



Pioneer Energy Services

# Dual Induction Log

15-171-20,948-00-00

API No.

Company **Landmark Resources, Inc.**

Well **Sands No. 1 - 11**

Field **Wildcat**

County **Scott** State **Kansas**

Location **1998' FSL & 2285' FWL**

Sec: **11** Twp: **17 S** Rge: **34 W**

Permanent Datum **Ground Level** Elevation **3092**

Log Measured From **Kelly Bushing** 11 Ft. Above Perm. Datum

Drilling Measured From **Kelly Bushing**

Other Services  
CNL/CDL  
MEL/BHCS

Elevation

K.B. 3103  
D.F. 3092  
G.L. 3092

Date	5/12/2013	
Run Number	One	
Depth Driller	4900	
Depth Logger	4903	
Bottom Logged Interval	4902	
Top Log Interval	250	
Casing Driller	8.625 @ 266	
Casing Logger	263	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	9000	
Density / Viscosity	9.3   64	
pH / Fluid Loss	9.0   10.4	
Source of Sample	Flowline	
Rm @ Meas. Temp	.32 @ 67	
Rmf @ Meas. Temp	.24 @ 67	
Rmc @ Meas. Temp	.43 @ 67	
Source of Rmf / Rmc	Charts	
Rm @ BHT	.17 @ 125	
Operating Rig Time	5 1/2 Hours	
Max Rec. Temp. F	125	
Equipment Number	108	
Location	Hays	
Recorded By	D. Martin	
Witnessed By	Brad Rine	

<<< Fold Here >>>

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

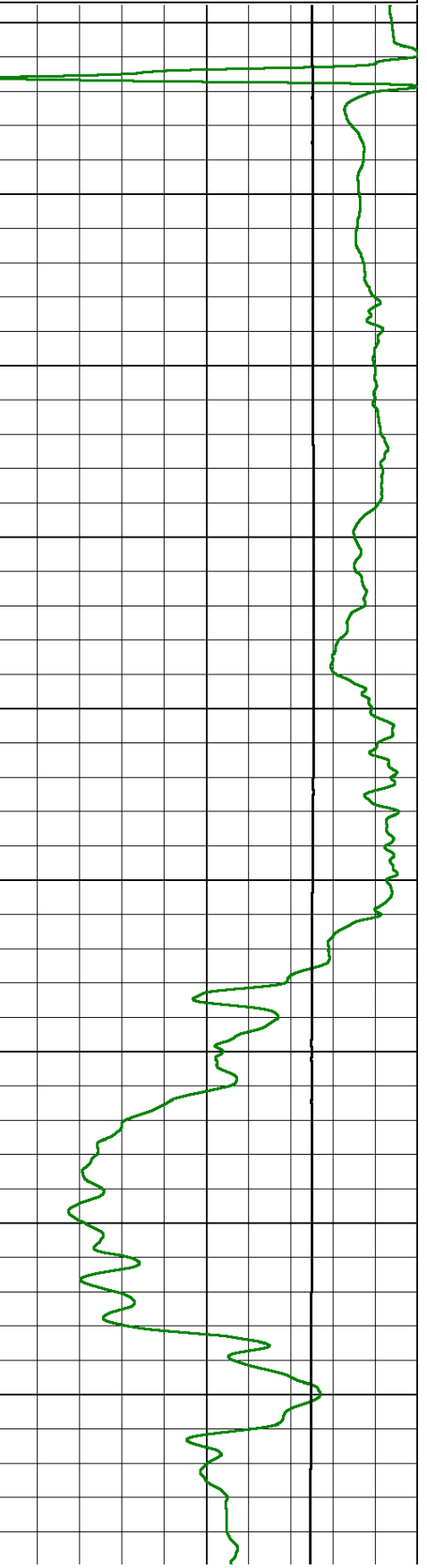
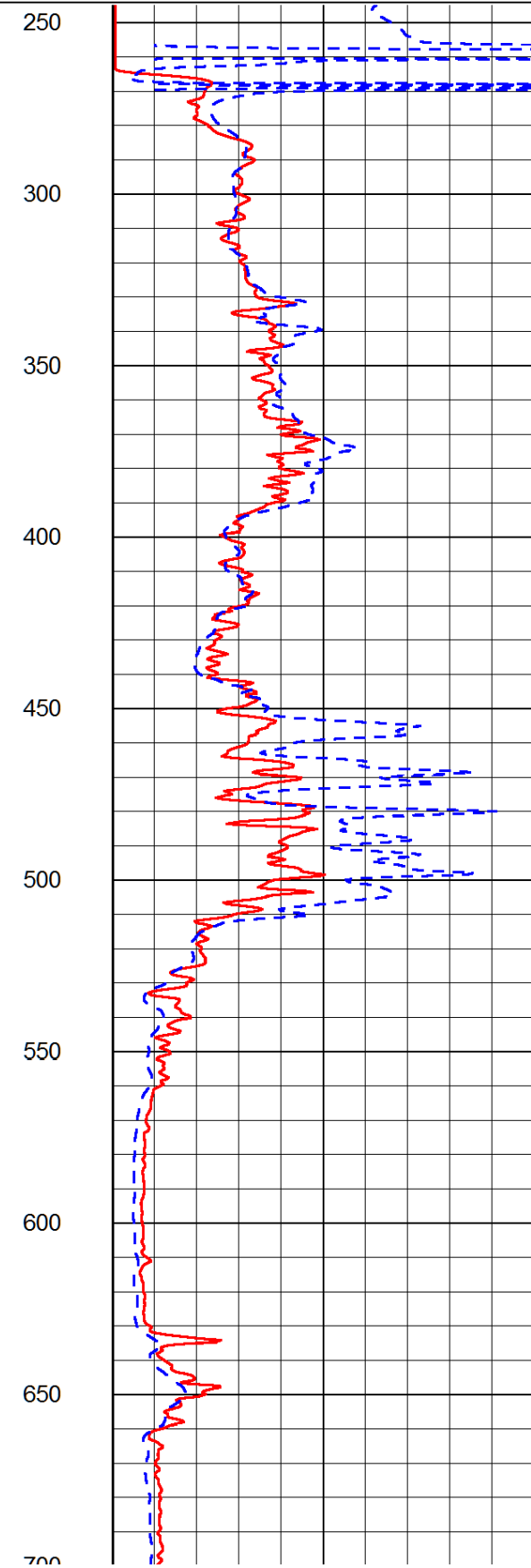
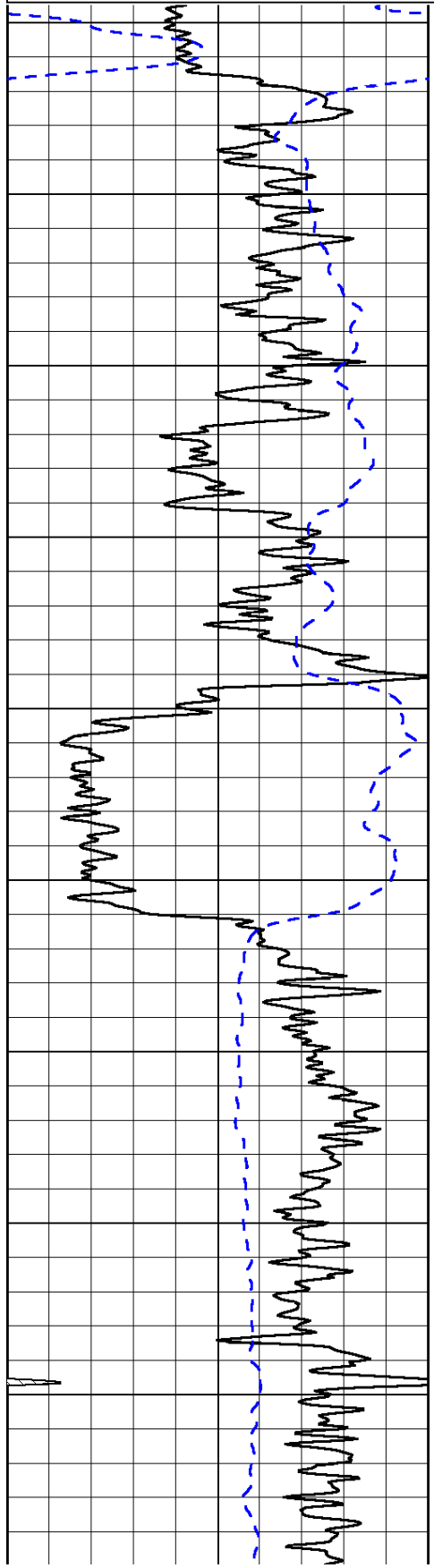
Thank you for using Log-Tech, Inc.  
(785) 625-3858

