



Dual Induction Log

Pioneer Energy Services

API No.

15-101-22,551-00-00

Company Cobalt Energy, LLC

Well Williams-Hess "A" #1-15

Field Paris West

County Lane State Kansas

Location 330' FNL & 1250' FEL

Sec: 15 Twp: 19S Rge: 29W

Other Services
CNL/CDL
MEL

Permanent Datum Ground Level Elevation 2821

Log Measured From Kelly Bushing 12 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing K.B. 2833
D.F. 2821
G.L. 2821

Date 12/12/2014

Run Number One

Depth Driller 4700

Depth Logger 4702

Bottom Logged Interval 4701

Top Log Interval 250

Casing Driller 8.625 @ 265

Casing Logger 264

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 2,200

Density / Viscosity 9.3 54

pH / Fluid Loss 9.0 7.6

Source of Sample Flowline

Rm @ Meas. Temp 1.1 @ 55

Rmf @ Meas. Temp .83 @ 55

Rmc @ Meas. Temp 1.49 @ 55

Source of Rmf / Rmc Charts

Rm @ BHT .49 @ 123

Operating Rig Time 3 Hours

Max Rec. Temp. F 123

Equipment Number 10

Location Hays

Recorded By C. Desaire

Witnessed By Terry McCleod

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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

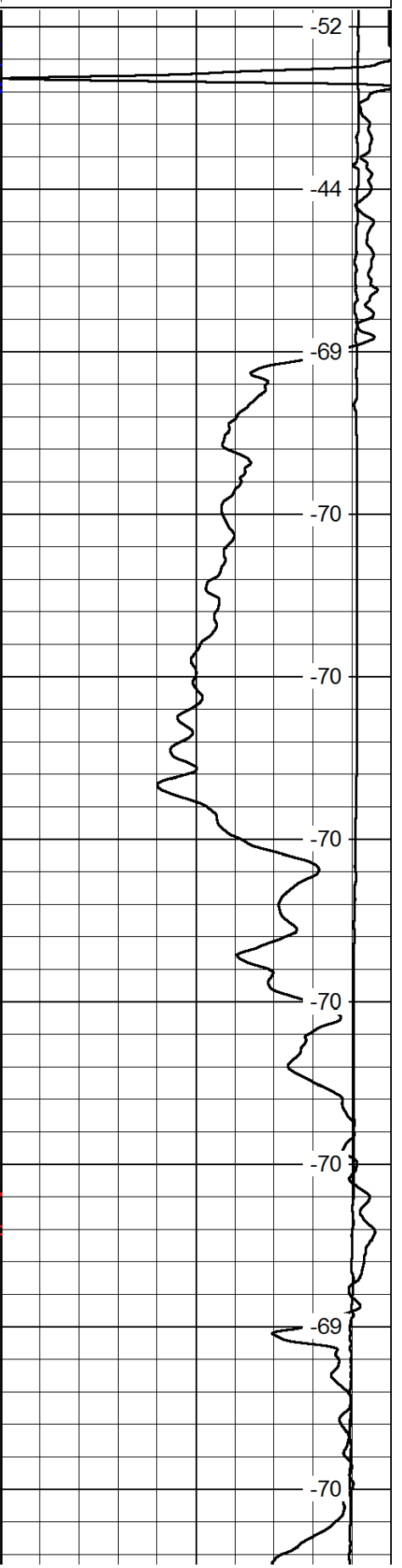
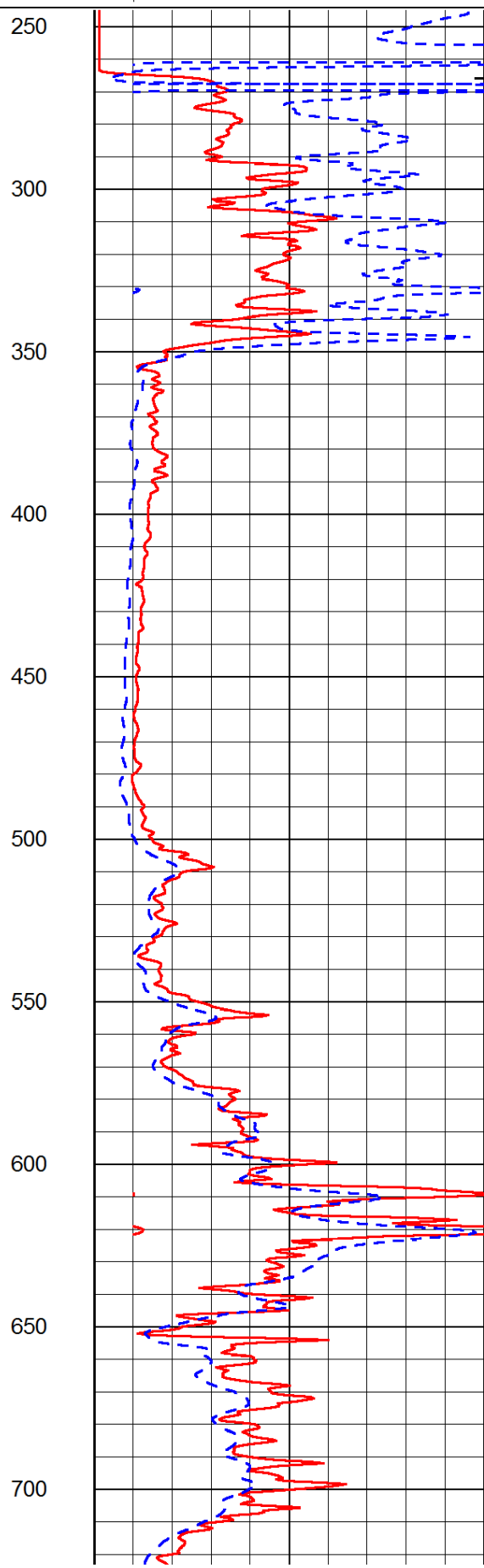
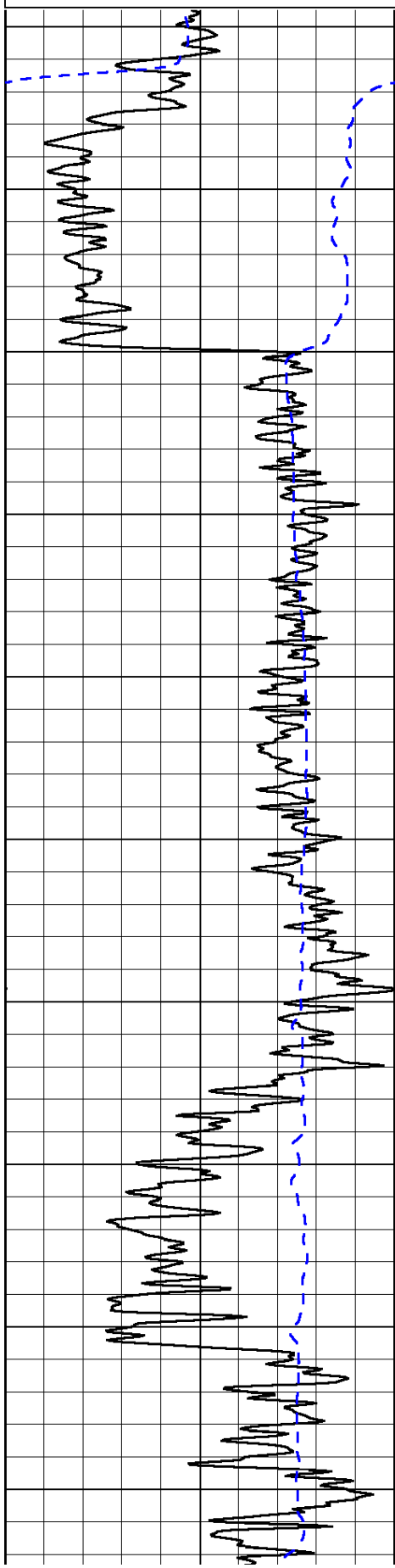
Dighton KS, 6 S to 90 Rd, 2 W, 1 N,
1/4 W, S Into

