

**COMPENSATED DENSITY  
NEUTRON  
LOG**

|                              |                           |                |                           |
|------------------------------|---------------------------|----------------|---------------------------|
| Company                      | Pioneer Natural Resources | Company        | Pioneer Natural Resources |
| Well                         | Panther 33-5              | Well           | Panther 33-5              |
| Field                        | Purgatoire River          | Field          | Purgatoire River          |
| County                       | Las Animas                | County         | Las Animas                |
| State                        | Colorado                  | State          | Colorado                  |
| Location:                    | APL #: 05 071 09671 00    | Other Services | SIL                       |
| SEC 5 TWP 33S RGE 66W        | 2299' FNL & 2622' FEL     | Elevation      |                           |
| Permanent Datum              | Ground Level              | Elevation      | 7267'                     |
| Log Measured From            | Kelly Bushing 4' AGL      | K.B. 7271'     |                           |
| Drilling Measured From       | Kelly Bushing             | D.F. -----     |                           |
|                              |                           | G.L. 7267'     |                           |
| Date                         | 6-1-11                    |                |                           |
| Run Number                   | One                       |                |                           |
| Depth Driller                | 2145'                     |                |                           |
| Depth Logger                 | 2141'                     |                |                           |
| Bottom Logged Interval       | 2125'                     |                |                           |
| Top Log Interval             | Surface Casing            |                |                           |
| Casing Driller               | 8 5/8" @ 692"             |                |                           |
| Casing Logger                | 691'                      |                |                           |
| 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 A.M.                 |                |                           |
| Time Logger on Bottom        | 1:00 P.M.                 |                |                           |
| Maximum Recorded Temperature | 110 DEG F                 |                |                           |
| Equipment Number             | T590                      |                |                           |
| Location                     | Trinidad                  |                |                           |
| Recorded By                  | C. Sisneros               |                |                           |
| Witnessed By                 | Mr. Bill Vigil            |                |                           |

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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 Porosity Presented On Sandstone Matrix.  
ABHV Calculated For 5.5" Casing.  
Neutron Porosity invalid from 1515' to 1099' due to foam.

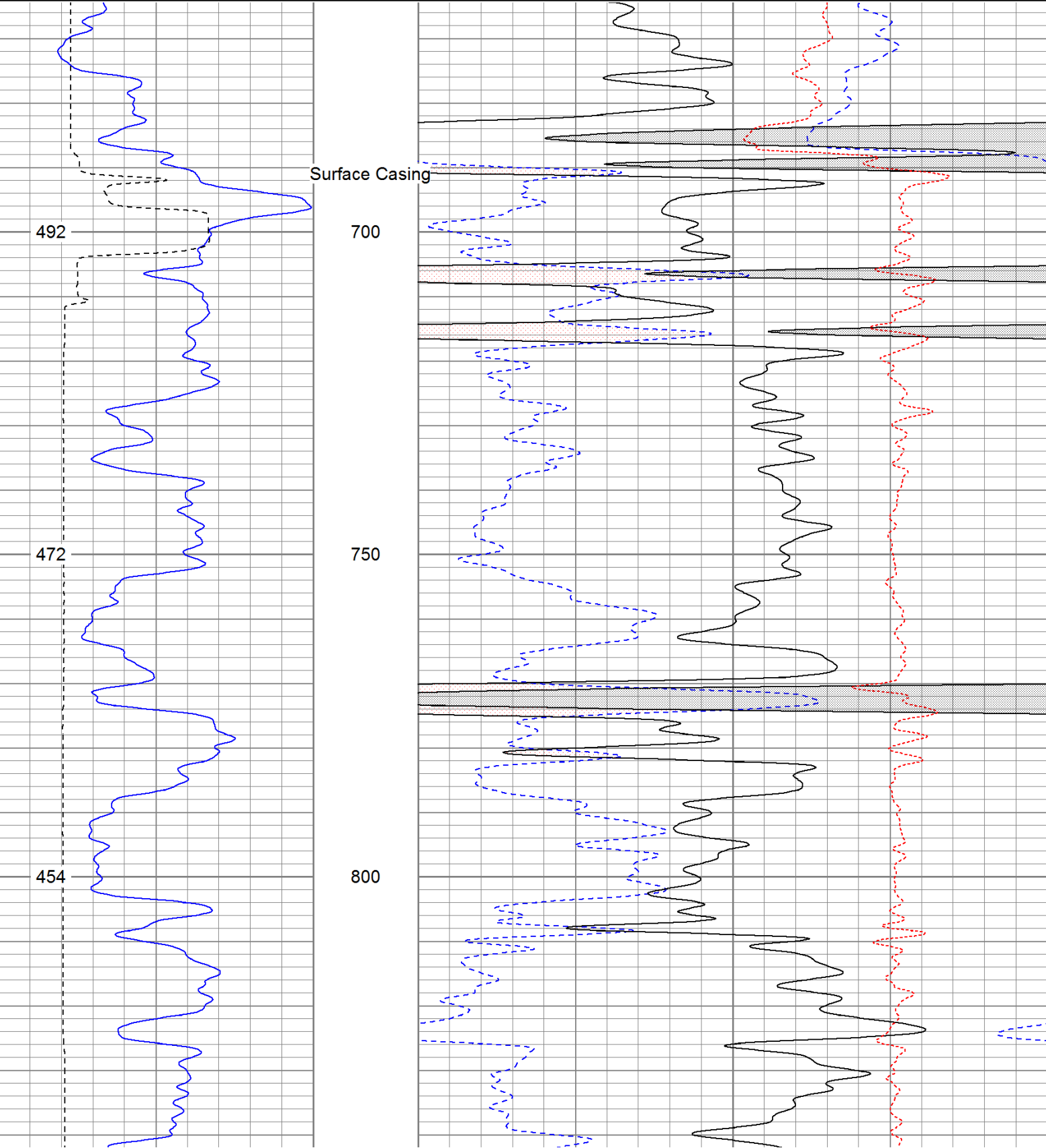
**Directions:**

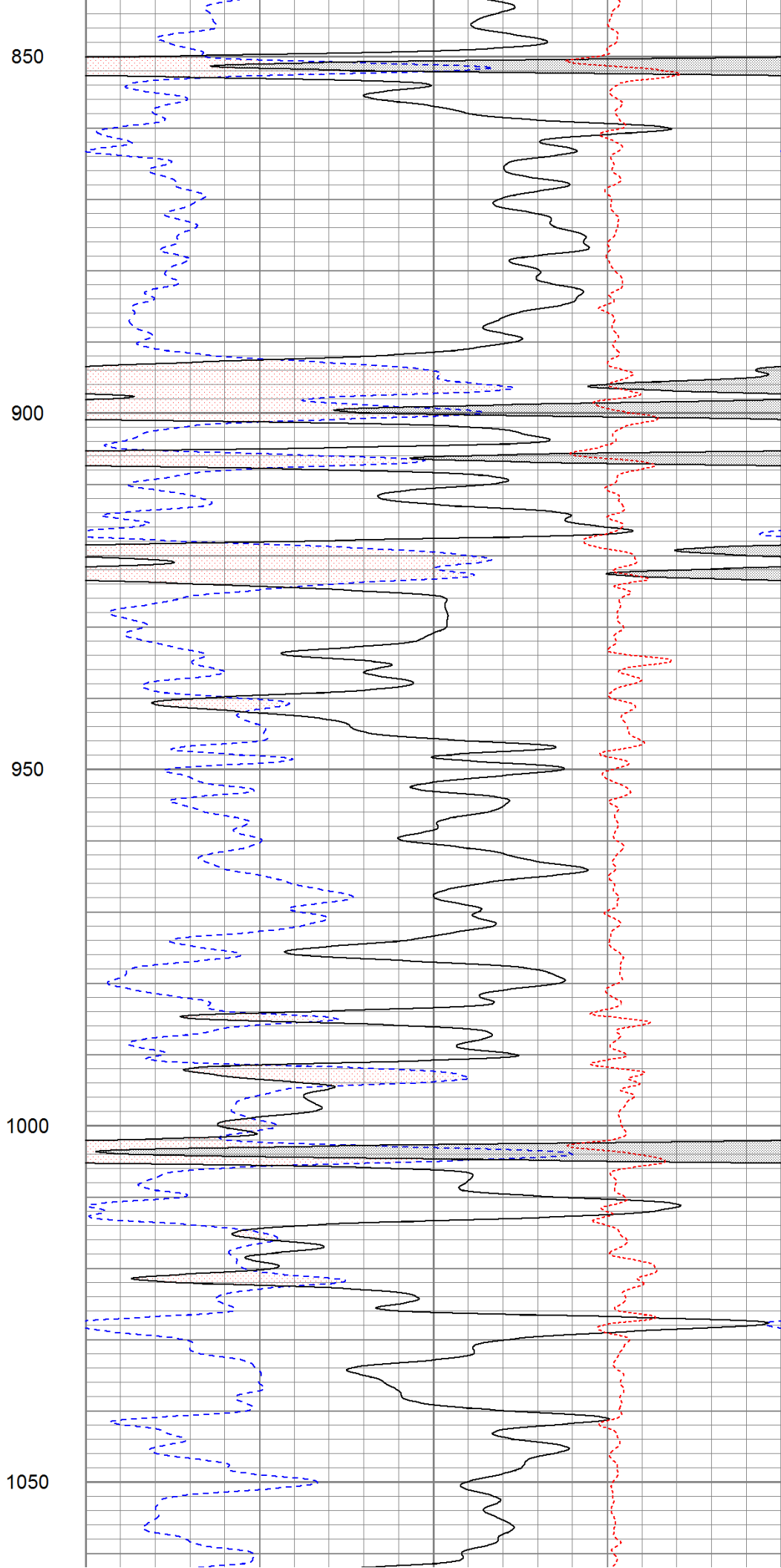
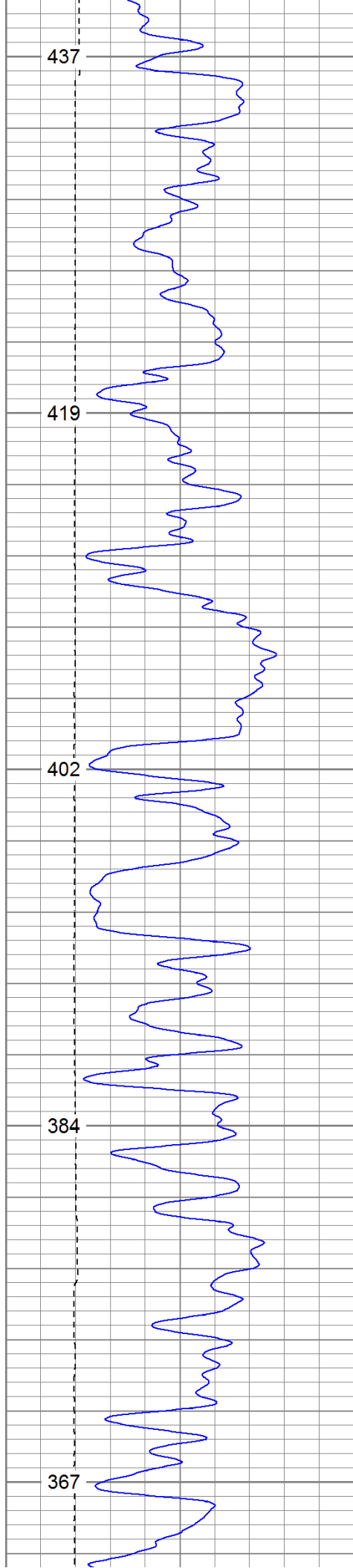
Sarcillo to La Garita, stay on main road to Fire Station, straight across road.

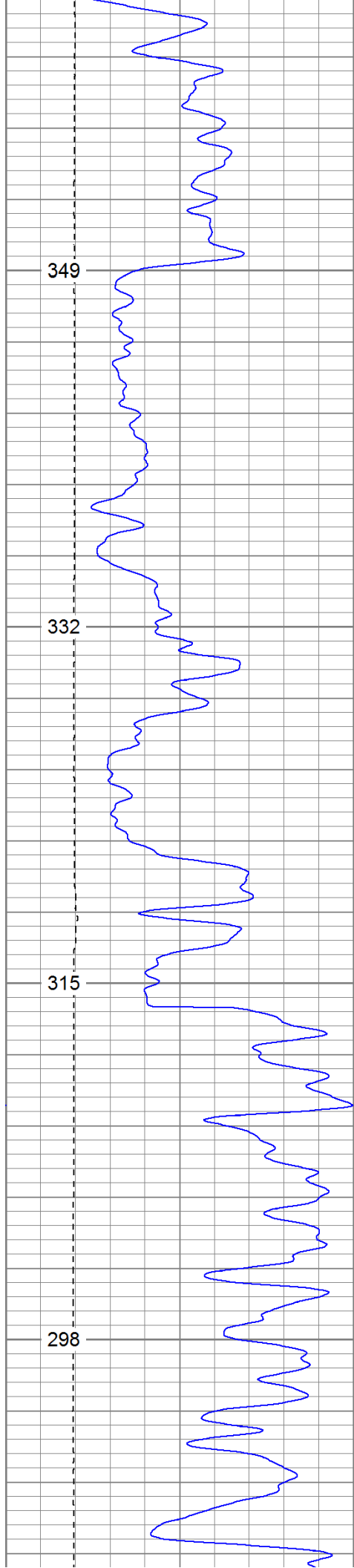
Database File: panther.db  
Dataset Pathname: pass2.1  
Presentation Format: cdnl  
Dataset Creation: Wed Jun 01 17:50:14 2011 by Calc Open-Cased 110302  
Charted by: Depth in Feet scaled 1:240

