



Borehole Compensated Sonic Log

Pioneer Energy Services

API No.

15-051-26472-00-00

Company **Murfin Drilling Company, Inc**
Well **Emmerentia #1-23**
Field **Martina**
County **Ellis** State **Kansas**

Location

2310' FSL & 800' FWL

Other Services
CNL/CDL
MEL/DIL

Sec: 23

Twp: 15 S

Rge: 19 W

Permanent Datum

Log Measured From

Drilling Measured From

Ground Level
Kelly Bushing
Kelly Bushing

Elevation 1976
5 Ft. Above Perm. Datum
K.B. 1981
D.F. 1976
G.L. 1976

Date 02-25-2013

Run Number Two

Type Log BHC Sonic

Depth Driller 3700

Depth Logger 3698

Bottom Logged Interval 3687

Top Logged Interval 1150

Type Fluid In Hole Chemical

Salinity, PPM CL 8900

Density 9.3

Level Full

Max. Rec. Temp. F 115

Operating Rig Time 5 Hours

Equipment -- Location 91 Days

Recorded By D. Schmidt

Witnessed By Rocky Milford

Borehole Record

Casing Record

Run No.

Bit

From

To

Size

Wgt.

From

To

One 12.25 00 1176 8.625 23# 00 1176

Two 7.875 1176 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.

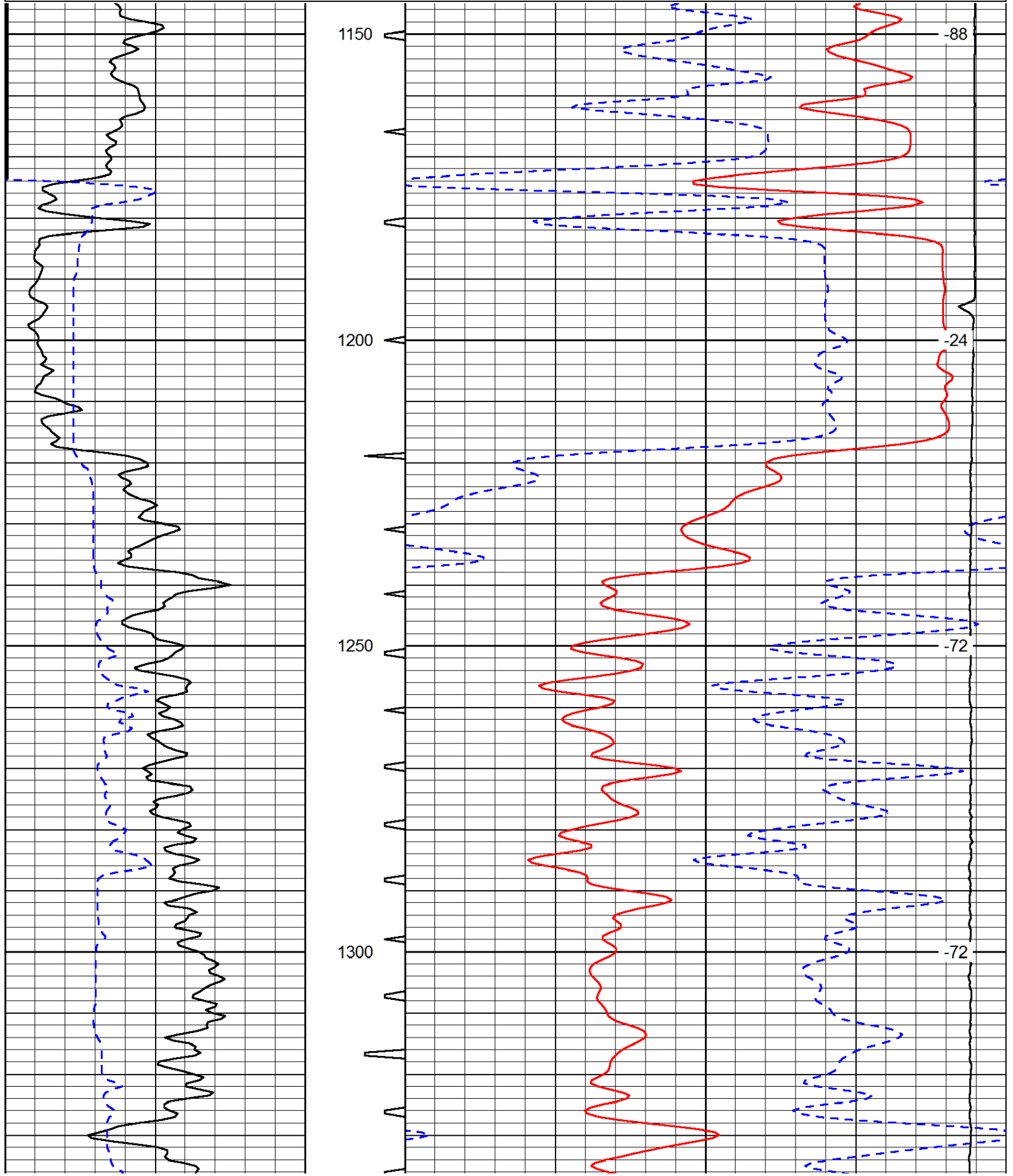
Comments

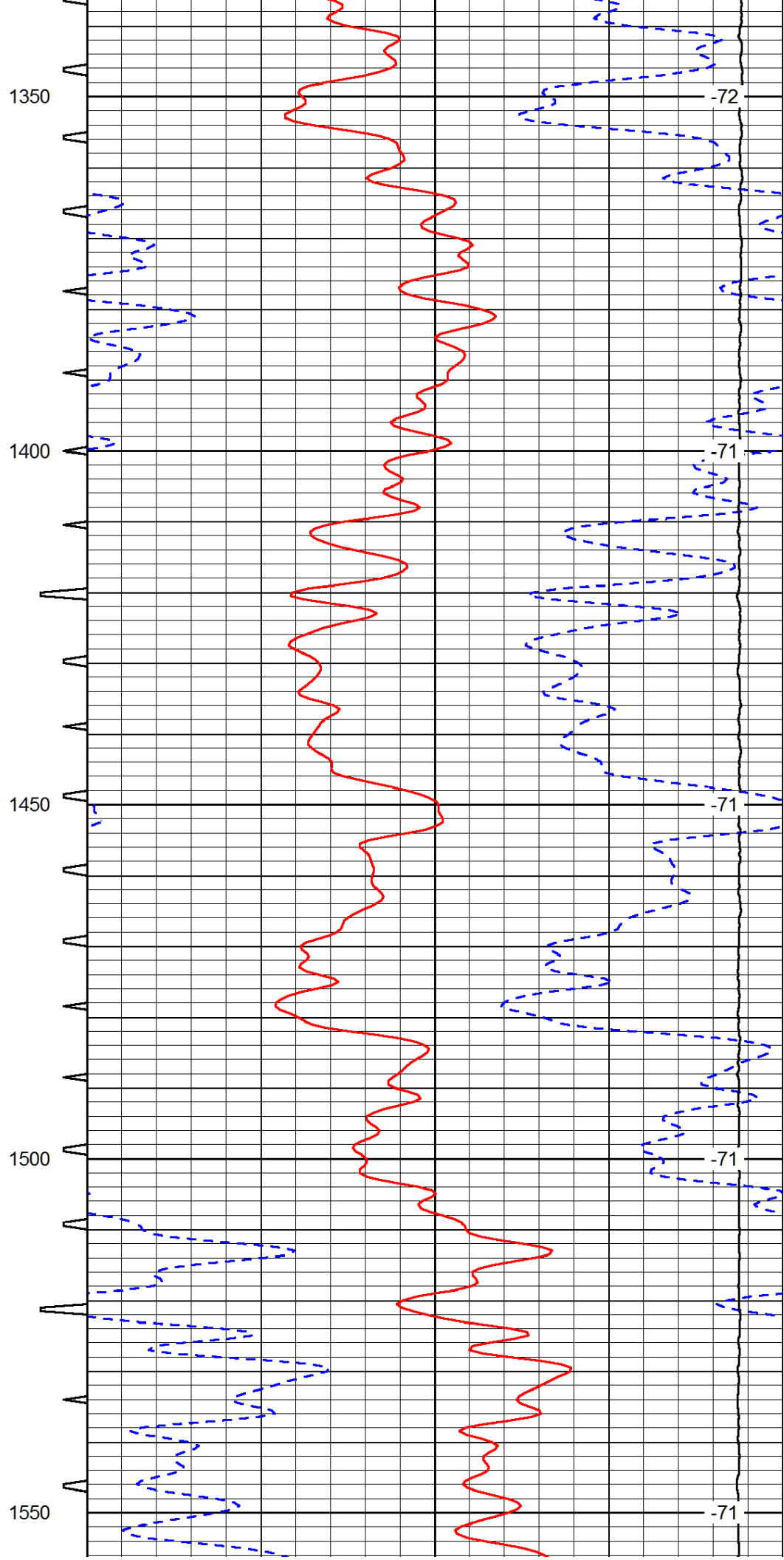
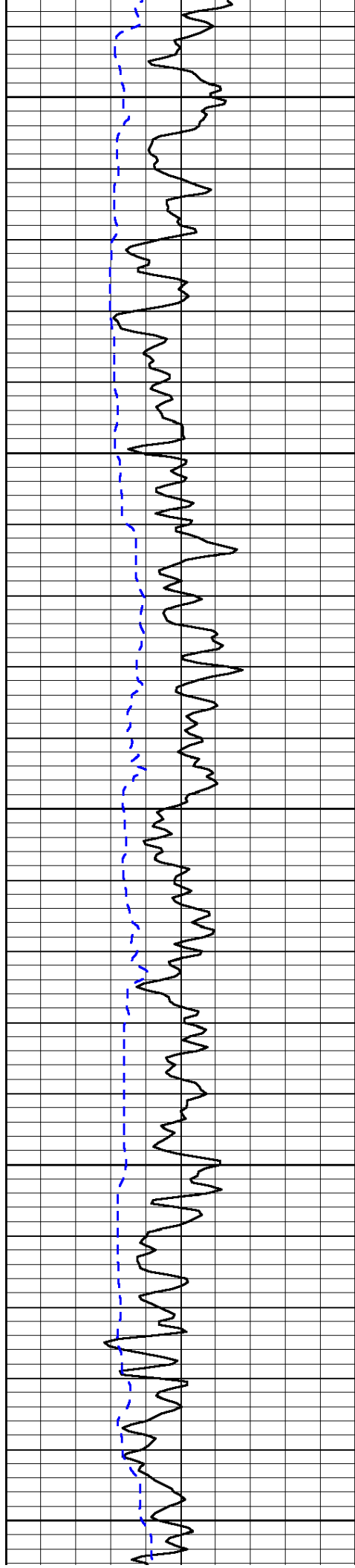
Thank you for using Log-Tech, Inc.
(785) 625-3858

