



PIONEER

Pioneer Energy Services

Borehole Compensated Sonic Log

API No.

15-051-26418-00-00

Company **Murfin Drilling Company, Inc.**

Well **Haneke Inv #1-18**

Field **Wildcat**

County **Ellis**

State **Kansas**

Location

2550' FNL & 1100' FWL

Sec: **18**

Twp: **11S**

Rge: **20W**

Other Services
CNL/CDL
MEL/DIL

Permanent Datum Ground Level Elevation 2135

Log Measured From Kelly Bushing 5 Ft. Above Perm. Datum

K.B. 2140
D.F.
G.L. 2135

Date 11/9/2012

Run Number Two

Type Log BHC Sonic

Depth Driller 3814

Depth Logger 3812

Bottom Logged Interval 3801

Top Logged Interval 200

Type Fluid In Hole Chemical

Salinity, PPM CL 6900

Density 9.3

Level Full

Max. Rec. Temp. F 116

Operating Rig Time 5 Hours

Equipment -- Location 91 Hays

Recorded By D. Schmidt

Witnessed By Paul Gunzelman

Borehole Record

Casing Record

Run No	Bit	From	To	Size	Wgt.	From	To
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One	12.25	00	217	8.625	23#	00	217
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Two	7.875	217	TD				
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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.

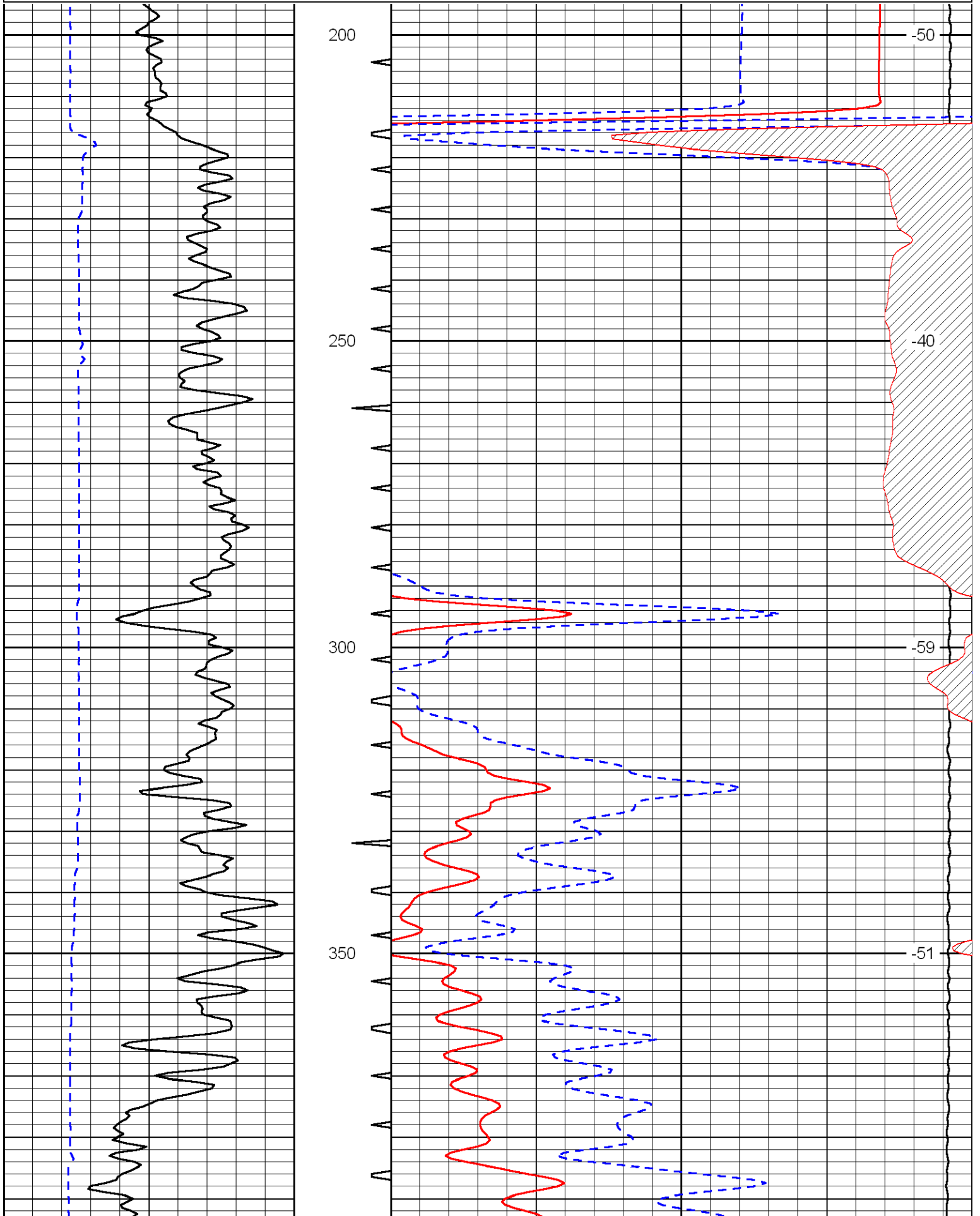
Comments

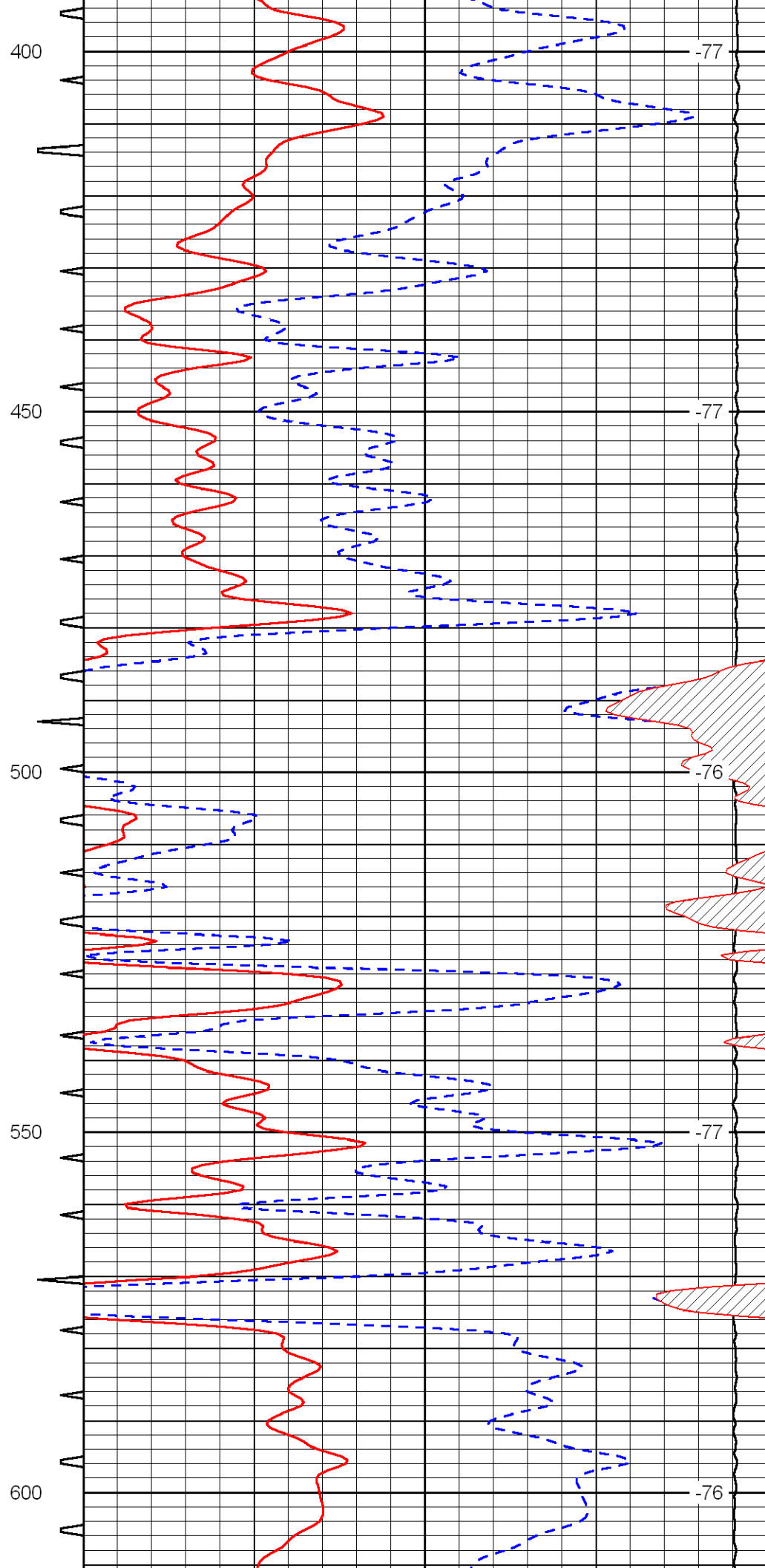
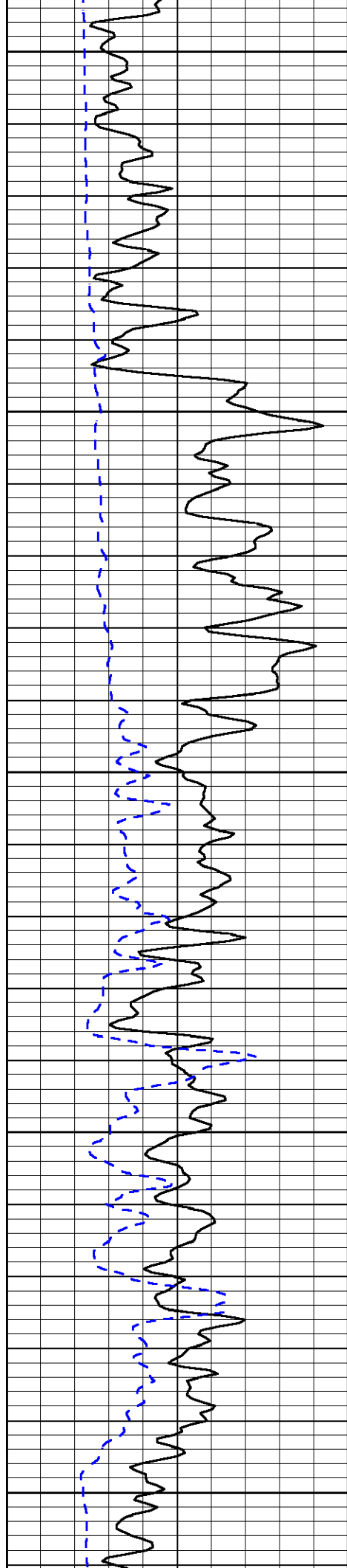
Thank you for using Log-Tech, Inc.
(785) 625-3858

