



Pioneer Energy Services

# Borehole Compensated Sonic Log

15-167-24,007-00-00

API No.

Company **H&D Exploration, LLC**  
 Well **Michaelis #1**  
 Field **Roosevelt**  
 County **Russell** State **Kansas**

Location  
 1793' FNL & 2310' FWL

Sec: **25** Twp: **15S** Rge: **15W**

Other Services  
 CNL/CDL  
 MEL/DIL

Permanent Datum Ground Level Elevation 1903  
 Log Measured From Kelly Bushing 9 Ft. Above Perm. Datum  
 Drilling Measured From Kelly Bushing

Elevation  
 K.B. 1912  
 D.F. G.I.L. 1903

Date	12/11/2014	
Run Number	Two	
Type Log	BHC Sonic	
Depth Driller	3480	
Depth Logger	3479	
Bottom Logged Interval	3468	
Top Logged Interval	350	
Type Fluid In Hole	Chemical	
Salinity, PPM CL	10,000	
Density	9.3	
Level	Full	
Max. Rec. Temp. F	111	
Operating Rig Time	4 Hours	
Equipment -- Location	51 Hays	
Recorded By	C. Desaire	
Witnessed By	Clint Musgrove	

**Borehole Record**

Run No	Bit	From	To	Size	Wgt.	From	To
1	12.25	00	390	8.625	24#	00	390
2	7.875	390	3480				

**Casing Record**

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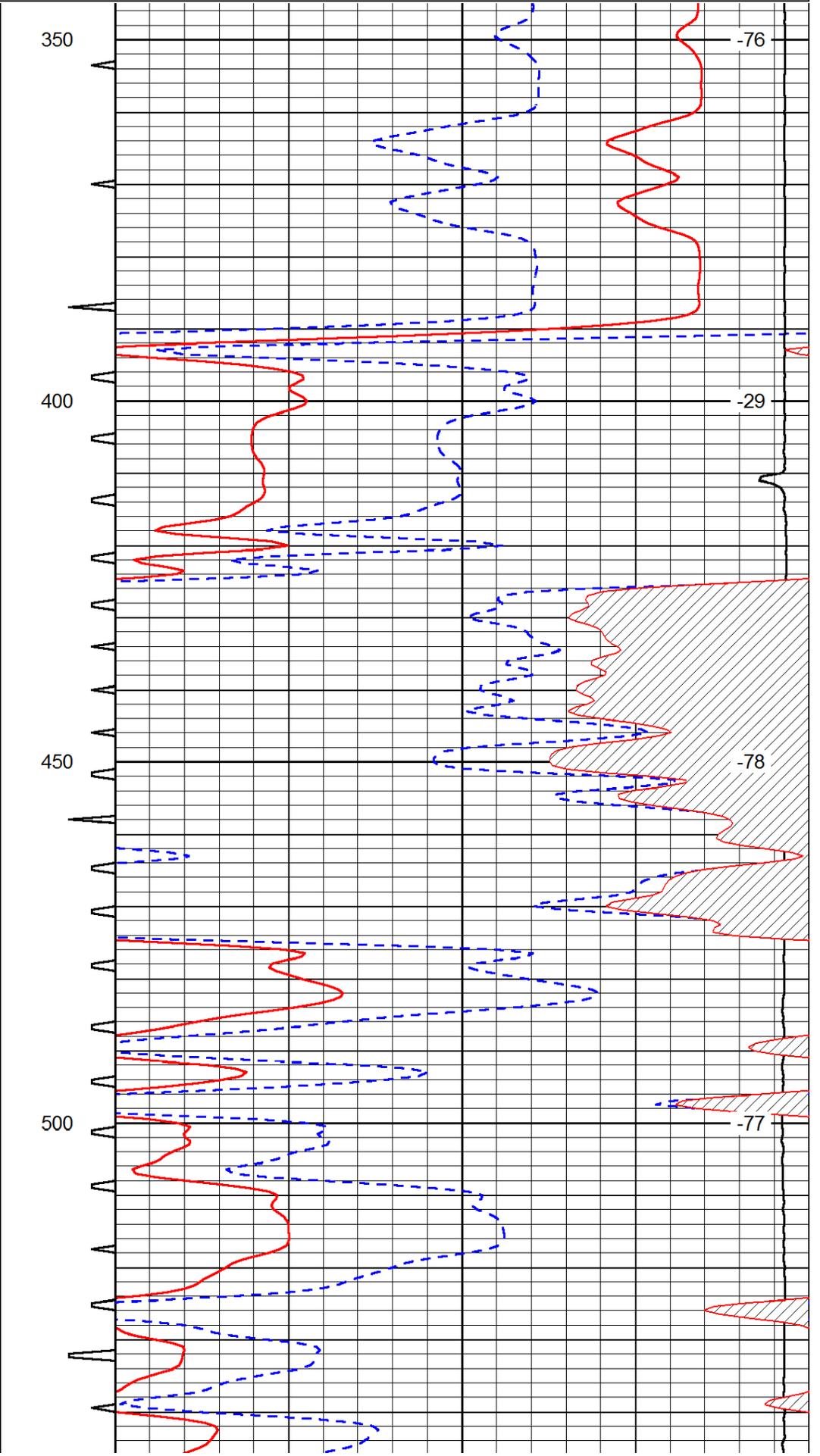
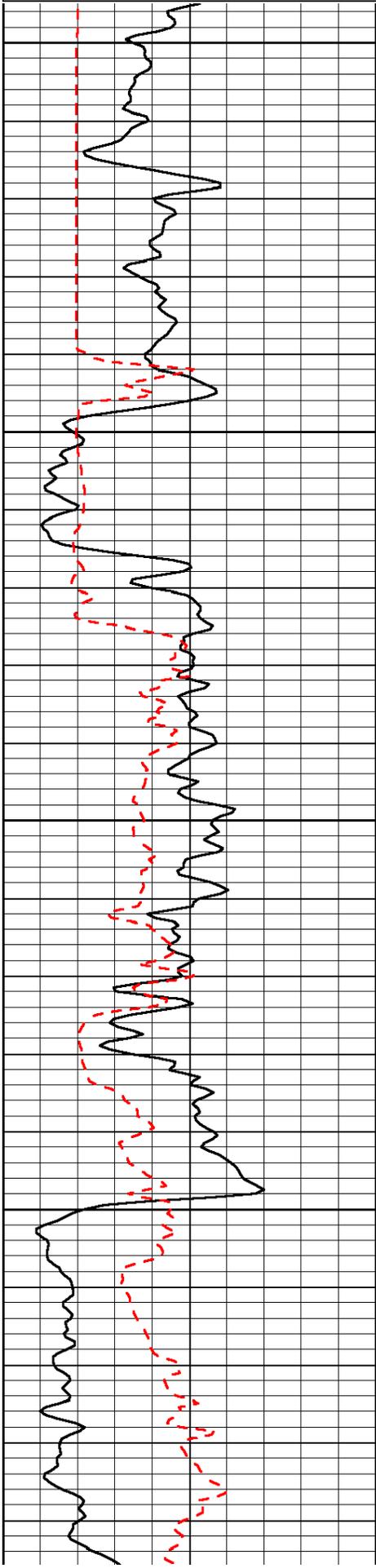
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

