



Pioneer Energy Services

Dual Induction Log

API No.	15-185-23834-00-00	
Company	H & D Exploration, LLC	
Well	Nichols "A" #1	
Field	Wildcat	
County	Stafford	State
		Kansas
Location	W2 NE NW NE 330' FNL / 1903' FEL	
Sec: 22	Twp: 25S	Rge: 12W
Permanent Datum	Ground Level	Elevation 1861
Log Measured From	Kelly Bushing	8 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
		Other Services CNL/CDL MEL/BHCS
		Elevation K.B. 1869 D.F. G.L. 1861

Date	10/12/2013
Run Number	One
Depth Driller	4275
Depth Logger	4274
Bottom Logged Interval	4273
Top Log Interval	650
Casing Driller	8.625 @ 662
Casing Logger	660
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	6500
Density / Viscosity	9.4 52
pH / Fluid Loss	9.5 10.0
Source of Sample	Flowline
Rm @ Meas. Temp	0.42 @ 65
Rmf @ Meas. Temp	0.32 @ 65
Rmc @ Meas. Temp	0.57 @ 65
Source of Rmf / Rmc	Charts
Rm @ BHT	0.23 @ 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

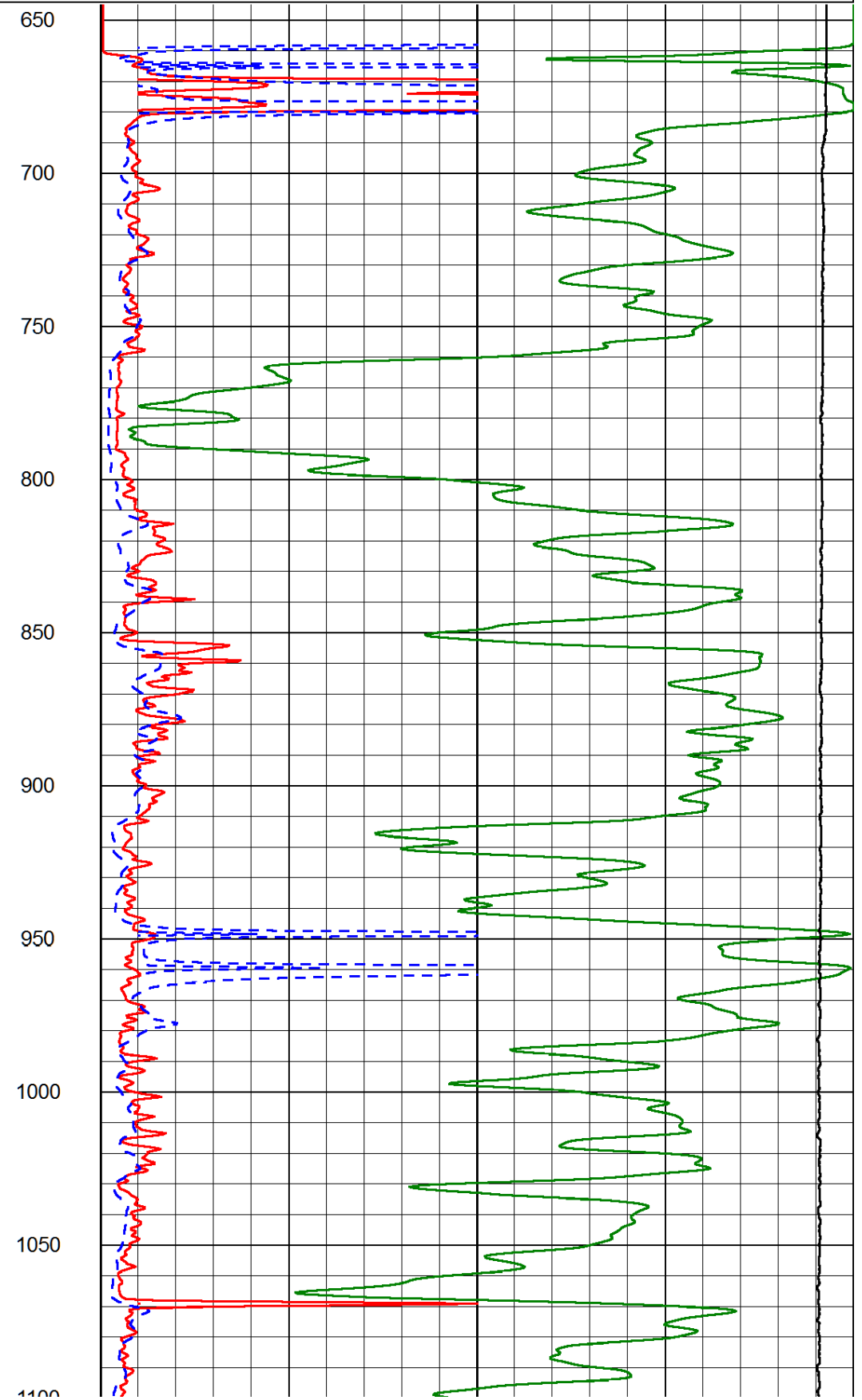
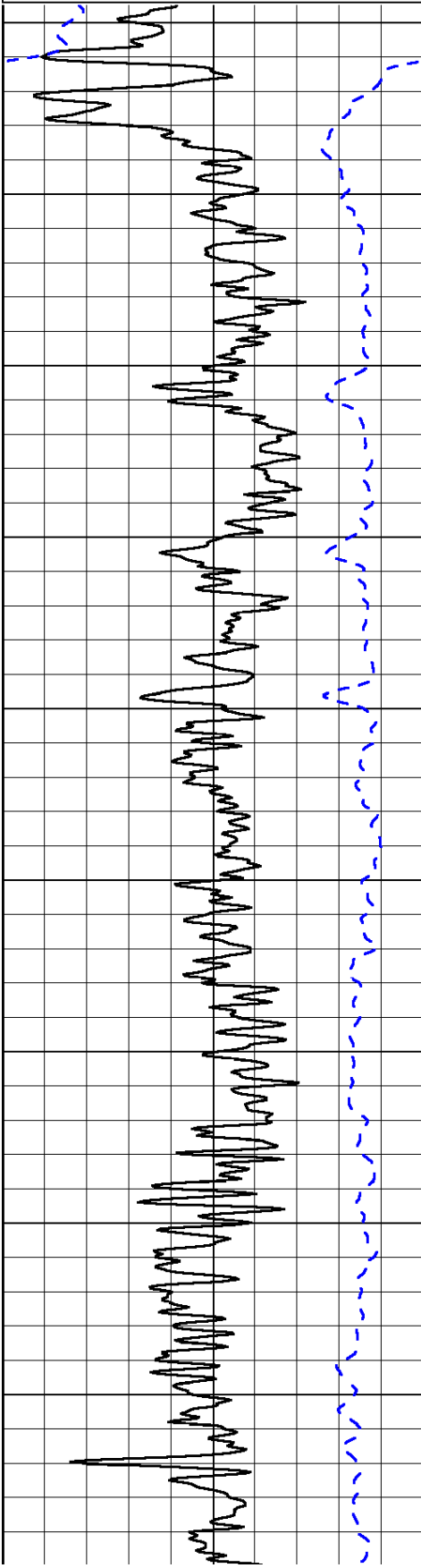
Stafford, KS:
 6S to Rd. 60, 1 1/2W, S into

