



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

# COMPENSATED DENSITY NEUTRON LOG

Company	XTO Energy Inc.		
Well	Hill Ranch East 14-15		
Field	Purgatoire River		
County	Las Animas	State	Colorado
Location:	API # : 05 071 09450 00		Other Services
1277' FSL & 2144' FEL		DIL	
Permanent Datum	SEC 14 TWP 34S RGE 67W	Ground Level	Elevation 7906'
Log Measured From		Ground Level	
Drilling Measured From		Ground Level	
Date	4-5-08		
Run Number	Two		
Depth Driller	2515'		
Depth Logger	2511'		
Bottom Logged Interval	2509'		
Top Log Interval	Surface Casing		
Casing Driller	8 5/8" @ 450'		
Casing Logger	452'		
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	10:00 A.M.		
Time Logger on Bottom	1:15 P.M.		
Maximum Recorded Temperature	108 DEG F		
Equipment Number	T697		
Location	Trinidad		
Recorded By	J. Cappellucci		
Witnessed By	Mr. Butch Cummings		

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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

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

### Well Directions:

Lorencito, 2.2 miles past Compressor station take right,  
at next Y stay right up hill, At top of hill take hard left,  
second left to location.

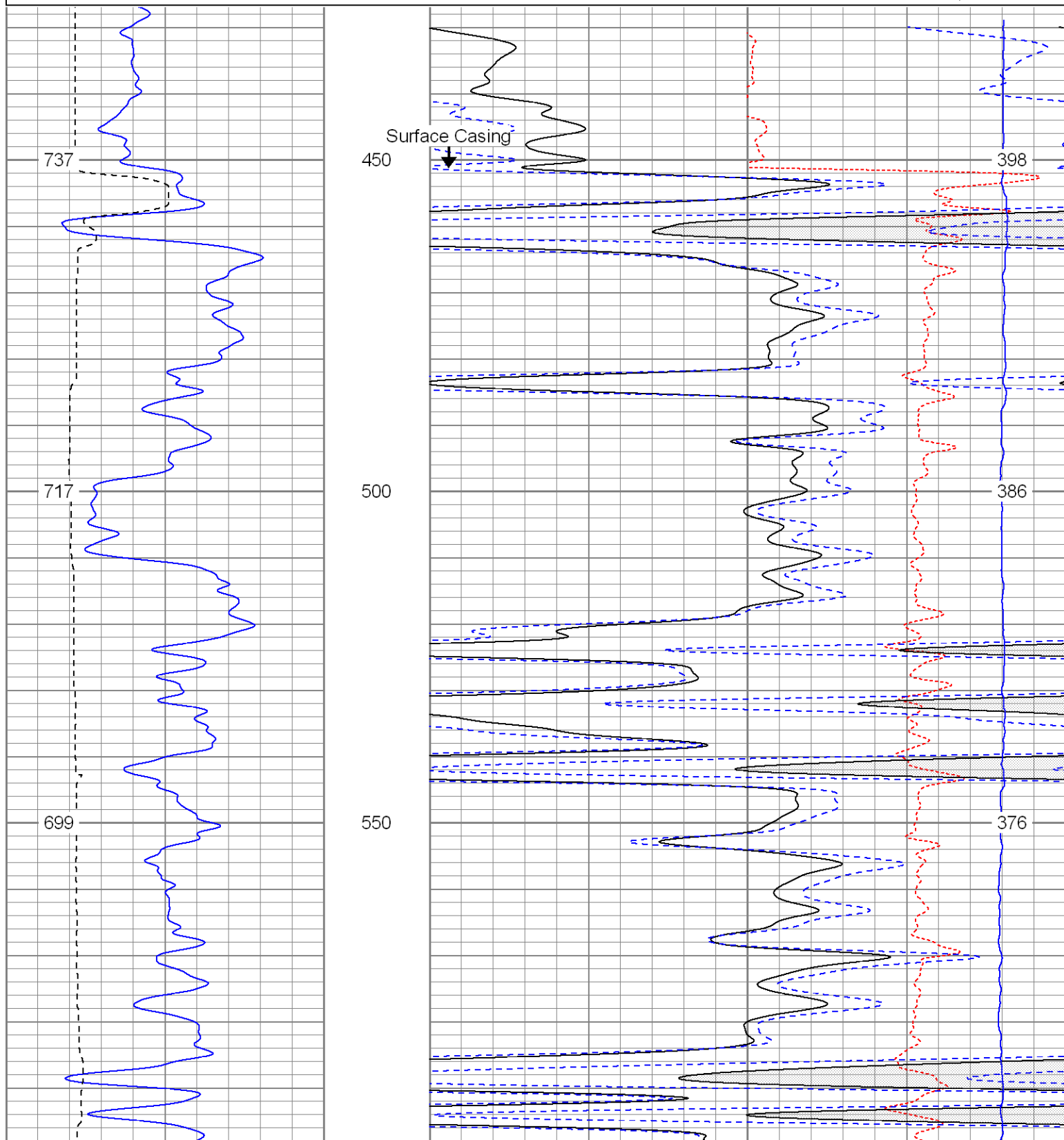


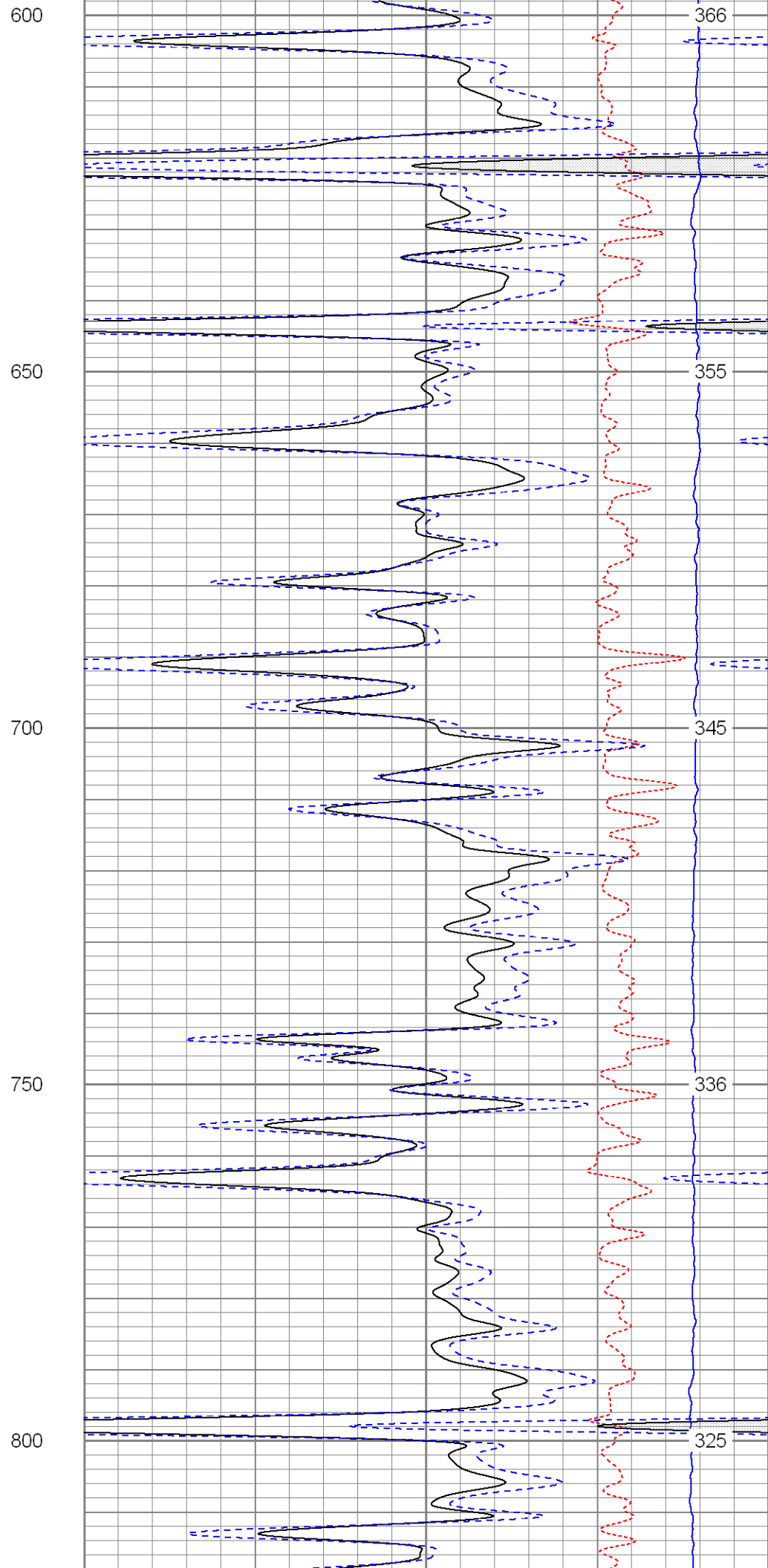
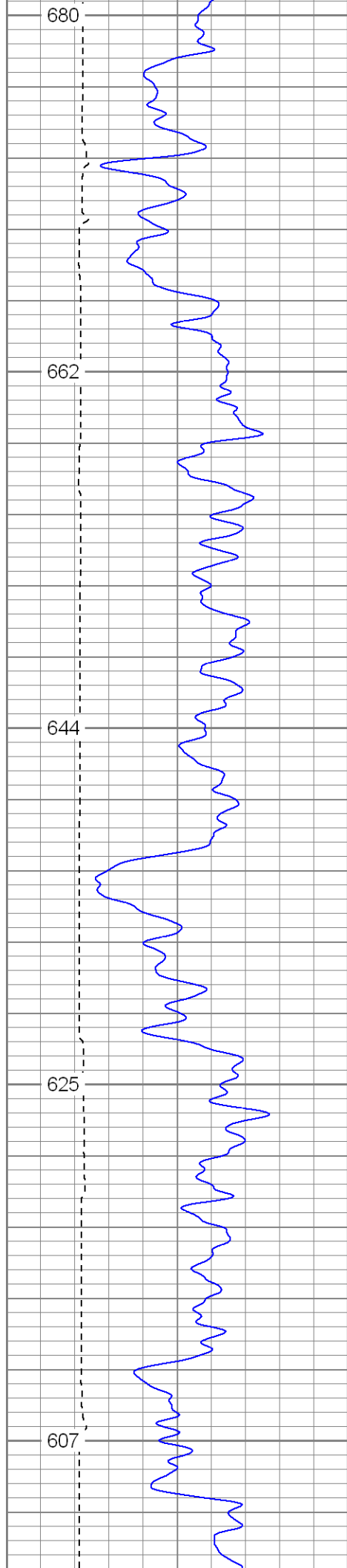
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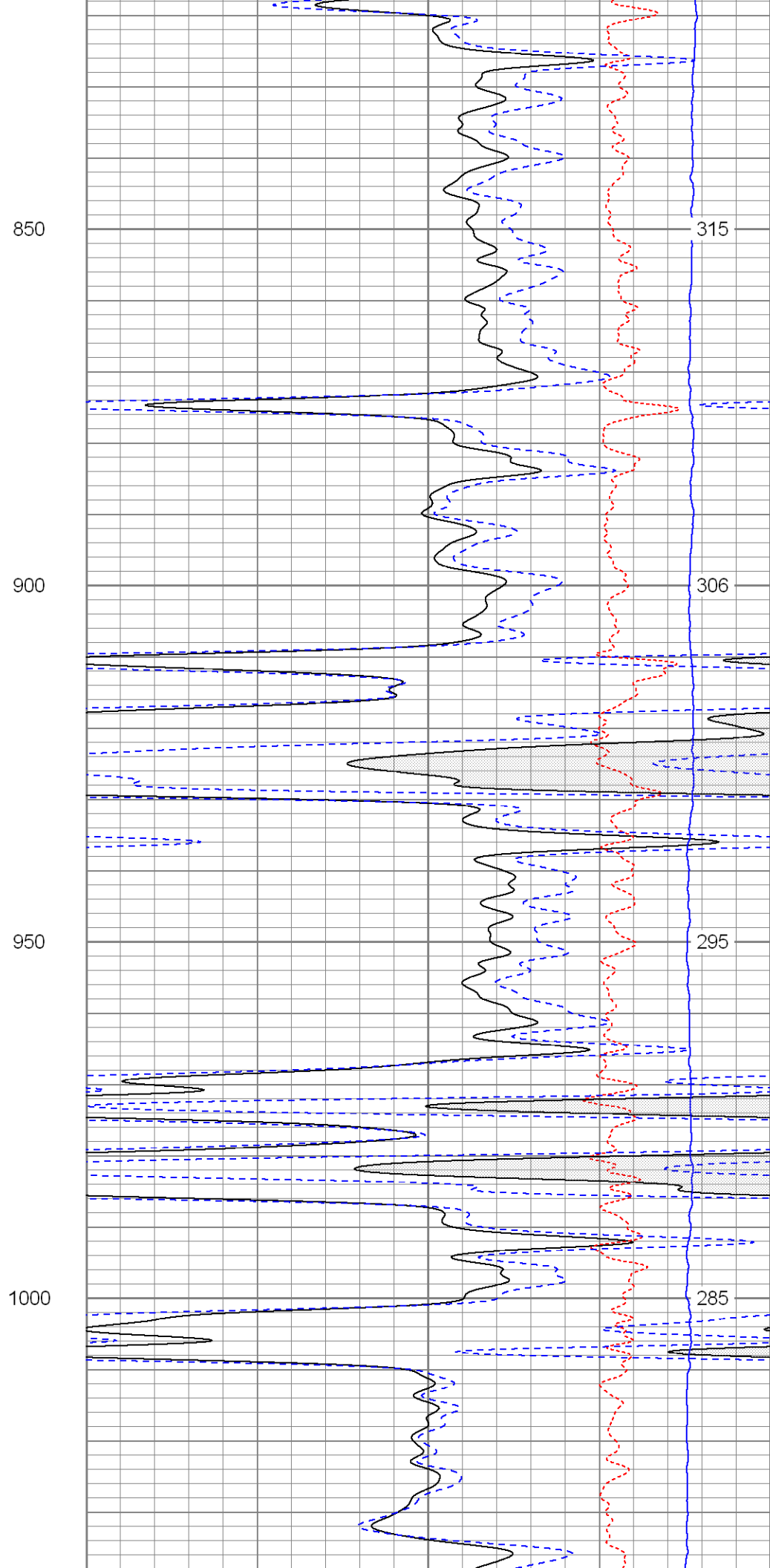
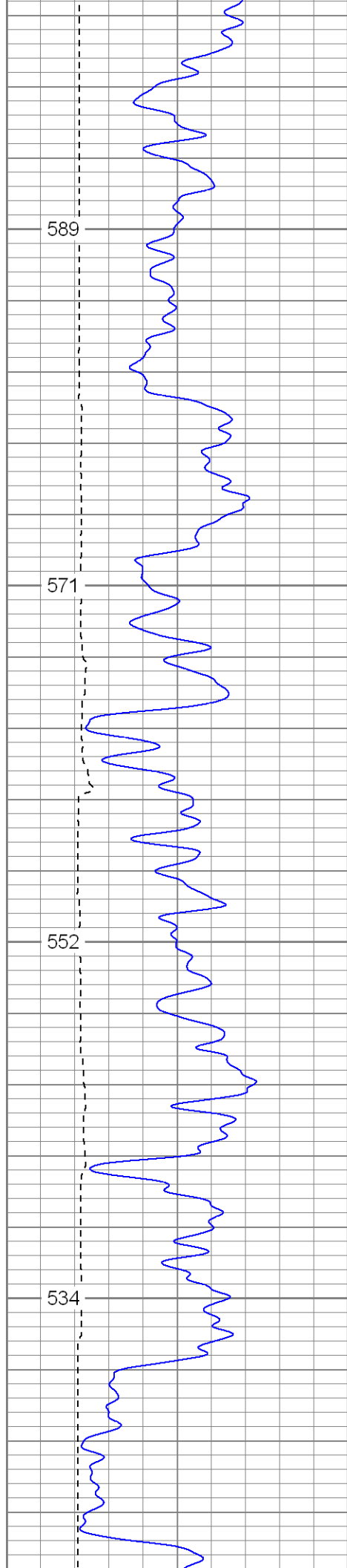
# Main Pass

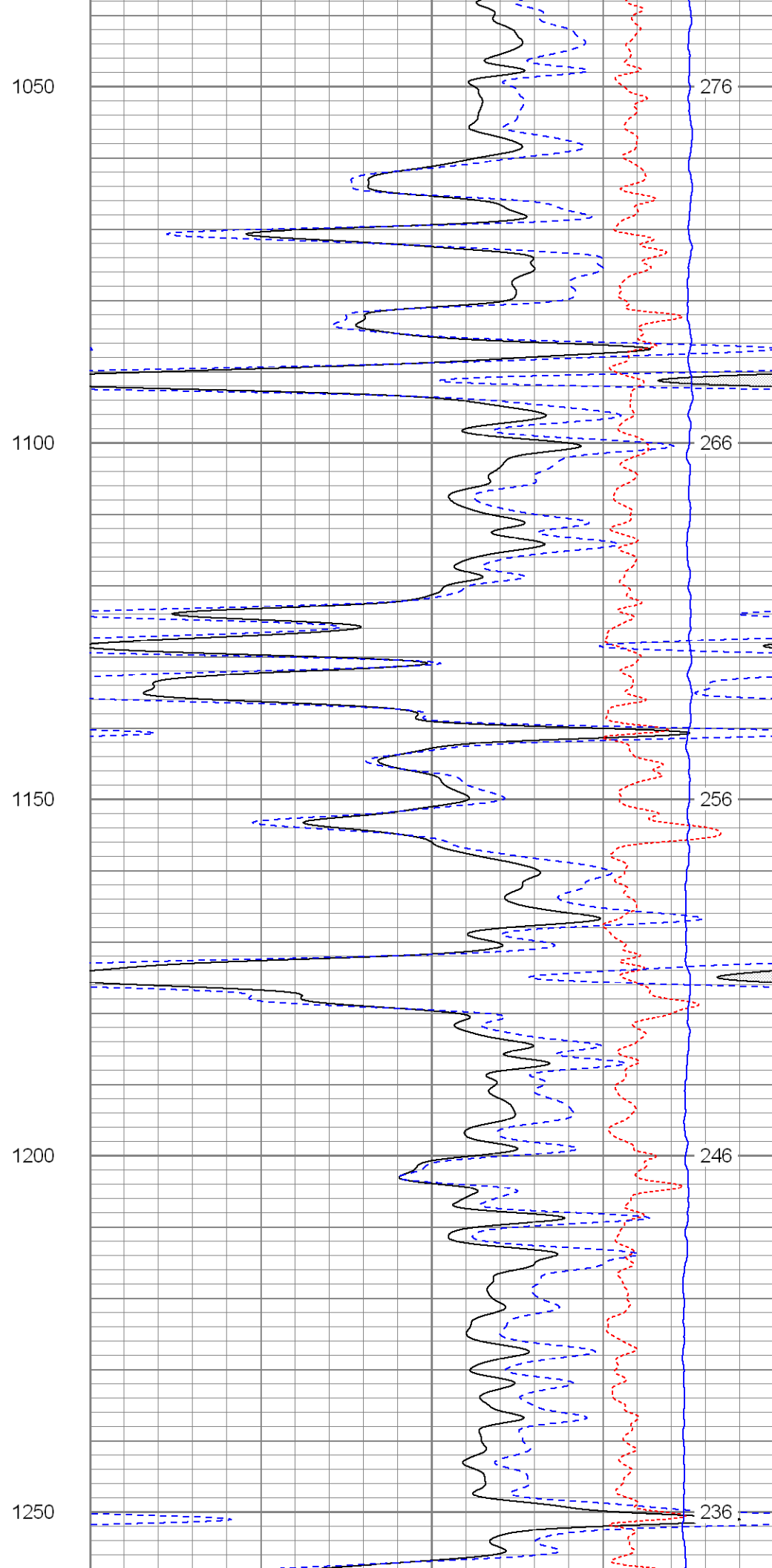
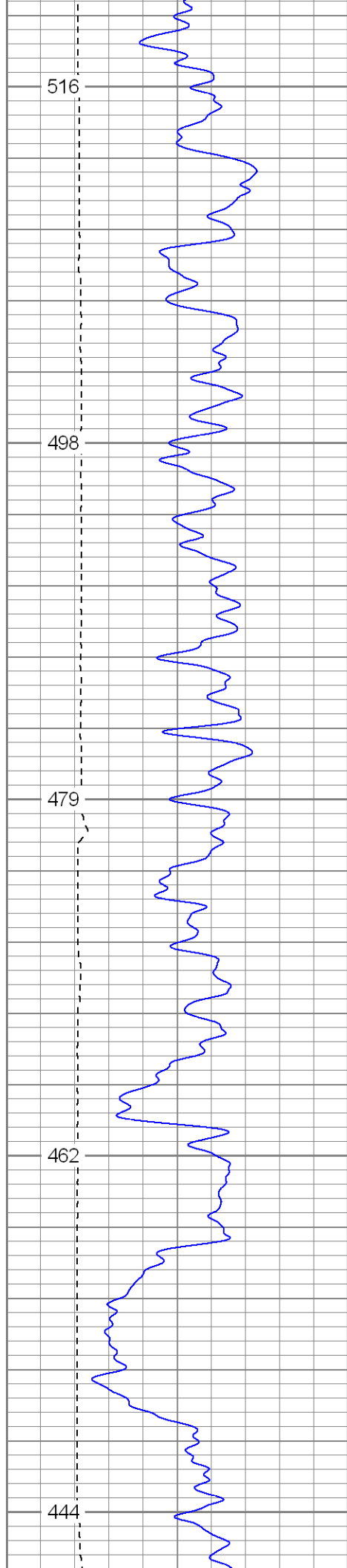
Database File: xtohr1415.db  
Dataset Pathname: pass4.1  
Presentation Format: cdl  
Dataset Creation: Sat Apr 05 14:45:22 2008 by Calc Open-Cased 070814  
Charted by: Depth in Feet scaled 1:240

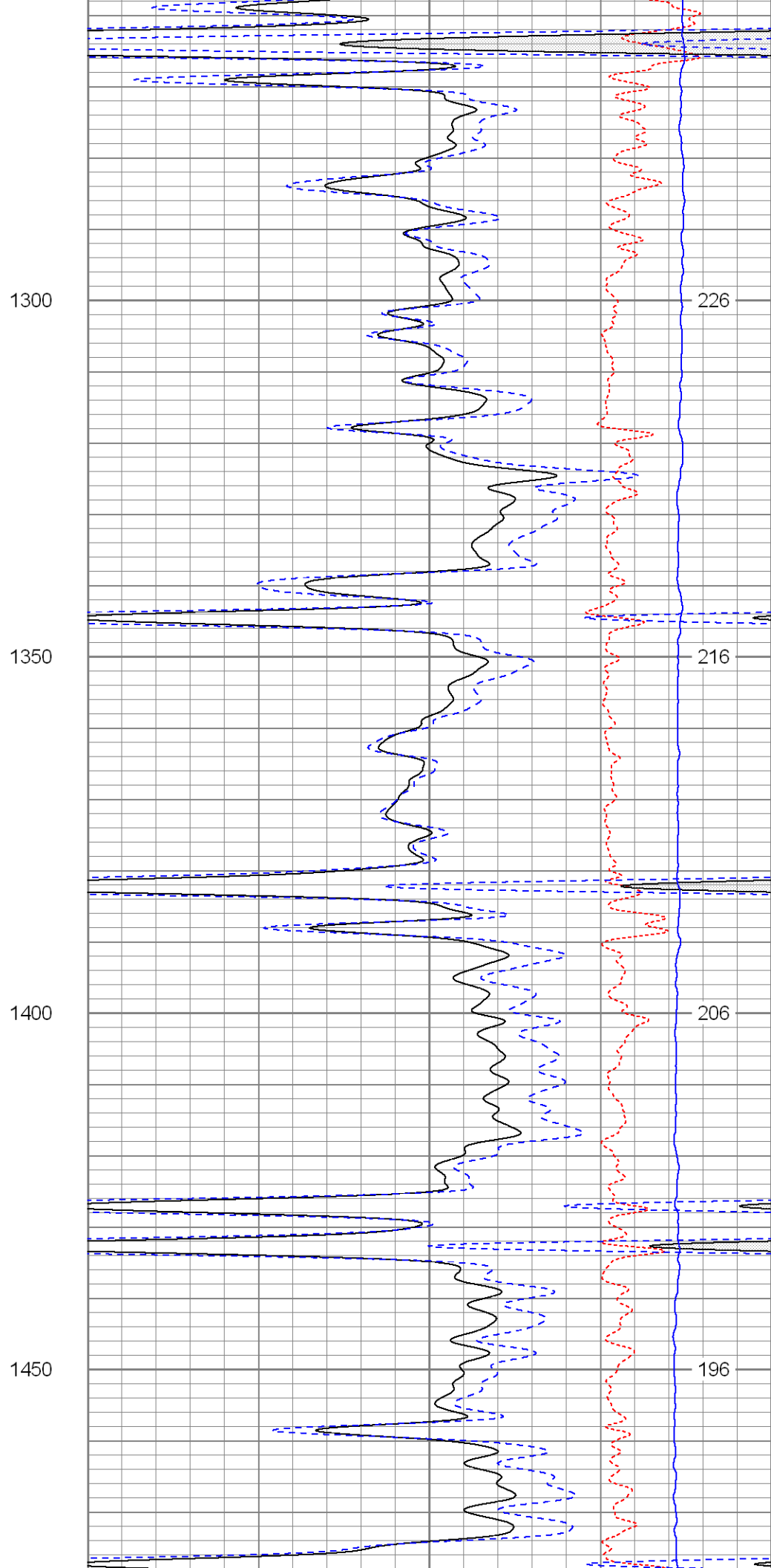
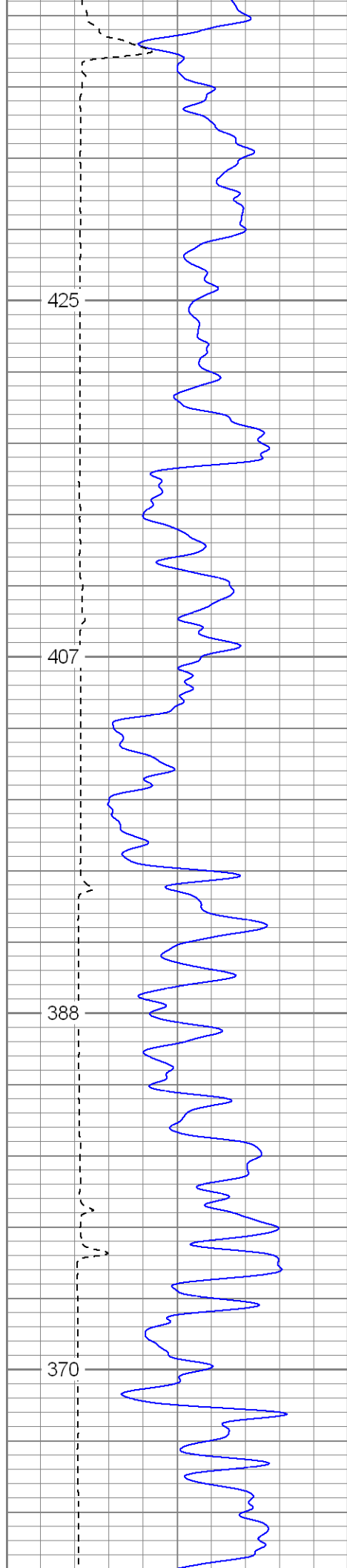
0	GR (GAPI)	200	2	RHOB (g/cc)	3
6	DCAL (in)	16	1	RHOB (g/cc)	2
TBHV (ft3)			30	DPOR (pu)	-10
			-0.5 RHOC (g/cc) 0.5		
			4000 LTEN (lb) 0		
			ABHV (ft3)		

