



Dual Induction Log

Pioneer Energy Services

API No.	Company Cobalt Energy, LLC		
	Well Wasinger Trust A #1-21		
	Field N/A		
	County Graham	State	Kansas
	Location 910' FSL & 1718' FWL	Other Services CNL/CDL MEL/BHCS	
	Sec: 21	Twp: 8S	Rge: 22W
	Permanent Datum Ground Level		Elevation 2184
	Log Measured From Kelly Bushing	5	Ft. Above Perm. Datum
	Drilling Measured From Kelly Bushing		K.B. 2189 D.F. 2184 G.L. 2184
Date	06/10/2014		
Run Number	One		
Depth Driller	3710		
Depth Logger	3707		
Bottom Logged Interval	3706		
Top Log Interval	200		
Casing Driller	8.625 @ 221		
Casing Logger	219		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	1400		
Density / Viscosity	8.8	59	
pH / Fluid Loss	11.5	6.4	
Source of Sample	Flowline		
Rm @ Meas. Temp	0.95 @ 57		
Rmf @ Meas. Temp	0.71 @ 57		
Rmc @ Meas. Temp	1.28 @ 57		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.47 @ 115		
Operating Rig Time	6 Hours		
Max Rec. Temp. F	115		
Equipment Number	91		
Location	Hays		
Recorded By	M. Beougher		
Witnessed By	D. Schmidt		
	Corey Baker		

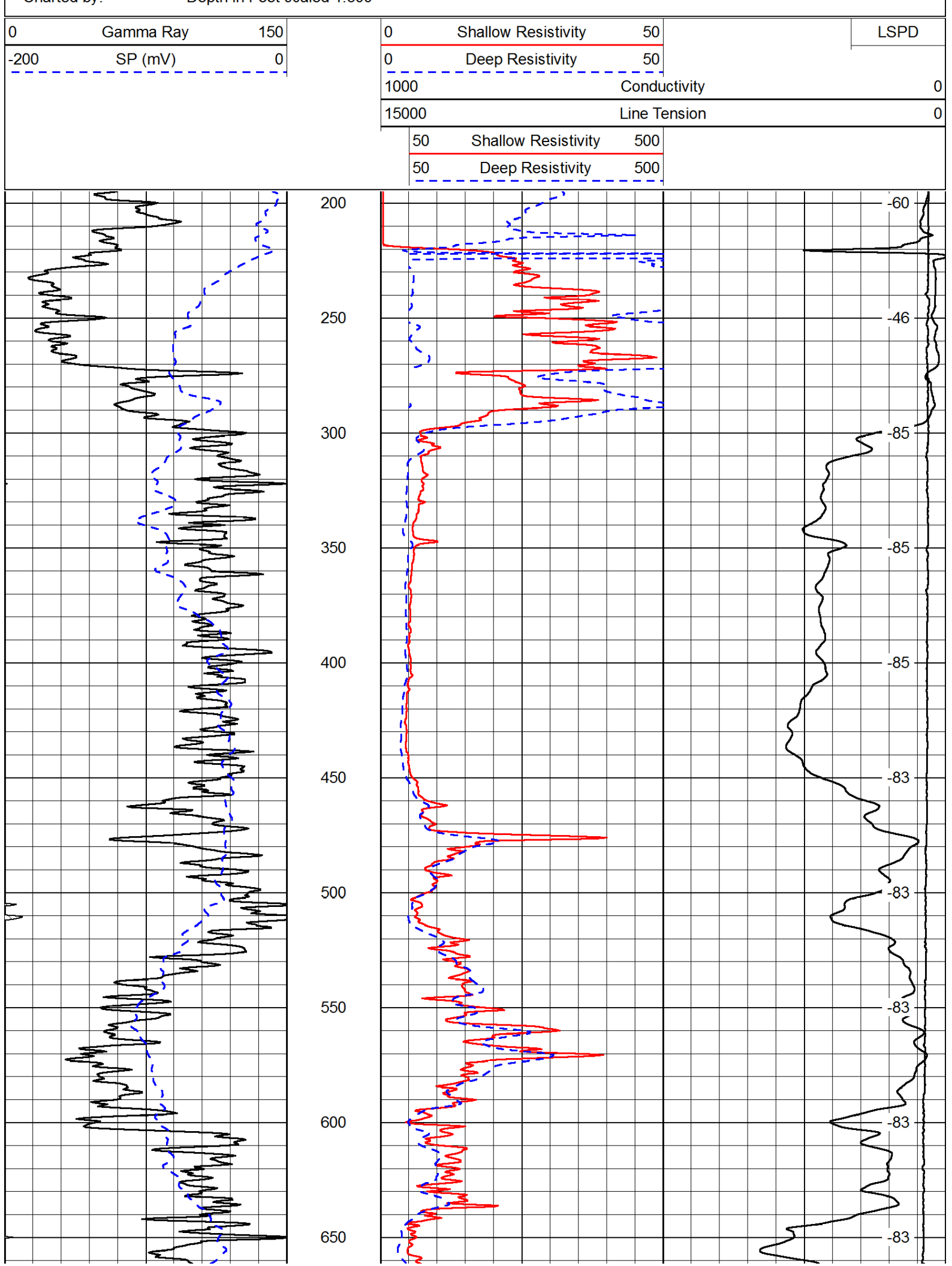
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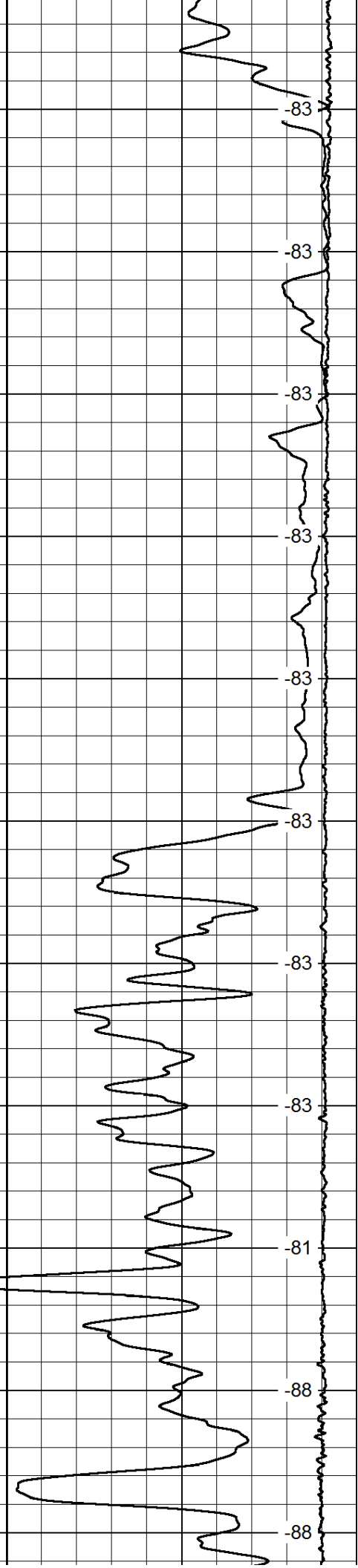
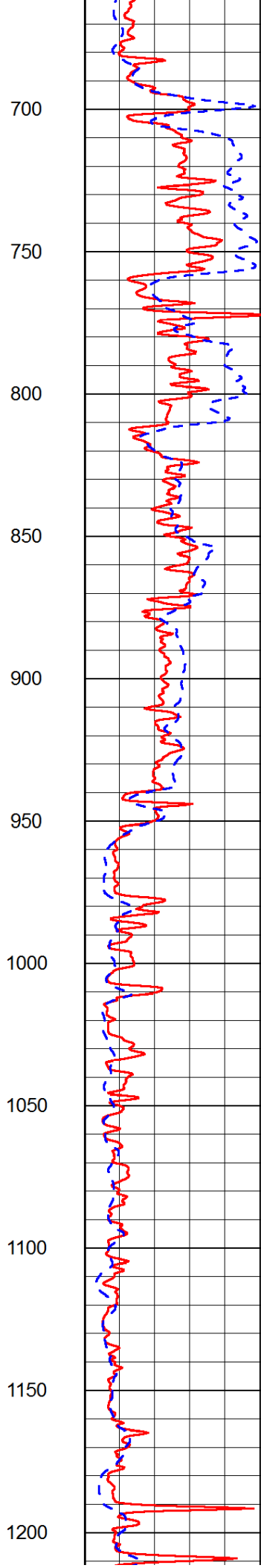
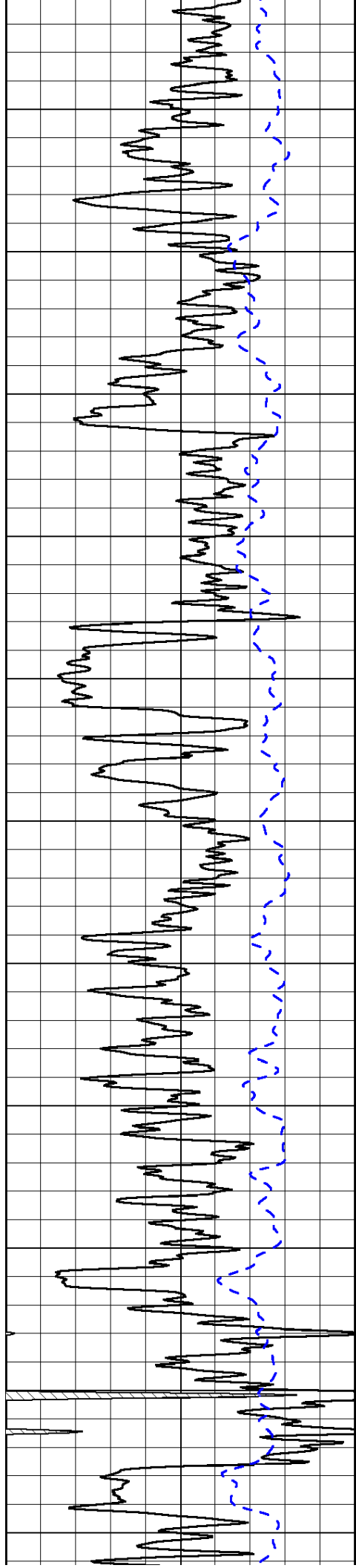
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

