



Pioneer Energy Services

Dual Induction Log

15-065-23935-00-00

API No.

Company **H&C Operating, Inc.**

Well **Riedel #17-1**

Field **Wildcat**

County **Graham** State

Kansas

Location

330' FSL & 1900' FWL

Other Services
CNL/CDL
MEL

Sec: 17 Twp: 10 S Rge: 25 W

Permanent Datum Ground Level Elevation 2550
Log Measured From Kelly Bushing 11 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Elevation

K.B. 2561
D.F. 2550
G.L. 2550

Date 5/31/2013

Run Number One

Depth Driller 4120

Depth Logger 4119

Bottom Logged Interval 4118

Top Log Interval 250

Casing Driller 8.625 @ 266

Casing Logger 263

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 1500

Density / Viscosity 9.3 48

pH / Fluid Loss 10.0 7.2

Source of Sample Flowline

Rm @ Meas. Temp 0.80 @ 64

Rmf @ Meas. Temp 0.60 @ 64

Rmc @ Meas. Temp 1.08 @ 64

Source of Rmf / Rmc Charts

Rm @ BHT 0.43 @ 119

Operating Rig Time 4 Hours

Max Rec. Temp. F 119

Equipment Number 91

Location Hays

Recorded By Y. Ruiz

Witnessed By Clayton Erickson

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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.pioneerenergy.com
 785 625 3858
 ST. Peter,
 4 West on E Rd, 1 South on 110 Rd, 1/4 East,
 North into

Database File: c:\warrior\data\h&c_riedel #17-1\h&c053113hd.db
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 Charted by: Depth in Feet scaled 1:600

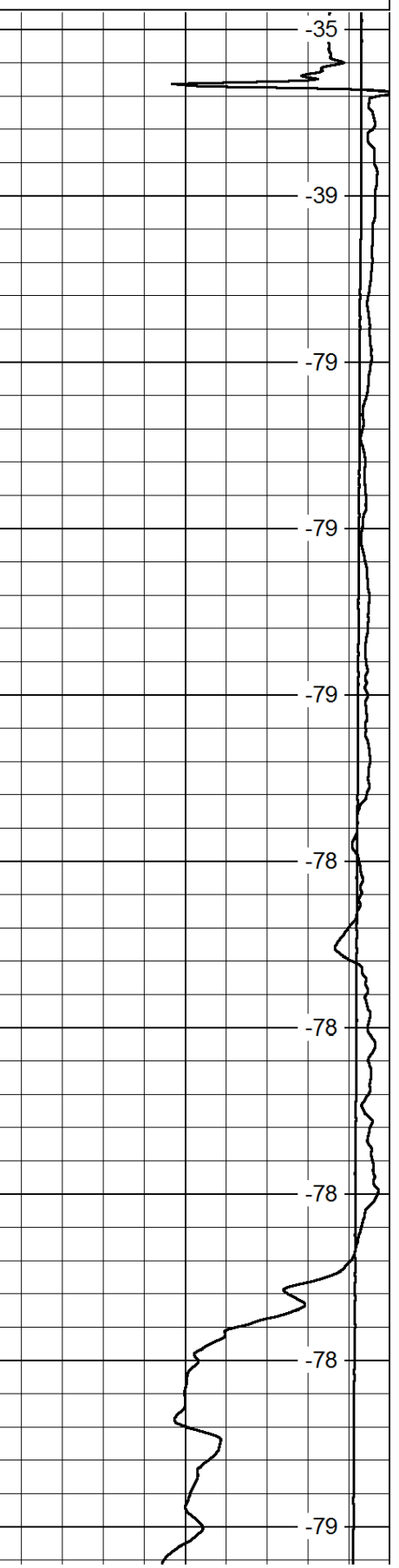
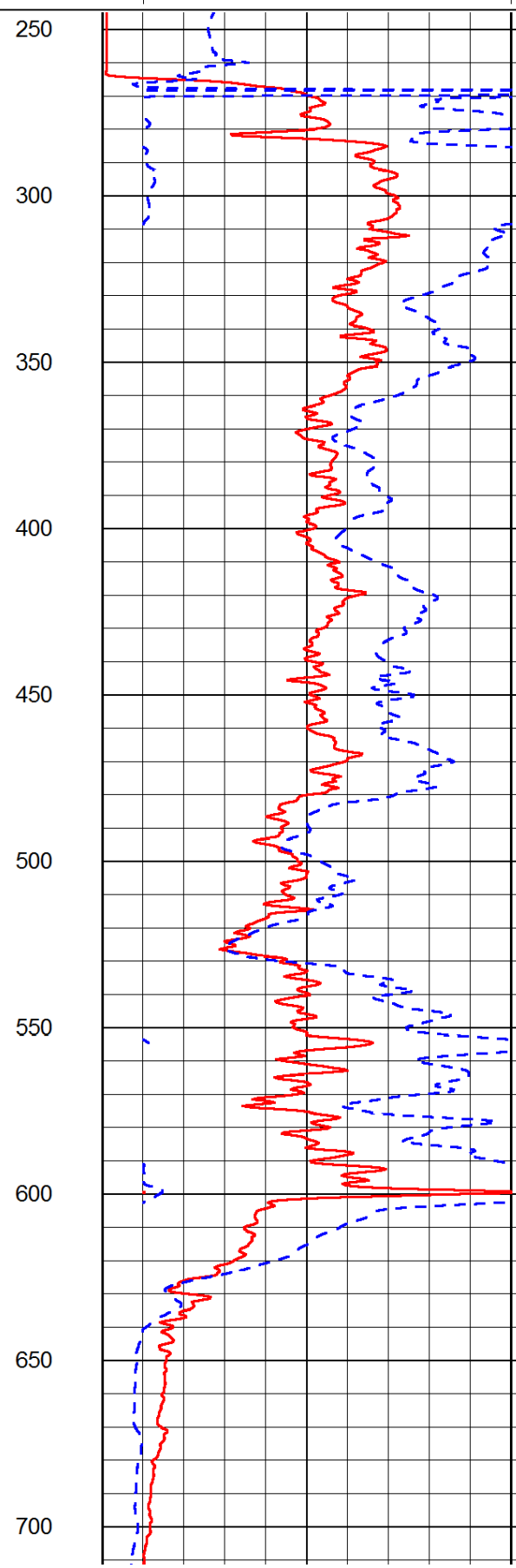
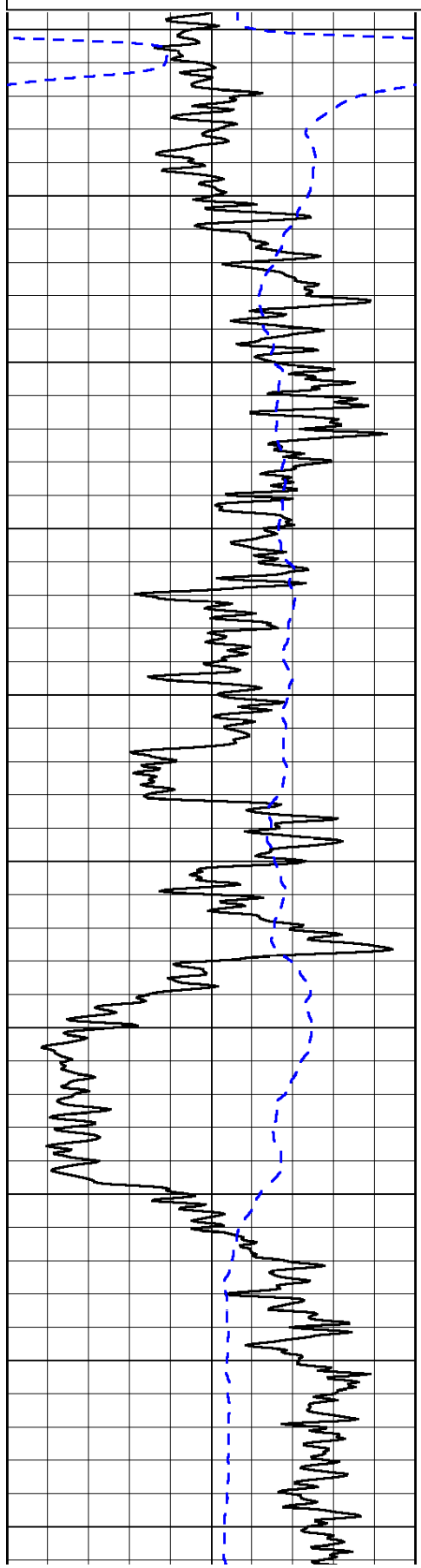
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-200	SP (mV)	0

