



PIONEER

Pioneer Energy Services

Borehole Compensated Sonic Log

API No.

15-167-23, 992-00-00

Company **EMPIRE ENERGY E&P LLC**

Well **DRISCOLL HEIRS # 31-6**

Field **DRISCOLL**

County **RUSSELL**

State **KS**

Location **2156' FNL & 1928' FEL
NW/SE/SW/NE**

Other Services
CNL/CDL/MEL
BHCS

Sec: **31**

Twp: **15 S**

Rge: **11 W**

Permanent Datum **GROUND LEVEL** Elevation **1868 FT**

Log Measured From **KELLY BUSHING** 13 Ft. Above Perm. Datum

K.B. 1881 FT
D.F. 1880 FT
G.L. 1868 FT

Drilling Measured From **KELLY BUSHING**

Elevation

SEPTEMBER 20, 2014

Run Number **TWO**

Type Log **BHC Sonic**

Depth Driller **3450 FT**

Depth Logger **3442 FT**

Bottom Logged Interval **3421 FT**

Top Logged Interval **700**

Type Fluid In Hole **CHEM GEL**

Salinity, PPM CL **4,800 ppm**

Density **9.3 ppg**

Level **43 FT**

Max. Rec. Temp. F **107 F**

Operating Rig Time **4 HRS**

Equipment -- Location **H - 20 | Hays**

Recorded By **A. HARTMAN**

Witnessed By **MIKE BAIR**

Borehole Record

Casing Record

Run No

Bit

From

To

Size

Wgt.

From

To

ONE 12-1/4"

0.0

727 FT

8-5/8"

27 #

0.0

727 FT

TWO 7-7/8"

727 FT

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.

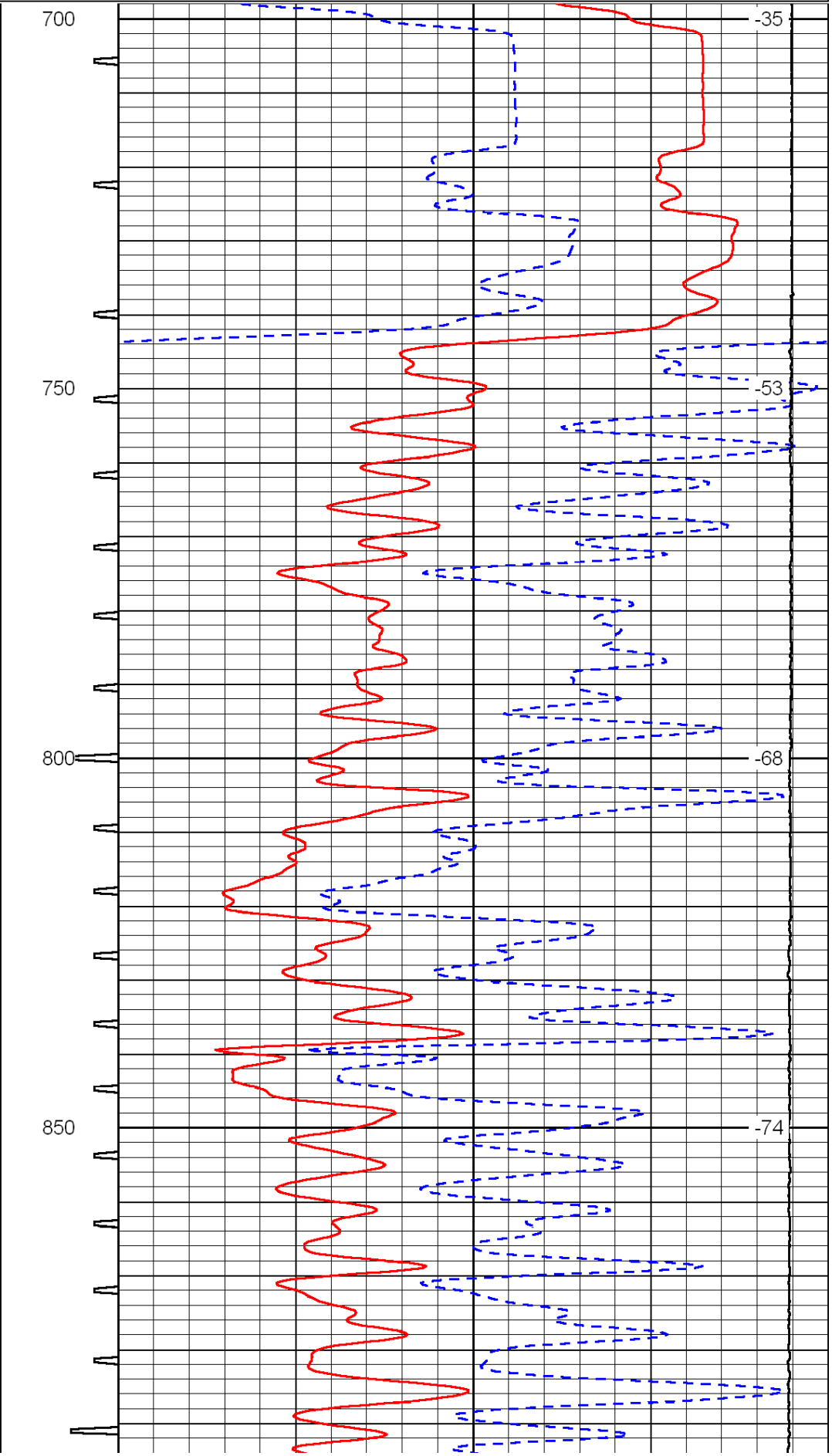
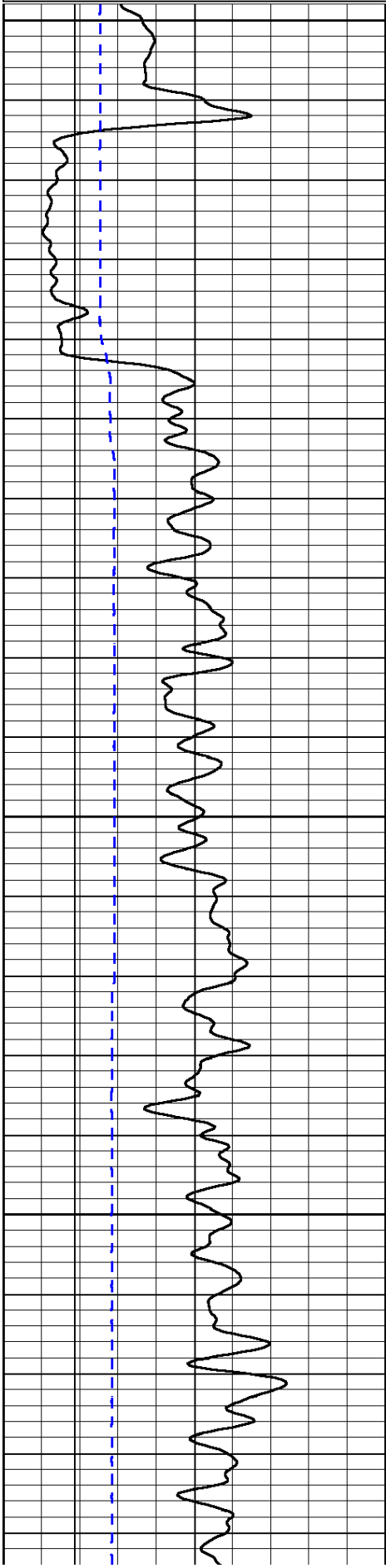
Comments

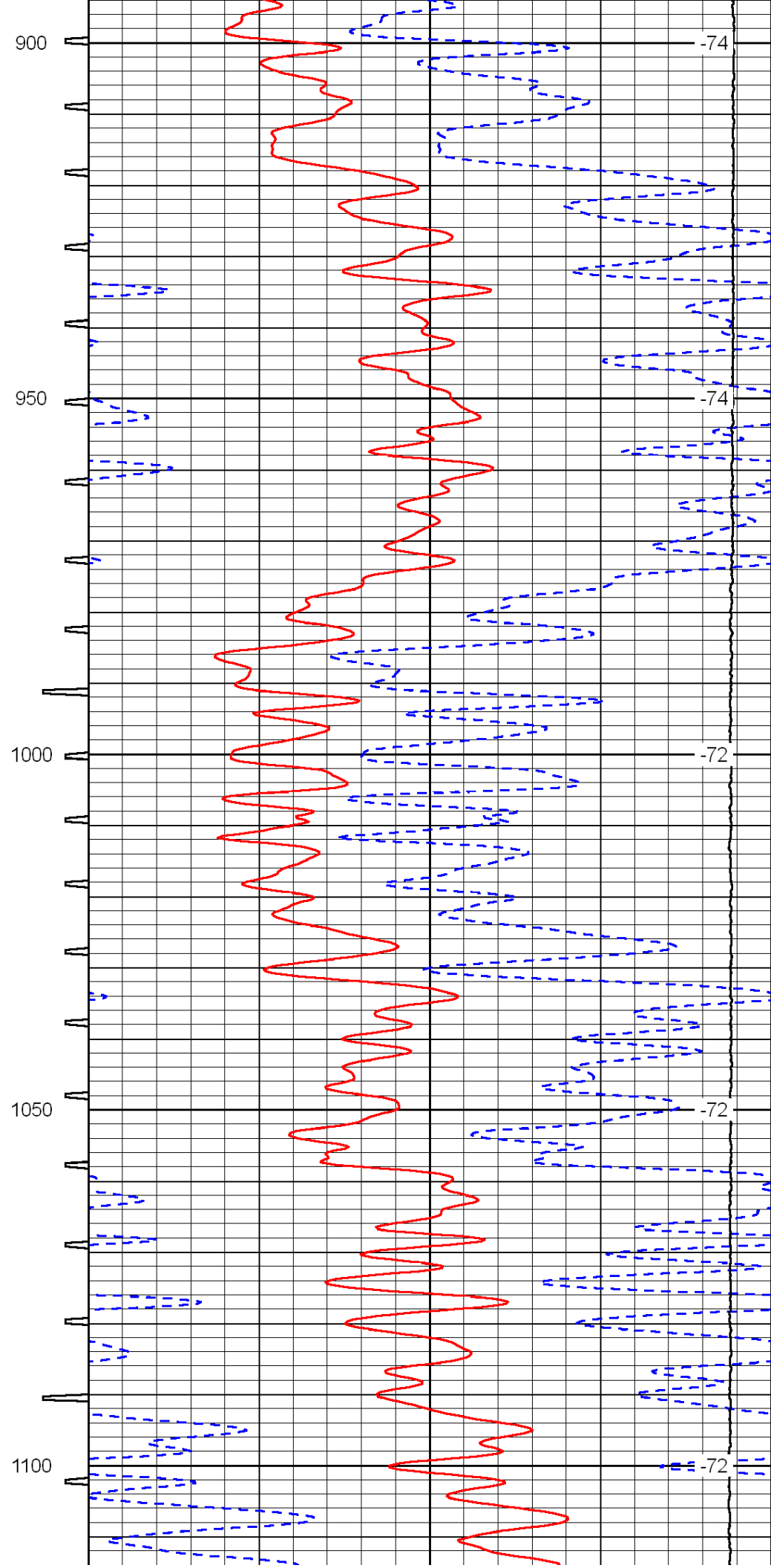
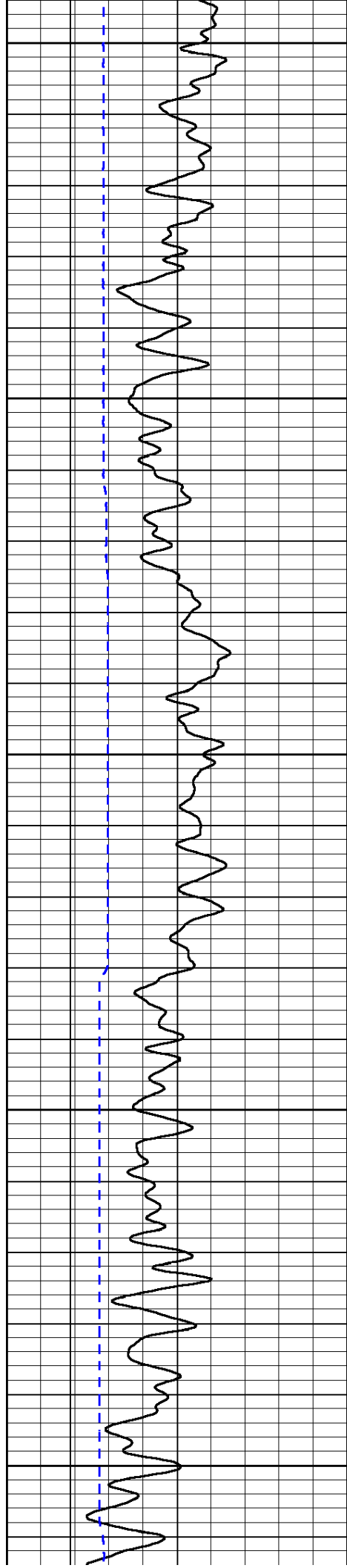
Thank you for using Log-Tech, Inc.
(785) 625-3858

