



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

# COMPENSATED DENSITY NEUTRON LOG

Company XTO Energy Inc.  
Well Hill Ranch 16-09 VX  
Field Purgatoire River  
County Las Animas State Colorado

Location: API # : 05 071 09275 00

3354' FNL & 511' FEL

SEC 16 TWP 35S RGE 67W

Permanent Datum Ground Level Elevation 7824'  
Log Measured From Ground Level  
Drilling Measured From Ground Level

Other Services  
DIL  
Elevation  
K.B. -----  
D.F. -----  
G.L. 7824'

Date 4-15-07

Run Number Two

Depth Driller 2335'

Depth Logger 2323'

Bottom Logged Interval 2321'

Top Log Interval Surface Casing

Casing Driller 8 5/8" @ 483'

Casing Logger 483'

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 8:00 P.M.

Time Logger on Bottom 11:00 P.M.

Maximum Recorded Temperature 104 DEG F

Equipment Number T0697

Location Trinidad

Recorded By M. Norton

Witnessed By Mr. Don Johnson

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

## Comments

Density Neutron Porosity Presented On Sandstone Matrix.

ABHV Calculated For 5 1/2" Casing

Well Directions:

Lorencito up XTO hill at white dumpster stay right, stay left @ T, at deadhorse stay right, at Y stay left, at bottom of hill stay left, stay on main road first drive thru location.

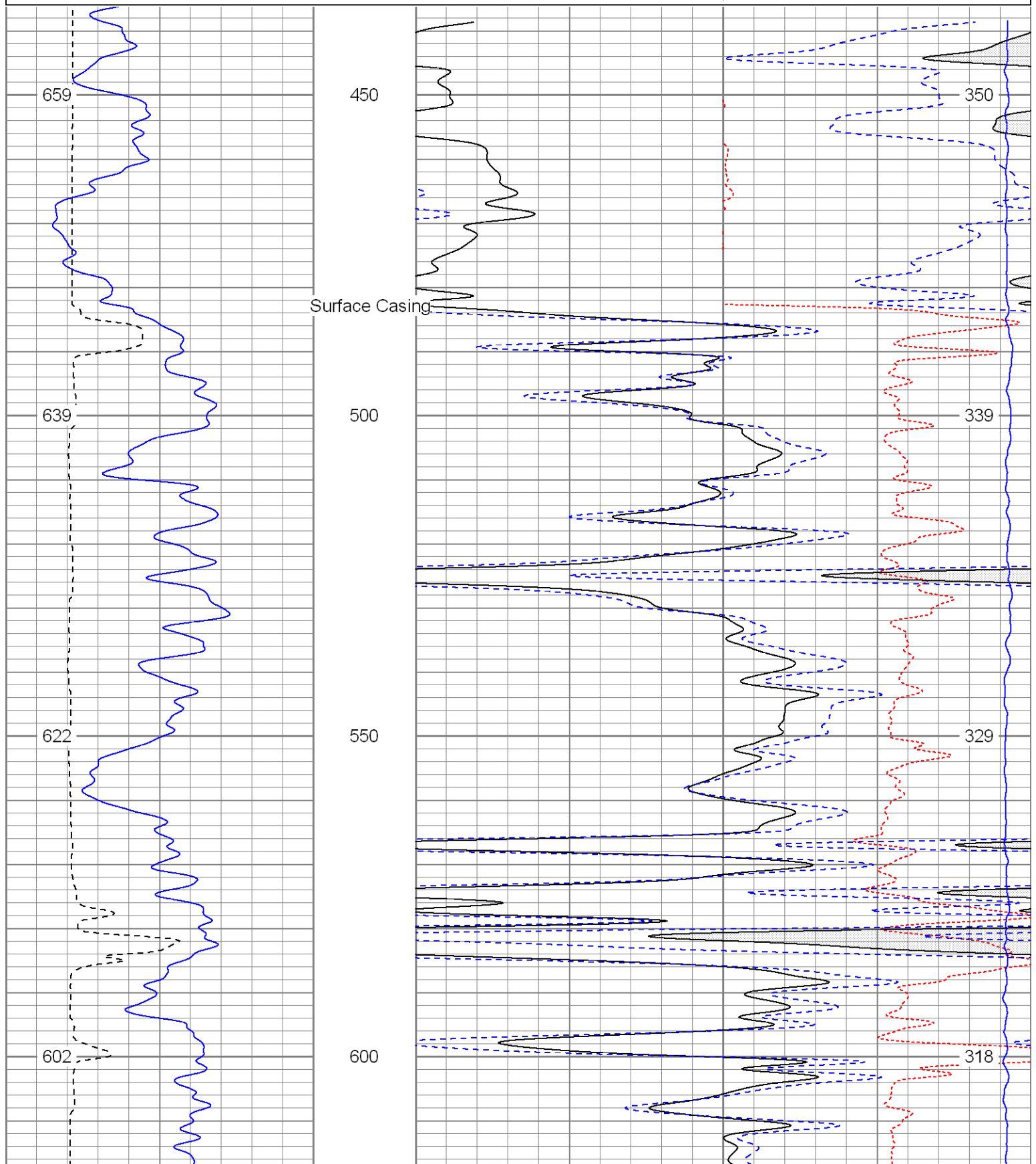


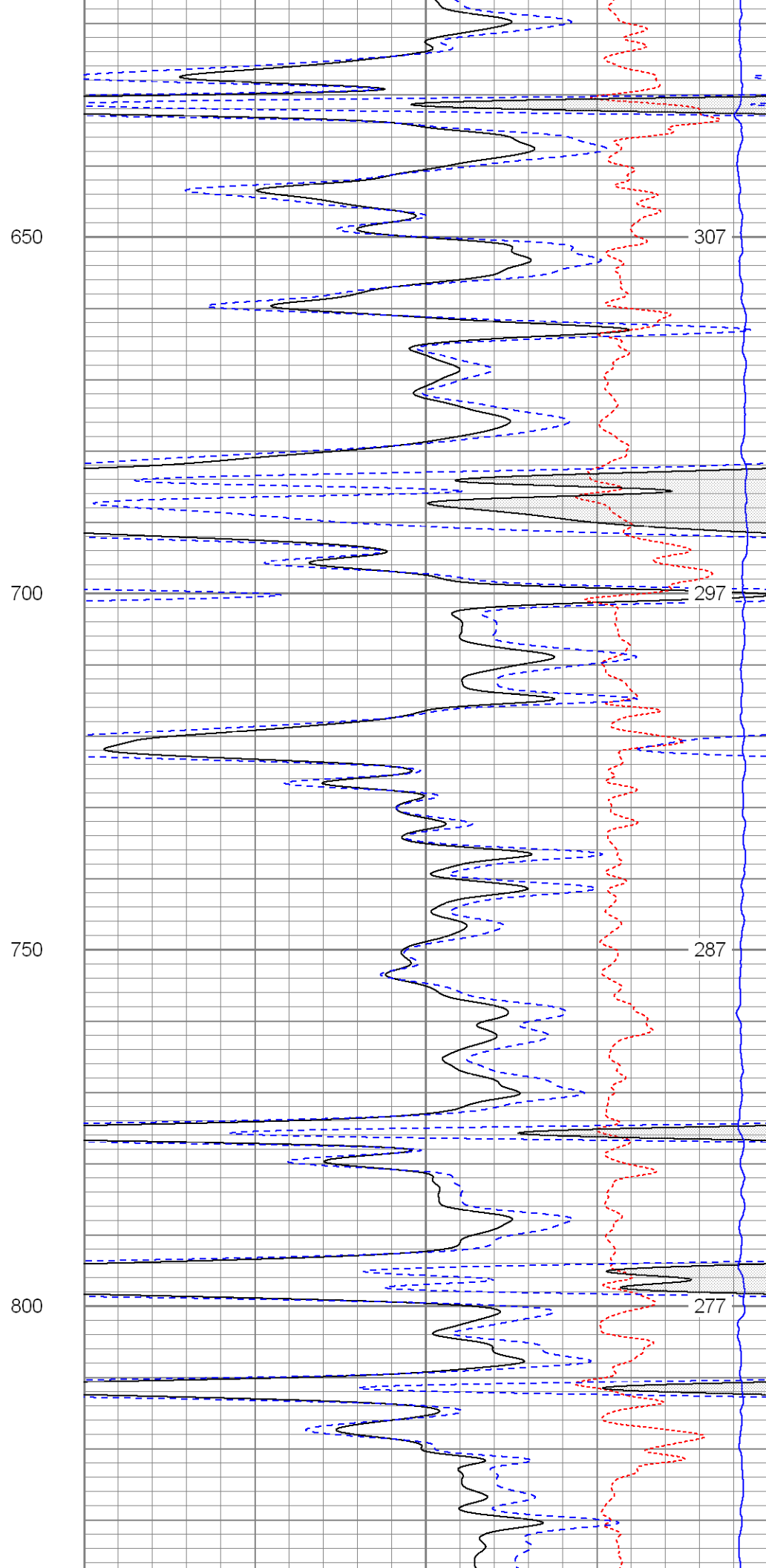
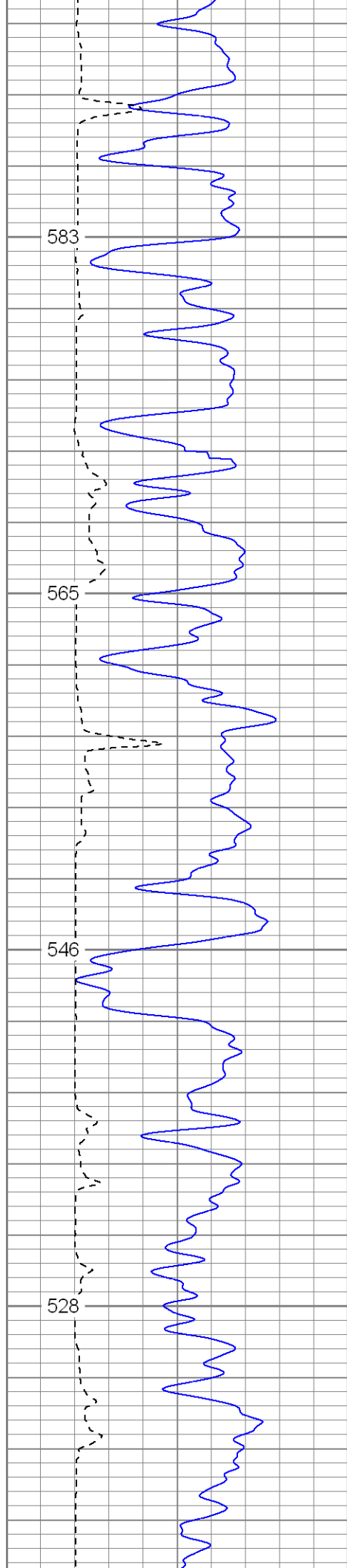
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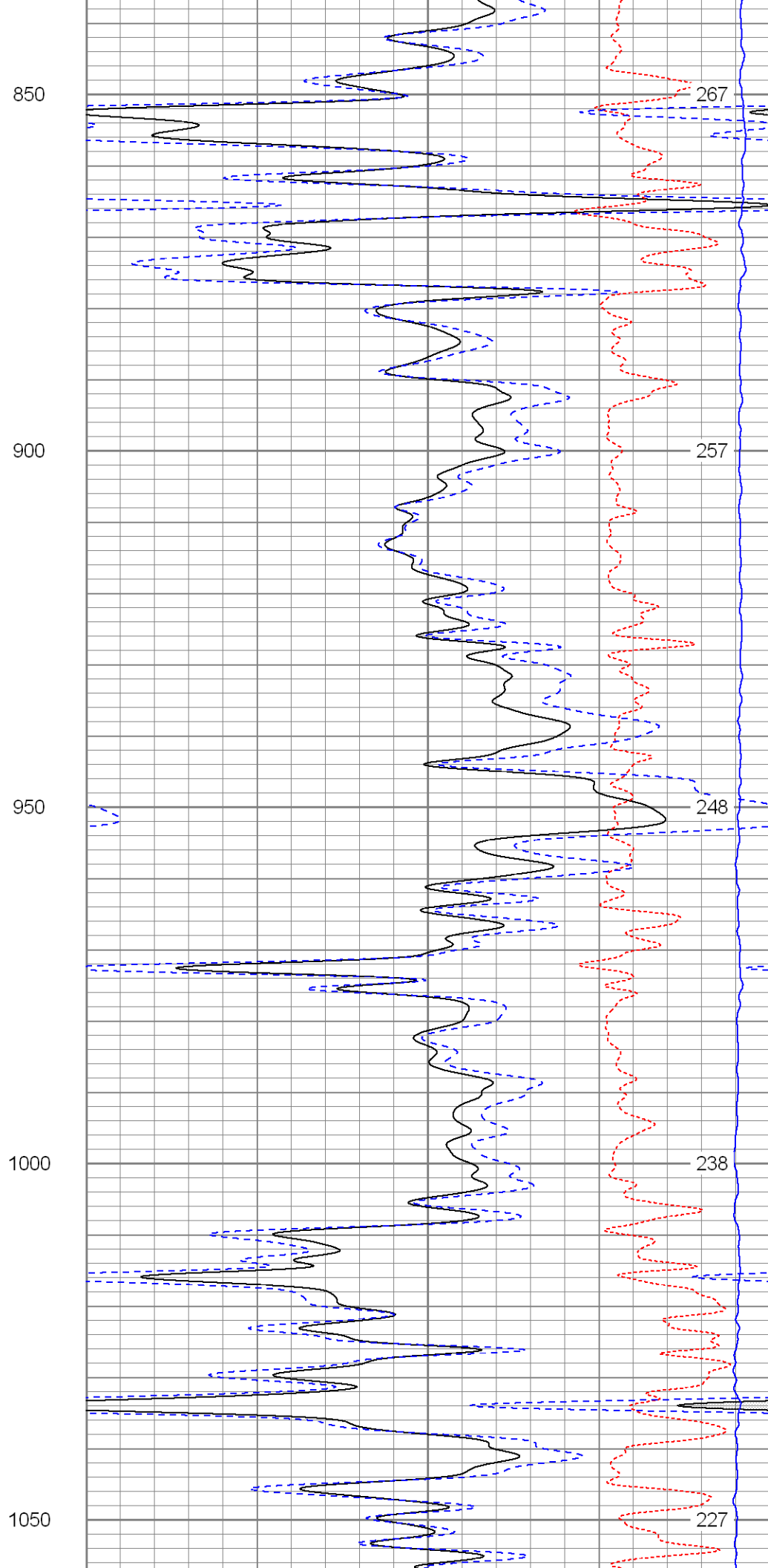
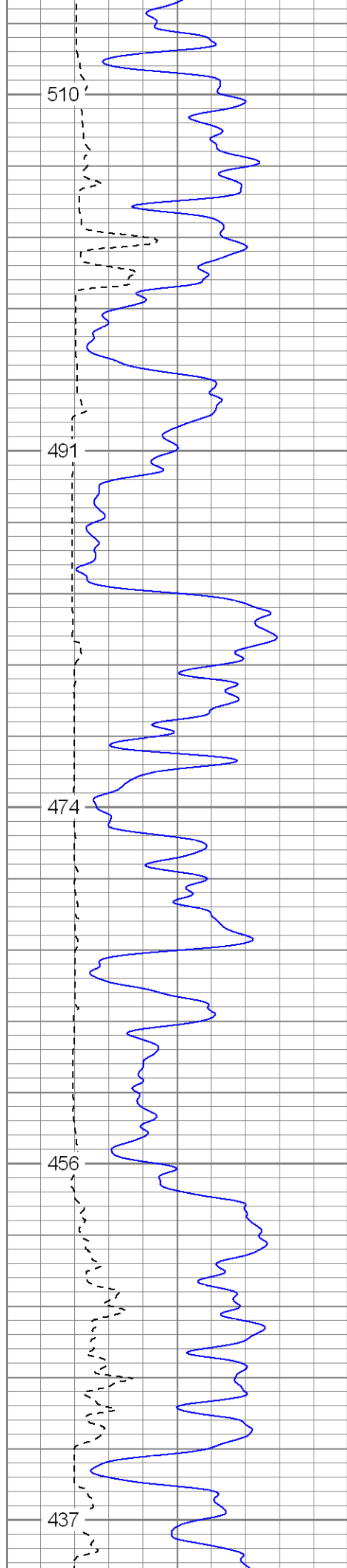
# Main Pass

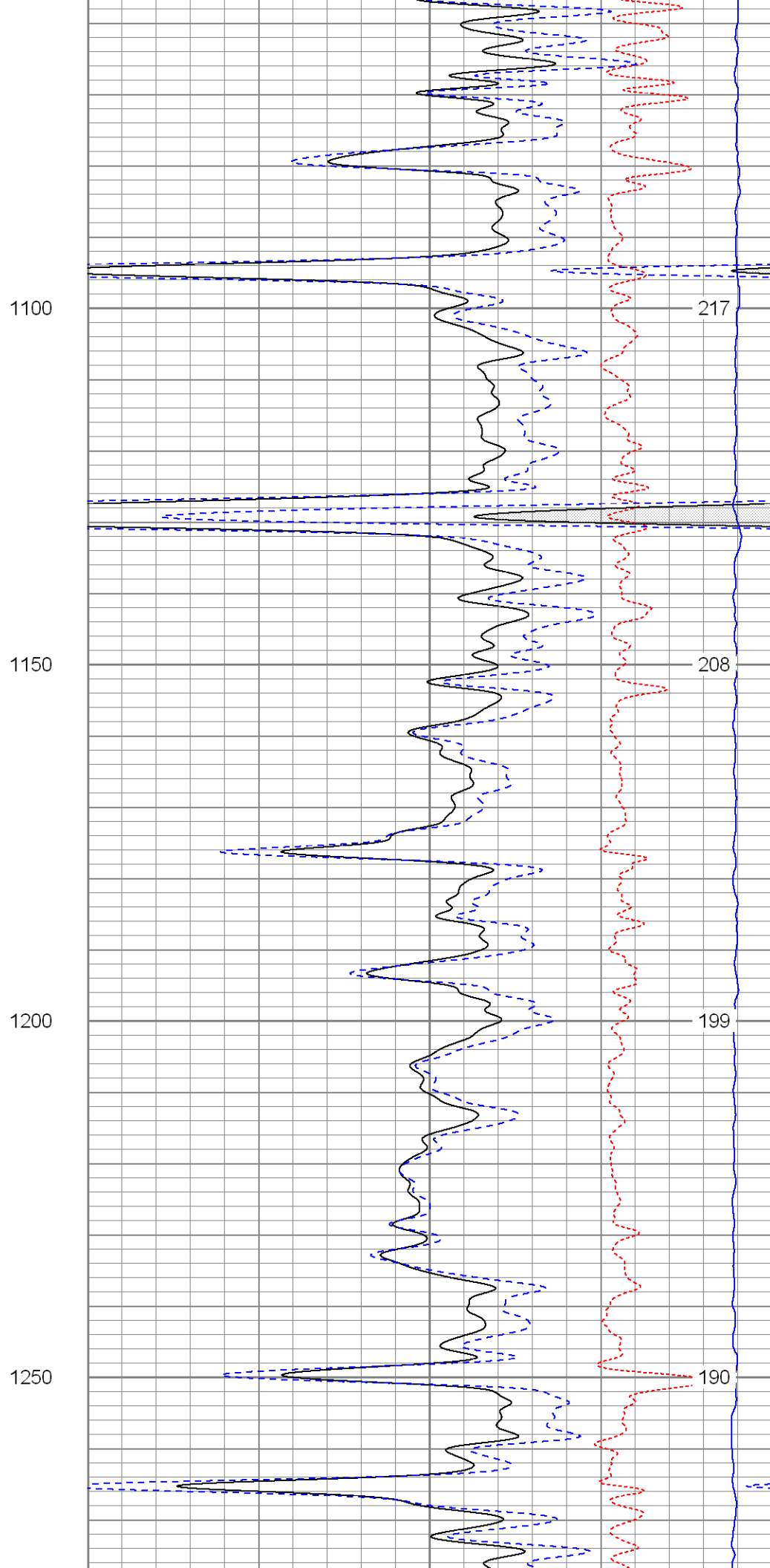
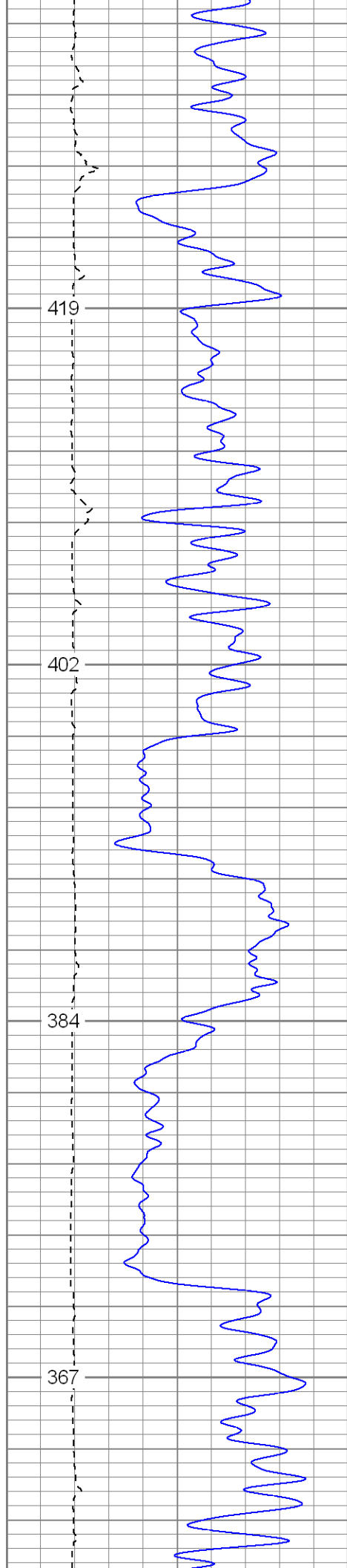
Database File: xtohr1609vx.db  
Dataset Pathname: pass4.1  
Presentation Format: cdl  
Dataset Creation: Mon Apr 16 00:25:44 2007 by Calc Open-Cased 061129  
Charted by: Depth in Feet scaled 1:240