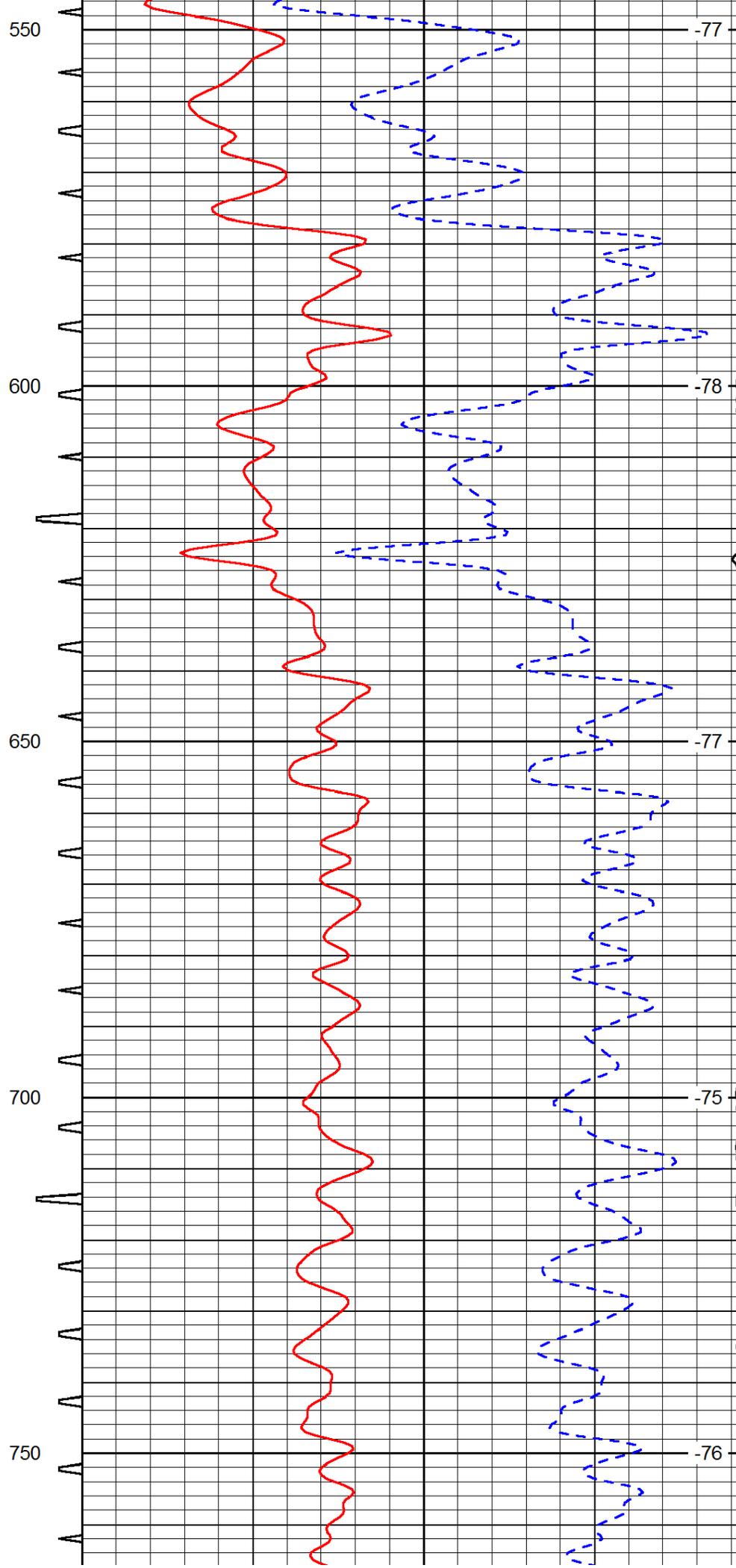
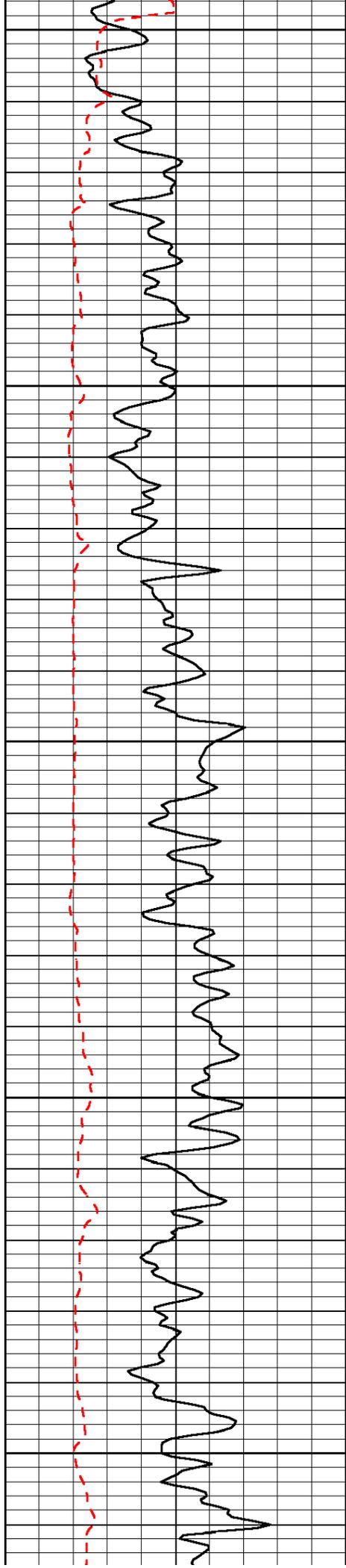
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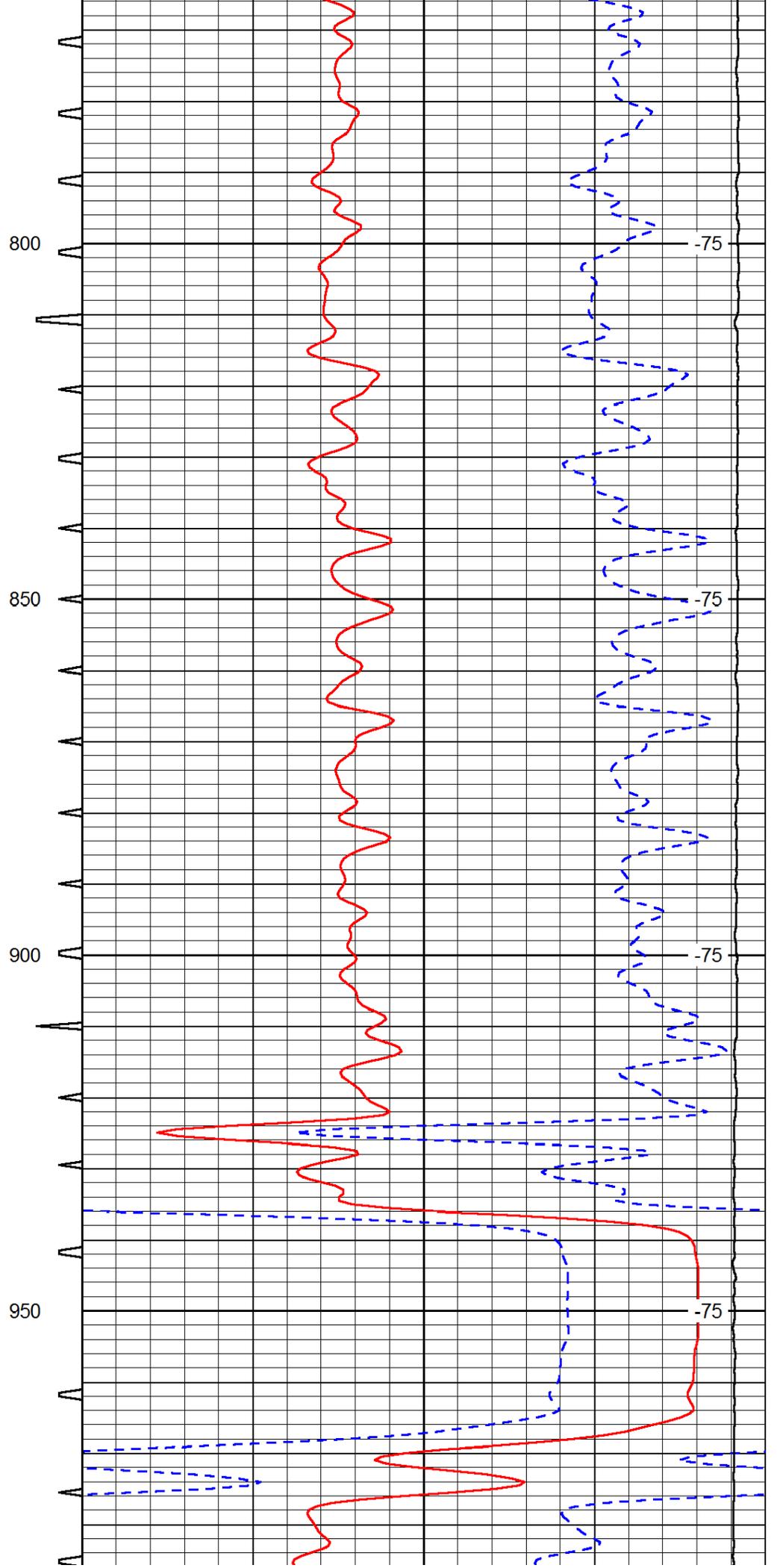
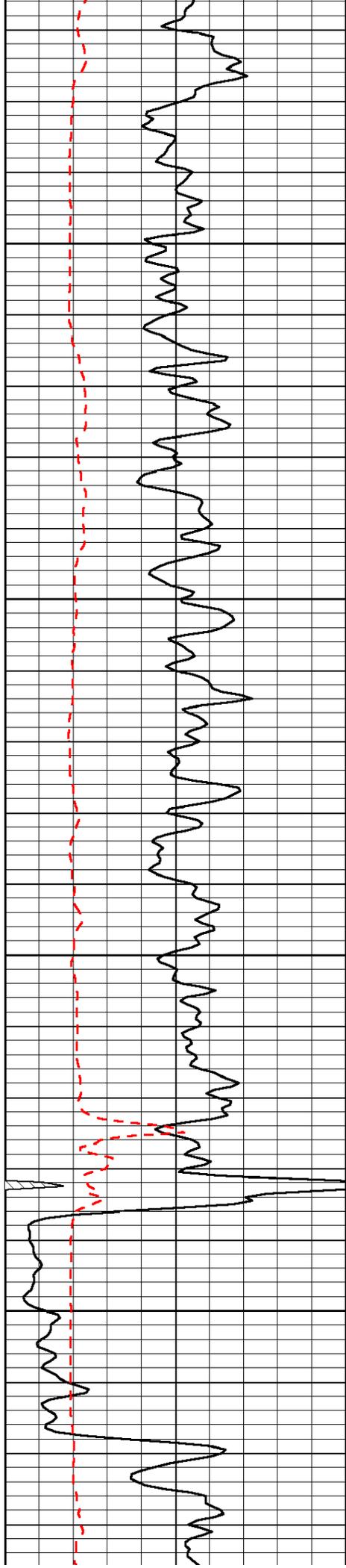
Thank you for using Pioneer Energy Services  
 www.pioneeres.com  
 785 625 3858  
 Russell KS, W on I-70 to Balta Rd,  
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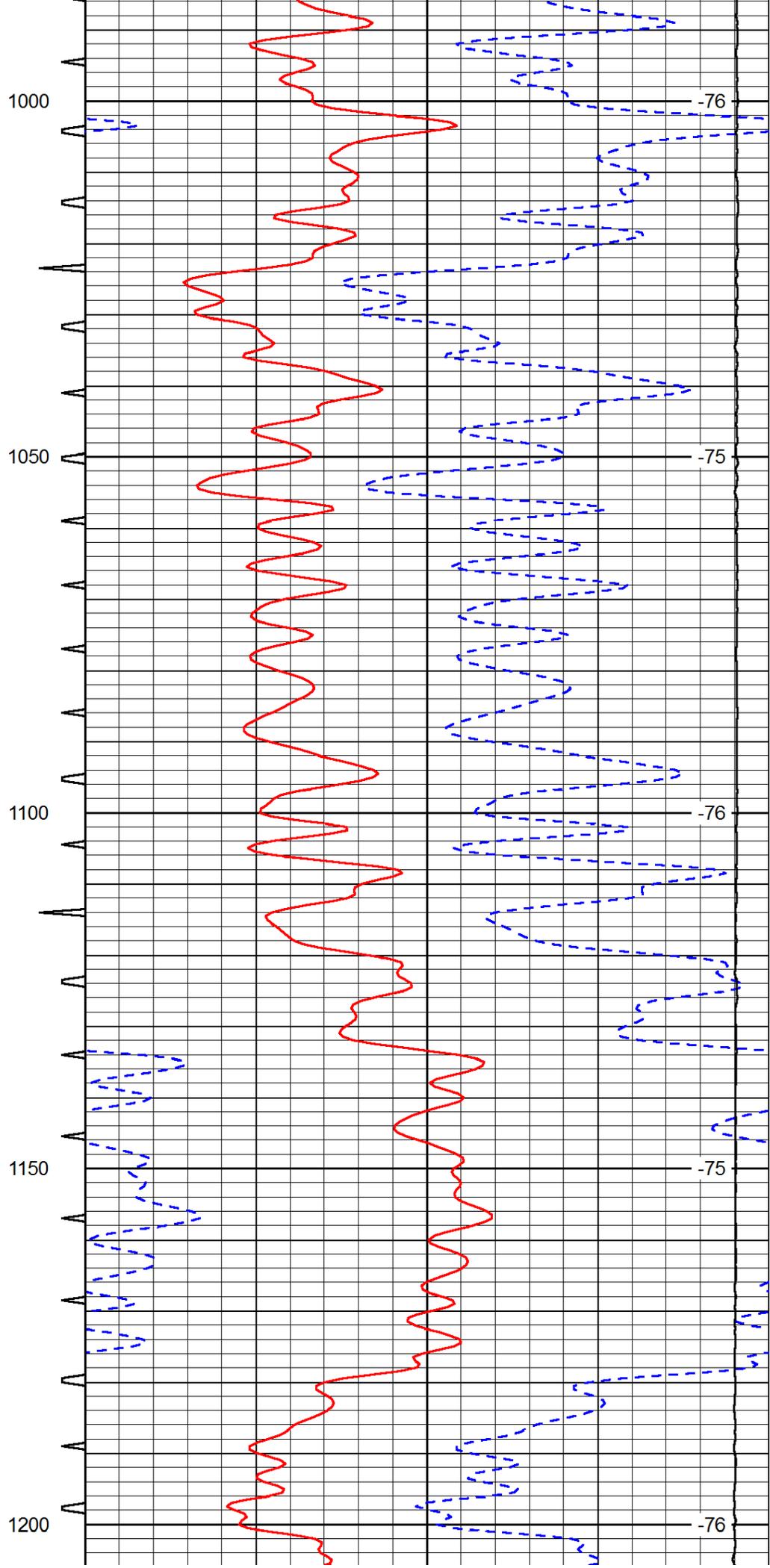
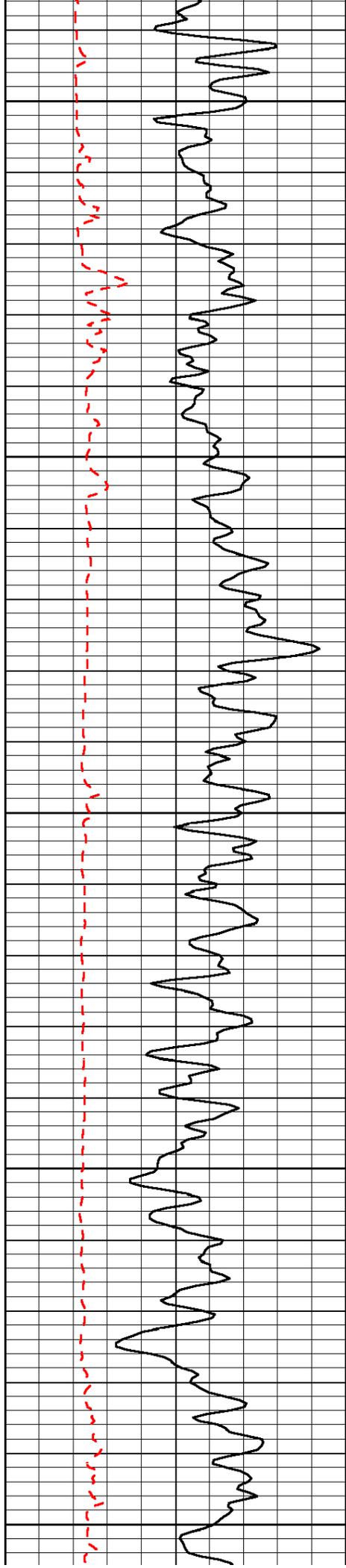
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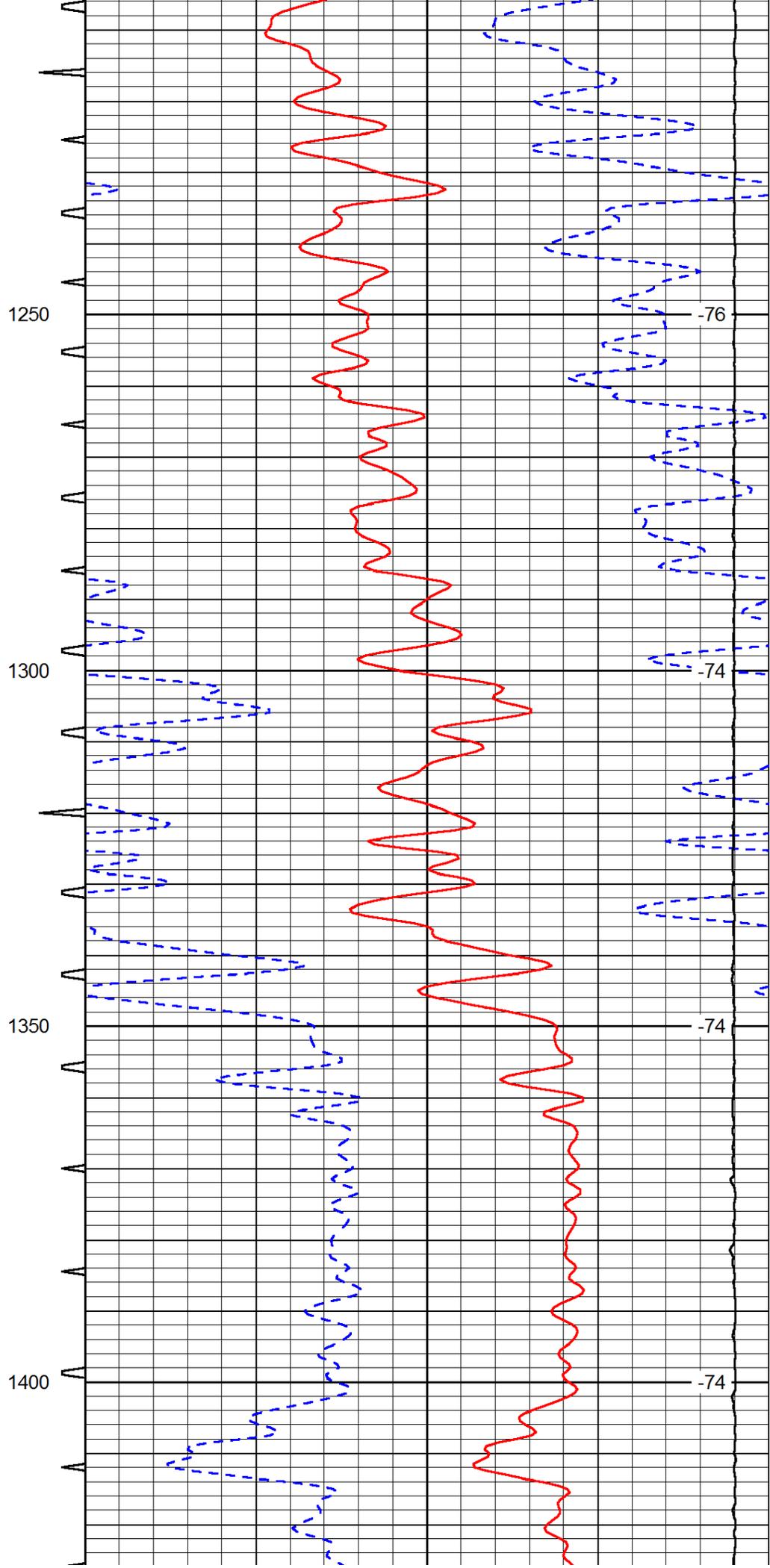
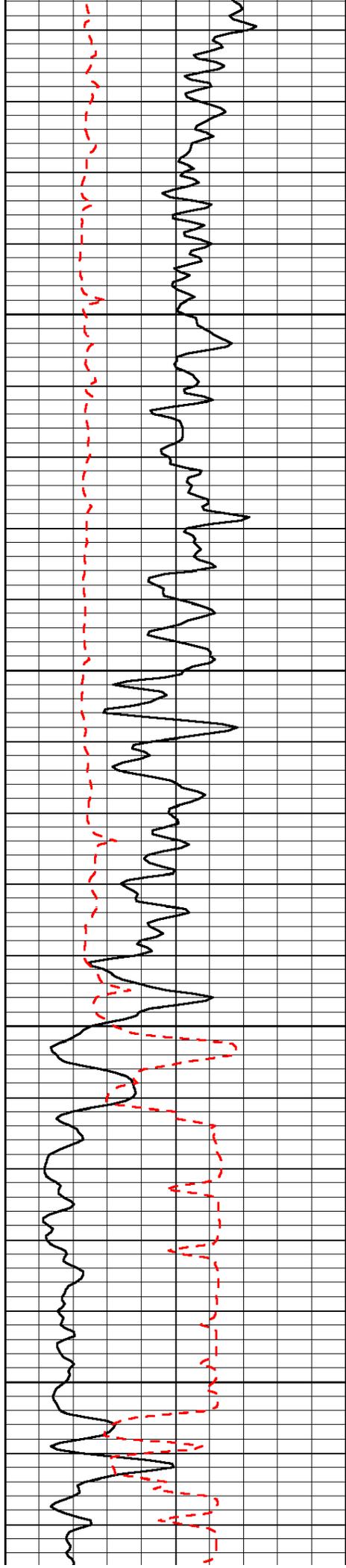
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150	Gamma Ray	300	5	0	SPOR	-10
6	Caliper (GAPI)	16		15000	LTEN (lb)	0
						LSPD

