



Pioneer Energy Services

Dual Induction Log

API No.

15-009-25,954-00-00

Company F.G. Holl Company, L.L.C.

Well Romine Trust # 3-1

Field Clarence

County Barton State

Kansas

Location 1060' FSL & 1300' FEL

Sec: 1 Twp: 20 S Rge: 15 W

Other Services
CNL/CDL
MEI/BHCS

Permanent Datum Ground Level Elevation 1955

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

Drilling Measured From Kelly Bushing

Date 03-25-2013

Run Number One

Depth Driller 3800

Depth Logger 3800

Bottom Logged Interval 3799

Top Log Interval 0

Casing Driller 8.625 @ 905

Casing Logger 907

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 6800

Density / Viscosity 9.2 53

pH / Fluid Loss 10.0 7.2

Source of Sample Flowline

Rm @ Meas. Temp 0.60 @ 52

Rmf @ Meas. Temp 0.45 @ 52

Rmc @ Meas. Temp 0.81 @ 52

Source of Rmf / Rmc Charts

Rm @ BHT 0.27 @ 114

Operating Rig Time 5 1/2 Hours

Max Rec. Temp. F 114

Equipment Number 15

Location Hays

Recorded By Y. Ruiz

Witnessed By Rene Husted

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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.

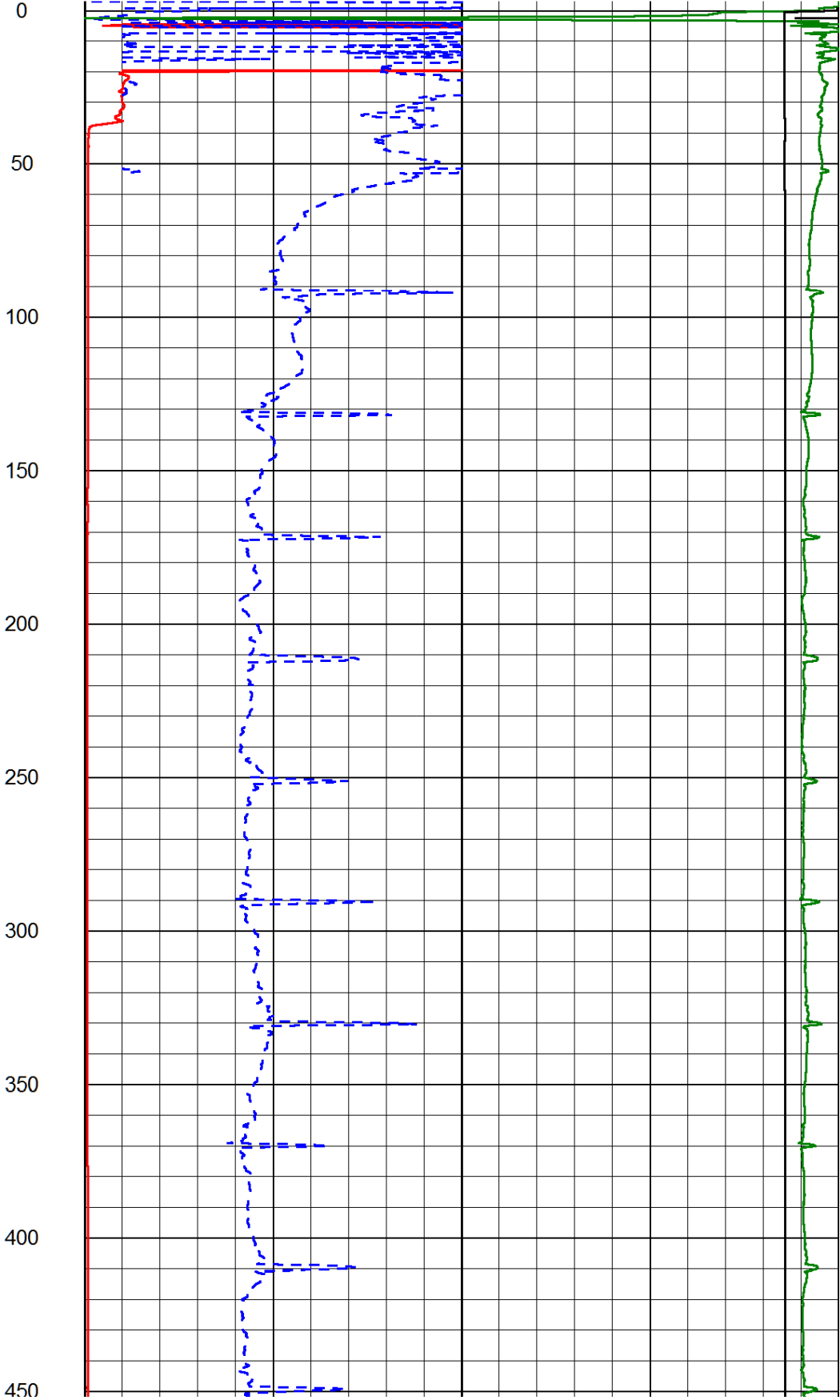
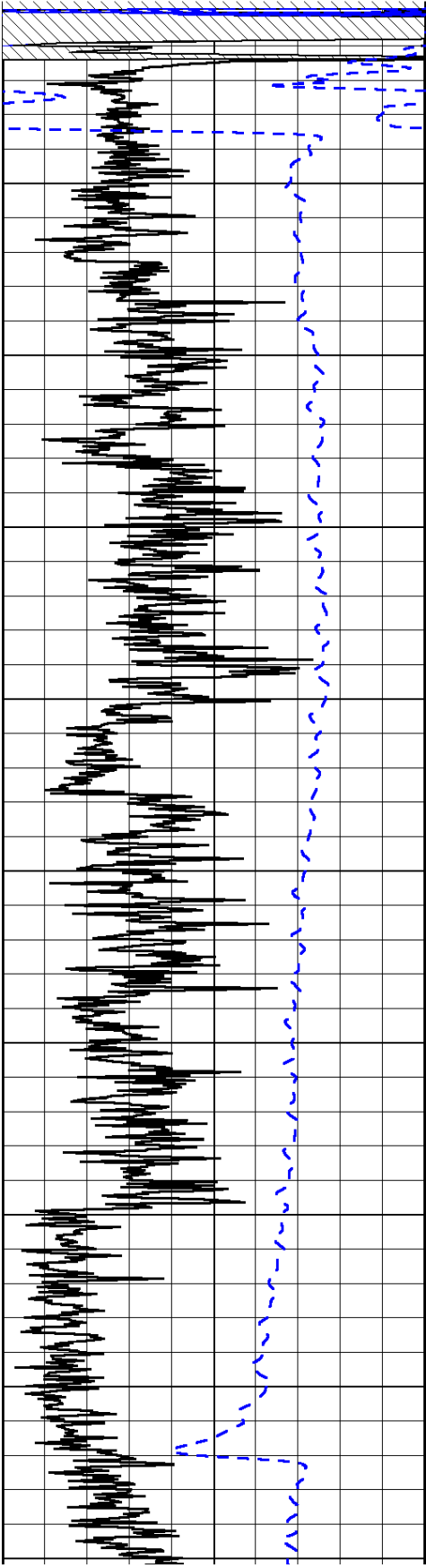
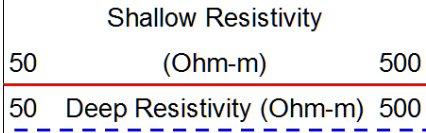
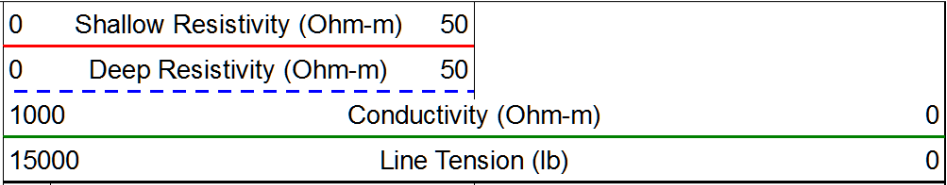
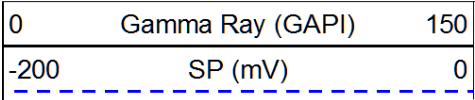
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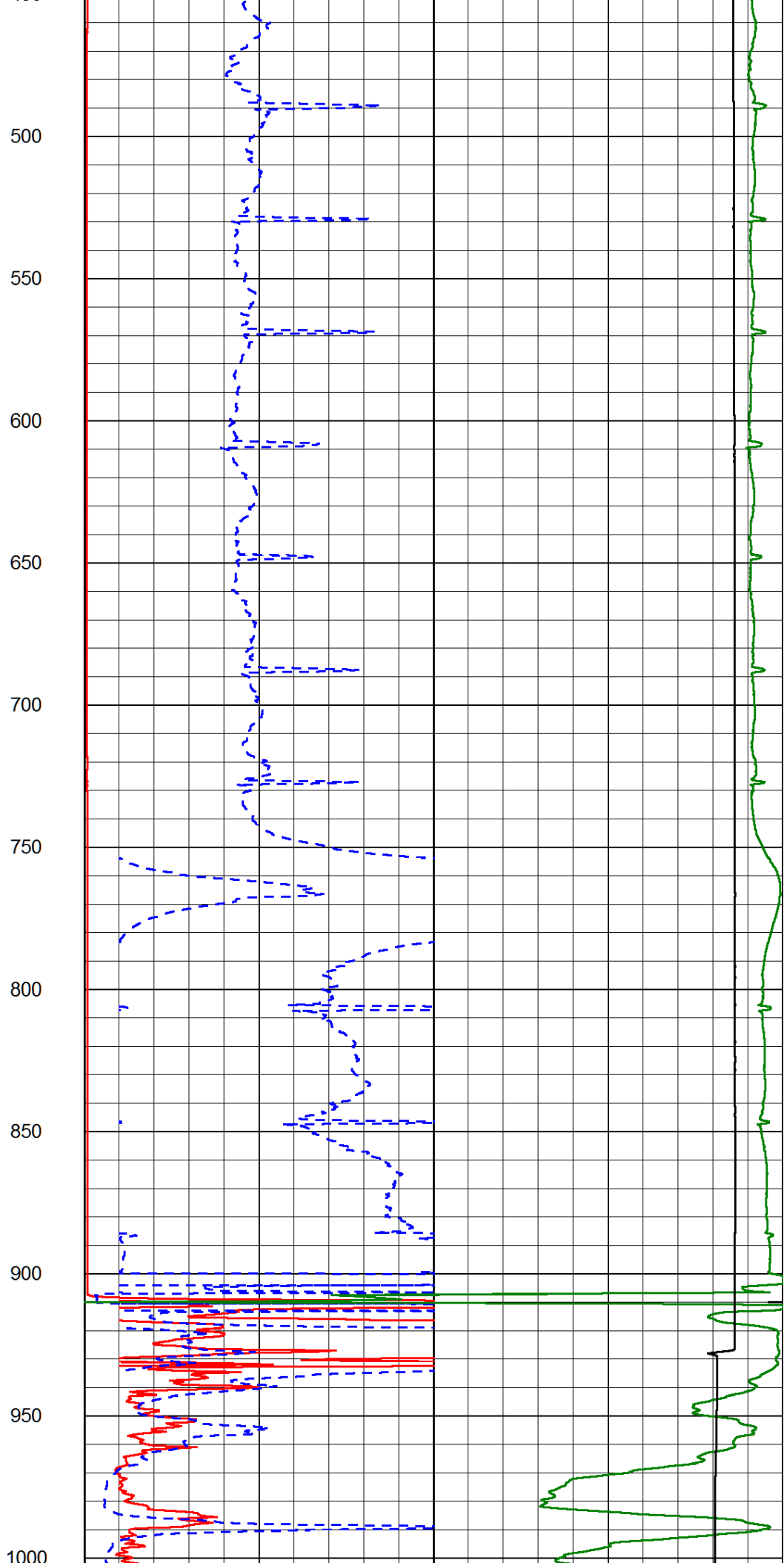
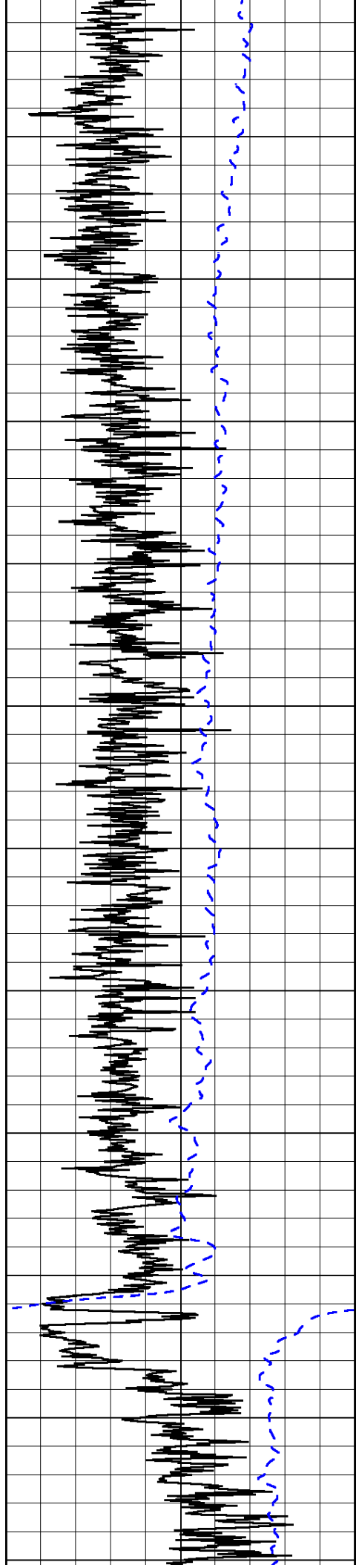
Thank you for using Log-Tech, Inc.
(785) 625-3858

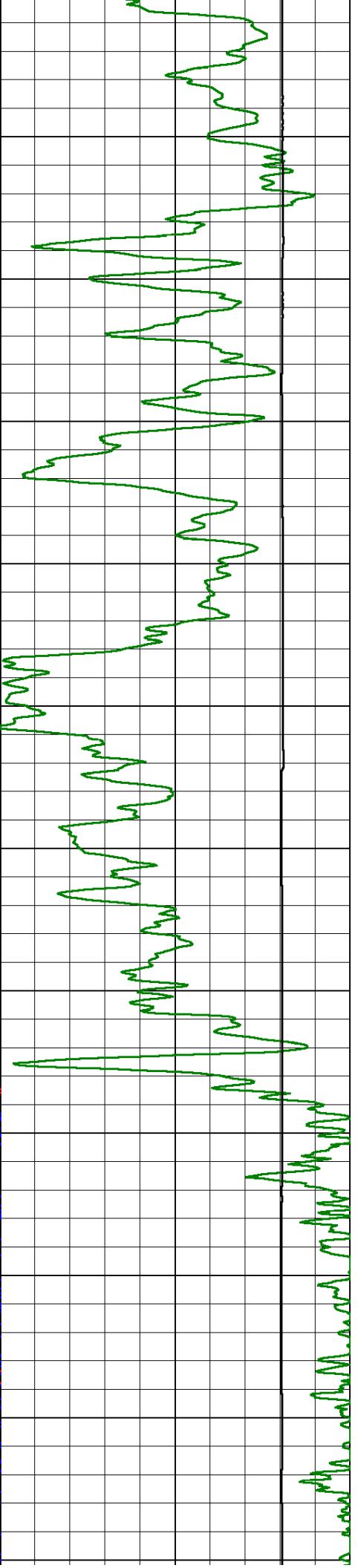
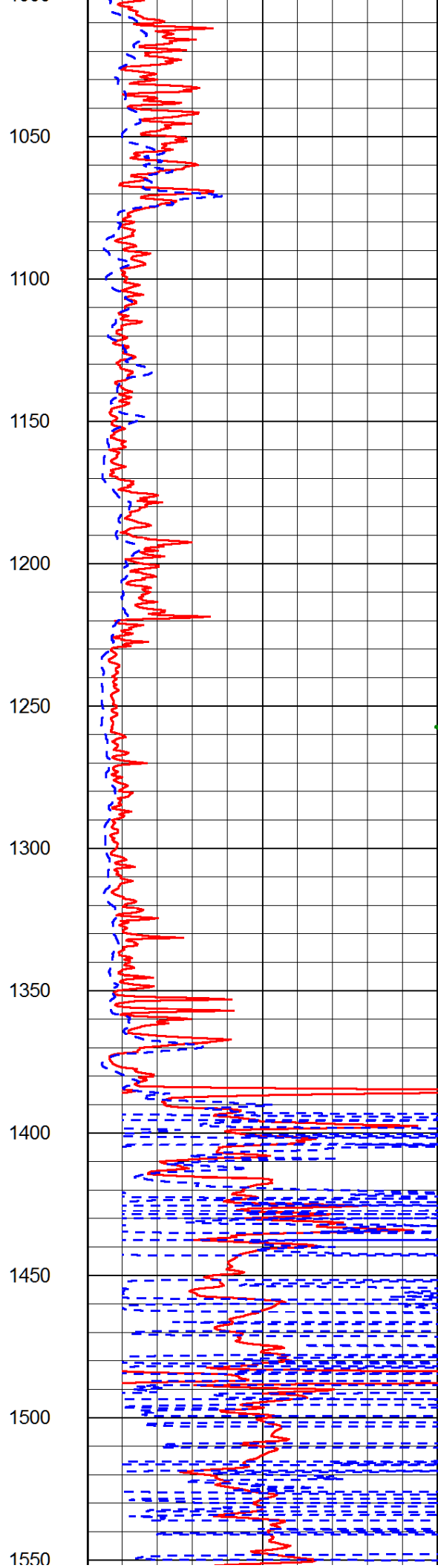
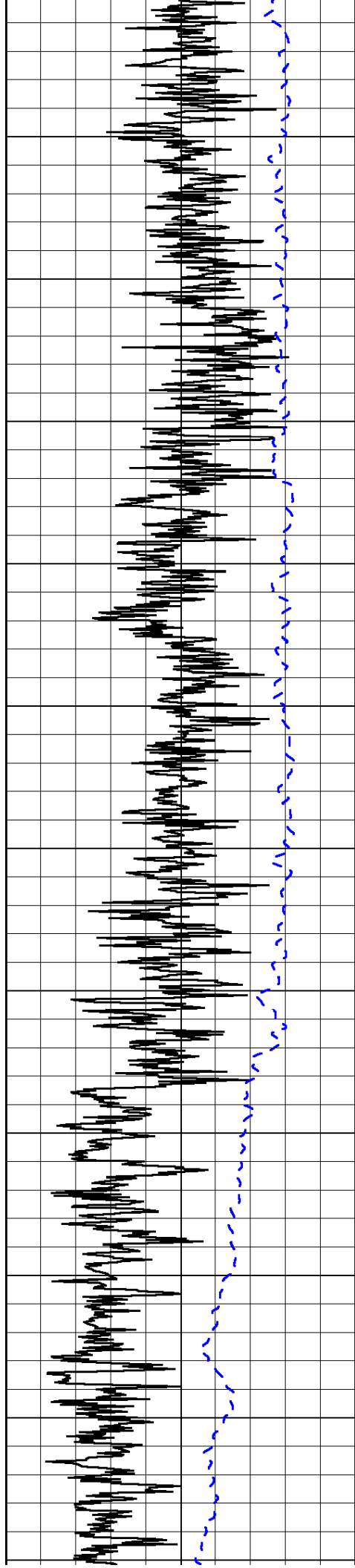
Heizer,
6 South, 2 1/2 West,
North and East into

