



Pioneer Energy Services

Dual Induction Log

15-035-24,594-00-00

API No.

Company **W.D. Short Oil Company, LLC**

Well **Brown #13**

Field **Albright**

County **Cowley** State

Kansas

Location **2,037' FSL & 1,970' FEL**

Other Services
CNL/CDL
MEL/BHCS

Sec: **2** Twp: **34S** Rge: **5E**

Permanent Datum **Ground Level** Elevation **1270**

Log Measured From **Kelly Bushing** 8 Ft. Above Perm. Datum

Elevation
K.B. 1278
D.F.
G.L. 1270

Drilling Measured From **Kelly Bushing**

Date **8/23/2014**

Run Number **One**

Depth Driller **3503**

Depth Logger **3497**

Bottom Logged Interval **3496**

Top Log Interval **200**

Casing Driller **8.625 @ 210**

Casing Logger **210**

Bit Size **7.875**

Type Fluid in Hole **Chemical**

Salinity, ppm CL **1500**

Density / Viscosity **9.1 37**

pH / Fluid Loss **8.0 8.2**

Source of Sample **Flowline**

Rm @ Meas. Temp **1.60 @ 78**

Rmf @ Meas. Temp **1.20 @ 78**

Rmc @ Meas. Temp **2.16 @ 78**

Source of Rmf / Rmc **Charts**

Rm @ BHT **1.12 @ 111**

Operating Rig Time **4 Hours**

Max Rec. Temp. F **111**

Equipment Number **108**

Location **Hays**

Recorded By **J. Long**

Witnessed By **Dan Johnson**

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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

Arkansas City, 9 East from Highway 166 & Highway 77 Intersection to Grouse Creek Road,
2 North to 256 Road, 1/4 North, 1/2 Northwest, 1/8 North, 200 Yards West, 400 Yards North,
West Into

Database File: c:\warrior\data\w.d. short_brown # 13\wdshort_brown_#13hd.db
Dataset Pathname: dil/wdstck
Presentation Format: dil2in
Dataset Creation: Sat Aug 23 22:24:42 2014
Charted by: Depth in Feet scaled 1:600

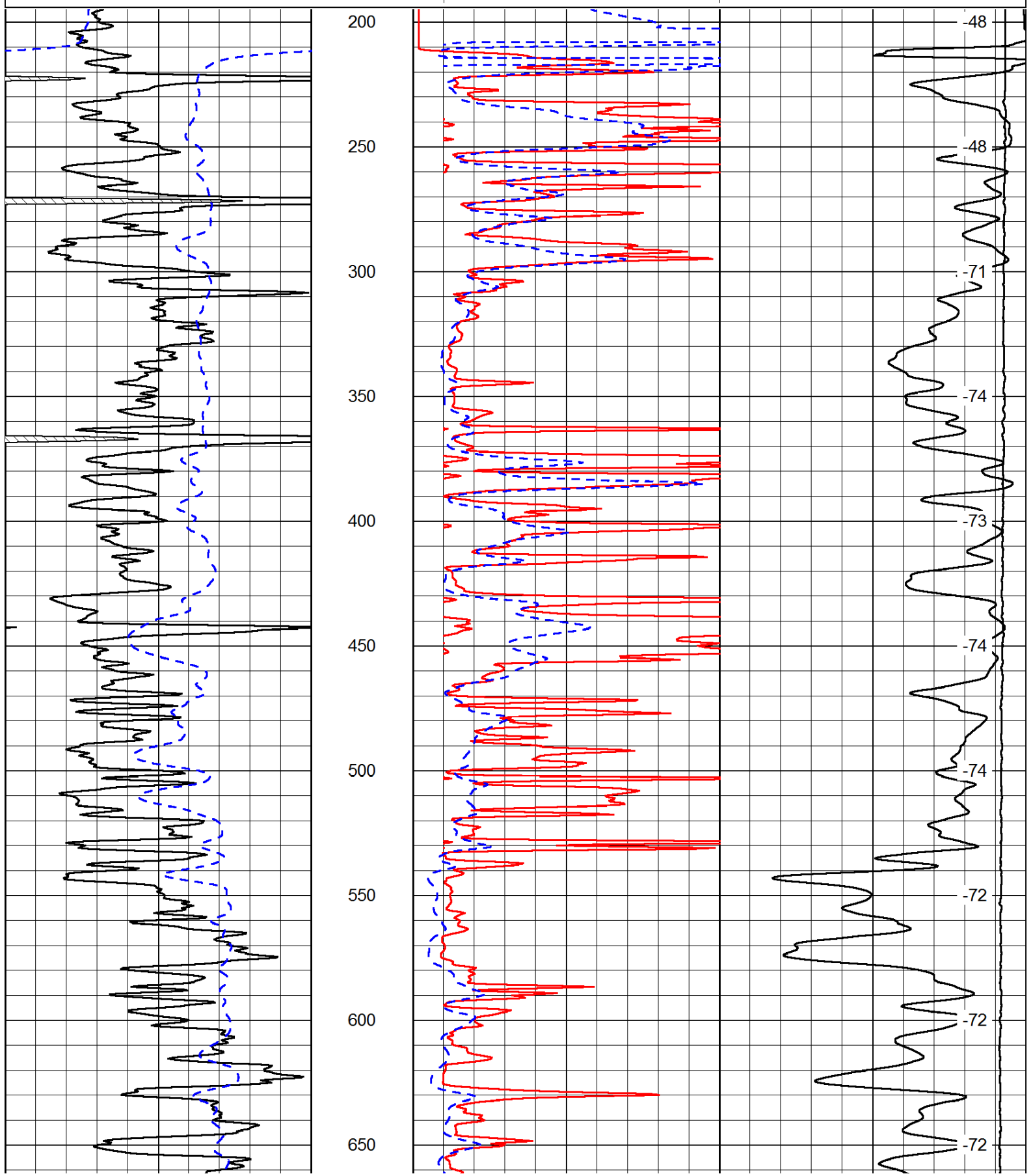
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-200	SP (mV)	0

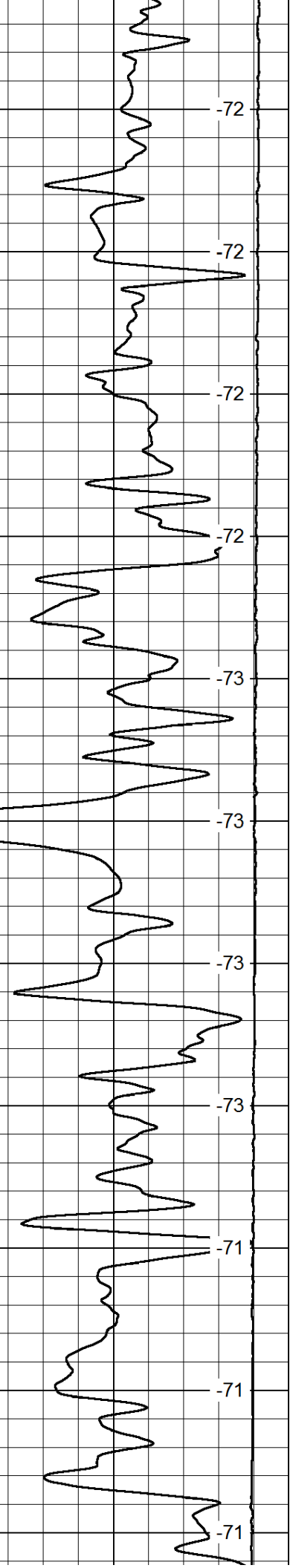
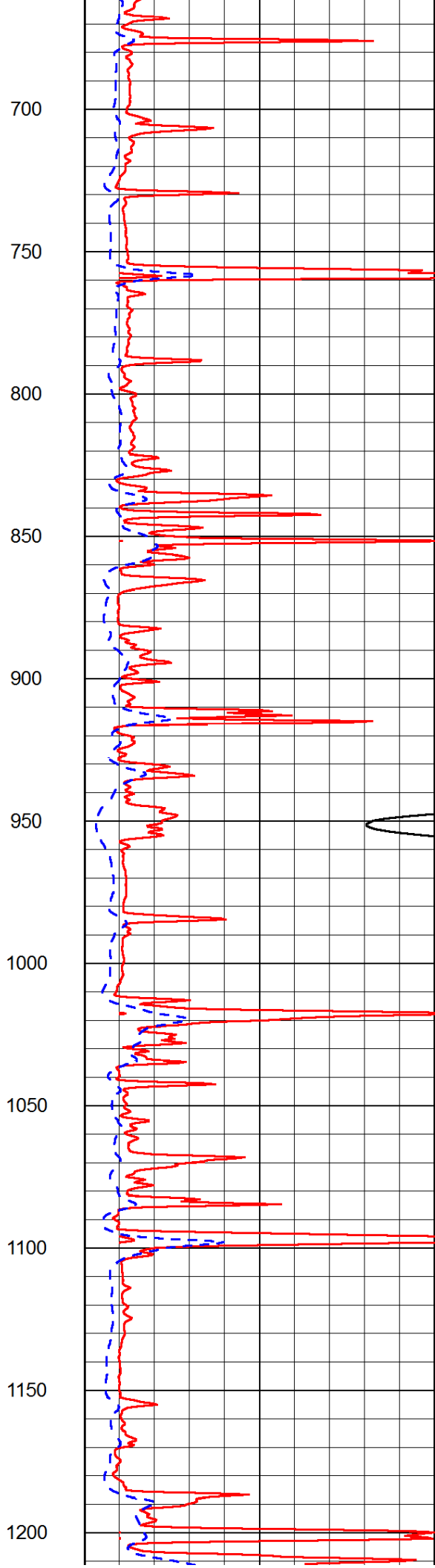
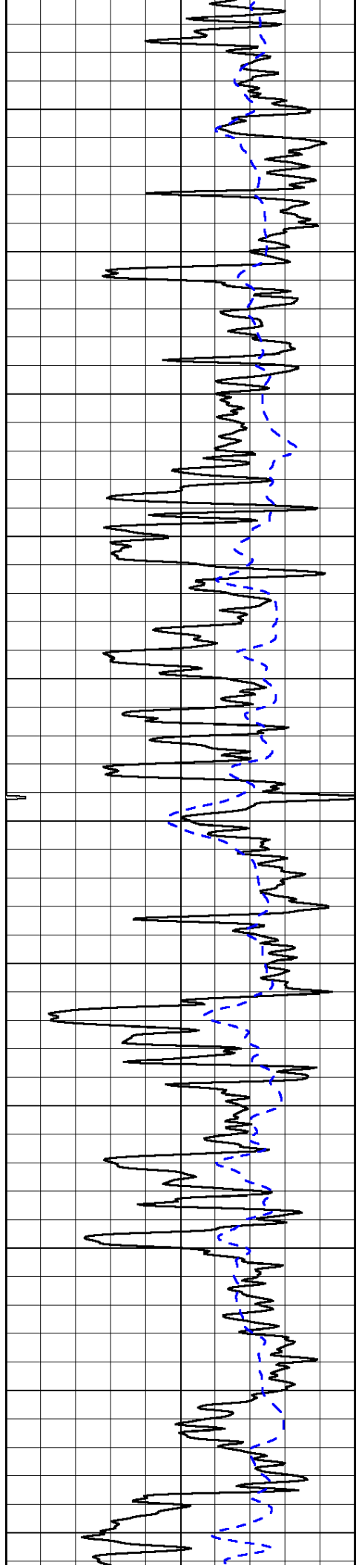
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0	Deep Resistivity	50