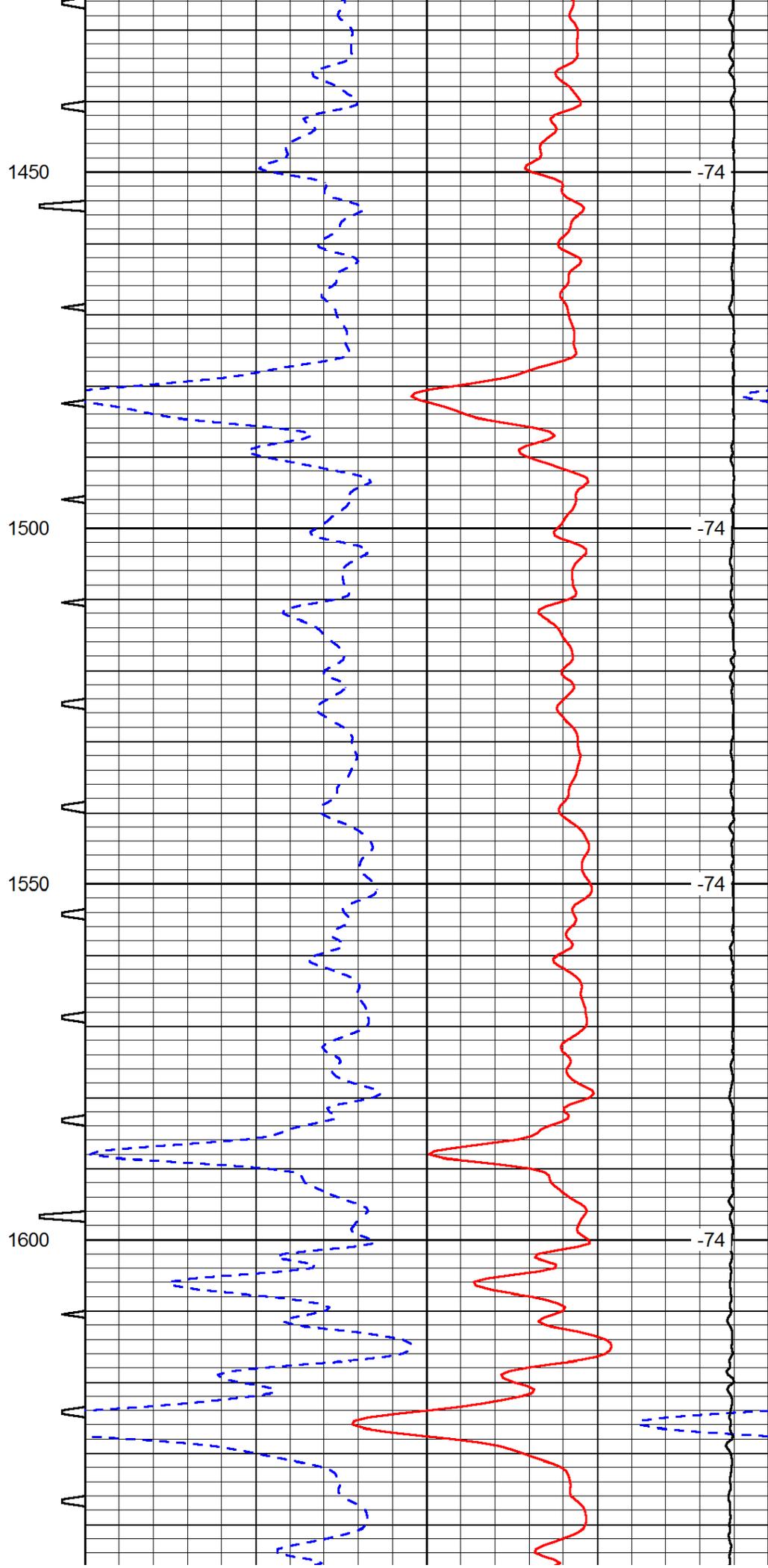
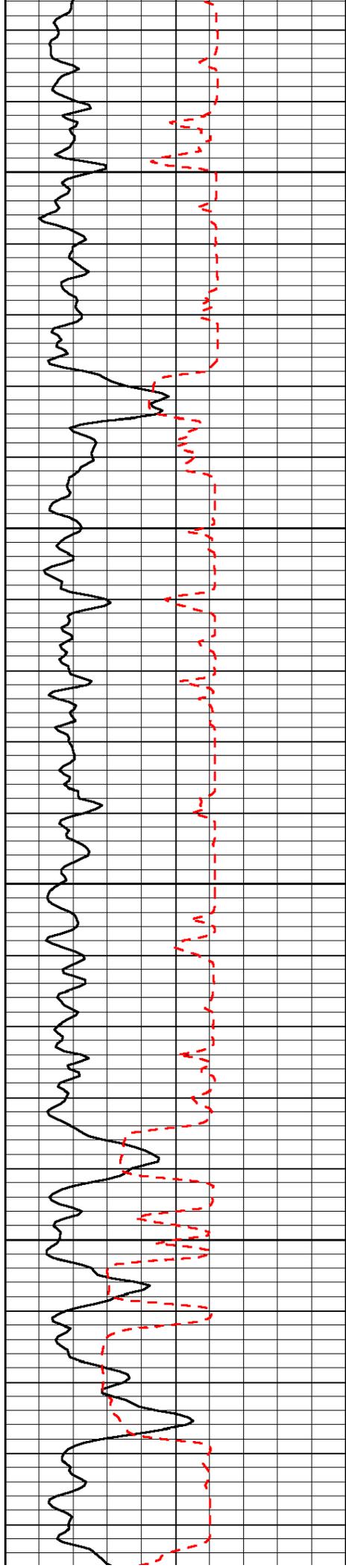


