



**Borehole Compensated  
Sonic Log**

**DIGITAL LOG (785) 625-3858**

|  |  |   |  |
|--|--|---|--|
| API No.<br>15-065-23,551-00-00                                 | Company<br><b>H&amp;C Oil Operating, Inc.</b>  | Location<br><b>NW - SW - SE - SW<br/>610' FSL &amp; 1550' FWL</b> | Other Services<br>CNL/CDL<br>MEL/DIL             |
| Well<br><b>Tien No. 28 - 1</b>                                 | County<br><b>Graham</b>                        |   |  |
| Field<br><b>Wildcat</b>  | State<br><b>Kansas</b>                         |   |  |
| Sec: <b>28</b>   | Twp: <b>6 S</b>                                | Rge: <b>23 W</b>  | Elevation<br>K.B. 2458<br>D.F. 2453<br>G.L. 2453 |
| Permanent Datum<br>Log Measured From<br>Drilling Measured From | Ground Level<br>Kelly Bushing<br>Kelly Bushing | Elevation 2453<br>5 Ft. Above Perm. Datum                         |  |

|                        |                 |
|------------------------|-----------------|
| Date                   | 7/7/2009        |
| Run Number             | Two             |
| Type Log               | BHC Sonic       |
| Depth Driller          | 3963            |
| Depth Logger           | 3966            |
| Bottom Logged Interval | 3955            |
| Top Logged Interval    | 250             |
| Type Fluid In Hole     | Chemical        |
| Salinity, PPM CL       | 1,300           |
| Density                | 9.1             |
| Level                  | Full            |
| Max. Rec. Temp. F      | 116             |
| Operating Rig Time     | 4-1/2 Hours     |
| Equipment -- Location  | 15 Hays         |
| Recorded By            | B. Becker       |
| Witnessed By           | Clayton Ericson |

| Run No | Bit   | Borehole Record |      | Casing Record |     |
|--------|-------|-----------------|------|---------------|-----|
|        |       | From            | To   | From          | To  |
| 1      | 12.25 | 00              | 258  | 8.625         | 24# |
| 2      | 7.875 | 258             | 3963 |               |     |
|        |       |                 |      |               |     |
|        |       |                 |      |               |     |
|        |       |                 |      |               |     |
|        |       |                 |      |               |     |
|        |       |                 |      |               |     |
|        |       |                 |      |               |     |
|        |       |                 |      |               |     |

<<< Fold Here >>>

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.

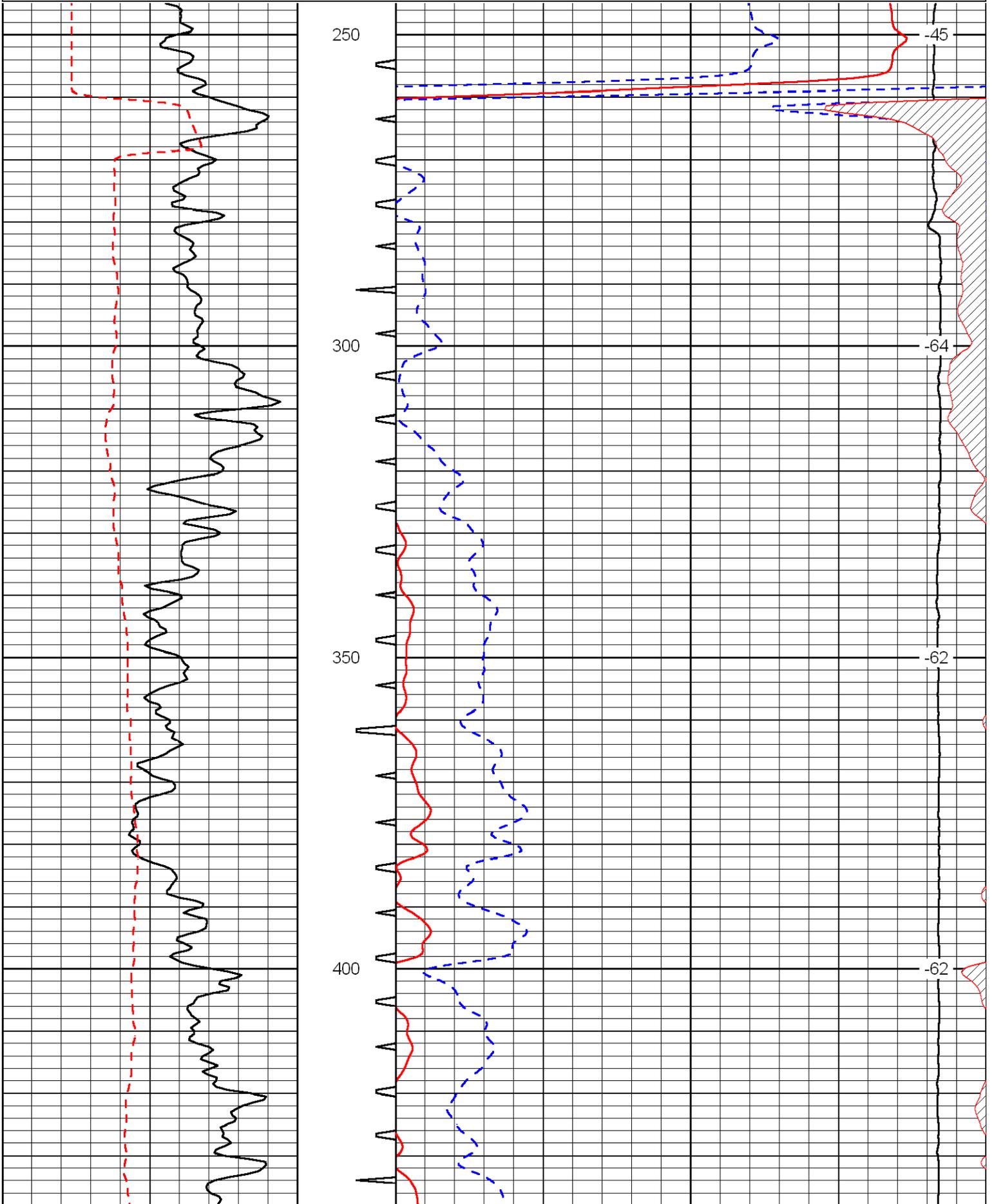
**Comments**

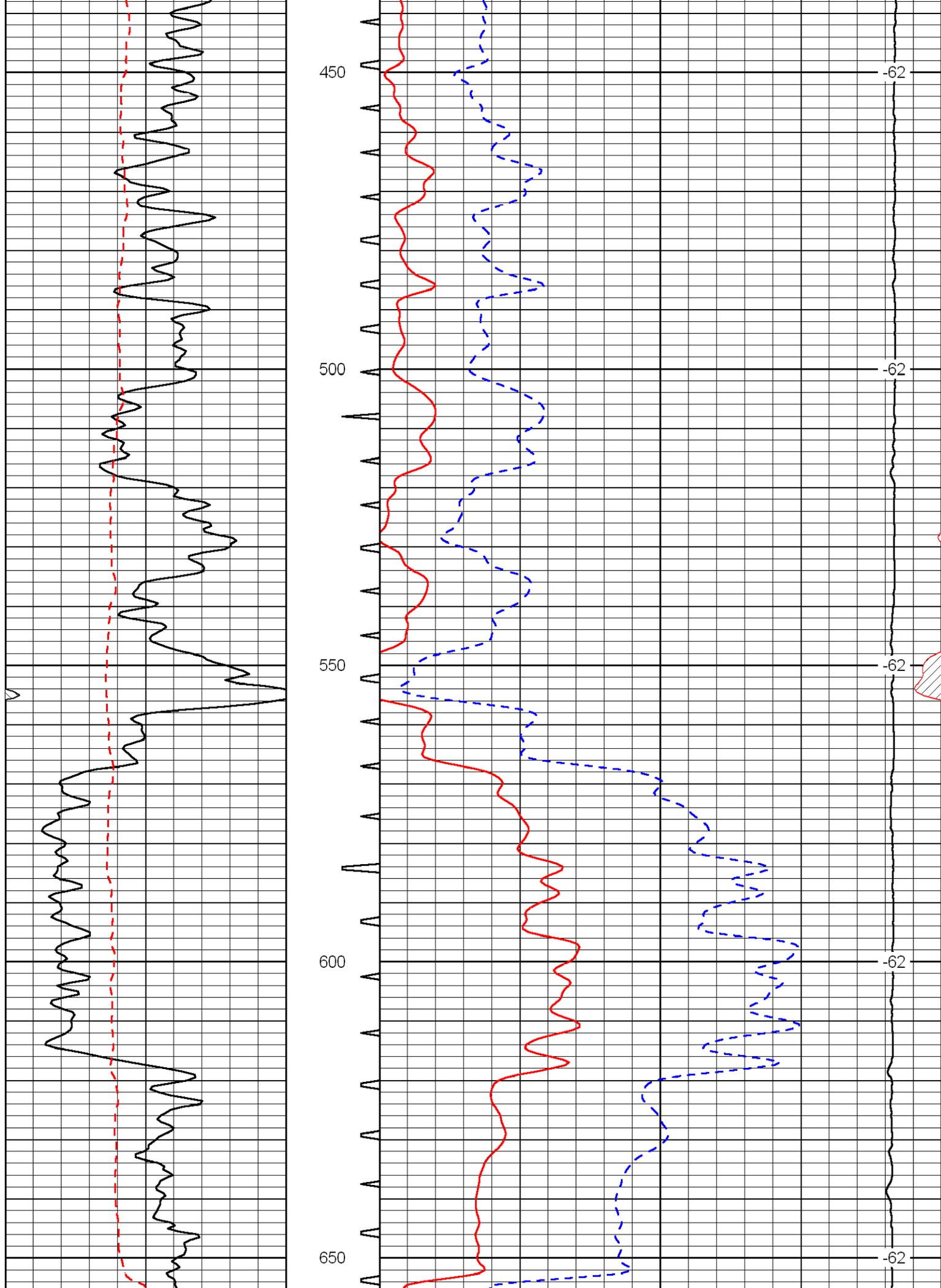
Thank you for using Log-Tech, Inc.  
(785) 625-3858