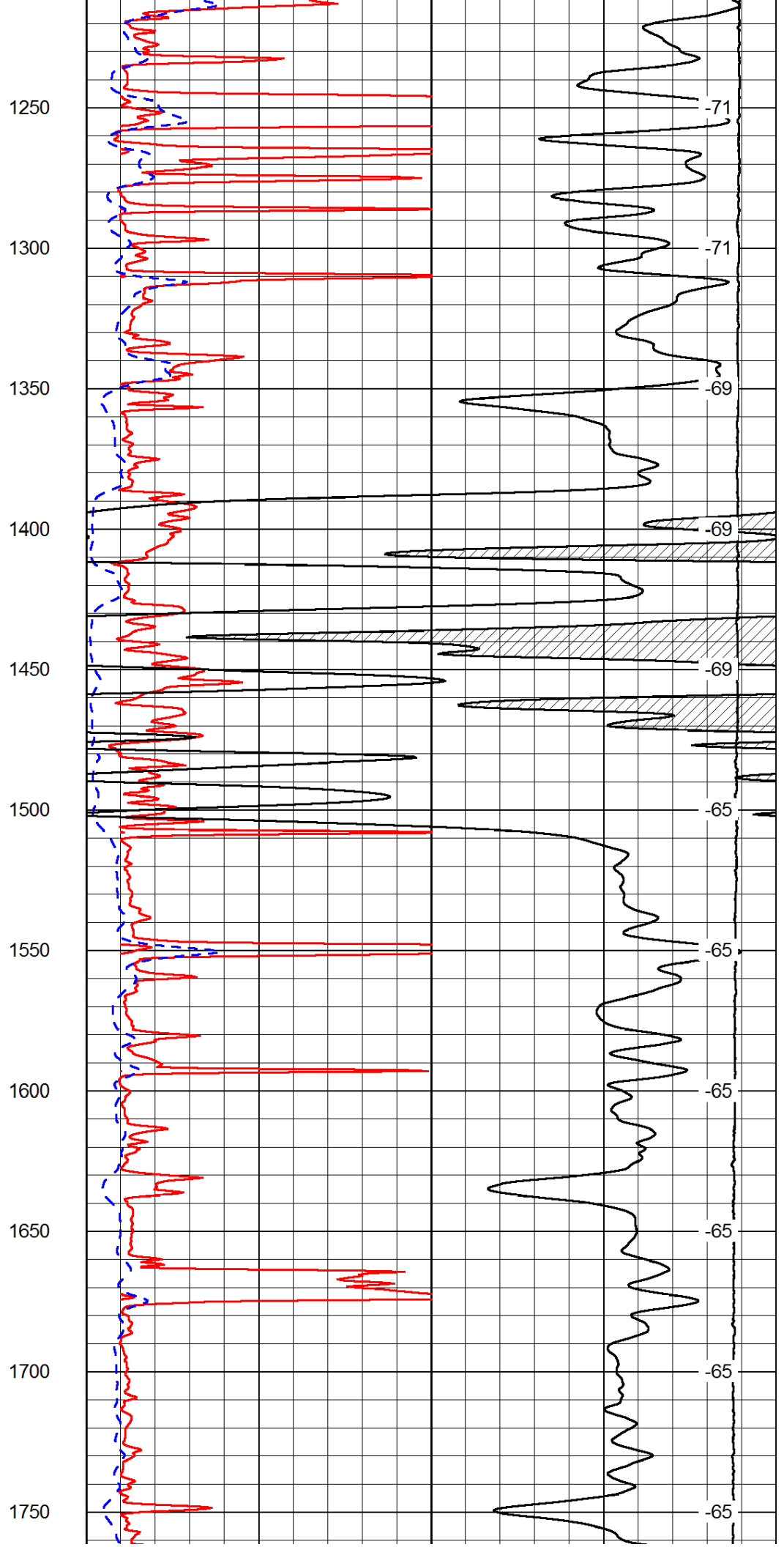
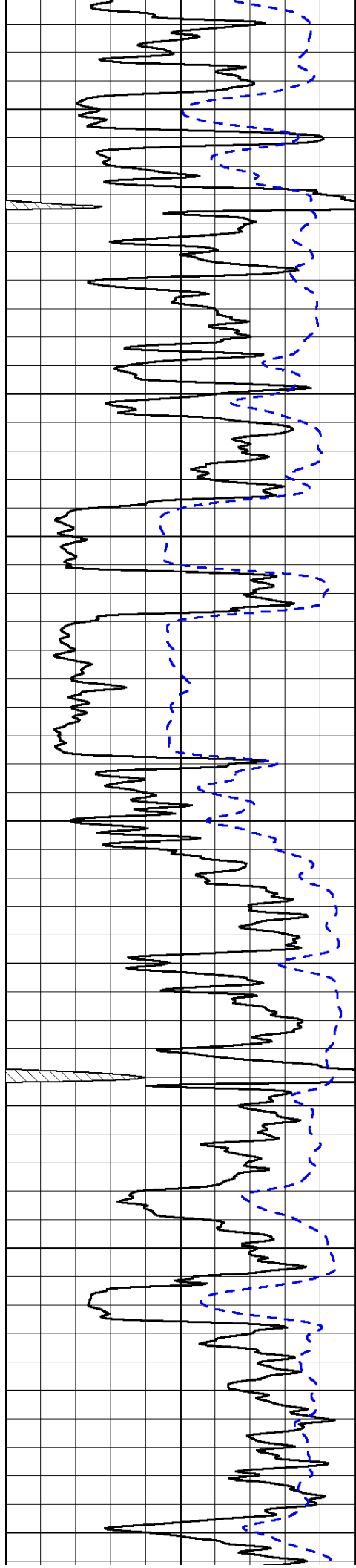
LSPD

