



Pioneer Energy Services

Dual Induction Log

15-135-25,663-00-00

API No.	Company American Warrior, Inc.		Location 600' FNL & 142' FWL	Other Services CNL/CDL
	Well LJ Unit No. 1	State Kansas		
	Field Walnut Hill			
	County Ness			
	Sec: 21	Twp: 18S	Rge: 22W	
Permanent Datum	Ground Level	Elevation 2174		Elevation
Log Measured From	Kelly Bushing	8 Ft. Above Perm. Datum		K.B. 2182
Drilling Measured From	Kelly Bushing			D.F. 2174
				G.L. 2174

Date	11/24/13	
Run Number	One	
Depth Driller	4420	
Depth Logger	4427	
Bottom Logged Interval	4426	
Top Log Interval	200	
Casing Driller	8.625 @ 222	
Casing Logger	222	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	8,000	
Density / Viscosity	9.2 61	
pH / Fluid Loss	9.5 9.6	
Source of Sample	Flowline	
Rm @ Meas. Temp	.24 @ 72	
Rmf @ Meas. Temp	.18 @ 72	
Rmc @ Meas. Temp	.32 @ 72	
Source of Rmf / Rmc	Charts	
Rm @ BHT	.14 @ 120	
Operating Rig Time	3 Hours	
Max Rec. Temp. F	120	
Equipment Number	108	
Location	Hays	
Recorded By	J. Henrickson	
Witnessed By	Scott Corsair	Jason Alm

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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

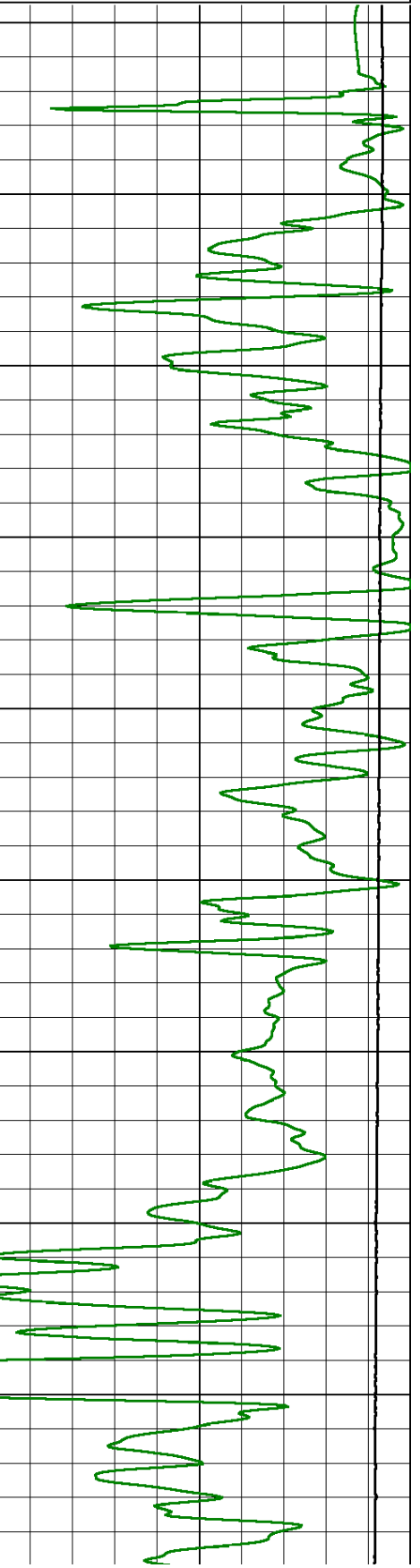
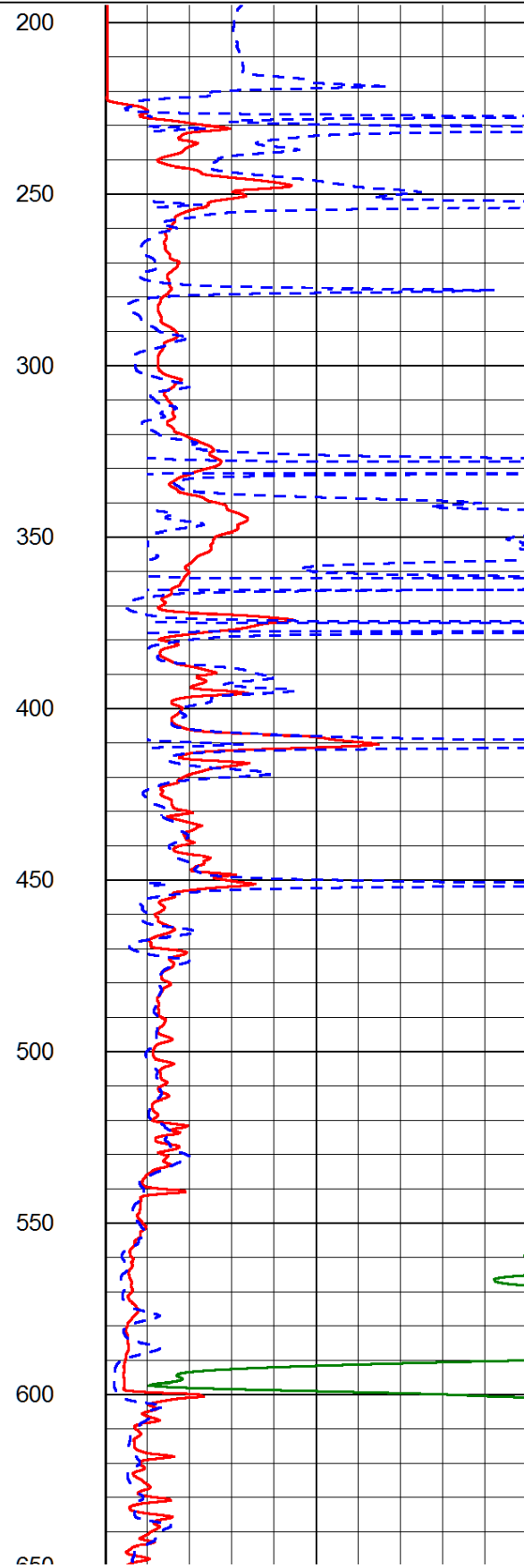
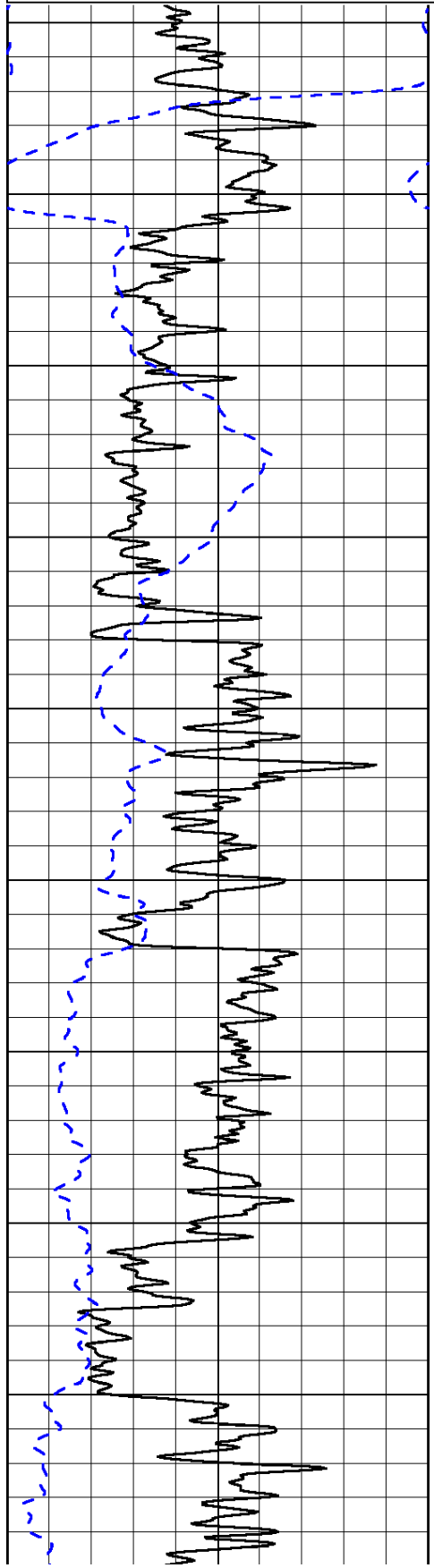
Thank you for using Log-Tech, Inc.
 (785) 625-3858