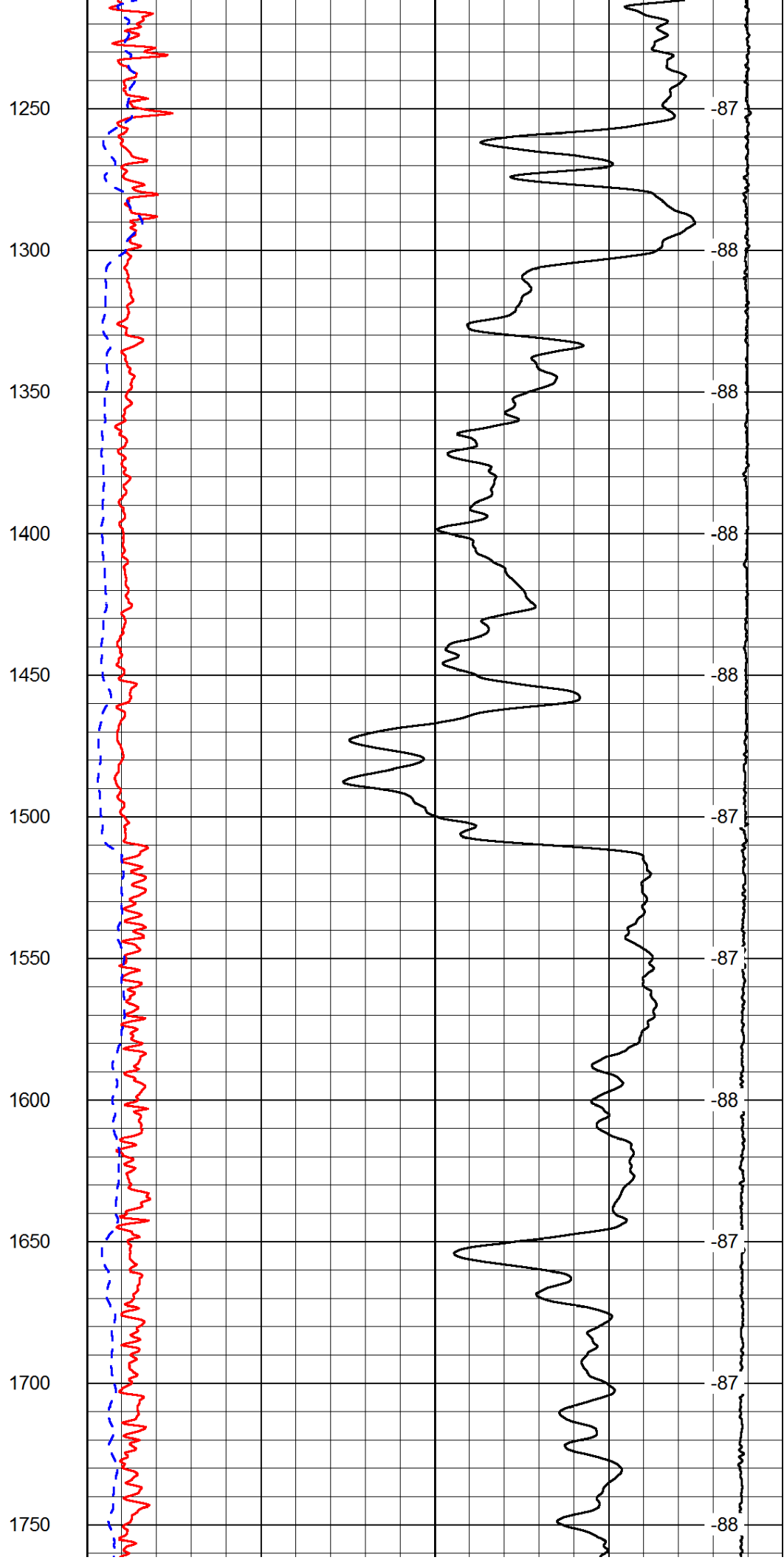
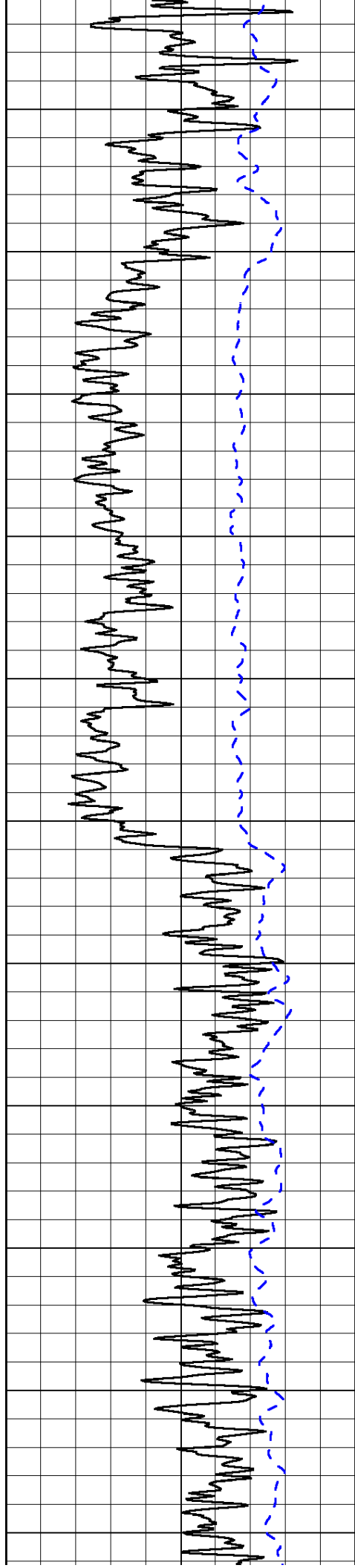
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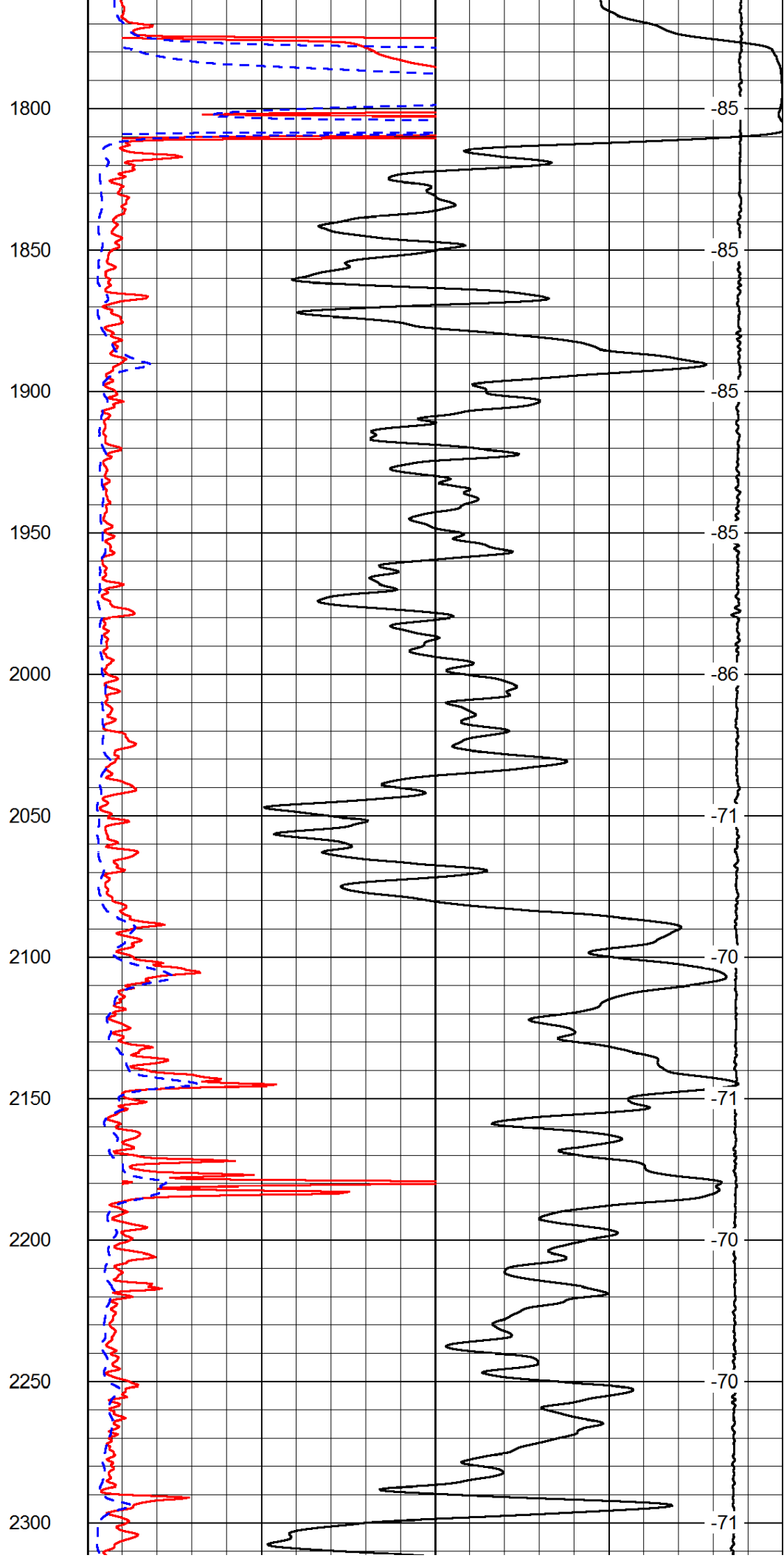
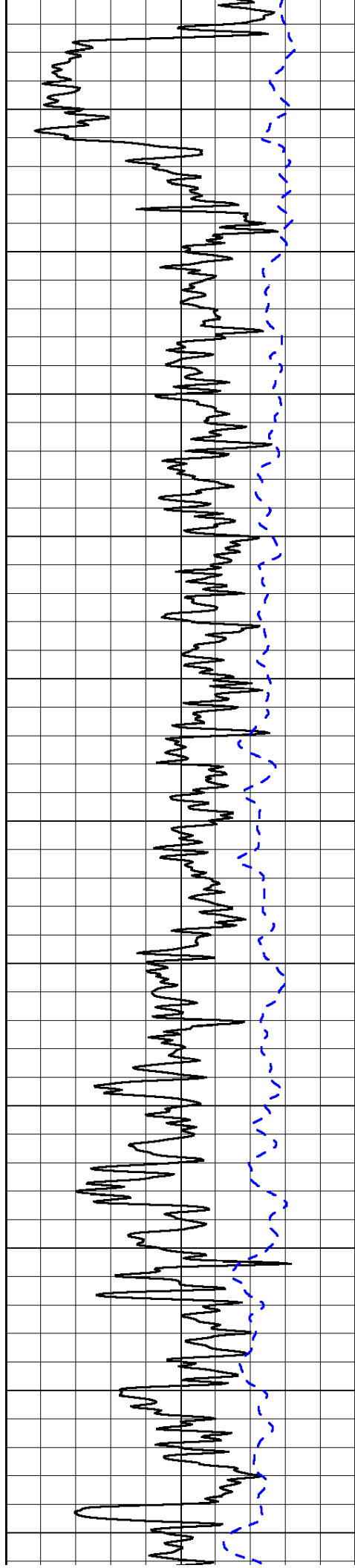
Thank you for using Pioneer Energy Services
www.pioneerres.com
785 625 3858
Hill City,
South to Rd 4392, East to TH Ave,
South to O Rd, 1 1/4 East,
North into