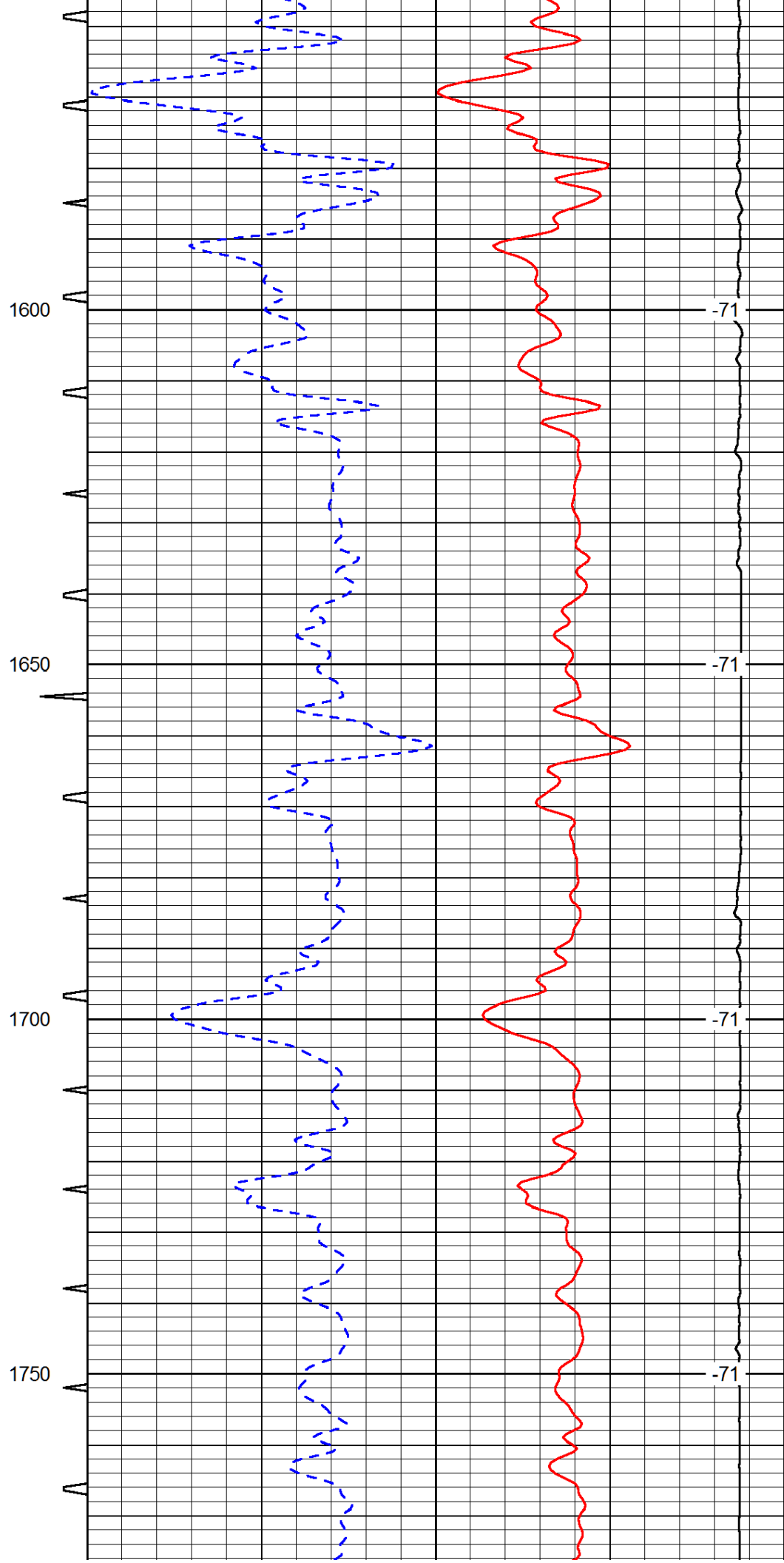
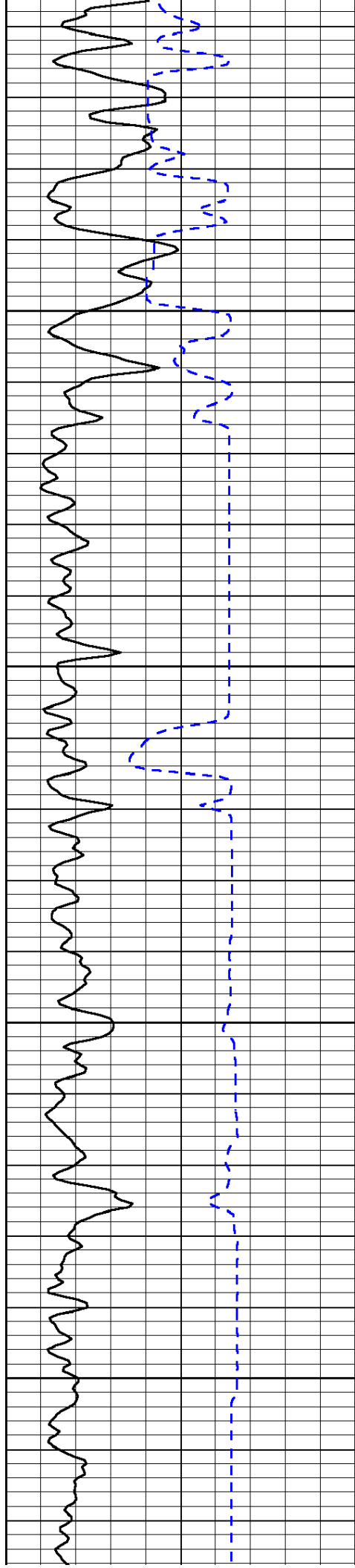
Antonino,
1 West to 200 Rd, 3 1/2 South,
East Into

