



Borehole Compensated Sonic Log

Pioneer Energy Services

API No.

15-185-23,852-00-00

Company H&D Exploration, LLC

Well Hearn-Debes No. 1

Field

County Stafford

State Kansas

Location

SW-SE-SE-SW
142' FSL & 2284' FWL

Other Services
CNL/CDL
MEL/DIL

Sec: 3

Twp: 25S

Rge: 12W

Permanent Datum

Ground Level
Kelly Bushing

Elevation 1868
8 Ft. Above Perm. Datum

Elevation

Date

2/1/14

Run Number

Two

Type Log

BHC Sonic

Depth Driller

4220

Depth Logger

4216

Bottom Logged Interval

4205

Top Logged Interval

650

Type Fluid In Hole

Chemical

Salinity, PPM CL

7,200

Density

8.9

Level

Full

Max. Rec. Temp. F

118

Operating Rig Time

5 Hours

Equipment -- Location

15 Hays

Recorded By

J. Henrickson

Witnessed By

Josh Austin

Borehole Record

Casing Record

Run No.

Bit

From

To

Size

Wgt.

From

To

One

12.25

00

680

8.625

23#

00

680

Two

7.875

680

TD

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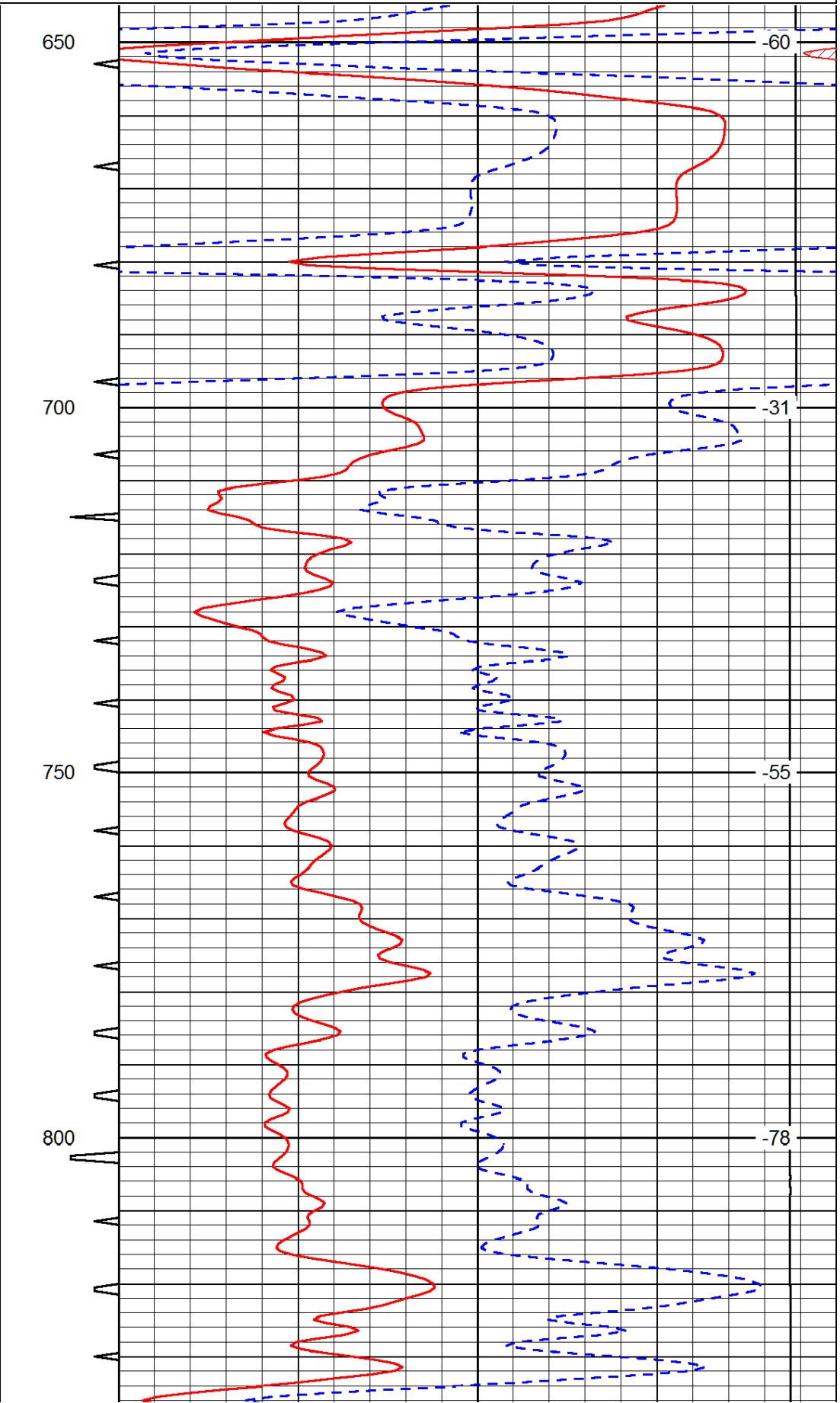
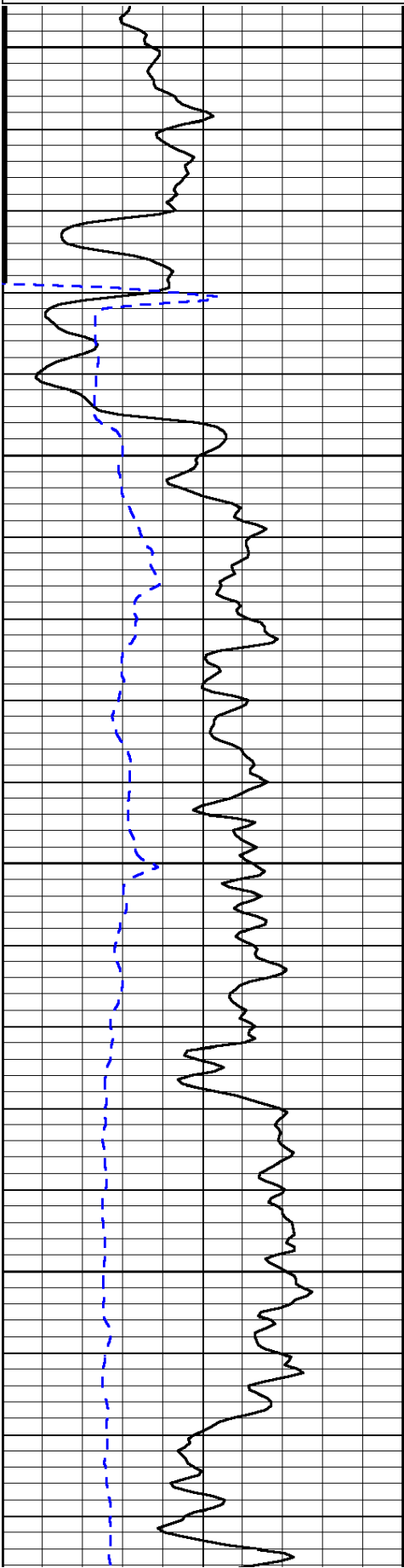
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

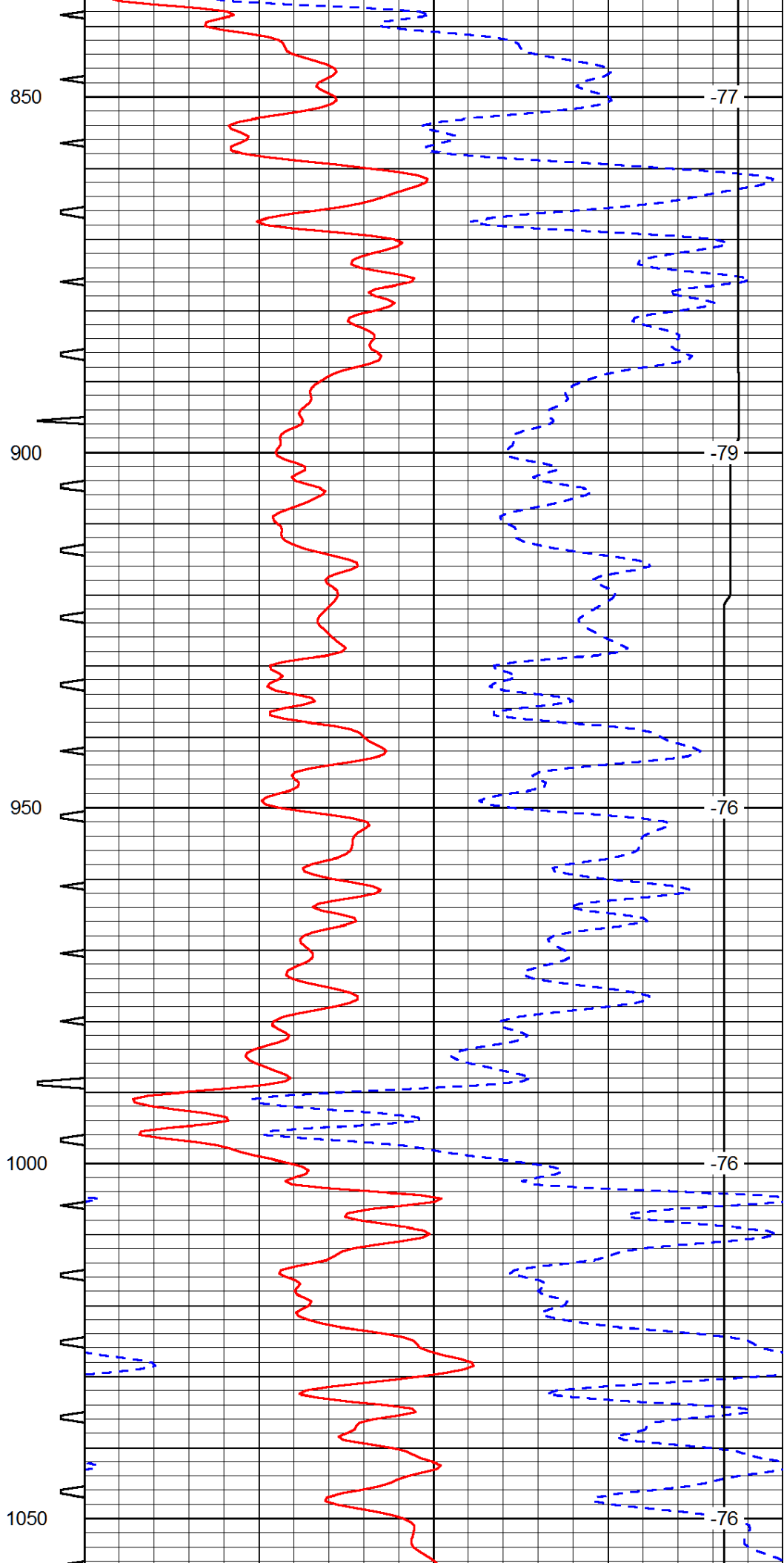
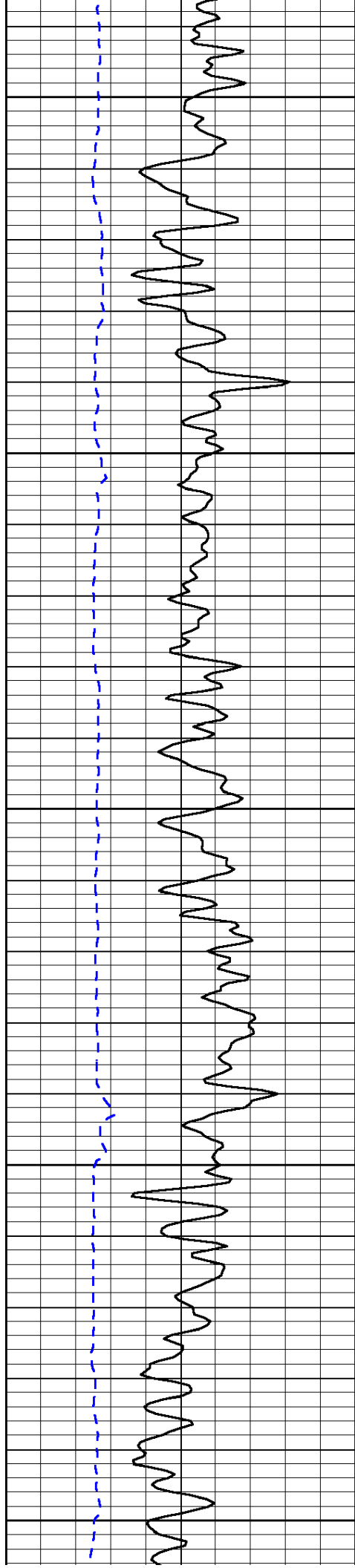
Comments

