



Pioneer Energy Services

Dual Induction Log

API No. 15-193-20889-00-00

Company **Culbreath Oil & Gas Company, Inc.**
 Well **Ostmeyer #1-20**
 Field **Wildcat**
 County **Thomas** State **Kansas**

Location **850' FNL & 1220' FWL**

Sec: 20 Twp: 10S Rge: 31W

Other Services
 CNL/CDL
 MEL/BHCS

Permanent Datum	Ground Level	Elevation 2970	
Log Measured From	Kelly Bushing	10 Ft. Above Perm. Datum	K.B. 2980
Drilling Measured From	Kelly Bushing		D.F. 2970
			G.L. 2970
Date	4/14/2013		
Run Number	One		
Depth Driller	4676		
Depth Logger	4676		
Bottom Logged Interval	4675		
Top Log Interval	300		
Casing Driller	8.625 @ 310		
Casing Logger	306		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	2000		
Density / Viscosity	9.3 60		
pH / Fluid Loss	9.5 7.6		
Source of Sample	Flowline		
Rm @ Meas. Temp	1.30 @ 60		
Rmf @ Meas. Temp	0.98 @ 60		
Rmc @ Meas. Temp	1.76 @ 60		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.63 @ 125		
Operating Rig Time	5 Hours		
Max Rec. Temp. F	125		
Equipment Number	91		
Location	Hays		
Recorded By	D. Schmidt		
Witnessed By	Steve Murphy		

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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
 Oakley (Mittens),
 1 1/2 West on Old Hwy 40 to 450 Rd, 1 North to the T,
 1 East to 460 Rd, 2 1/2 North,
 East & North into

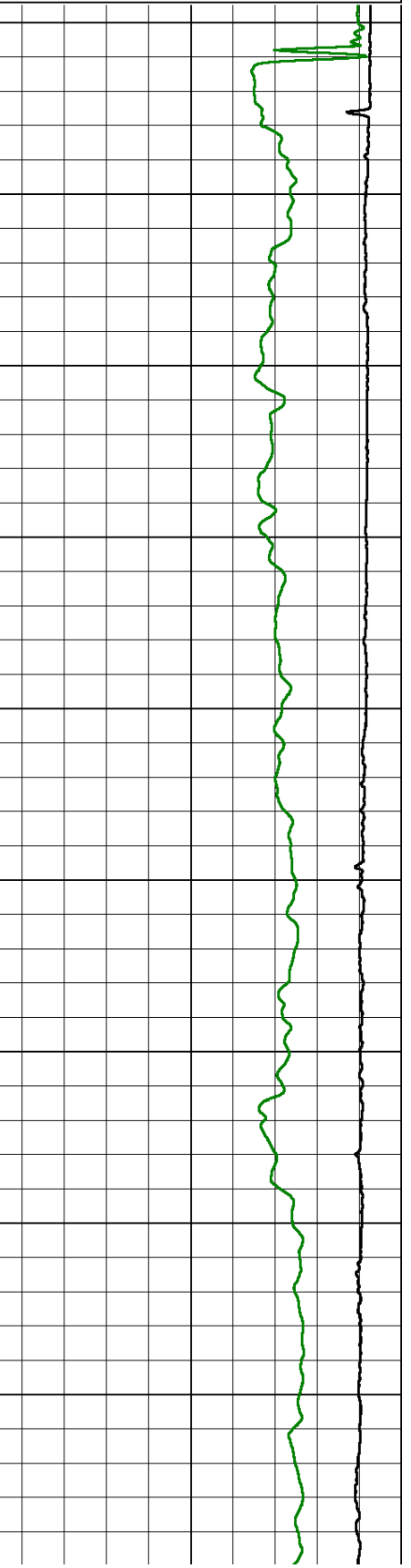
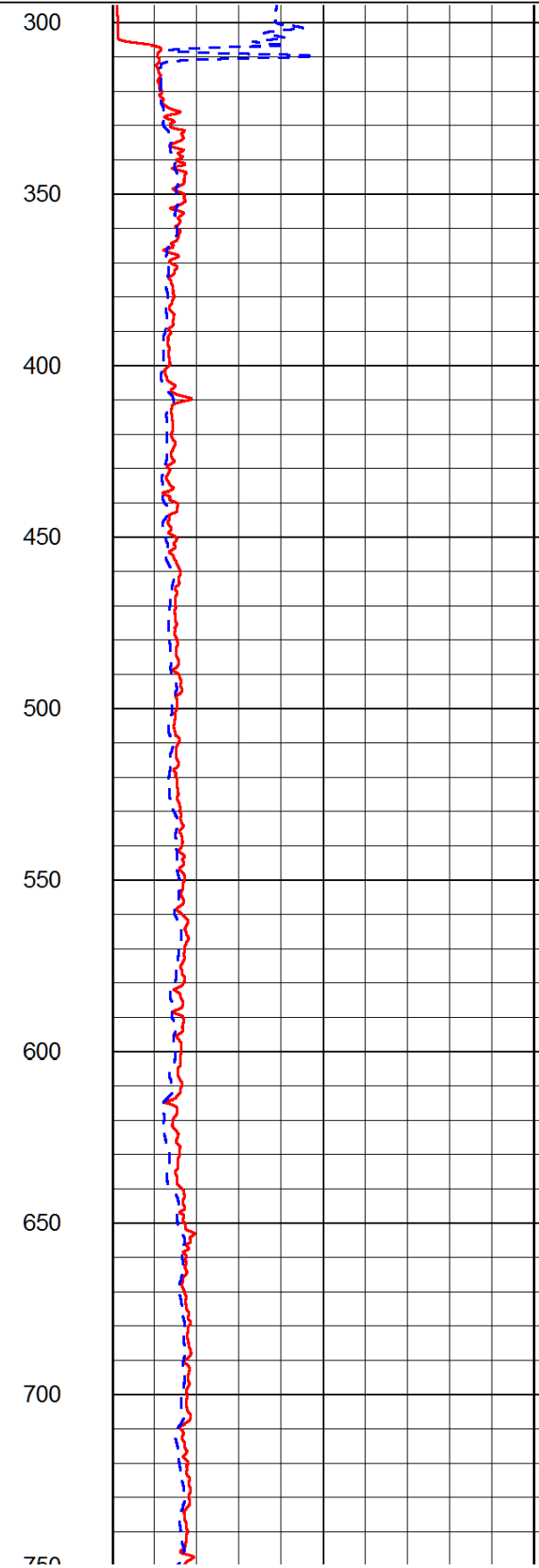
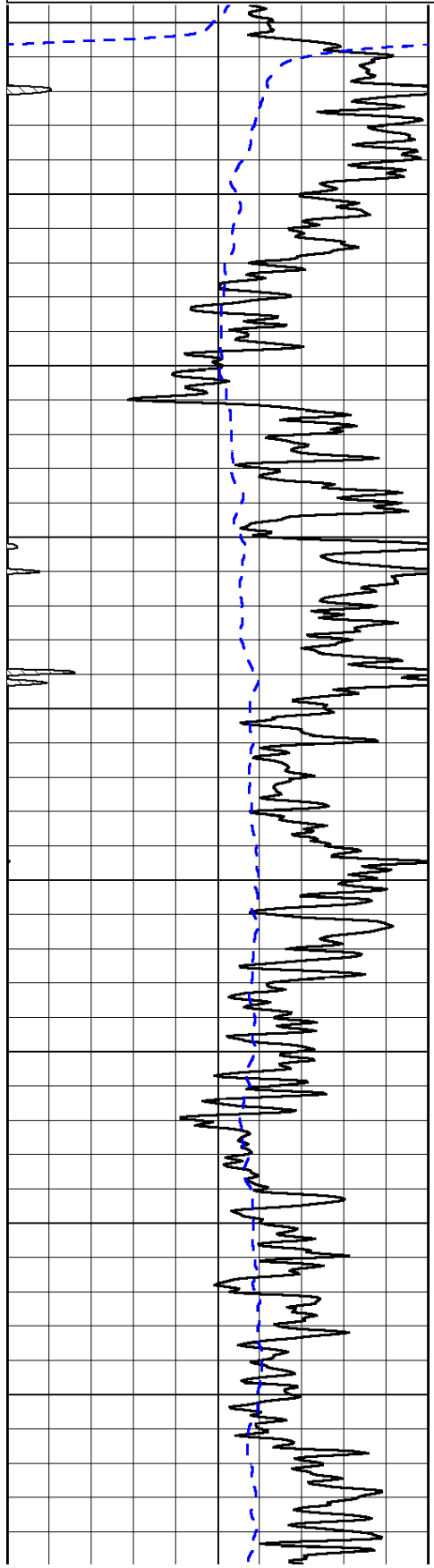
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 Dataset Pathname: dil/culstk
 Presentation Format: dil2in
 Dataset Creation: Sun Apr 14 21:23:00 2013
 Charted by: Depth in Feet scaled 1:600

