



Pioneer Energy Services

Dual Induction Log

API No.	15-185-23857-00-00		
Company	Rama Operating Company, Inc.		
Well	Licholat # 1-27		
Field	North Star		
County	Stafford	State	Kansas
Location	700' FSL & 350' FEL		
Sec: 27	Twp: 24 S	Rge: 12 W	Other Services CNL/CDL MEL

Permanent Datum	Ground Level	Elevation 1867	K.B. 1880
Log Measured From	Kelly Bushing	13 Ft. Above Perm. Datum	D.F. 1867
Drilling Measured From	Kelly Bushing		G.L. 1867
Date	1-31-2014		
Run Number	One		
Depth Driller	4180		
Depth Logger	4184		
Bottom Logged Interval	4183		
Top Log Interval	350		
Casing Driller	8.625 @ 354		
Casing Logger	354		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	9000		
Density / Viscosity	9.3	72	
pH / Fluid Loss	8.0	11.2	
Source of Sample	Flowline		
Rm @ Meas. Temp	0.85 @ 38		
Rmf @ Meas. Temp	0.63 @ 38		
Rmc @ Meas. Temp	1.14 @ 38		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.27 @ 120		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	120		
Equipment Number	91		
Location	Hays		
Recorded By	Y. Ruiz		
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

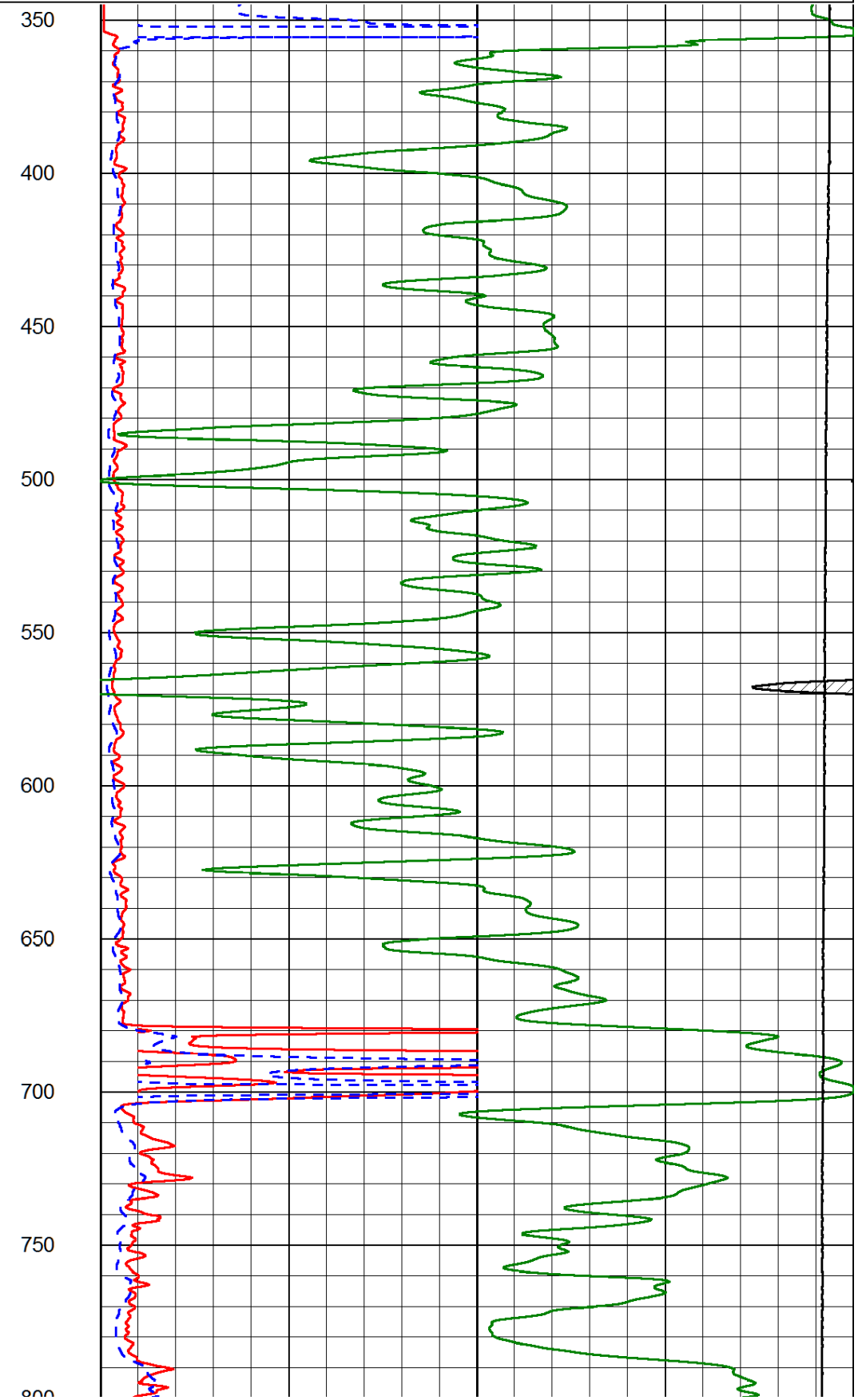
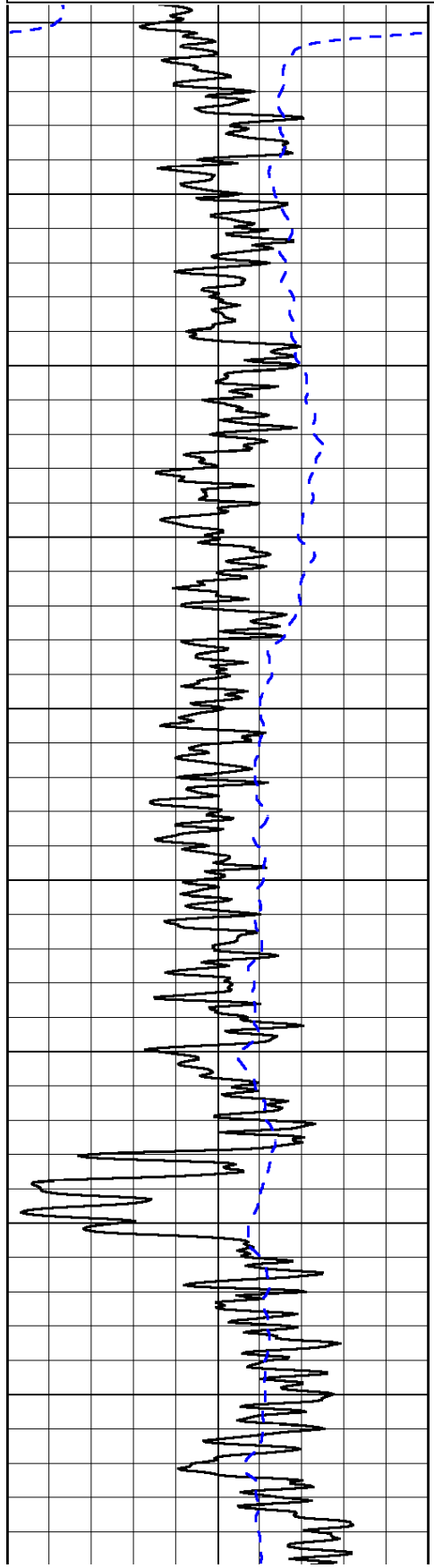
Thank you for using Log-Tech, Inc.
(785) 625-3858

