



Dual Induction Log

Pioneer Energy Services

API No.

15-185-23808-00-00

Company H & D Exploration, LLC

Well Bunker #1

Field Wildcat

County Stafford State Kansas

Location NE SW SW SE
630' FSL / 2068' FEL

Sec: 20 Twp: 25S Rge: 12W

Permanent Datum Ground Level Elevation 1877

Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing Elevation
K.B. 1887
D.F. 1877
G.L. 1877

Date 7/6/2013

Run Number One

Depth Driller 4260

Depth Logger 4262

Bottom Logged Interval 4261

Top Log Interval 650

Casing Driller 8.625 @ 705

Casing Logger 706

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 3400

Density / Viscosity 9.6 50

pH / Fluid Loss 12.5 8.8

Source of Sample Flowline

Rm @ Meas. Temp 0.40 @ 82

Rmf @ Meas. Temp 0.30 @ 82

Rmc @ Meas. Temp 0.54 @ 82

Source of Rmf / Rmc Charts

Rm @ BHT 0.28 @ 119

Operating Rig Time 5 Hours

Max Rec. Temp. F 119

Equipment Number 17

Location Hays

Recorded By R. Barnhart

Witnessed By Josh Austin

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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 Log-Tech, Inc.
(785) 625-3858

Stafford, KS:
7S, 3 1/2W, N into

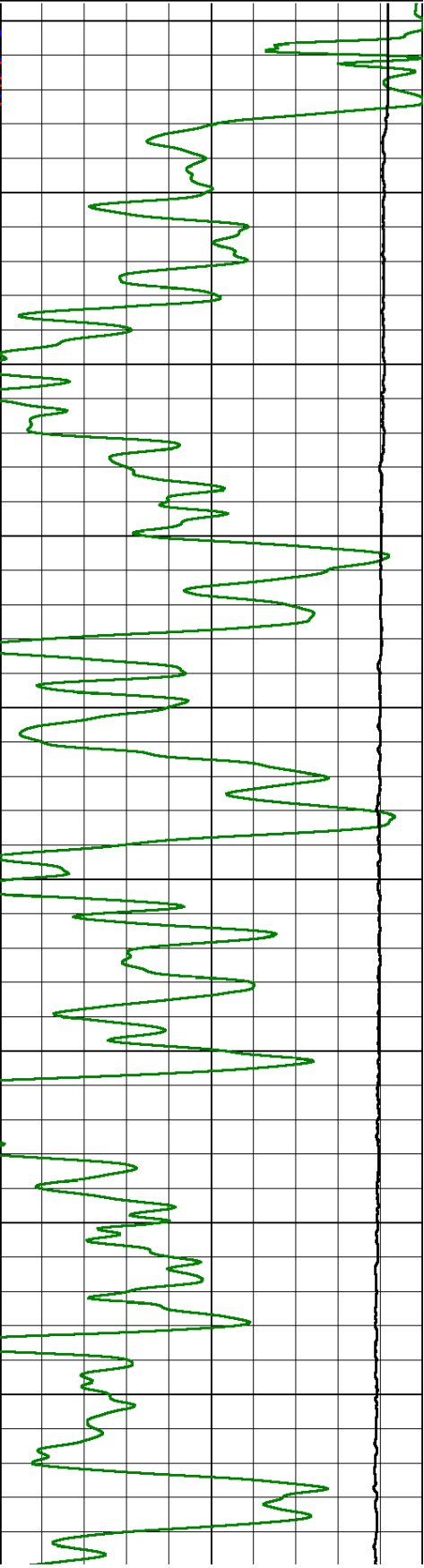
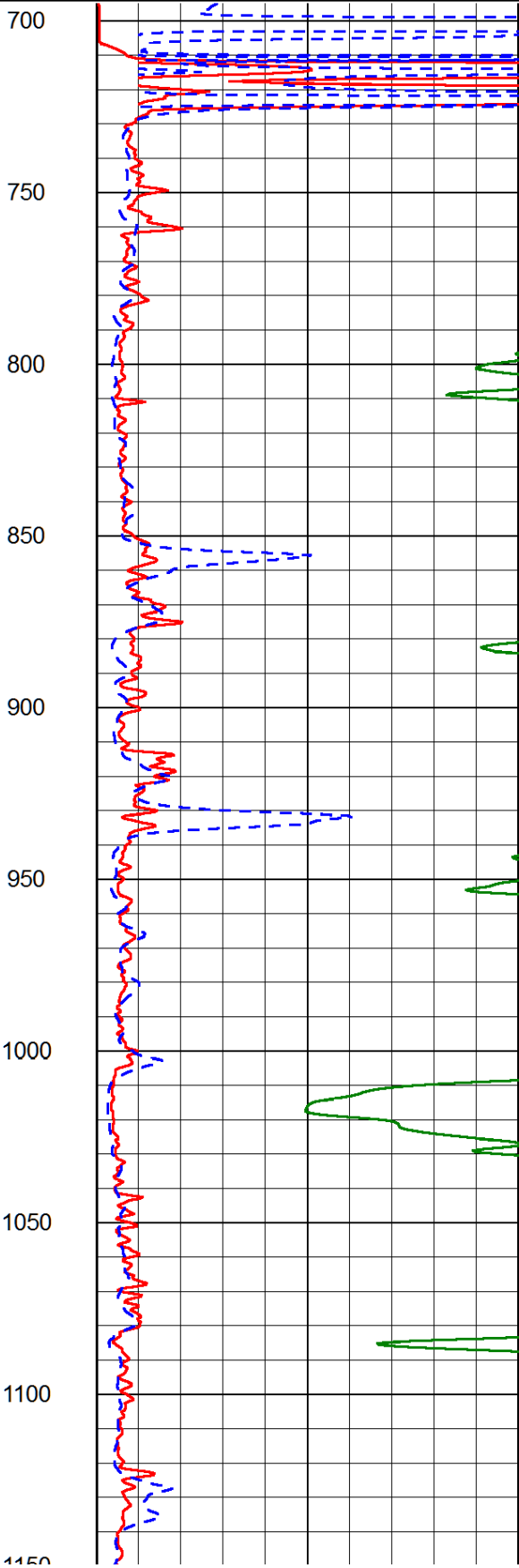
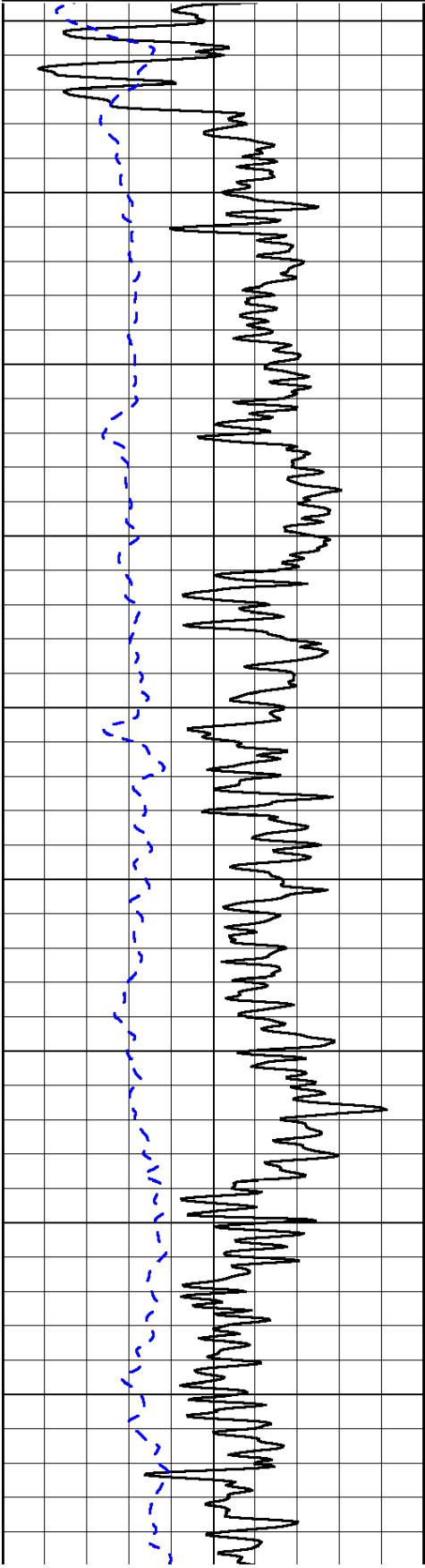
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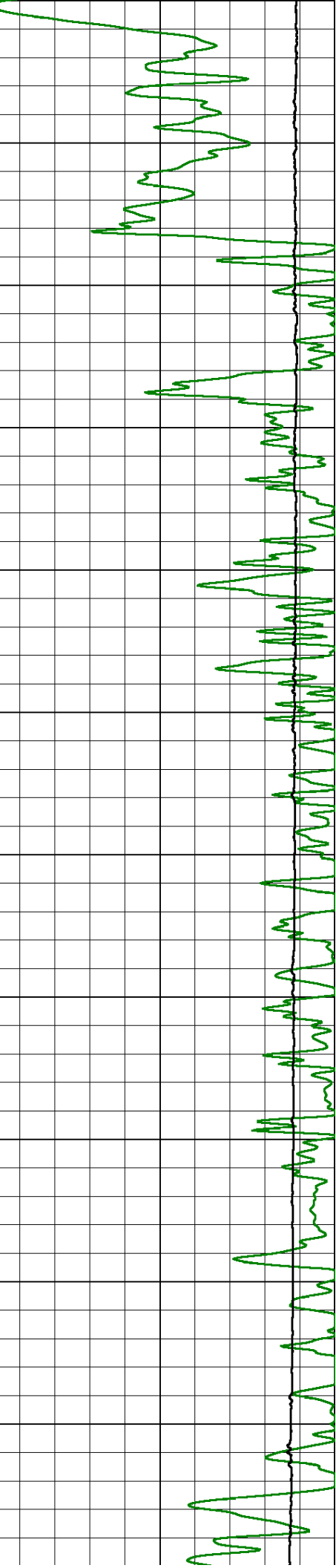
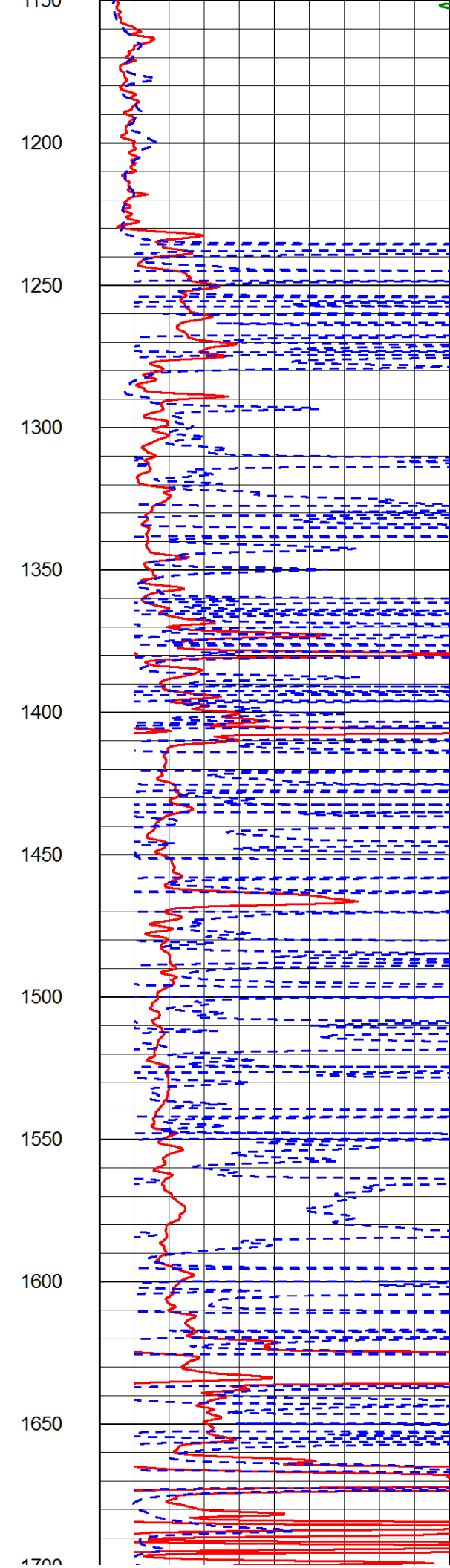
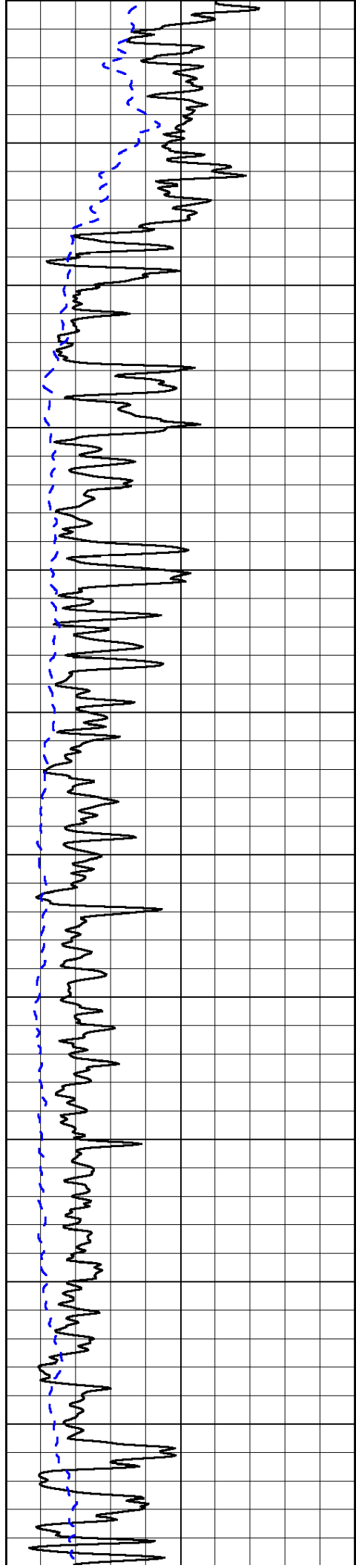
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