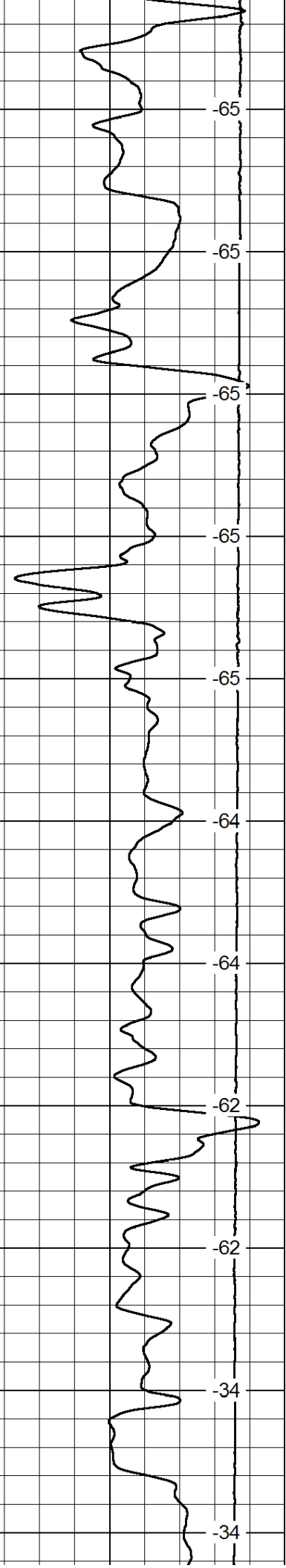
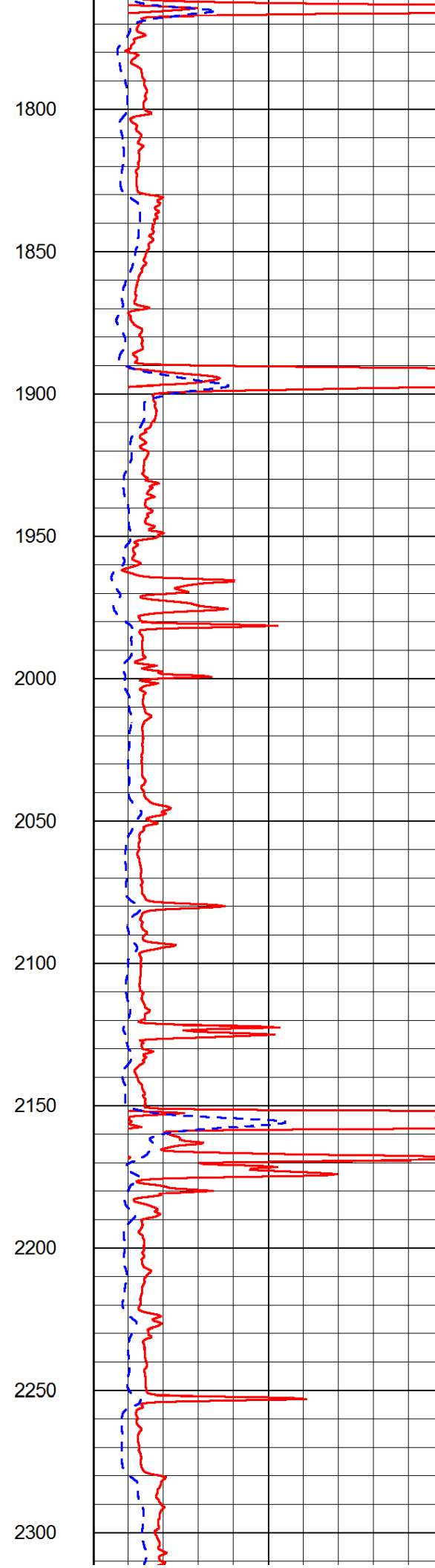
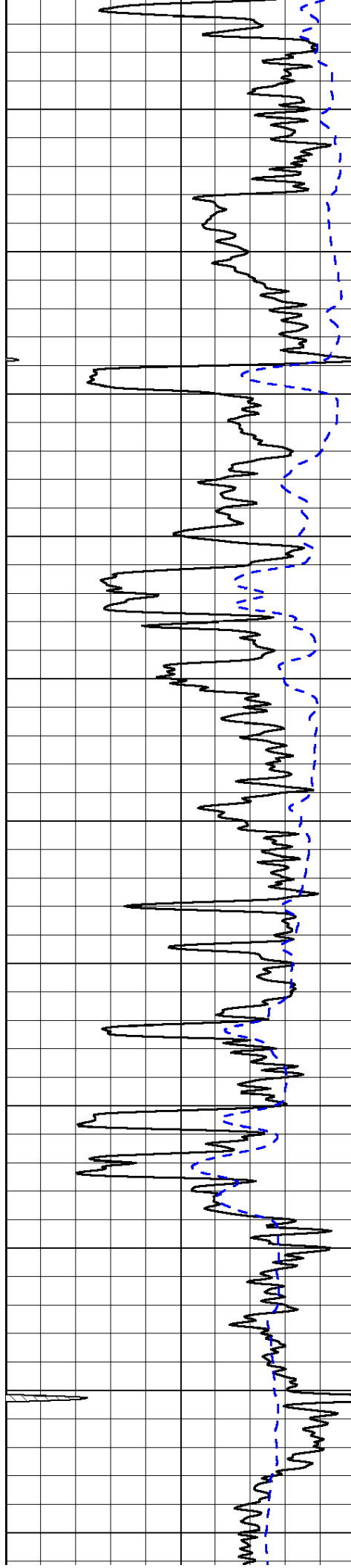
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15000	Line Tension	0

