



BOREHOLE COMPENSATED SONIC LOG

MIDWEST WIRELINE

Company American Warrior, Inc.
Well Ward Unit #1-10
Field
County Logan
State Kansas

Company American Warrior, Inc.

Well Ward Unit #1-10

Field

County Logan

State Kansas

Location: API #: 15-109-21649-00-00

Other Services

1347 FNL & 2554 FWL

SEC 10 TWP 12S RGE 36W

CNL/CDL
DIL/MEL

Permanent Datum Ground Level Elevation 3246
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

K.B. 3257
D.F.
G.L. 3246

Date 7/25/2022

Run Number Two

Type Log BHCS

Depth Driller 4828

Depth Logger 4830

Bottom Logged Interval 4818

Top Logged Interval 350

Type Fluid In Hole Chemical

Salinity, PPM CL 4400

Density 9.4

Level Full

Max. Rec. Temp. F 124

Operating Rig Time 5 Hours

Equipment -- Location P-108 HAYS

Recorded By D. Schmidt

Witnessed By Austin Garner

Borehole Record

Casing Record

Run No. Bit From To Size Wgt. From To

One 12.25 0 392 8.625 23 0 392

Two 7.875 392 TD

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline LLC will not 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.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Winona,
4 West, North and East into

Log Measured From: Kelly Bushing

13 Ft. Above Permanent Datum

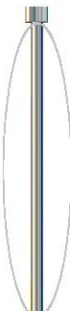
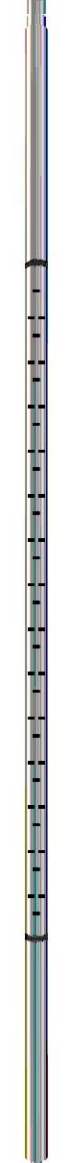
THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew

Engineer: D. Schmidt
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Austin Garner
Secondary Witness:
Secondary Witness:
Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CENT-PENGO	4.25	3.00	70.00
WVF4 WVF1	12.50 12.50		SLT-PENGO (602)	15.92	3.50	300.00
WVF3 WVF2	10.50 10.50		CENT-PENGO	4.25	3.00	70.00

Dataset: american_warrior_ward unit 1-10.db: field/well/son/pass2
Total length: 24.42 ft
Total weight: 440.00 lb
O.D.: 3.50 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\american_warrior_ward unit 1-10.db
Dataset field/well/stkml/pass3.12/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	124	5.5	0	1		2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m	mmho/m	mV	degF	Off	ft
		0	0	670	60		4830

