



Borehole Compensated Sonic Log

Pioneer Energy Services

API No.

15-051-26,474-00-00

Company **Murfin Drilling Company, Inc.**
Well **Kraus-Stecklein Unit No. 1-28**
Field **Leonhardt**
County **Ellis** State **Kansas**

Location

2,475' FNL & 1,500' FWL

Other Services
CNL/CDL
MEL/DIL

Sec: 28

Twp: 14S

Rge: 18W

Permanent Datum Ground Level Elevation 2076

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

Elevation
K.B. 2081
D.F.
G.L. 2076

Drilling Measured From Kelly Bushing

Elevation

Date 2/12/2013

Run Number Two

Type Log BHC Sonic

Depth Driller 3790

Depth Logger 3788

Bottom Logged Interval 3777

Top Logged Interval 200

Type Fluid In Hole Chemical

Salinity, PPM CL 12800

Density 9.3

Level Full

Max. Rec. Temp. F 114

Operating Rig Time 4 Hours

Equipment -- Location 108 Hays

Recorded By J. Long

Witnessed By Paul Gunzelman

Borehole Record

Casing Record

Run No. Bit From To Size Wgt. From To

One 12.25 00 217 8.625 23# 00 217

Two 7.875 217 TD

<<< Fold Here >>>

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.

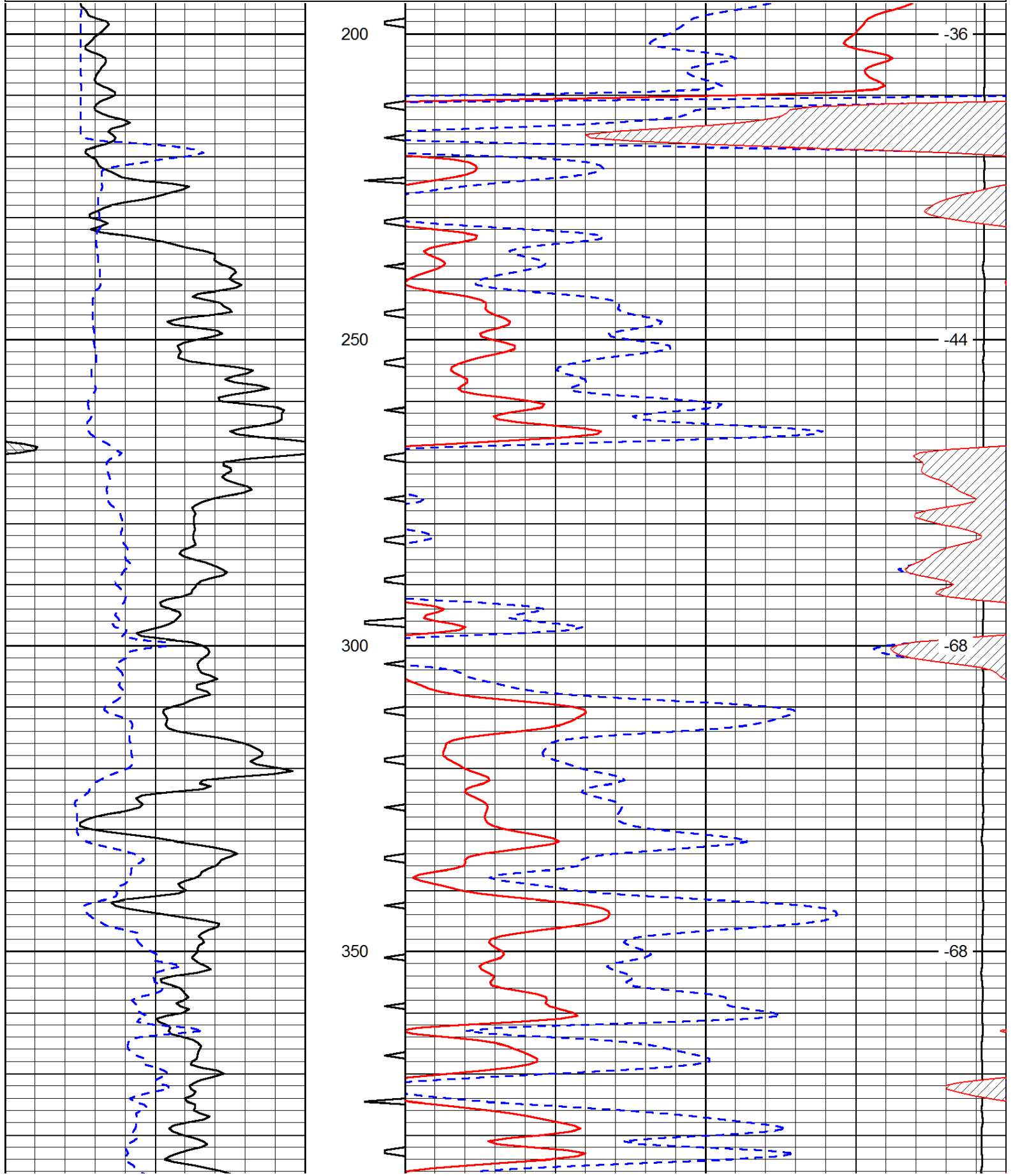
Comments

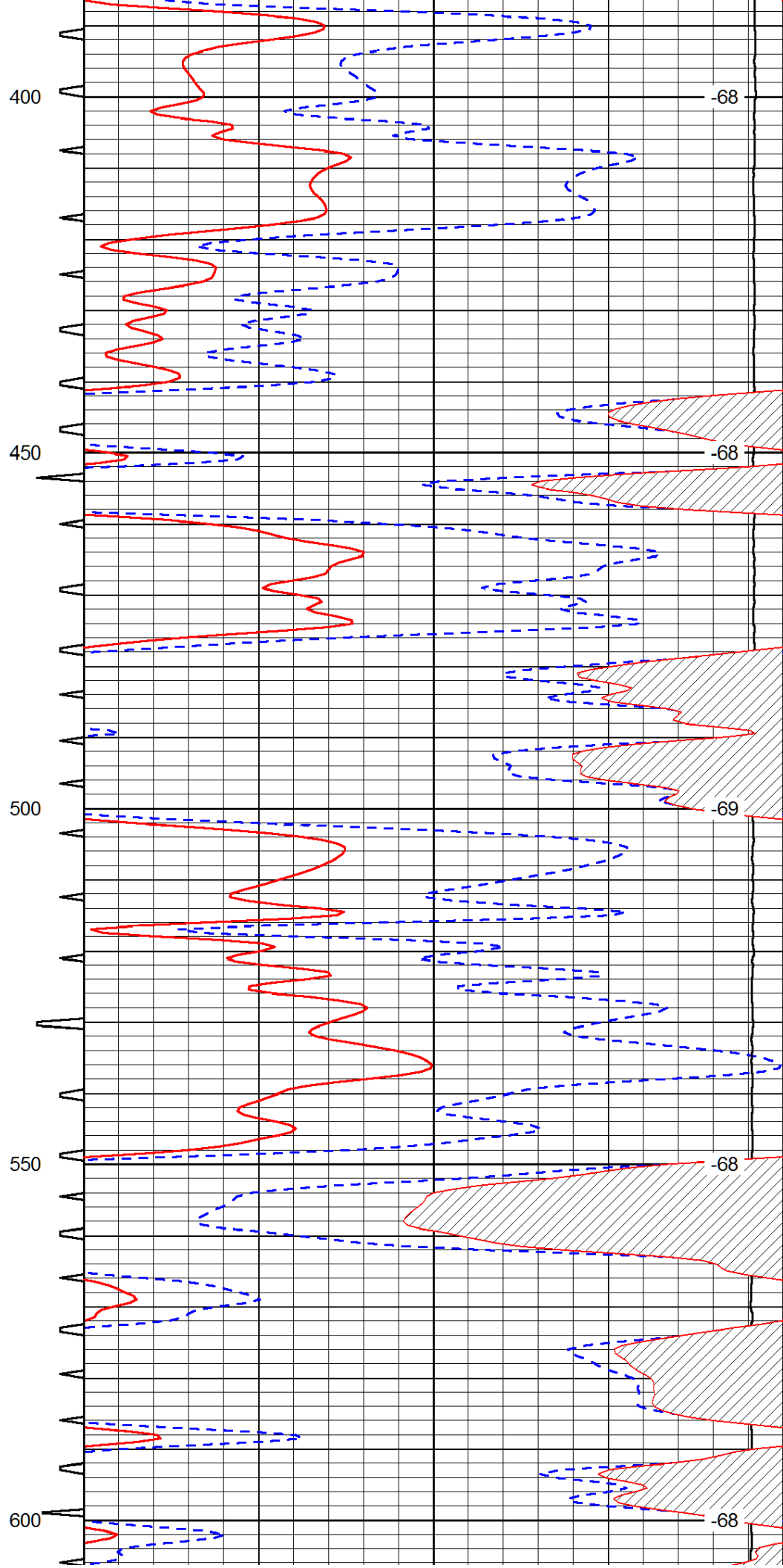
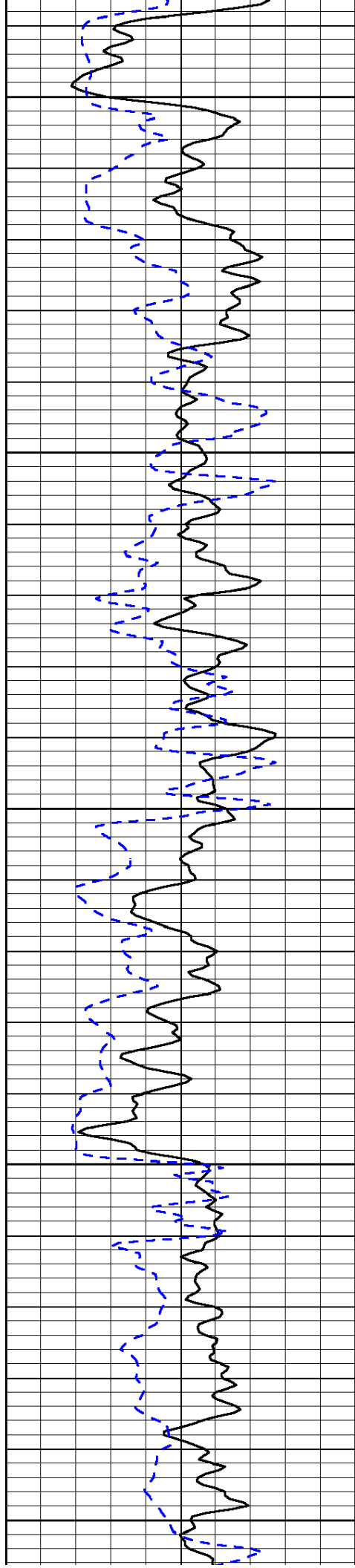
Thank you for using Log-Tech, Inc.
(785) 625-3858