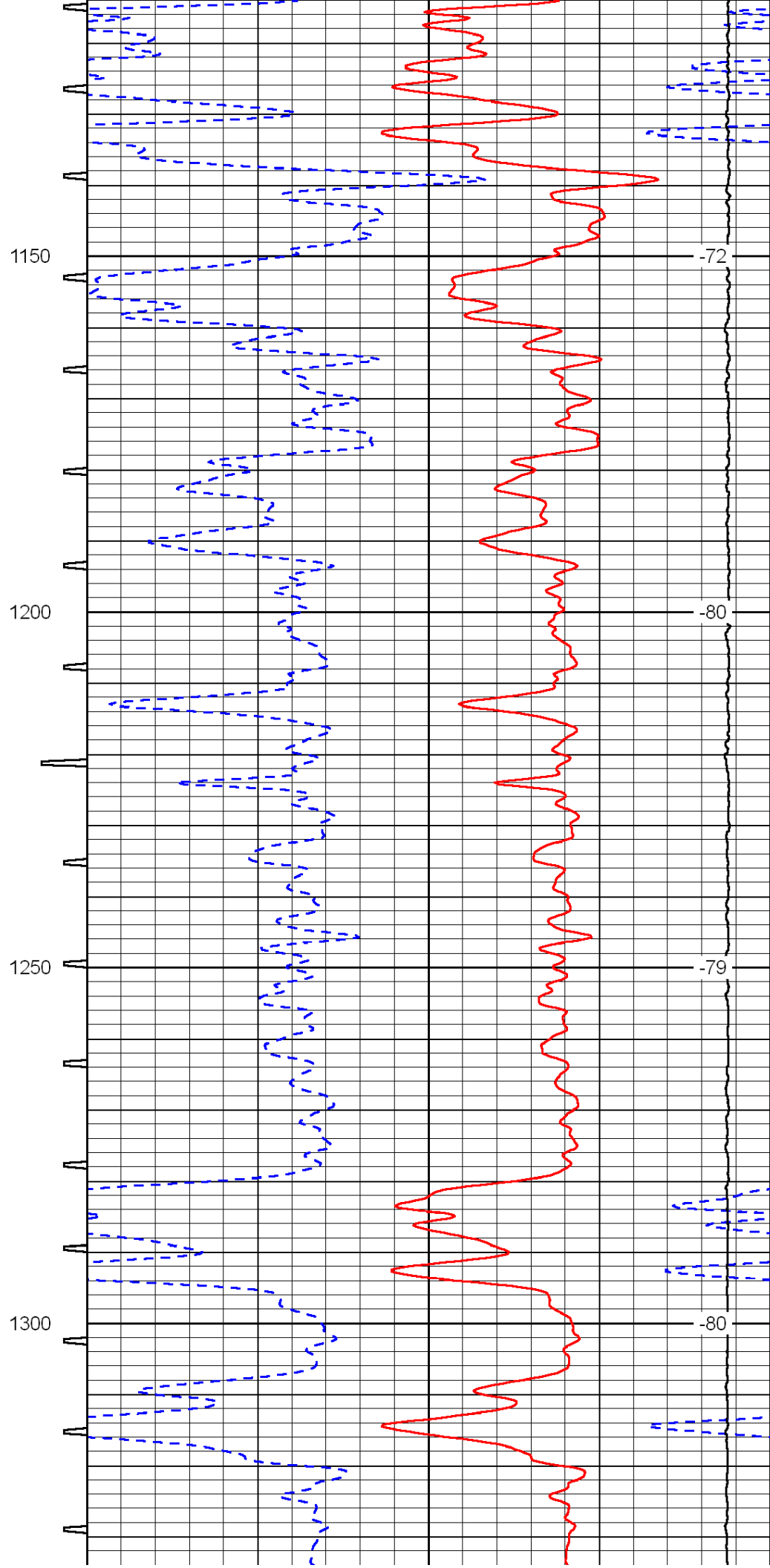
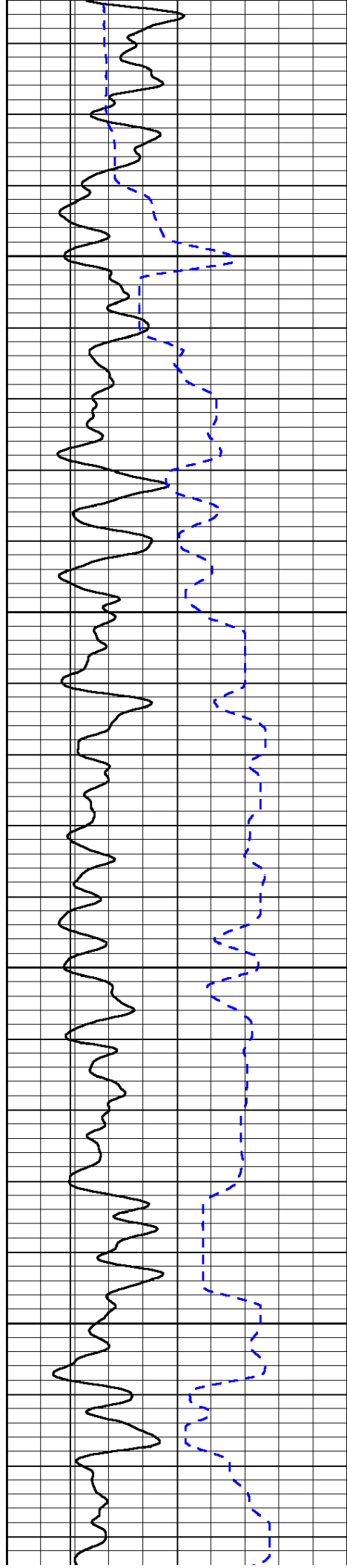
SERVICE ORDER # 12081
POROSITY VALUES BASED ON A LIMESTONE MATRIX. 2.71 g/cc
ANNULAR BOREHOLE VOLUMES CALCULATED FOR 5.5" CASING.