Variable Description

A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density

NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

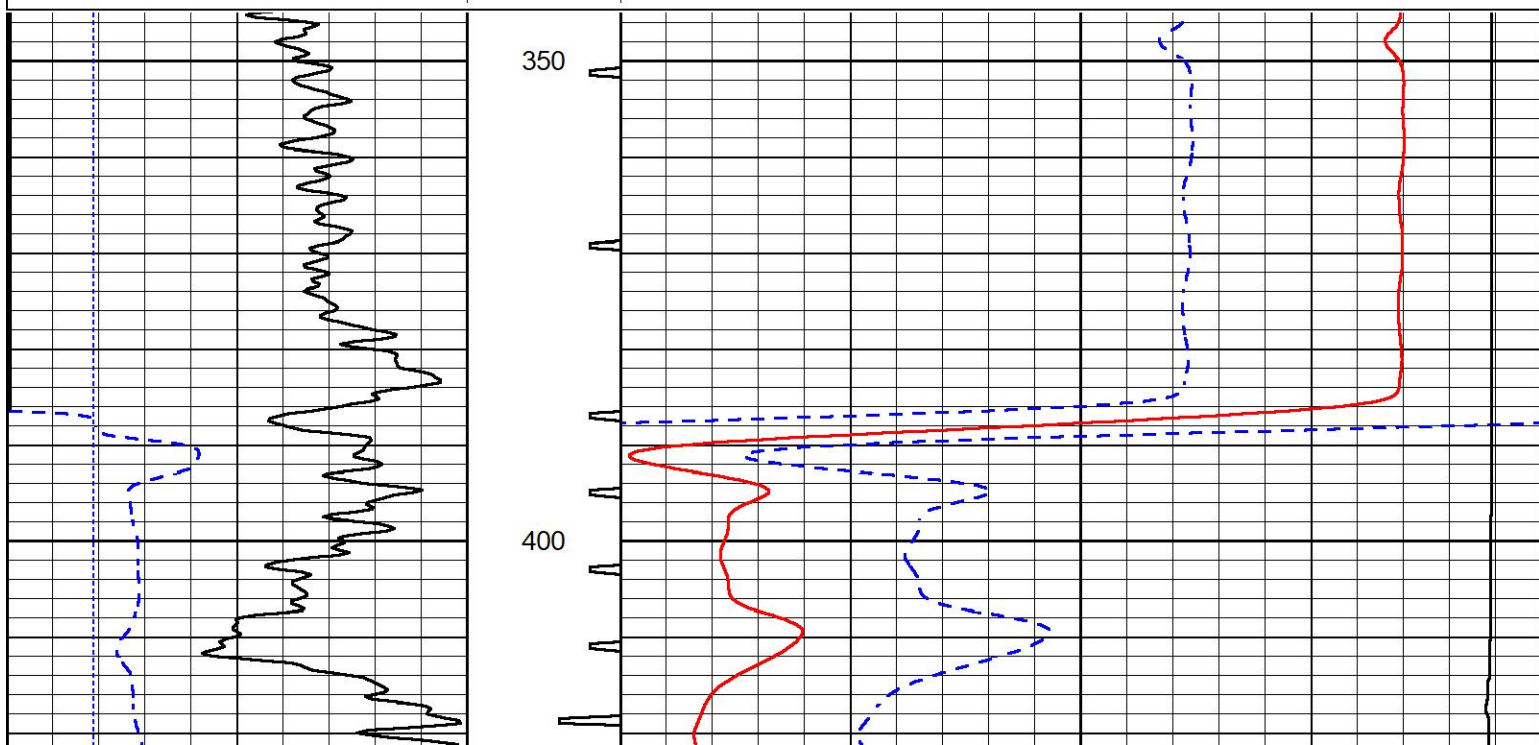


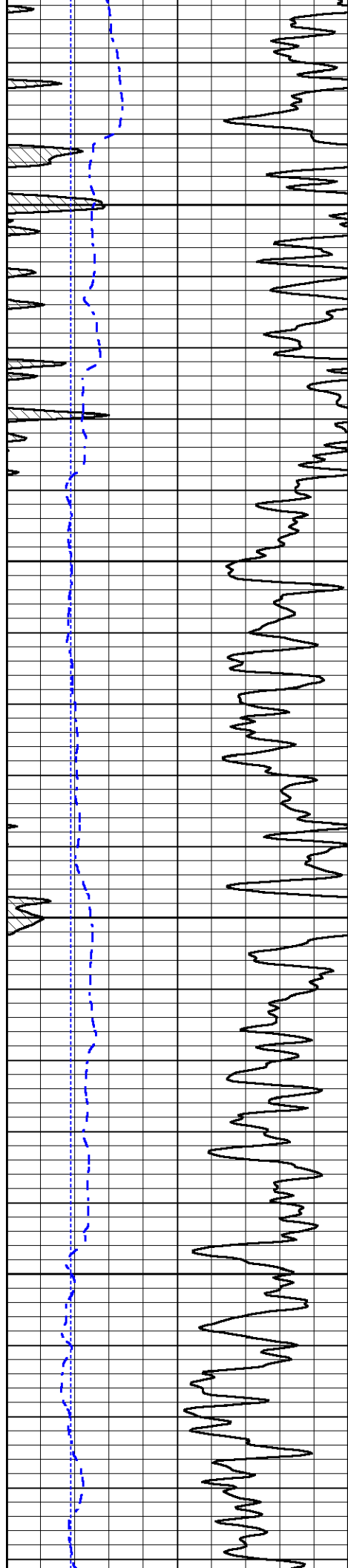
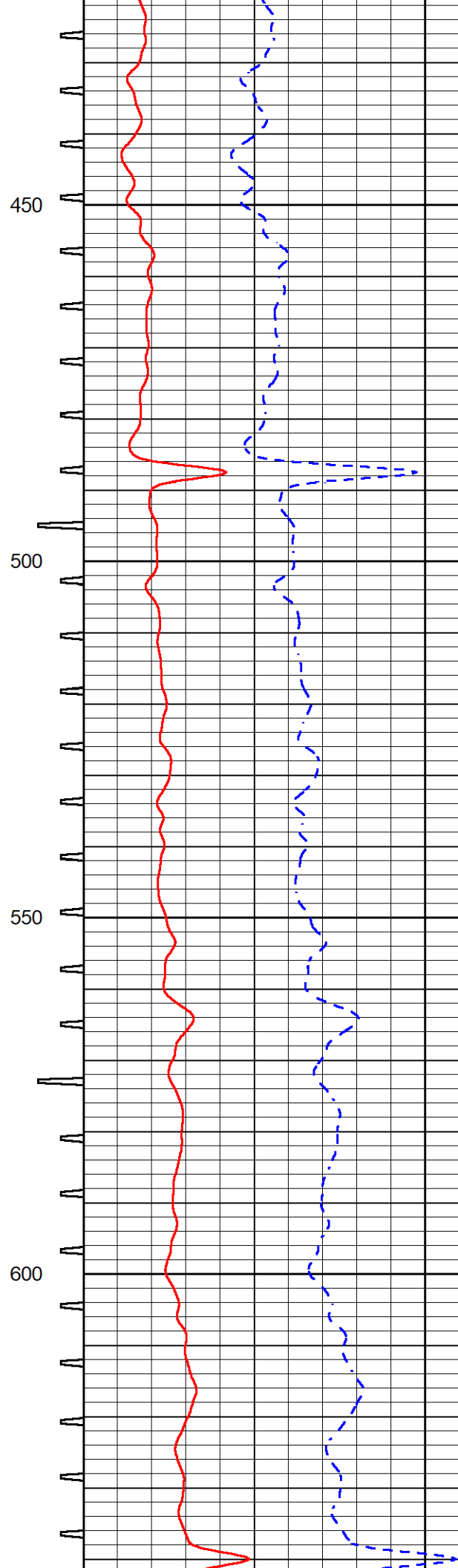
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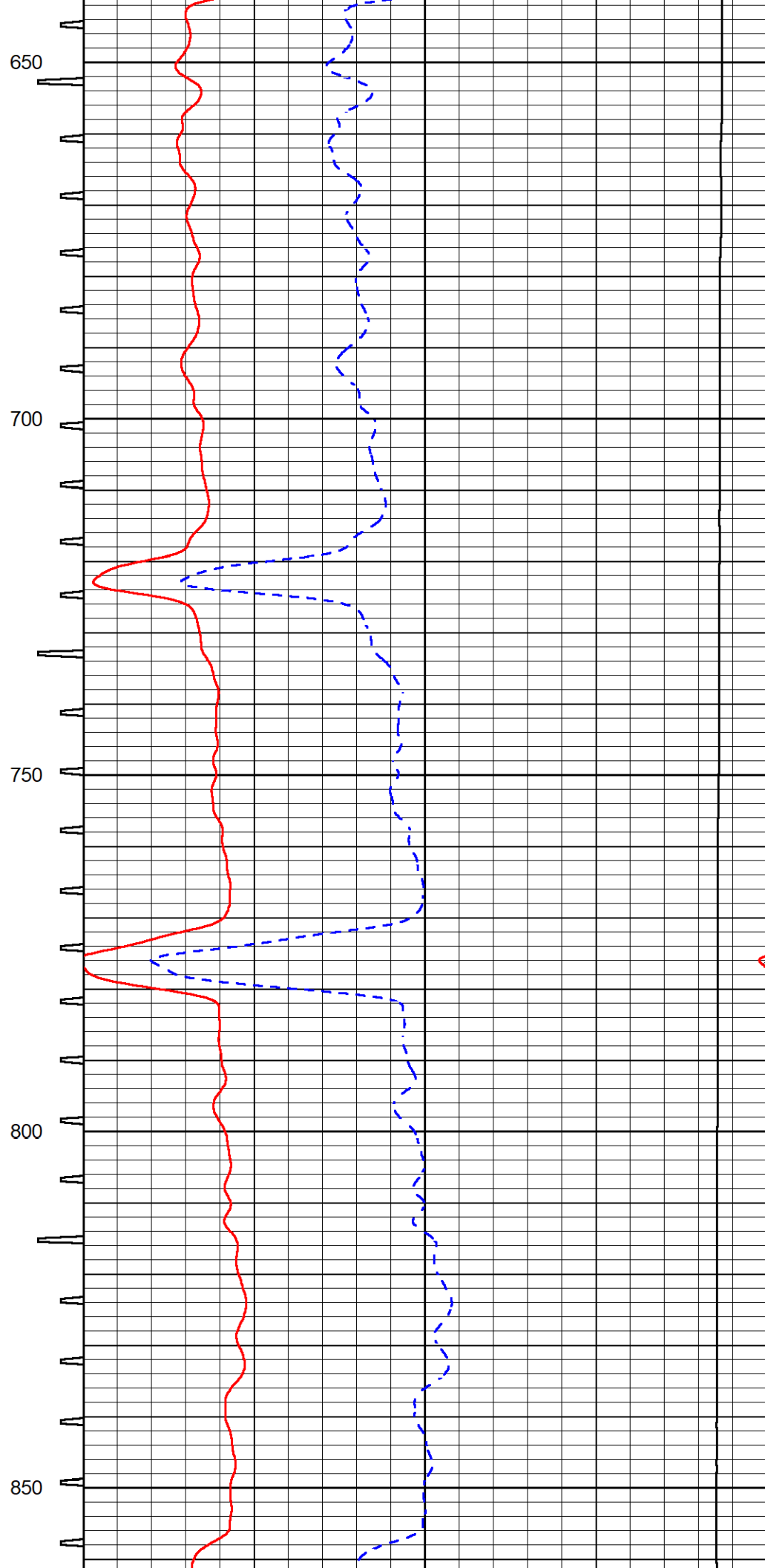
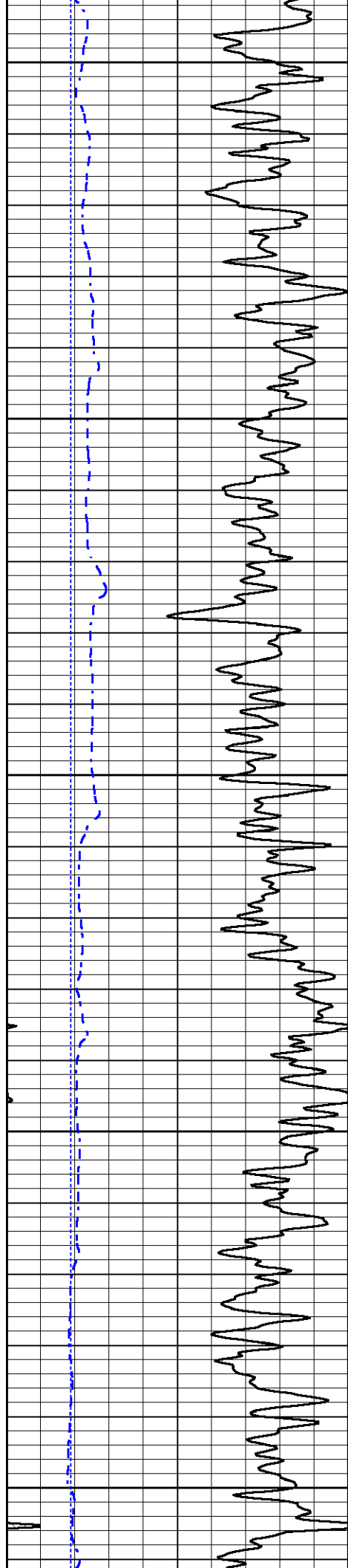
MAIN PASS