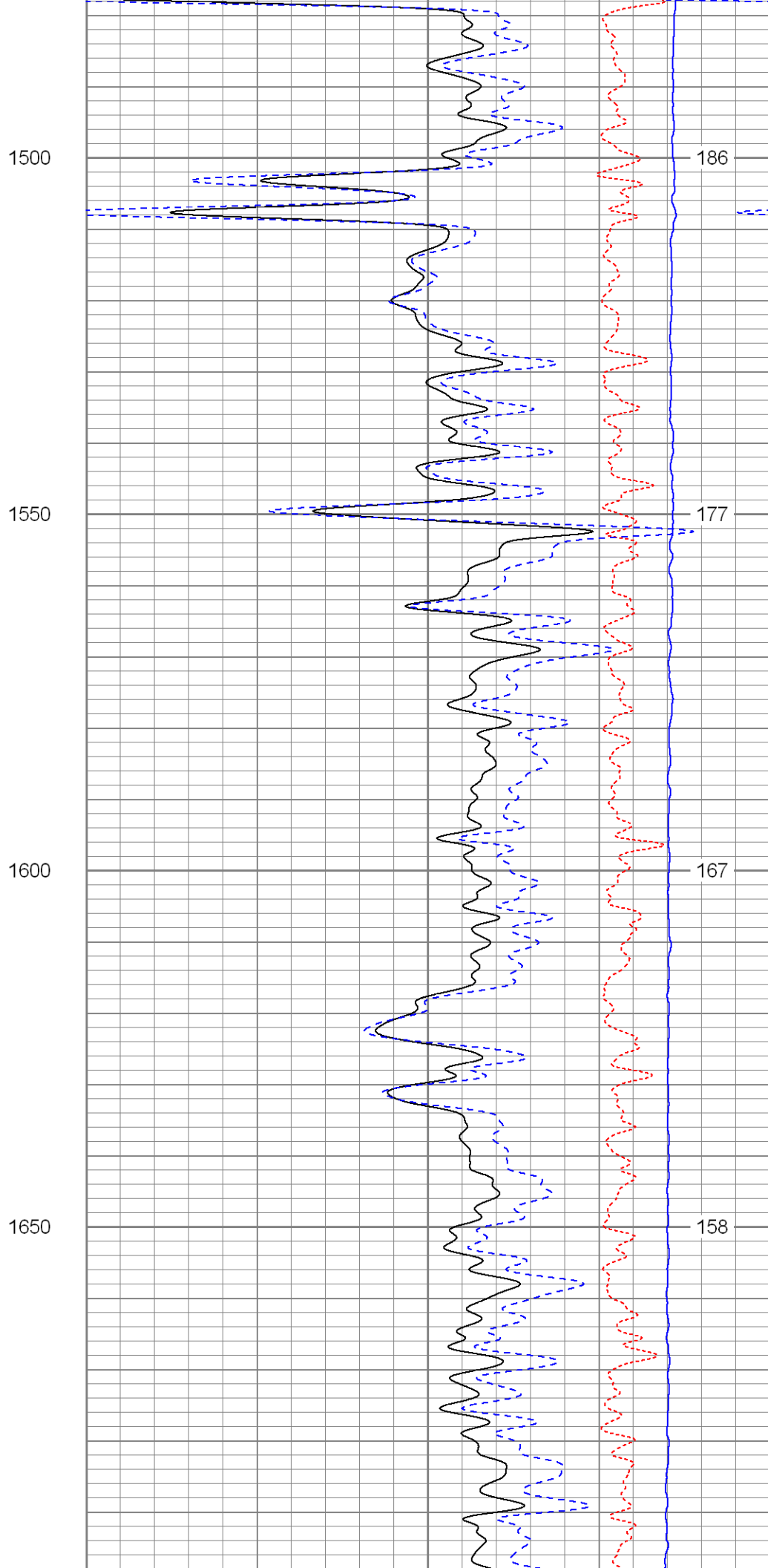
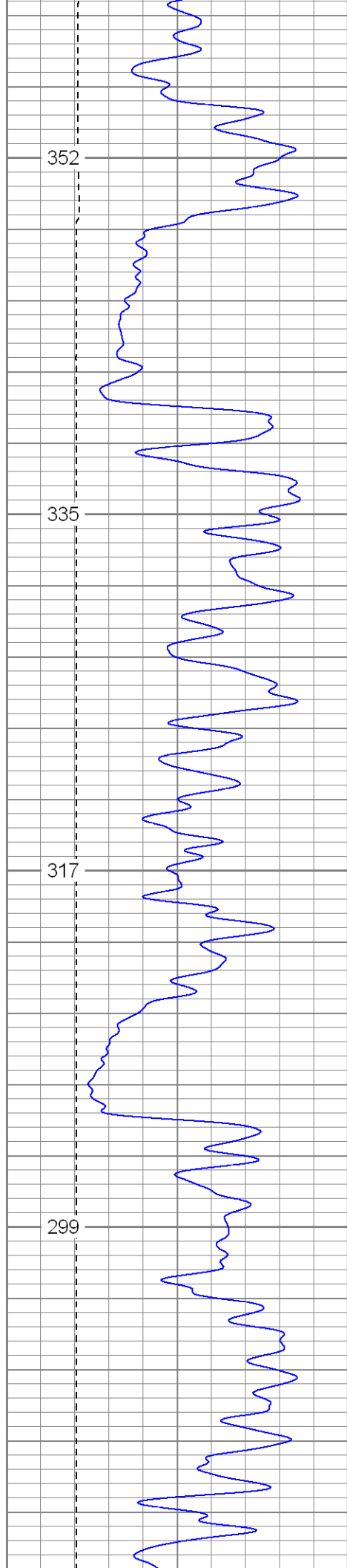


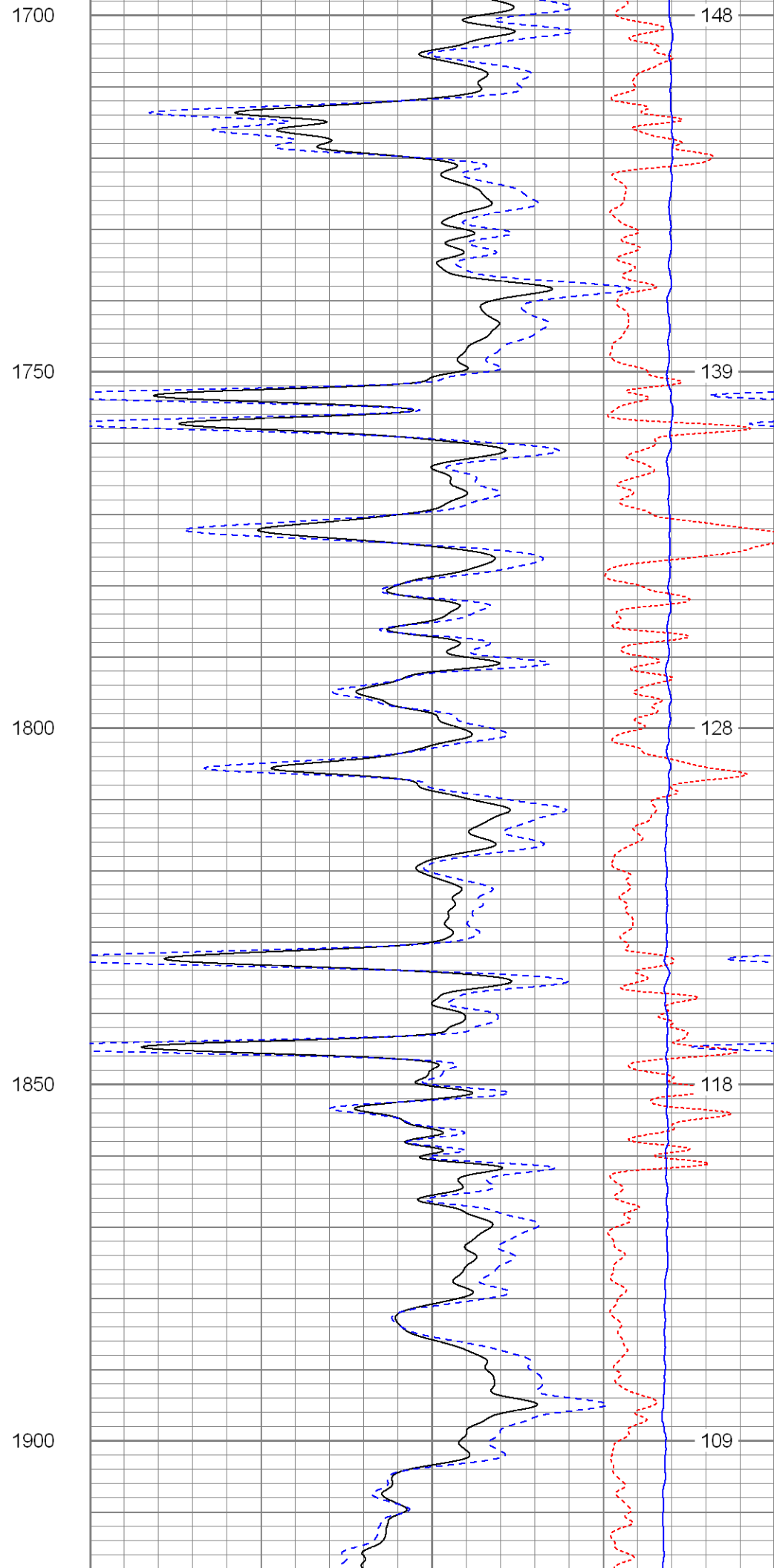
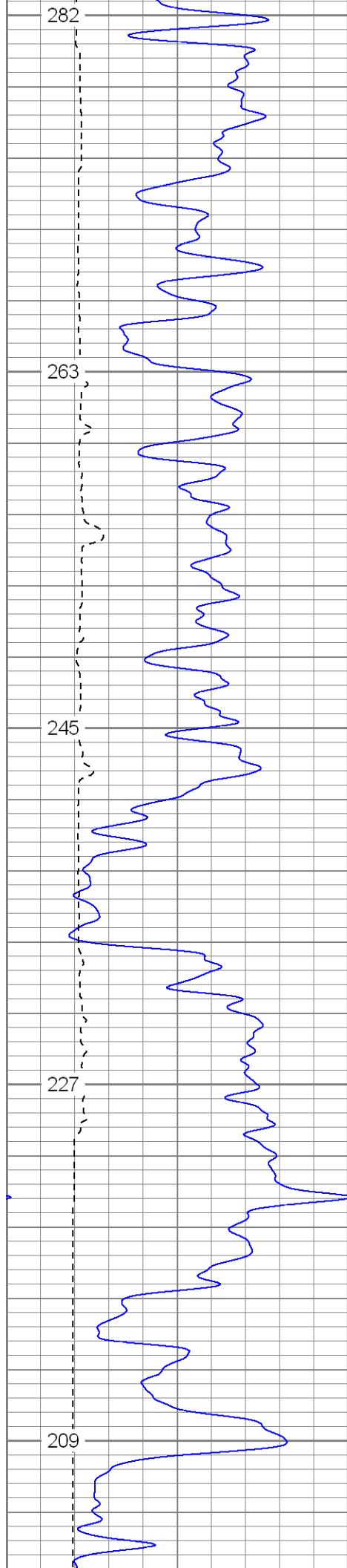




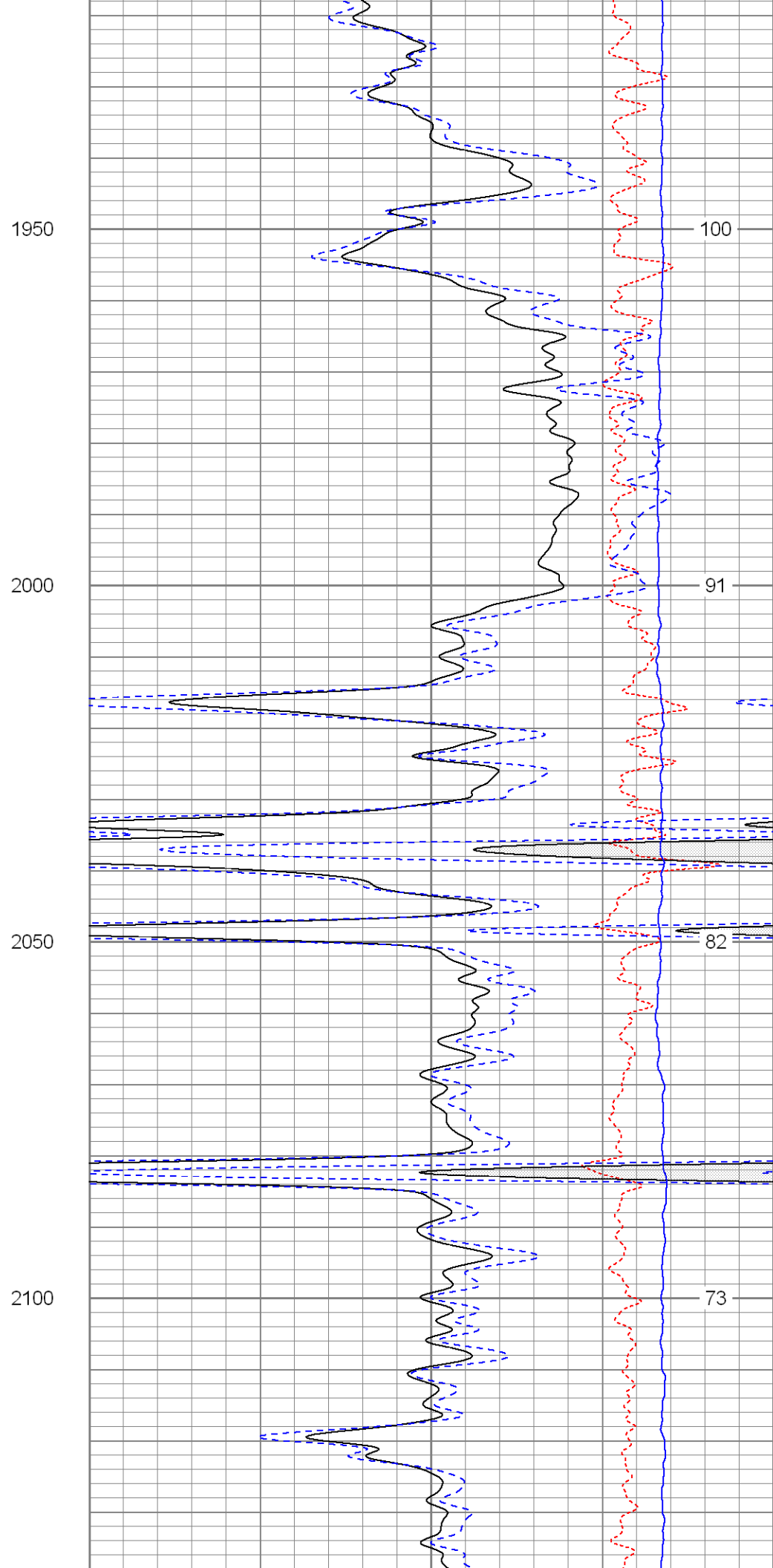
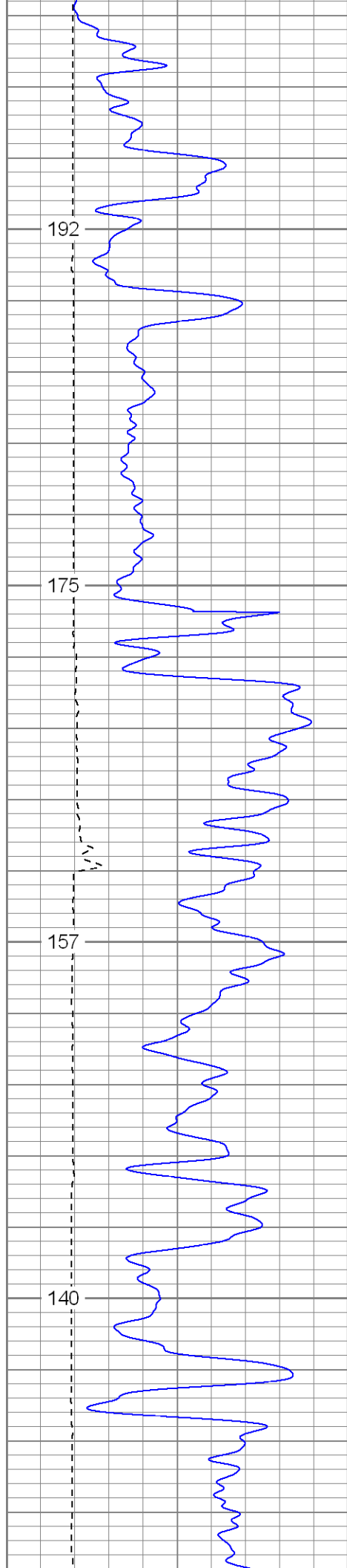


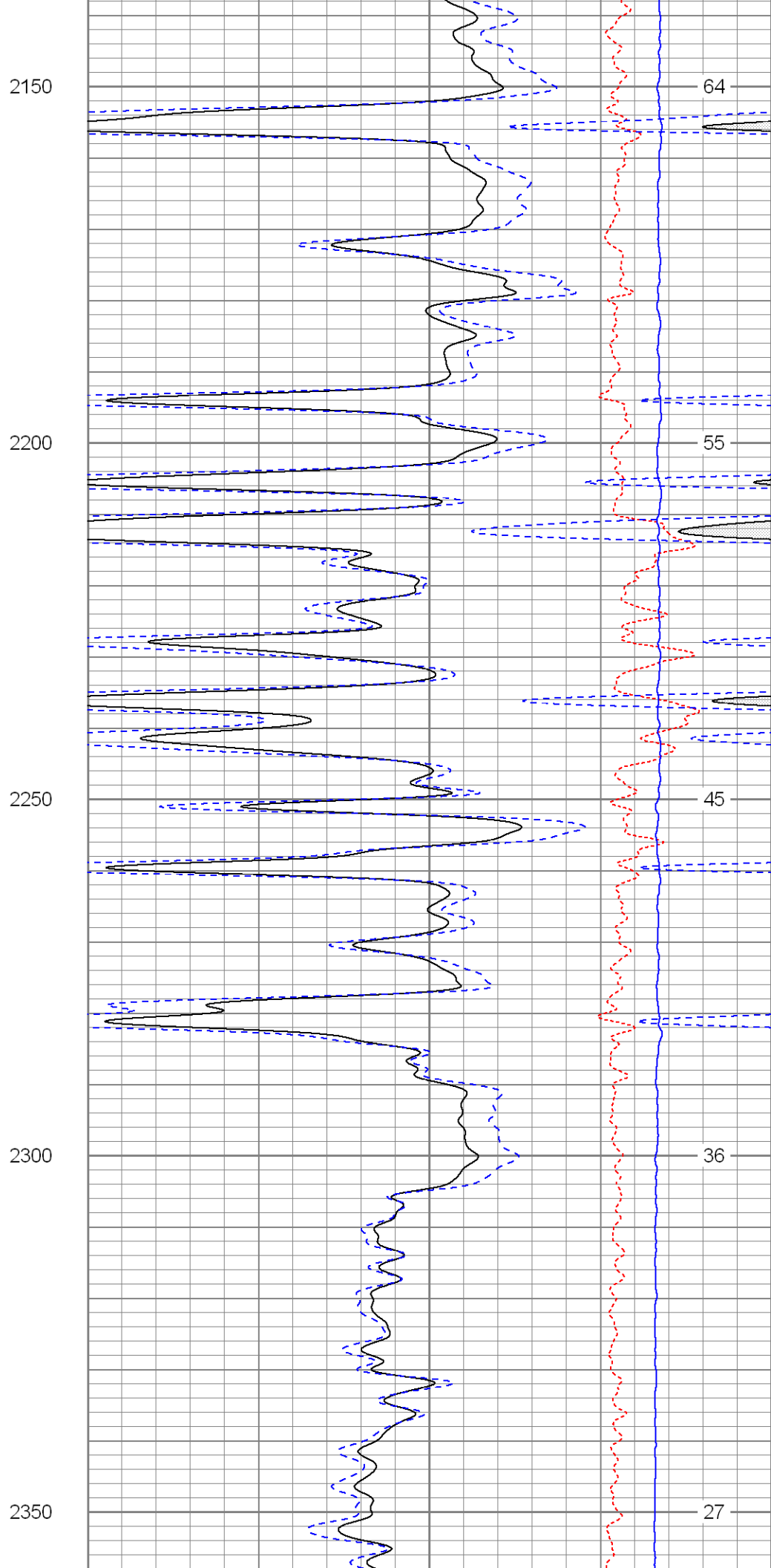
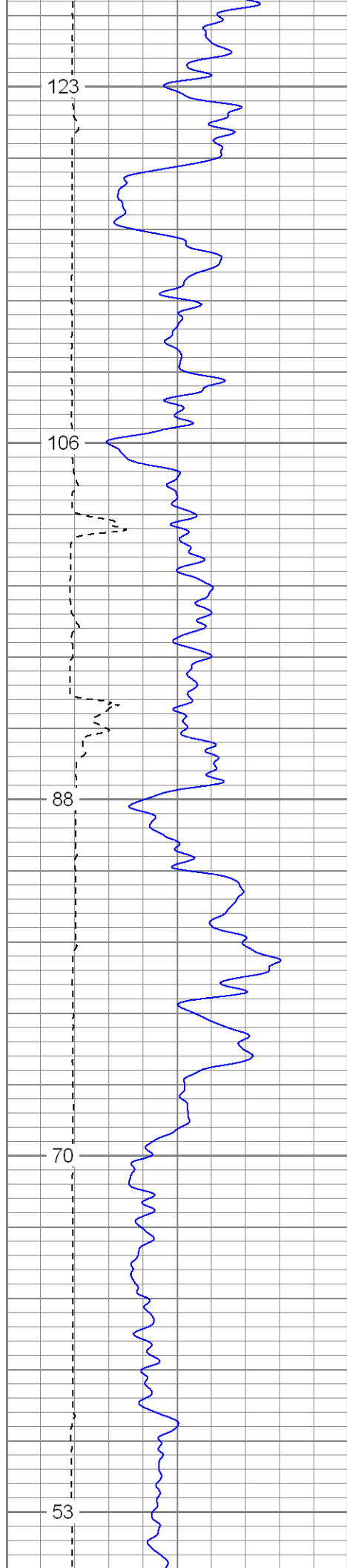


