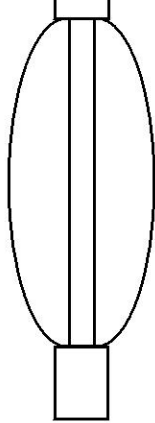




Top - Bottom

|                             |                          |                        |                       |                        |                    |                       |                           |
|-----------------------------|--------------------------|------------------------|-----------------------|------------------------|--------------------|-----------------------|---------------------------|
| A<br>1                      | BOREID<br>in<br>7.875    | BOTTEMP<br>degF<br>100 | CASEOD<br>in<br>5.5   | CASETHCK<br>in<br>0    | COMPACT<br>1       | FLUIDDEN<br>g/cc<br>1 | M<br>2                    |
| MATRXDEN<br>g/cc<br>2.71    | NPORSEL<br><br>Limestone | PERFS<br><br>0         | SNDERR<br>mmho/m<br>0 | SNDERRM<br>mmho/m<br>0 | SPSHIFT<br>mV<br>0 | SRFTEMP<br>degF<br>0  | SVFLUID<br>usec/ft<br>189 |
| SVMATRIX<br>usec/ft<br>47.6 | SZCOR<br><br>Off         | TDEPTH<br>ft<br>0      |                       |                        |                    |                       |                           |

| Sensor       | Offset (ft)    | Schematic                                                                           | Description      | Length (ft) | O.D. (in) | Weight (lb) |
|--------------|----------------|-------------------------------------------------------------------------------------|------------------|-------------|-----------|-------------|
| WVF4<br>WVF1 | 13.50<br>13.50 |   | SLT-PENGO (0001) | 16.00       | 3.50      | 300.00      |
| WVF3<br>WVF2 | 11.50<br>11.50 |  |                  |             |           |             |



CENT-PENGO (4-PENGO)

5.50

3.00

70.00

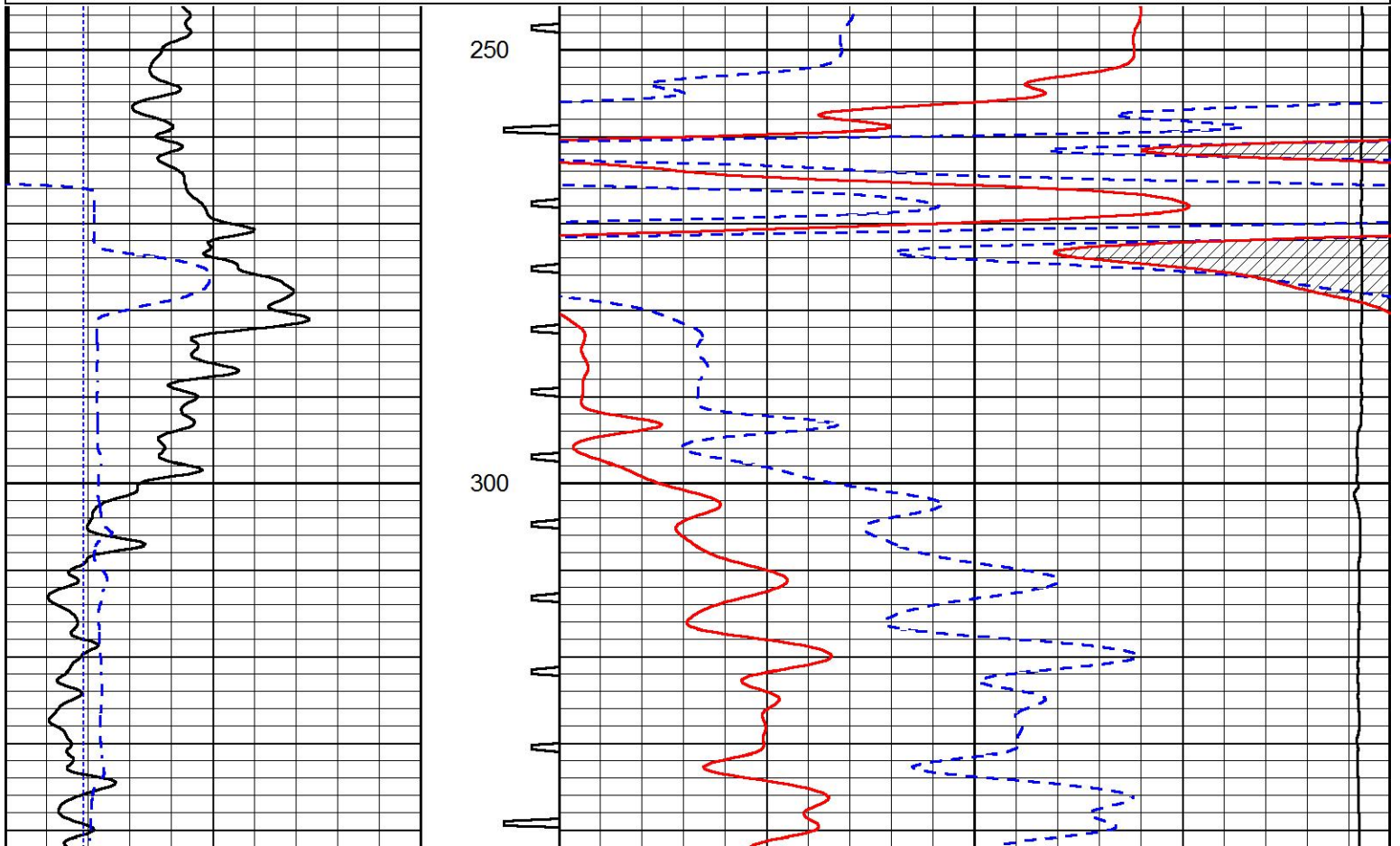
Dataset: black\_rock\_18\_1.db: field/well/stackmel/pass5  
Total length: 21.50 ft  
Total weight: 370.00 lb  
O.D.: 3.50 in

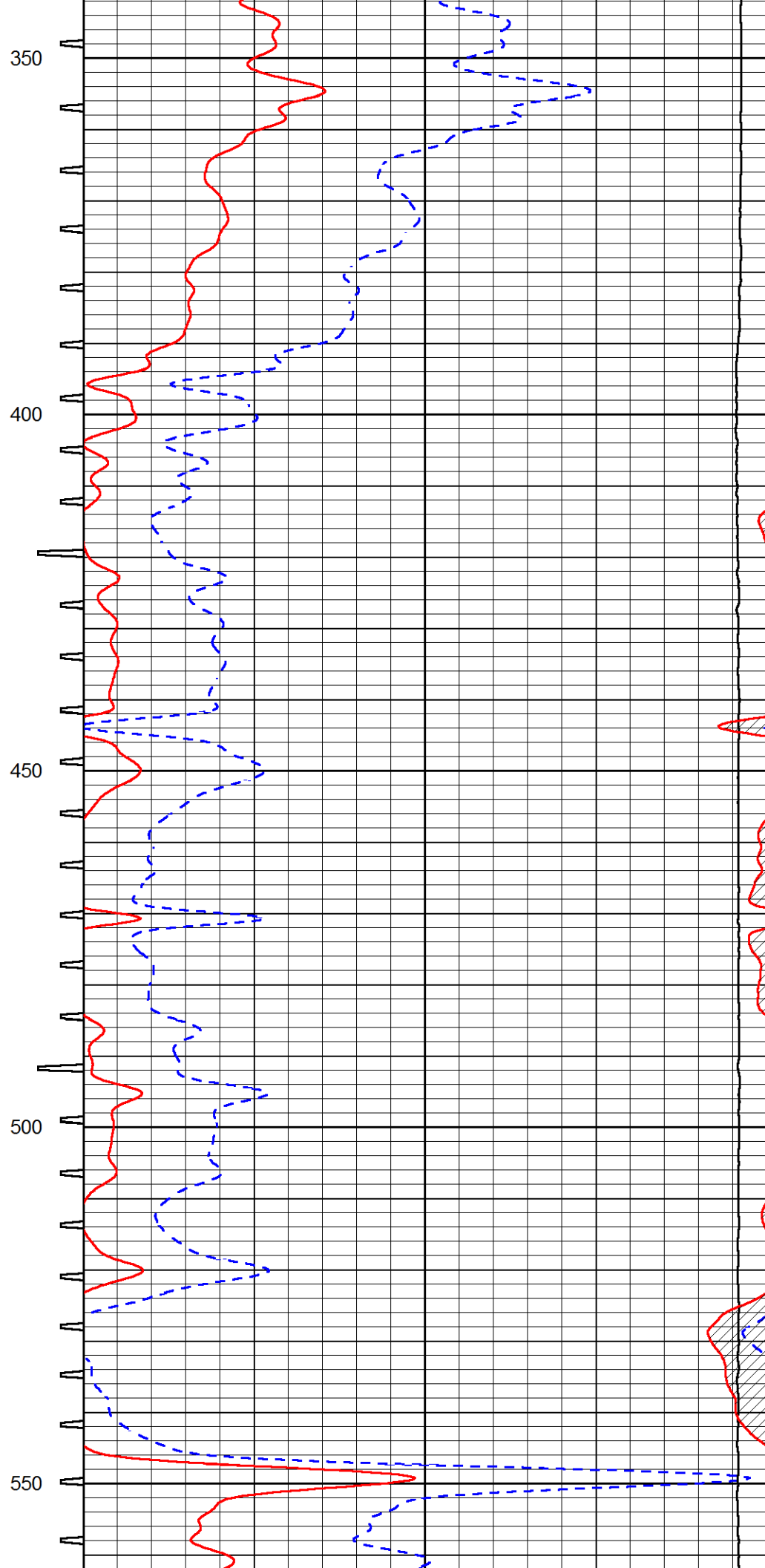
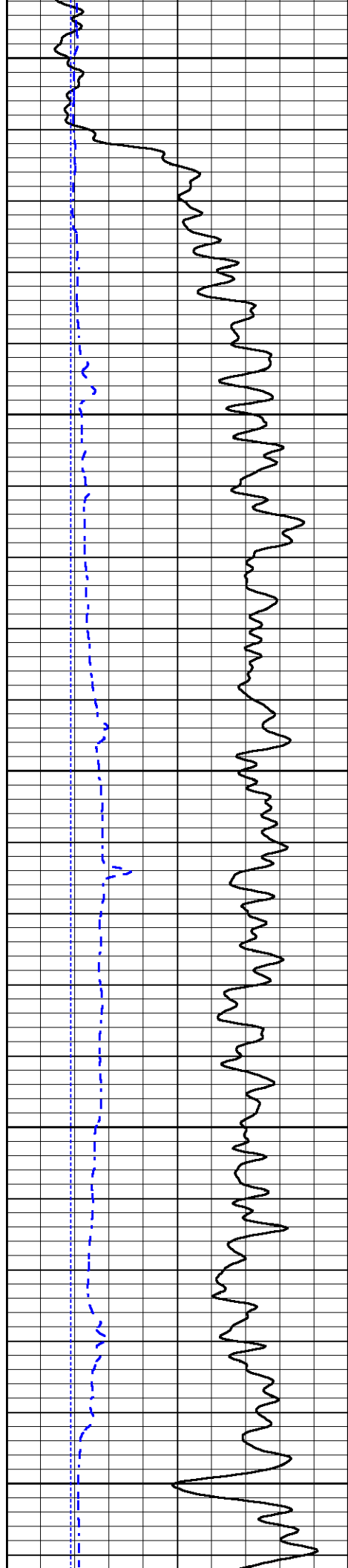


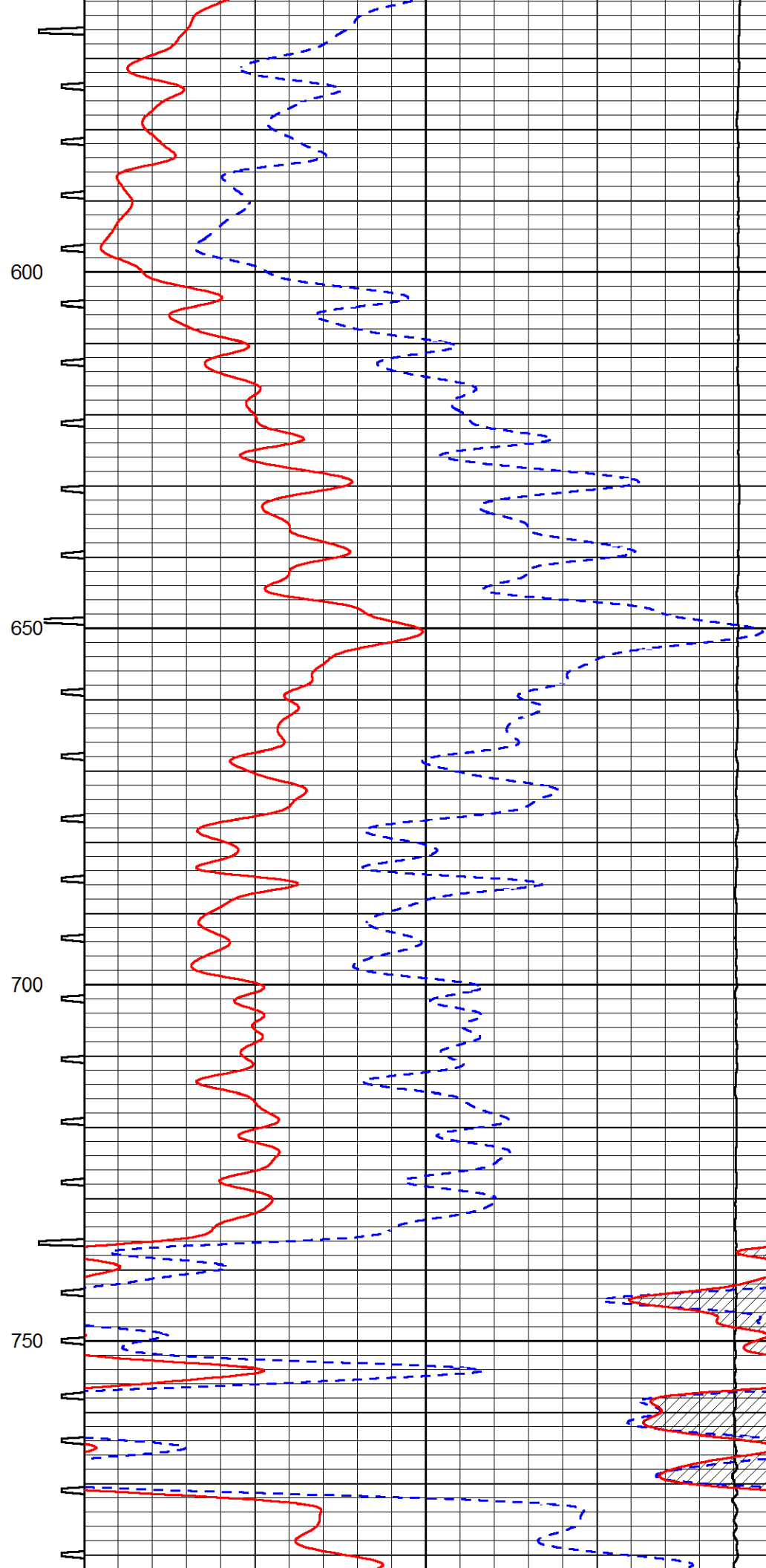
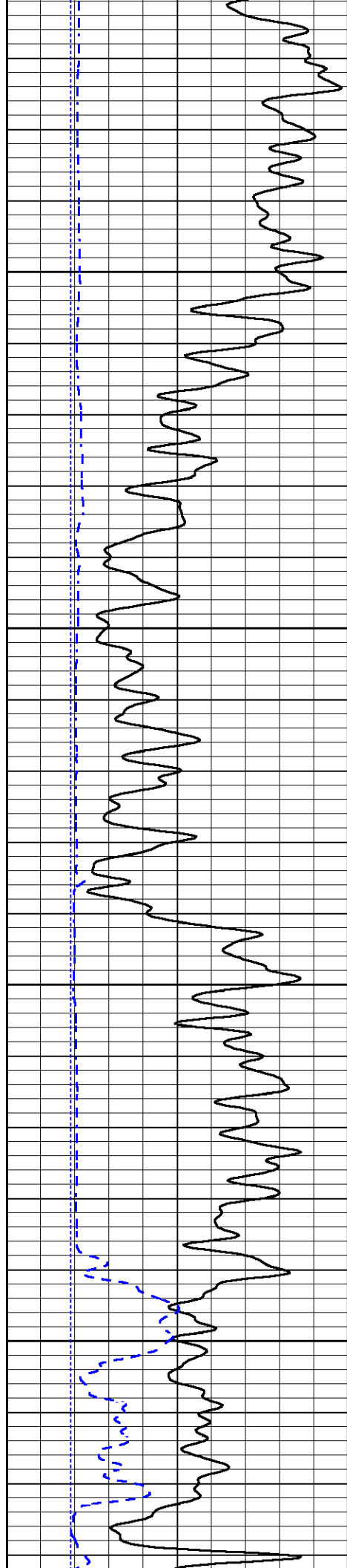
# MAIN PASS