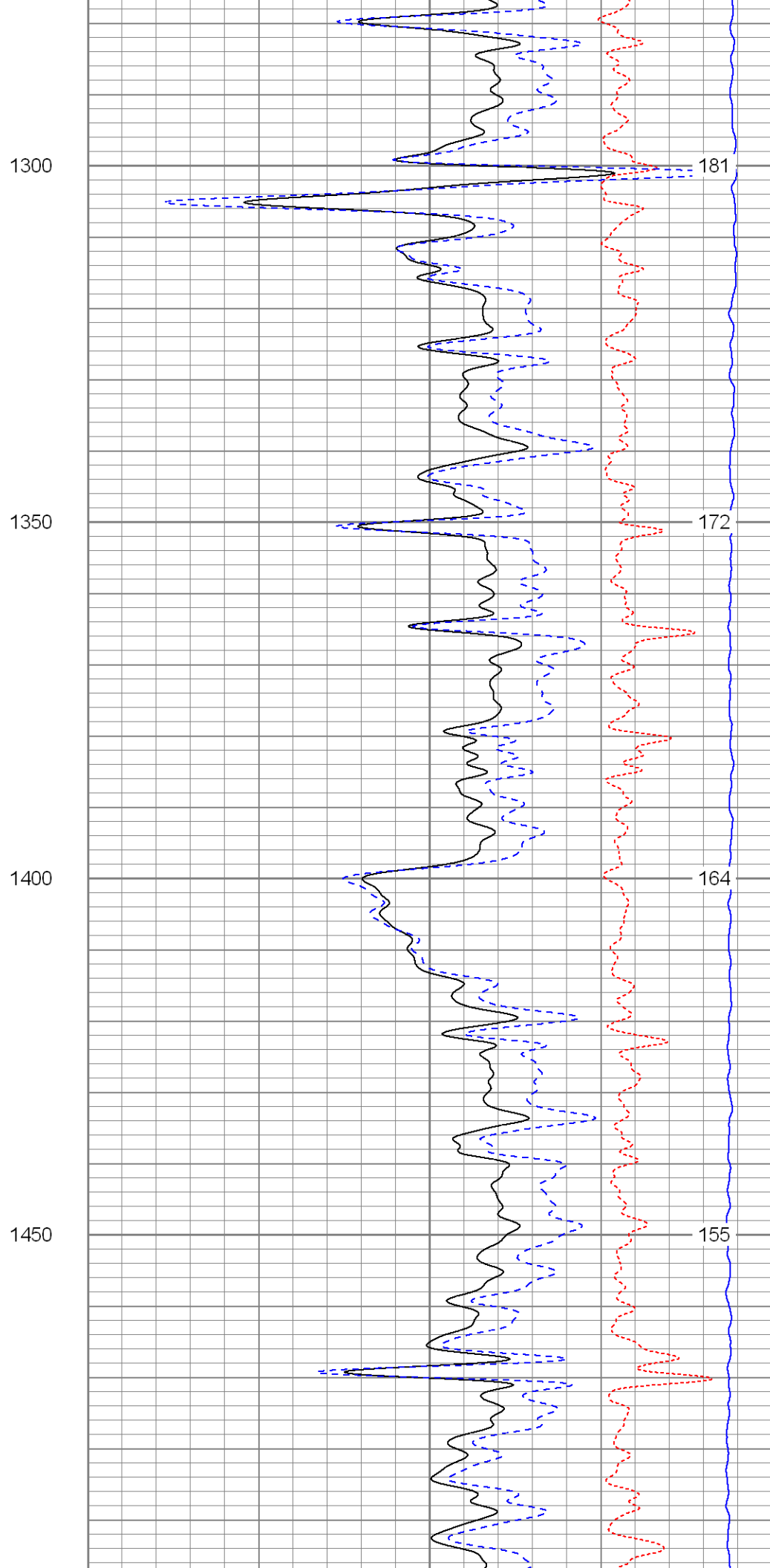
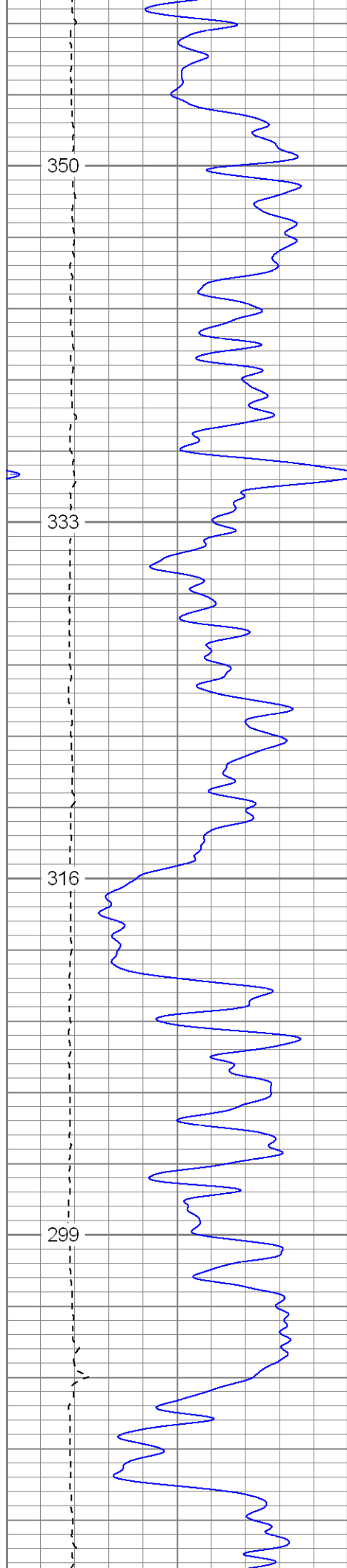
|   |           |     |      |             |     |
|---|-----------|-----|------|-------------|-----|
| 0 | GR (GAPI) | 200 | 1    | RHOB (g/cc) | 2   |
| 6 | DCAL (in) | 16  | 30   | DPOR (pu)   | -10 |
|   |           |     |      |             |     |
|   |           |     | -0.5 | RHOC (g/cc) | 0.5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

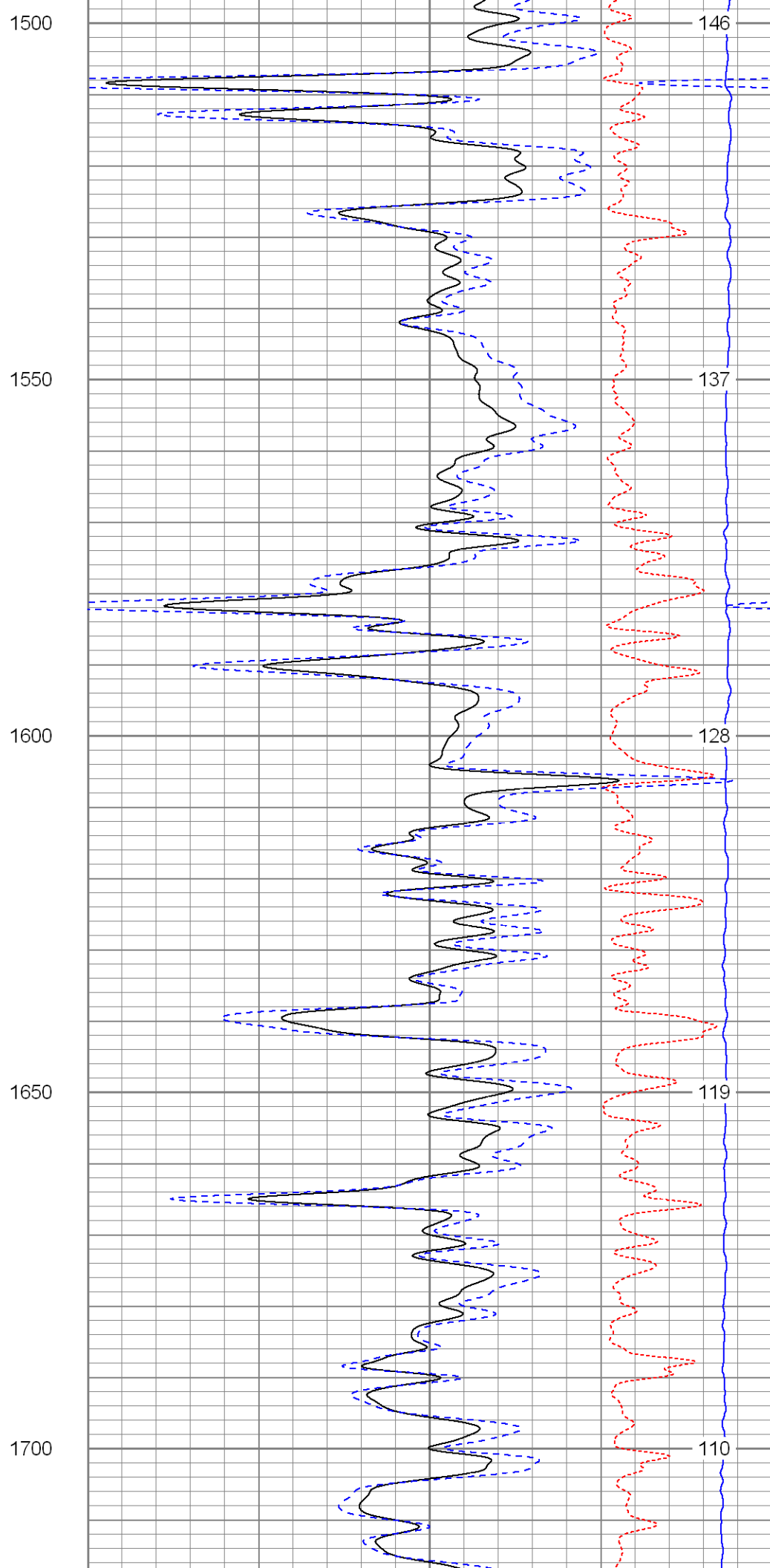
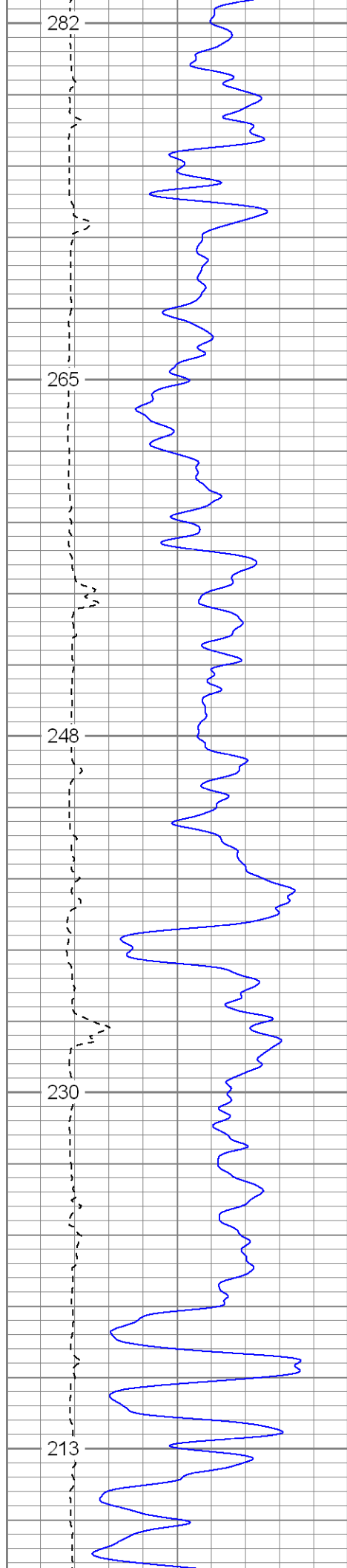


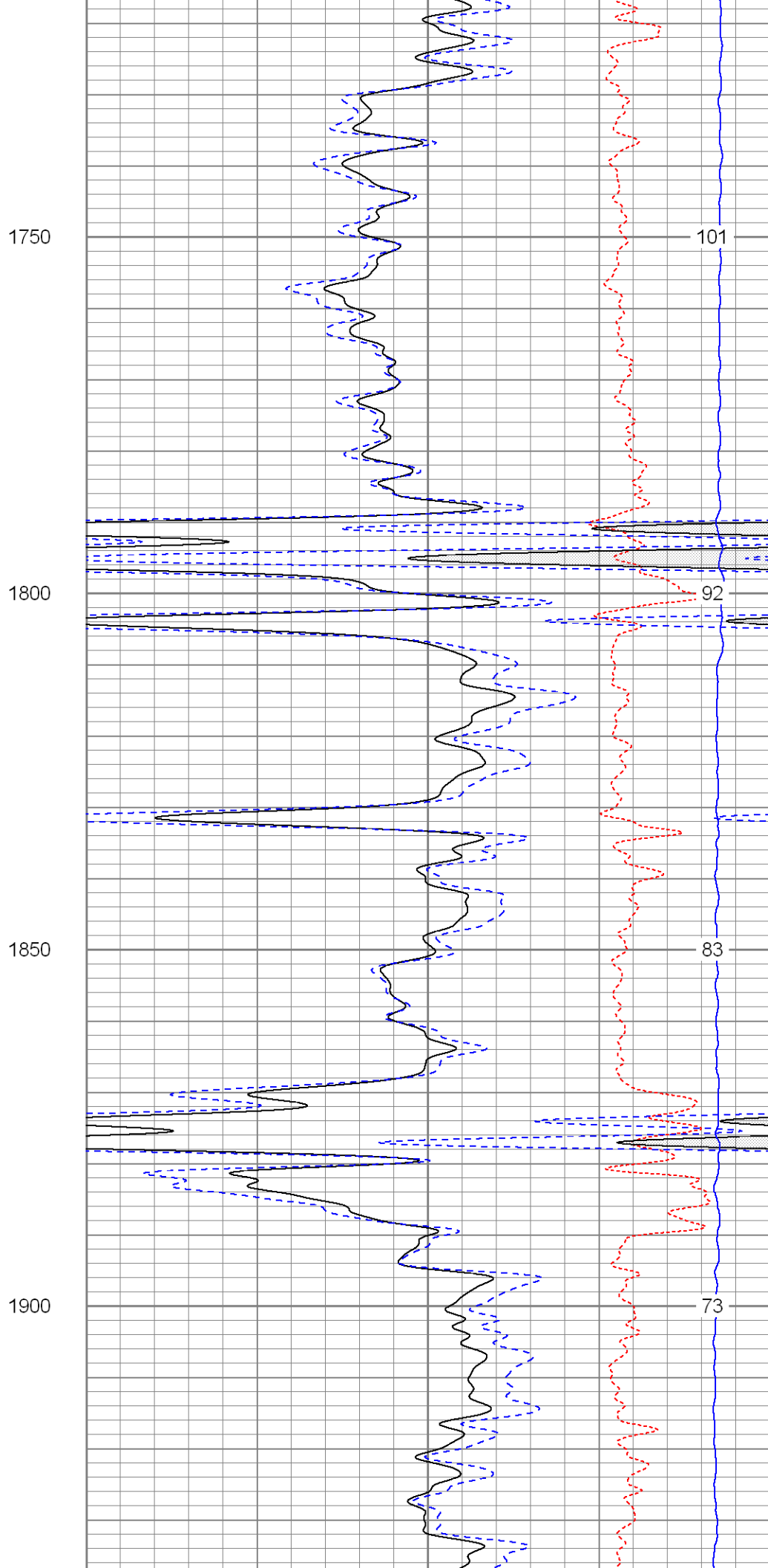
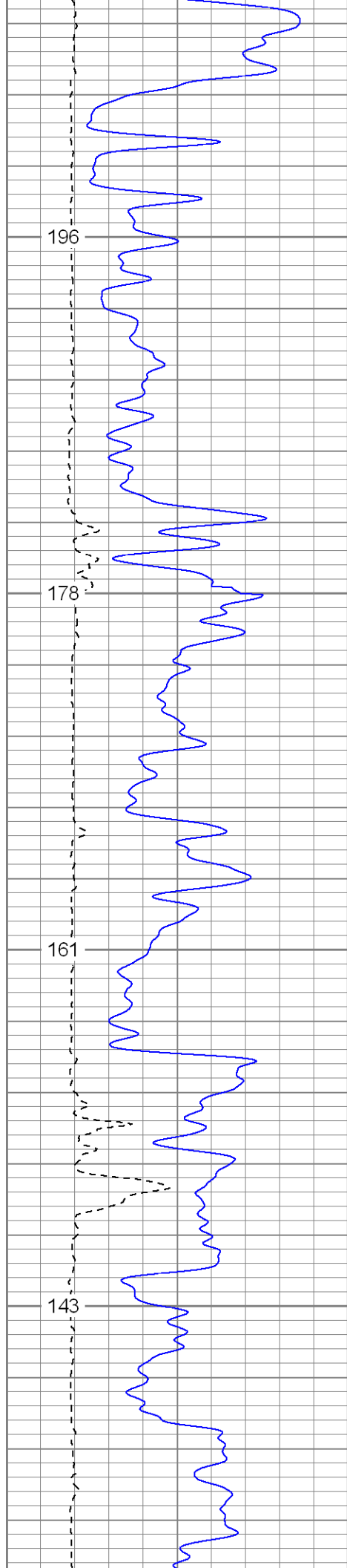




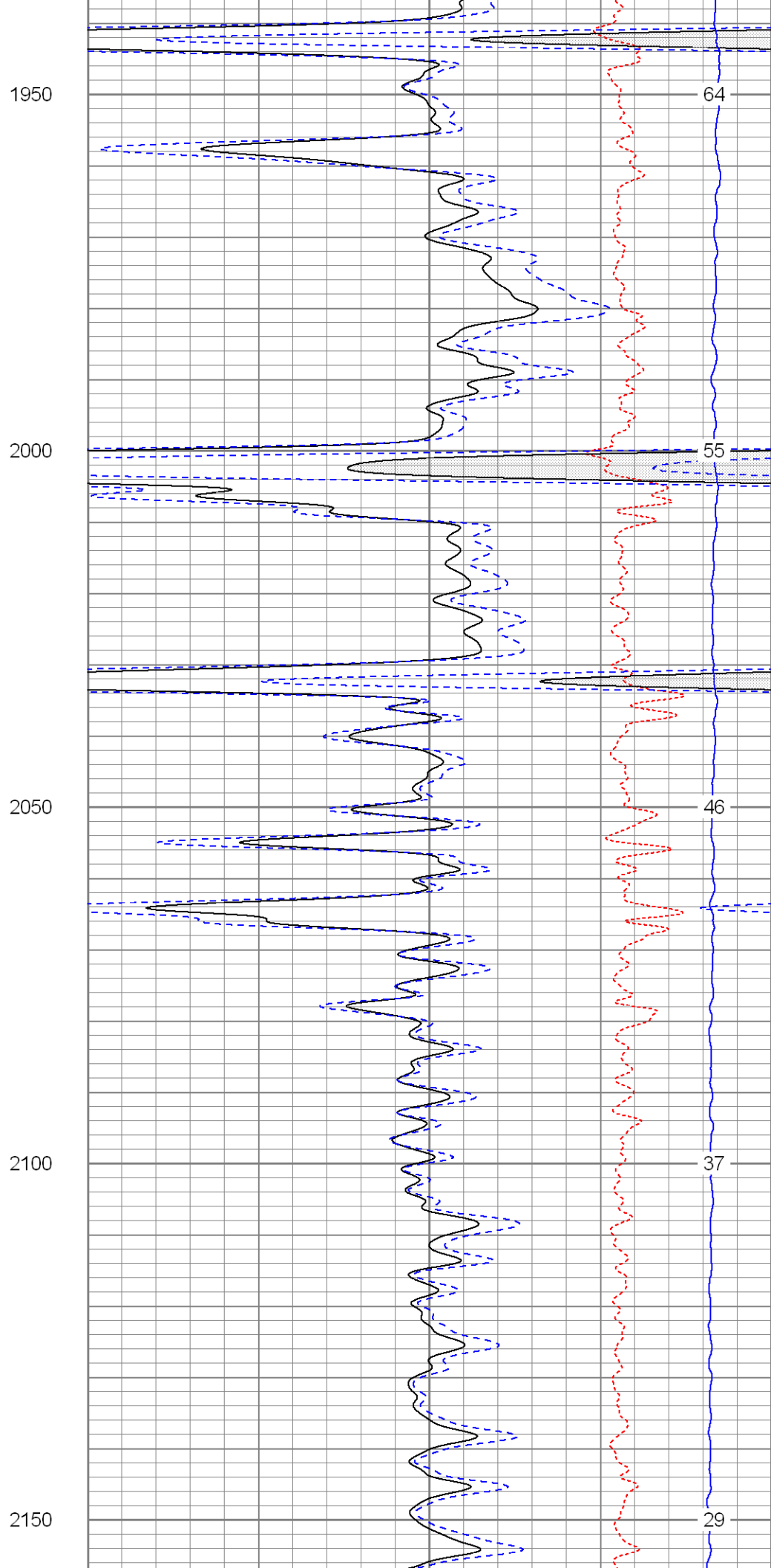
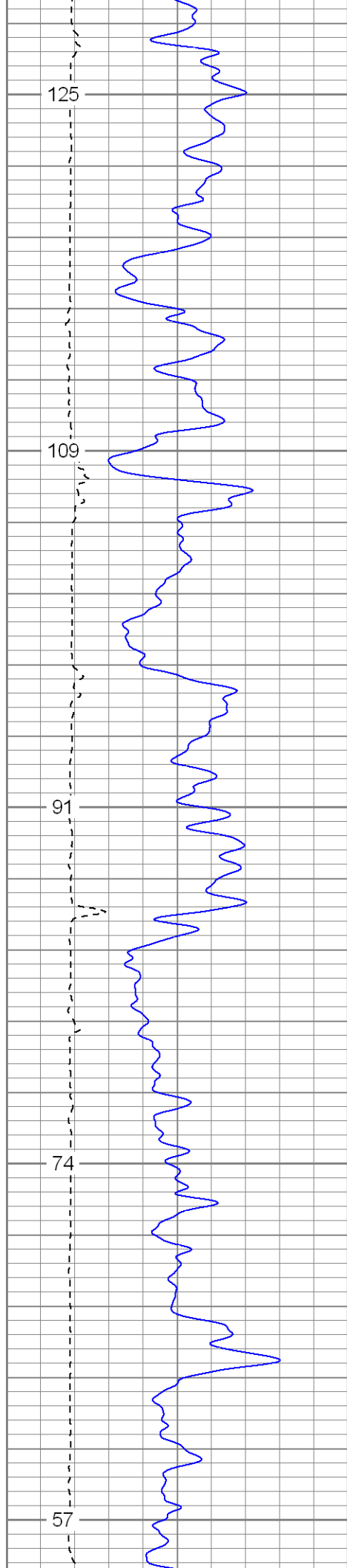


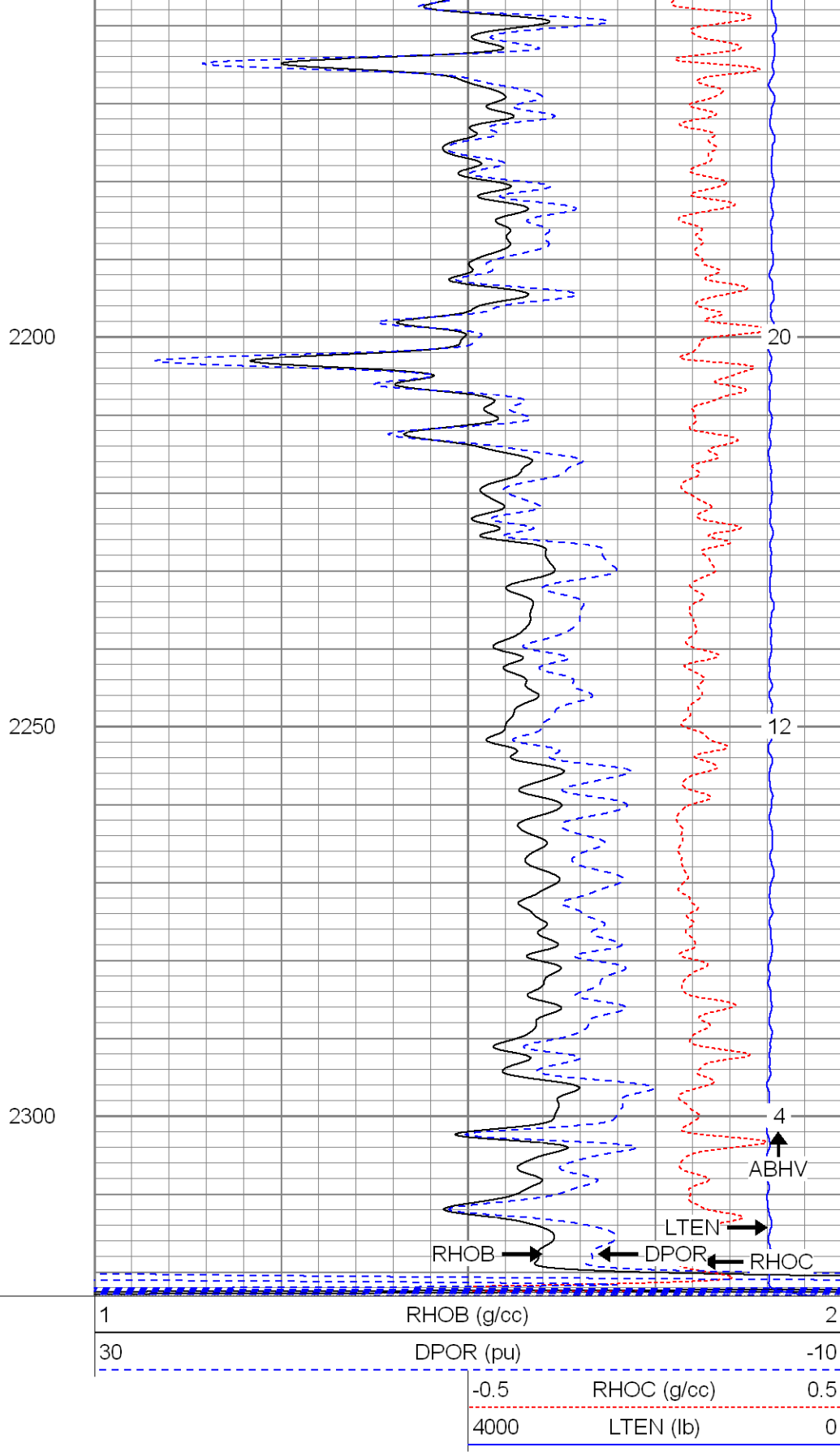
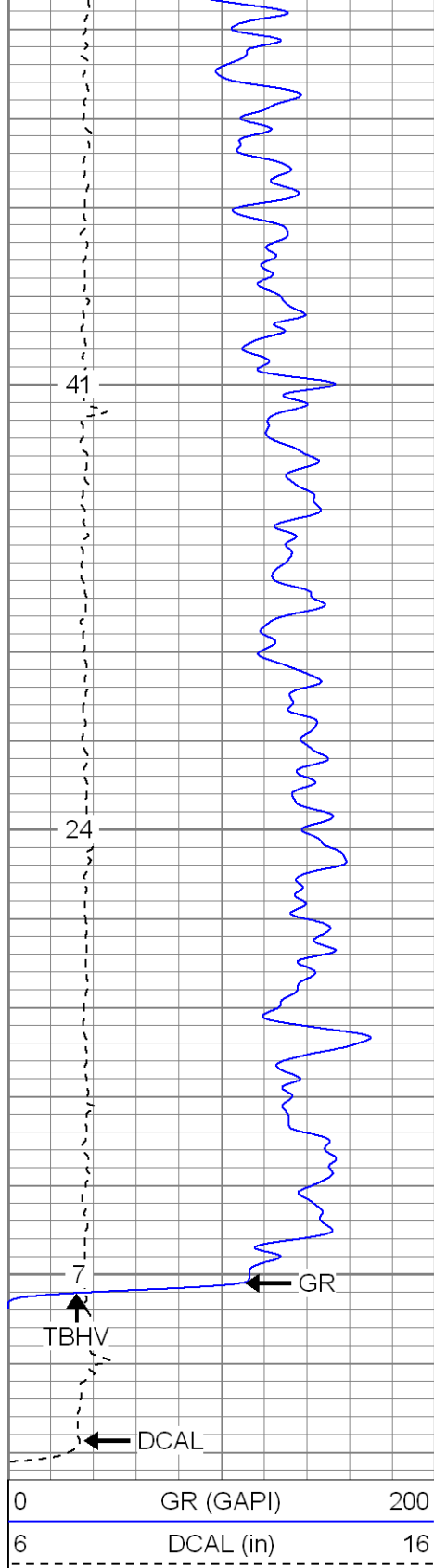












