



# PIONEER

Pioneer Energy Services

## Borehole Compensated Sonic Log

API No.

15-053-21312-00-00

Company Bird Dog Oil, LLC

Well Stoltzenberg-Svoboda #1-17

Field Stoltzenberg

County Ellsworth

State Kansas

Location

1445' FNL / 1305' FEL

Other Services  
CNL/CDL  
MEL/DIL

Sec: 17

Twp: 16S

Rge: 10W

Elevation

Permanent Datum Ground Level Elevation 1885

Log Measured From Kelly Bushing 9 Ft. Above Perm. Datum

K.B. 1894  
D.F.  
G.L. 1885

Drilling Measured From Kelly Bushing

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Date 5/23/2014

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Run Number Two

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Type Log BHC Sonic

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Depth Driller 3460

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Depth Logger 3460

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Bottom Logged Interval 3449

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Top Logged Interval 350

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Type Fluid In Hole Chemical

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Salinity, PPM CL 9600

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Density 9.3

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Level Full

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Max. Rec. Temp. F 111

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Operating Rig Time 4 Hours

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Equipment -- Location 17 Hays

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Recorded By R. Barnhart

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Witnessed By Derek Patterson

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Borehole Record

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Run No Bit From To Size Wgt. From To

Elevation

K.B. 1894  
D.F.  
G.L. 1885

One 12.25 00 392 8.625 23# 00 392

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Two 7.875 392 TD

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Elevation

K.B. 1894  
D.F.  
G.L. 1885

Elevation

K.B. 1894  
D.F.  
G.L. 1885

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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

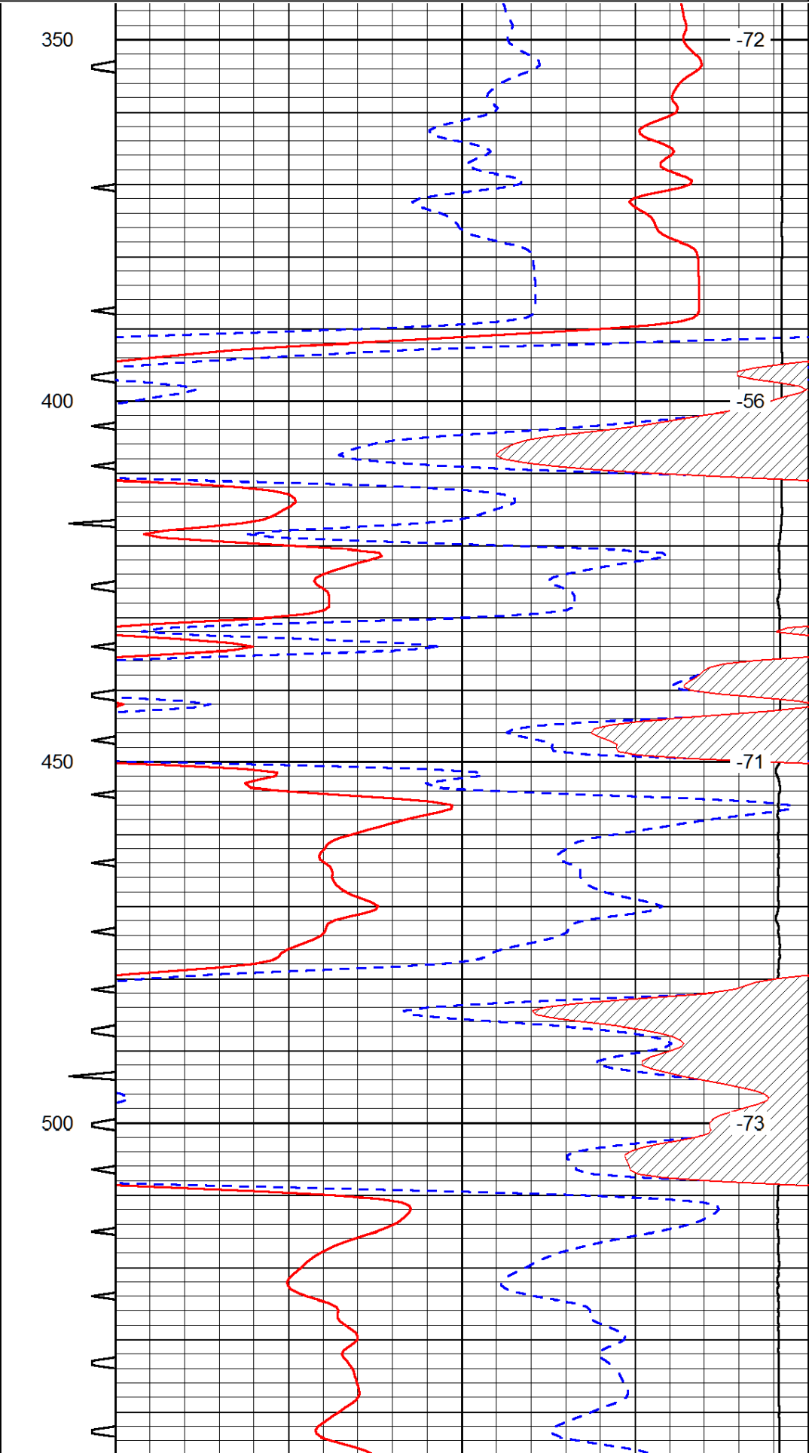
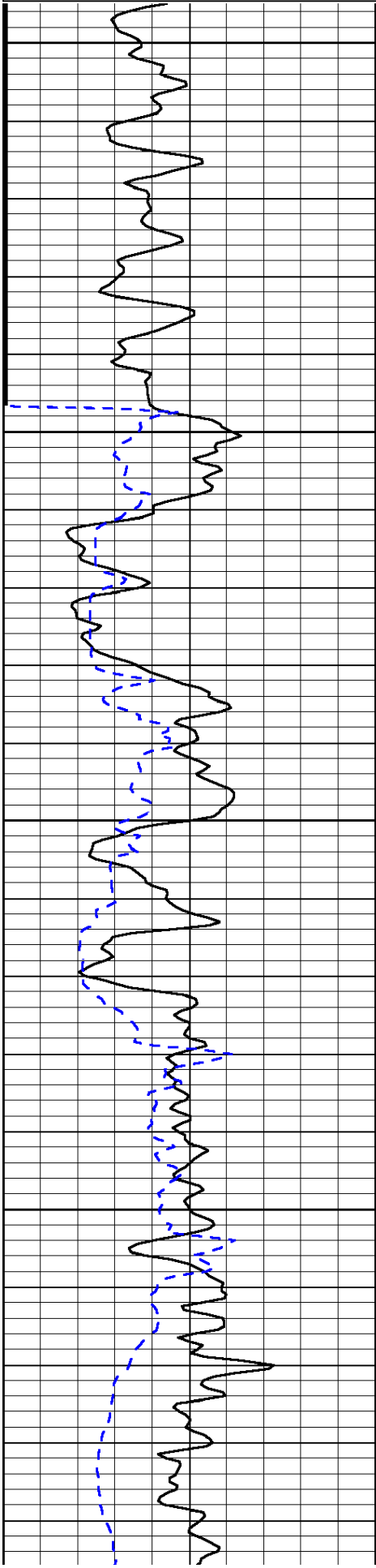
Thank you for using Log-Tech, Inc.  
(785) 625-3858

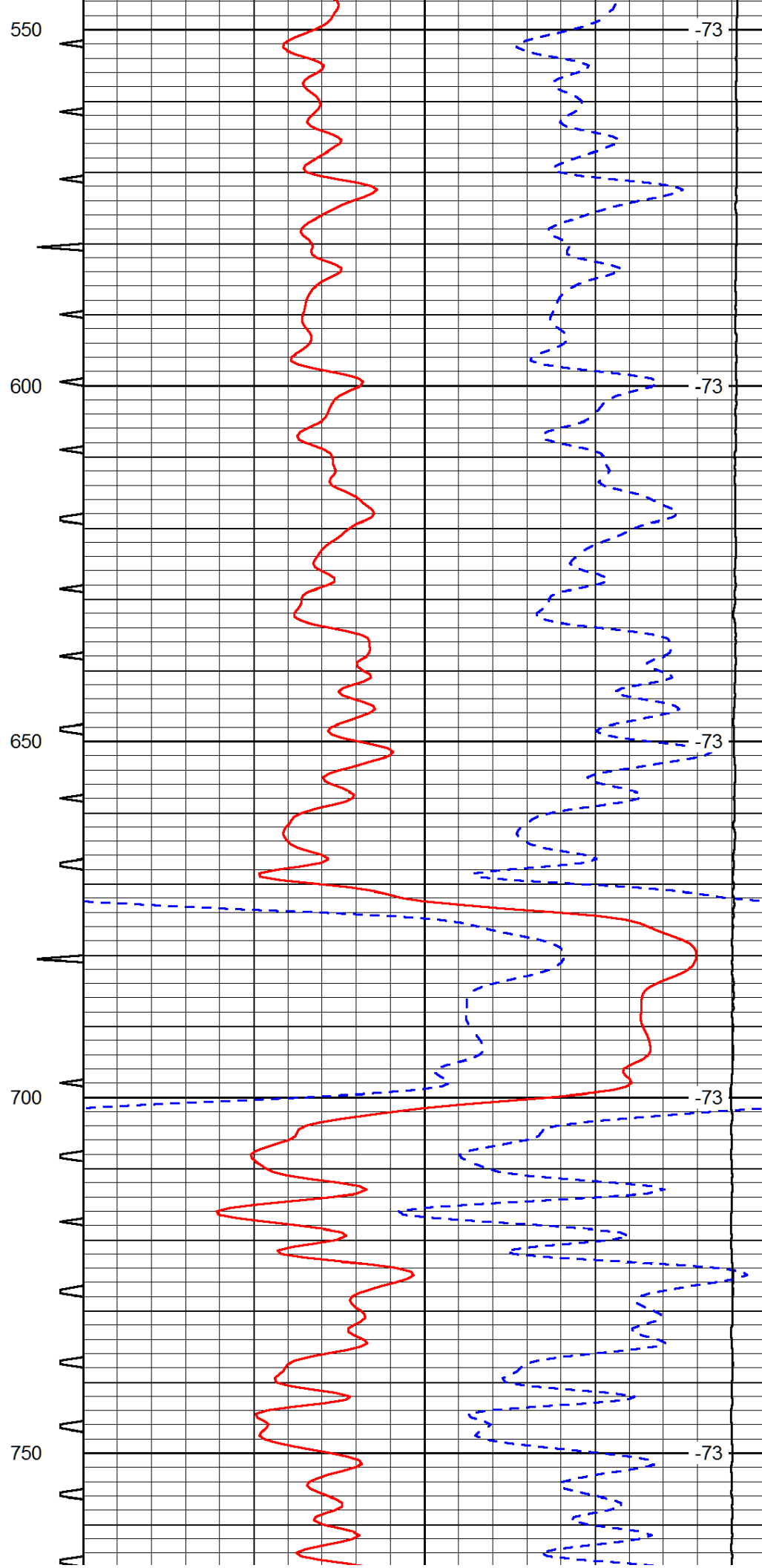
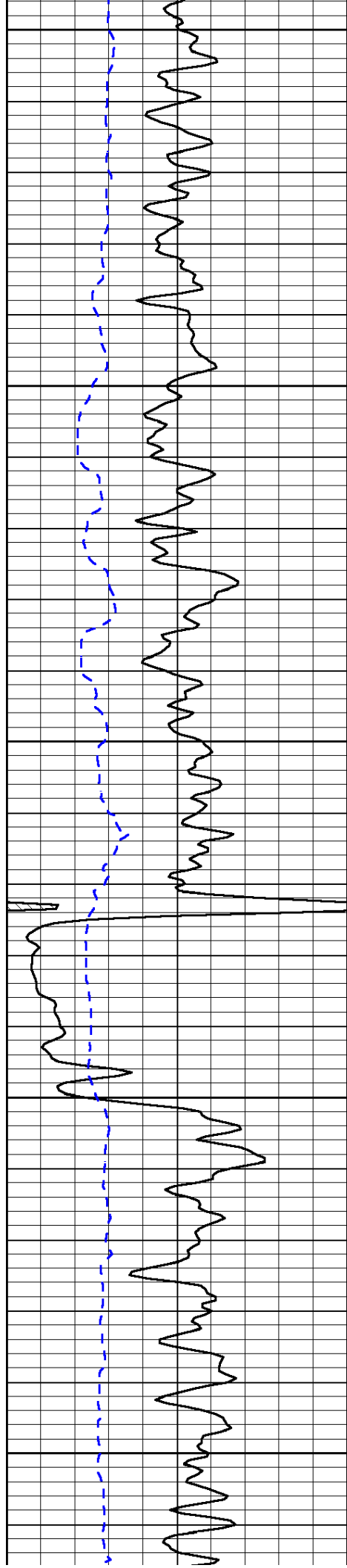
Clafiln, KS:

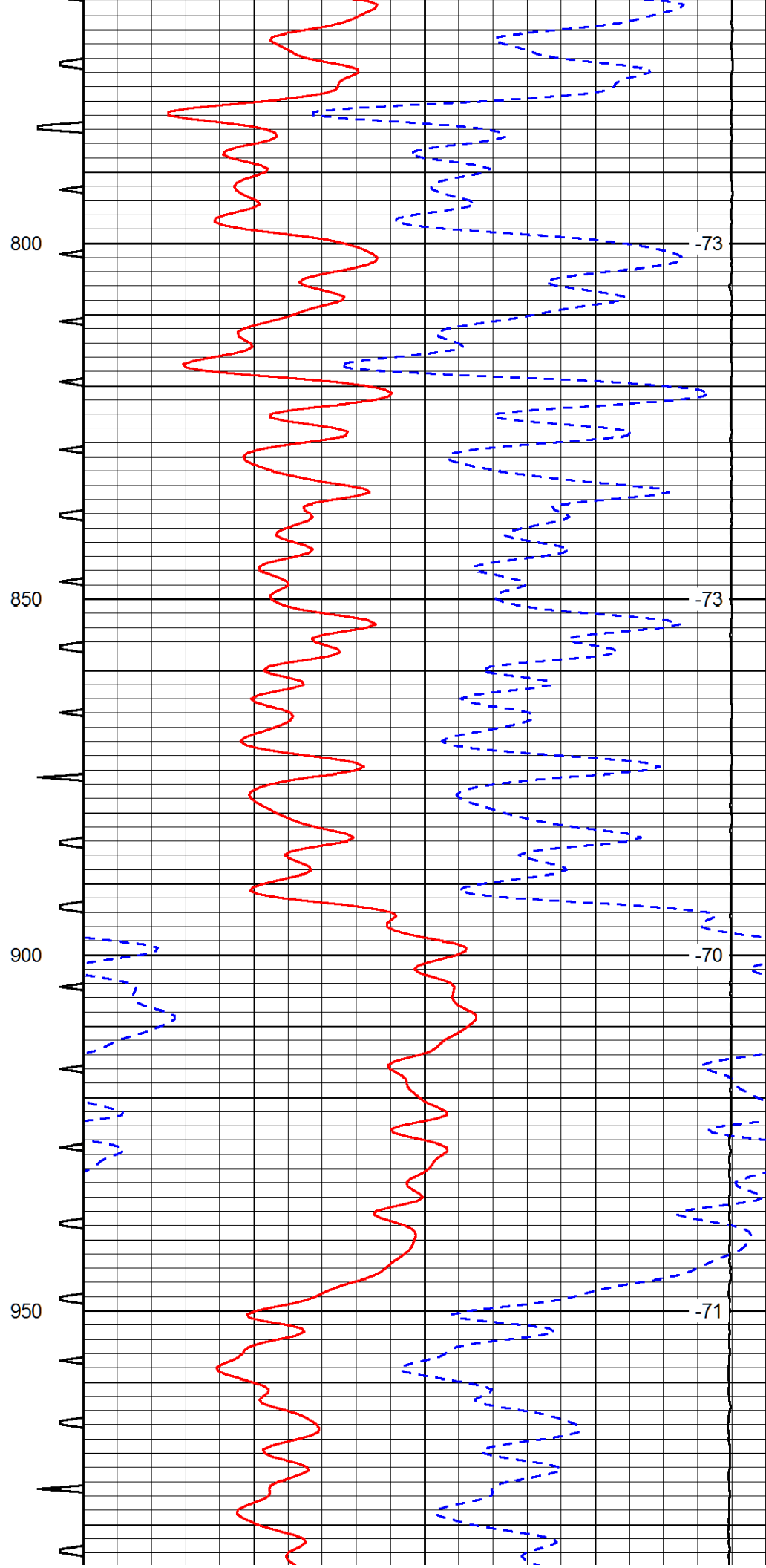
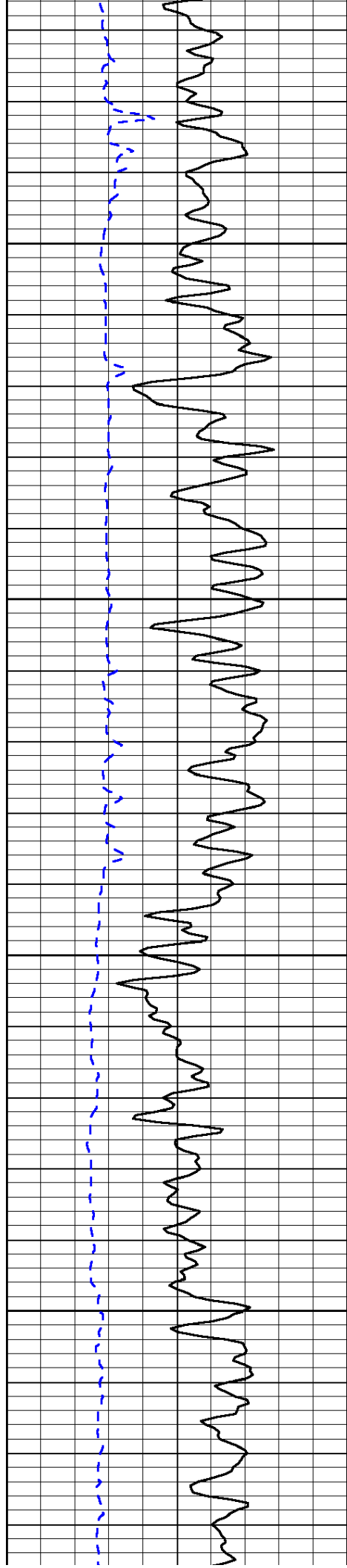
Hwy 4 & 156: 2NE to 160 Rd., 6 1/2N to Q Rd., 2E, 1 1/2N, W into