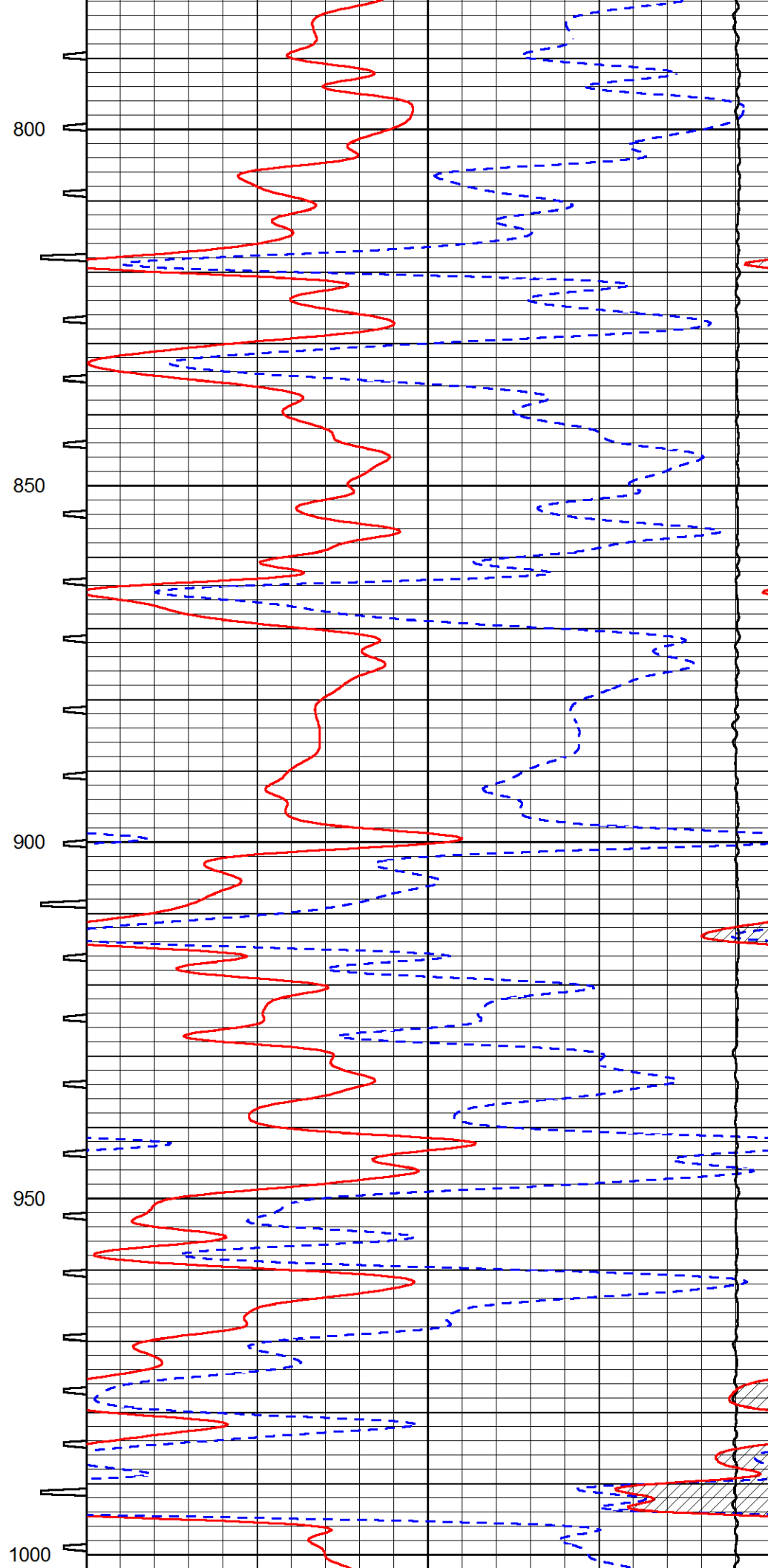
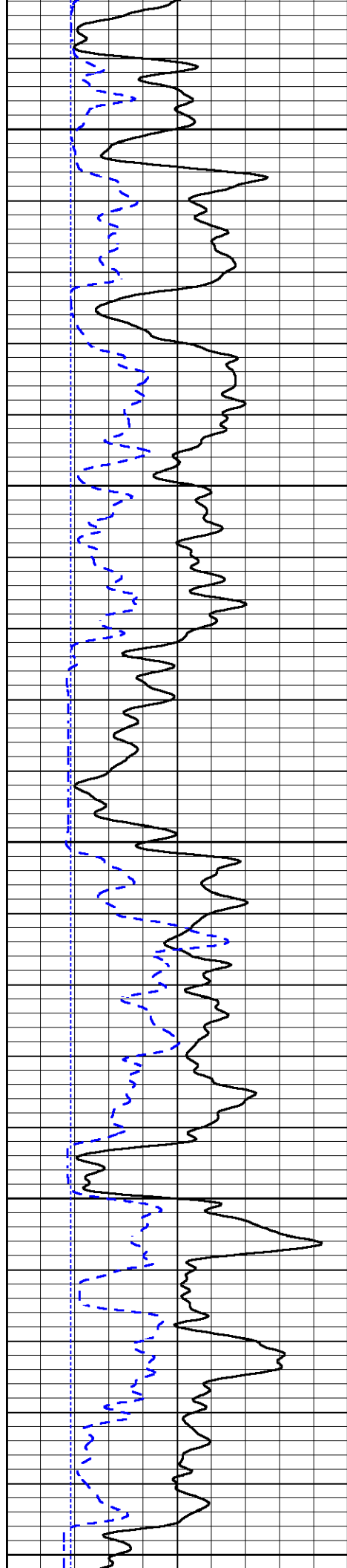
Database File black\_rock\_18\_1.db  
Dataset Pathname stackmel/pass4.1  
Presentation Format \_sonic  
Dataset Creation Tue Sep 10 10:24:17 2019  
Charted by Depth in Feet scaled 1:240

|     |                  |     |            |       |                                |     |
|-----|------------------|-----|------------|-------|--------------------------------|-----|
| 0   | Gamma Ray (GAPI) | 150 | Sonic Int  | 140   | Delta Time (usec/ft) (usec/ft) | 40  |
| 150 | GR (GAPI)        | 300 | 5 (msec) 0 | 30    | Sonic Porosity (pu)            | -10 |
| 6   | DCAL (in)        | 16  |            | 15000 | LTEN (lb) (lb)                 | 0   |

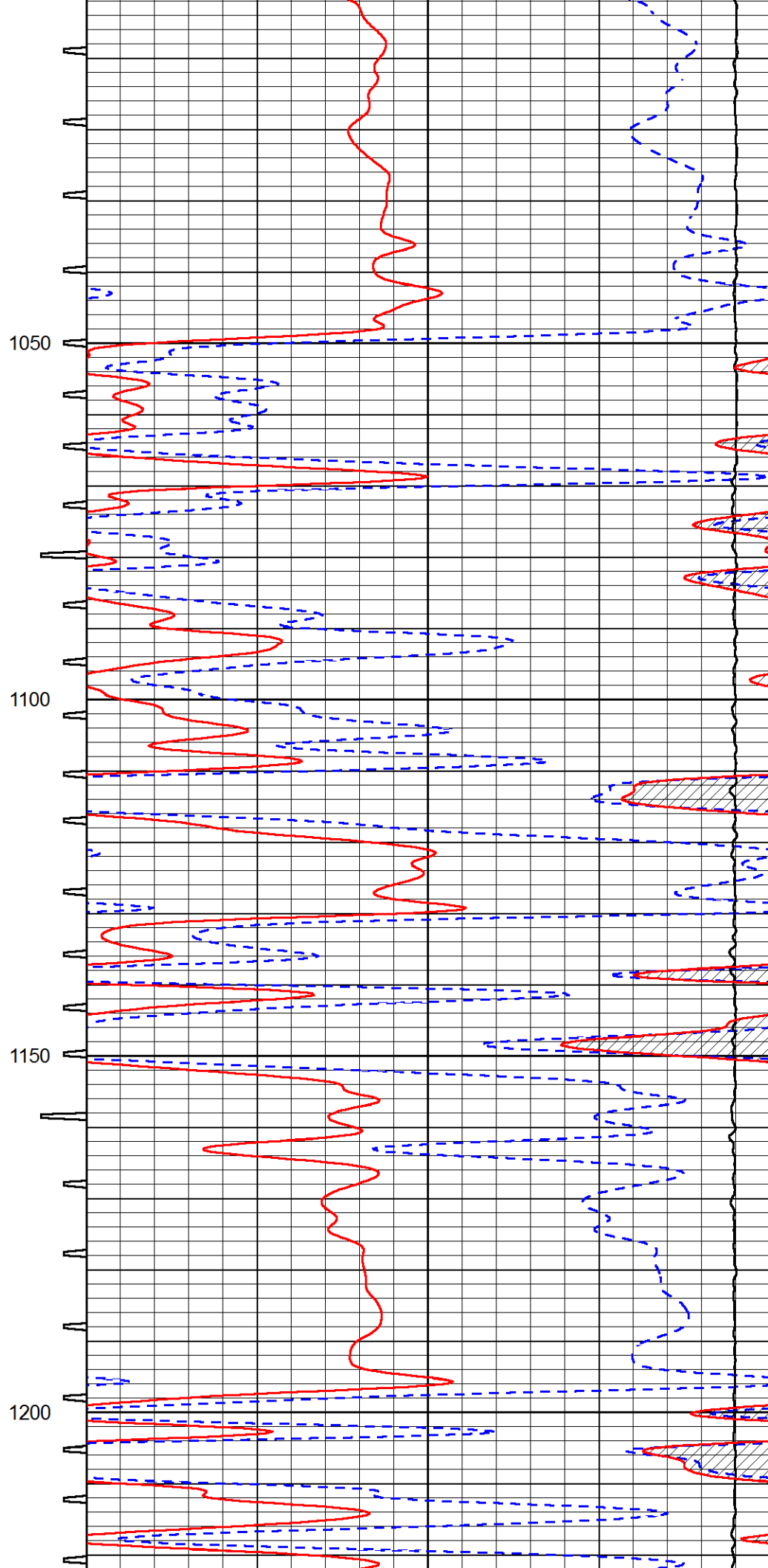
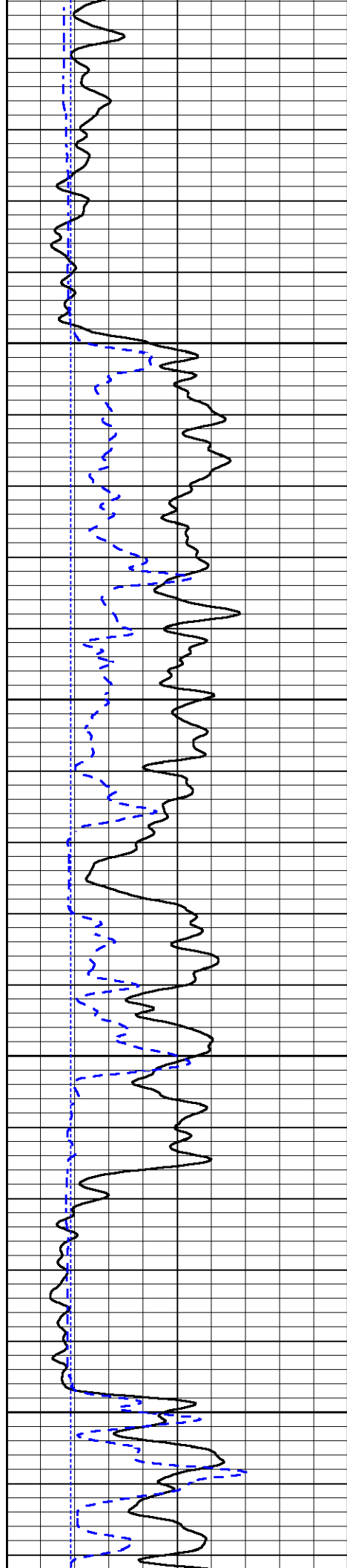