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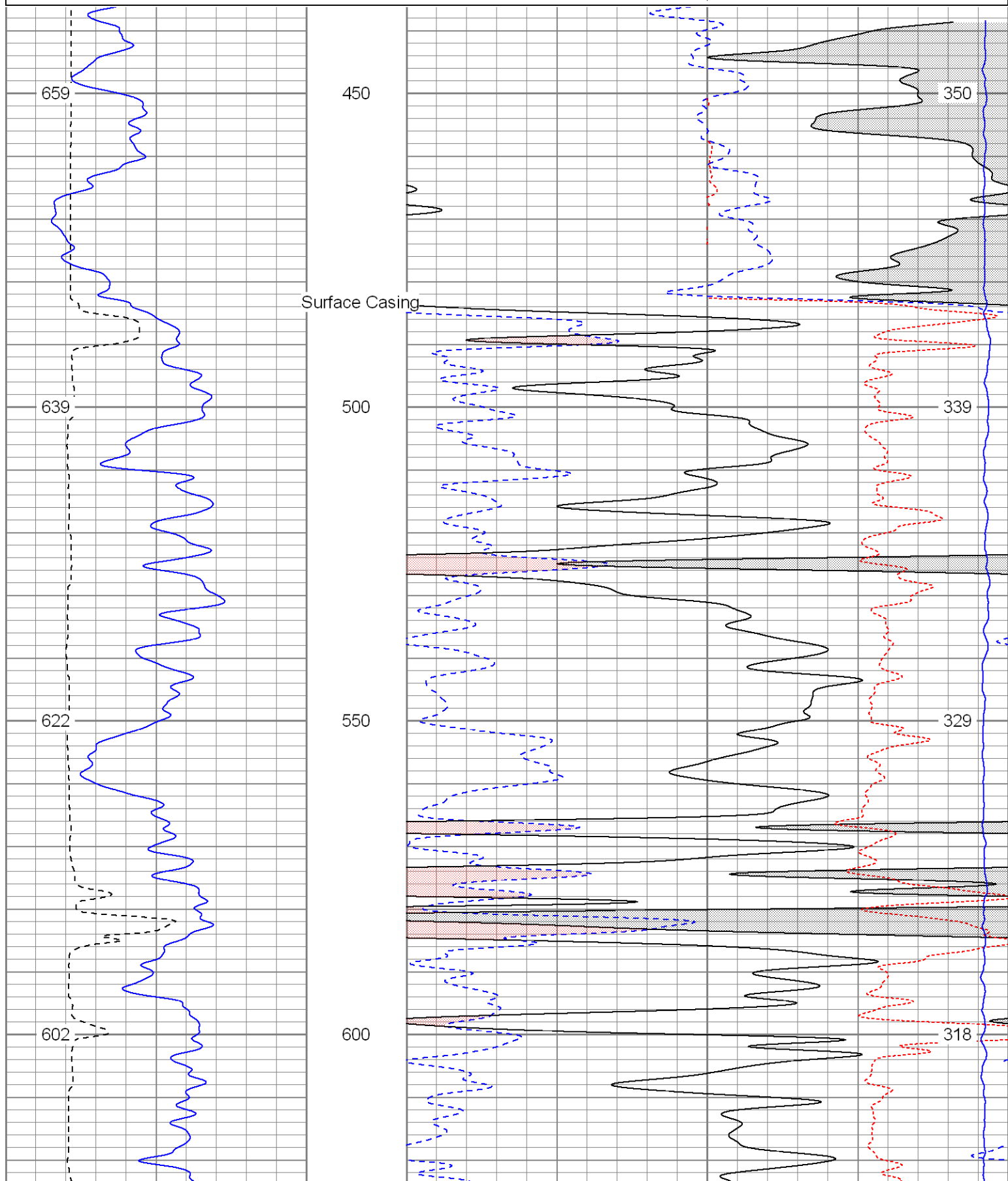
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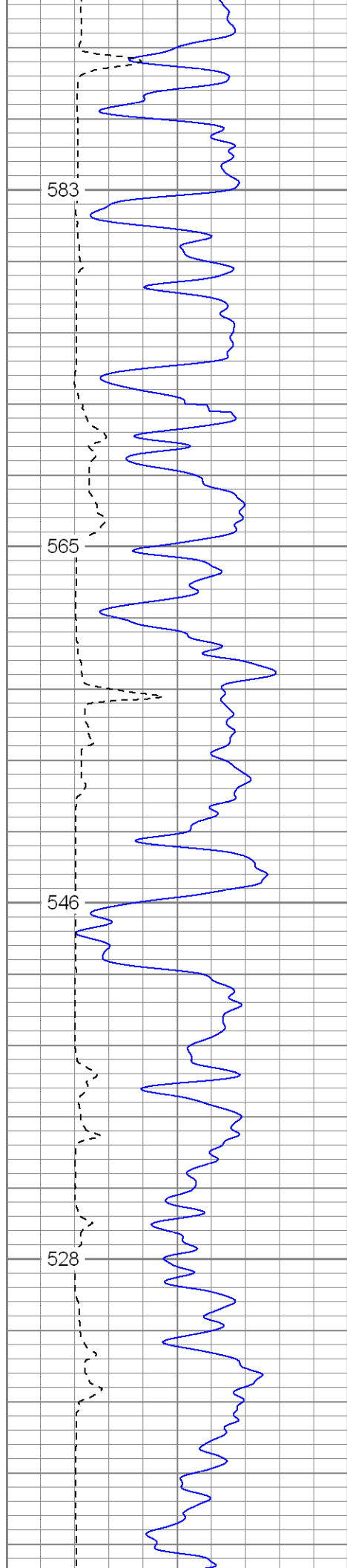
# Main Pass

Database File: xtohr1609vx.db

Dataset Pathname: pass4.1

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



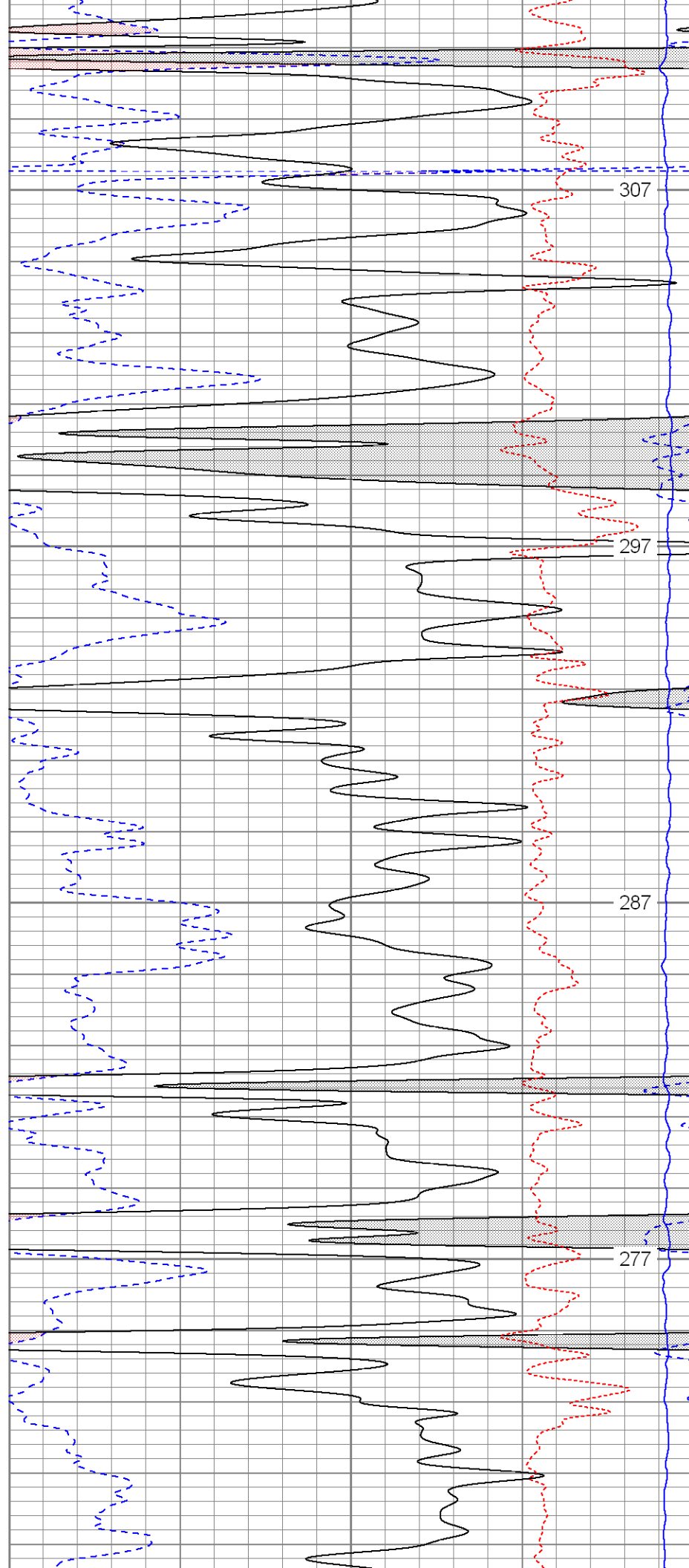


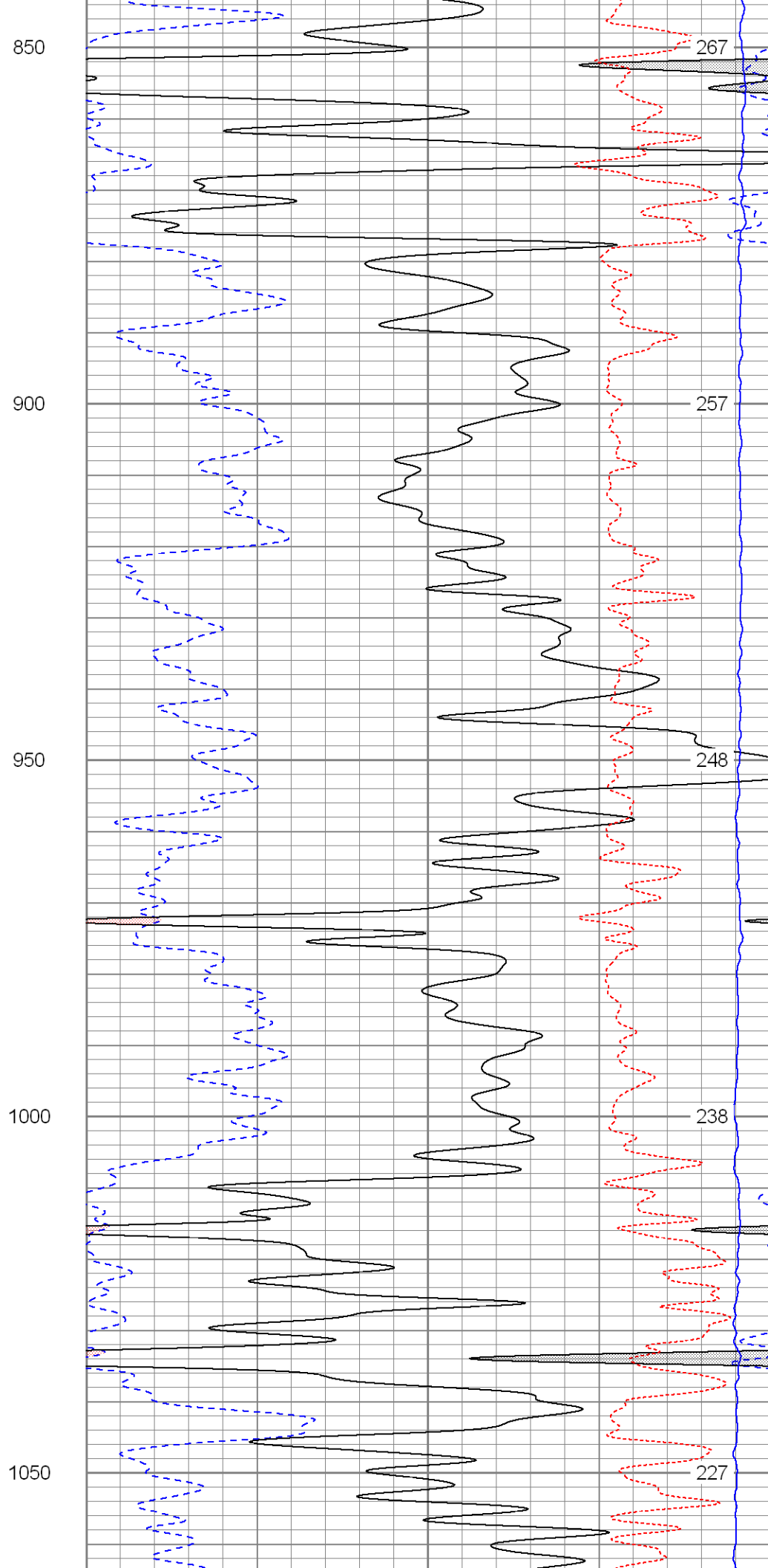
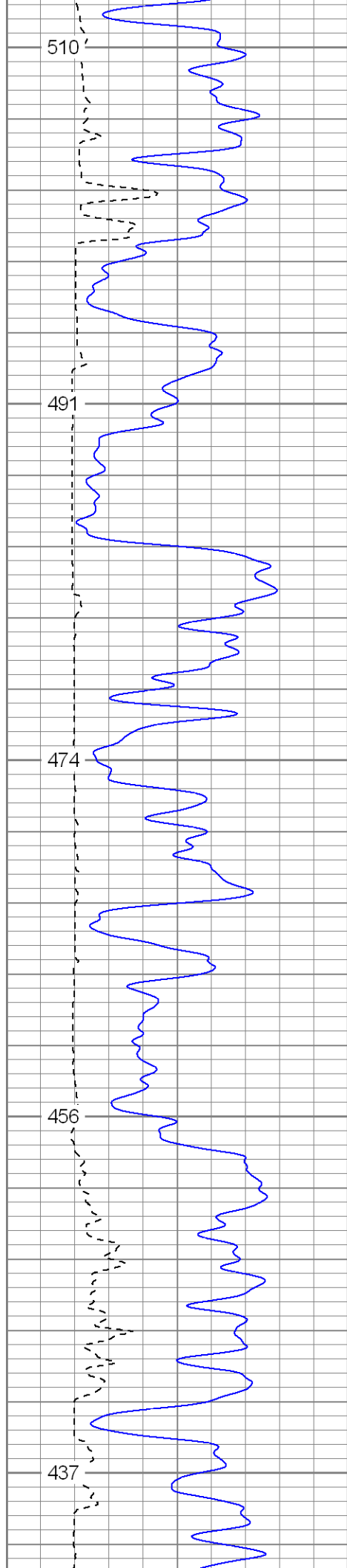
Fluid Level  
650

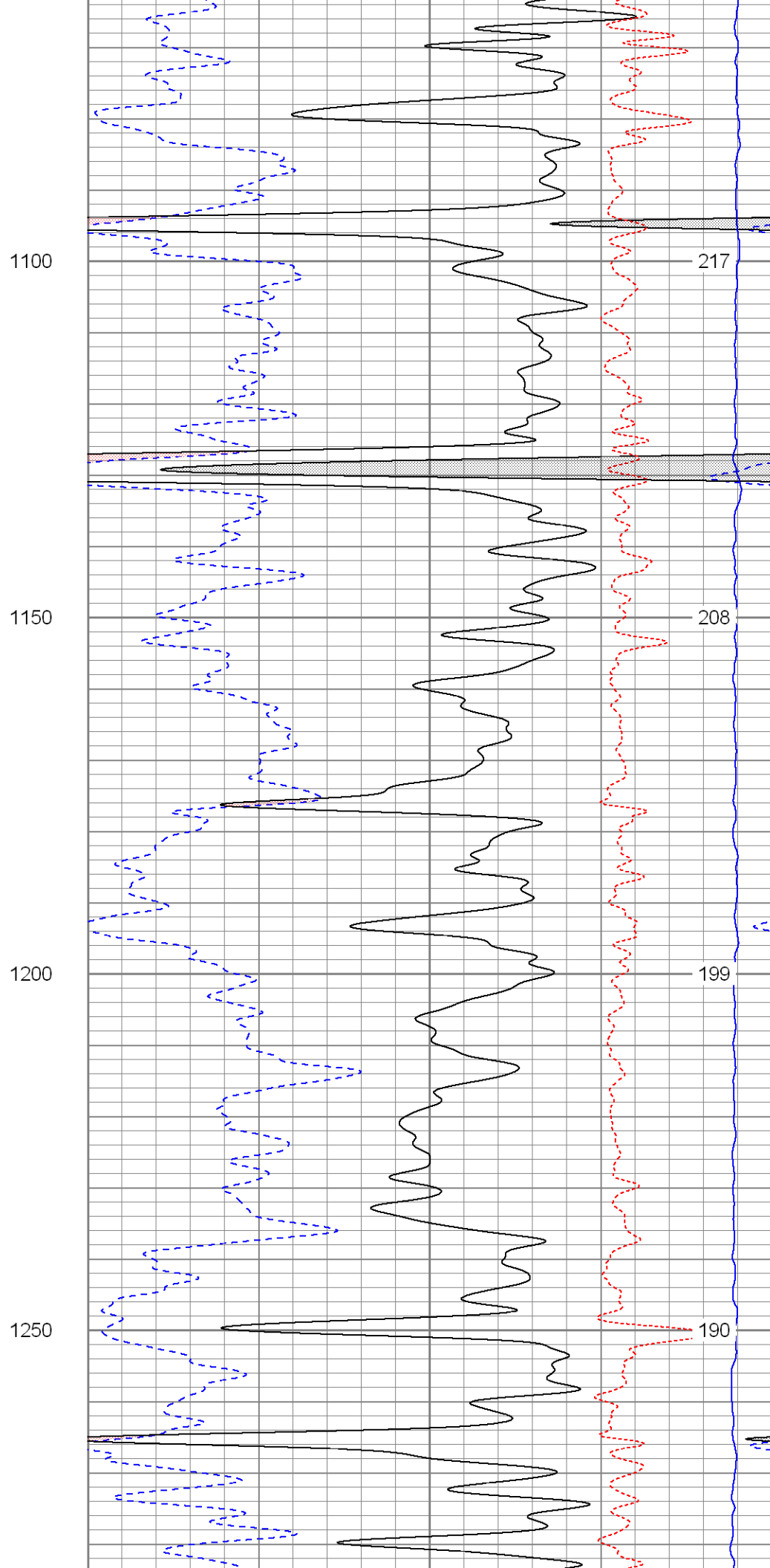
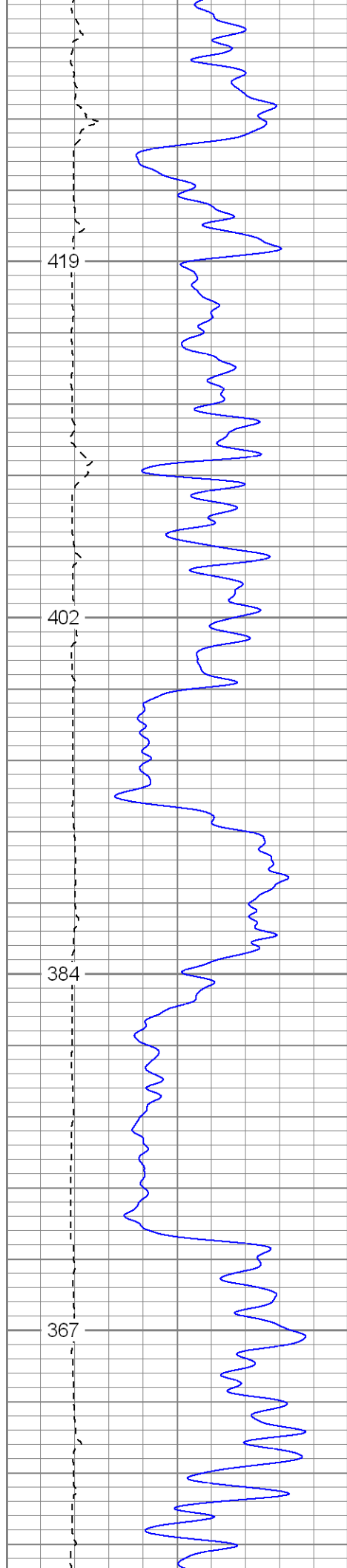
700

