



Pioneer Energy Services

## Dual Induction Log

API No.

15-065-24006-00-00

Company H & C Oil Operating, Inc.

Well Bakel #30-2

Field Driel

County Graham State

Kansas

Location

NE SW NW NW  
950' FNL / 620' FWL

Sec: 30

Twp: 9S

Rge: 24

Elevation

Permanent Datum Ground Level  
Log Measured From Kelly Bushing 7 Ft. Above Perm. Datum  
Drilling Measured From Kelly Bushing

K.B. 2565  
D.F. 2565  
G.L. 2558

Date

2/28/2014

Run Number

One

Depth Driller

4175

Depth Logger

4176

Bottom Logged Interval

4175

Top Log Interval

250

Casing Driller

8.625 @ 263

Casing Logger

263

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

1400

Density / Viscosity

9.2 55

pH / Fluid Loss

10.0 6.0

Source of Sample

Flowline

Rm @ Meas. Temp

0.90 @ 54

Rmf @ Meas. Temp

0.68 @ 54

Rmc @ Meas. Temp

1.22 @ 54

Source of Rmf / Rmc

Charts

Rm @ BHT

0.41 @ 118

Operating Rig Time

4 Hours

Max Rec. Temp. F

118

Equipment Number

15

Location

Hays

Recorded By

R. Barnhart

Witnessed By

Marc Downing

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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

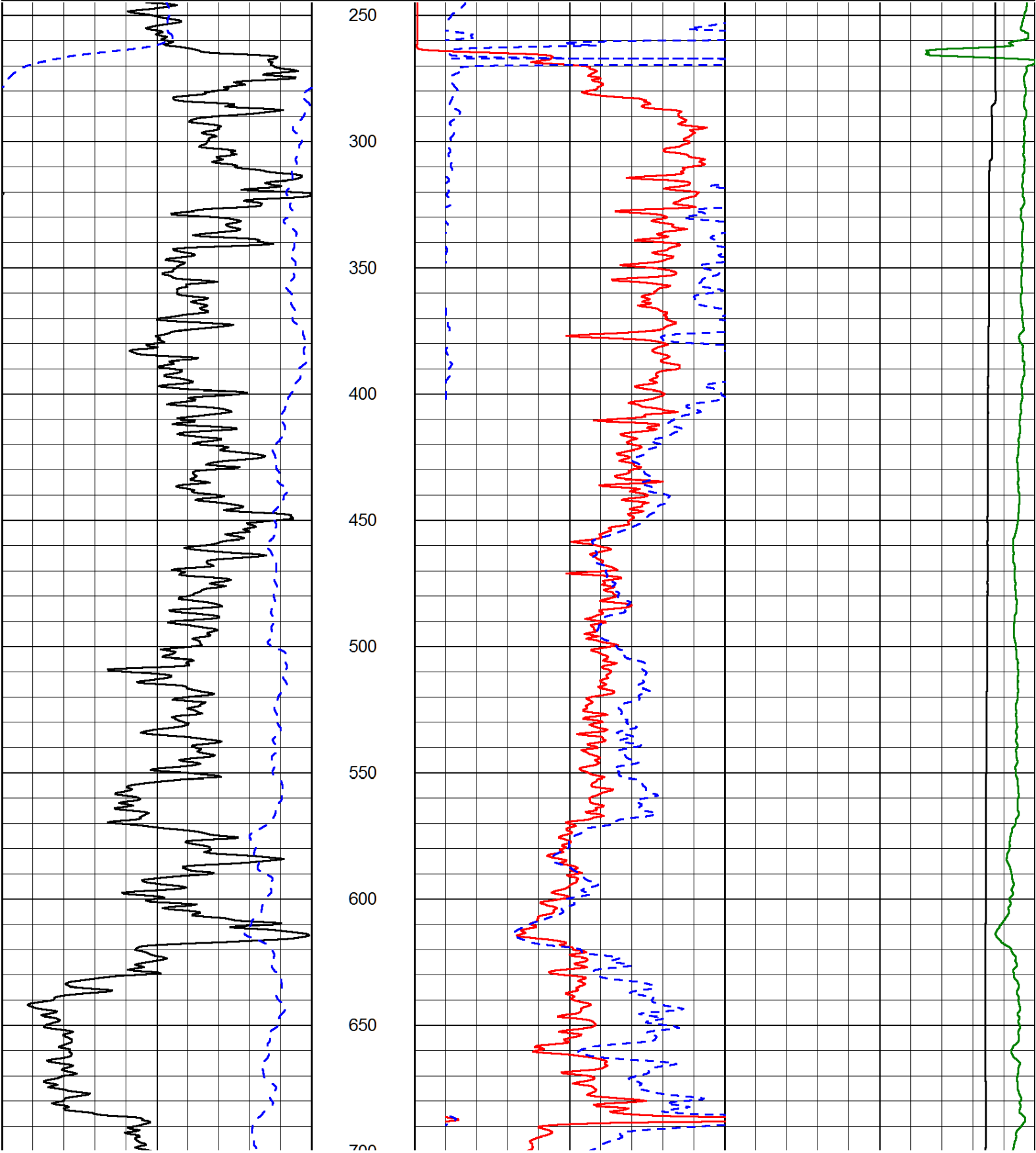
Thank you for using Log-Tech, Inc.  
(785) 625-3858

Wakeeney, KS:  
N to Redline Rd., 10W, 1/2N, E into at tank batteries

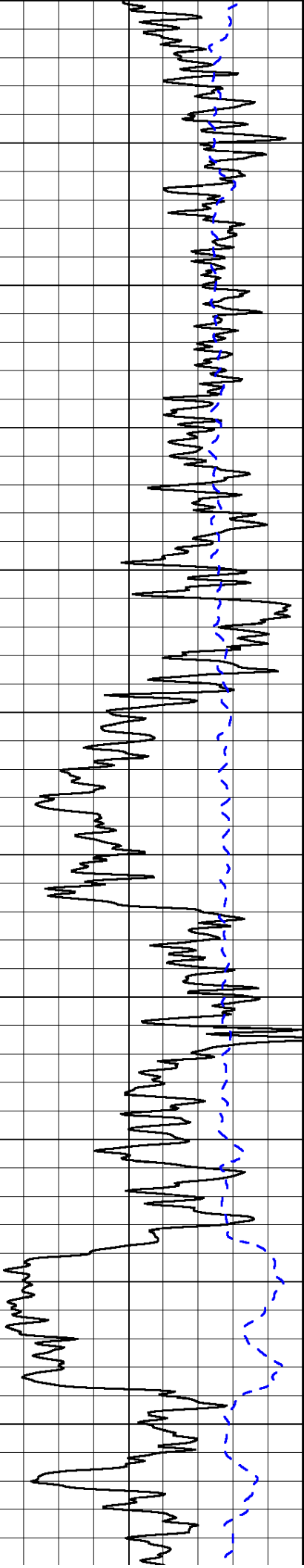
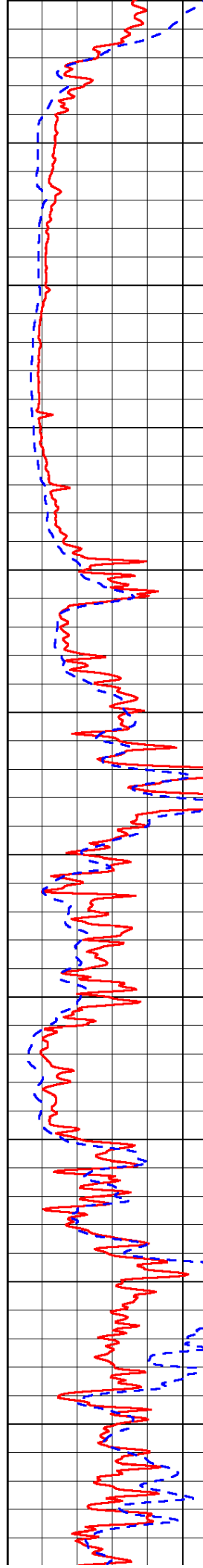
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Presentation Format: dil2in  
Dataset Creation: Fri Feb 28 21:08:19 2014  
Charted by: Depth in Feet scaled 1:600

