



Dual Induction Log

Pioneer Energy Services

API No.

15-079-20708-00-00

Company **Howell Oil Company, Inc.**

Well **Pizinger # 8**

Field **Burton**

County **Harvey** State **Kansas**

Location

1650' FNL & 2210' FWL

Other Services
CNL/CDL

Sec: **18** Twp: **23 S** Rge: **3 W**

Elevation

Permanent Datum **Ground Level** Elevation **1467**
Log Measured From **Kelly Bushing** **8** Ft. Above Perm. Datum
Drilling Measured From **Kelly Bushing**

K.B. **1475**
D.F. **1467**
G.L. **1467**

Date **11/10/2014**

Run Number **One**

Depth Driller **3950**

Depth Logger **3949**

Bottom Logged Interval **3948**

Top Log Interval **300**

Casing Driller **8.625 @ 304**

Casing Logger **304**

Bit Size **7.875**

Type Fluid in Hole **Chemical**

Salinity, ppm CL **2.100**

Density / Viscosity **9.1 62**

pH / Fluid Loss **20 9.5**

Source of Sample **Flowline**

Rm @ Meas. Temp **0.90 @ 80**

Rmf @ Meas. Temp **0.68 @ 80**

Rmc @ Meas. Temp **1.22 @ 80**

Source of Rmf / Rmc **Charts**

Rm @ BHT **0.62 @ 115**

Operating Rig Time **3 Hours**

Max Rec. Temp. F **115**

Equipment Number **15**

Location **Hays**

Recorded By **Y. Ruiz**

Witnessed By **Terry McLeod**

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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.

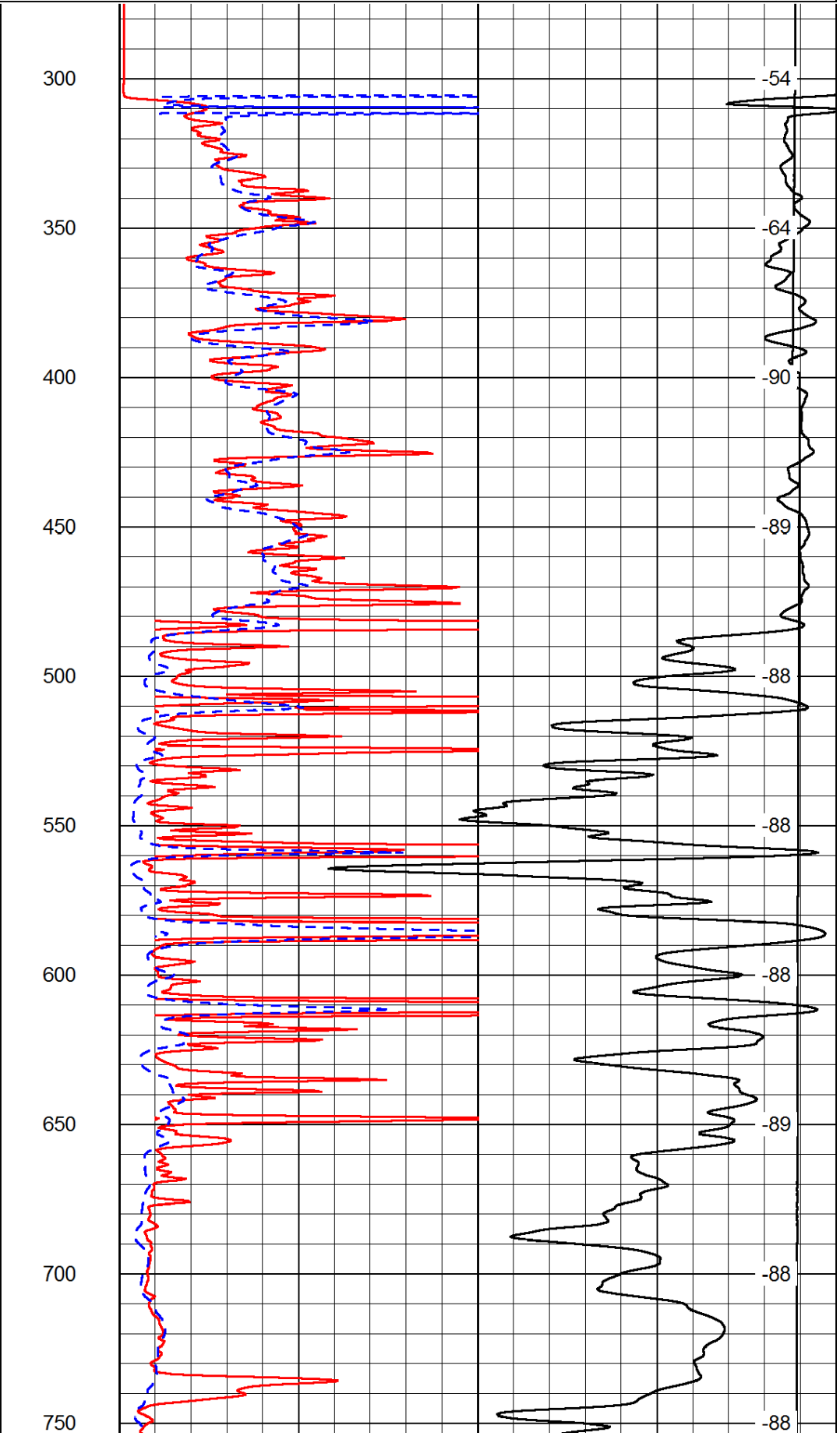
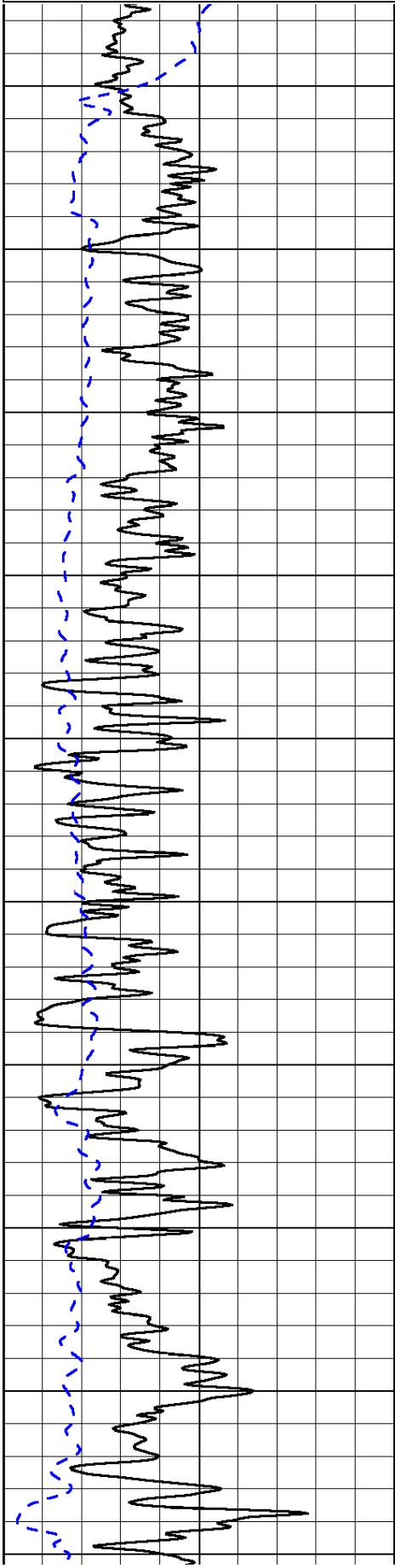
Comments

