



## Dual Induction Log

Pioneer Energy Services

API No.

15-167-24,014-00-00

Company GLM Company

Well Witt Trust #1

Field Gorham

County Russell State

Kansas

Location

N2-NW-SE  
1877' FSL & 1980' FEL

Sec: 4 Twp: 14S Rge: 15W

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

Elevation  
K.B. 1884  
D.F. 1877  
G.L. 1877

Date 10/28/2014

Run Number One

Depth Driller 3320

Depth Logger 3318

Bottom Logged Interval 3317

Top Log Interval 900

Casing Driller 8.625 @ 918

Casing Logger 914

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 5.000

Density / Viscosity 8.9 53

pH / Fluid Loss 9.5 8.3

Source of Sample Flowline

Rm @ Meas. Temp .34 @ 59

Rmf @ Meas. Temp .26 @ 59

Rmc @ Meas. Temp .46 @ 59

Source of Rmf / Rmc Charts

Rm @ BHT .18 @ 109

Operating Rig Time 3 1/2 Hours

Max Rec. Temp. F 109

Equipment Number 10

Location Hays

Recorded By J. Henrickson

Witnessed By Steve Reed

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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

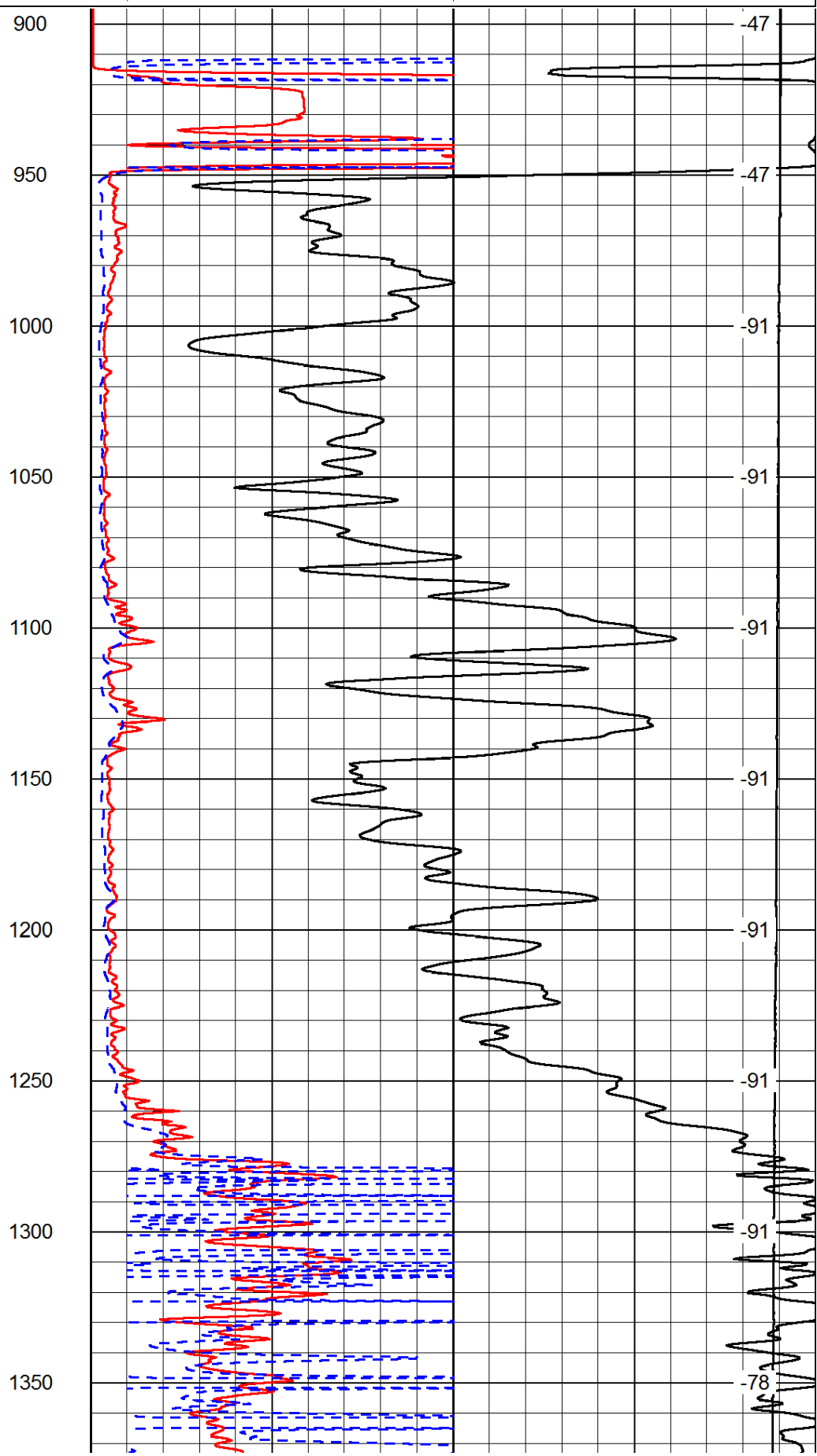
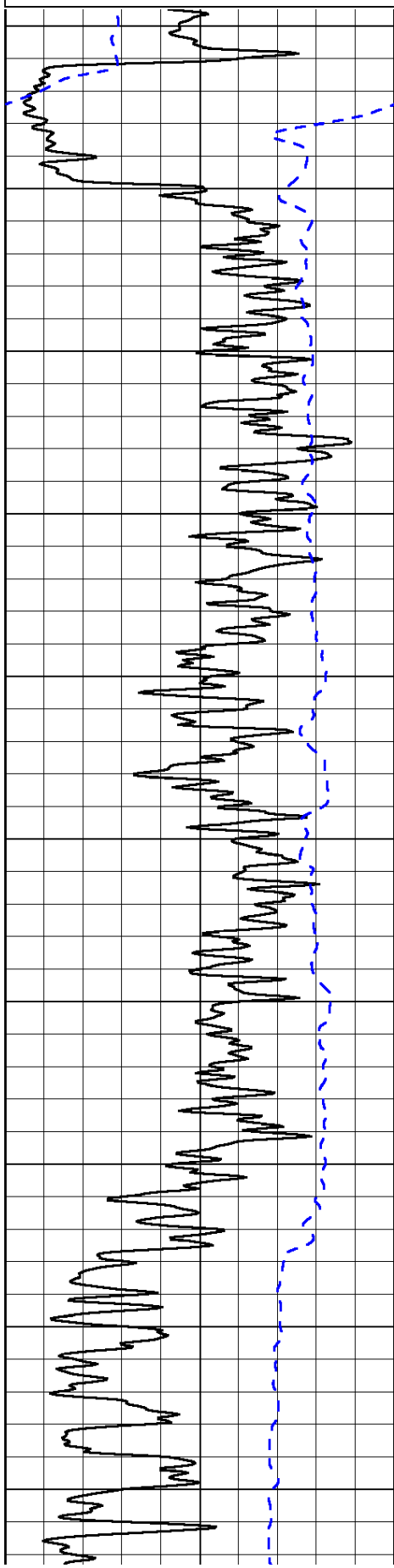
Gorham Exit on I70  
1/2 South, 2 East, 1/2 North, West Into

