



Pioneer Energy Services

**Borehole Compensated  
Sonic Log**

15-171-20905-00-00

API No.

Company **Murfin Drilling Company, Inc.**  
Well **Welch #1-18**  
Field  
County **Scott** State **Kansas**

Location **990' FSL & 1015' FWL**  
Sec: **18** Twp: **16S** Rge: **32W**

Other Services  
CNL/CDL  
MEL/DIL

Permanent Datum **Ground Level** Elevation **2955**  
Log Measured From **Kelly Busing** 11 Ft. Above Perm. Datum  
Drilling Measured From **Kelly Busing**

Elevation  
K.B. 2966  
D.F.  
G.L. 2955

Date	9/10/2012	
Run Number	Two	
Type Log	BHC Sonic	
Depth Driller	4715	
Depth Logger	4717	
Bottom Logged Interval	4706	
Top Logged Interval	200	
Type Fluid In Hole	Chemical	
Salinity, PPM CL	4800	
Density	9.2	
Level	Full	
Max. Rec. Temp. F	125	
Operating Rig Time	6 Hours	
Equipment -- Location	91 Hays	
Recorded By	D. Schmidt	
Witnessed By	Tom Funk	

Borehole Record				Casing Record			
Run No.	Bit	From	To	Size	Wgt.	From	To
1	12.25	00	222	8.625	24#	00	222
2	7.875	222	4715				

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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.

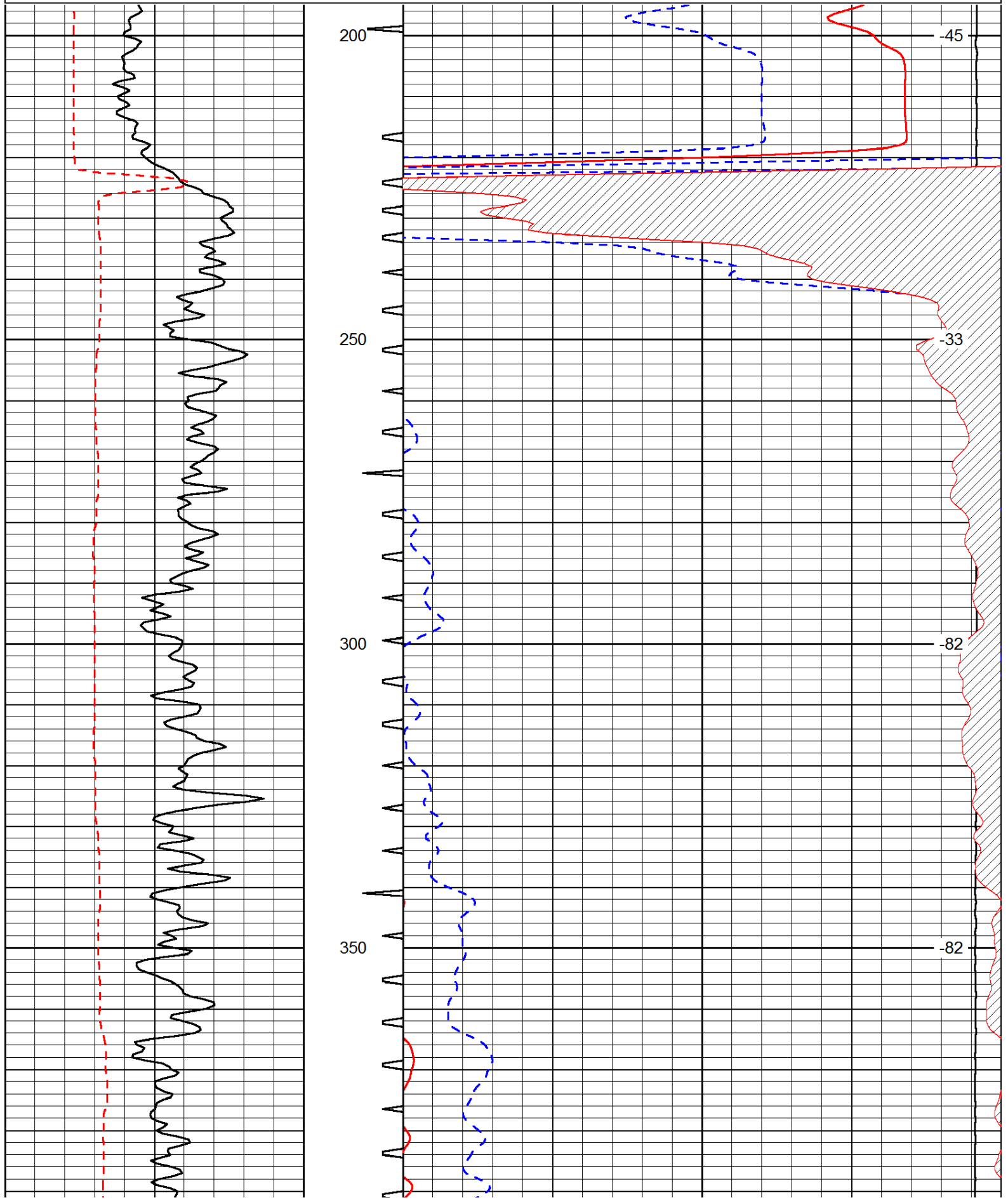
**Comments**

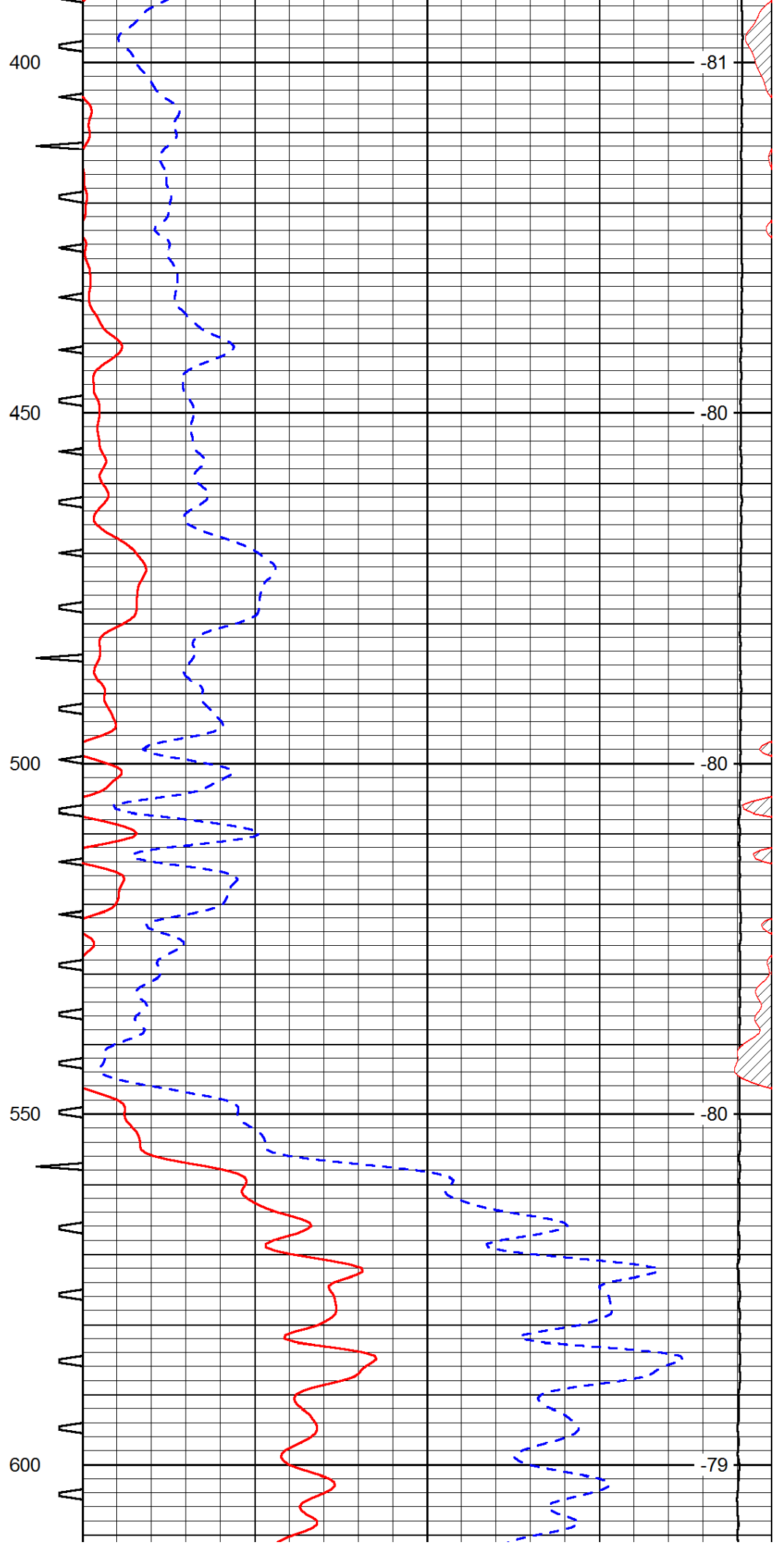
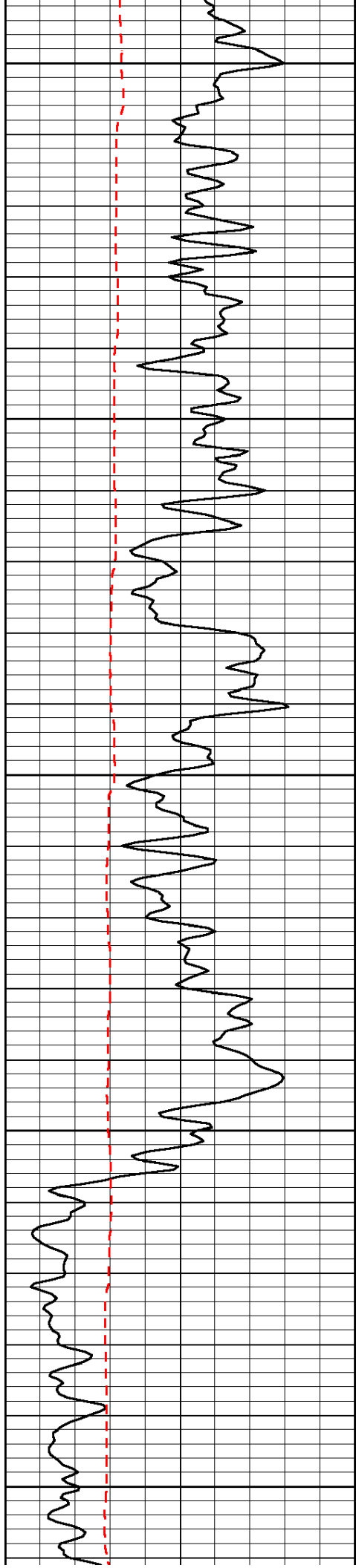
Thank you for using Pioneer Energy Services  
[www.pioneerenergy.com](http://www.pioneerenergy.com)  
 785 625 3858  
 Hwy 4 & 83 junction,  
 4.7 North to 270 Rd, 1 1/2 West,  
 N&W to location

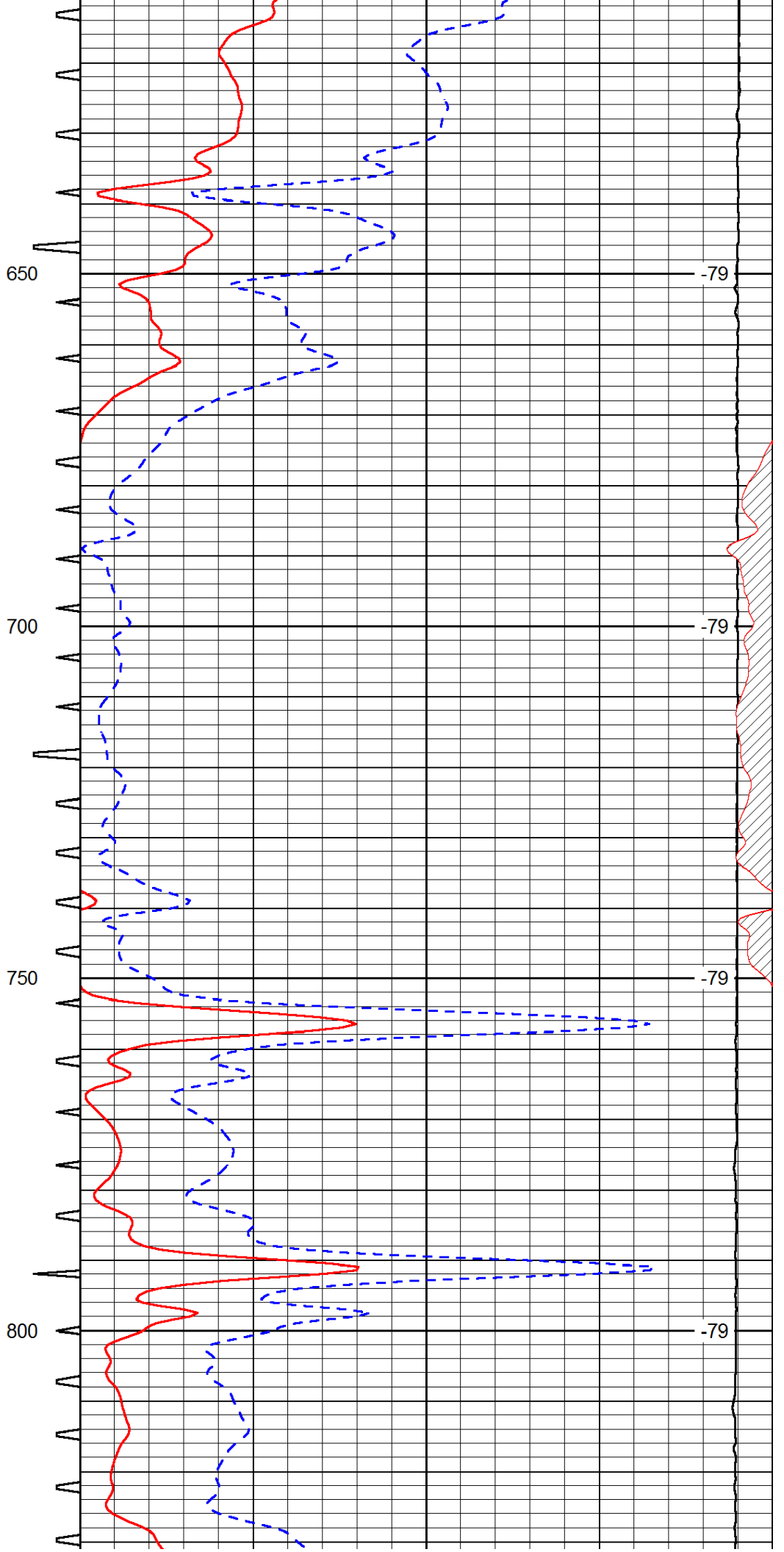
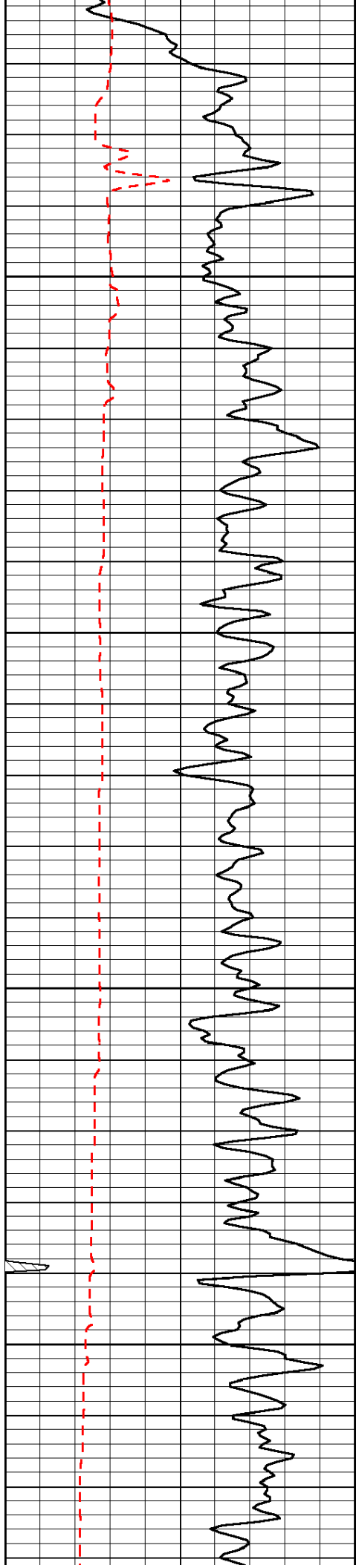
Database File: c:\warrior\data\murfin\_welch #1-18\murfin\_091012hd.db  
 Dataset Pathname: dil/mrfstack  
 Presentation Format: sonic  
 Dataset Creation: Mon Sep 10 10:24:29 2012  
 Charted by: Depth in Feet scaled 1:240