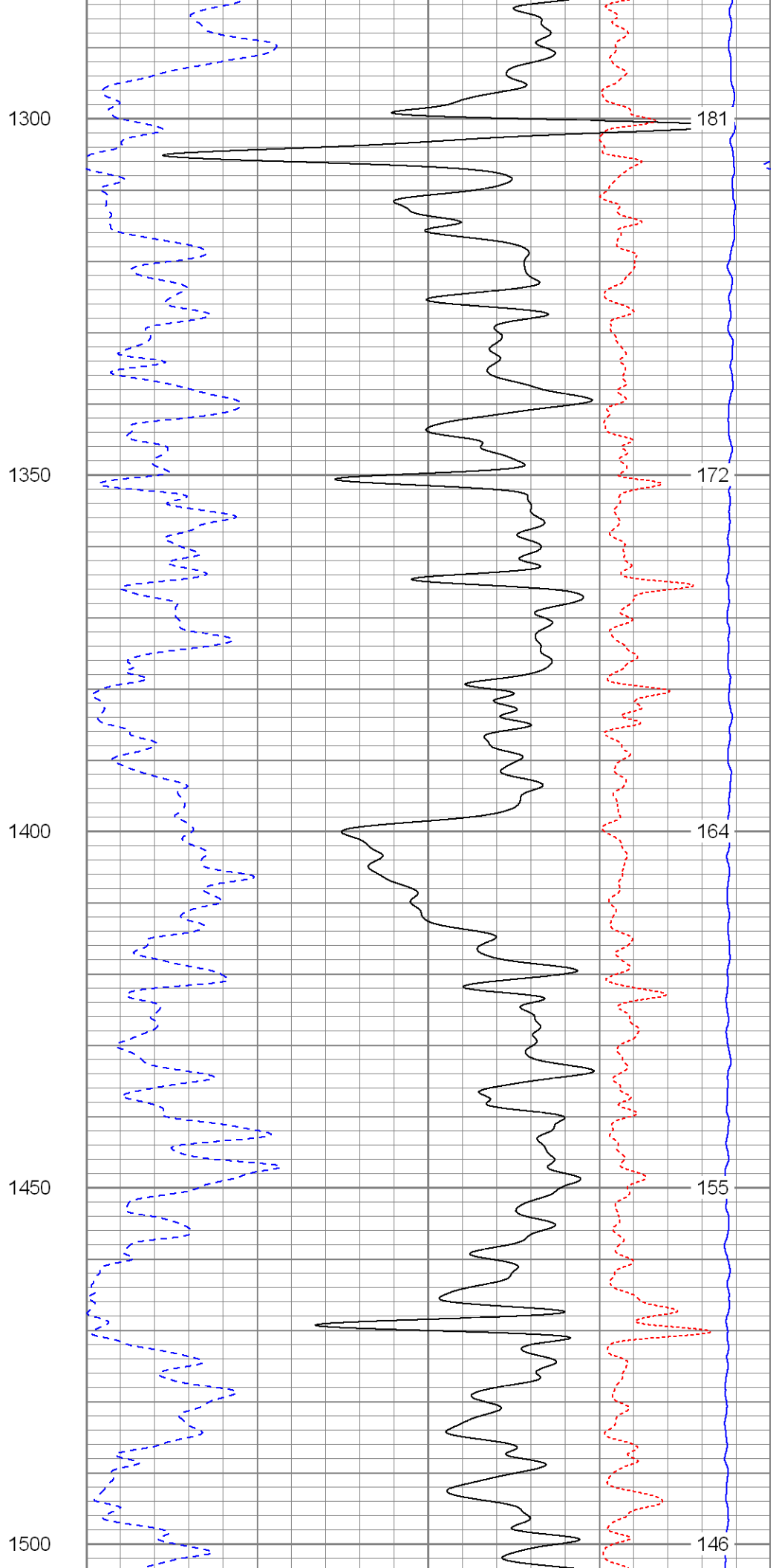
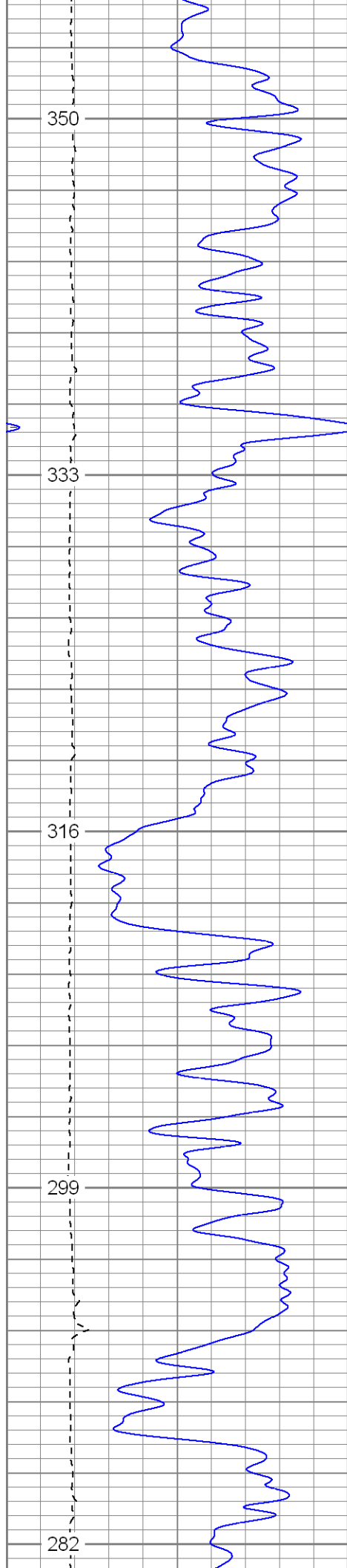
750

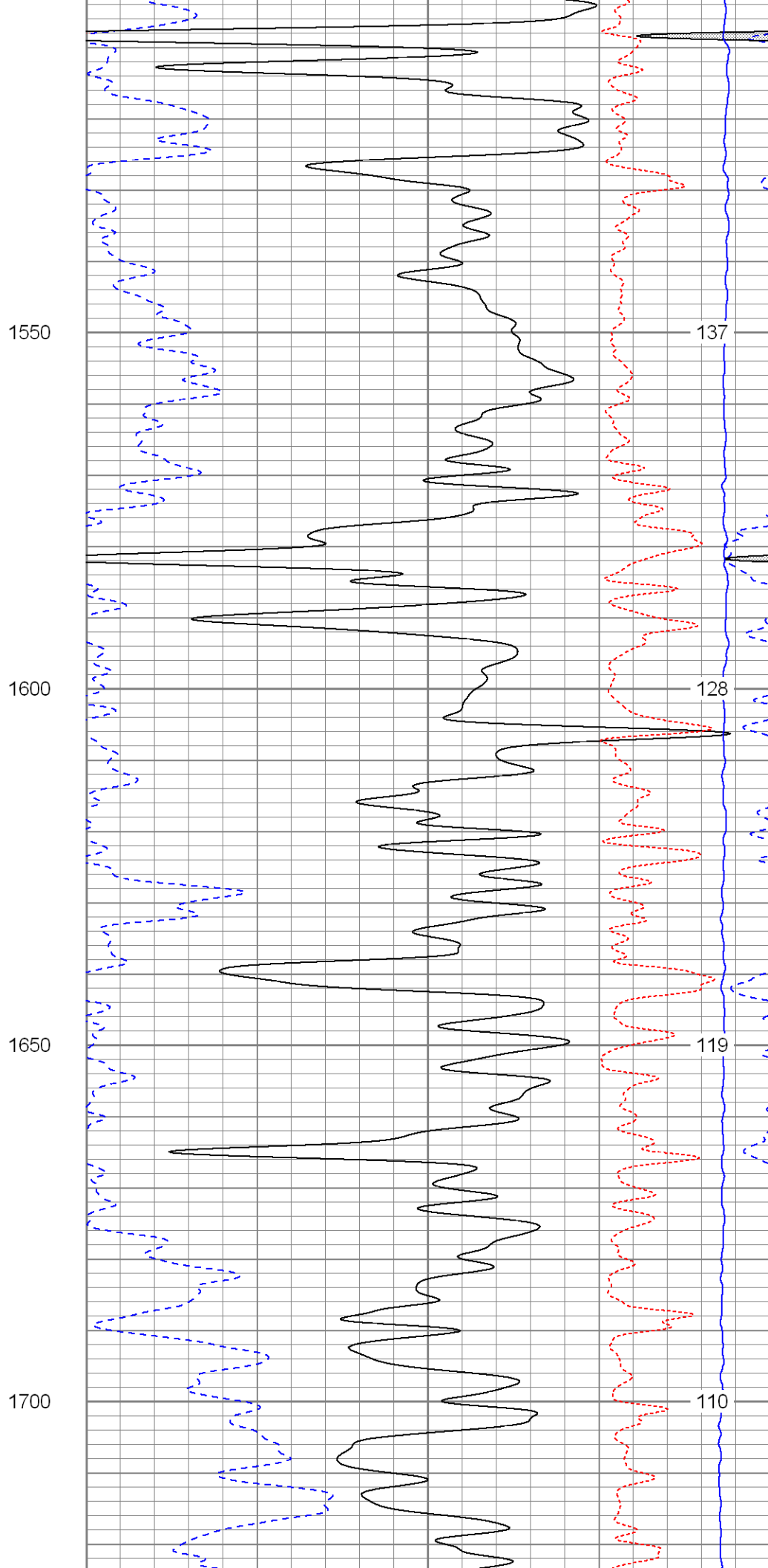
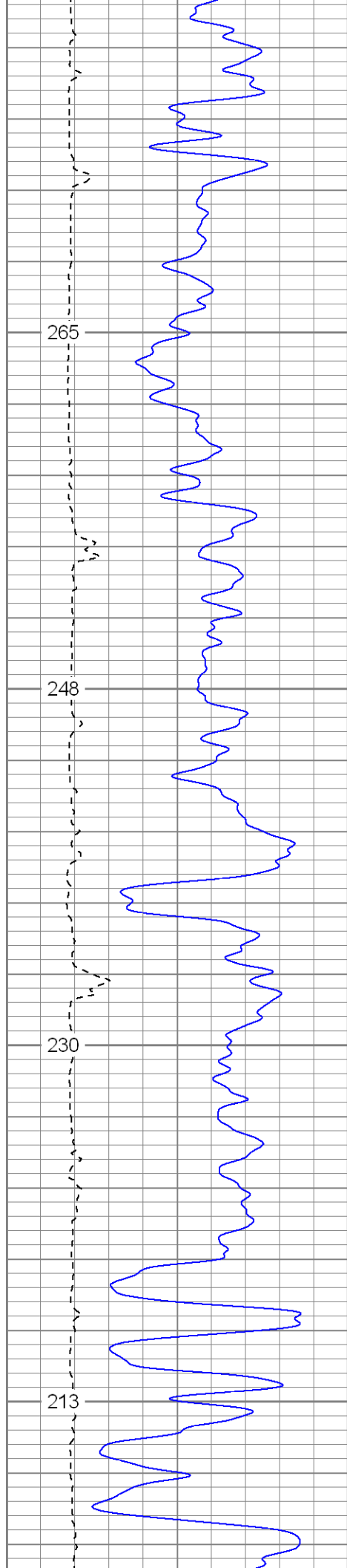
800



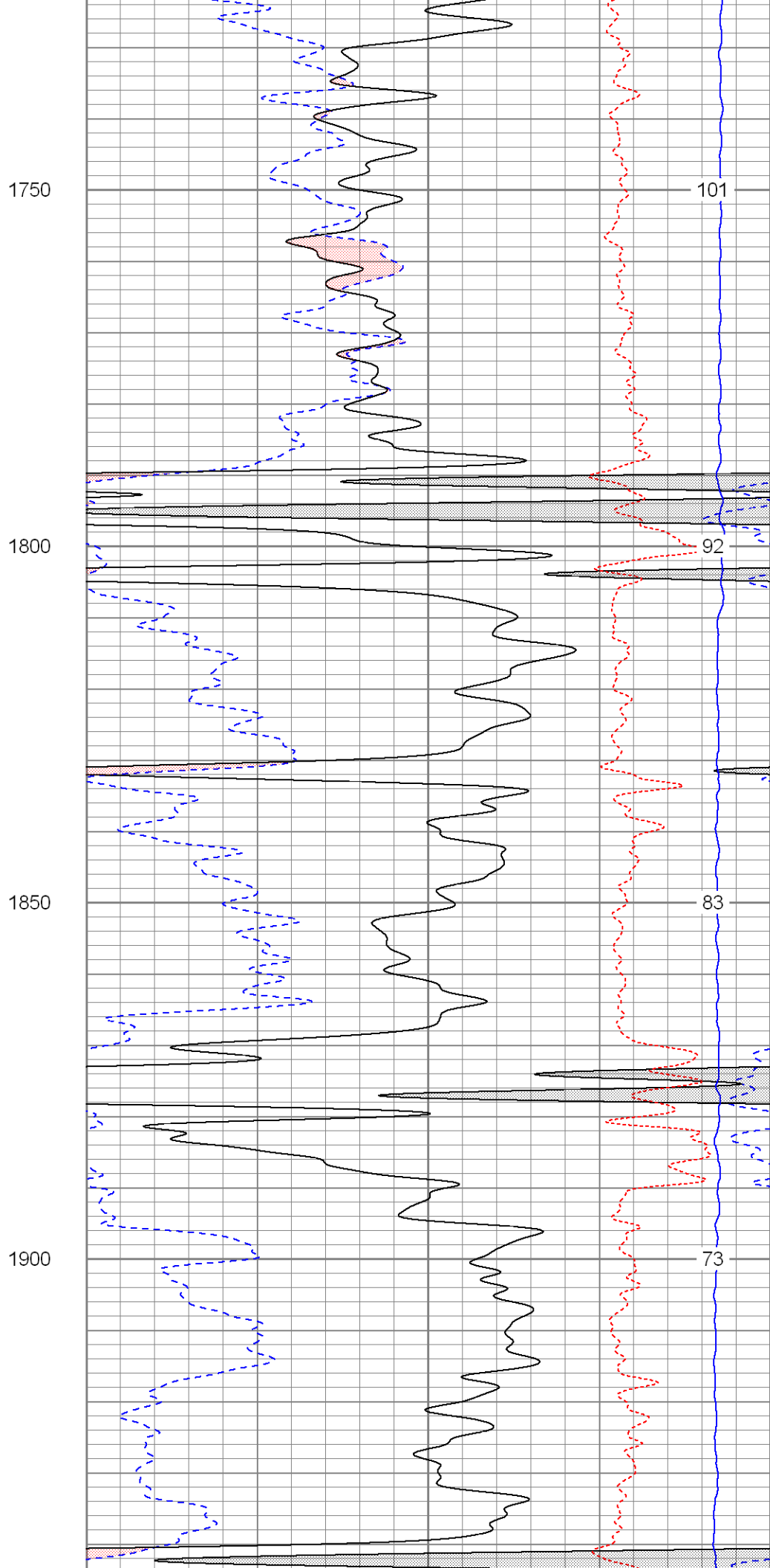
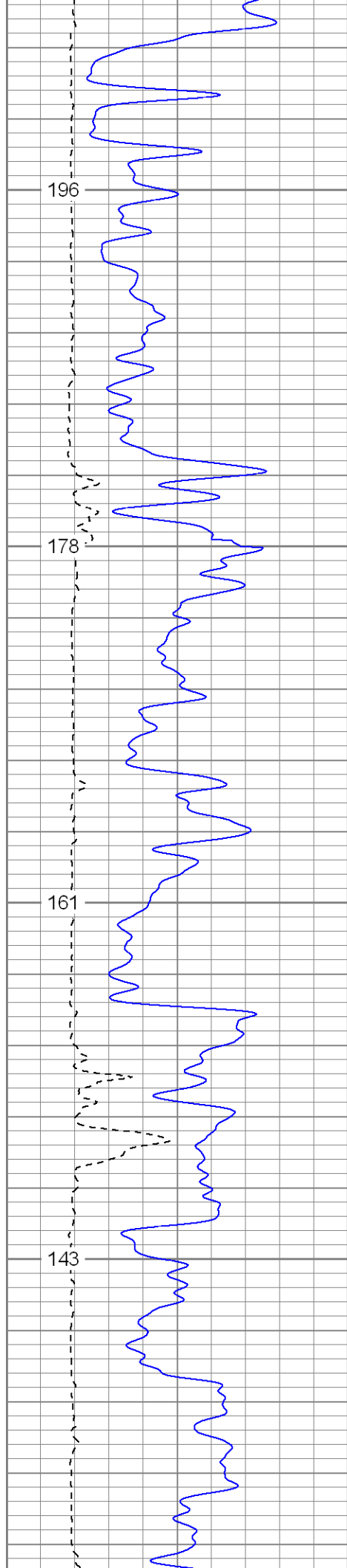


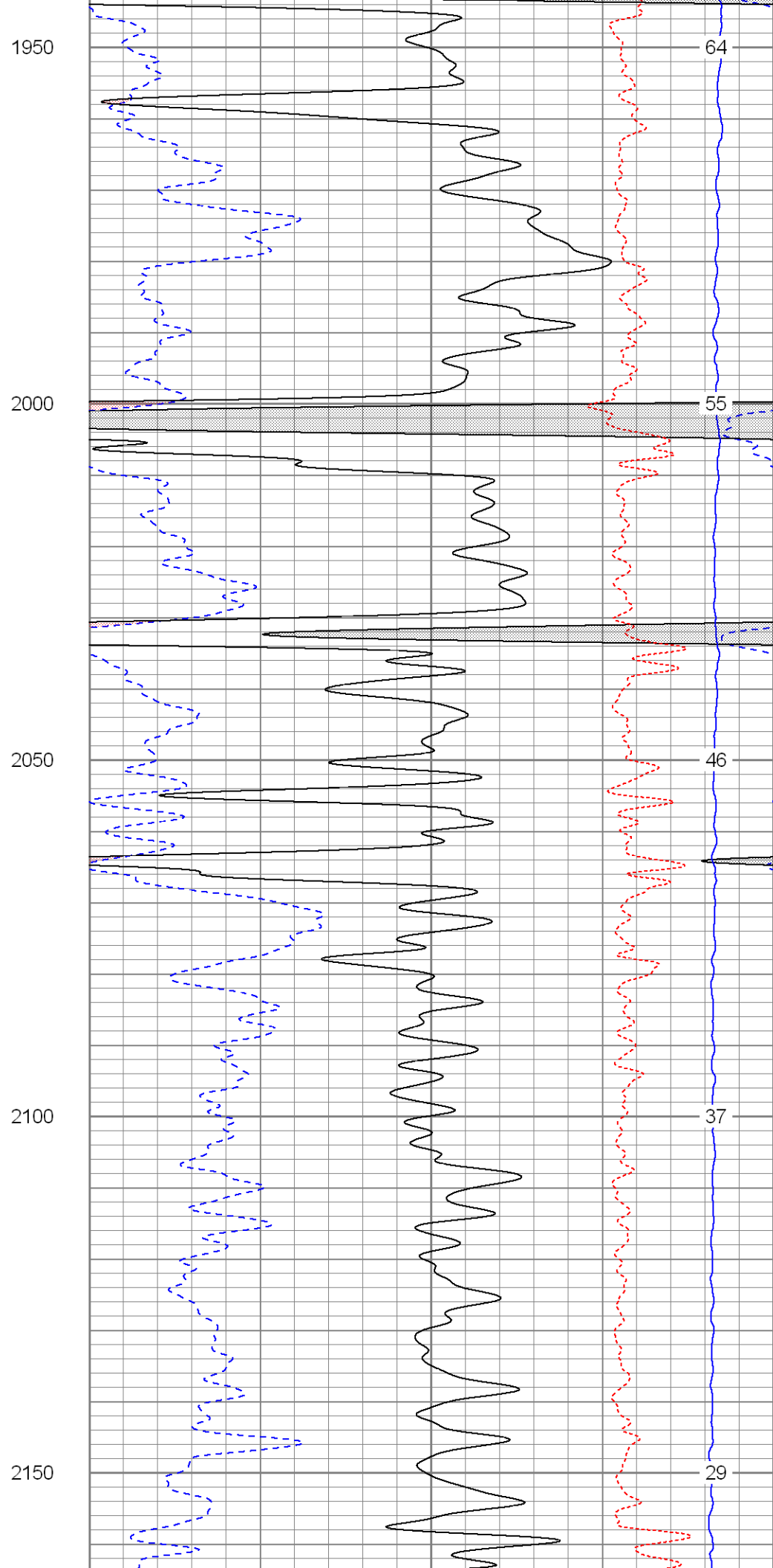
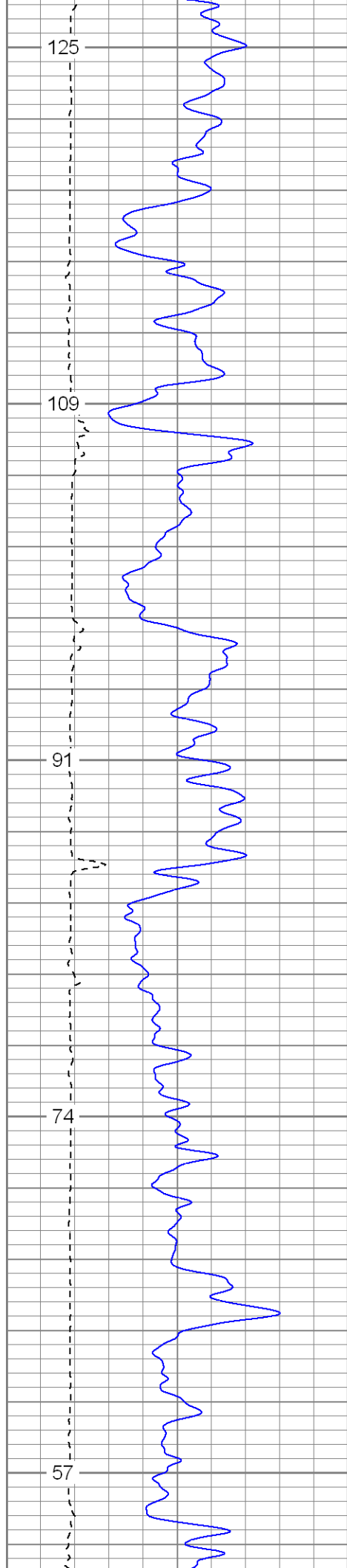


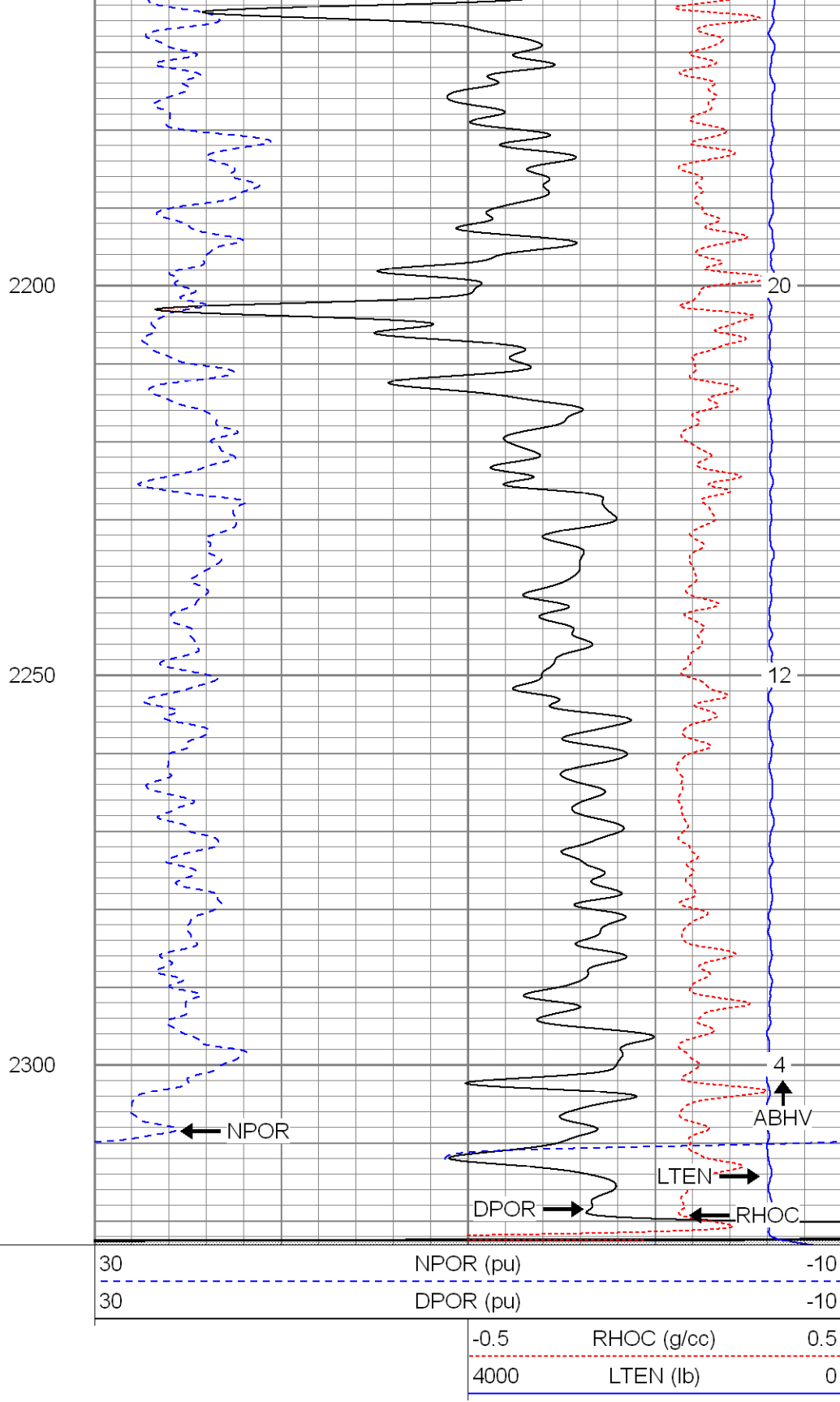
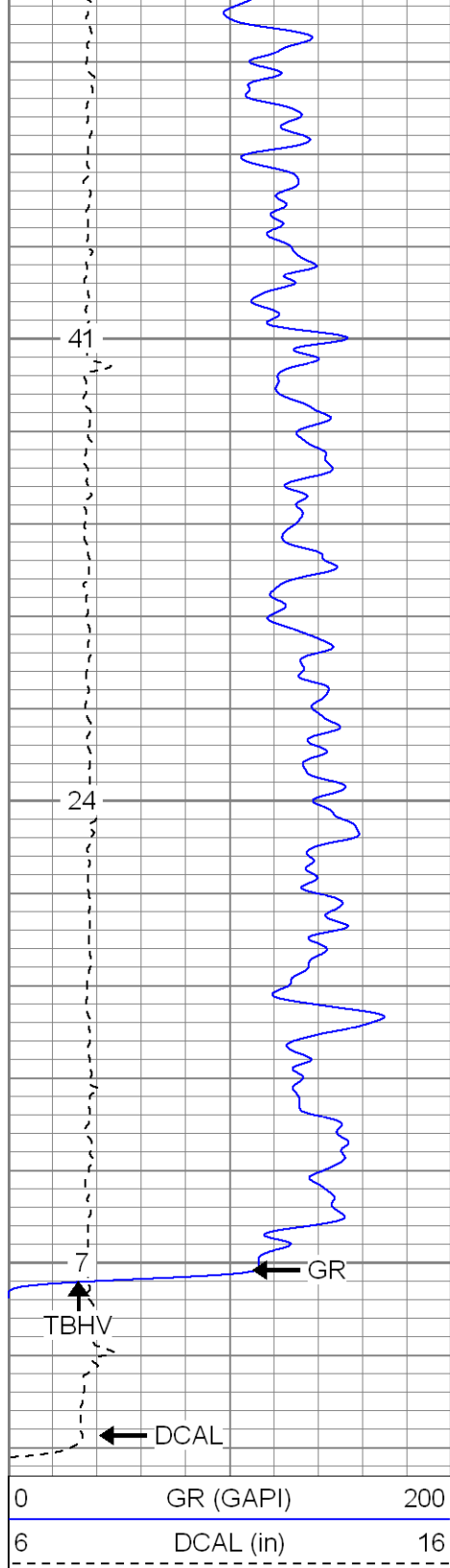