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

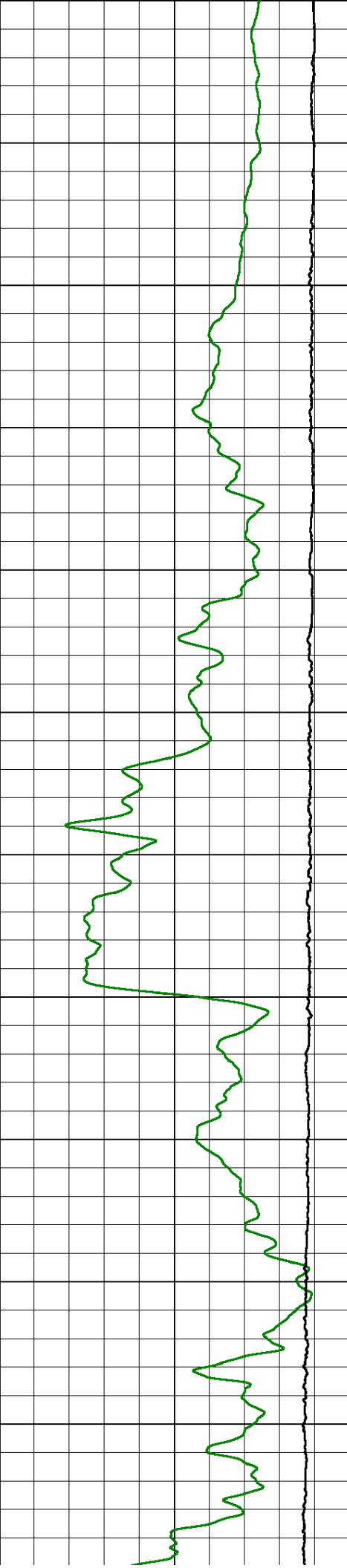
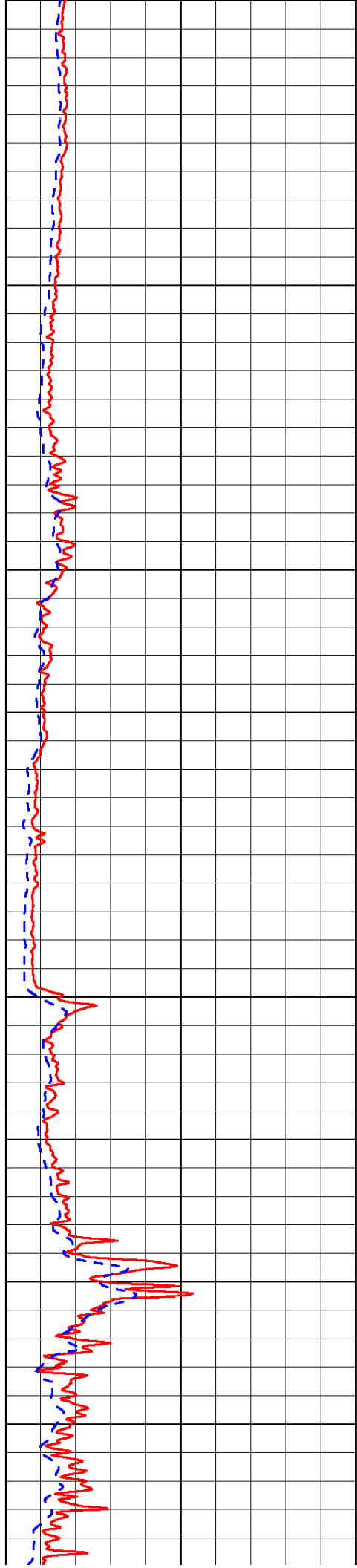
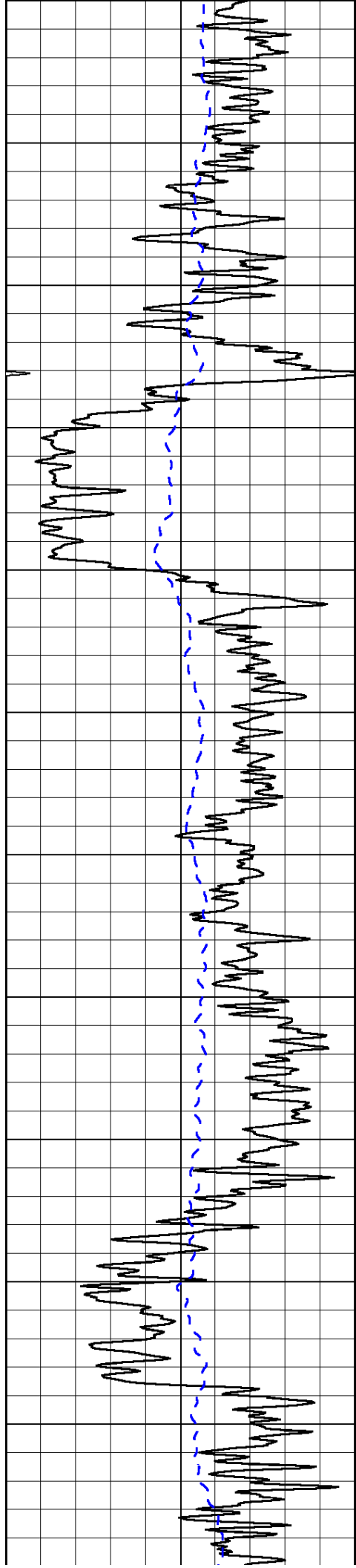
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50

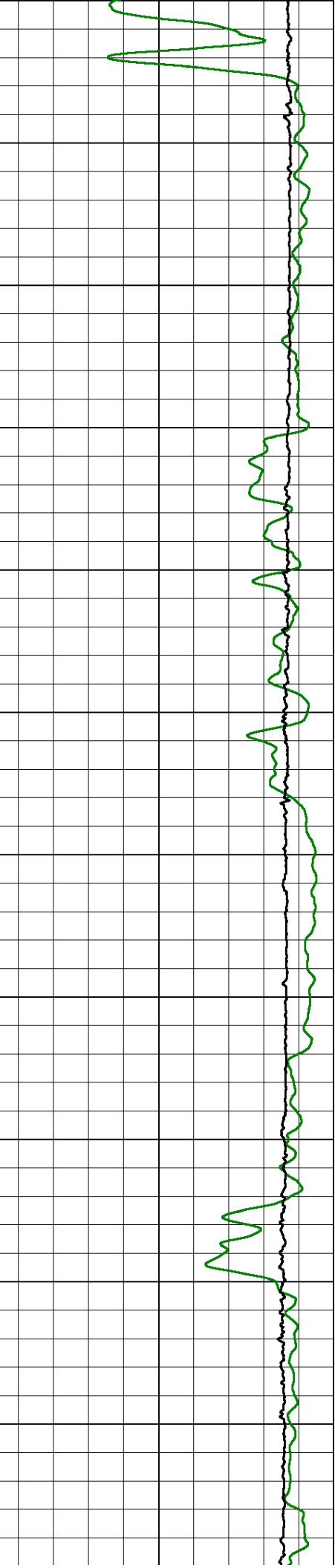
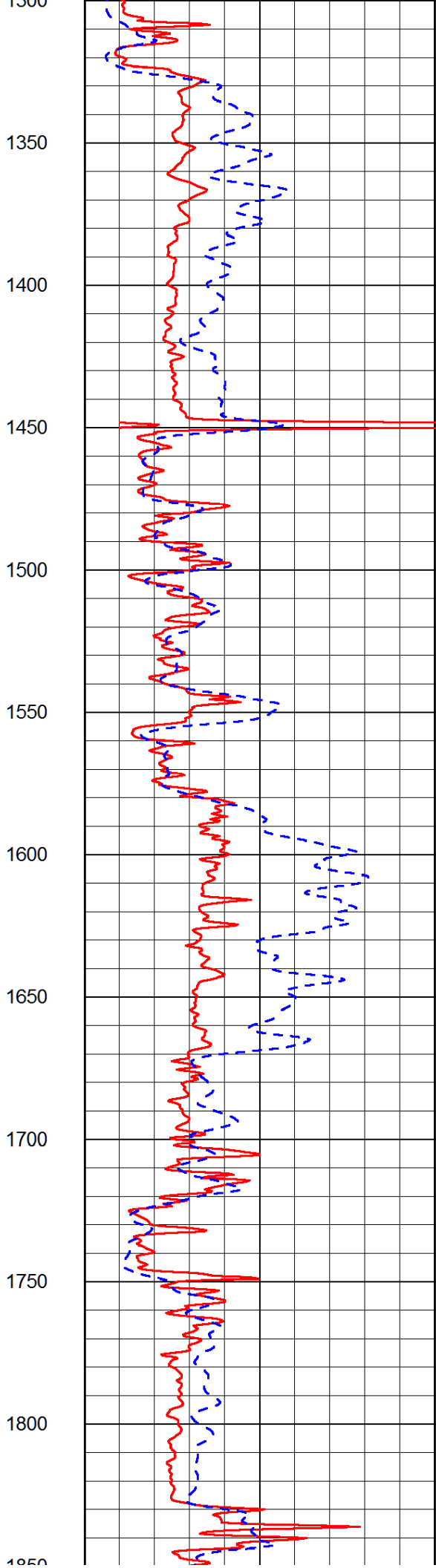
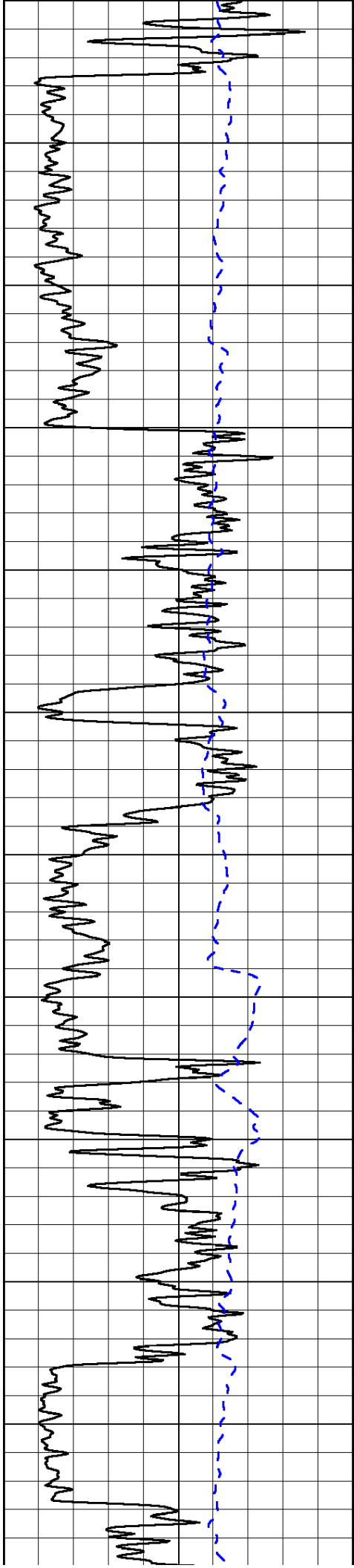
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0