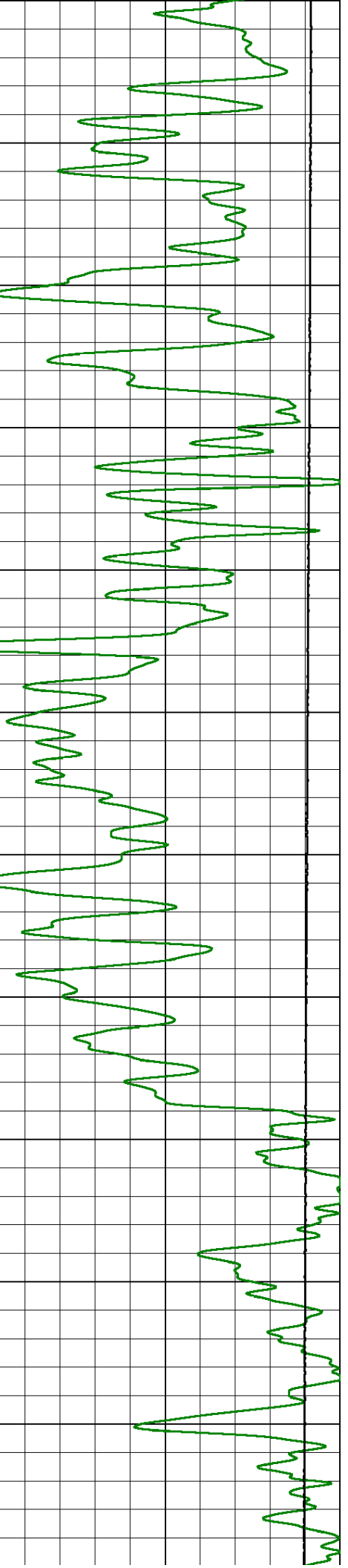
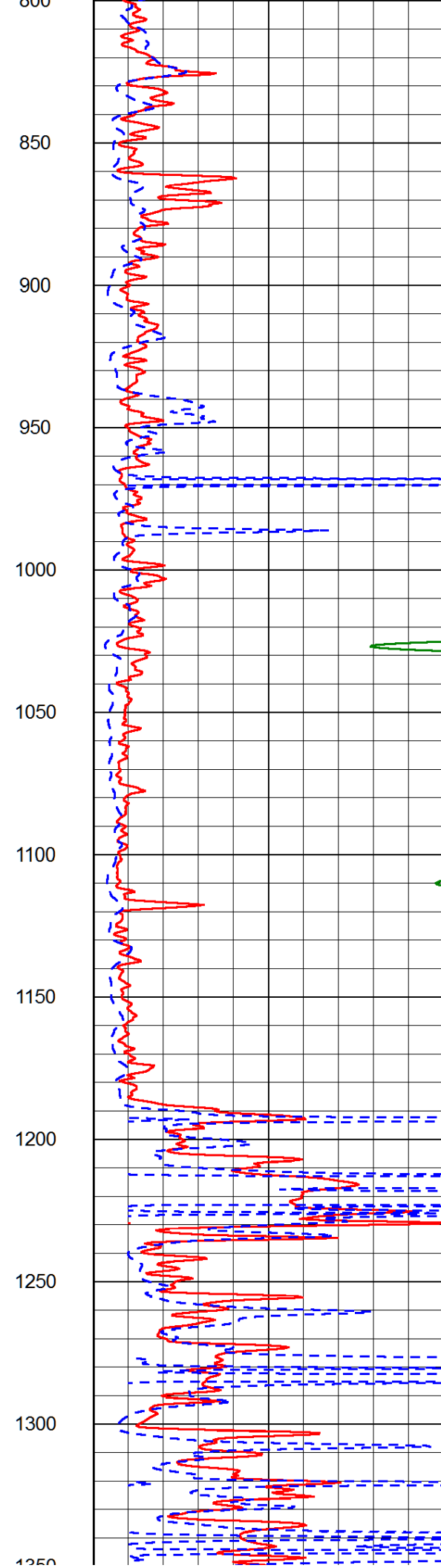
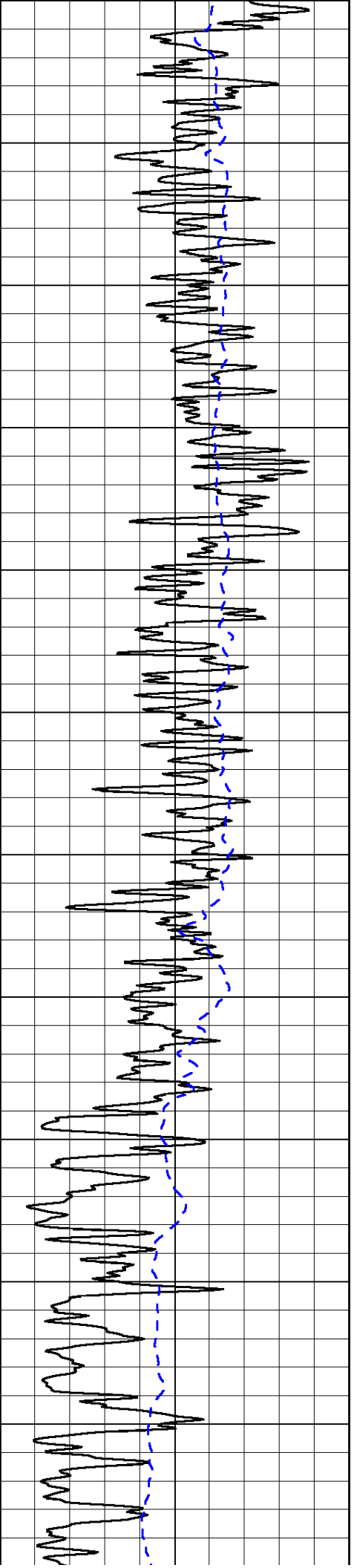
Stafford,
2 South, 1 West, 1/8 North,
West into

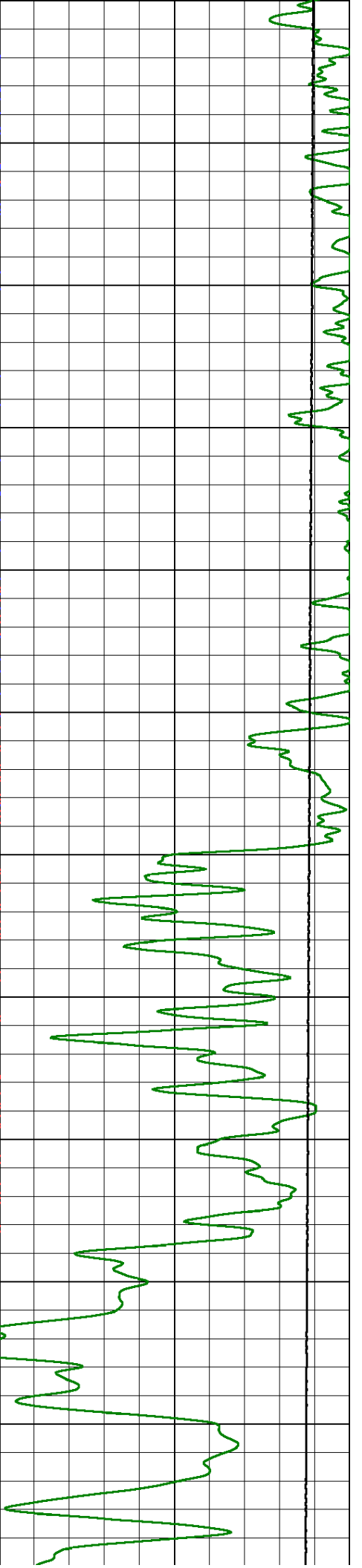
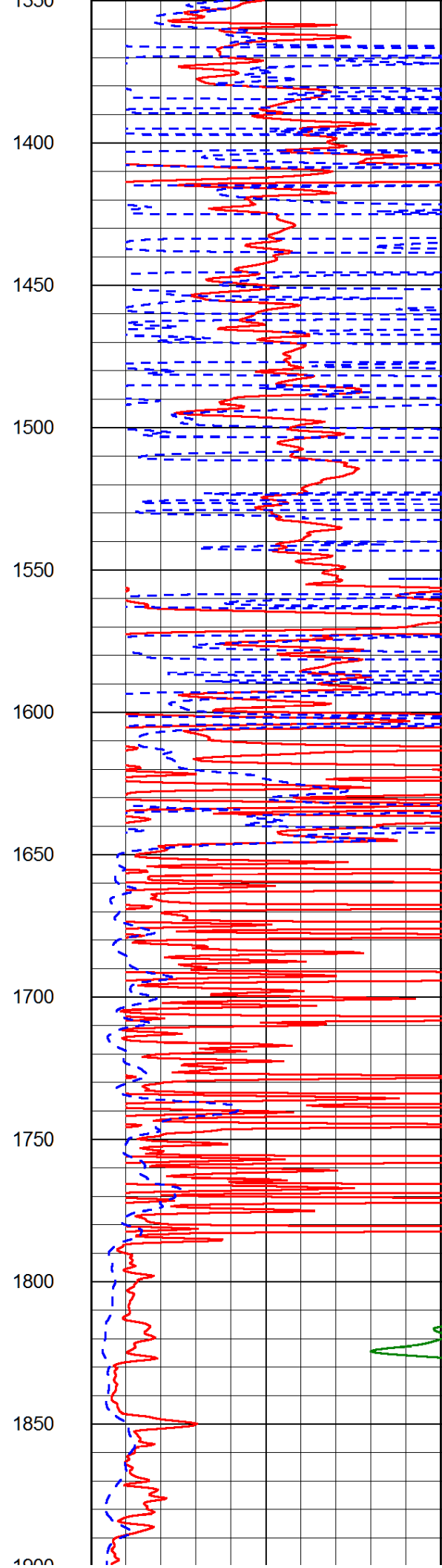
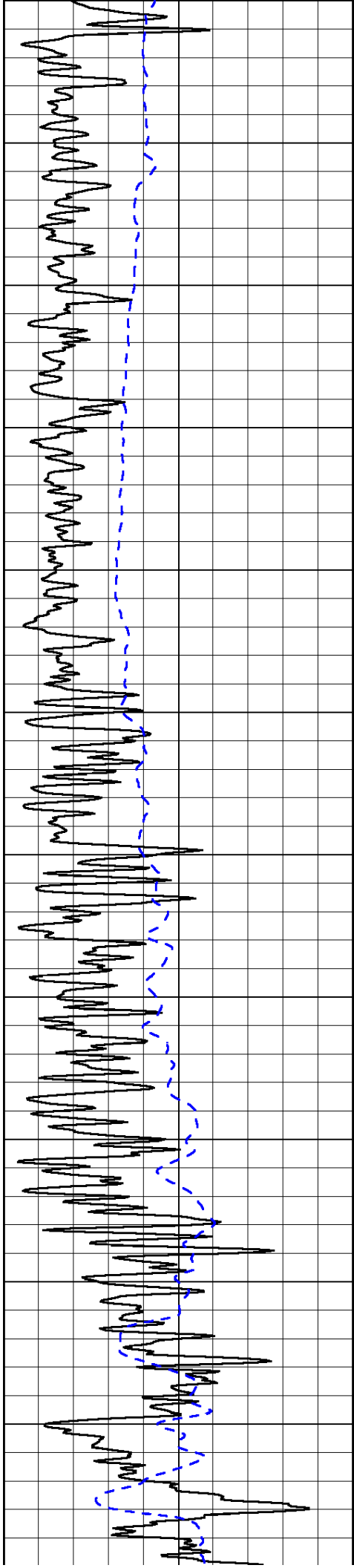
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 Presentation Format: dil2in
 Dataset Creation: Fri Jan 31 04:01:50 2014
 Charted by: Depth in Feet scaled 1:600