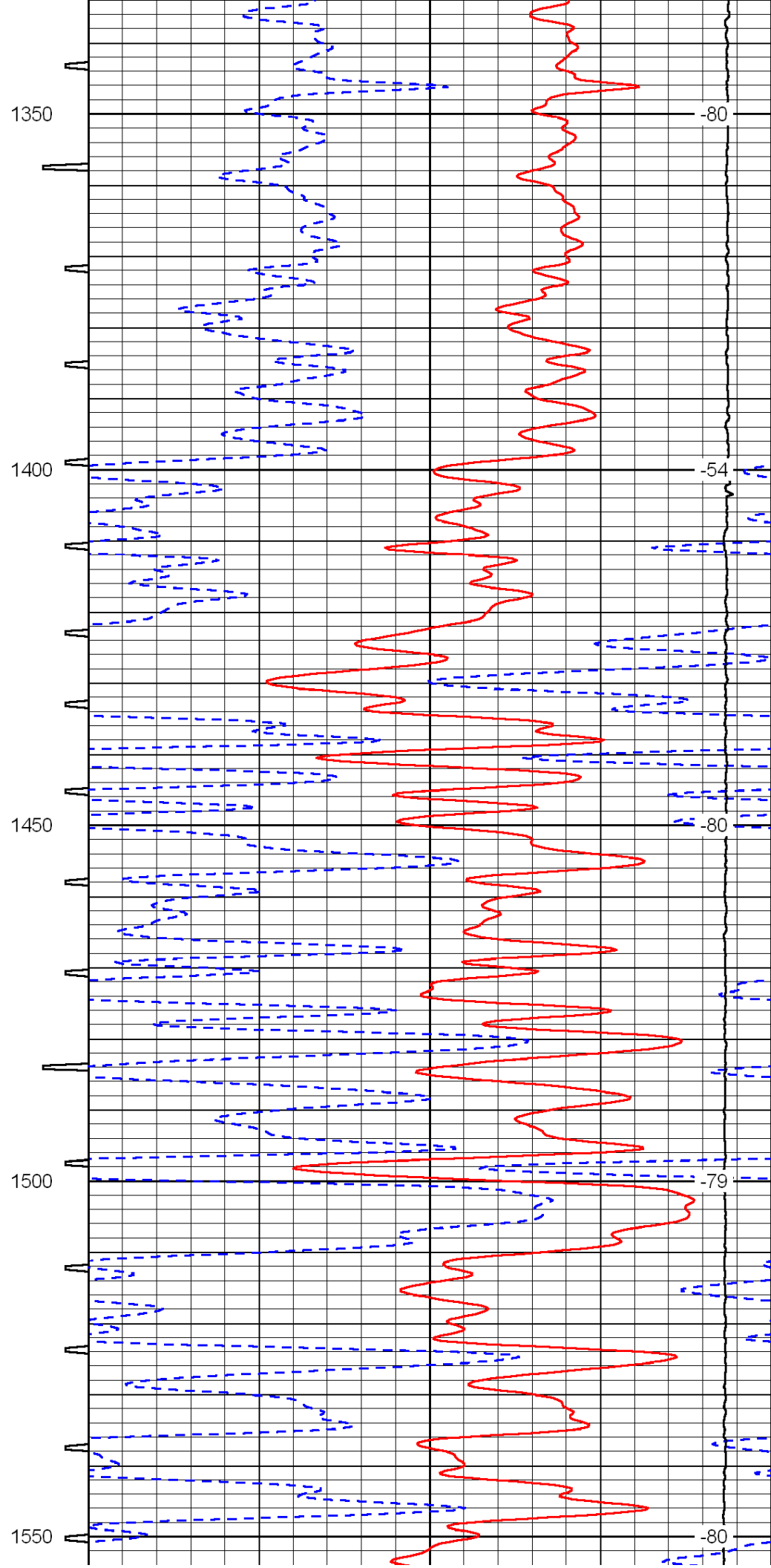
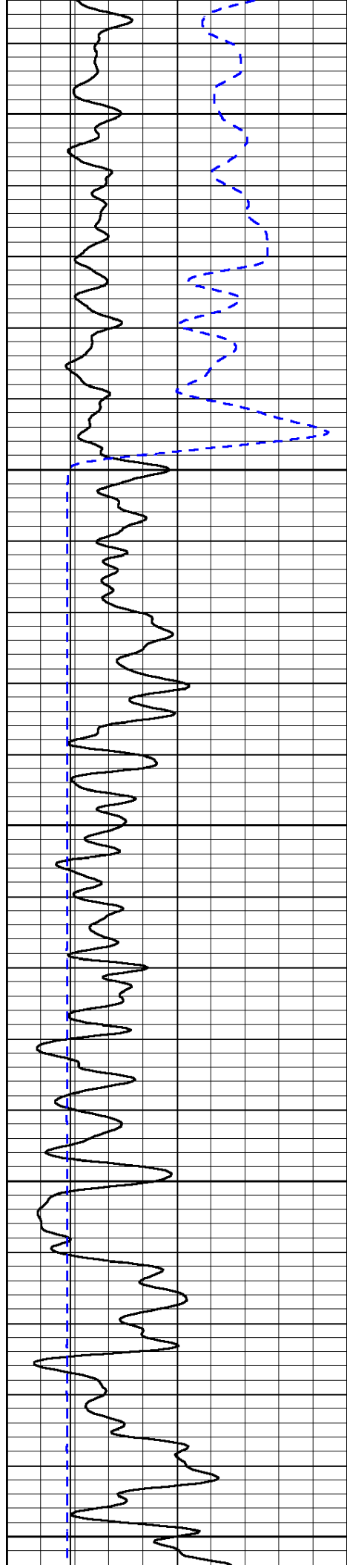
Database File: 12081.db
Dataset Pathname: pass3
Presentation Format: SONIC(~1
Dataset Creation: Sat Sep 20 22:10:59 2014 by Log 0
Charted by: Depth in Feet scaled 1:240

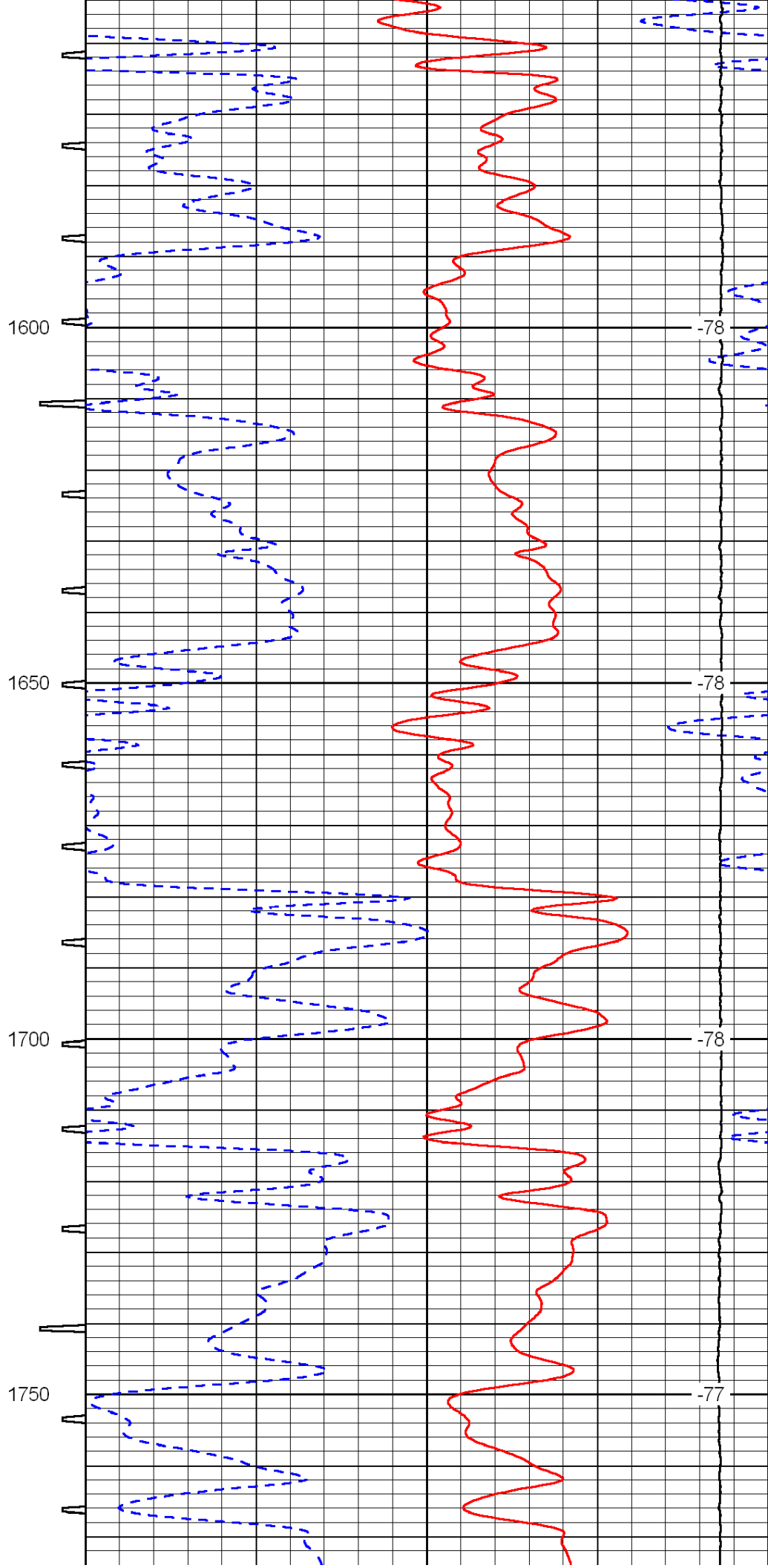
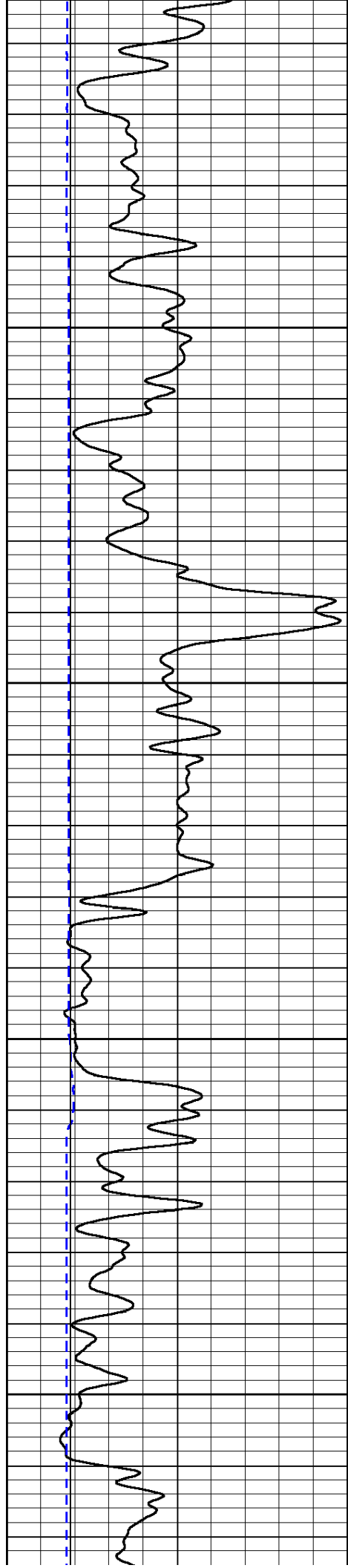
0	Gamma Ray (GAPI)	150	Sonic Int	140	Delta Time (usec/ft) (usec/ft)		40	
150	Gamma Ray (GAPI)	300	5 (msec)	0	30	Sonic Porosity (pu)		-10
6	dCAL (in)	16			15000	LTEN (lb) (lb)		0
6	scal (in)	16					LSPD (ft/min)	