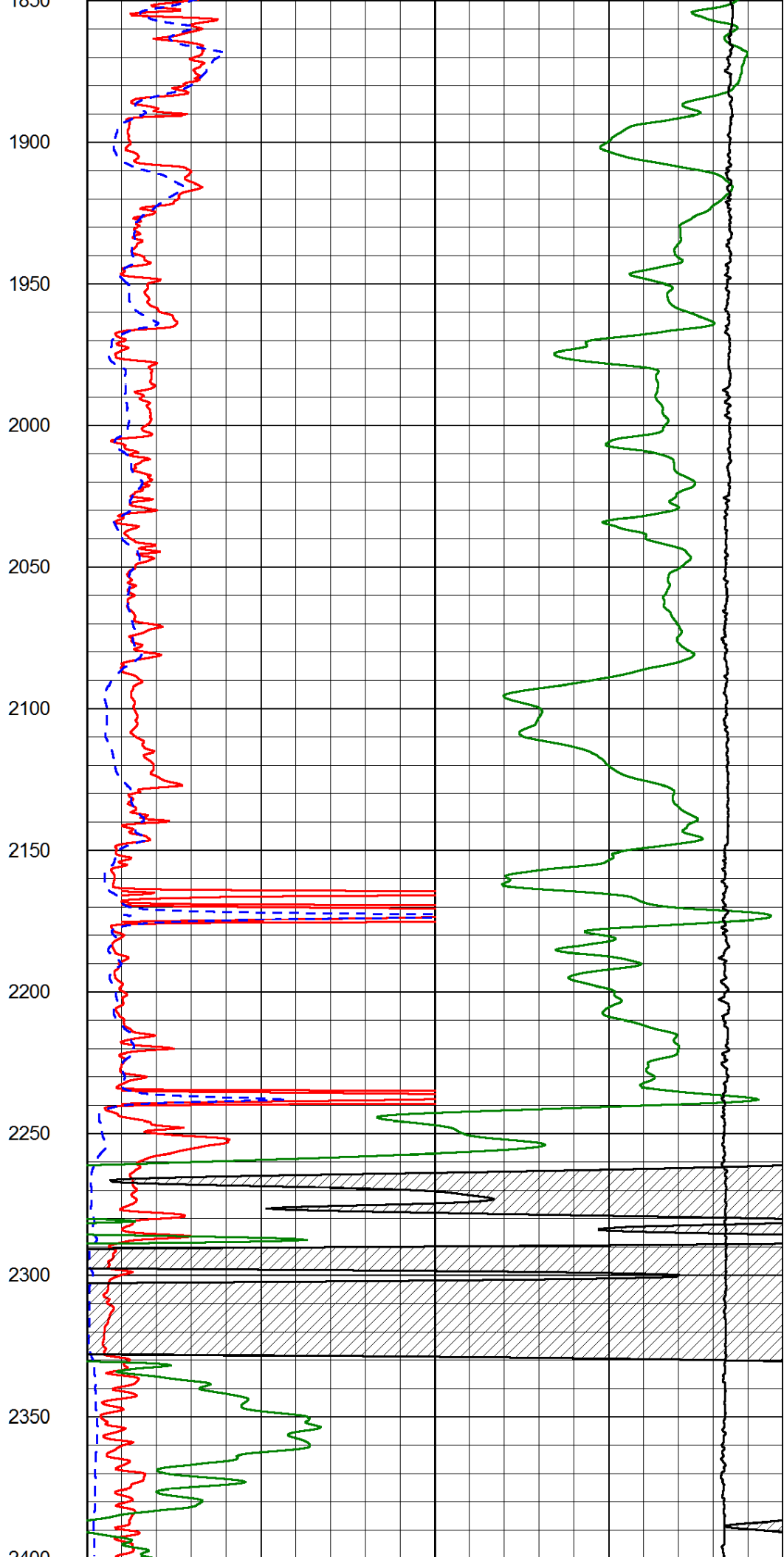
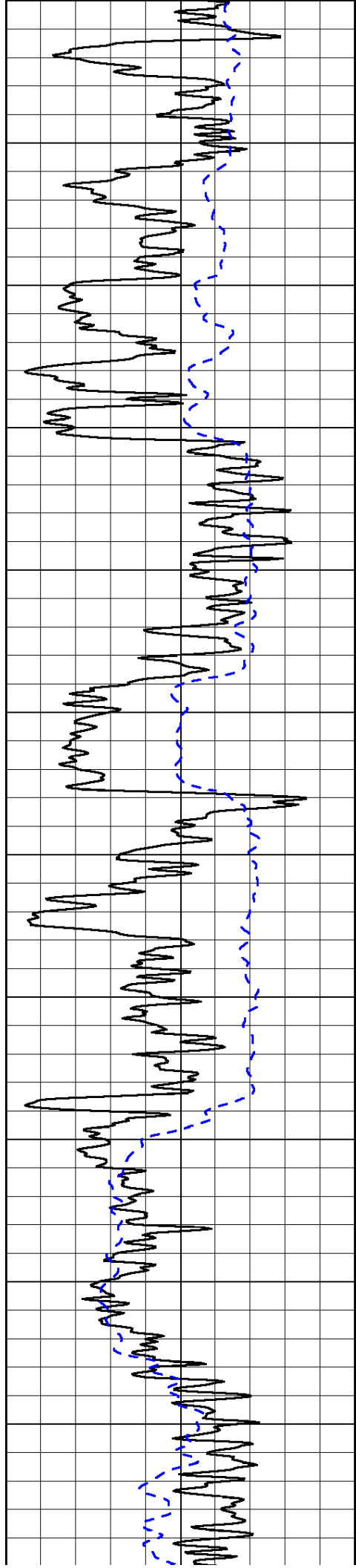
Shallow Resistivity		
50	(Ohm-m)	500
Deep Resistivity (Ohm-m) 500		

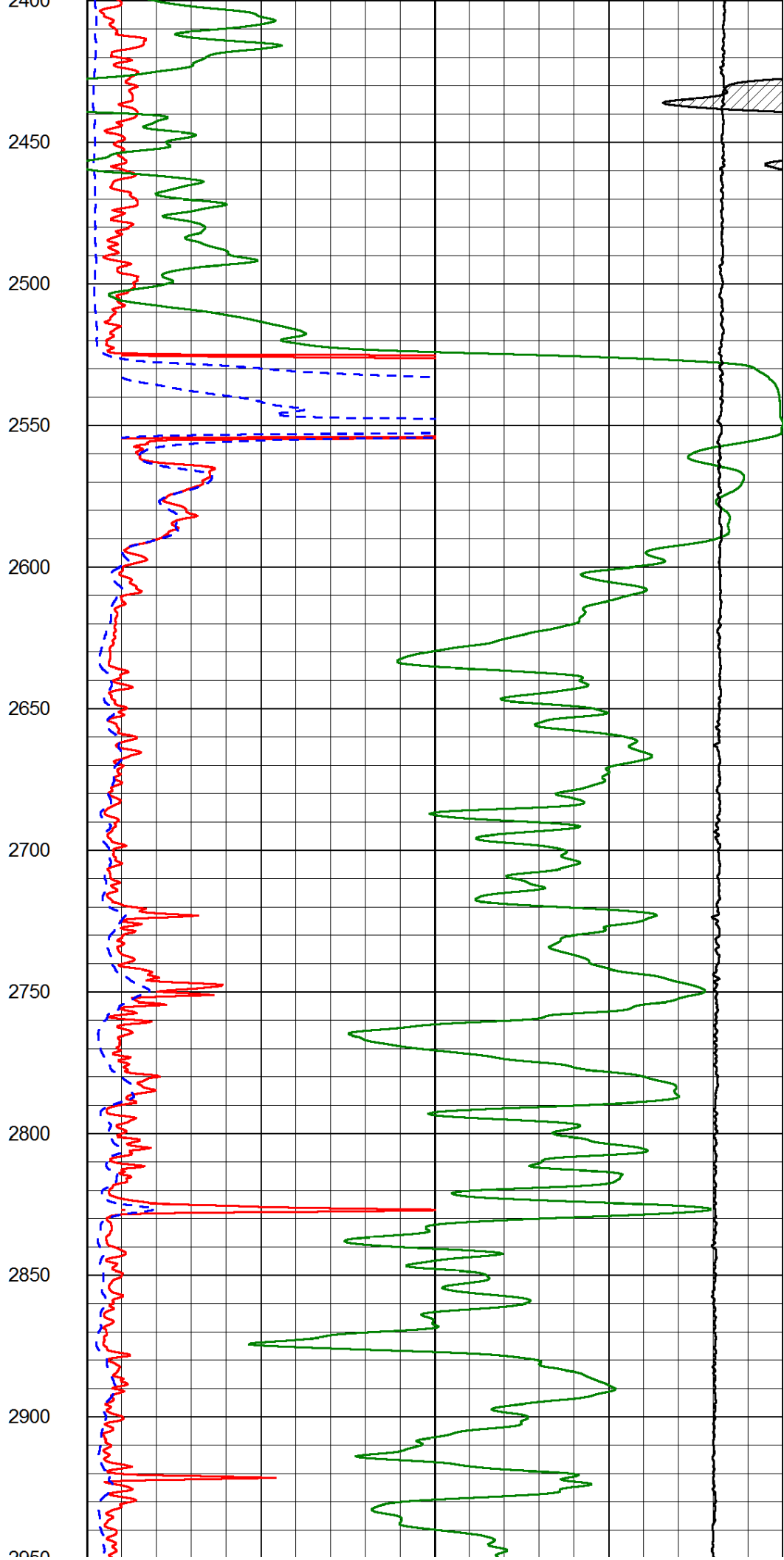
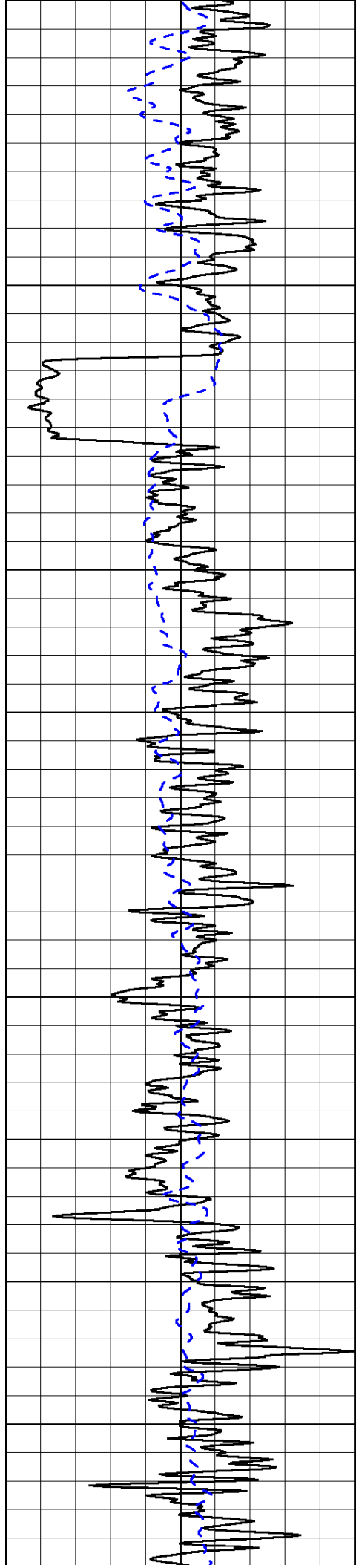