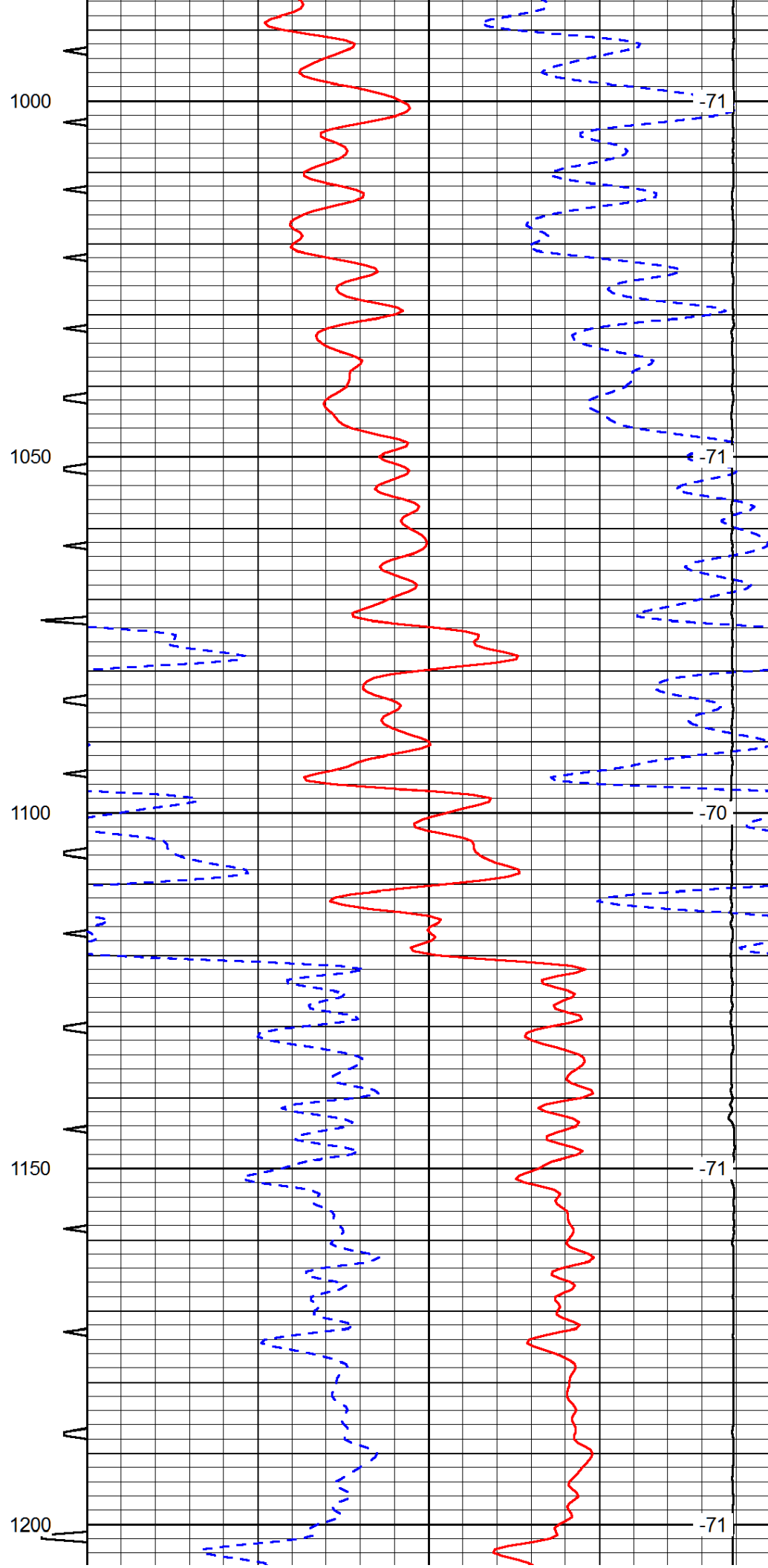
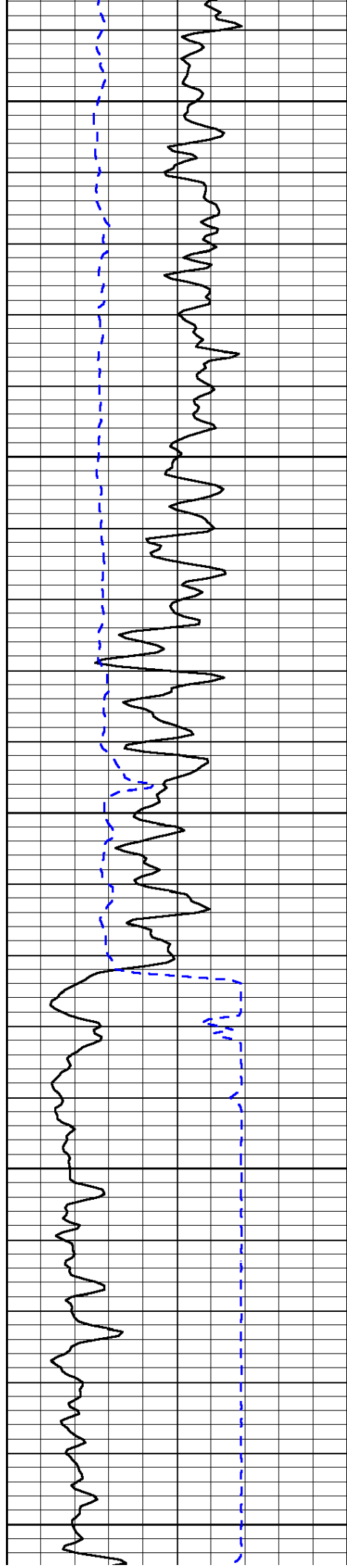
Database File: birddog\_stolteberg-hd.db  
Dataset Pathname: dil/brdmain  
Presentation Format: sonic  
Dataset Creation: Fri May 23 17:56:26 2014  
Charted by: Depth in Feet scaled 1:240

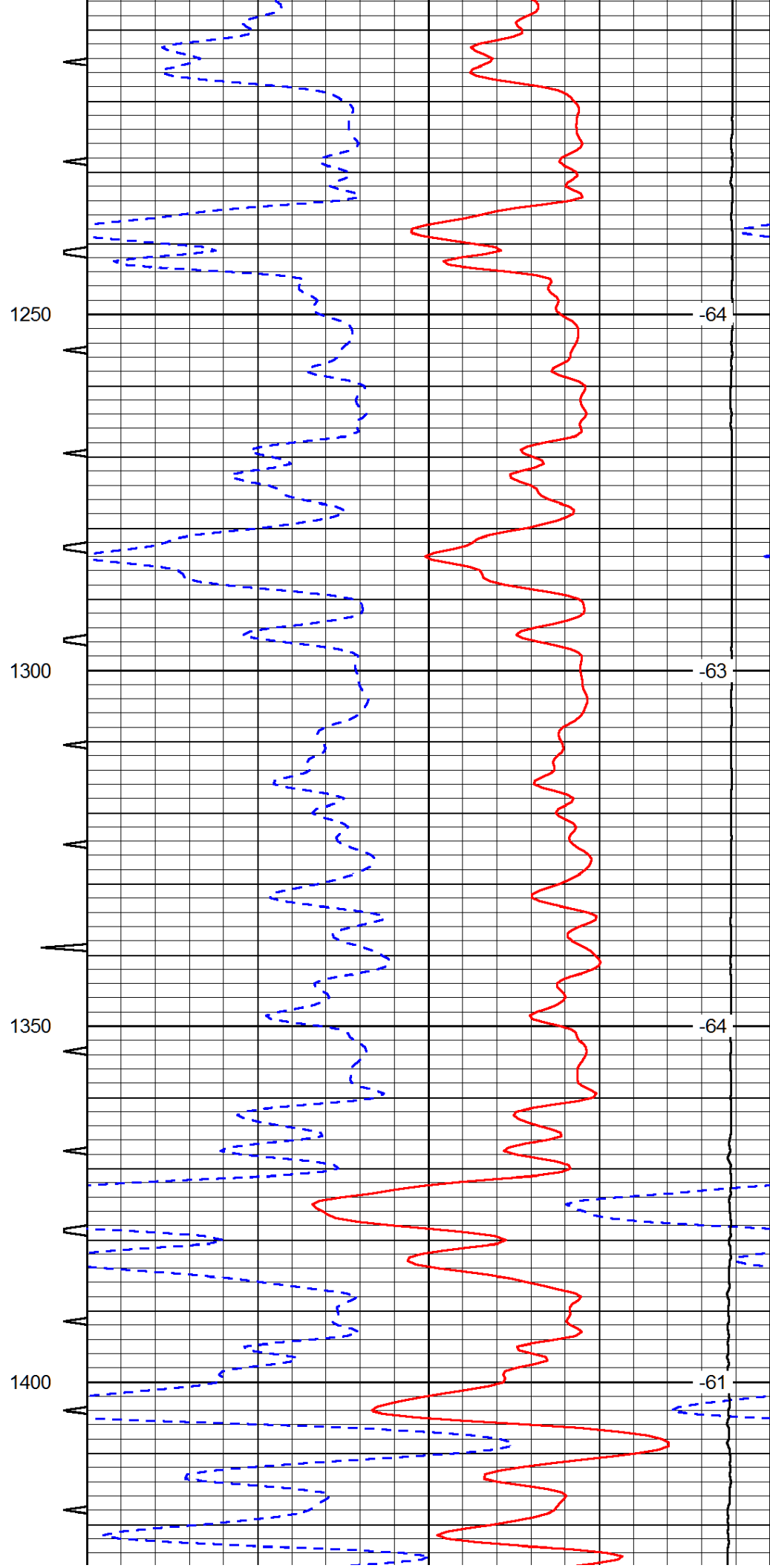
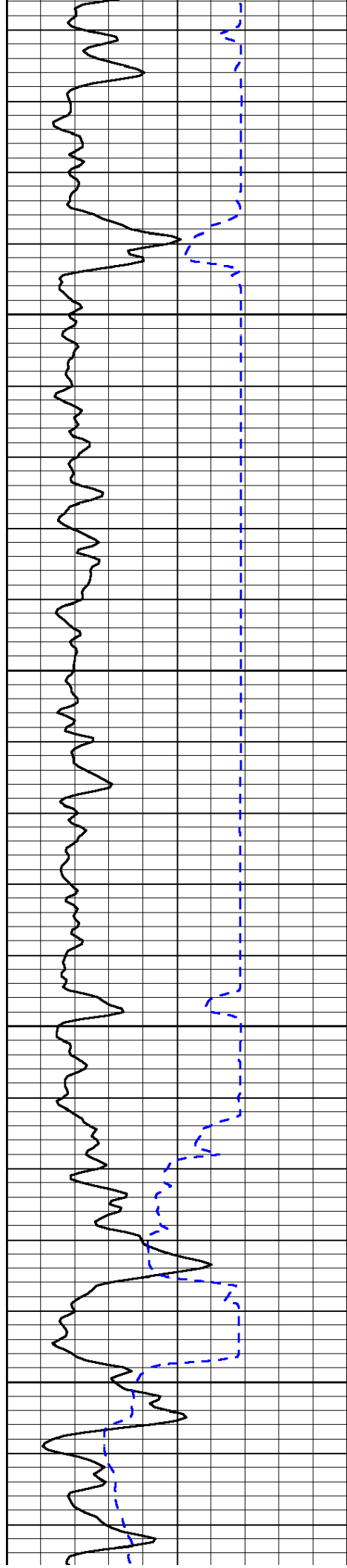
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|-----|-------------|-----|-----------|-------|----------------------|------|
| 0   | Gamma Ray   | 150 | Sonic Int | 140   | Delta Time (usec/ft) | 40   |
| 150 | Gamma Ray   | 300 | 5         | 0     | Sonic Porosity       | -10  |
| 6   | dCAL (GAPI) | 16  |           | 15000 | LTEN (lb)            | 0    |
|     |             |     |           |       |                      | LSPD |