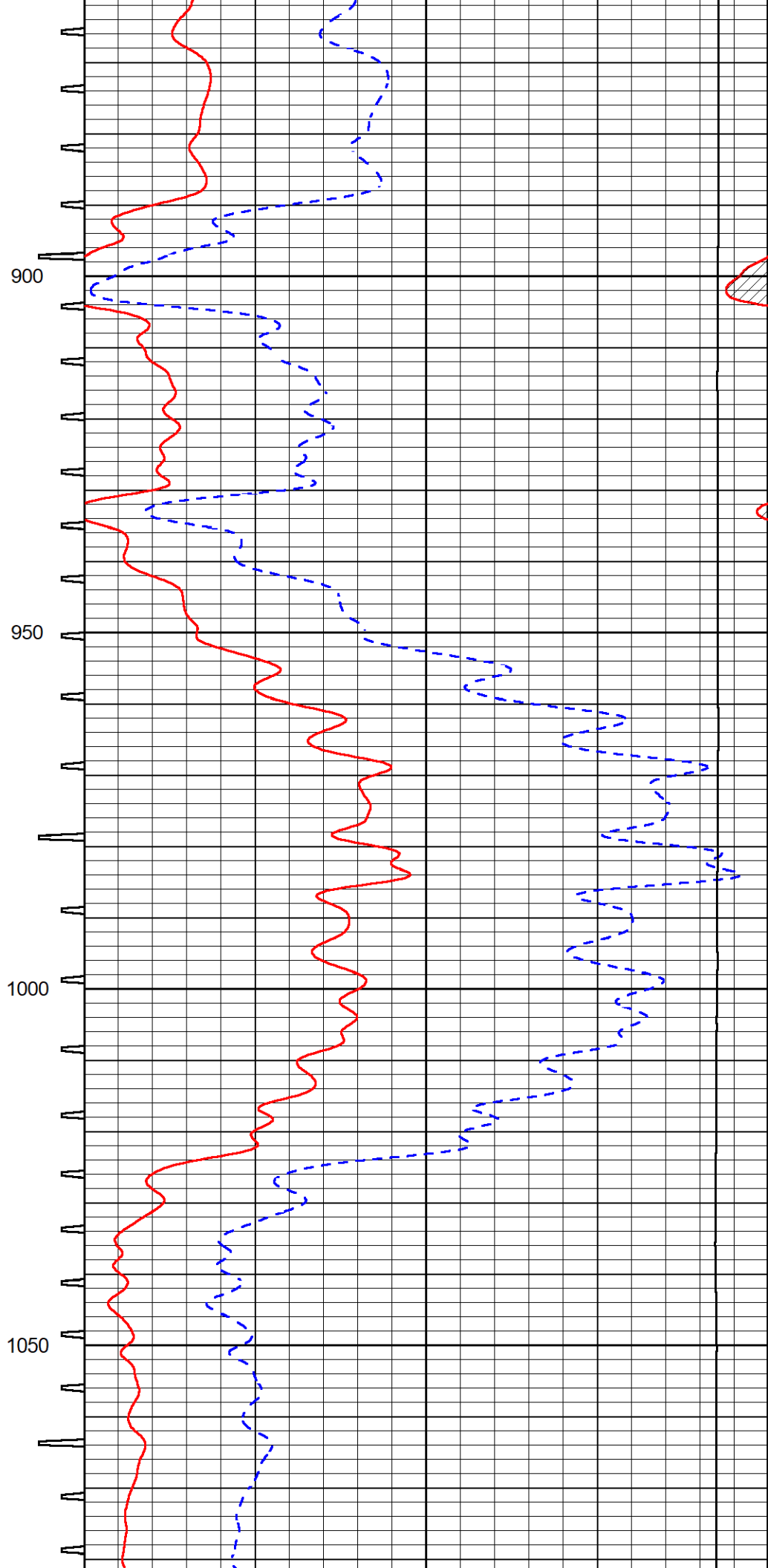
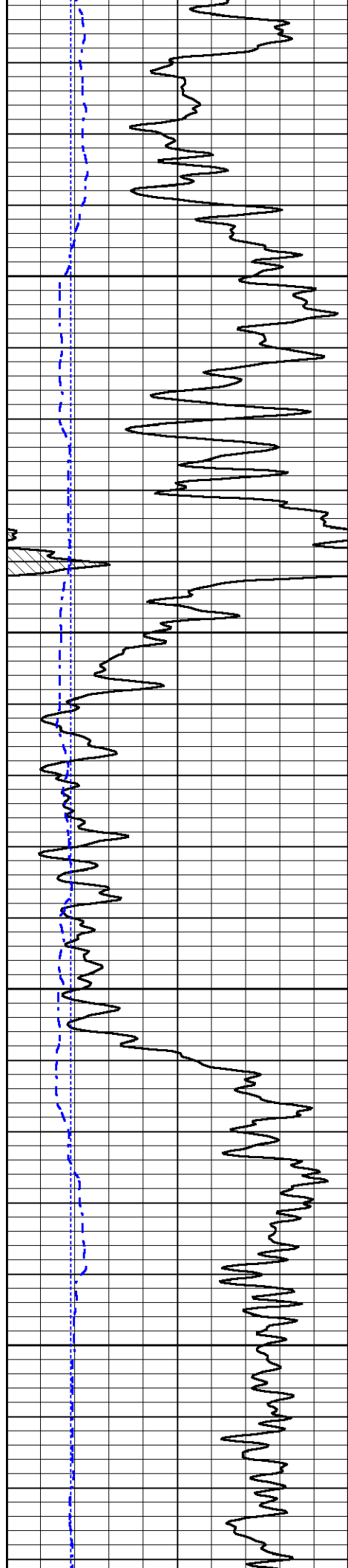
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Dataset Pathname stkml/pass3.1
Presentation Format _sonic
Dataset Creation Mon Jul 25 04:27:21 2022
Charted by Depth in Feet scaled 1:240