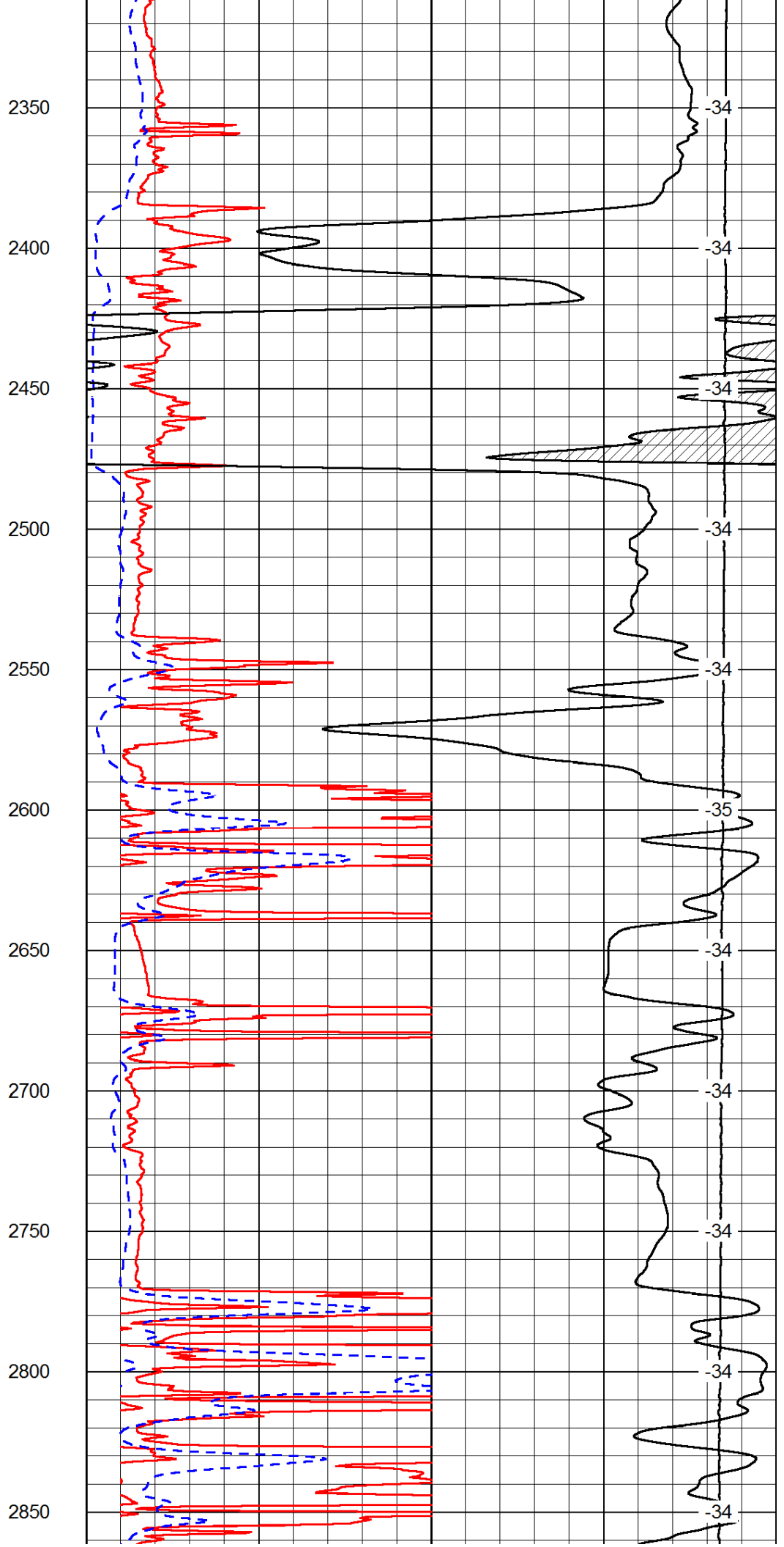
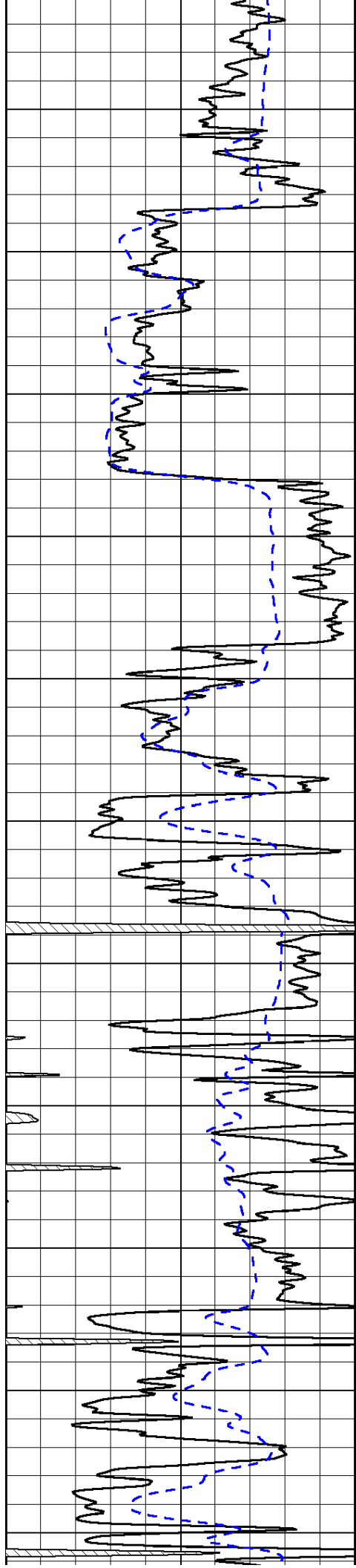
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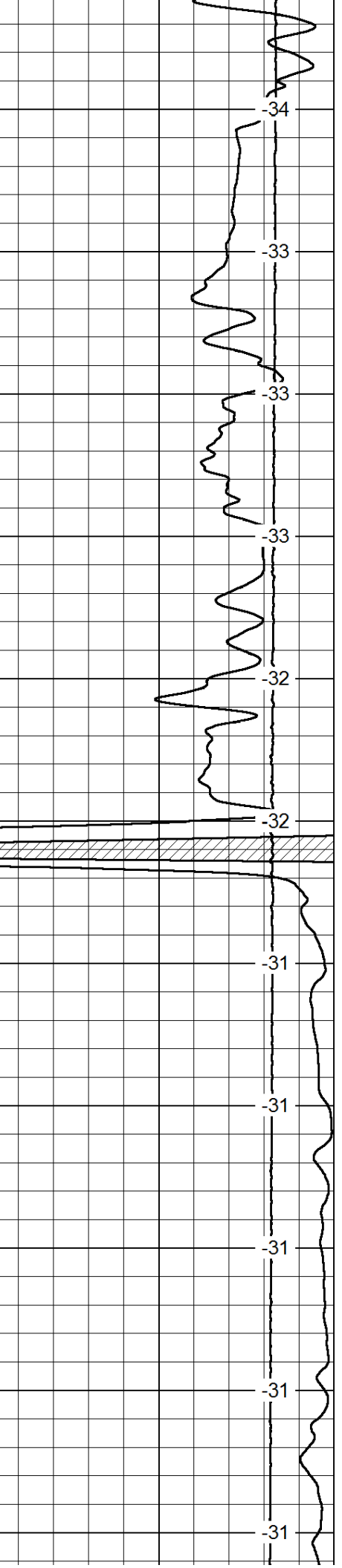
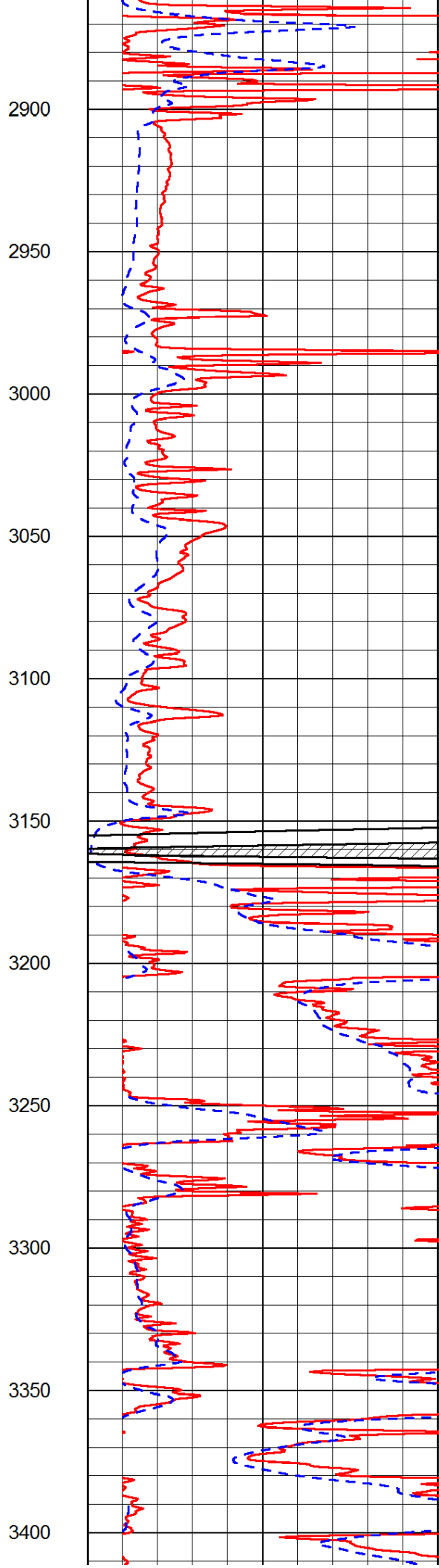
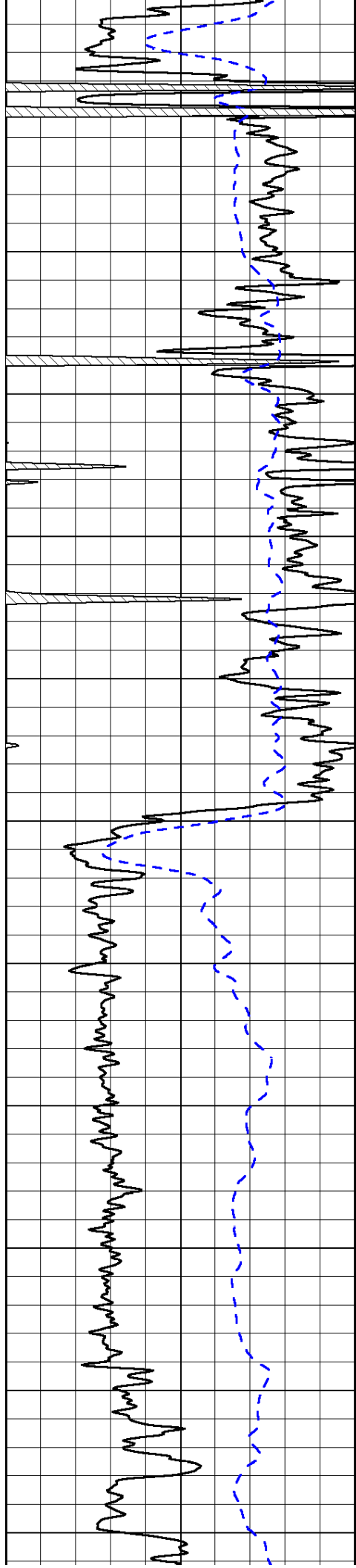


