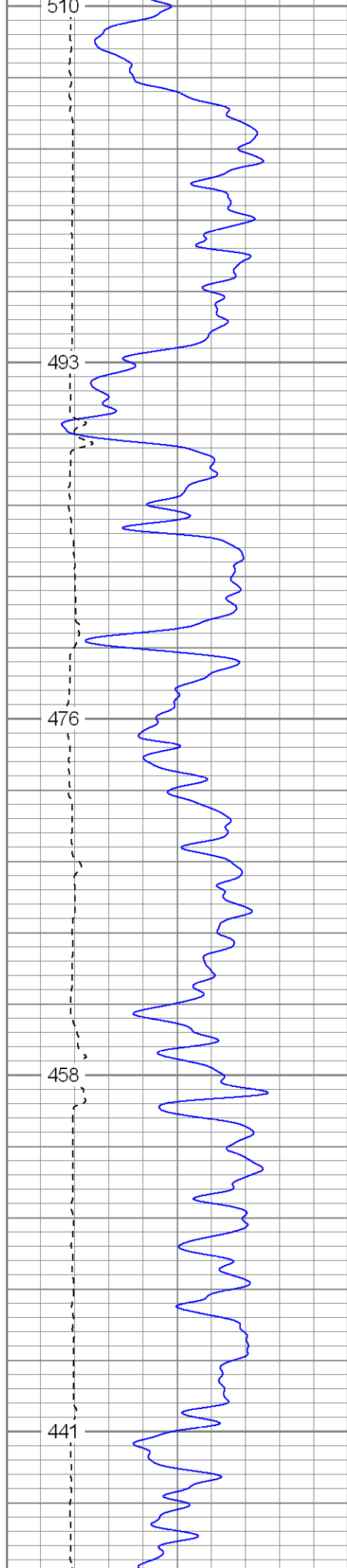
Database File: xtoac3214.db  
Dataset Pathname: pass4.1  
Presentation Format: cdl  
Dataset Creation: Fri Jun 15 02:20:19 2007 by Calc Open-Cased 061129  
Charted by: Depth in Feet scaled 1:240

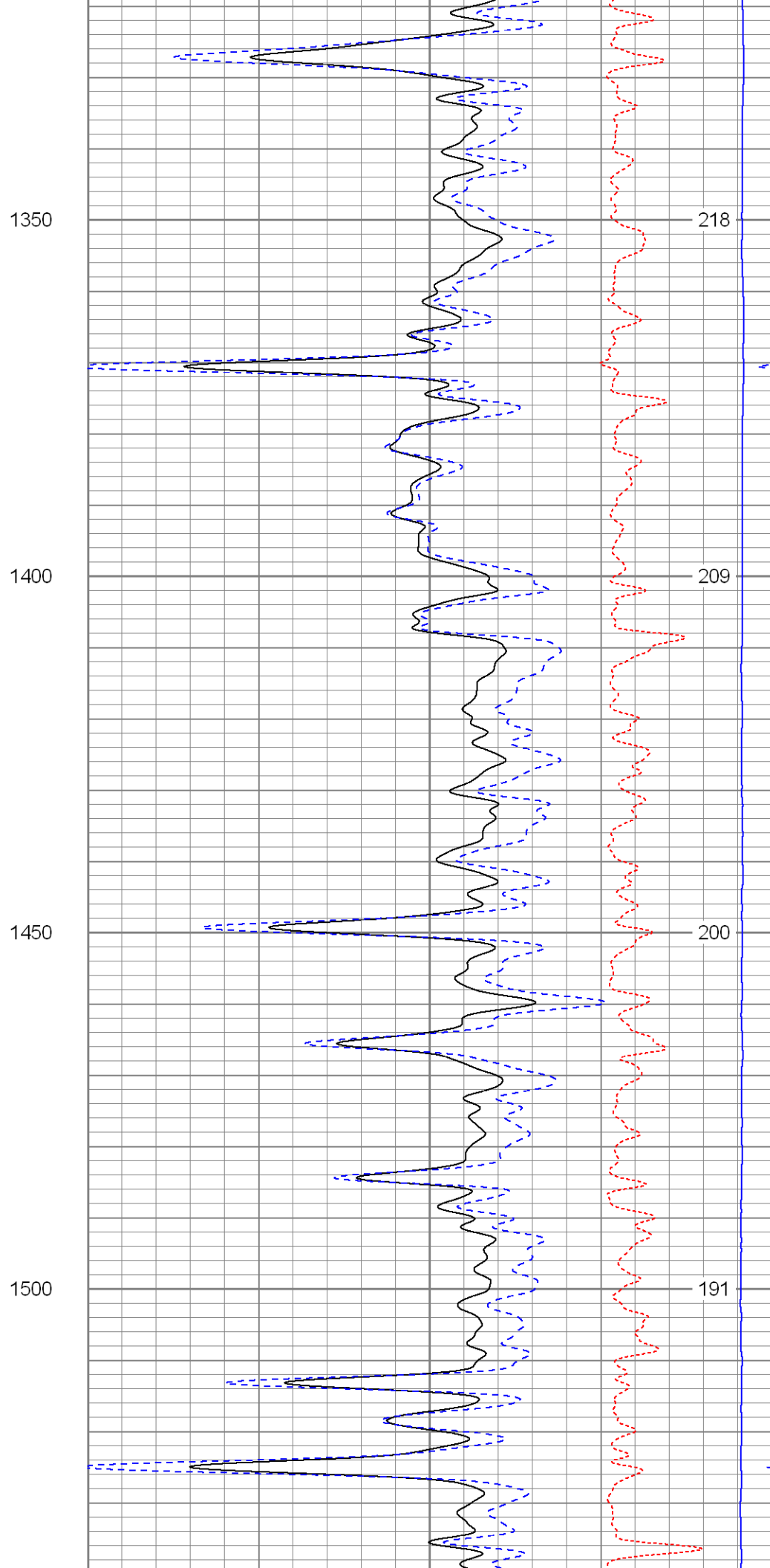
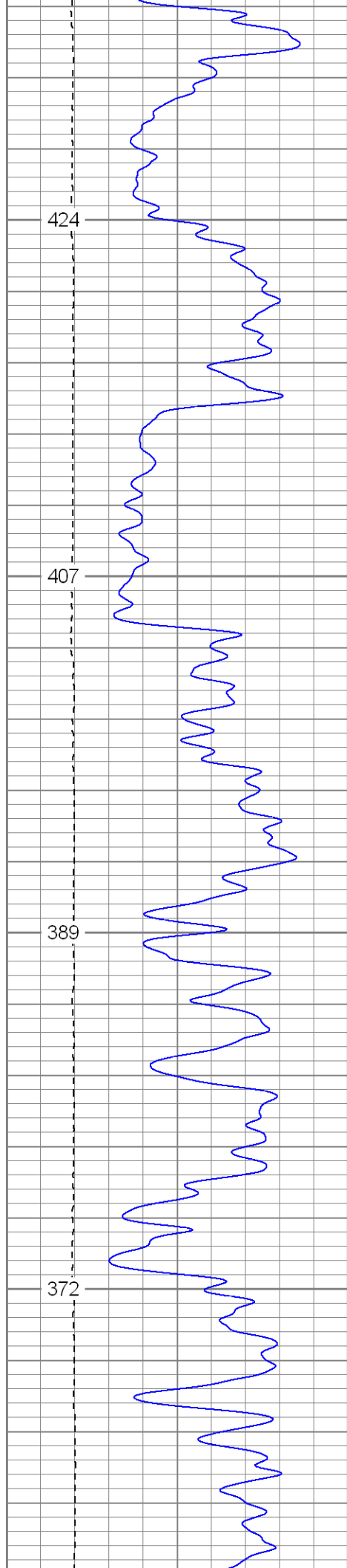
0	GR (GAPI)	200	1	RHOB (g/cc)	2
6	DCAL (in)	16	30	DPOR (pu)	-10
			-0.5	RHOC (g/cc)	0.5
			4000	LTEN (lb)	0

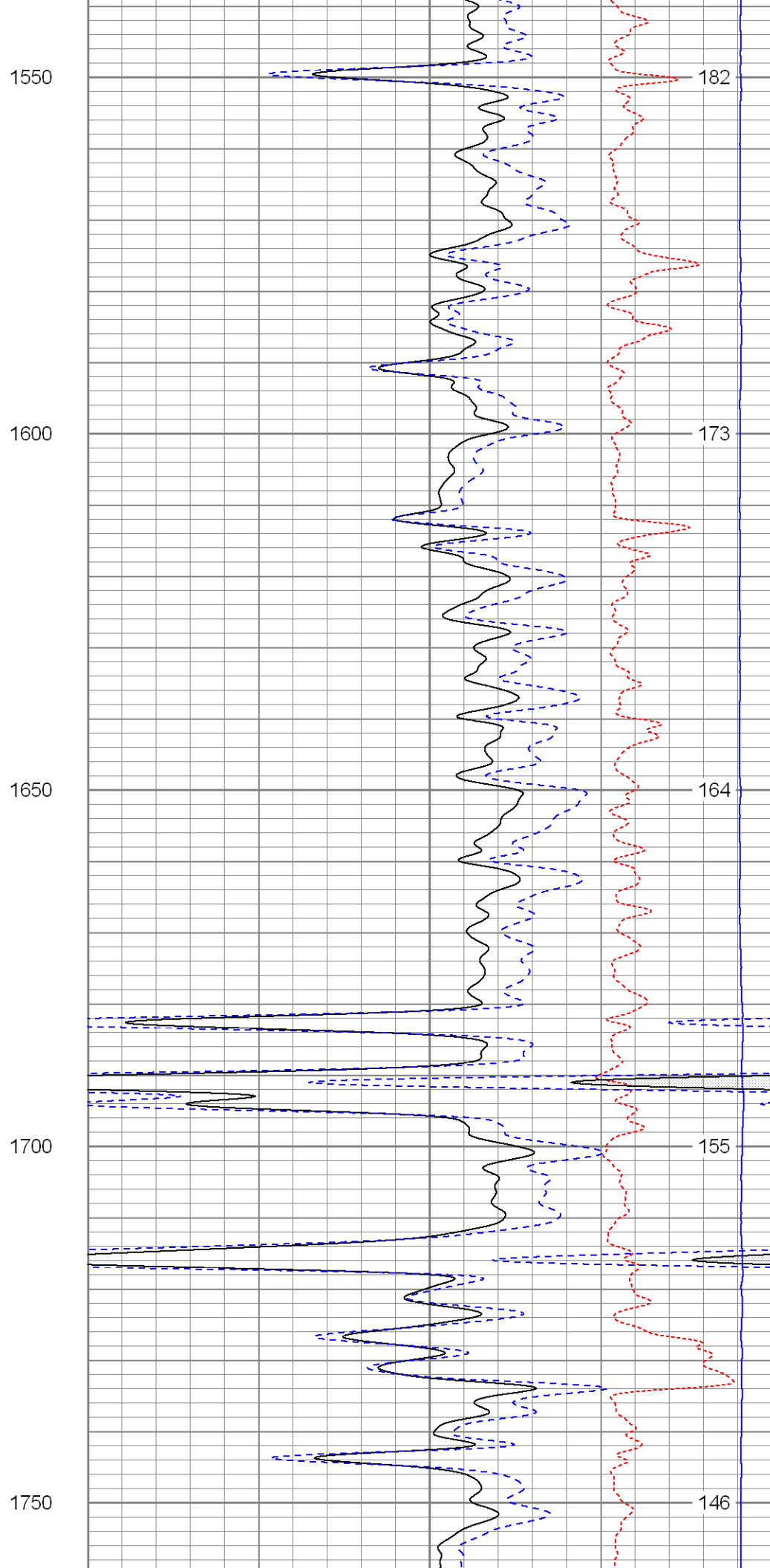
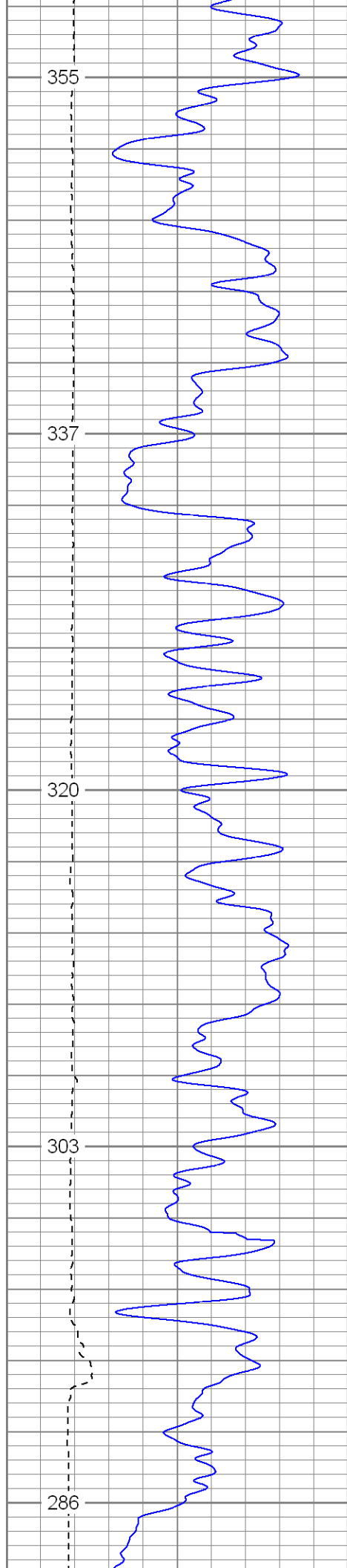


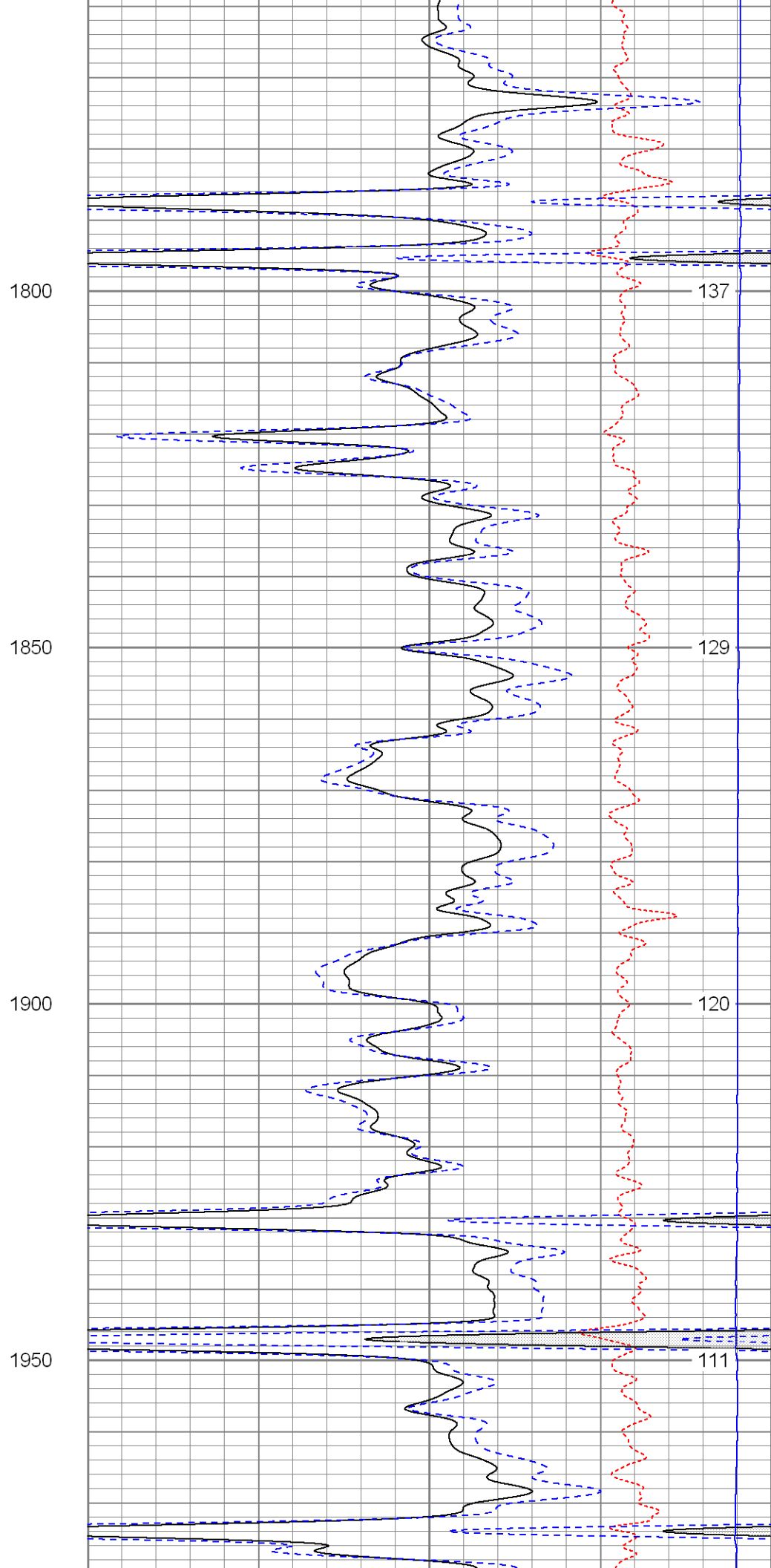
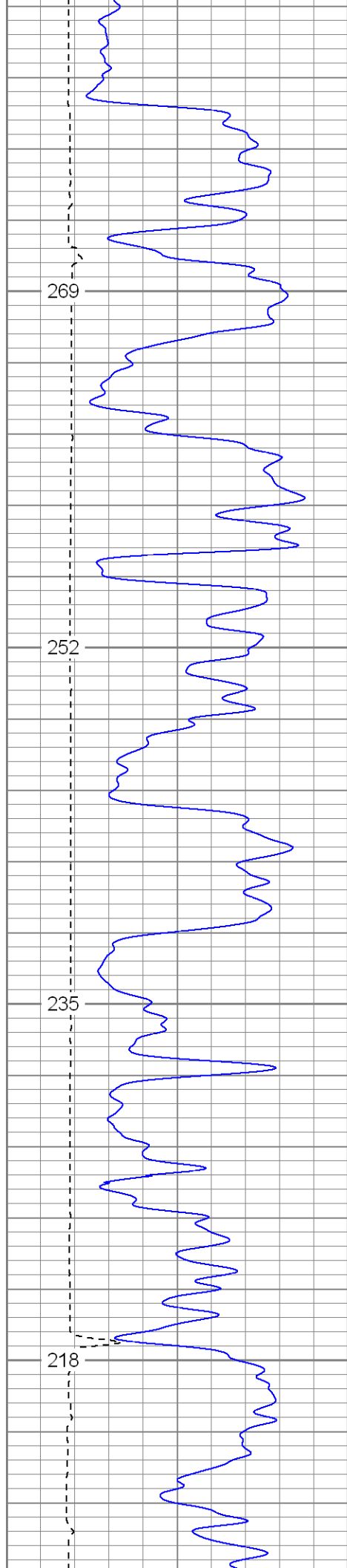




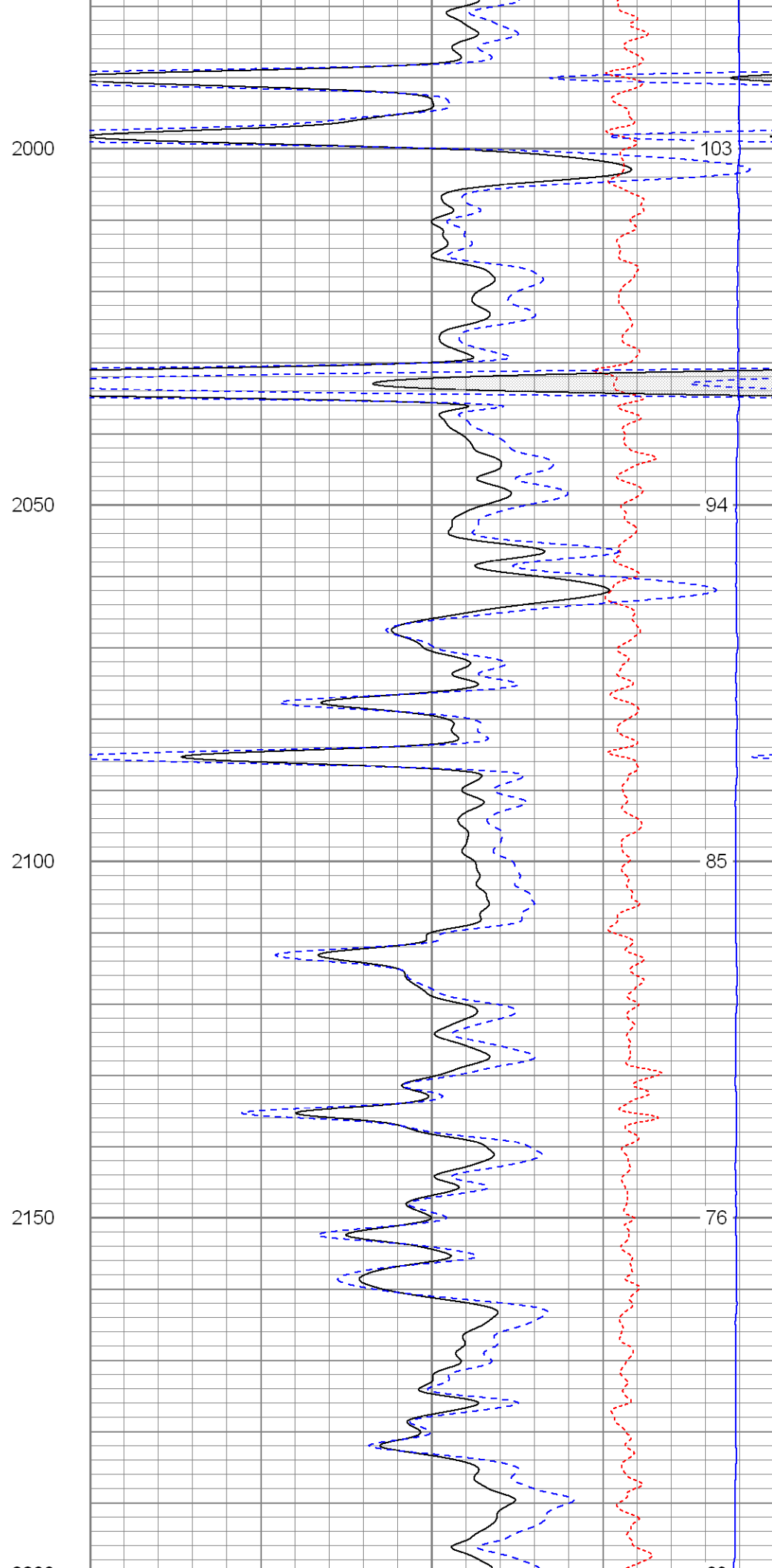
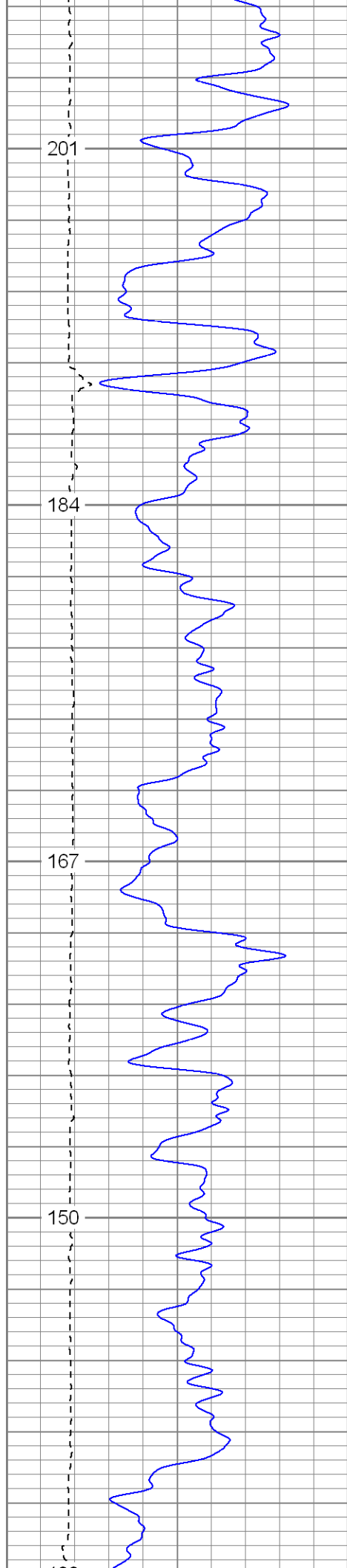