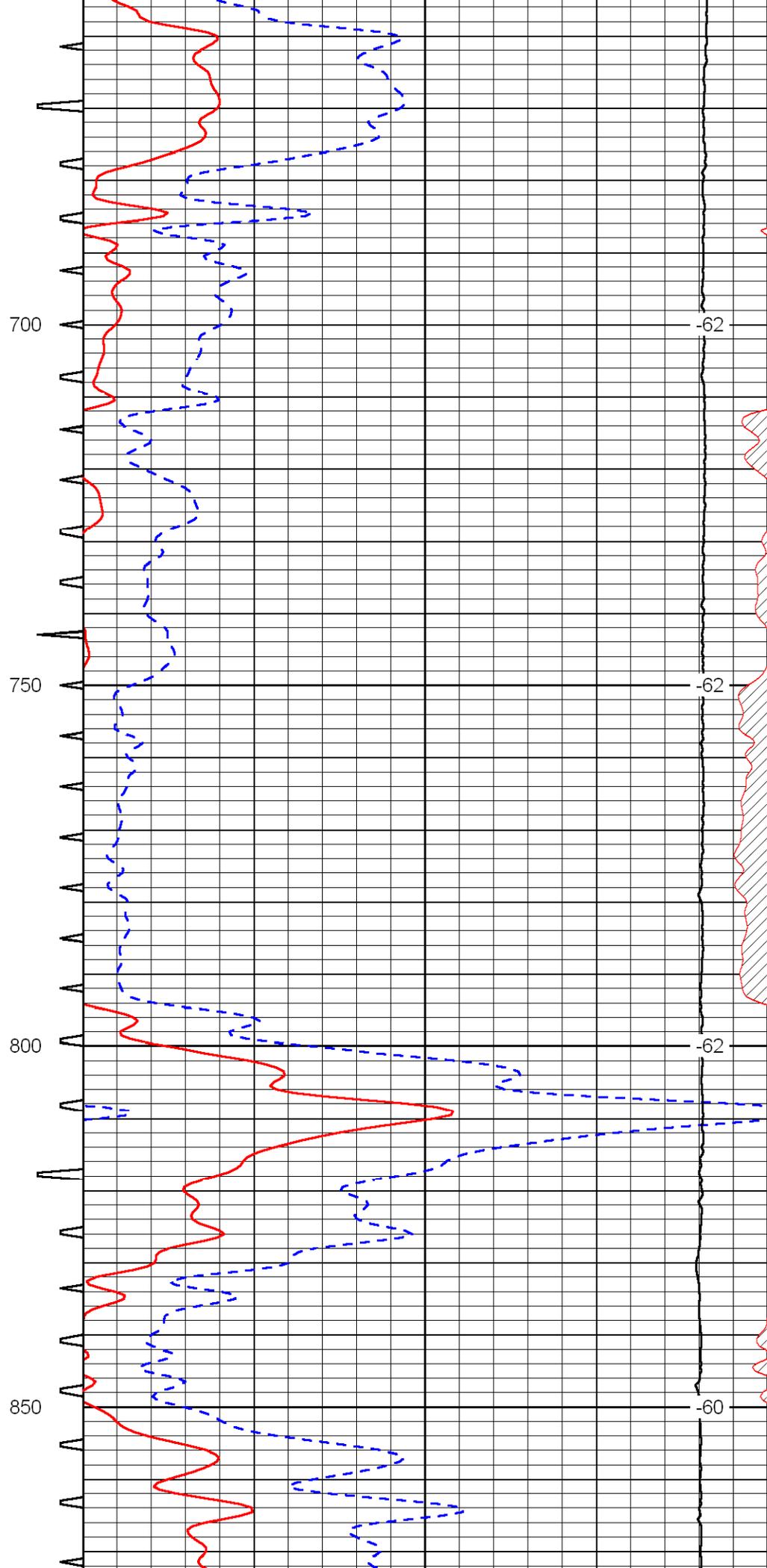
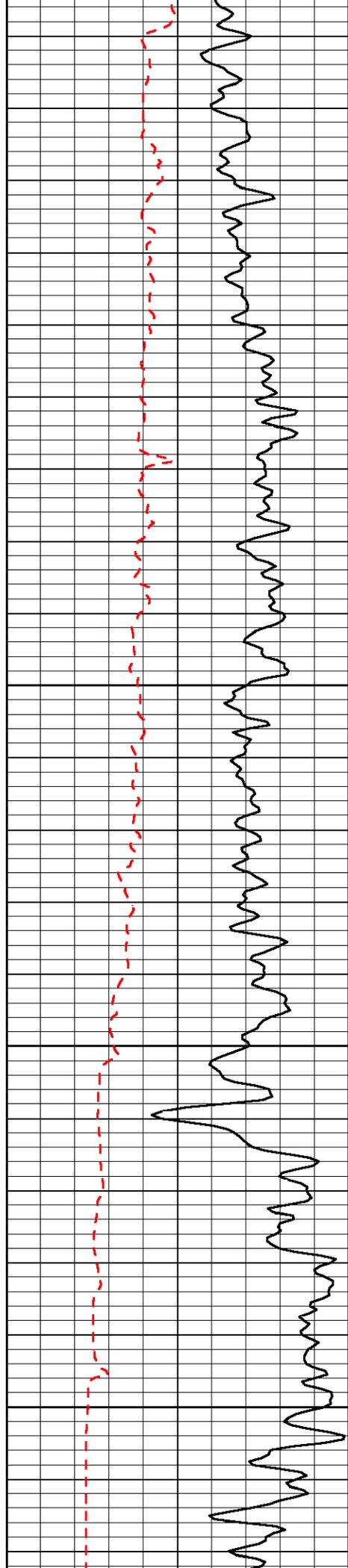
Hill City, Ks; North to Y Rd; West to 230th Rd;  
1 North to Z Rd; 1-1/2 East to location

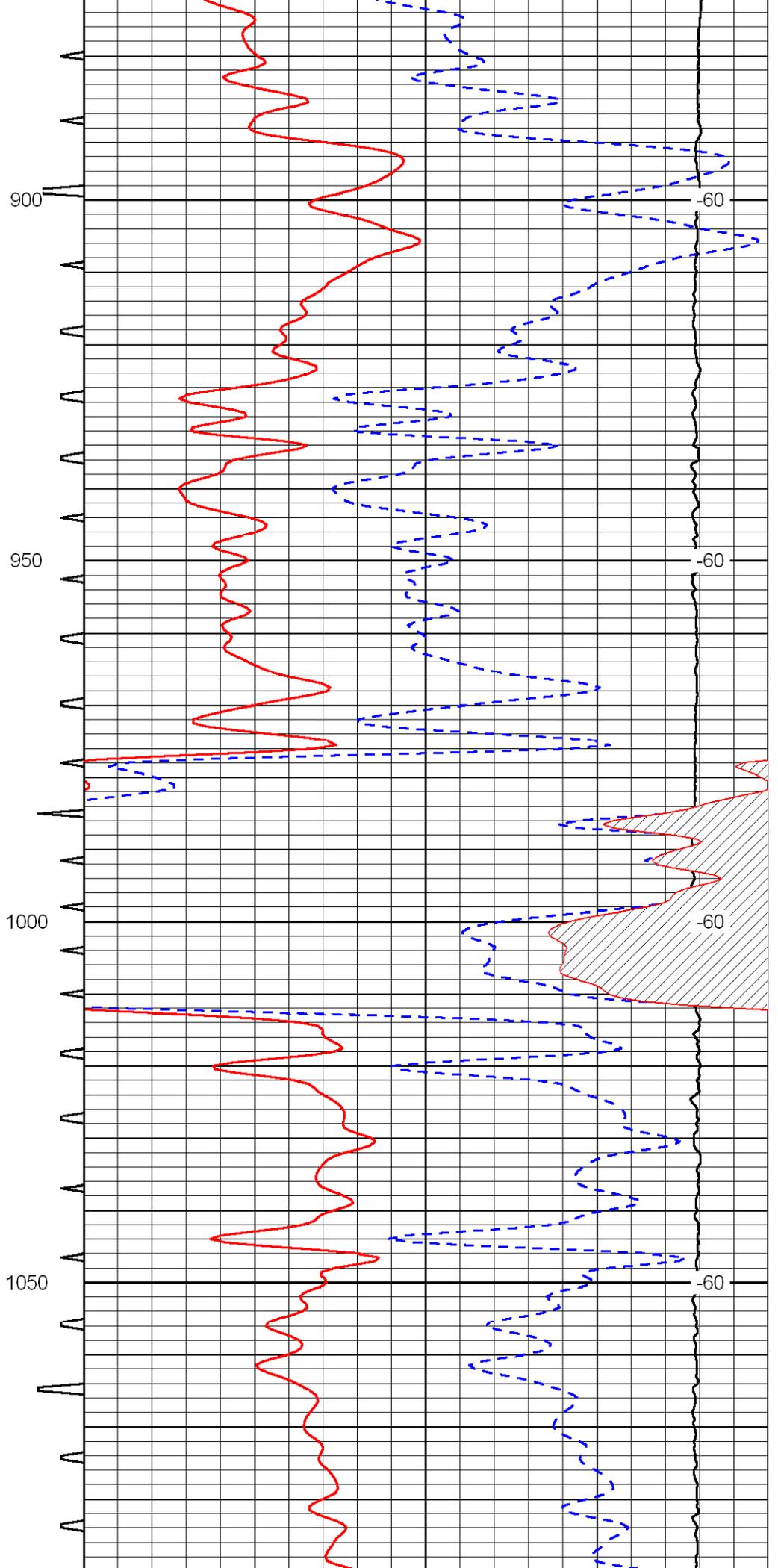
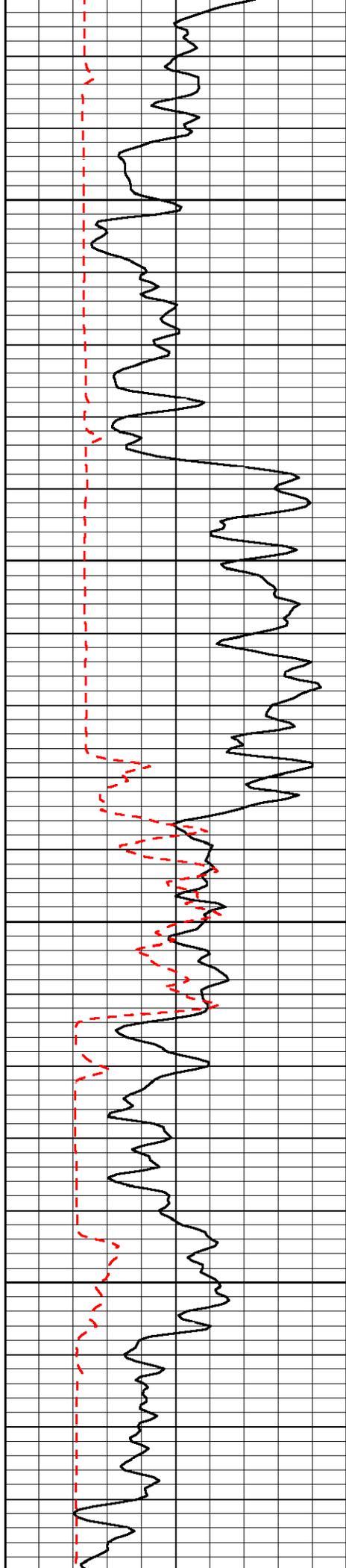
Database File: c:\warrior\data\h&c\_tien no. 28 - 1\h&chd.db  
 Dataset Pathname: DIL/stack  
 Presentation Format: sonic  
 Dataset Creation: Tue Jul 07 16:49:08 2009  
 Charted by: Depth in Feet scaled 1:240