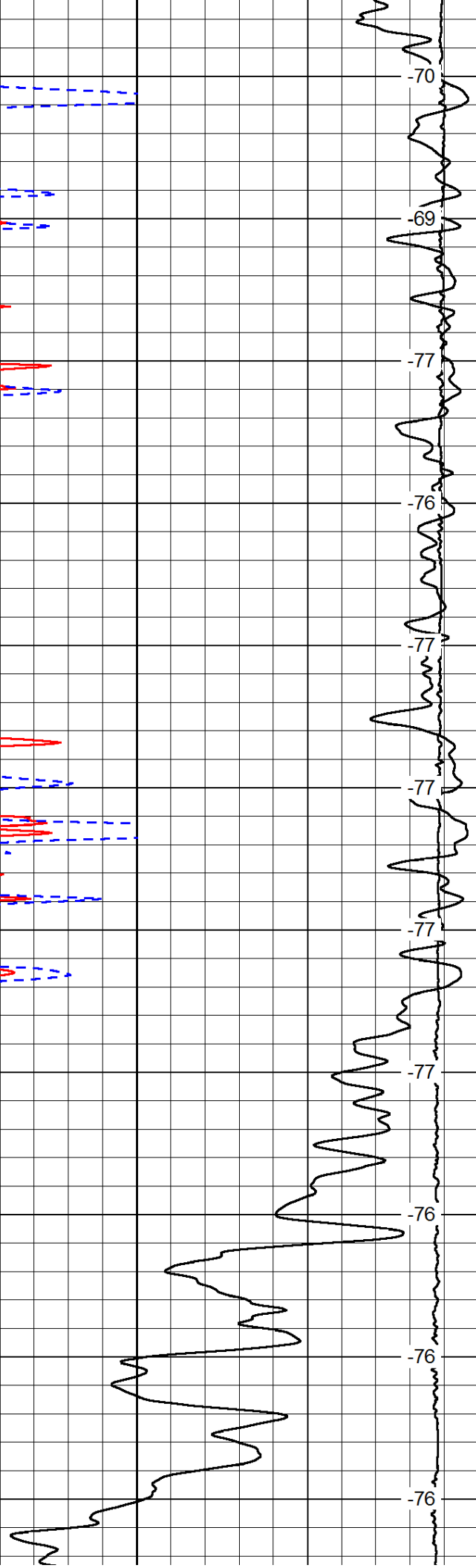
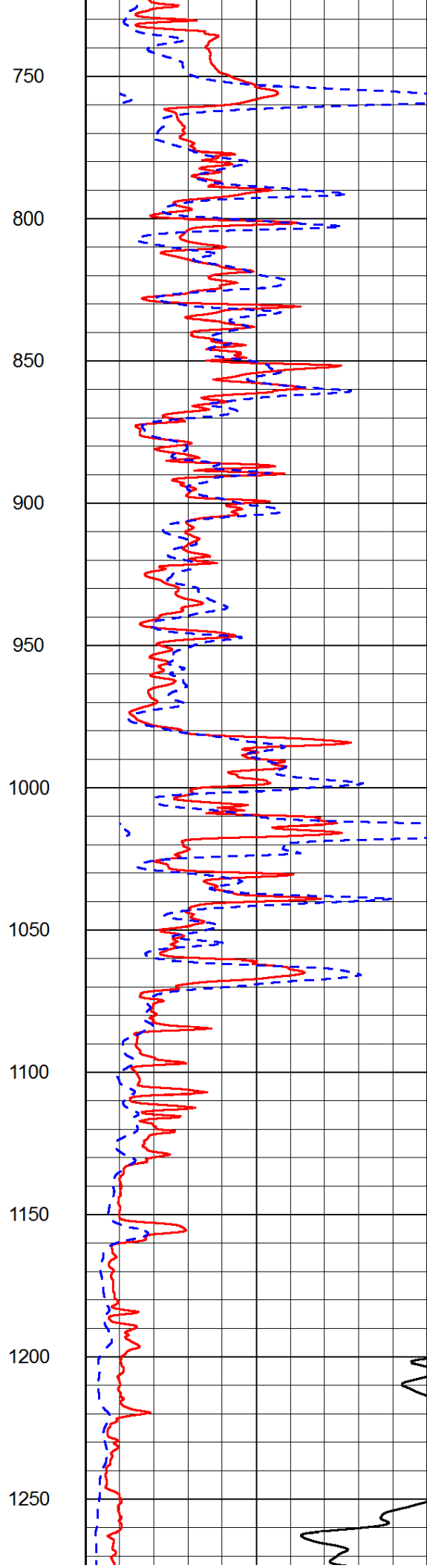
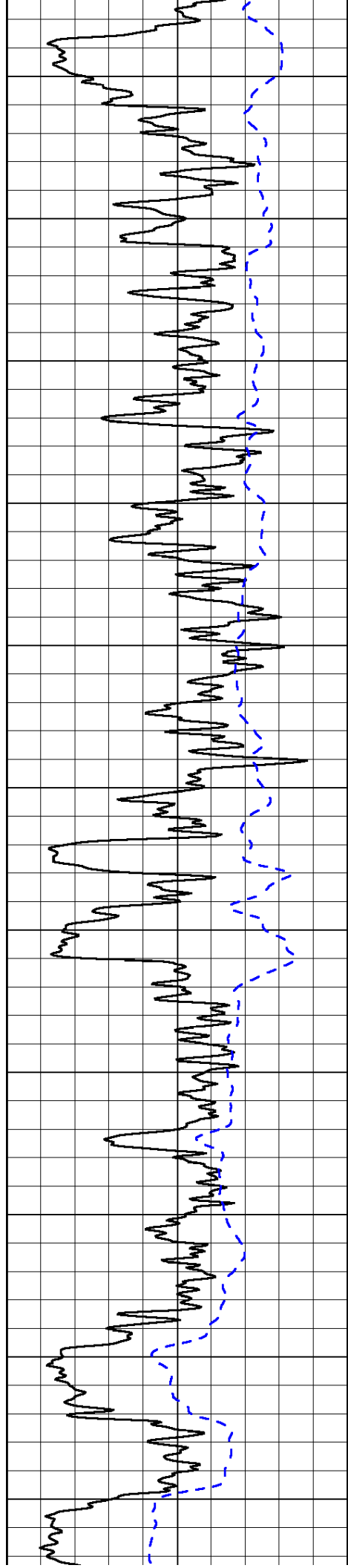
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Presentation Format: dil2in
Dataset Creation: Fri Dec 12 23:23:47 2014
Charted by: Depth in Feet scaled 1:600

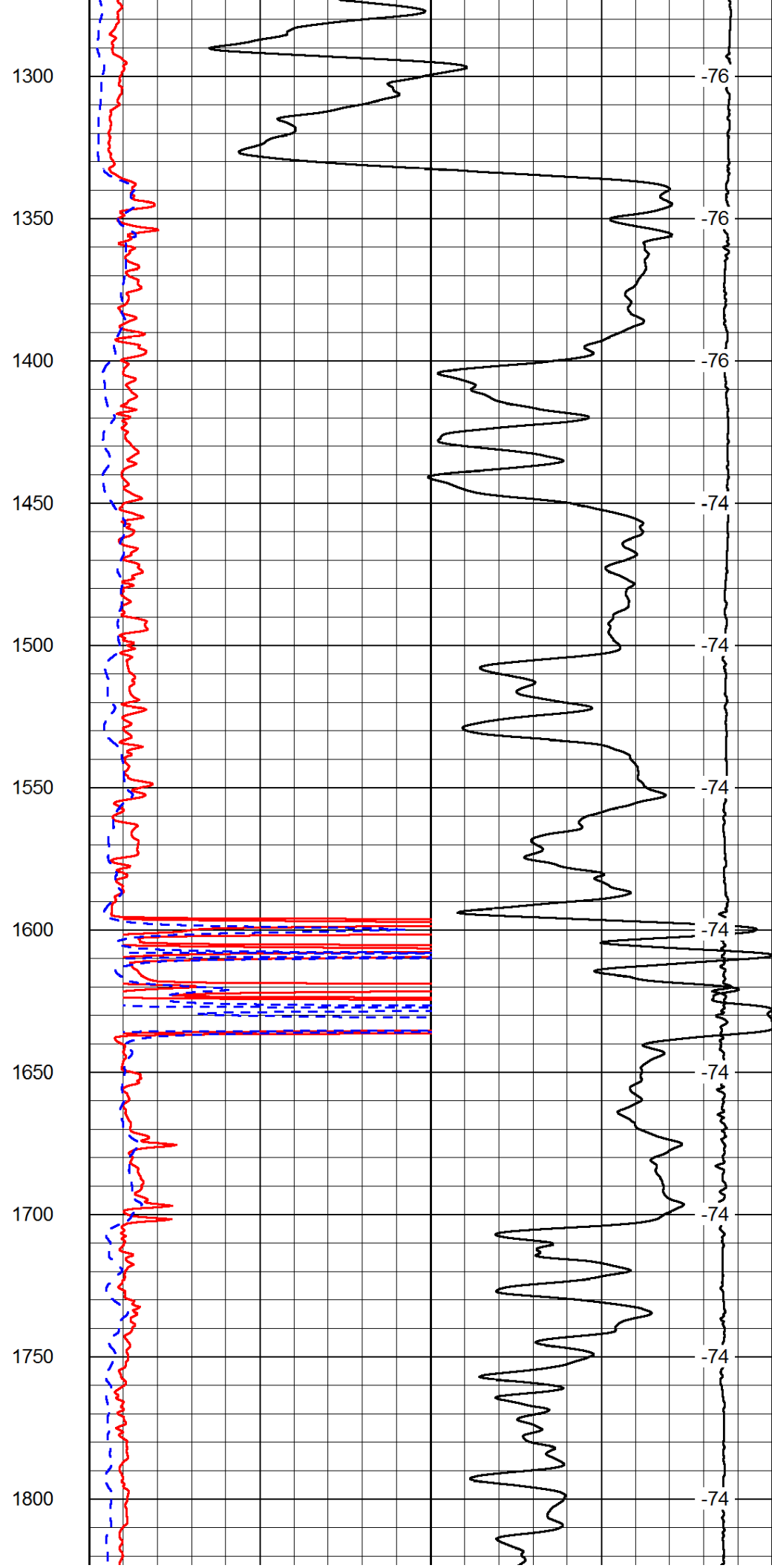
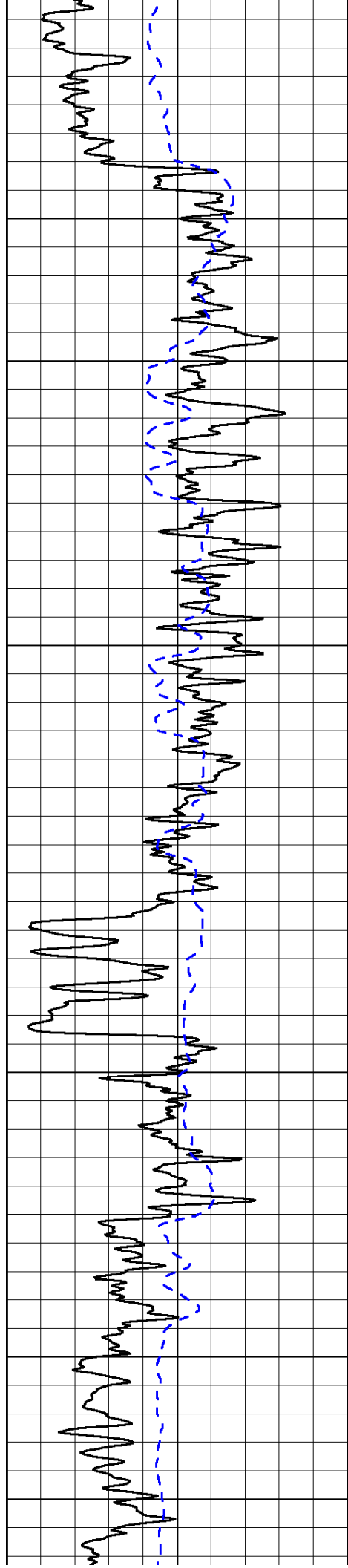
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-200	SP (mV)	0