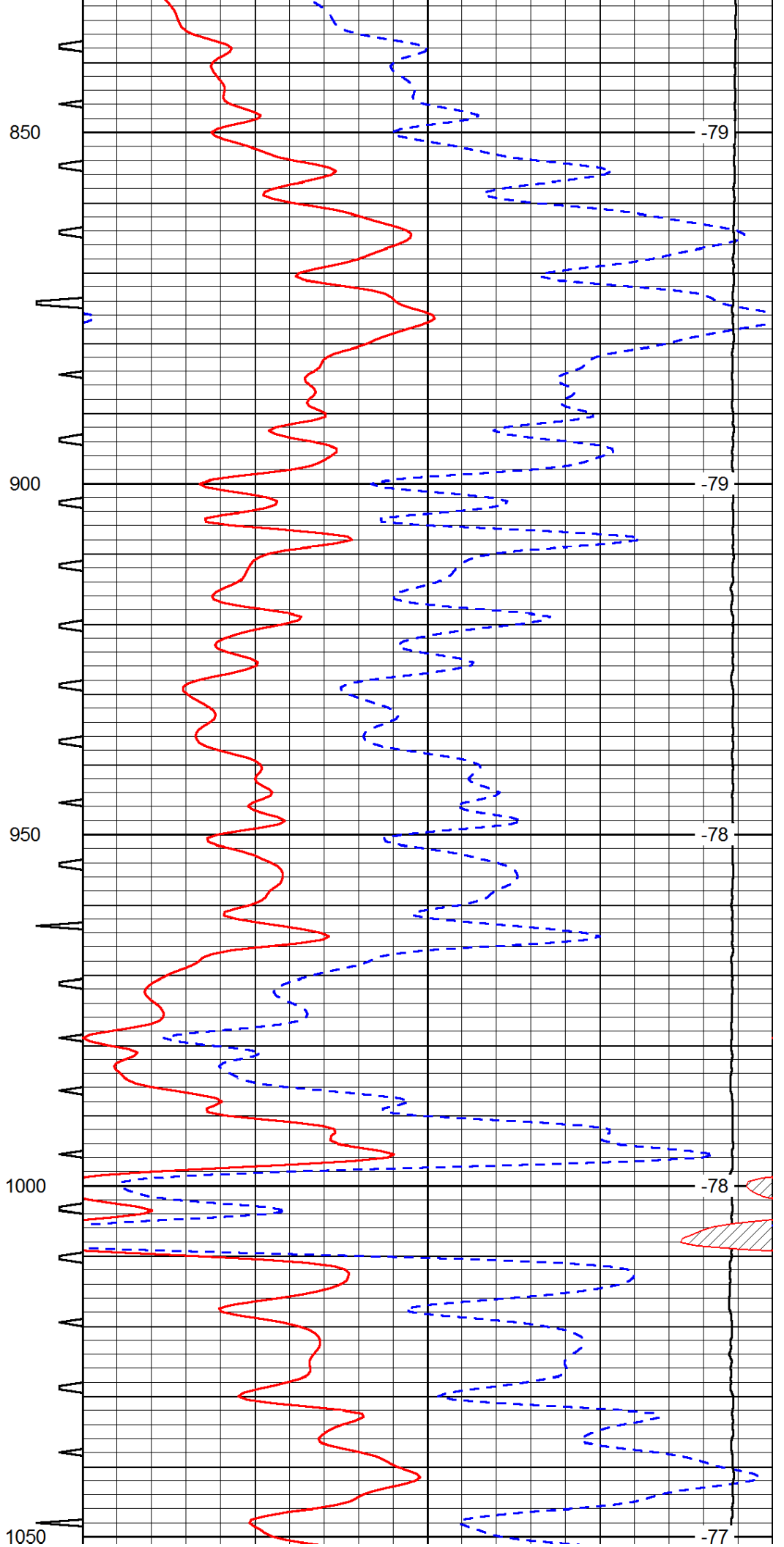
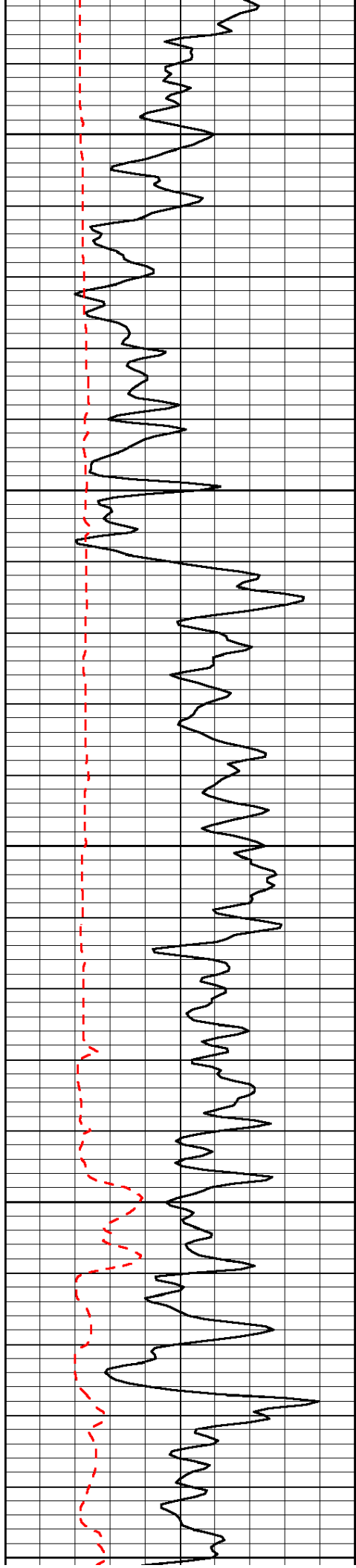
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150	Gamma Ray	300	5	0	SPOR	-10
6	Caliper (GAPI)	16		15000	LTEN (lb)	0

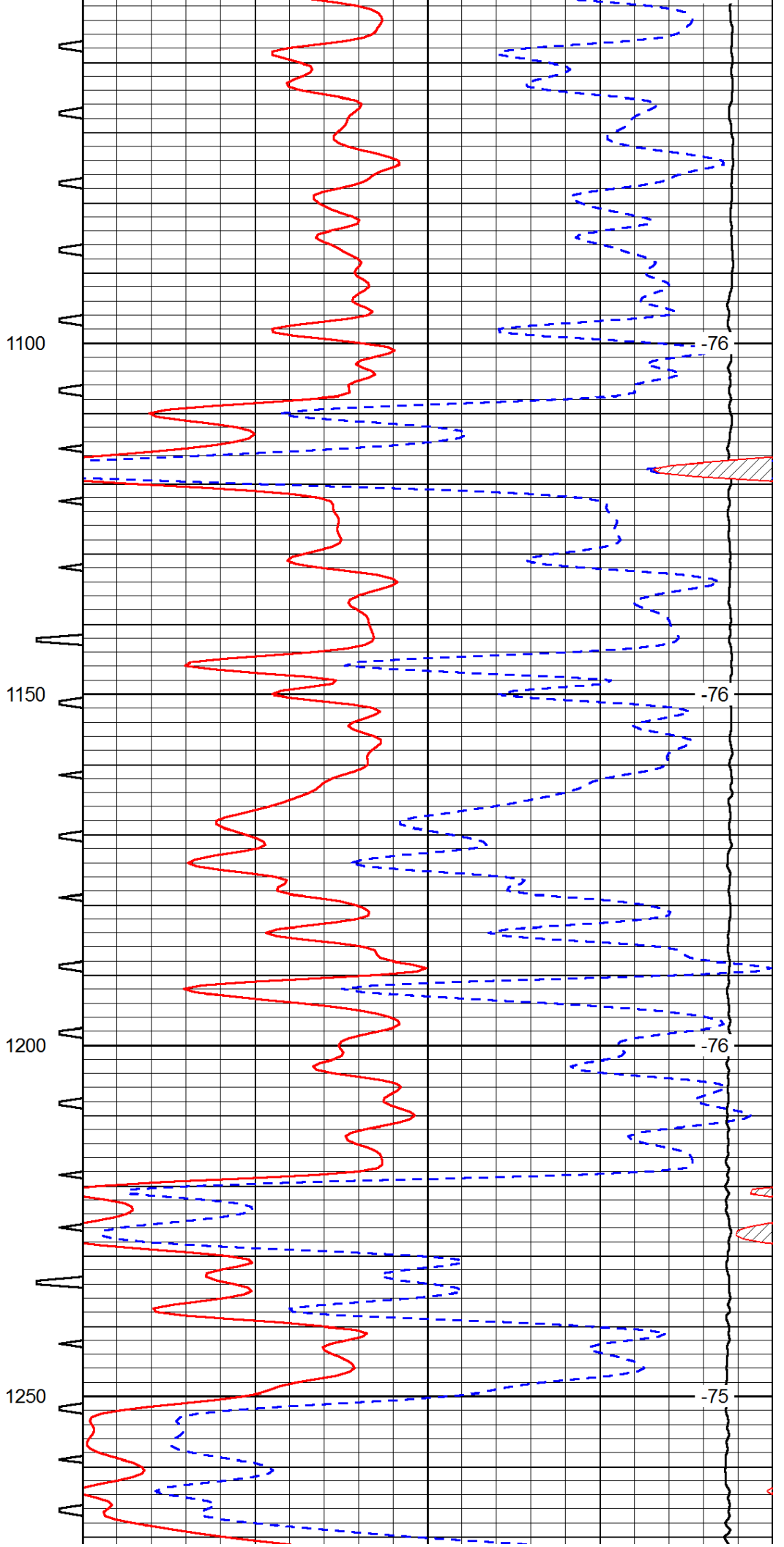
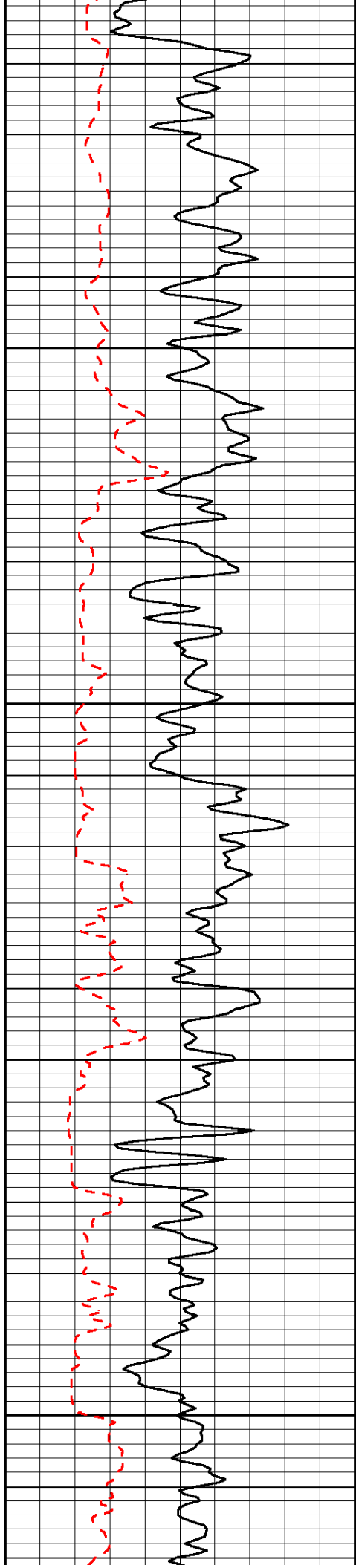
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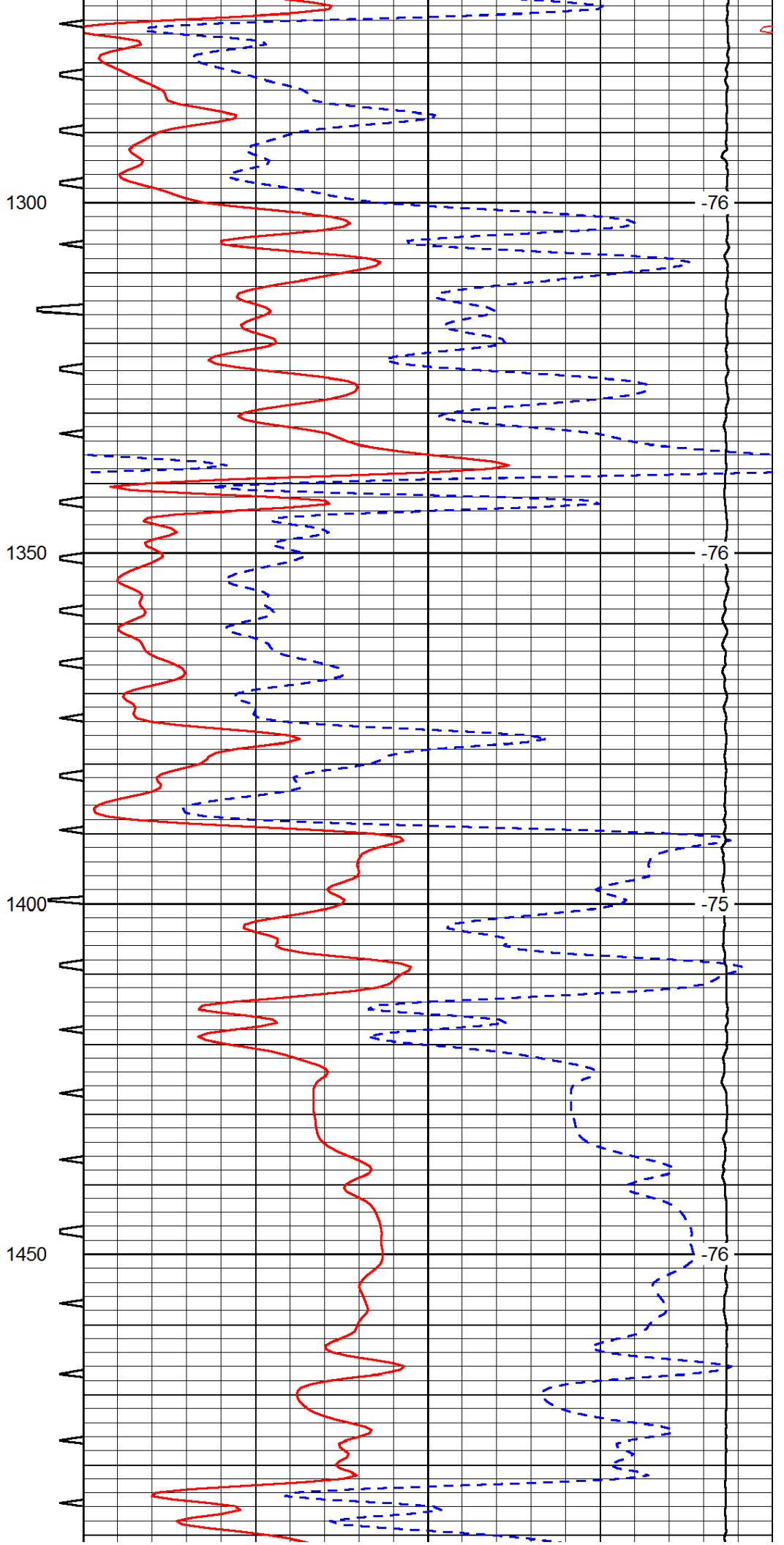
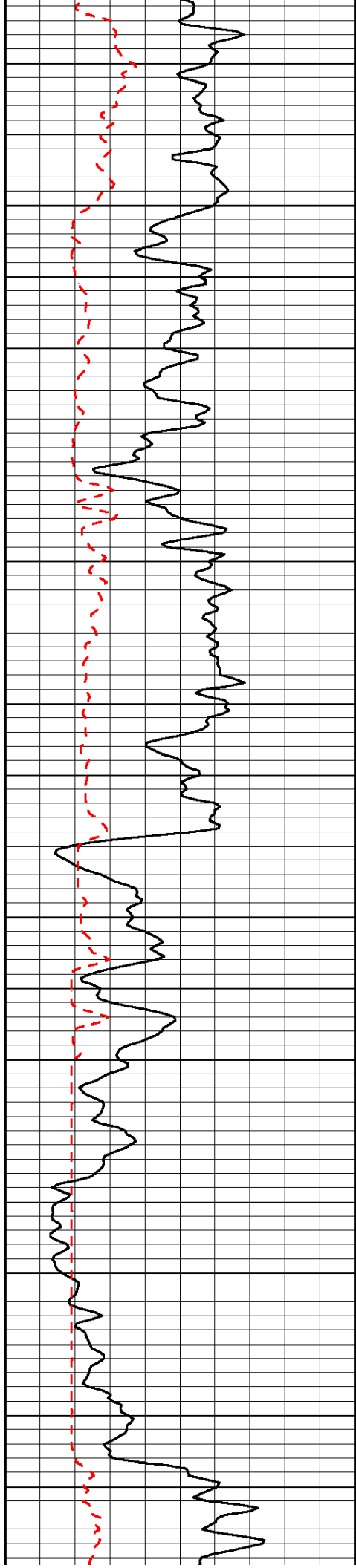