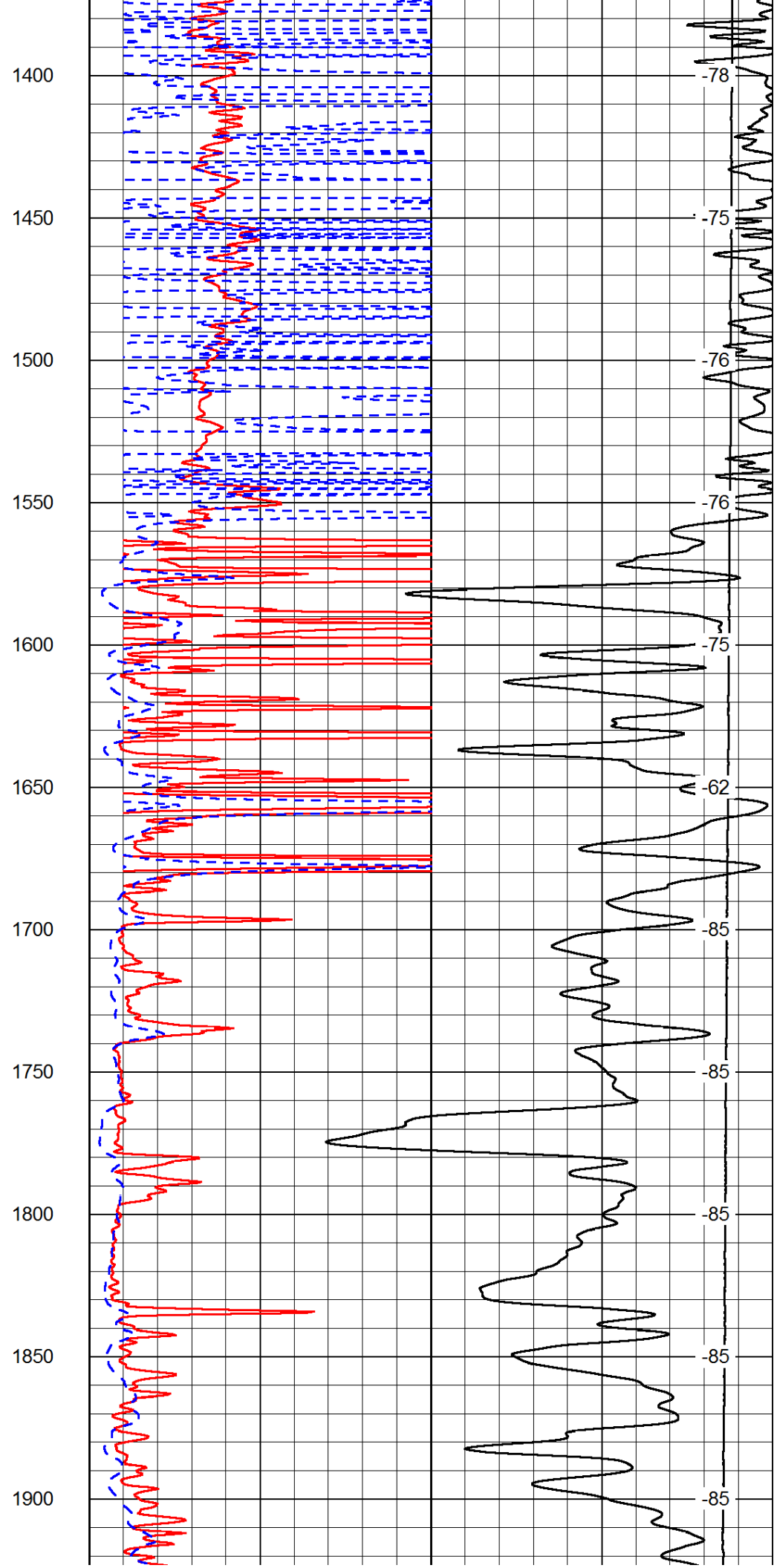
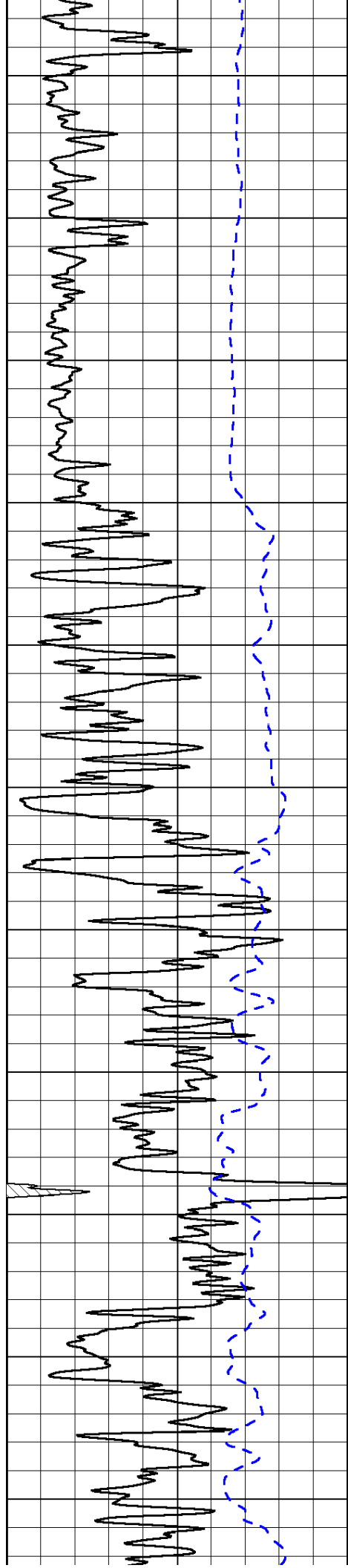
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Presentation Format: dil2in  
Dataset Creation: Tue Oct 28 19:57:27 2014  
Charted by: Depth in Feet scaled 1:600

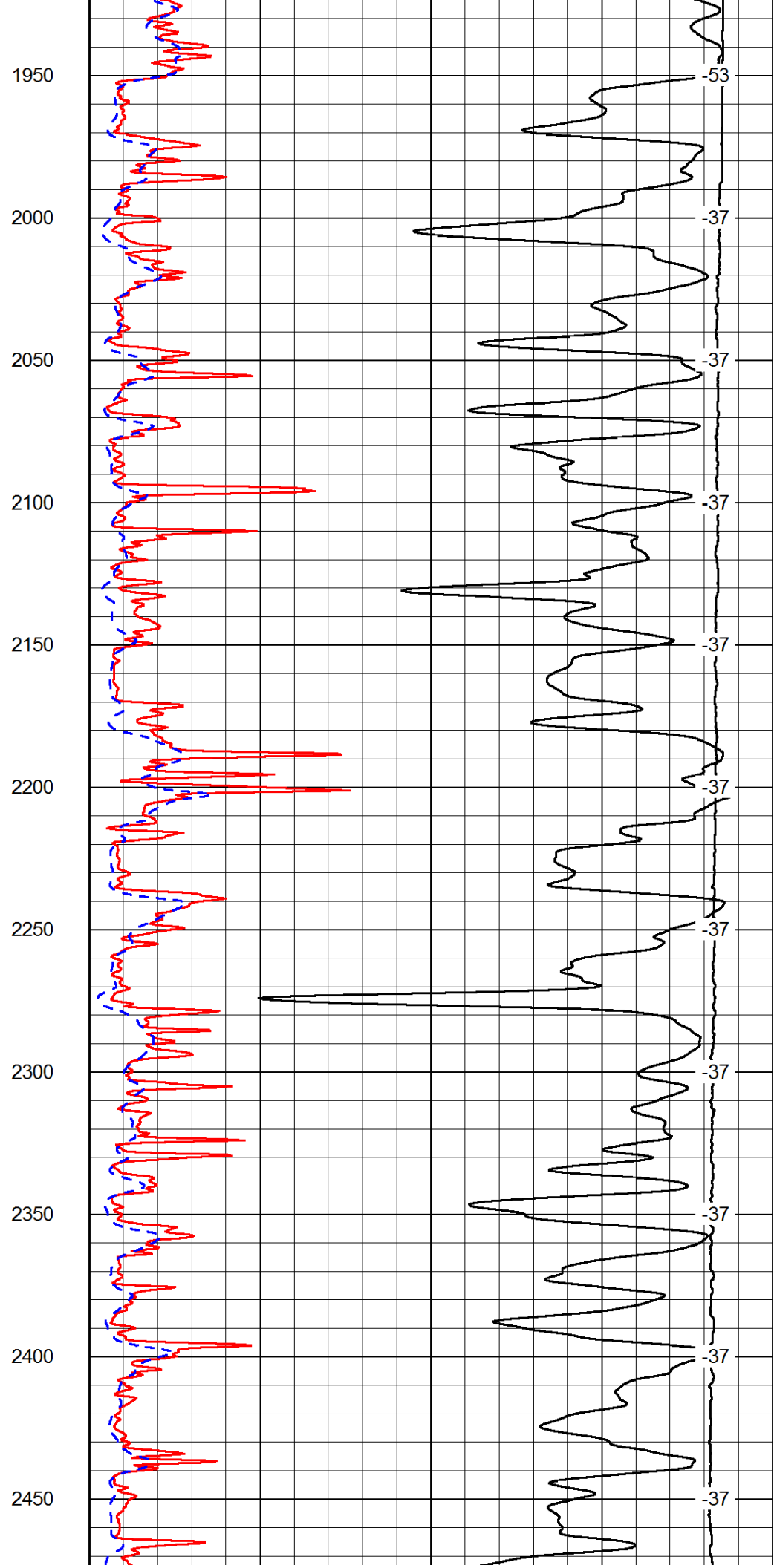
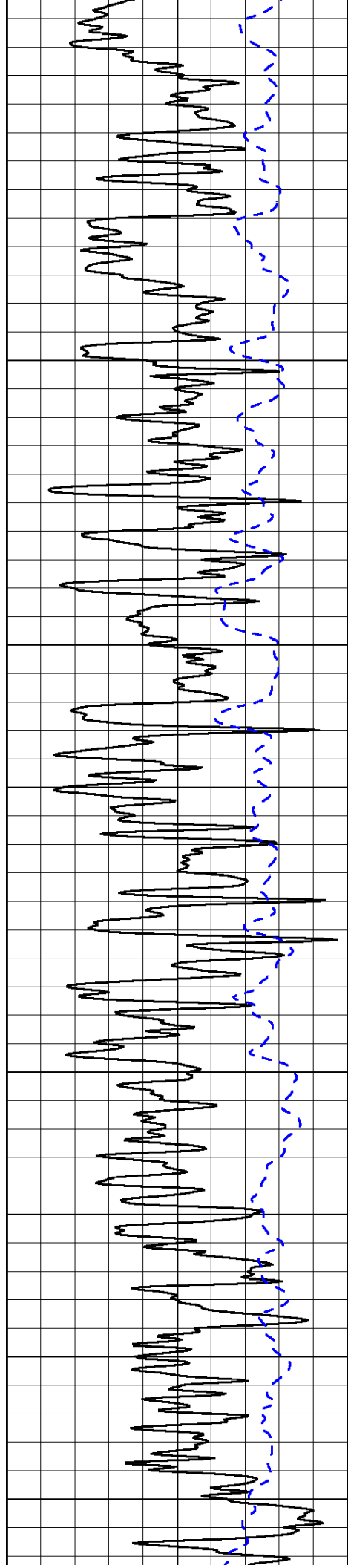
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|------|-----------|-----|
| 0    | Gamma Ray | 150 |
| -200 | SP (mV)   | 0   |