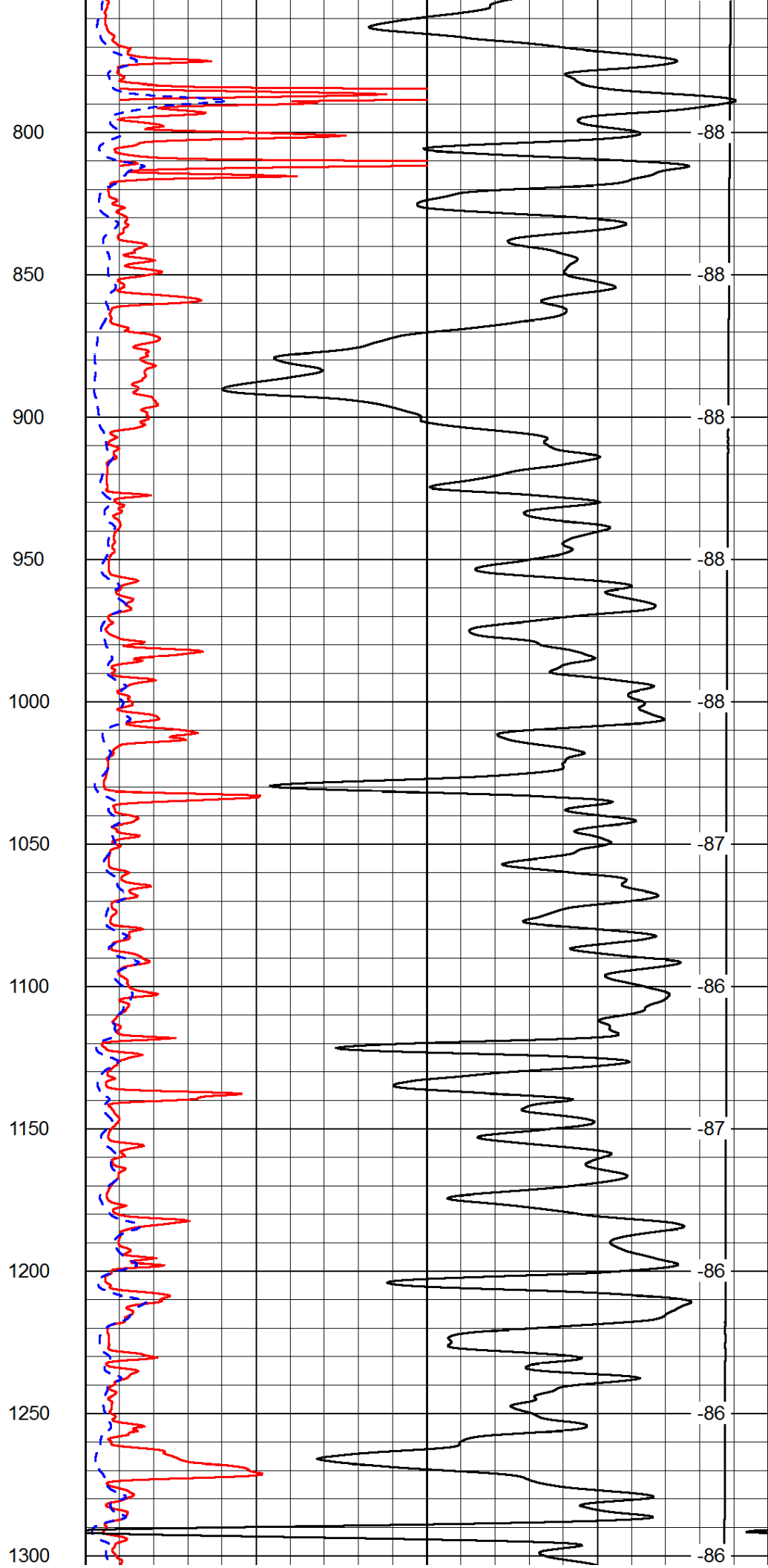
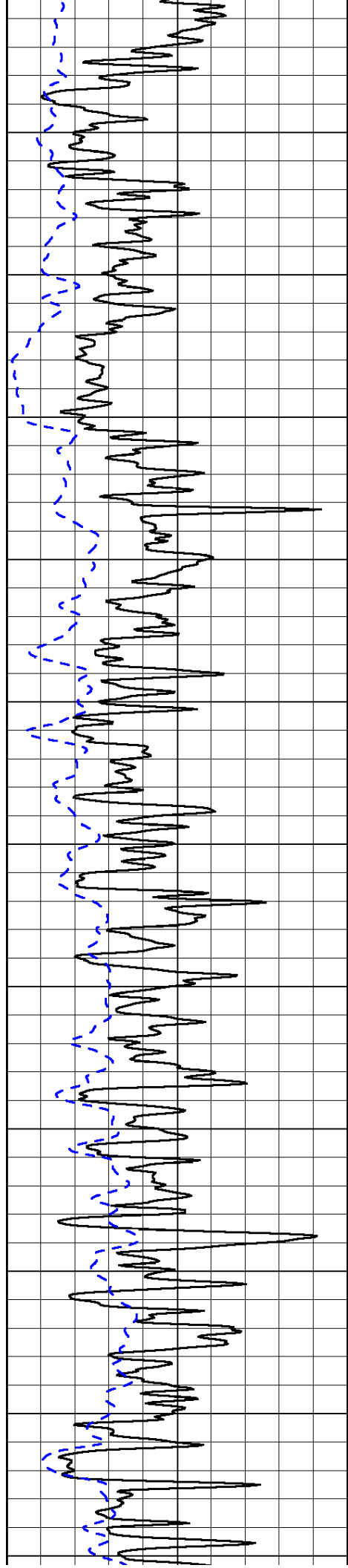
Thank you for using Pioneer Energy Services
www.pioneerres.com
785 625 3858
Hutchinson,
East to County Line, 2 North, 2/3 East,
South into

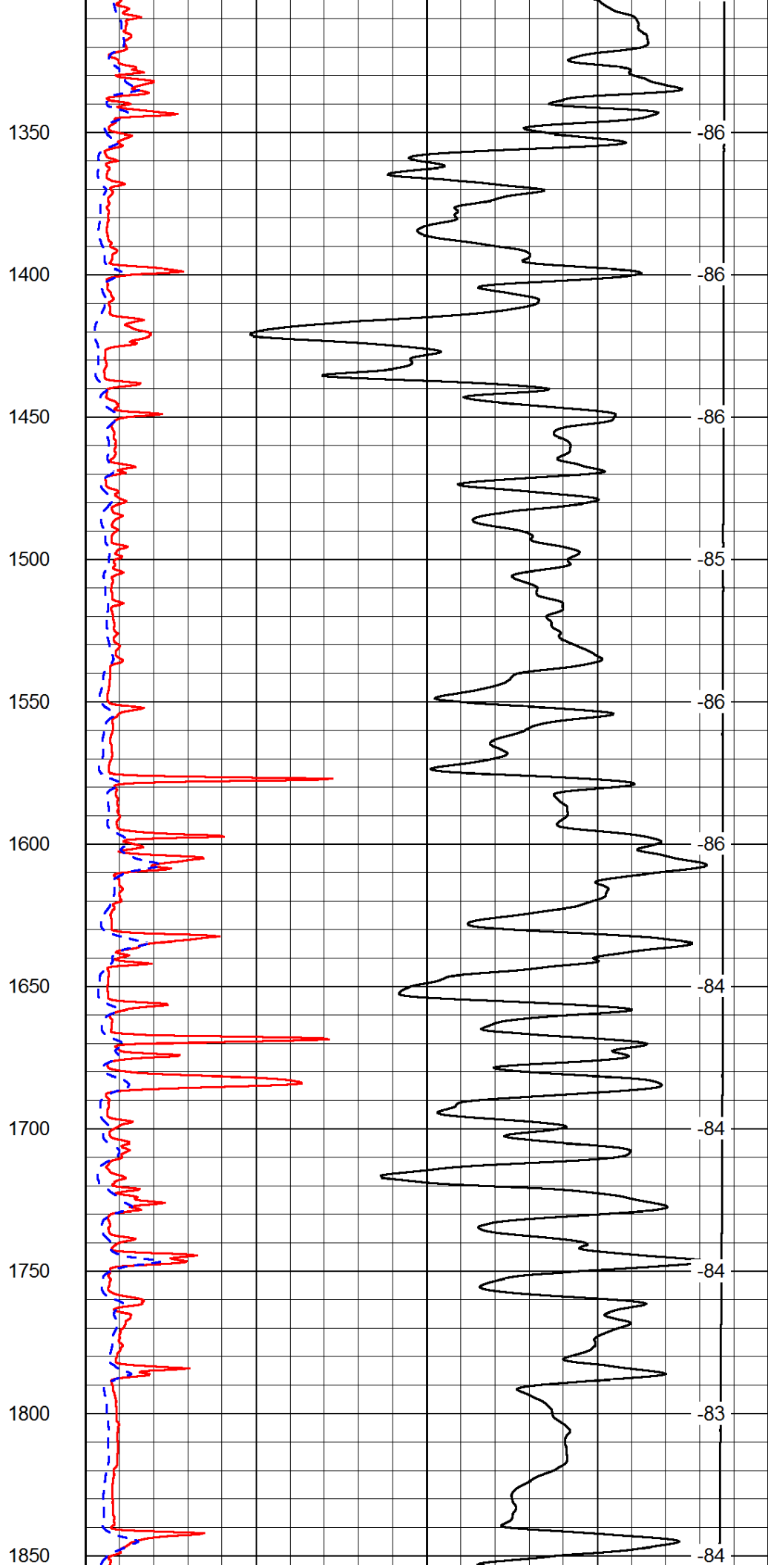
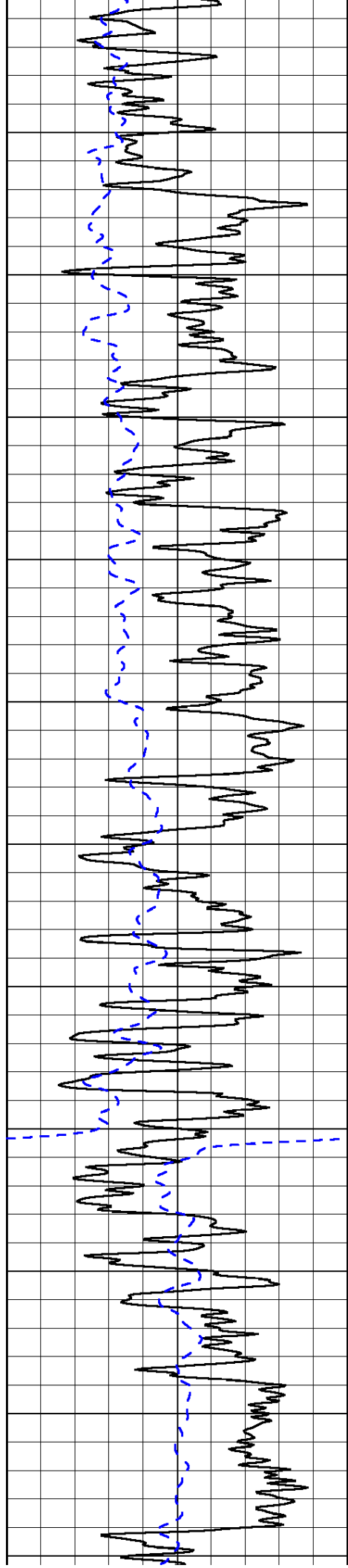
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Dataset Pathname: DIL\hostk
Presentation Format: dil2in
Dataset Creation: Mon Nov 10 16:11:50 2014
Charted by: Depth in Feet scaled 1:600