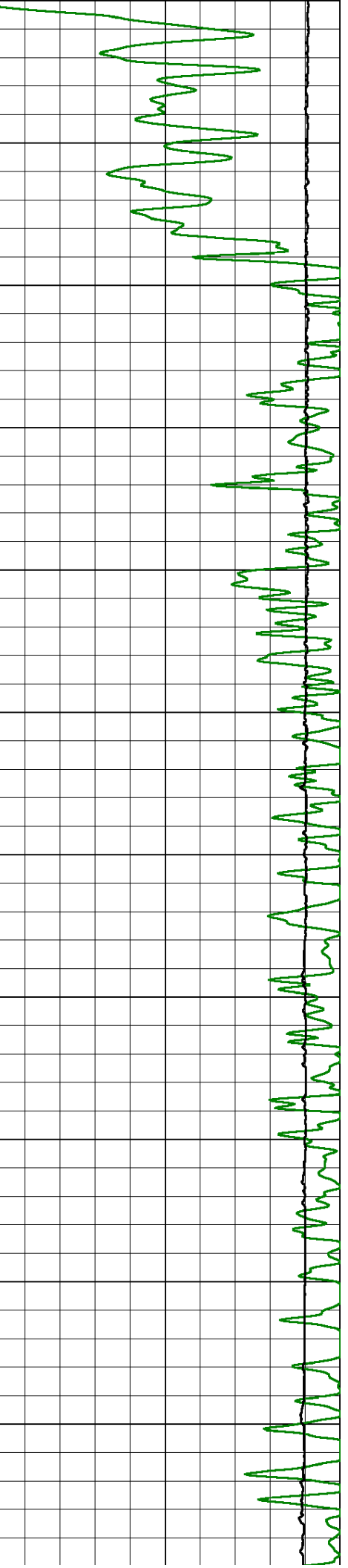
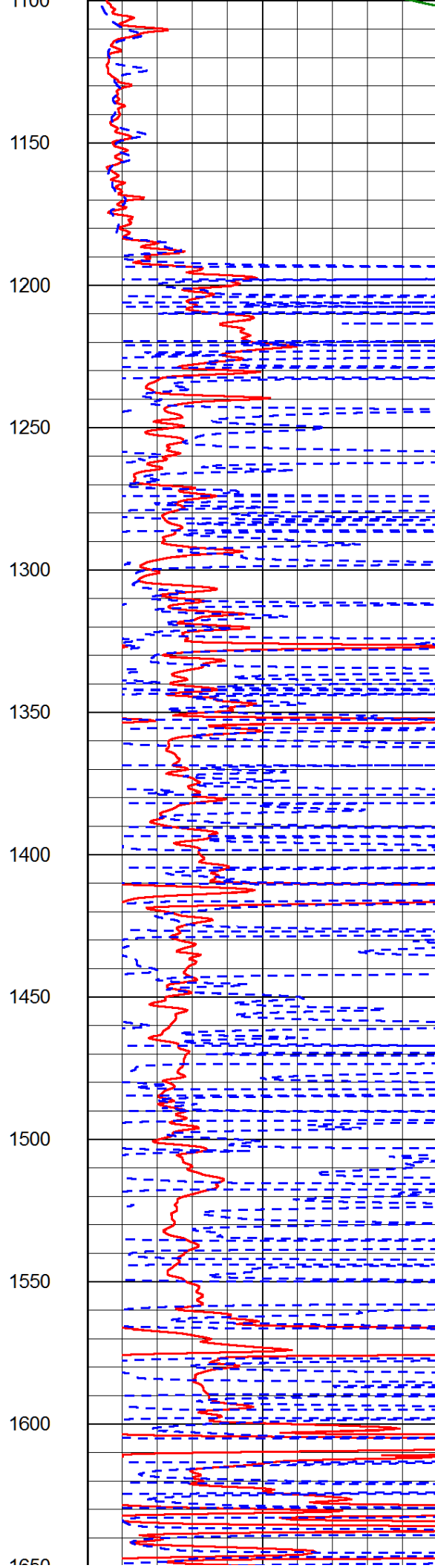
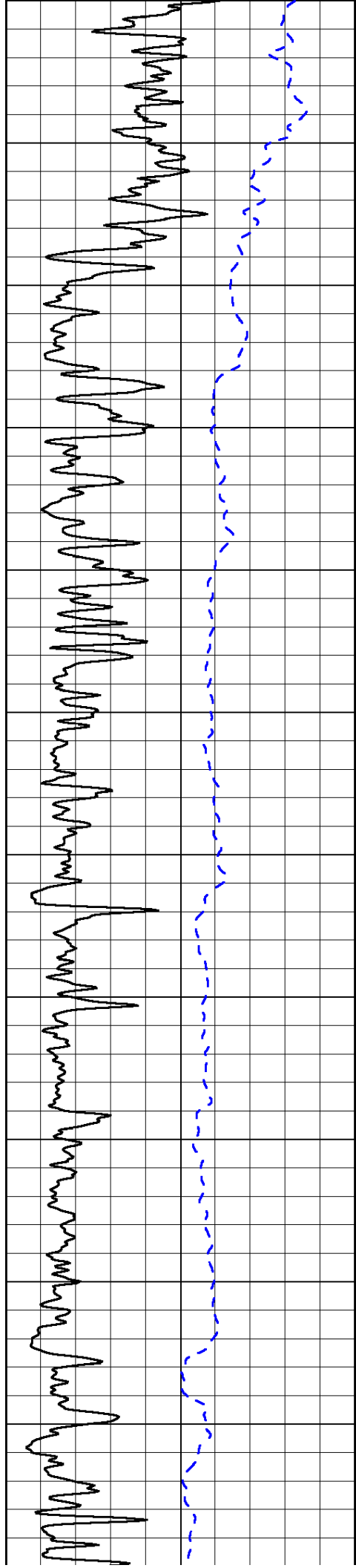
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

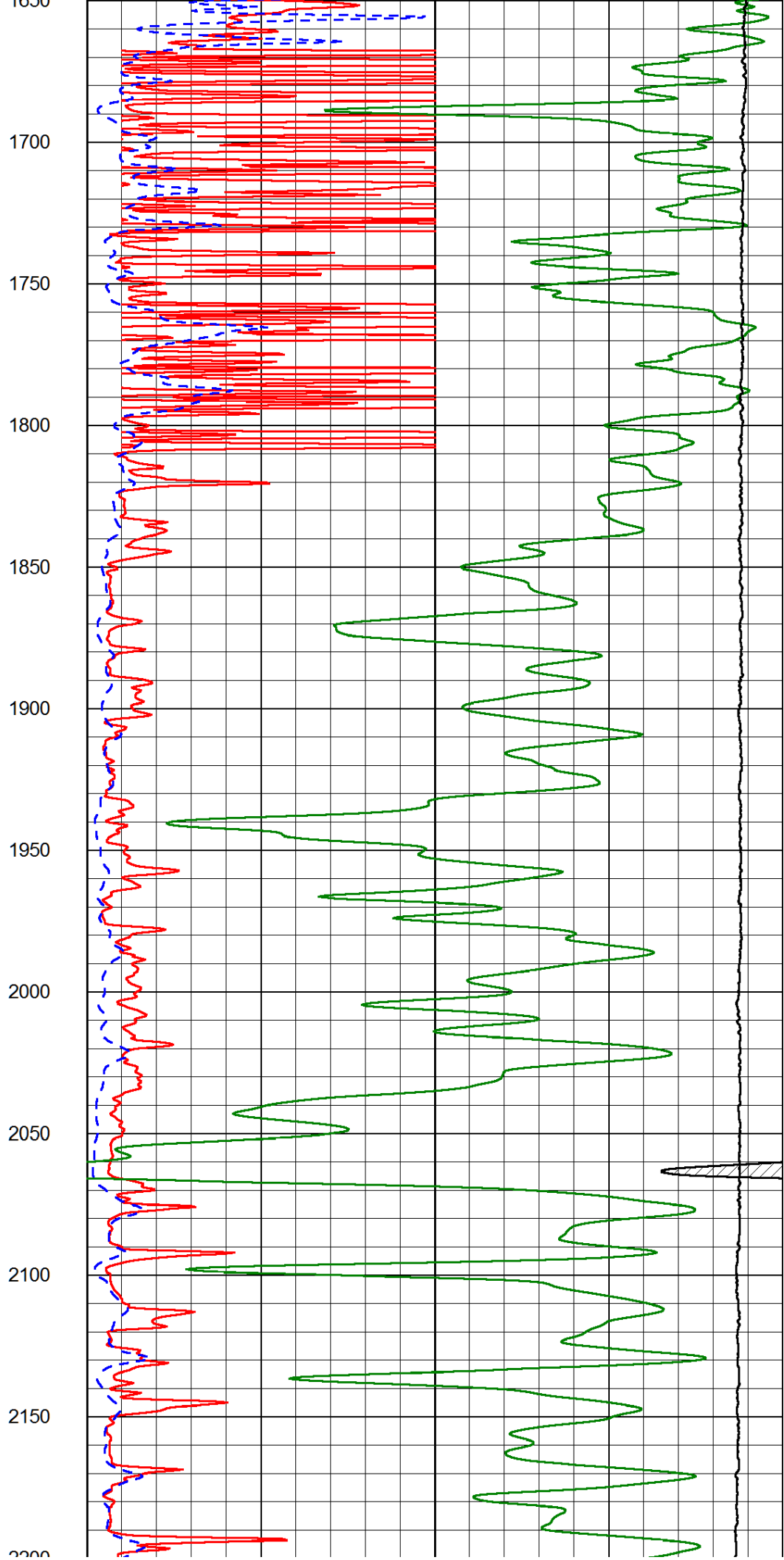
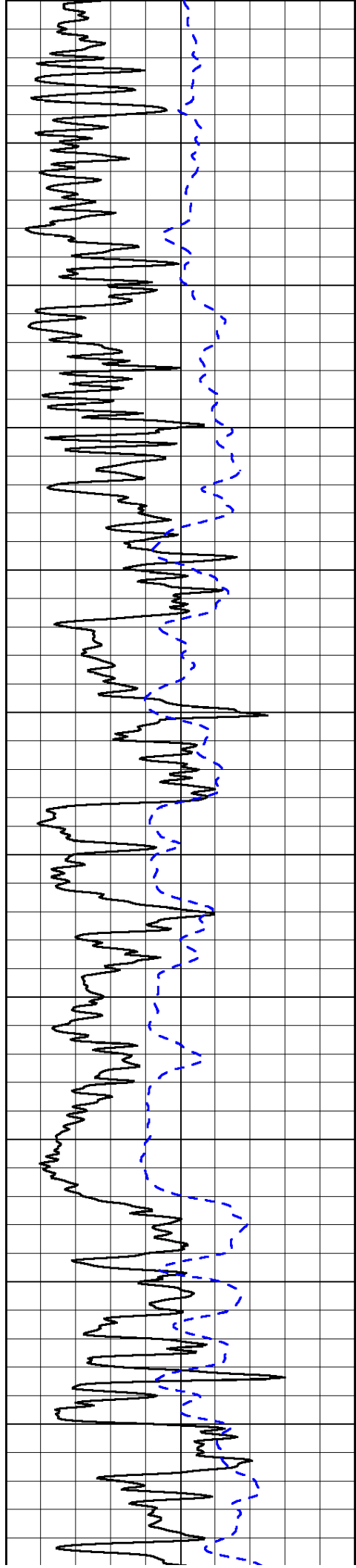
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50