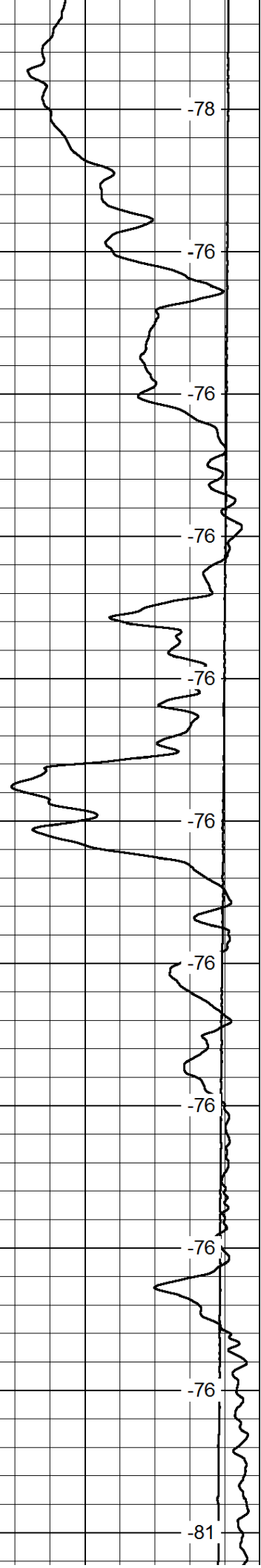
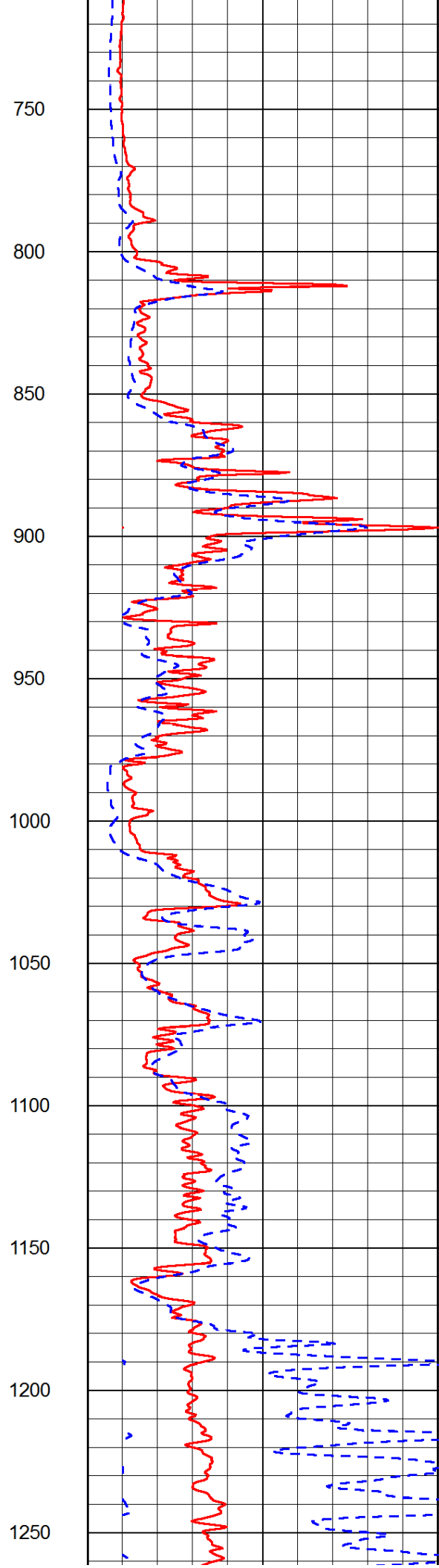
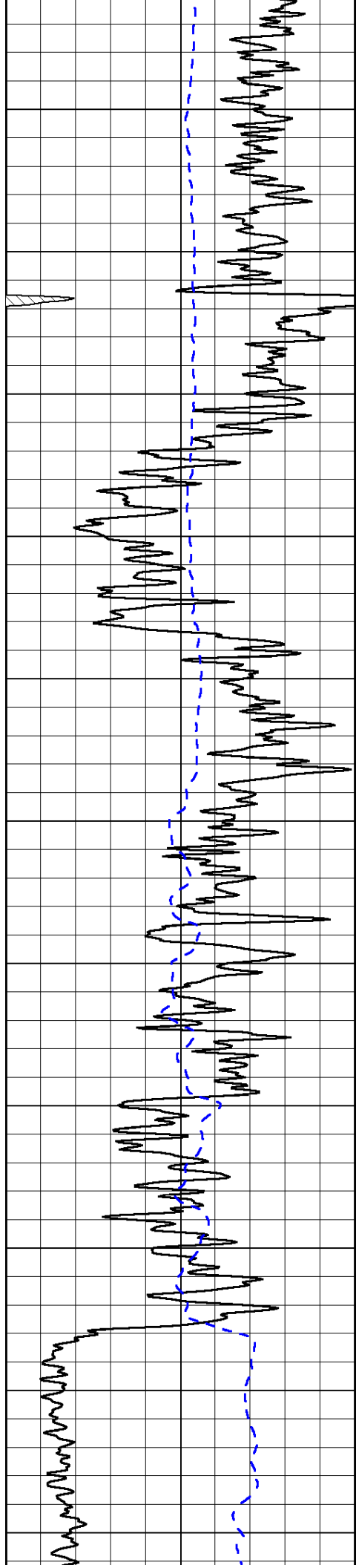
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0	Deep Resistivity	50

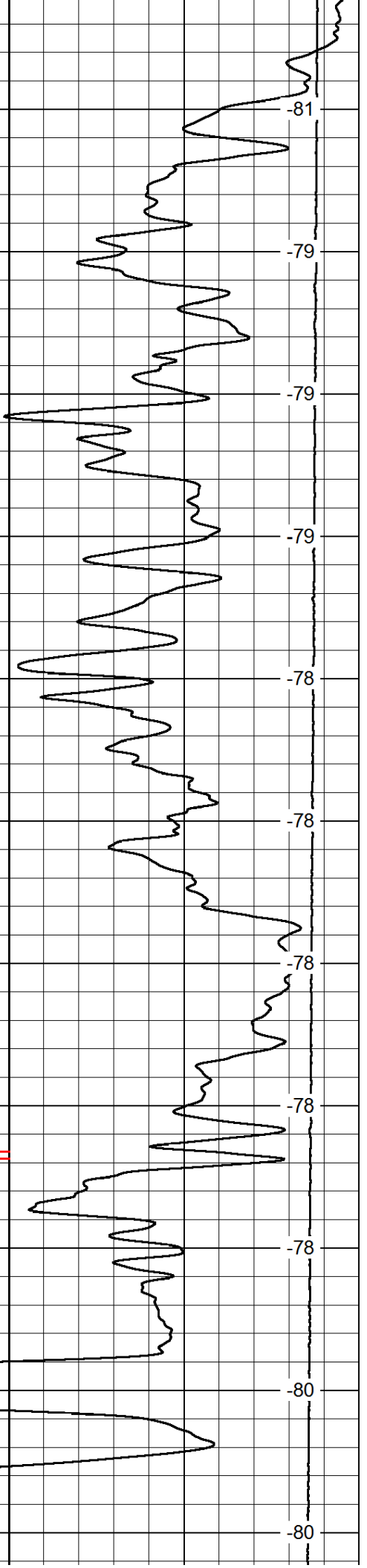
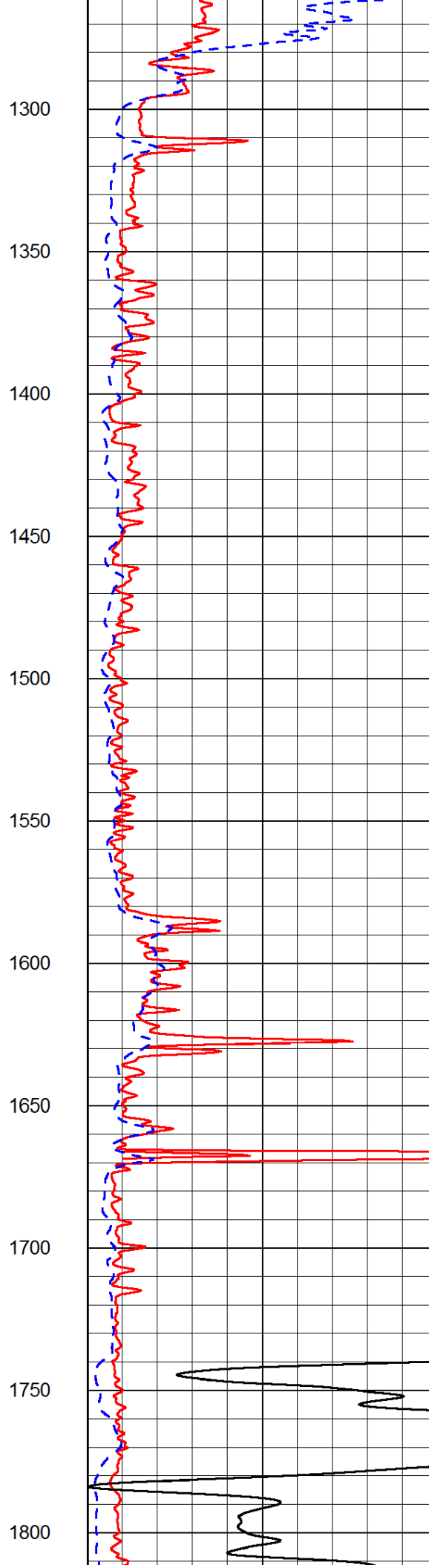
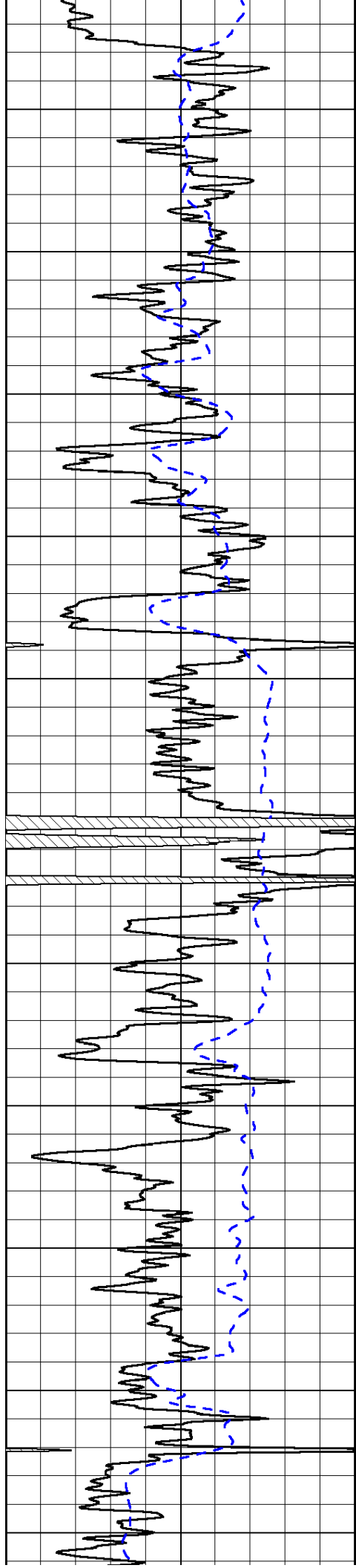
LSPD

