



Pioneer Energy Services

Dual Induction Log

15-069-20,491-00-00

API No.

Company **American Warrior, Inc.**

Well **Shadow #7-17**

Field **Shadow**

County **Gray** State **Kansas**

Location **2410' FSL & 2123' FWL**

Sec: **17** Twp: **28S** Rge: **30W**

Permanent Datum **Ground Level** Elevation **2793**

Log Measured From **Kelly Bushing** 13 Ft. Above Perm. Datum

Drilling Measured From **Kelly Bushing** K.B. 2806
D.F. 2793
G.L. 2793

Other Services
CNL/CDL
MEL

Date **11/29/2014**

Run Number **One**

Depth Driller **5250**

Depth Logger **5249**

Bottom Logged Interval **5248**

Top Log Interval **1650**

Casing Driller **8.625 @ 1698**

Casing Logger **1696**

Bit Size **7.875**

Type Fluid in Hole **Chemical**

Salinity, ppm CL **5.700**

Density / Viscosity **9.3 66**

pH / Fluid Loss **10.5 8.0**

Source of Sample **Flowline**

Rm @ Meas. Temp **.6 @ 55**

Rmf @ Meas. Temp **.45 @ 55**

Rmc @ Meas. Temp **.81 @ 55**

Source of Rmf / Rmc **Charts**

Rm @ BHT **.26 @ 128**

Operating Rig Time **4 1/2 Hours**

Max Rec. Temp. F **128**

Equipment Number **51**

Location **Hays**

Recorded By **C. Desaire**

Witnessed By **Kevin Timson**

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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

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www.pioneeres.com
785 625 3858

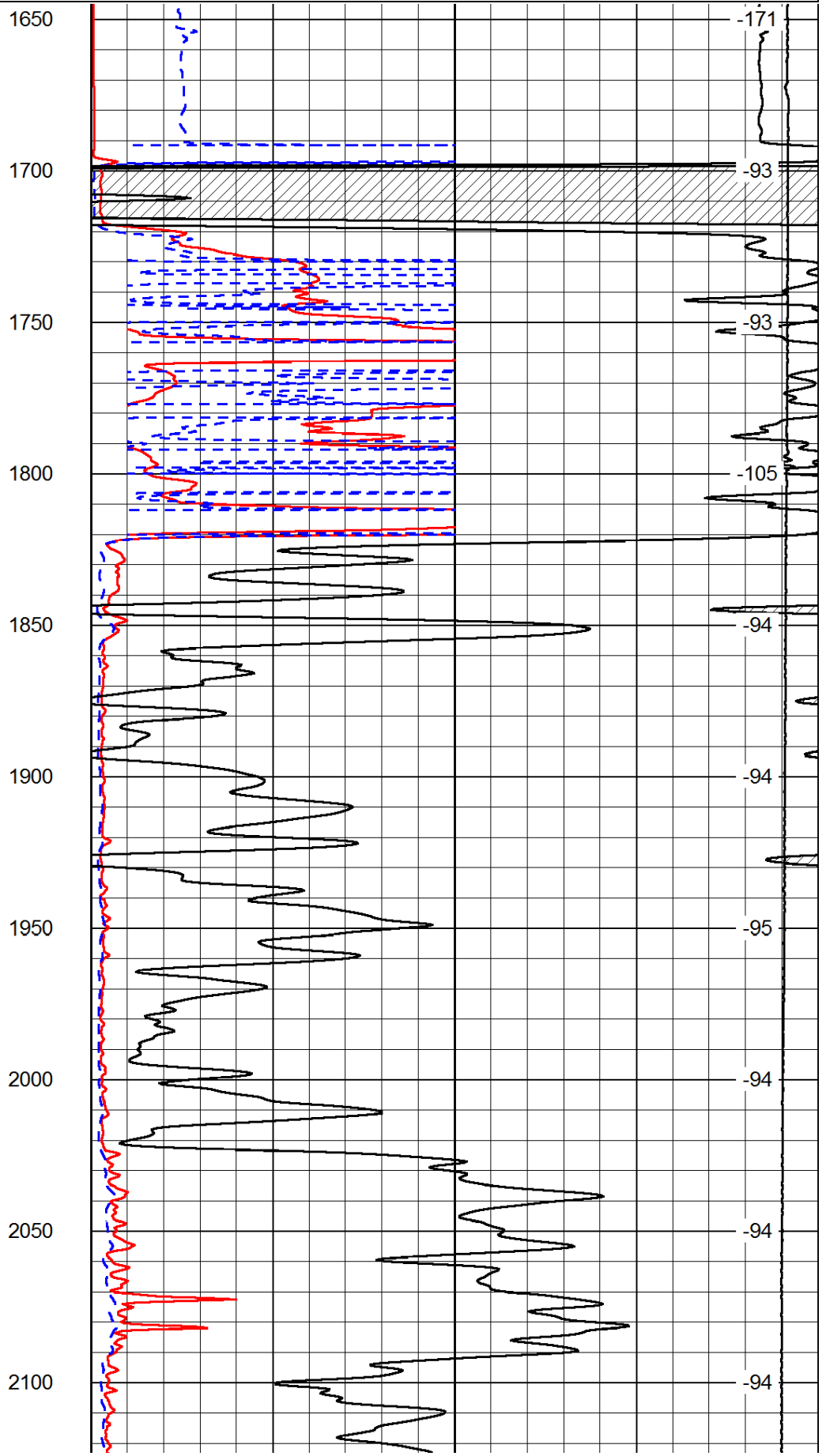
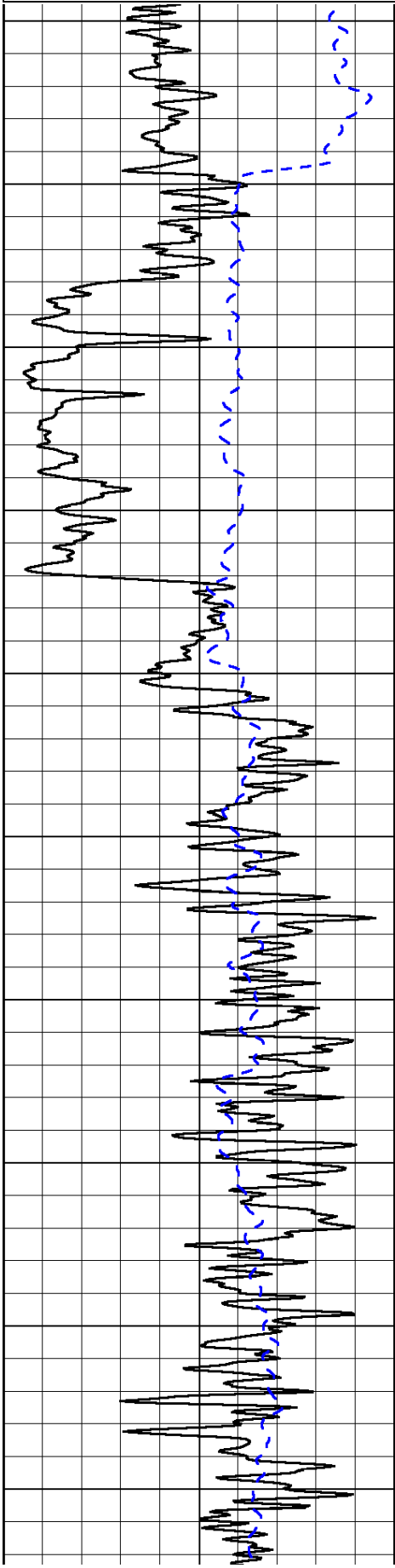
Copeland KS, N on 2 Rd, to AA Rd,
1/2 E, 1/2 S Into