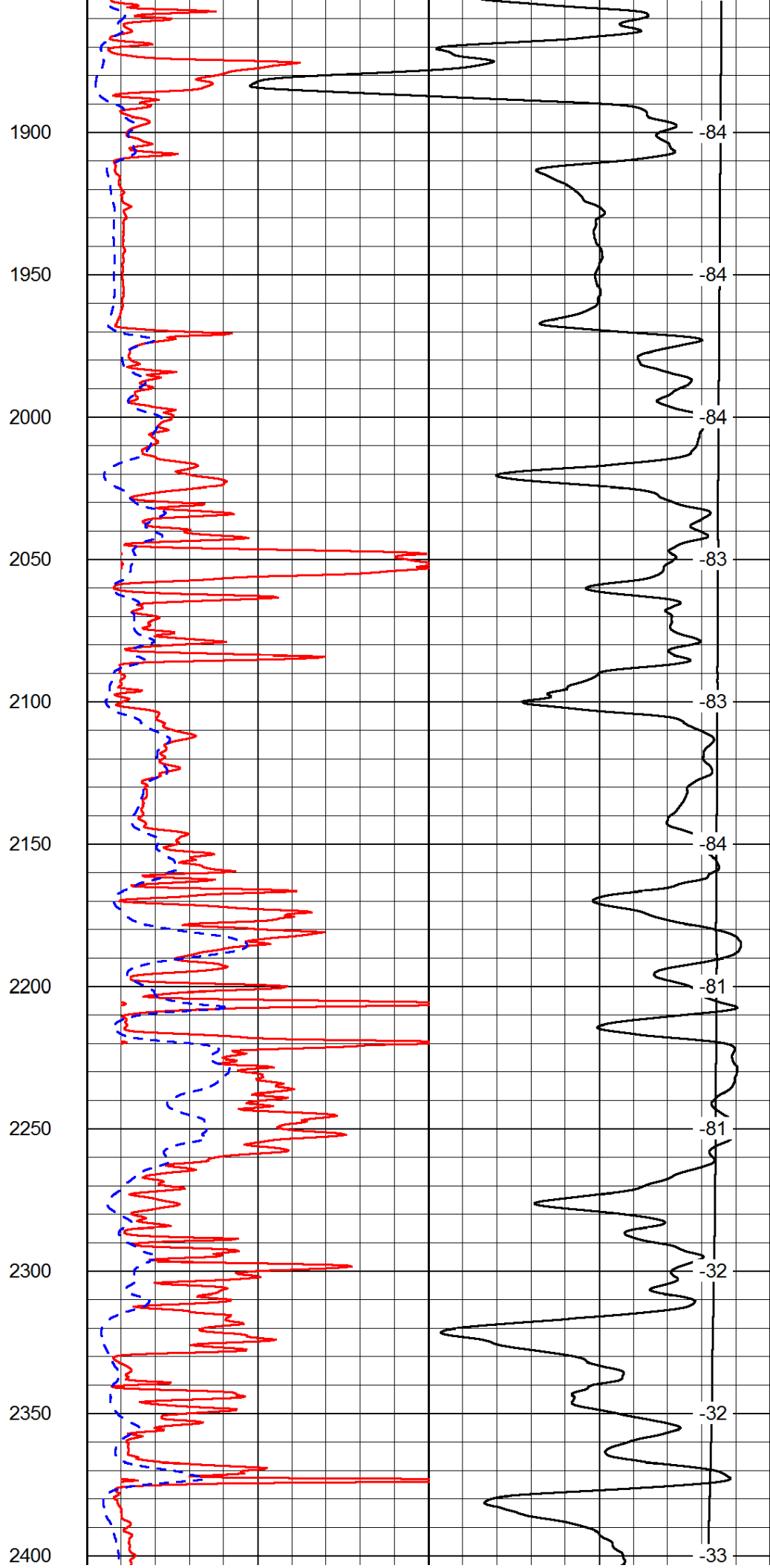
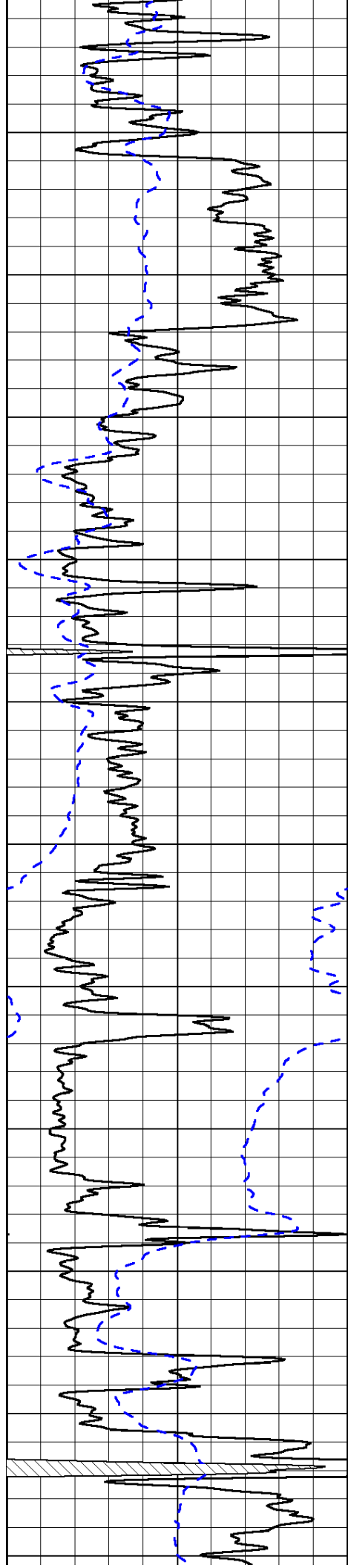
0	Gamma Ray	150
-200	SP (mV)	0

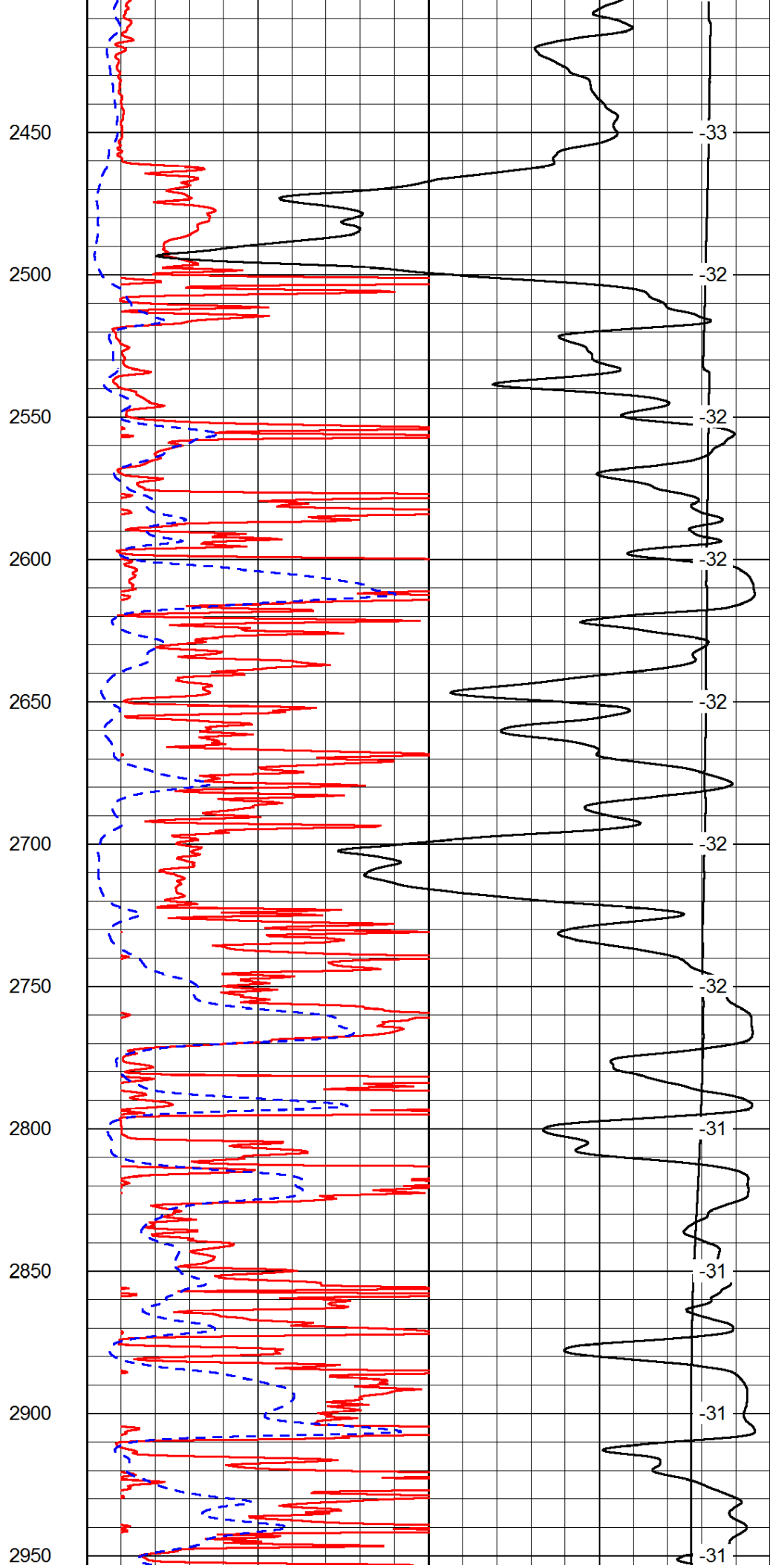
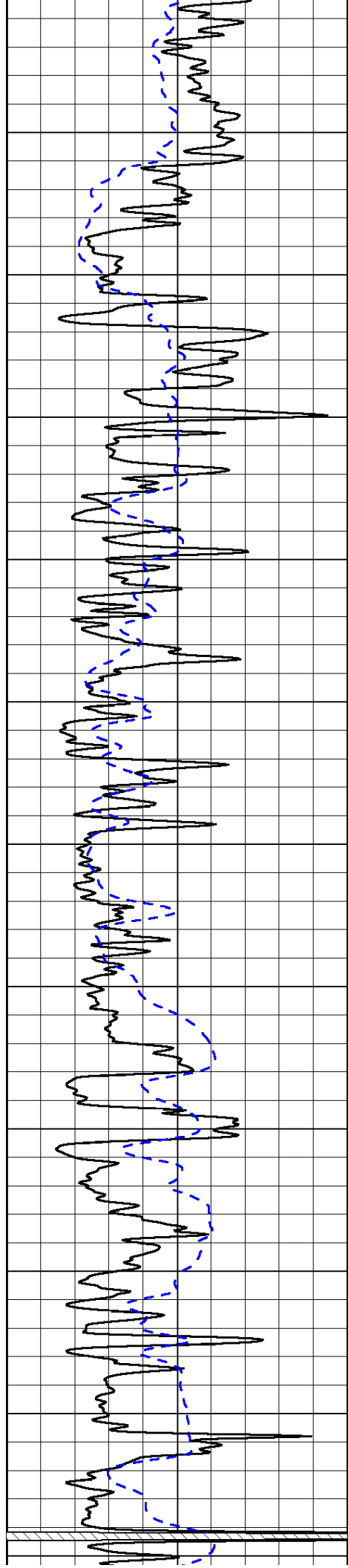
0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