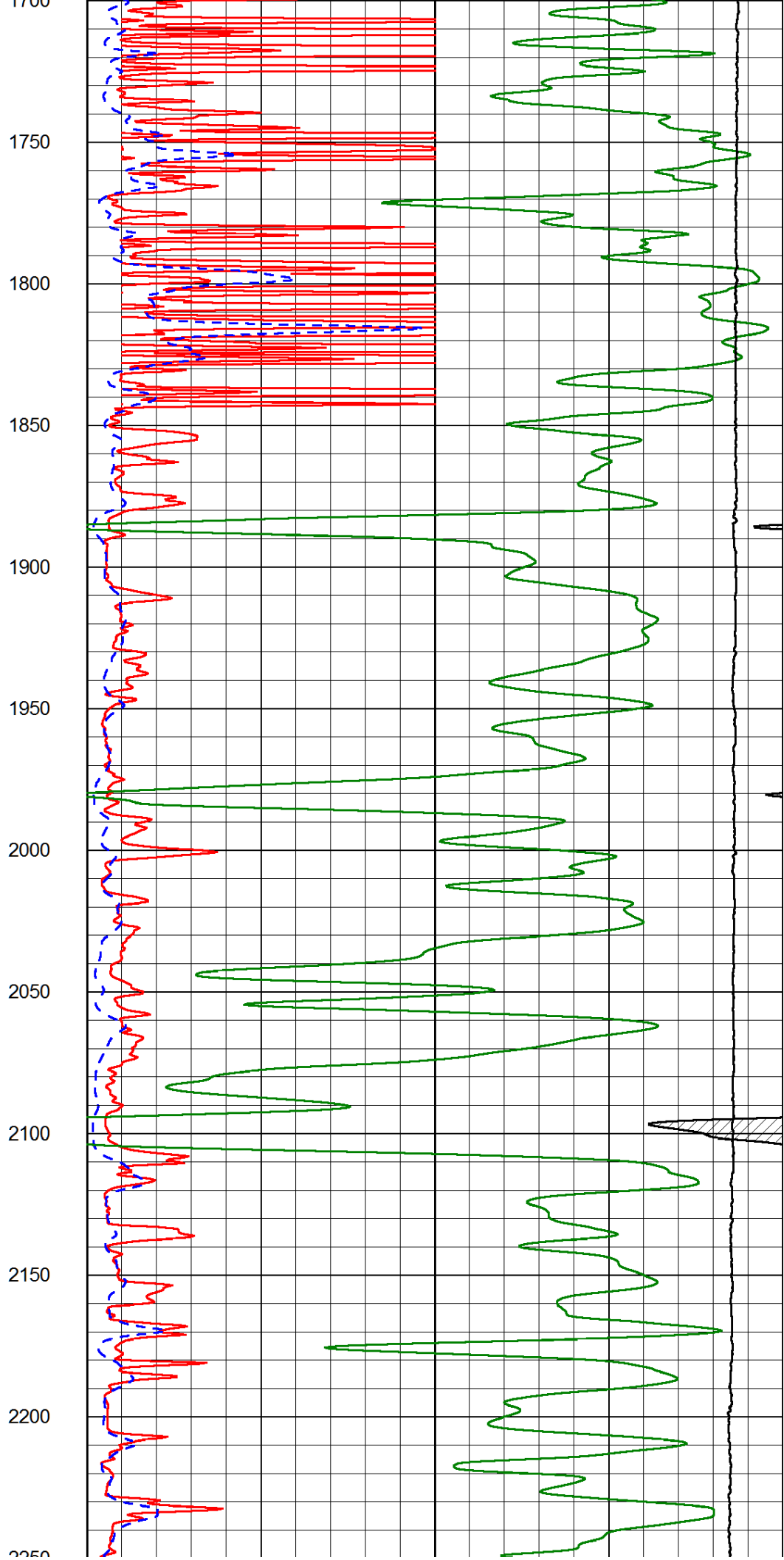
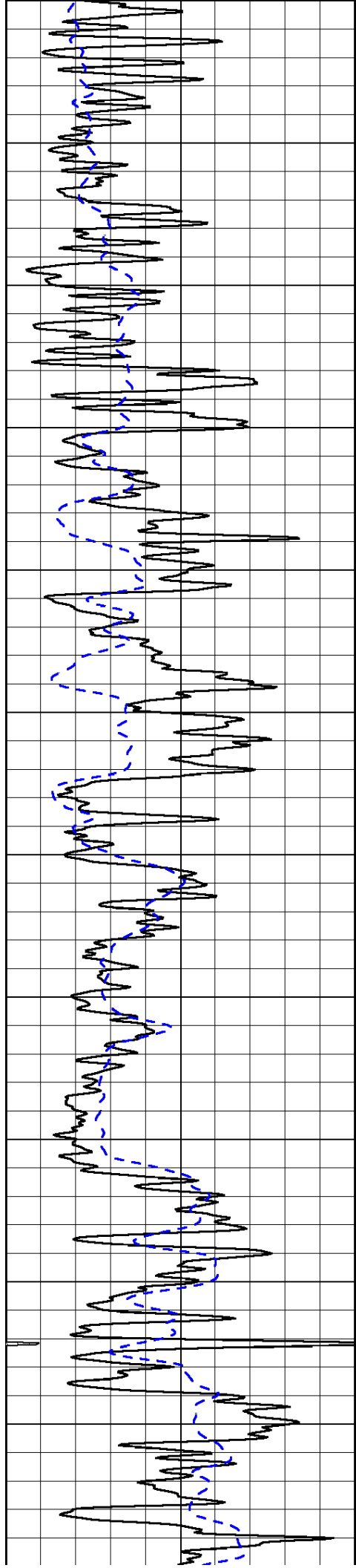
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0	Deep Resistivity (Ohm-m)	50

