



**PIONEER**

Pioneer Energy Services

## BOREHOLE COMPENSATED SONIC LOG

Company **THOMAS GARNER, INC.**  
Well **DIAMOND 'H' #1**  
Field **UNKNOWN**  
County **STAFFORD** State **KANSAS**

Location: API #: 15-185-24071-00-00

Other Services

SEC 23 TWP 25S RGE 13W  
2310' FSL & 810' FWL

DIL/MEL  
CNL/CDL

Permanent Datum GROUND LEVEL Elevation 1923'  
Log Measured From KELLY BUSHING  
Drilling Measured From KELLY BUSHING

Elevation  
K.B. 1934'  
D.F. N/A  
G.L. 1923'

Date 8/4/2020

Run Number TWO

Type Log BHCS

Depth Driller 4300'

Depth Logger 4300'

Bottom Logged Interval 4289'

Top Logged Interval 300'

Type Fluid In Hole CHEMICAL

Salinity, PPM CL 8,300

Density 8.9

Level FULL

Max. Rec. Temp. F 119 DEG/F

Operating Rig Time 4 HOURS

Equipment -- Location P-108 HAYS

Recorded By J. HENRICKSON

Witnessed By KEITH REAVIS

### Borehole Record

### Casing Record

Run No.

Bit

From

To

Size

Wgt.

24#

From

To

ONE 12.25"

0

349'

TD

TWO 7.875"

349'

TD

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, LLC will not 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.

### Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

ST. JOHN, KANSAS  
SOUTH TO 60 RD, 1 EAST, 1/2 SOUTH,  
EAST INTO

Log Measured From: KELLY BUSHING 11 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES  
www.pioneerenergy.com 785-625-3858

### Your Pioneer Energy Services Crew

Engineer: J. HENRICKSON  
Operator:  
Operator:  
Operator:

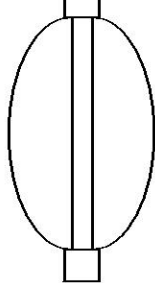
### This Log Record Was Witnessed By

Primary Witness: KEITH REAVIS  
Secondary Witness:  
Secondary Witness:  
Secondary Witness:

Top - Bottom

|           |             |             |             |           |           |       |              |
|-----------|-------------|-------------|-------------|-----------|-----------|-------|--------------|
| A         | BOREID      | BOTTEMP     | CASEOD      | CASETHCK  | FLUIDDEN  | M     | MATRXDEN     |
| 1         | in<br>7.875 | degF<br>119 | in<br>5.5   | in<br>0   | g/cc<br>1 | 2     | g/cc<br>2.71 |
| NPORSEL   | PERFS       | SNDERR      | SNDERRM     | SPSHIFT   | SRFTEMP   | SZCOR | TDEPTH       |
| Limestone | 0           | mmho/m<br>5 | mmho/m<br>5 | mV<br>270 | degF<br>0 | Off   | ft<br>4300   |

| Sensor       | Offset (ft)    | Schematic                                                                           | Description      | Length (ft) | O.D. (in) | Weight (lb) |
|--------------|----------------|-------------------------------------------------------------------------------------|------------------|-------------|-----------|-------------|
| WVF4<br>WVF1 | 11.00<br>11.00 |   | SLT-PENGO (0001) | 16.00       | 3.50      | 300.00      |
| WVF3<br>WVF2 | 9.00<br>9.00   |  |                  |             |           |             |



CENT-SIE

3.00

2.00

10.00

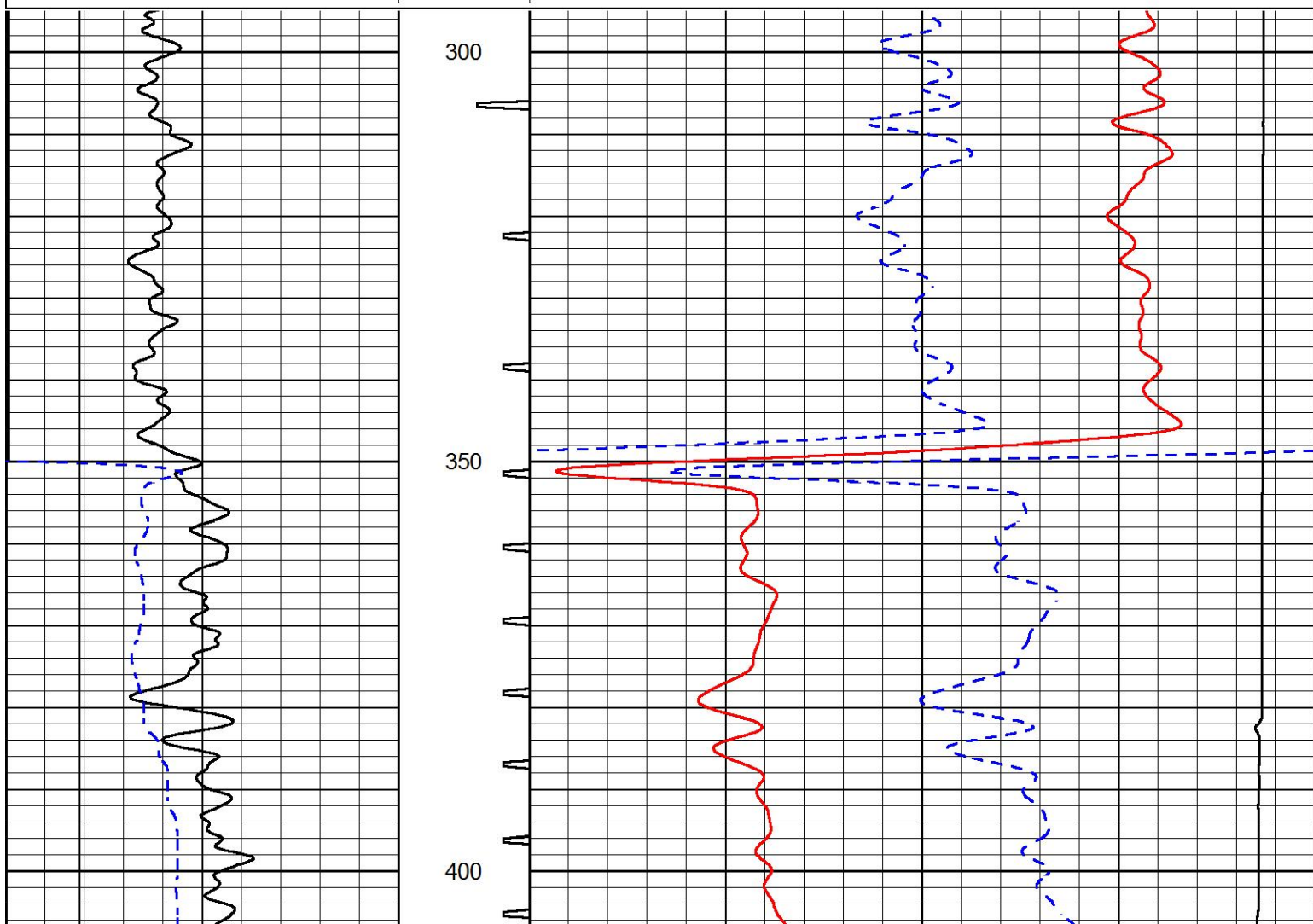
Dataset: garner\_diamond\_h\_1.db: field/well/SONIC/pass2  
Total length: 19.00 ft  
Total weight: 310.00 lb  
O.D.: 3.50 in

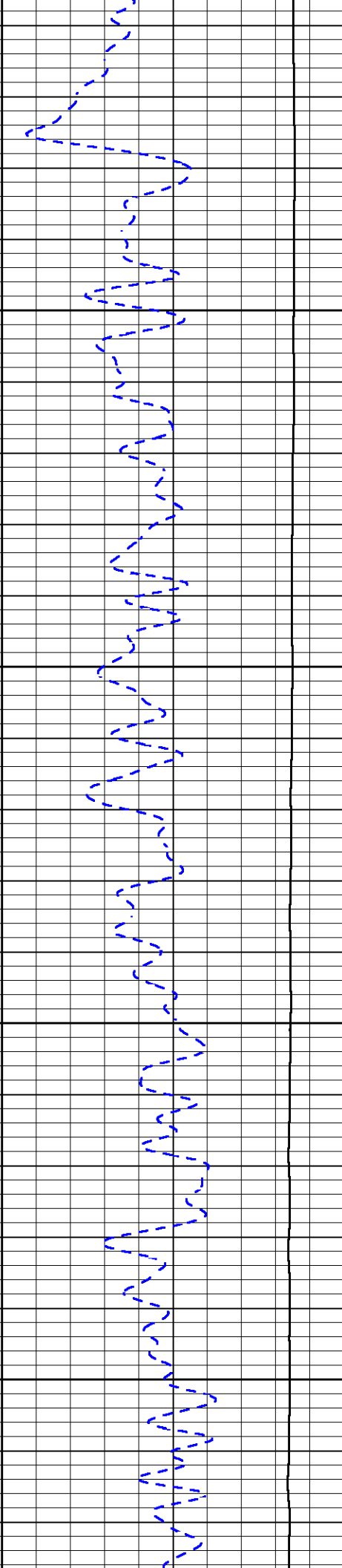
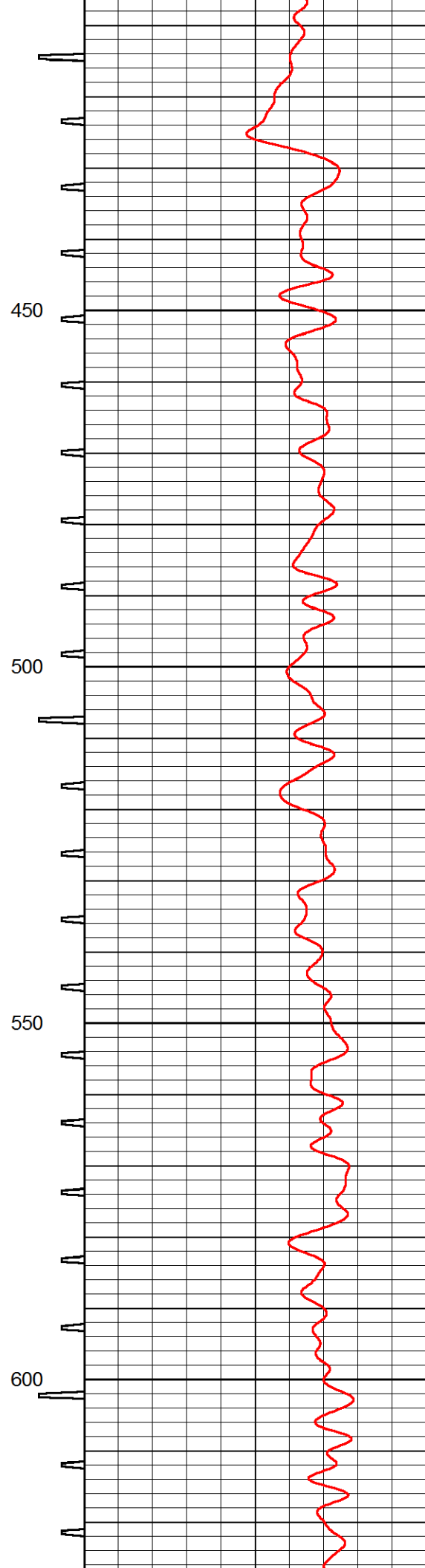
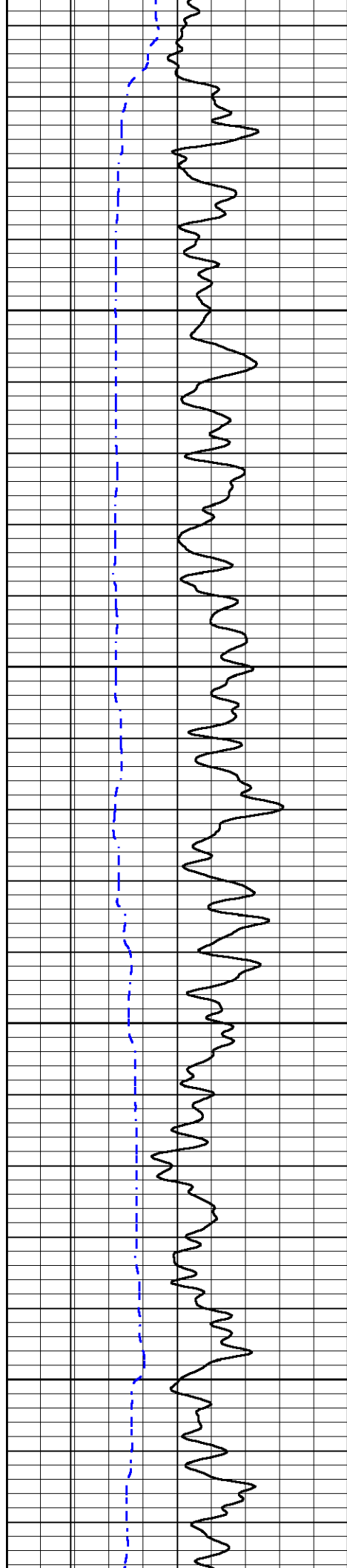