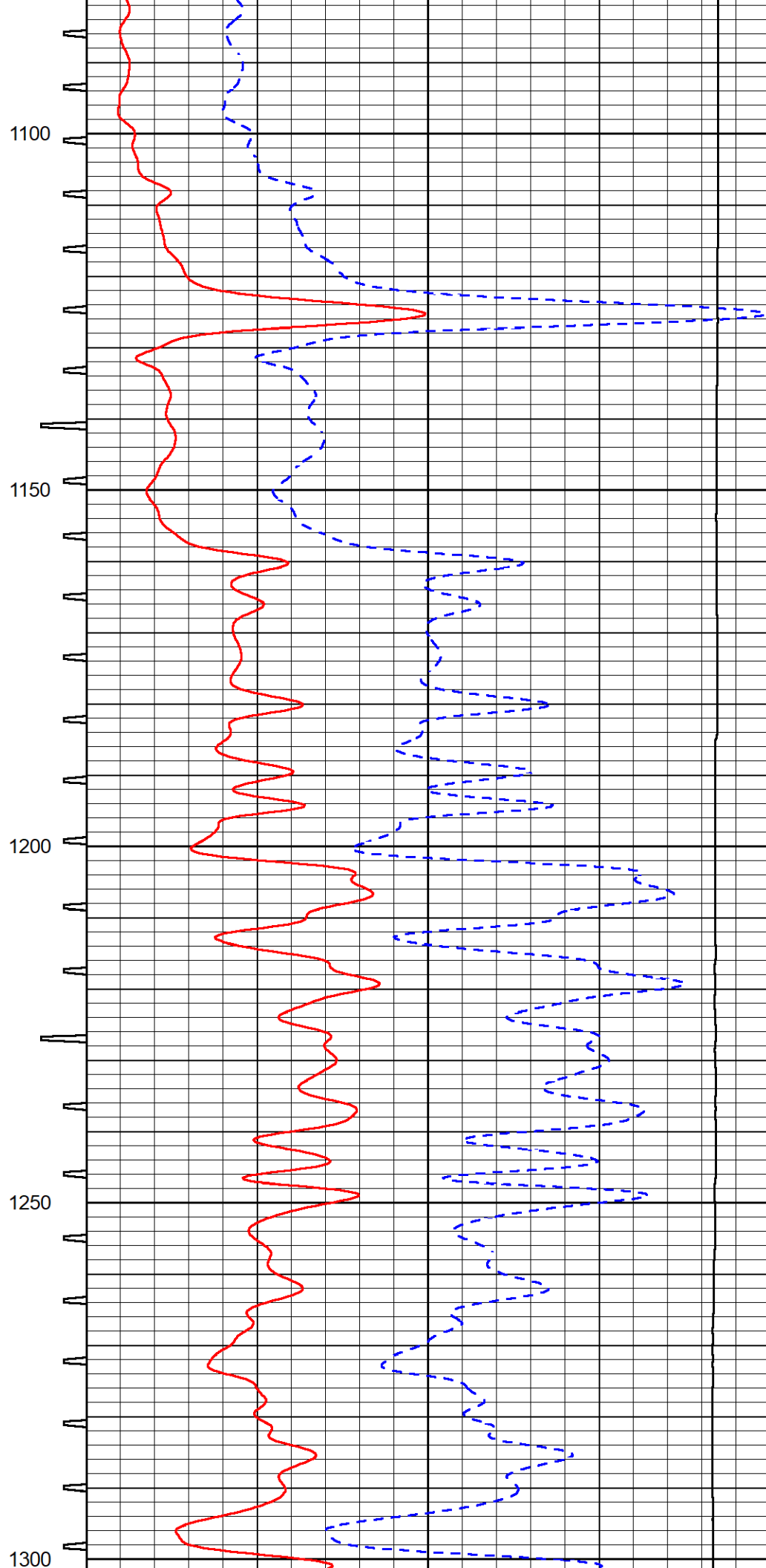
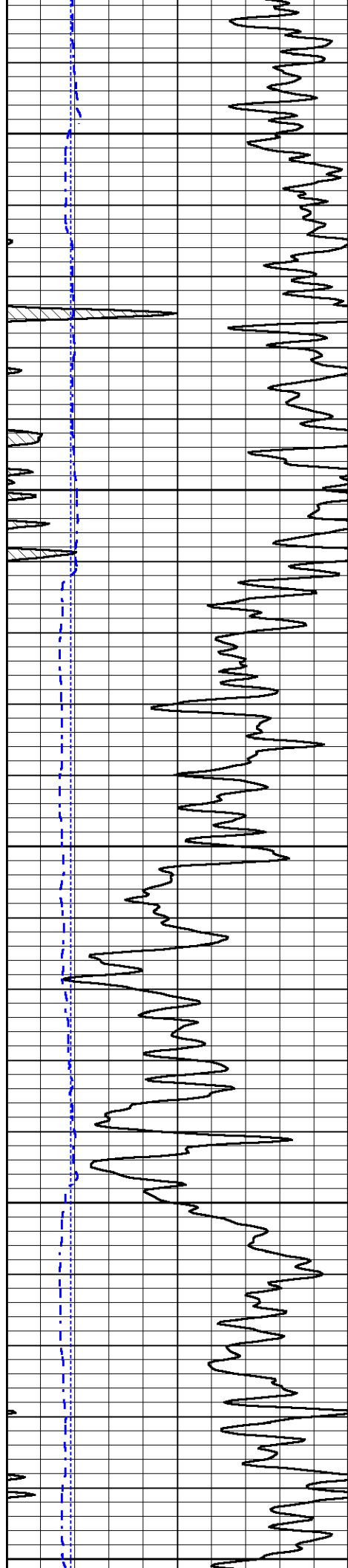
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150	GR (GAPI)	300	5 (msec) 0	30	Sonic Porosity (pu) (pu)	-10
6	Caliper (in)	16		15000	Line Tension (lb)	0