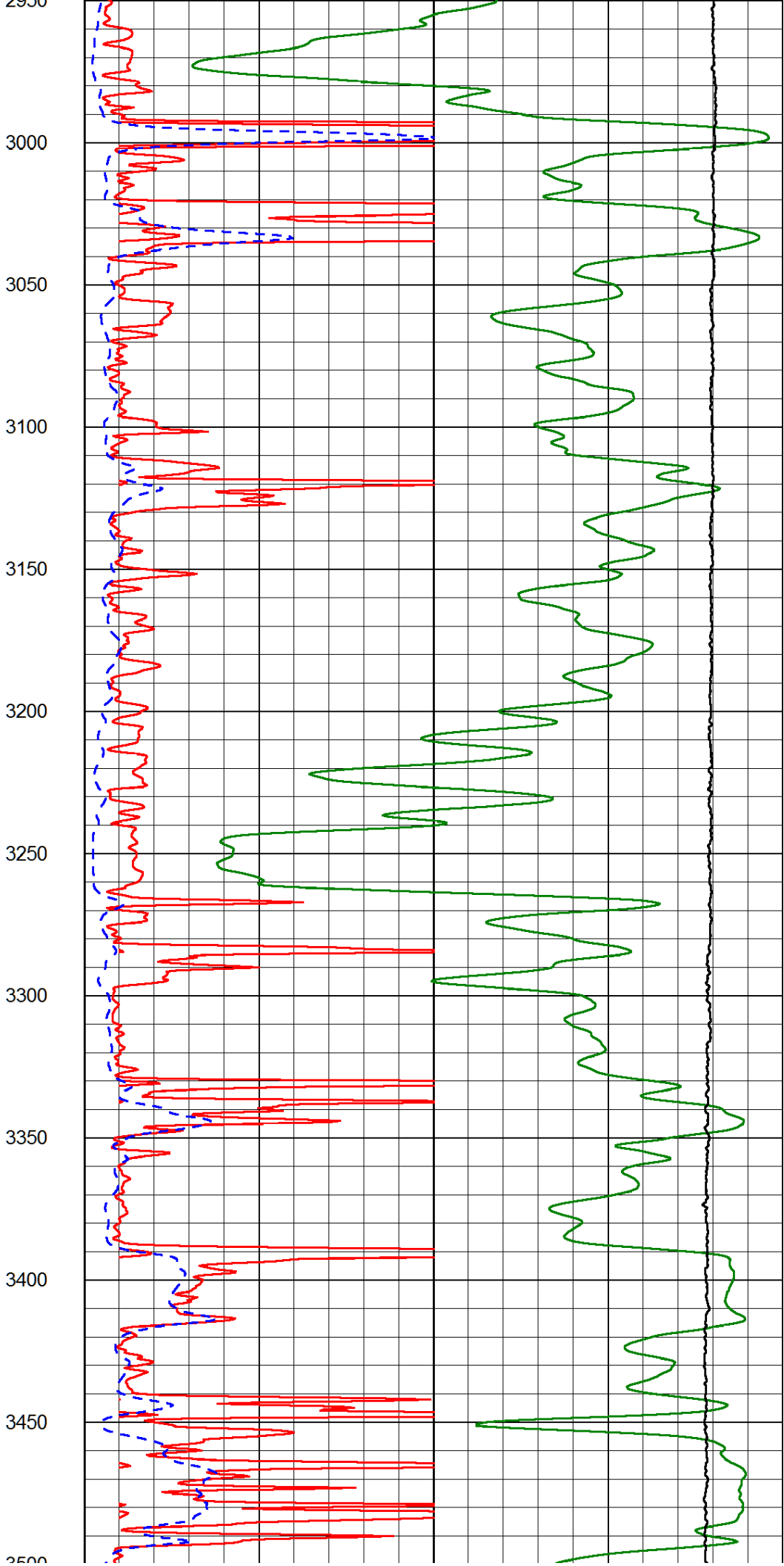
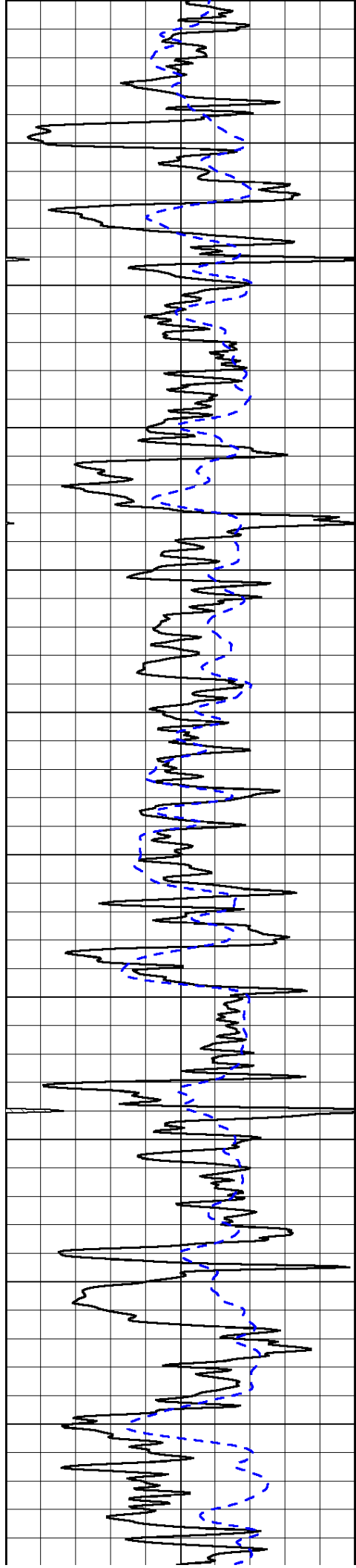
300
350
400
450
500
550
600
650
700
750

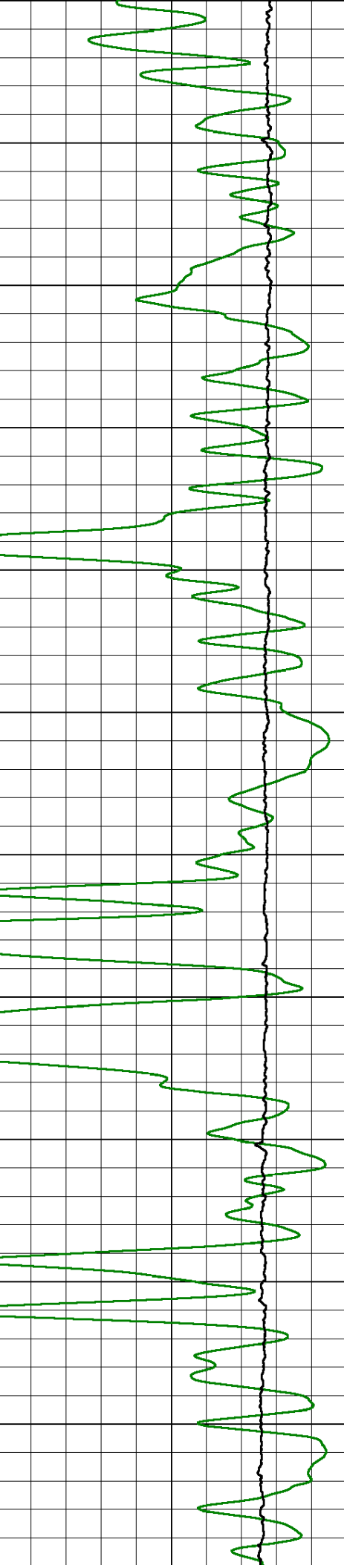
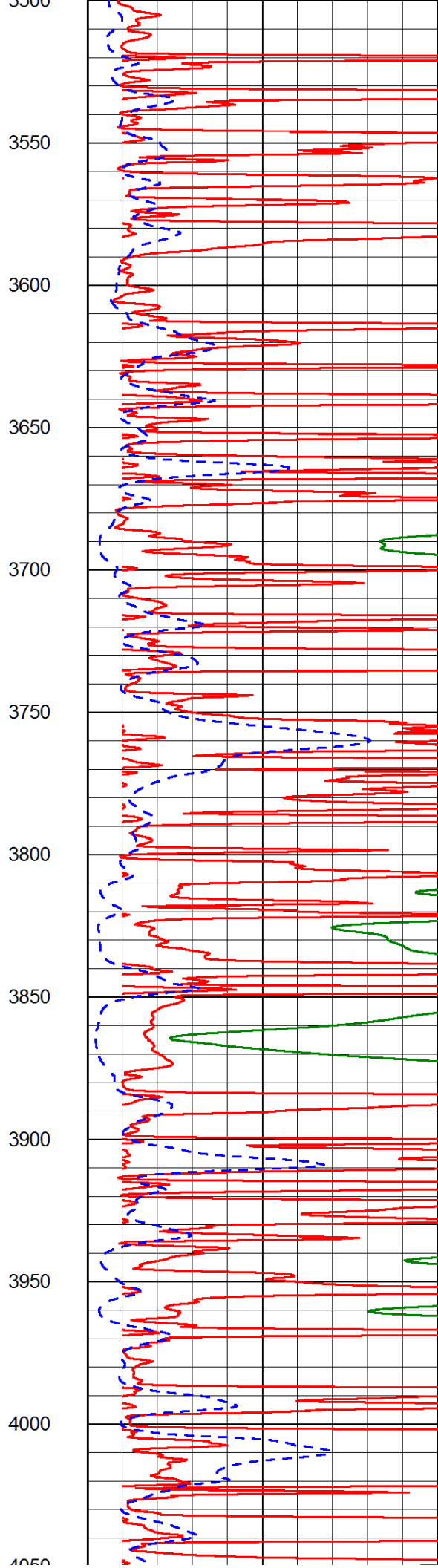
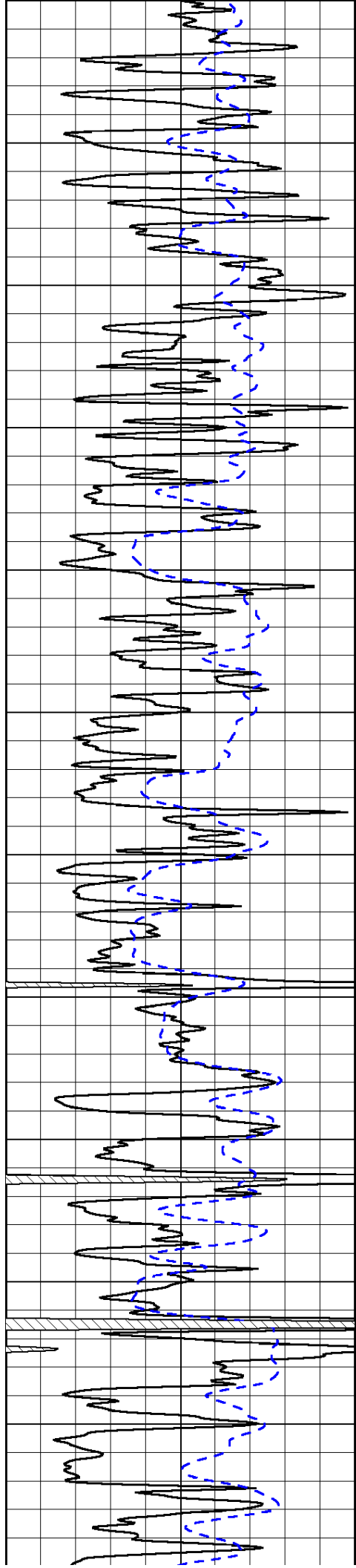


