



Dual Induction Log

Pioneer Energy Services

API No.	Company American Warrior, Inc.		
	Well G.E. Riedel No. 4-31		
	Field Irvin		
	County Ellis State Kansas		
15-051-26,481-00-00	Location	1,685' FSL & 1,664' FEL	
	Sec: 31 Twp: 13S Rge: 19W	Other Services CNL/CDL MEL/BHCS	
Permanent Datum	Ground Level	Elevation 2268	
Log Measured From	Kelly Bushing	8 Ft. Above Perm. Datum	
Drilling Measured From	Kelly Bushing		
Date	3/13/2013		
Run Number	One		
Depth Driller	3980		
Depth Logger	3979		
Bottom Logged Interval	3978		
Top Log Interval	200		
Casing Driller	8.625 @ 221		
Casing Logger	219		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	6500		
Density / Viscosity	9.3 55		
pH / Fluid Loss	10.5 8.4		
Source of Sample	Flowline		
Rm @ Meas. Temp	.50 @ 65		
Rmf @ Meas. Temp	.38 @ 65		
Rmc @ Meas. Temp	.68 @ 65		
Source of Rmf / Rmc	Charts		
Rm @ BHT	.28 @ 116		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	116		
Equipment Number	108		
Location	Hays		
Recorded By	J. Long		
Witnessed By	Jason Alm	Austin Klaus	

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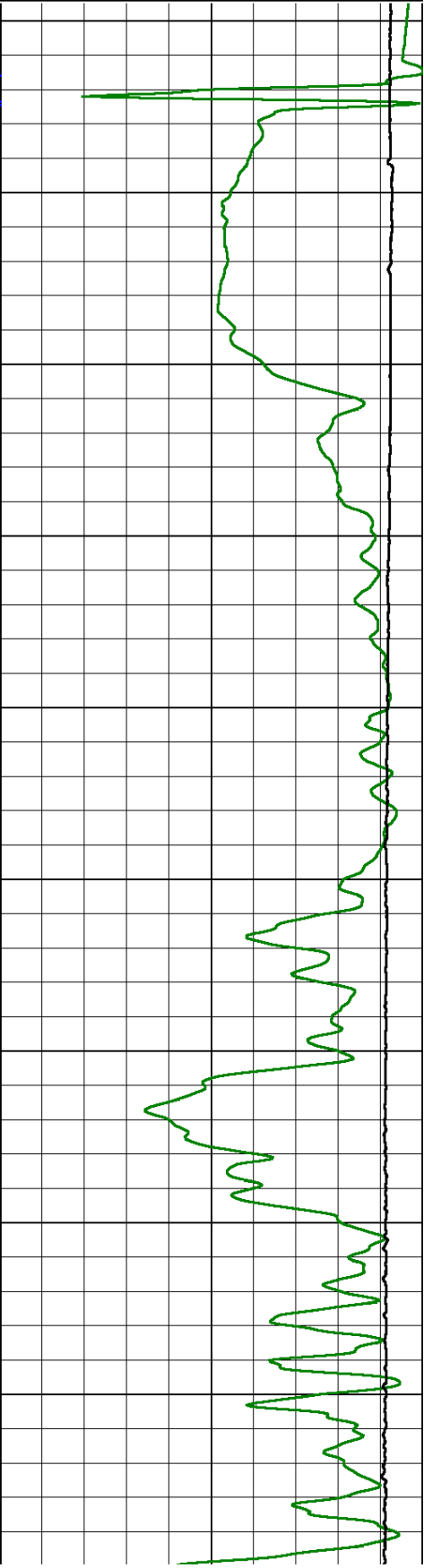
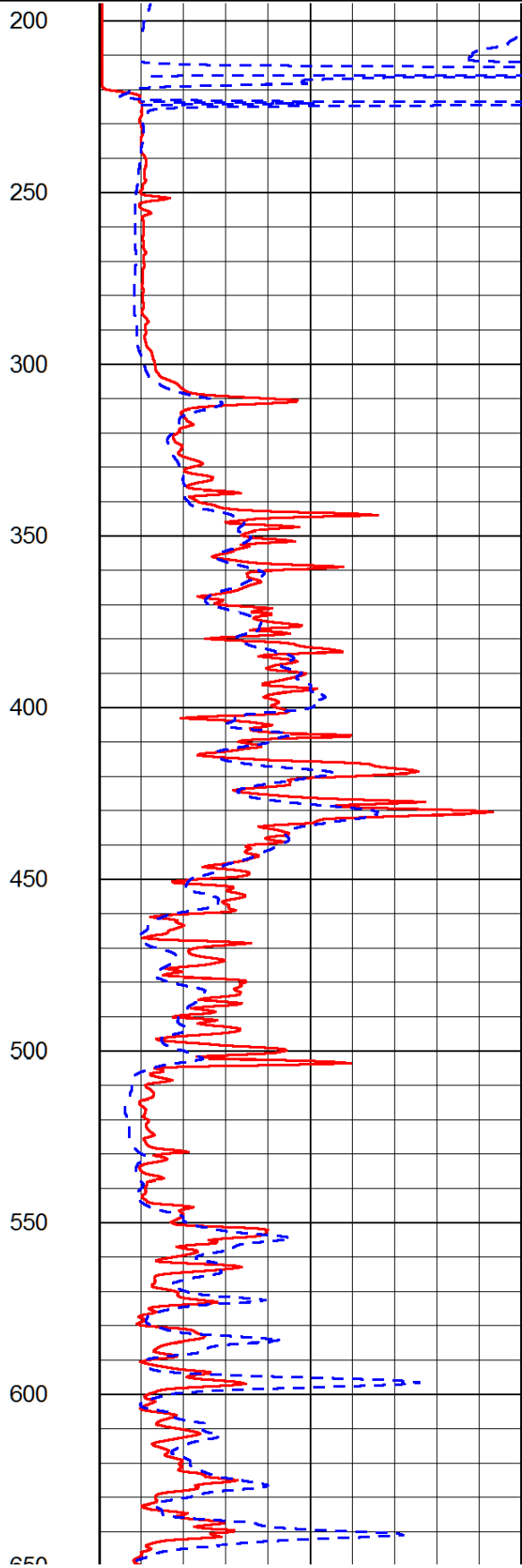
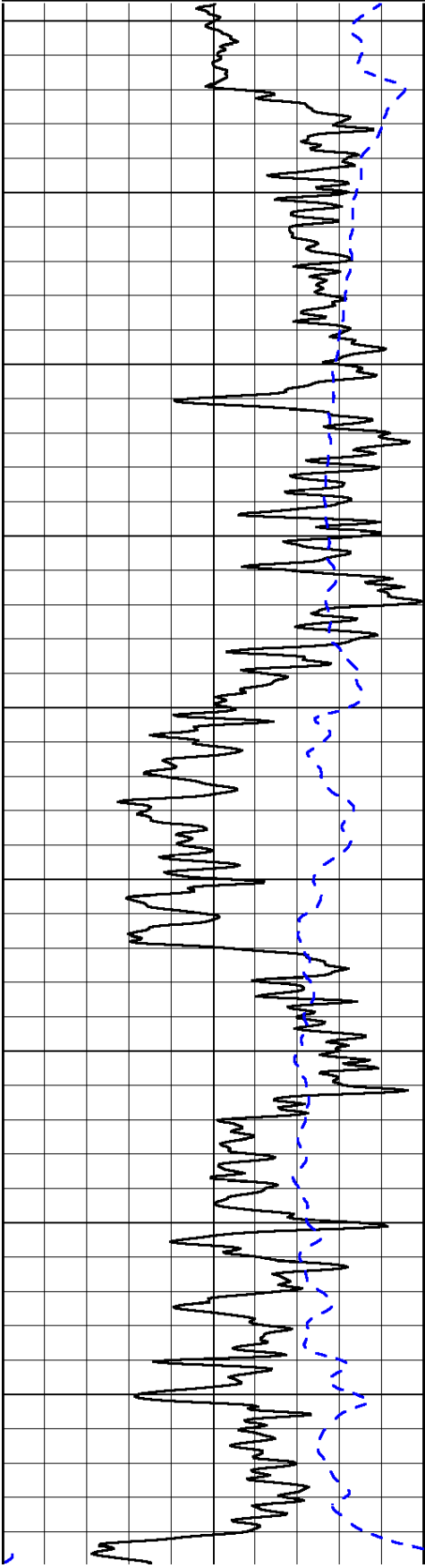
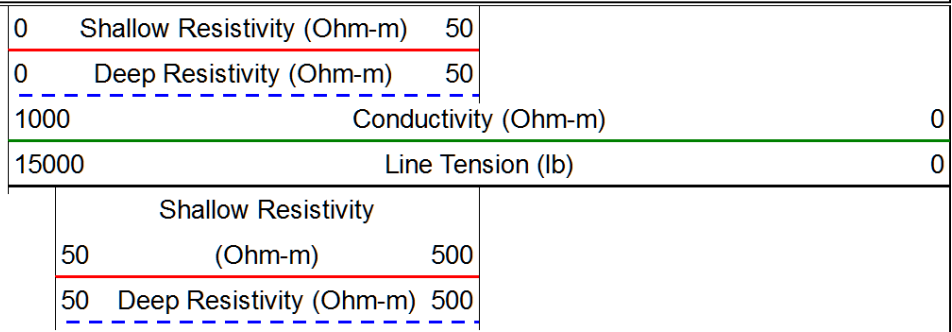
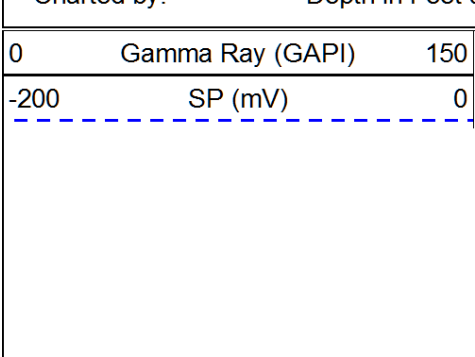
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