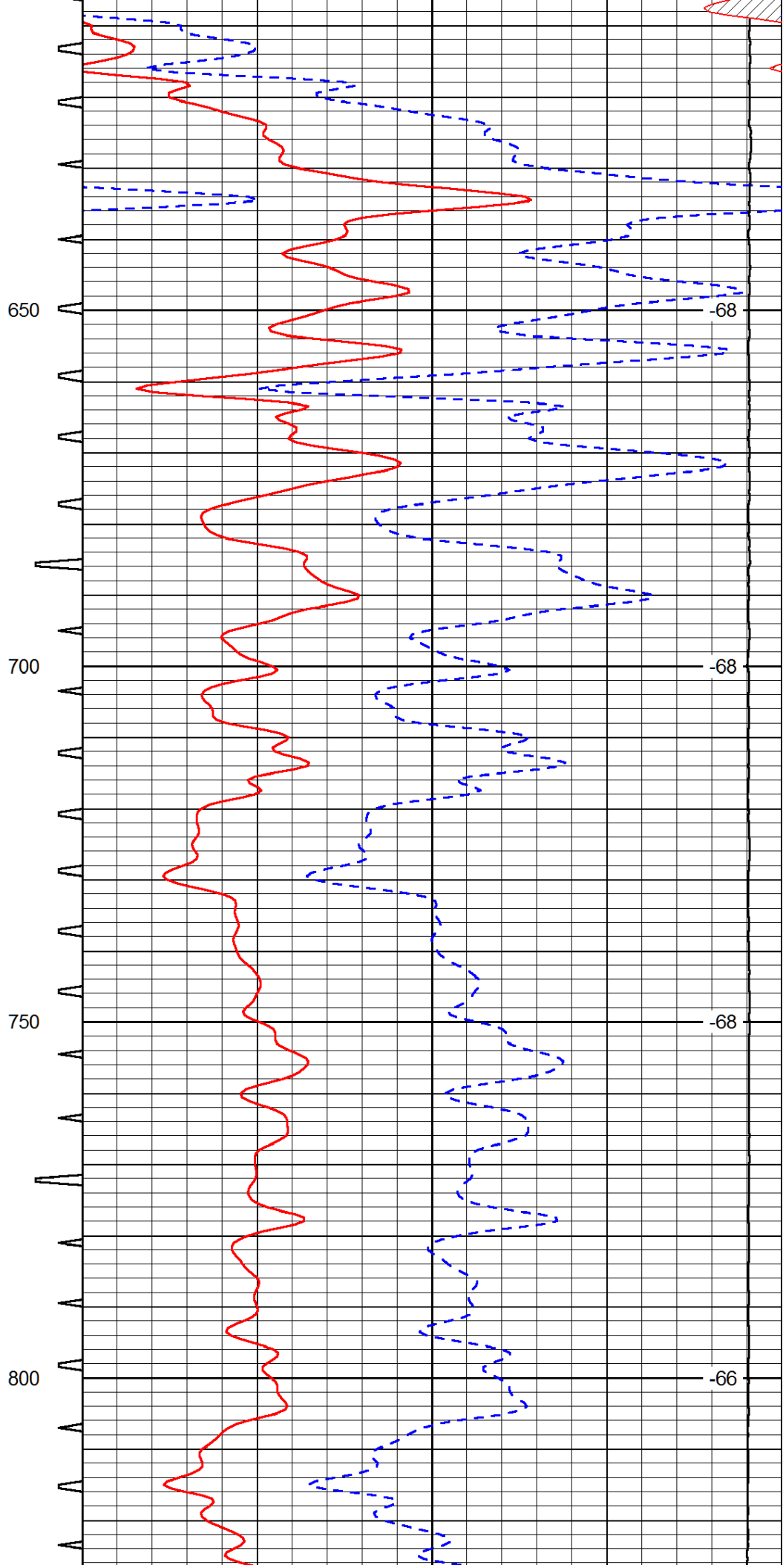
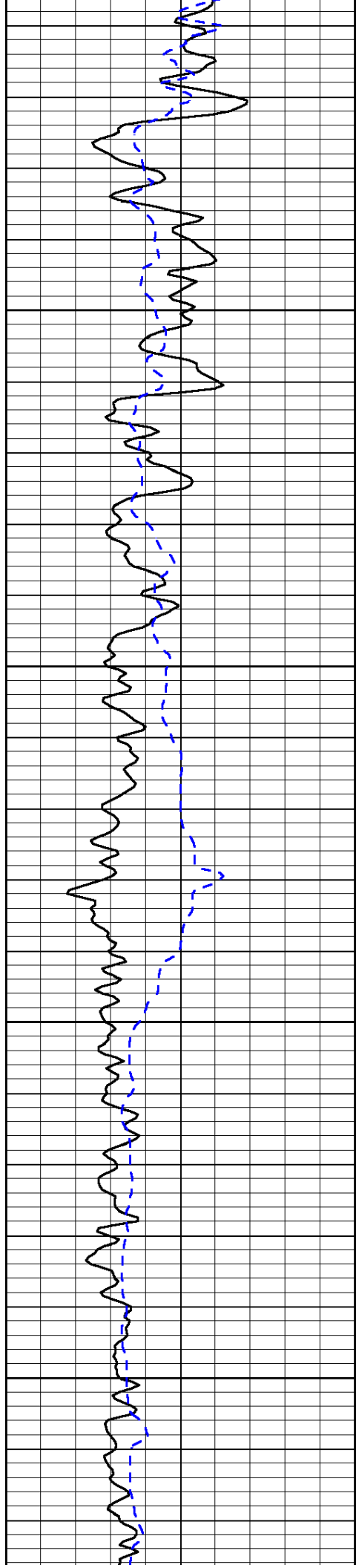
Hays, 3 1/2 South on 240th Avenue, East Into

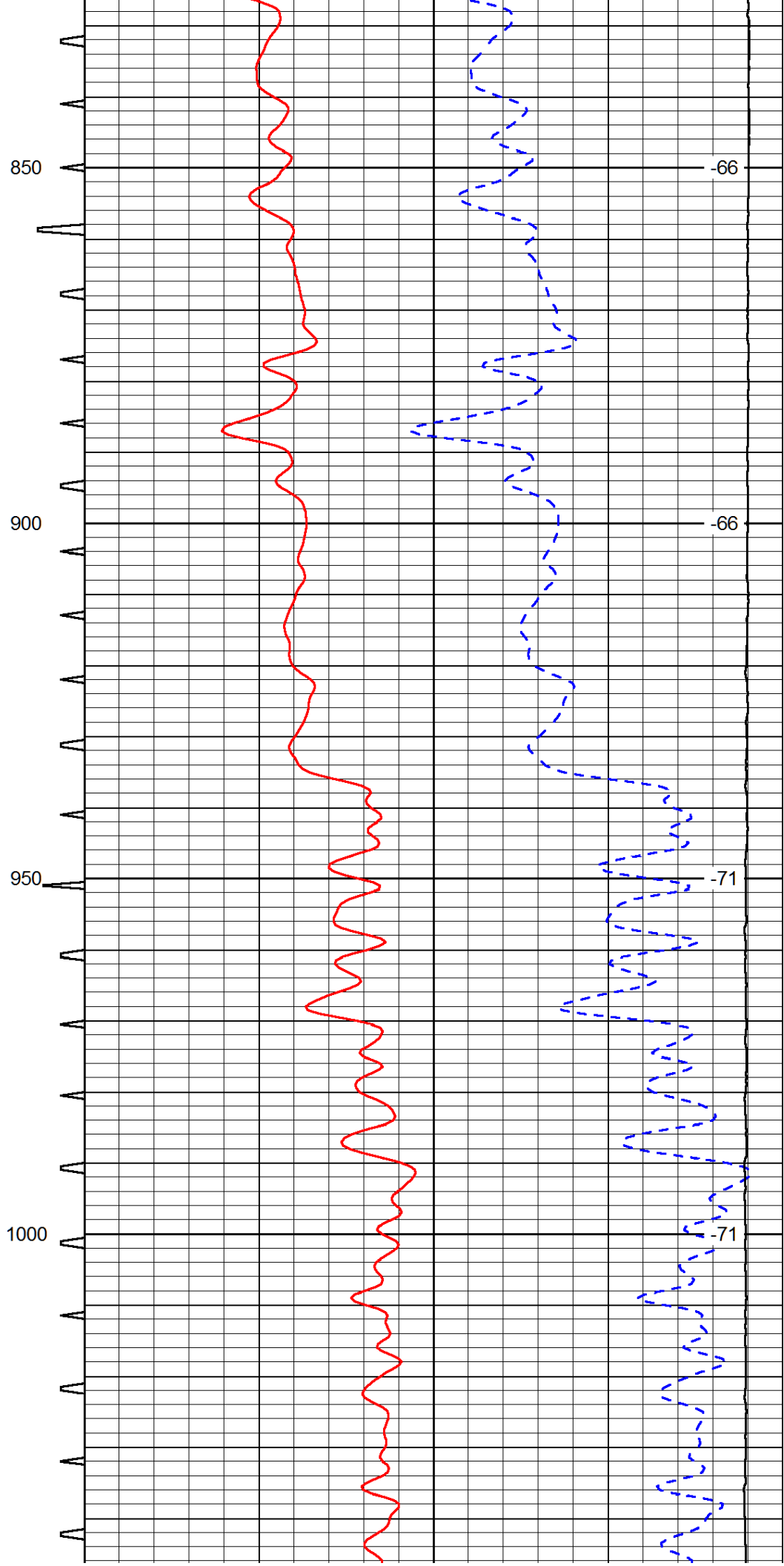
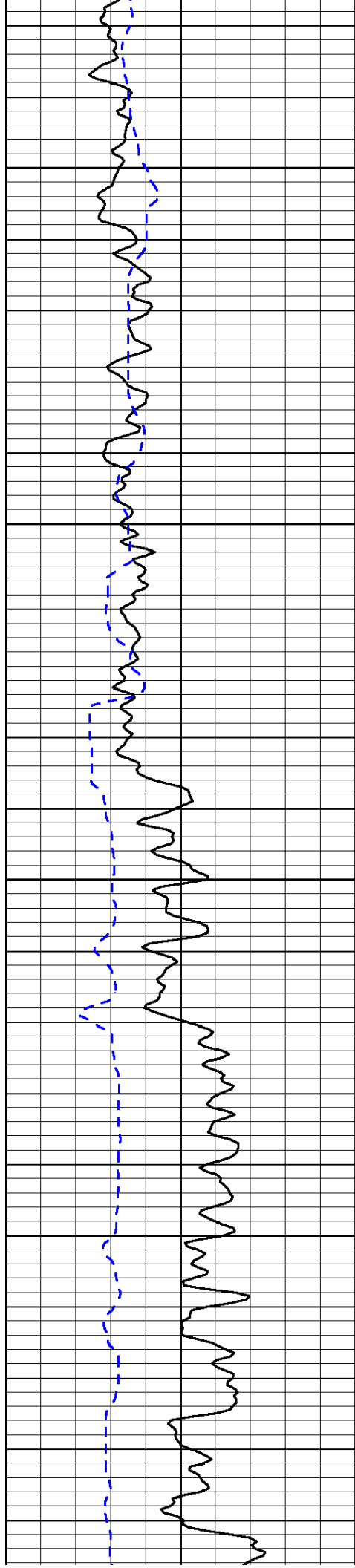
Database File: murfin_kraus-stecklein_1-28hd.db
Dataset Pathname: dil/murfstck
Presentation Format: sonic
Dataset Creation: Tue Feb 12 05:33:24 2013
Charted by: Depth in Feet scaled 1:240

