



**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 14-15  
Field Purgatoire River  
County Las Animas State Colorado

Location: API #: 05 071 09450 00

1277' FSL & 2144' FEL

SEC 14 TWP 34S RGE 67W

Permanent Datum Ground Level Elevation 7906'  
Log Measured From Ground Level  
Drilling Measured From Ground Level

Other Services  
DIL  
Elevation  
K.B. -----  
D.F. -----  
G.L. 7906'

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.

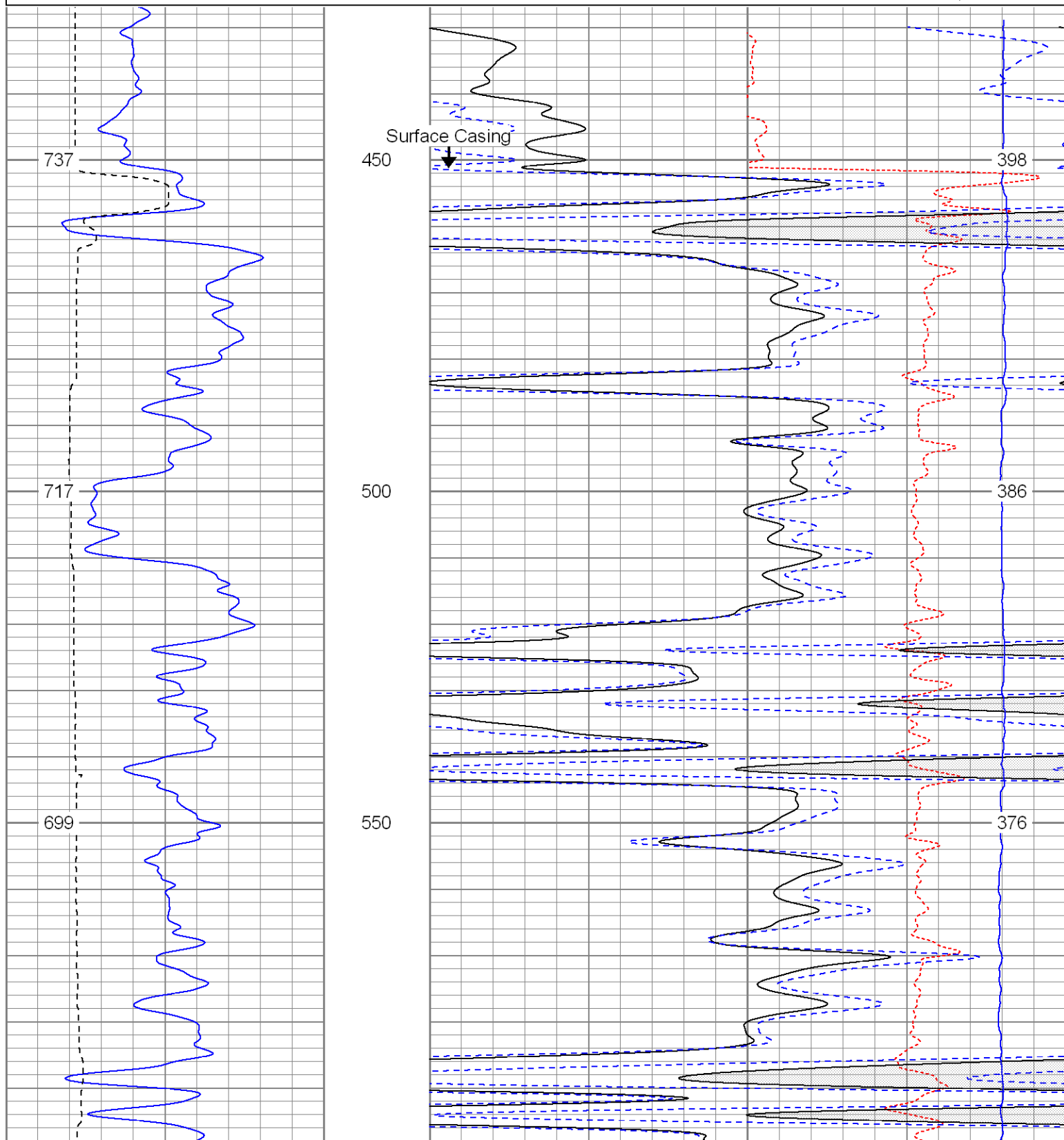


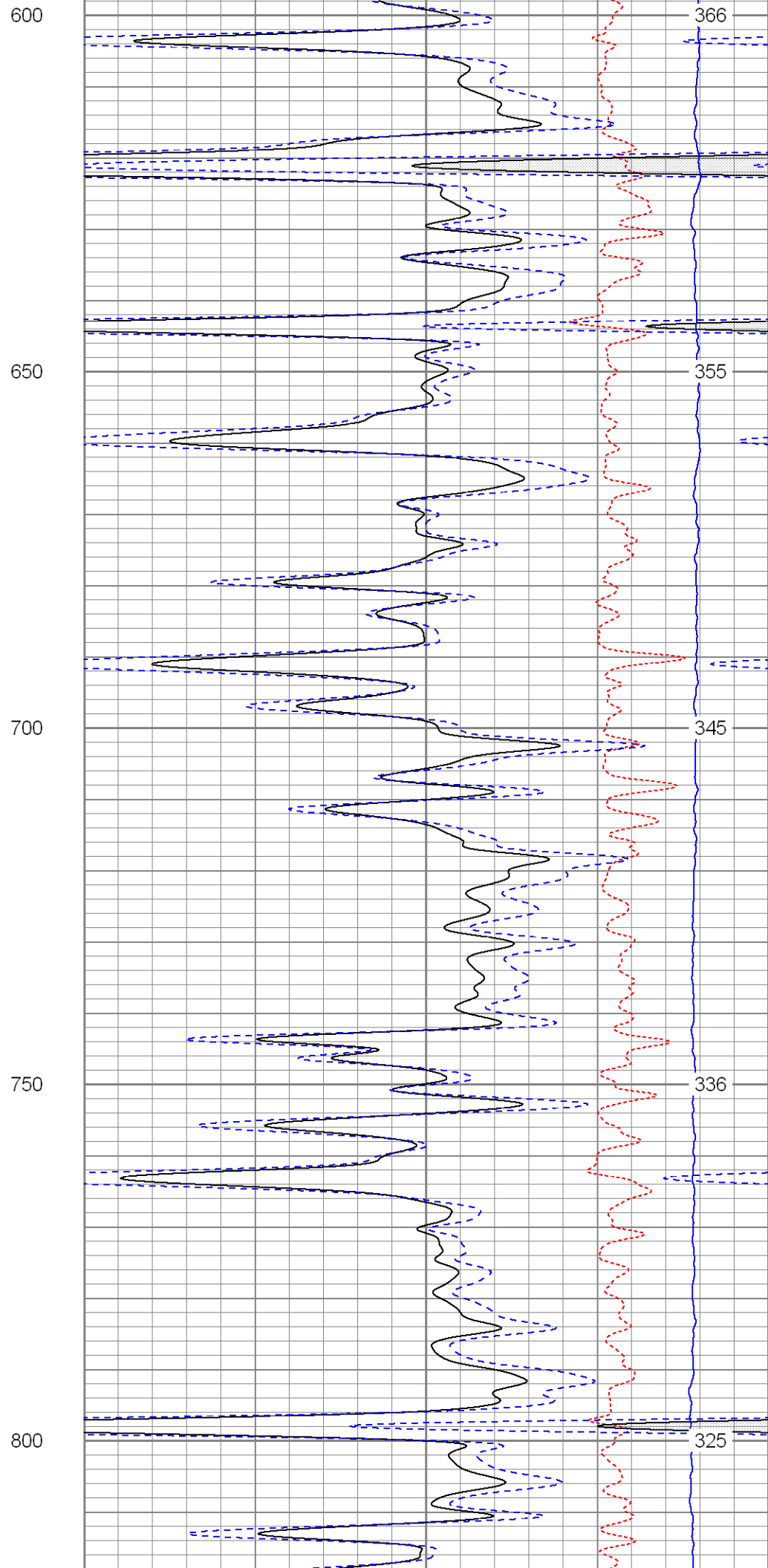
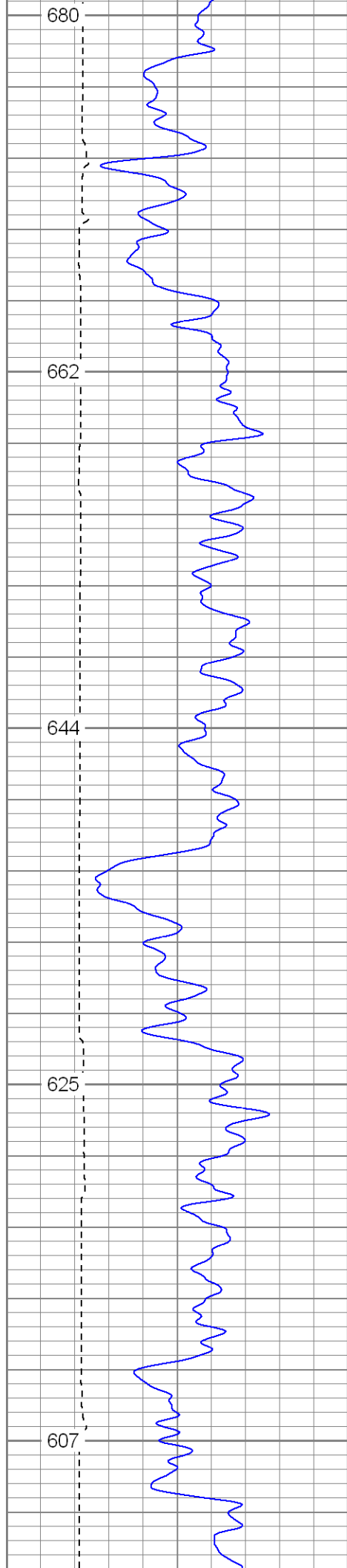
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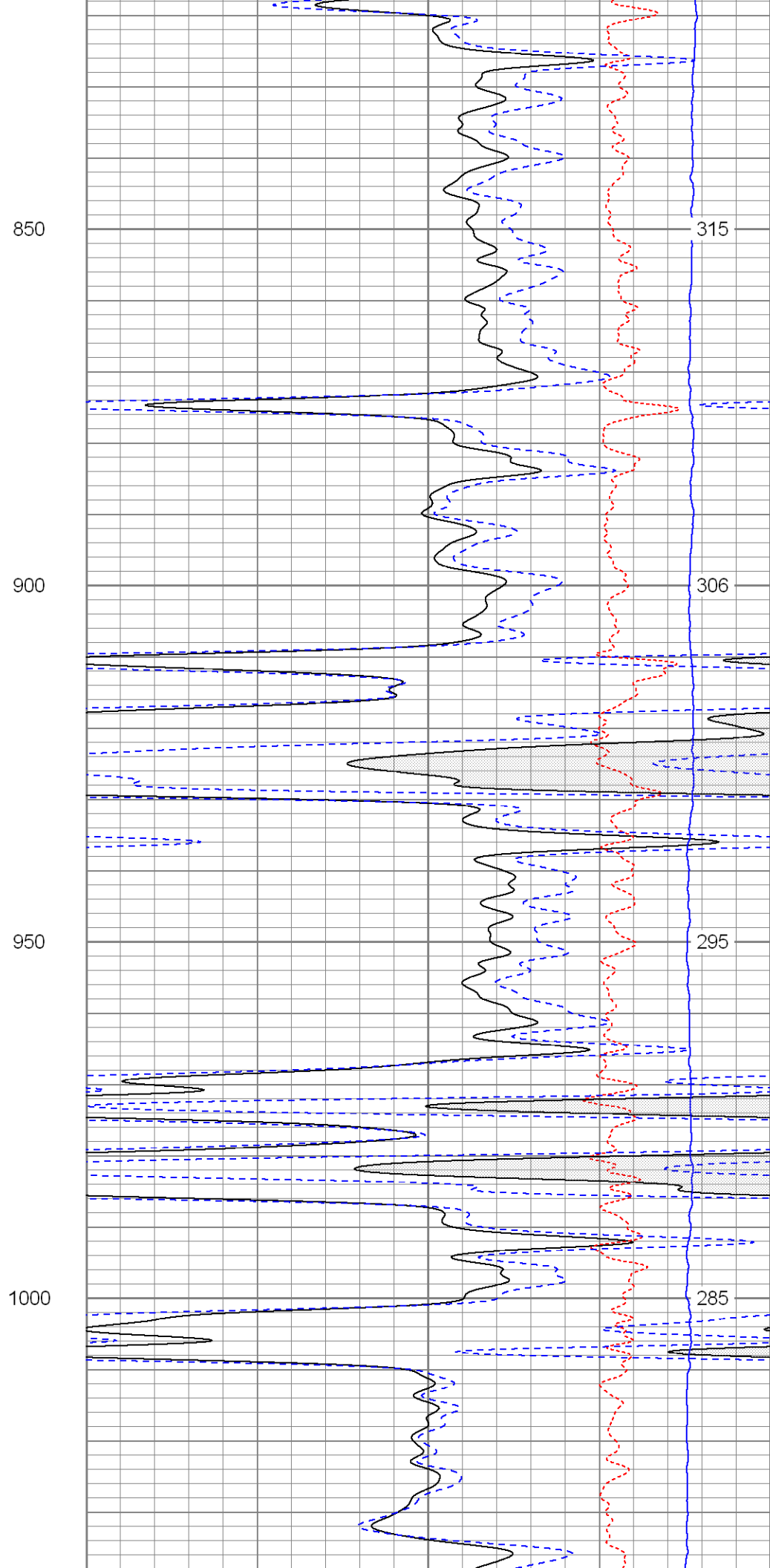
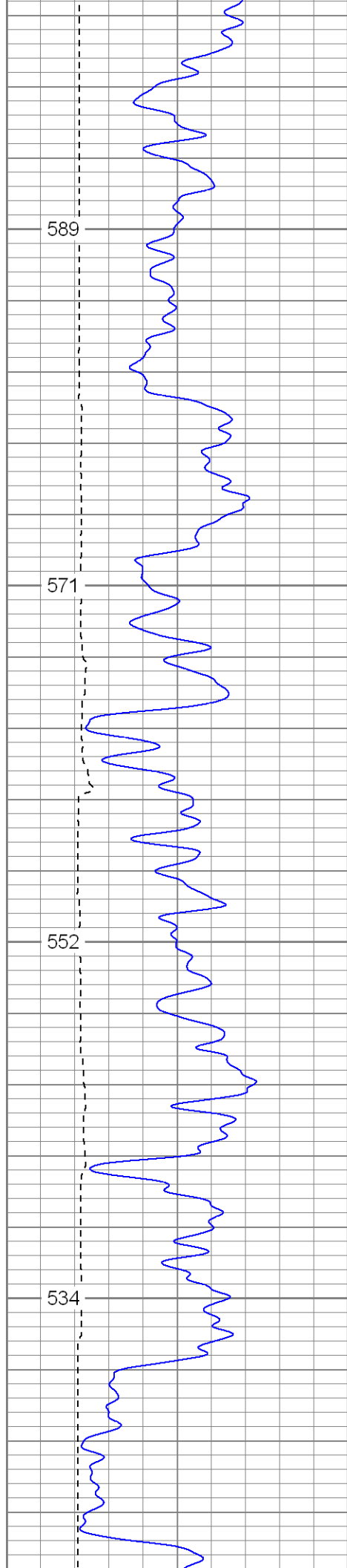
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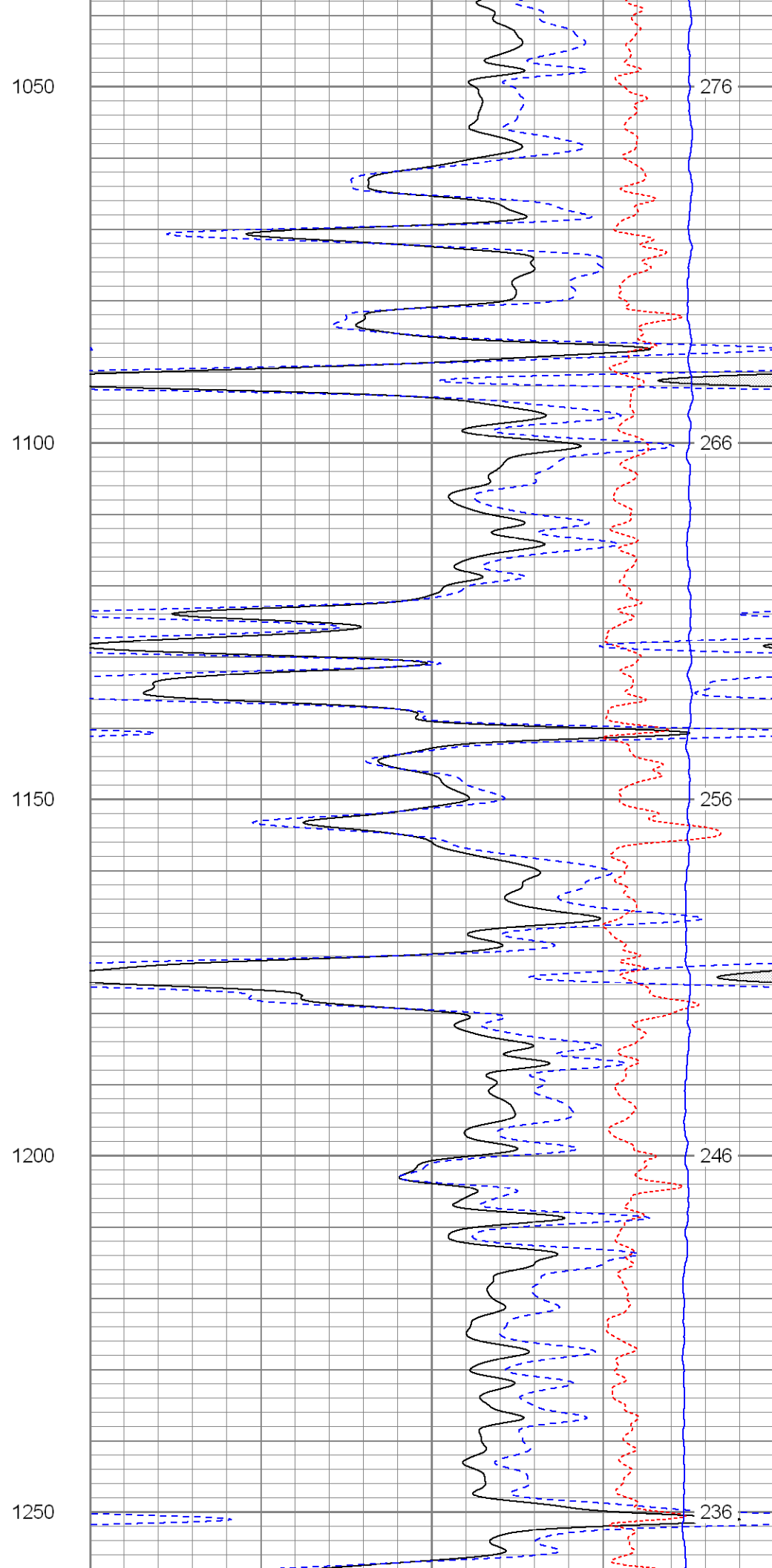
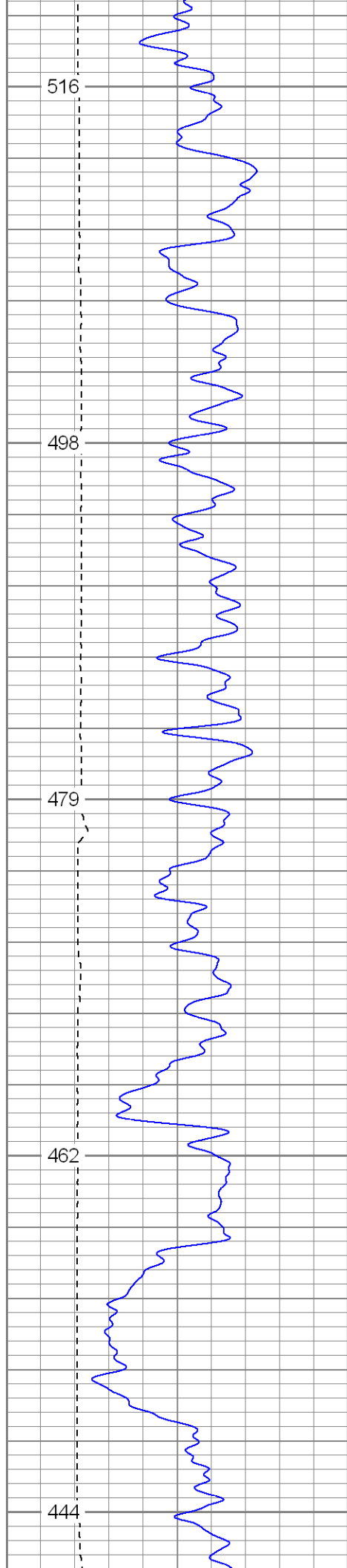
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Dataset Pathname: pass4.1  
Presentation Format: cdl  
Dataset Creation: Sat Apr 05 14:45:22 2008 by Calc Open-Cased 070814  
Charted by: Depth in Feet scaled 1:240

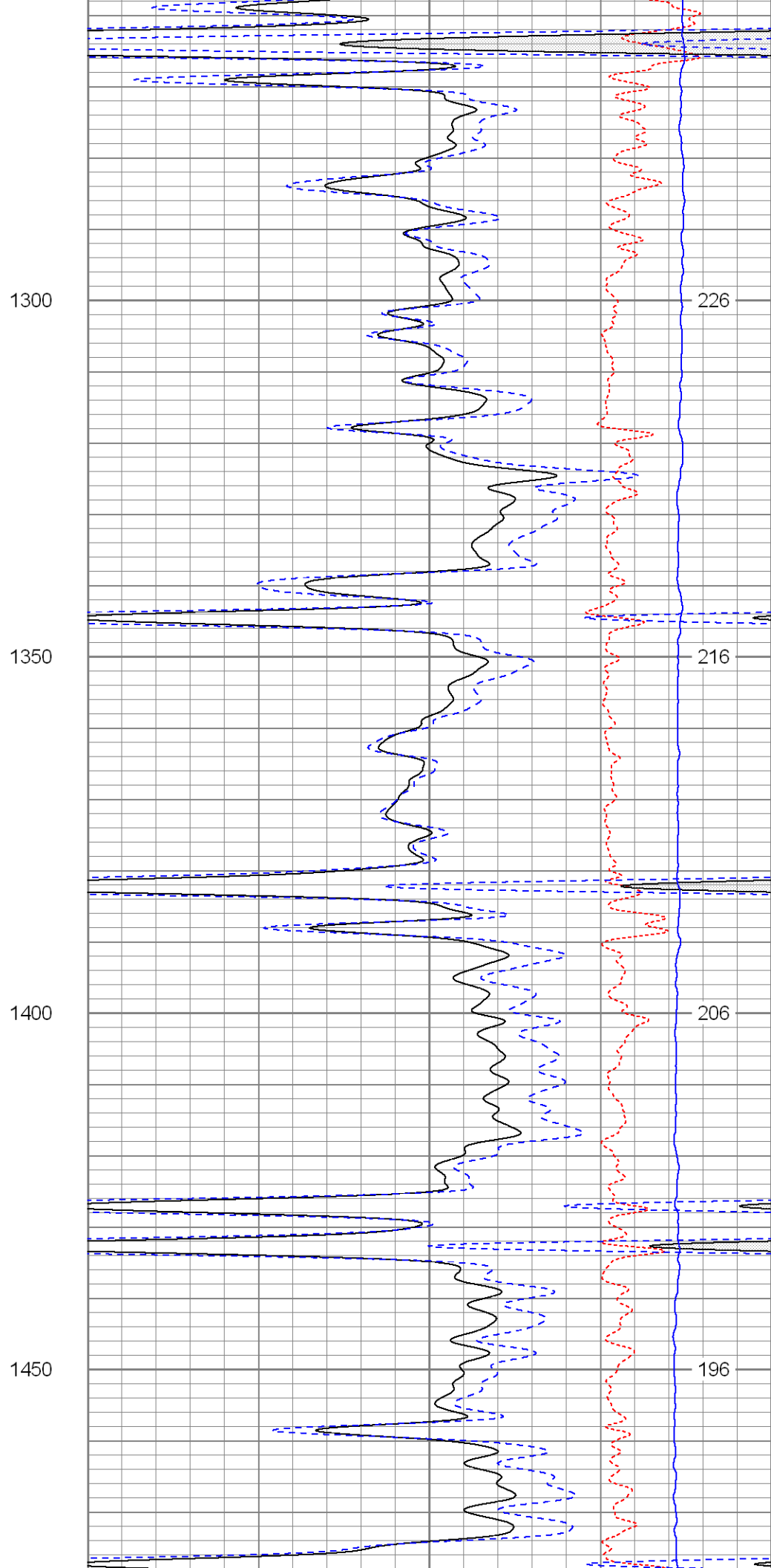
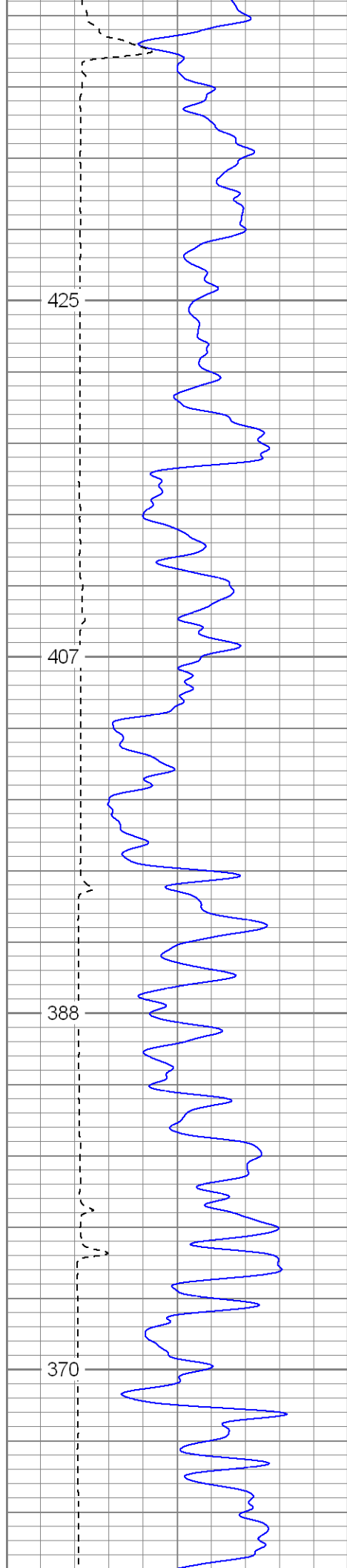
0	GR (GAPI)	200	2	RHOB (g/cc)	3
6	DCAL (in)	16	1	RHOB (g/cc)	2
TBHV (ft3)			30	DPOR (pu)	-10
			-0.5 RHOC (g/cc) 0.5		
			4000 LTEN (lb) 0		
			ABHV (ft3)		

