



## Dual Induction Log

Pioneer Energy Services

API No.

15-063-22,077-00-00

Company H&C Oil Operating, Inc.  
Well Bentley No.36-2  
Field Shanline Northeast  
County Gove State Kansas

Location

500' FSL & 1750' FEL

Sec: 36

Twp: 15S

Rge: 28W

Other Services  
CNL/CDL  
MEL

Elevation

K.B. 2521  
D.F.  
G.L. 2510

Permanent Datum  
Log Measured From Kelly Bushing  
Drilling Measured From Kelly Bushing

Ground Level  
Elevation 2510  
11 Ft. Above Perm. Datum

Date

1/26/2013

Run Number

One

Depth Driller

4400

Depth Logger

4398

Bottom Logged Interval

4397

Top Log Interval

250

Casing Driller

8.625 @ 266

Casing Logger

266

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity,ppm CL

3,000

Density / Viscosity

9.3 62

pH / Fluid Loss

9.5 8.8

Source of Sample

Flowline

Rm @ Meas. Temp

.7 @ 56

Rmf @ Meas. Temp

.53 @ 56

Rmc @ Meas. Temp

.95 @ 56

Source of Rmf / Rmc

Charts

Rm @ BHT

.33 @ 120

Operating Rig Time

4 Hours

Max Rec. Temp. F

120

Equipment Number

17

Location

Hays

Recorded By

C. Desaire

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.

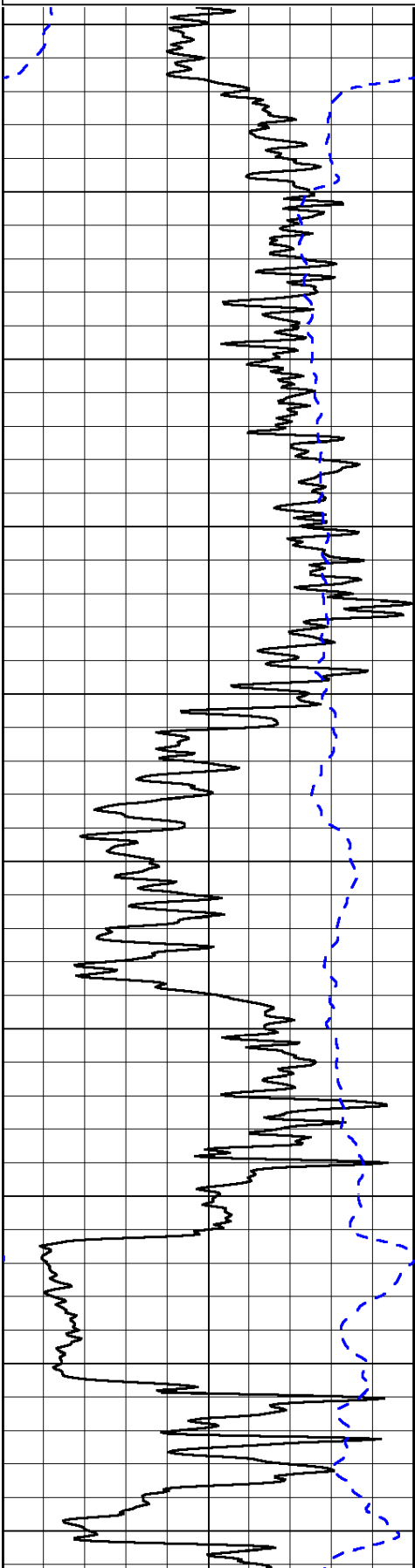
### Comments

Thank you for using Pioneer Energy Services  
www.pioneerres.com  
785 625 3858

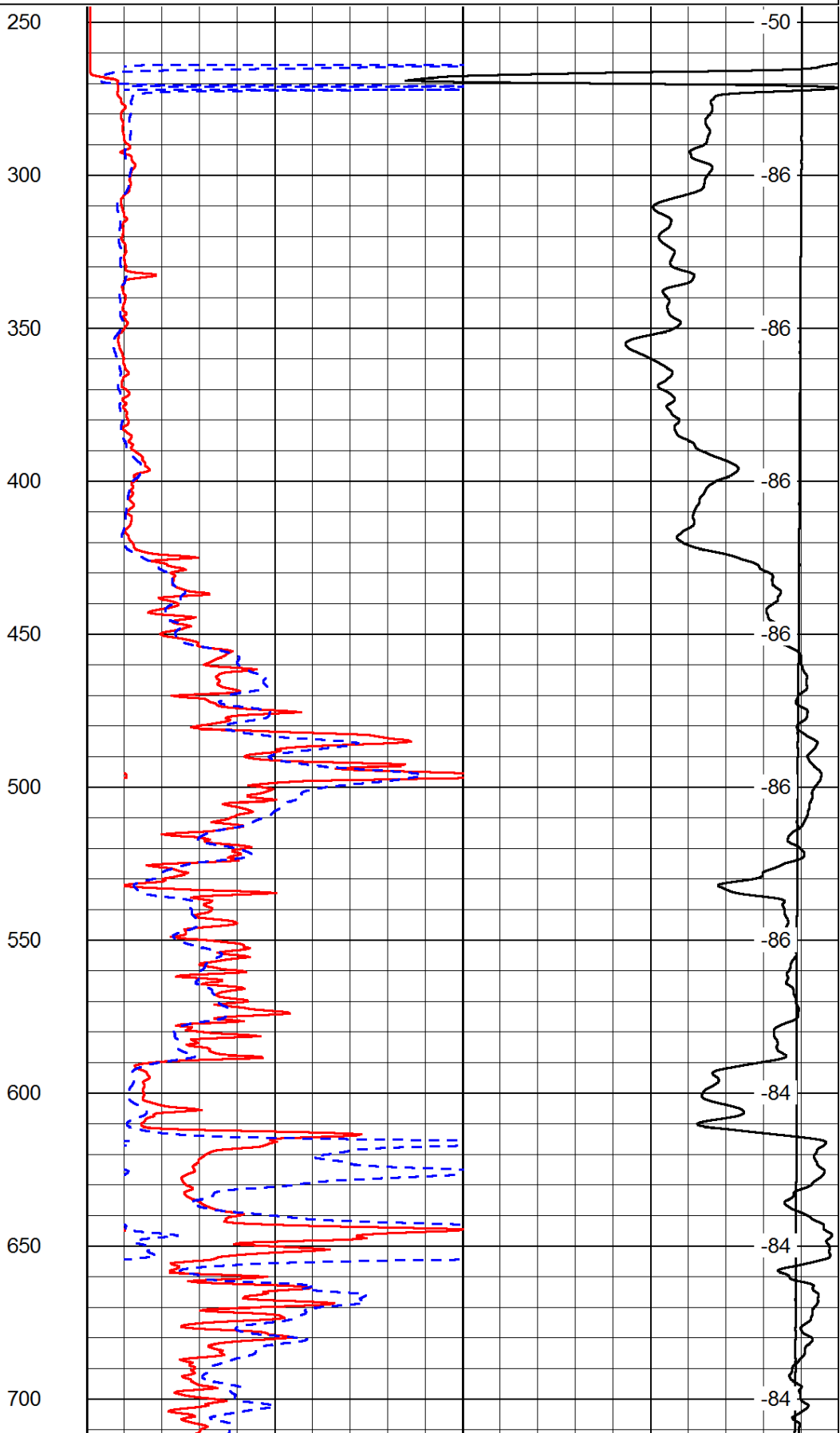
Pendennis KS, 2 1/2 W to Pawnee Rd,  
5 1/4 N, 1/4 W, N Into