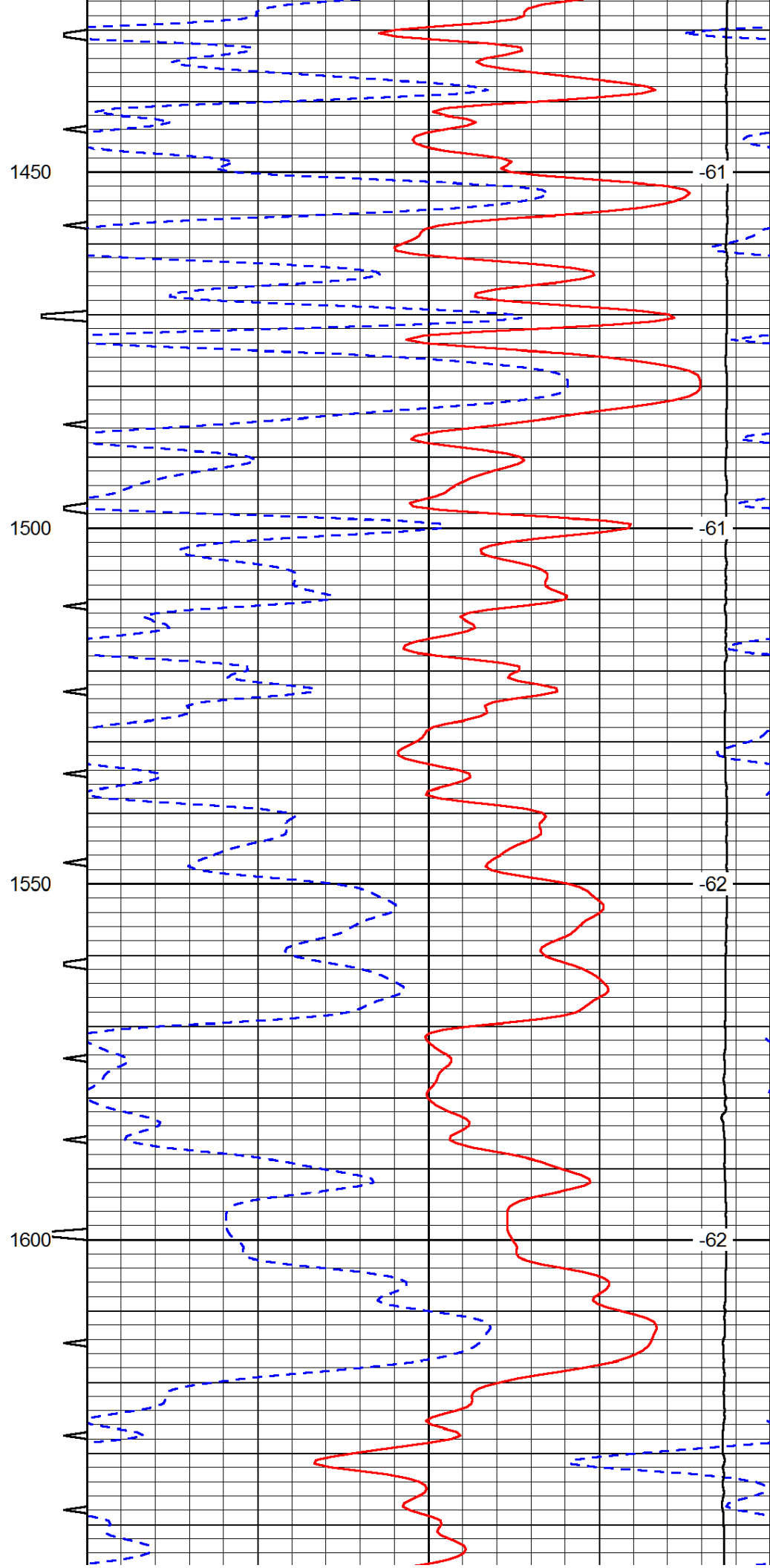
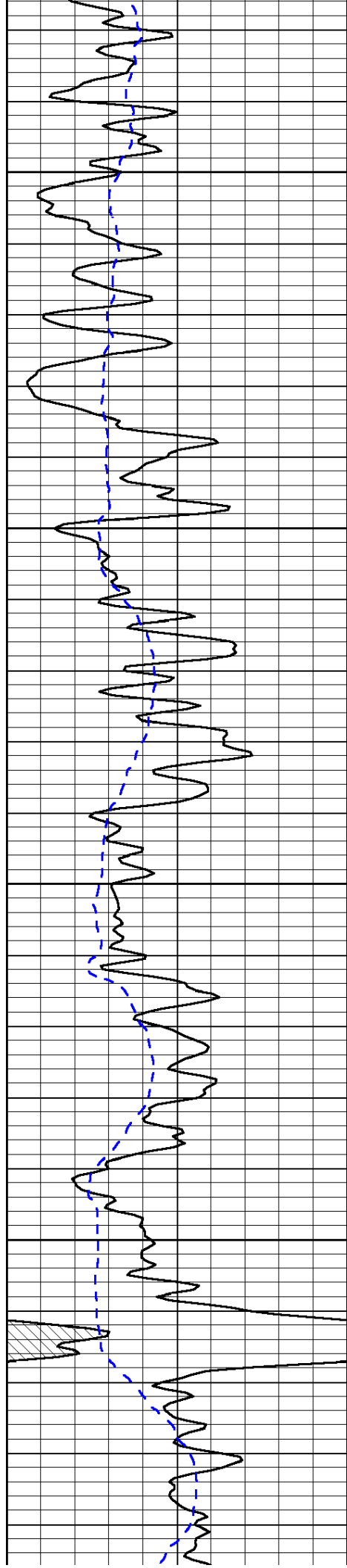


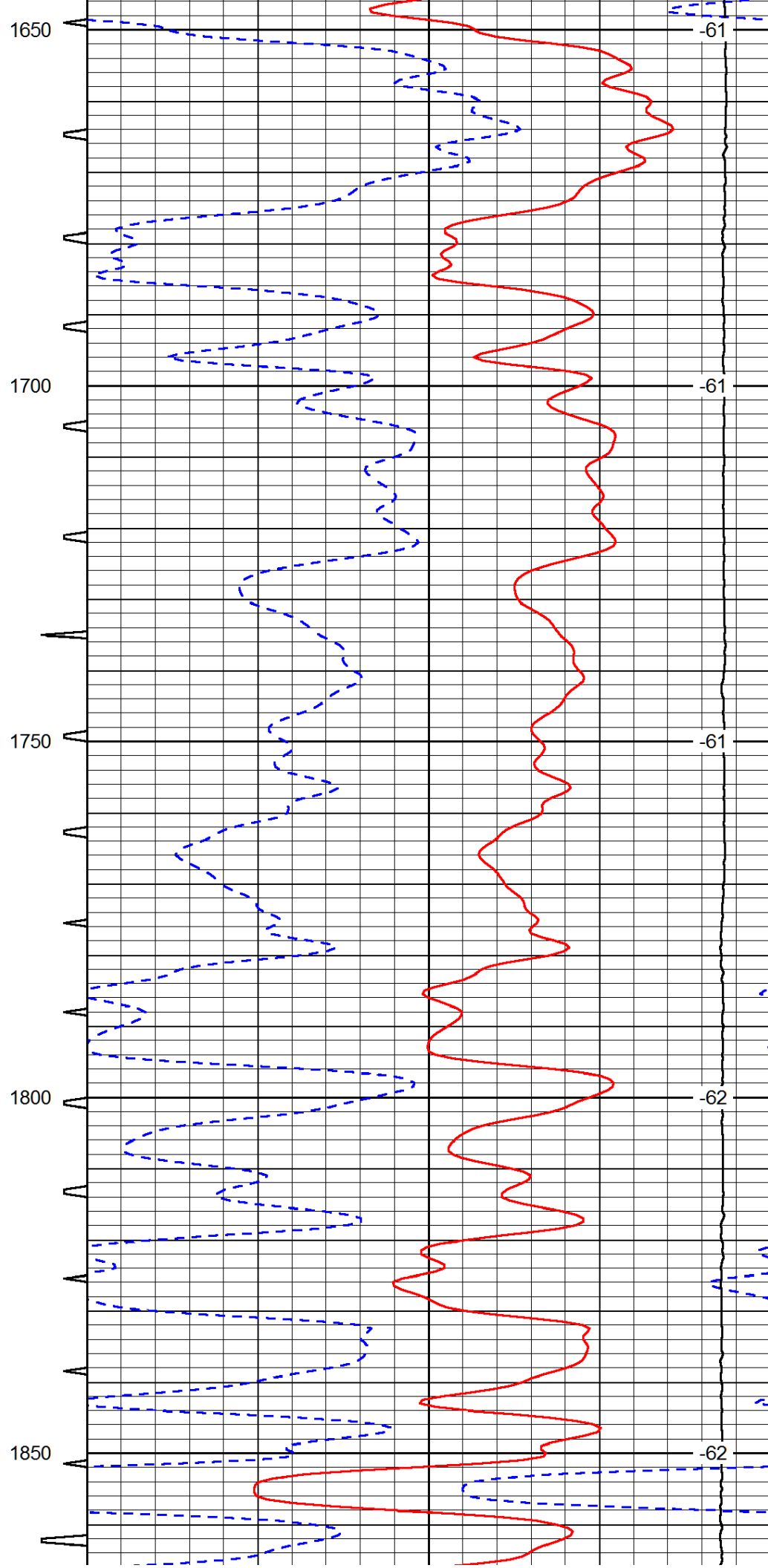
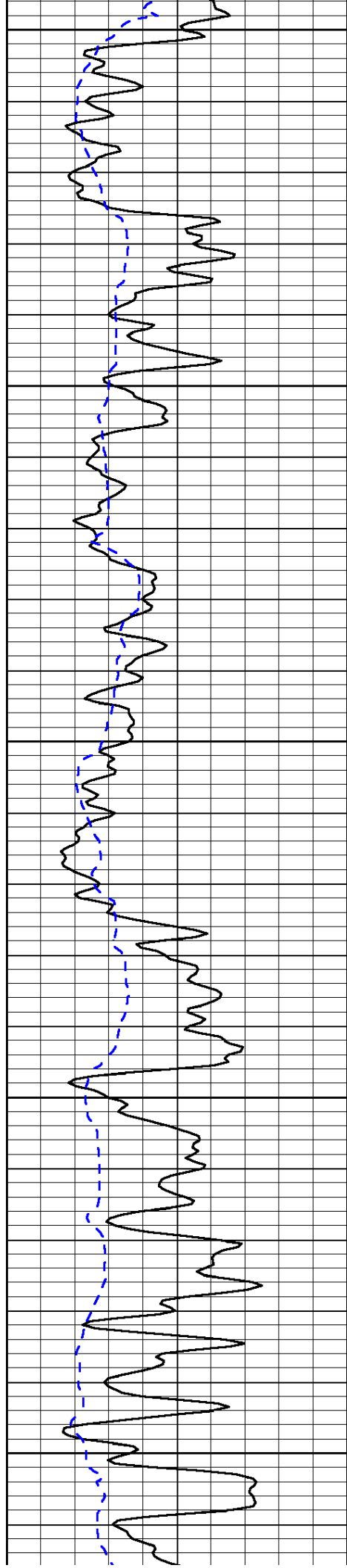