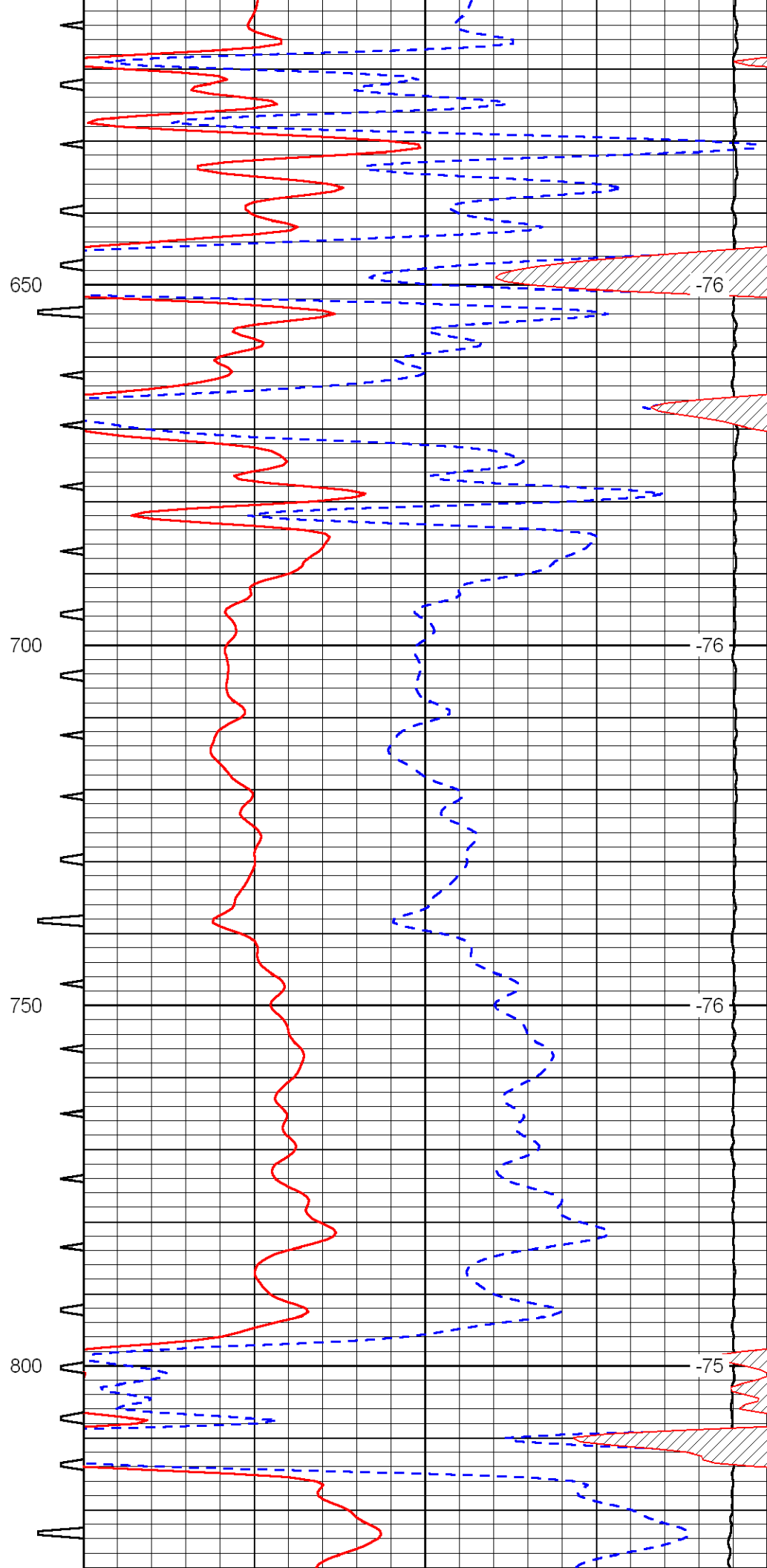
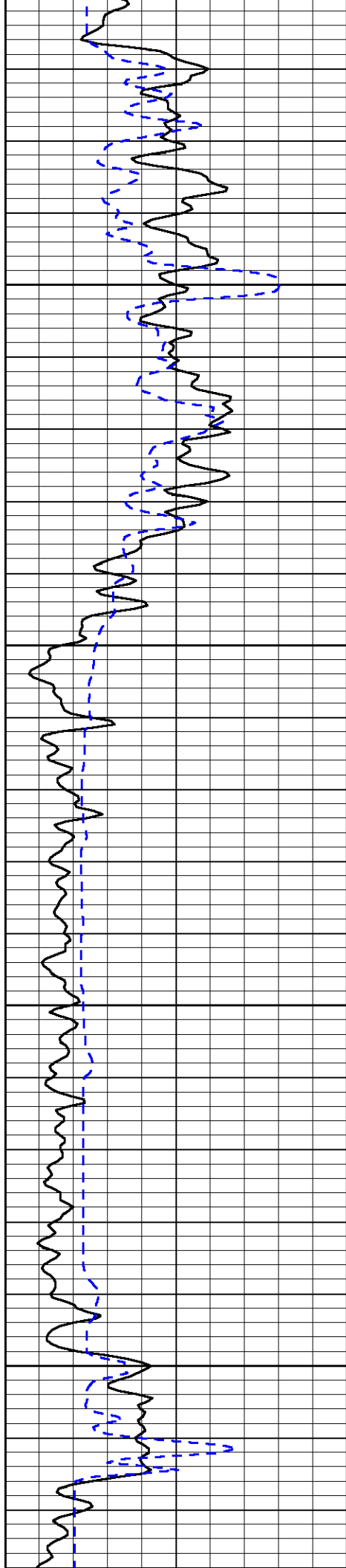
Ellis,
10 1/2 North to Riverview Rd, 2 West, 1 North, 1 West, 1/2 South,
East into

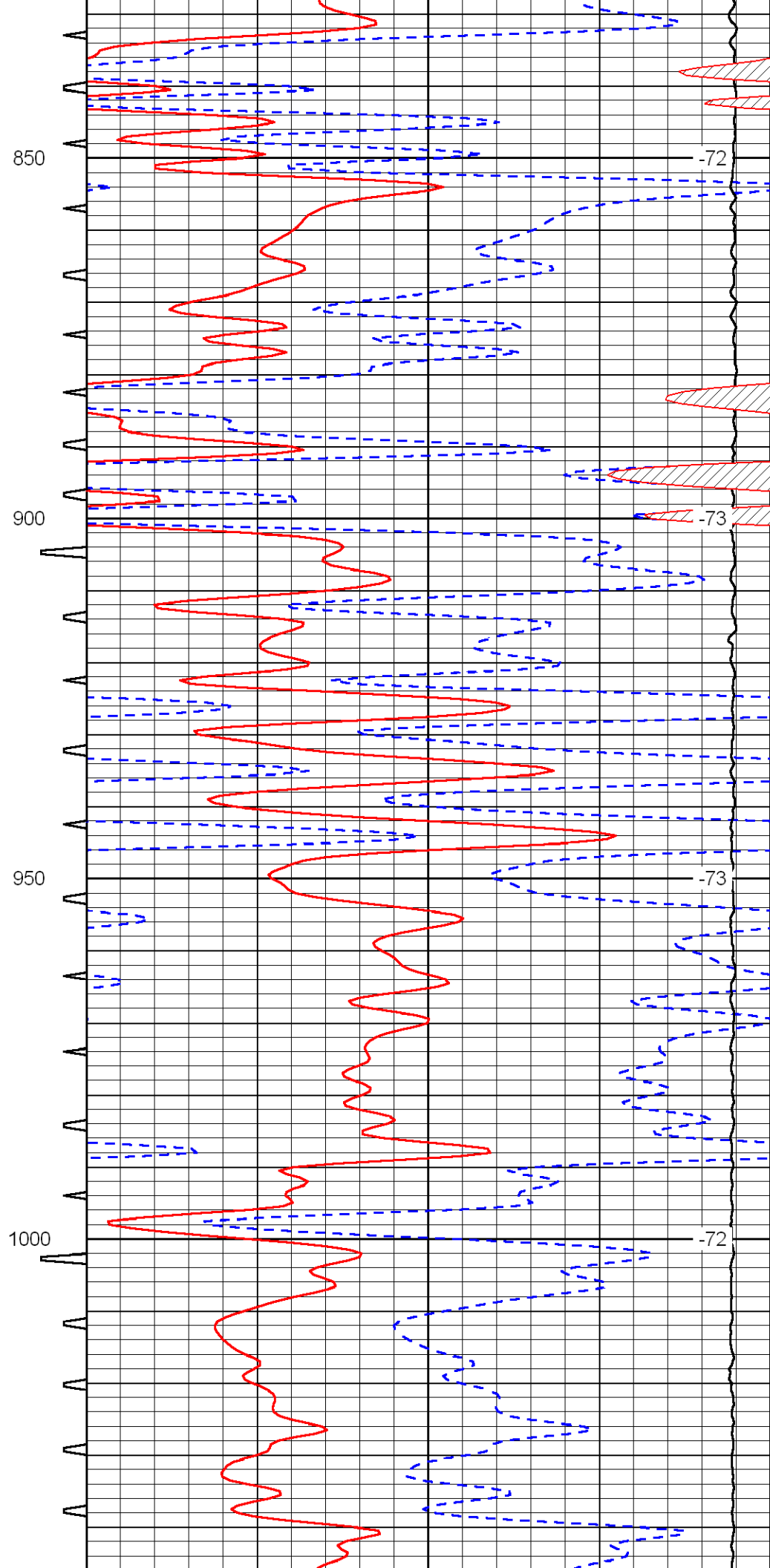
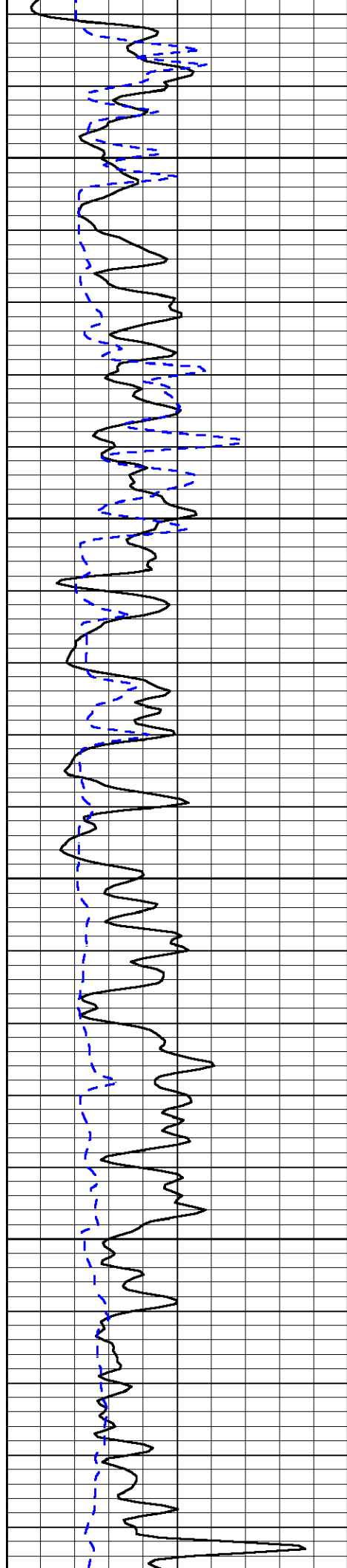
Database File: murfin_110912hd.db
Dataset Pathname: dil/mrfstack
Presentation Format: sonic
Dataset Creation: Fri Nov 09 20:40:04 2012
Charted by: Depth in Feet scaled 1:240