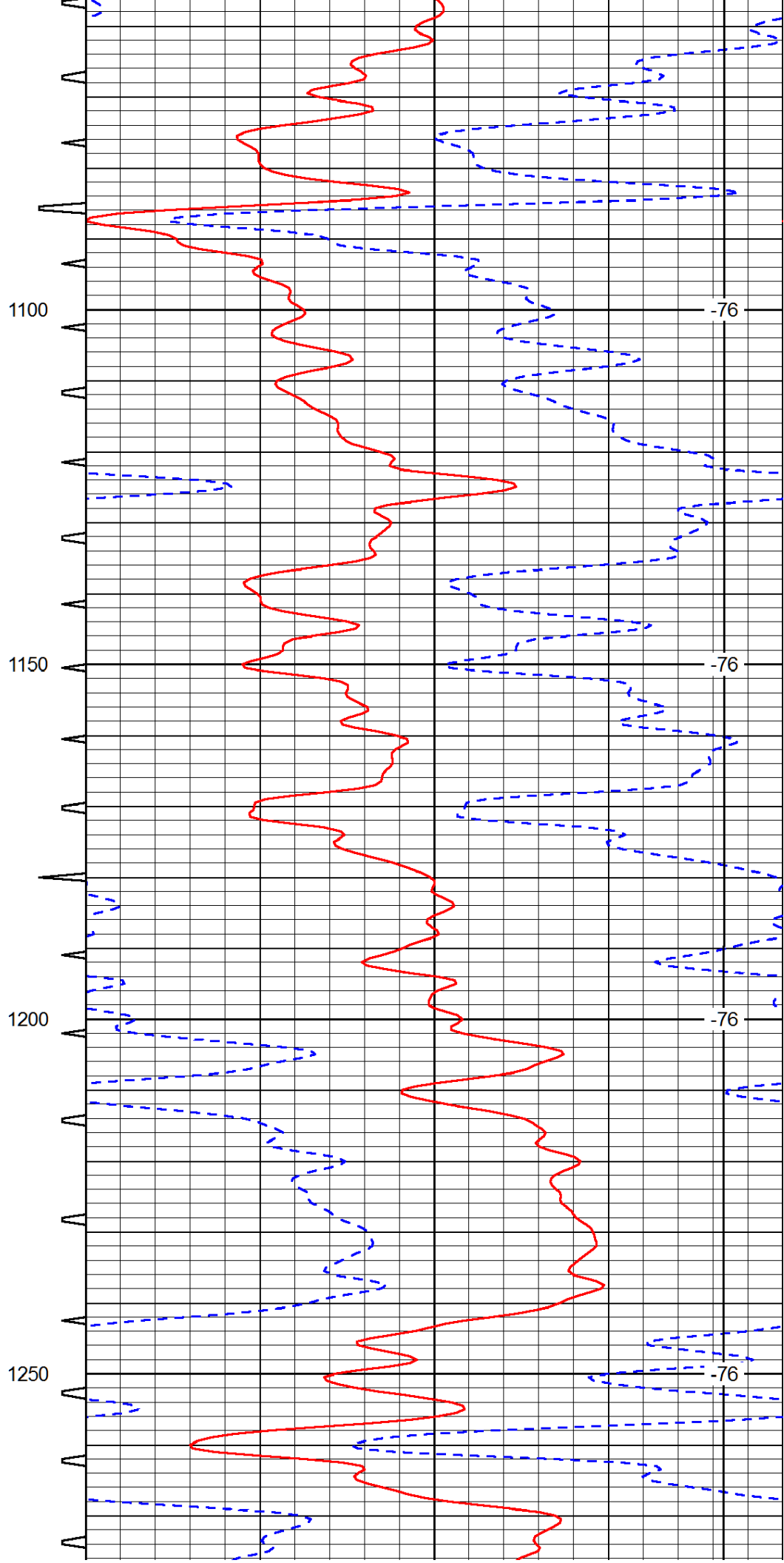
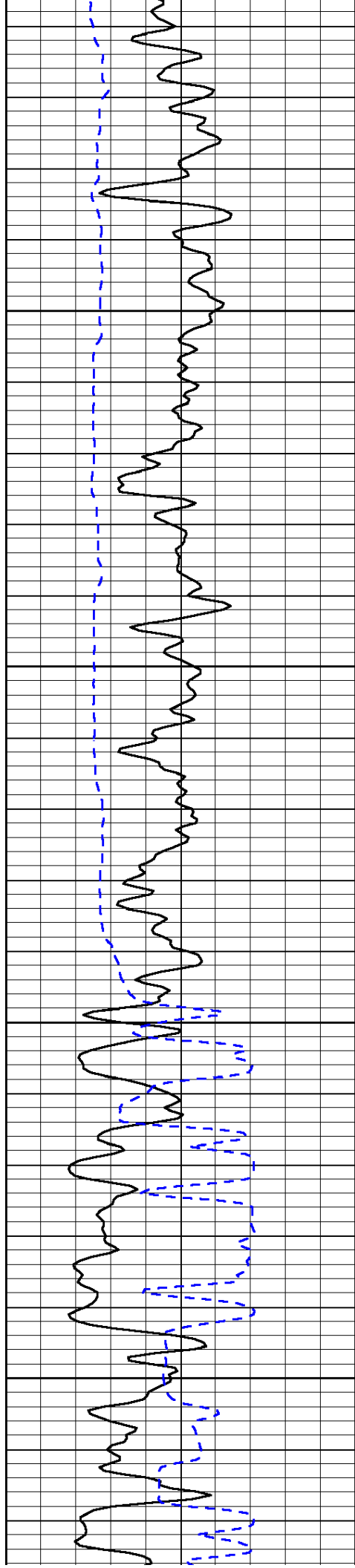
Thank you for using Log-Tech, Inc.
(785) 625-3858

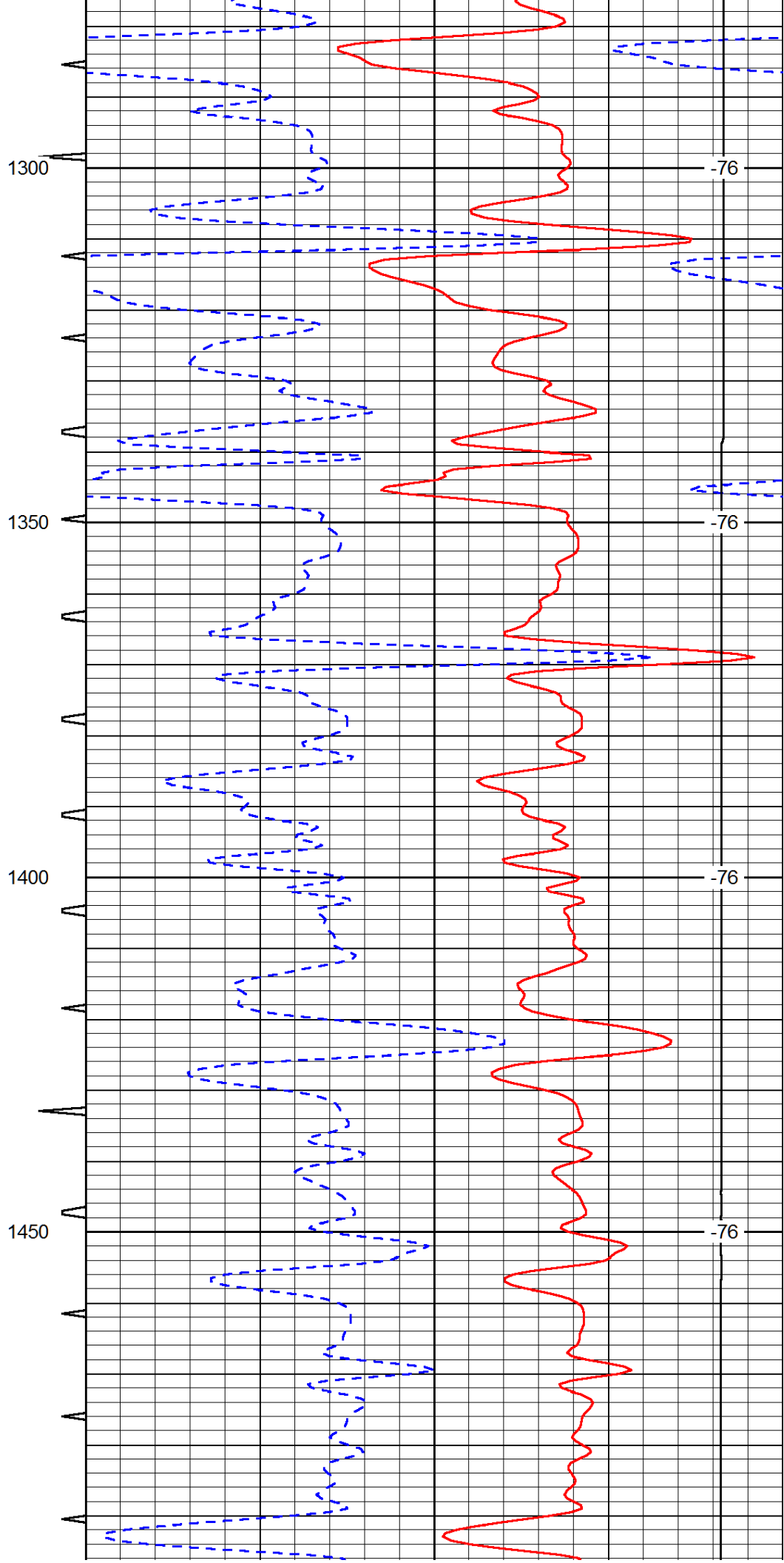
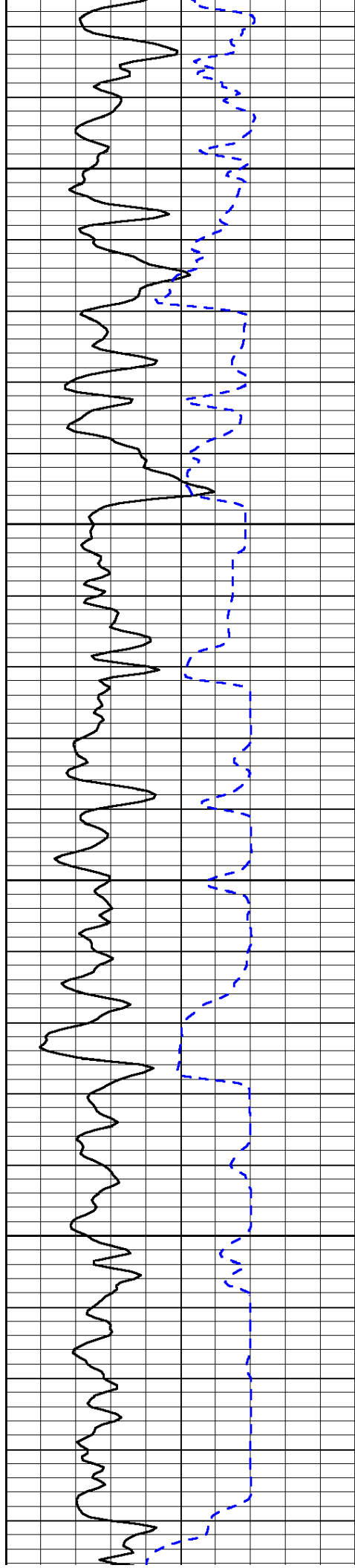
Stafford Kansas
4 South, 1 1/2 West, North Into