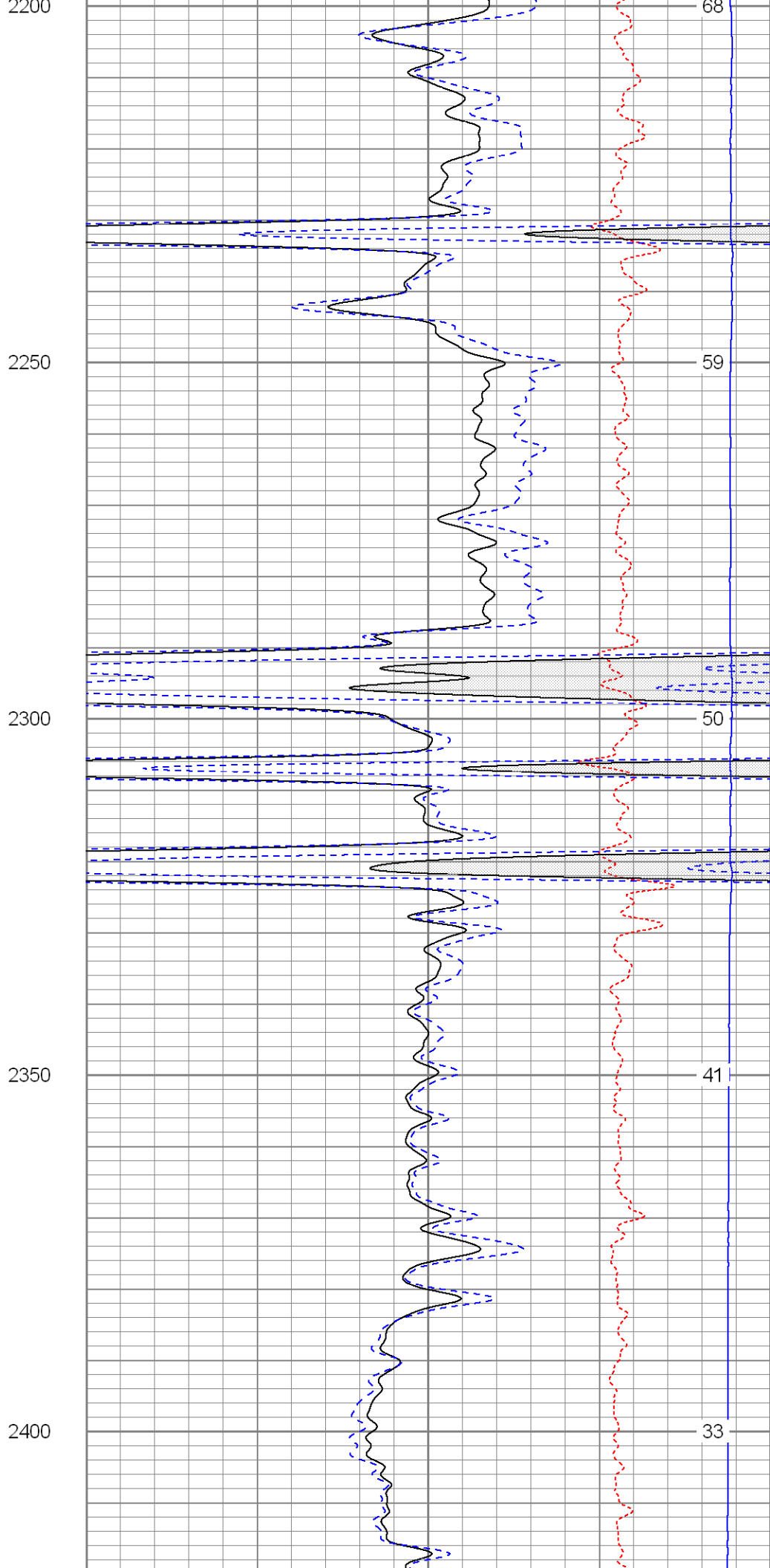
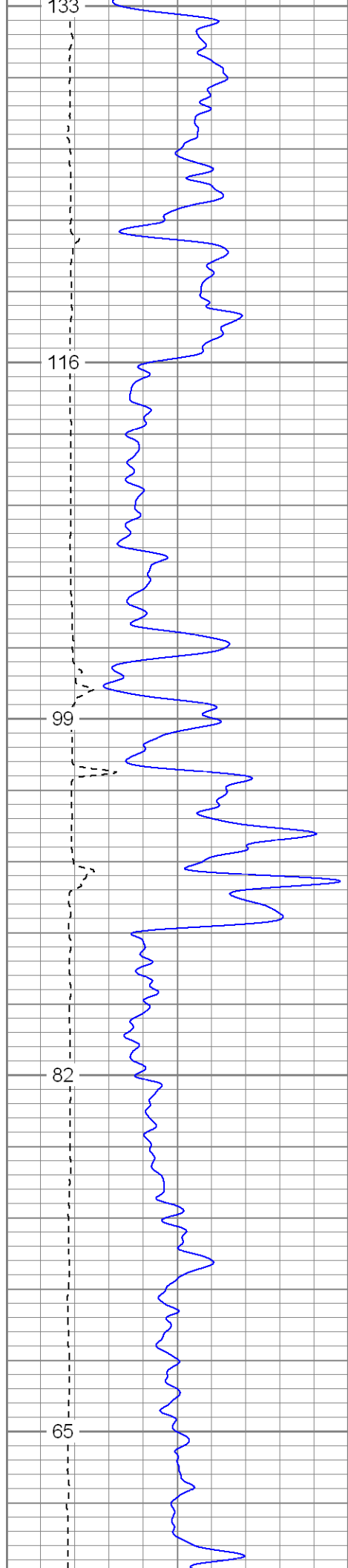


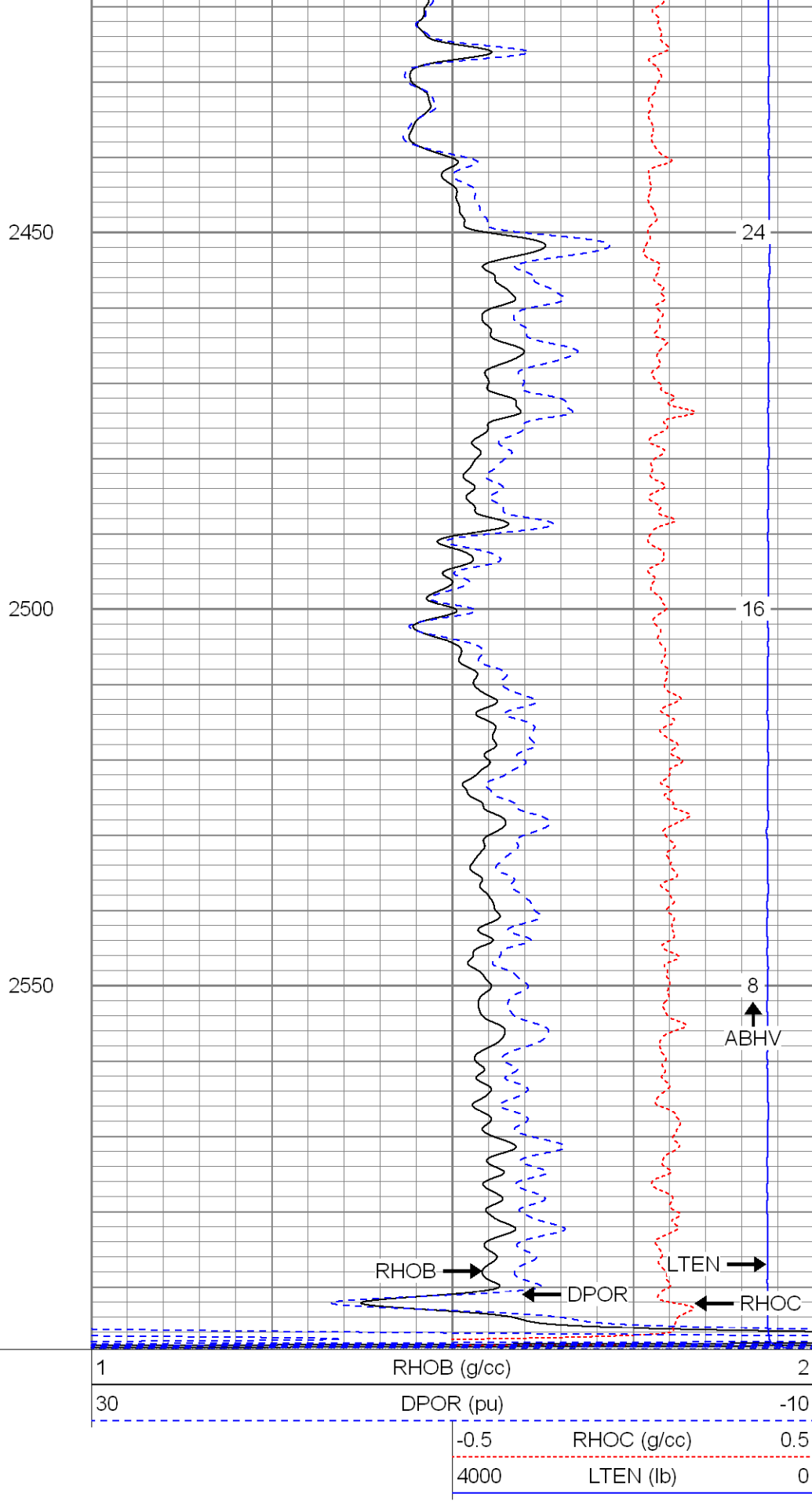
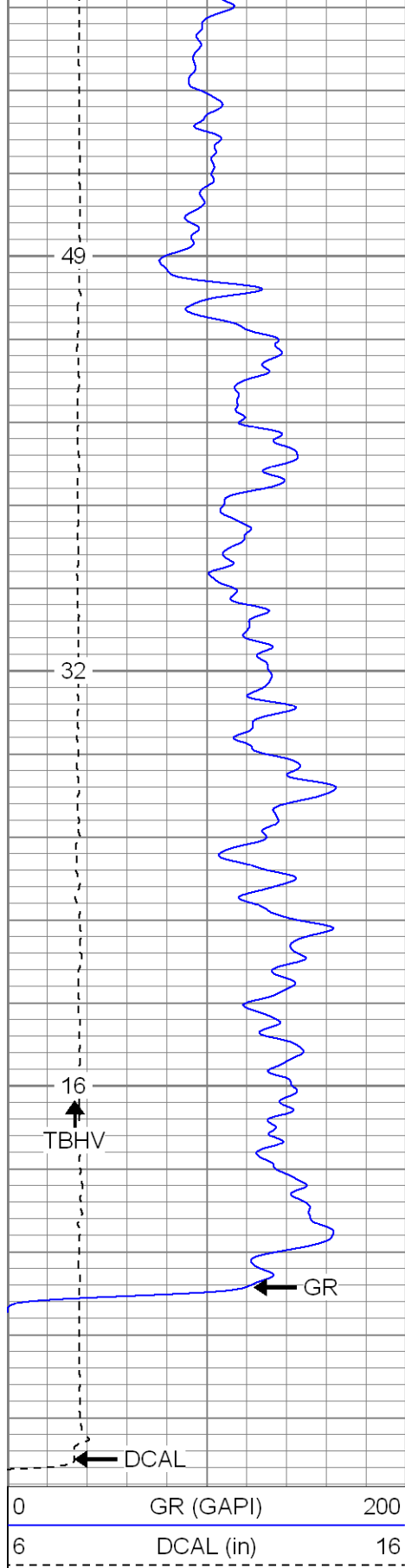












**SUPERIOR**  
 Black Lick, Pa.  
 Mercer, Pa.  
 Wooster, Oh.

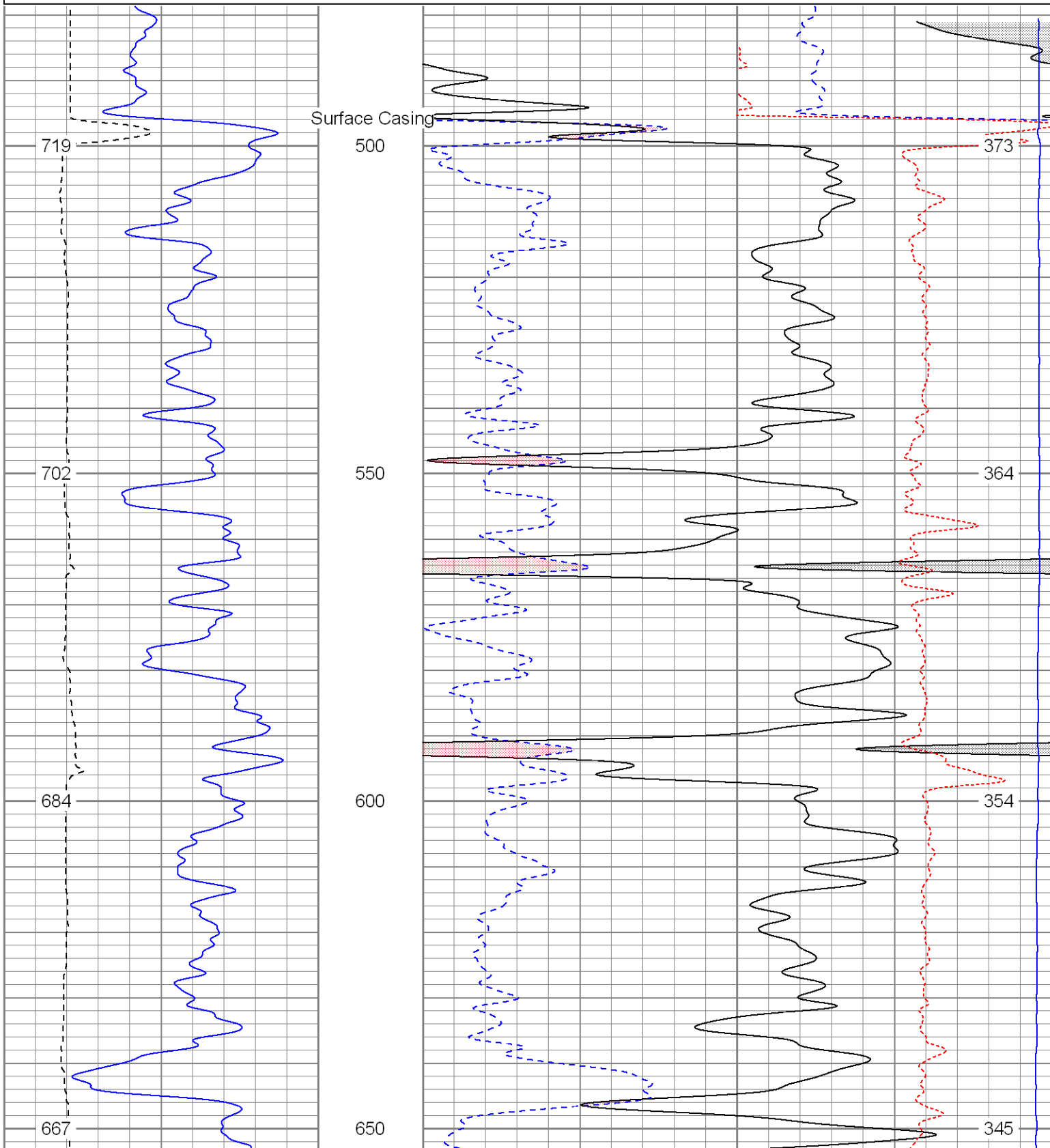
# Main Pass

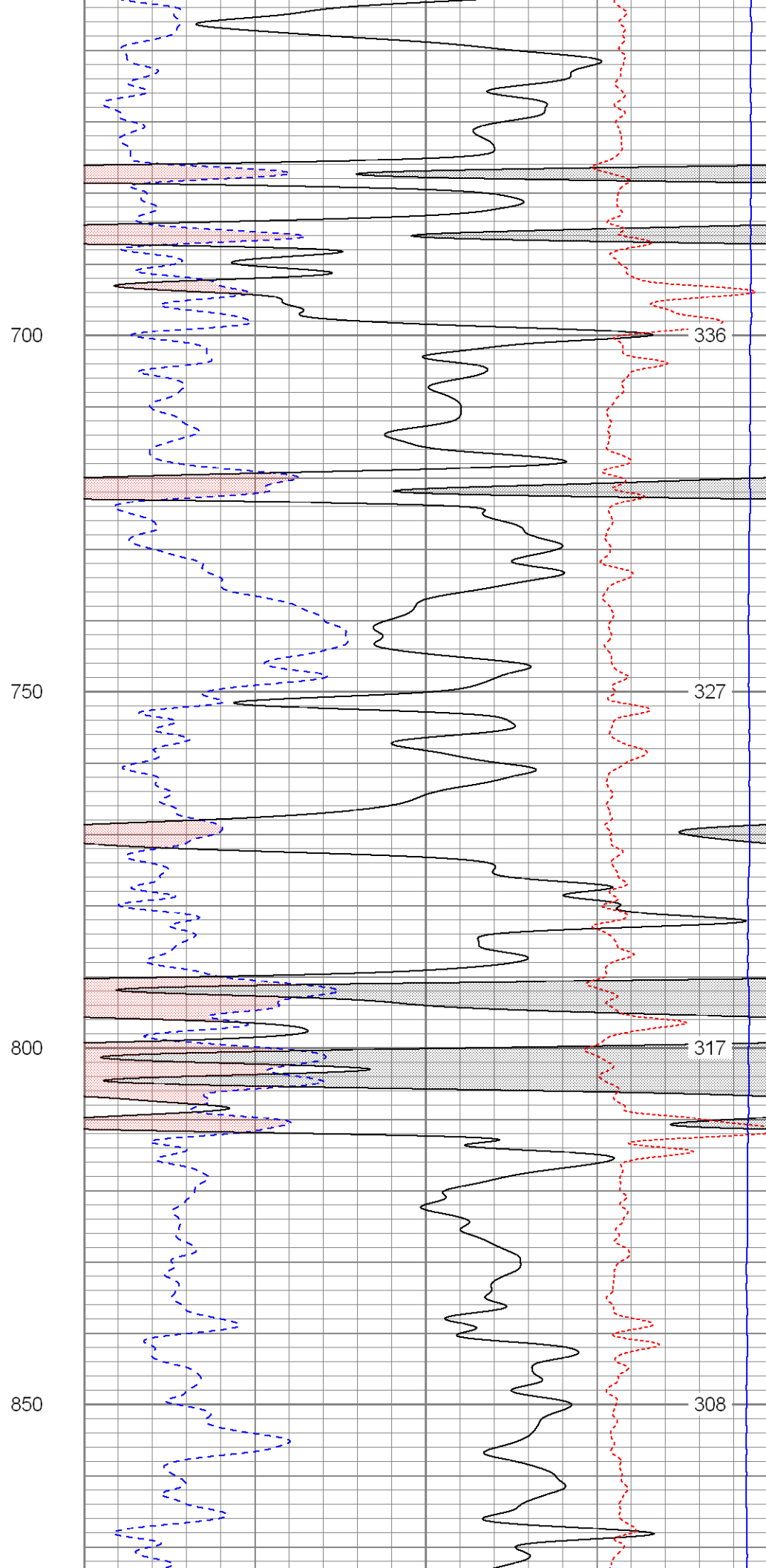
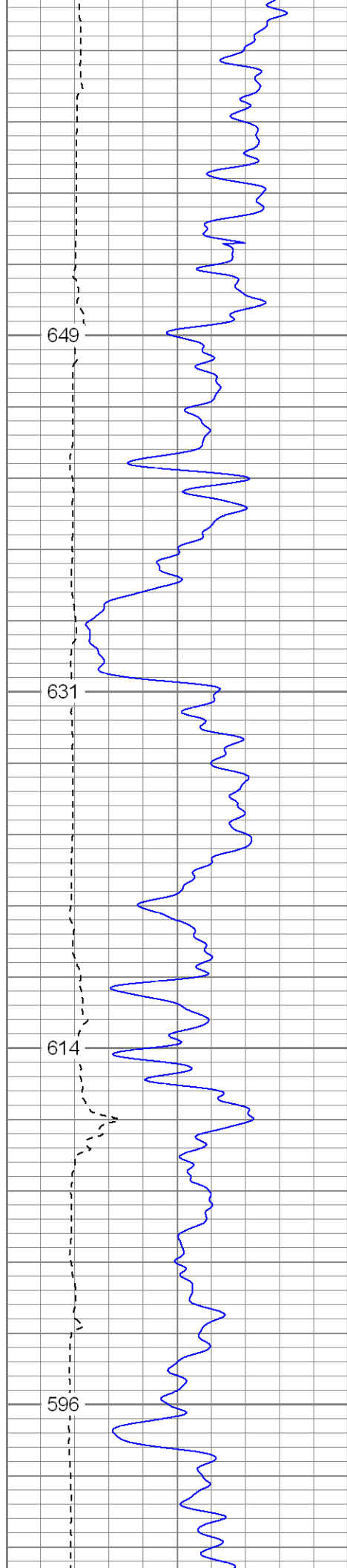
Database File: xtoac3214.db  
Dataset Pathname: pass4.1  
Presentation Format: cdnl  
Dataset Creation: Fri Jun 15 02:20:19 2007 by Calc Open-Cased 061129  
Charted by: Depth in Feet scaled 1:240

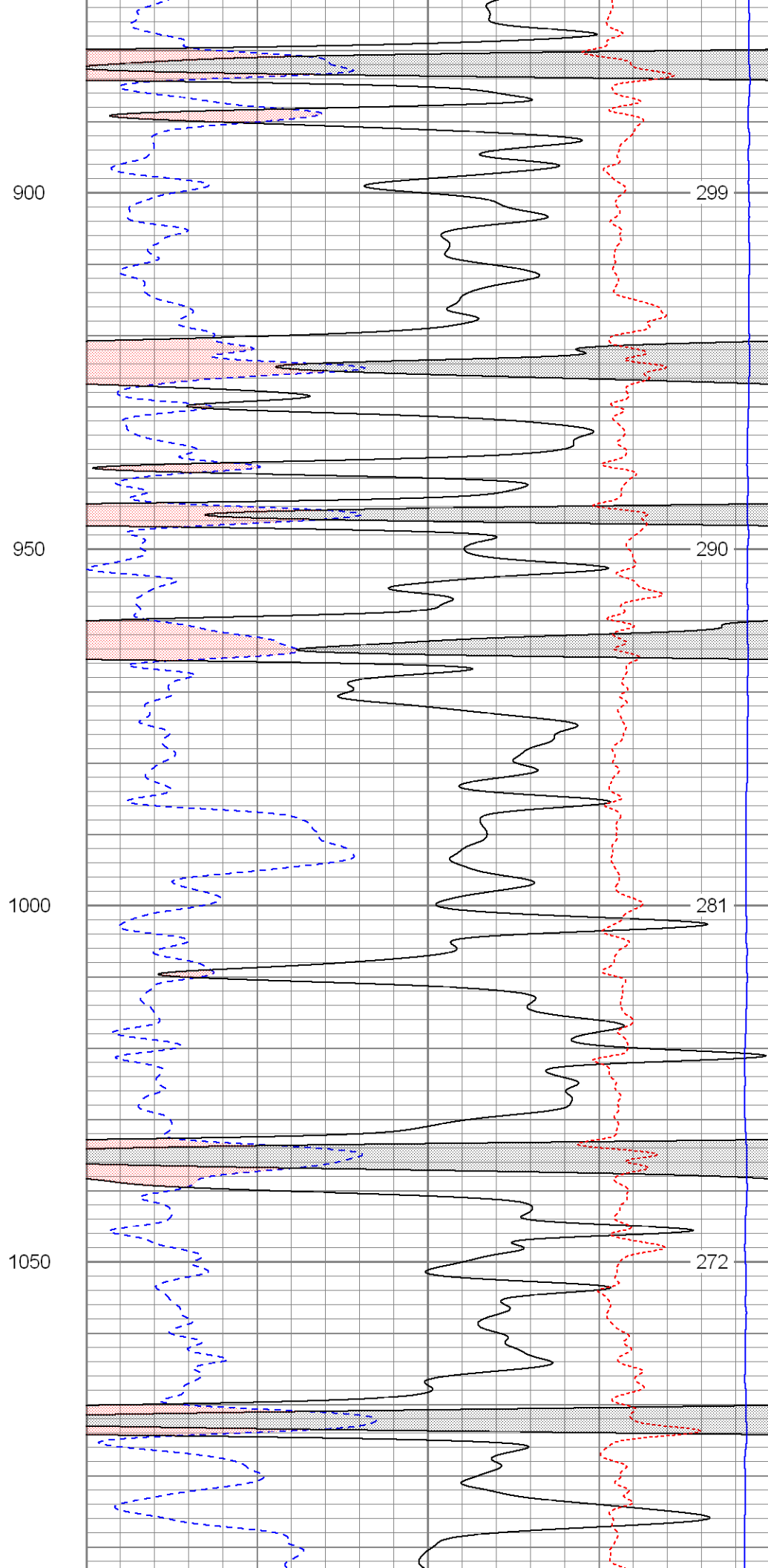
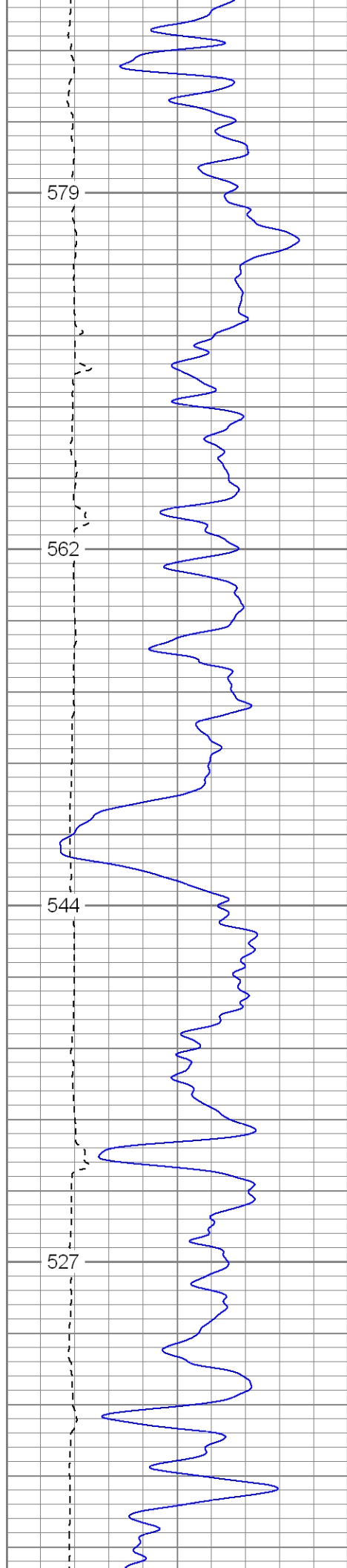
0	GR (GAPI)	200
6	DCAL (in)	16