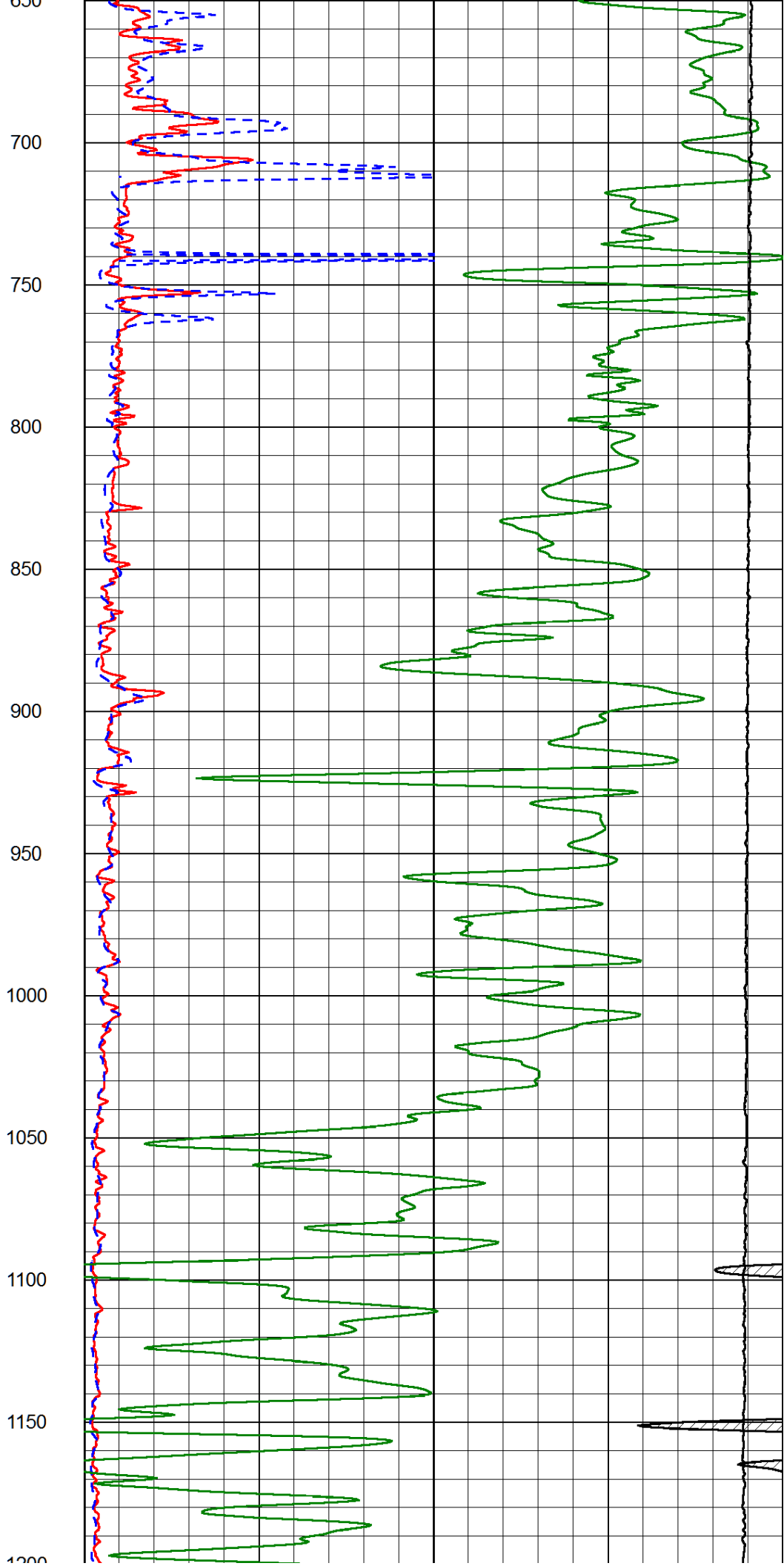
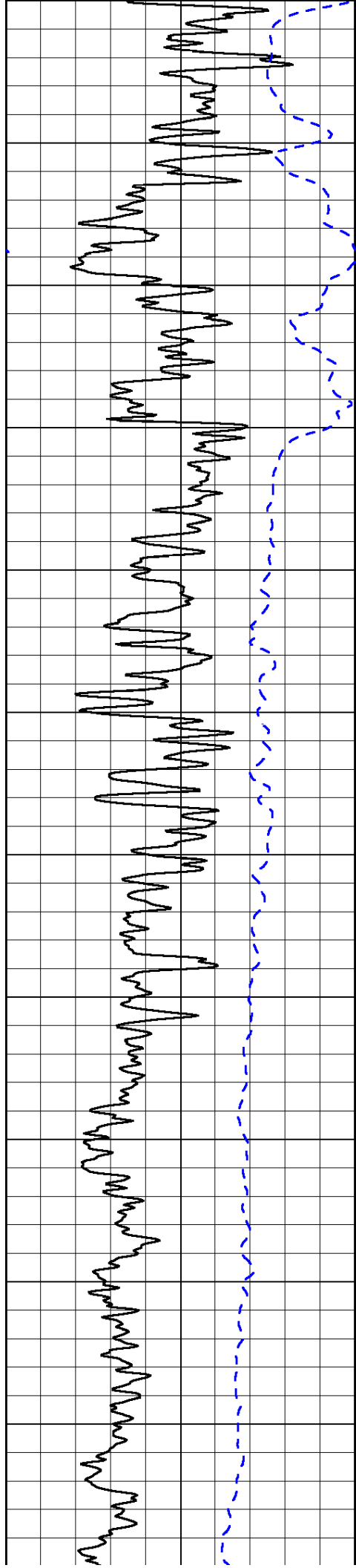
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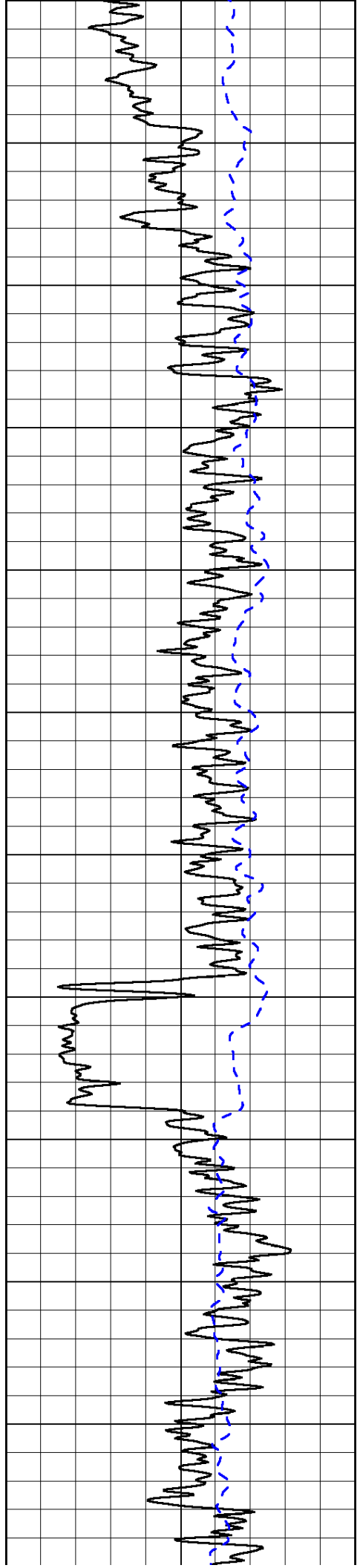
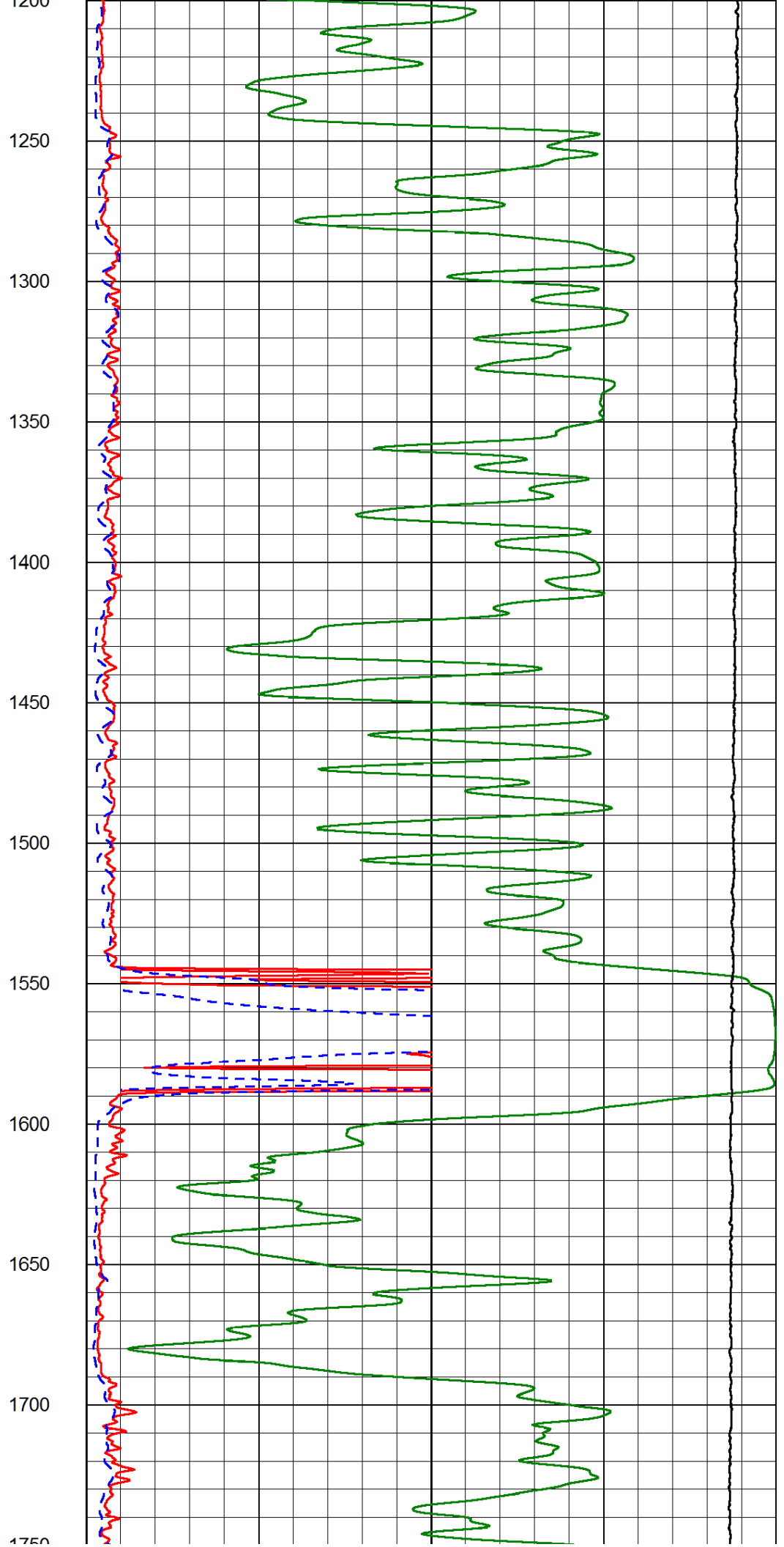
Thank you for using Log-Tech, Inc.
(785) 625-3858