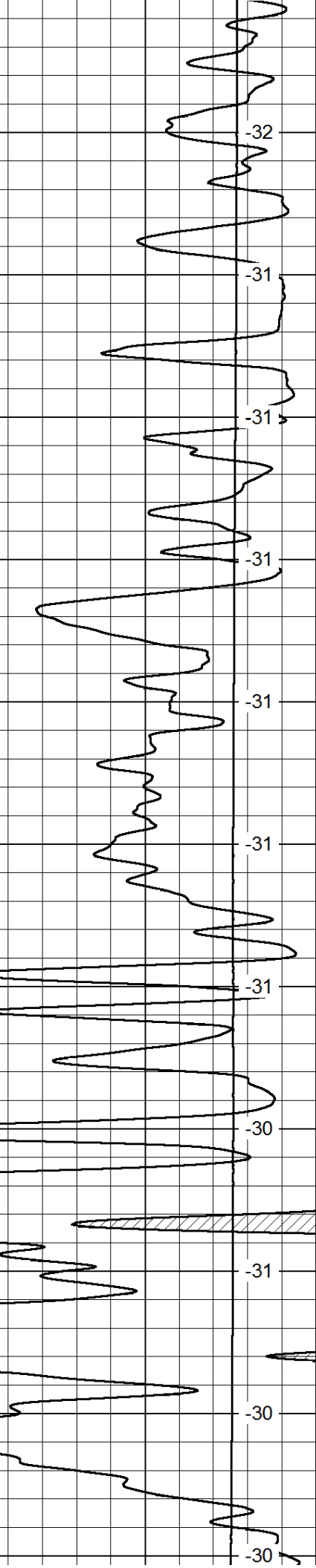
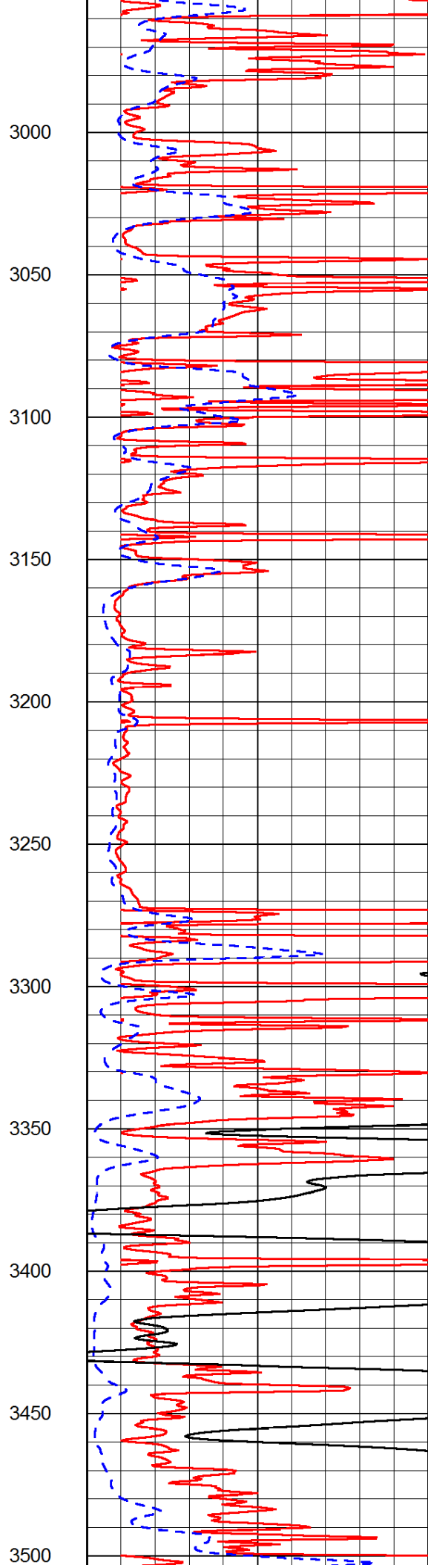
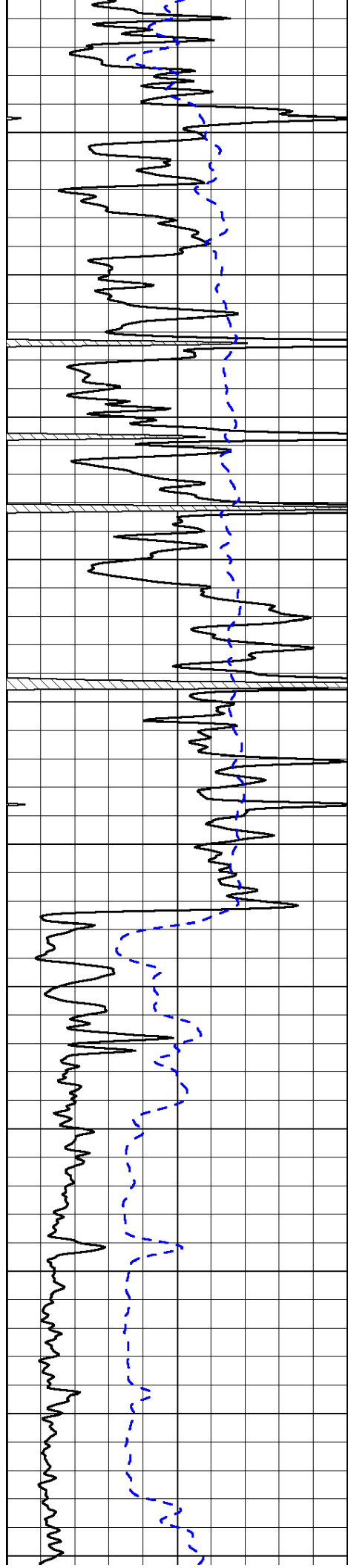