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





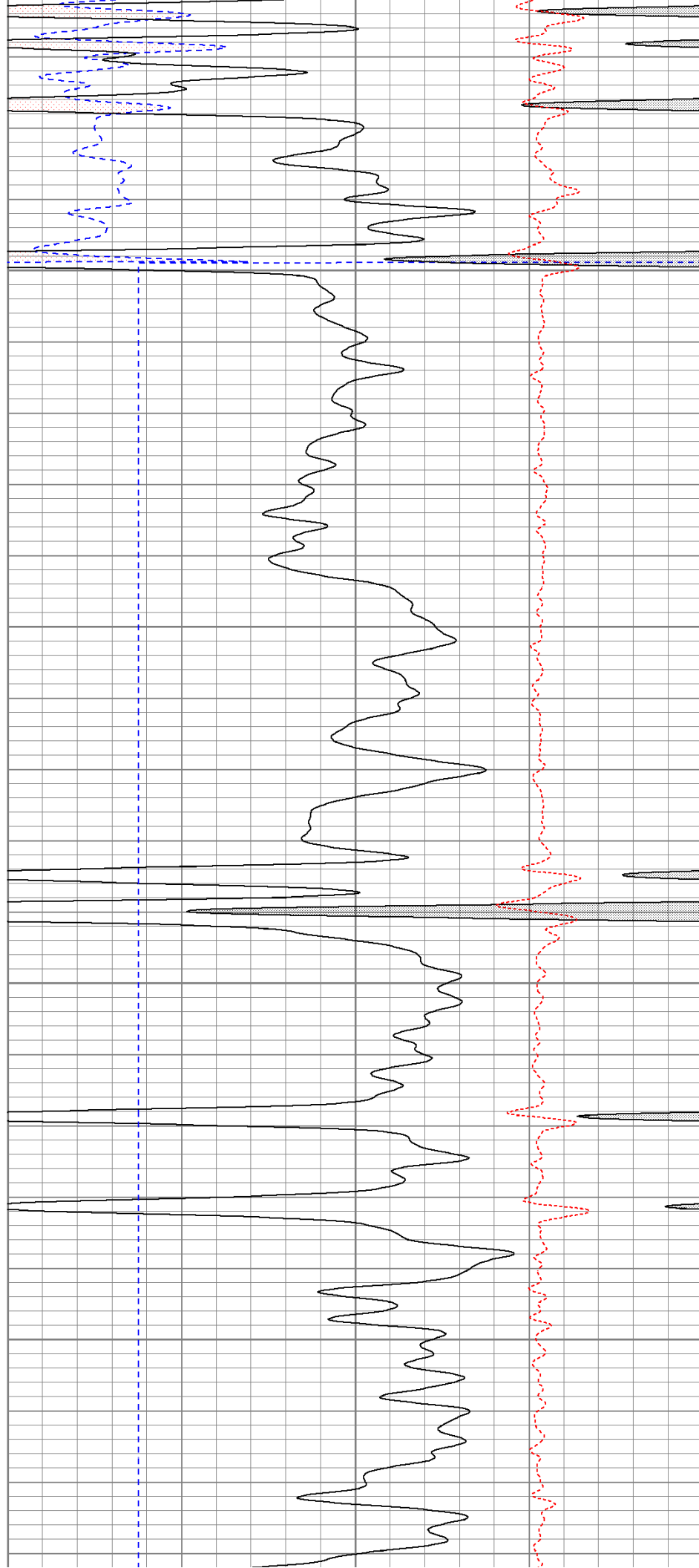


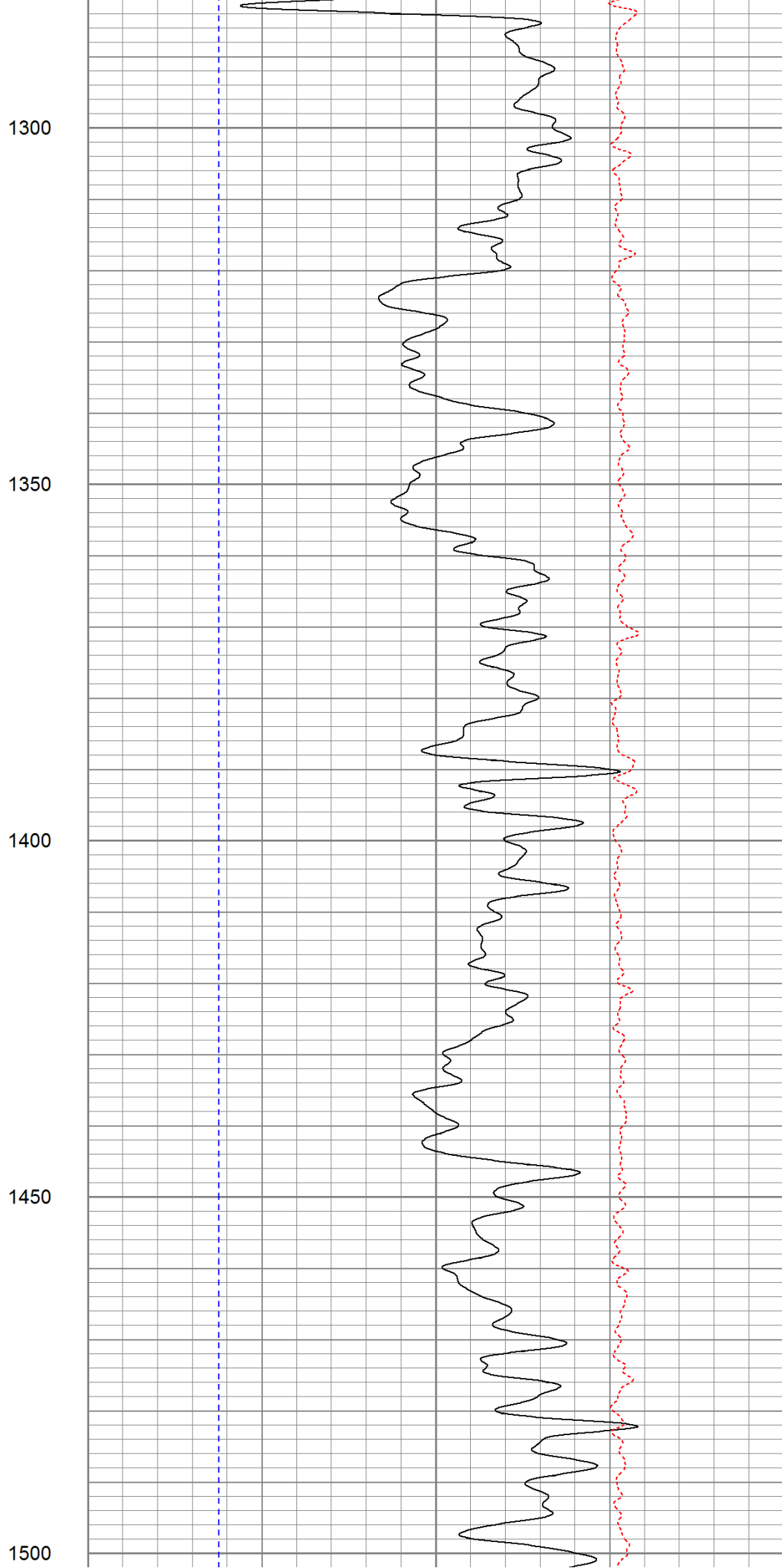
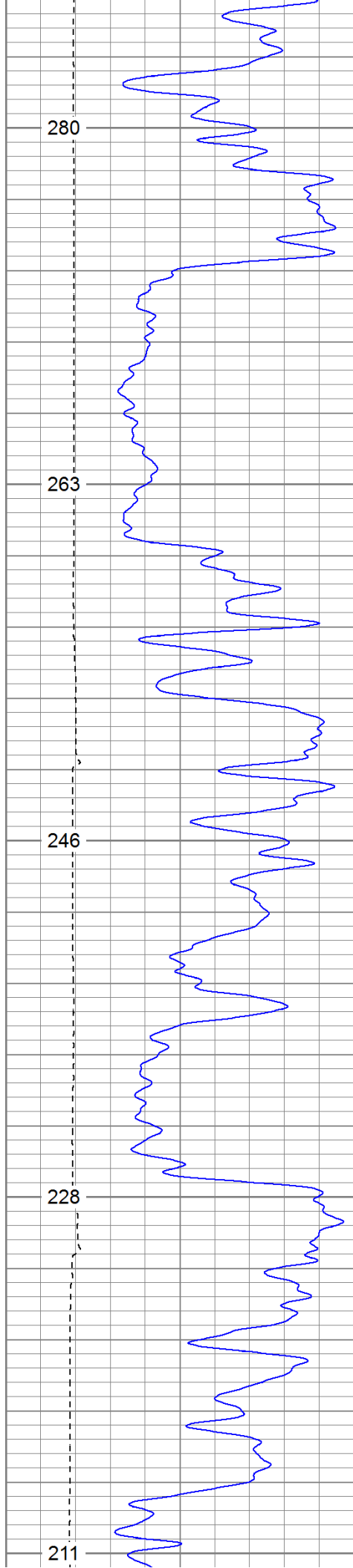
AIR  
1100

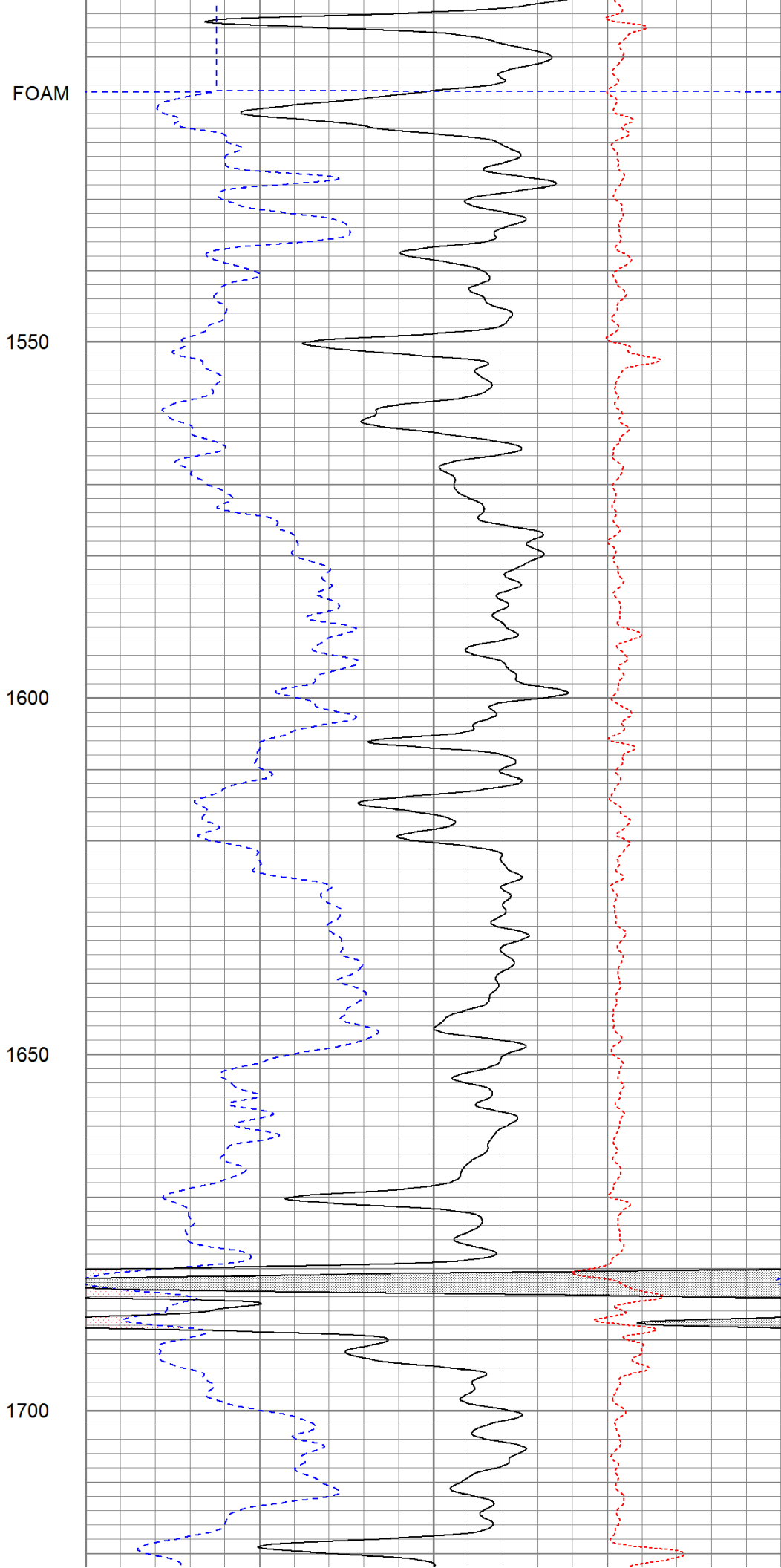
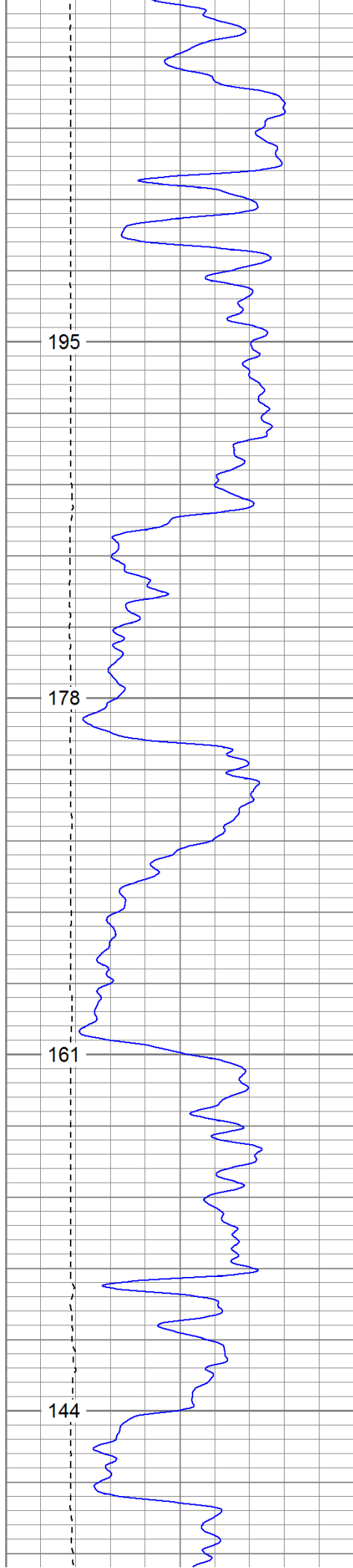
1150

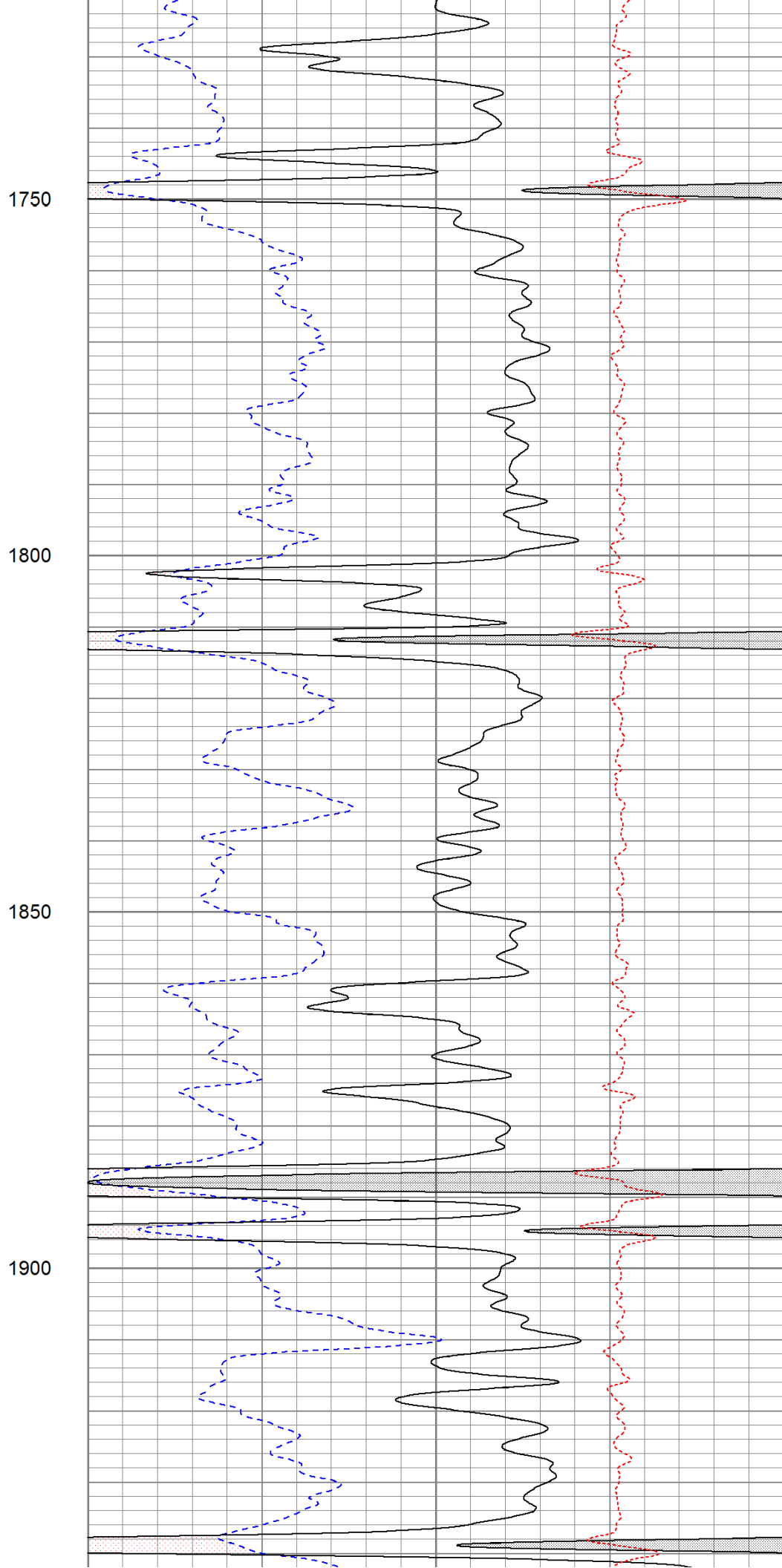
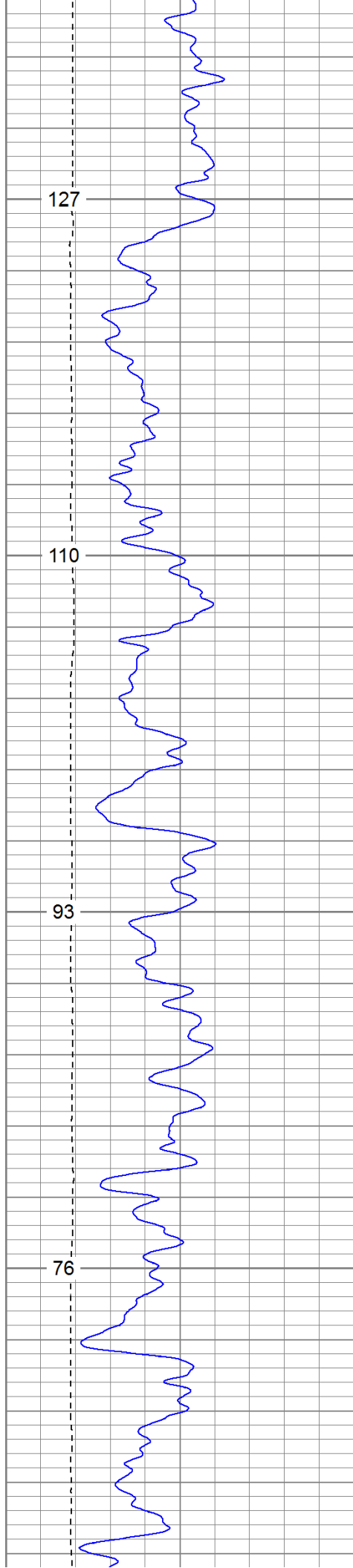
1200