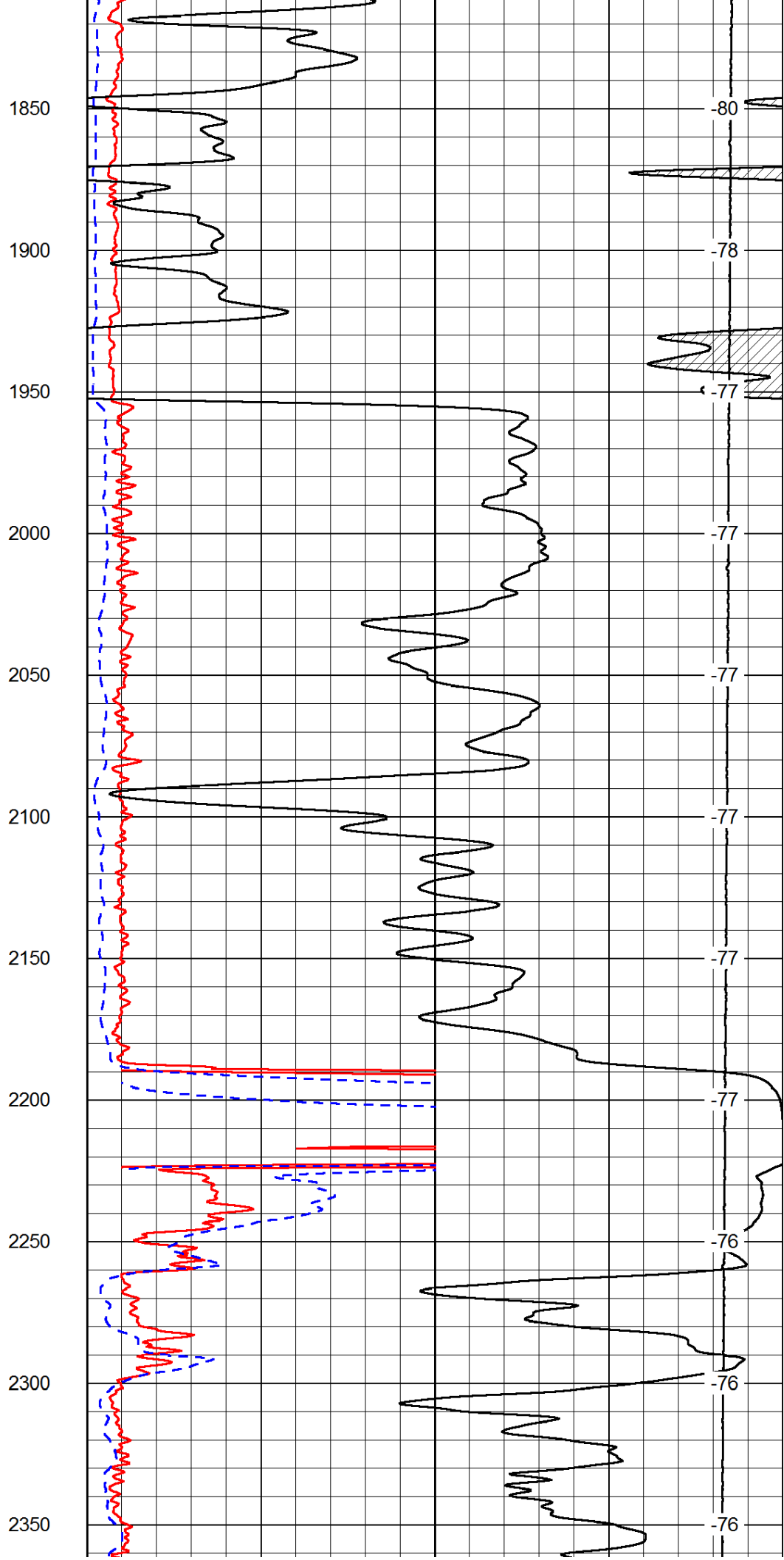
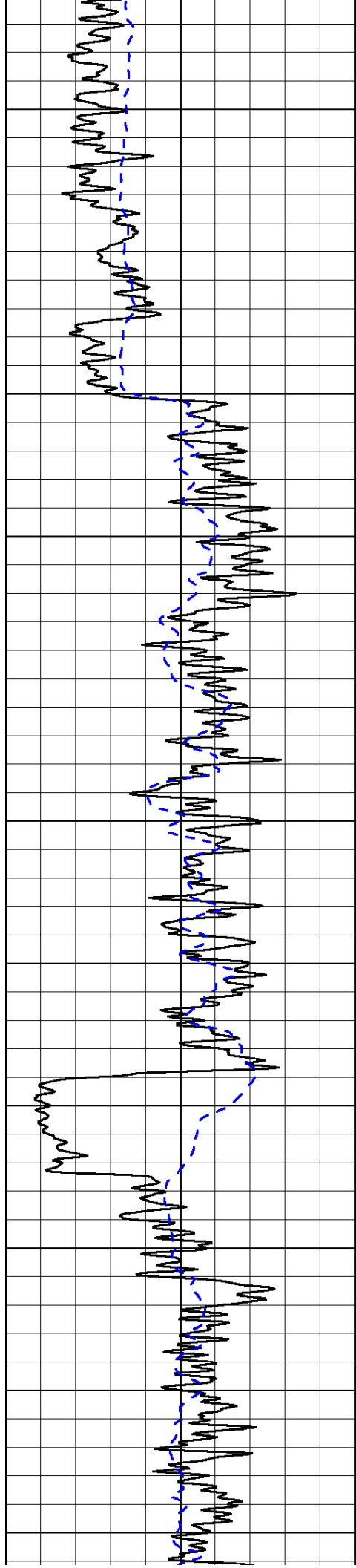
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15000	Line Tension	0

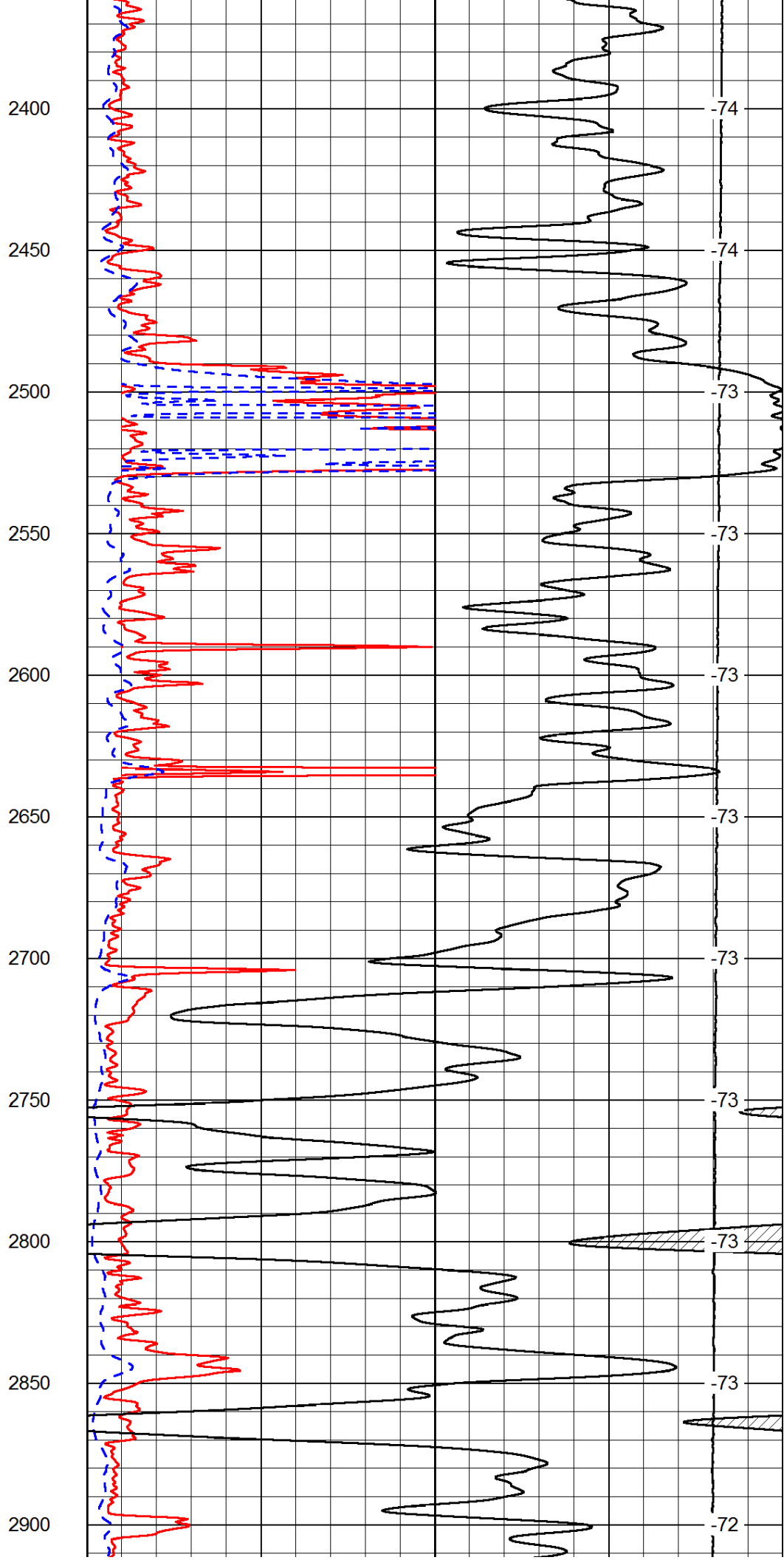
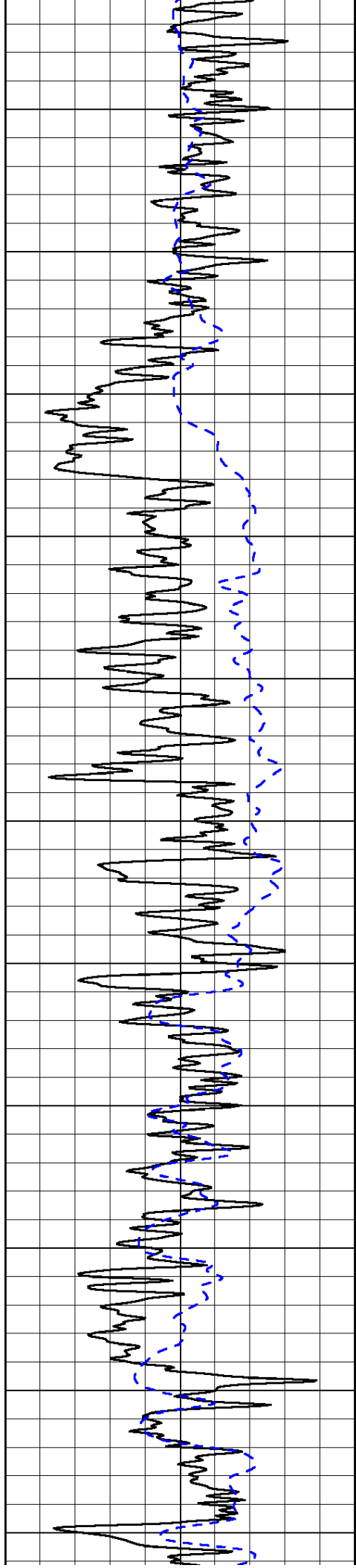
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50	Deep Resistivity	500