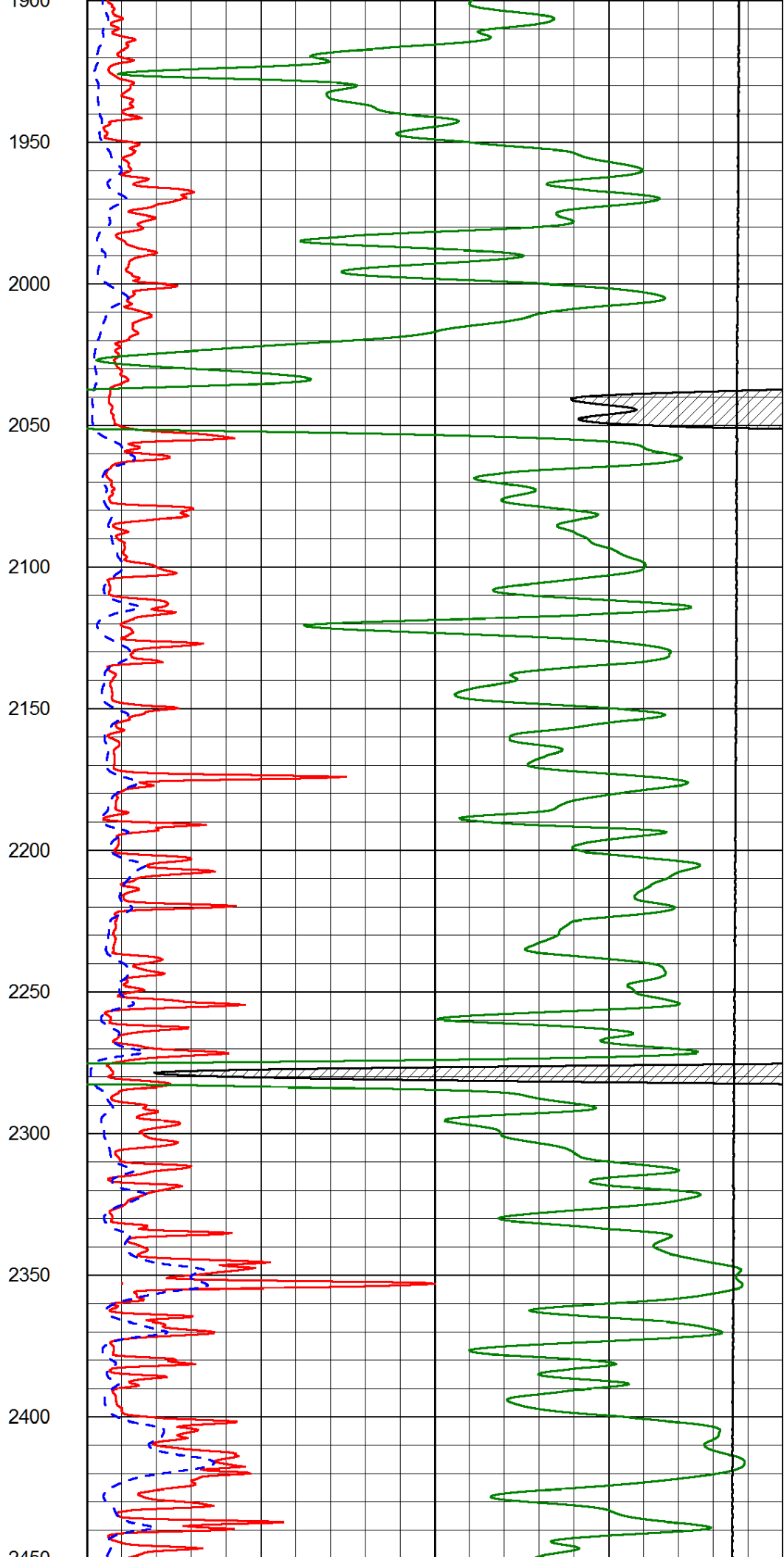
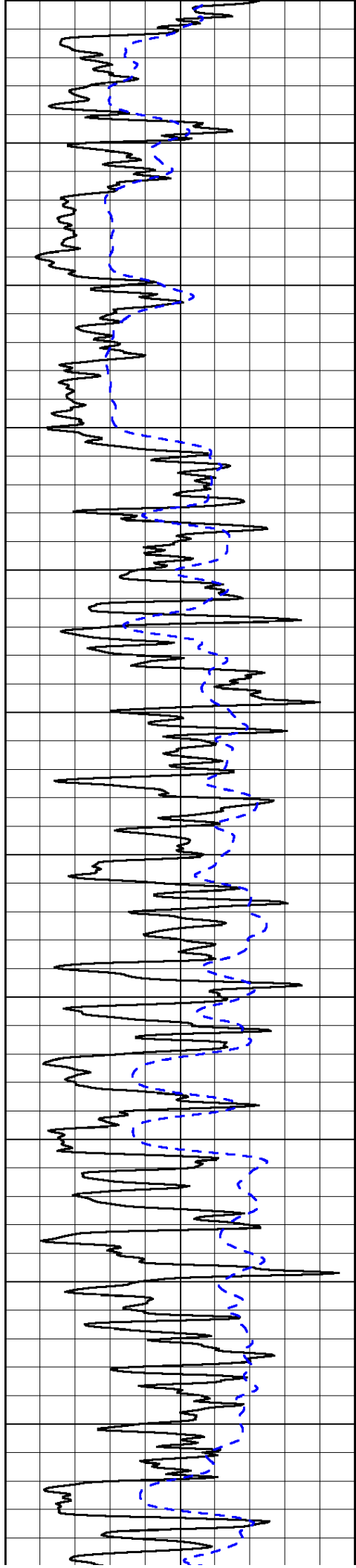
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-200	SP (mV)	0

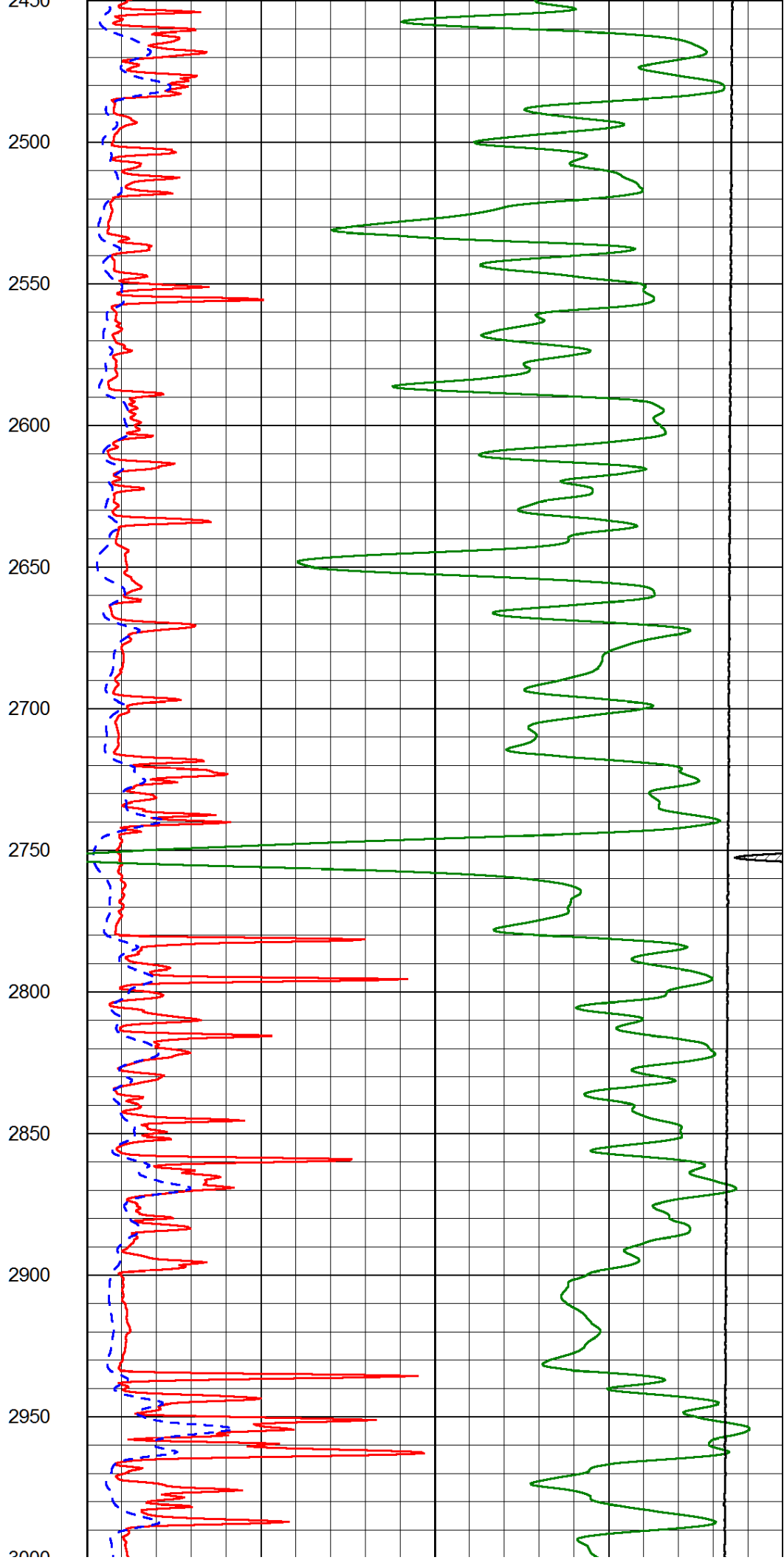
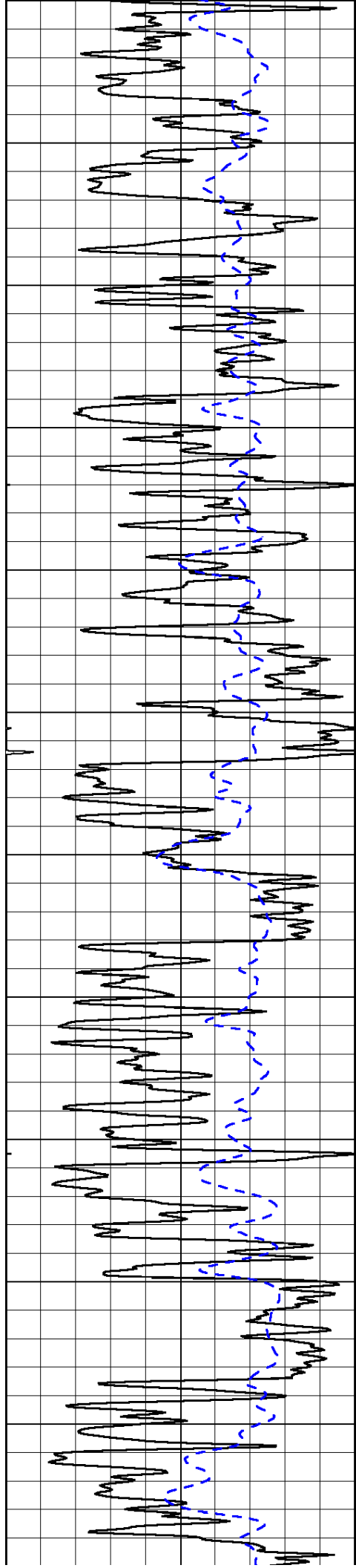
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
1000	Conductivity (Ohm-m)	
15000	Line Tension (lb)	
	Shallow Resistivity (Ohm-m)	500
	Deep Resistivity (Ohm-m)	500