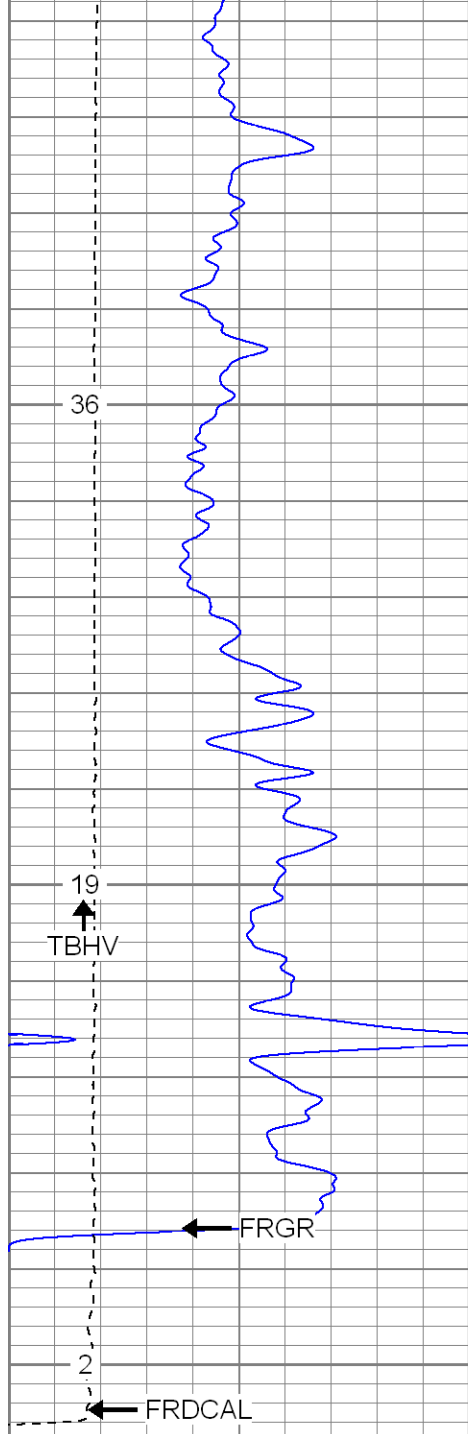










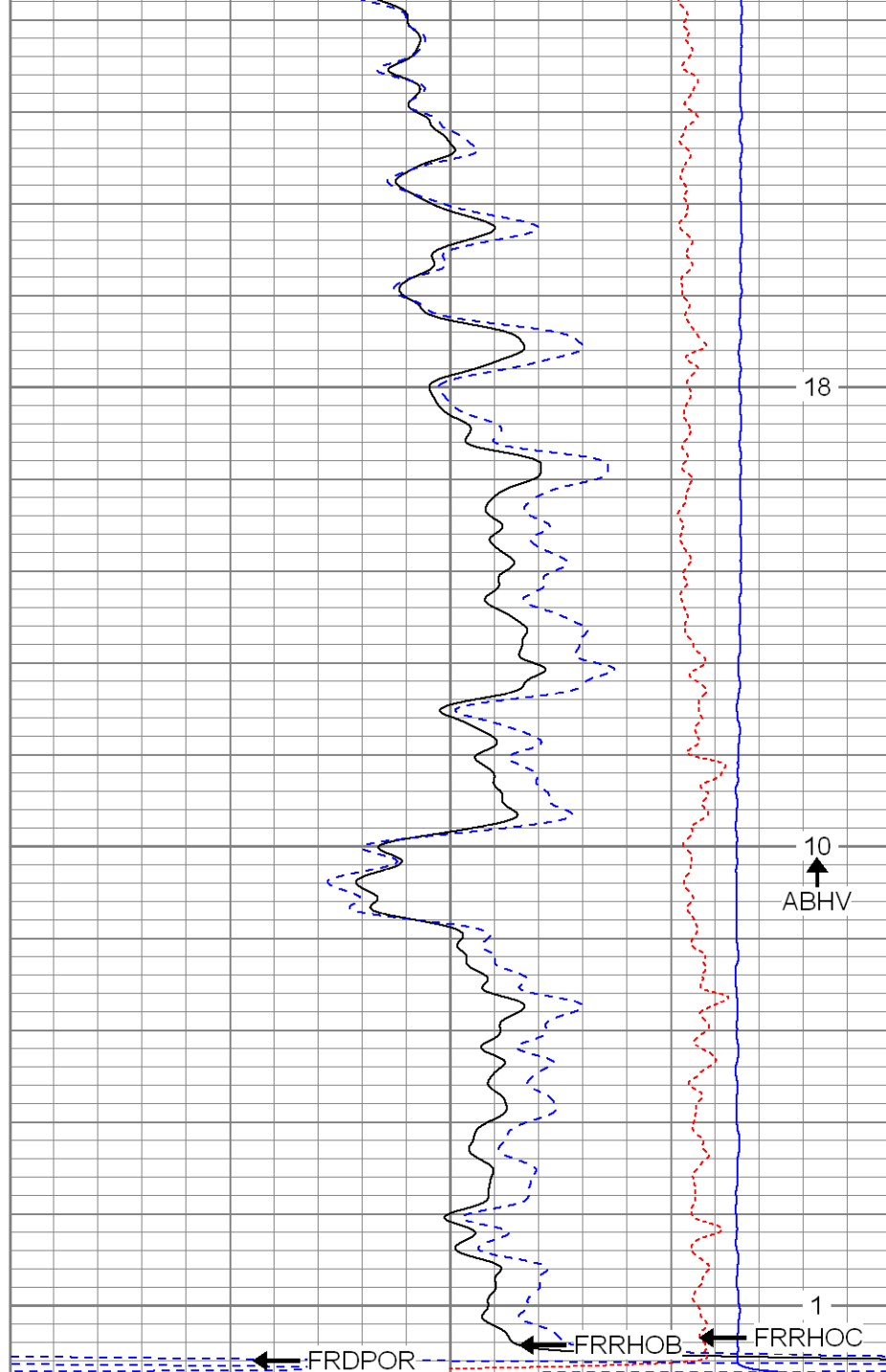


0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		

2400

2450

2500



2	RHOB (g/cc)	3
1	RHOB (g/cc)	2
30	DPOR (pu)	-10

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

ABHV (ft3)



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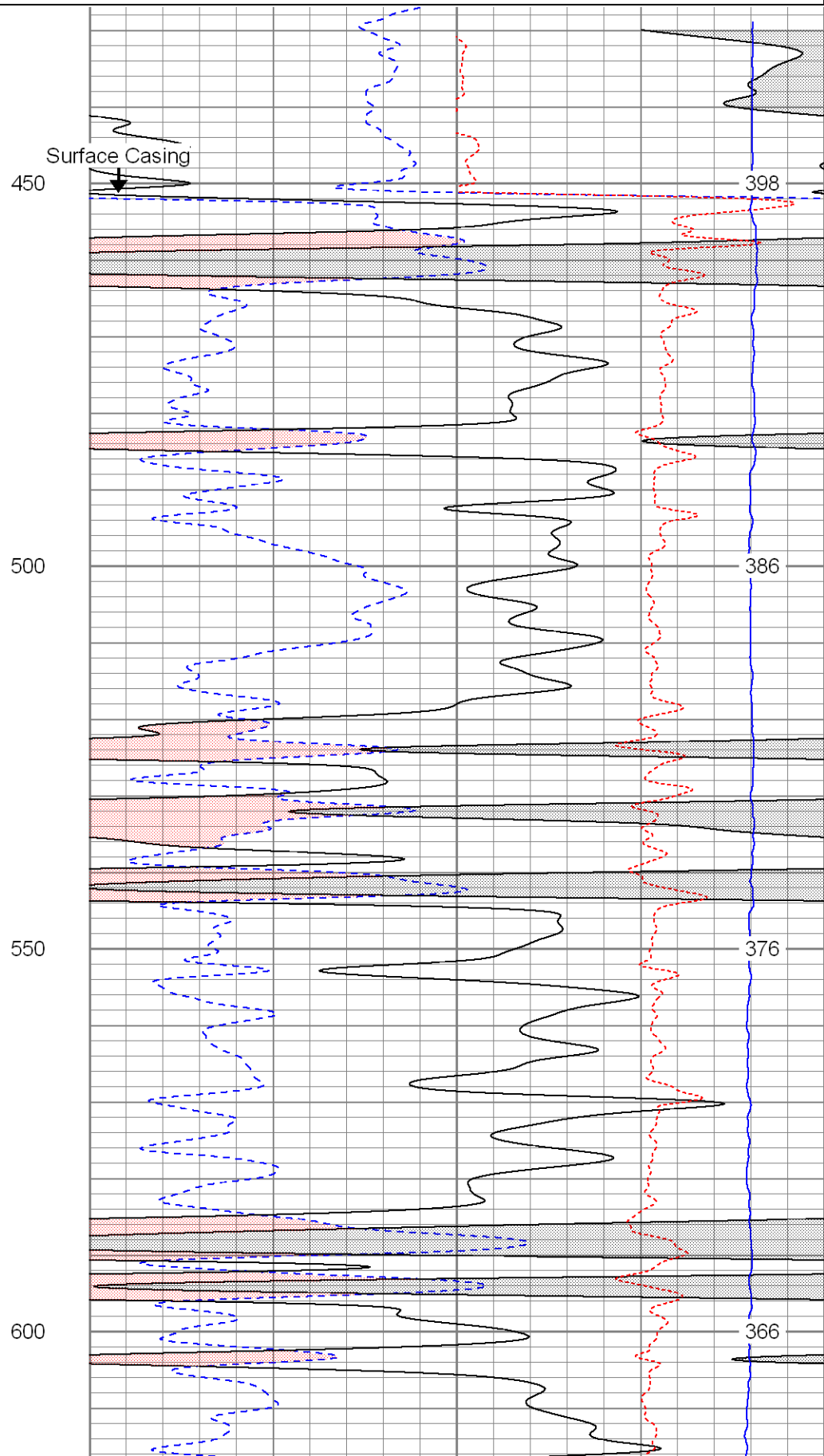
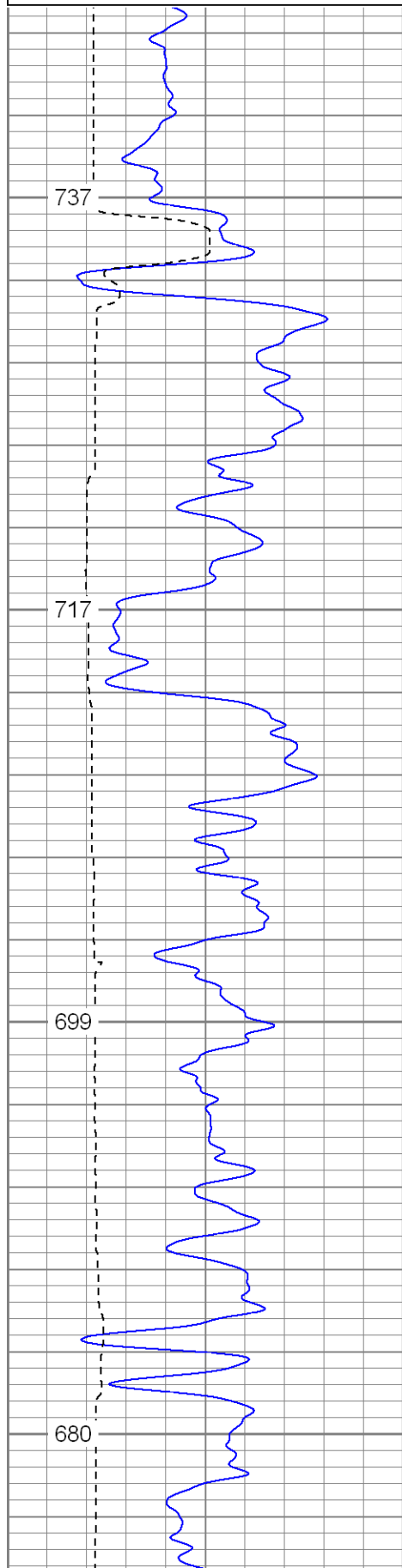
Black Lick, Pa.  
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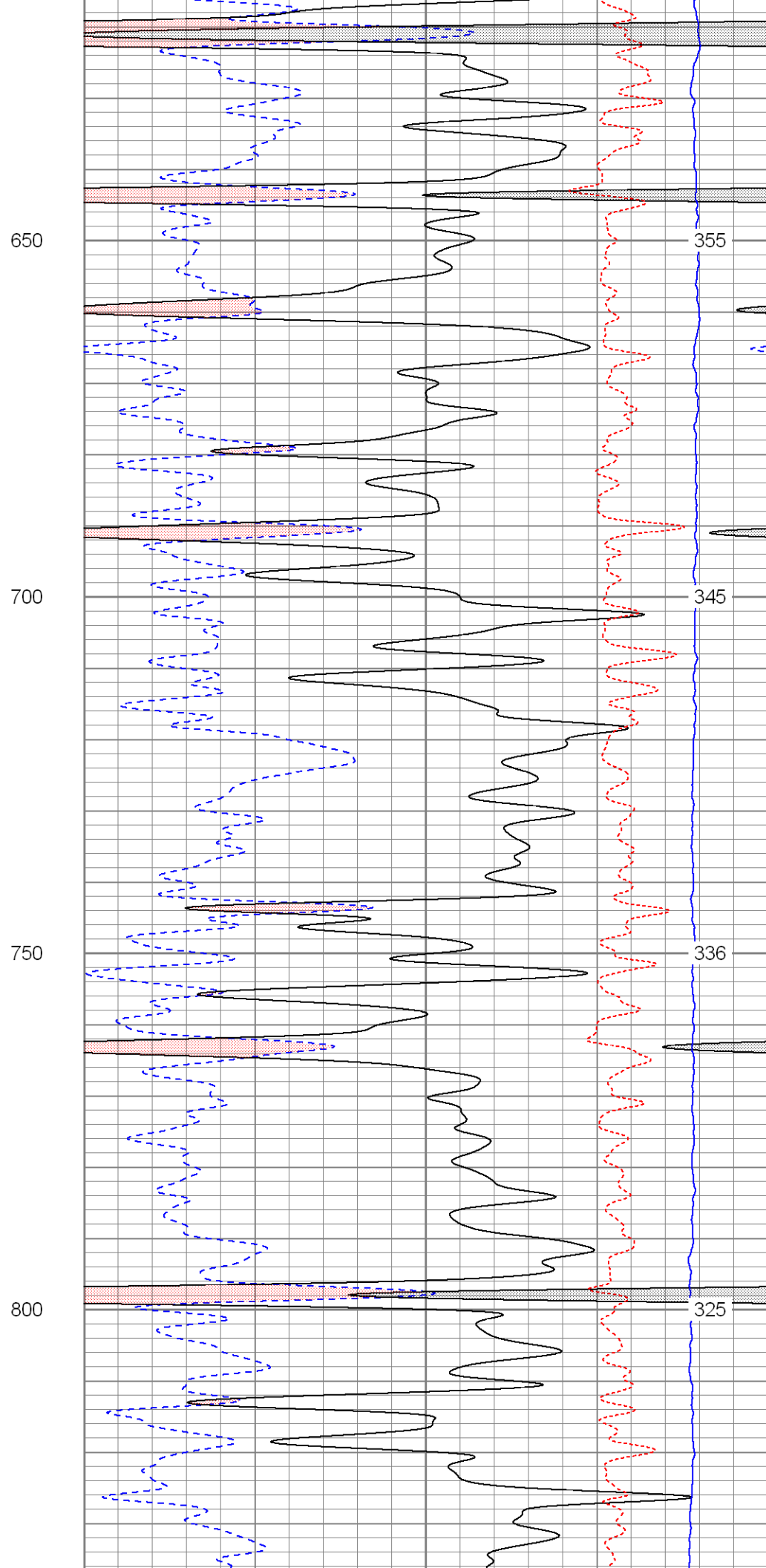
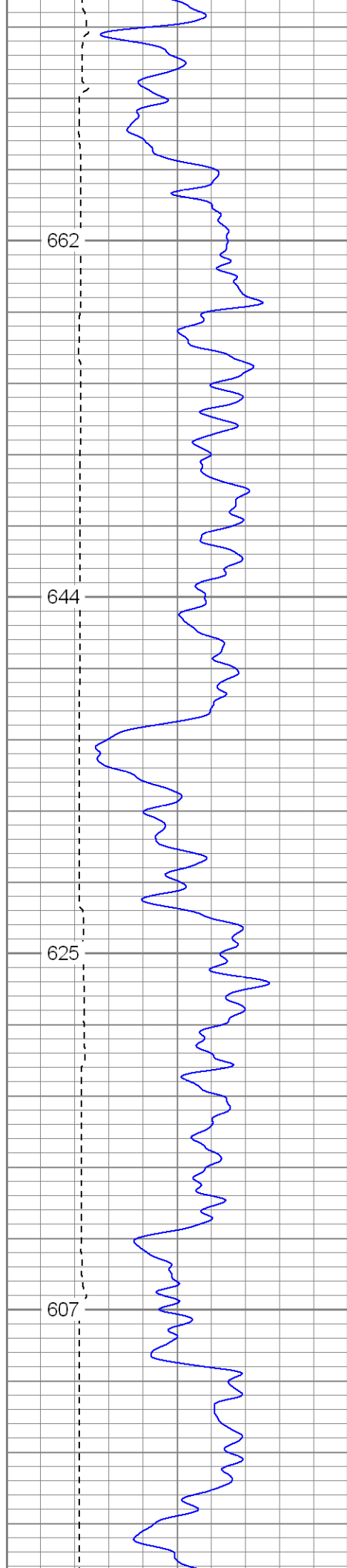
# Main Pass

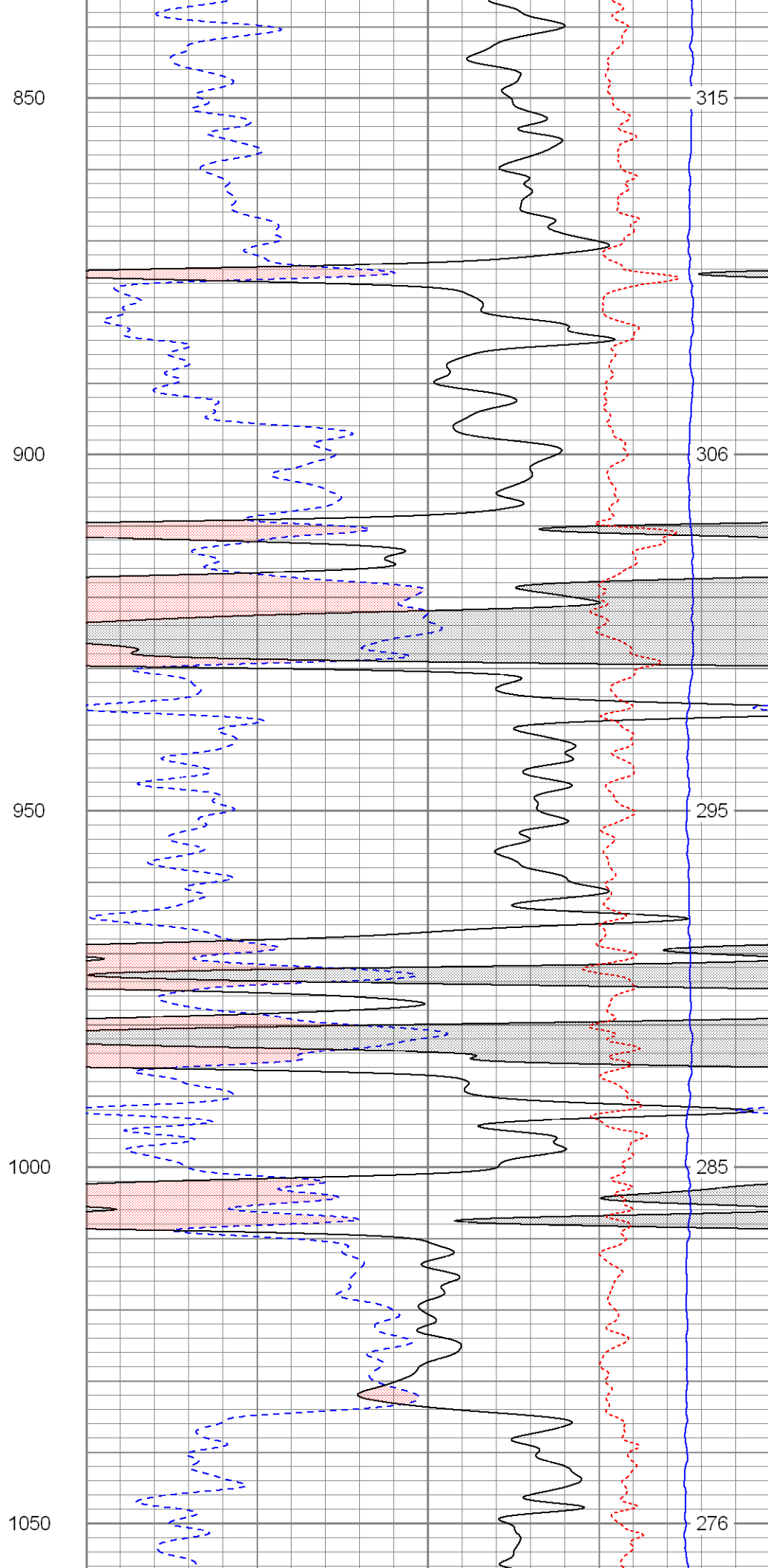
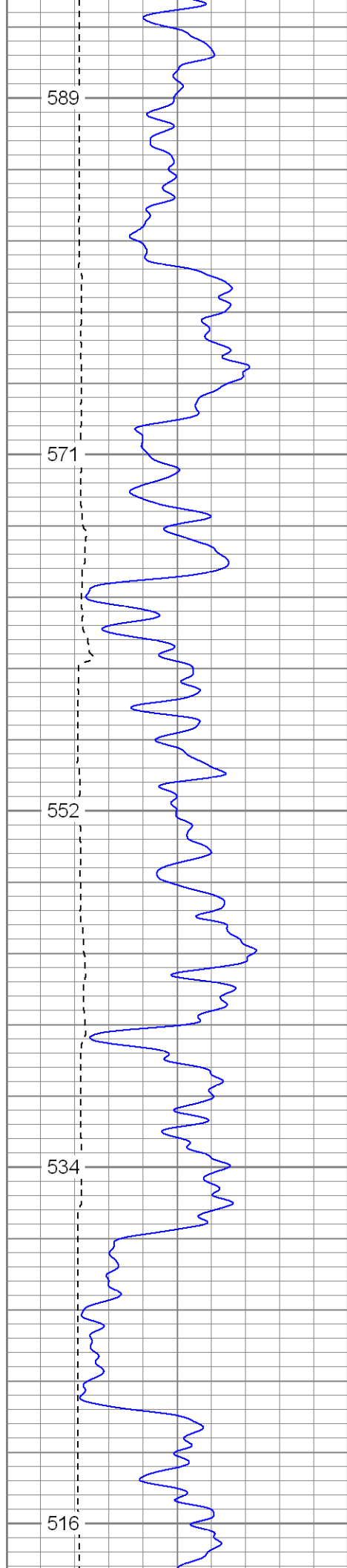
Database File: xtohr1415.db  
Dataset Pathname: pass4.1  
Presentation Format: cdnl  
Dataset Creation: Sat Apr 05 14:45:22 2008 by Calc Open-Cased 070814

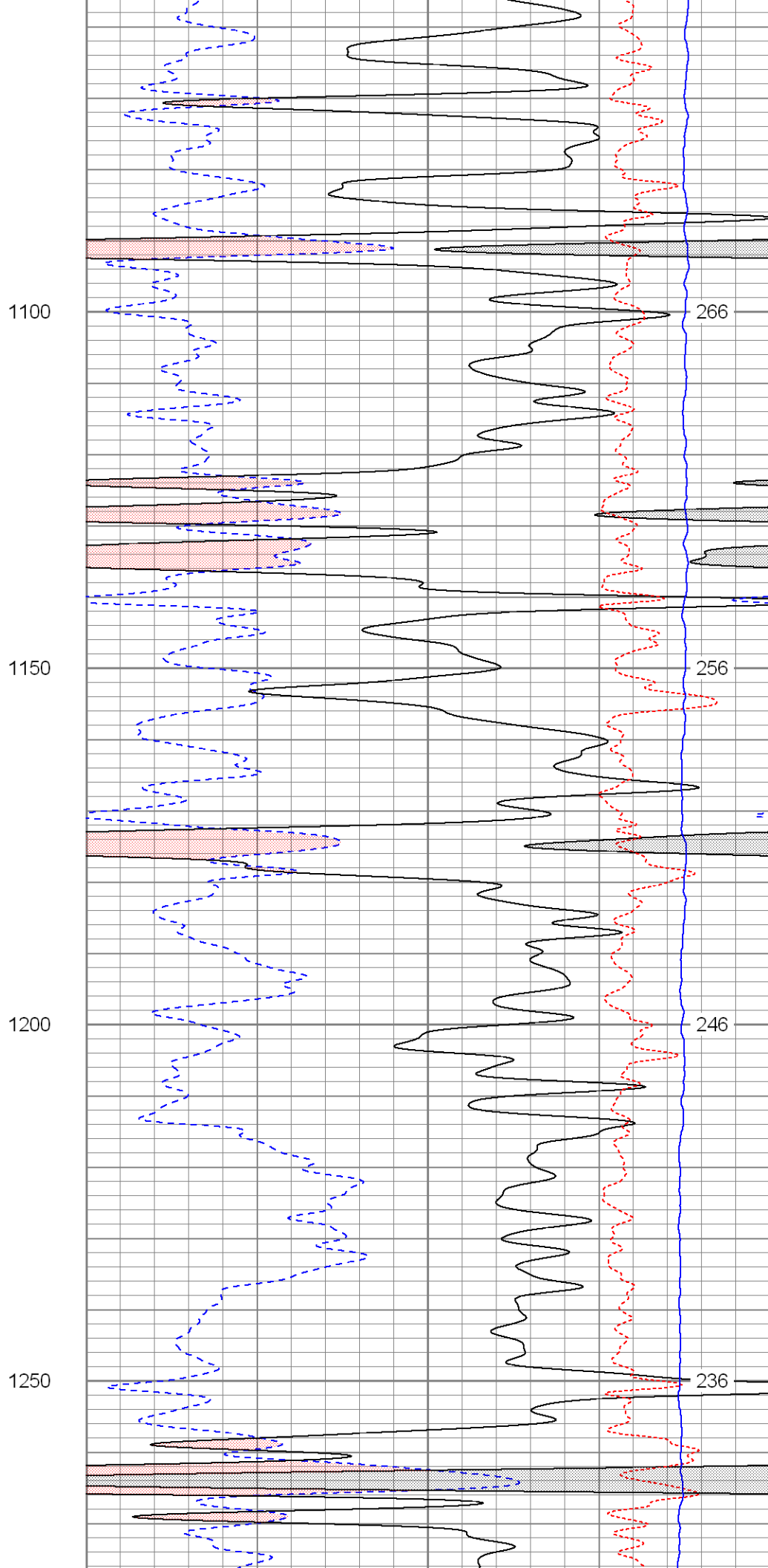
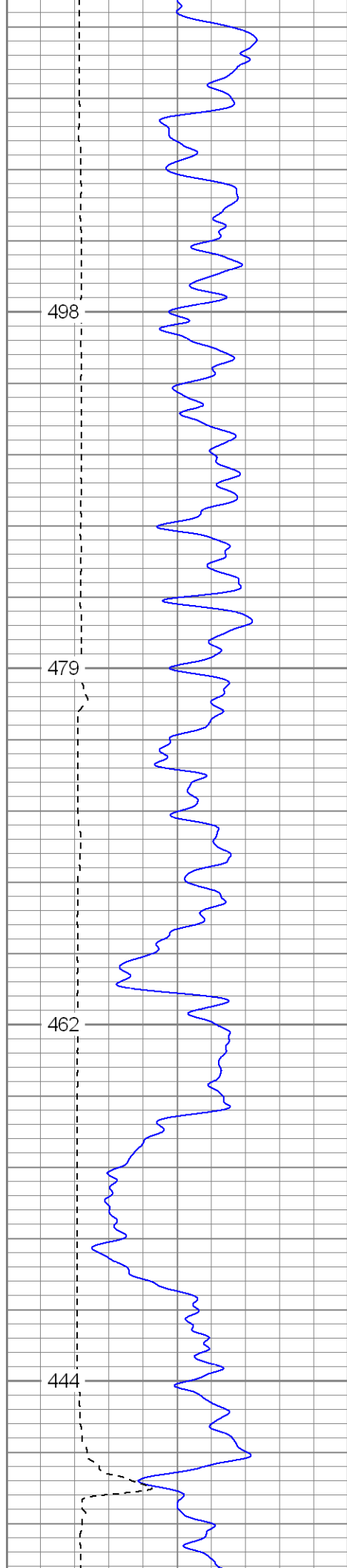
0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		