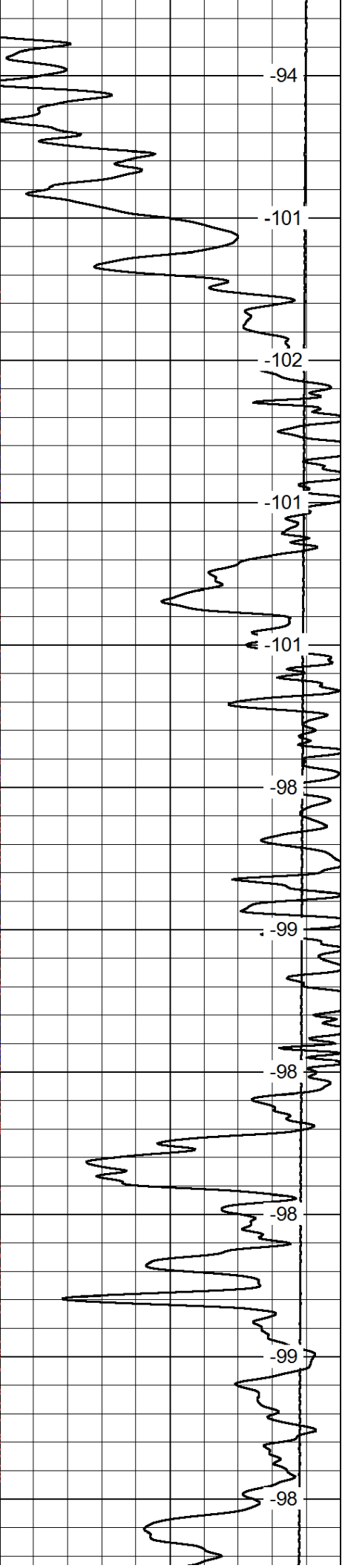
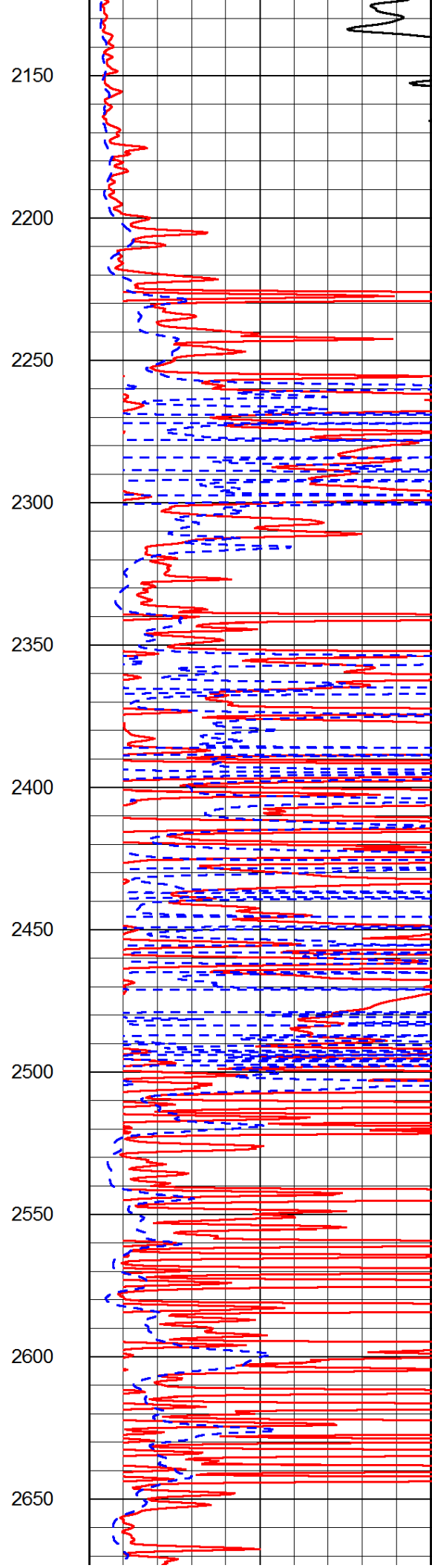
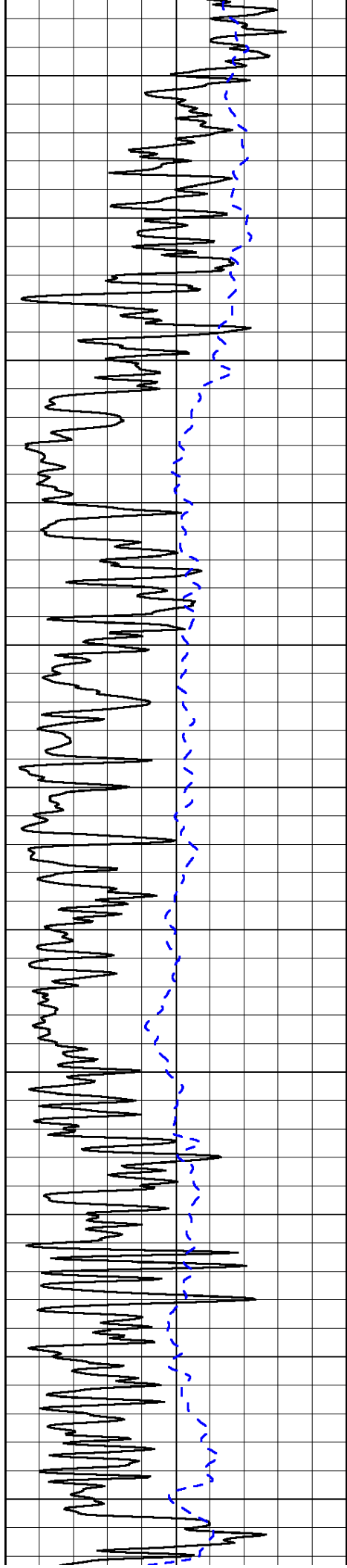
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Presentation Format: dil2in
Dataset Creation: Sat Nov 29 23:21:47 2014
Charted by: Depth in Feet scaled 1:600

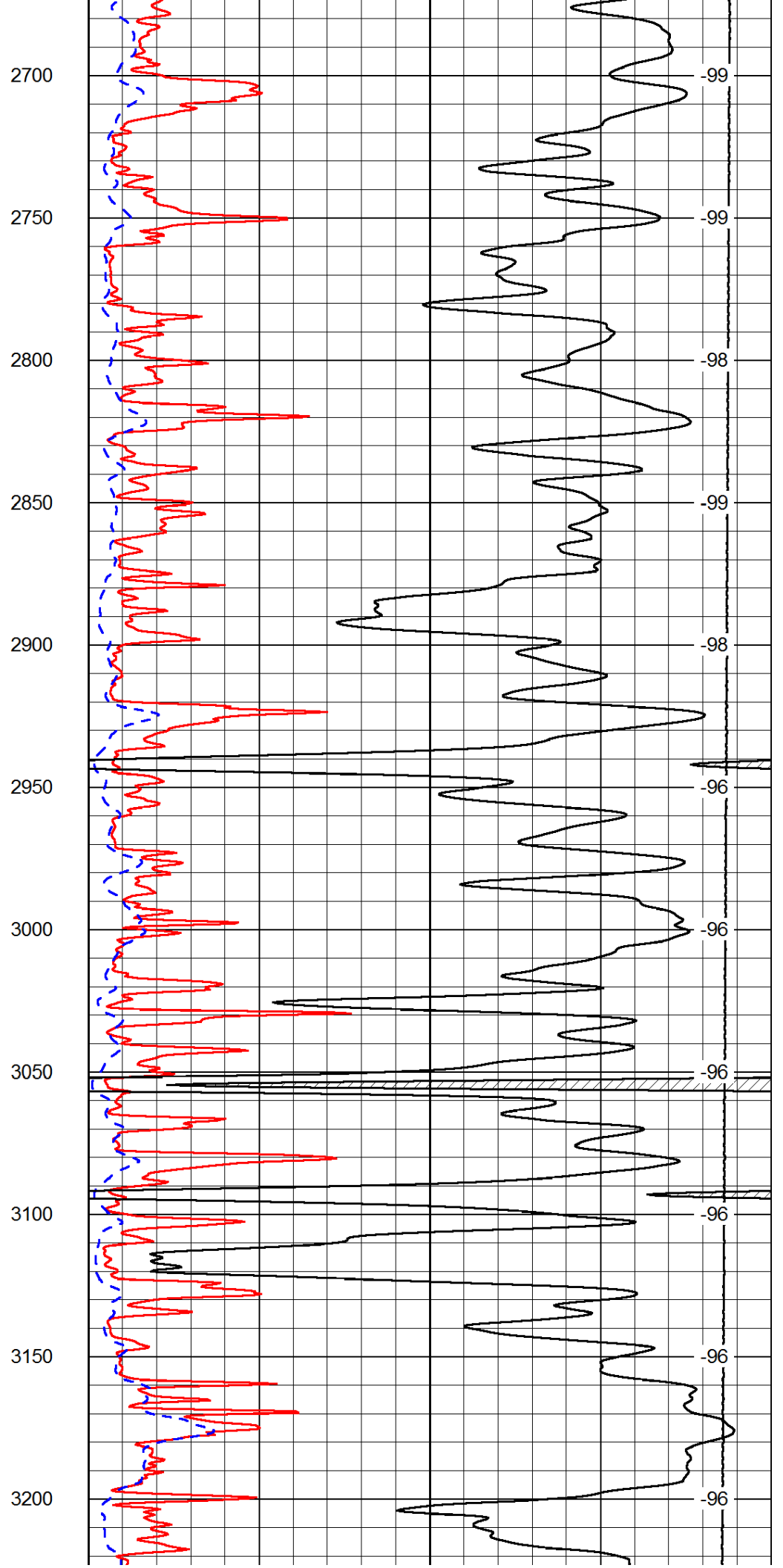
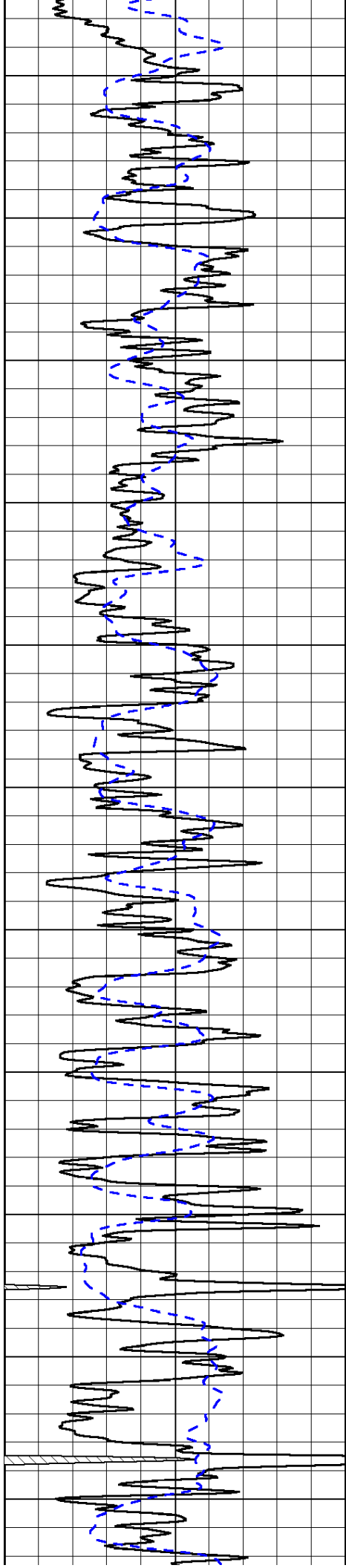
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-200 SP (mV) 0