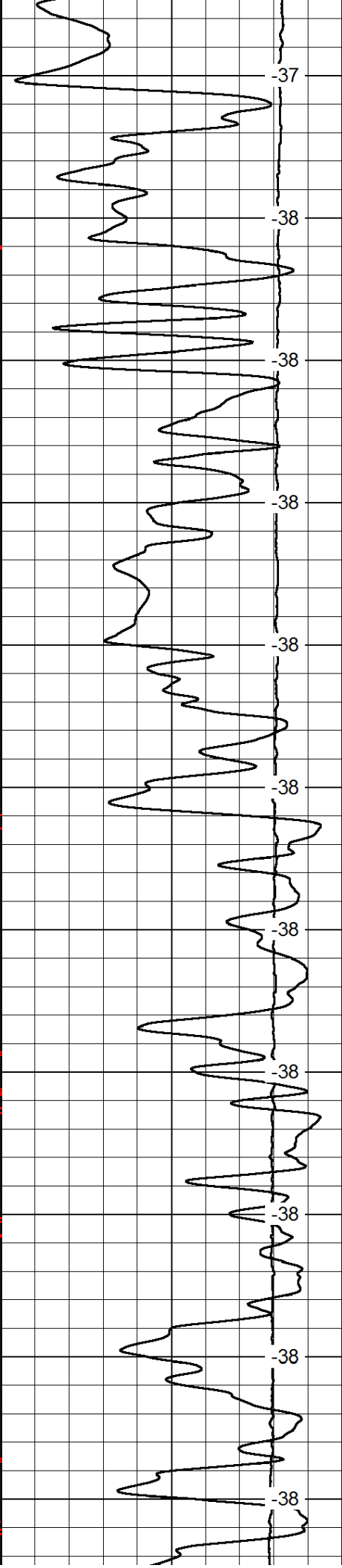
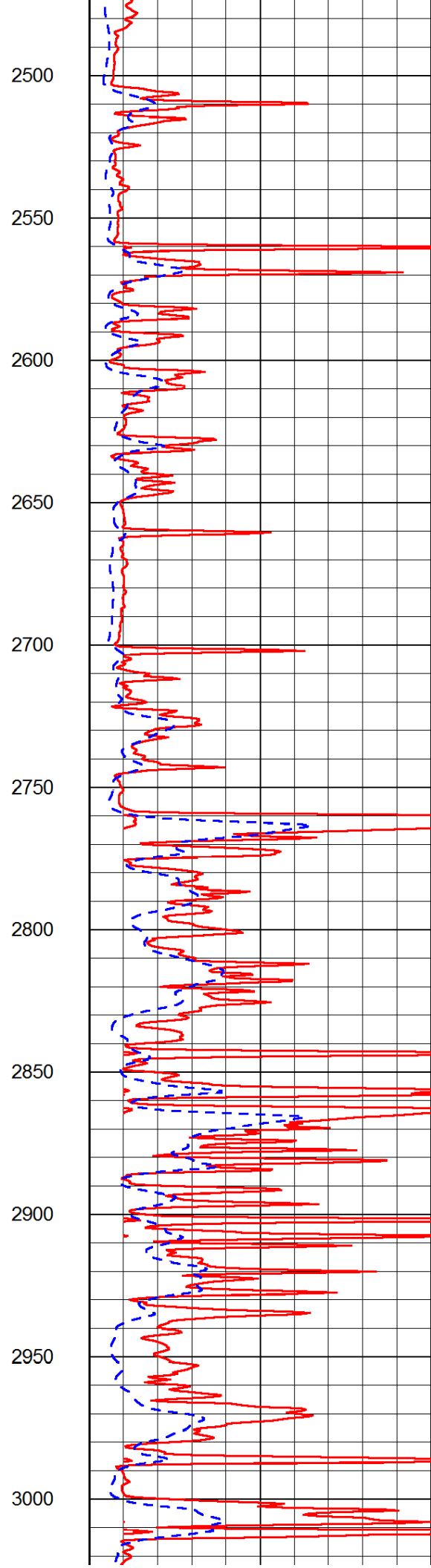
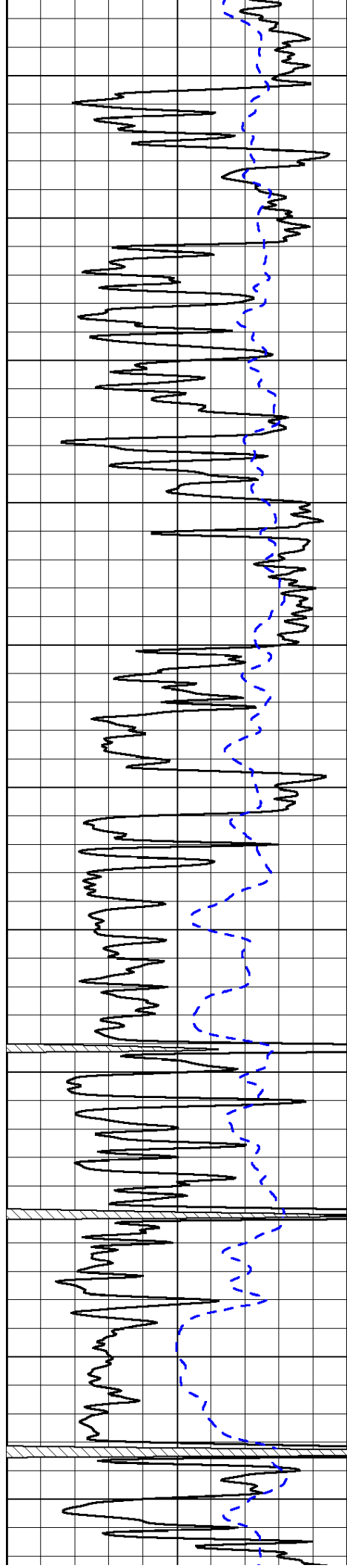
|       |                     |     |
|-------|---------------------|-----|
| 0     | Shallow Resistivity | 50  |
| 0     | Deep Resistivity    | 50  |
| 1000  | Conductivity        | 0   |
| 15000 | Line Tension        | 0   |
| 50    | Shallow Resistivity | 500 |
| 50    | Deep Resistivity    | 500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