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# Repeat Section

Database File: xtohr1609vx.db  
 Dataset Pathname: pass3.1  
 Presentation Format: cdnl  
 Dataset Creation: Mon Apr 16 00:25:17 2007 by Calc Open-Cased 061129

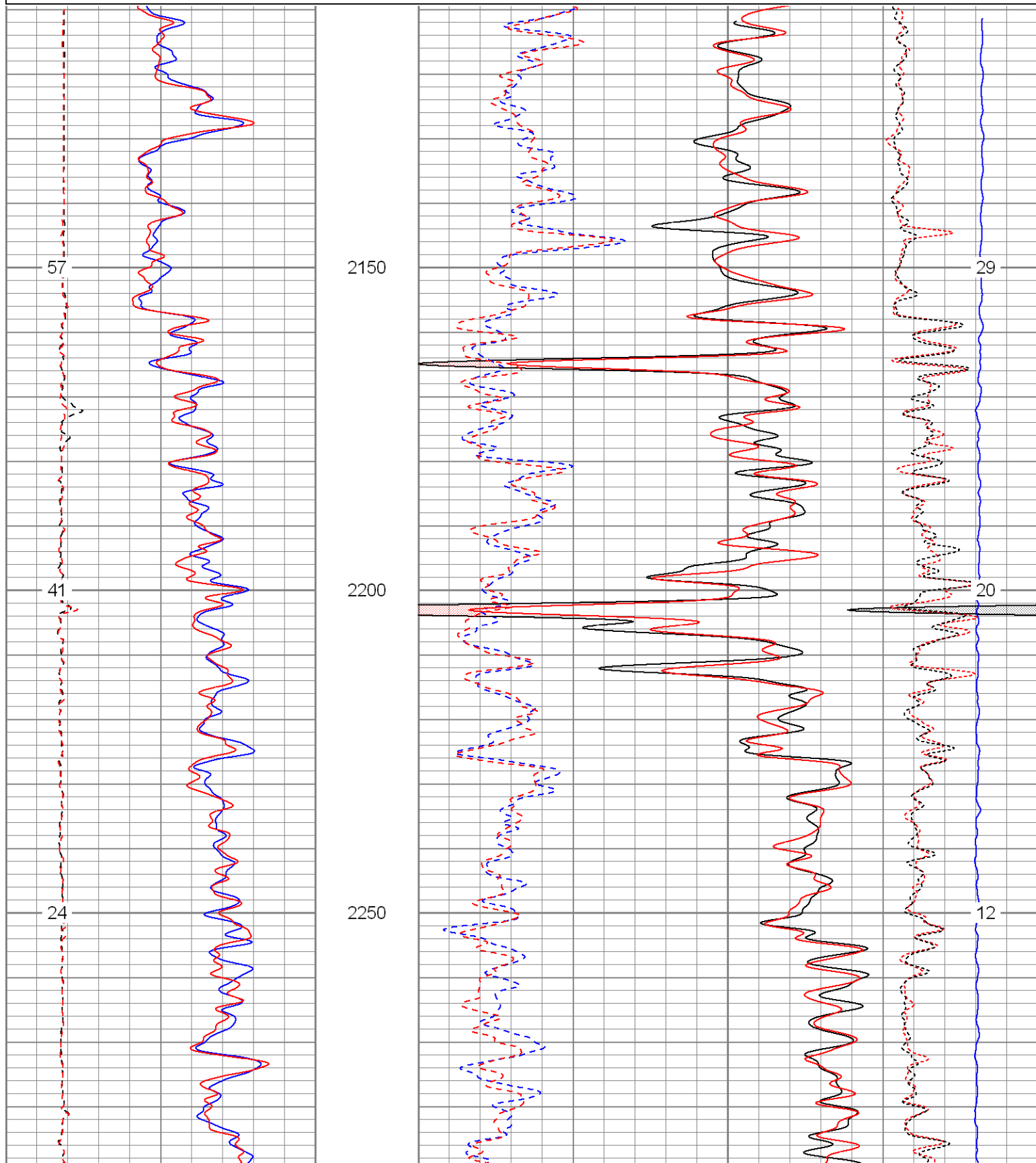
Charted by:

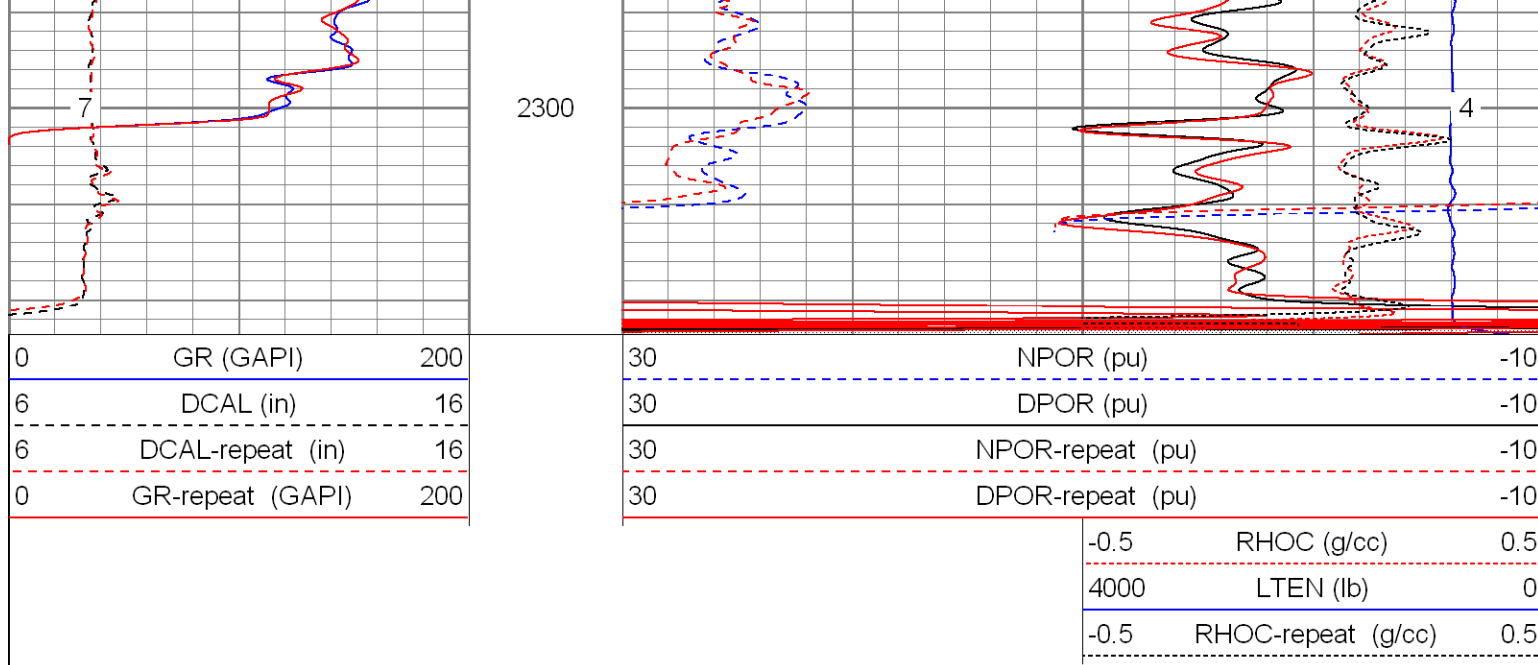
Depth in Feet scaled 1:240

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

|    |                  |     |
|----|------------------|-----|
| 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 |





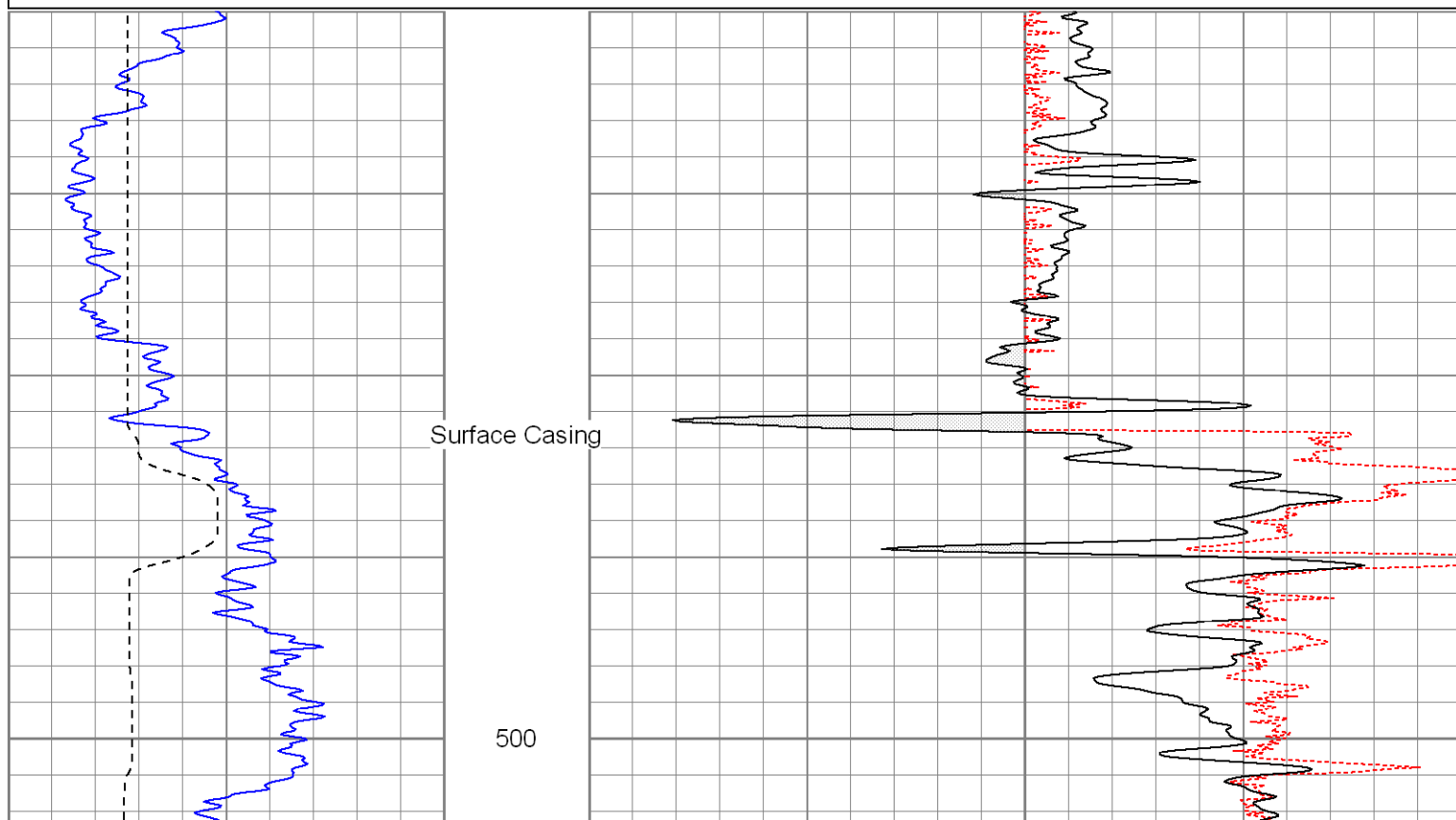
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# High Resolution Pass

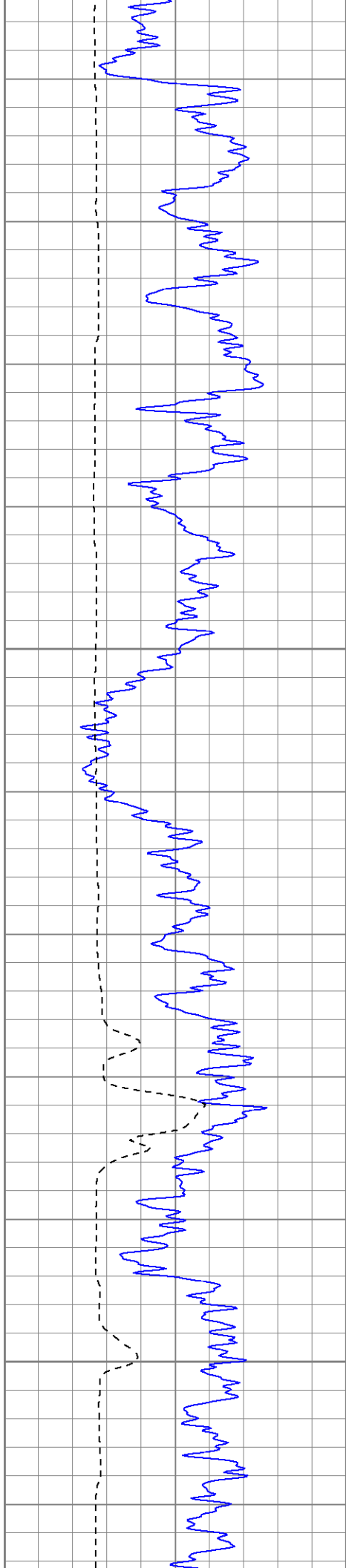
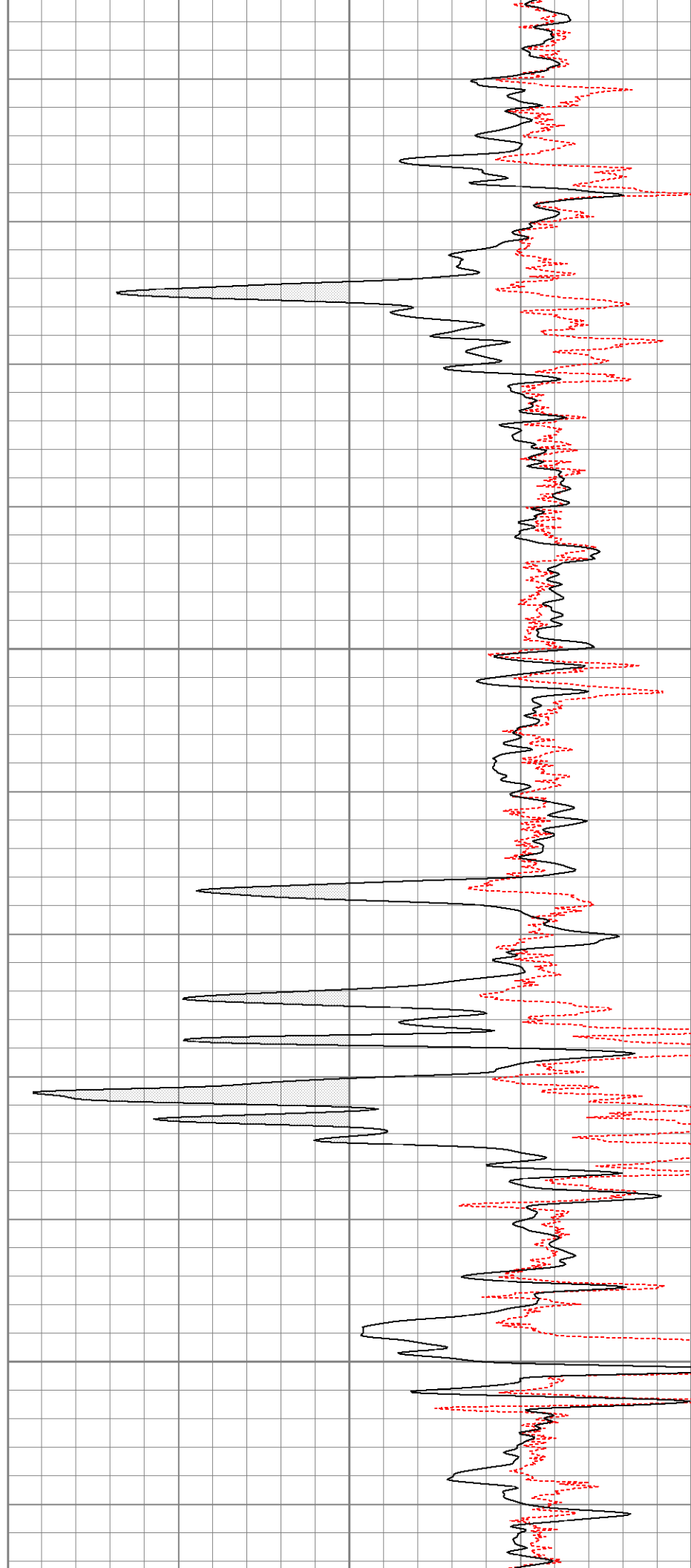
Database File: xtohr1609vx.db  
 Dataset Pathname: pass4.2  
 Presentation Format: cdlhr  
 Dataset Creation: Mon Apr 16 10:14:32 2007 by Calc Open-Cased 061129  
 Charted by: Depth in Feet scaled 1:120

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



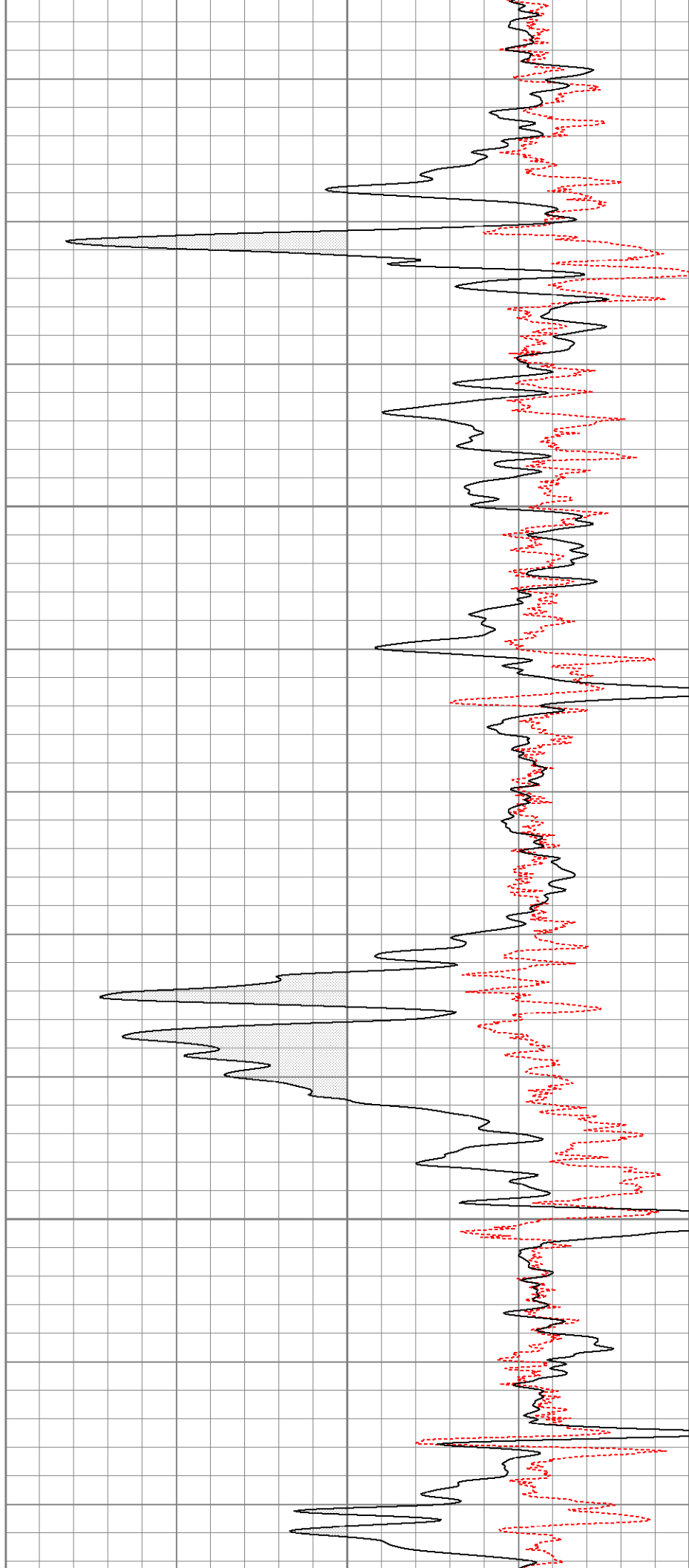
550

600



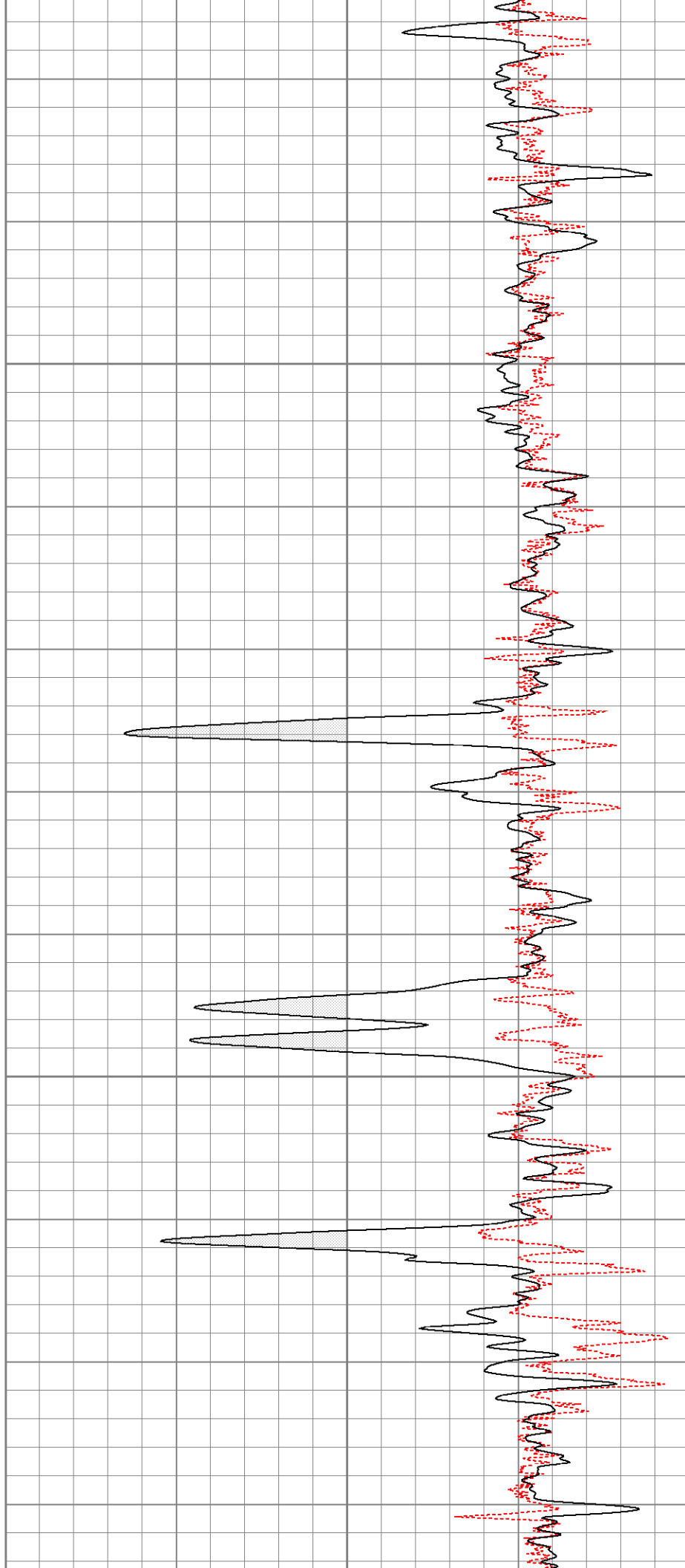
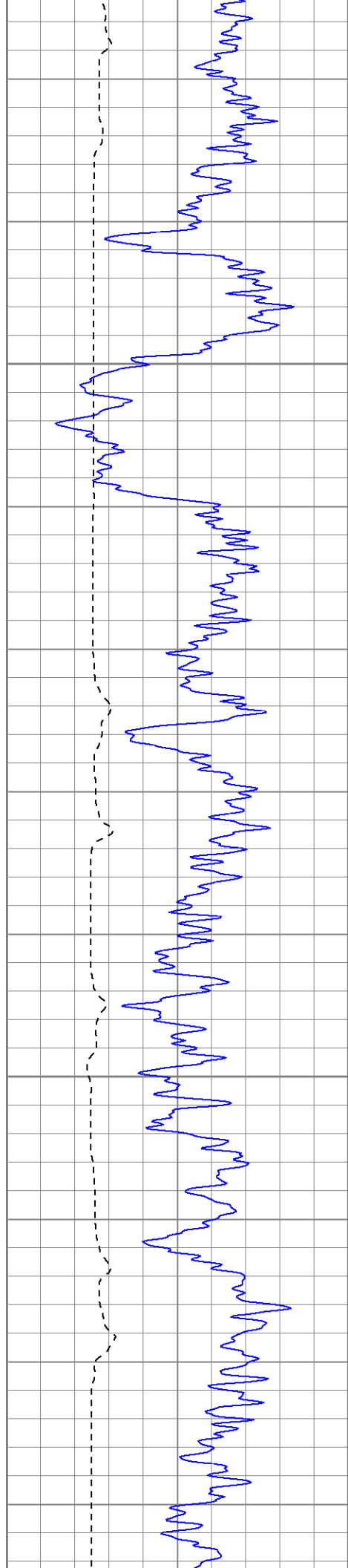
650

