



Pioneer Energy Services

Dual Induction Log

API No.	15-101-22,420-00-00		
Company	Larson Engineering, Inc.		
Well	Bockelman No. 2 - 19		
Field	Wildcat		
County	Lane	State	Kansas
Location	SE NW SW NE 1936' FNL & 2132' FEL		
Sec: 19	Twp: 18 S	Rge: 29 W	Other Services CNL/CDL MEL

Permanent Datum	Ground Level	Elevation 2834	K.B. 2841
Log Measured From	Kelly Bushing	7 Ft. Above Perm. Datum	D.F. 2834
Drilling Measured From	Kelly Bushing		G.L. 2834
Date	2/1/2013		
Run Number	One		
Depth Driller	4660		
Depth Logger	4661		
Bottom Logged Interval	4660		
Top Log Interval	250		
Casing Driller	8.625 @ 259		
Casing Logger	255		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	3300		
Density / Viscosity	9.2	52	
pH / Fluid Loss	10.0	6.8	
Source of Sample	Flowline		
Rm @ Meas. Temp	.80 @ 68		
Rmf @ Meas. Temp	.60 @ 68		
Rmc @ Meas. Temp	1.08 @ 68		
Source of Rmf / Rmc	Charts		
Rm @ BHT	.44 @ 123		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	123		
Equipment Number	108		
Location	Hays		
Recorded By	D. Martin		
Witnessed By	Vern Schrag		

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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

Dighton, KS
5 W to Gage Rd., 1/2 S, W Into

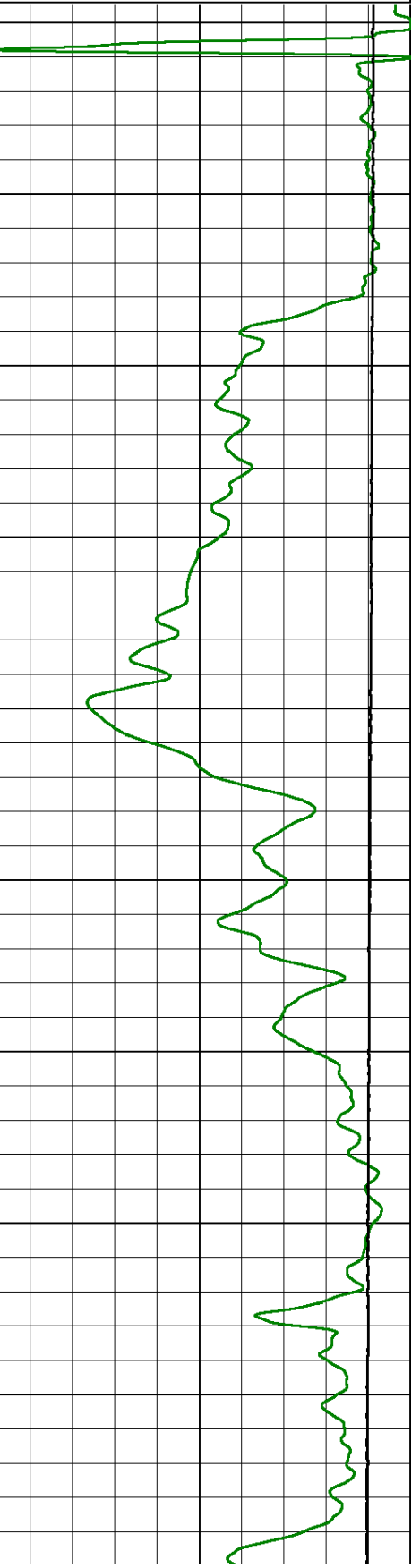
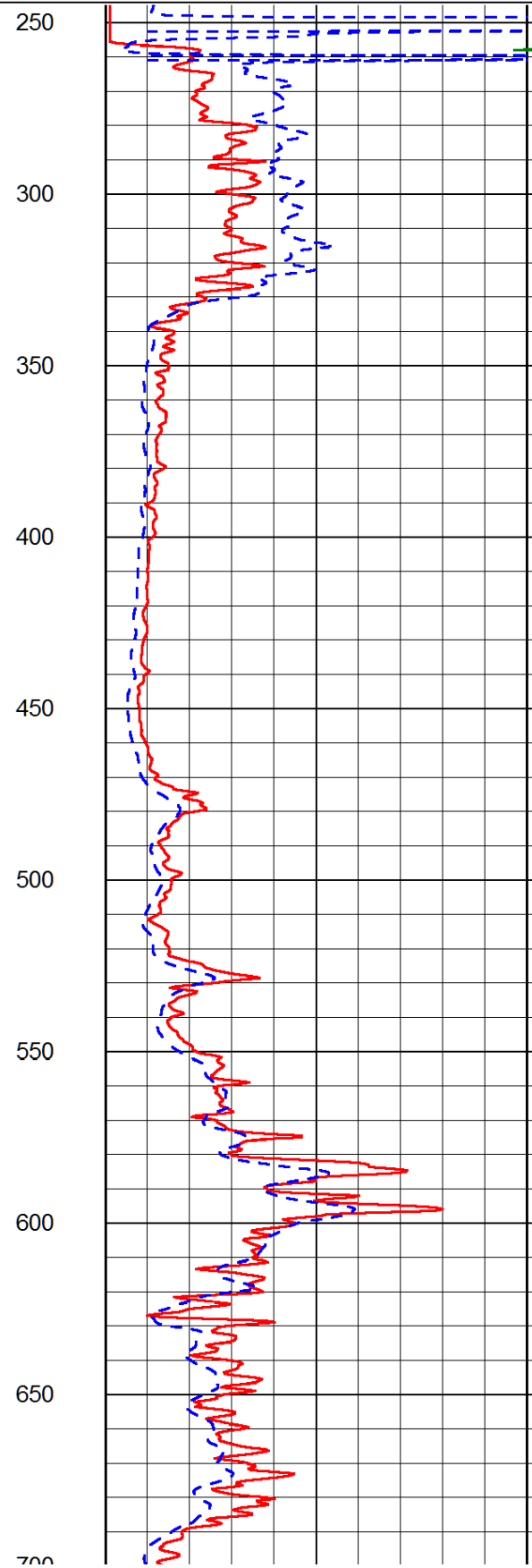
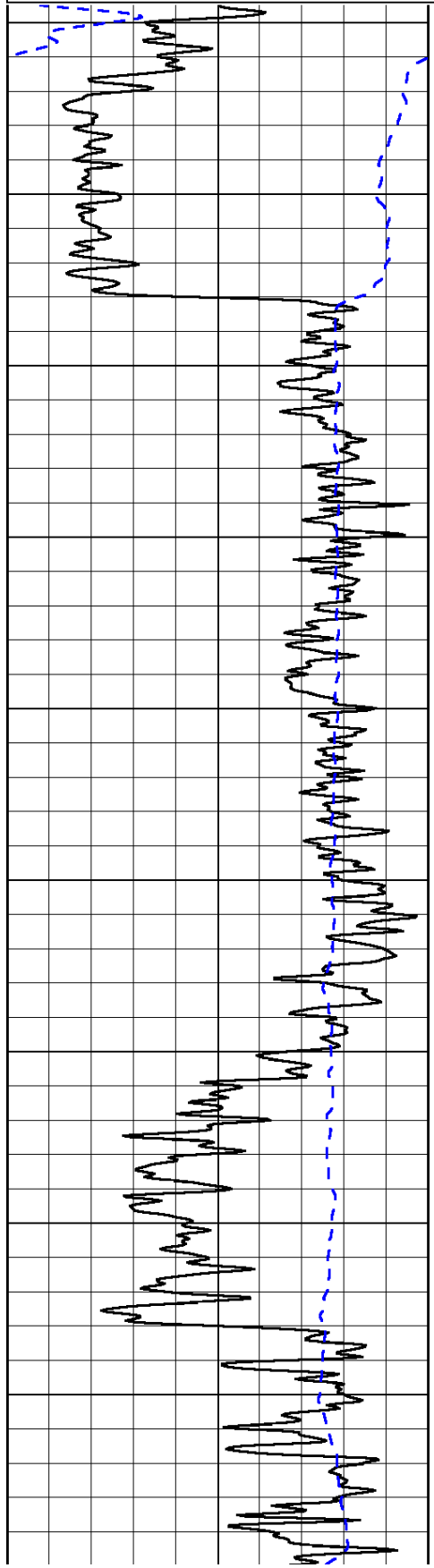
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 Presentation Format: dil2in
 Dataset Creation: Fri Feb 01 15:35:01 2013
 Charted by: Depth in Feet scaled 1:600