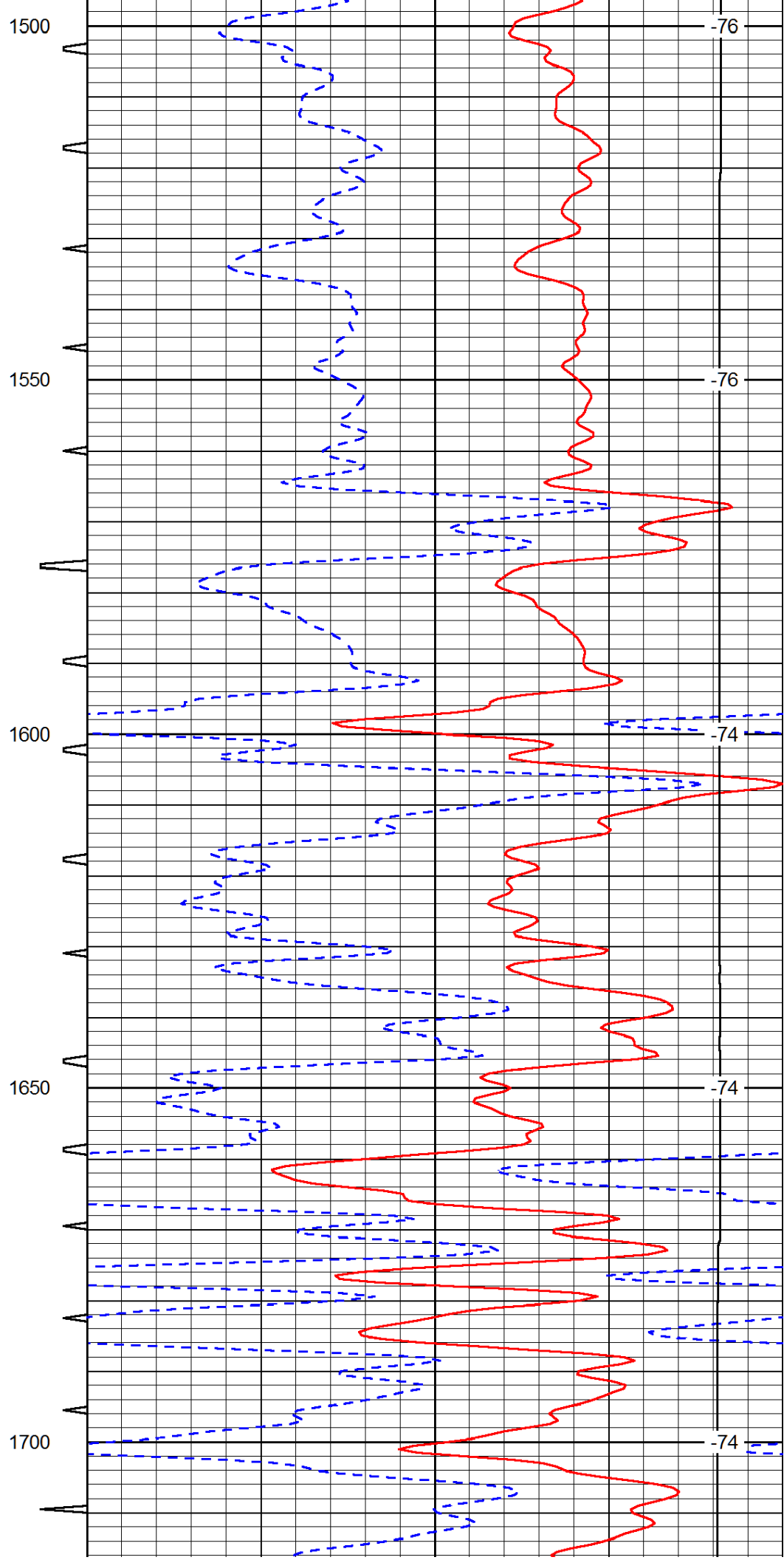
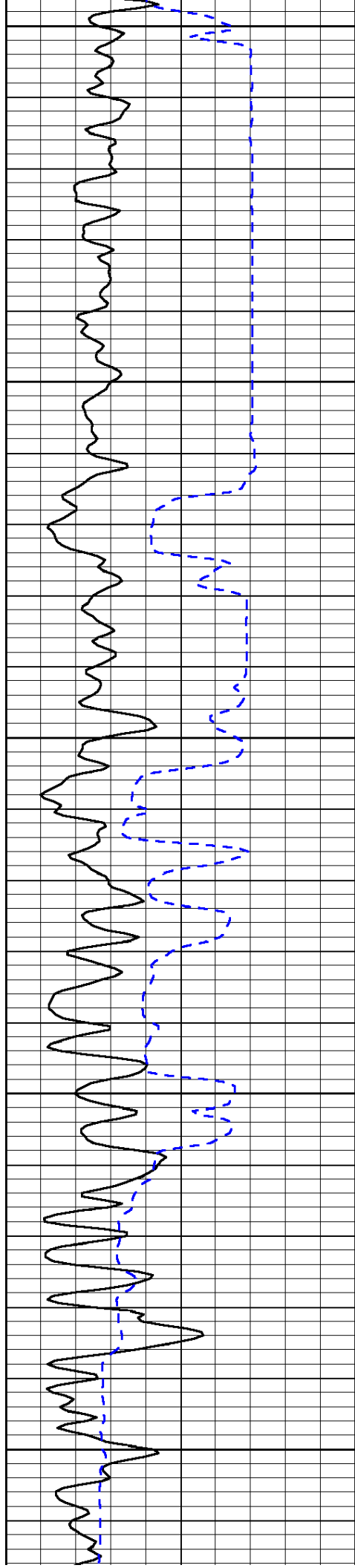
0			Gamma Ray (GAPI)	150	Sonic Int 5 (msec) 0	140	Delta Time (usec/ft) (usec/ft)		40
150			Gamma Ray (GAPI)	300		30	Sonic Porosity (pu)		-10
6			dCAL (in)	16		15000	LTEN (lb) (lb)		0
									LSPD (ft/min)

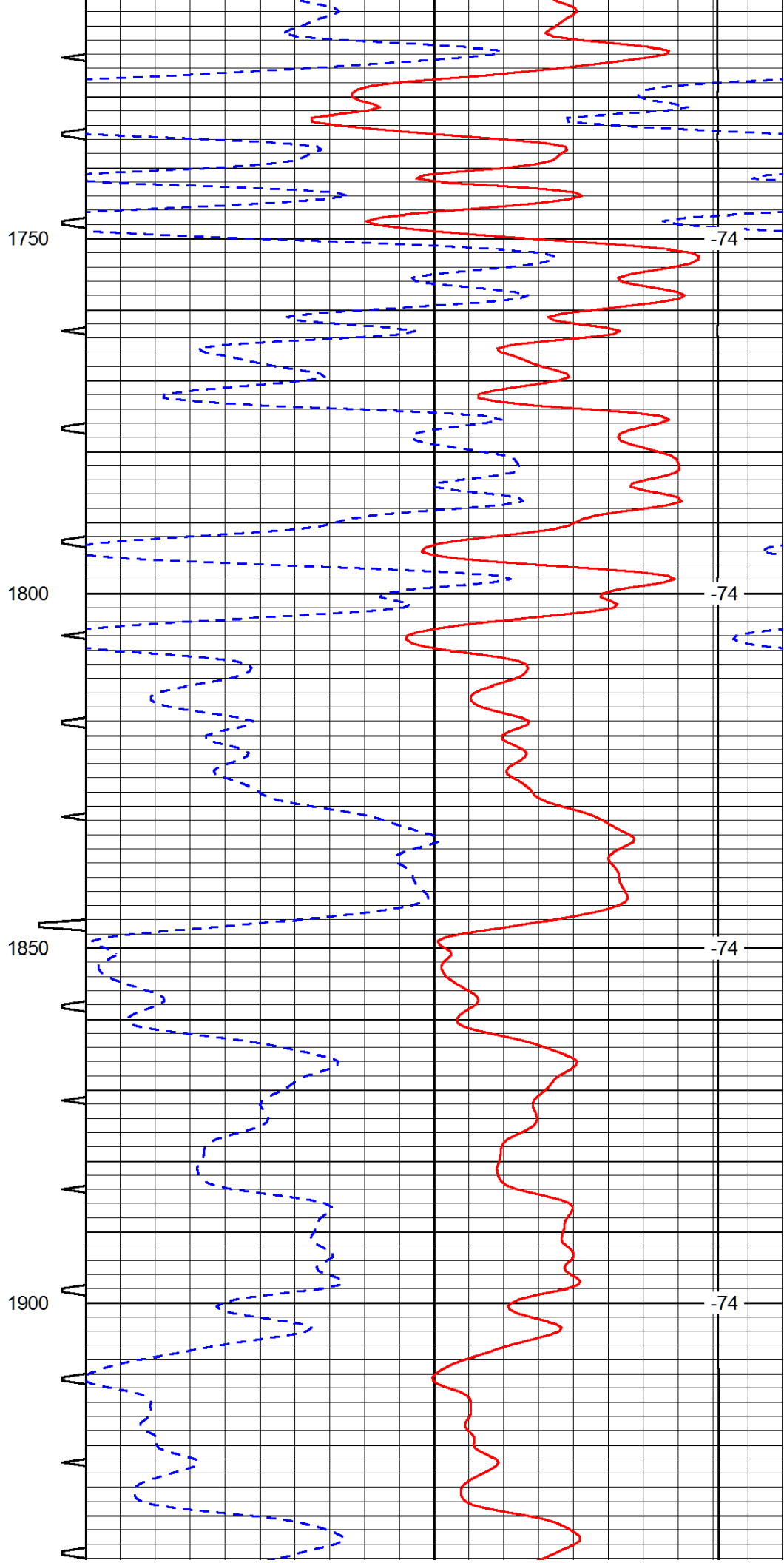
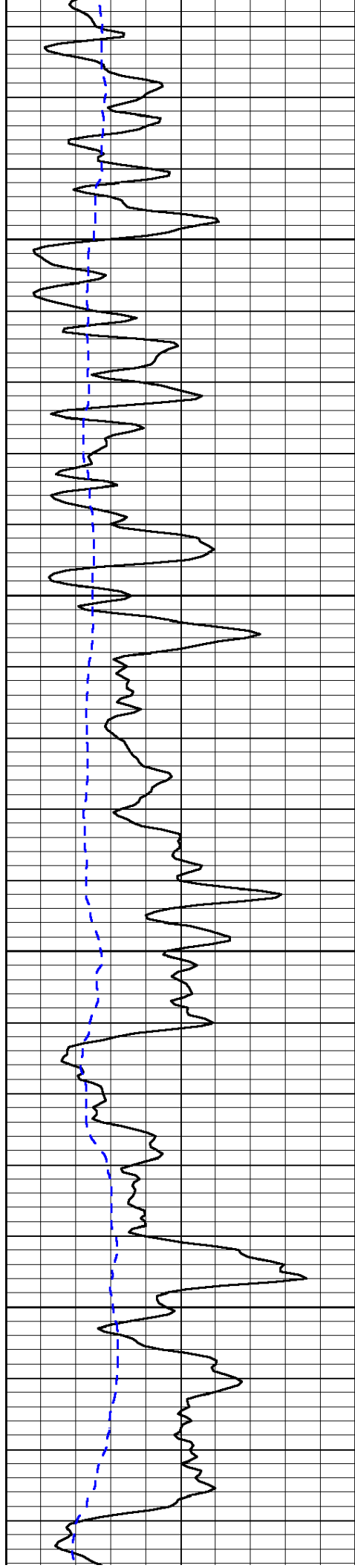


