



PIONEER

Pioneer Energy Services

Borehole Compensated Sonic Log

API No.

15-167-23941-00-00

Company Brungardt Oil and Leasing, Inc.

Well Miller #1

Field Dreher

County Russell

State Kansas

Location

1370' FSL & 860' FEL

Other Services
CNL/CDL
MEL/DIL

Sec: 22

Twp: 11S

Rge: 15W

Permanent Datum Ground Level Elevation 1849

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

Drilling Measured From Kelly Bushing

Elevation
K.B. 1854
D.F.
G.L. 1849

Date 10/20/2014

Run Number Two

Type Log BHC Sonic

Depth Driller 3390

Depth Logger 3387

Bottom Logged Interval 3376

Top Logged Interval 200

Type Fluid In Hole Chemical

Salinity, PPM CL 8200

Density 9.2

Level Full

Max. Rec. Temp. F 110

Operating Rig Time 5 Hours

Equipment -- Location 91 Hays

Recorded By D. Schmidt

Witnessed By Roger Fisher

Borehole Record

Casing Record

Run No

Bit

From

To

Size

Wgt.

23#

From

To

One 12.25

00

218

8.625

23#

00

218

Two 7.875

218

TD

<<< Fold Here >>>

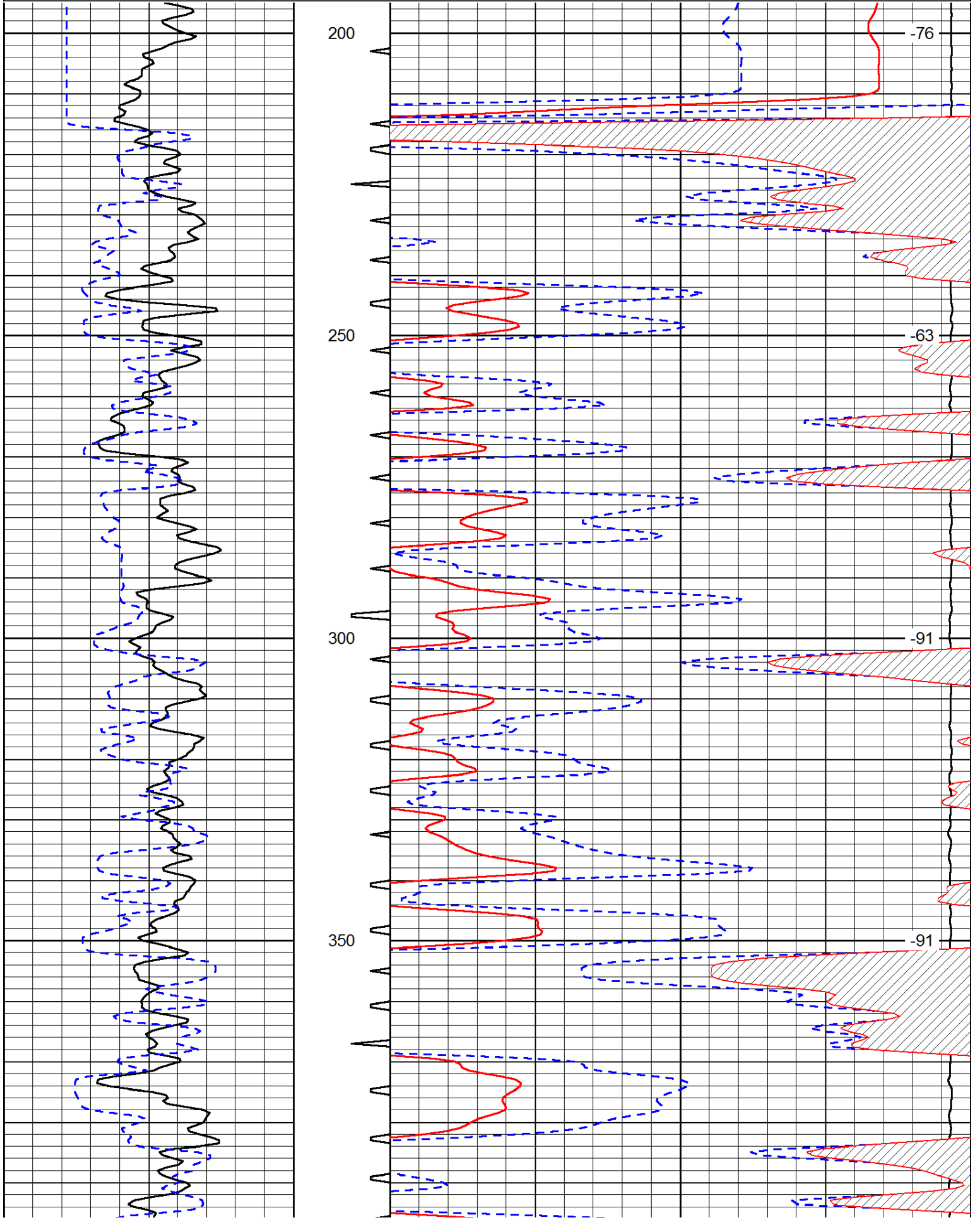
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

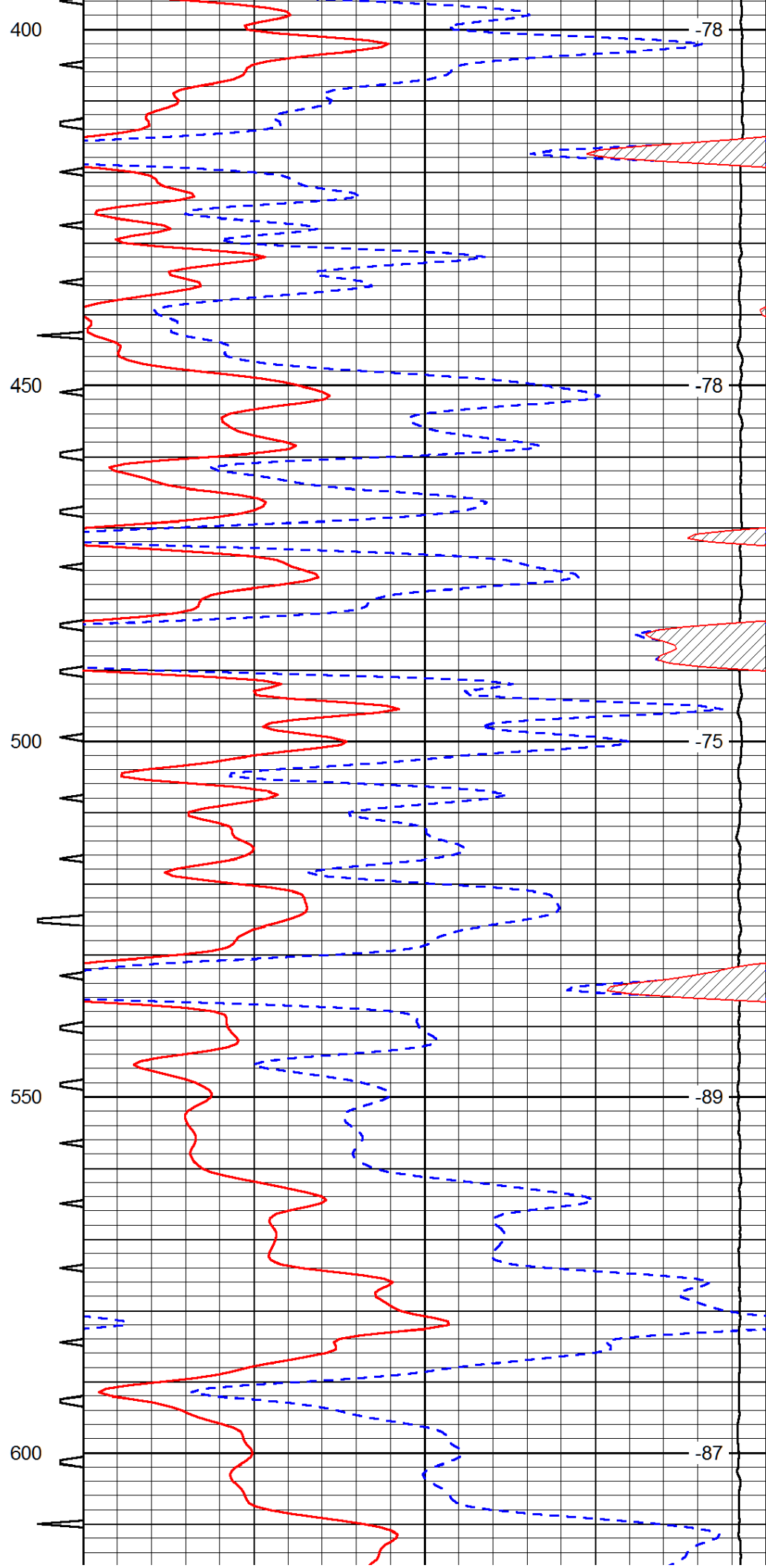
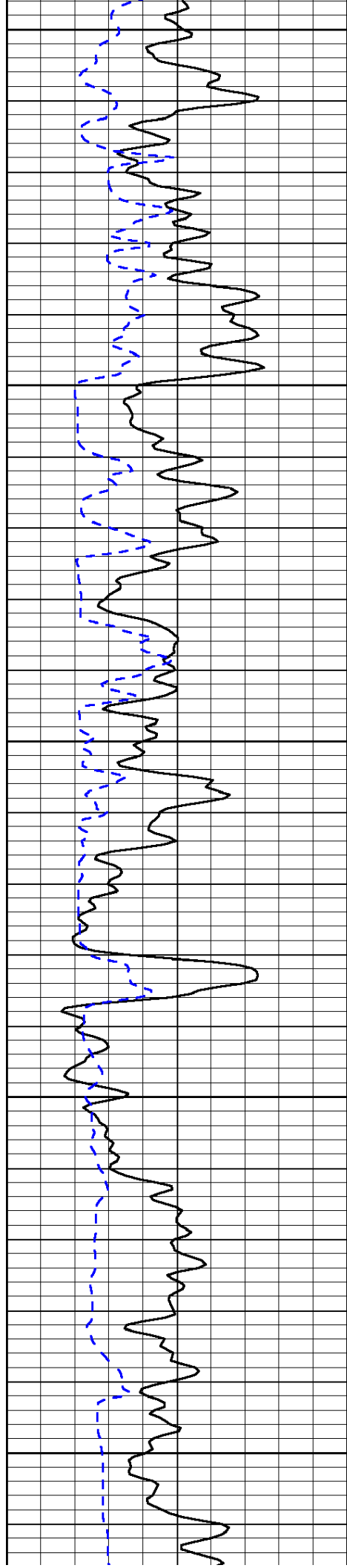
Comments