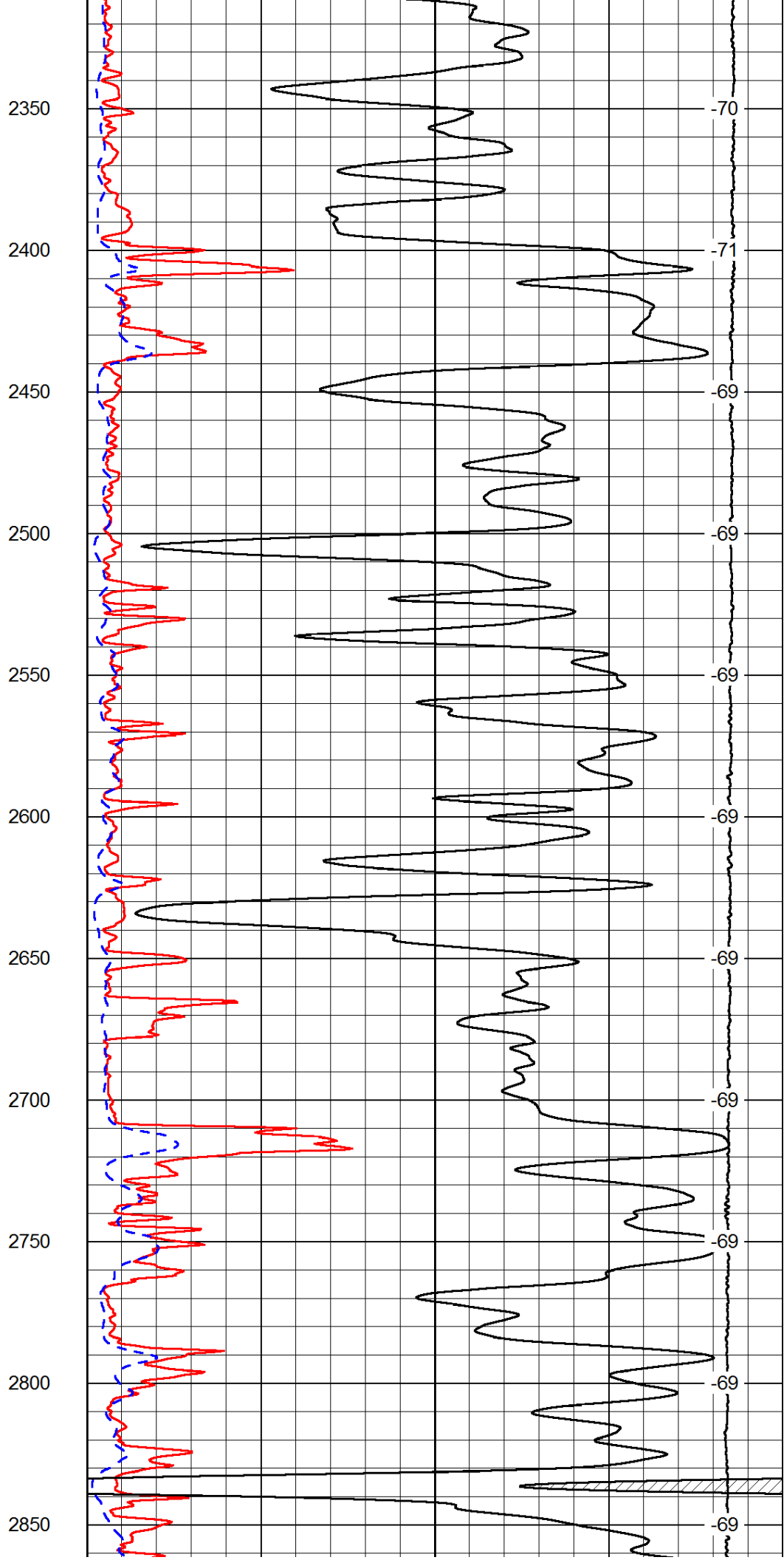
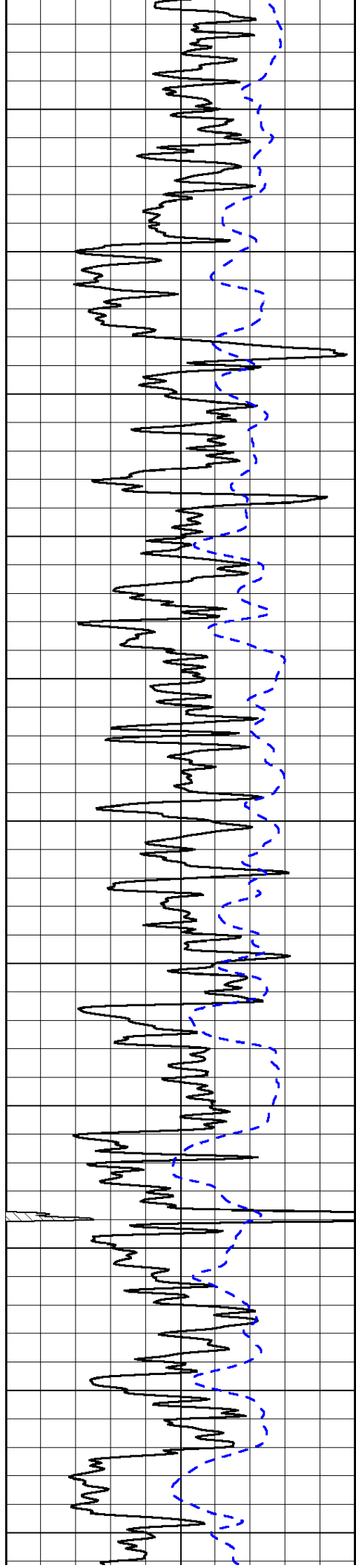
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Charted by: Depth in Feet scaled 1:600