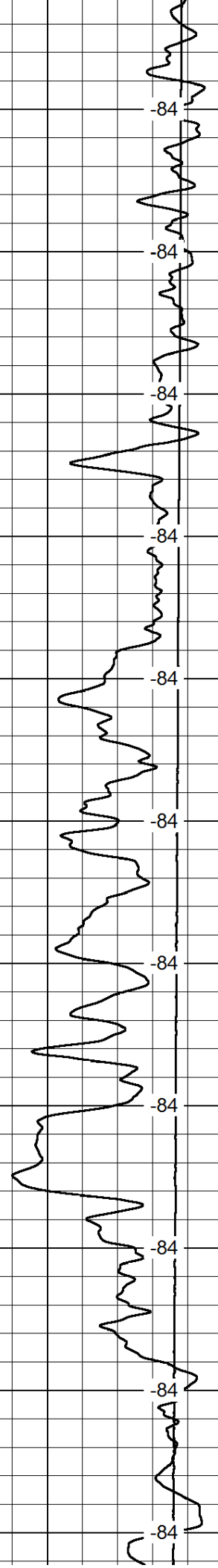
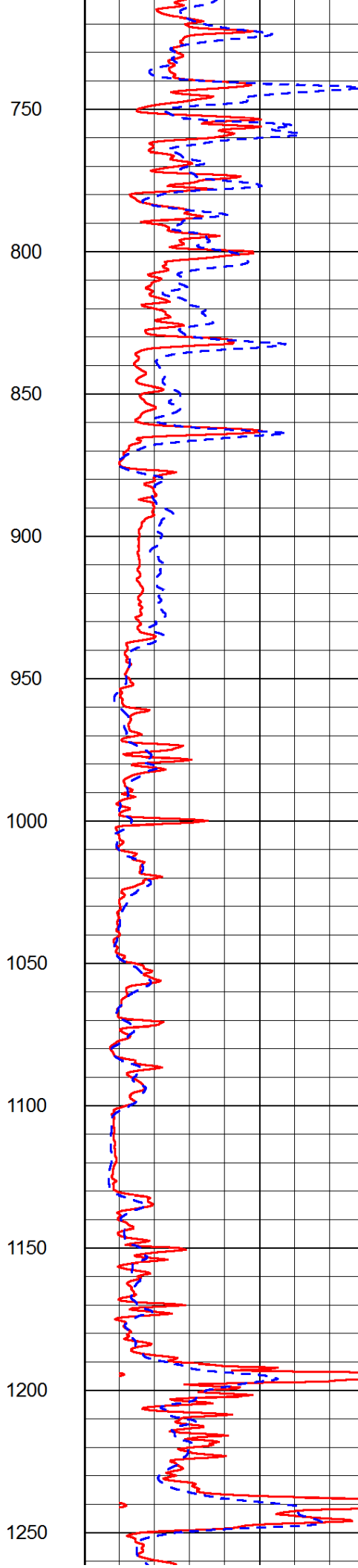
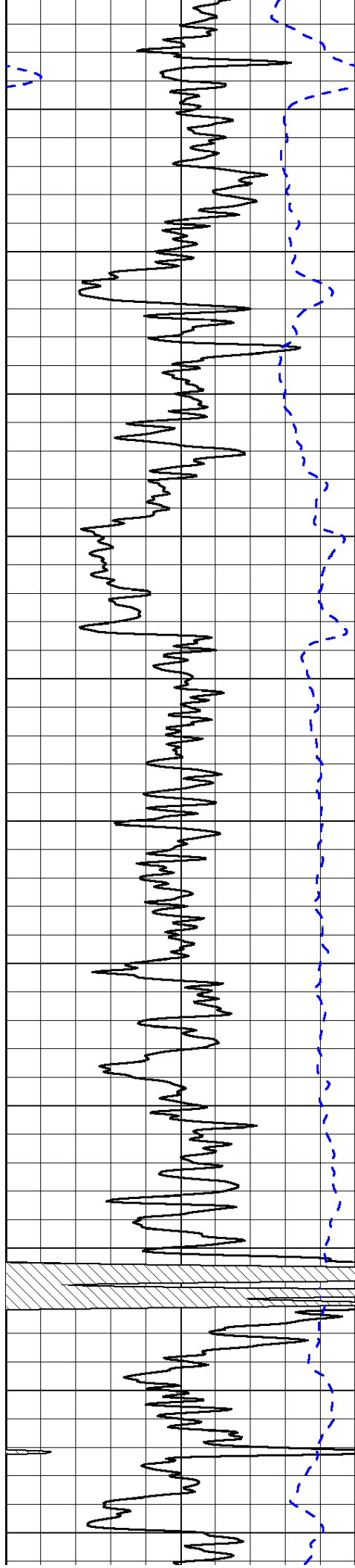
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Presentation Format: dil2in  
Dataset Creation: Sat Jan 26 12:44:16 2013  
Charted by: Depth in Feet scaled 1:600

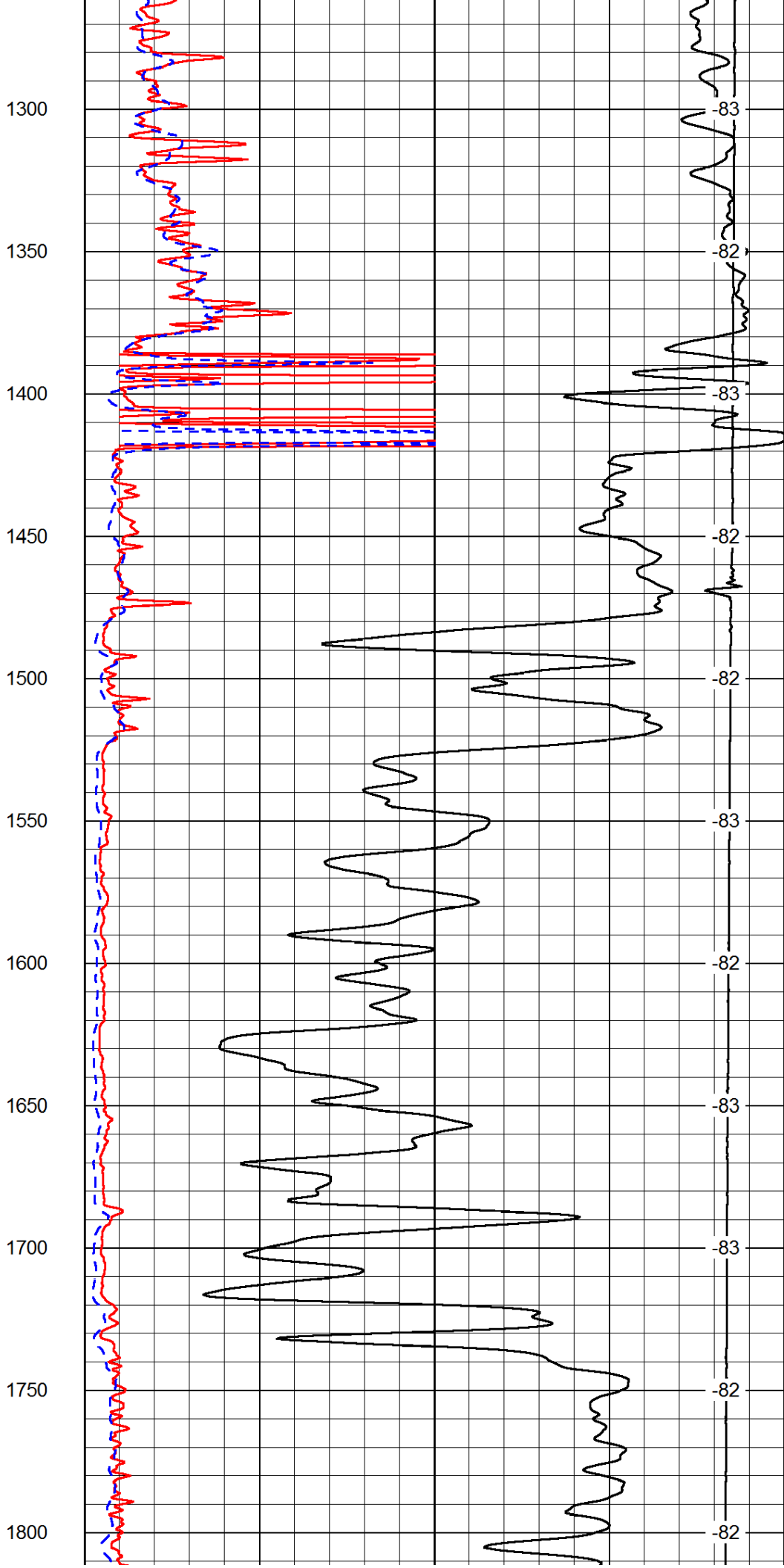
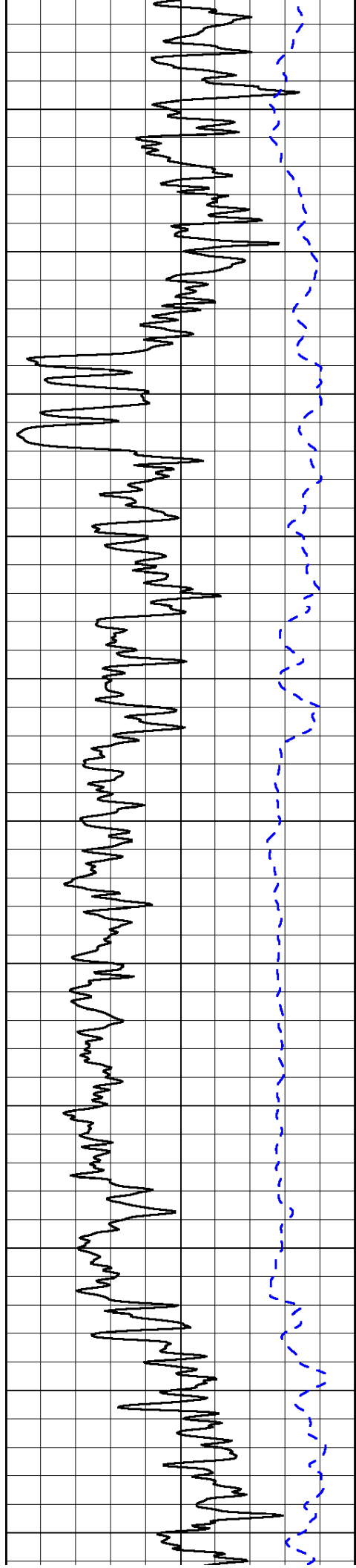
|      |           |     |
|------|-----------|-----|
| 0    | Gamma Ray | 150 |
| -200 | SP (mV)   | 0   |