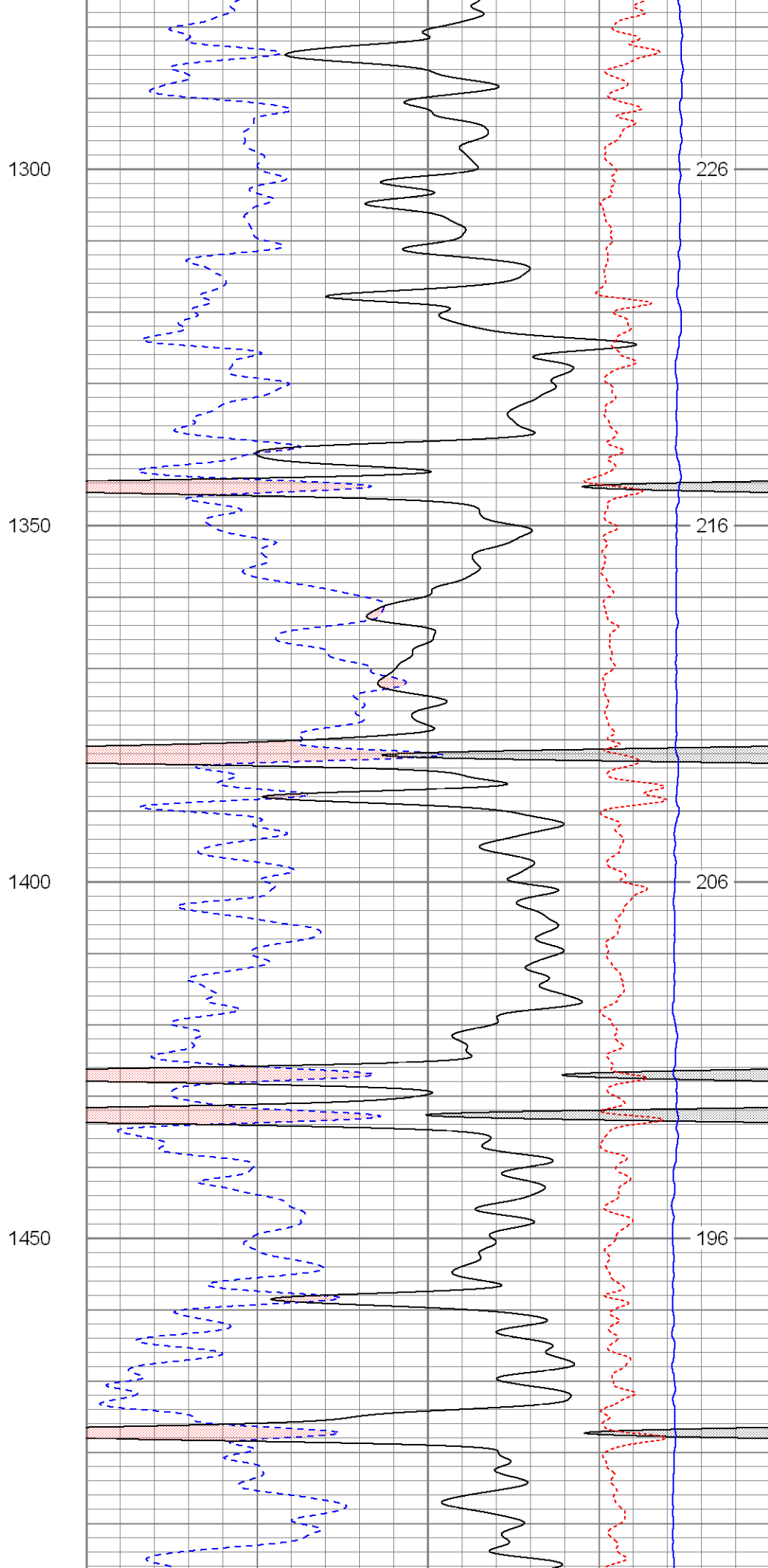
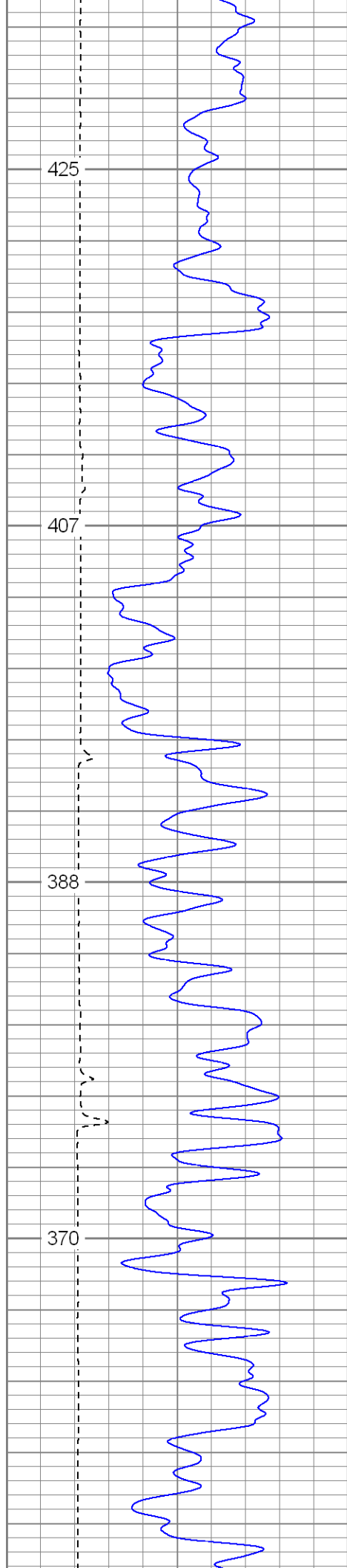
30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
ABHV (ft3)		



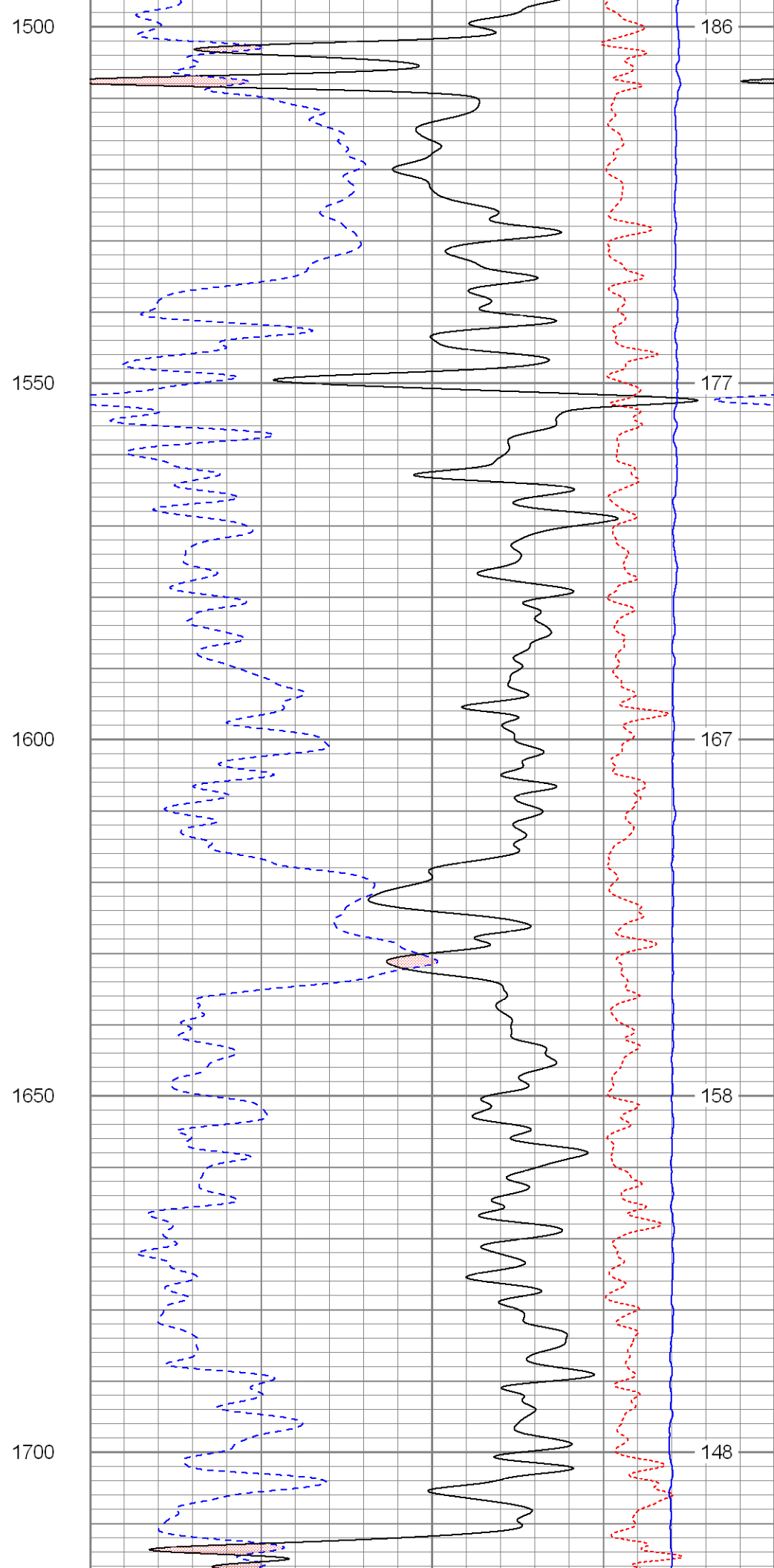
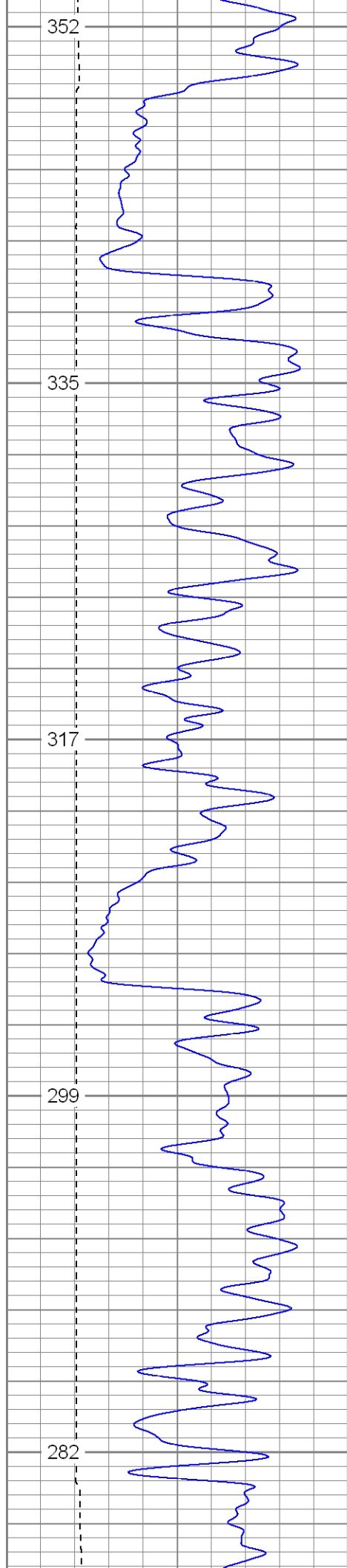


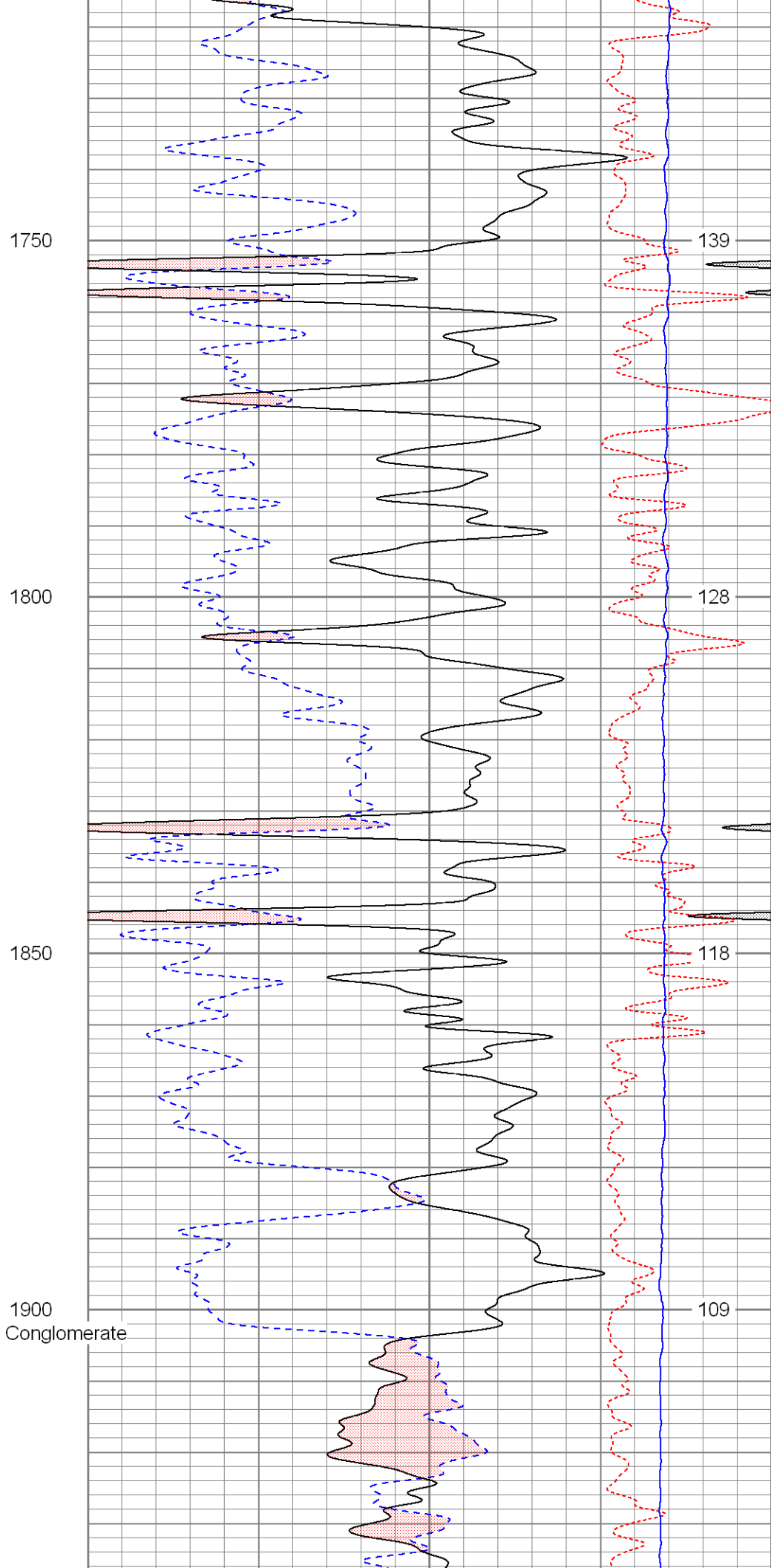
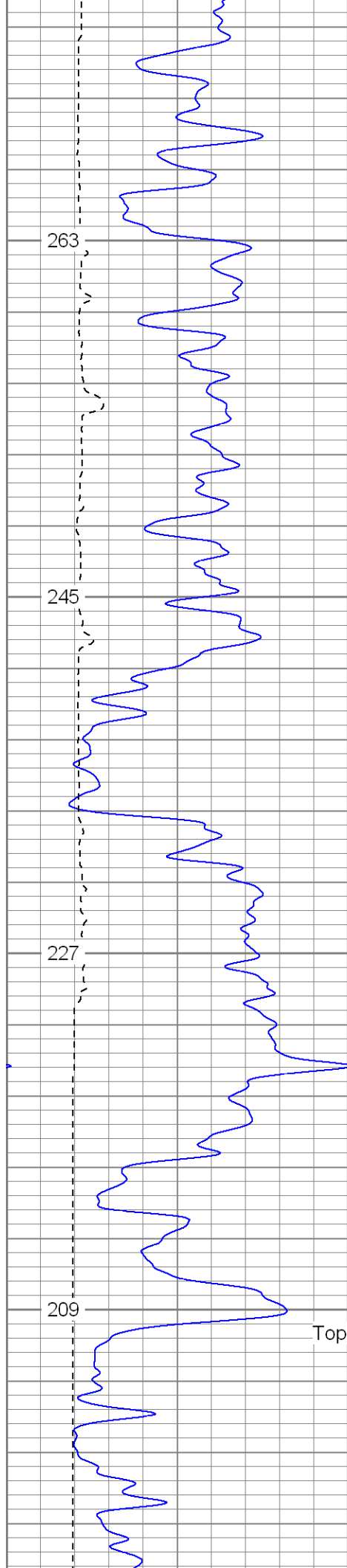


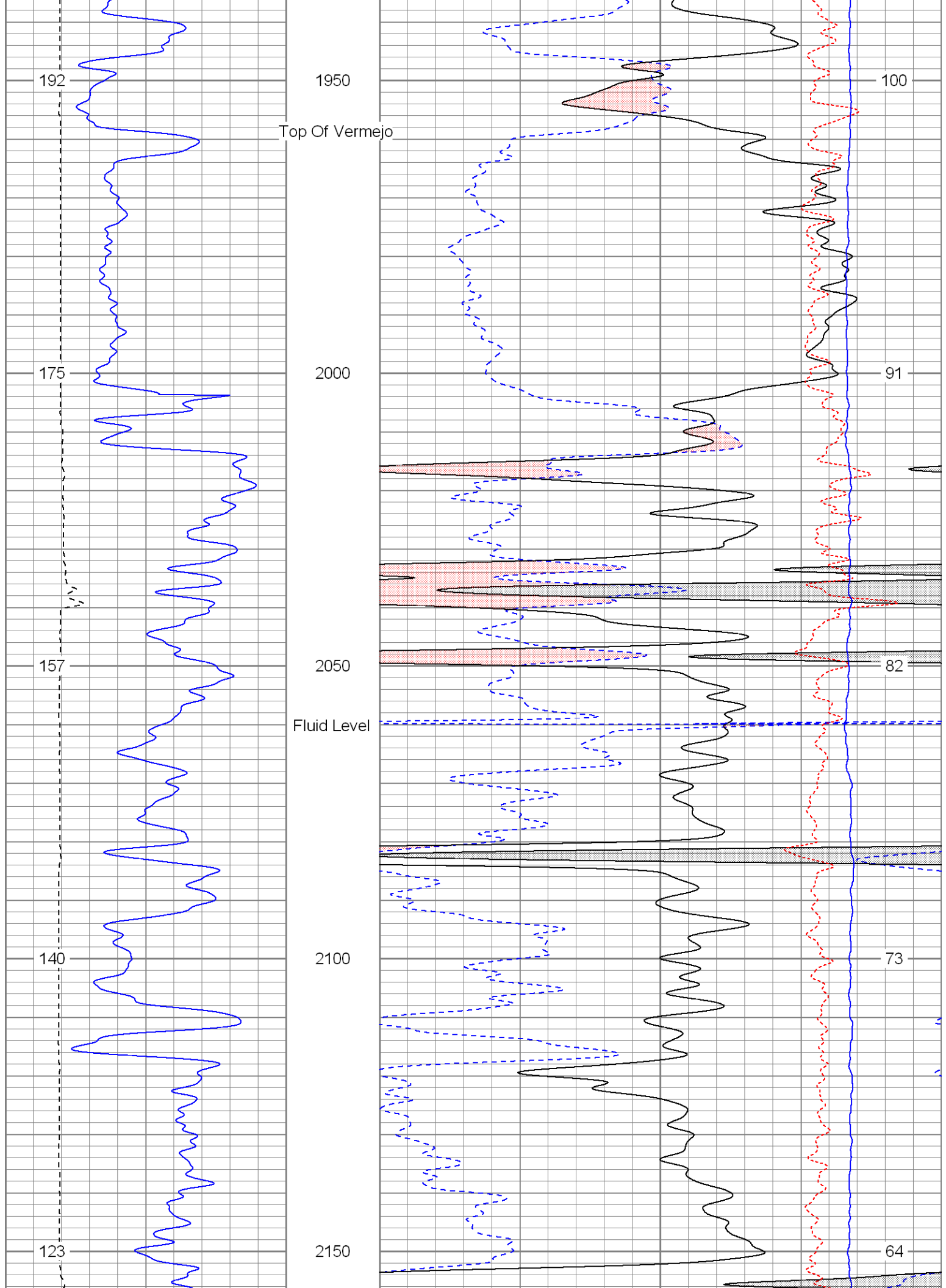


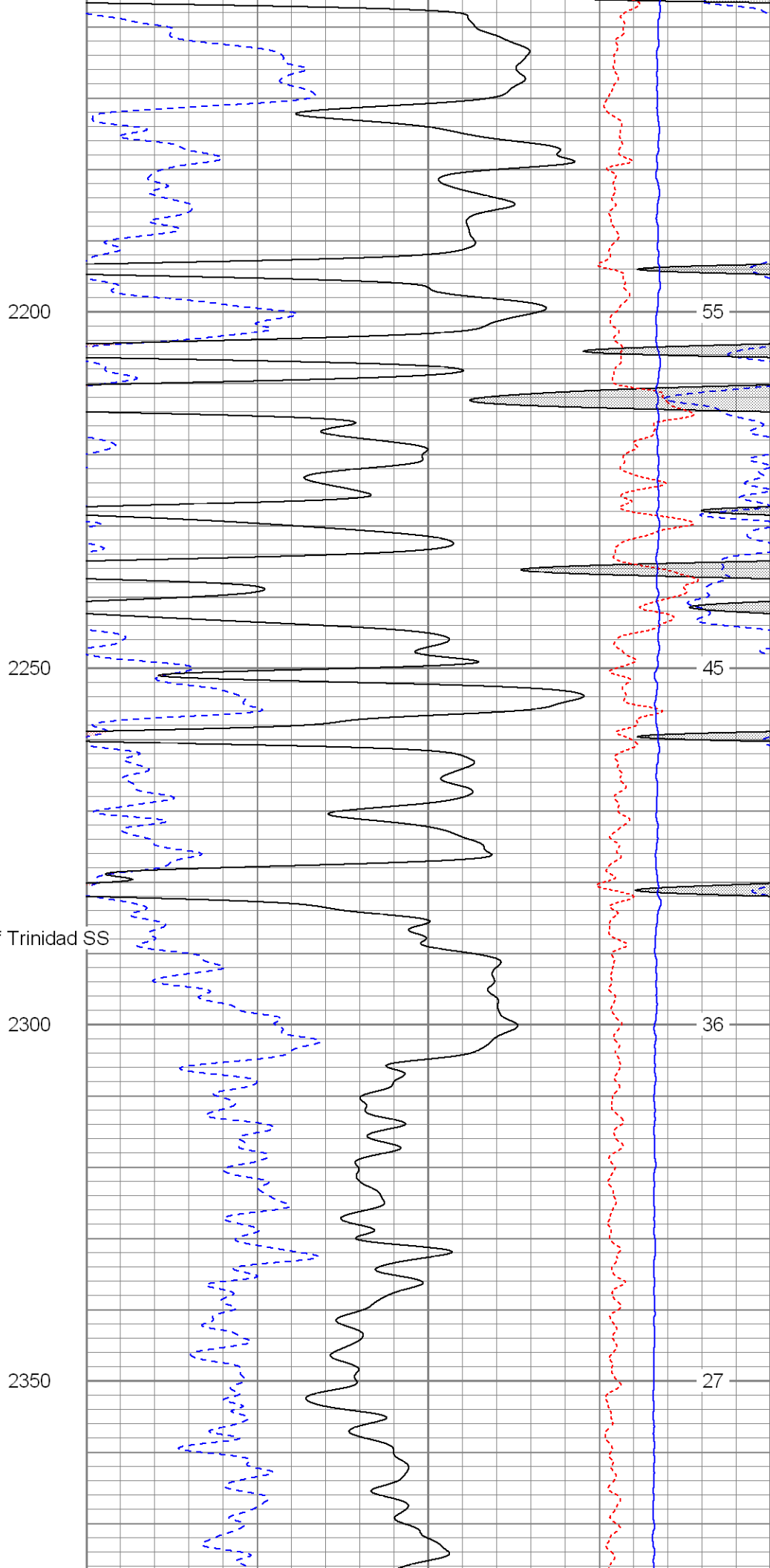
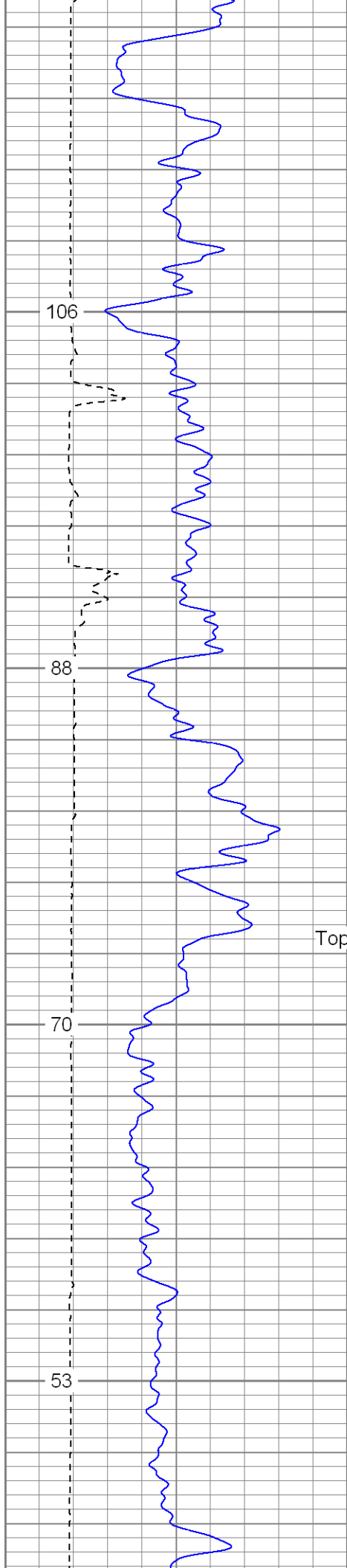