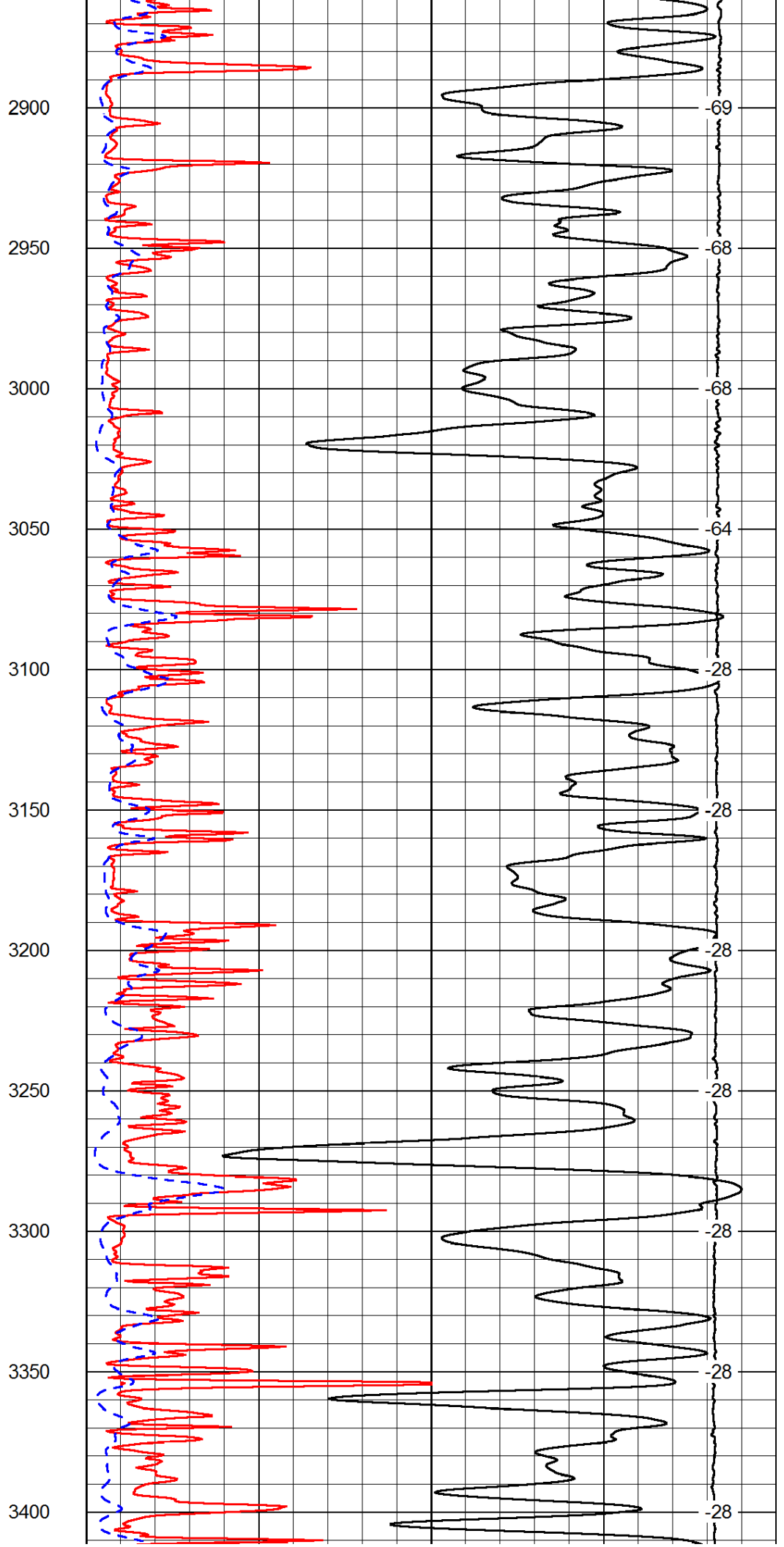
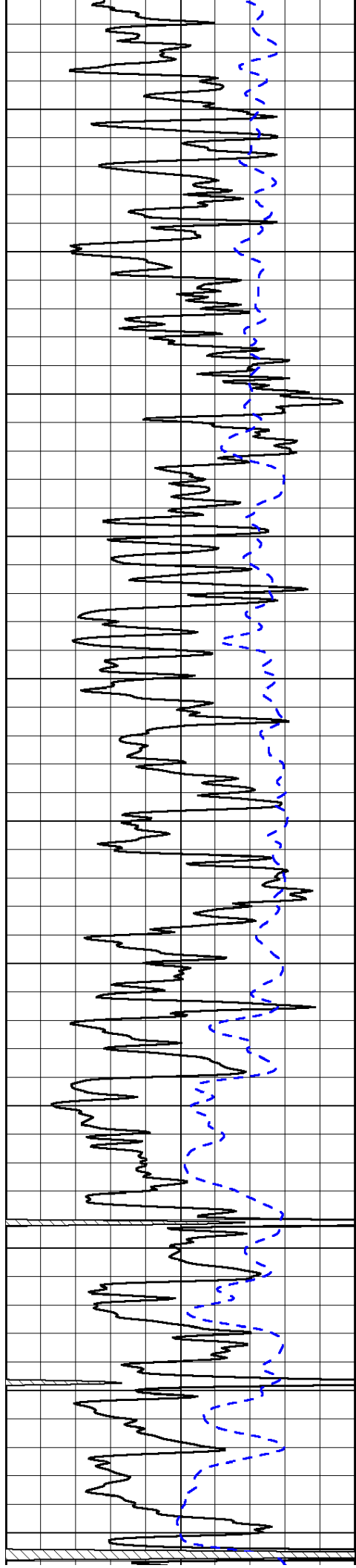