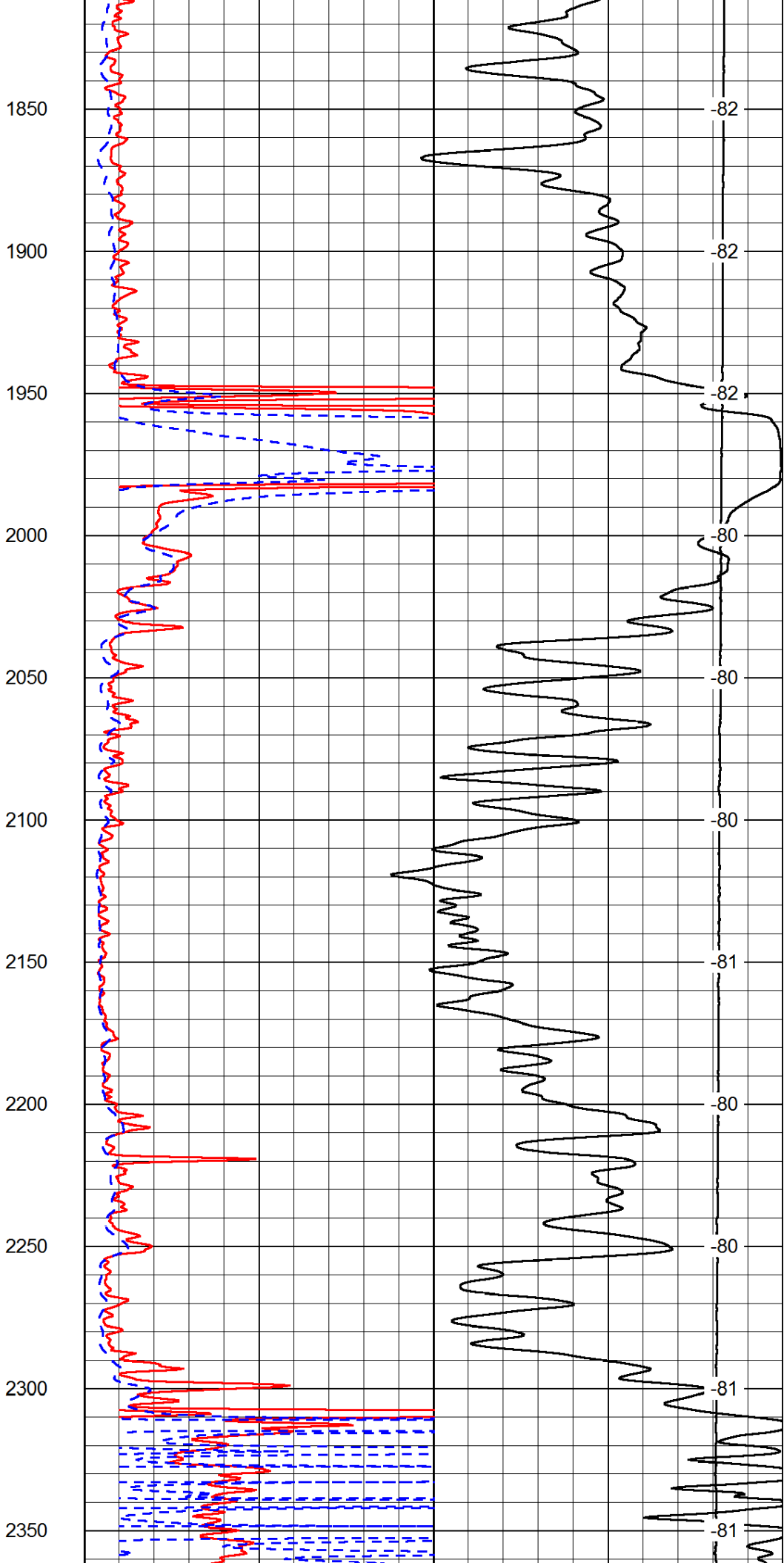
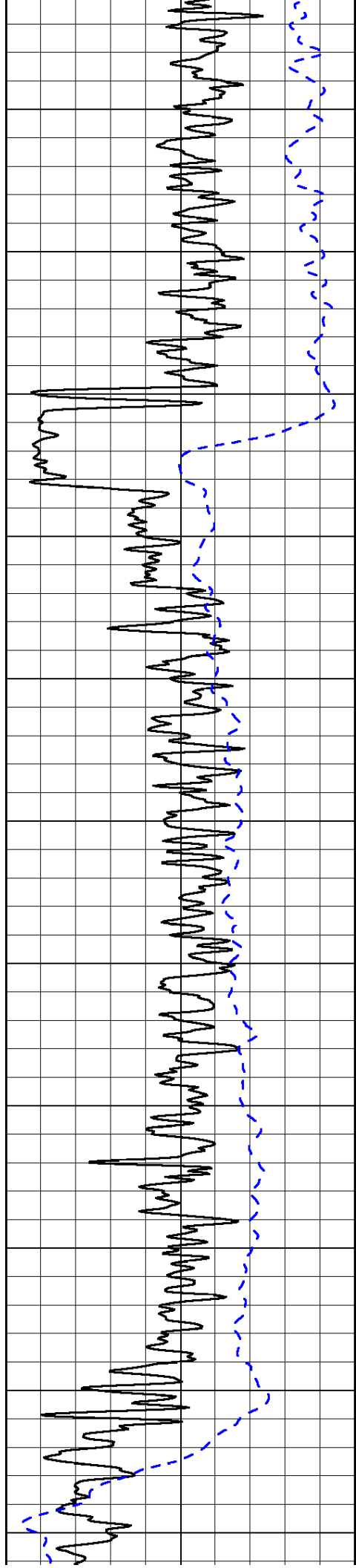


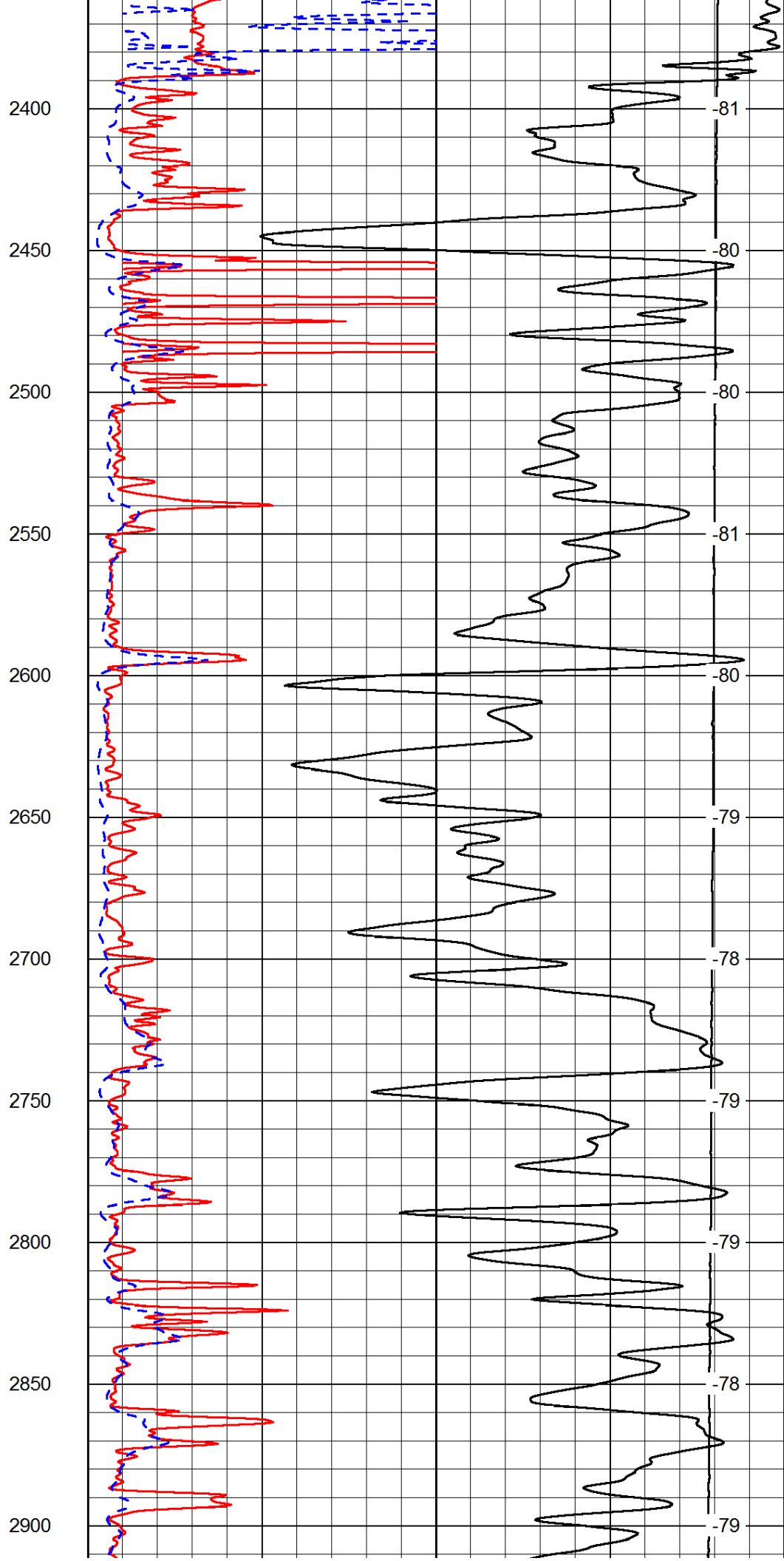
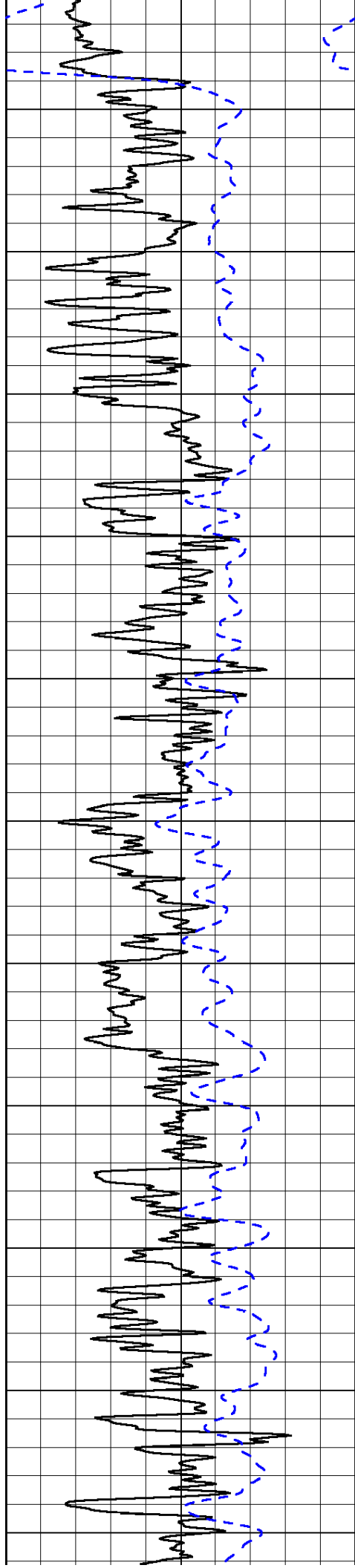
|       |                     |     |      |
|-------|---------------------|-----|------|
| 0     | Shallow Resistivity | 50  | LSPD |
| 0     | Deep Resistivity    | 50  |      |
| 1000  | Conductivity        |     | 0    |
| 15000 | Line Tension        |     | 0    |
| 50    | Shallow Resistivity | 500 |      |
| 50    | Deep Resistivity    | 500 |      |