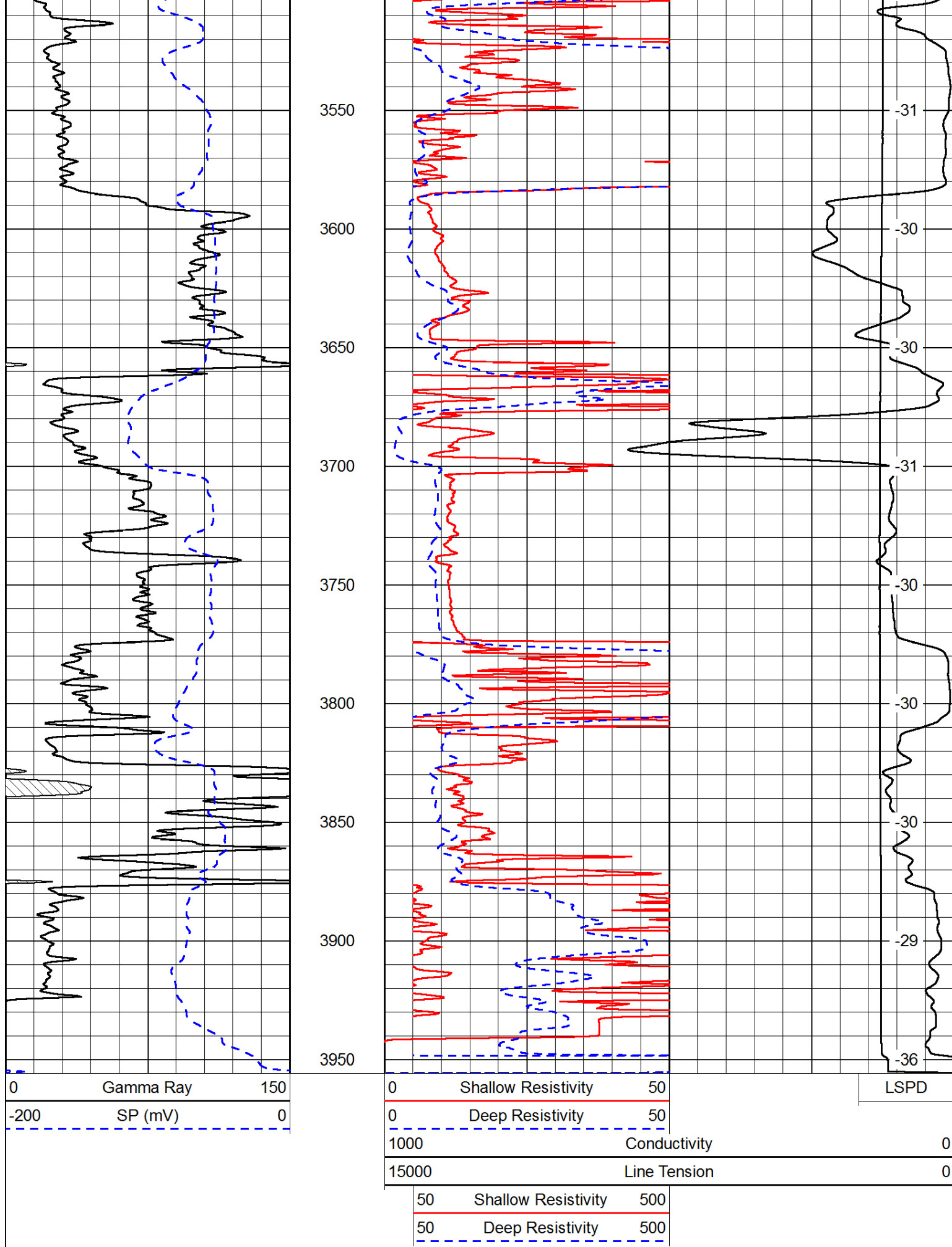




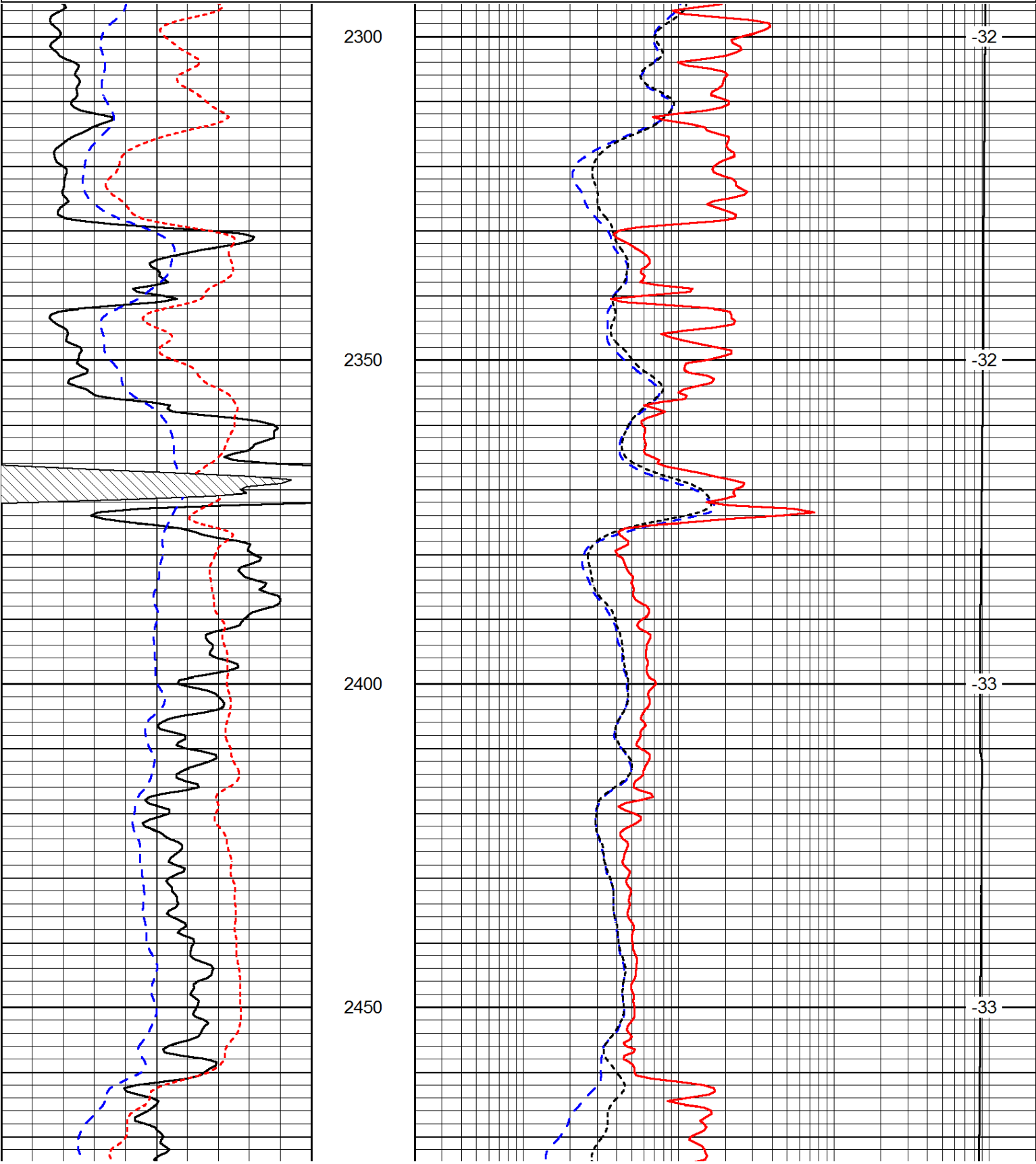


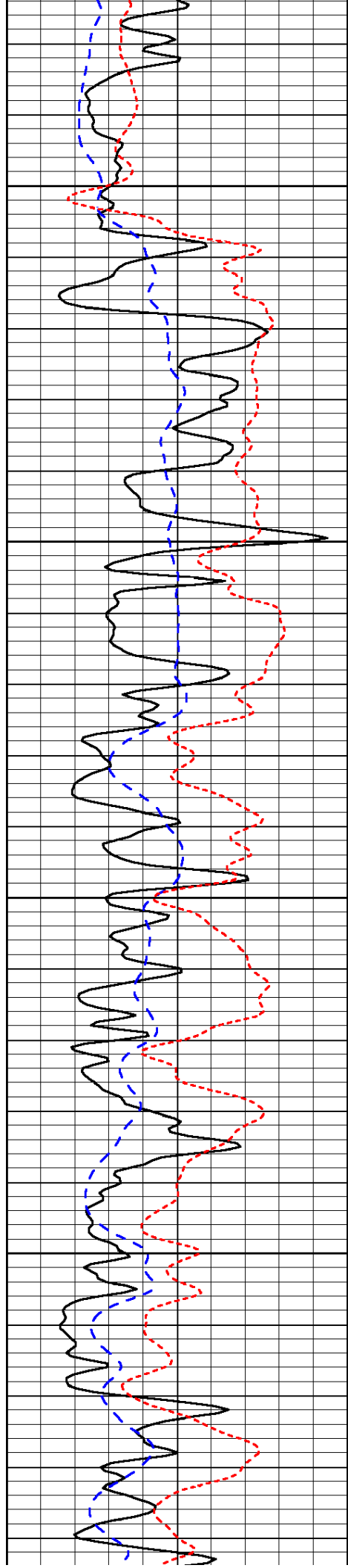






0	Gamma Ray	150	0.2	Deep Resistivity	2000
-200	SP (mV)	0	0.2	Medium Resistivity	2000
-160	RxoRt	40	0.2	Shallow Resistivity	2000
			15000	Line Tension	0
					LSPD