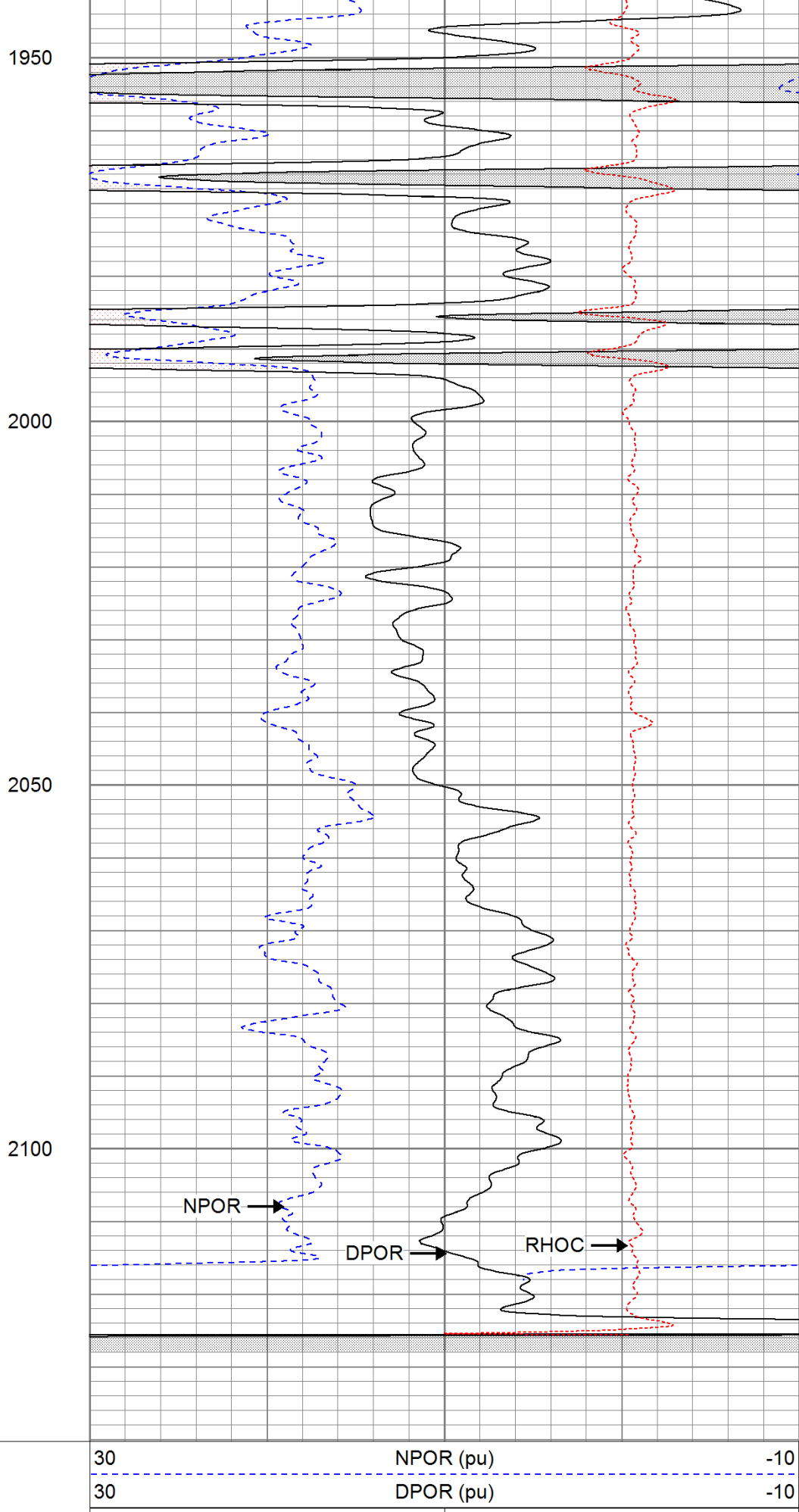
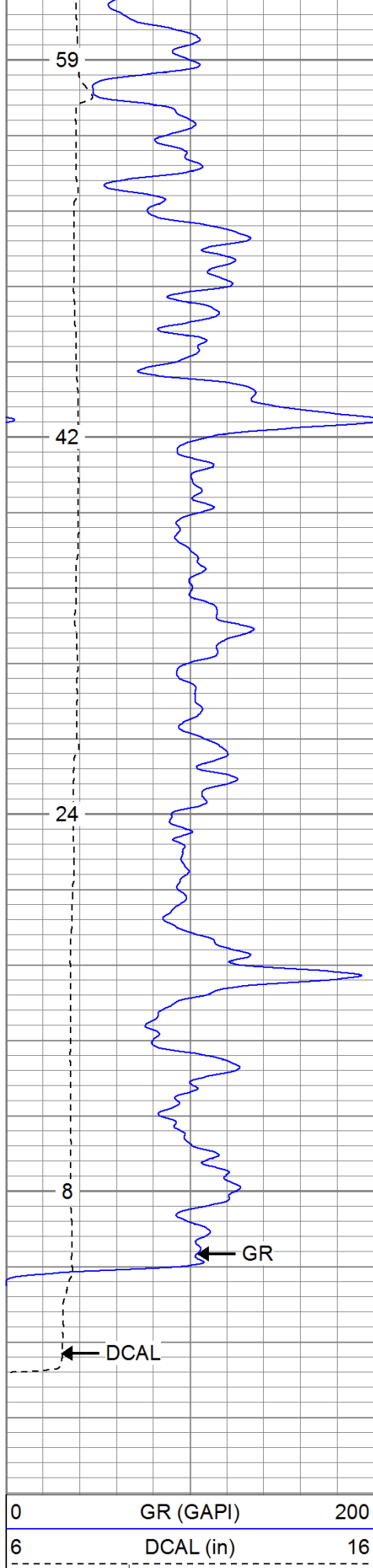
1250











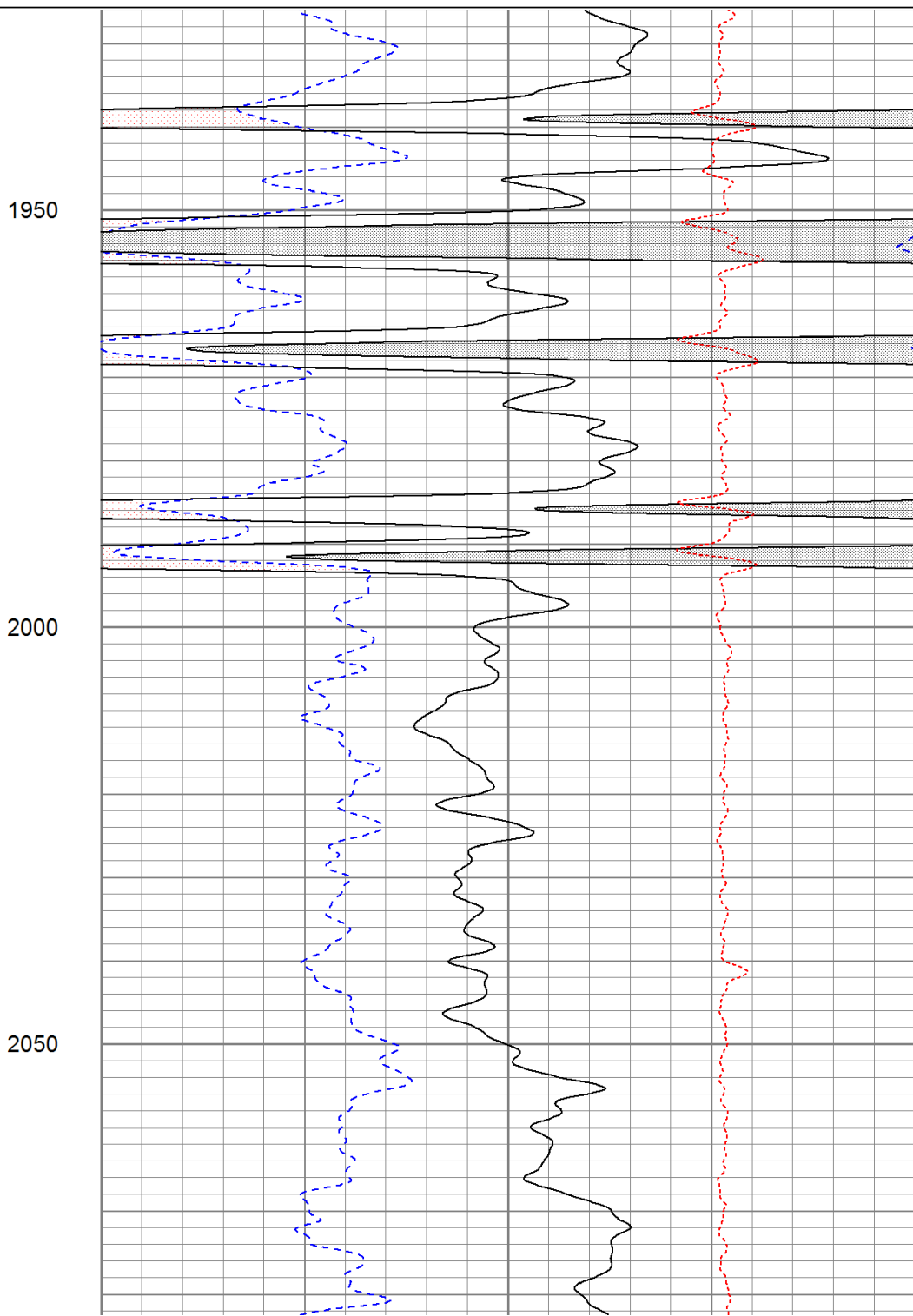
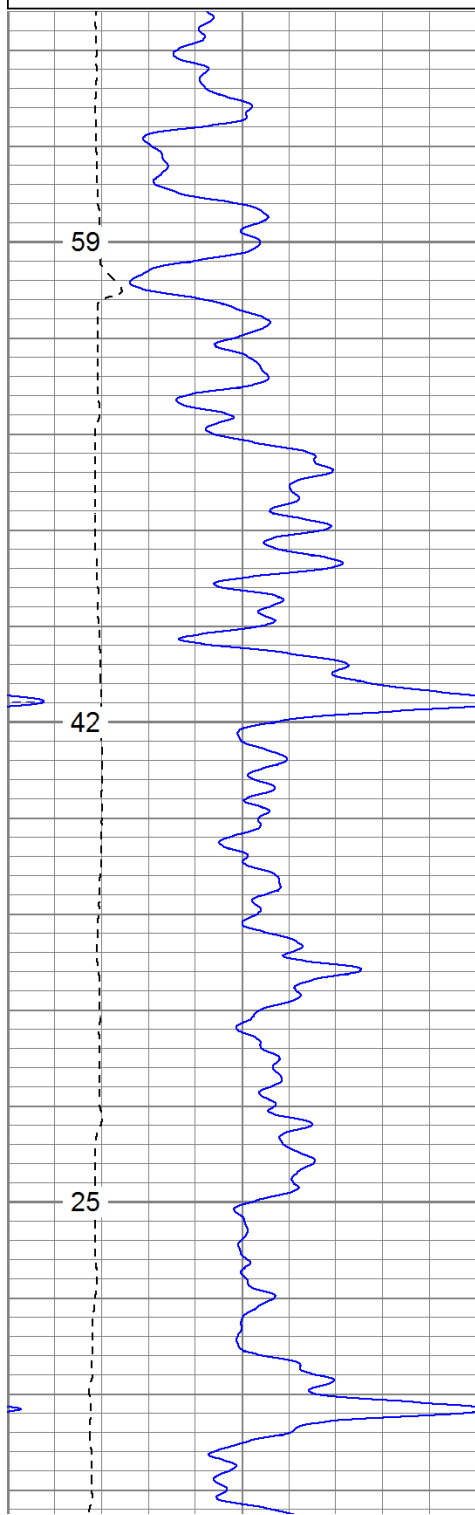


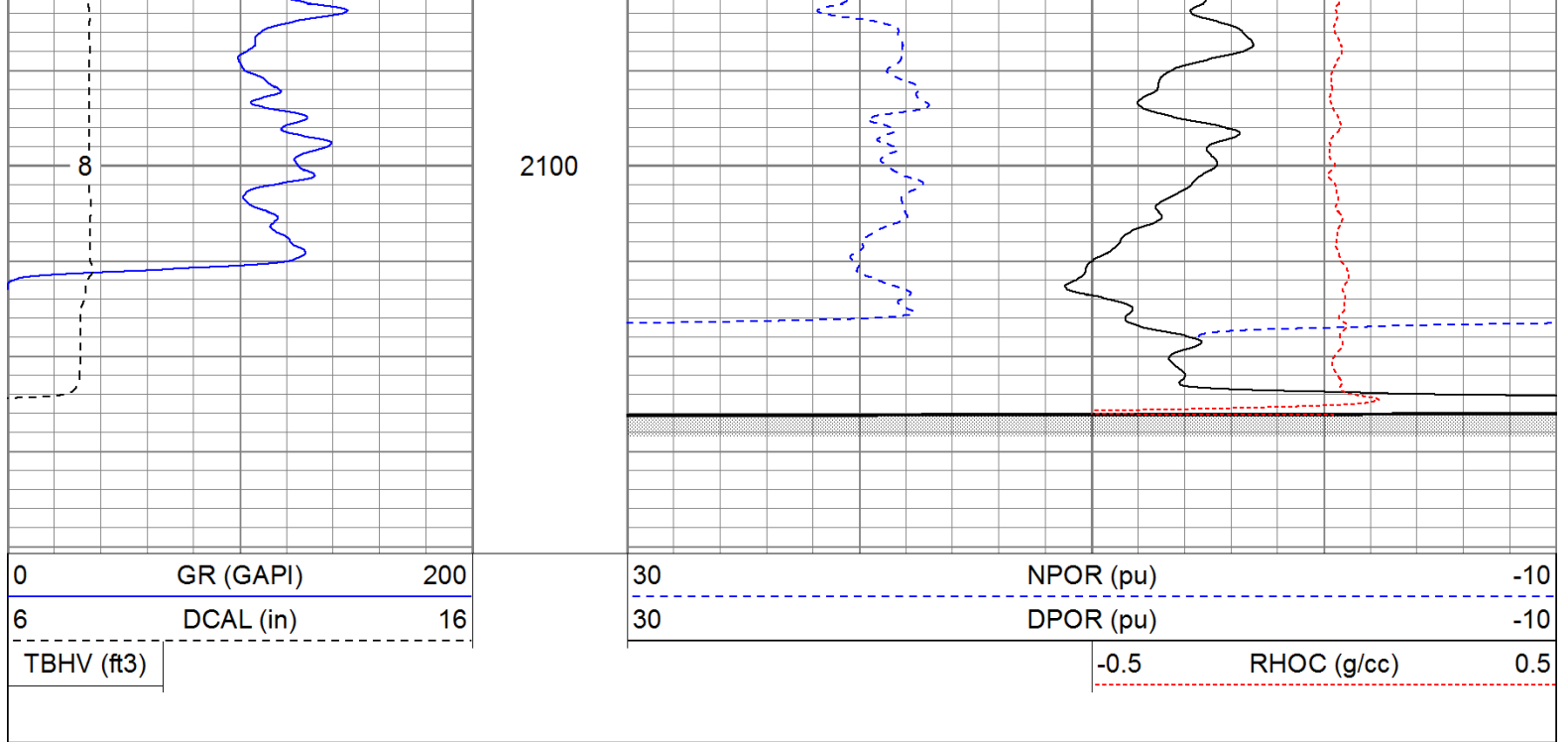
# Repeat Pass

Database File: panther.db  
 Dataset Pathname: pass1.1  
 Presentation Format: cdnl  
 Dataset Creation: Wed Jun 01 17:56:40 2011 by Calc Open-Cased 110302  
 Charted by: Depth in Feet scaled 1:240