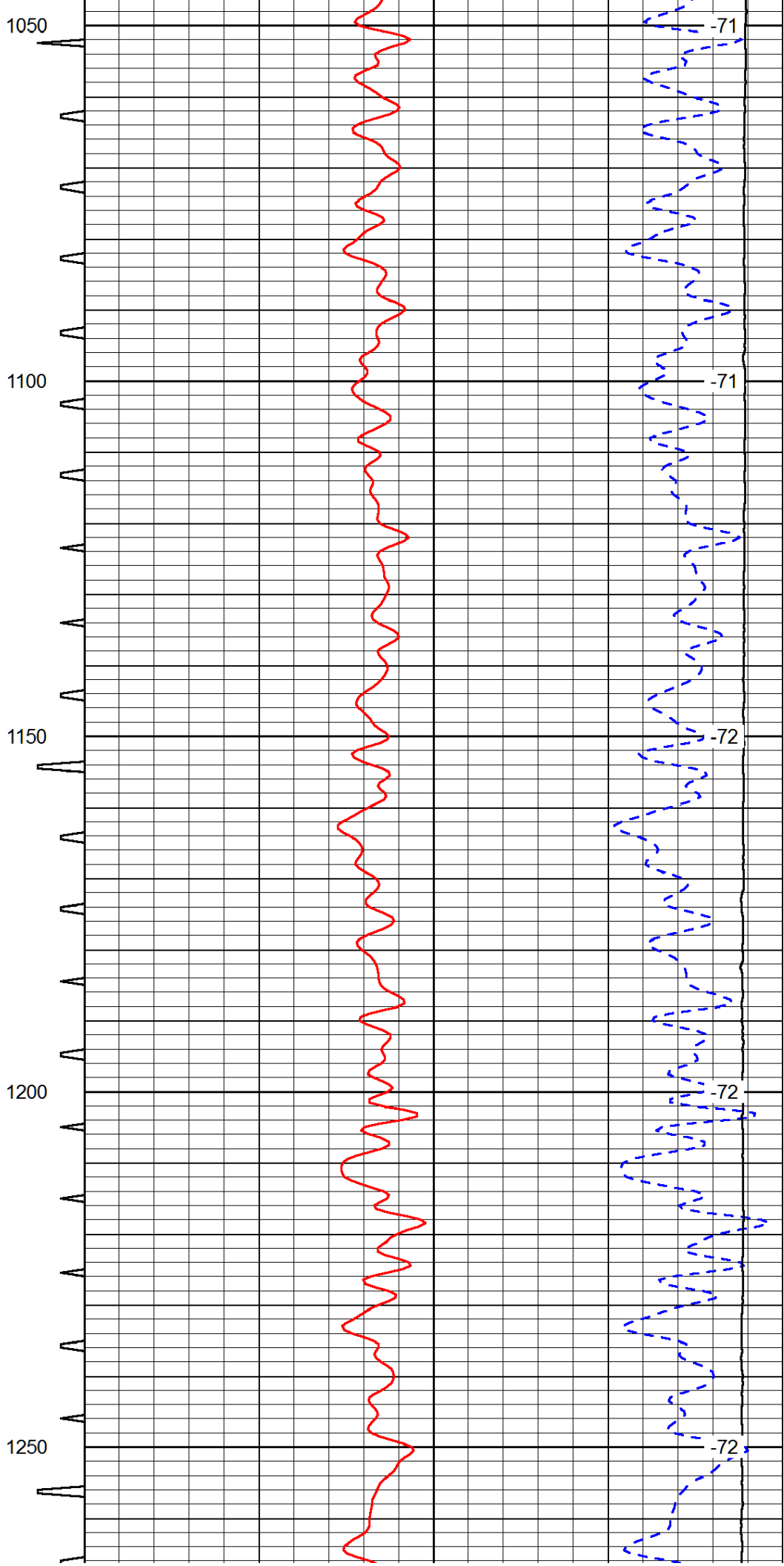
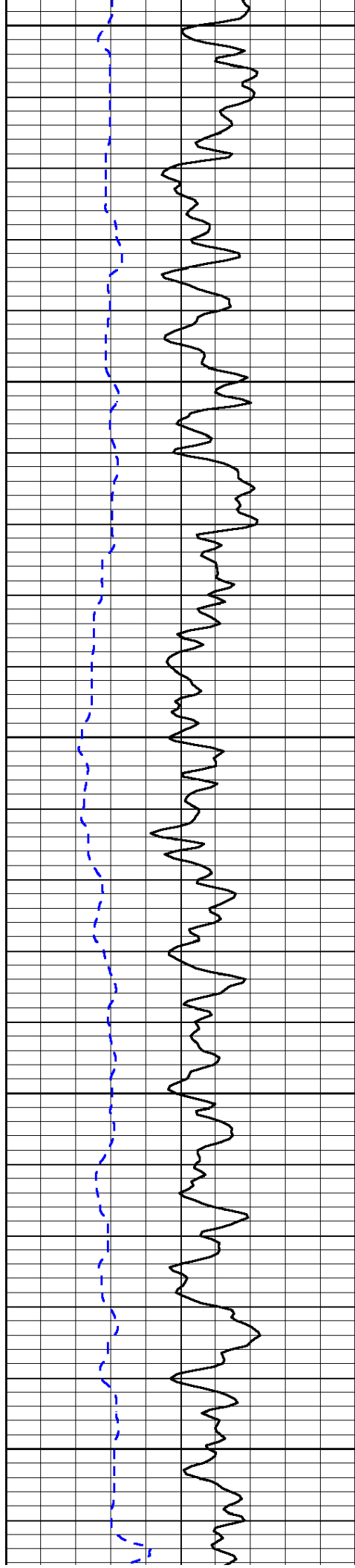
Charted by: _____			Depth in Feet scaled 1:210			
0	Gamma Ray (GAPI)	150	Sonic Int	140	Delta Time (usec/ft) (usec/ft)	40
150	Gamma Ray (GAPI)	300	5 (msec) 0	30	Sonic Porosity (pu)	-10
6	dCAL (in)	16		15000	LTEN (lb) (lb)	0
						LSPD (ft/min)

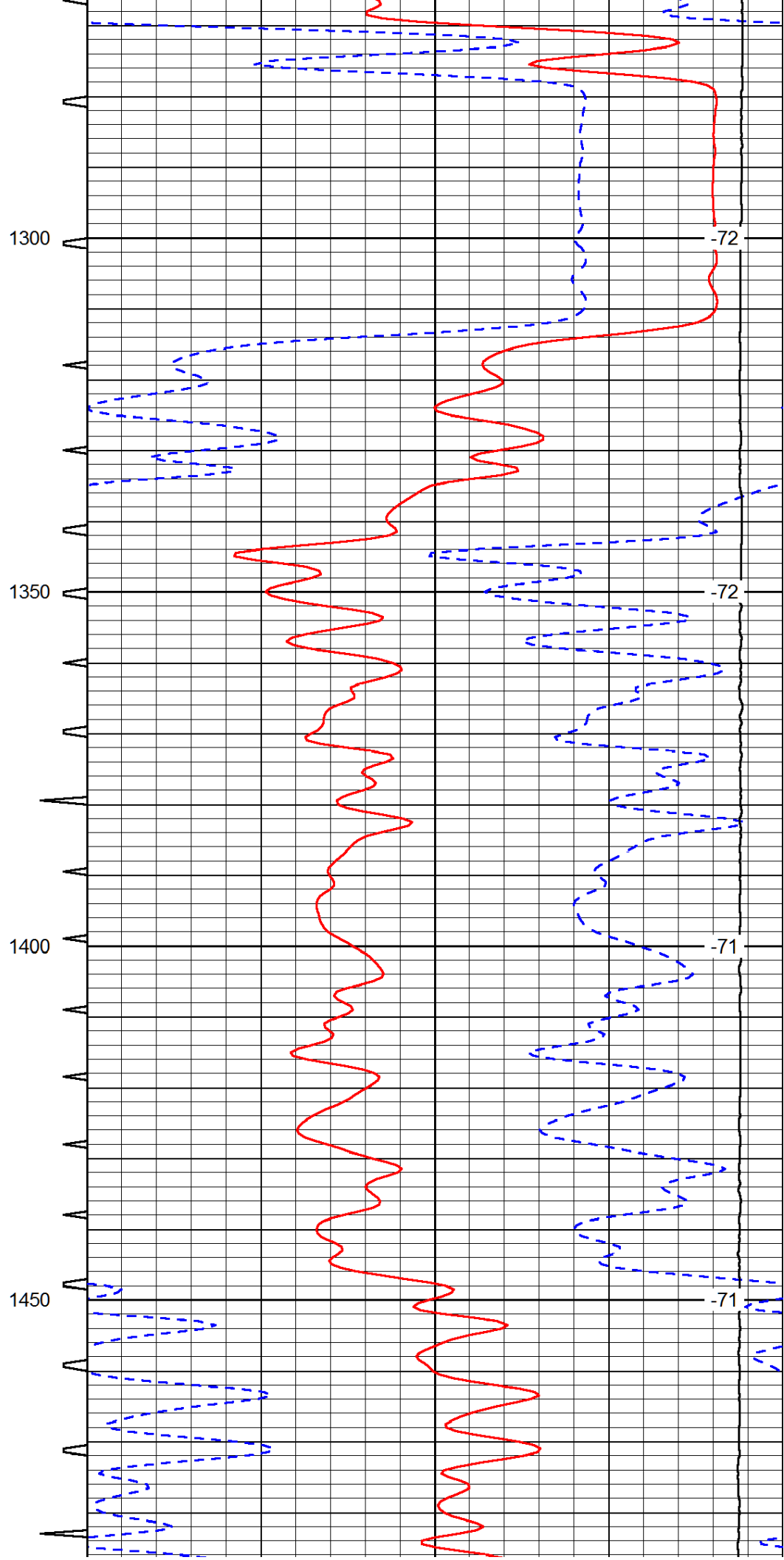
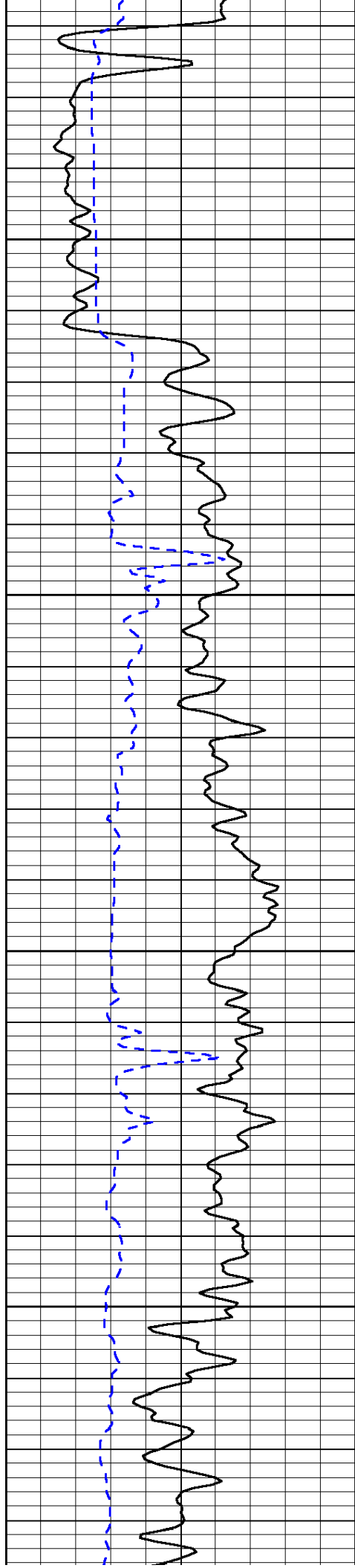