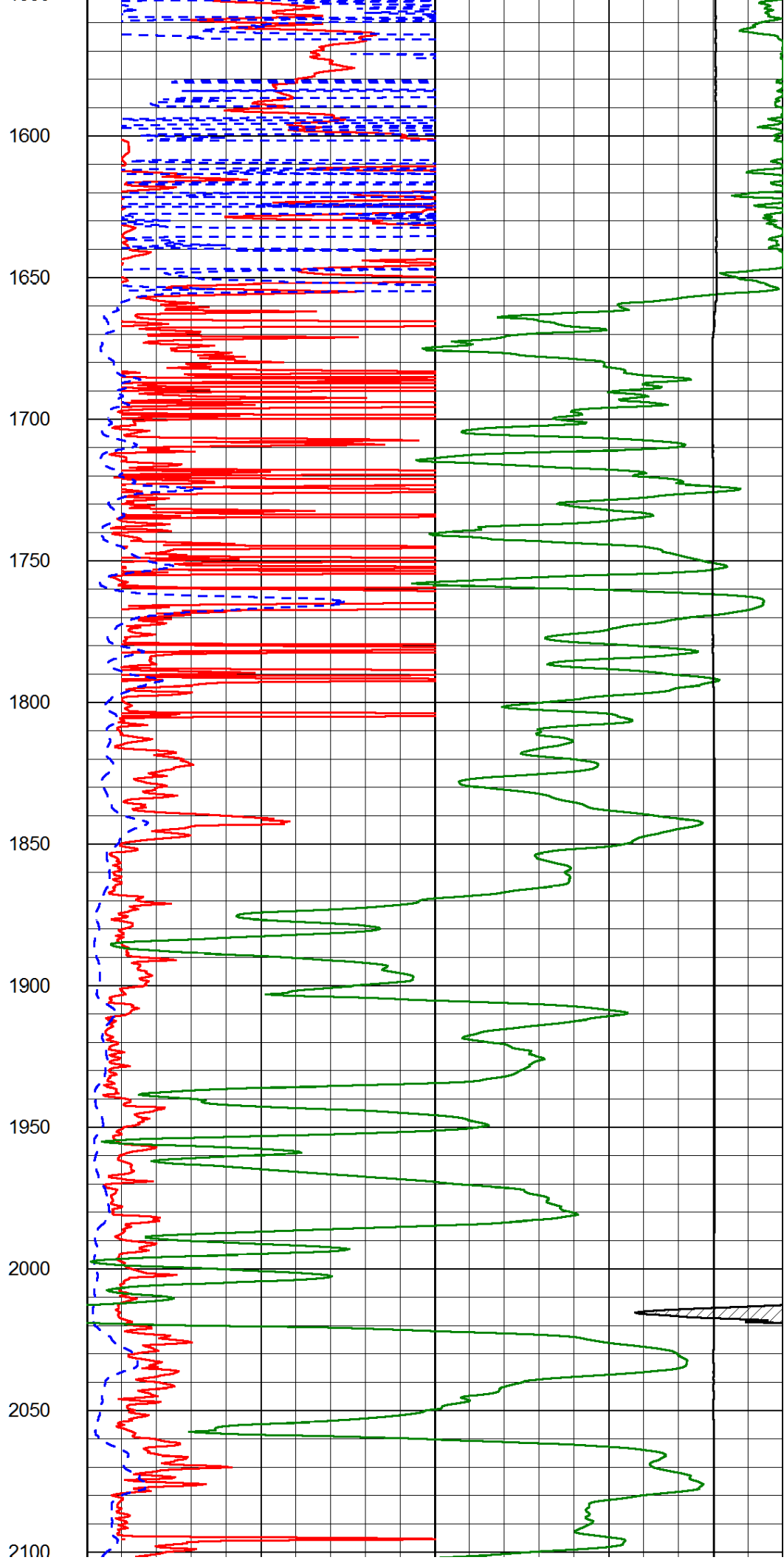
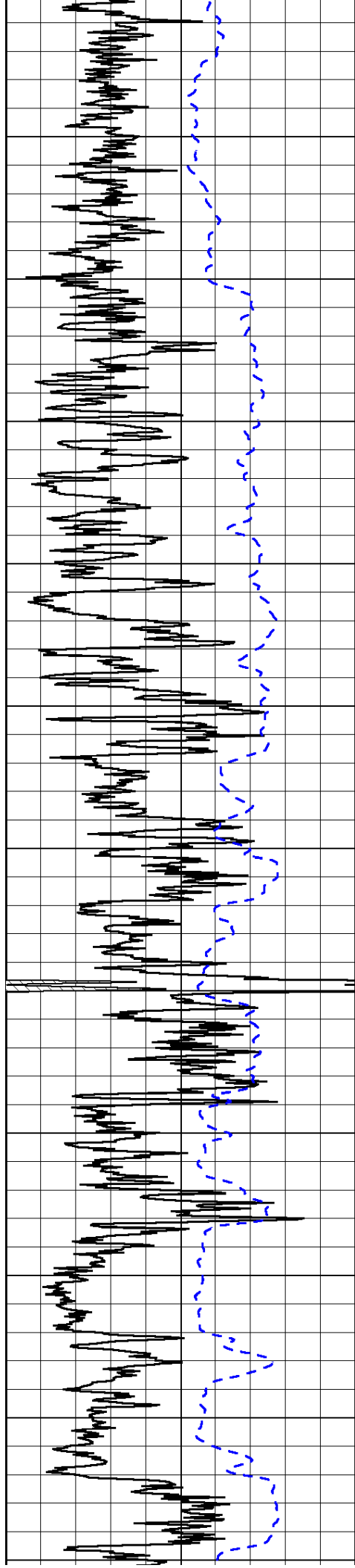
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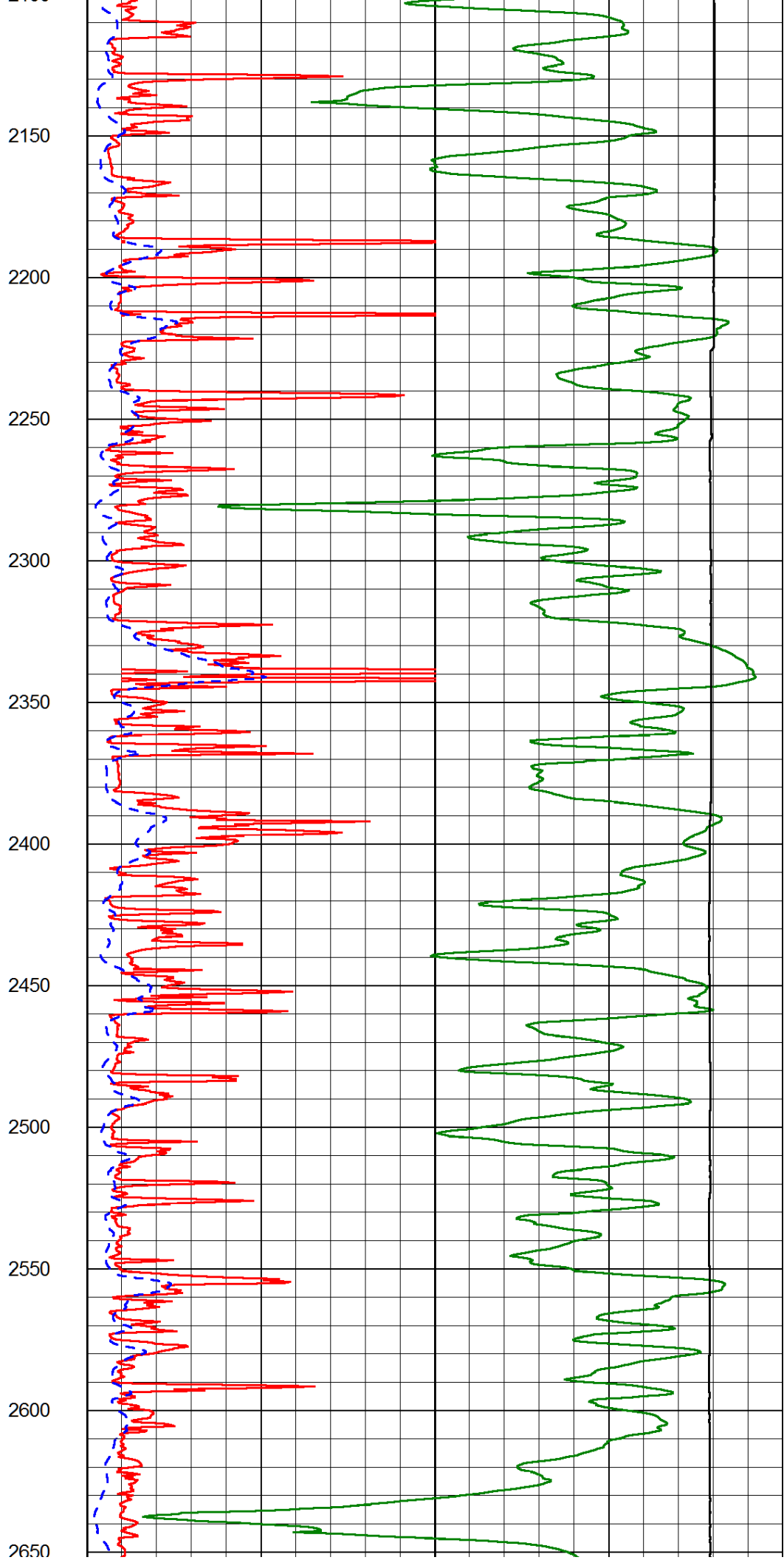
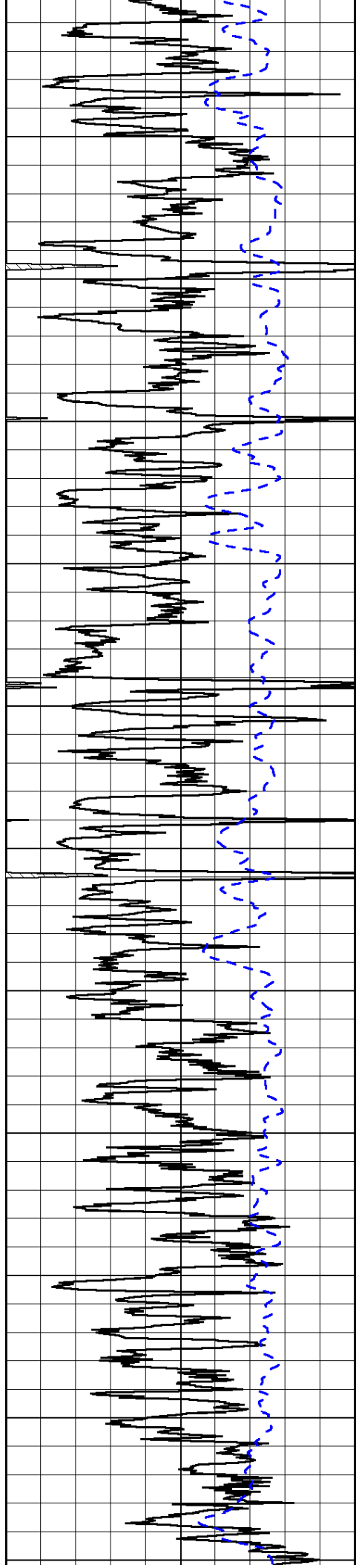
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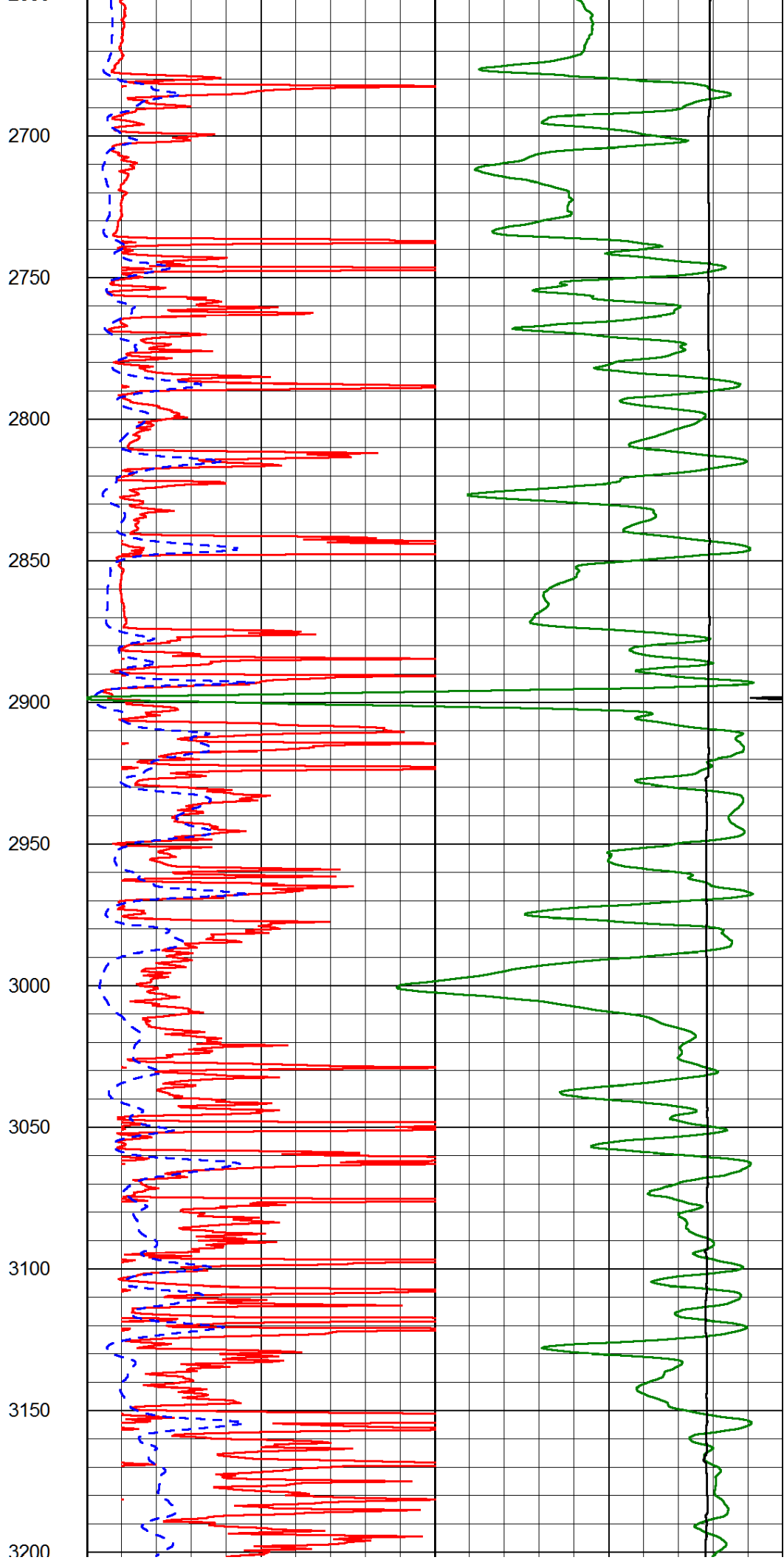
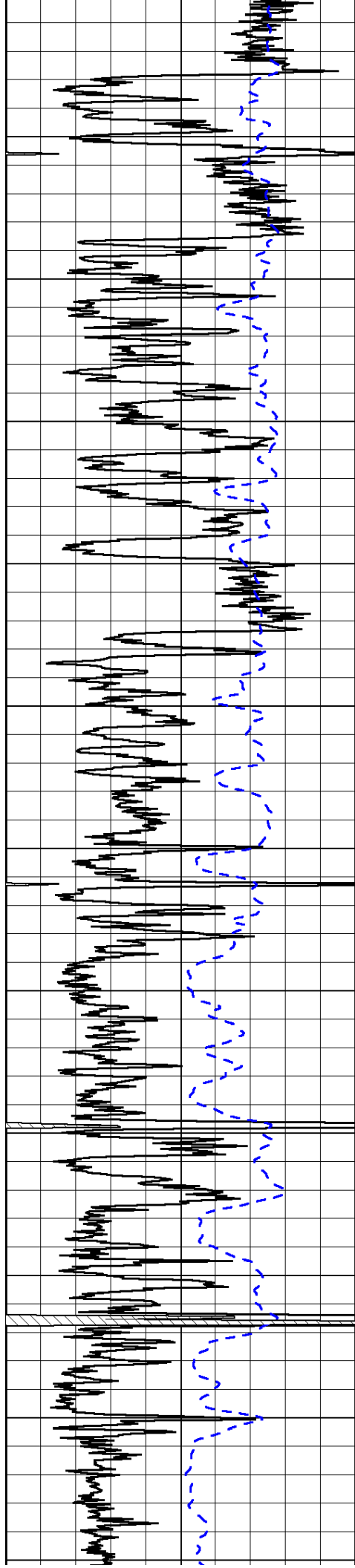