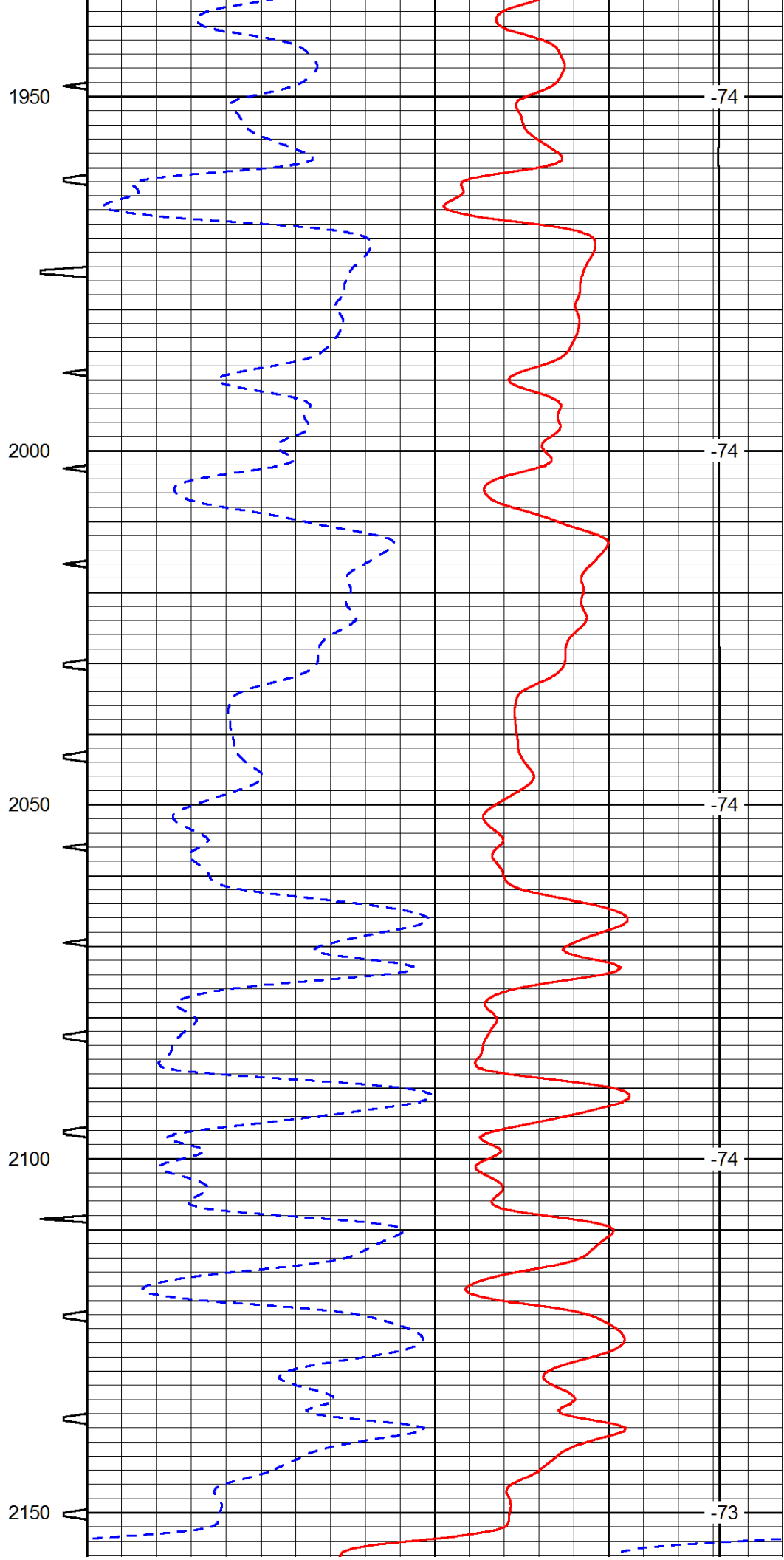
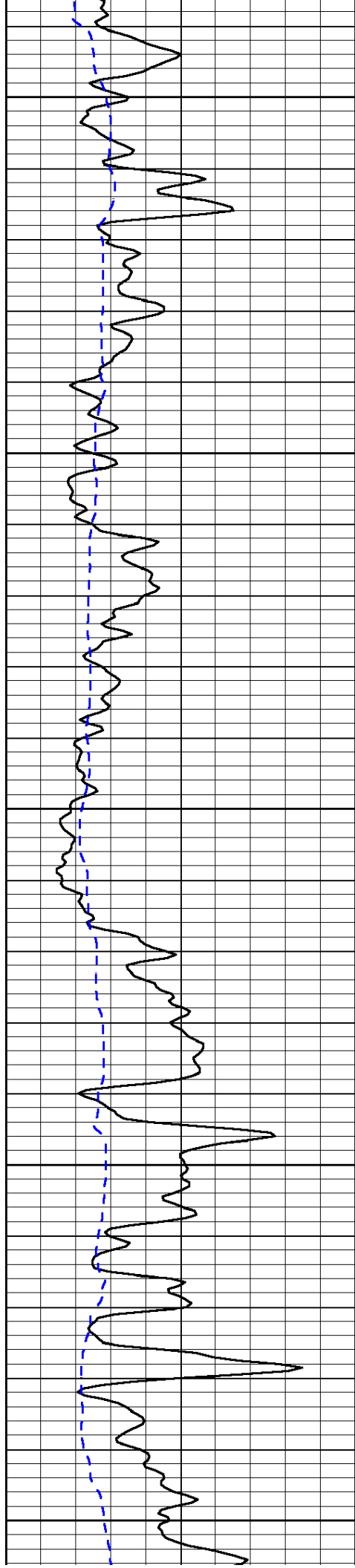


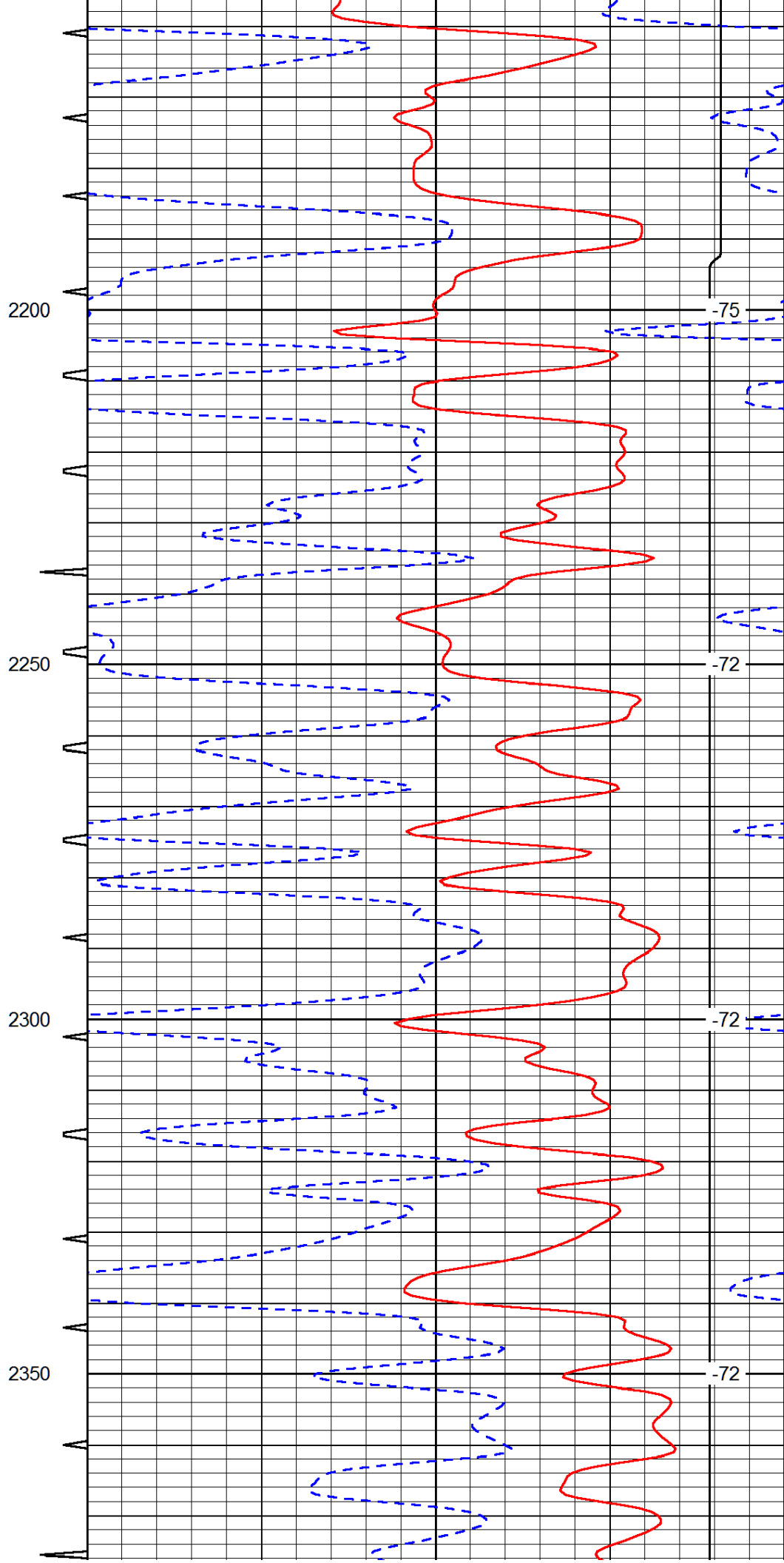
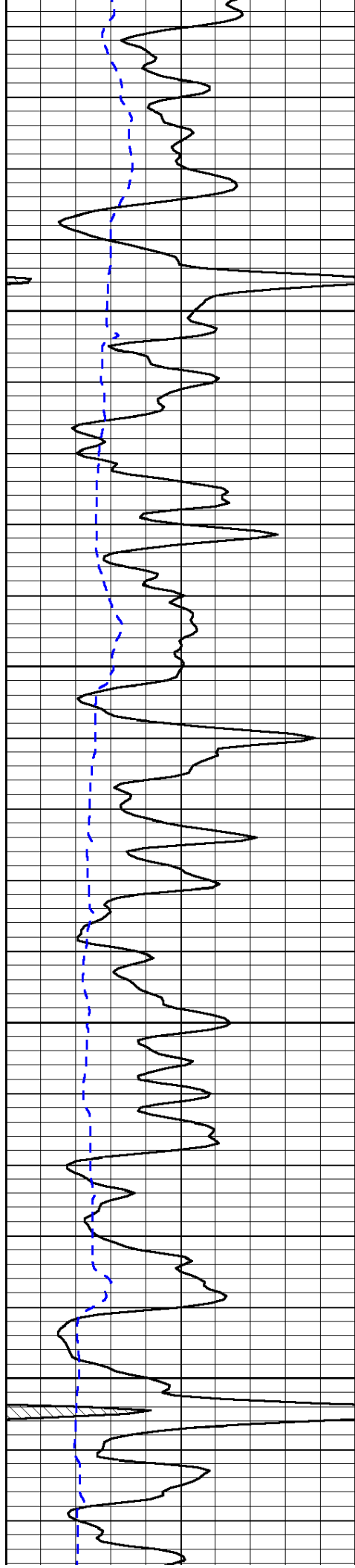