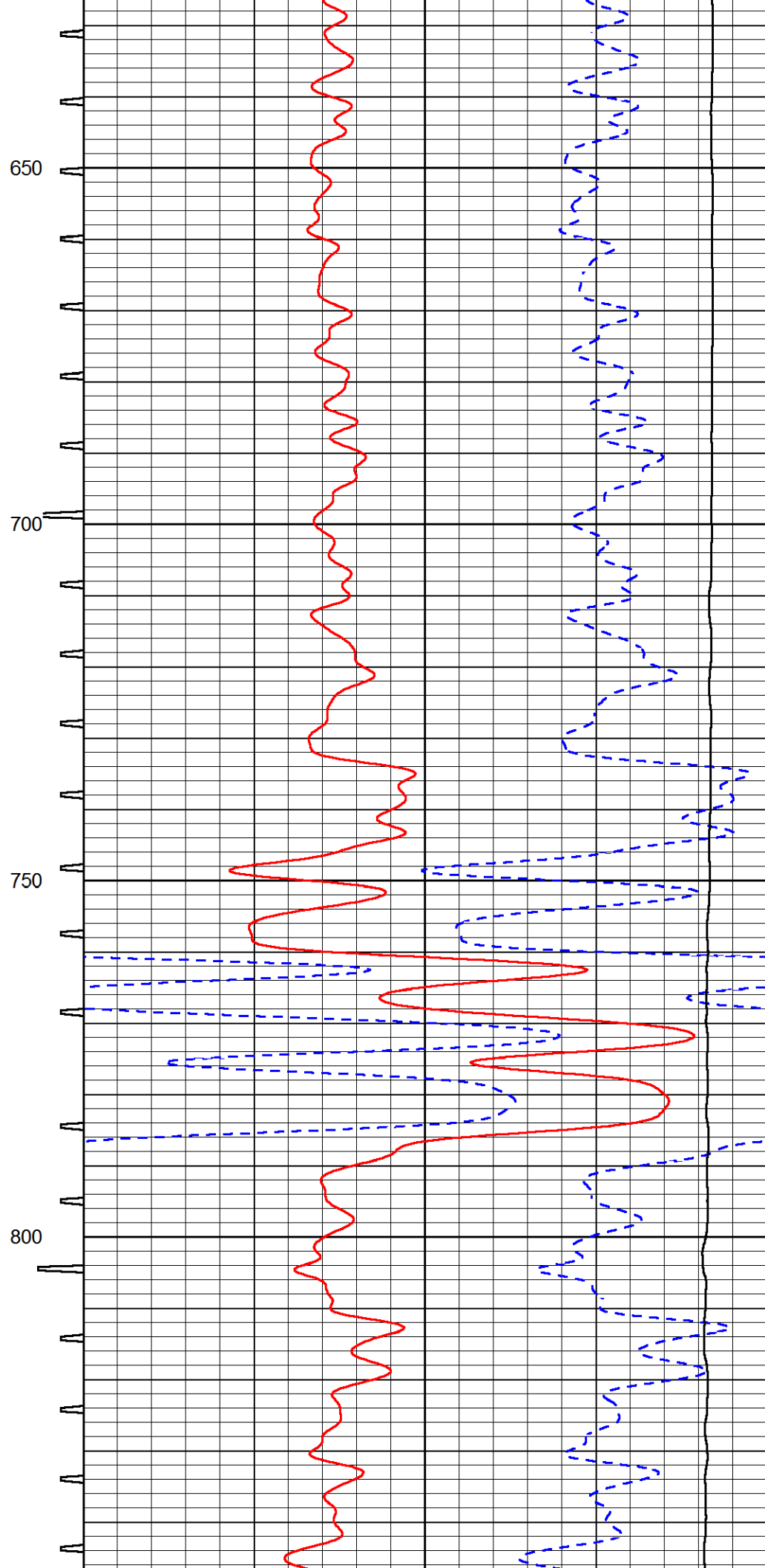
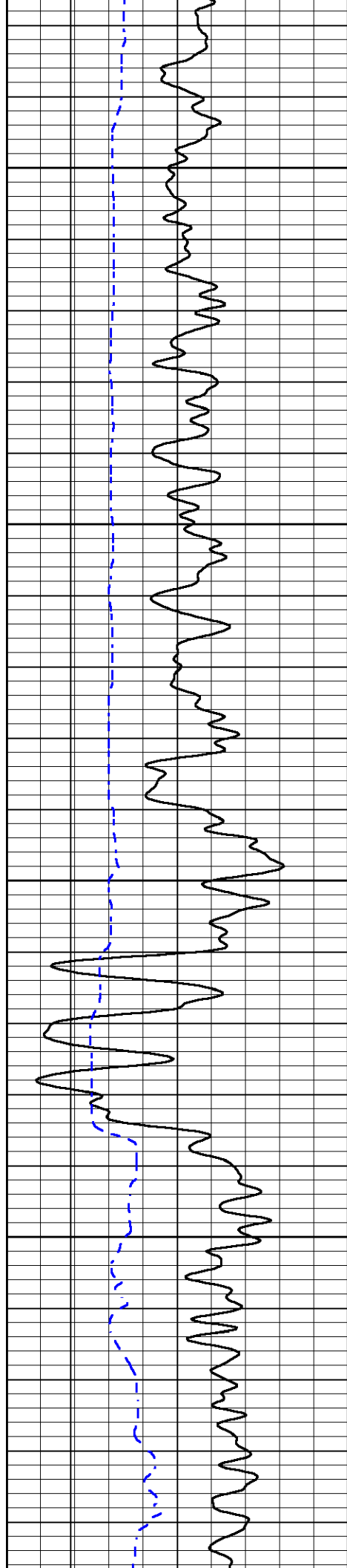
# MAIN PASS

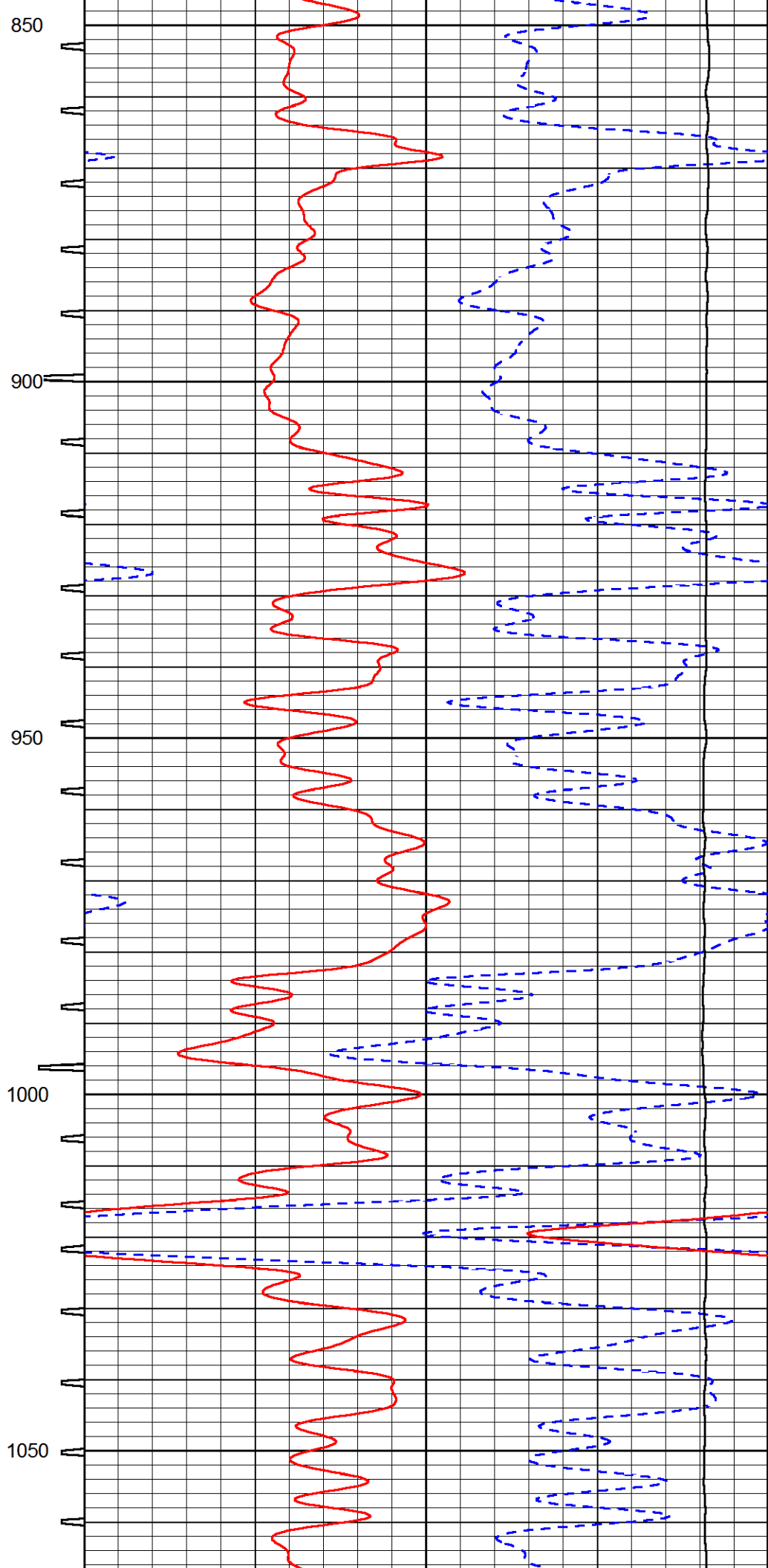
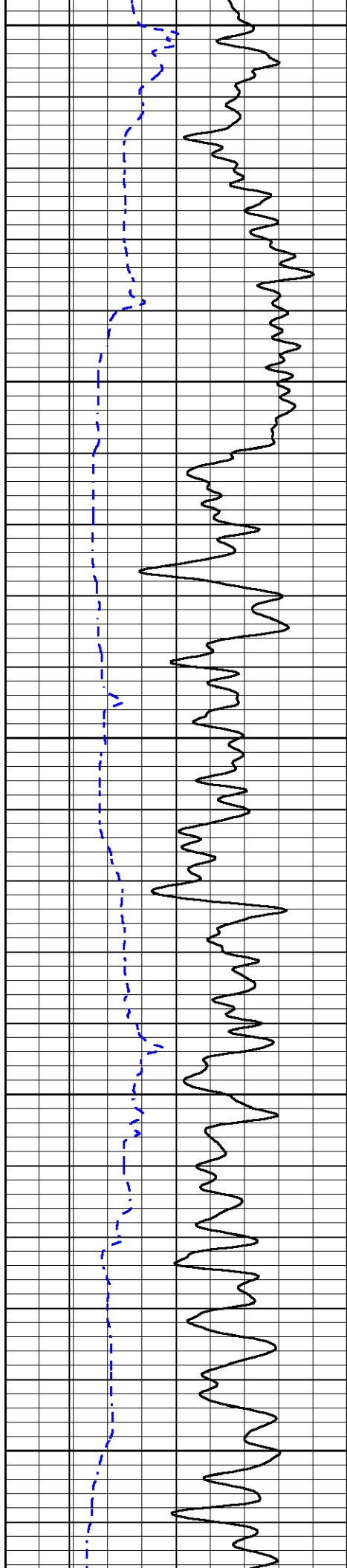
Database File garner\_diamond\_h\_1.db  
Dataset Pathname stackml/pass3.1  
Presentation Format sonic  
Dataset Creation Tue Aug 04 14:51:04 2020  
Charted by Depth in Feet scaled 1:240

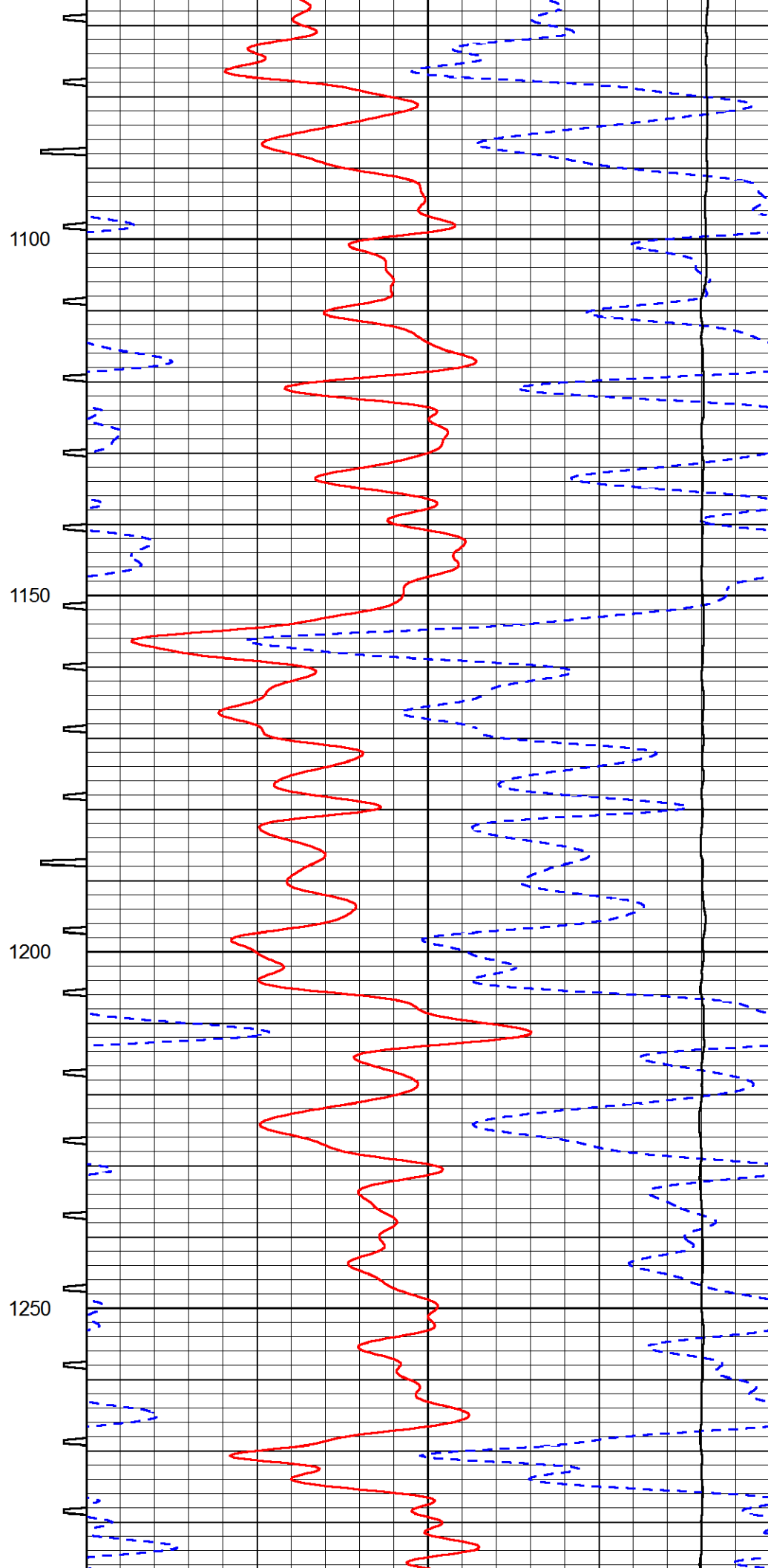
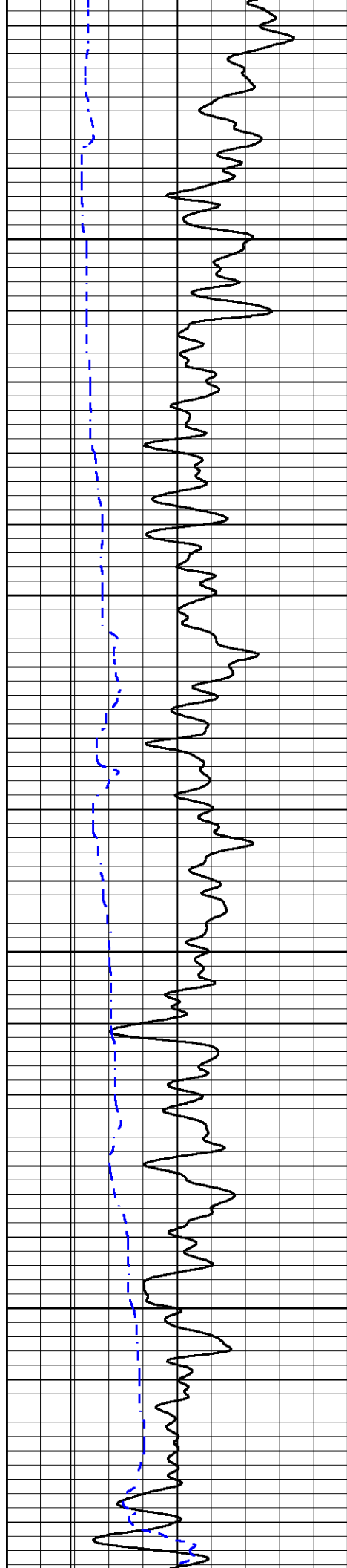
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|---|------------------|-----|-----------|-------|--------------------------------|-----|
| 0 | GAMMA RAY (GAPI) | 150 | SONIC INT | 140   | DELTA TIME (usec/ft) (usec/ft) | 40  |
| 6 | CALIPER (in)     | 16  | RAVEL TIM | 30    | SONIC POROSITY (pu)            | -10 |
| 6 | BIT SIZE         | 16  | (msec)    | 15000 | LINE TENSION (lb)              | 0   |