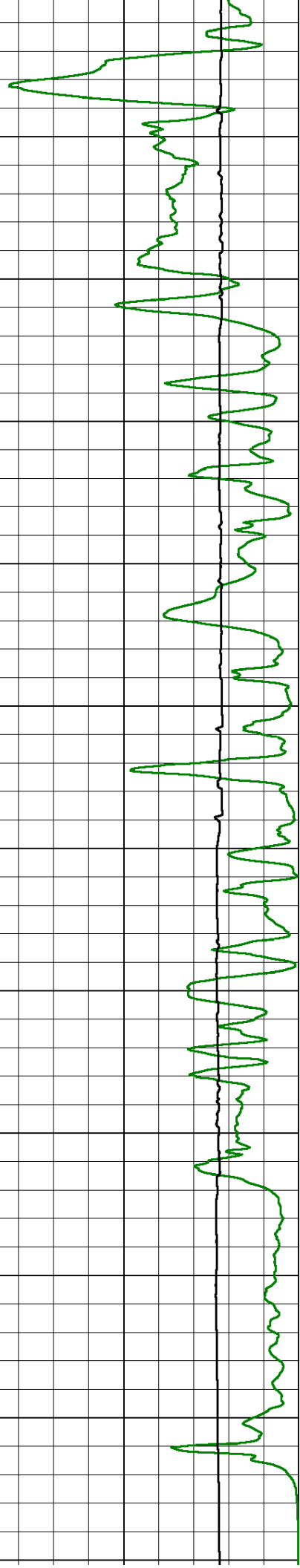
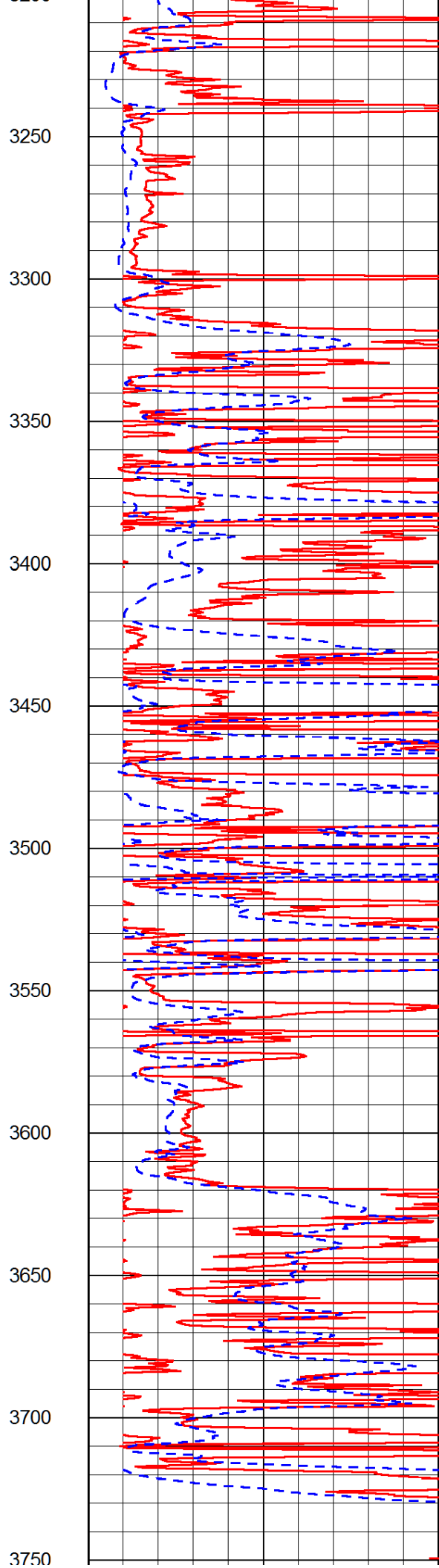
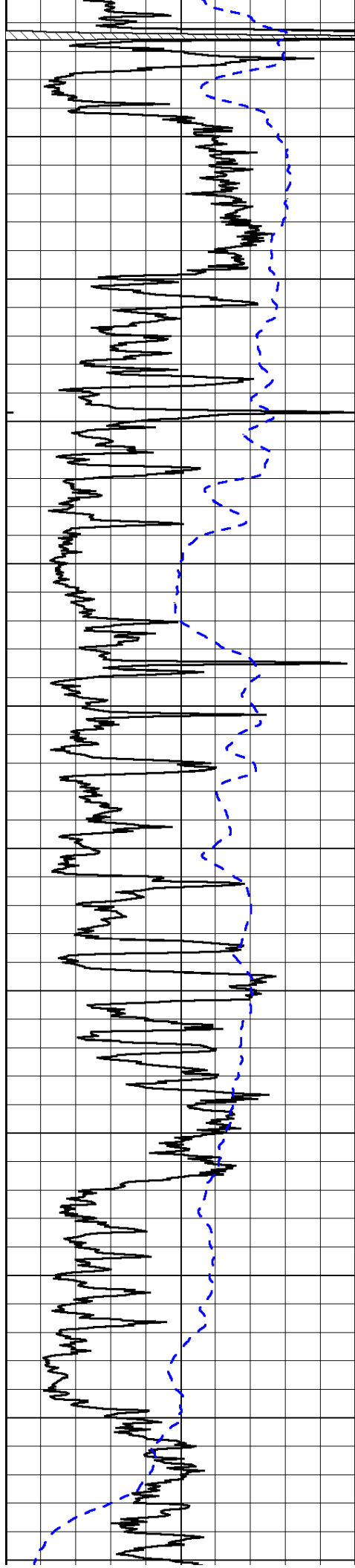


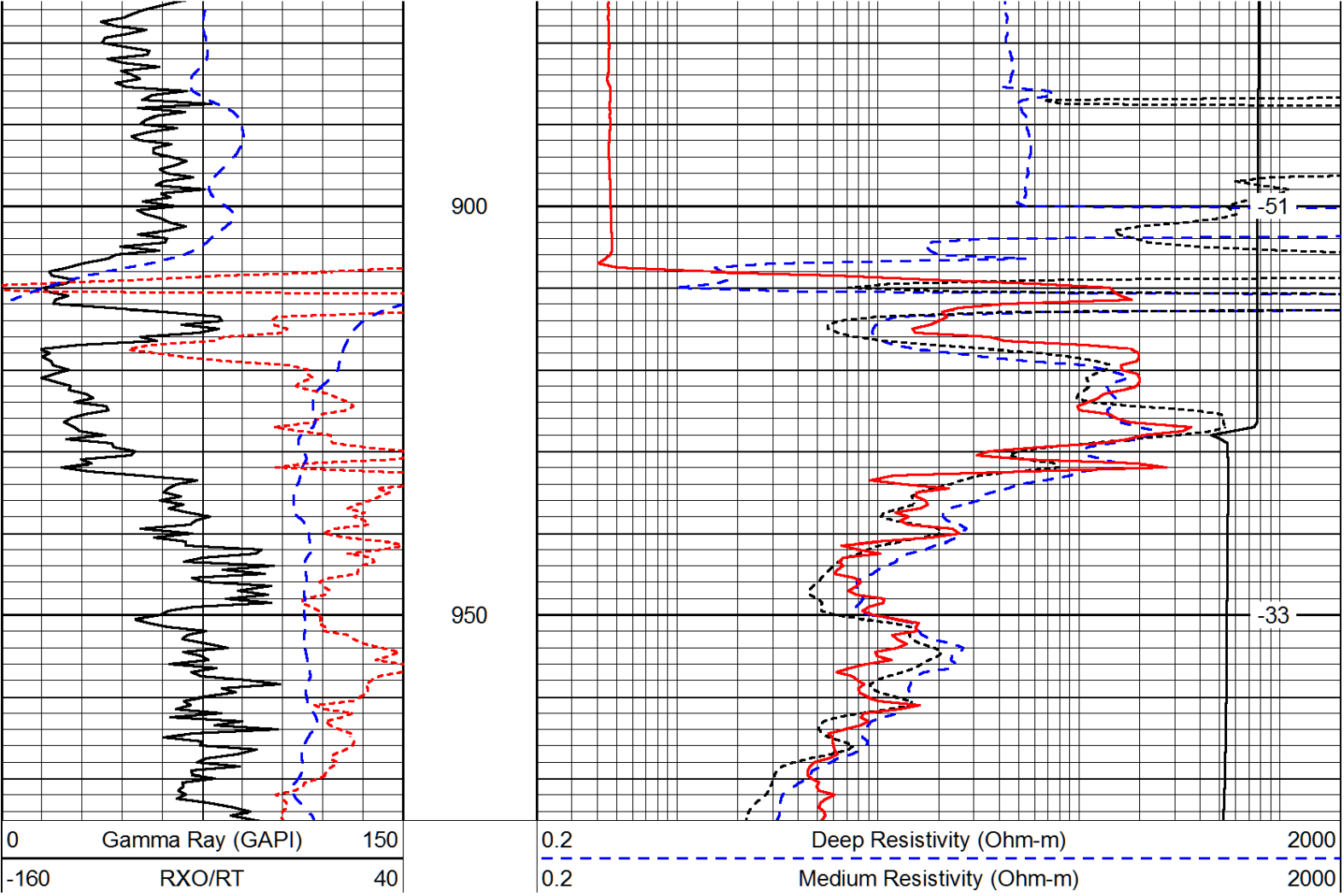
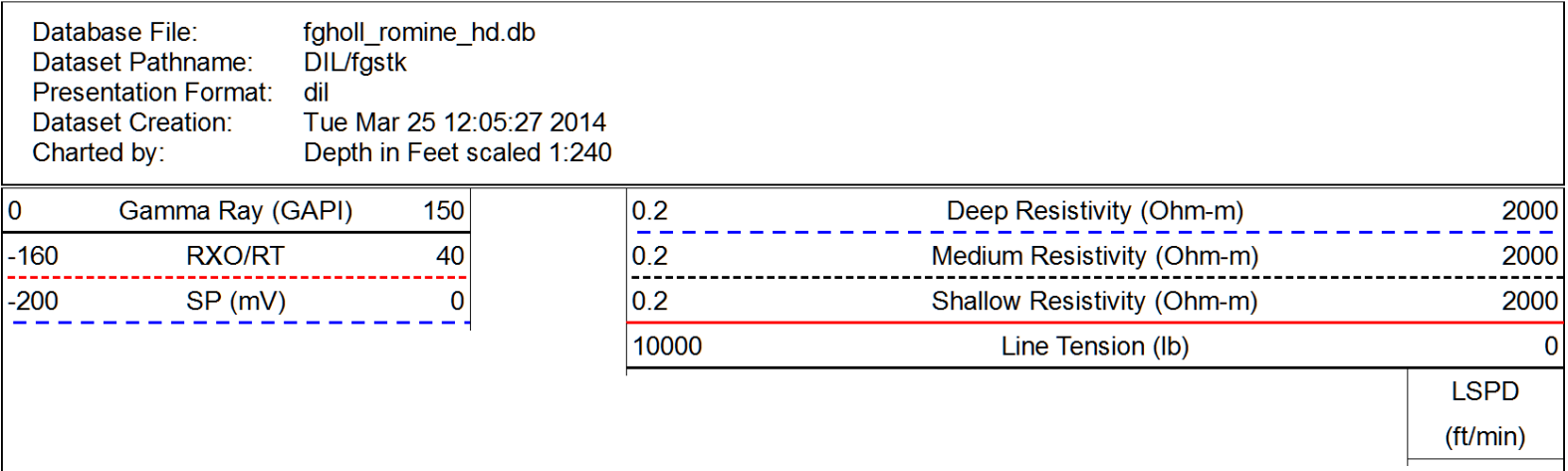
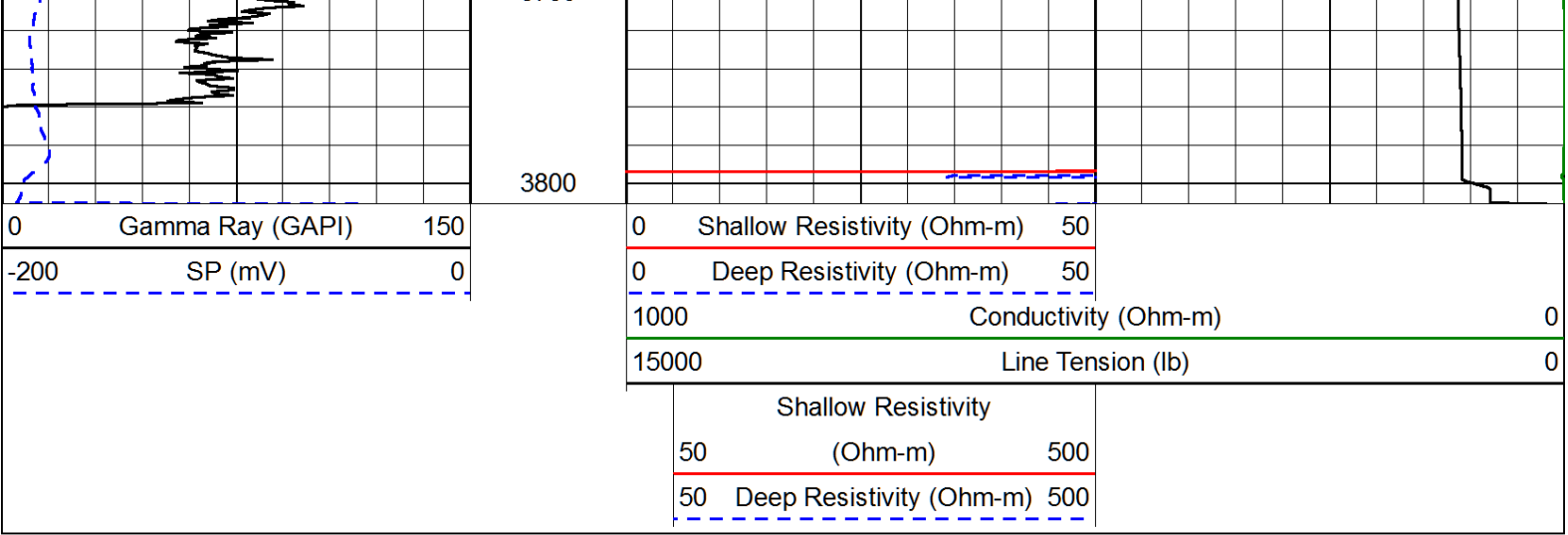