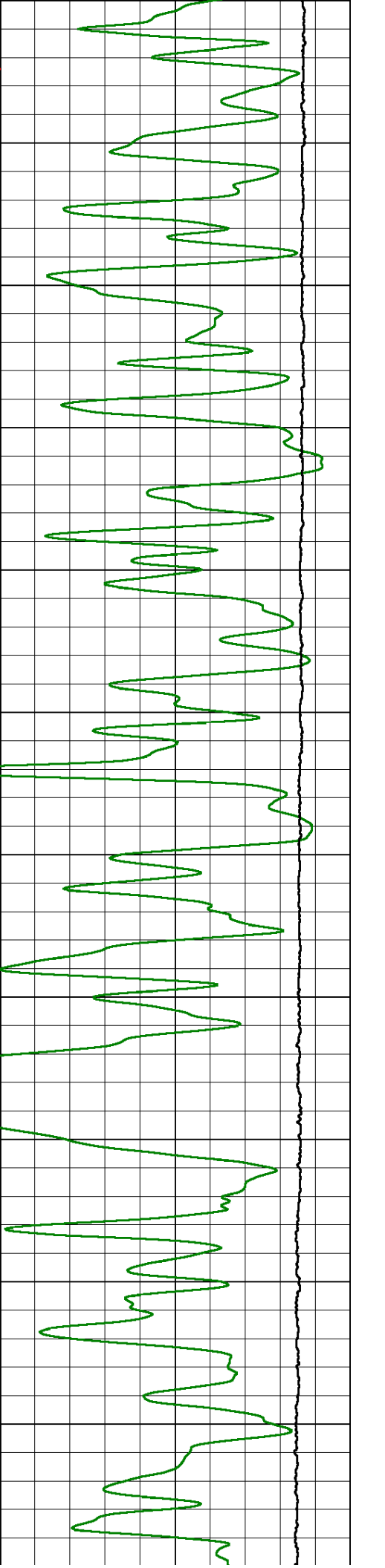
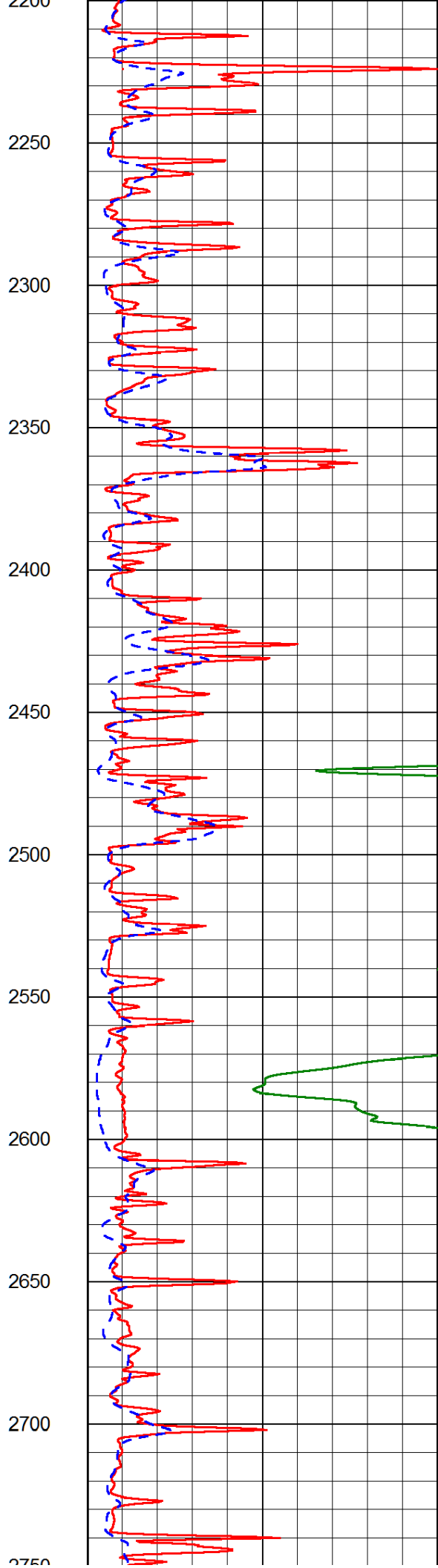
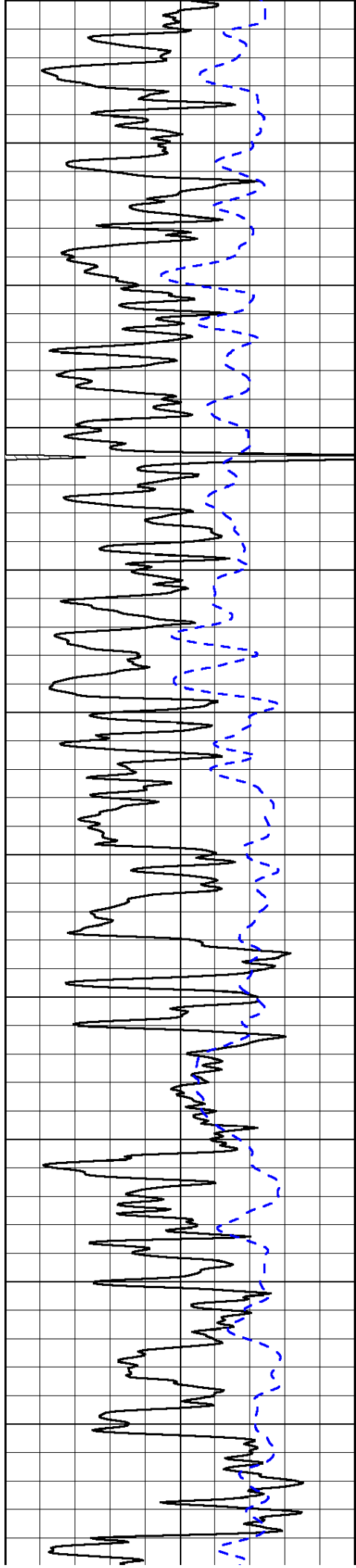
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0