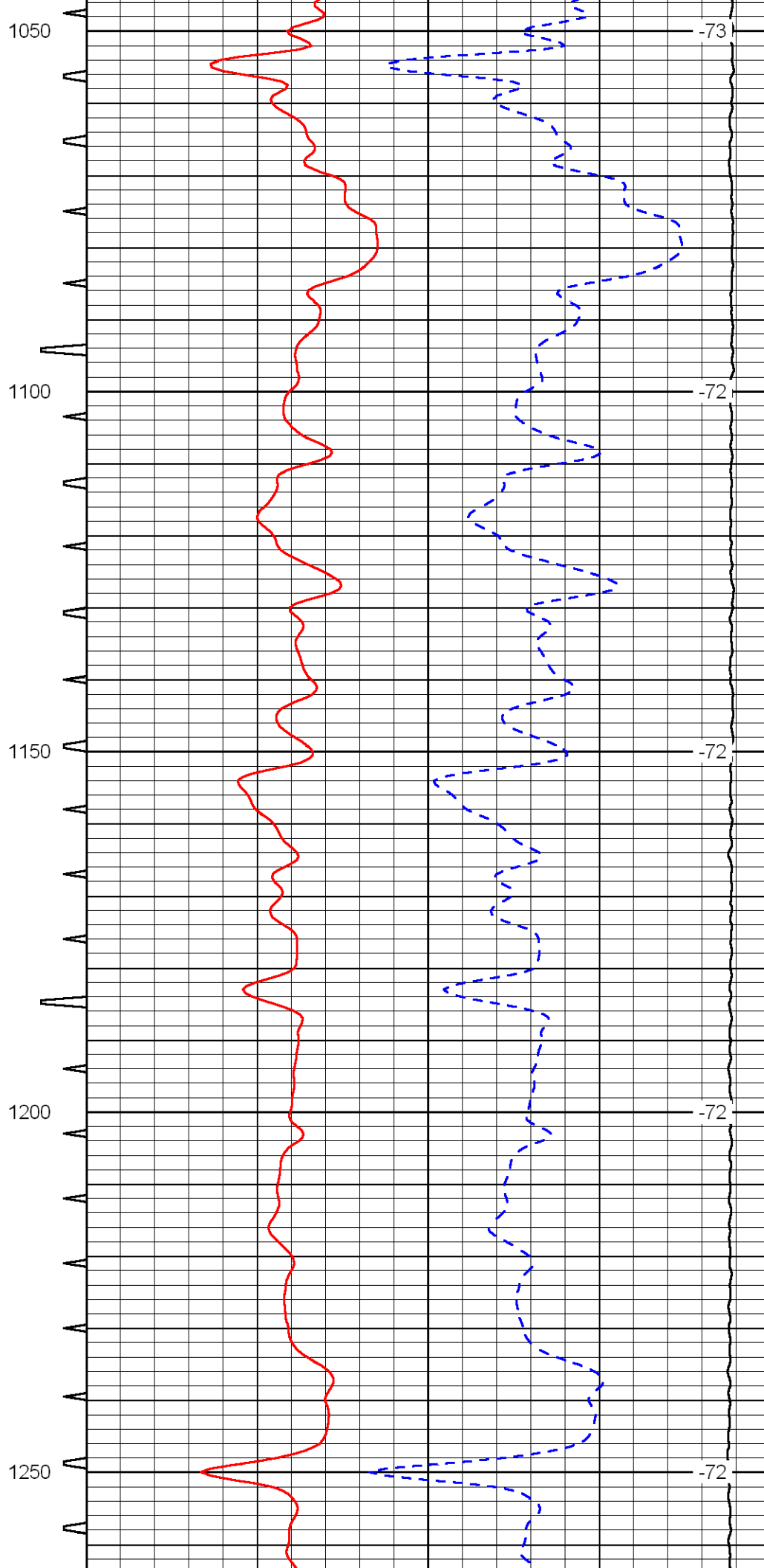
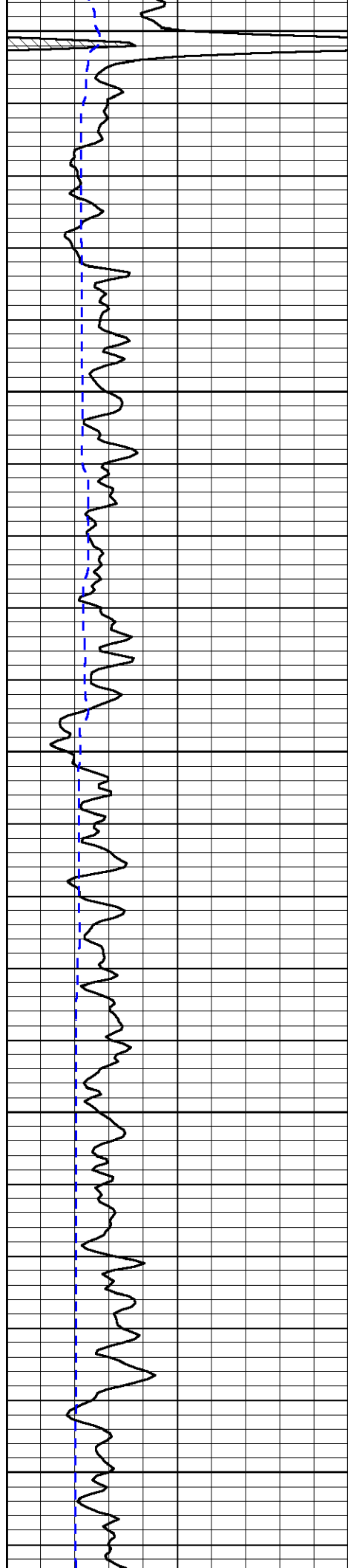
0	Gamma Ray	150	Sonic Int	140	Delta Time (usec/ft)	40
150	Gamma Ray	300	5	0	Sonic Porosity	-10
6	dCAL (GAPI)	16		30	LTEN (lb)	0
						LSPD

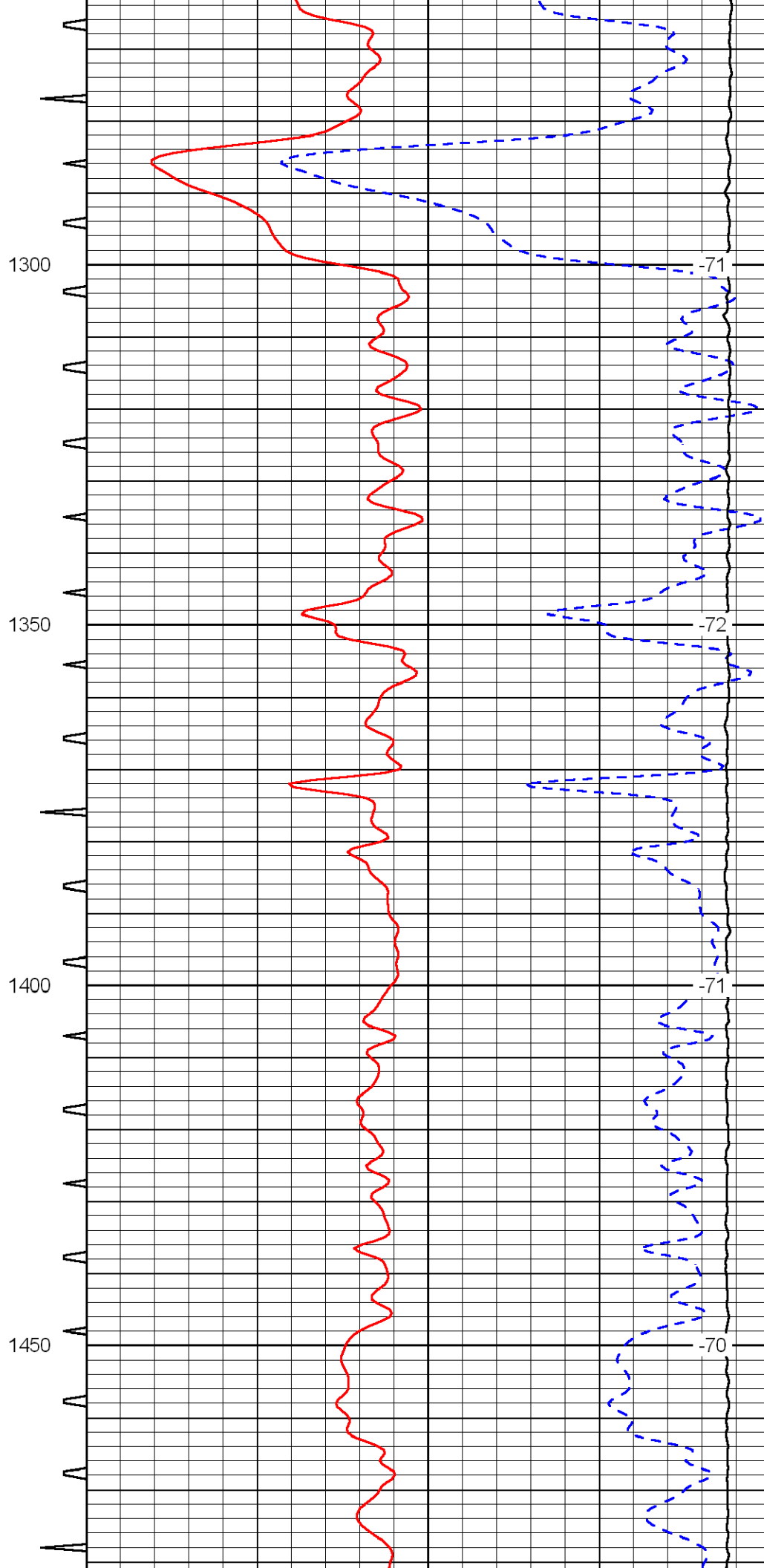
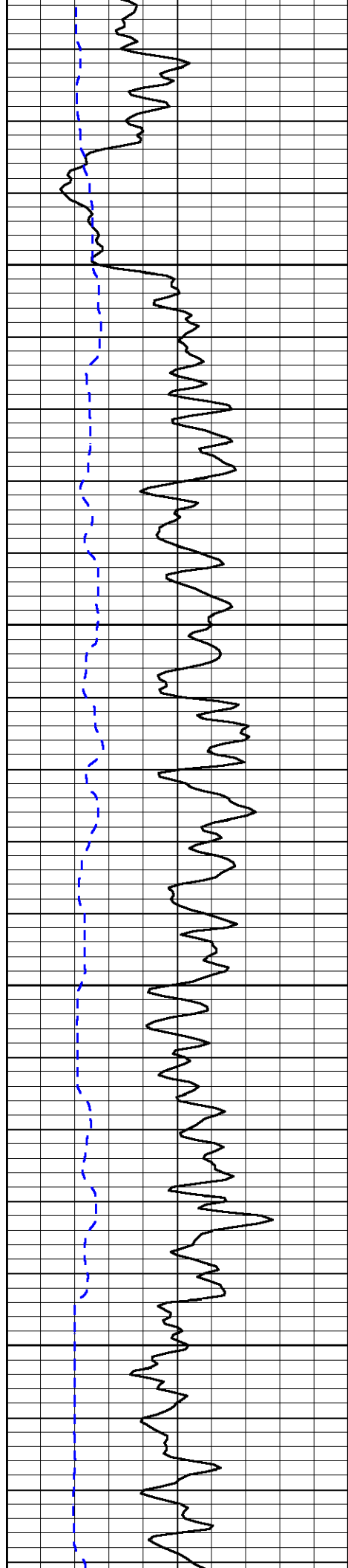