-200	SP (mV)	0
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0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

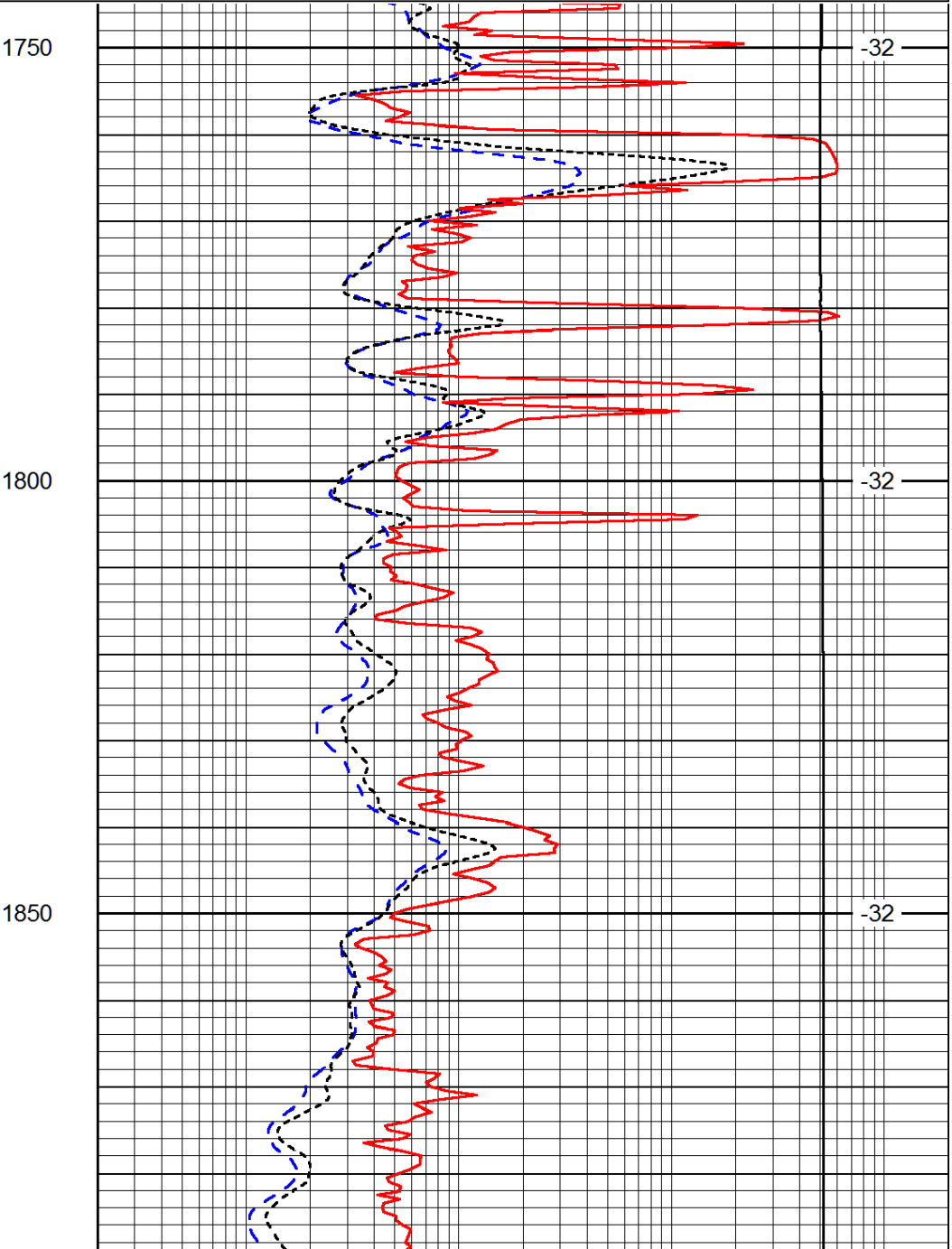
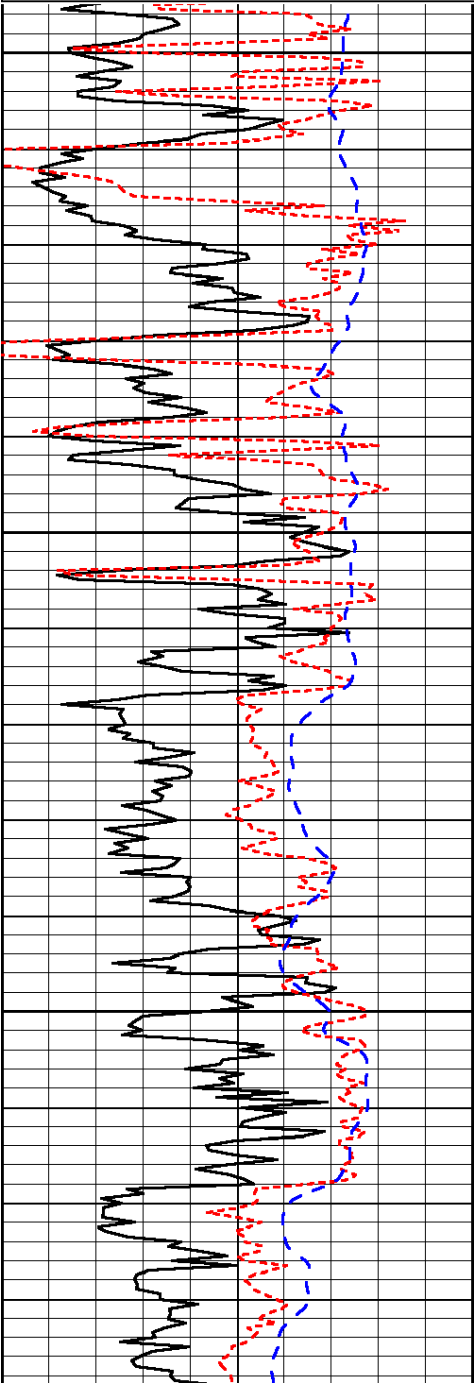
LSPD
(ft/min)

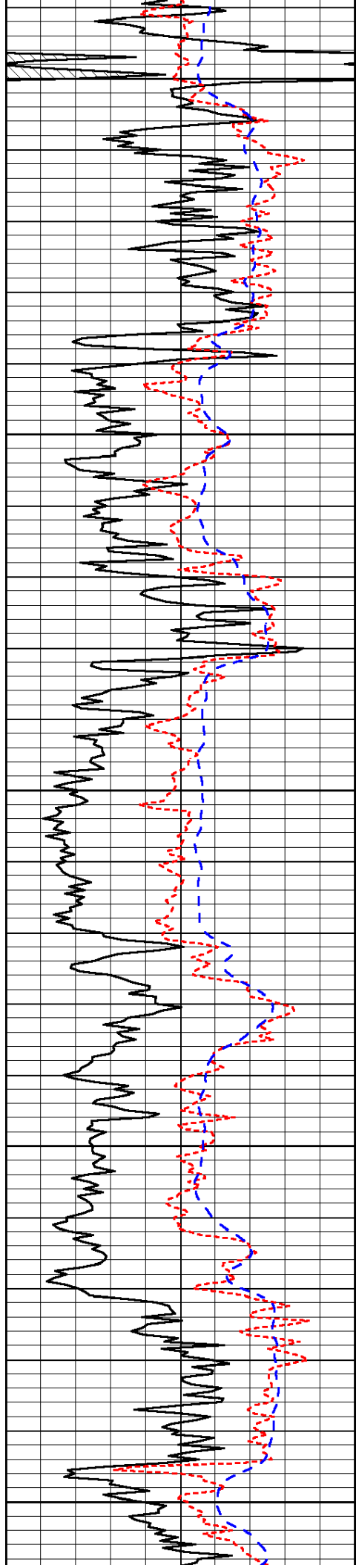
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0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

LSPD
(ft/min)





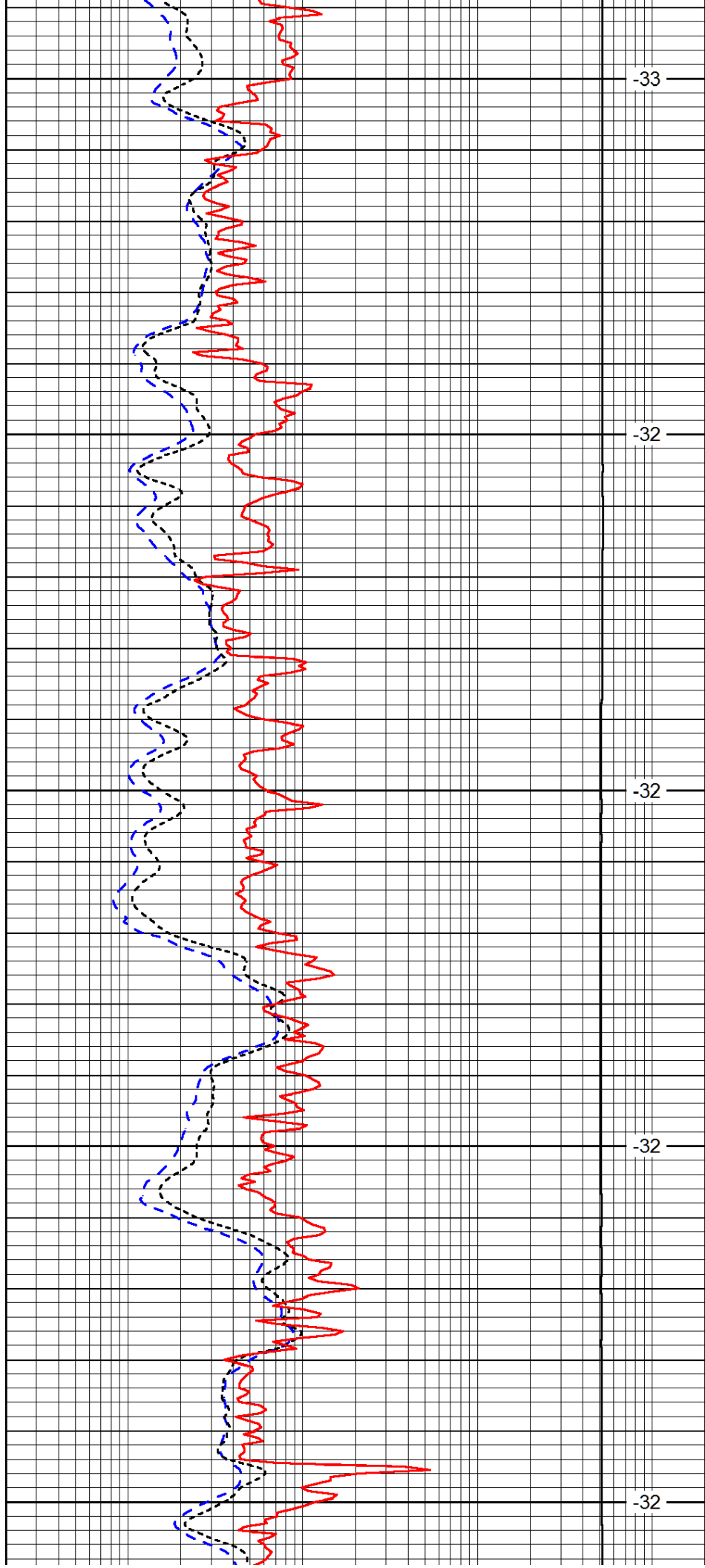
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1950