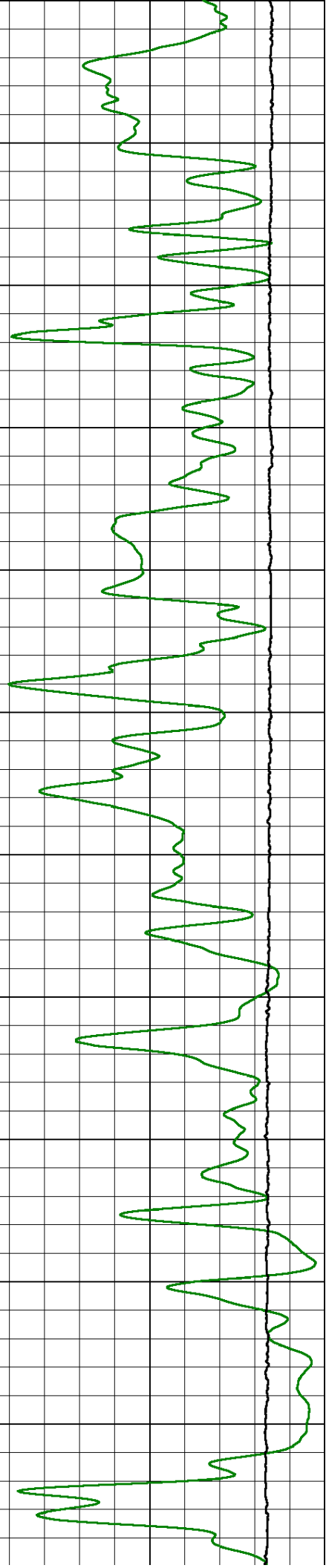
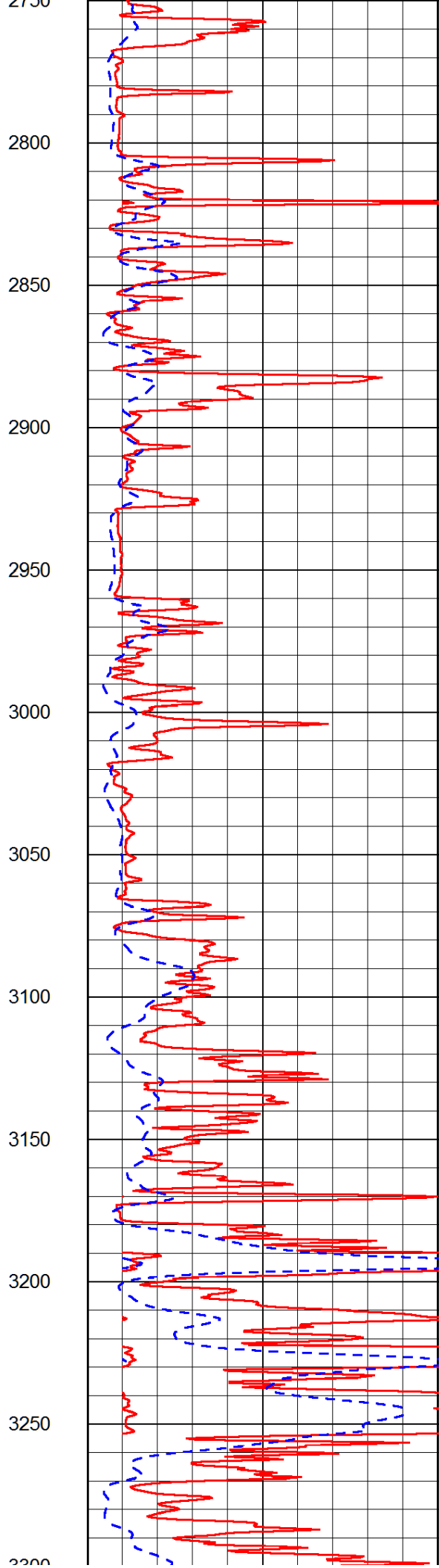
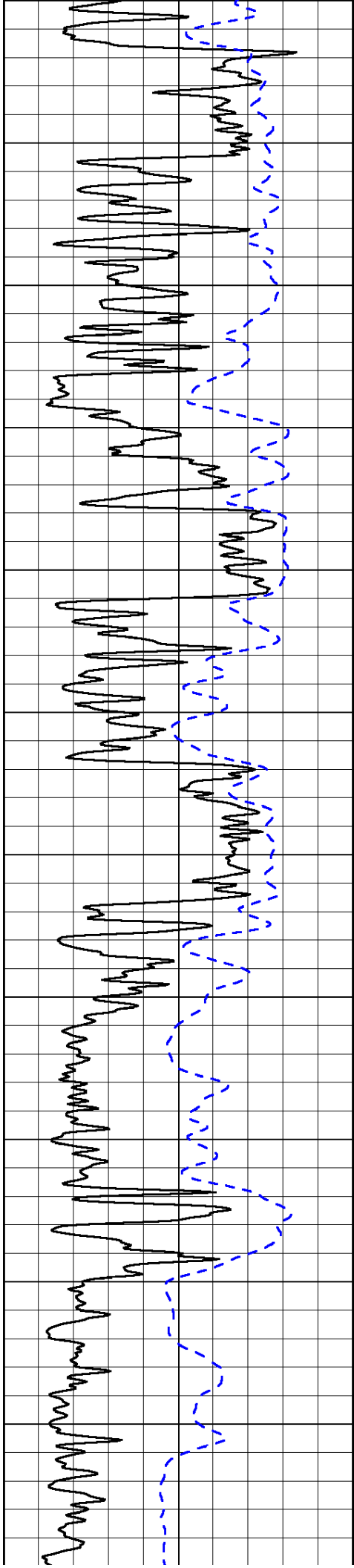
Shallow Resistivity		
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500

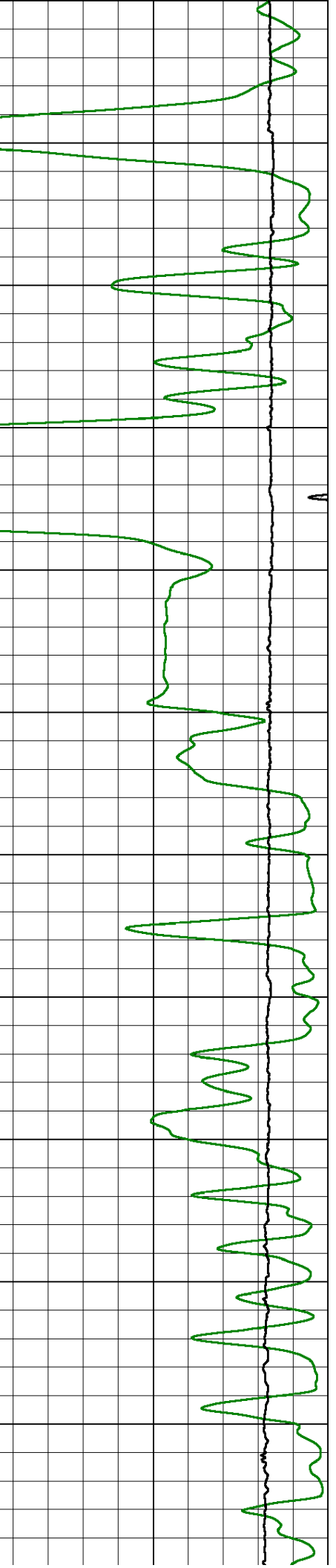
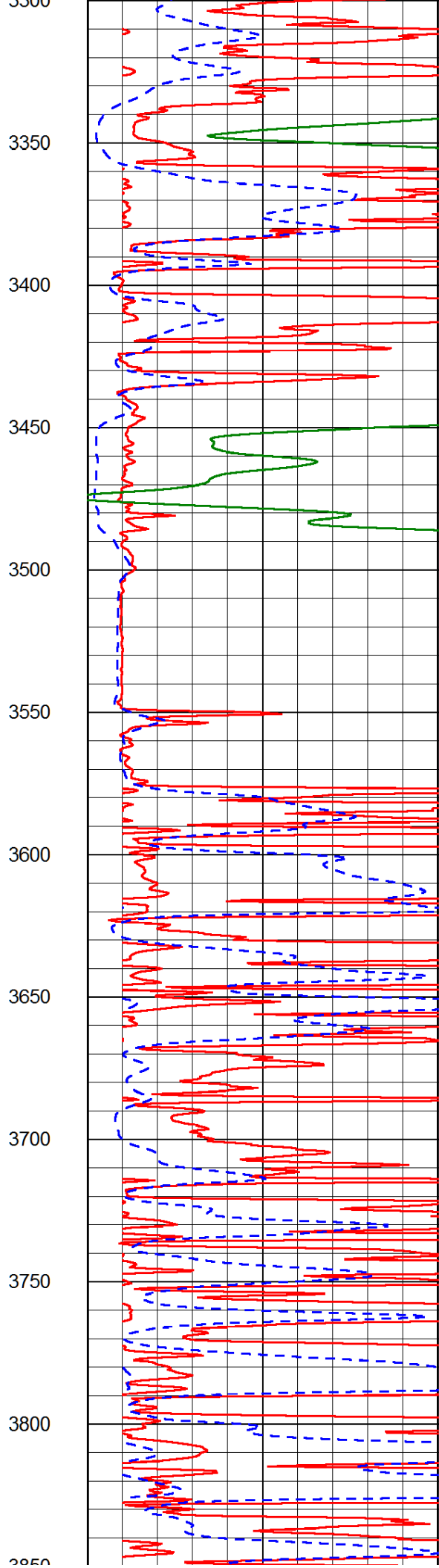
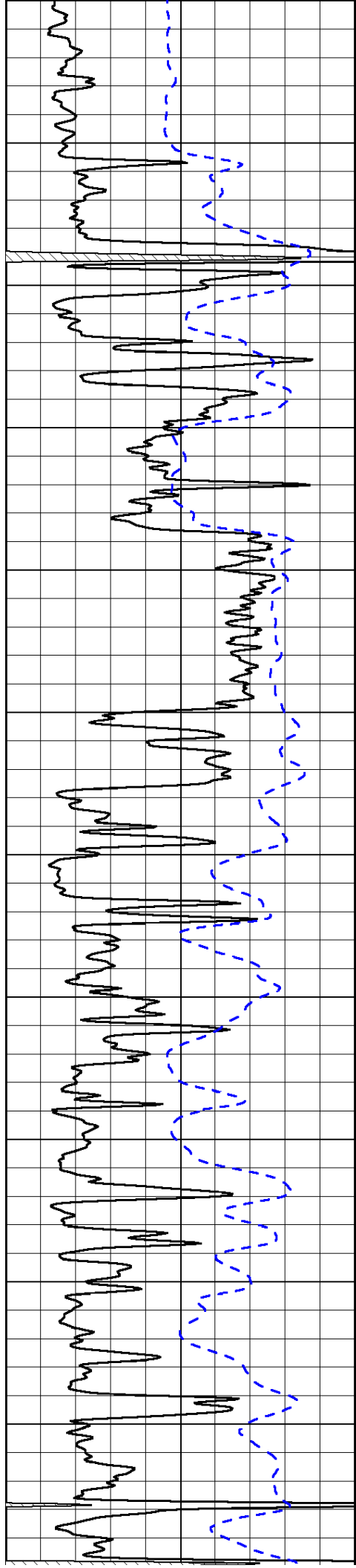