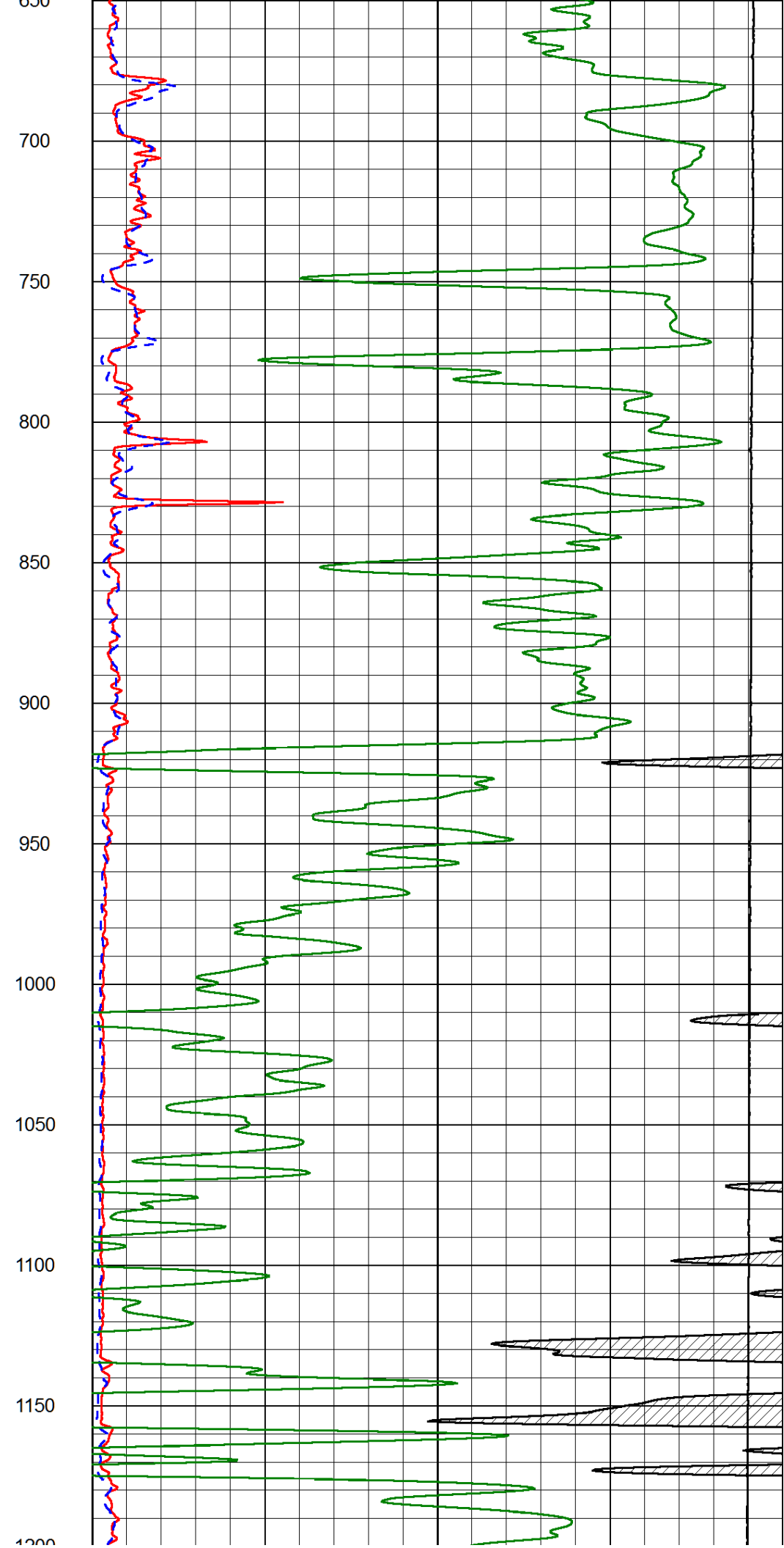
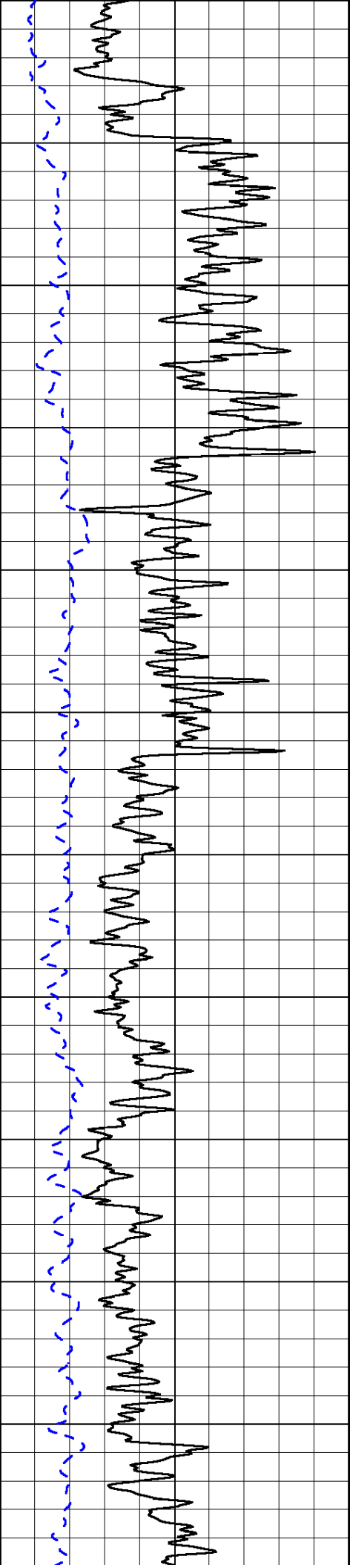
Bazine Kansas
 3 West, 2 North, West Into

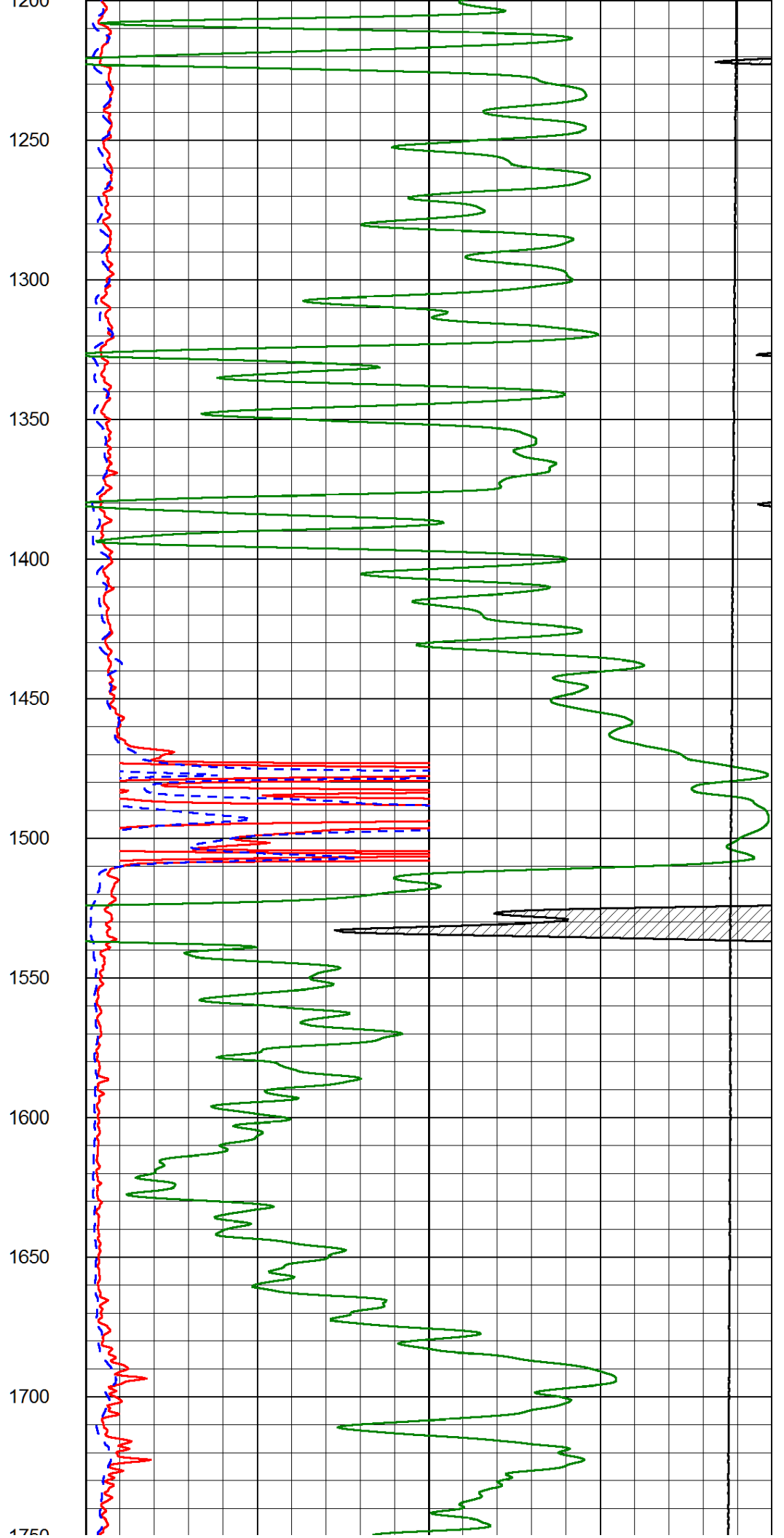
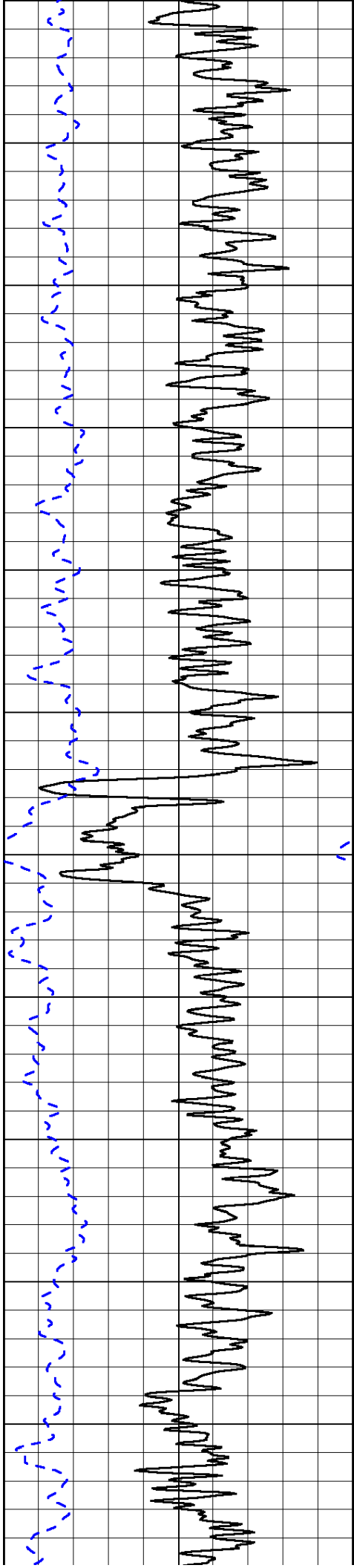
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 Presentation Format: dil2in
 Dataset Creation: Sun Nov 24 16:29:40 2013
 Charted by: Depth in Feet scaled 1:600