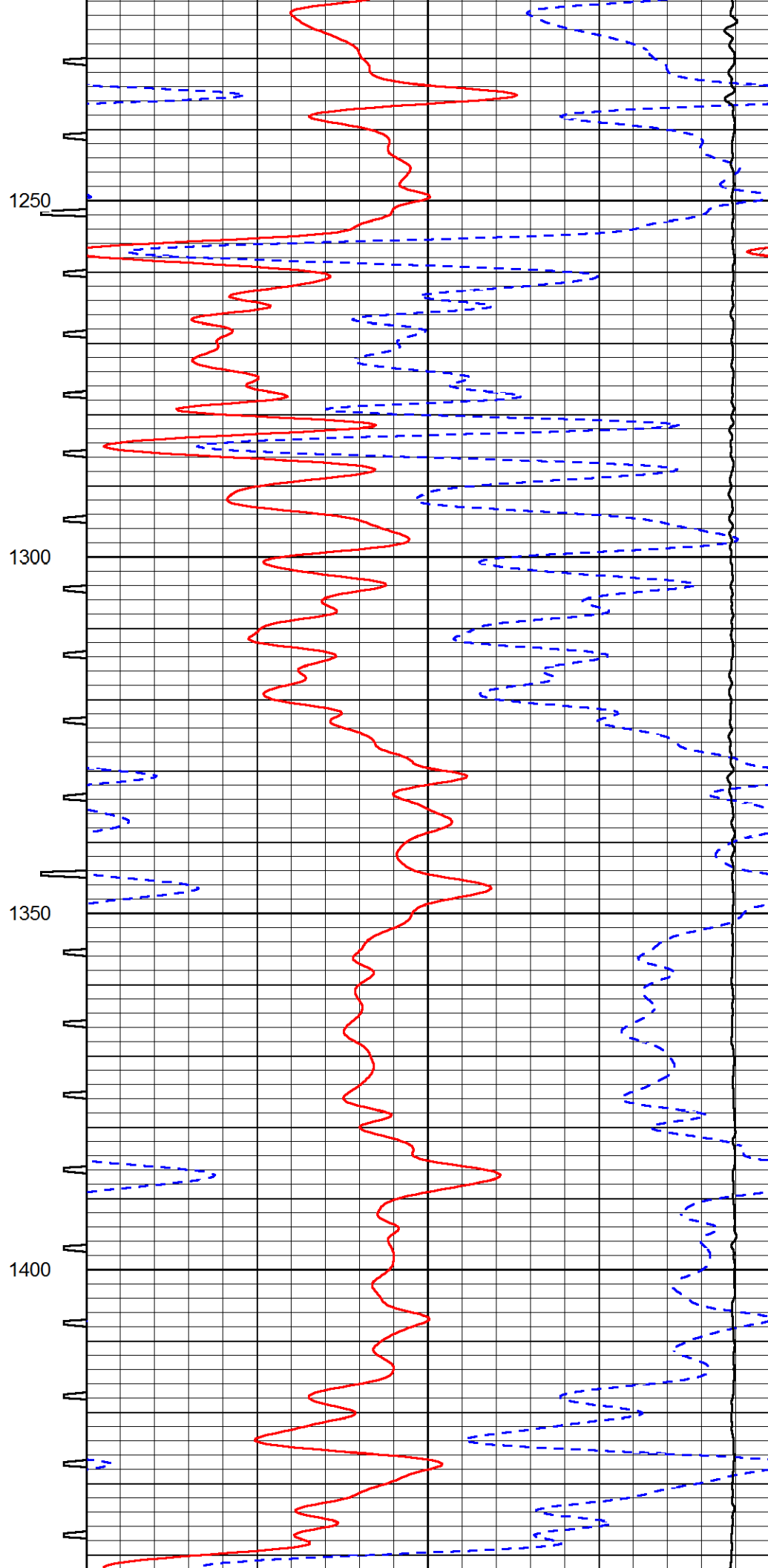
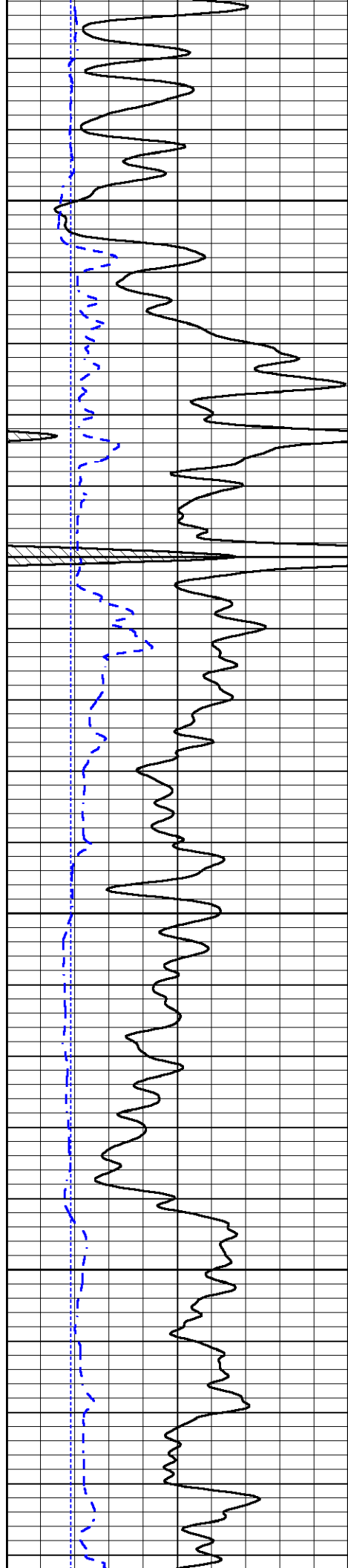




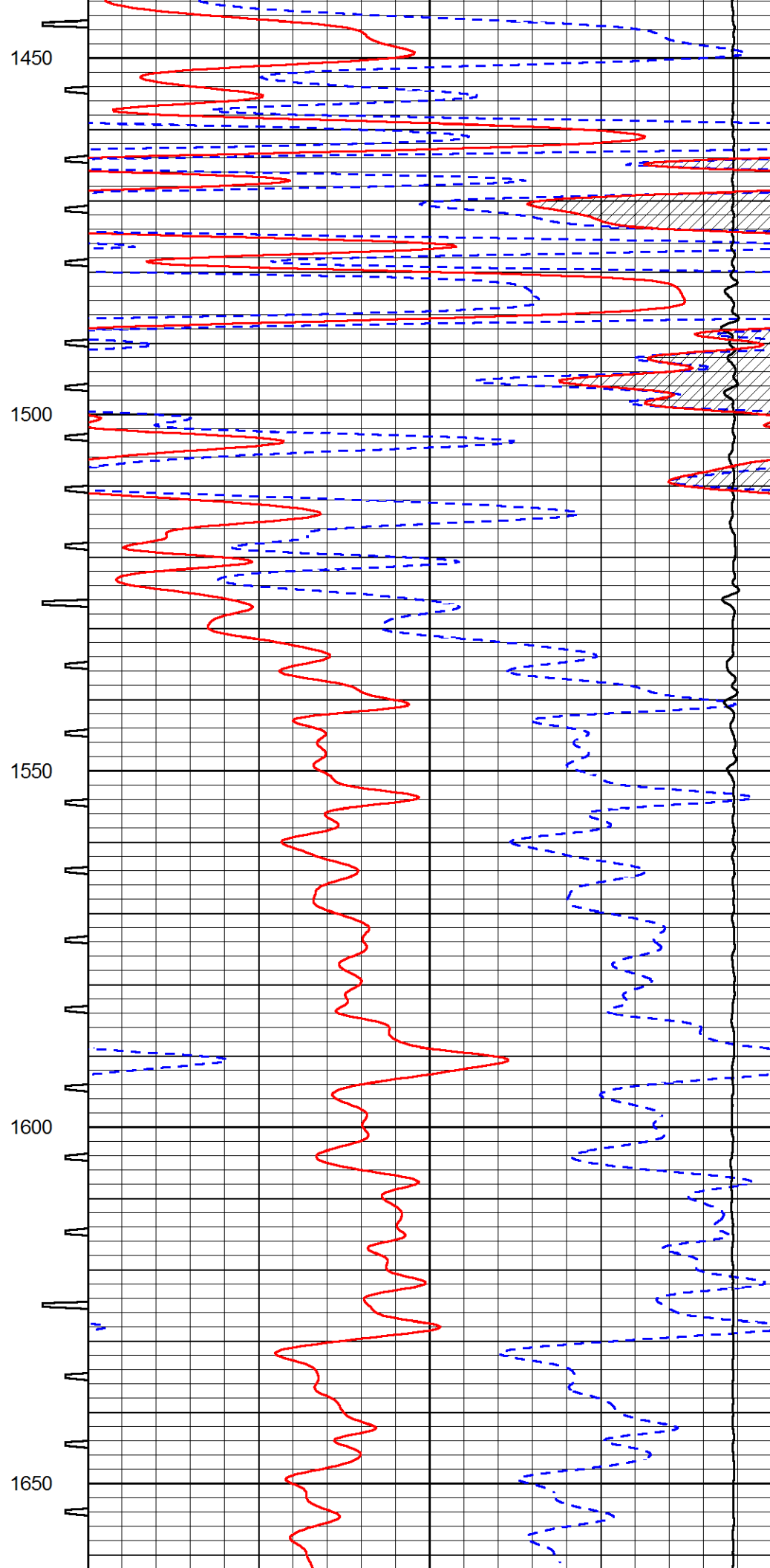
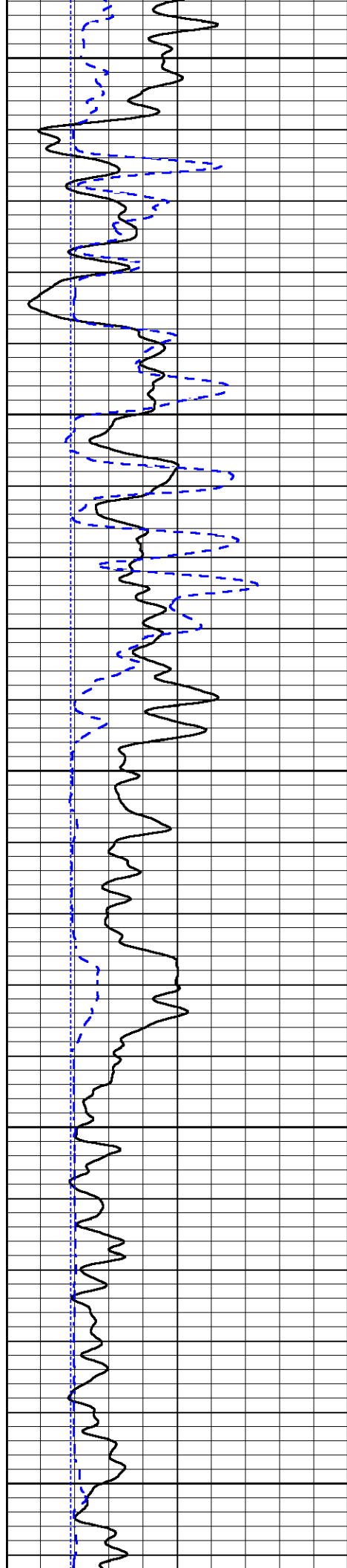


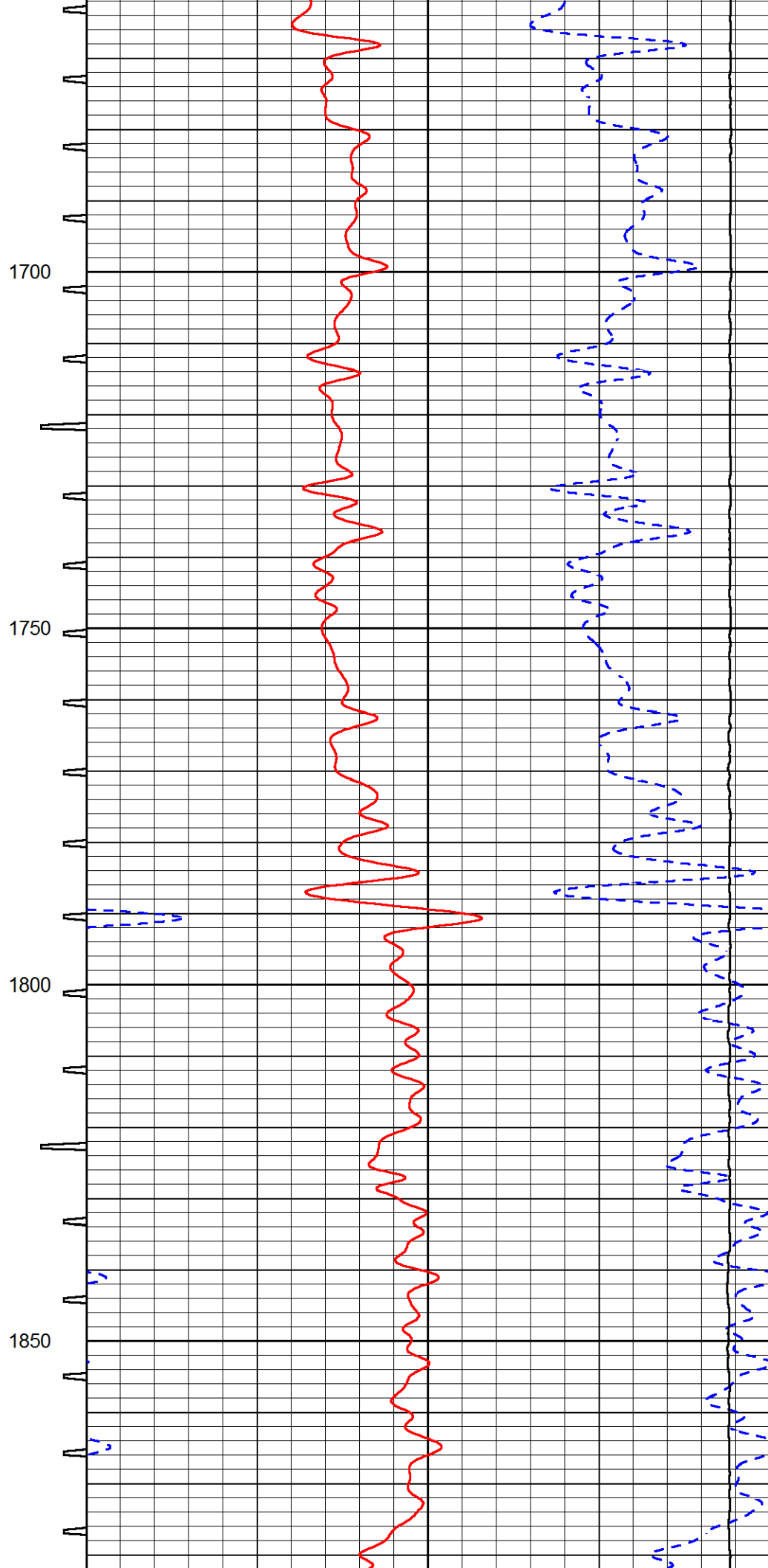
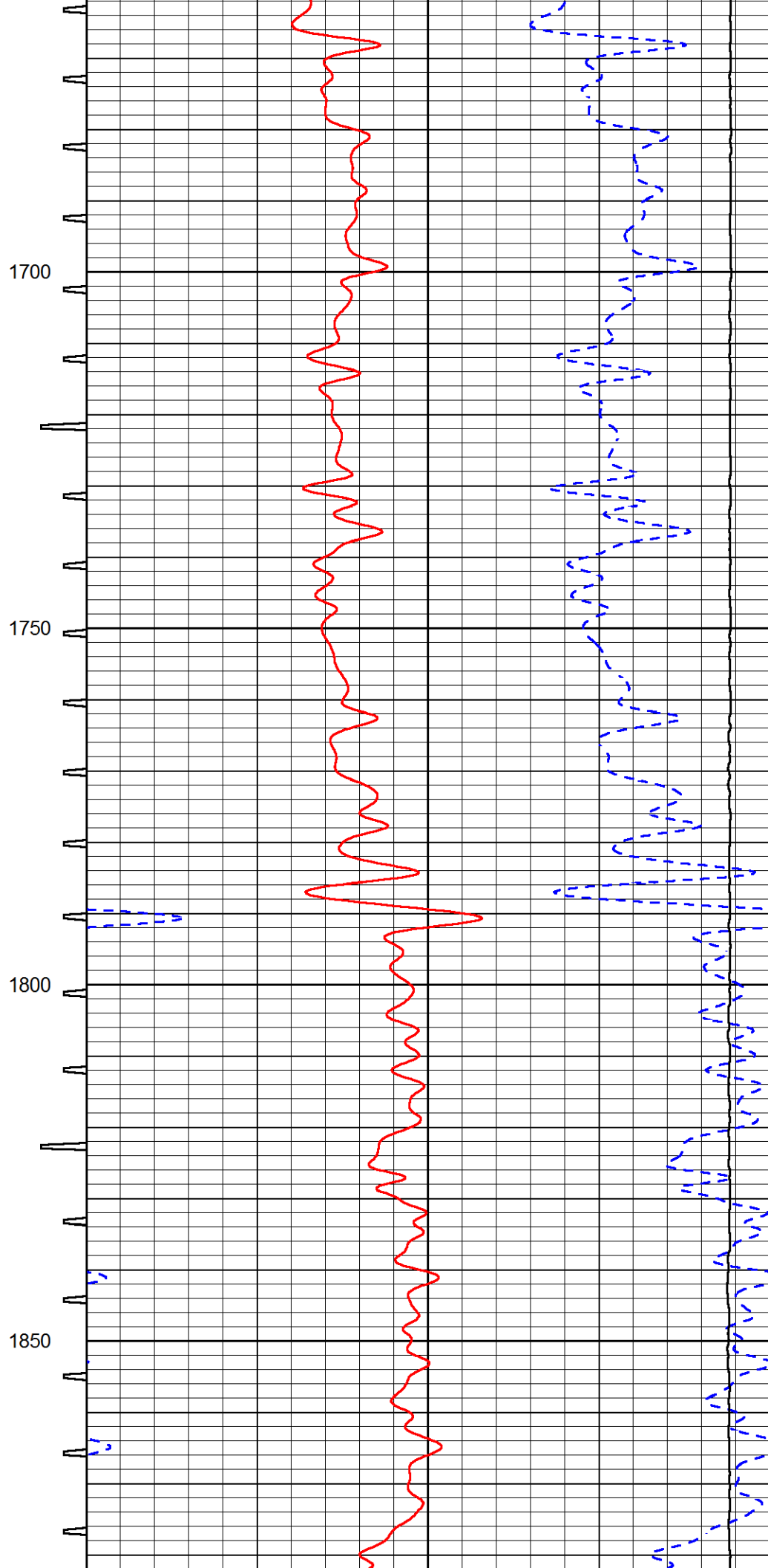
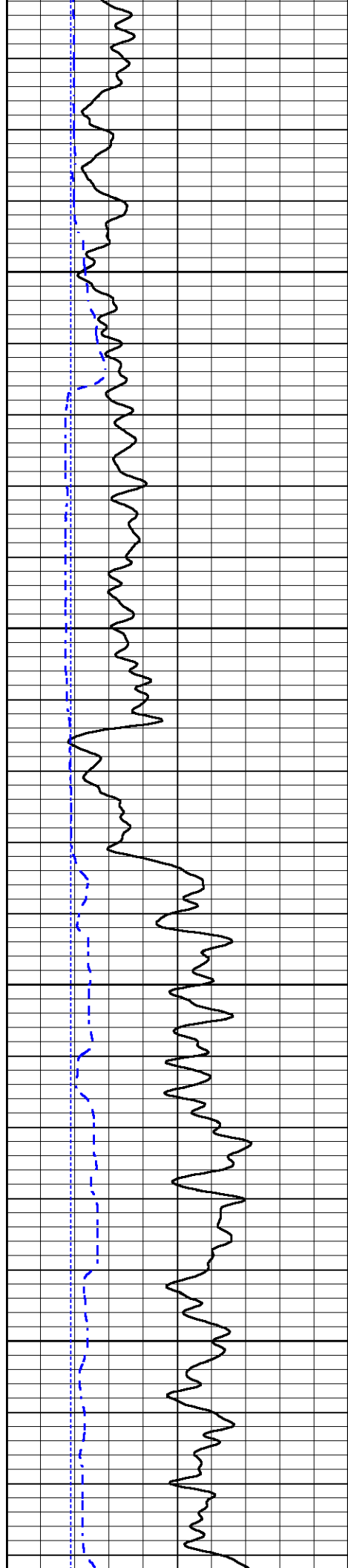