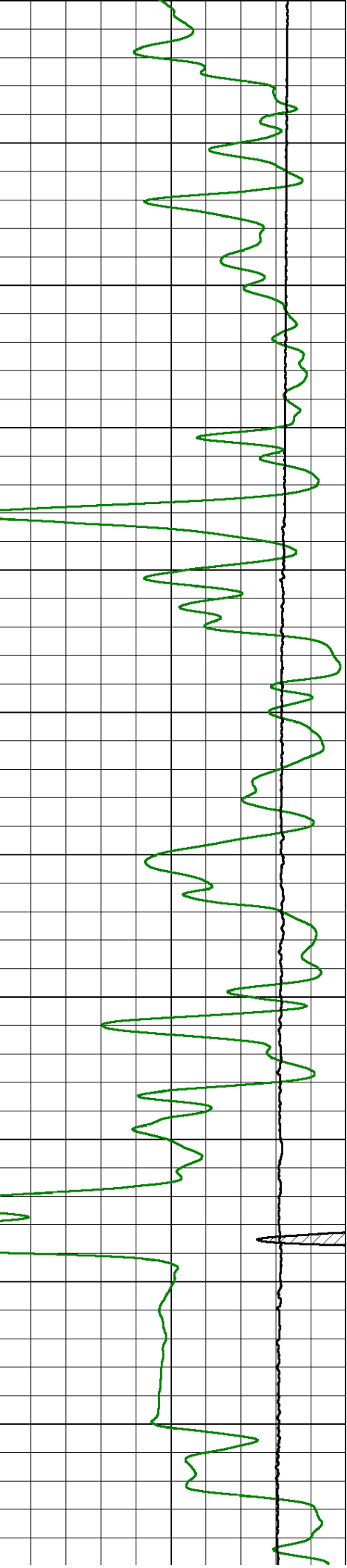
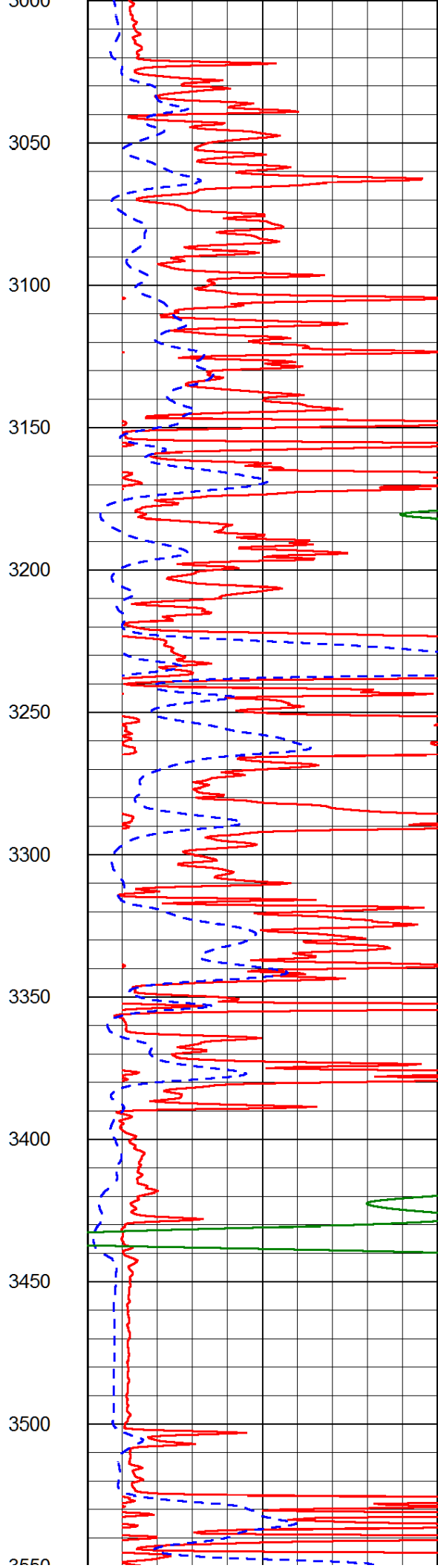
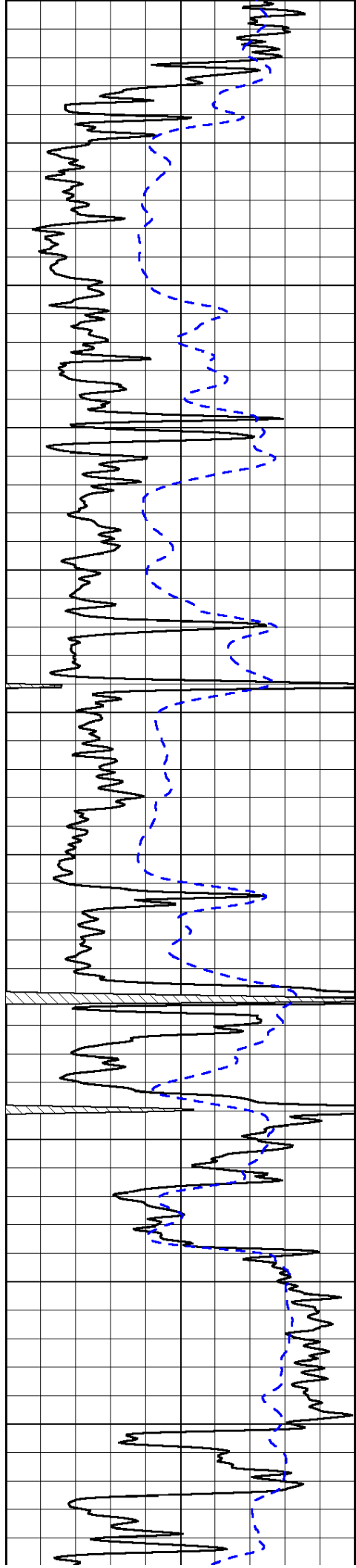


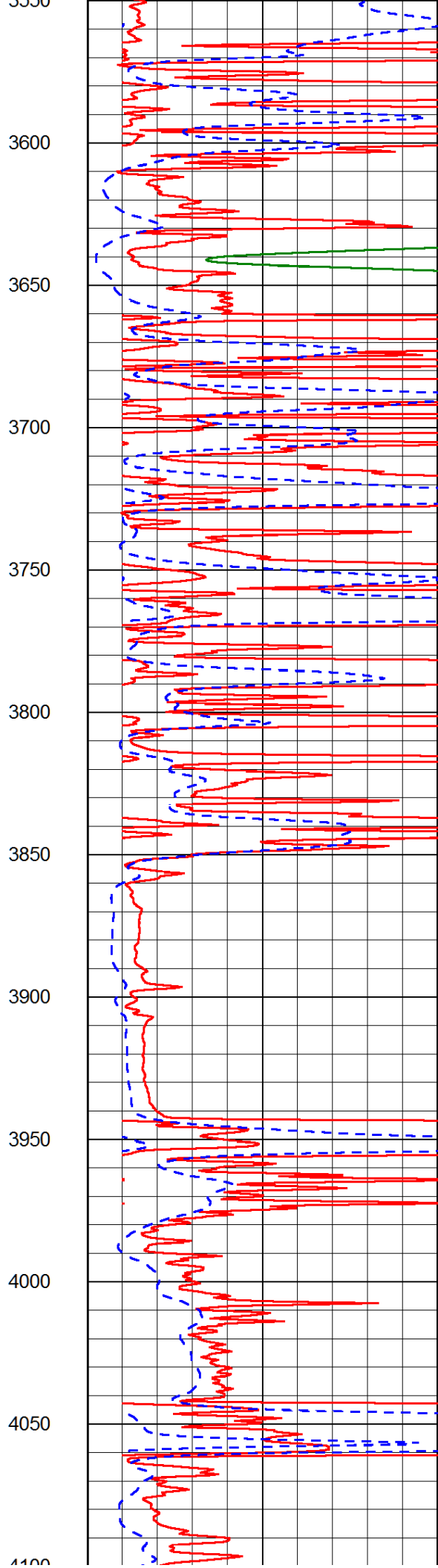
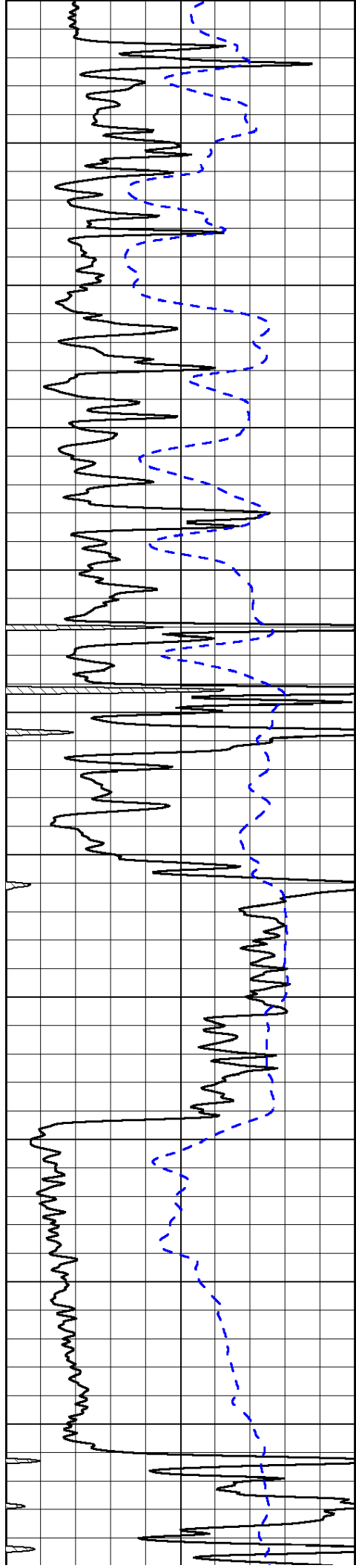