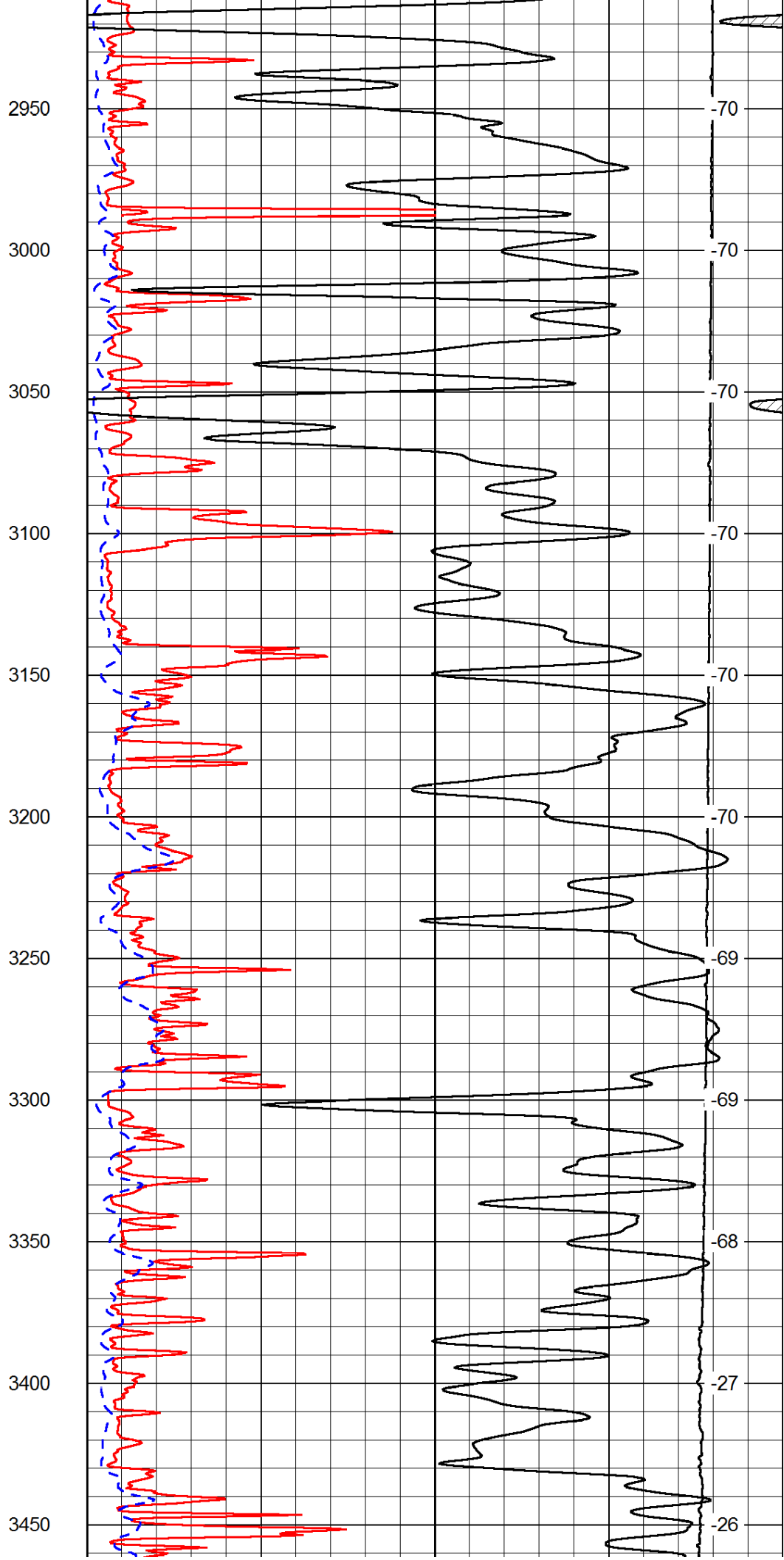
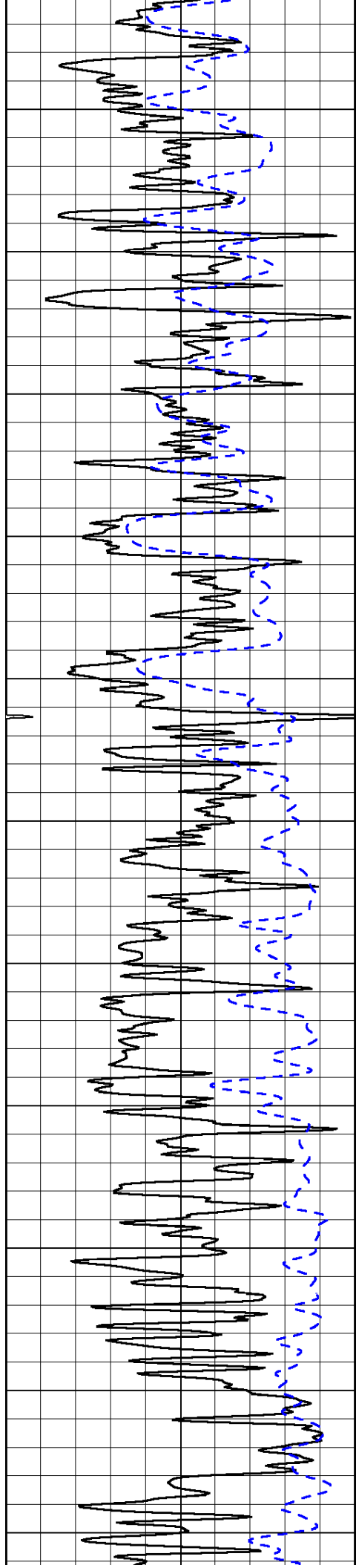