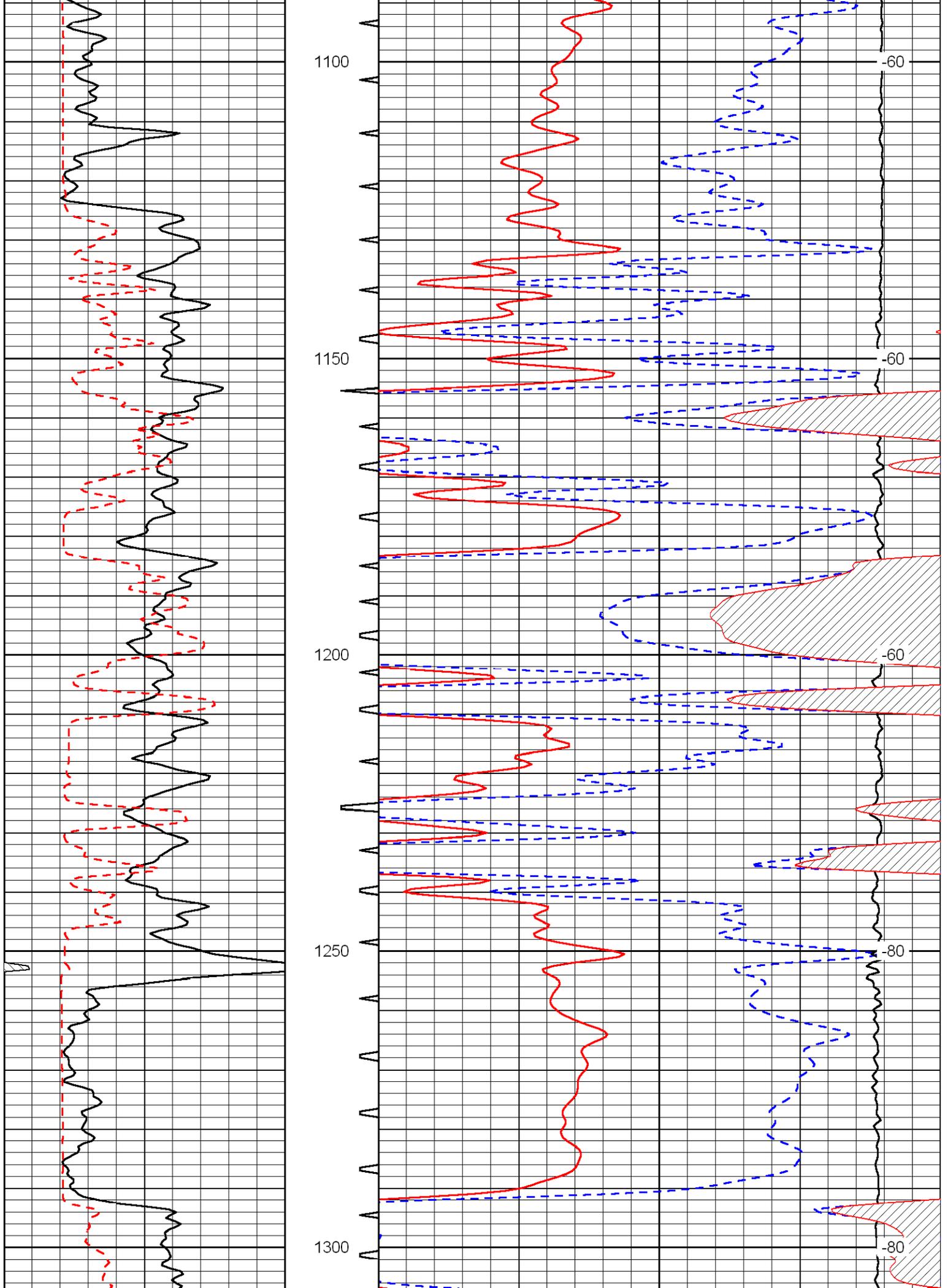
|     |              |     |           |       |                                |               |
|-----|--------------|-----|-----------|-------|--------------------------------|---------------|
| 0   | Gamma Ray    | 150 | Sonic Int | 140   | Delta Time (usec/ft) (usec/ft) | 40            |
| 150 | Gamma Ray    | 300 | 5 (msec)  | 0     | SPOR (pu)                      | -10           |
| 6   | Caliper (in) | 16  |           | 10000 | LTEN (lb) (lb)                 | 0             |
|     |              |     |           |       |                                | LSPD (ft/min) |

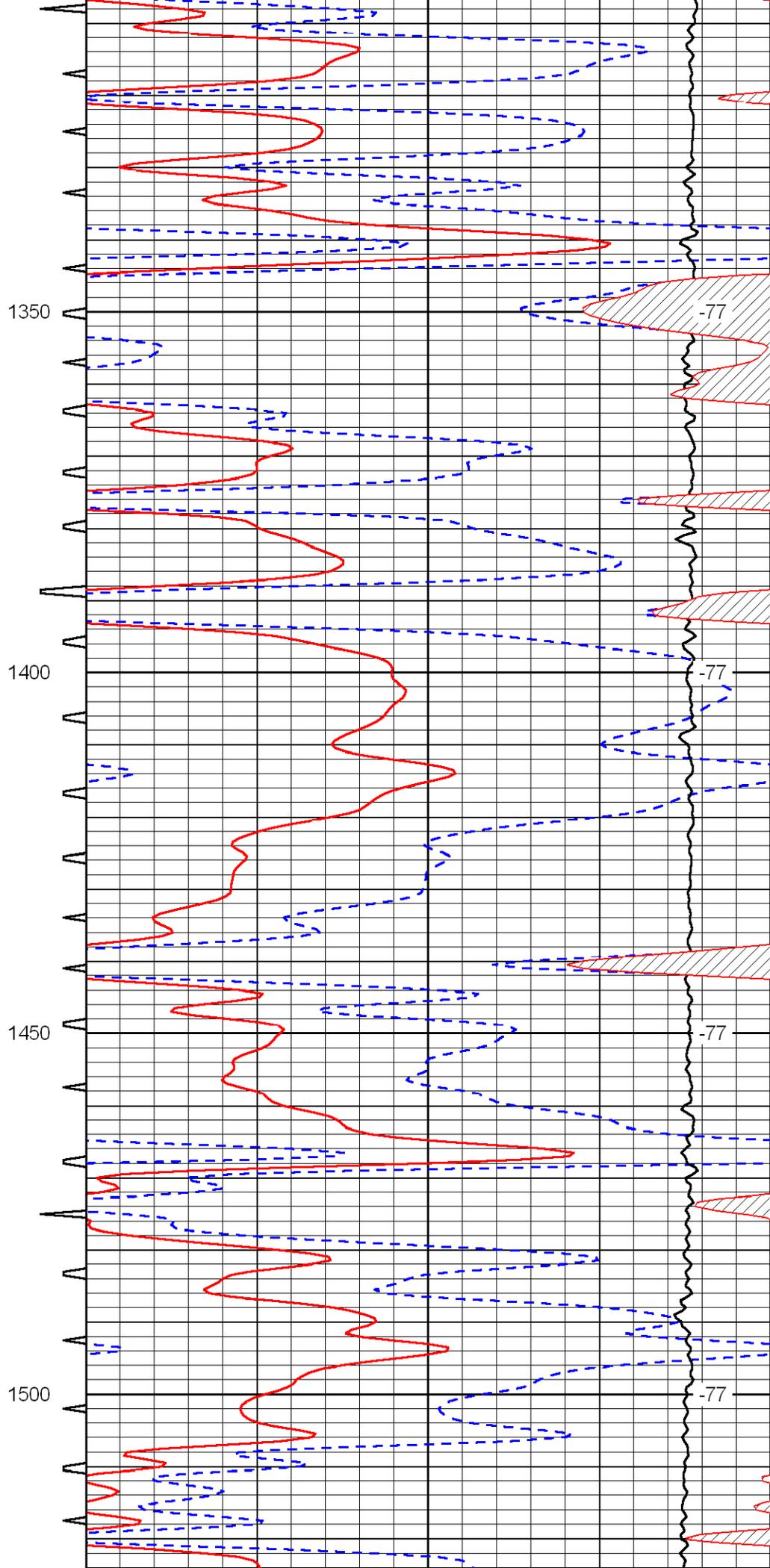
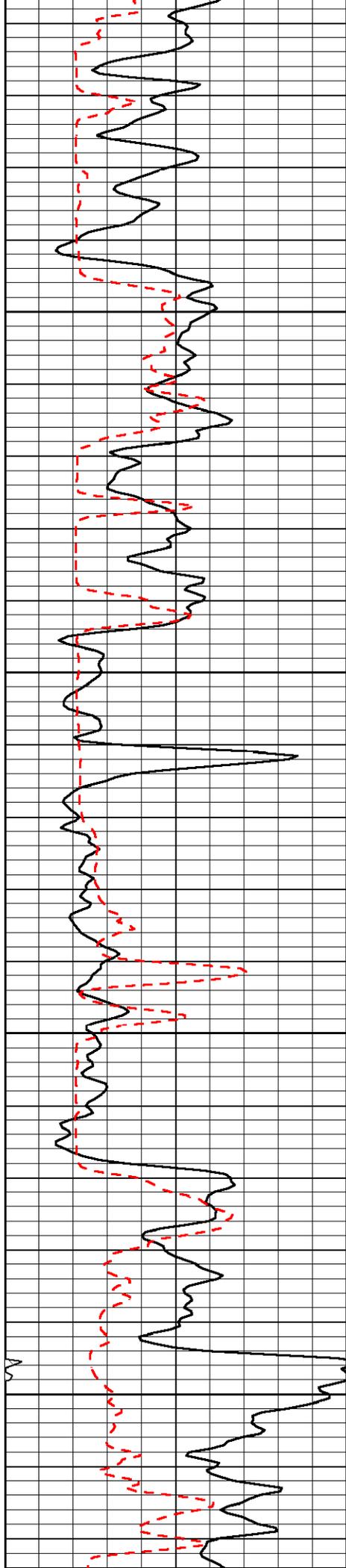


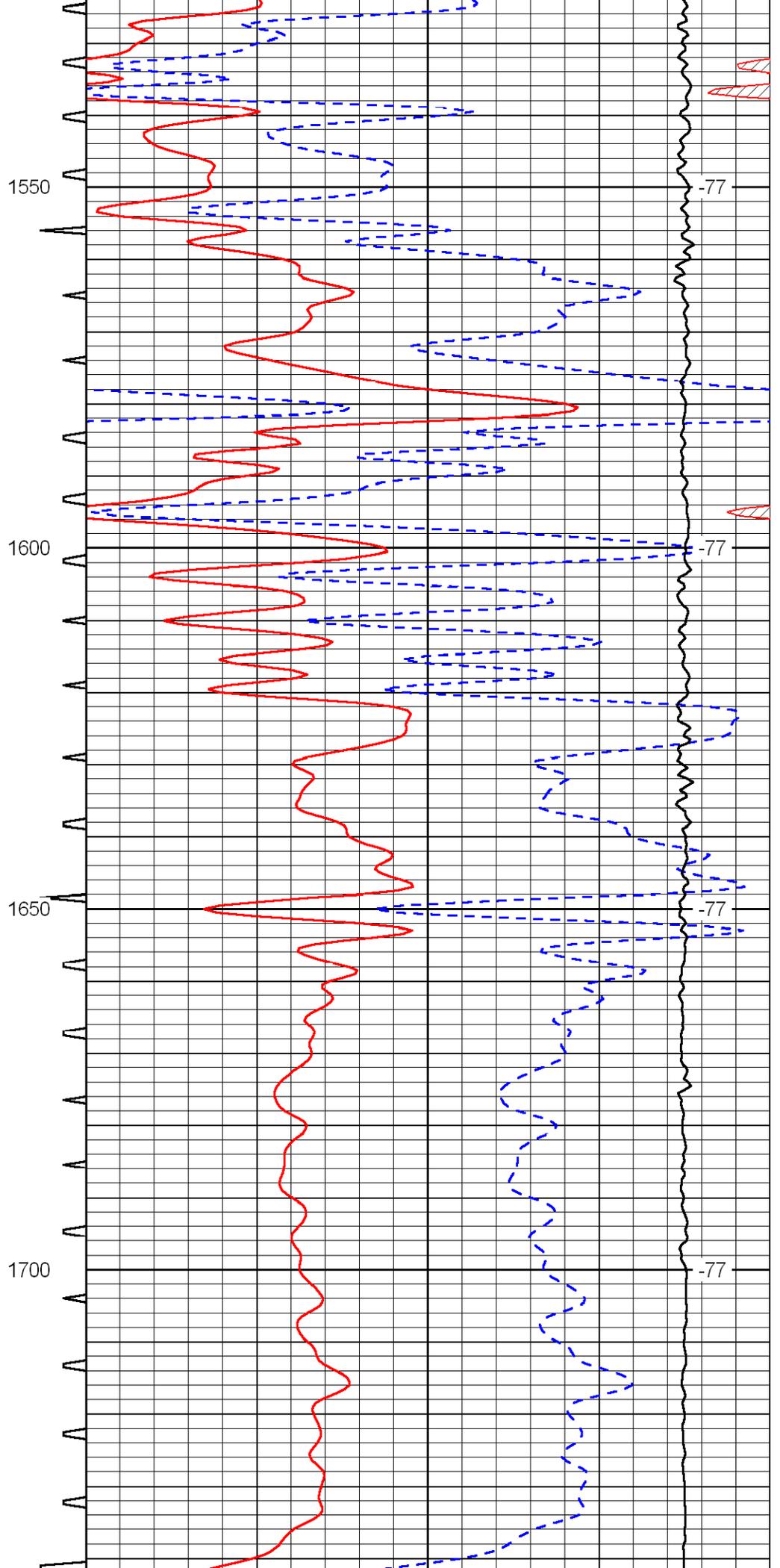
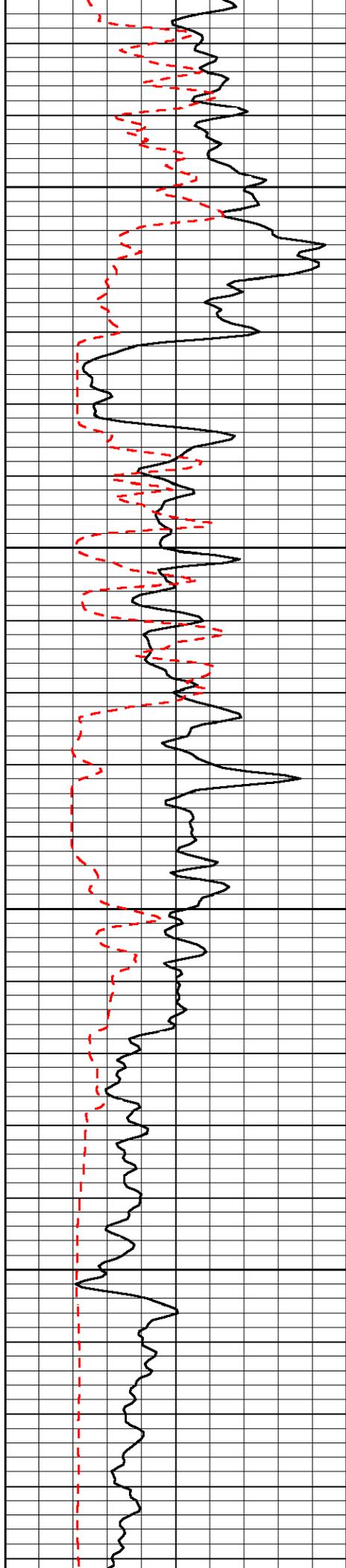