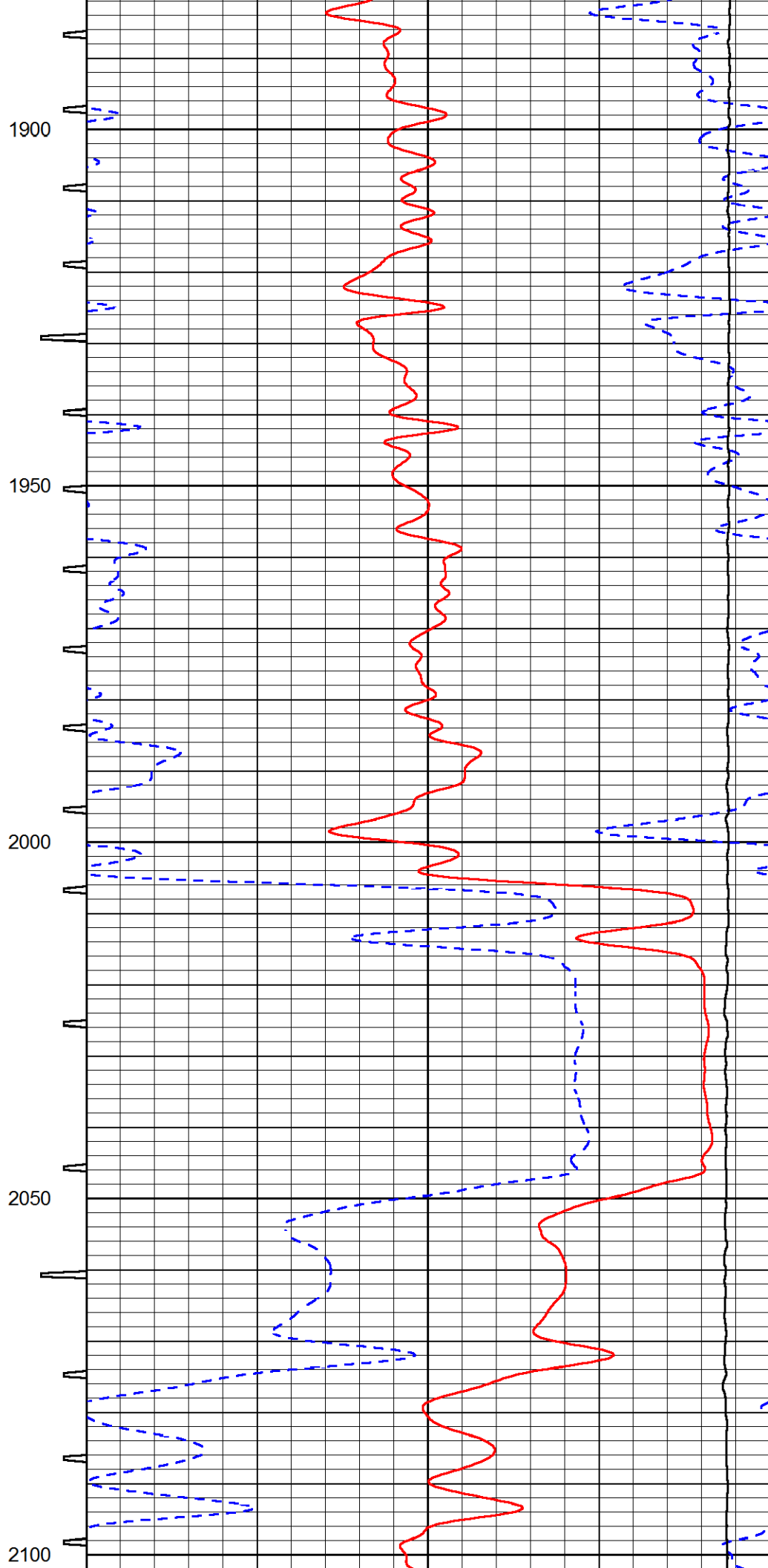
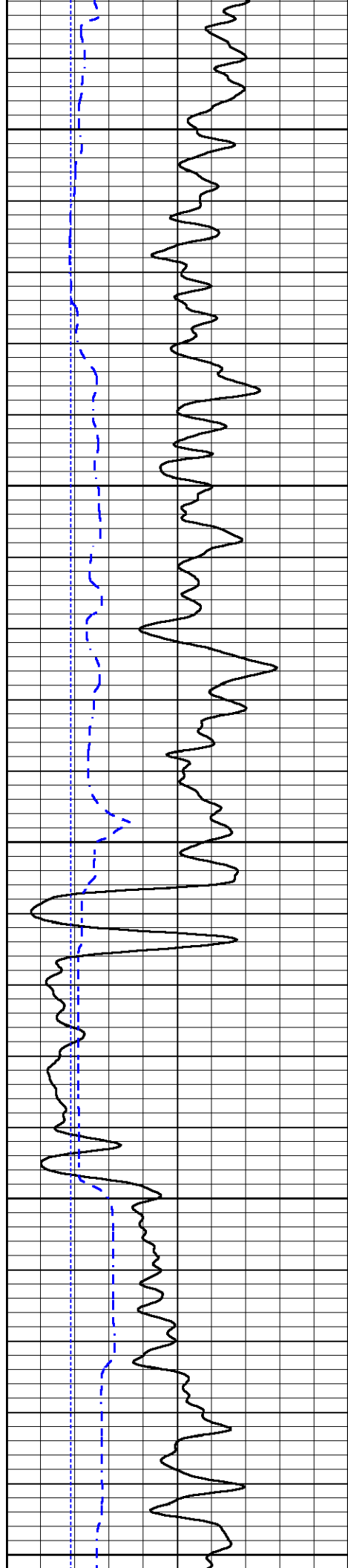


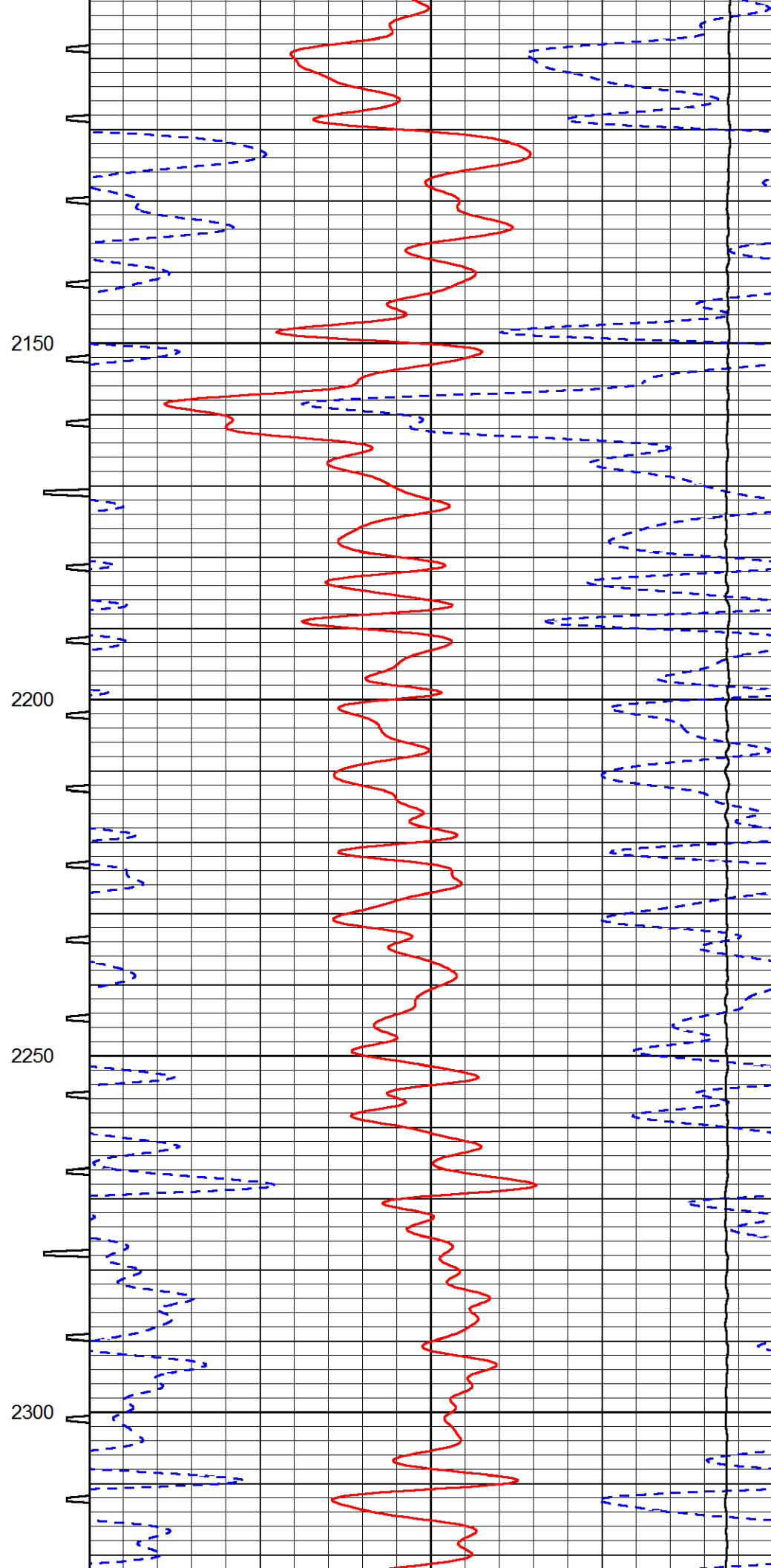
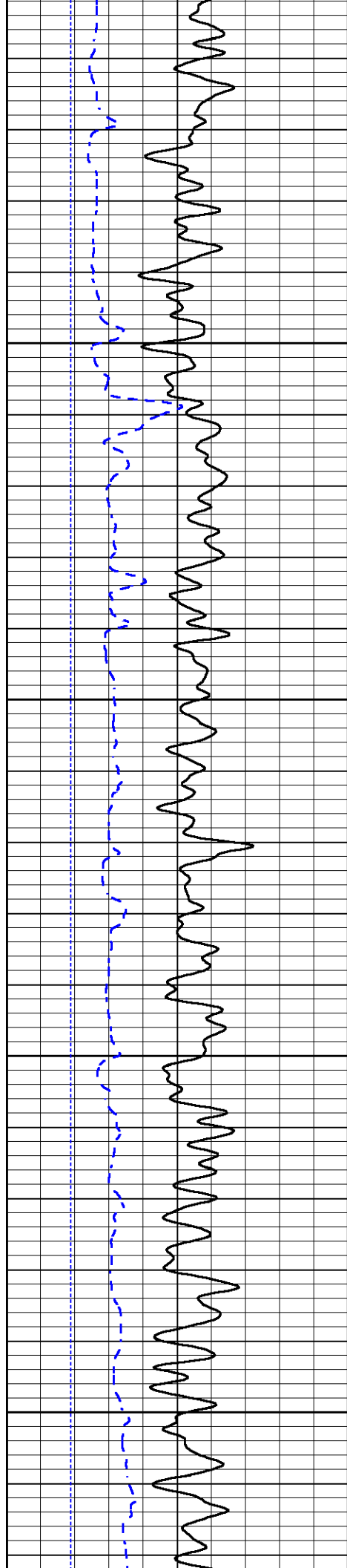