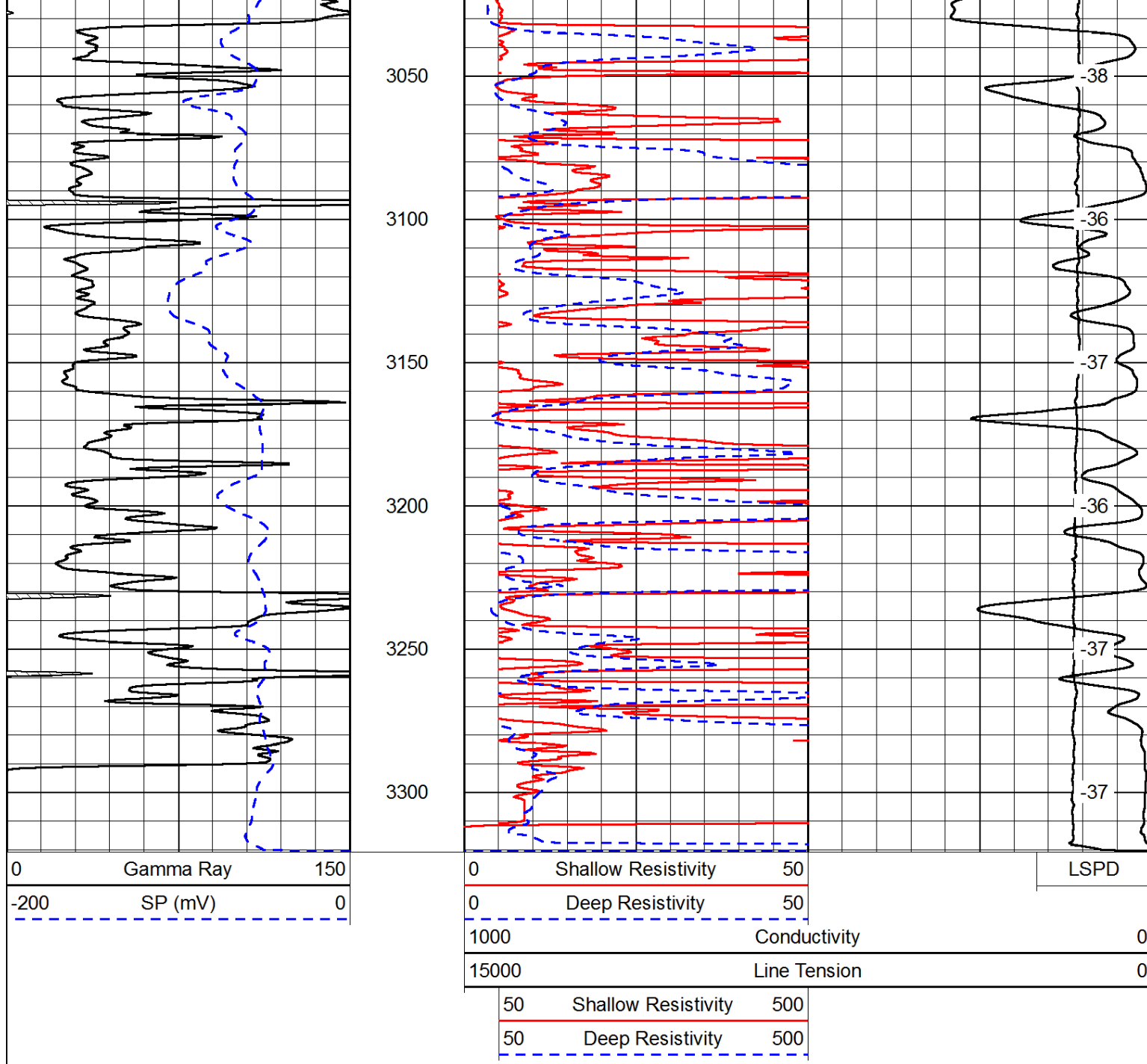
|      |
|------|
| LSPD |
|------|



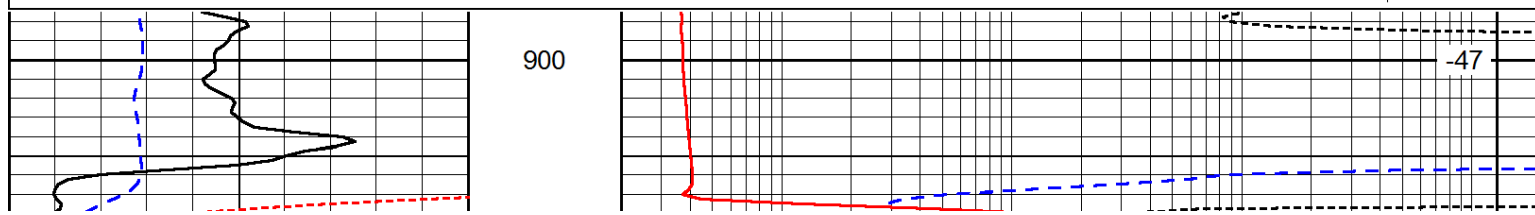
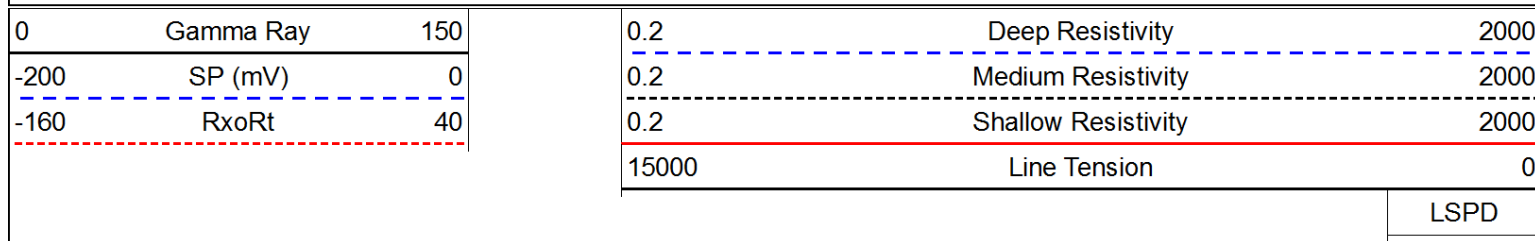


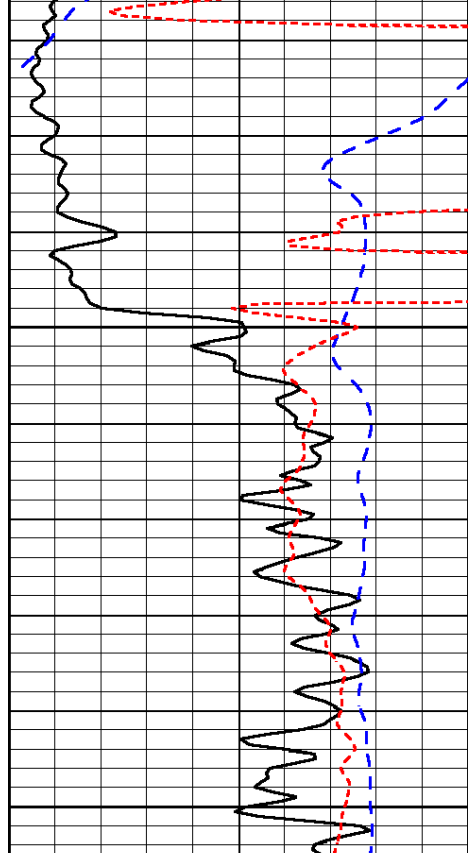






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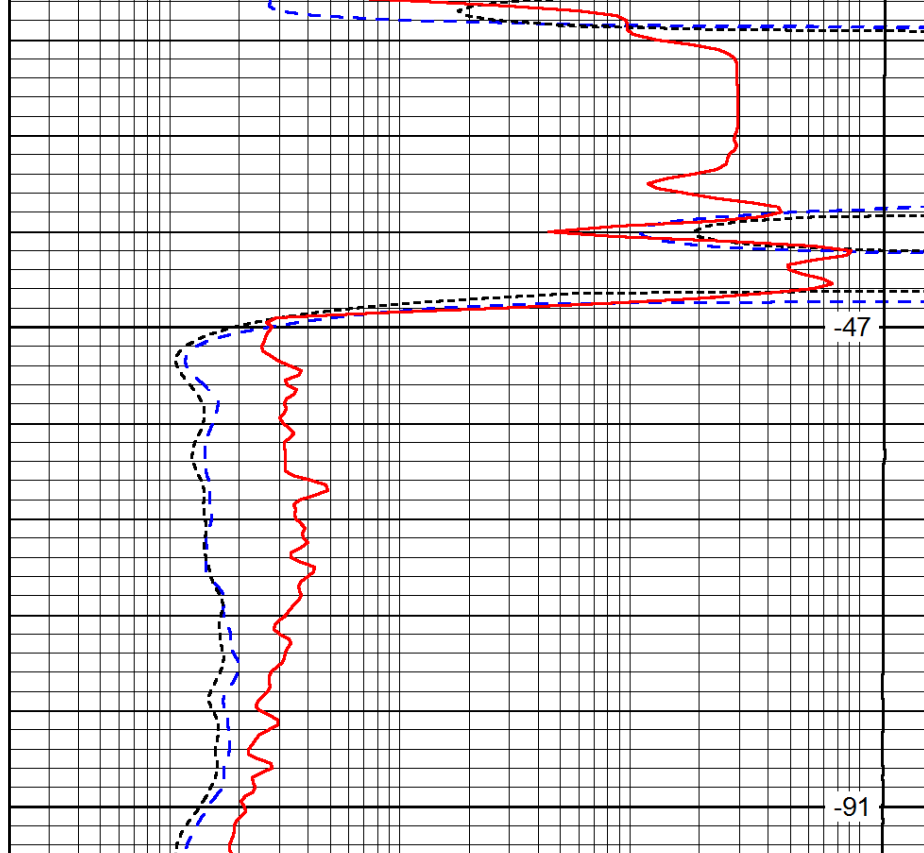




|      |           |     |
|------|-----------|-----|
| 0    | Gamma Ray | 150 |
| -200 | SP (mV)   | 0   |
| -160 | RxoRt     | 40  |