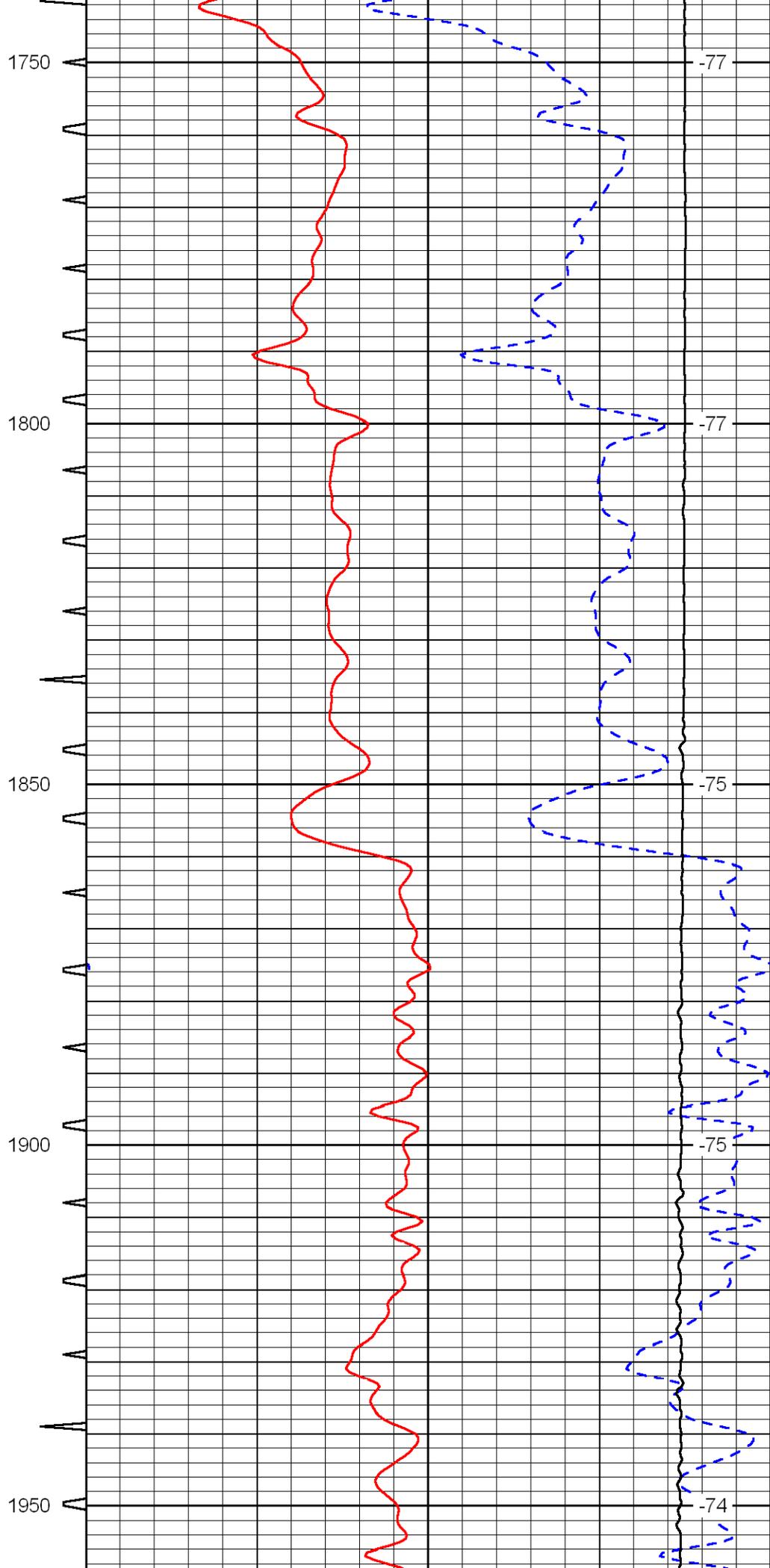
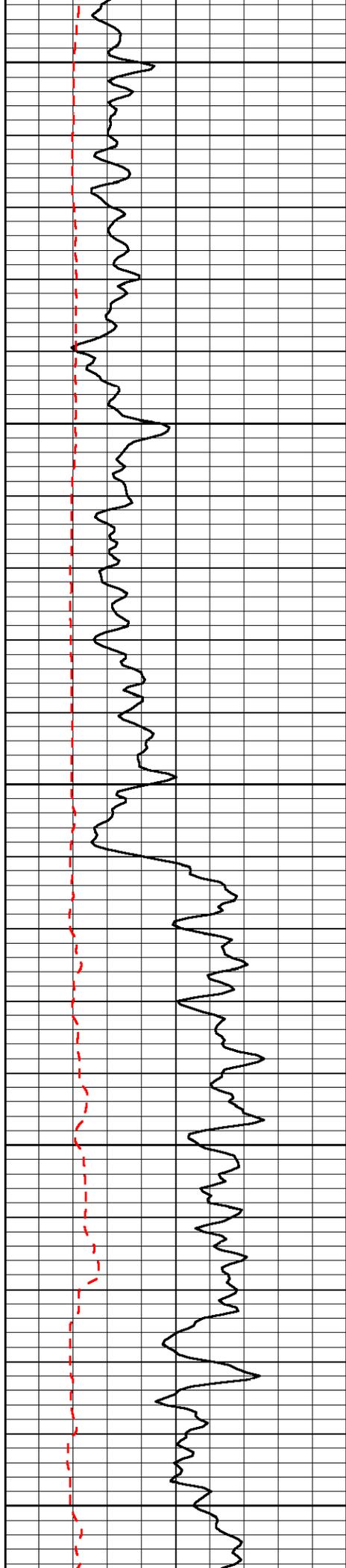


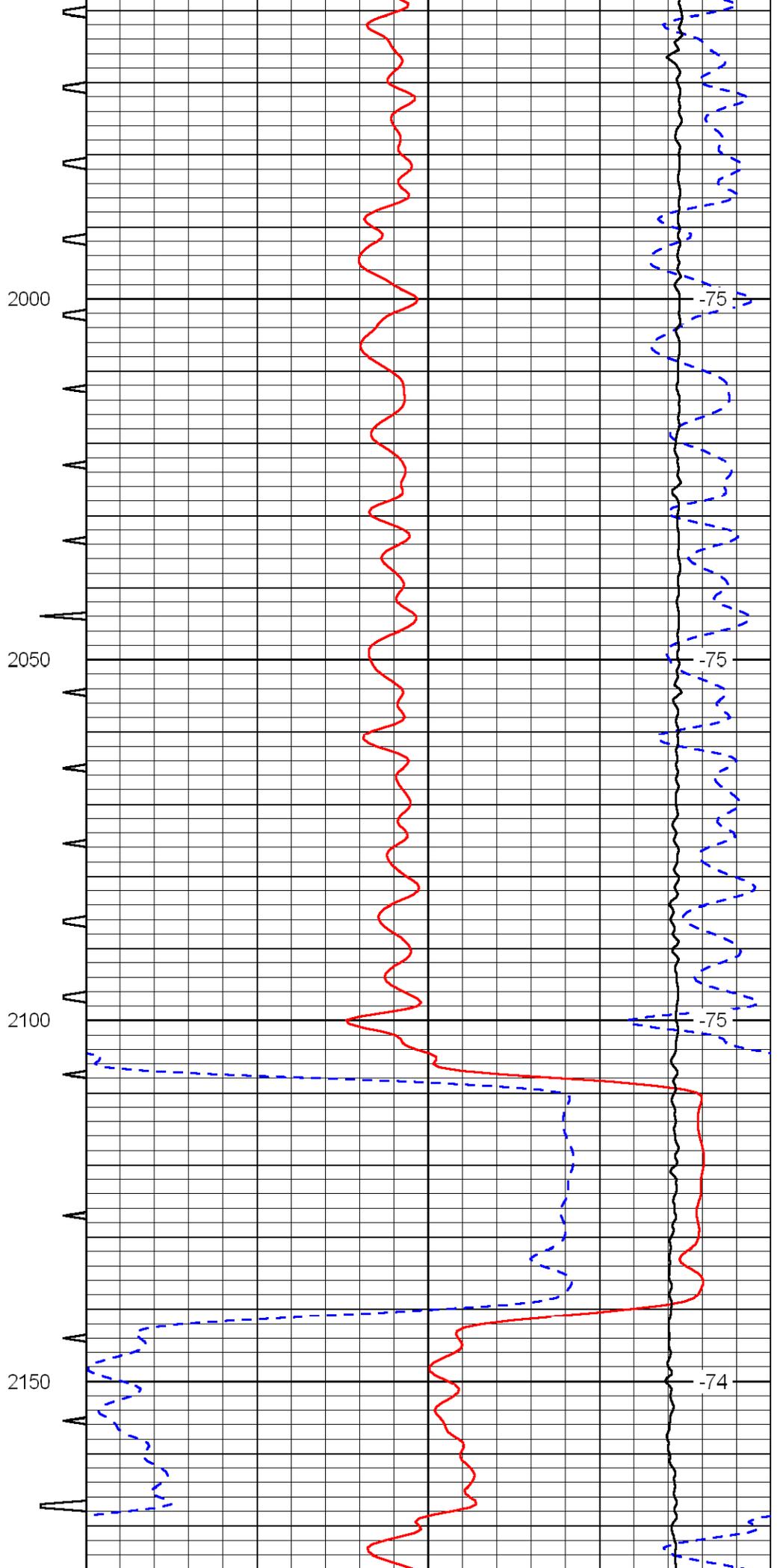
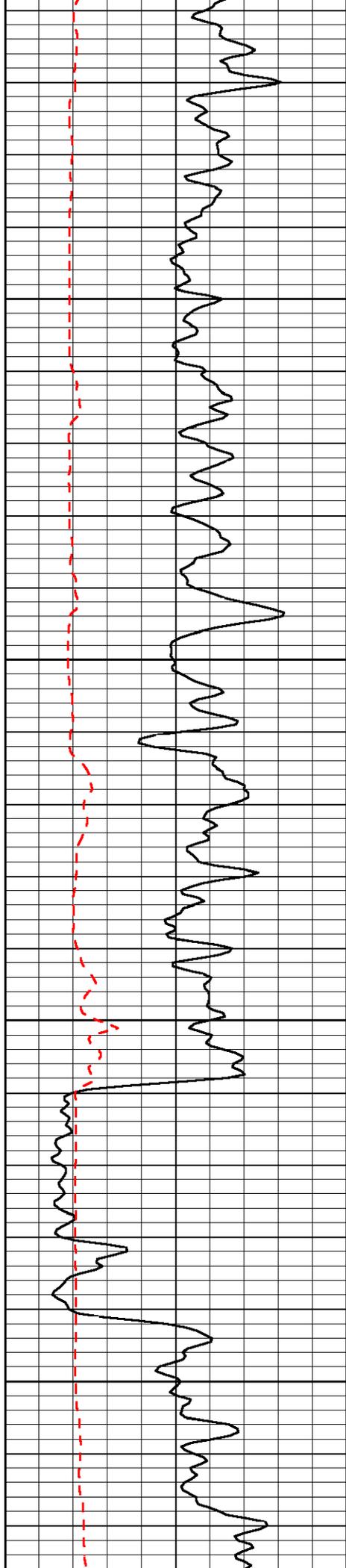