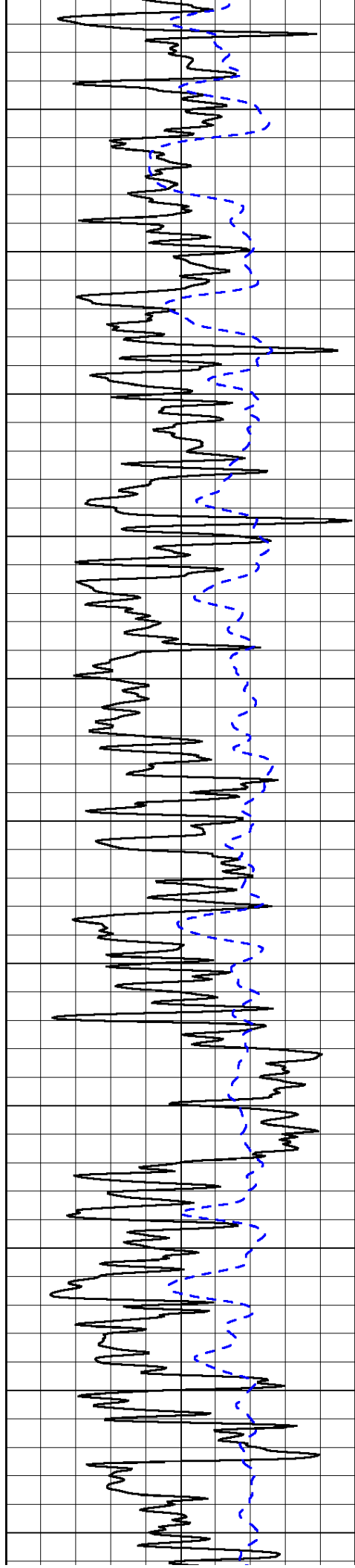




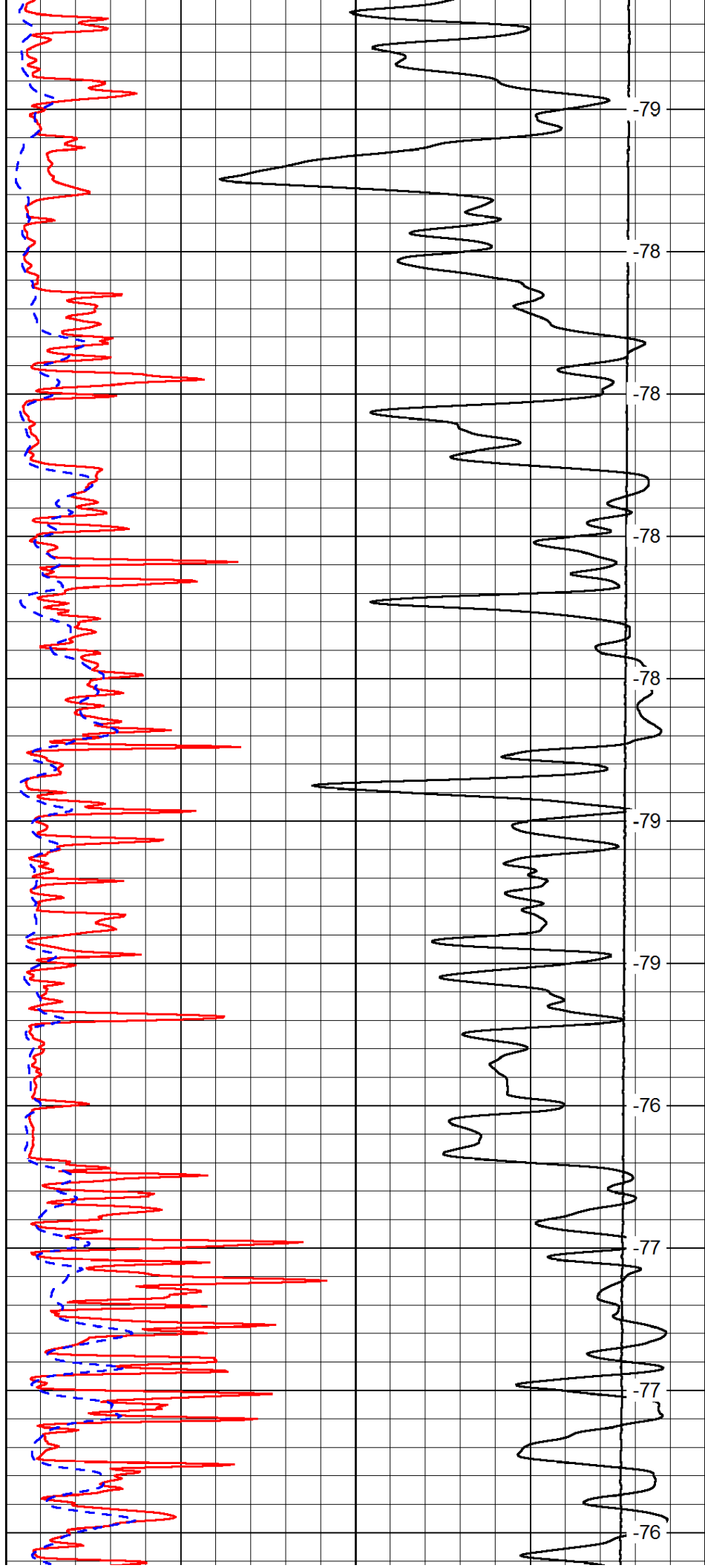




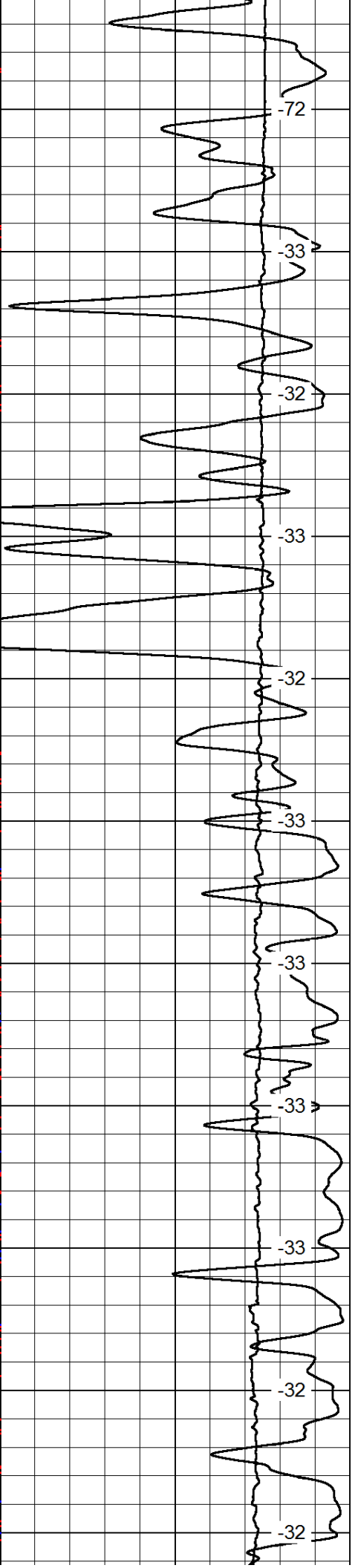
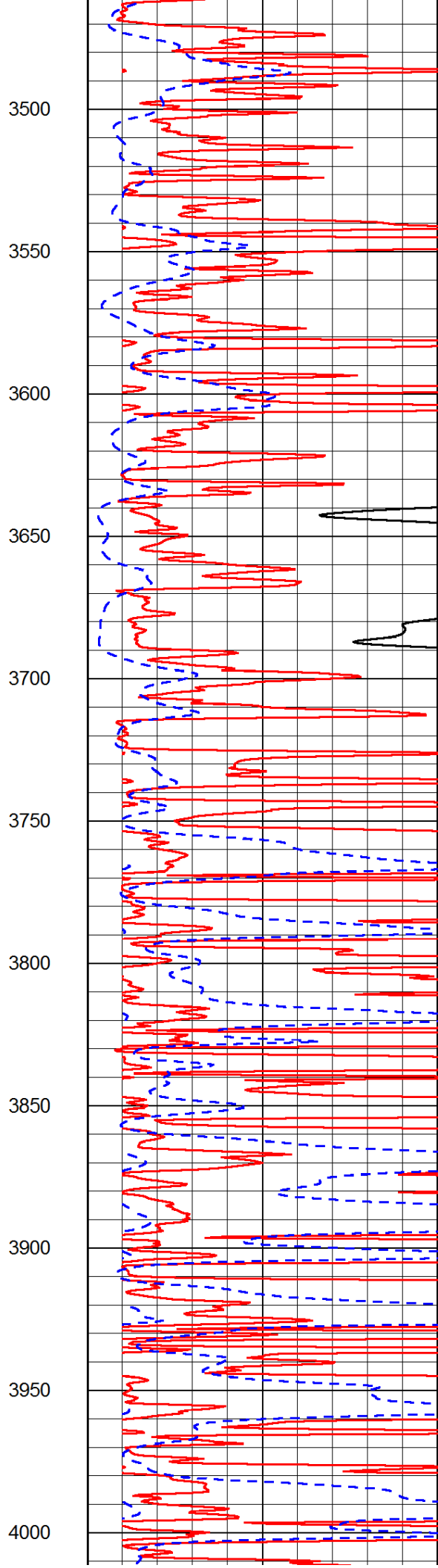
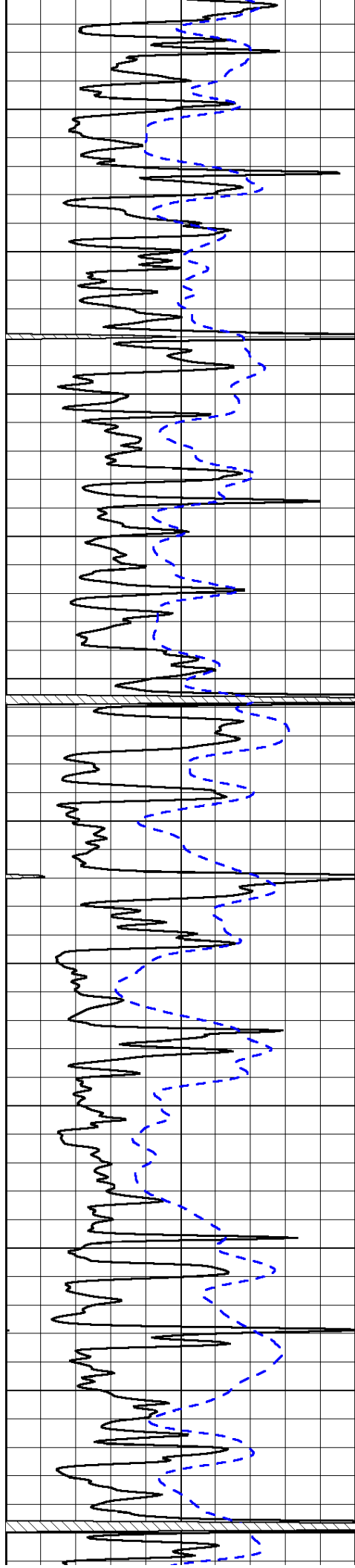


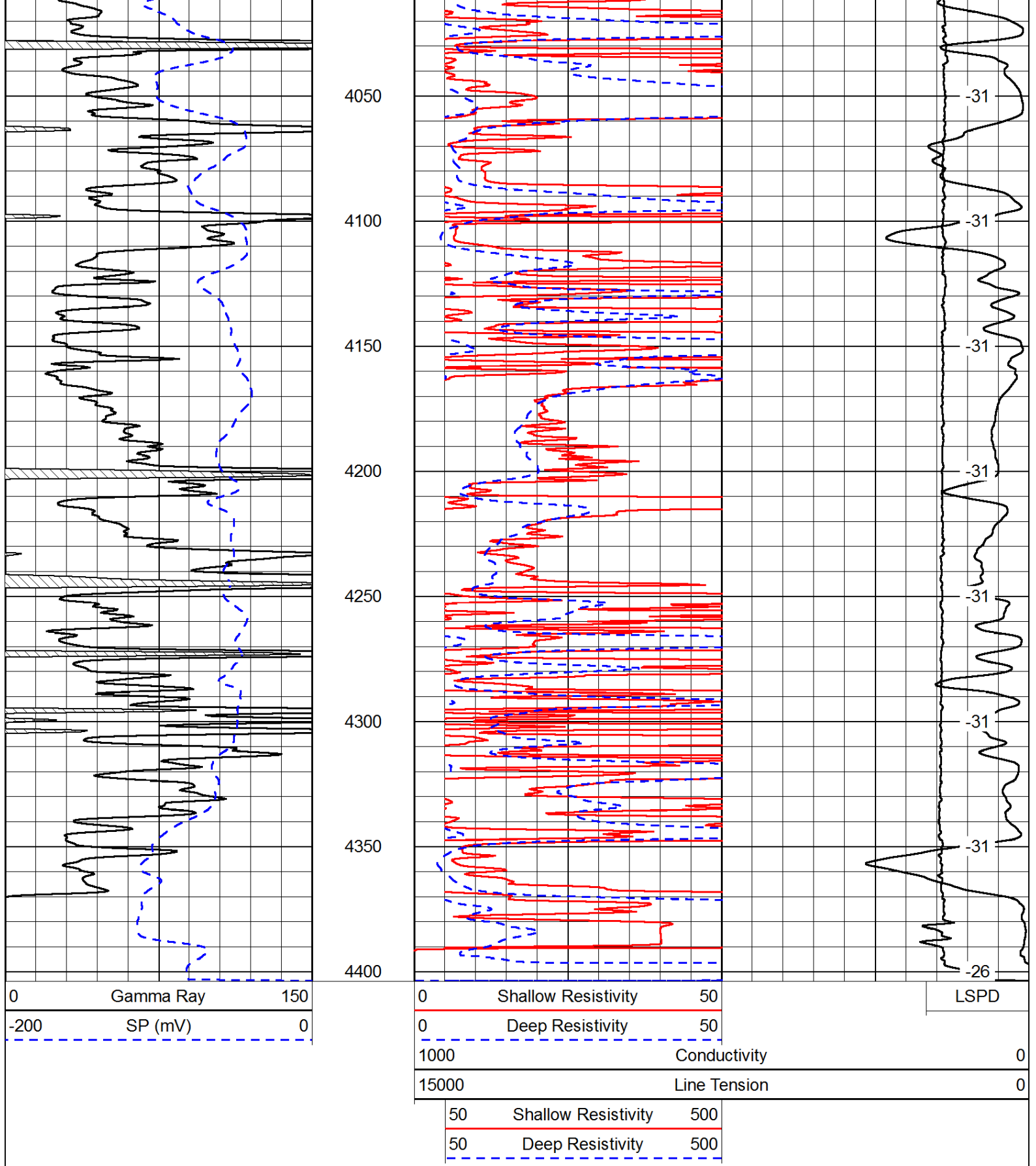


2950  
3000  
3050  
3100  
3150  
3200  
3250  
3300  
3350  
3400  
3450

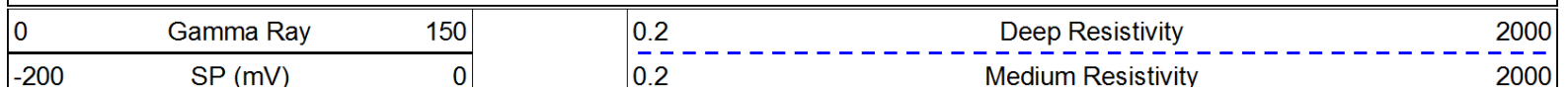