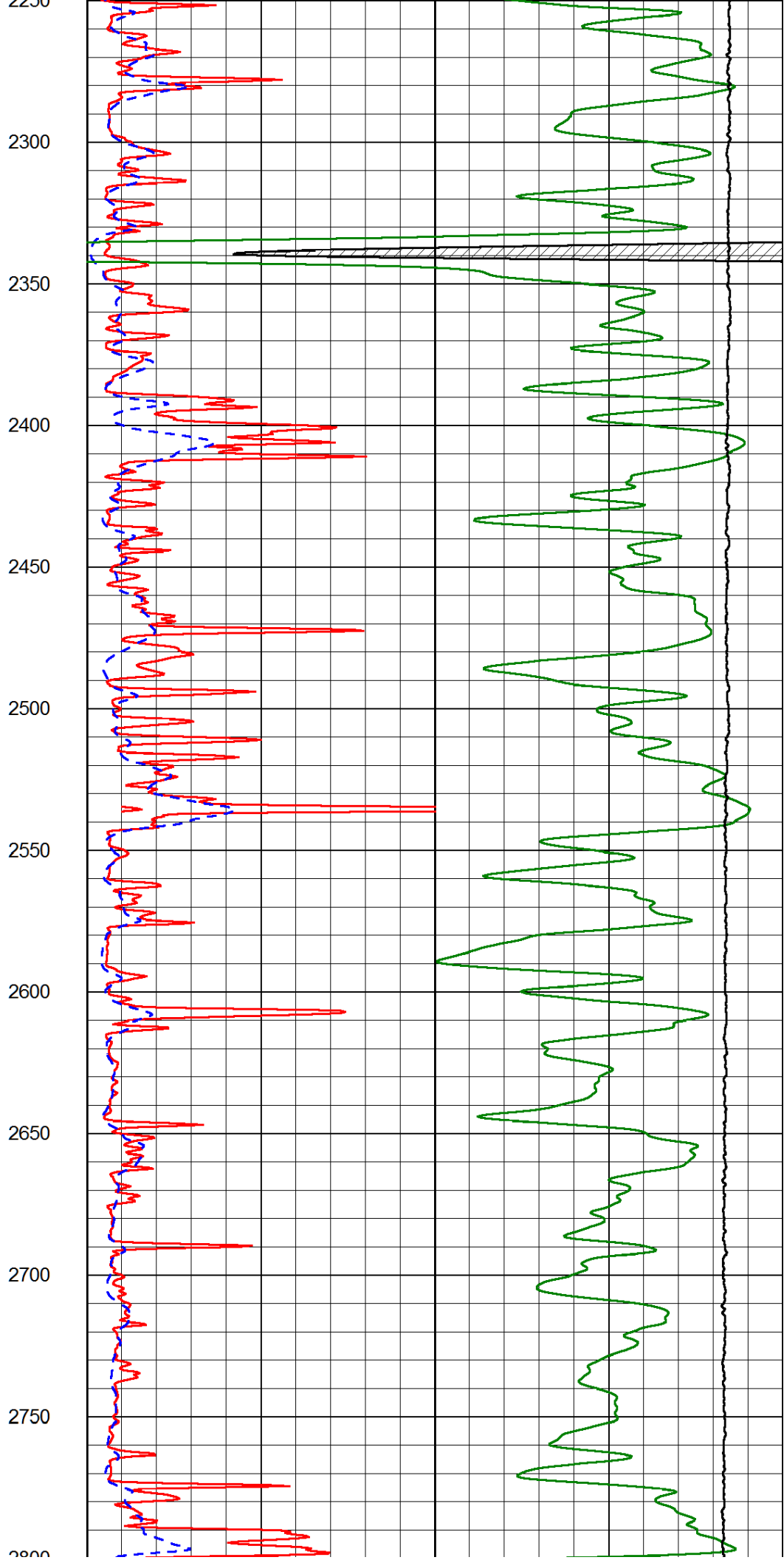
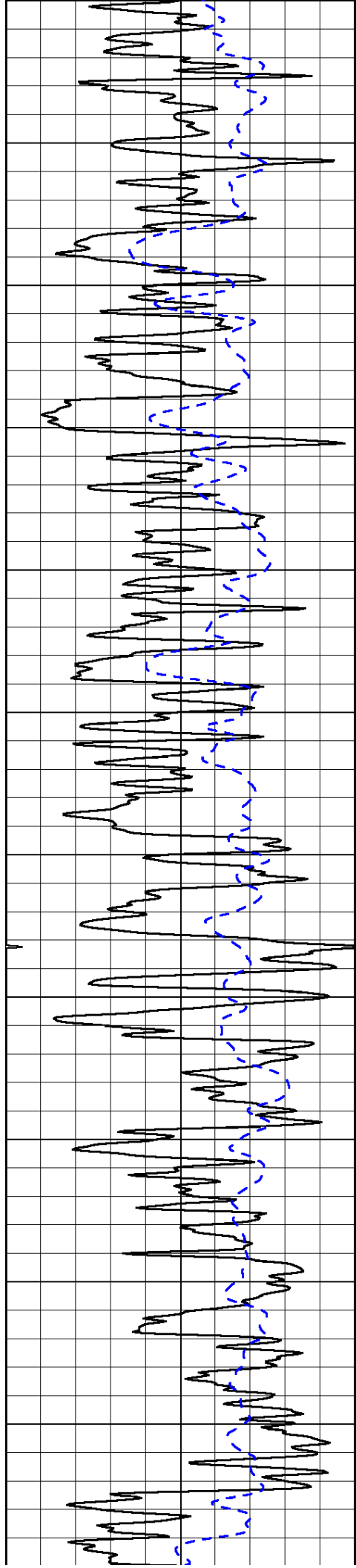
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0

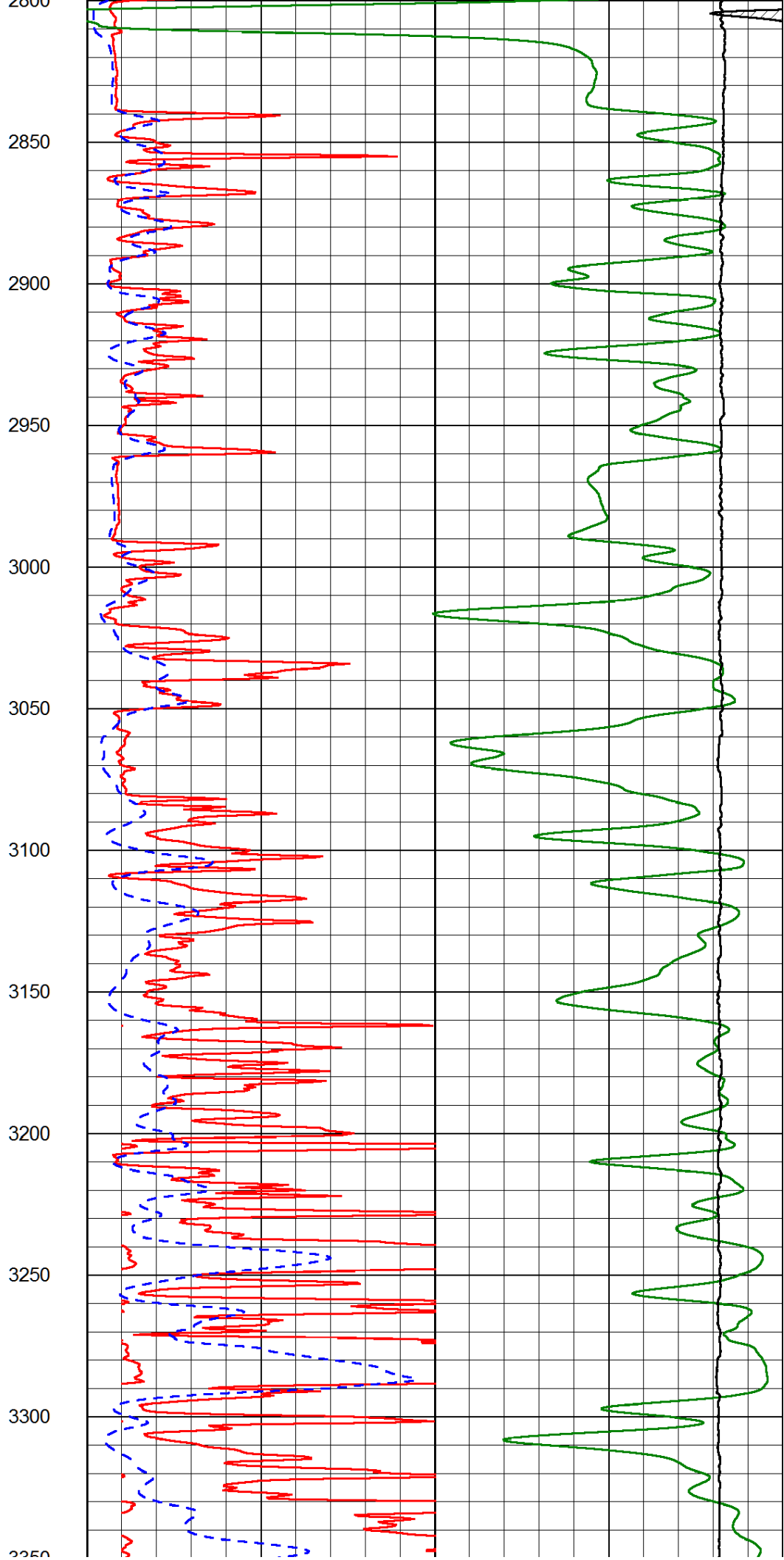
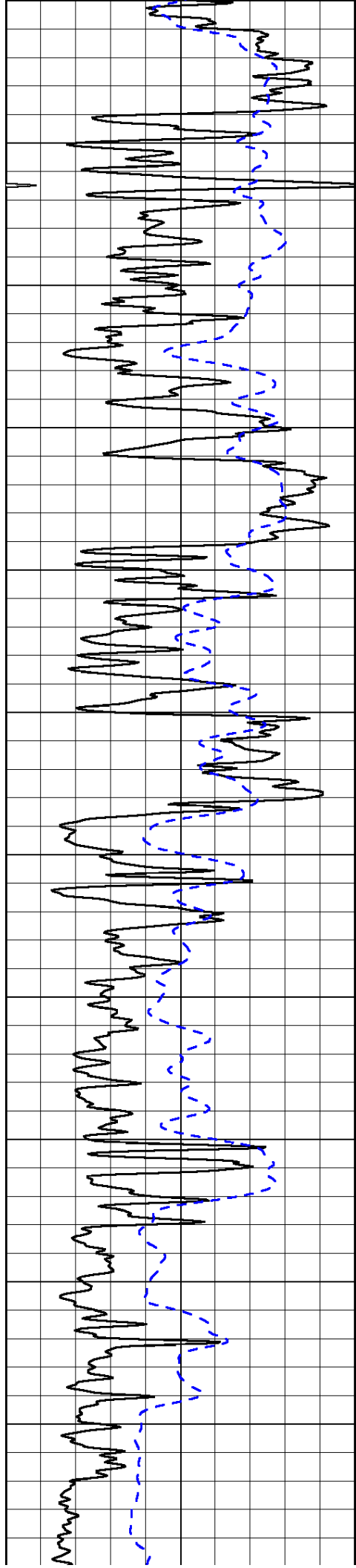
Shallow Resistivity		
50	(Ohm-m)	500
50 Deep Resistivity (Ohm-m) 500		