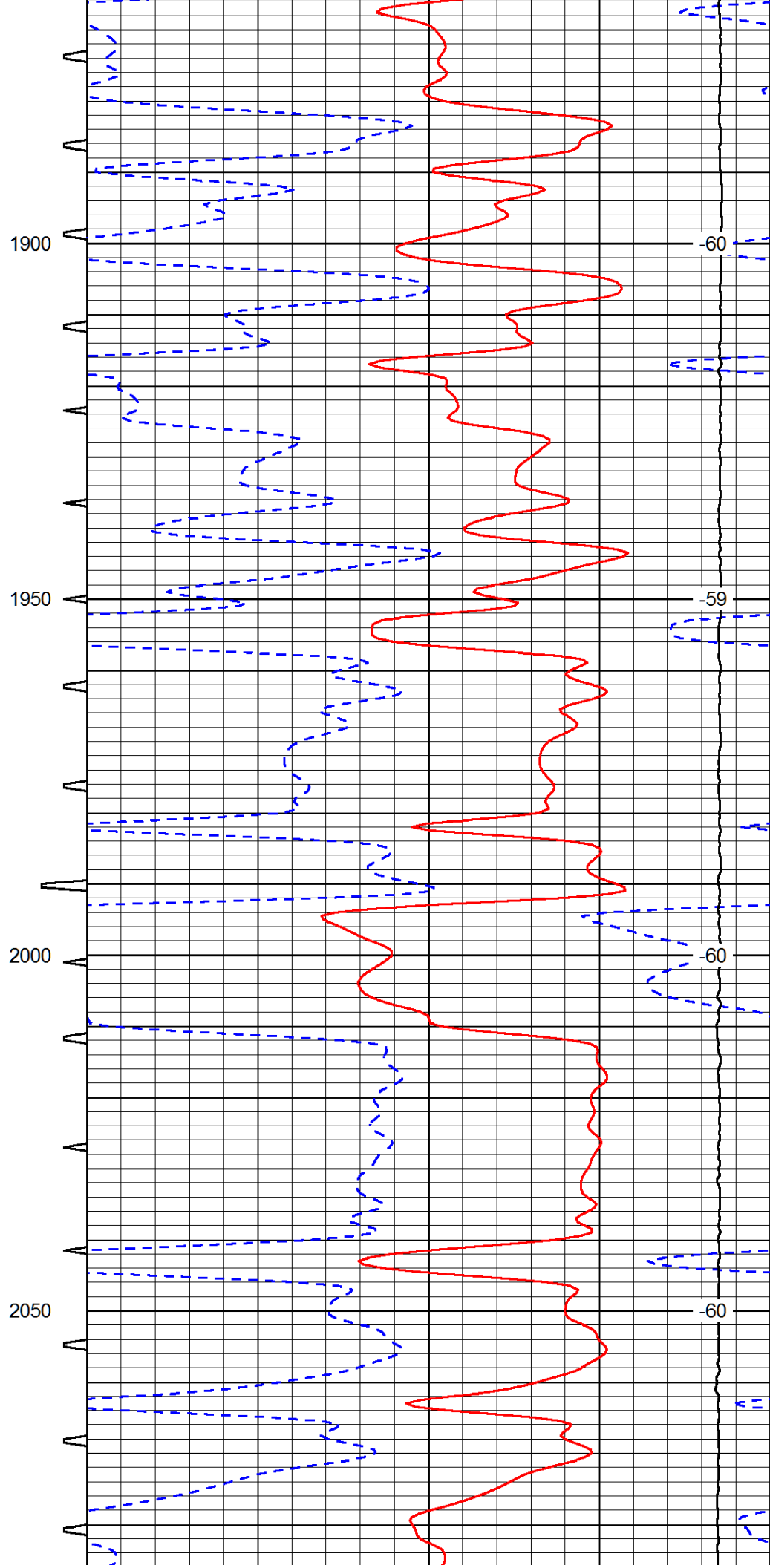
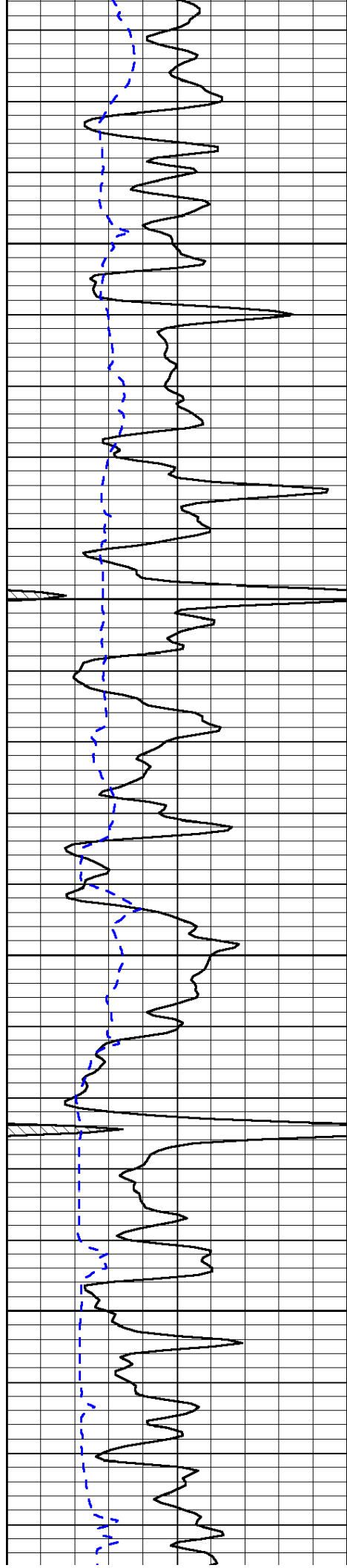


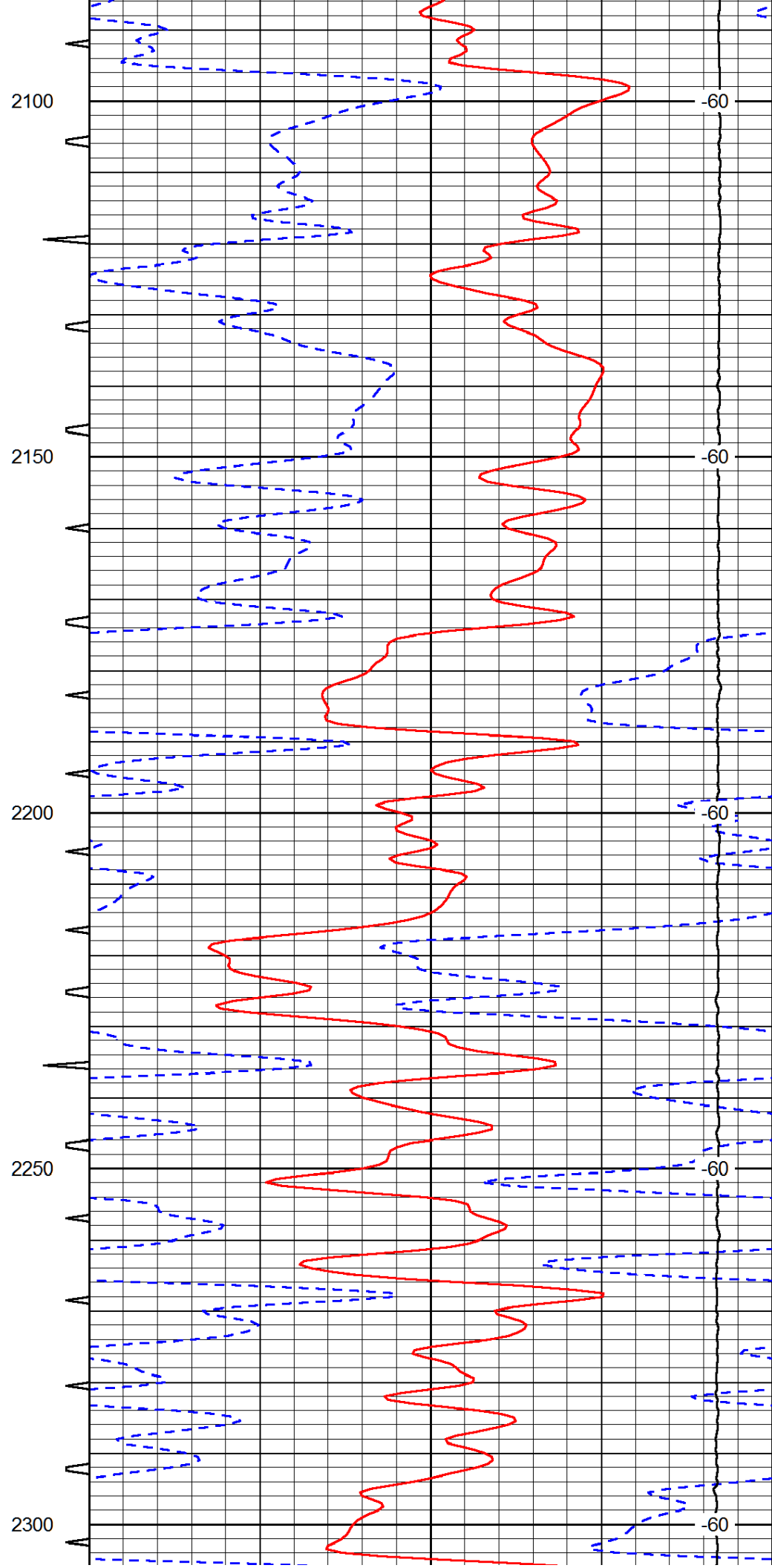
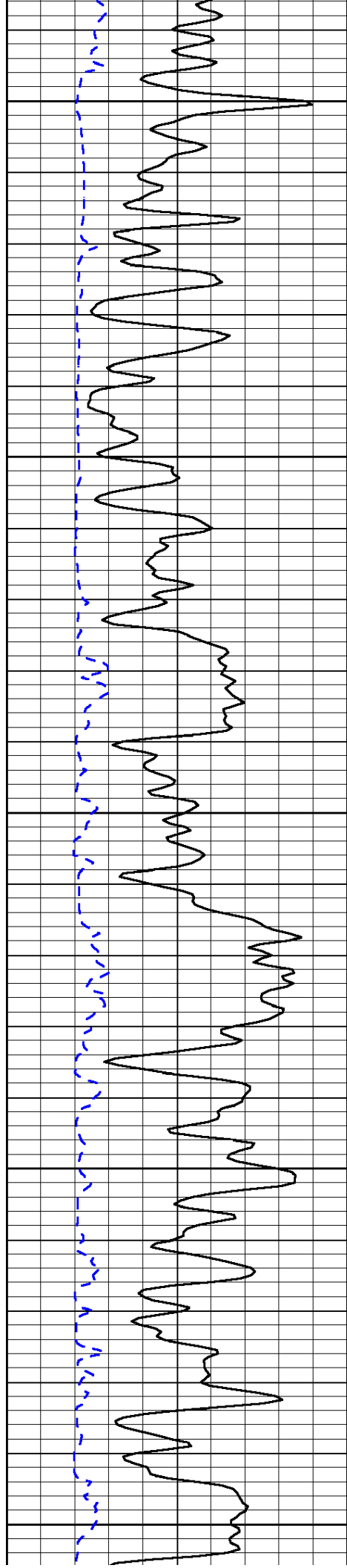