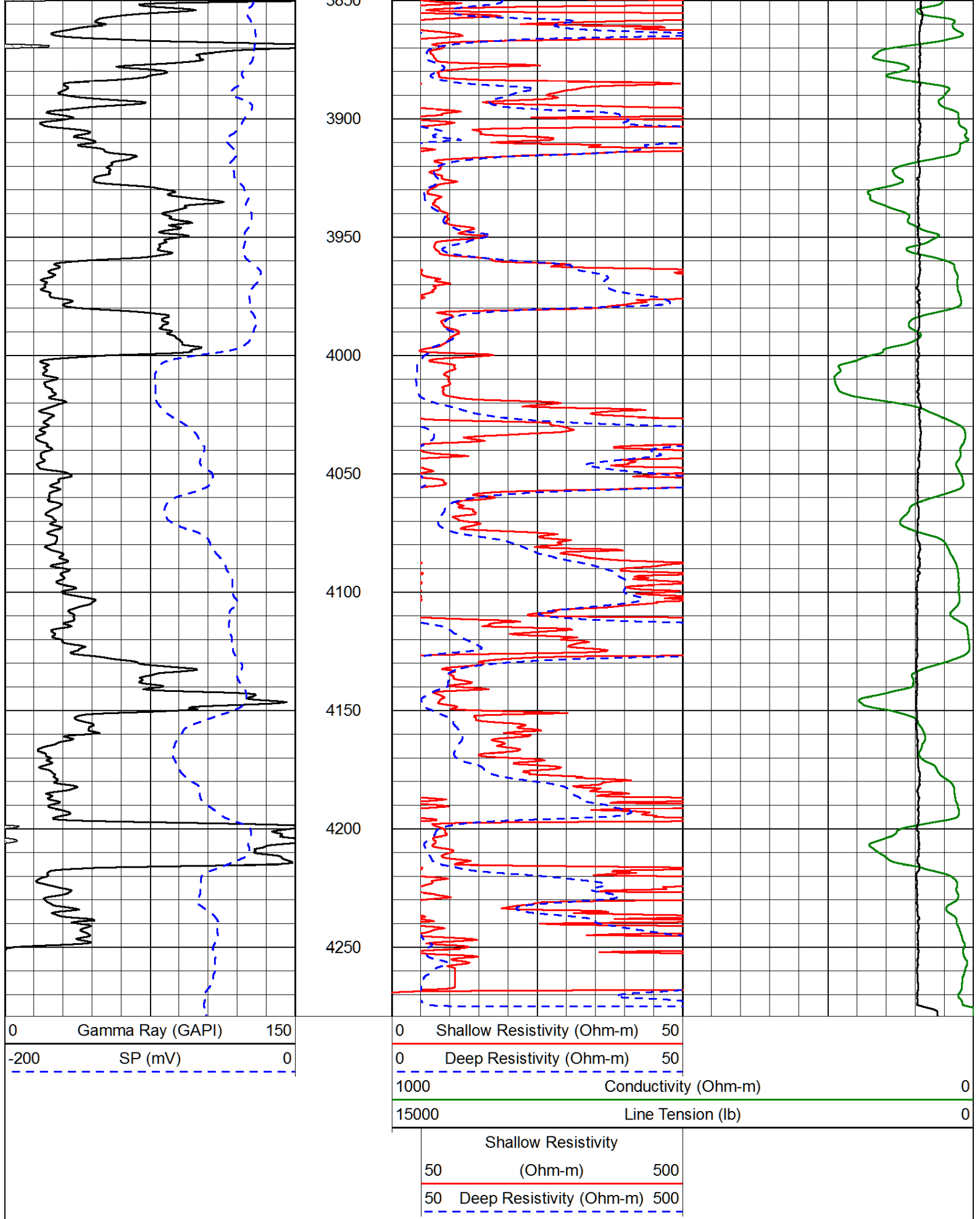










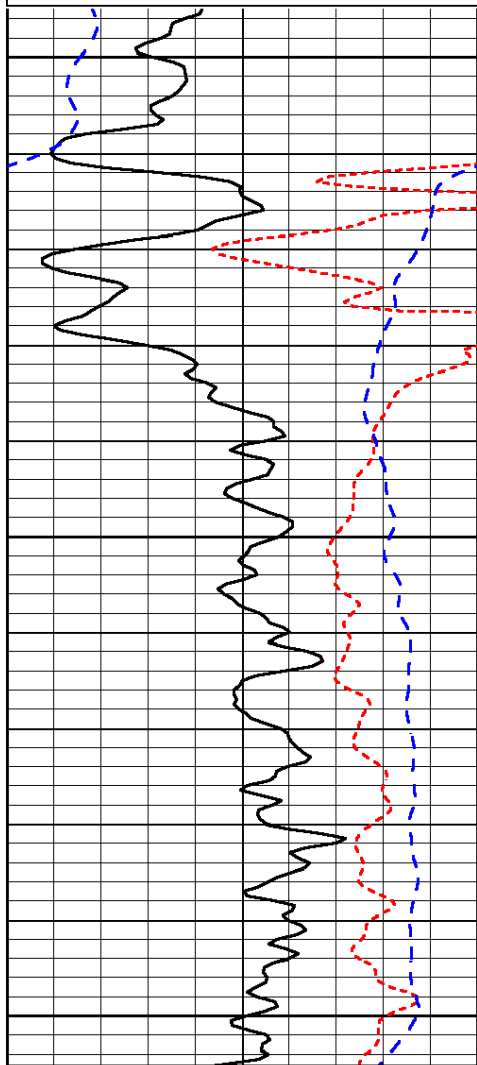


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 Charted by: Depth in Feet scaled 1:240

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

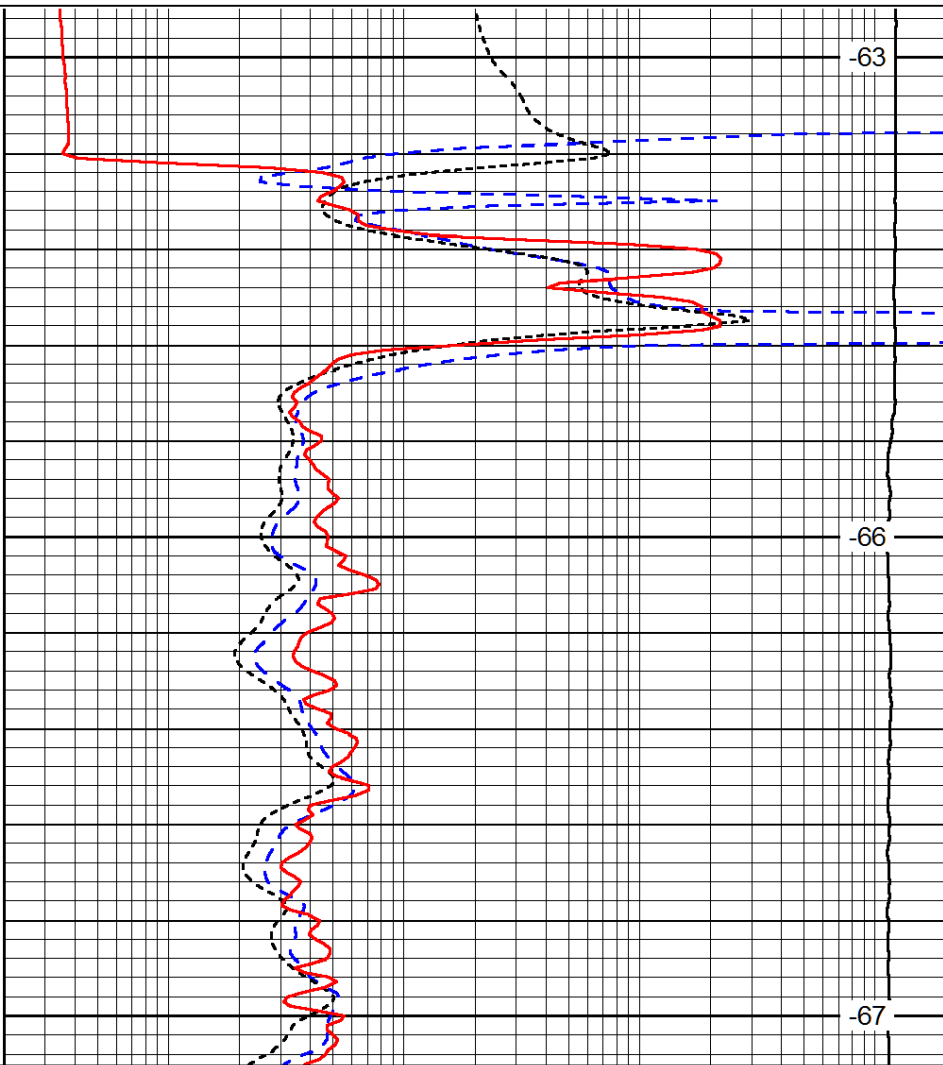
LSPD
(ft/min)



650

700

750



-63

-66

-67

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)

Database File: h&d_hd.db
 Dataset Pathname: DIL/hdmain
 Presentation Format: dil
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-160	RXO/RT	40
-200	SP (mV)	0