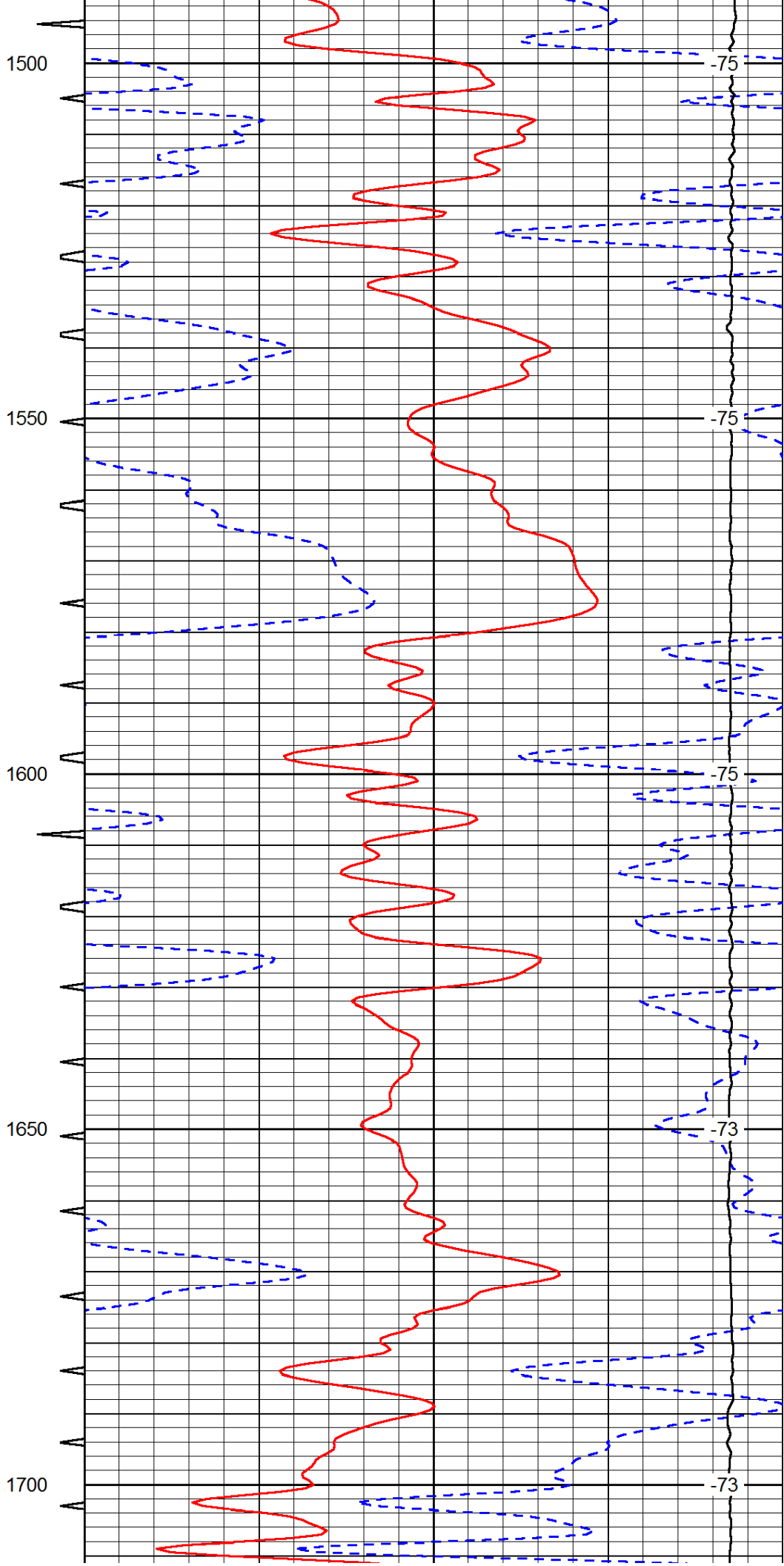
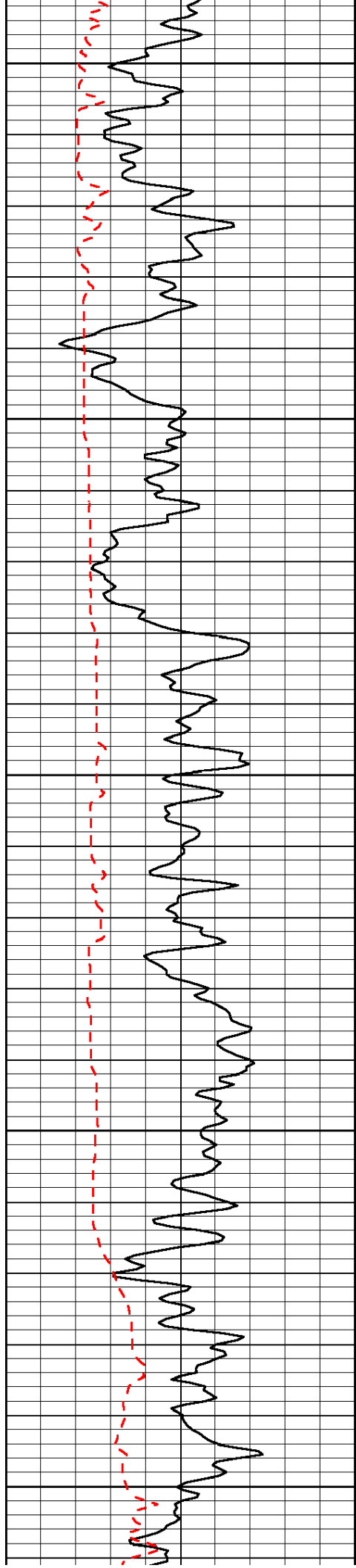




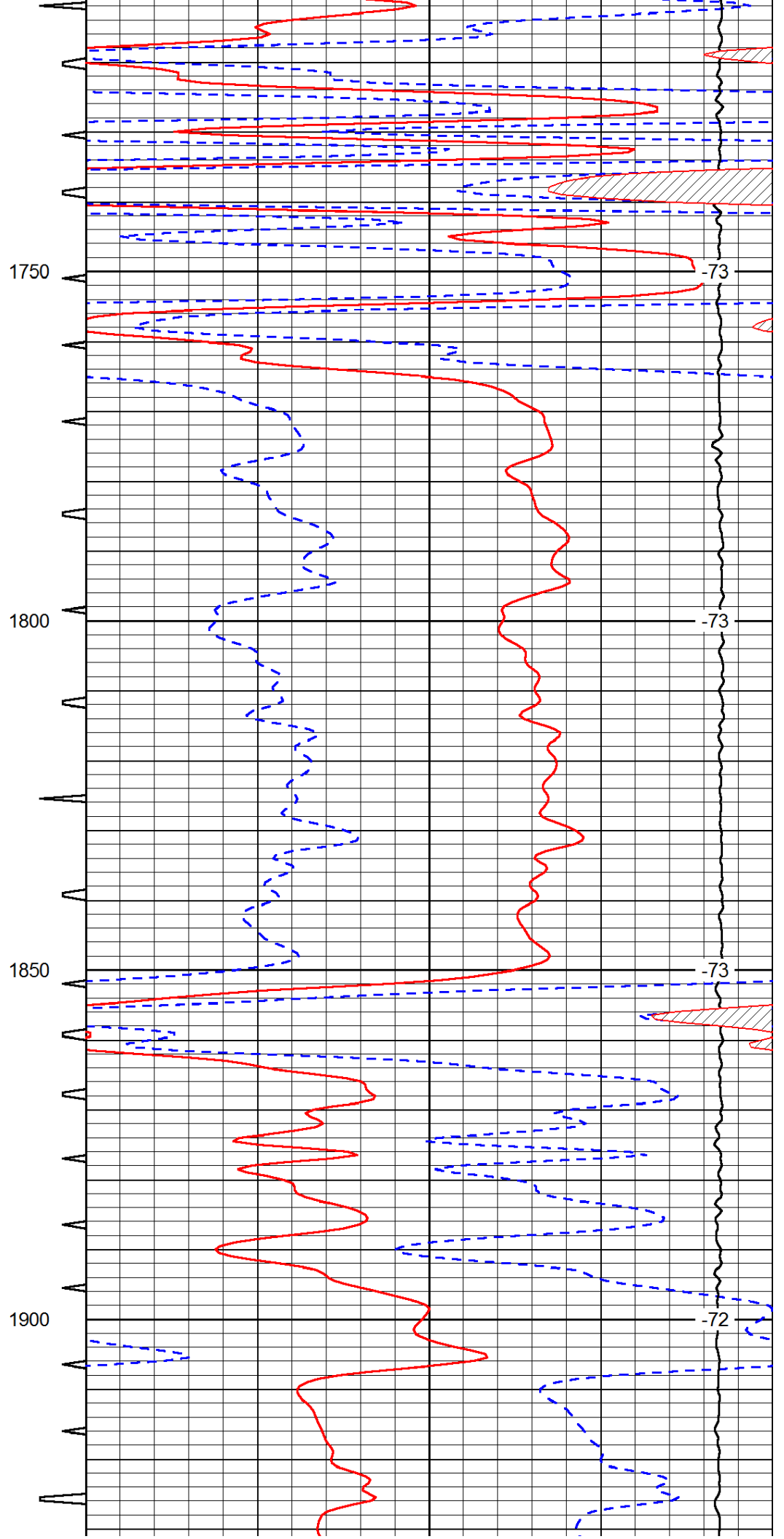
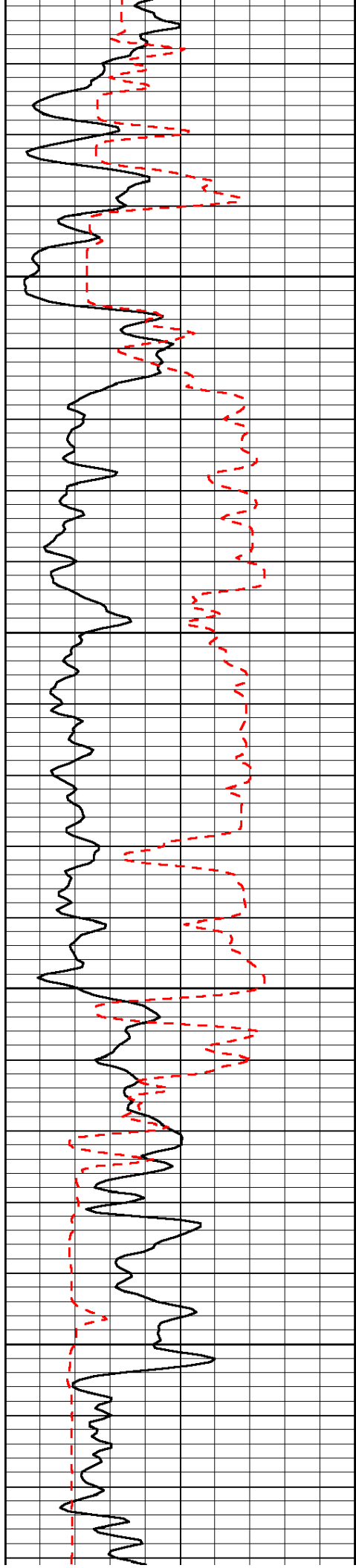