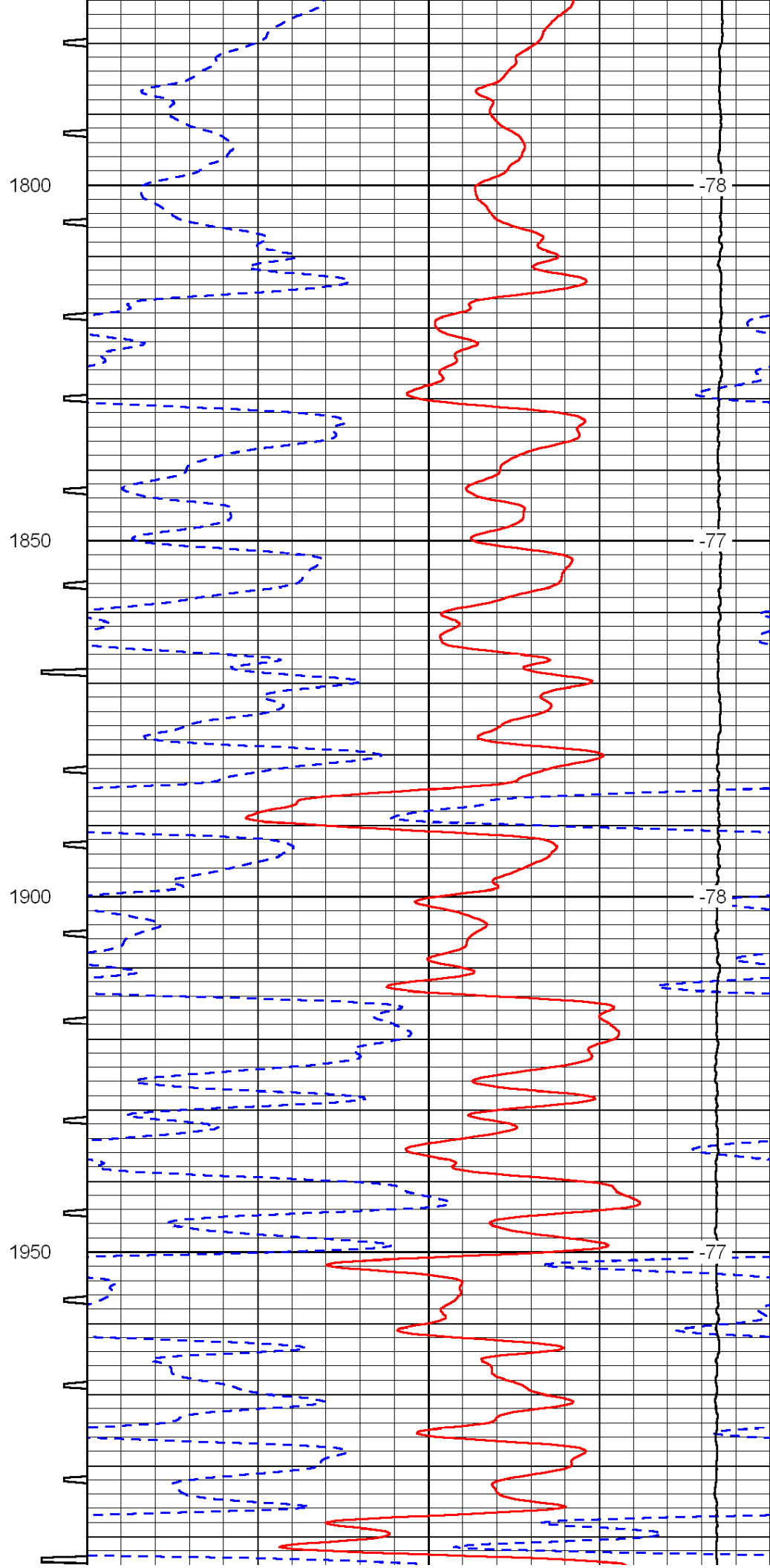
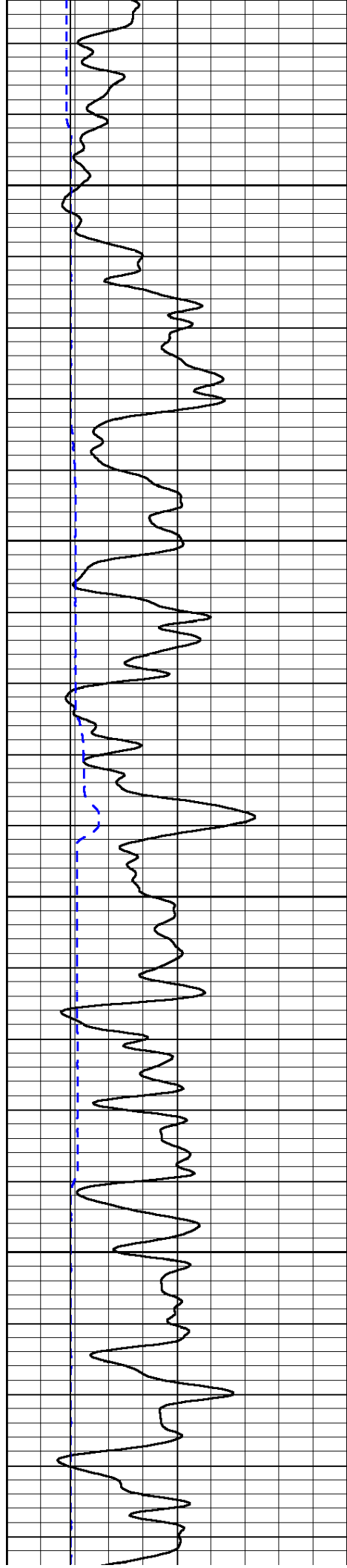


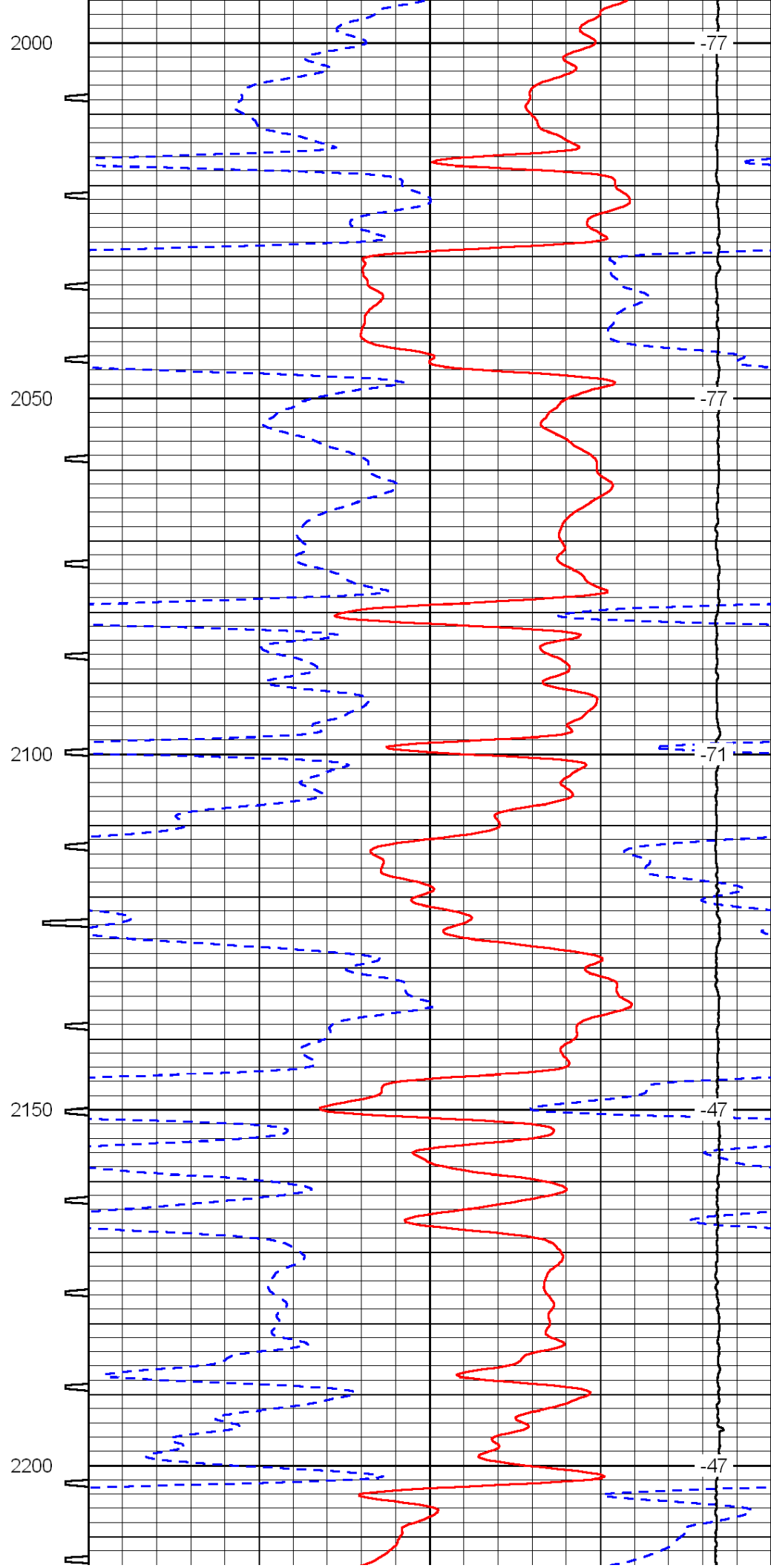
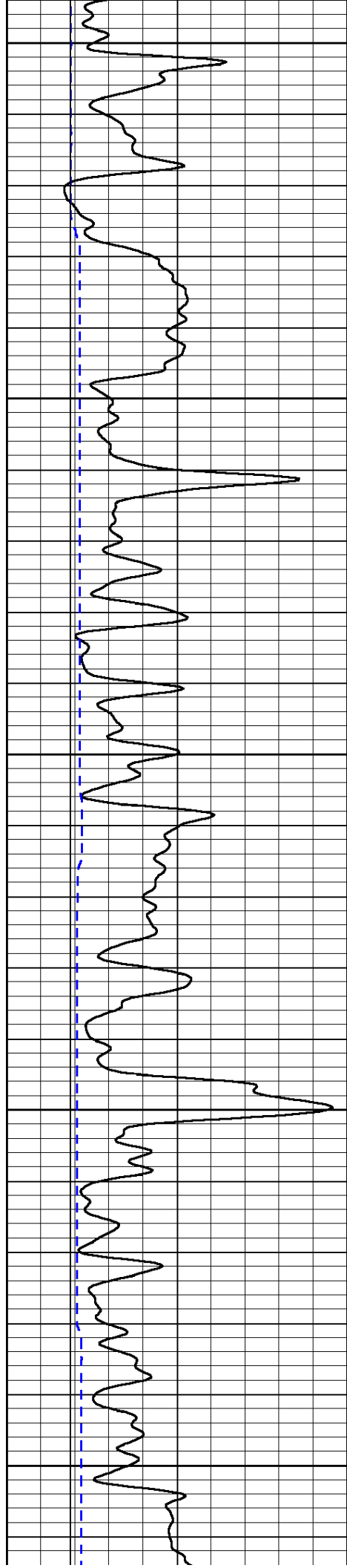