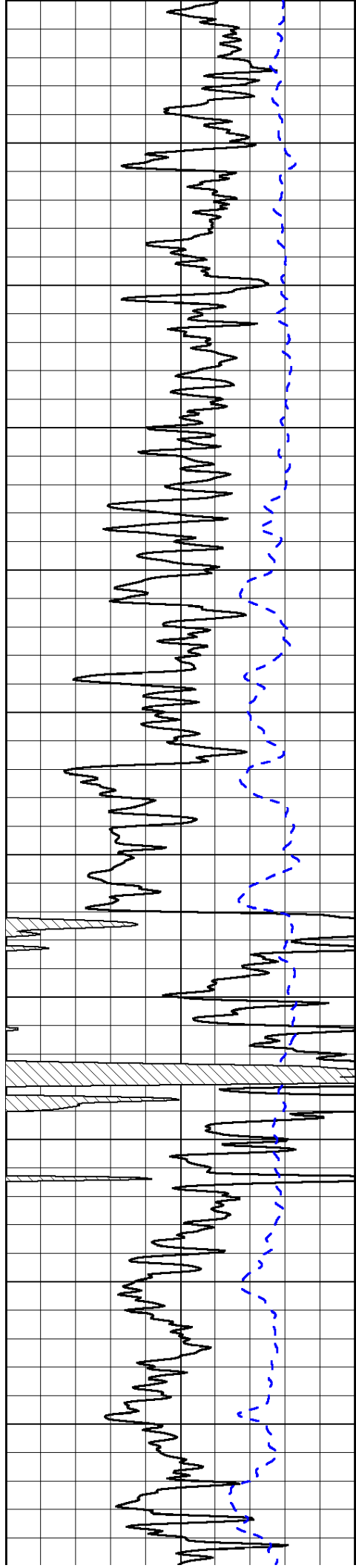
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|------|------------------|-----|
| 0    | Gamma Ray (GAPI) | 150 |
| -200 | SP (mV)          | 0   |

|                     |                             |     |
|---------------------|-----------------------------|-----|
| 0                   | Shallow Resistivity (Ohm-m) | 50  |
| 0                   | Deep Resistivity (Ohm-m)    | 50  |
| 1000                | Conductivity (Ohm-m)        | 0   |
| 15000               | Line Tension (lb)           | 0   |
| Shallow Resistivity |                             |     |
| 50                  | (Ohm-m)                     | 500 |
| 50                  | Deep Resistivity (Ohm-m)    | 500 |