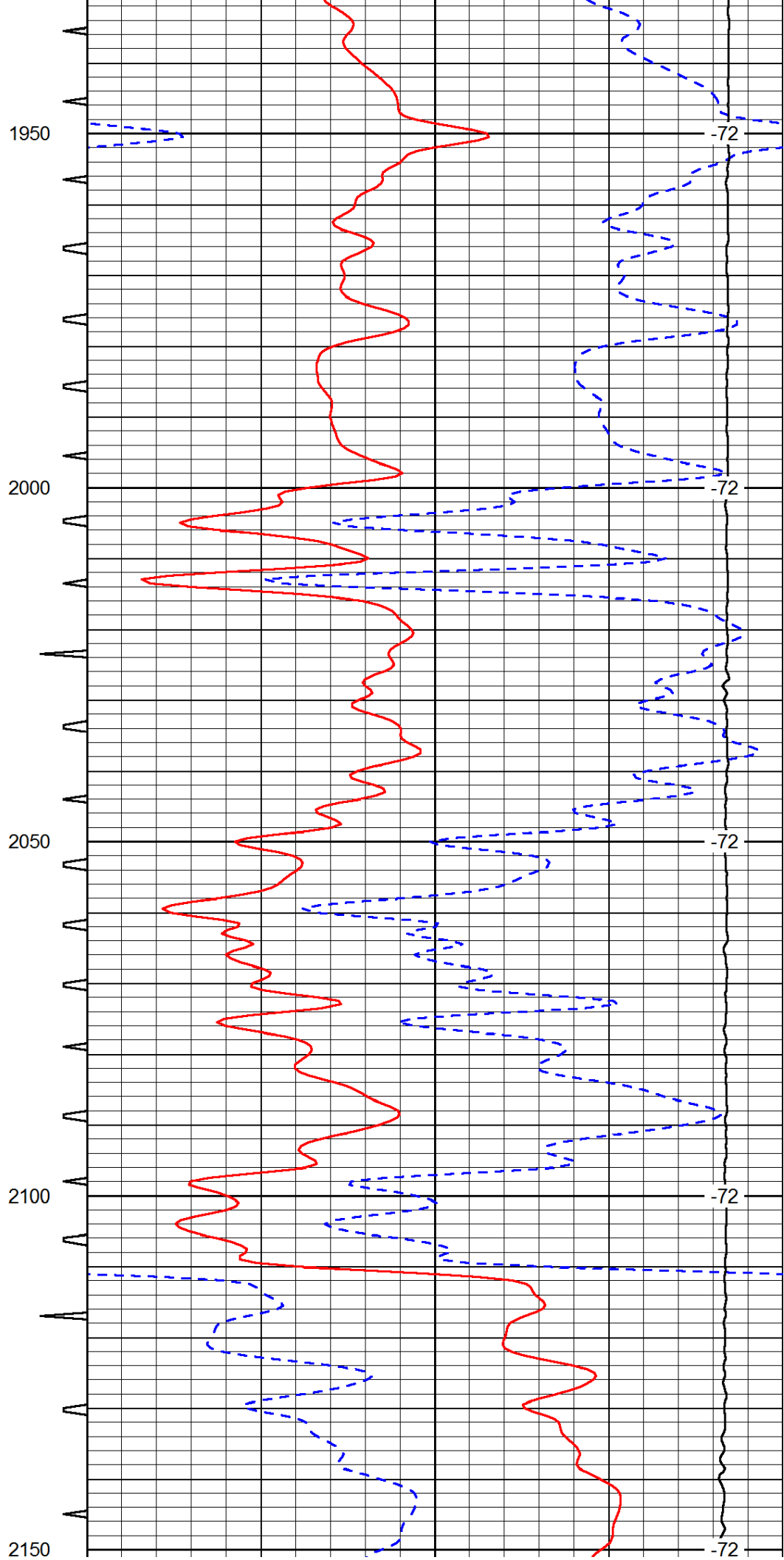
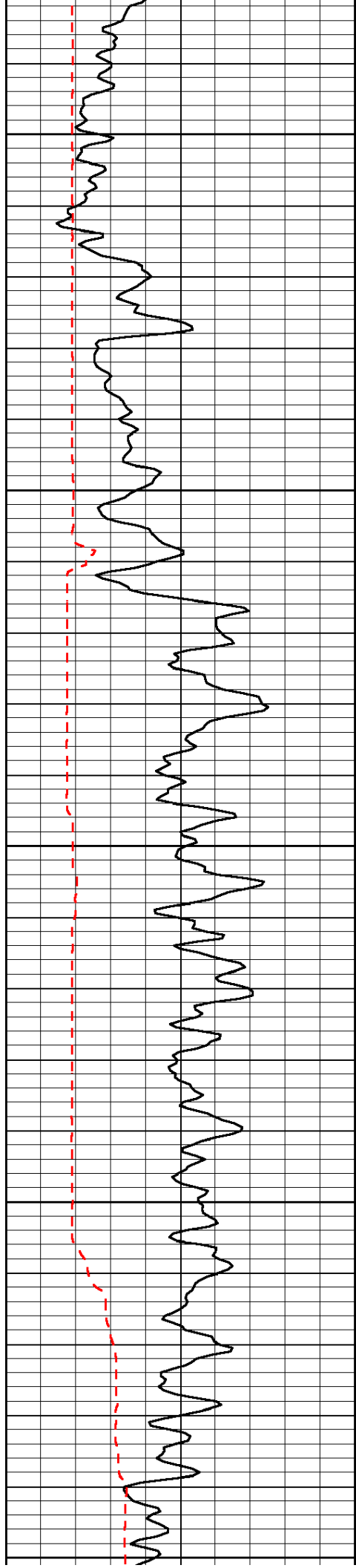


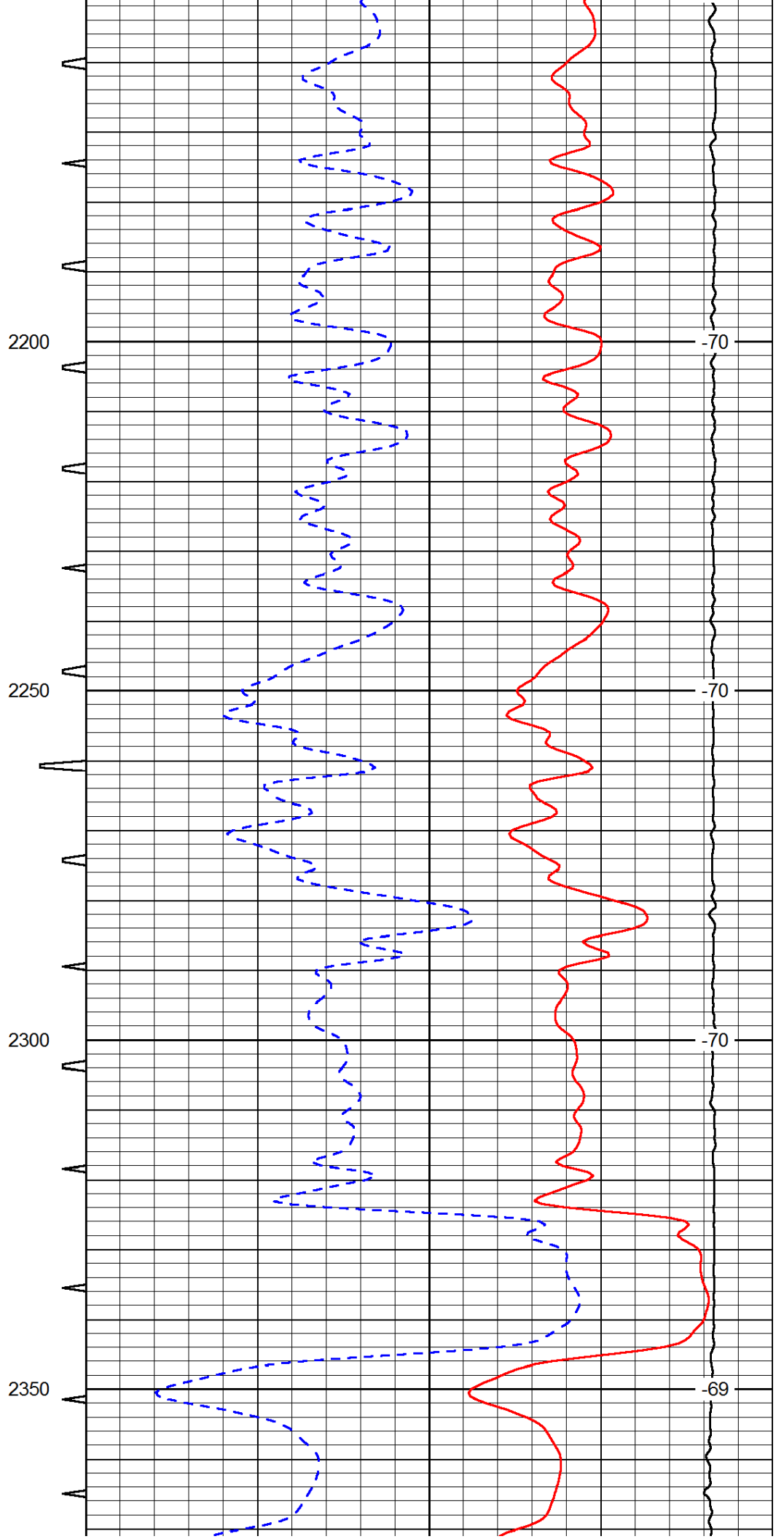
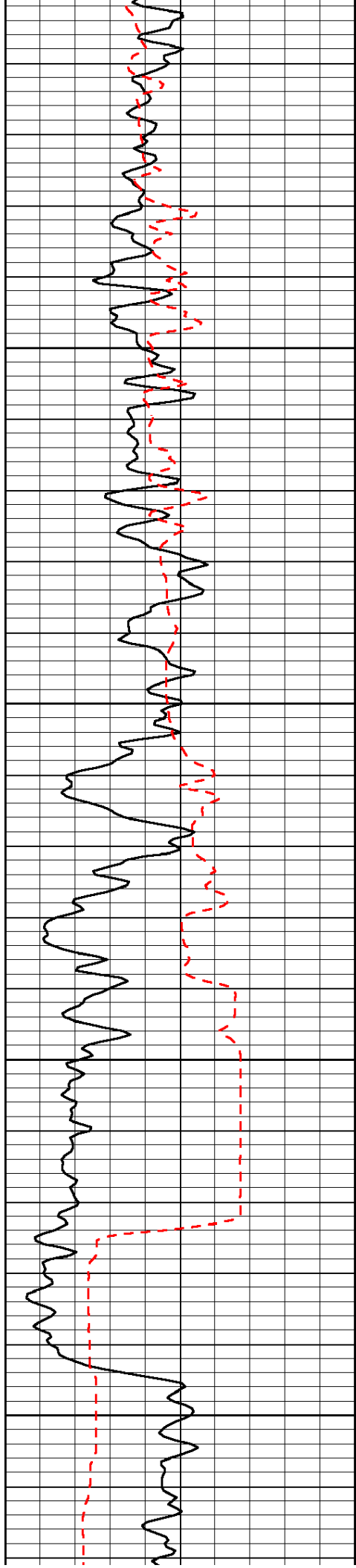


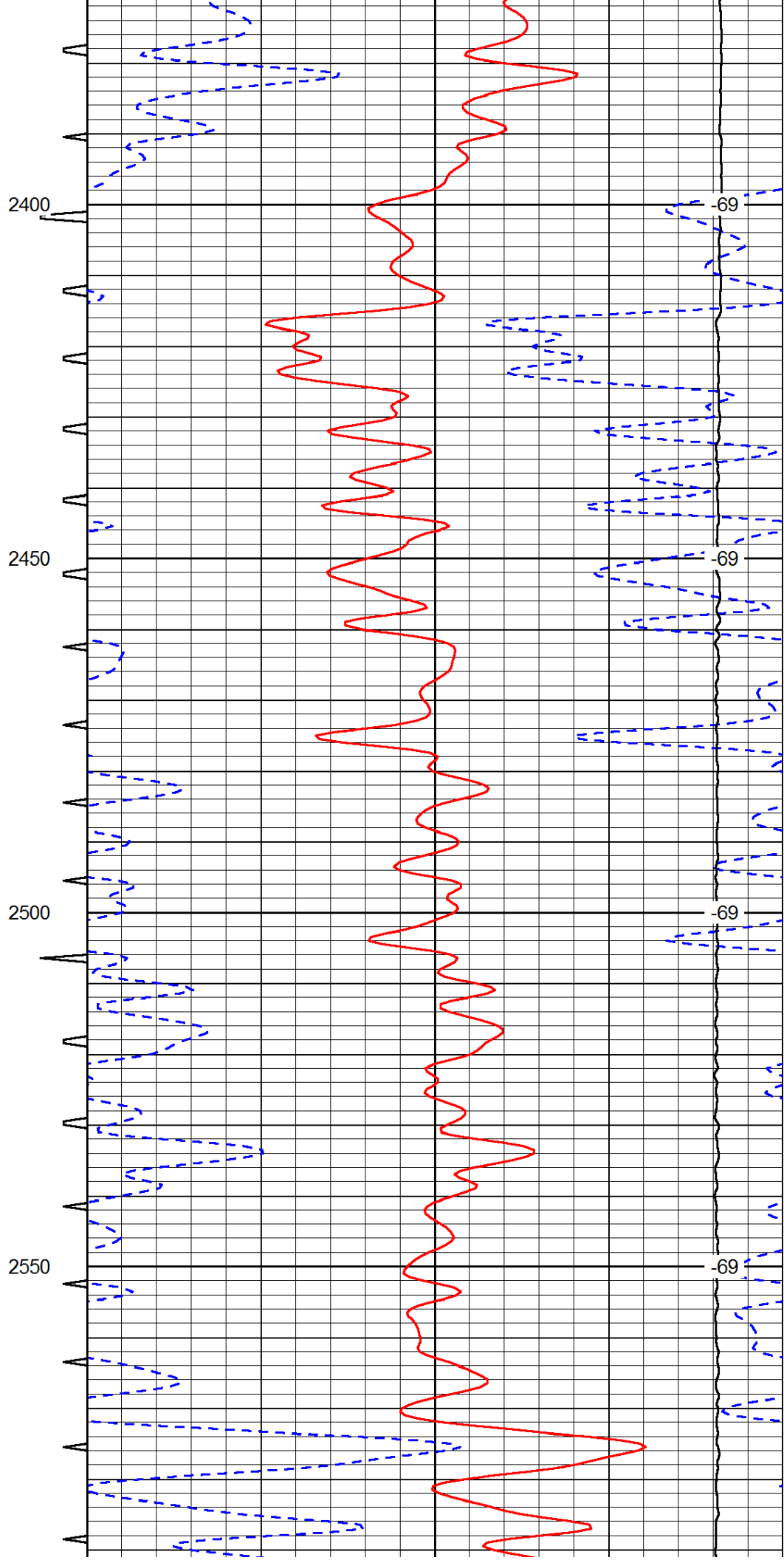
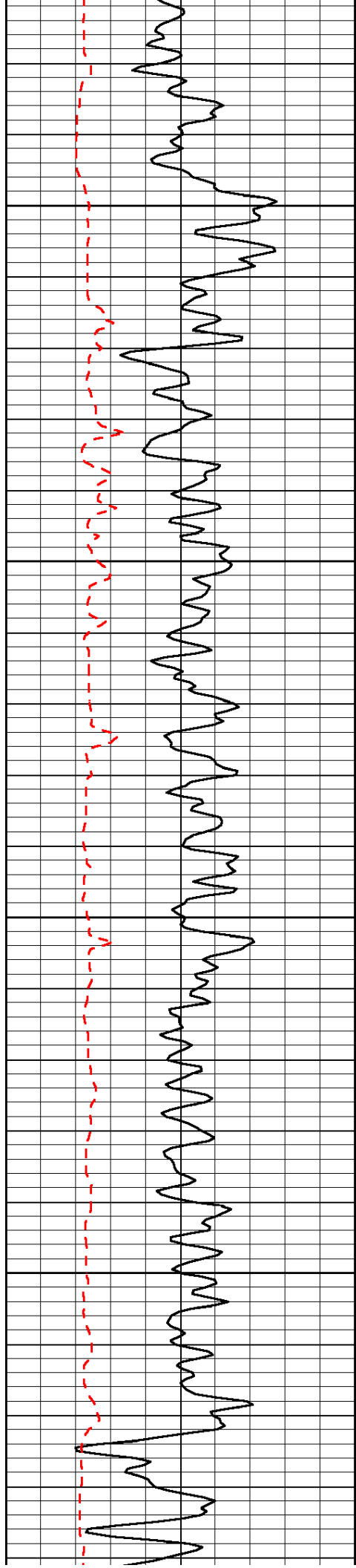