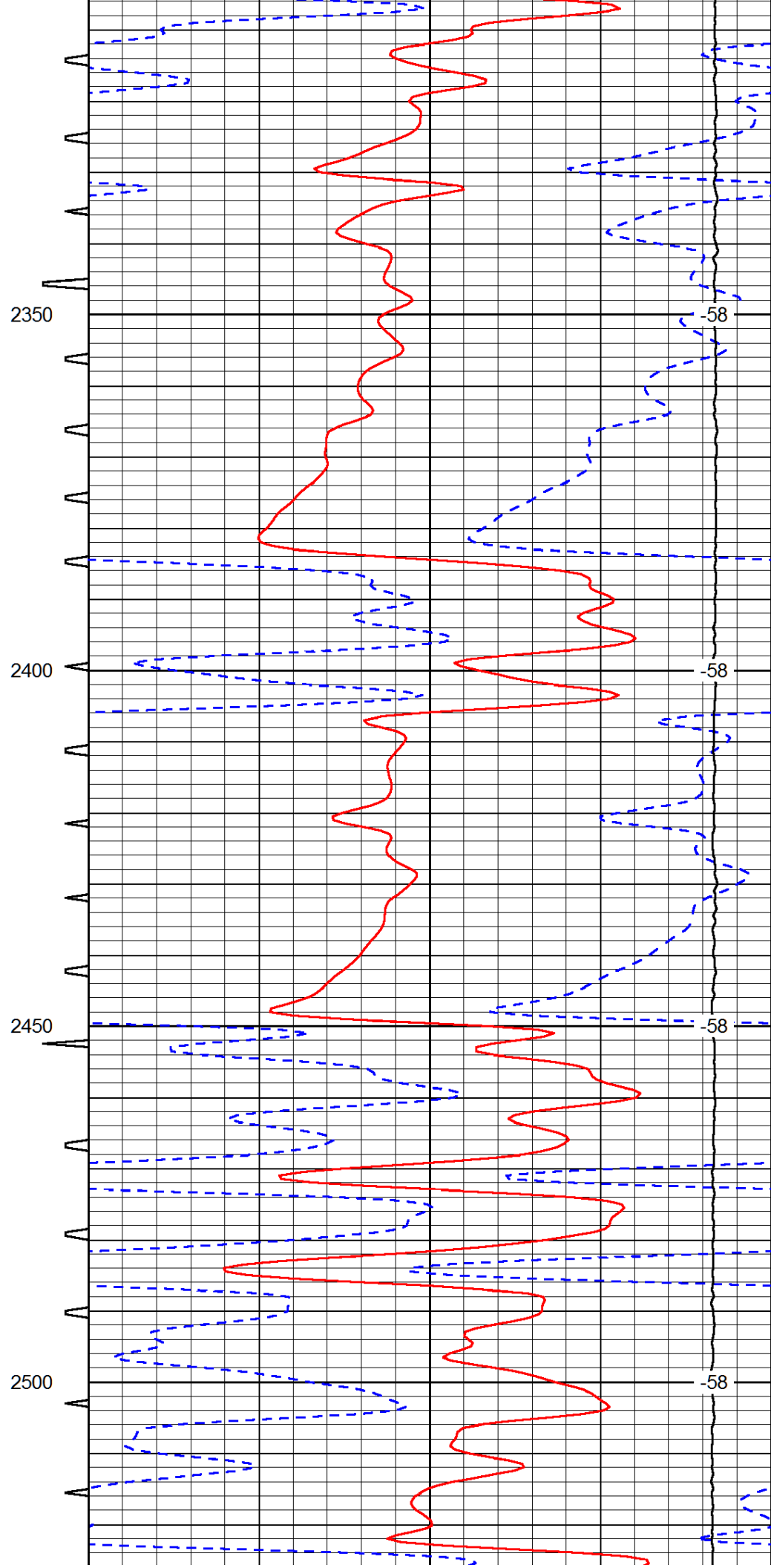
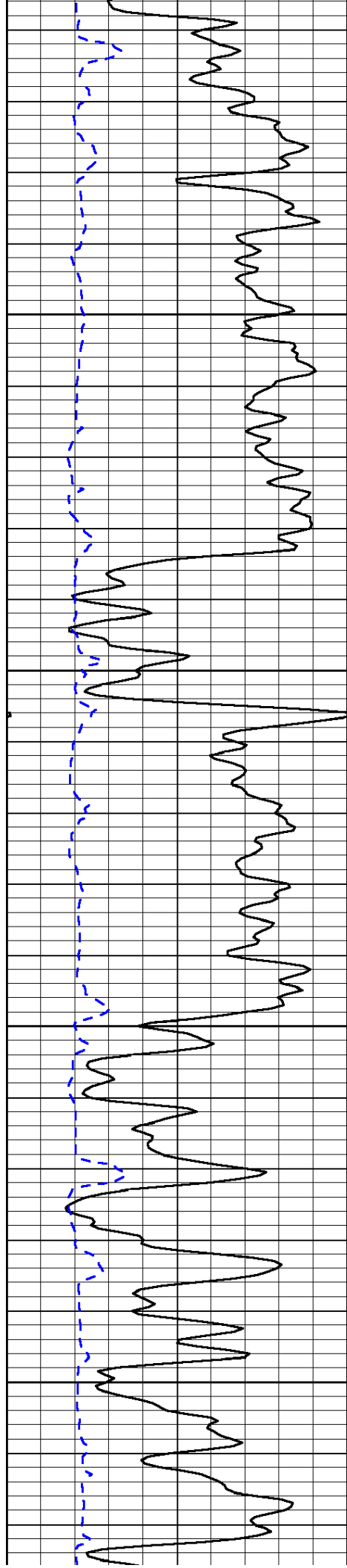


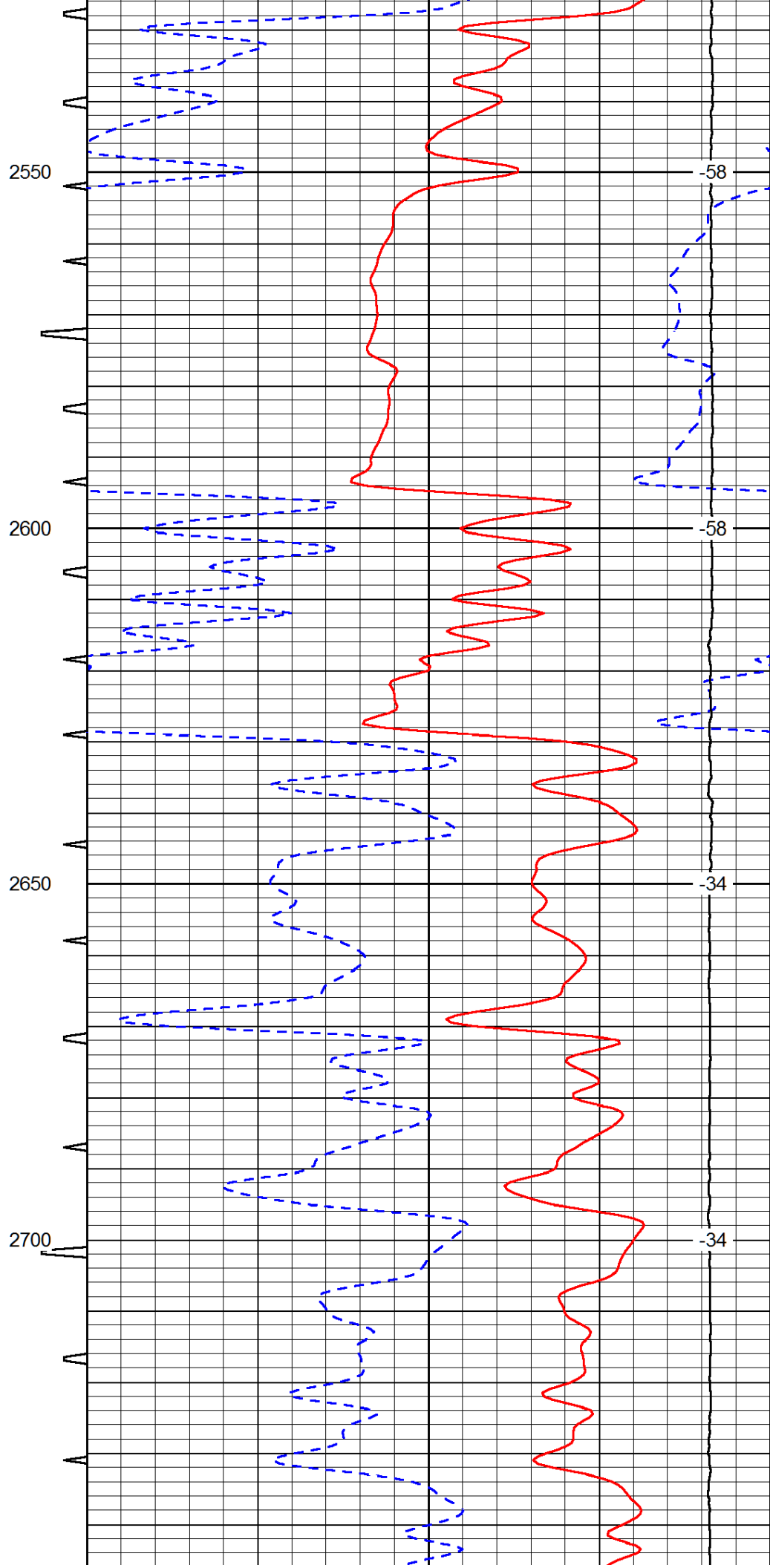
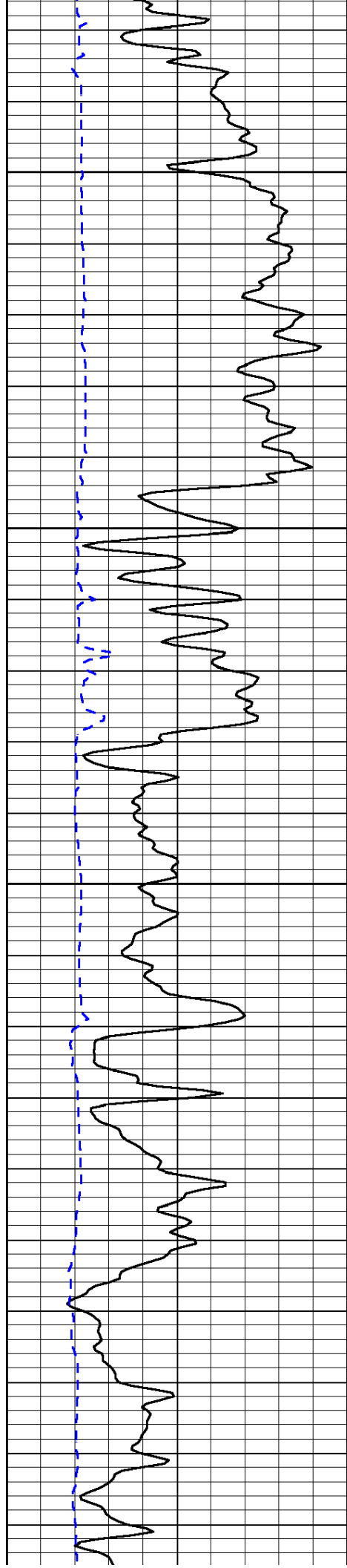