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

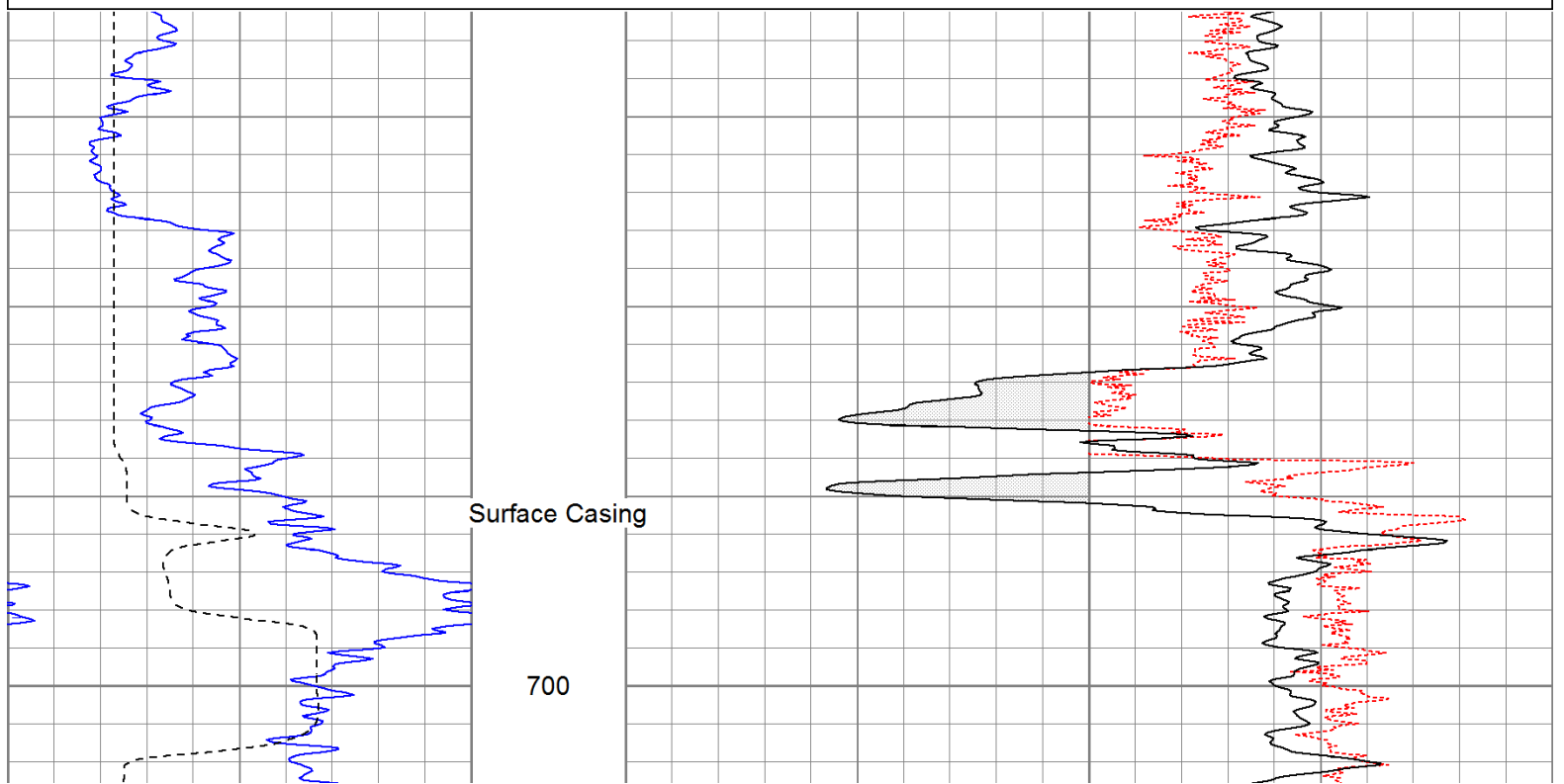


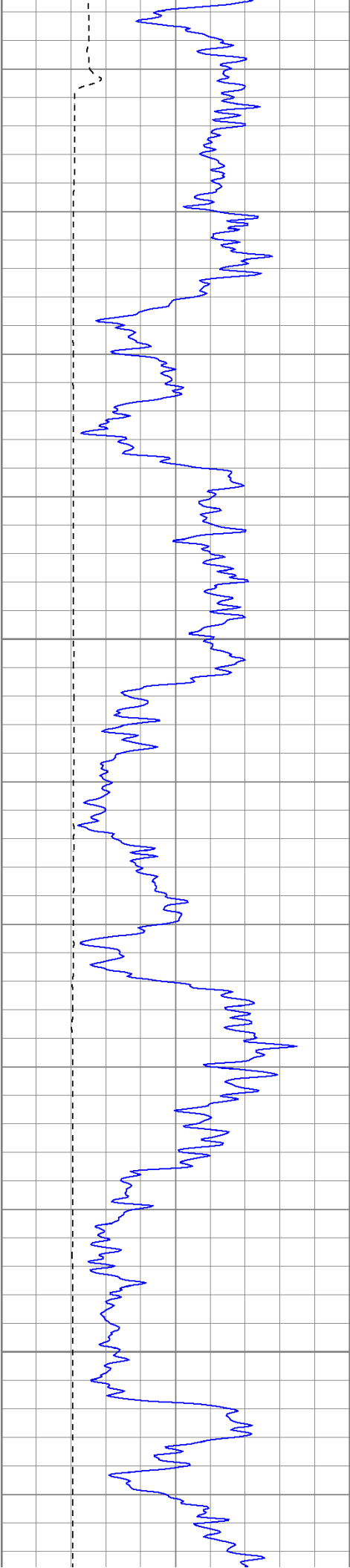


# High Resolution Pass

Database File: panther.db  
 Dataset Pathname: pass2.2  
 Presentation Format: cdlhr  
 Dataset Creation: Wed Jun 01 17:58:02 2011 by Calc Open-Cased 110302  
 Charted by: Depth in Feet scaled 1:120

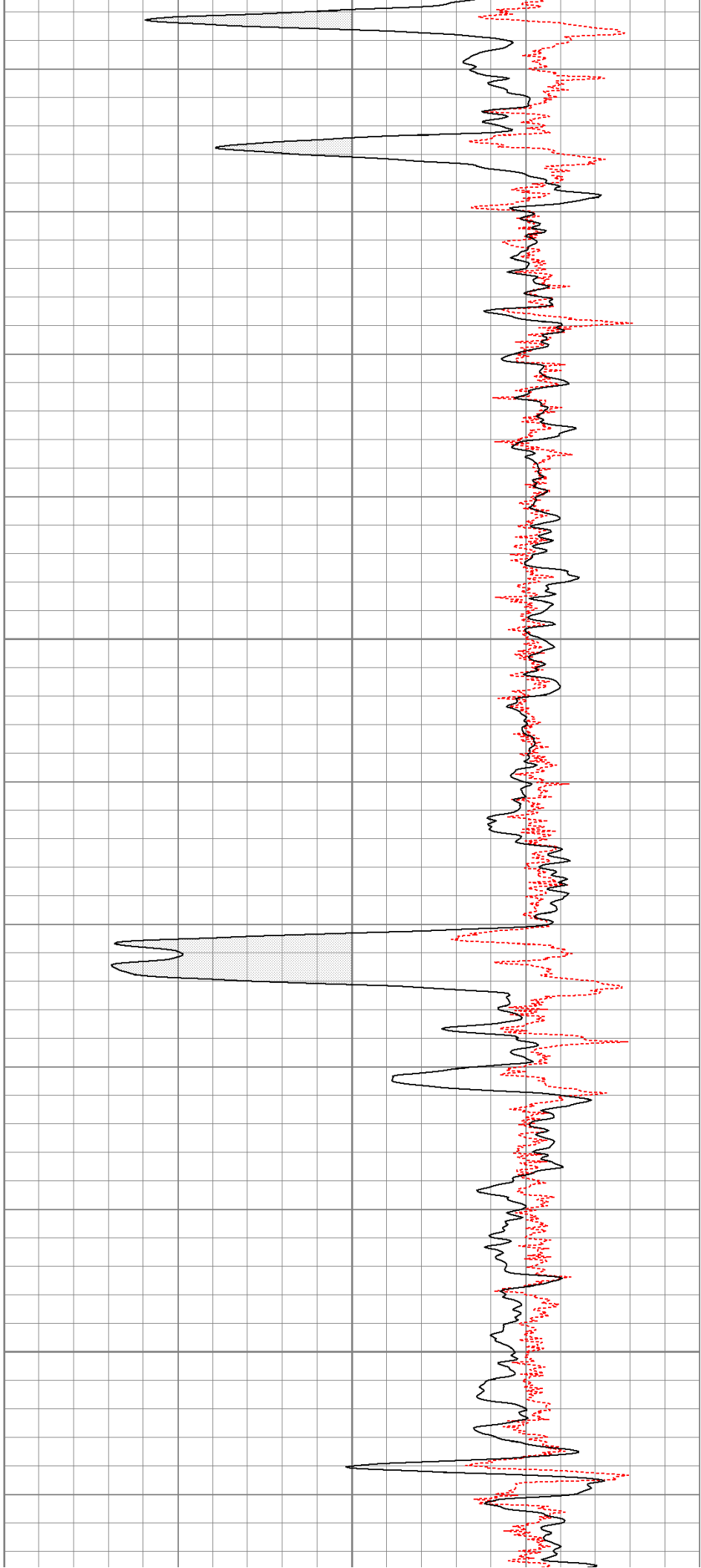
|   |           |     |   |             |                 |
|---|-----------|-----|---|-------------|-----------------|
| 0 | GR (GAPI) | 200 | 1 | RHOB (g/cc) | 3               |
| 6 | DCAL (in) | 16  |   | -0.5        | RHOC (g/cc) 0.5 |