700

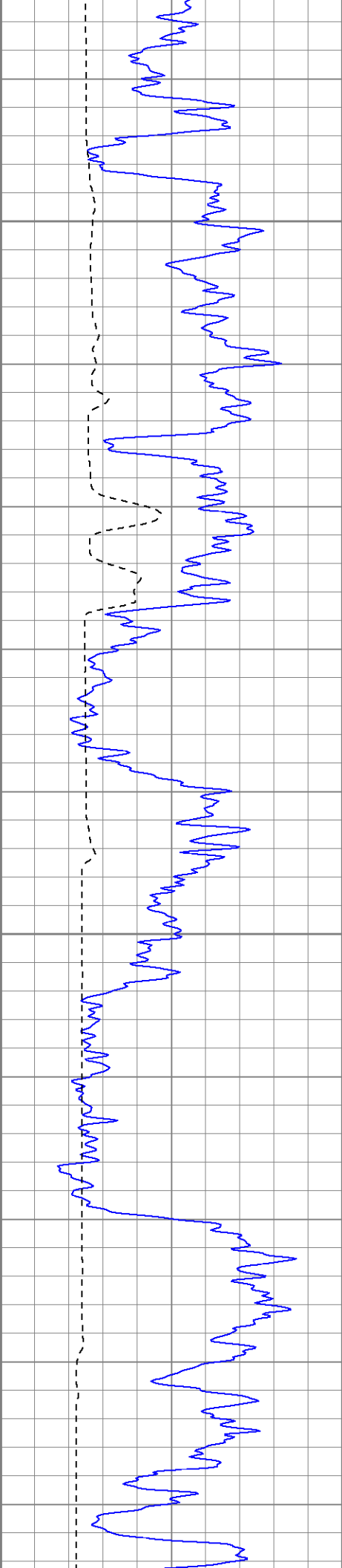


750

800

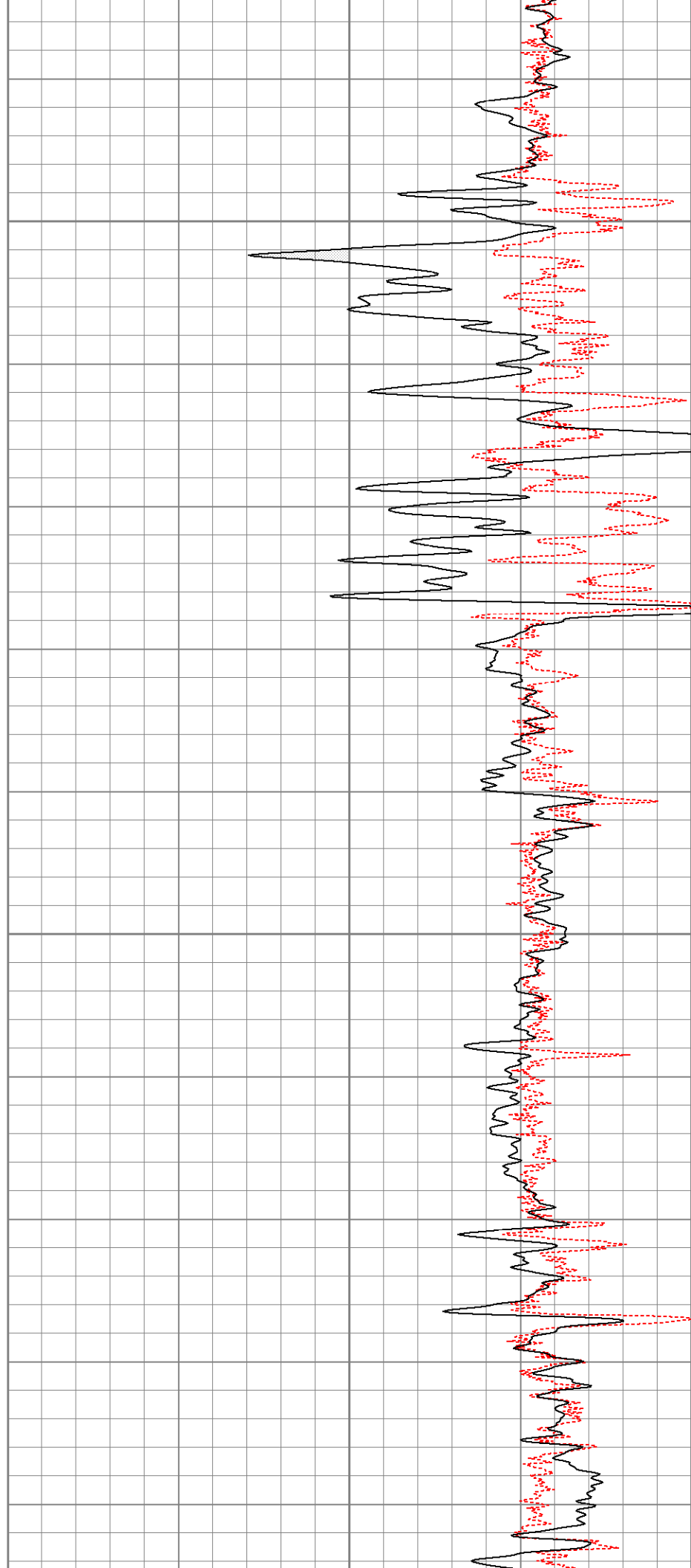


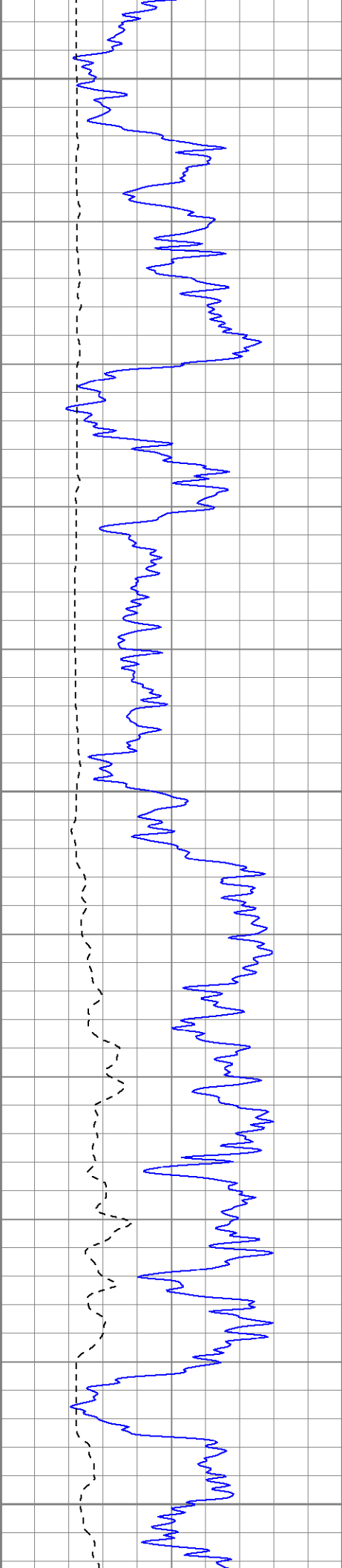




850

900

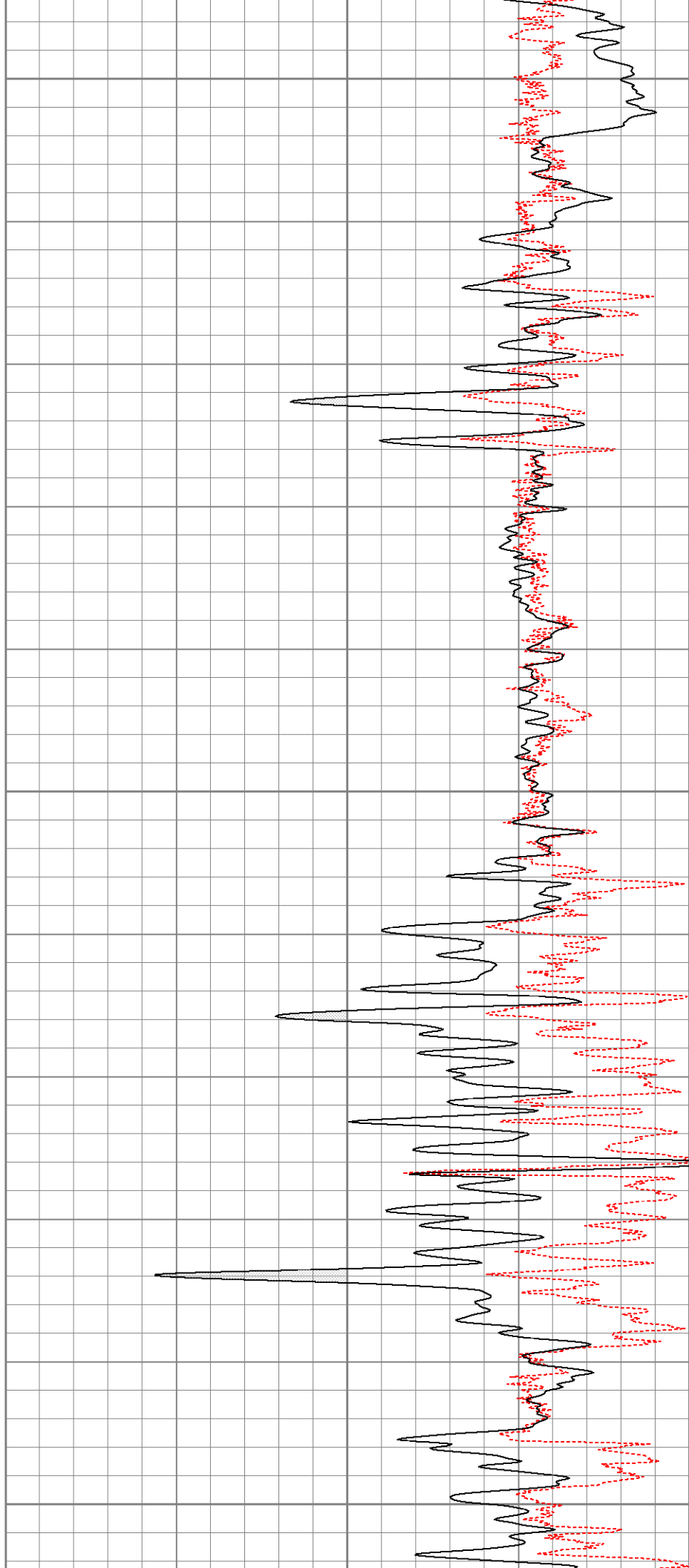


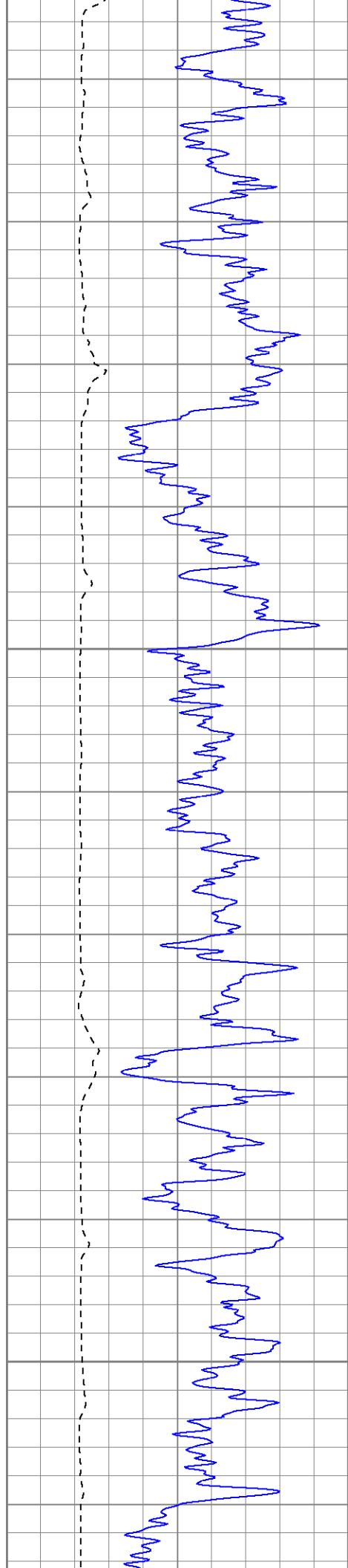


950

1000

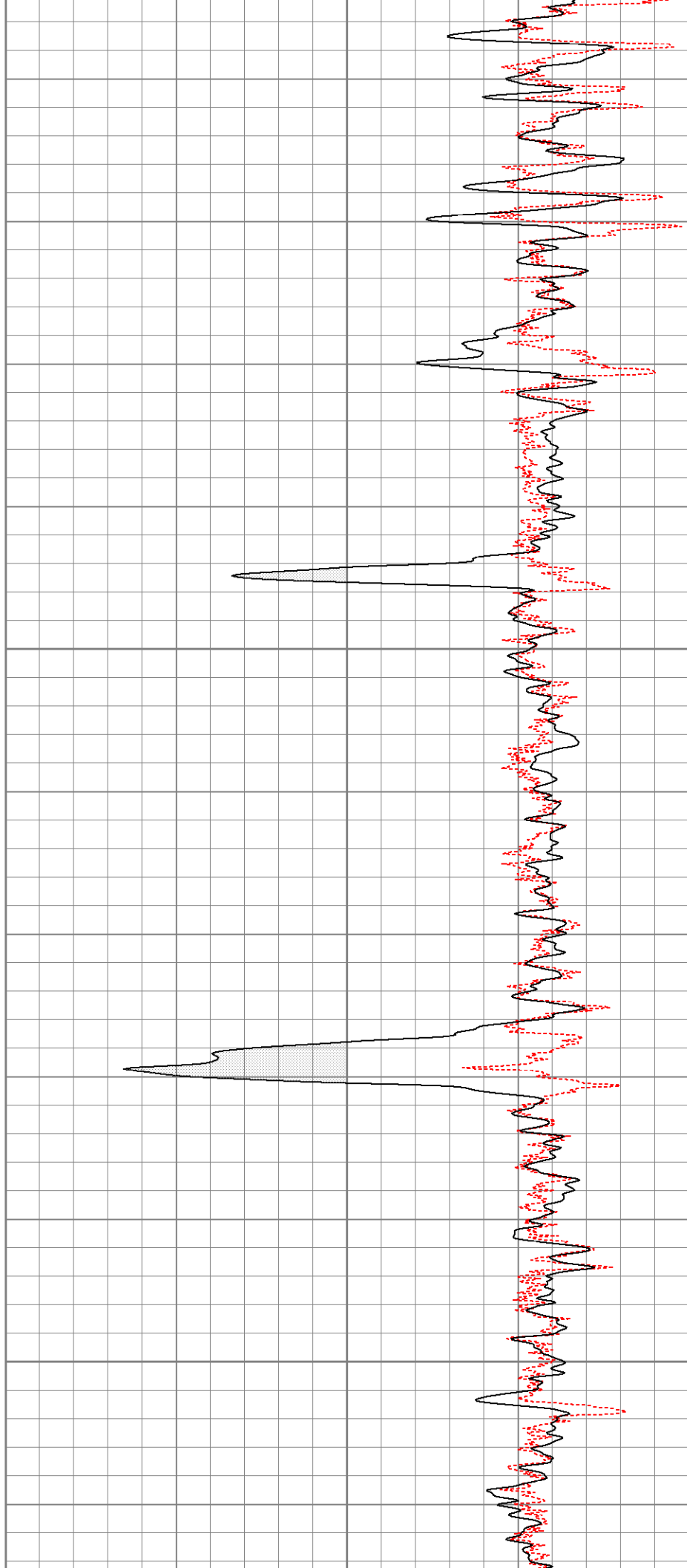
1050

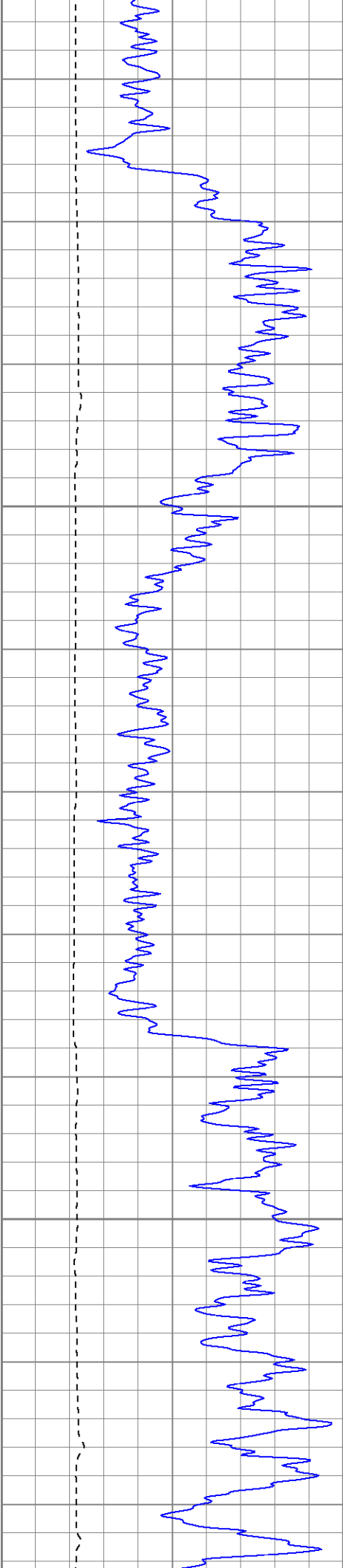




1100

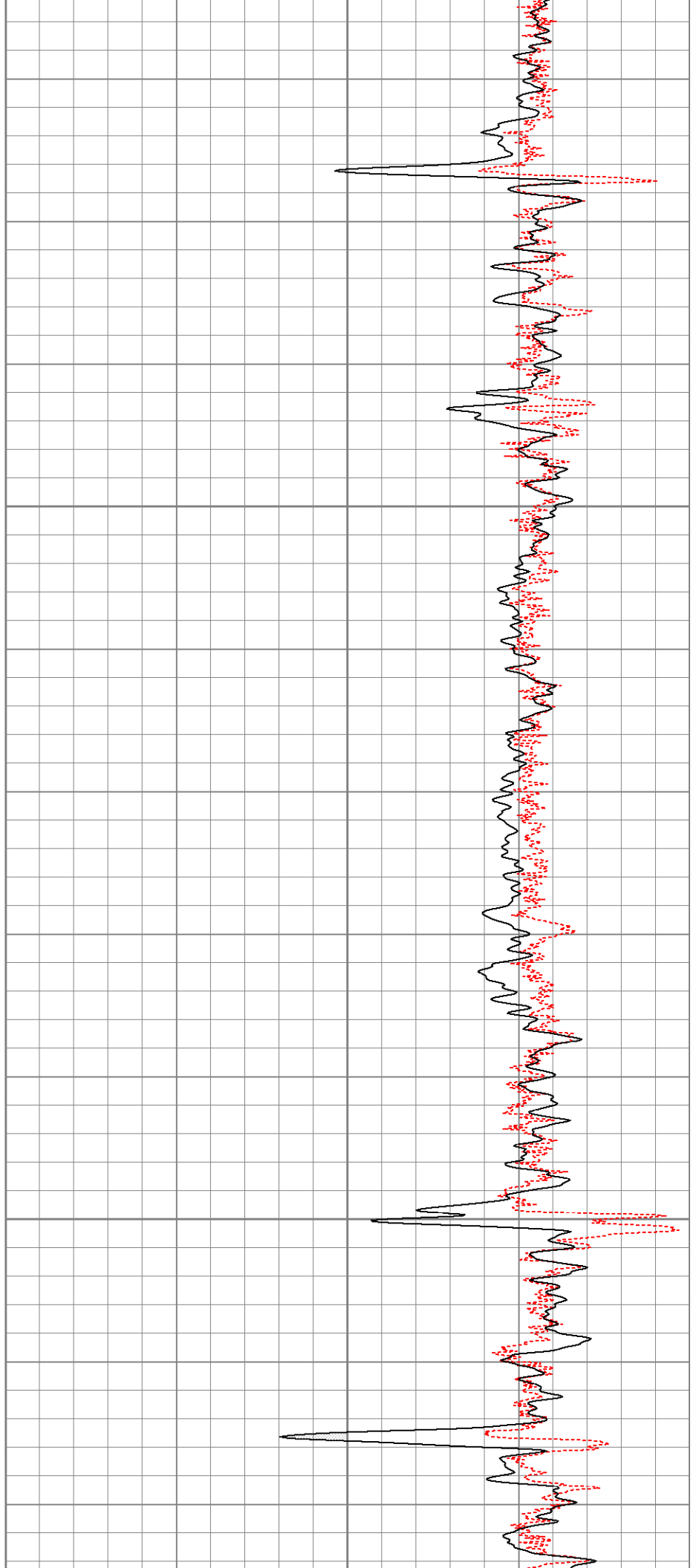
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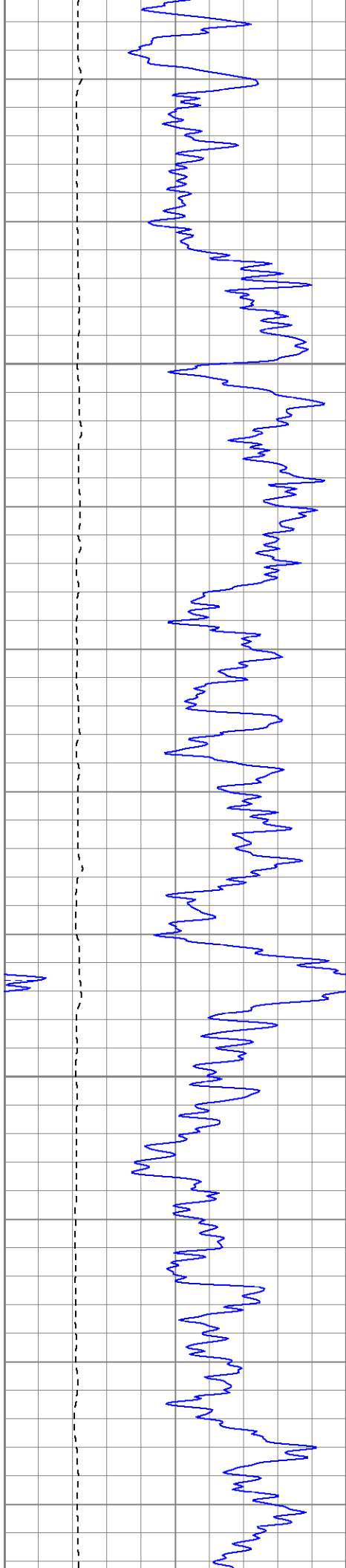