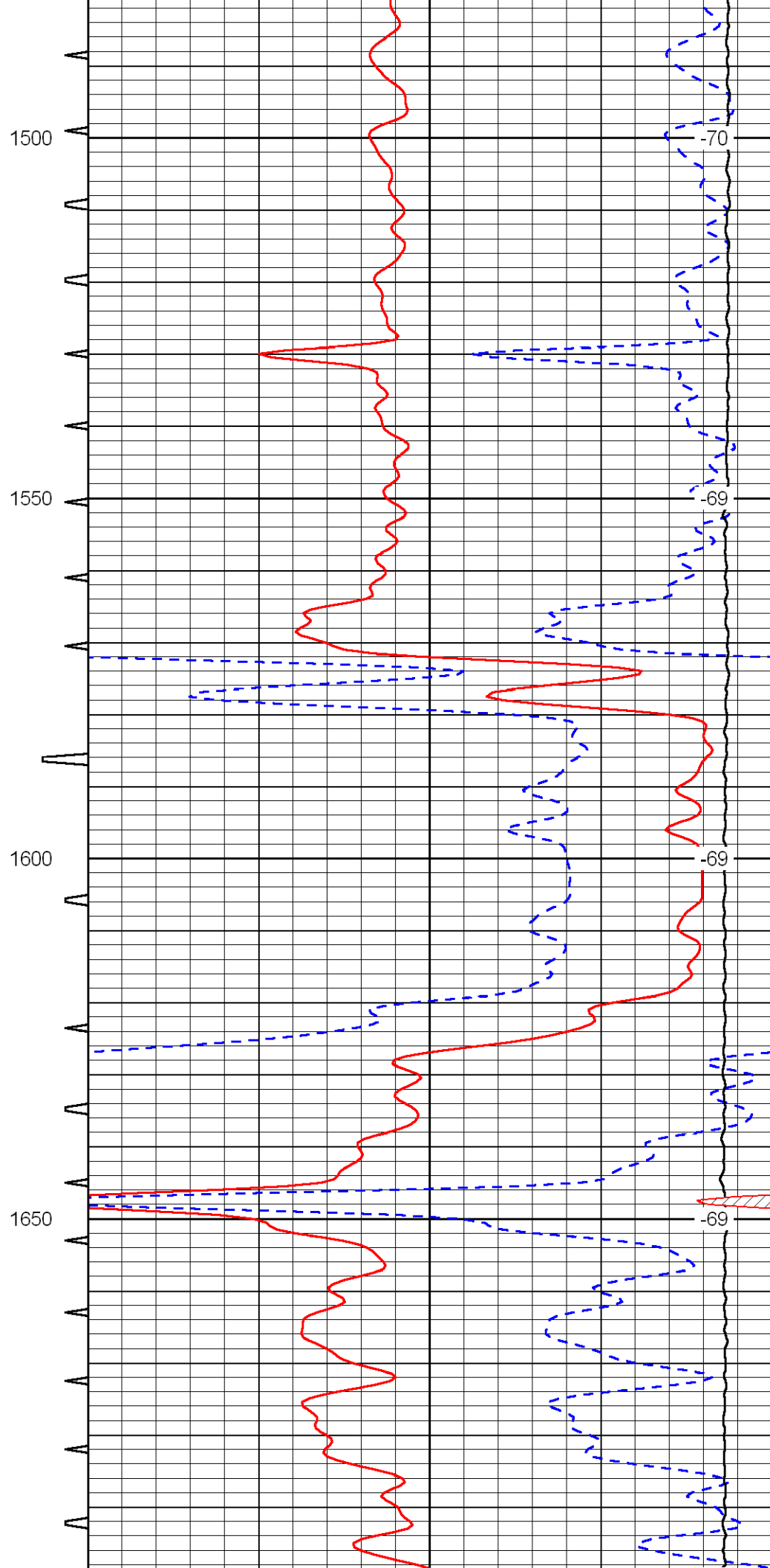
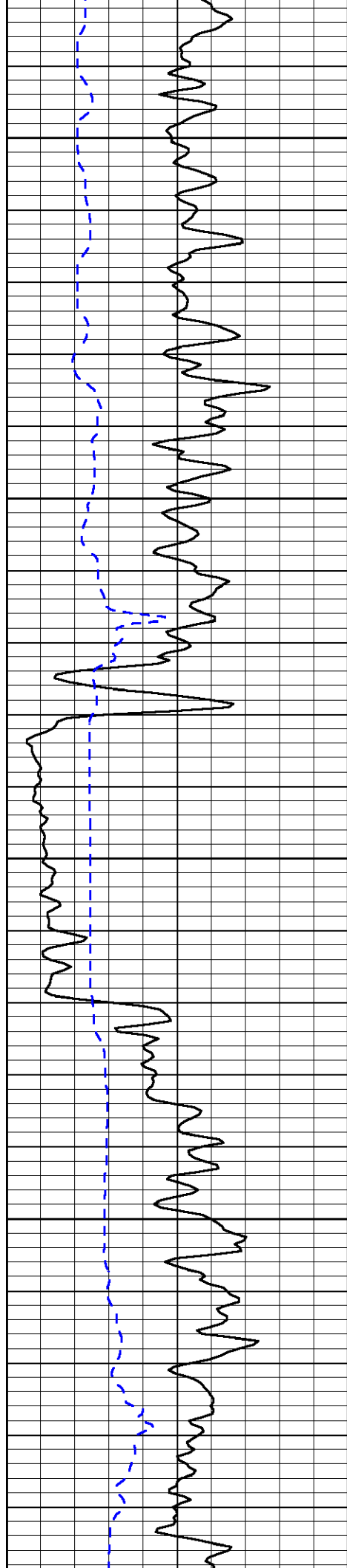


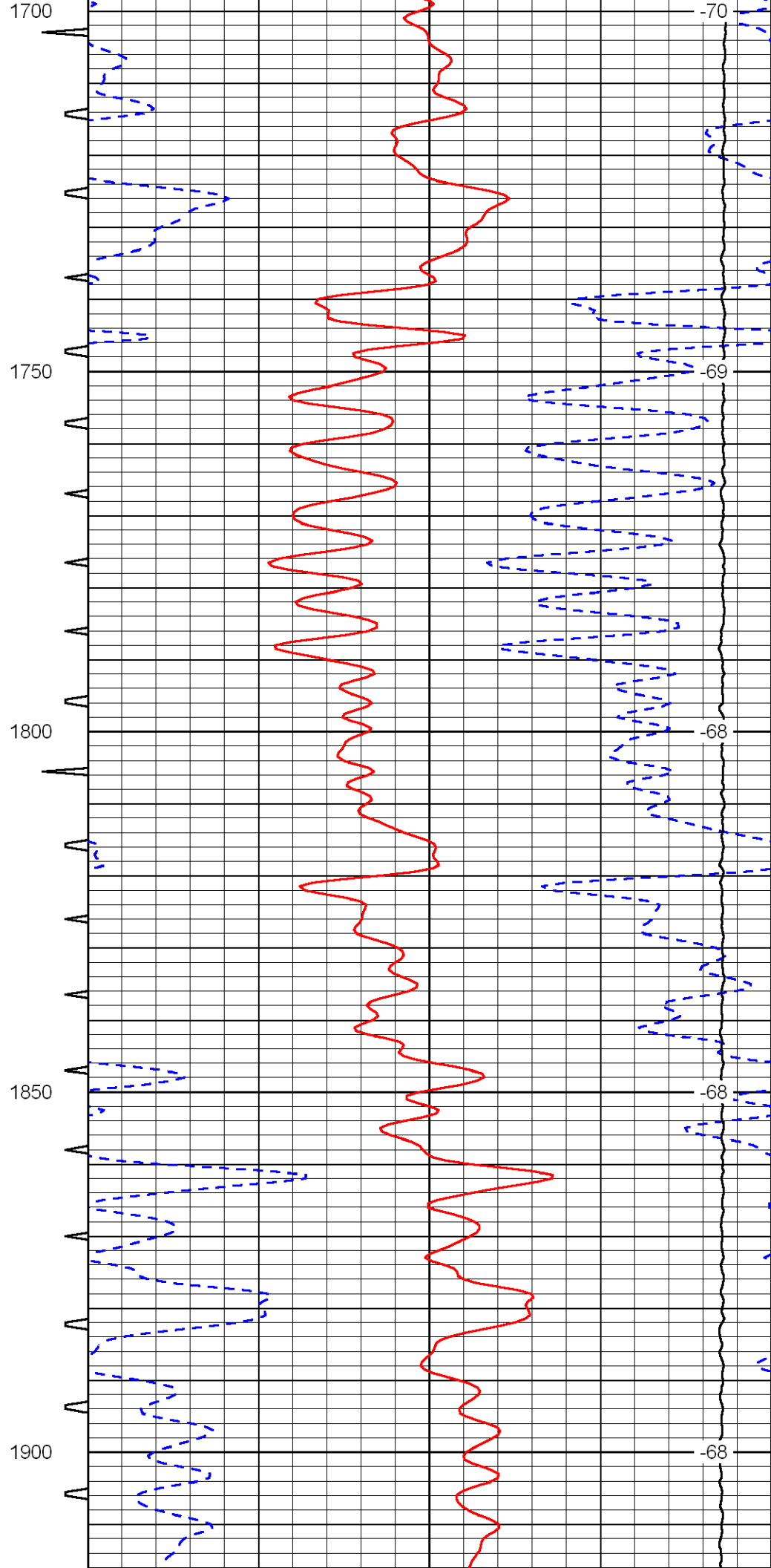
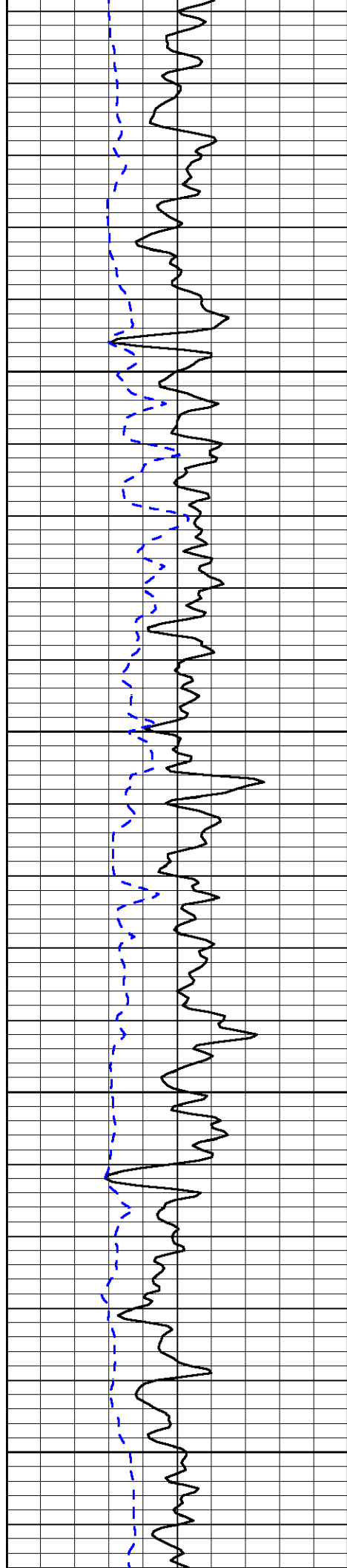


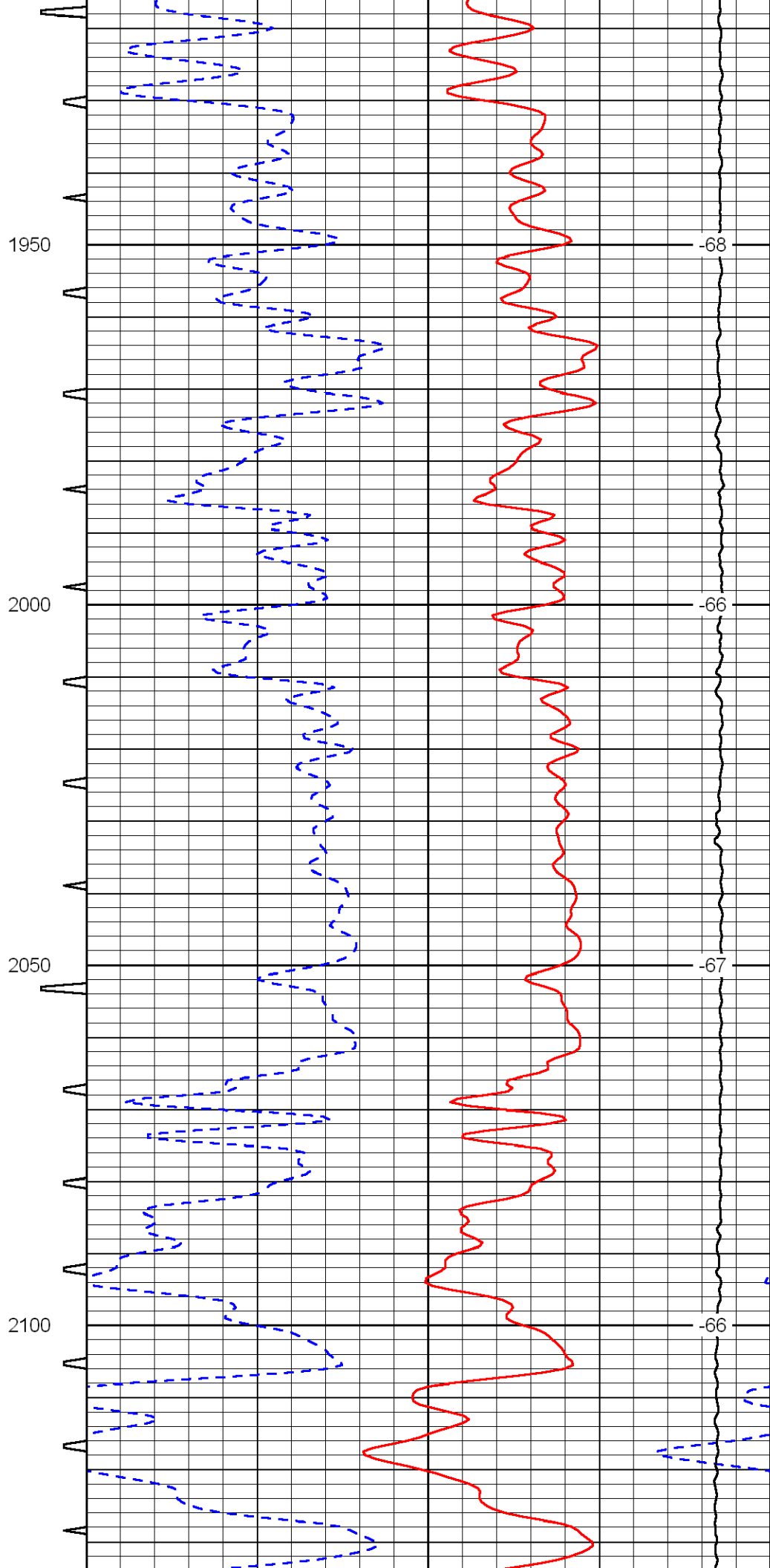
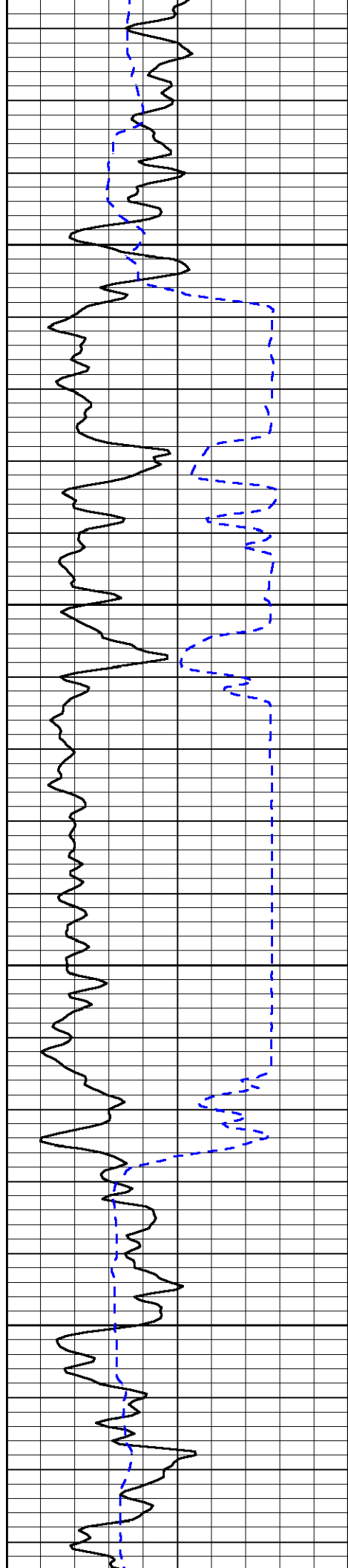