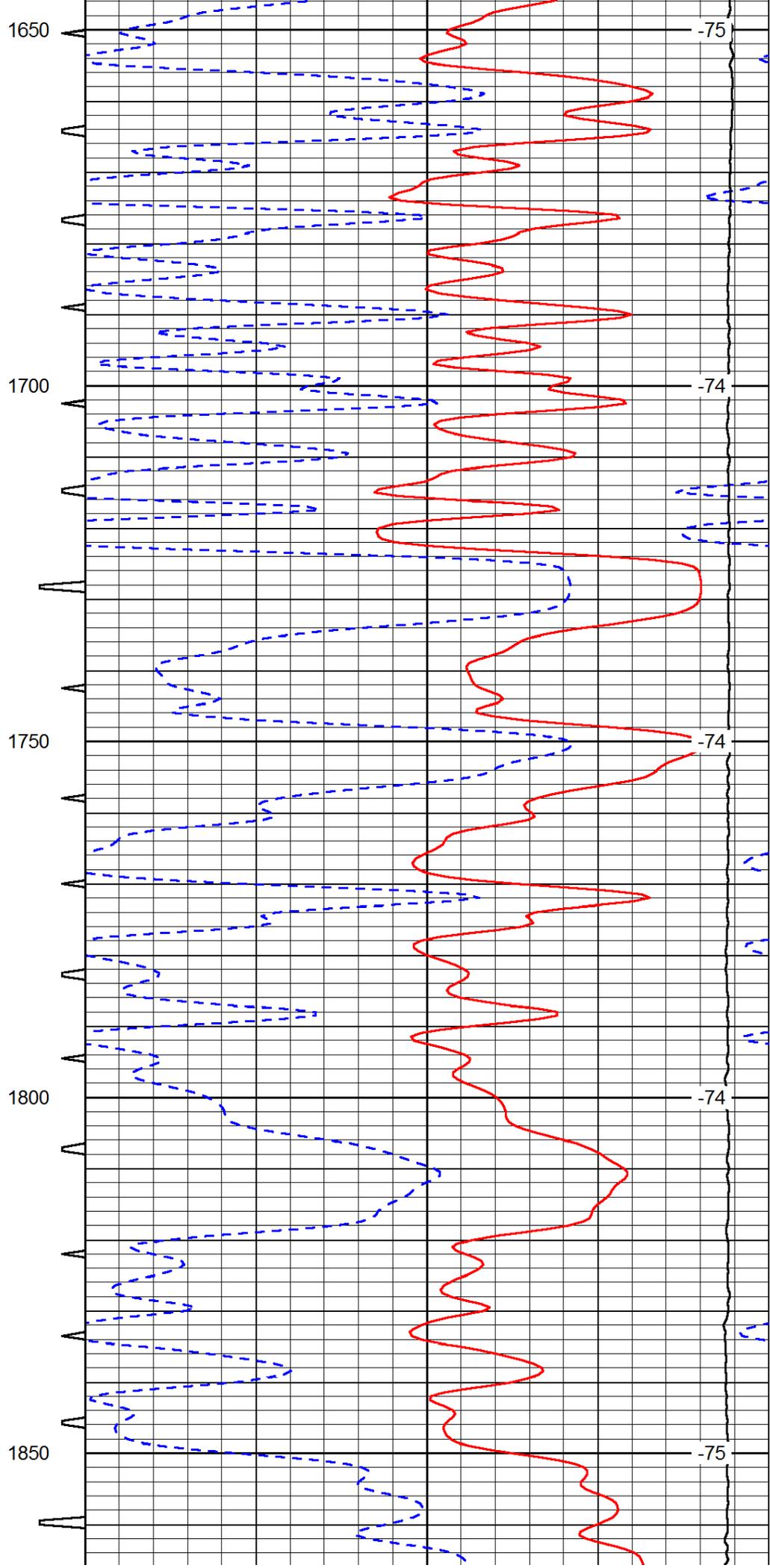
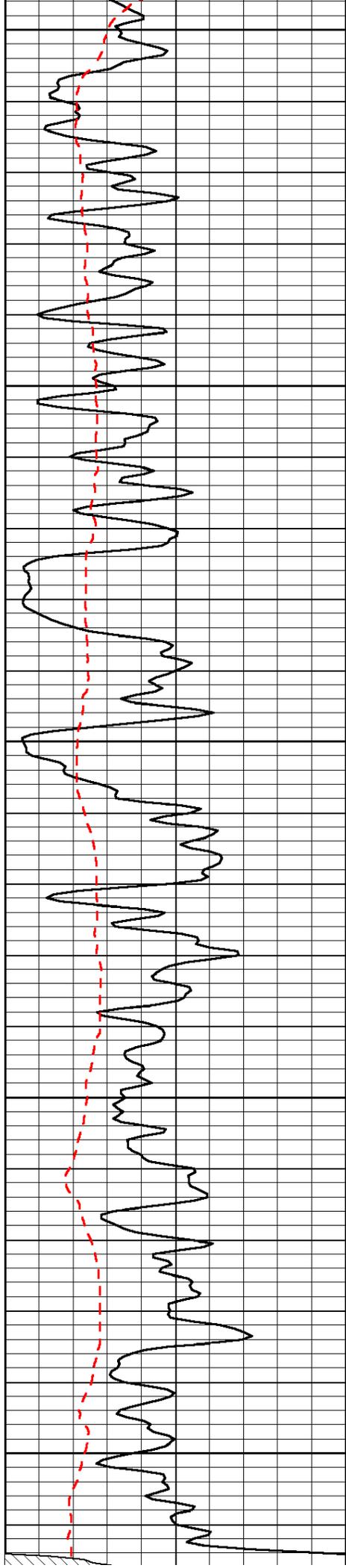