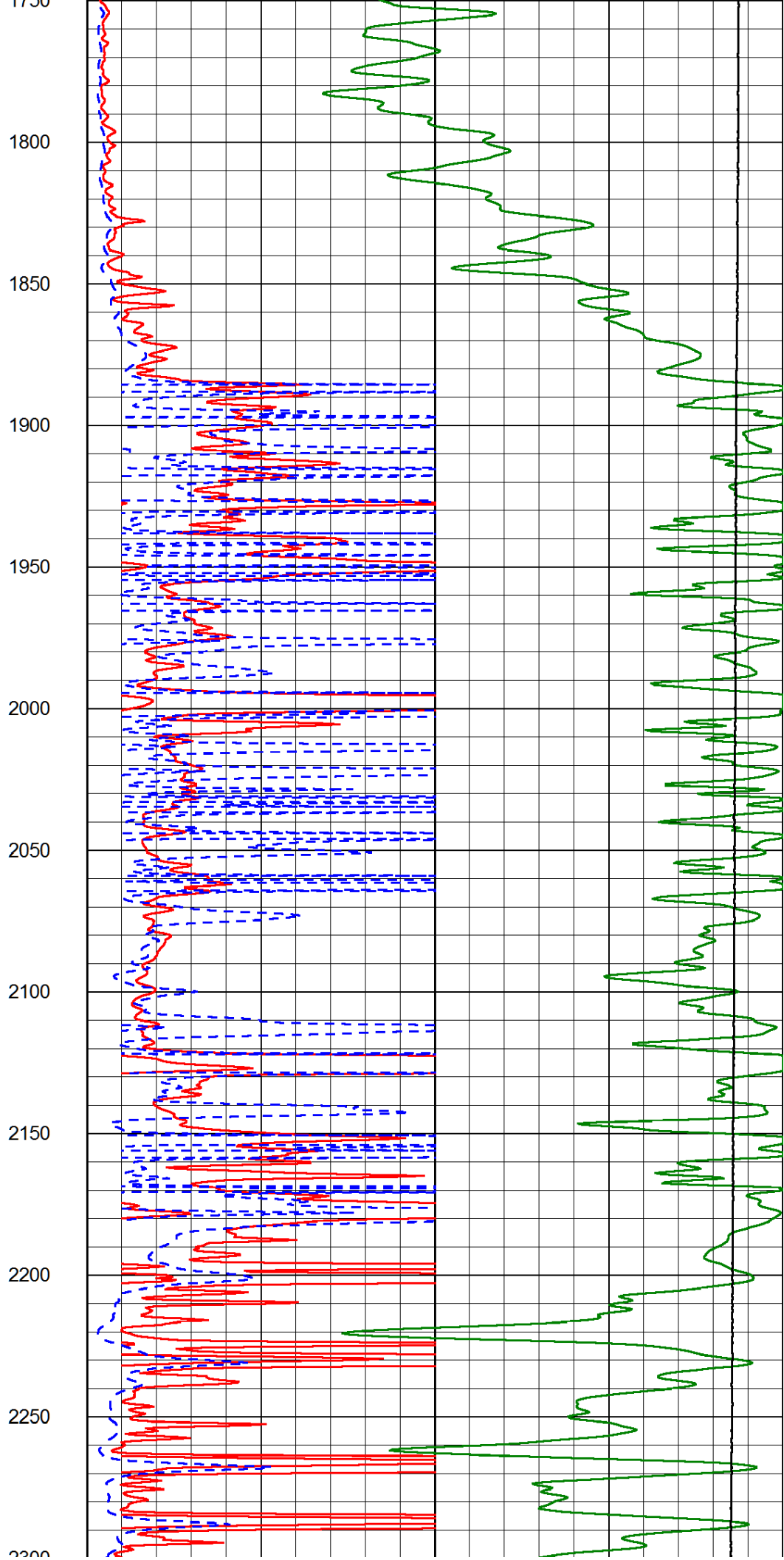
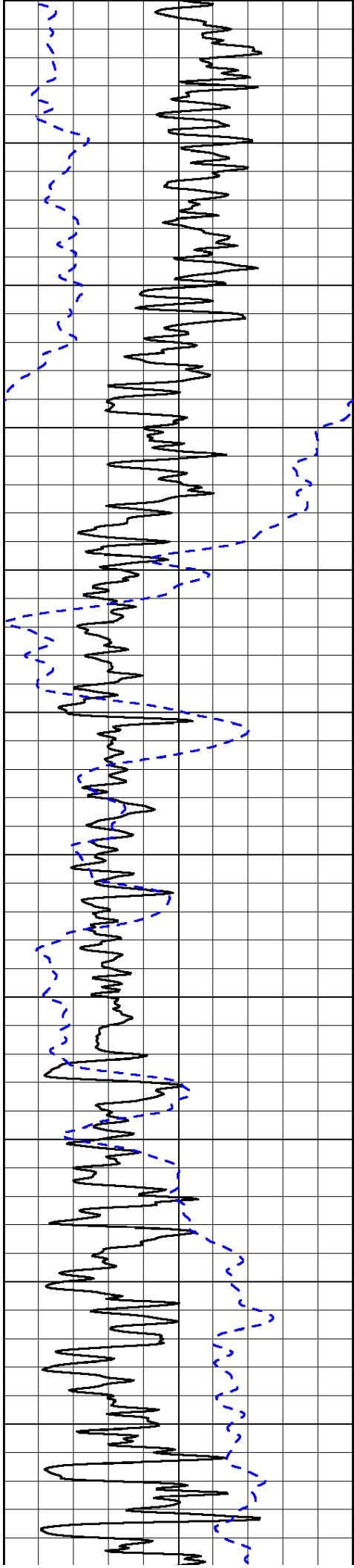
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-200	SP (mV)	0

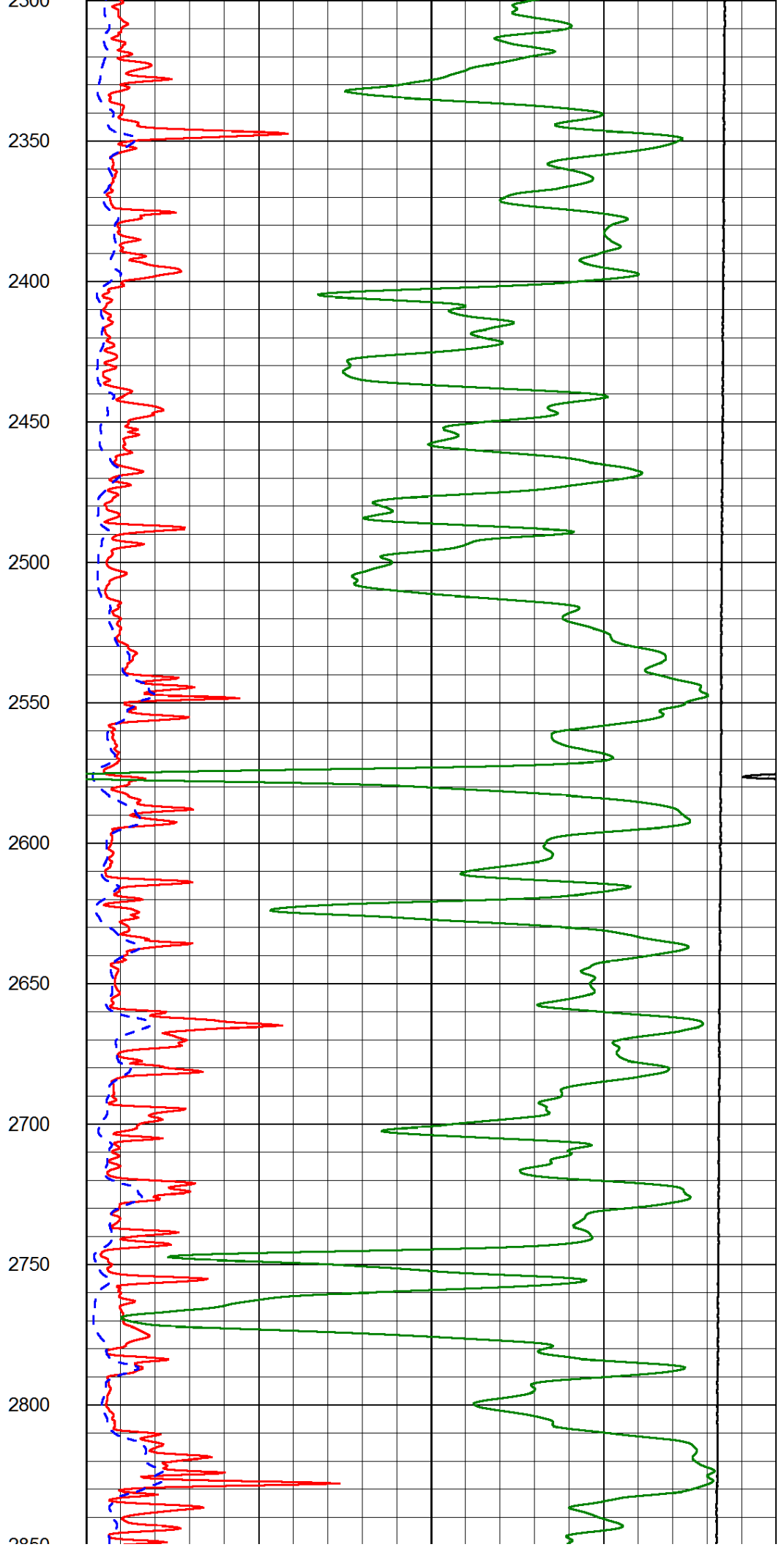
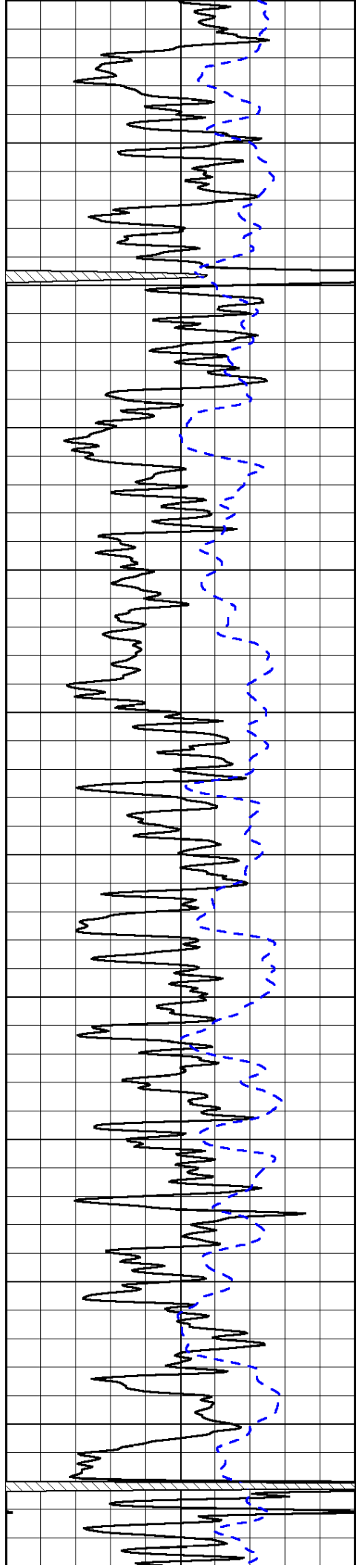
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
1000	Conductivity (Ohm-m)	0
15000	Line Tension (lb)	0
	Shallow Resistivity (Ohm-m)	50
	Deep Resistivity (Ohm-m)	50