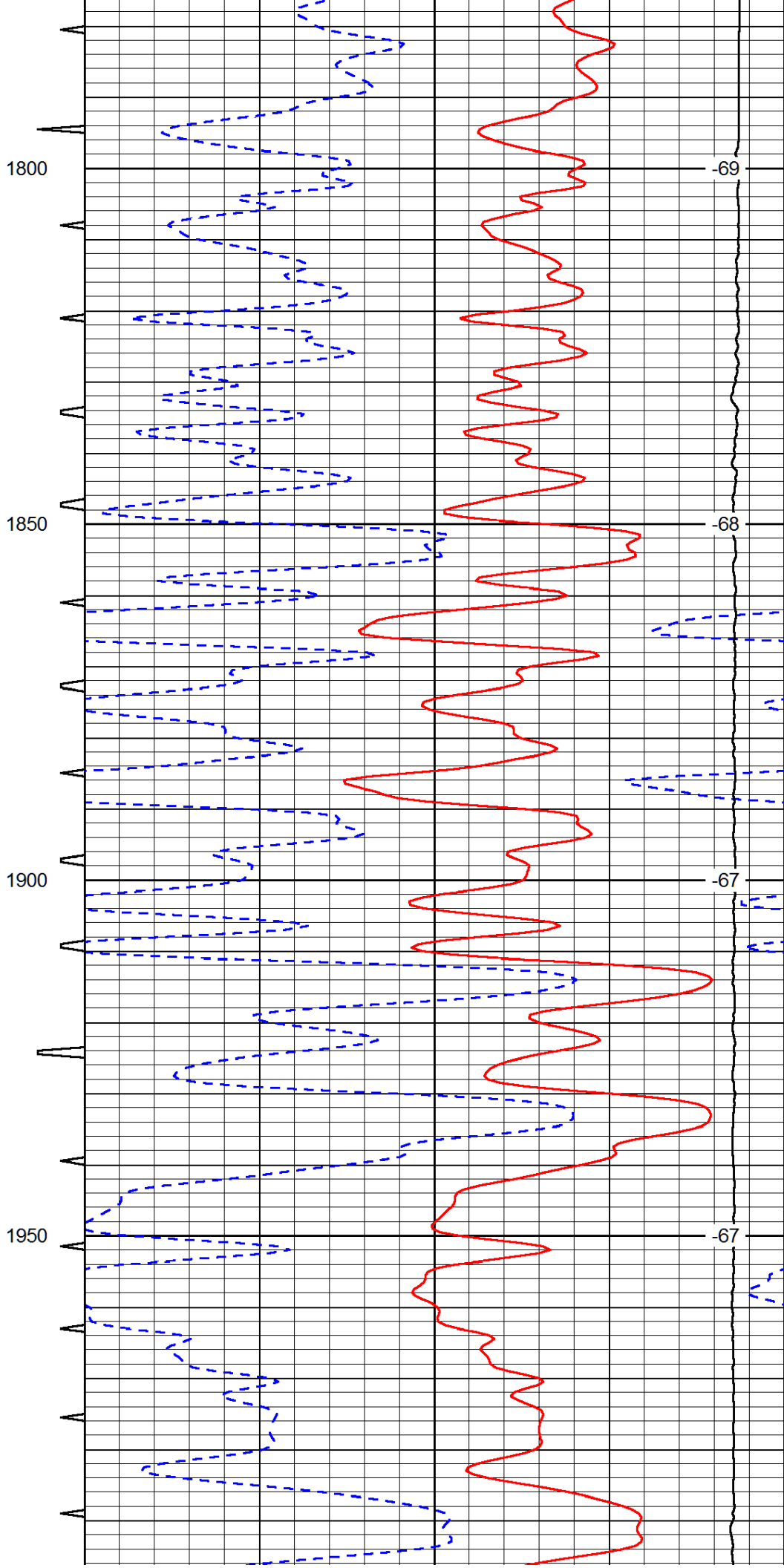
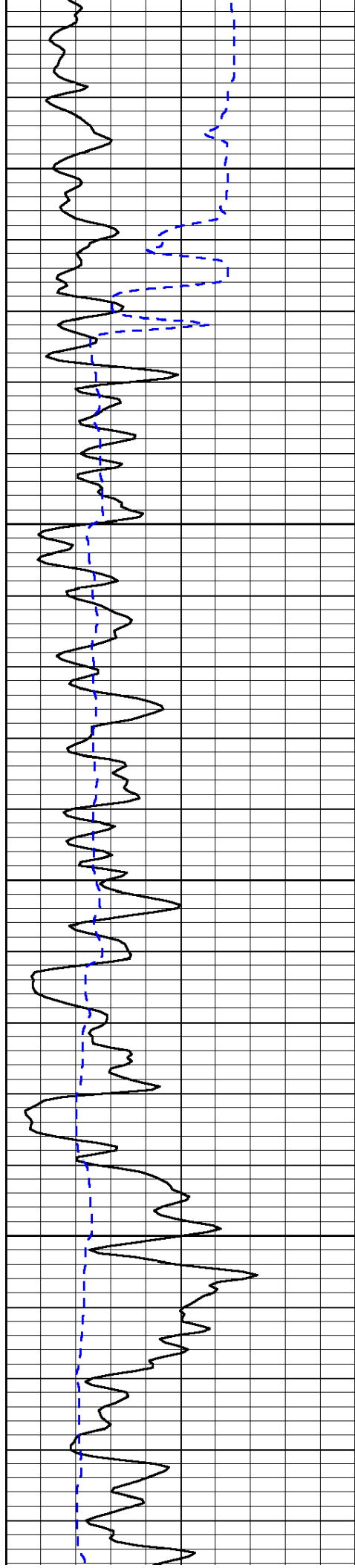
Database File: murfin_022513hd.db
Dataset Pathname: dil/mrfstck
Presentation Format: sonic
Dataset Creation: Mon Feb 25 08:54:36 2013
Charted by: Depth in Feet scaled 1:240

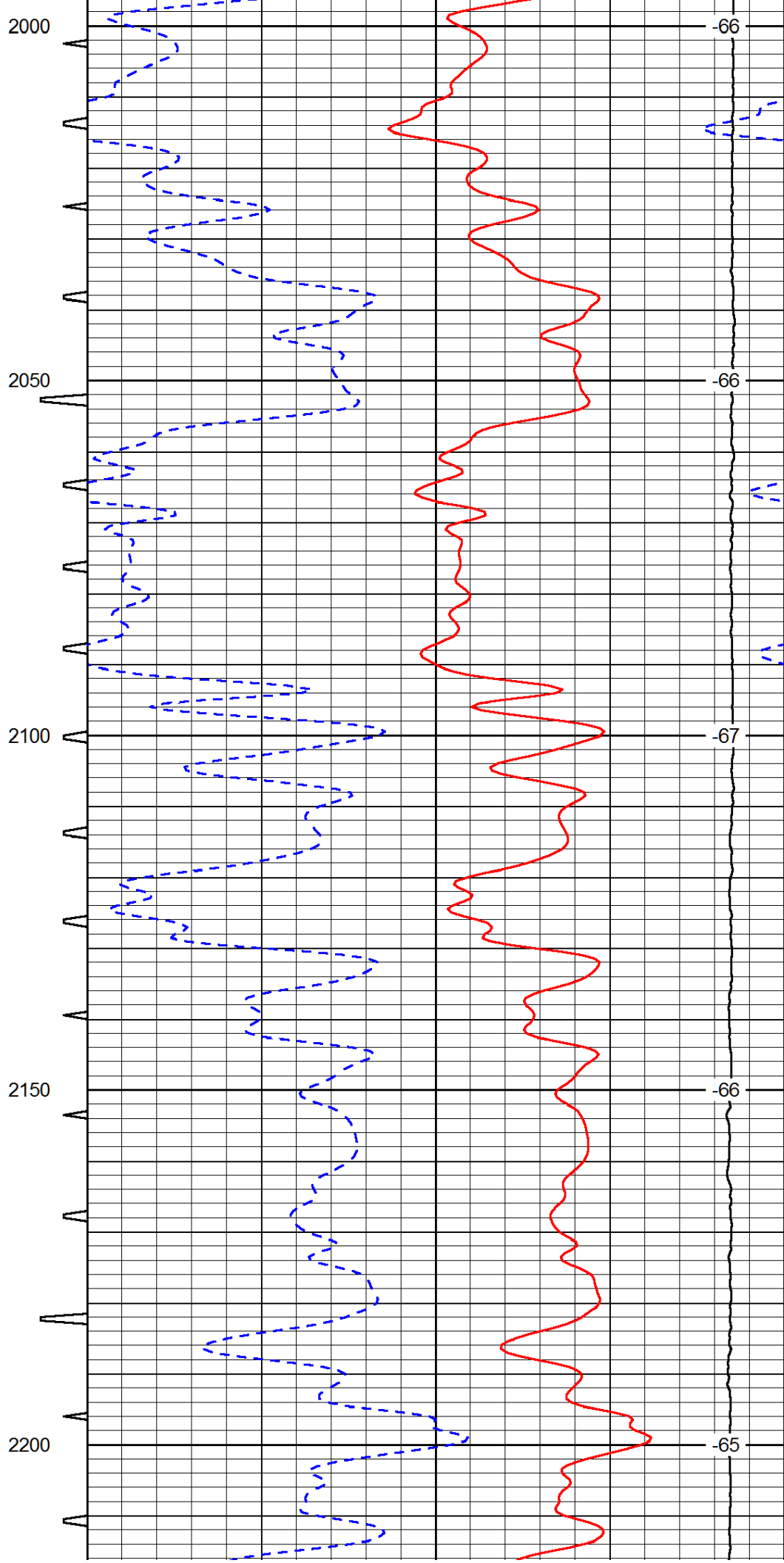
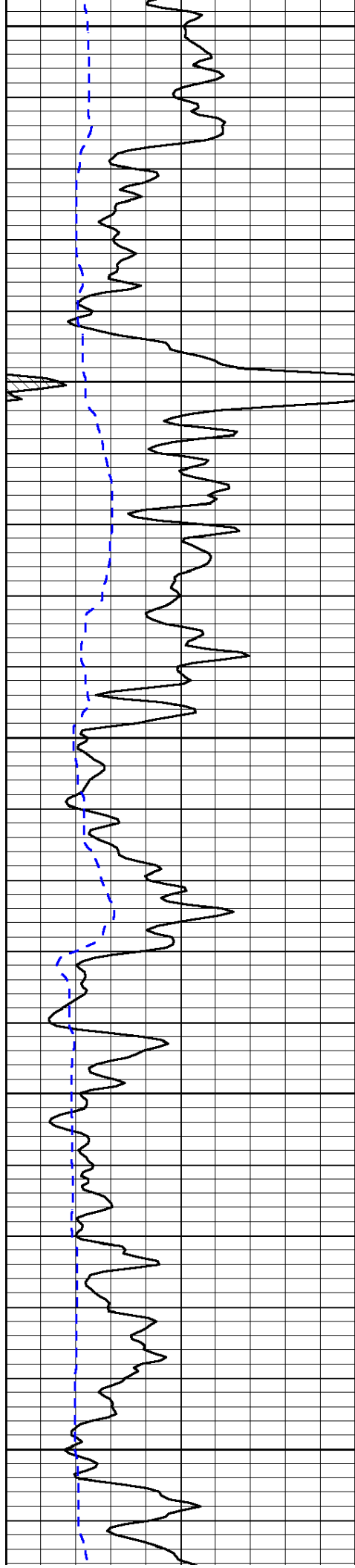
0	Gamma Ray (GAPI)	150	Sonic Int	140	Delta Time (usec/ft) (usec/ft)	40
150	Gamma Ray (GAPI)	300	5 (msec) 0	30	Sonic Porosity (pu)	-10
6	dCAL (in)	16		15000	LTEN (lb) (lb)	0
						LSPD (ft/min)