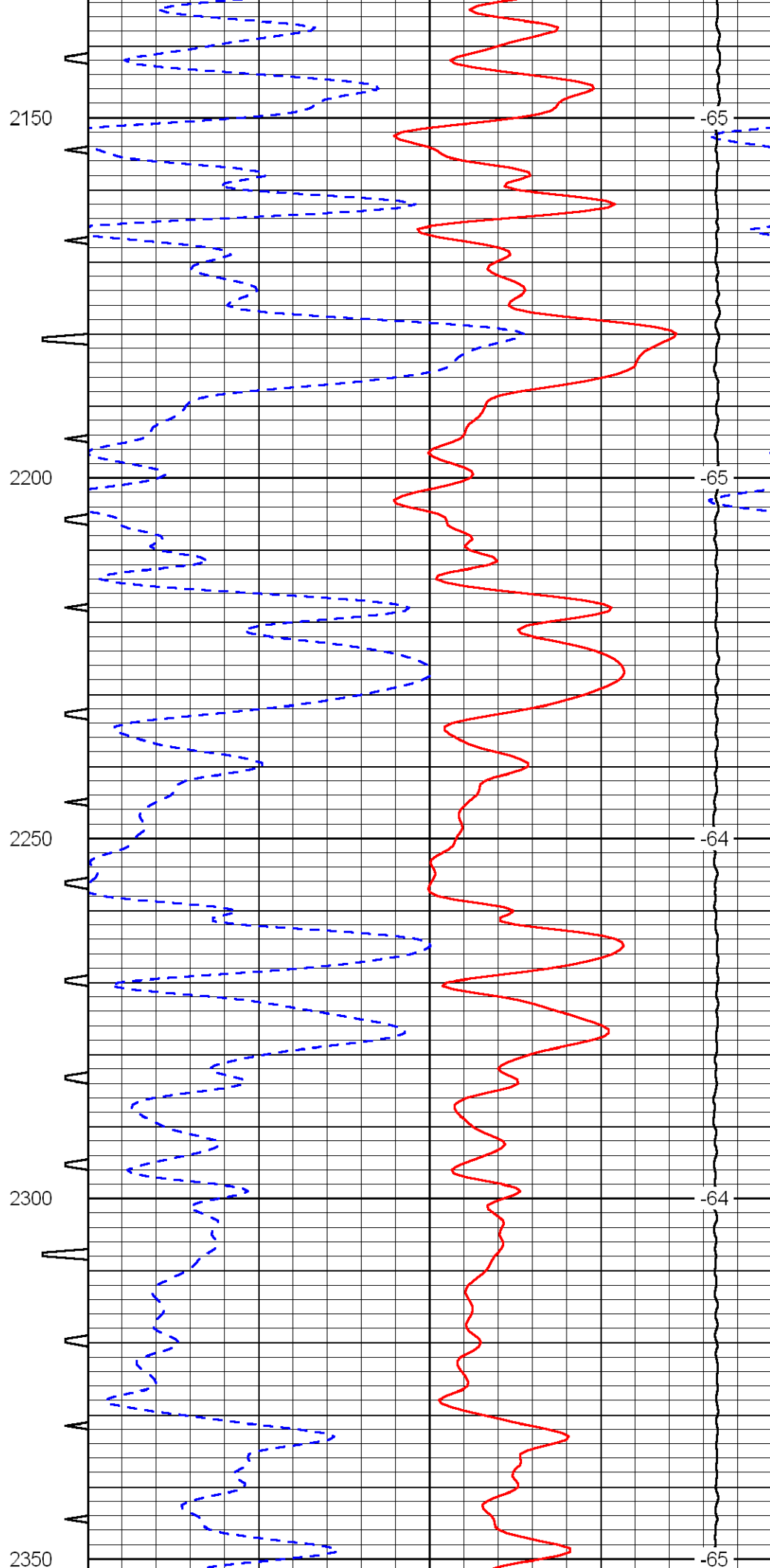
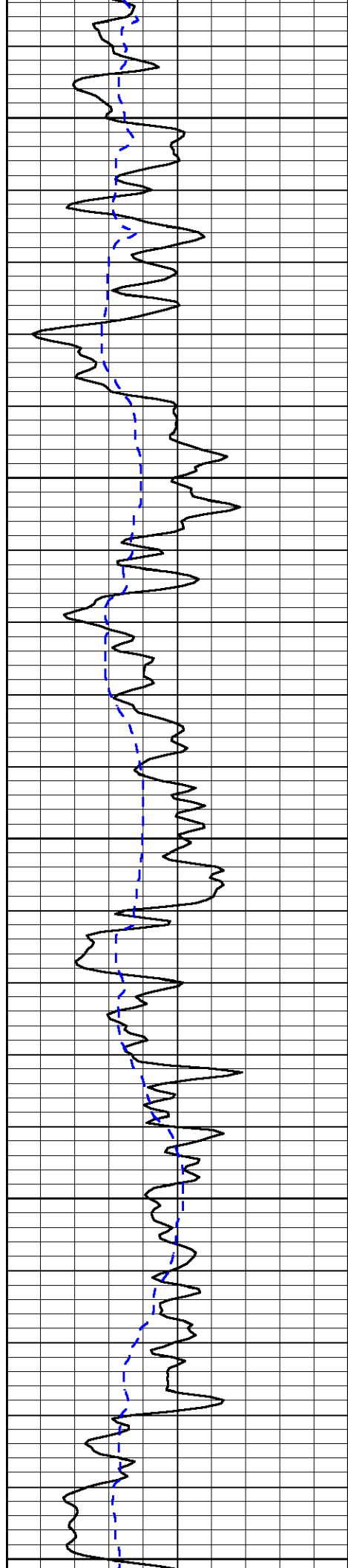


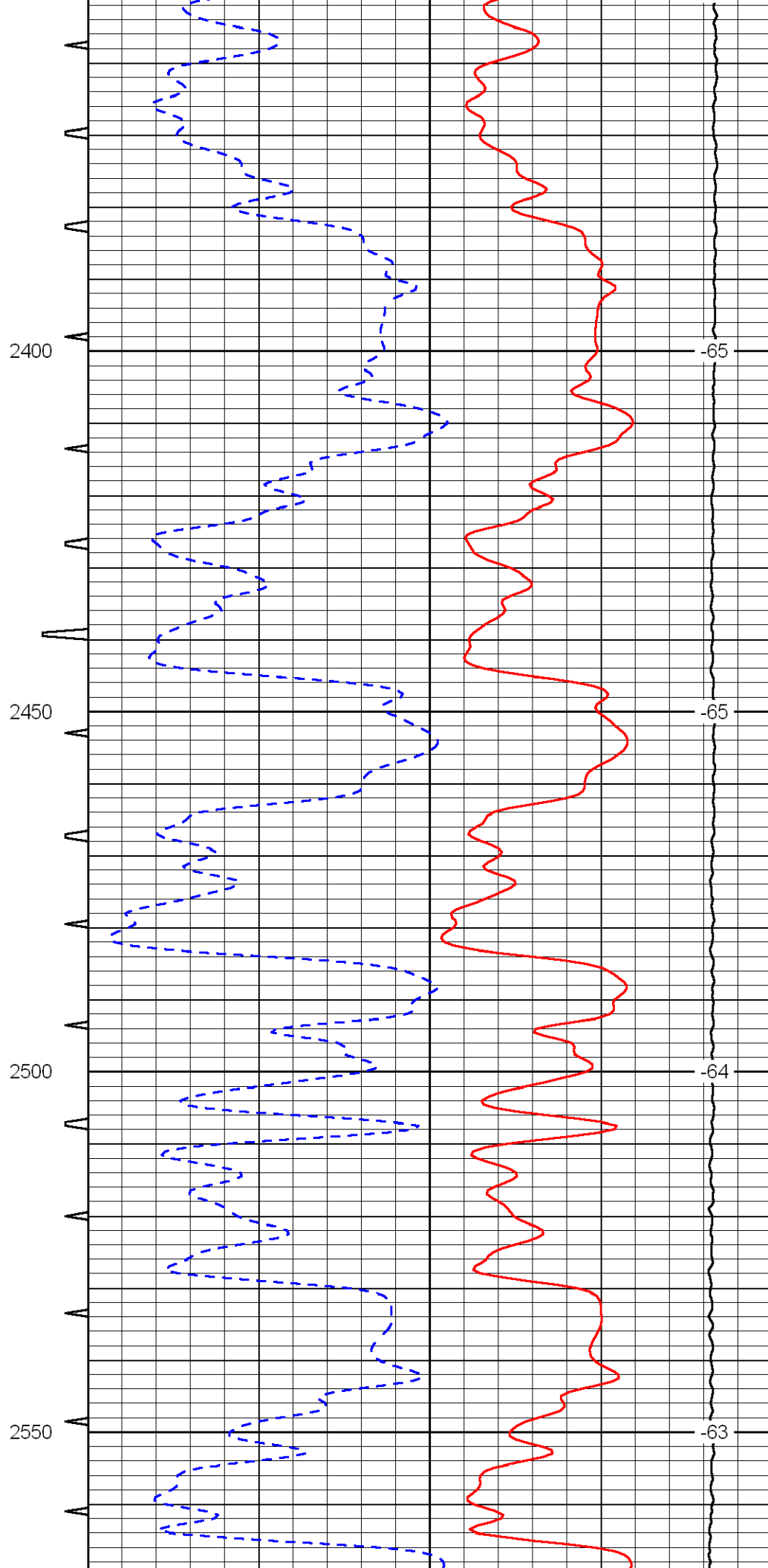
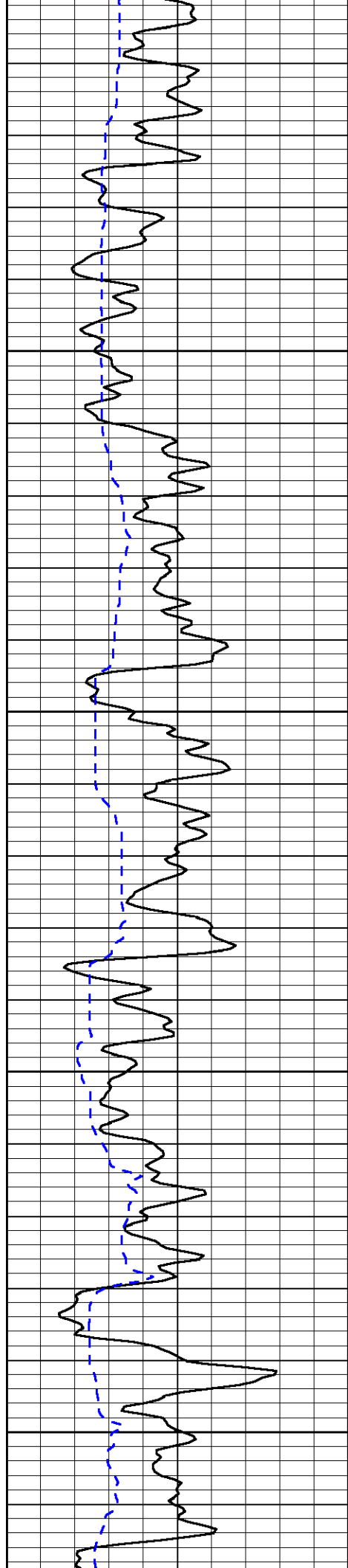