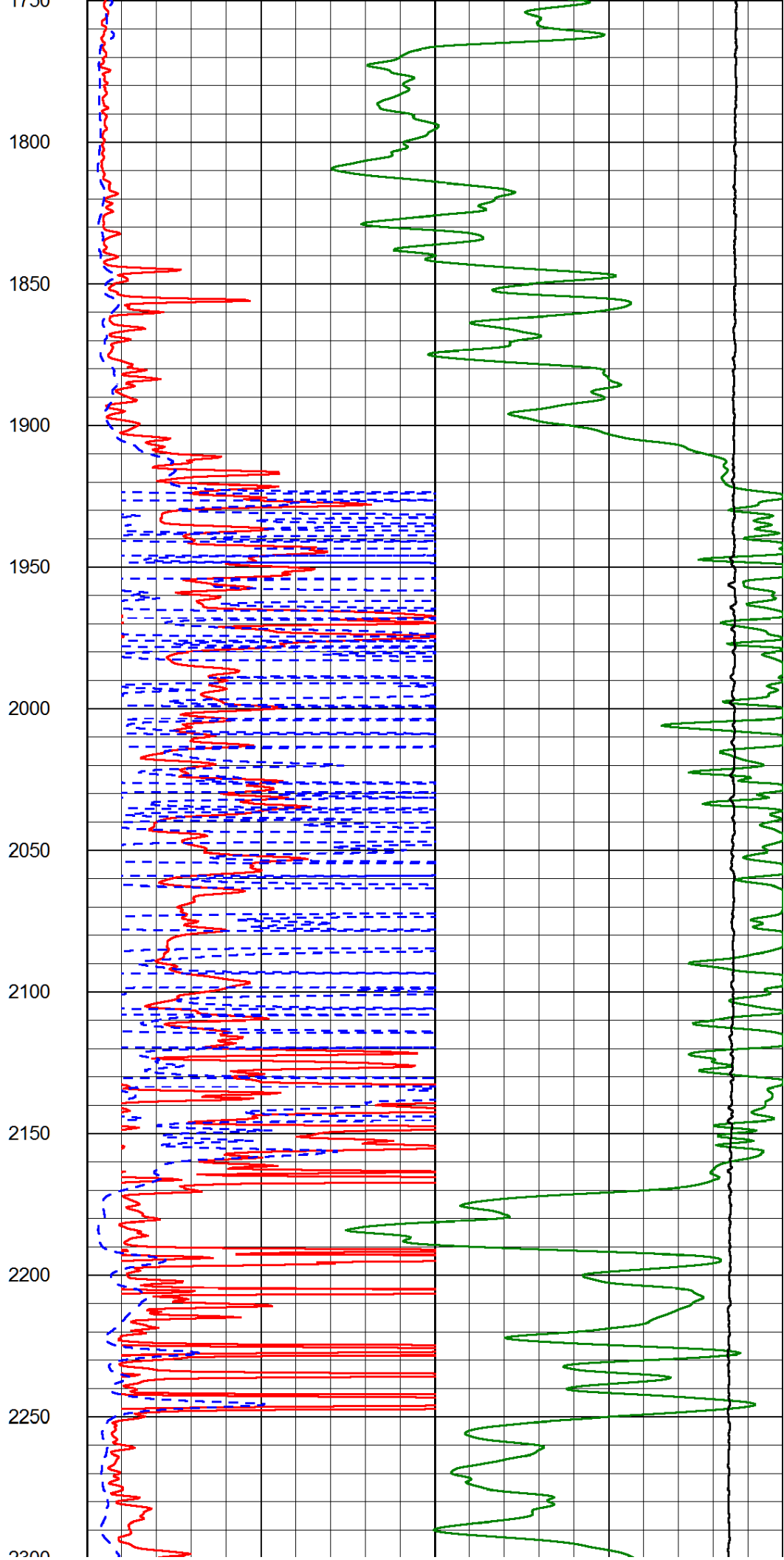
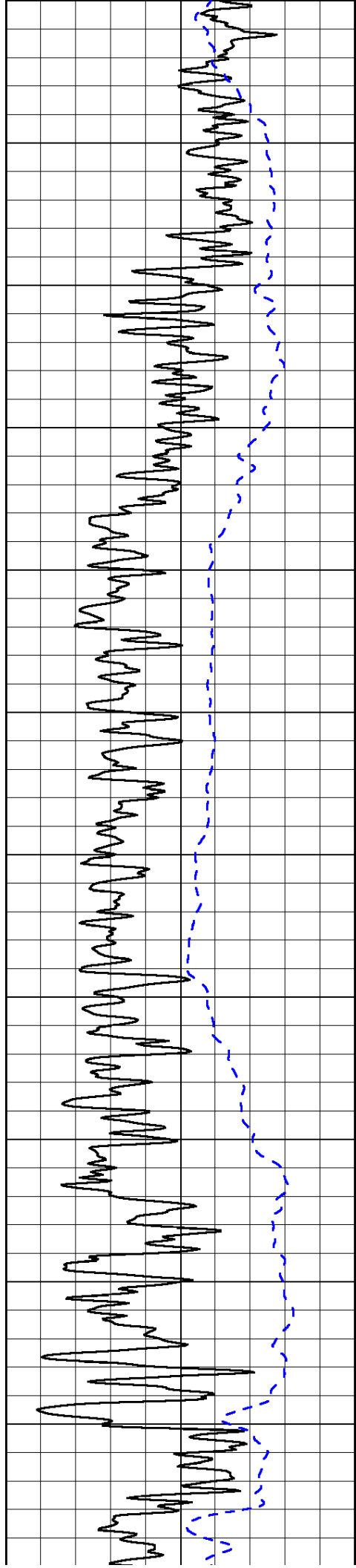
Hays, 7 West on Golf Course Road to 170 Road, 1 North, 1/2 West, North Into