-79  
-78  
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-76

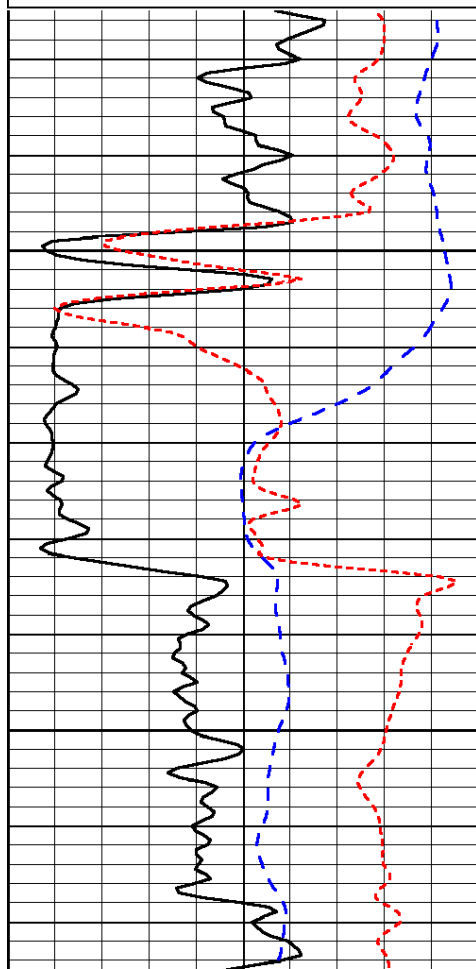




Database File: c:\warrior\data\h&c\_bentley #36-2\hchd.db  
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 Presentation Format: dil  
 Dataset Creation: Sat Jan 26 12:44:16 2013  
 Charted by: Depth in Feet scaled 1:240