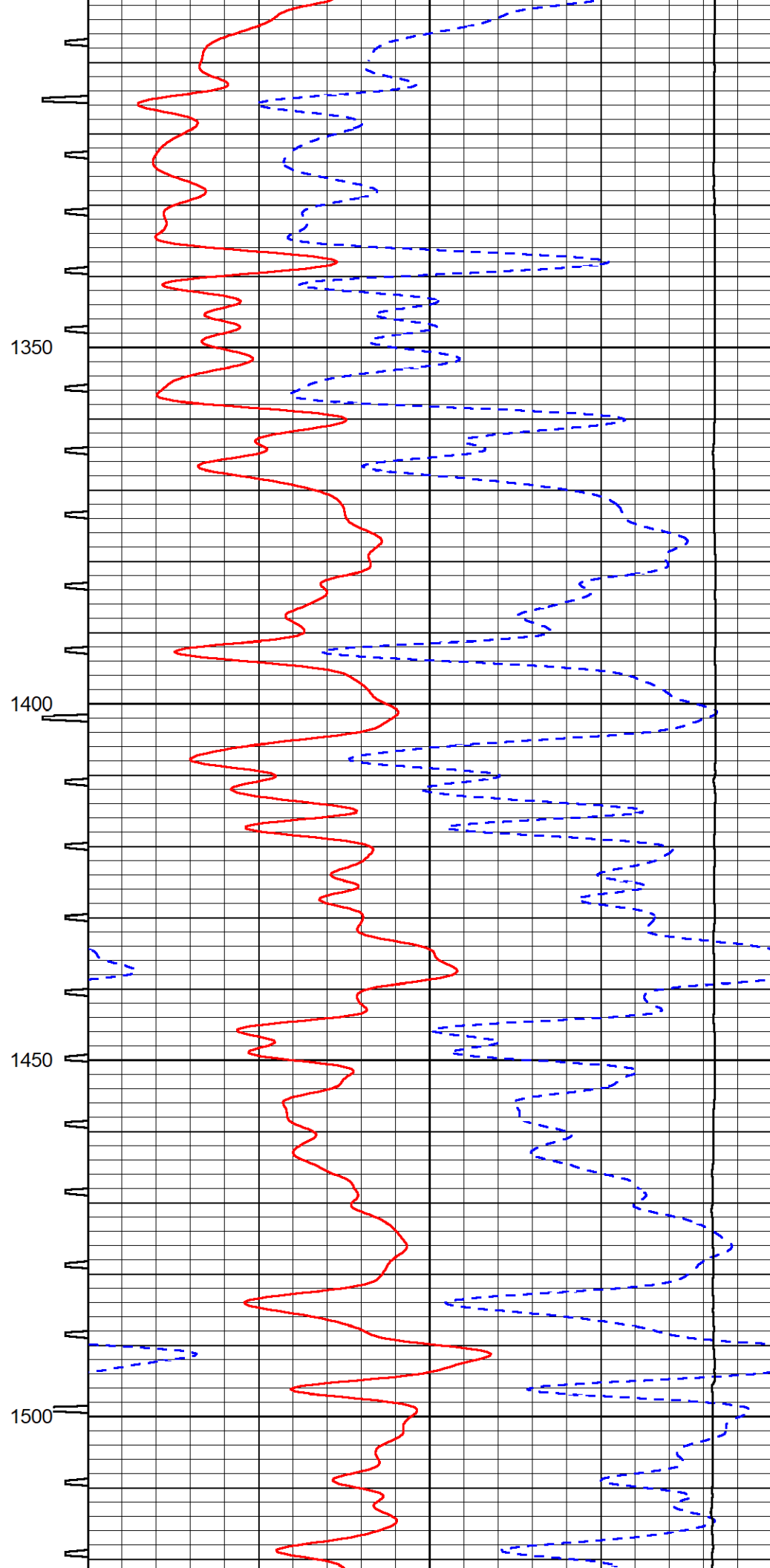
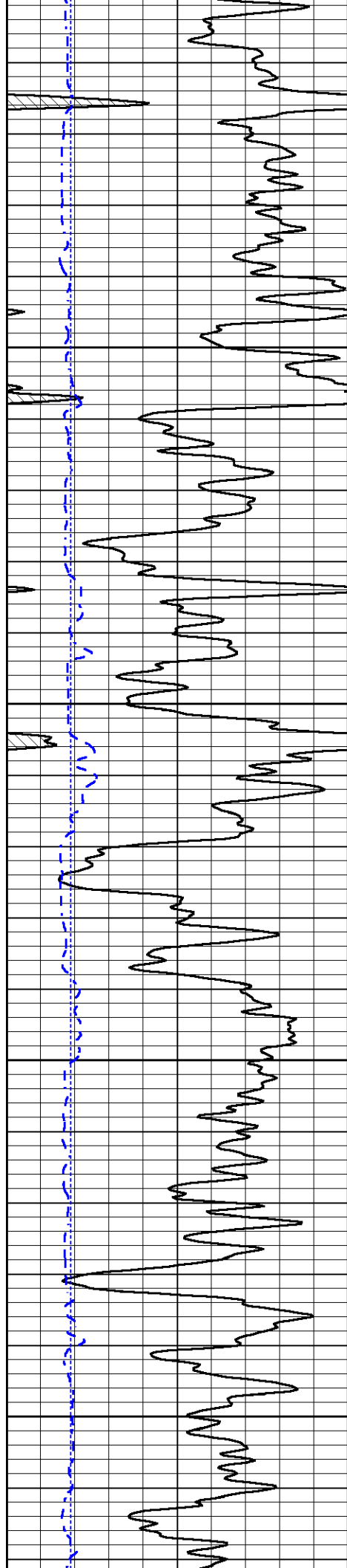


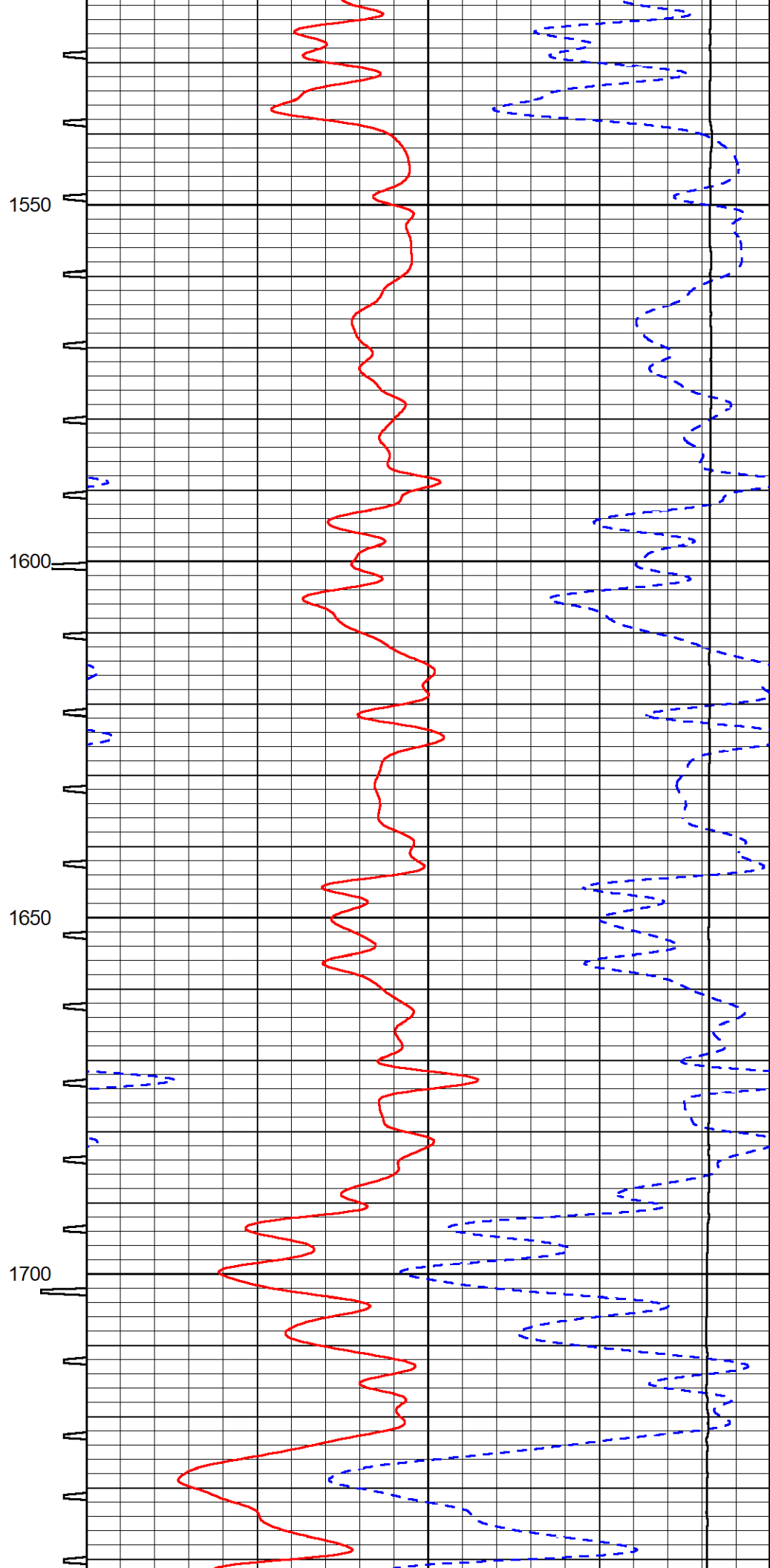
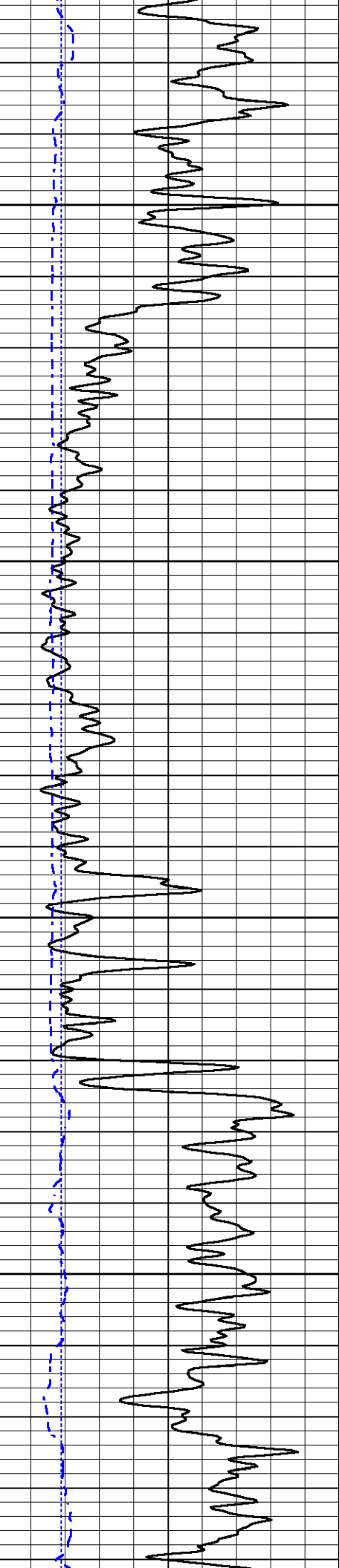