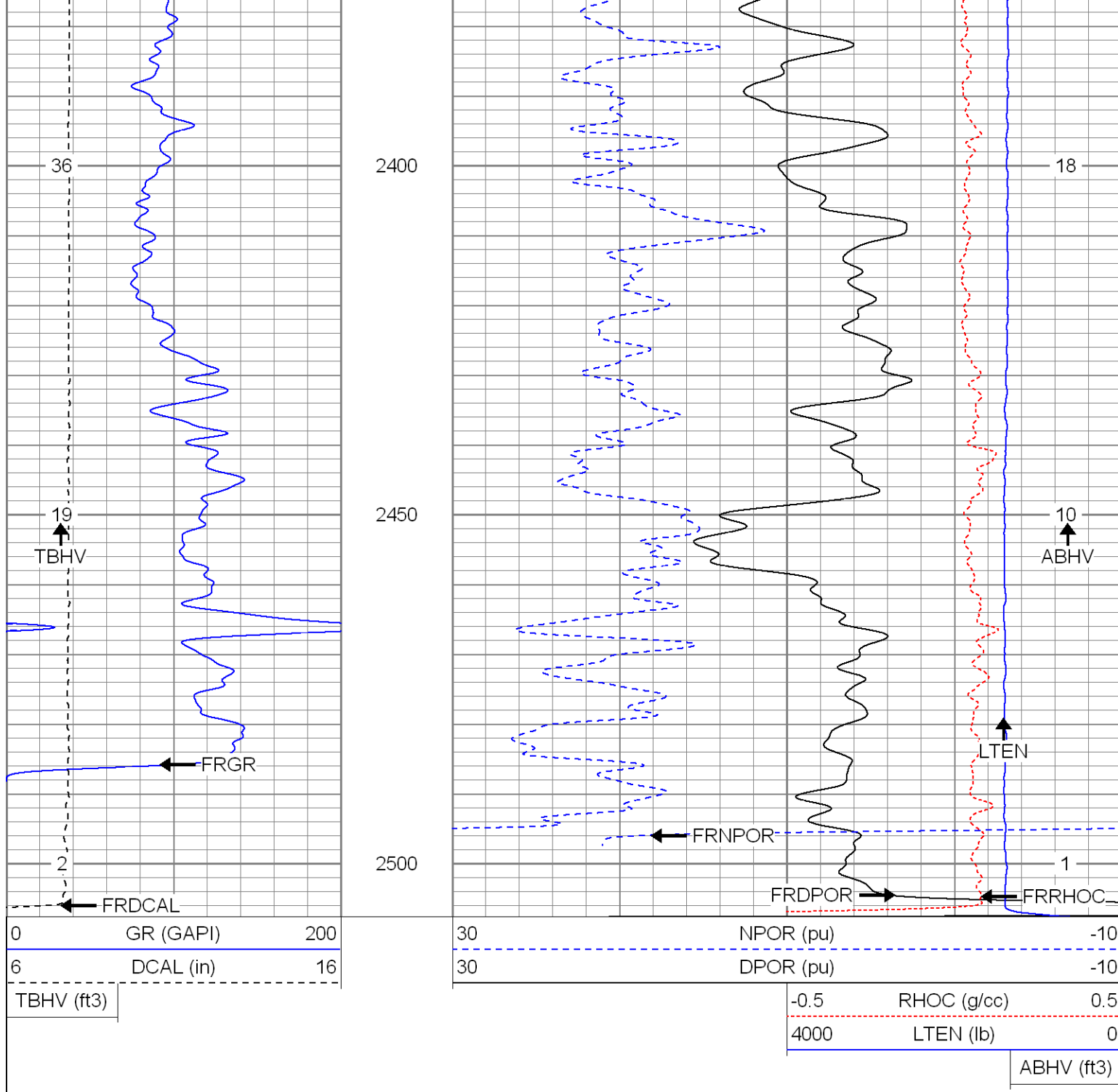












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# Repeat Pass

Database File: xtohr1415.db  
Dataset Pathname: pass3.1  
Presentation Format: cdnl  
Dataset Creation: Sat Apr 05 14:43:11 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

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

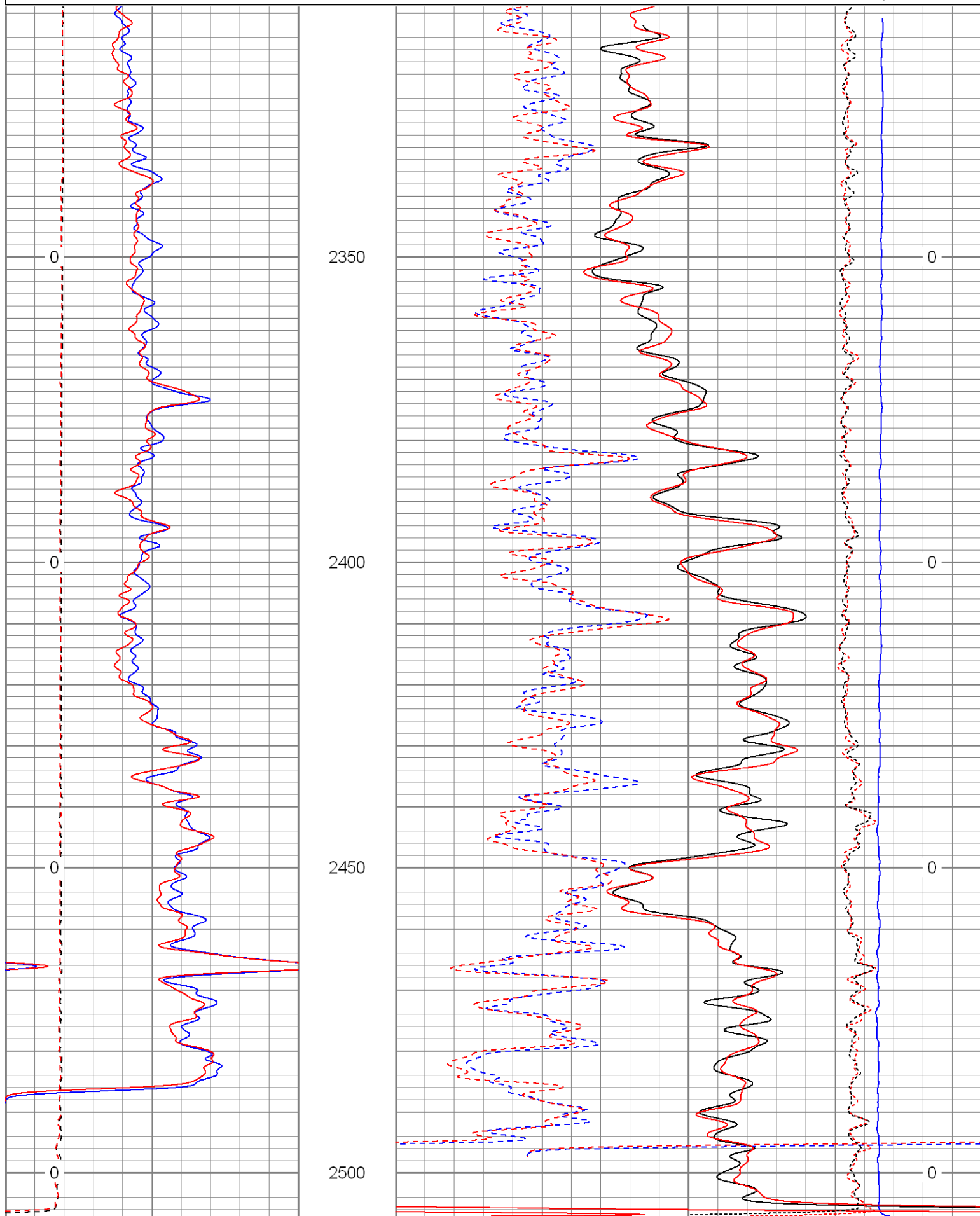
TBHV (ft3)

-0.5 RHOC (g/cc) 0.5

4000 LTEN (lb) 0

-0.5 RHOC-repeat (g/cc) 0.5

ABHV (ft3)



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
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
ABHV (ft3)		



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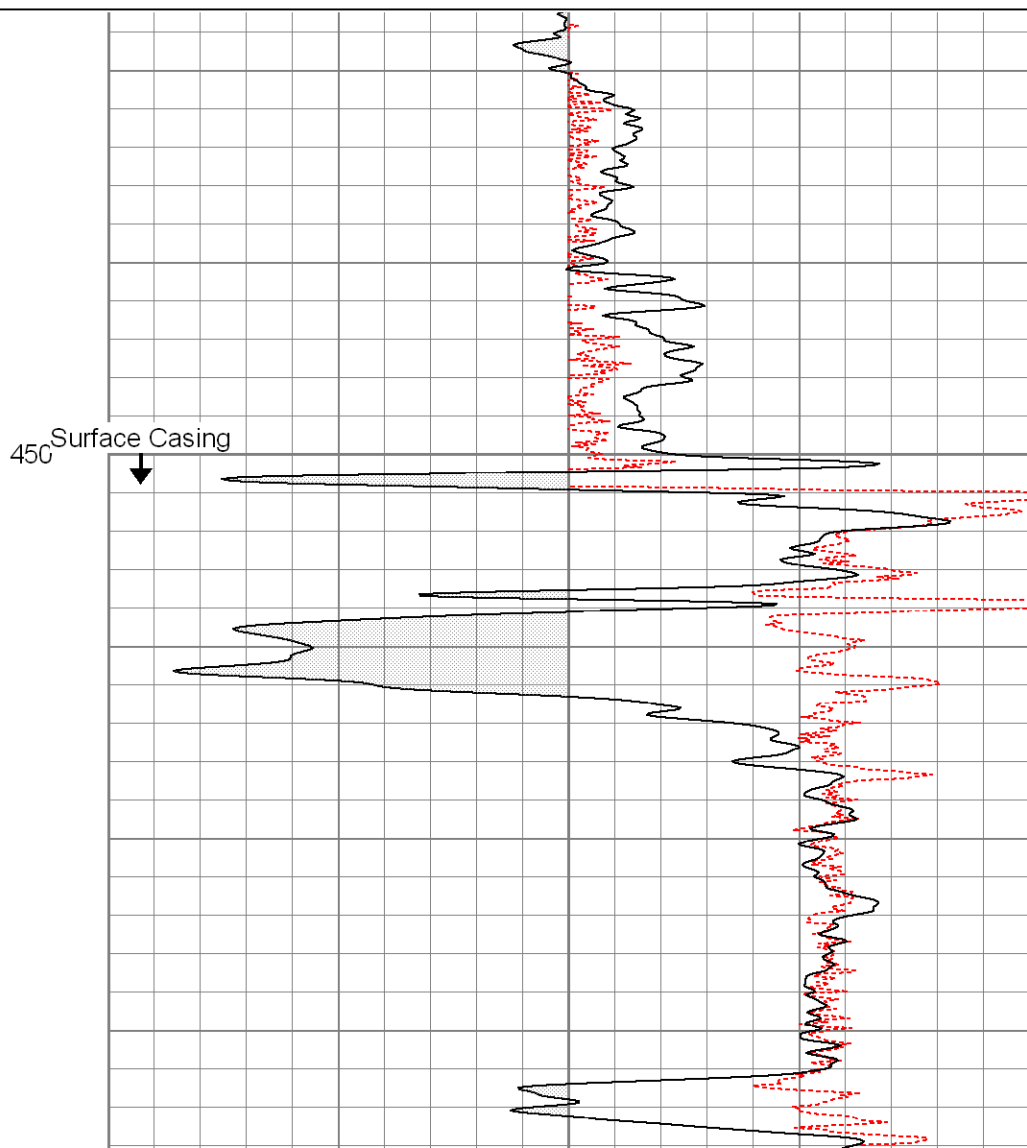
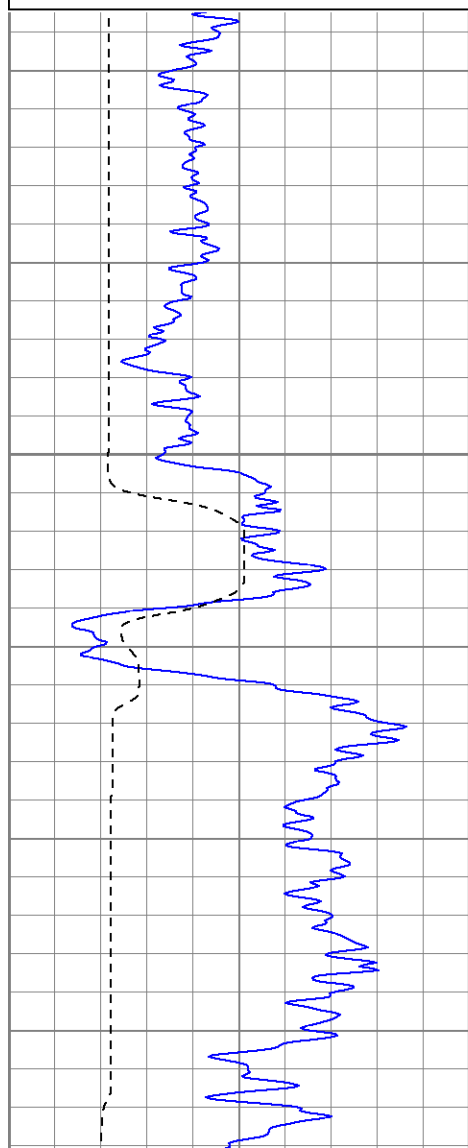
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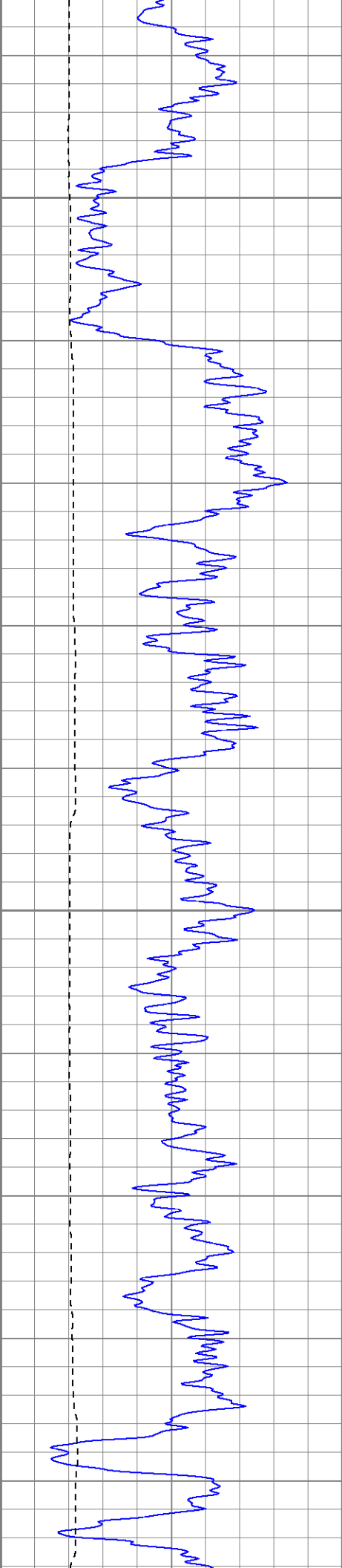
# High Resolution Pass

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Dataset Pathname: pass4.2  
Presentation Format: cdlhr  
Dataset Creation: Mon Apr 07 09:49:27 2008 by Calc Open-Cased 070814  
Charted by: Depth in Feet scaled 1:120

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

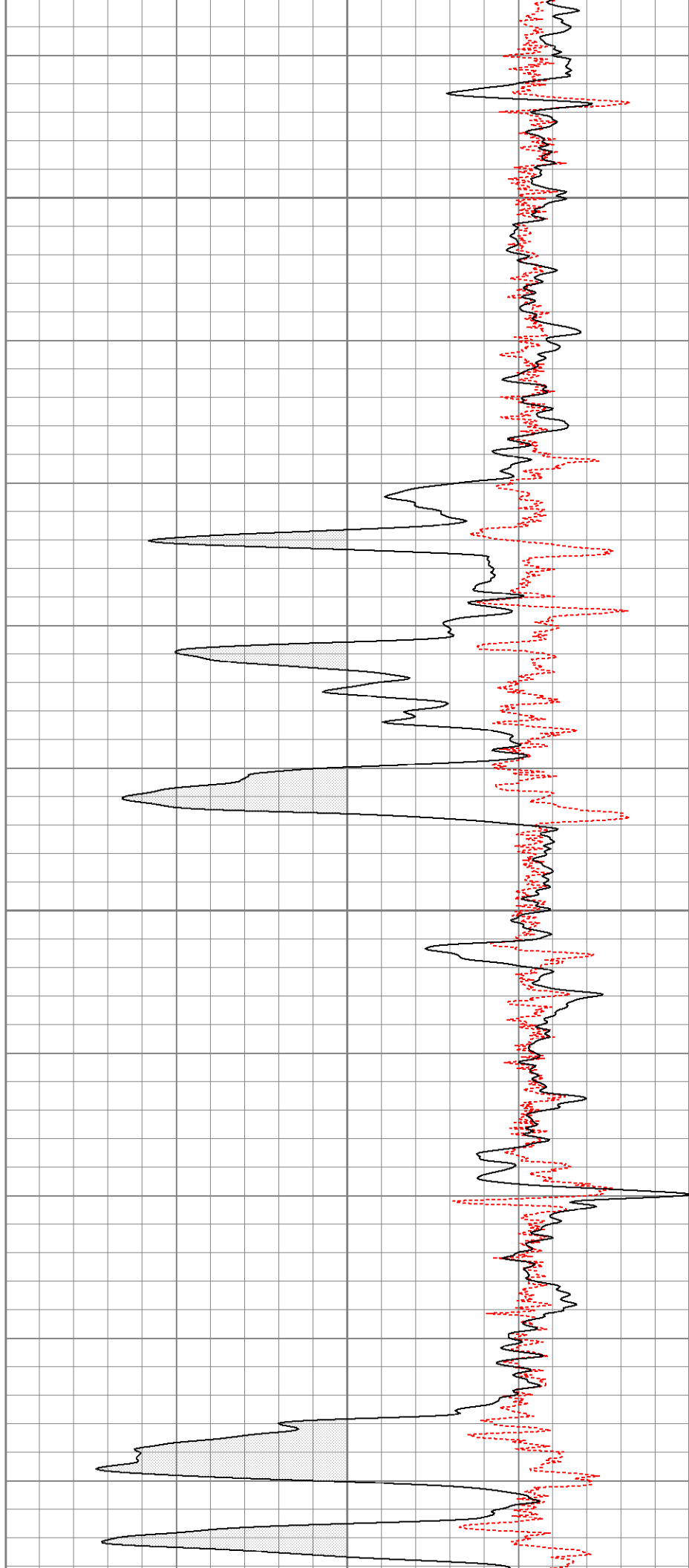
1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5