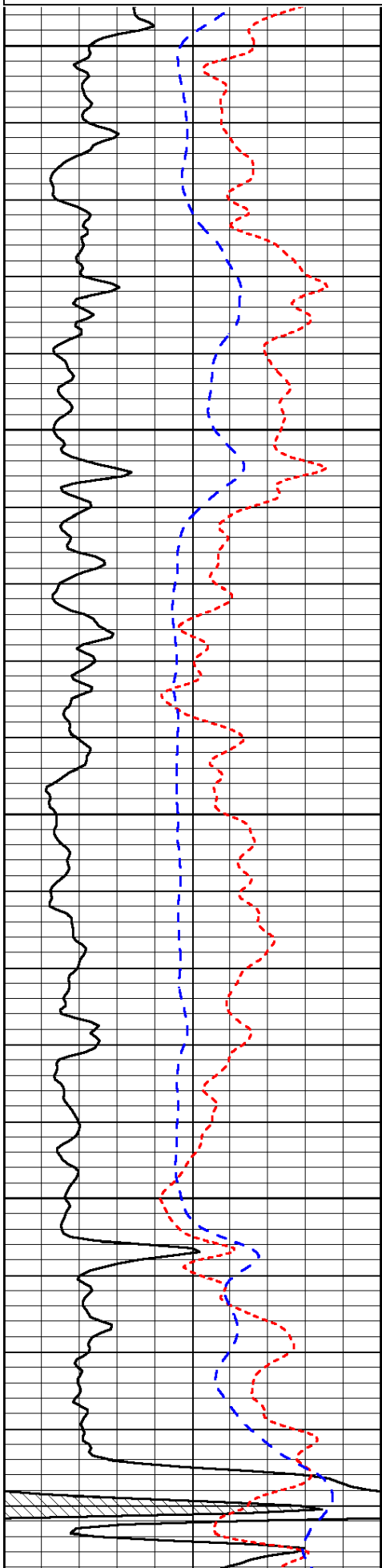
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000

10000

Line Tension (lb)

0

LSPD
(ft/min)