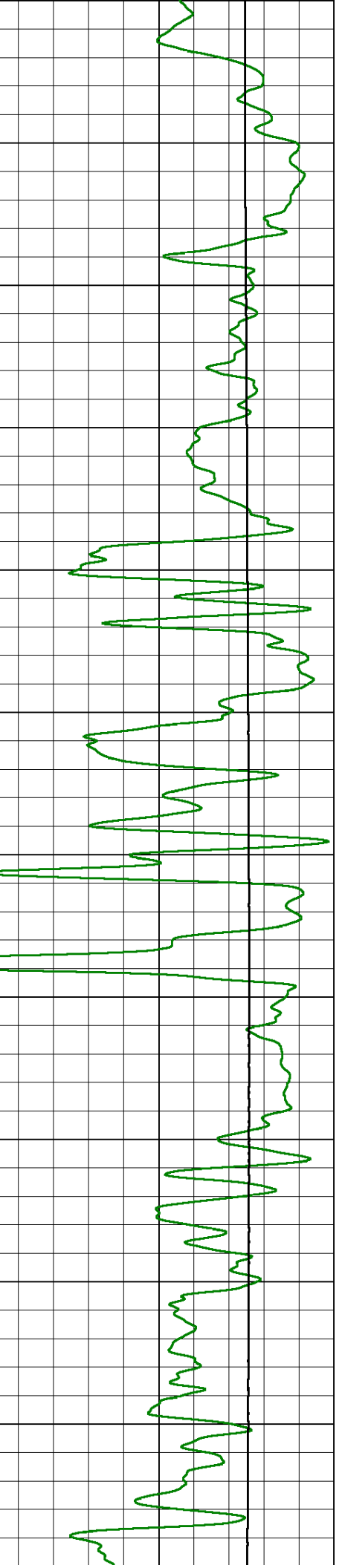
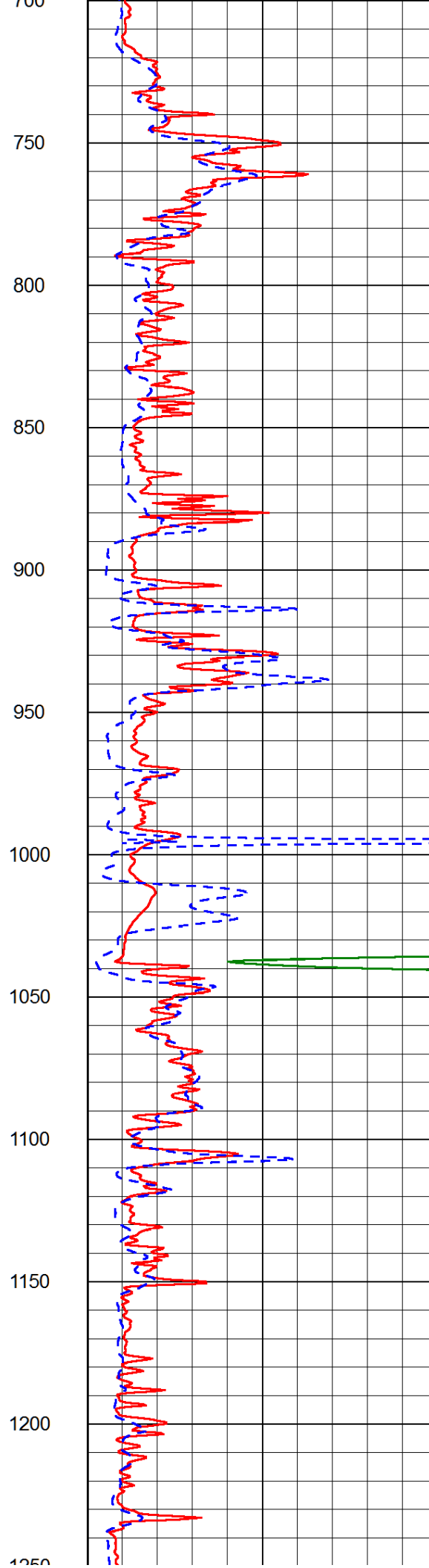
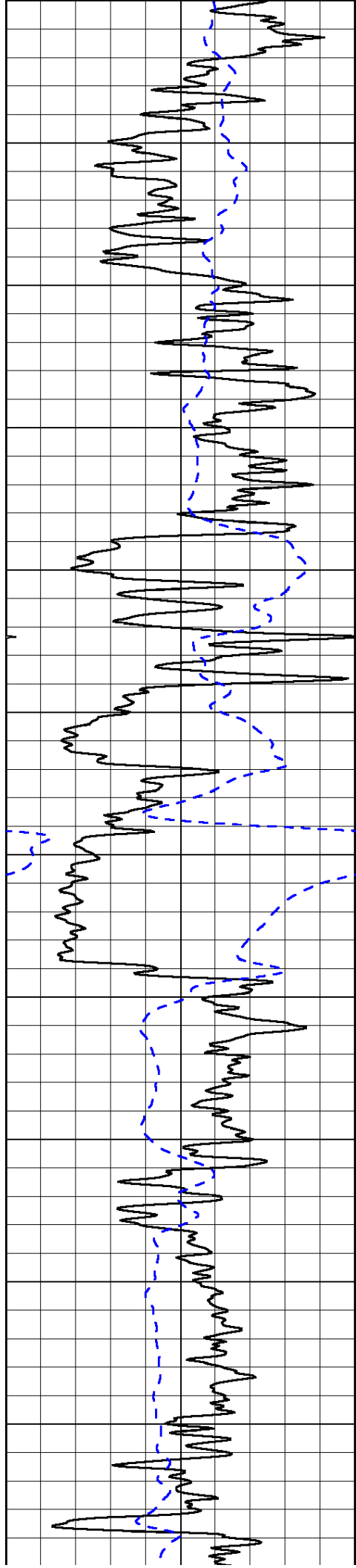
Modoc, KS  
N to "T", 1/2 E to Cherokee Rd.,  
6 N, E Into(1 1/2 E, 1/2 N, W 1/8)

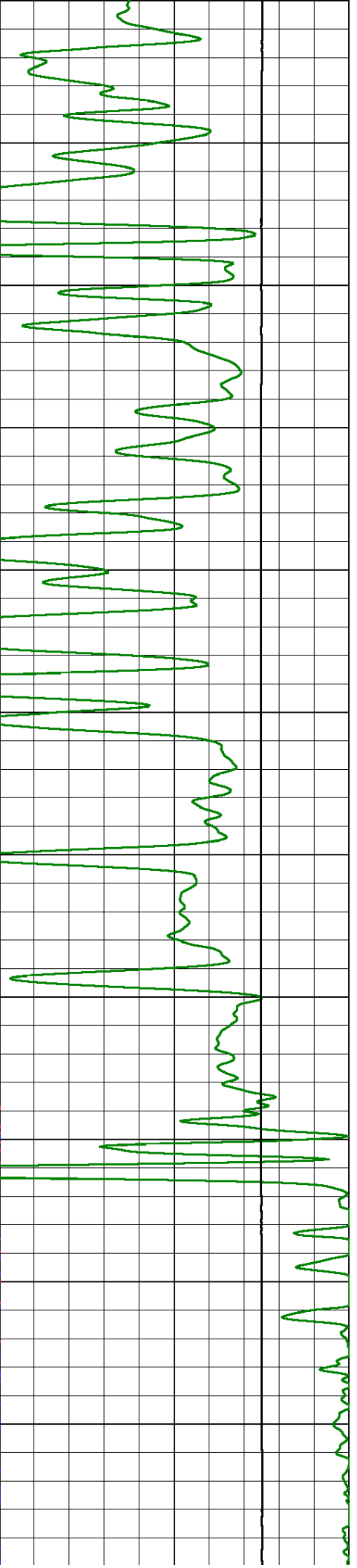
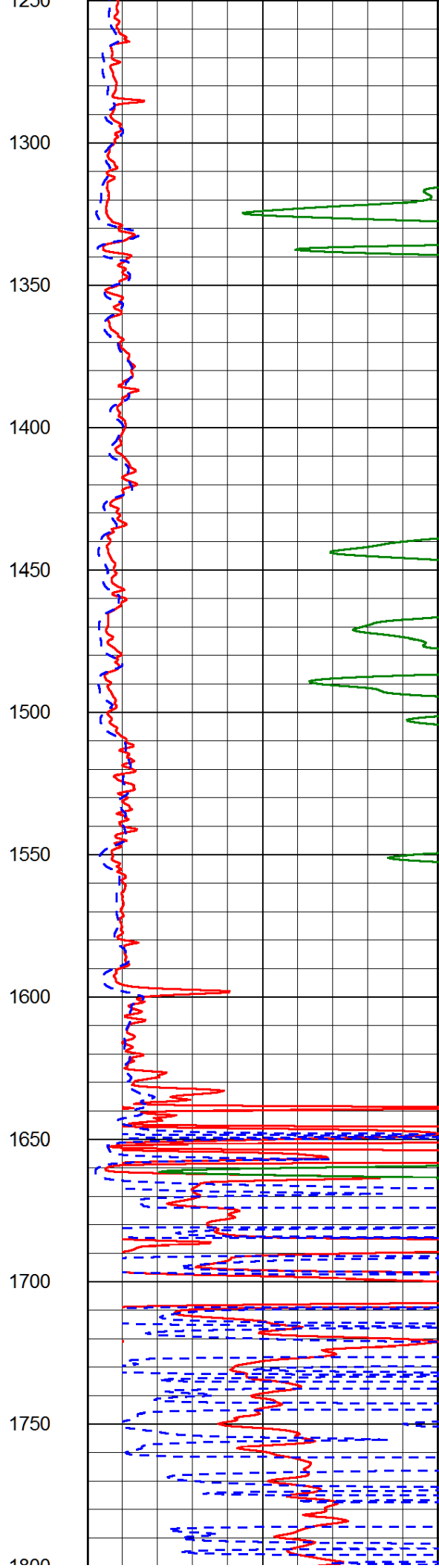
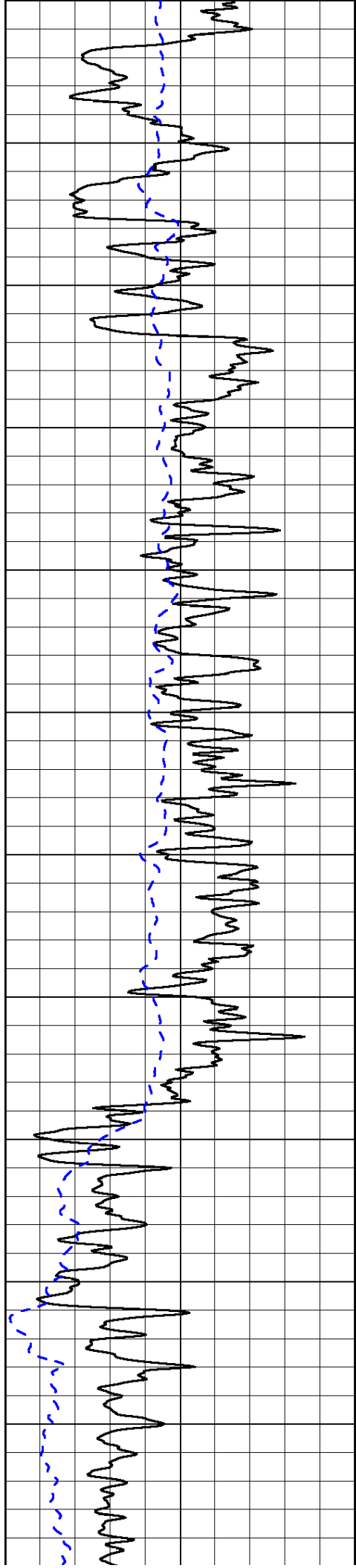
Database File: landmark\_sands\_1-11hd.db  
 Dataset Pathname: dil/landstk  
 Presentation Format: dil2in  
 Dataset Creation: Sun May 12 13:41:18 2013  
 Charted by: Depth in Feet scaled 1:600