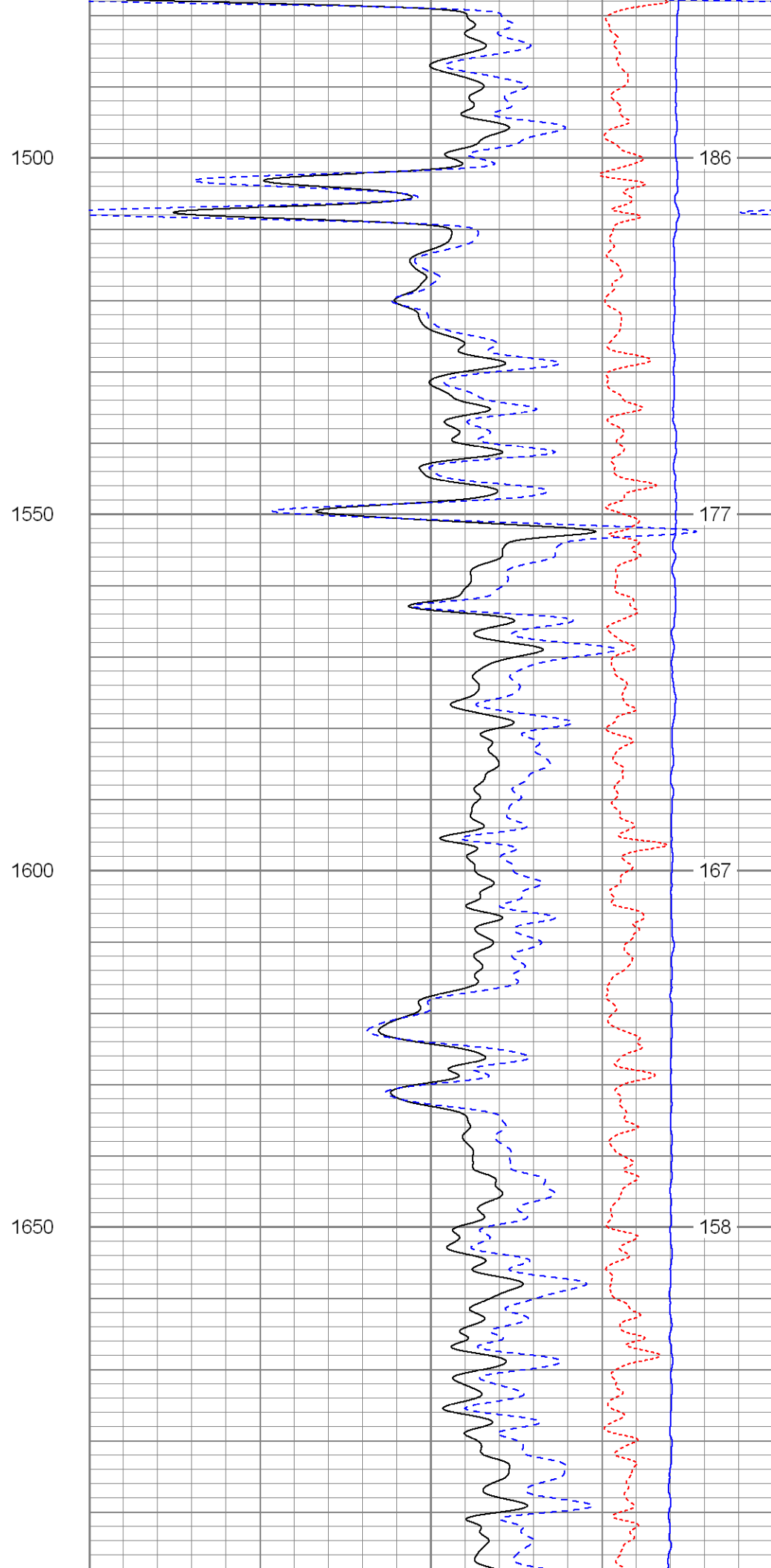
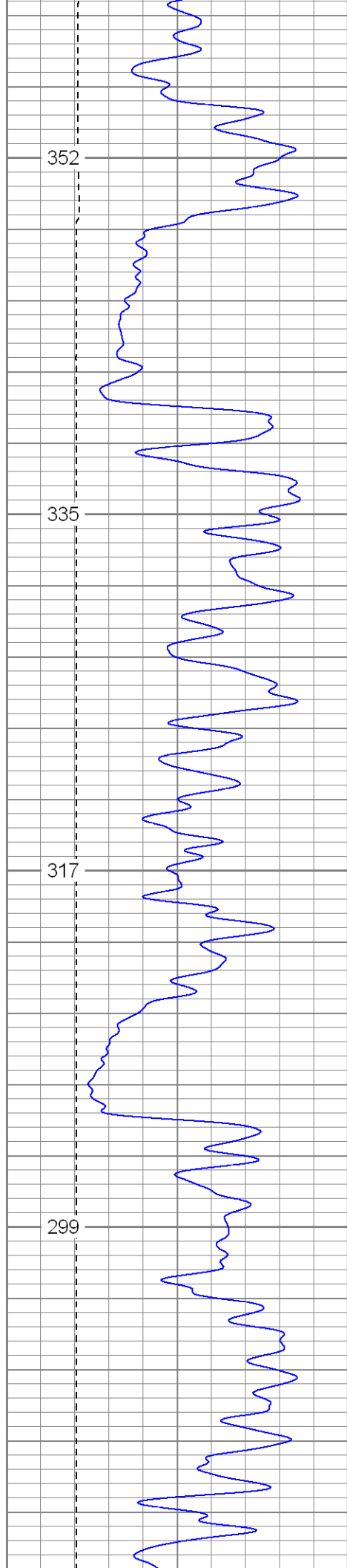


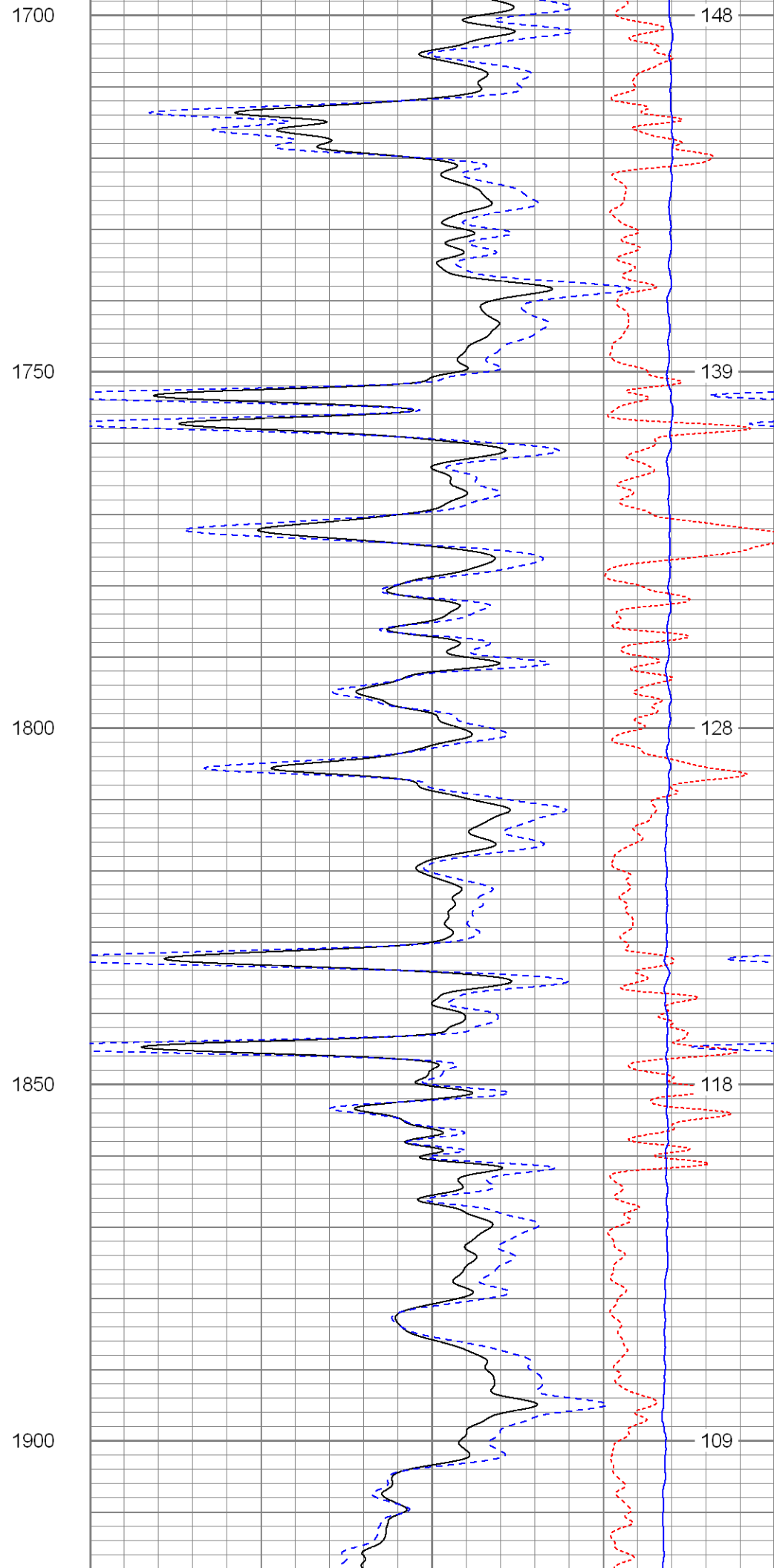
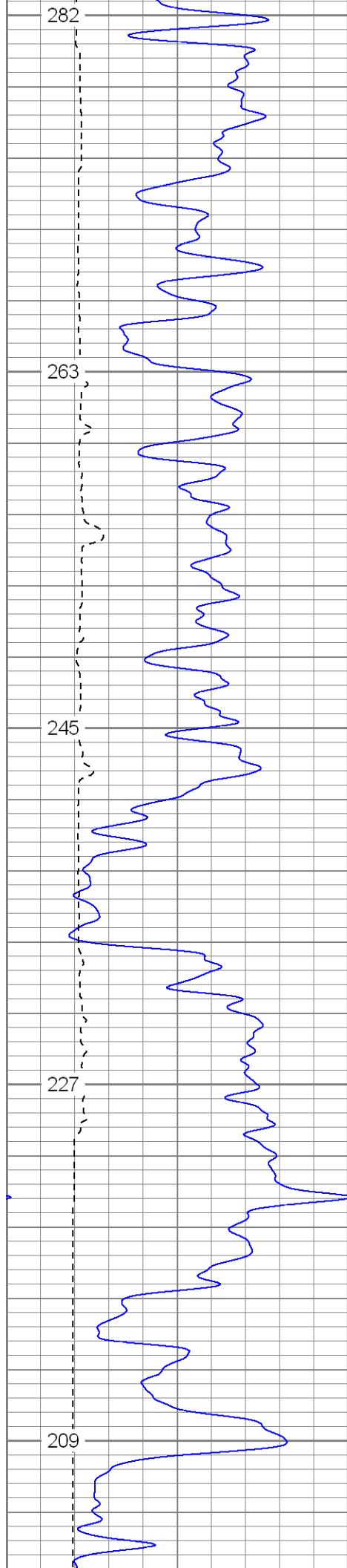




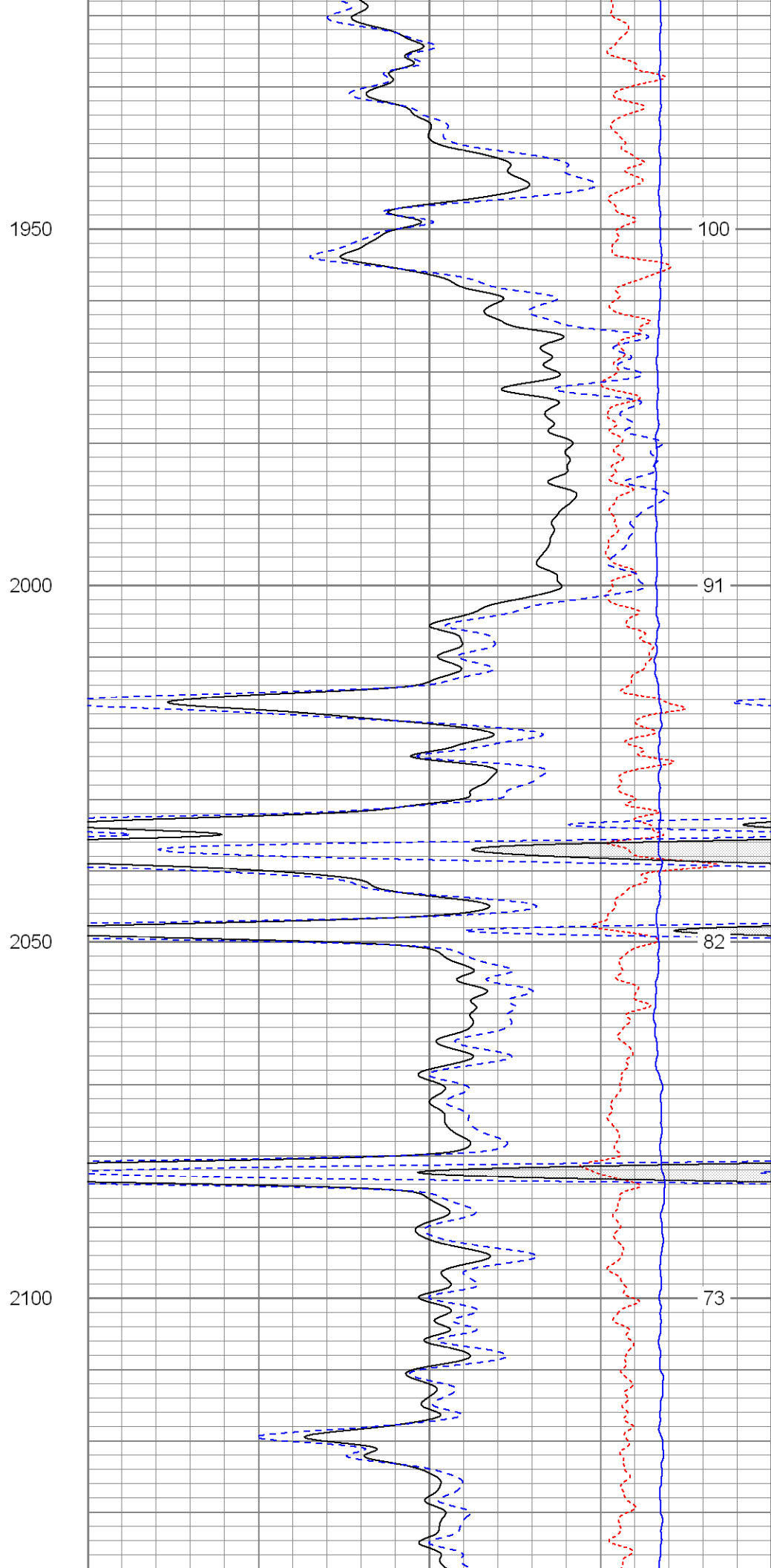
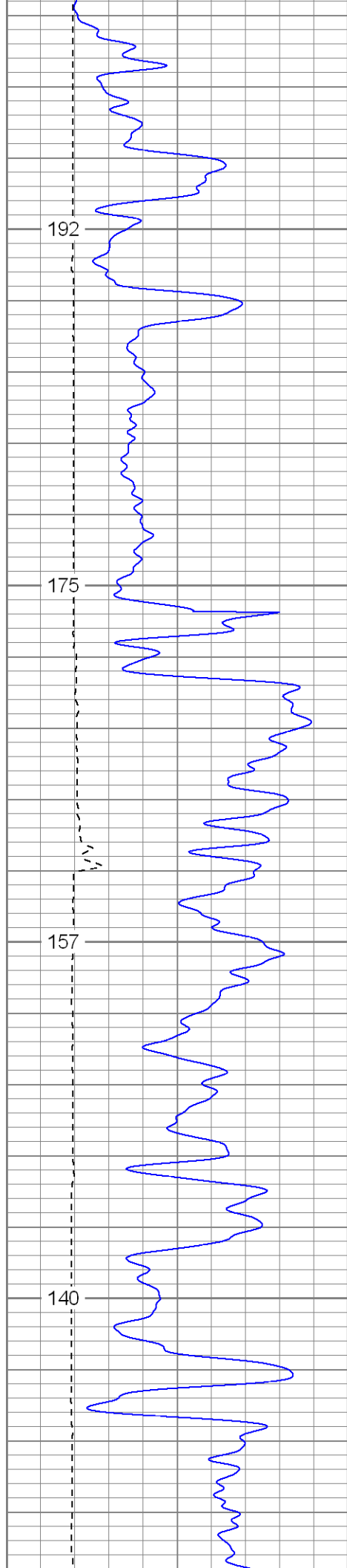


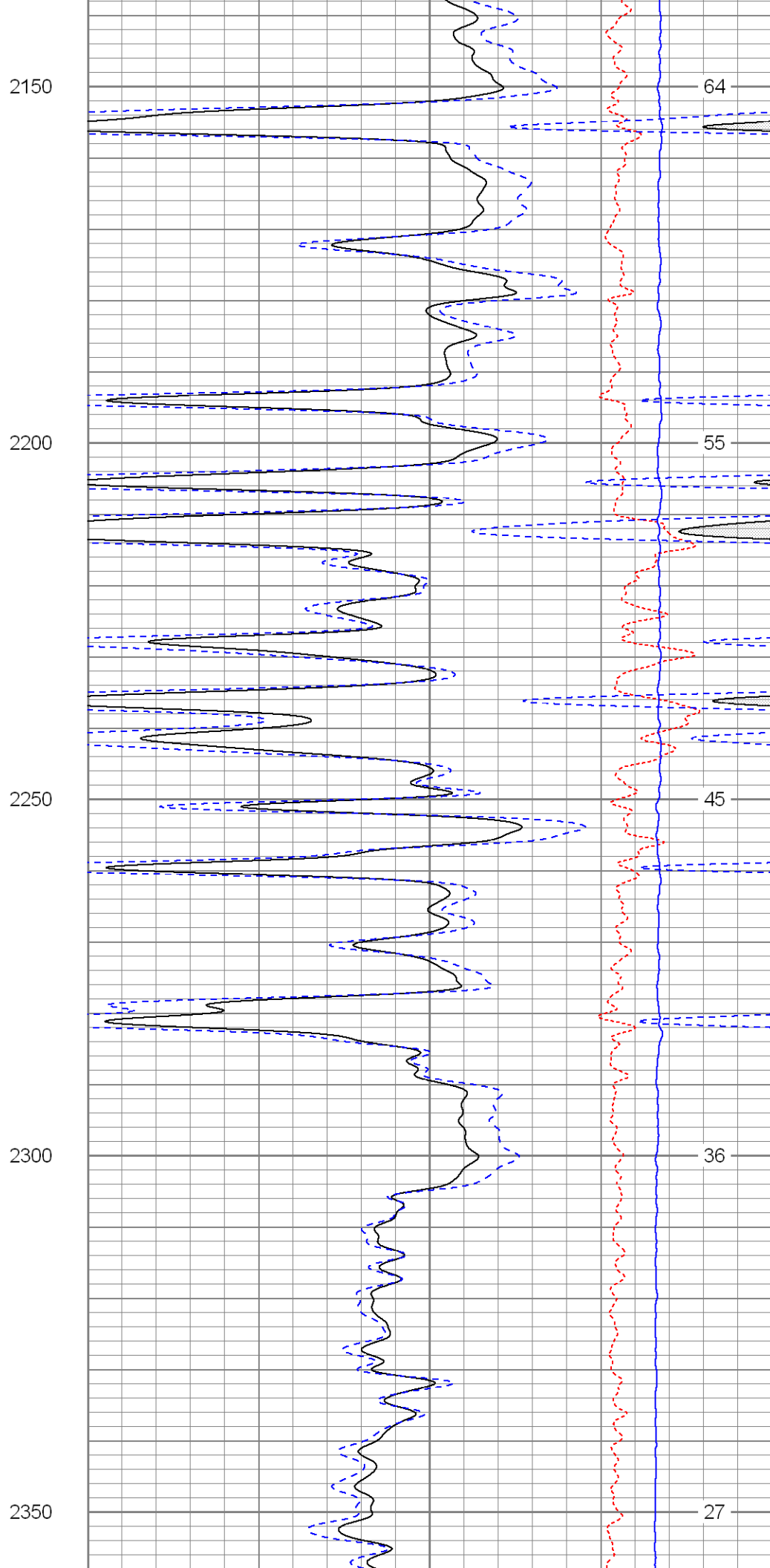
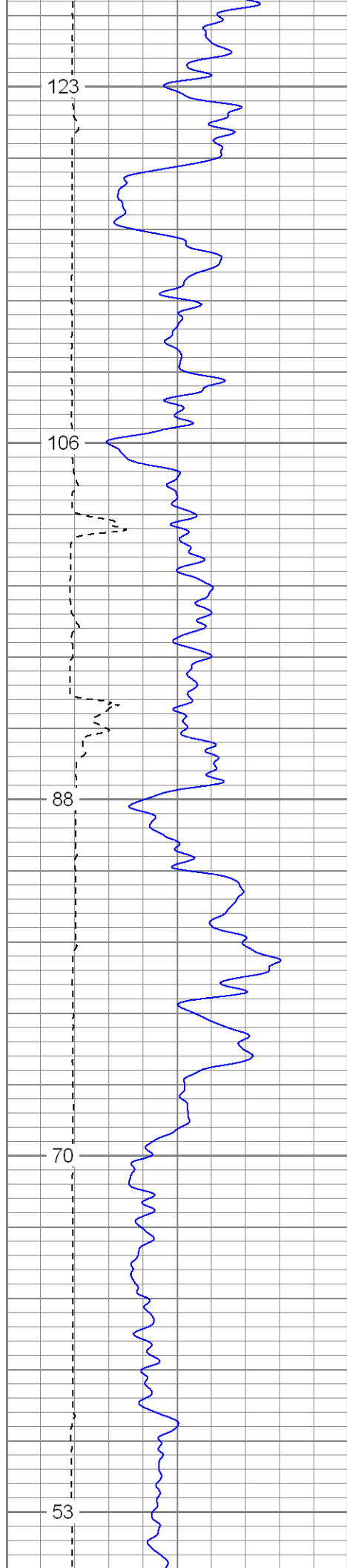