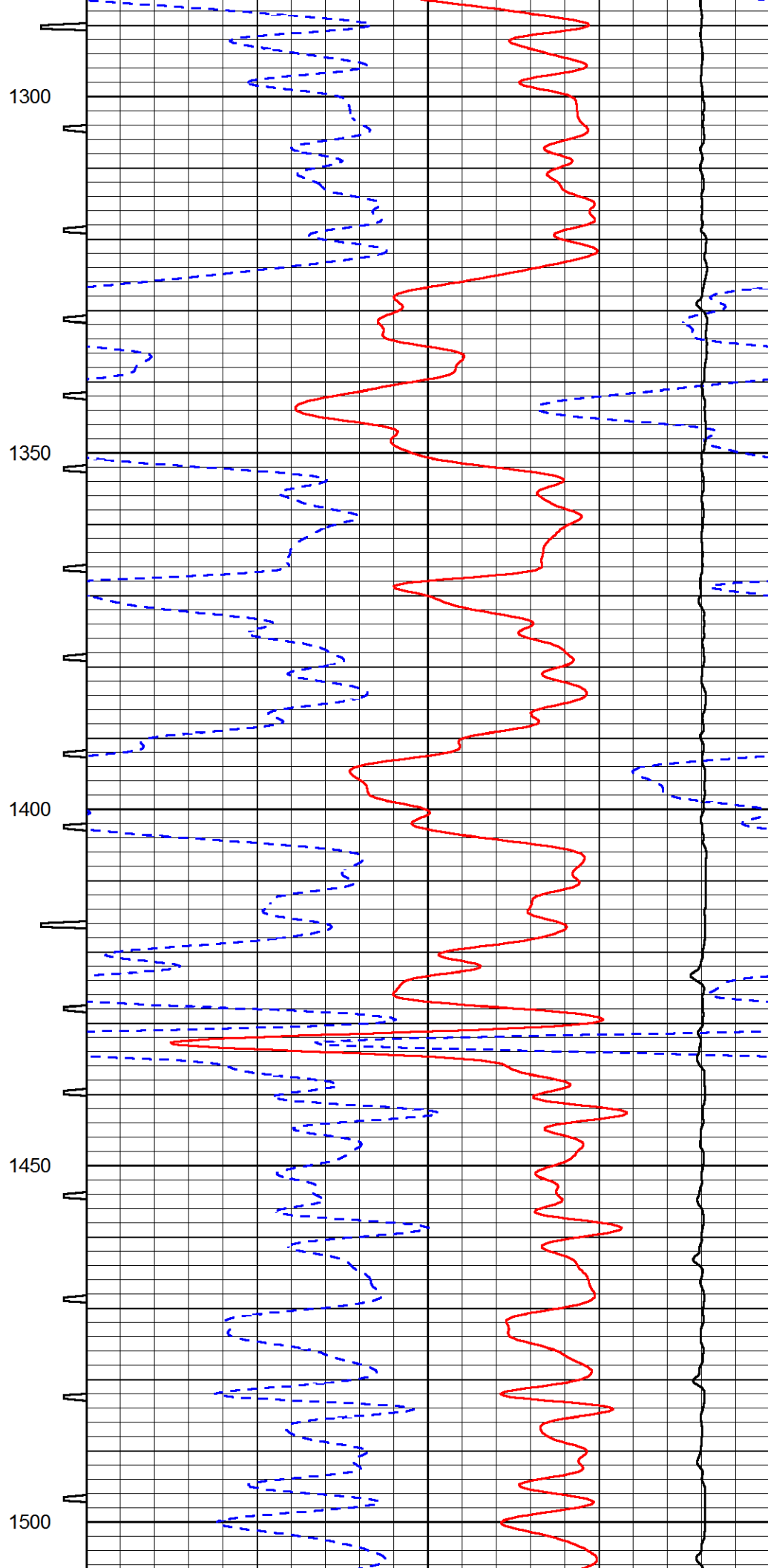
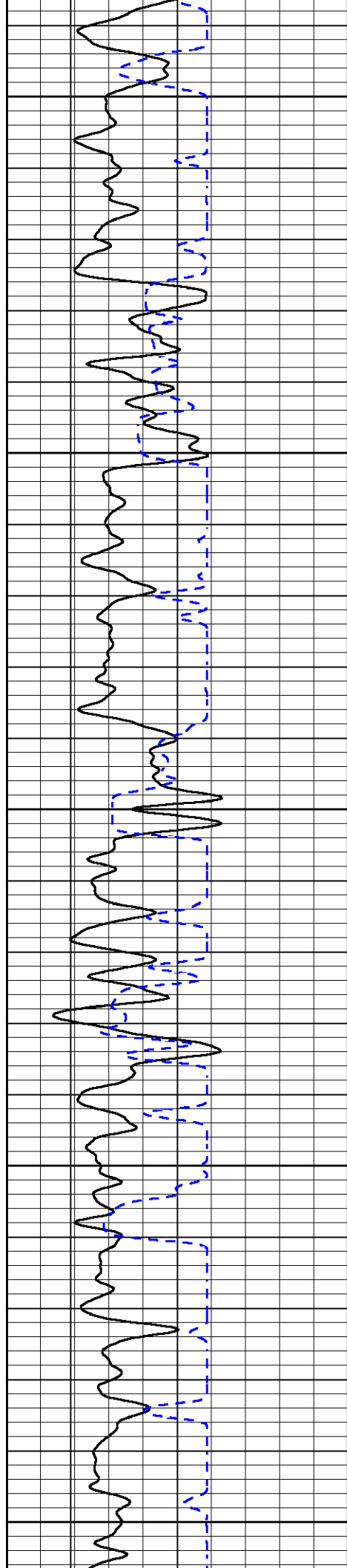


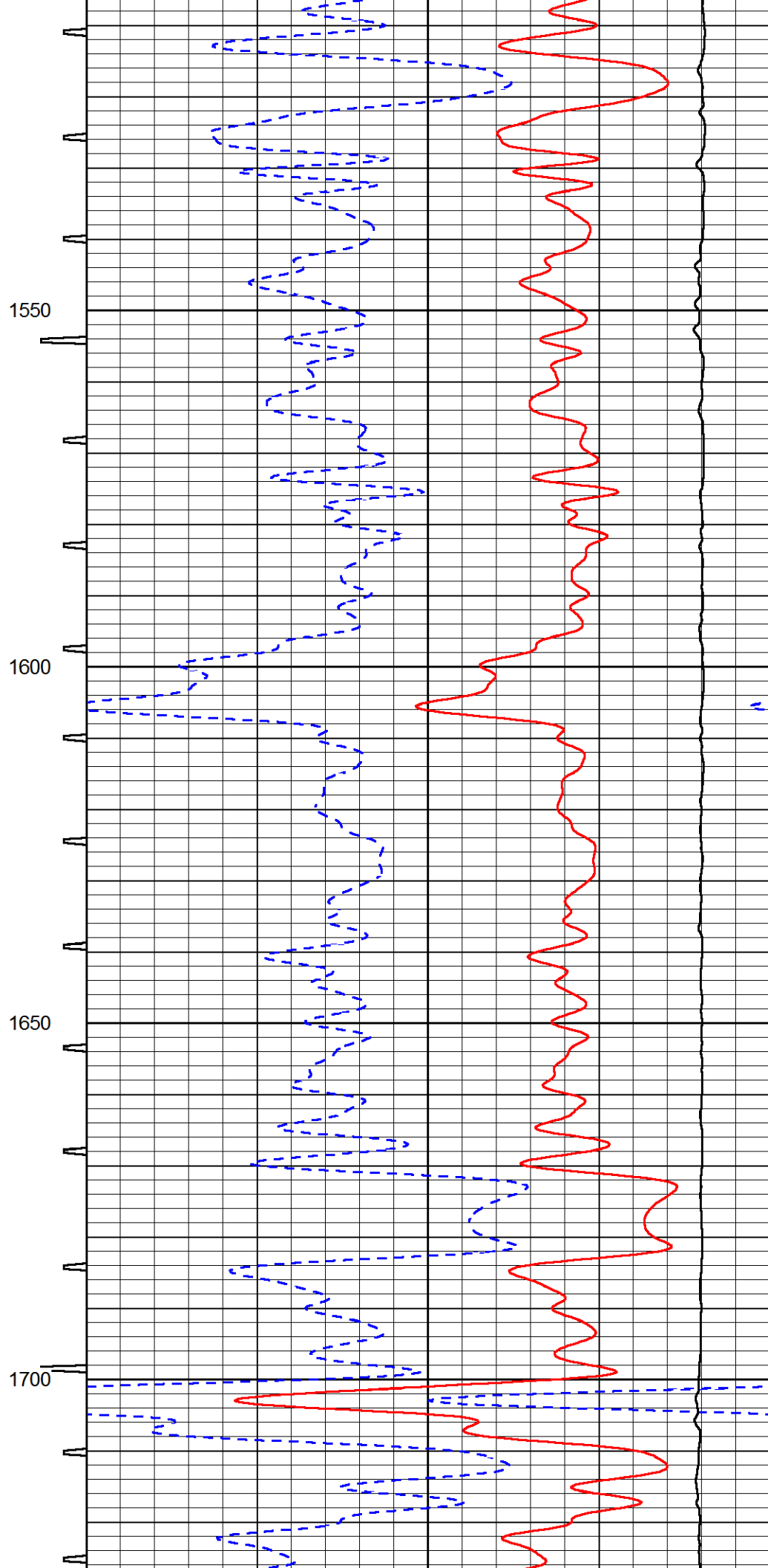
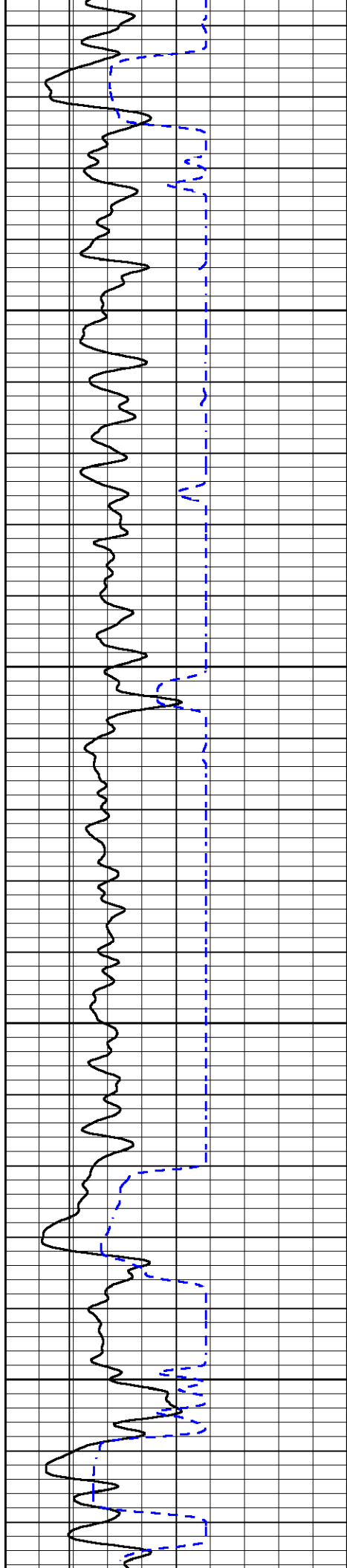