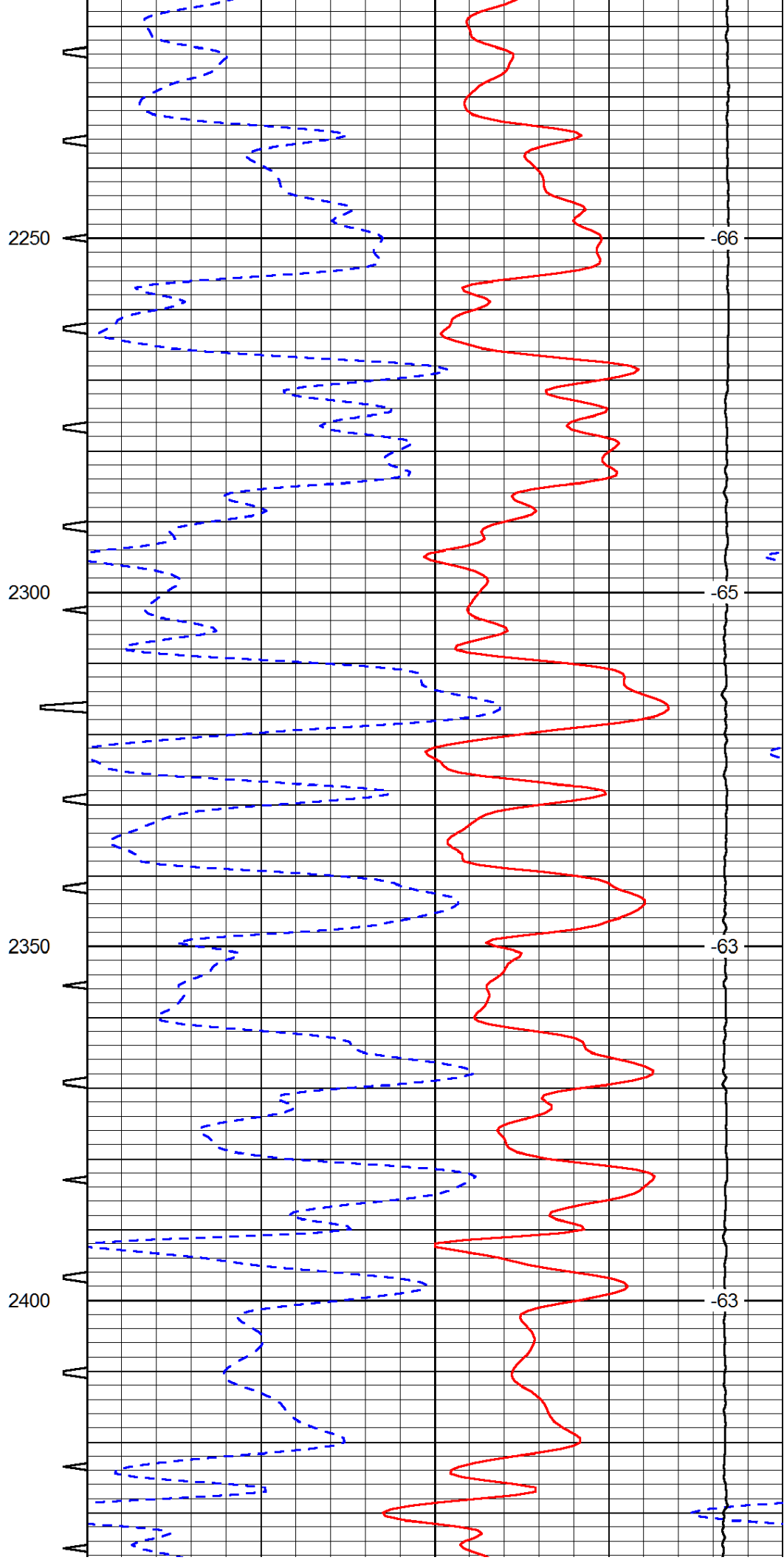
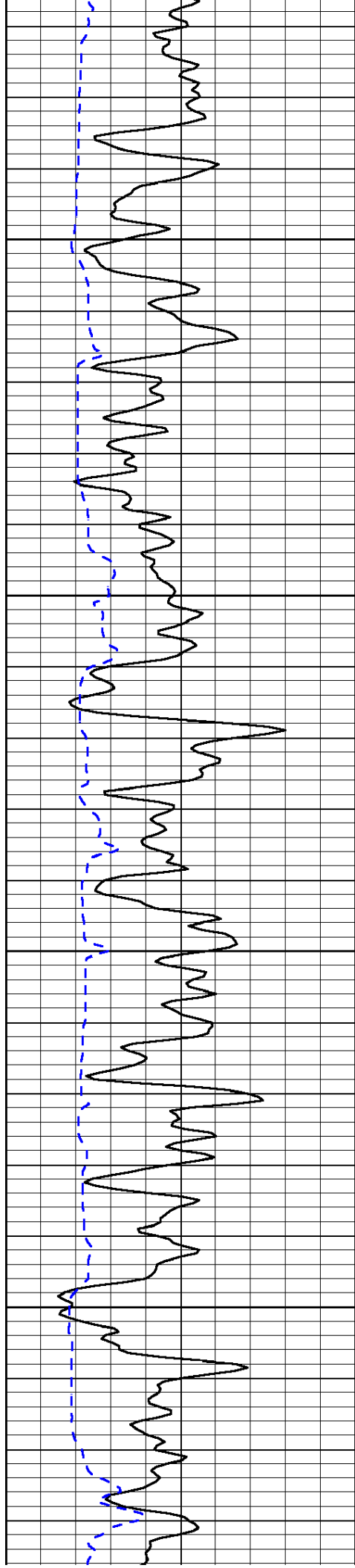