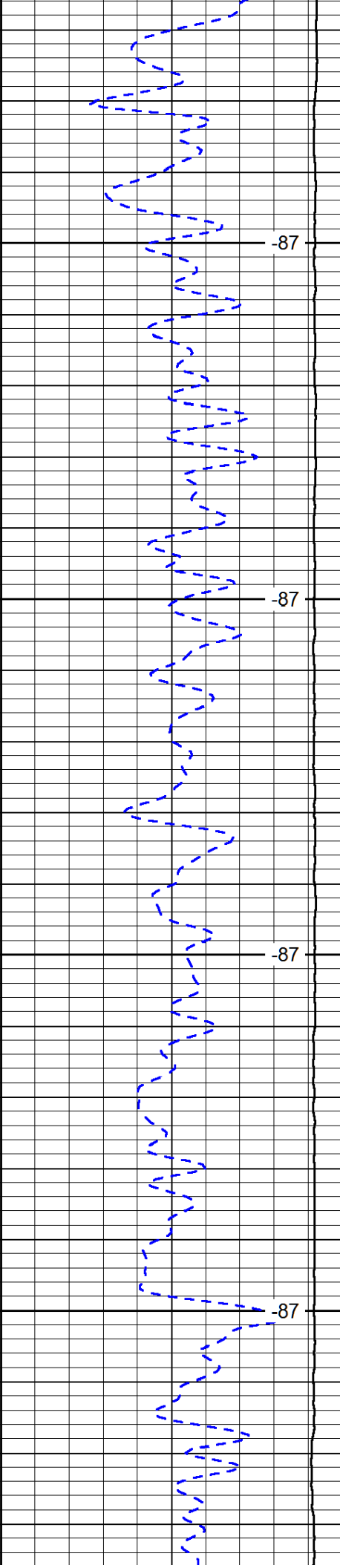
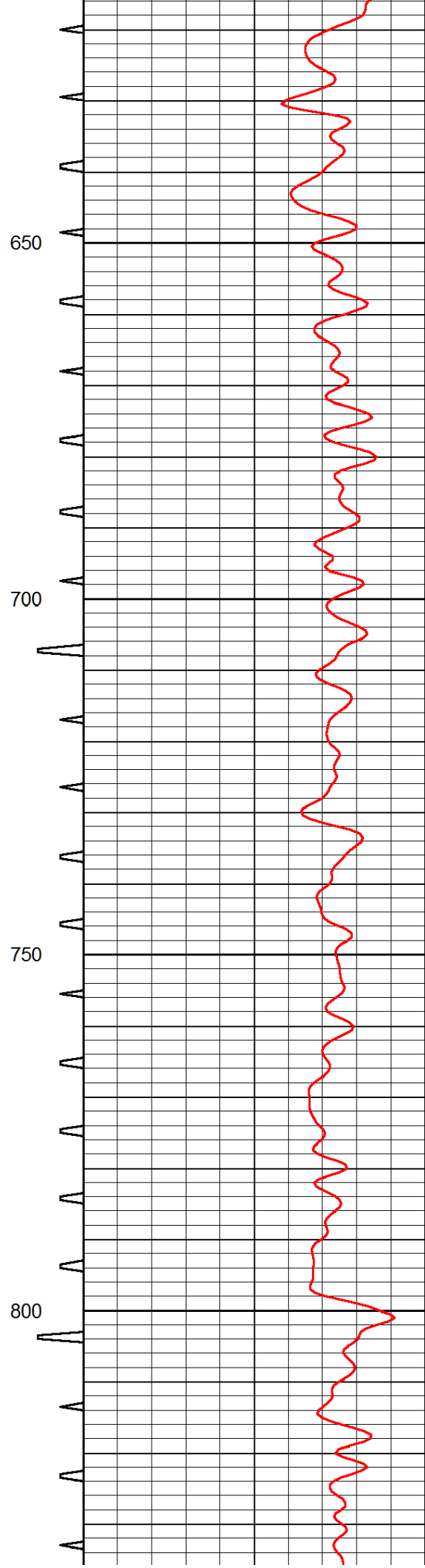
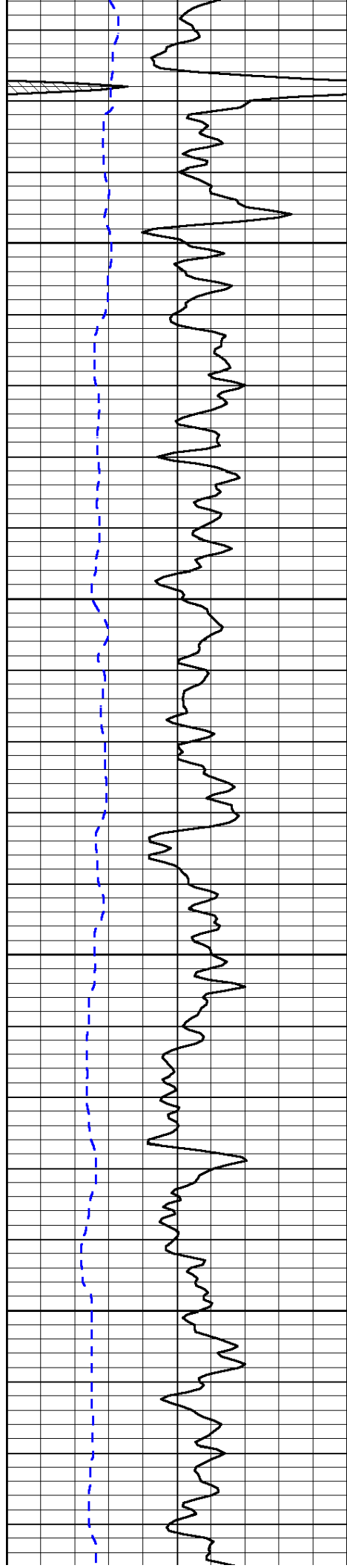
Thank you for using Log-Tech, Inc.
(785) 625-3858
Gorham,
1 East to 177th Rd,
North to Saline Lane,
1/2 East,
North to Fariview Rd, 1 East,
North Into

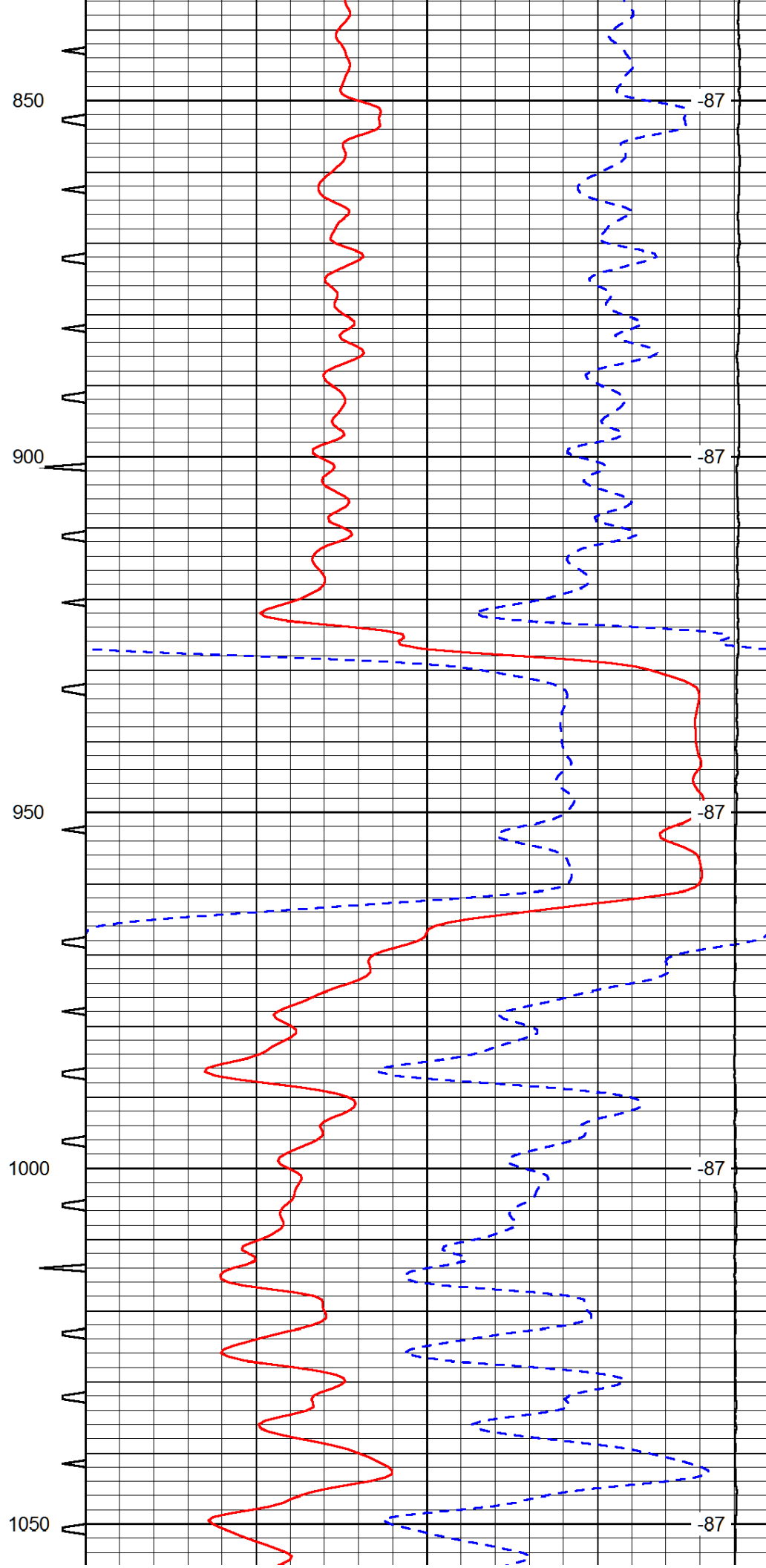
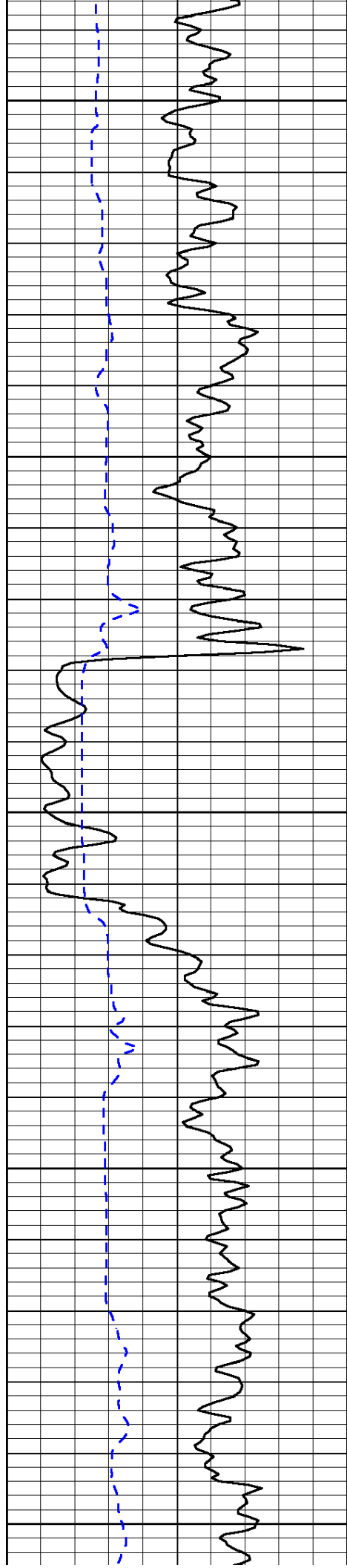
Database File: brungardt_miller_1hd.db
Dataset Pathname: dil/brstack
Presentation Format: sonic
Dataset Creation: Mon Oct 20 20:28:09 2014
Charted by: Depth in Feet scaled 1:240