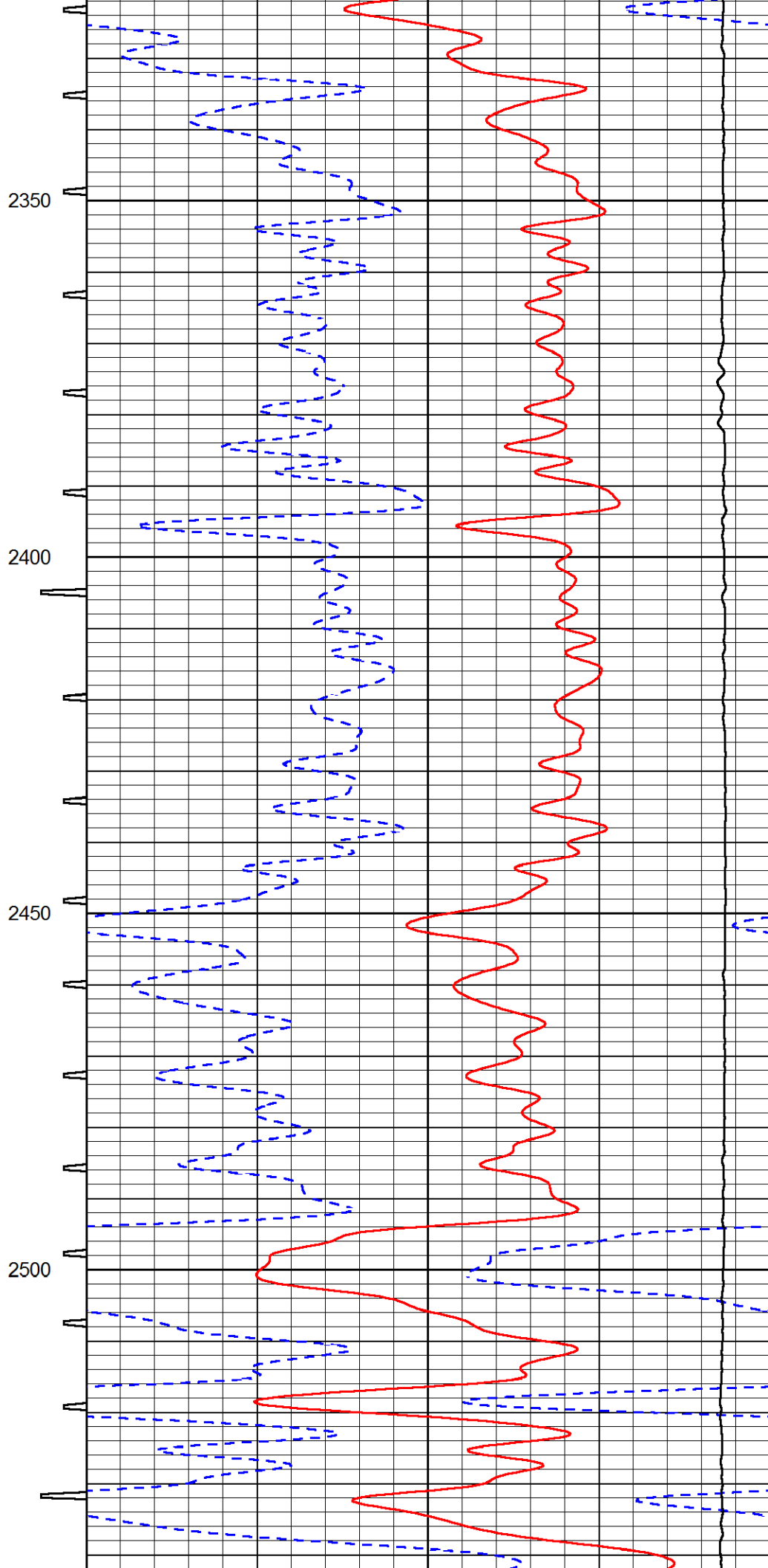
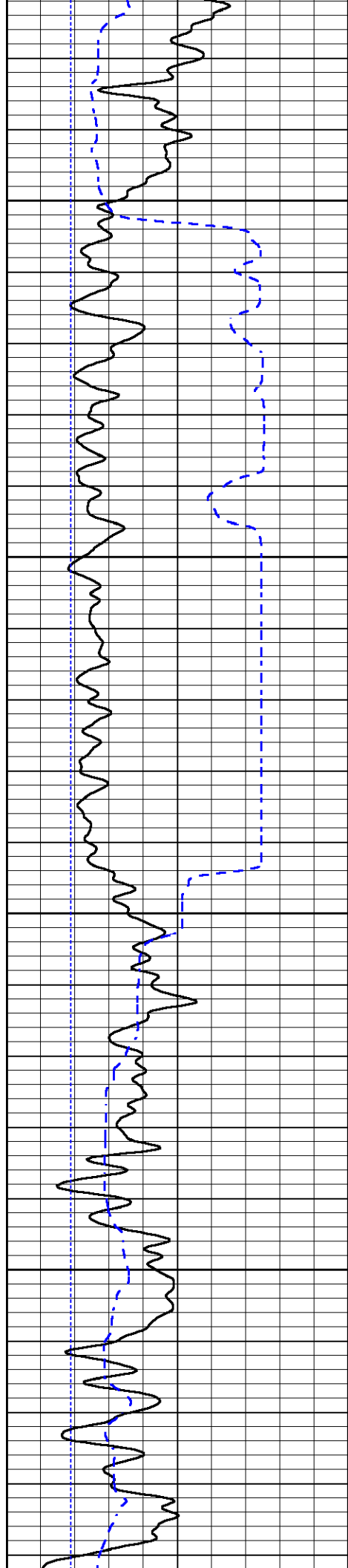


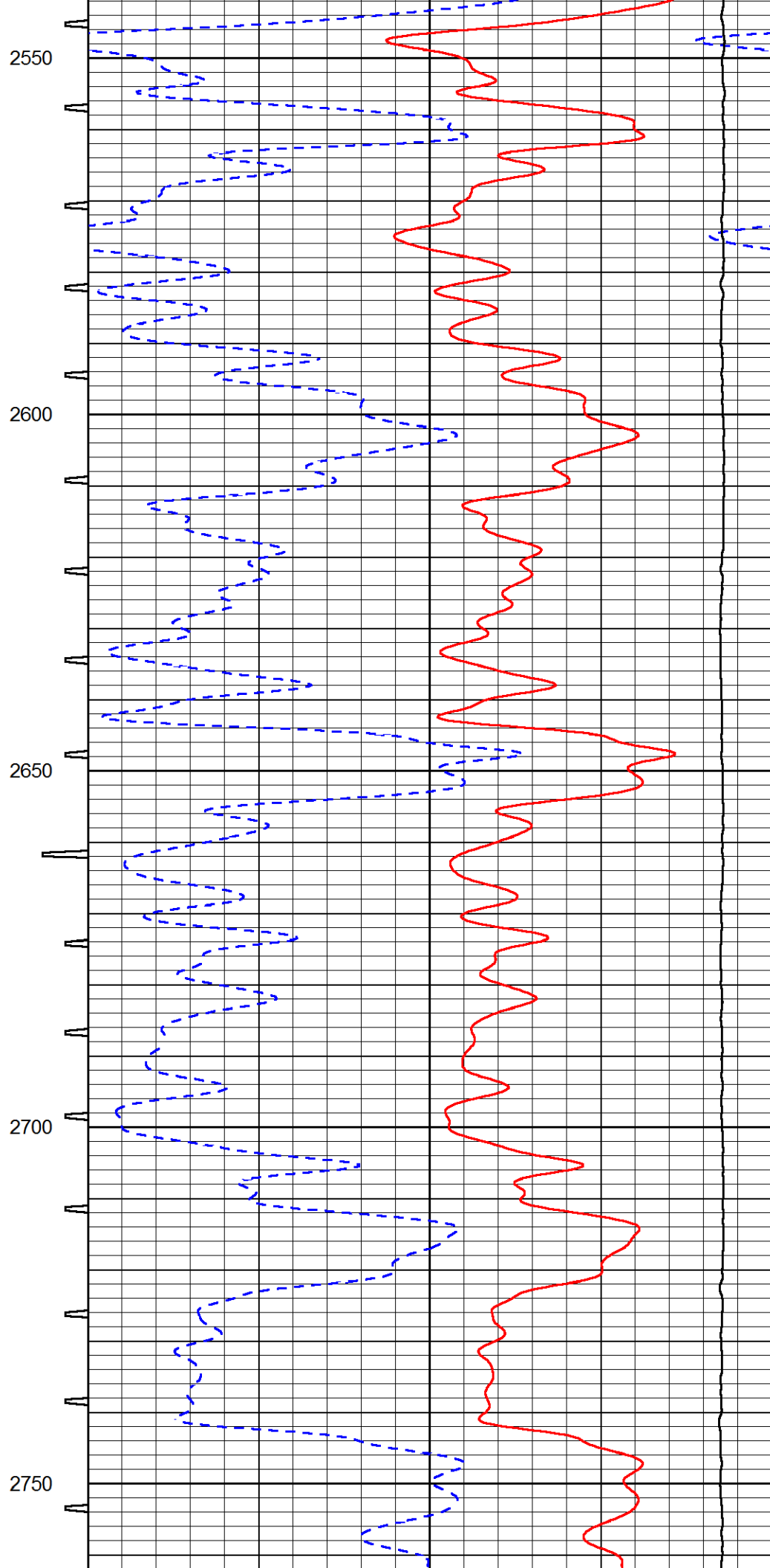
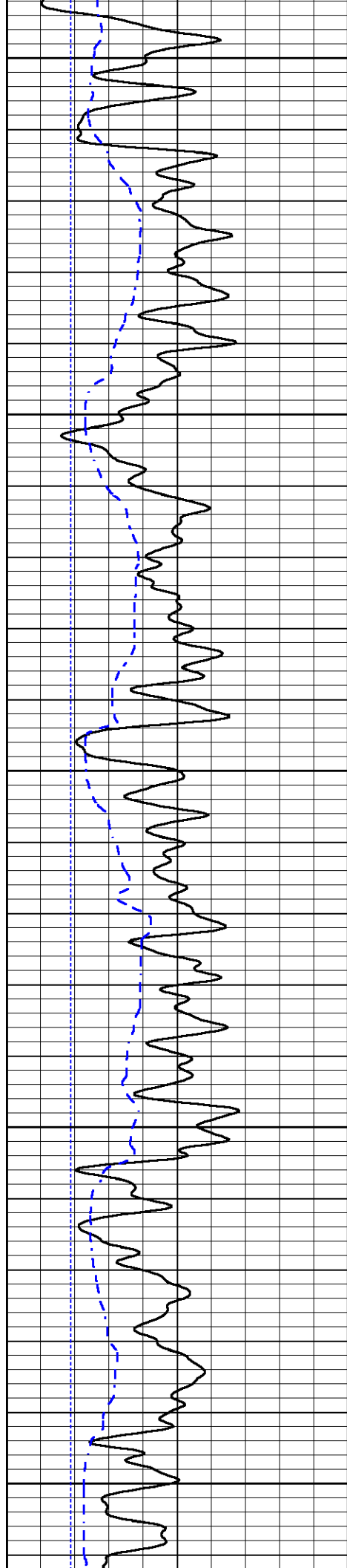




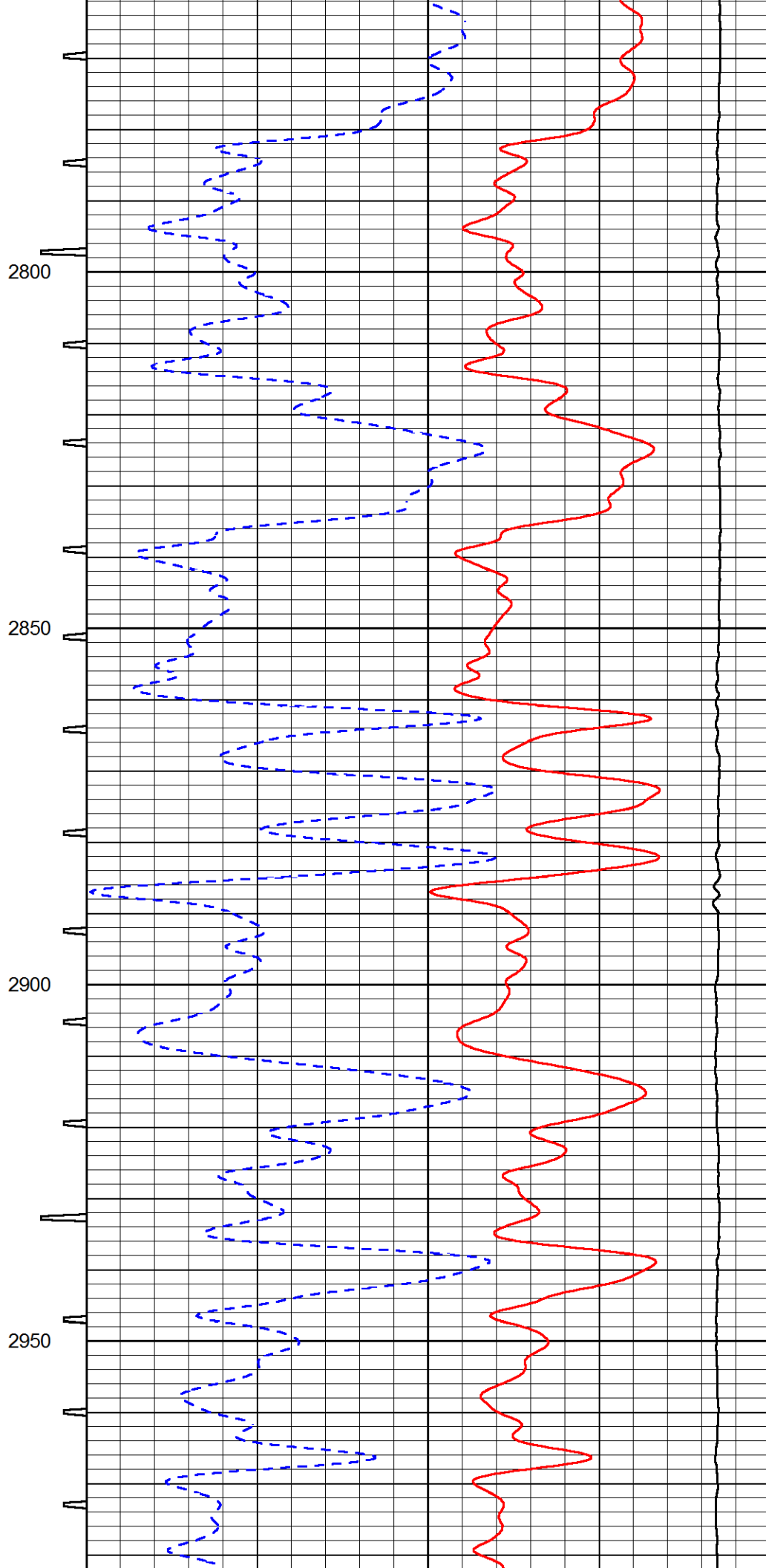
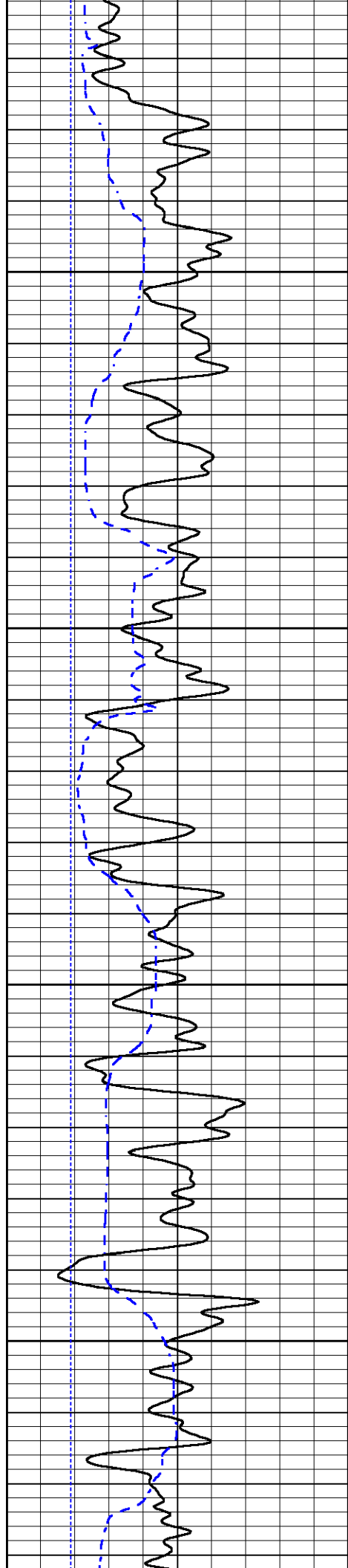