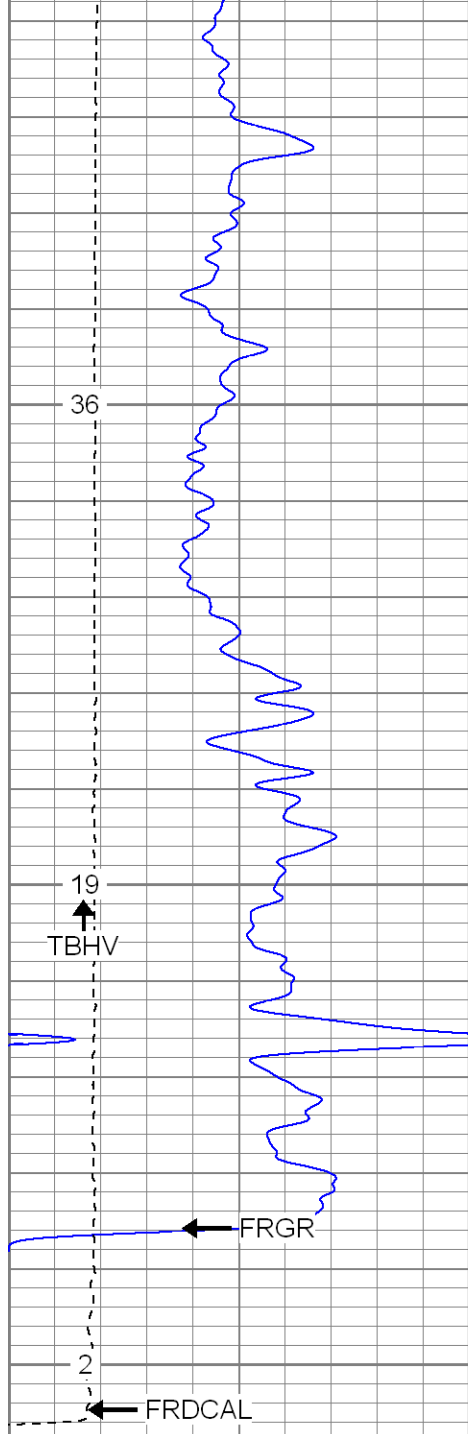




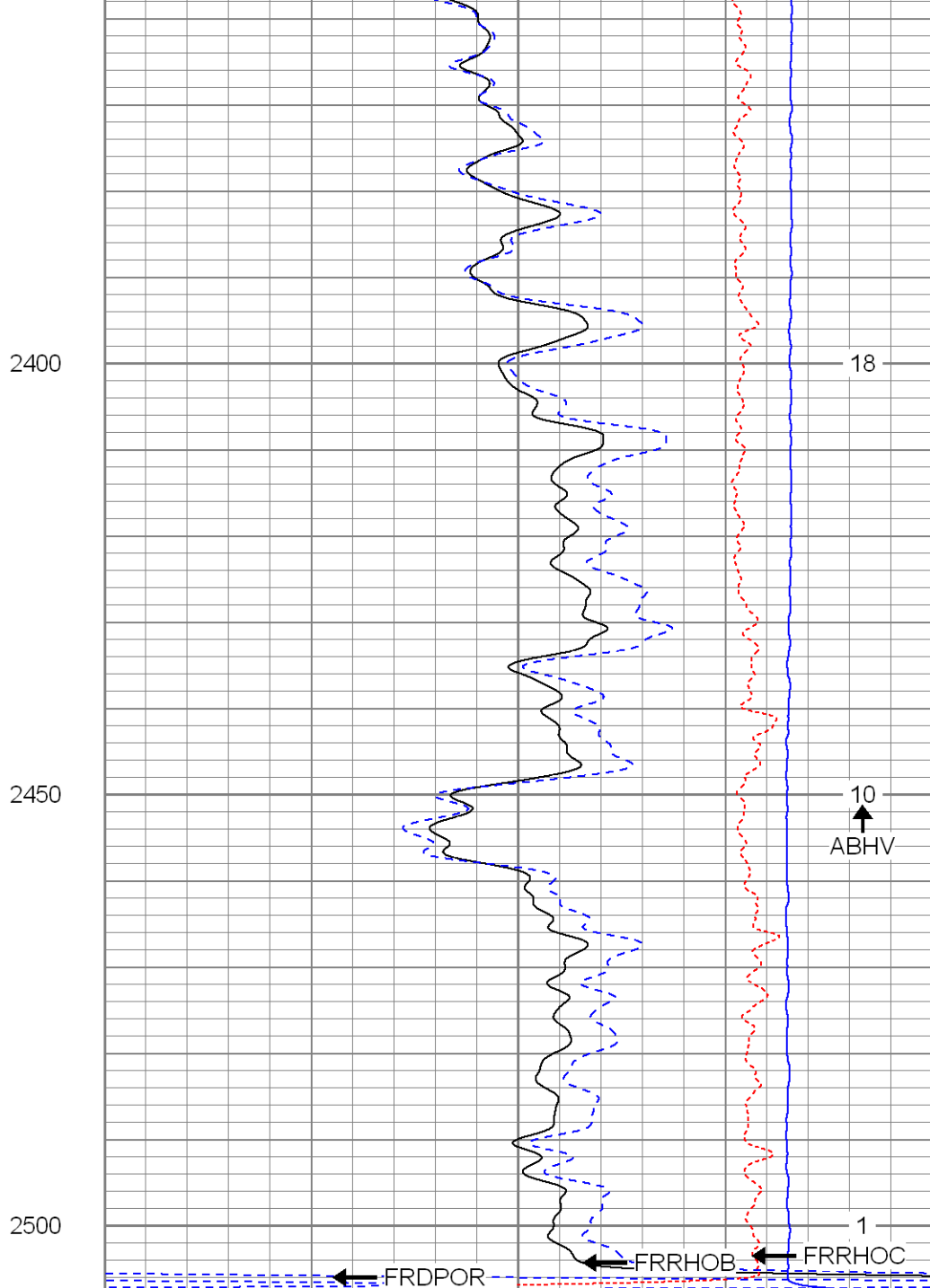








0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		



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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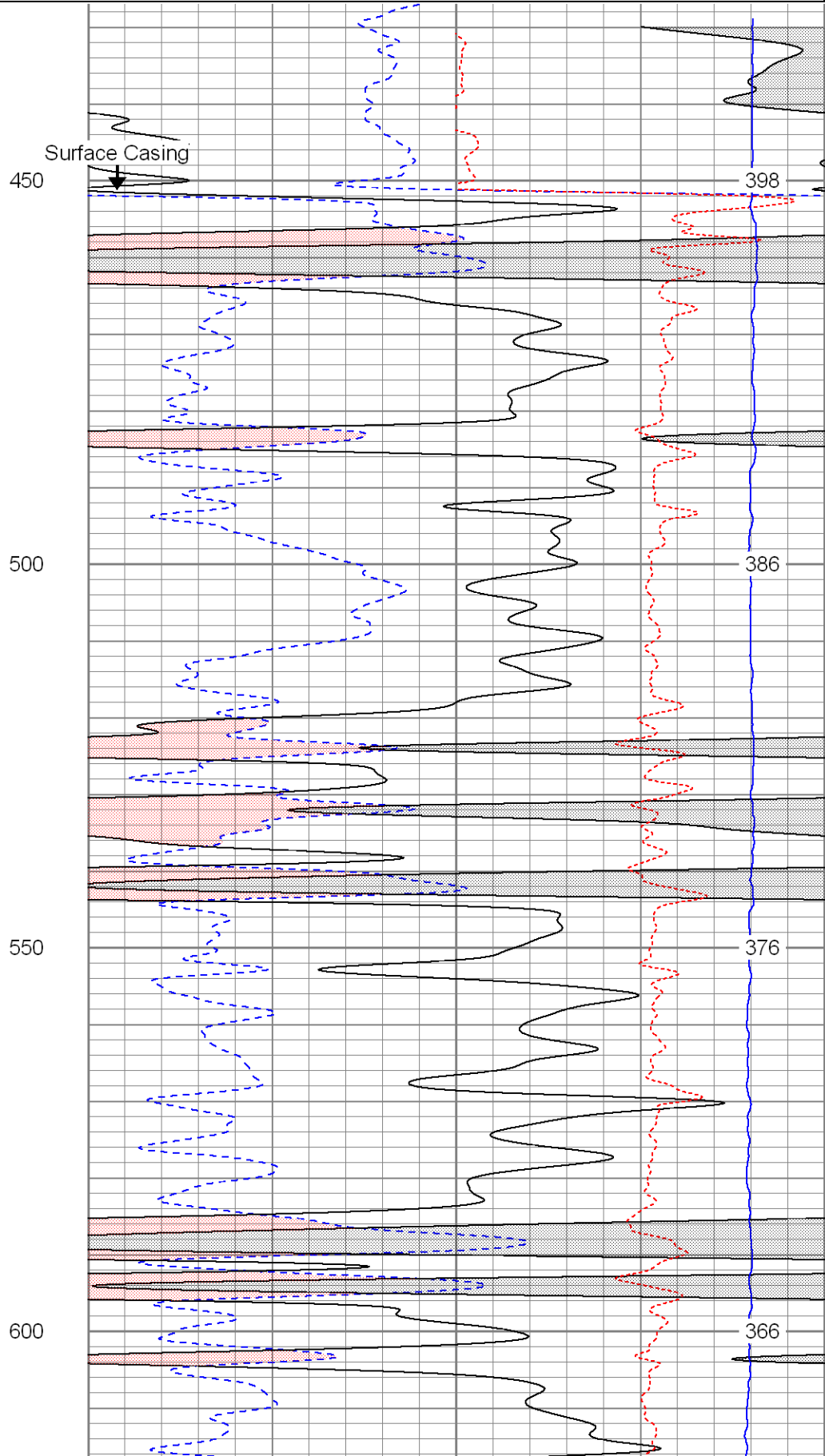
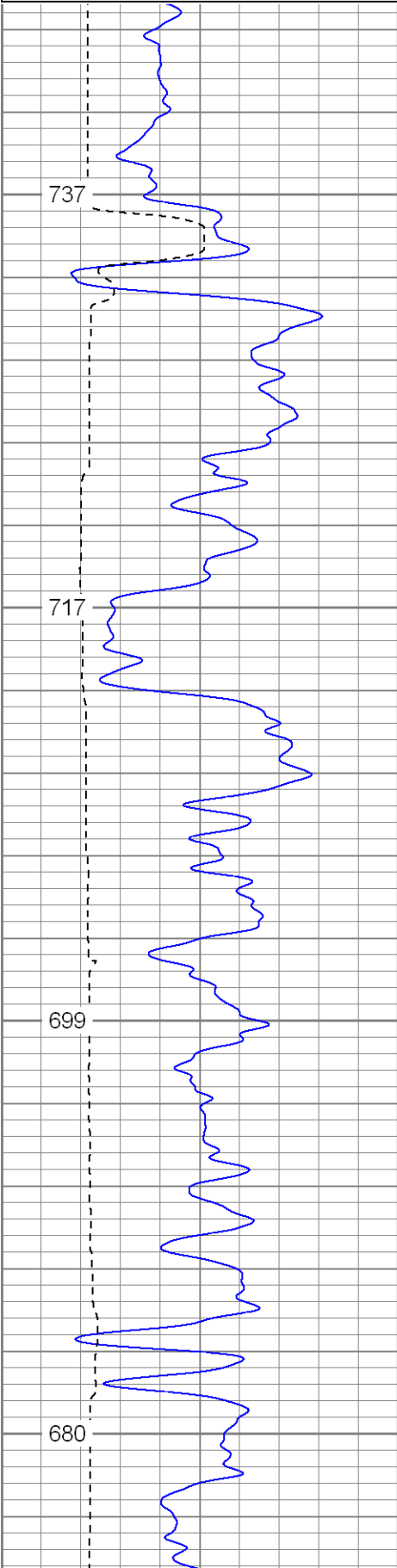
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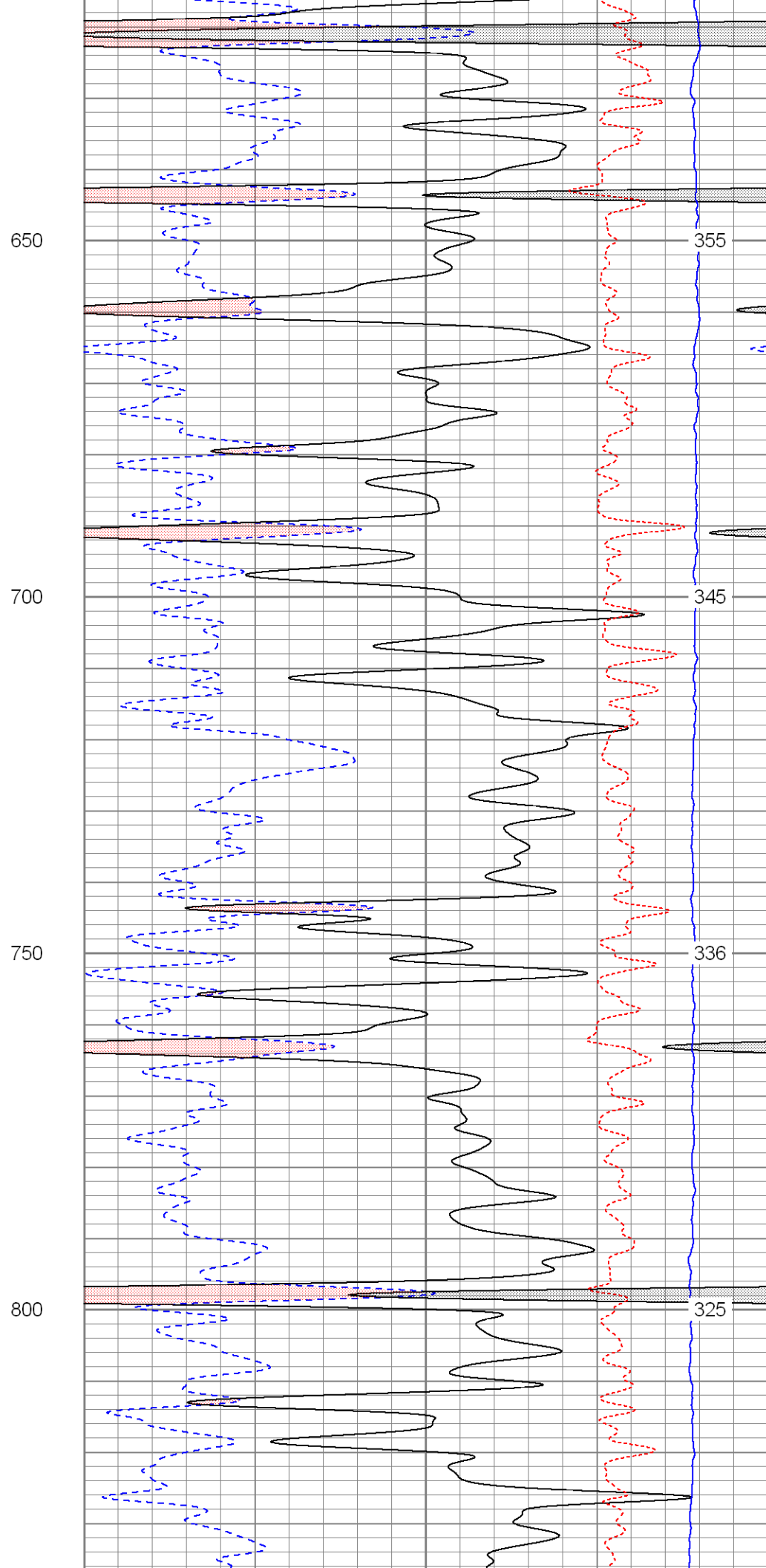
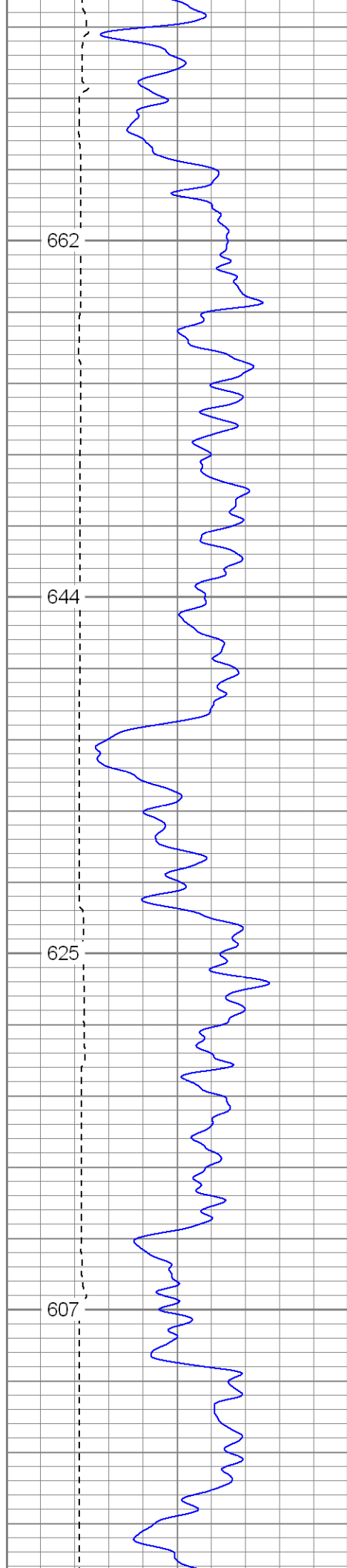
# Main Pass

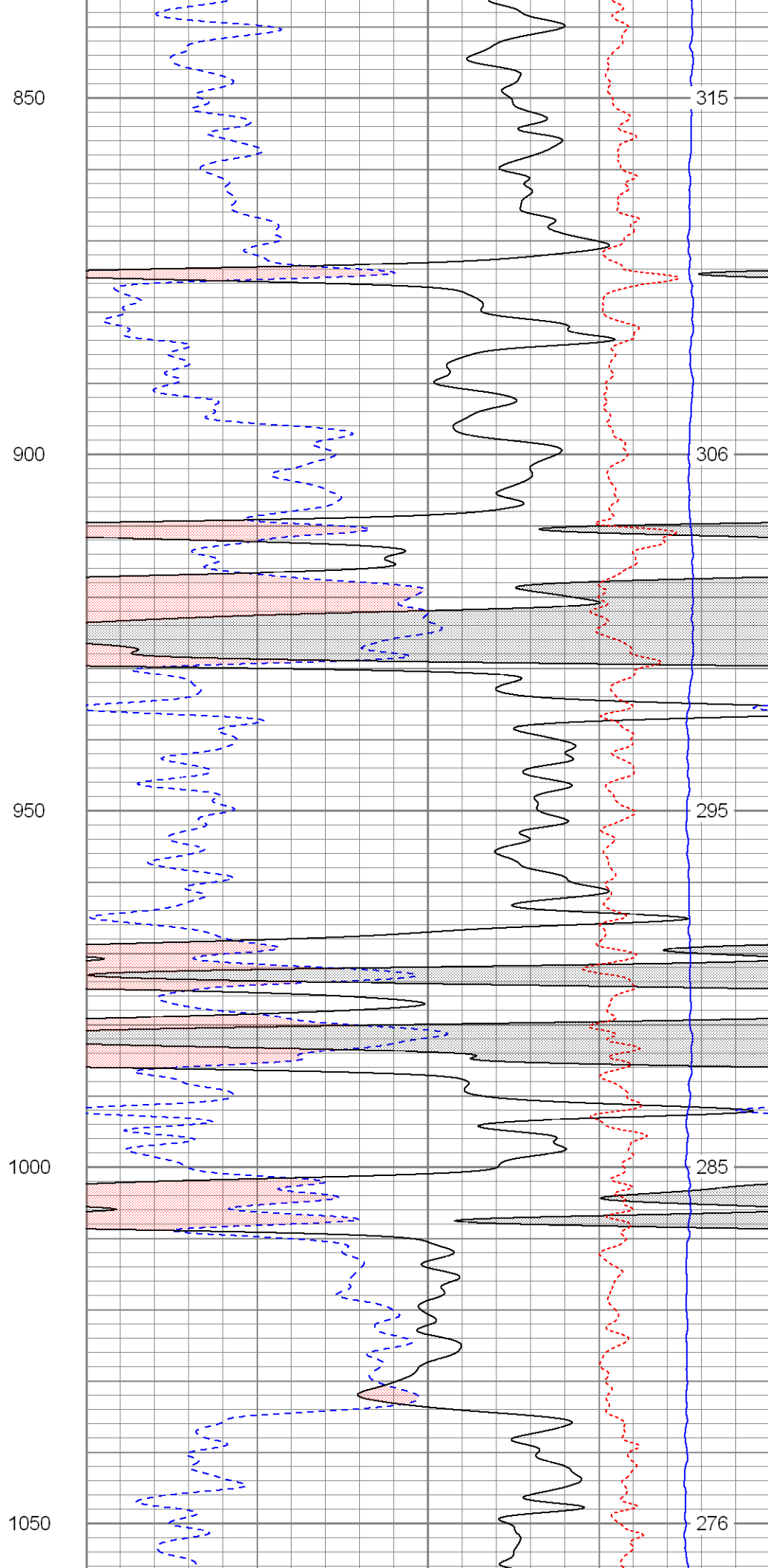
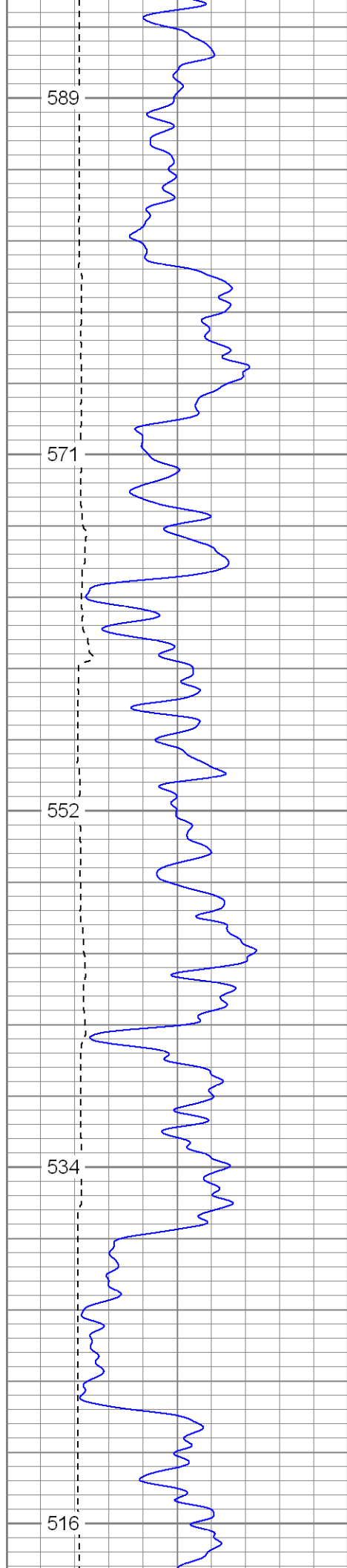
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Dataset Pathname: pass4.1  
Presentation Format: cdnl  
Dataset Creation: Sat Apr 05 14:45:22 2008 by Calc Open-Cased 070814

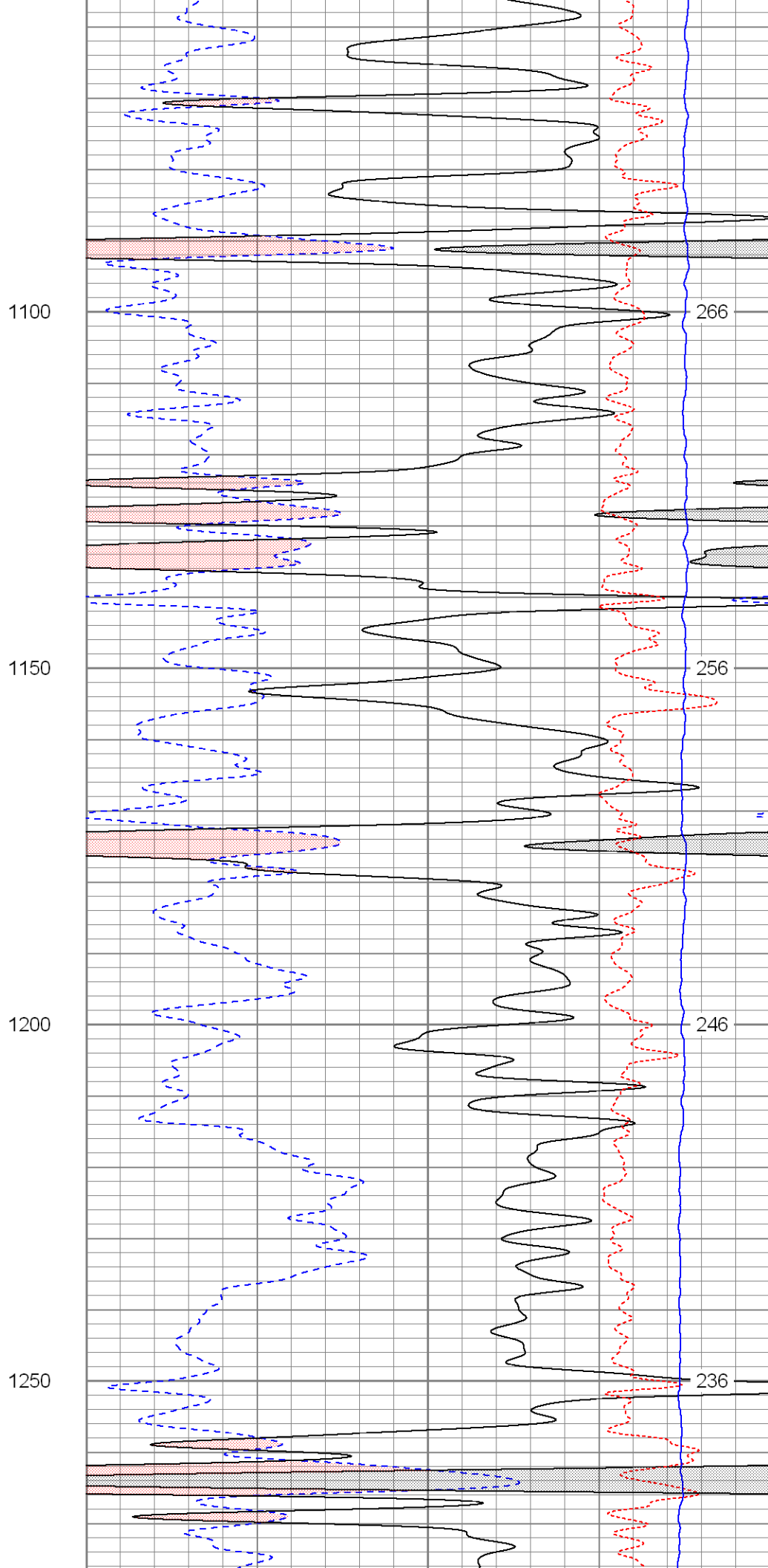
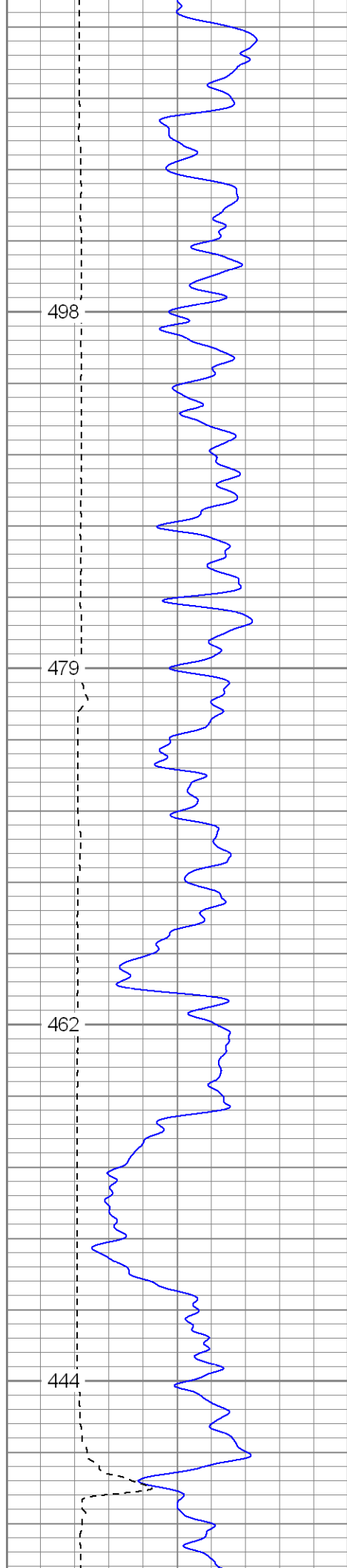
0	GR (GAPI)	200
6	DCAL (in)	16
TBHV (ft3)		