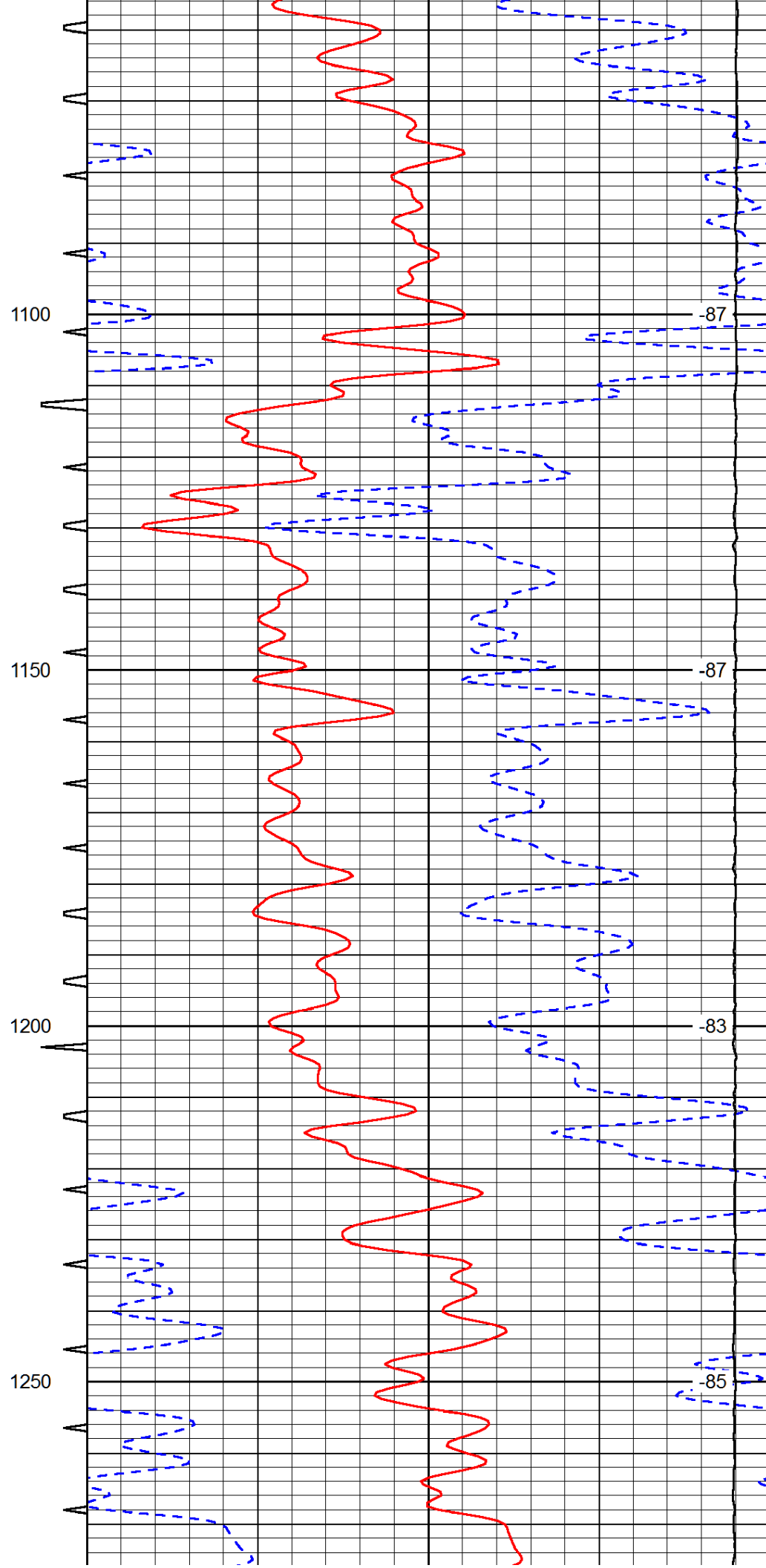
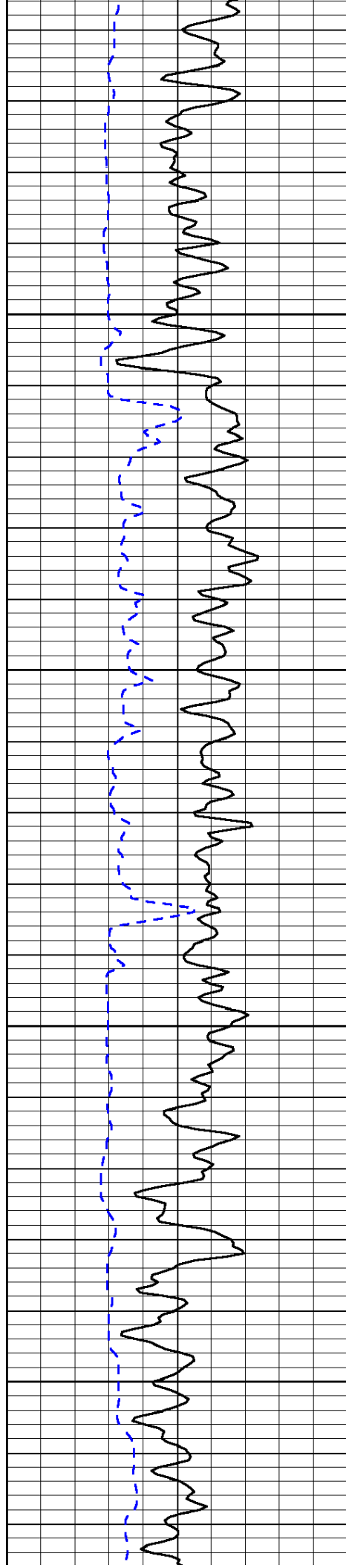
0	Gamma Ray	150	Sonic Int	140	Delta Time (usec/ft)	40
150	Gamma Ray	300	5	0	Sonic Porosity	-10
6	dCAL (GAPI)	16		15000	LTEN (lb)	0
						LSPD

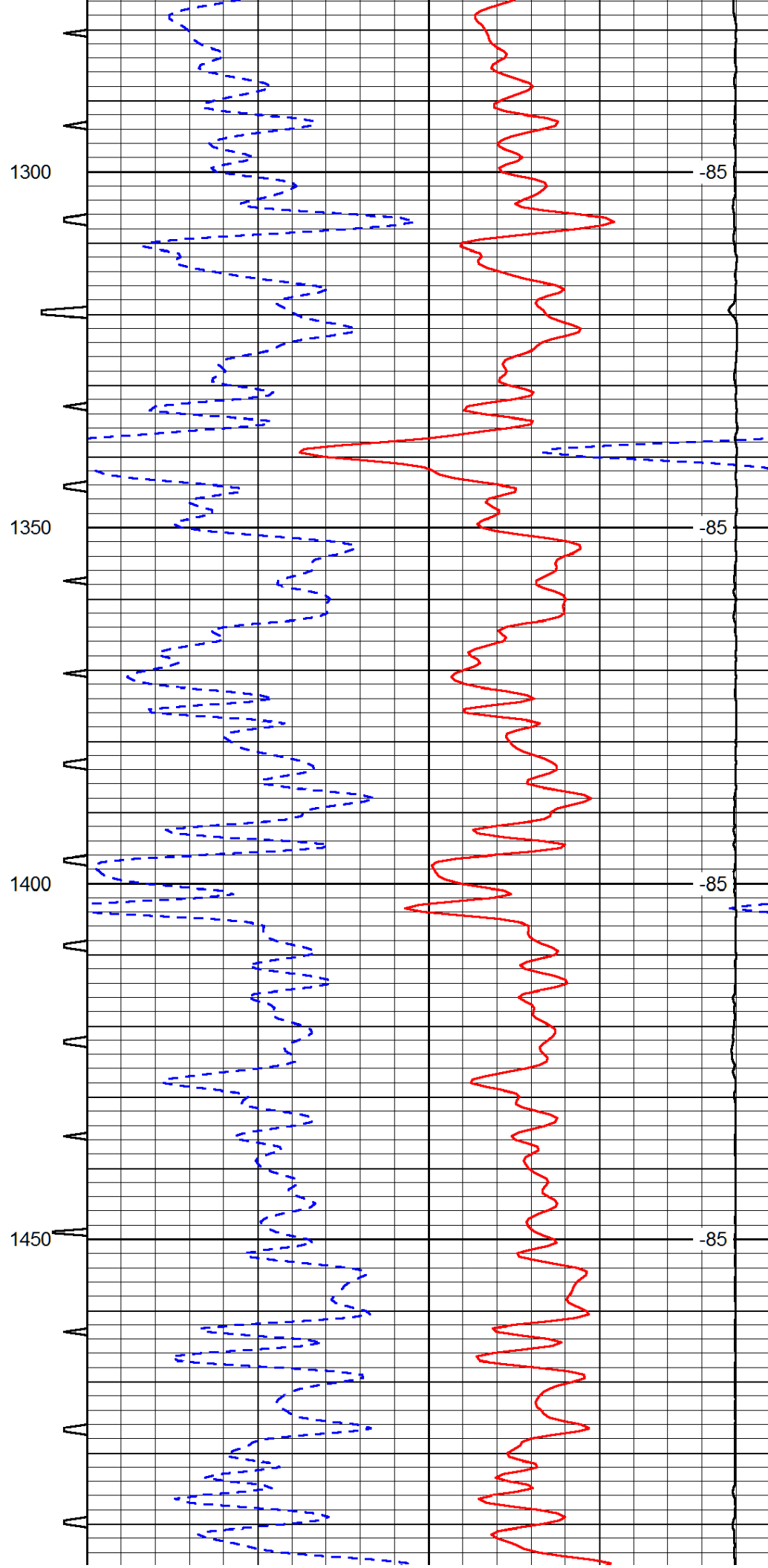
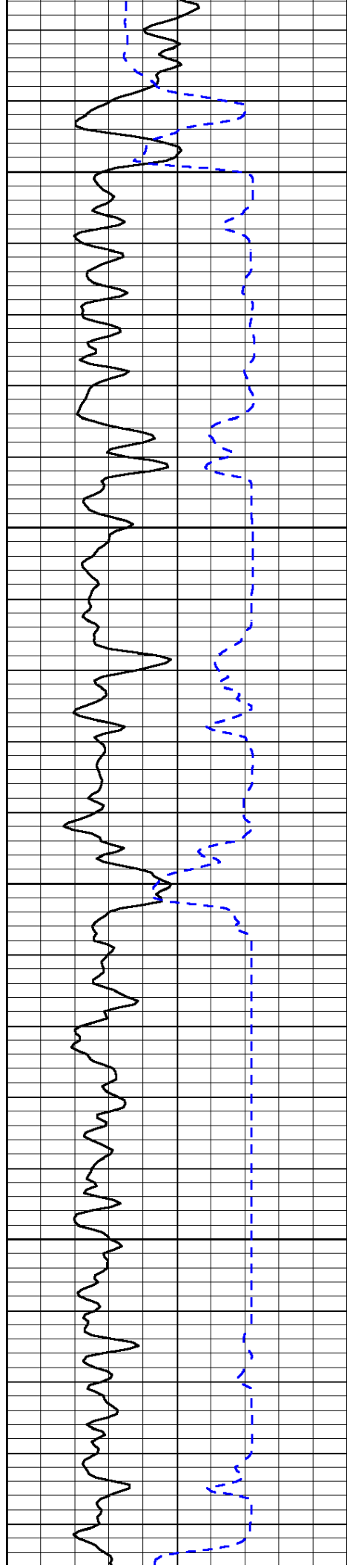