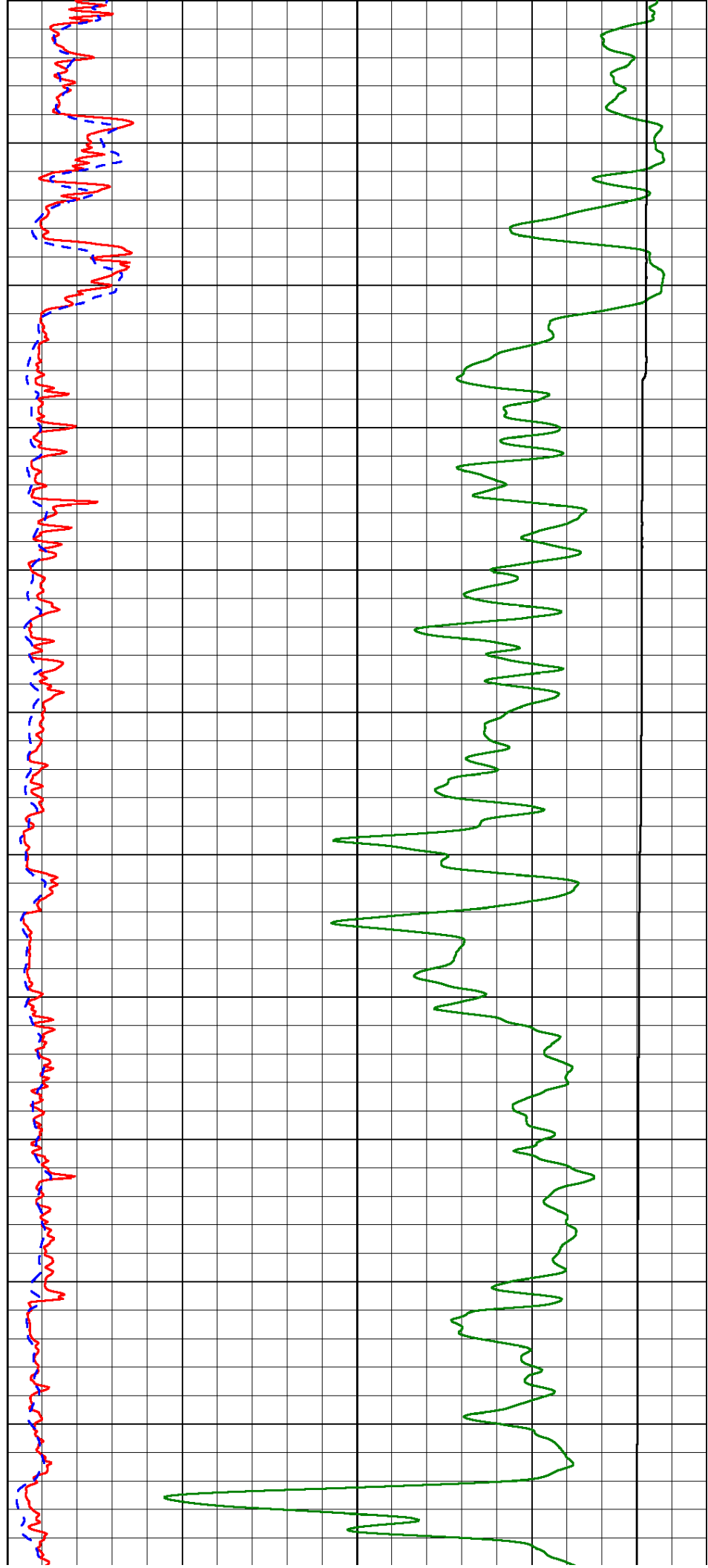


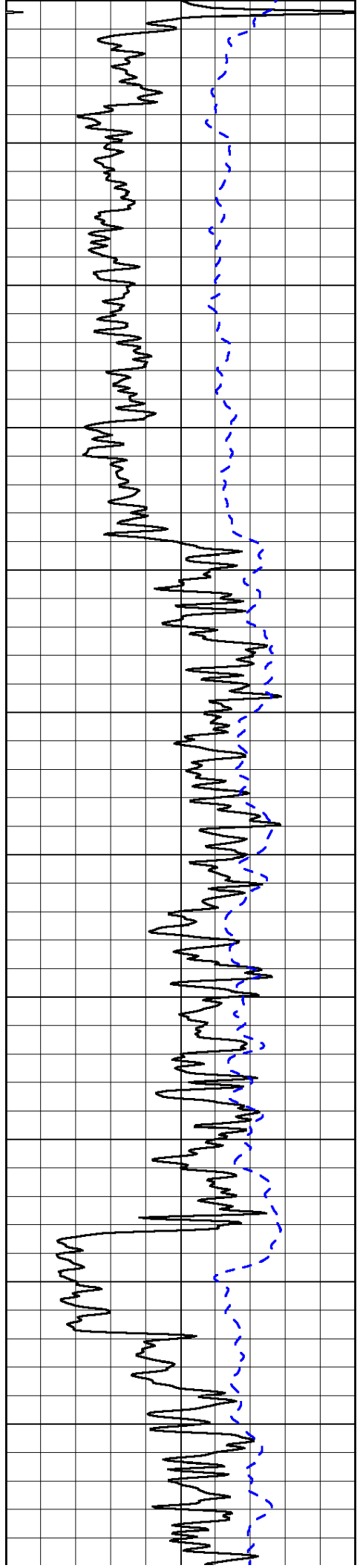
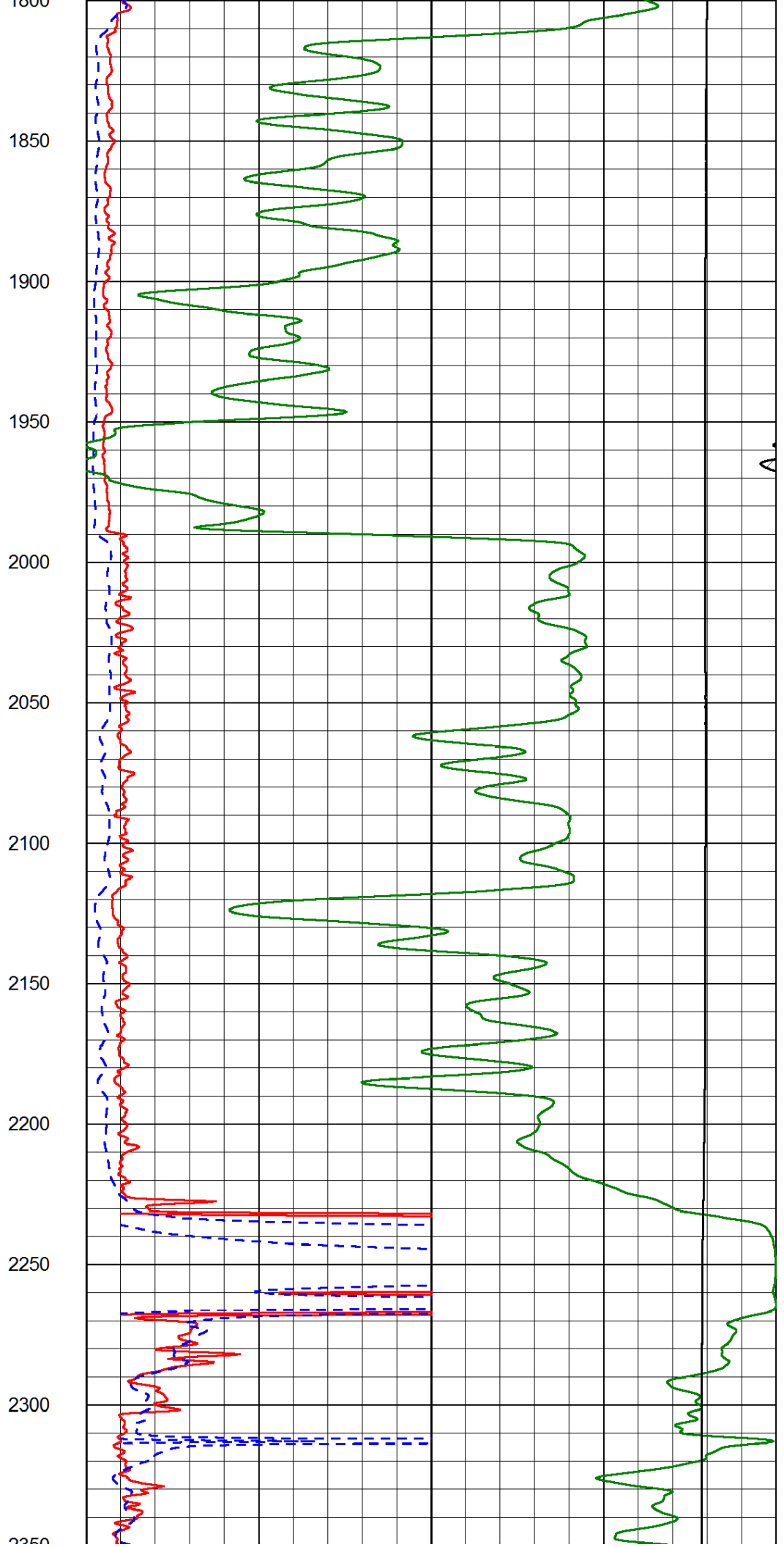
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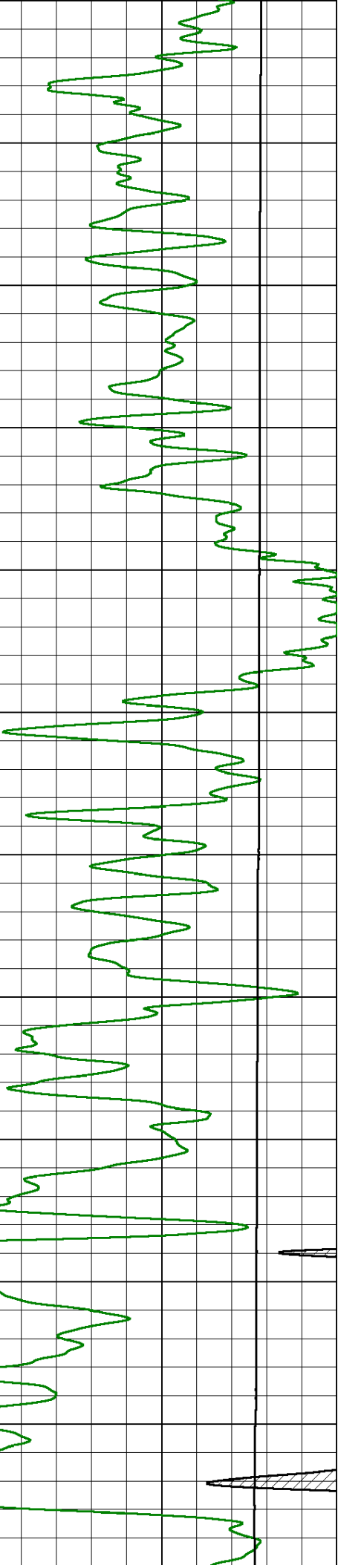
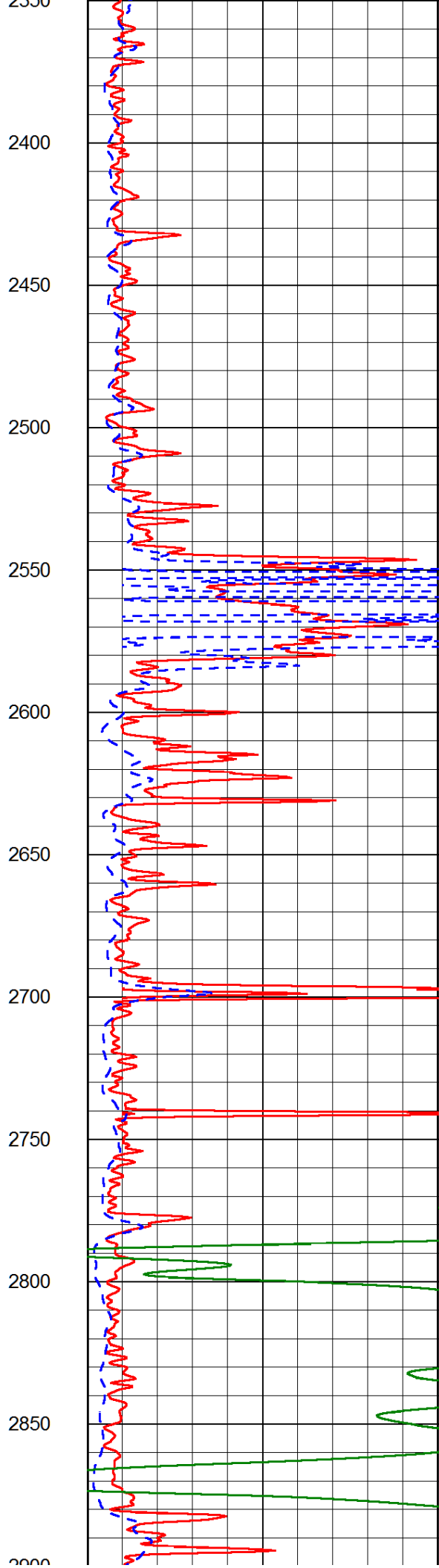
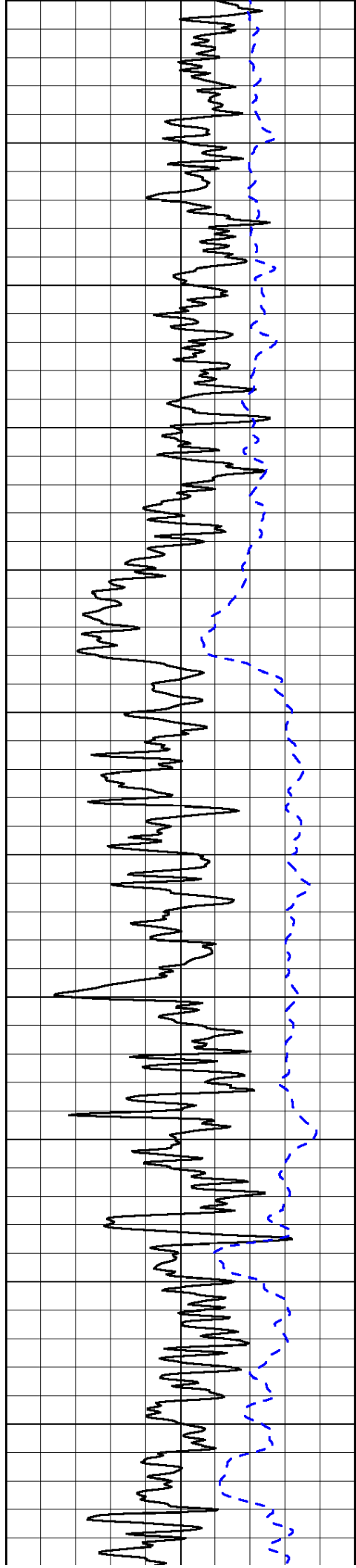