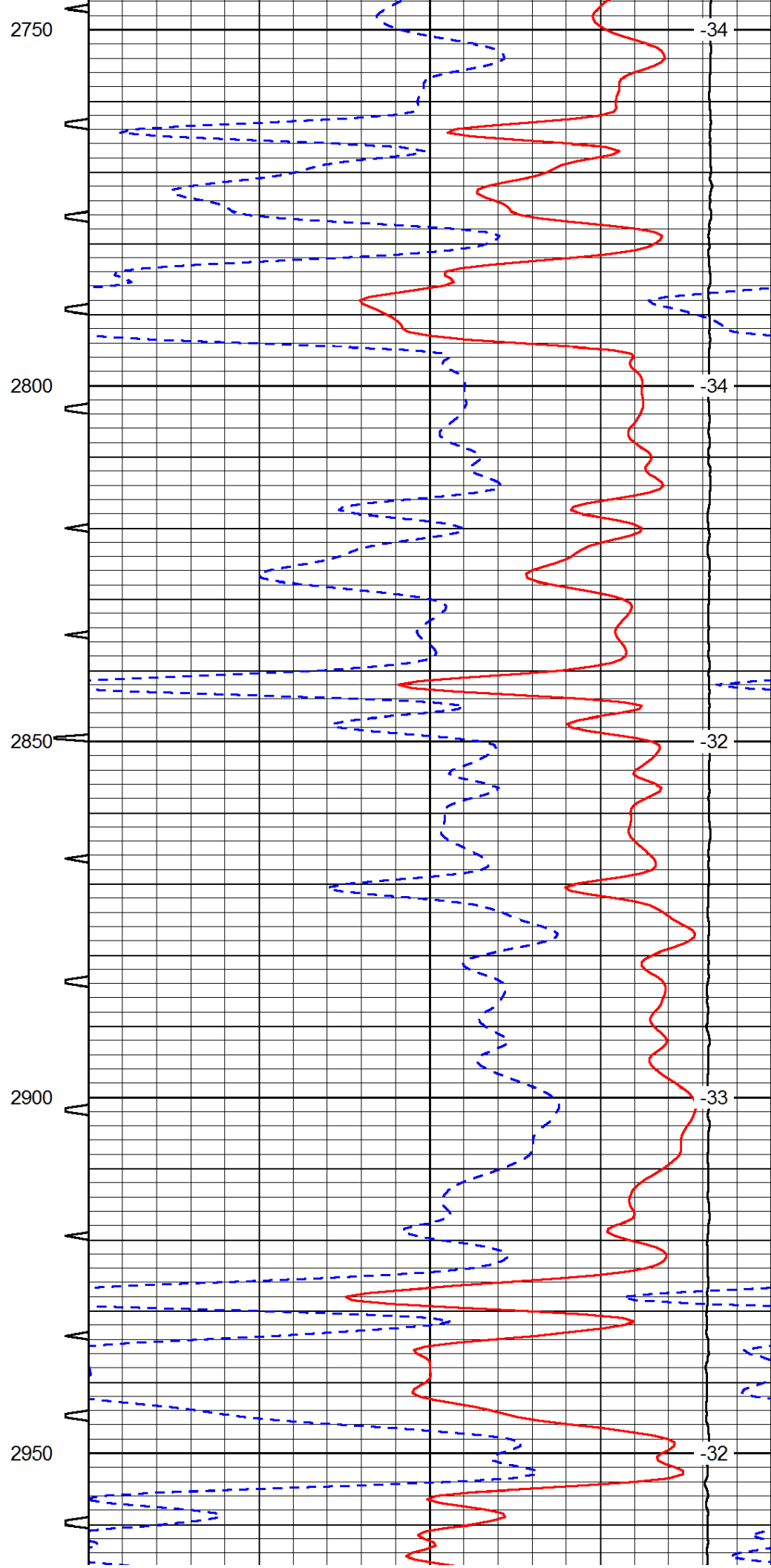
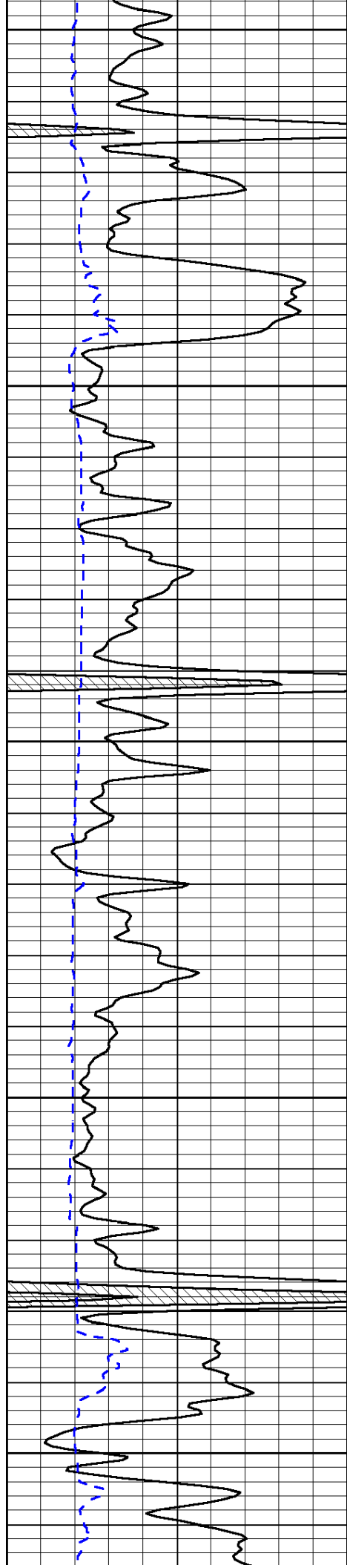