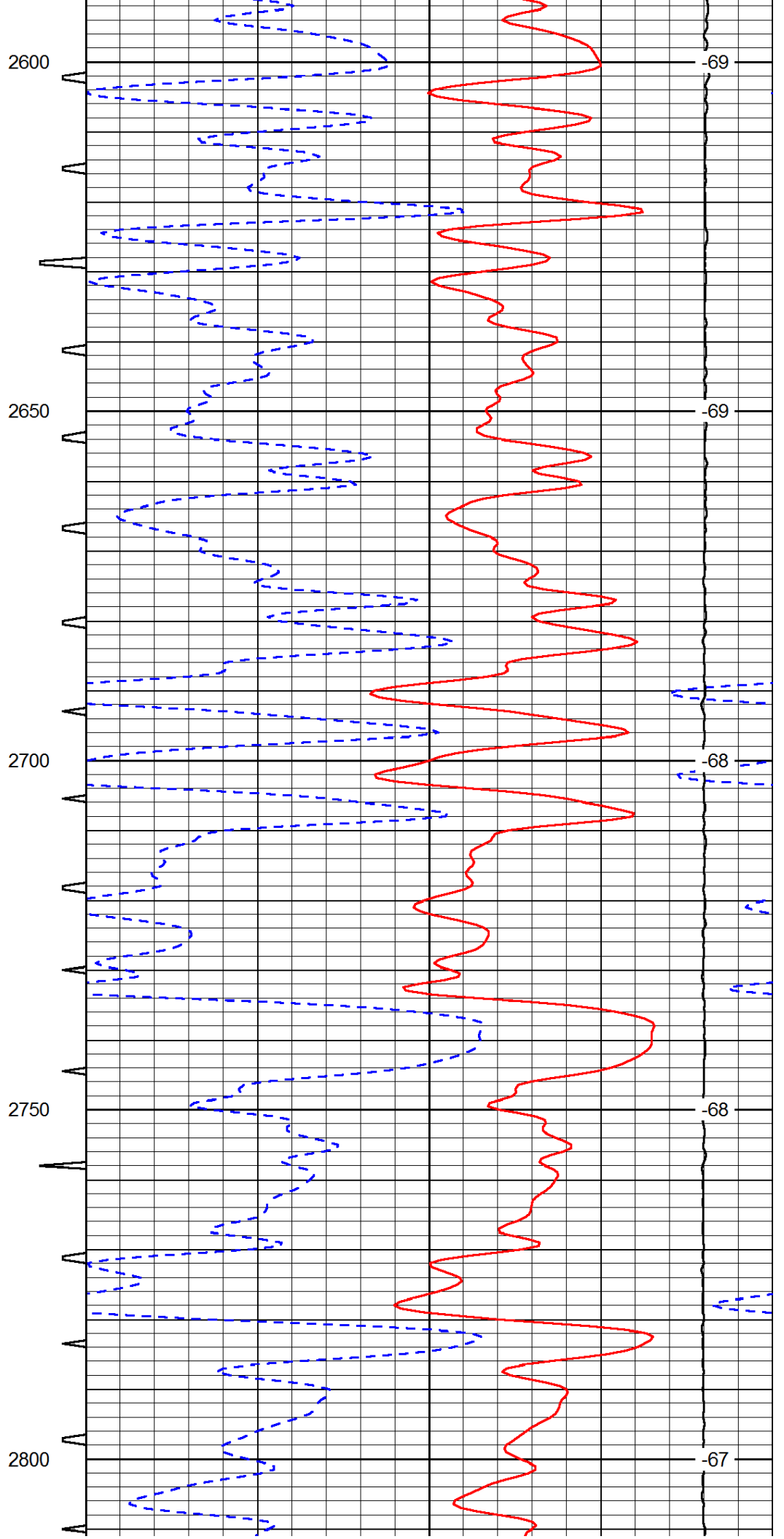
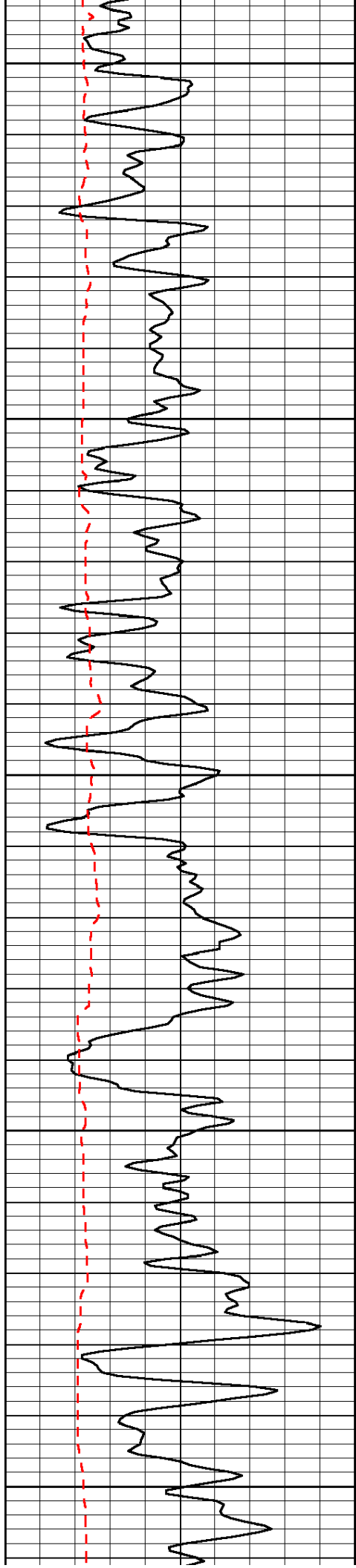


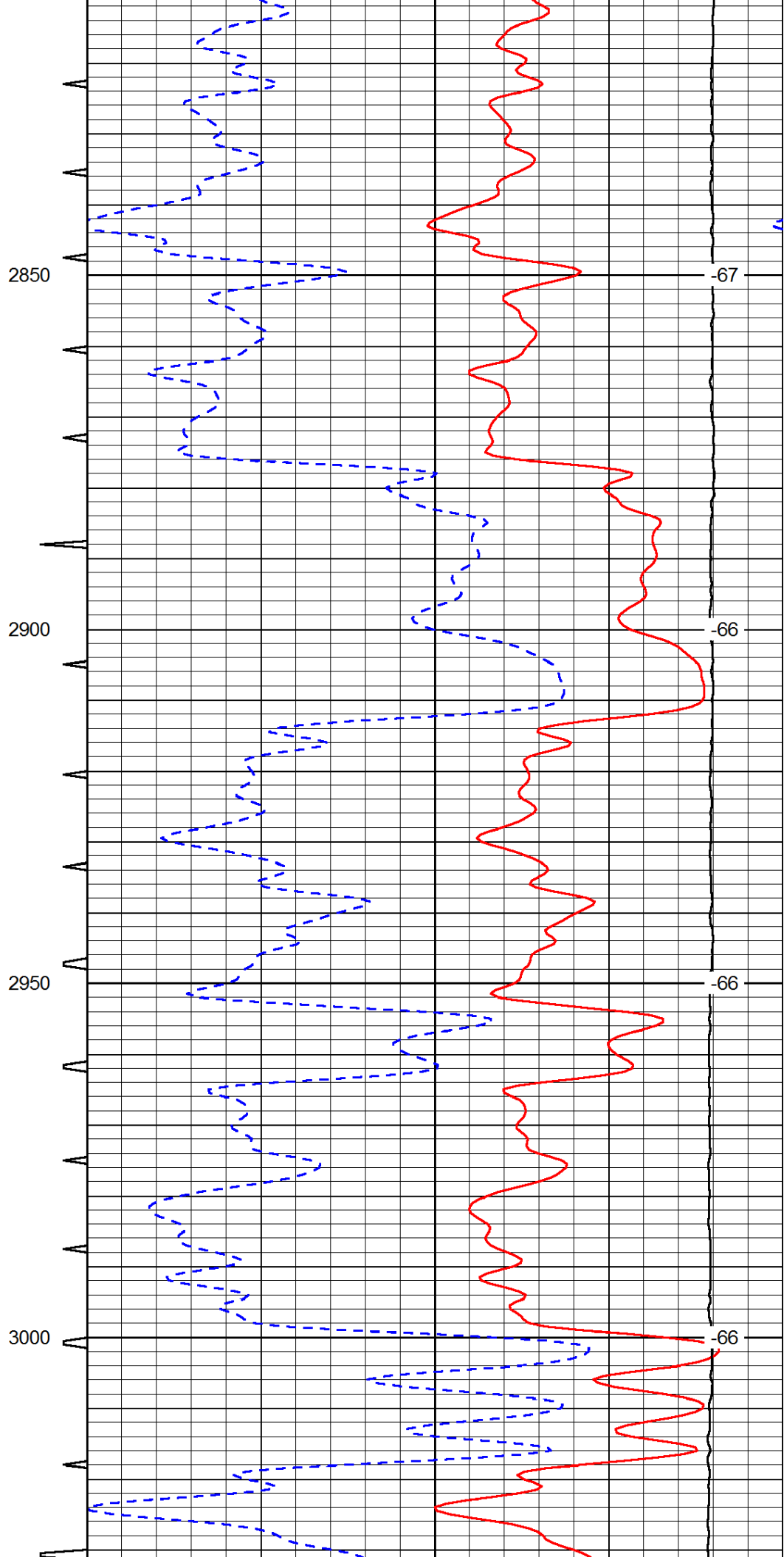
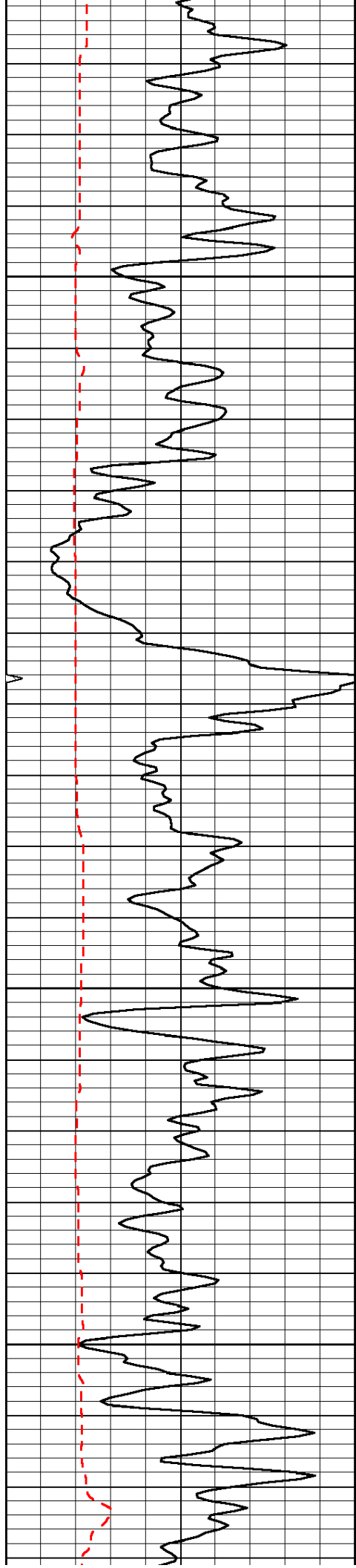