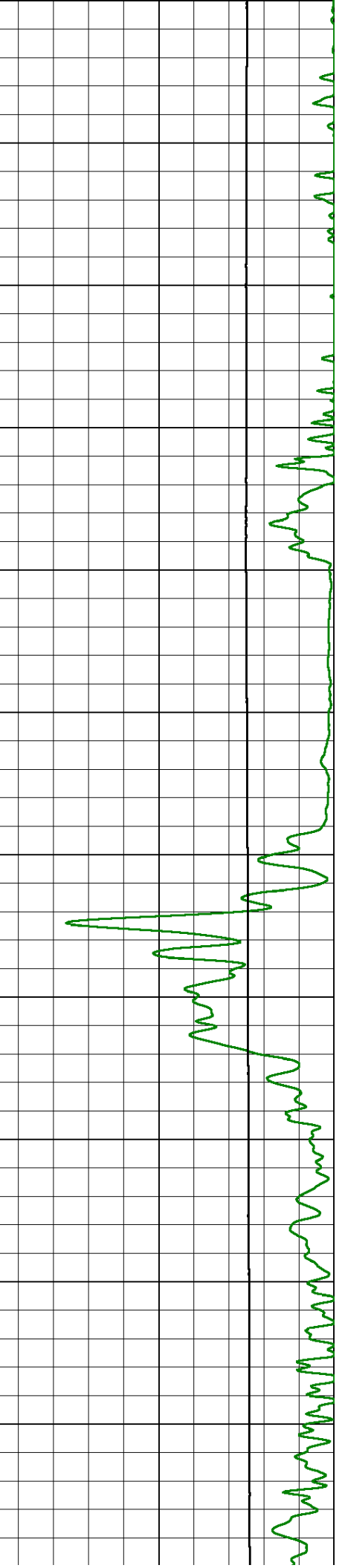
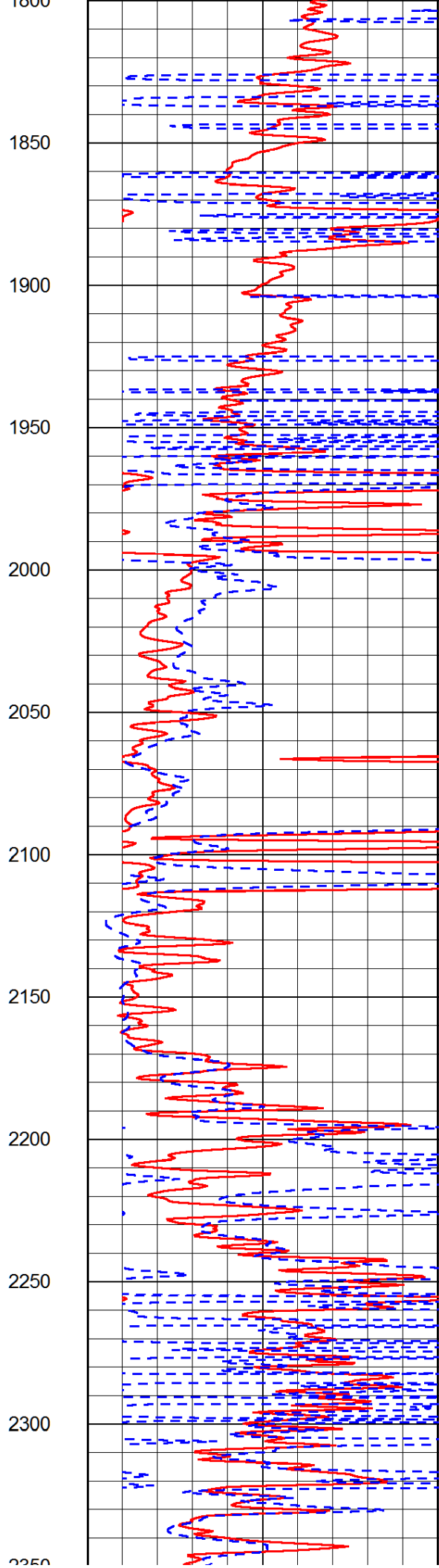
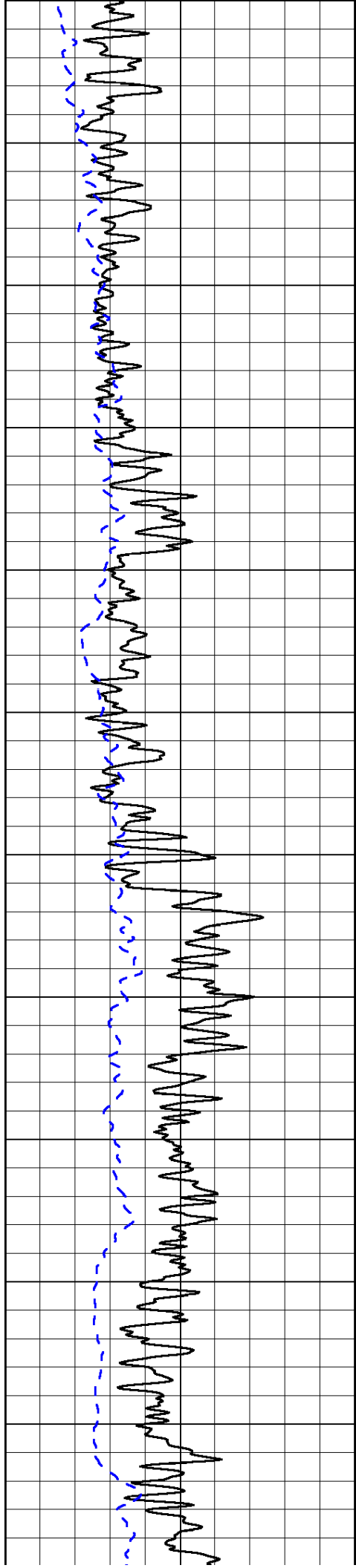
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

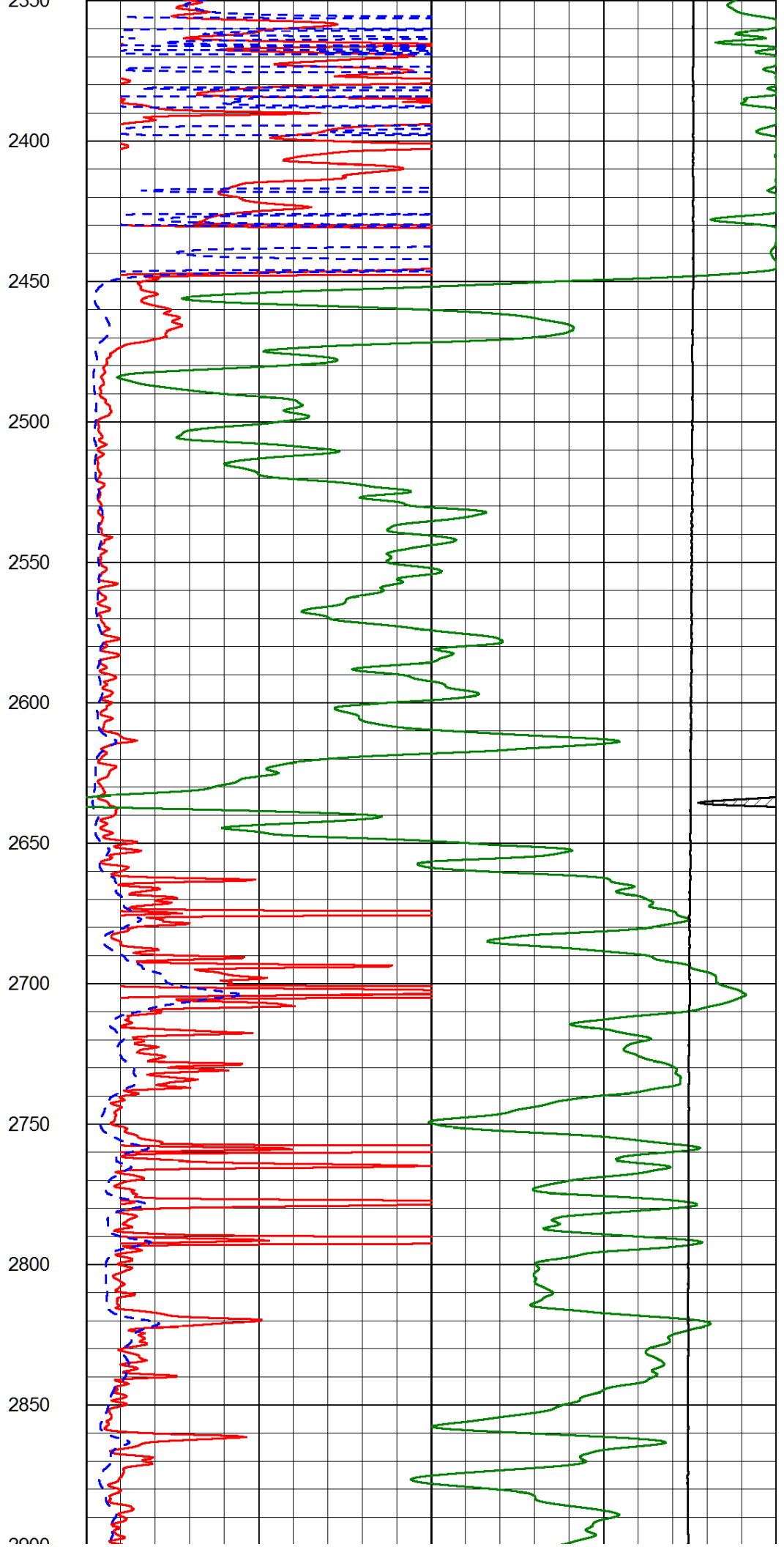
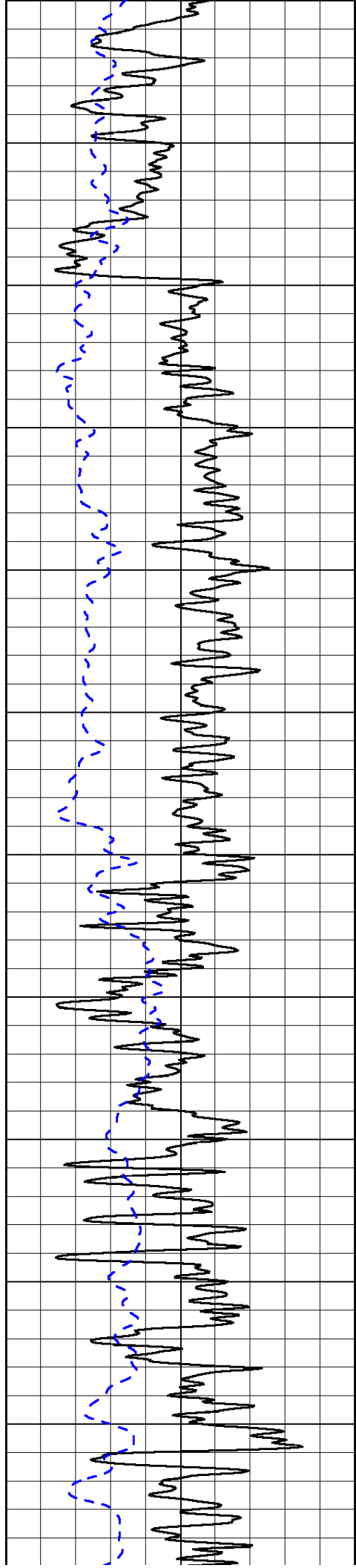
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0
50	Shallow Resistivity (Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500