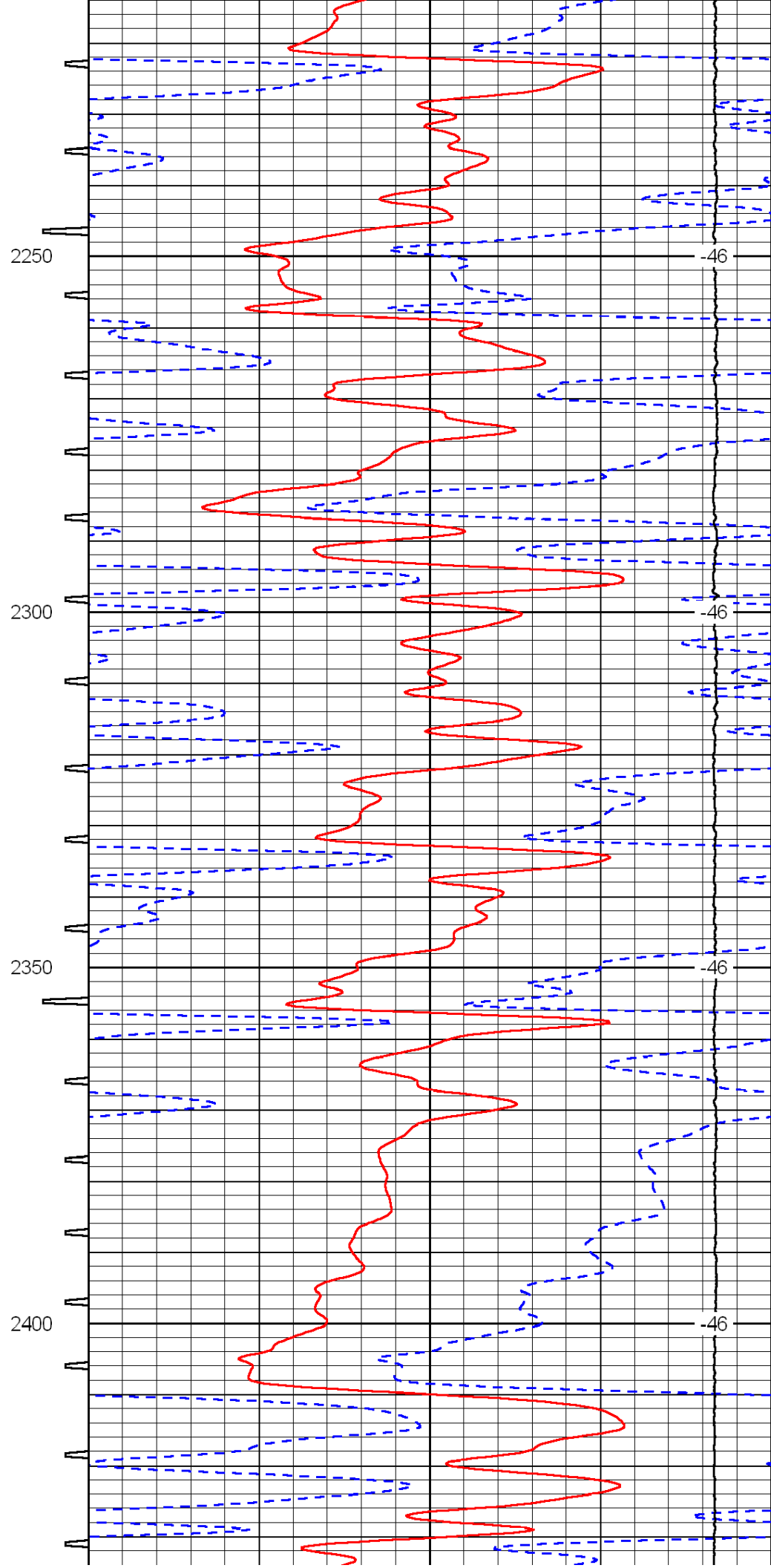
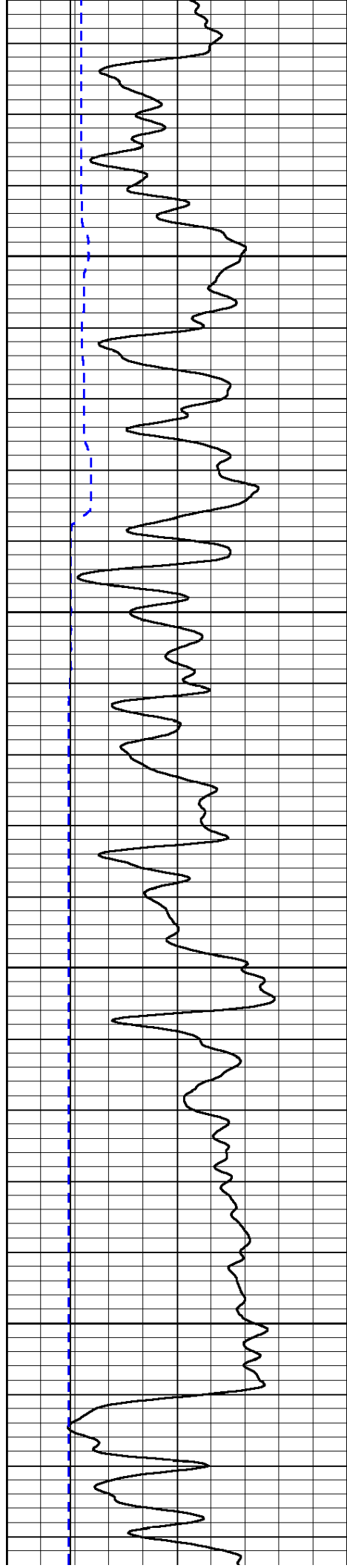


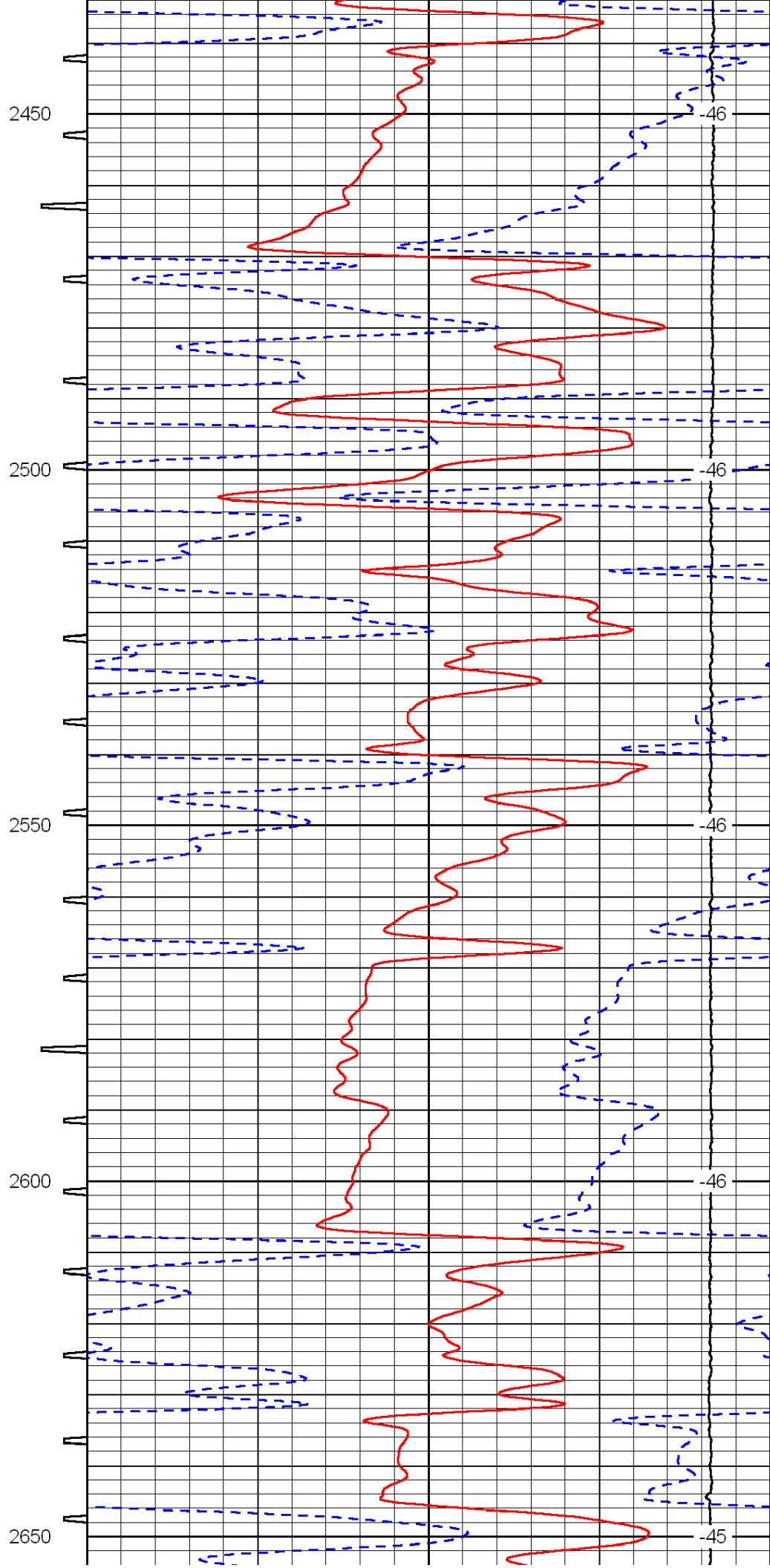
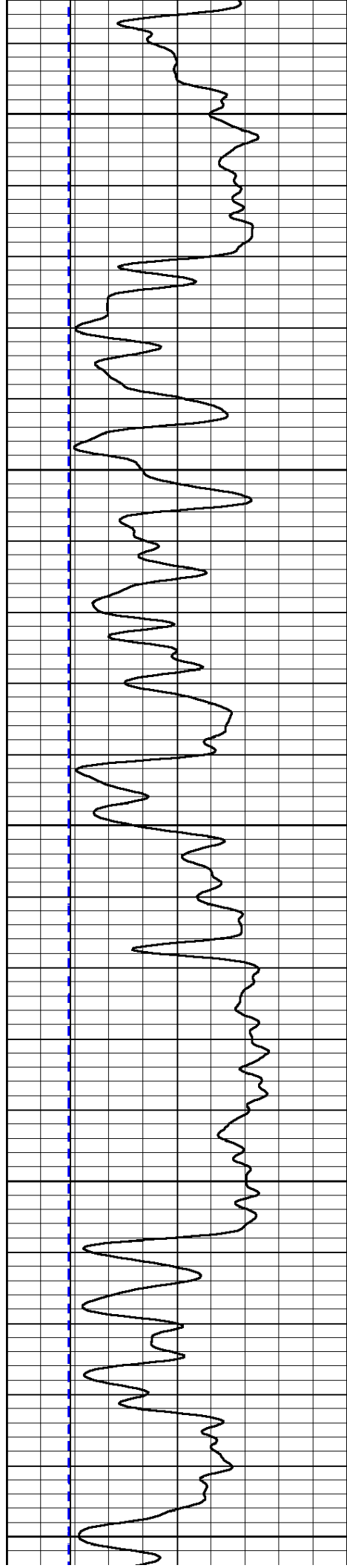