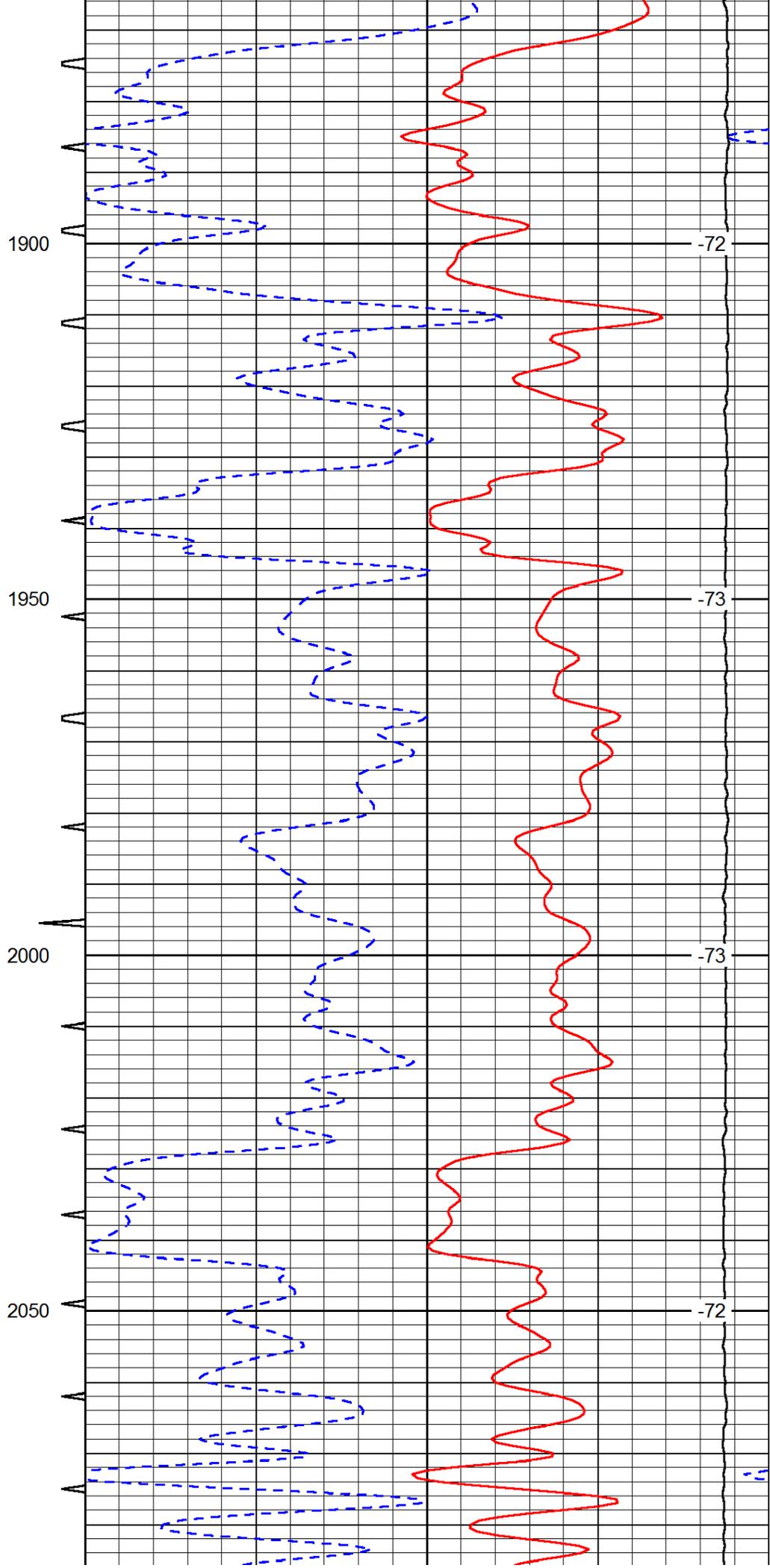
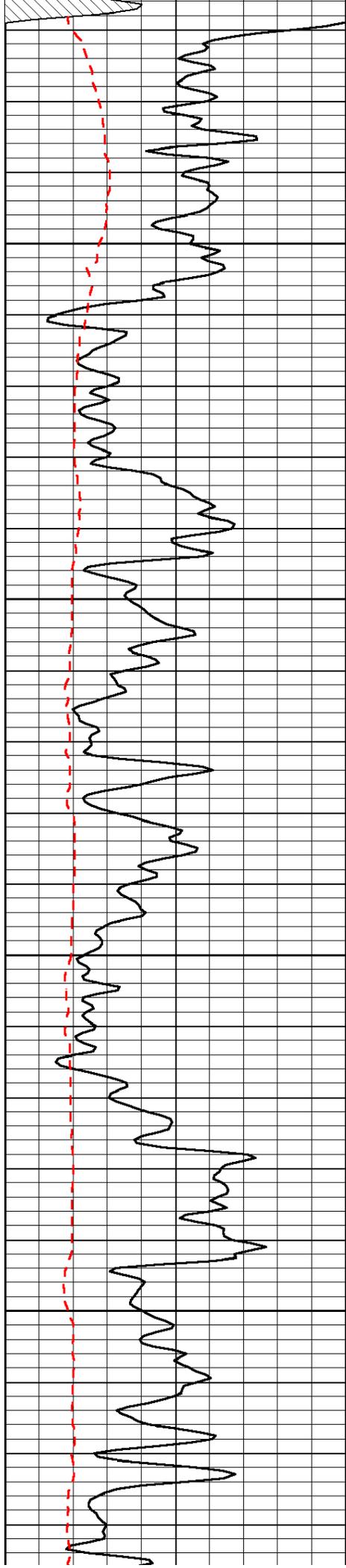