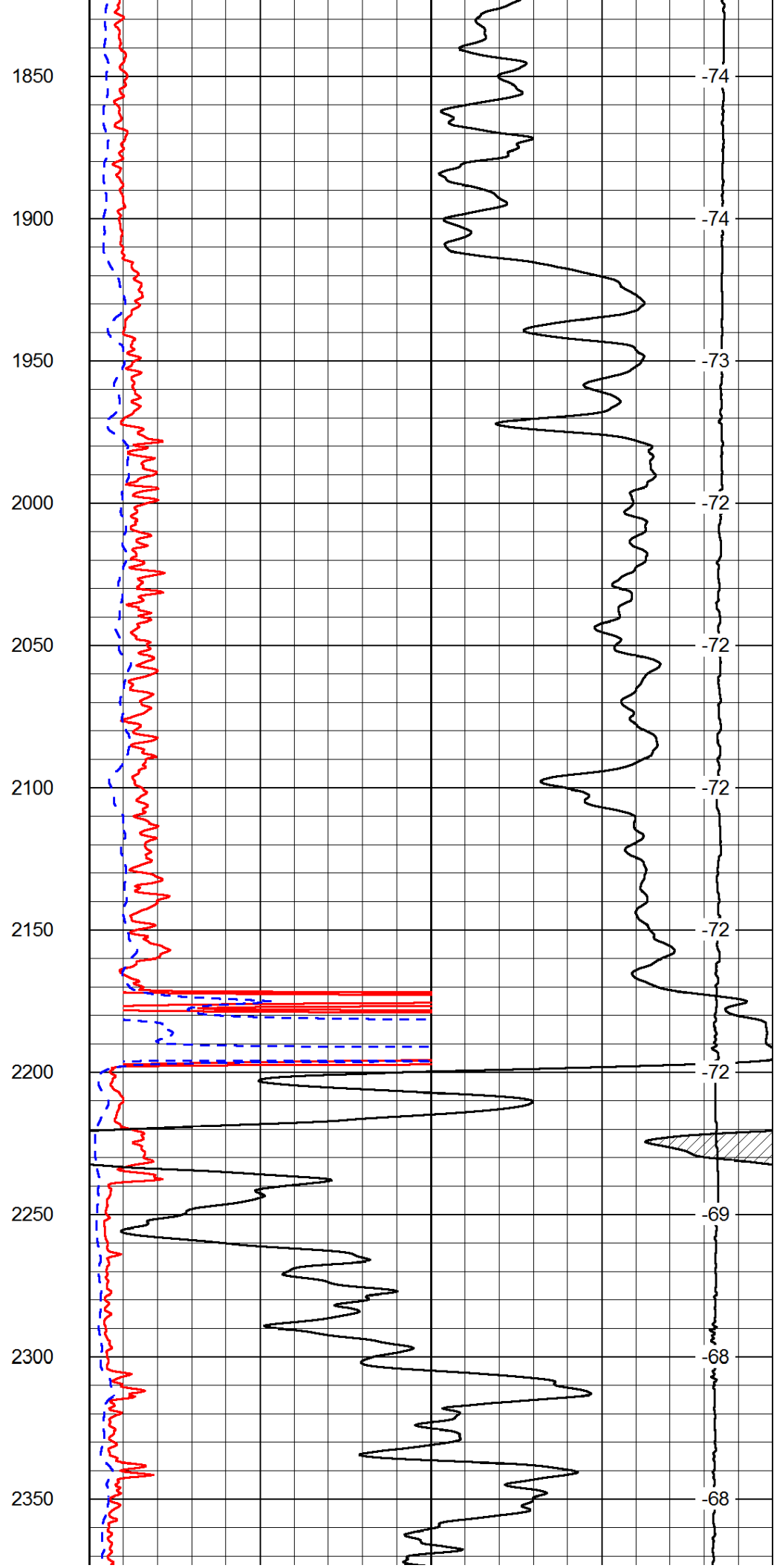
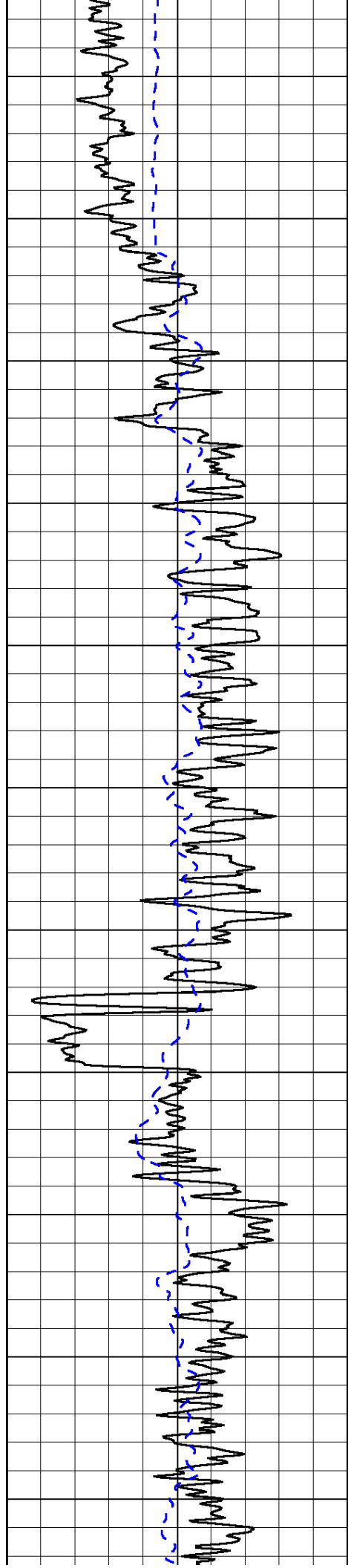
0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

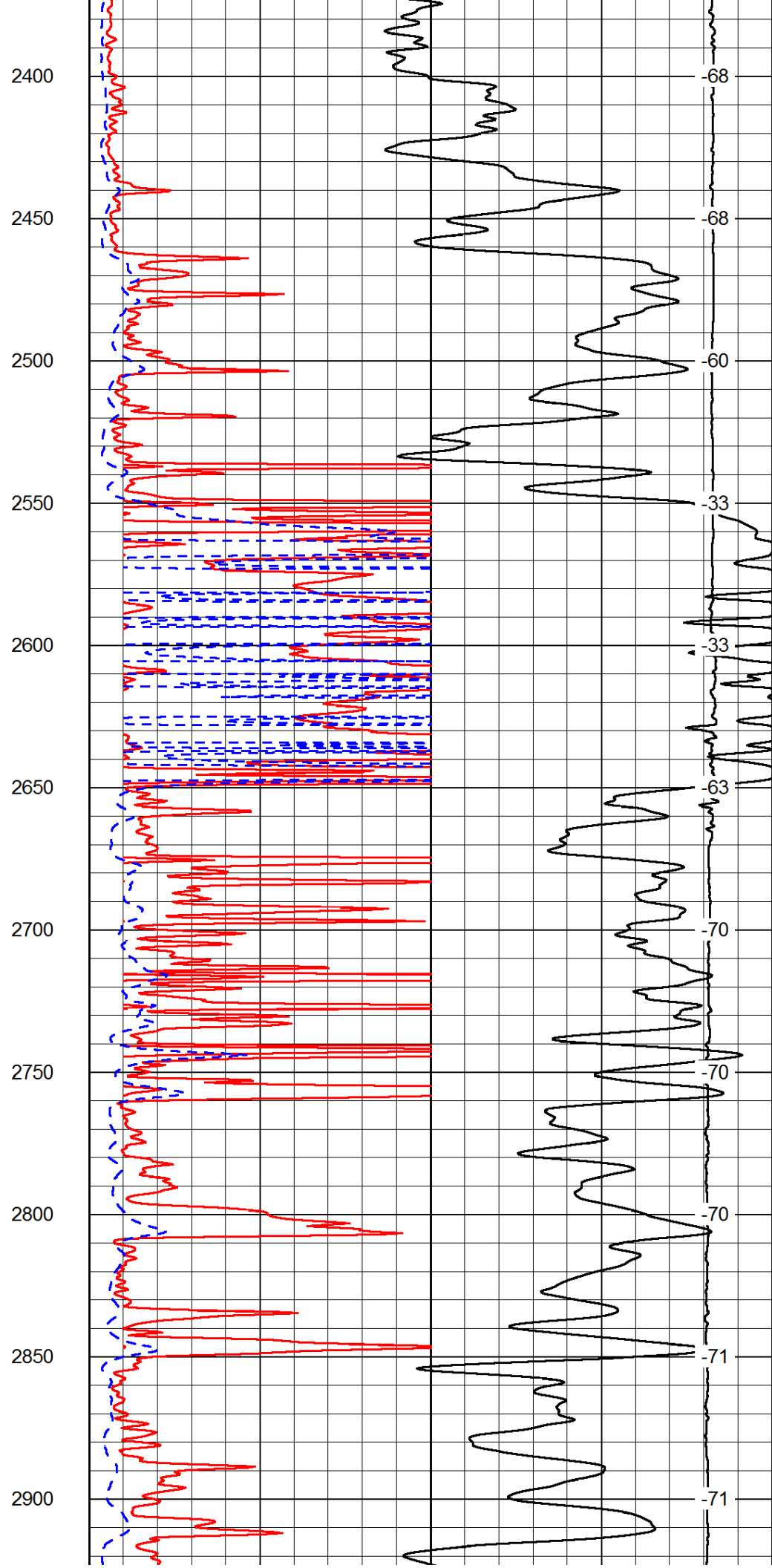
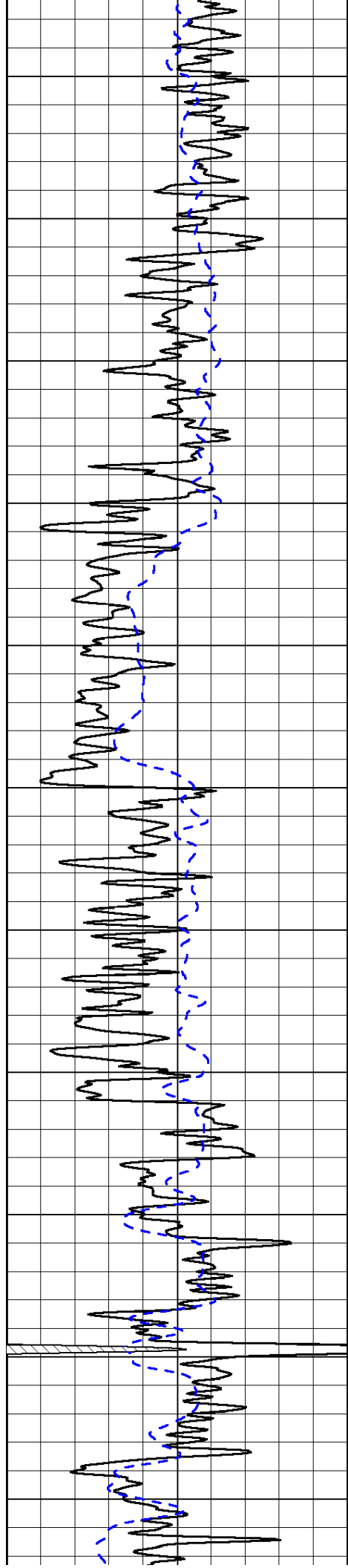
LSPD