950

1000



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

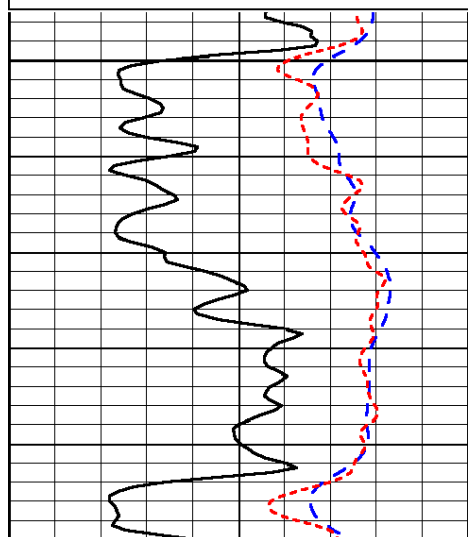
LSPD

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 Charted by: Depth in Feet scaled 1:240

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

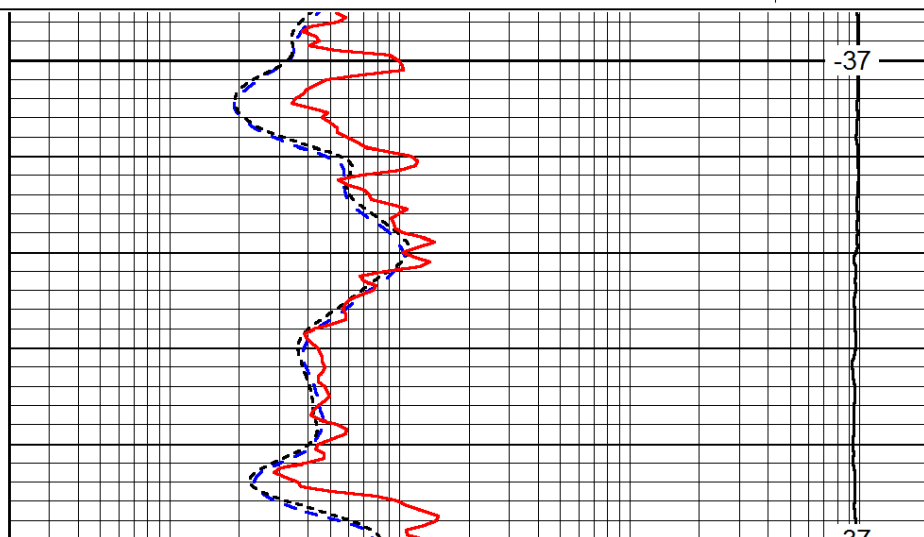
|       |                     |      |
|-------|---------------------|------|
| 0.2   | Deep Resistivity    | 2000 |
| 0.2   | Medium Resistivity  | 2000 |
| 0.2   | Shallow Resistivity | 2000 |
| 15000 | Line Tension        | 0    |

LSPD



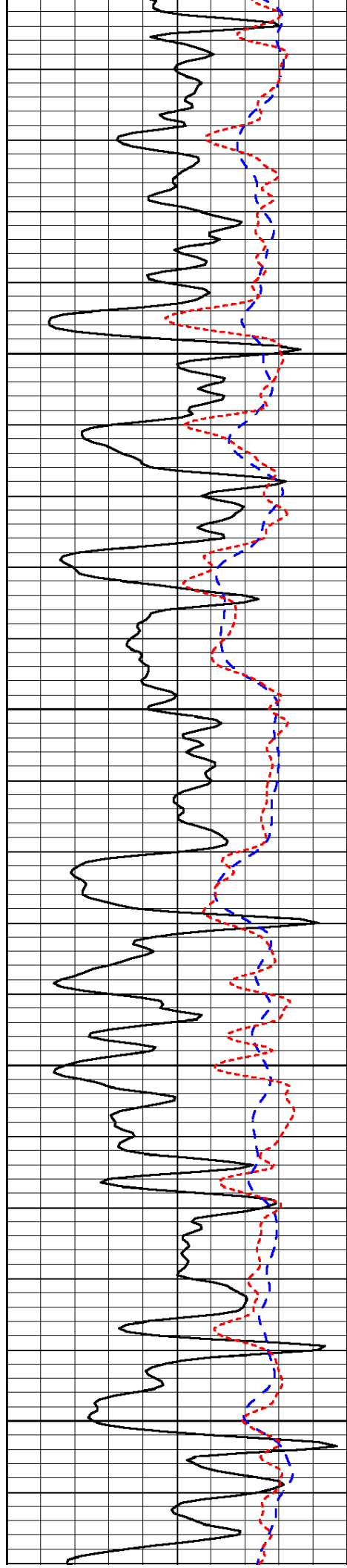
2000

2050

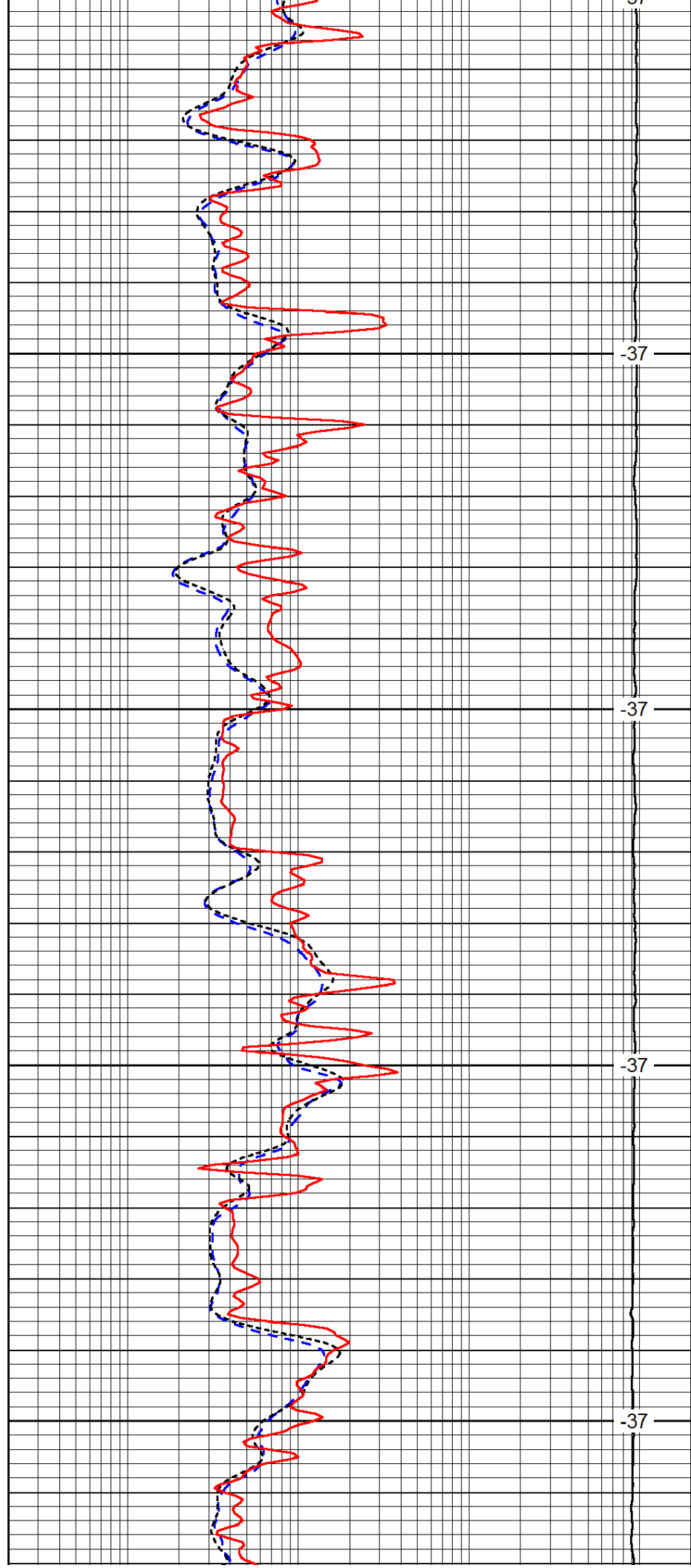


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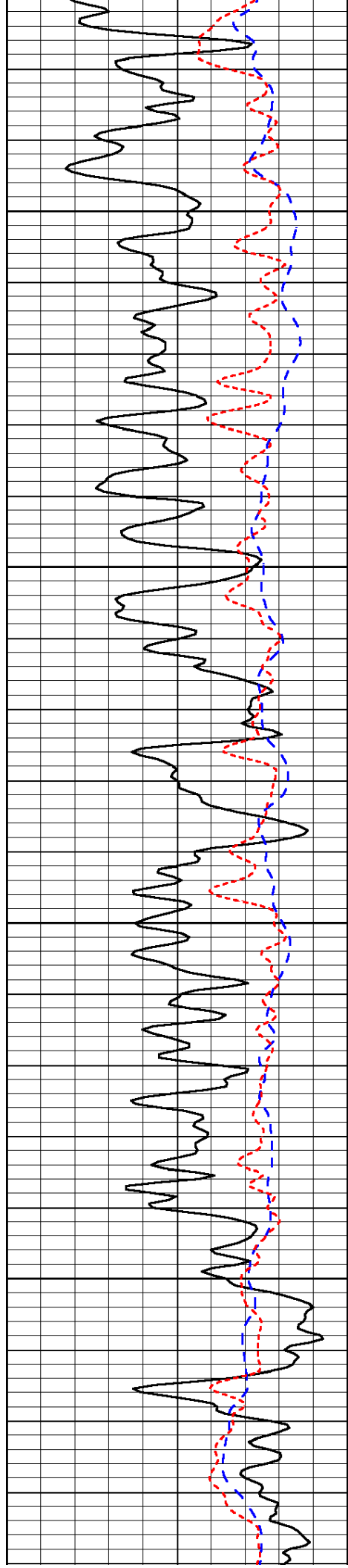
-37