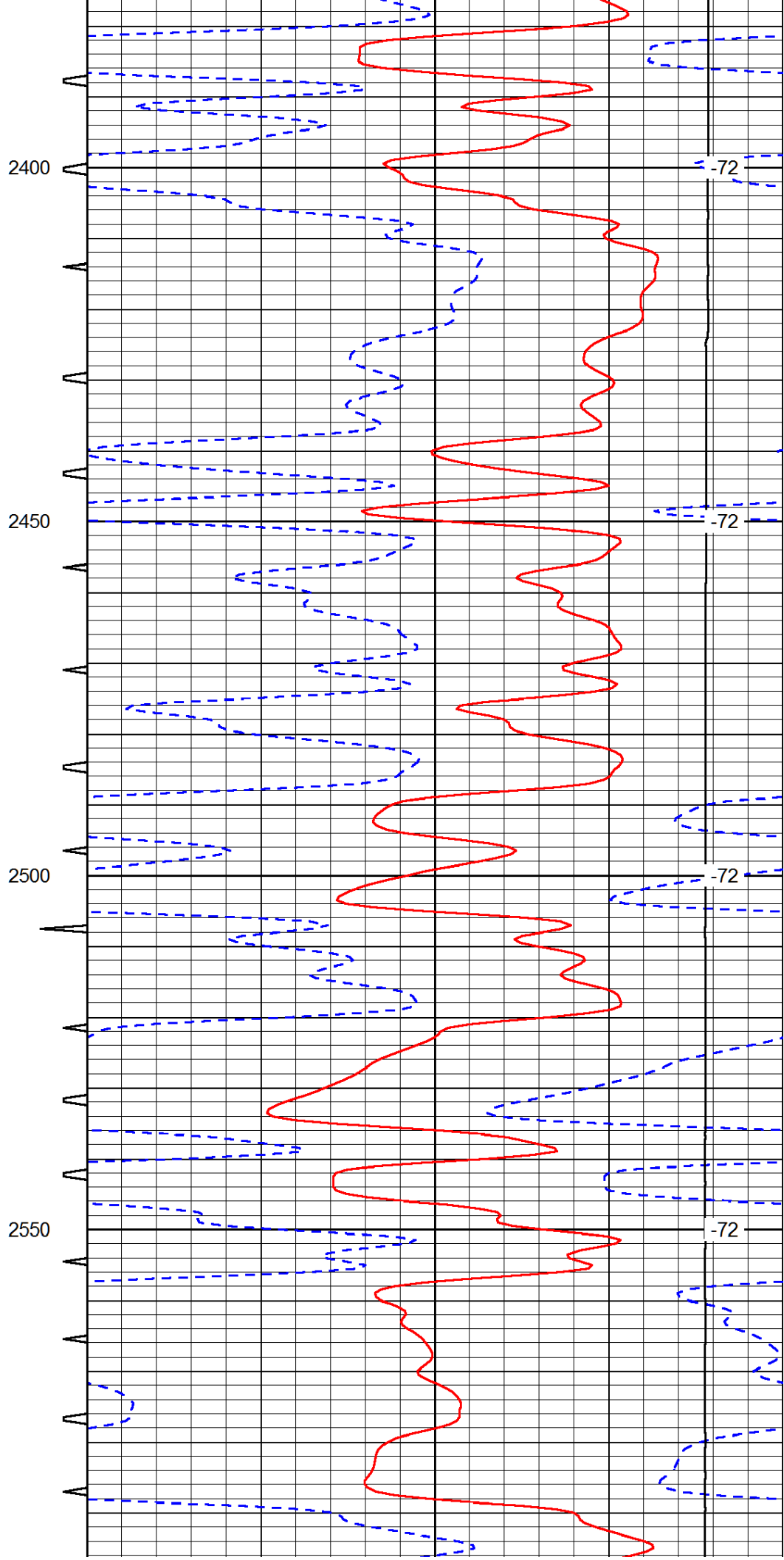
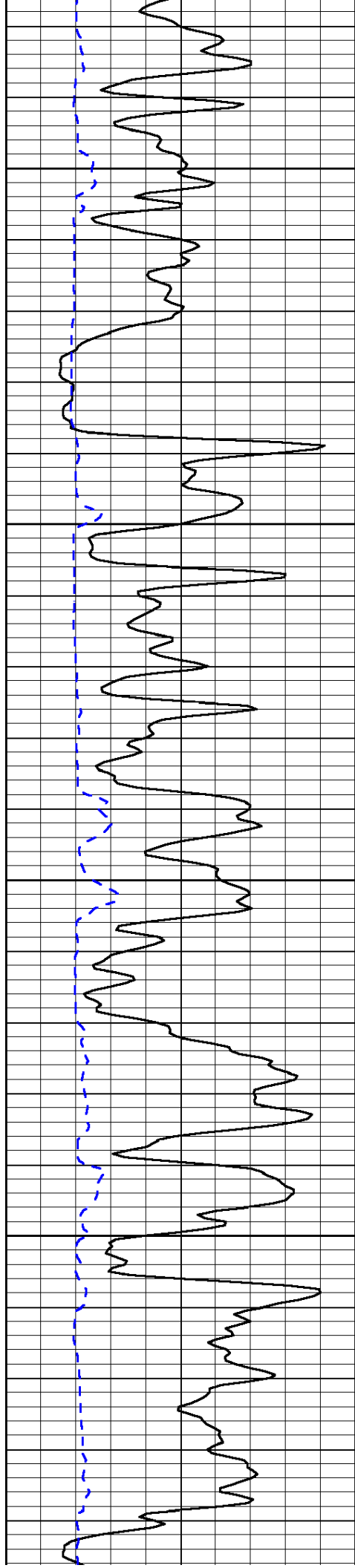


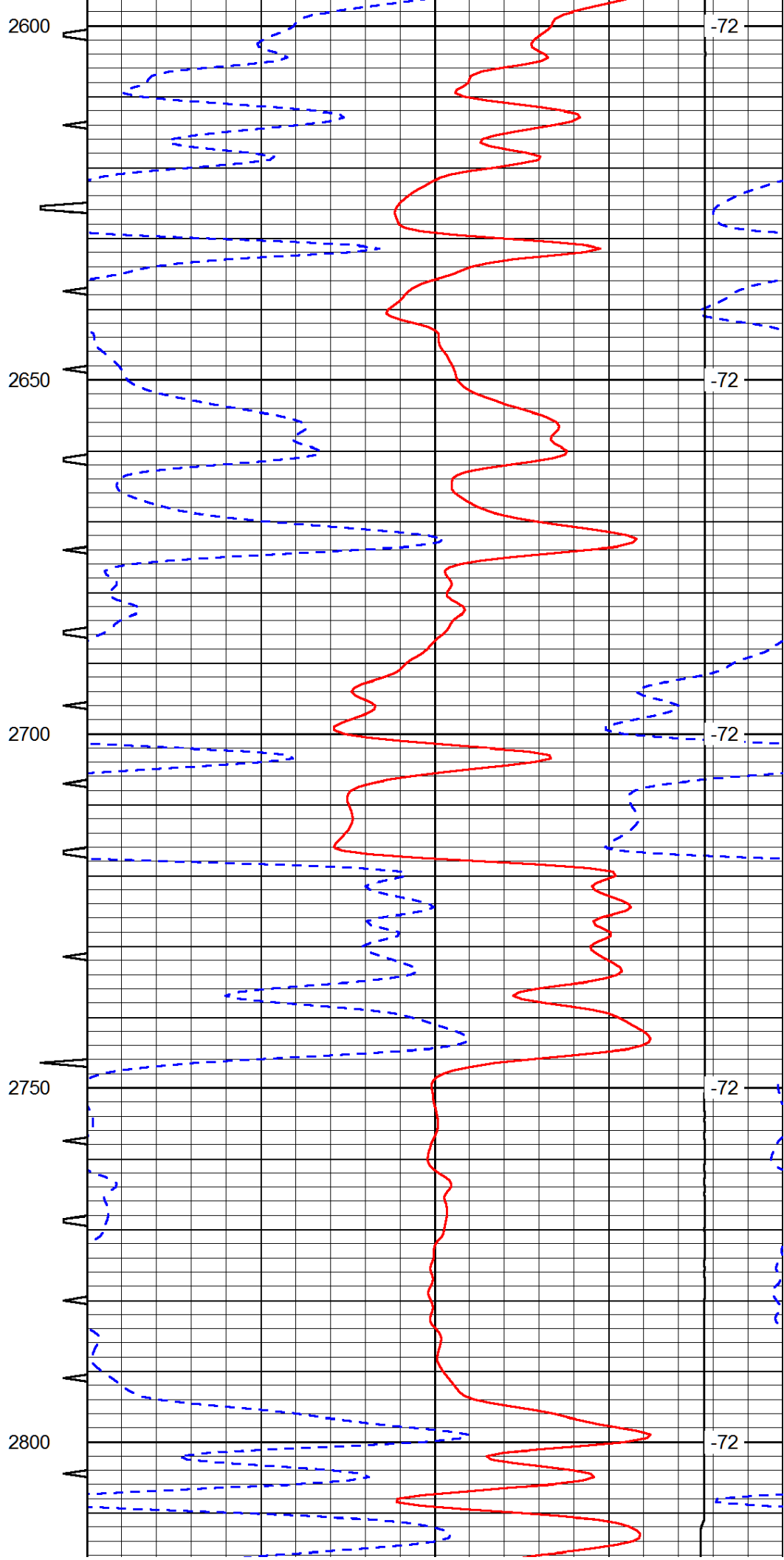
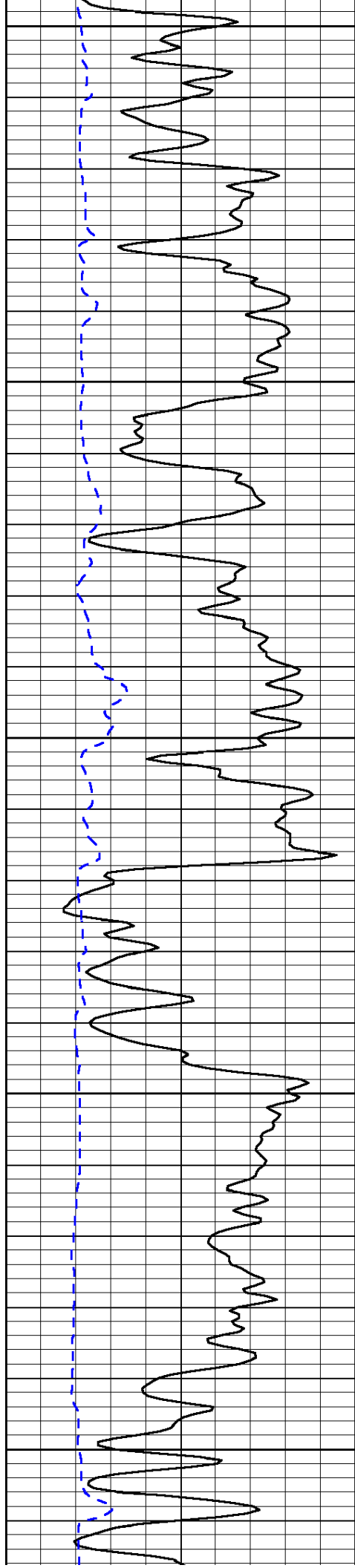