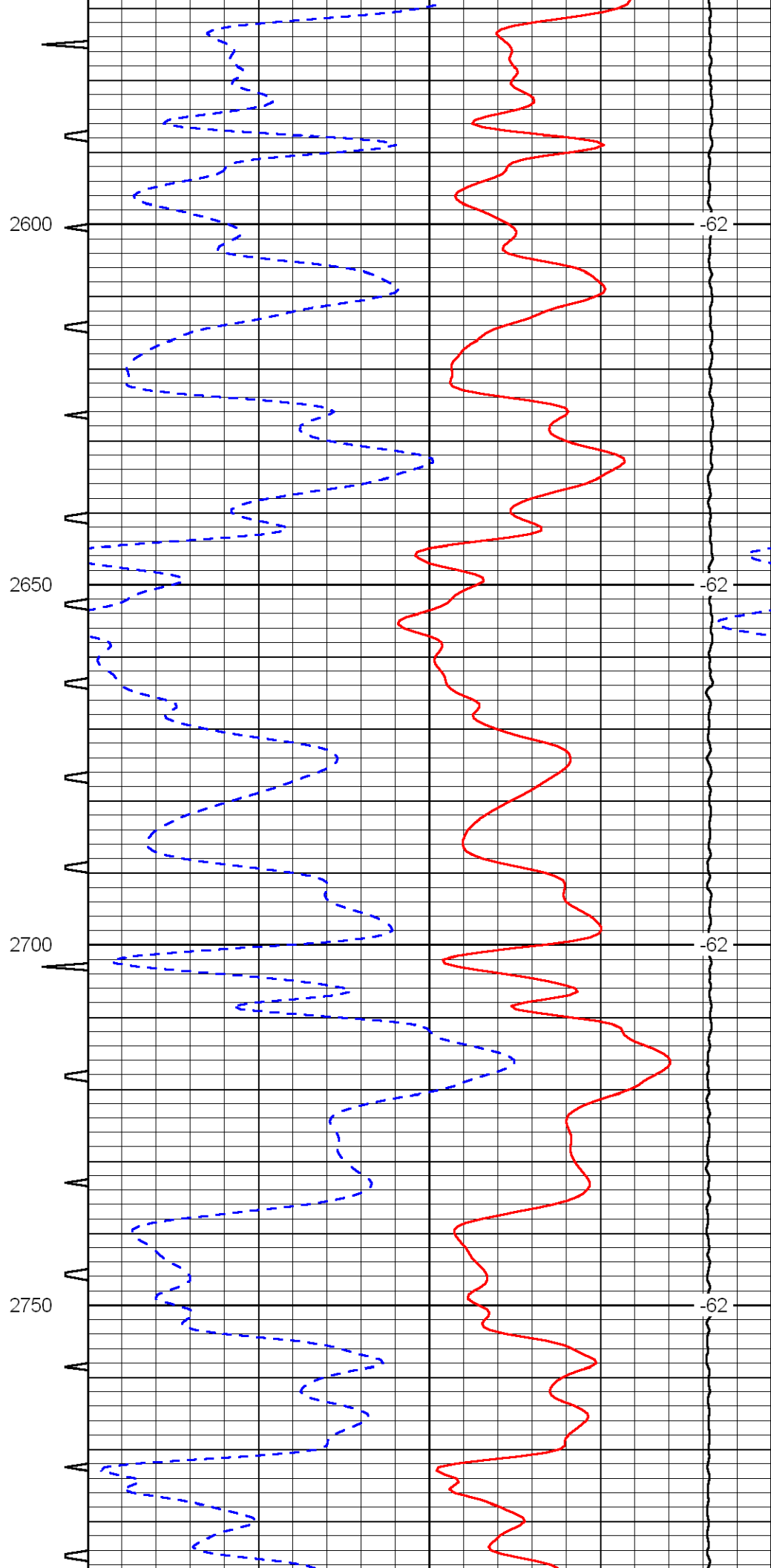
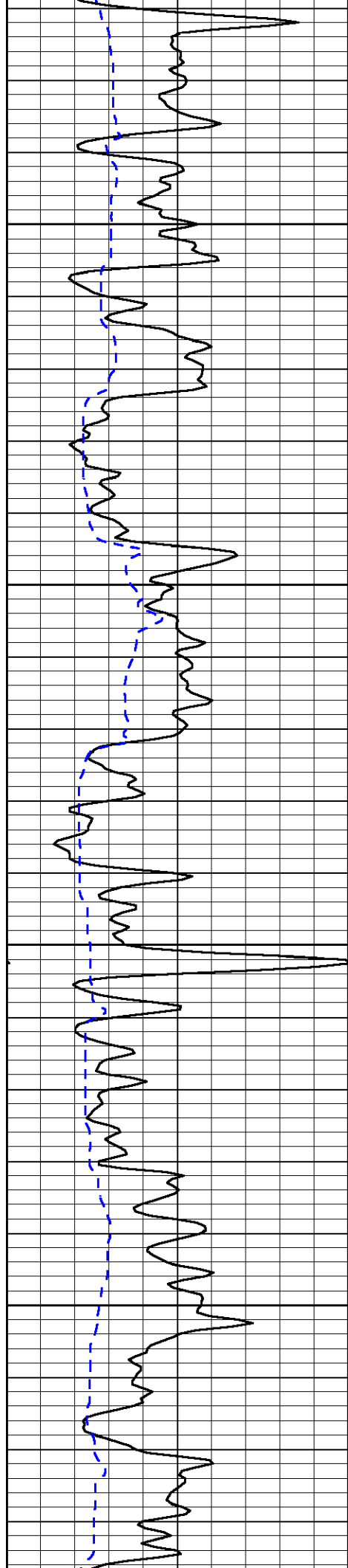


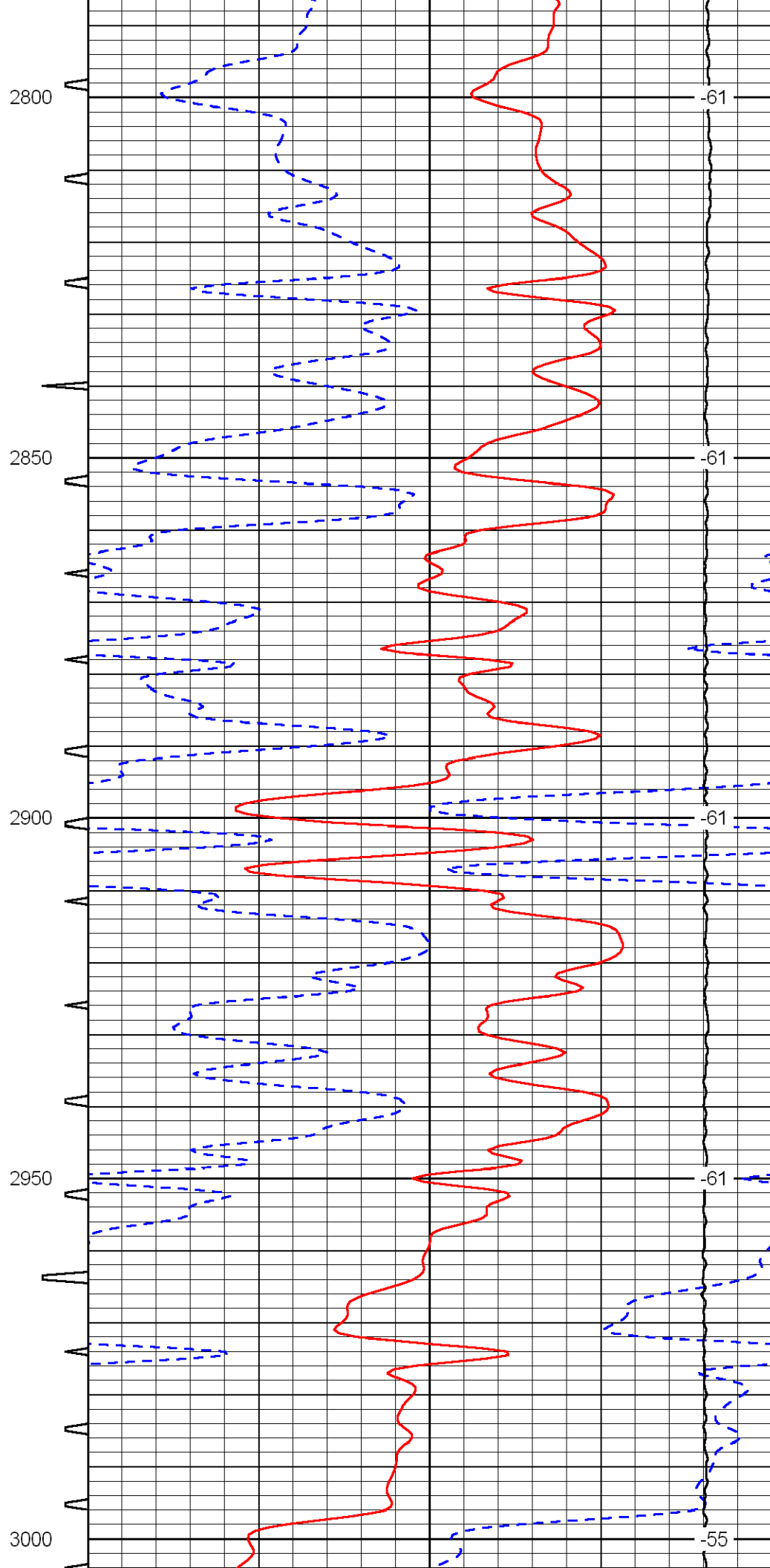
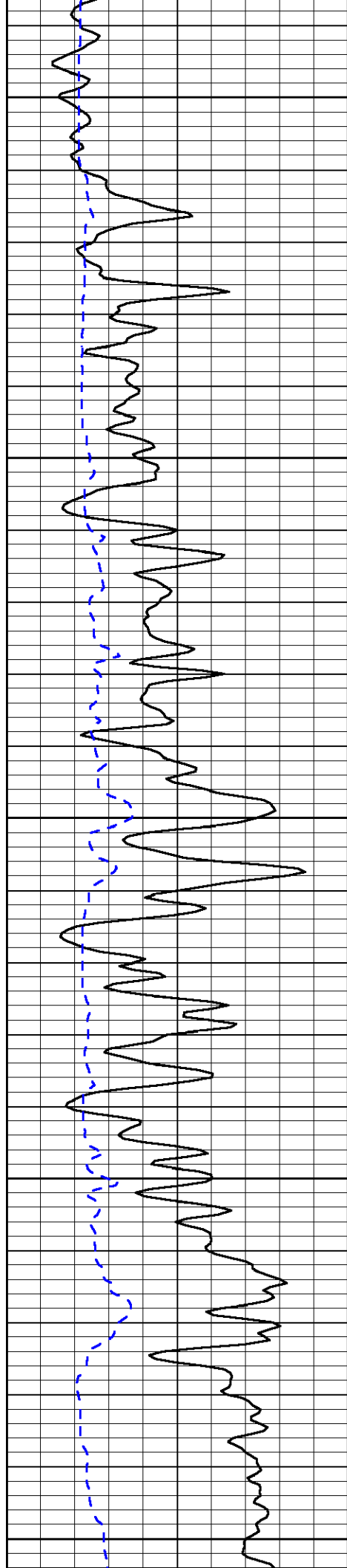