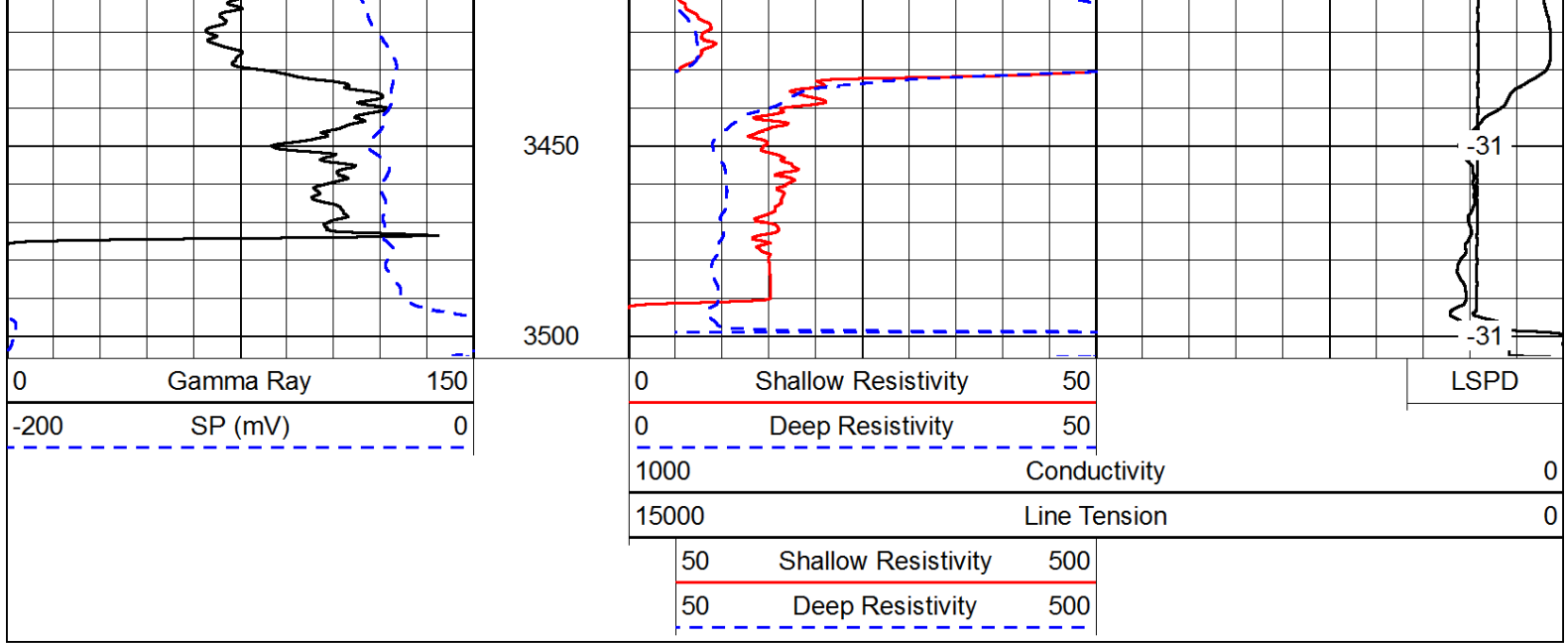




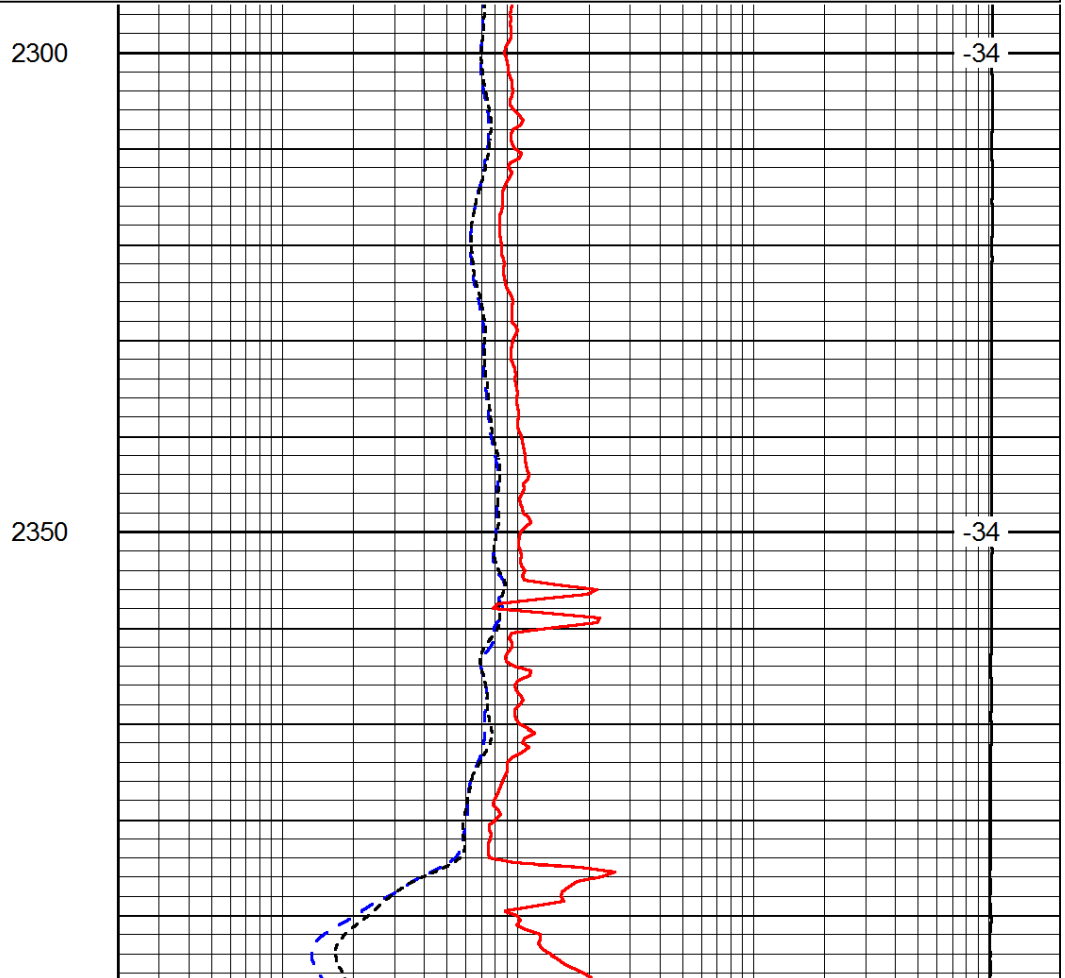
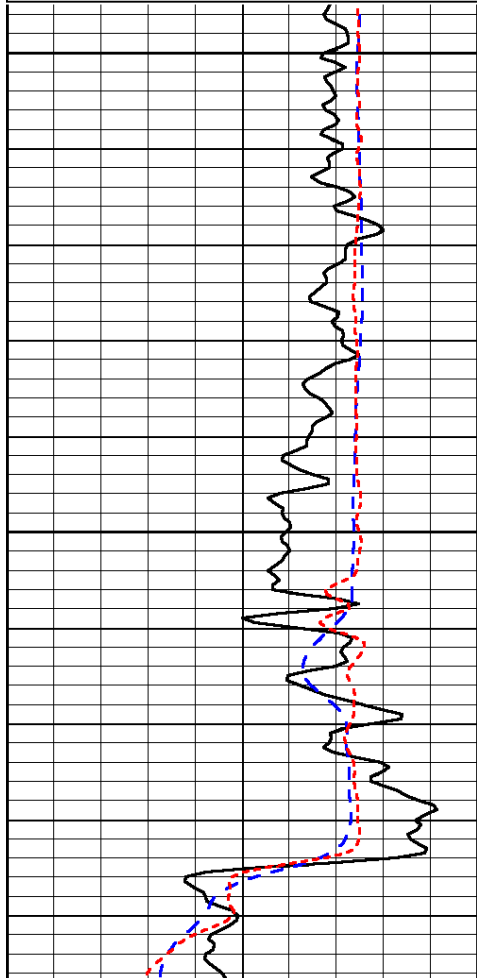
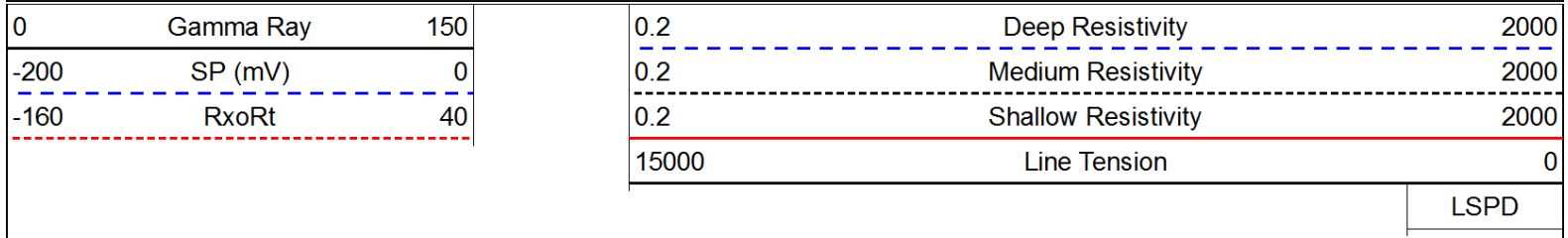