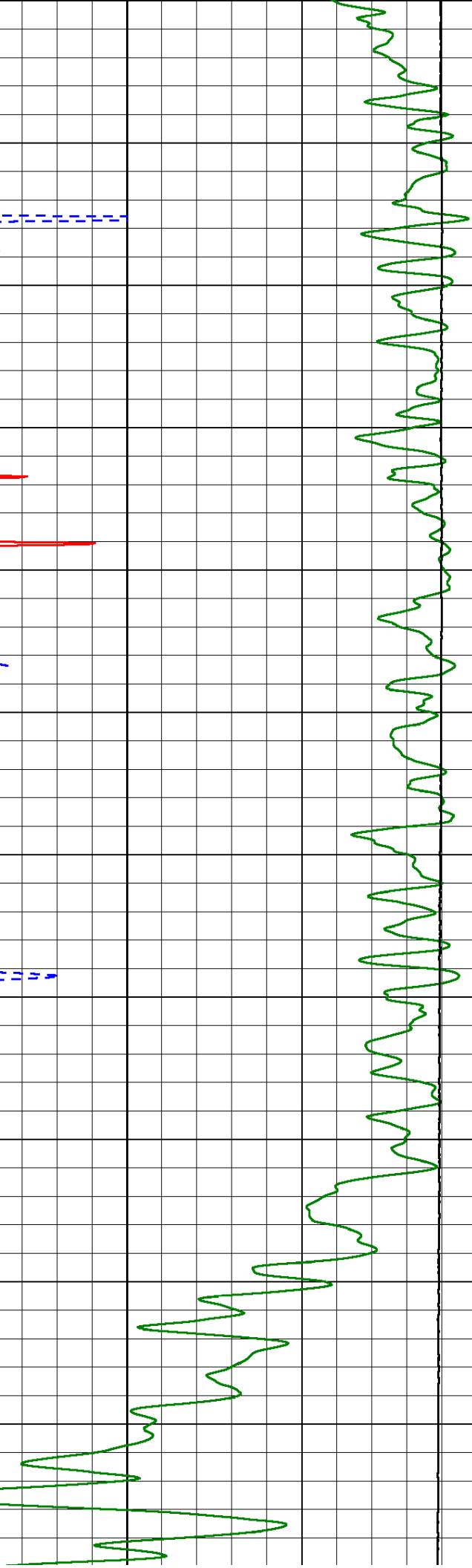
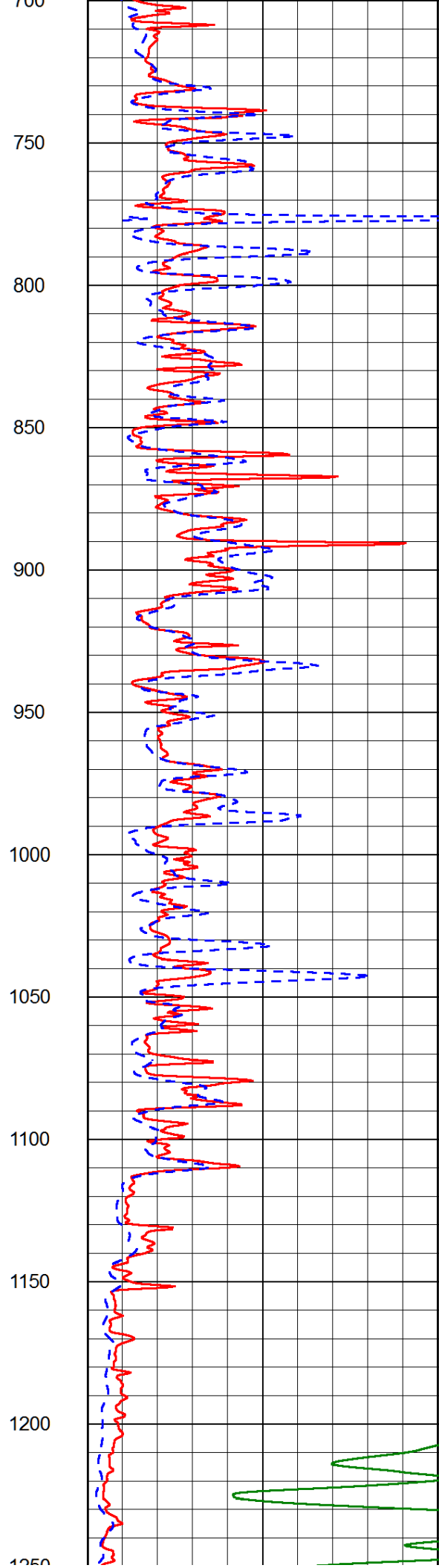
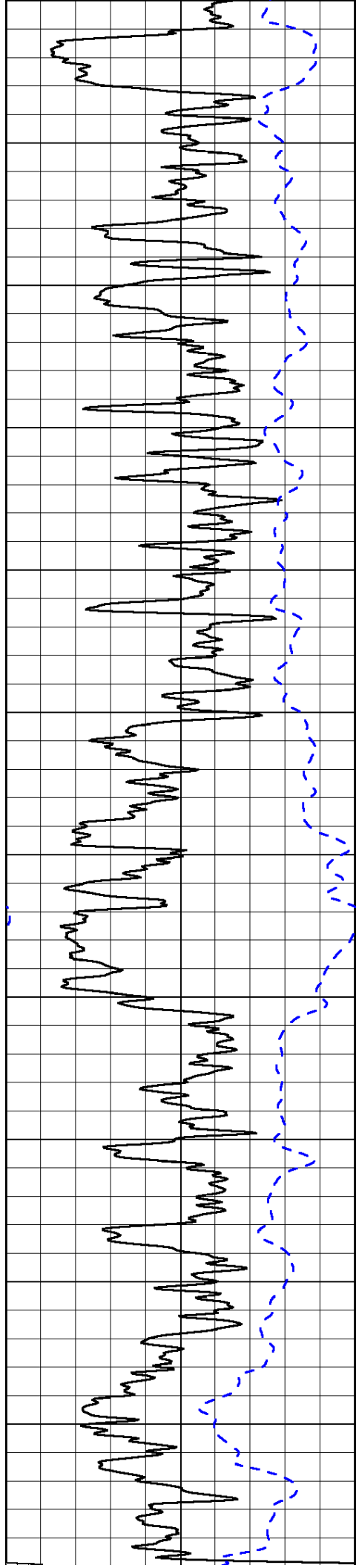
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

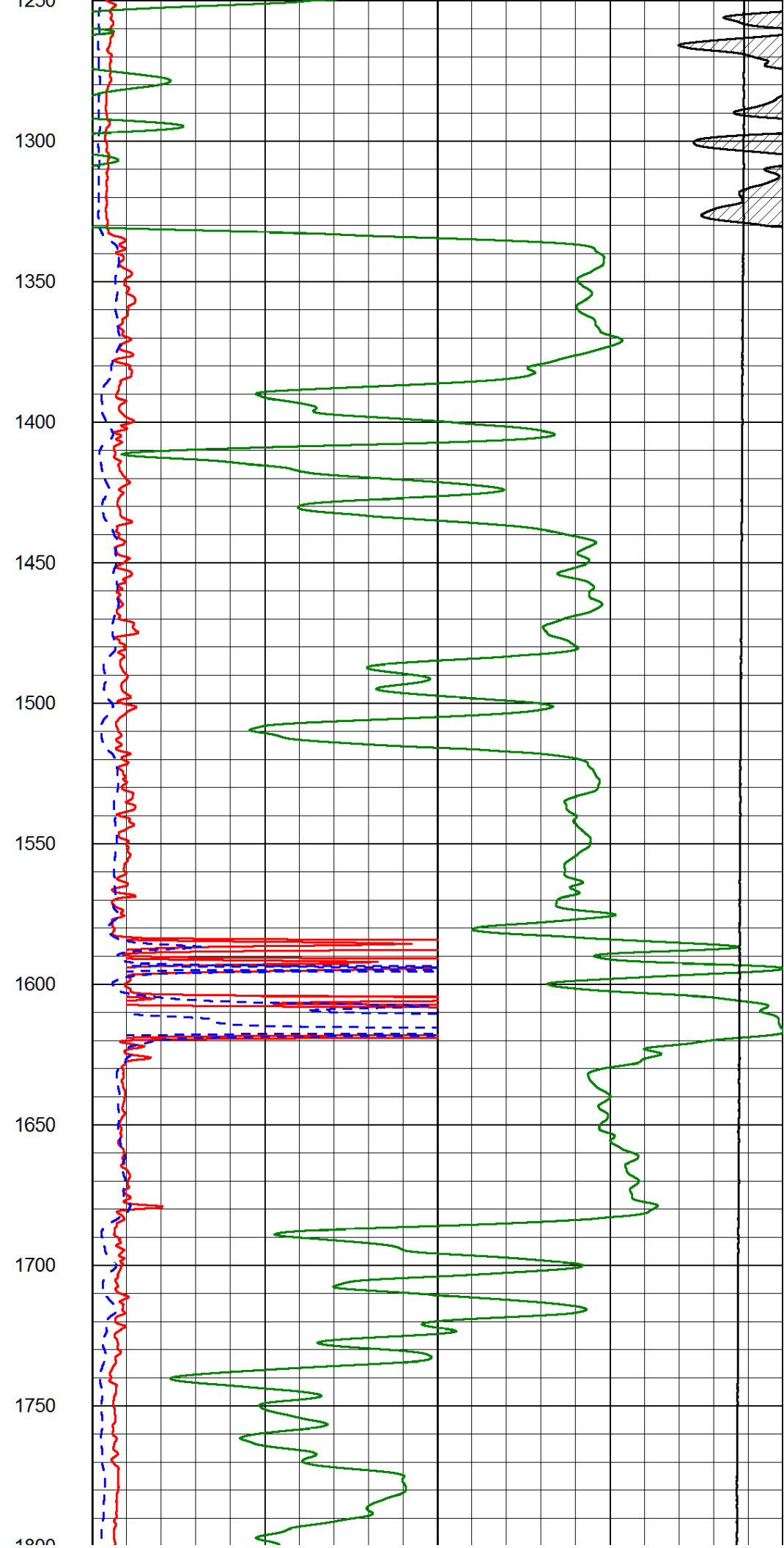
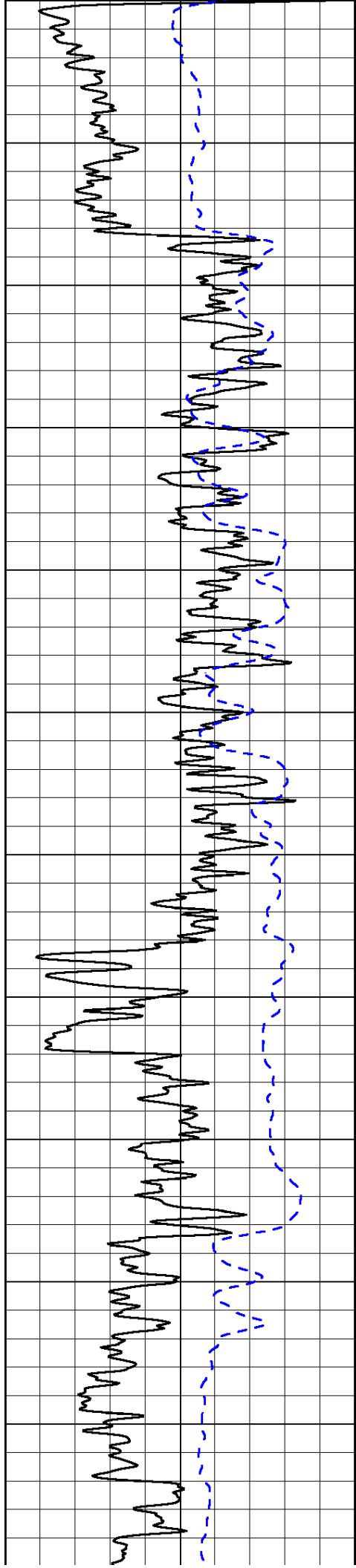
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0	Deep Resistivity (Ohm-m)	50