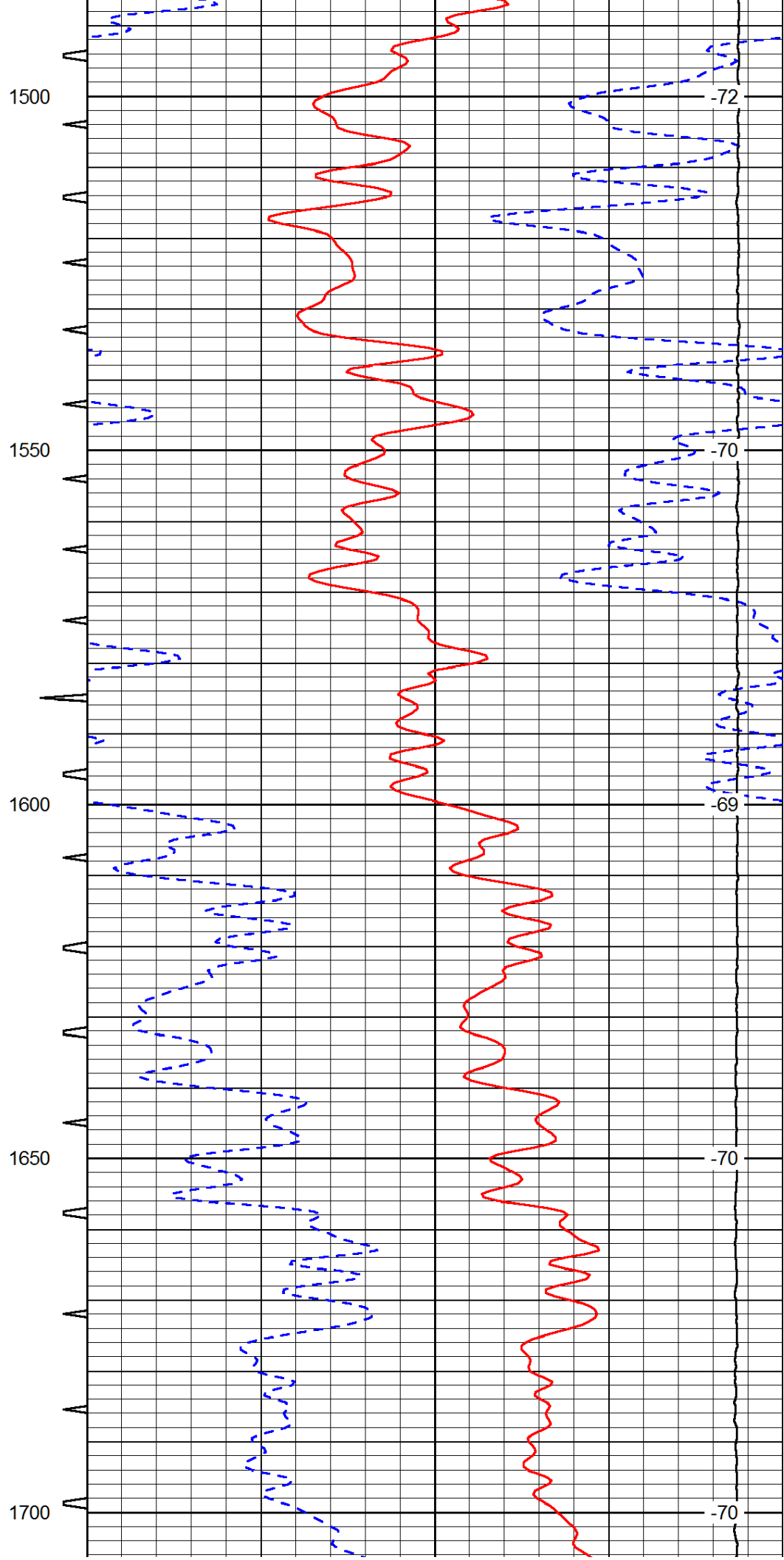
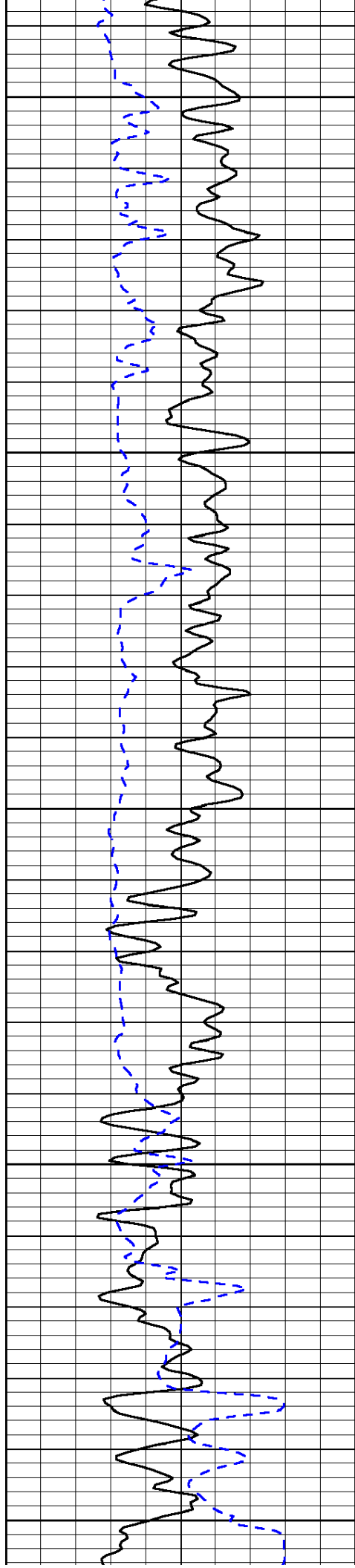


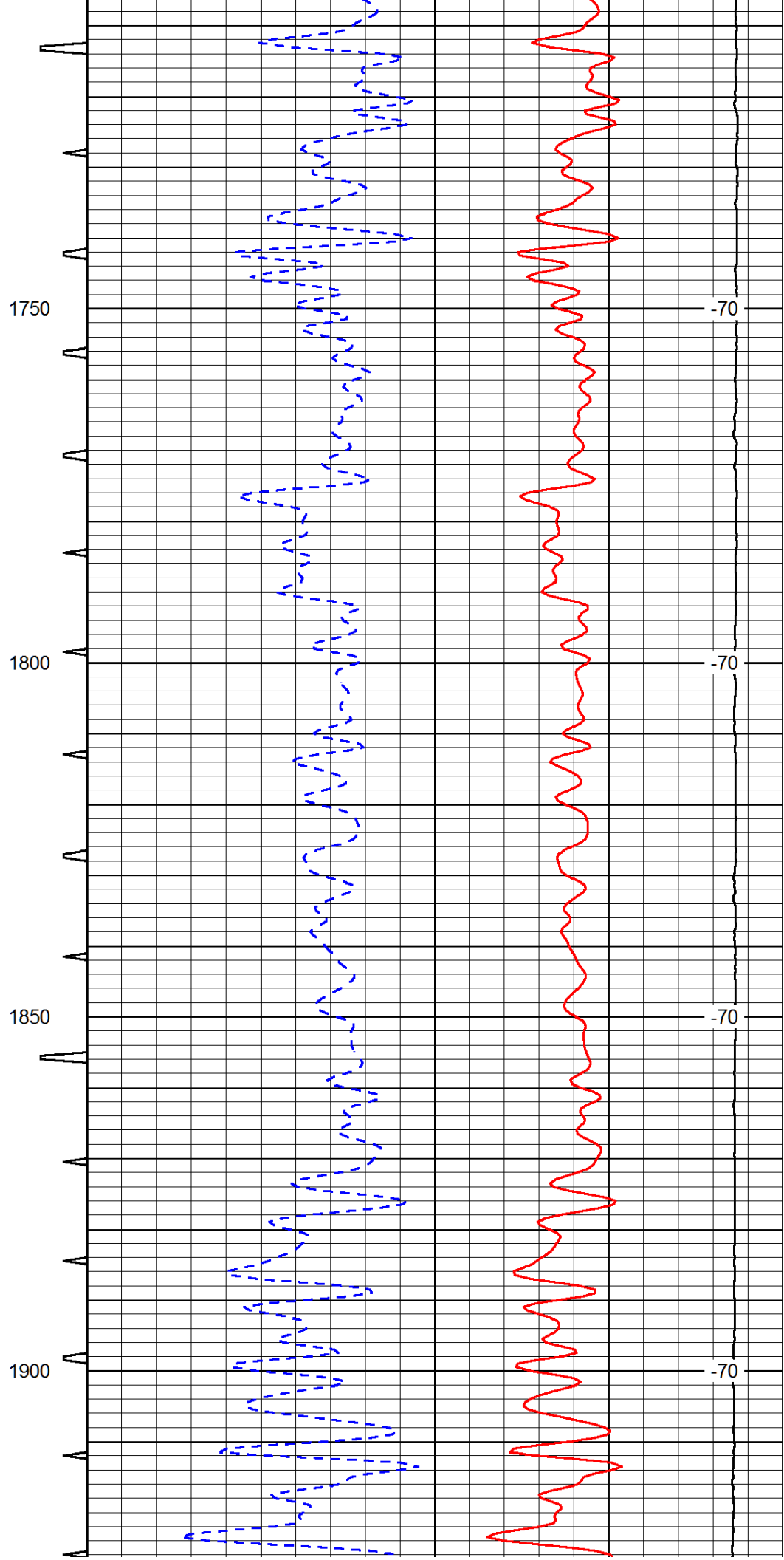
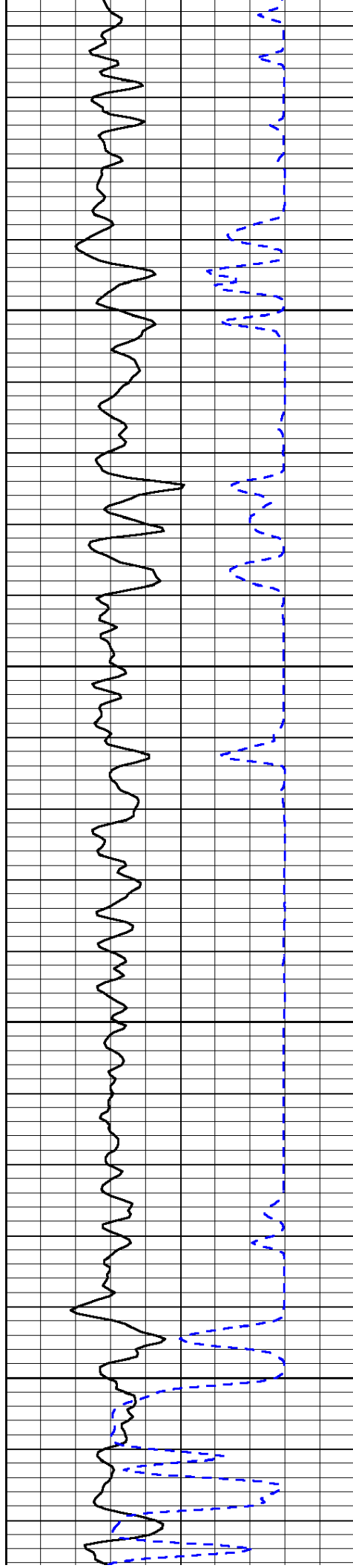