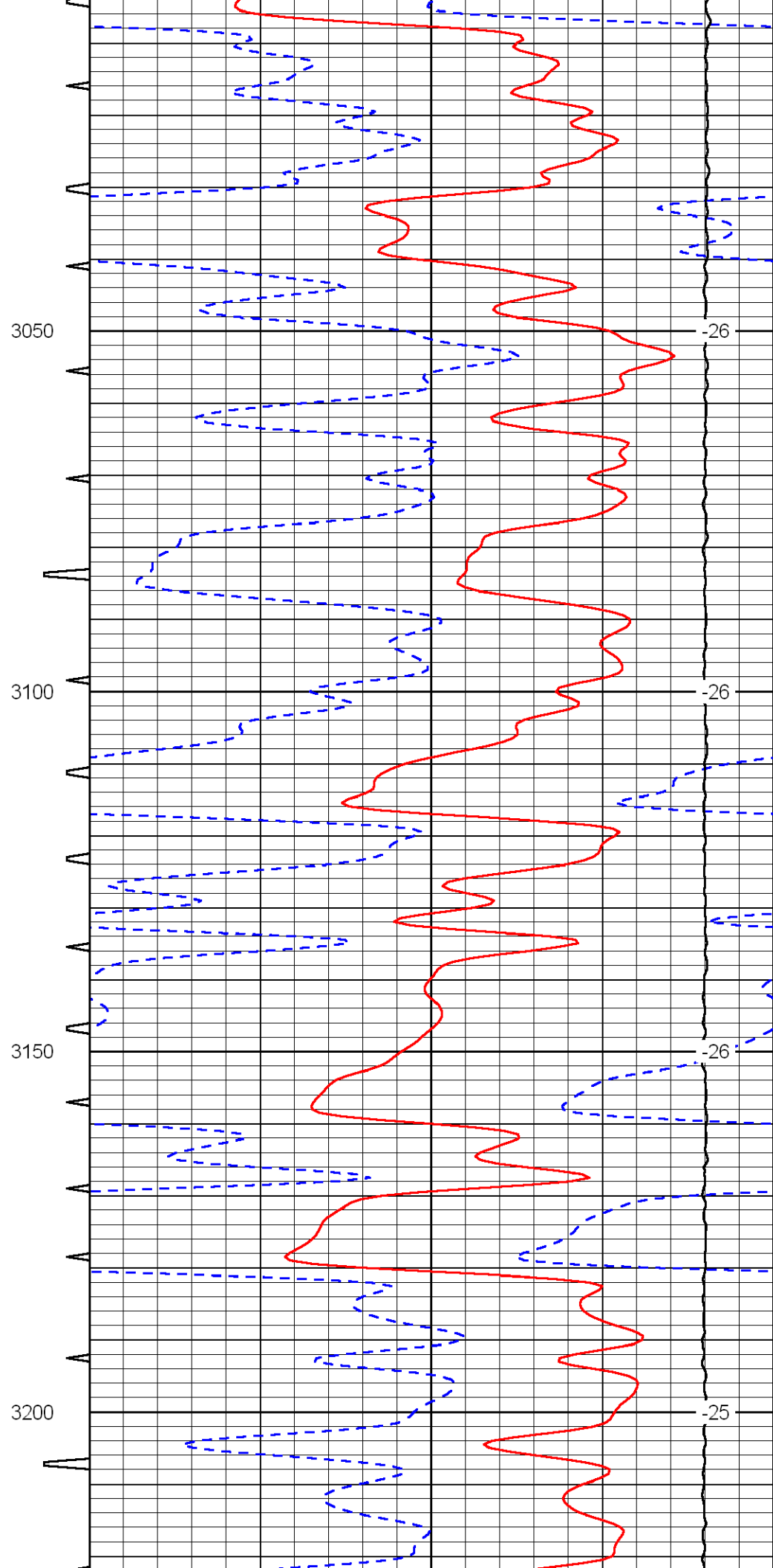
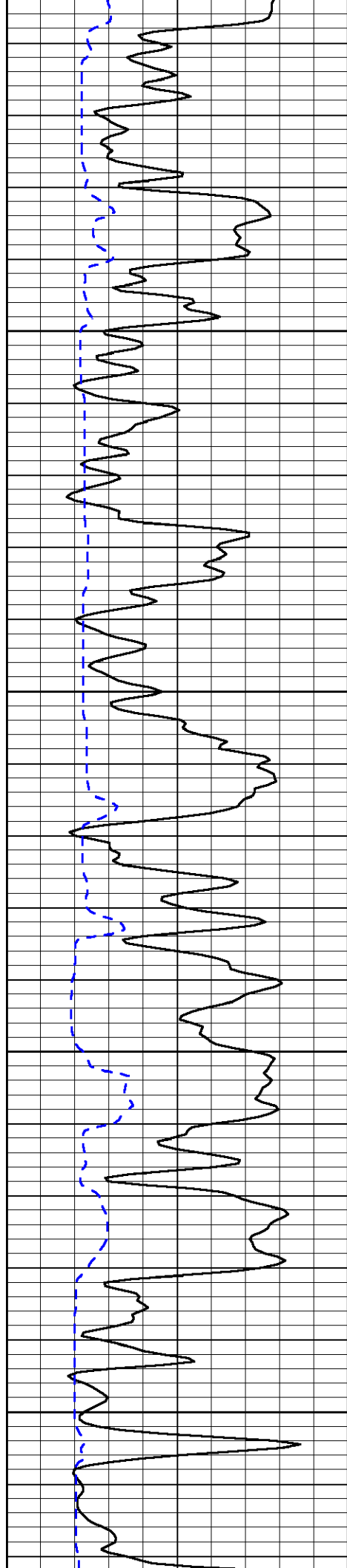


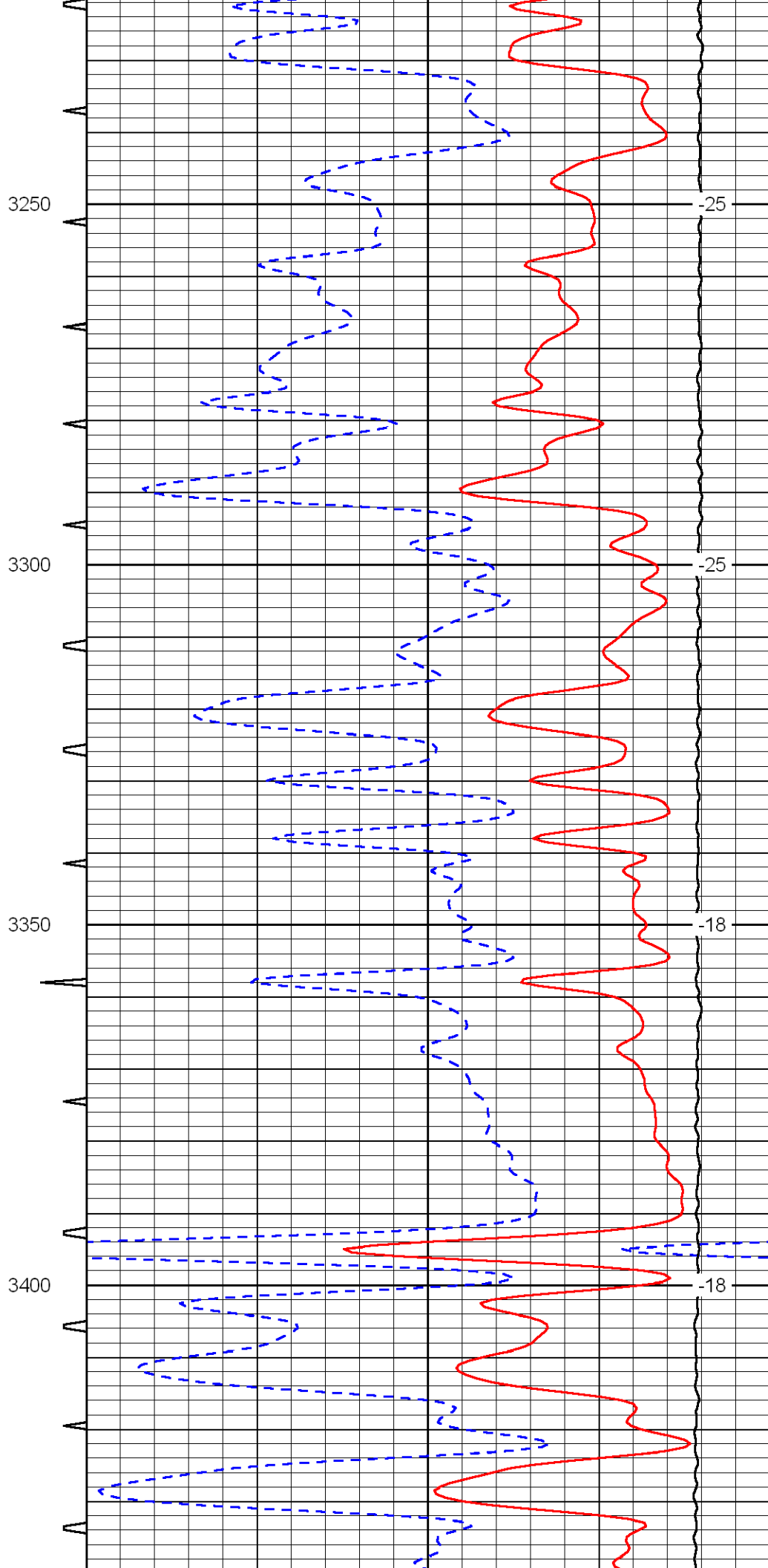
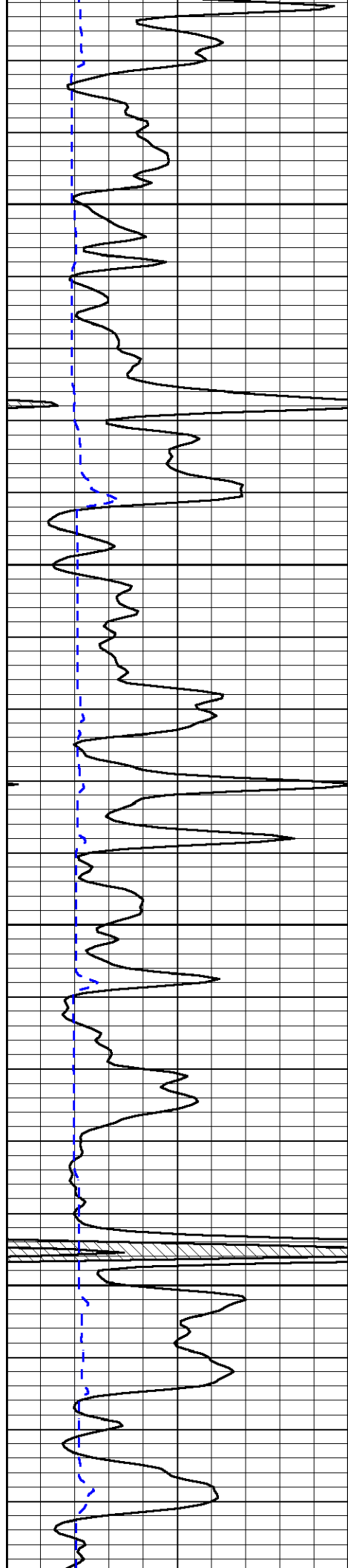