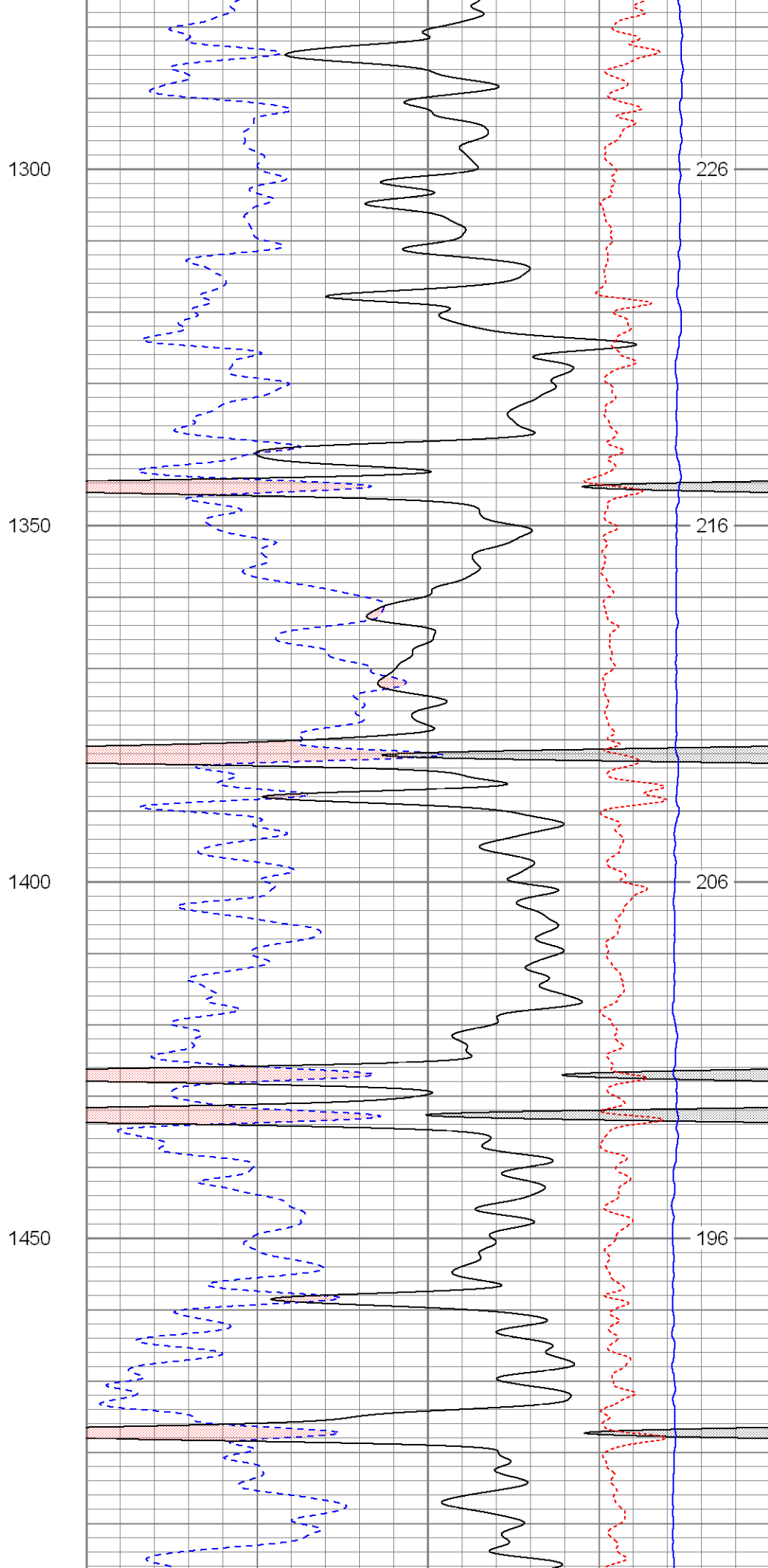
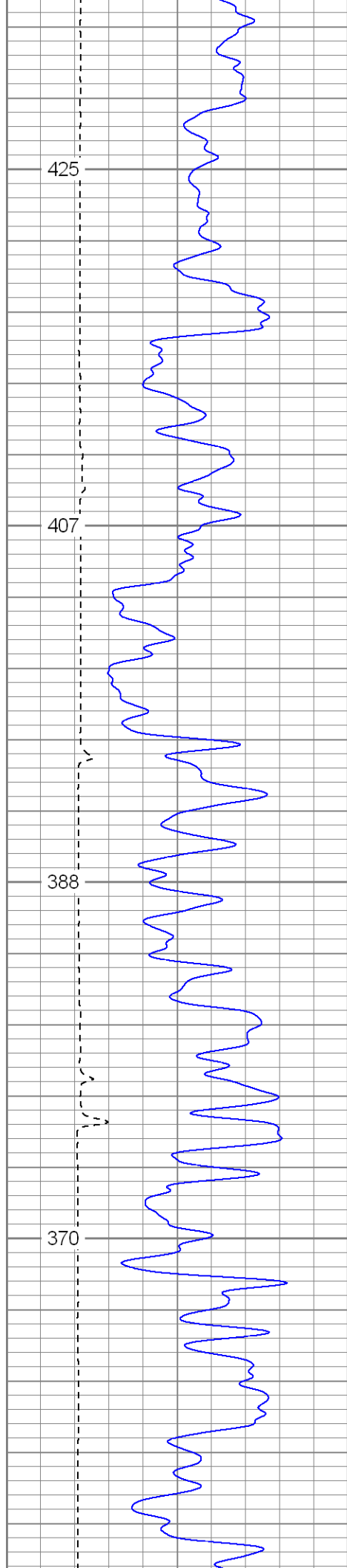
30	NPOR (pu)	-10
30	DPOR (pu)	-10
-0.5	RHOC (g/cc)	0.5
4000	LTEN (lb)	0
ABHV (ft3)		



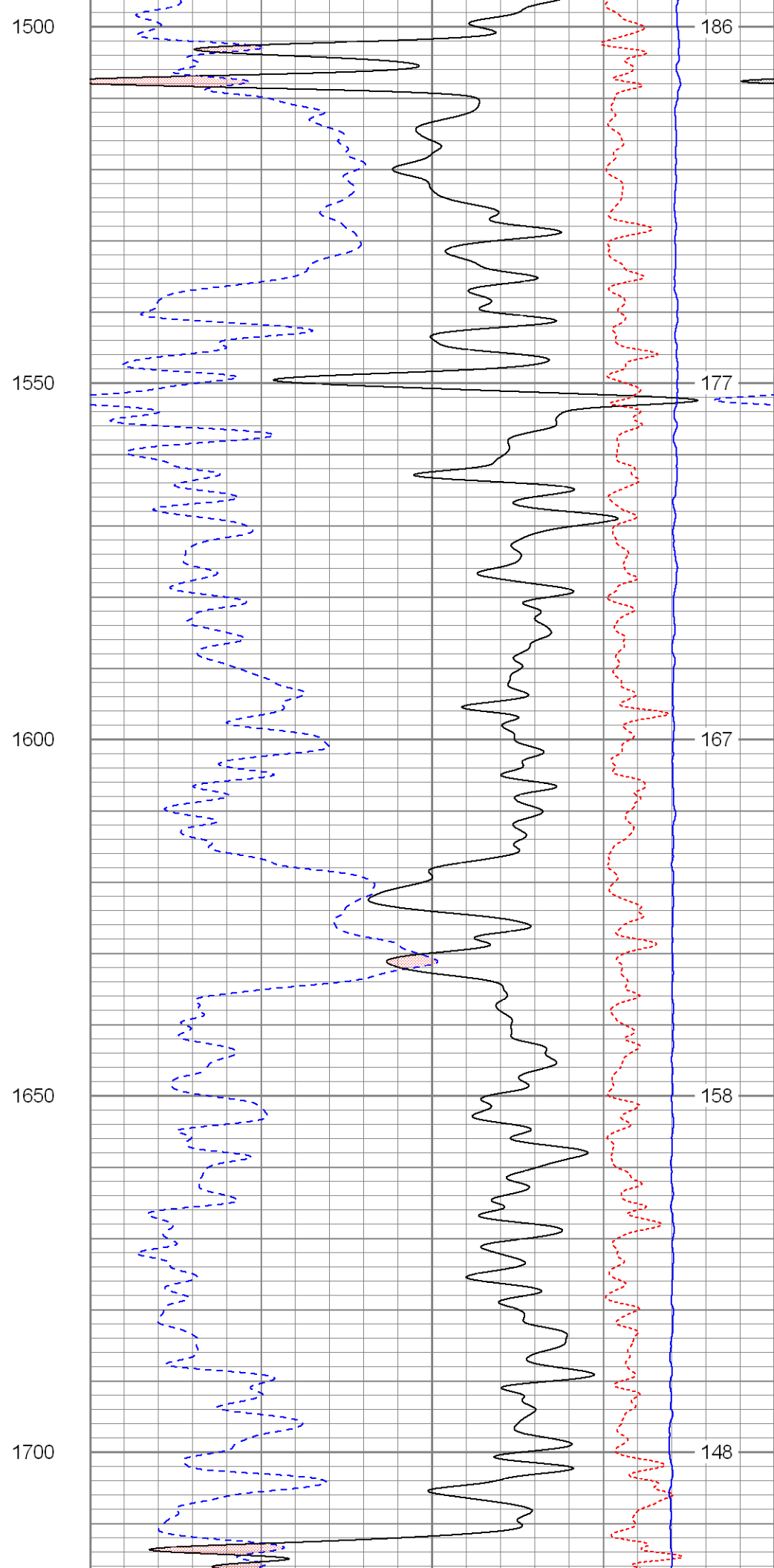
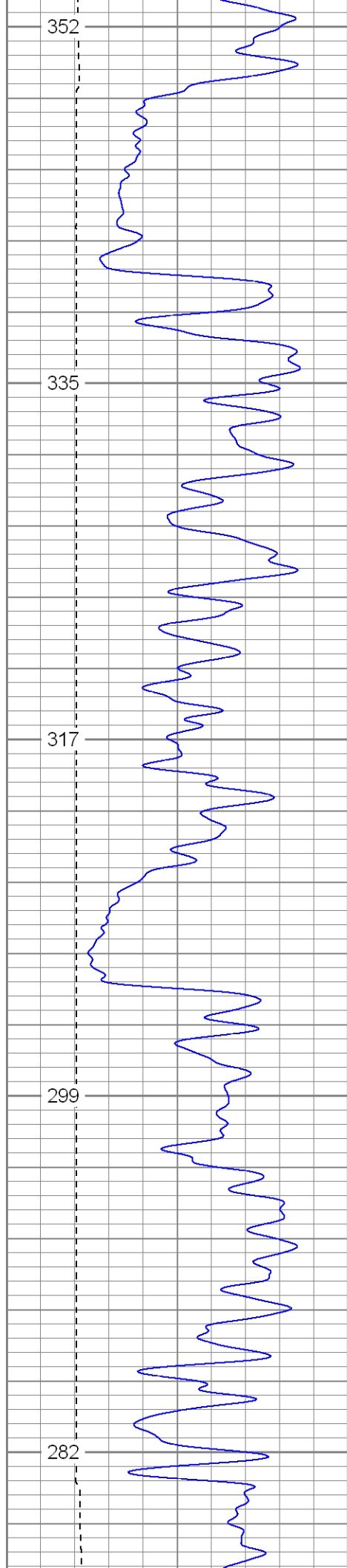


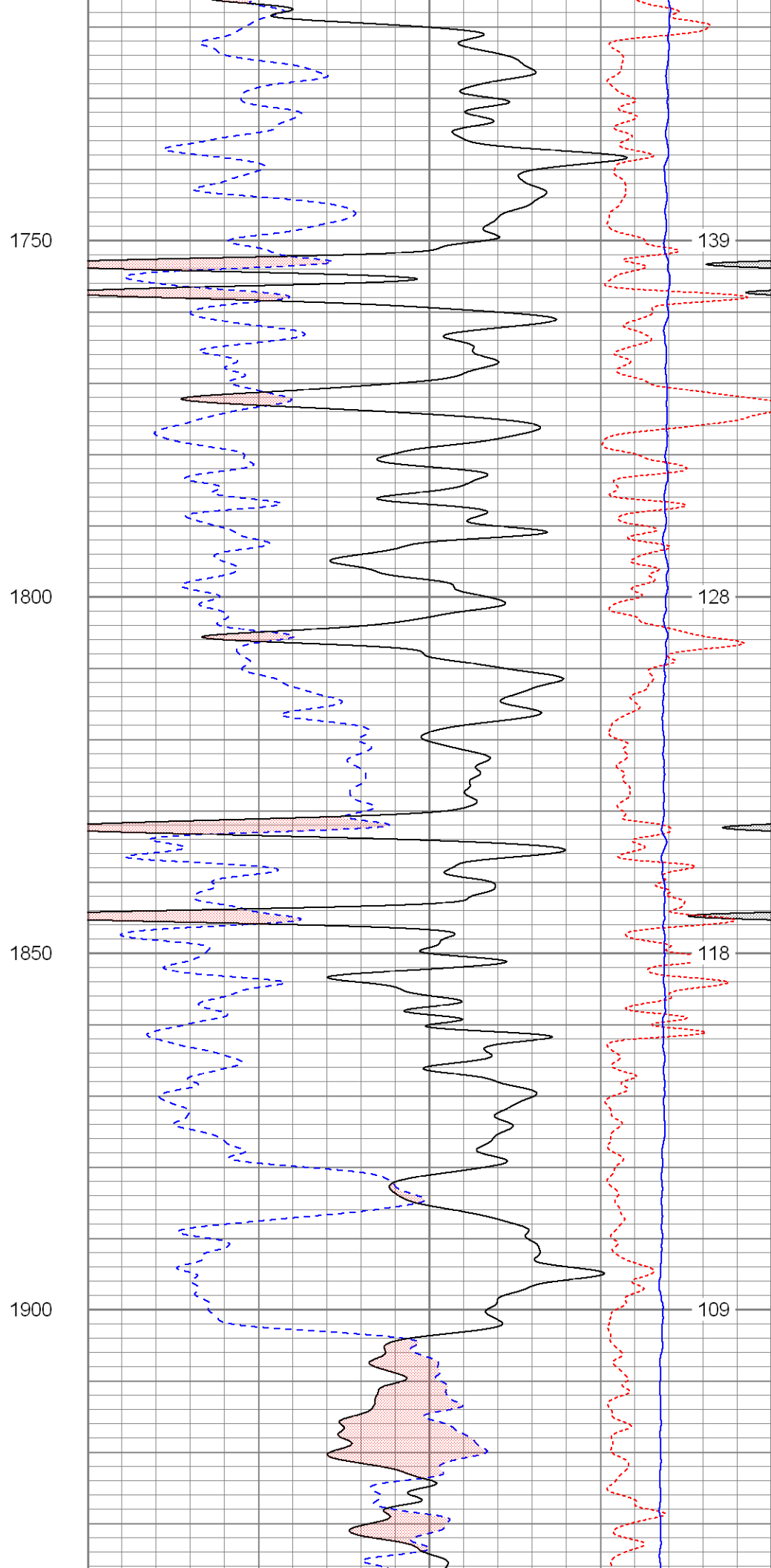
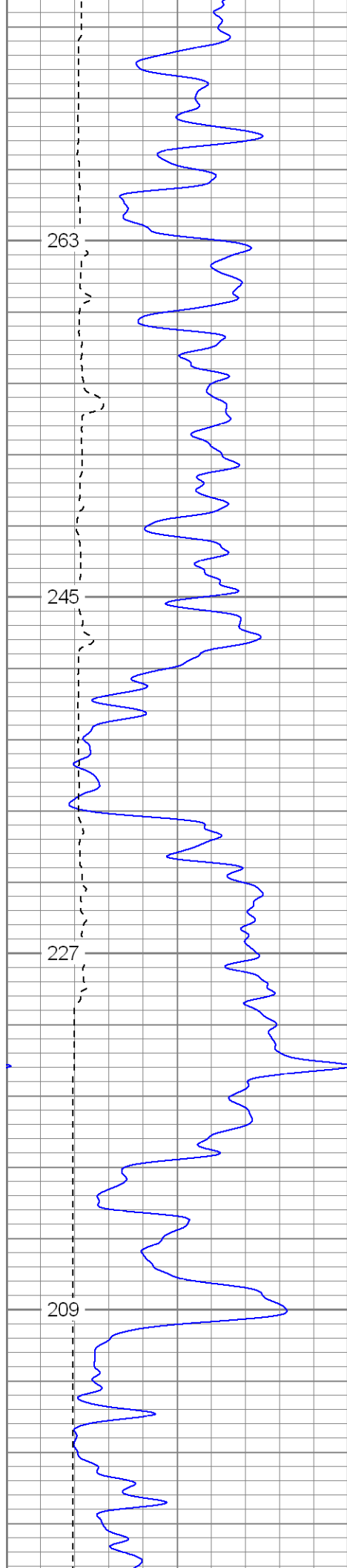


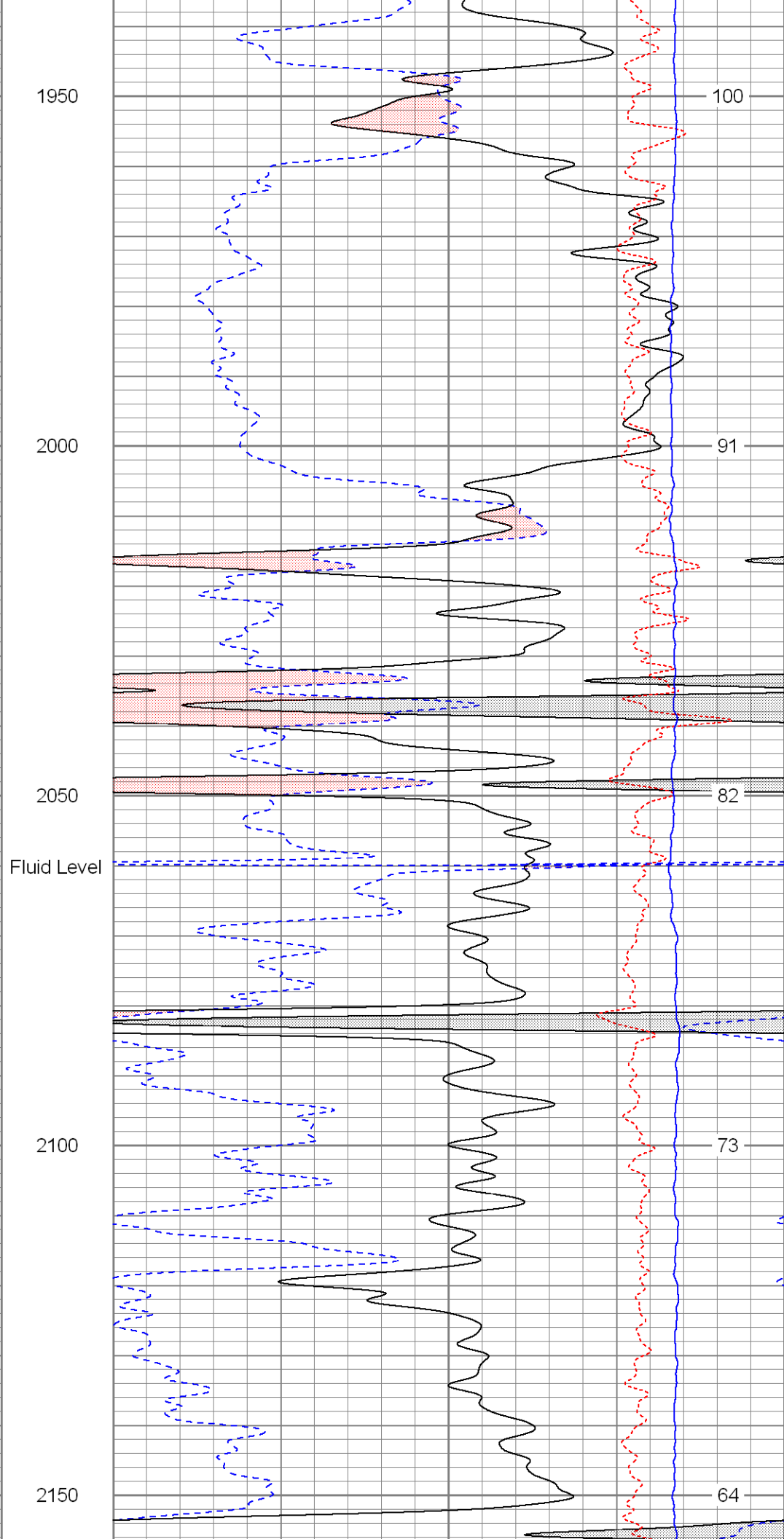
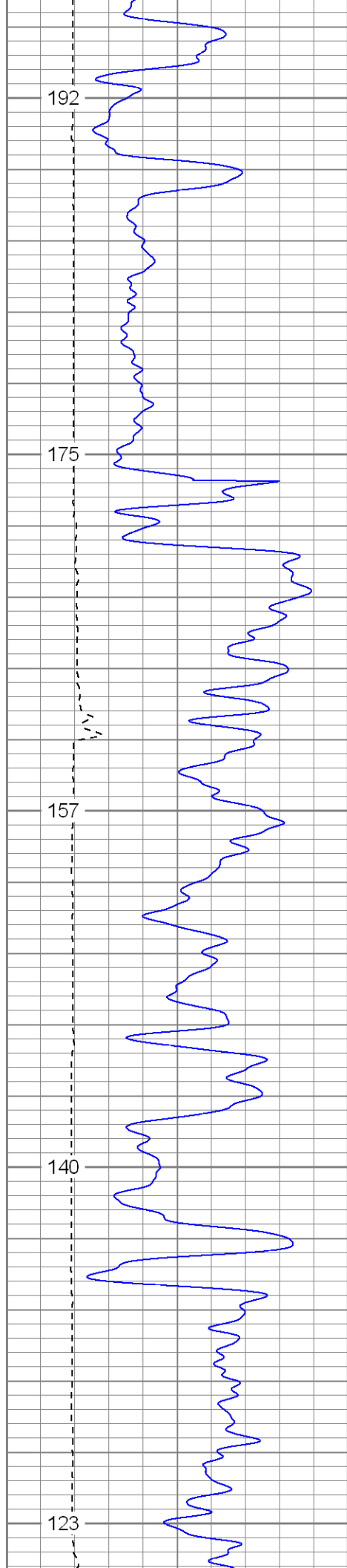