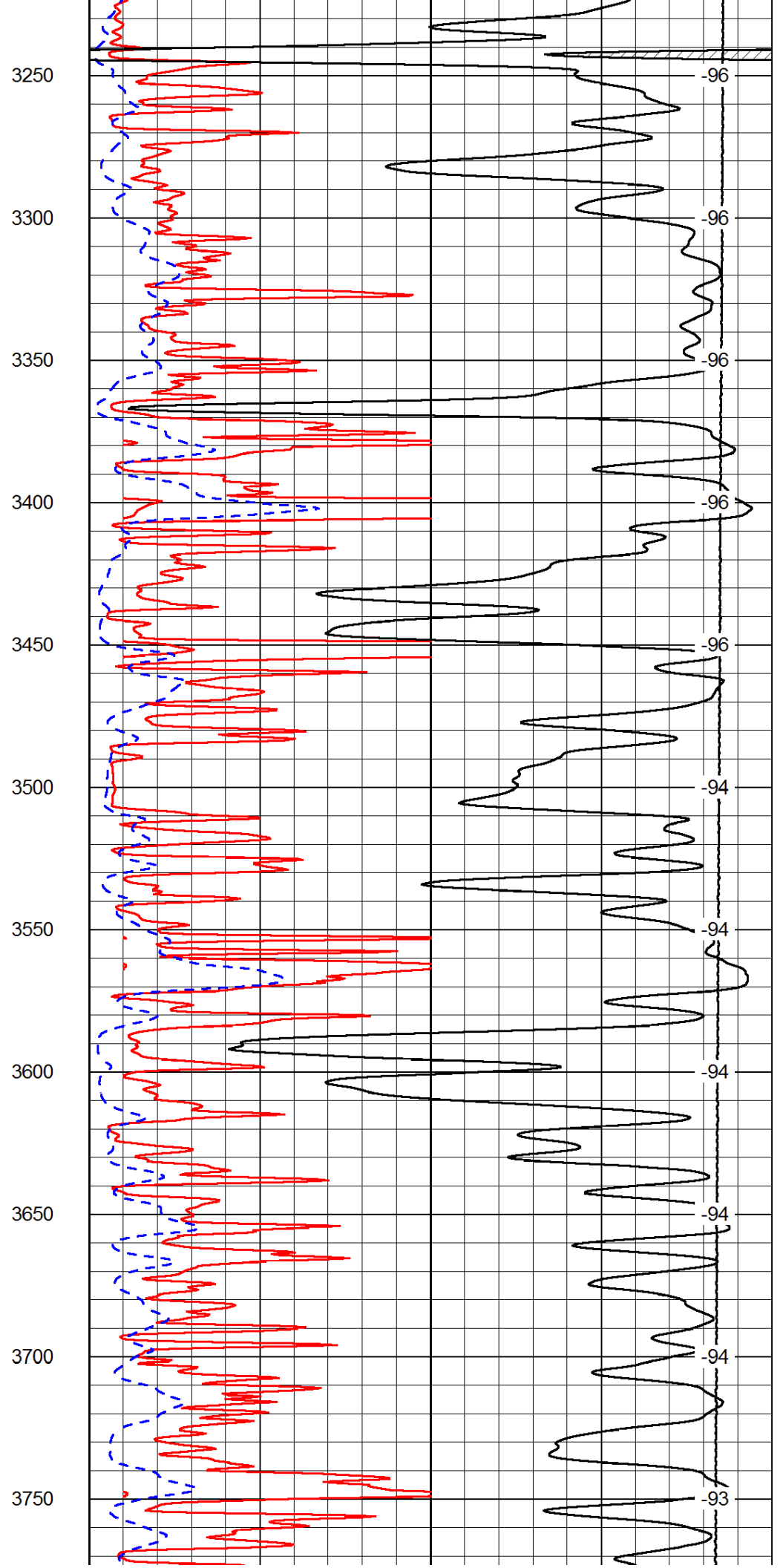
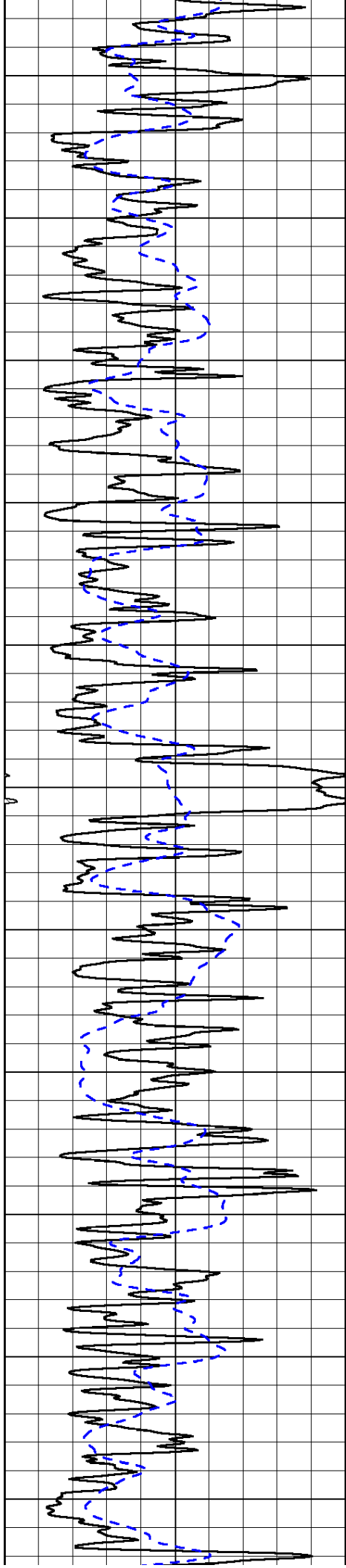
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0 Deep Resistivity 50
1000 Conductivity 0
15000 Line Tension 0
50 Shallow Resistivity 500
50 Deep Resistivity 500