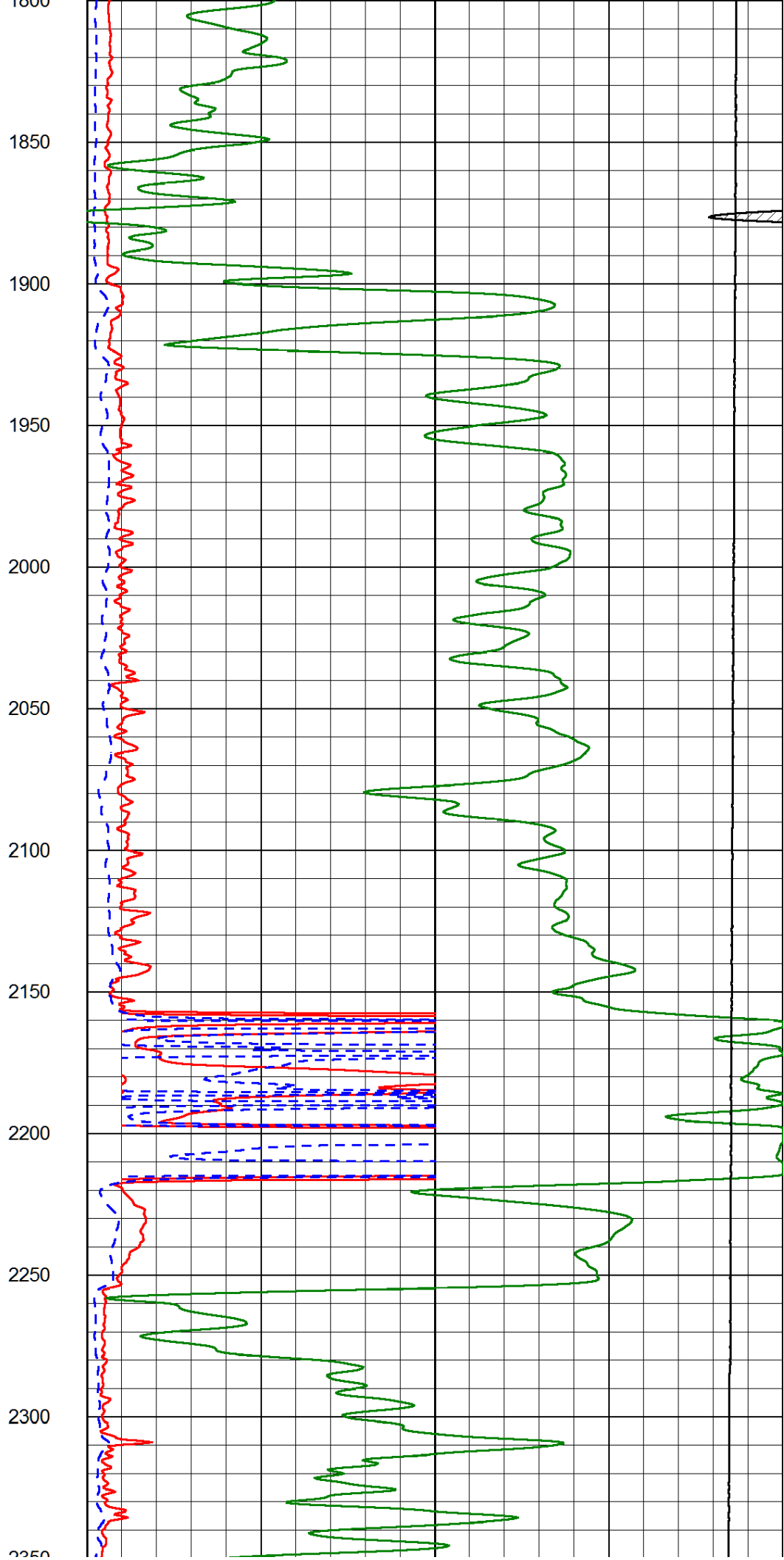
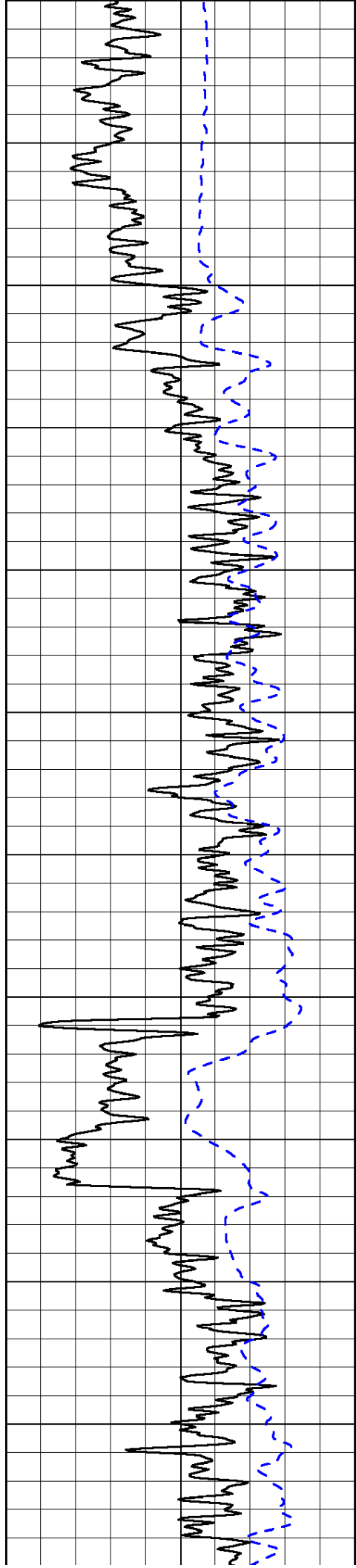
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0

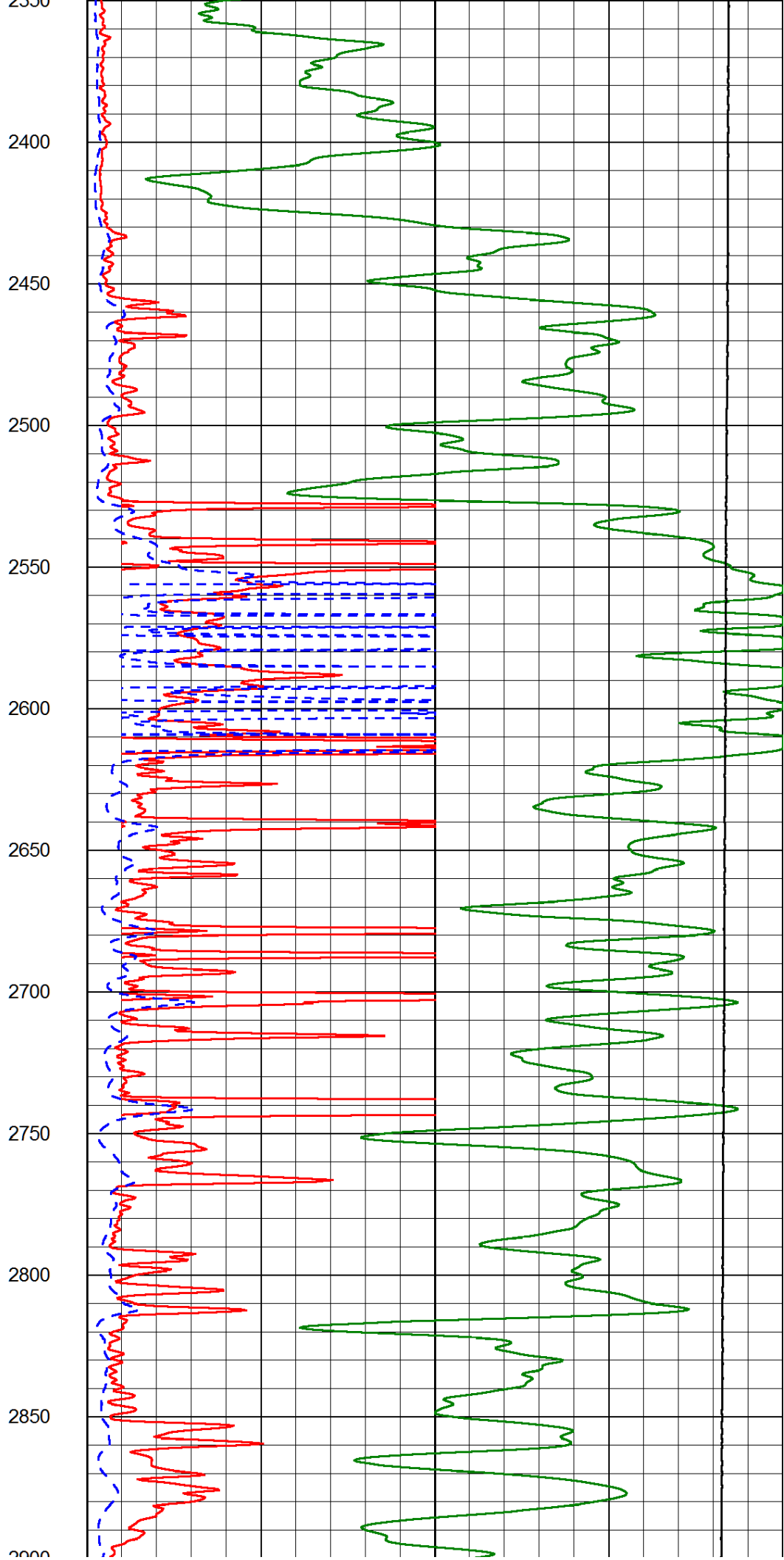
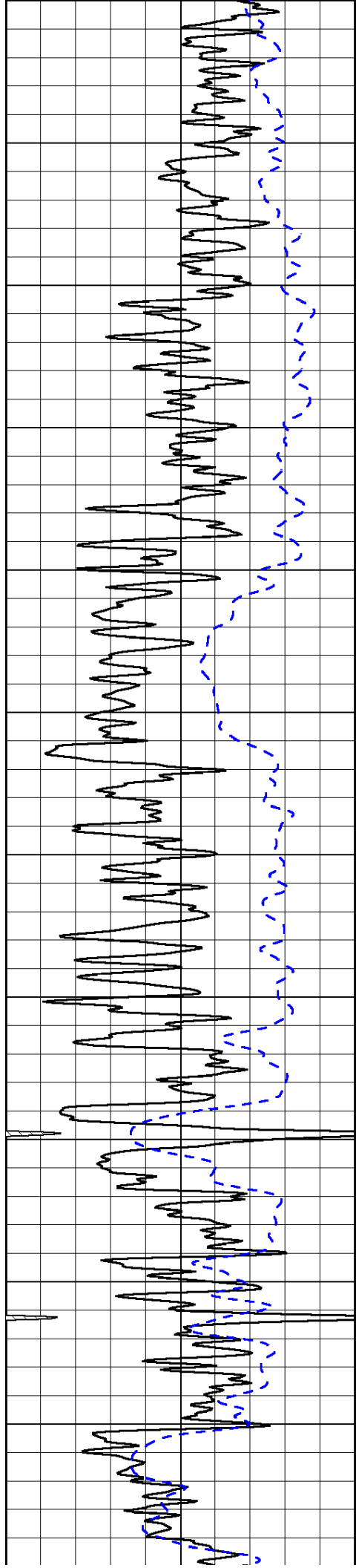
Shallow Resistivity	
50	500
(Ohm-m)	
50	
Deep Resistivity (Ohm-m)	
500	