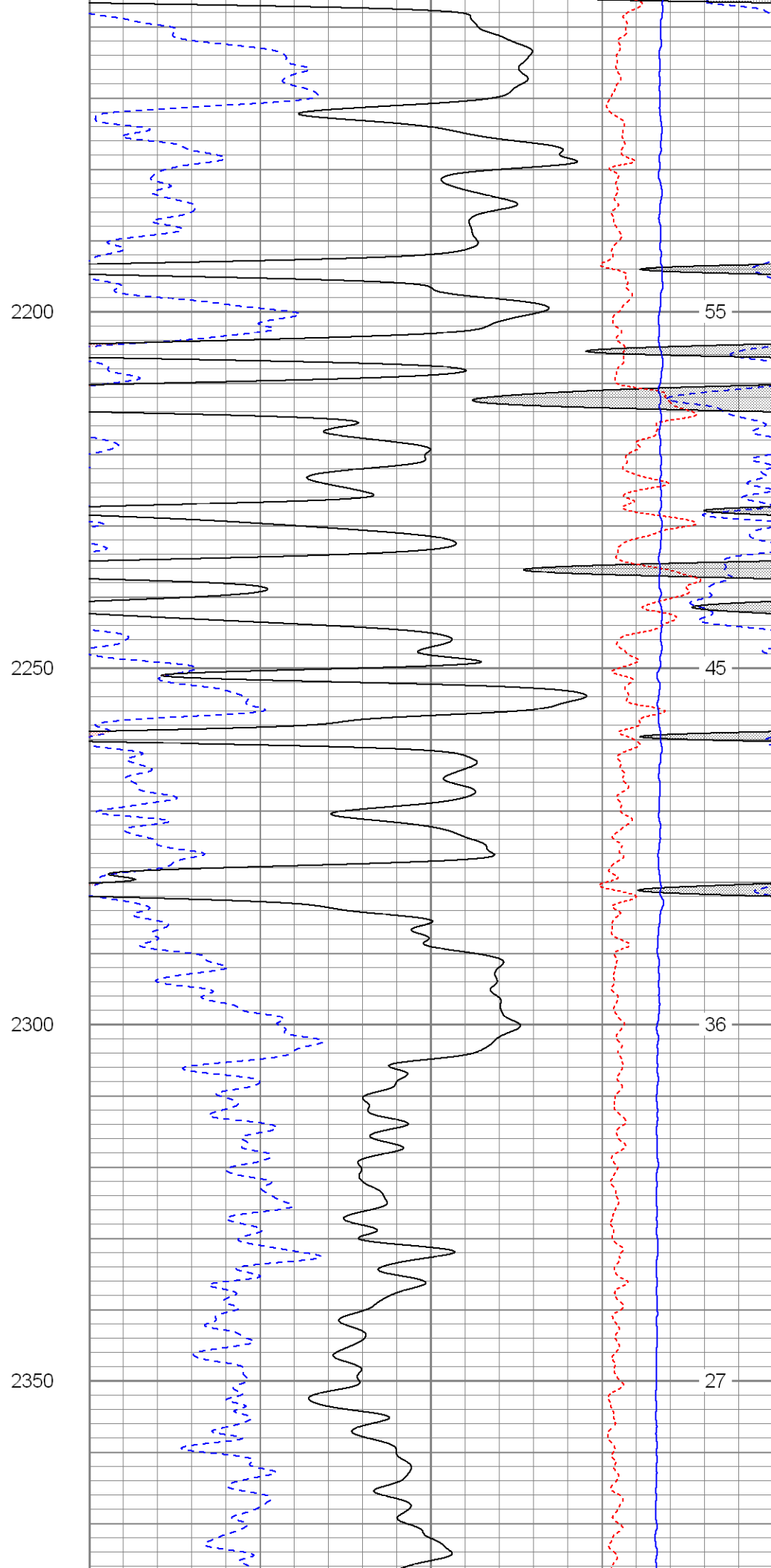
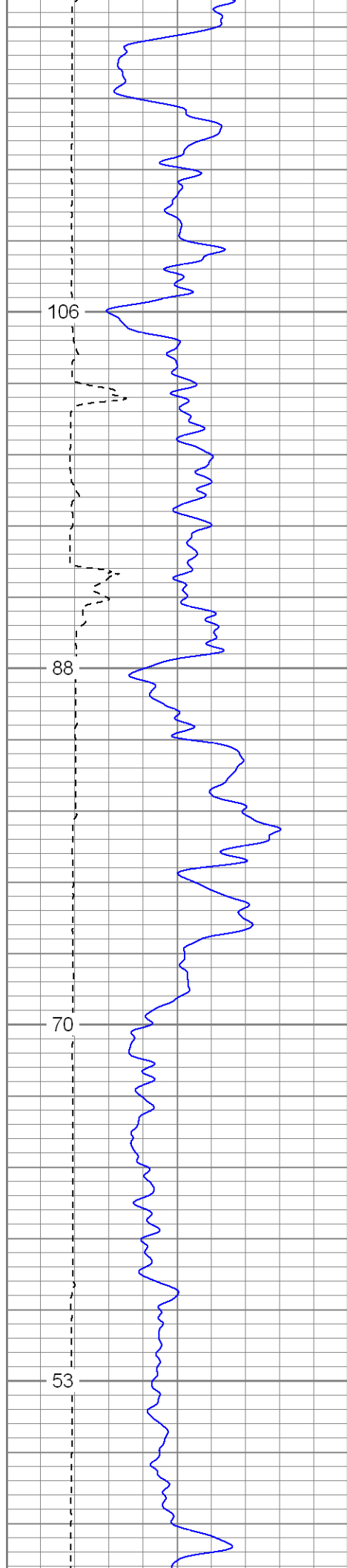


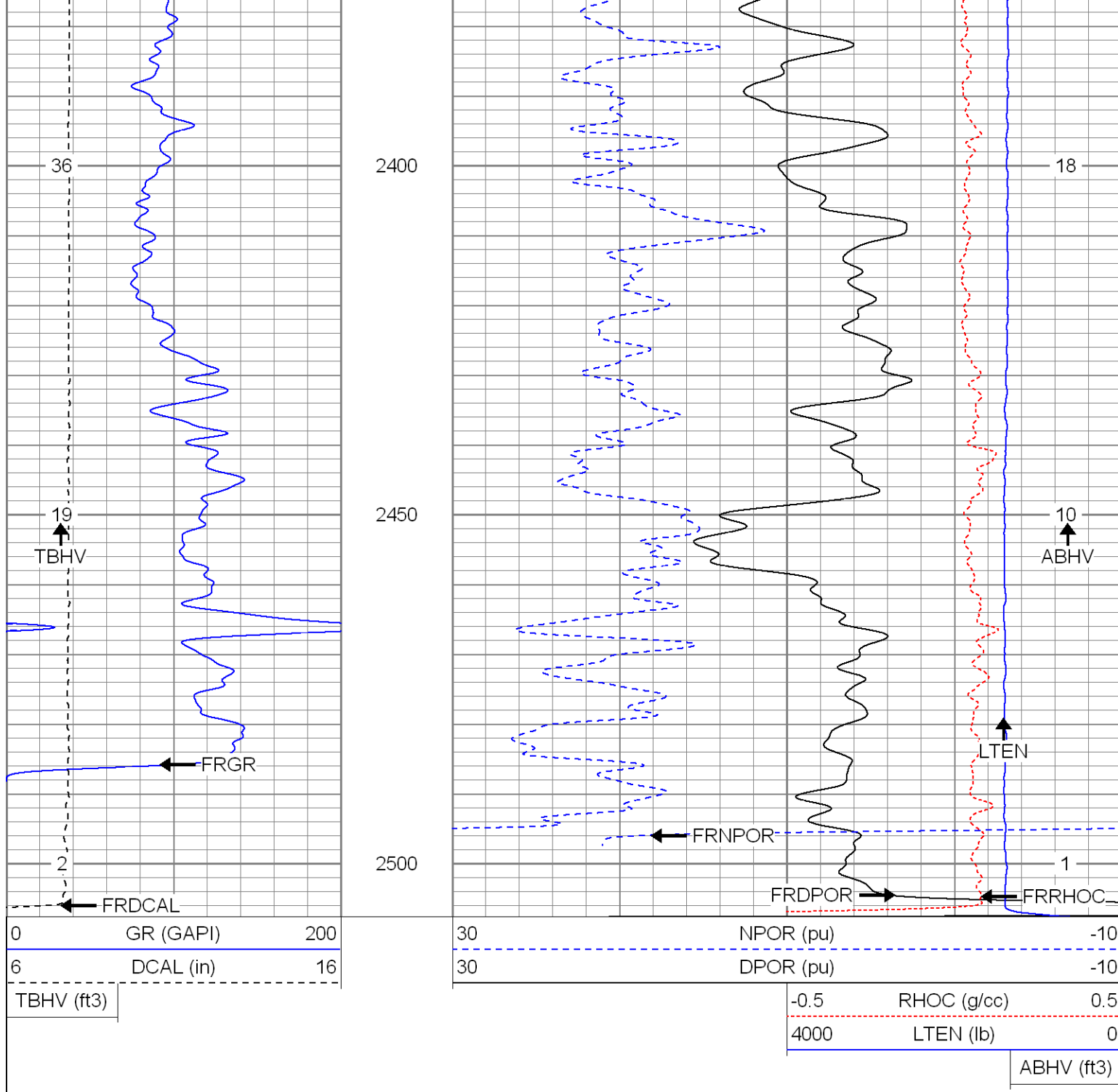












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# Repeat Pass

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

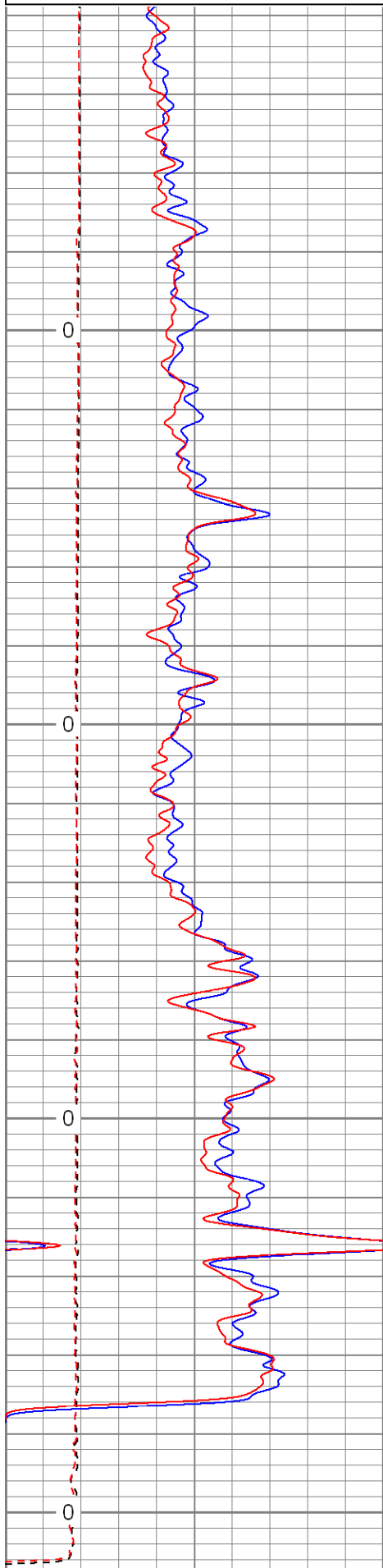
TBHV (ft3)

-0.5 RHOC (g/cc) 0.5

4000 LTEN (lb) 0

-0.5 RHOC-repeat (g/cc) 0.5

ABHV (ft3)

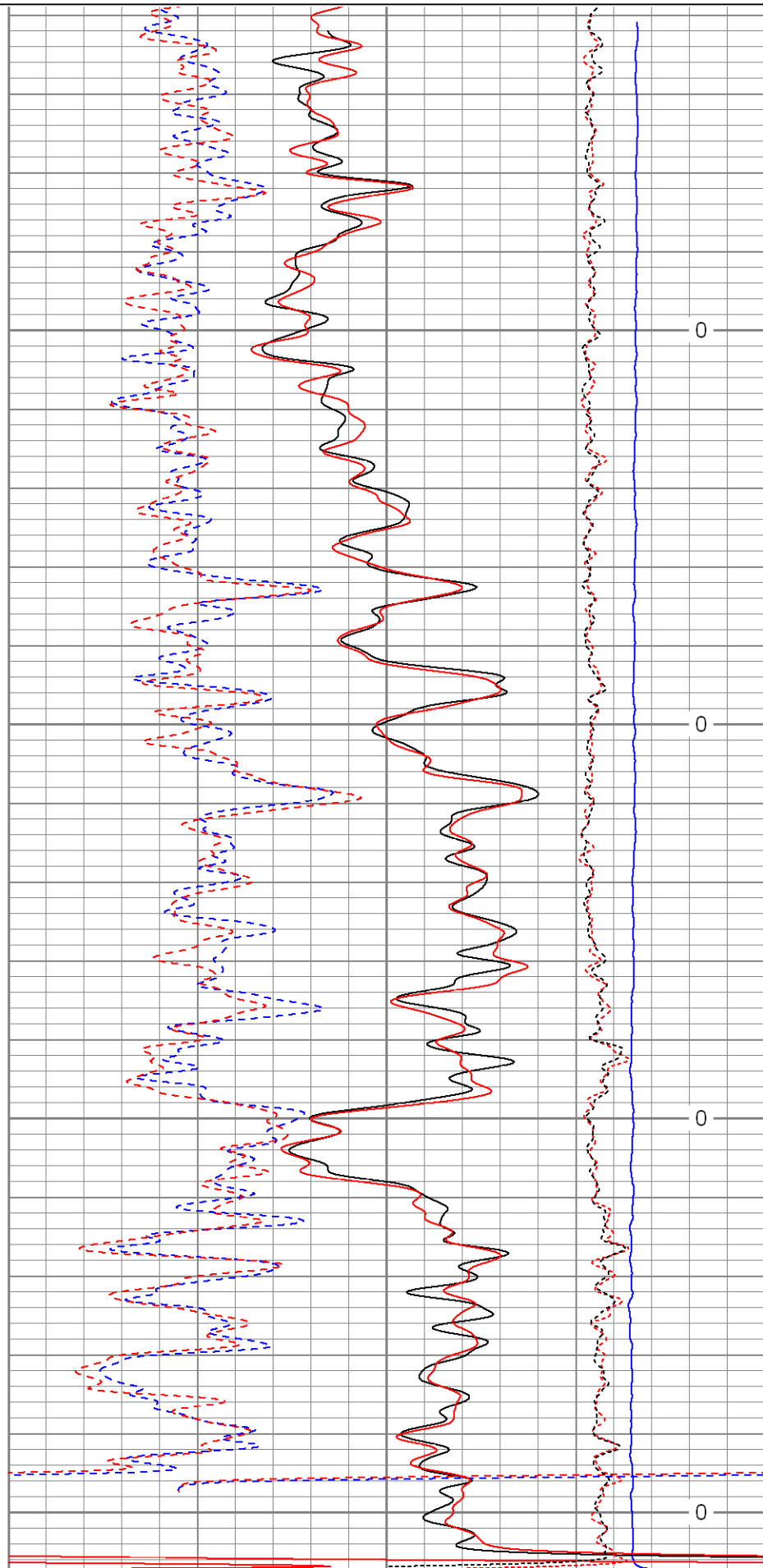


2350

2400

2450

2500



0

0

0

0

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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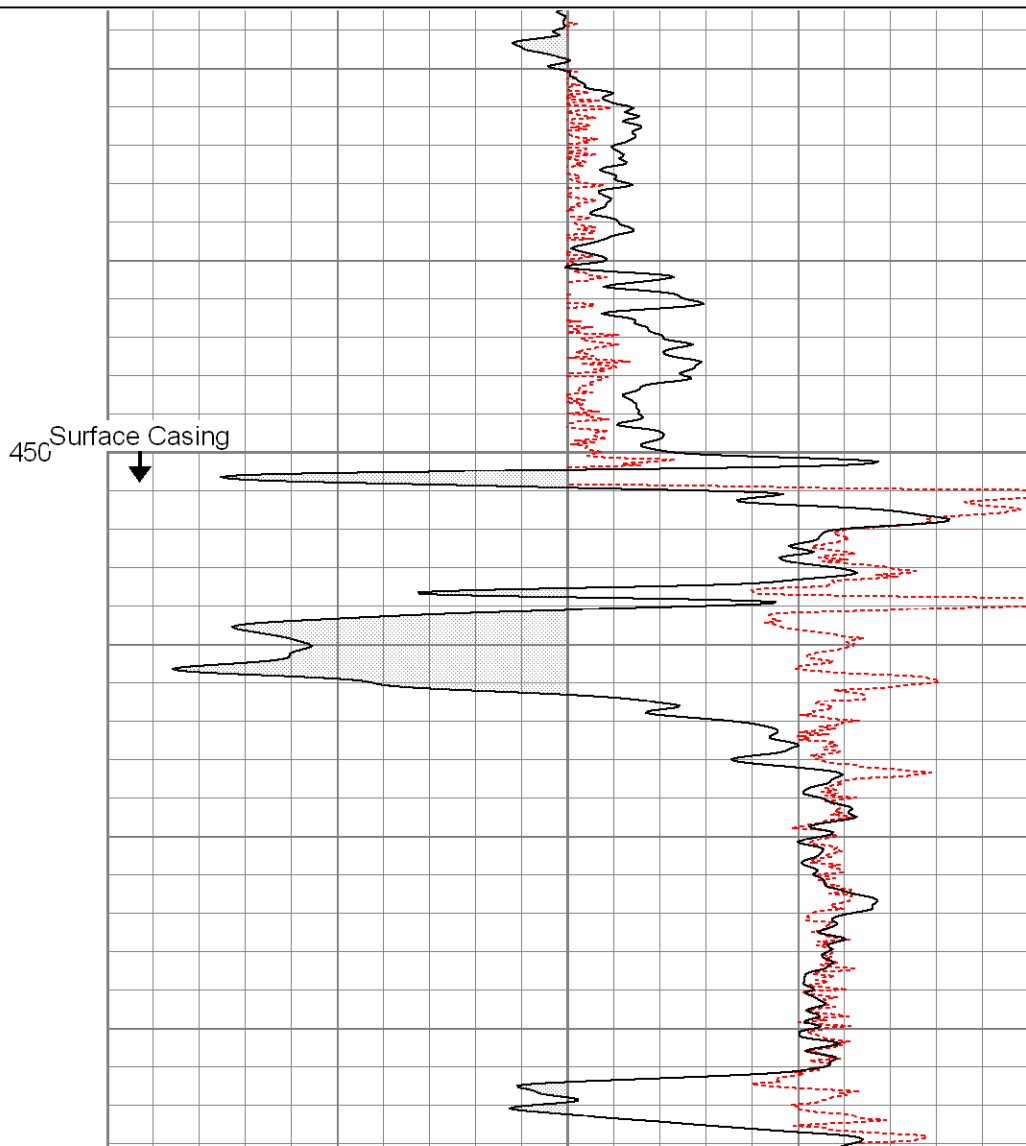
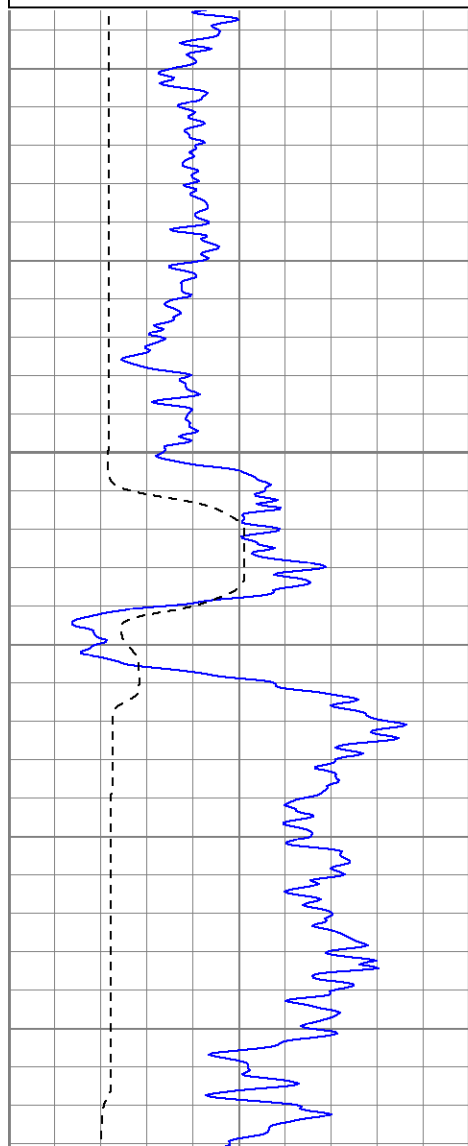
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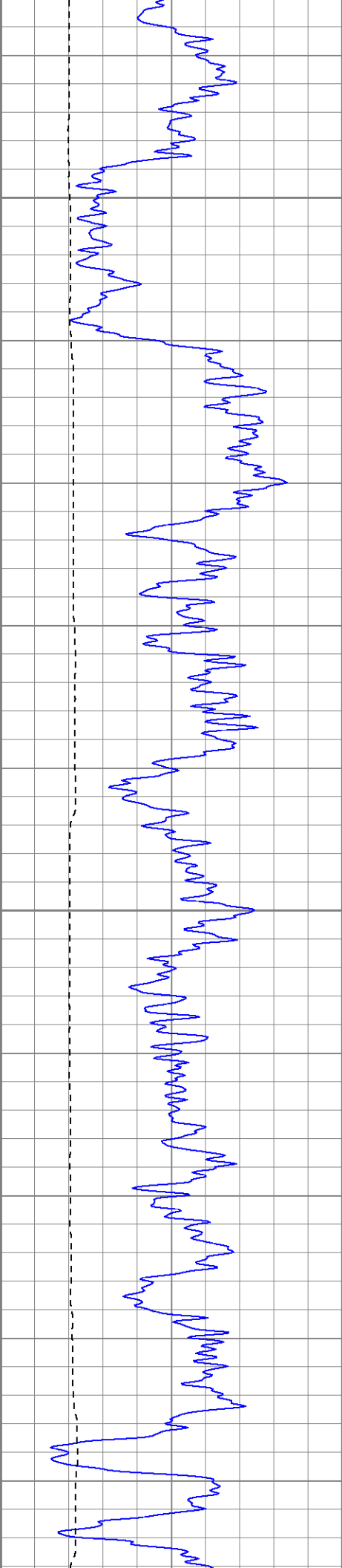
# High Resolution Pass

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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