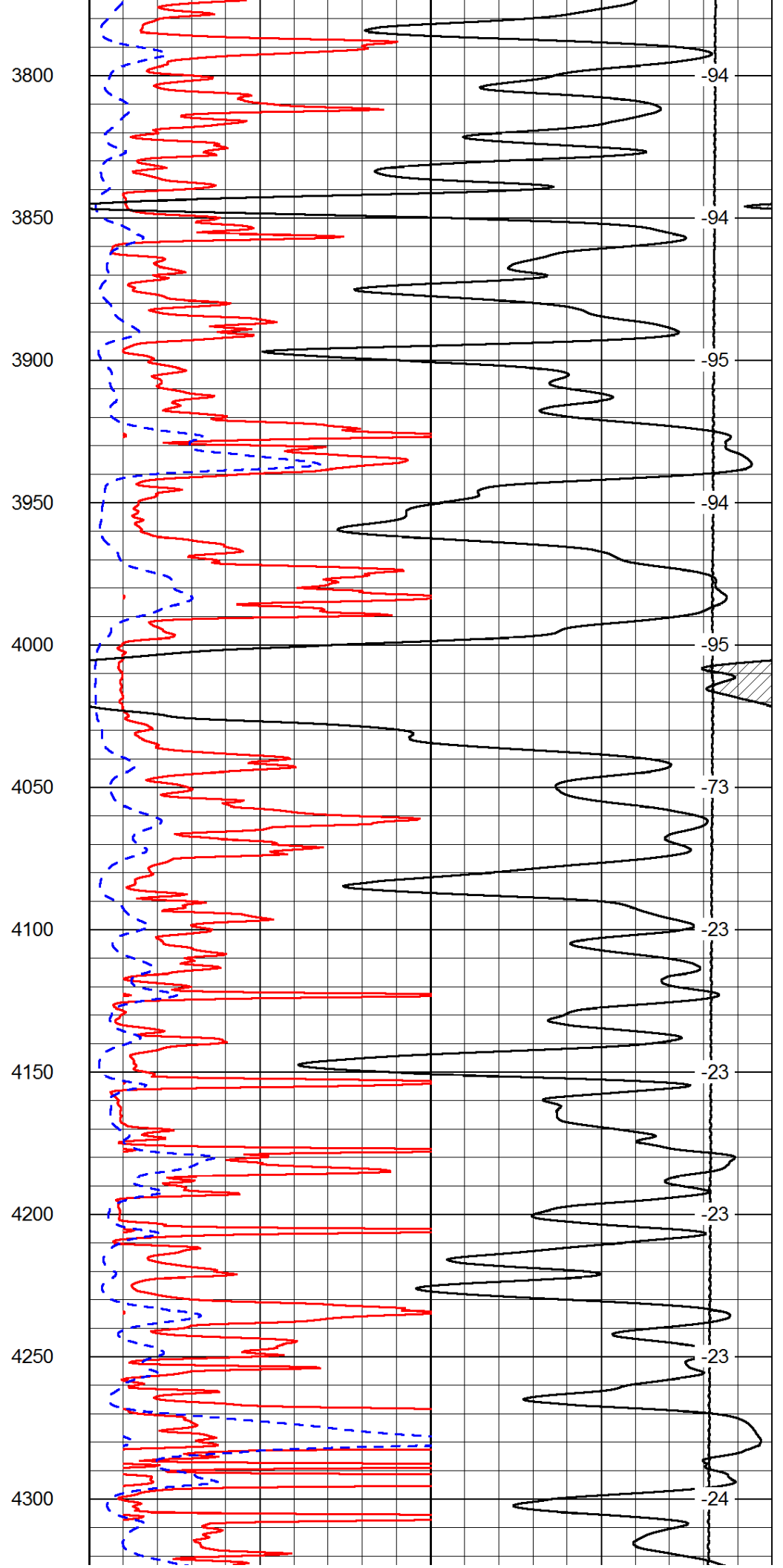
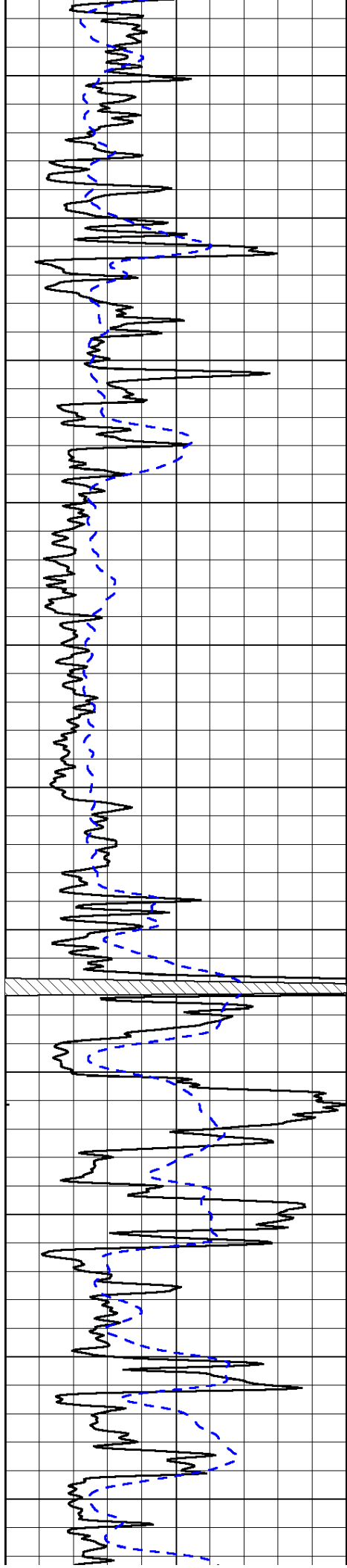
LSPD