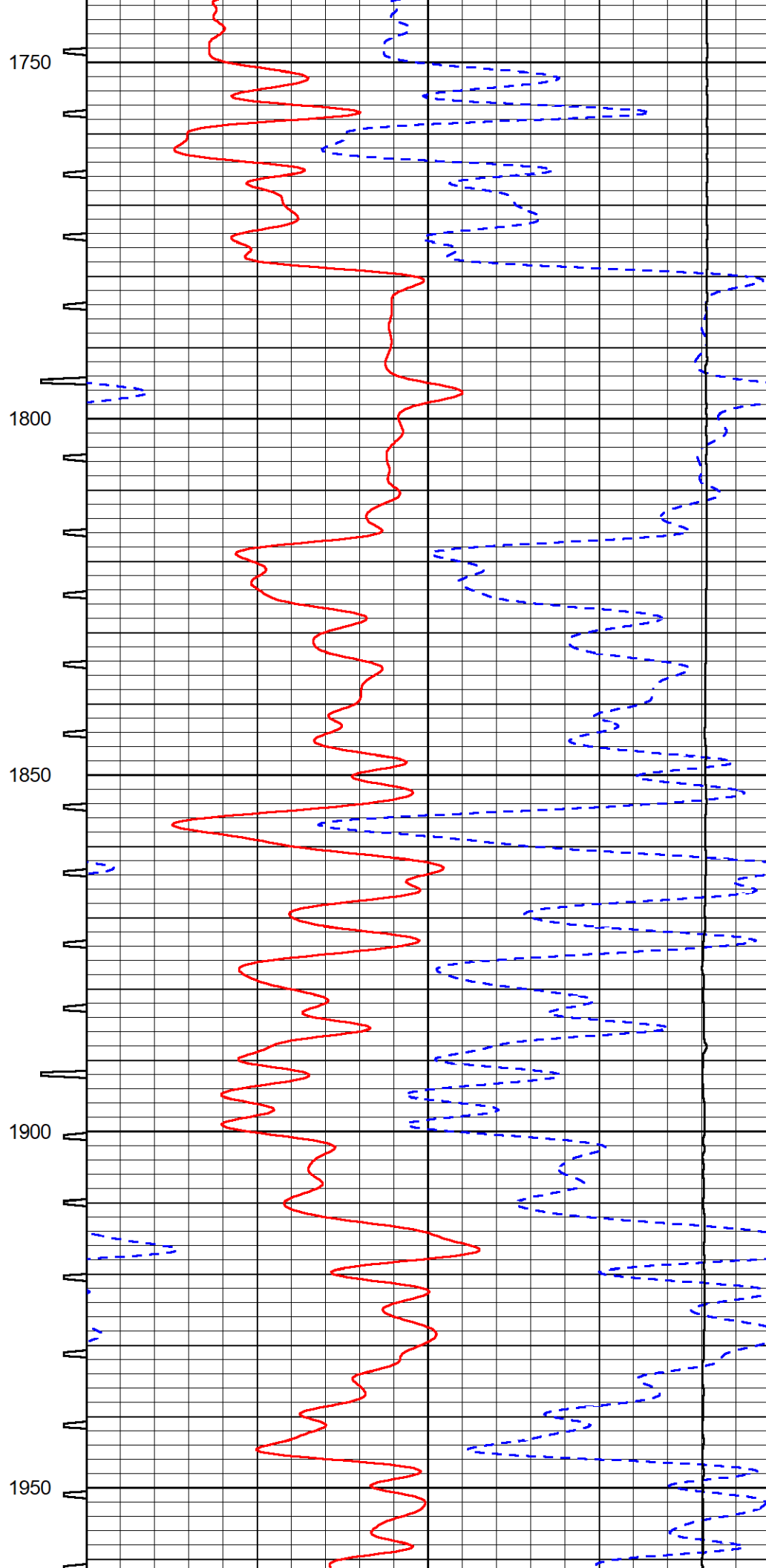
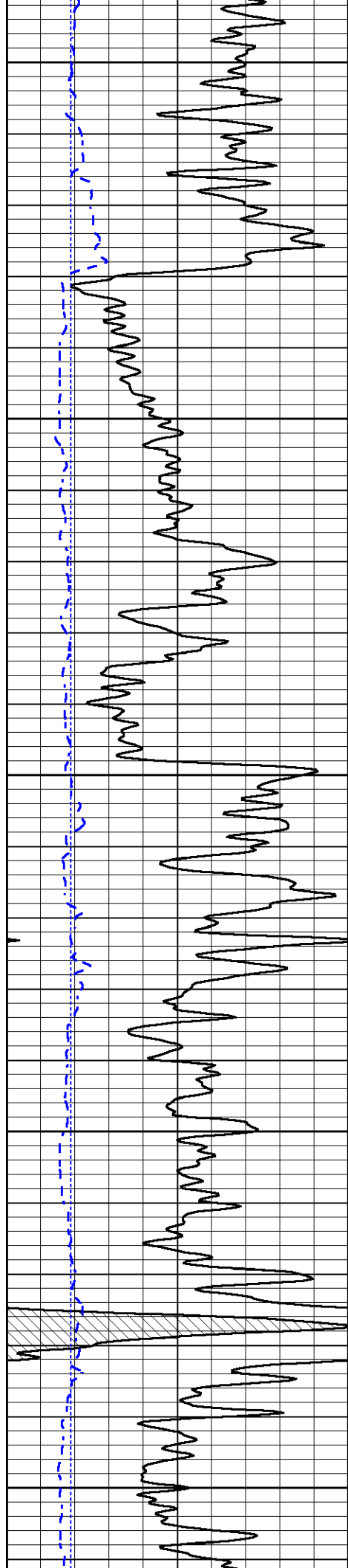