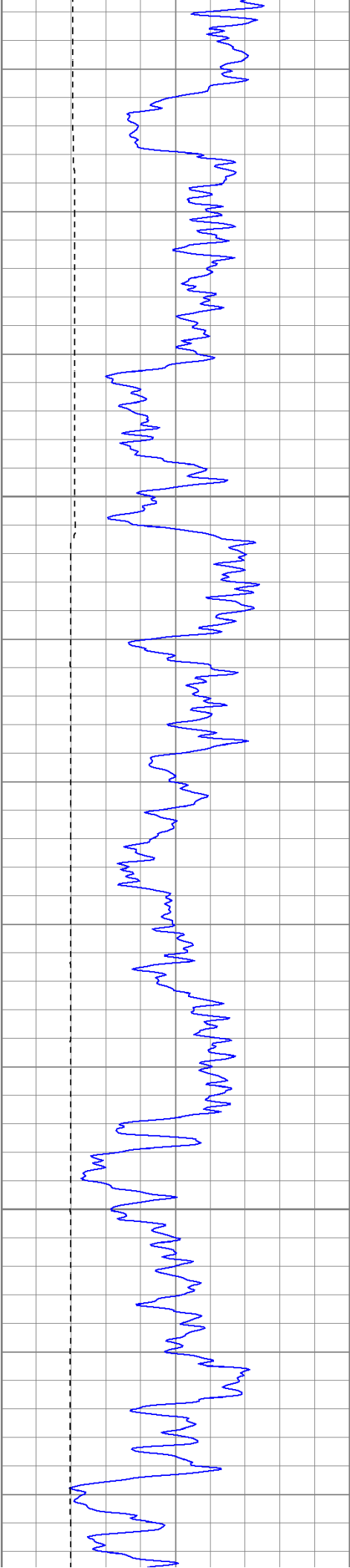




750

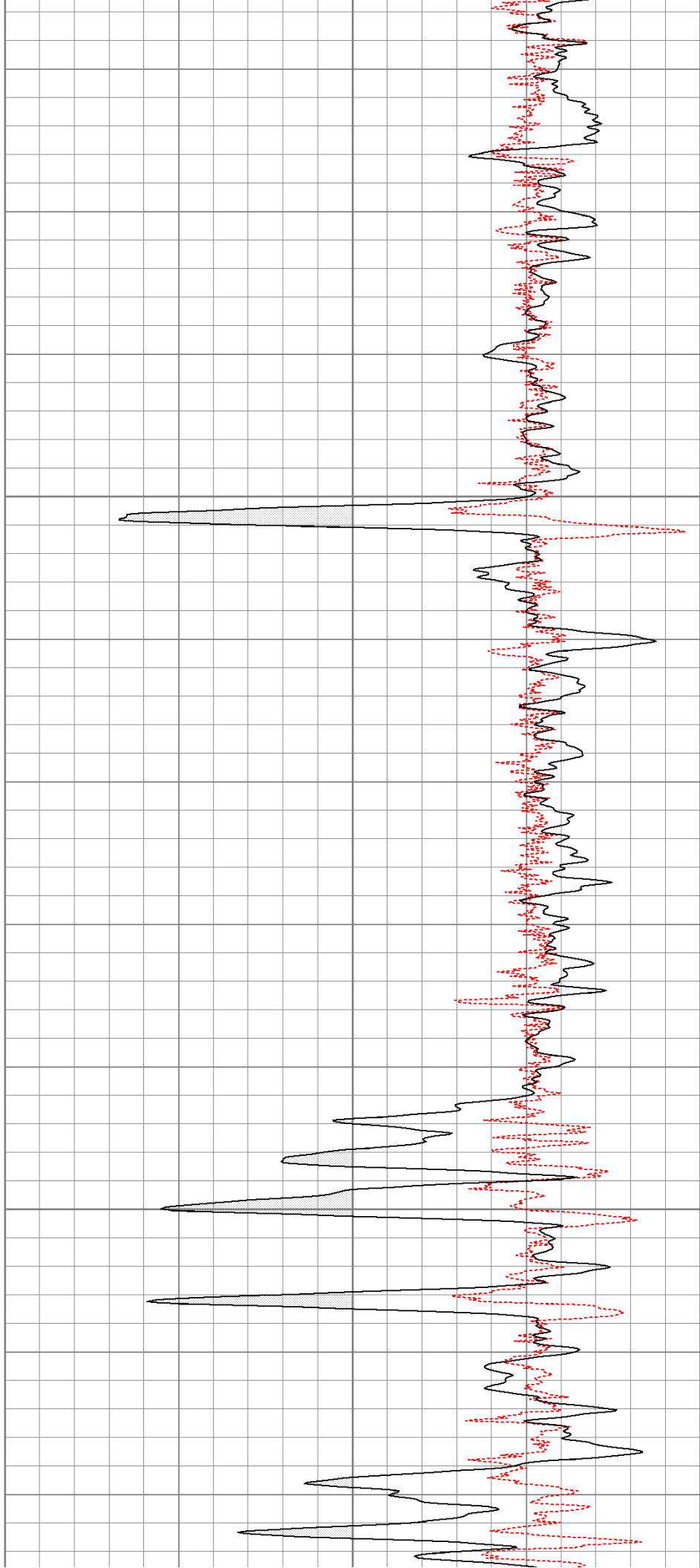
800

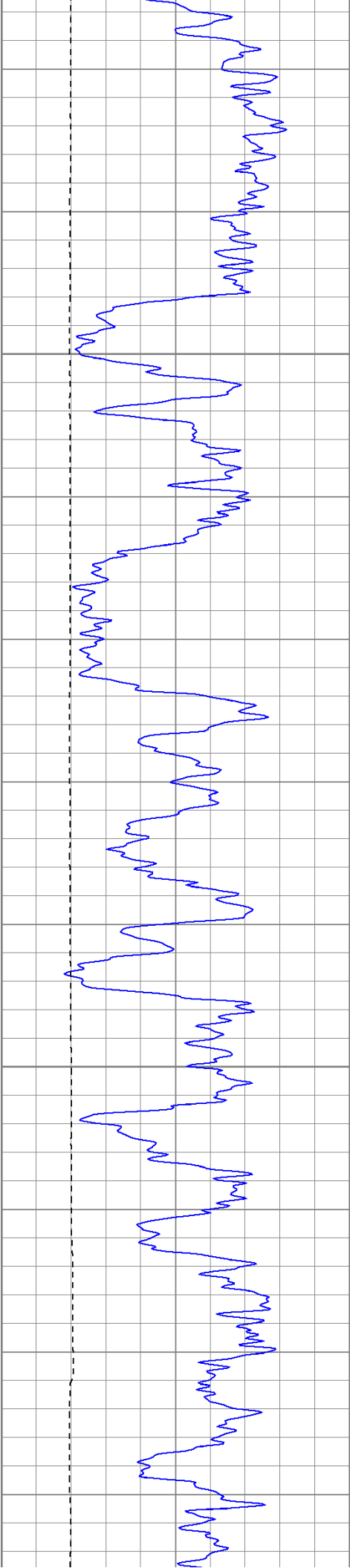




850

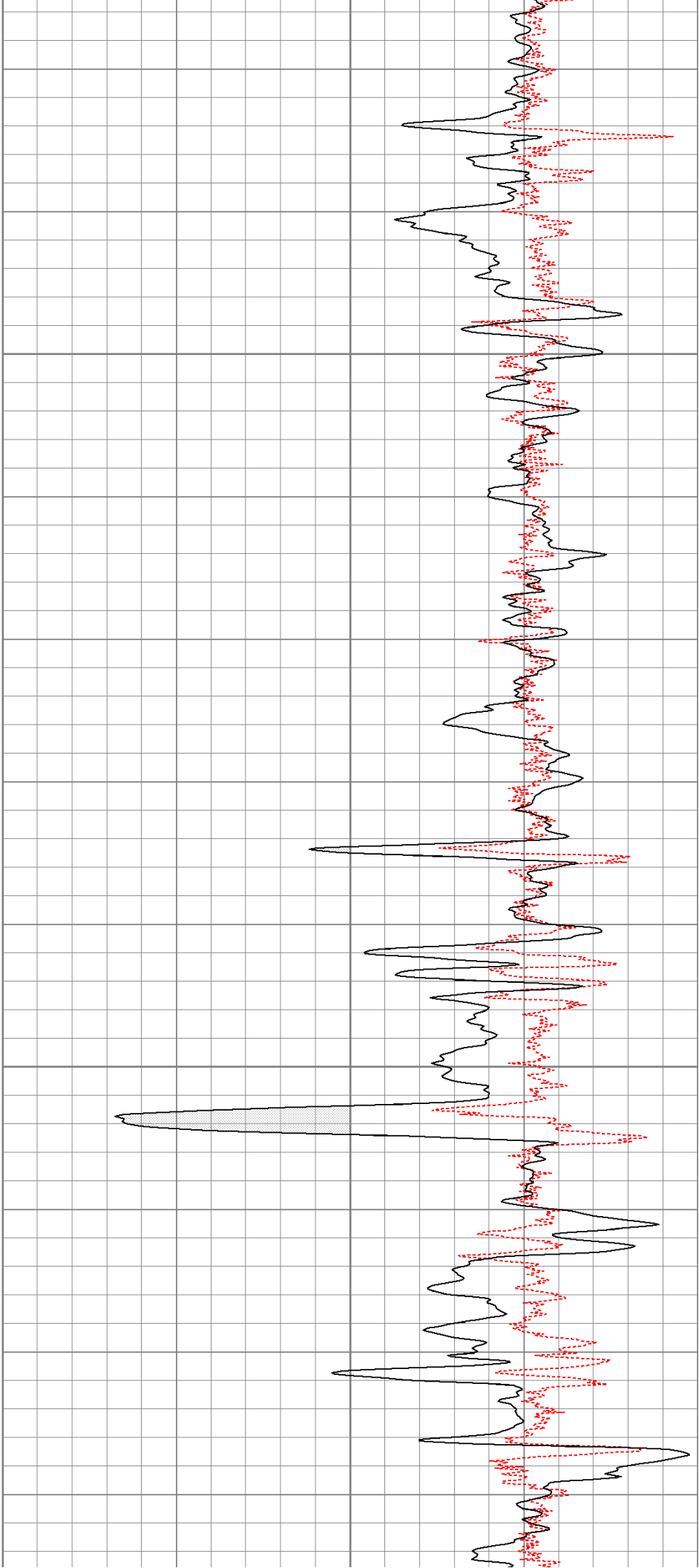
900

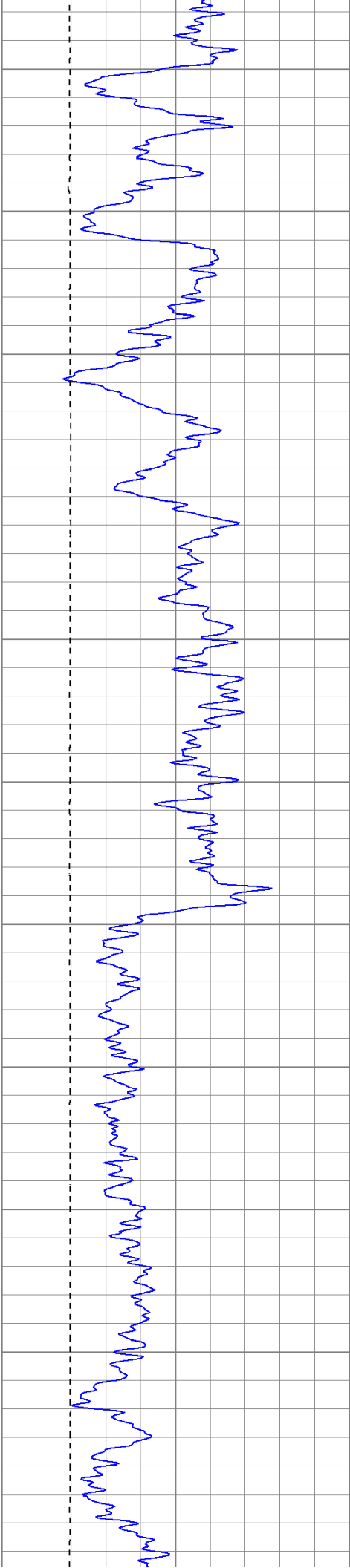




950

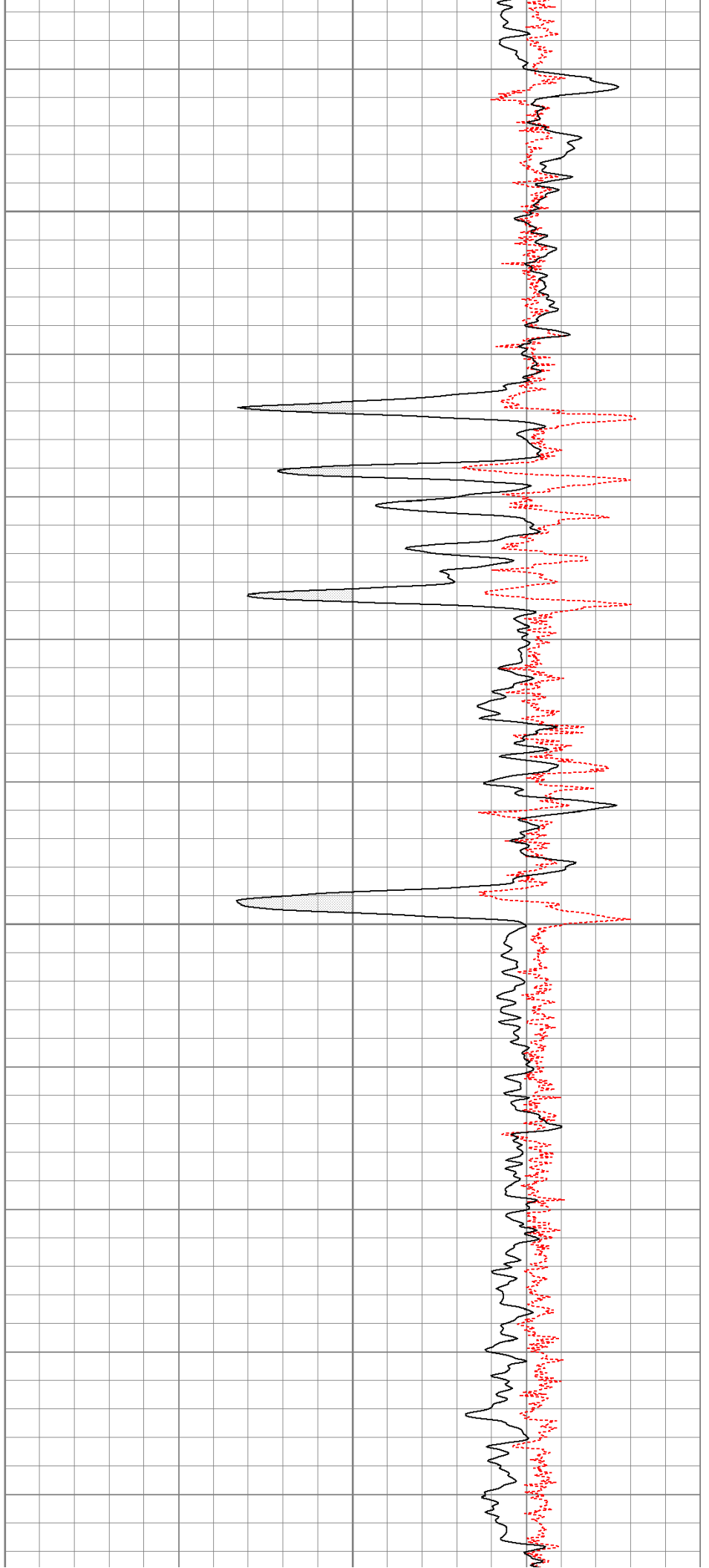
1000

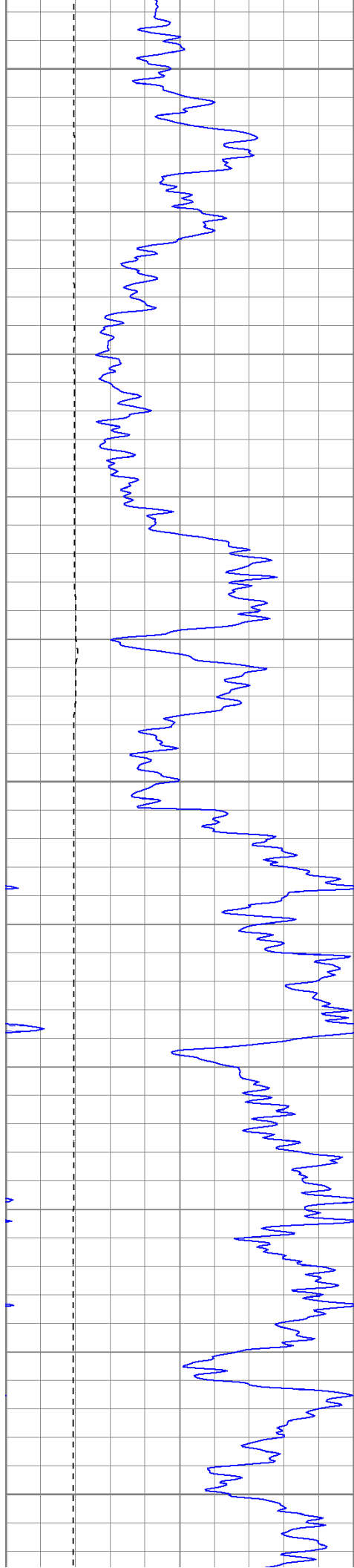




1050

AIR  
1100

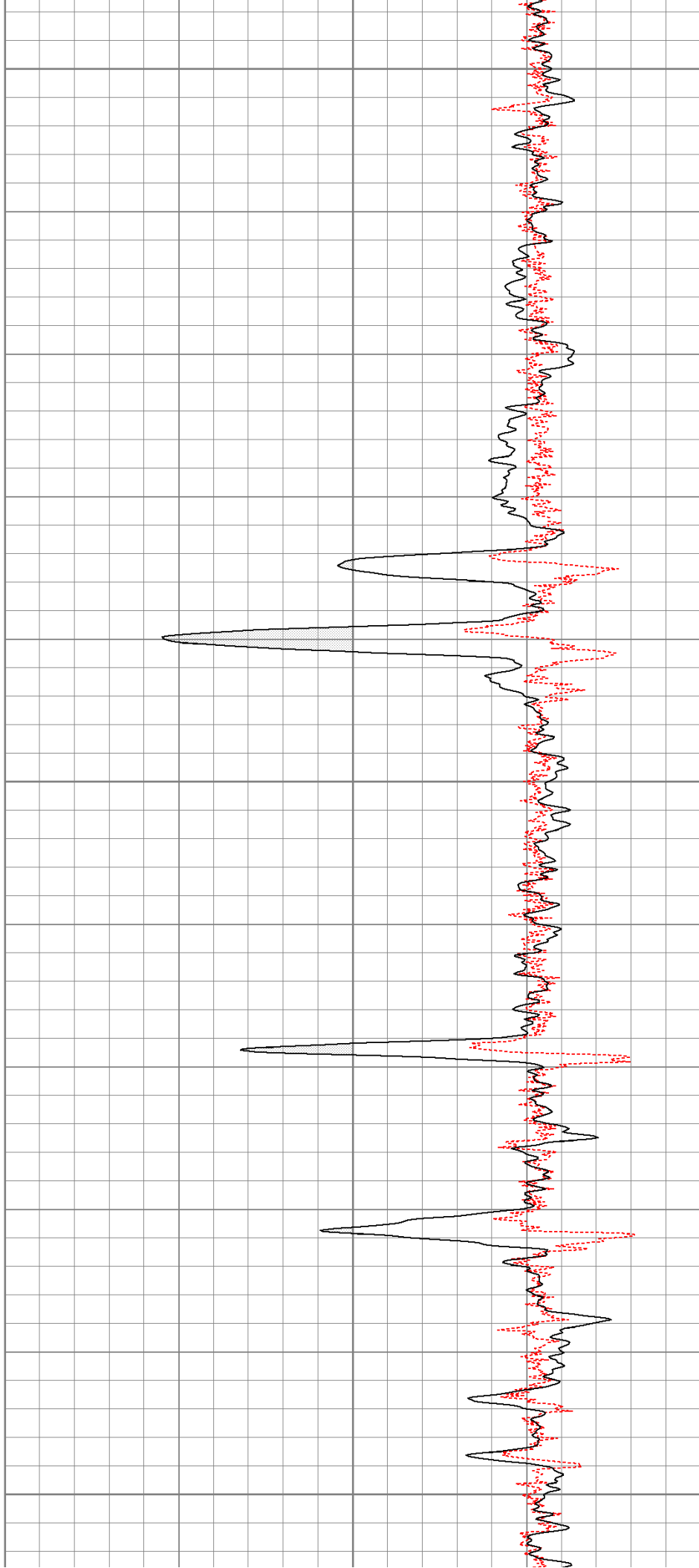


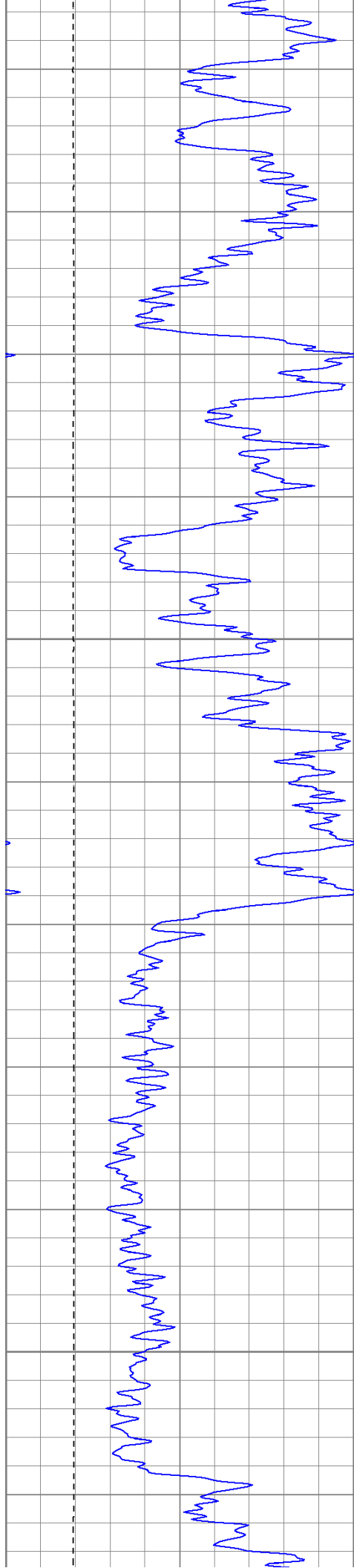


1150

1200

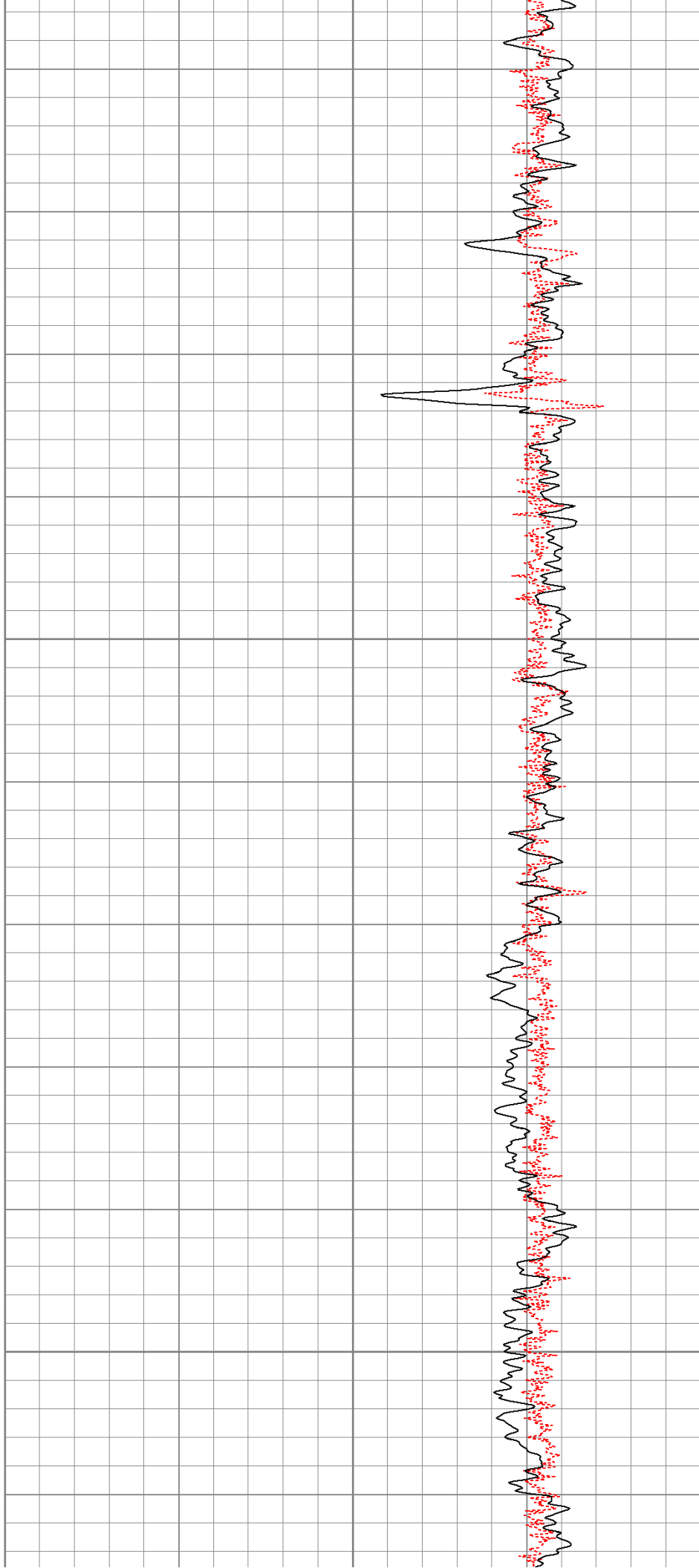
1250



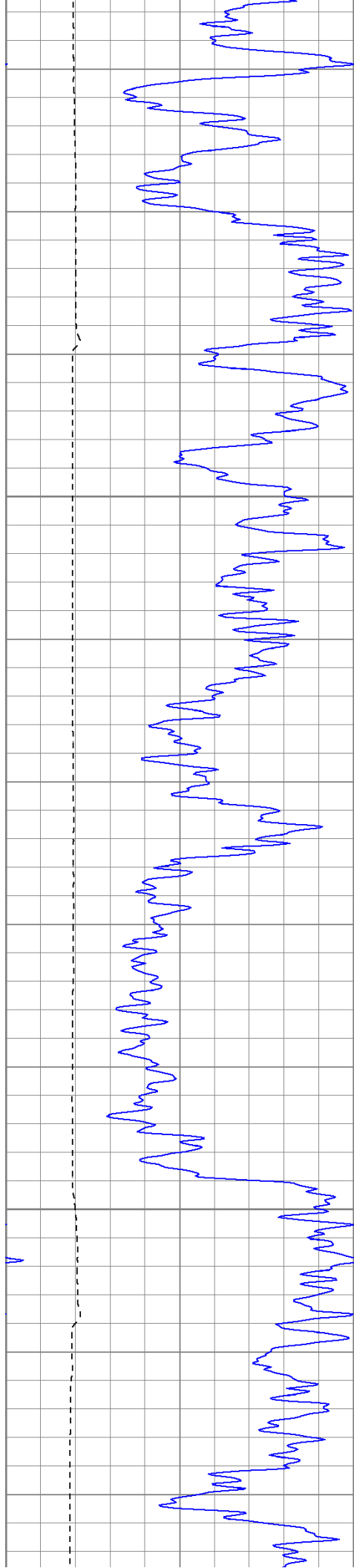


1300

1350

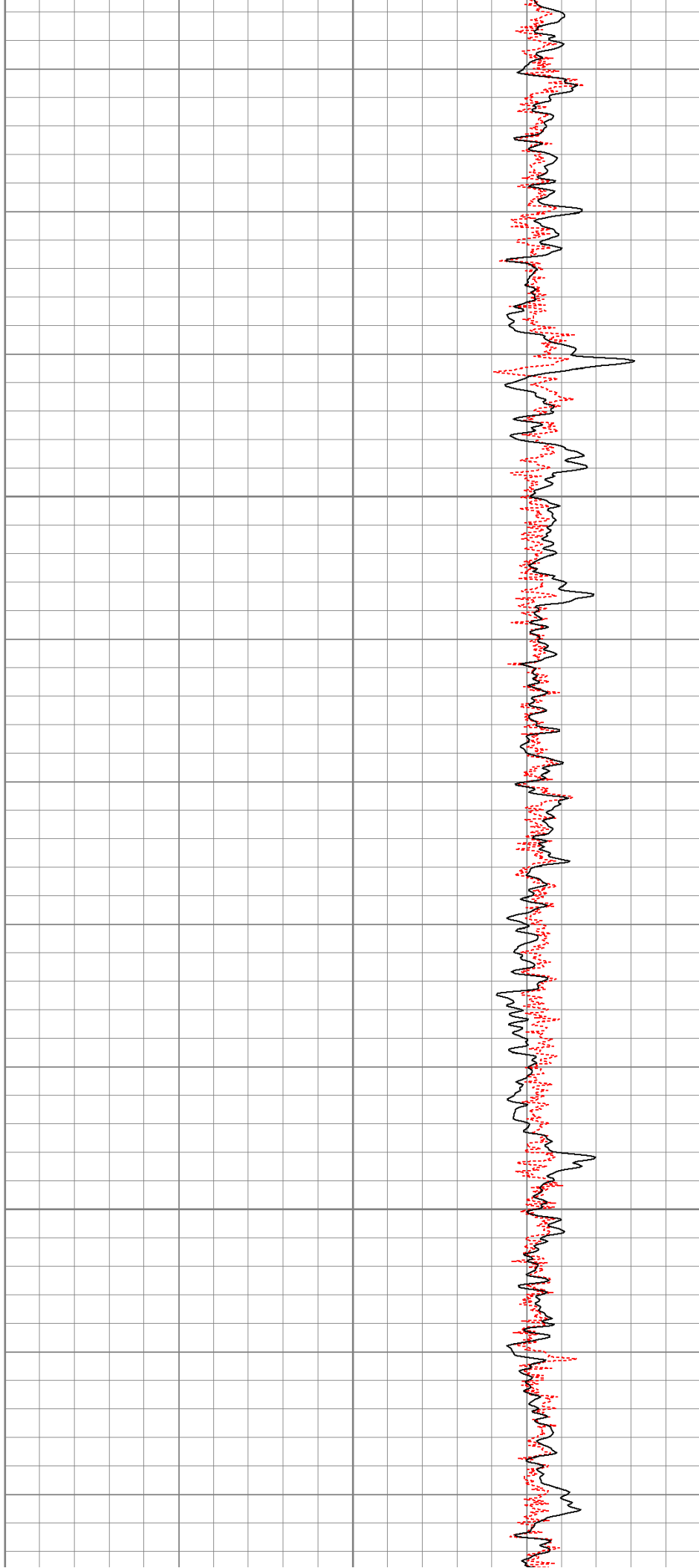


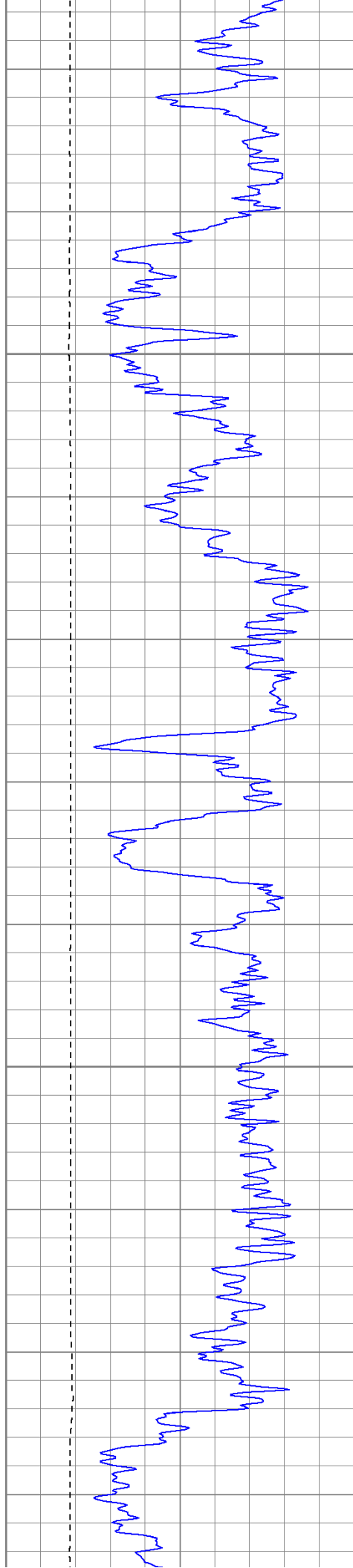




1400

1450

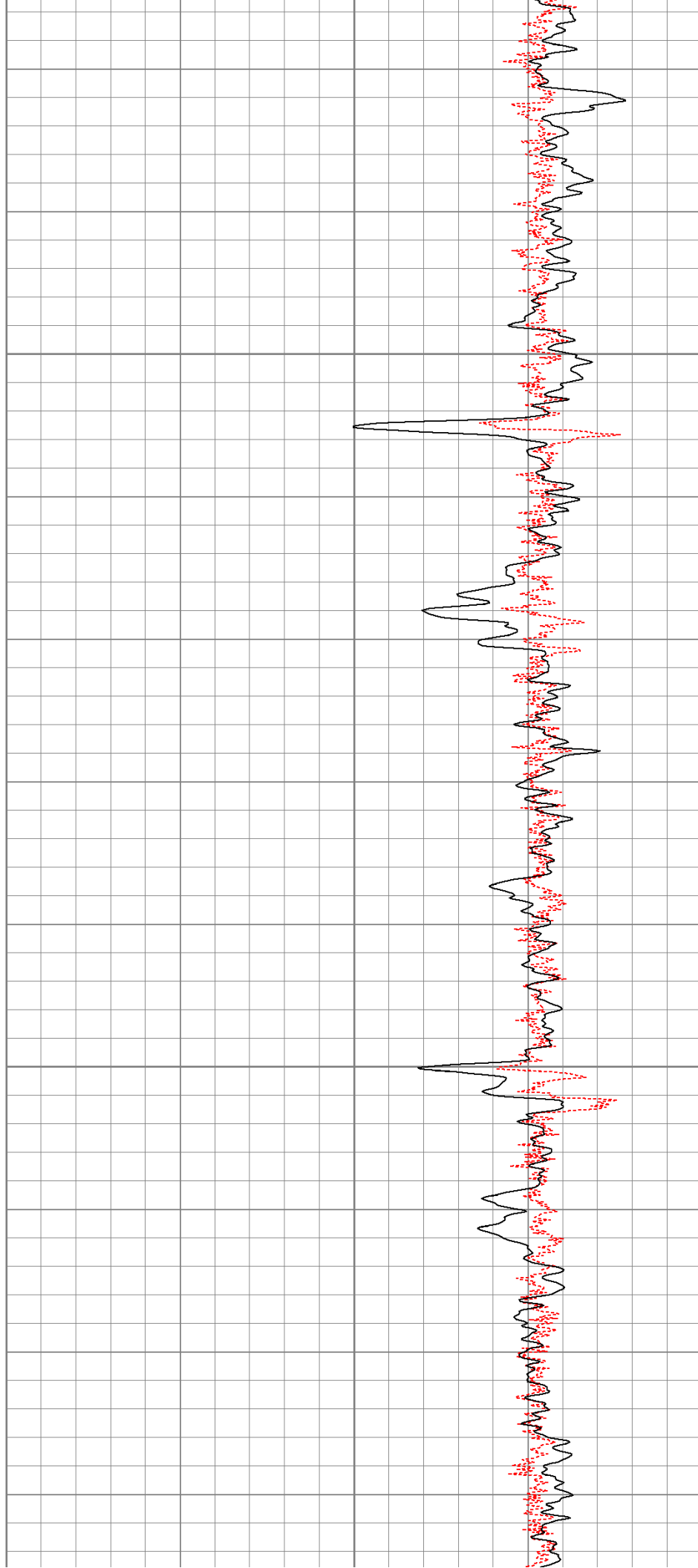


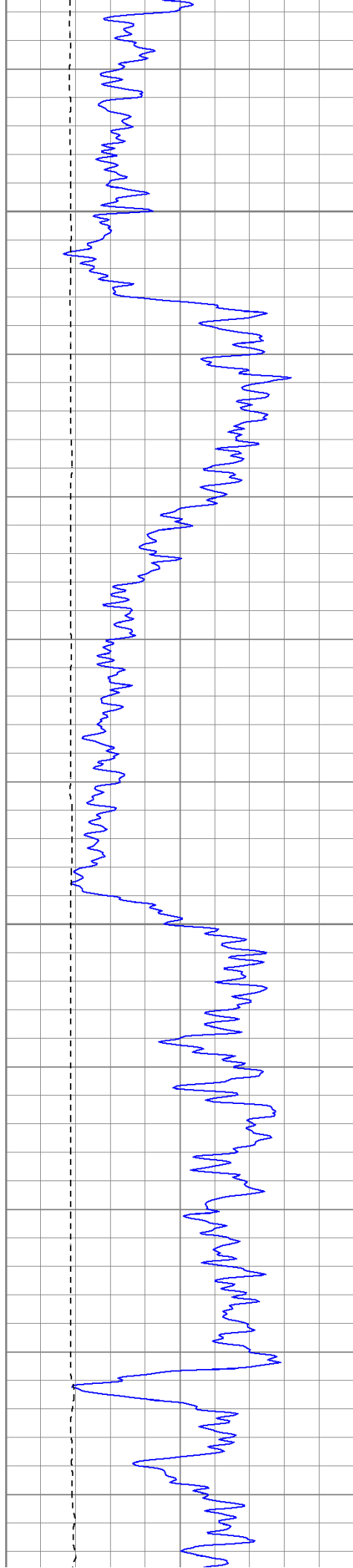


1500

FOAM

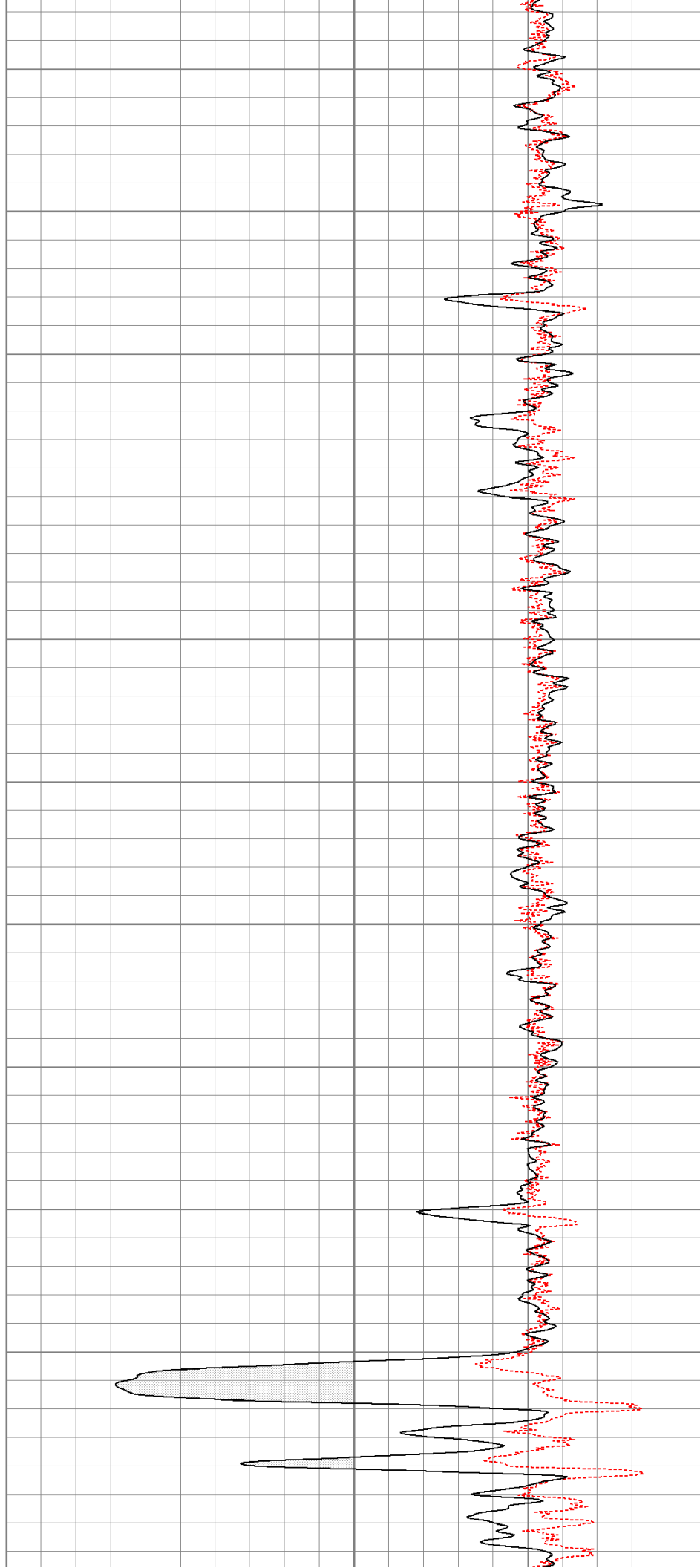
1550

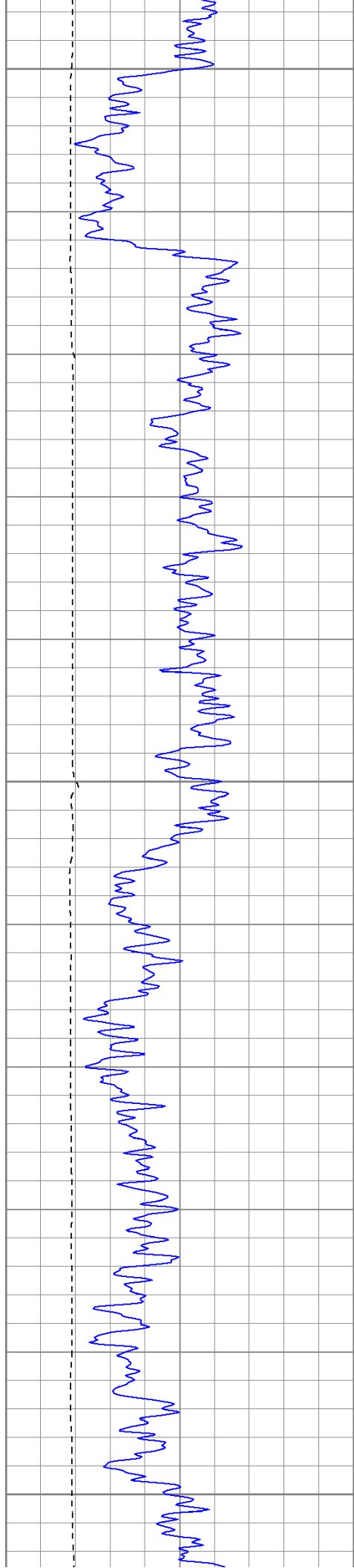




1600

1650

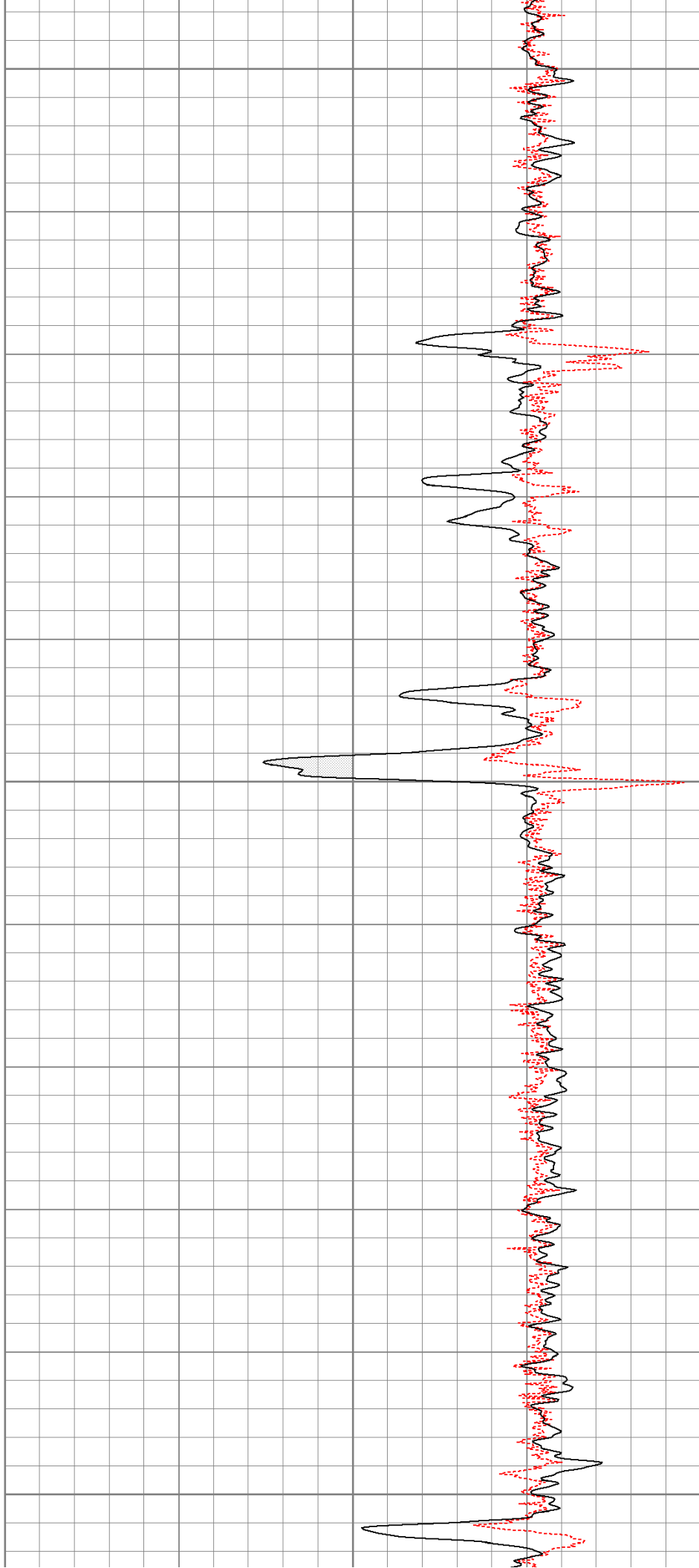


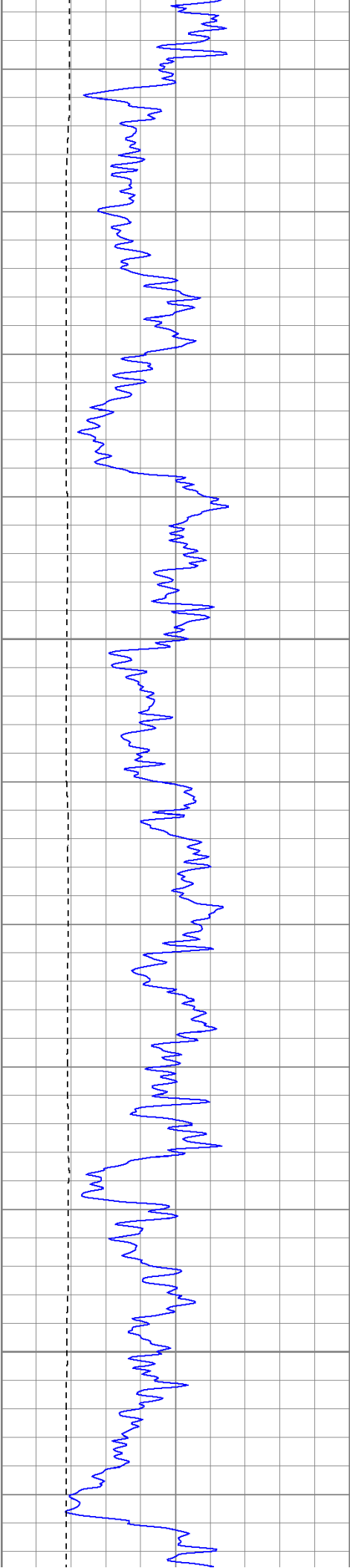


1700

1750

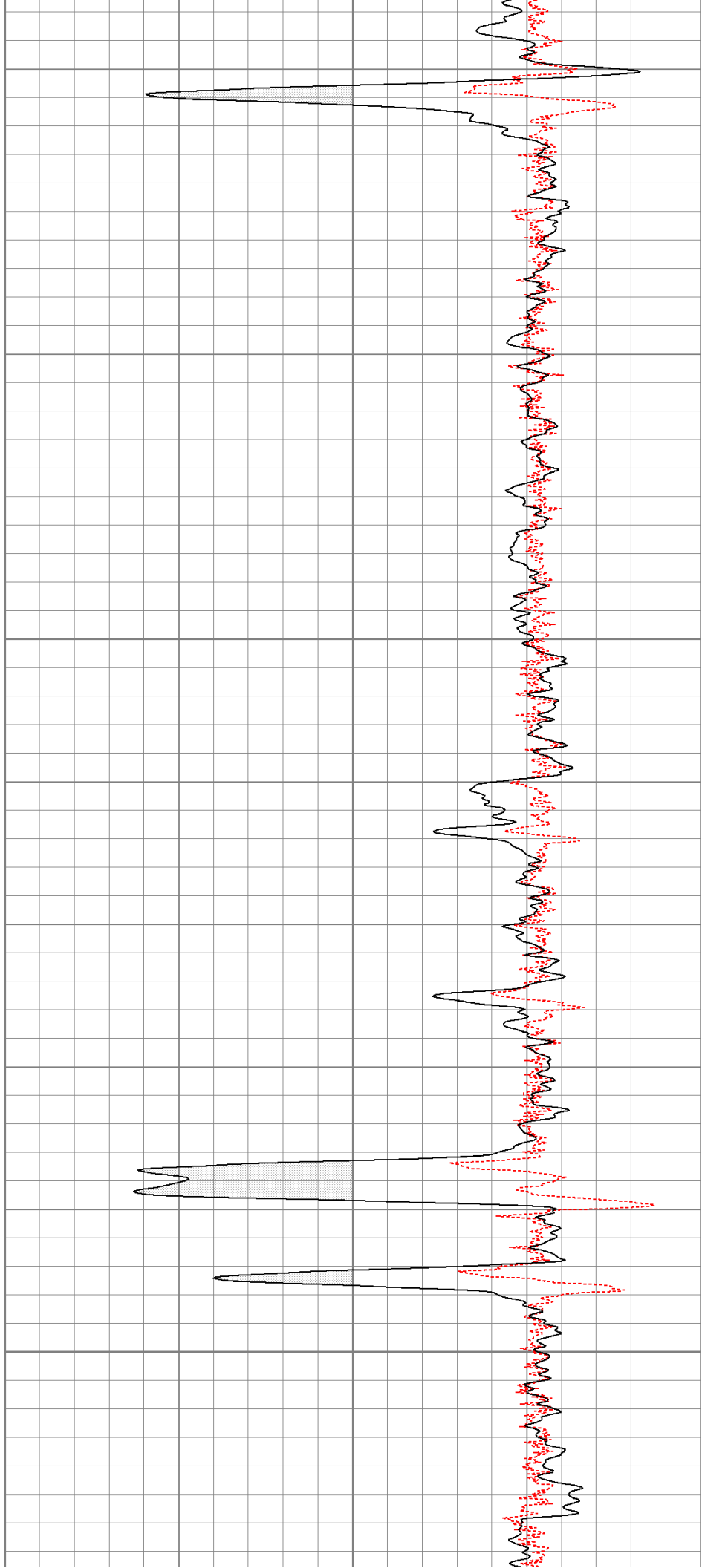
1800

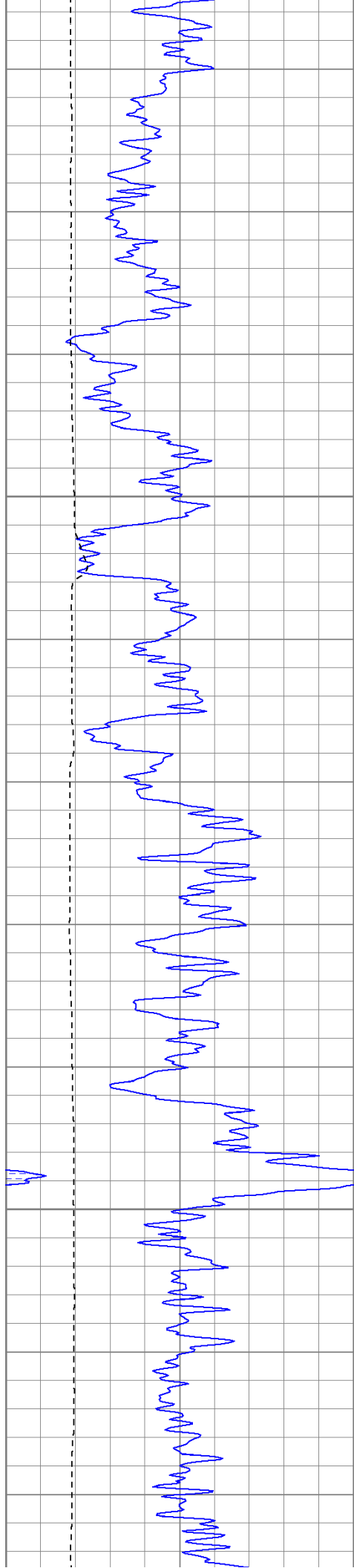




1850

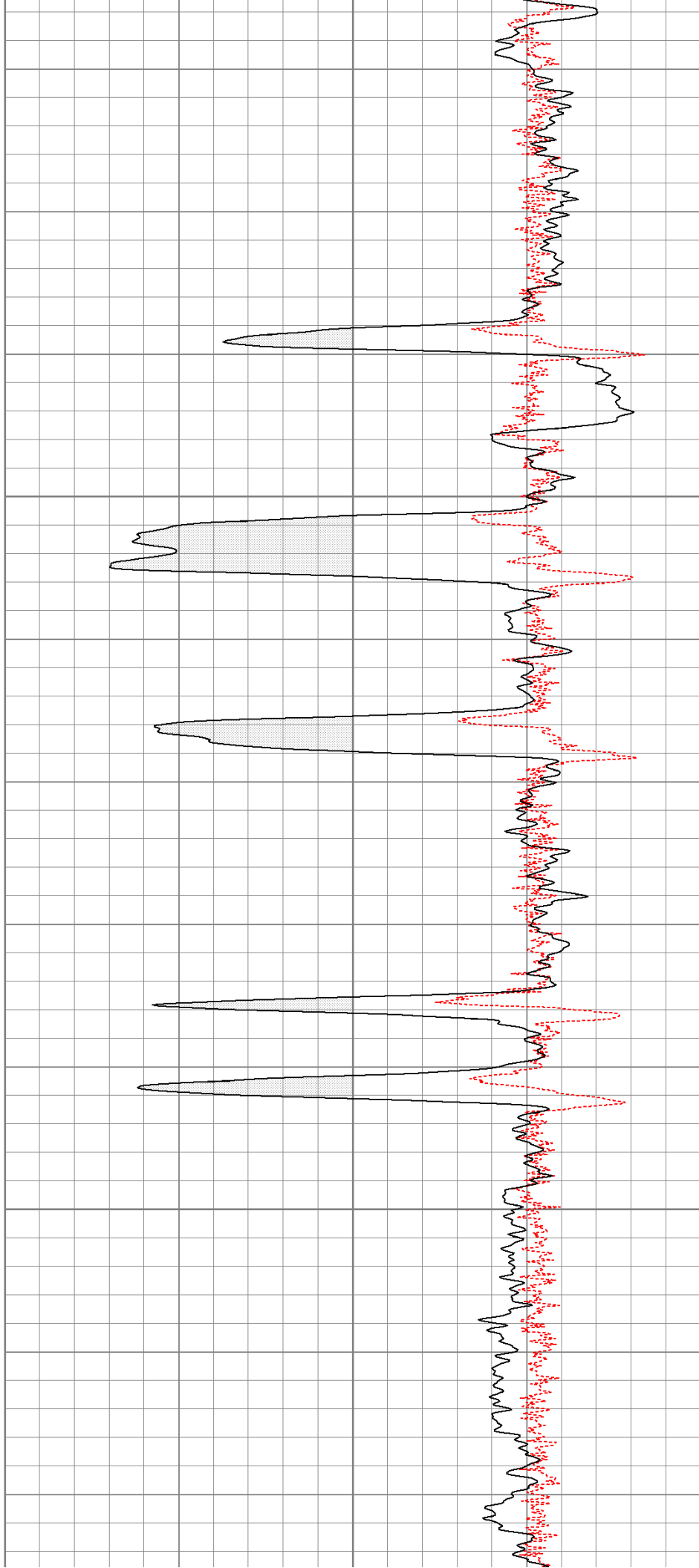
1900

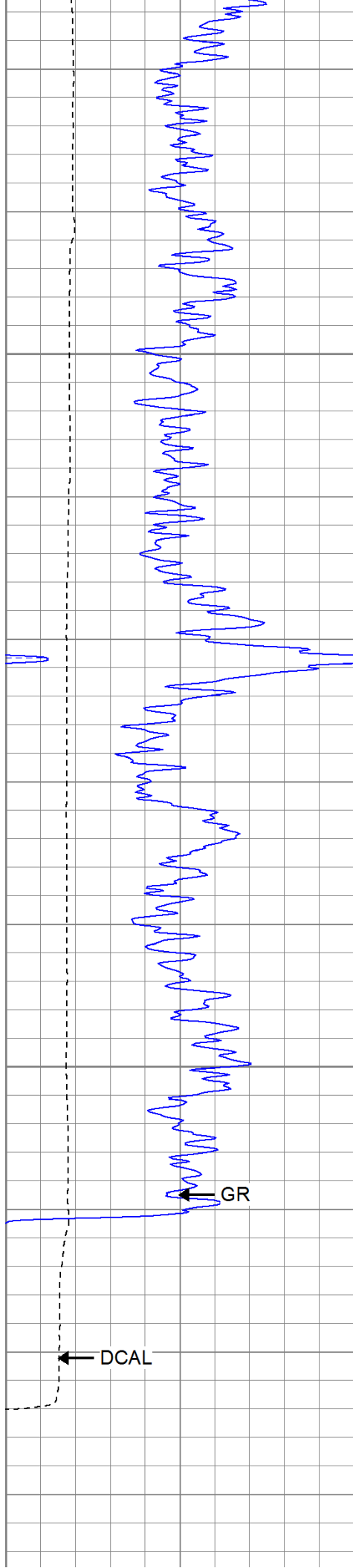




1950

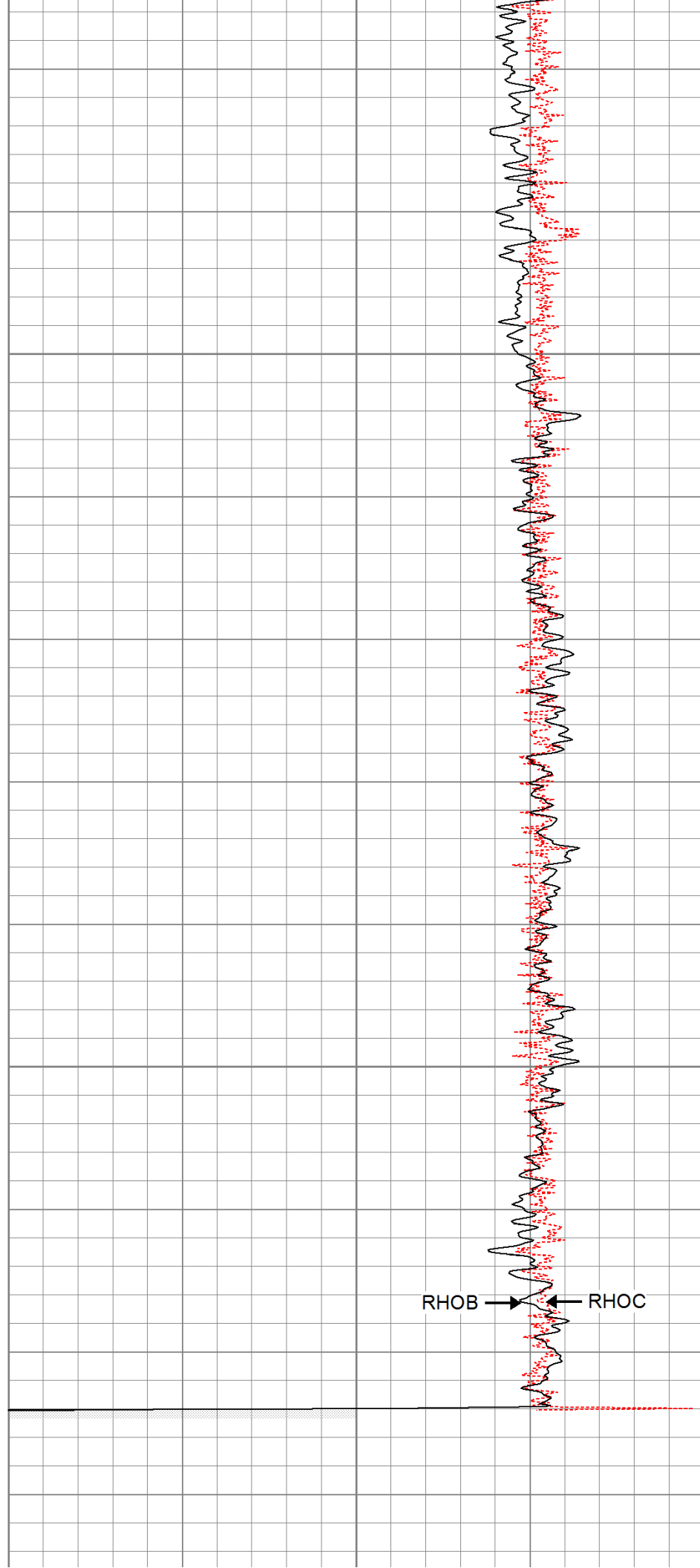
2000





2050

2100



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

## Calibration Report

Database File: panther.db

Dataset Pathname: pass1

Dataset Creation: Wed Jun 01 13:27:39 2011 by Log Open-Cased 110302

# Induction Tool Calibration Report

Serial Number: 701  
Tool Model: Probe  
Downhole Cal Performed: Fri May 13 12:26:14 2011  
Surface Cal Performed: Wed Apr 27 12:27:07 2011  
After Survey Verification Performed:

|                         |       |         |      |
|-------------------------|-------|---------|------|
| Surface Calibration:    | Air   | Loop    |      |
| Conductivity Reference: | 0.000 | 500.000 | mmho |
| Conductivity Reading:   | 0.006 | 0.644   | V    |
| Internal Reference:     | Zero  | Cal     |      |