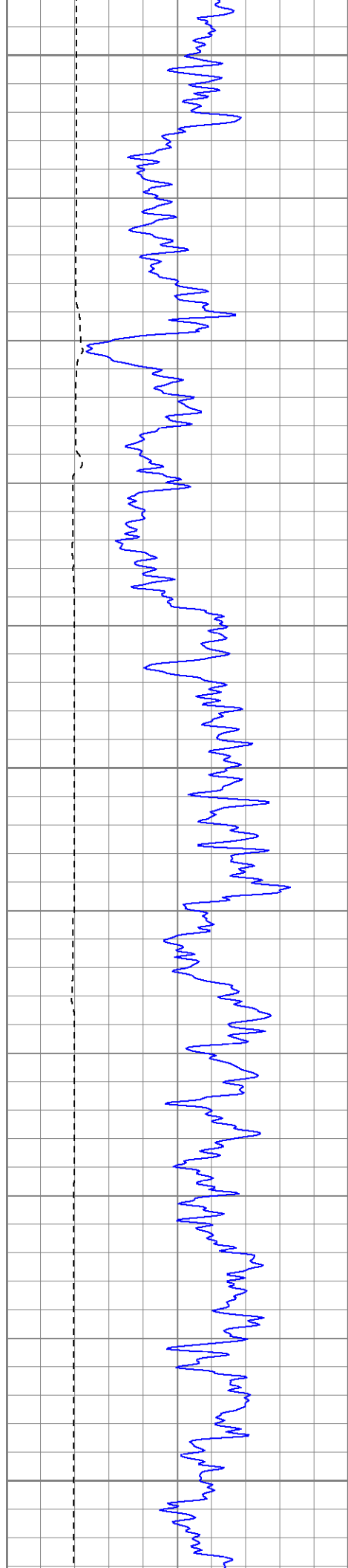


500

550



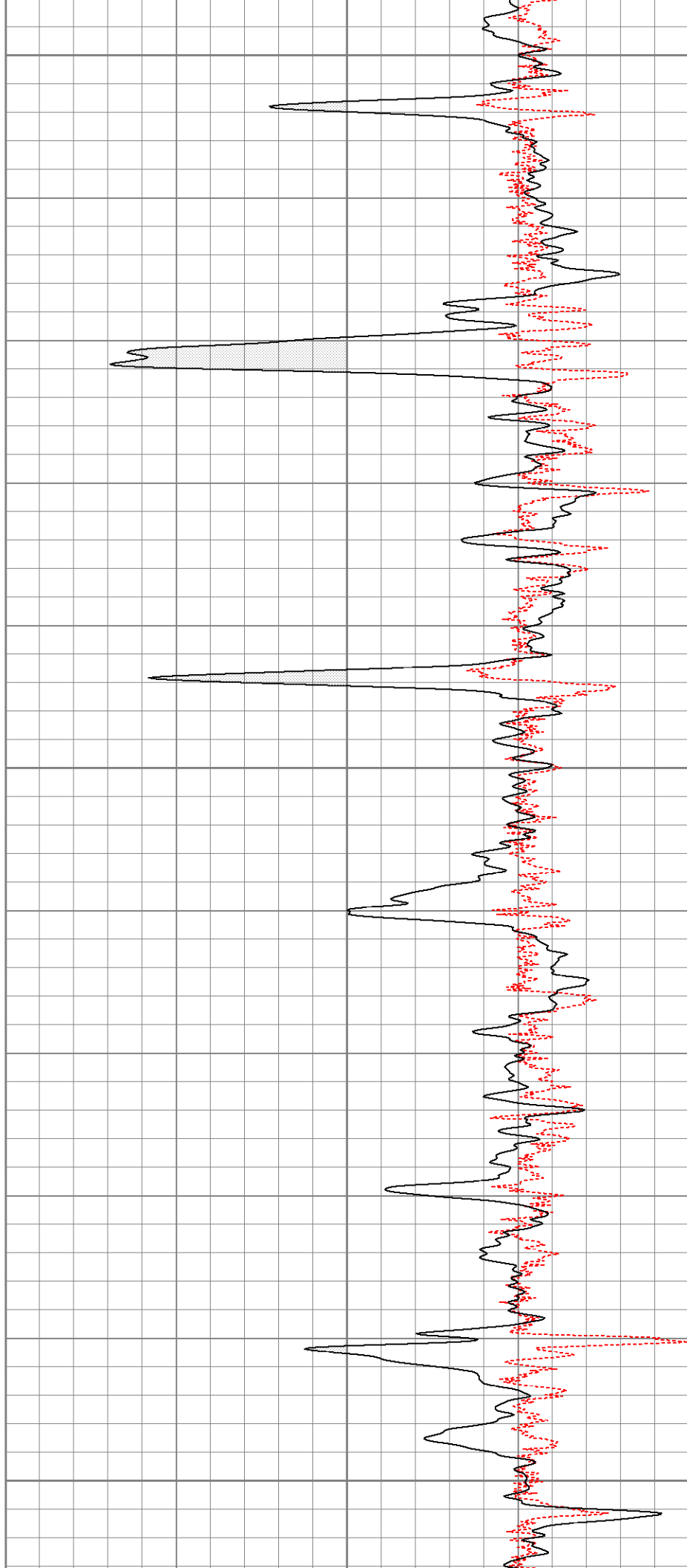


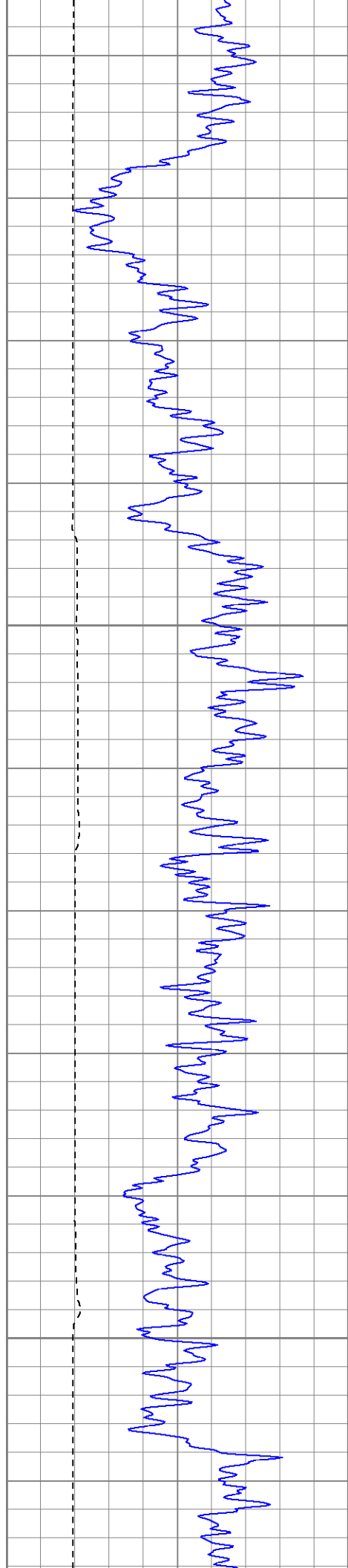


600

650

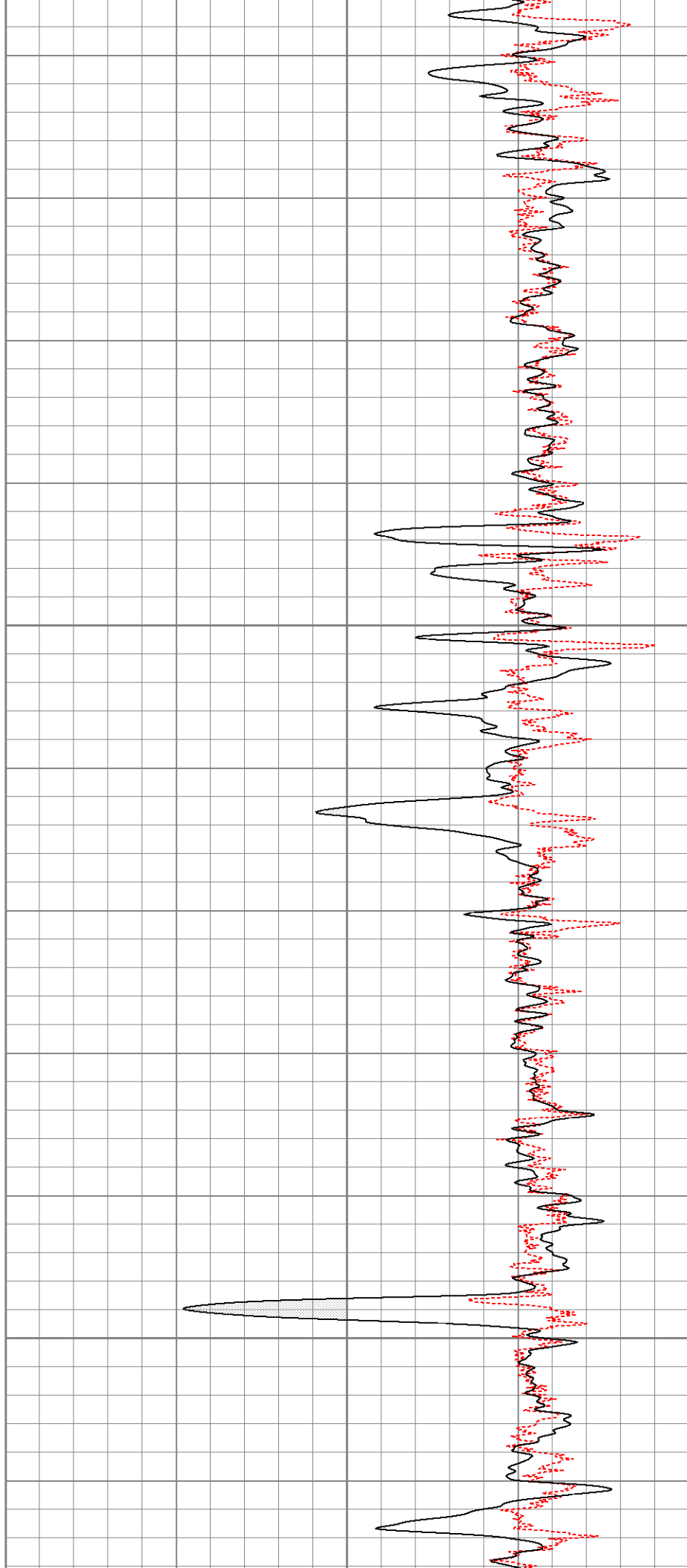
700

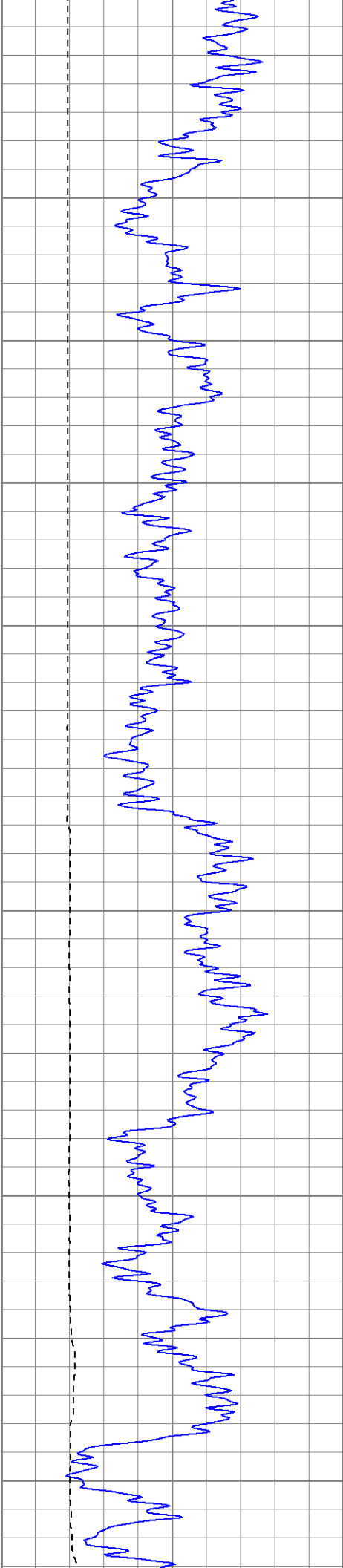




750

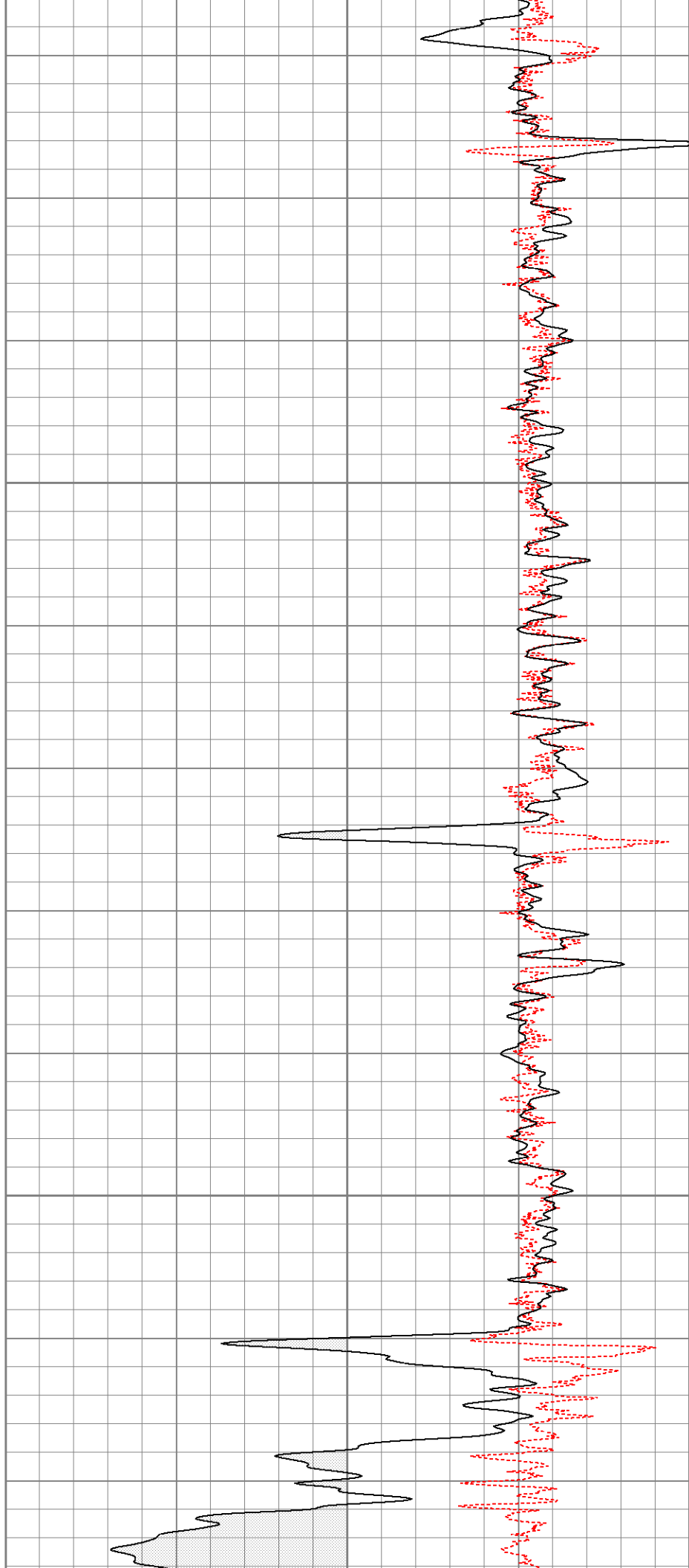
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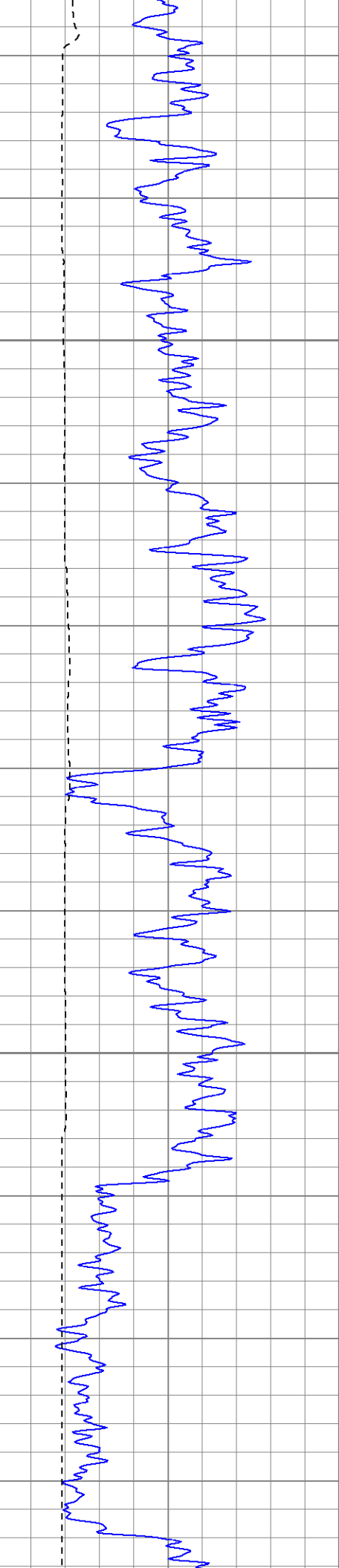




850

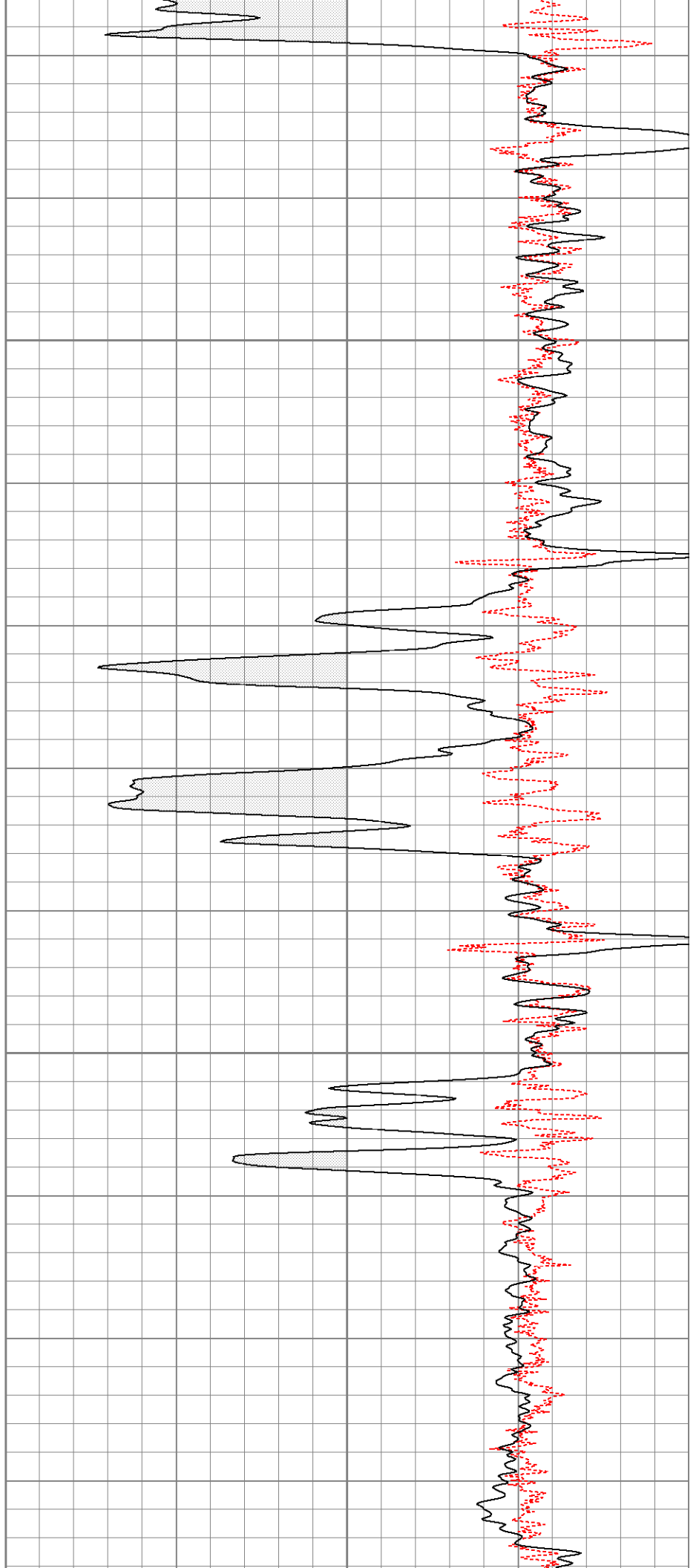
900





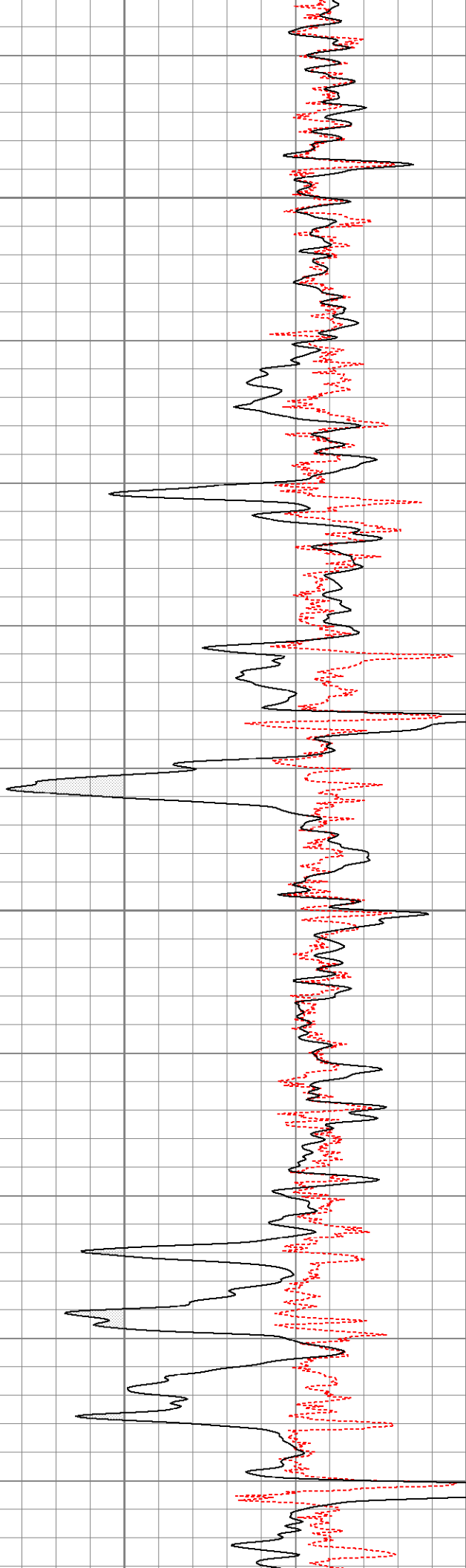
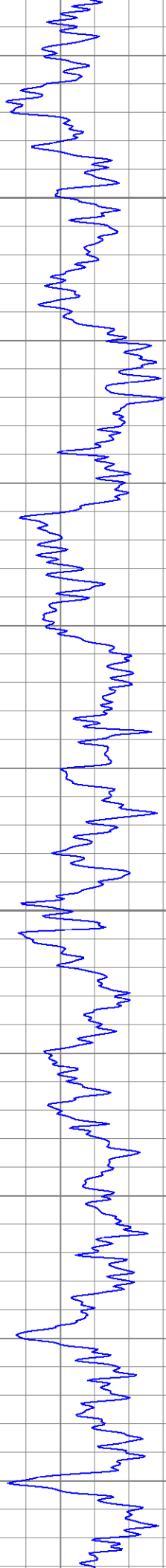
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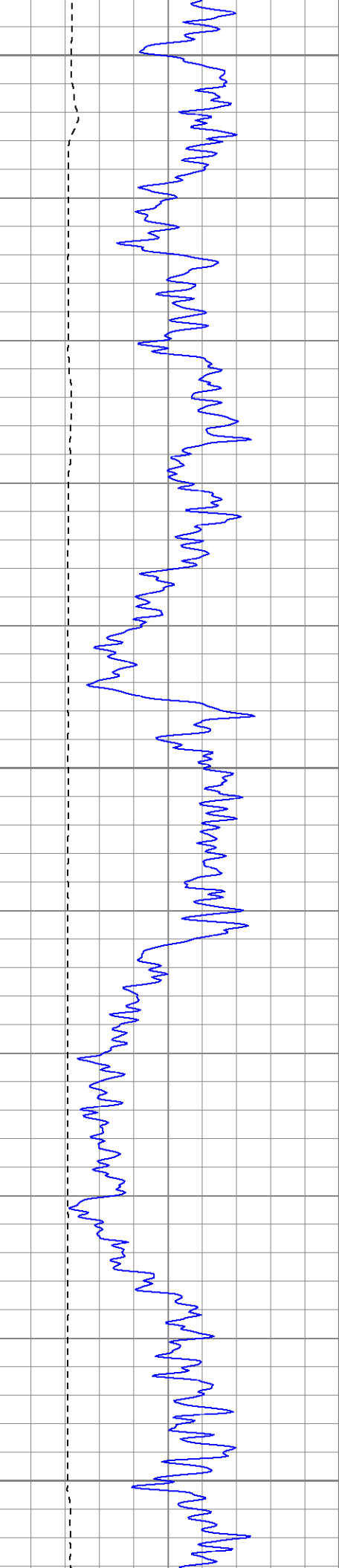
1000