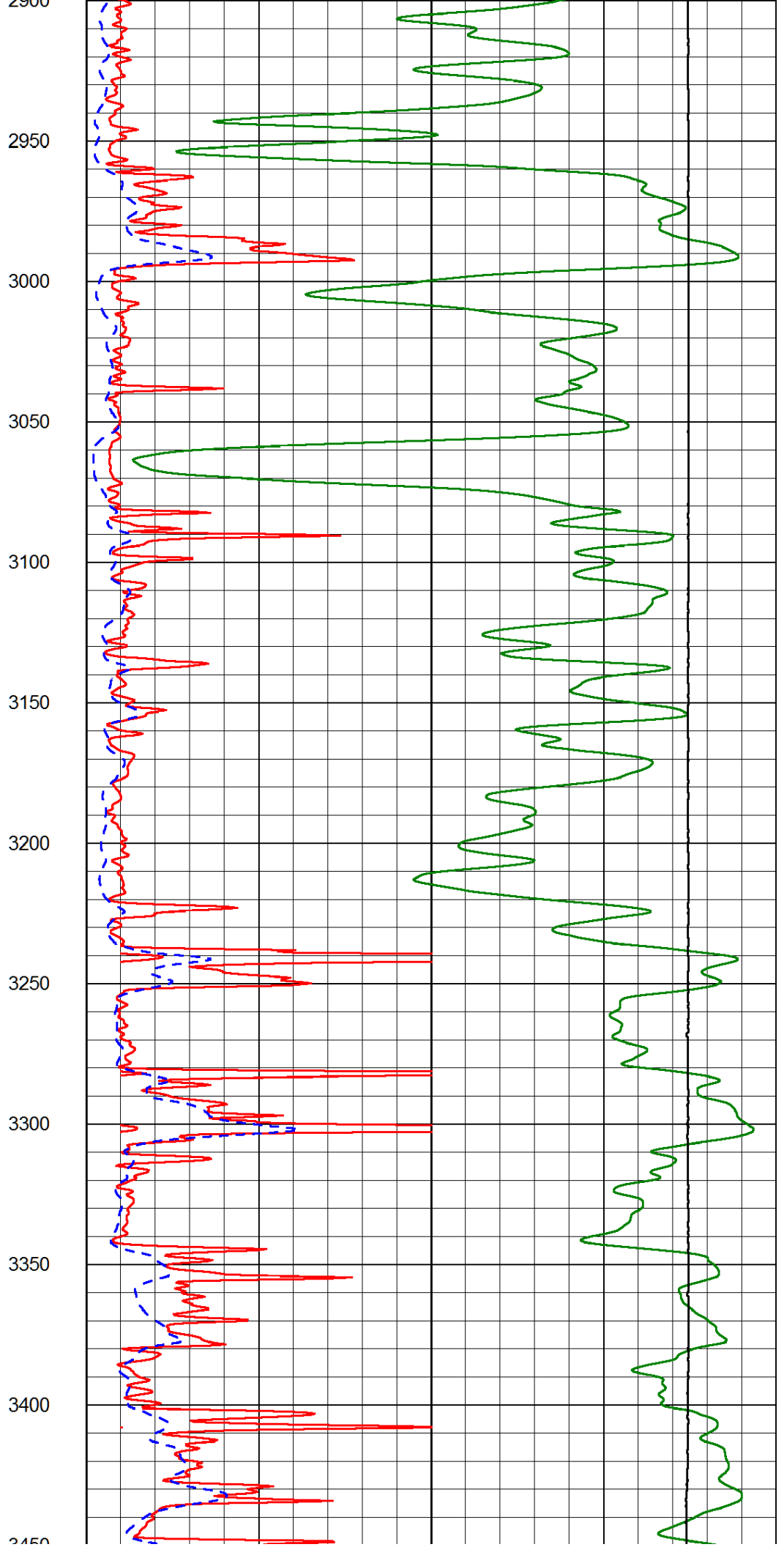
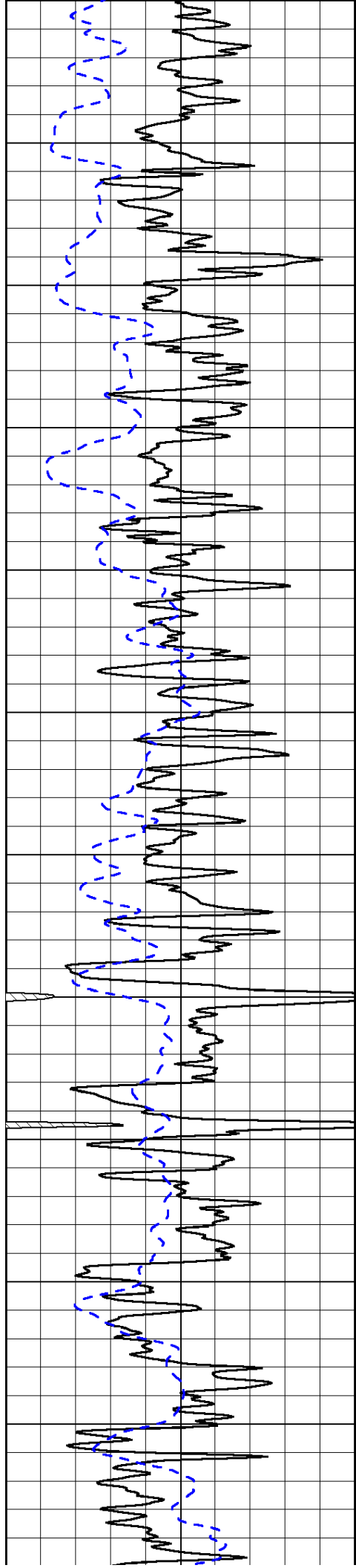


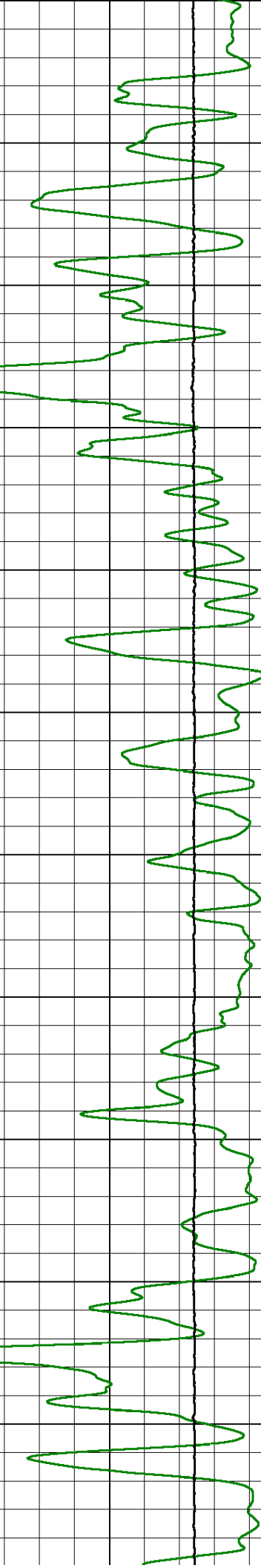
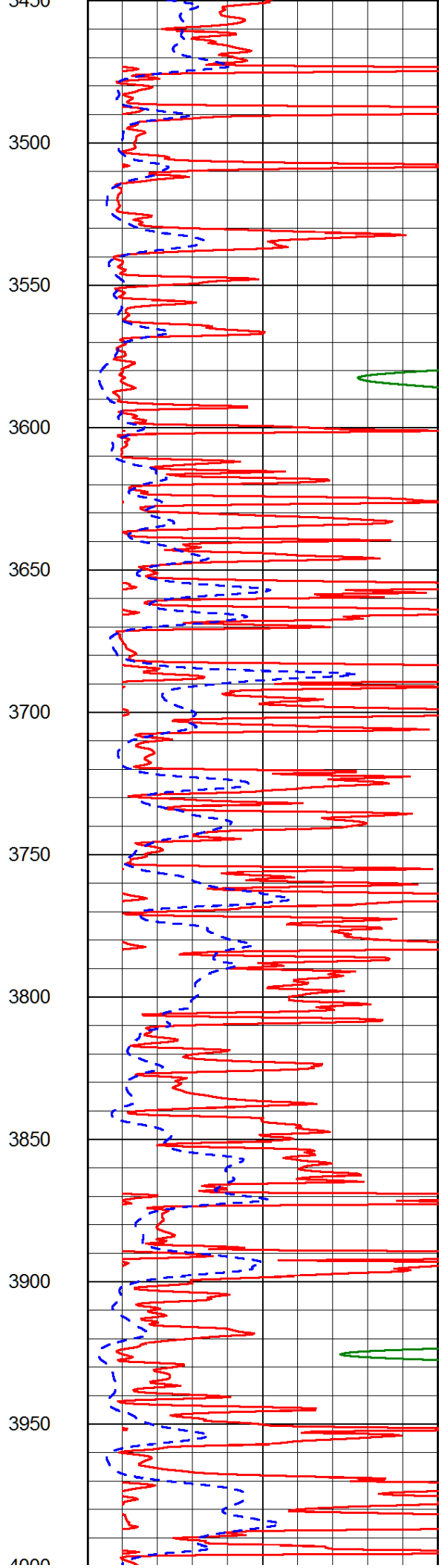
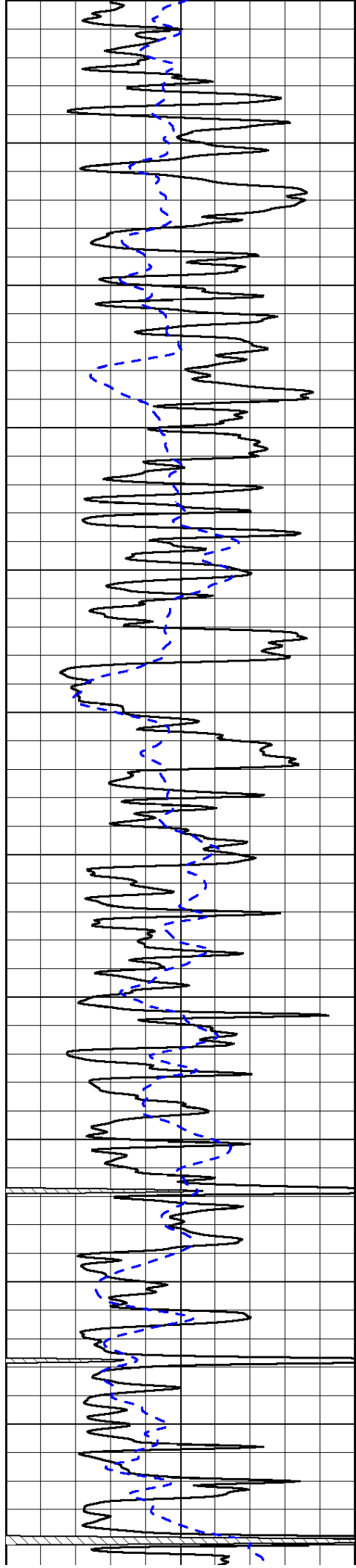




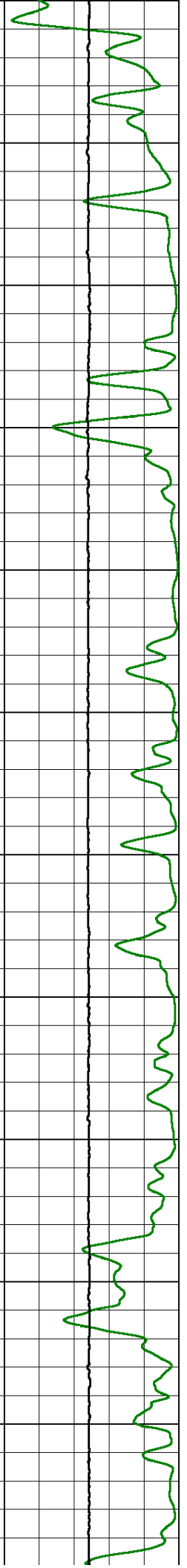
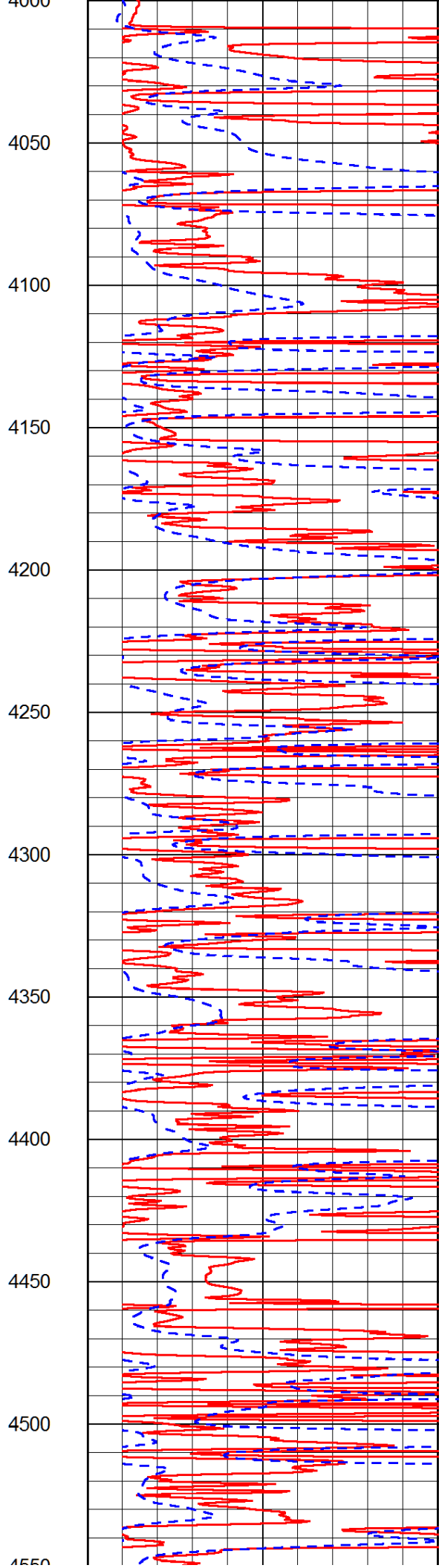
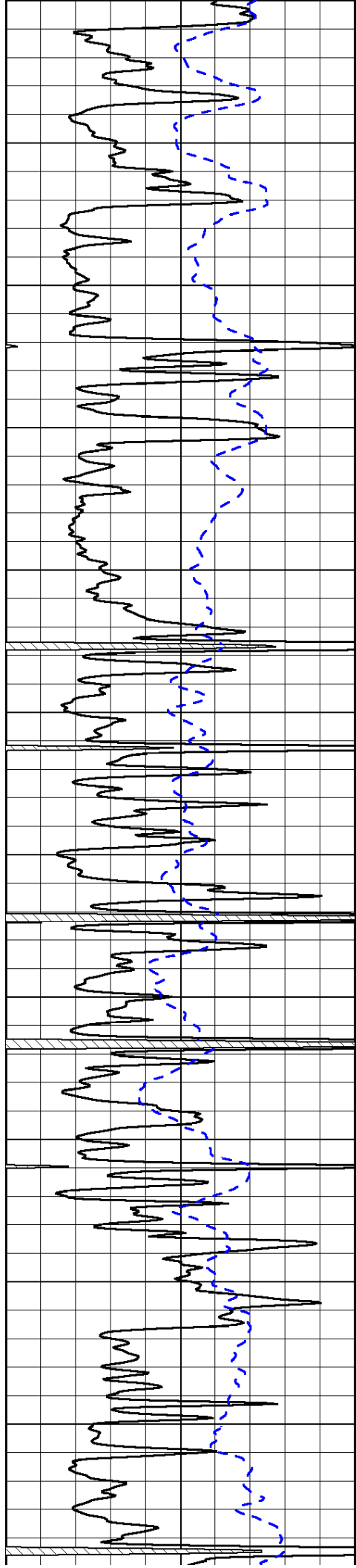