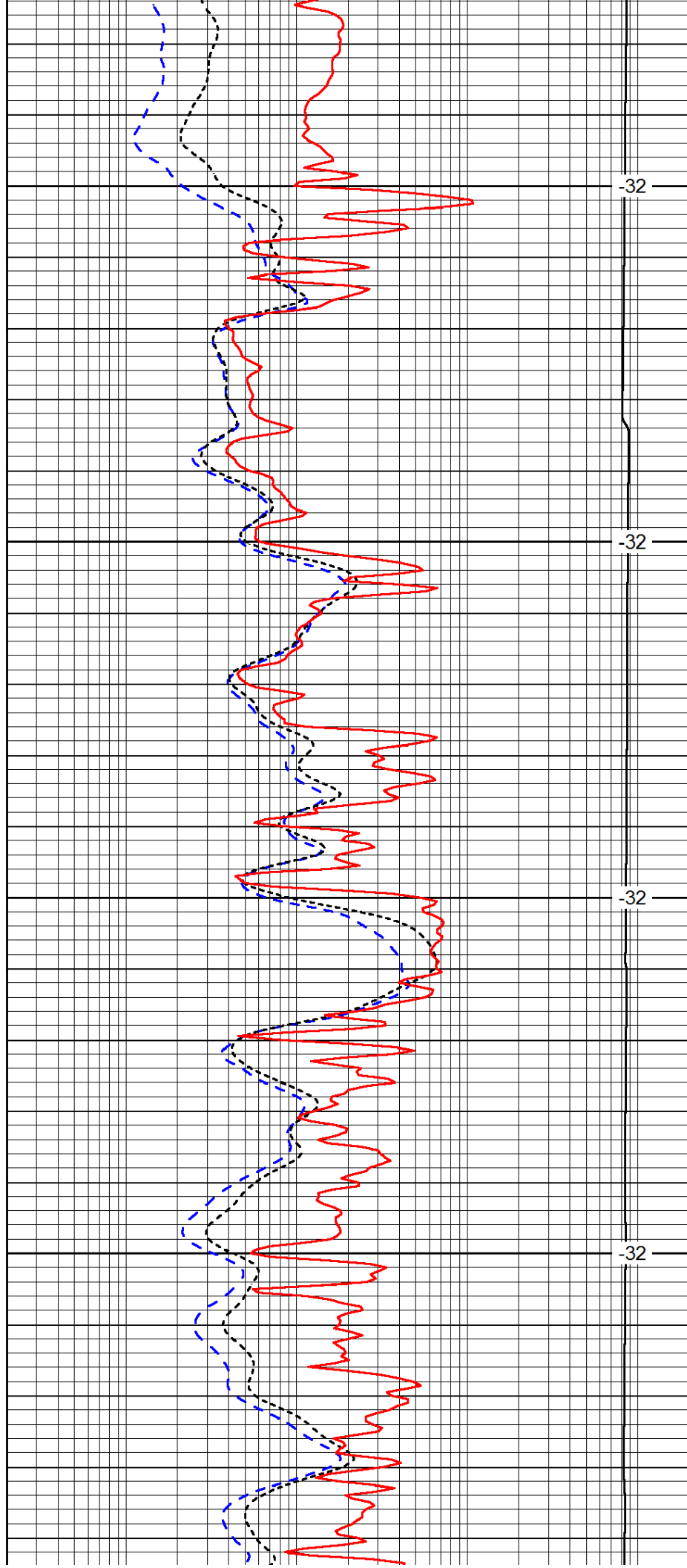


2500

2550

2600

2650

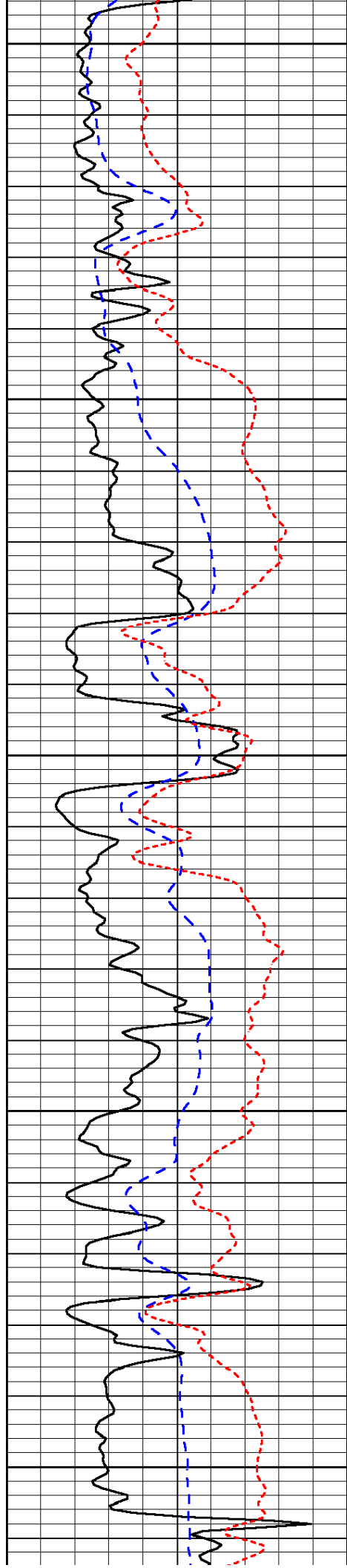


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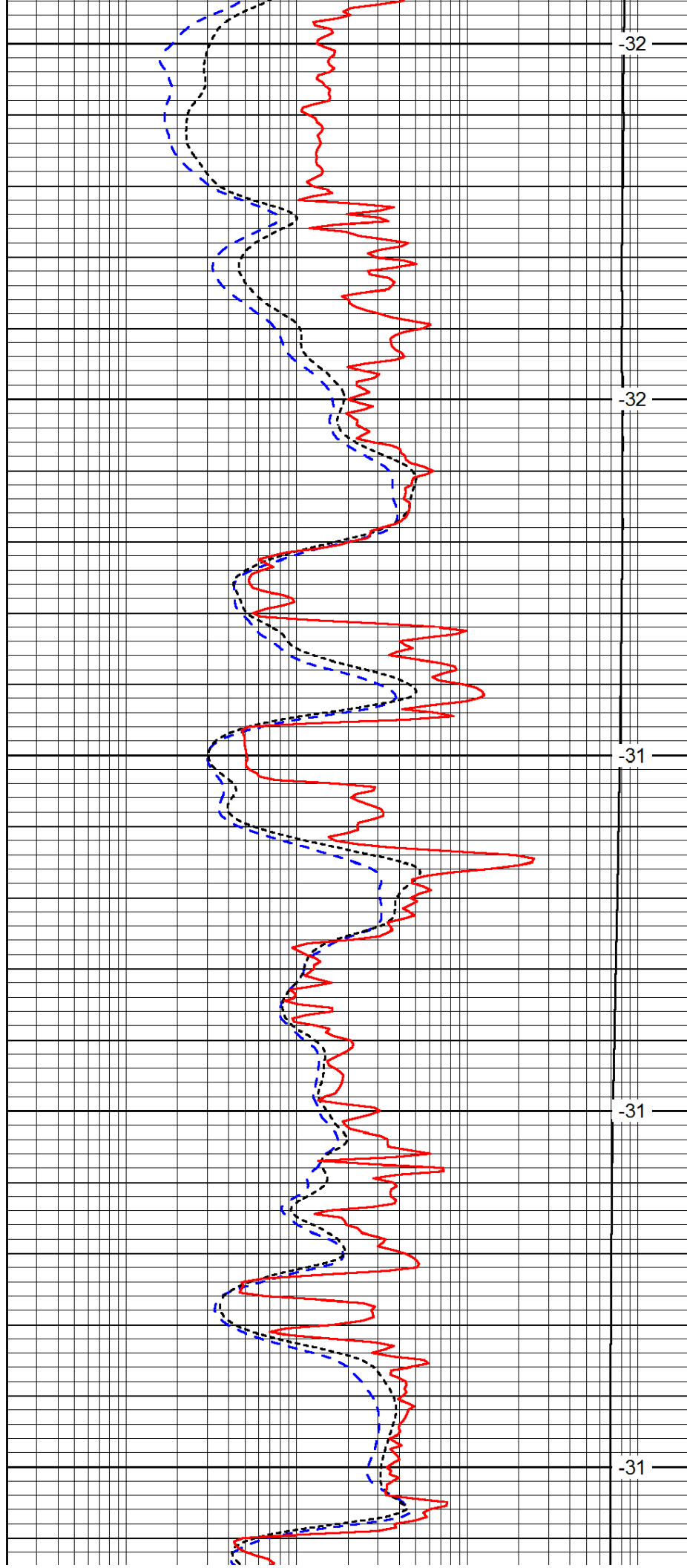
2700