1200

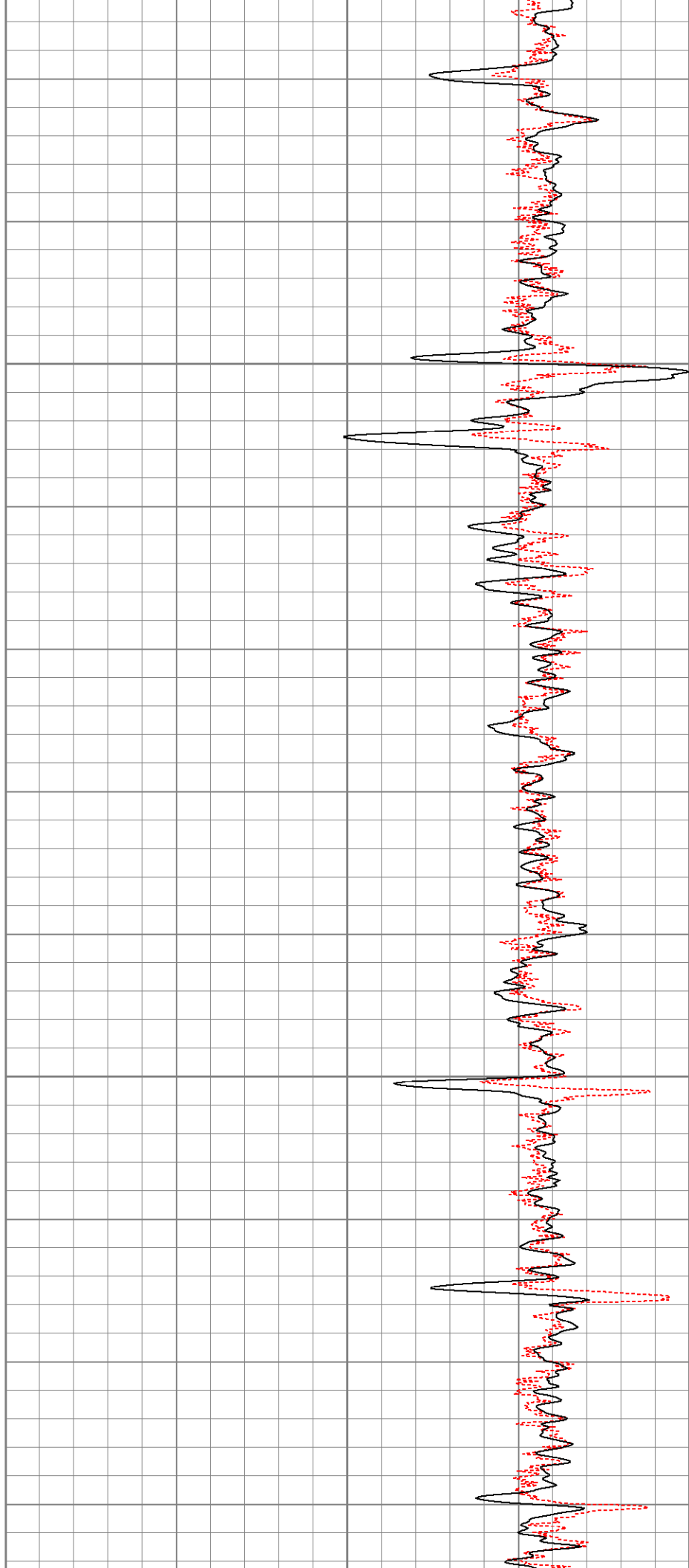
1250

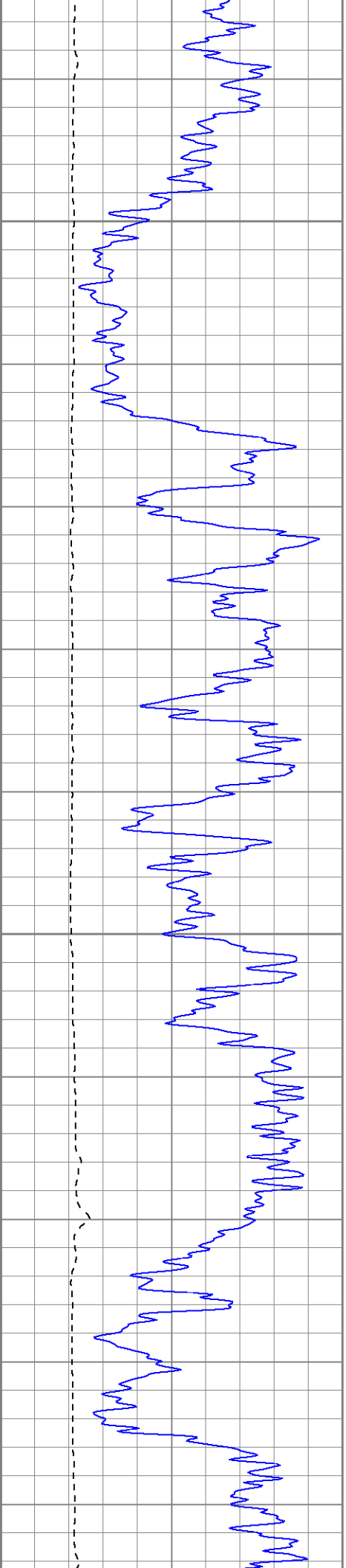




1300

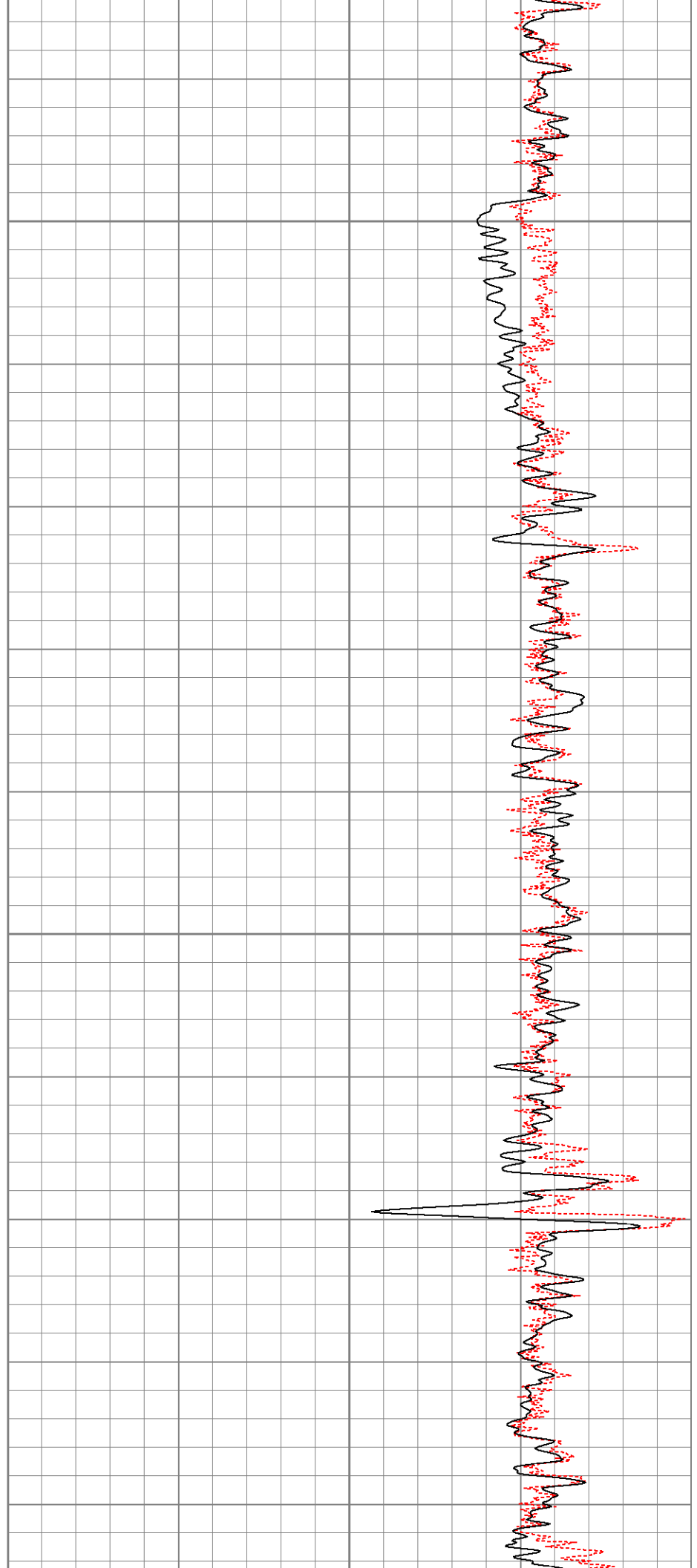
1350

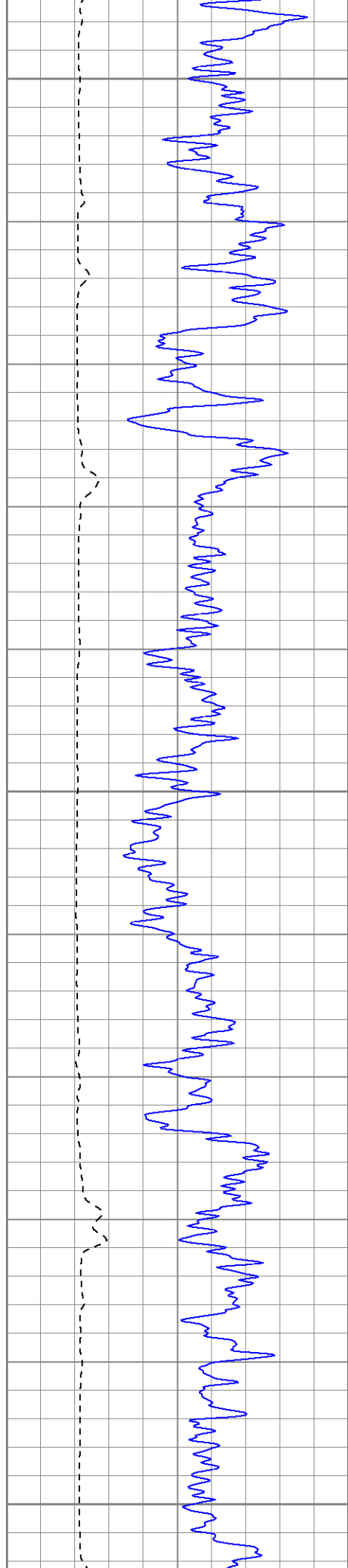




1400

1450

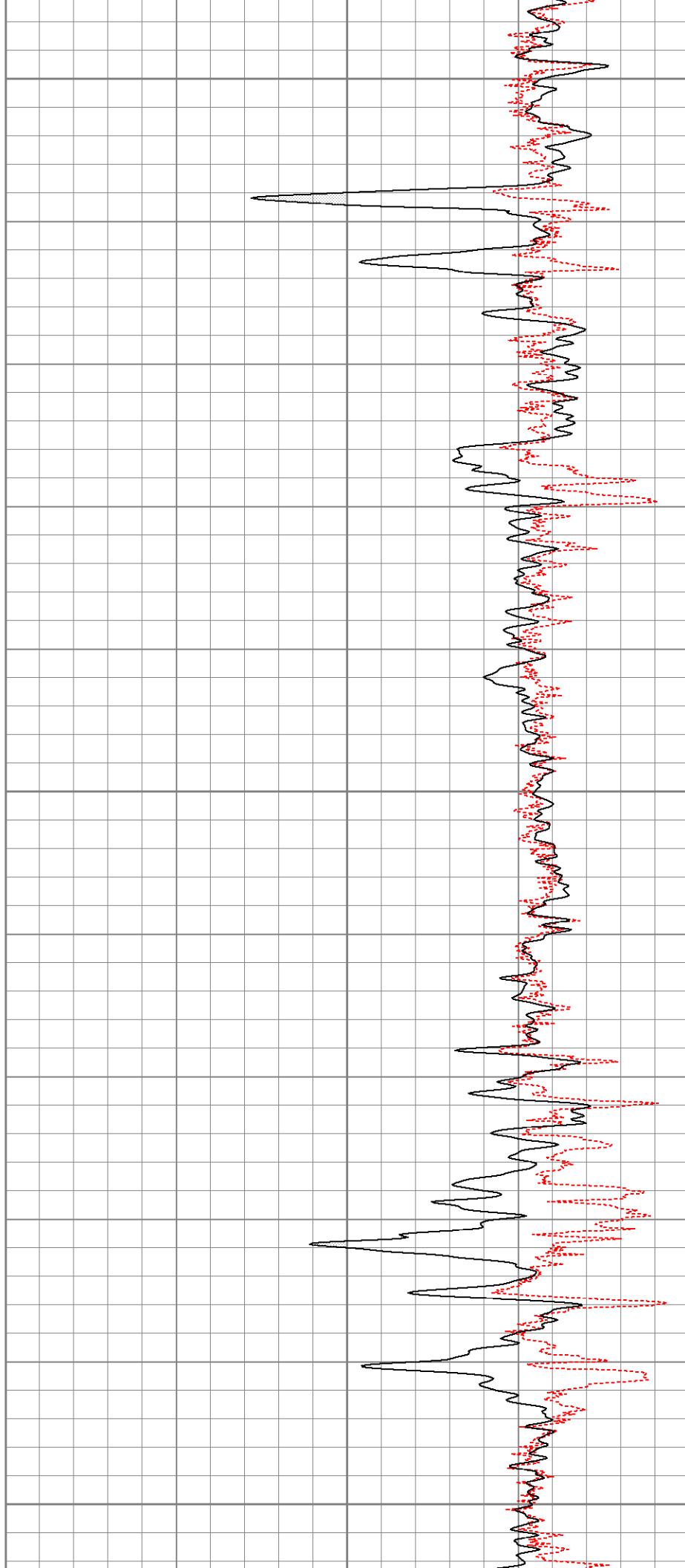


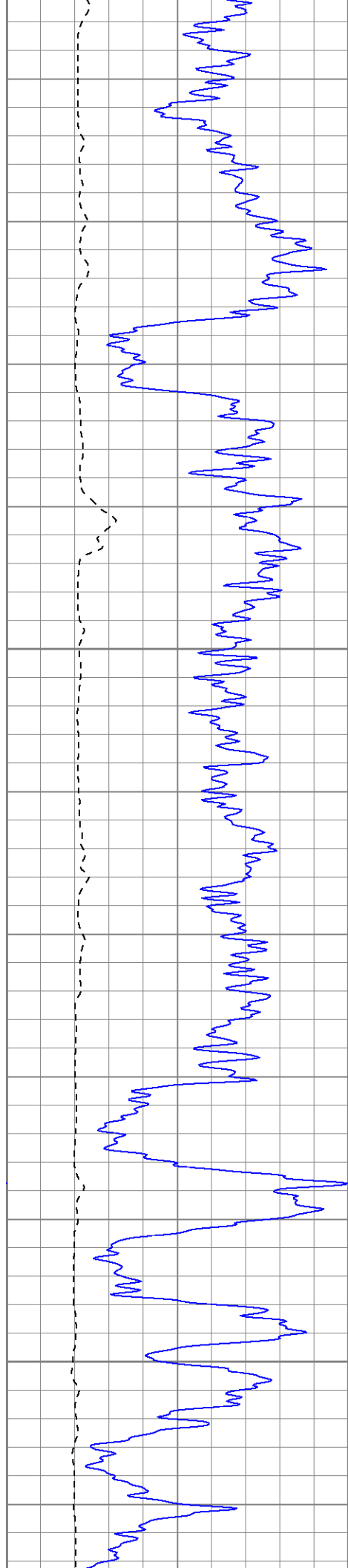


1500

1550

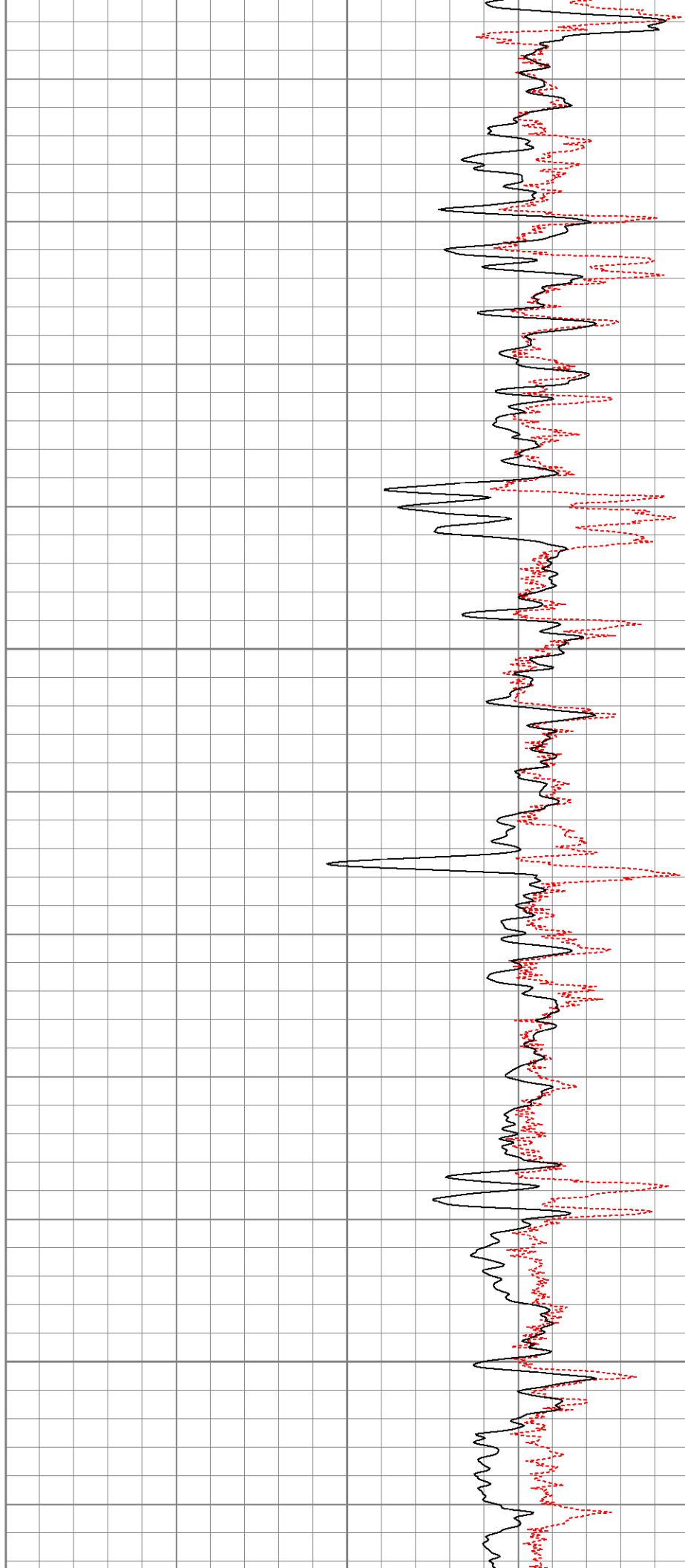
1600



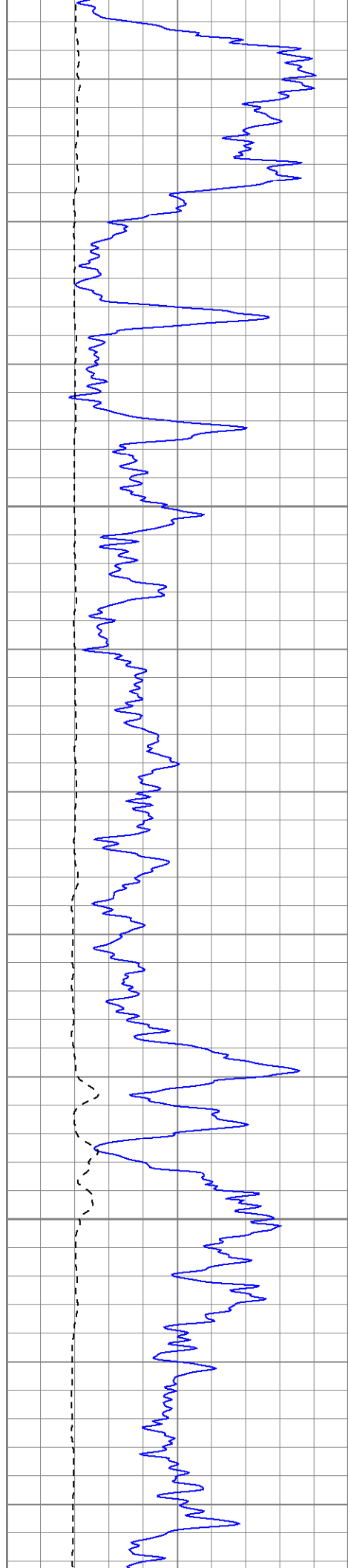


1650

1700

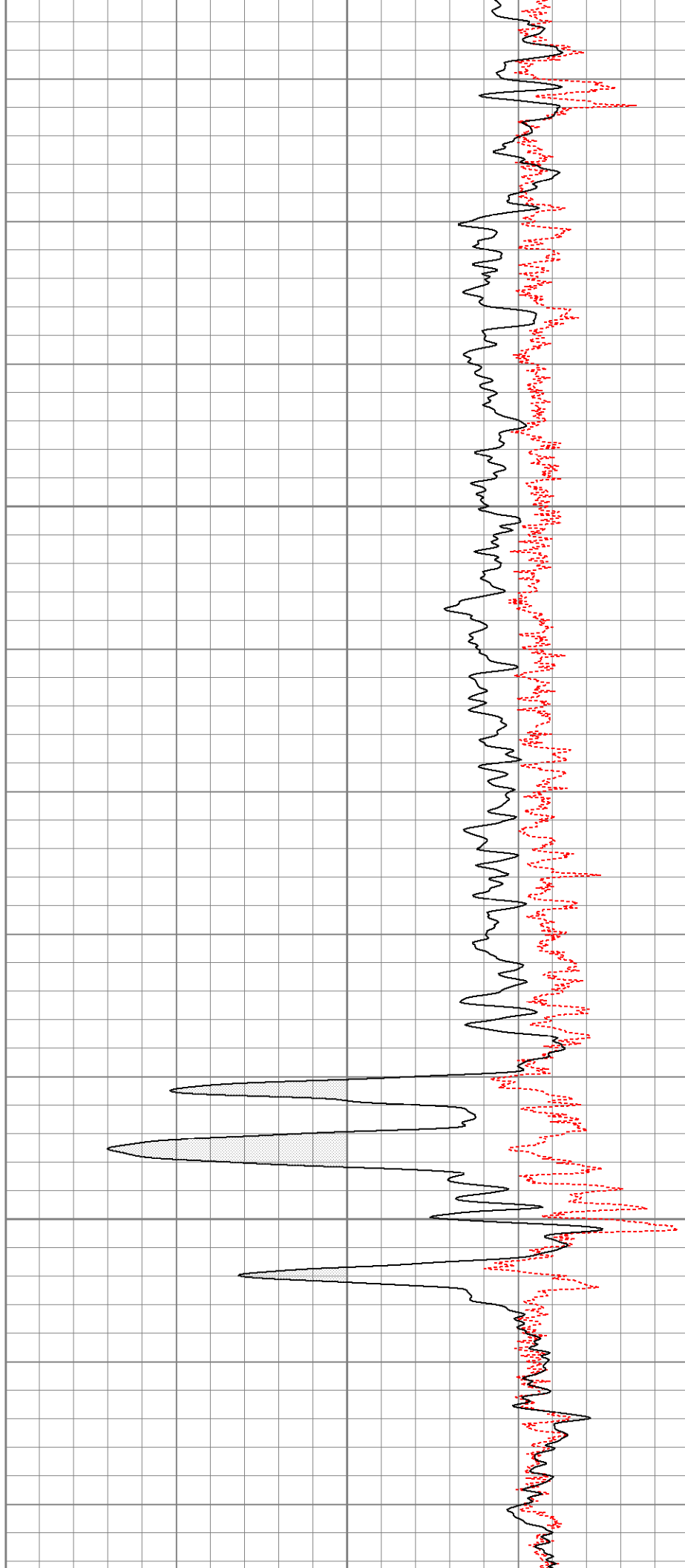


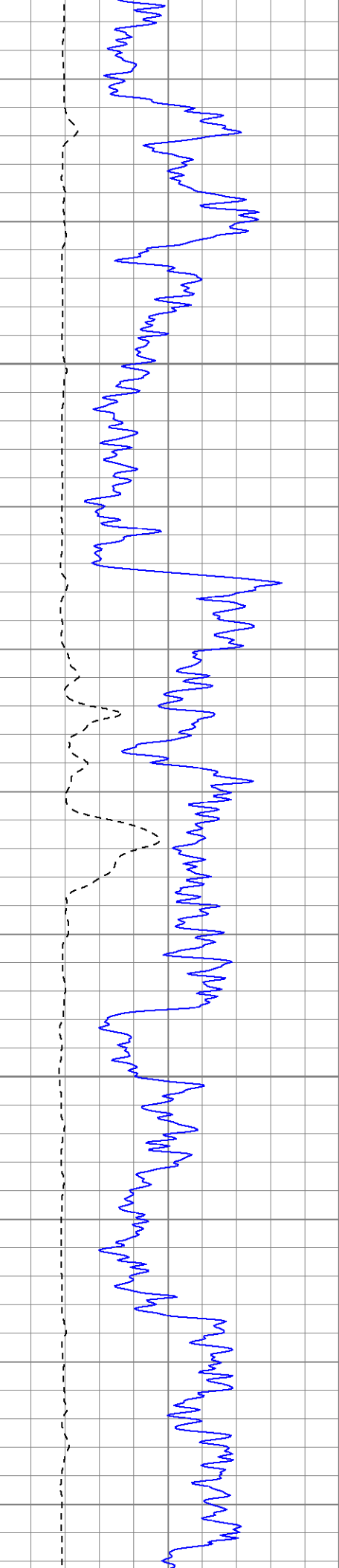




1750

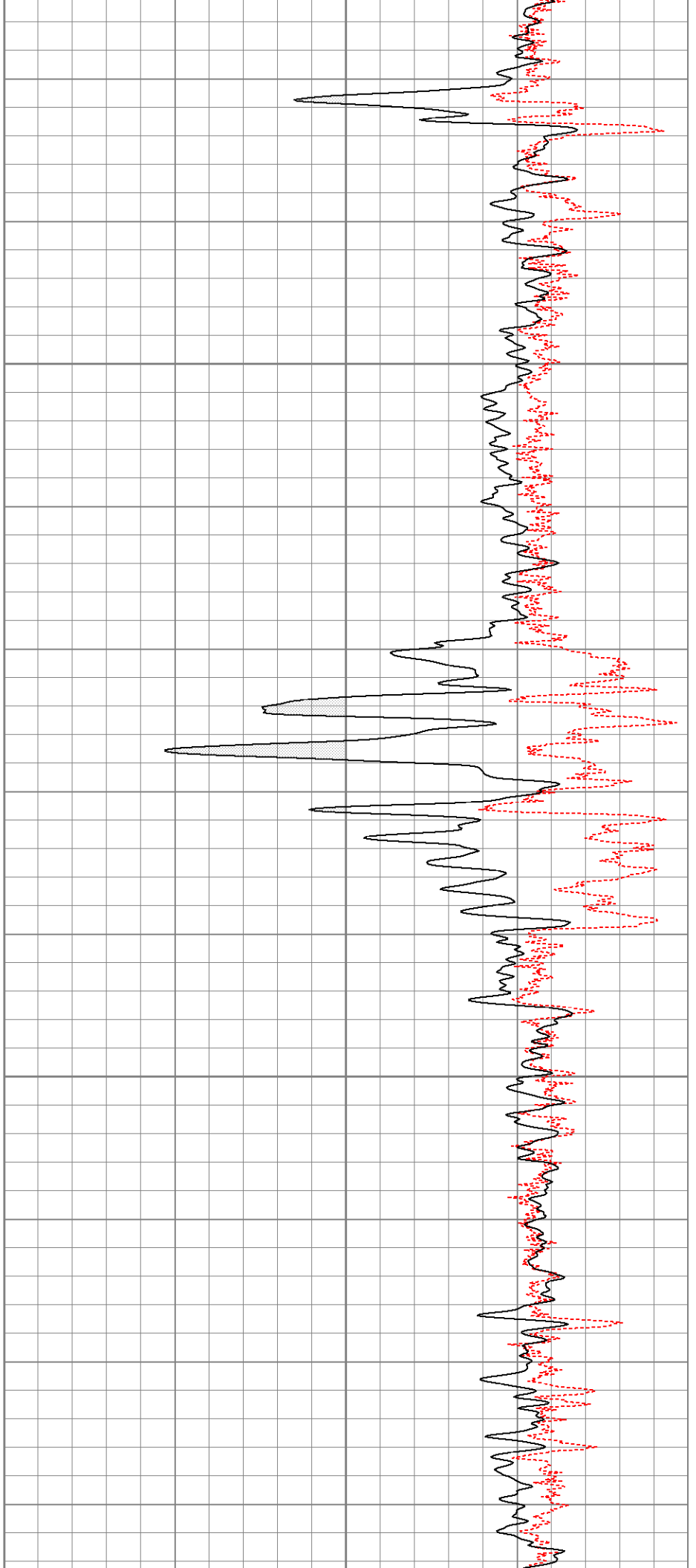
1800





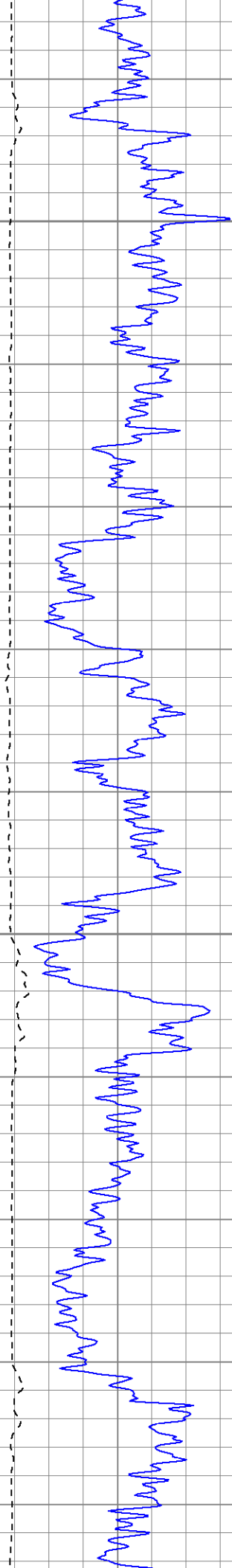
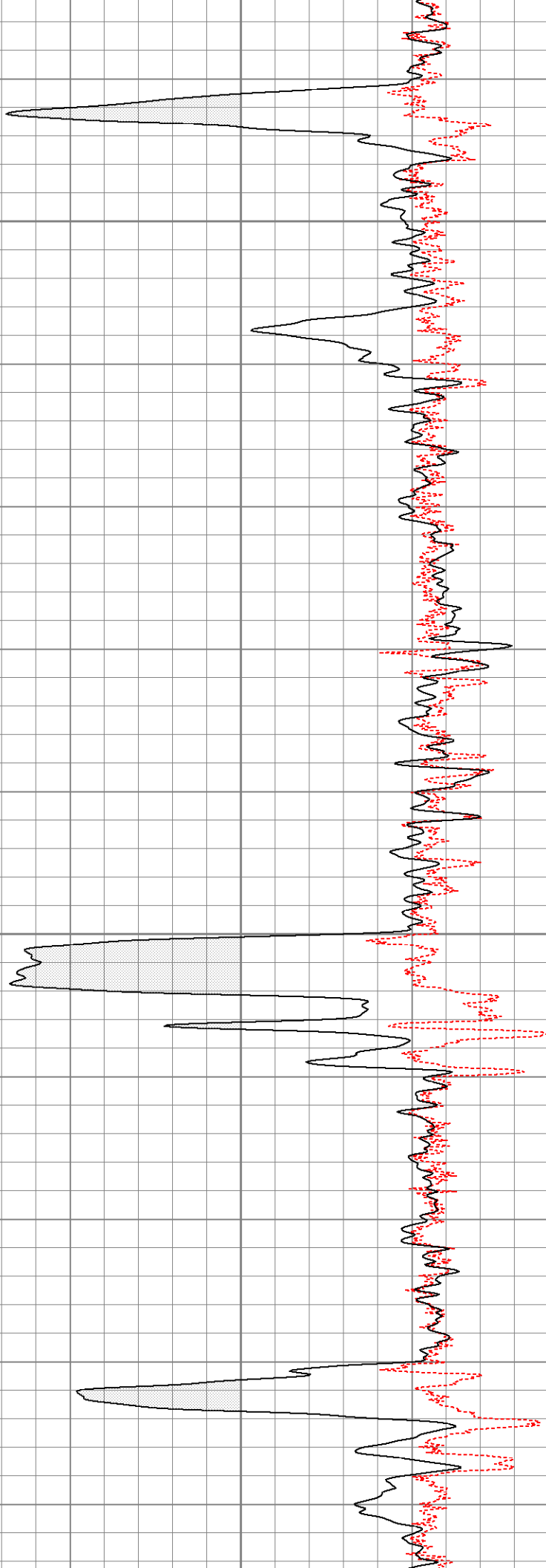
1850

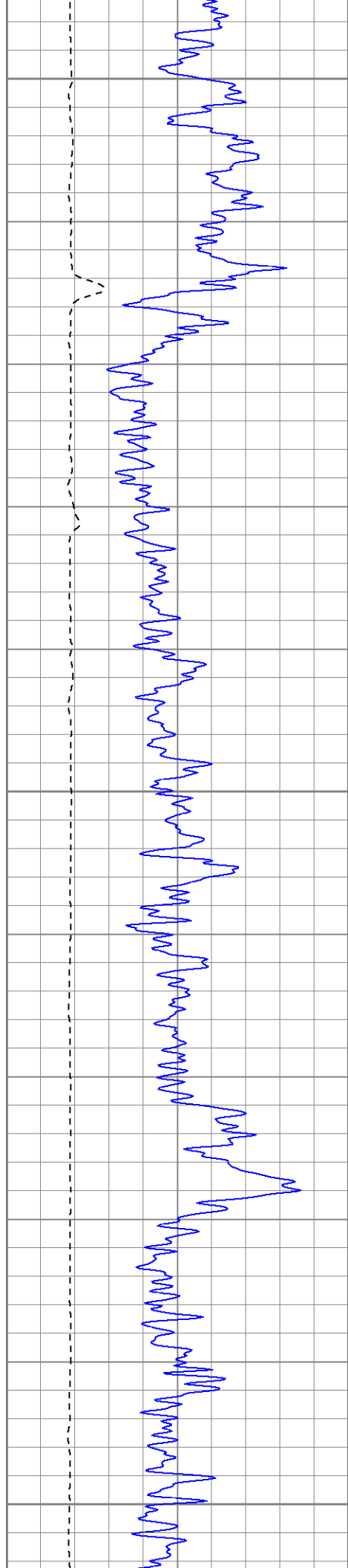
1900



1950

2000

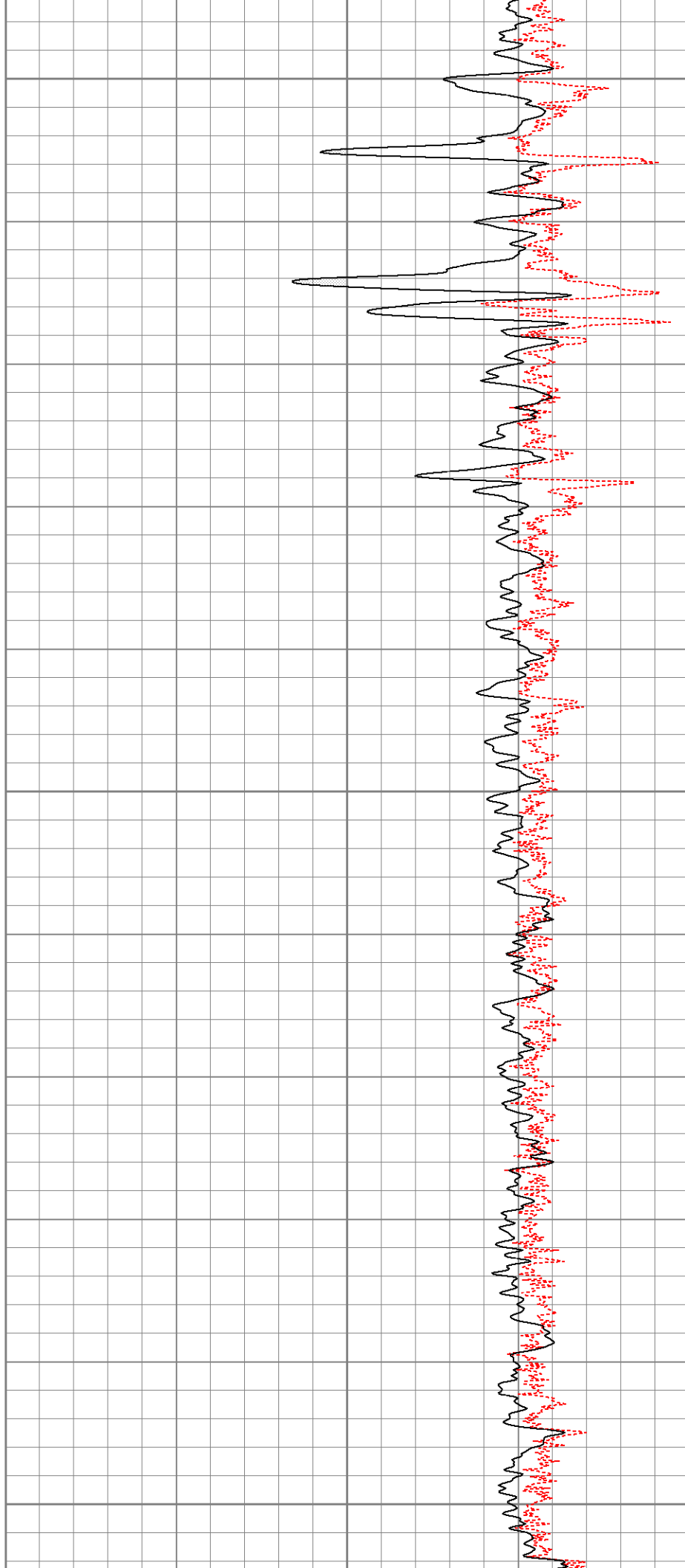


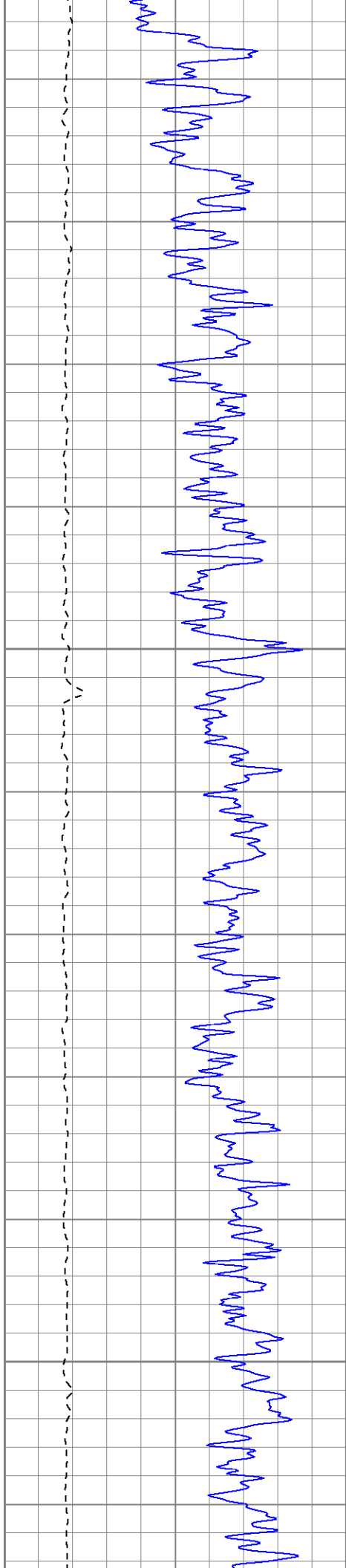


2050

2100

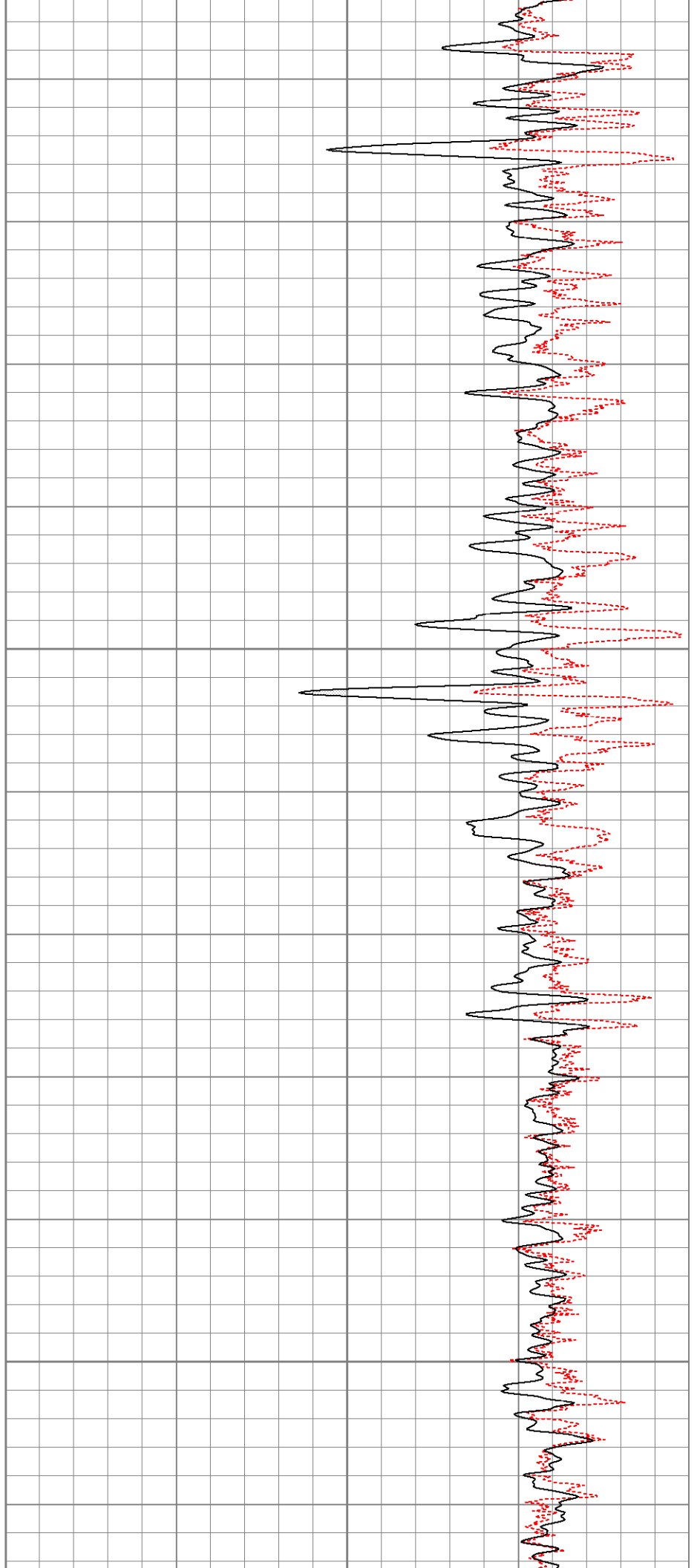
2150

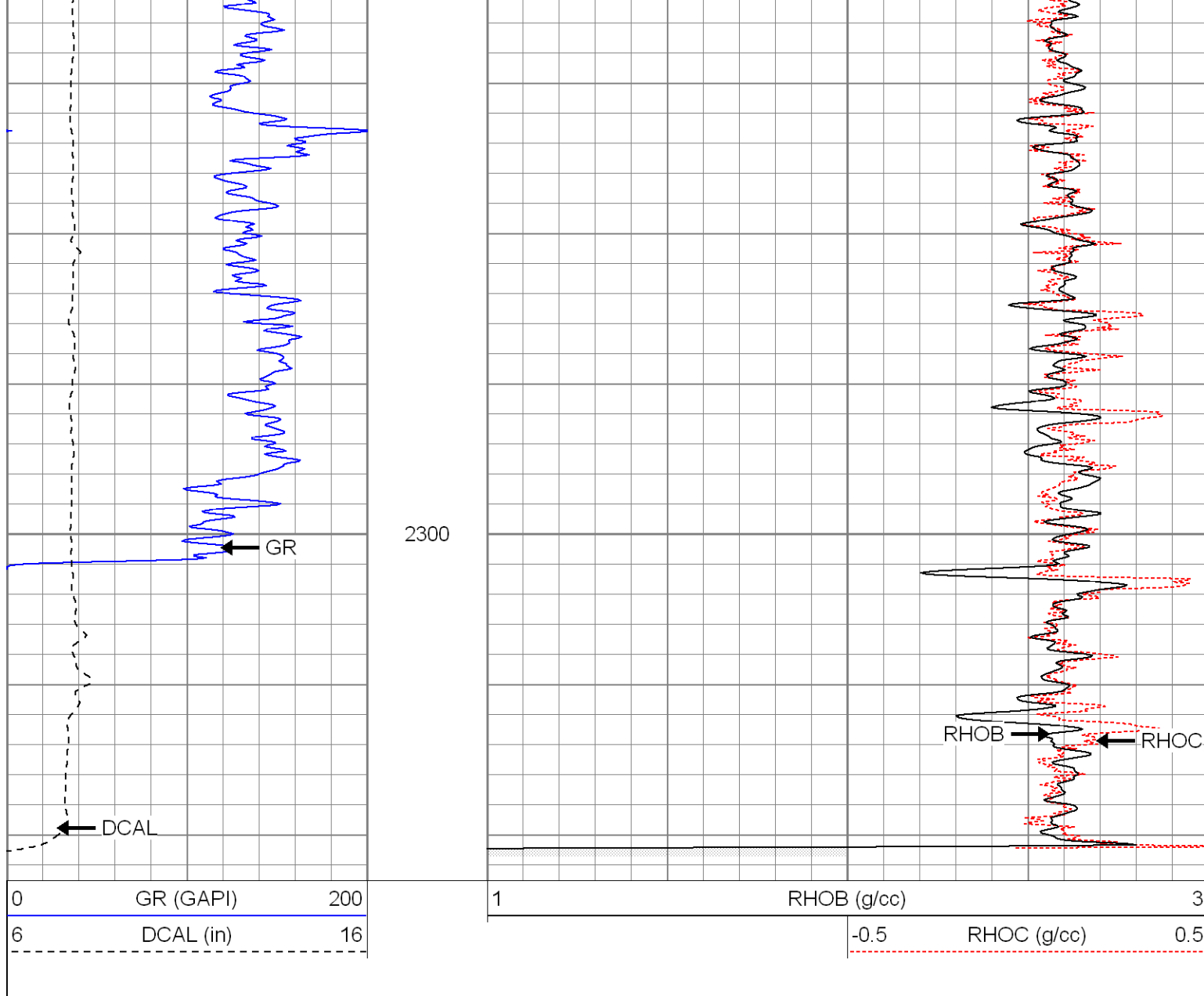




2200

2250





### Calibration Report

Database File: xtohr1609vx.db  
 Dataset Pathname: pass4  
 Dataset Creation: Sun Apr 15 23:10:48 2007 by Log Open-Cased 061129

### Compensated Density Calibration Report

Serial-Model: 2119-O  
 Source / Verifier: csv-j12 / blks  
 Master Calibration Performed: Wed Mar 28 17:52:23 2007

### Master Calibration


|           | Density |      | Far Detector | Near Detector |     |
|-----------|---------|------|--------------|---------------|-----|
| 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

|            | Size  |    | Reading |   |
|------------|-------|----|---------|---|
| Small Ring | 7.85  | in | 2.80    | V |
| Large Ring | 14.00 | in | 8.81    | V |