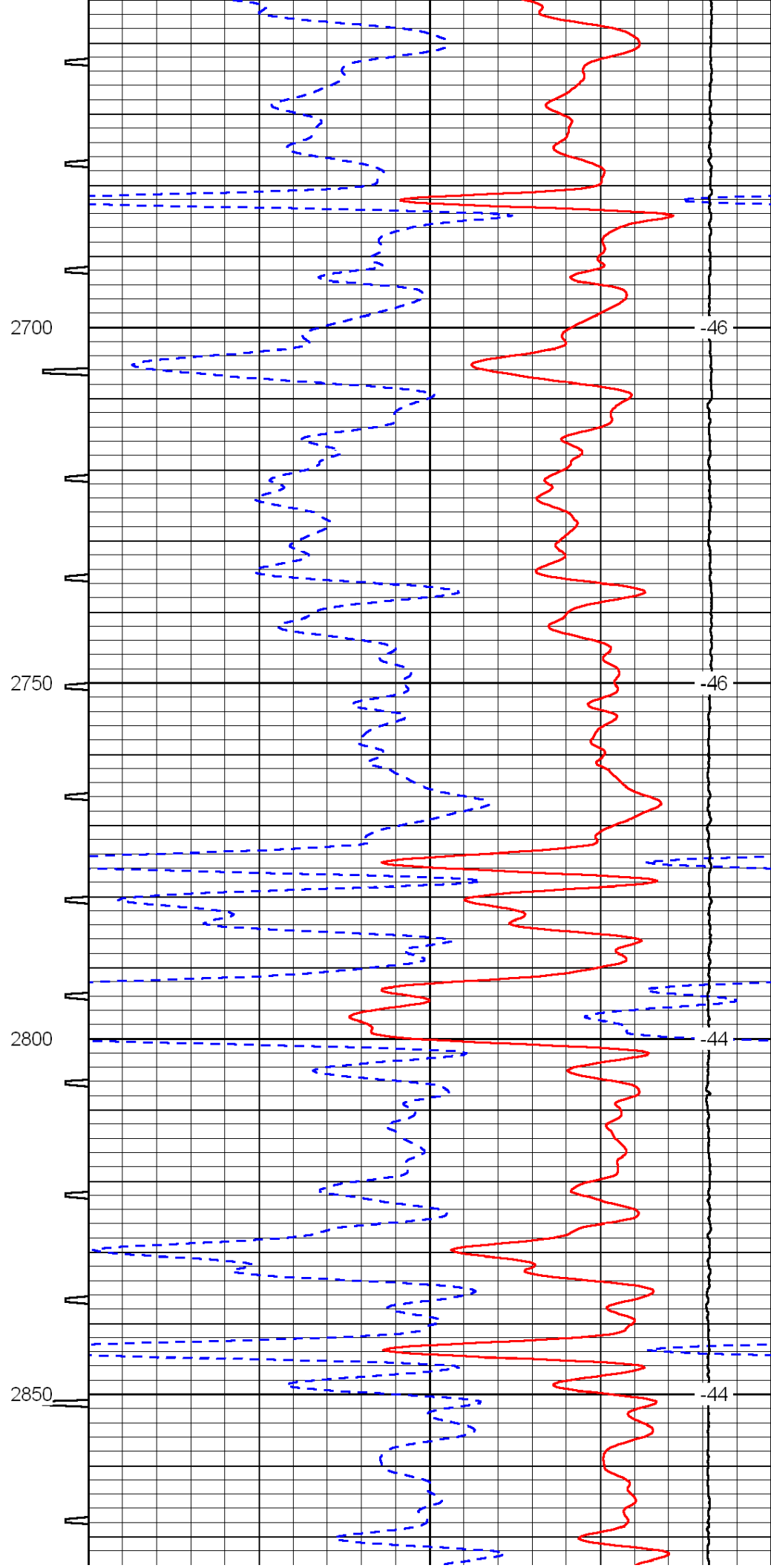
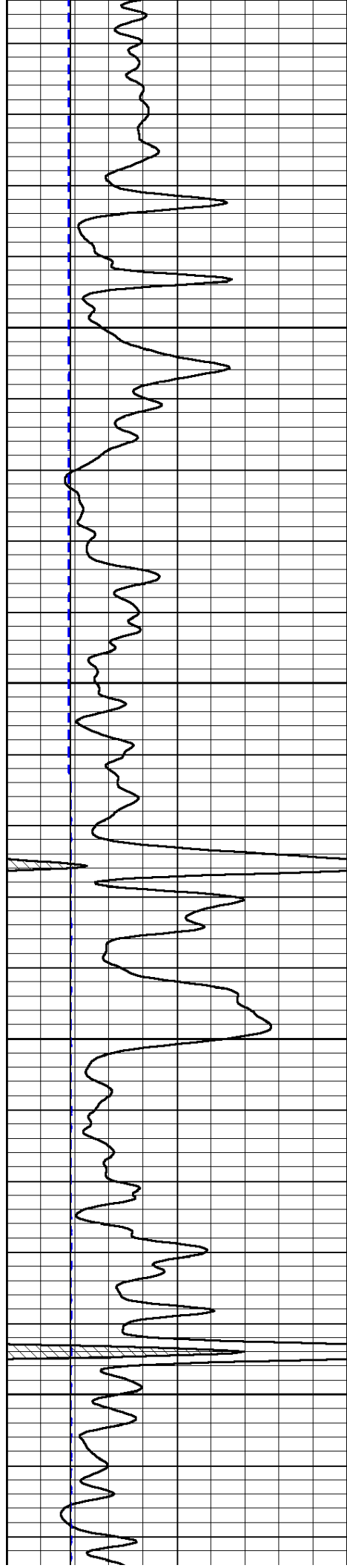


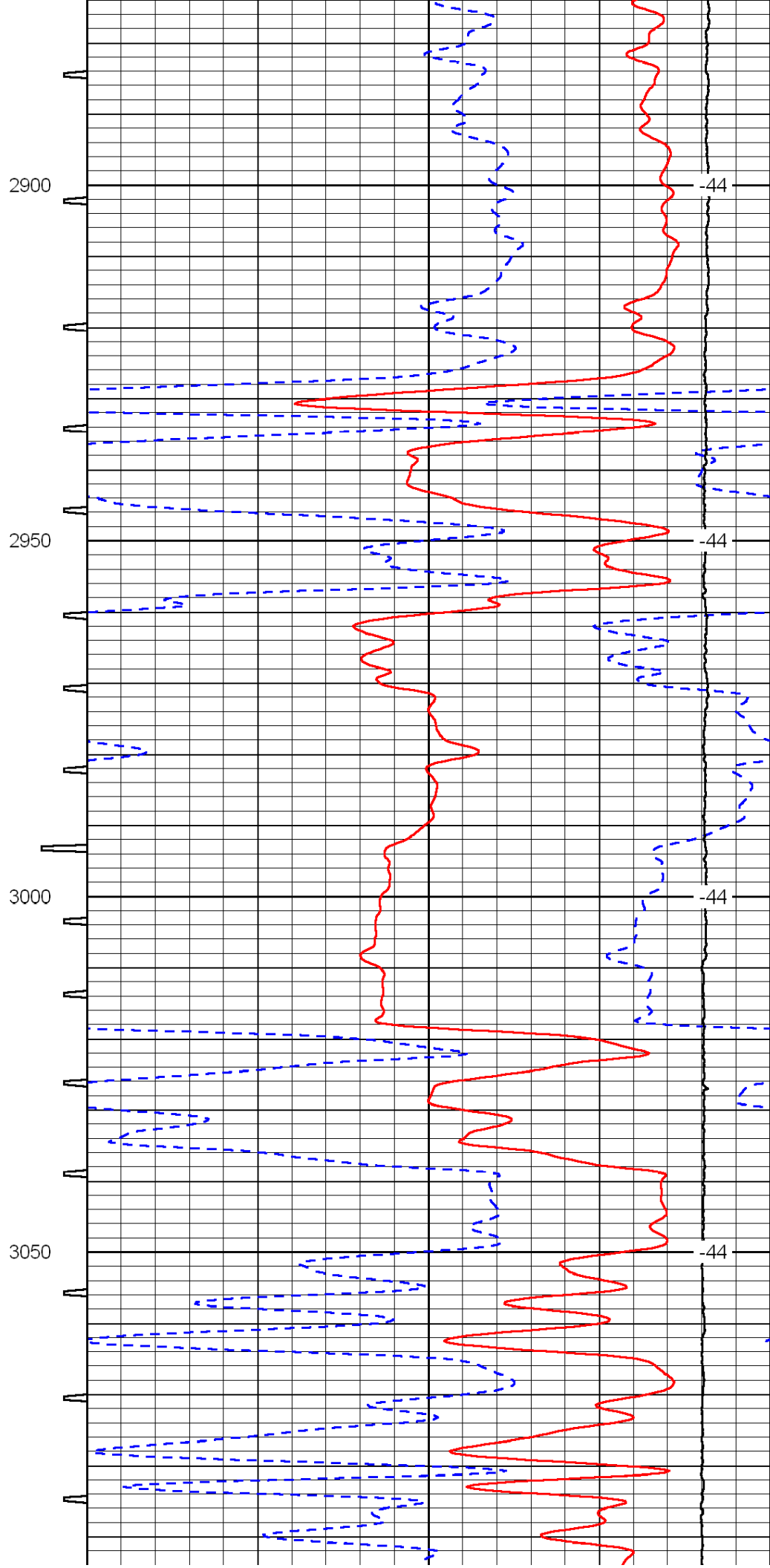
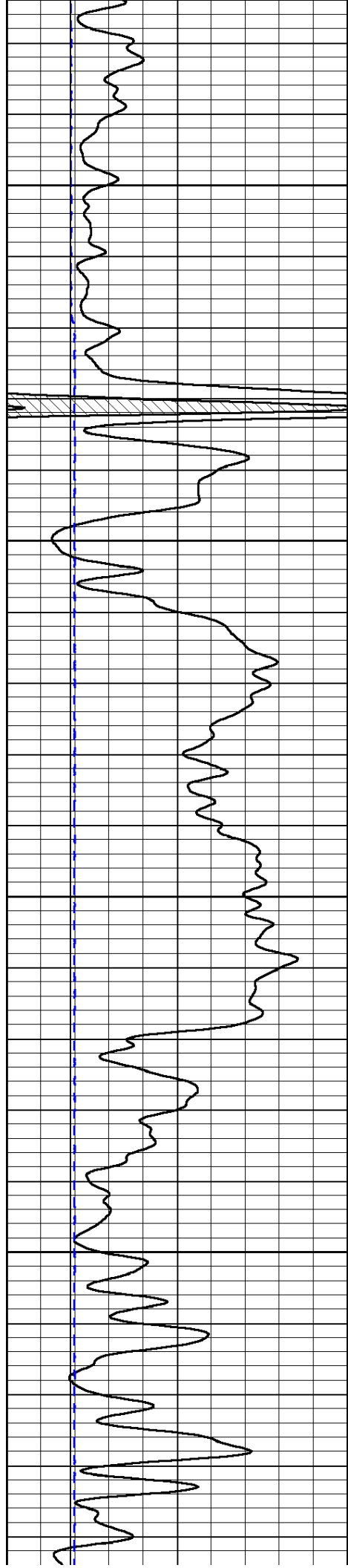