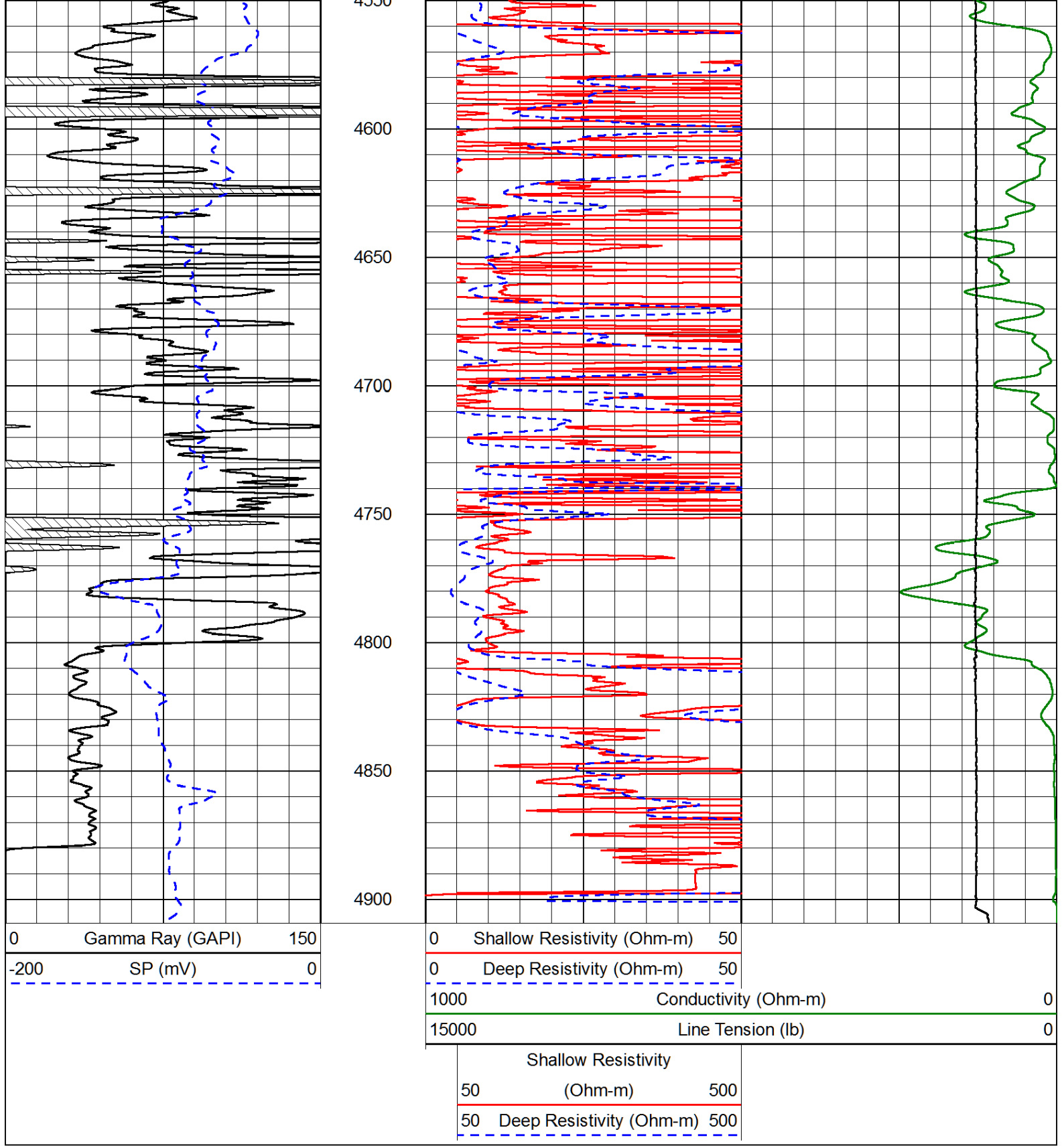






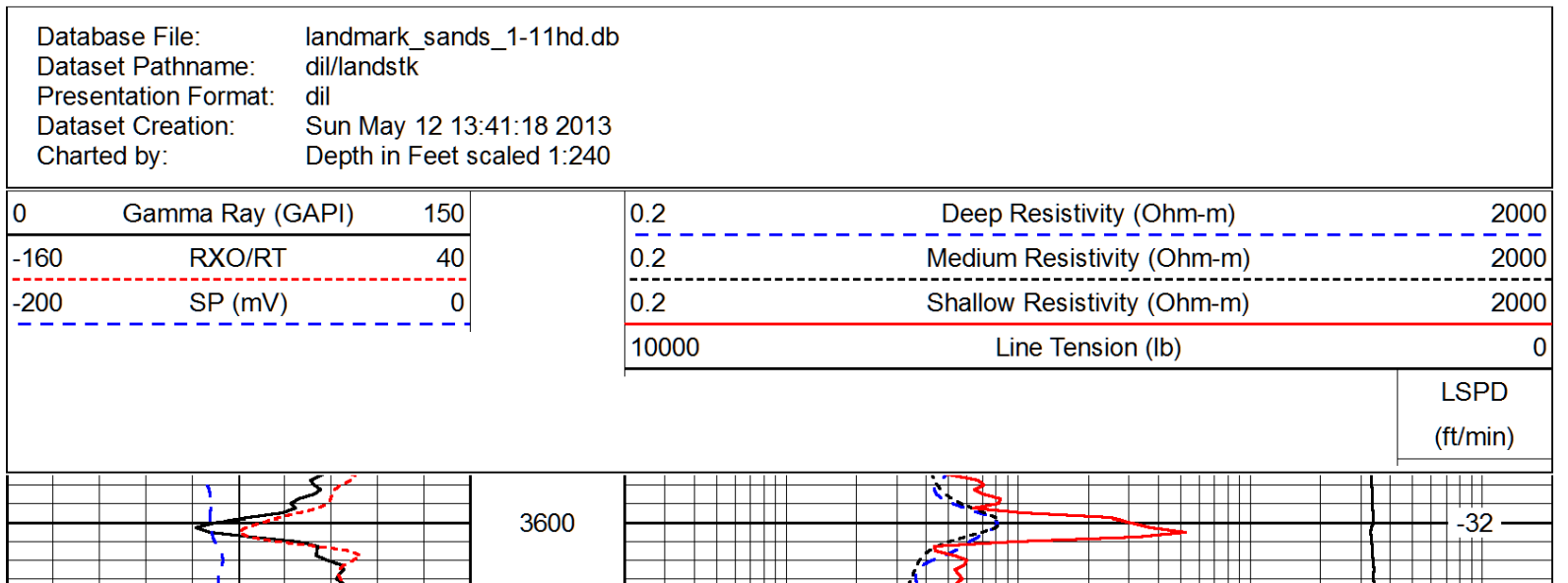
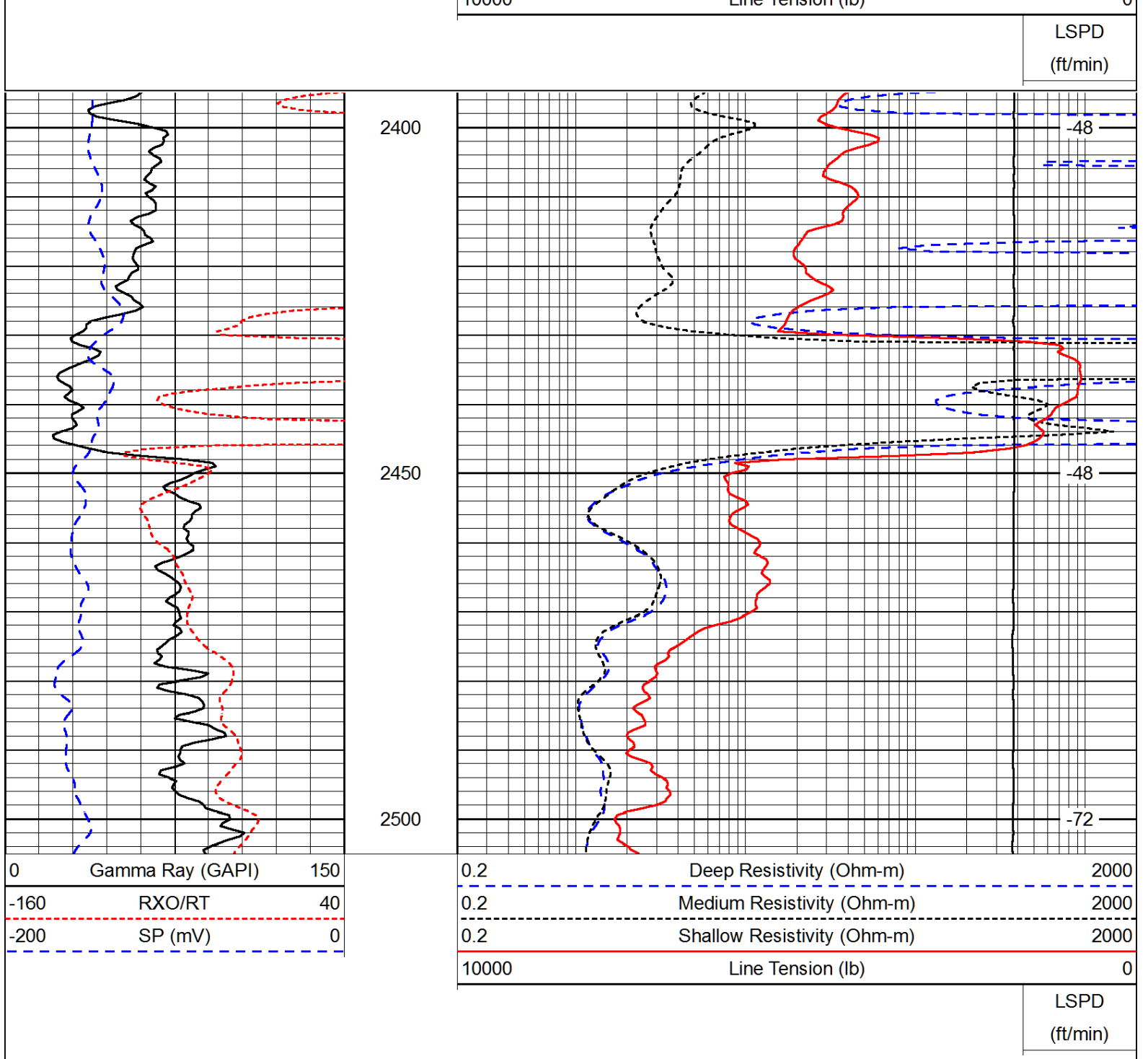