2000

2050

2100



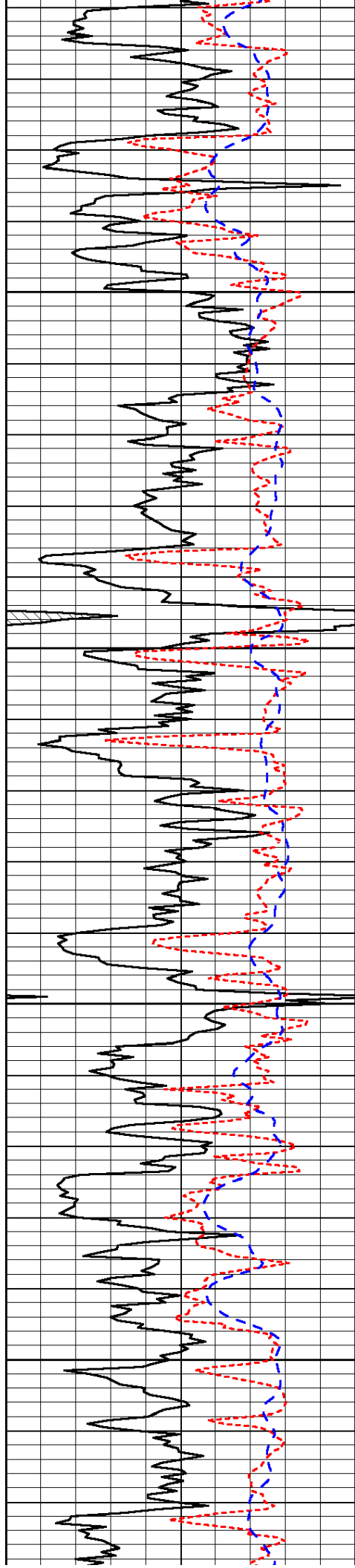
-33

-32

-32

-32

-32

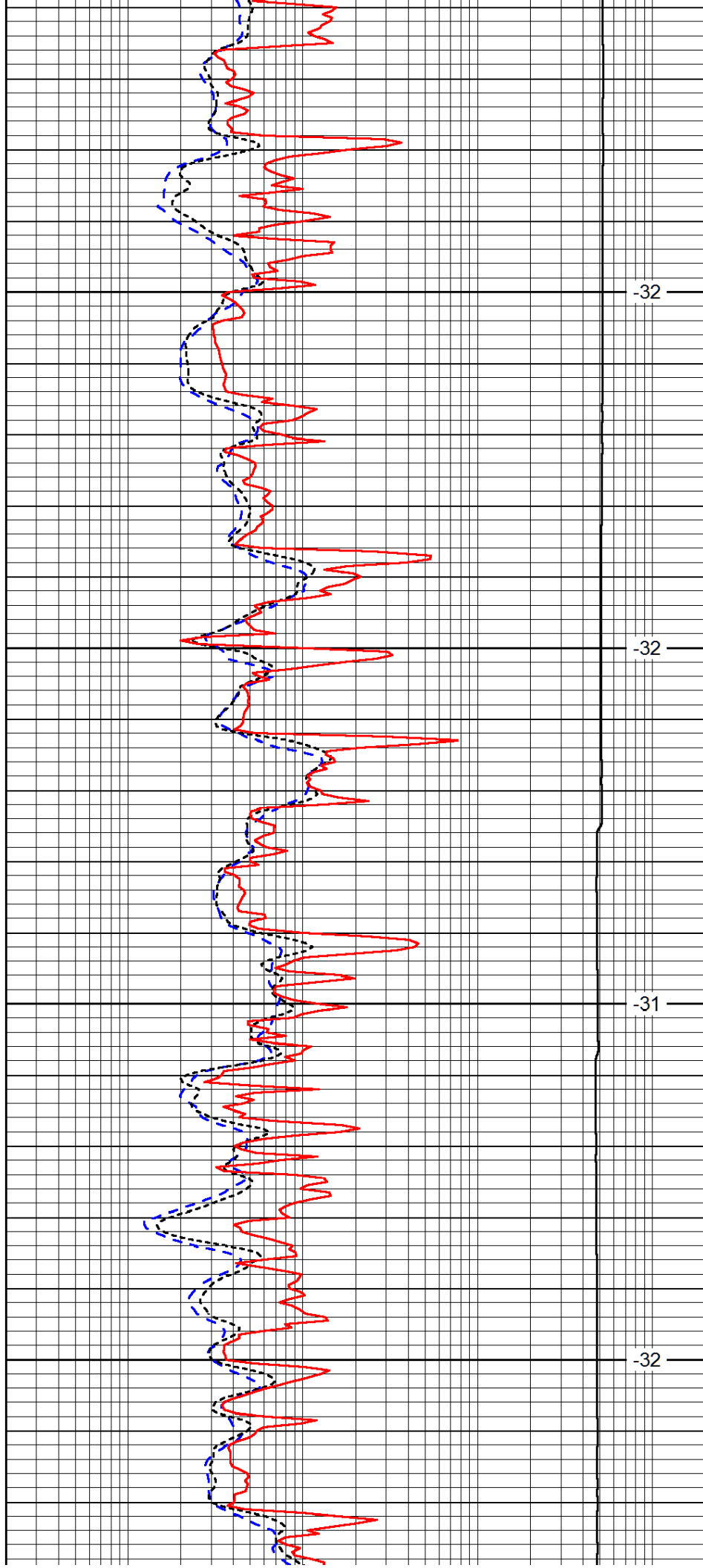


2150

2200

2250

2300

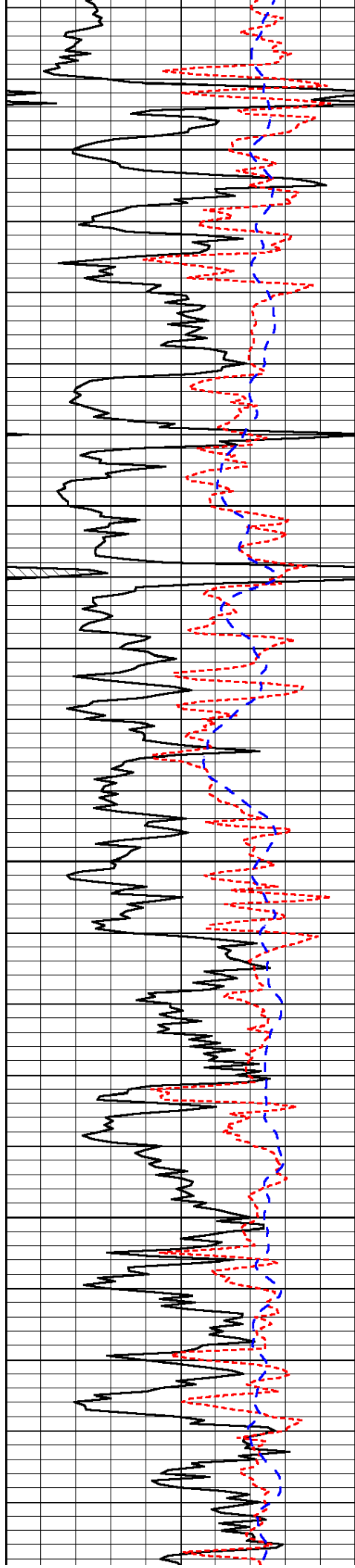


-32

-32

-31

-32

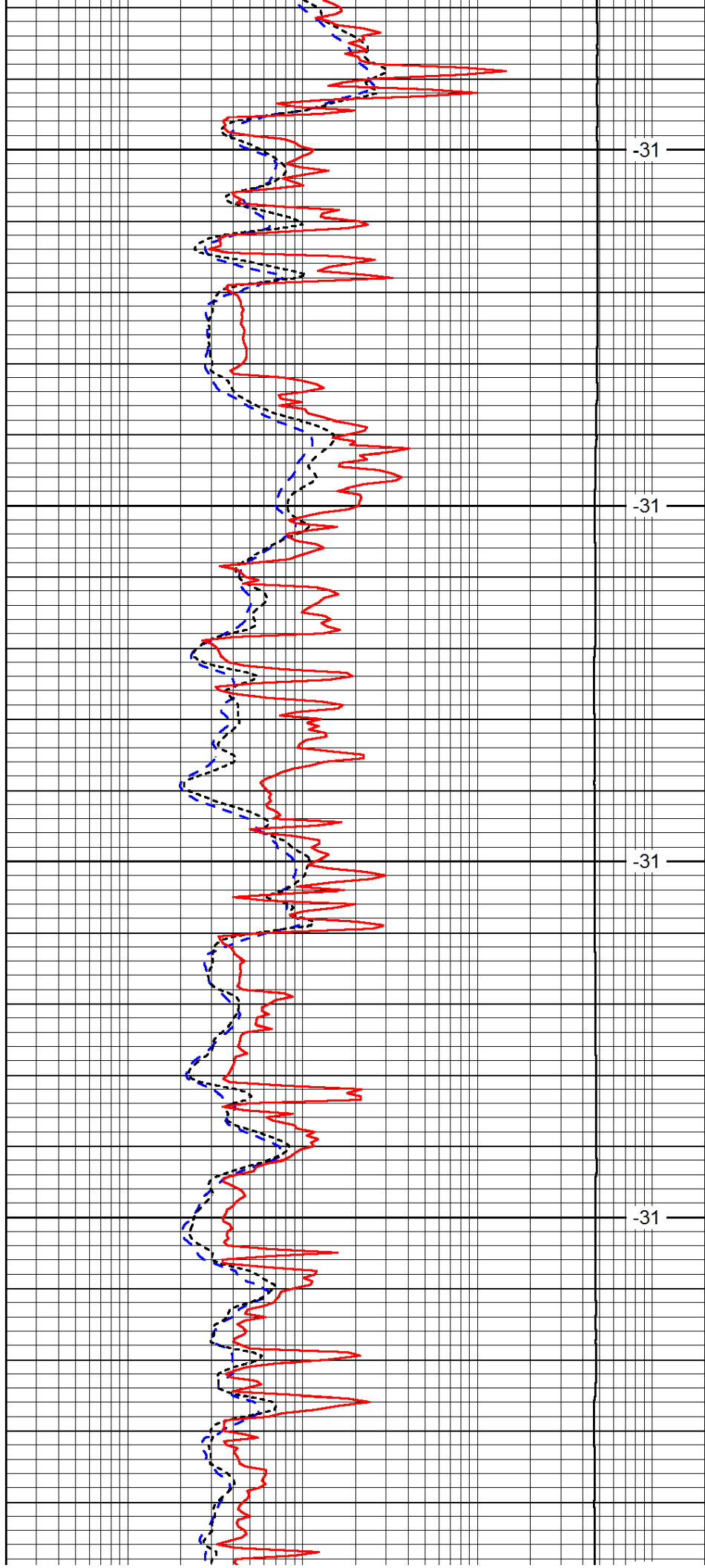


2350

2400

2450

2500

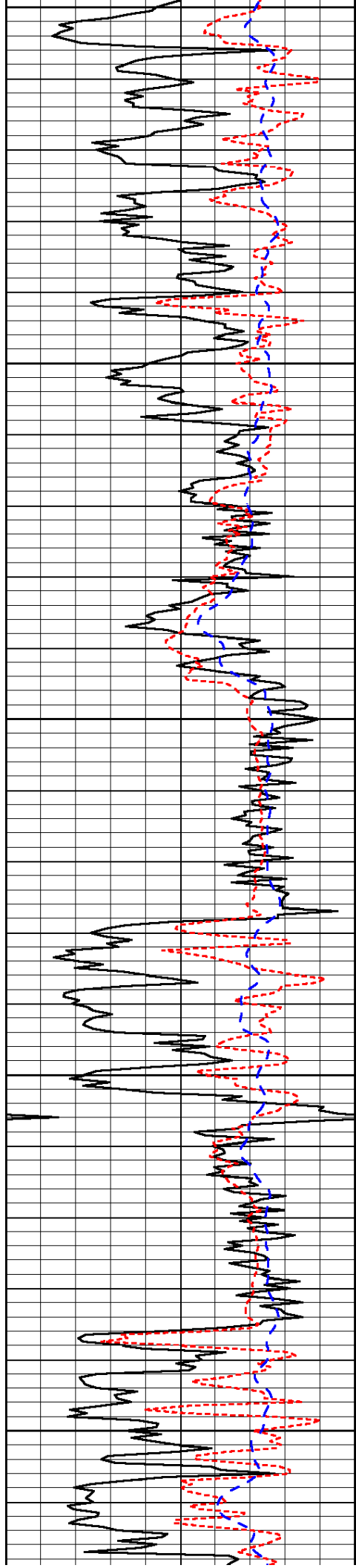


-31

-31

-31

-31



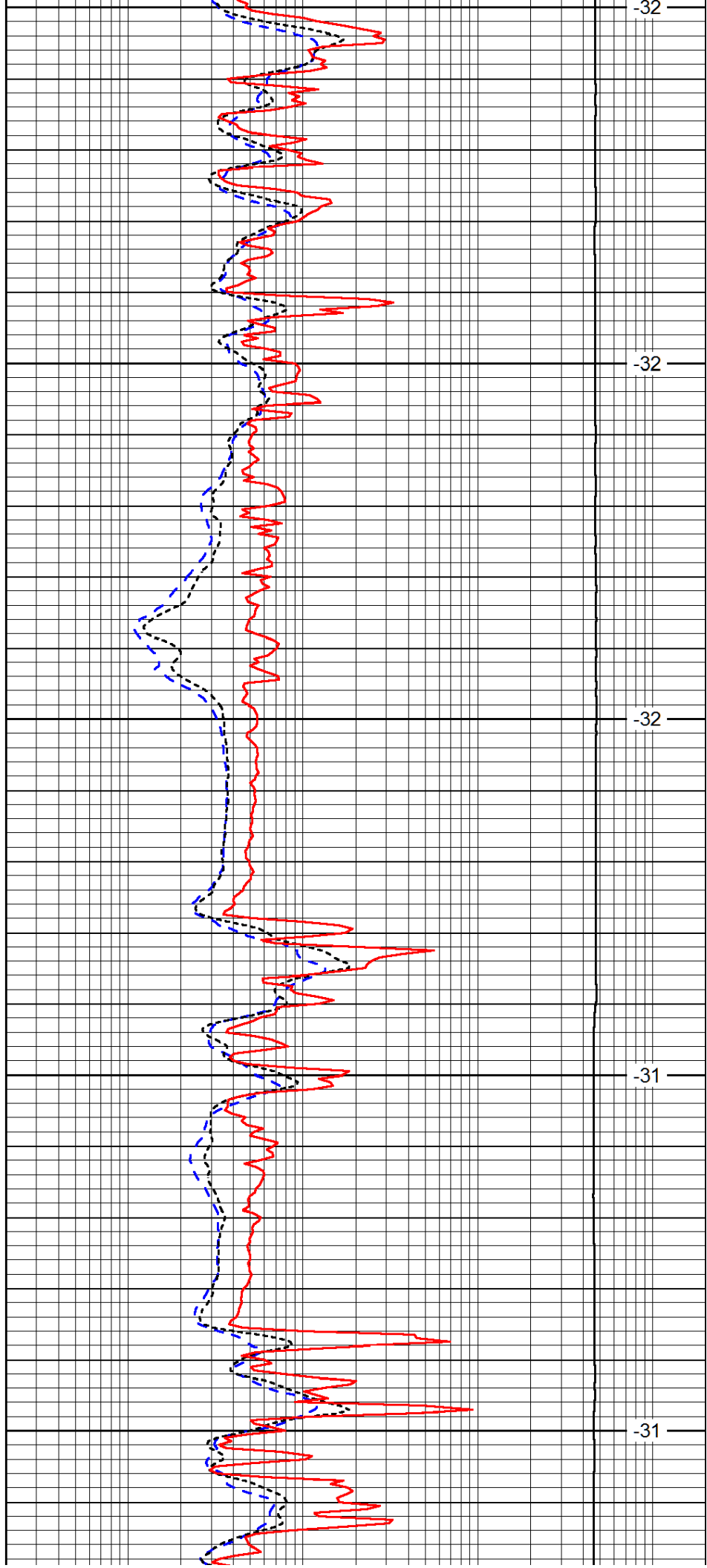
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2600

2650

2700

2750



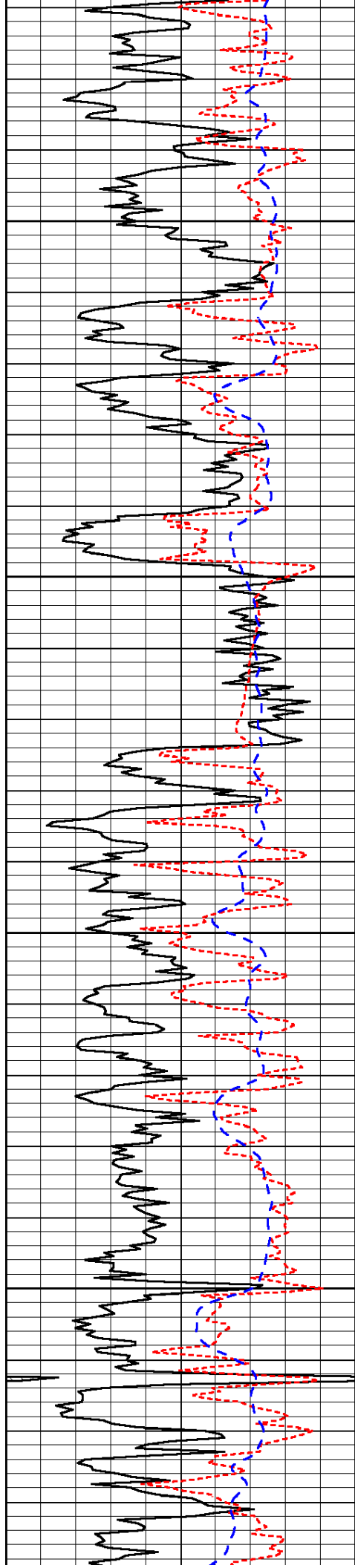
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-31