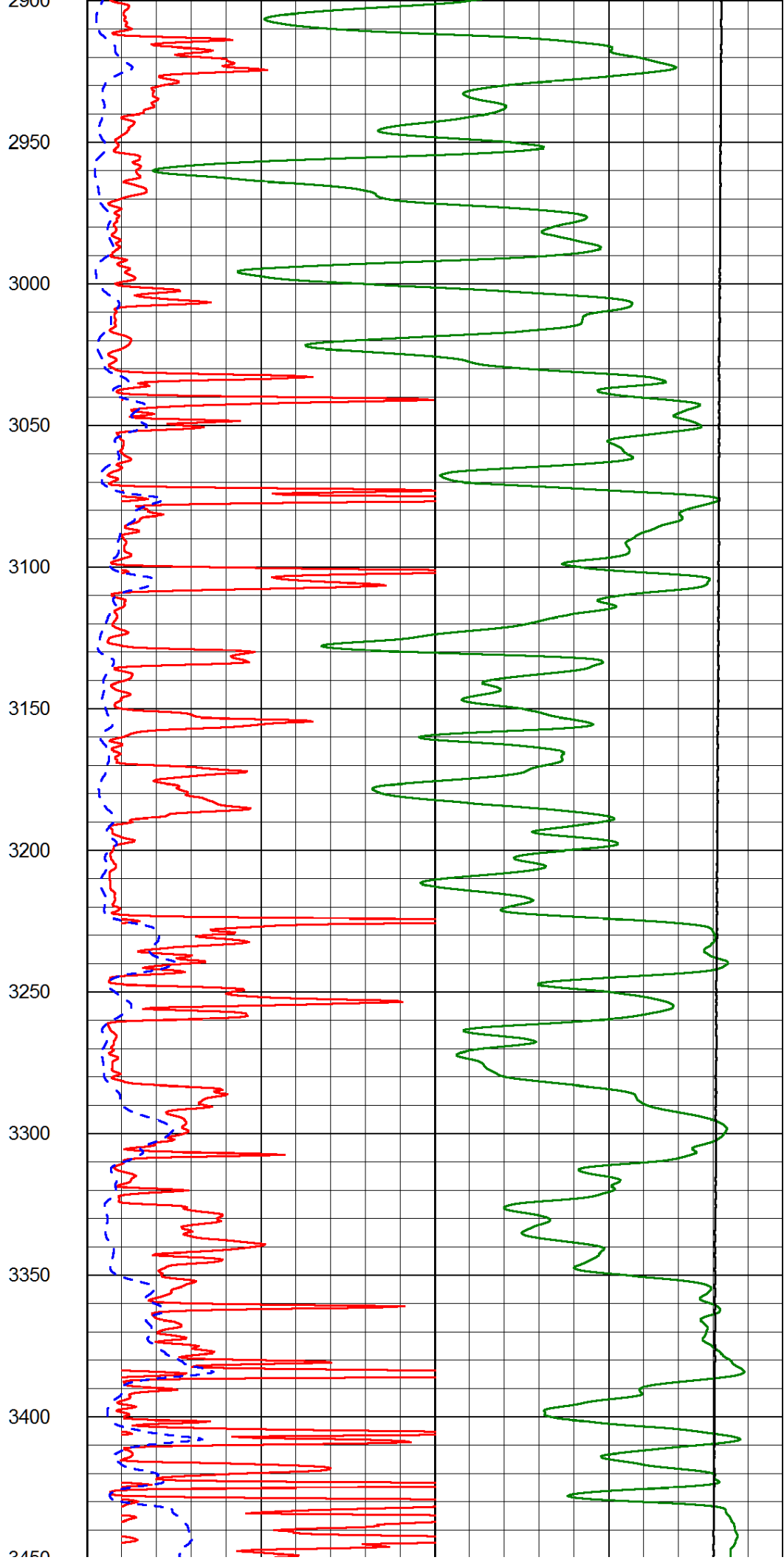
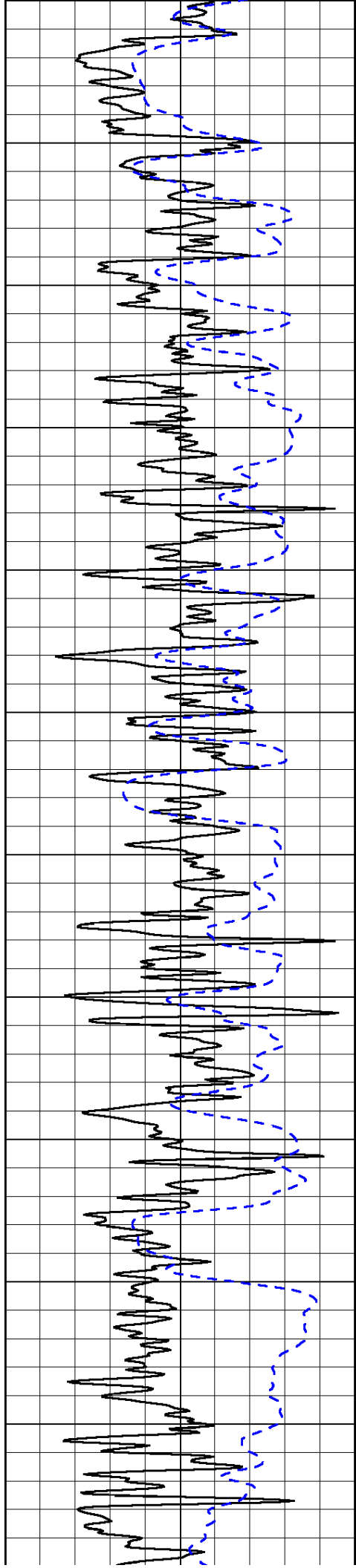


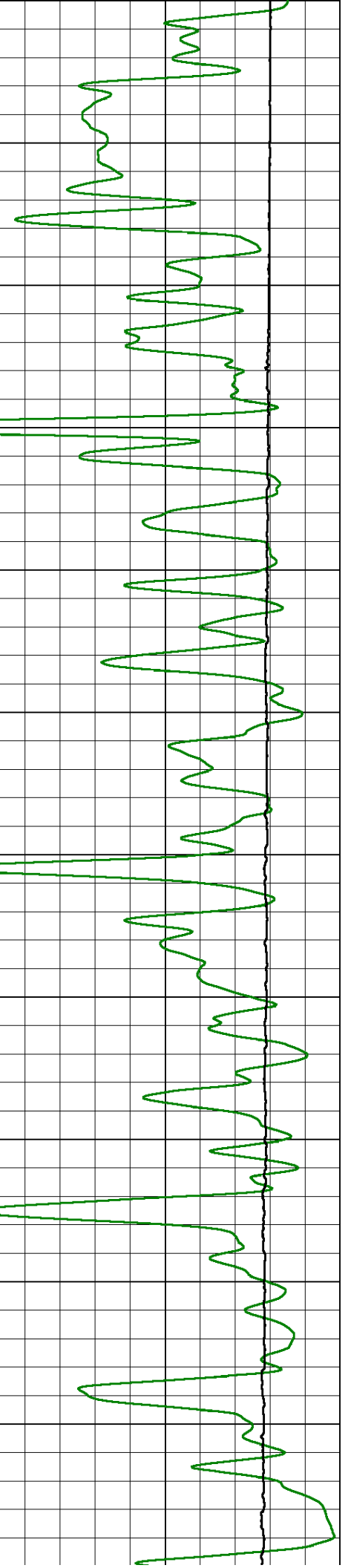
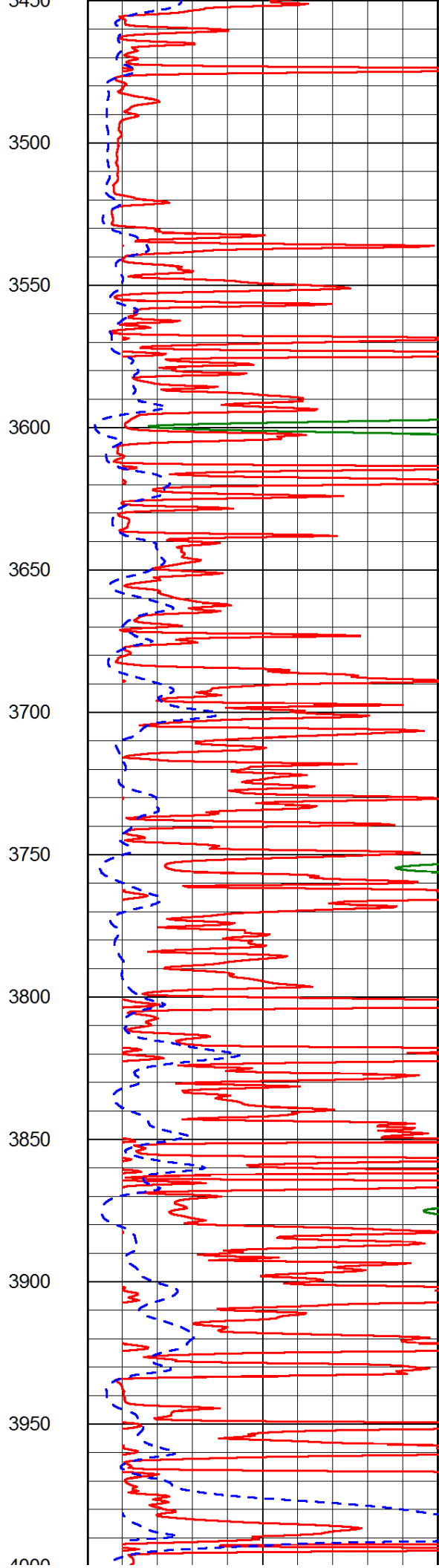
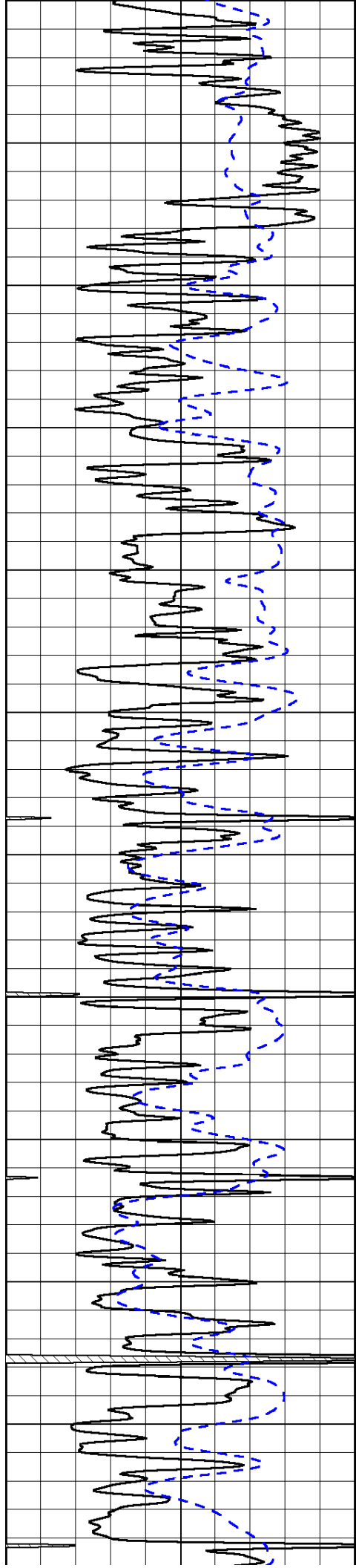