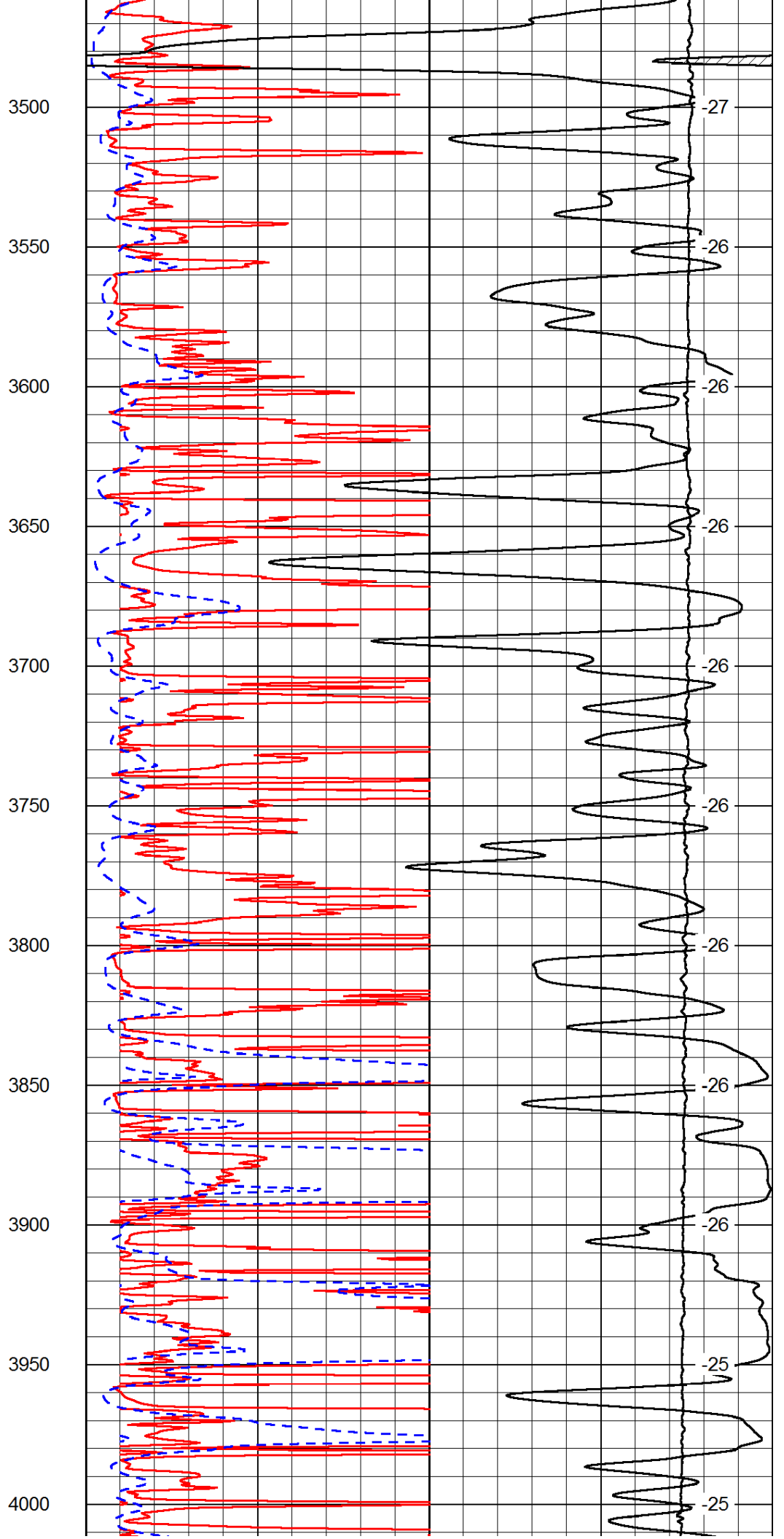
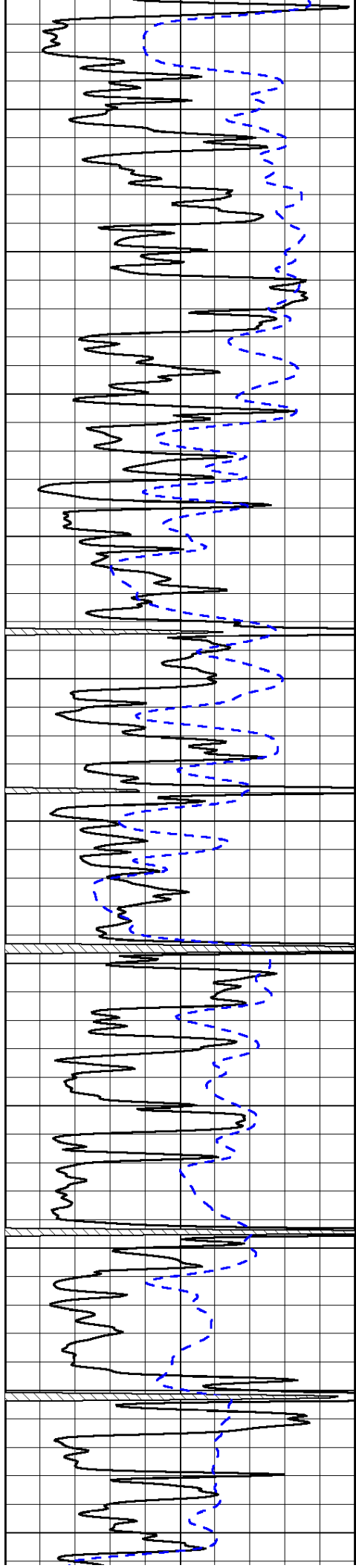