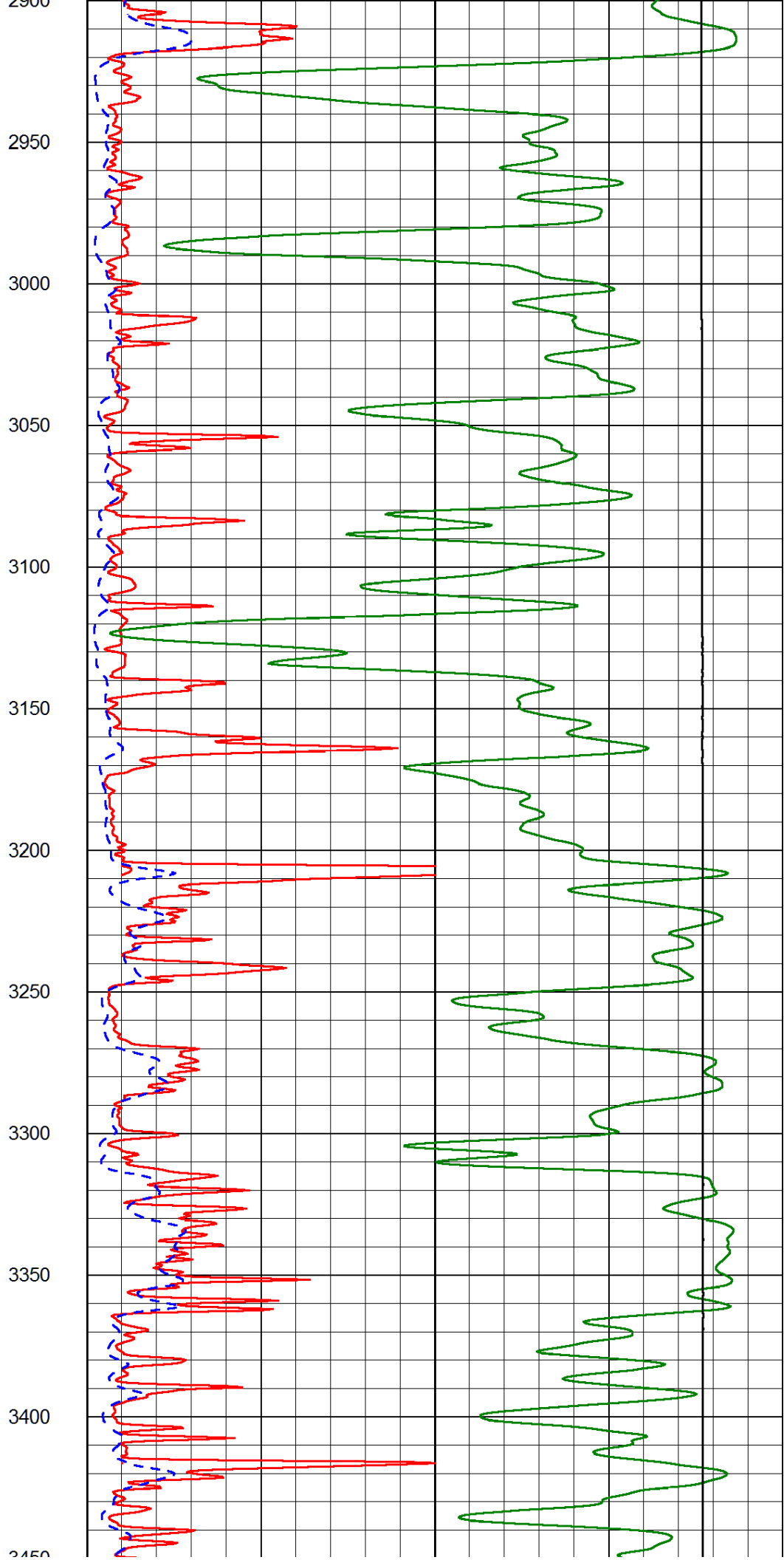
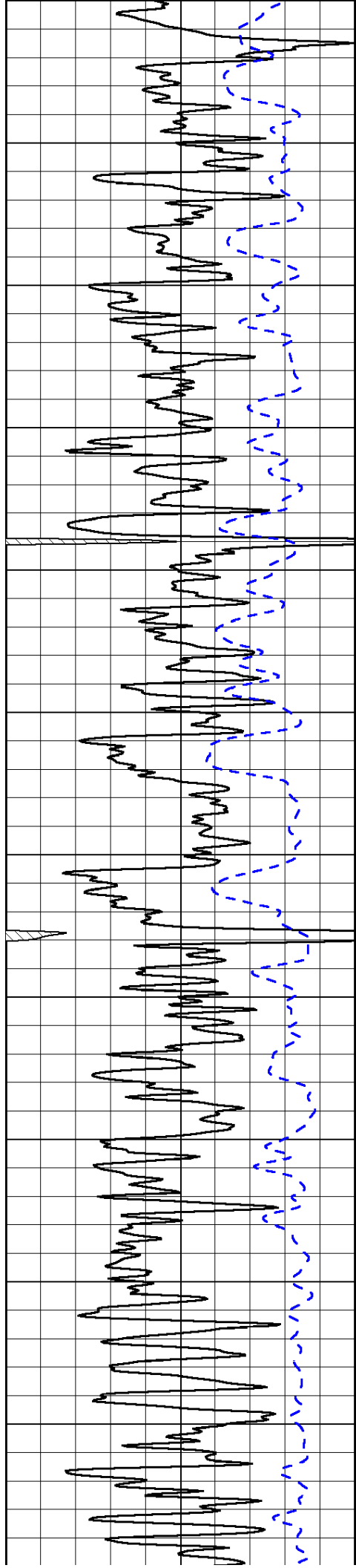


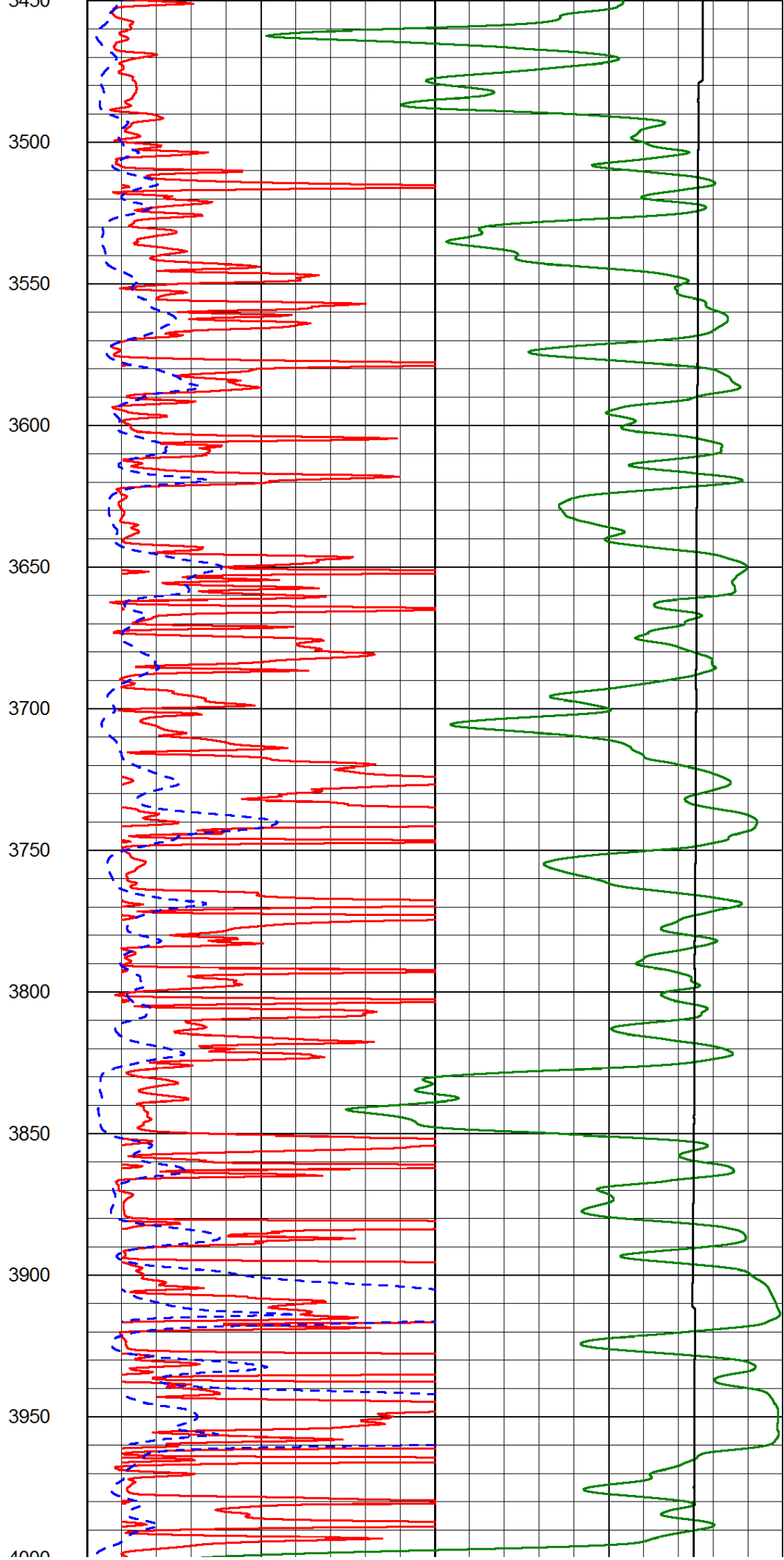
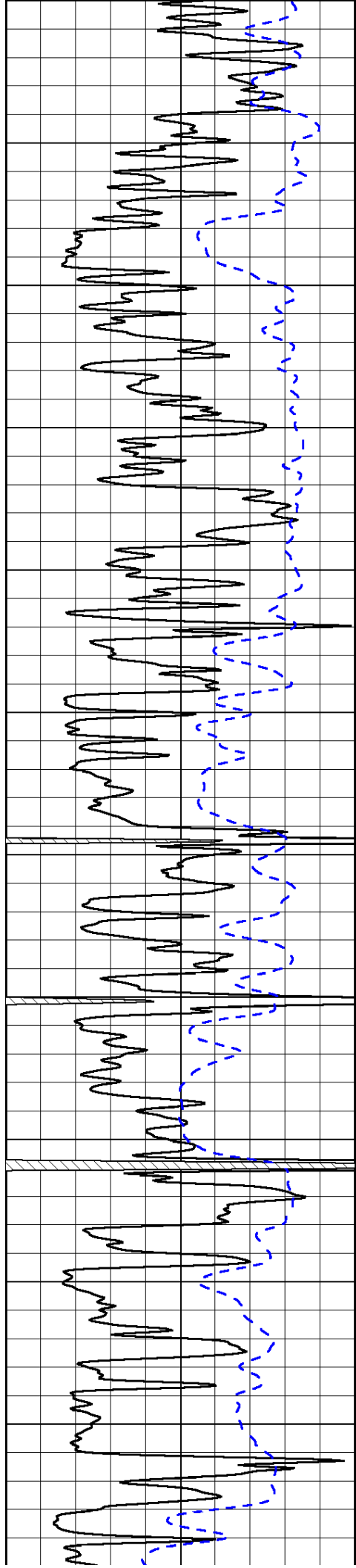
1250  
1300  
1350  
1400  
1450  
1500  
1550  
1600  
1650  
1700  
1750  
1800