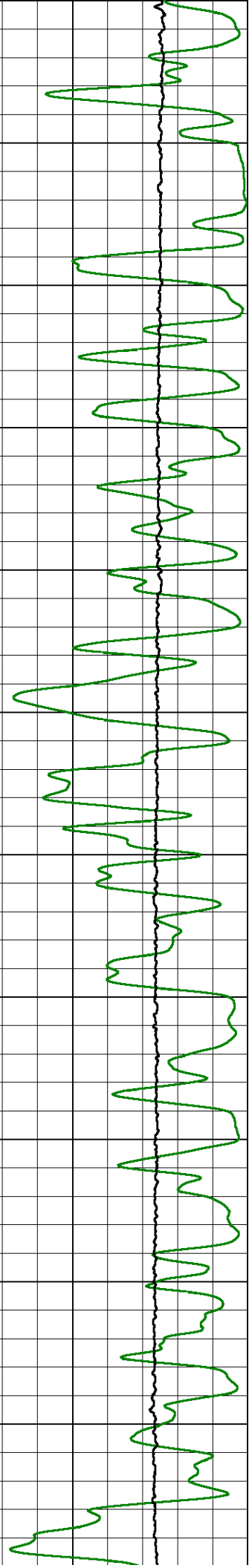
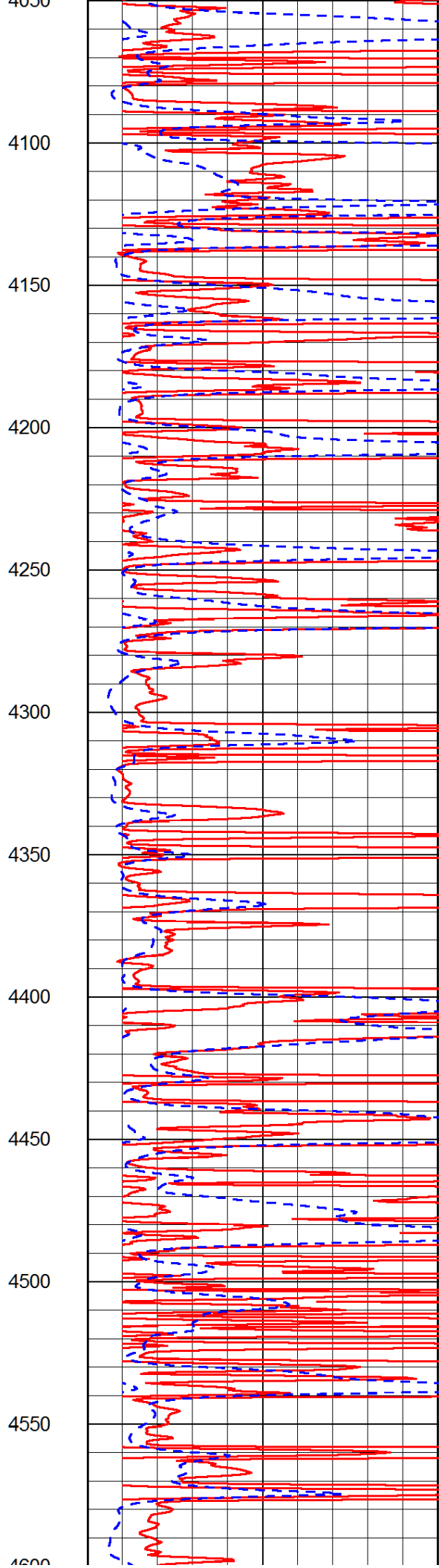
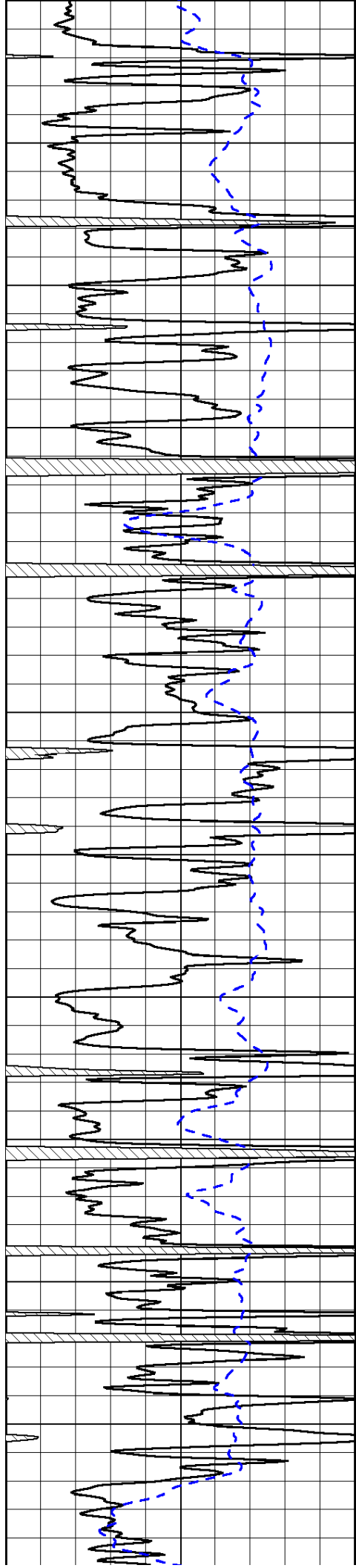


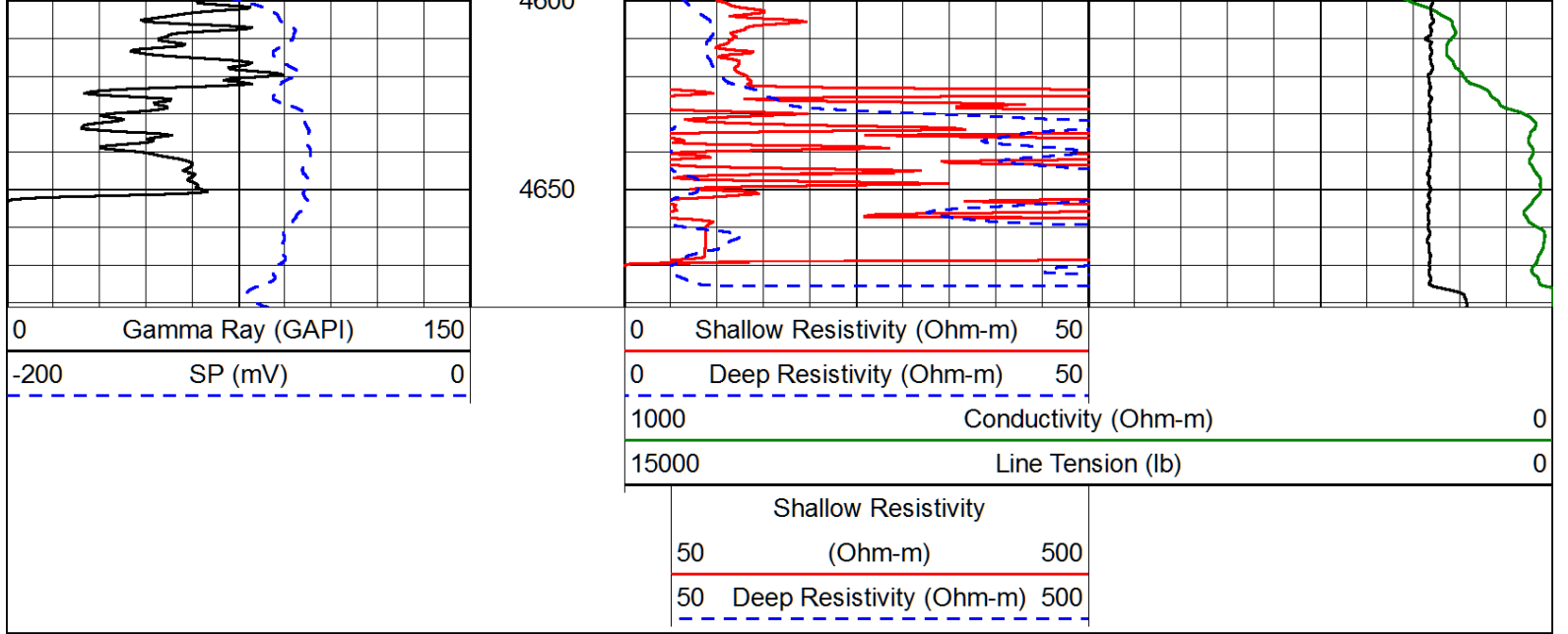




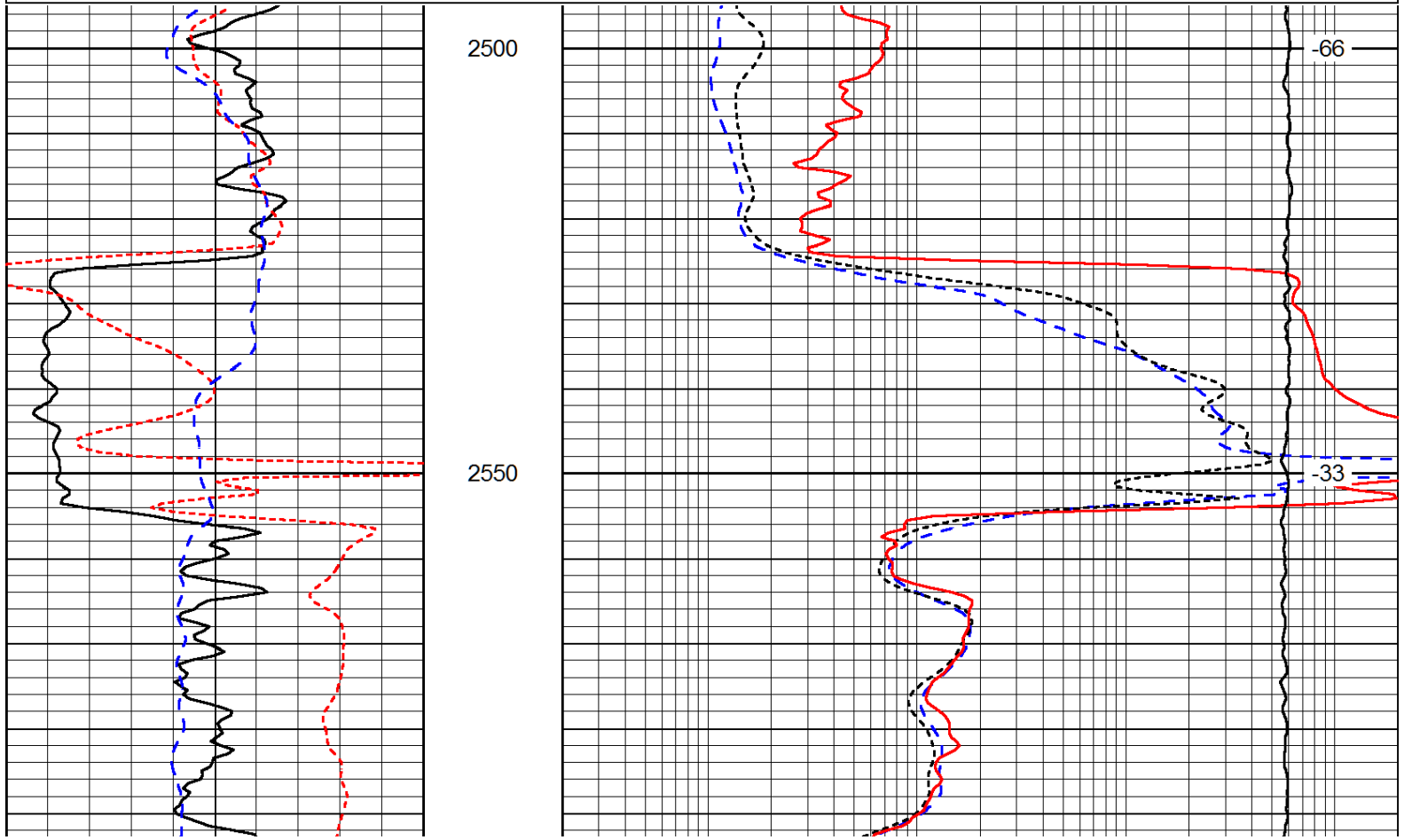
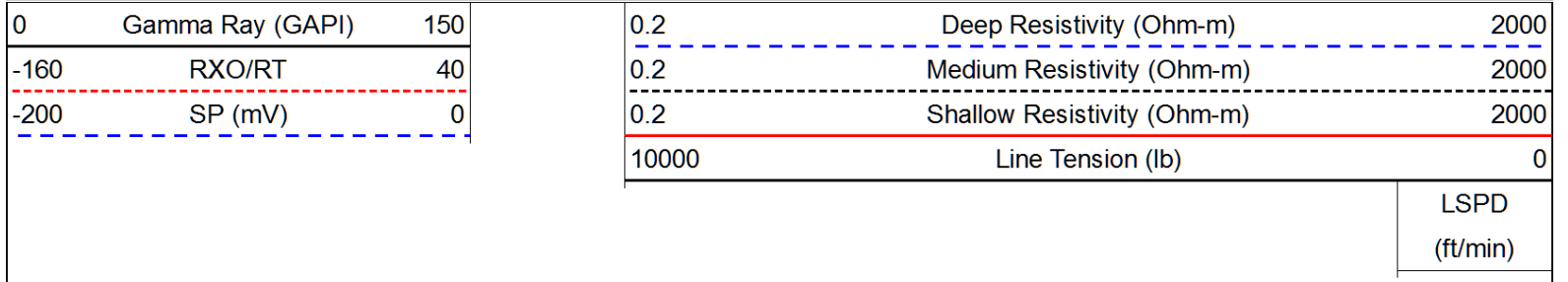