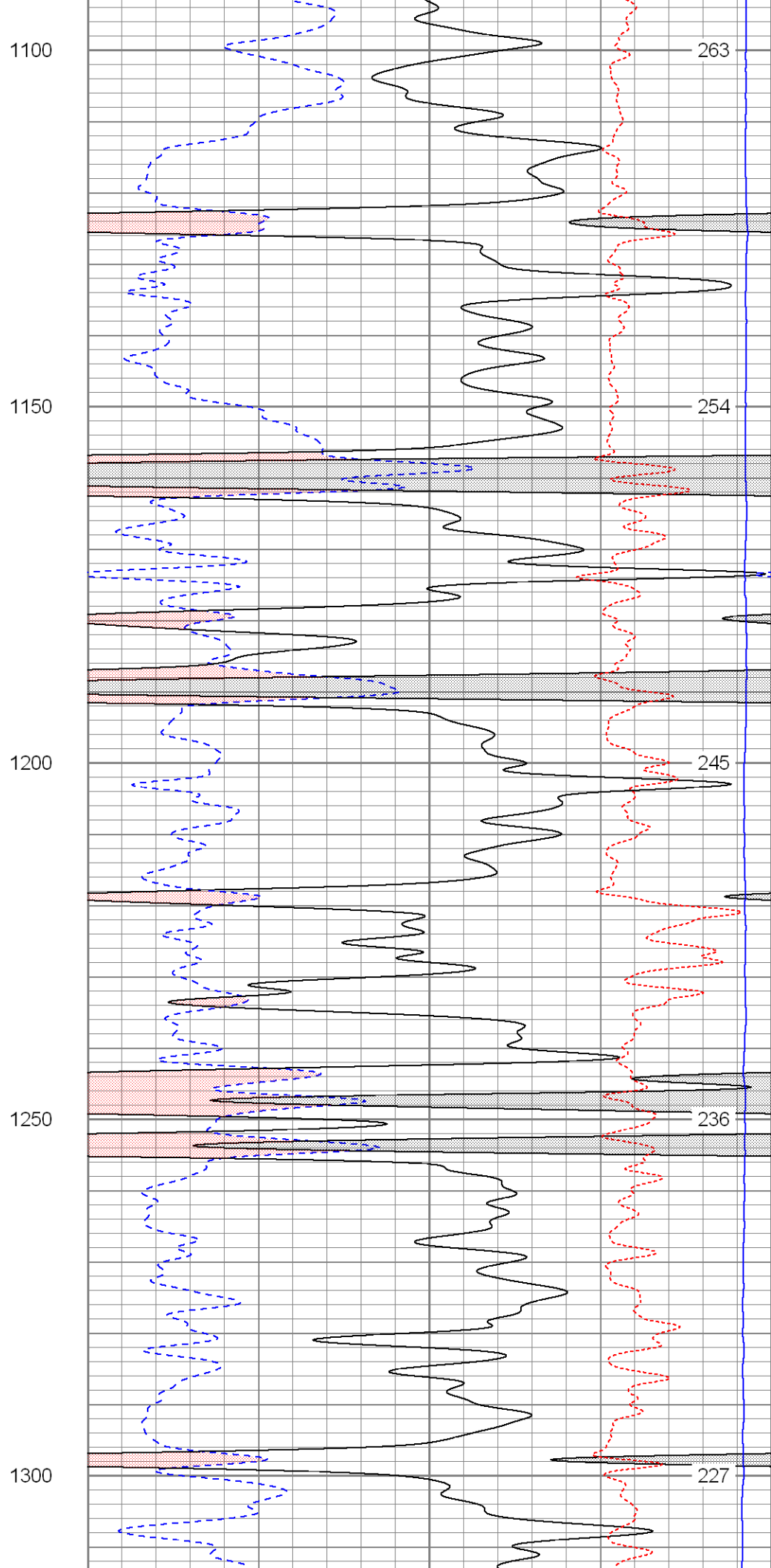
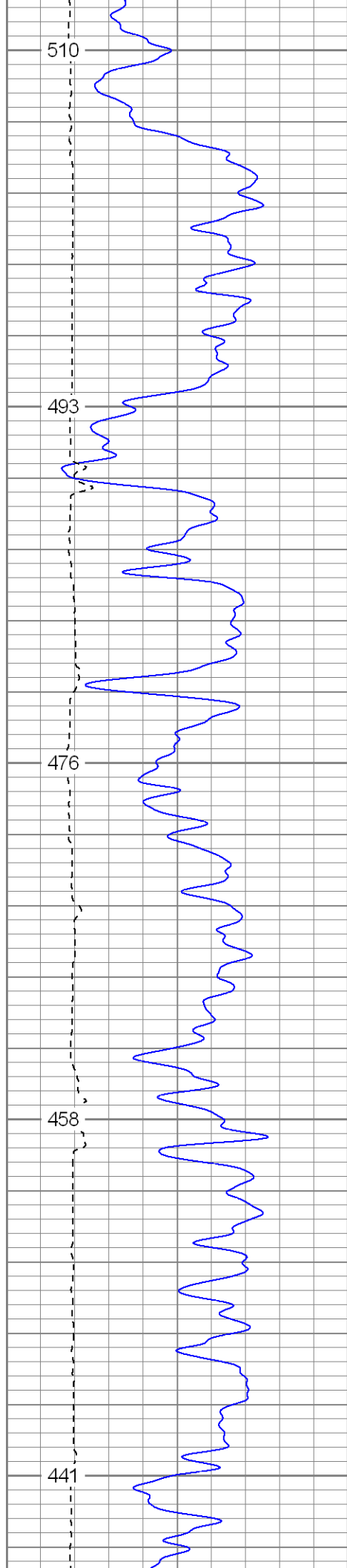
30	NPOR (pu)	-10
30	DPOR (pu)	-10

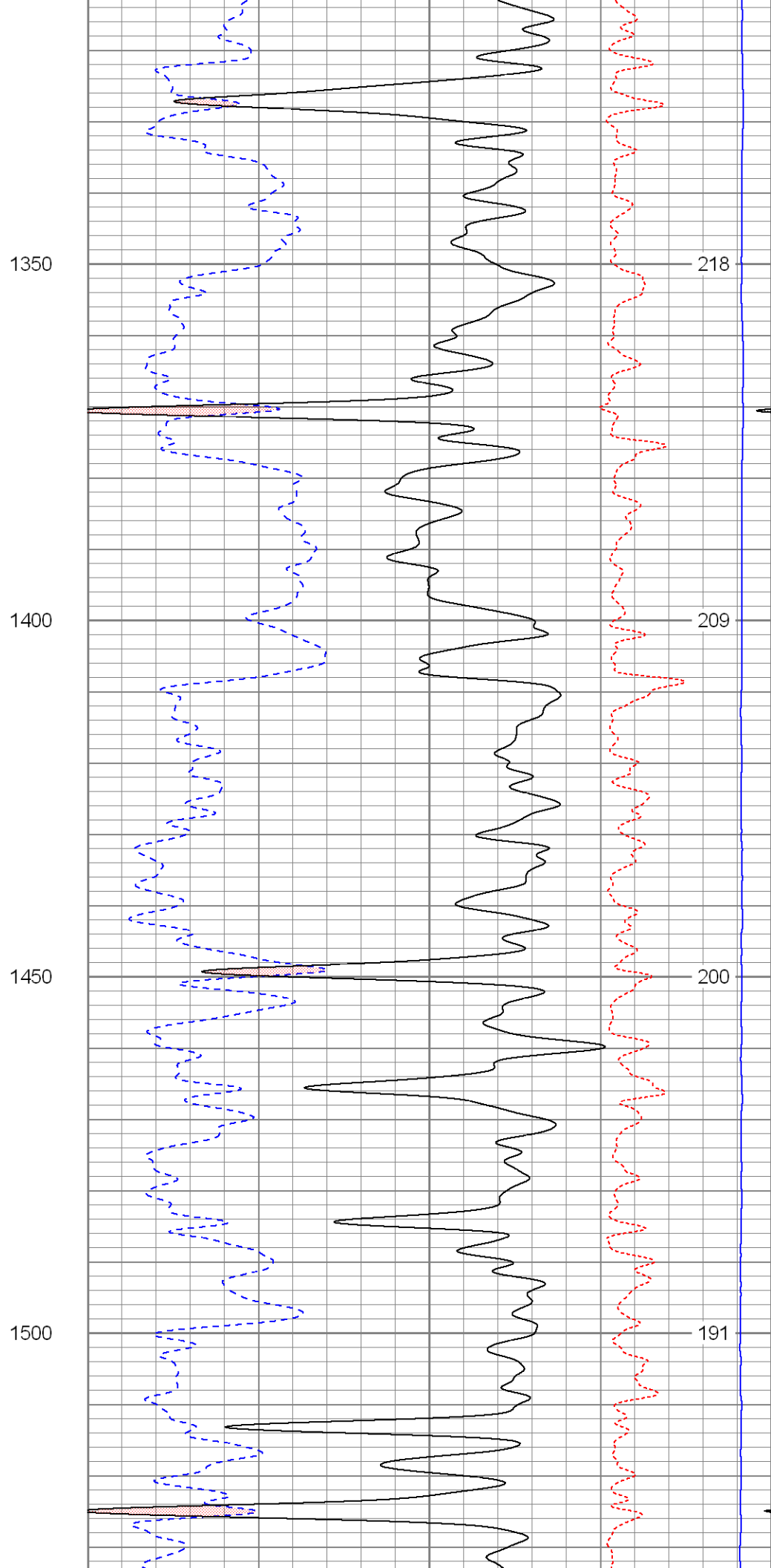
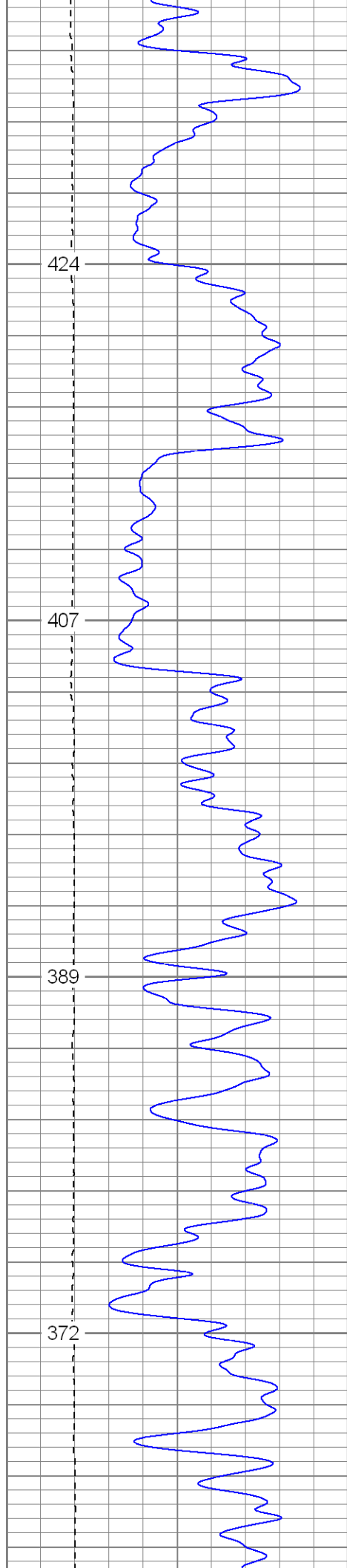
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0



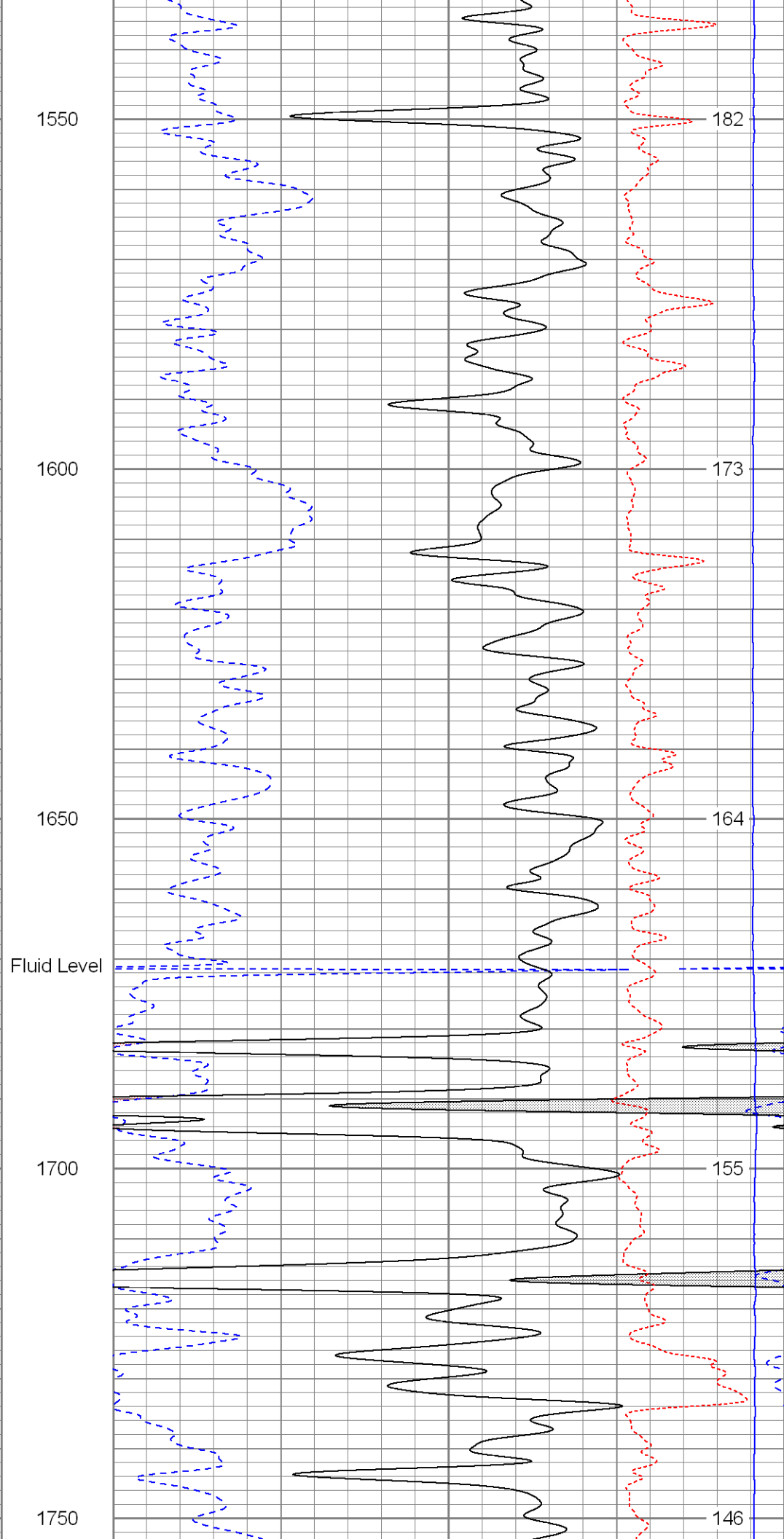
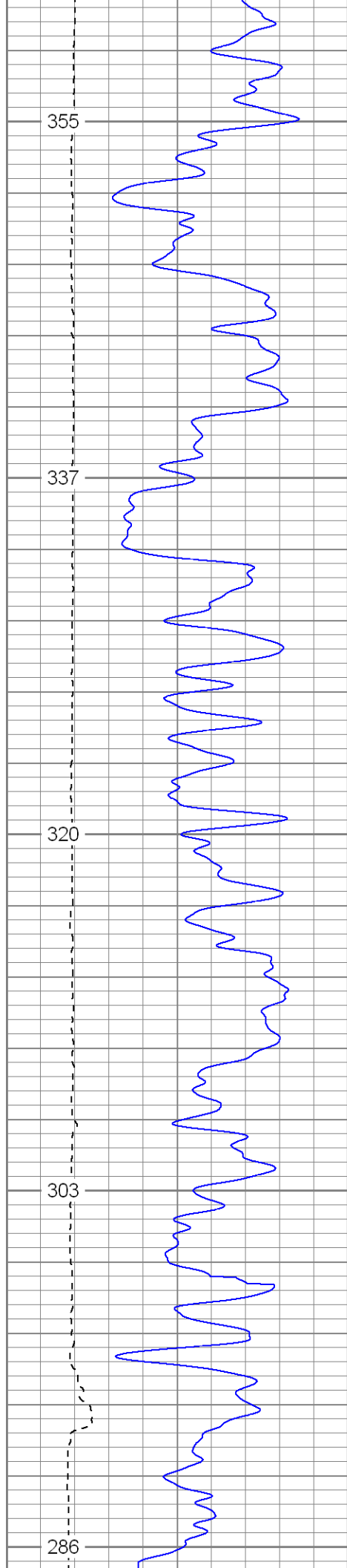


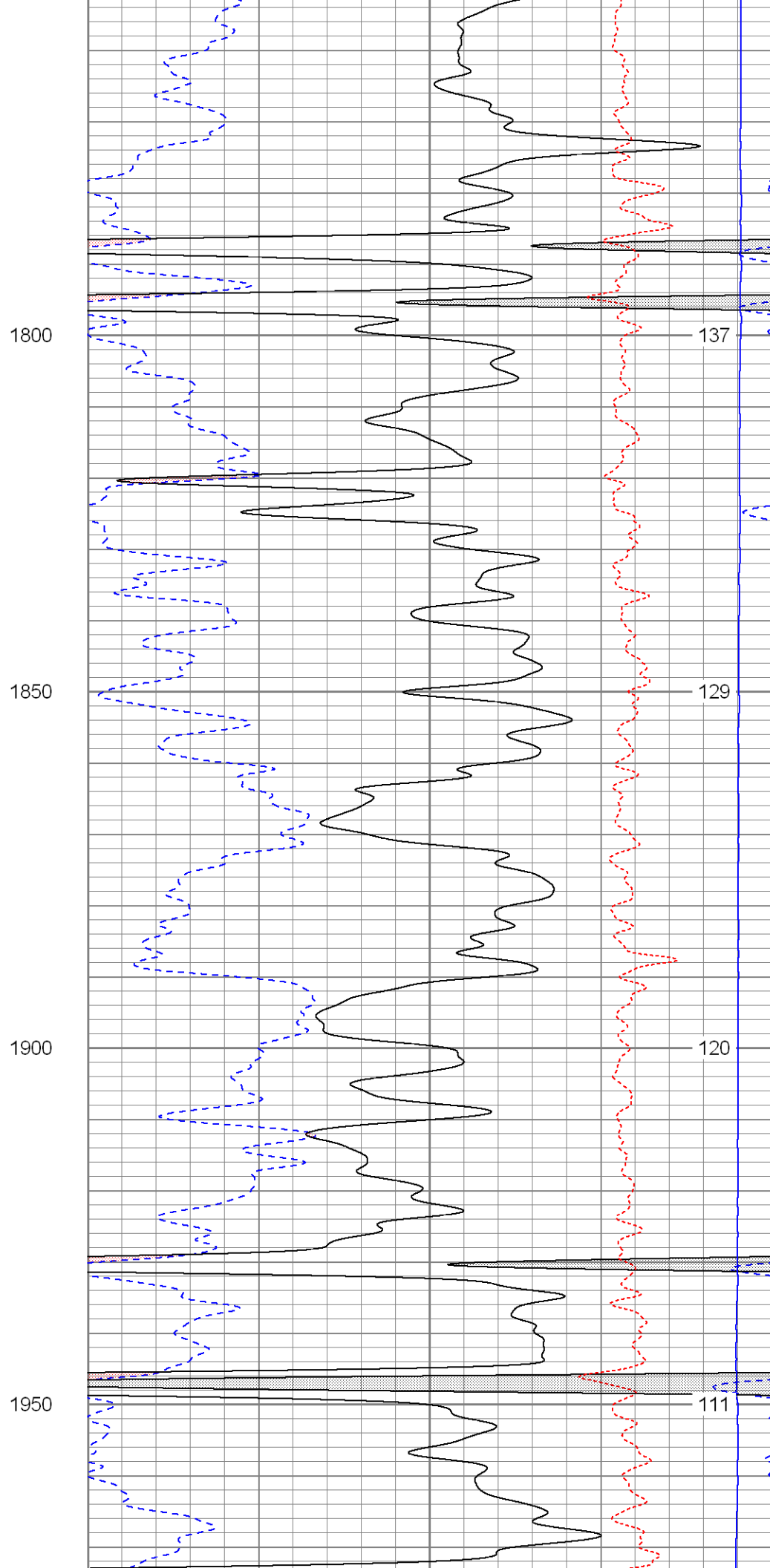
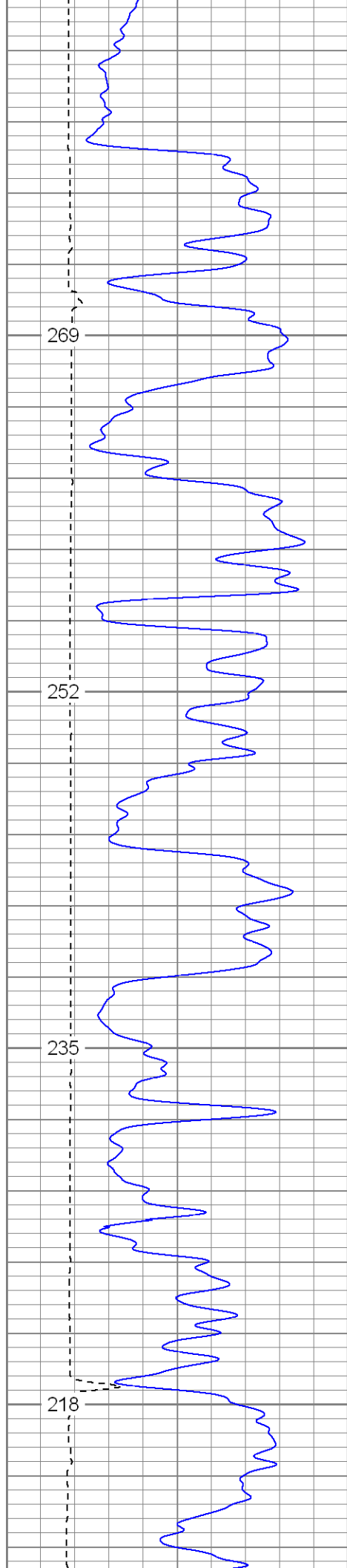