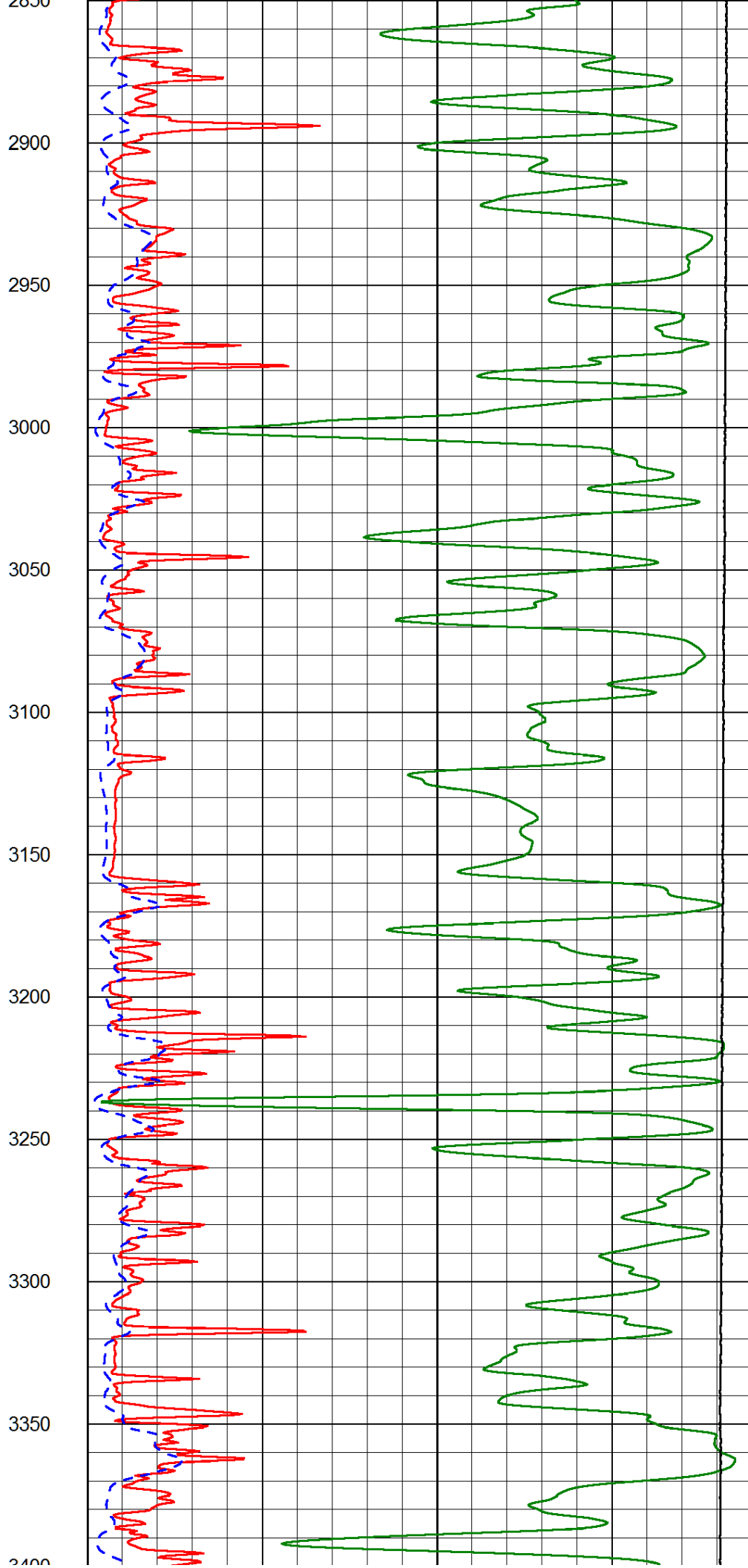
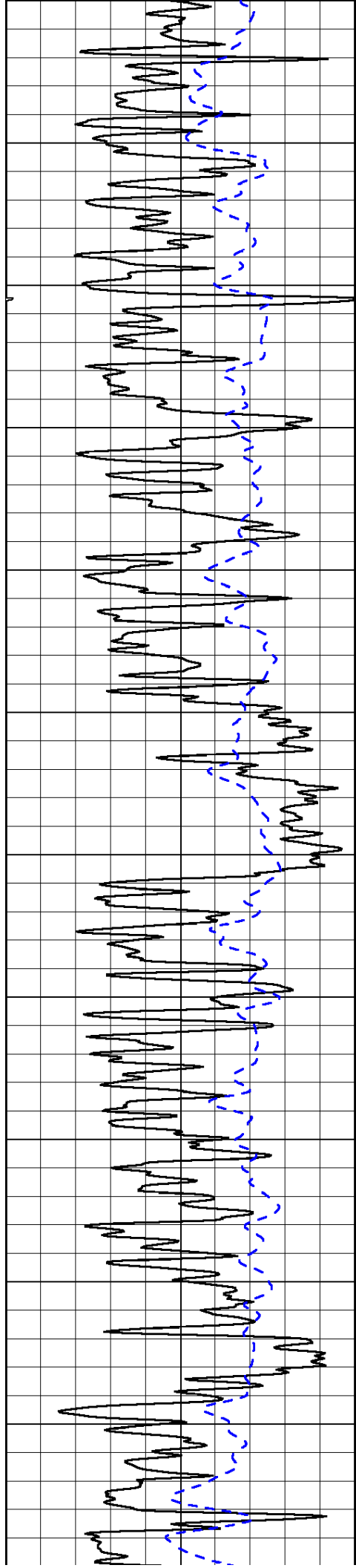


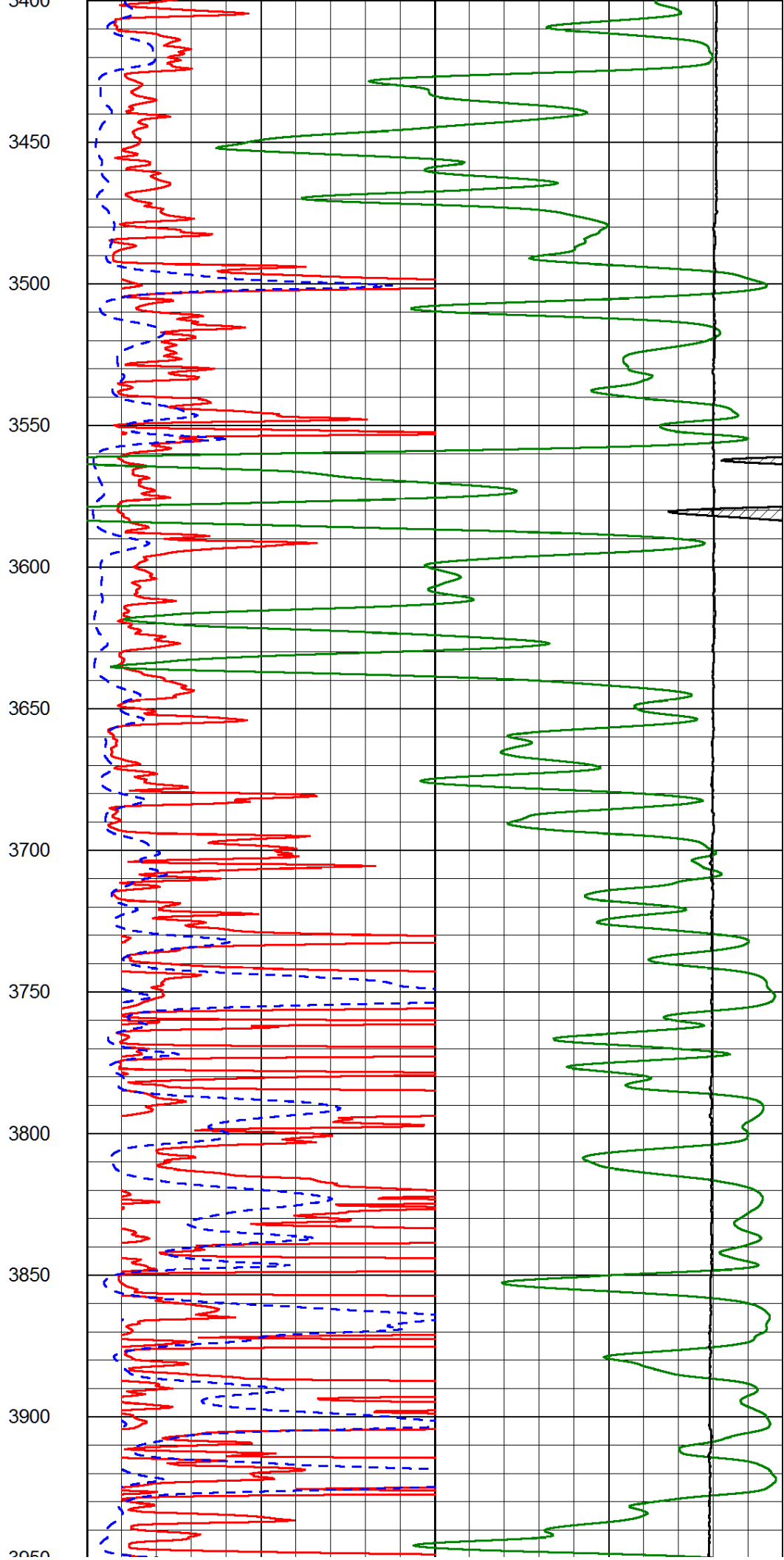
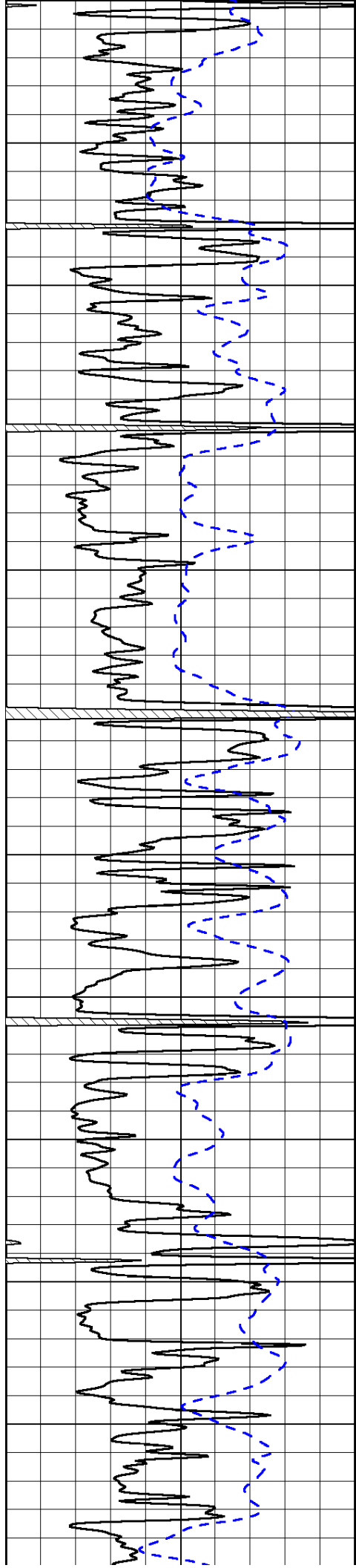