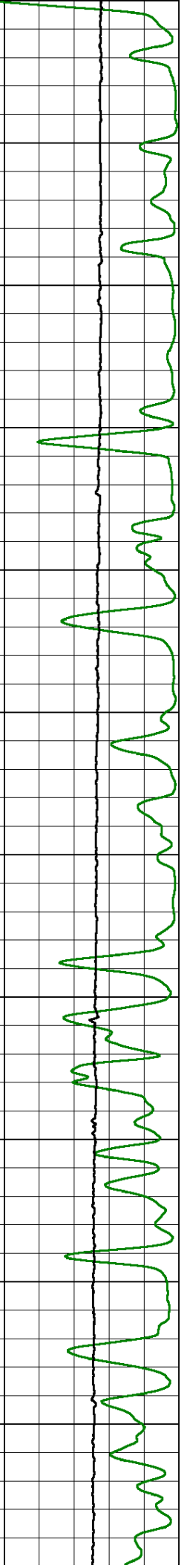
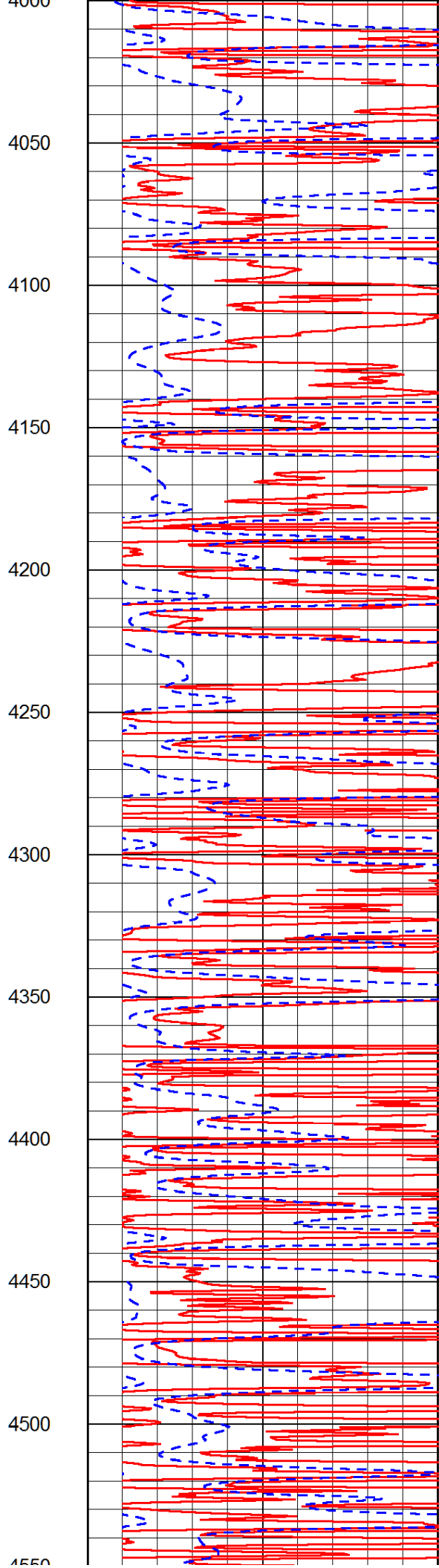
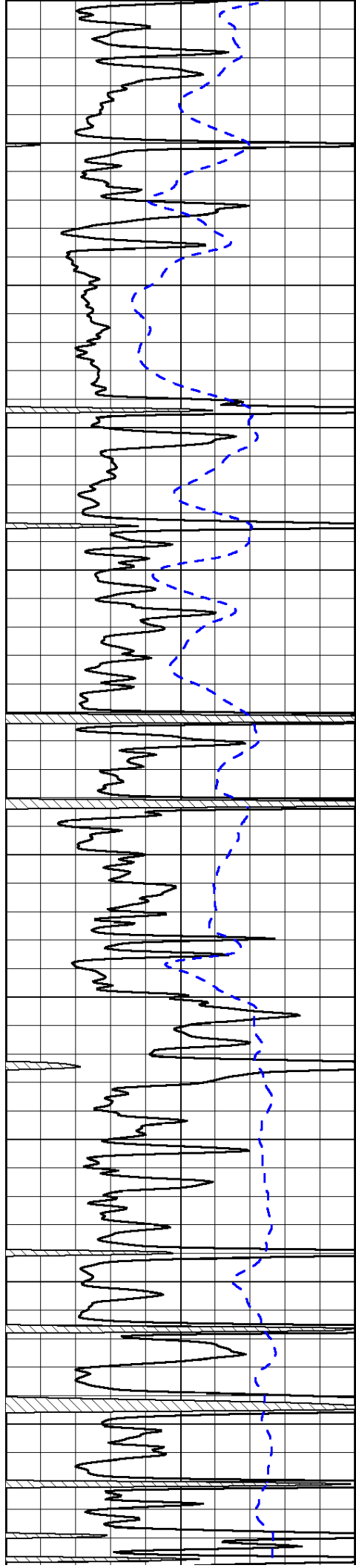


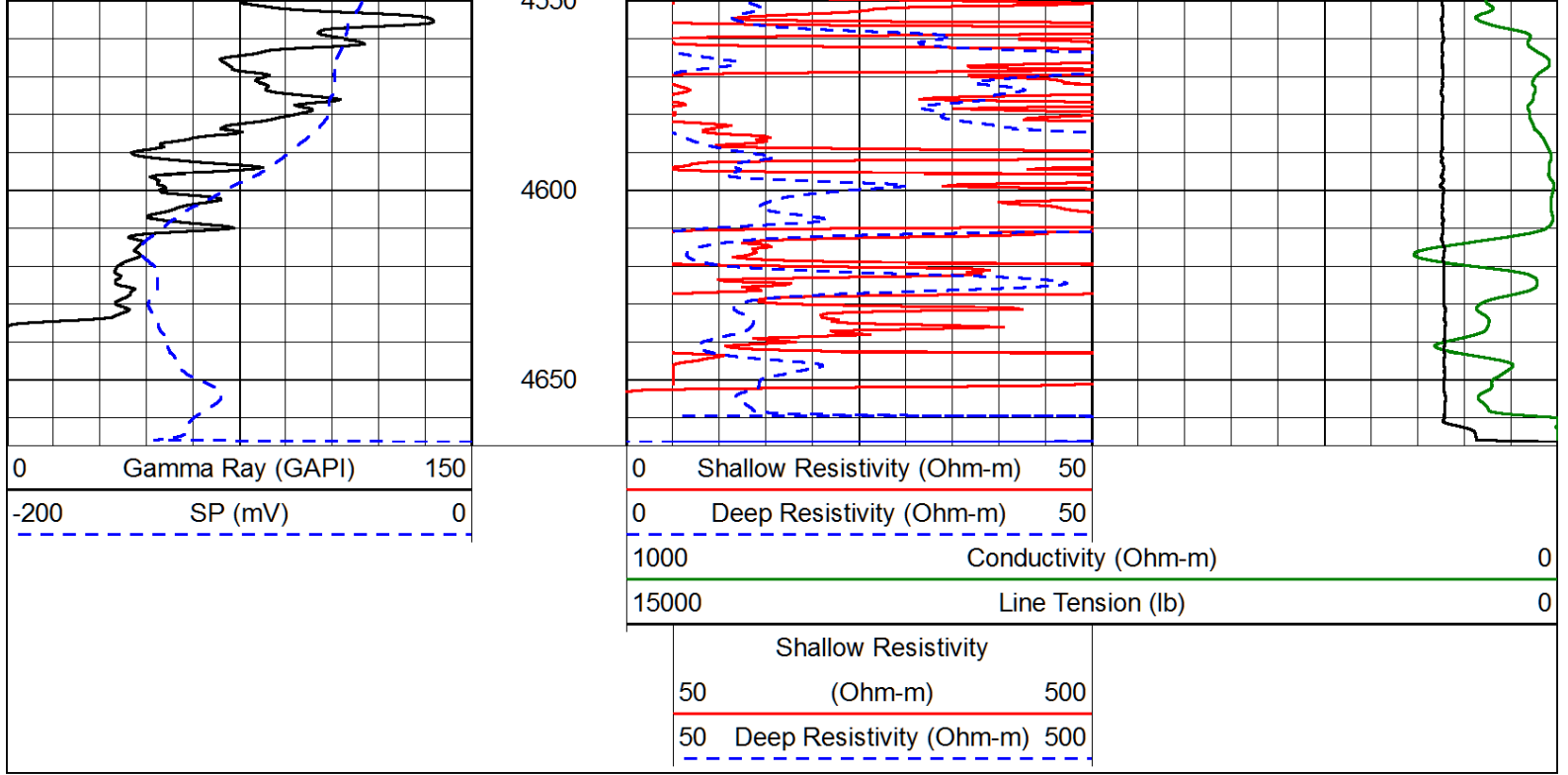




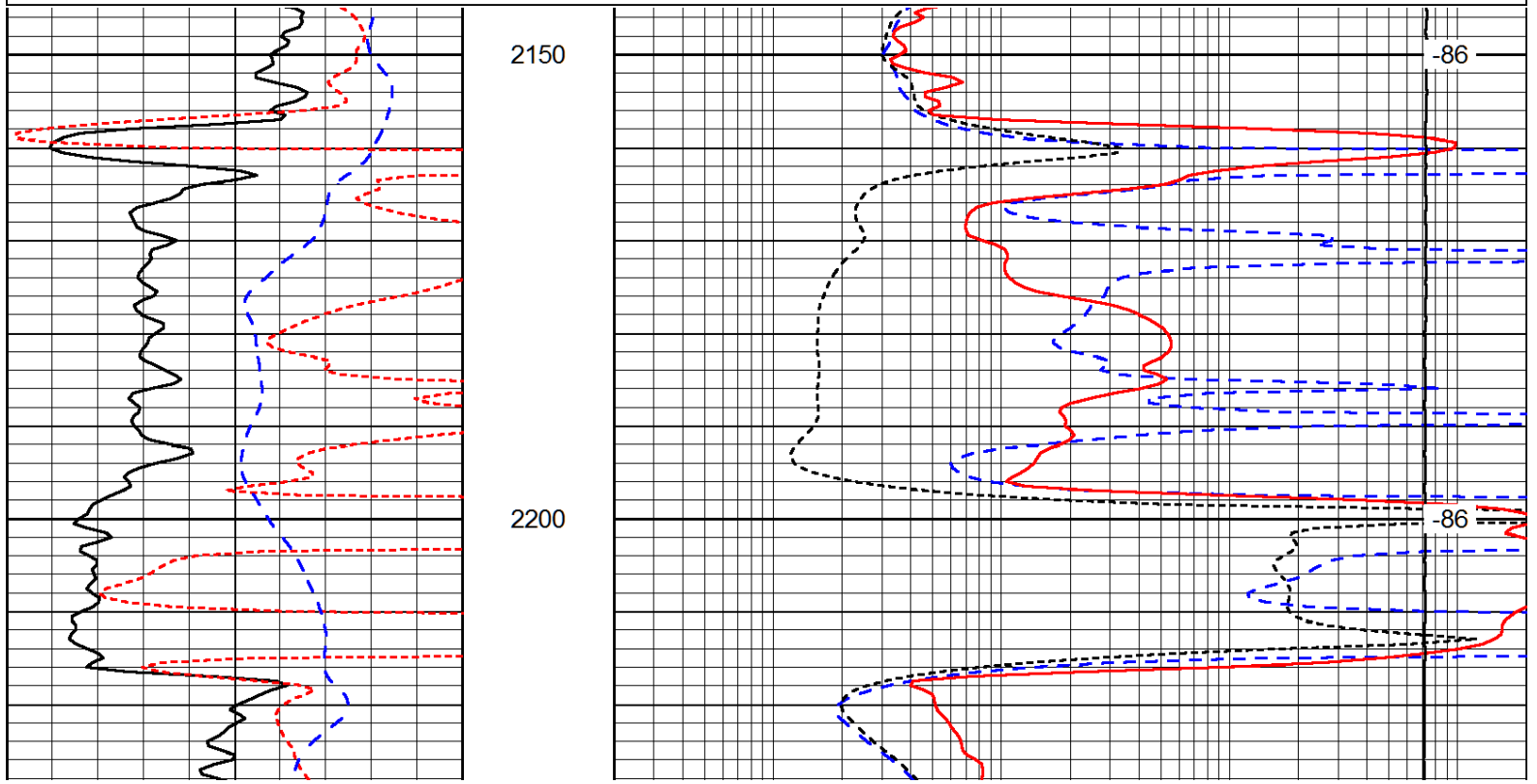
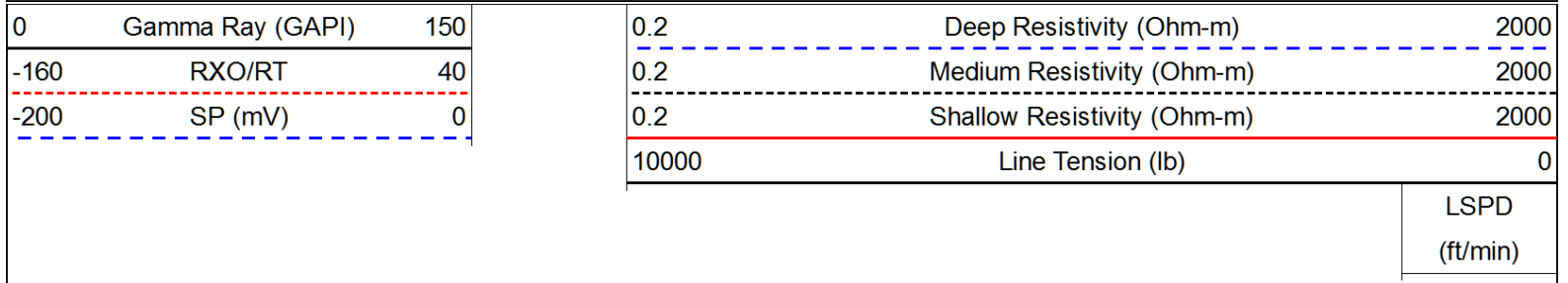