-160 RxoRt 40



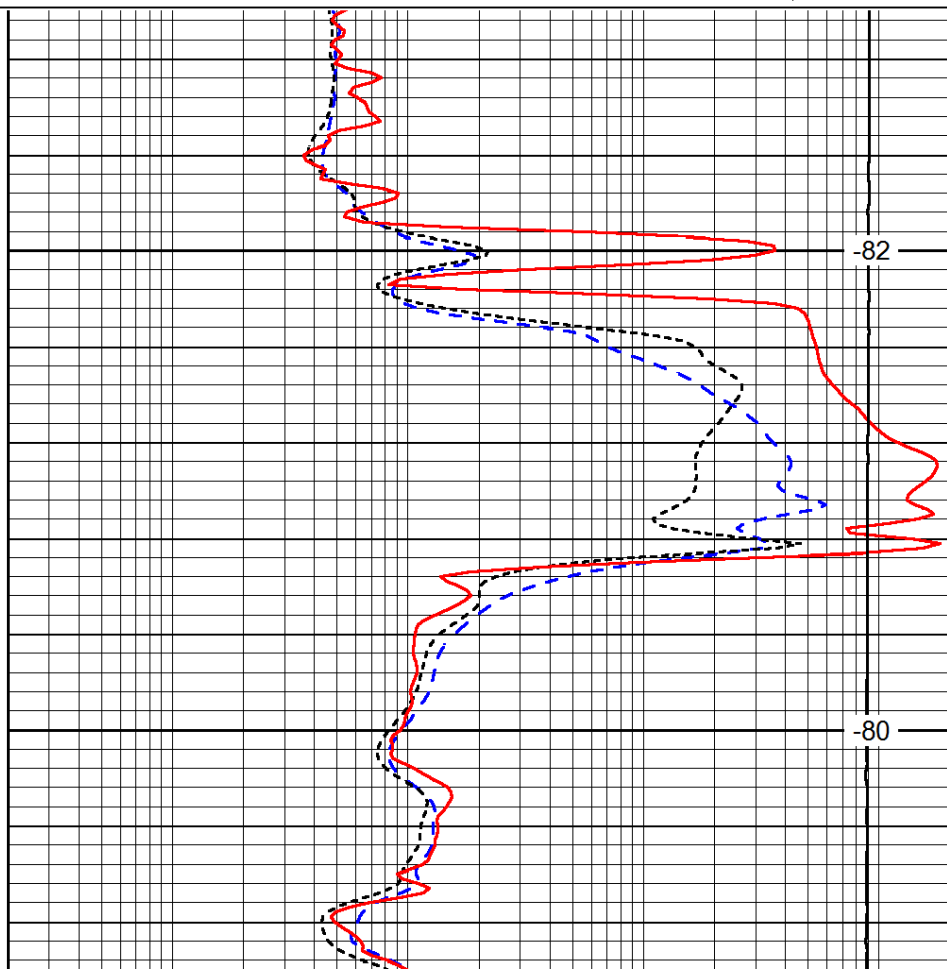
0 Gamma Ray 150  
-200 SP (mV) 0  
-160 RxoRt 40

1950

2000

0.2 Shallow Resistivity 2000  
15000 Line Tension 0

LSPD

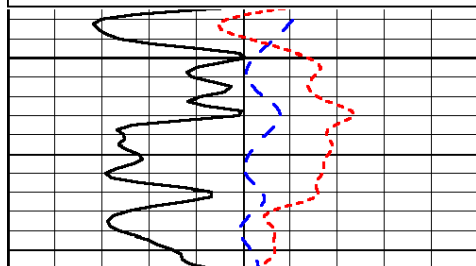


0.2 Deep Resistivity 2000  
0.2 Medium Resistivity 2000  
0.2 Shallow Resistivity 2000  
15000 Line Tension 0

LSPD

Database File: c:\warrior\data\h&c\_bentley #36-2\hchd.db  
Dataset Pathname: dil/hcstk  
Presentation Format: dil  
Dataset Creation: Sat Jan 26 12:44:16 2013  
Charted by: Depth in Feet scaled 1:240

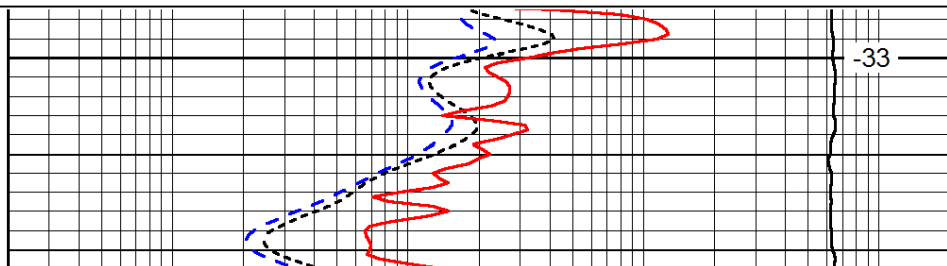
0 Gamma Ray 150  
-200 SP (mV) 0  
-160 RxoRt 40