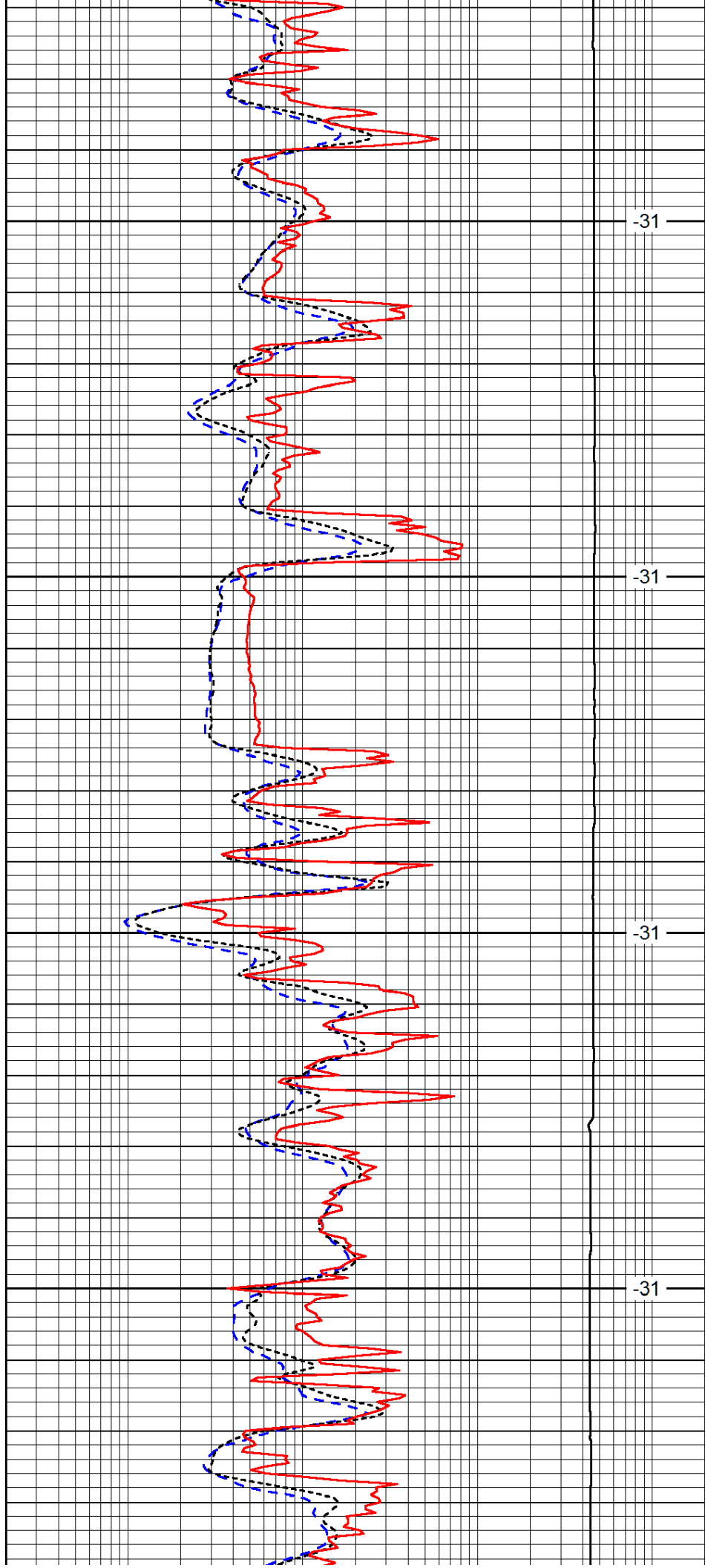


2800

2850

2900

2950

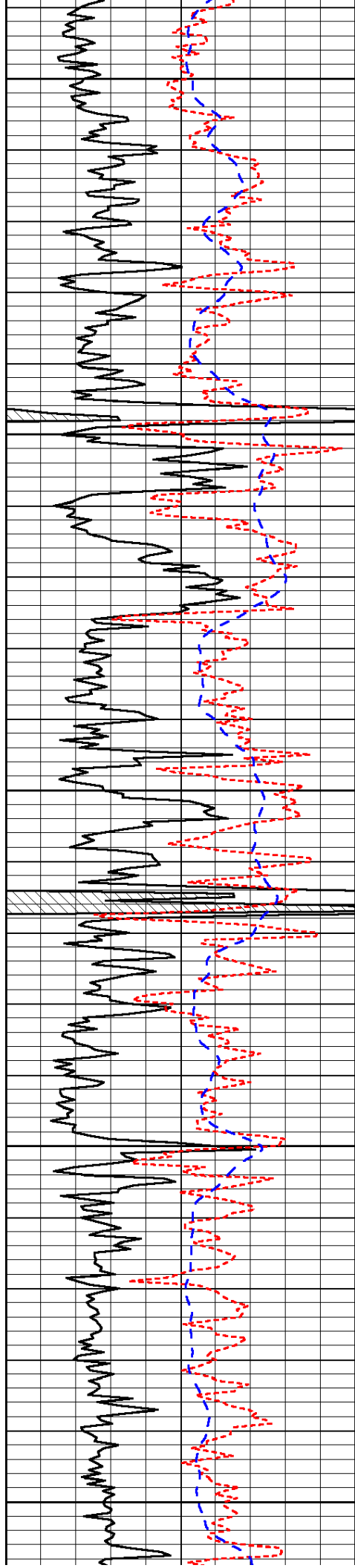


-31

-31

-31

-31



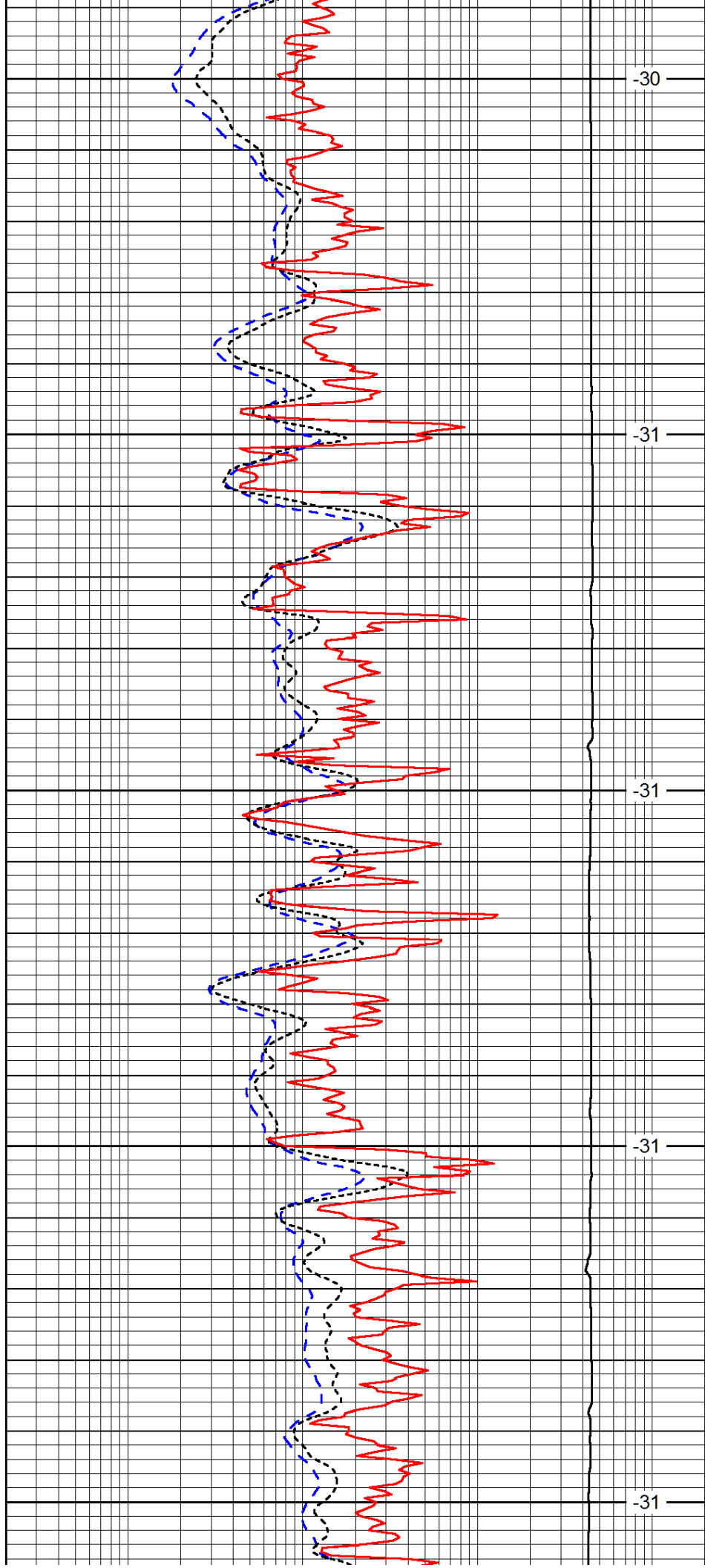
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3050

3100

3150

3200



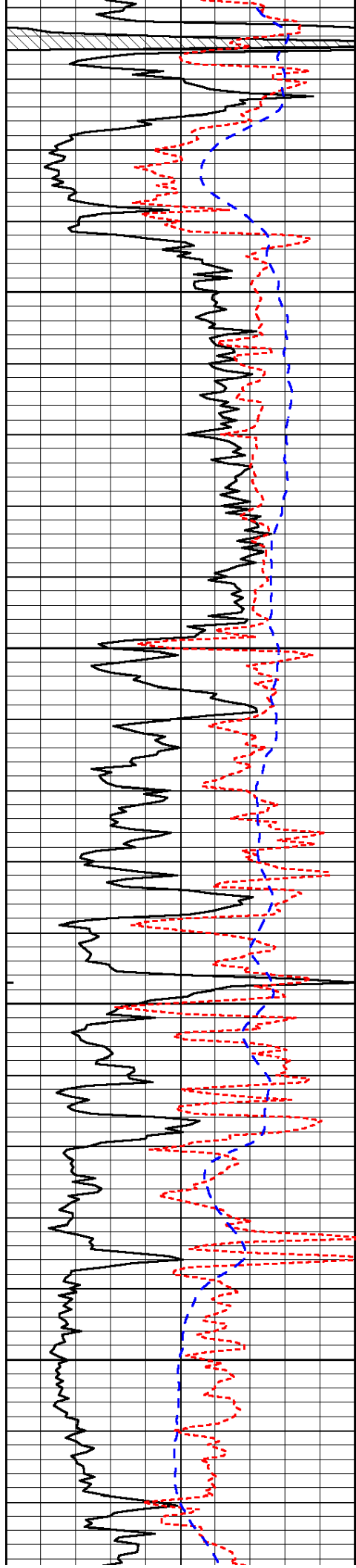
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-31