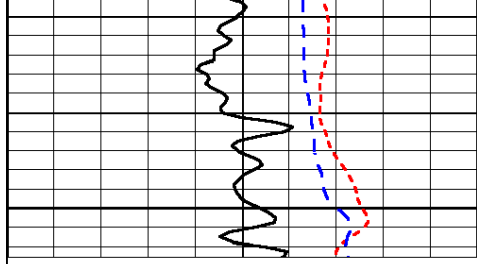






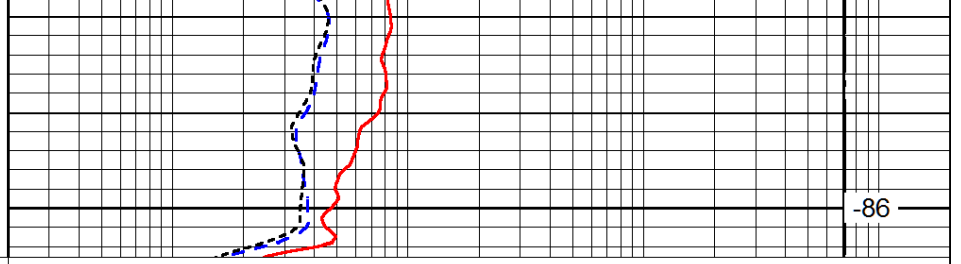
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0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

2250



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

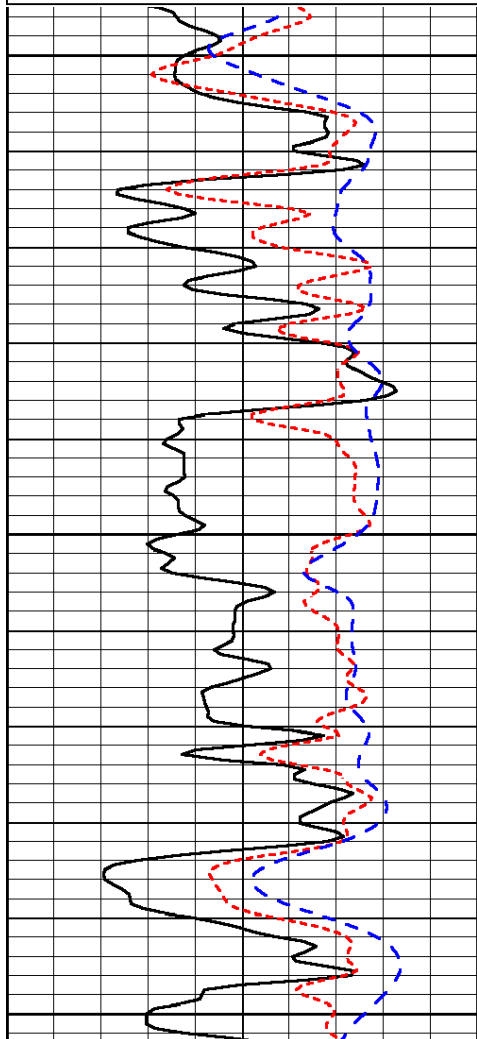
LSPD
(ft/min)

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-200	SP (mV)	0

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

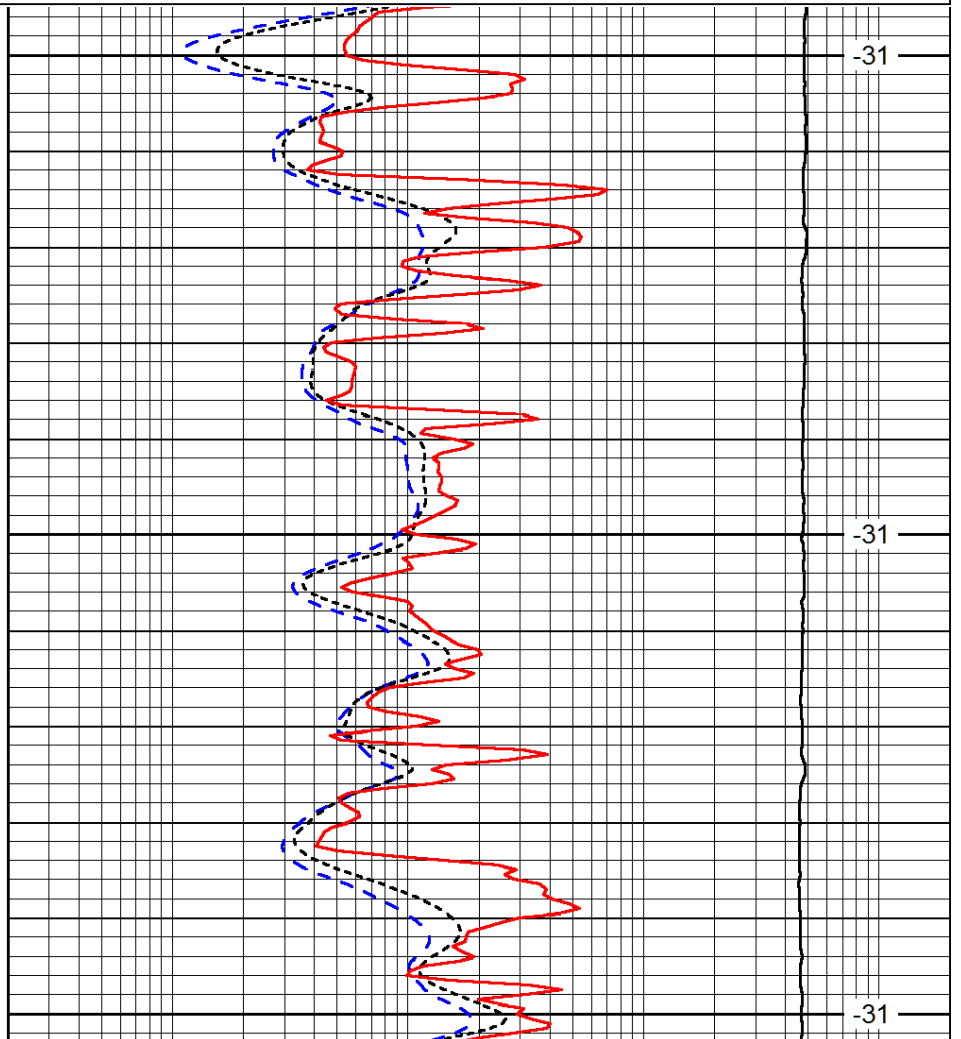
LSPD
(ft/min)