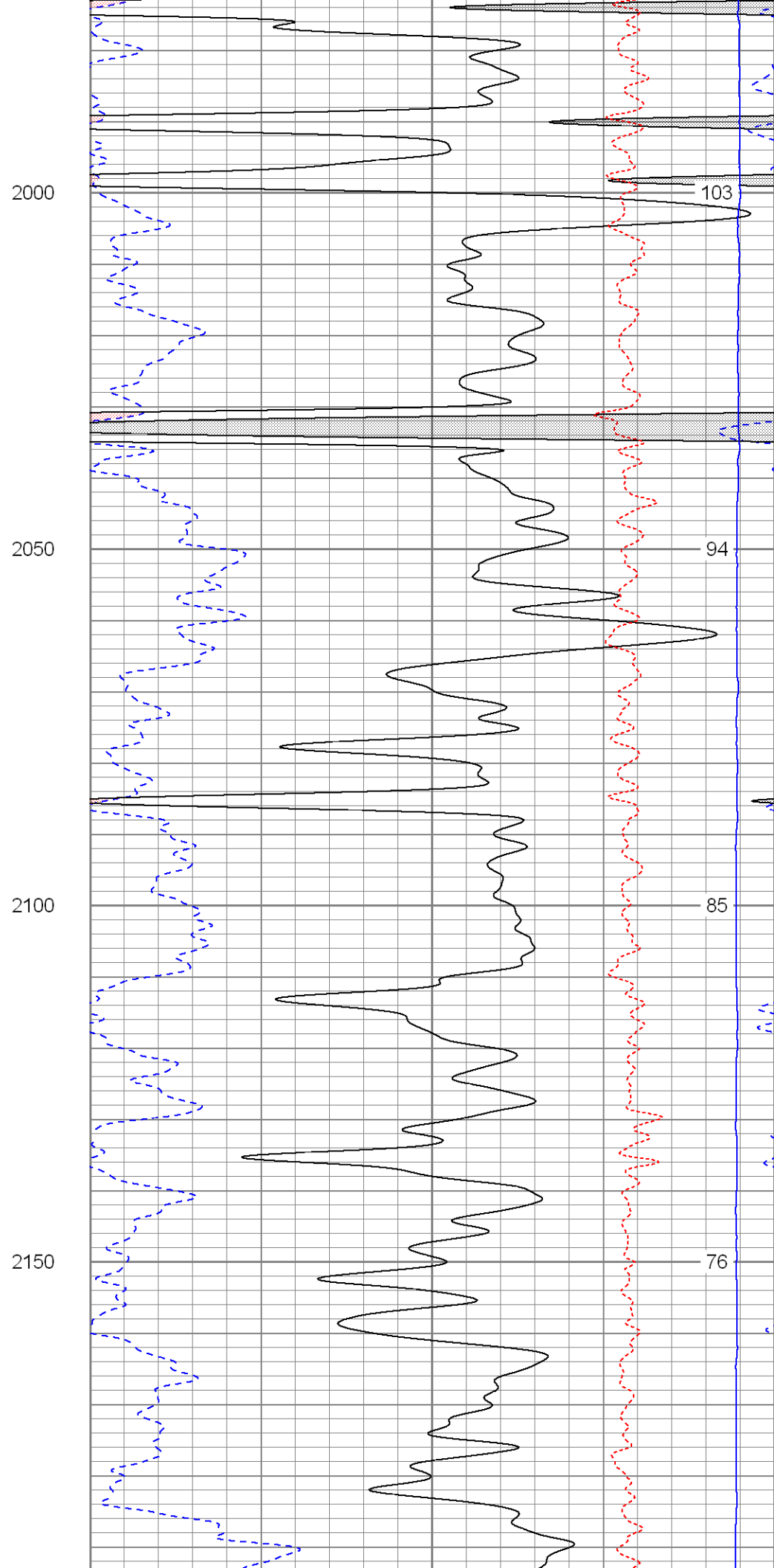
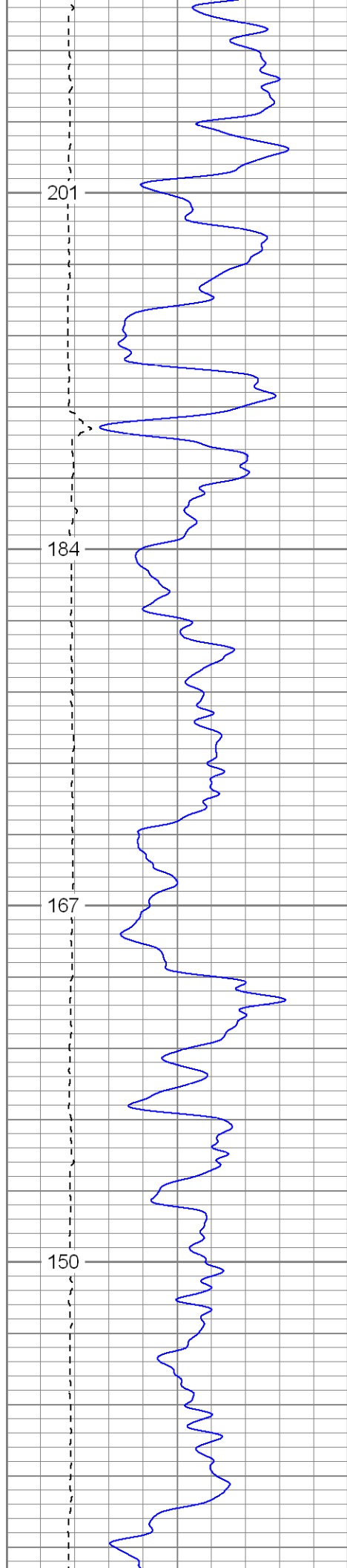


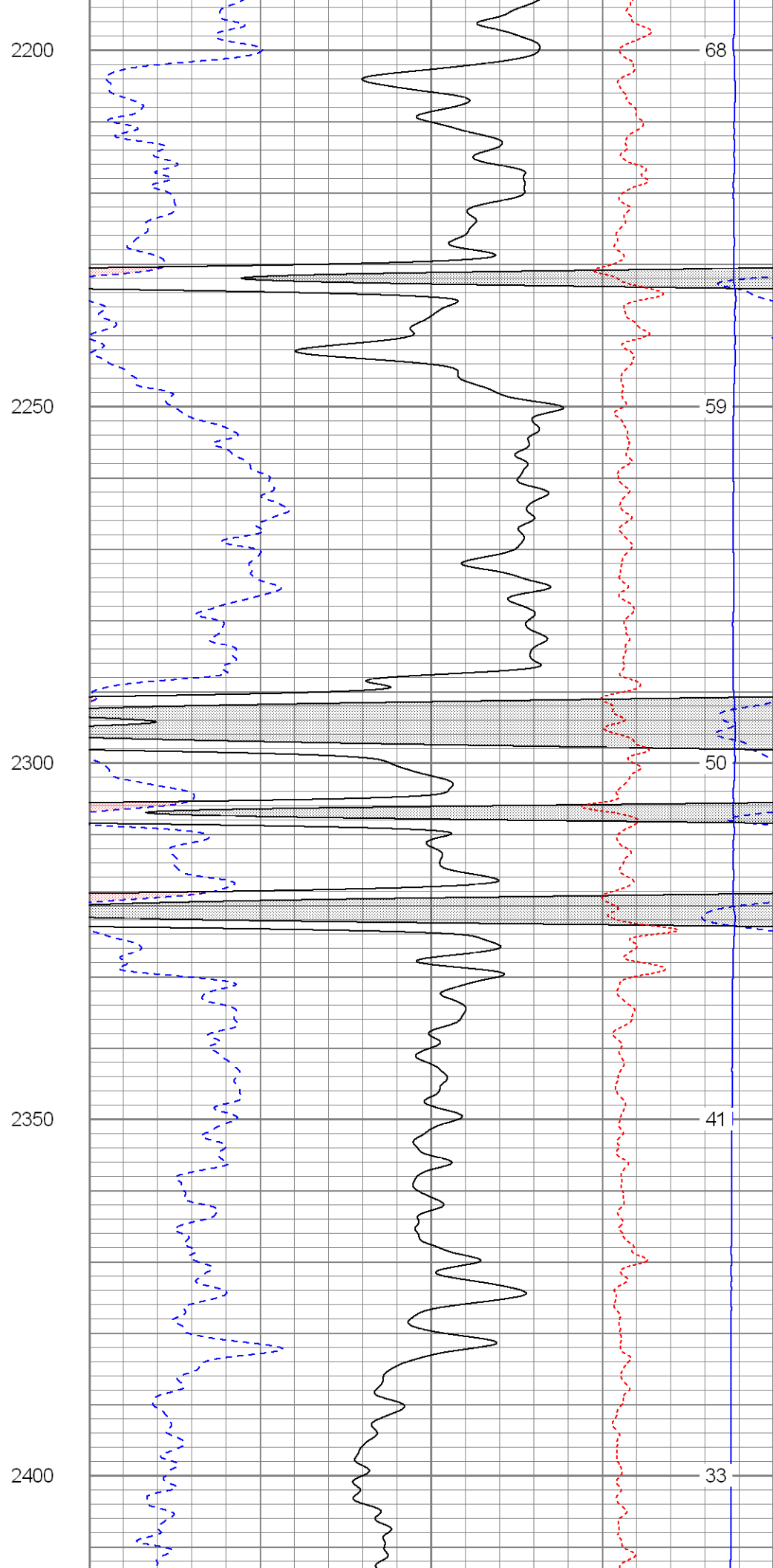
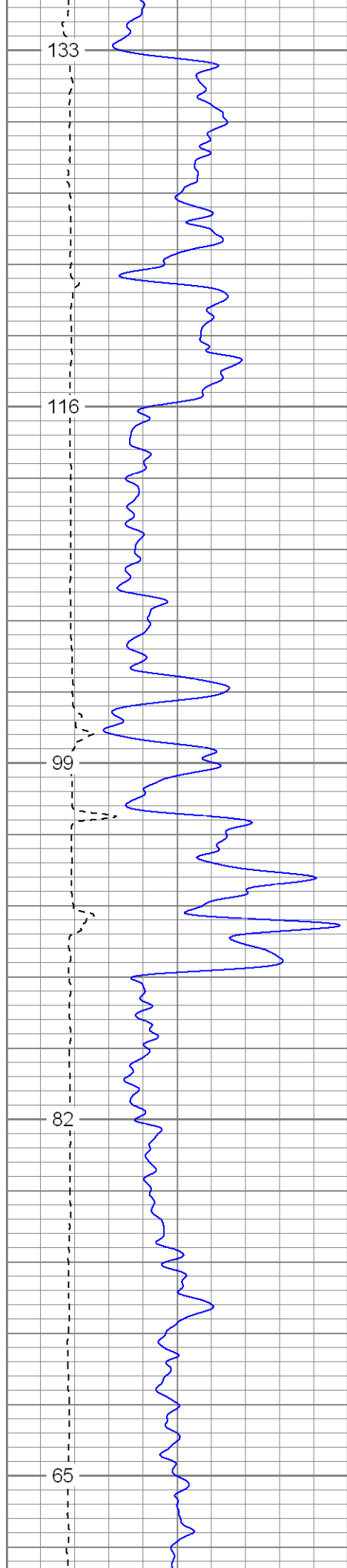


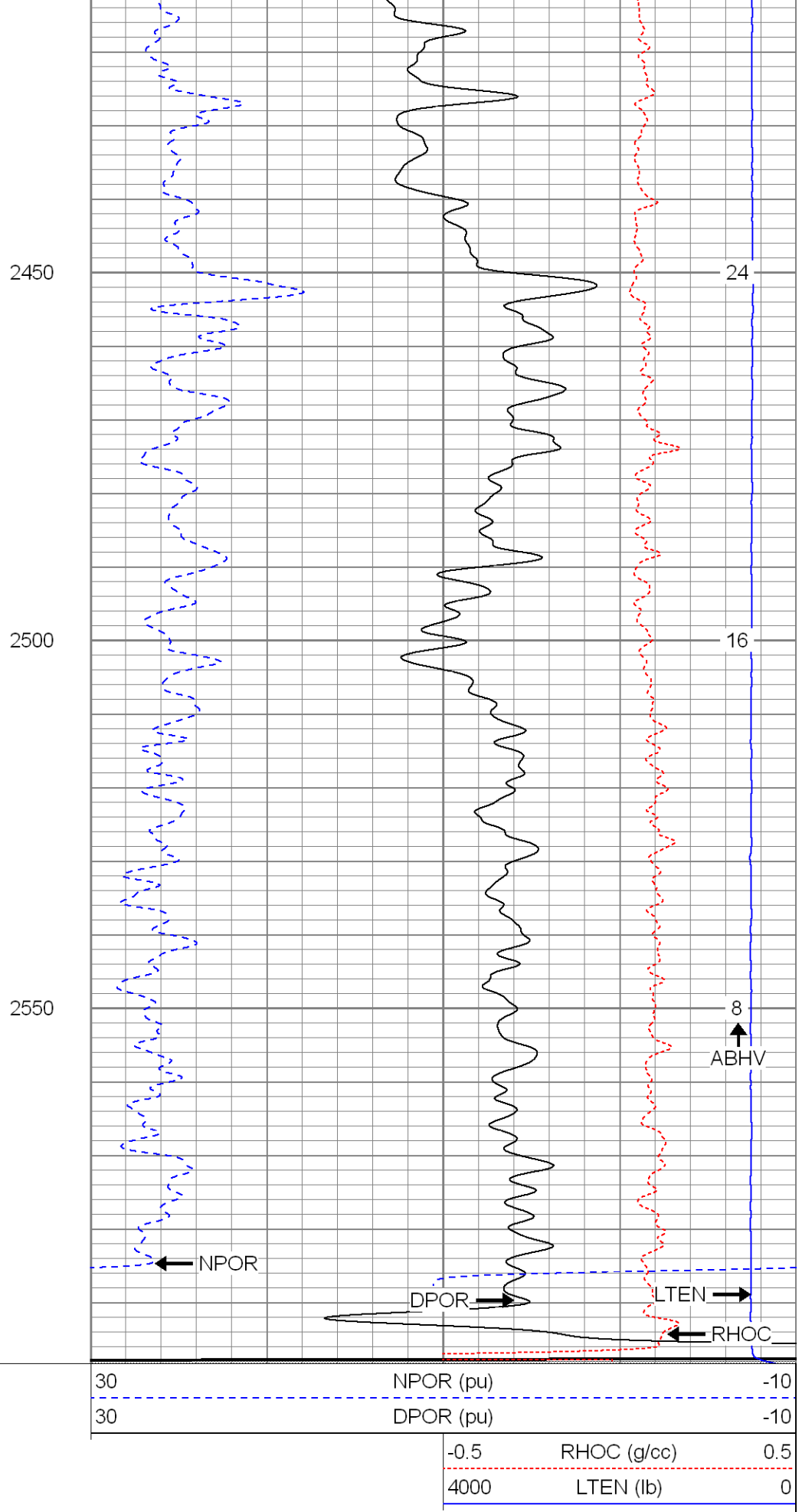
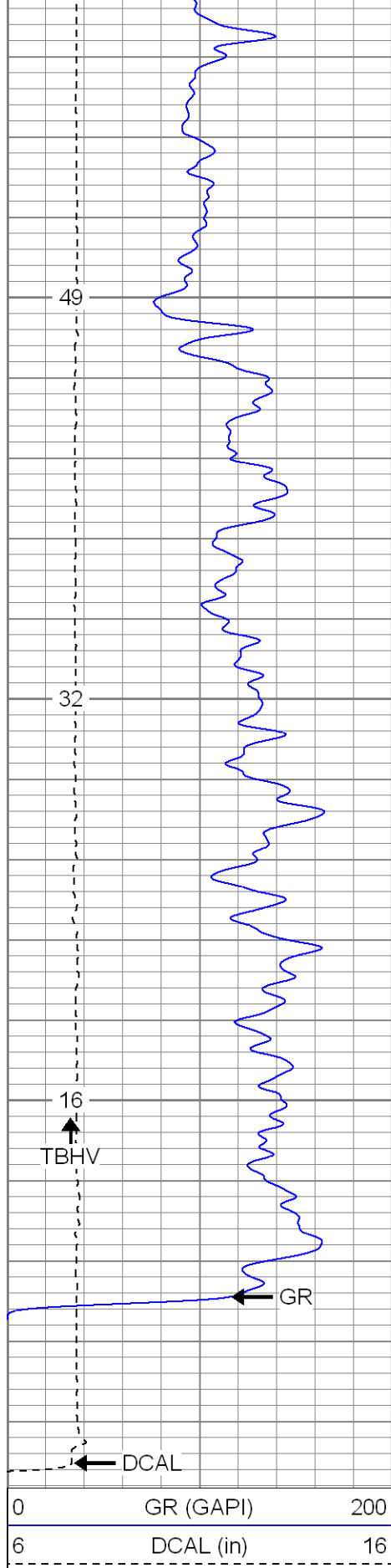












SUPERIOR

Report Section



Black Lick, Pa.  
Mercer, Pa.  
Wooster, Oh.  
Cleveland, Ok.  
Trinidad, Co.

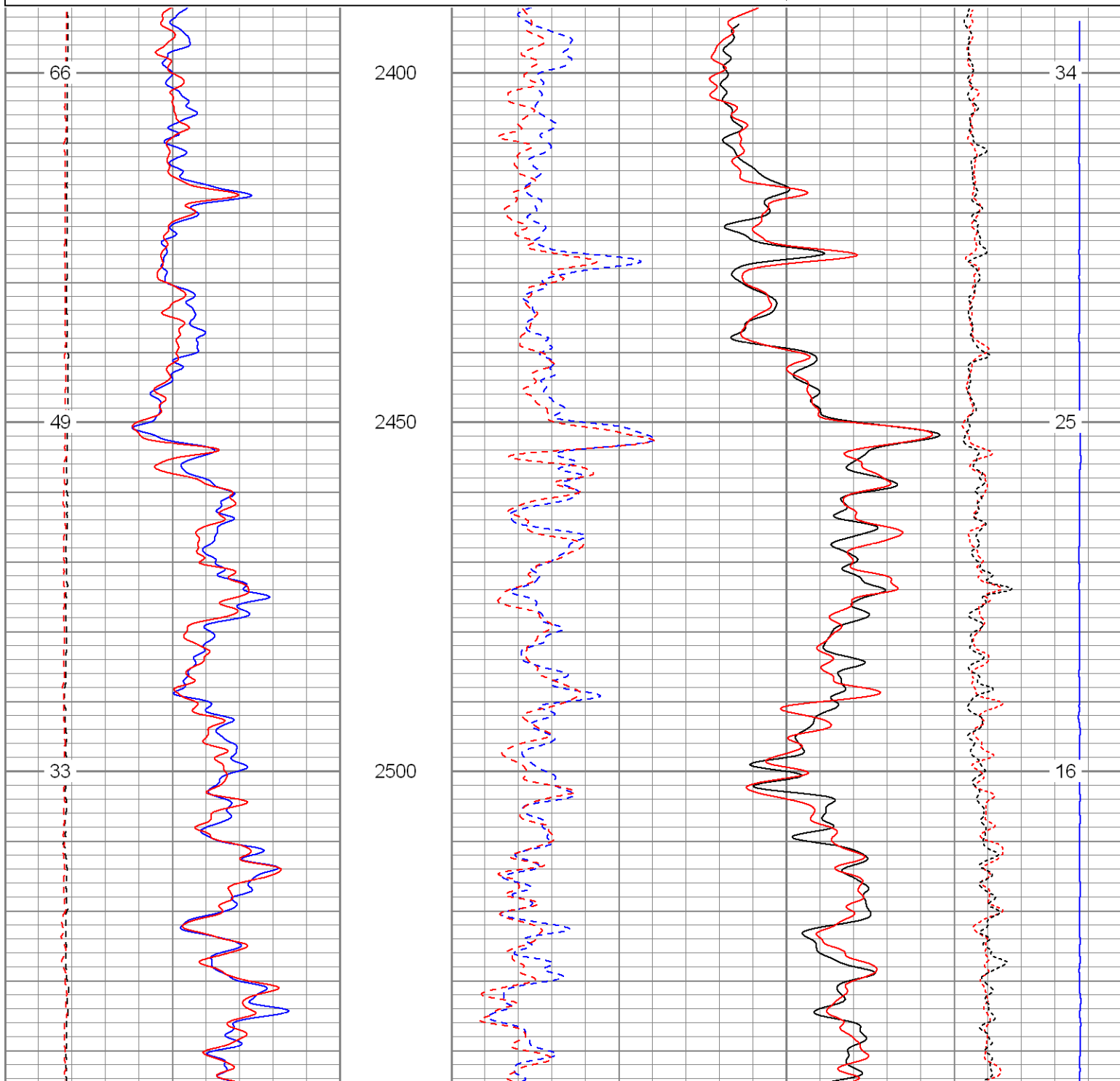
# Repeat Section

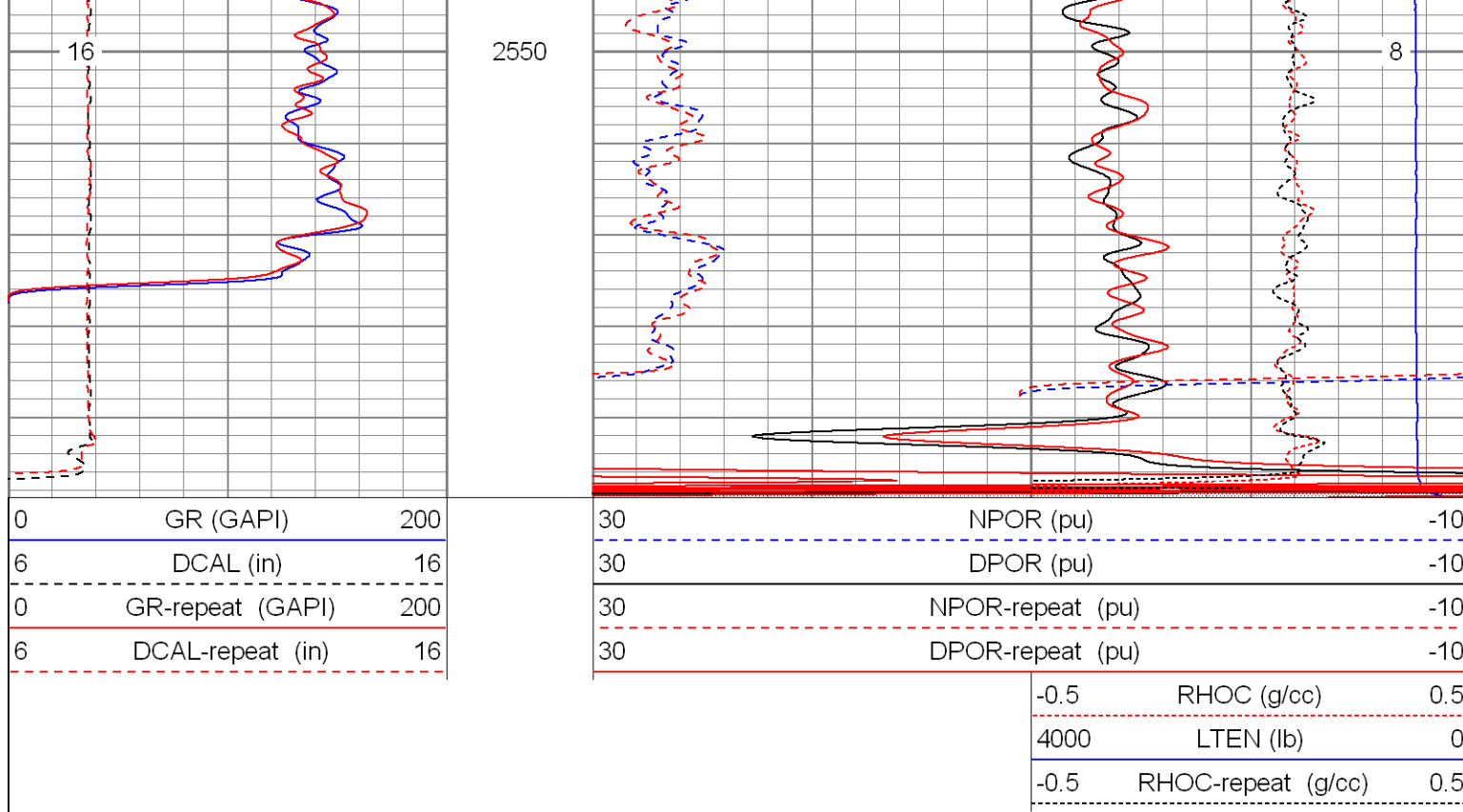
Database File: xtoac3214.db  
Dataset Pathname: pass3.1  
Presentation Format: cdnl  
Dataset Creation: Fri Jun 15 02:05:07 2007 by Calc Open-Cased 061129  
Charted by: Depth in Feet scaled 1:240