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6	DCAL (in)	16

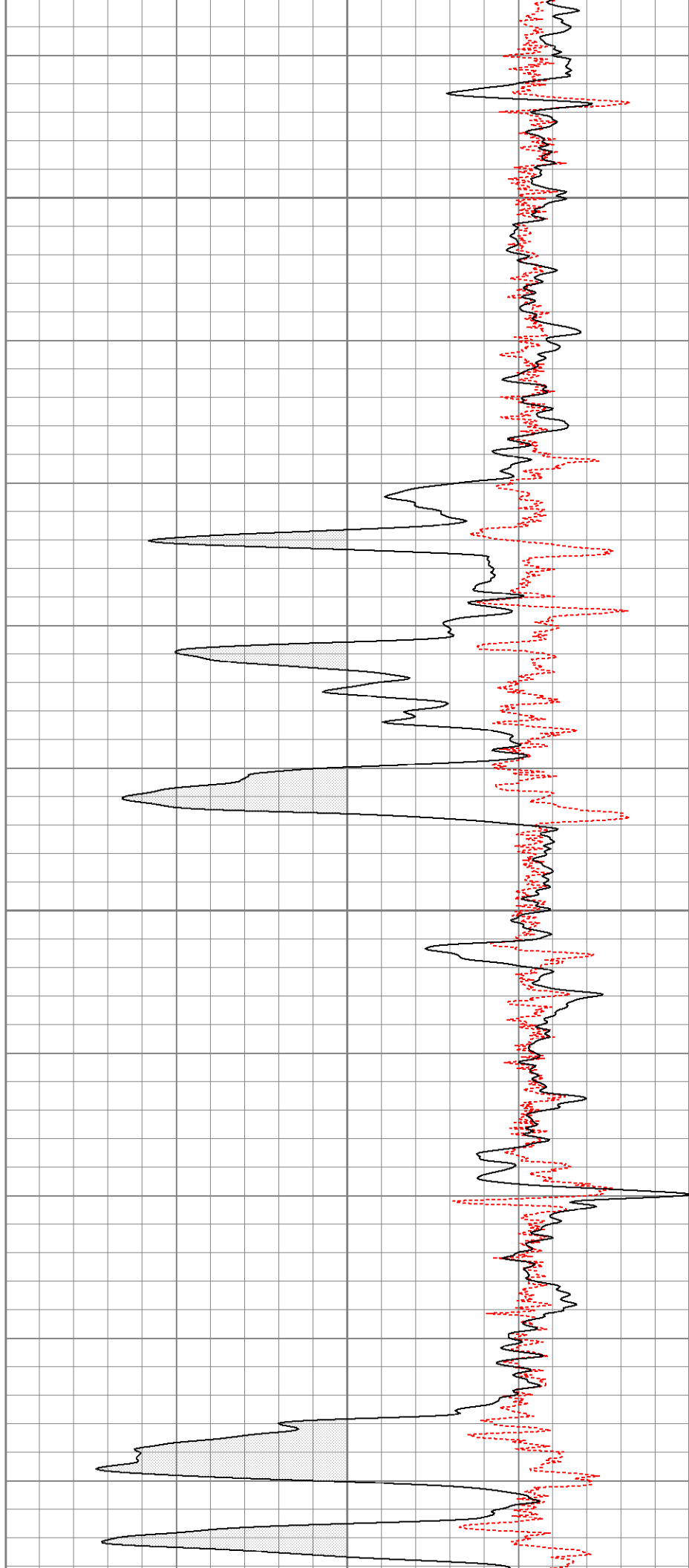
1	RHOB (g/cc)	3
-0.5	RHOC (g/cc)	0.5



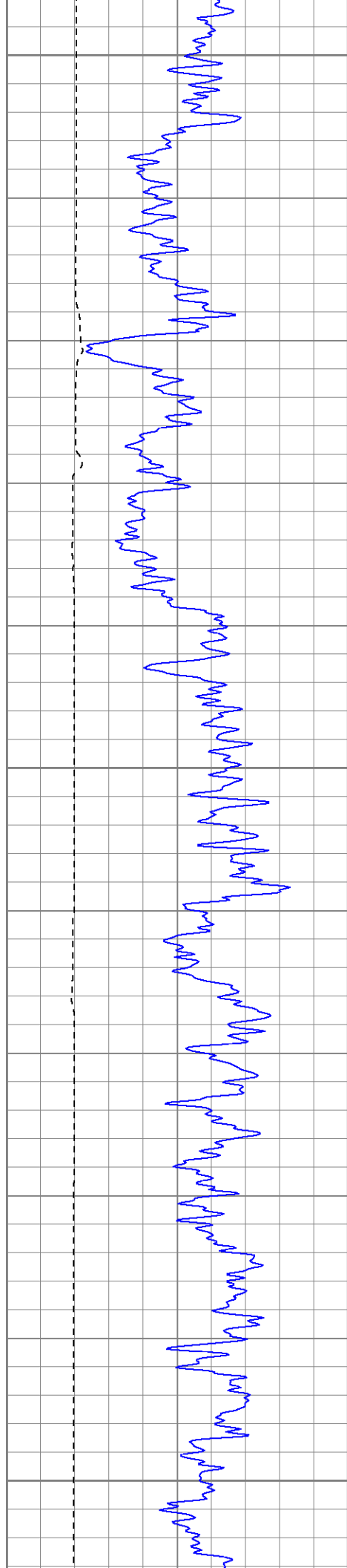


500

550



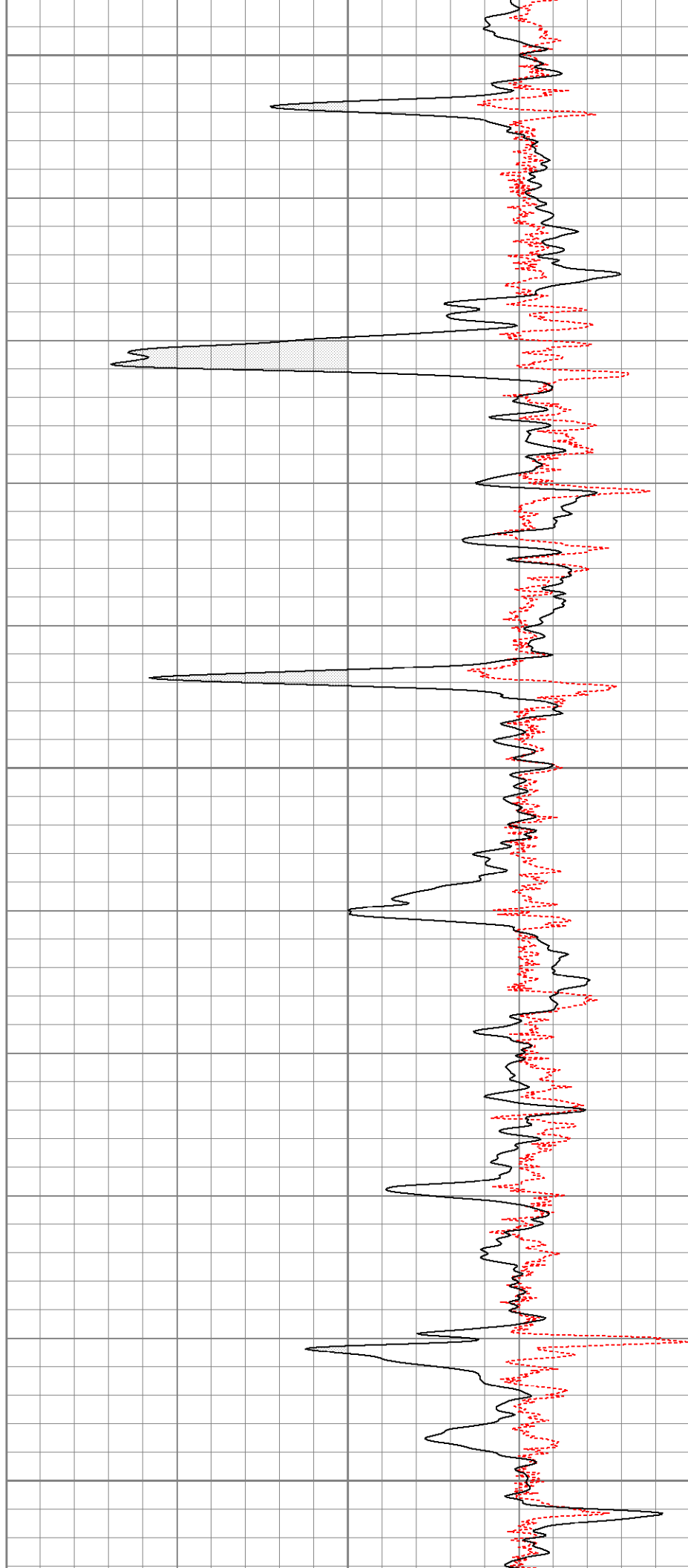


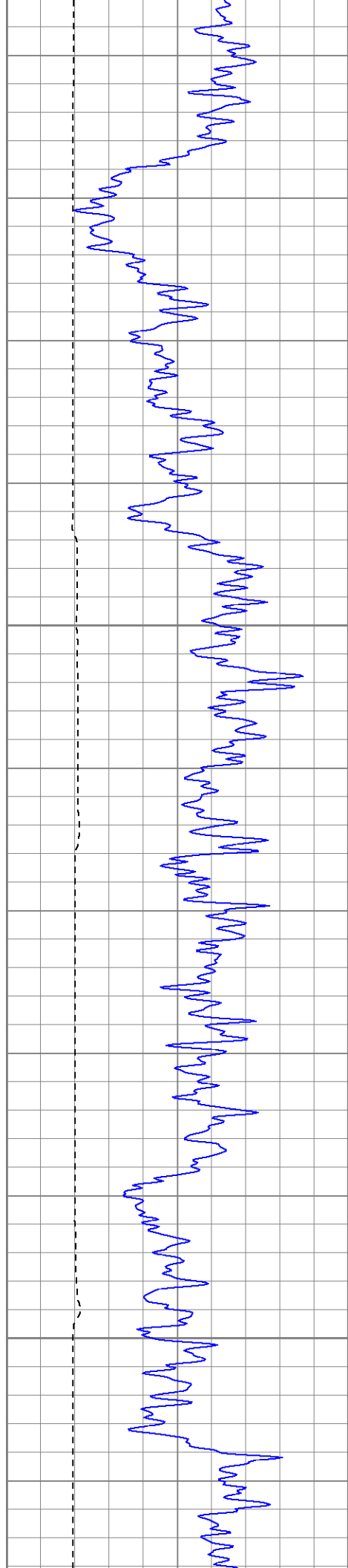


600

650

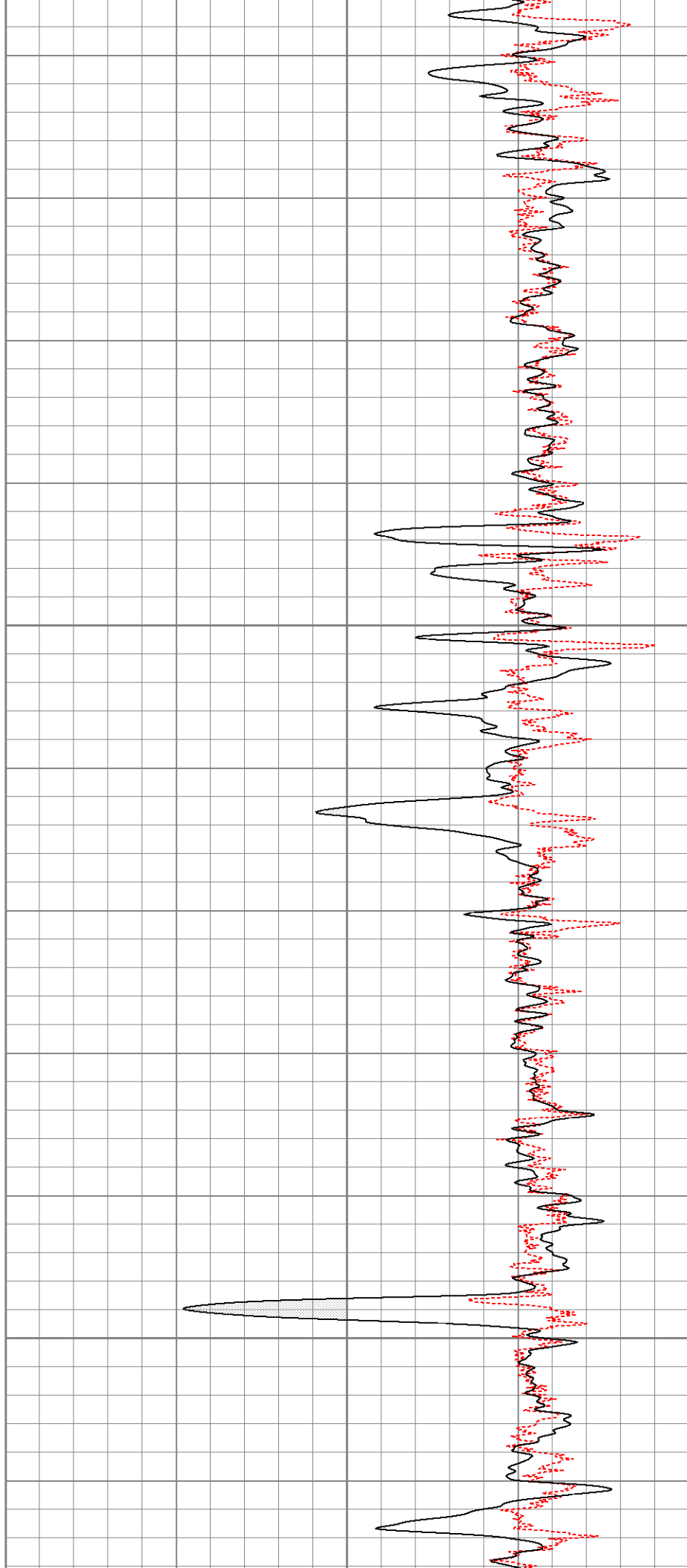
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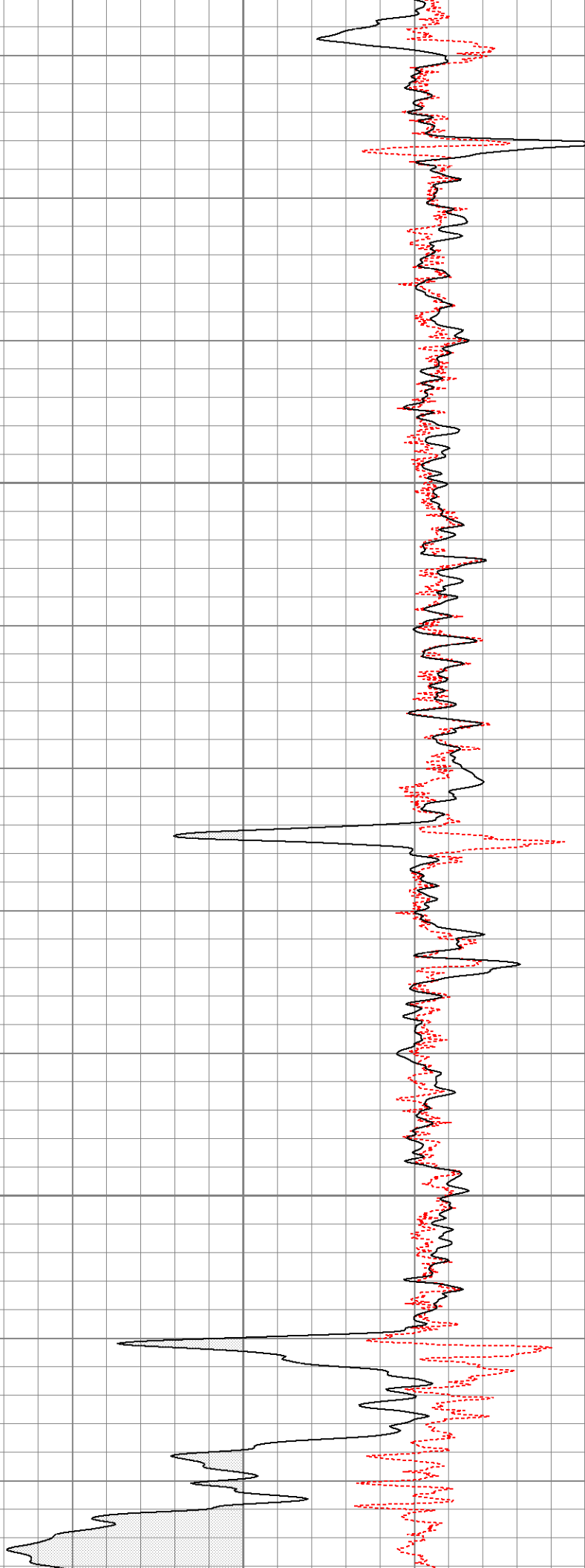
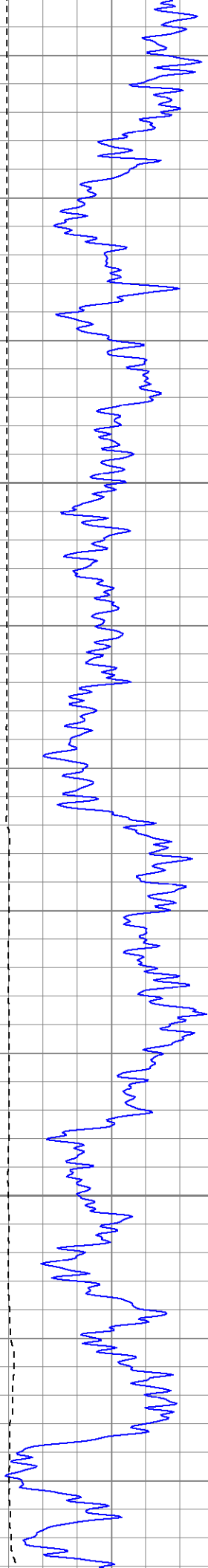
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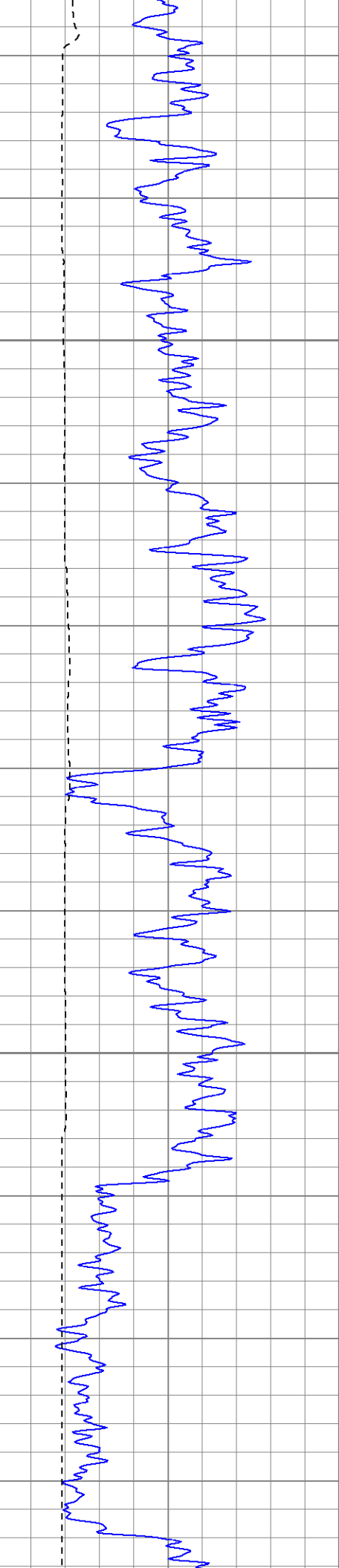
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850

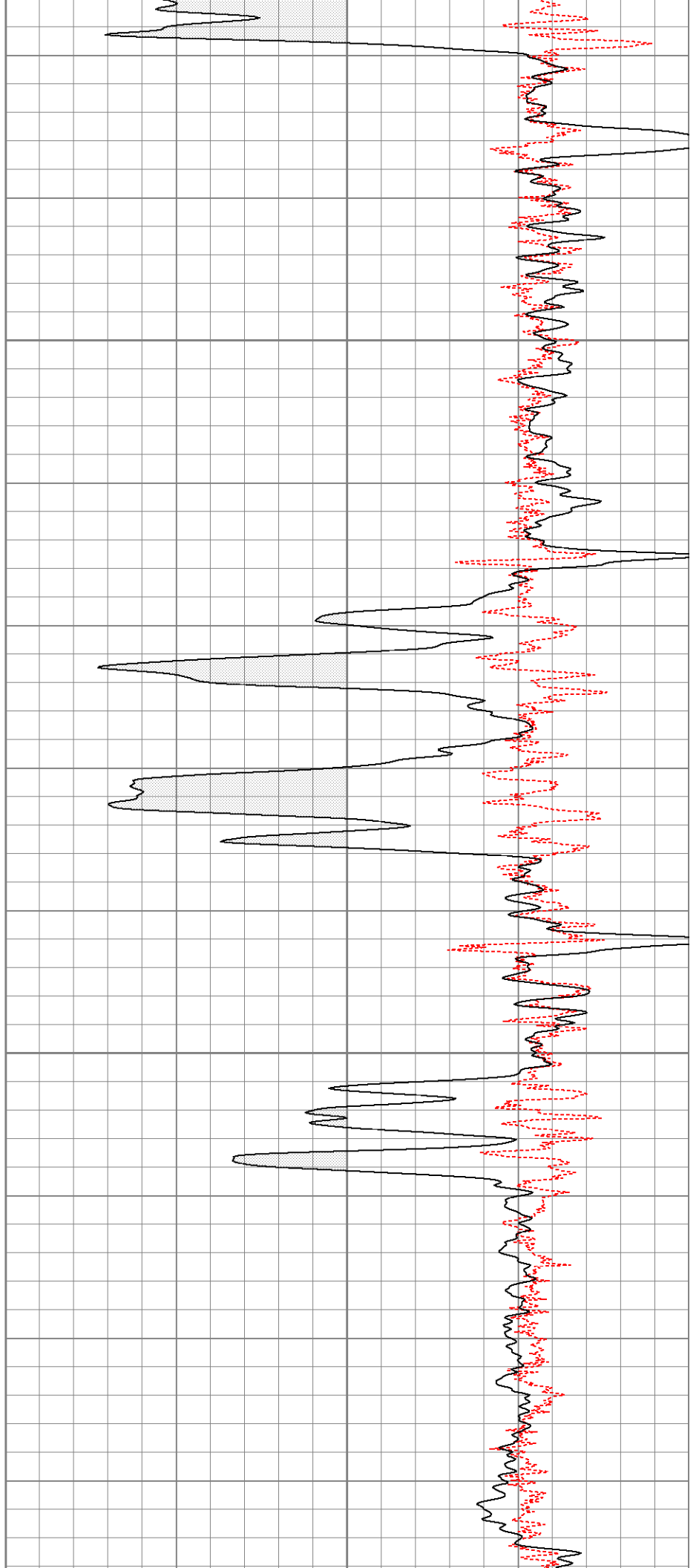
900





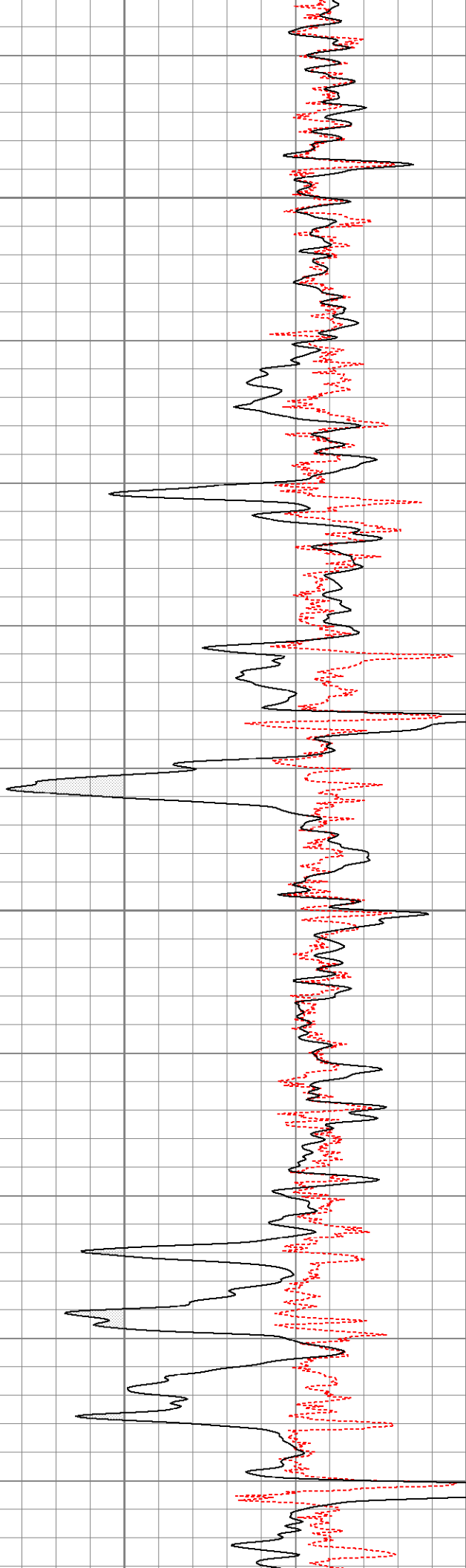
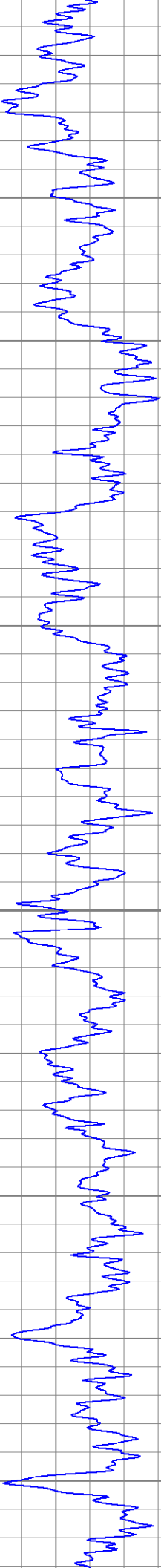
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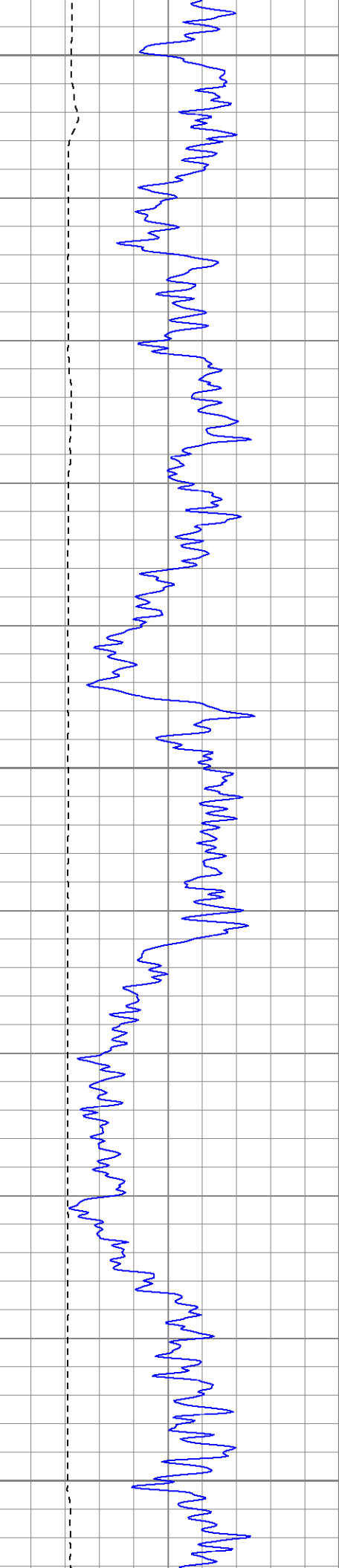
1000