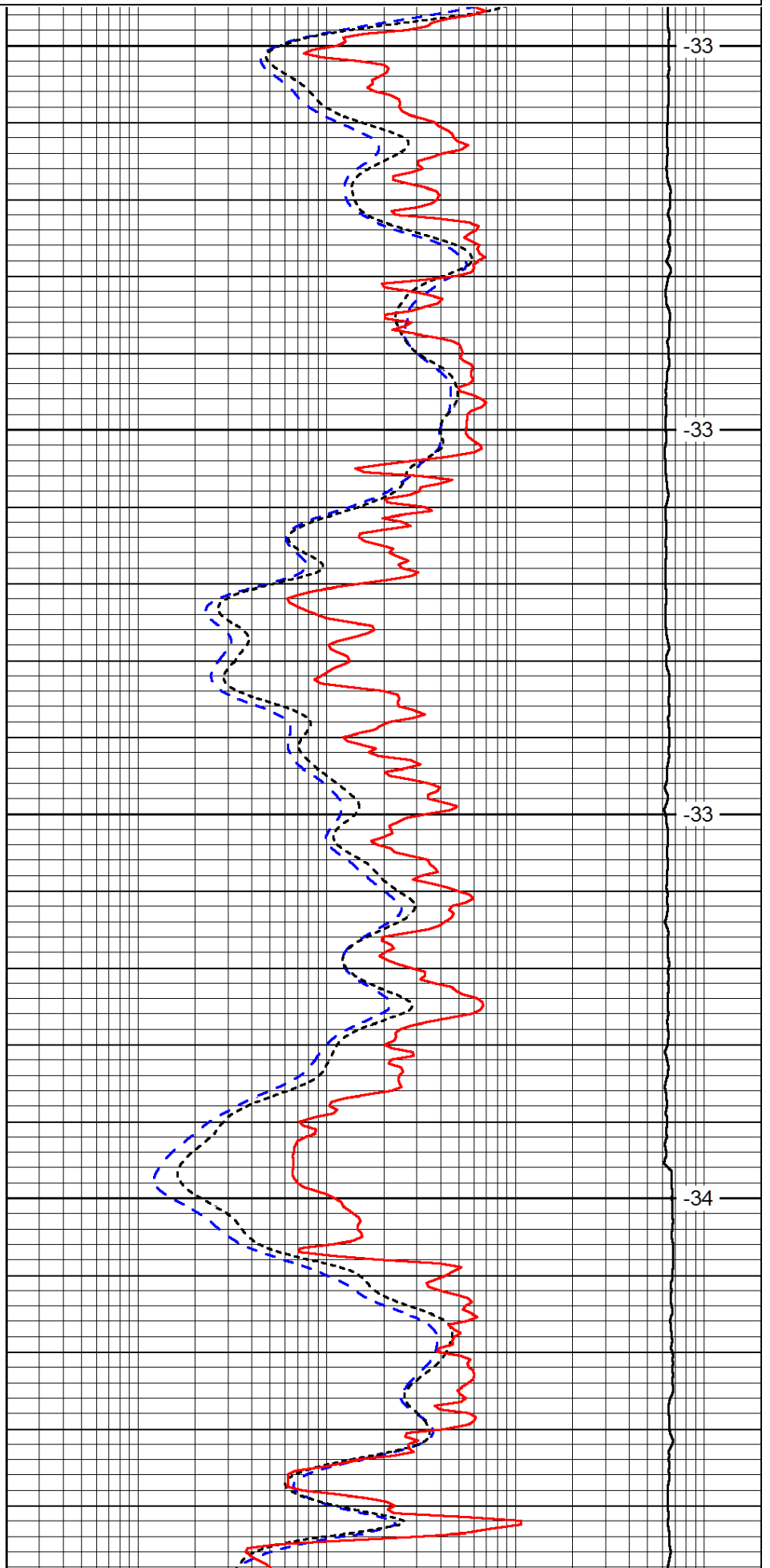


3200

3250

3300

3350

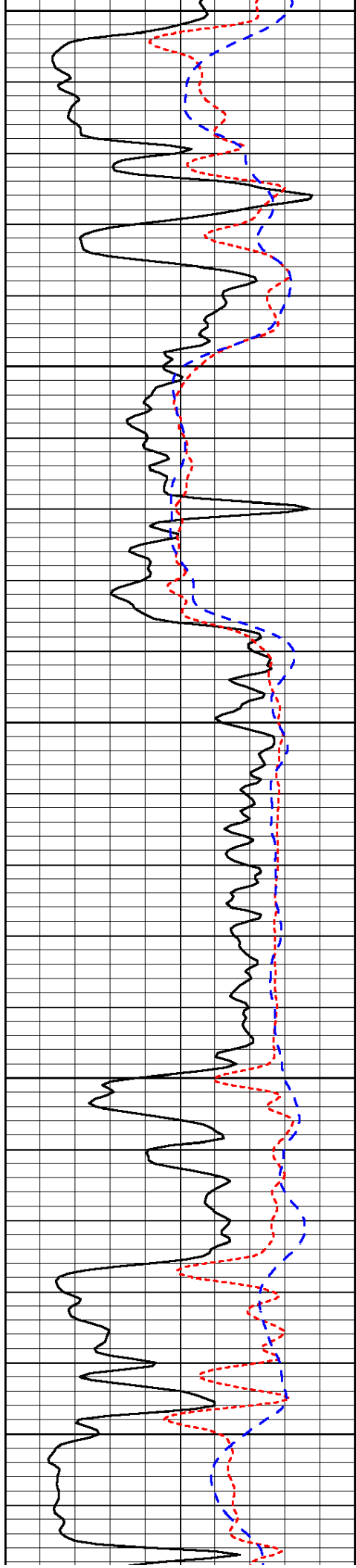


-33

-33

-33

-34



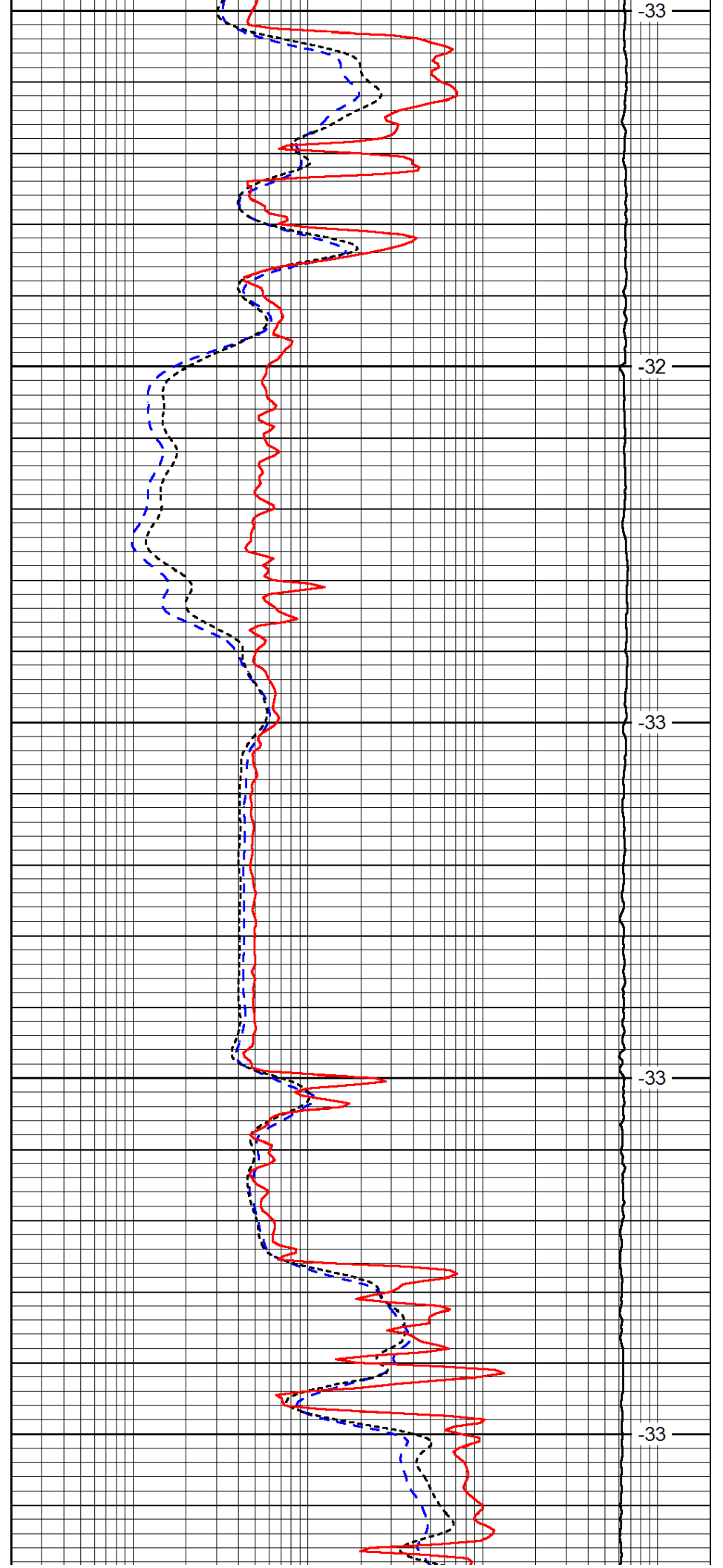
3400

3450

3500

3550

3600



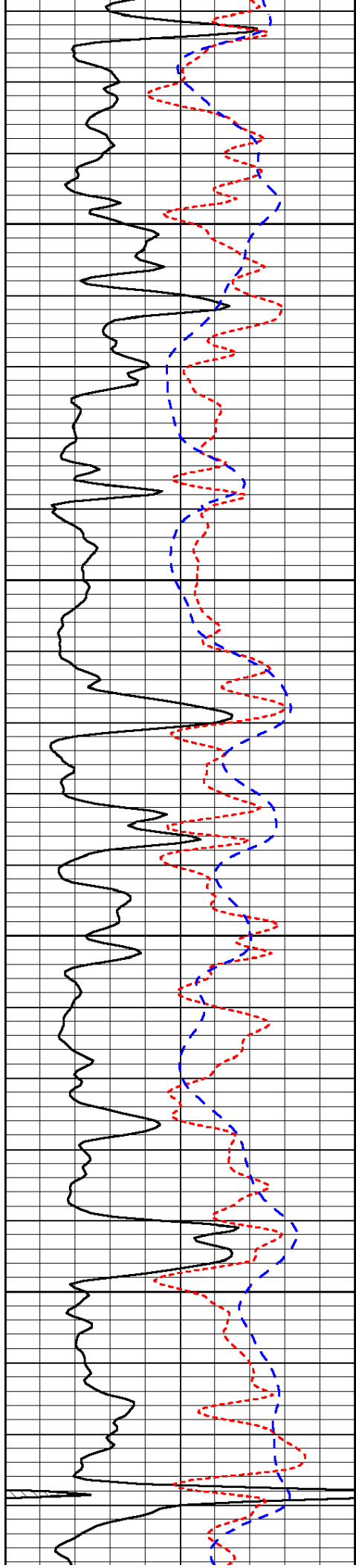
-33

-32

-33

-33

-33

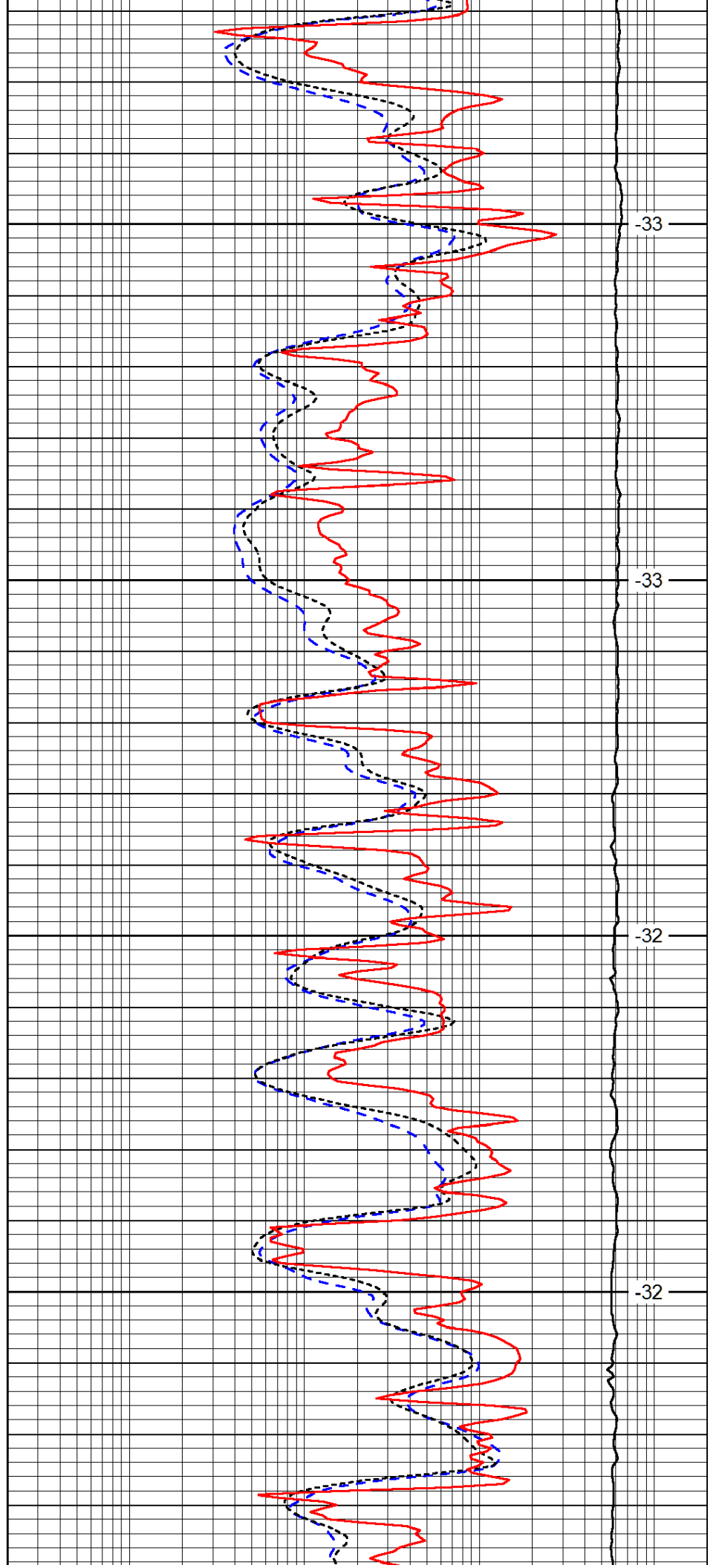


3650

3700

3750

3800