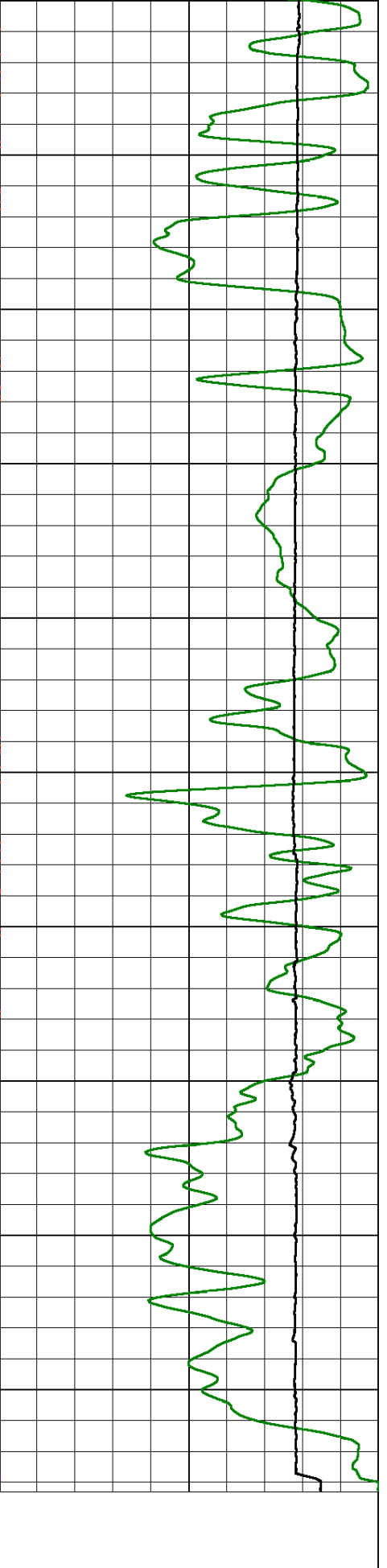
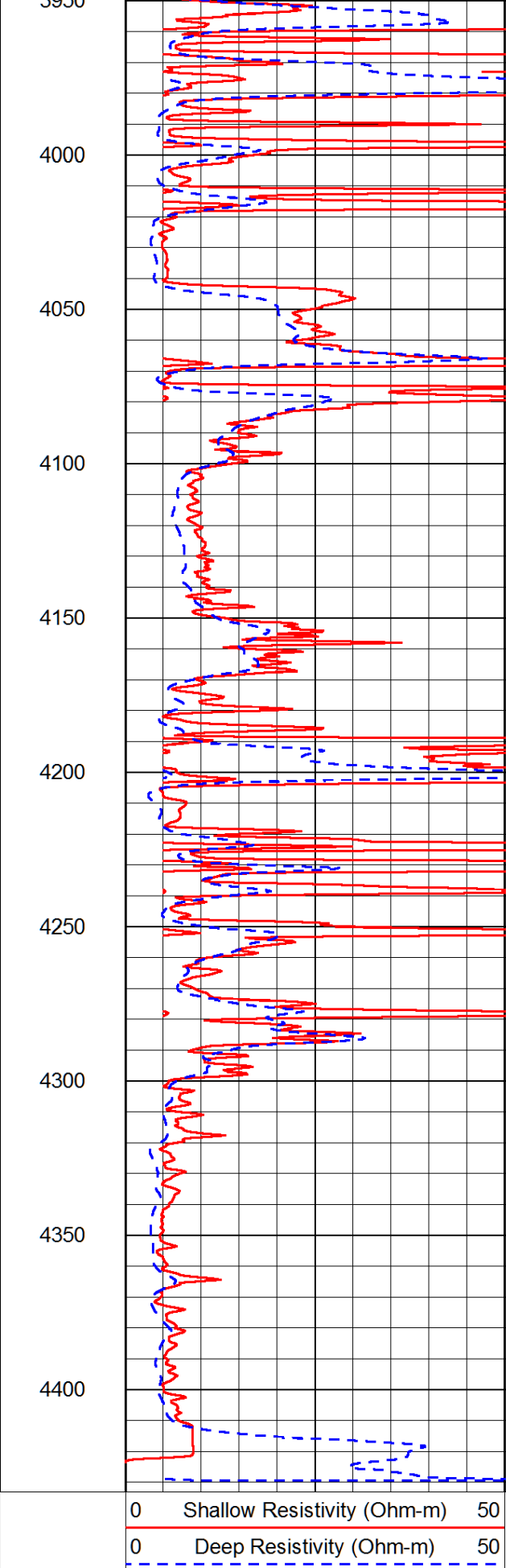
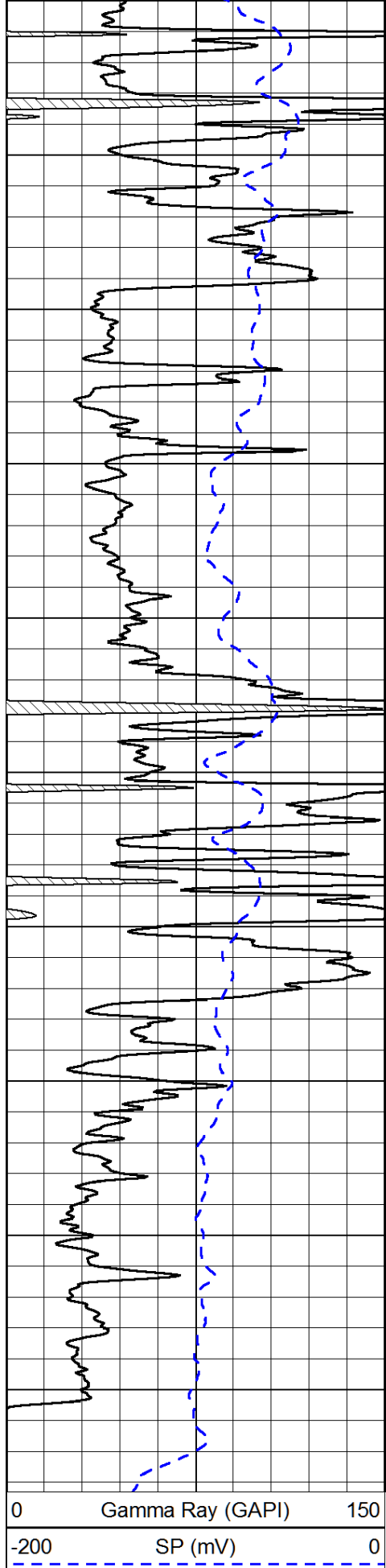












0 Gamma Ray (GAPI) 150
 -200 SP (mV) 0

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 500
 (Ohm-m)