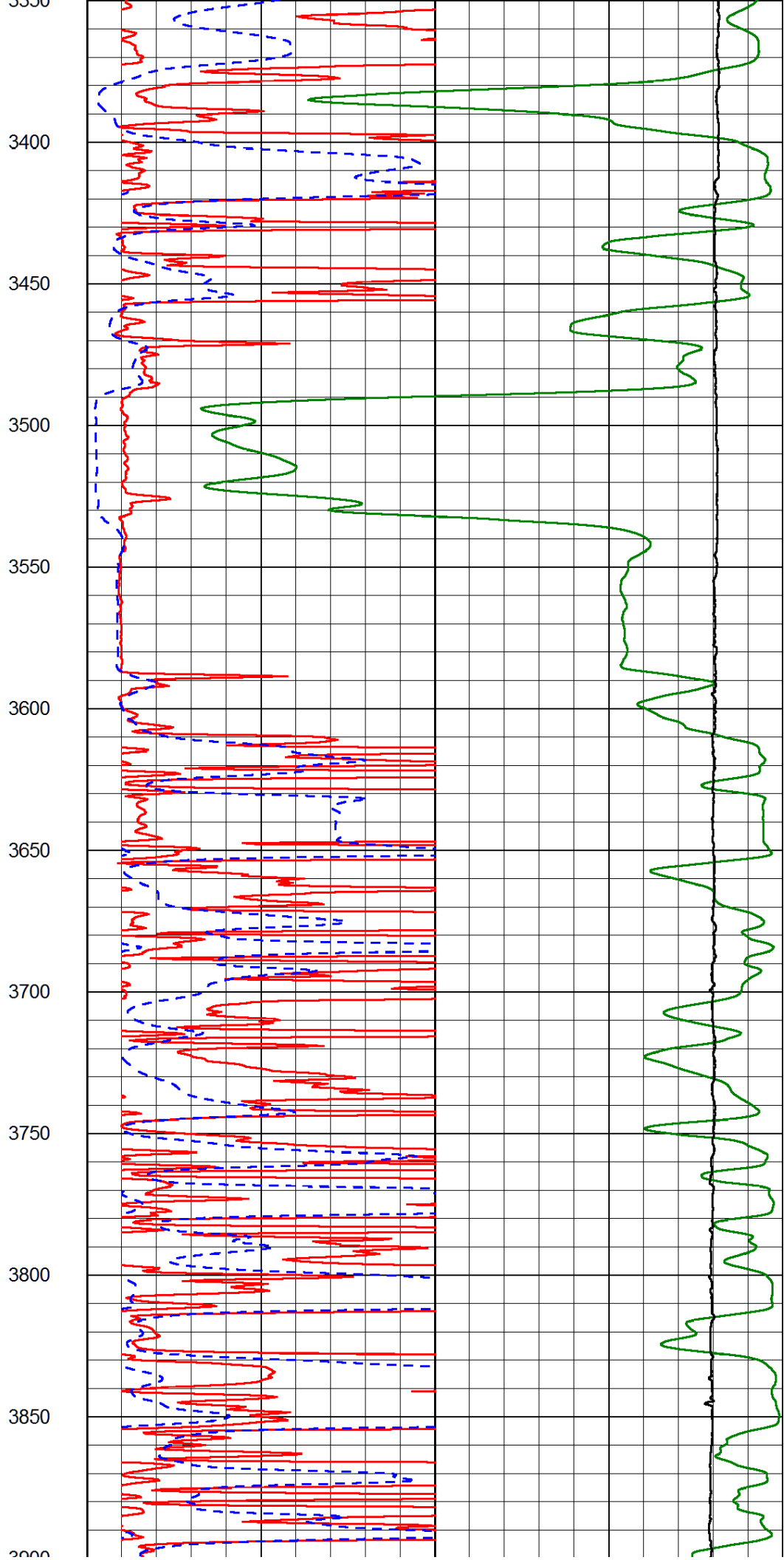
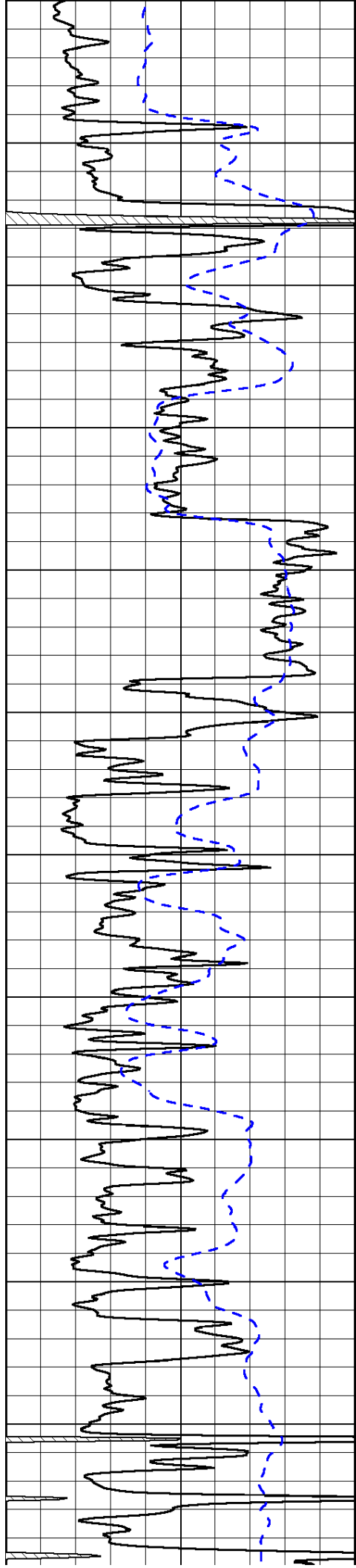