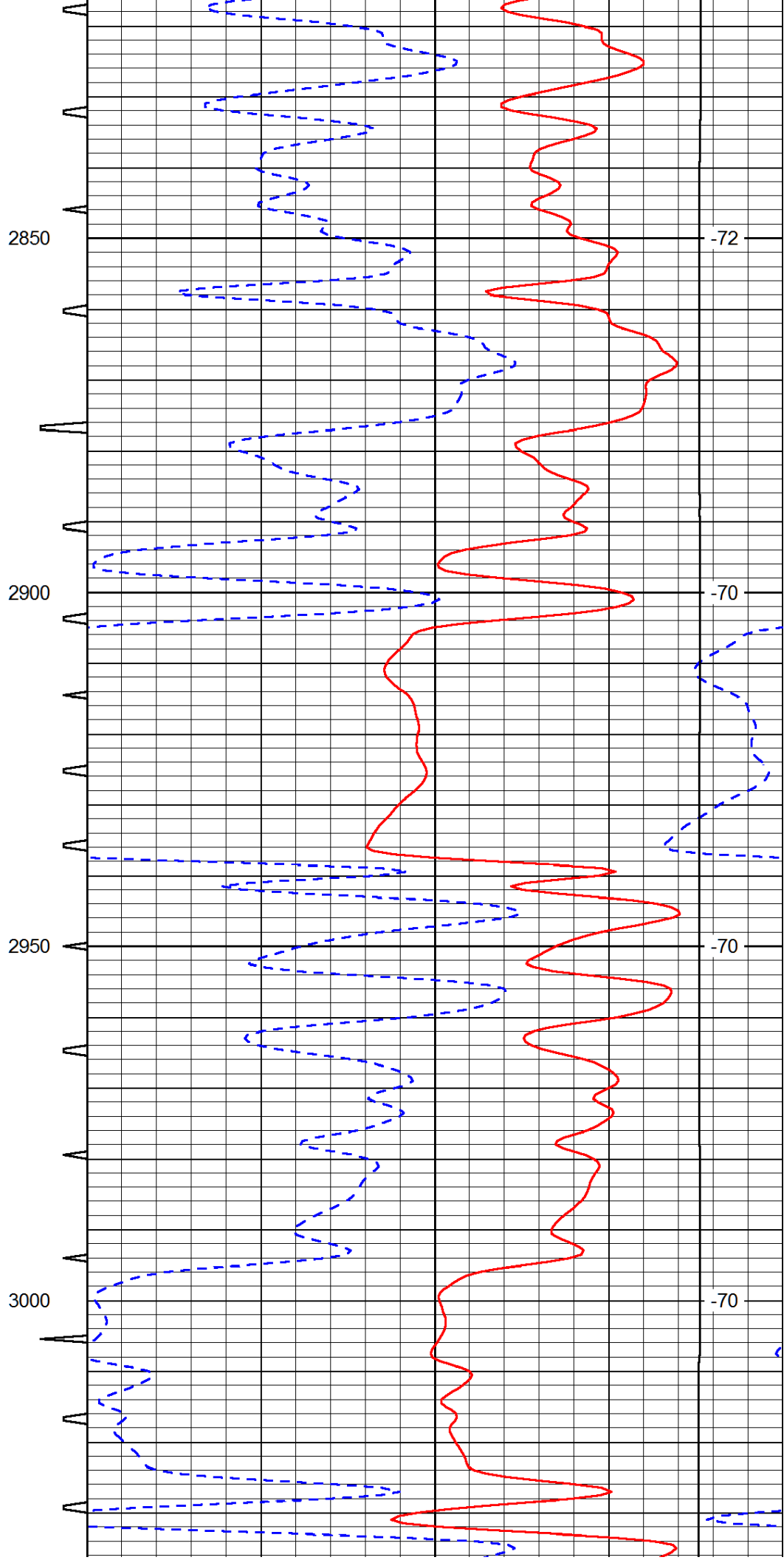
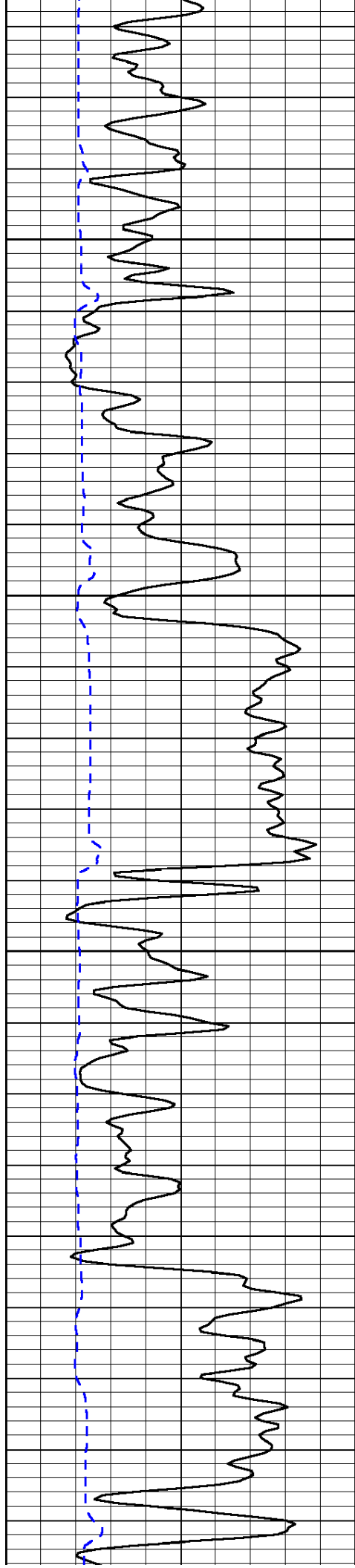


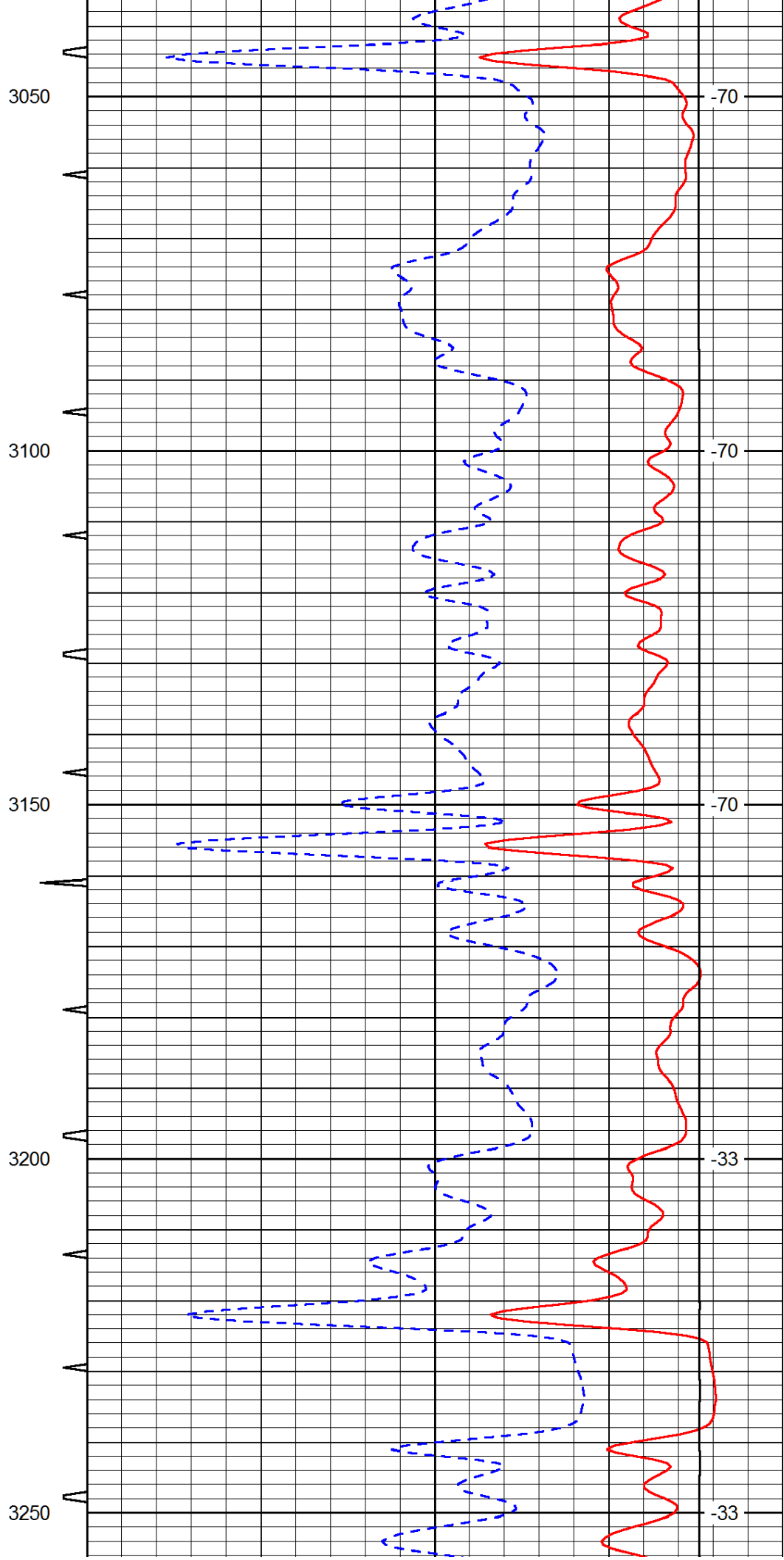
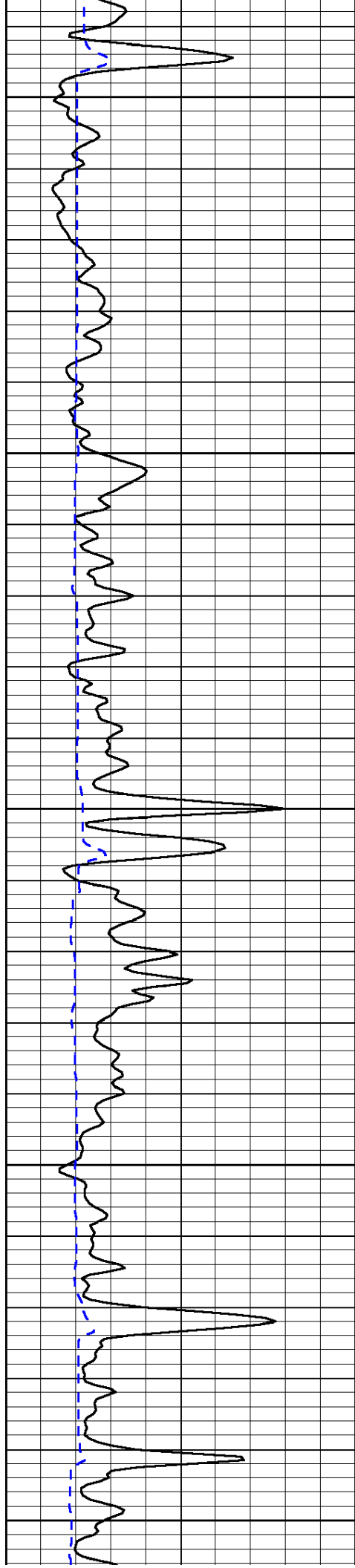