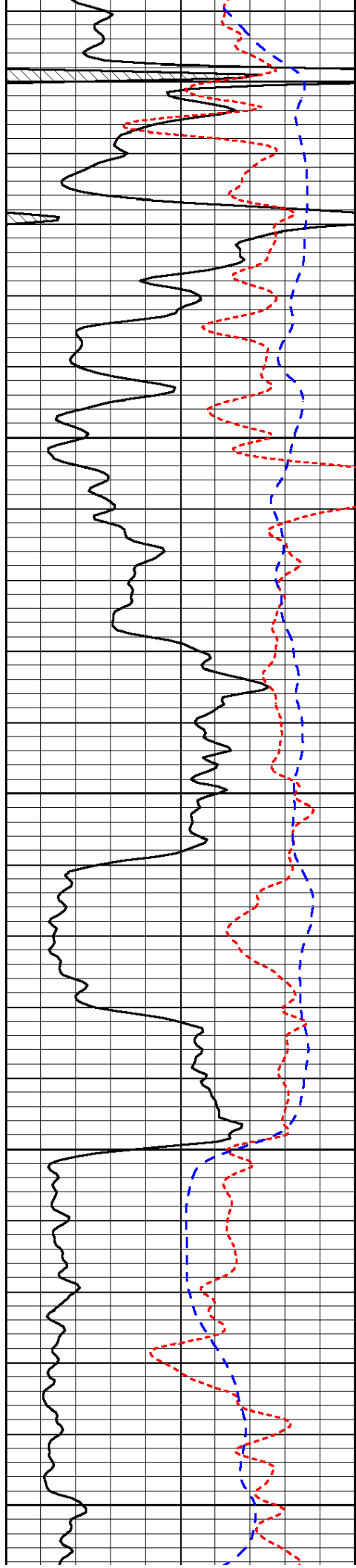


-33

-33

-32

-32



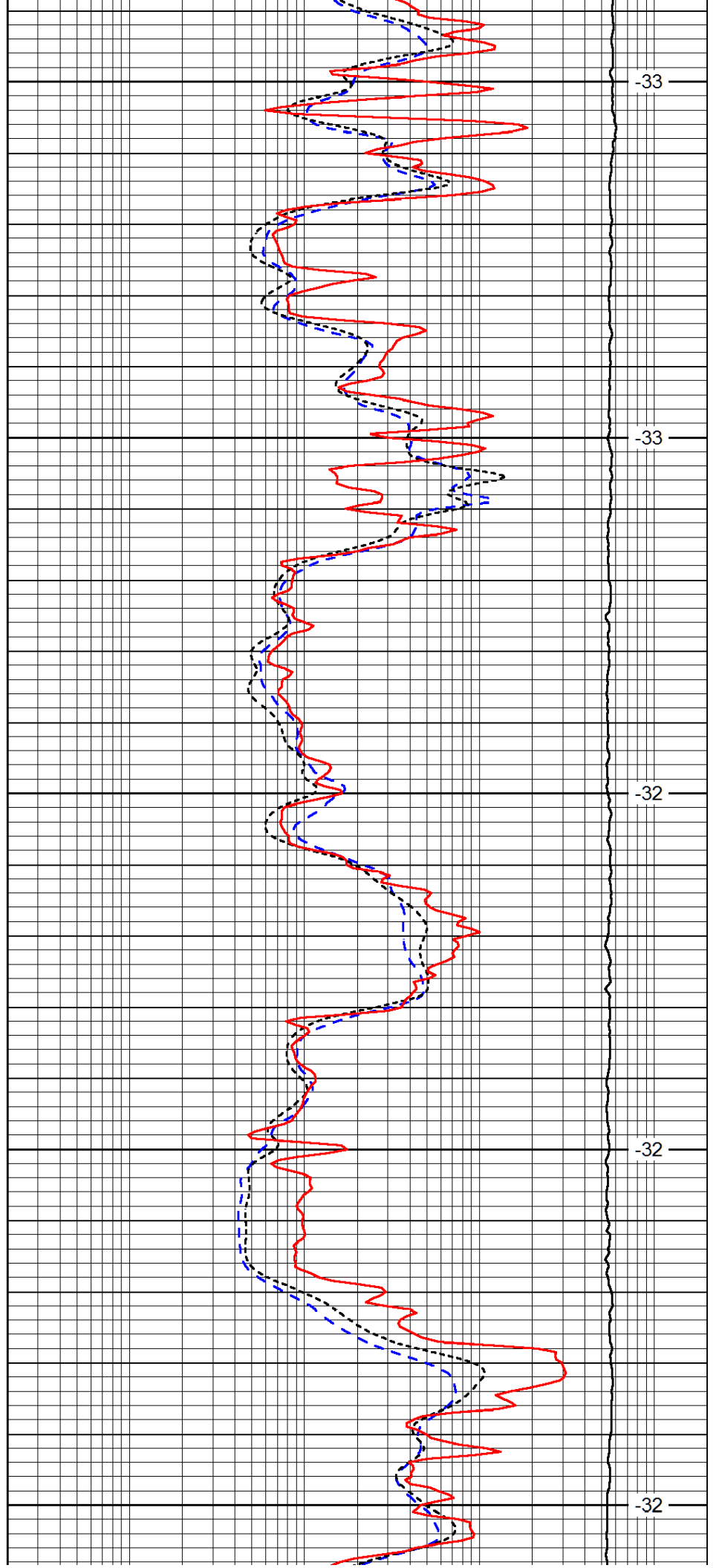
3850

3900

3950

4000

4050



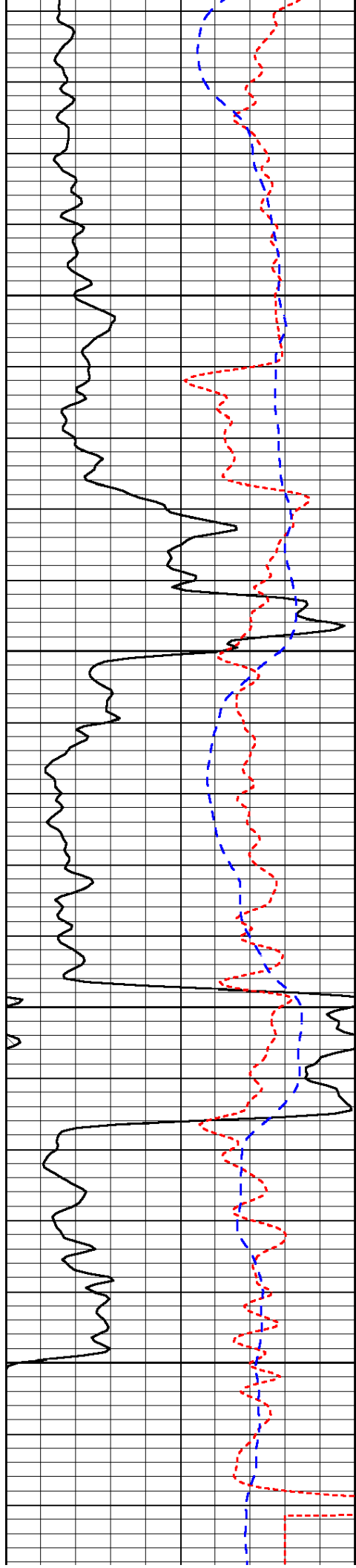
-33

-33

-32

-32

-32

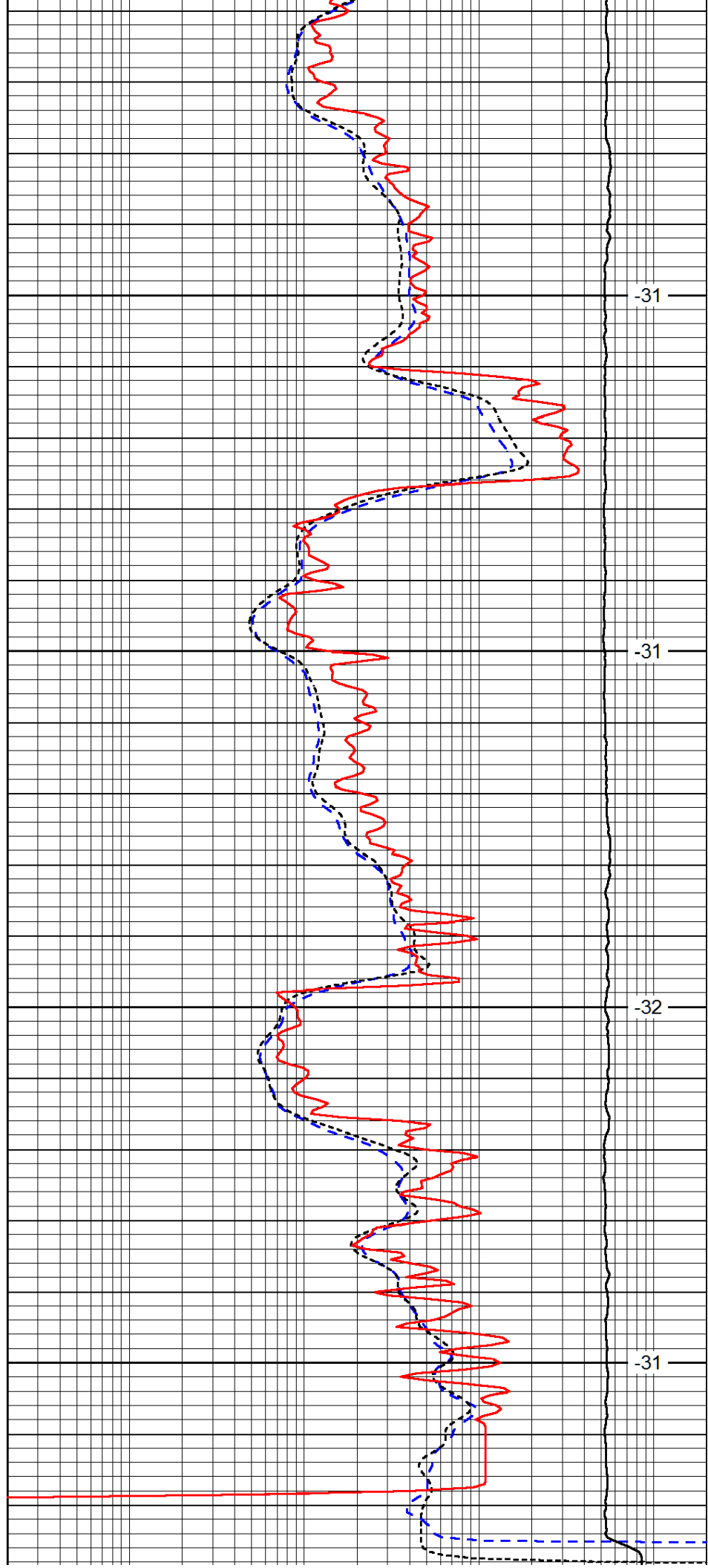


4100

4150

4200

4250



-31

-31

-32

-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)