-31

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-31

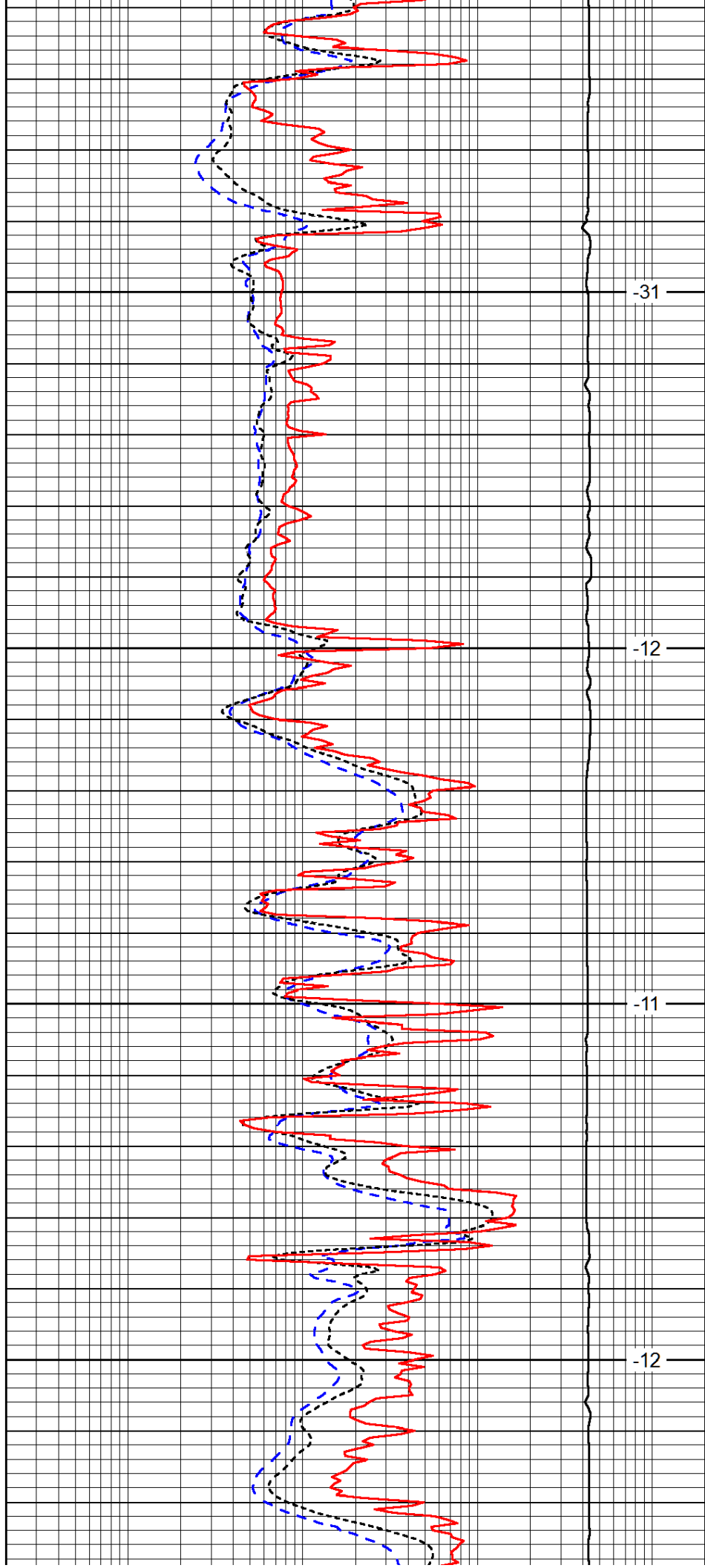


3250

3300

3350

3400

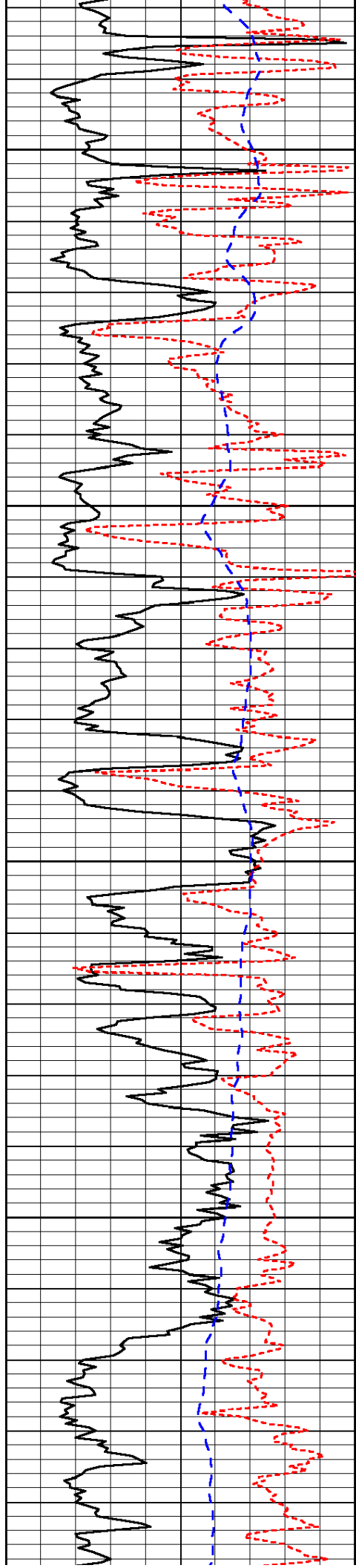


-31

-12

-11

-12

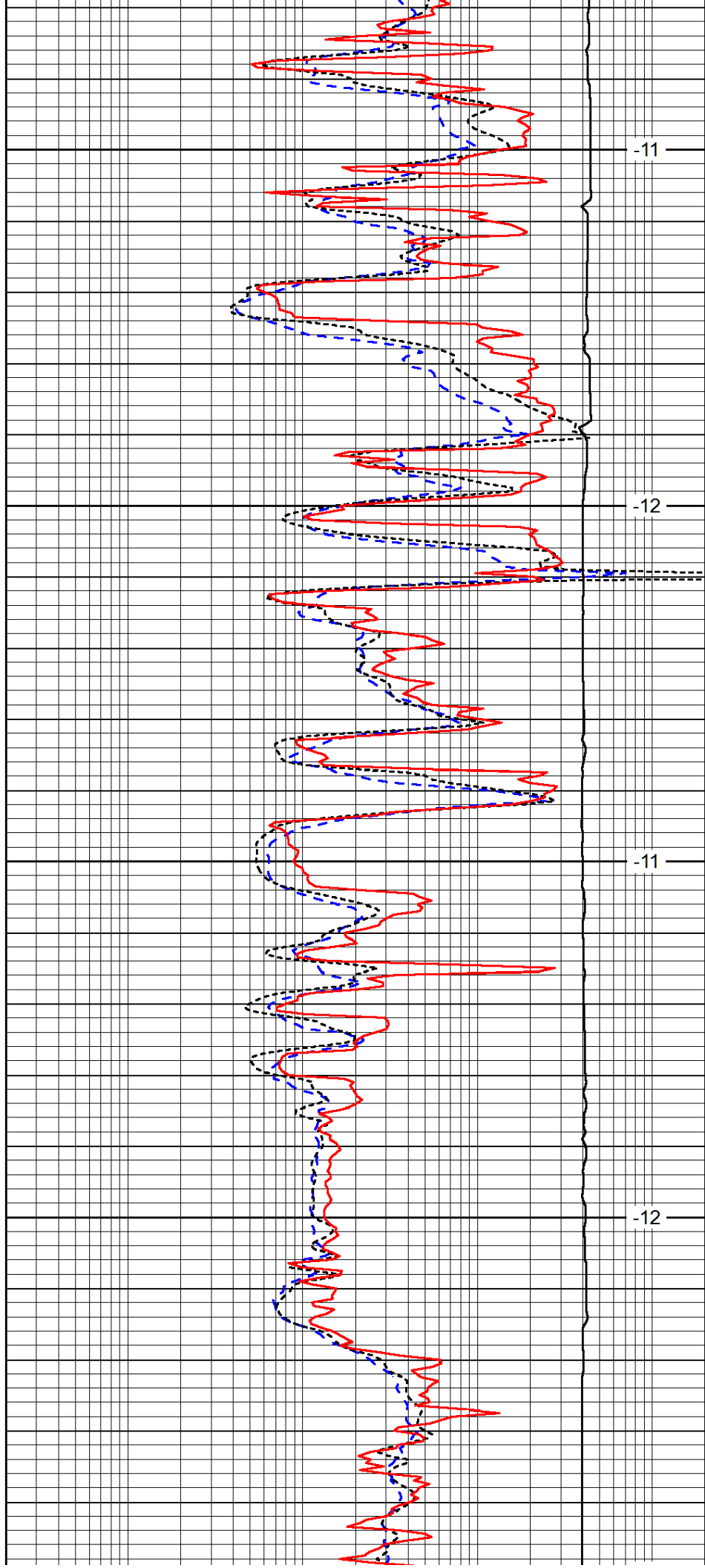


3450

3500

3550

3600

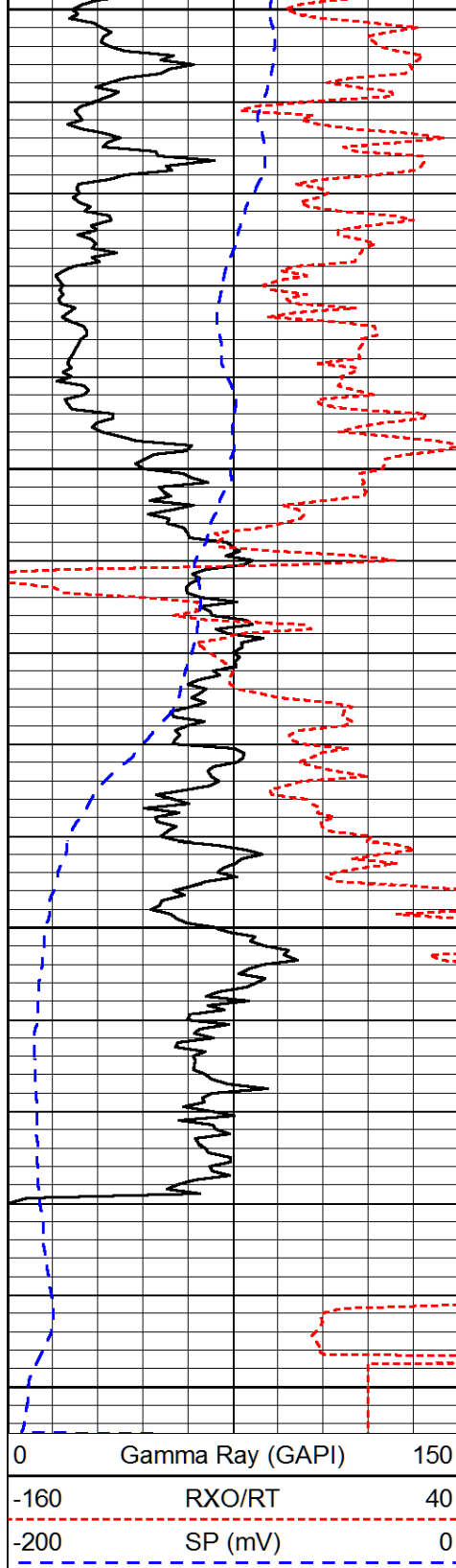


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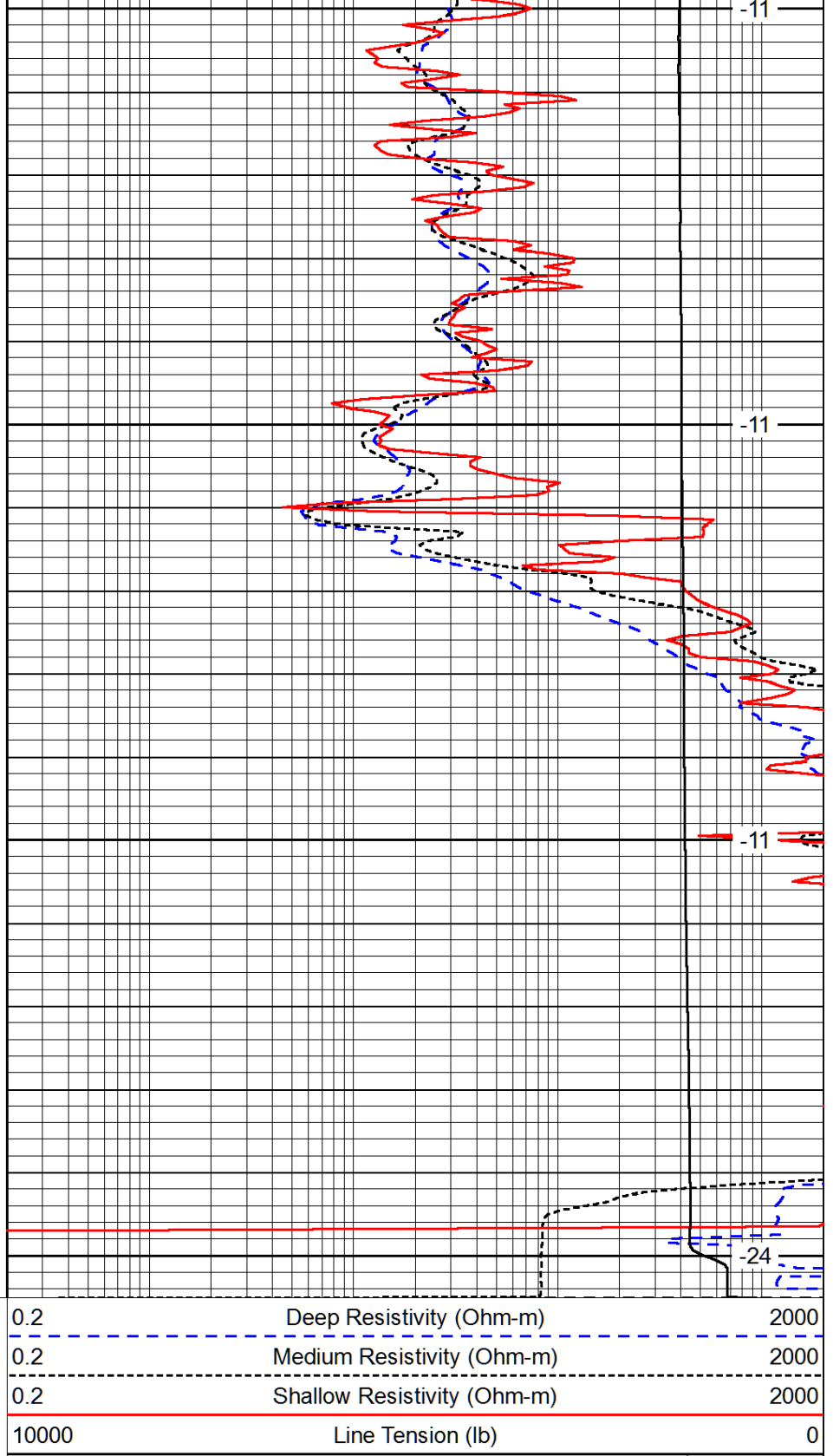
-12

-11

-12



3650
3700
3750
3800



-11
-11
-11
-24

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

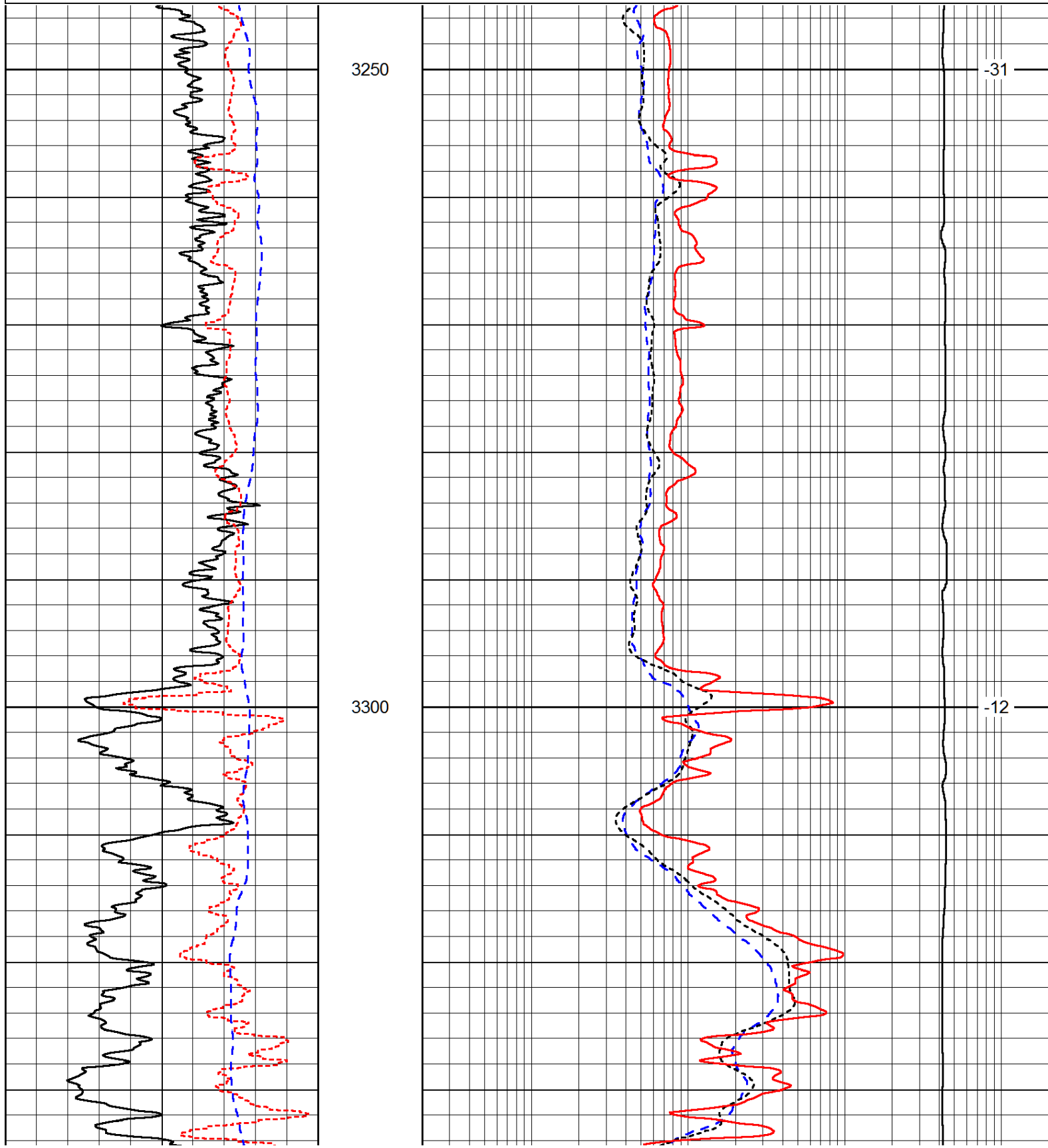
LSPD
(ft/min)

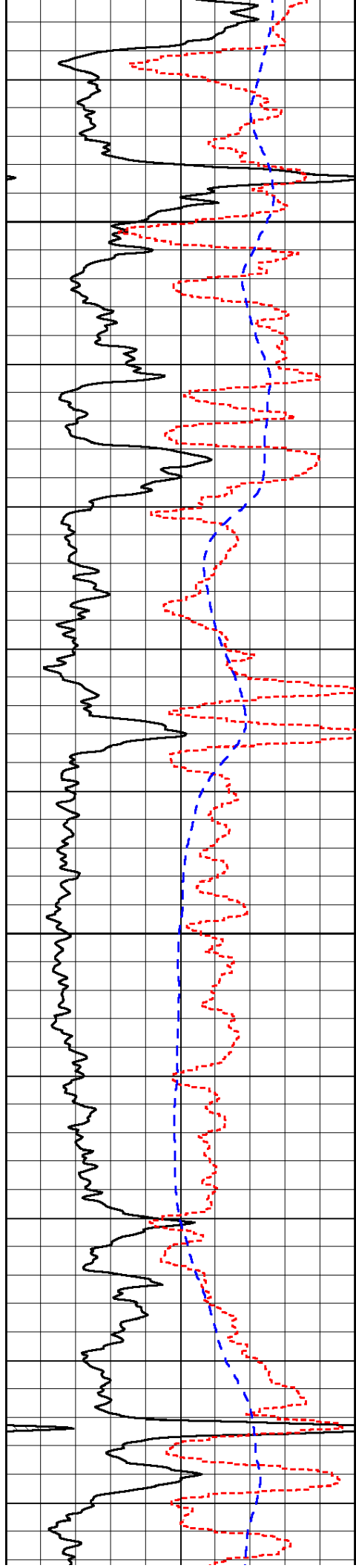


High Resolution

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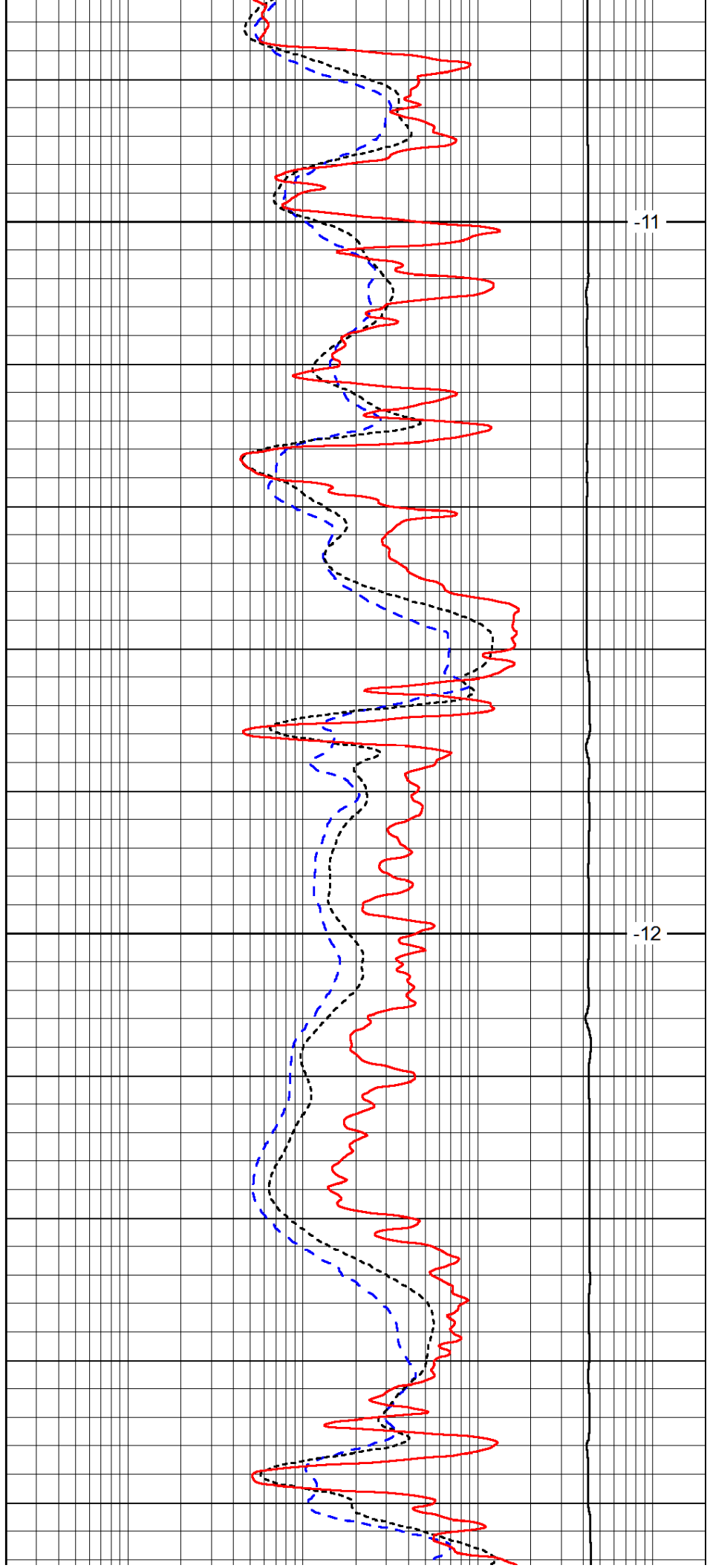
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-160	RXO/RT	40	0.2	Medium Resistivity (Ohm-m)	2000
-200	SP (mV)	0	0.2	Shallow Resistivity (Ohm-m)	2000
			10000	Line Tension (lb)	0
				LSPD (ft/min)	





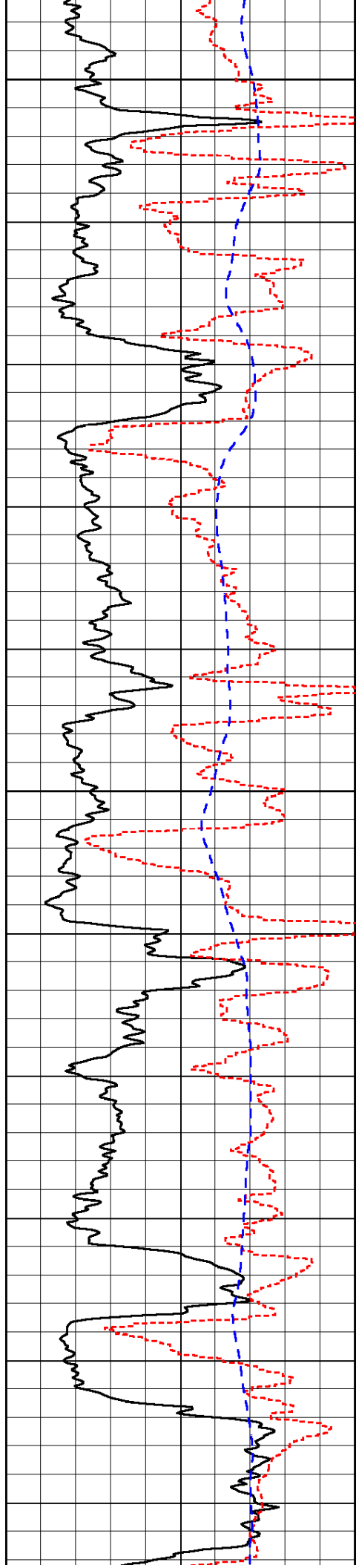
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3400