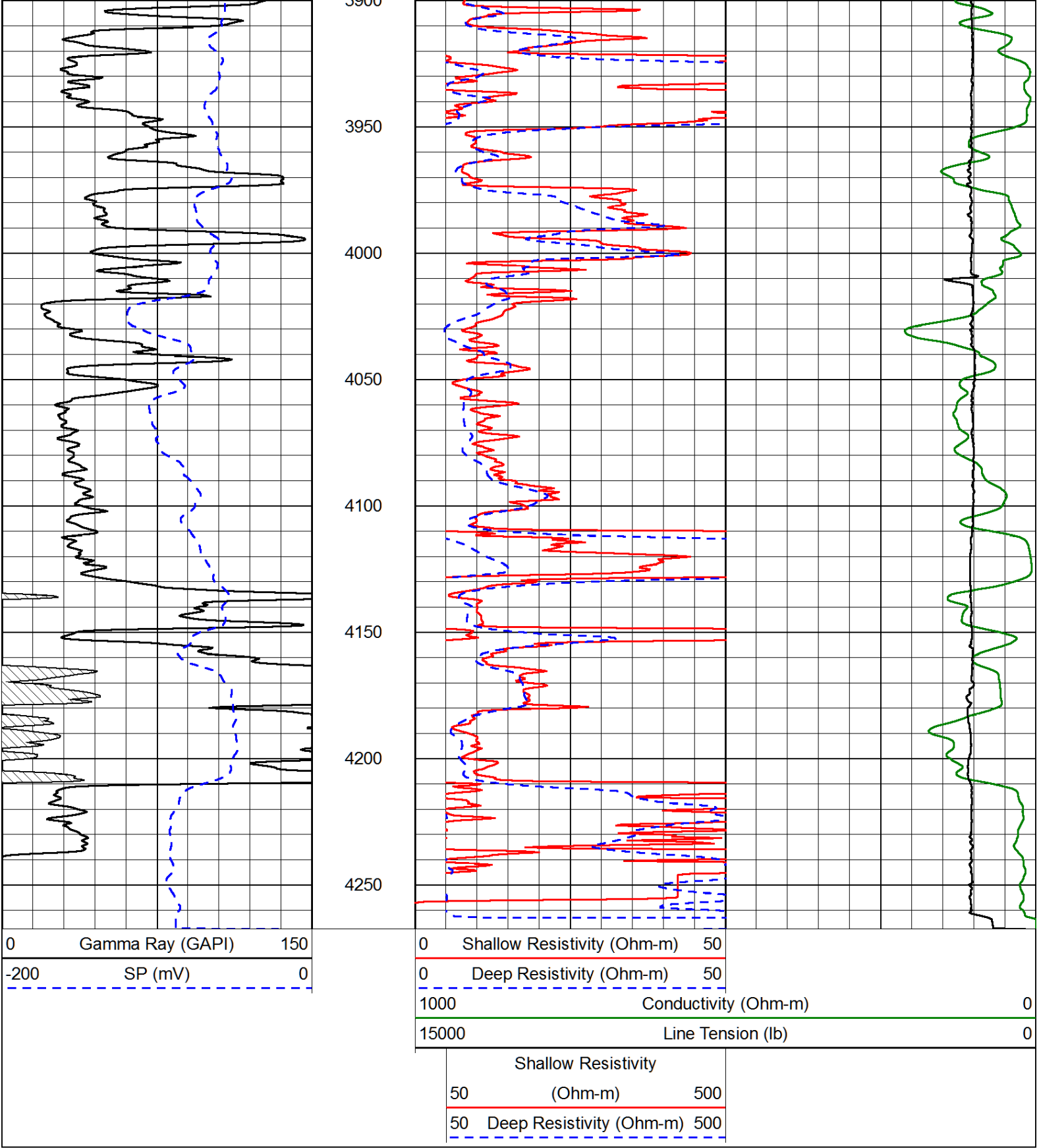




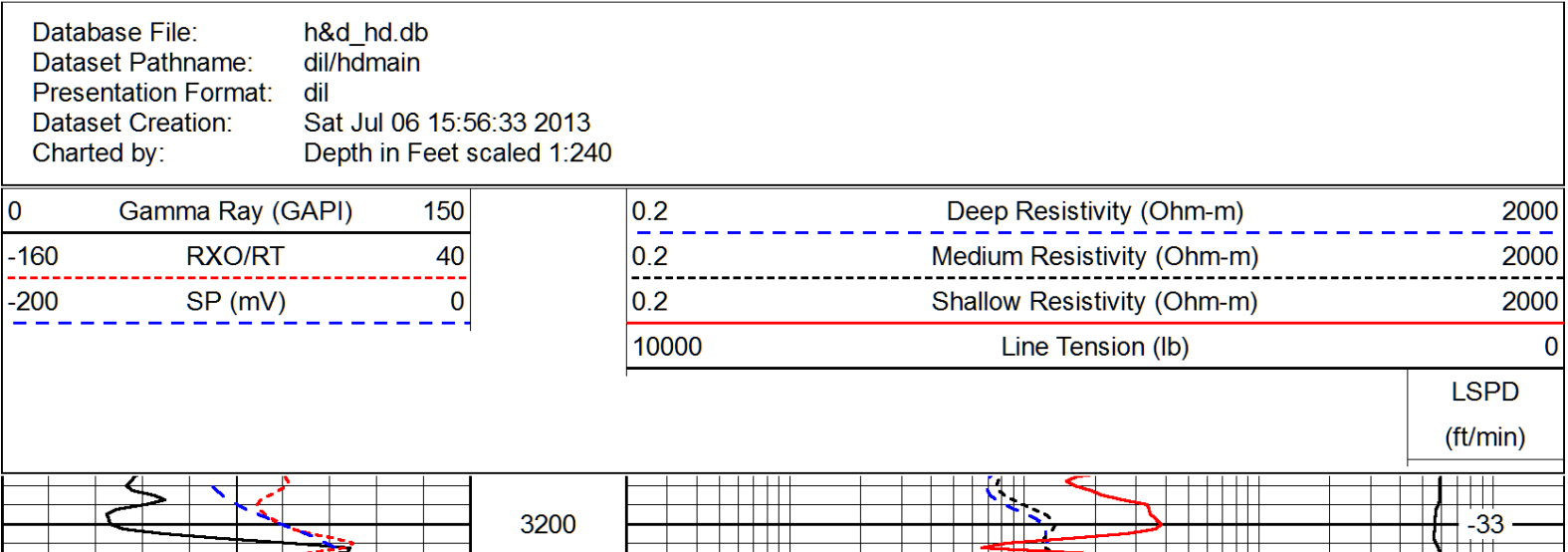
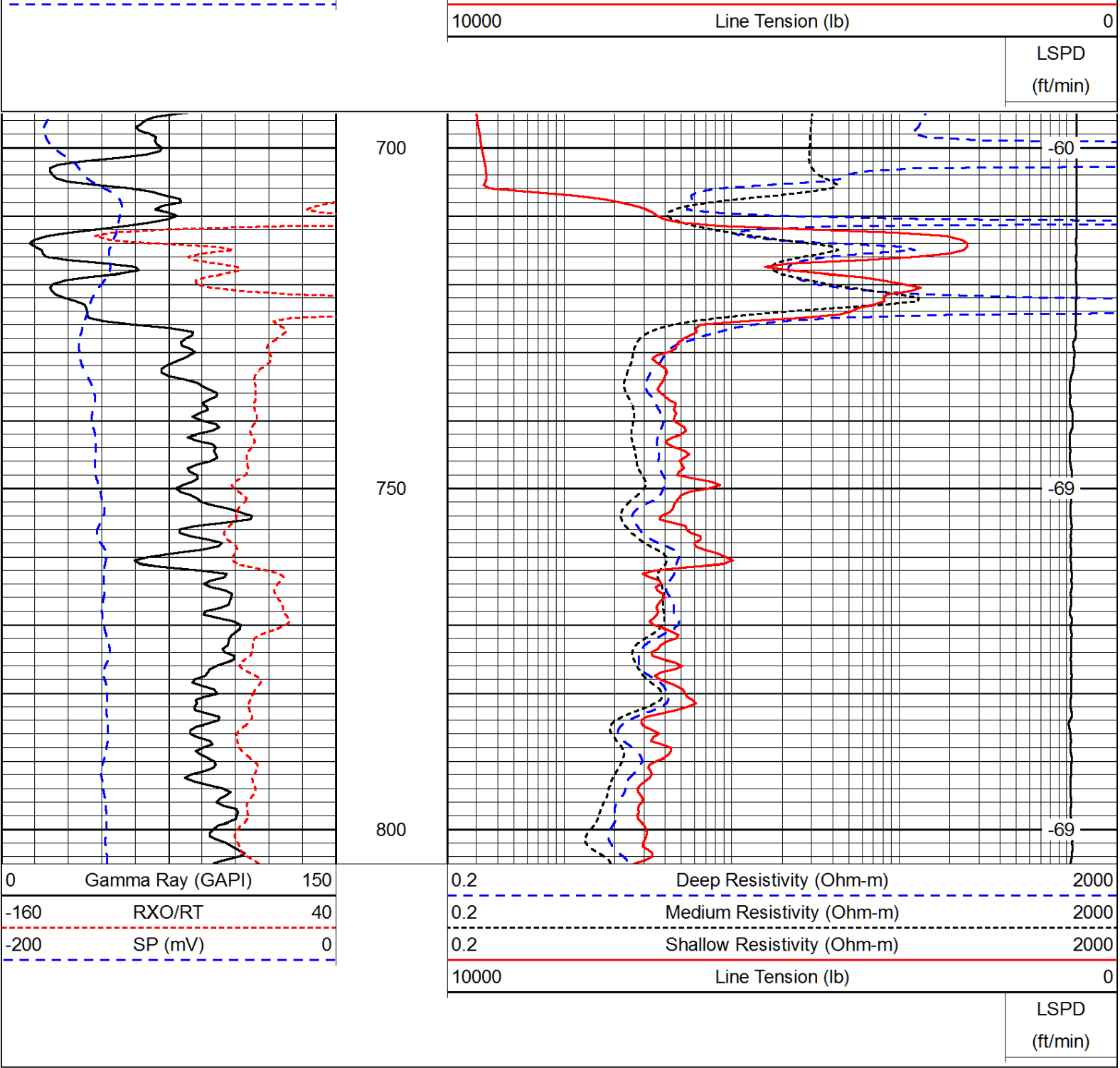