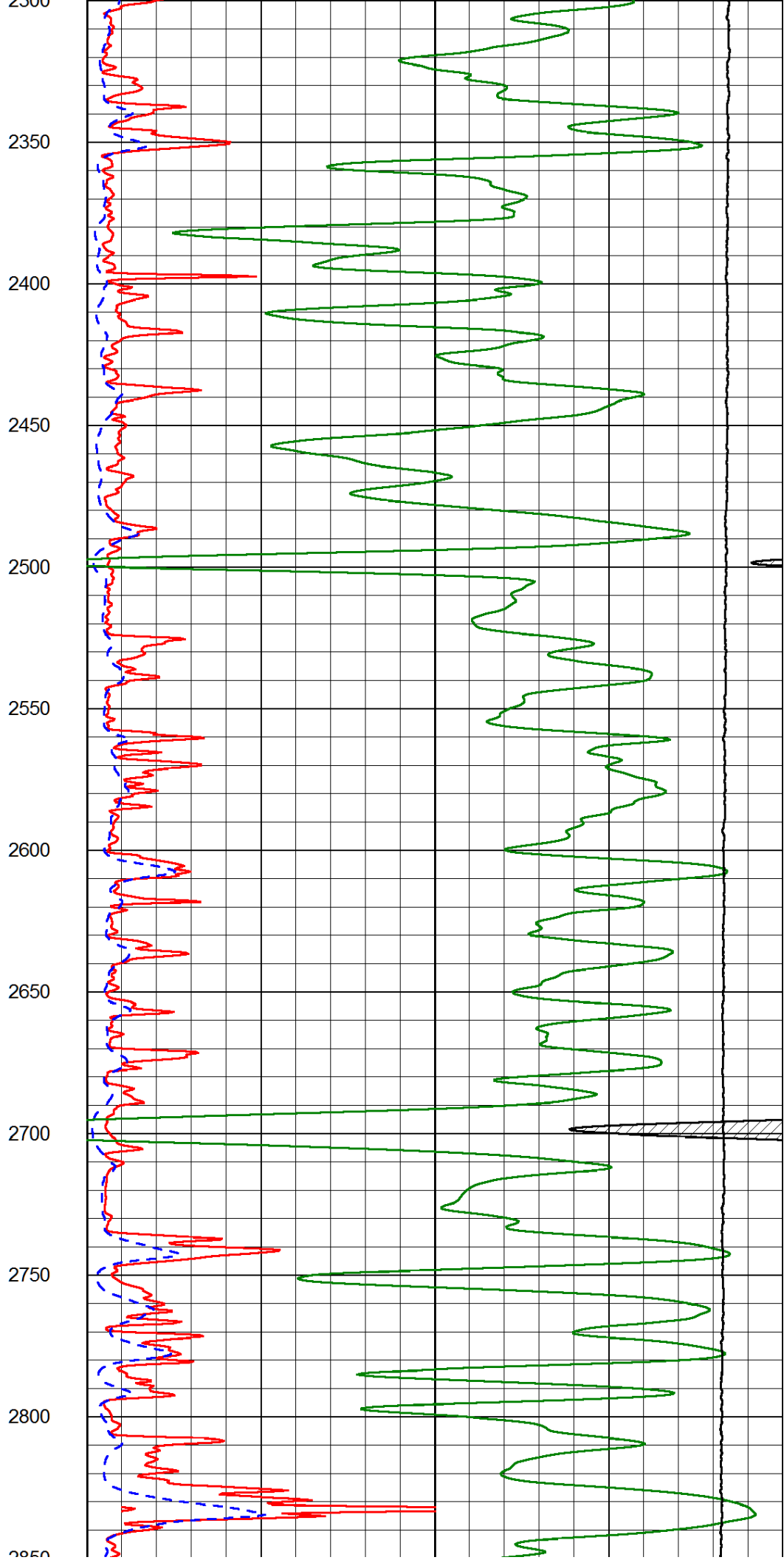
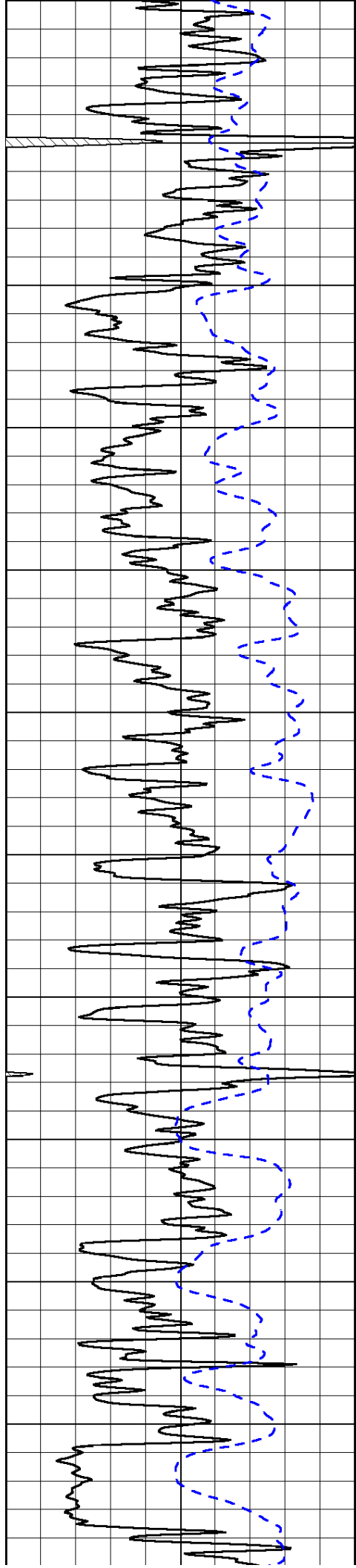
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Presentation Format: dil2in
Dataset Creation: Wed Mar 13 05:00:58 2013
Charted by: Depth in Feet scaled 1:600

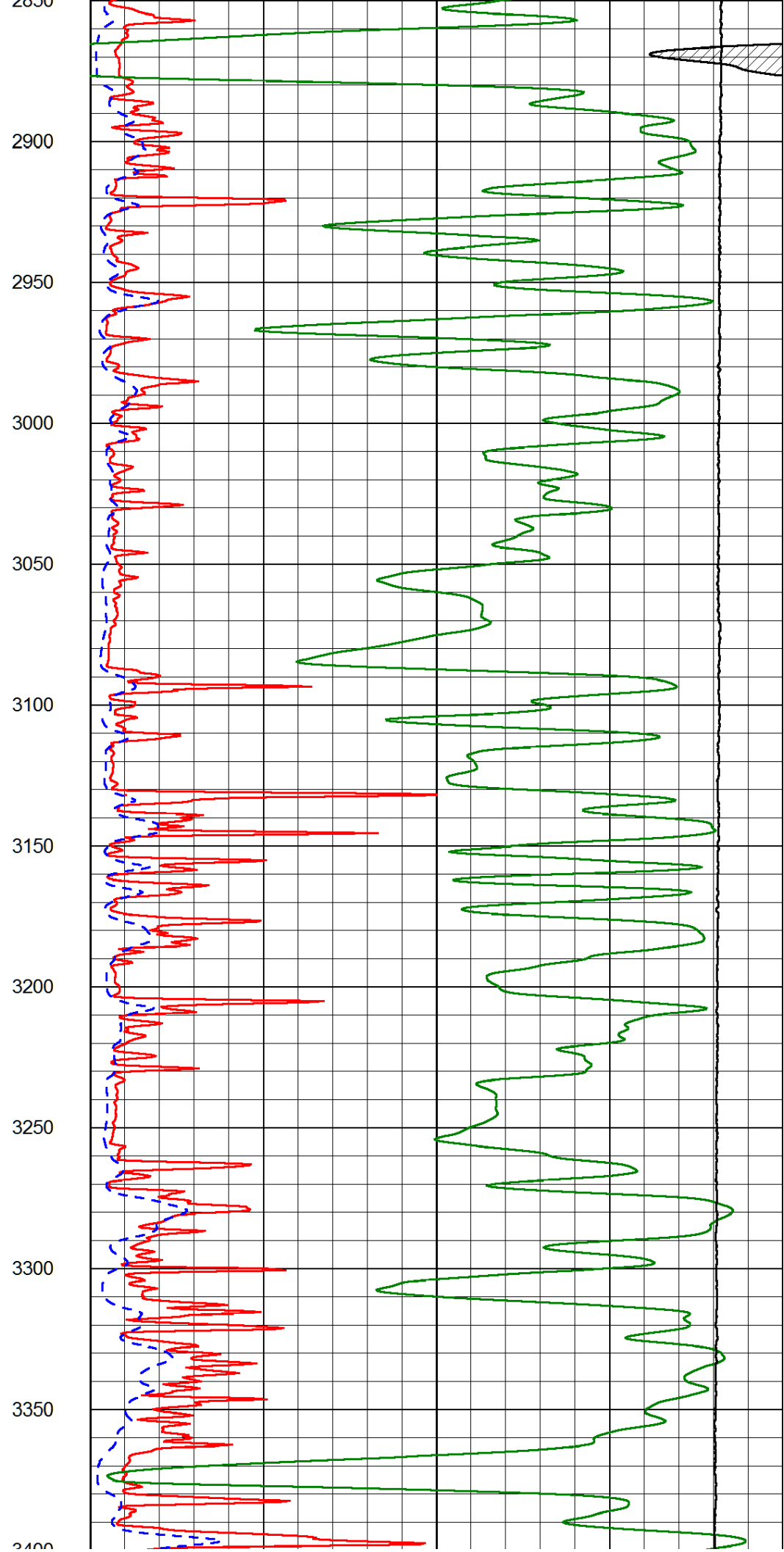
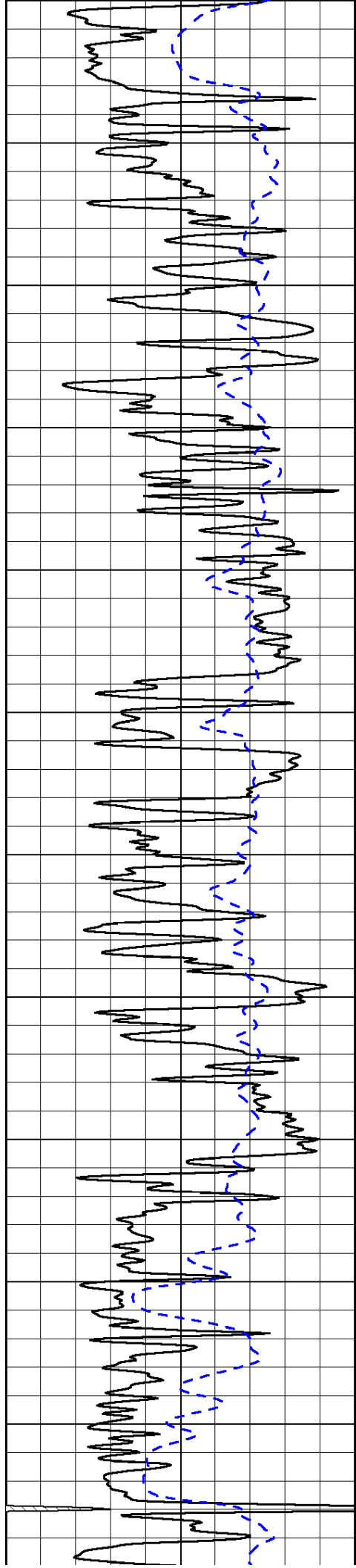