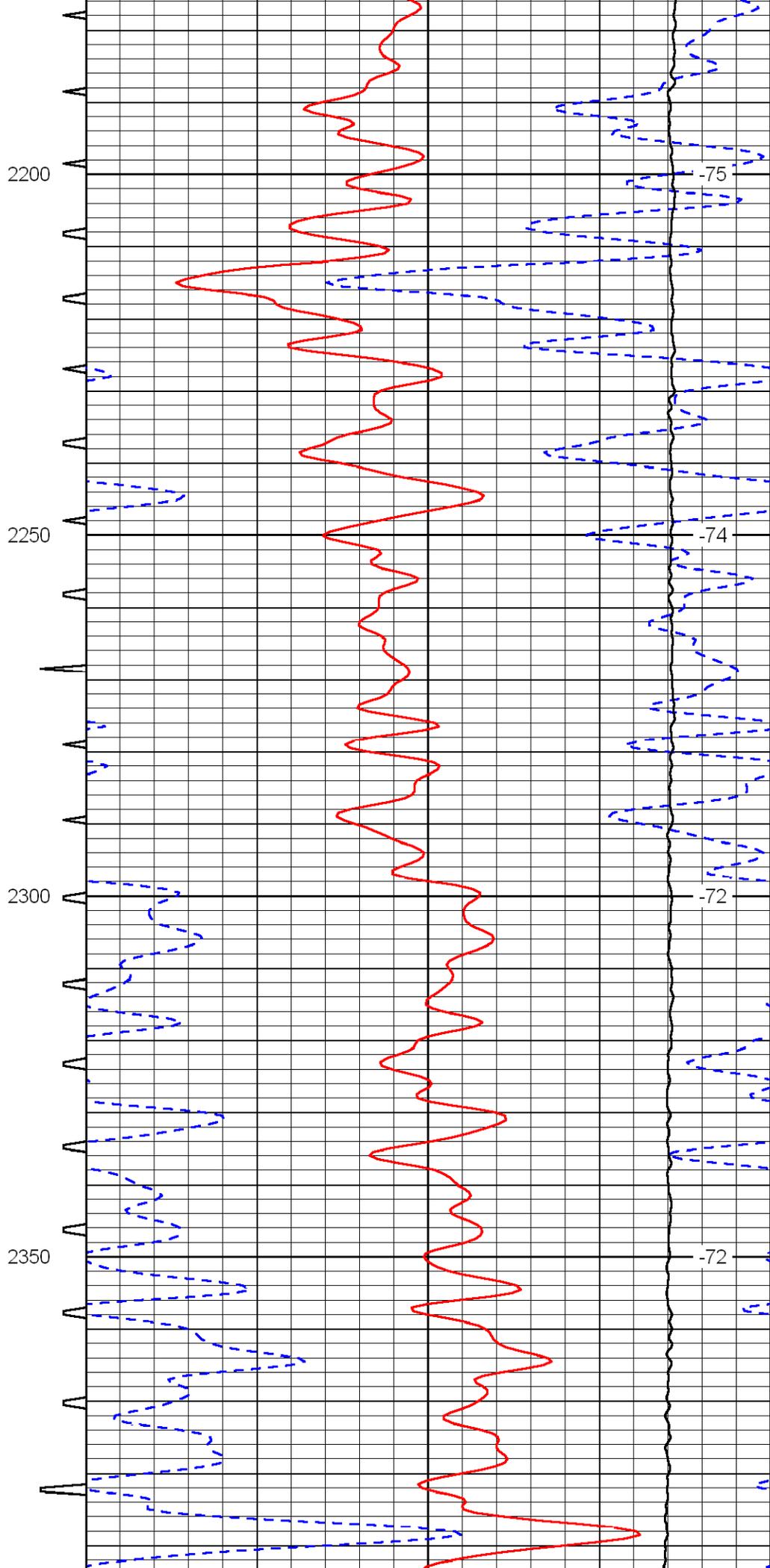
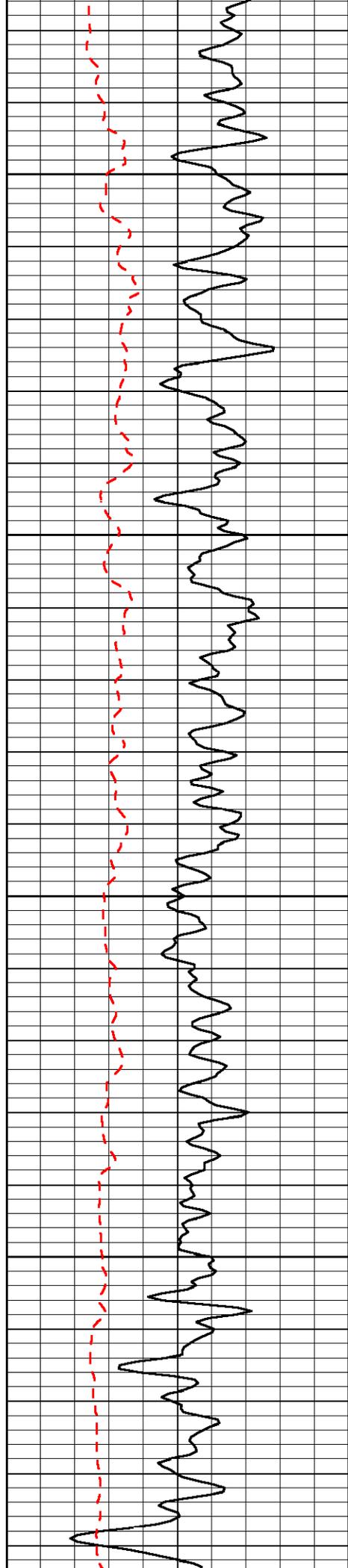