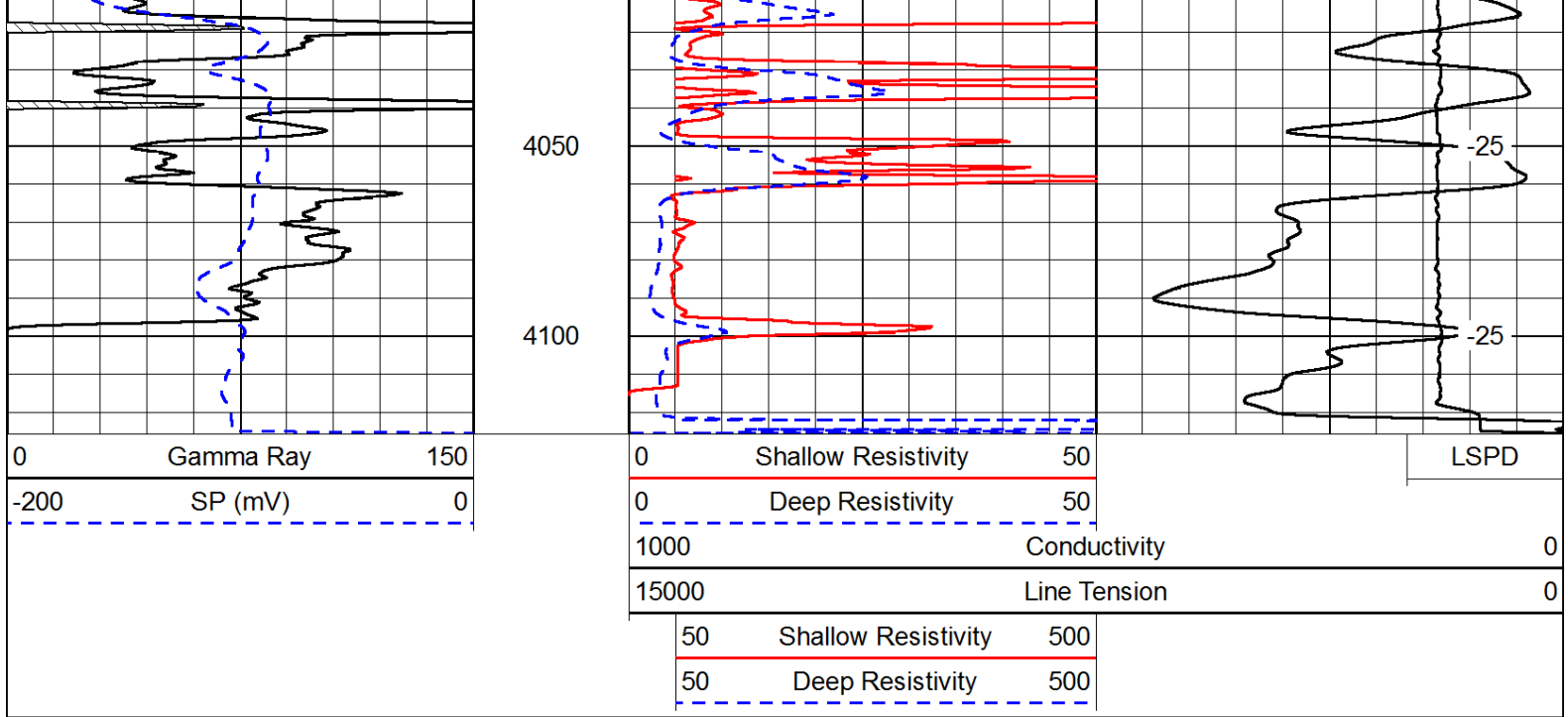




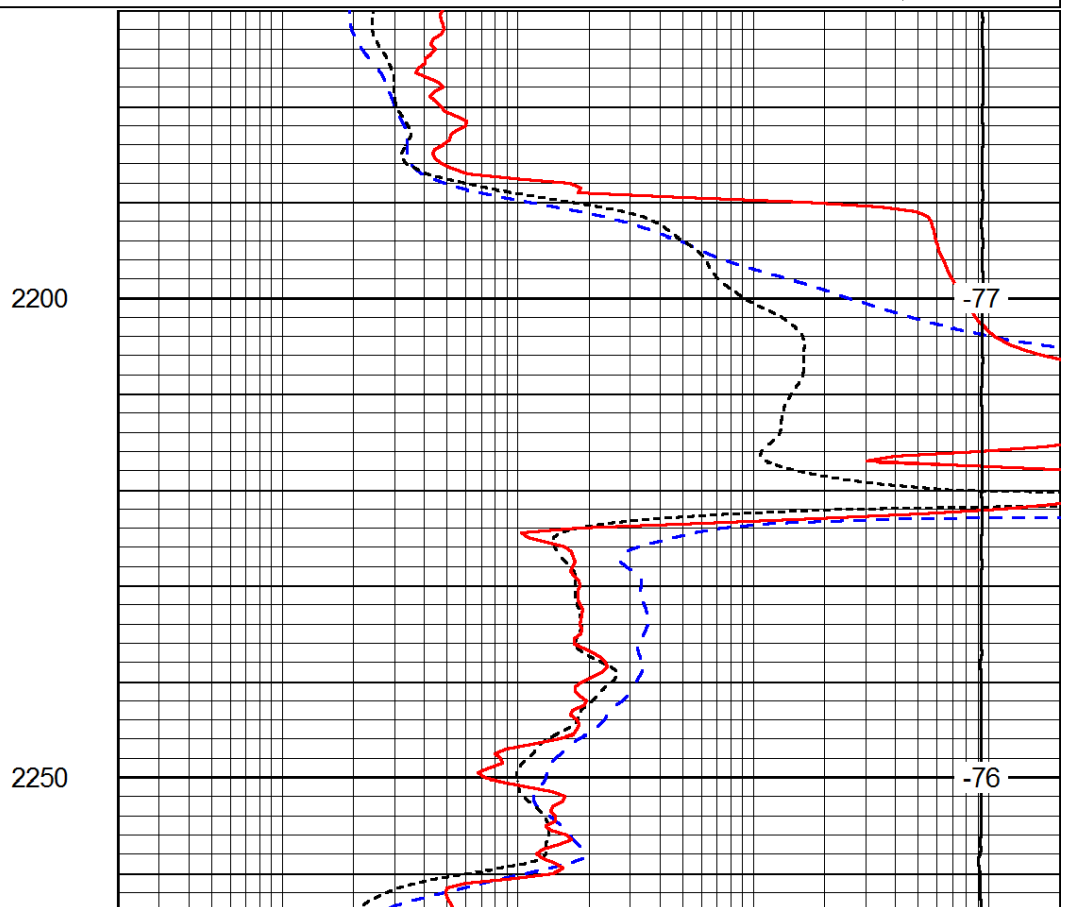
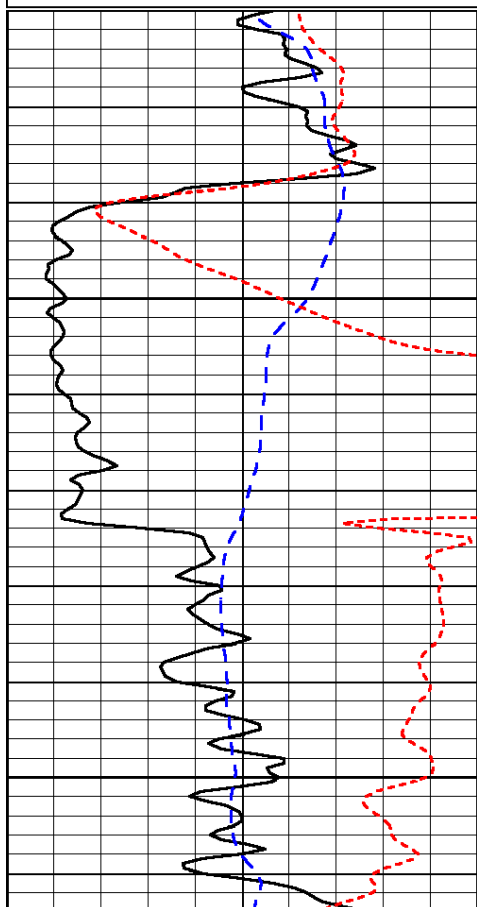
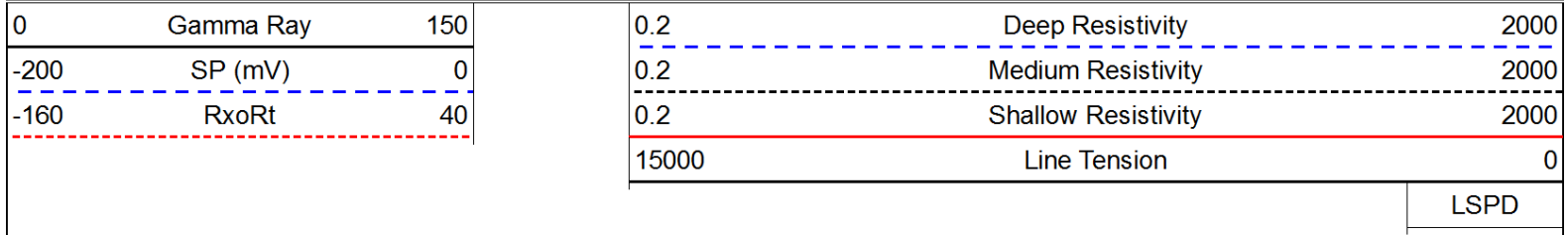


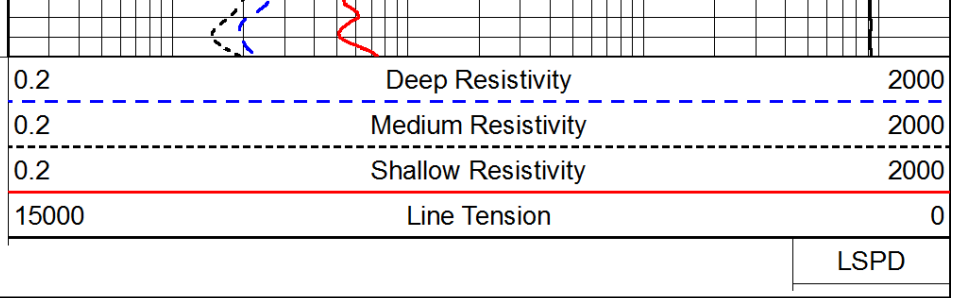
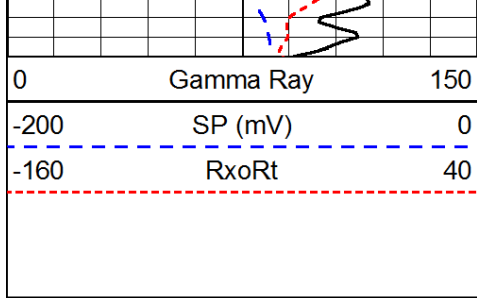




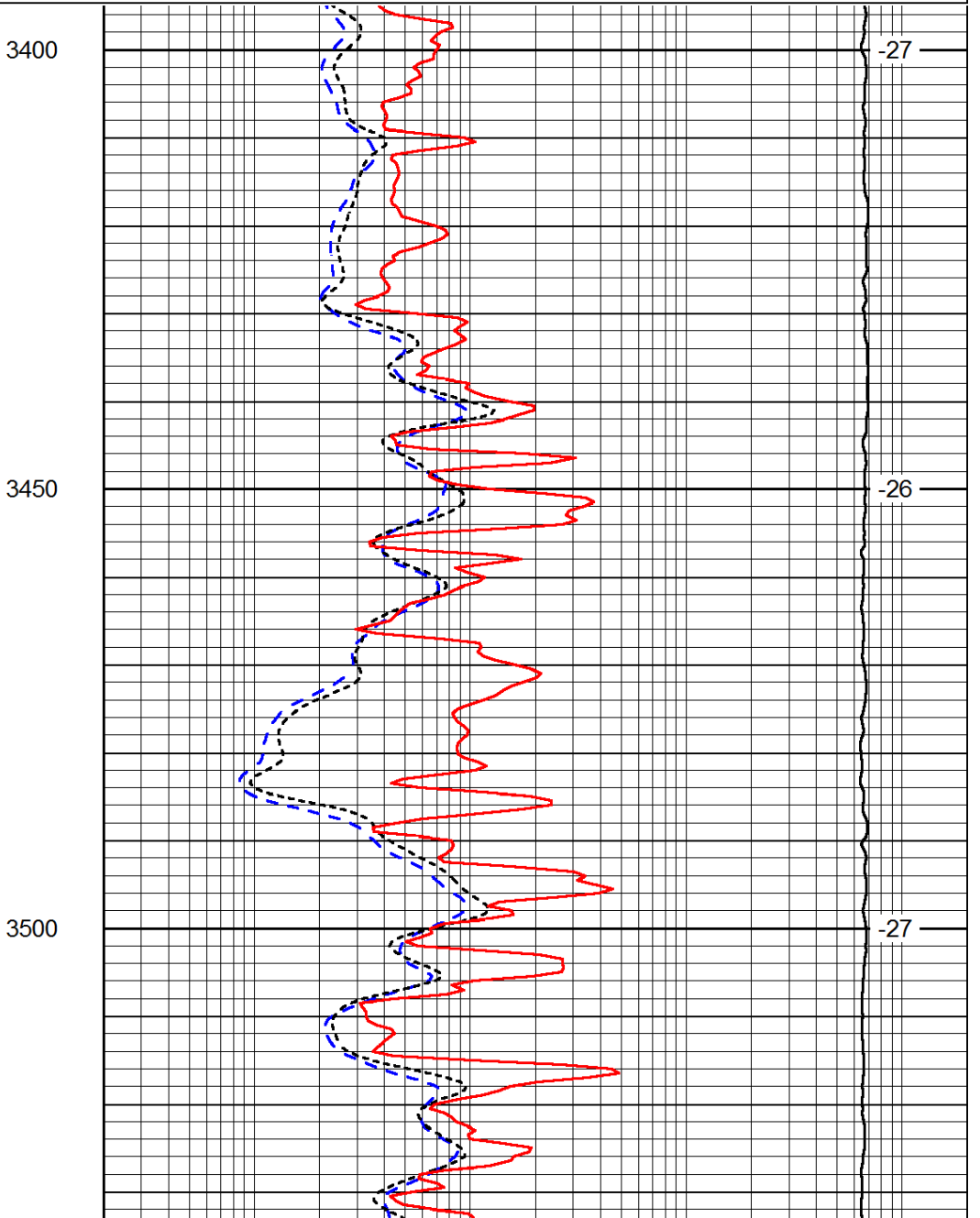
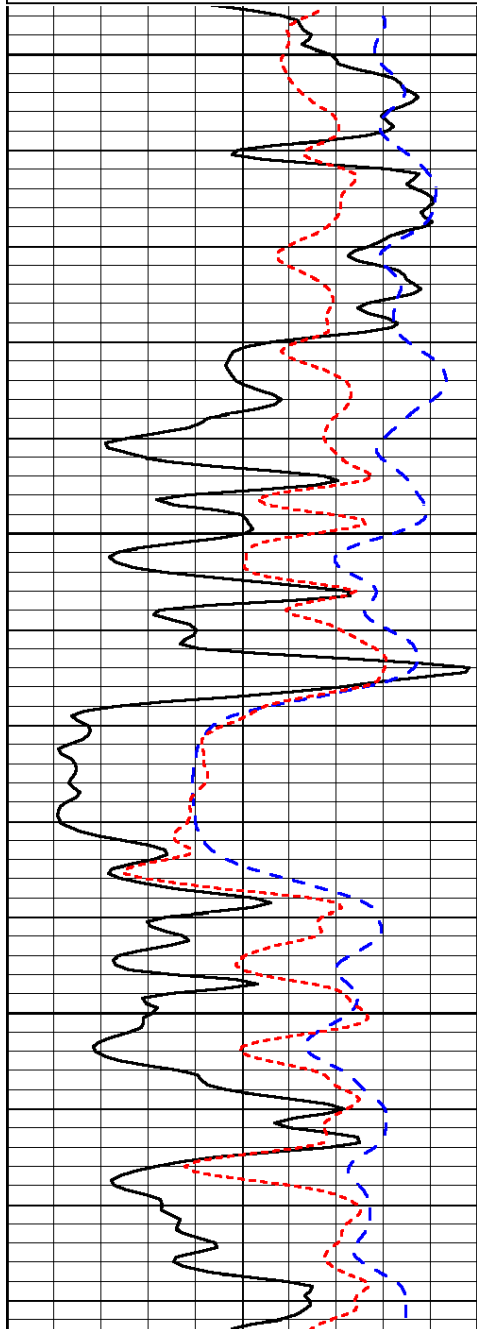
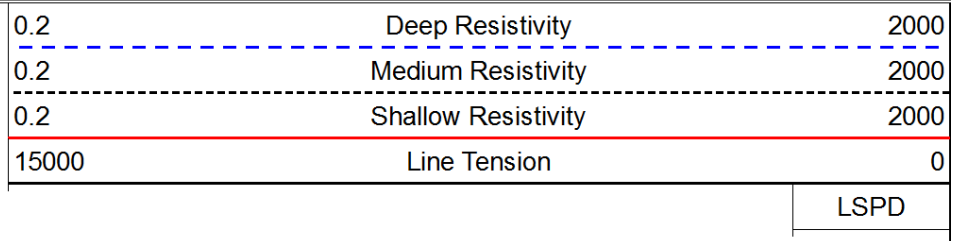
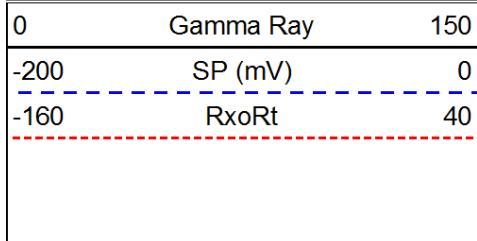