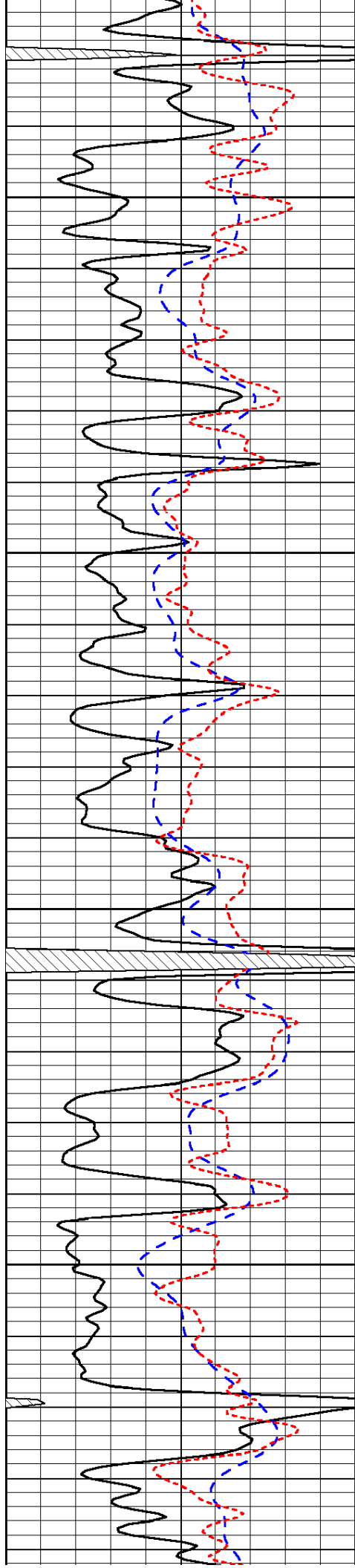


3550

0.2 Deep Resistivity 2000  
0.2 Medium Resistivity 2000  
0.2 Shallow Resistivity 2000  
15000 Line Tension 0

LSPD



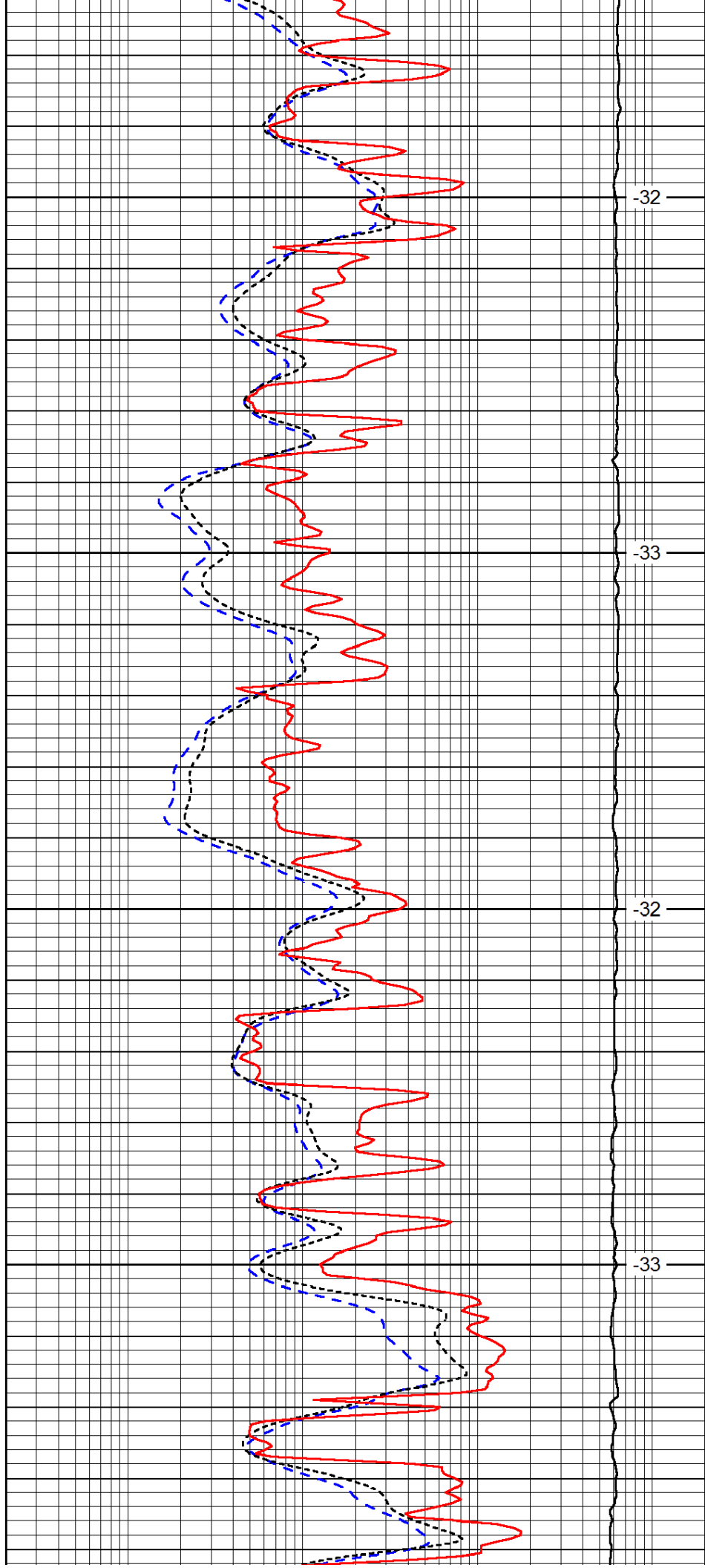


3600

3650

3700

3750

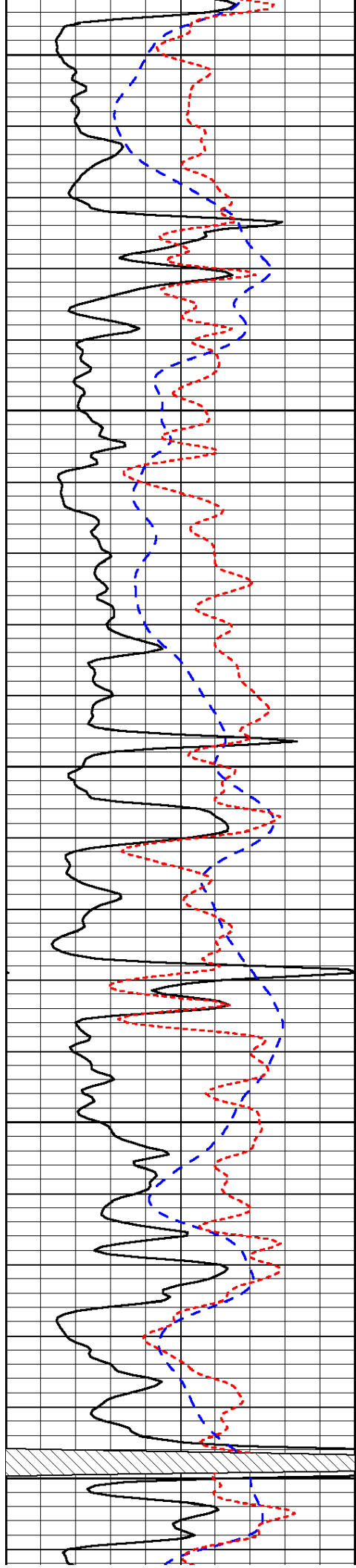


-32

-33

-32

-33



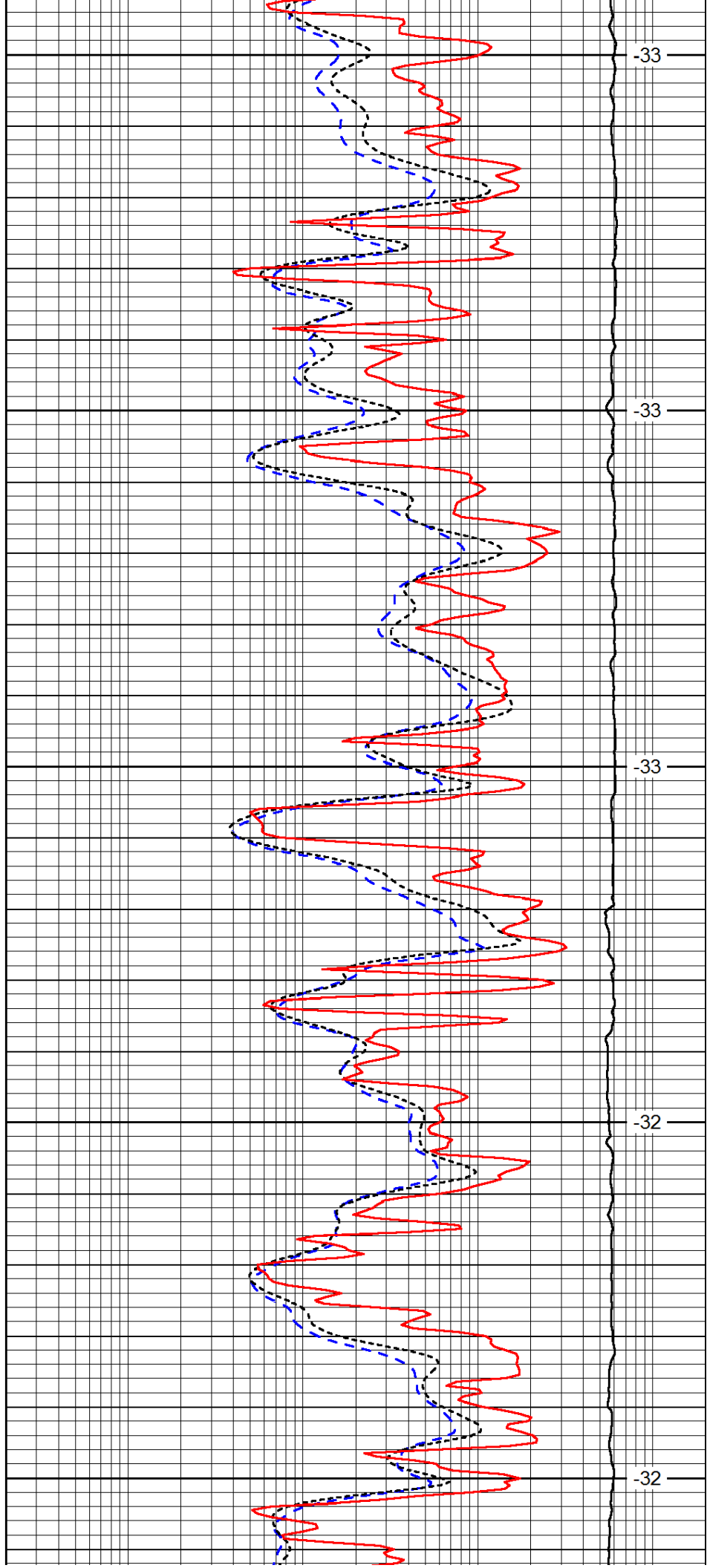
3800

3850

3900

3950

4000



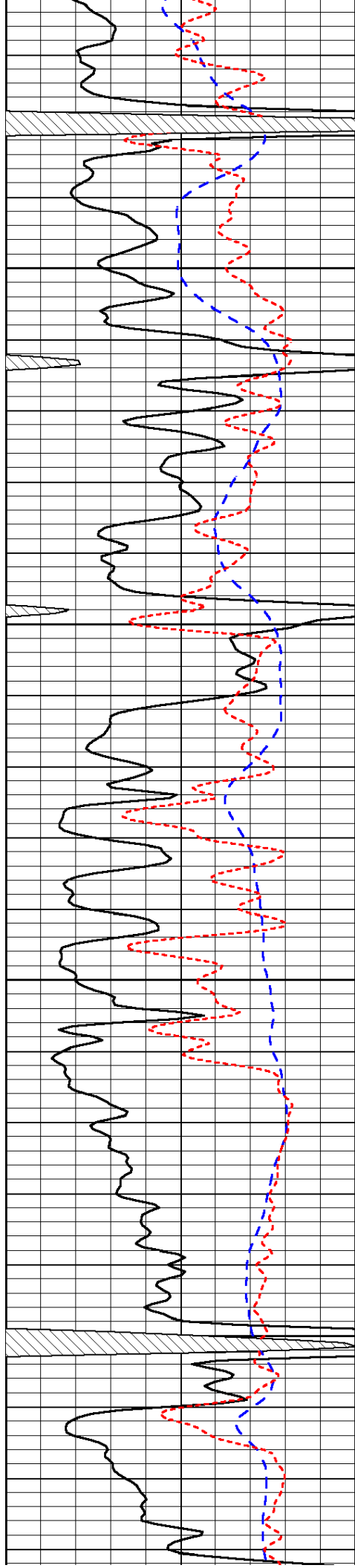
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-33