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

30	NPOR (pu)	-10
30	DPOR (pu)	-10
30	NPOR-repeat (pu)	-10
30	DPOR-repeat (pu)	-10

-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
-0.5	RHOC-repeat (g/cc)	0.5





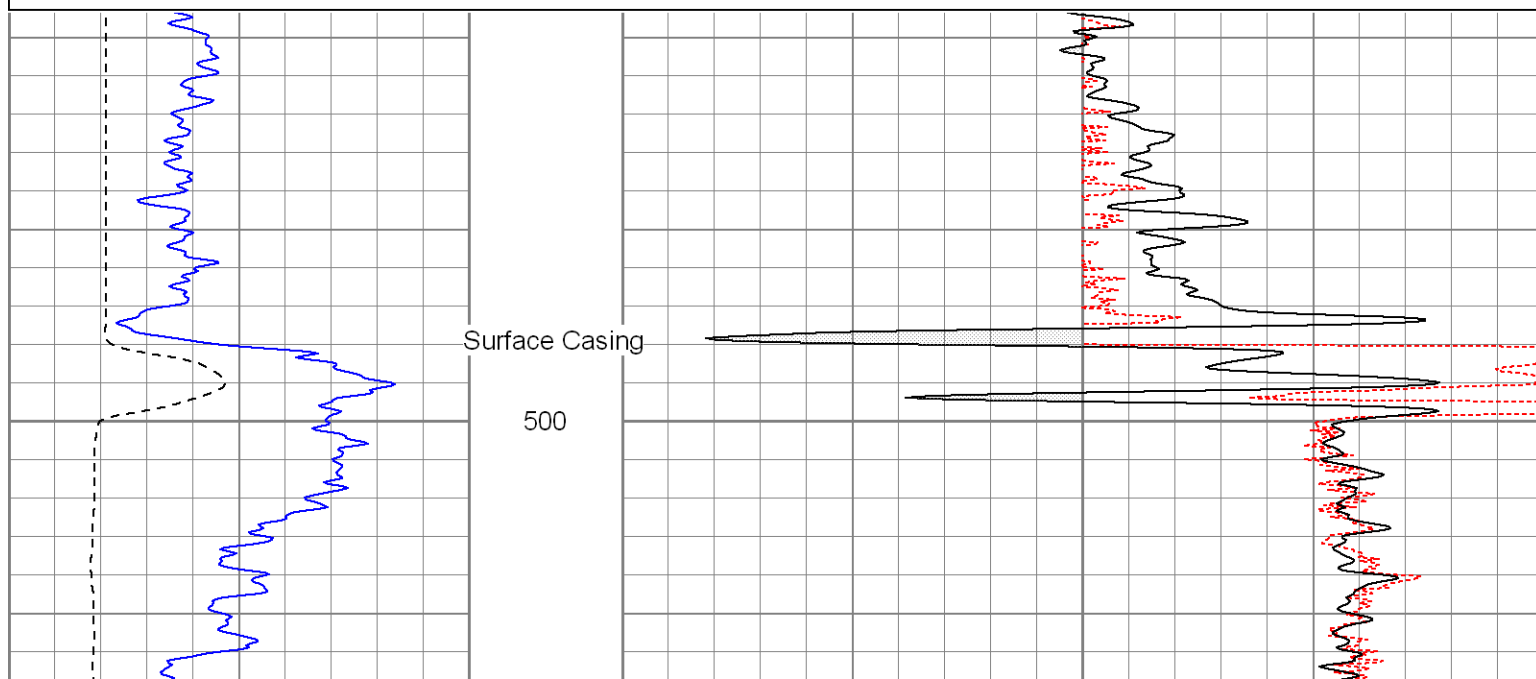
**SUPERIOR**

Black Lick, Pa.  
Mercer, Pa.  
Wooster, Oh.  
Cleveland, Ok.  
Trinidad, Co.

# High Resolution Pass

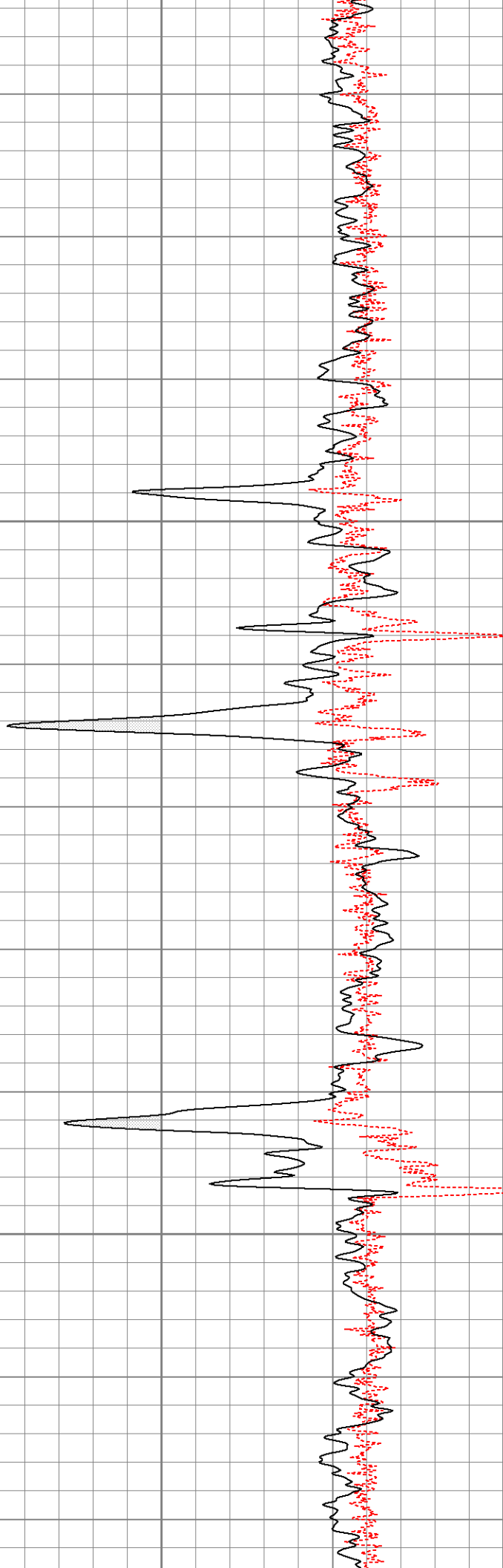
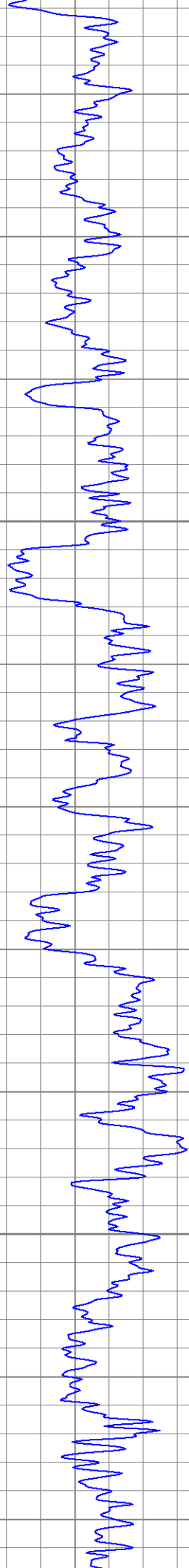
Database File: xtoac3214.db  
Dataset Pathname: pass4.2  
Presentation Format: cdlhr  
Dataset Creation: Fri Jun 15 13:10:01 2007 by Calc Open-Cased 061129  
Charted by: Depth in Feet scaled 1:120

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

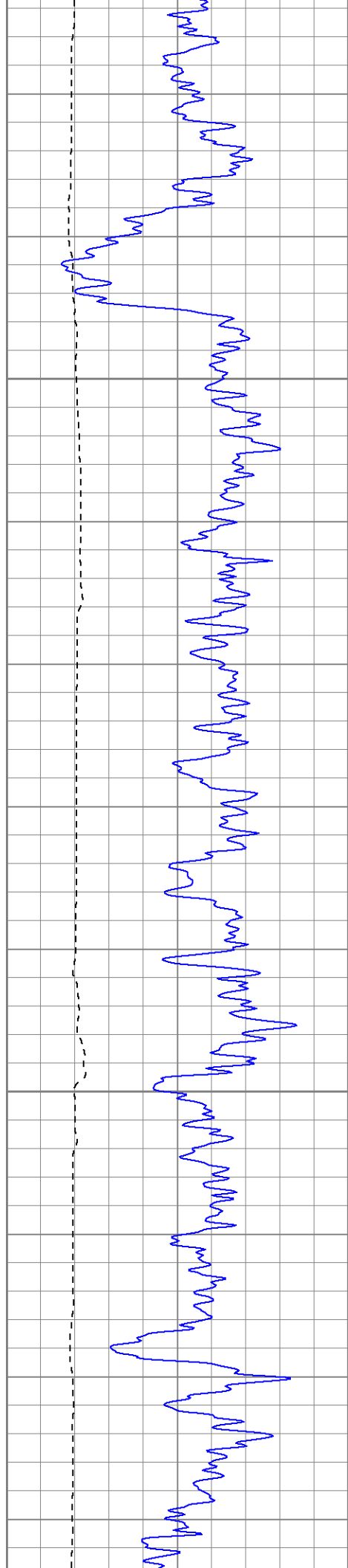


550

600

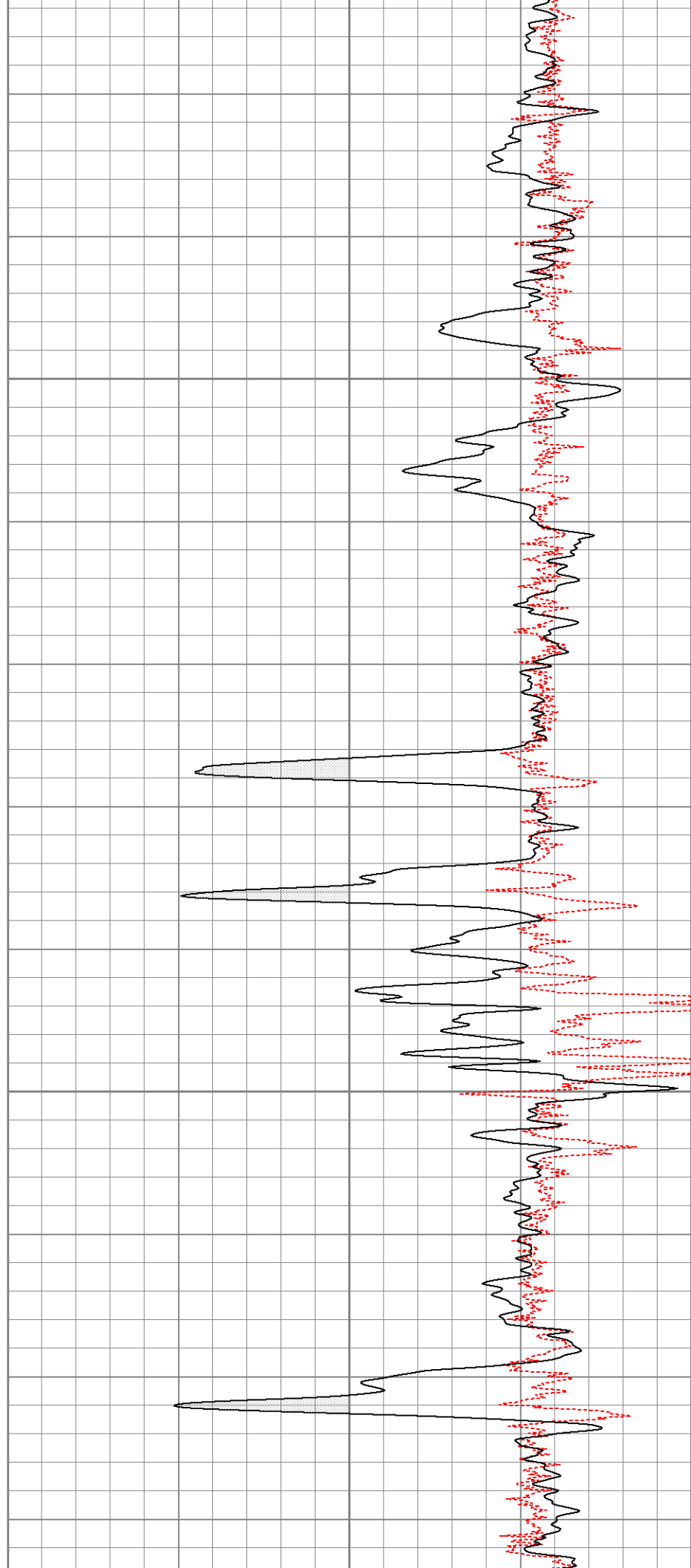






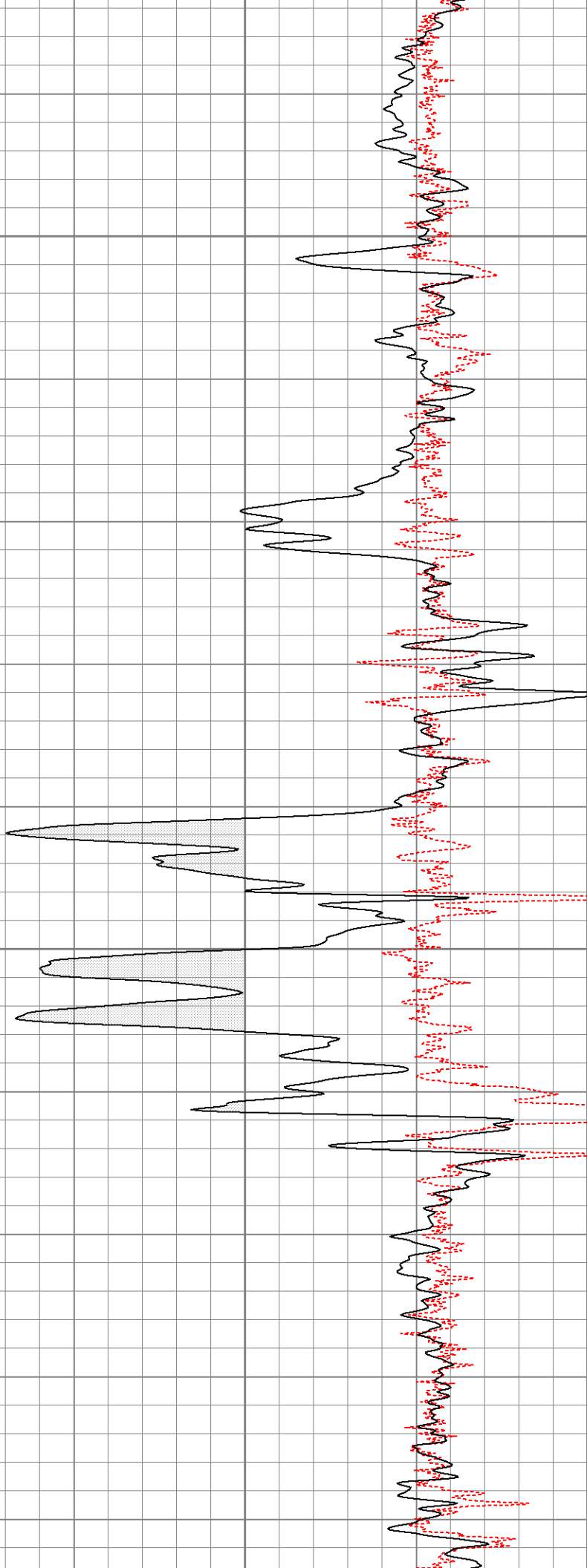
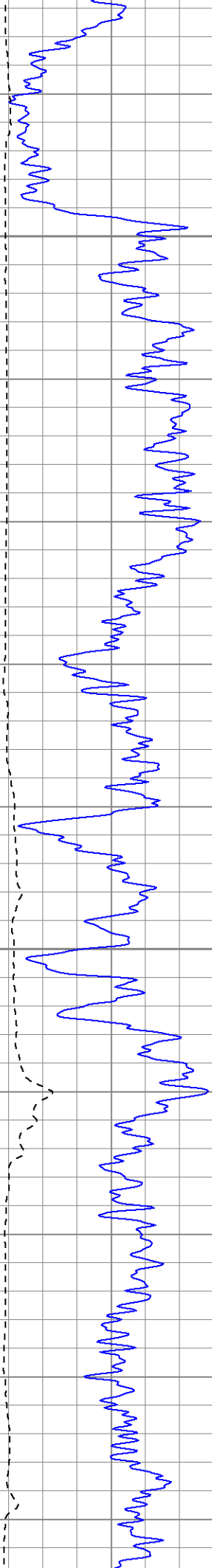
650