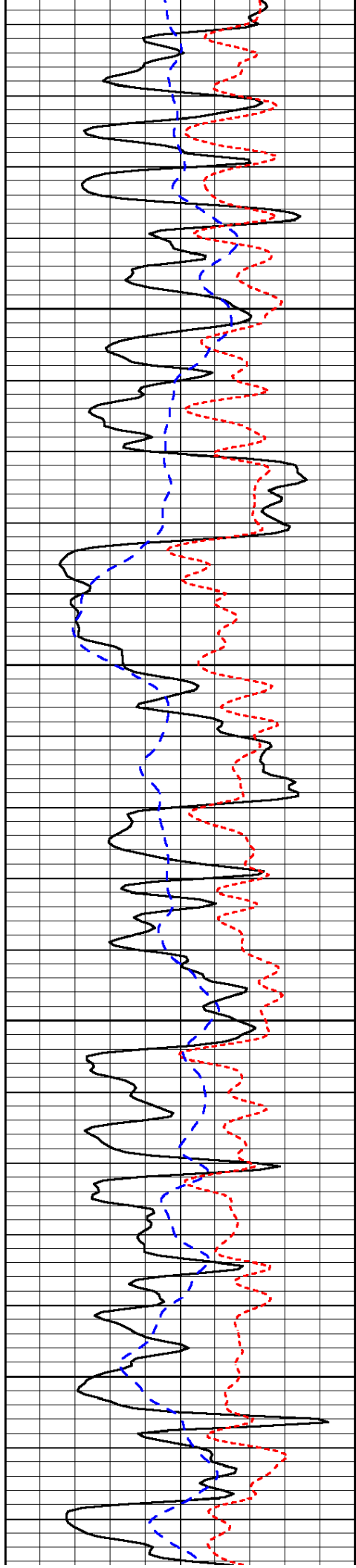




Database File: landmark\_sands\_1-11hd.db  
 Dataset Pathname: dil/landstk  
 Presentation Format: dil  
 Dataset Creation: Sun May 12 13:41:18 2013  
 Charted by: Depth in Feet scaled 1:240