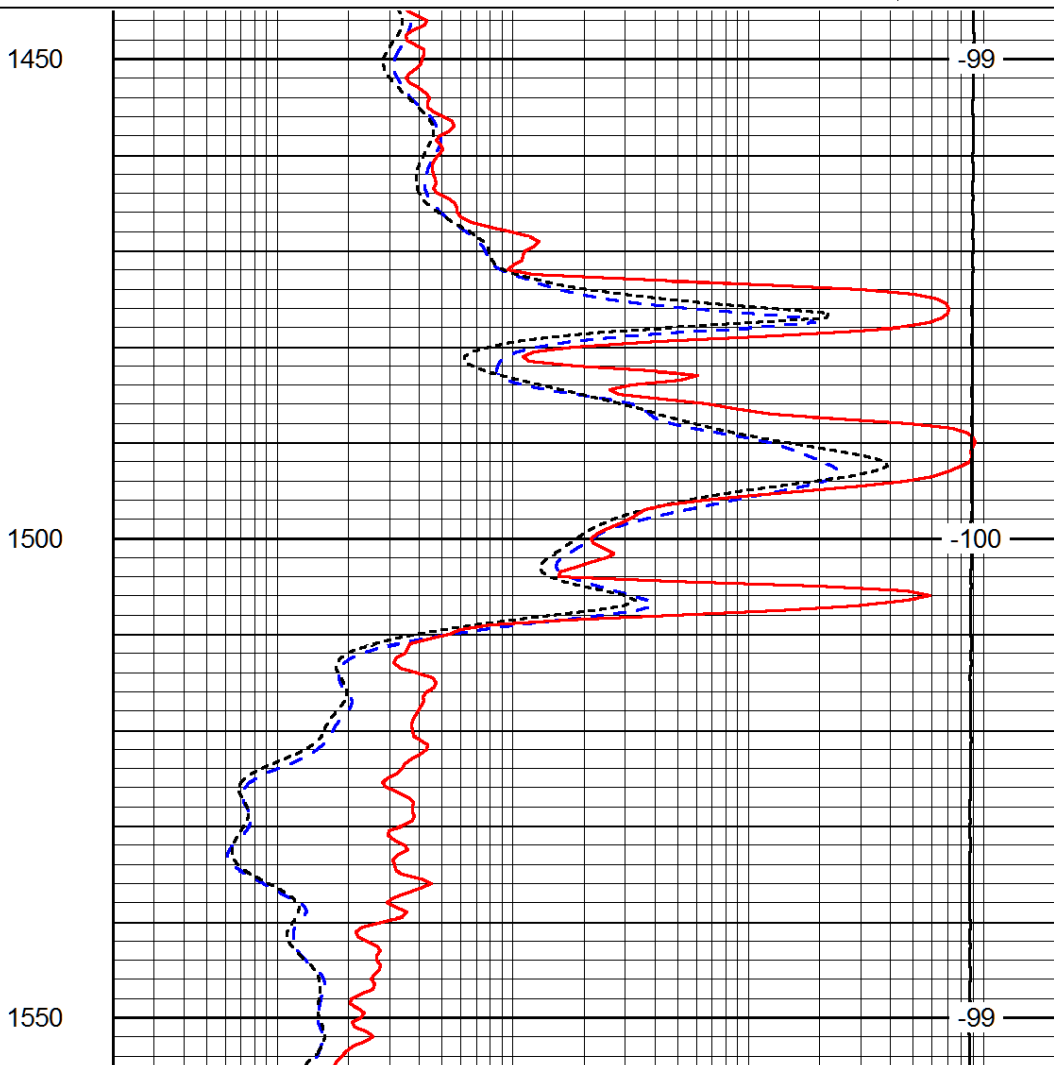
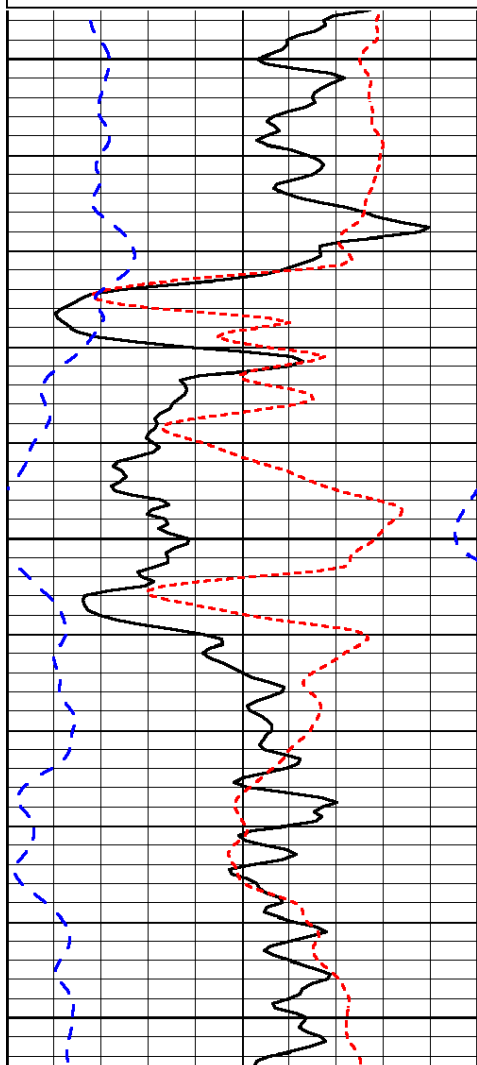
50 Deep Resistivity (Ohm-m) 500

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 Dataset Pathname: DIL/awstk
 Presentation Format: dil
 Dataset Creation: Sun Nov 24 16:29:40 2013
 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)



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

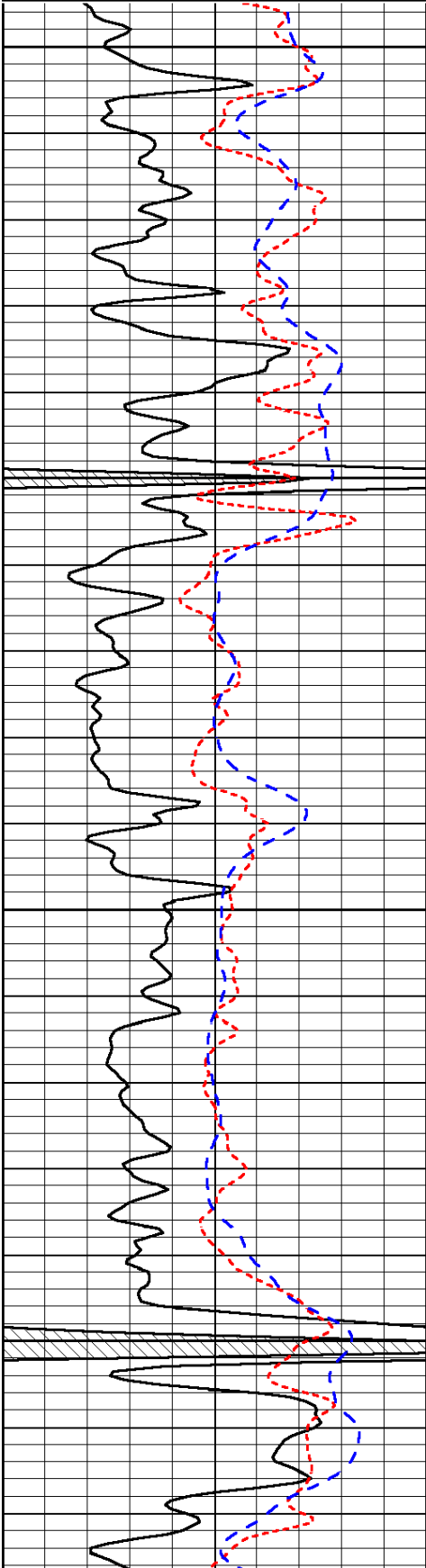
LSPD
(ft/min)

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10000	Line Tension (lb)	0

LSPD
(ft/min)