1050

1100

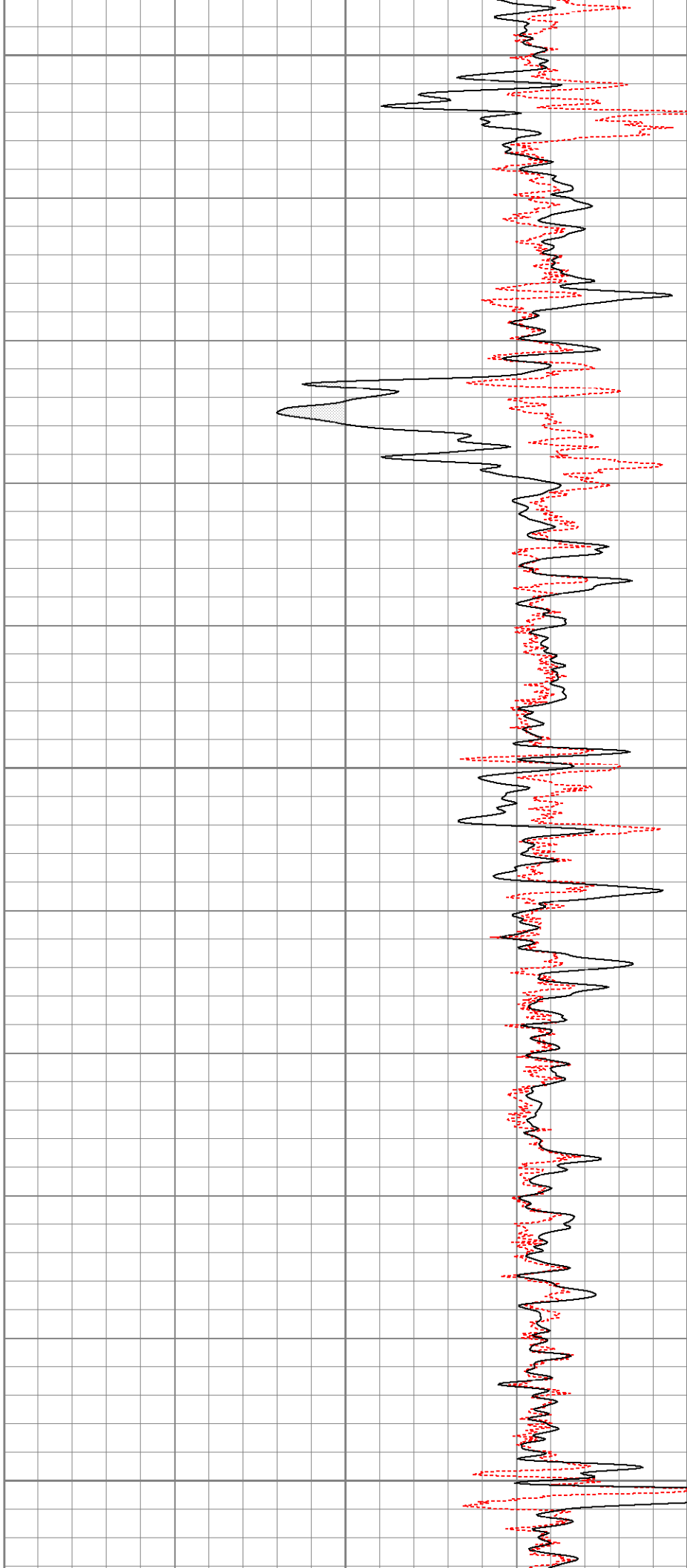


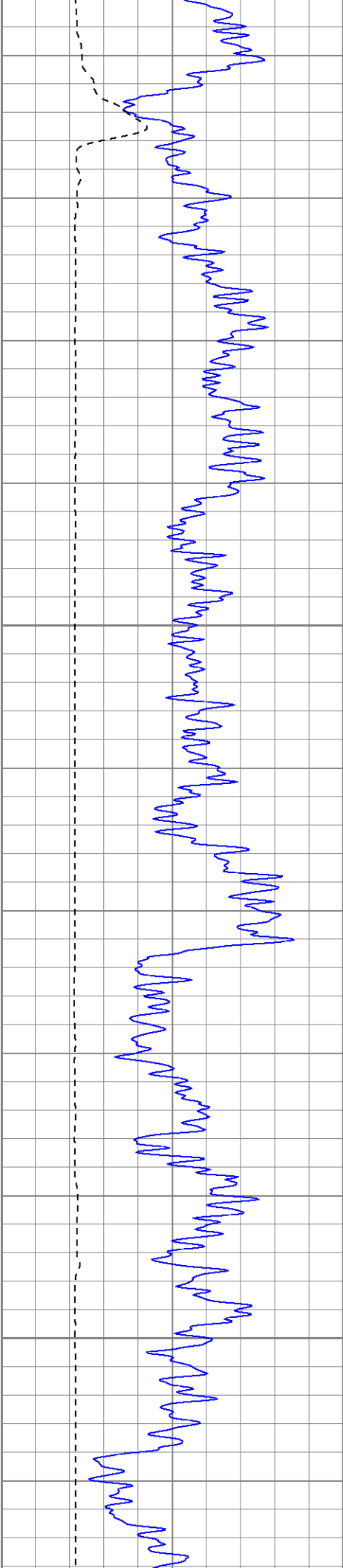


1150

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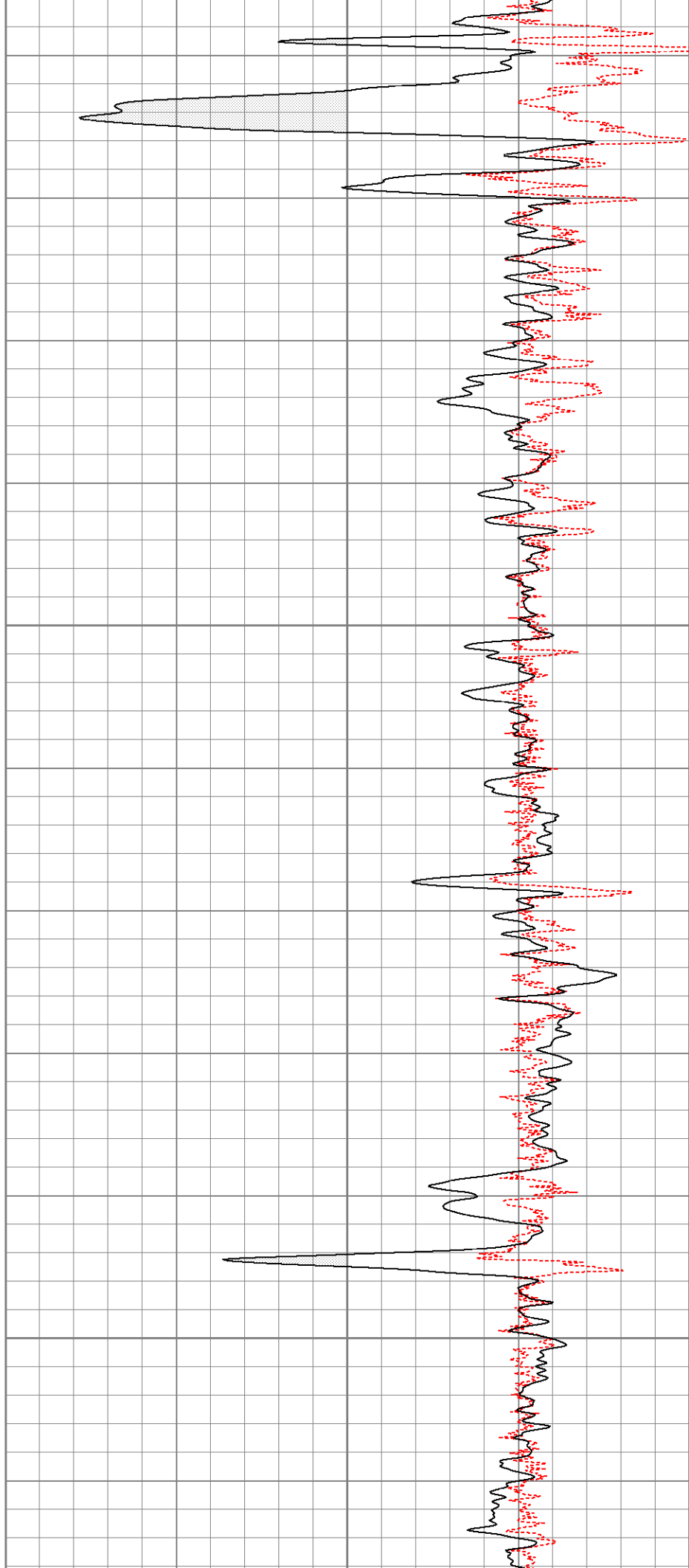
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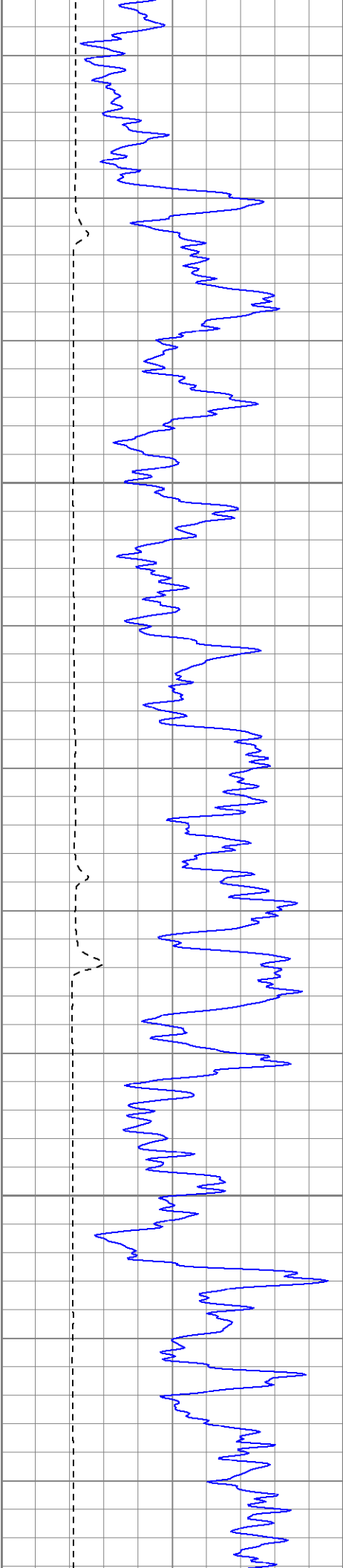




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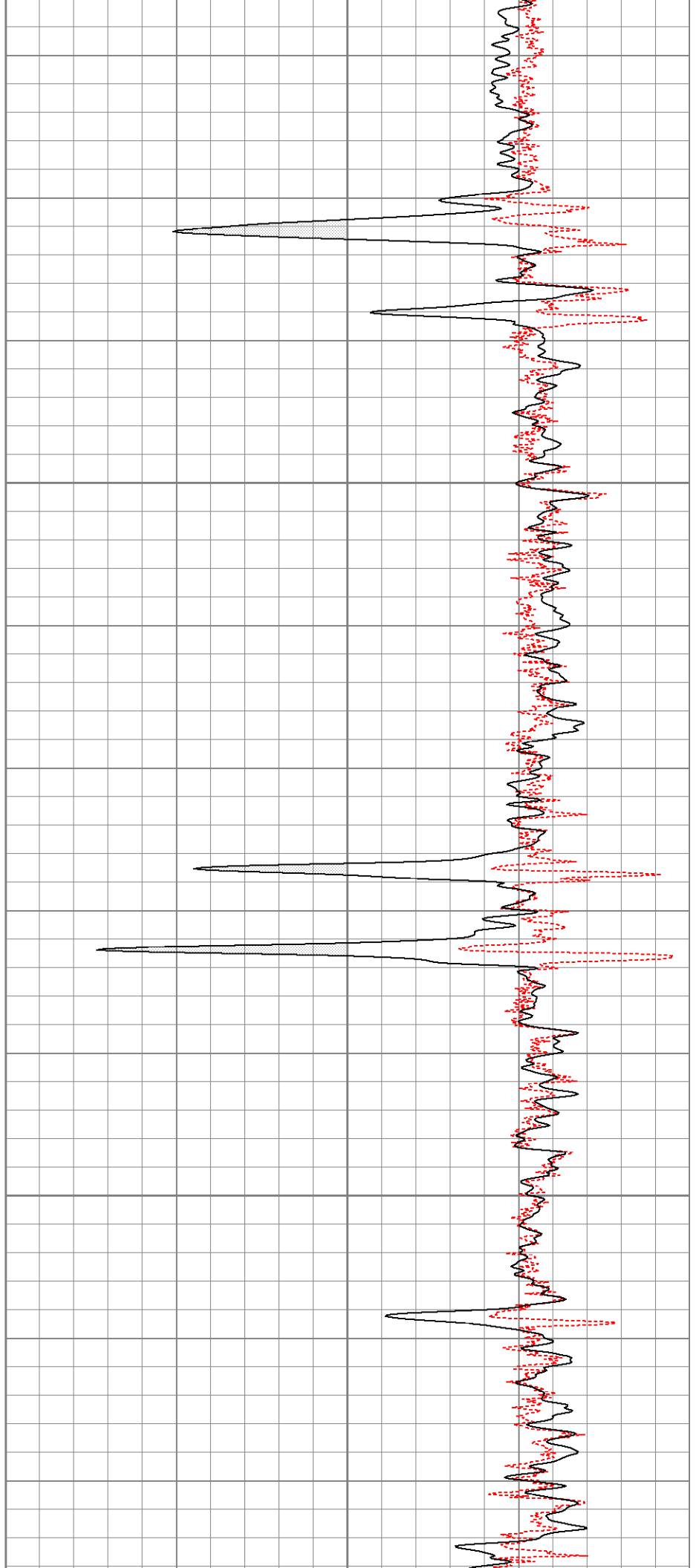
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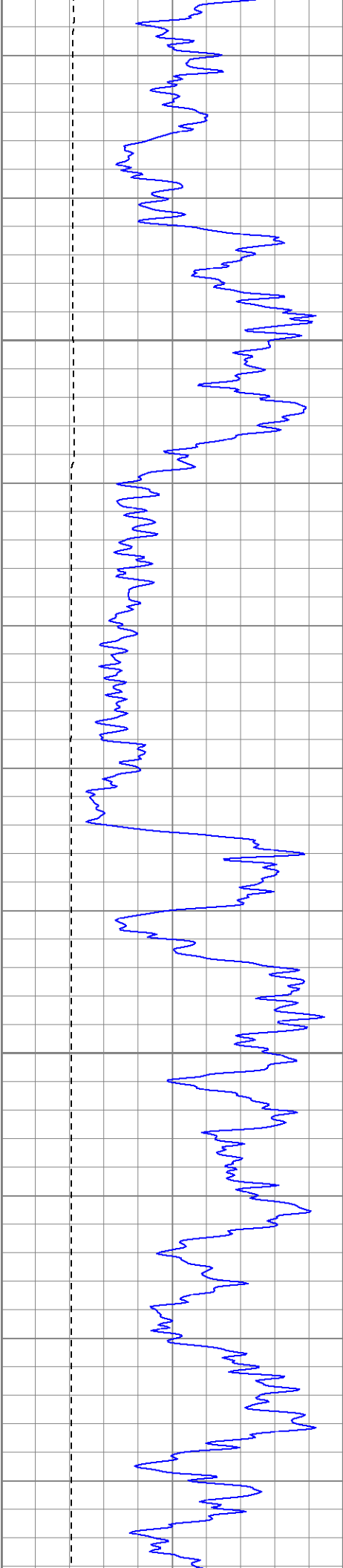


1400

1450

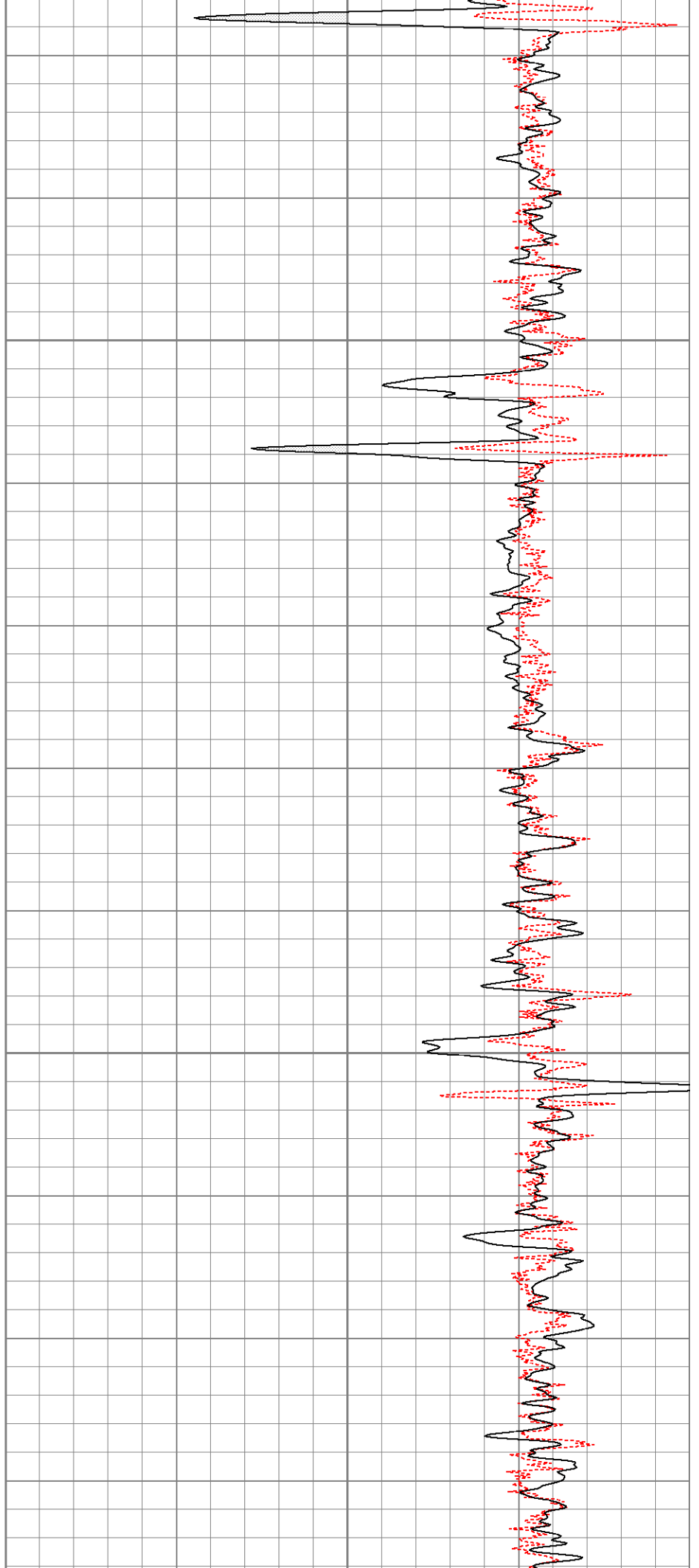






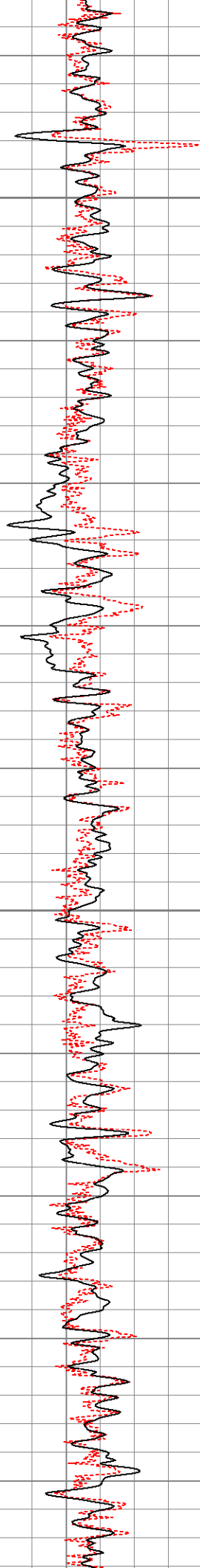
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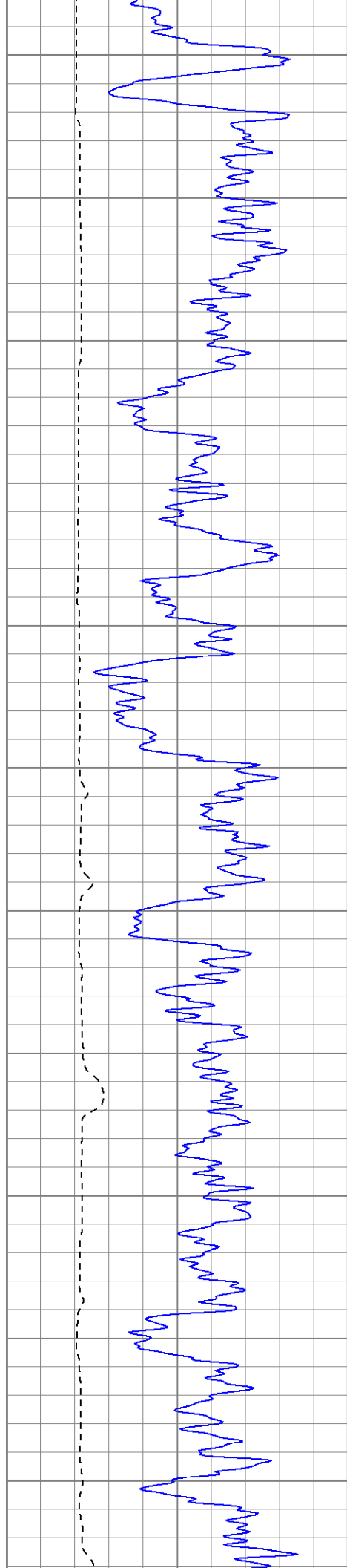
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1600

1650

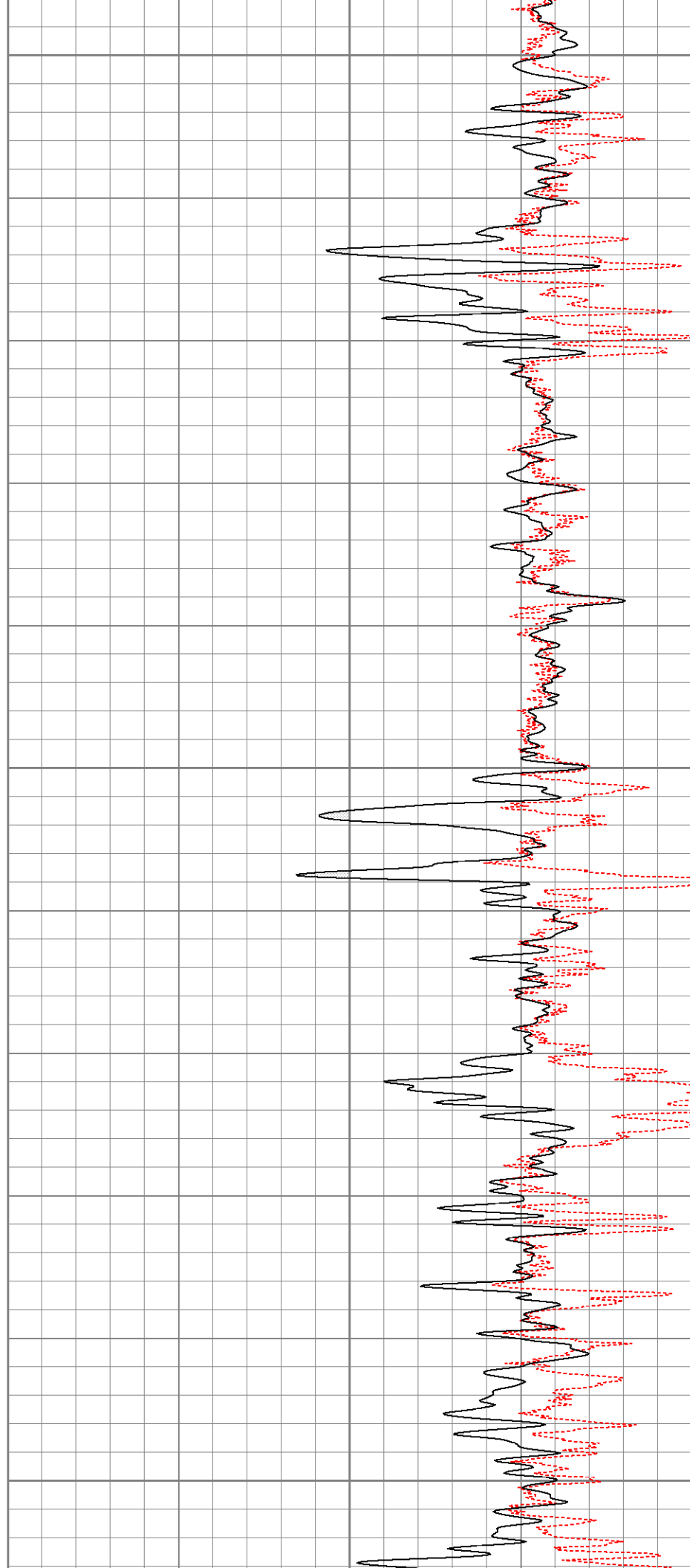


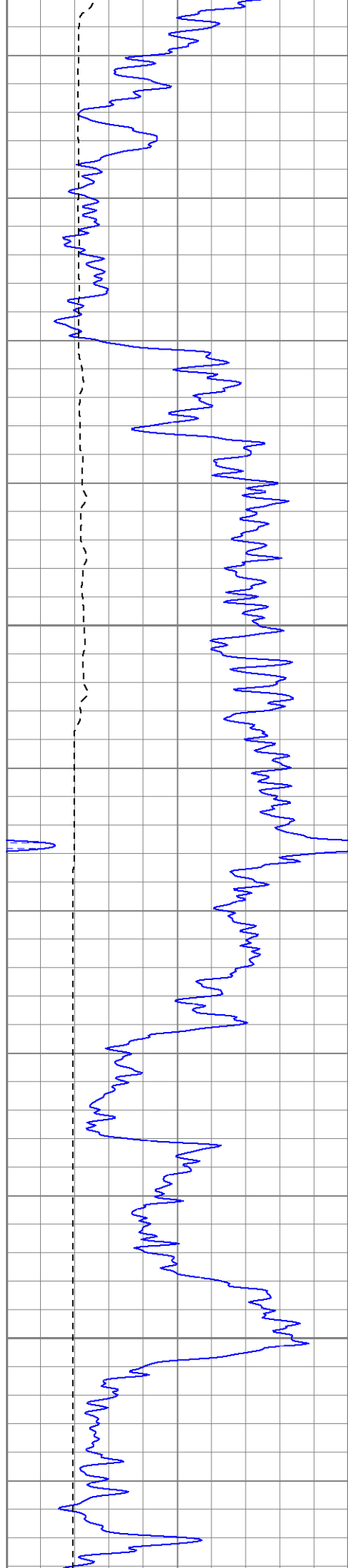


1700

1750

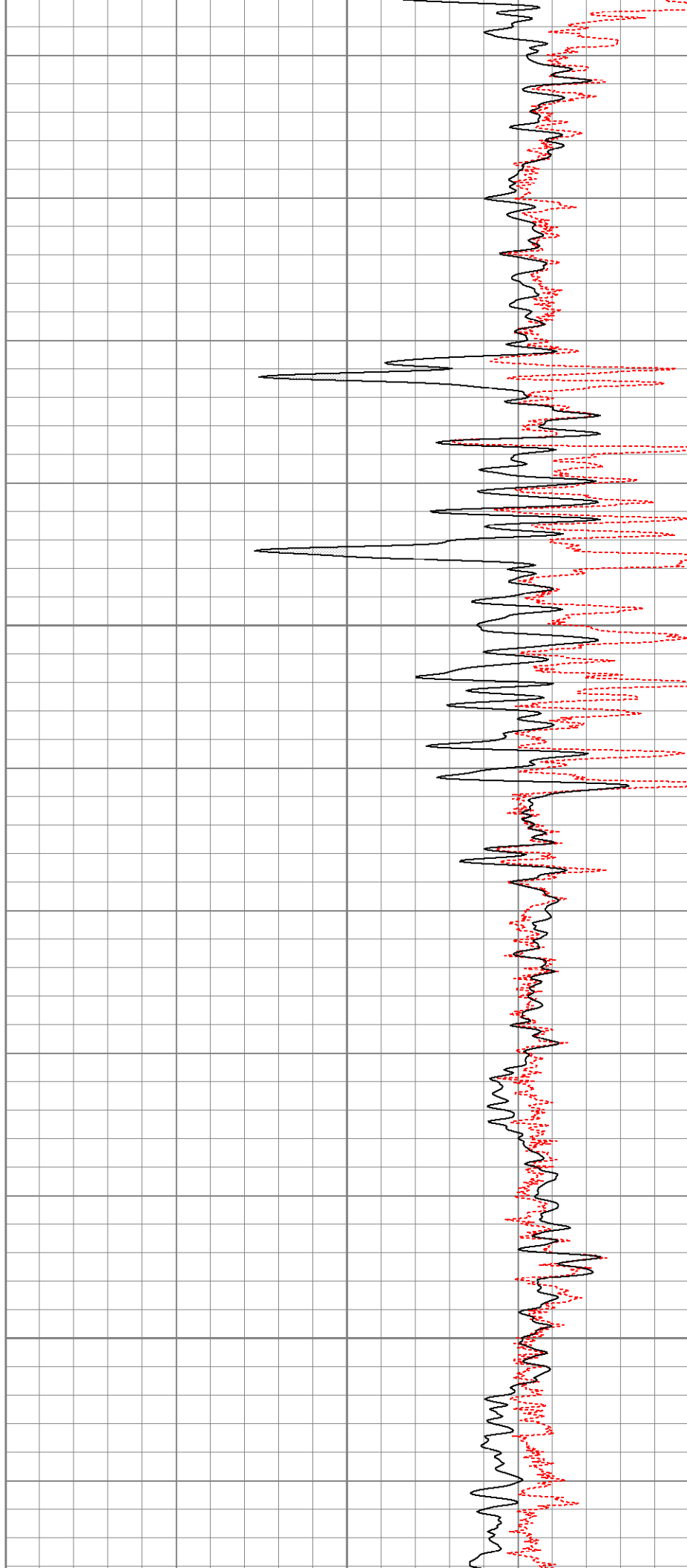
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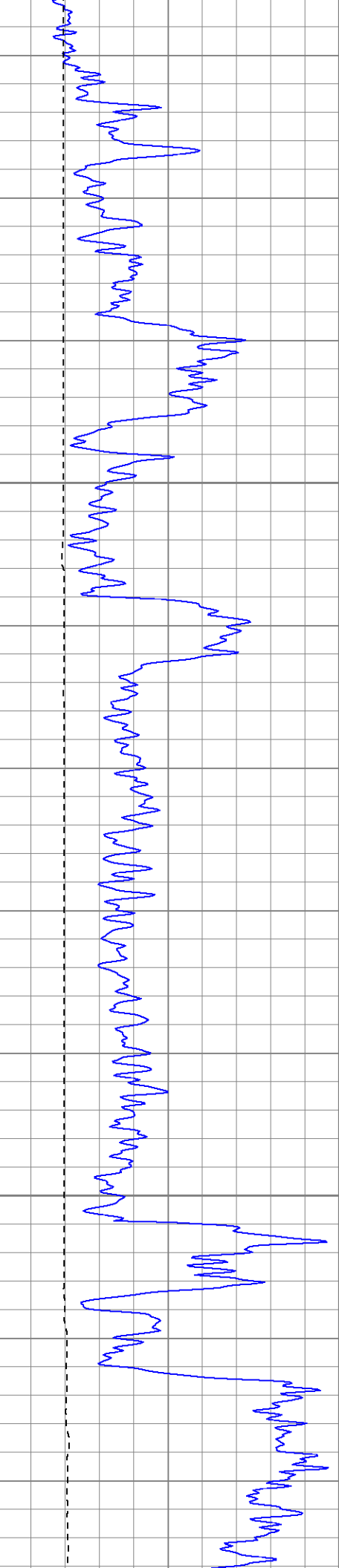