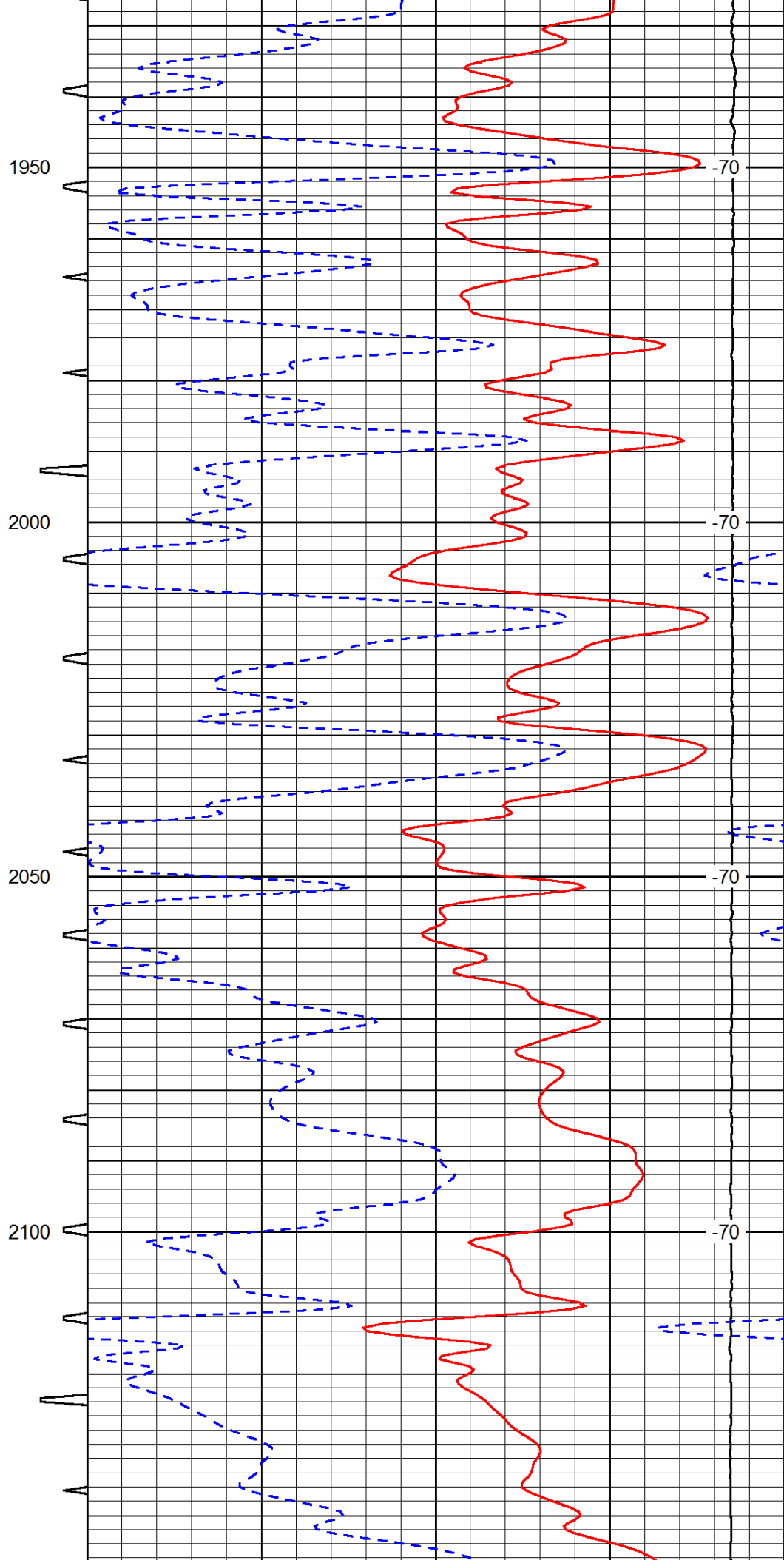
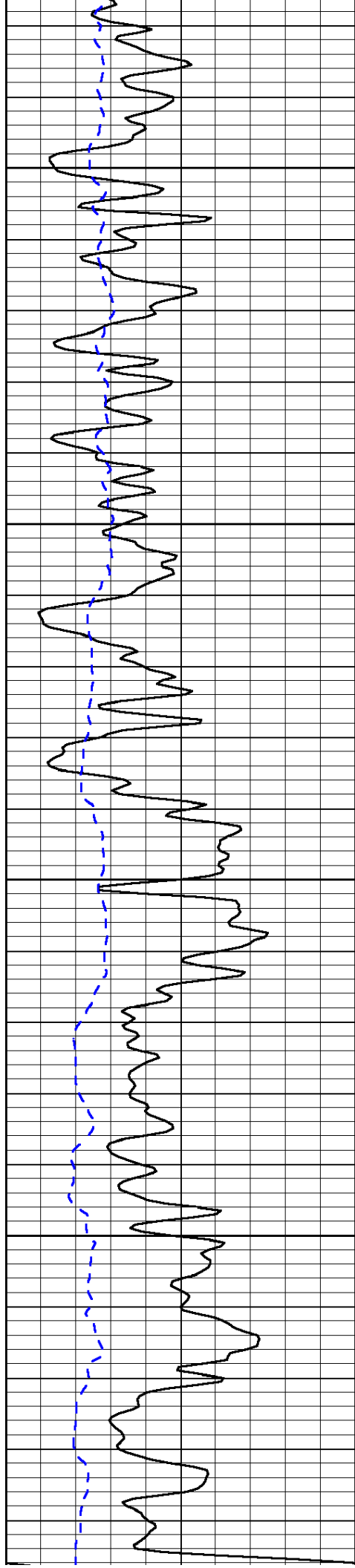


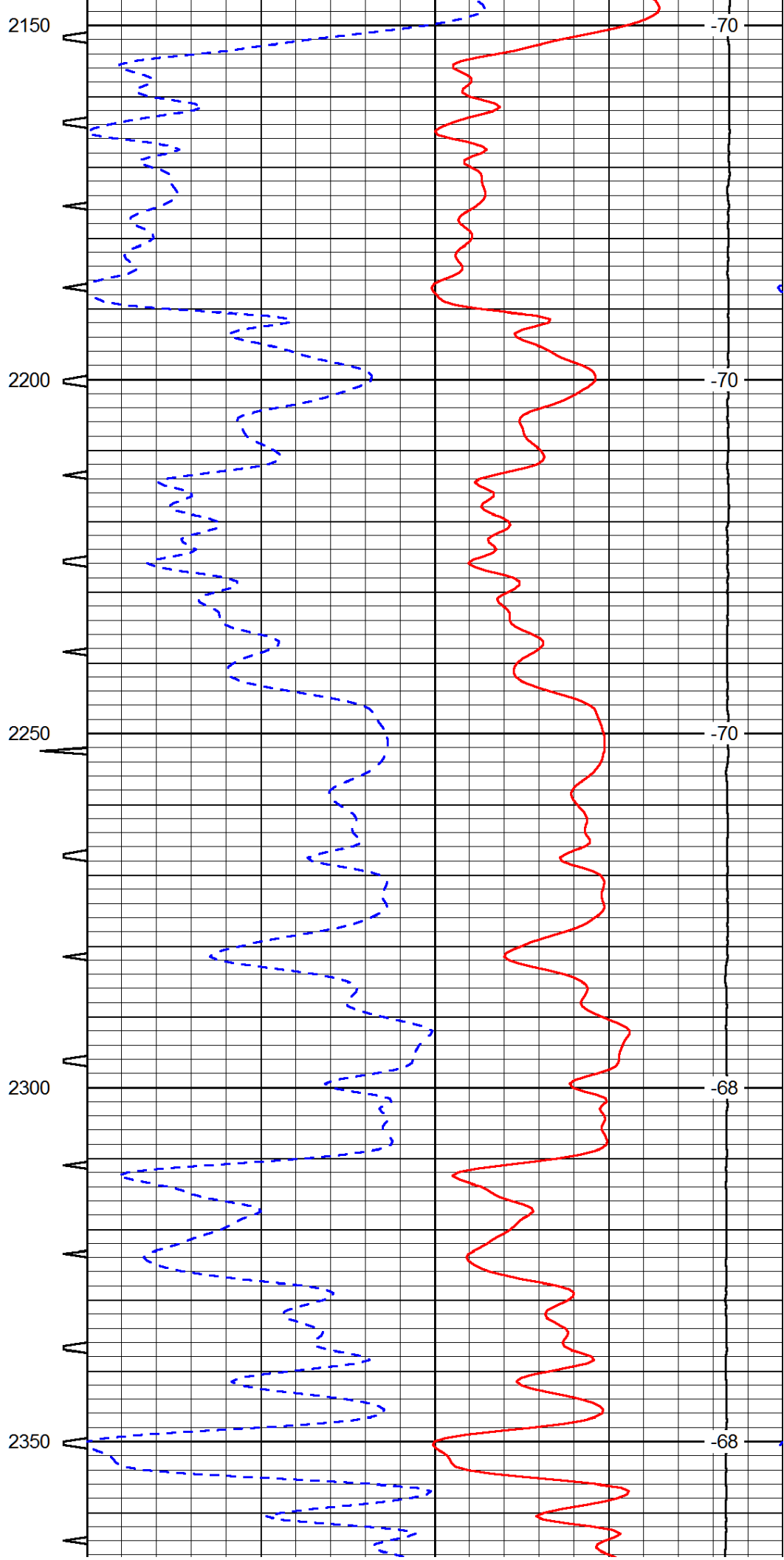
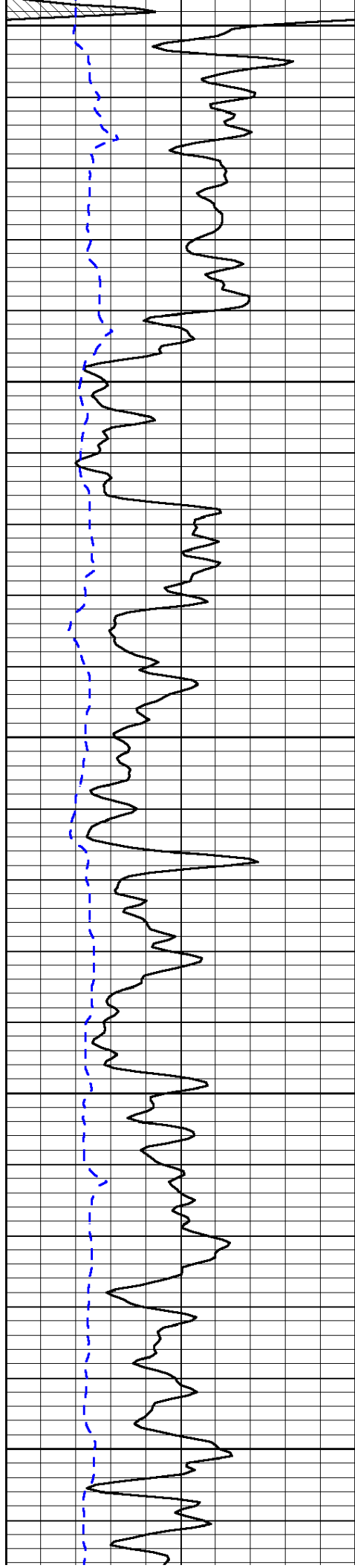