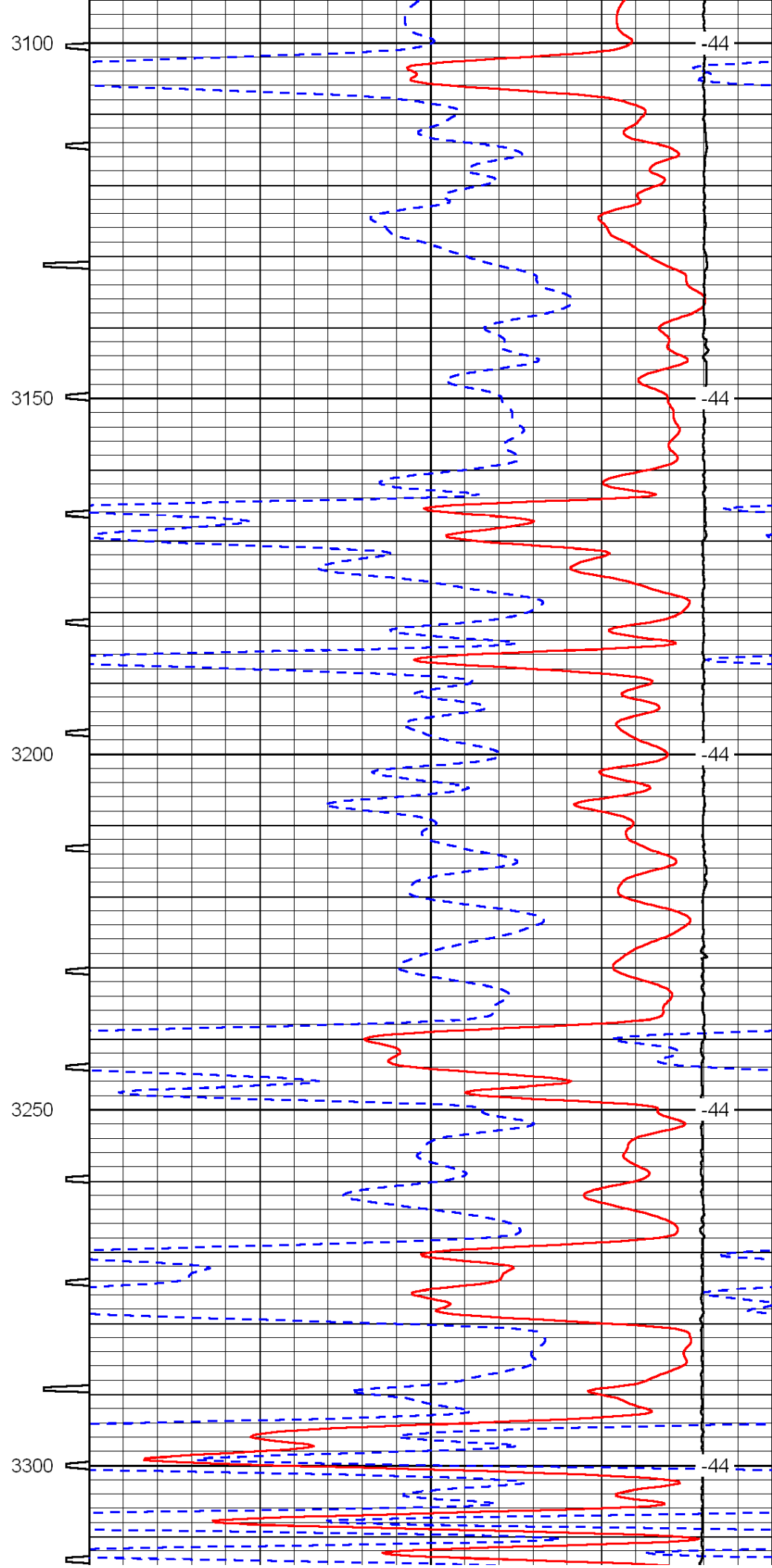
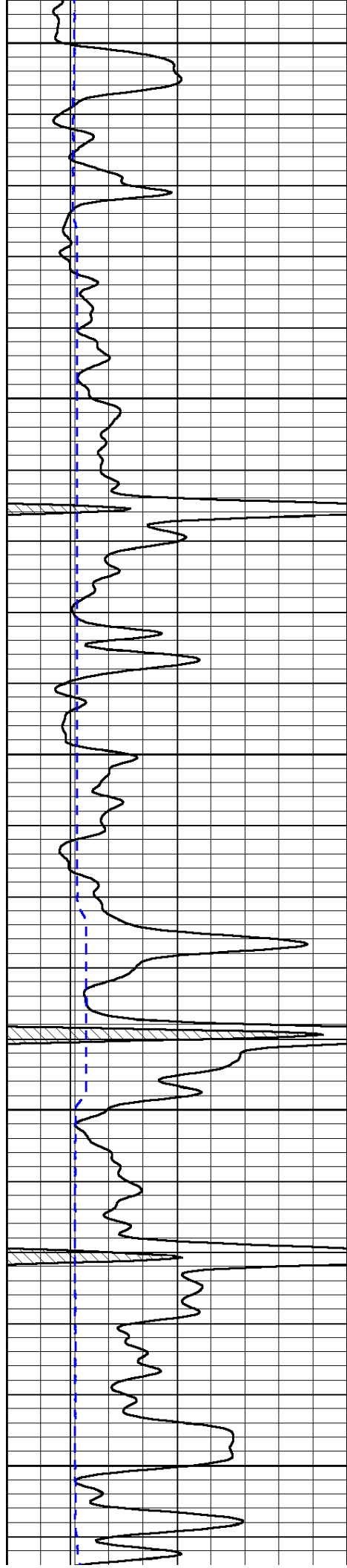


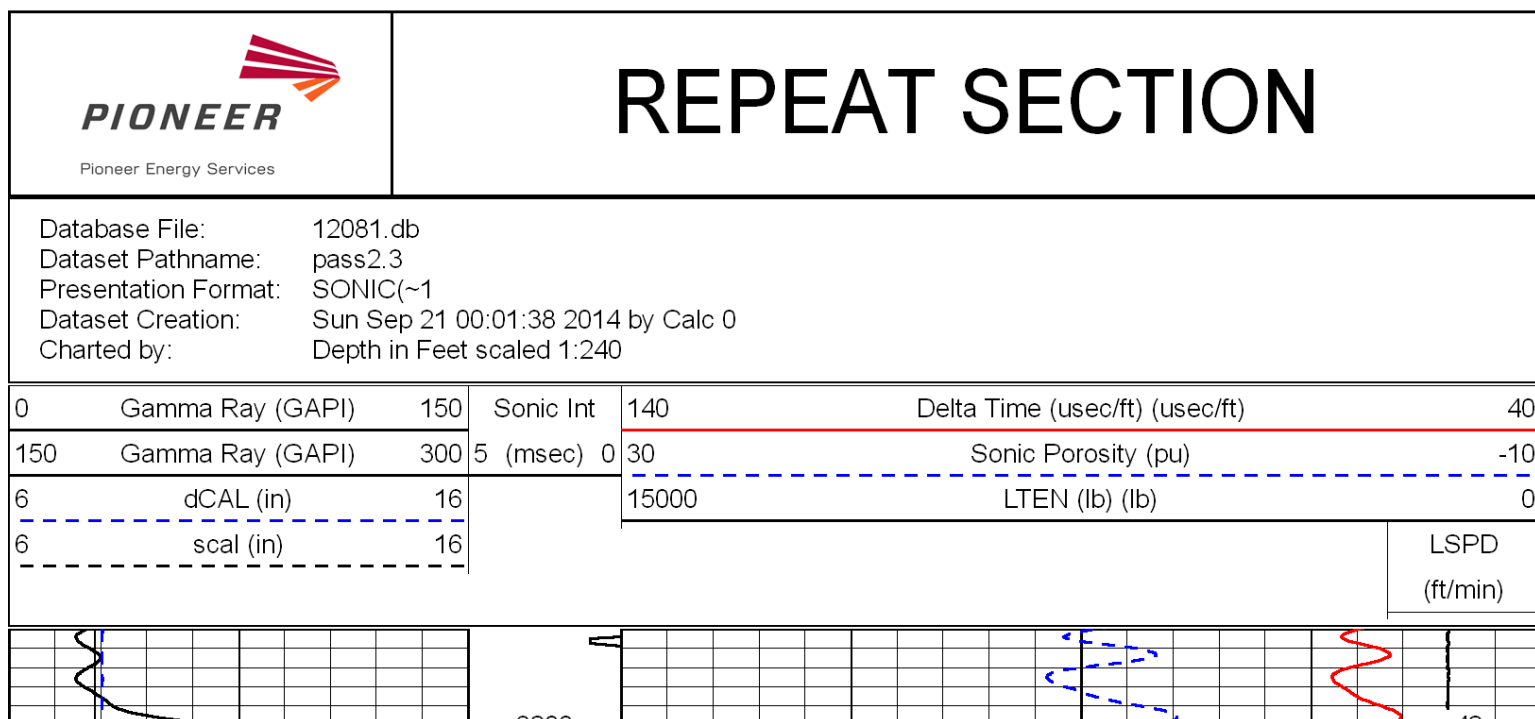
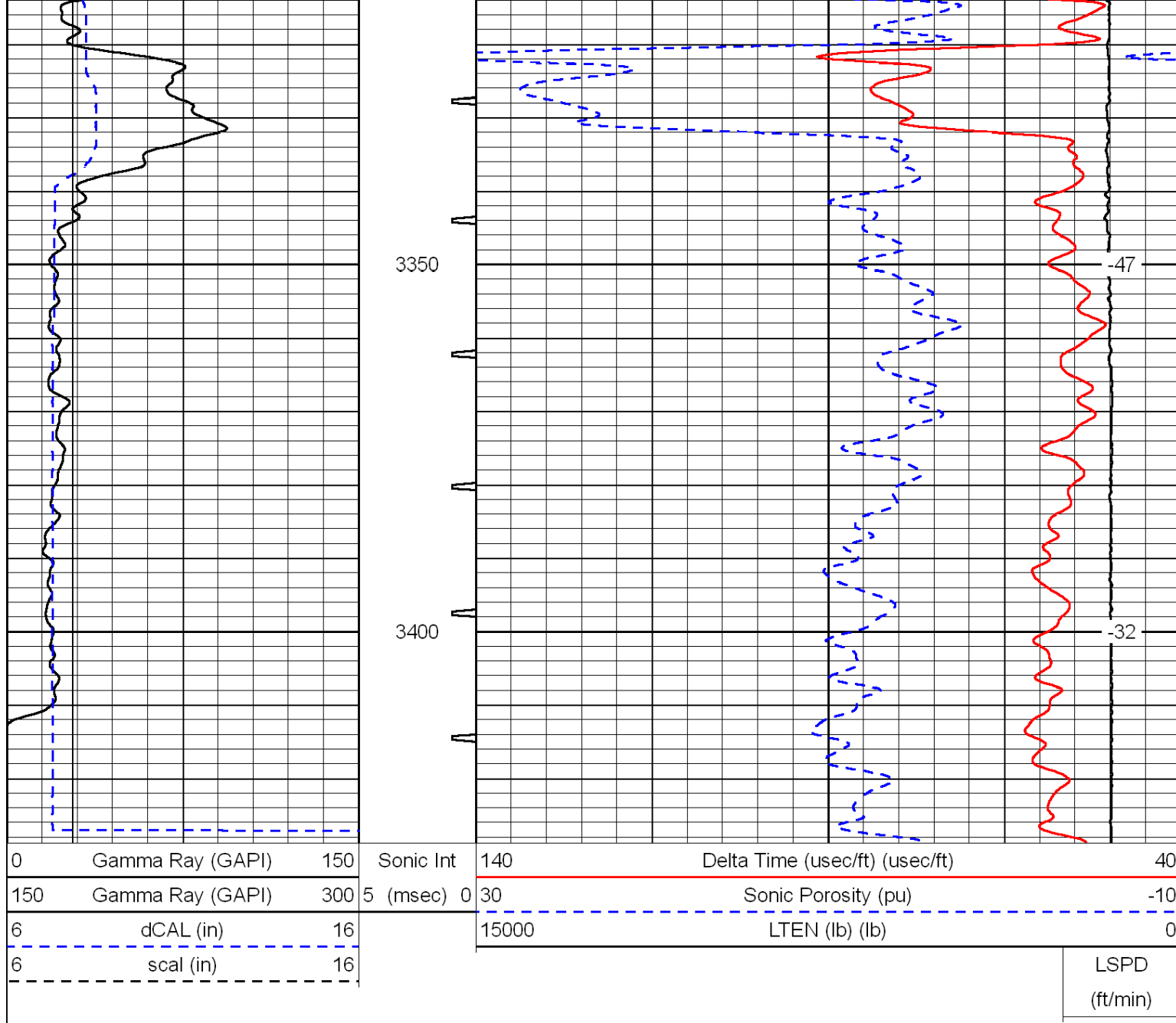