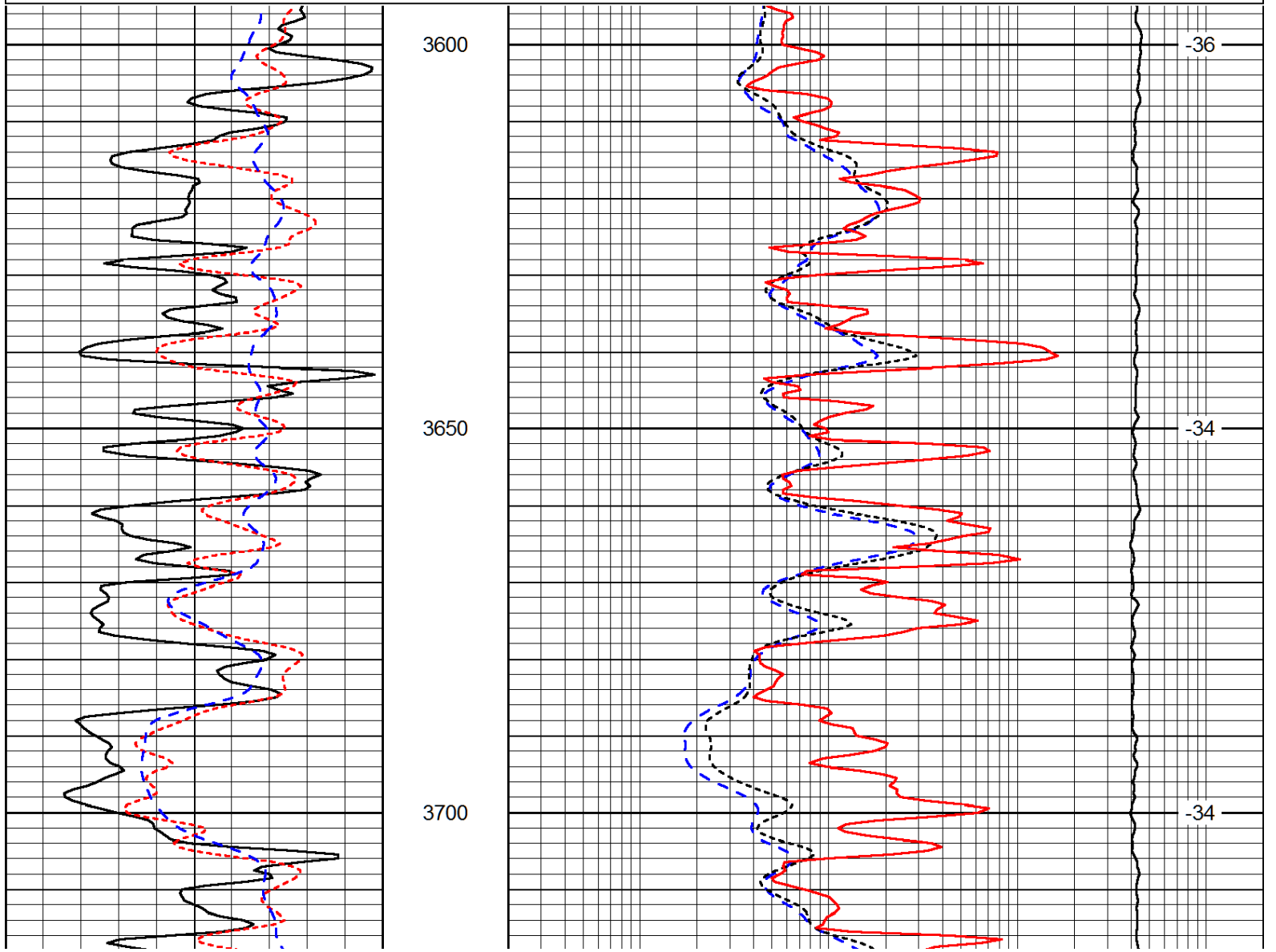
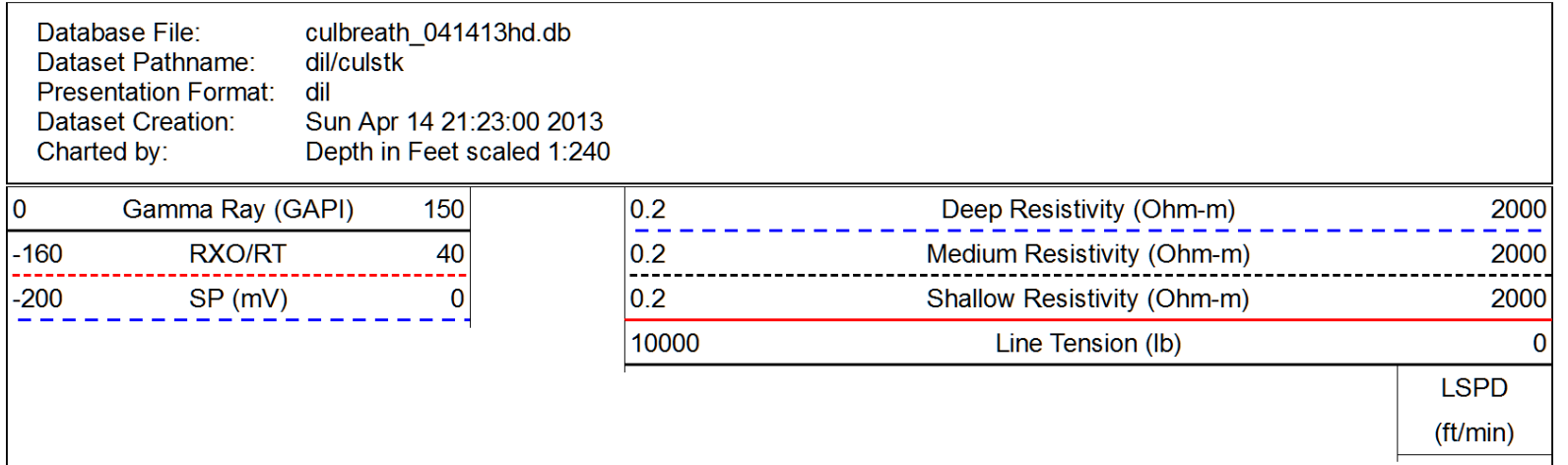
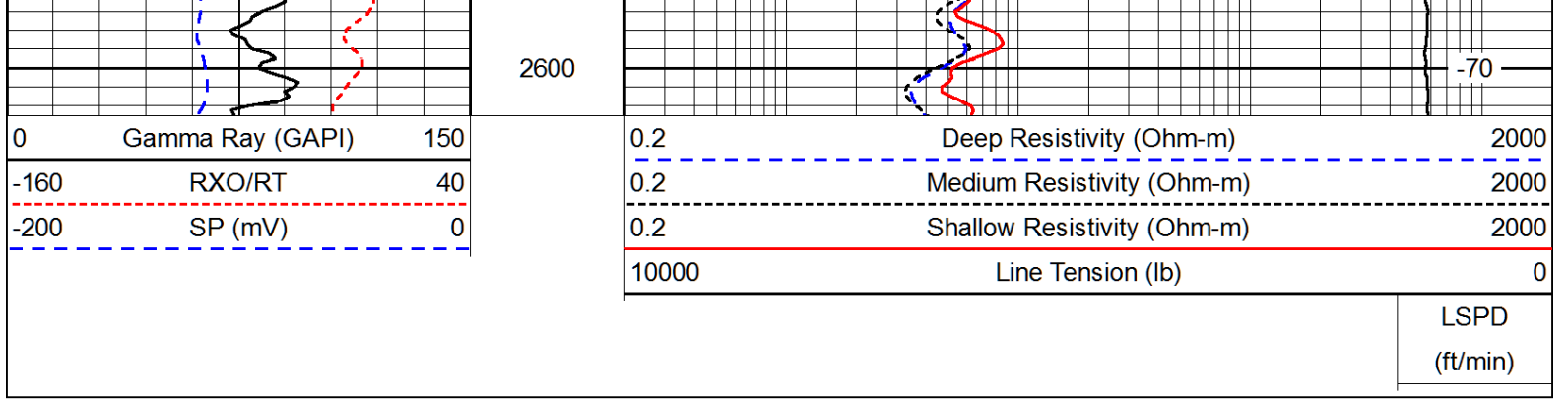