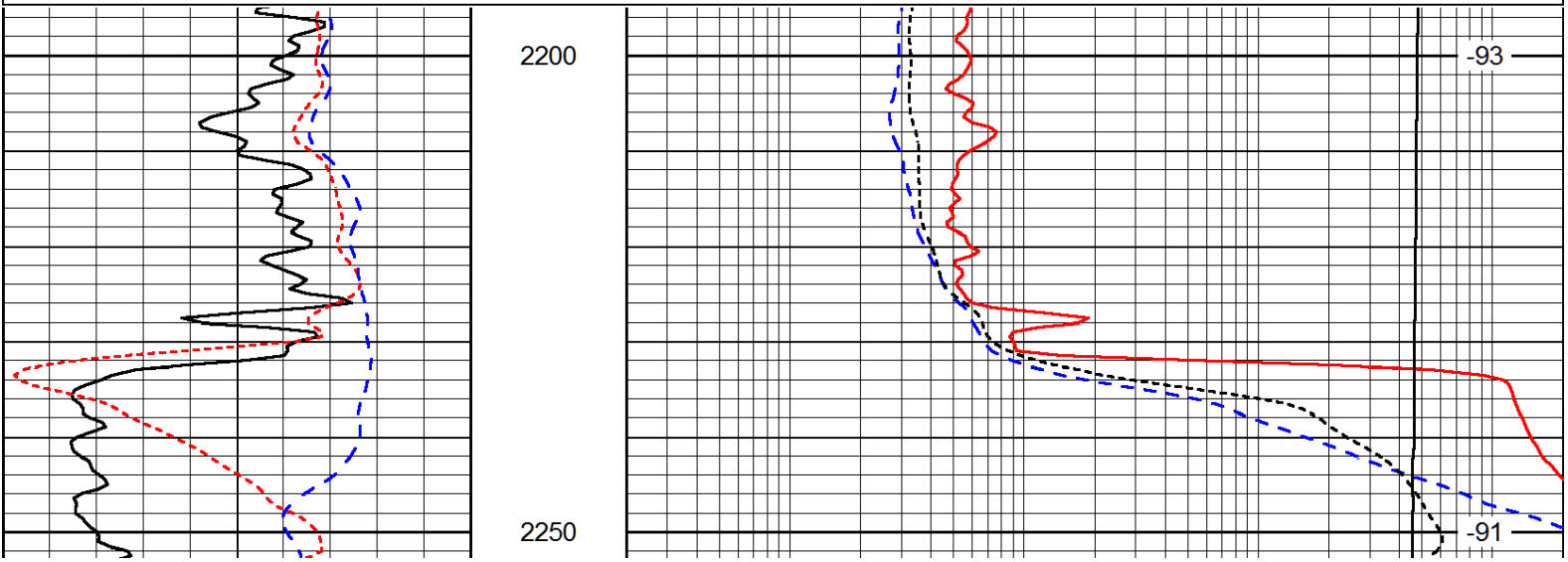
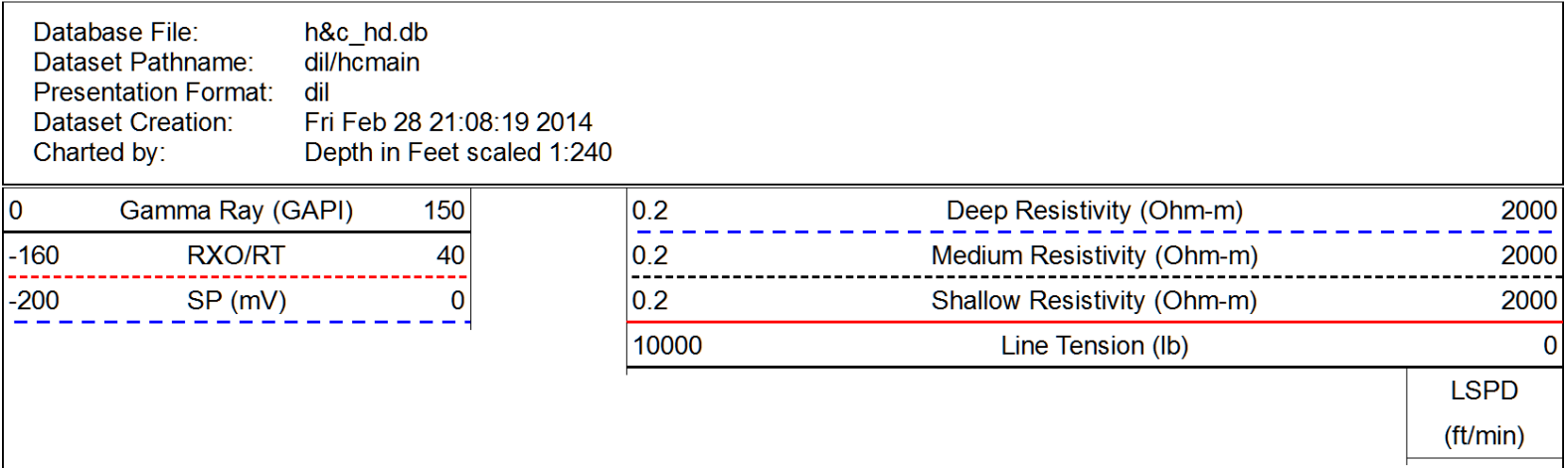
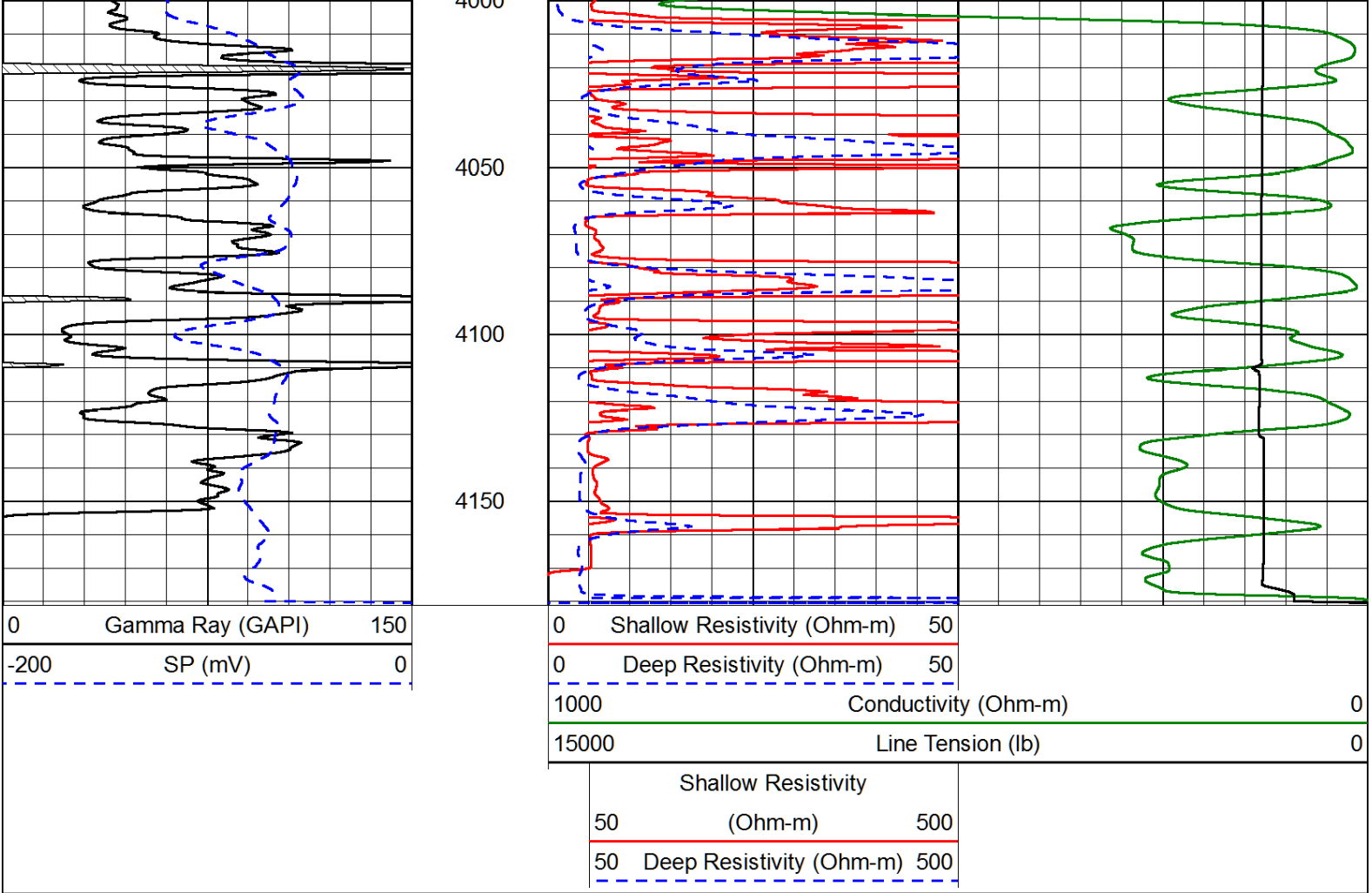