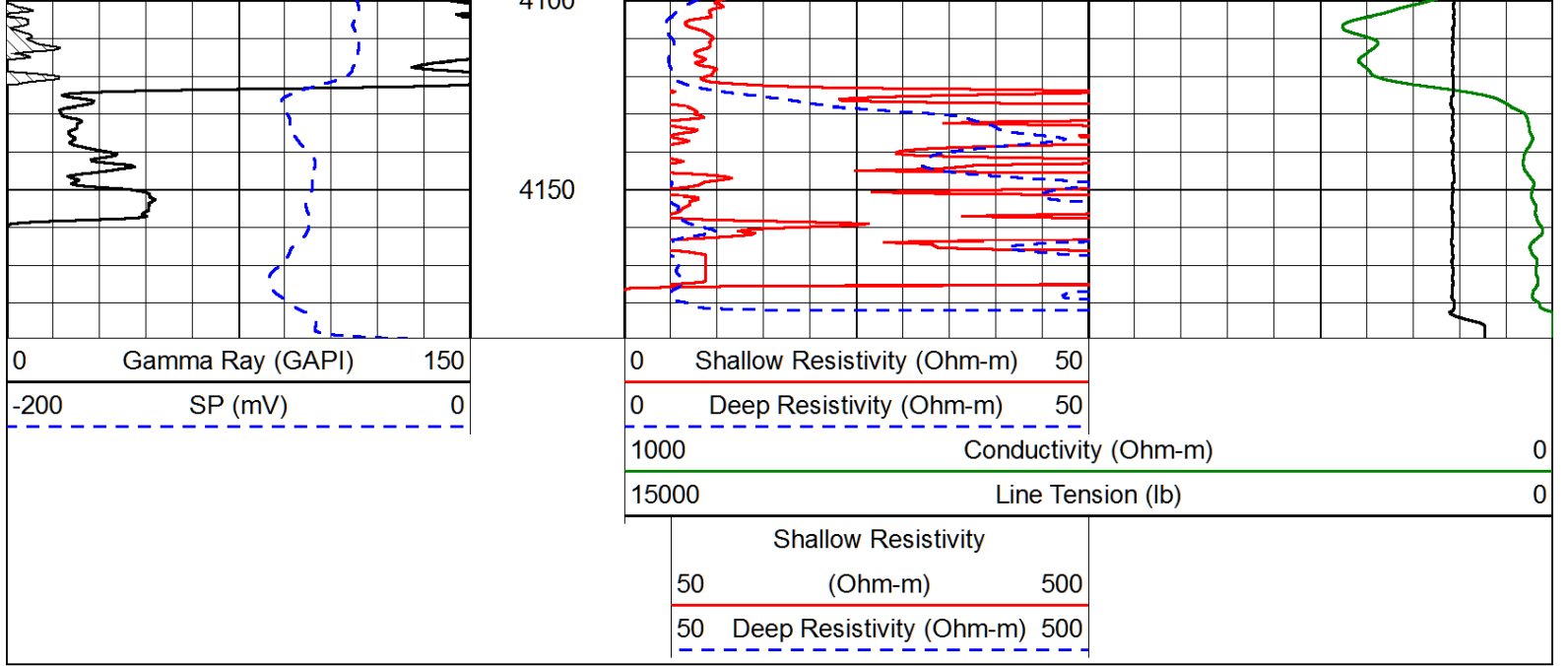




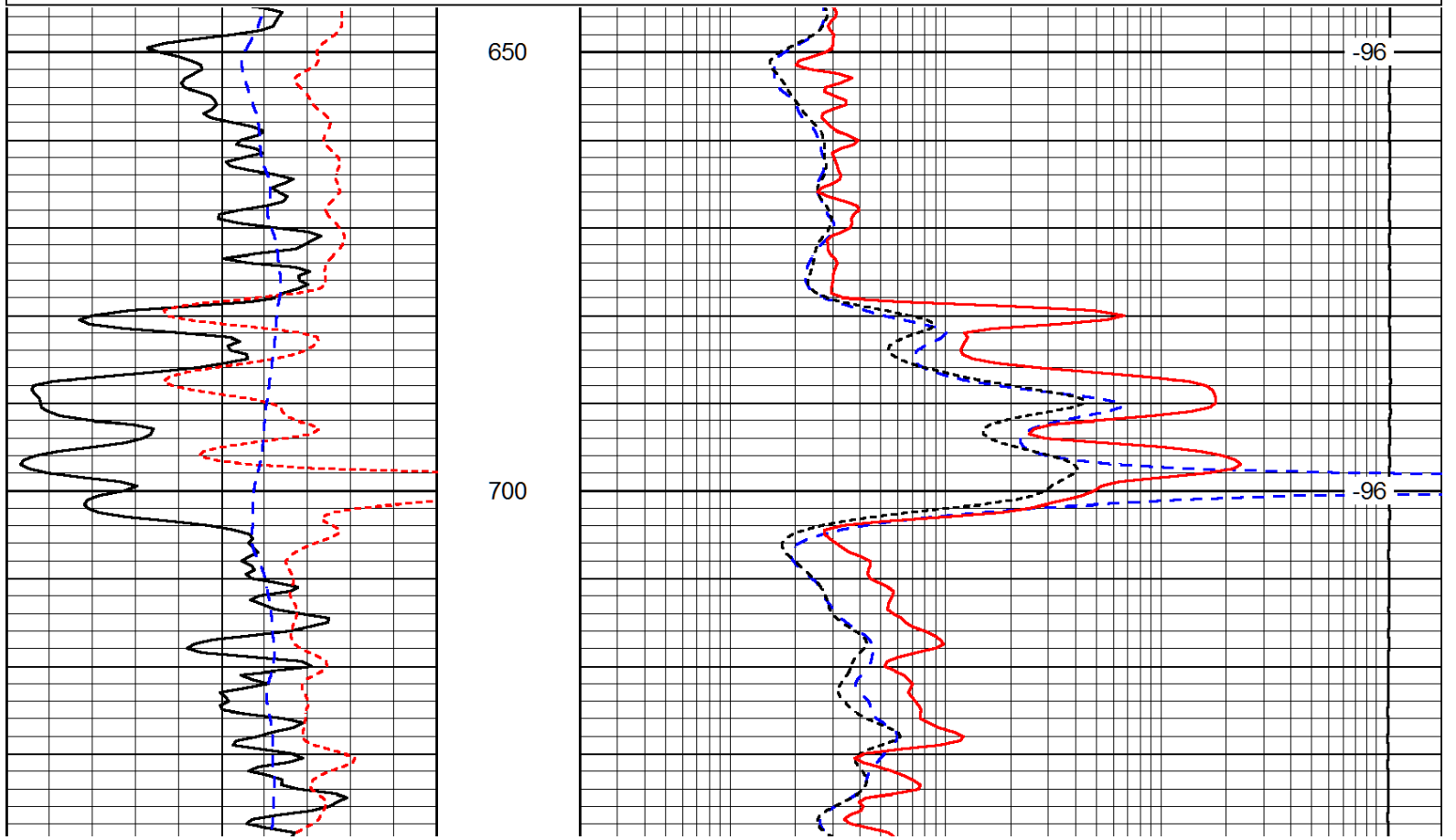
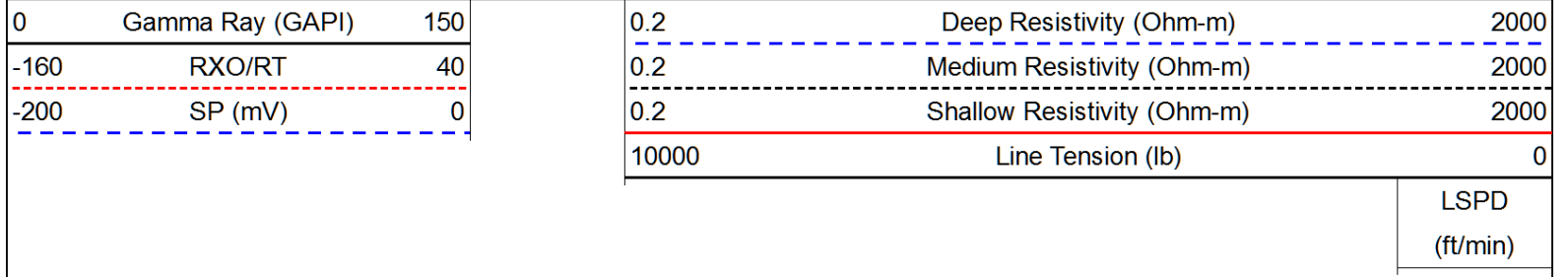