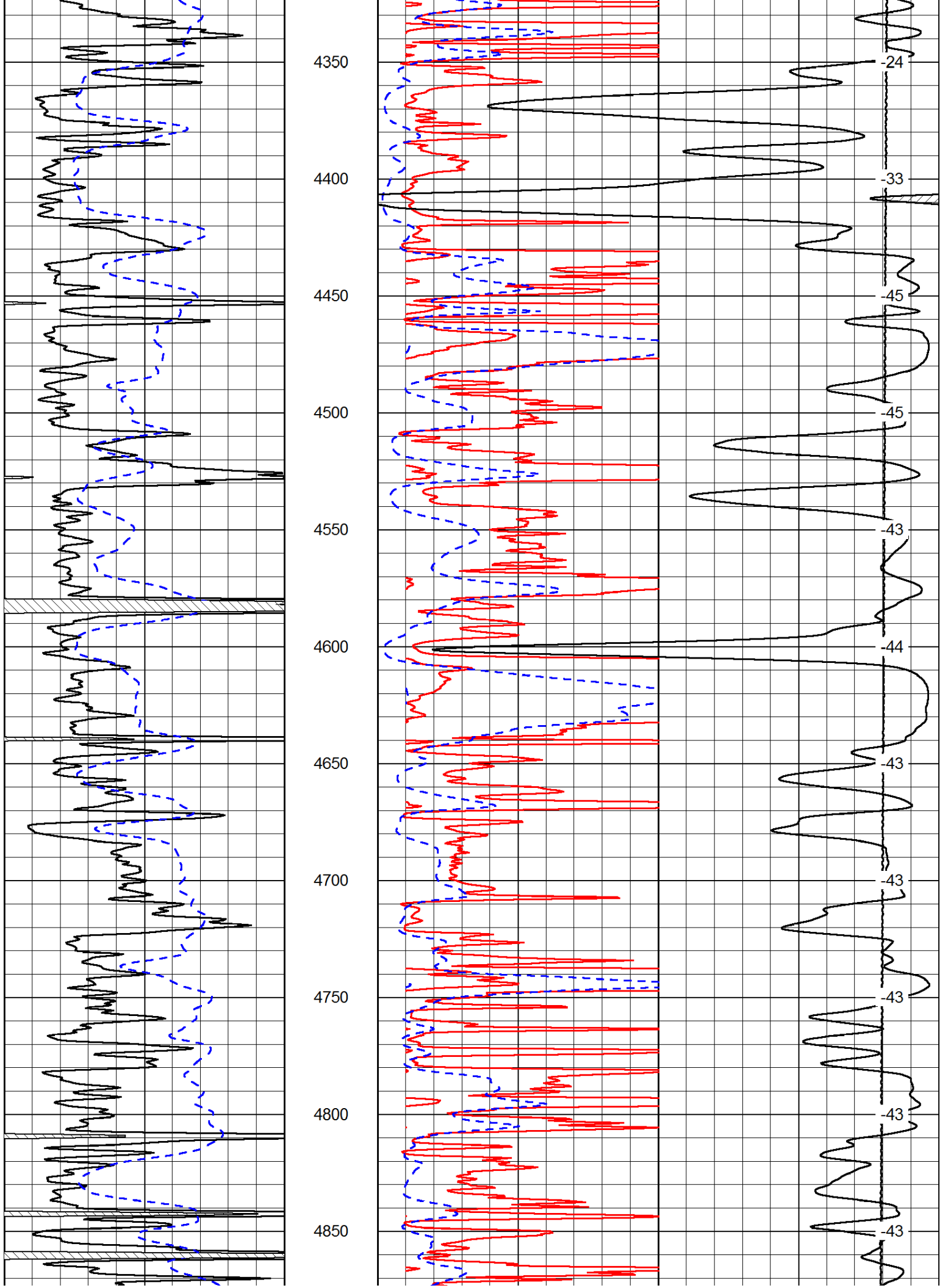


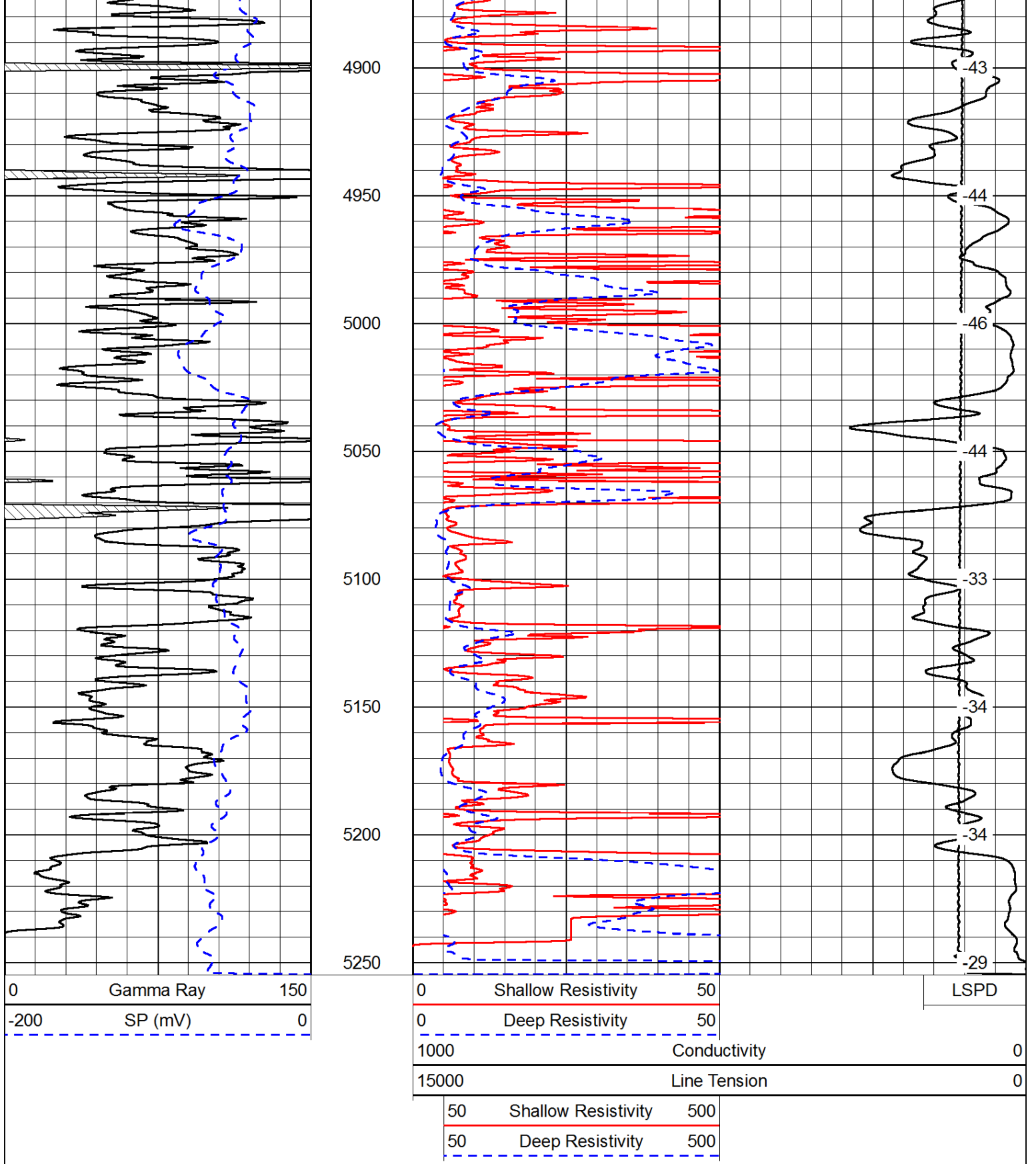




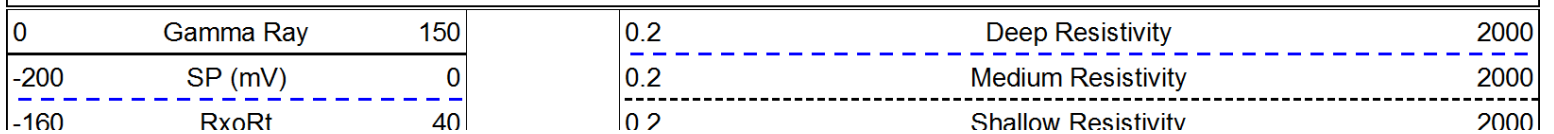


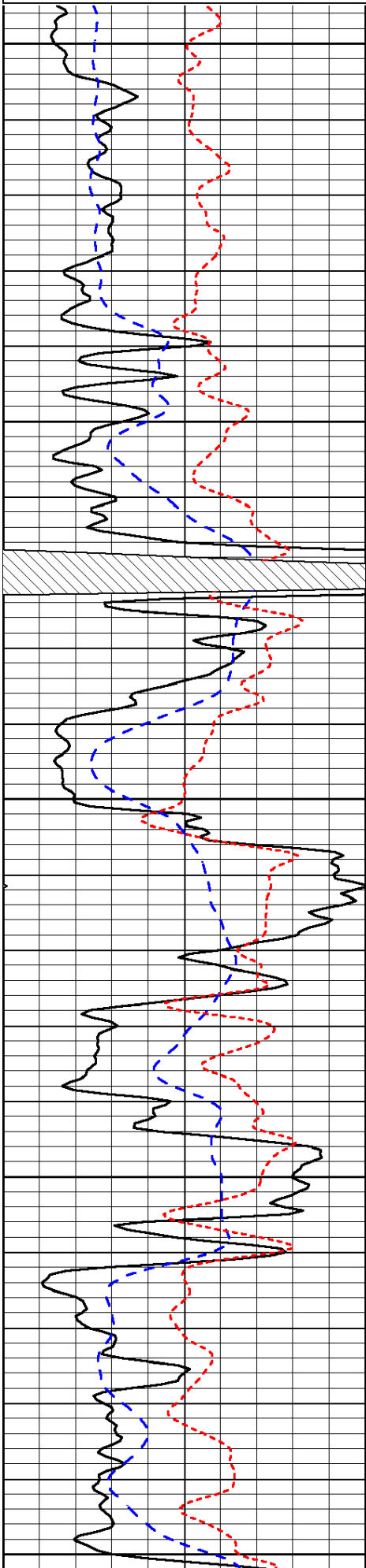