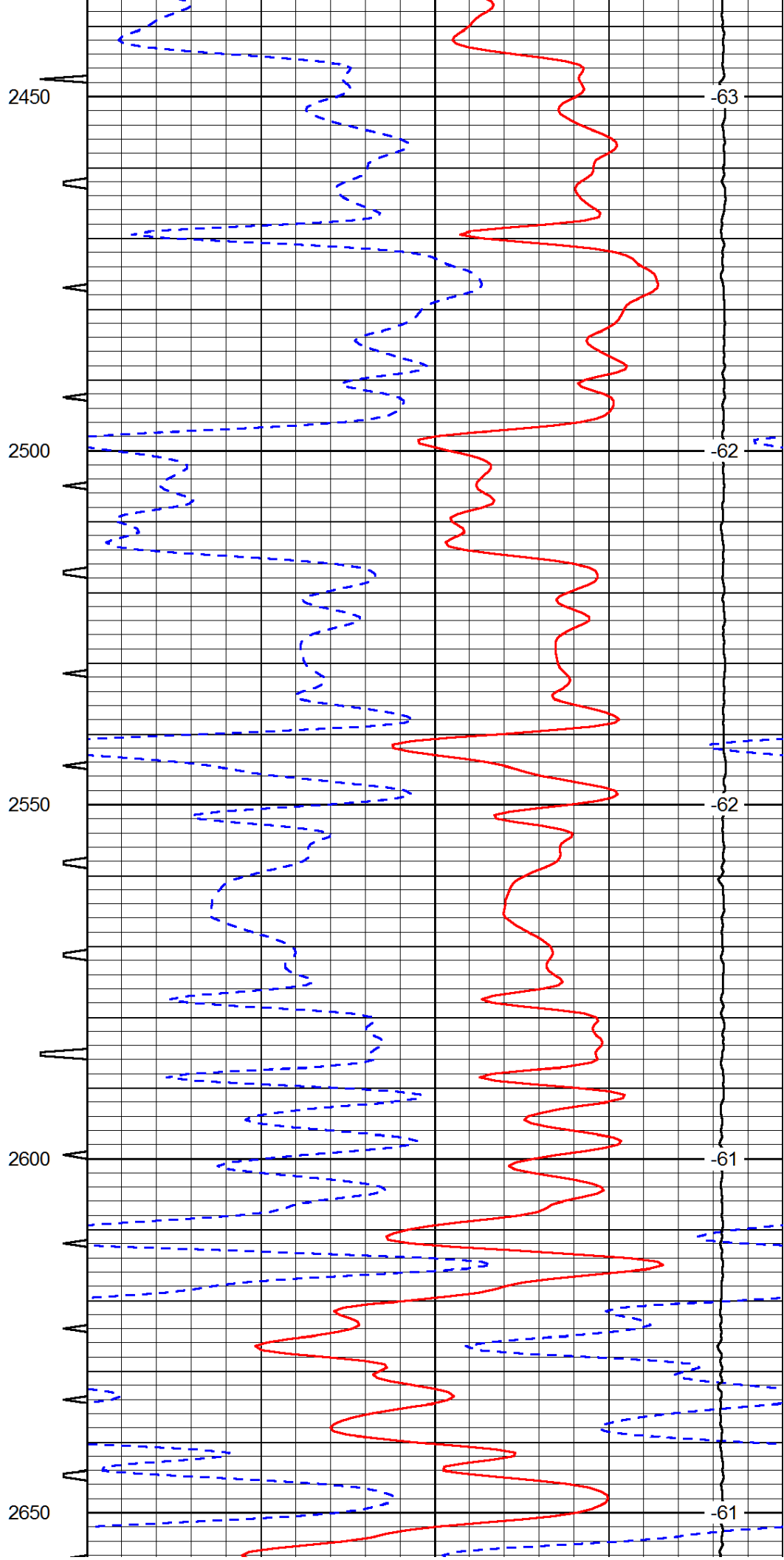
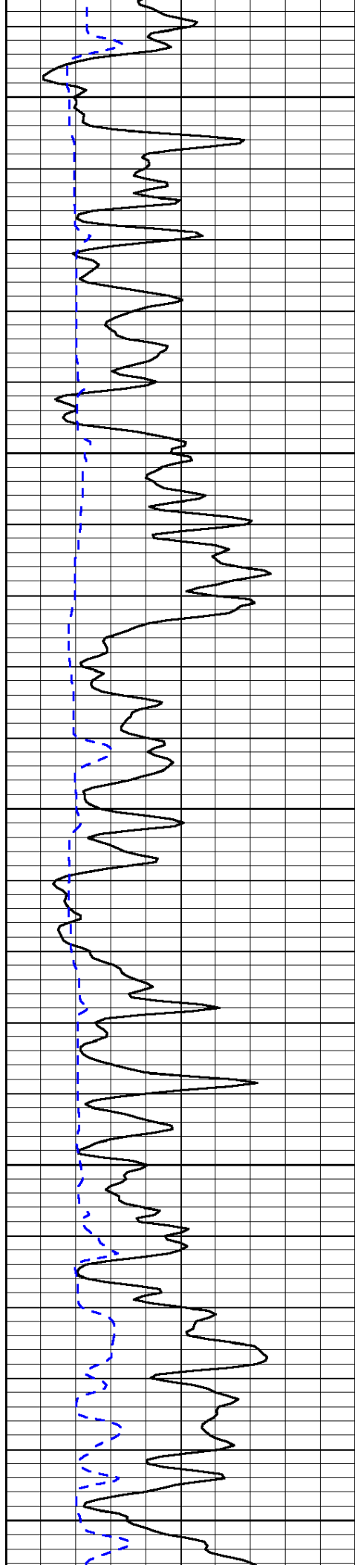


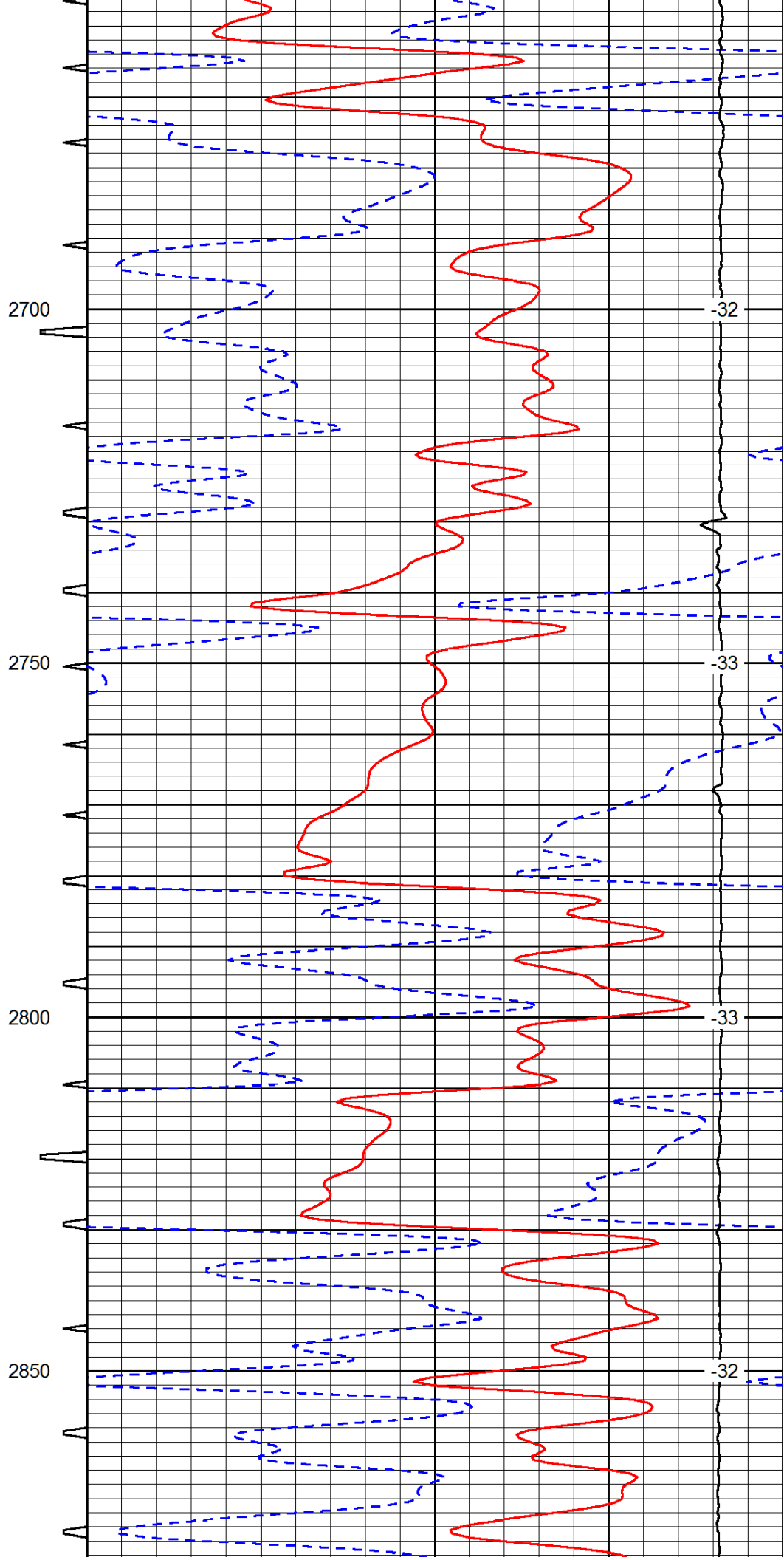
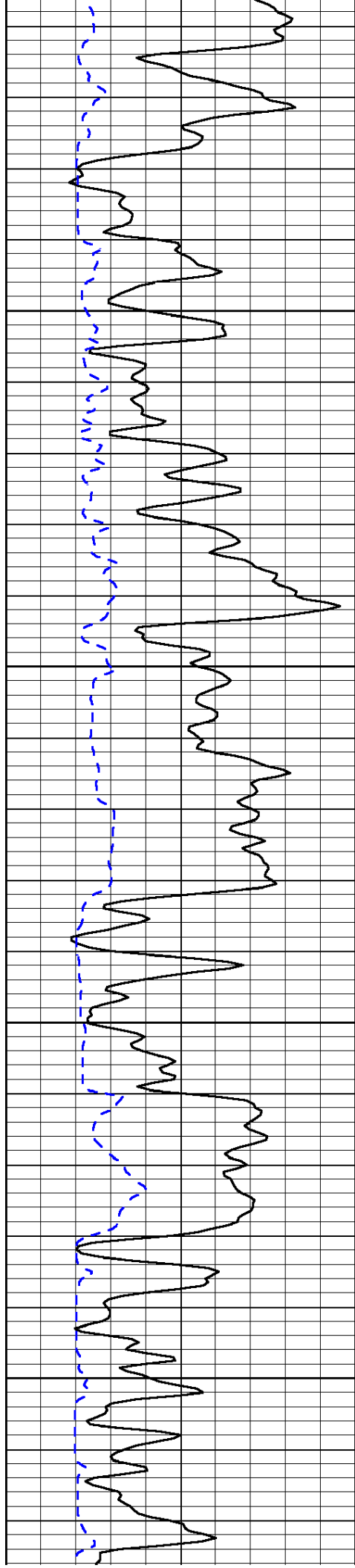