1050

1100

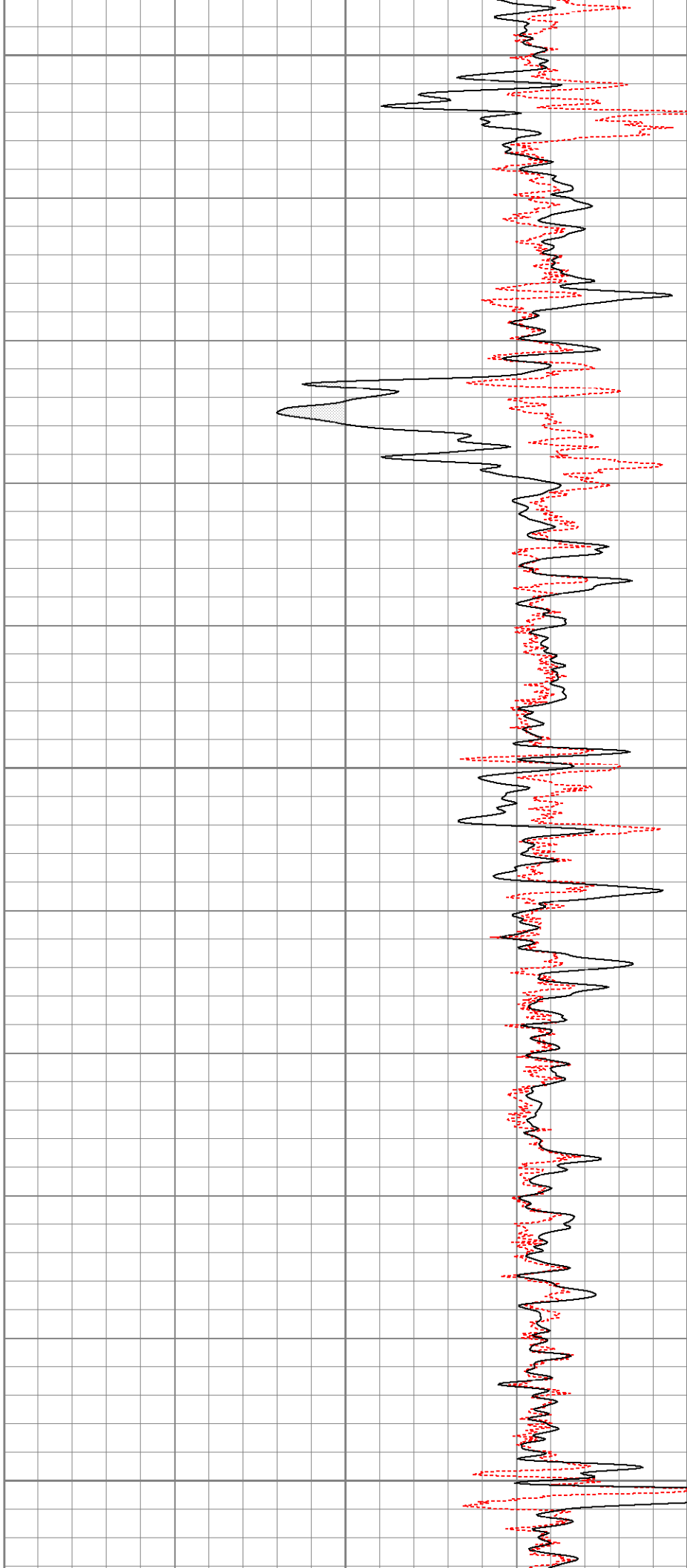


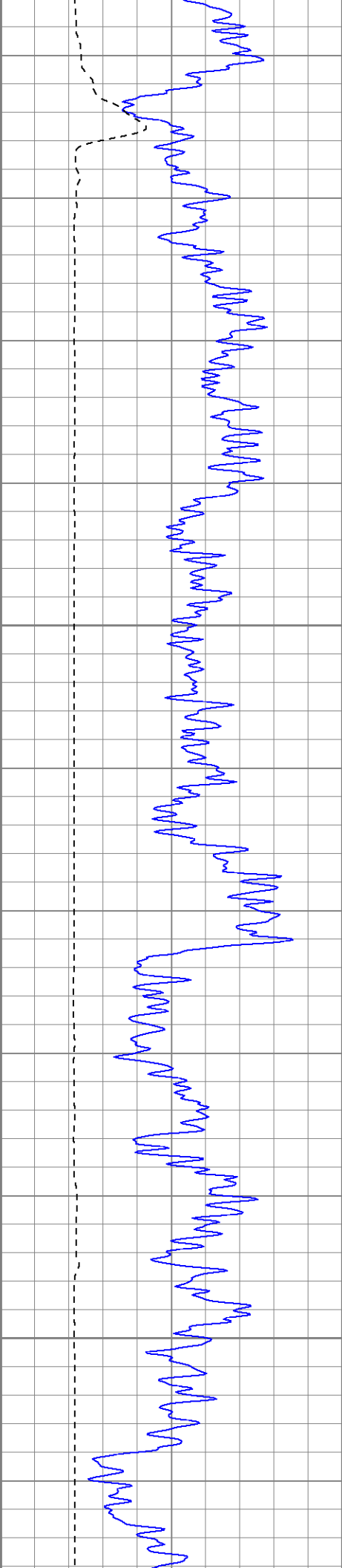


1150

1200

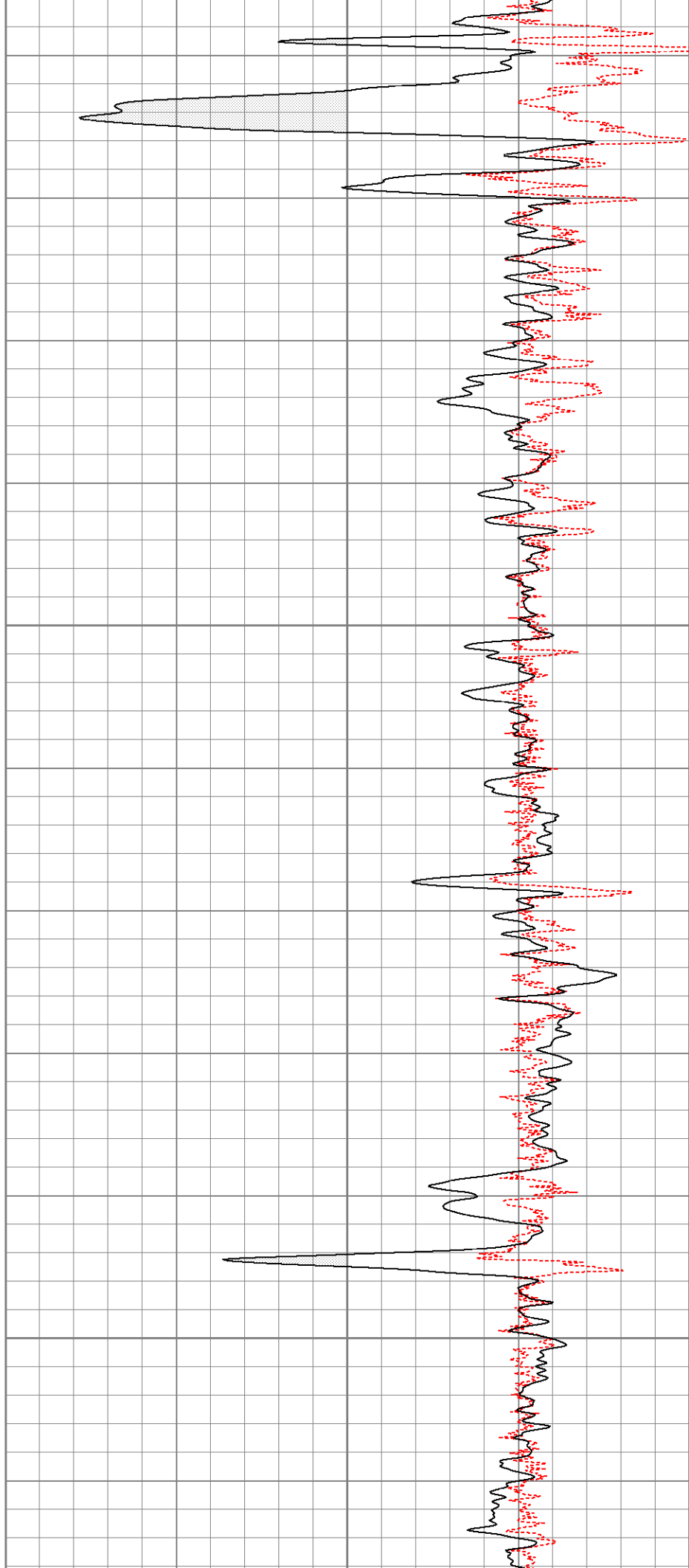
1250

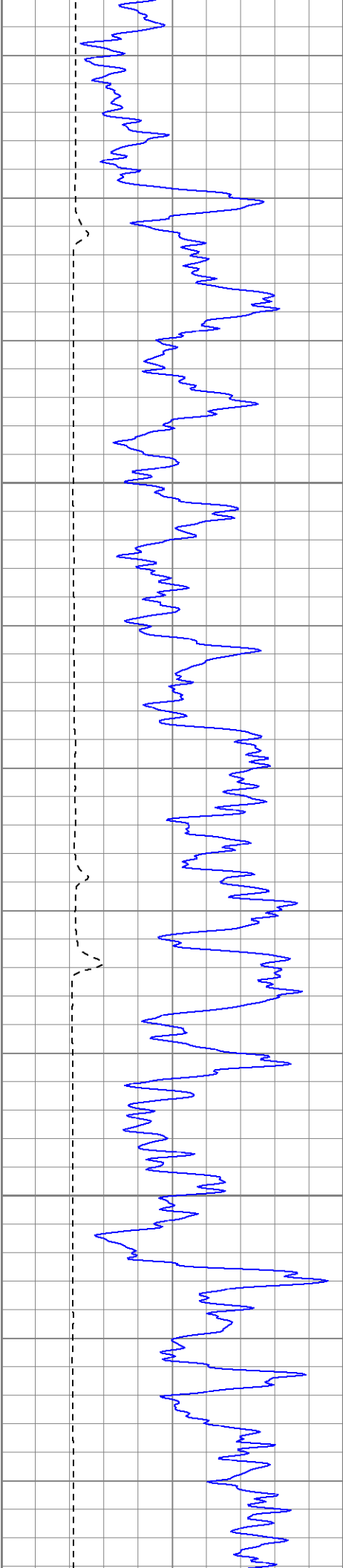




1300

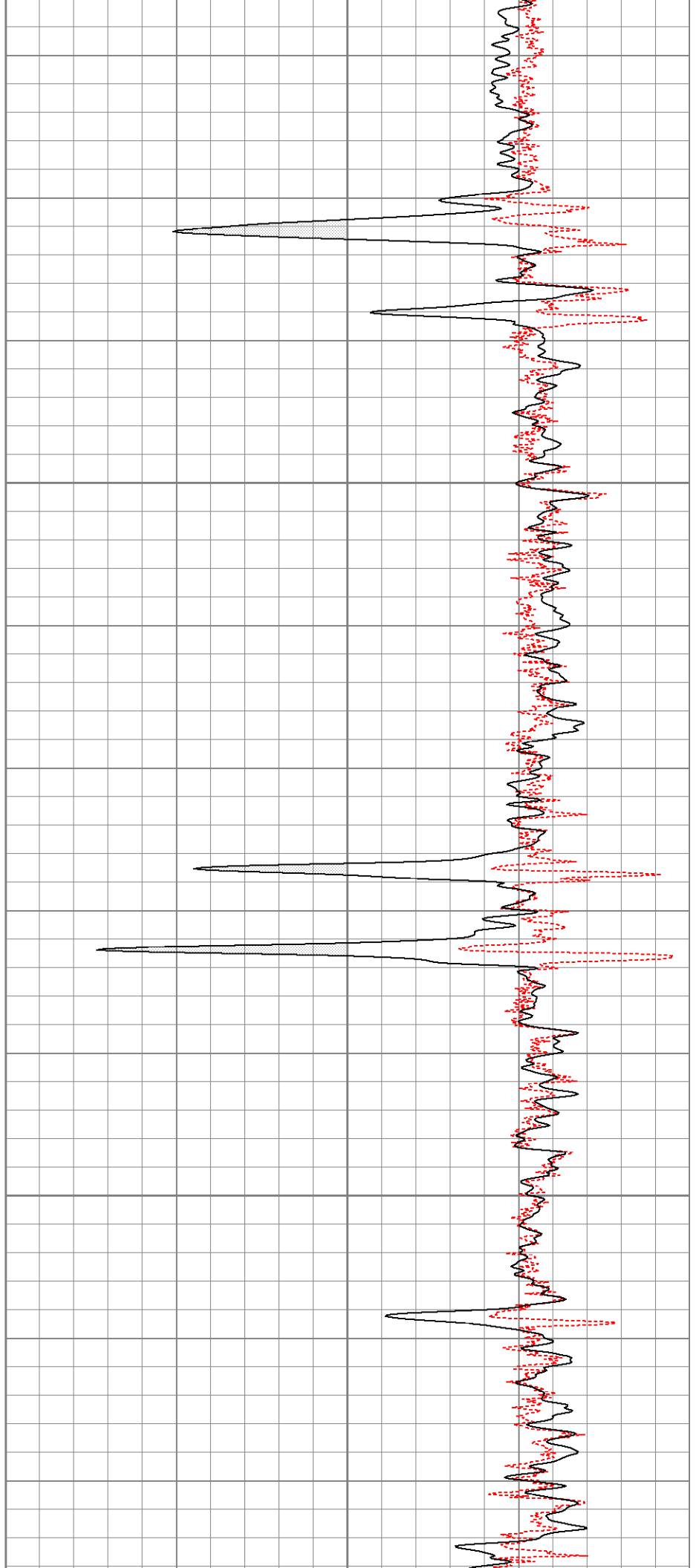
1350



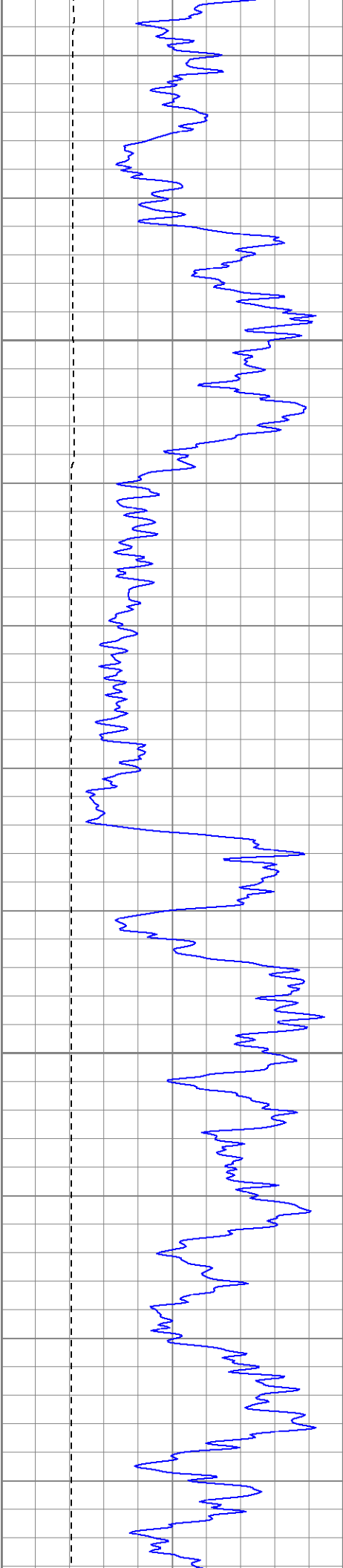


1400

1450

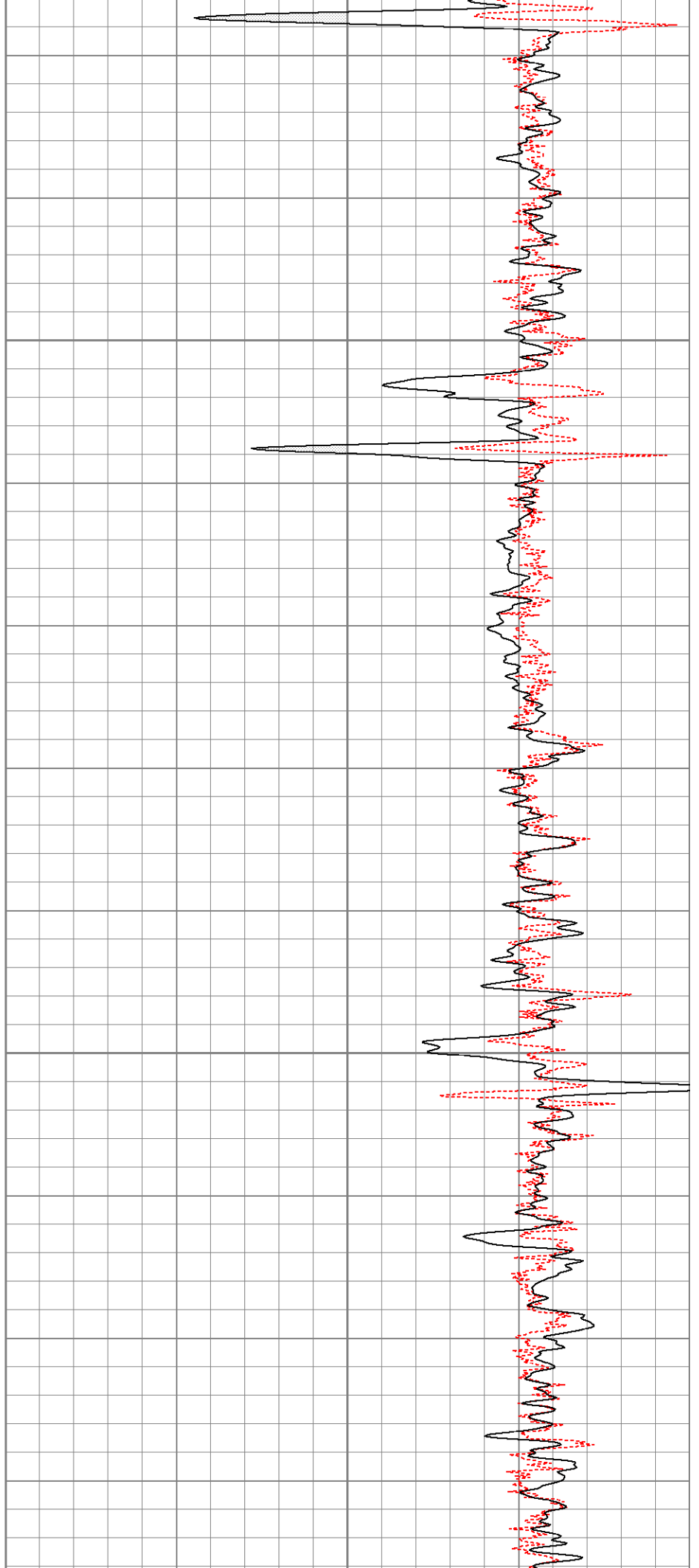






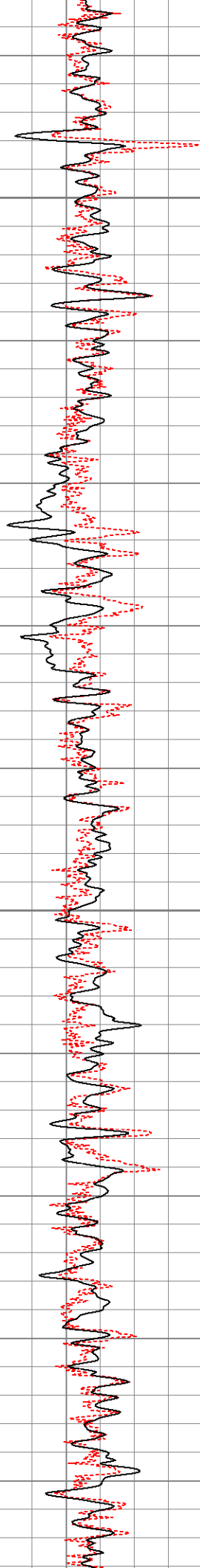
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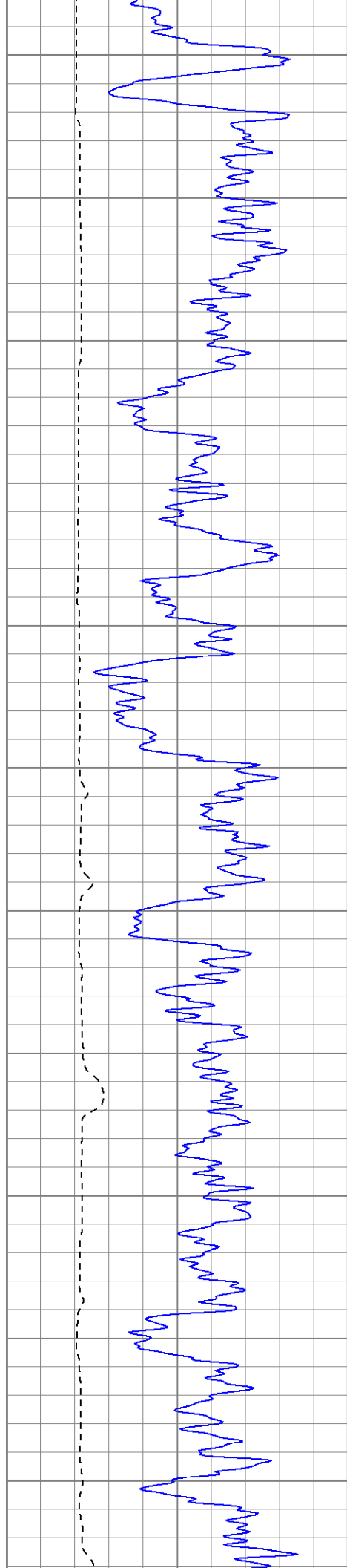
1550