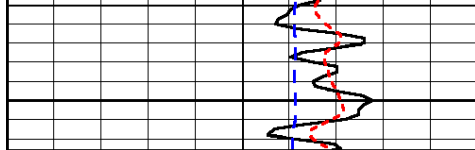




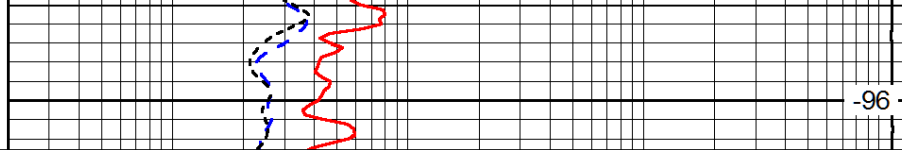


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 Dataset Pathname: DIL/ramstk
 Presentation Format: dil
 Dataset Creation: Fri Jan 31 04:01:50 2014
 Charted by: Depth in Feet scaled 1:240





750



-96

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

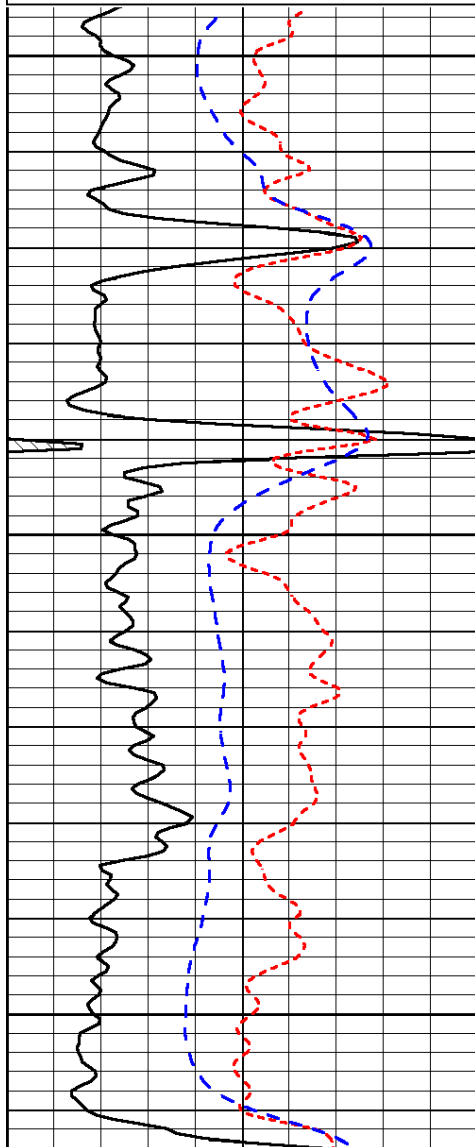
LSPD
(ft/min)

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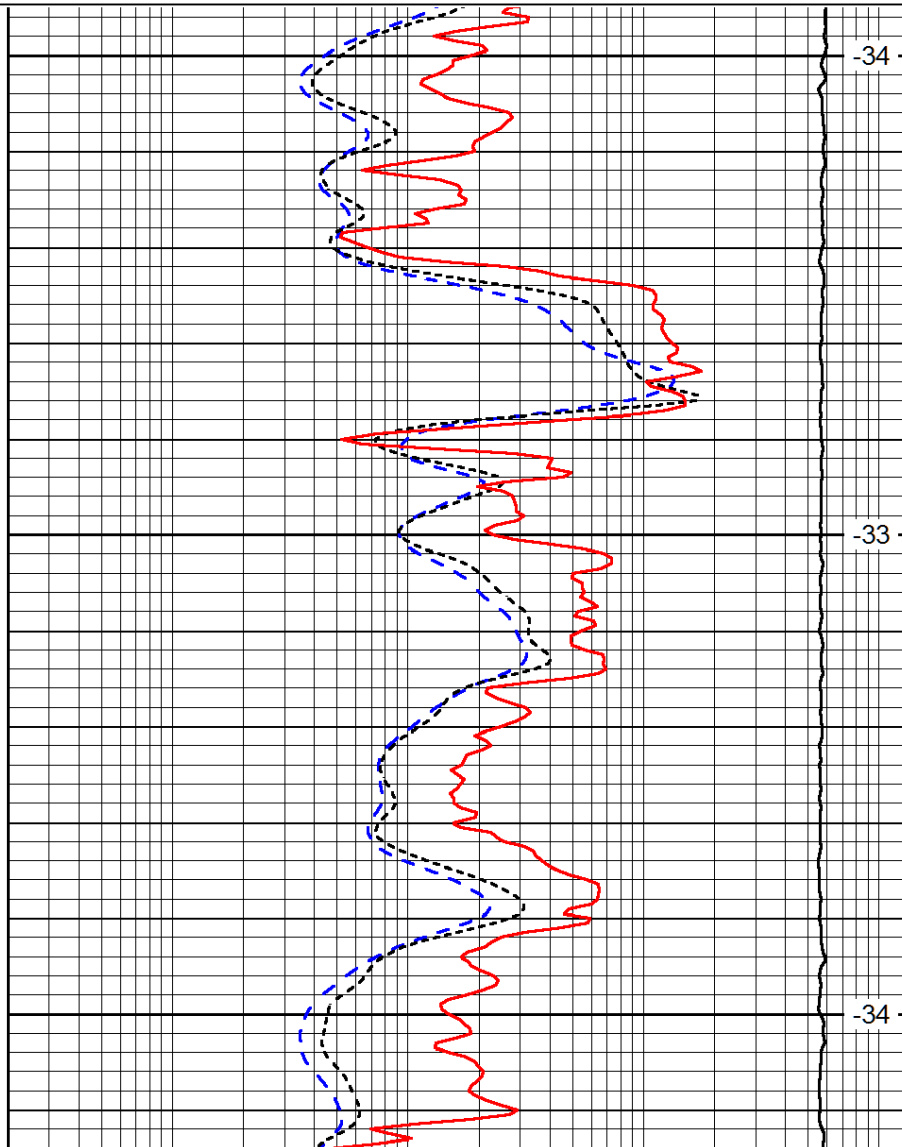
LSPD
(ft/min)