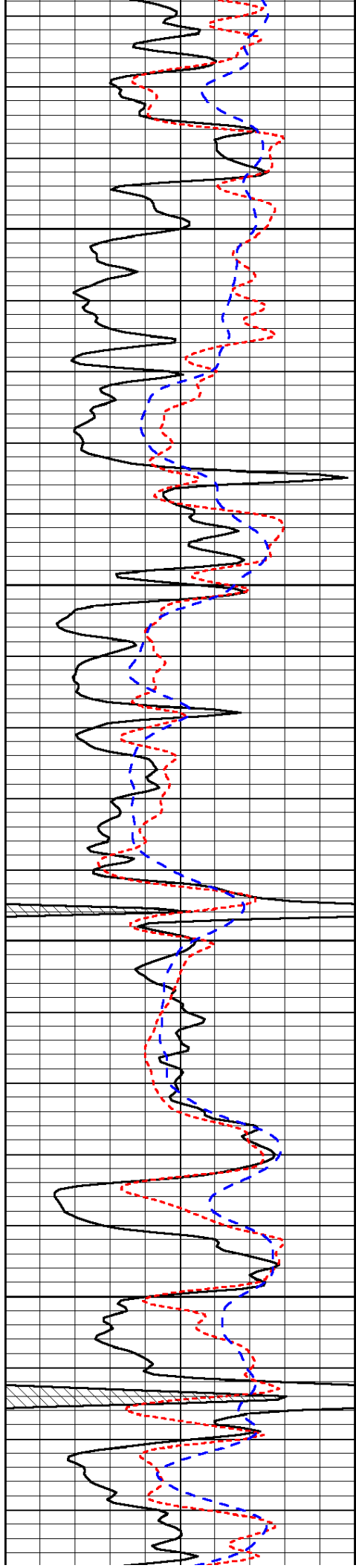




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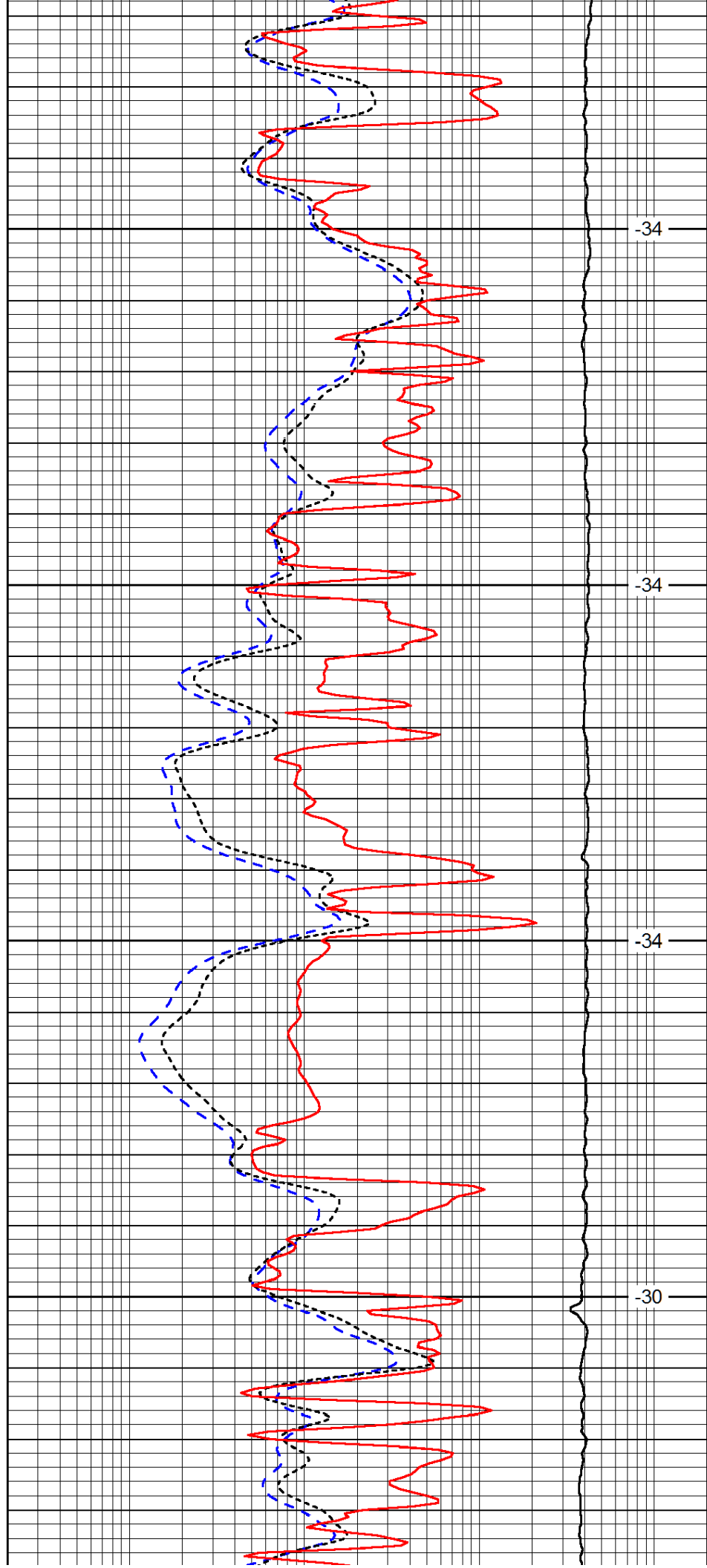


3750

3800

3850

3900

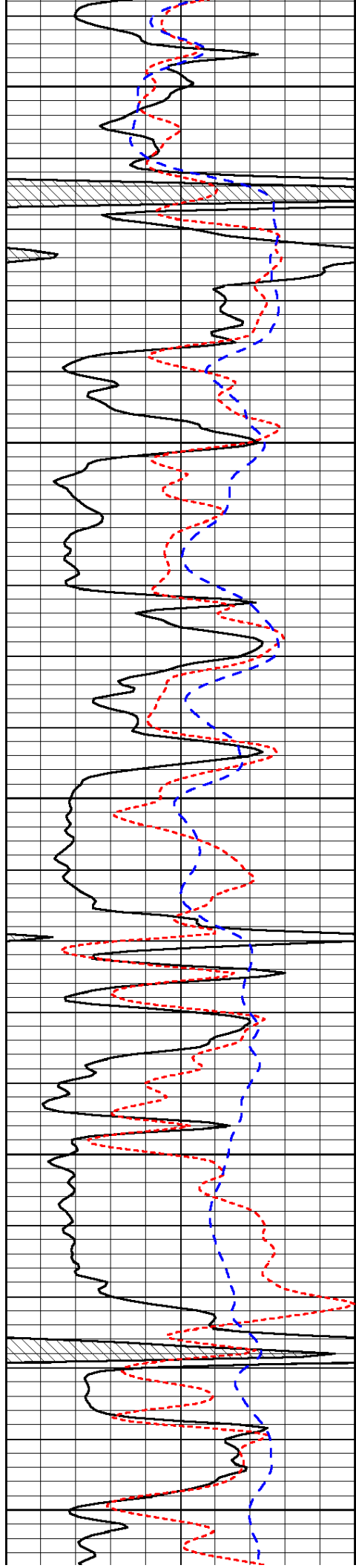


-34

-34

-34

-30



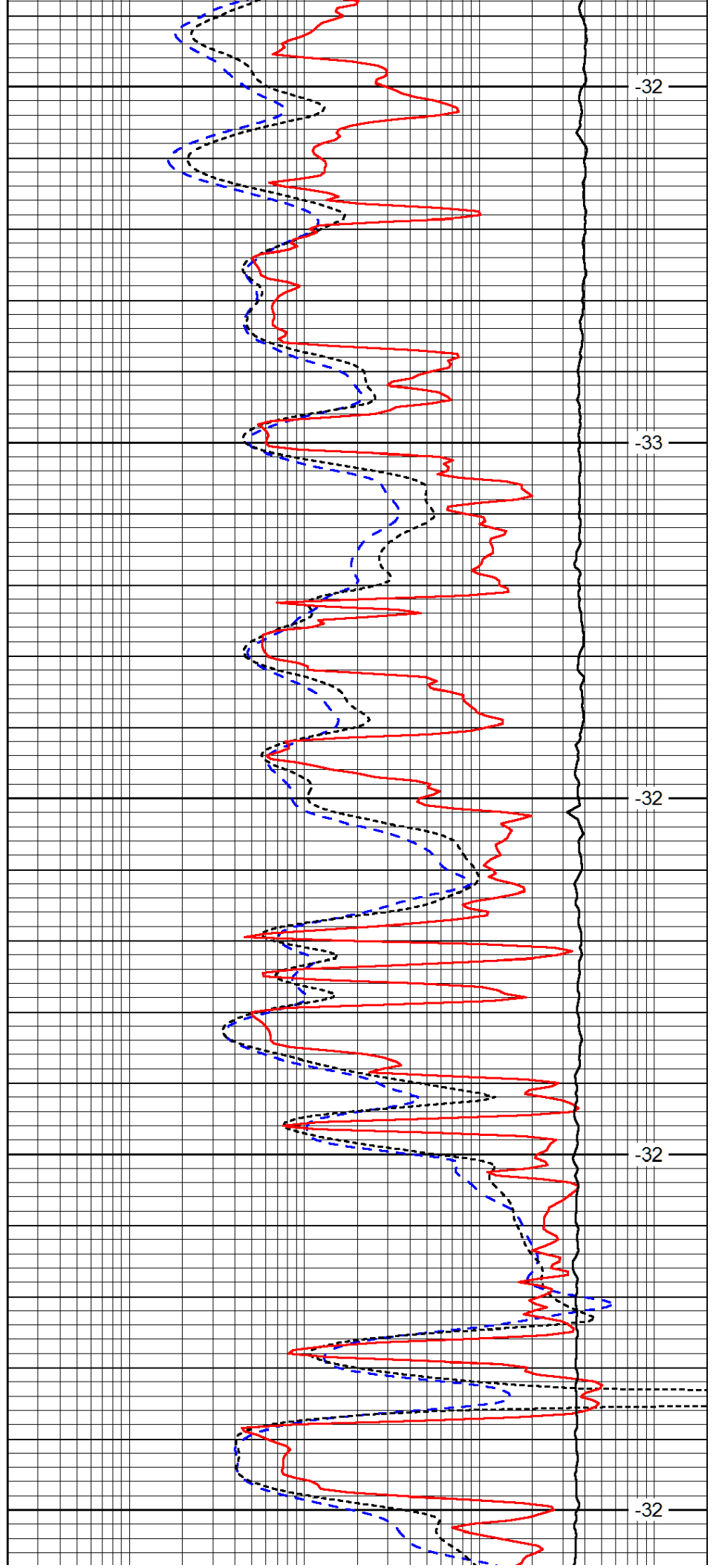
3950

4000

4050

4100

4150



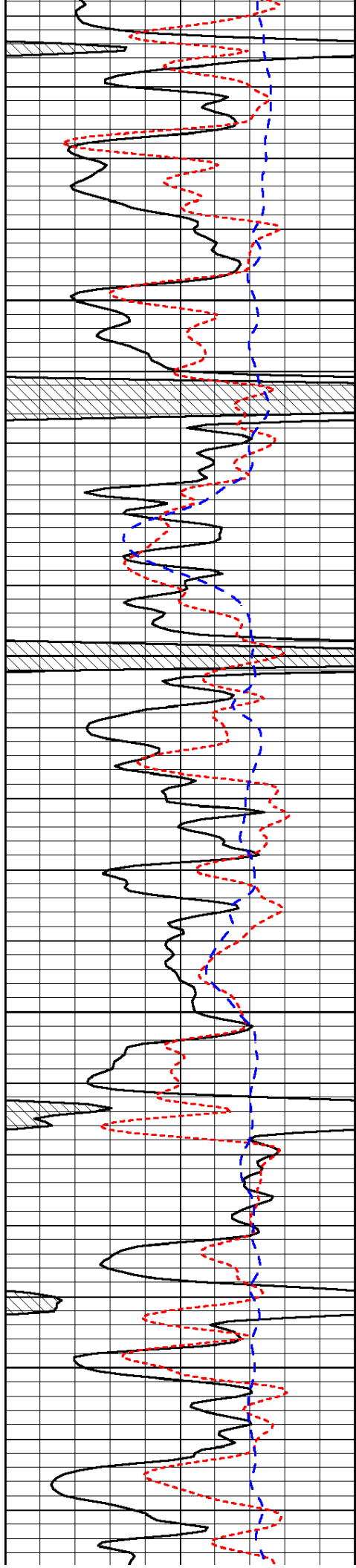
-32

-33

-32

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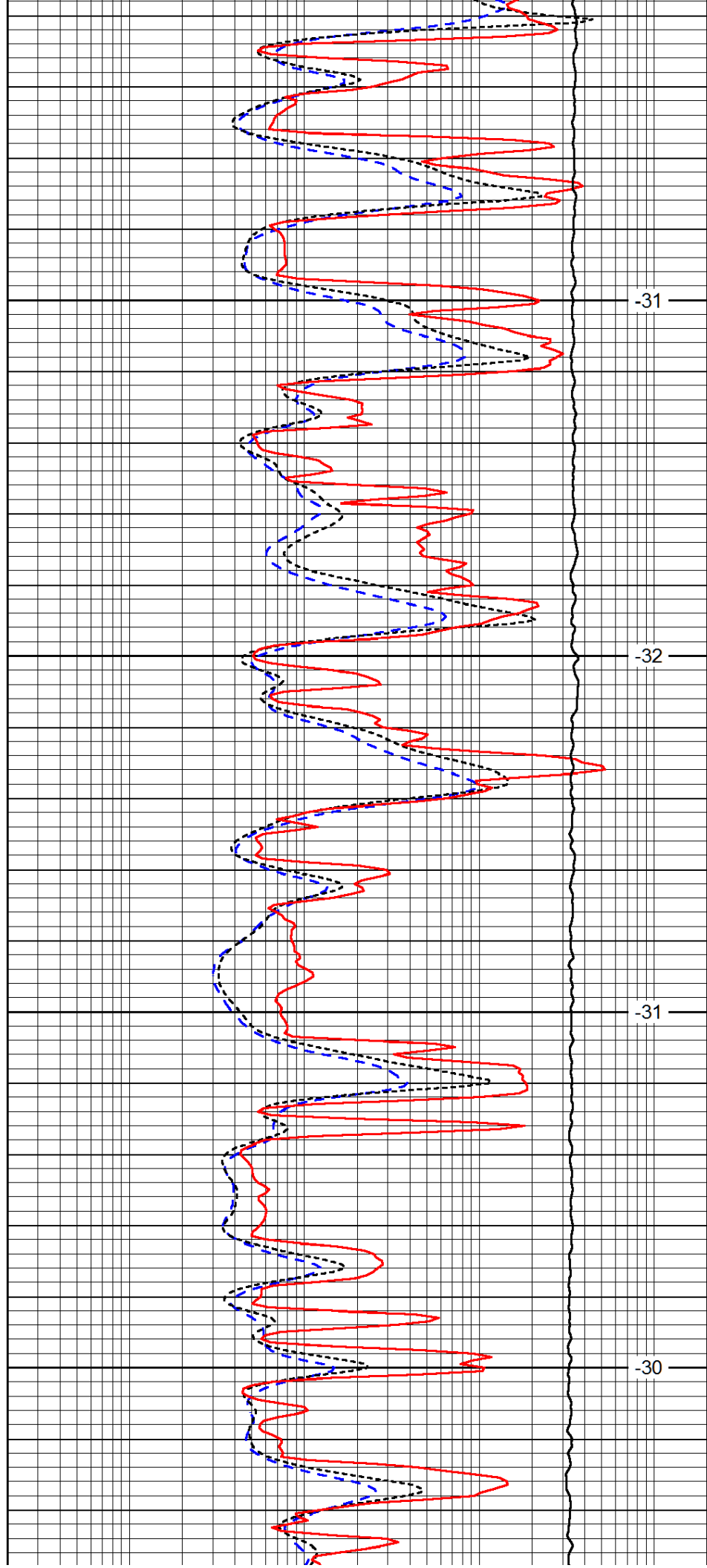