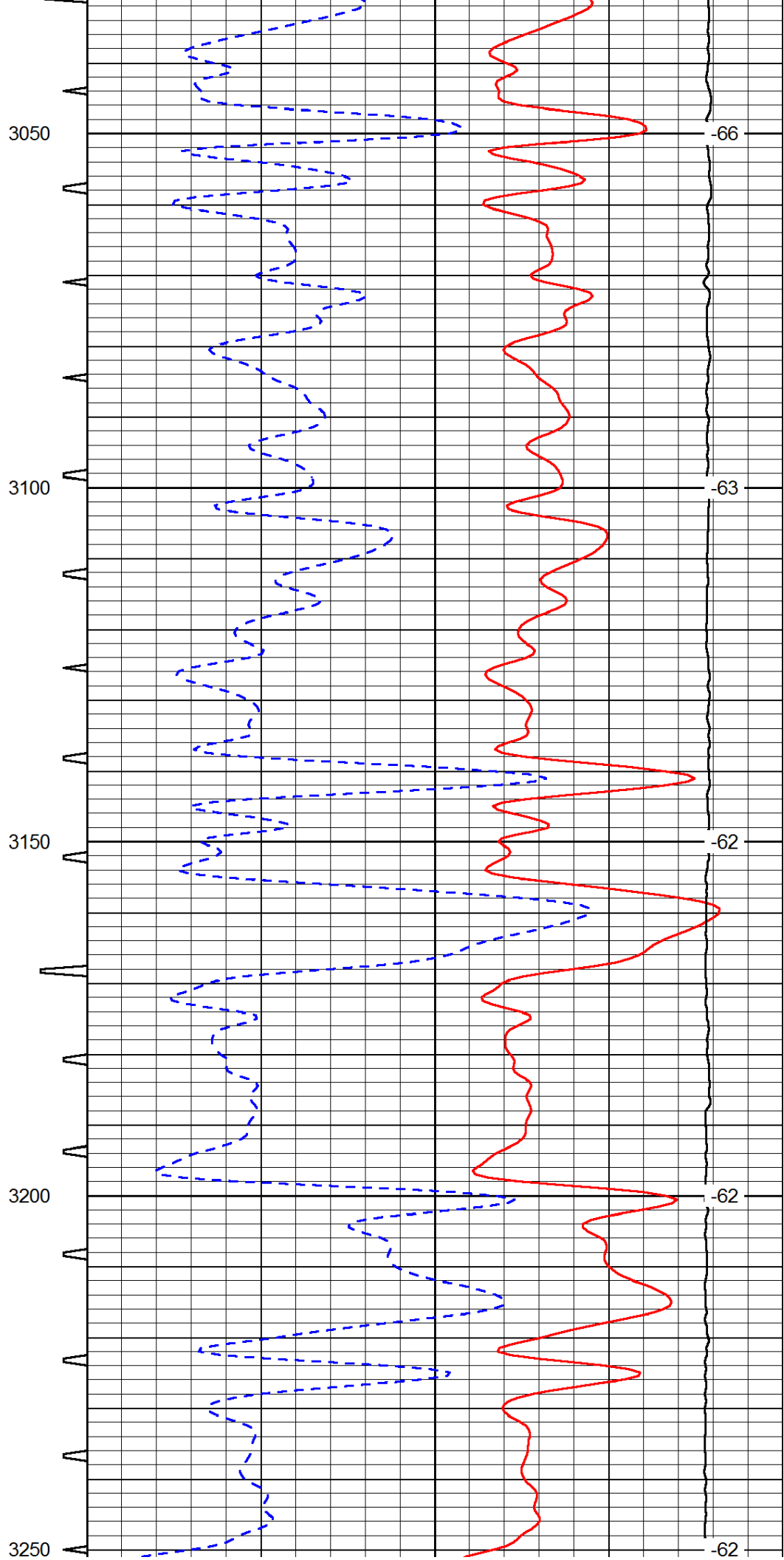
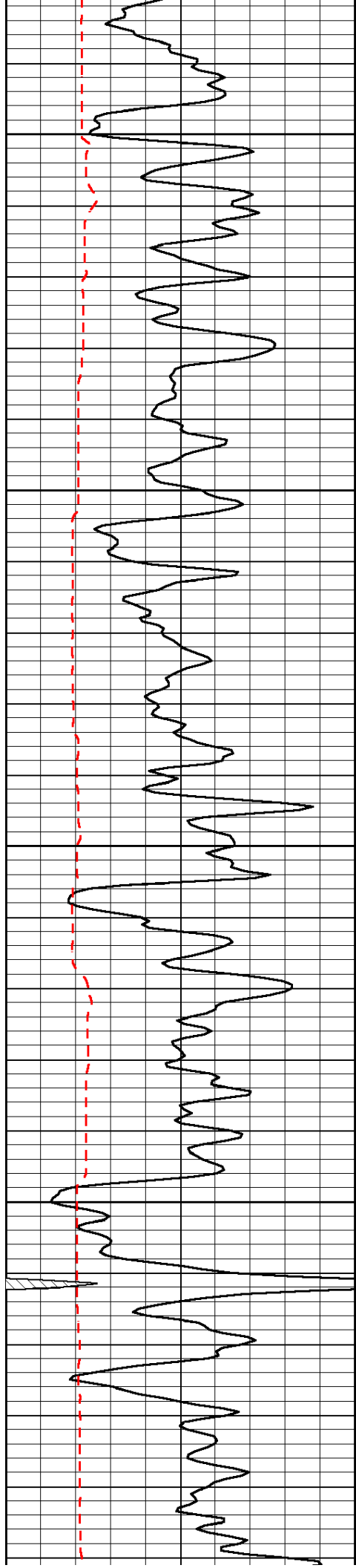


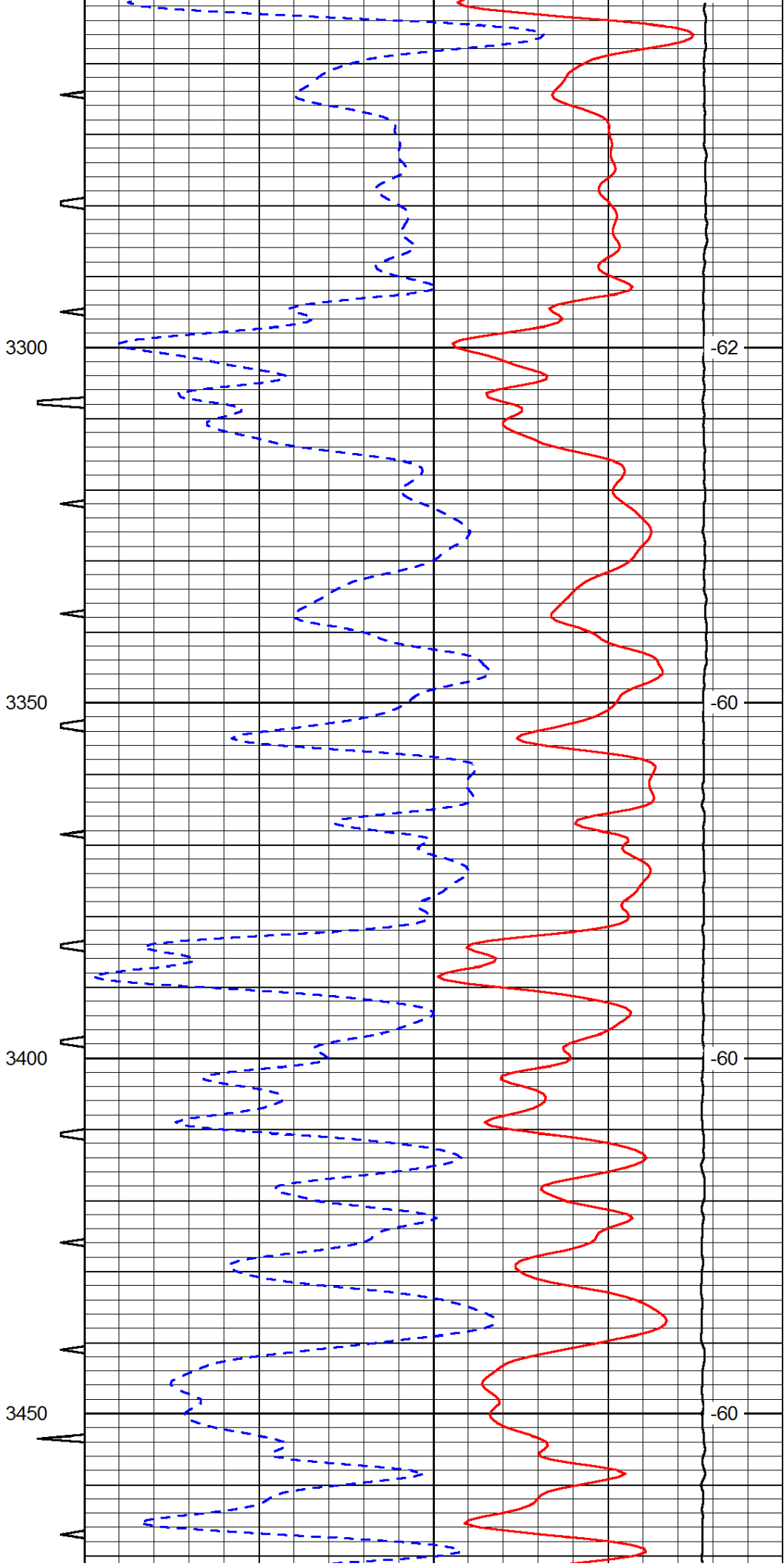
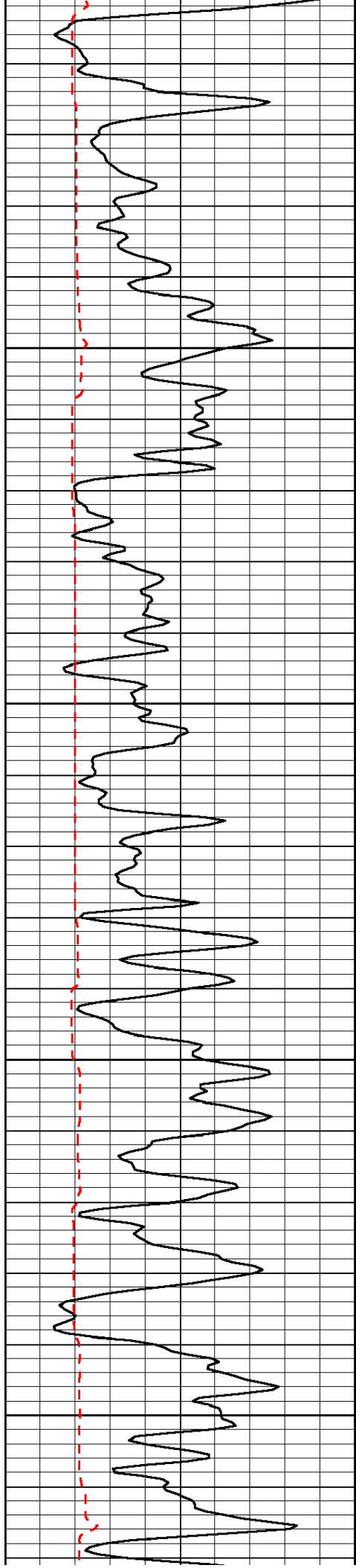




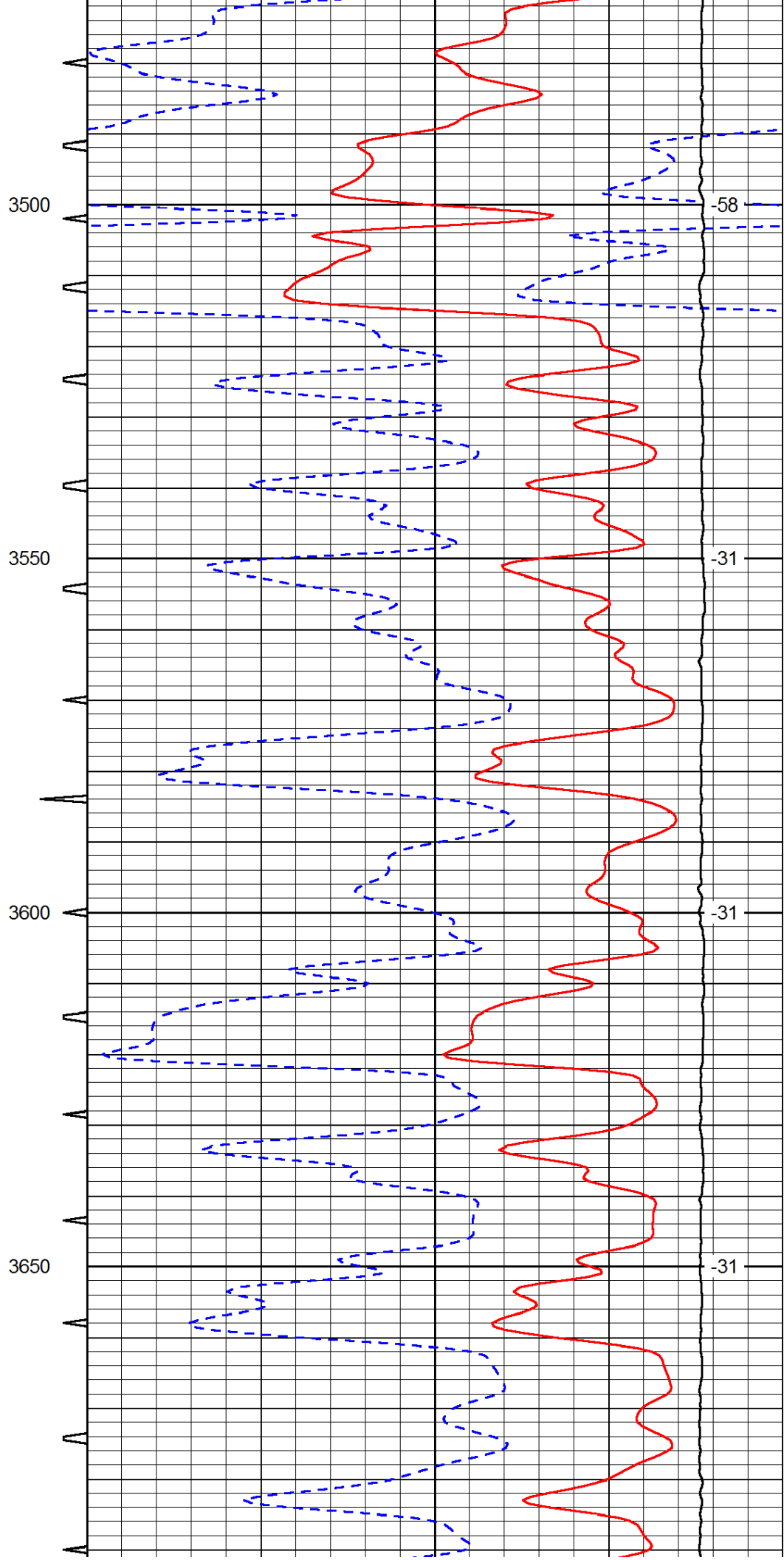
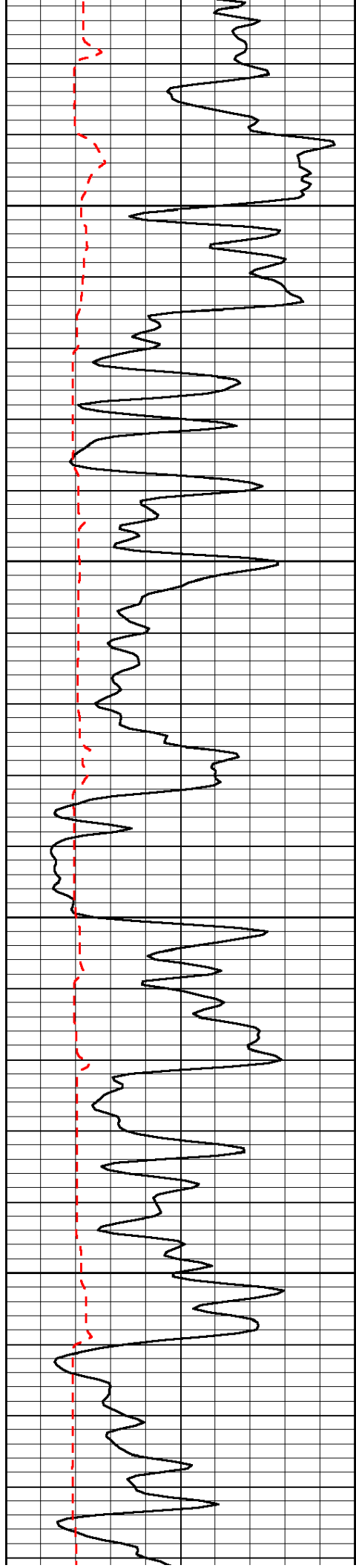