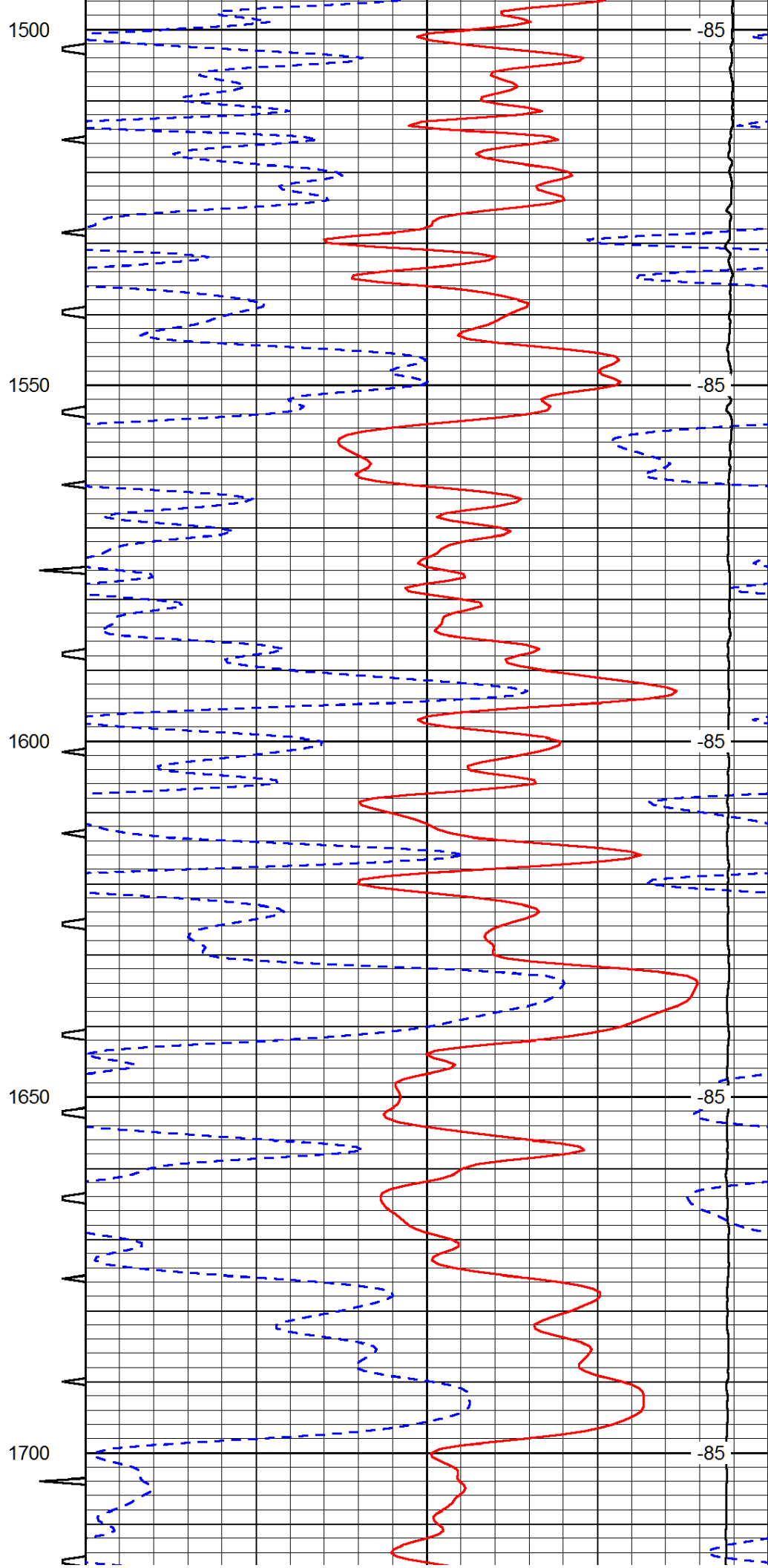
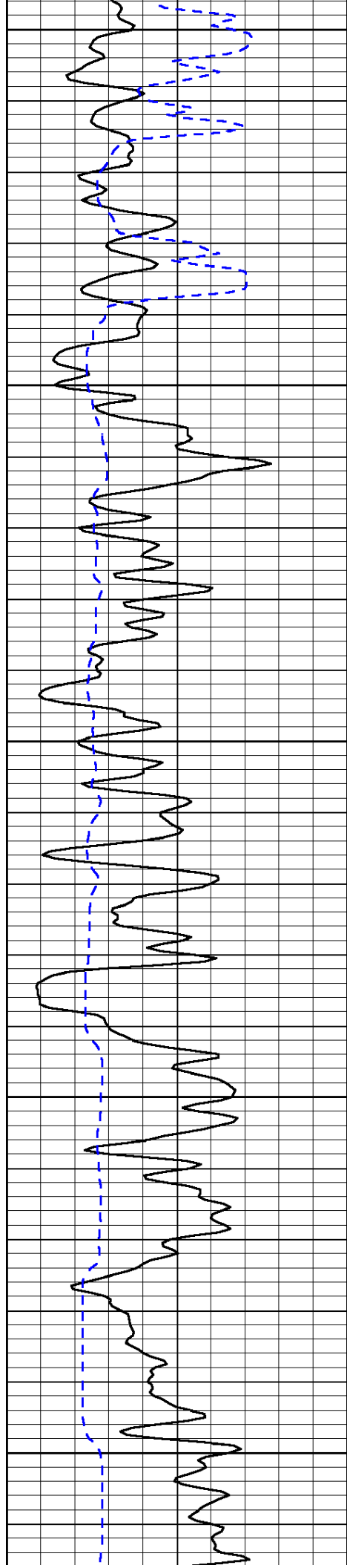


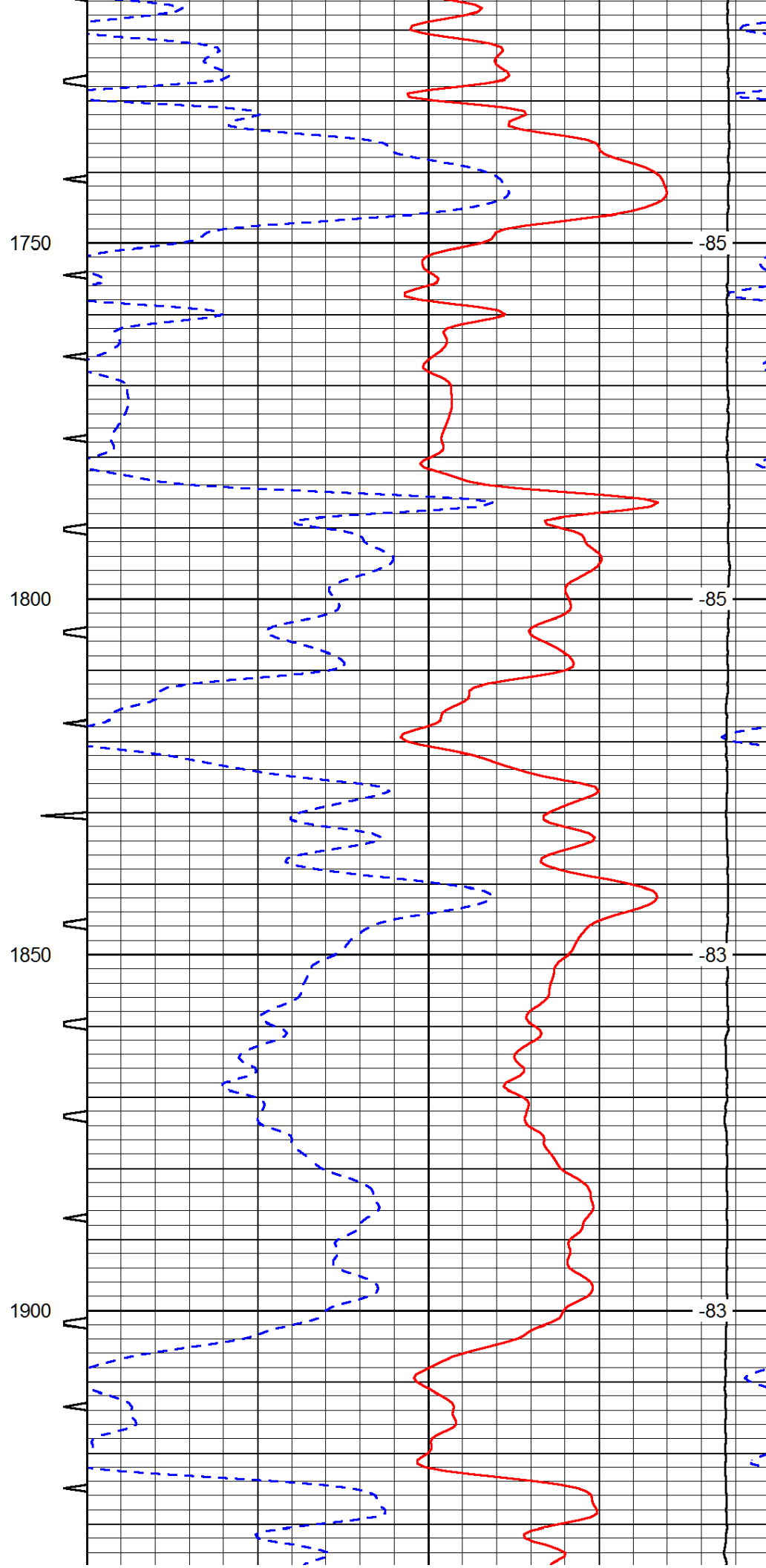
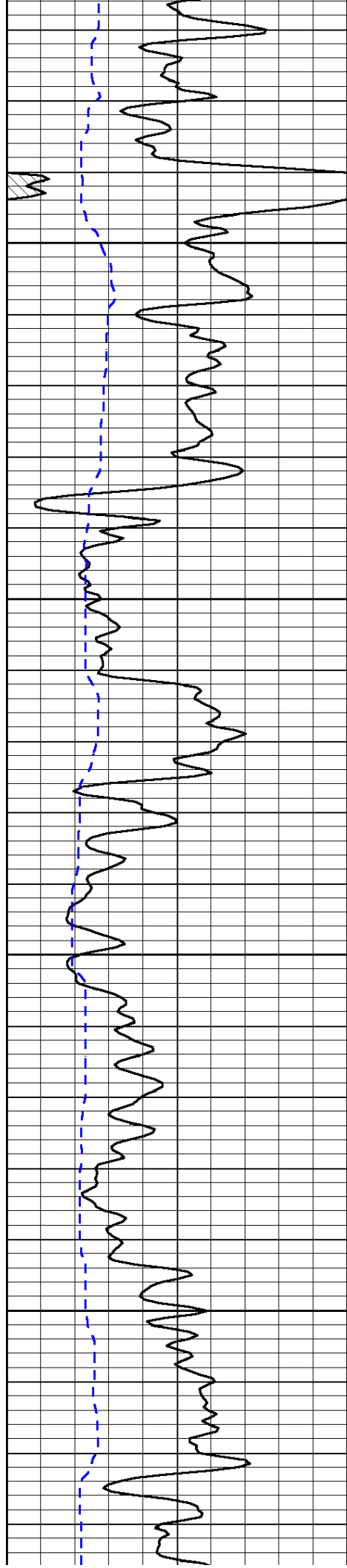