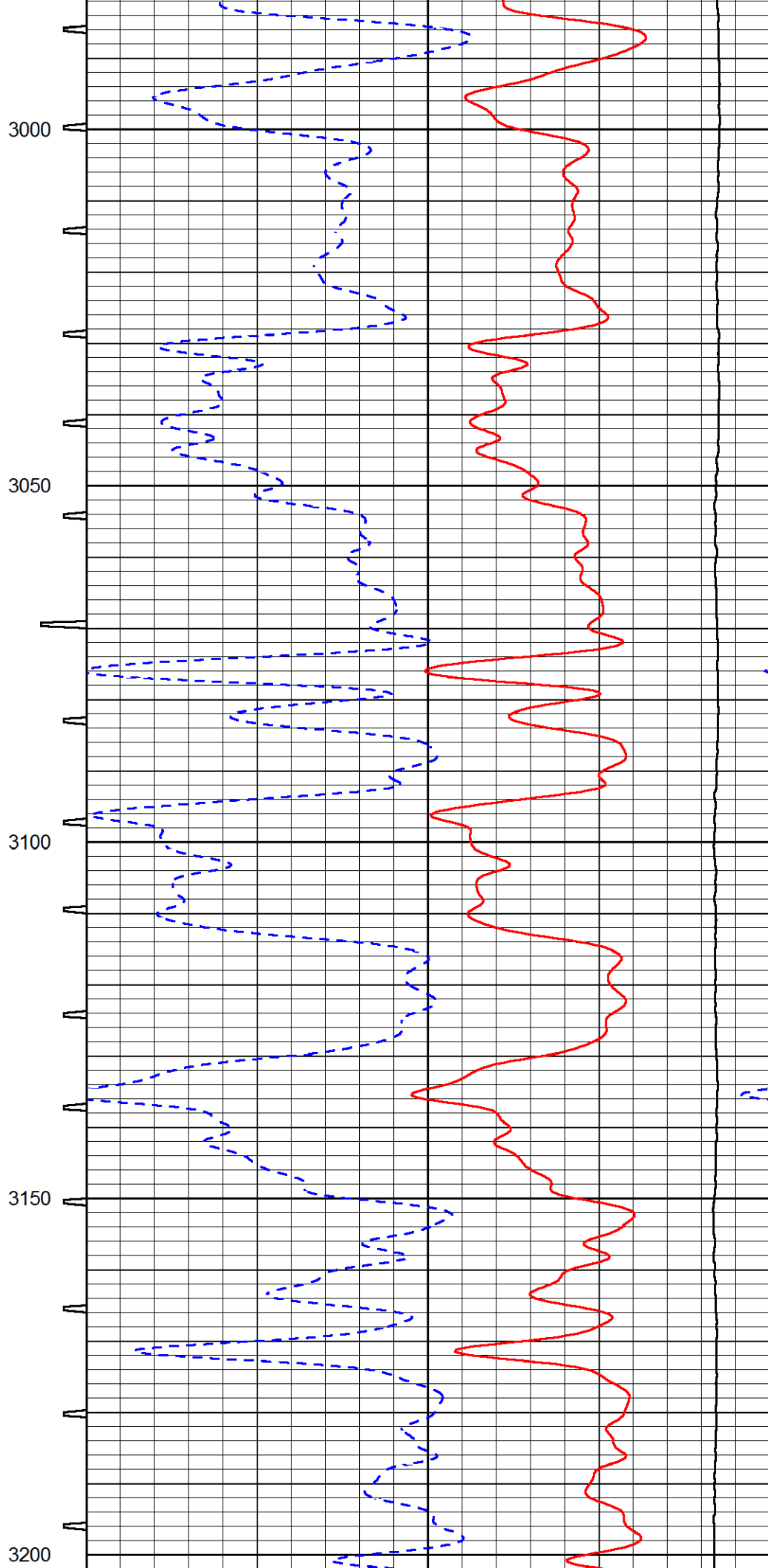
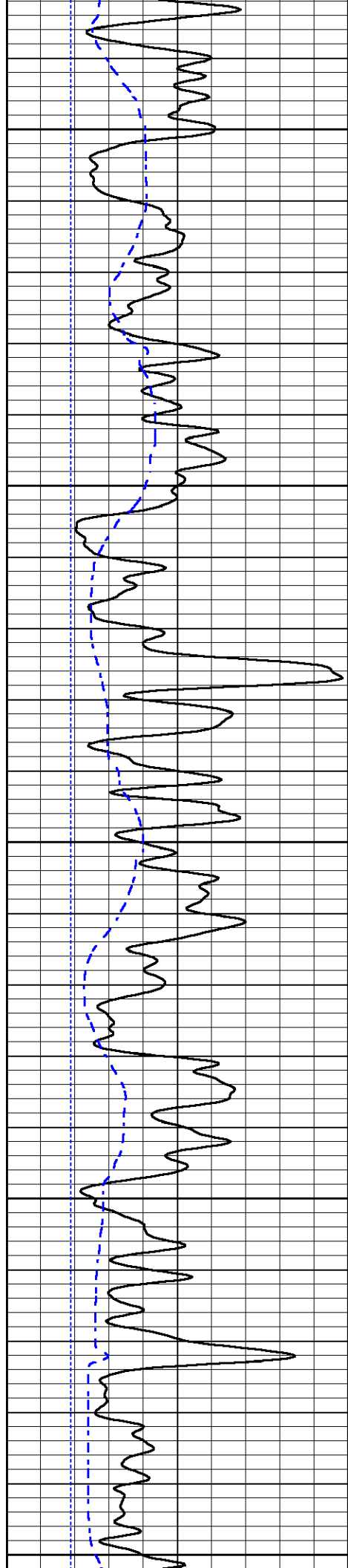


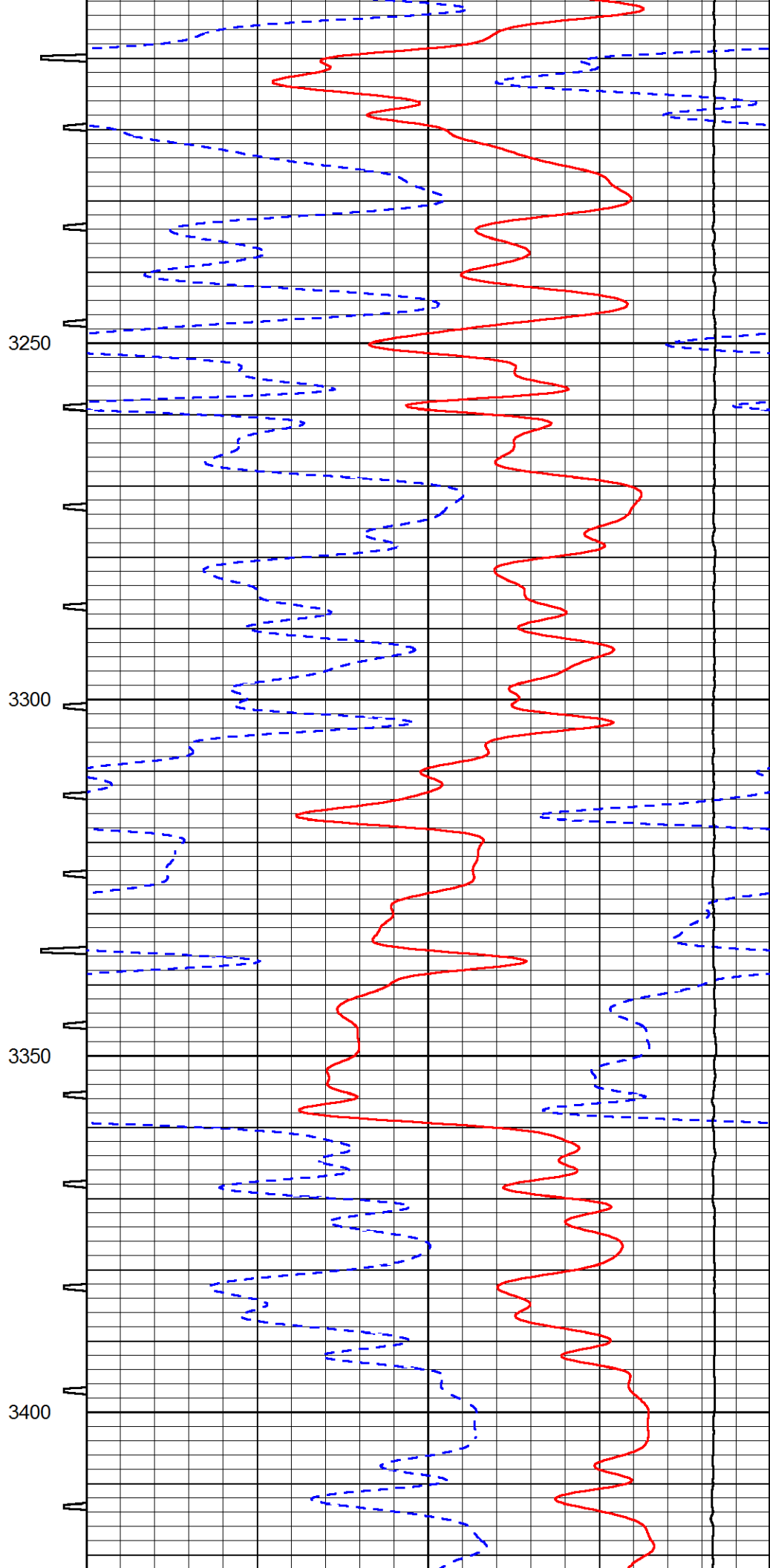
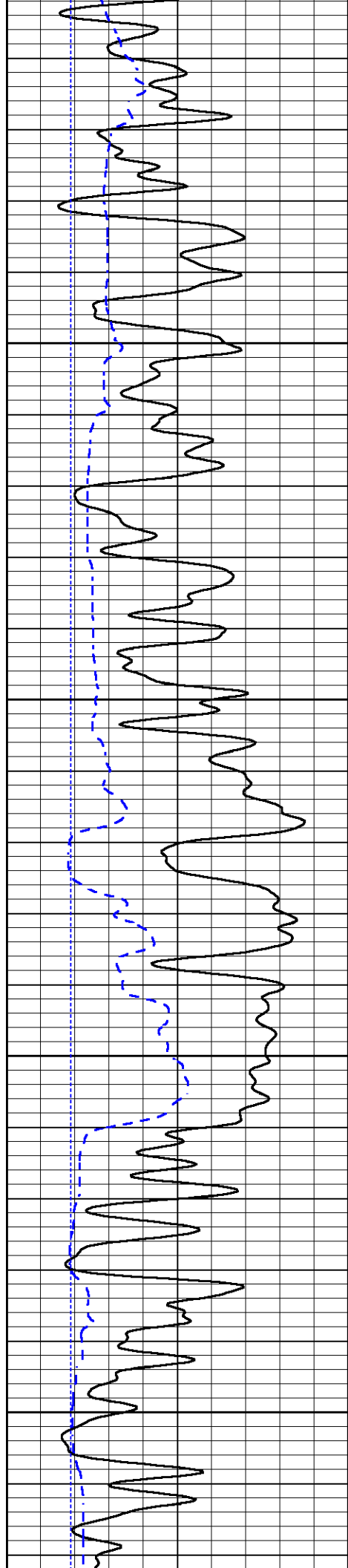