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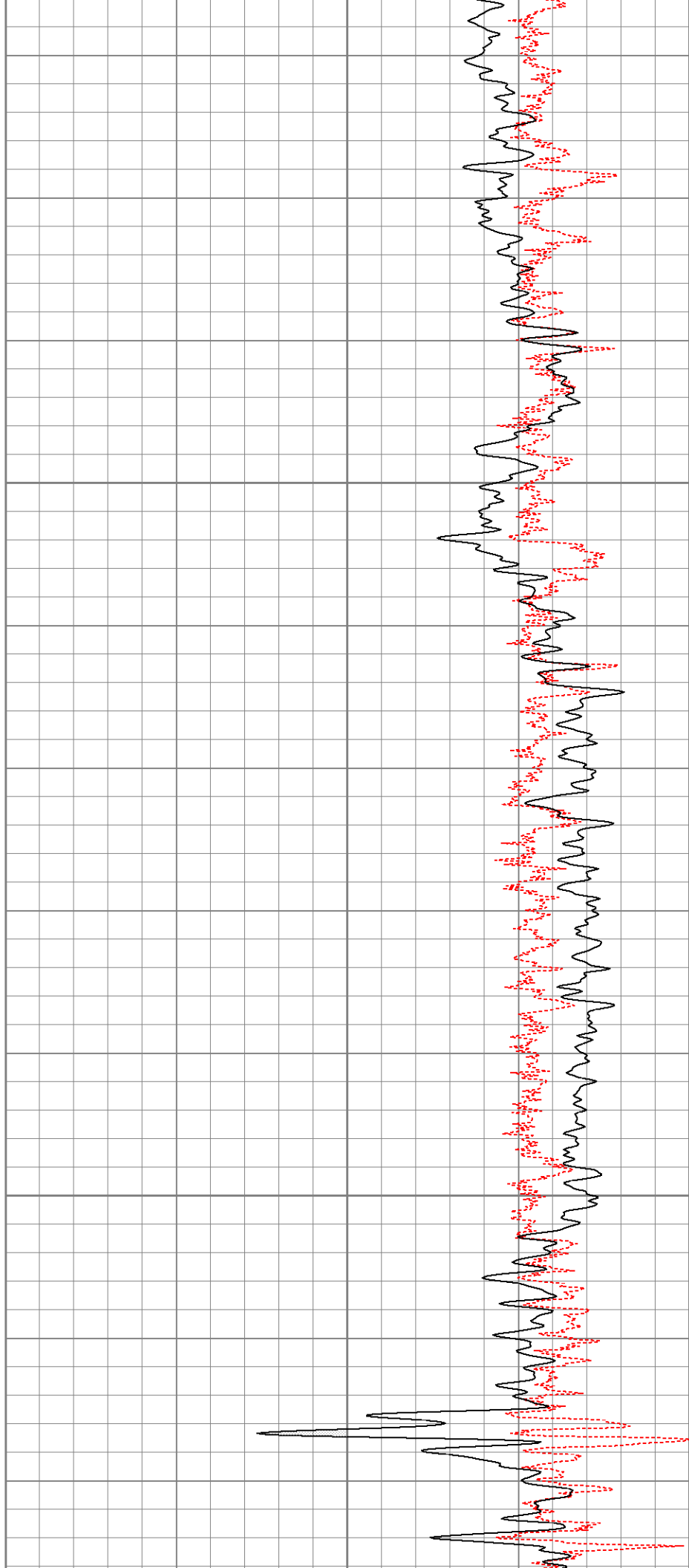
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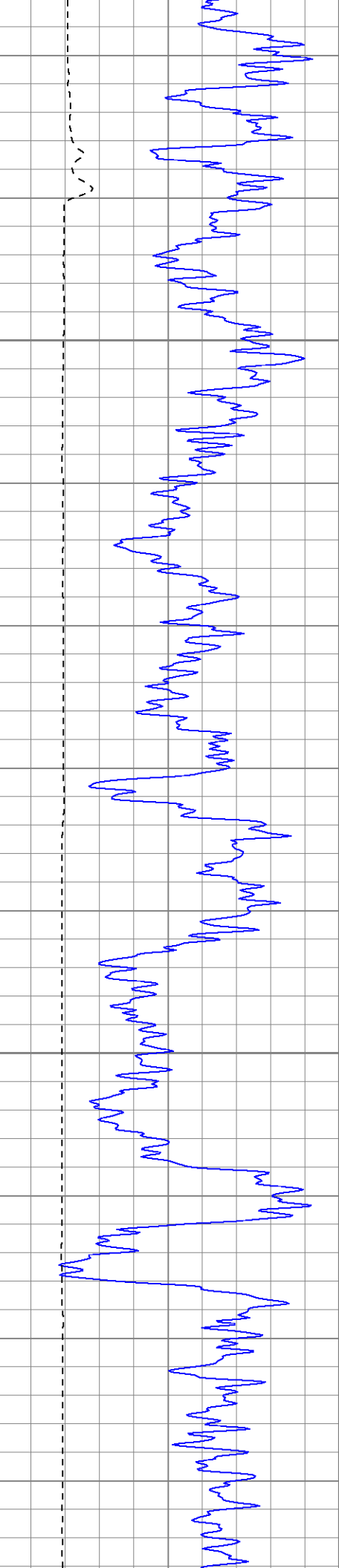




1950

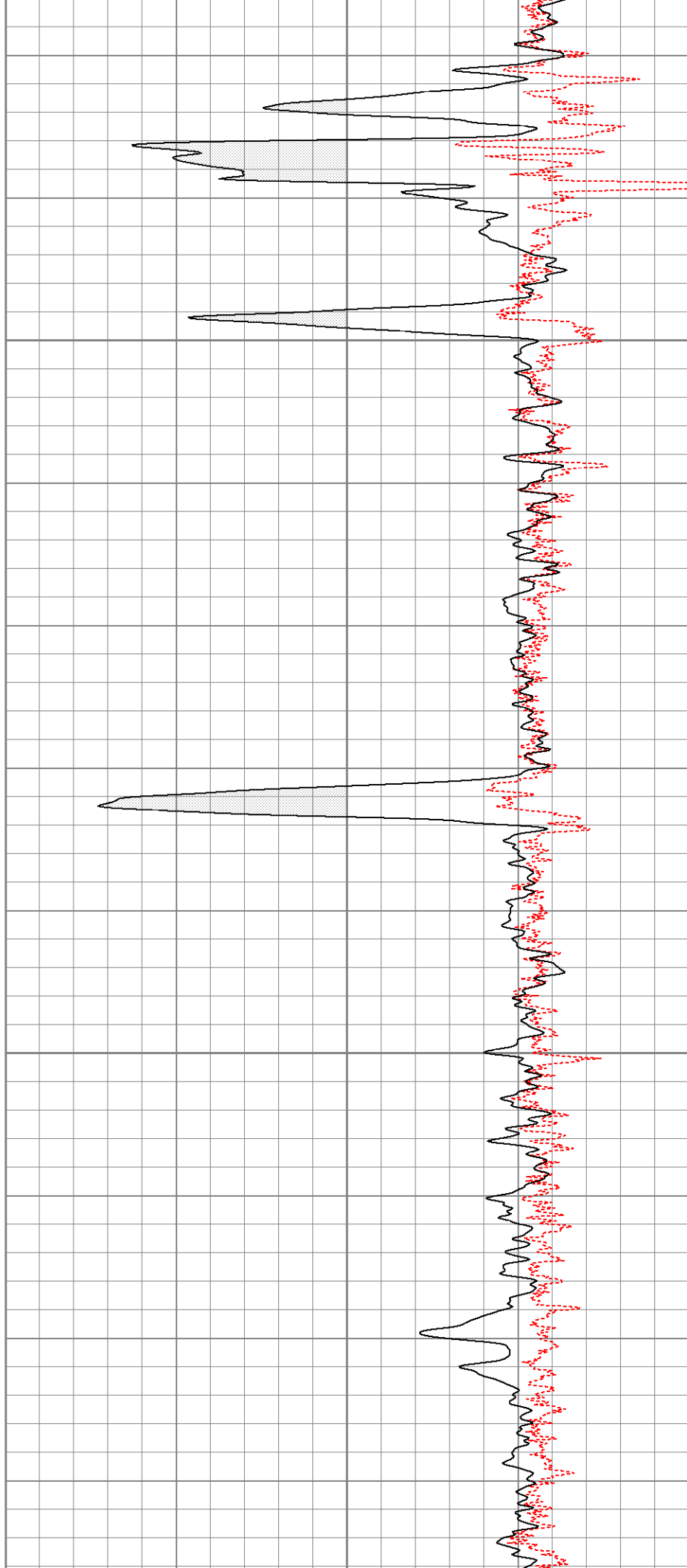
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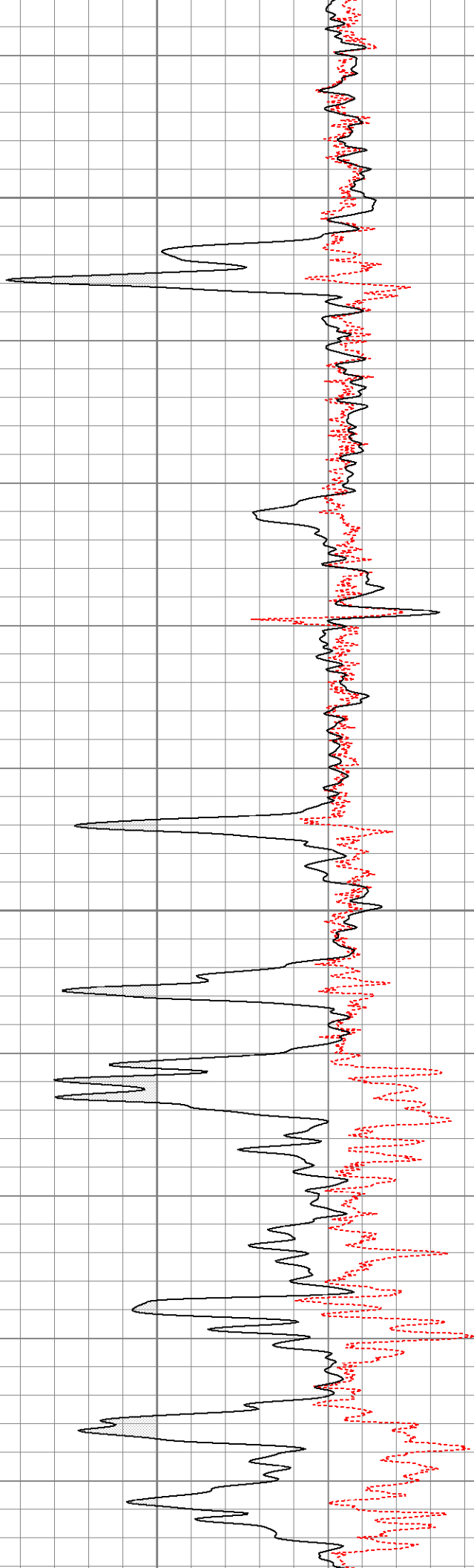
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2100



2150

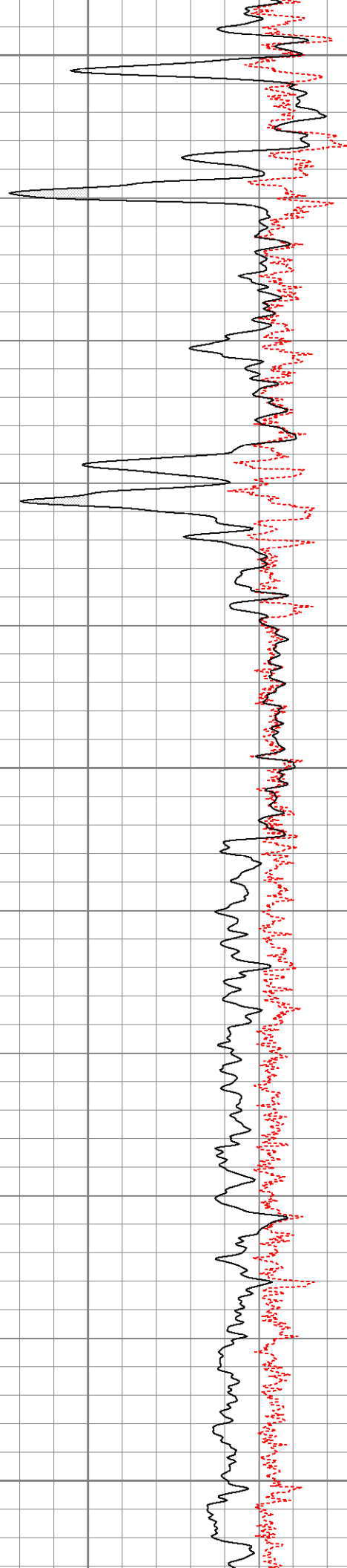
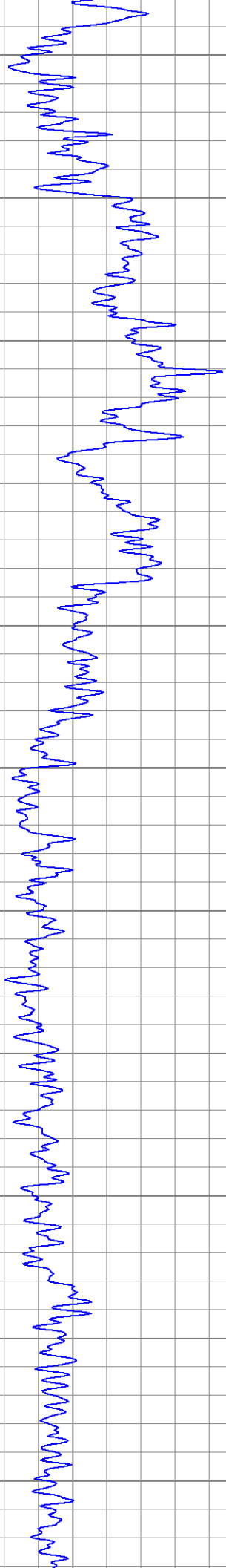
2200



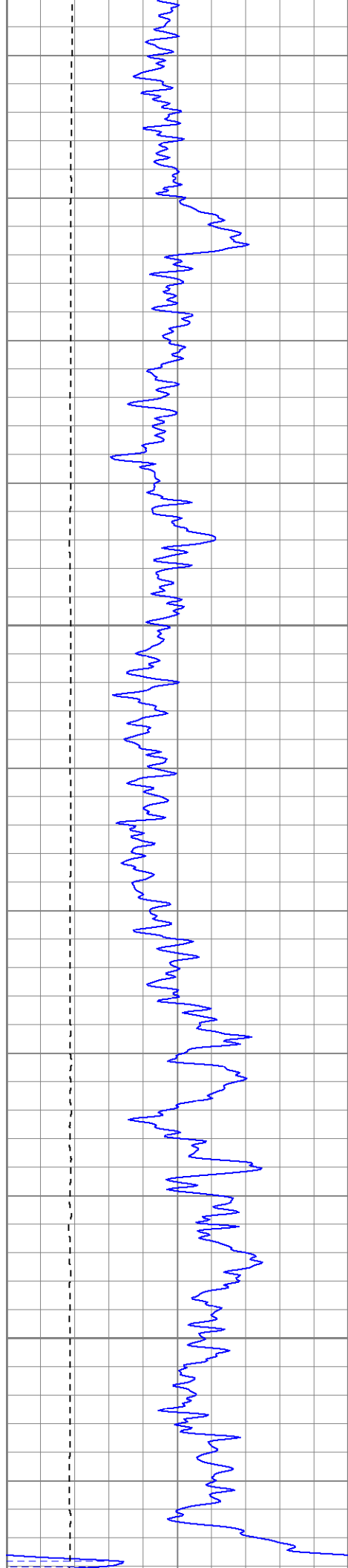
2250

2300

2350

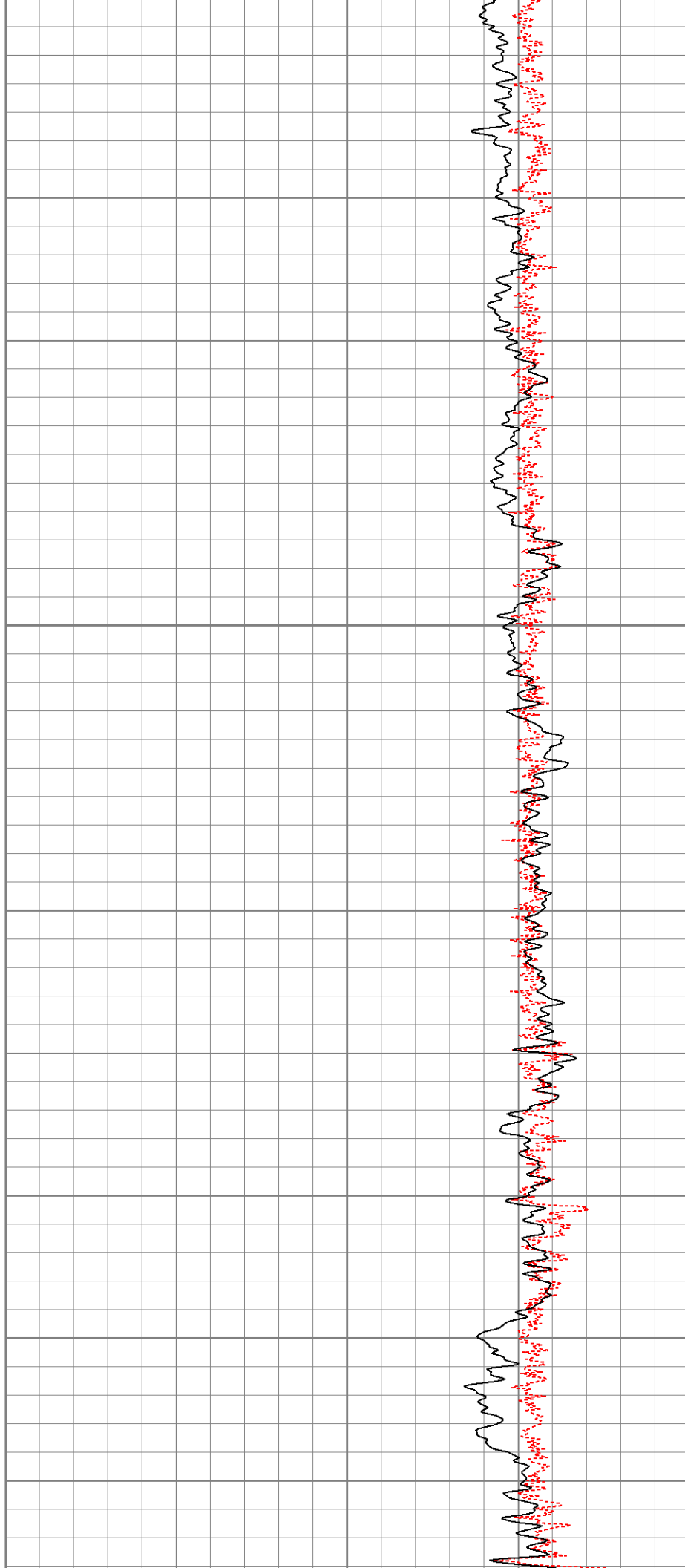


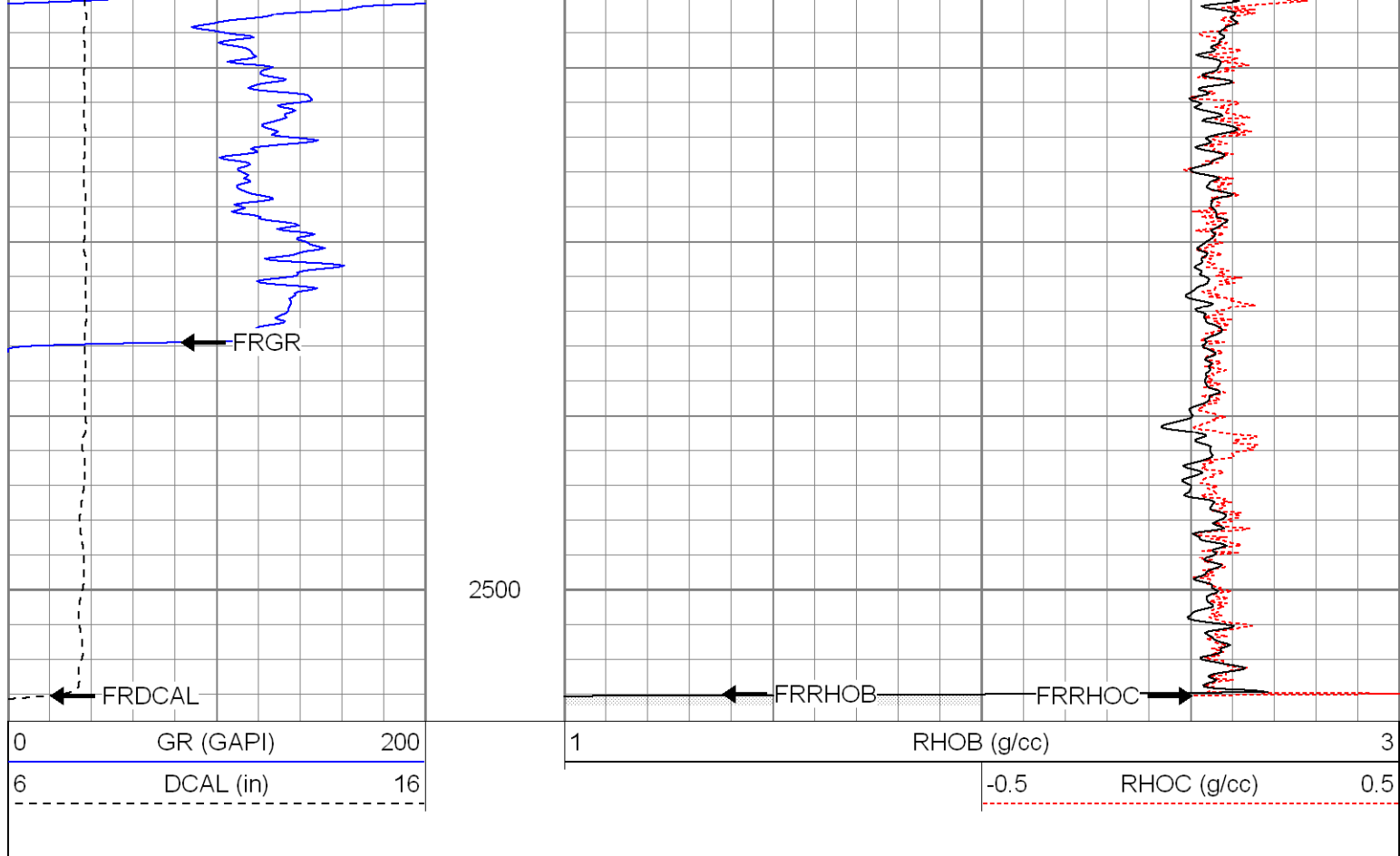




2400

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