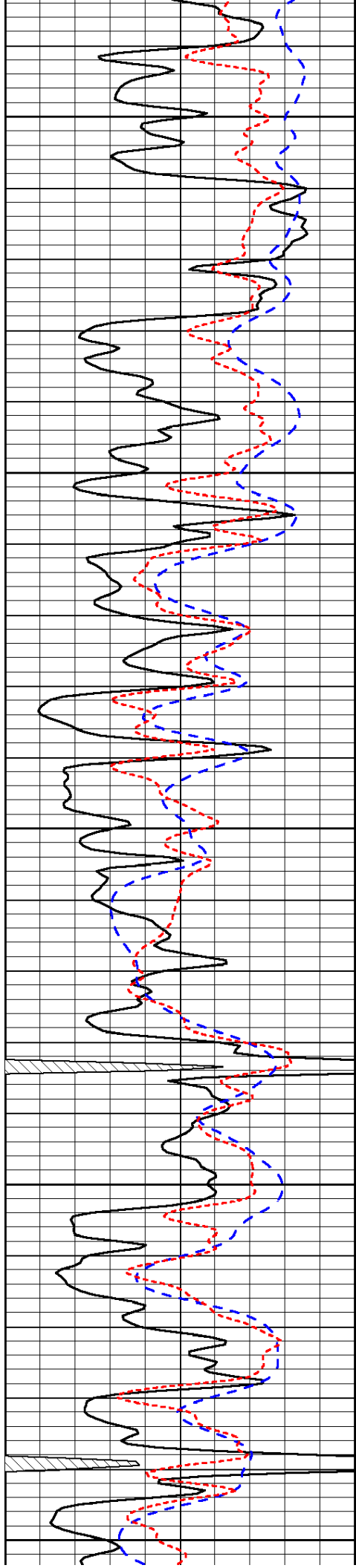
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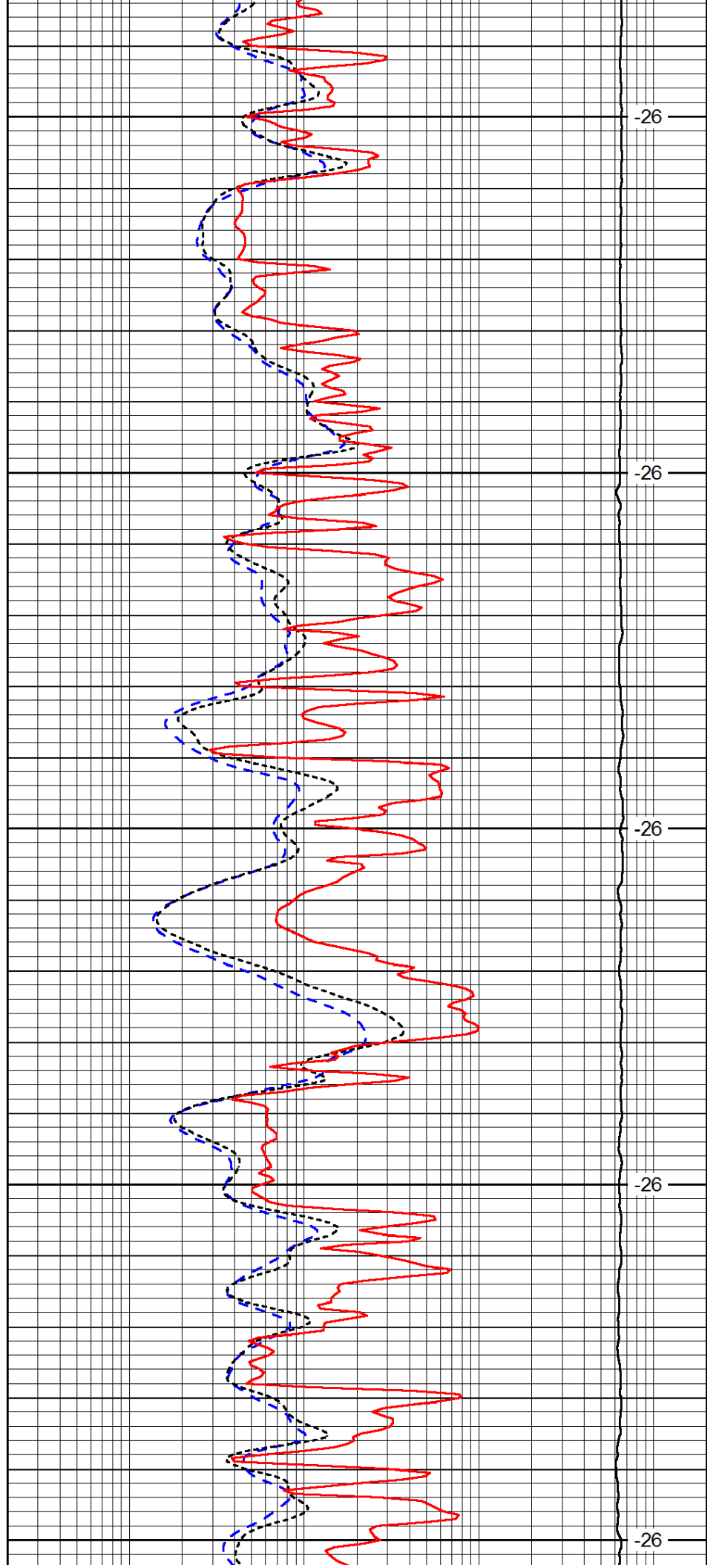
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3600