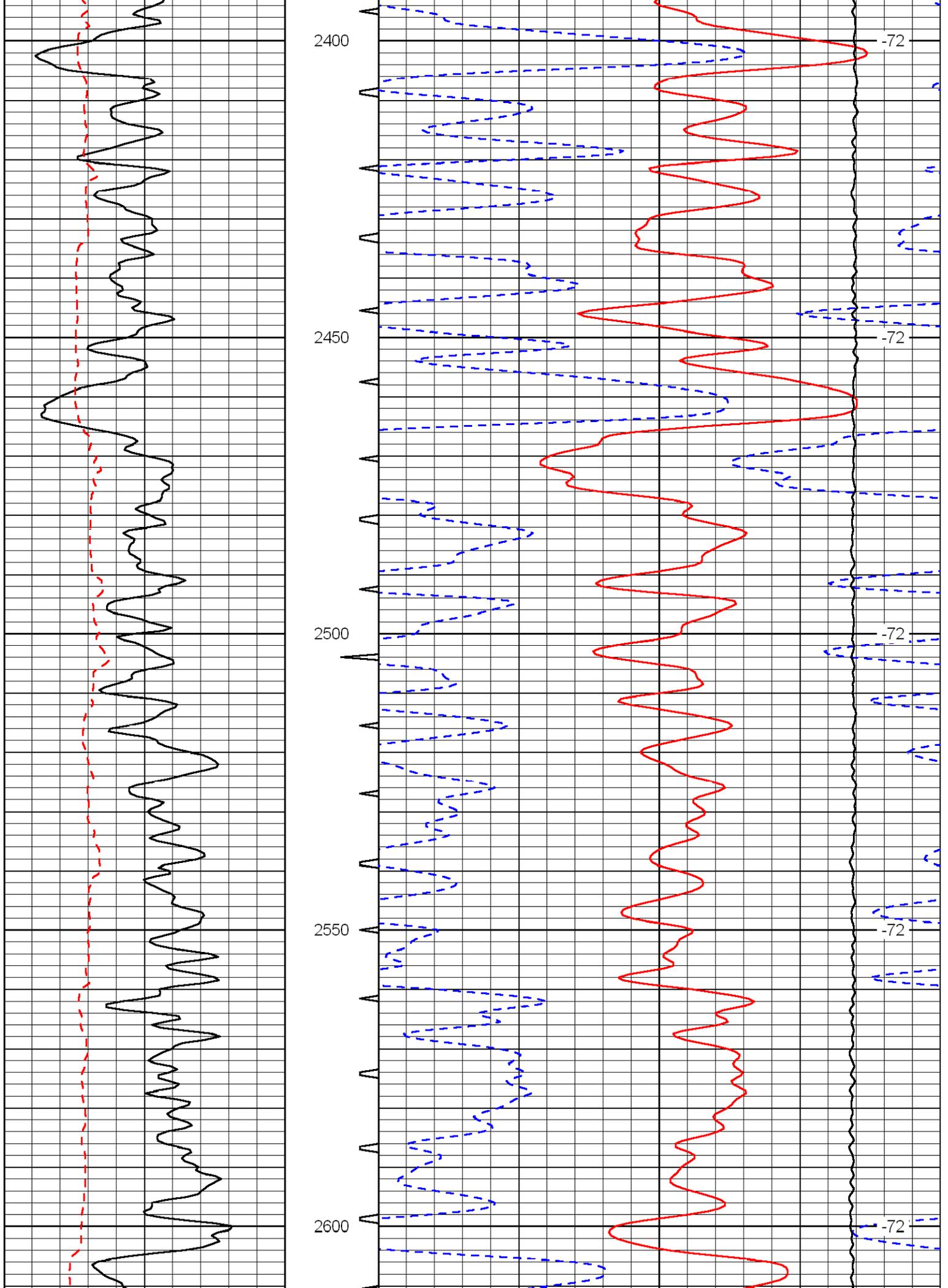


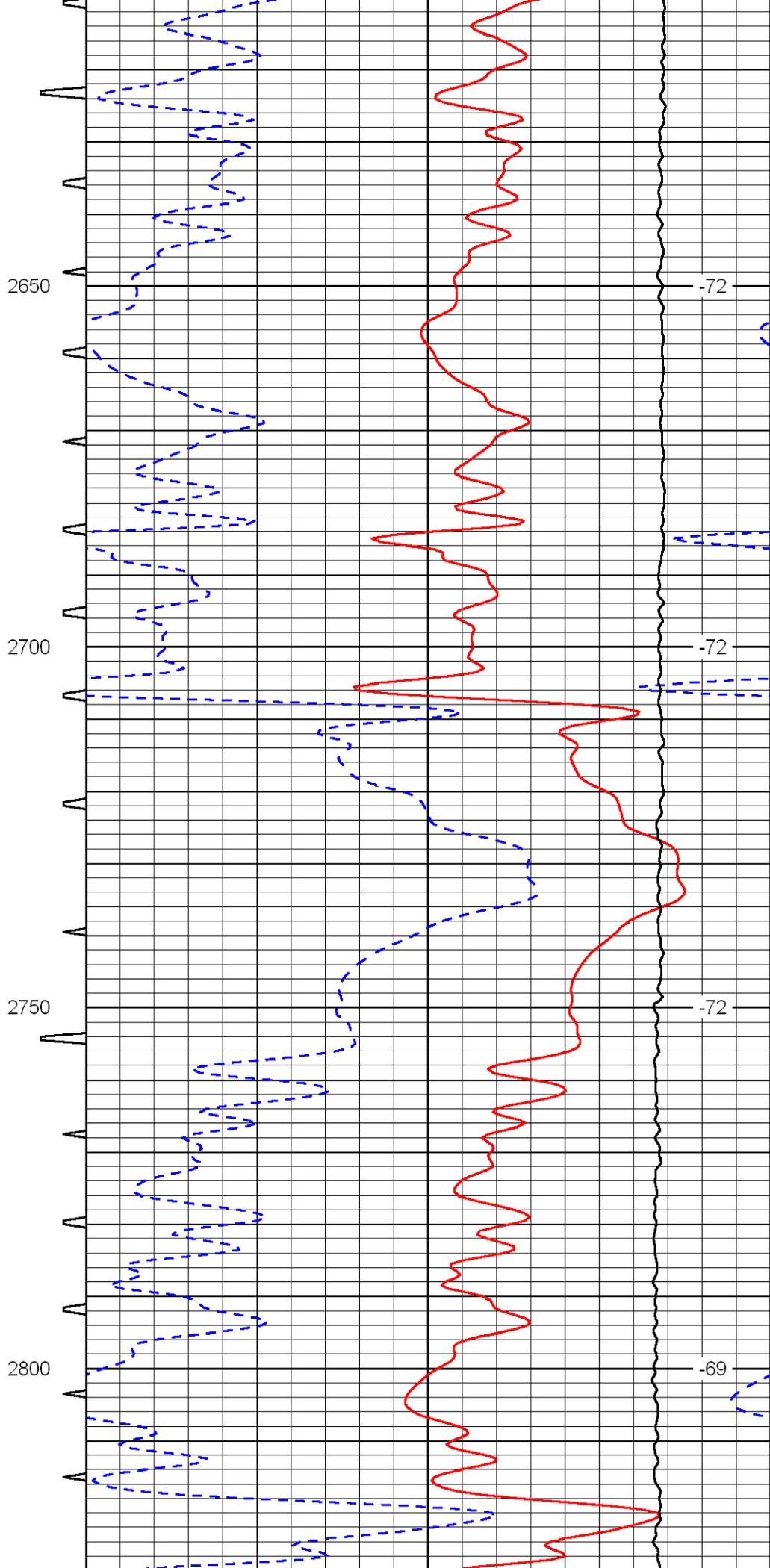
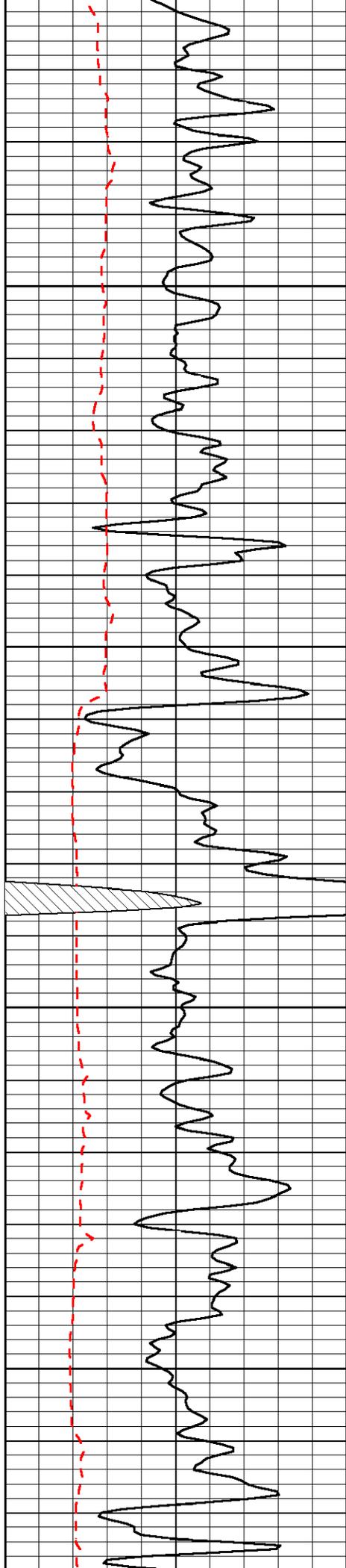