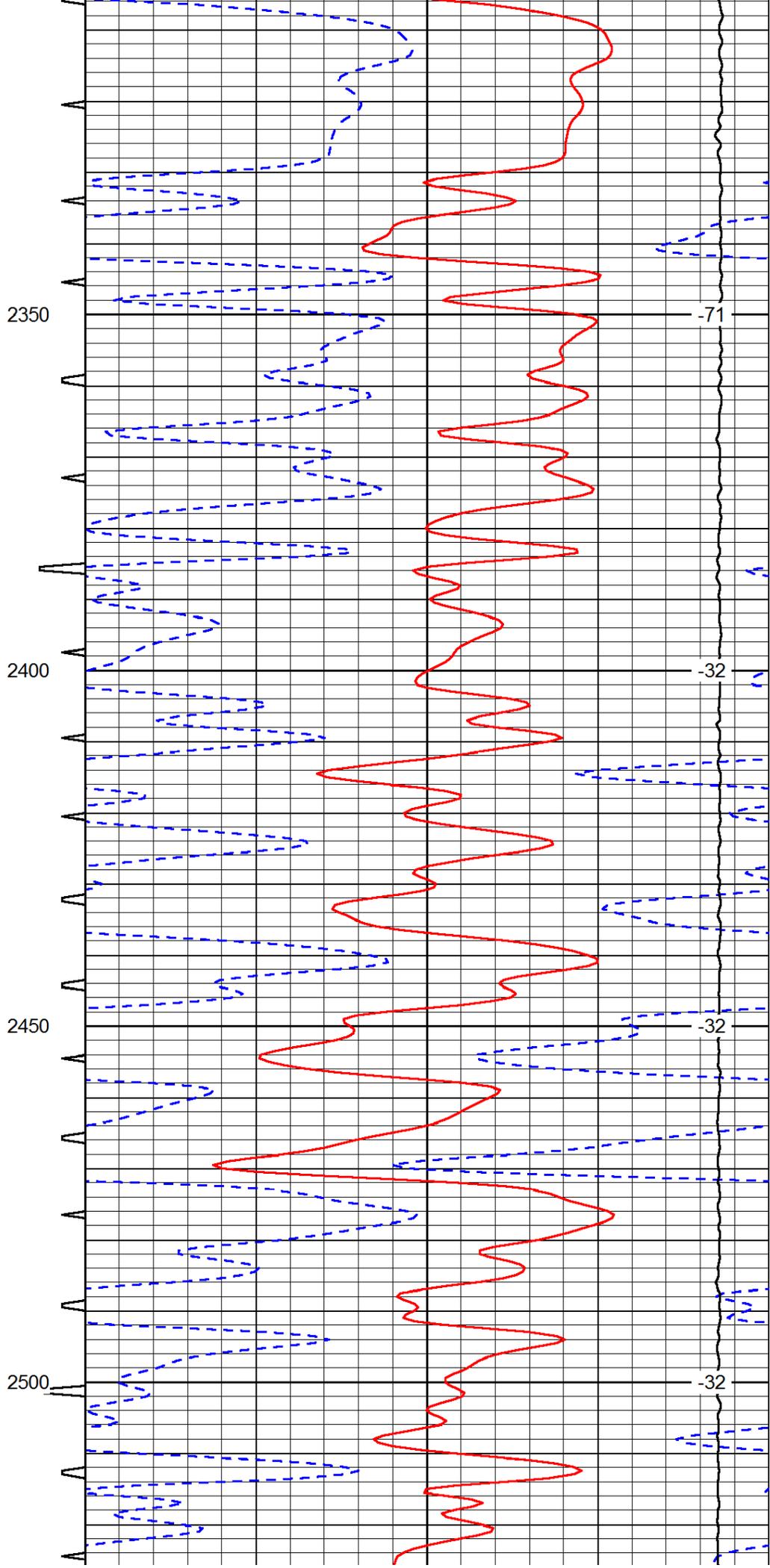
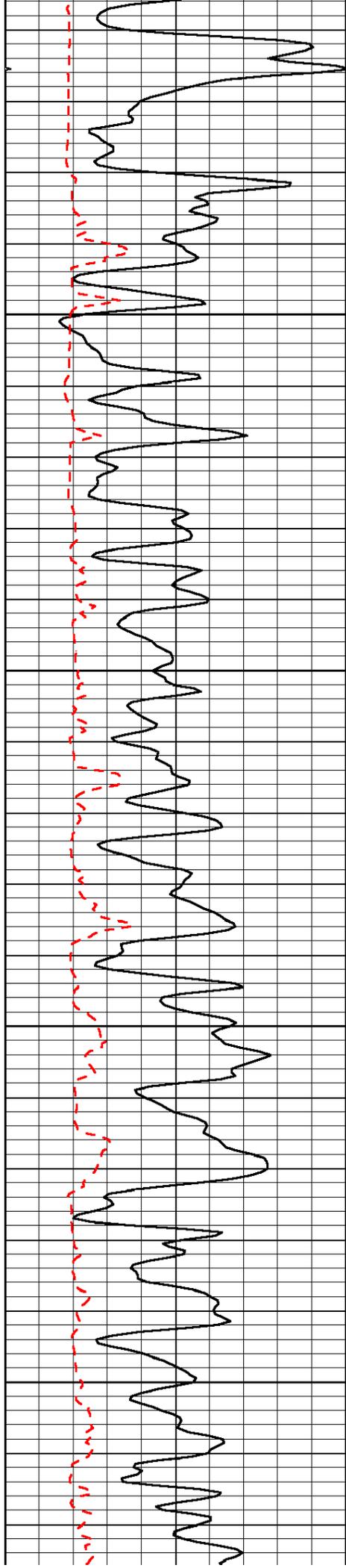


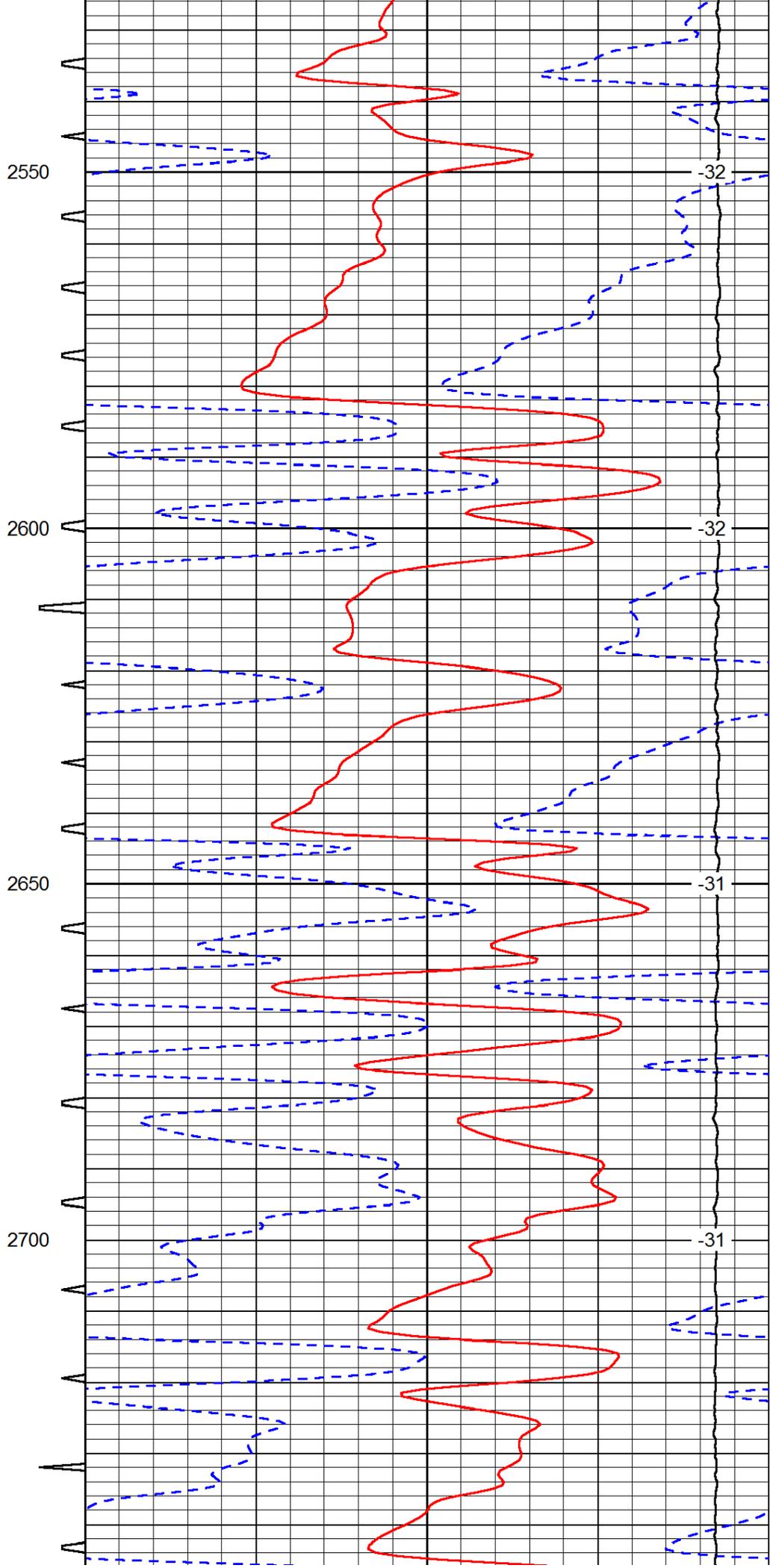
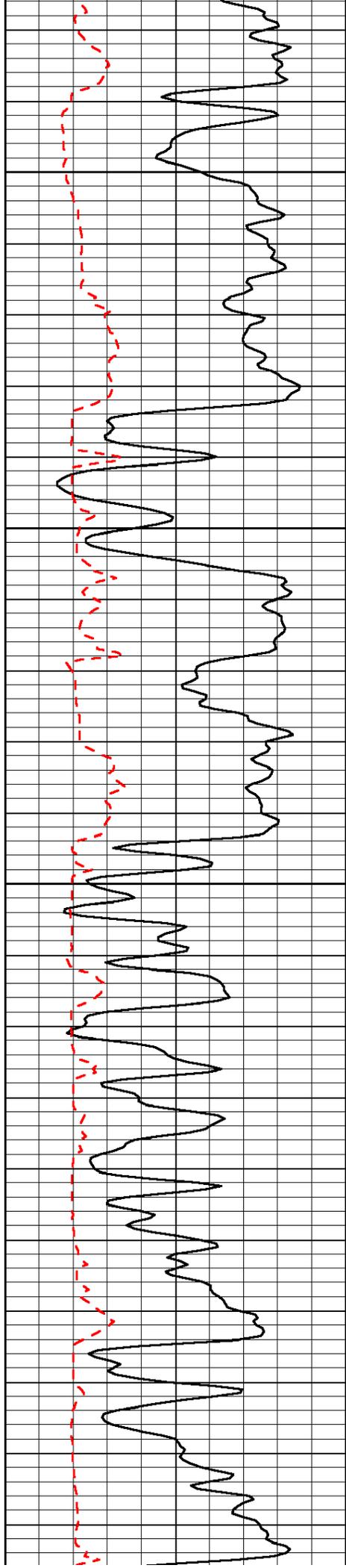