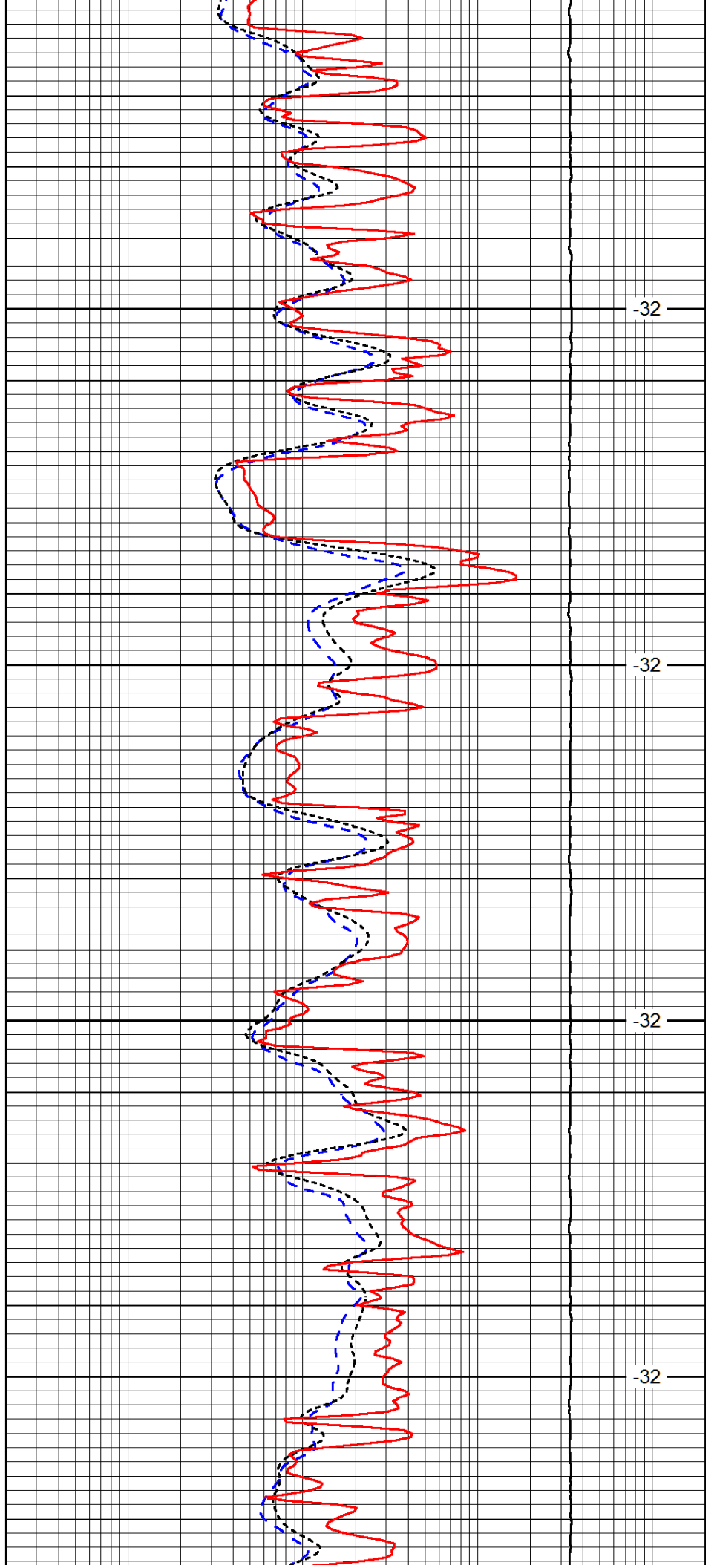


3650

3700

3750

3800

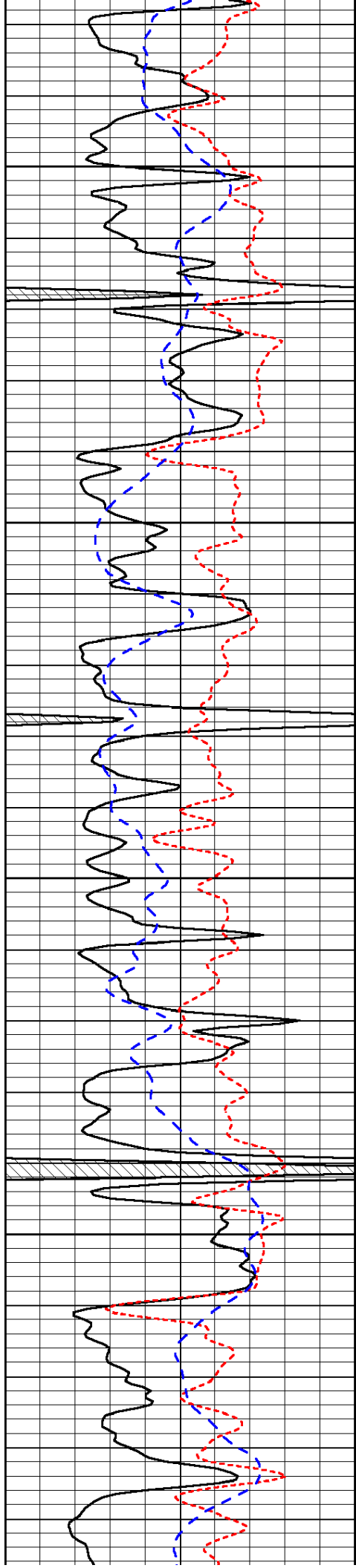


-32

-32

-32

-32

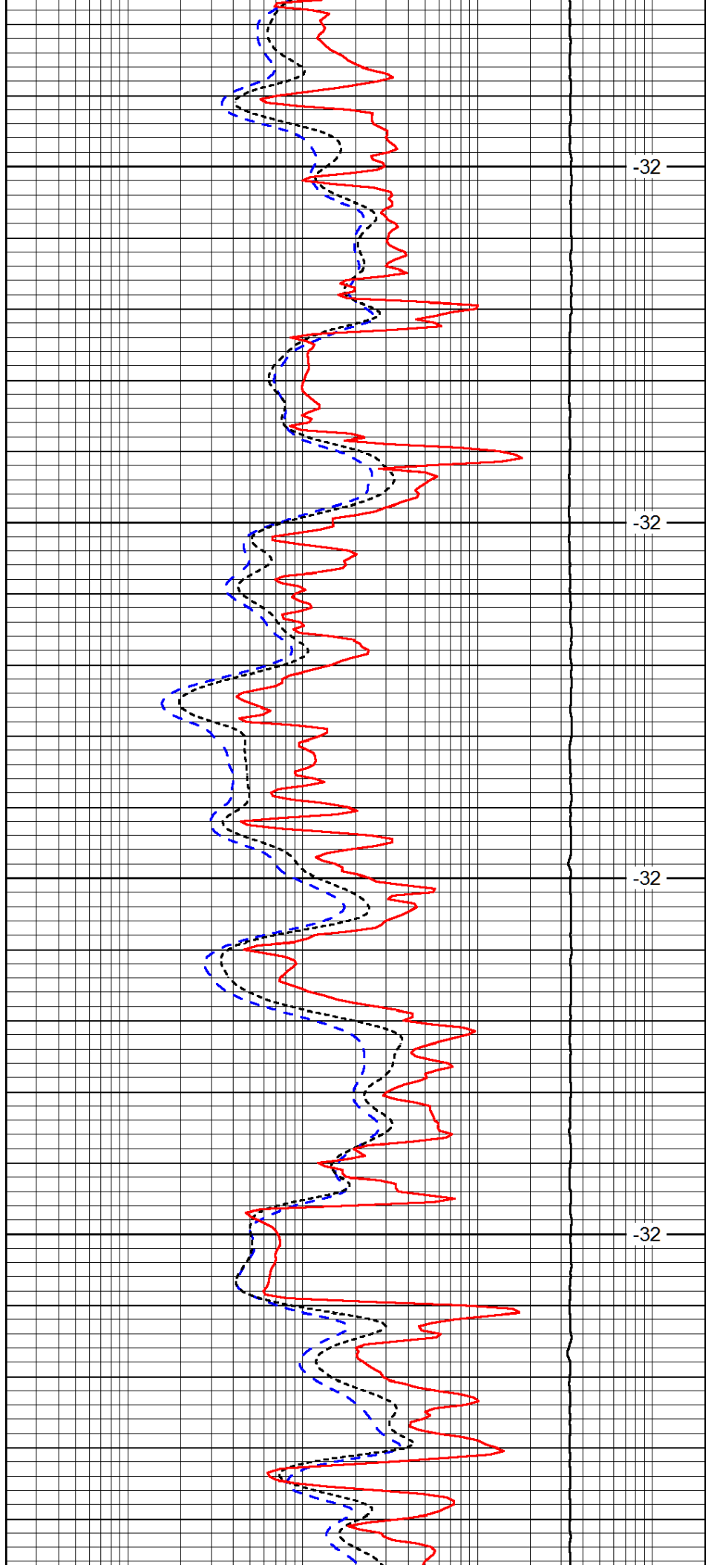


3850

3900

3950

4000

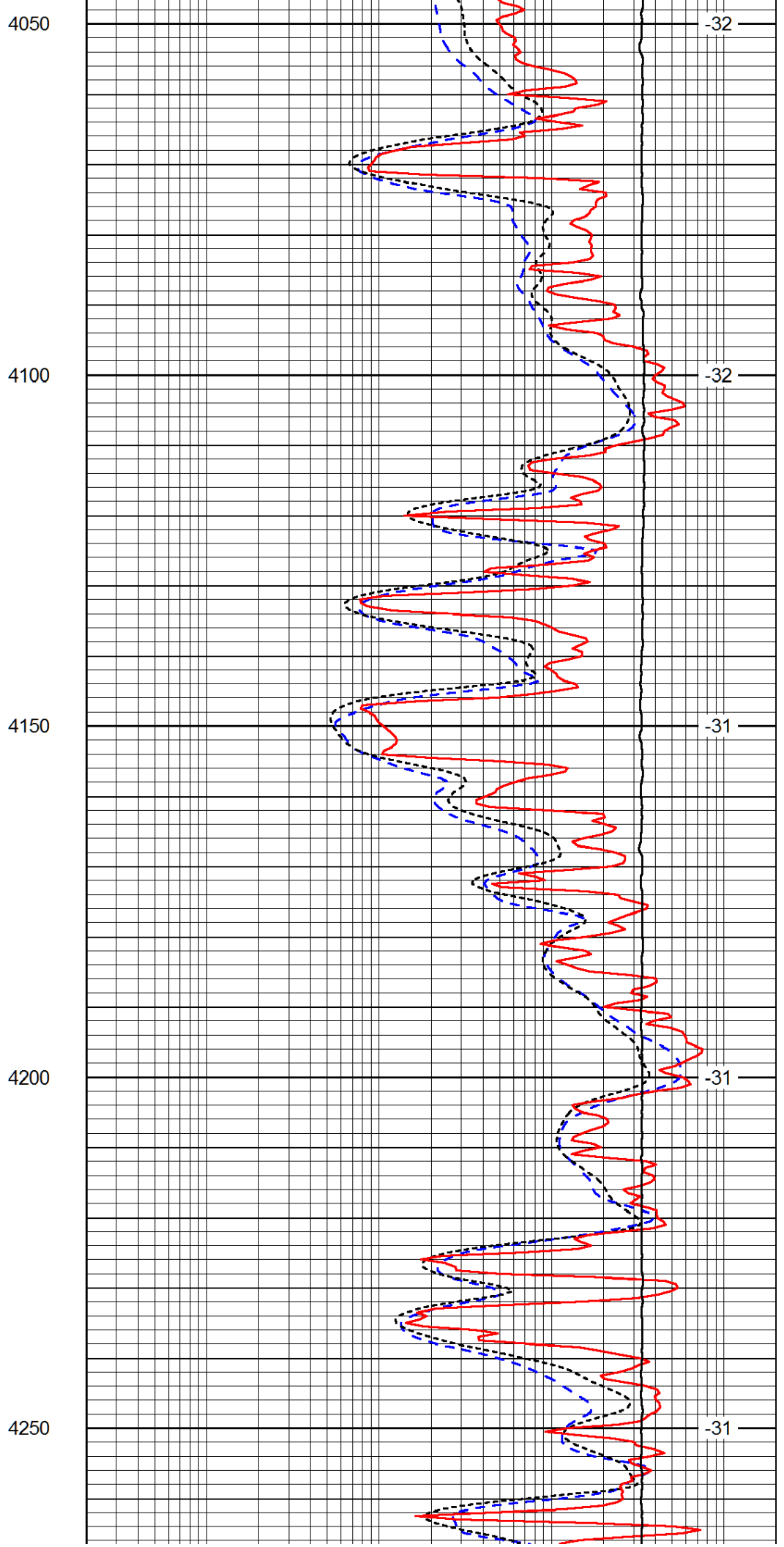
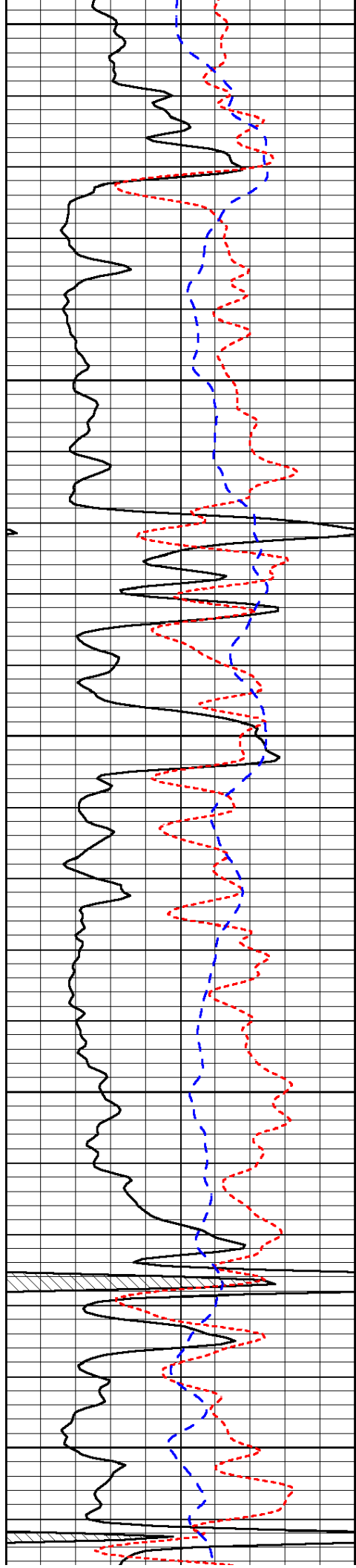