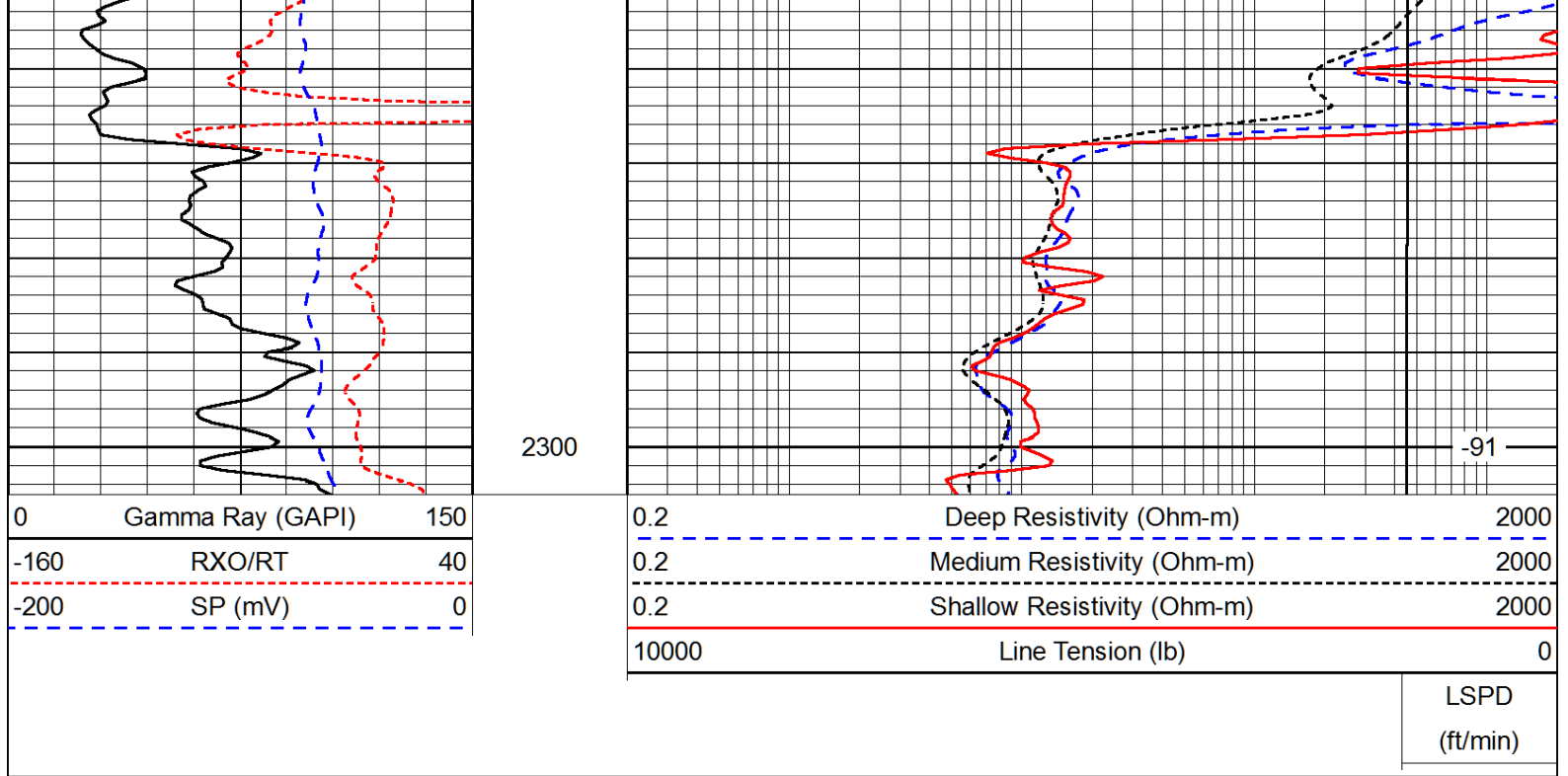




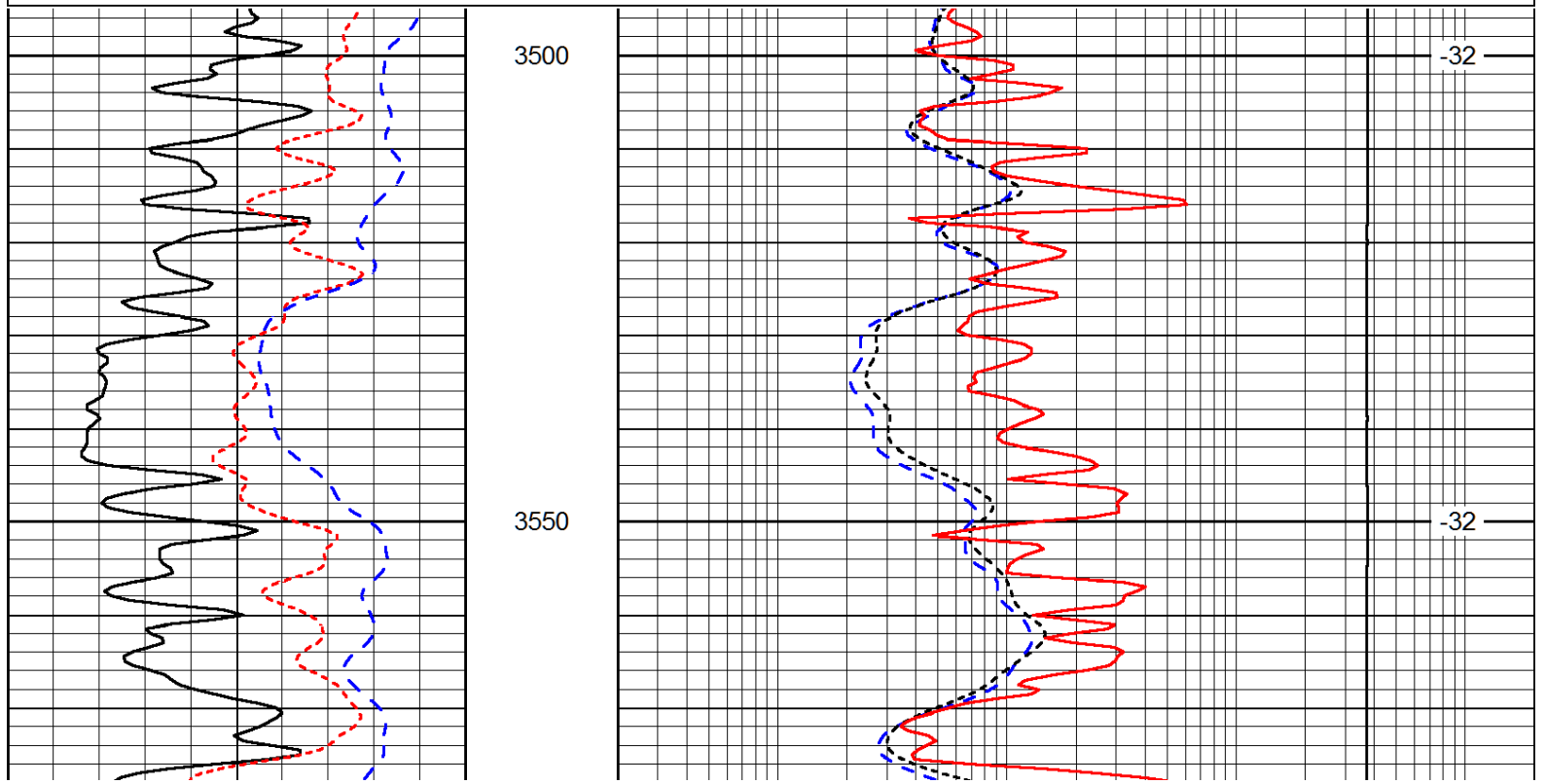
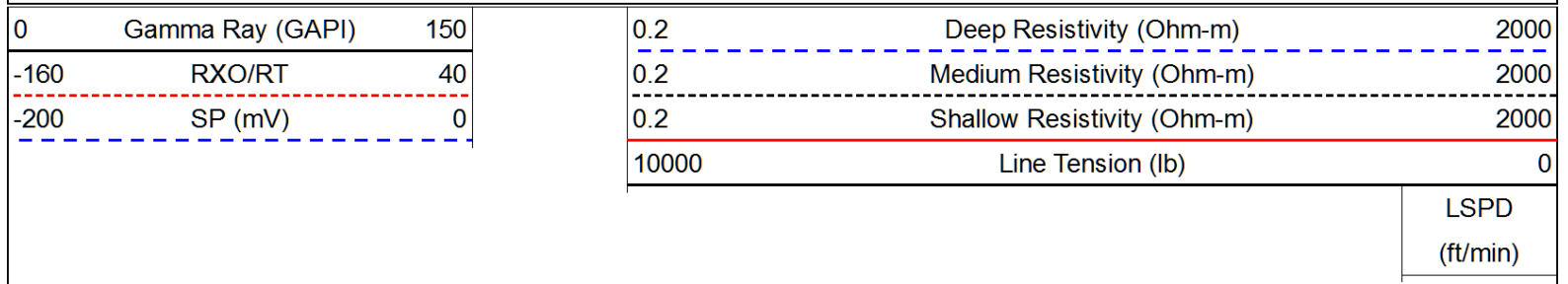