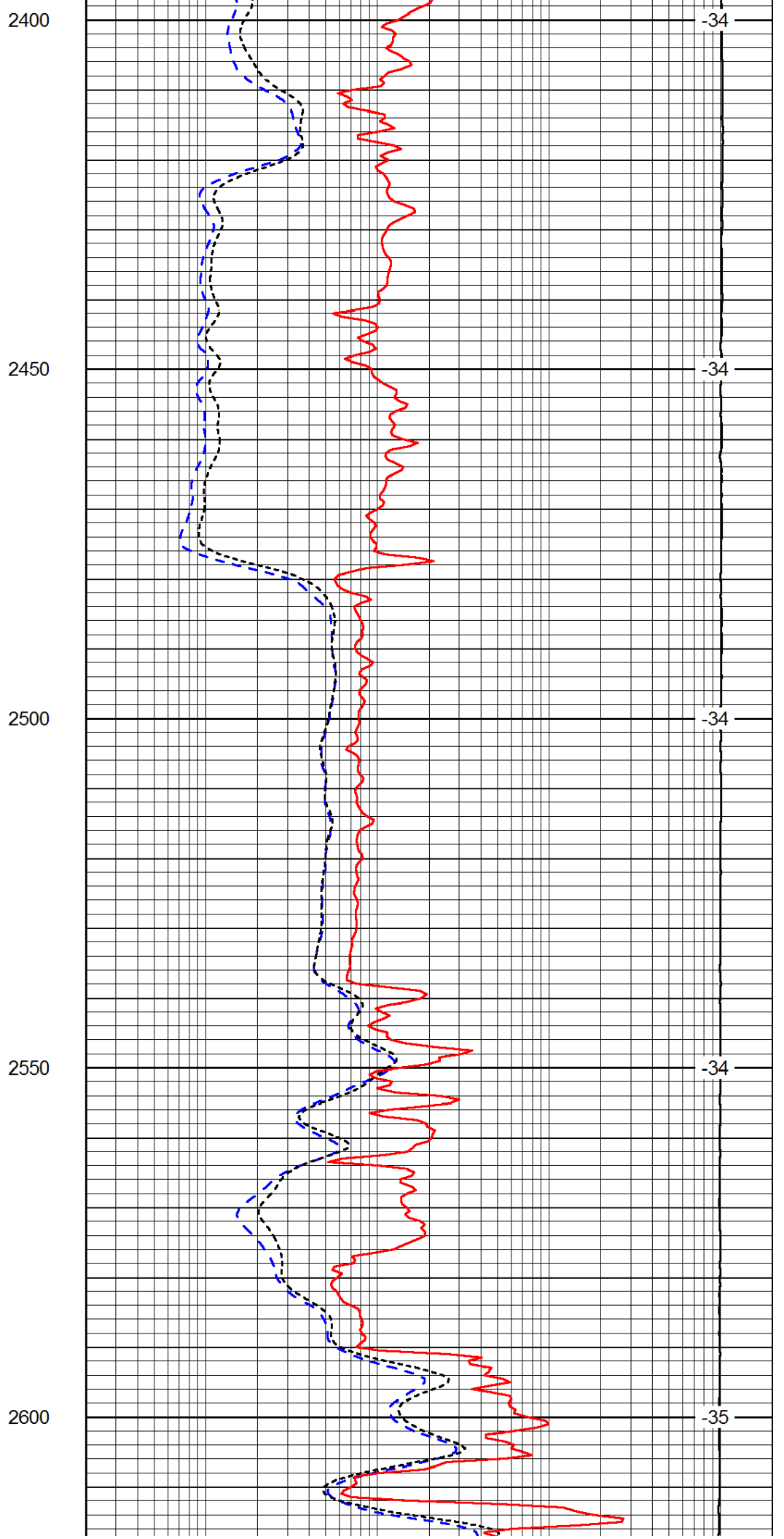
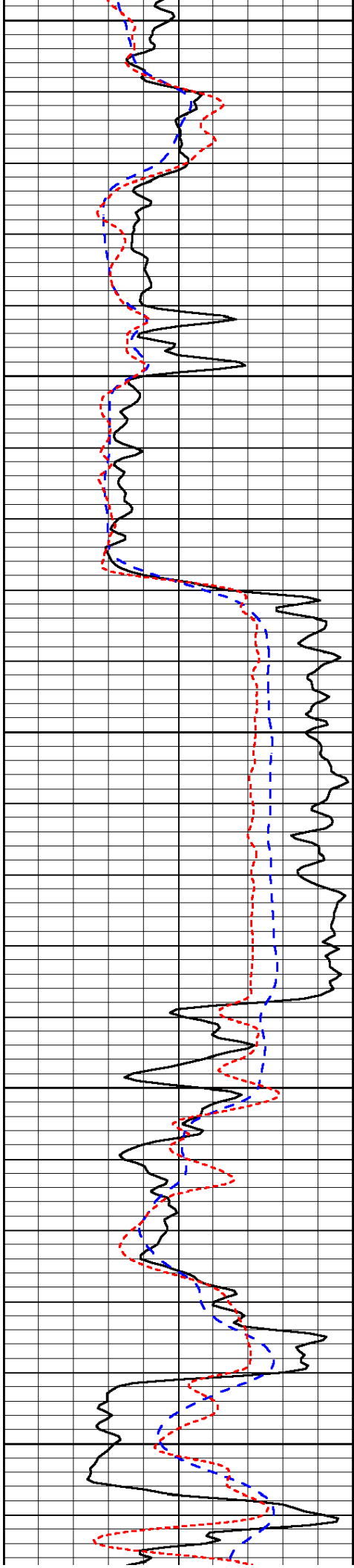


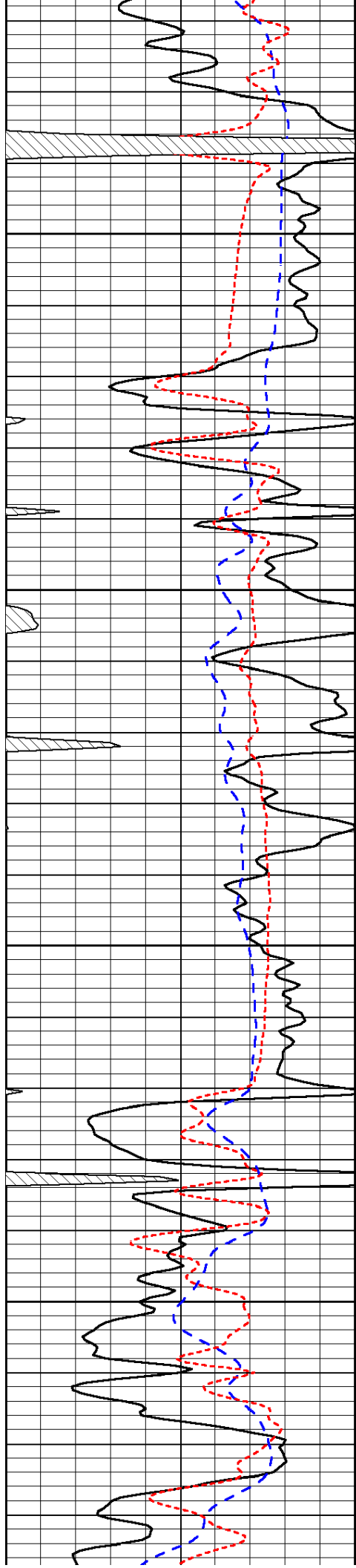




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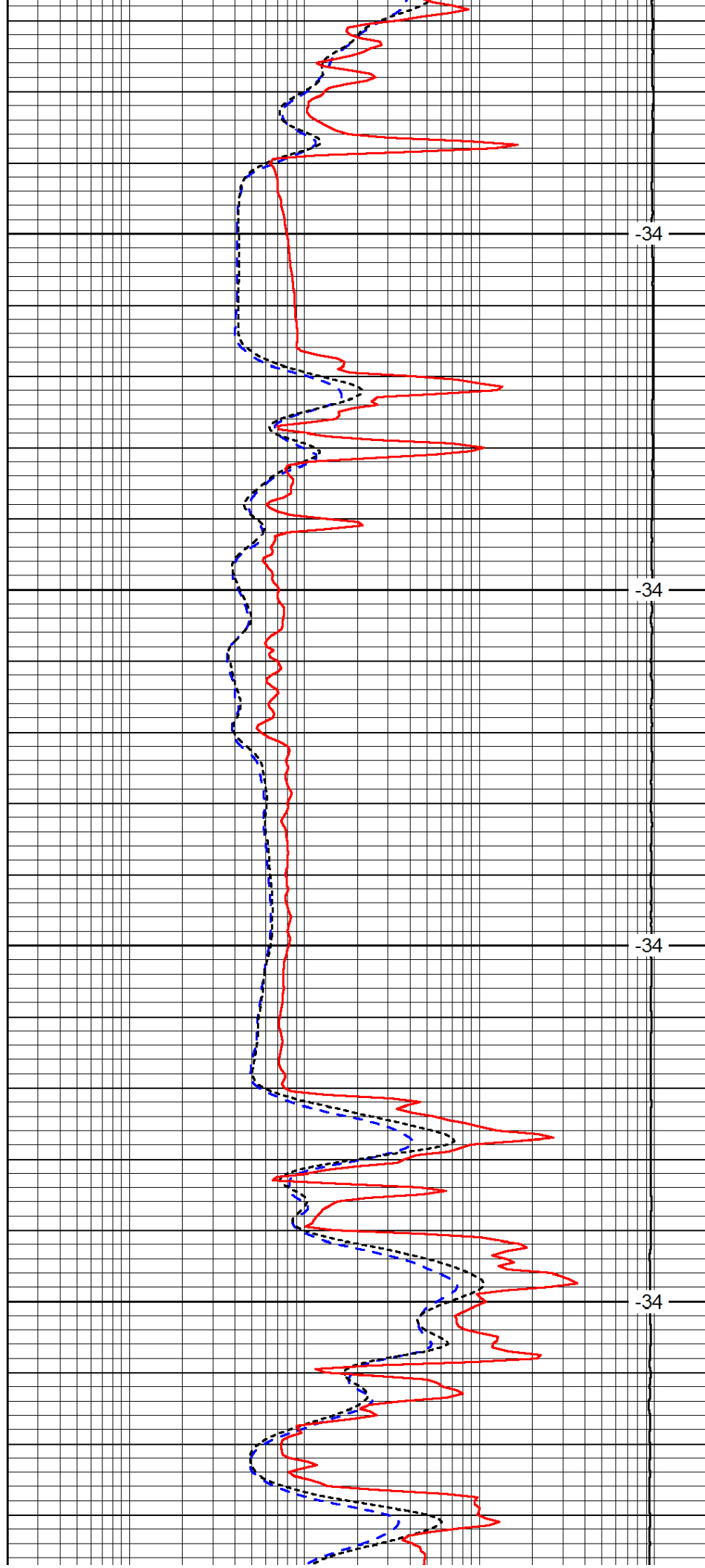