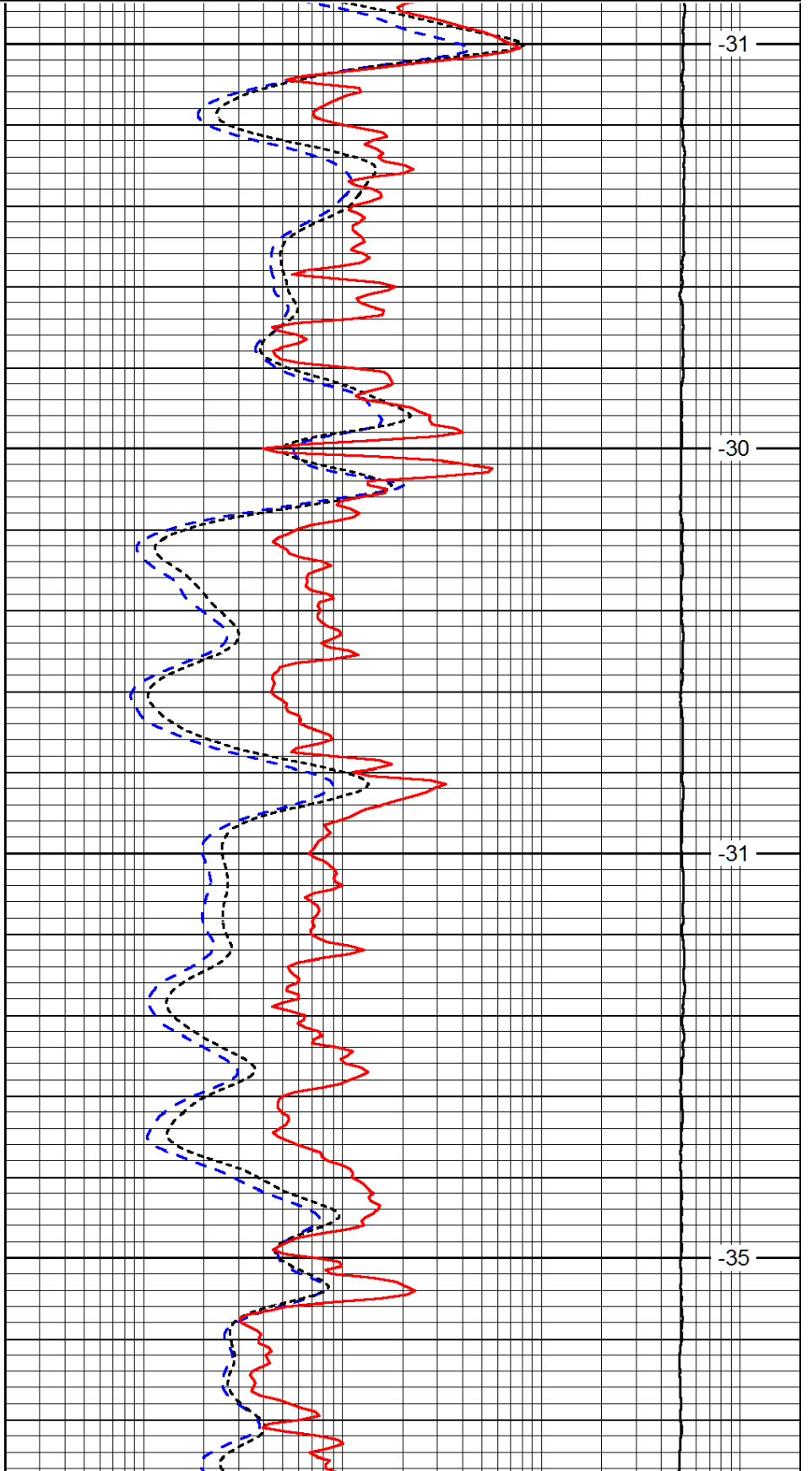


3500

3550

3600

3650

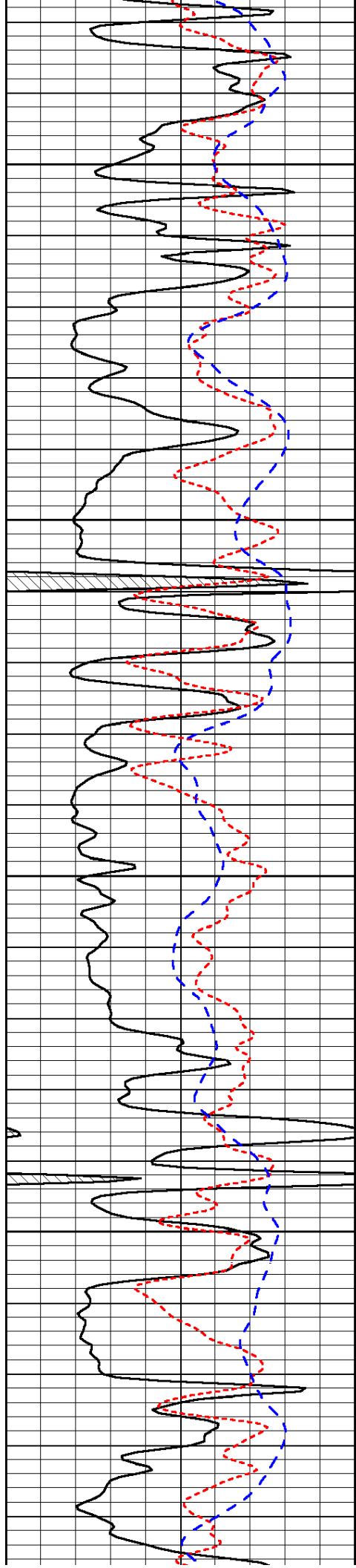


-31

-30

-31

-35

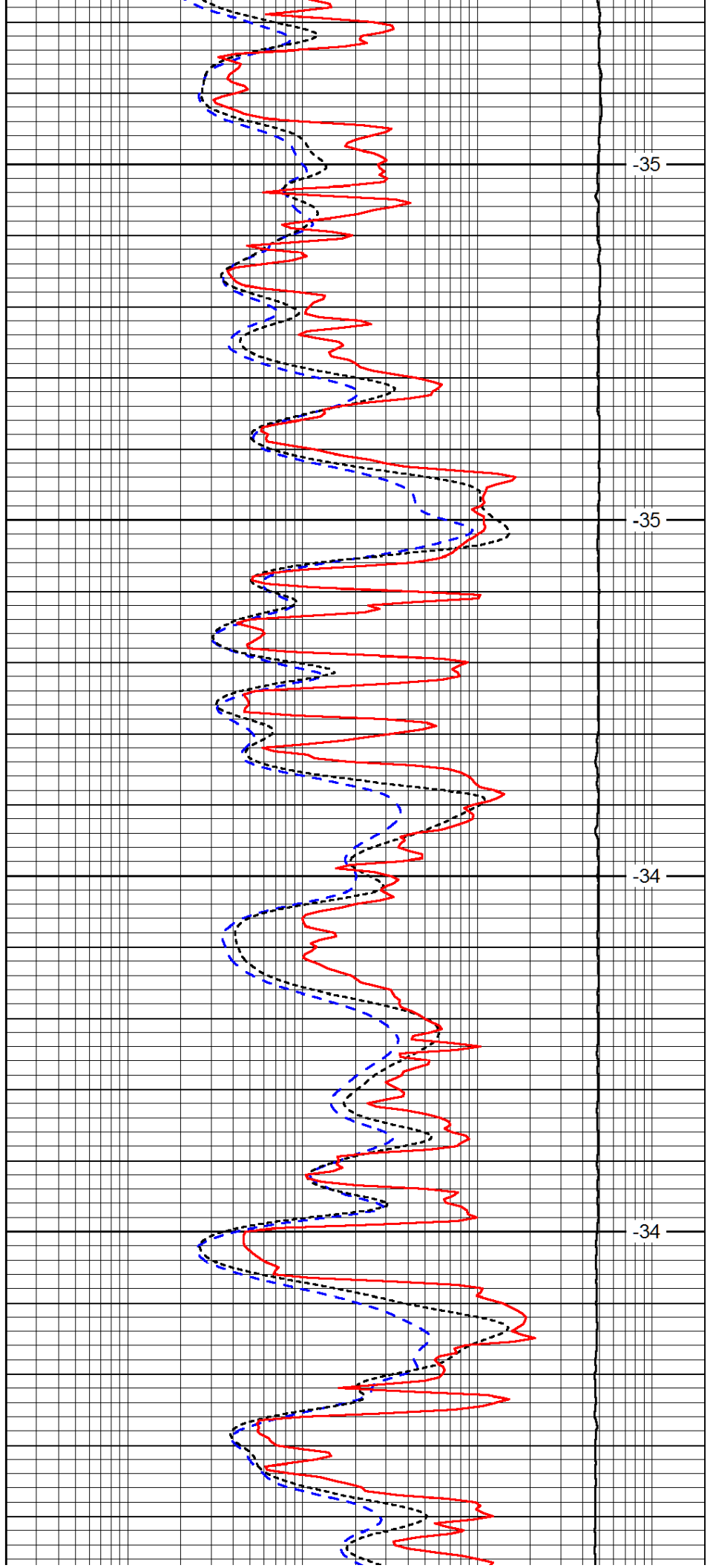


3700

3750

3800

3850

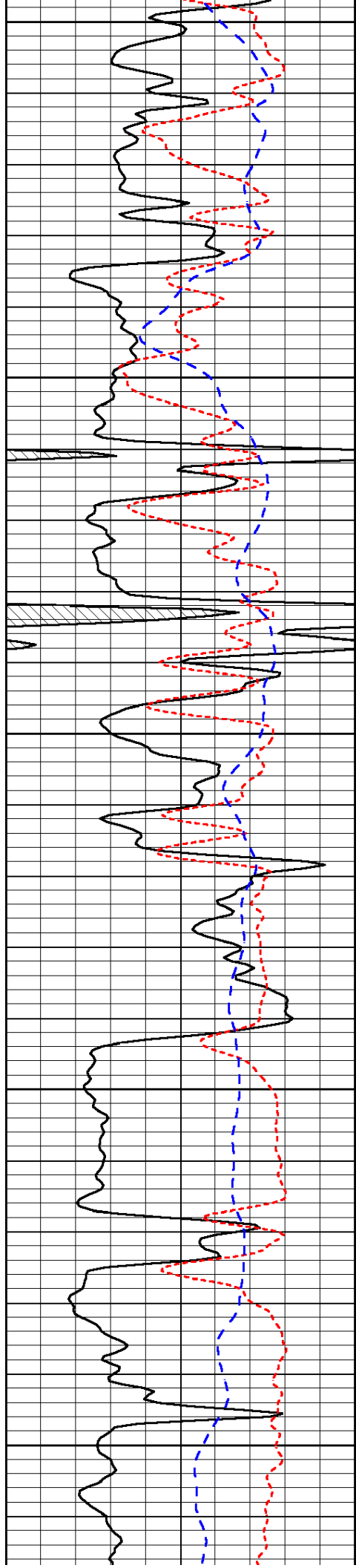


-35

-35

-34

-34



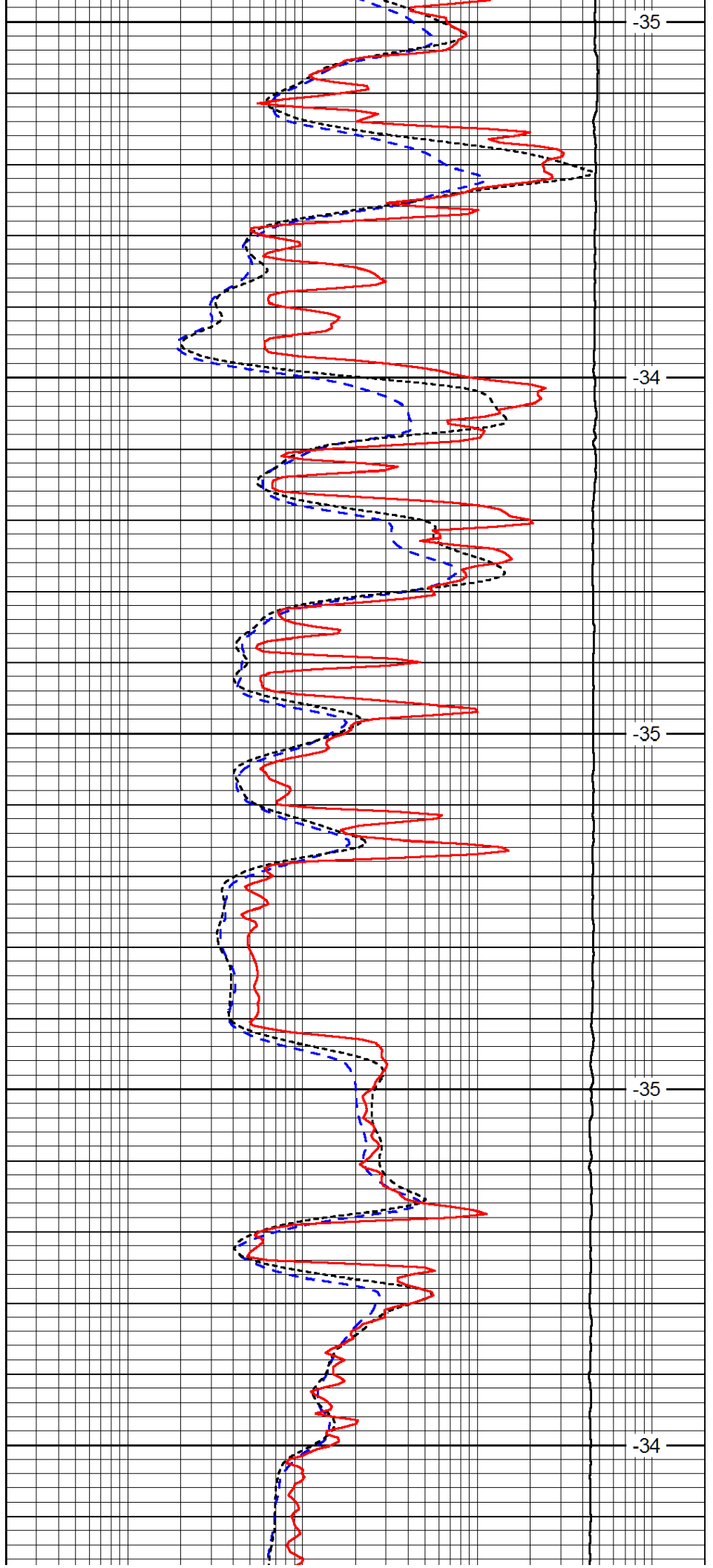
3900

3950

4000

4050

4100