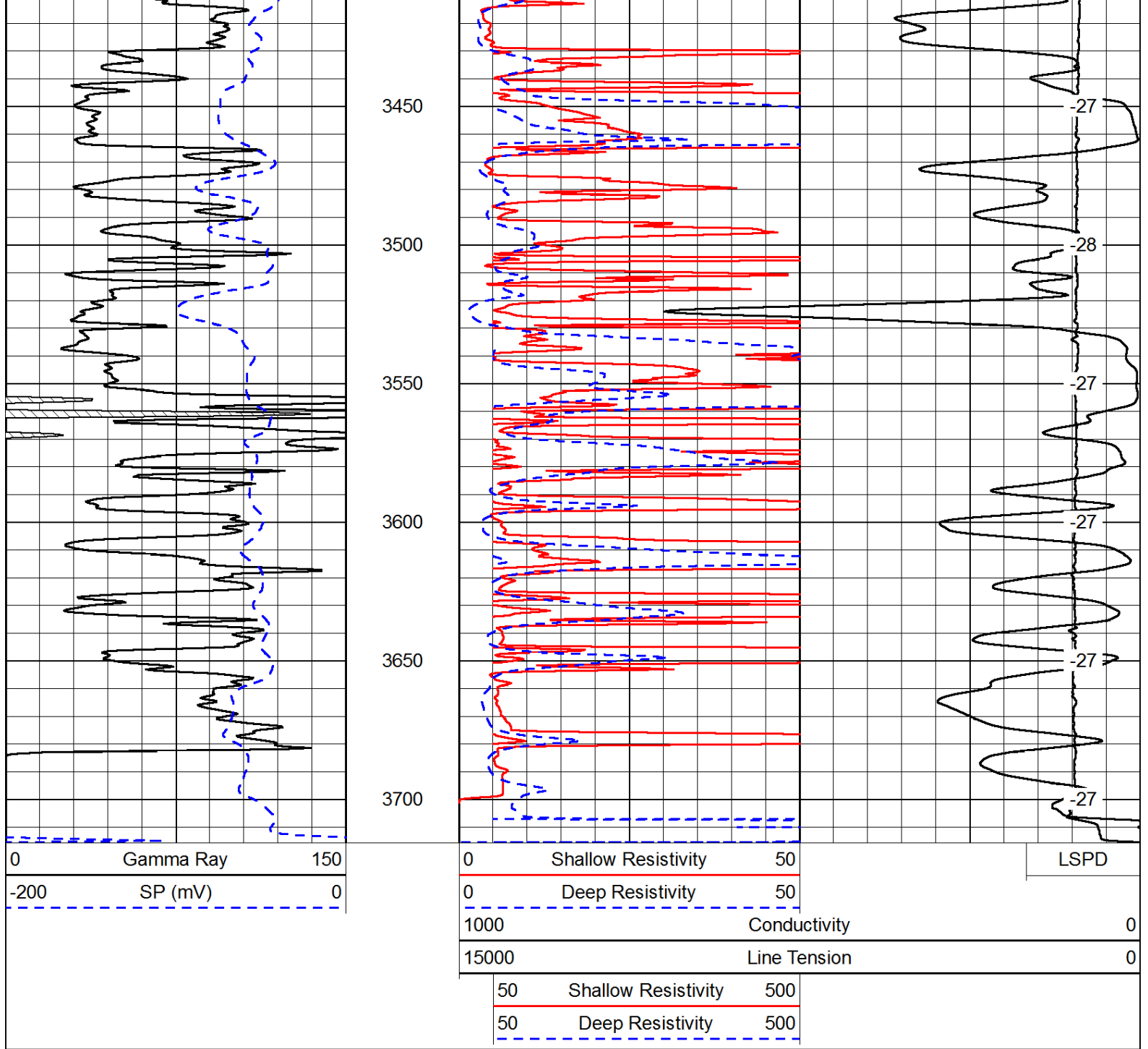




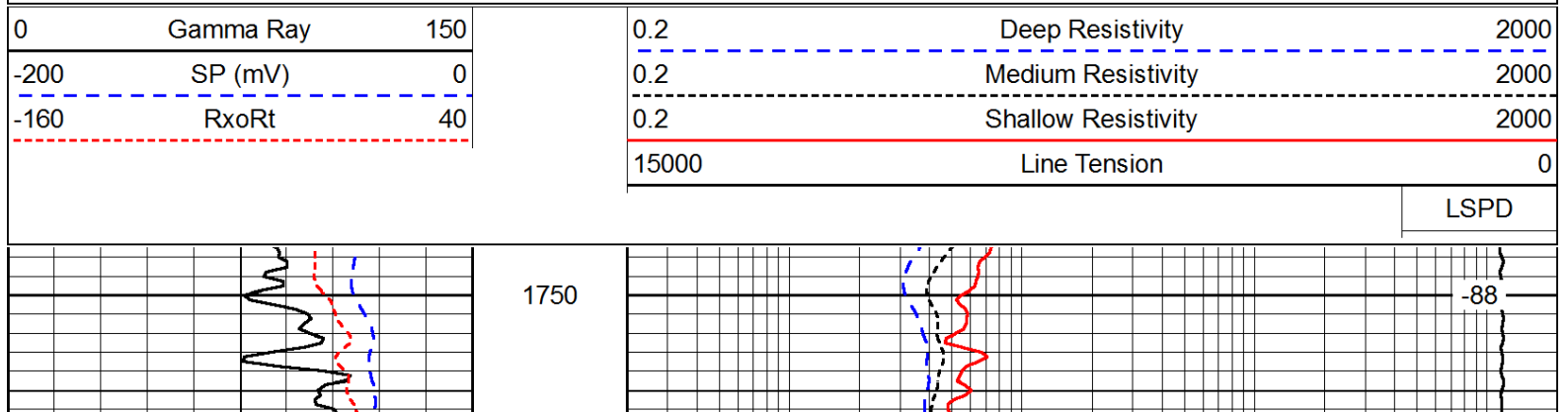


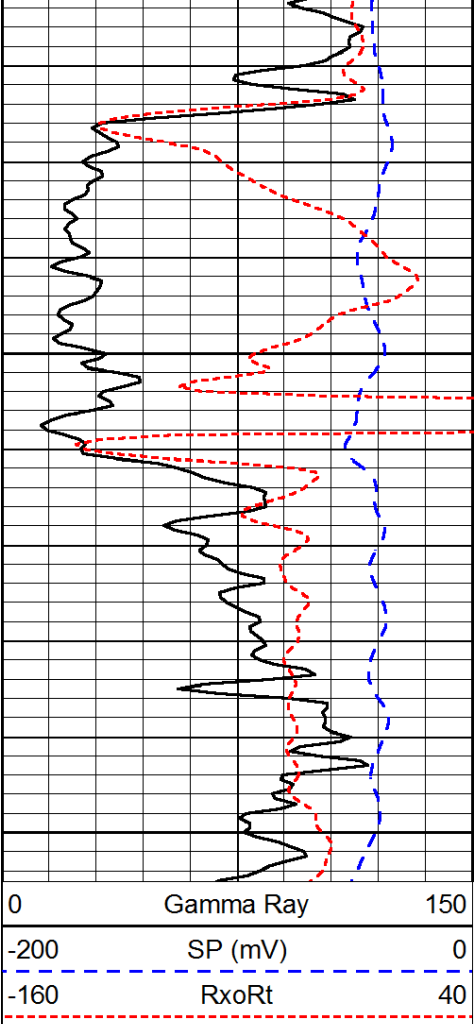






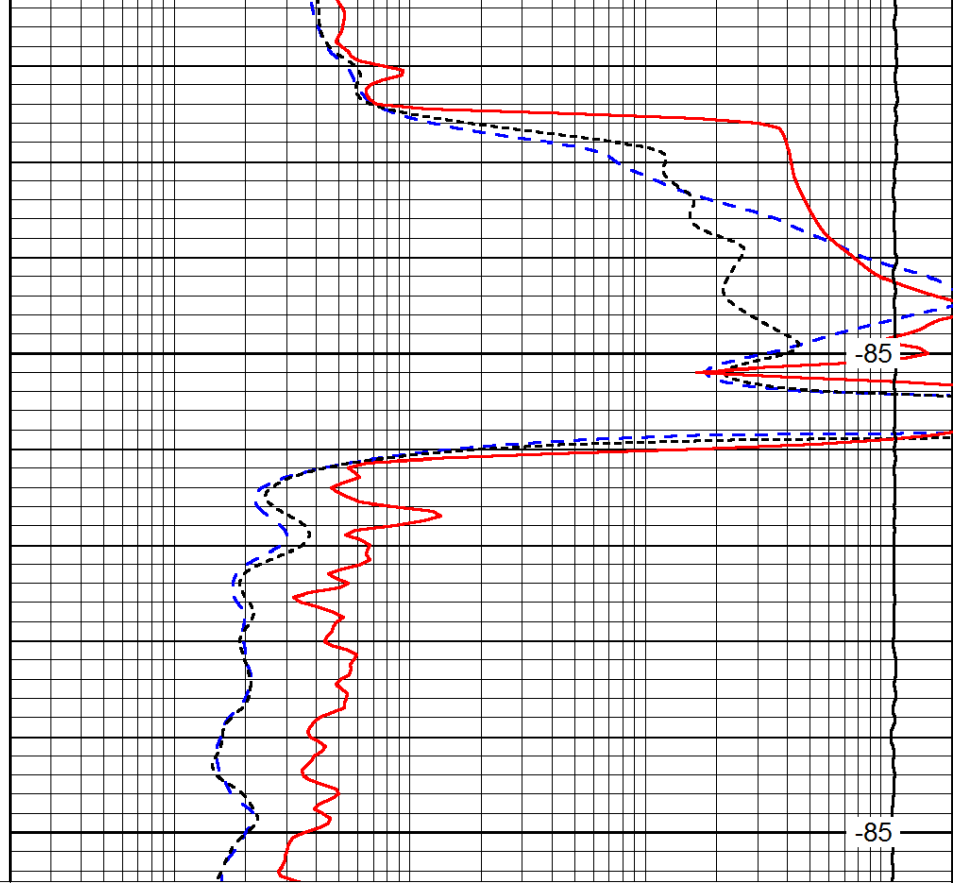
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1800

1850

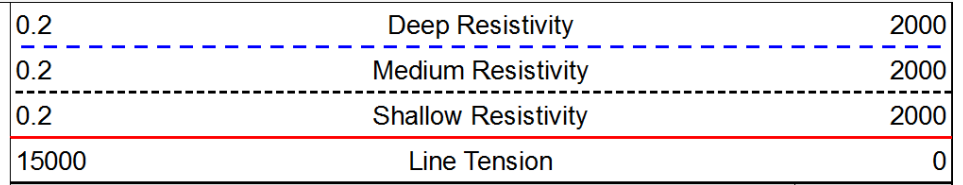
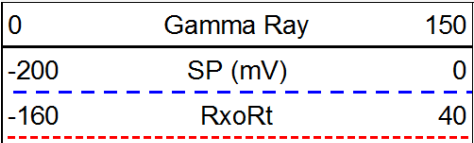