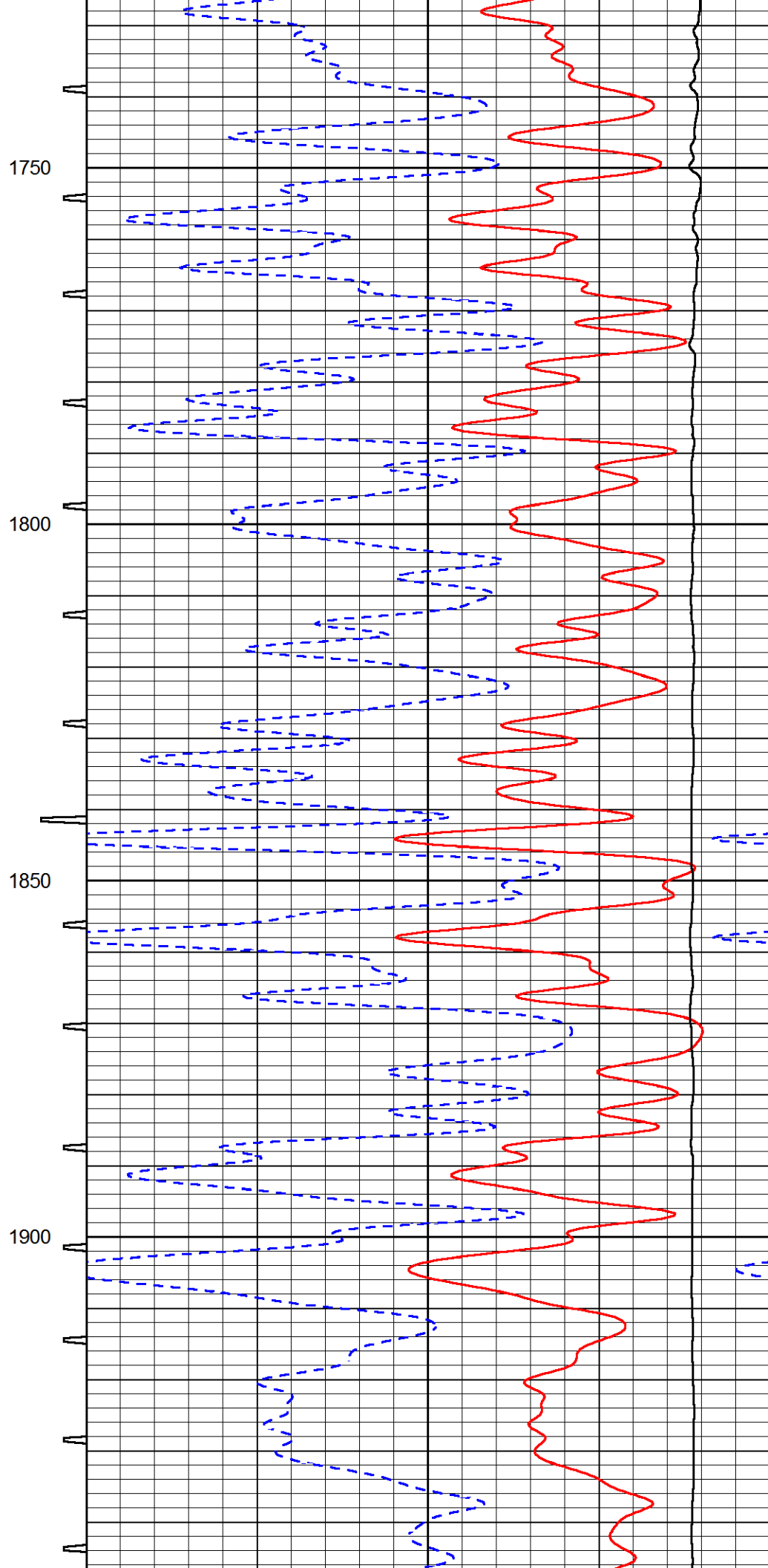
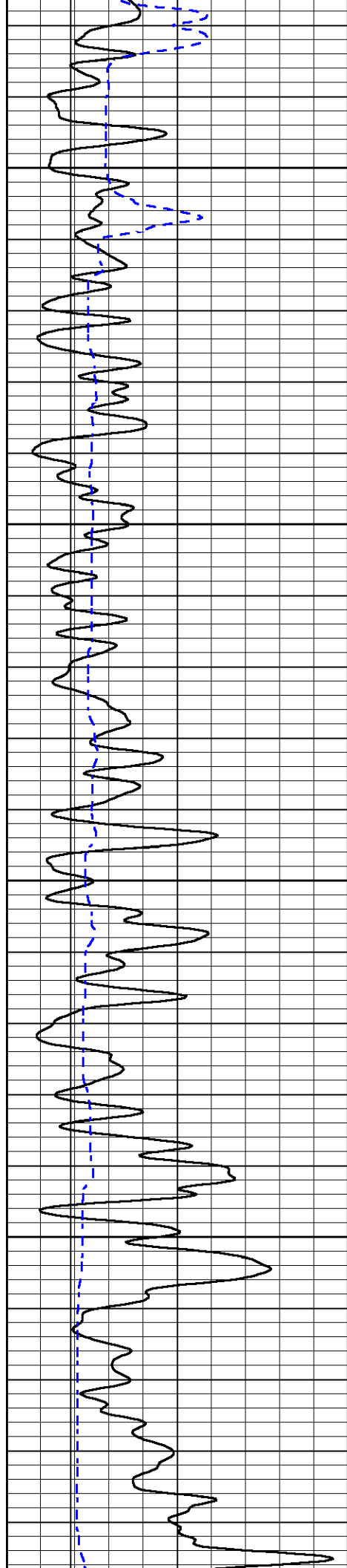


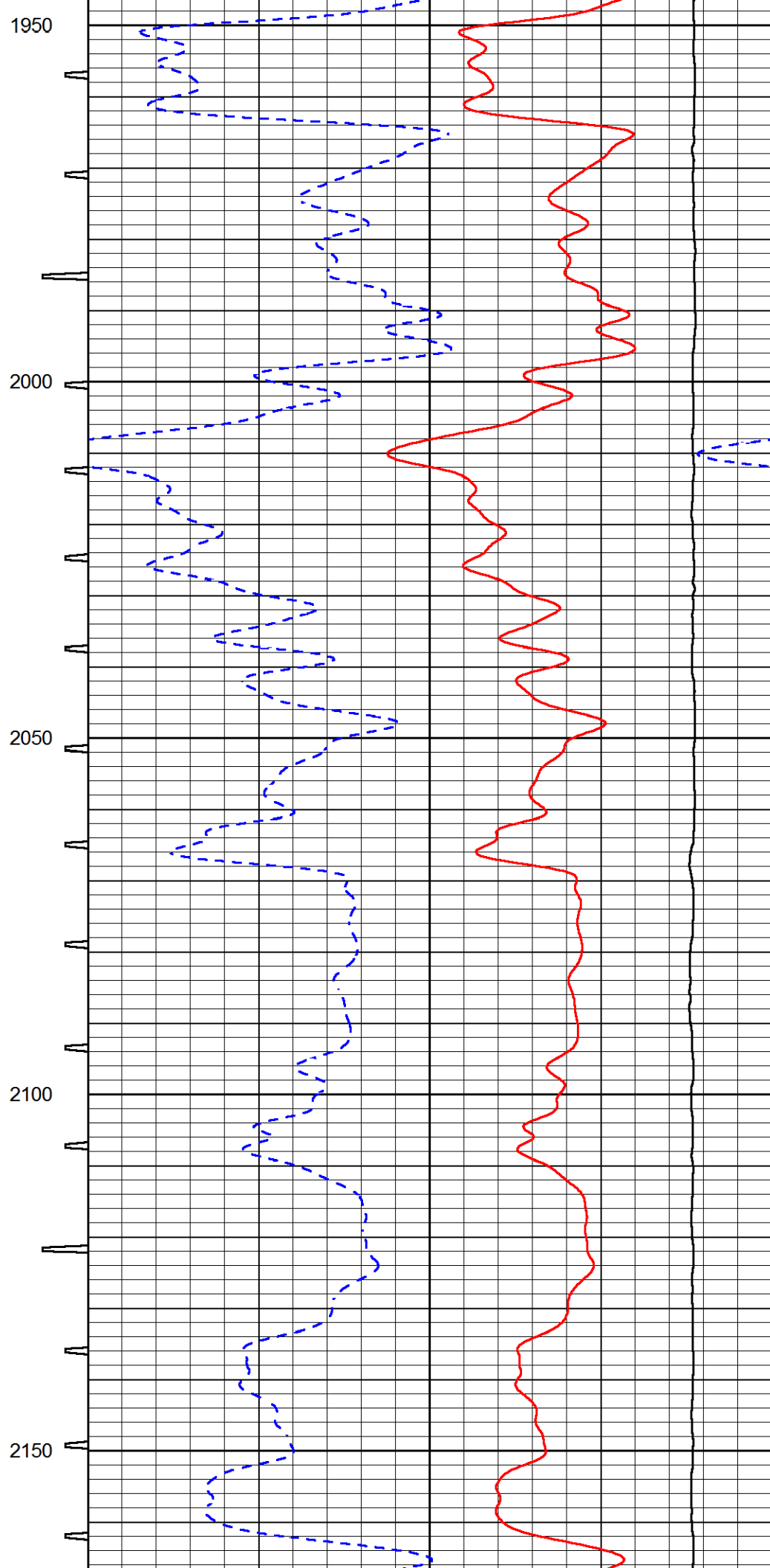
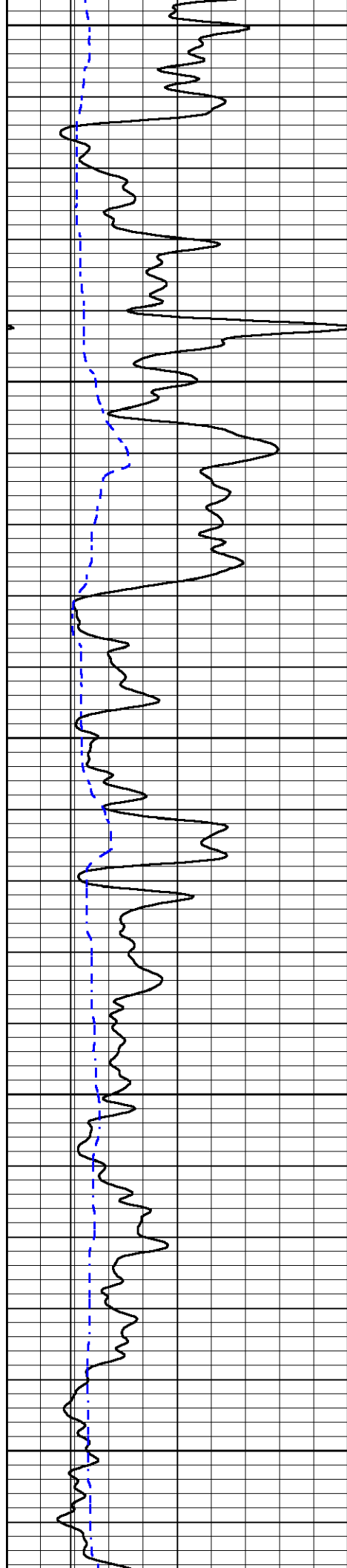


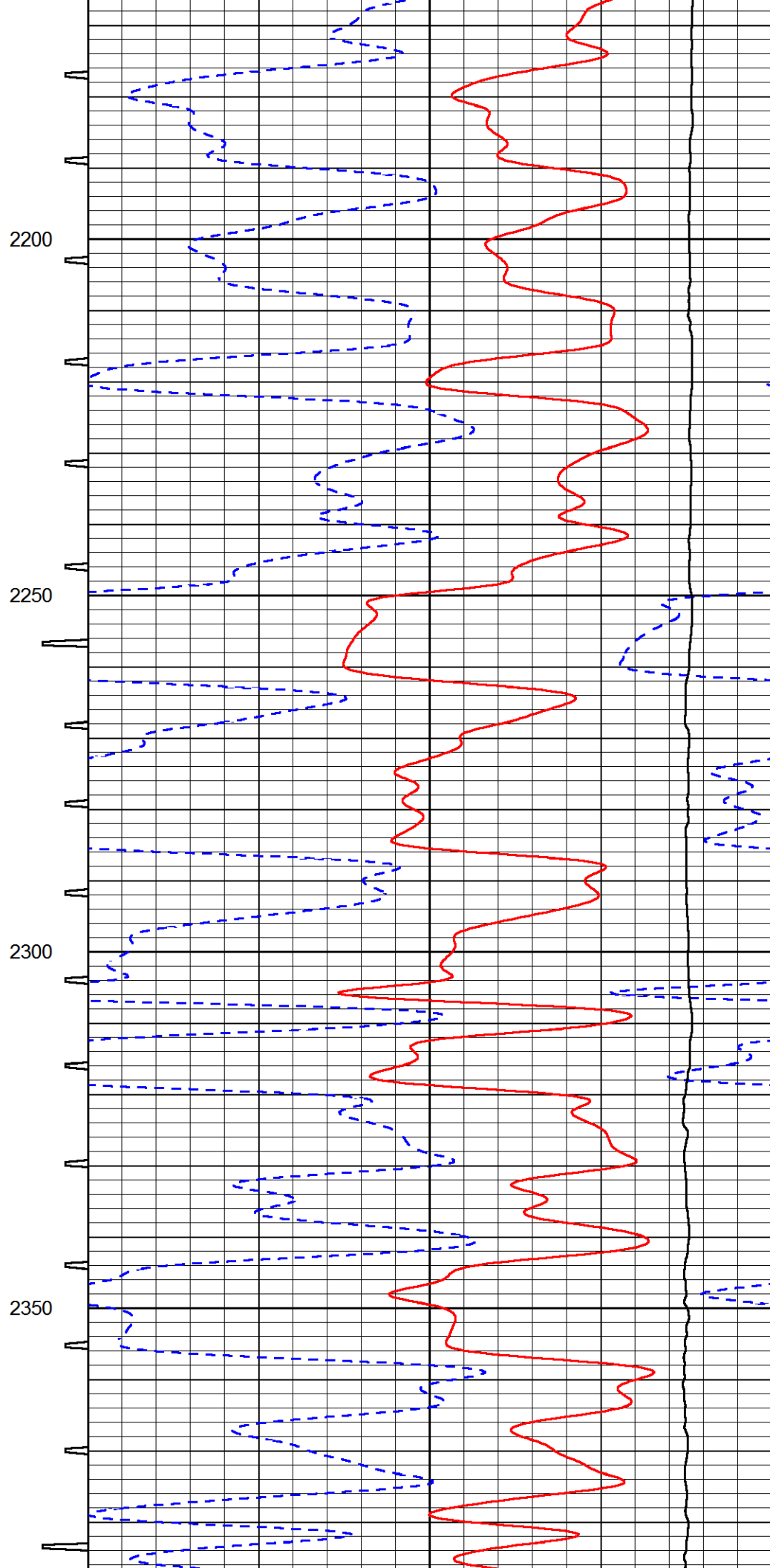
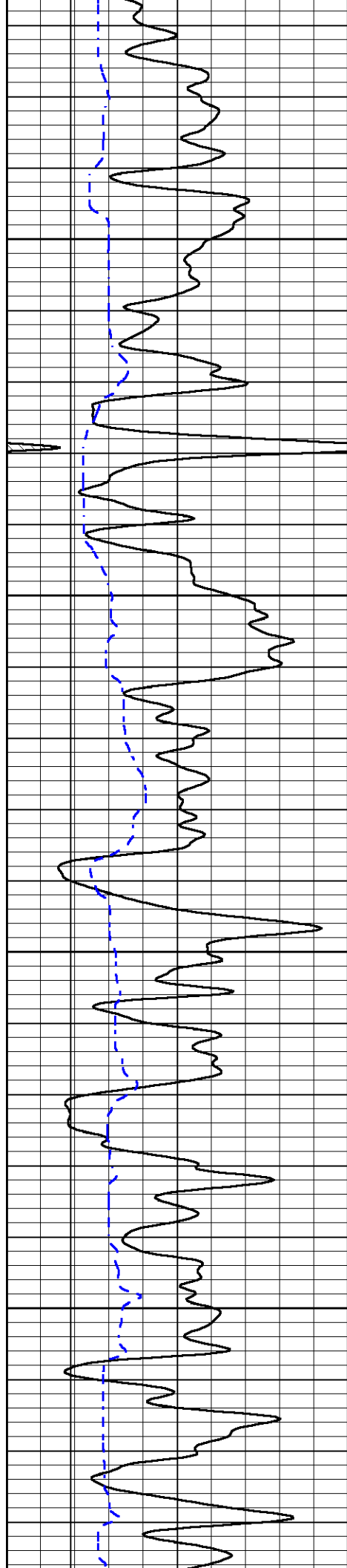