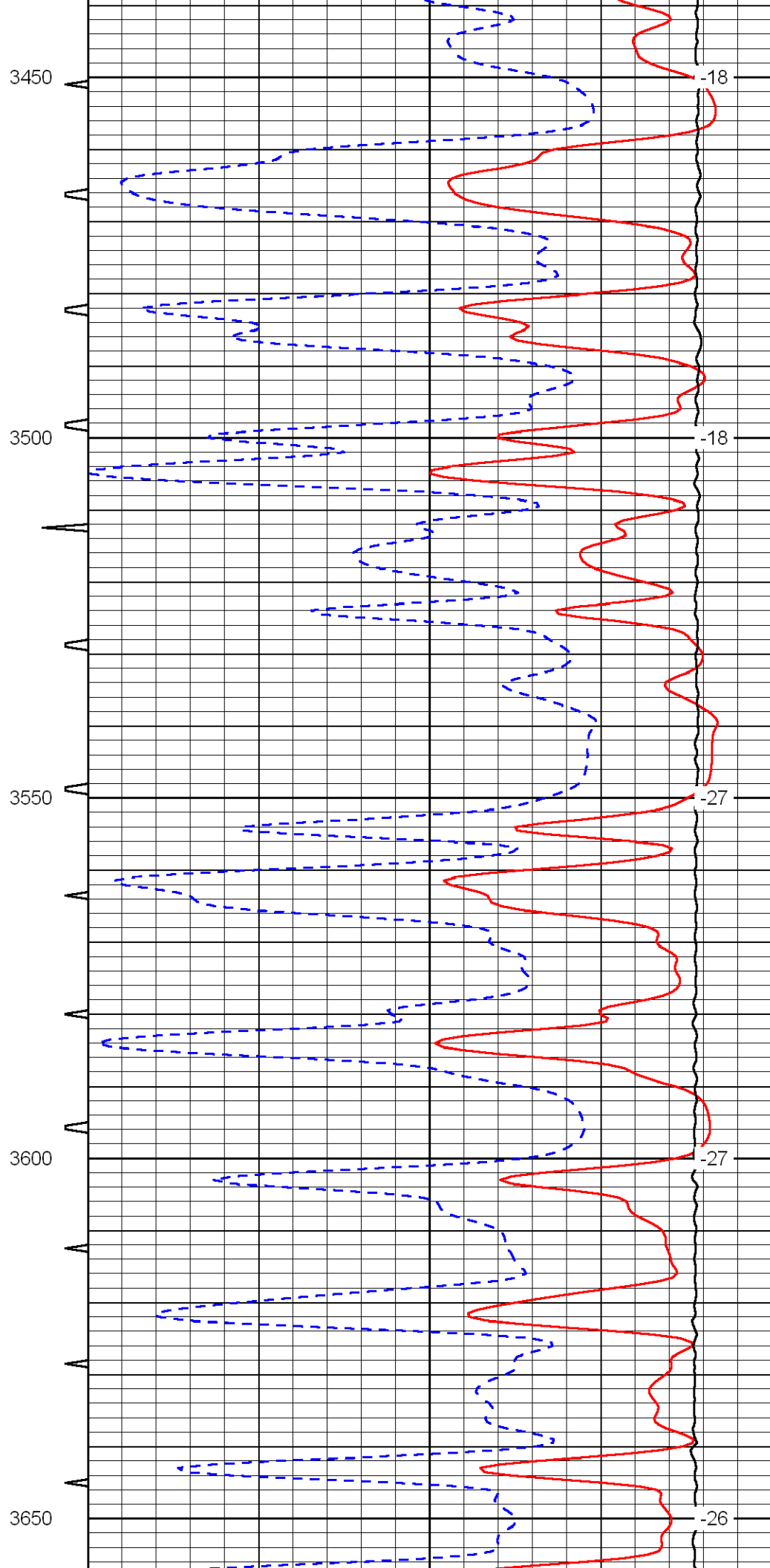
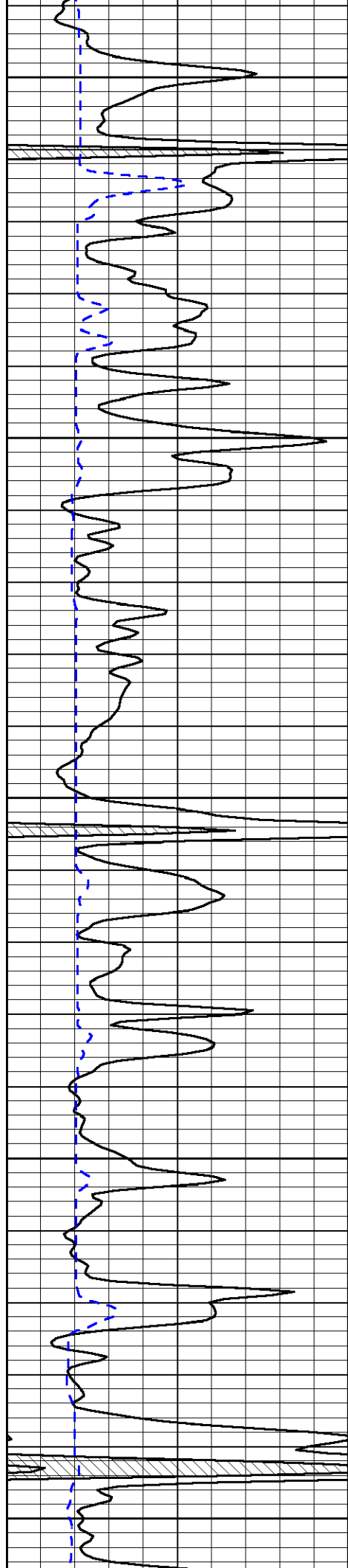


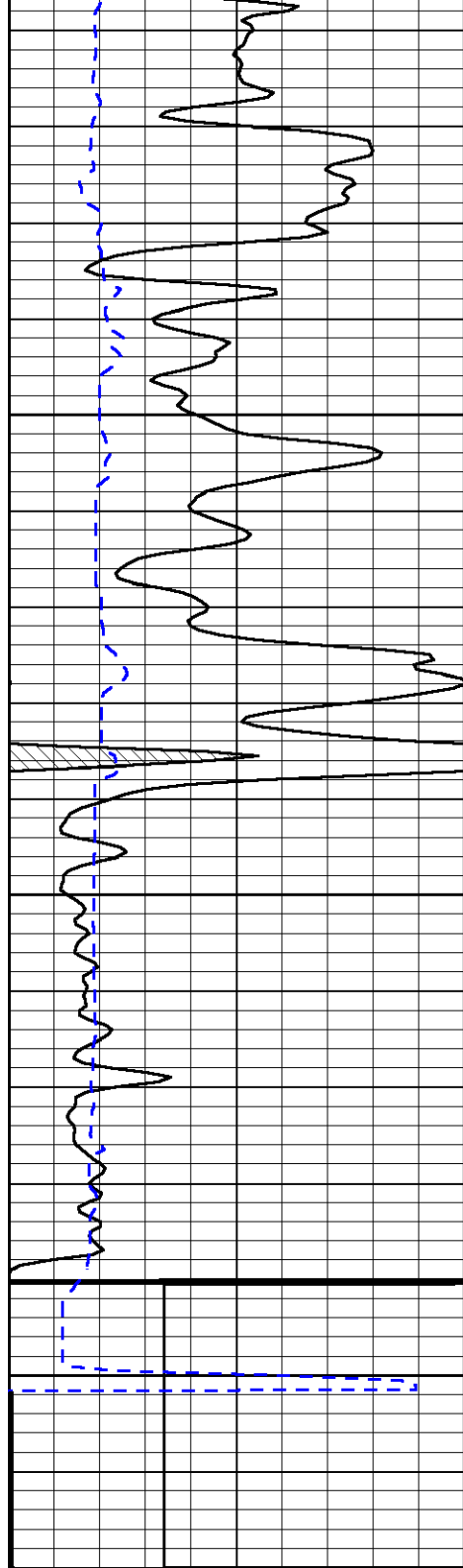




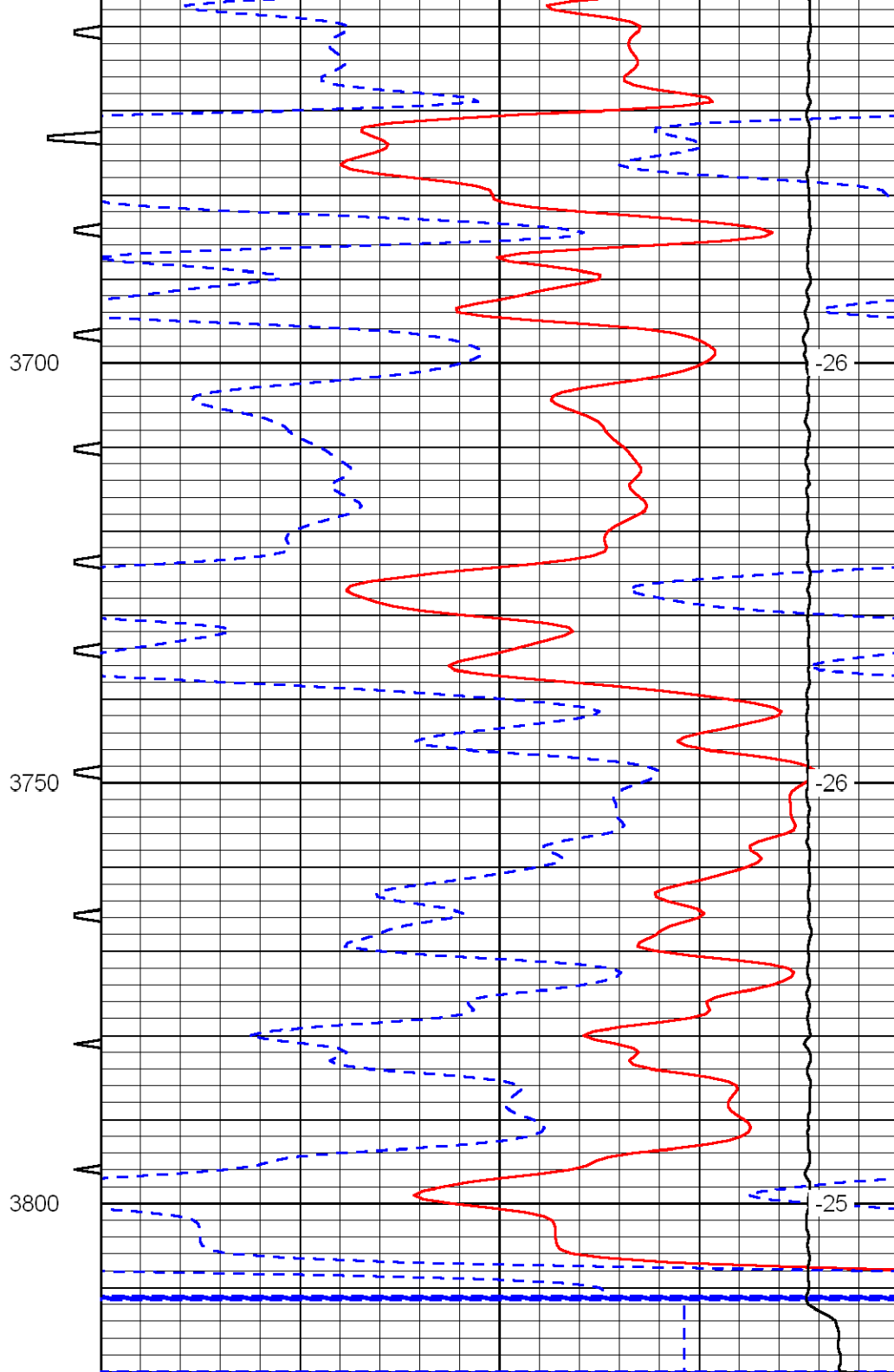








0	Gamma Ray	150
150	Gamma Ray	300
6	dCAL (GAPI)	16



Sonic Int	140	Delta Time (usec/ft)	40
5	0	Sonic Porosity	-10
		LTEN (lb)	0

LSPD