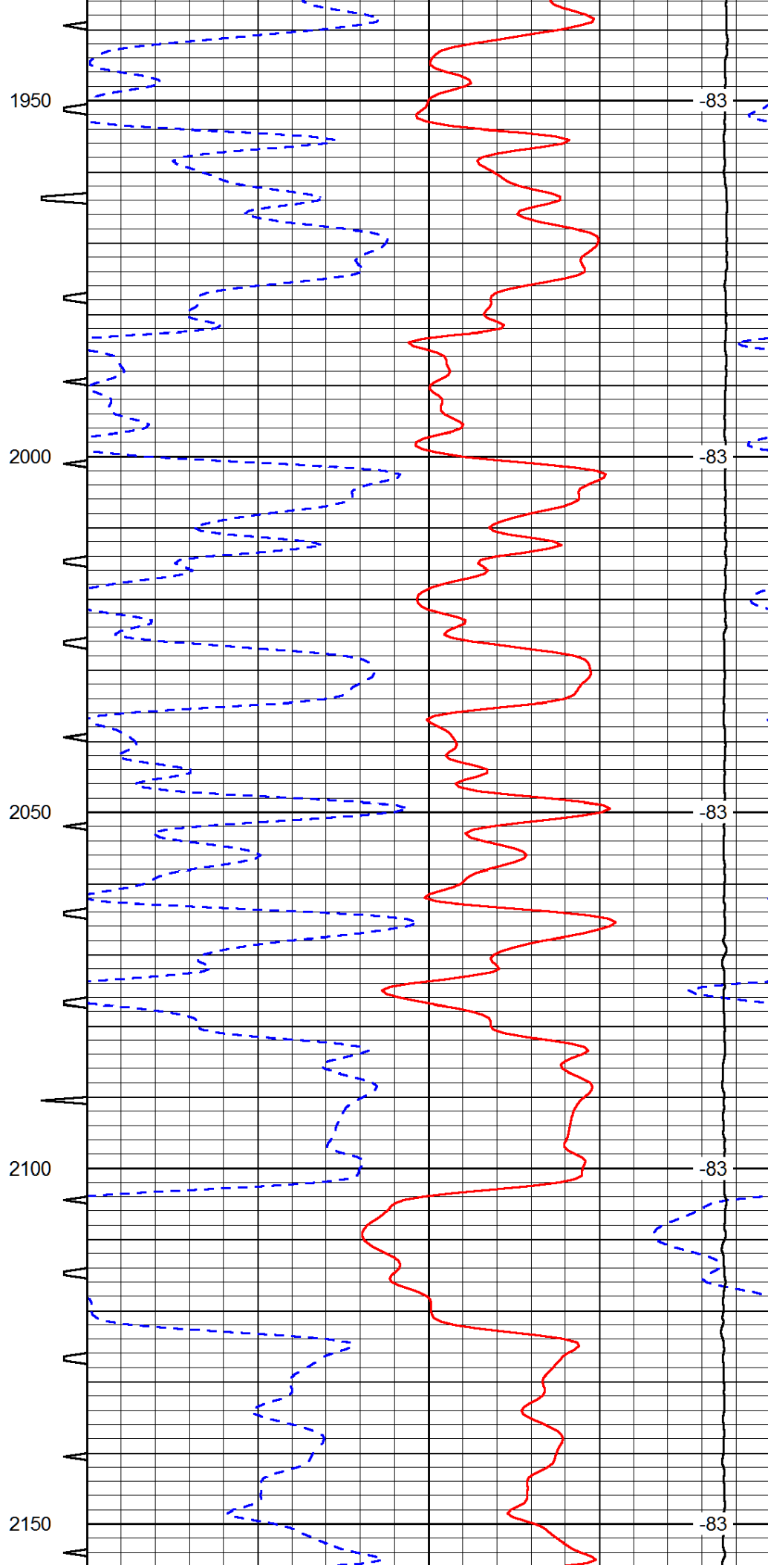
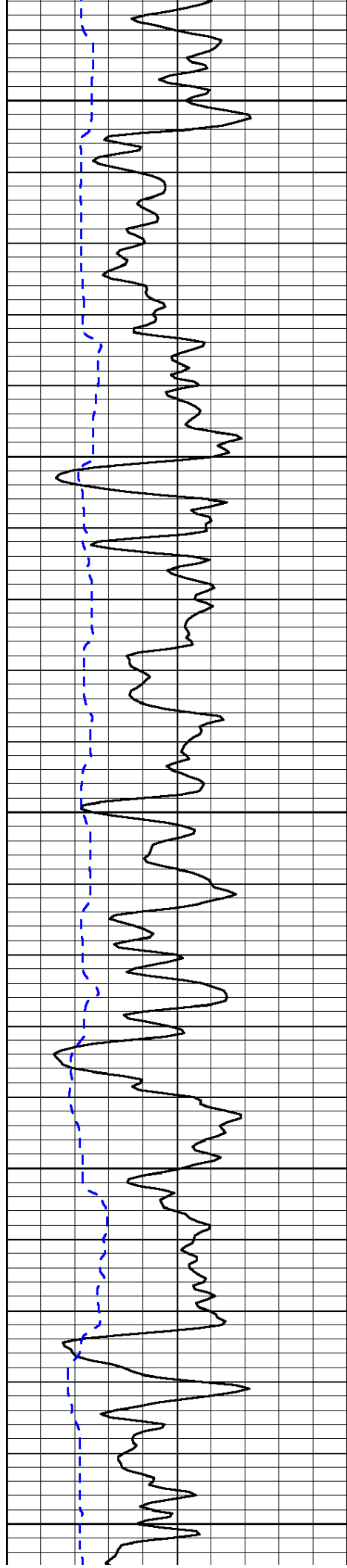