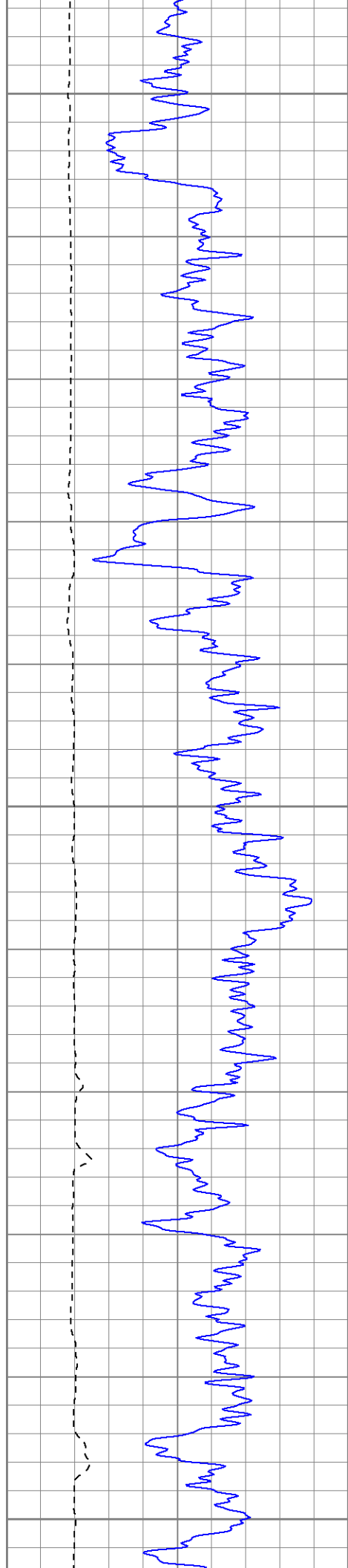
700



750

800

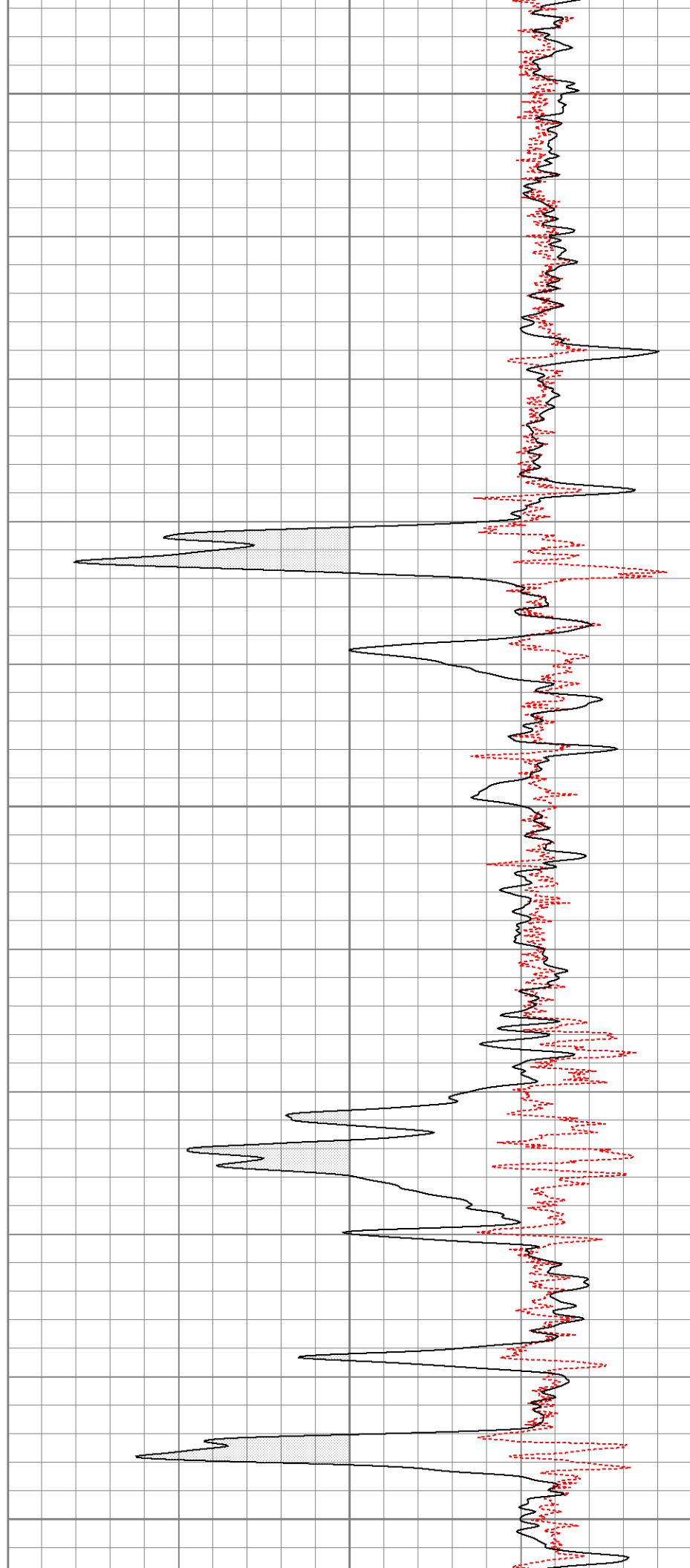


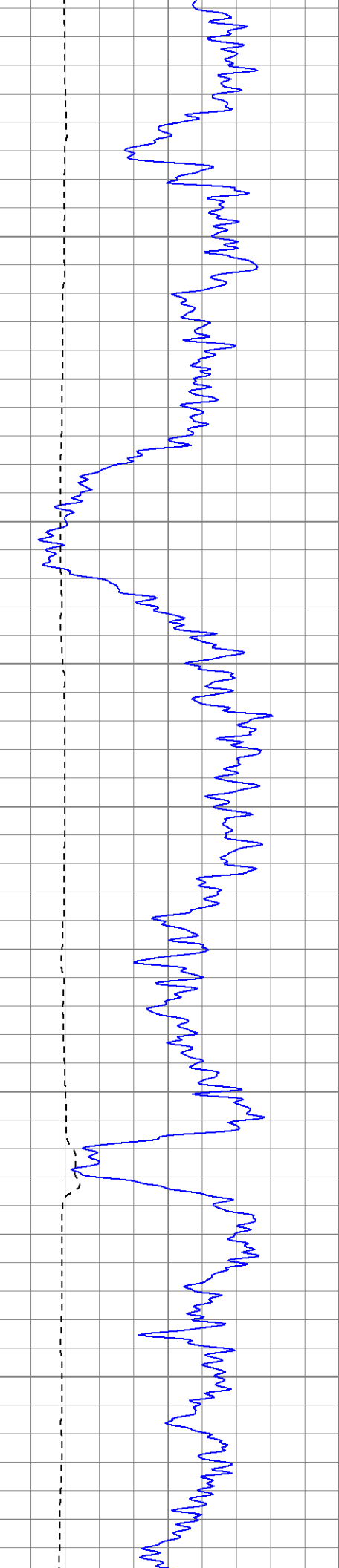


850

900

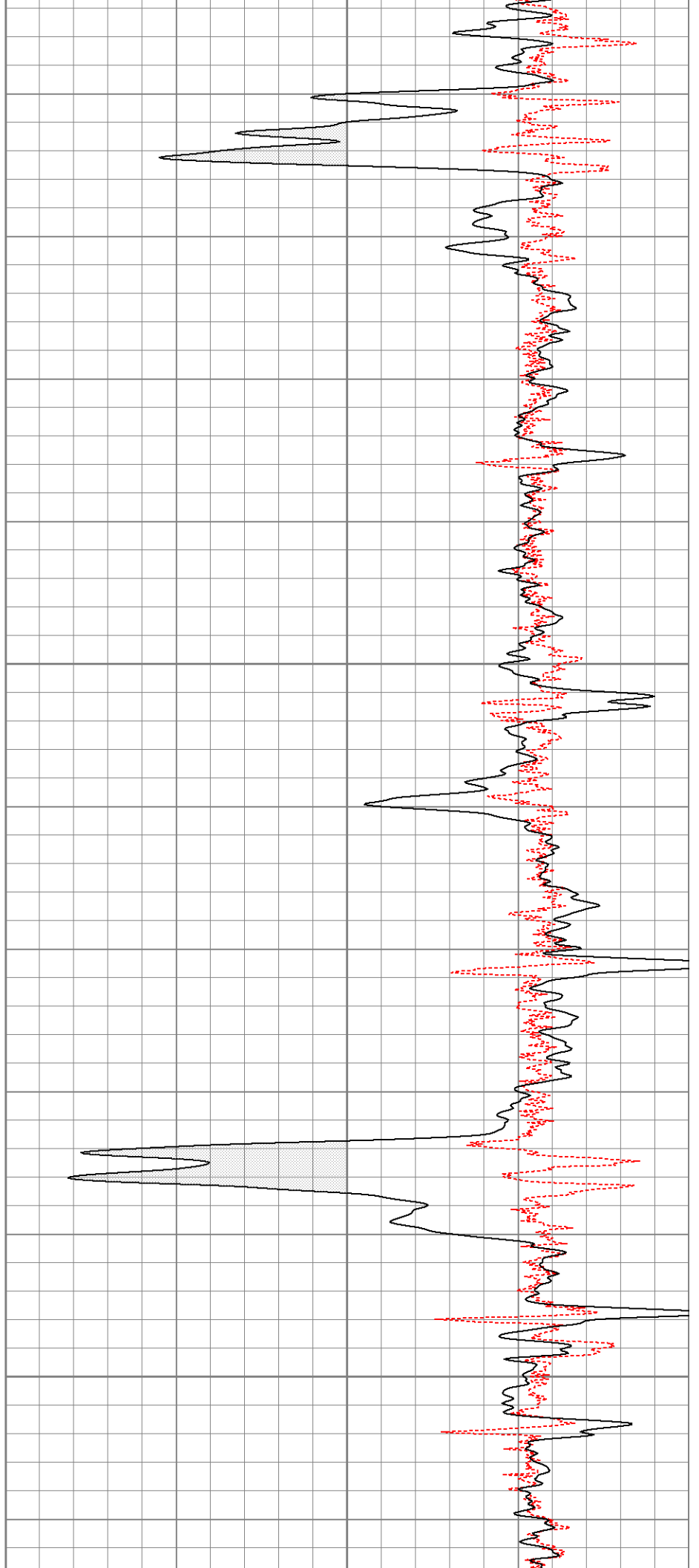
950

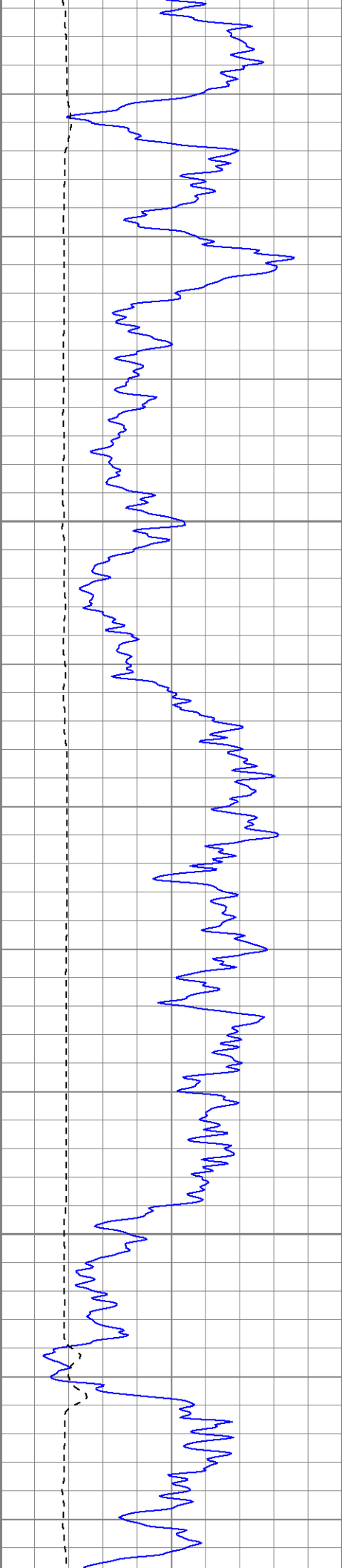




1000

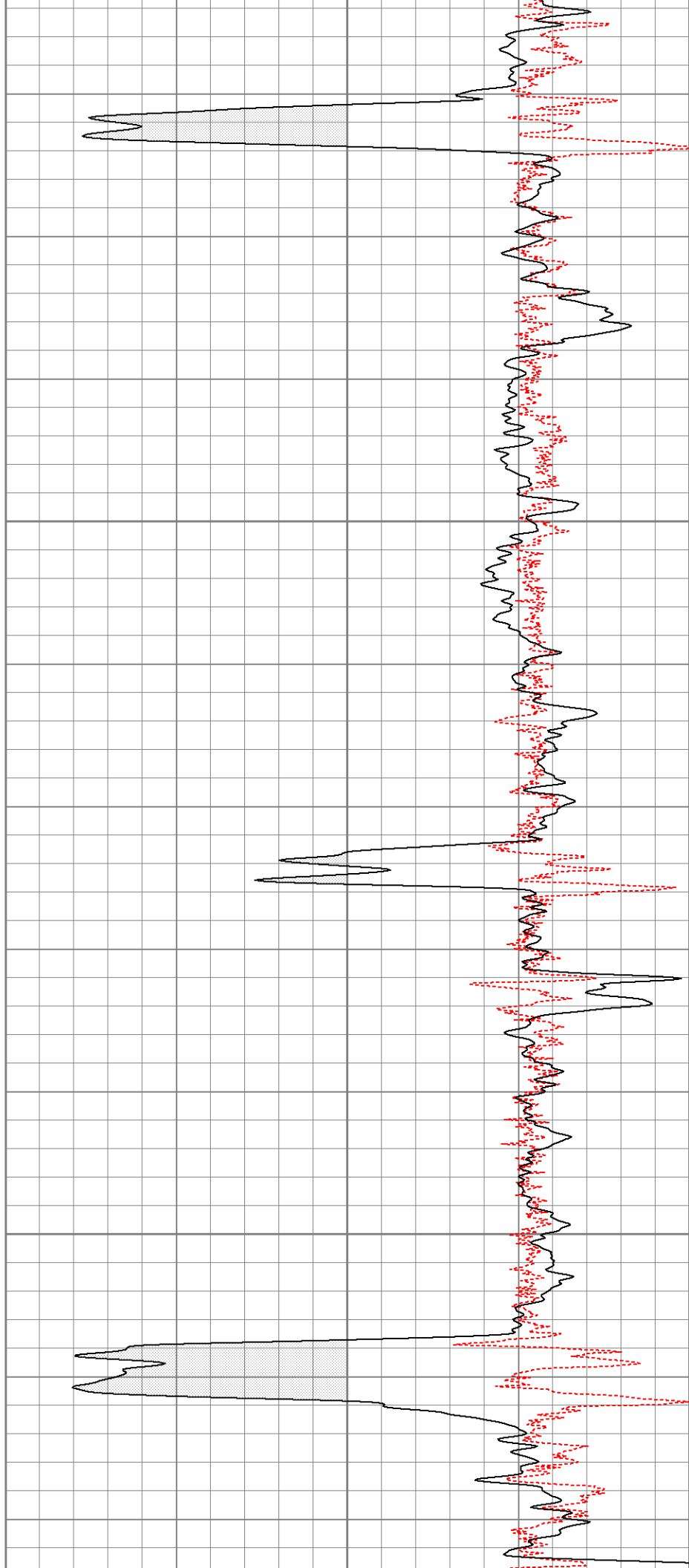
1050

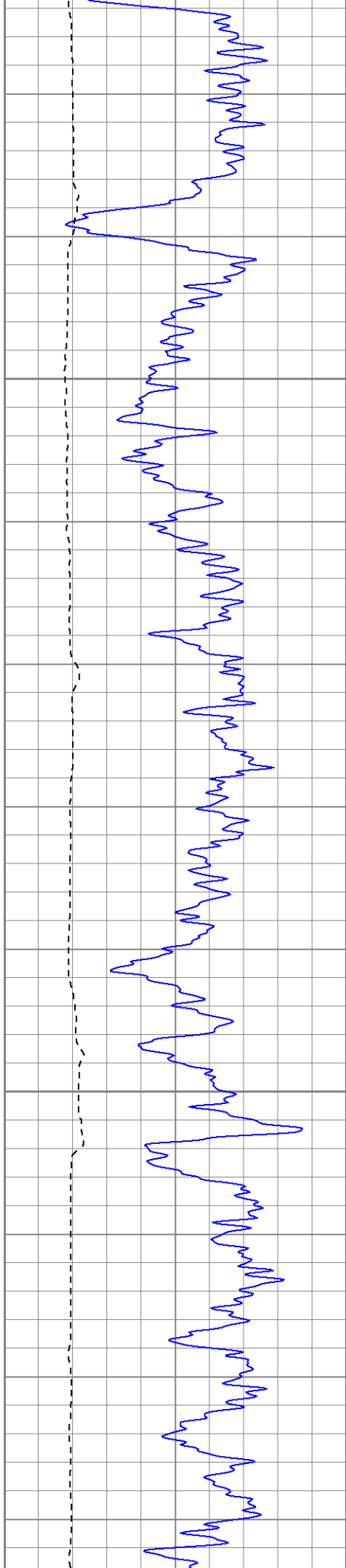




1100

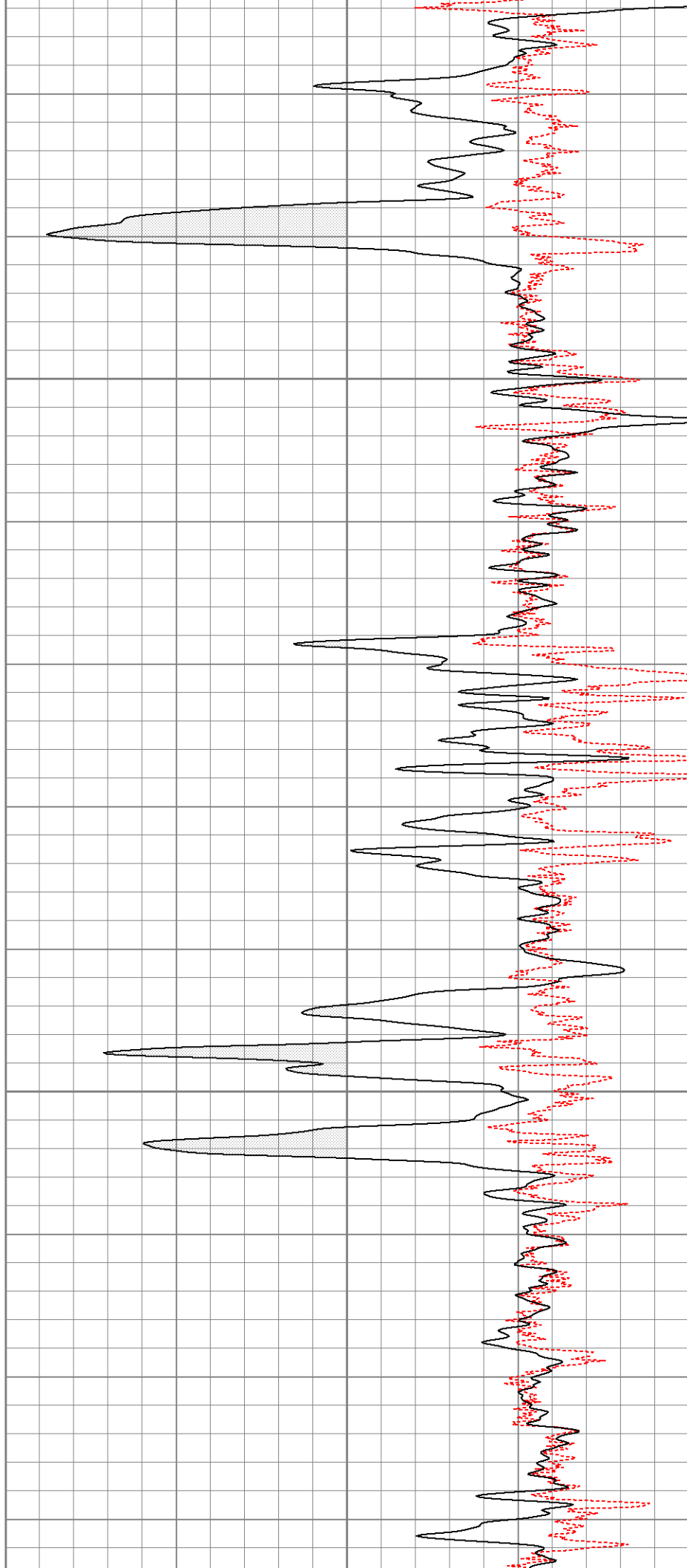
1150

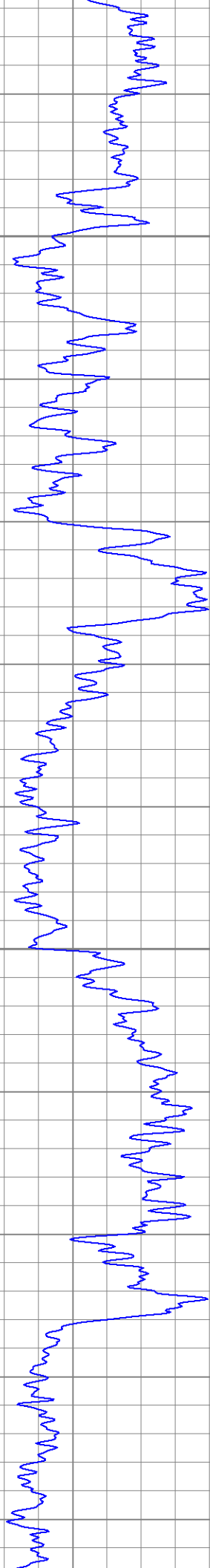




1200

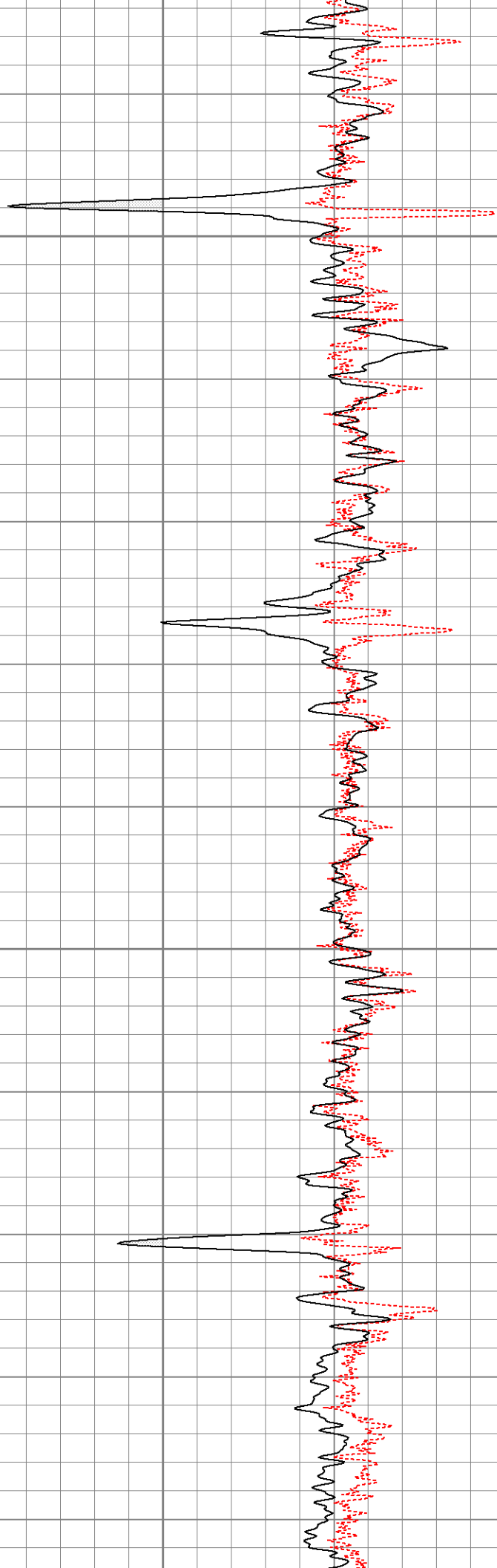
1250

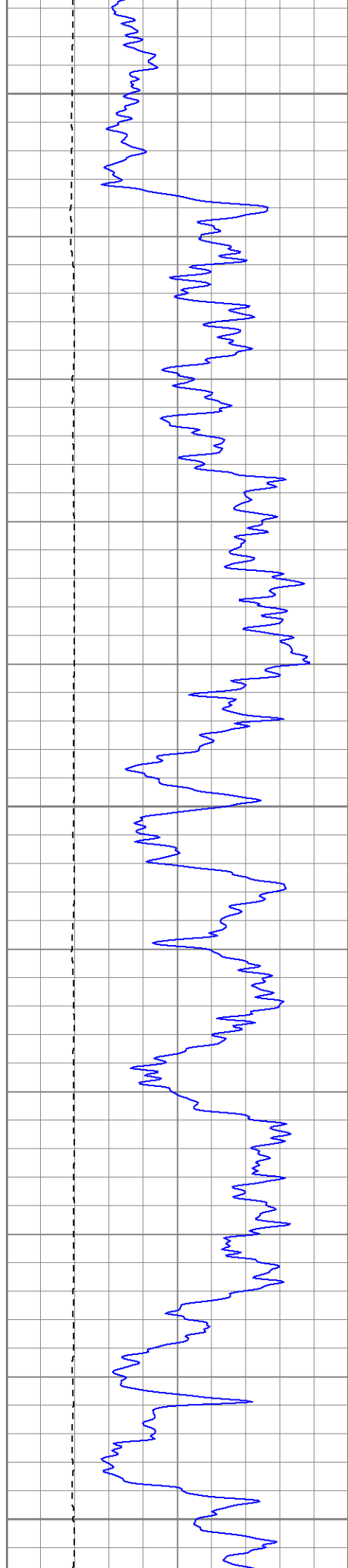




1300

1350

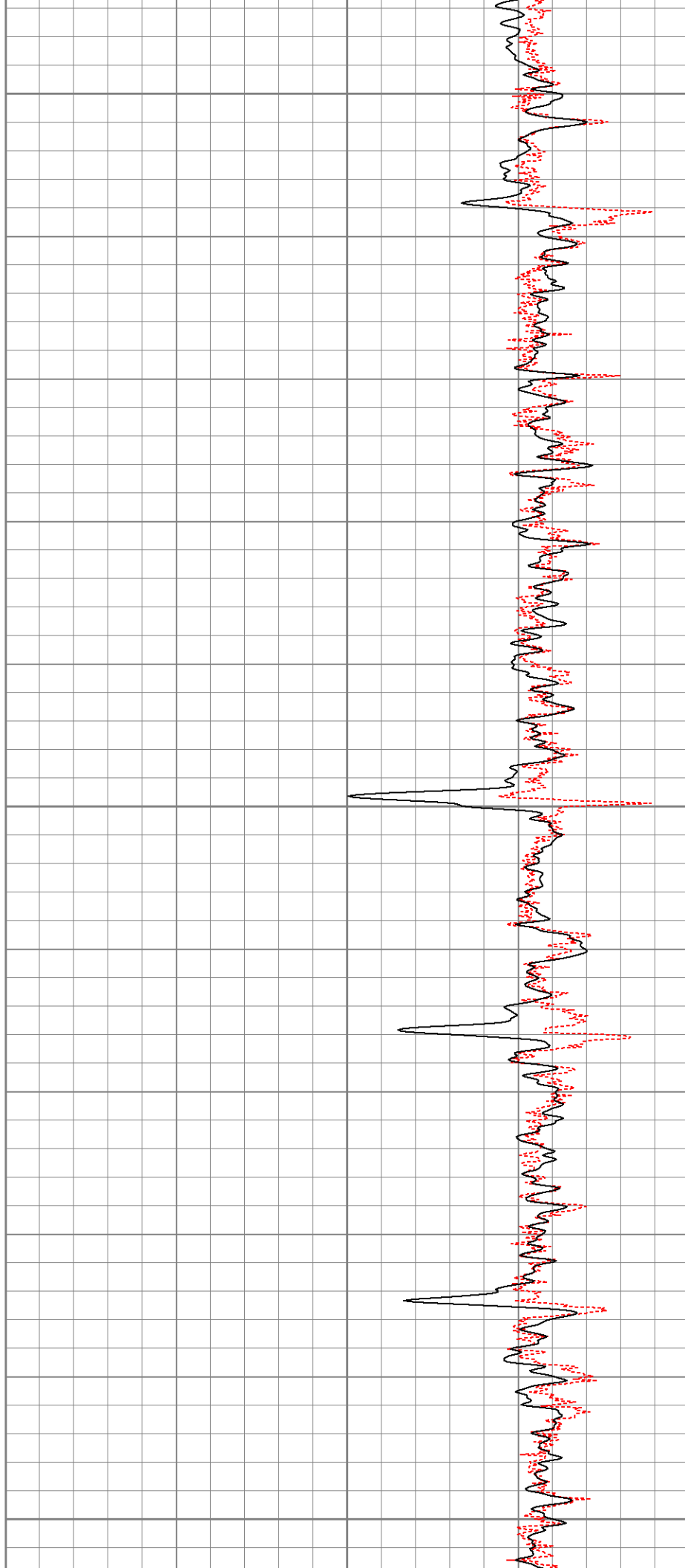




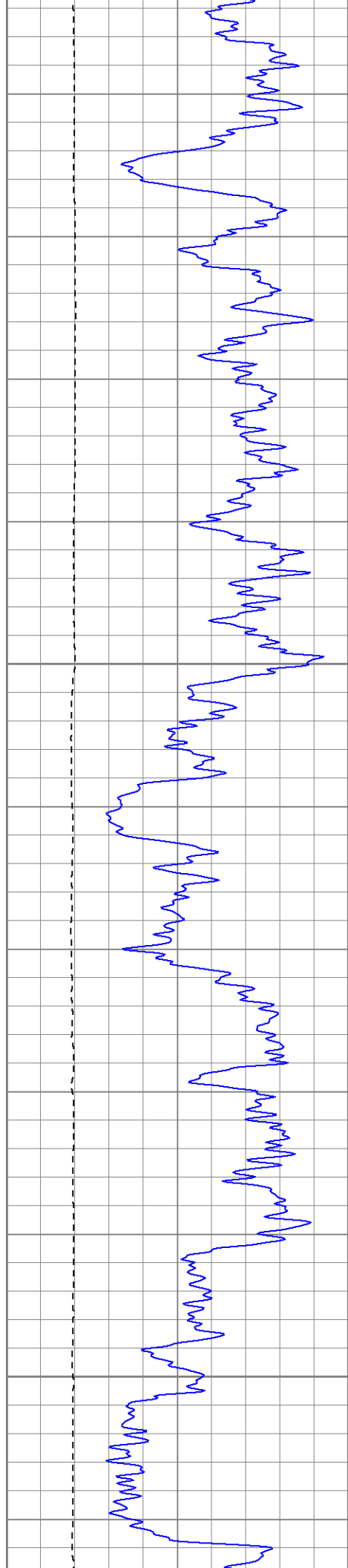
1400

1450

1500

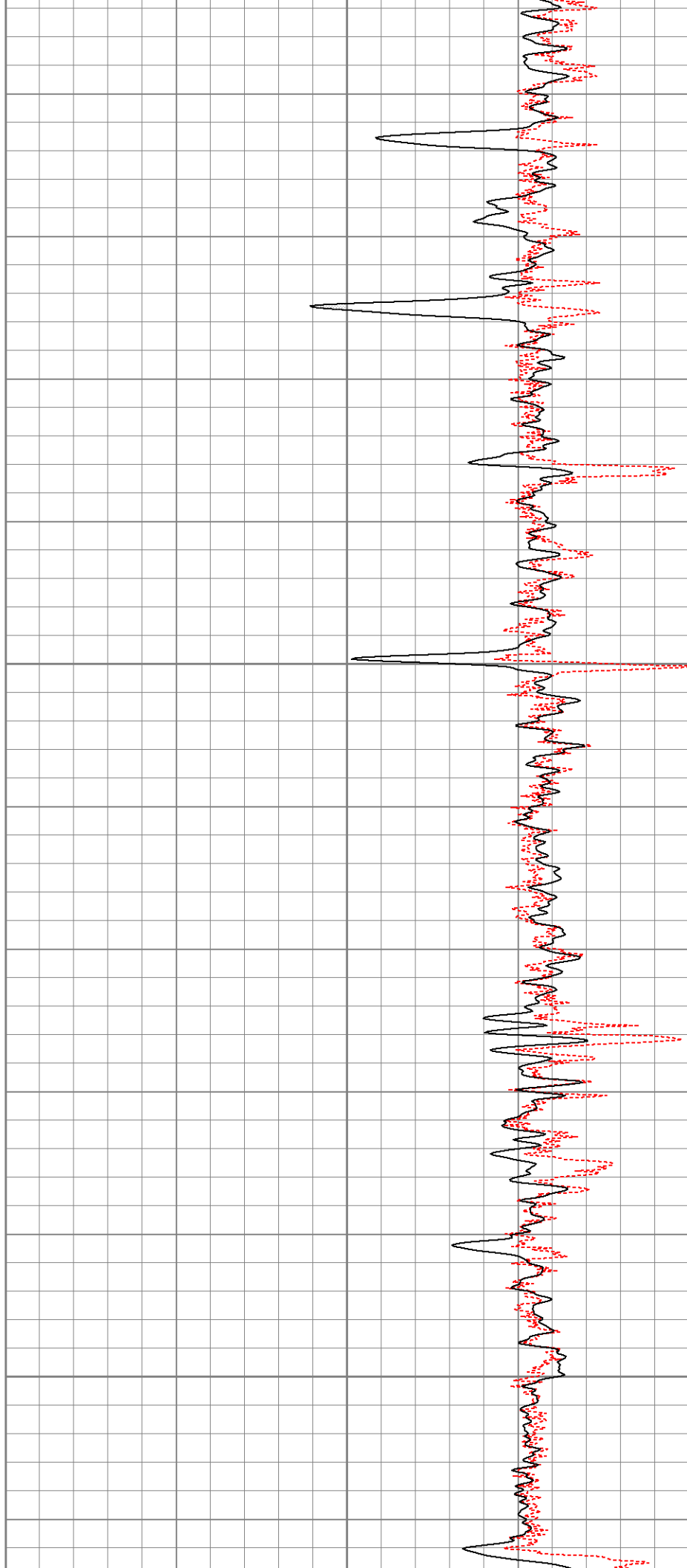


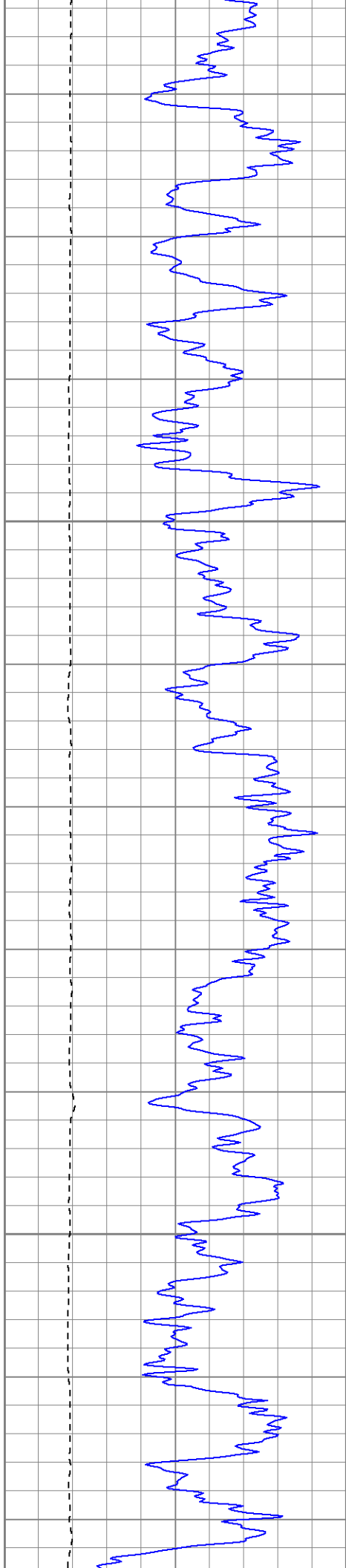




1550

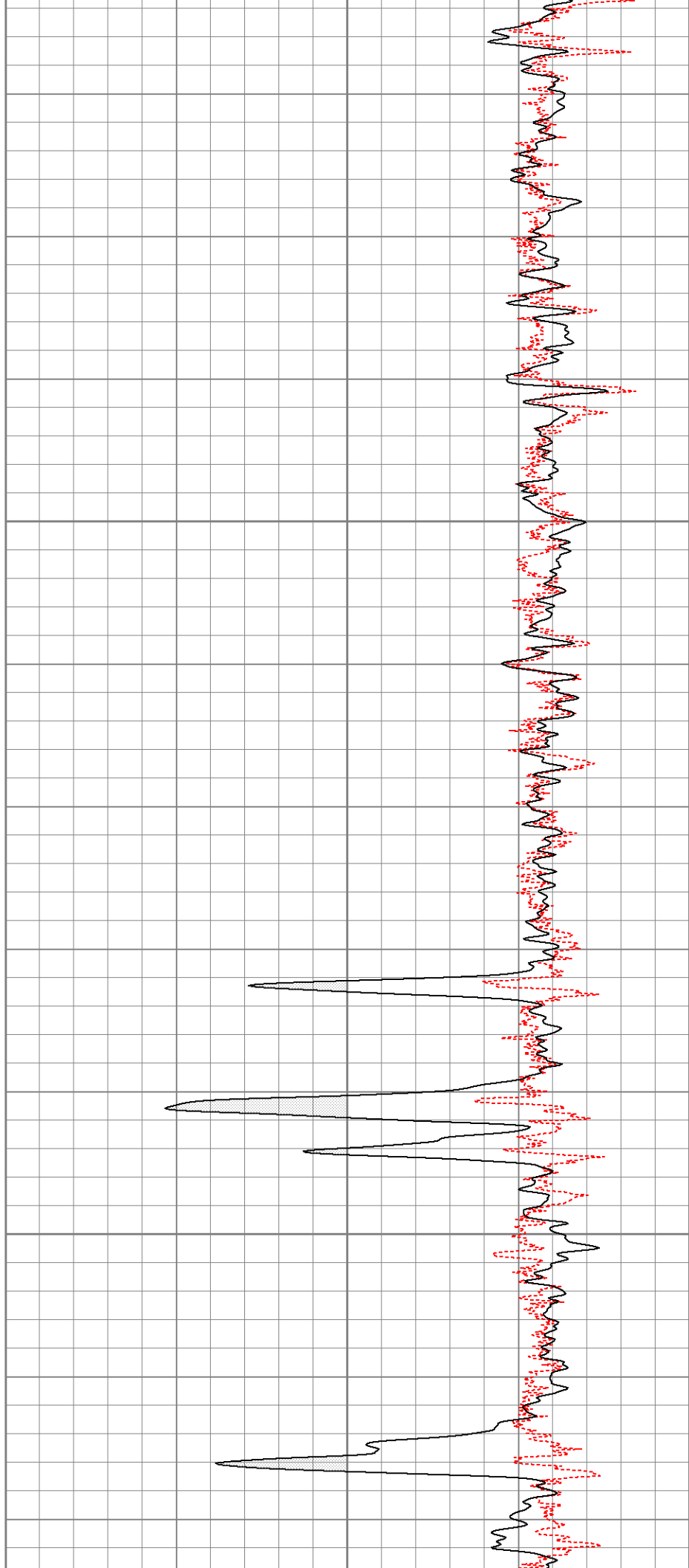
1600

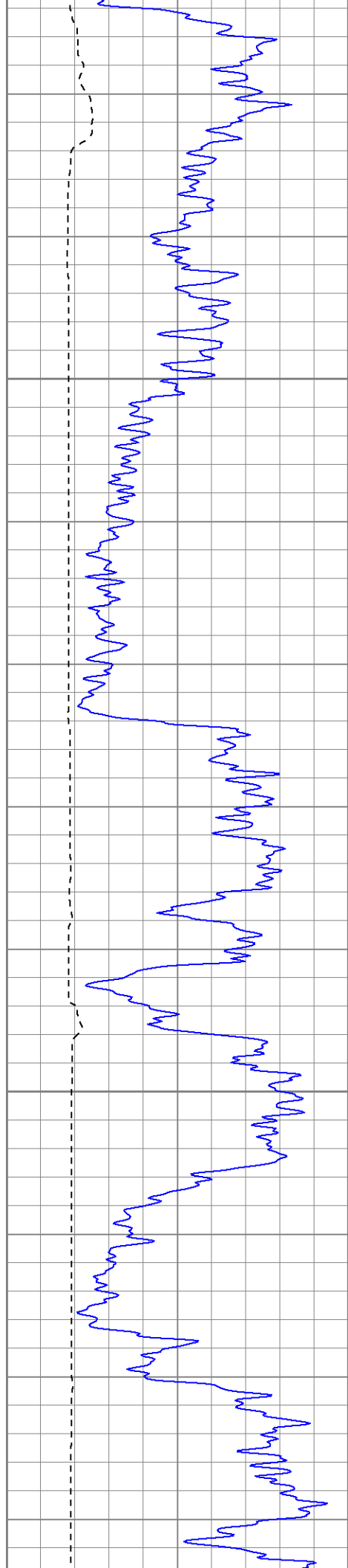




1650

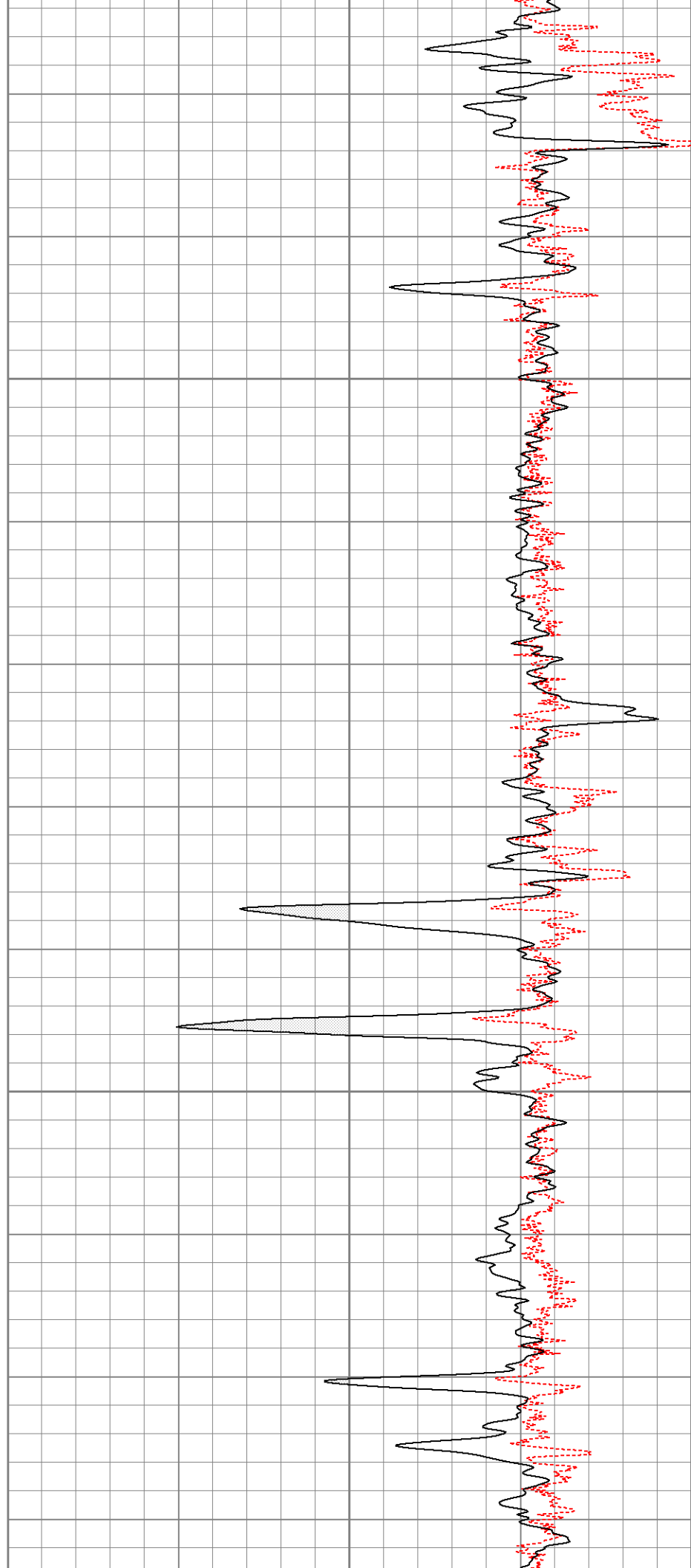
1700

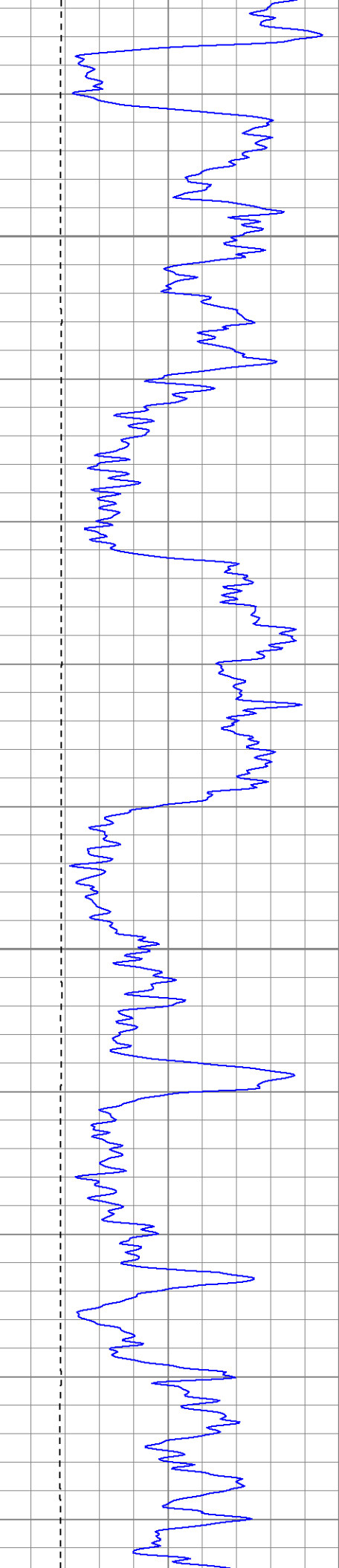