2650

2700

2750

2800

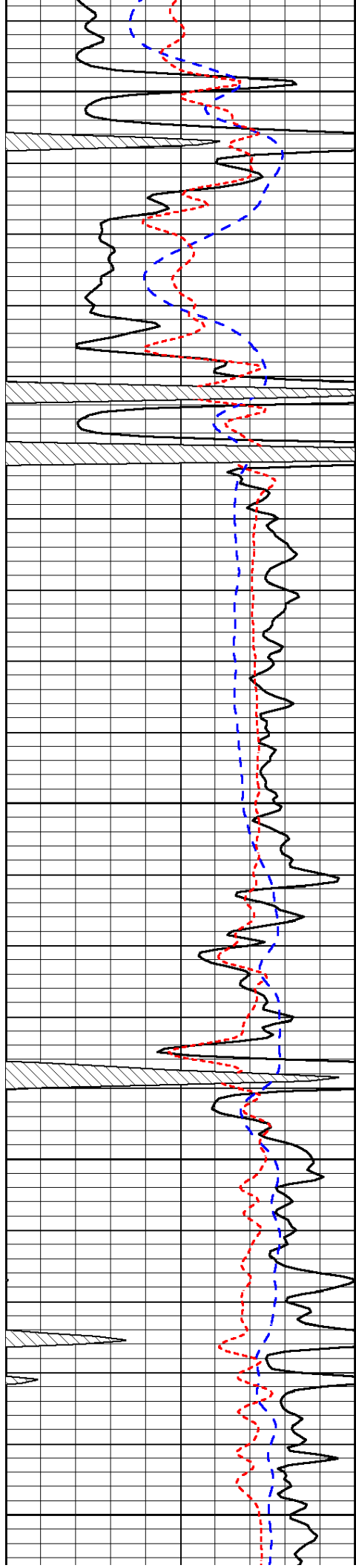


-34

-34

-34

-34



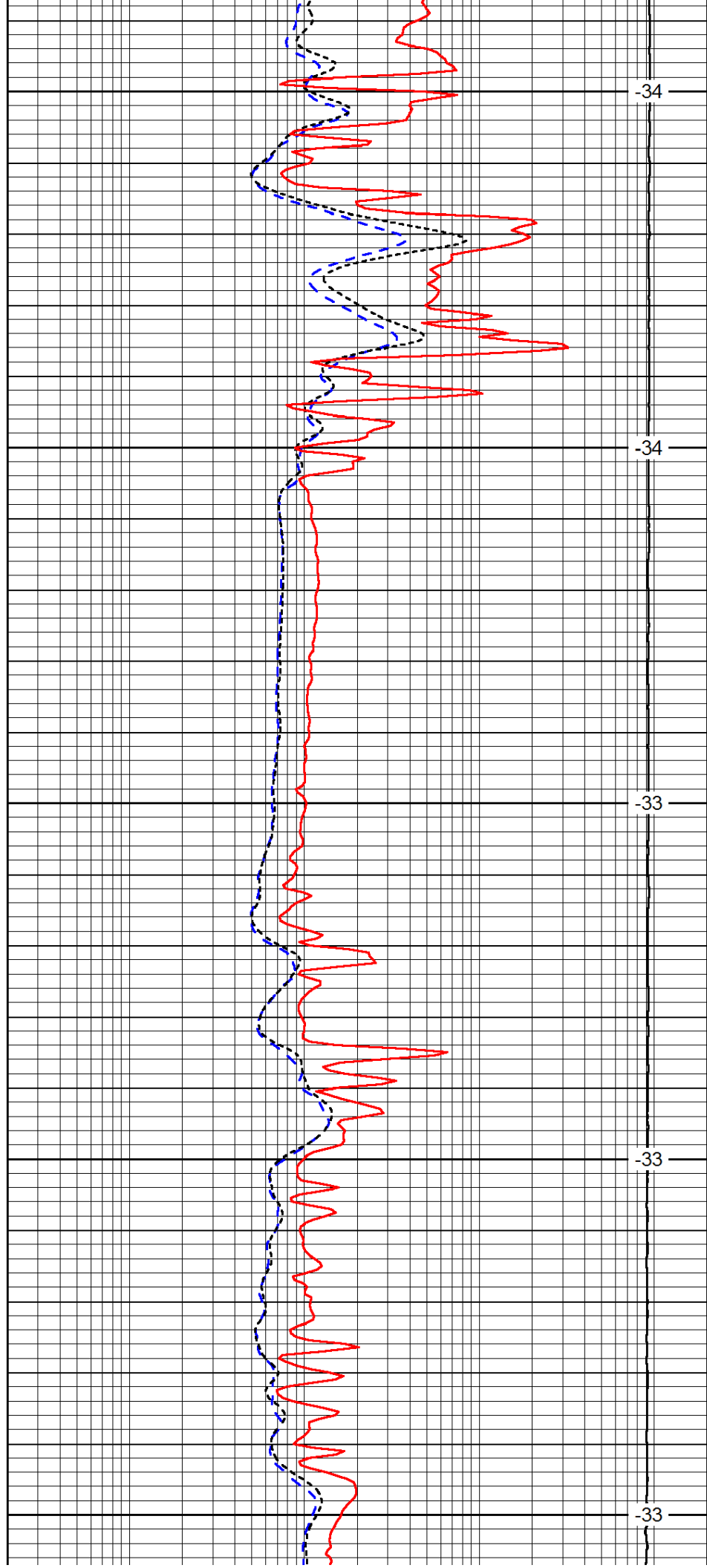
2850

2900

2950

3000

3050



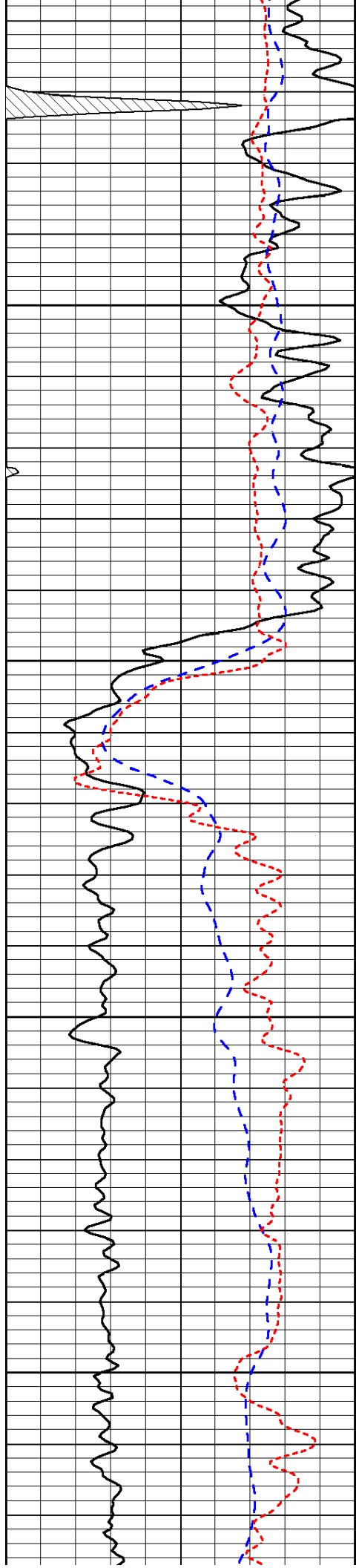
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-34