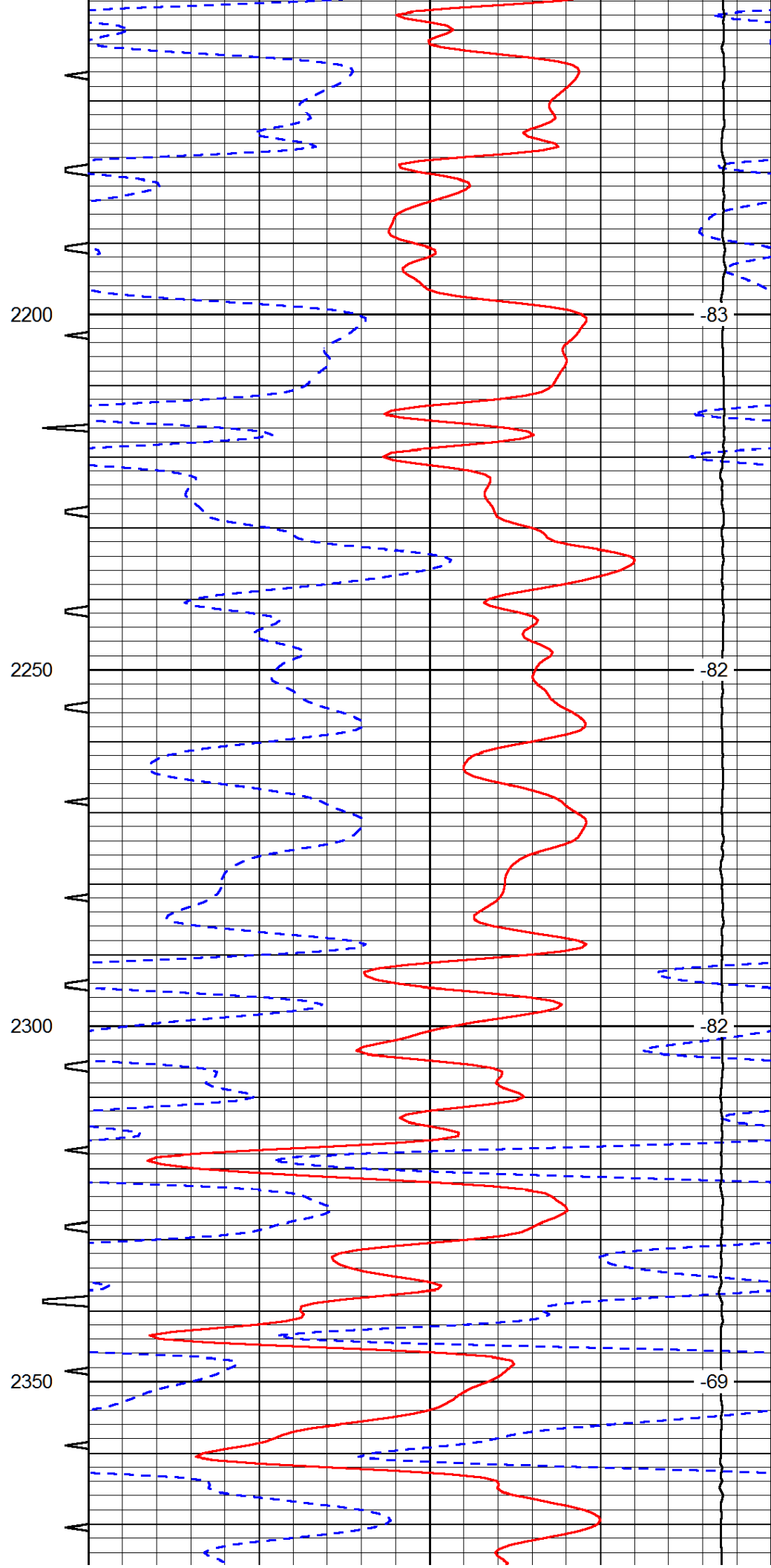
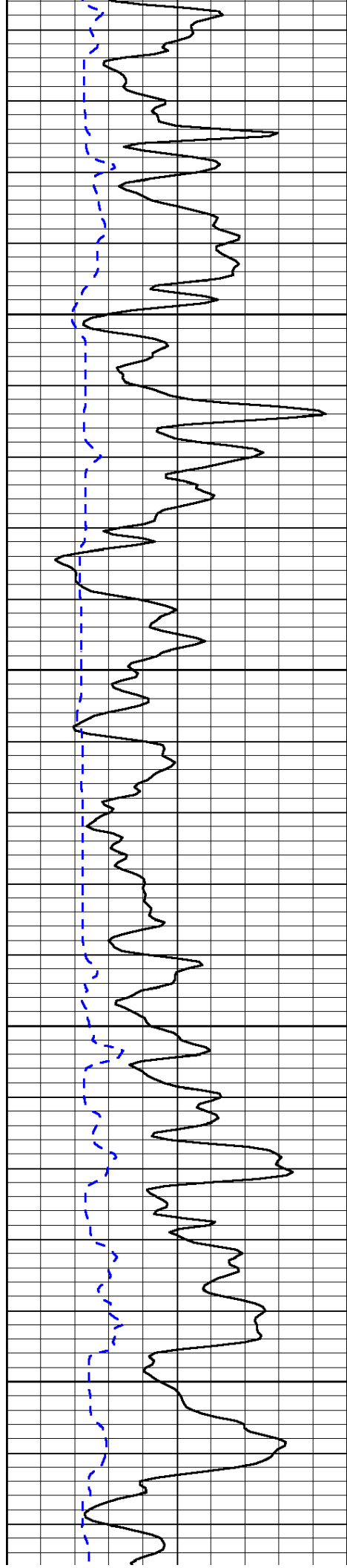


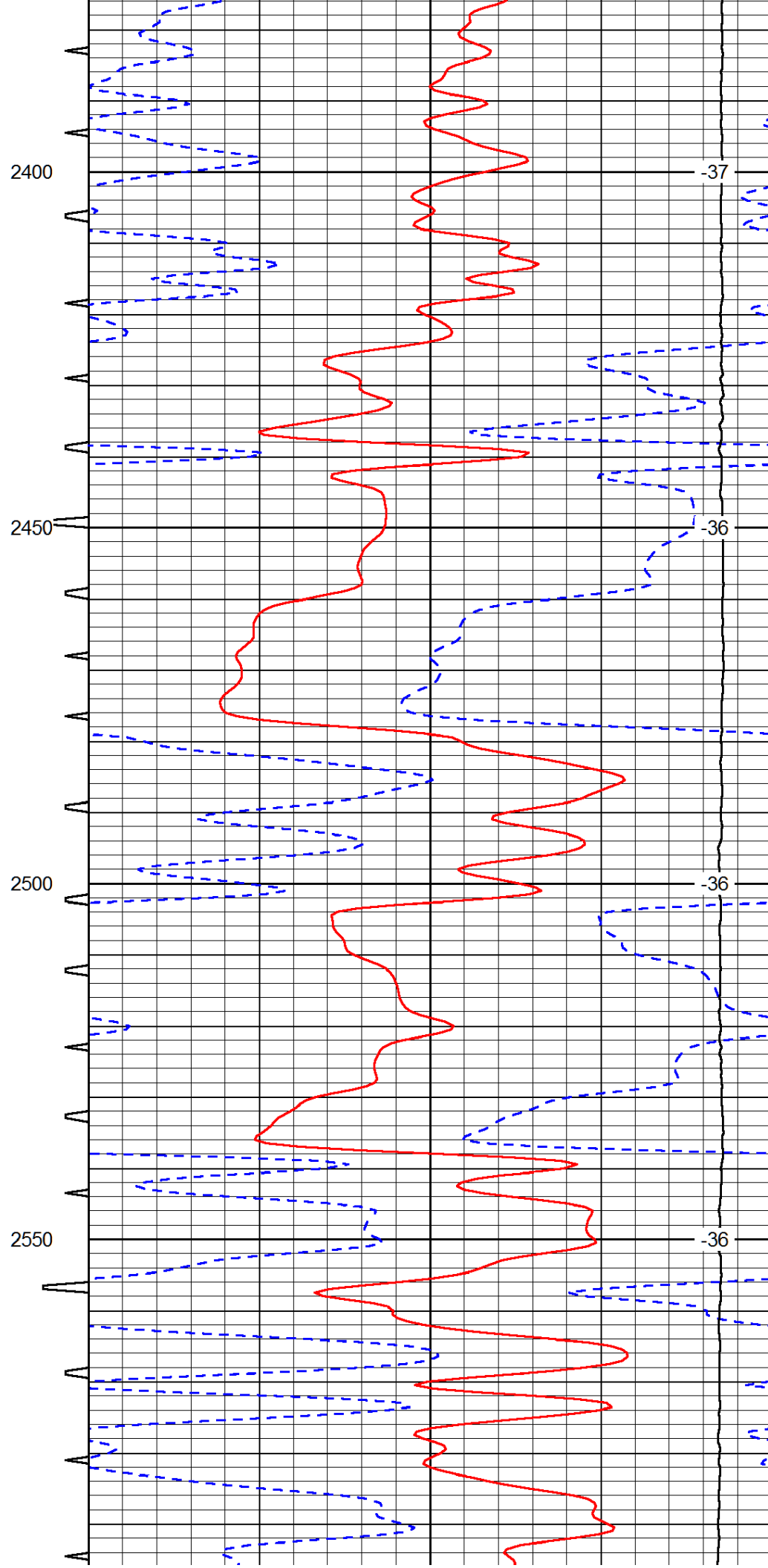
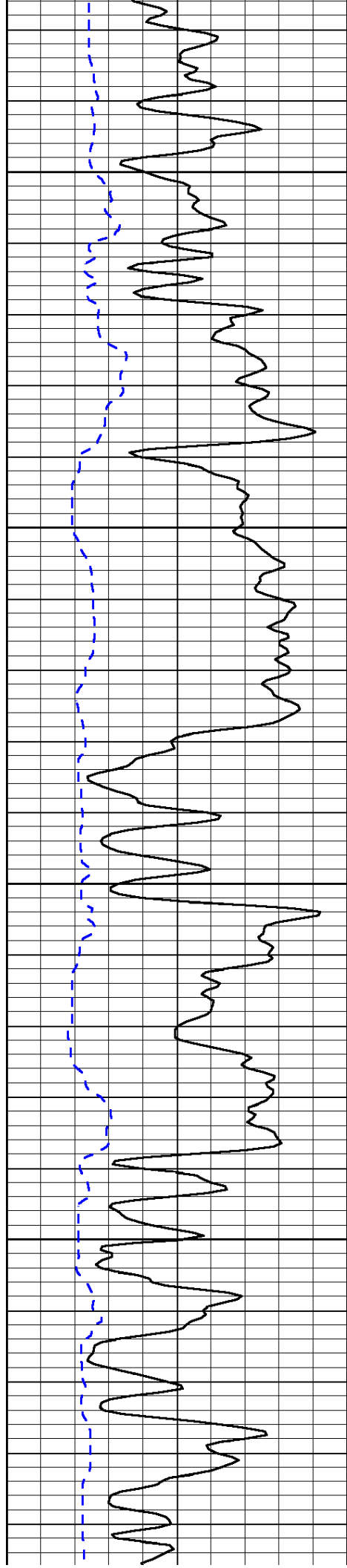