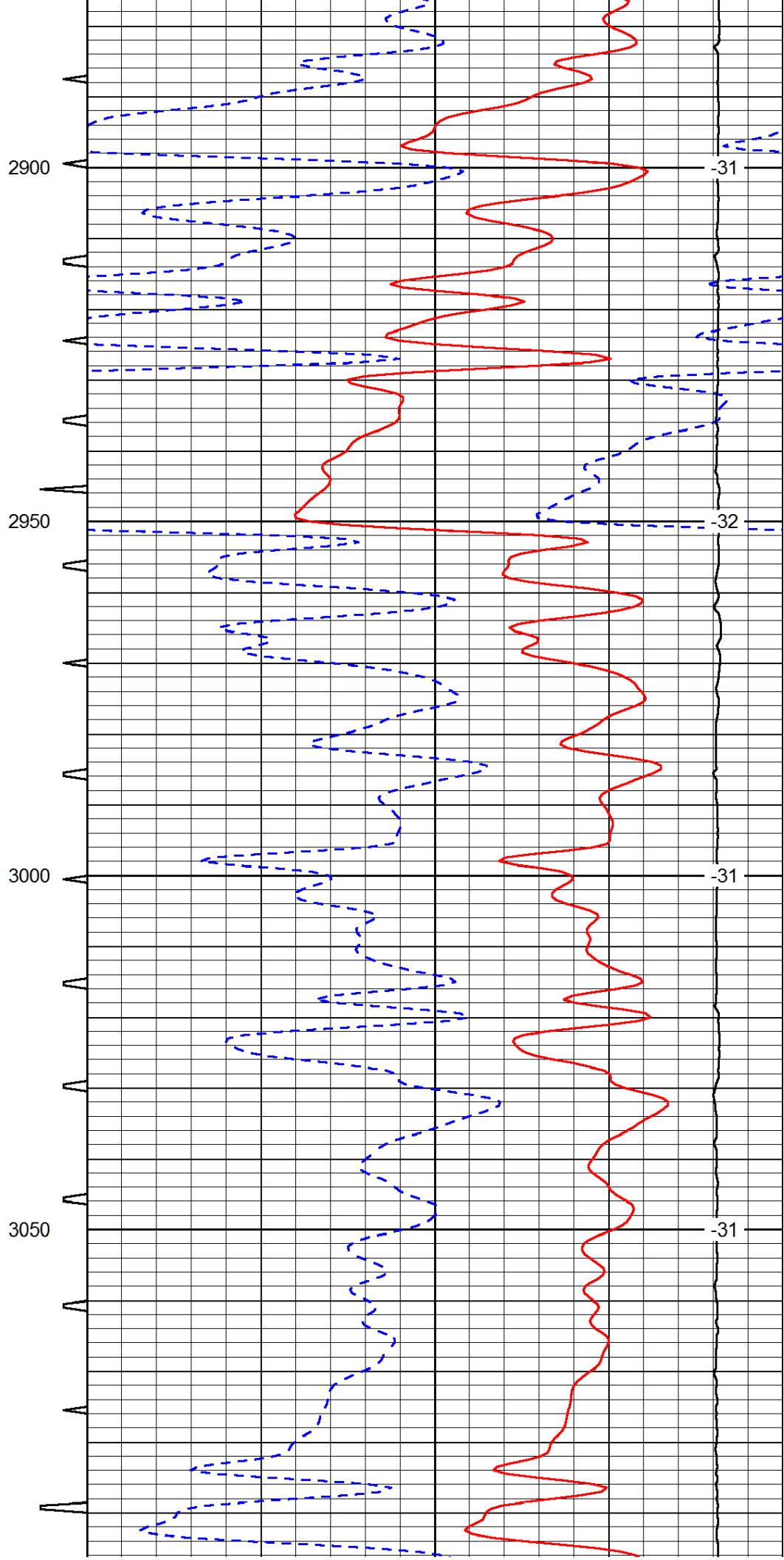
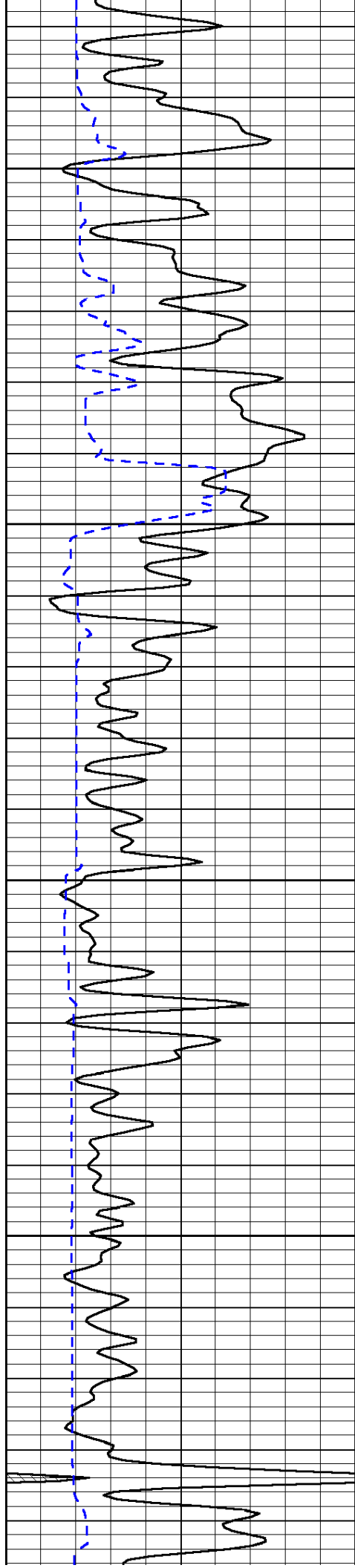