-33

-33

-33

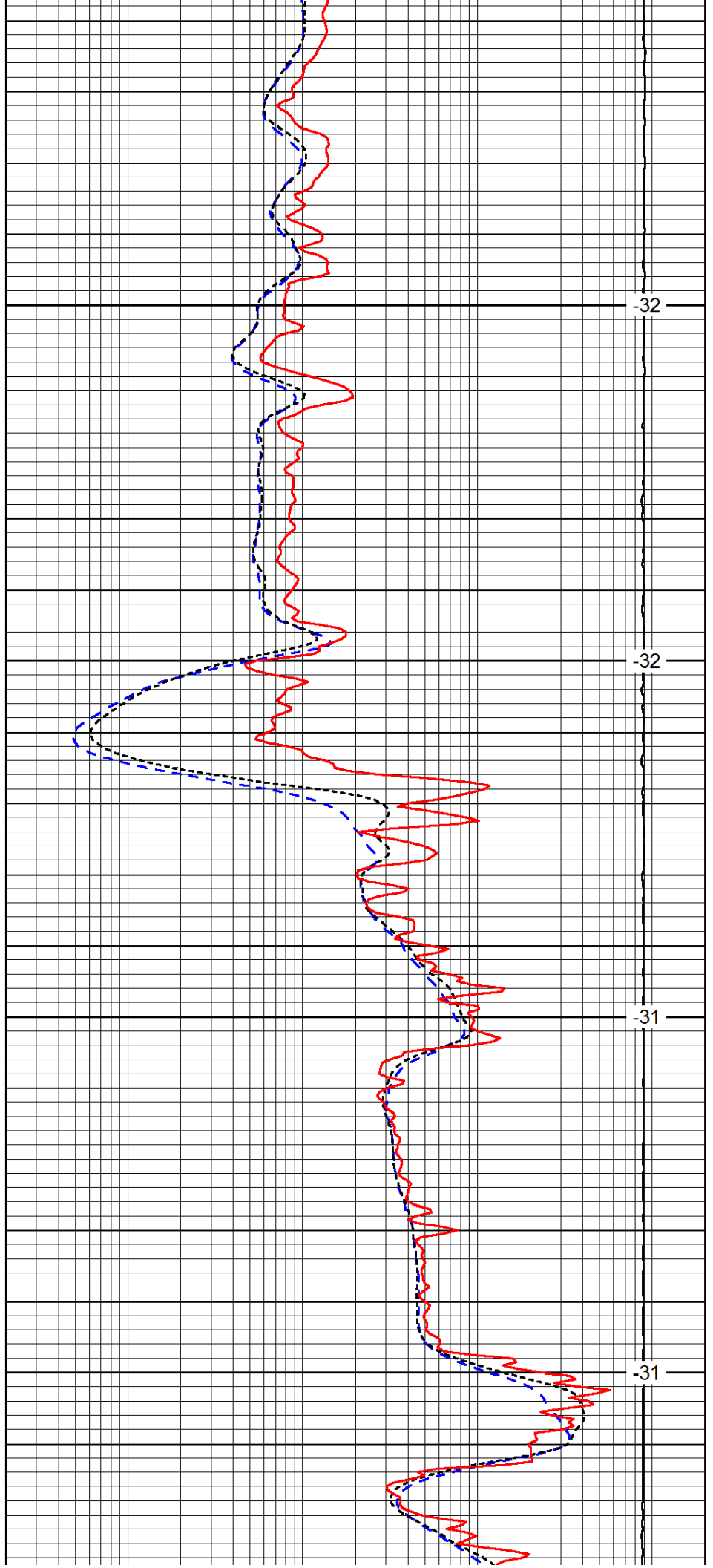


3100

3150

3200

3250

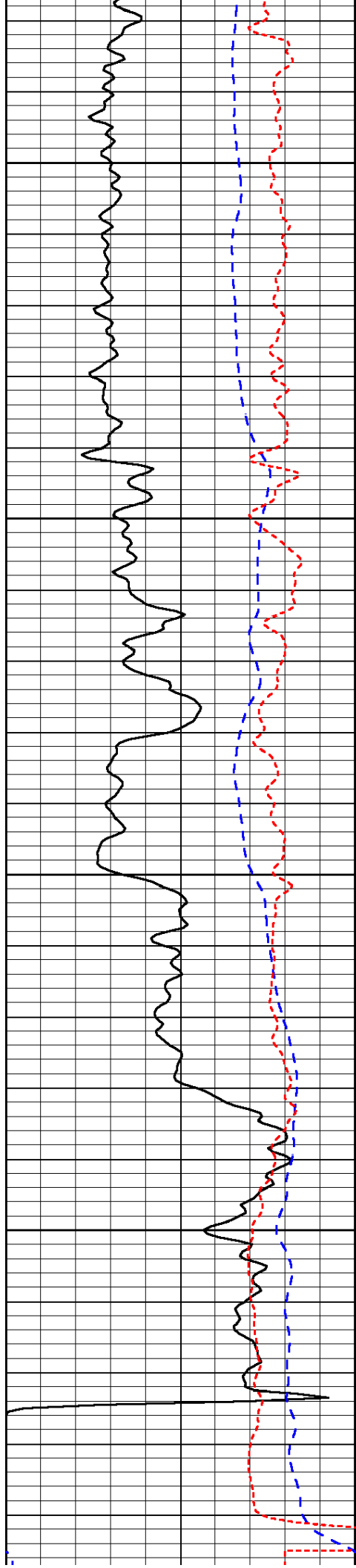


-32

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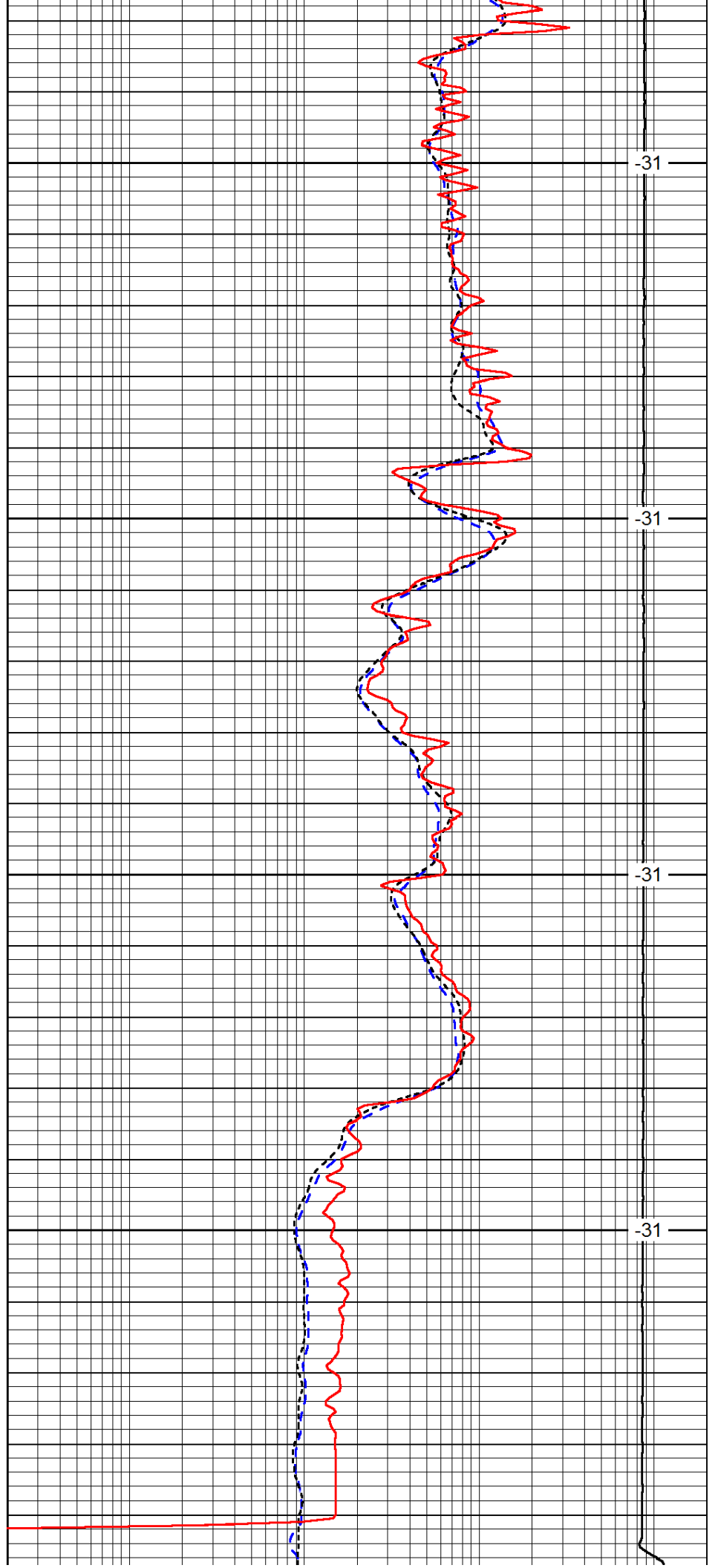


3300

3350

3400

3450



-31

-31

-31

-31

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

3500

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

-31

LSPD