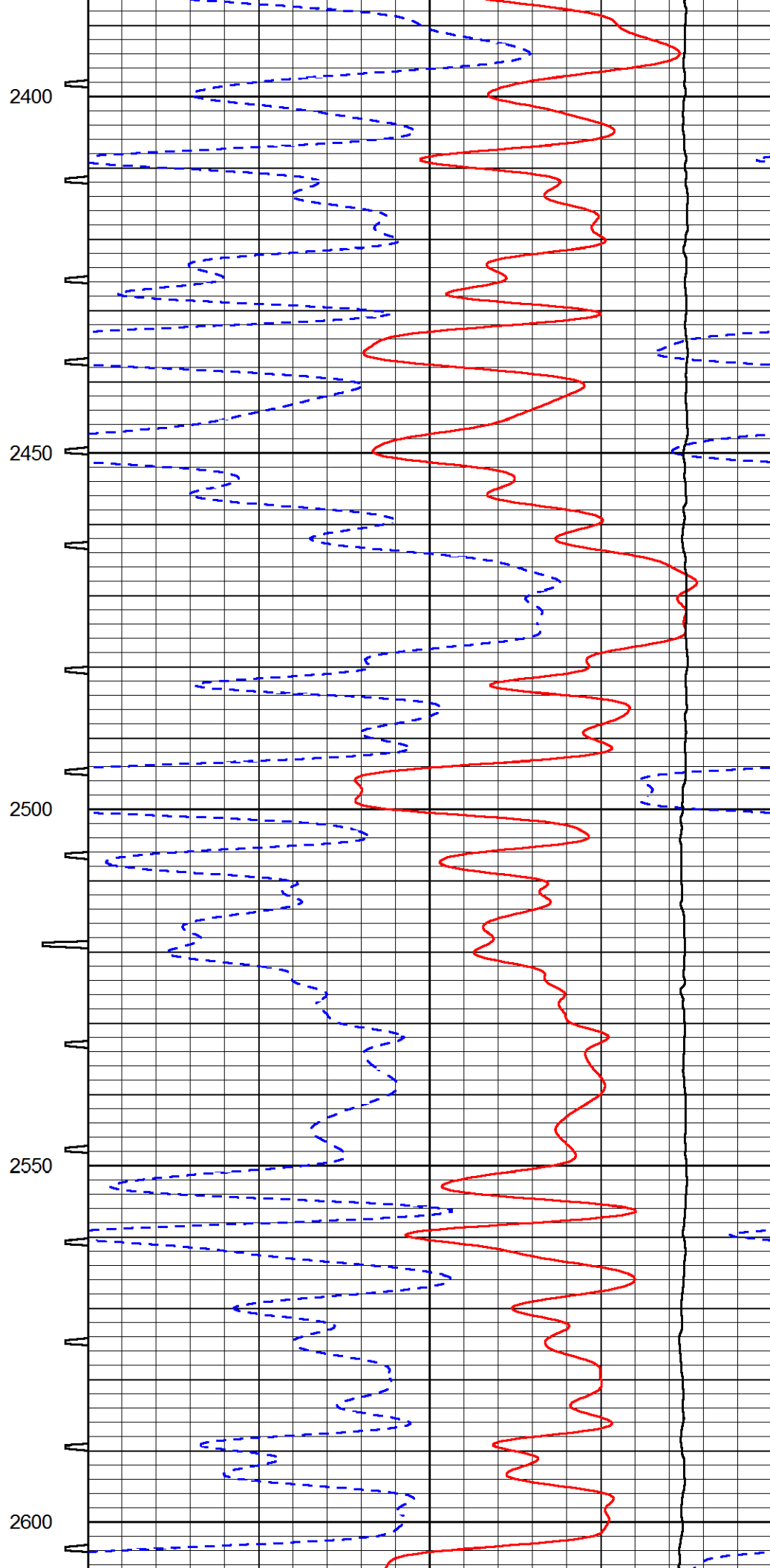
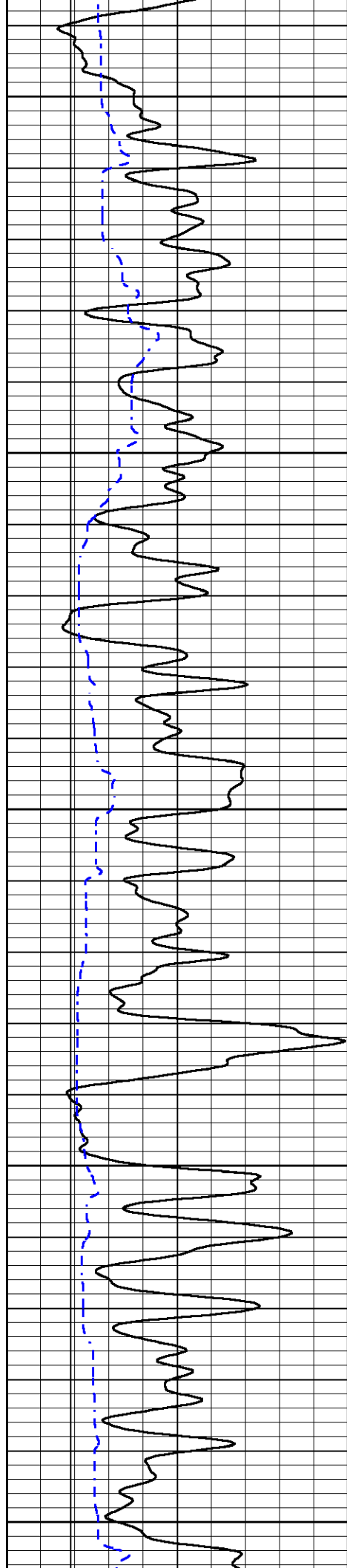


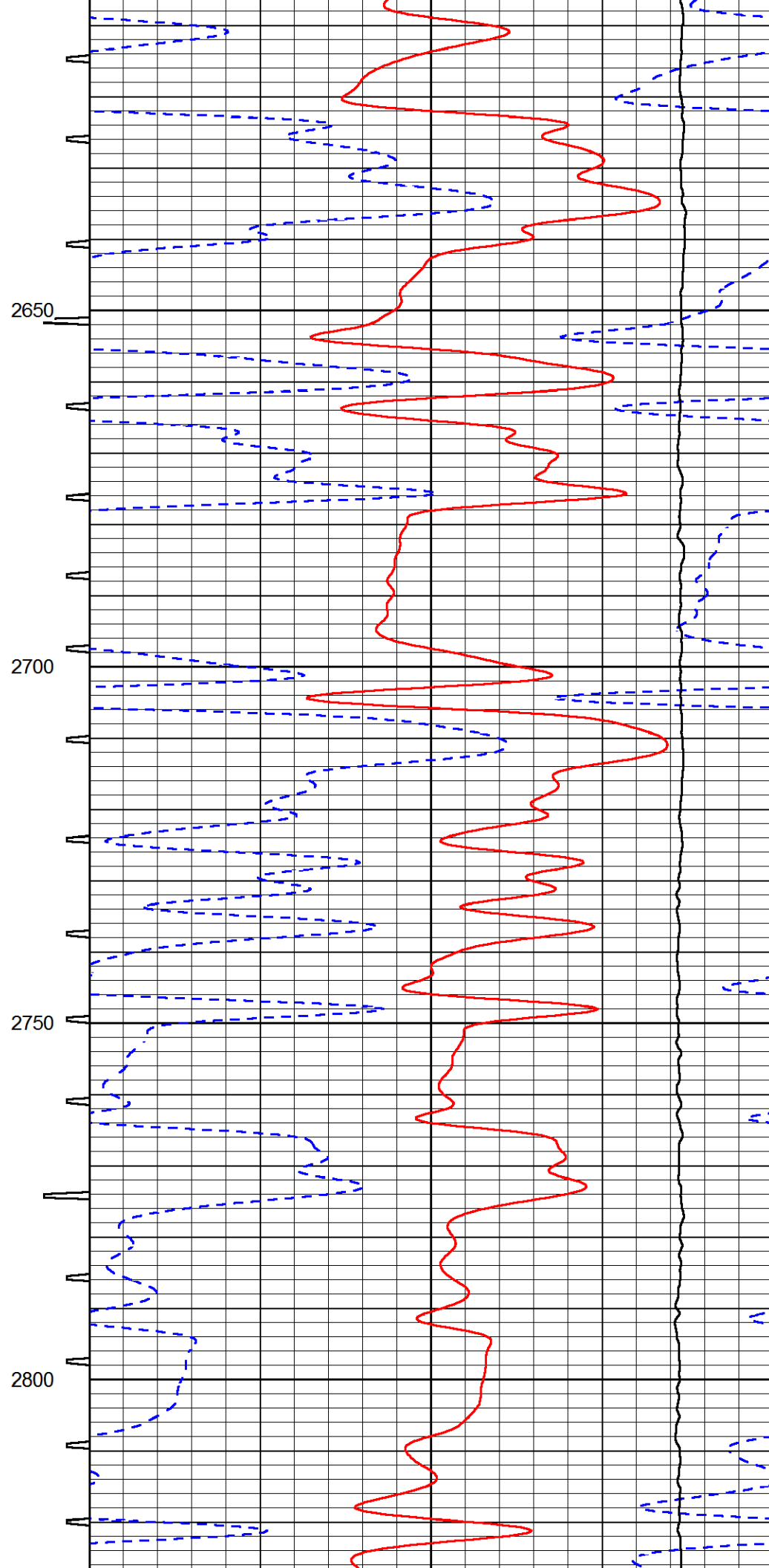
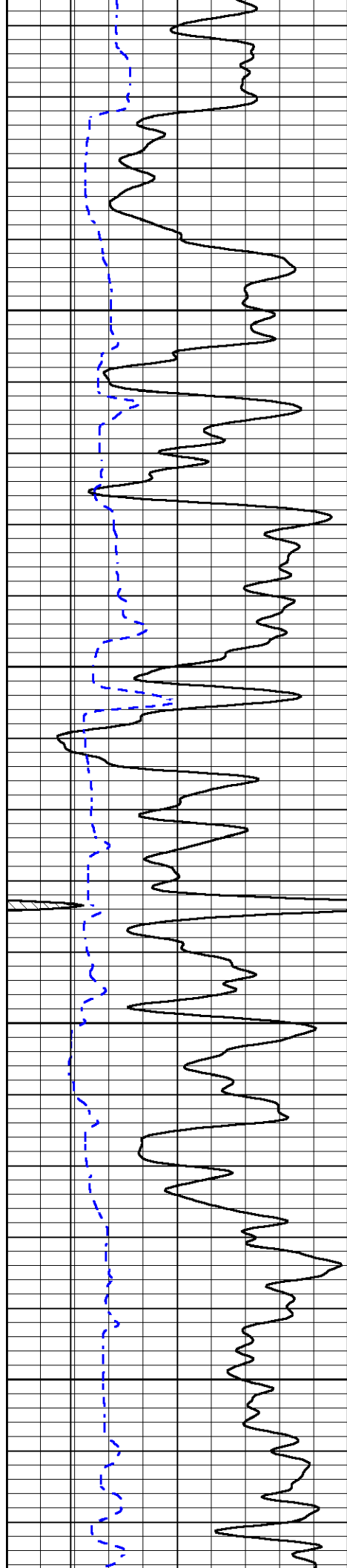