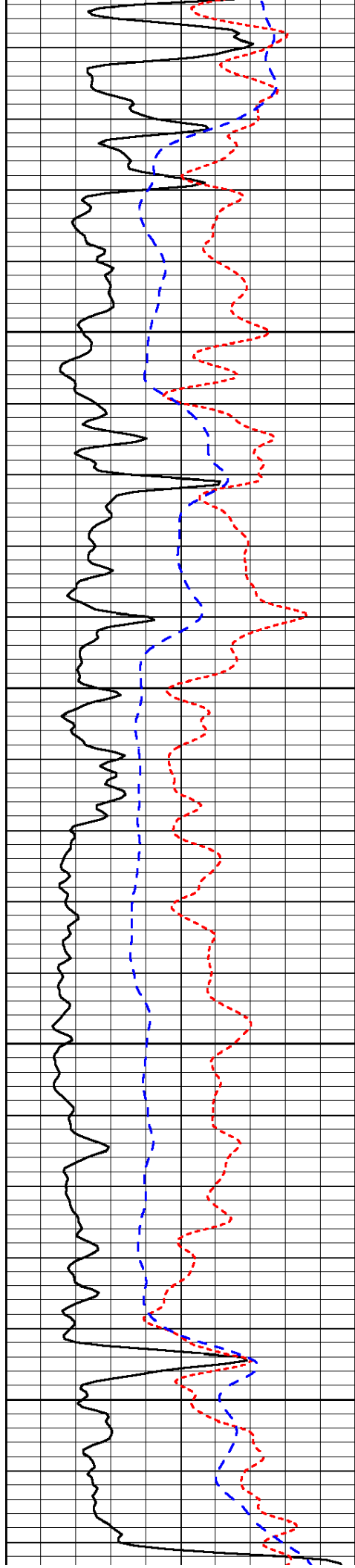






Database File: h&d_hd.db					
Dataset Pathname: dil/hdmain					
Presentation Format: dil					
Dataset Creation: Sat Jul 06 15:56:33 2013					
Charted by: Depth in Feet scaled 1:240					
0	Gamma Ray (GAPI)	150	0.2	Deep Resistivity (Ohm-m)	2000
-160	RXO/RT	40	0.2	Medium Resistivity (Ohm-m)	2000
-200	SP (mV)	0	0.2	Shallow Resistivity (Ohm-m)	2000