3600

3650

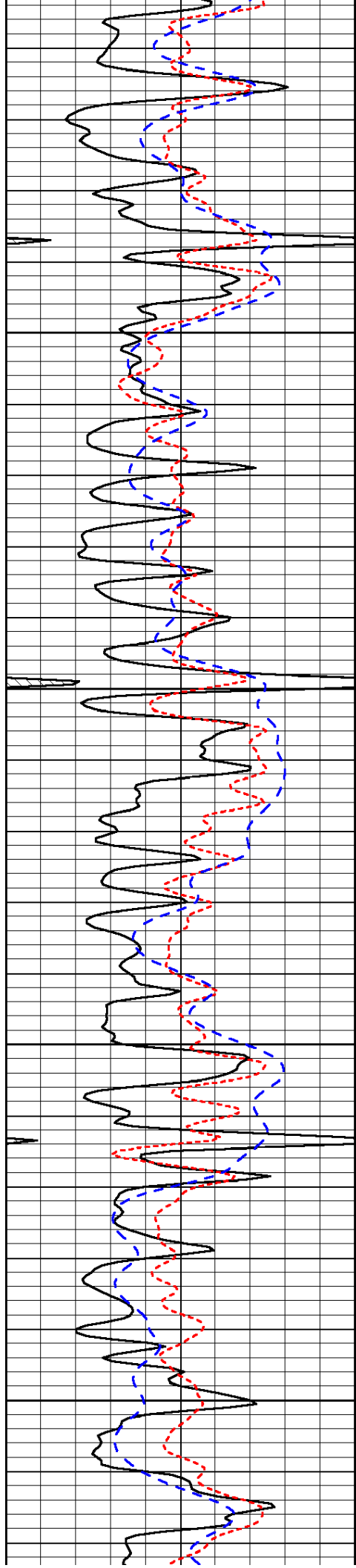
3700



-31

-31

-31

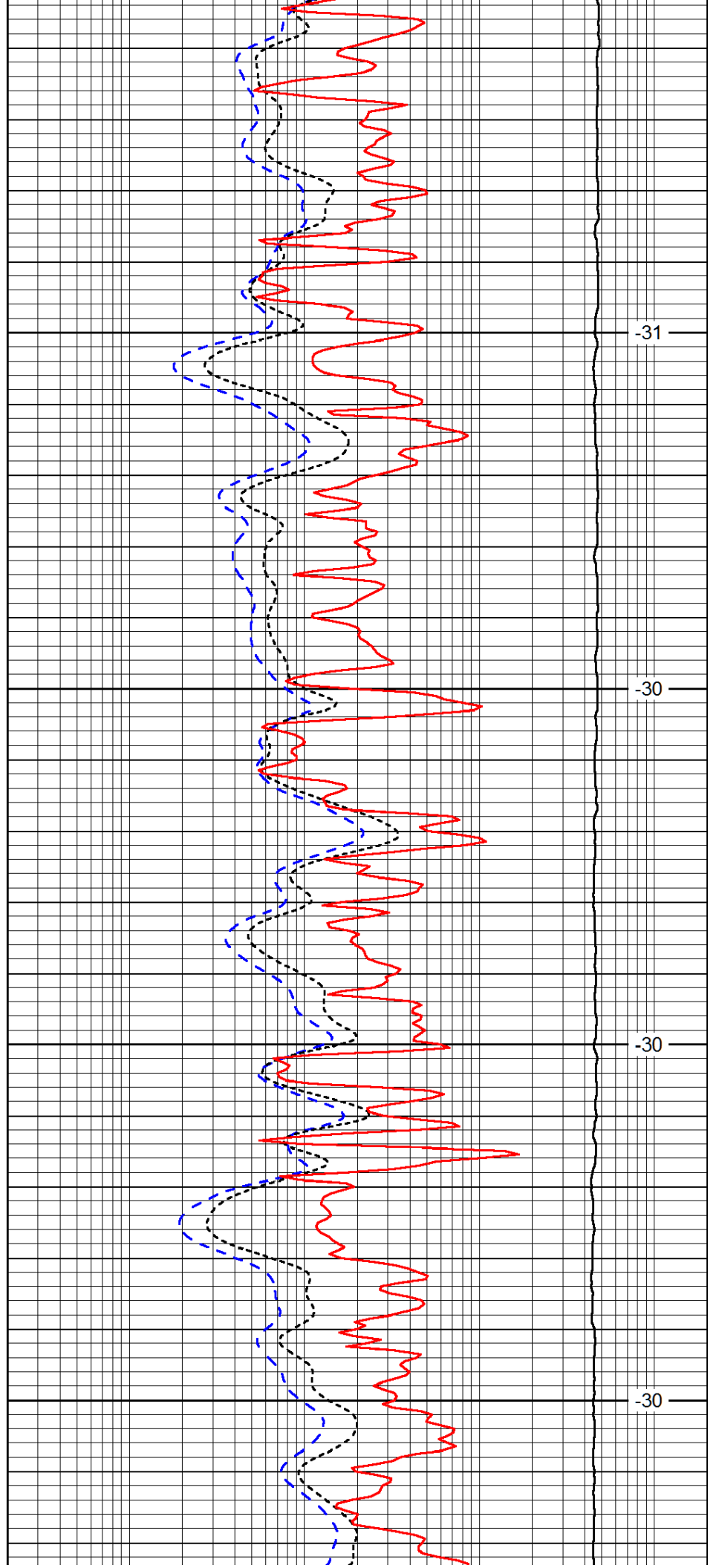


3750

3800

3850

3900

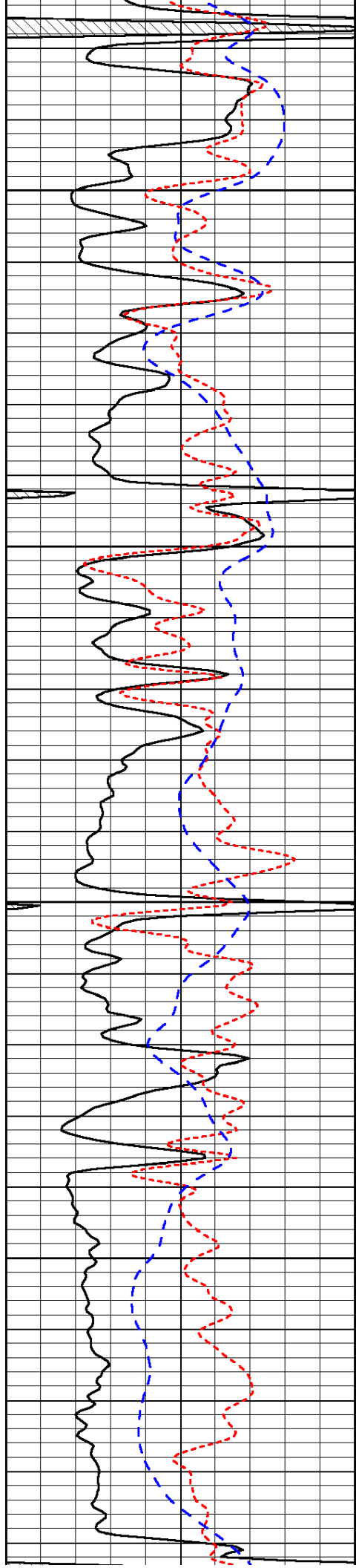


-31

-30

-30

-30

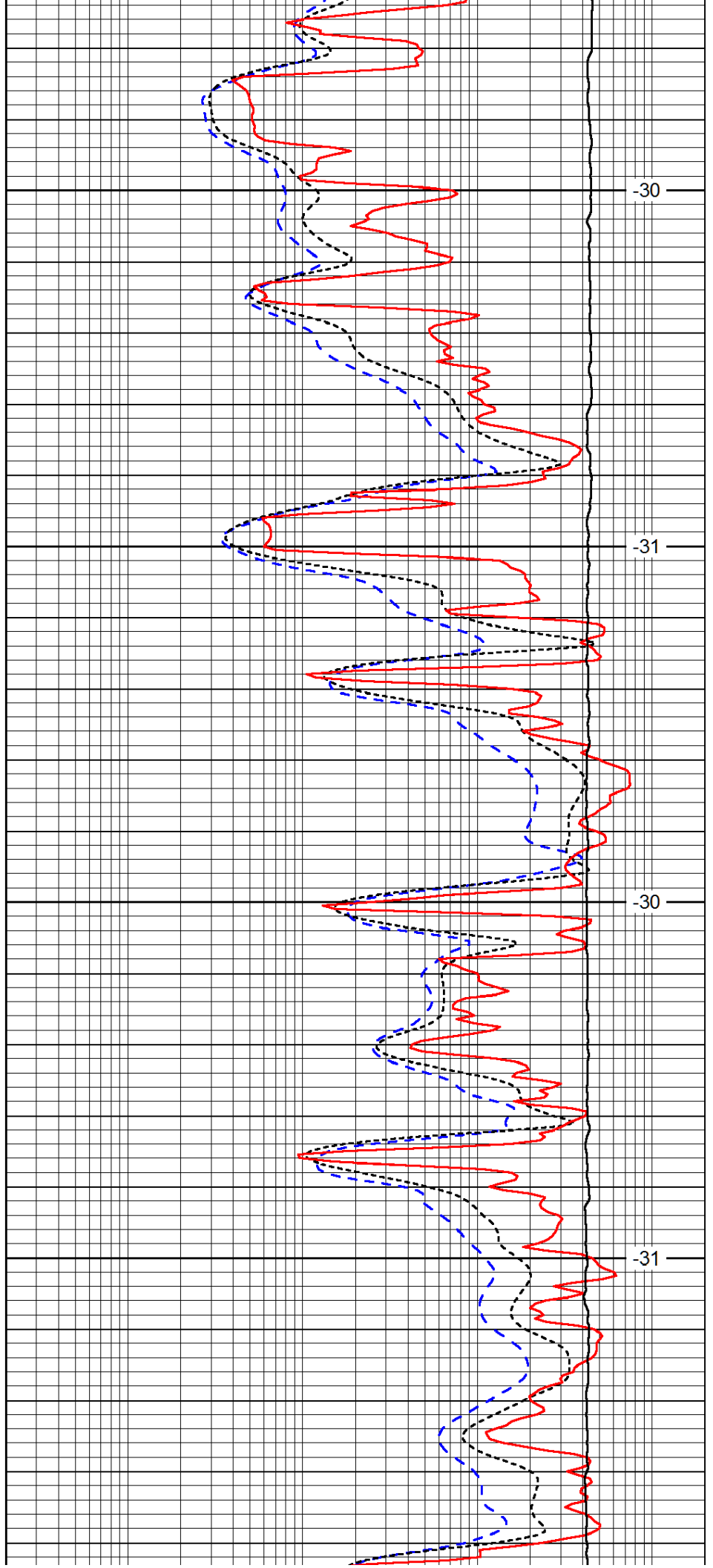


3950

4000

4050

4100

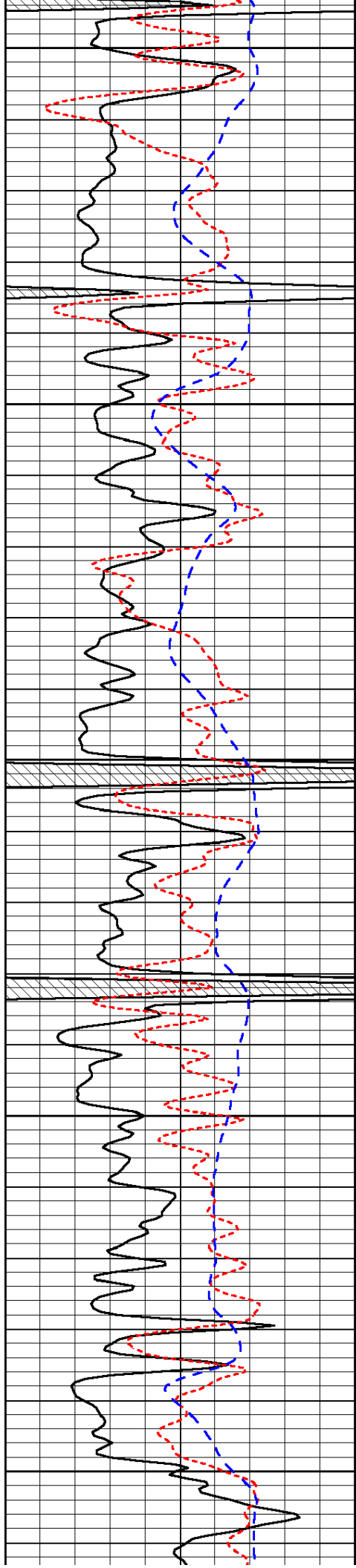


-30

-31

-30

-31



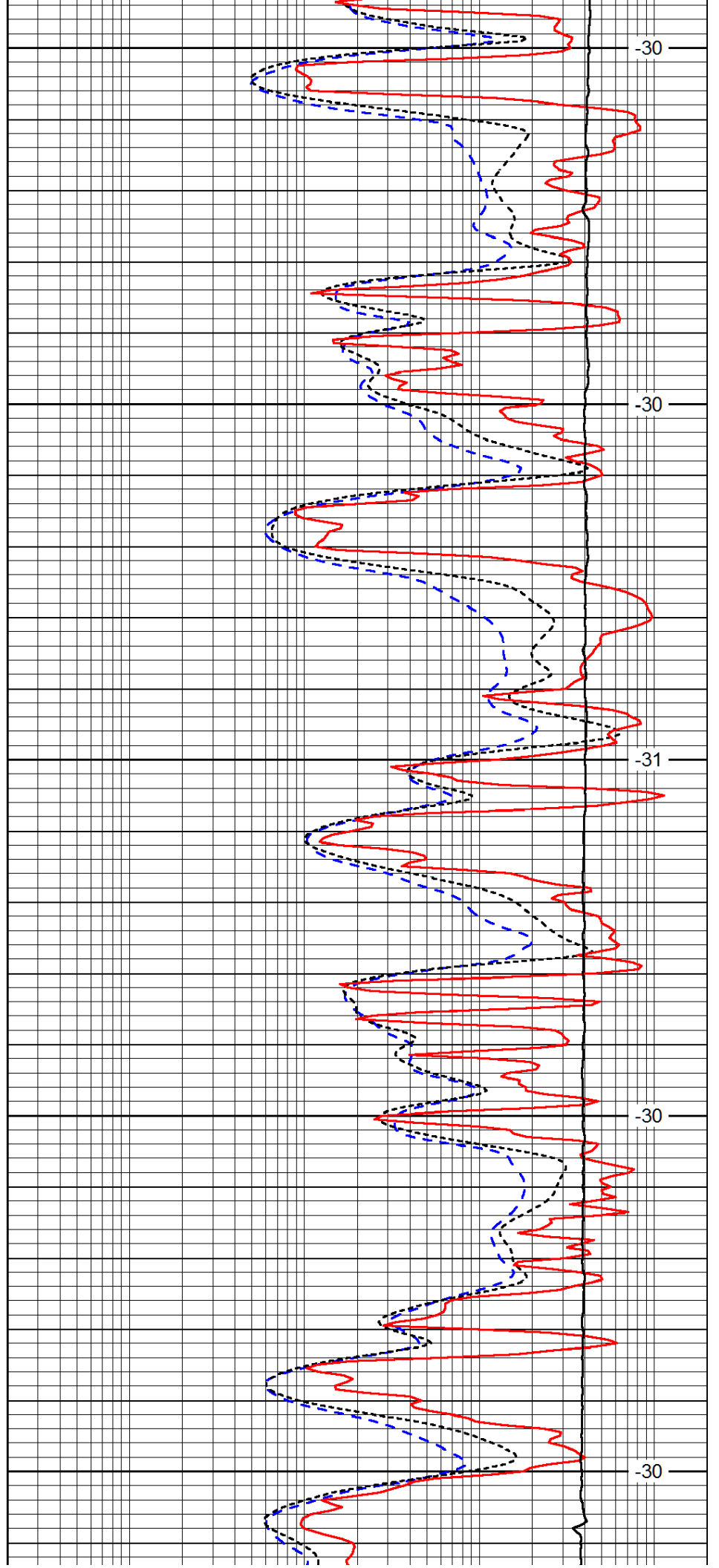
4150

4200

4250

4300

4350