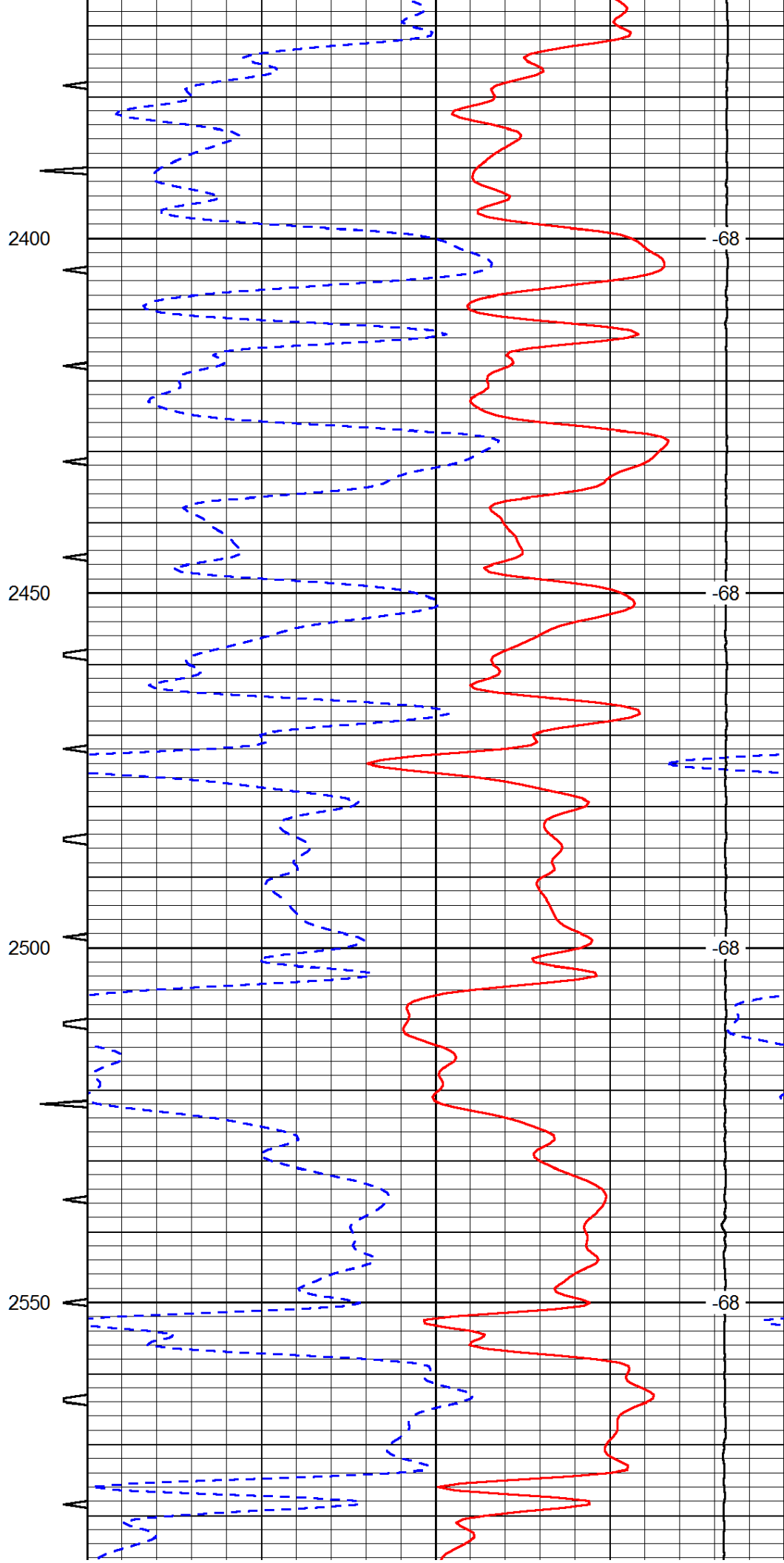
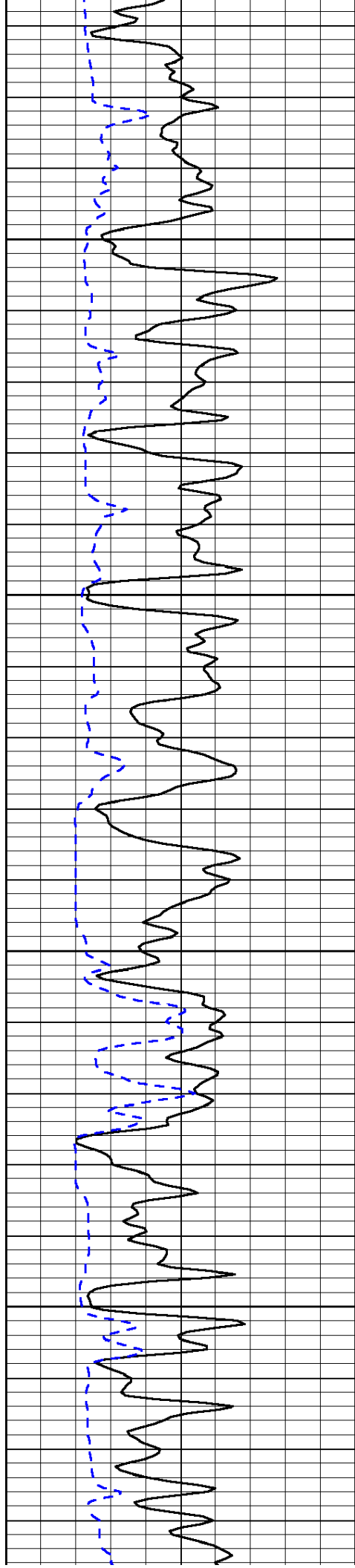


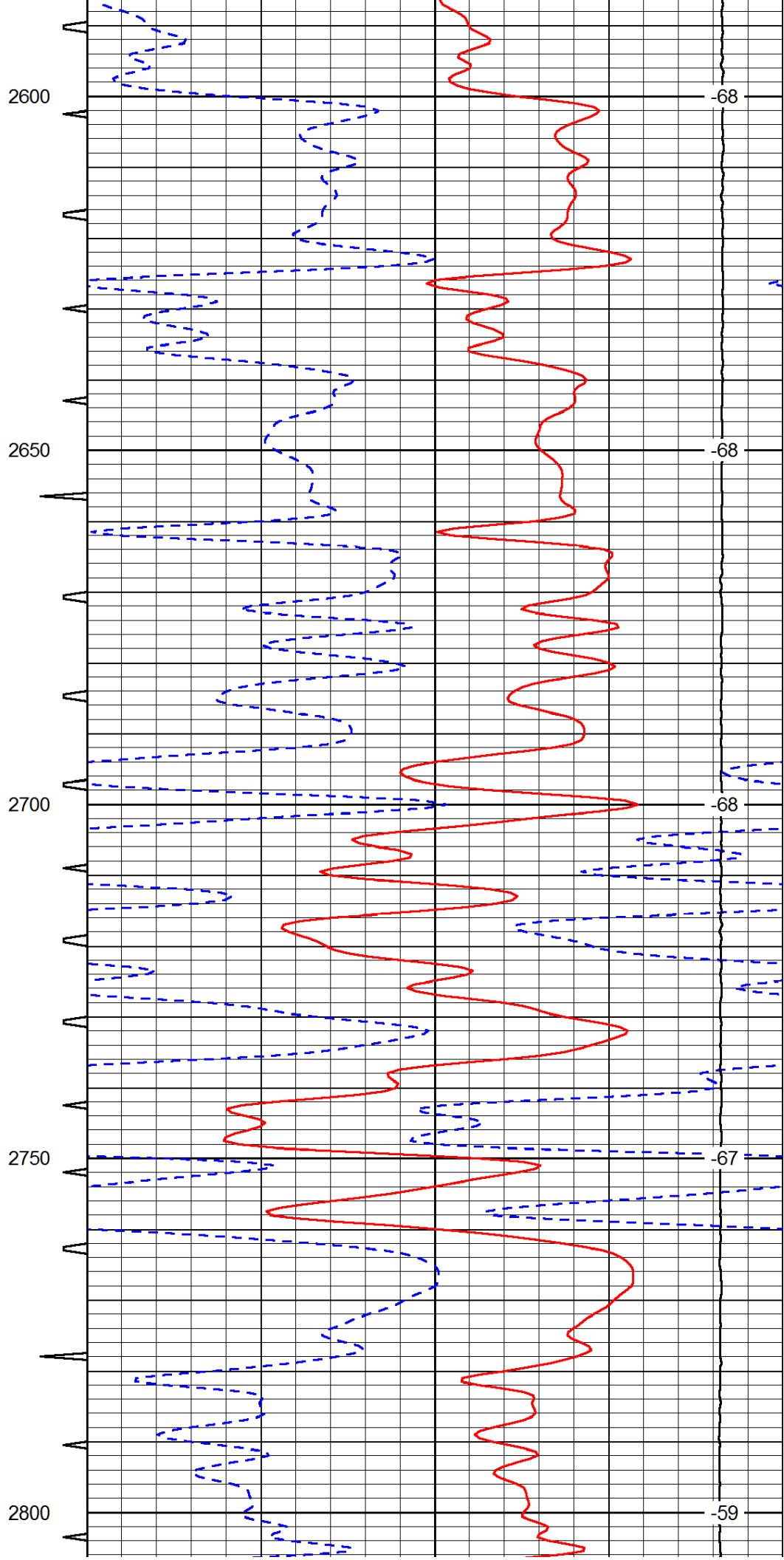
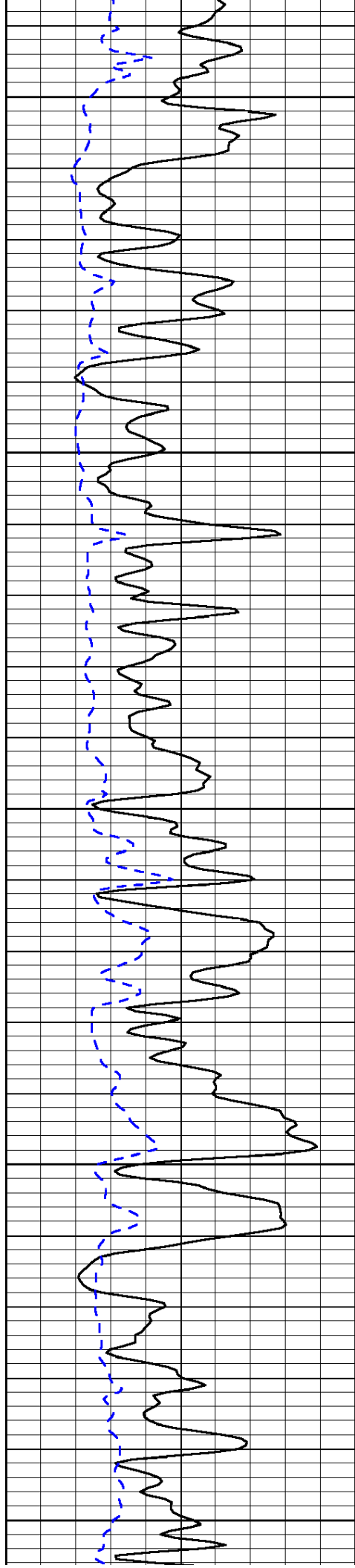