-33

-32

-32

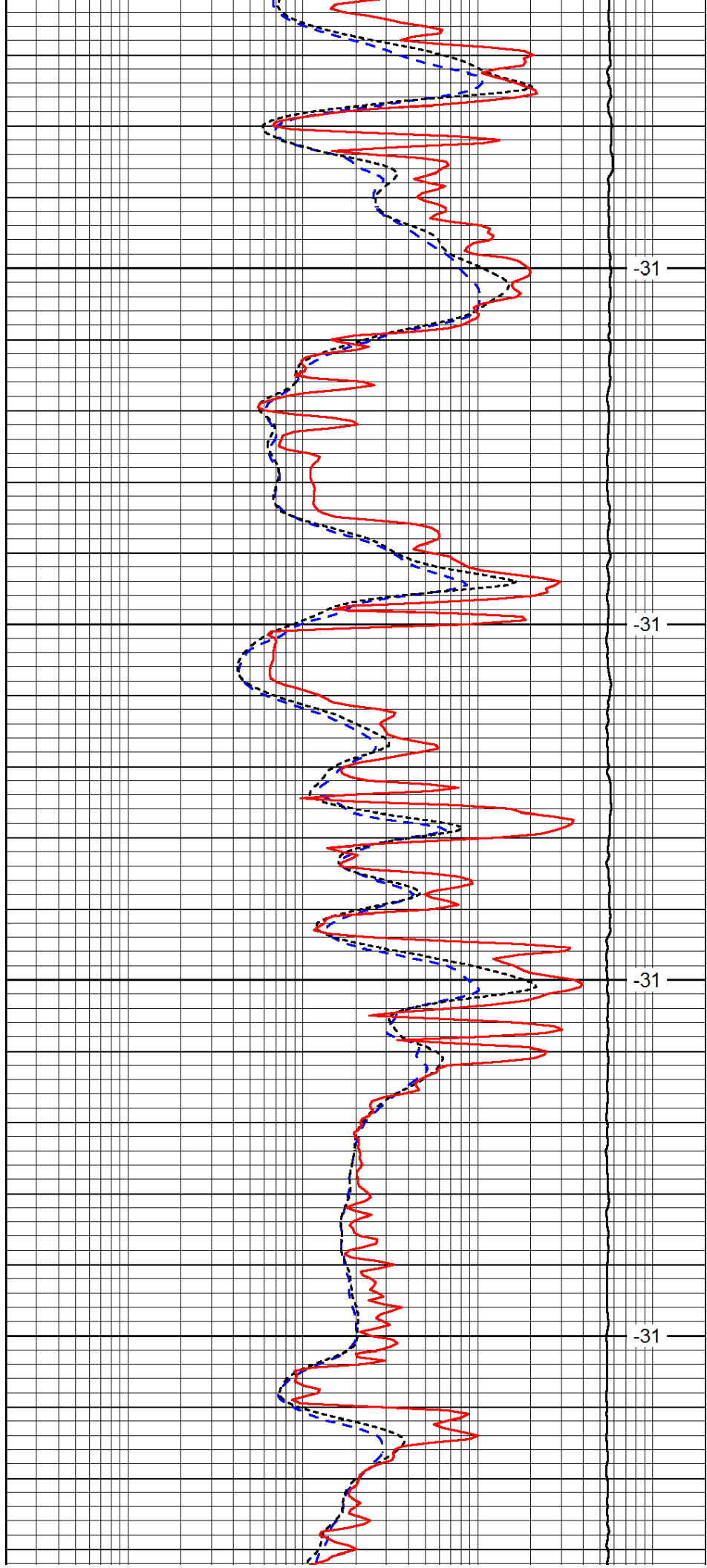


4050

4100

4150

4200

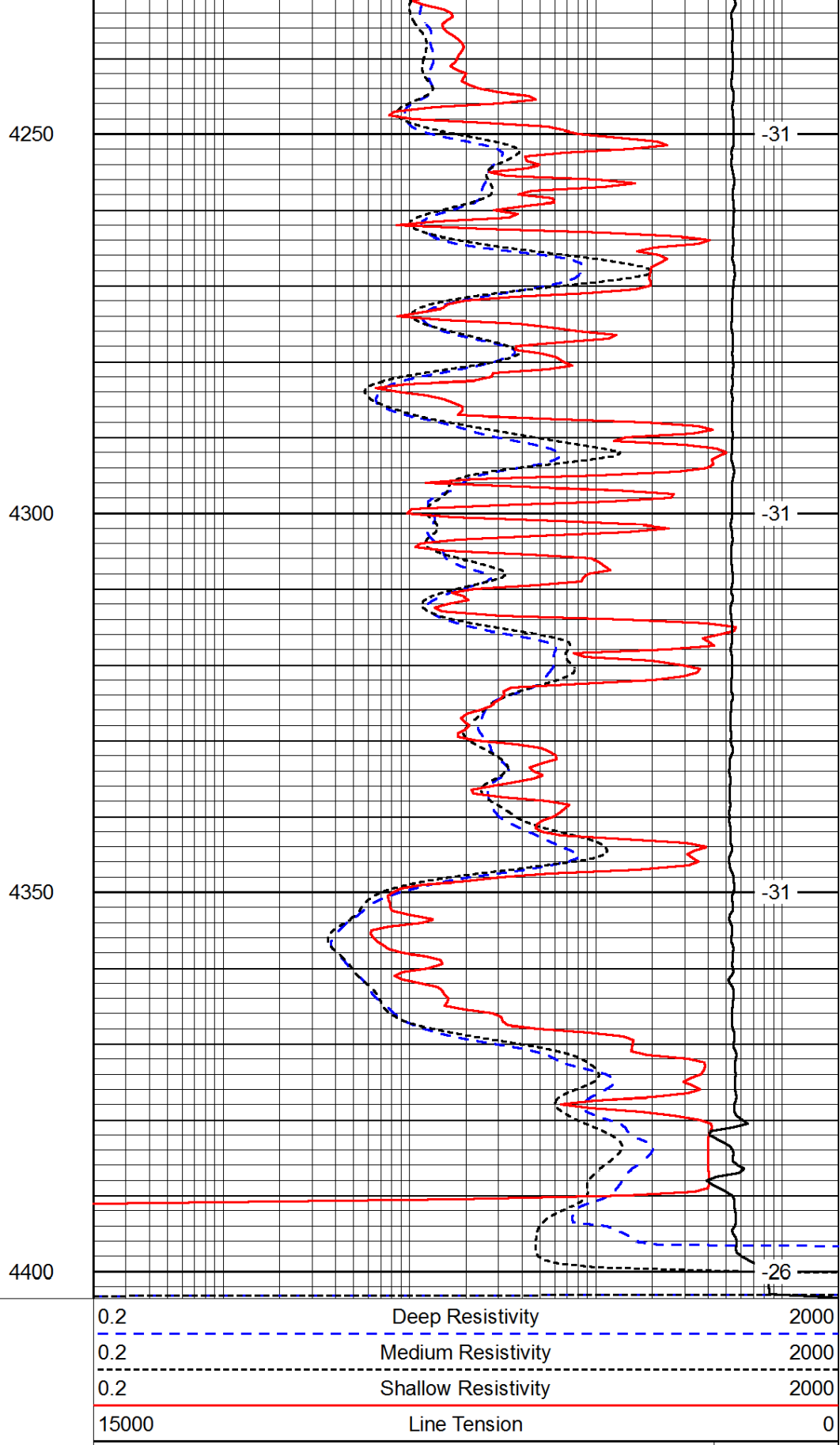
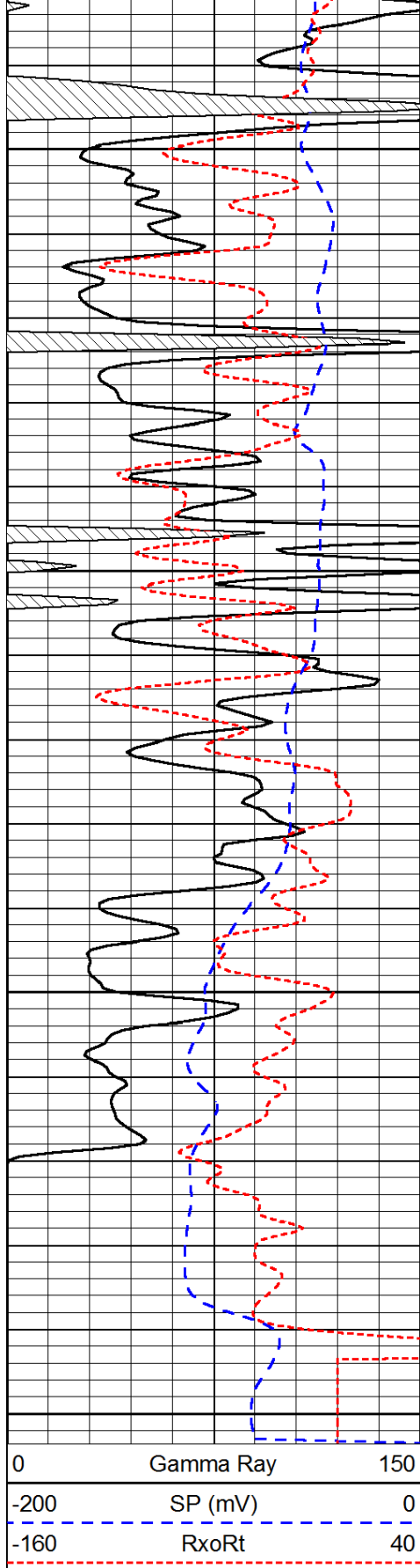


-31

-31

-31

-31



LSPD