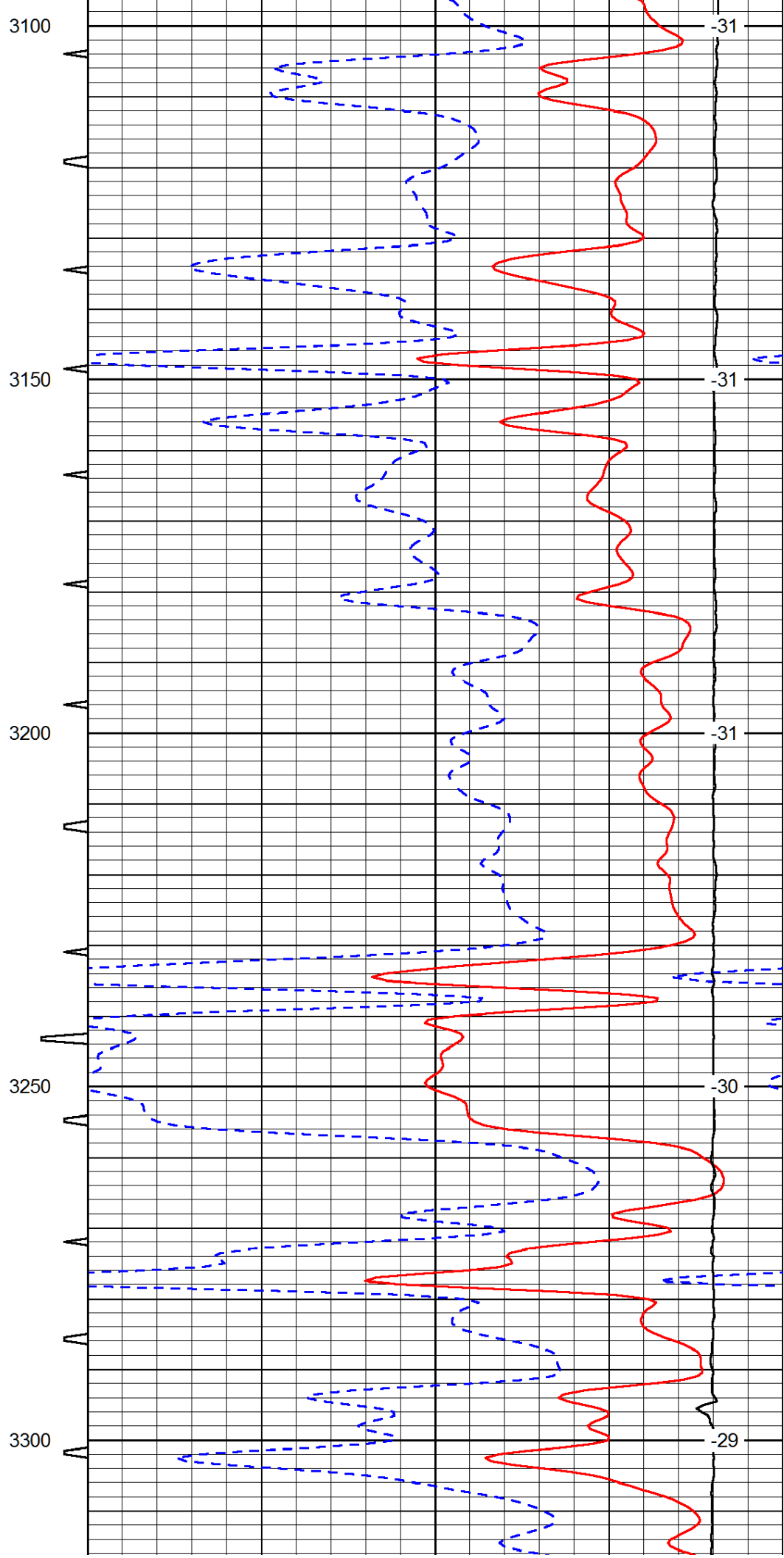
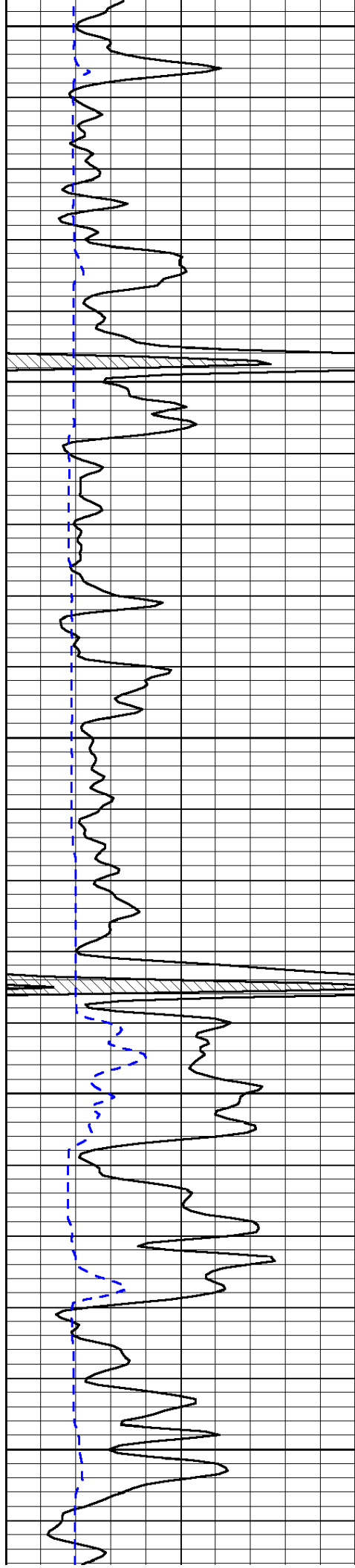


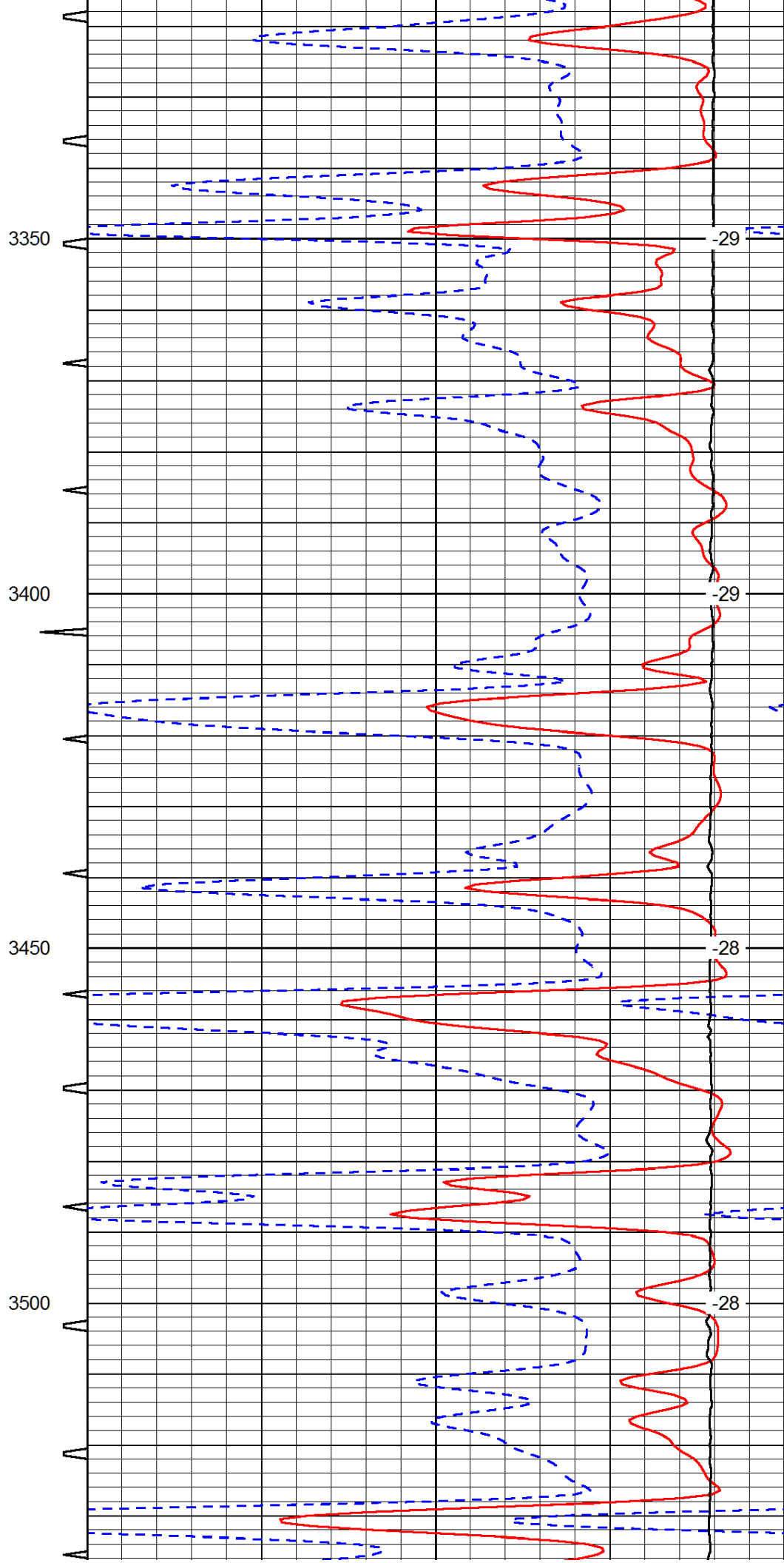
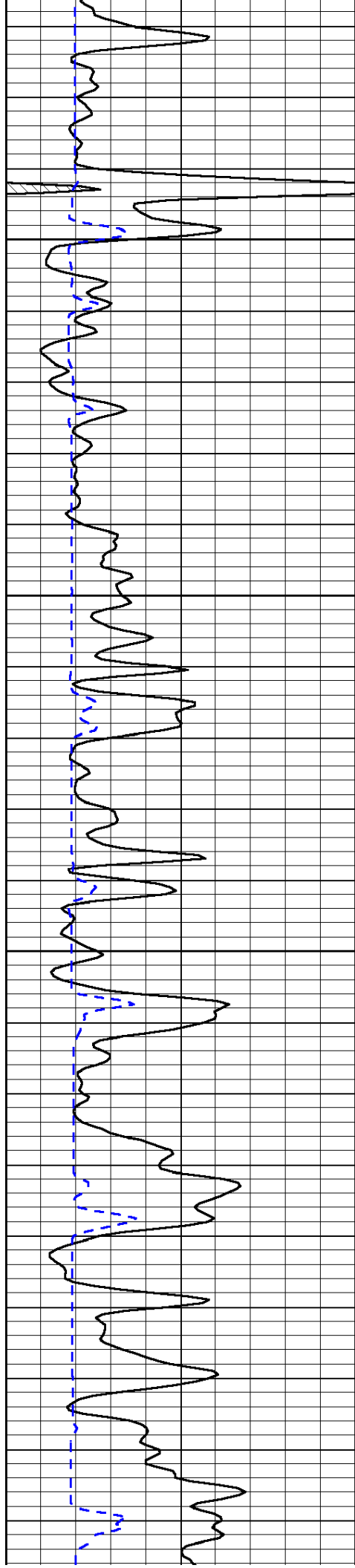