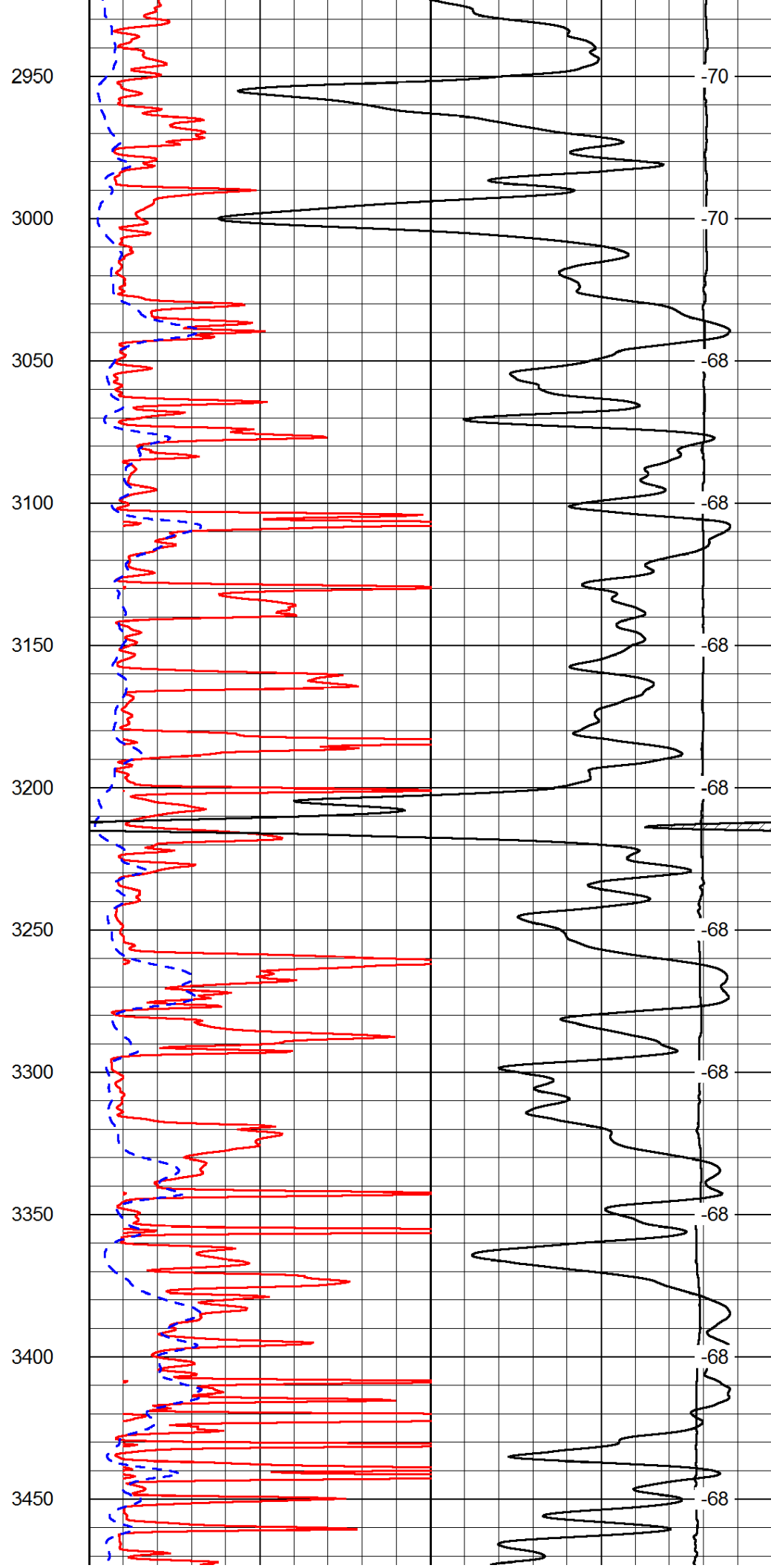
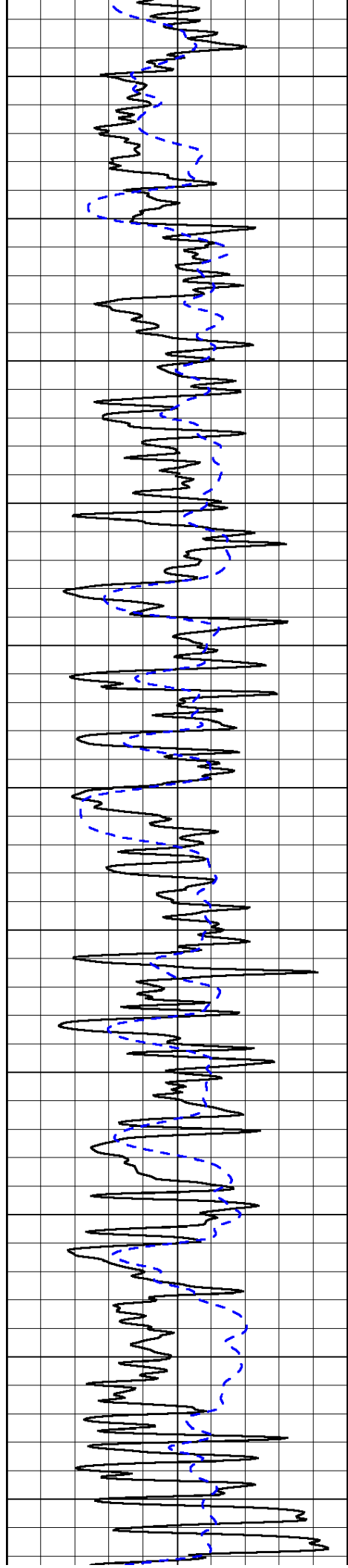


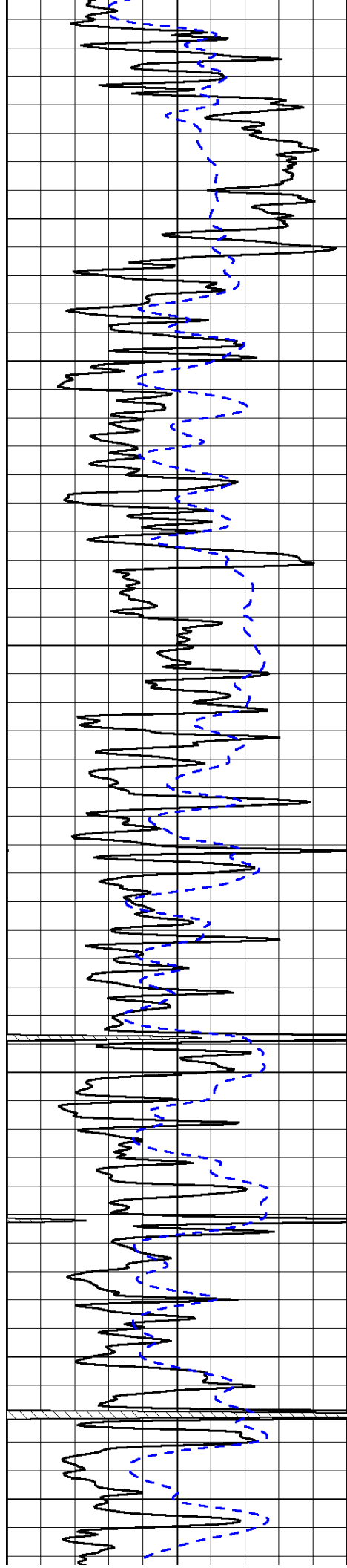












3500

3550

3600

3650

3700

3750

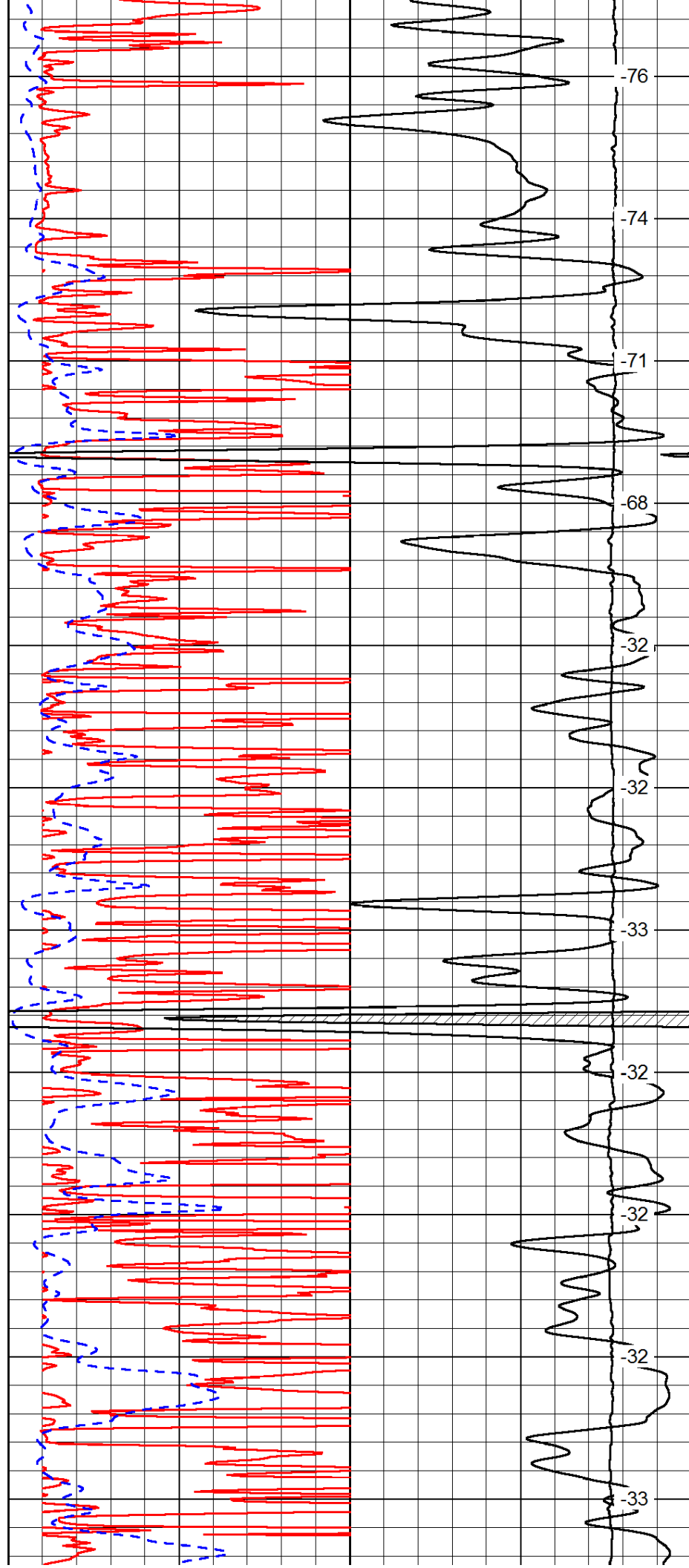
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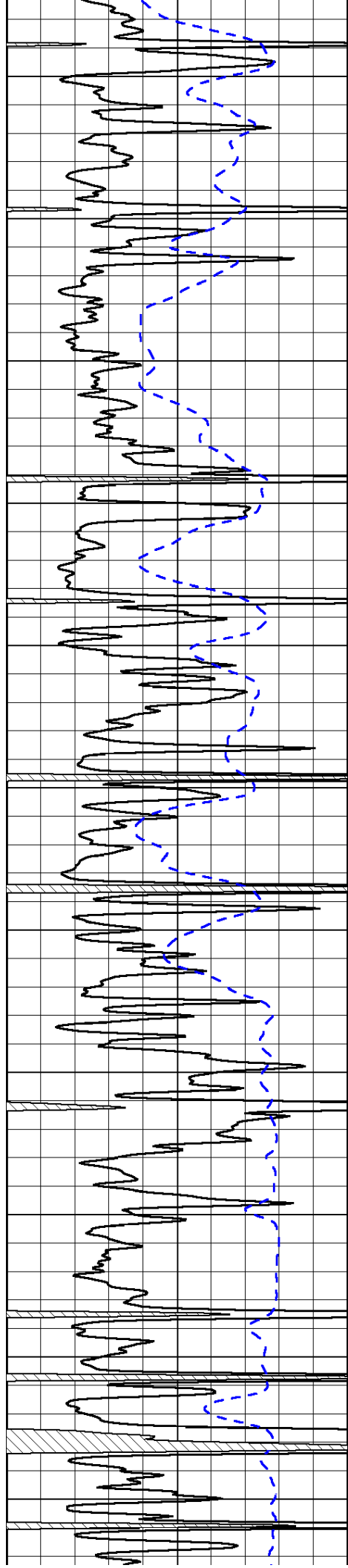
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3900