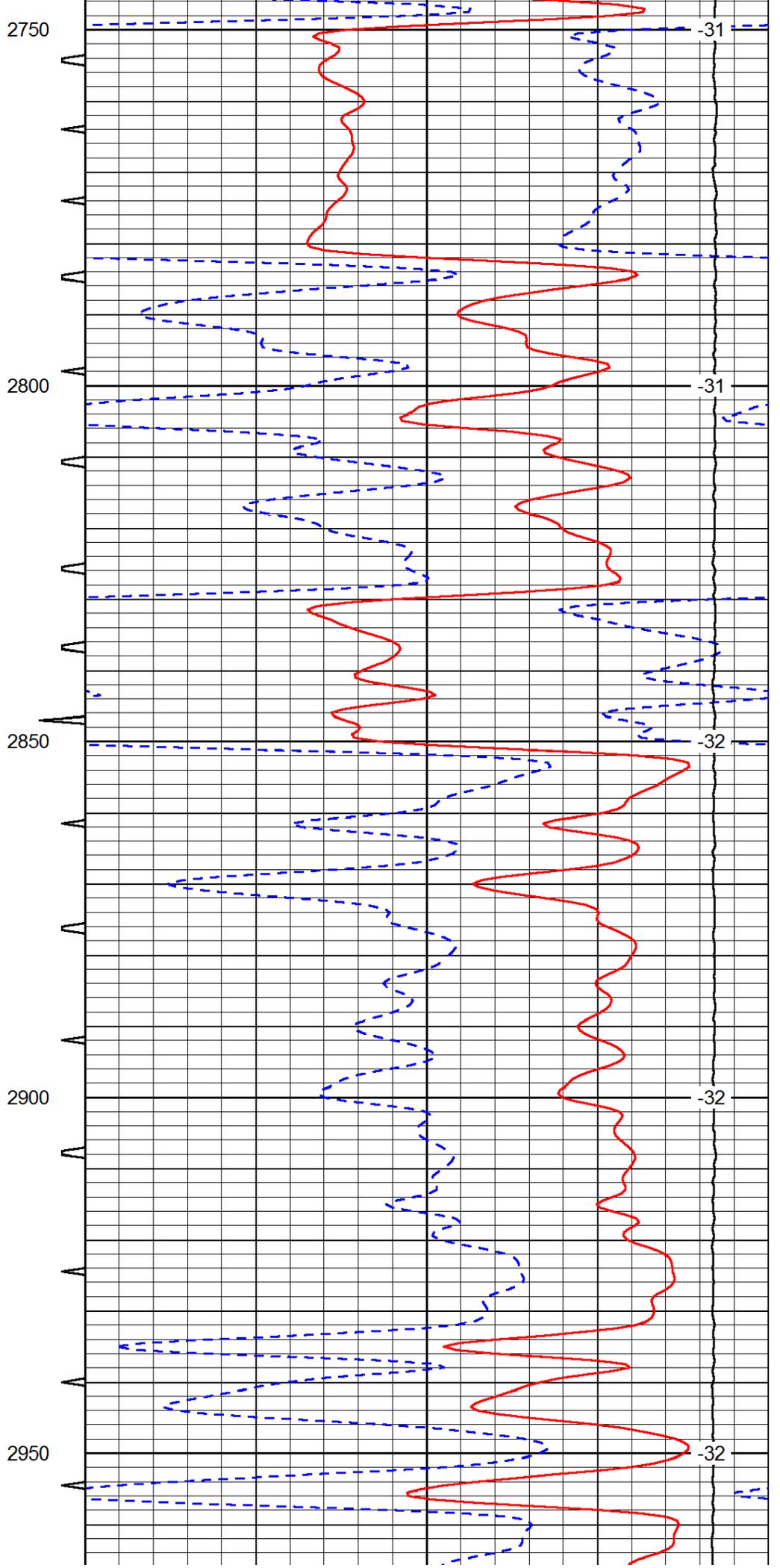
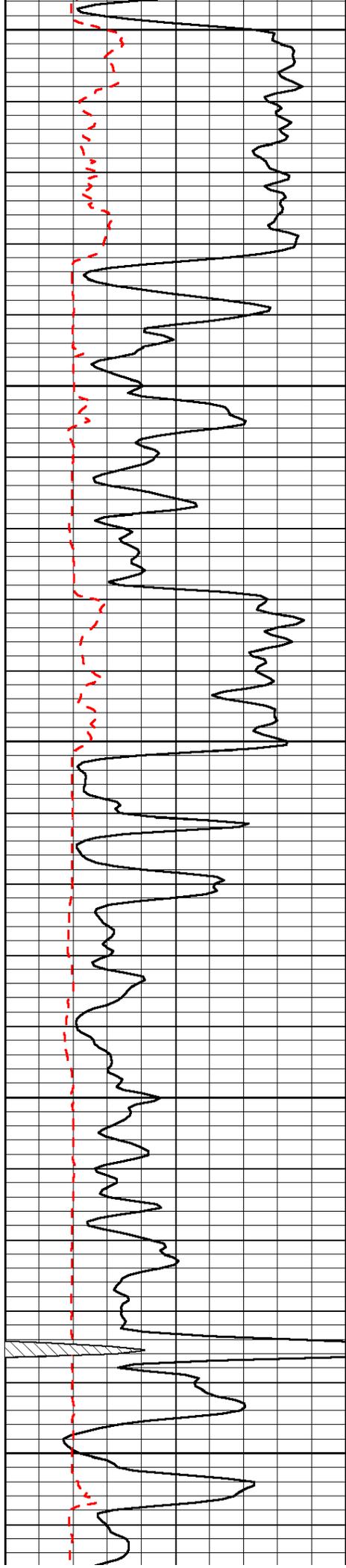


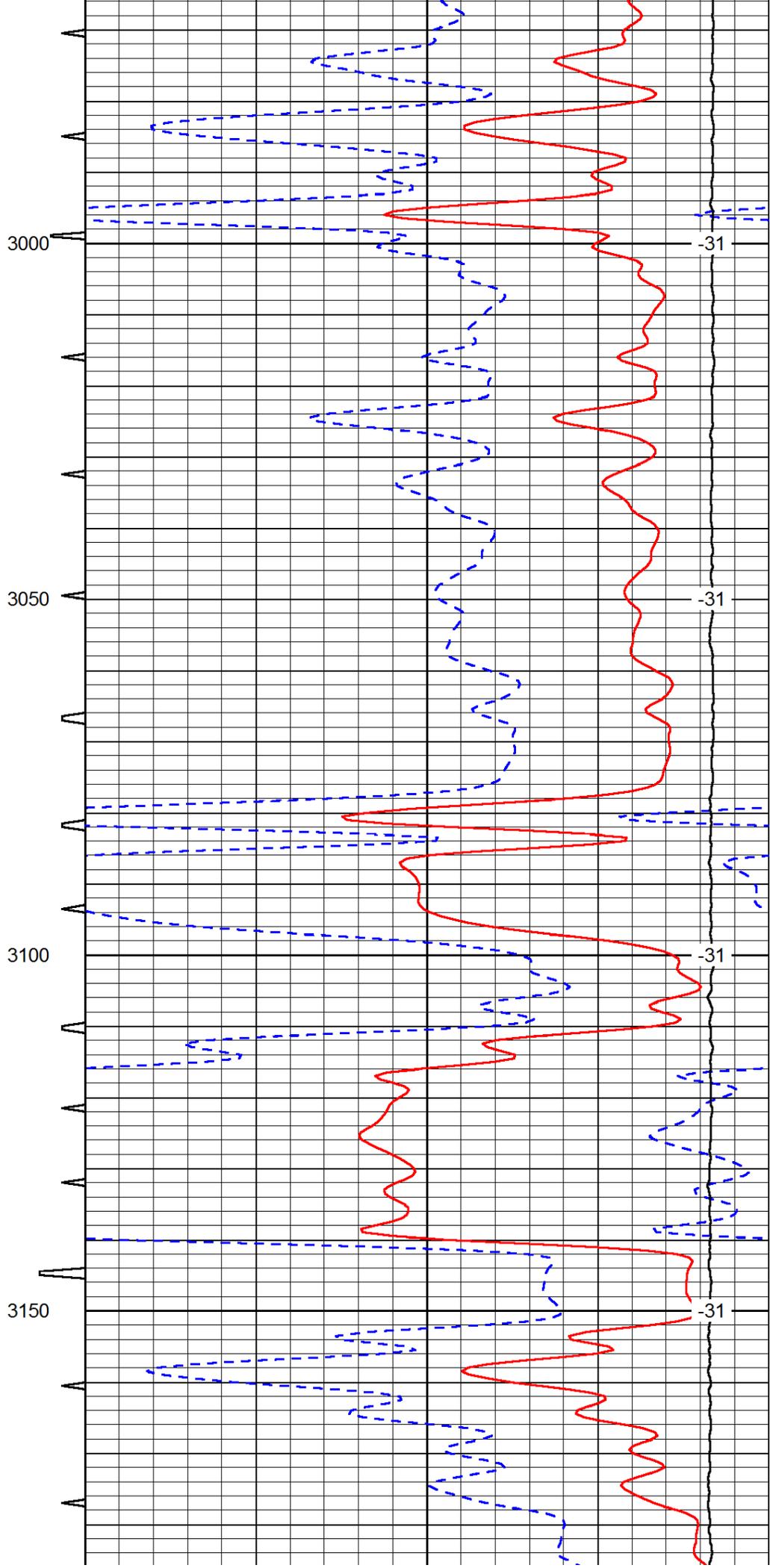
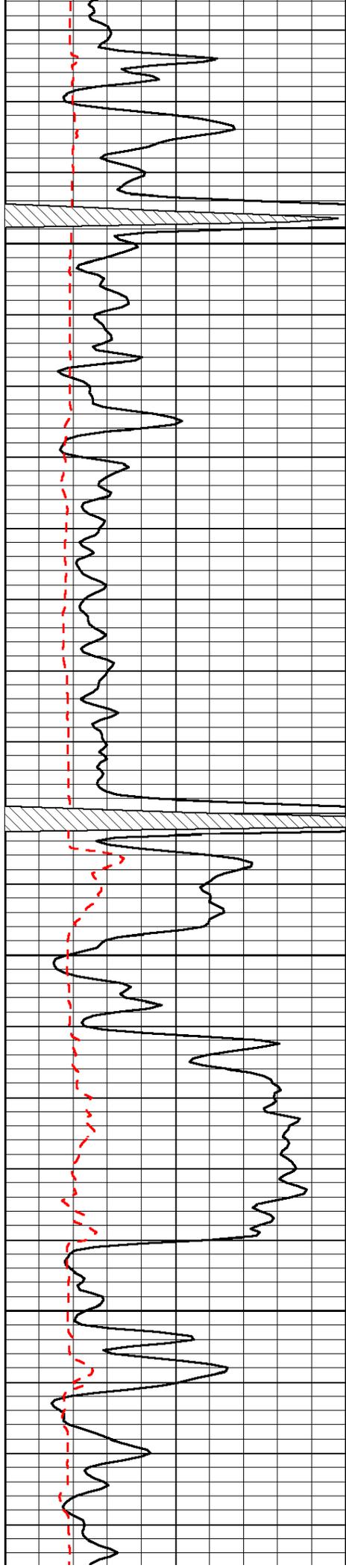