| Conductivity Reference: | 0.000 | 500.000 | mmho |
| Conductivity Reading:   | 0.007 | 0.643   | V    |

|                         |               |              |       |
|-------------------------|---------------|--------------|-------|
| Downhole Calibration:   | Internal Zero | Internal Cal |       |
| Conductivity Reference: | 0.703         | 499.163      | mmho  |
| Conductivity Reading:   | 0.000         | 0.000        | V     |
| Short Normal Reference: | 0.000         | 20.000       | Ohm-m |
| Short Normal Reading:   | 0.005         | 0.214        | V     |

|                           |         |        |
|---------------------------|---------|--------|
| Results:                  | Gain    | Offset |
| Loop Conductivity:        | 783.886 | -4.674 |
| Downhole Correction:      | 1.000   | 0.000  |
| Short Normal Resistivity: | 95.281  | -0.432 |

| After Survey Verification |       | Internal Zero | Internal Cal |  |
|---------------------------|-------|---------------|--------------|--|
| Conductivity Reading:     | 0.000 | 0.000         | V            |  |
| Conductivity Result:      | 0.000 | 0.000         | mmho         |  |
| Short Normal Reading:     | 0.000 | 0.000         | V            |  |
| Short Normal Result:      | 0.000 | 0.000         | Ohm-m        |  |

## Compensated Density Calibration Report




Serial-Model: 901-2.75POH  
Source / Verifier: /  
Master Calibration Performed: Tue May 17 10:06:24 2011  
Before Survey Verification Performed:  
After Survey Verification Performed:

## Master Calibration

|                     | Density |      | Far Detector                | Near Detector |     |
|---------------------|---------|------|-----------------------------|---------------|-----|
| Magnesium           | 1.710   | g/cc | 1001.79                     | 578.48        | cps |
| Aluminum            | 2.590   | g/cc | 180.36                      | 300.39        | cps |