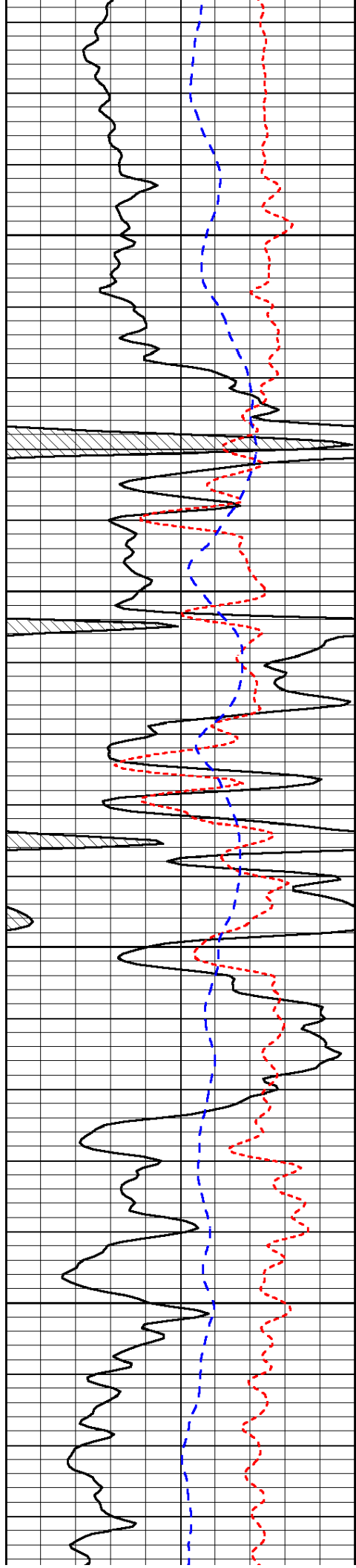
-35

-34

-35

-35

-34

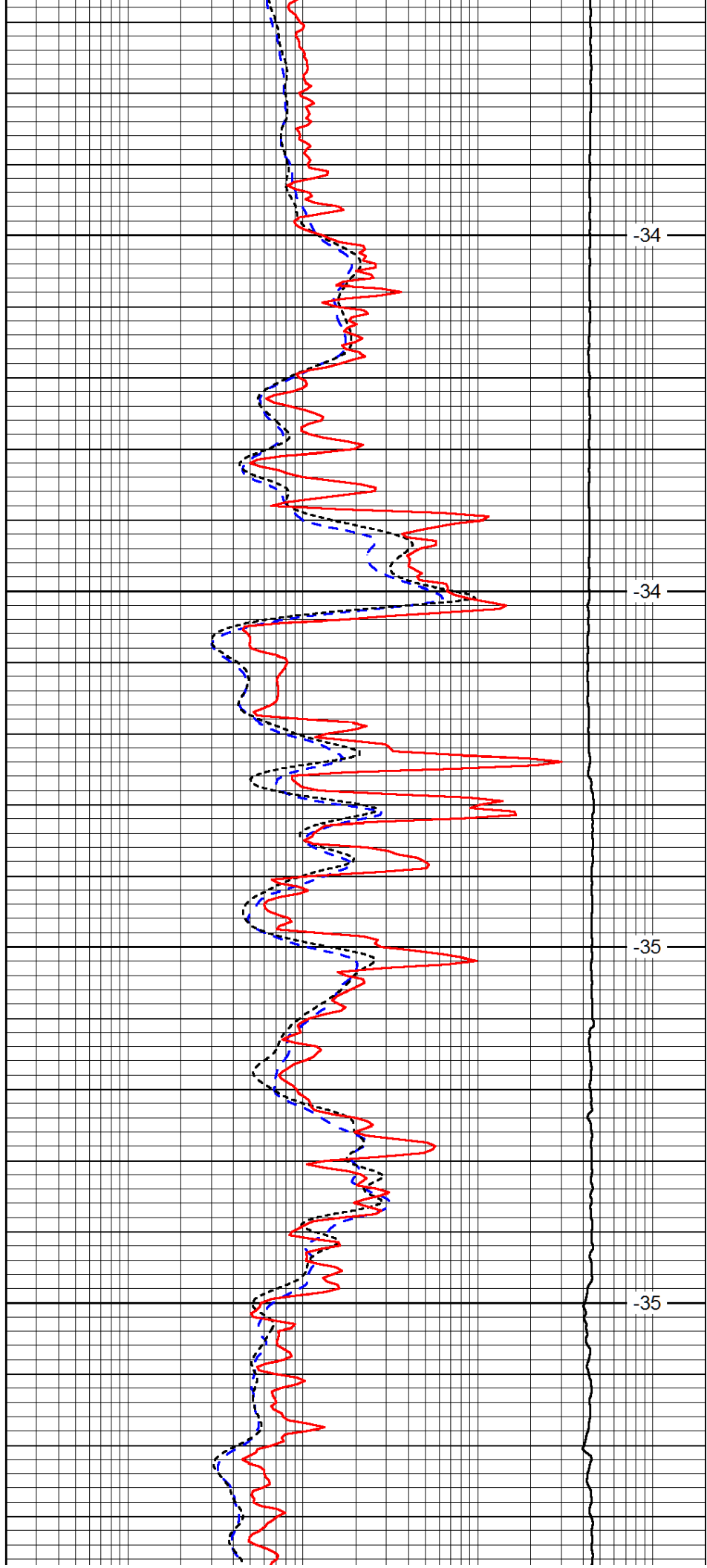


4150

4200

4250

4300

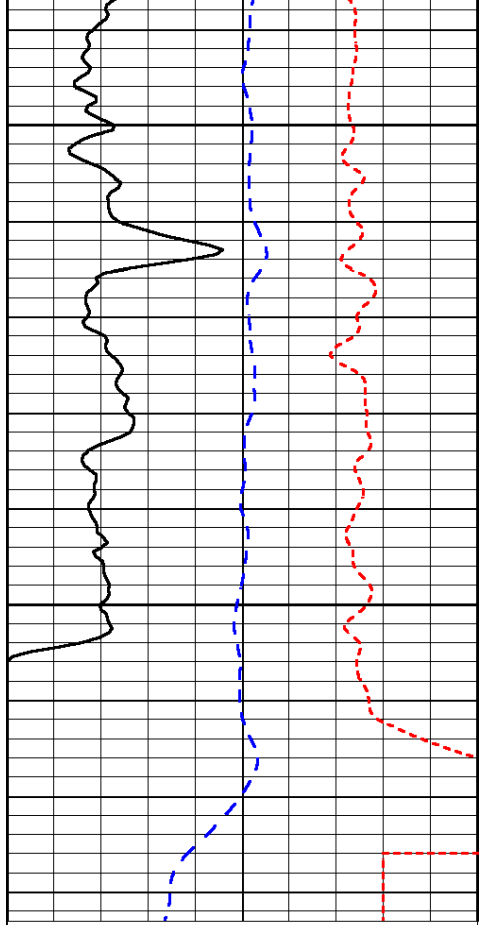


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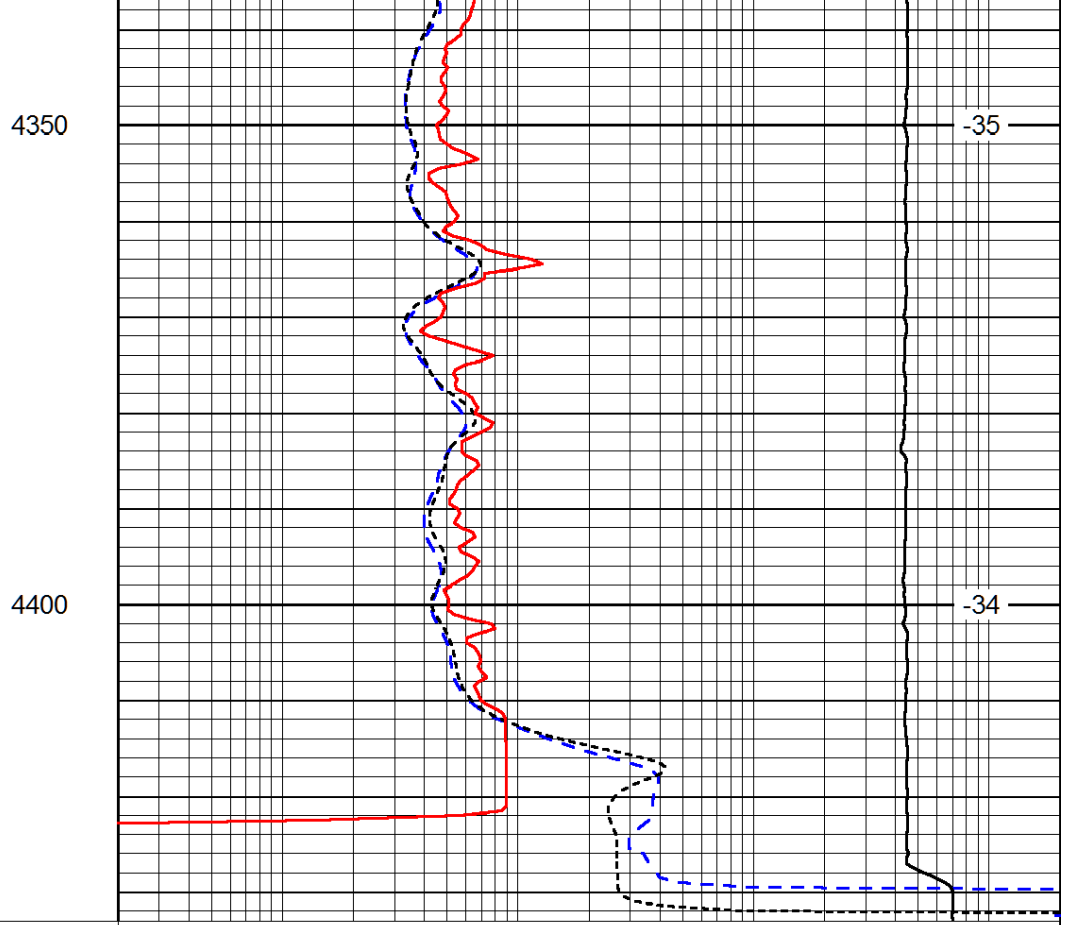
-34

-35

-35



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LSPD
(ft/min)