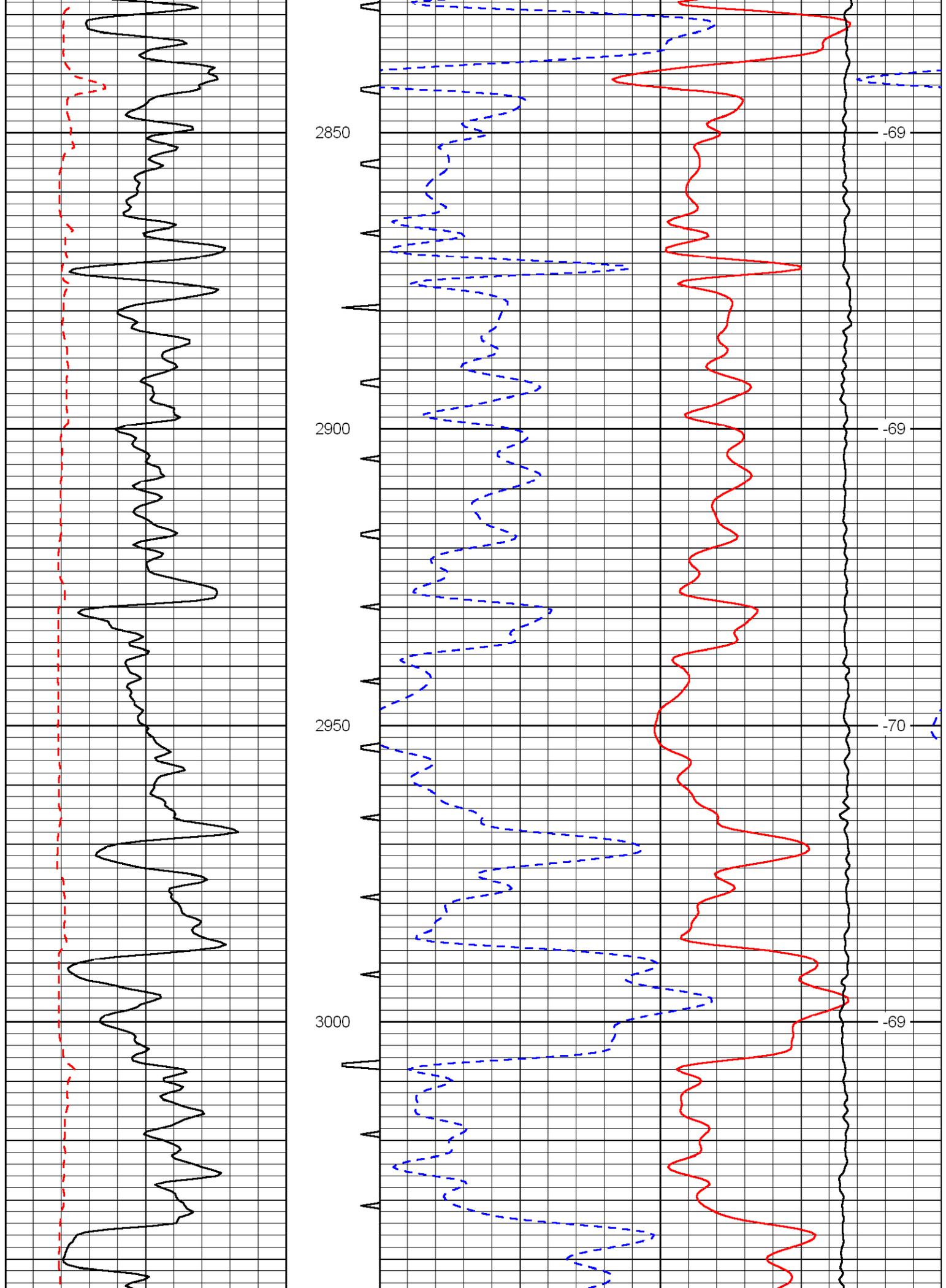


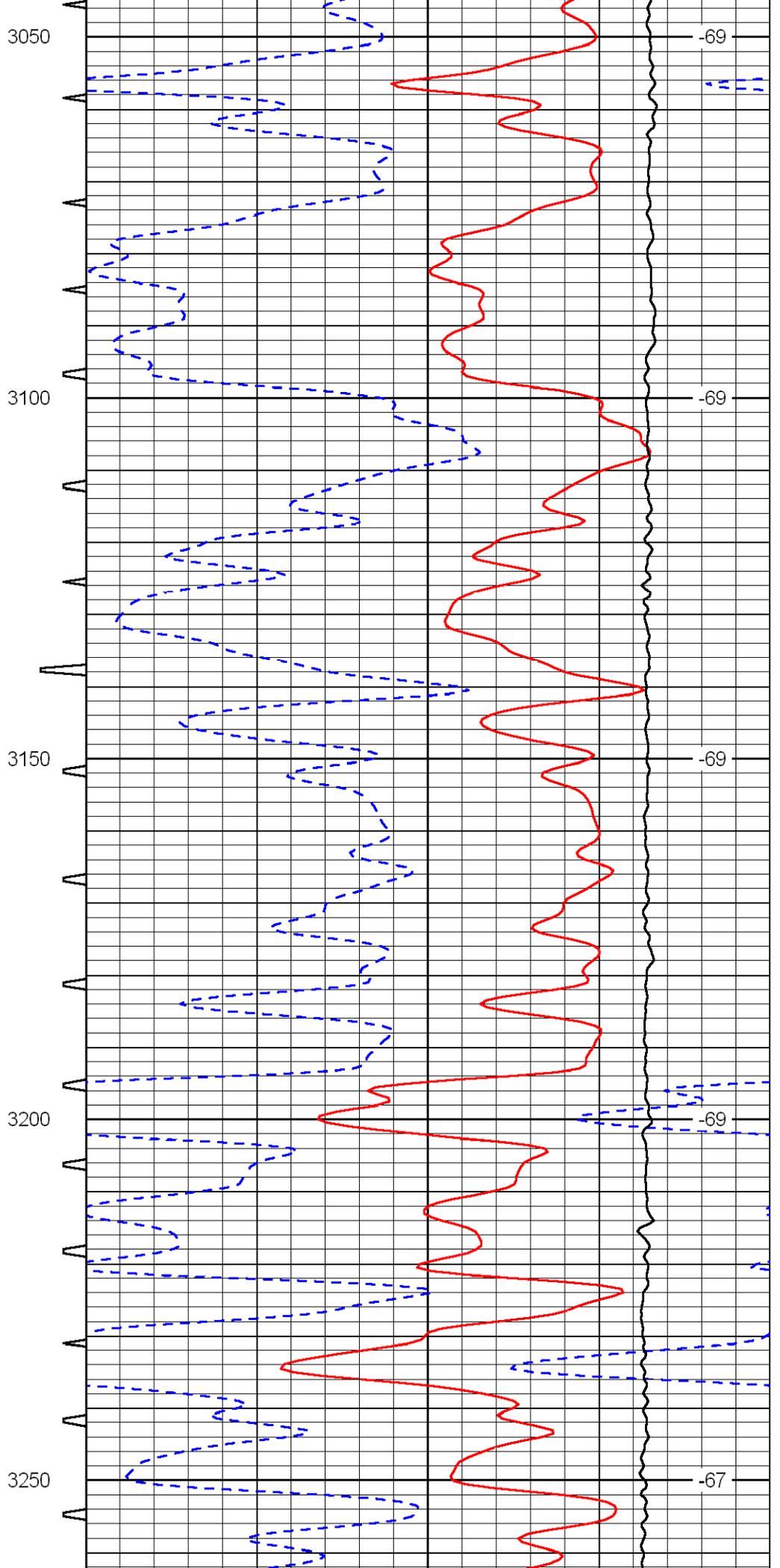
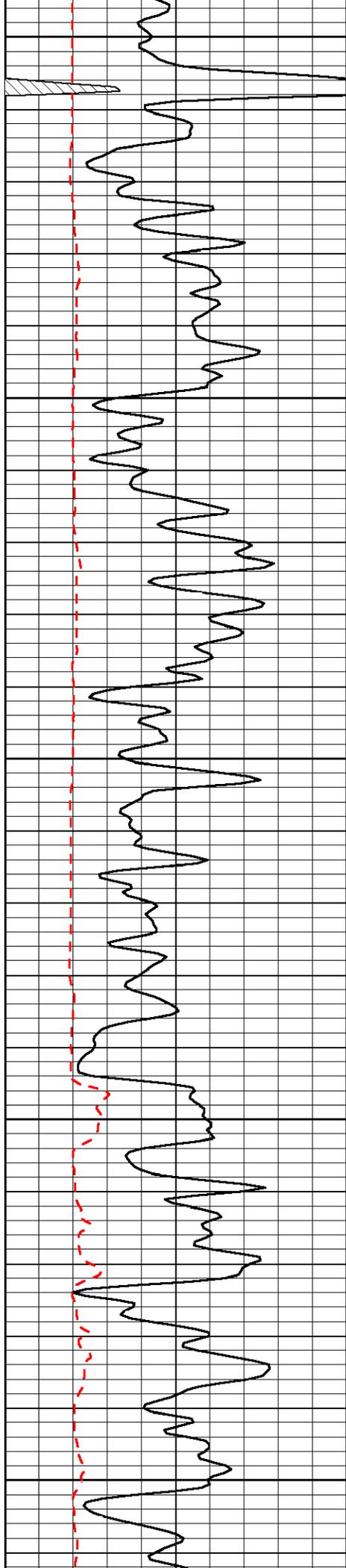


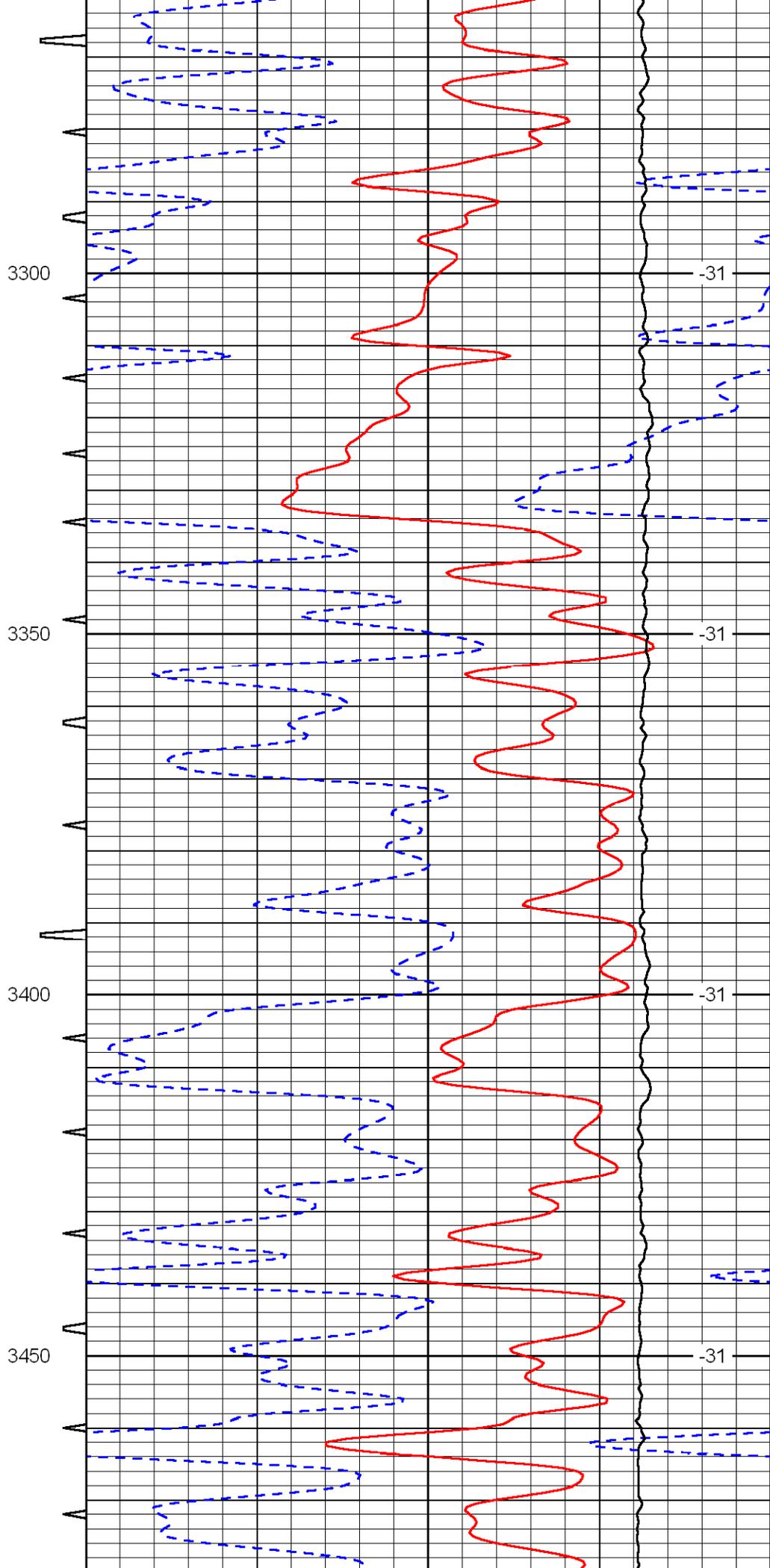
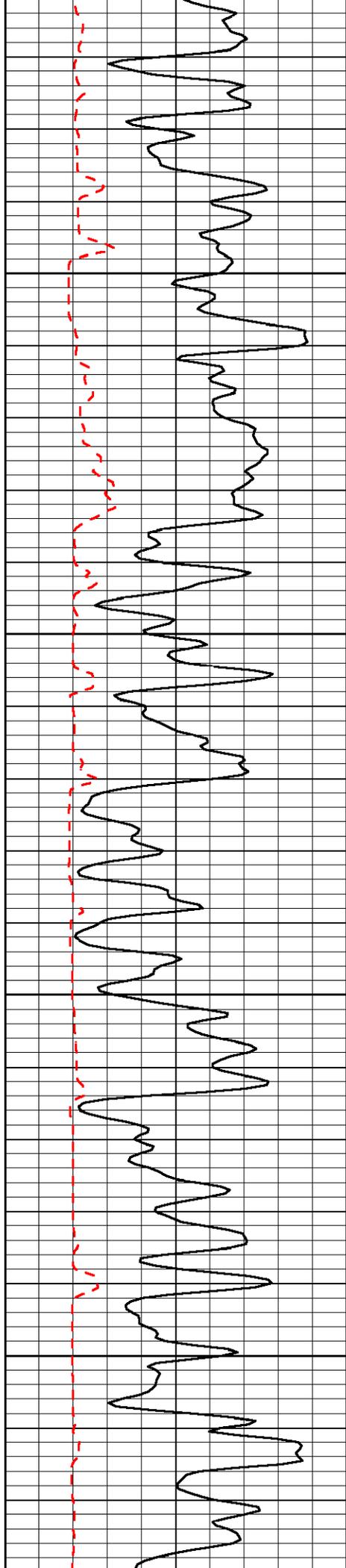


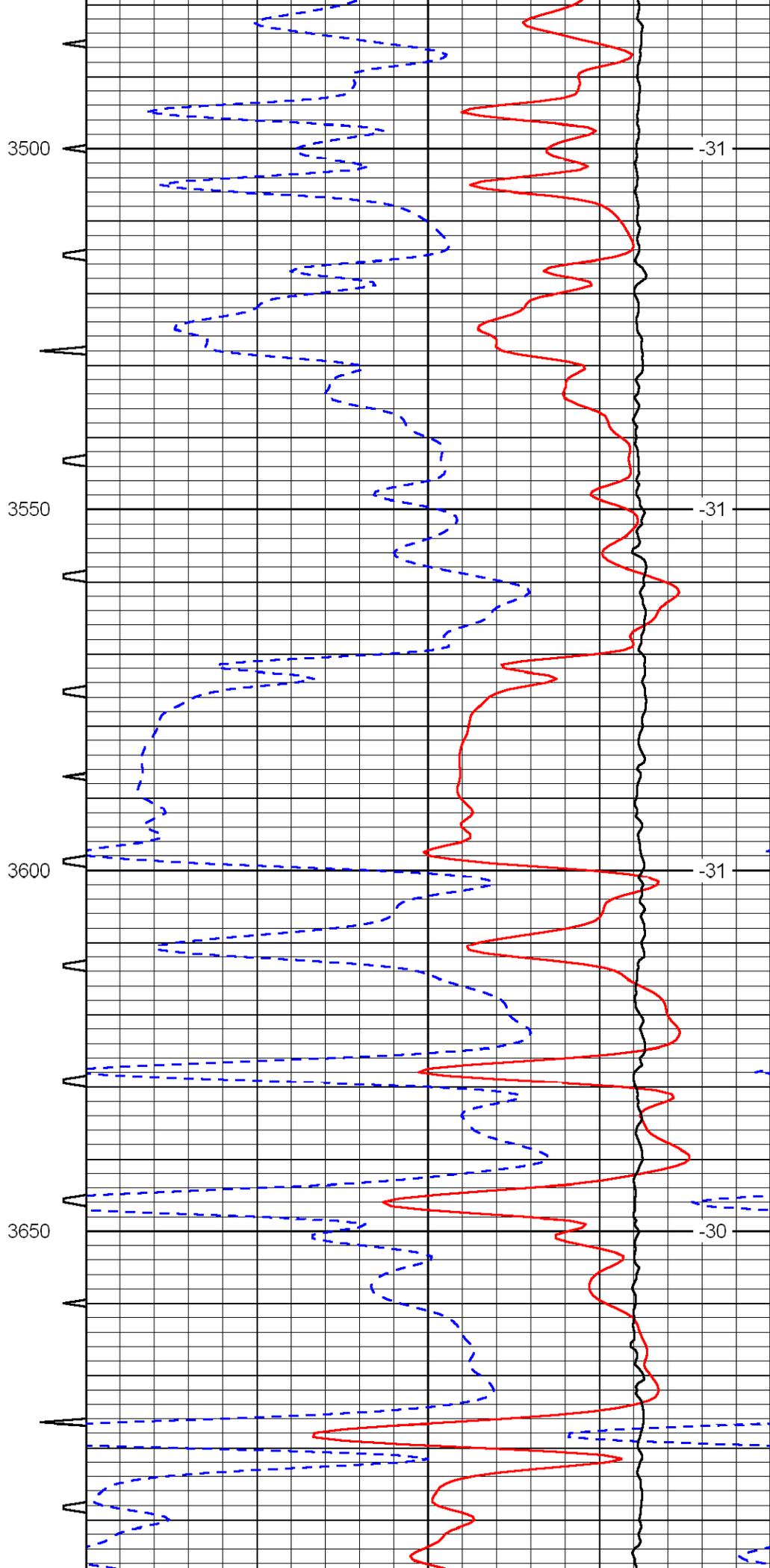
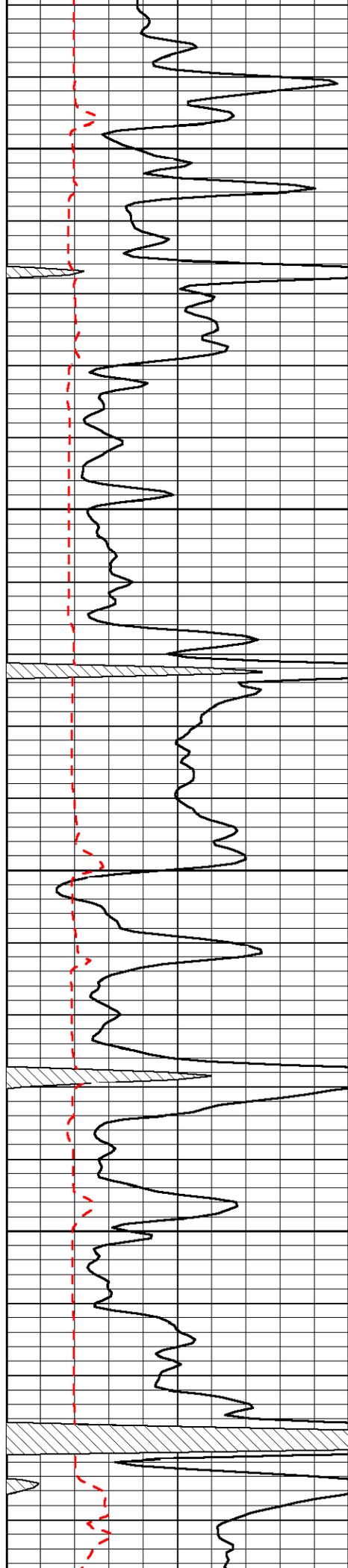