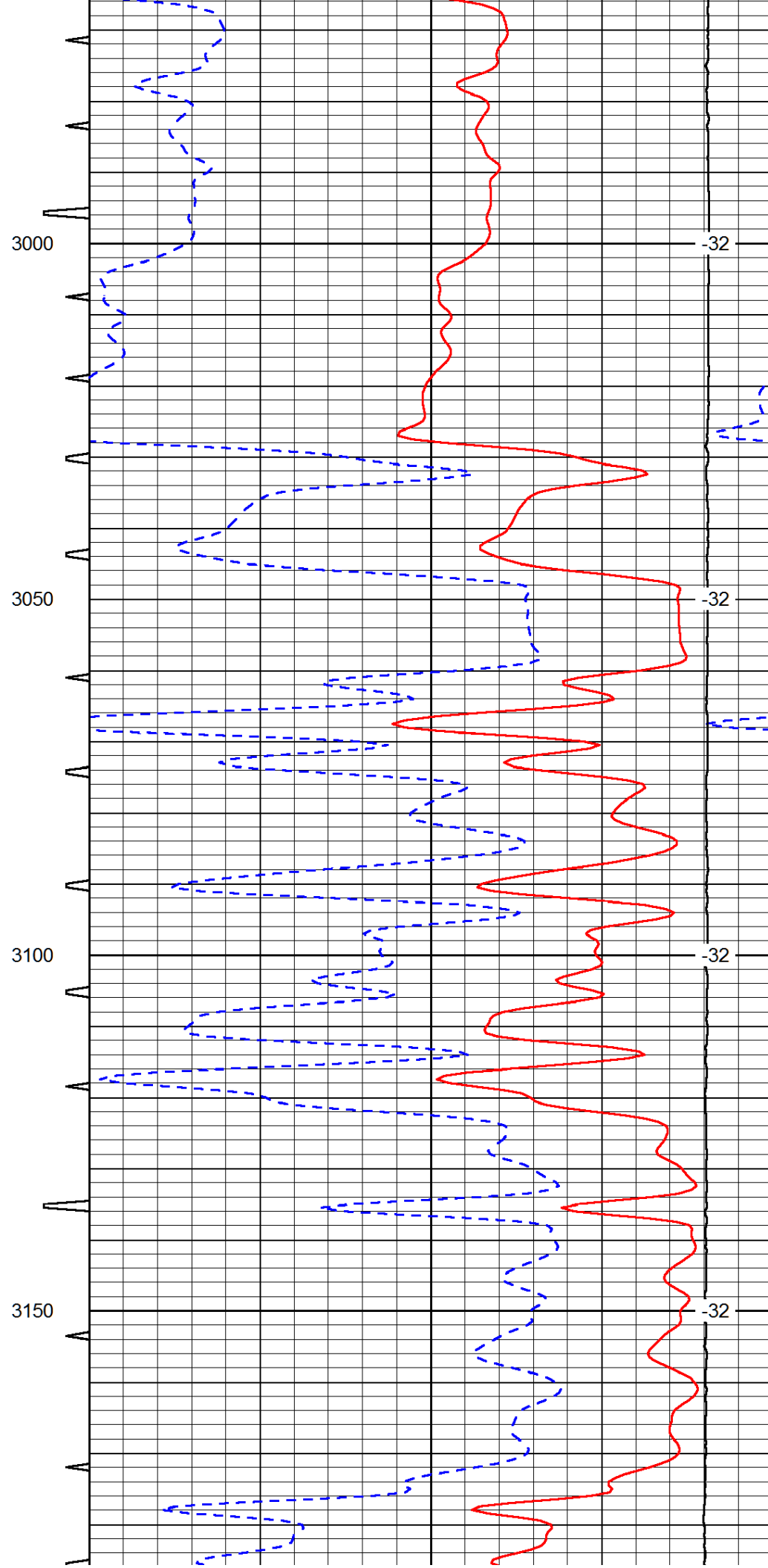
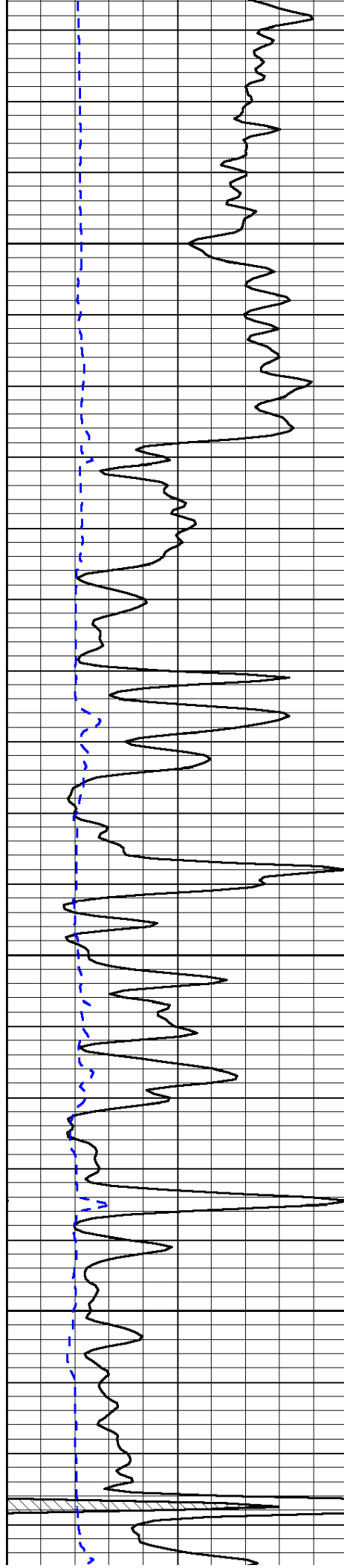


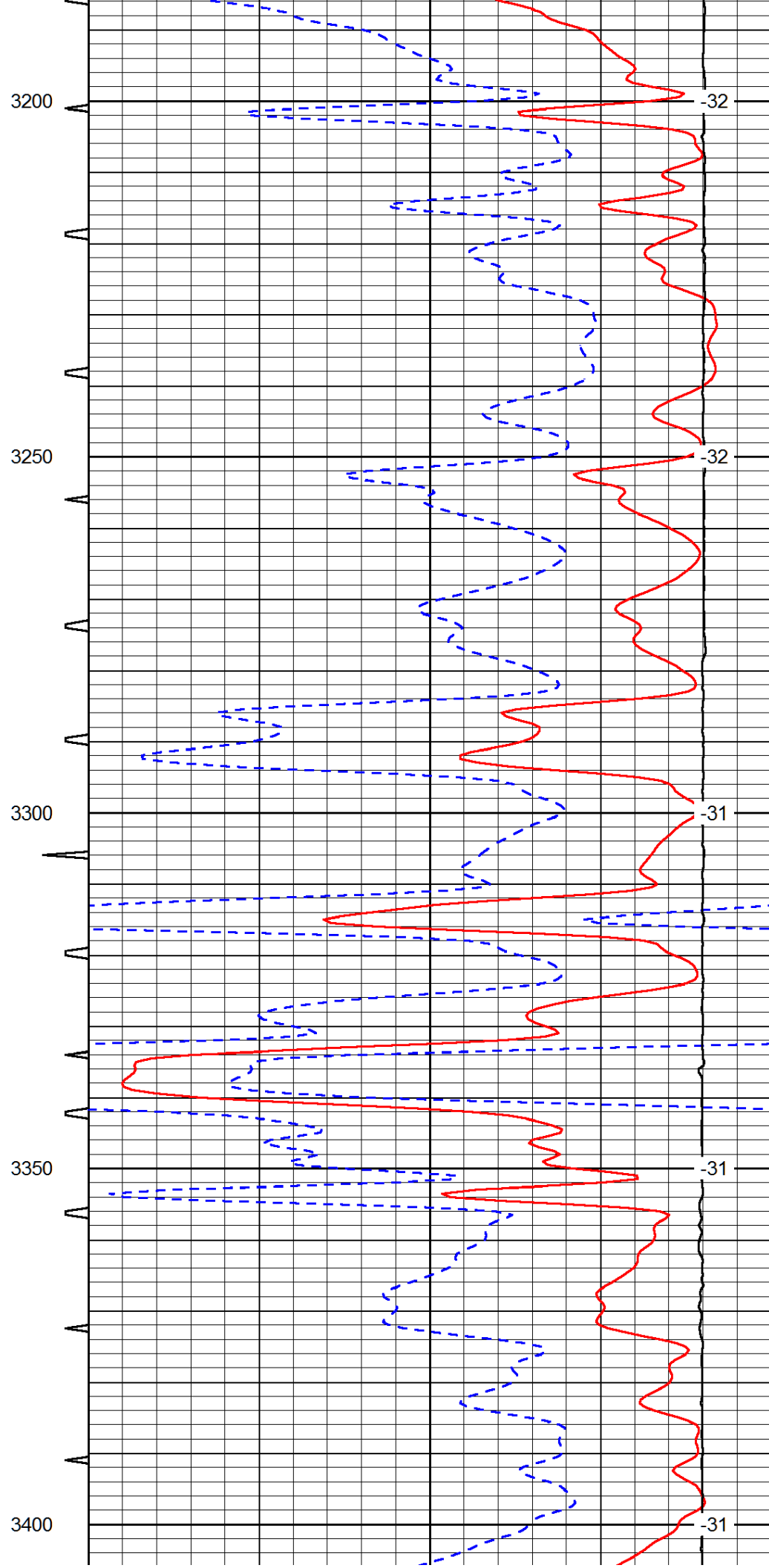
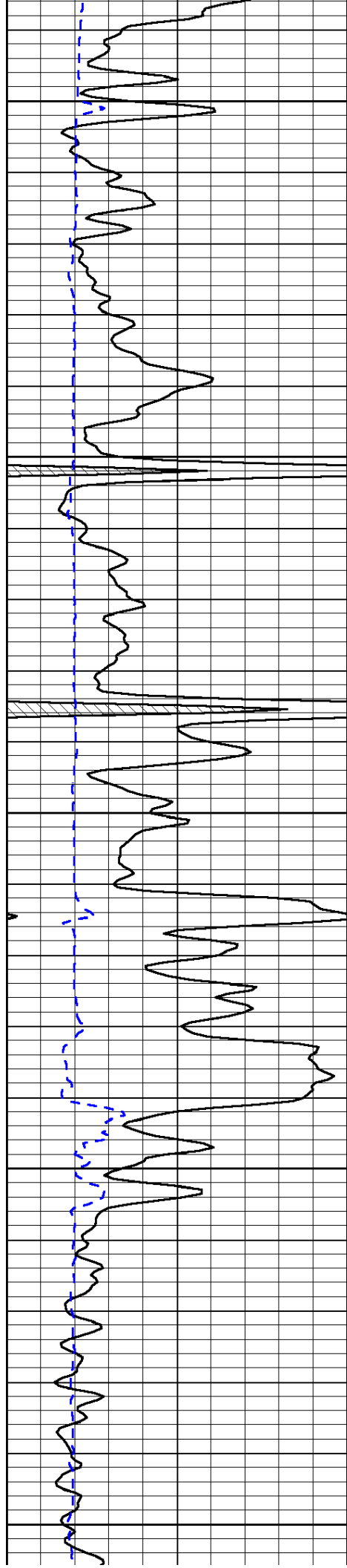


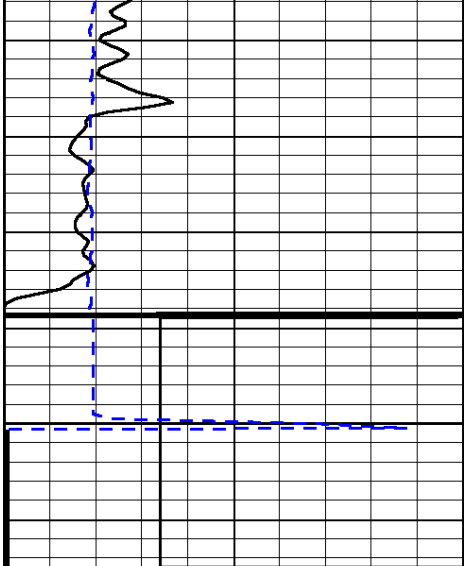












|     |             |     |
|-----|-------------|-----|
| 0   | Gamma Ray   | 150 |
| 150 | Gamma Ray   | 300 |
| 6   | dCAL (GAPI) | 16  |

3450

|           |       |                      |     |
|-----------|-------|----------------------|-----|
| Sonic Int | 140   | Delta Time (usec/ft) | 40  |
| 5         | 0     | Sonic Porosity       | -10 |
|           | 30    | LTEN (lb)            | 0   |
|           | 15000 |                      |     |

LSPD