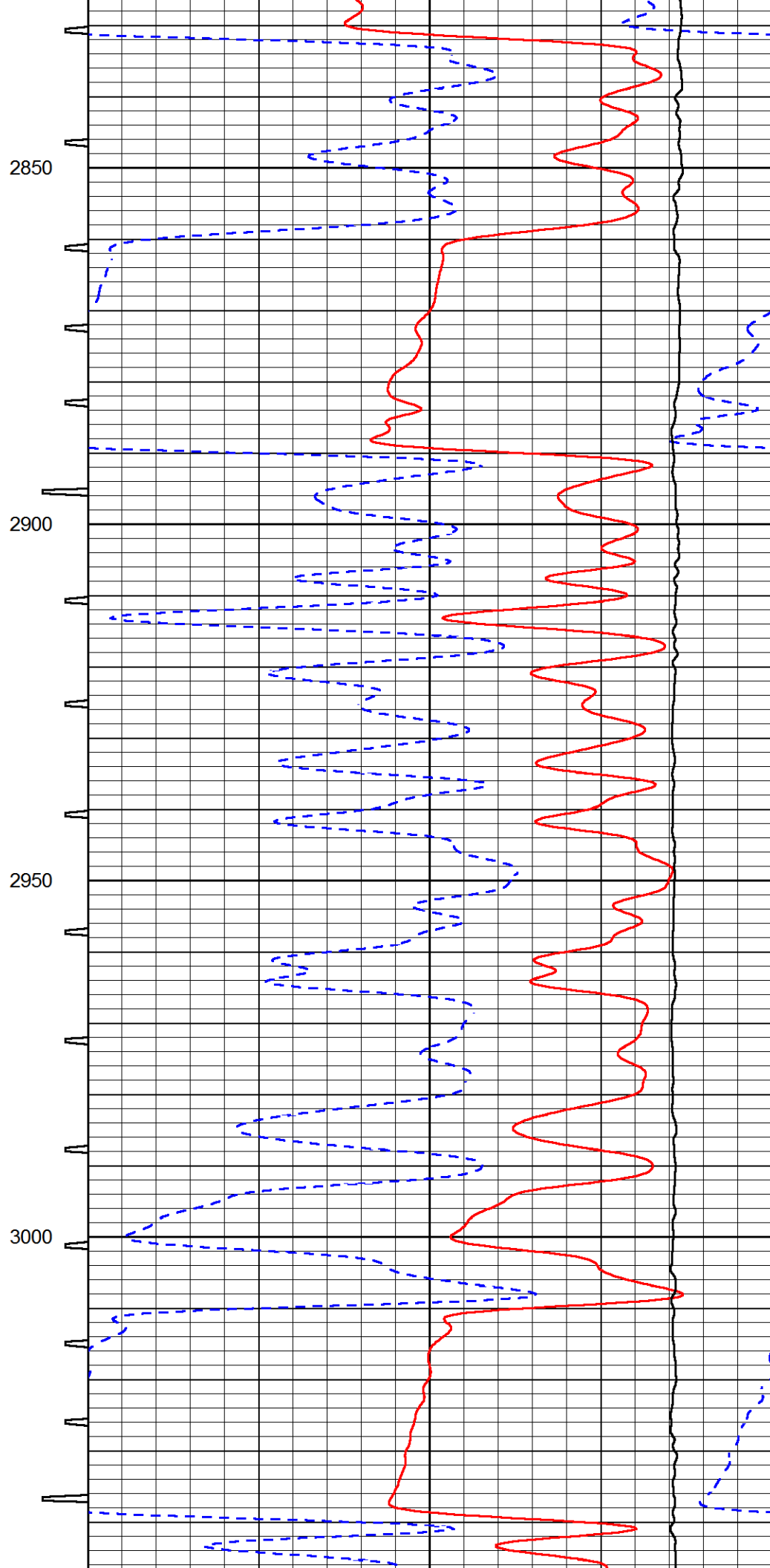
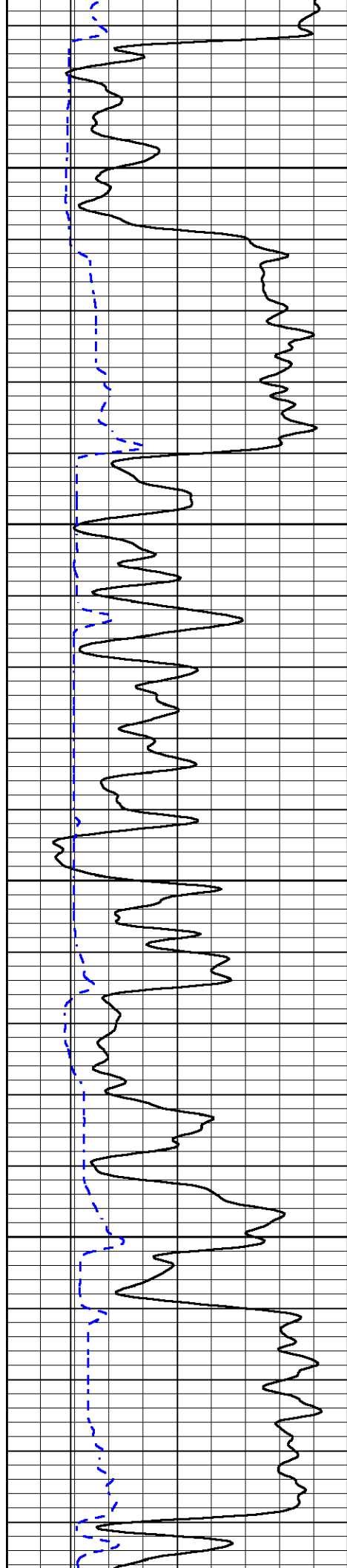


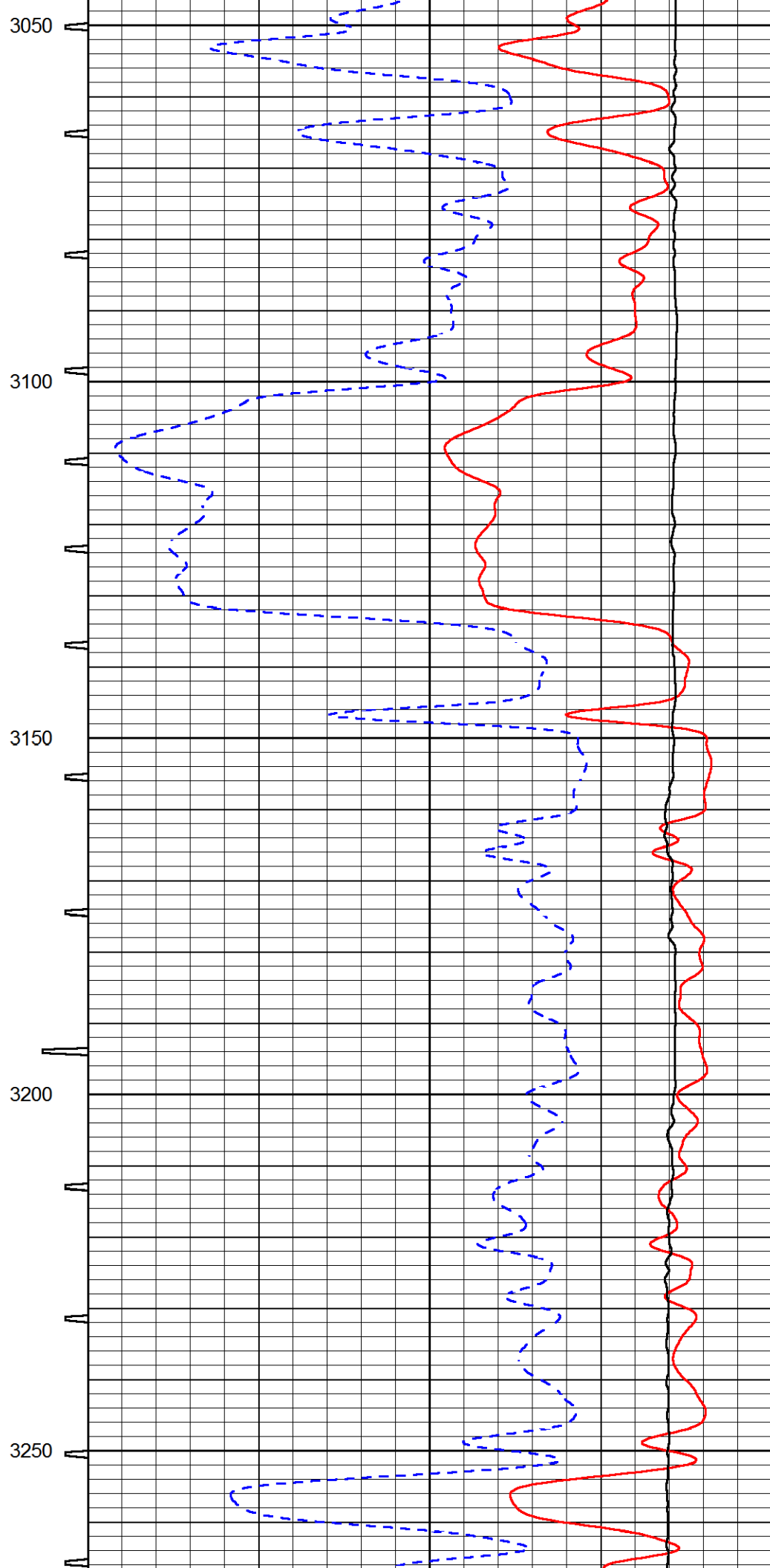
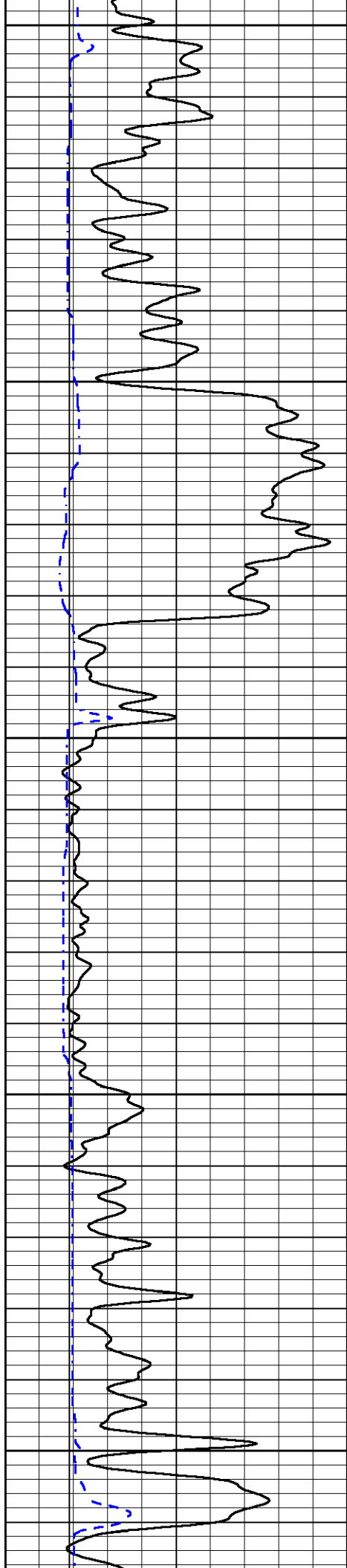


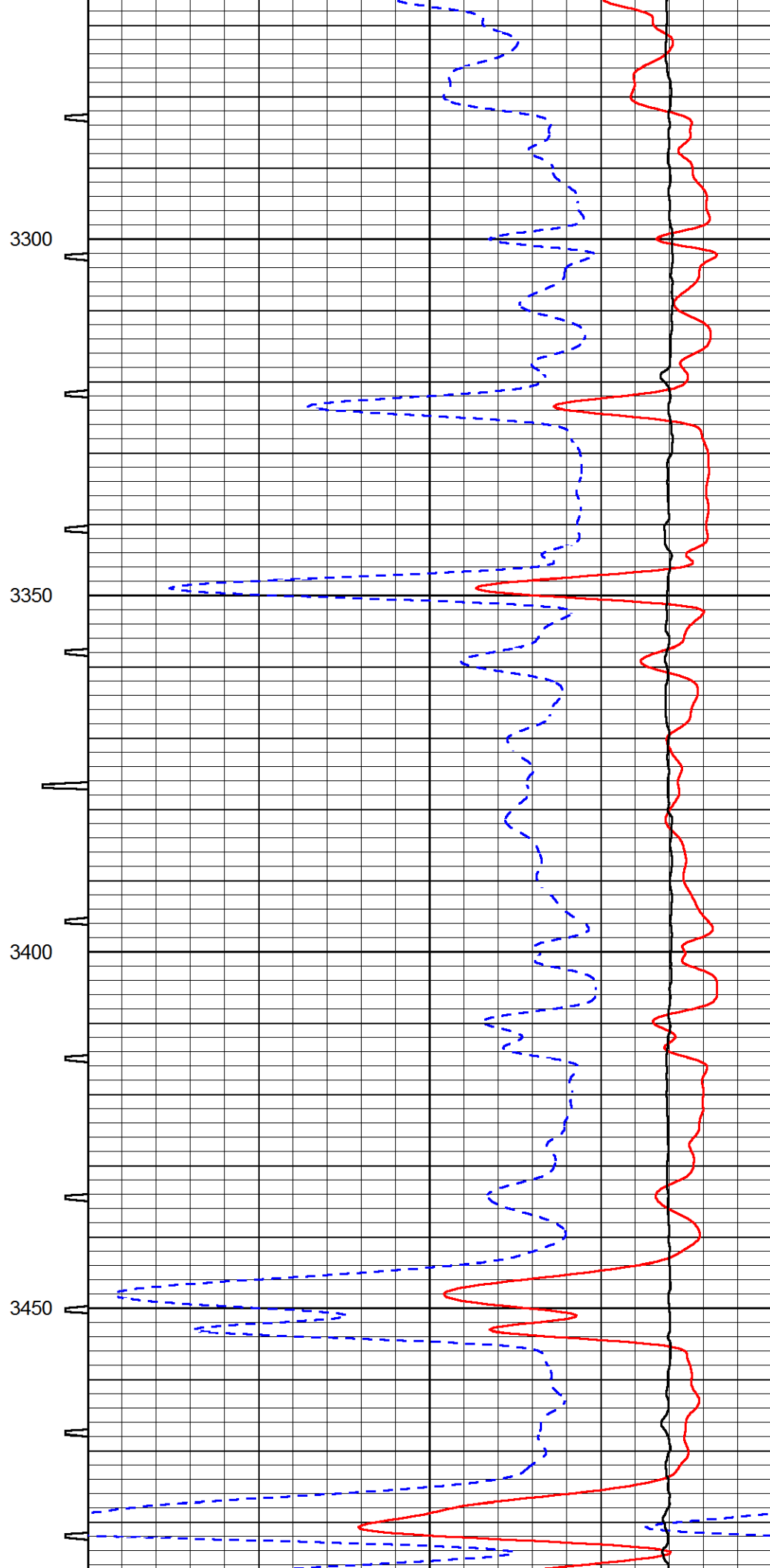
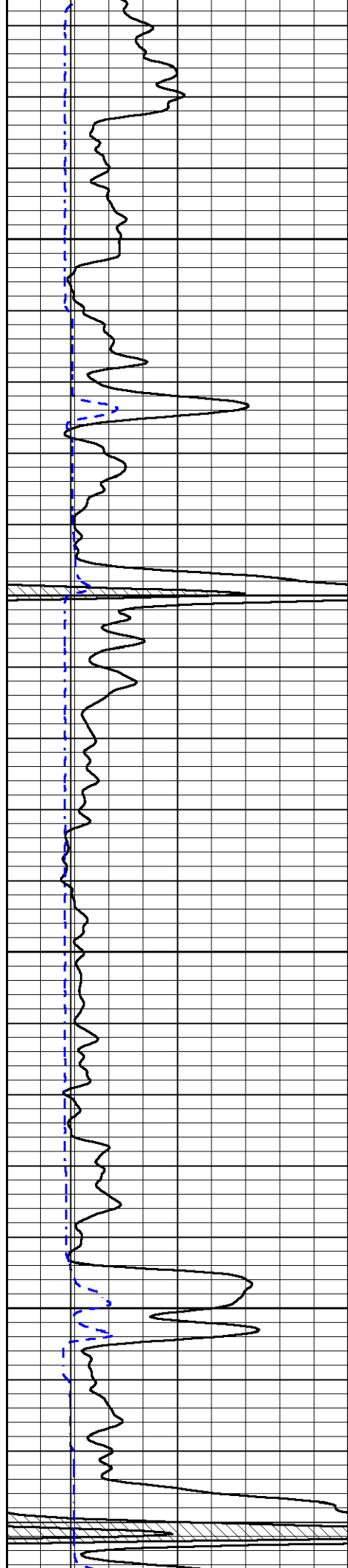