-11

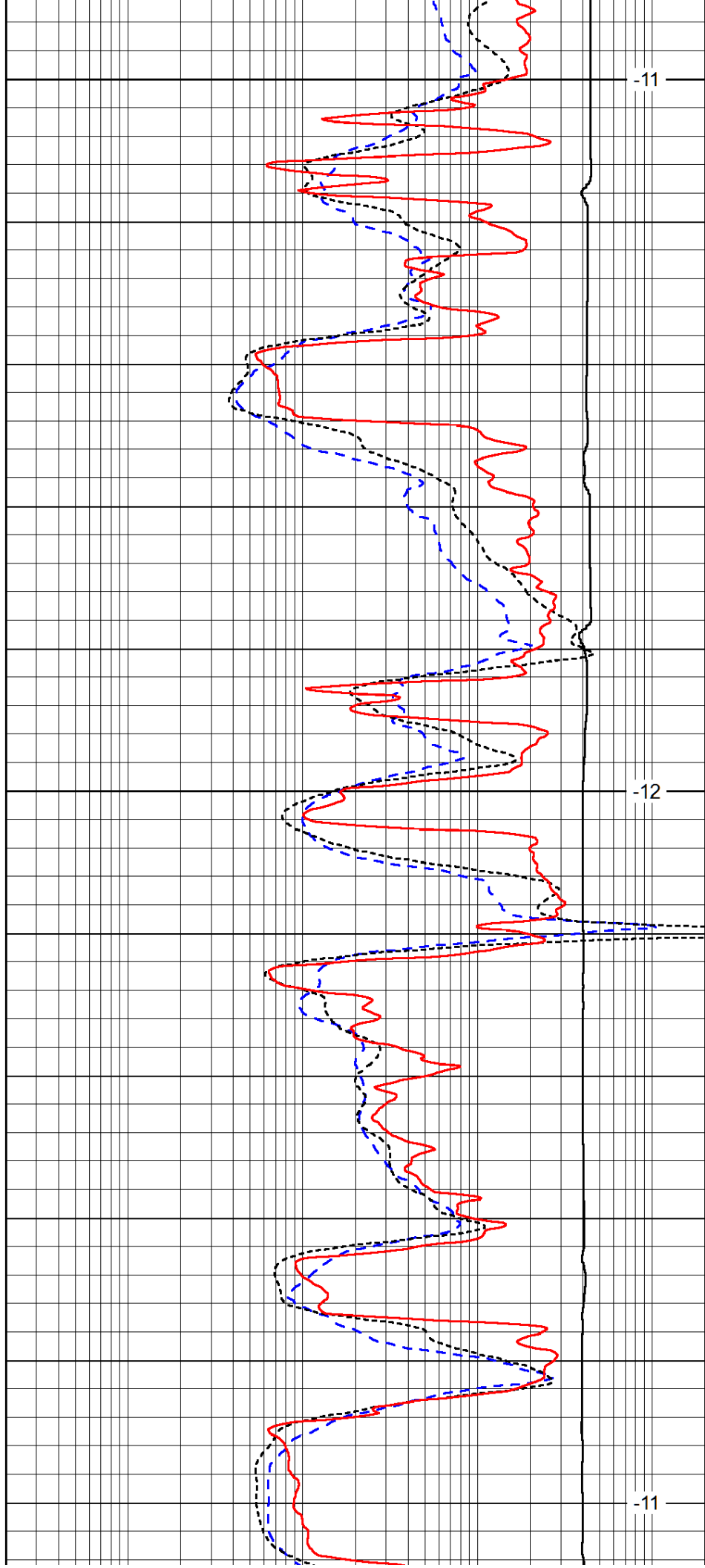
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3450

3500

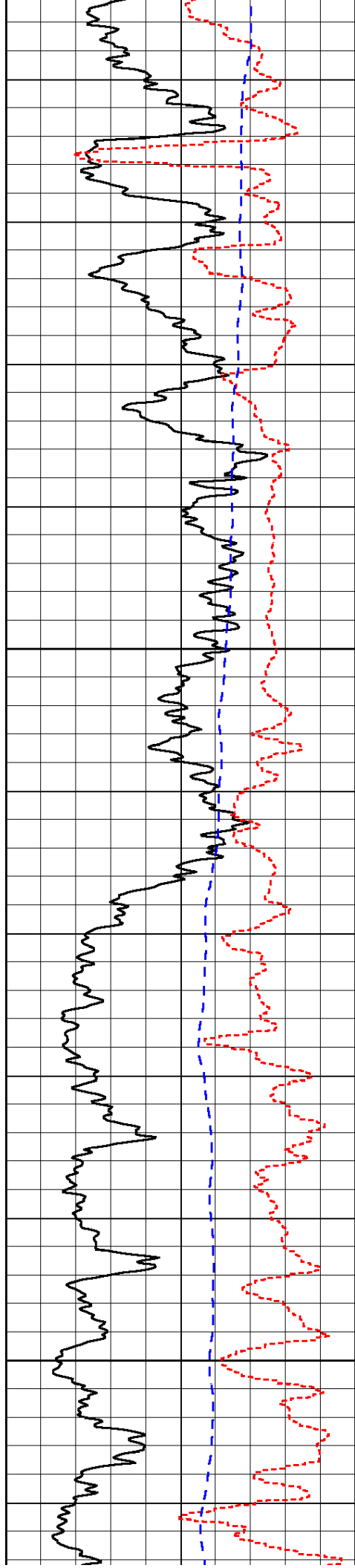
3550



-11

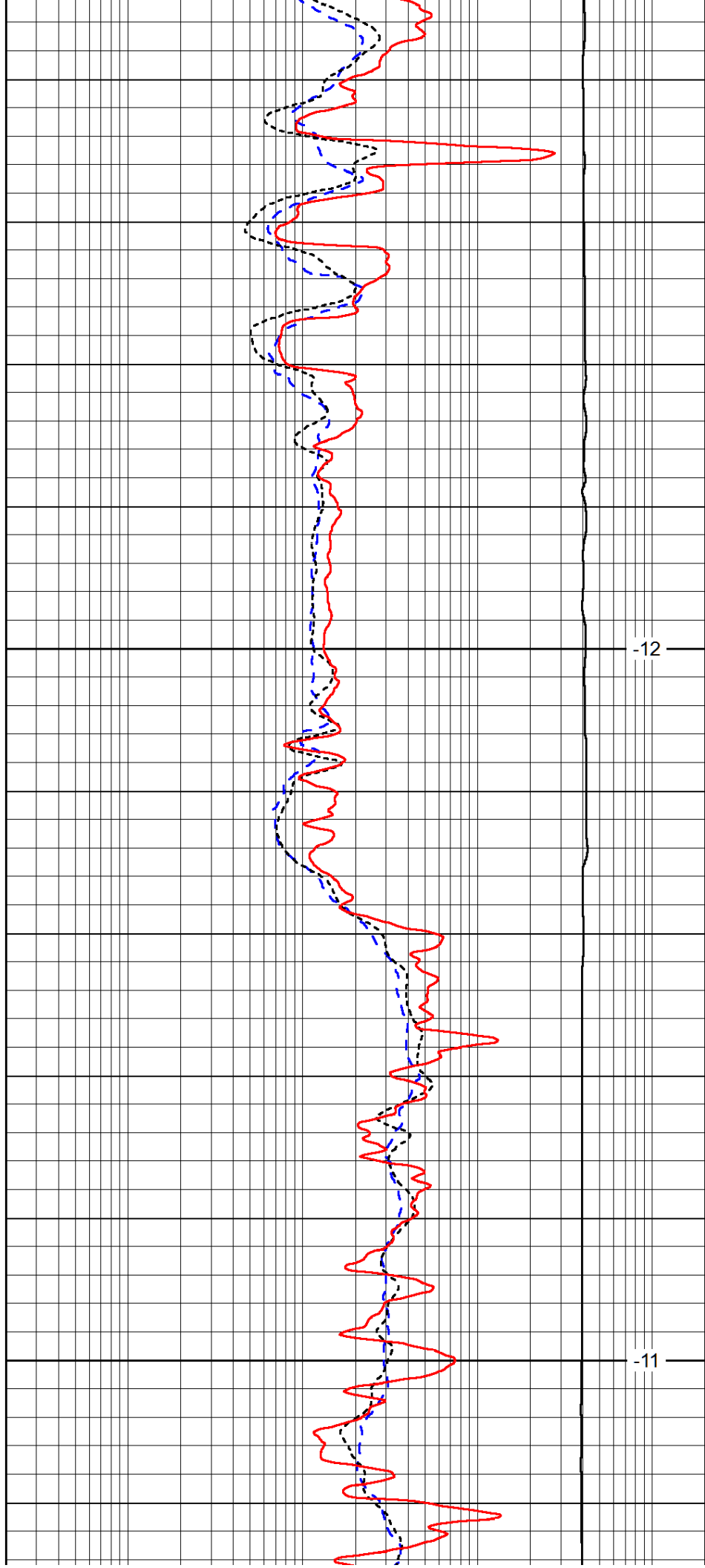
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-11



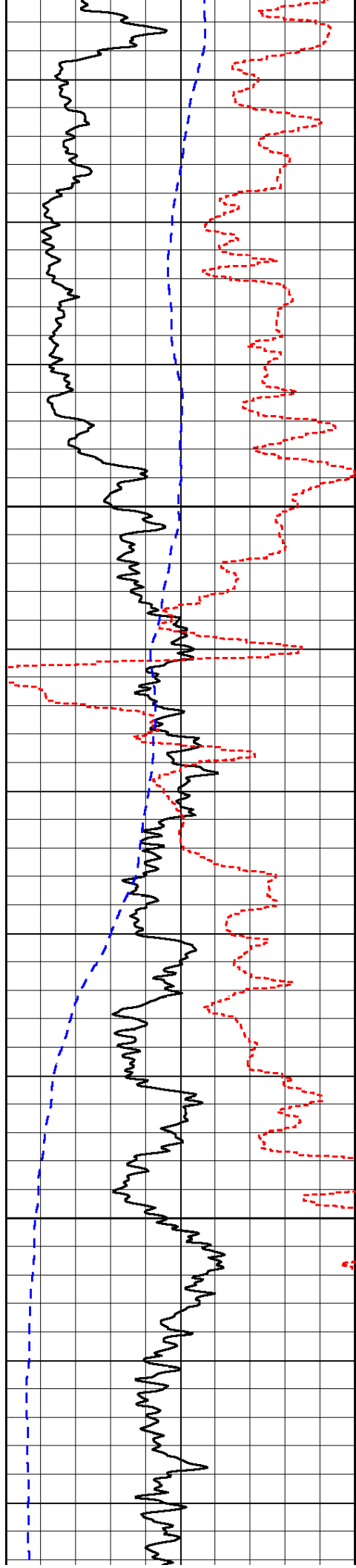
3600

3650



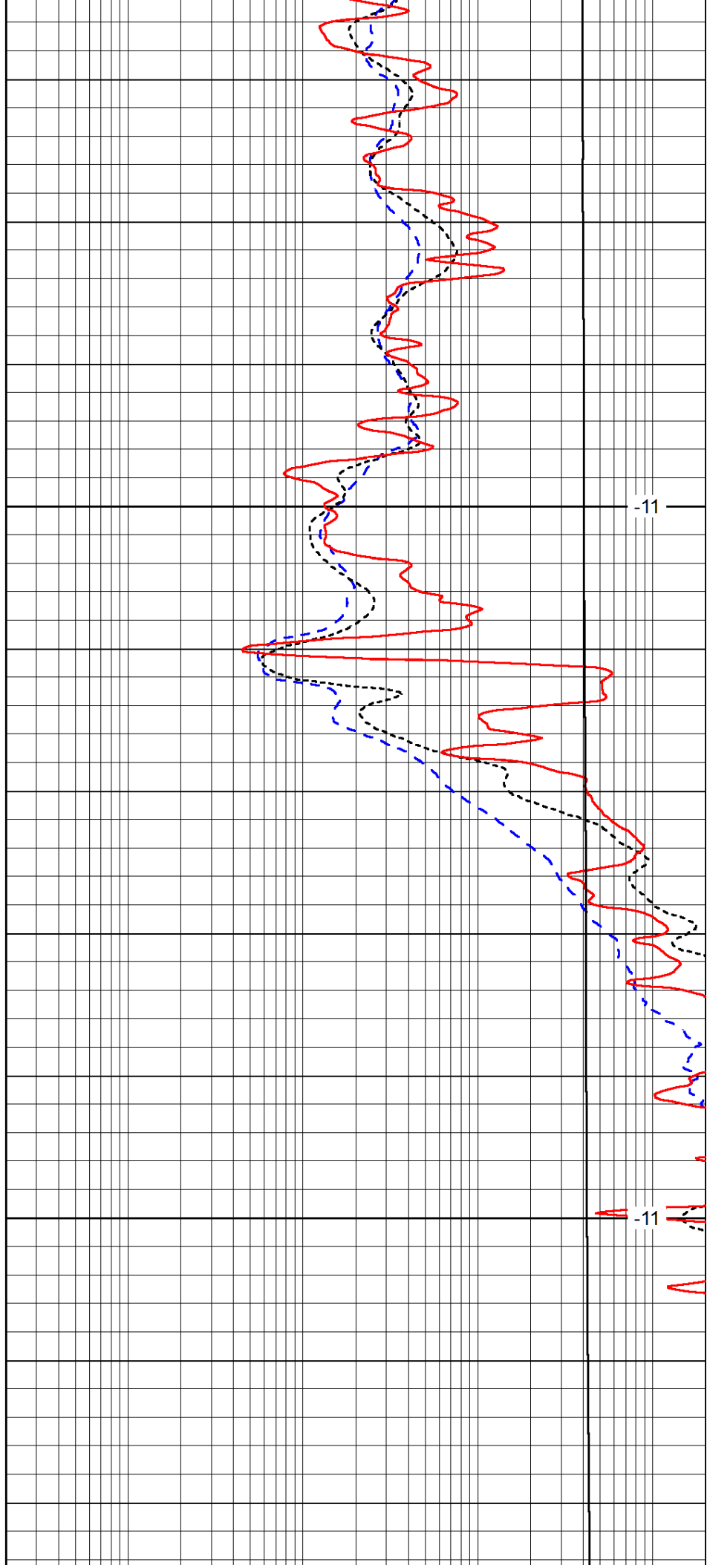
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-11



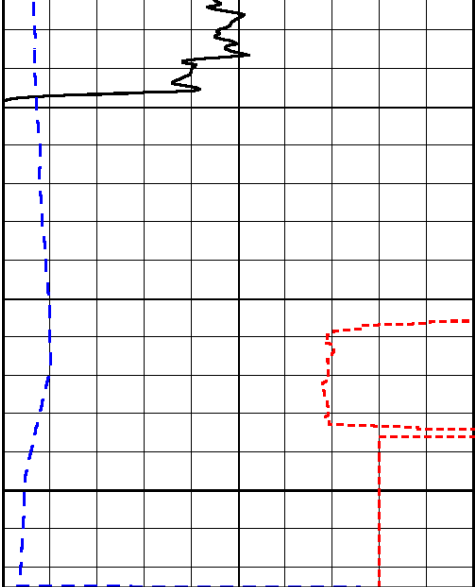
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3750



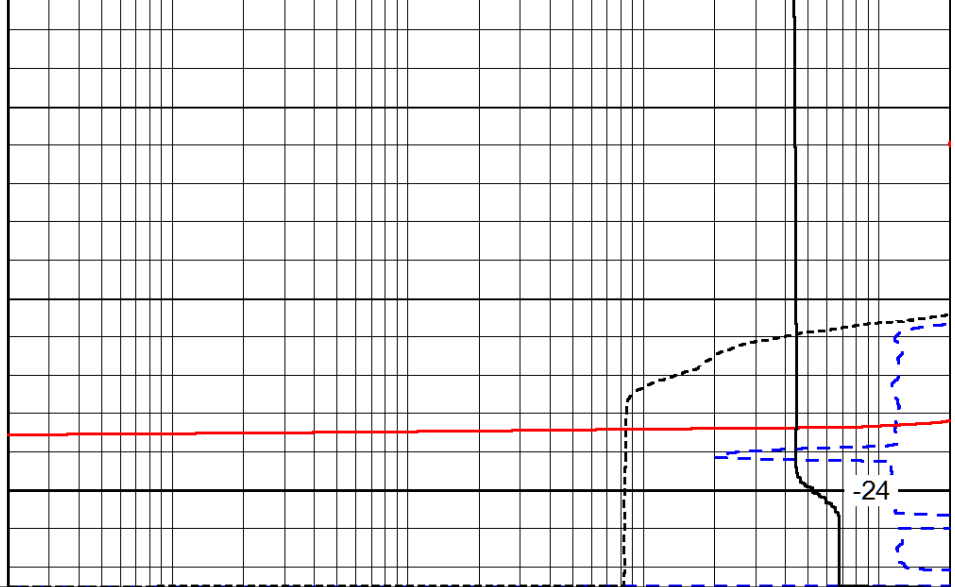
-11

-11



0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

3800



0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

LSPD
(ft/min)