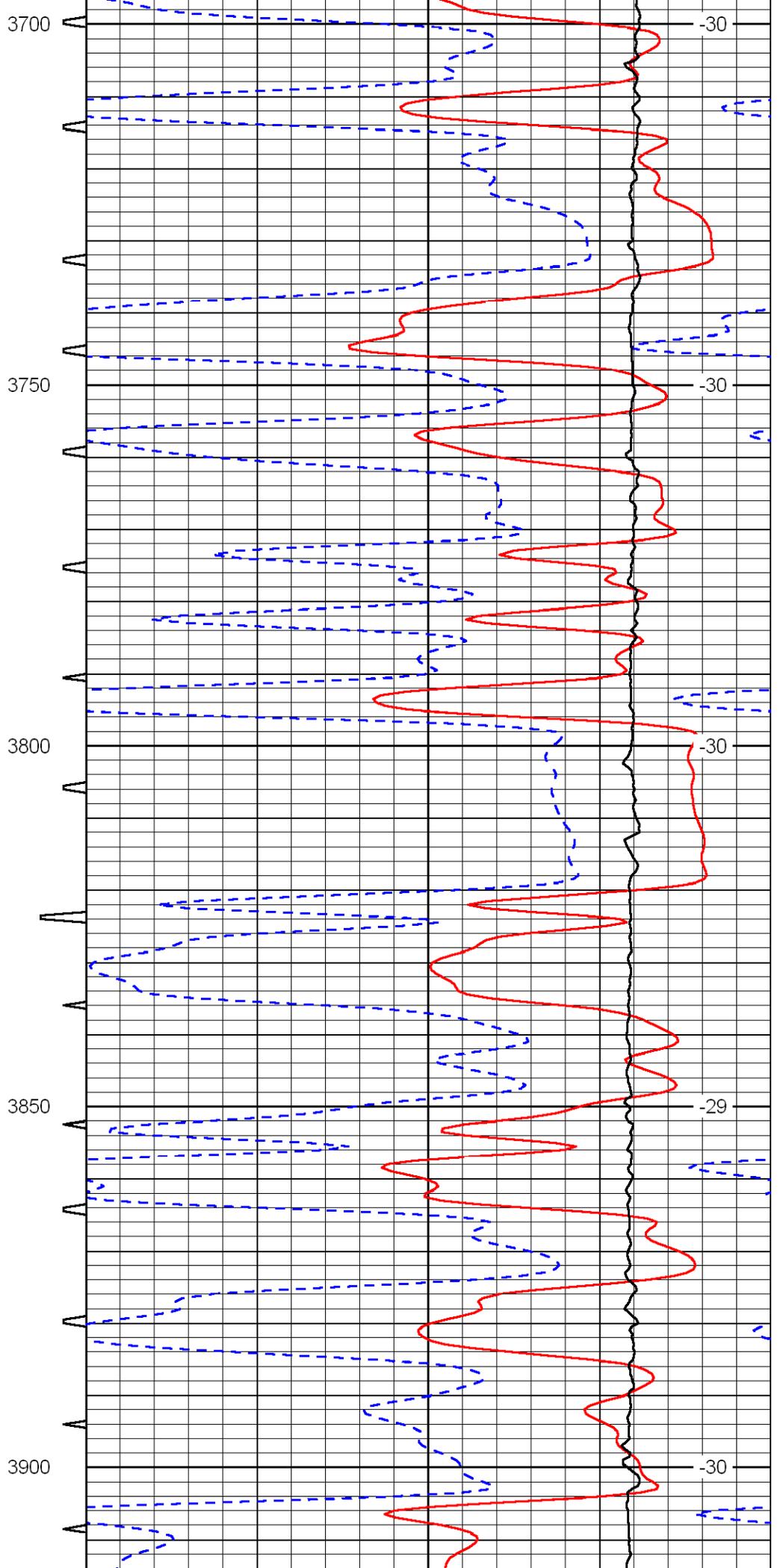
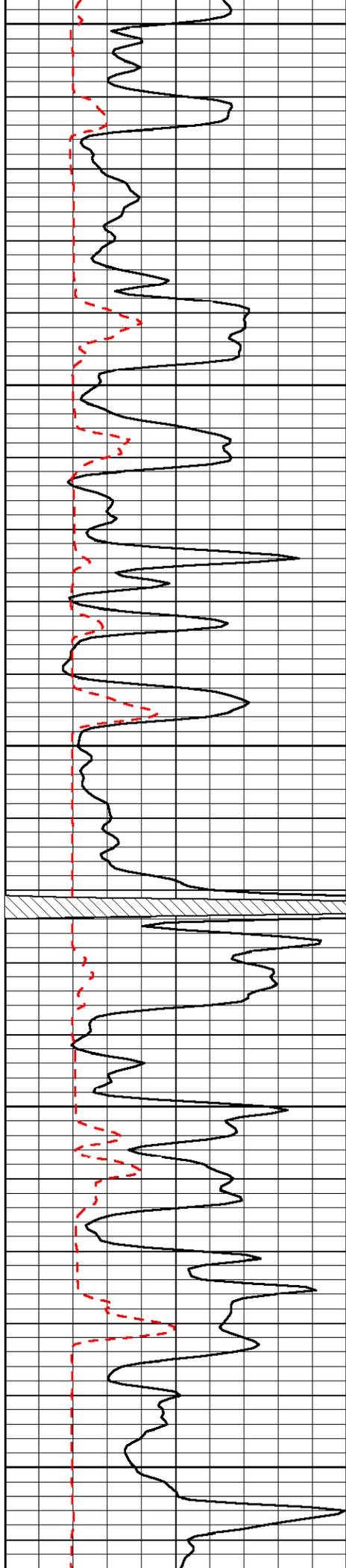


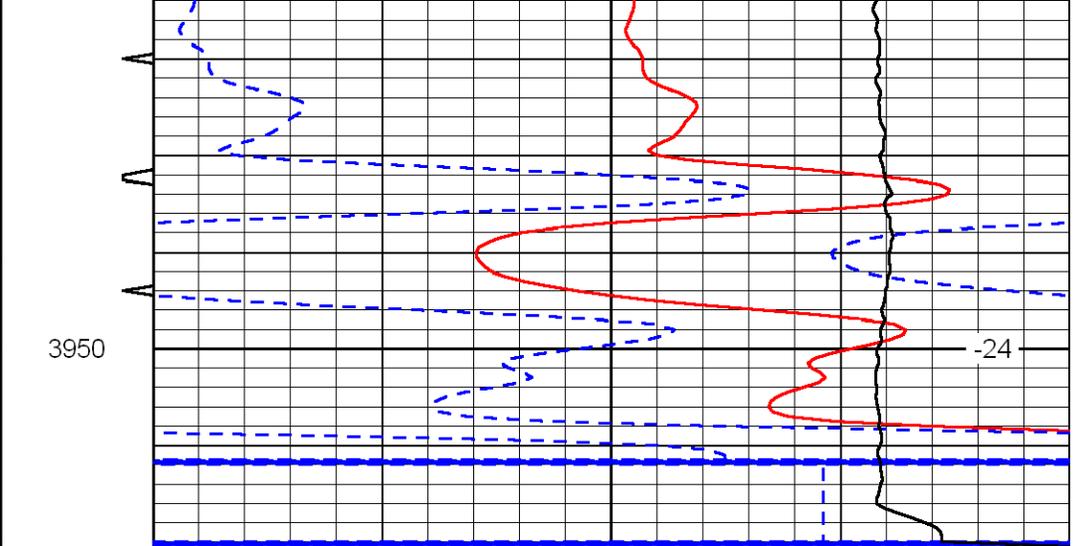
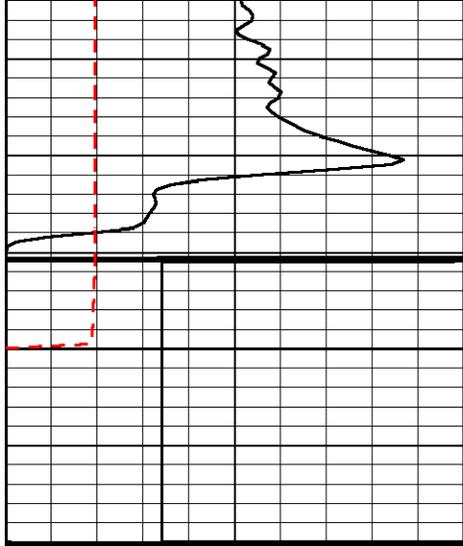












|     |              |     |            |       |                                |               |
|-----|--------------|-----|------------|-------|--------------------------------|---------------|
| 0   | Gamma Ray    | 150 | Sonic Int  | 140   | Delta Time (usec/ft) (usec/ft) | 40            |
| 150 | Gamma Ray    | 300 | 5 (msec) 0 | 30    | SPOR (pu)                      | -10           |
| 6   | Caliper (in) | 16  |            | 10000 | LTEN (lb) (lb)                 | 0             |
|     |              |     |            |       |                                | LSPD (ft/min) |