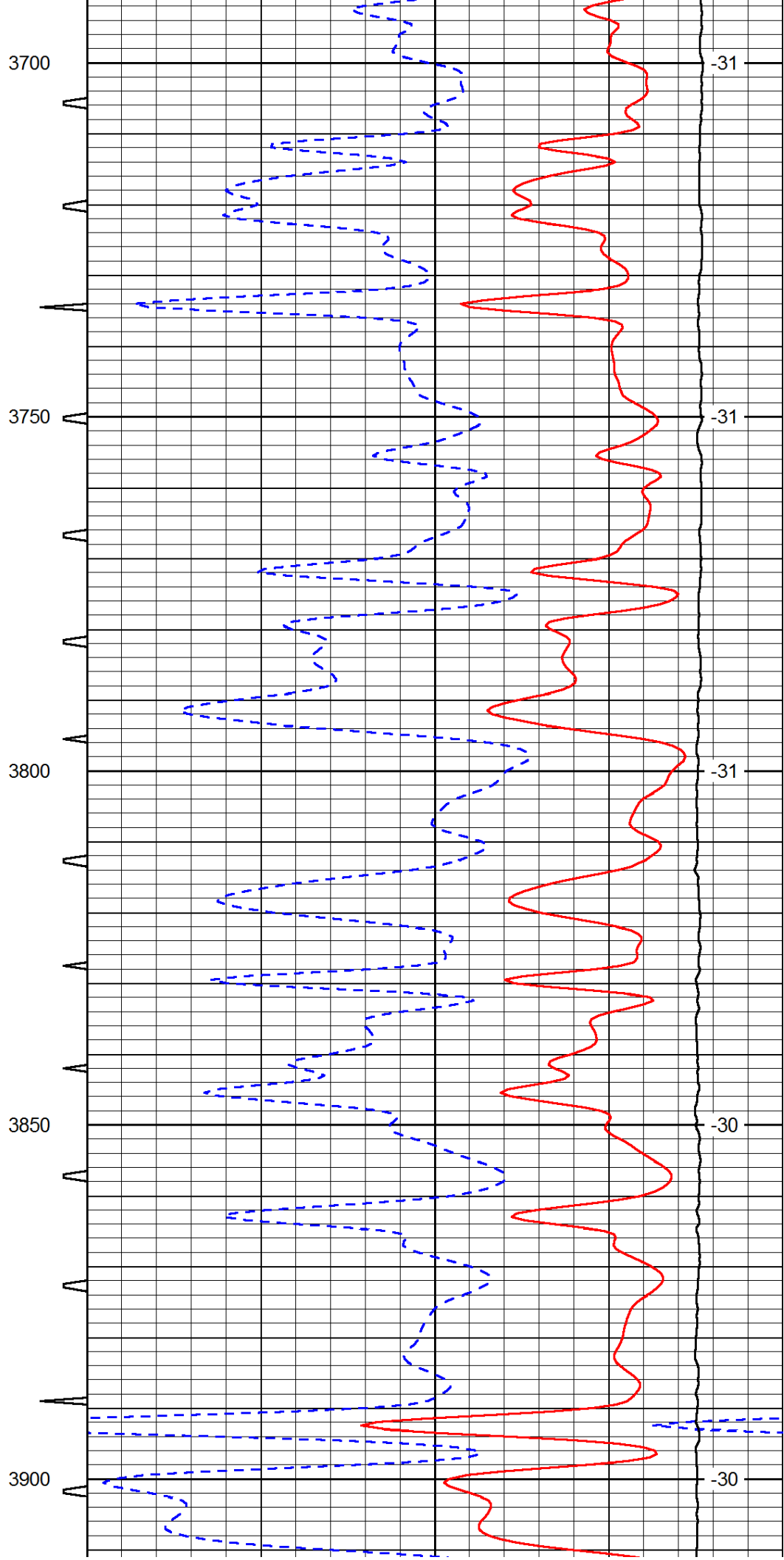
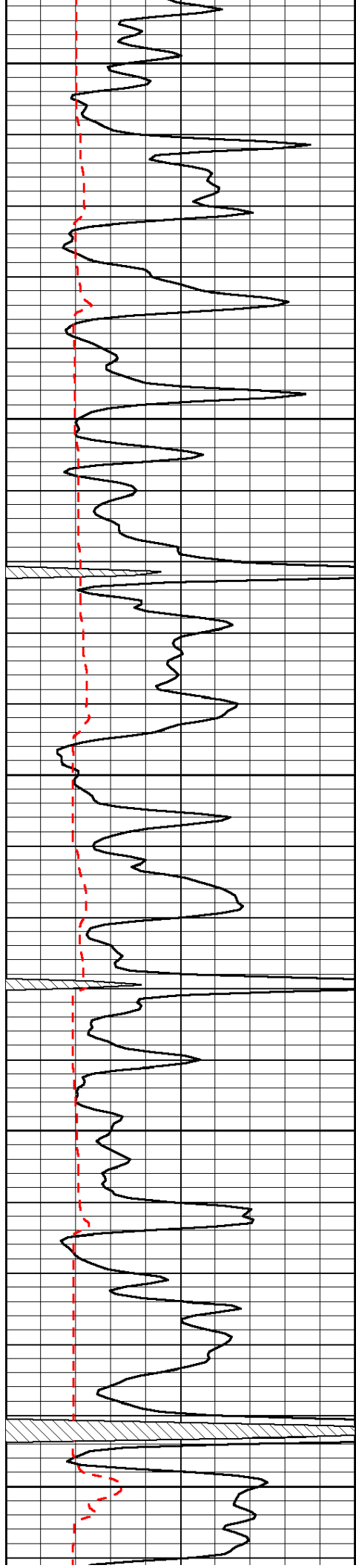


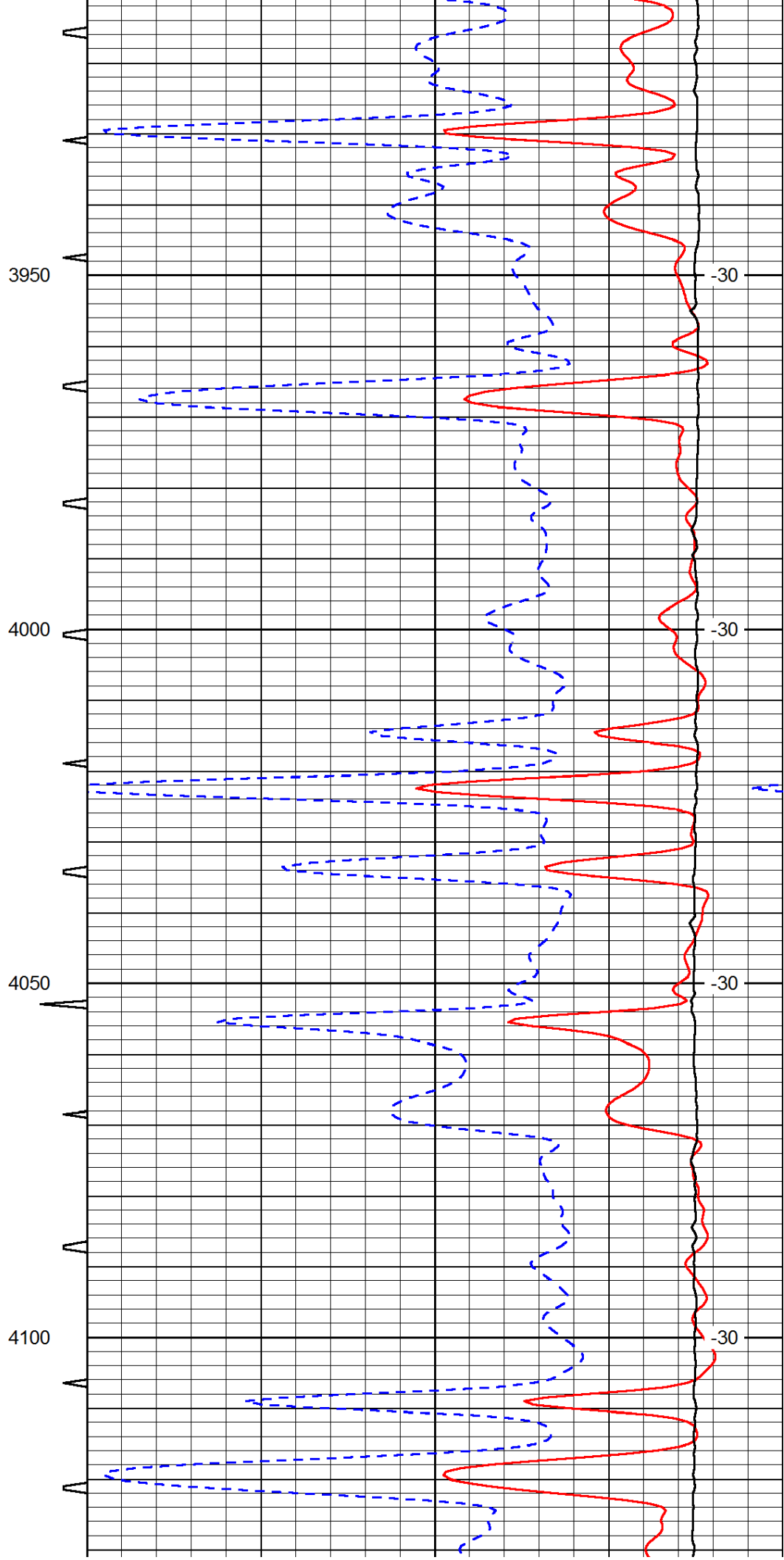
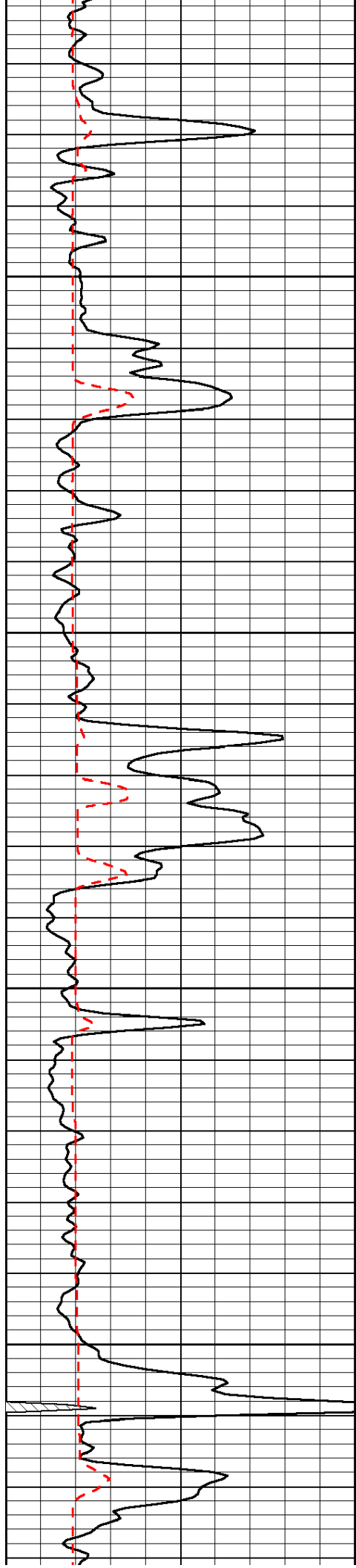