2050  
2100  
2150  
2200  
2250





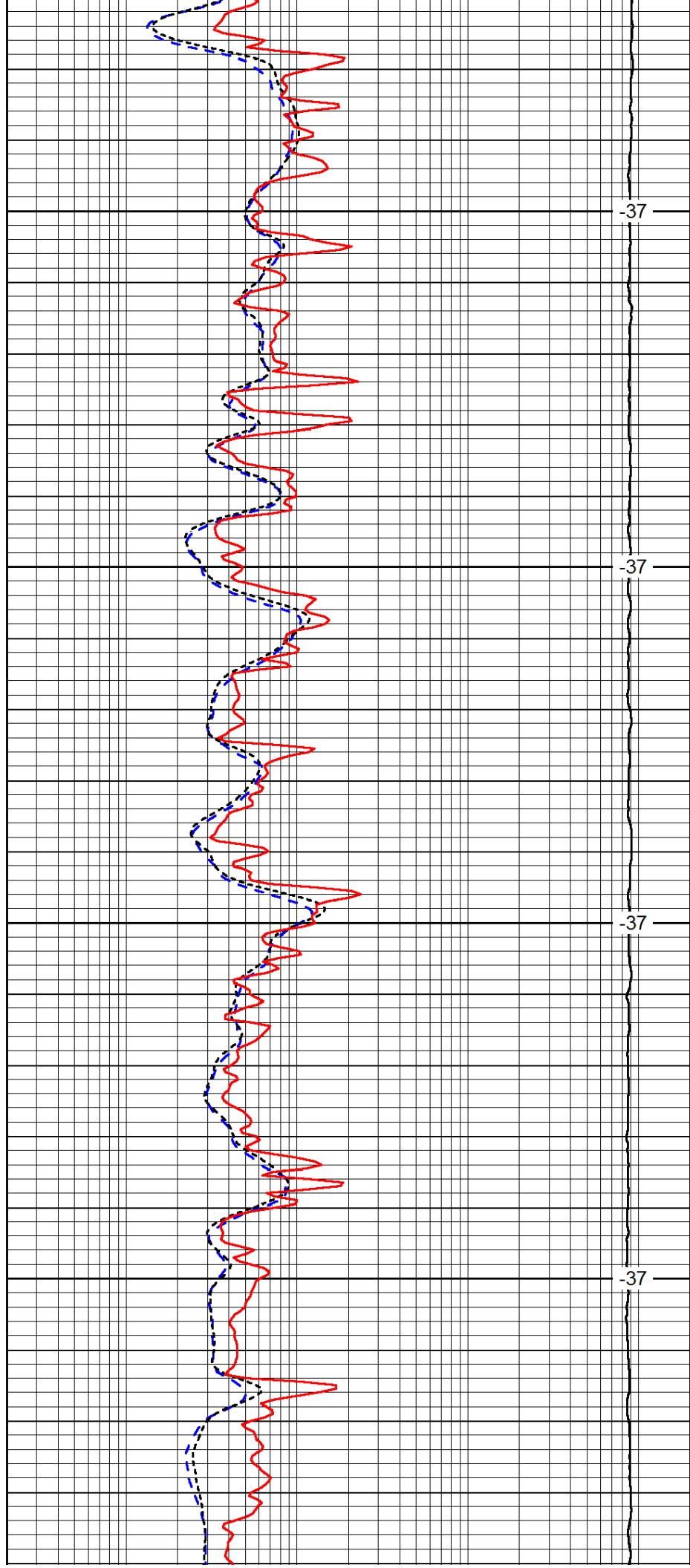


2300

2350

2400

2450

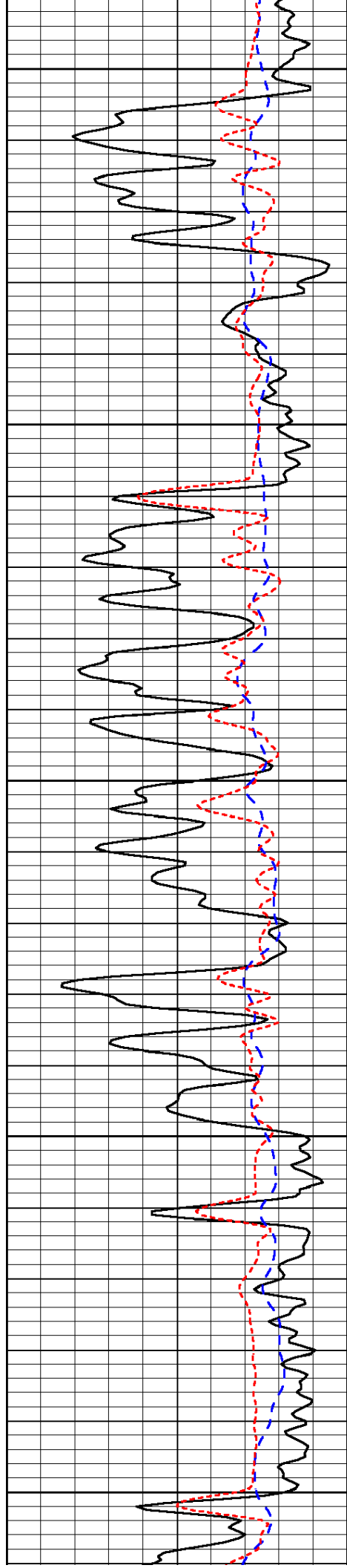


-37

-37

-37

-37



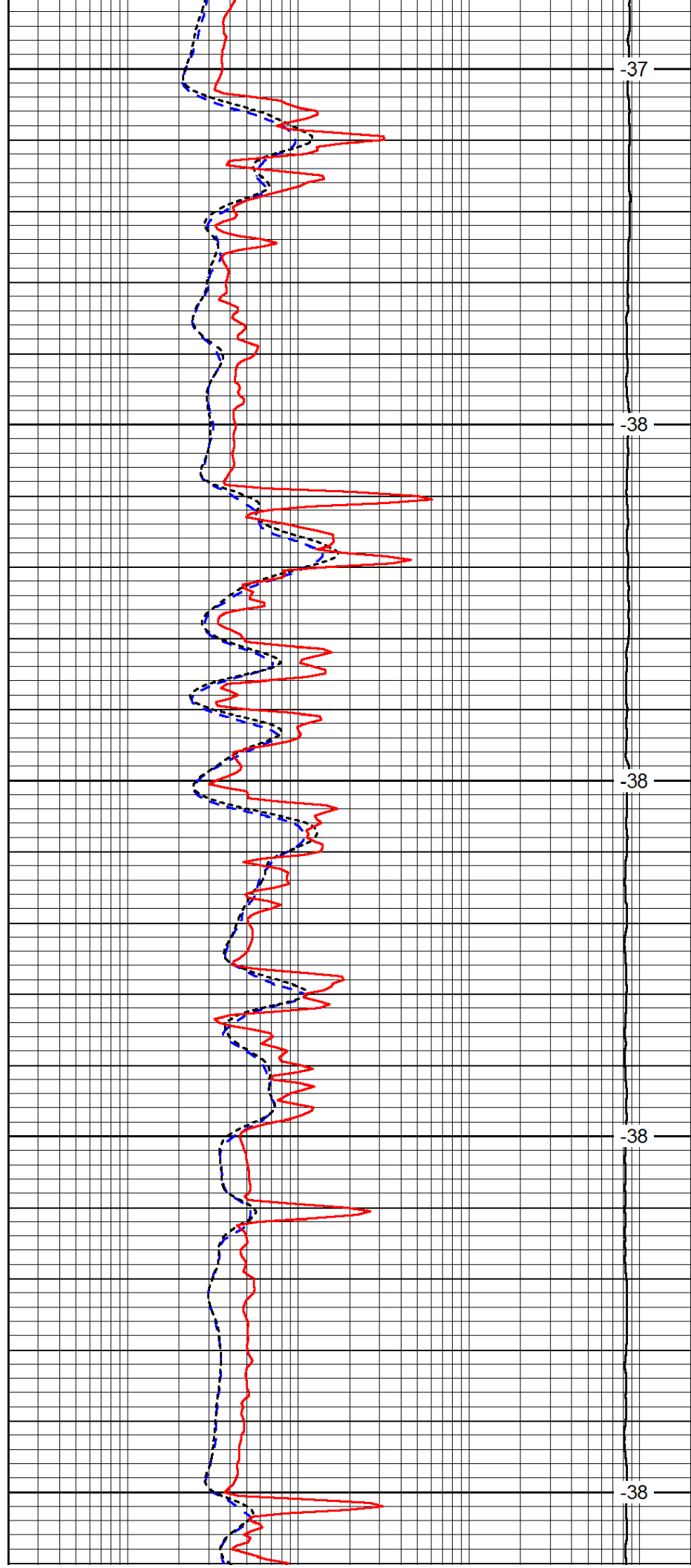
2500

2550