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4150

4200

4250

4300

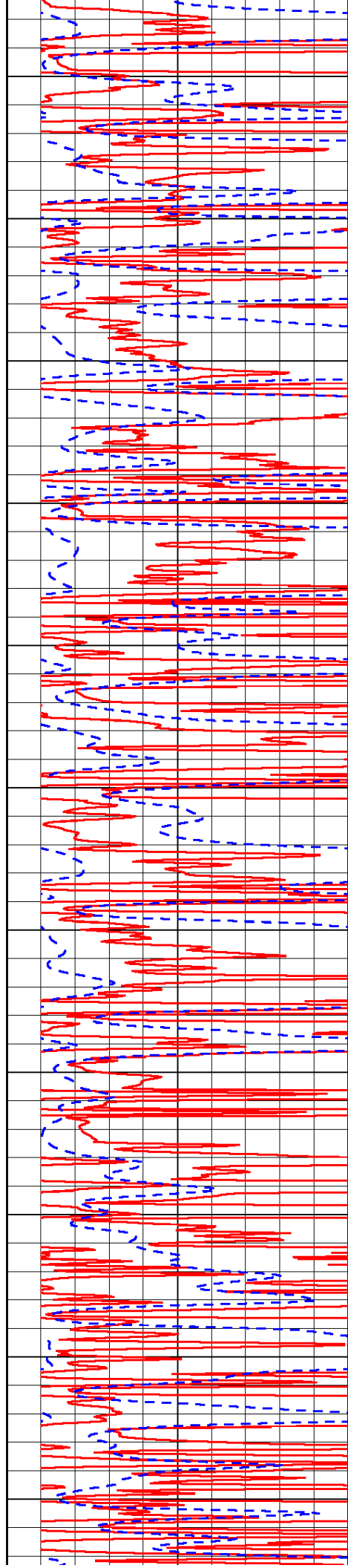
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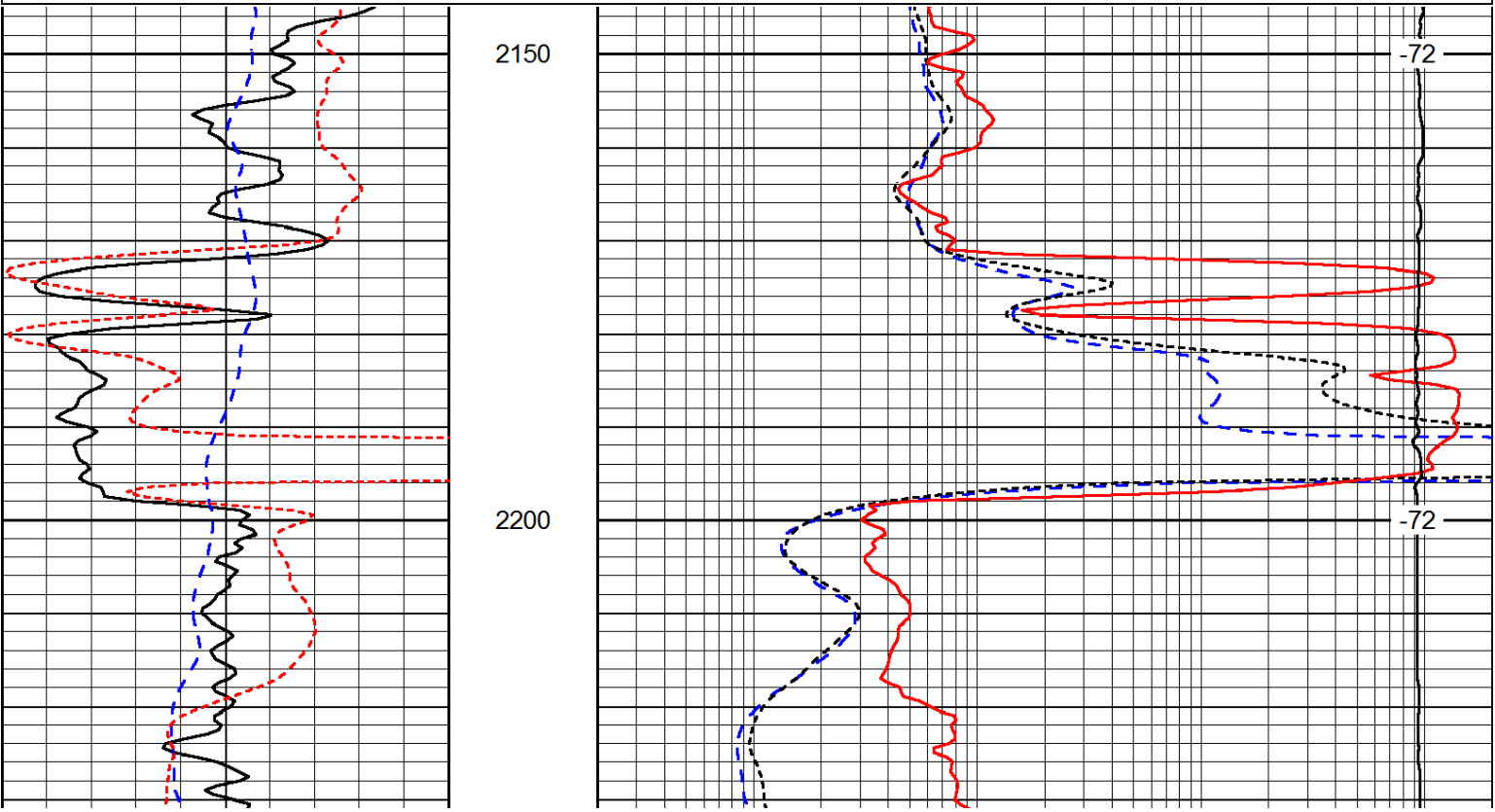
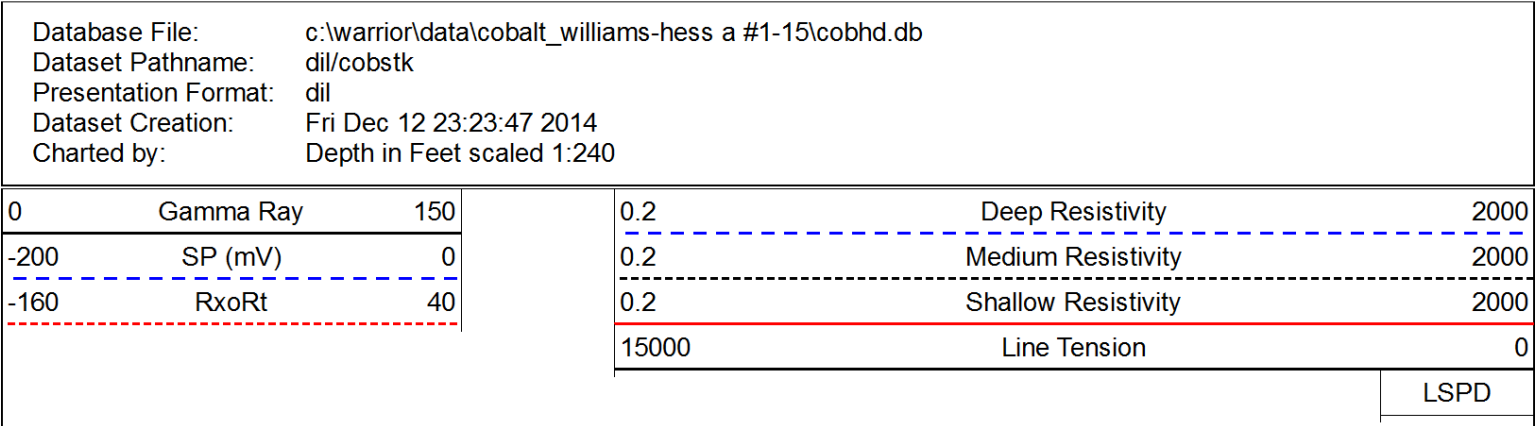
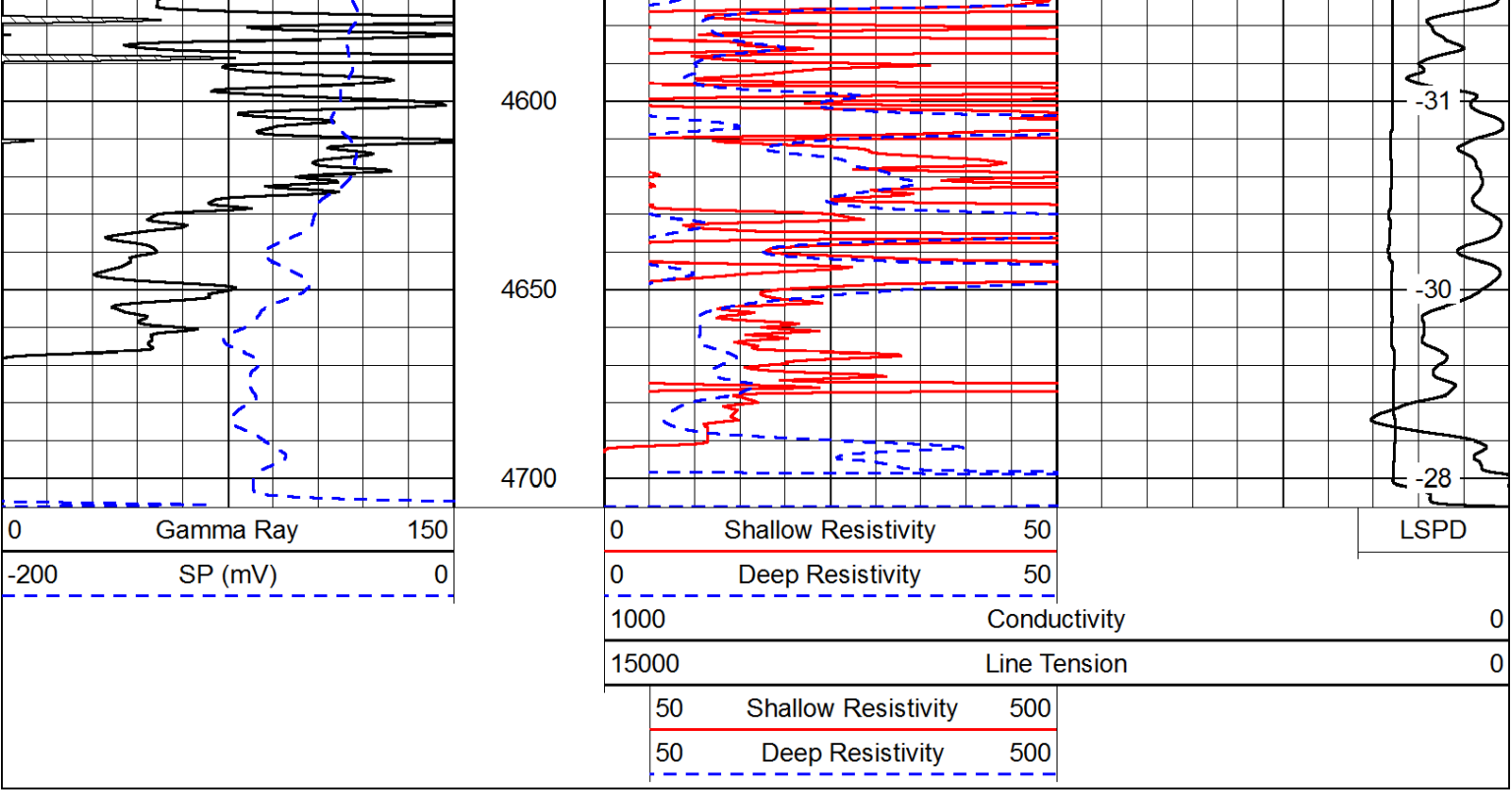
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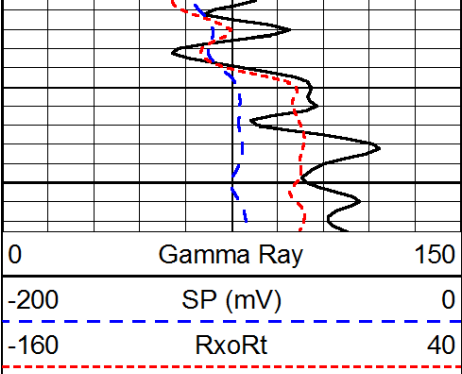
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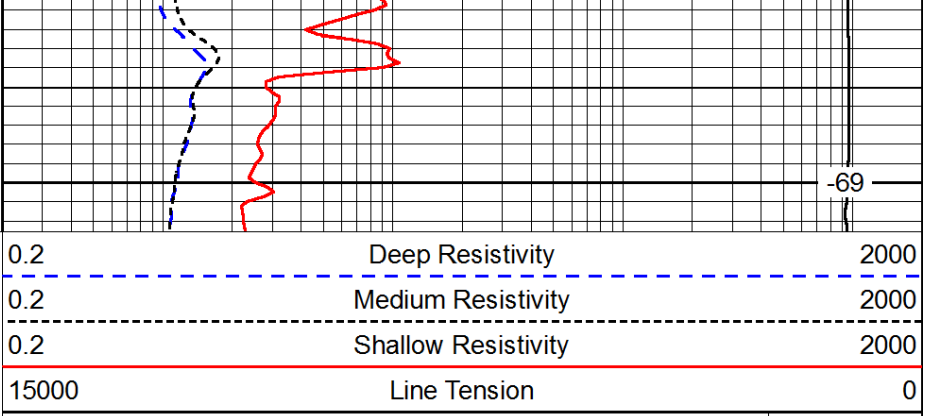
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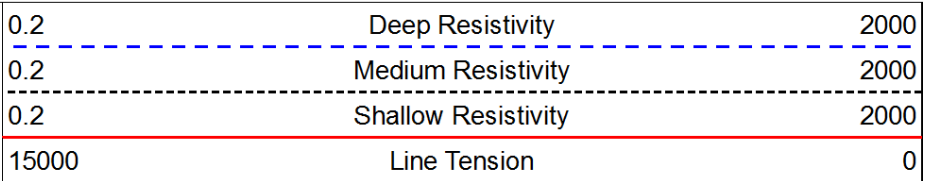
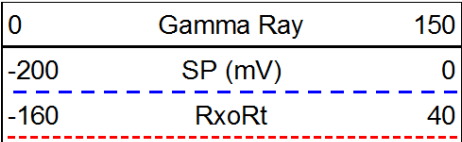
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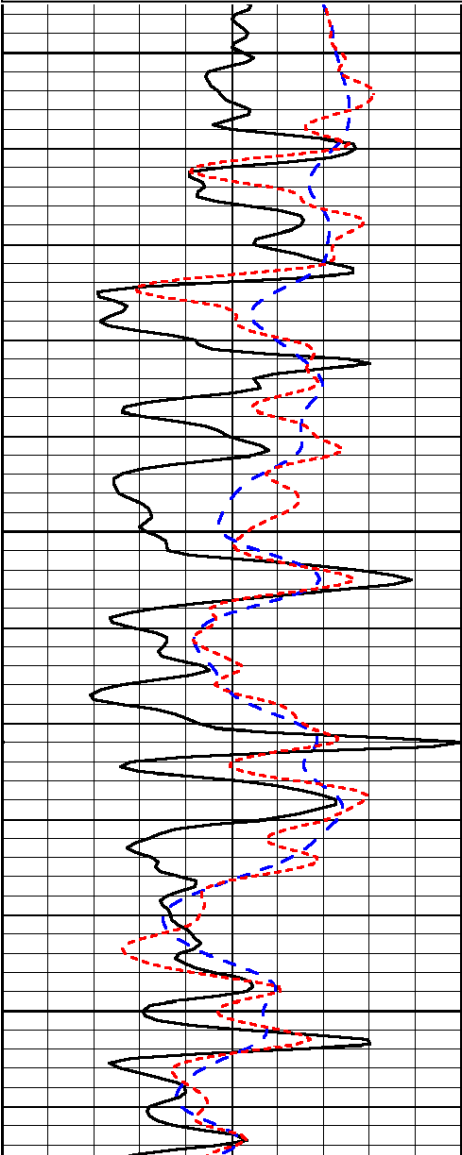
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LSPD