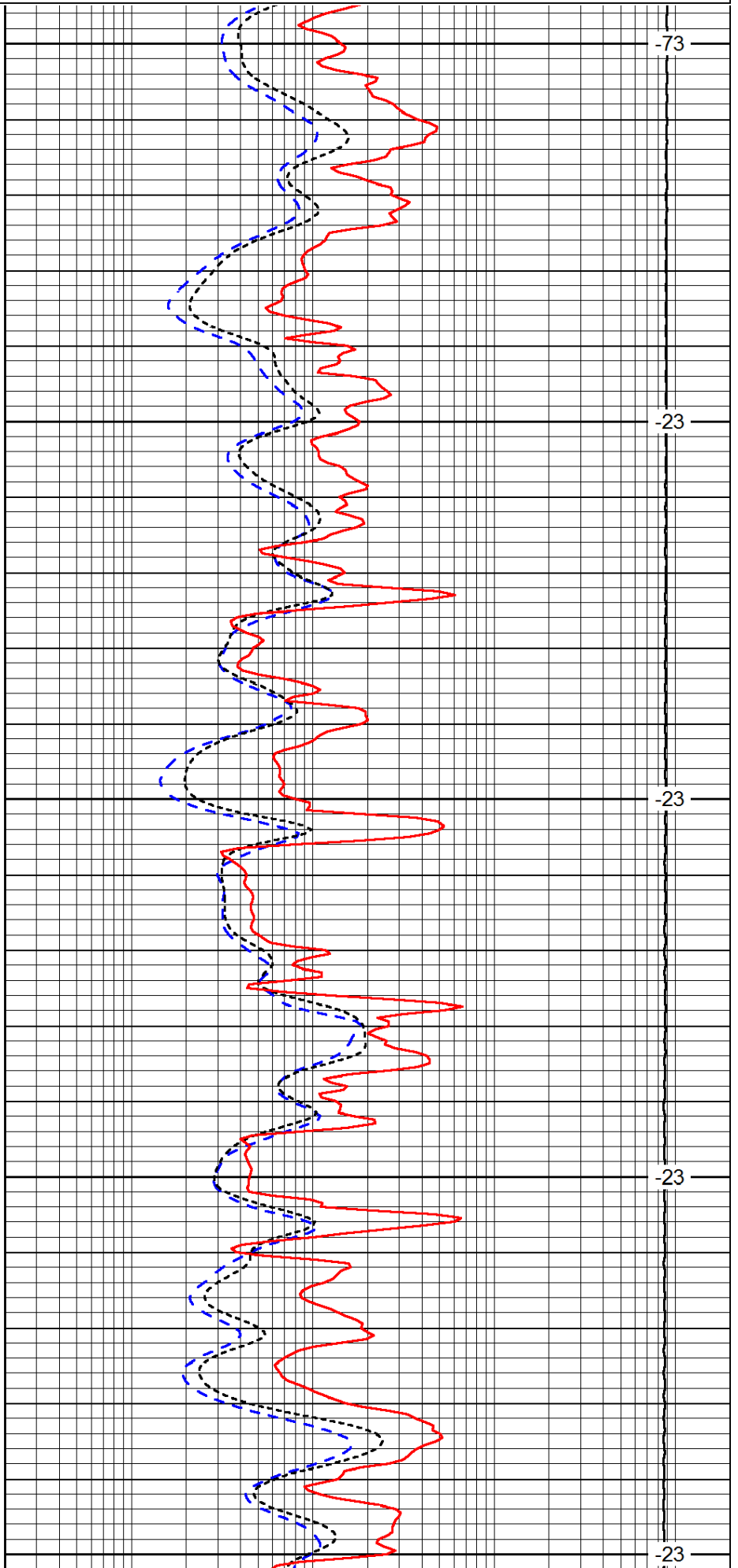


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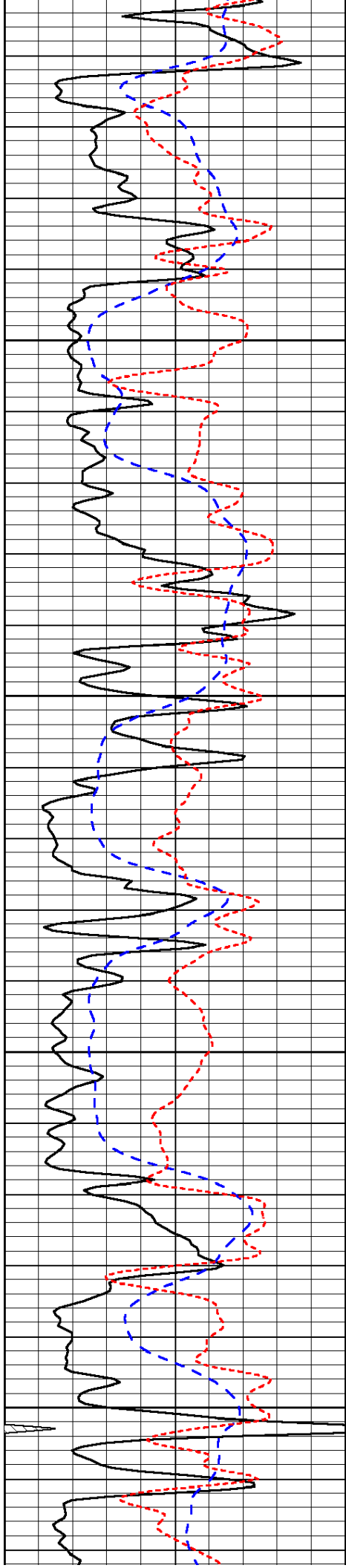