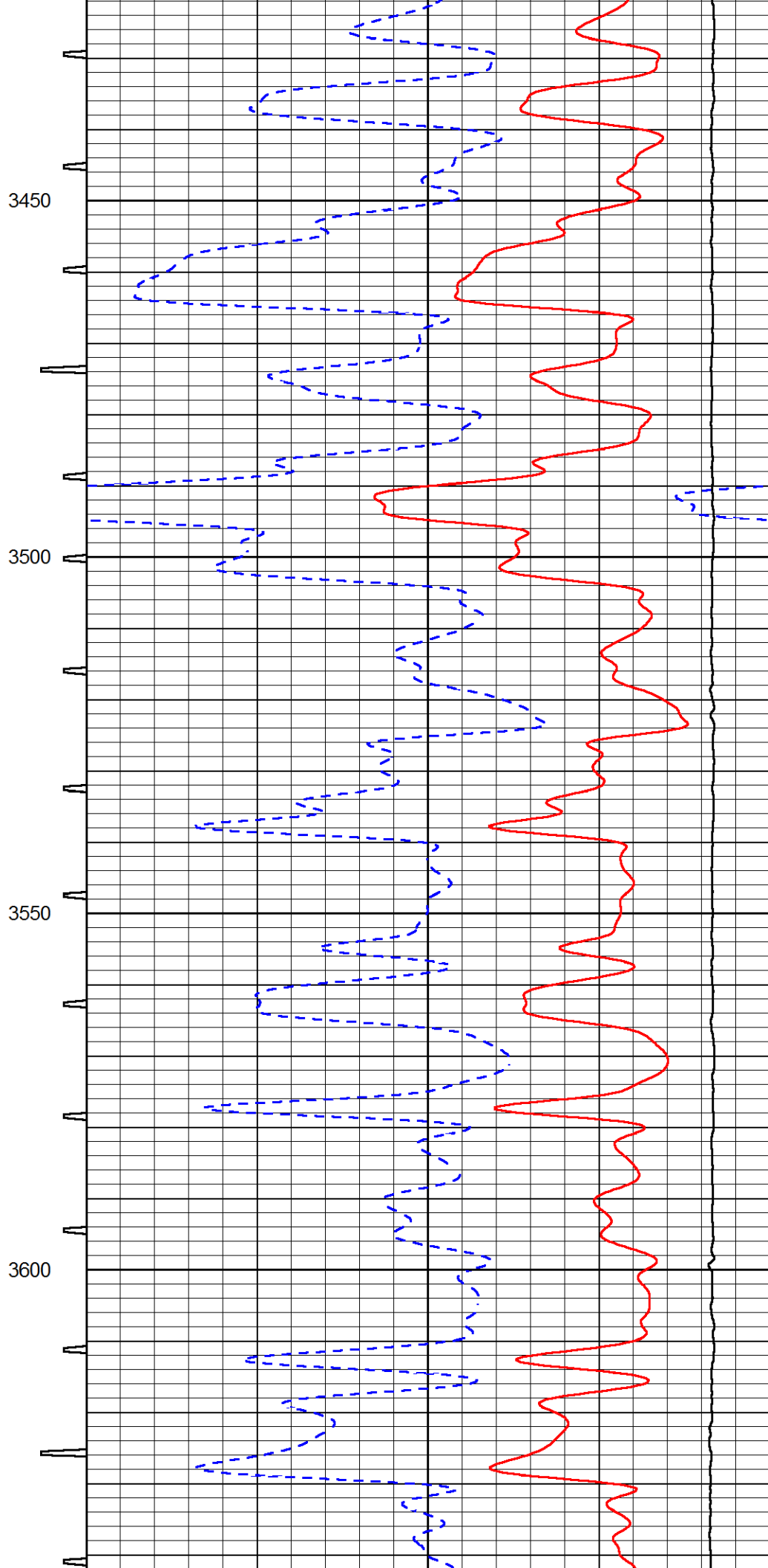
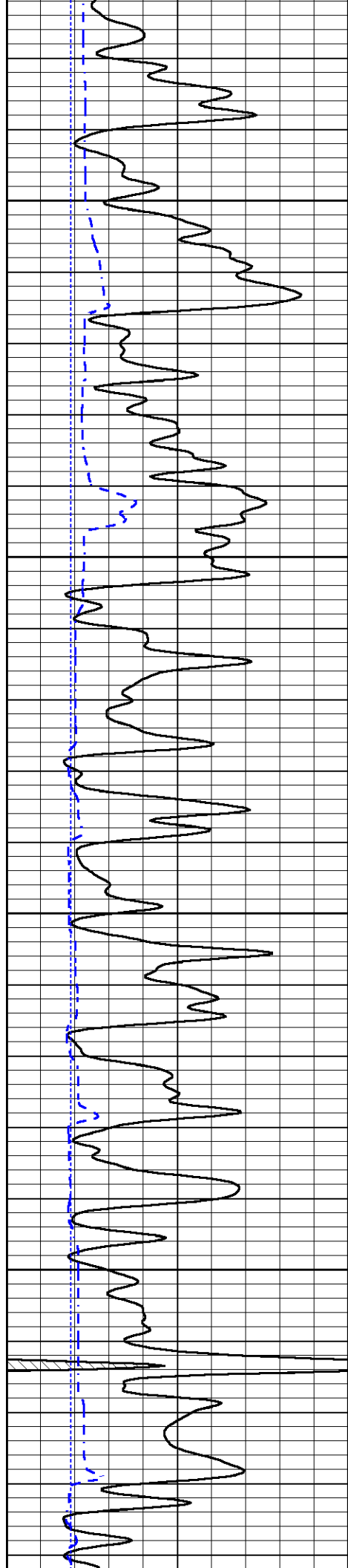


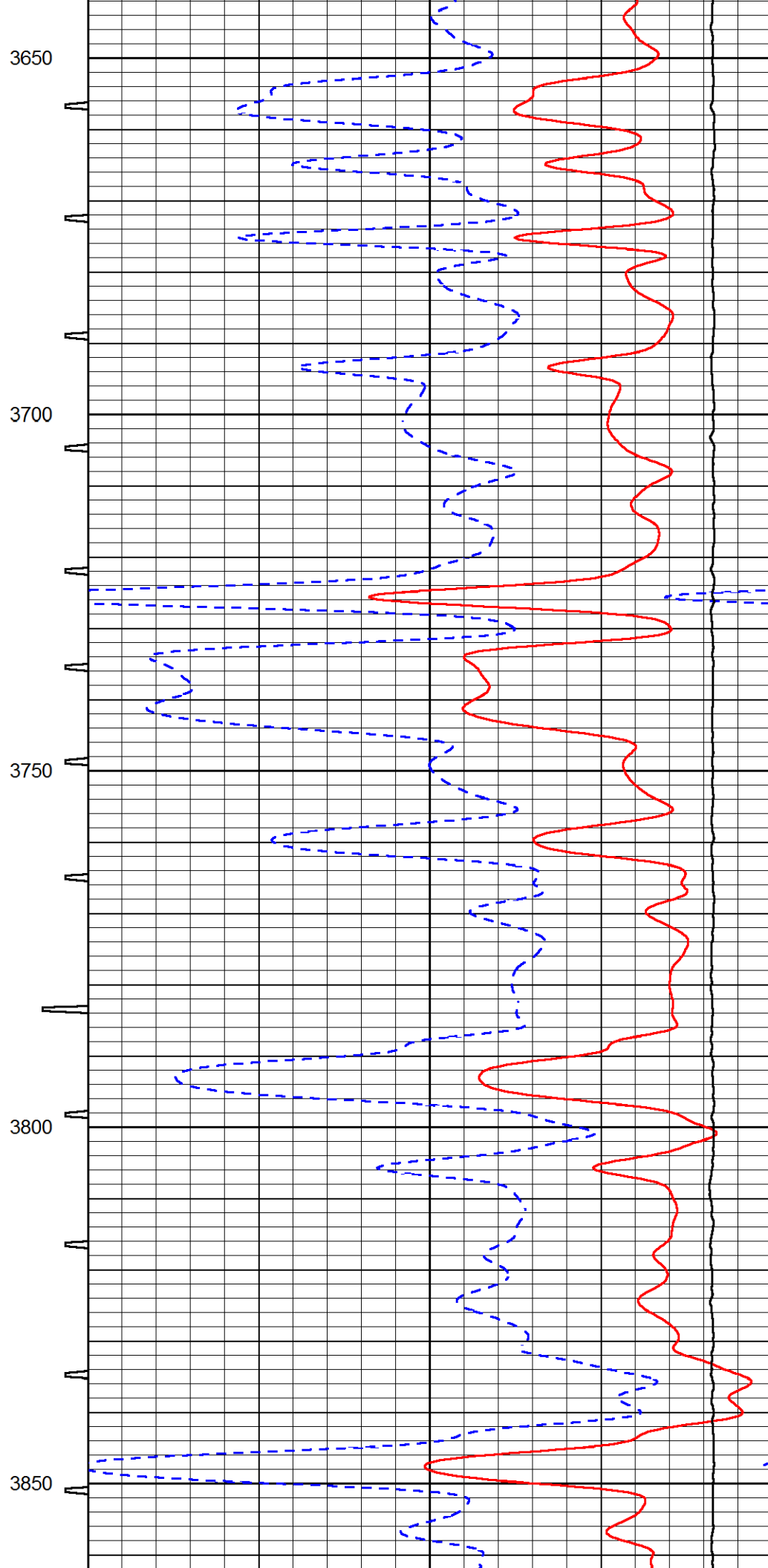
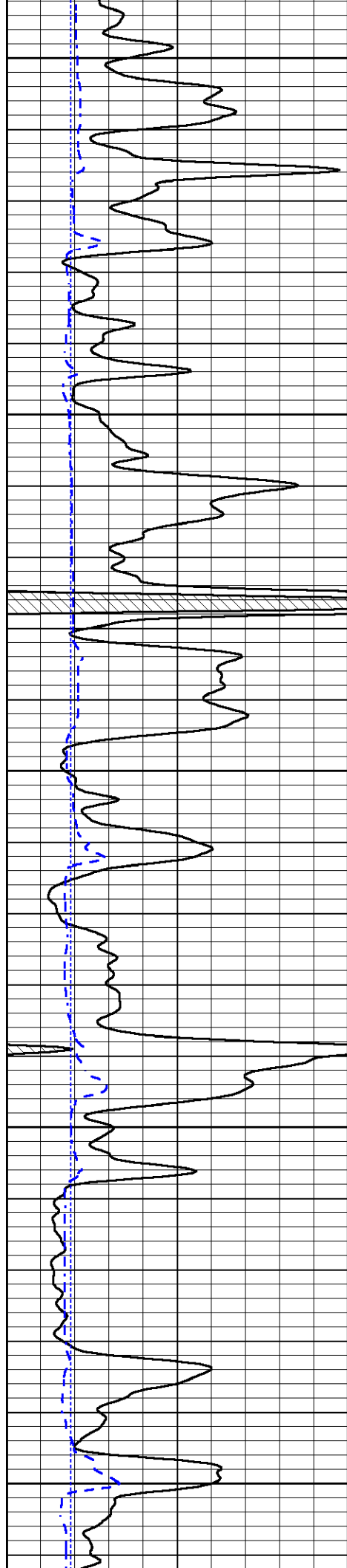


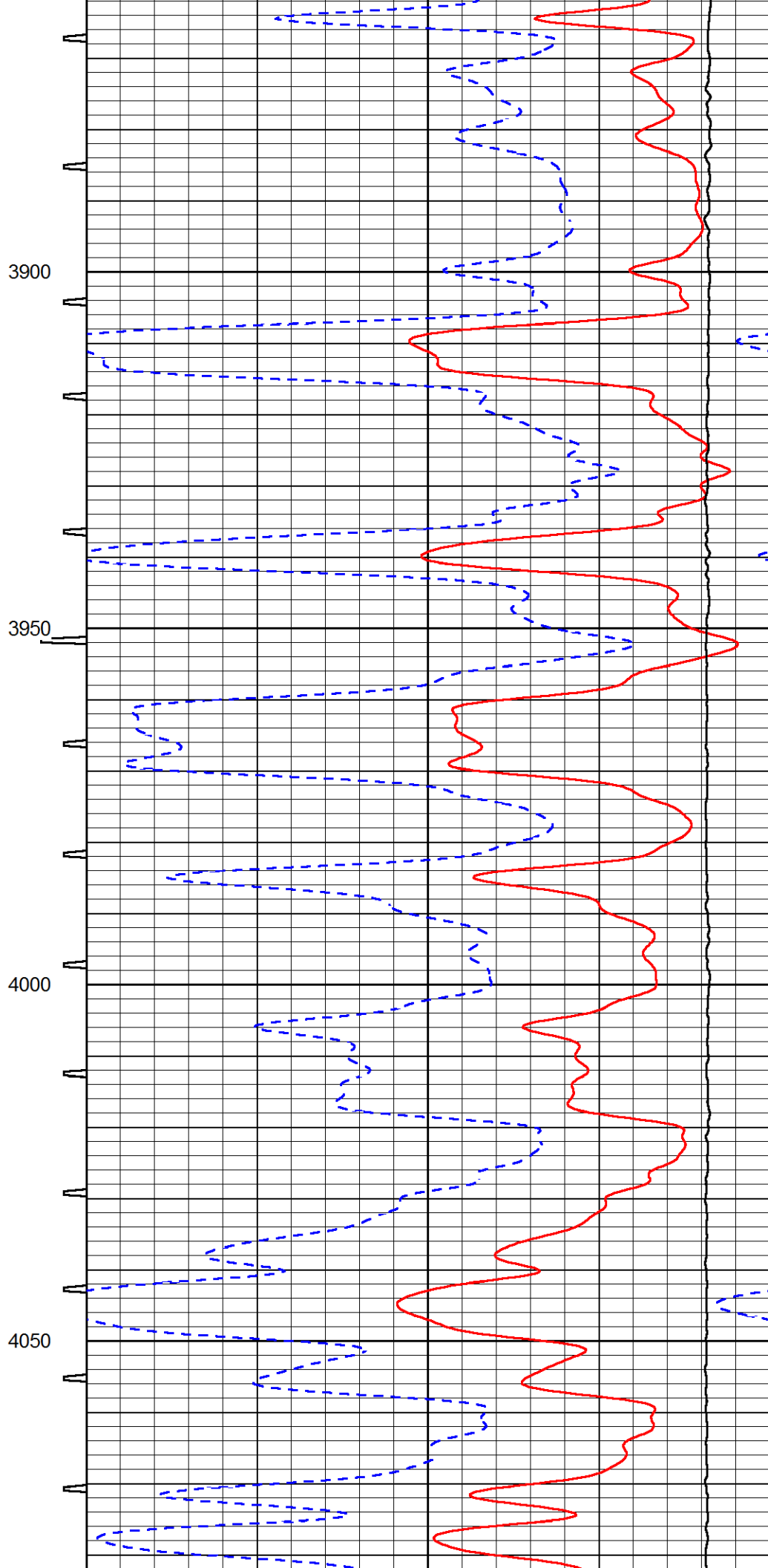
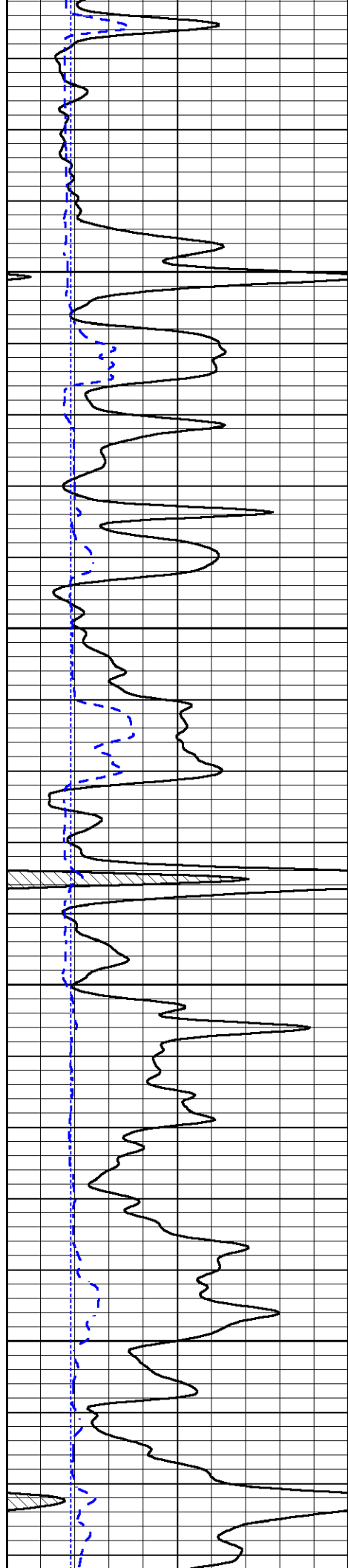