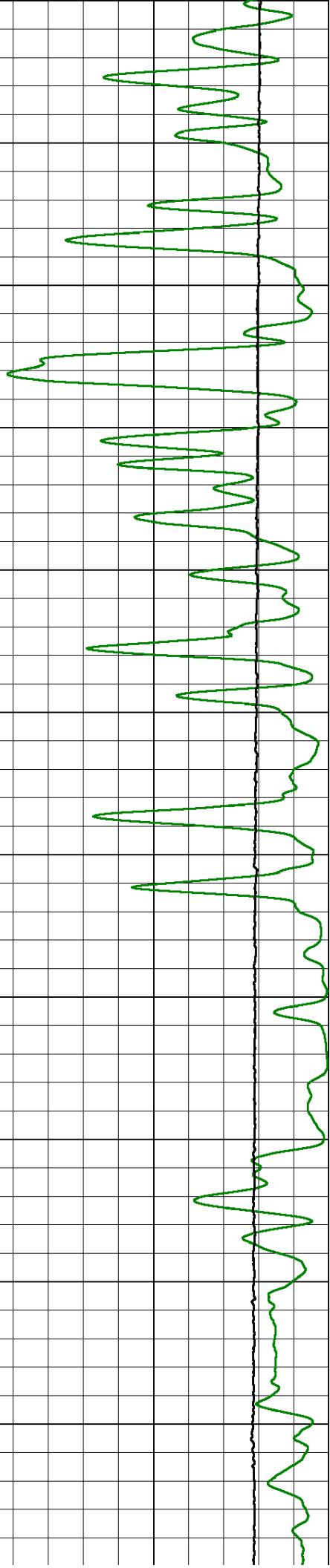
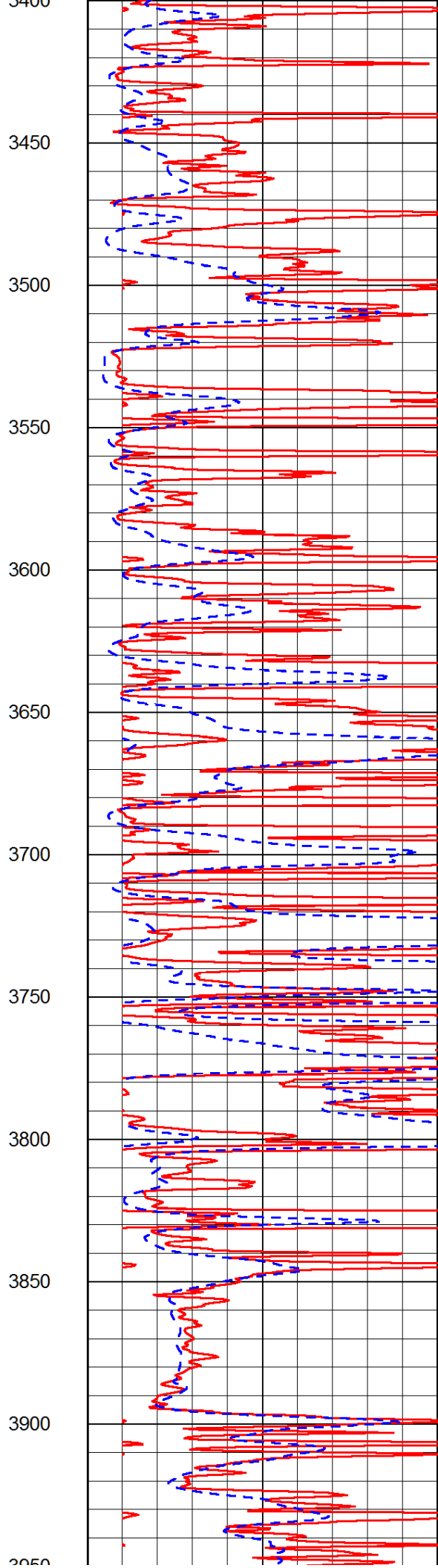
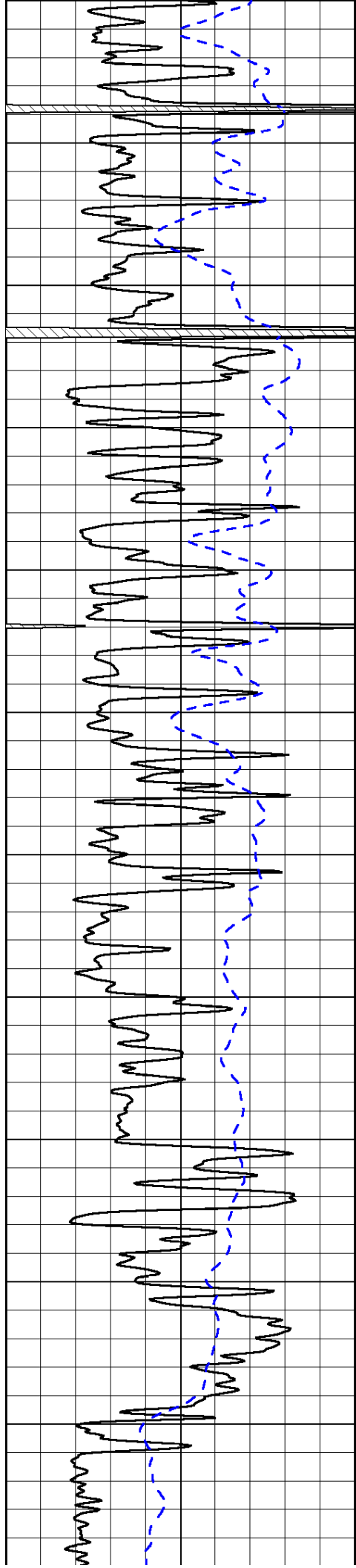