4050
4100
4150
4200
4250



-73
-23
-23
-23
-23

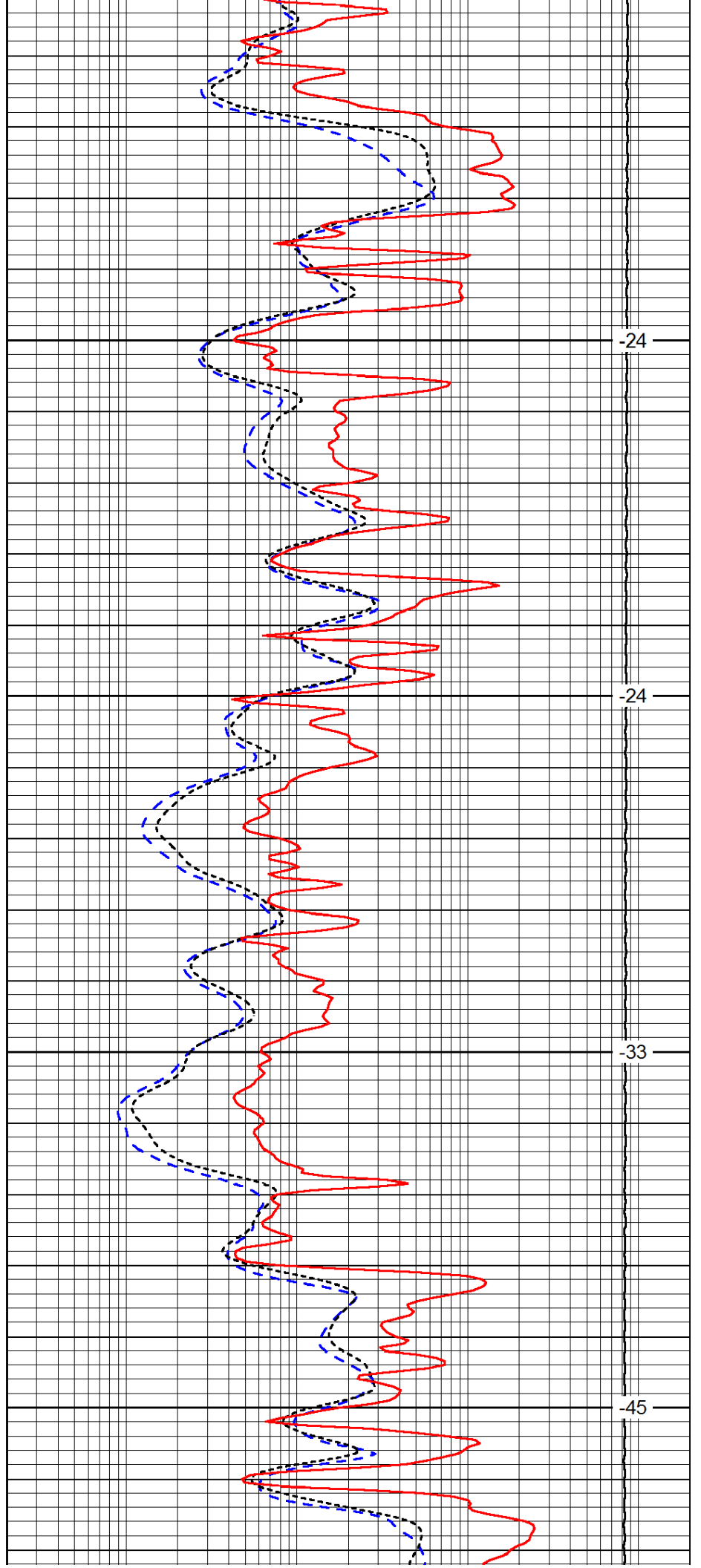


4300

4350

4400

4450

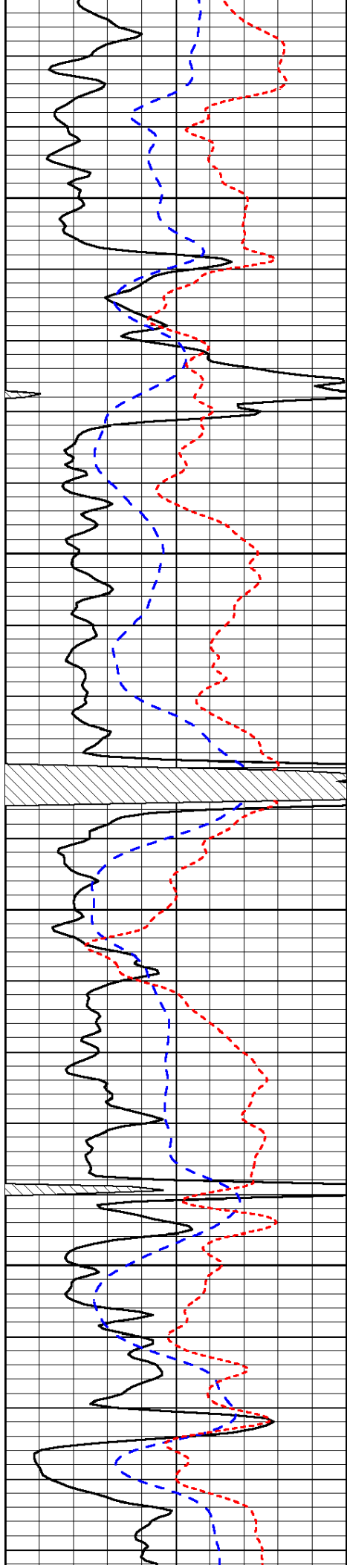


-24

-24

-33

-45

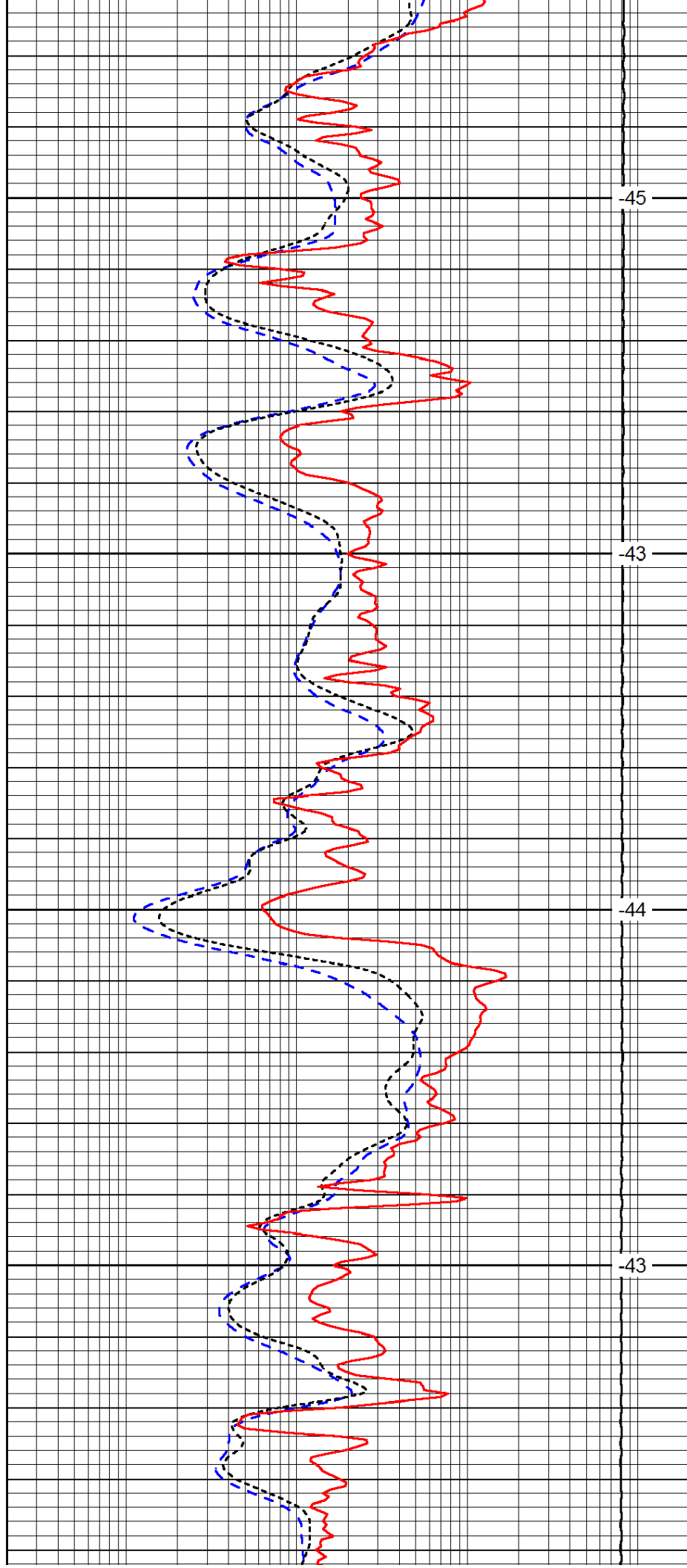


4500

4550

4600

4650

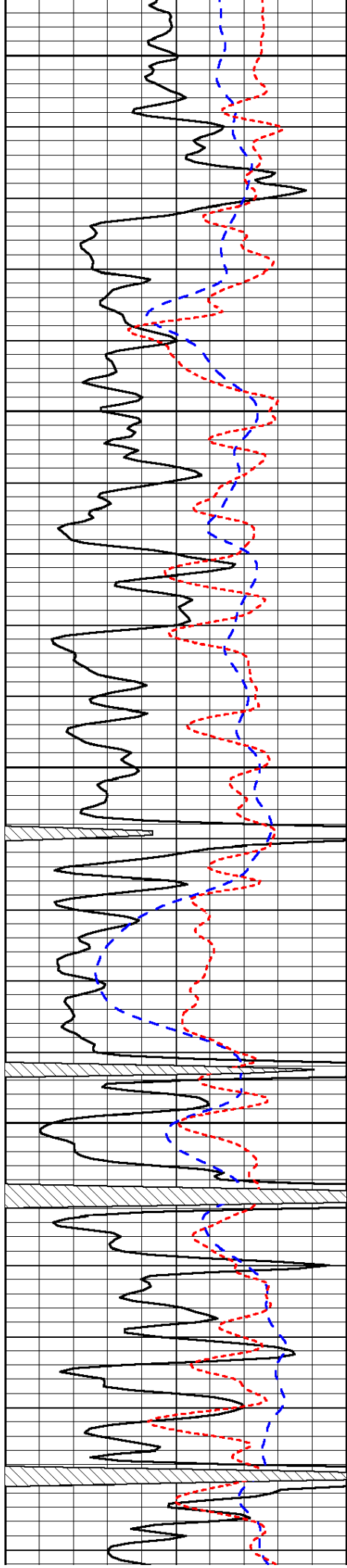


-45

-43

-44

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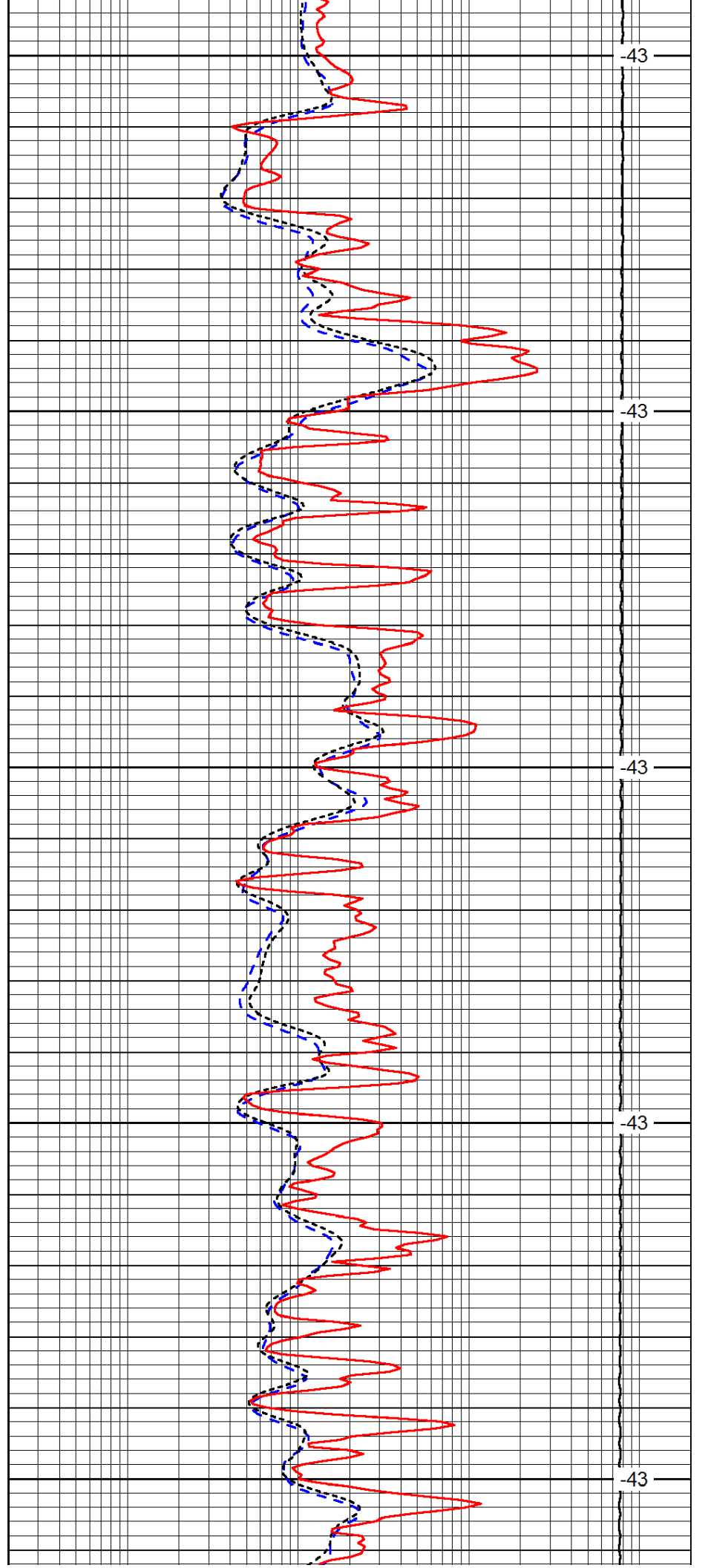
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4750