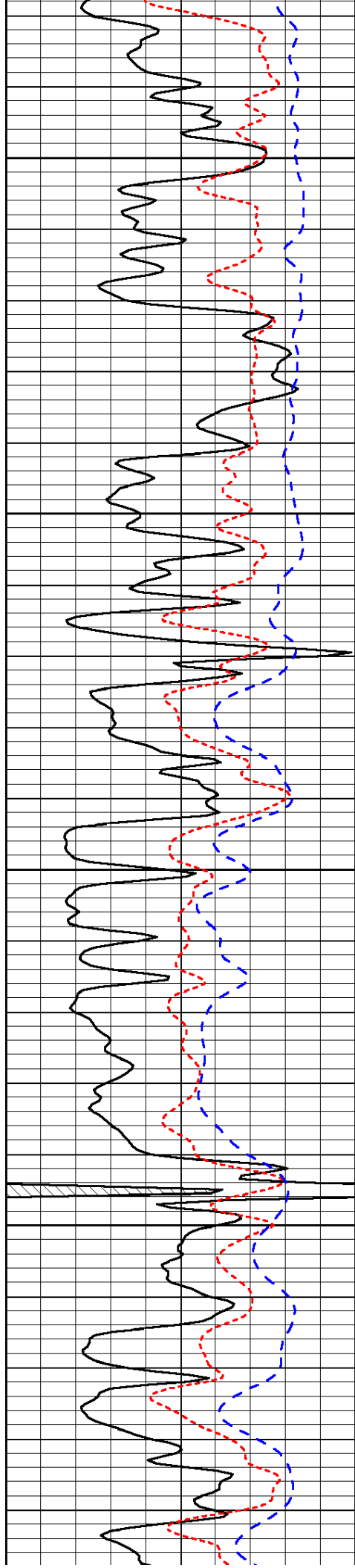






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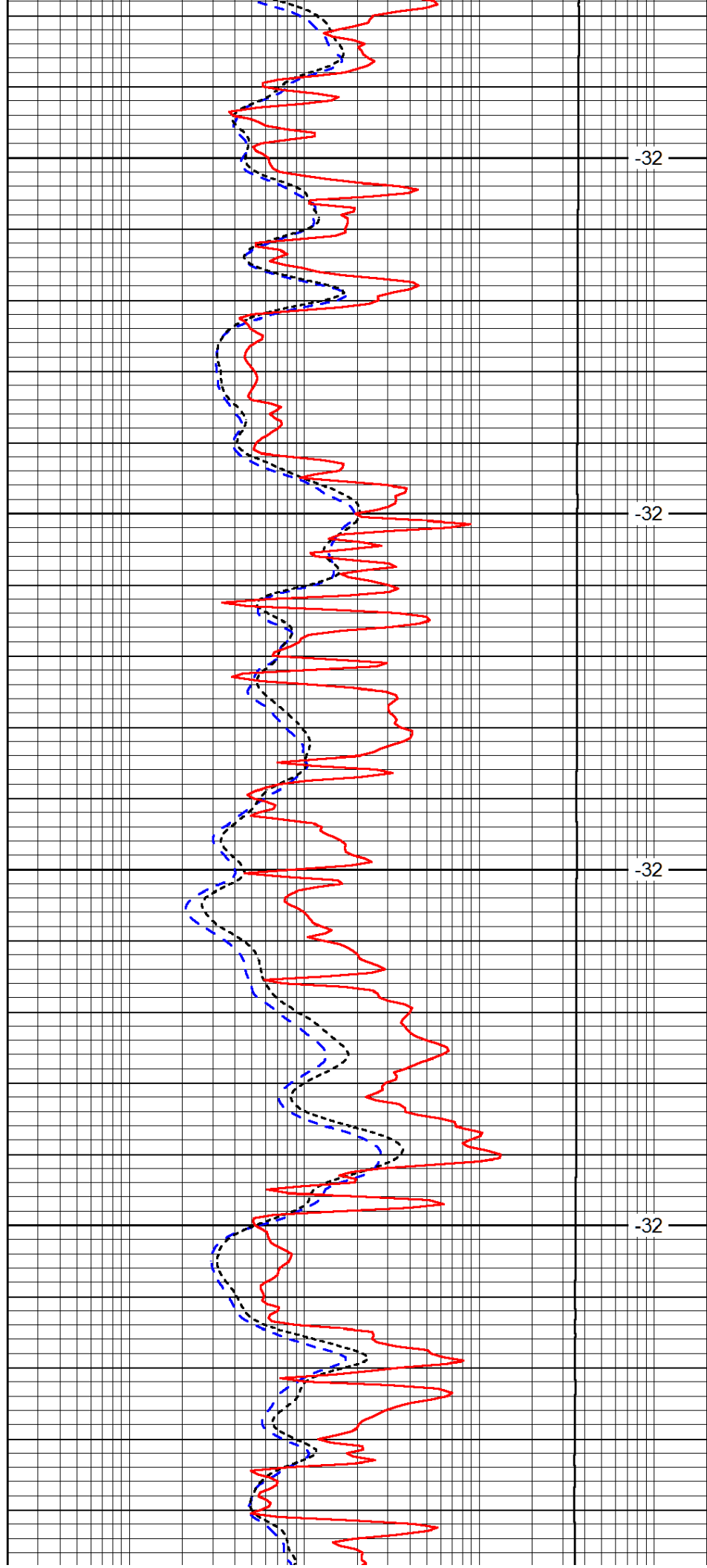