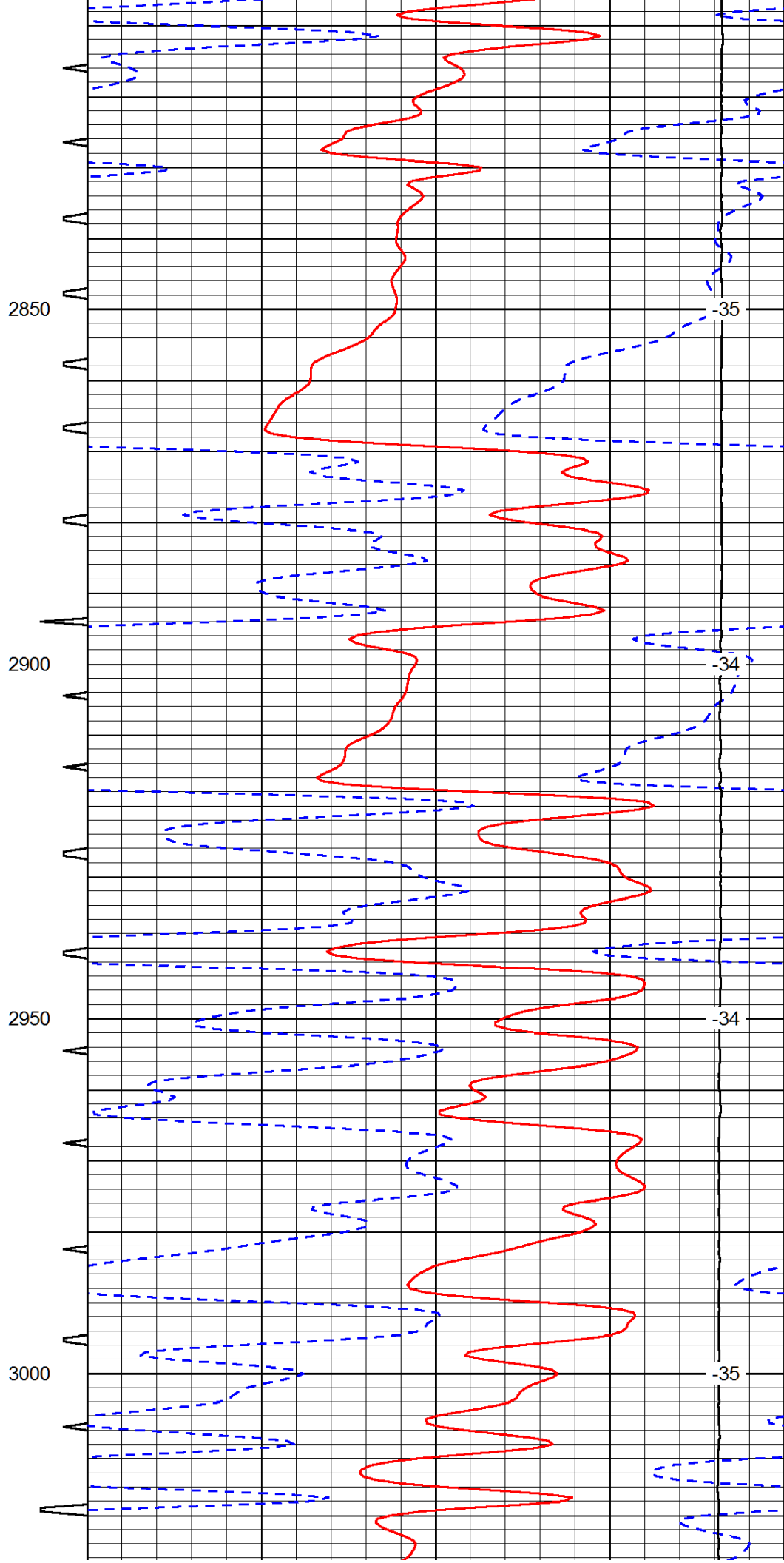
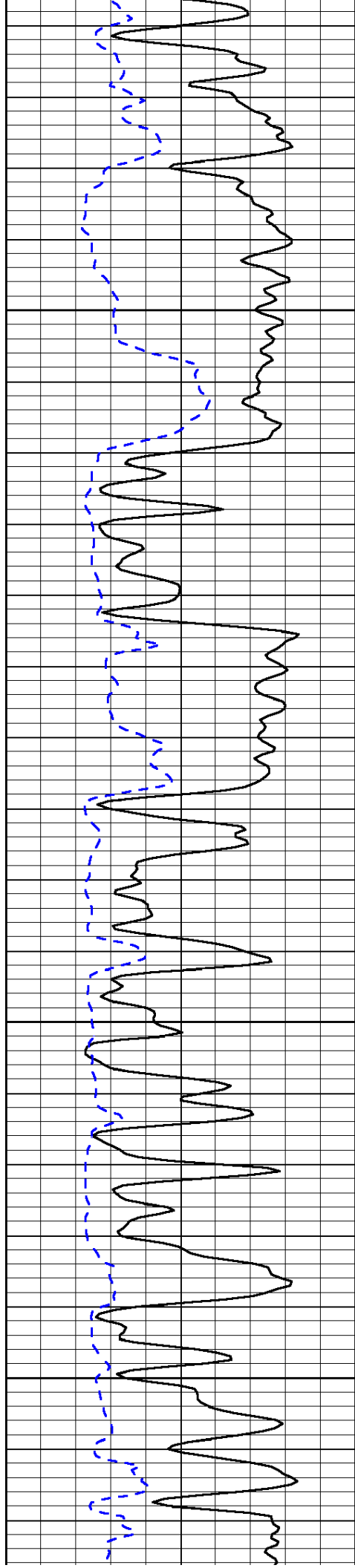


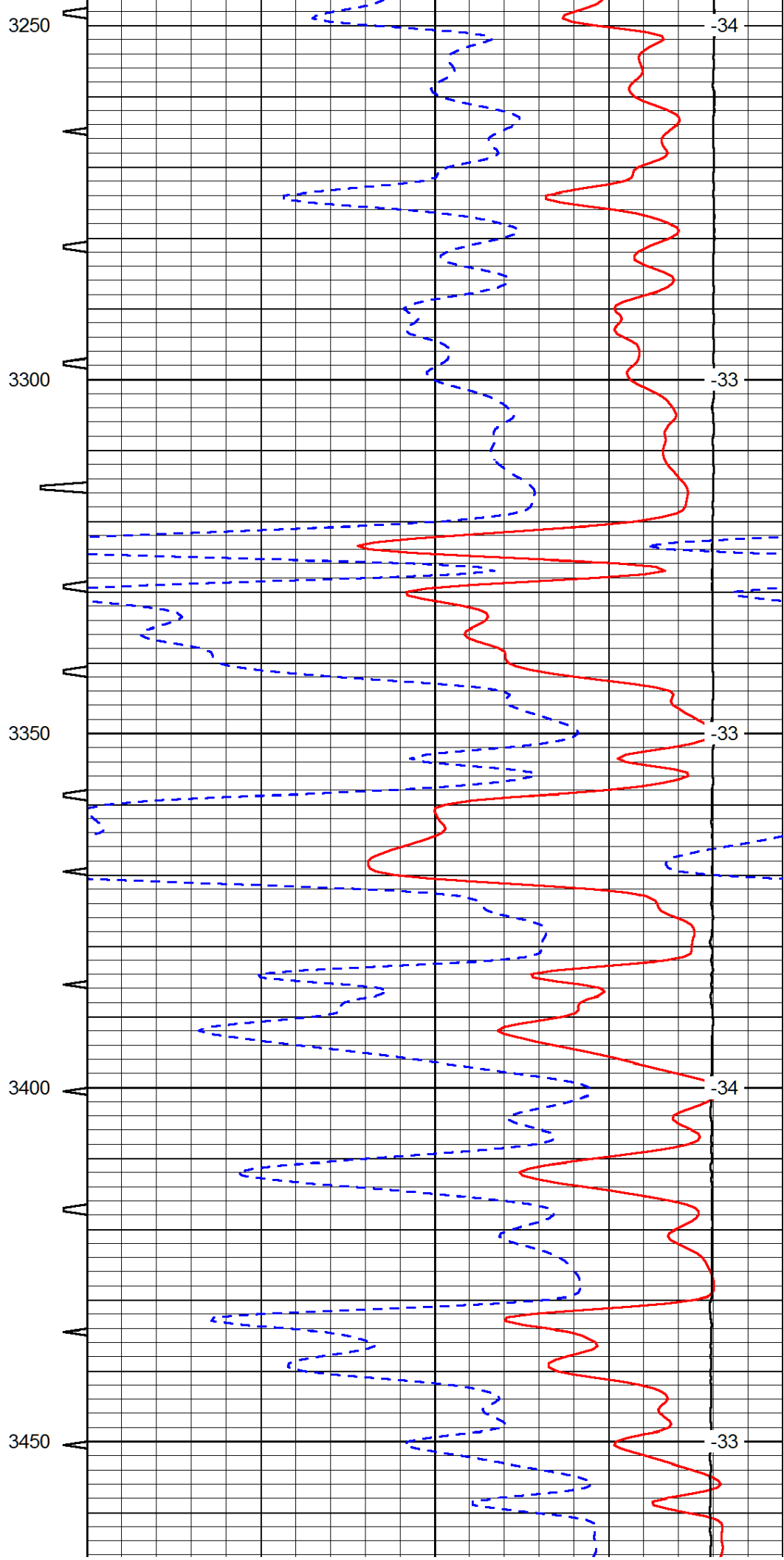
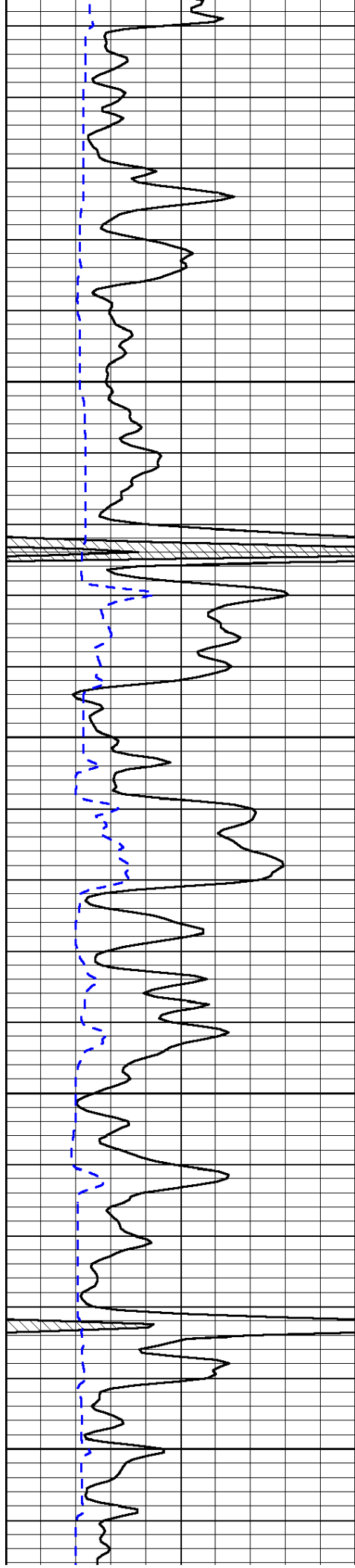