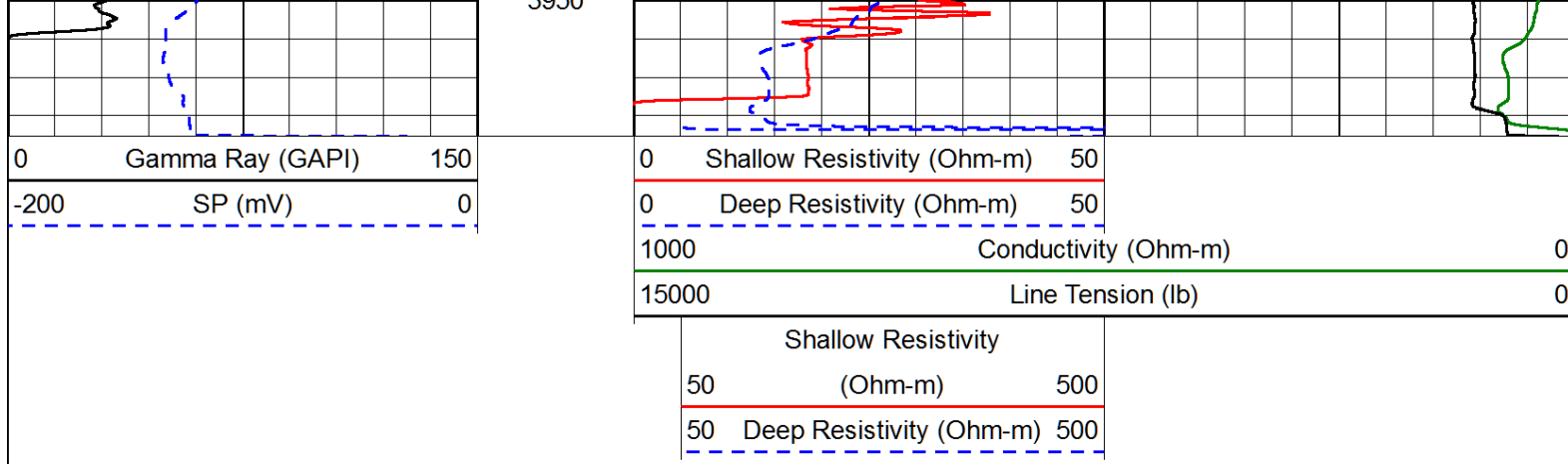




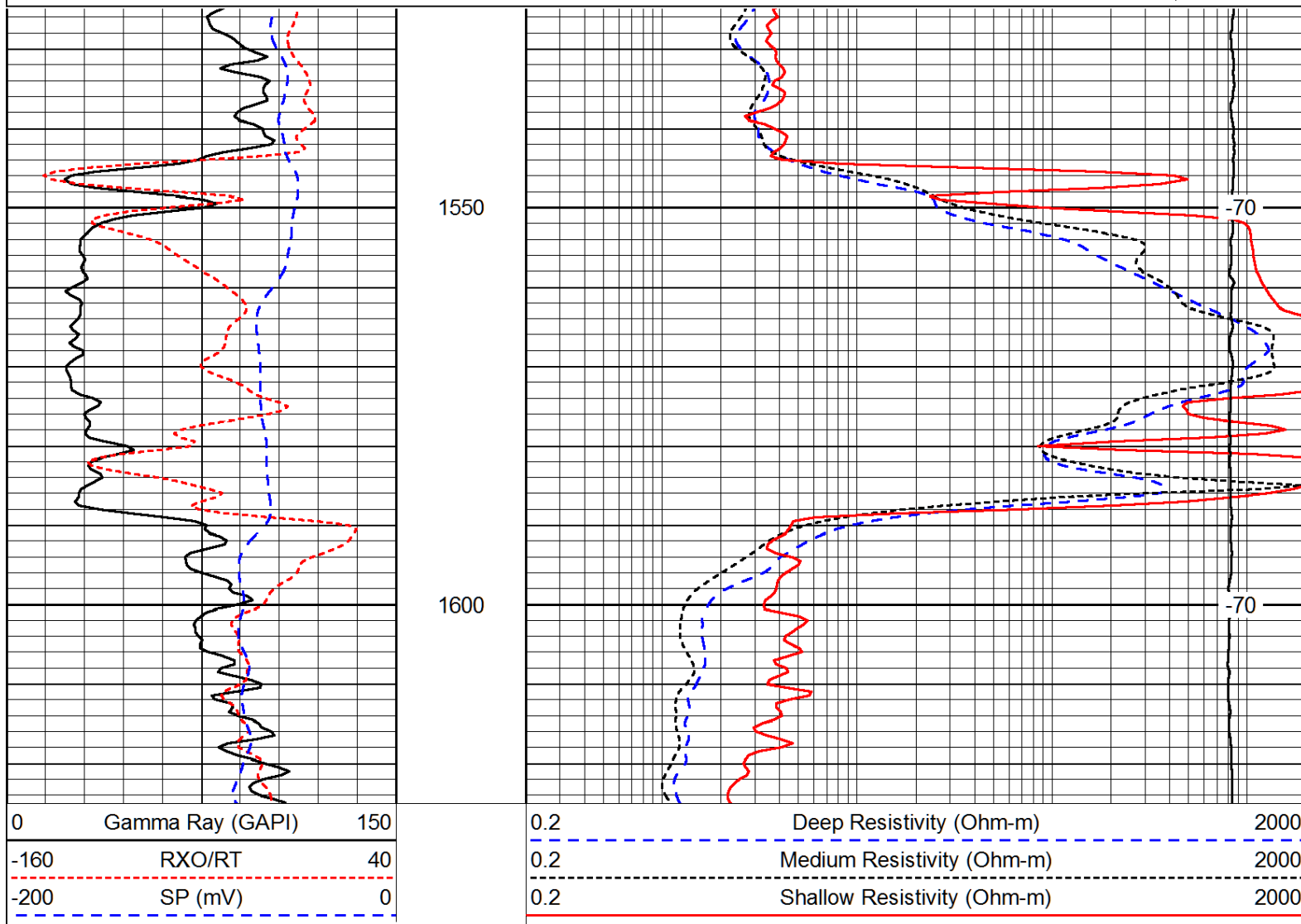
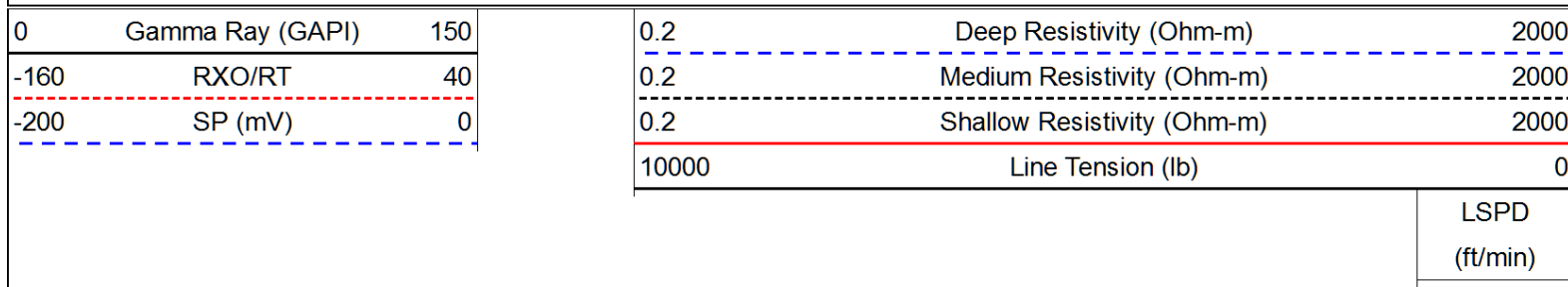








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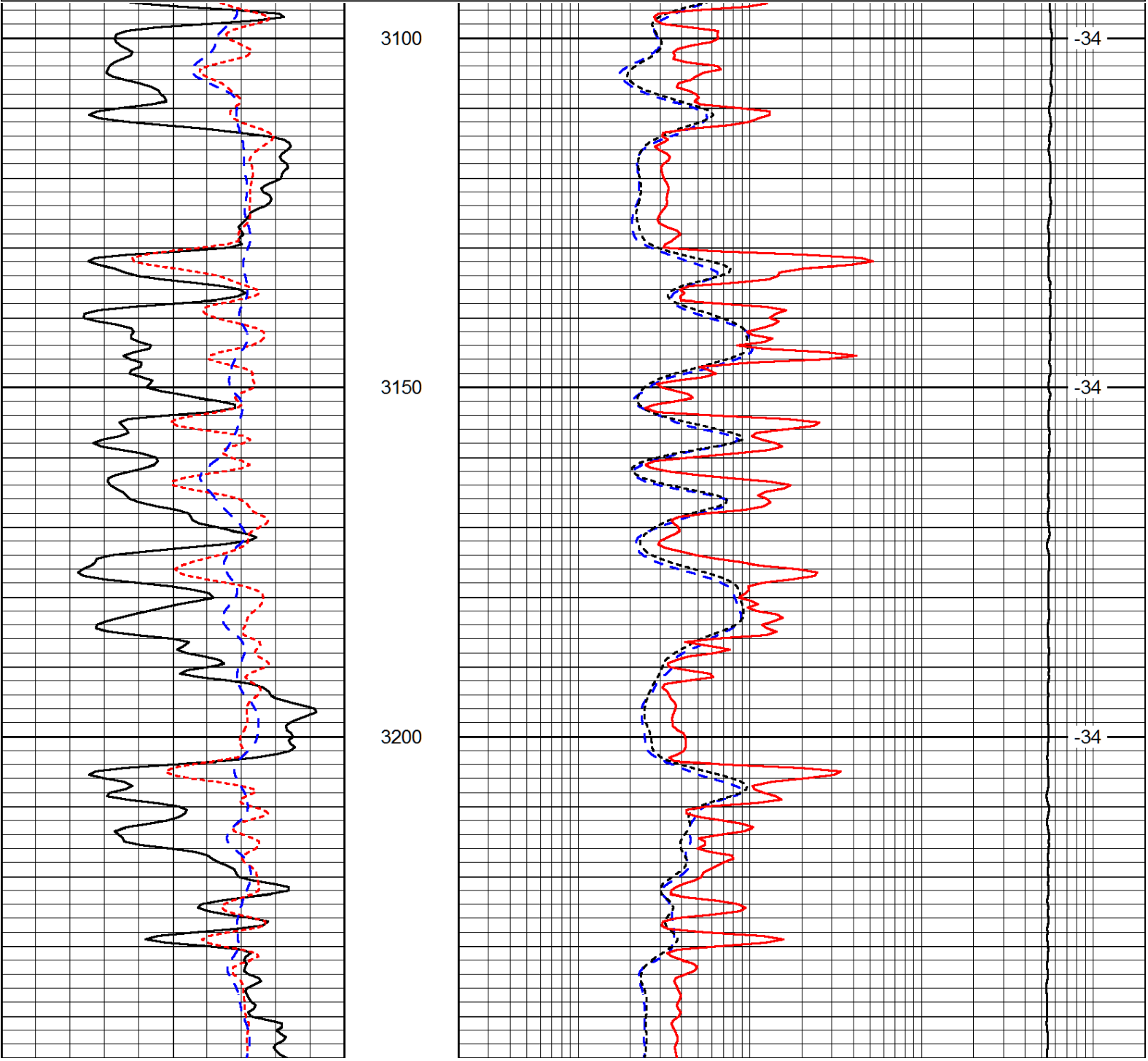
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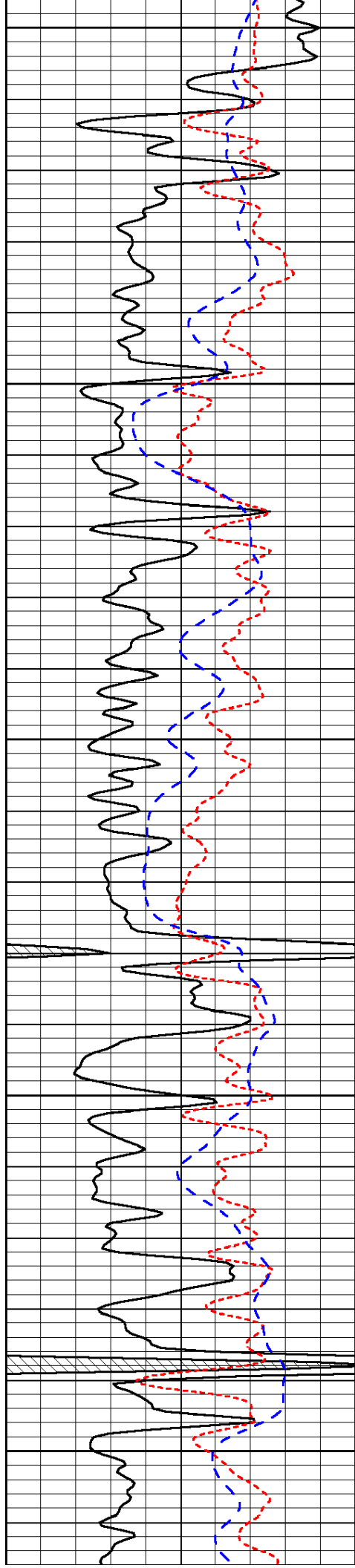
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Dataset Creation:Wed Mar 13 05:00:58 2013