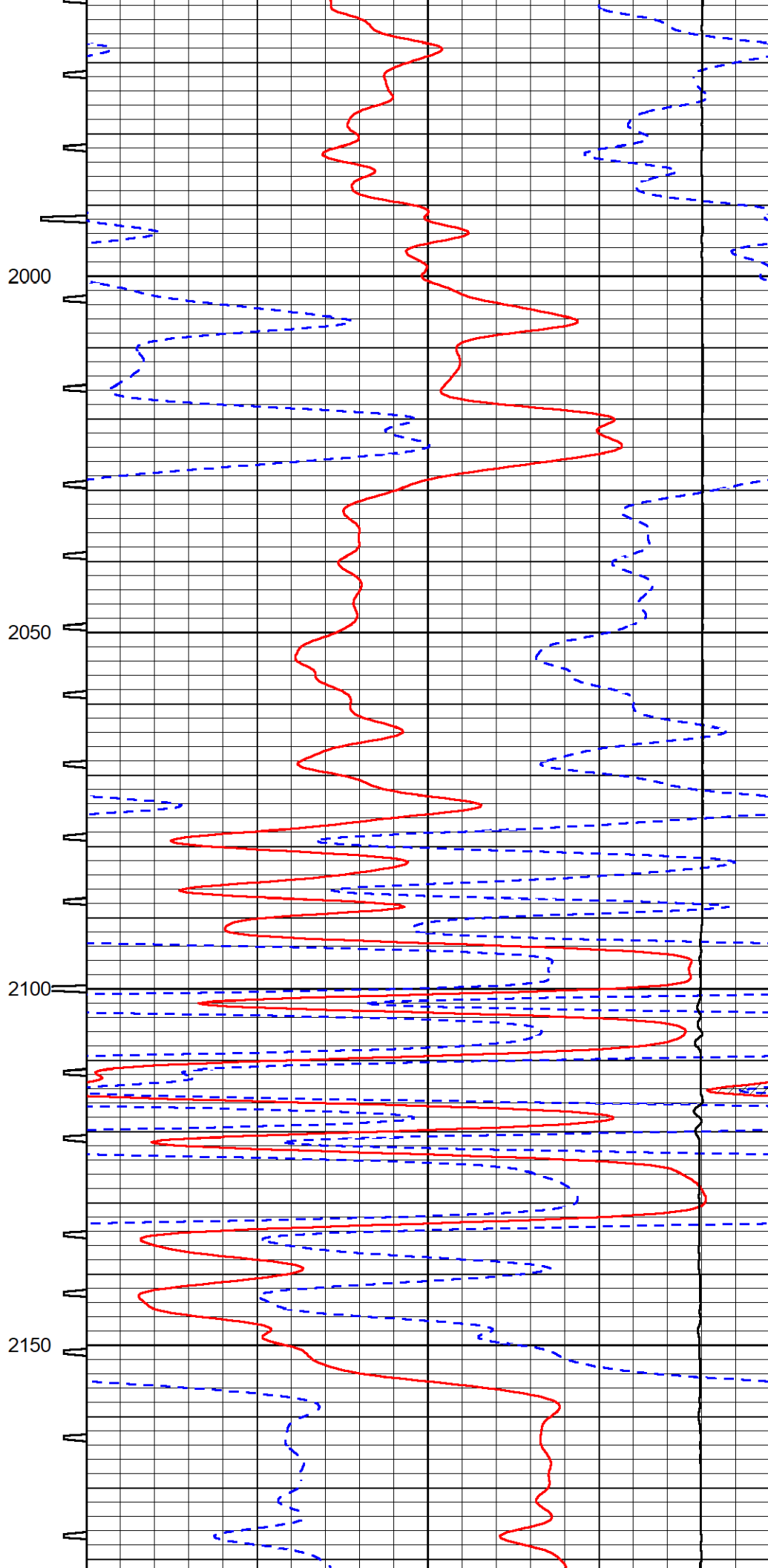
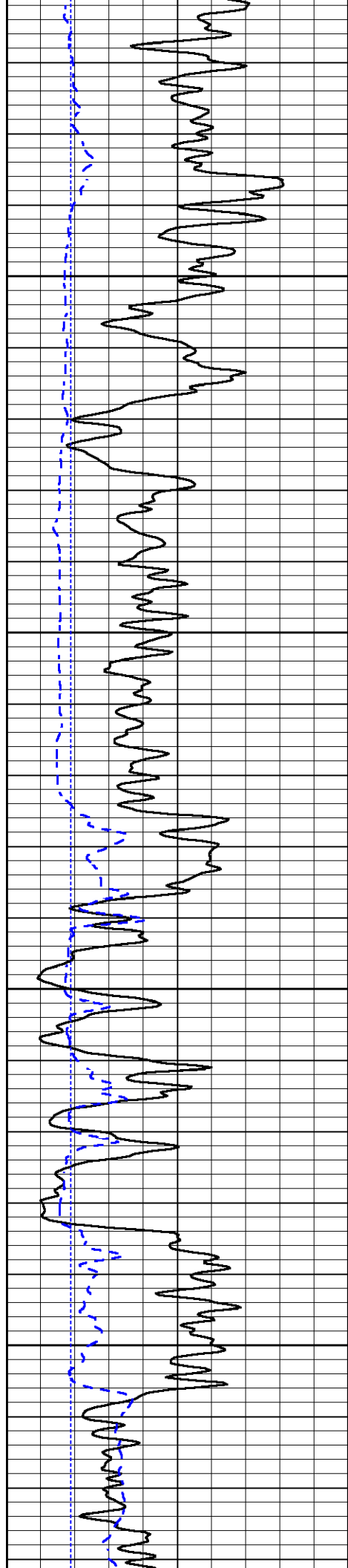