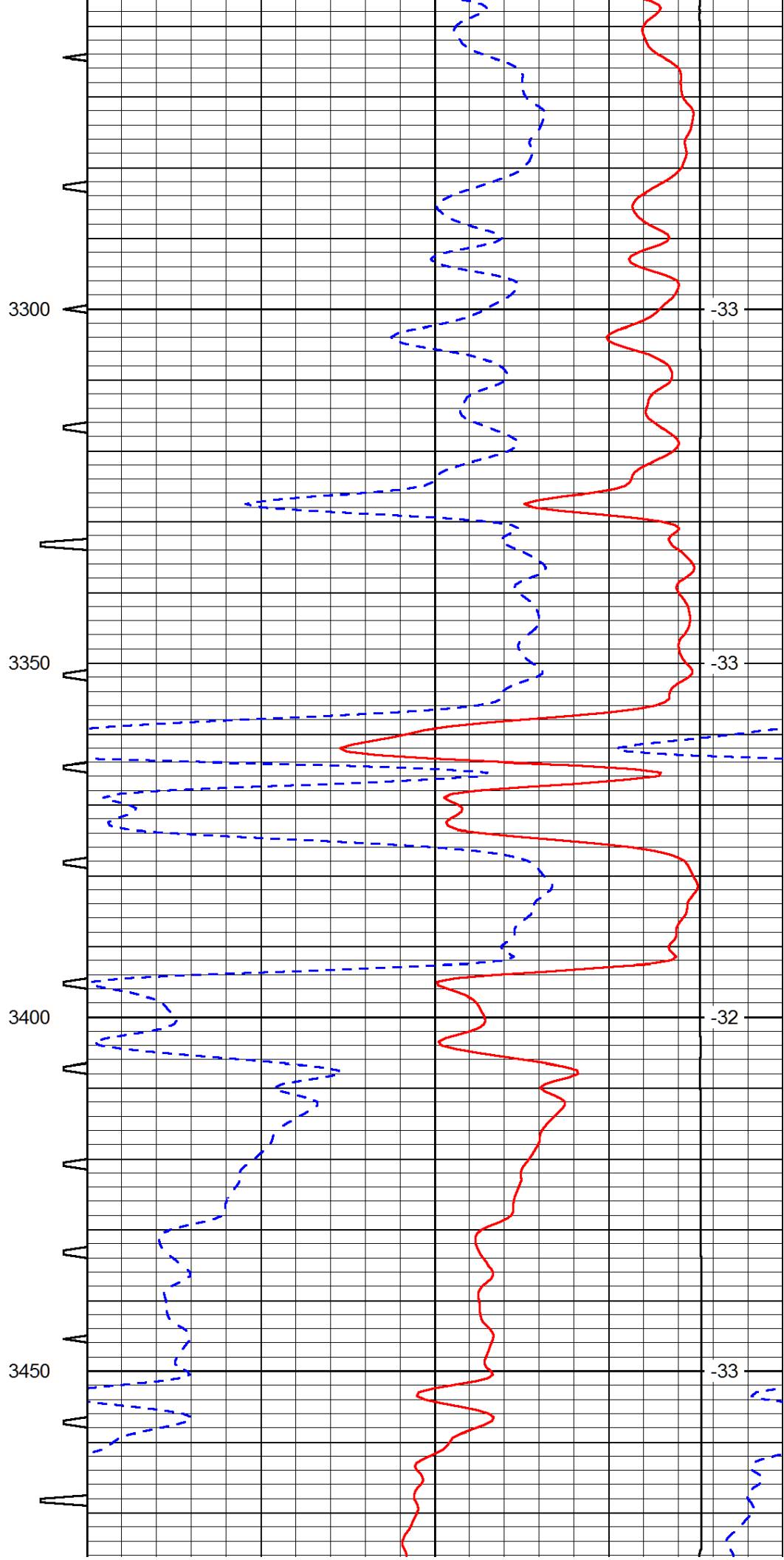
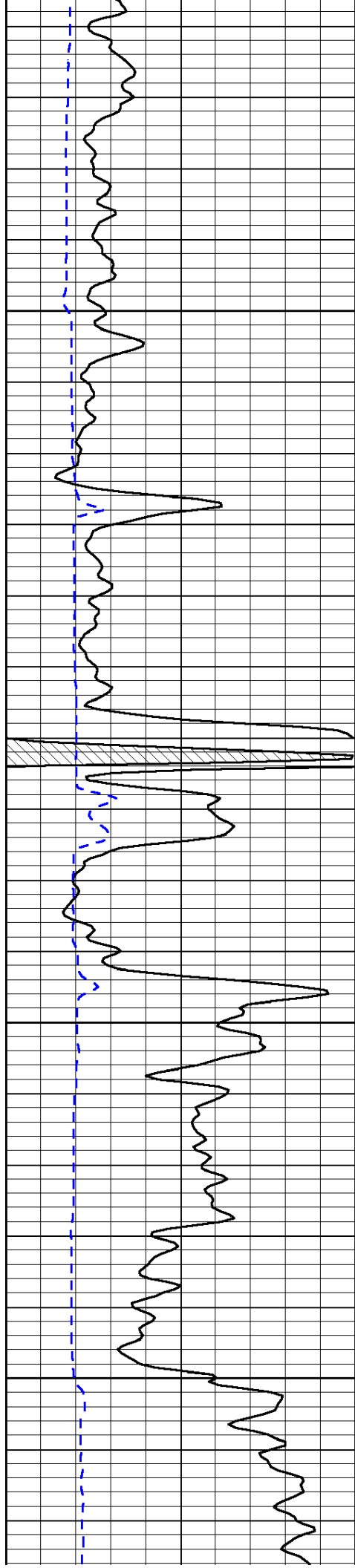


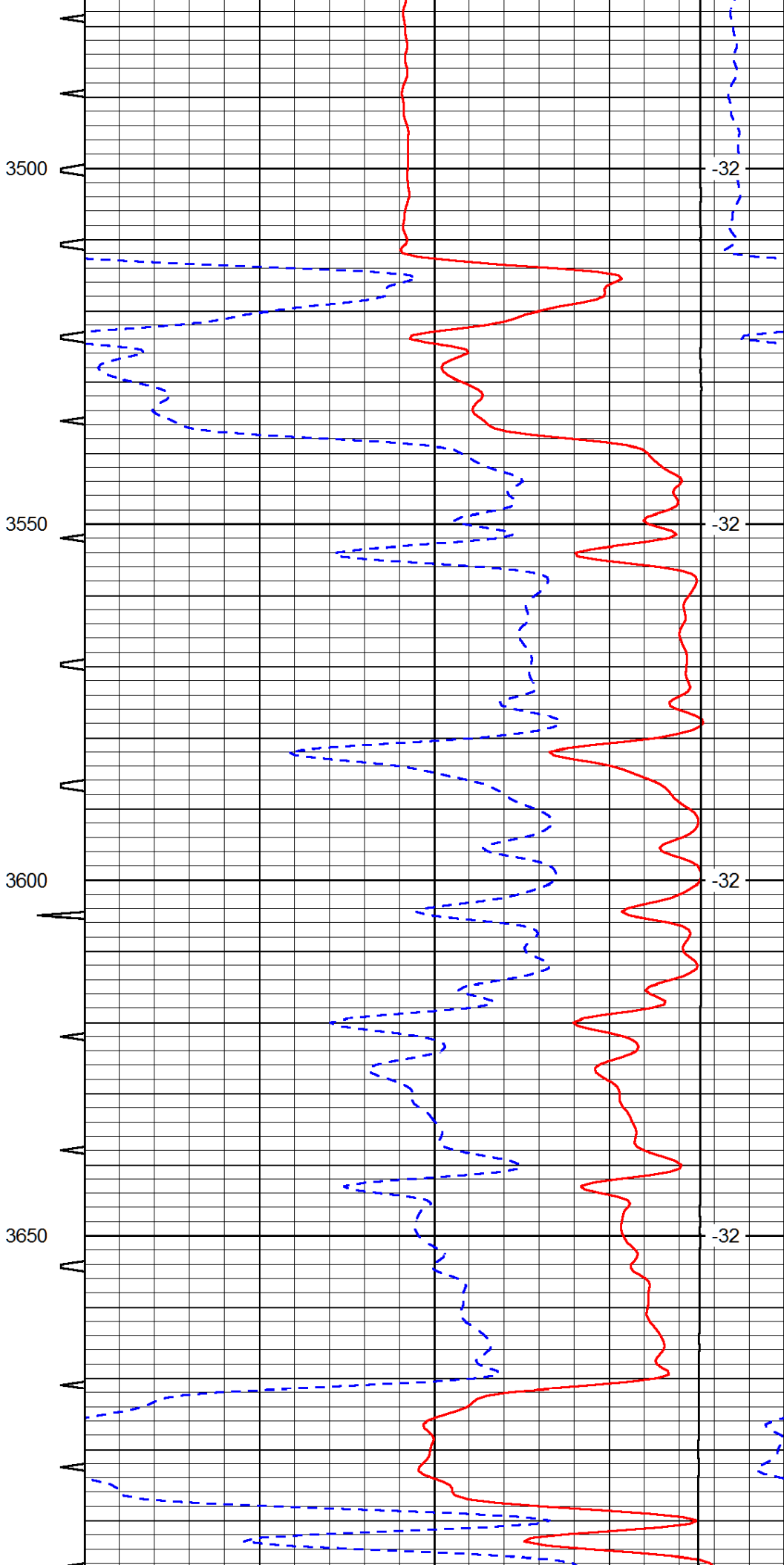
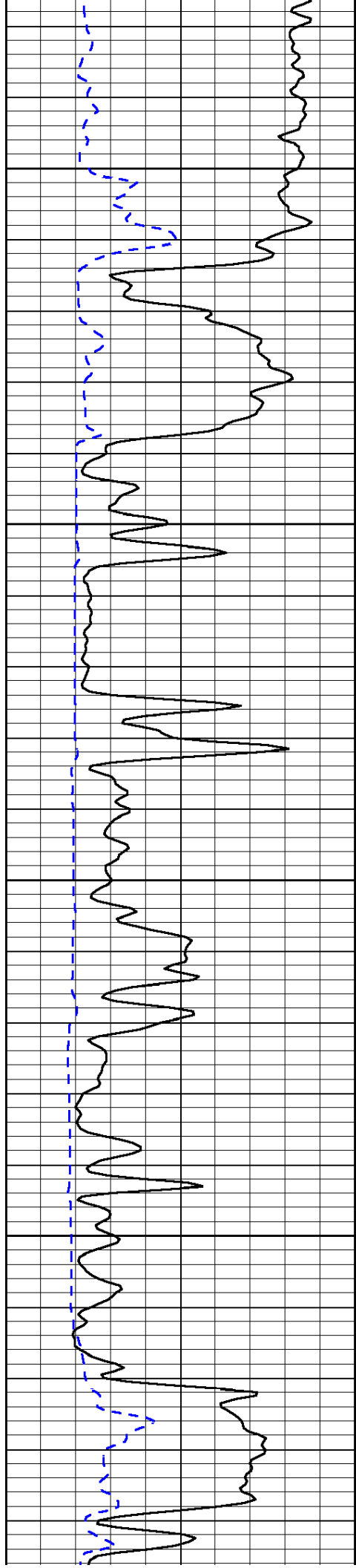


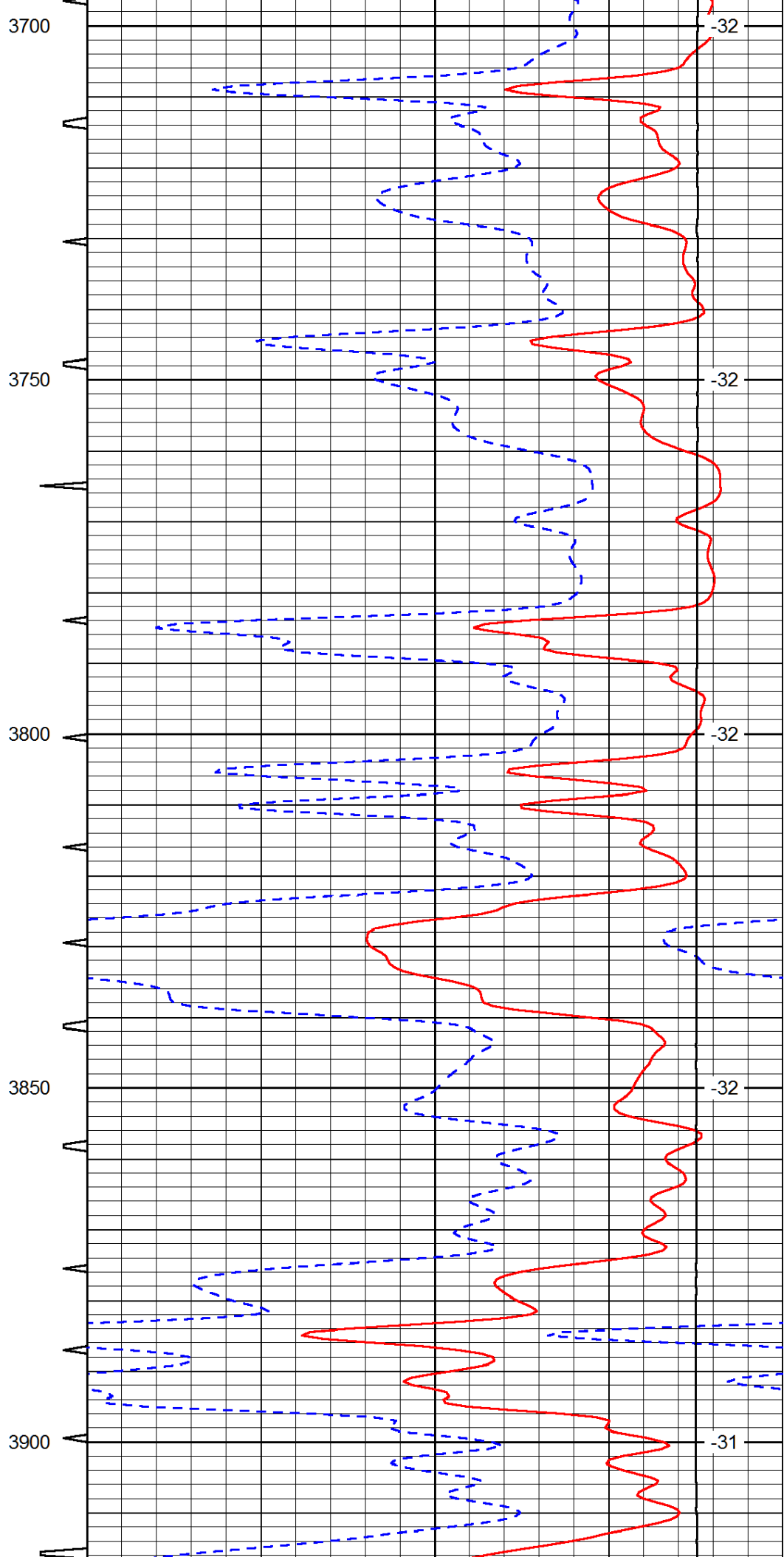
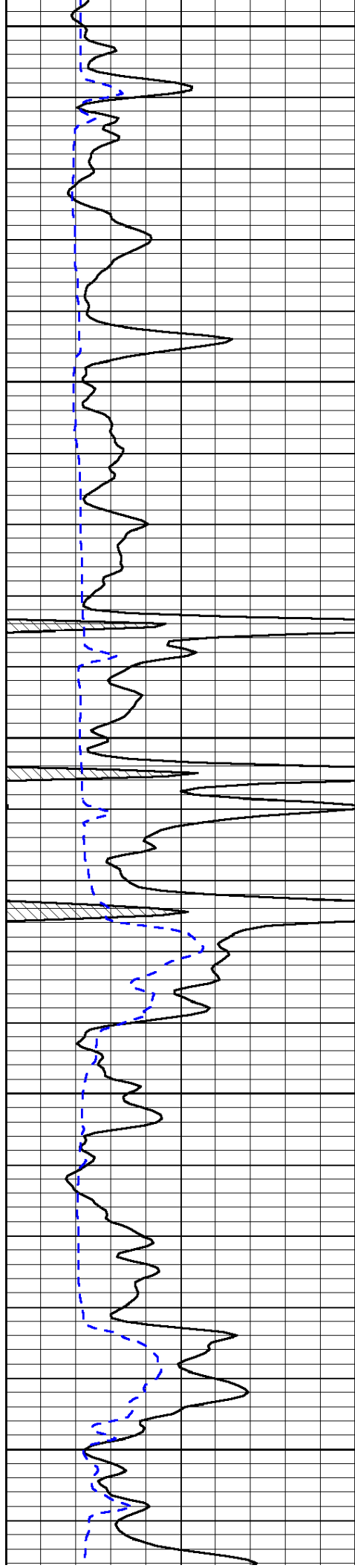