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3700

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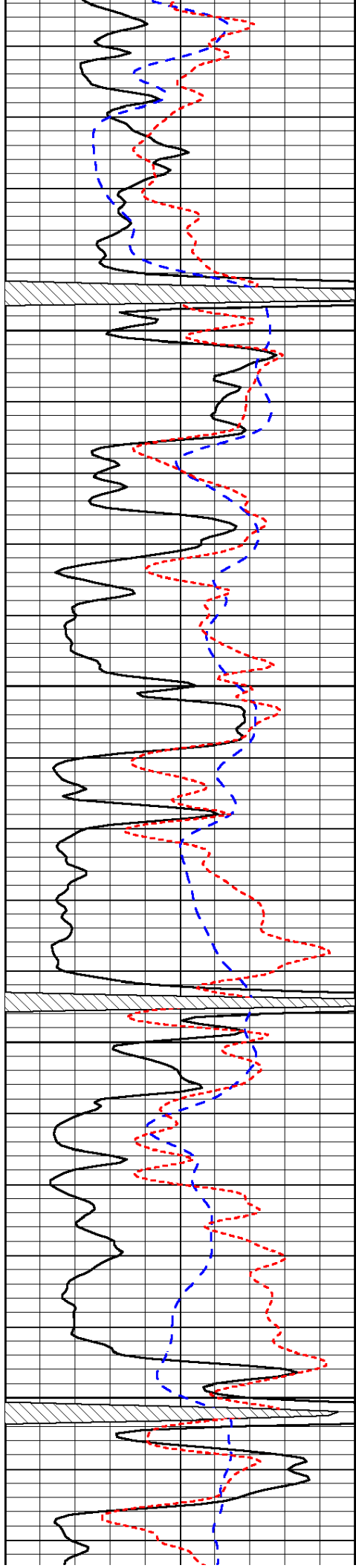
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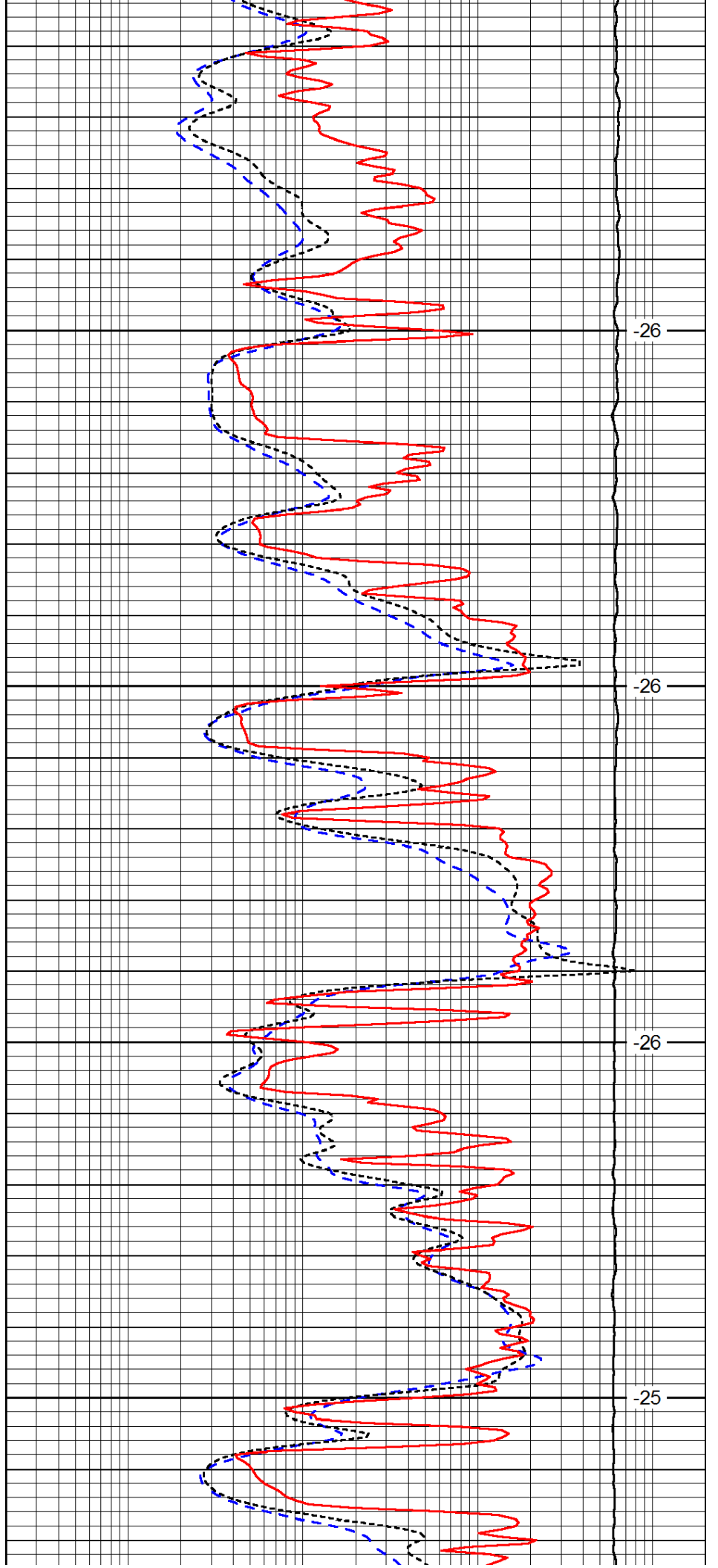


3800

3850

3900

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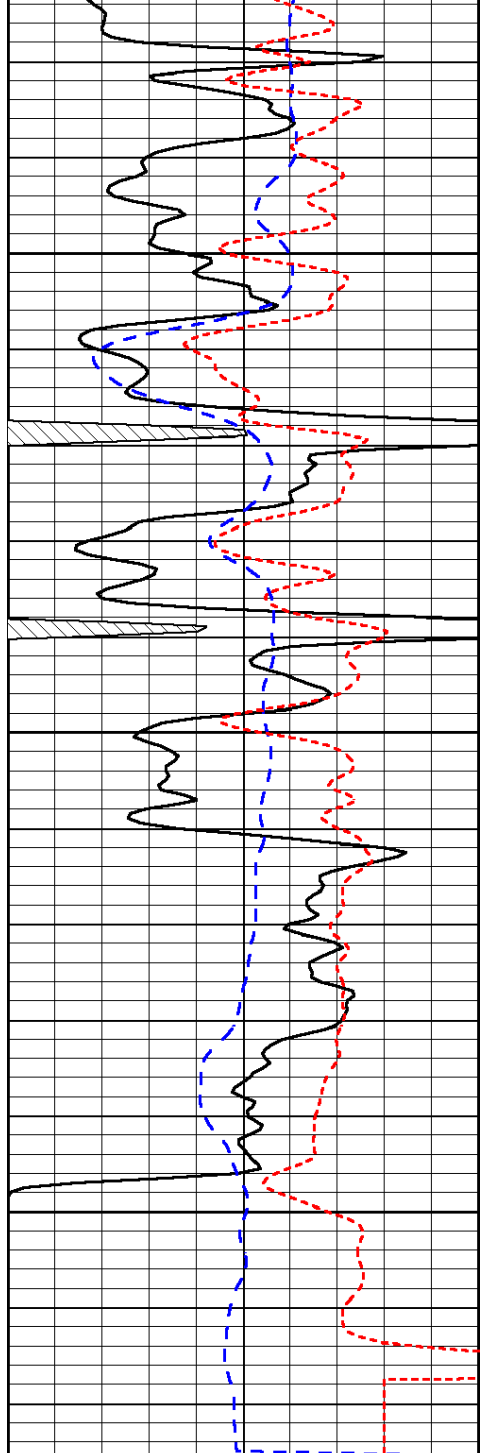


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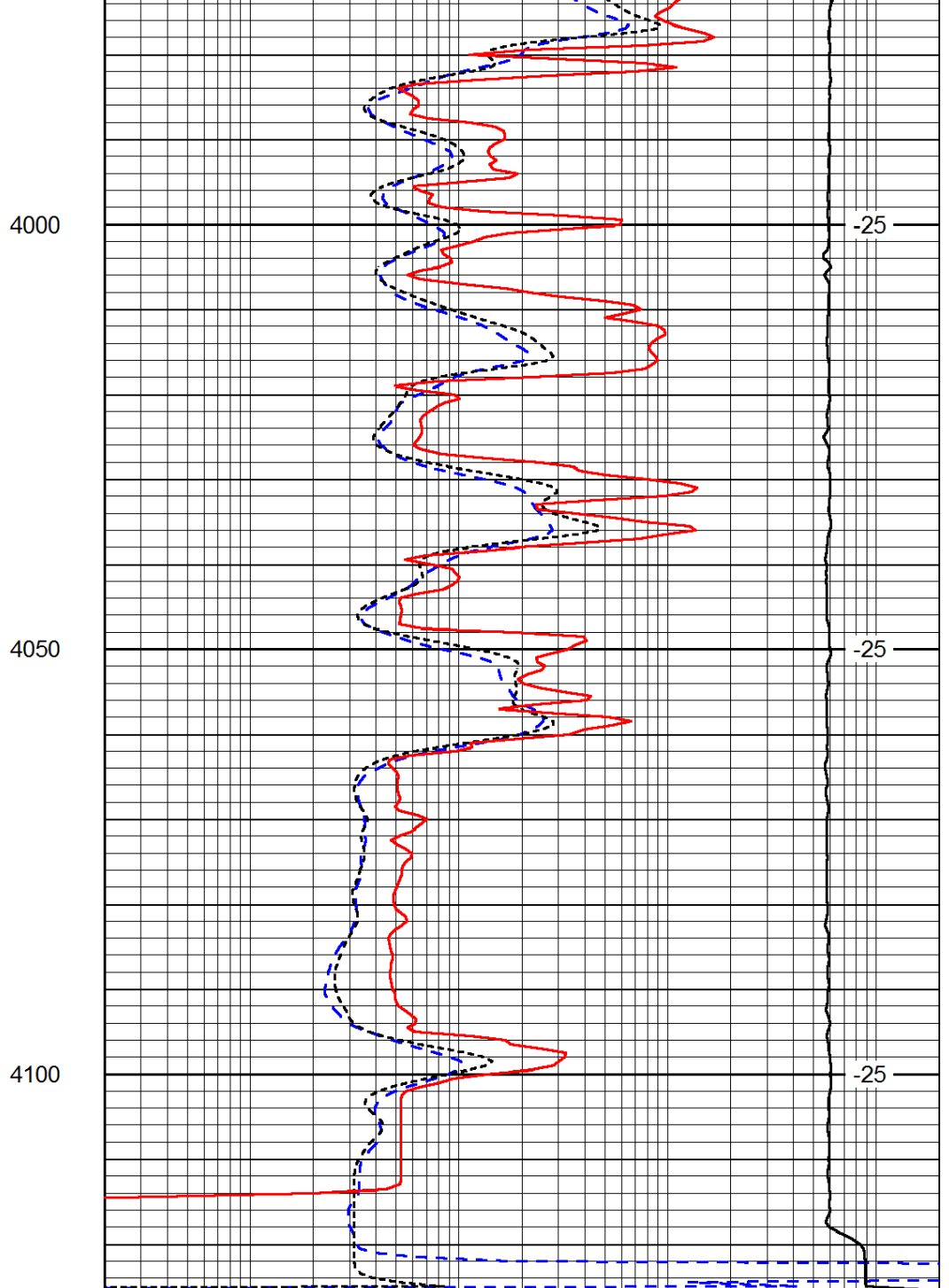
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-26

-25



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