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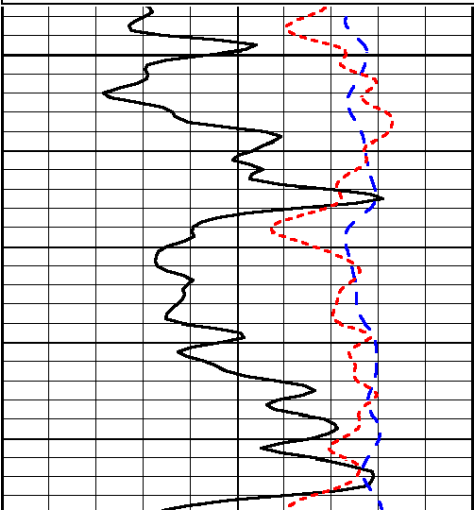
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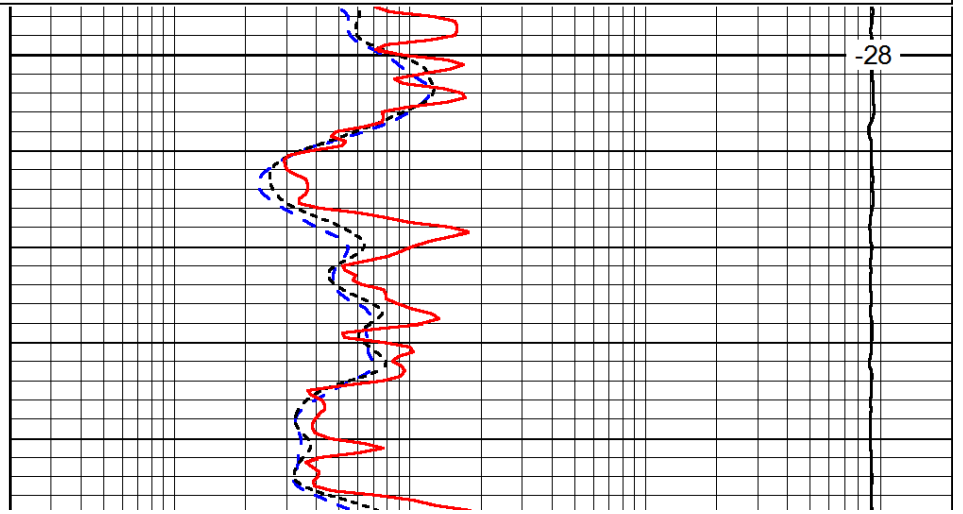
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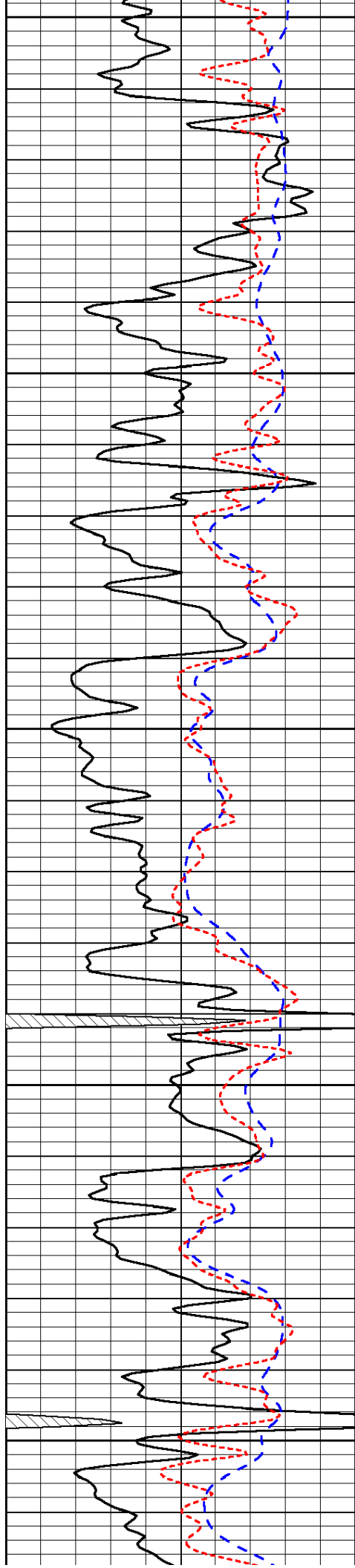
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3100