3600

3650

3700

3750

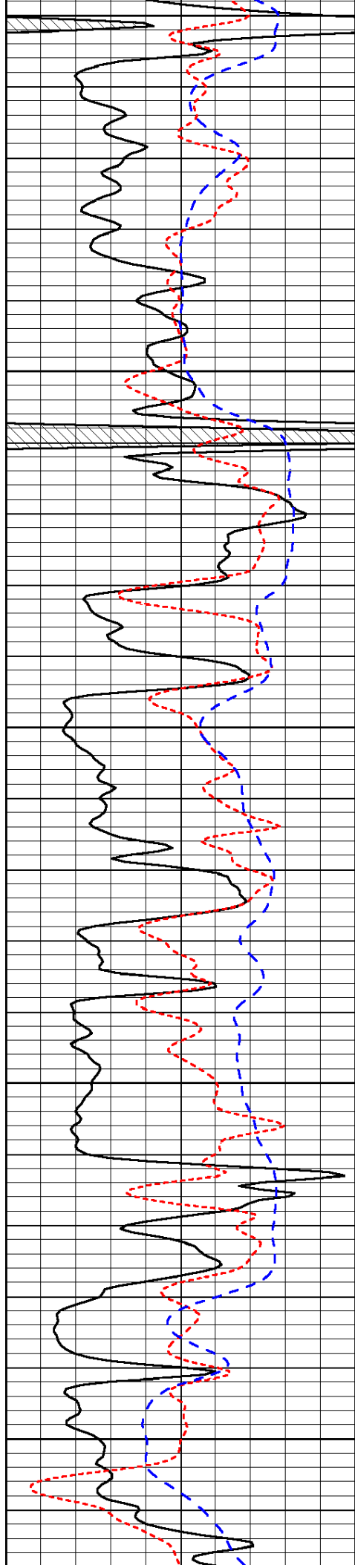


-32

-32

-32

-32



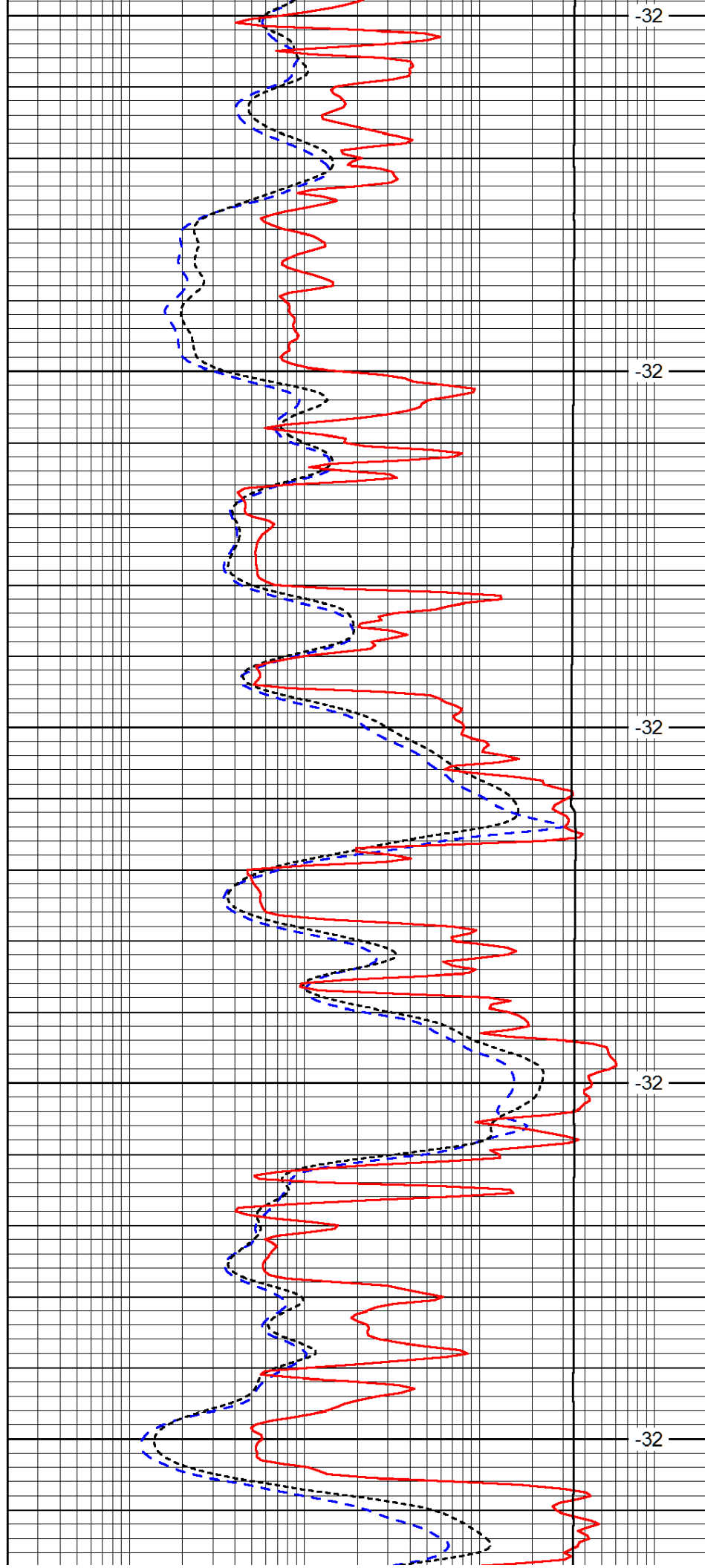
3800

3850

3900

3950

4000



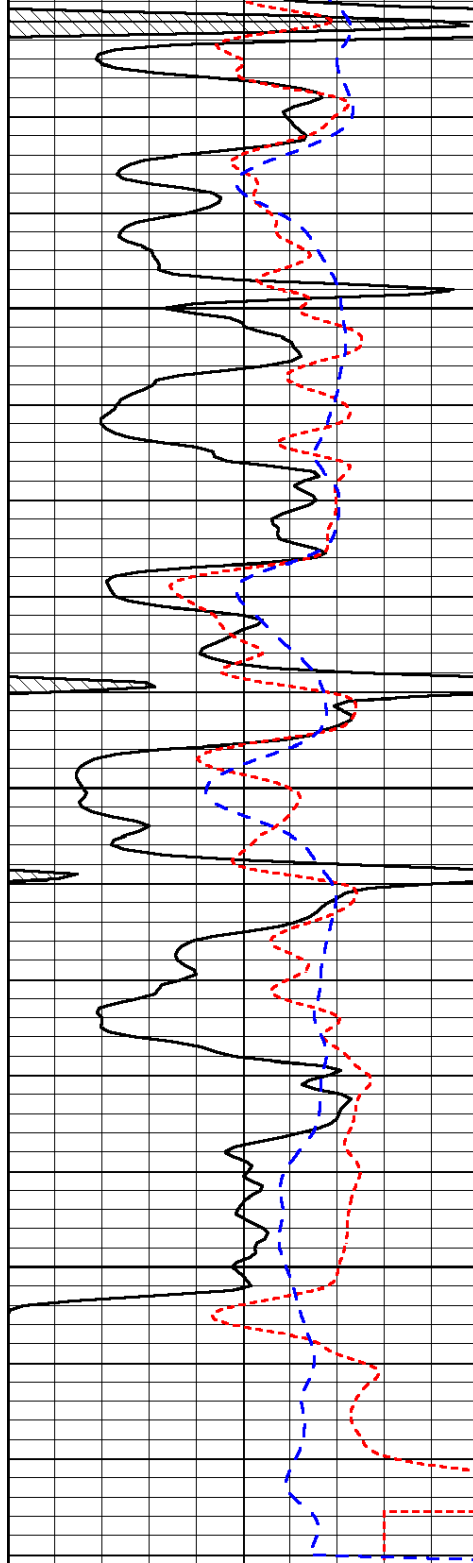
-32

-32

-32

-32

-32

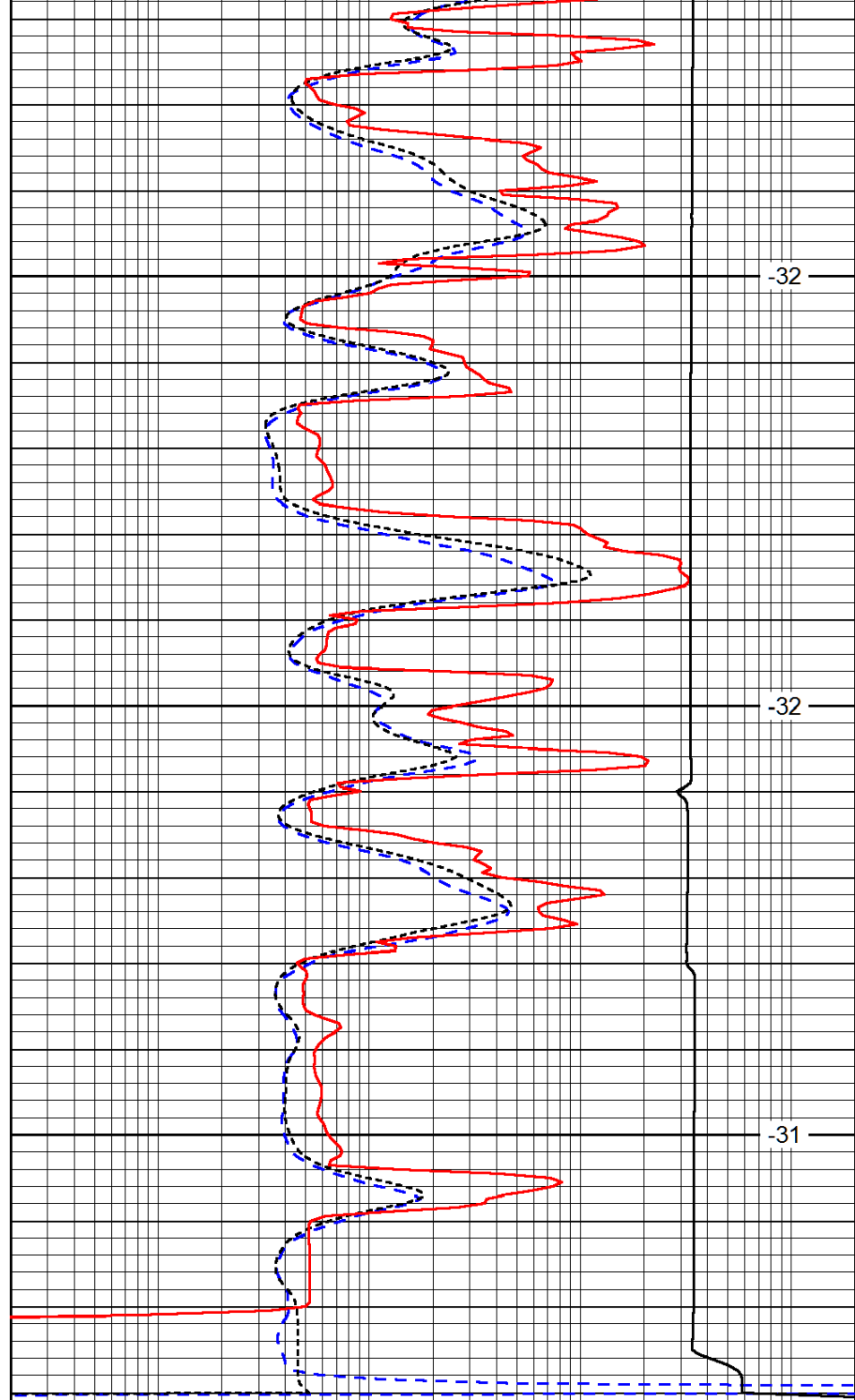


|      |                  |     |
|------|------------------|-----|
| 0    | Gamma Ray (GAPI) | 150 |
| -160 | RXO/RT           | 40  |
| -200 | SP (mV)          | 0   |

4050

4100

4150



|       |                             |      |
|-------|-----------------------------|------|
| 0.2   | Deep Resistivity (Ohm-m)    | 2000 |
| 0.2   | Medium Resistivity (Ohm-m)  | 2000 |
| 0.2   | Shallow Resistivity (Ohm-m) | 2000 |
| 10000 | Line Tension (lb)           | 0    |

LSPD  
(ft/min)