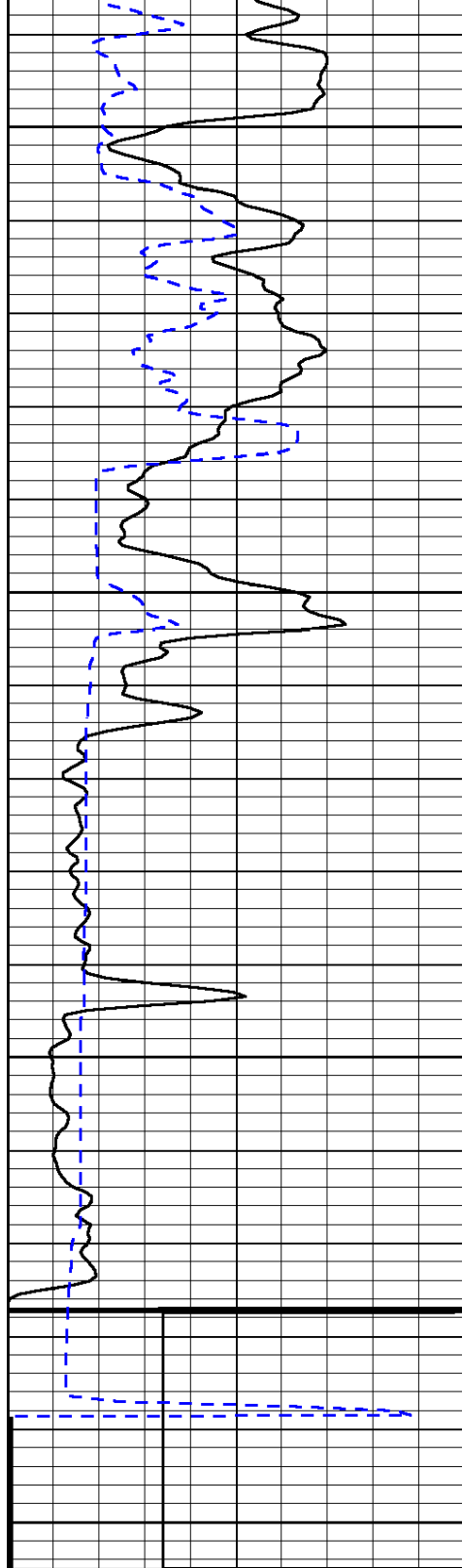




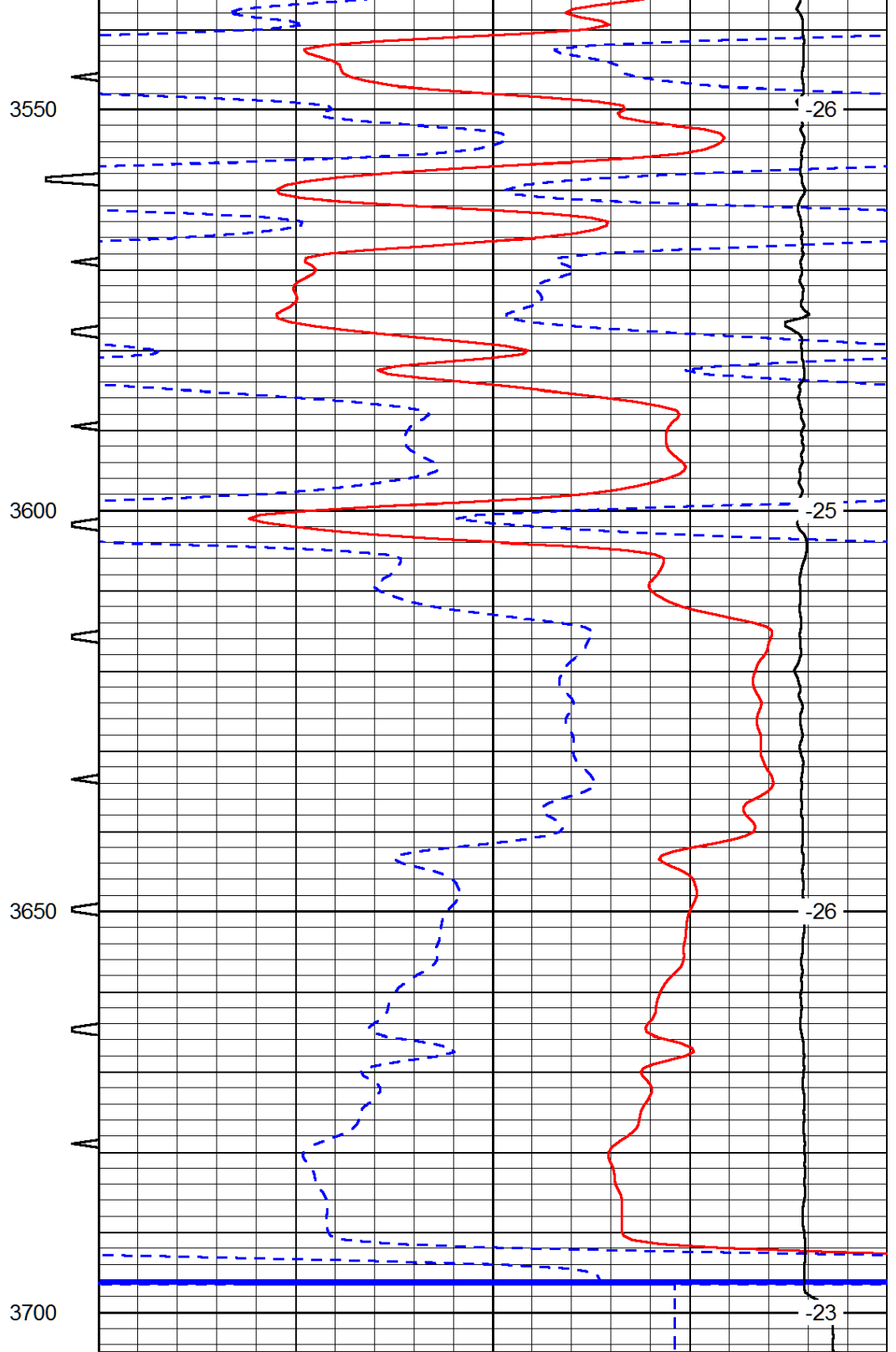








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LSPD
(ft/min)