Charted by:Depth in Feet scaled 1:240

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-160	RXO/RT	40	0.2	Medium Resistivity (Ohm-m)	2000
-200	SP (mV)	0	0.2	Shallow Resistivity (Ohm-m)	2000
			10000	Line Tension (lb)	0
					LSPD (ft/min)





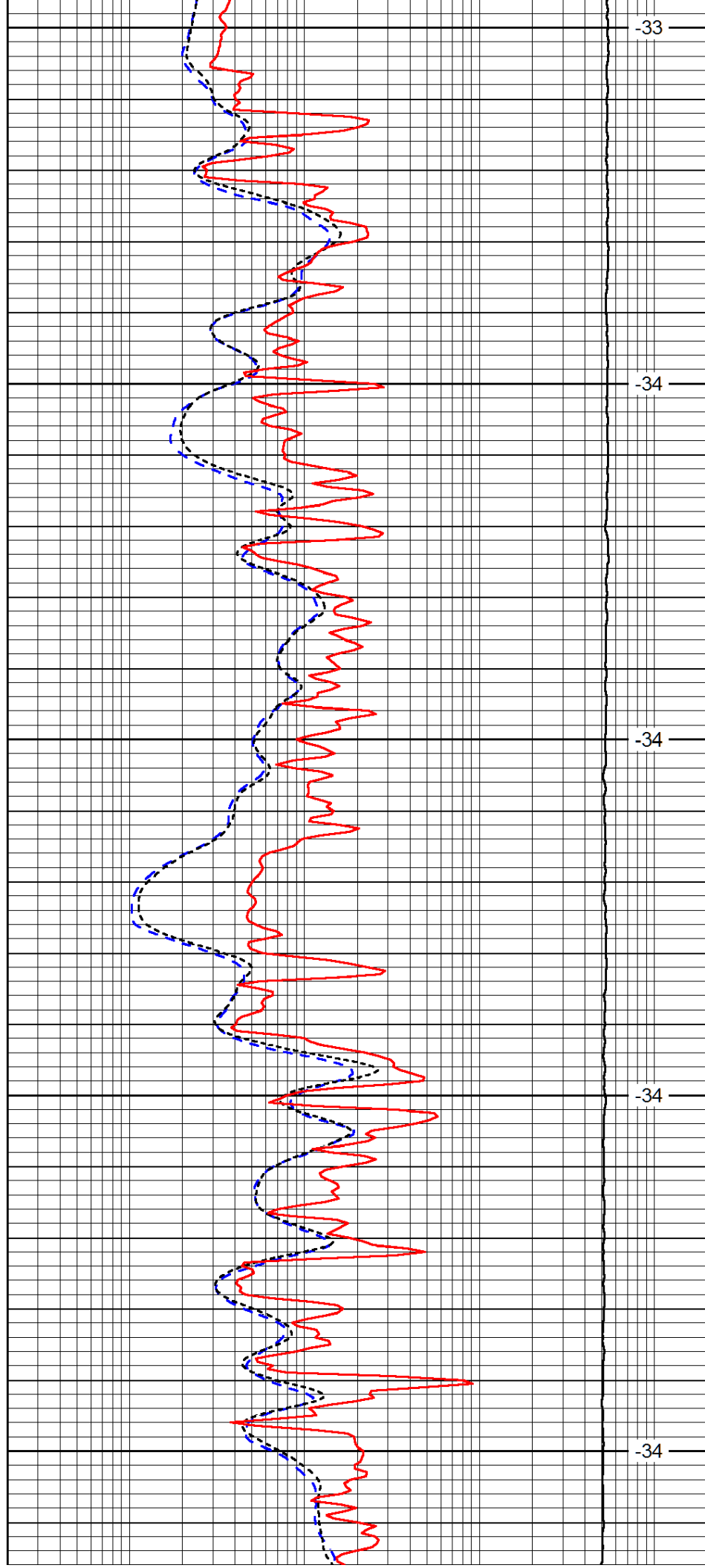
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3400

3450



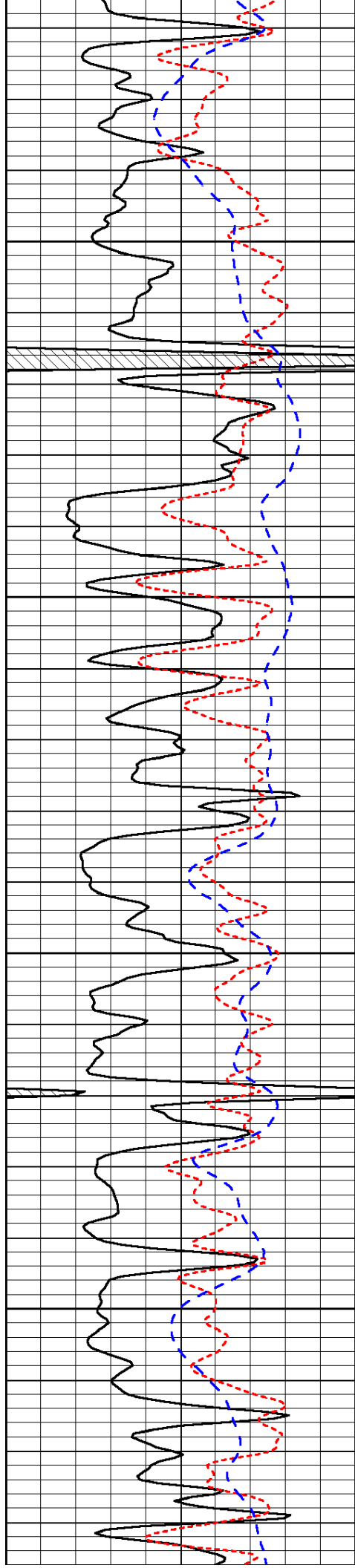
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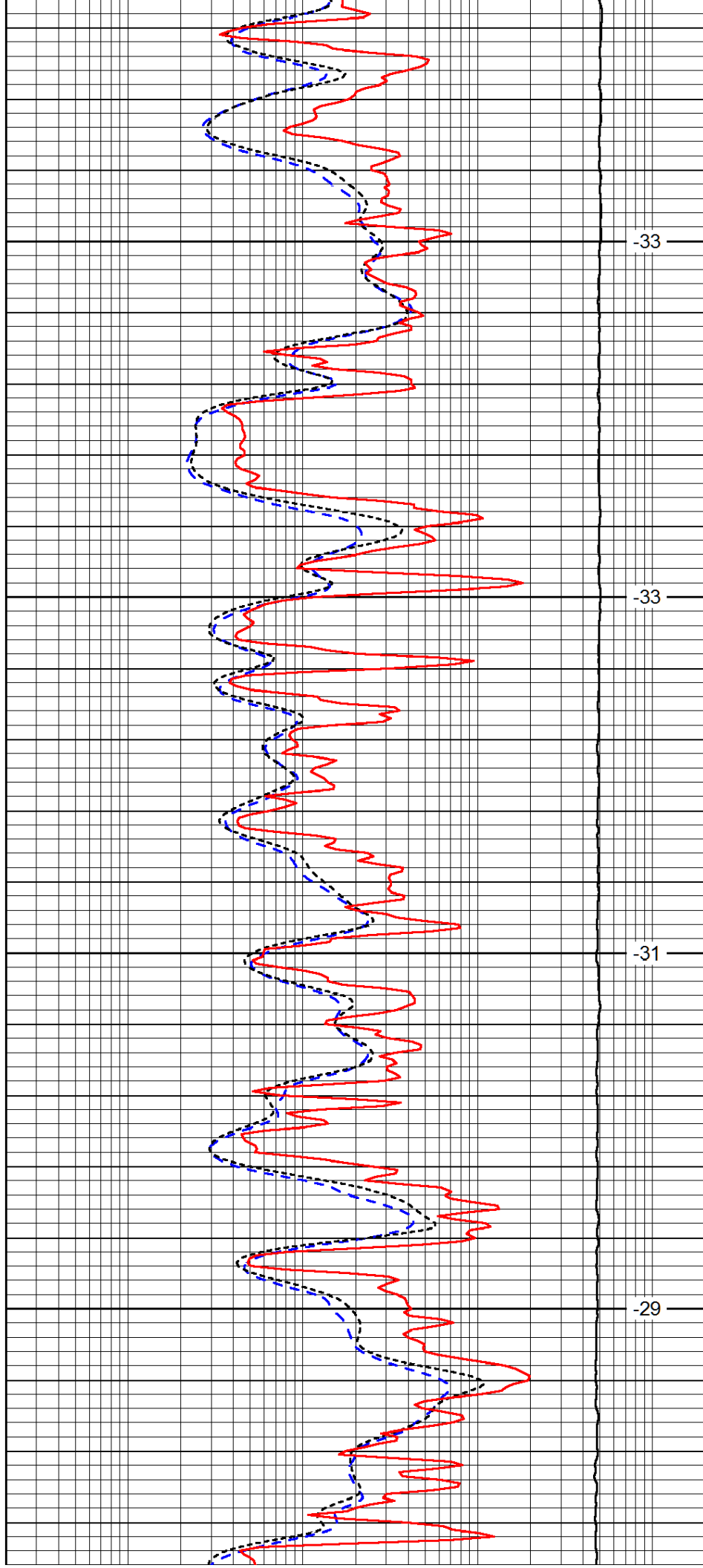