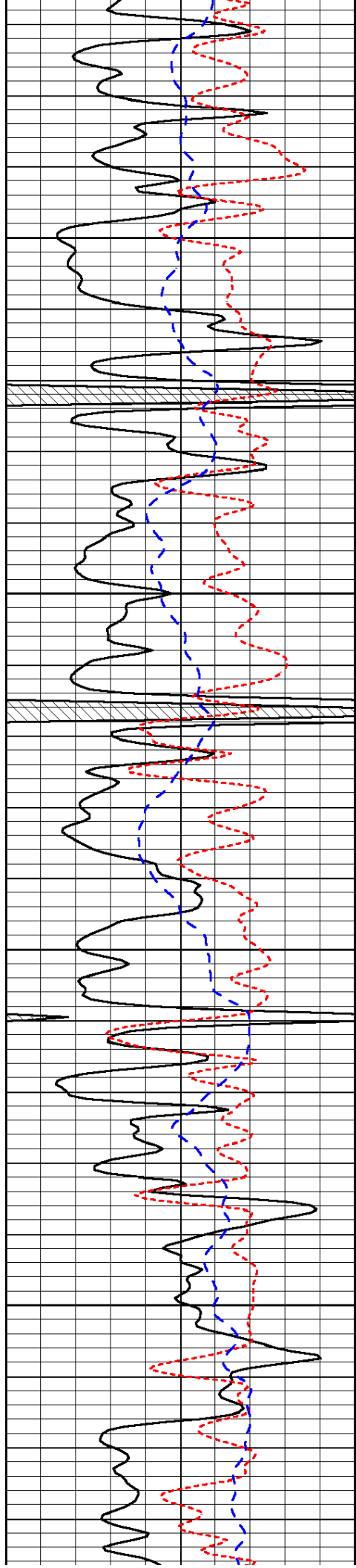
-32

-32

-32

-32



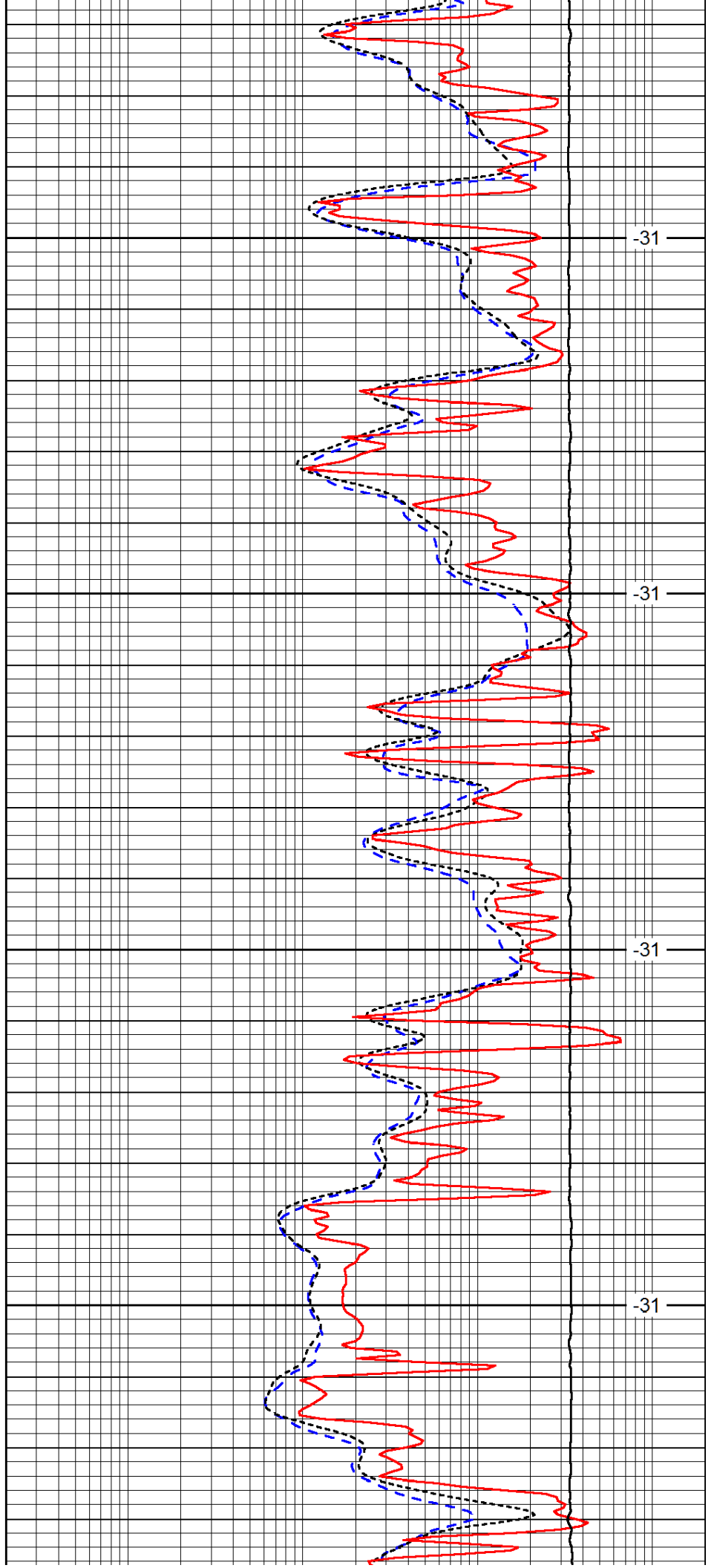


4300

4350

4400

4450

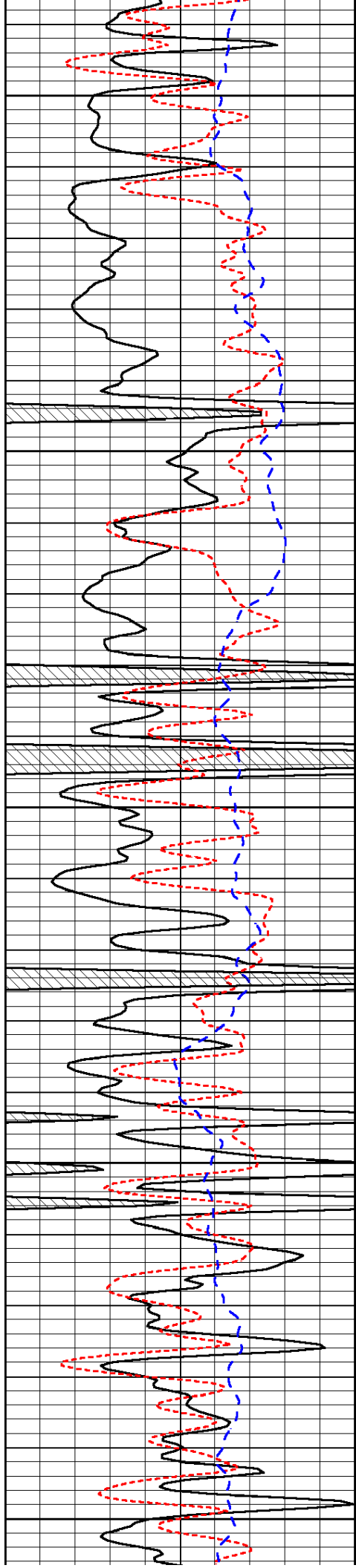


-31

-31

-31

-31



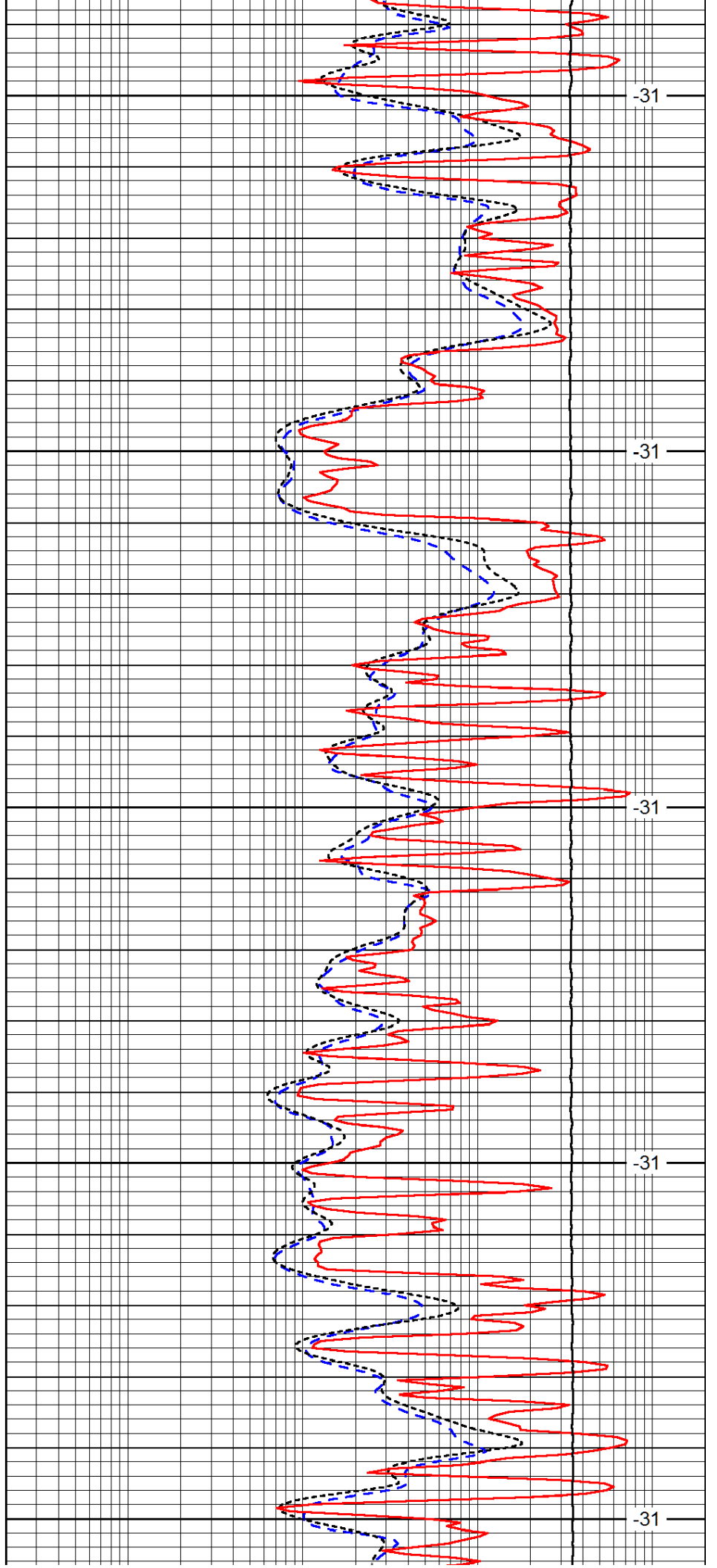
4500

4550

4600

4650

4700



-31

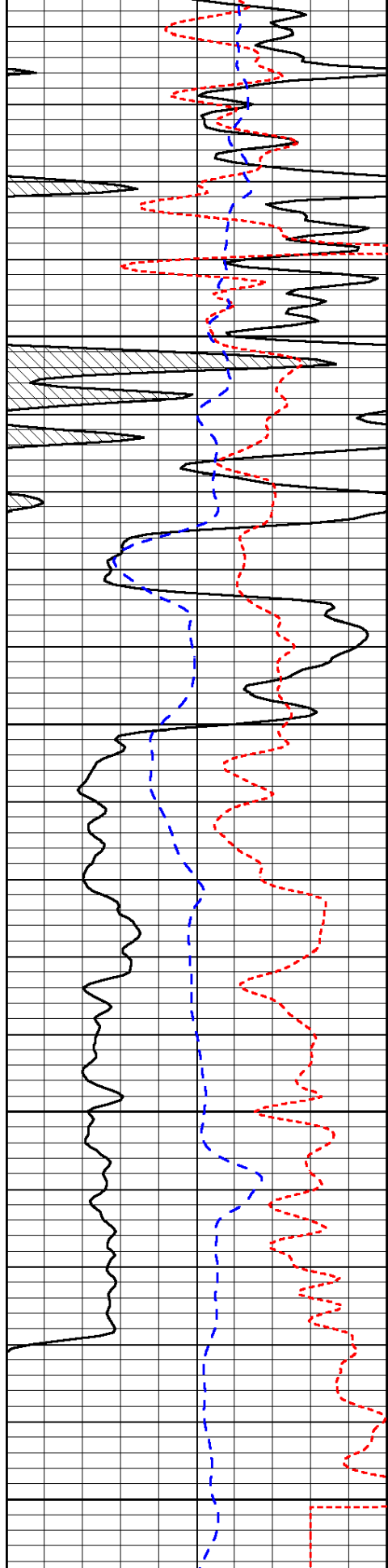
-31

-31

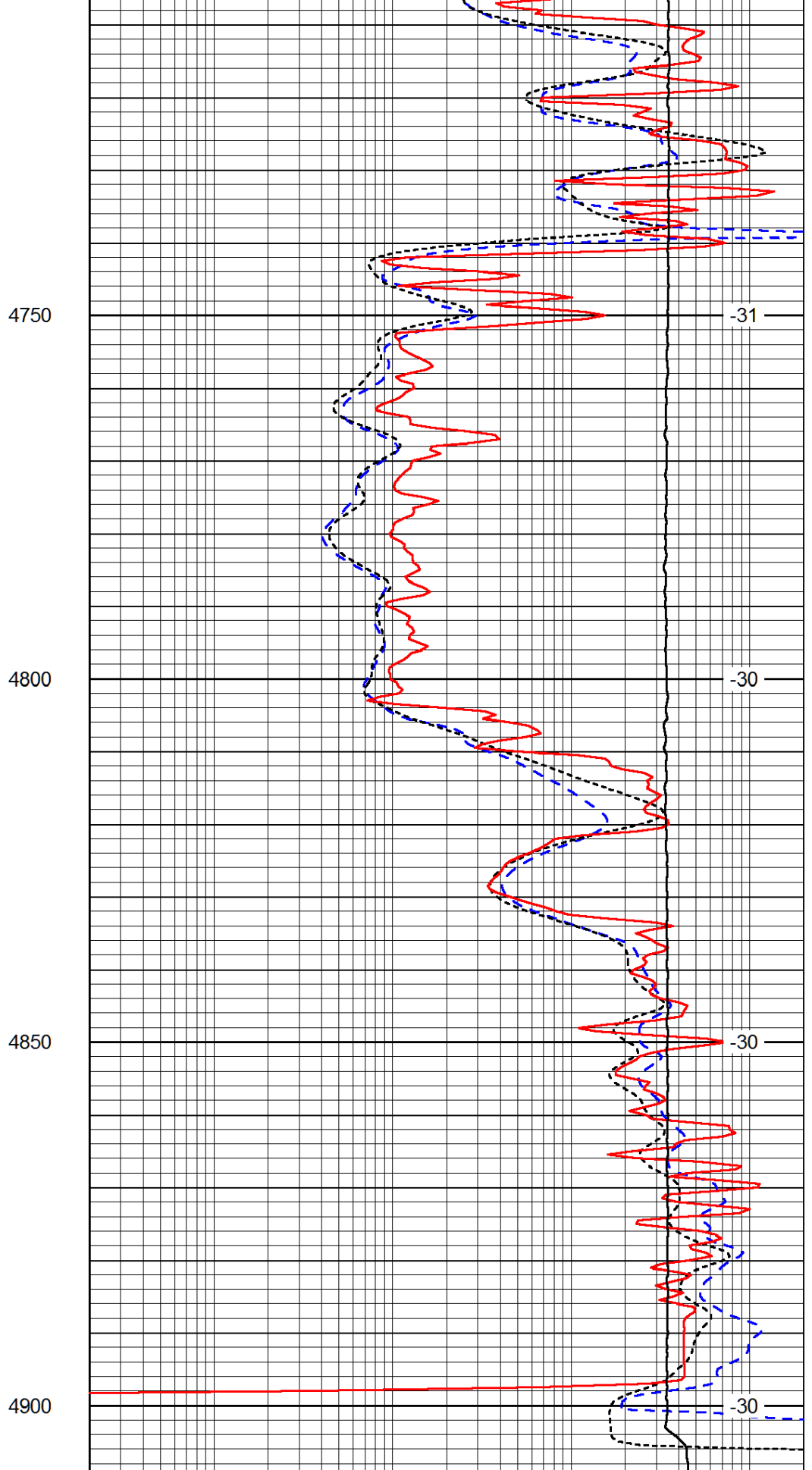
-31

-31





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)