| Spine Angle = 69.08 |         |      | Density/Spine Ratio = 0.479 |               |     |
|                     | Size    |      | Reading                     |               |     |
| Small Ring          | 8.00    | in   | 2.50                        | V             |     |
| Large Ring          | 16.00   | in   | 4.57                        | V             |     |



|                              |                          |                     |  |
|------------------------------|--------------------------|---------------------|--|
| Before Survey Verification   |                          |                     |  |
| <div>Target</div>            |                          | <div>Measured</div> |  |
| g/cc                         |                          | g/cc                |  |
| g/cc                         |                          | g/cc                |  |
| g/cc                         |                          | g/cc                |  |
| After Survey Verification    |                          |                     |  |
| <div>Target</div>            |                          | <div>Measured</div> |  |
| g/cc                         |                          | g/cc                |  |
| g/cc                         |                          | g/cc                |  |
| g/cc                         |                          | g/cc                |  |
| Neutron Calibration Report   |                          |                     |  |
| Serial Number:               | 802                      |                     |  |
| Tool Model:                  | 2.75POH                  |                     |  |
| Performed:                   | Tue May 03 12:28:21 2011 |                     |  |
| Calibrator Value:            | 700                      | NAPI                |  |
| Calibrator Reading:          | 1000                     | cps                 |  |