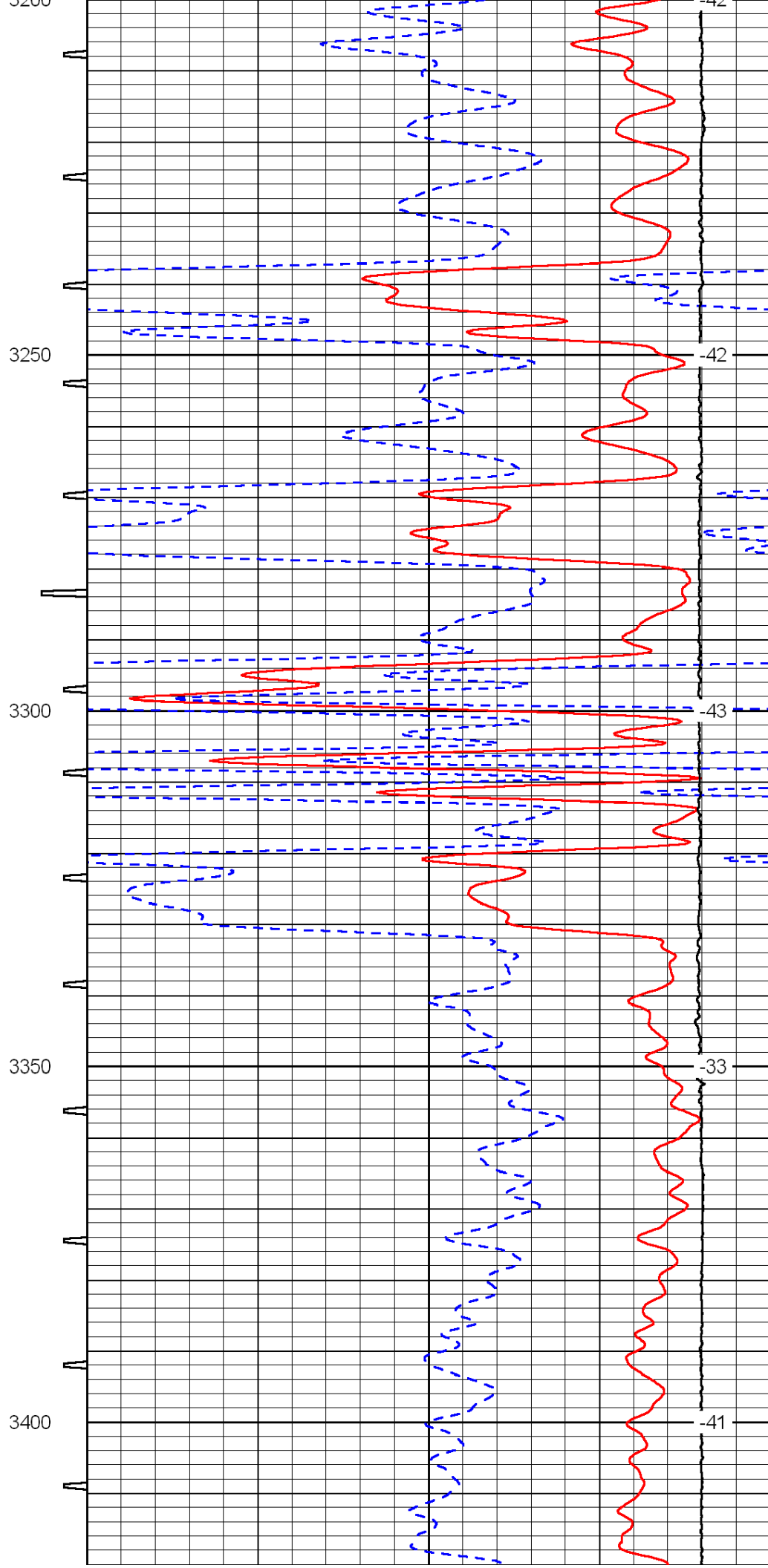
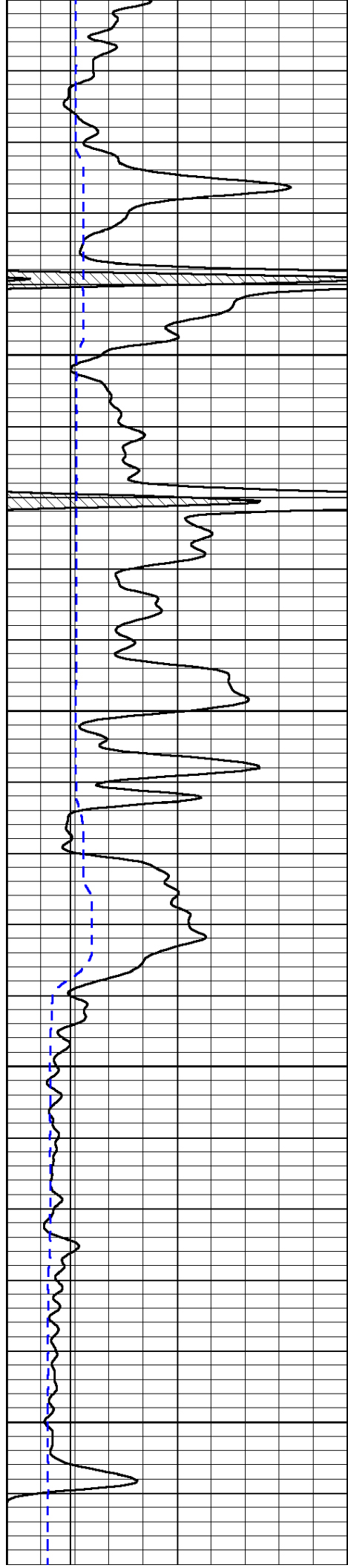


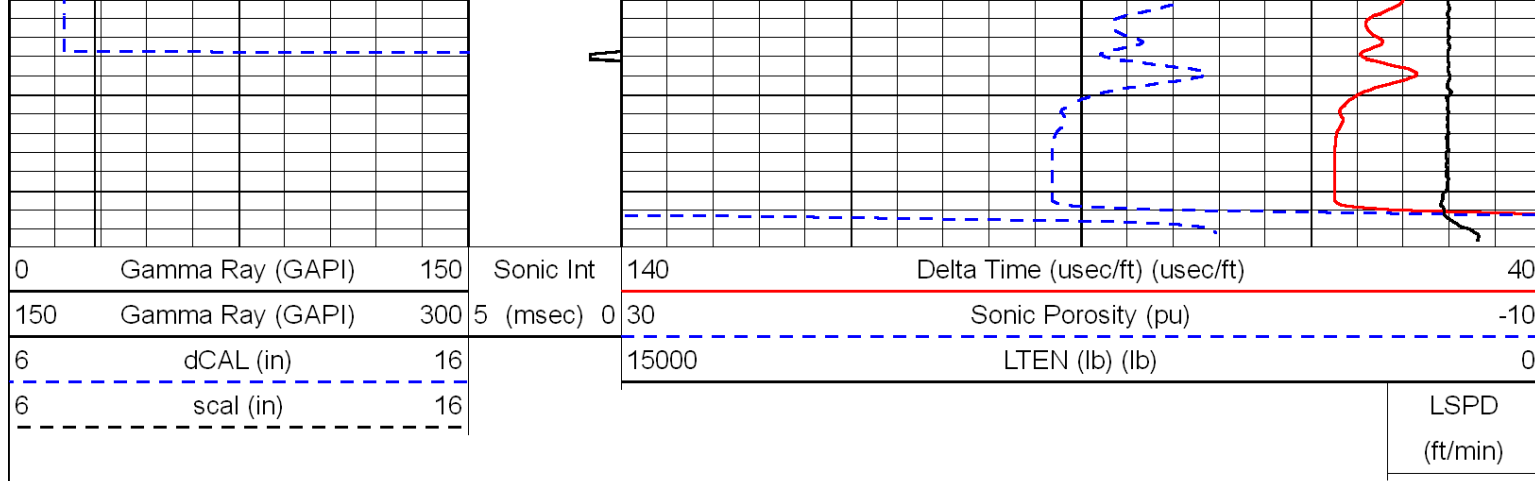












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	Well	DRISCOLL HEIRS # 31-6	
	Field	DRISCOLL	
	County	RUSSELL	
	State	KS	Country