| Gamma Ray Calibration Report |                          |          |
|------------------------------|--------------------------|----------|
| Serial Number:               | 2119                     |          |
| Tool Model:                  | O                        |          |
| Performed:                   | Mon Jan 15 08:35:20 2007 |          |
| Calibrator Value:            | 170.0                    | GAPI     |
| Background Reading:          | 42.6                     | cps      |
| Calibrator Reading:          | 139.0                    | cps      |
| Sensitivity:                 | 1.0000                   | GAPI/cps |
| Neutron Calibration Report   |                          |          |
| Serial Number:               | 5145                     |          |
| Tool Model:                  | G                        |          |
| Performed:                   | Thu Jan 25 22:38:45 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)<br>Gearhart Epithermal | 5.75     | 3.50    | 85.00   |
| GR   | 7.64        |  | GR-O (2119)<br>Oilex                | 2.60     | 3.63    | 74.00   |
| LSD  | 2.13        |  | CDL-O (2119)<br>Oilex               | 5.77     | 4.00    | 201.00  |
| DCAL   | 1.79        |  |                                     |          |         |         |
| SSD  | 1.58        |  |                                     |          |         |         |
| Dataset: xtohr1609vx.db: field/well/run1/pass4<br>Total Length: 14.87 ft<br>Total Weight: 365.00 lb<br>O.D.: 4.00 in |             |  |                                     |          |         |         |