| Sensitivity:                 | 0.7                      | NAPI/cps            |  |
| Gamma Ray Calibration Report |                          |                     |  |
| Serial Number:               | 801                      |                     |  |
| Tool Model:                  | 2.75POH                  |                     |  |
| Performed:                   | Thu May 05 13:29:10 2011 |                     |  |
| Calibrator Value:            | 200.0                    | GAPI                |  |
| Background Reading:          | 8.0                      | cps                 |  |
| Calibrator Reading:          | 264.7                    | cps                 |  |
| Sensitivity:                 | 0.6000                   | GAPI/cps            |  |

| Sensor | Offset (ft) | Schematic   | Description   | Len (ft) | OD (in) | Wt (lb) |
|--------|-------------|---|---|----------|---------|---------|
| GR     | 29.58       |  | None  | 0.75     | 1.50    | 5.00    |
|        |             |   | GR-2.75POH (801)<br>Probe 2.75" Probe Open Hole Gamma Ray | 3.73     | 2.75    | 43.00   |
| NEU    | 24.04       |  | NEU-2.75POH (802)<br>Probe Epithermal                     | 4.75     | 2.75    | 58.00   |
|        |             |   | CDL-2.75POH (901)<br>Probe                                | 8.43     | 2.75    | 106.00  |
| LSD    | 16.21       |  |   |          |         |         |
| DCAL   | 15.94       |   |   |          |         |         |
| SSD    | 15.69       |   |   |          |         |         |

|          |              |  |                 |       |      |       |
|----------|--------------|--|-----------------|-------|------|-------|
| DIC      | 6.24         |  | IEL-Probe (701) | 13.46 | 2.75 | 93.00 |
| SP<br>SN | 2.25<br>1.71 |  |                 |       |      |       |

Dataset: panther.db: field/well/run1/pass1

Total Length: 31.11 ft

Total Weight: 305.00 lb

O.D. 2.75 in