4800

4850

4900



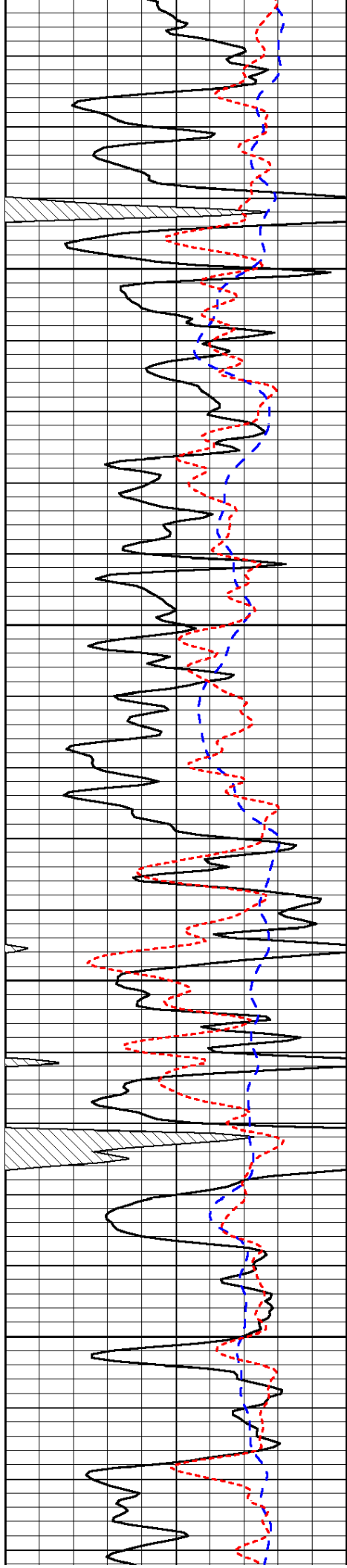
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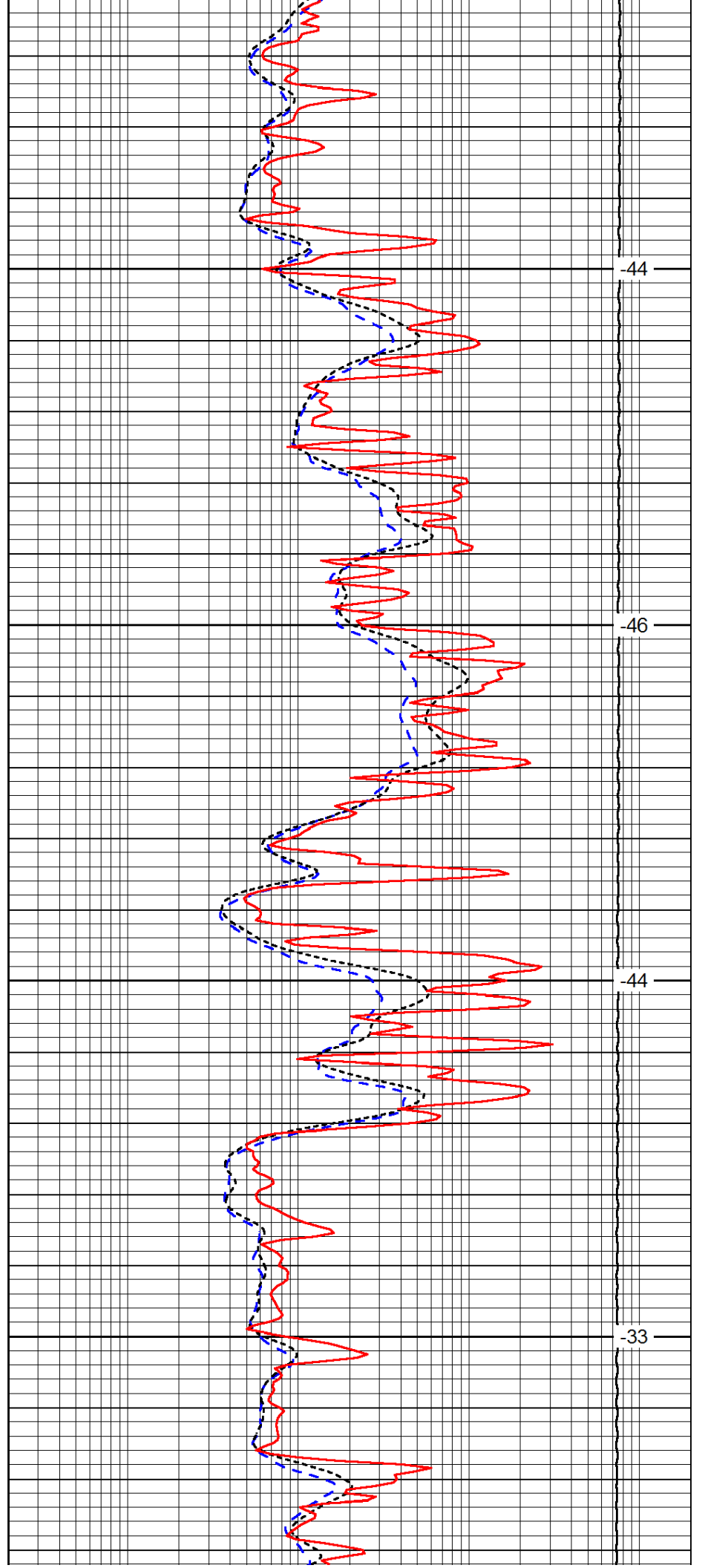


4950

5000

5050

5100

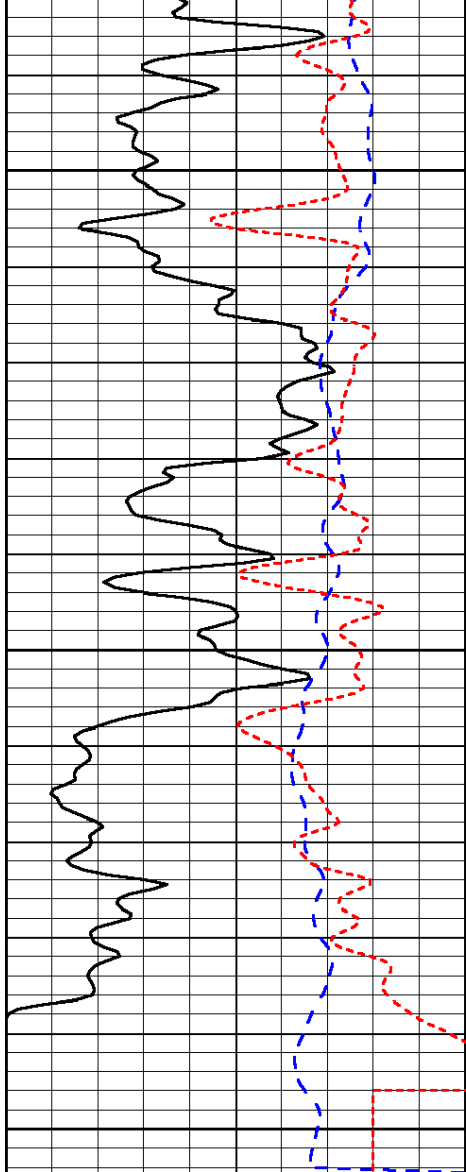


-44

-46

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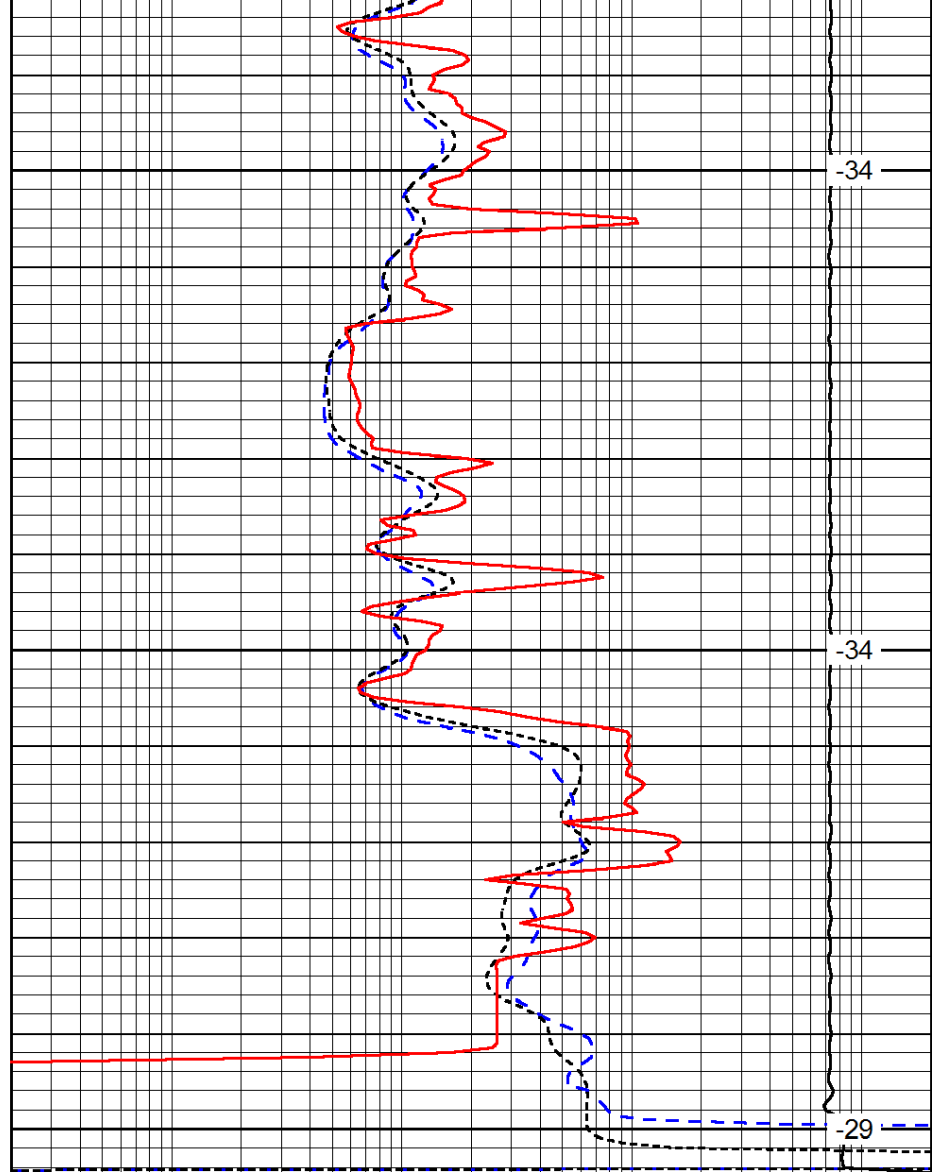


5150

5200

5250

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



-34

-34

-29

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

LSPD