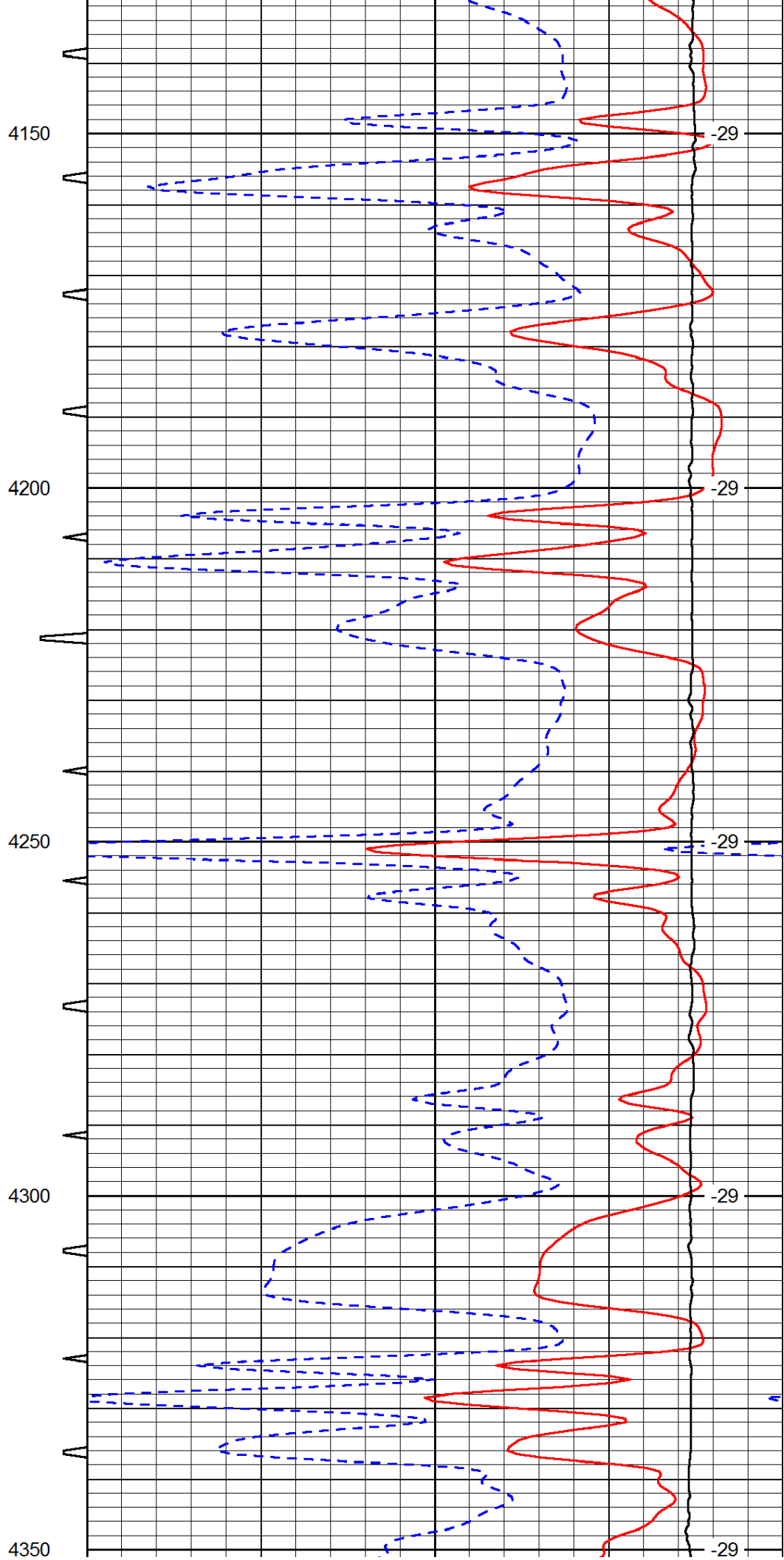
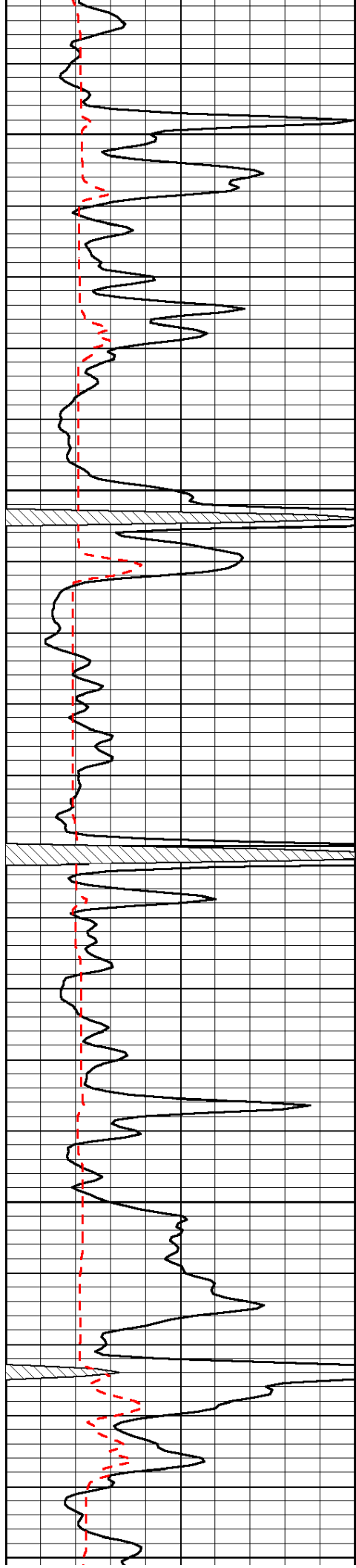


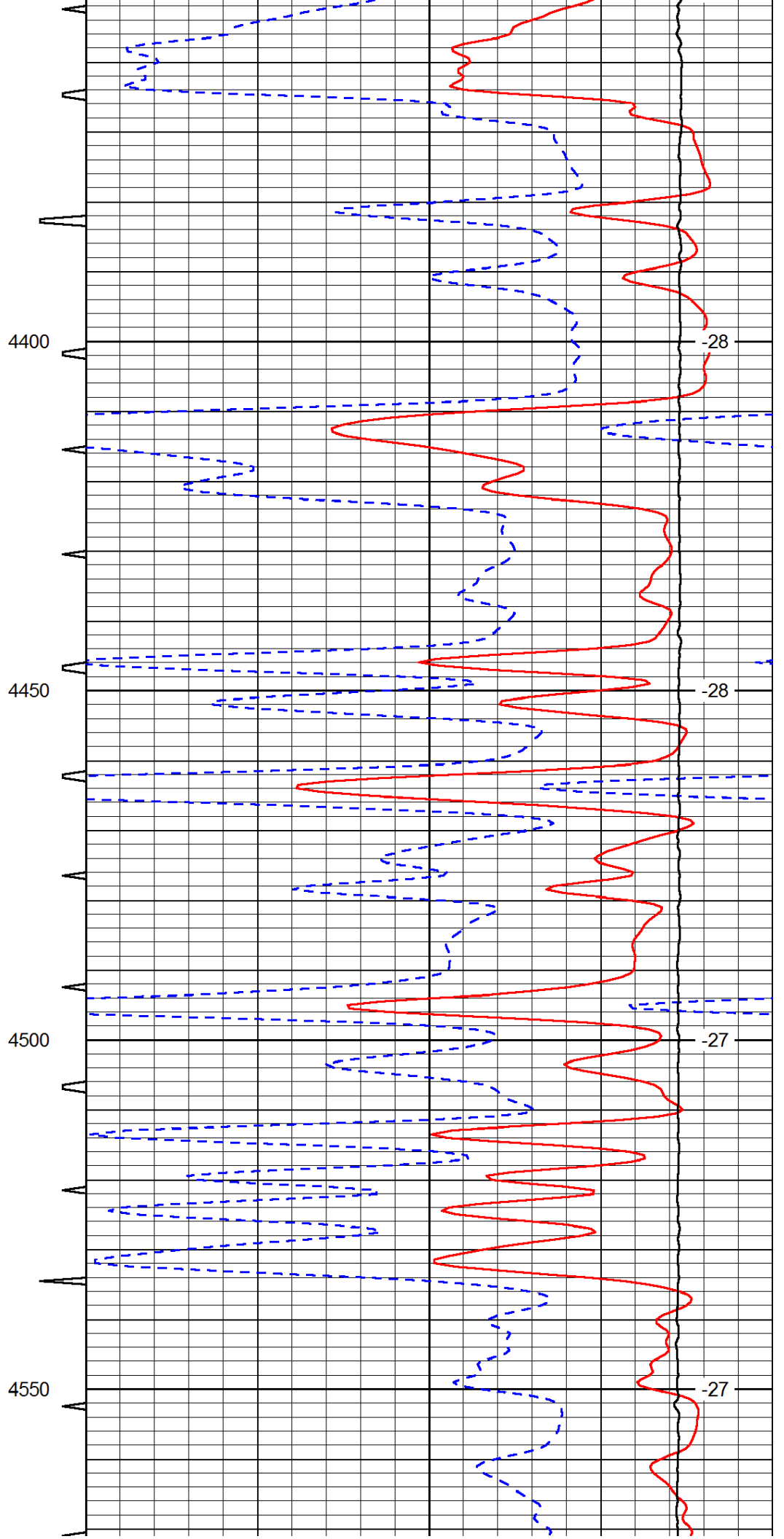
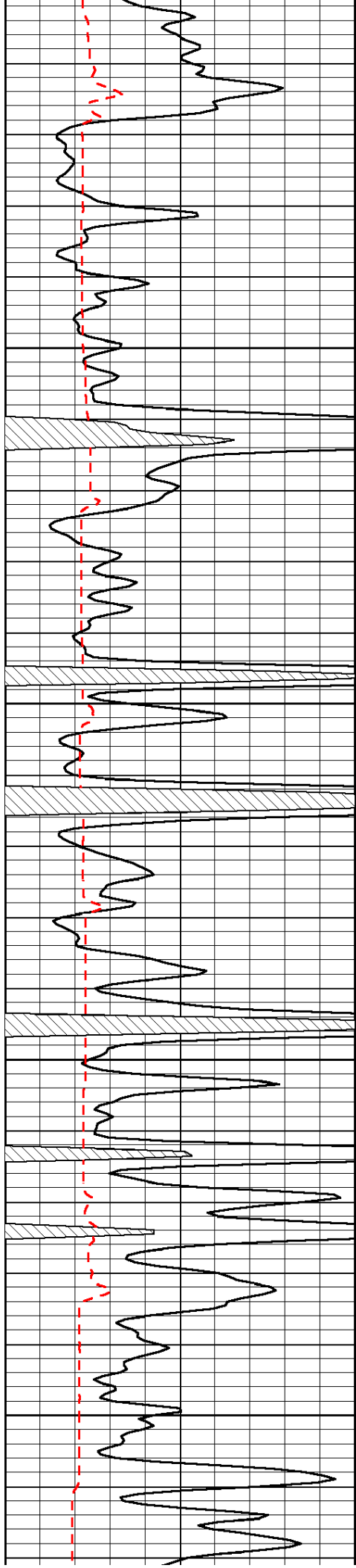


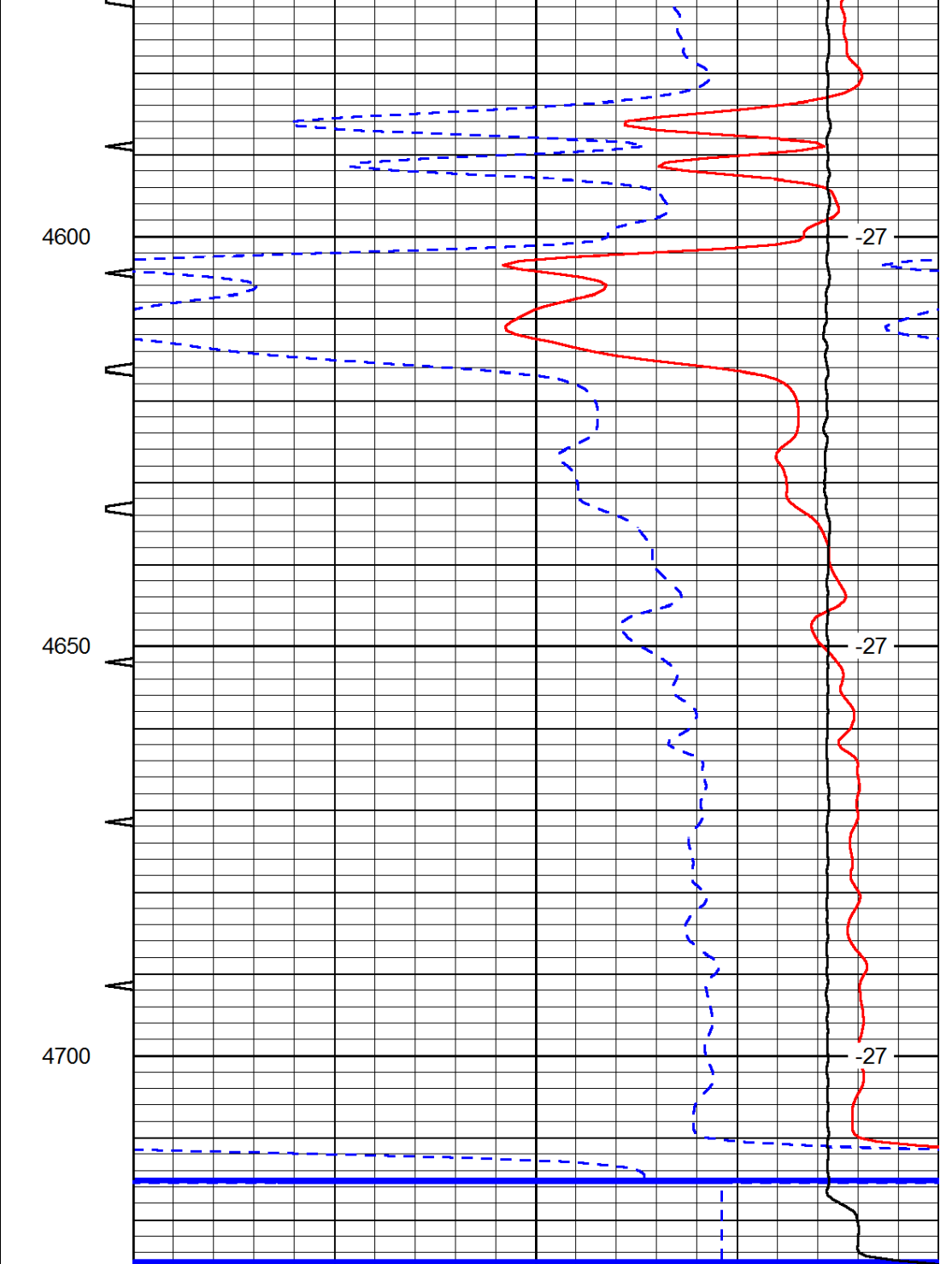
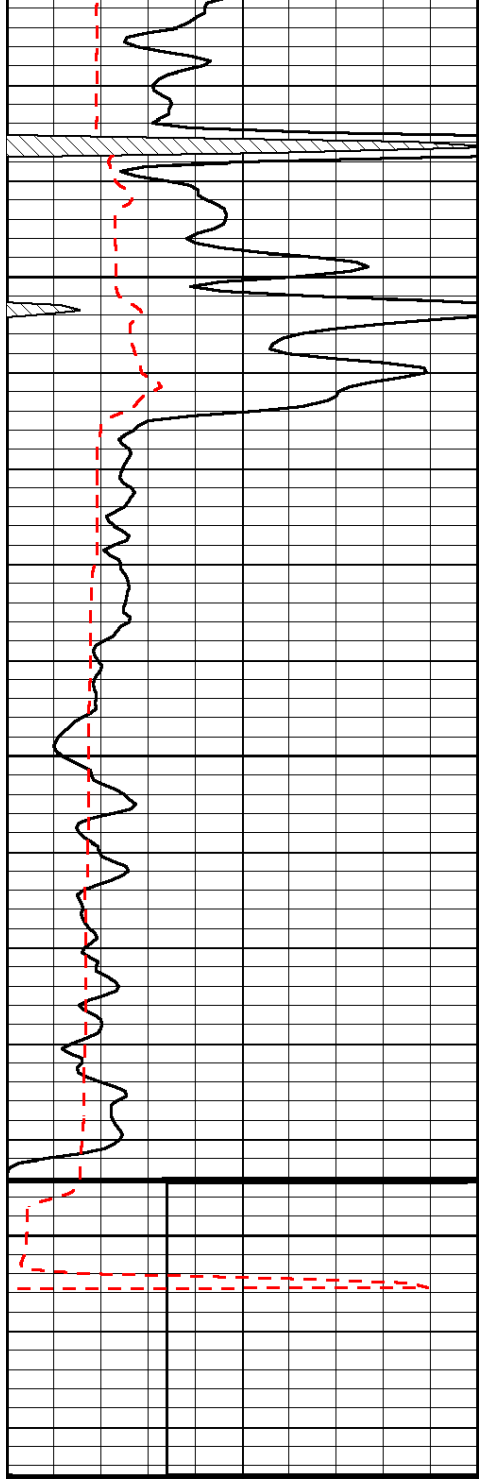












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