2600

2650

2700



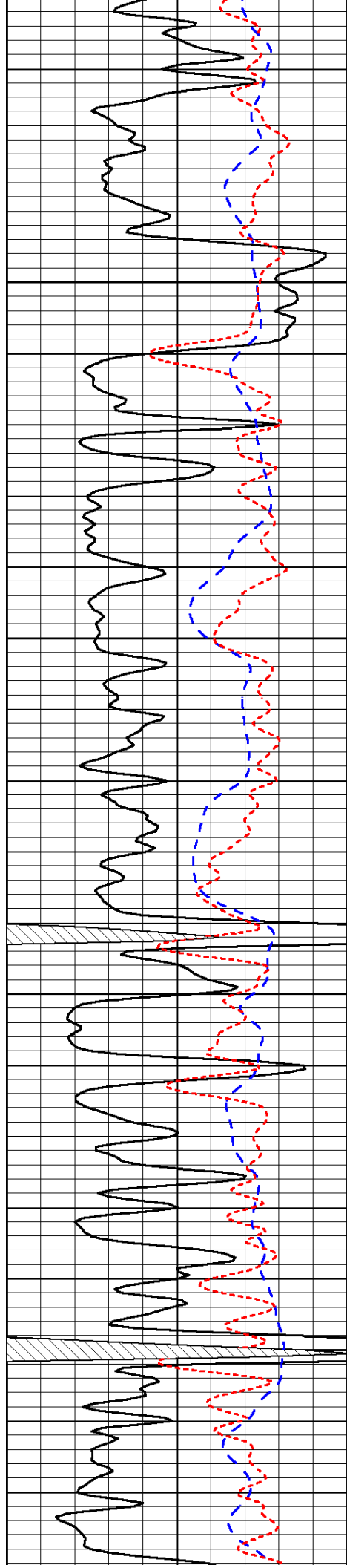
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-38

-38

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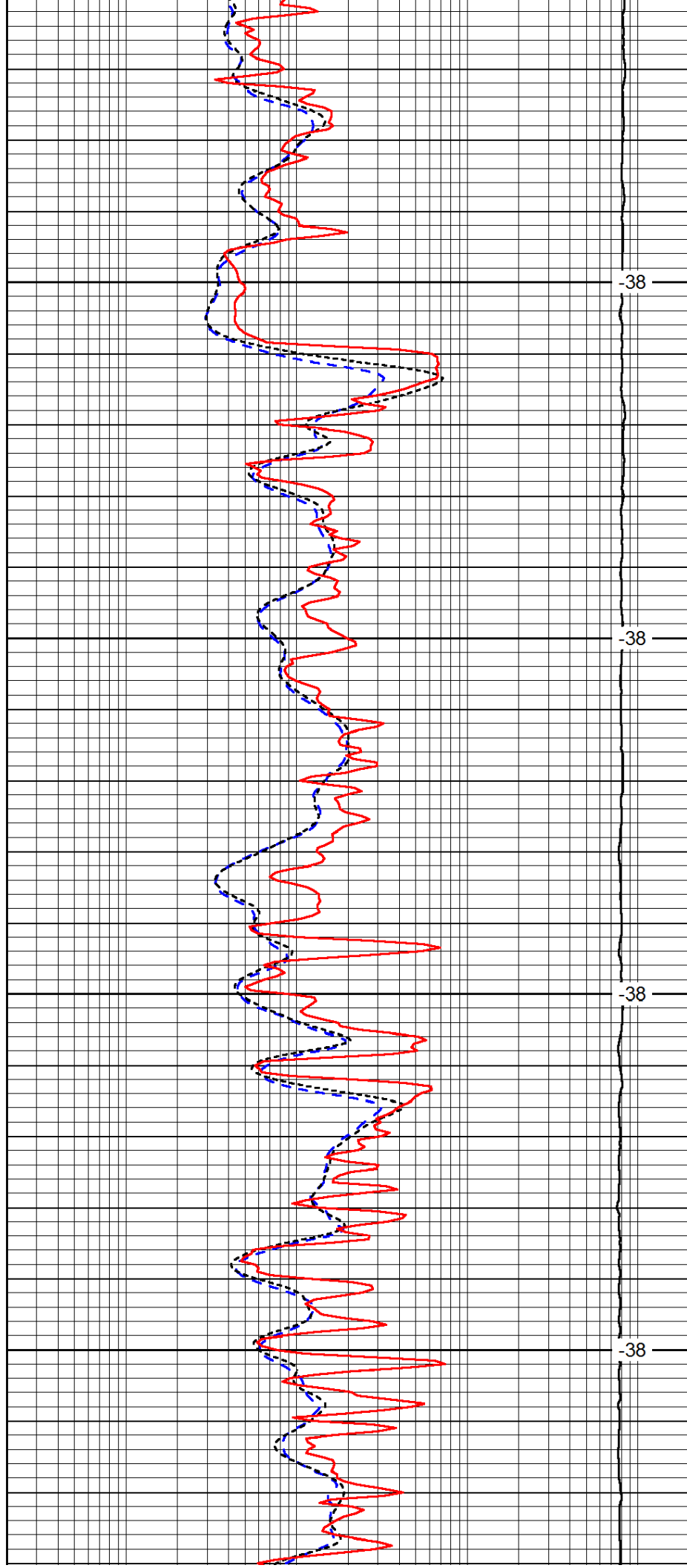