1600

1650

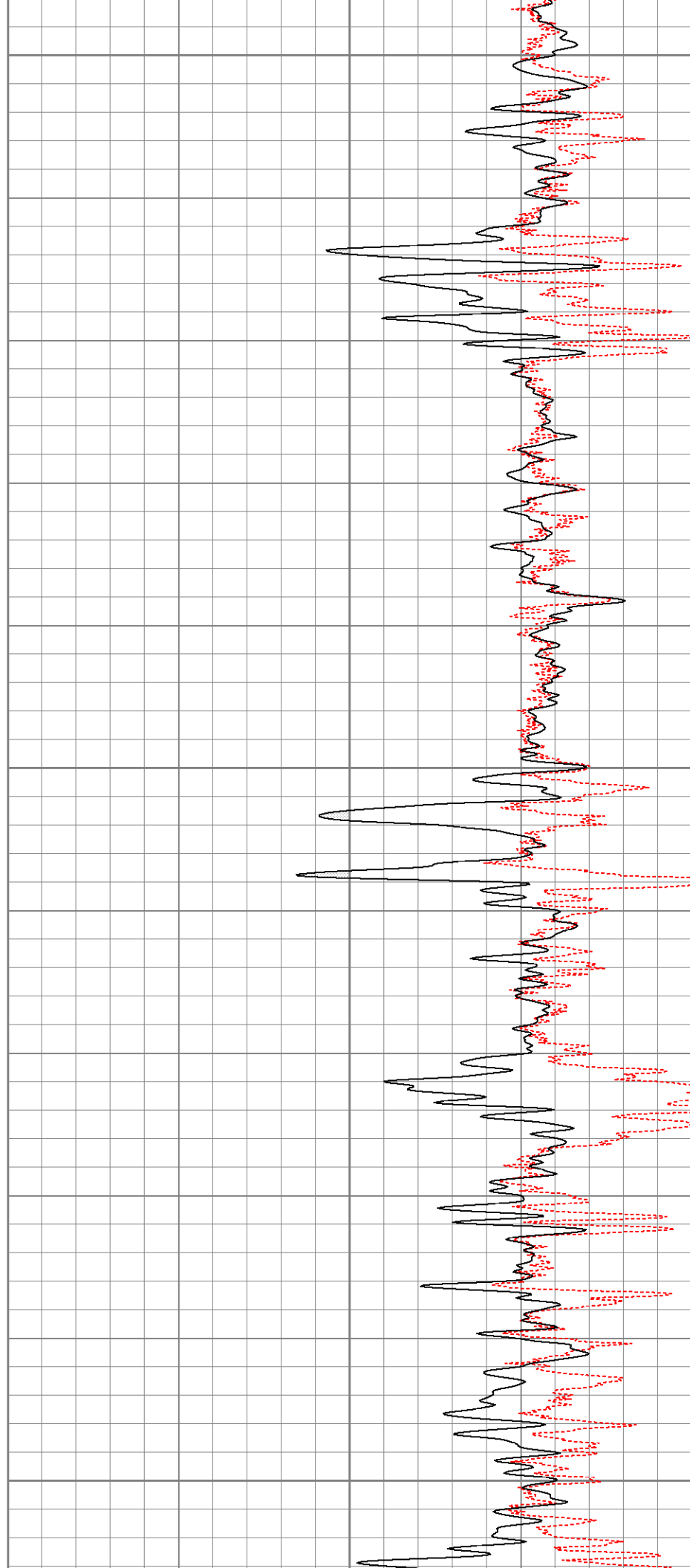


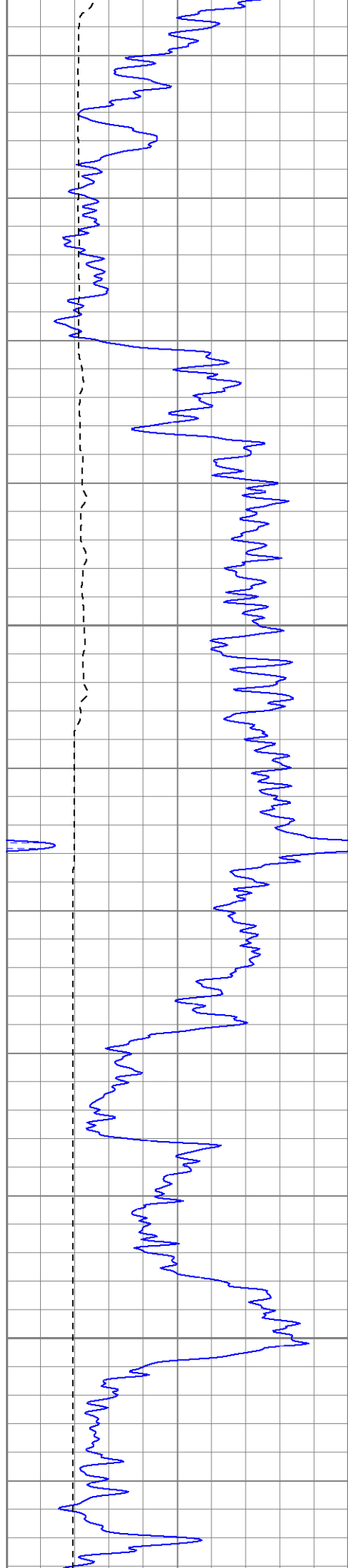


1700

1750

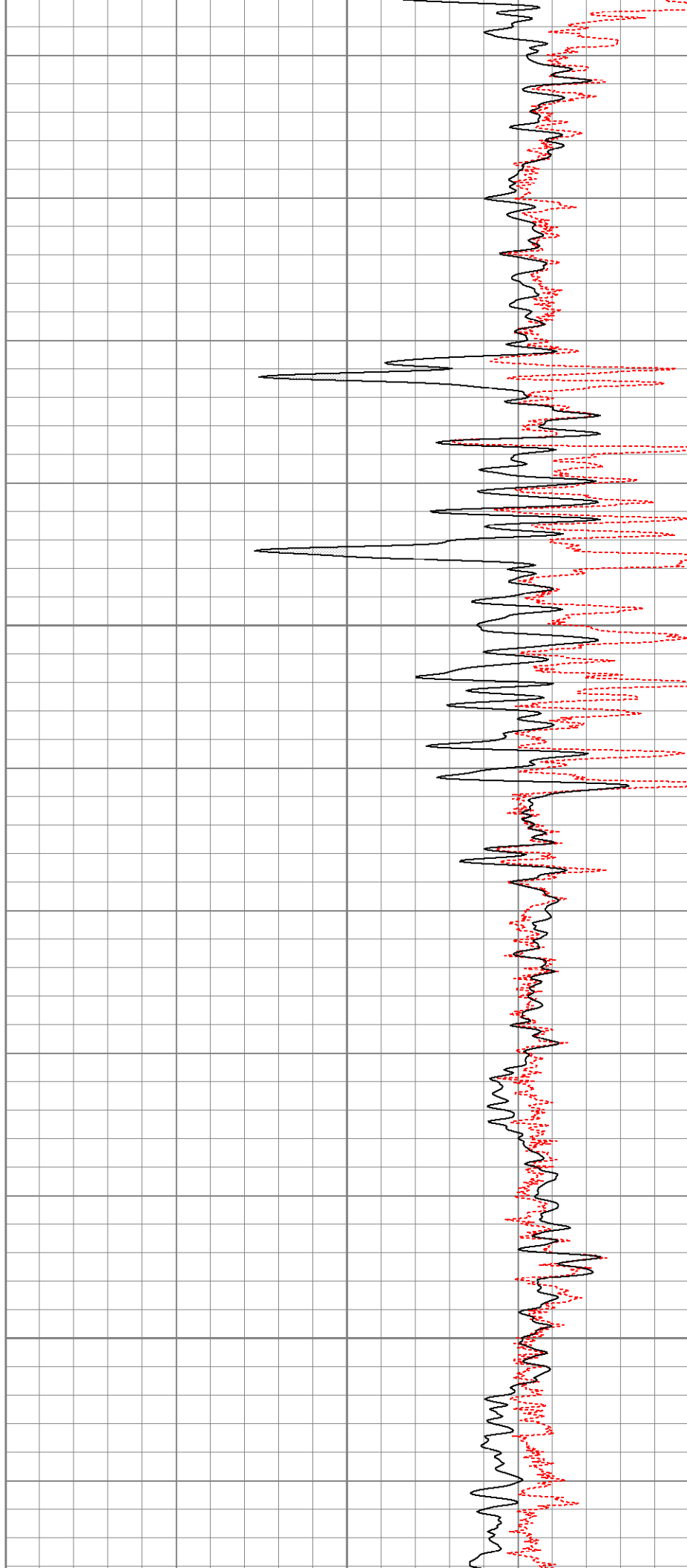
1800

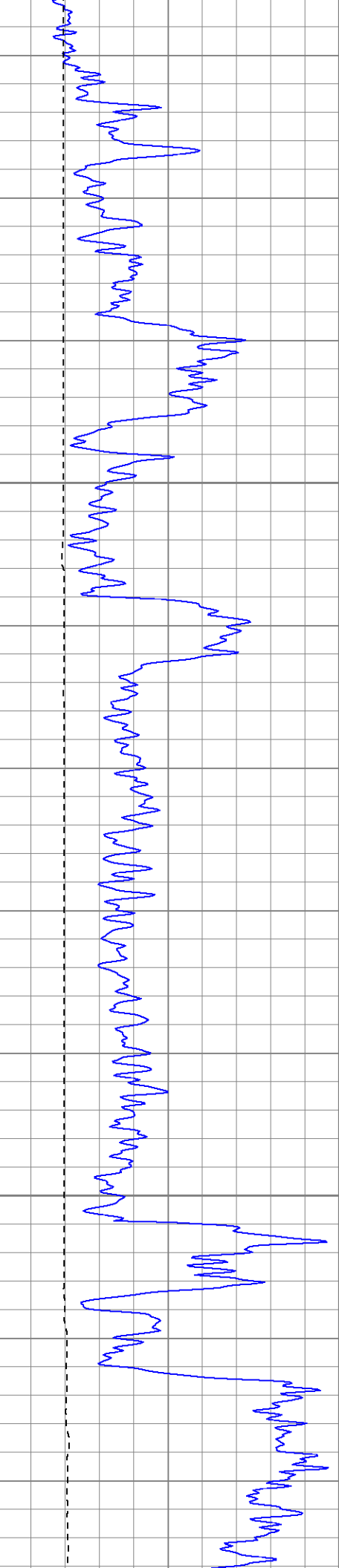




1850

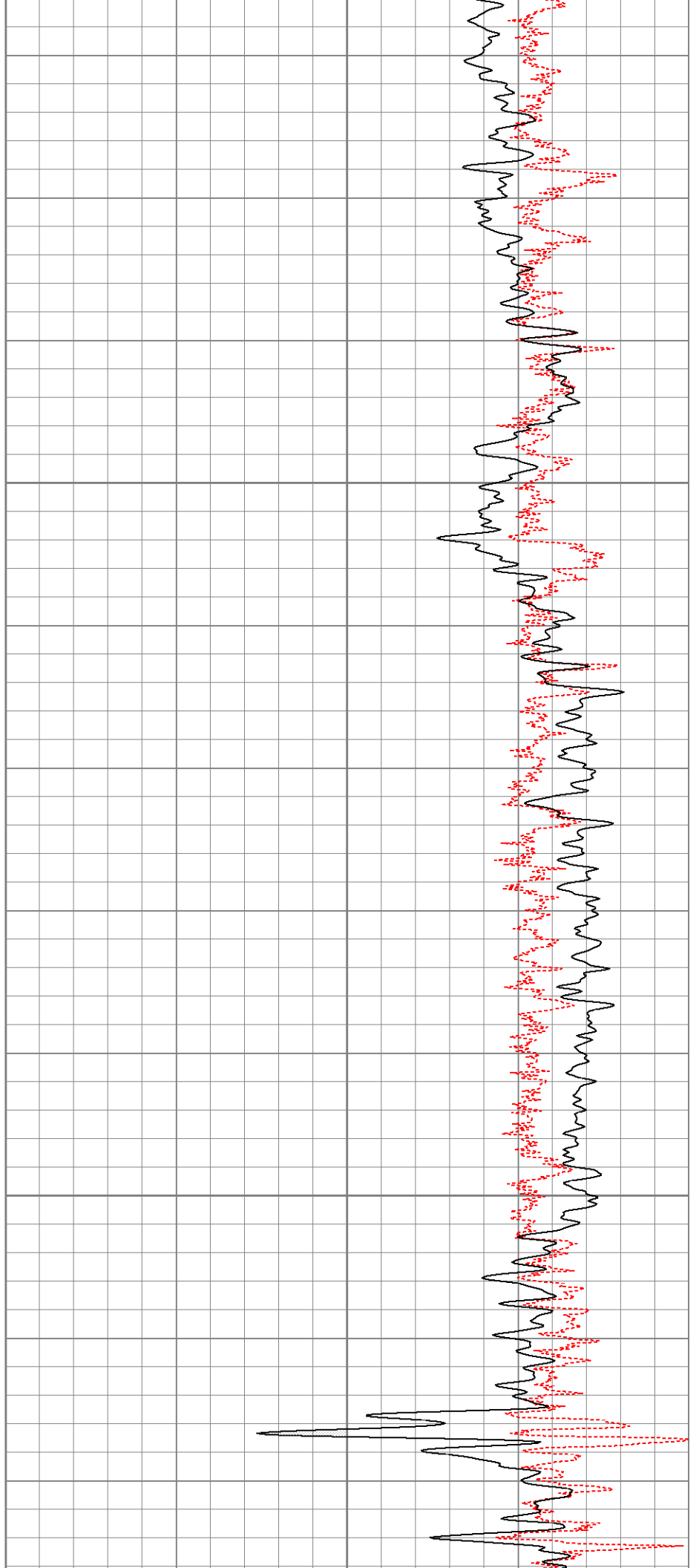
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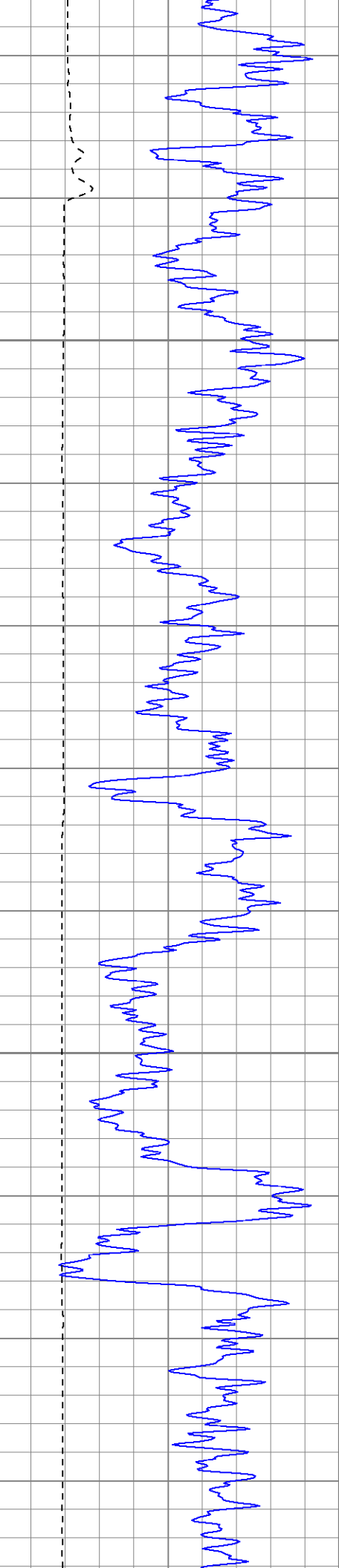




1950

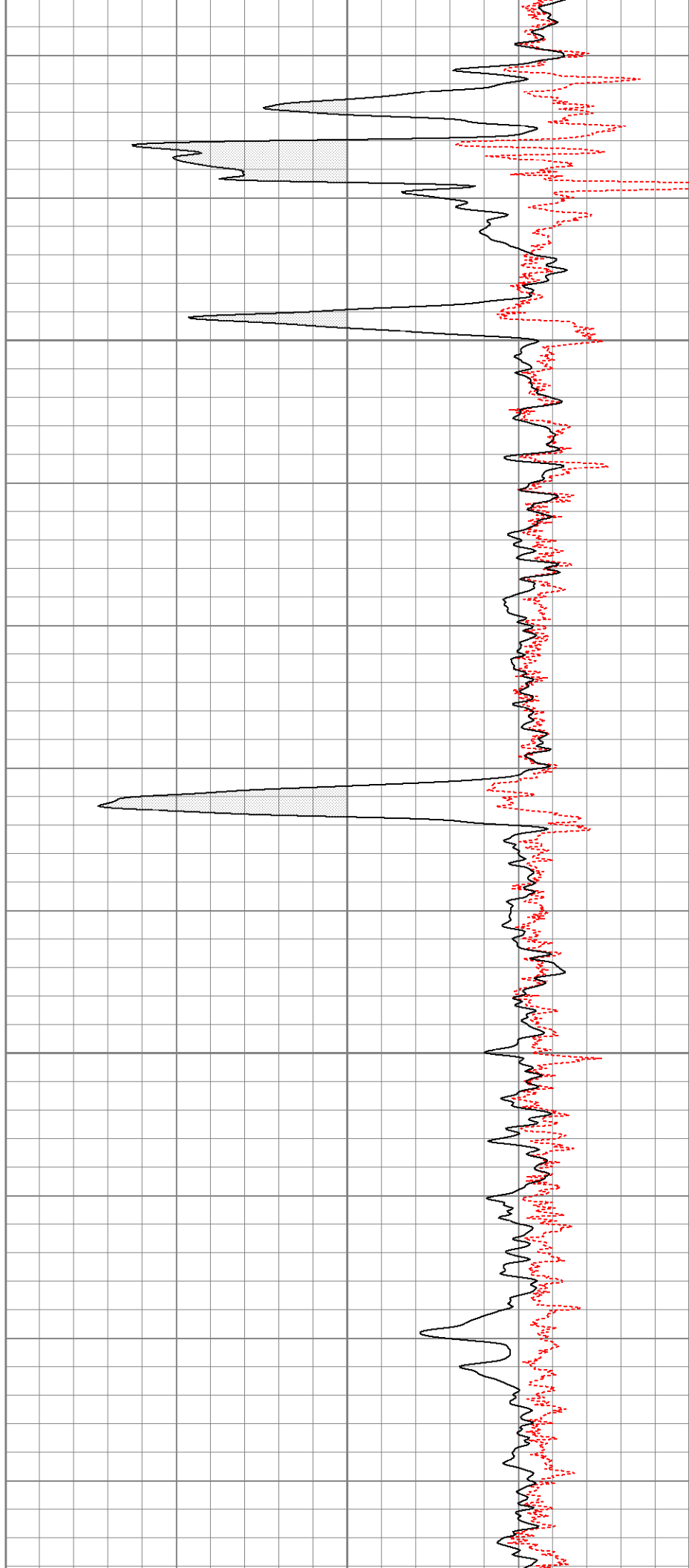
2000





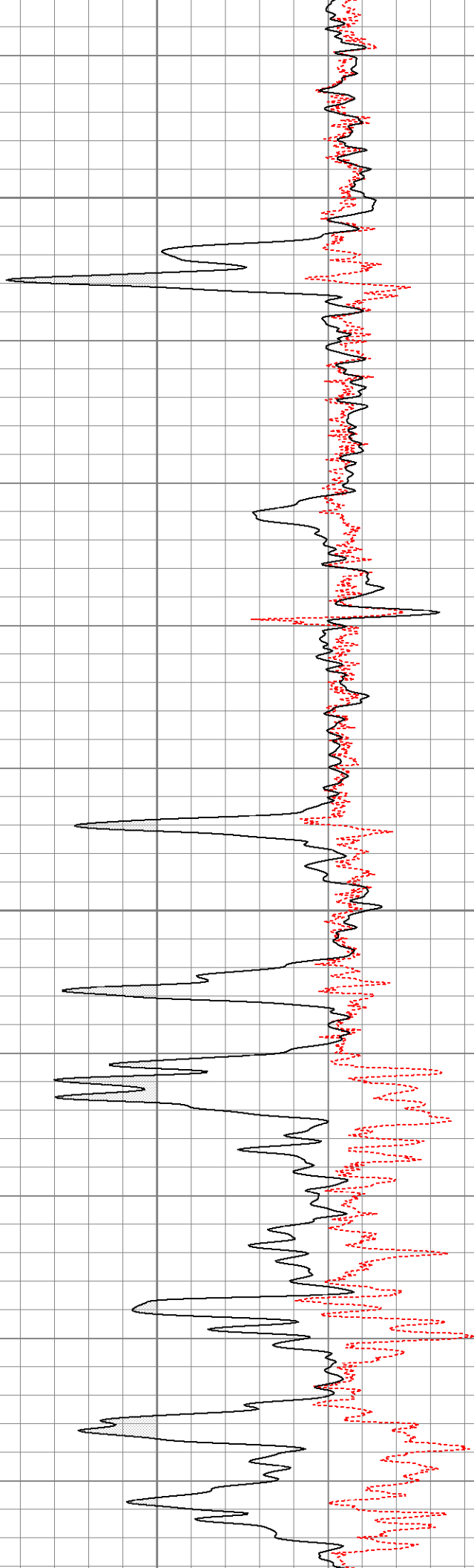
2050

2100



2150

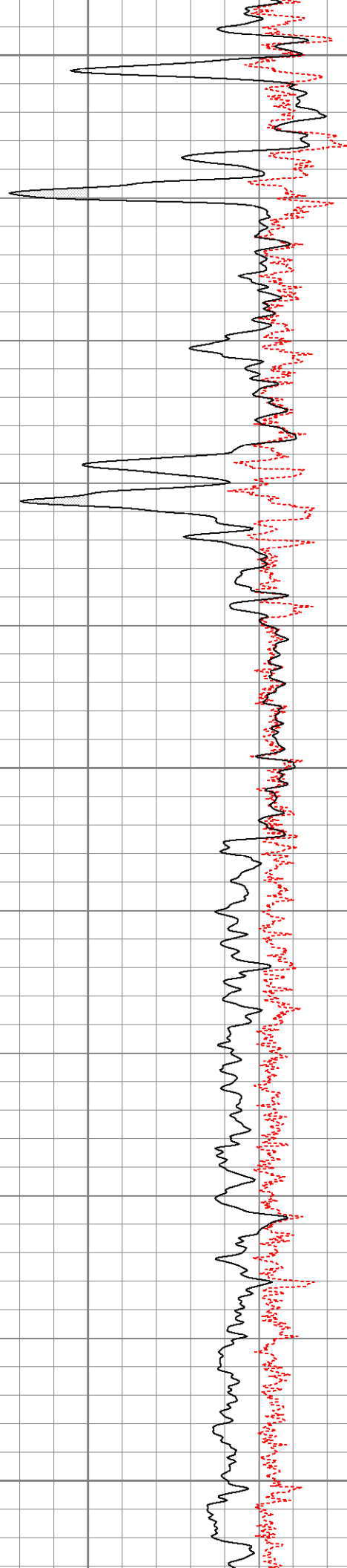
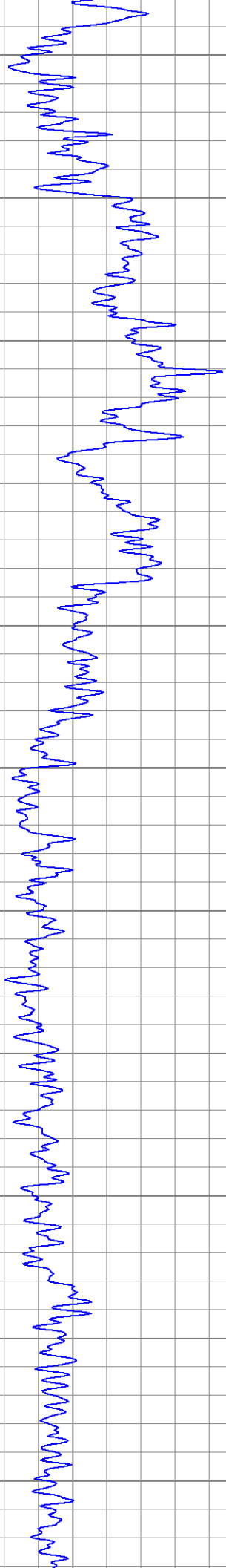
2200



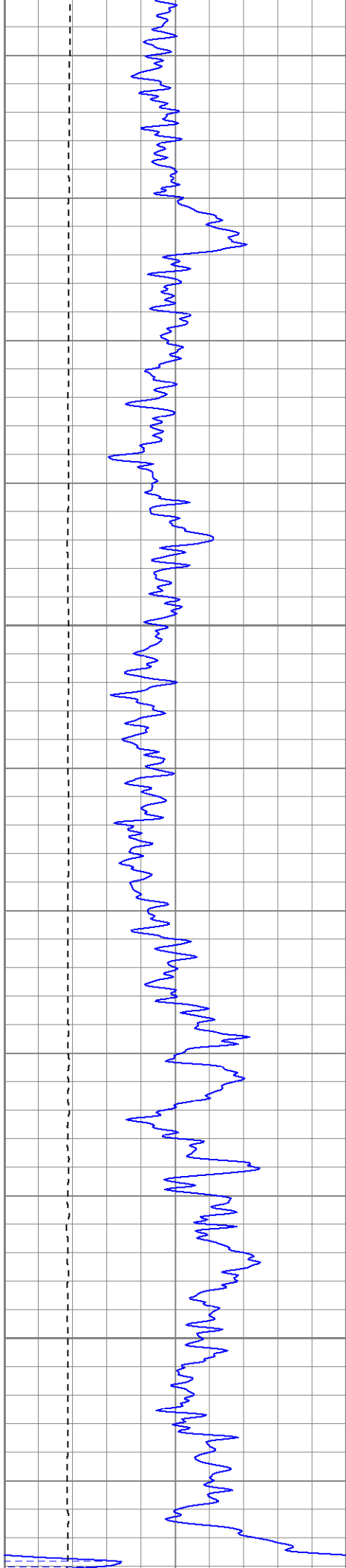
2250

2300

2350

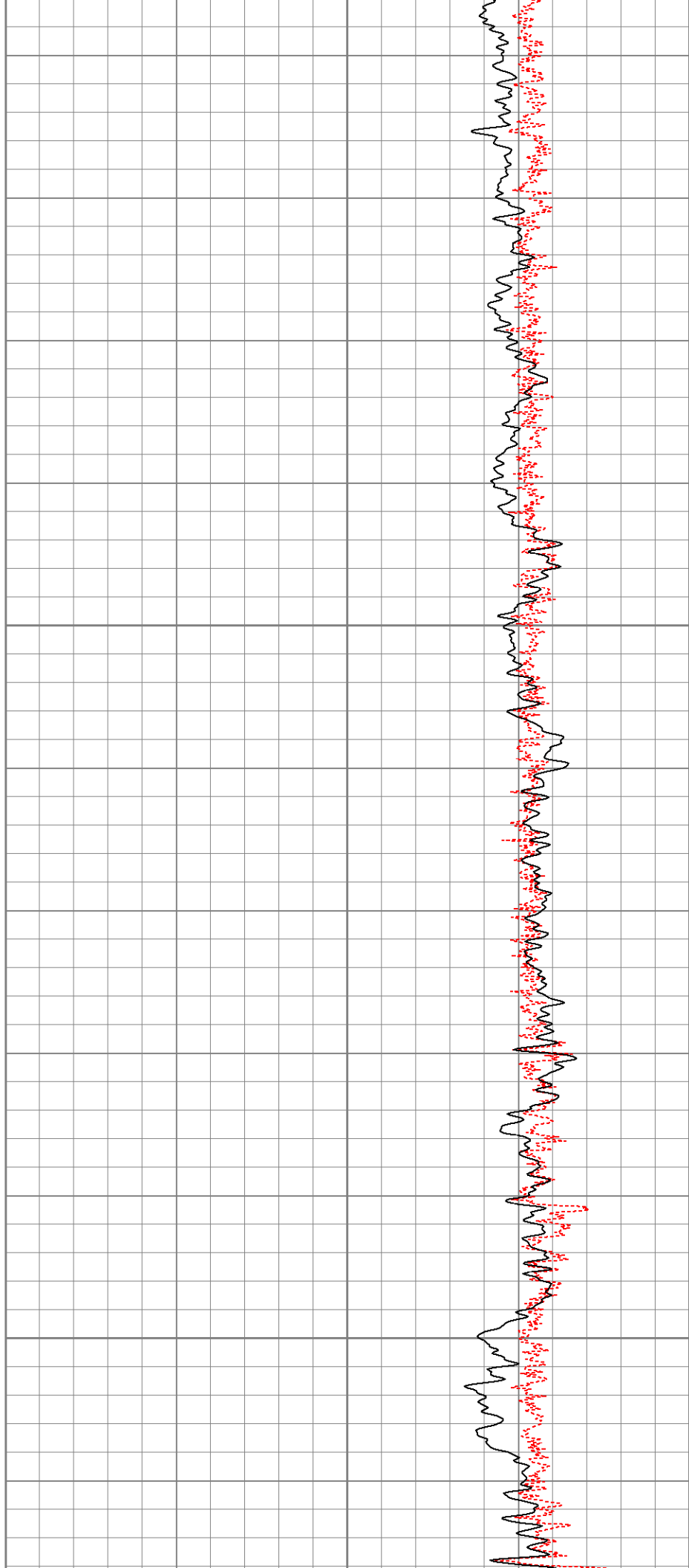


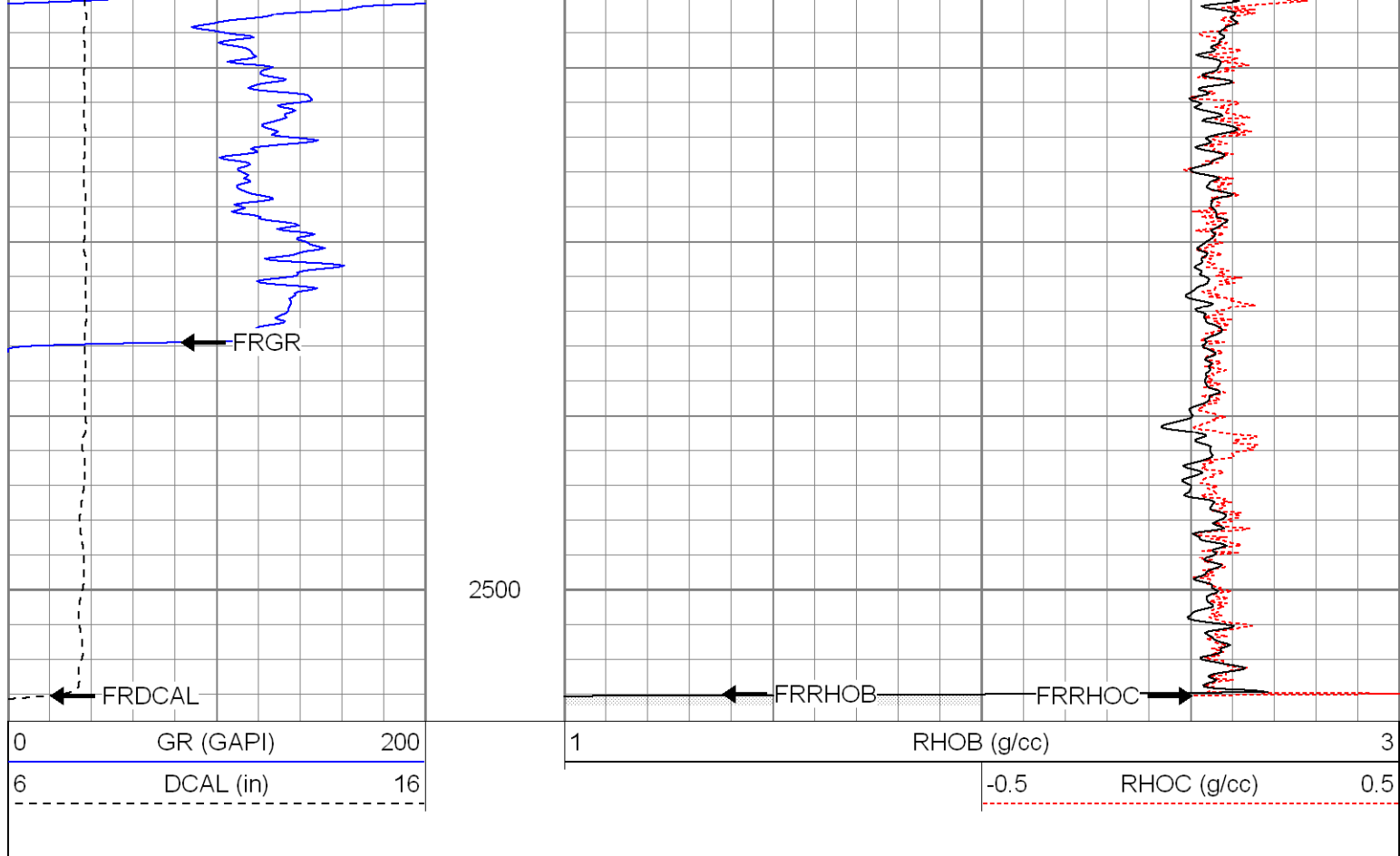




2400

2450





### Calibration Report

Database File: xtohr1415.db  
 Dataset Pathname: pass3  
 Dataset Creation: Sat Apr 05 13:06:40 2008 by Log Open-Cased 070814

### Compensated Density Calibration Report

Serial-Model: 2119-O  
 Source / Verifier: csv-j12 / blks  
 Master Calibration Performed: Fri Apr 04 09:12:47 2008

#### Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	976.49	604.49	cps
Aluminum	2.590	g/cc	217.12	393.38	cps
Spine Angle = 74.05			Density/Spine Ratio = 0.563		
	Size		Reading		
Small Ring	8.00	in	3.35	V	
Large Ring	14.00	in	7.70	V	

### Gamma Ray Calibration Report

Serial Number: 2119  
 Tool Model: O  
 Performed: Fri Apr 04 09:22:35 2008

Calibrator Value: 170.0 GAPI

Background Reading: 42.6 cps  
 Calibrator Reading: 139.0 cps