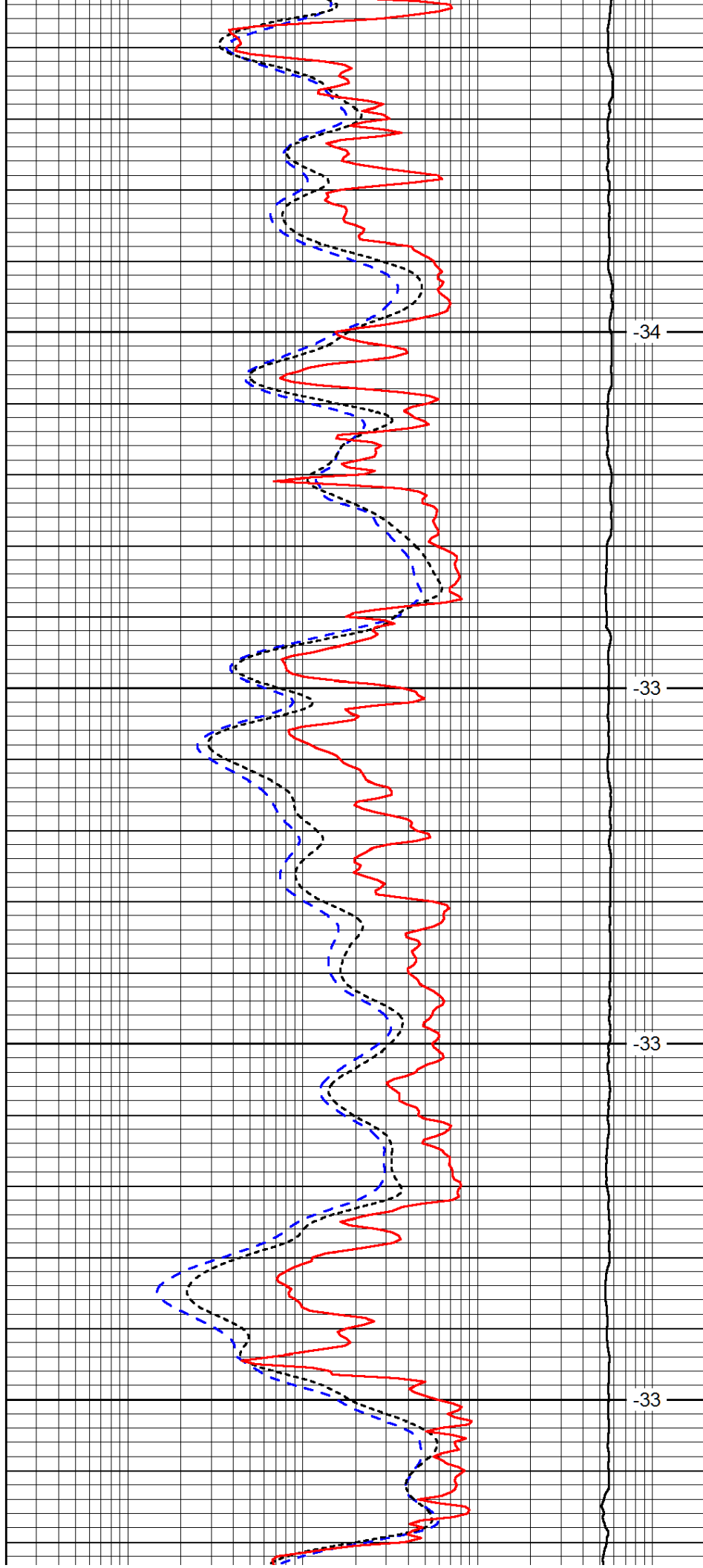


3250

3300

3350

3400

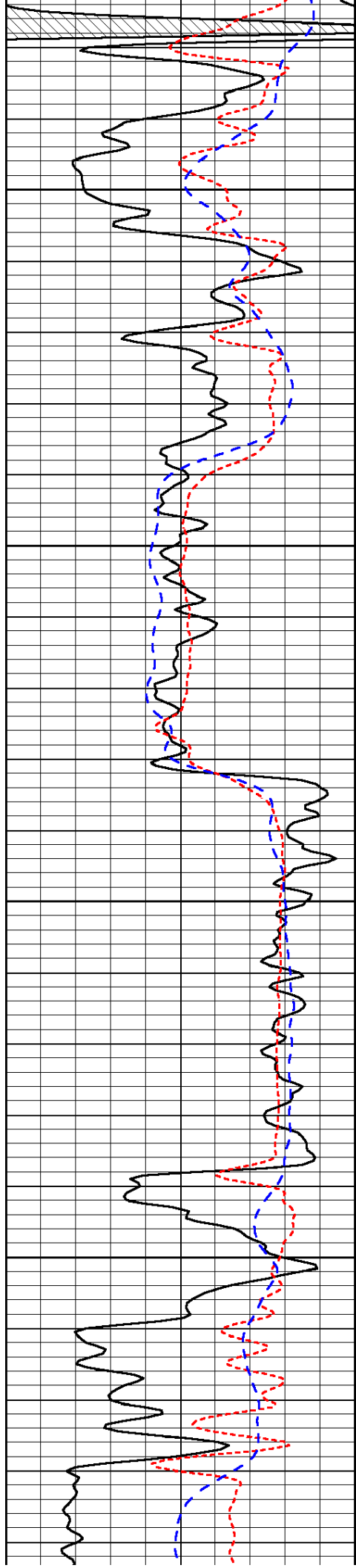


-34

-33

-33

-33

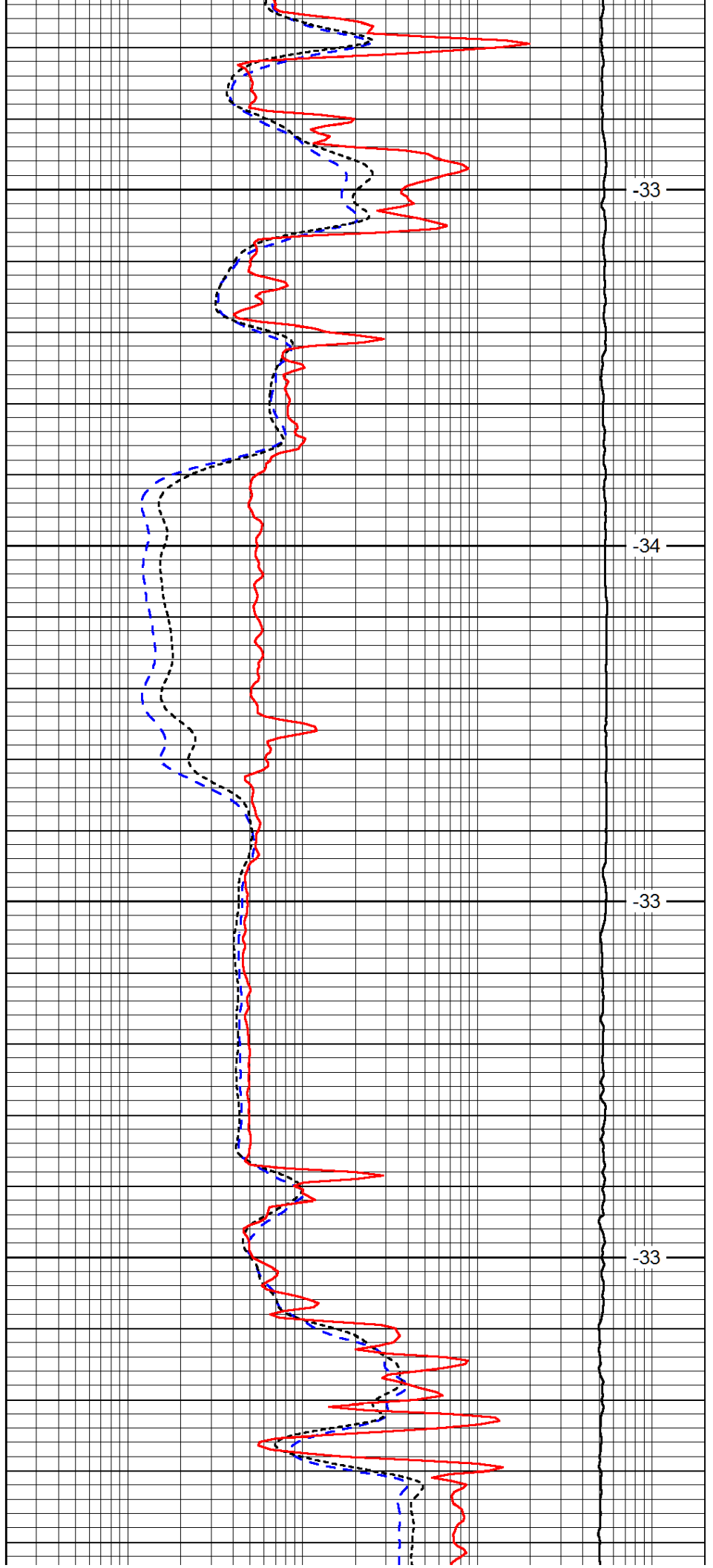


3450

3500

3550

3600

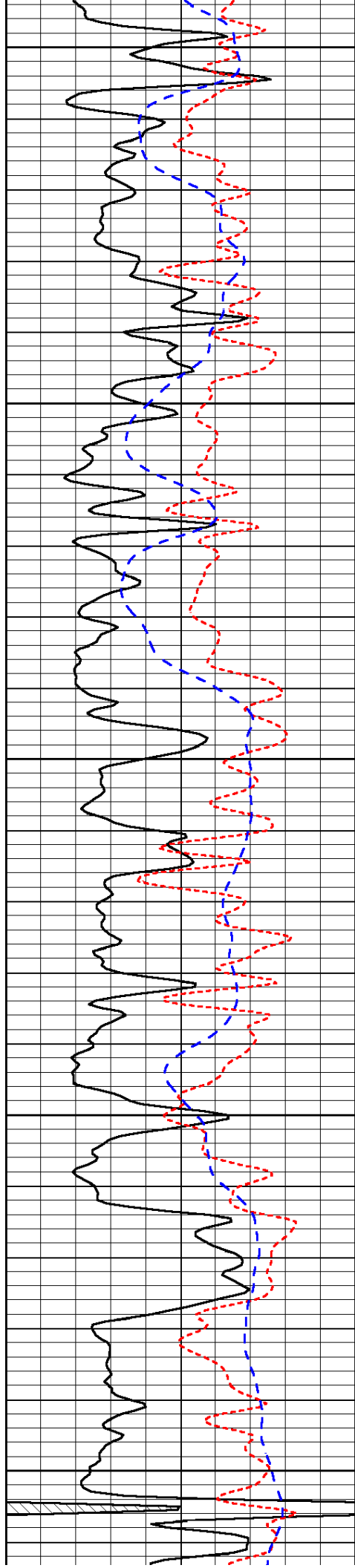


-33

-34

-33

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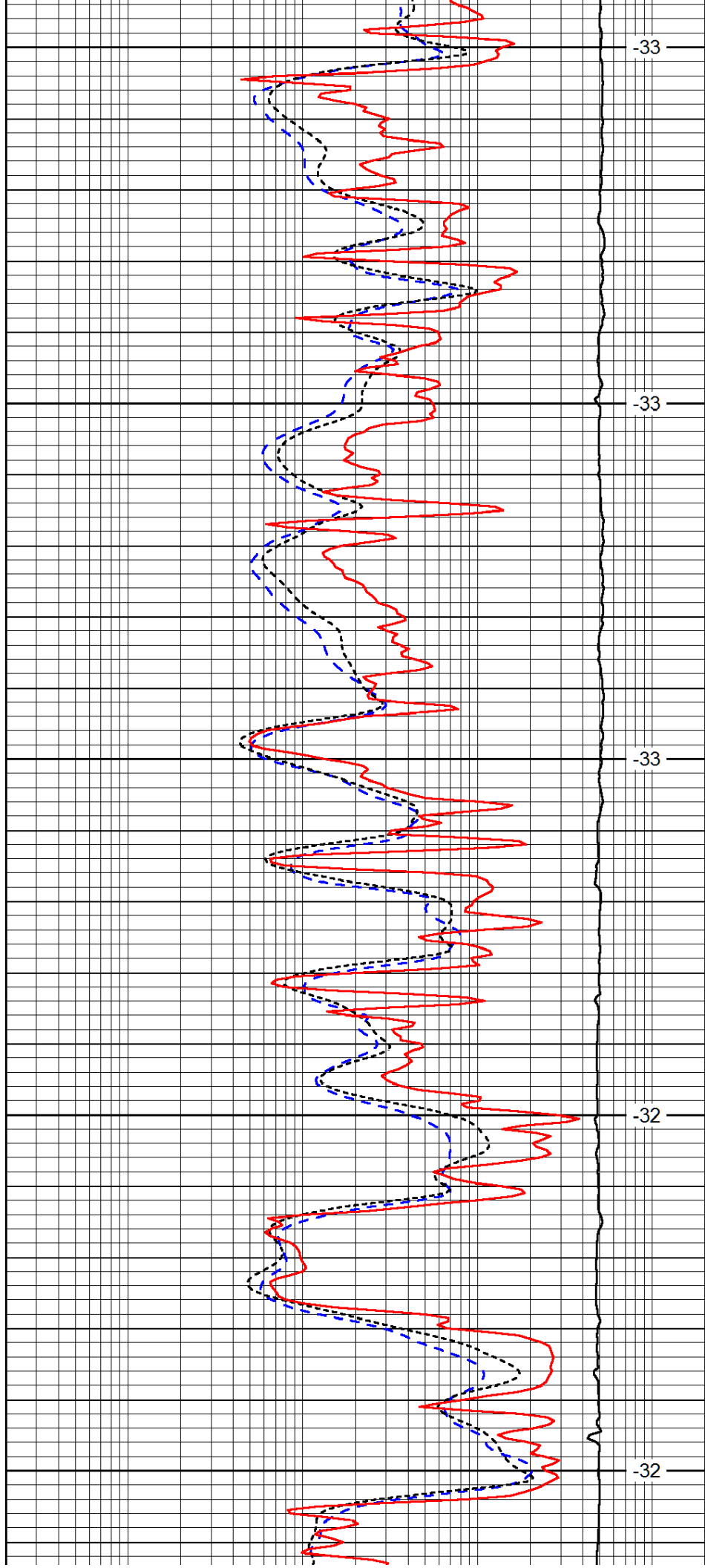
3650

3700

3750

3800

3850



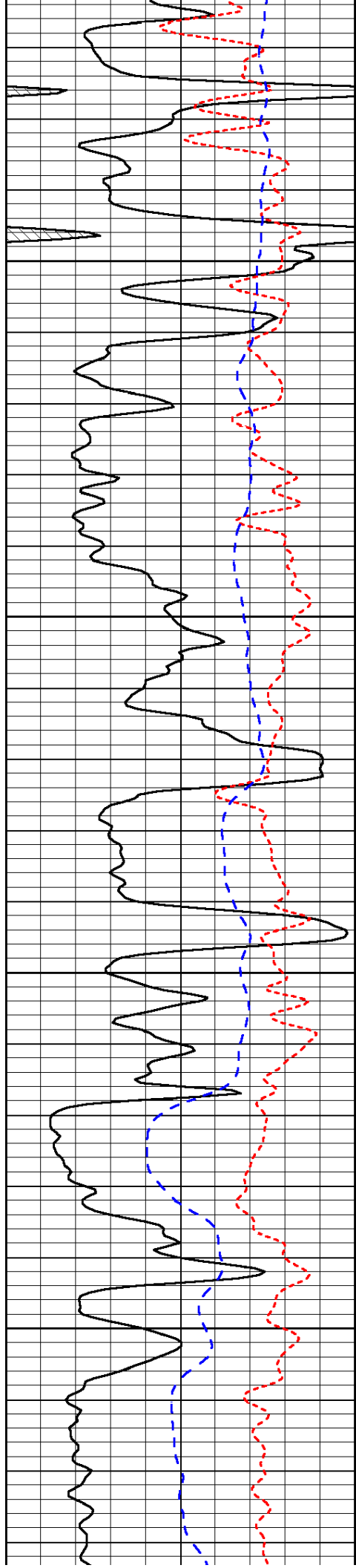
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-33