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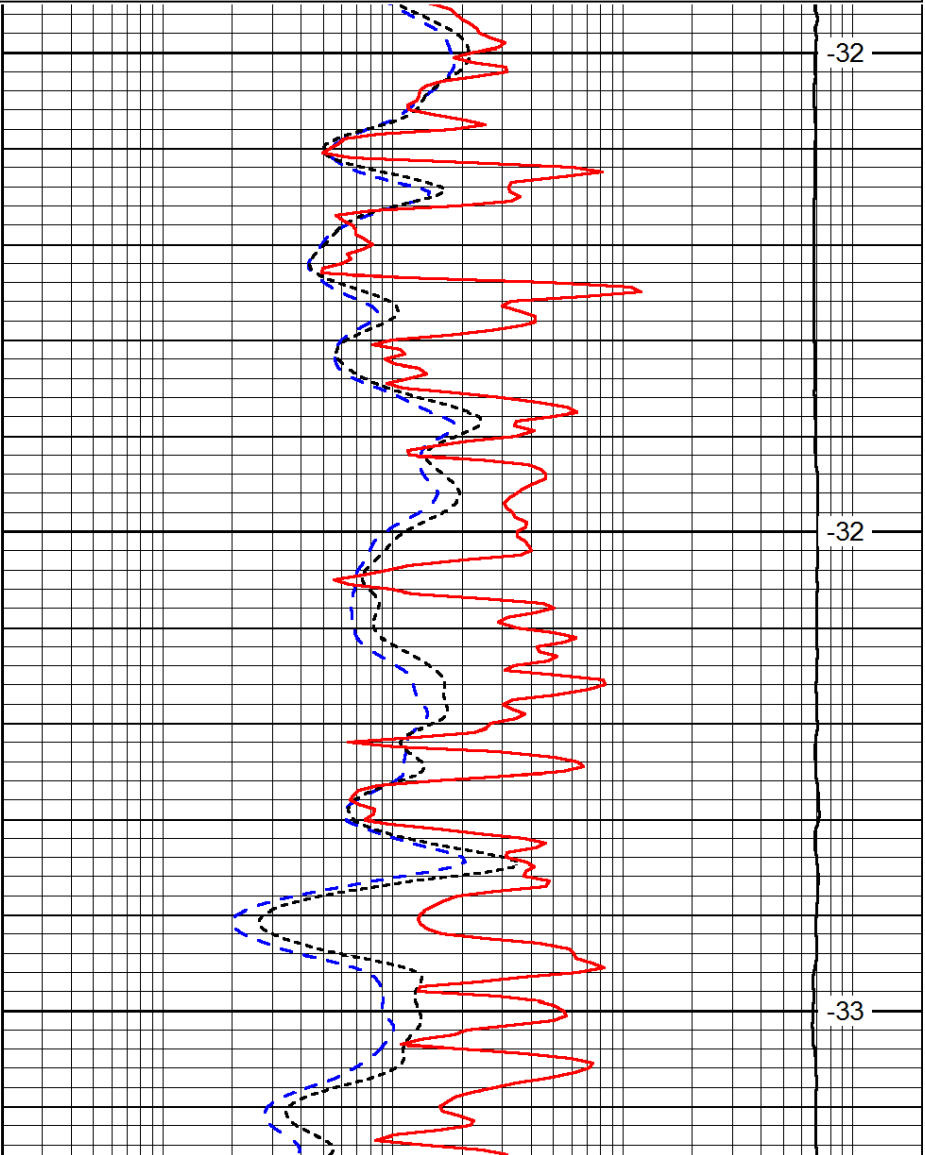
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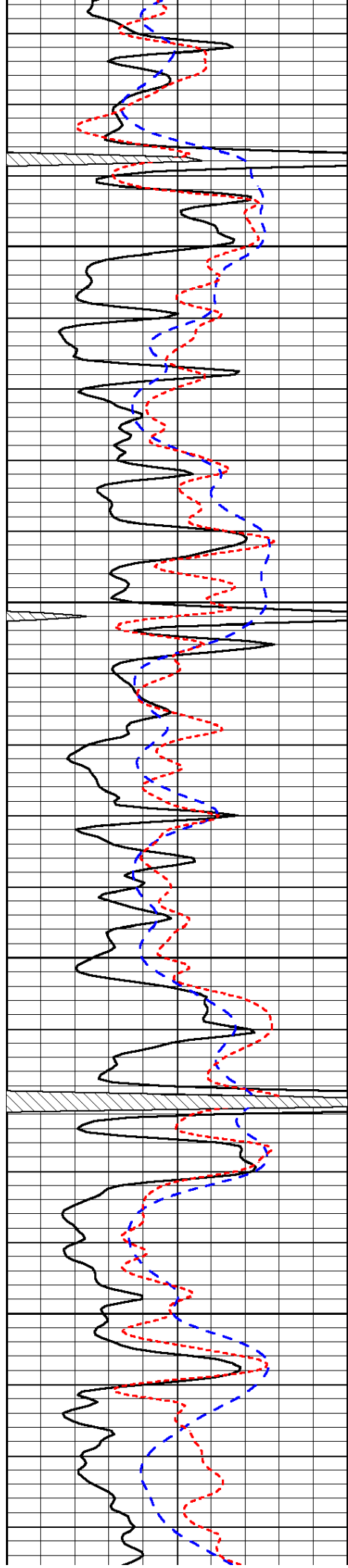
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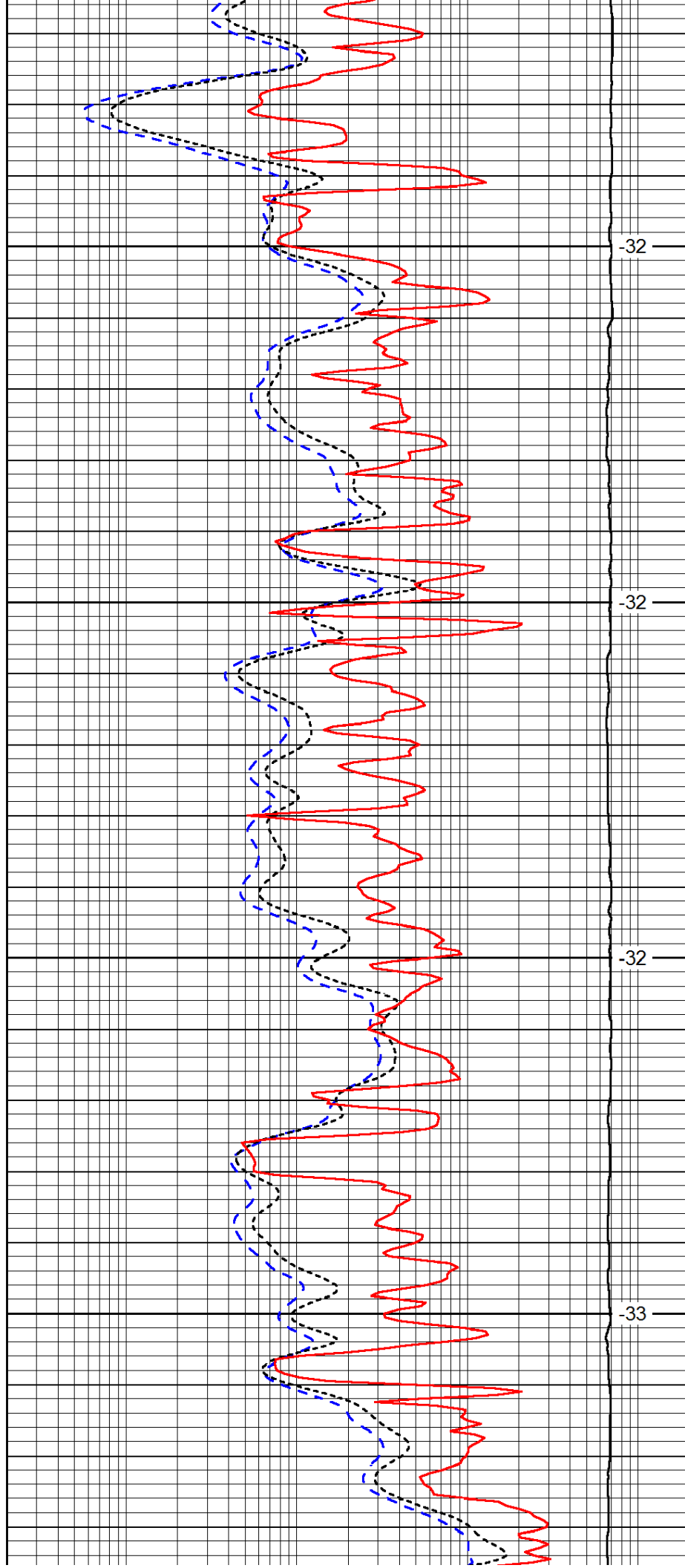