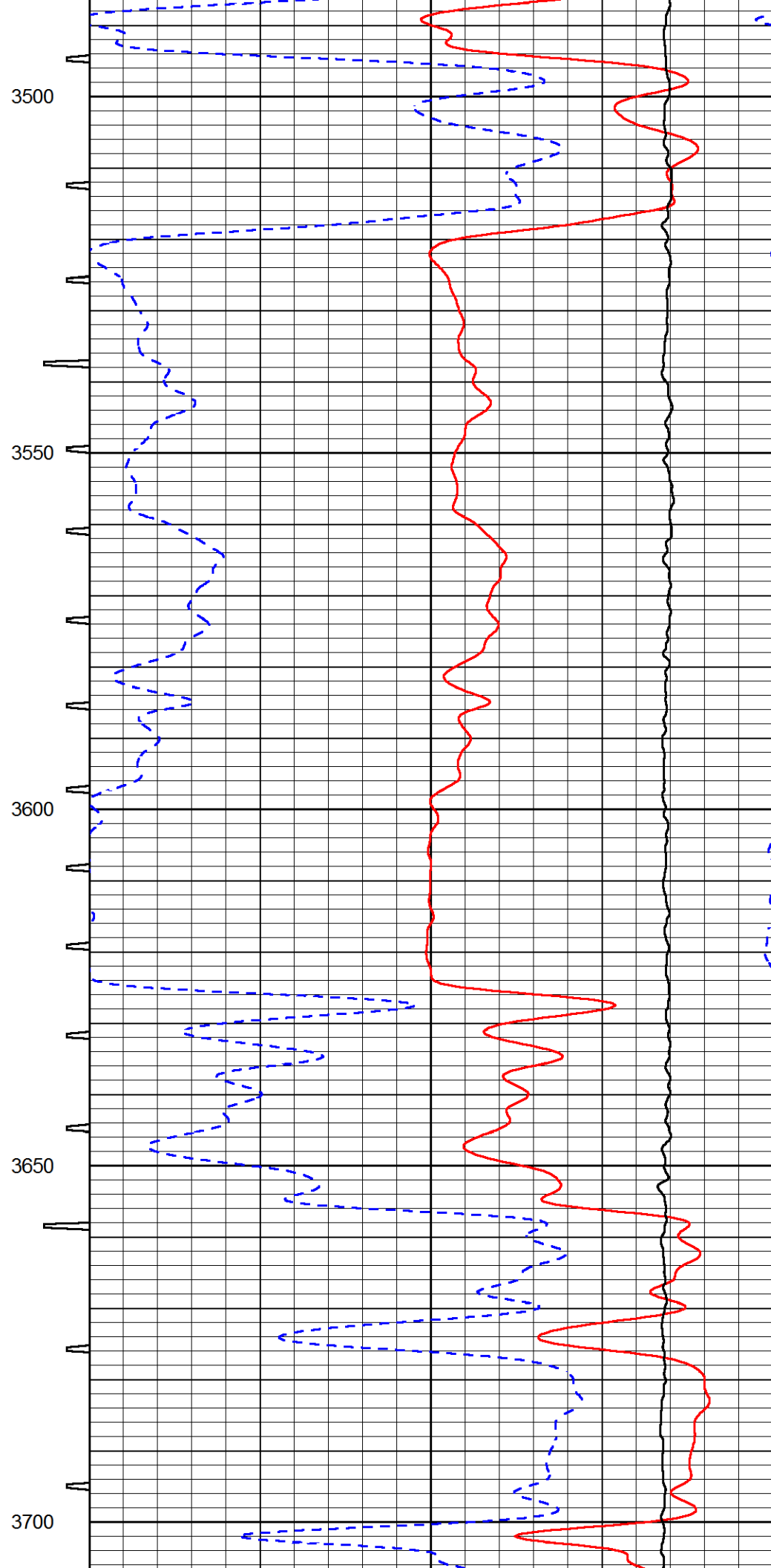
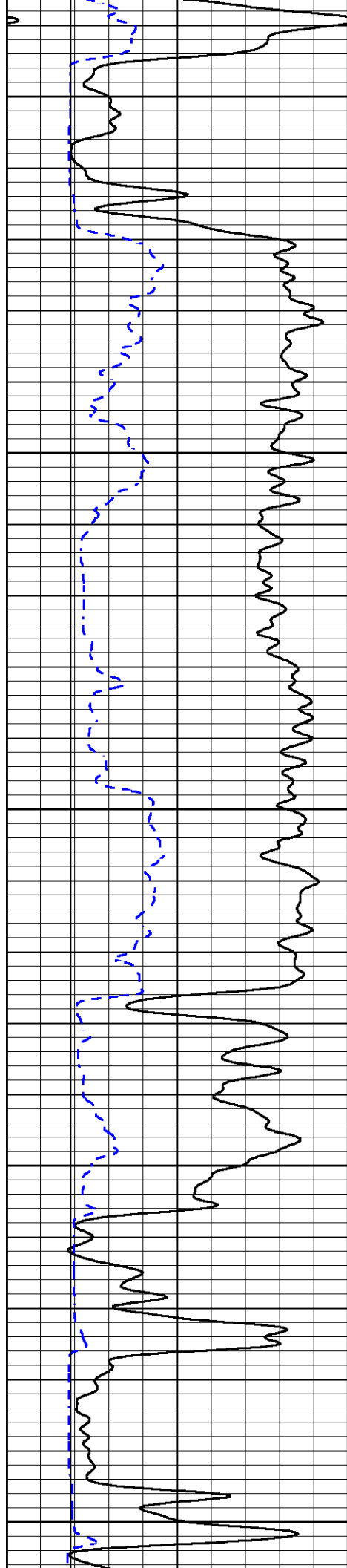


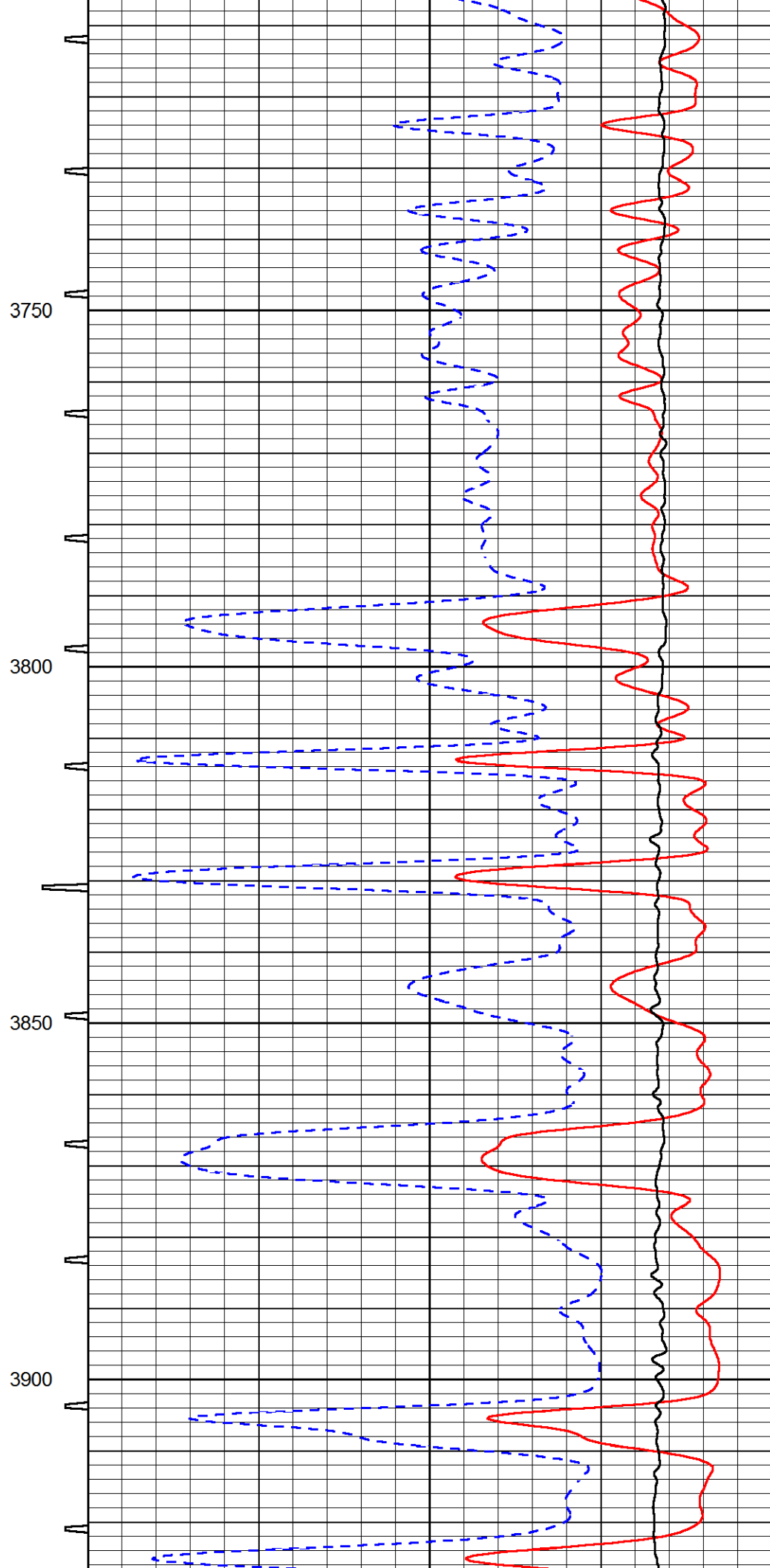
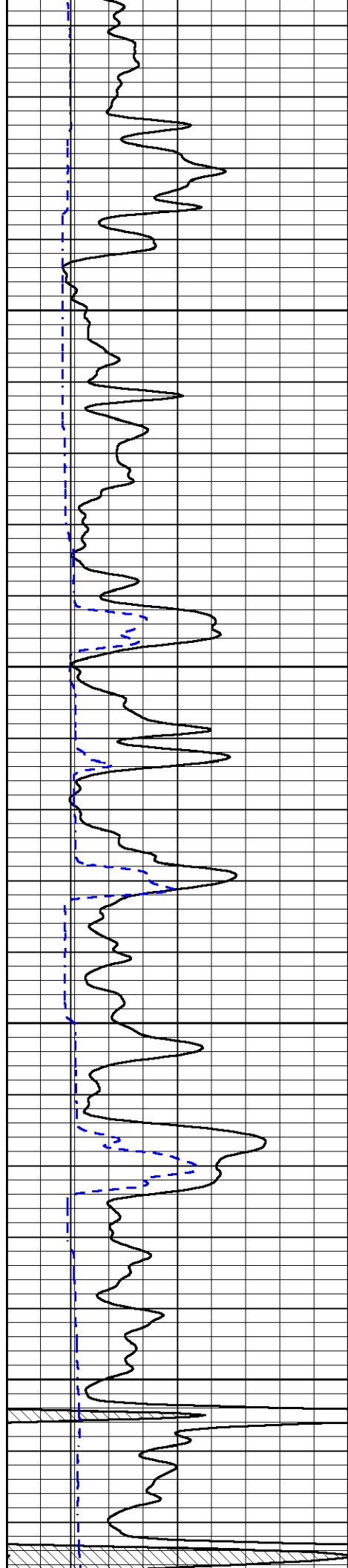