2750

2800

2850

2900



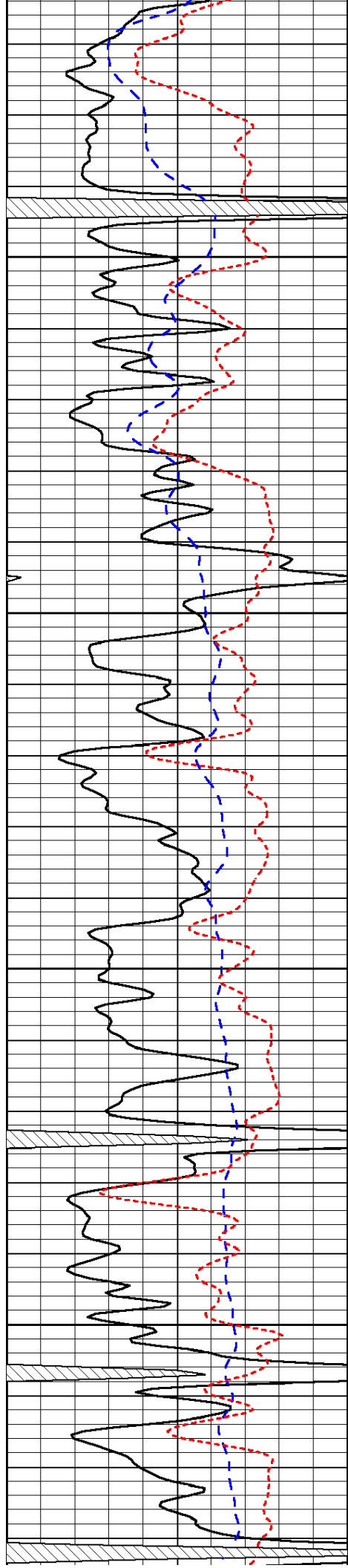
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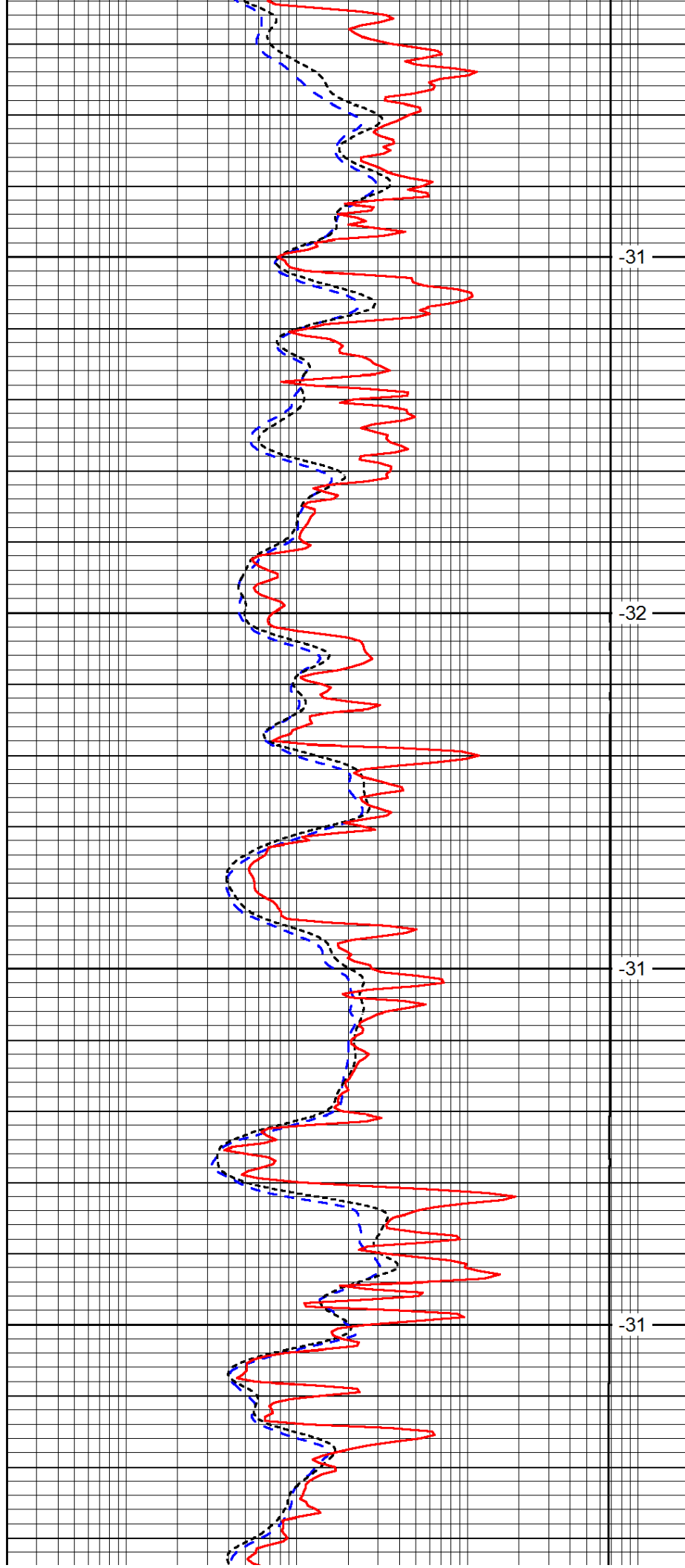


2950

3000

3050

3100

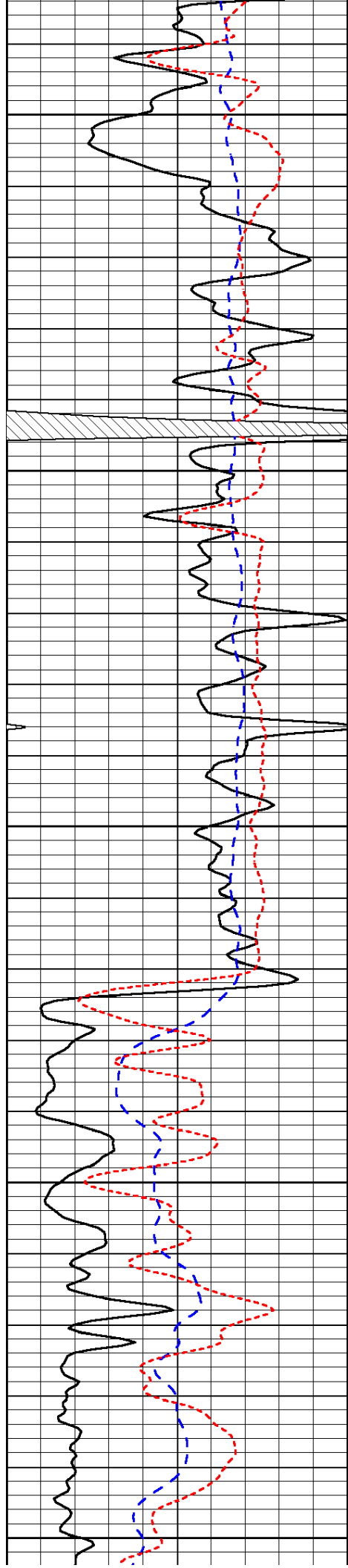


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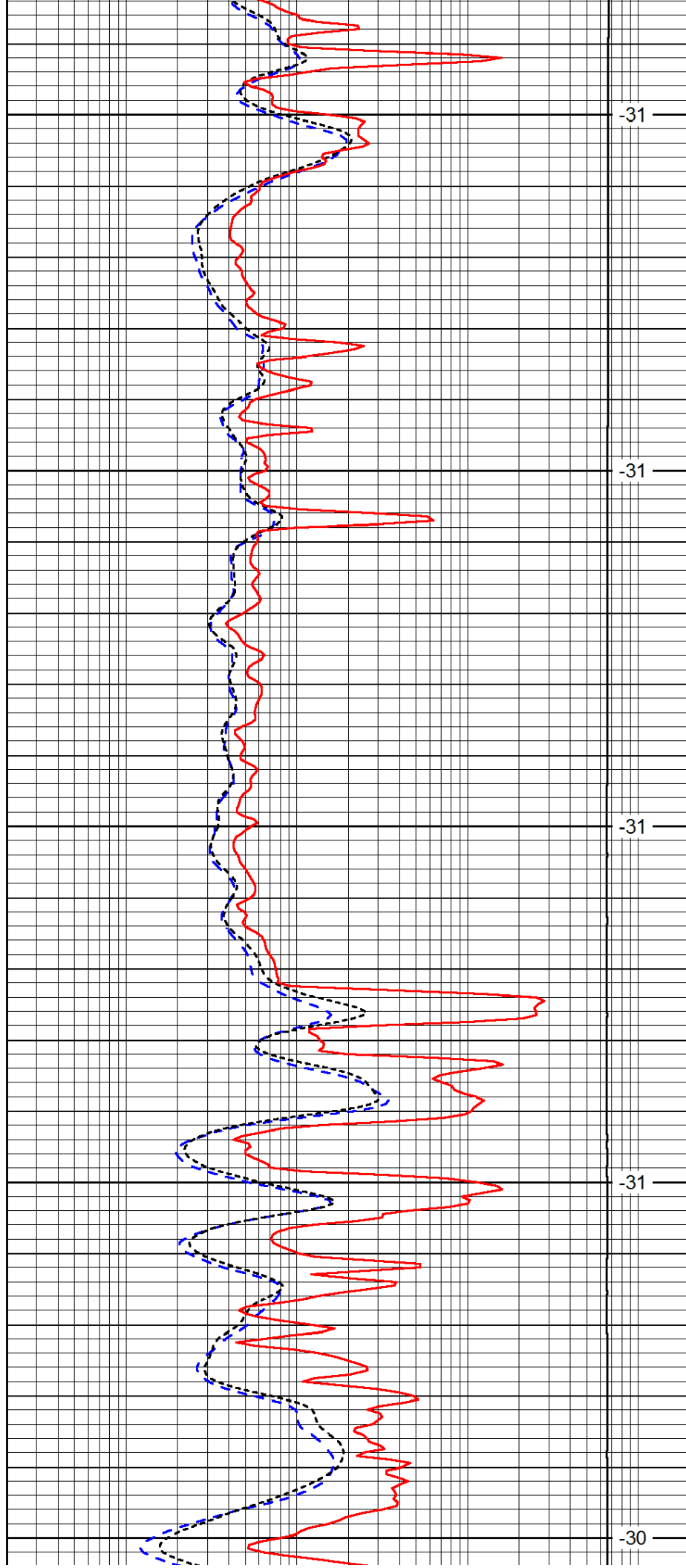
3150