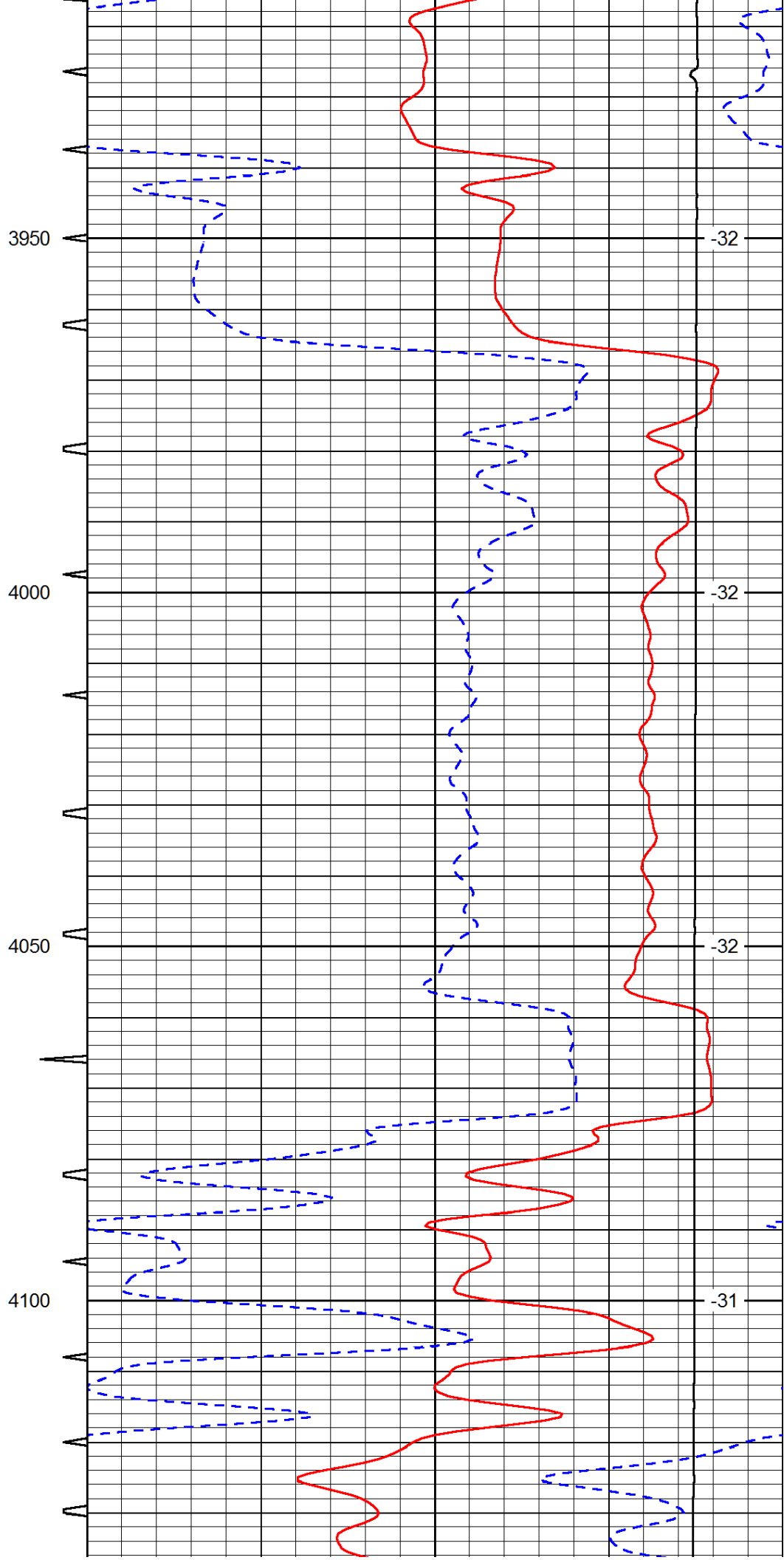
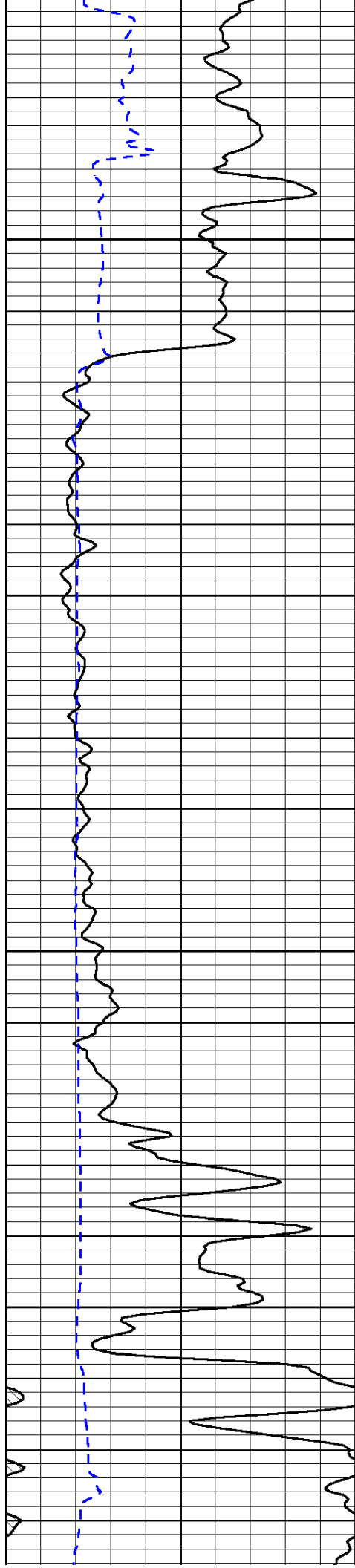


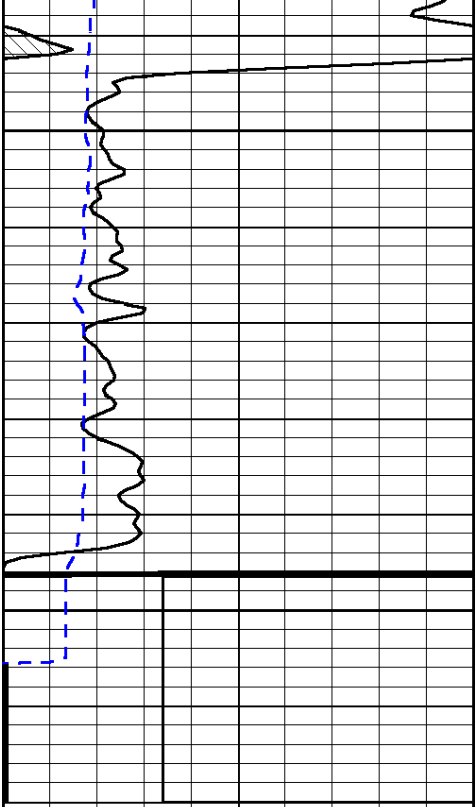




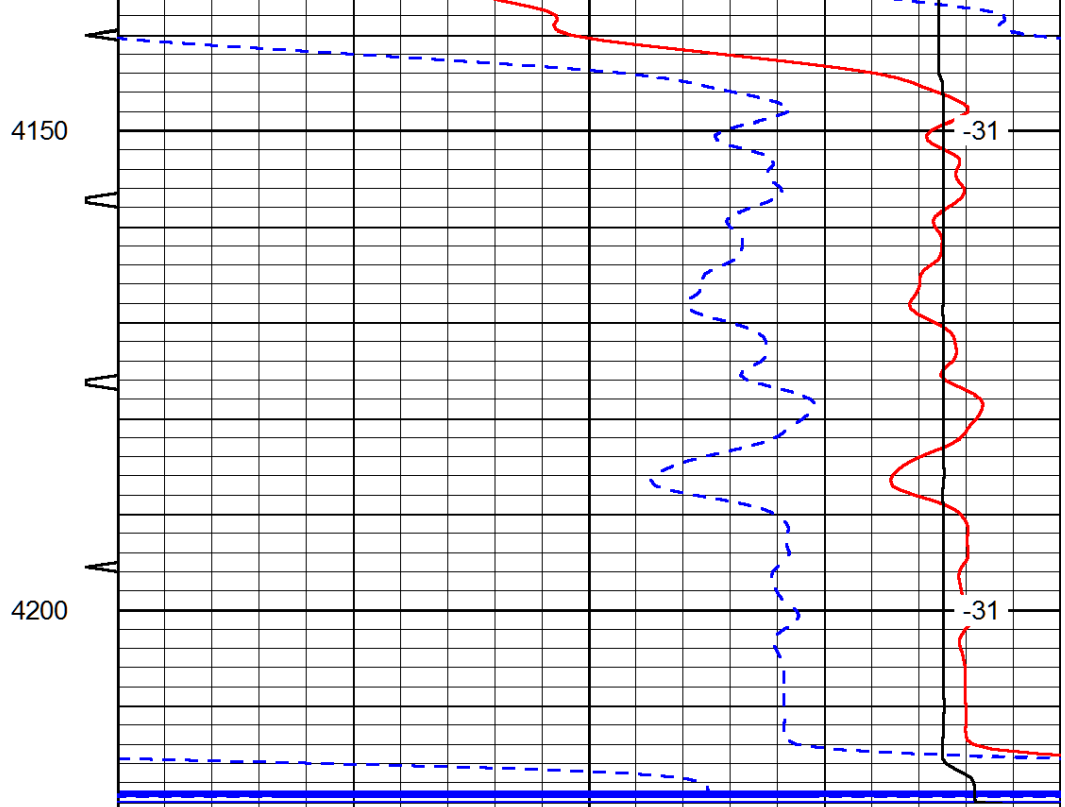








0	Gamma Ray (GAPI)	150
150	Gamma Ray (GAPI)	300
6	dCAL (in)	16



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)