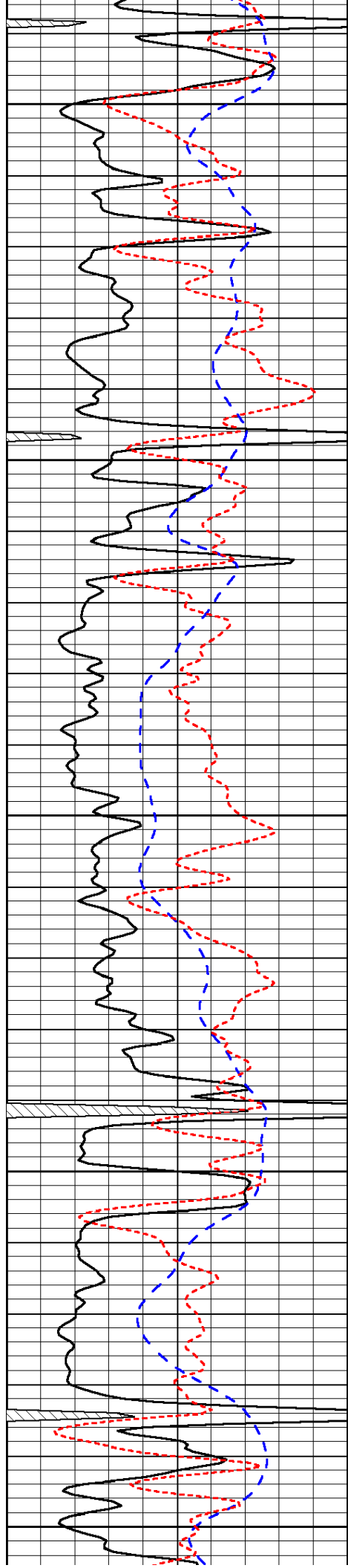
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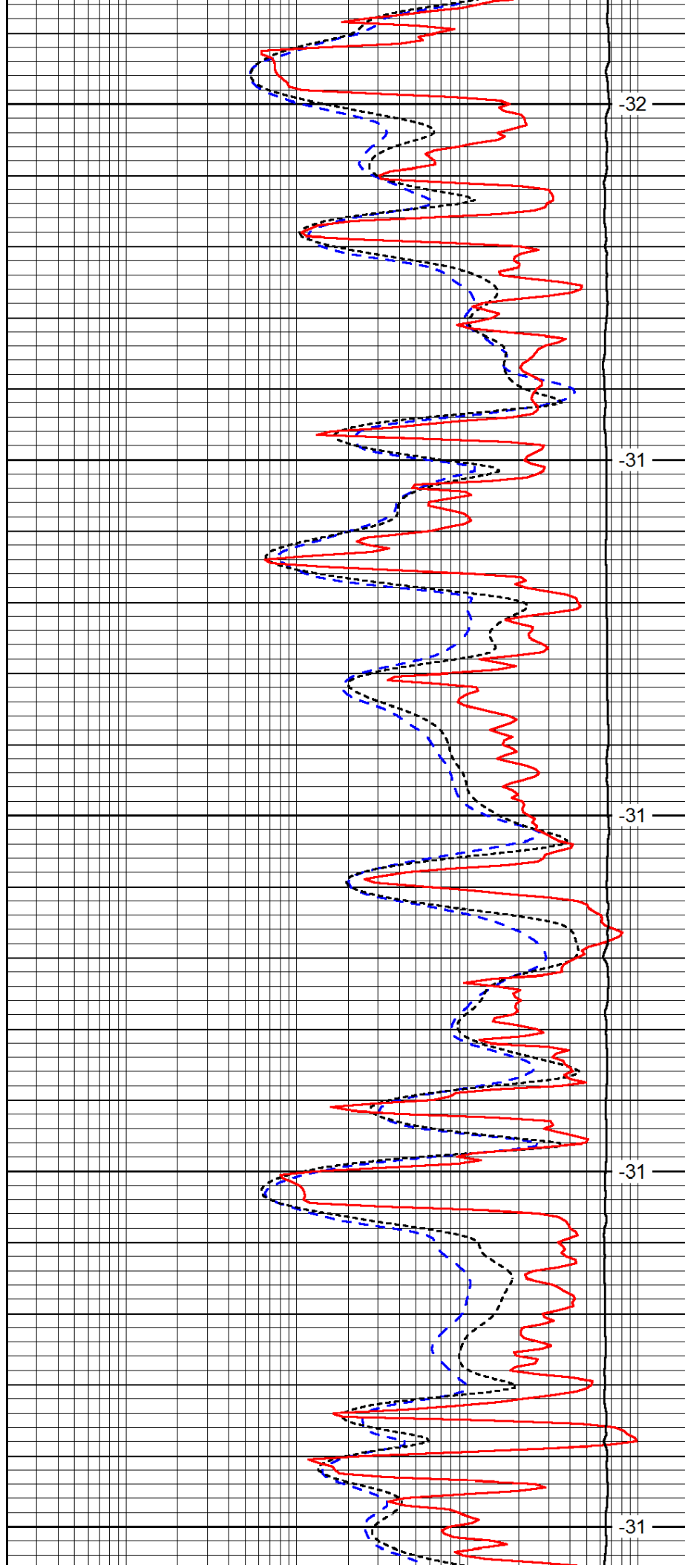
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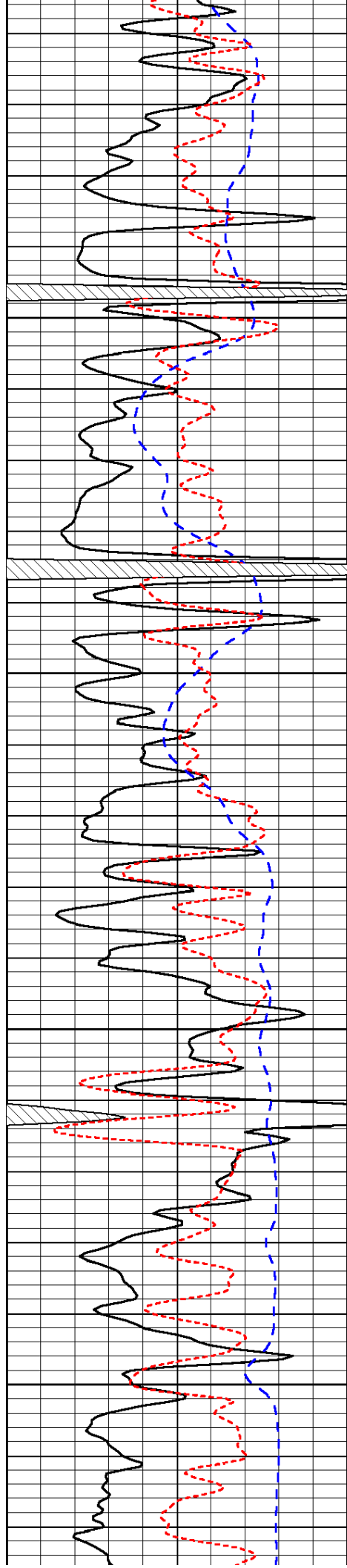
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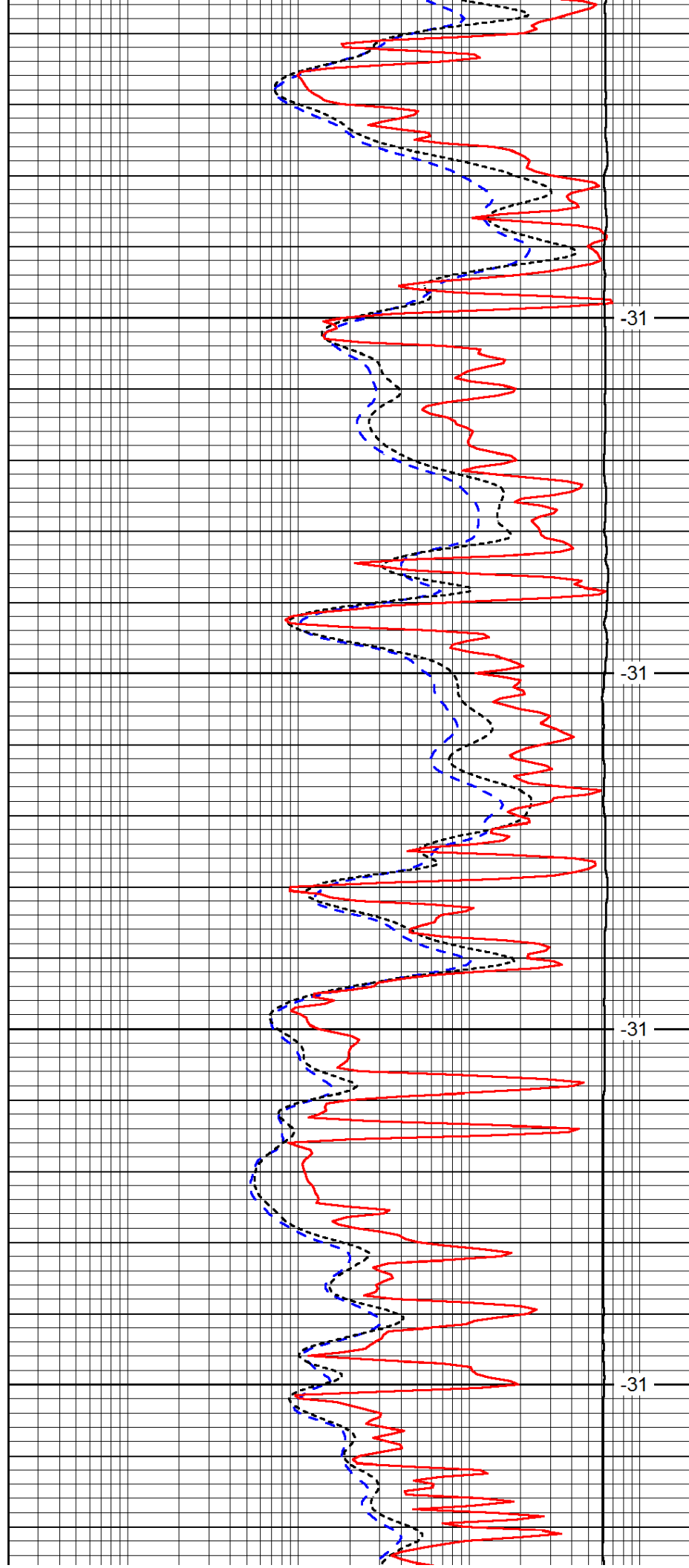