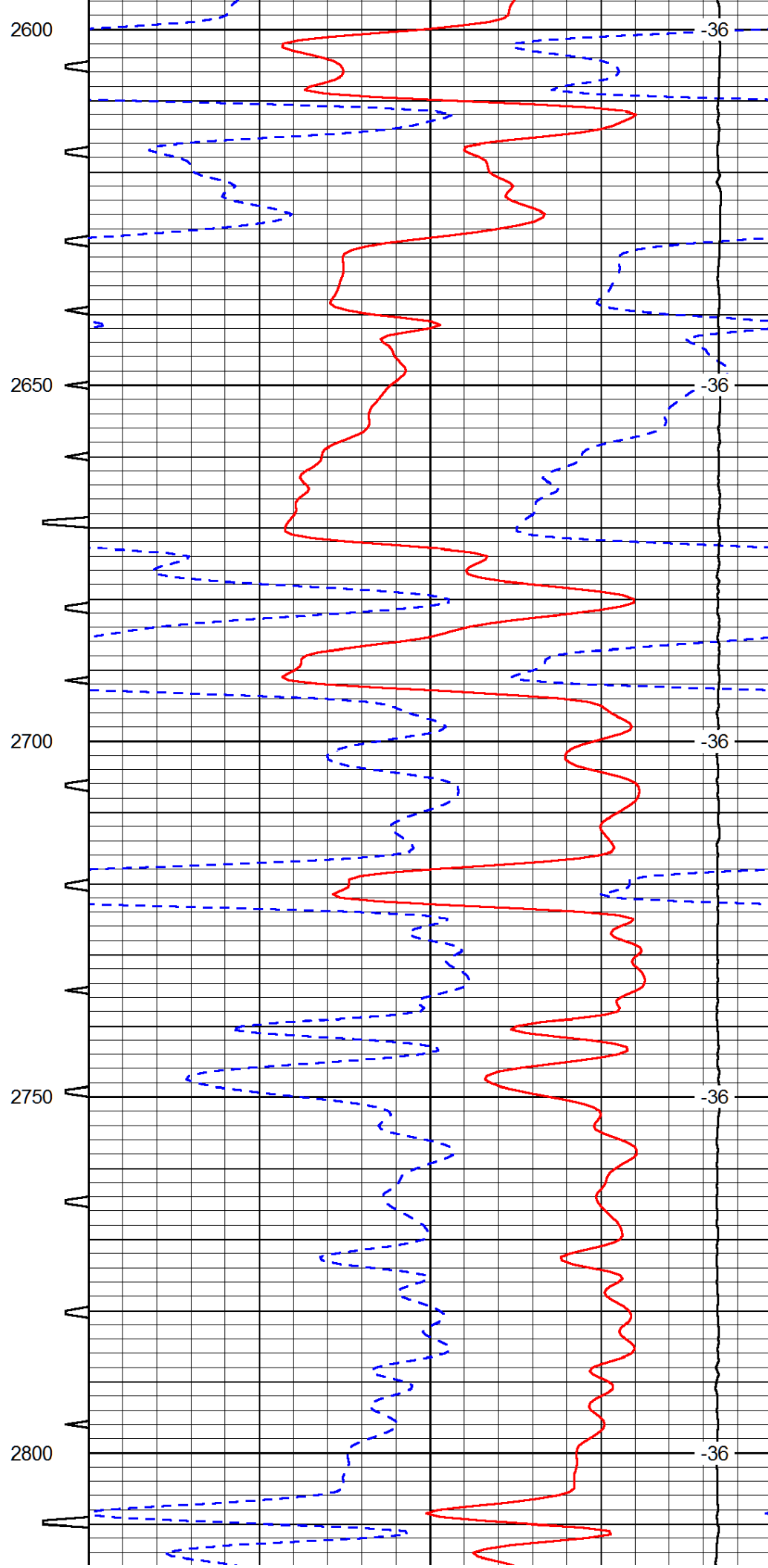
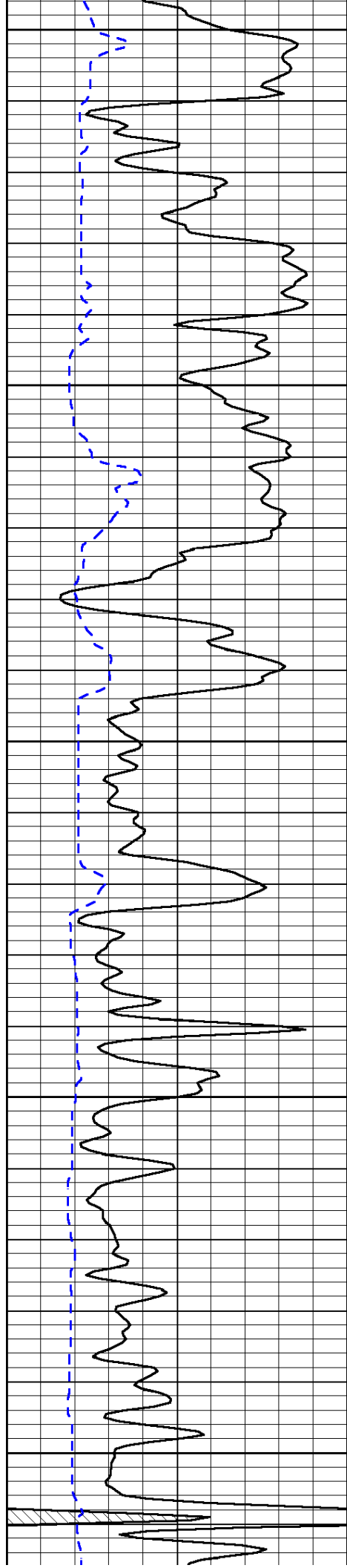


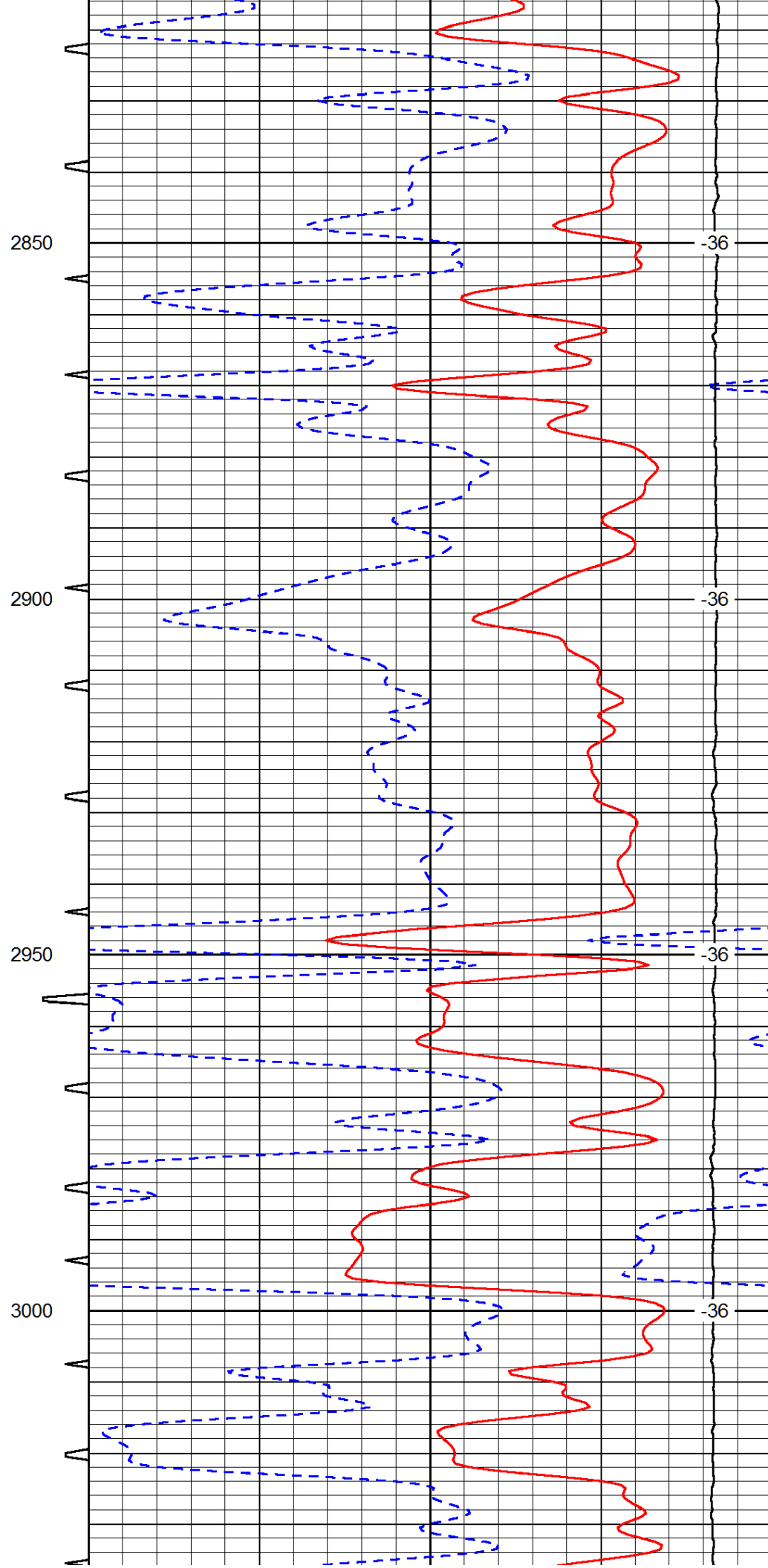
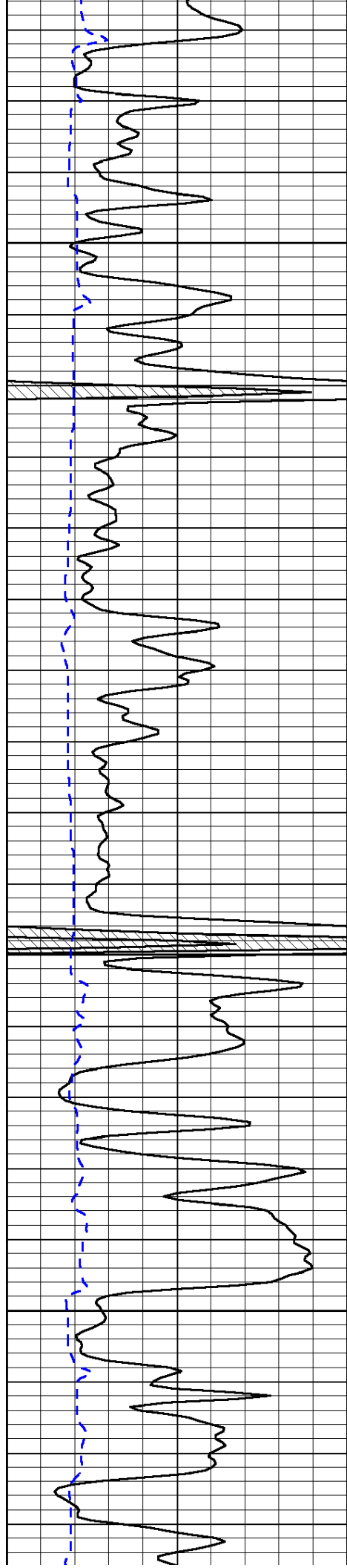