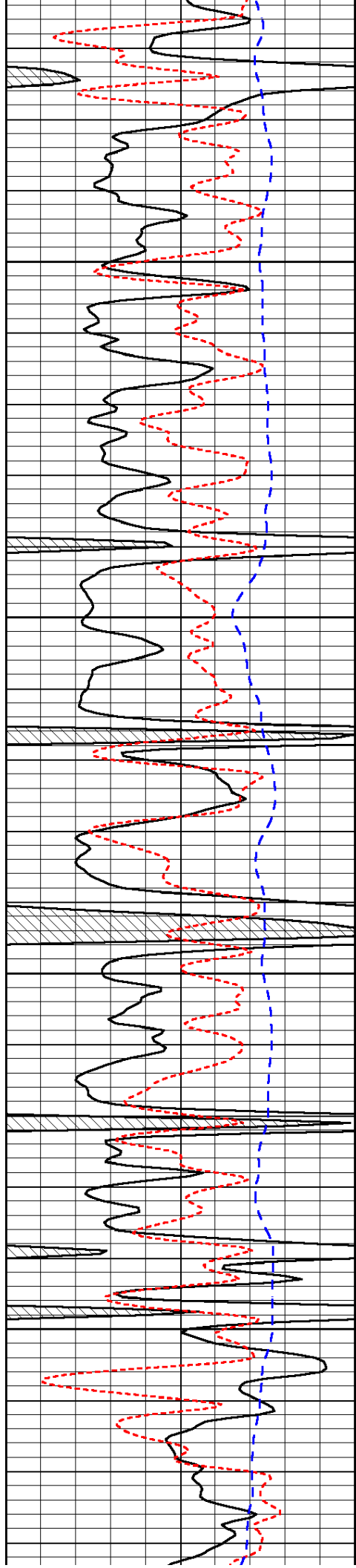
-30

-30

-31

-30

-30

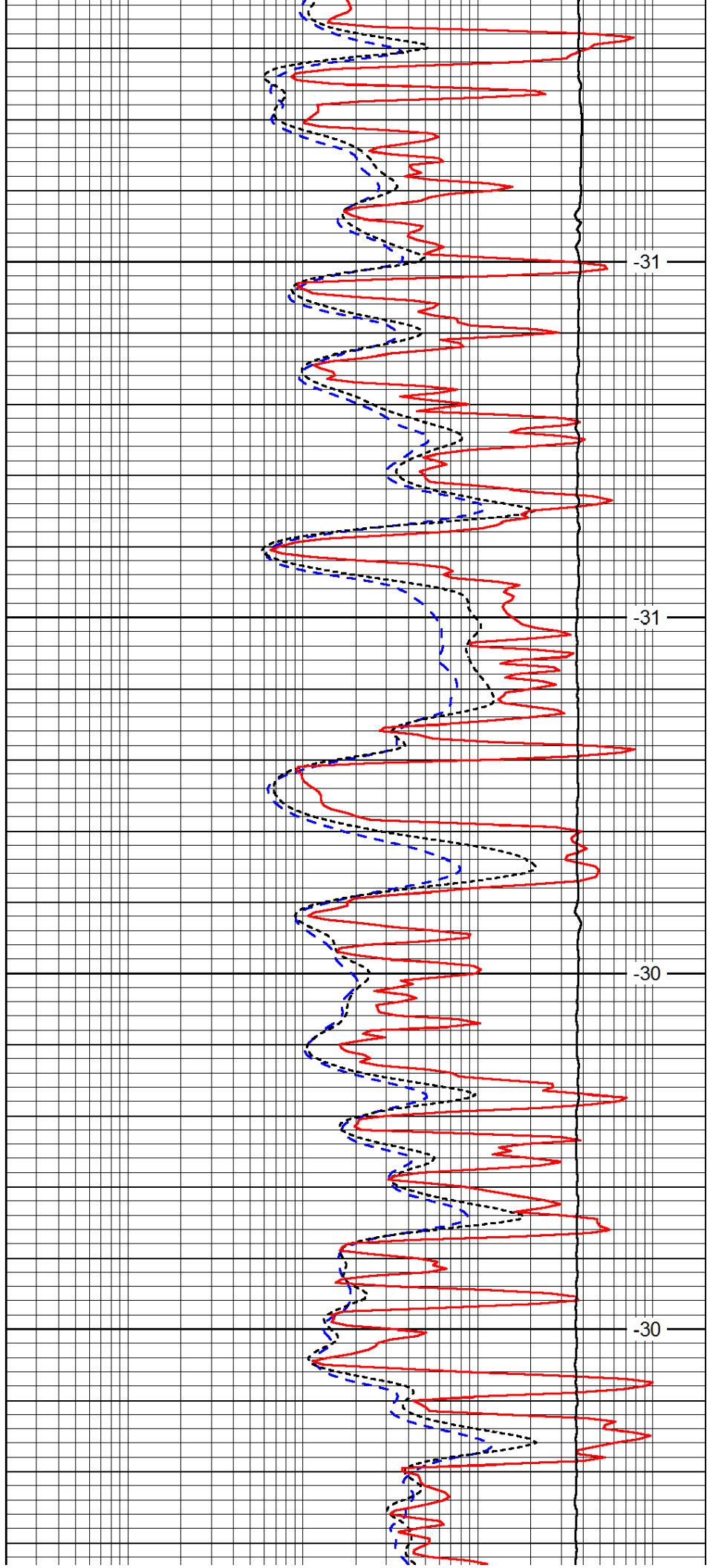


4400

4450

4500

4550

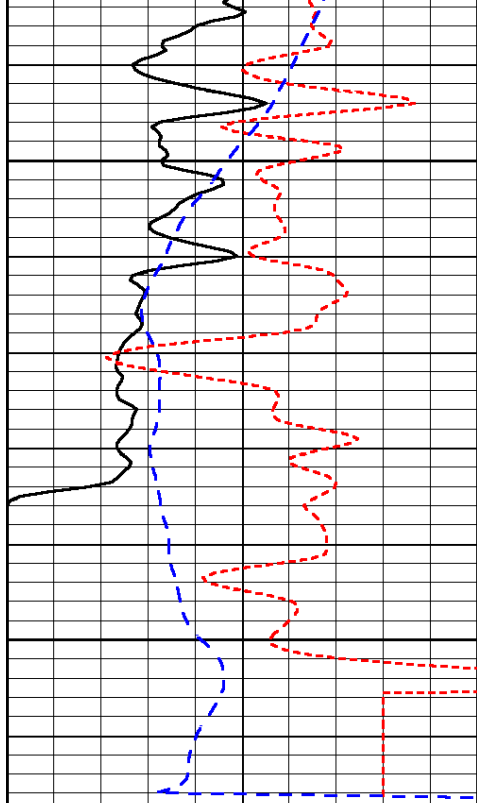


-31

-31

-30

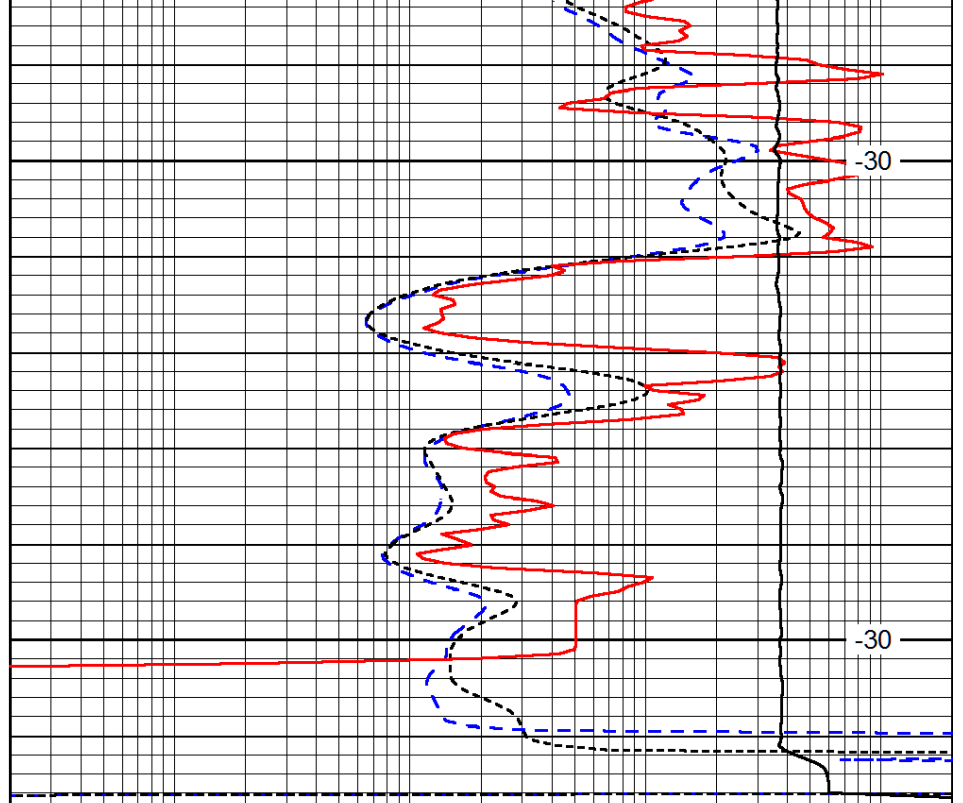
-30



4600

4650

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



-30

-30

0.2	Deep Resistivity (Ohm-m)	2000
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LSPD
(ft/min)