-28



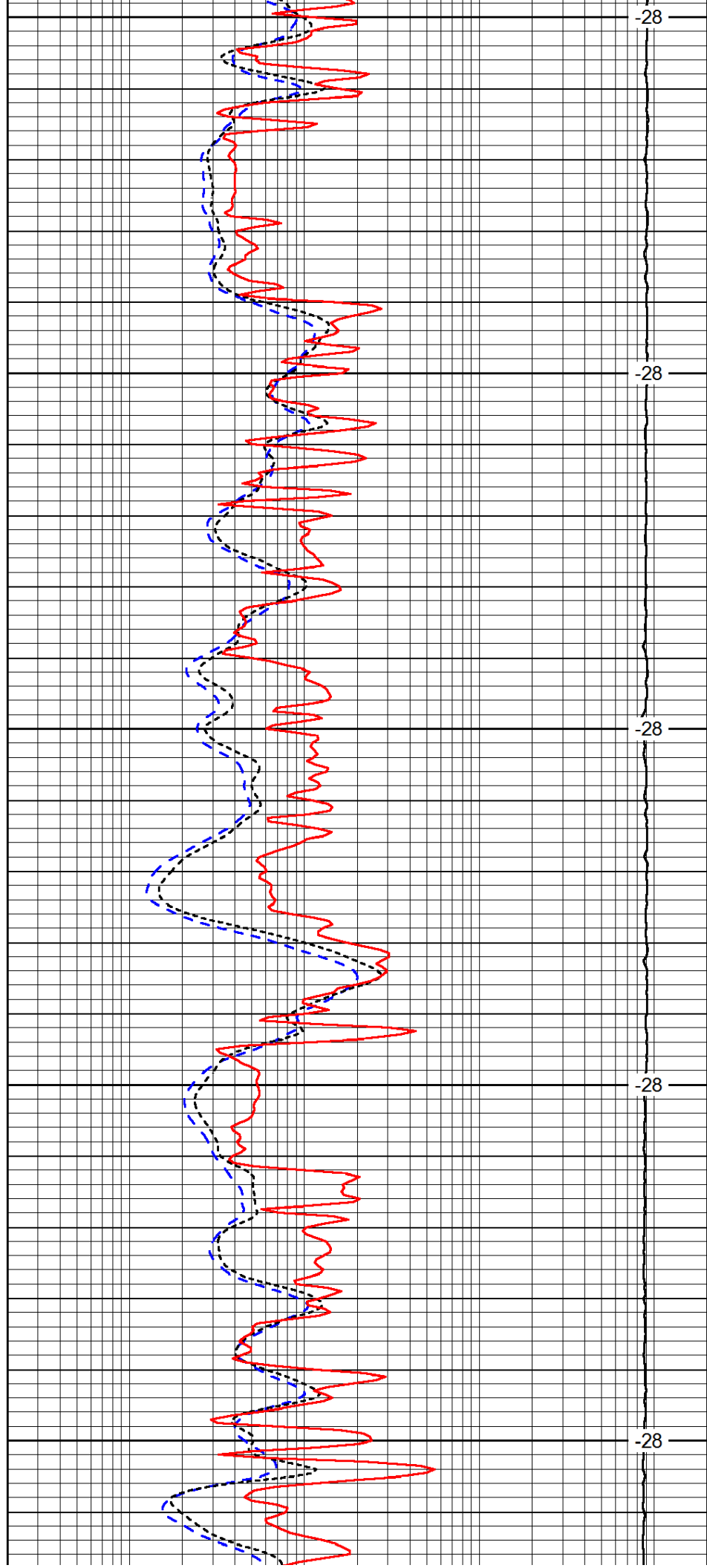
3150

3200

3250

3300

3350



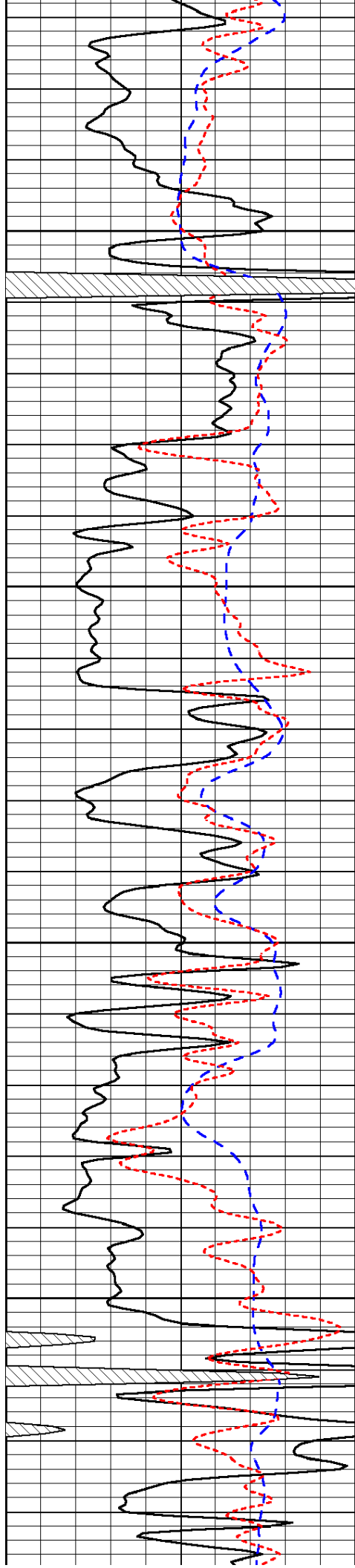
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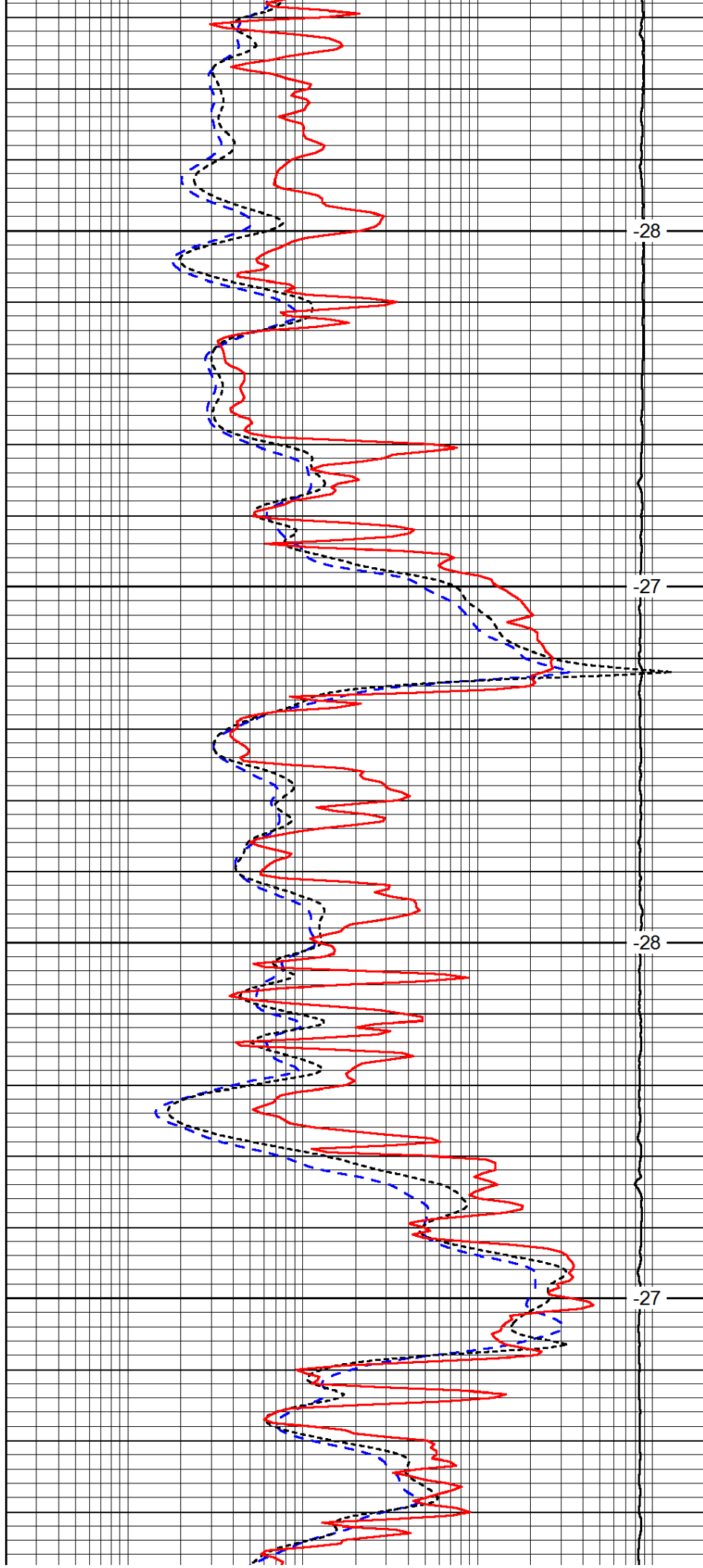