-33

-32

-32

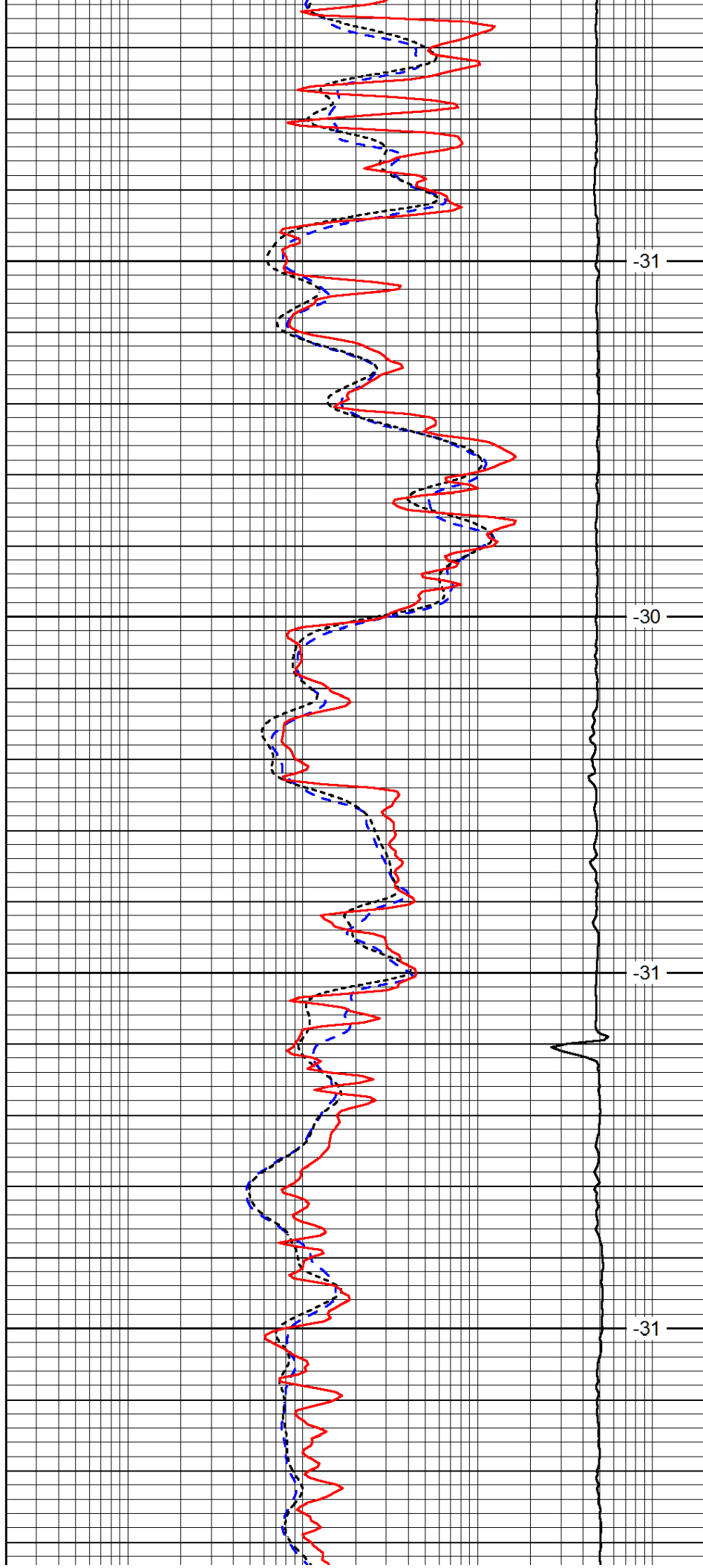


3900

3950

4000

4050

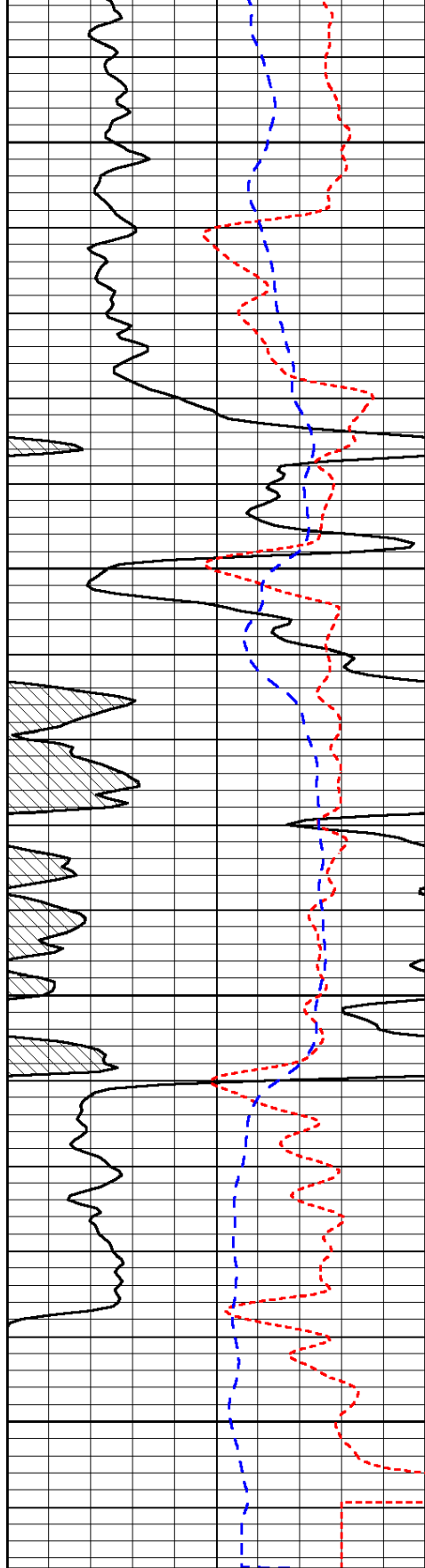


-31

-30

-31

-31



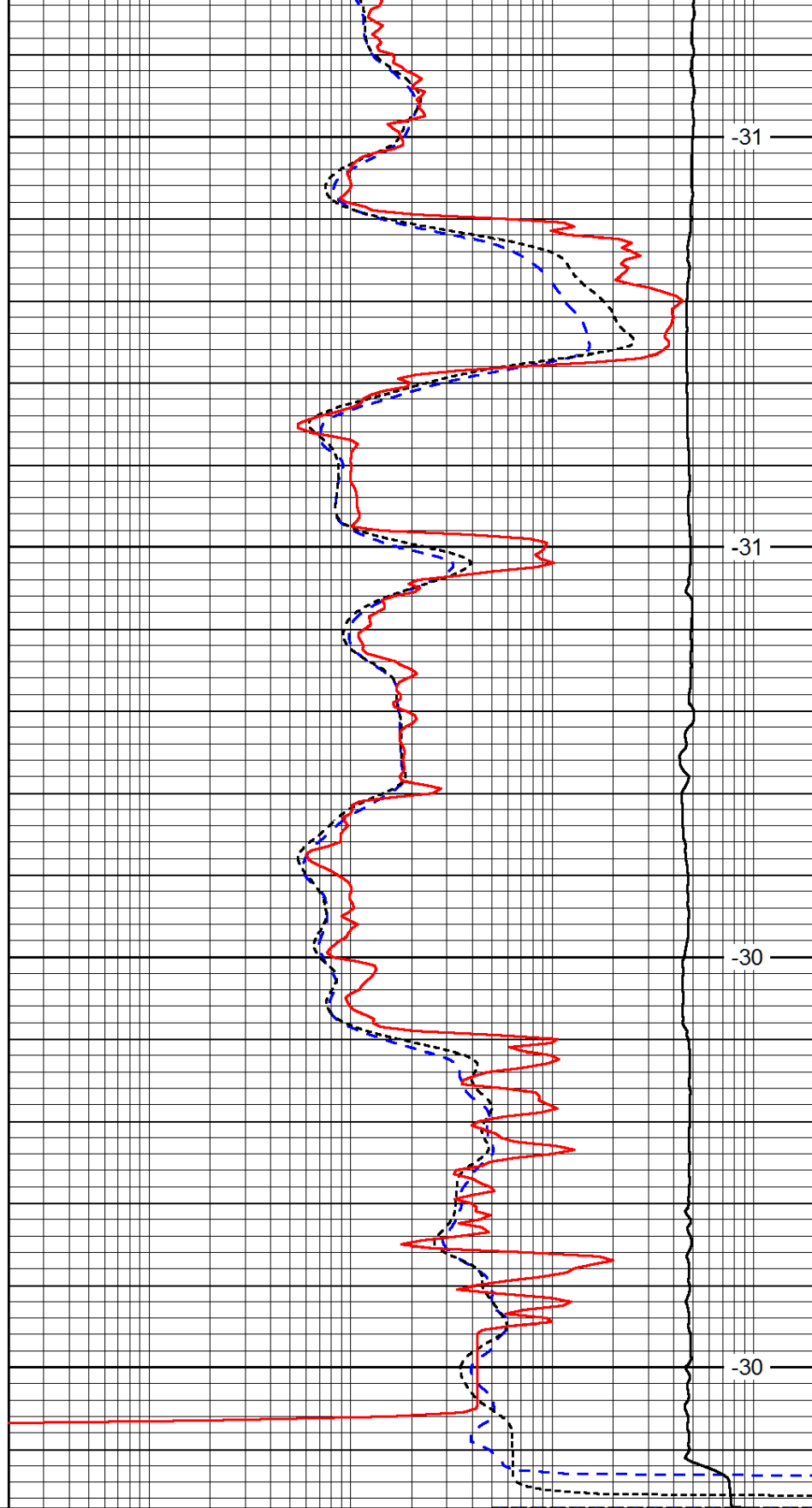
0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

4100

4150

4200

4250



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)