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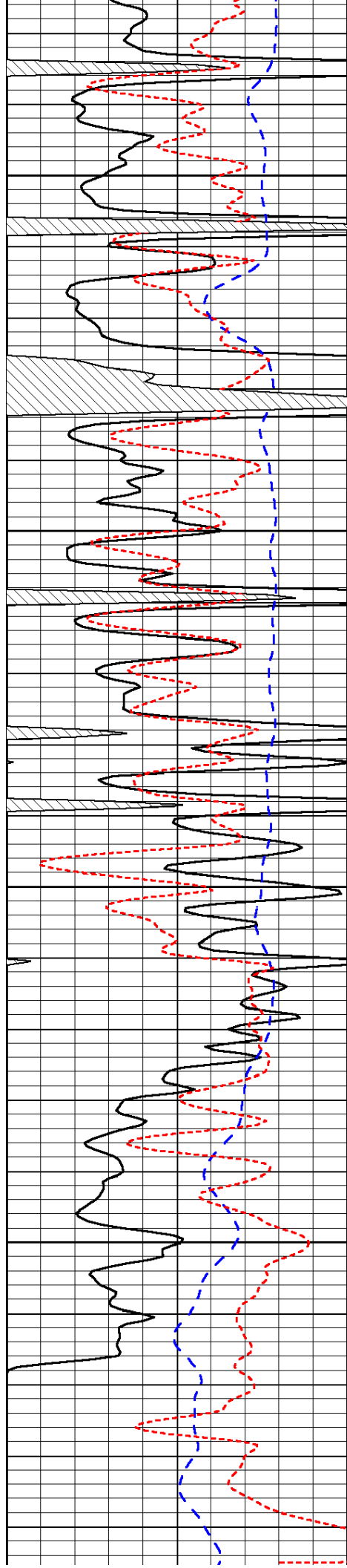


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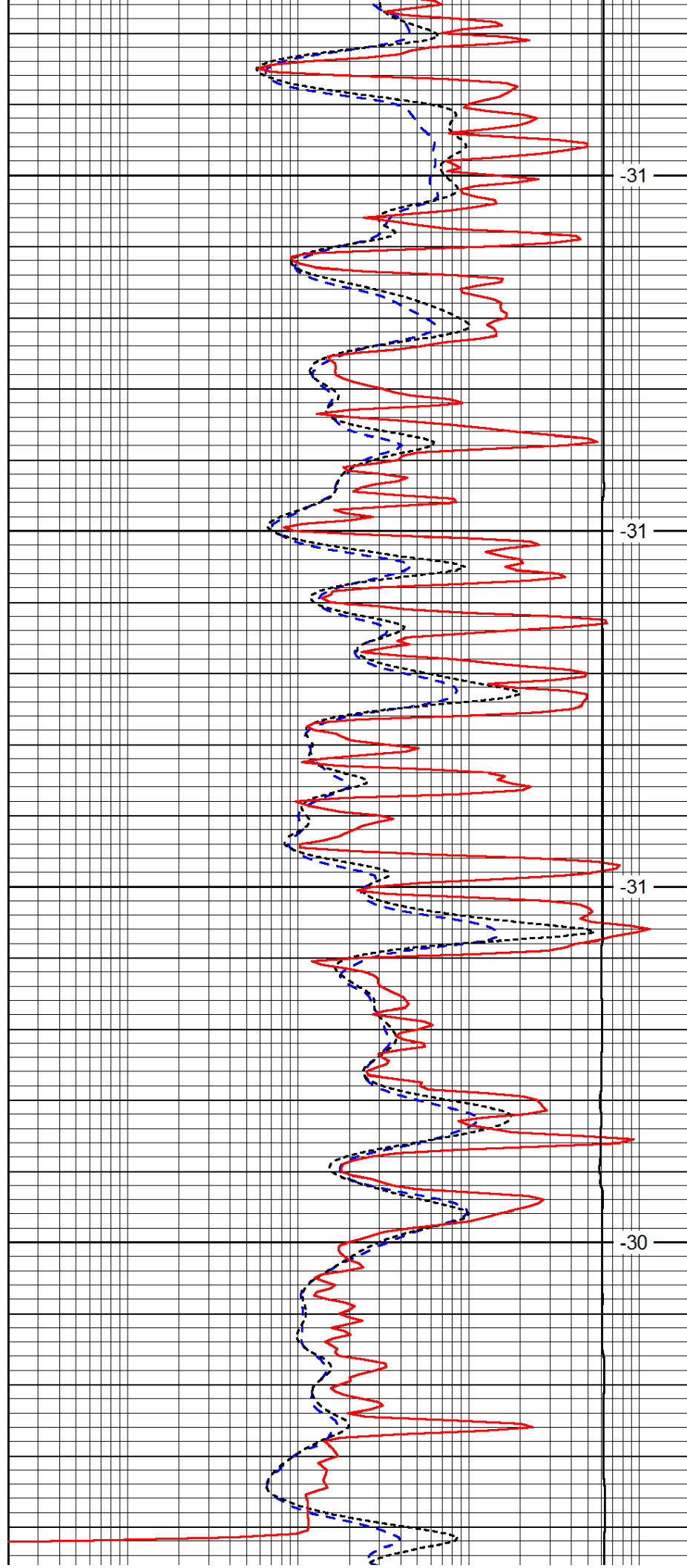


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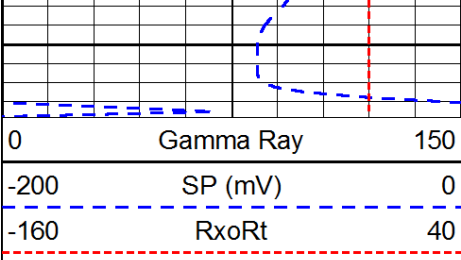


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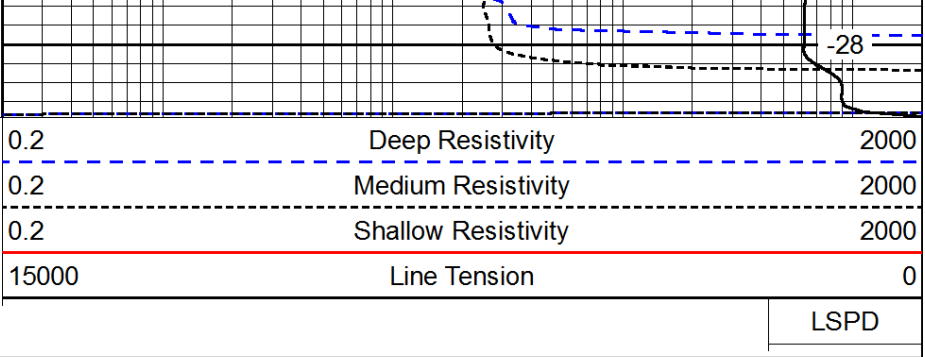
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4700



LSPD