3200

3250

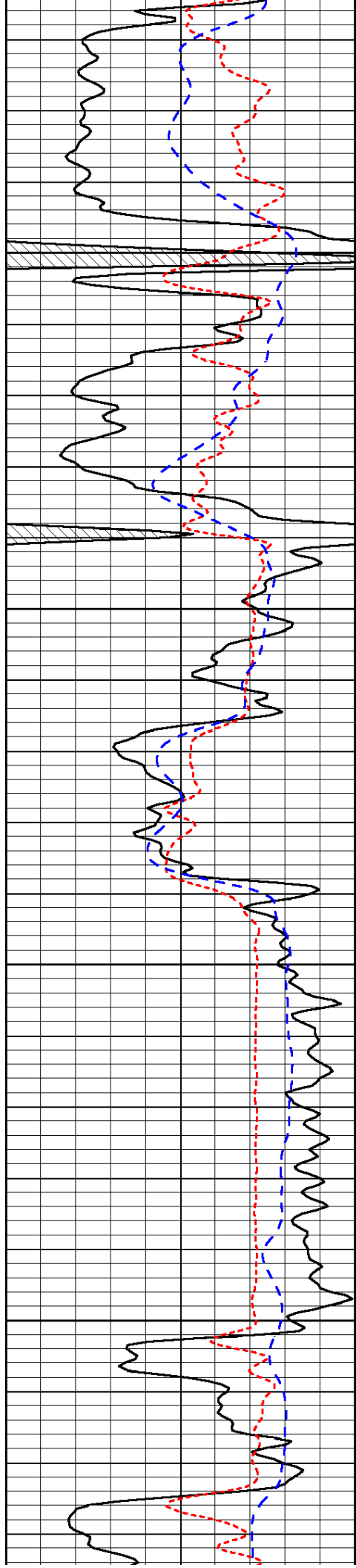
3300



-34

-33

-34

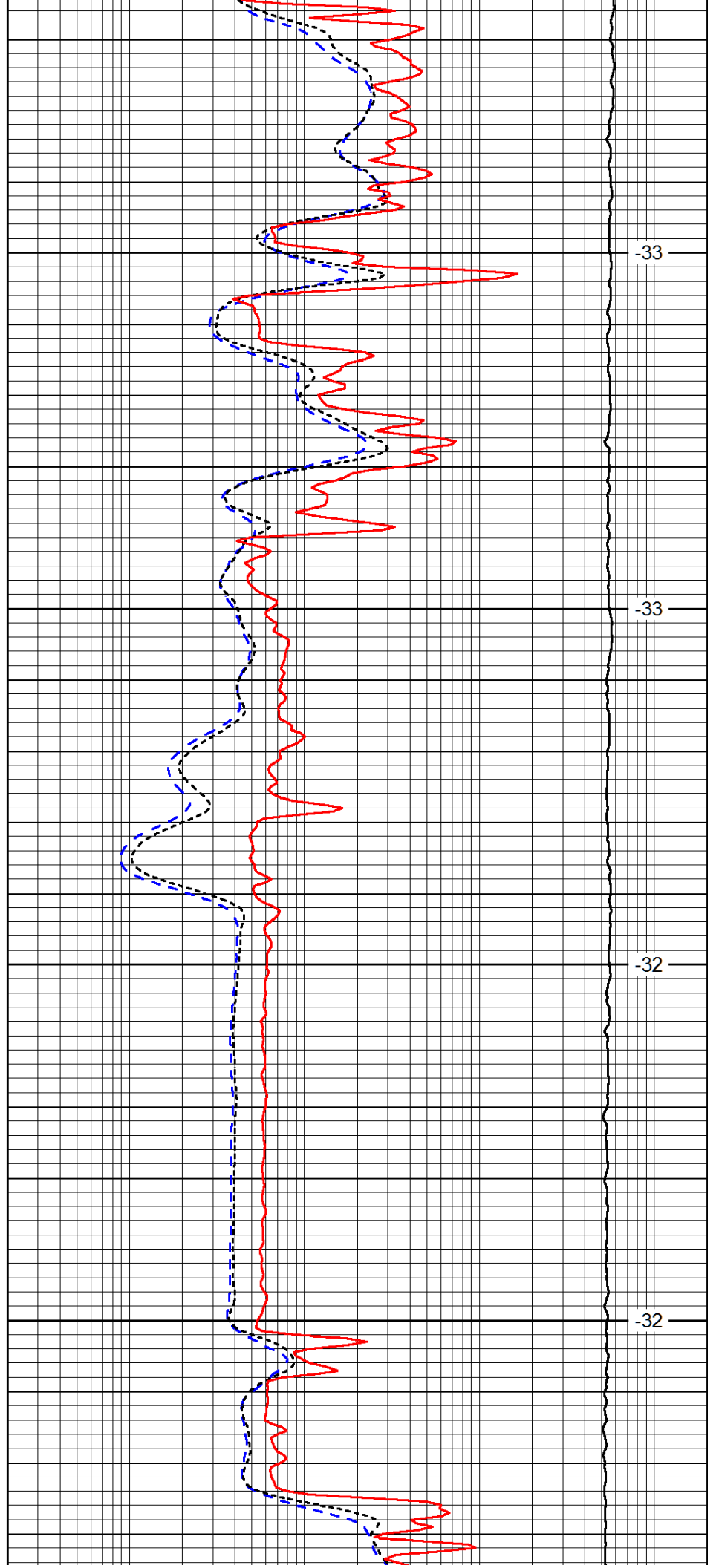


3350

3400

3450

3500

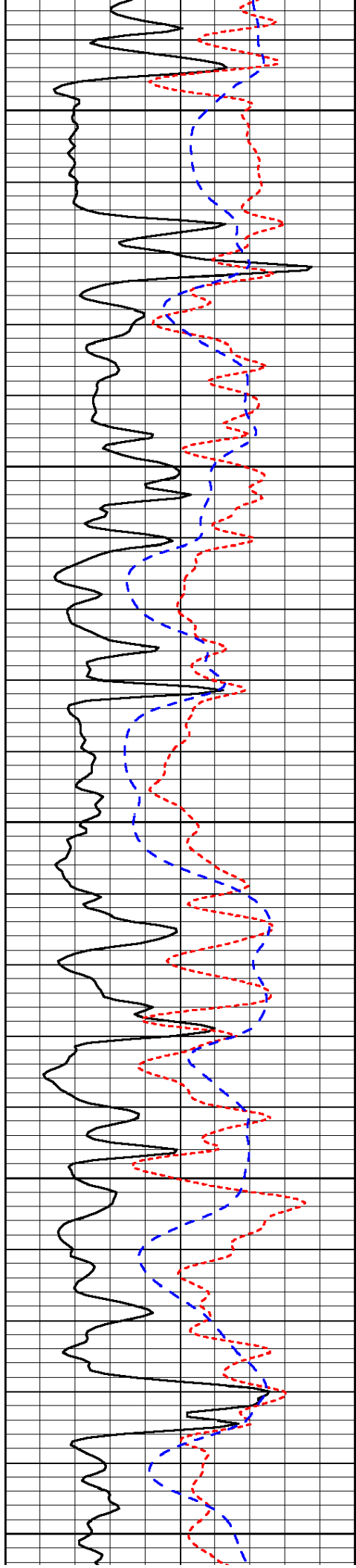


-33

-33

-32

-32



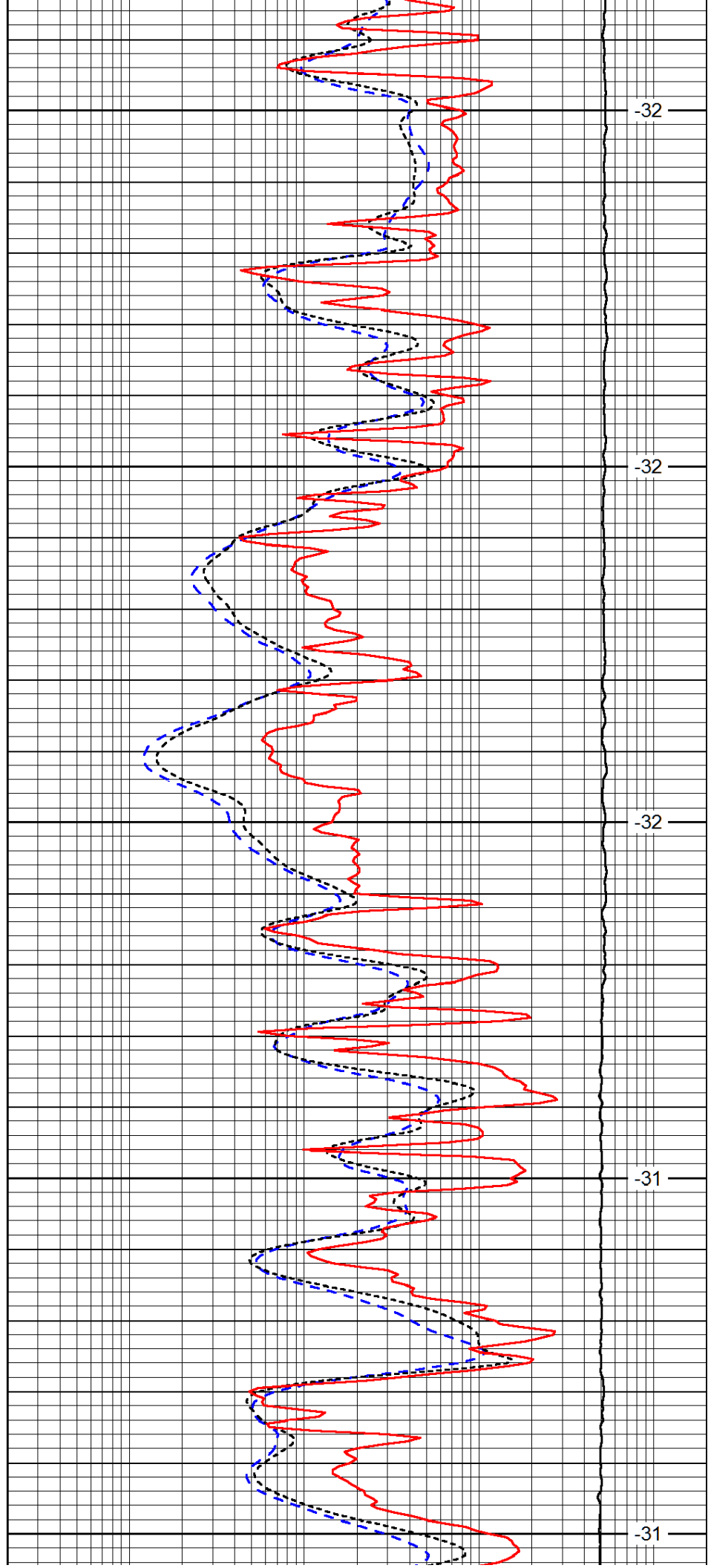
3550

3600

3650

3700

3750



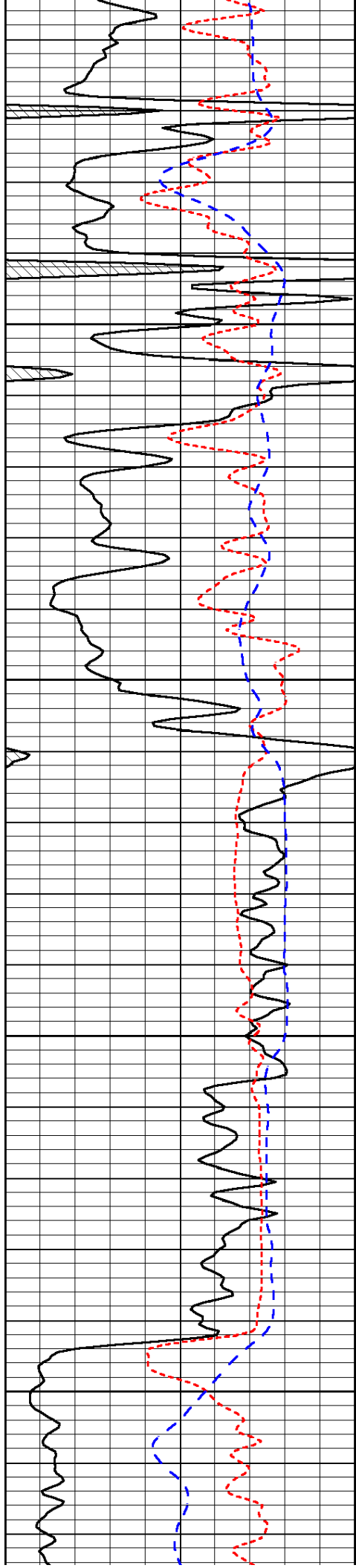