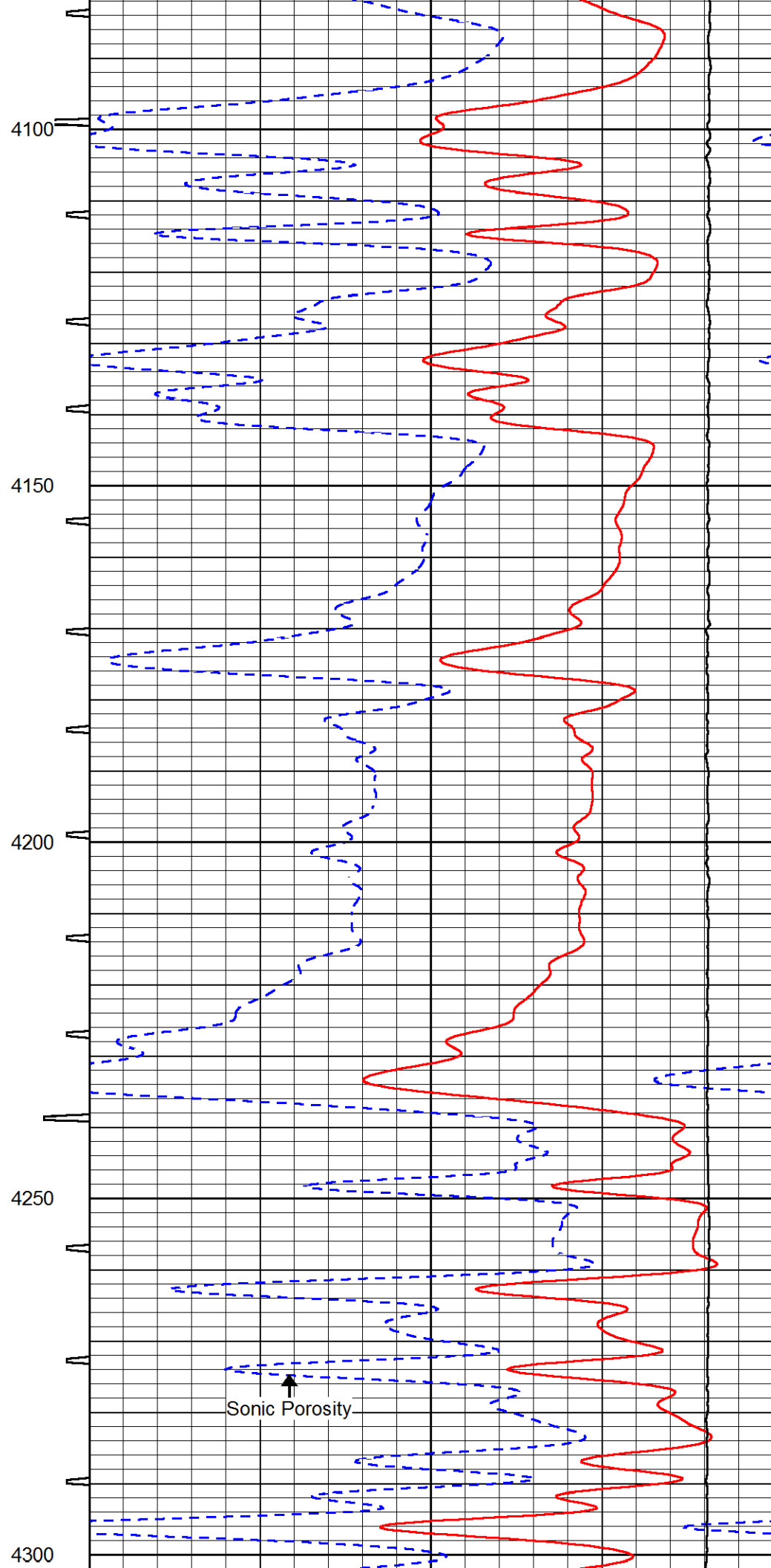
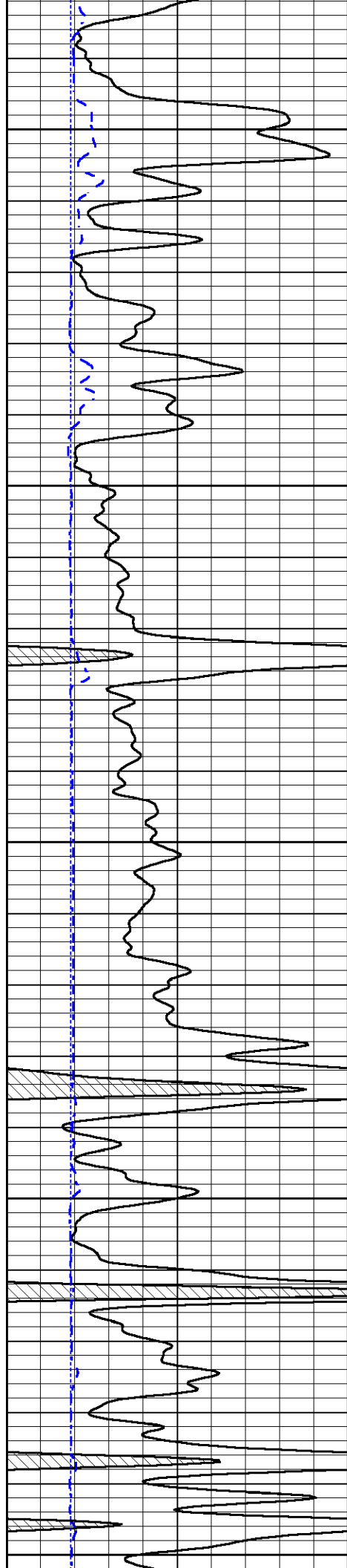


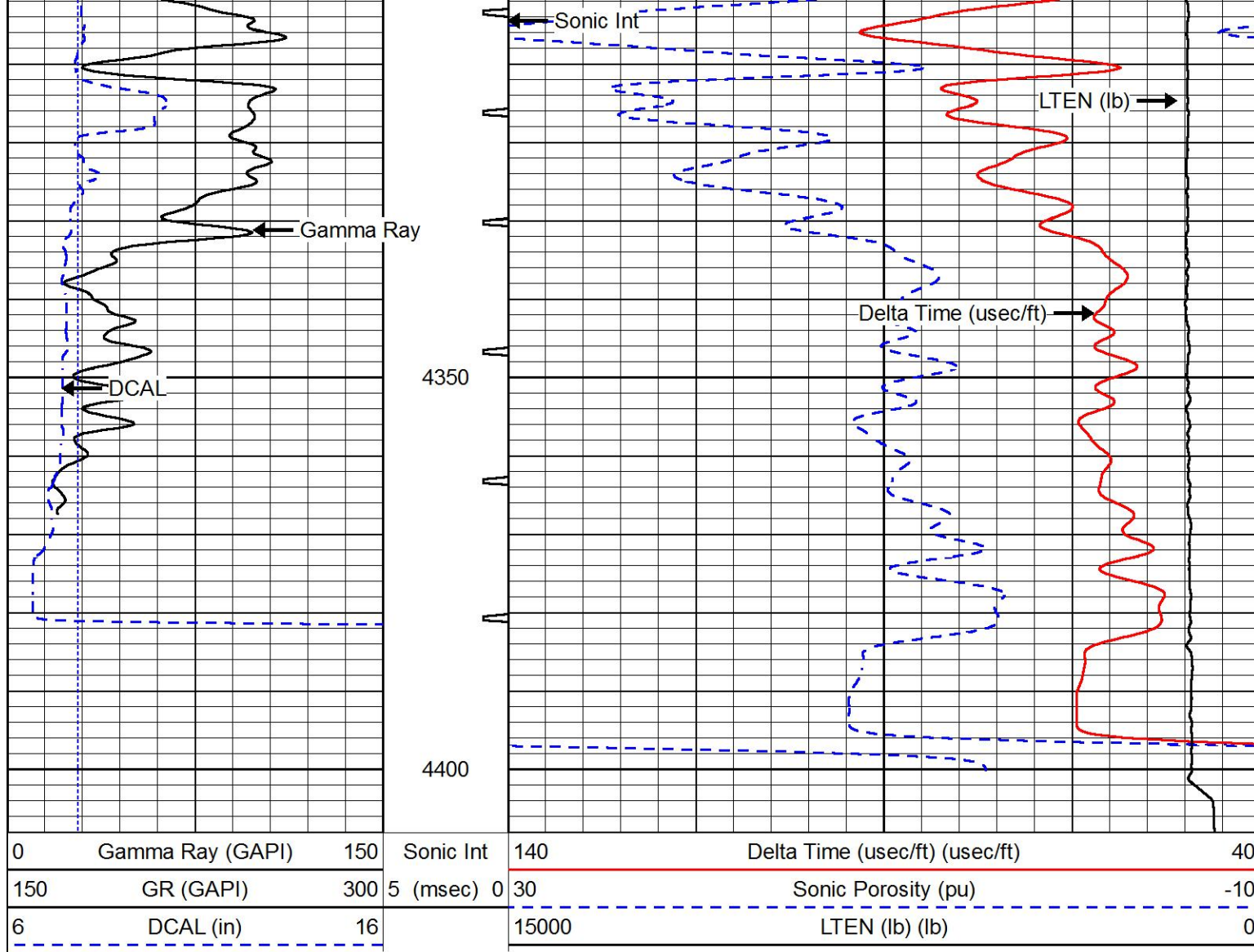










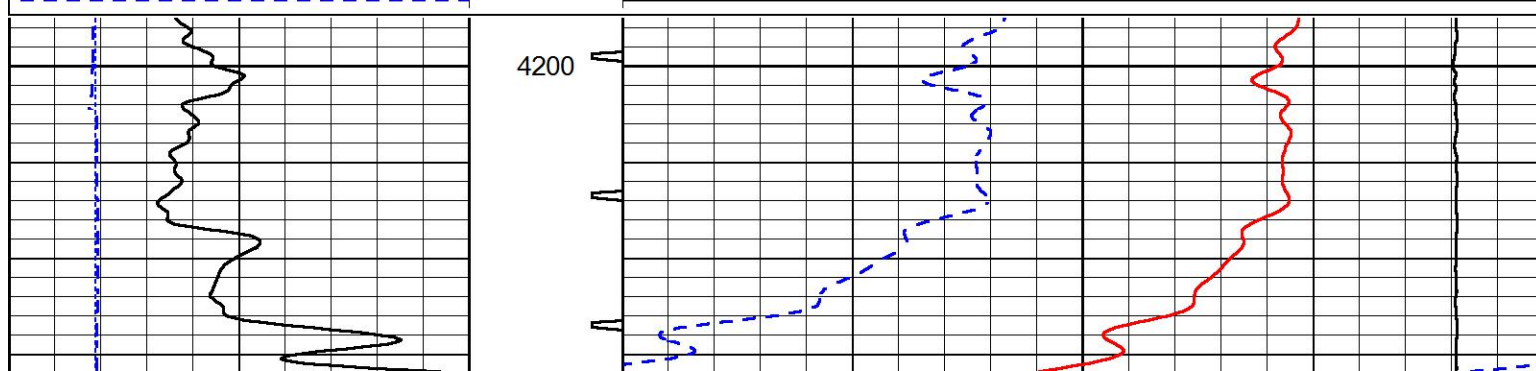




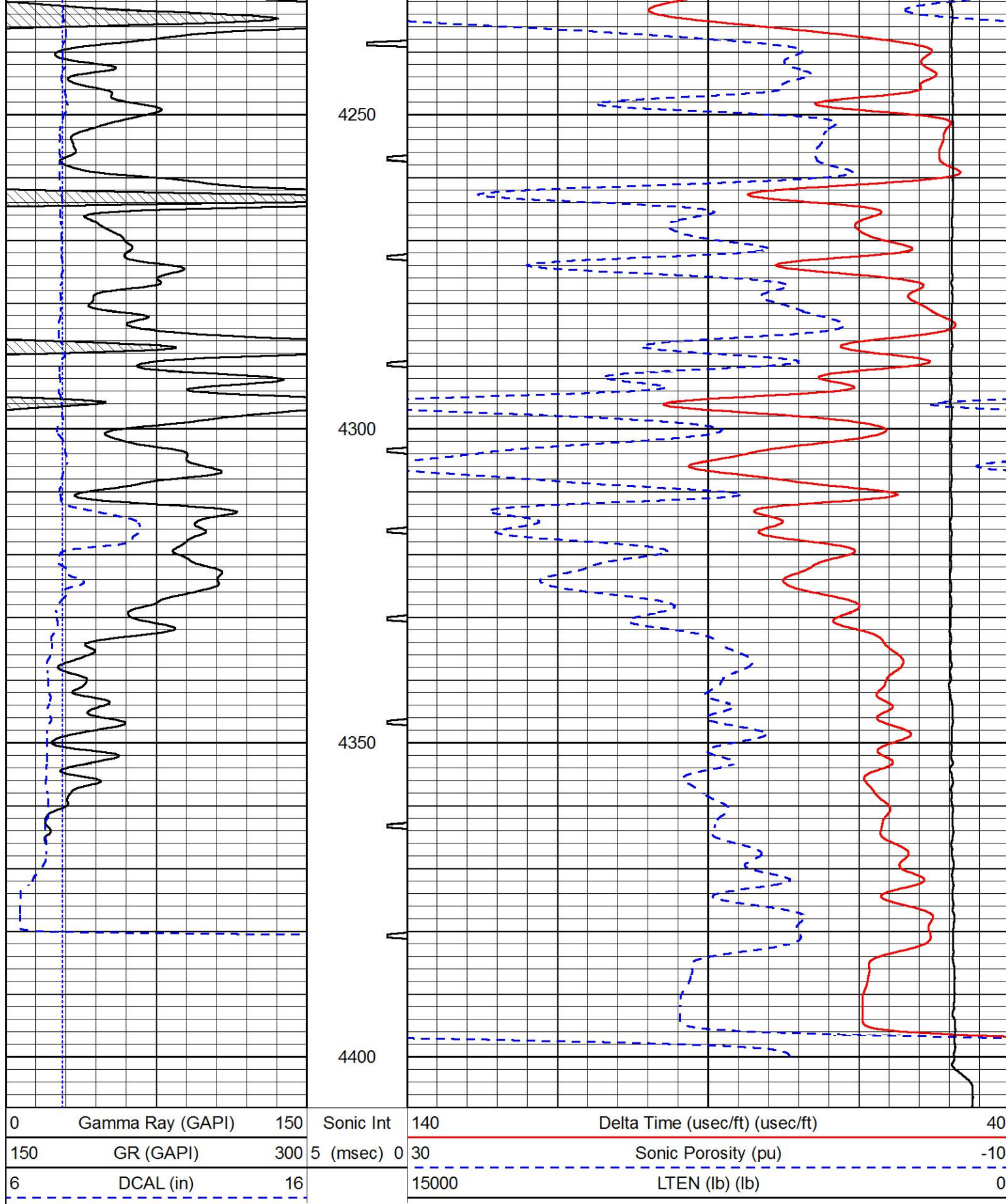
# REPEAT SECTION

|                     |                            |
|---------------------|----------------------------|
| Database File       | black_rock_18_1.db         |
| Dataset Pathname    | stackmel/pass2.1           |
| Presentation Format | _sonic                     |
| Dataset Creation    | Tue Sep 10 09:44:08 2019   |
| Charted by          | Depth in Feet scaled 1:240 |

| 0   | Gamma Ray (GAPI) | 150 | Sonic Int  | 140   | Delta Time (usec/ft) (usec/ft) | 40  |
|-----|------------------|-----|------------|-------|--------------------------------|-----|
| 150 | GR (GAPI)        | 300 | 5 (msec) 0 | 30    | Sonic Porosity (pu)            | -10 |
| 6   | DCAL (in)        | 16  |            | 15000 | LTEN (lb) (lb)                 | 0   |







**PIONEER**  
Pioneer Energy Services

State

KANSAS