3200

3250

3300

3350



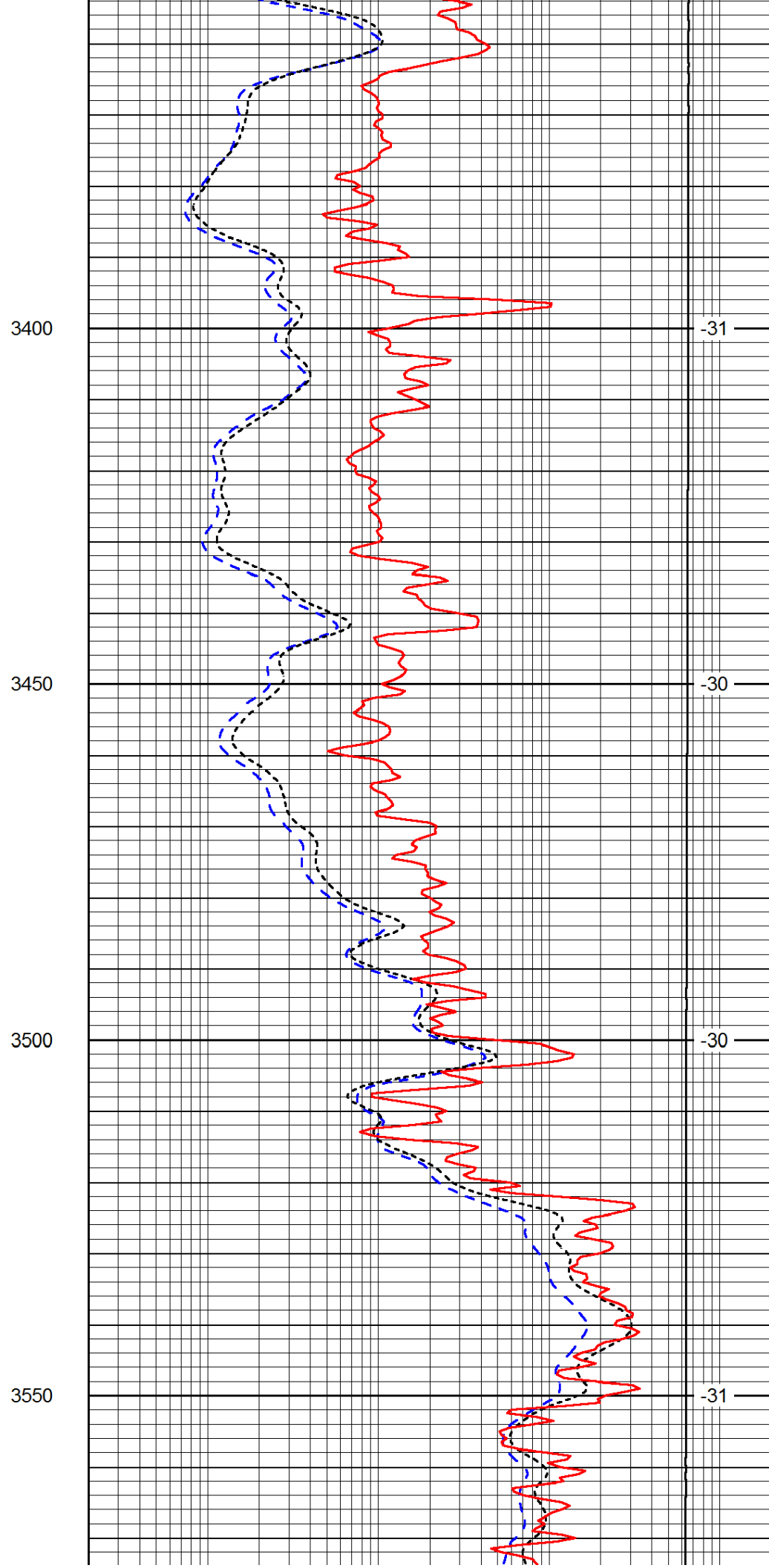
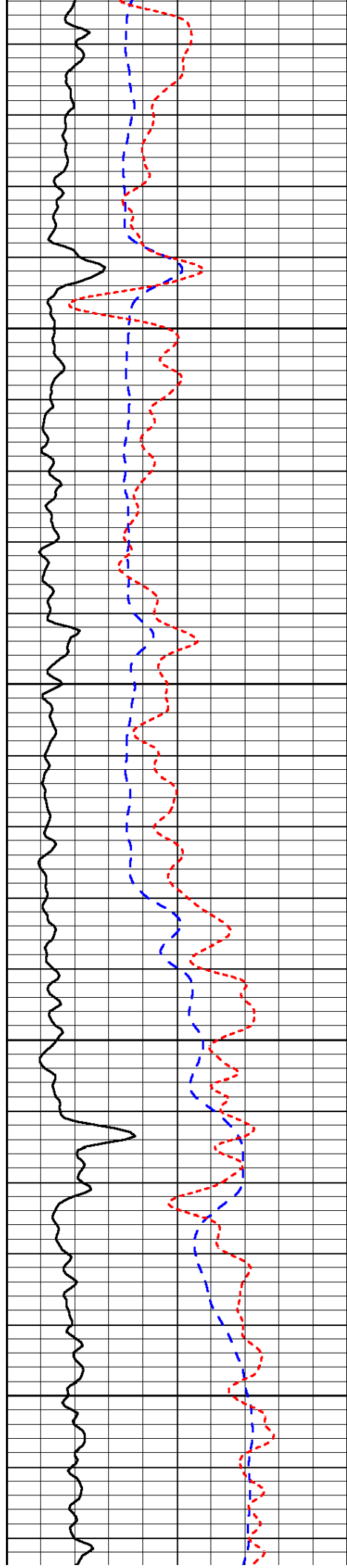
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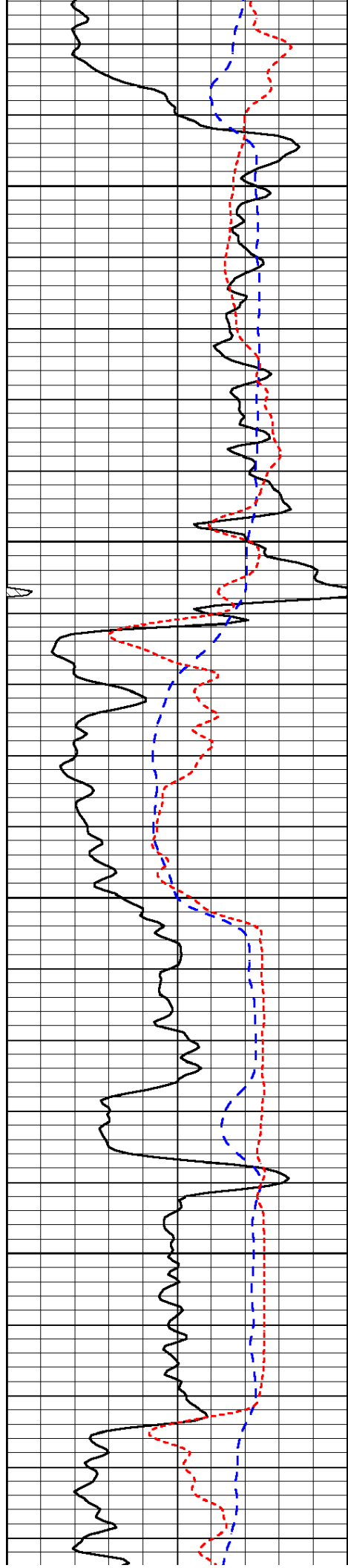
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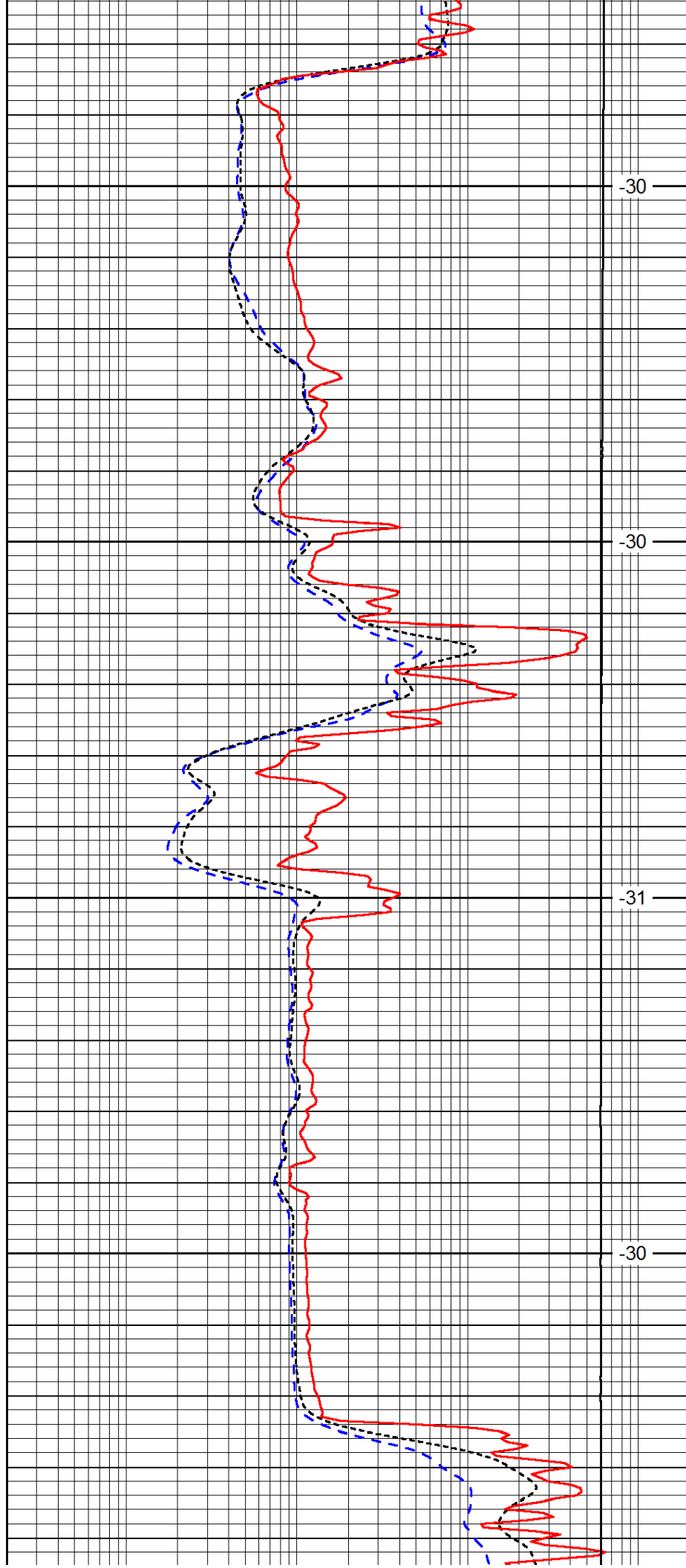


3600

3650

3700

3750



-30

-30

-31

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