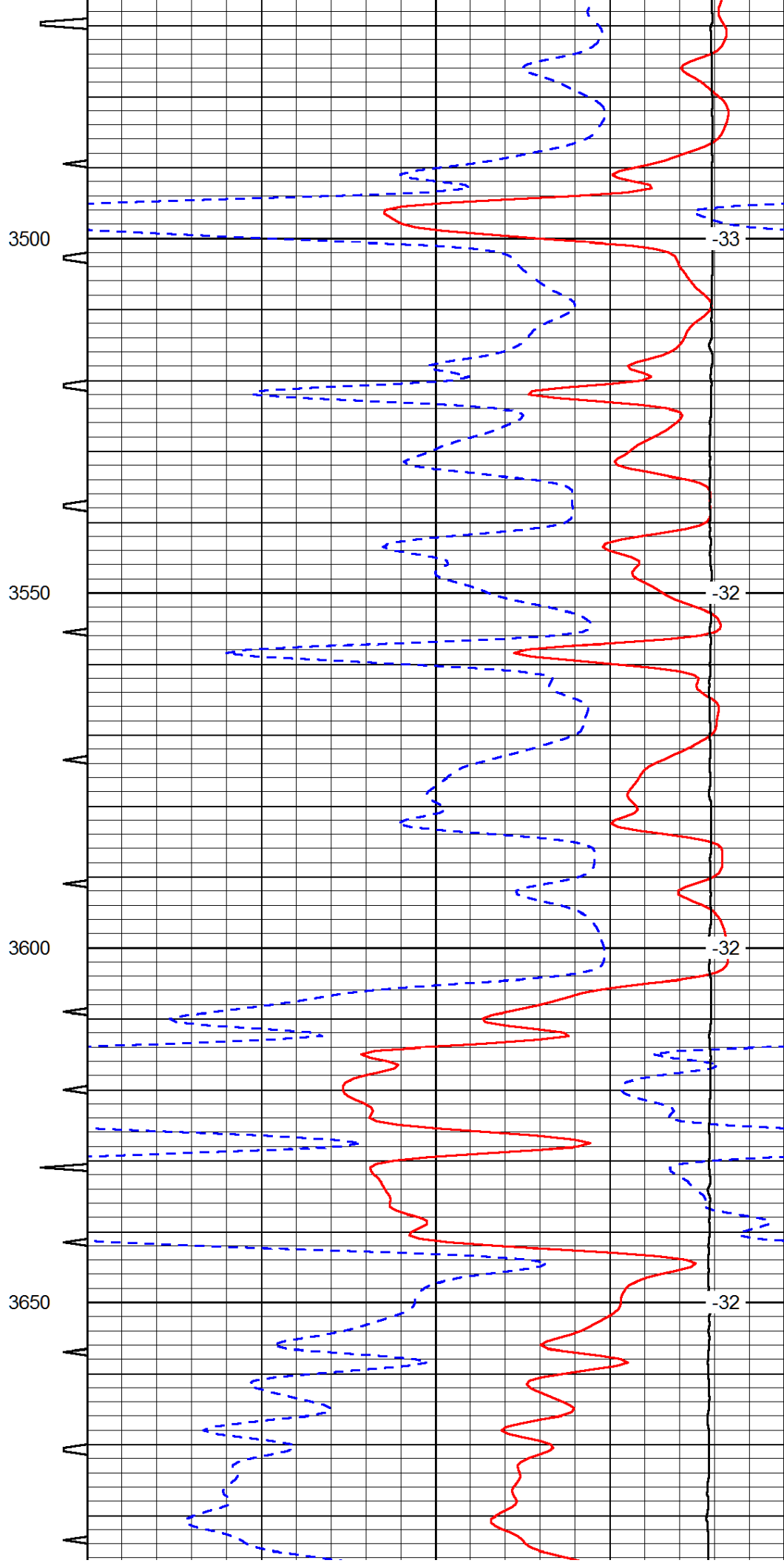
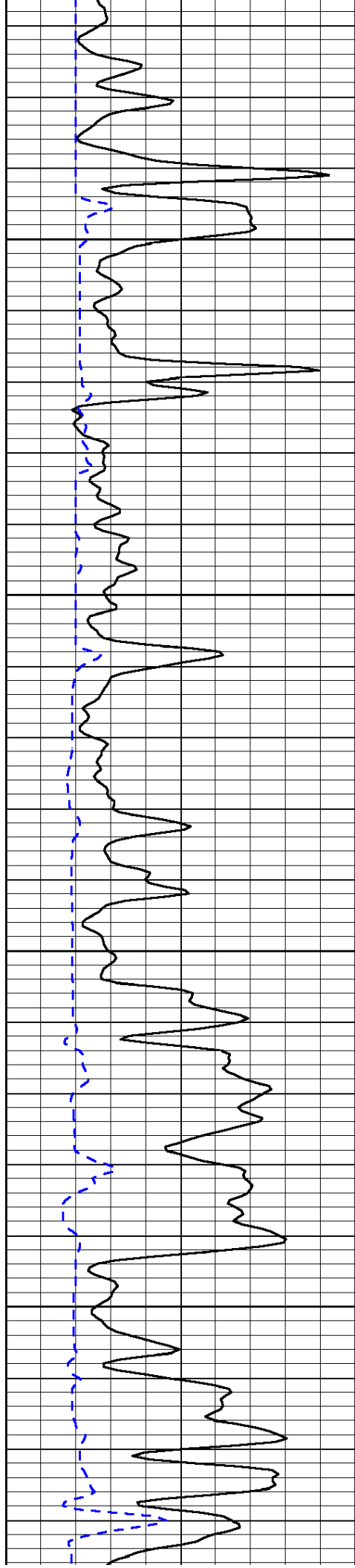


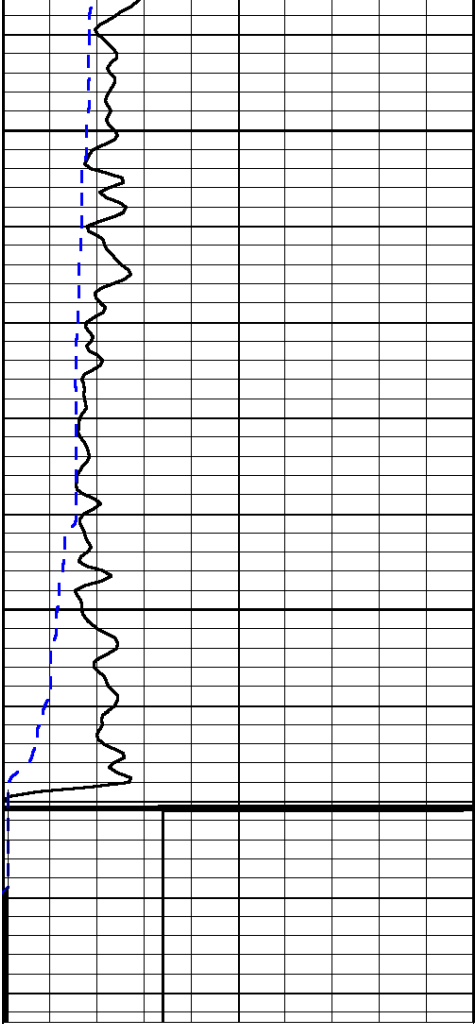




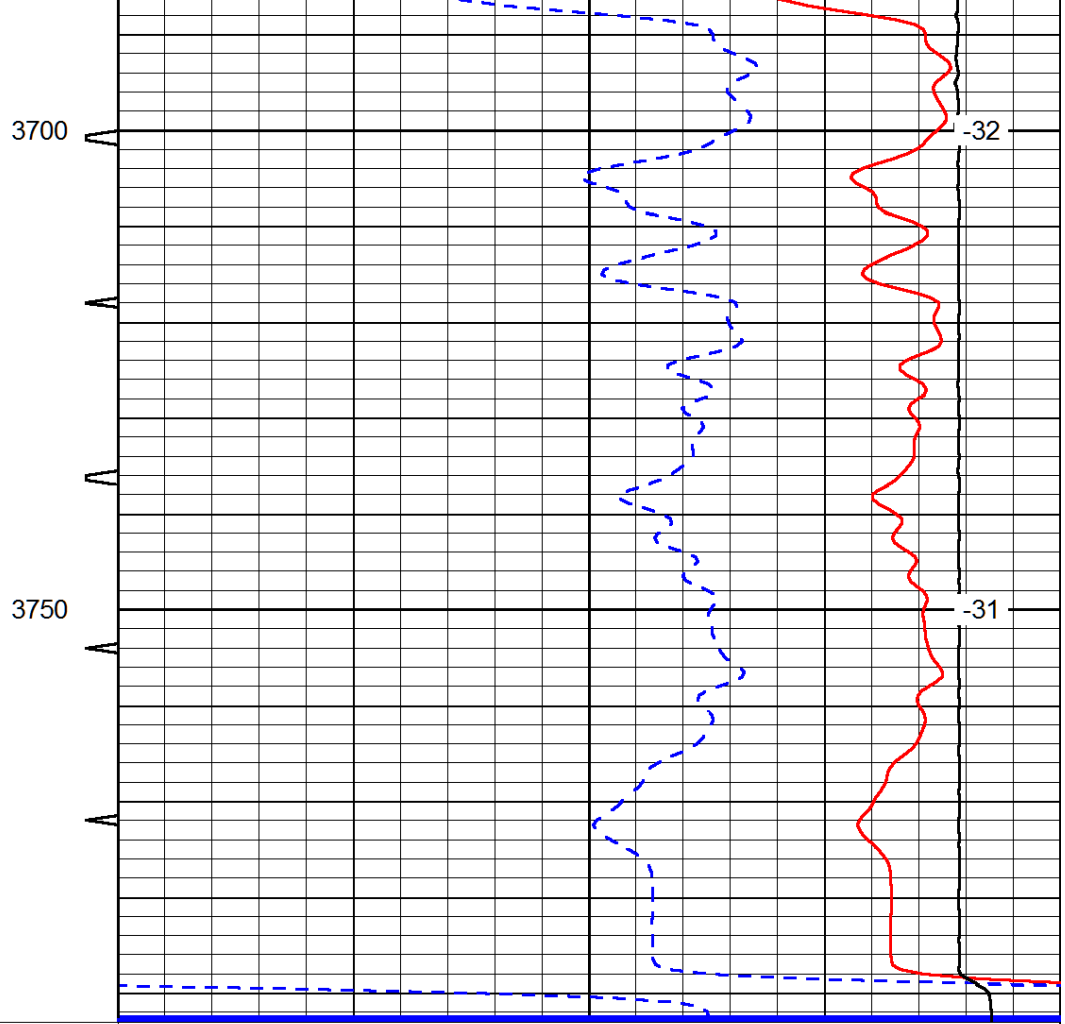








0	Gamma Ray (GAPI)	150
150	Gamma Ray (GAPI)	300
6	dCAL (in)	16



Sonic Int	140	Delta Time (usec/ft) (usec/ft)	40
5 (msec) 0	30	Sonic Porosity (pu)	-10
	15000	LTEN (lb) (lb)	0

LSPD
(ft/min)