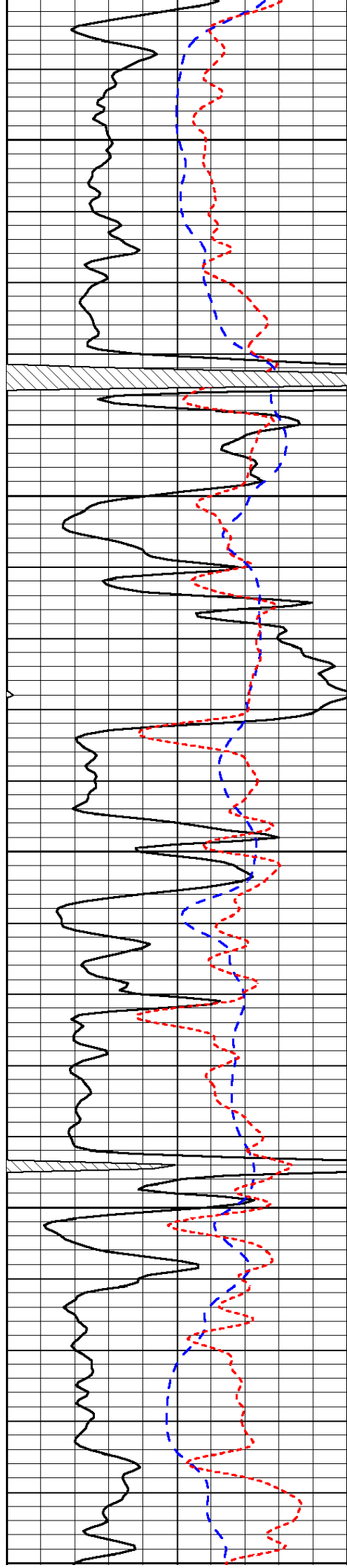
2750

2800

2850

2900





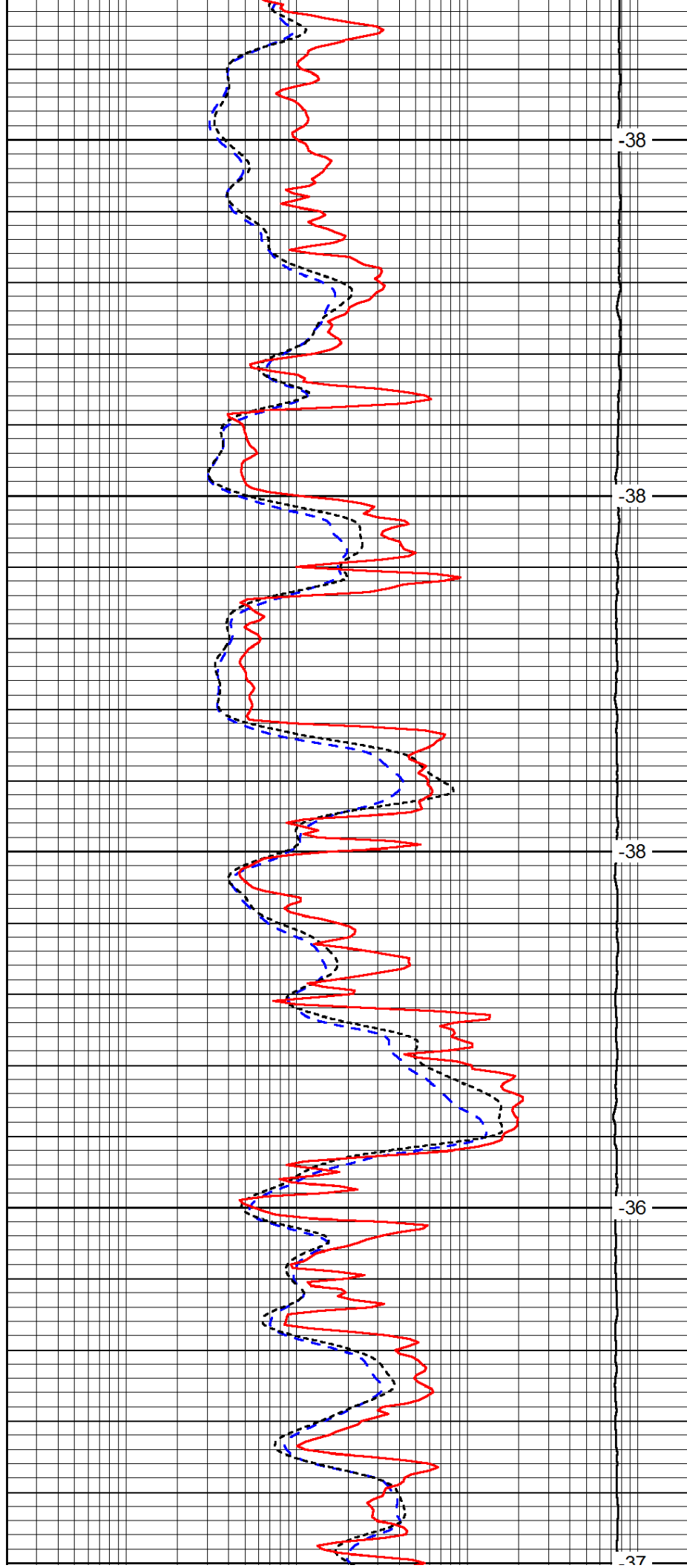
2950

3000

3050

3100

3150



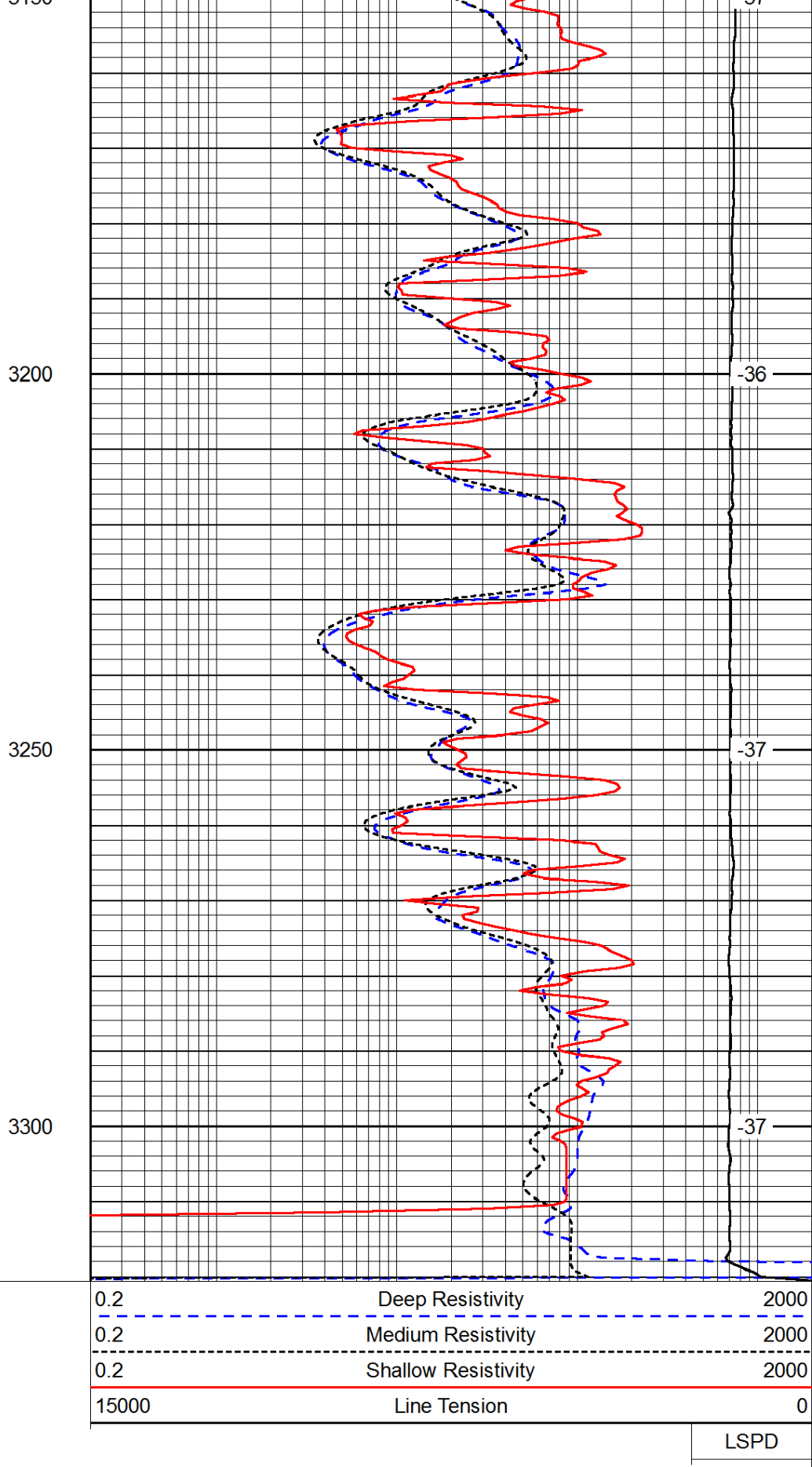
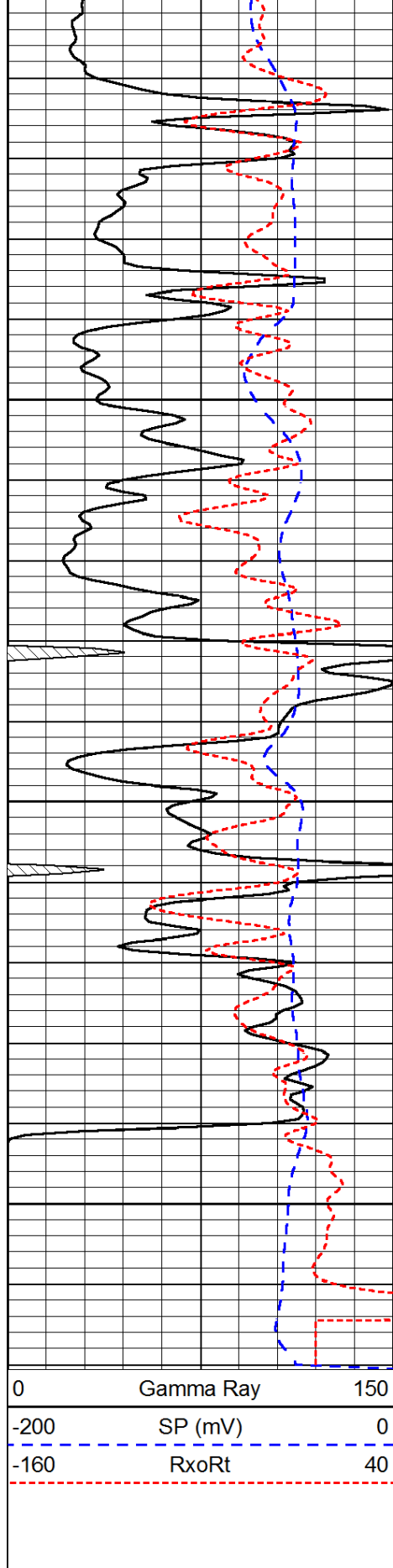
-38

-38

-38

-36

-37



LSPD