4200

4250

4300

4350

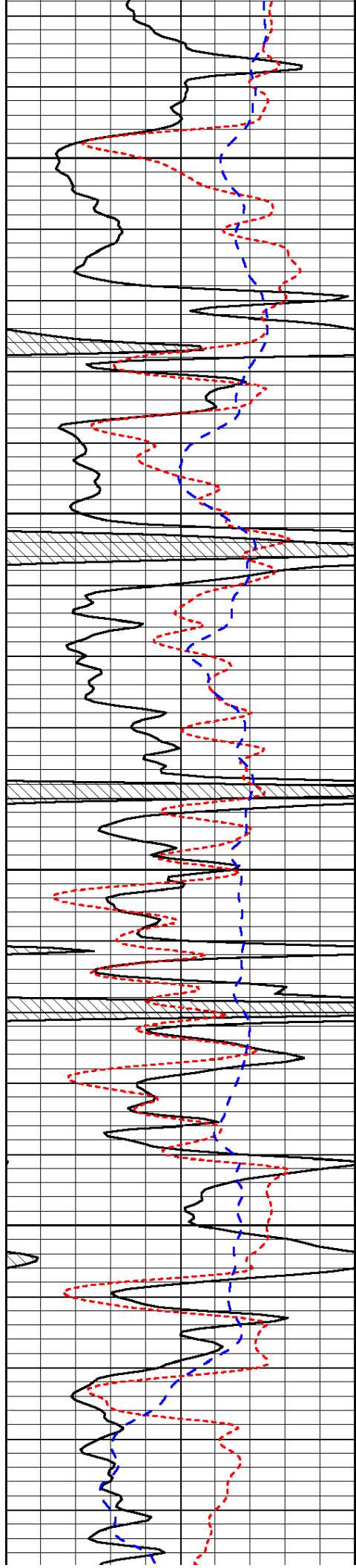


-31

-32

-31

-30

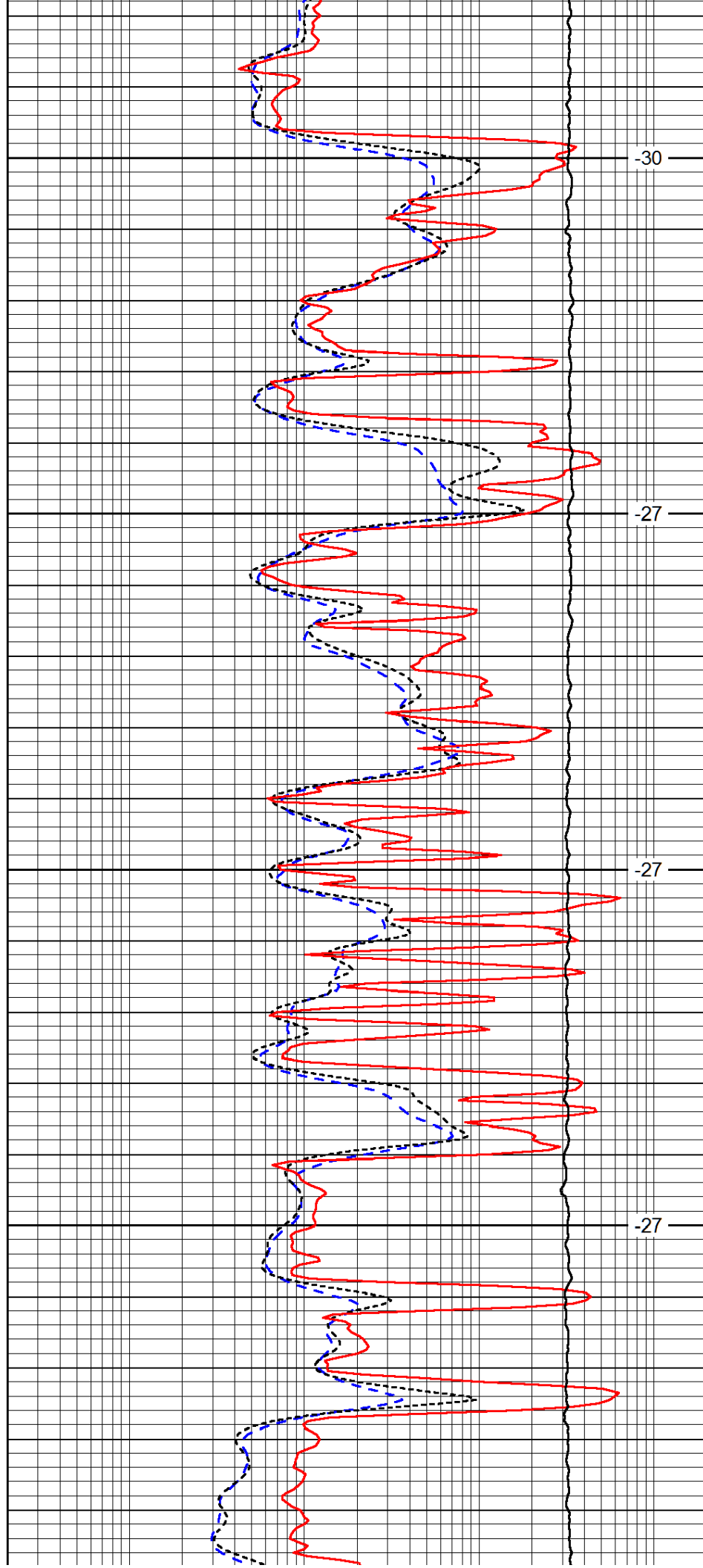


4400

4450

4500

4550

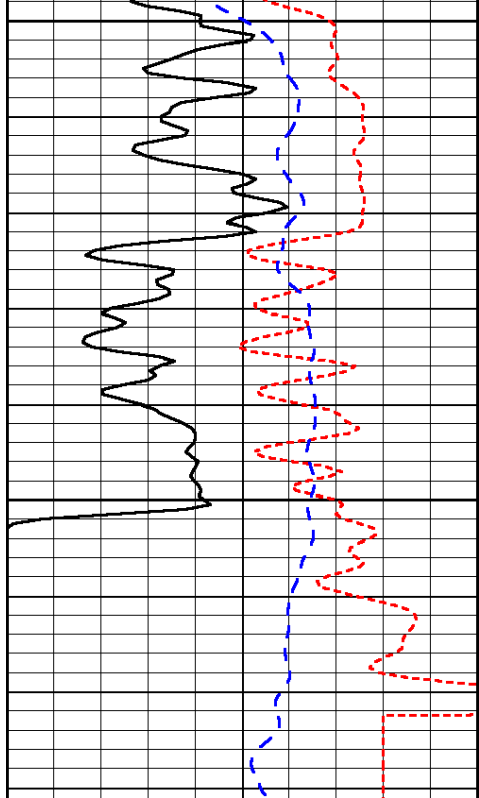


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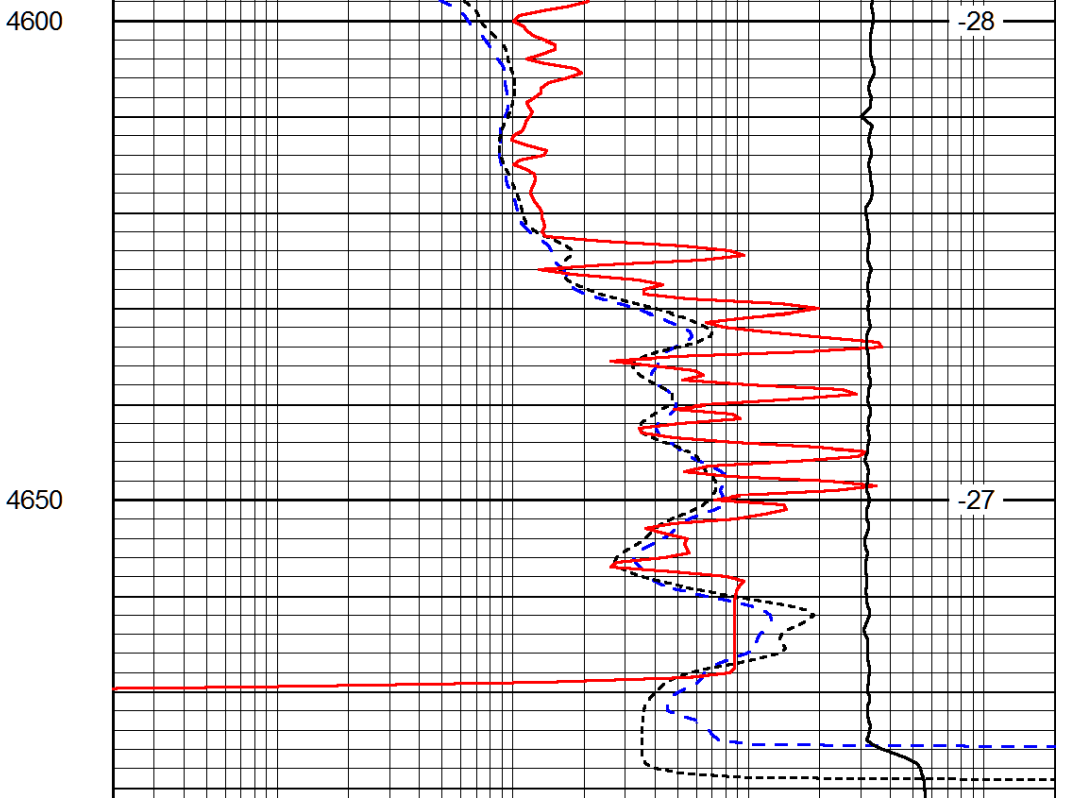
-27

-27

-27



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)