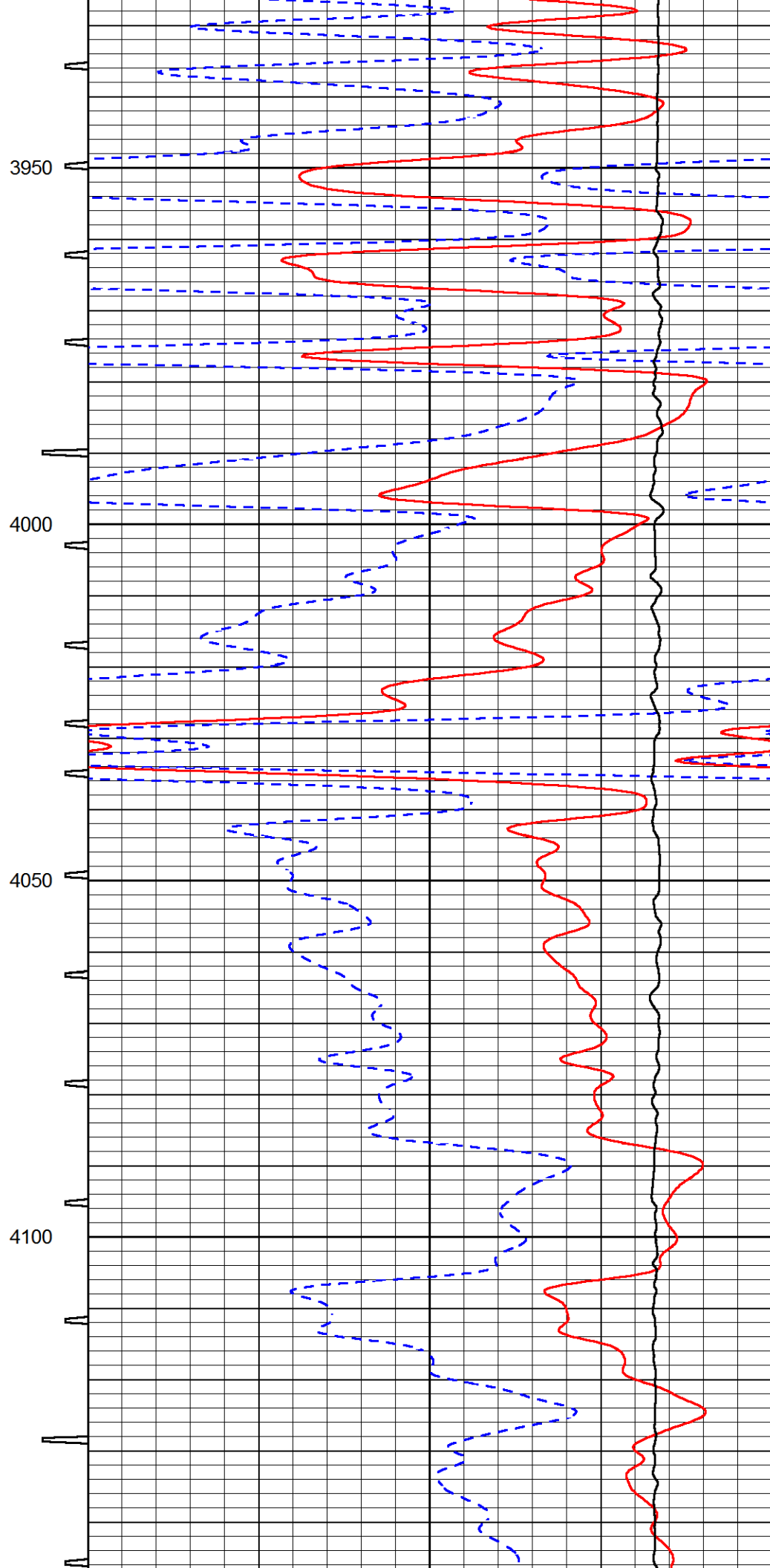
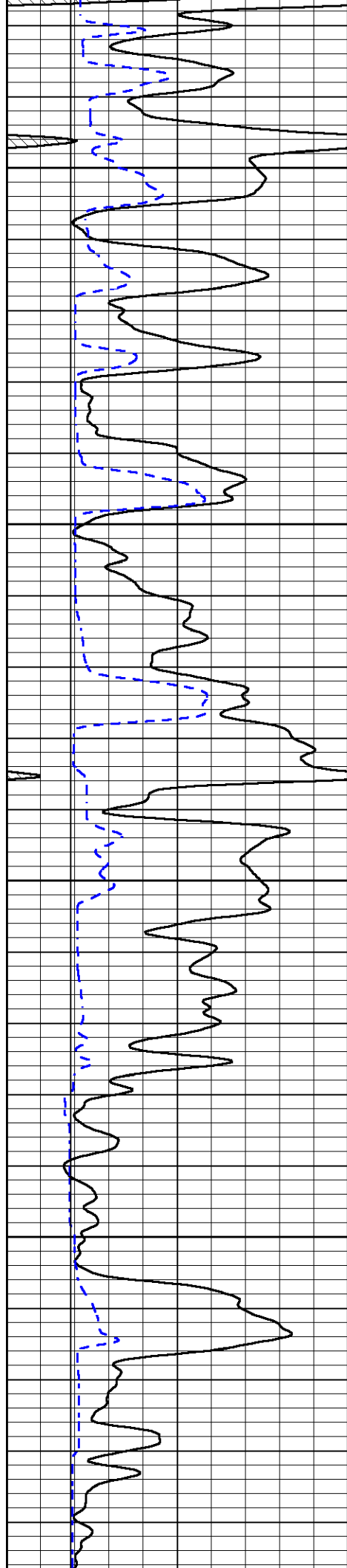


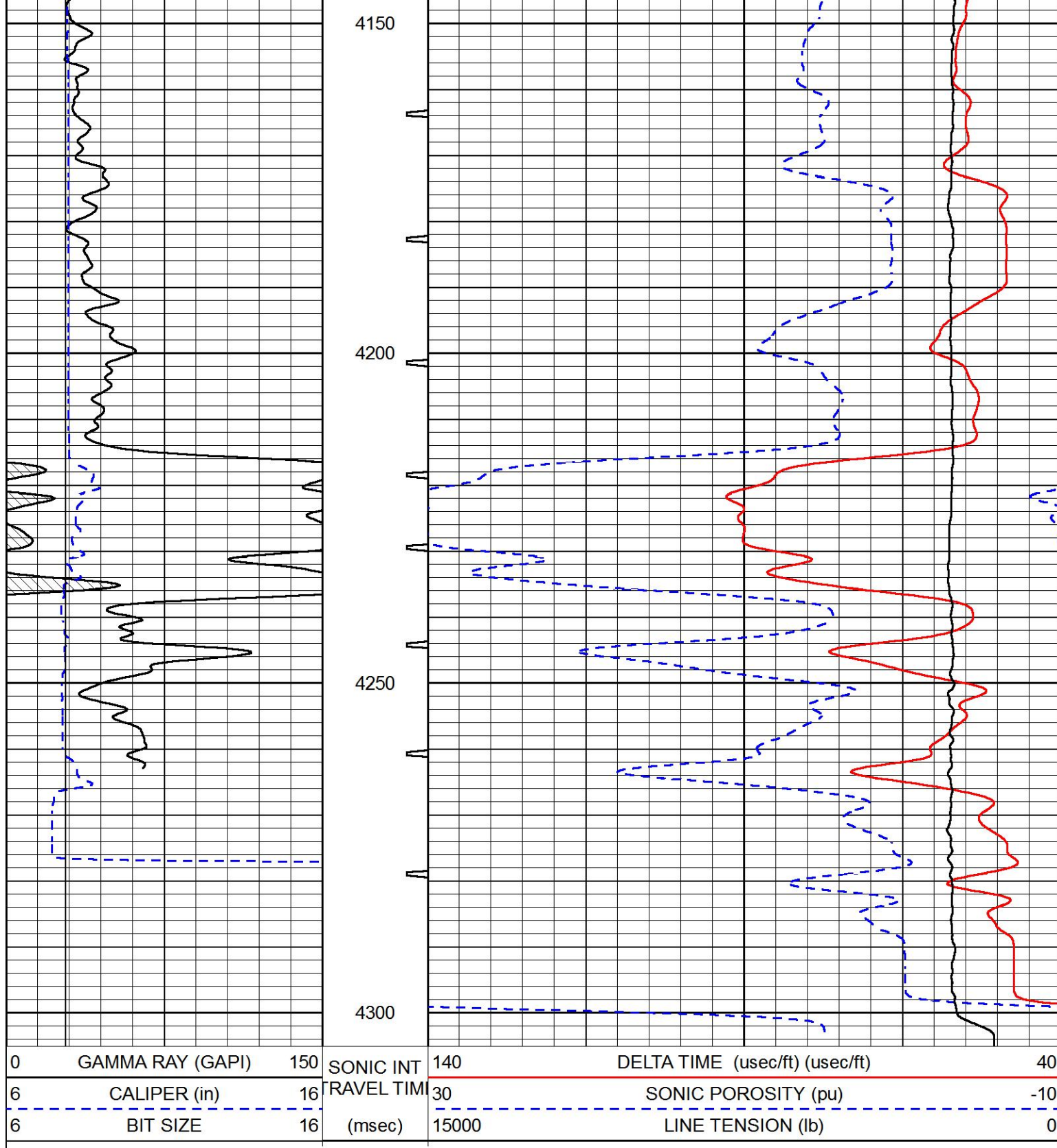












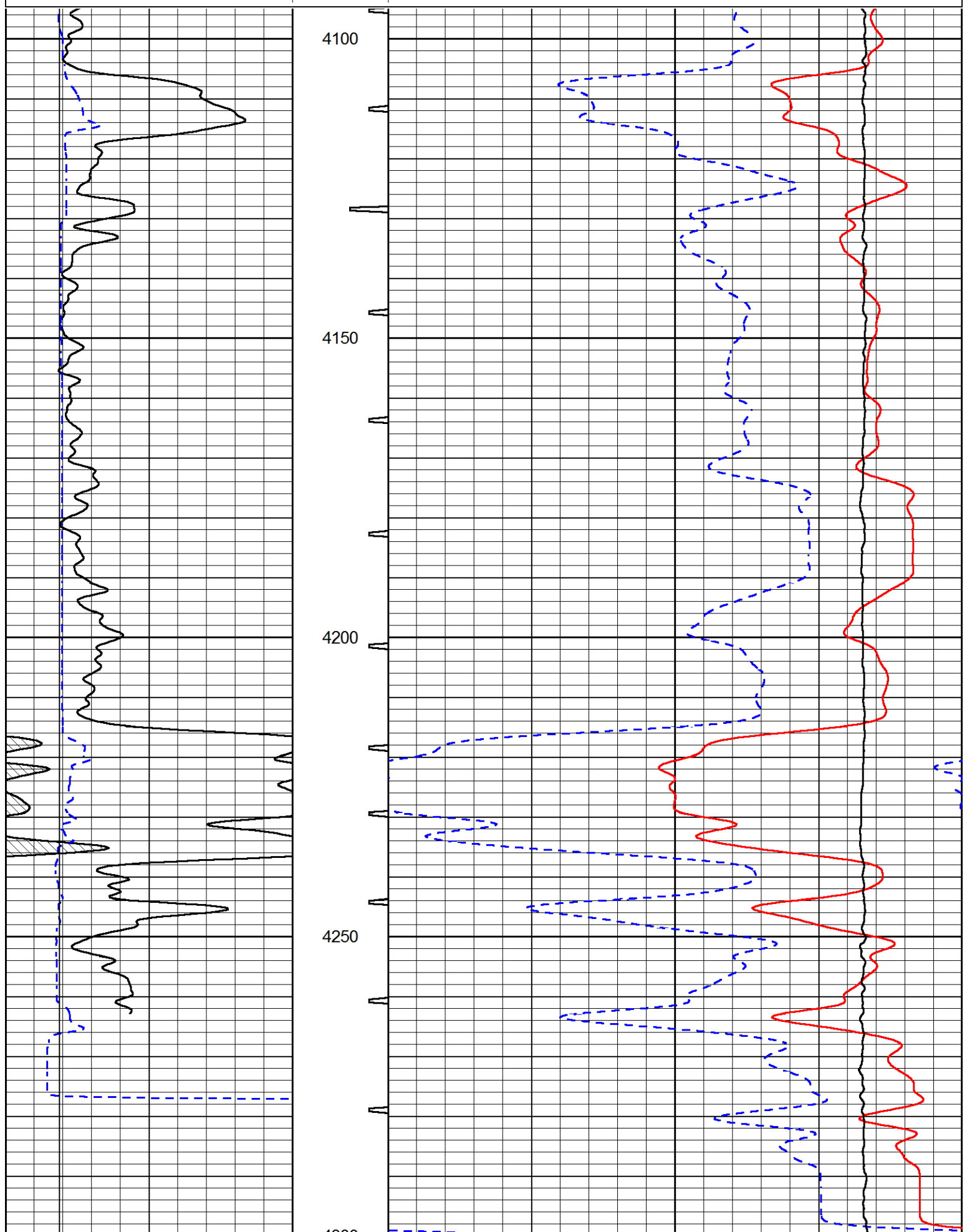


**PIONEER**  
Pioneer Energy Services

# REPEAT SECTION

|                     |                            |
|---------------------|----------------------------|
| Database File       | garner_diamond_h_1.db      |
| Dataset Pathname    | stackml/pass2.1            |
| Presentation Format | sonic                      |
| Dataset Creation    | Tue Aug 04 13:57:18 2020   |
| Charted by          | Depth in Feet scaled 1:240 |

|   |                  |     |                     |       |                      |           |     |
|---|------------------|-----|---------------------|-------|----------------------|-----------|-----|
| 0 | GAMMA RAY (GAPI) | 150 | SONIC INTERVAL      | 140   | DELTA TIME (usec/ft) | (usec/ft) | 40  |
| 6 | CALIPER (in)     | 16  | SONIC POROSITY (pu) | 30    | SONIC POROSITY (pu)  |           | -10 |
| 6 | BIT SIZE         | 16  | (msec)              | 15000 | LINE TENSION (lb)    |           | 0   |



|   |                  |     |                               |       |                                |     |
|---|------------------|-----|-------------------------------|-------|--------------------------------|-----|
|   |                  |     | 4300                          |       |                                |     |
| 0 | GAMMA RAY (GAPI) | 150 | SONIC INTERVAL TIME<br>(msec) | 140   | DELTA TIME (usec/ft) (usec/ft) | 40  |
| 6 | CALIPER (in)     | 16  |                               | 30    | SONIC POROSITY (pu)            | -10 |
| 6 | BIT SIZE         | 16  |                               | 15000 | LINE TENSION (lb)              | 0   |