-32

-32

-32

-31

-31

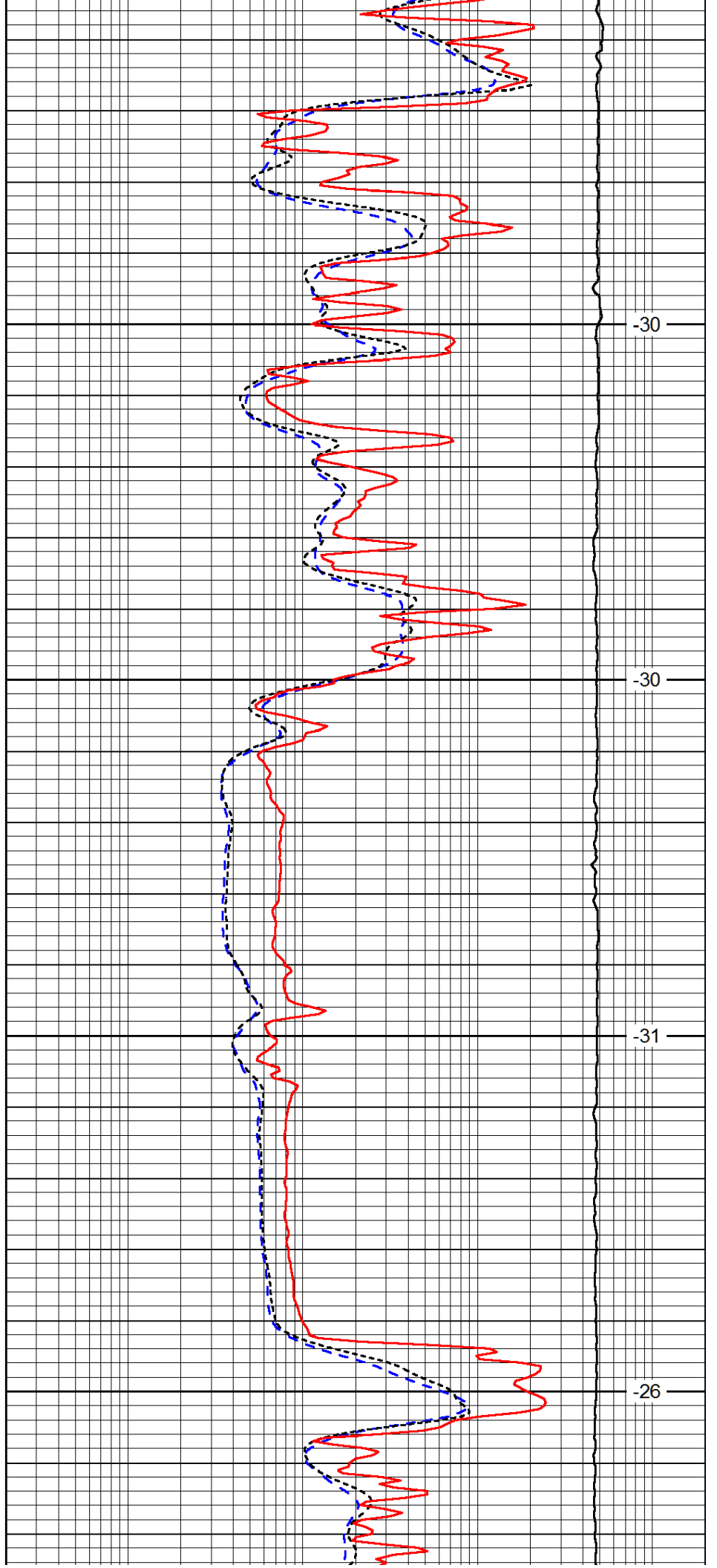


3800

3850

3900

3950

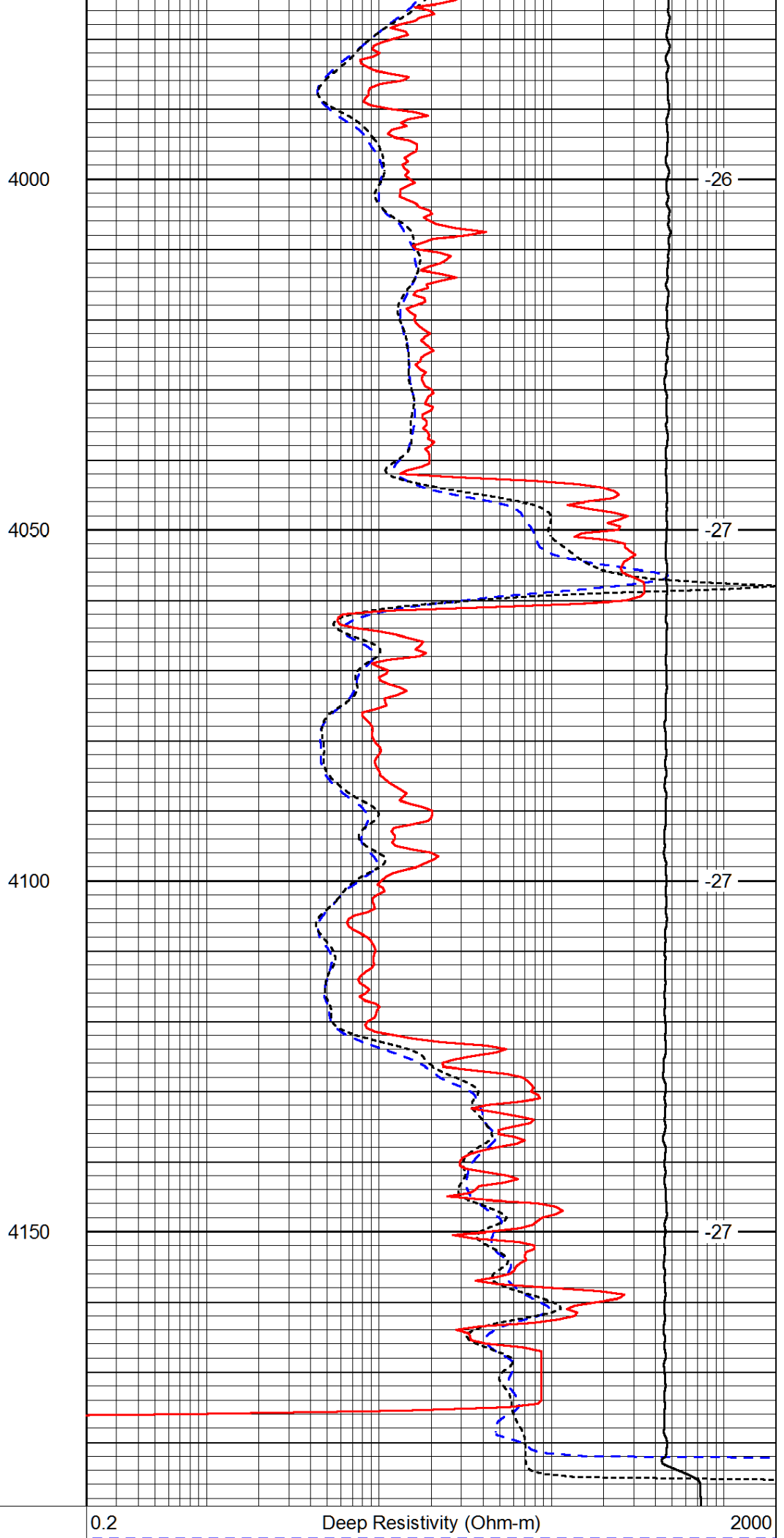
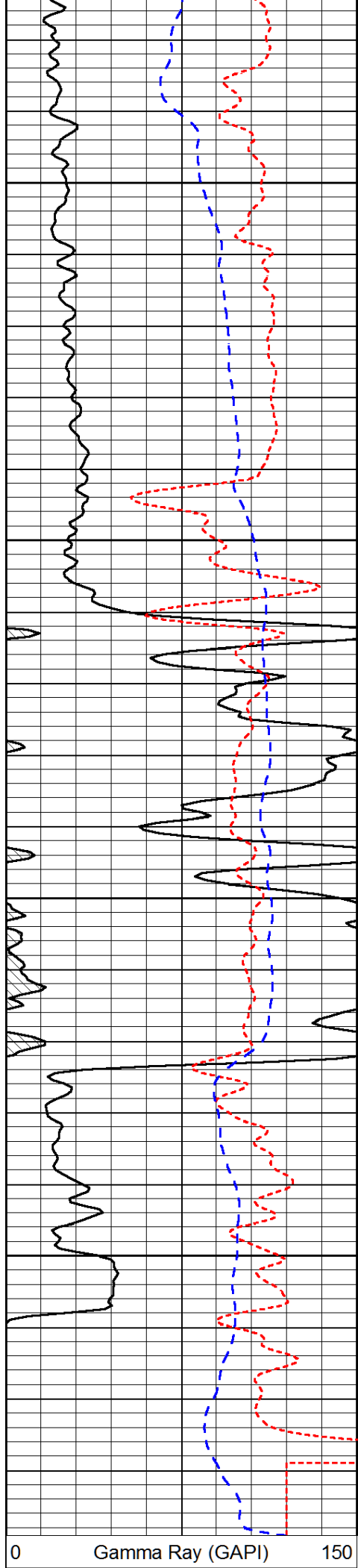


-30

-30

-31

-26



-160	RXO/RT	40
-200	SP (mV)	0

0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0
		LSPD (ft/min)