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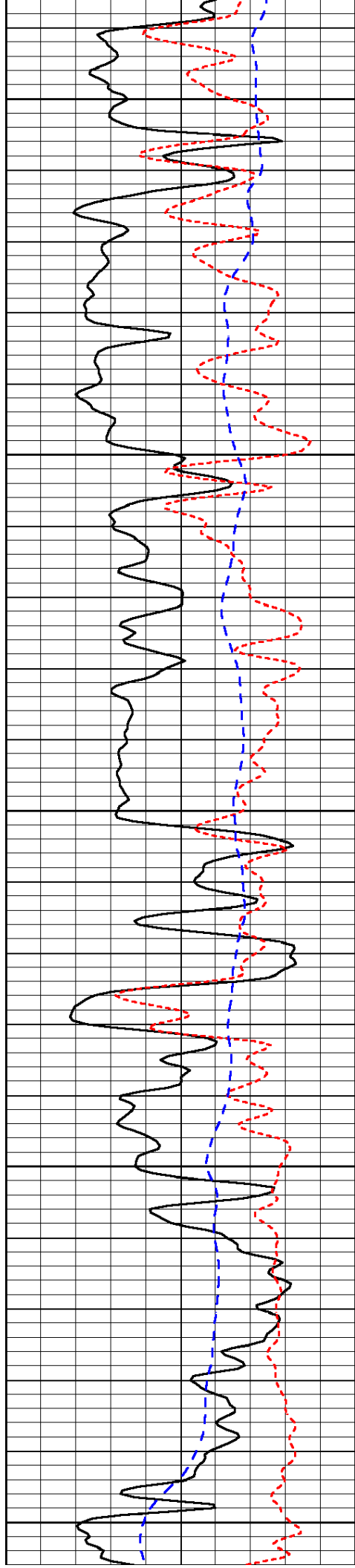


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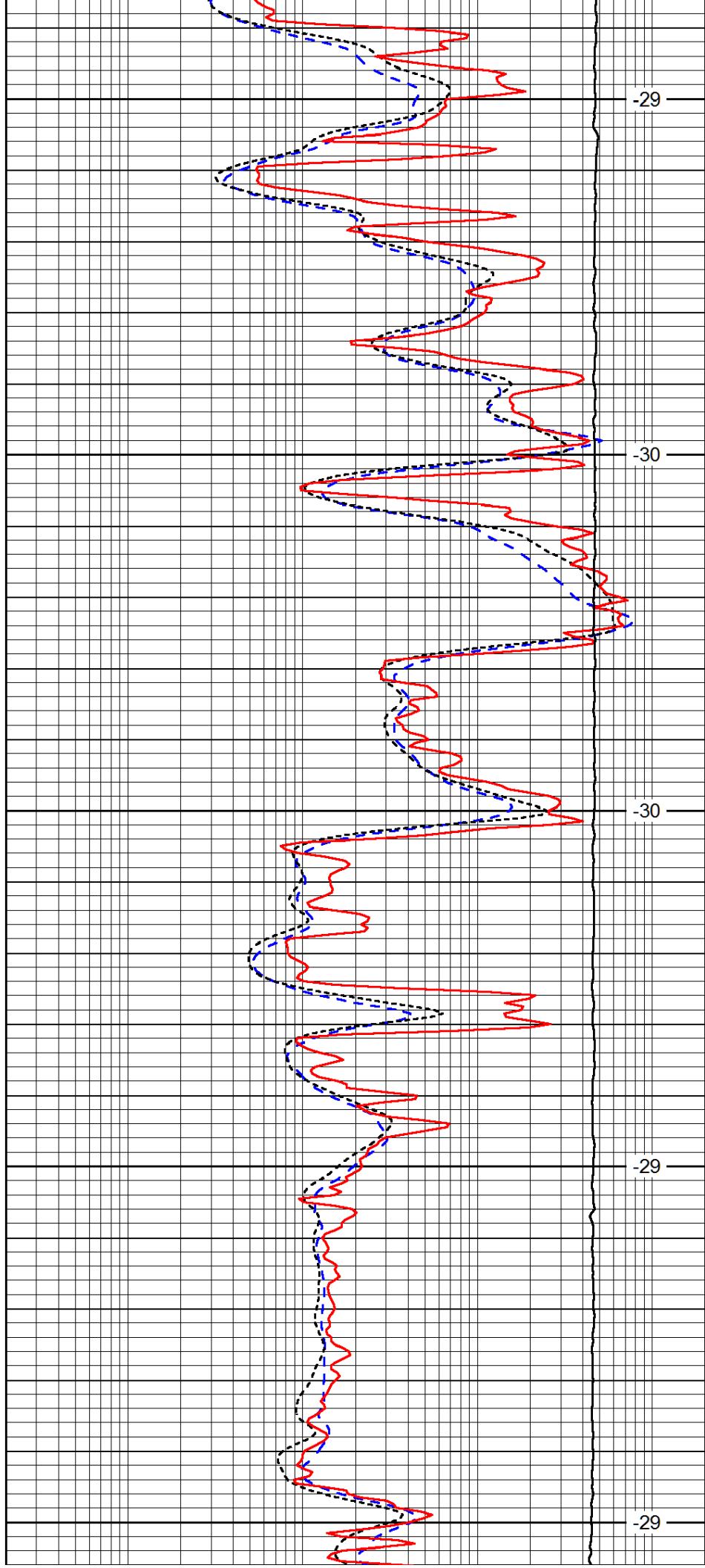
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3900



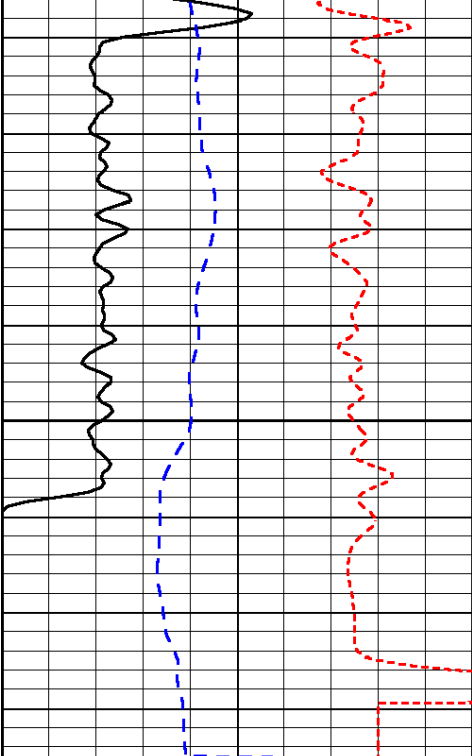
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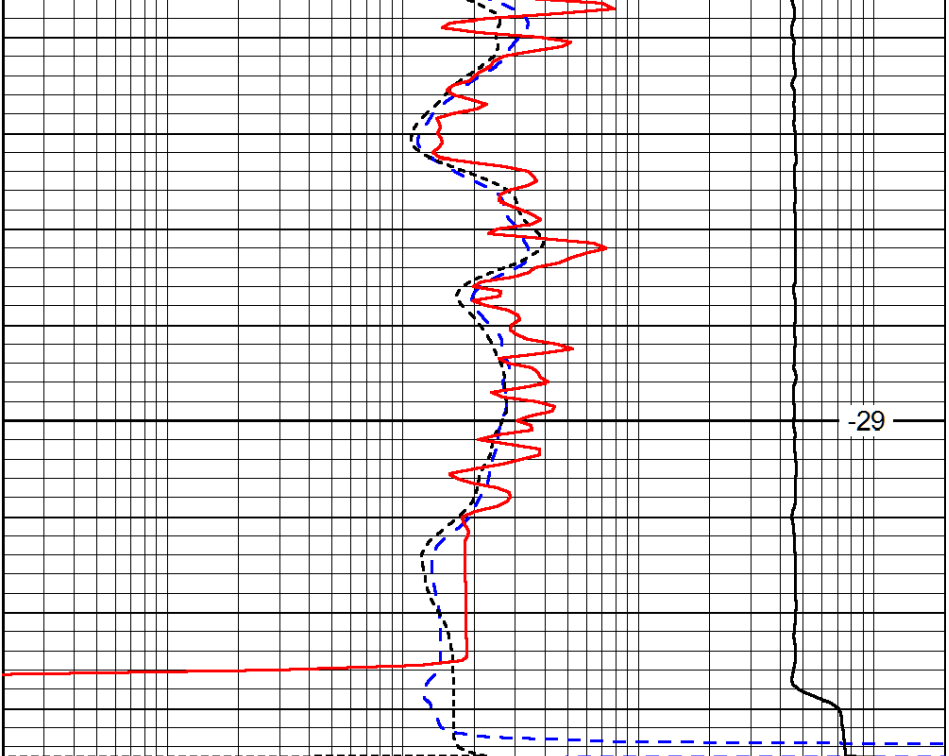
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-29



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

3950



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)