1750

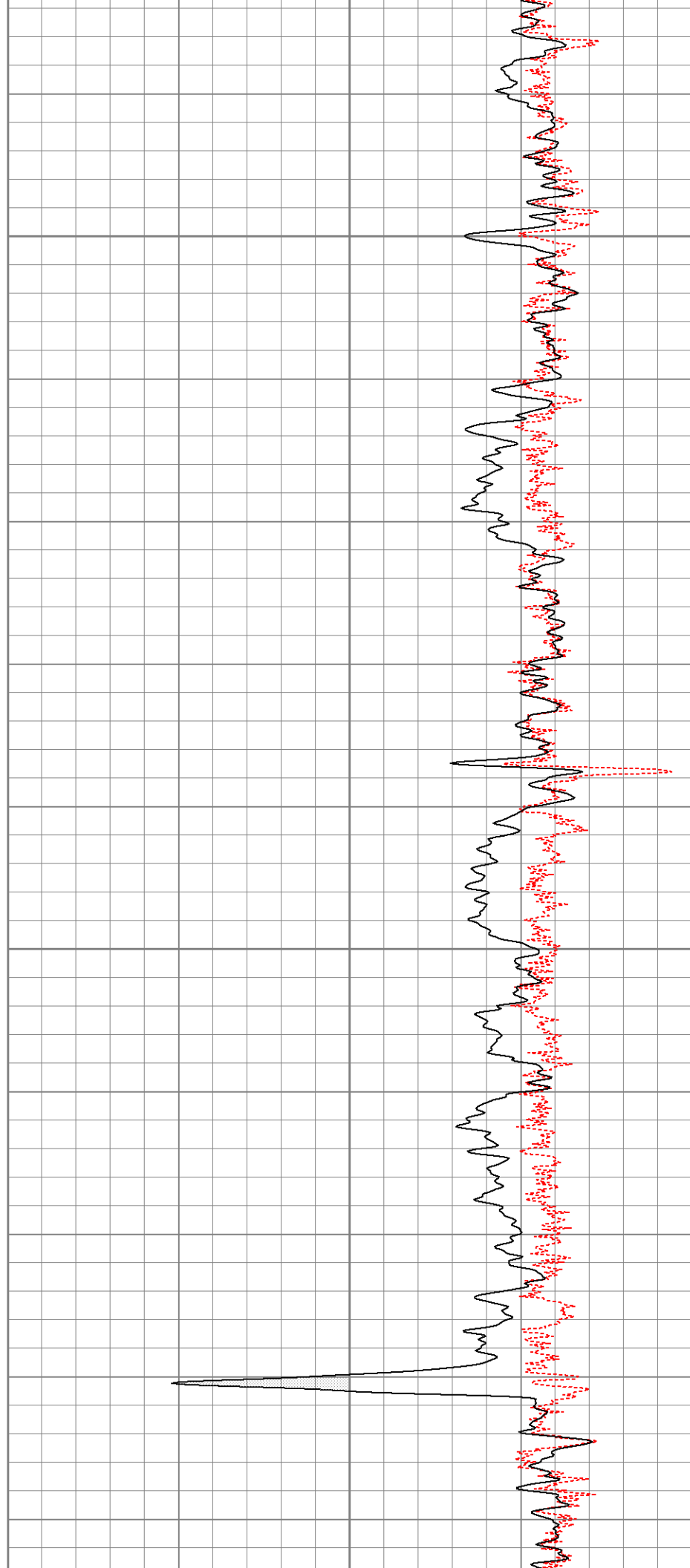
1800

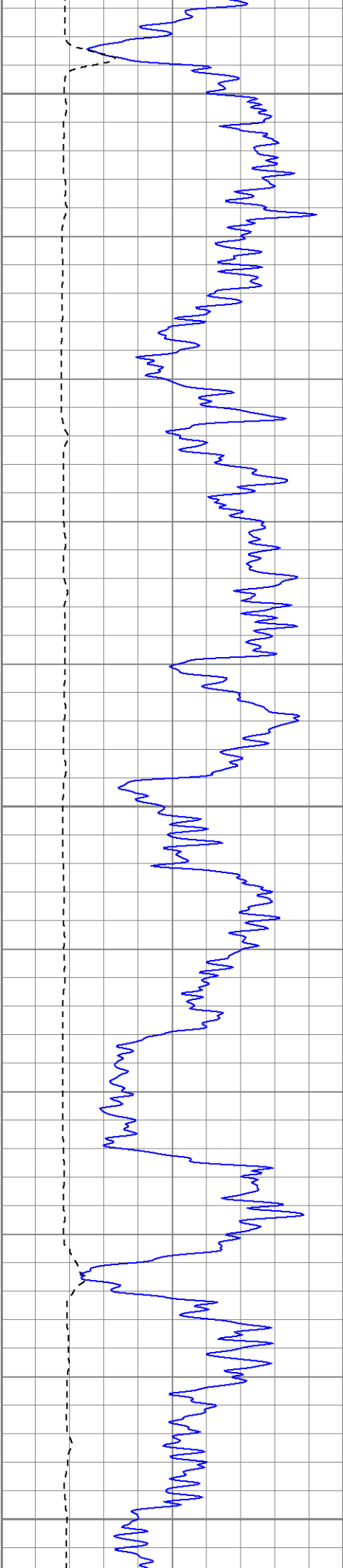




1850

1900

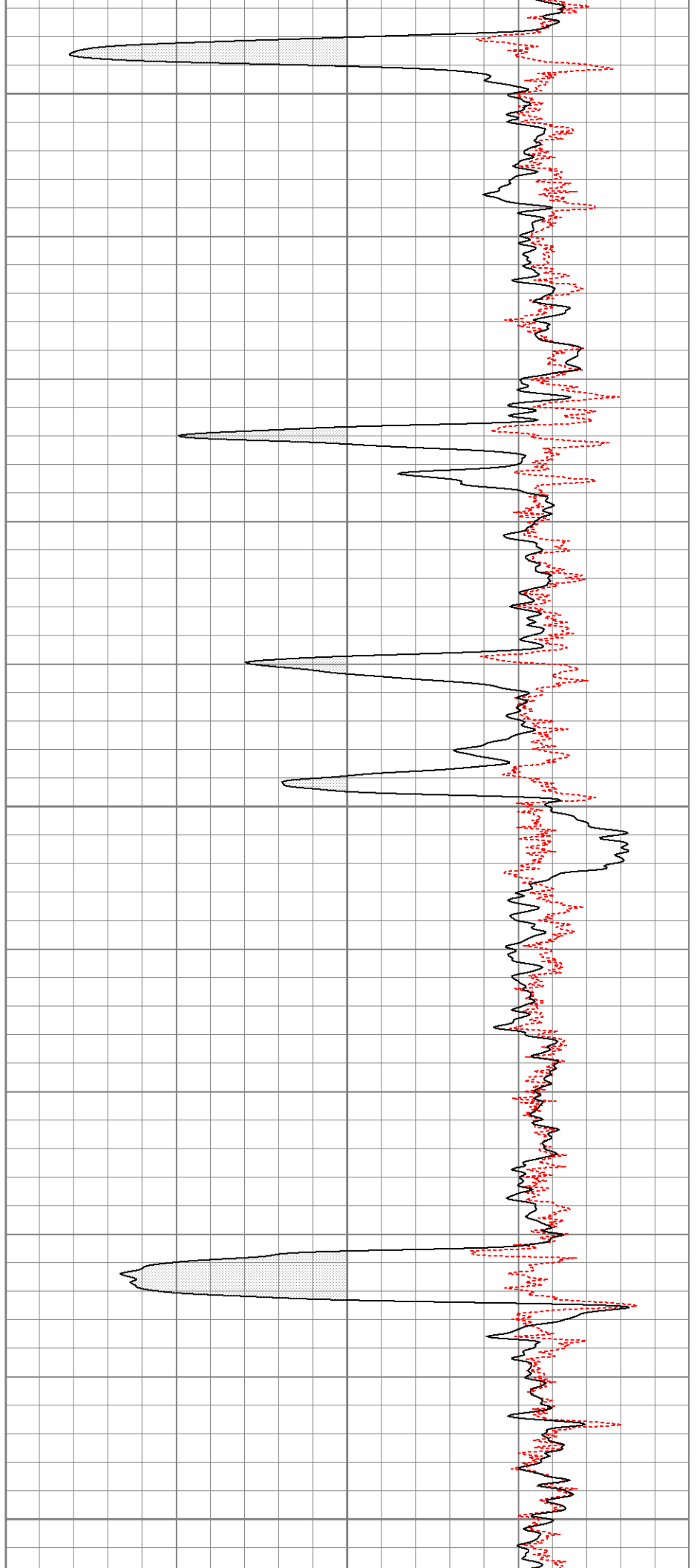




1950

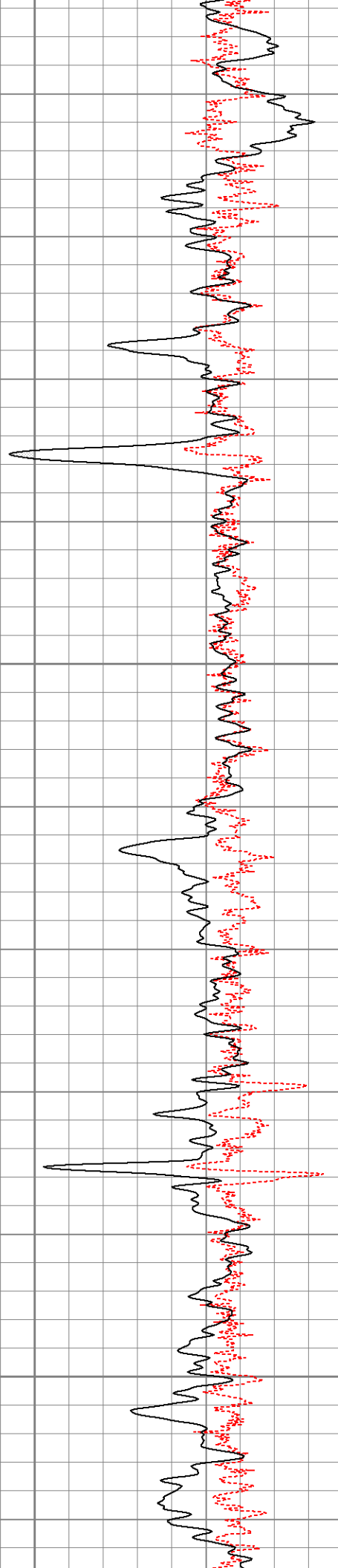
2000

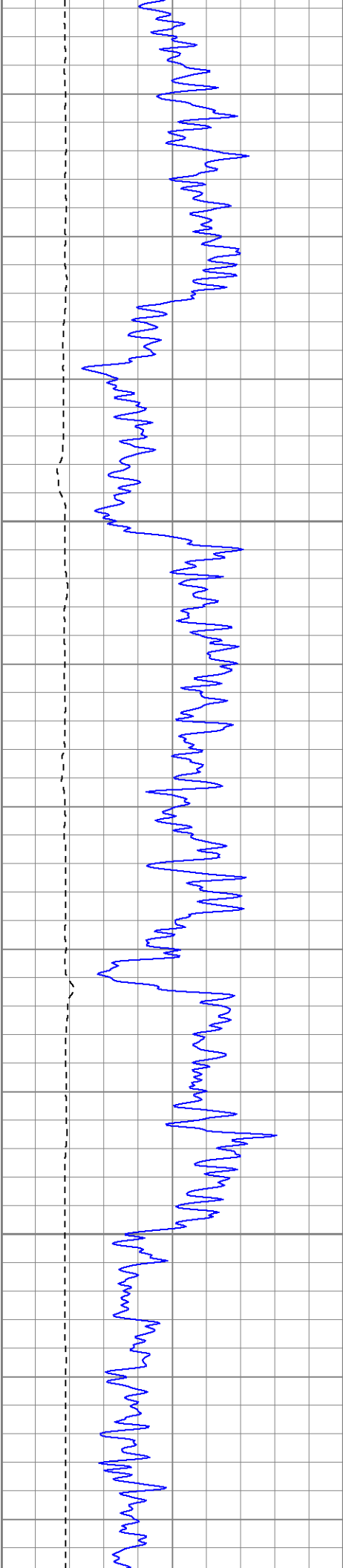
2050



2100

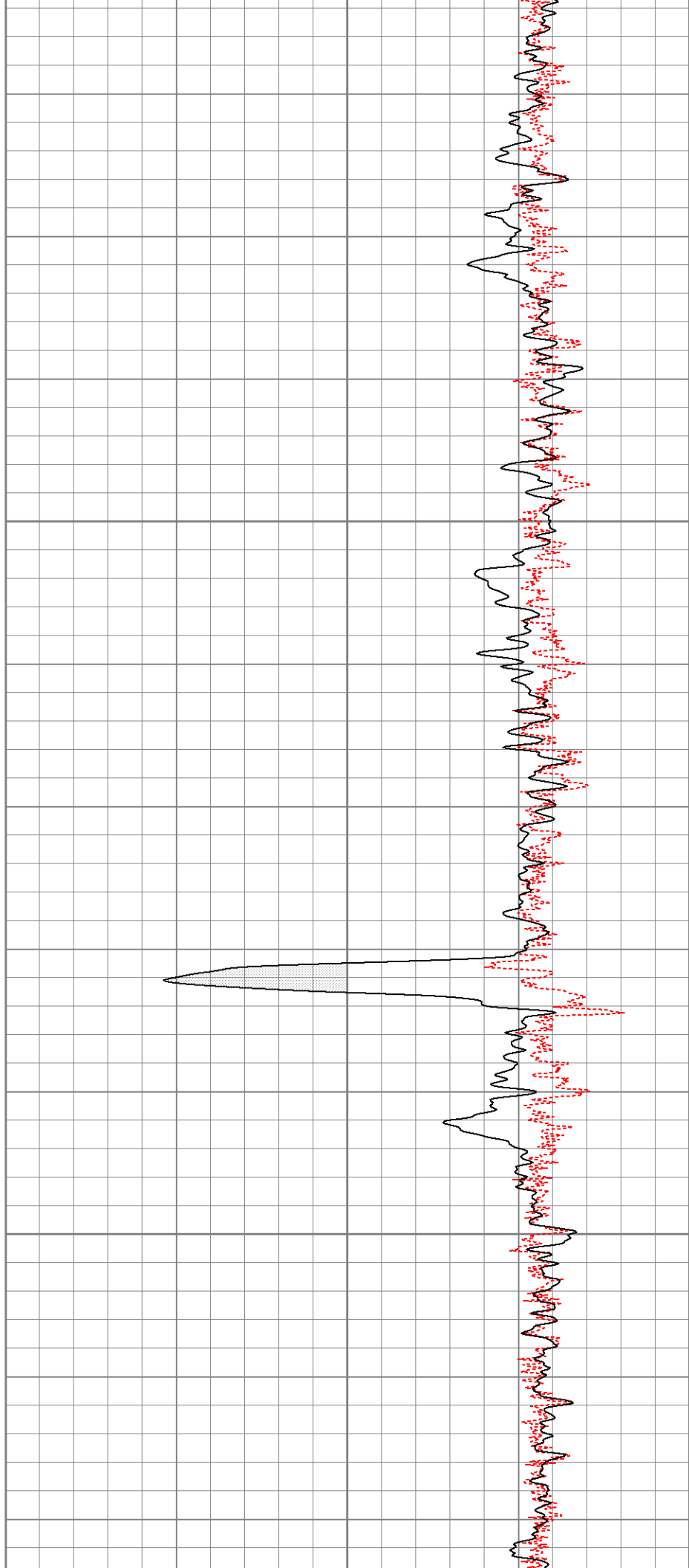
2150

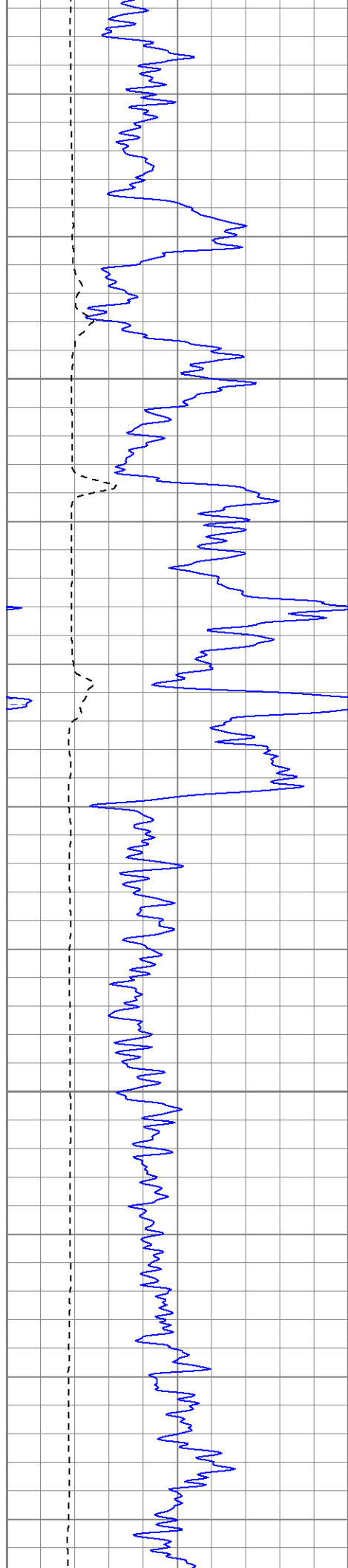




2200

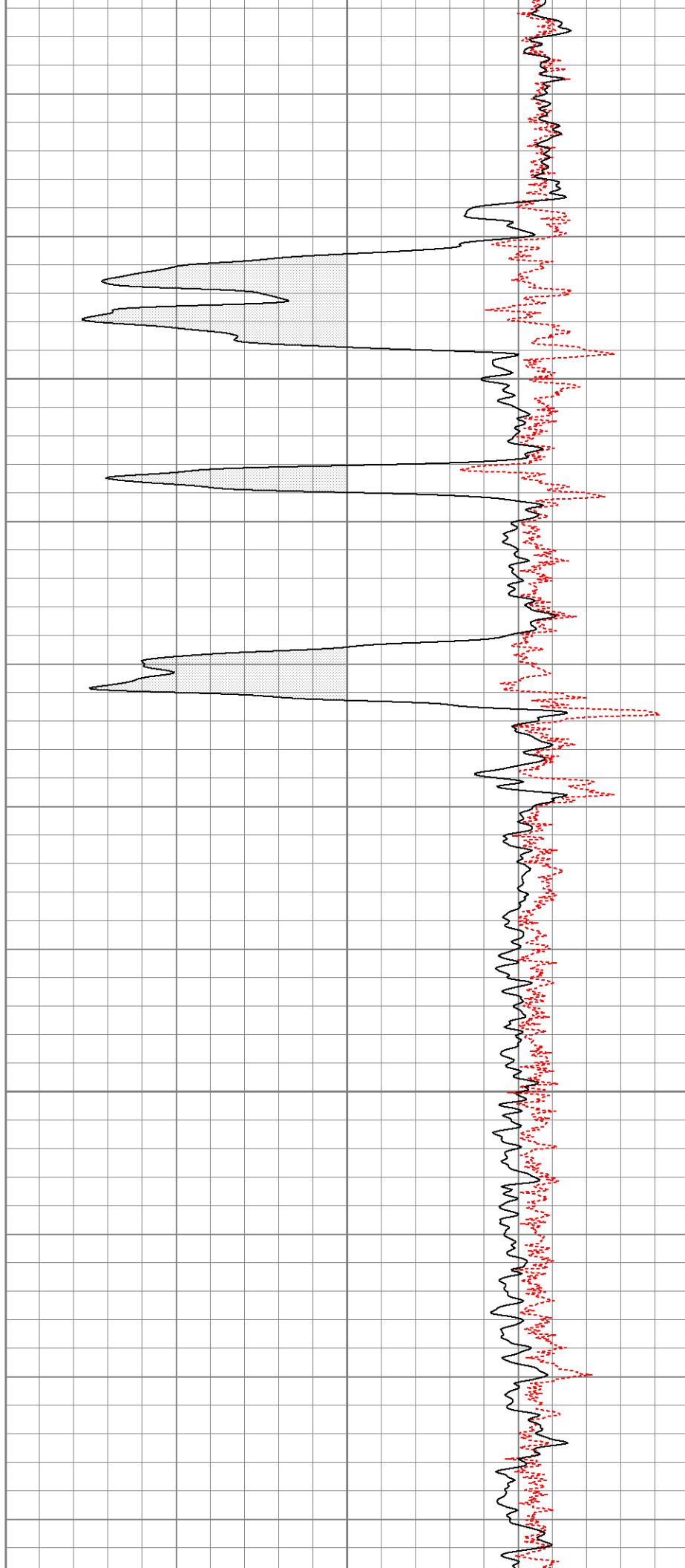
2250



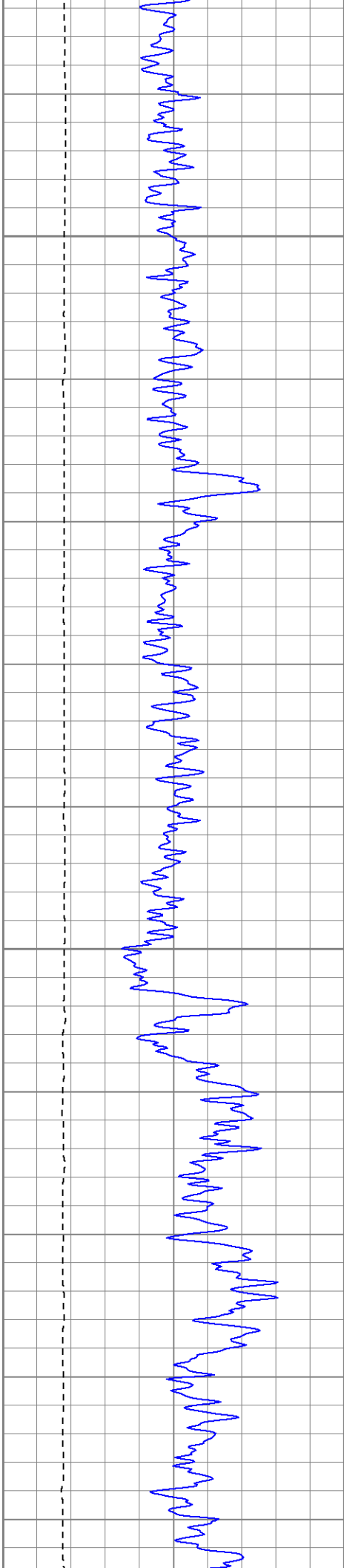


2300

2350

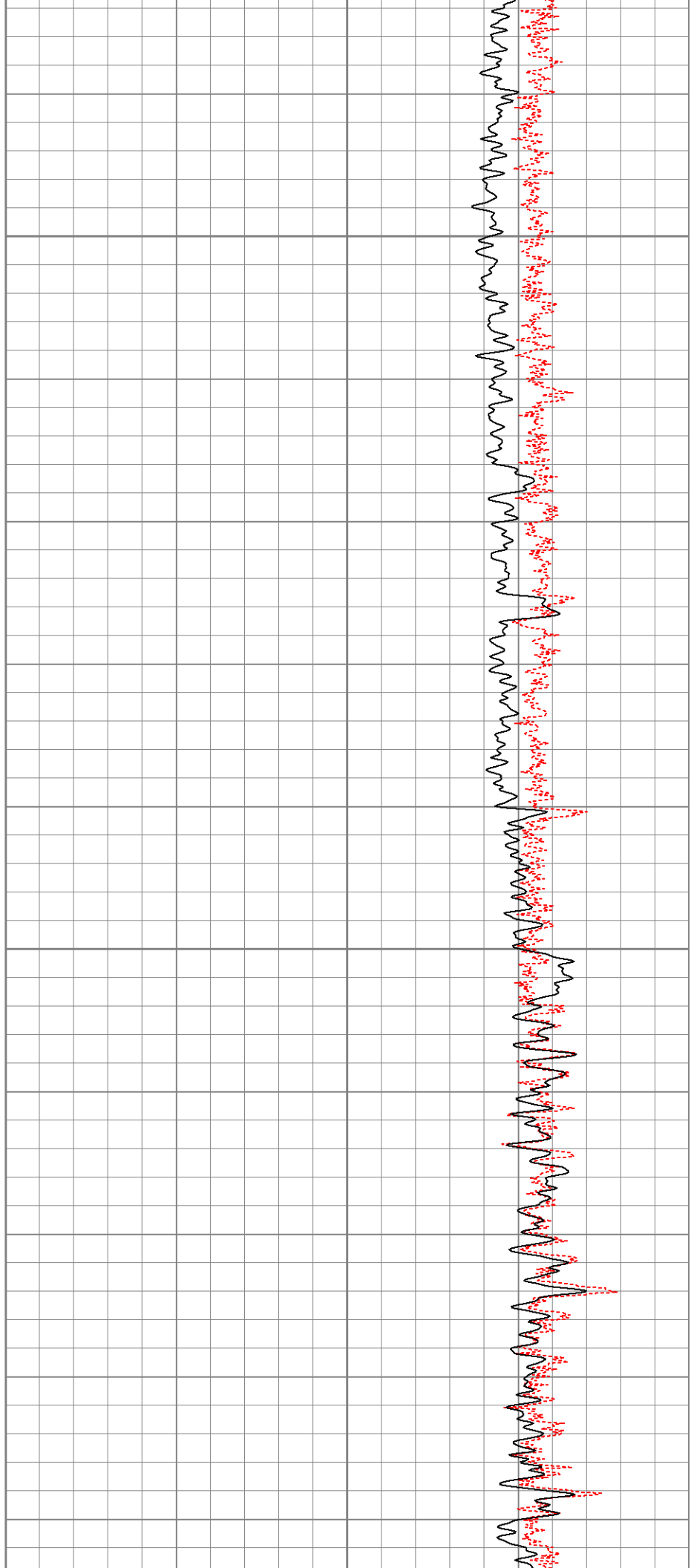


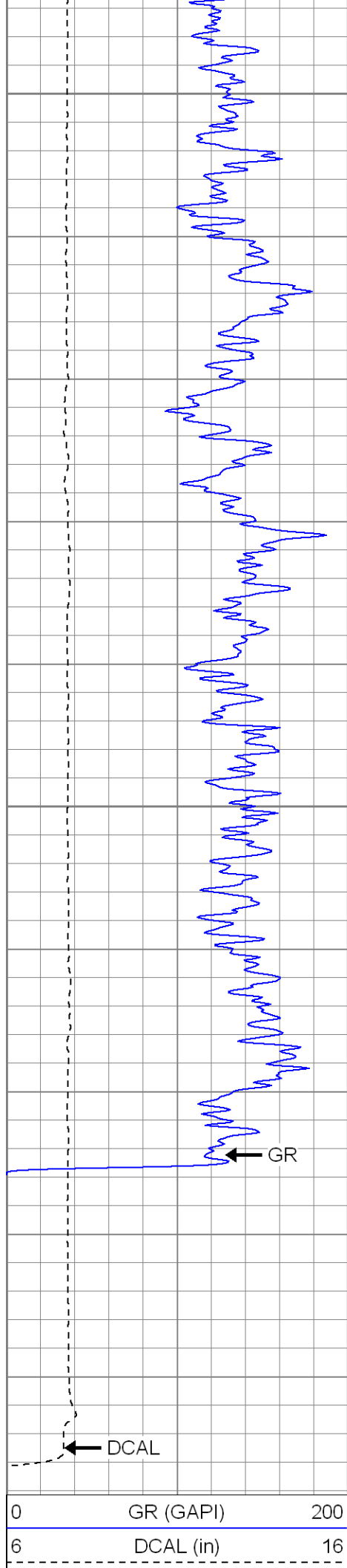




2400

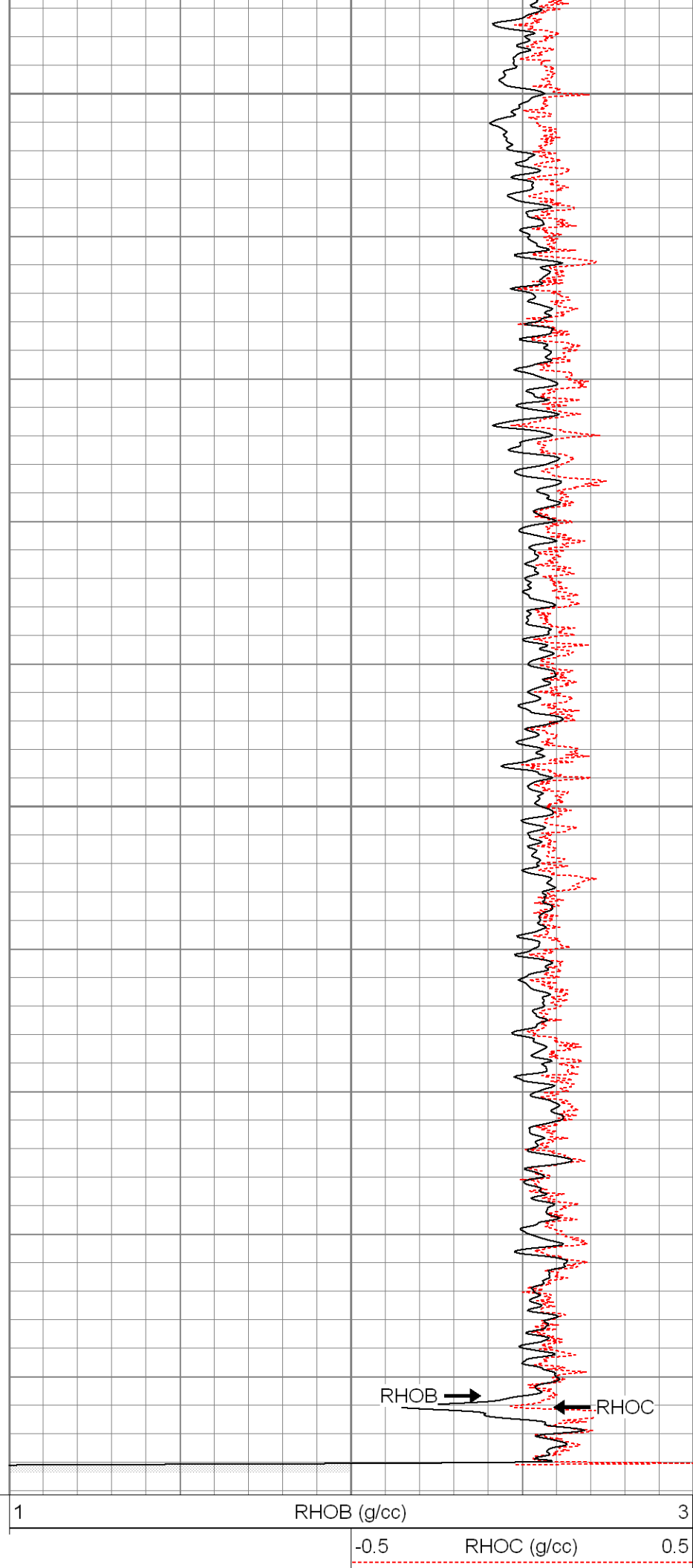
2450





2500

2550



## Calibration Report

Database File: xtoac3214.db  
 Dataset Pathname: pass4  
 Dataset Creation: Fri Jun 15 00:59:48 2007 by Log Open-Cased 061129

### Compensated Density Calibration Report

Serial-Model: 2119-O  
 Source / Verifier: csv-j12 / blks  
 Master Calibration Performed: Thu May 17 21:21:31 2007

#### Master Calibration

	<u>Density</u>		<u>Far Detector</u>		<u>Near Detector</u>
Magnesium	1.710	g/cc	988.49		602.41 cps
Aluminum	2.590	g/cc	220.69		404.88 cps
Spine Angle = 75.16			Density/Spine Ratio = 0.567		
	<u>Size</u>		<u>Reading</u>		
Small Ring	7.85	in	3.20	V	
Large Ring	14.00	in	8.81	V	

### Gamma Ray Calibration Report

Serial Number: 2119  
 Tool Model: O  
 Performed: Sun May 20 09:48:53 2007

Calibrator Value: 170.0 GAPI

Background Reading: 42.6 cps  
 Calibrator Reading: 139.0 cps

Sensitivity: 0.8000 GAPI/cps



### Neutron Calibration Report

Serial Number: 5145  
 Tool Model: G  
 Performed: Mon Apr 23 18:30:25 2007

Calibrator Value: 1200 NAPI

Calibrator Reading: 1700 cps

Sensitivity: 1 NAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
NEU	12.44		None	0.75	1.50	5.00
			NEU-G (5145) Gearhart Epithermal	5.75	3.50	85.00
GR	7.64		GR-O (2119) Oilex	2.60	3.63	74.00