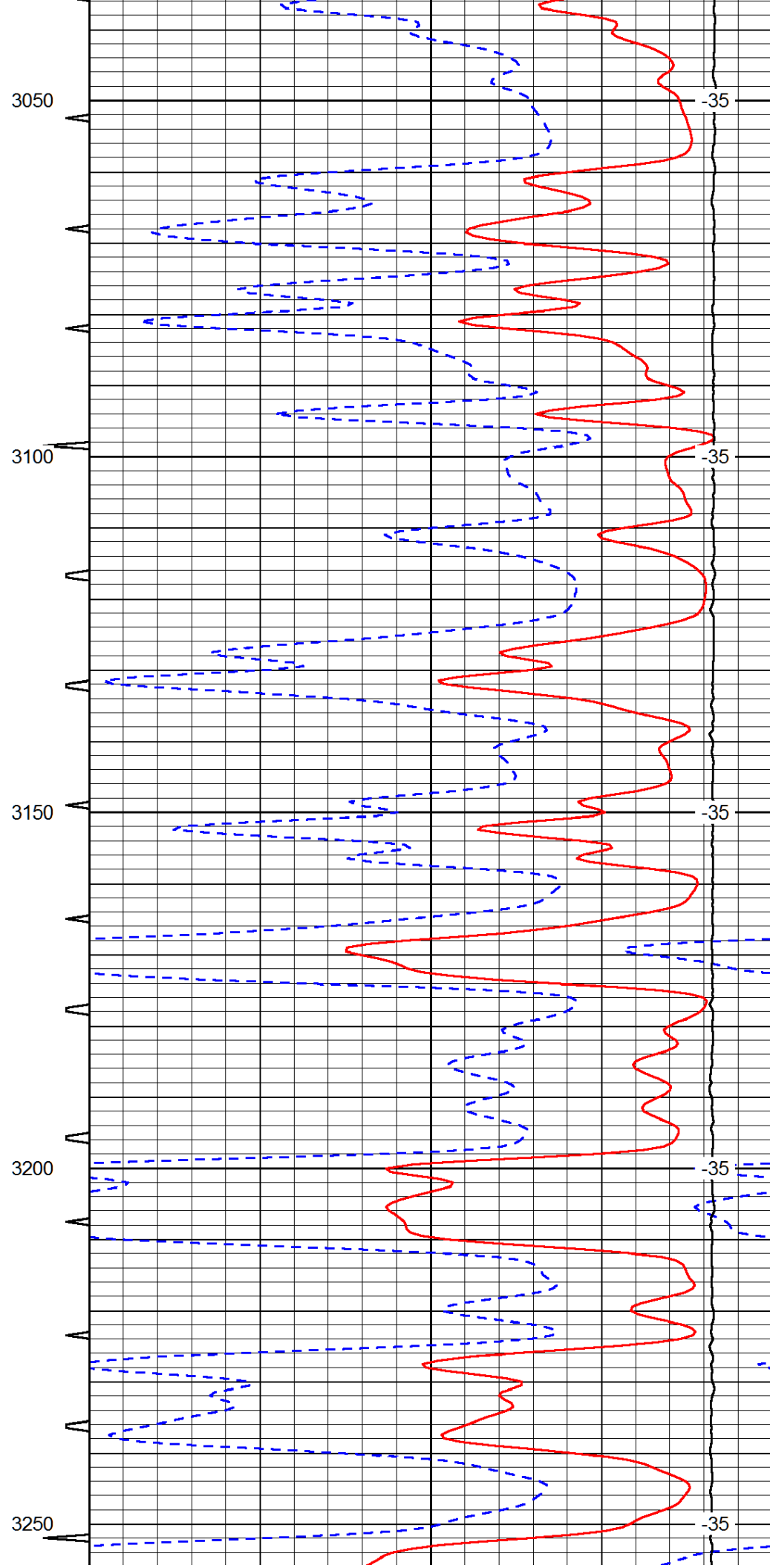
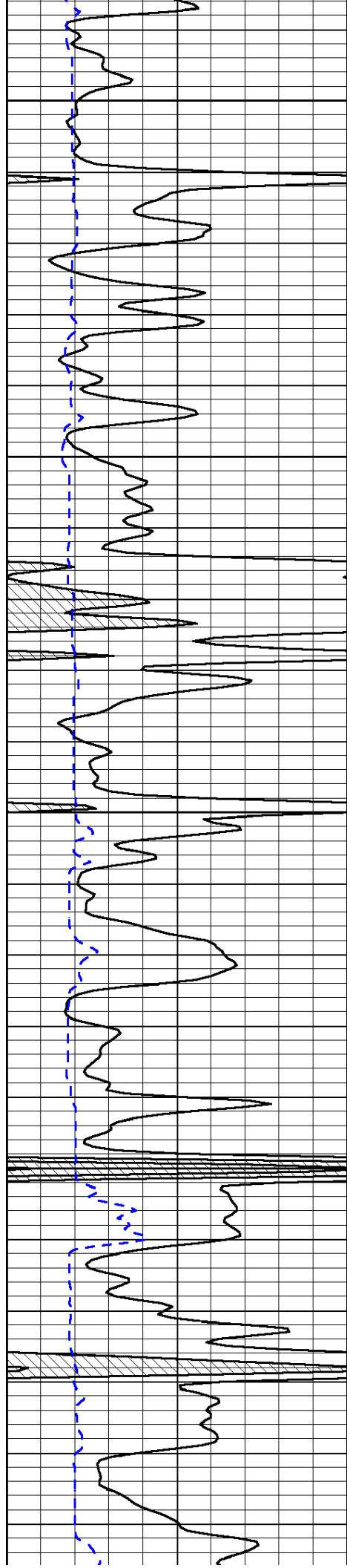


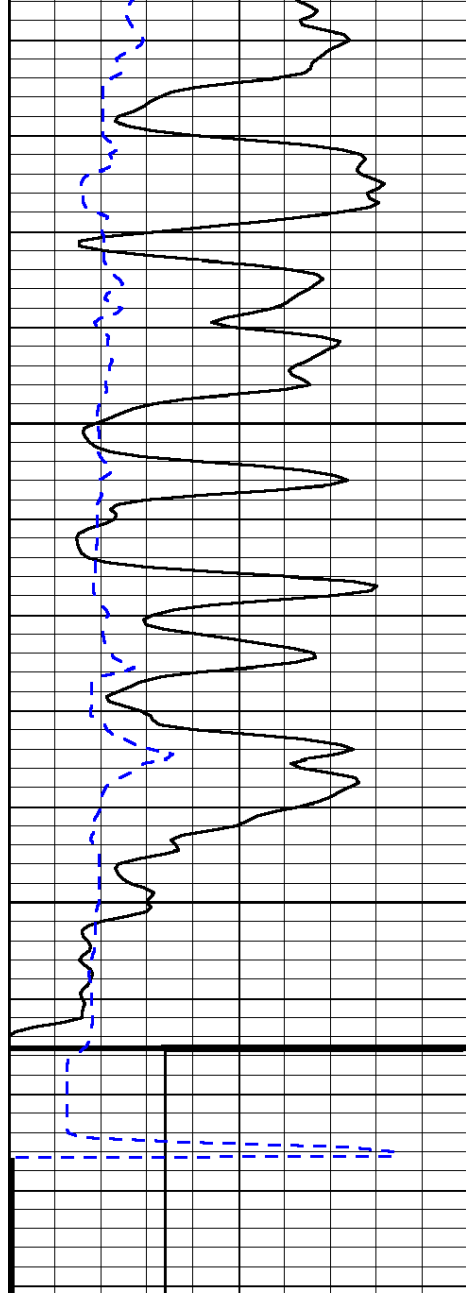






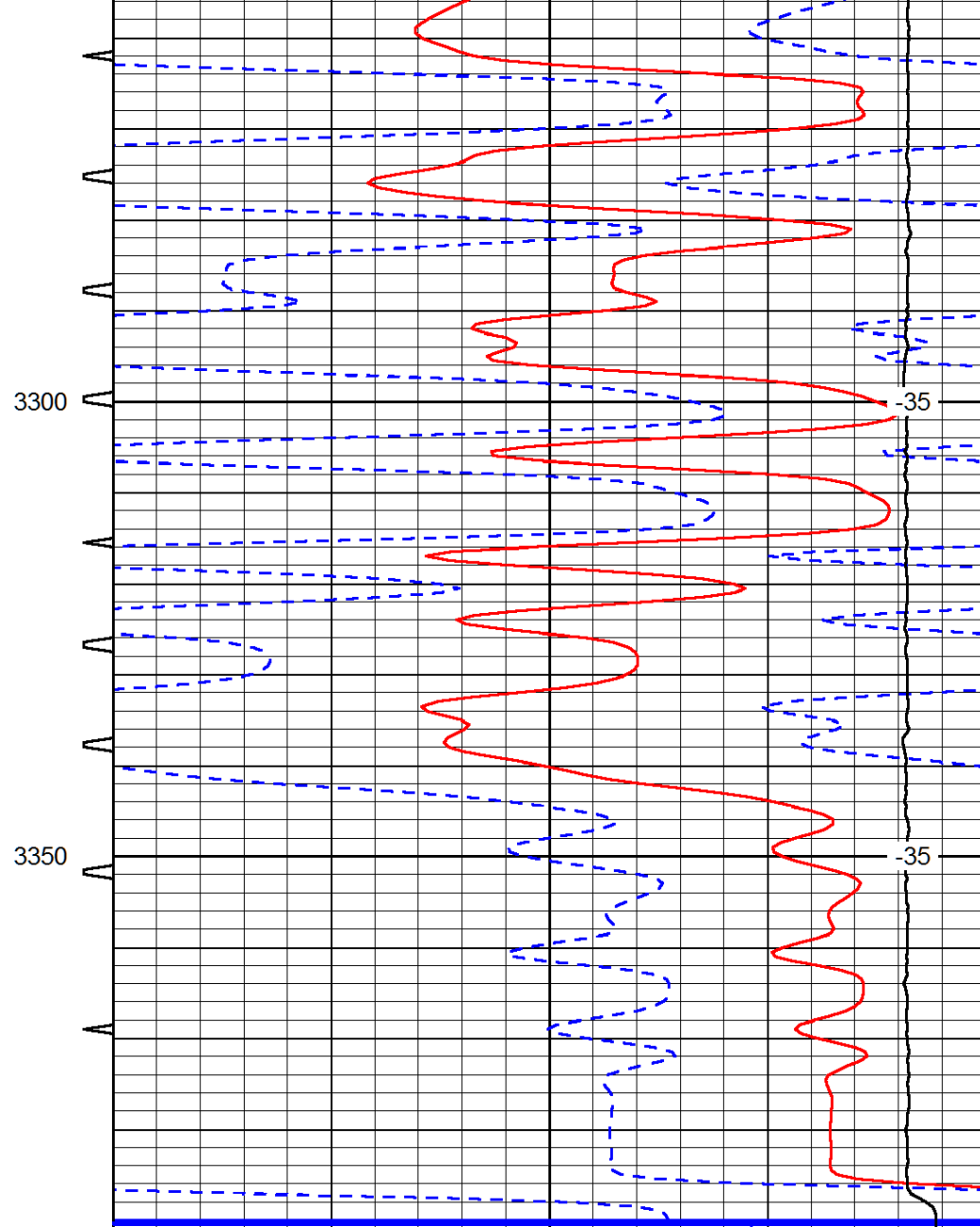






0	Gamma Ray	150
150	Gamma Ray	300
6	dCAL (GAPI)	16

Sonic Int 140
5 0



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

LSPD