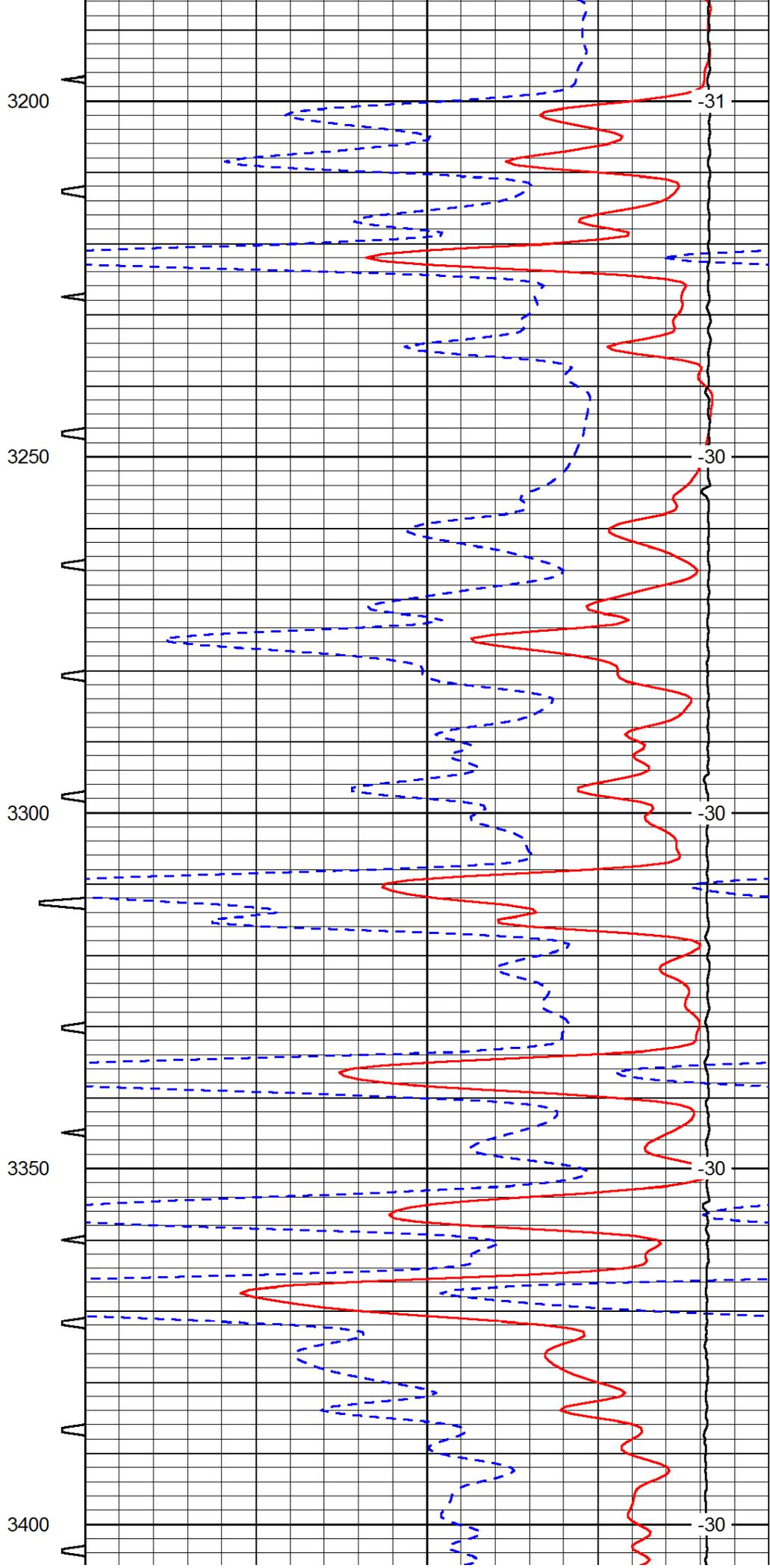
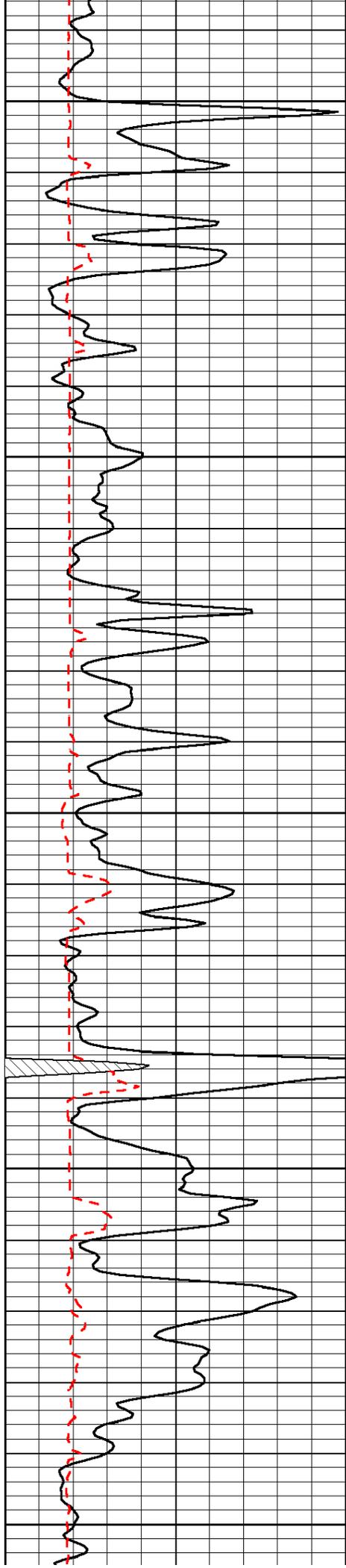






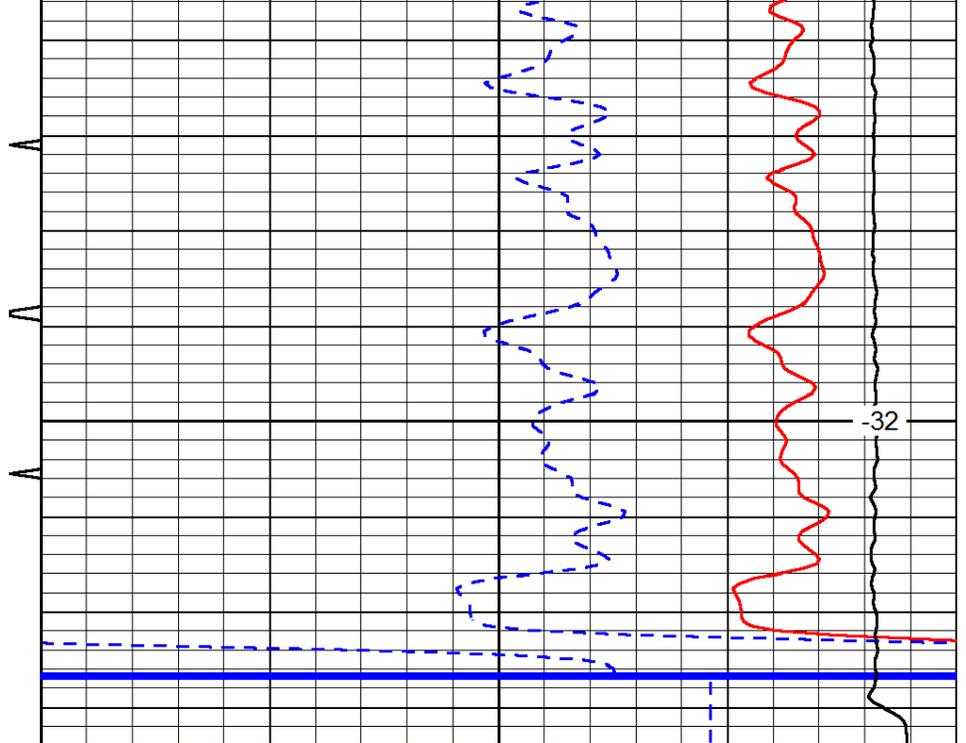








3450



-32

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LSPD