3400

3450

3500

3550

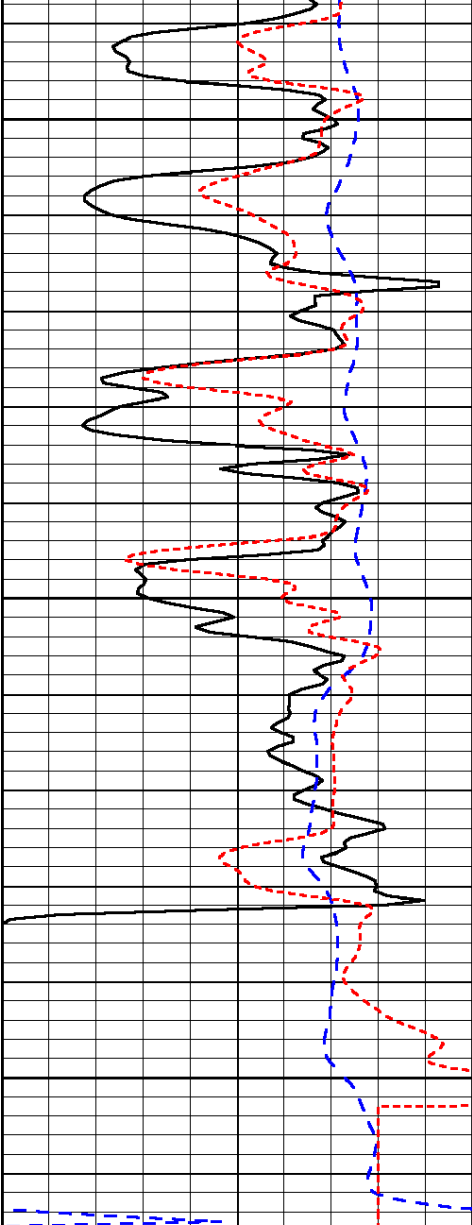


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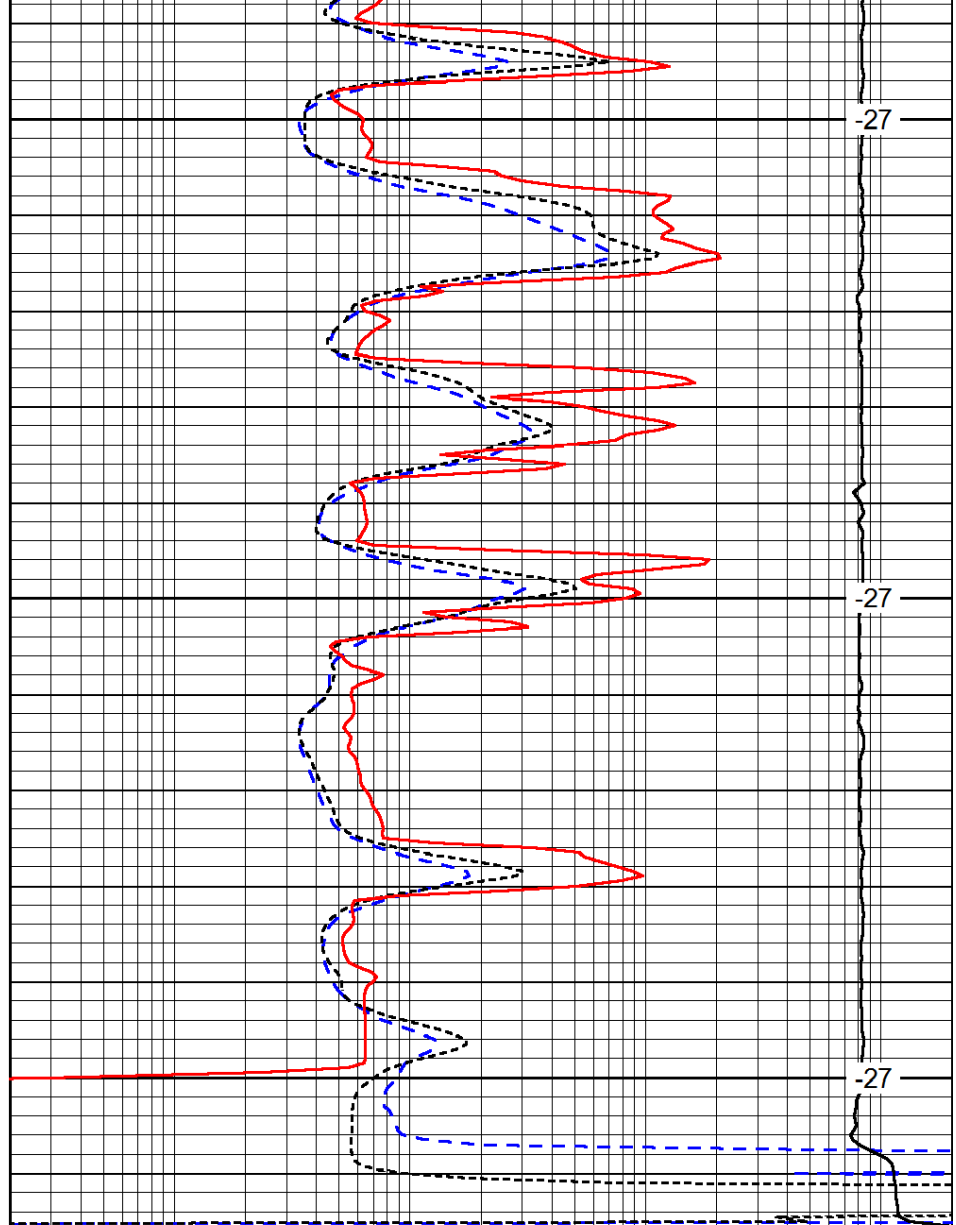


0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40

3600

3650

3700



0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000

15000	Line Tension	0
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LSPD