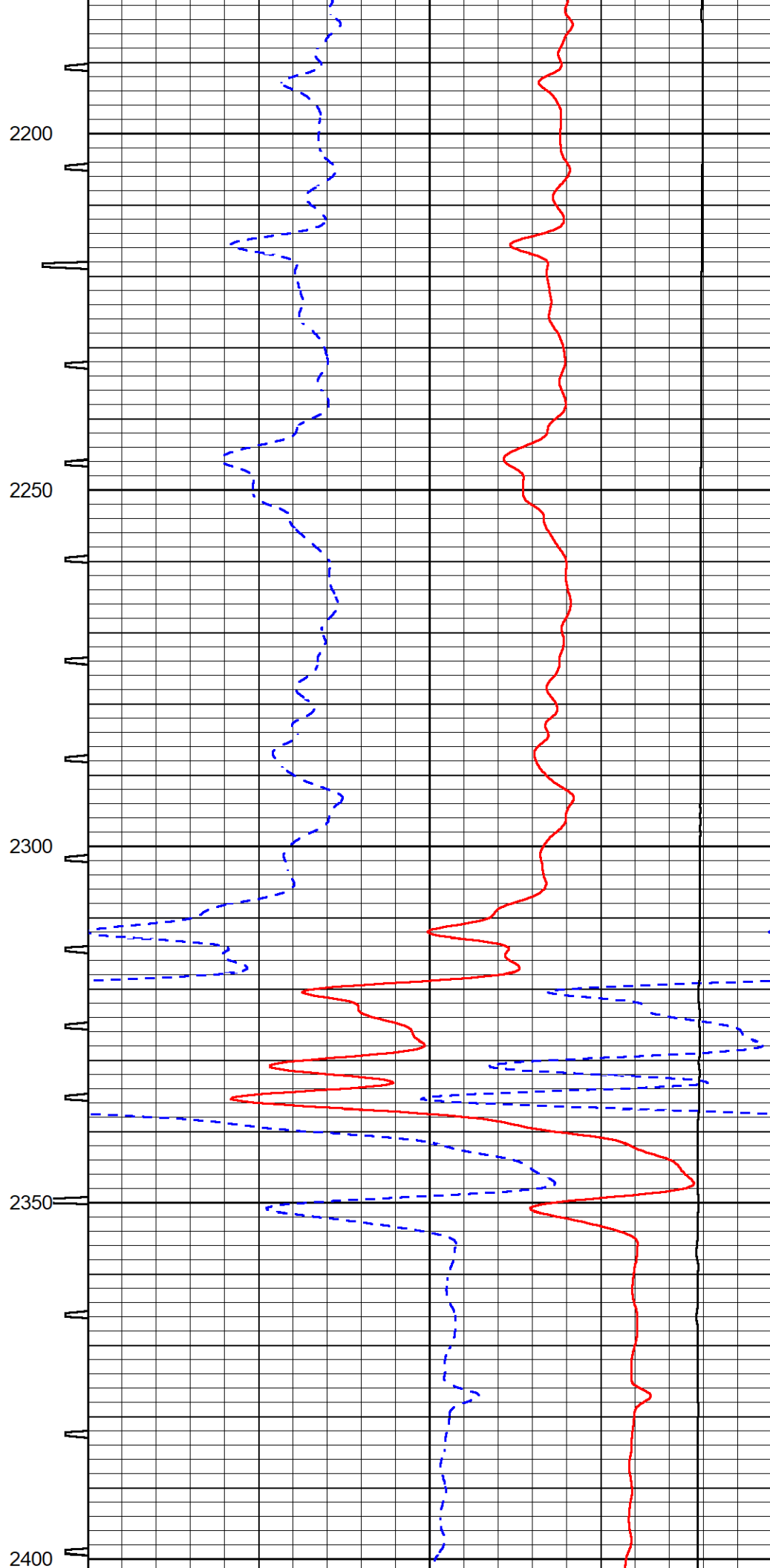
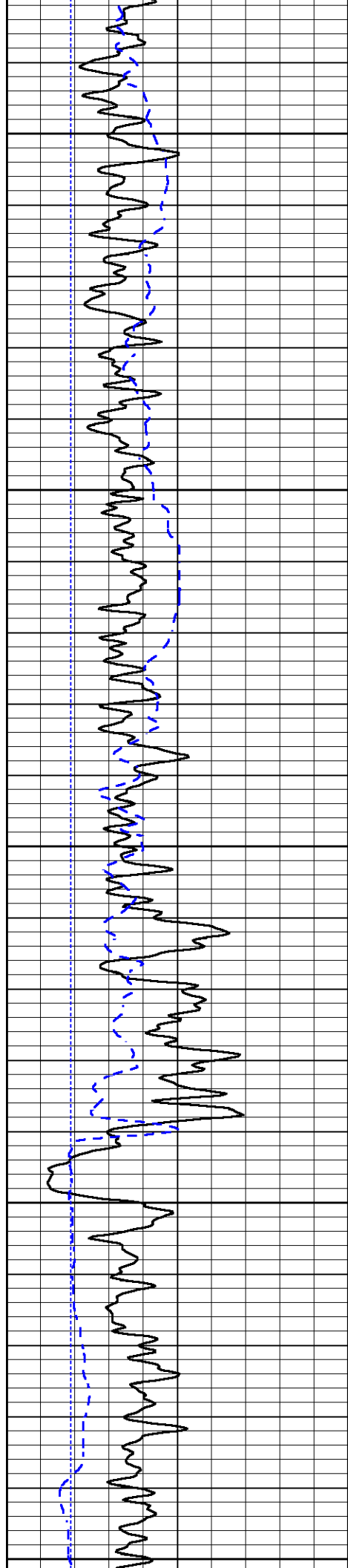


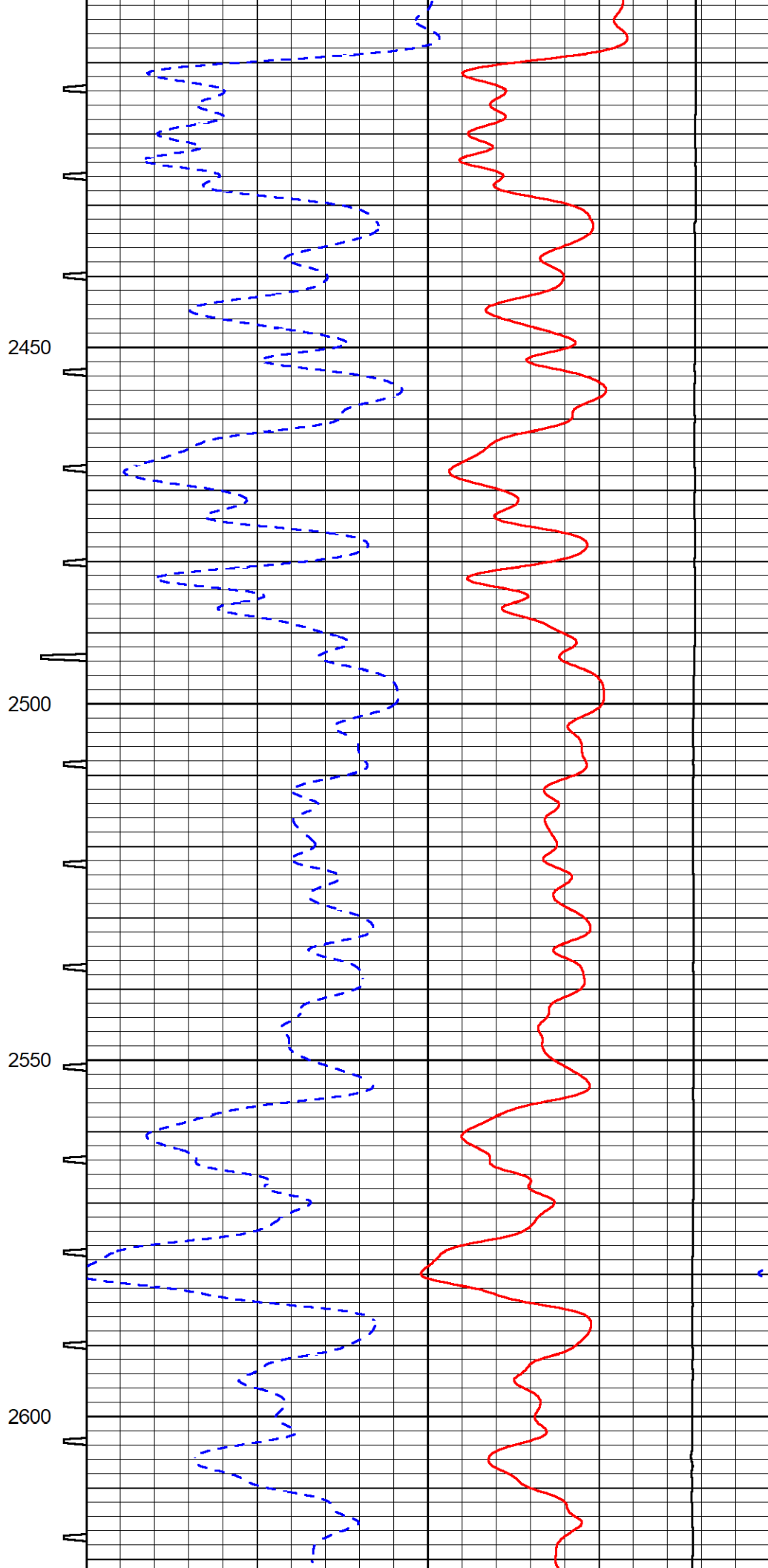
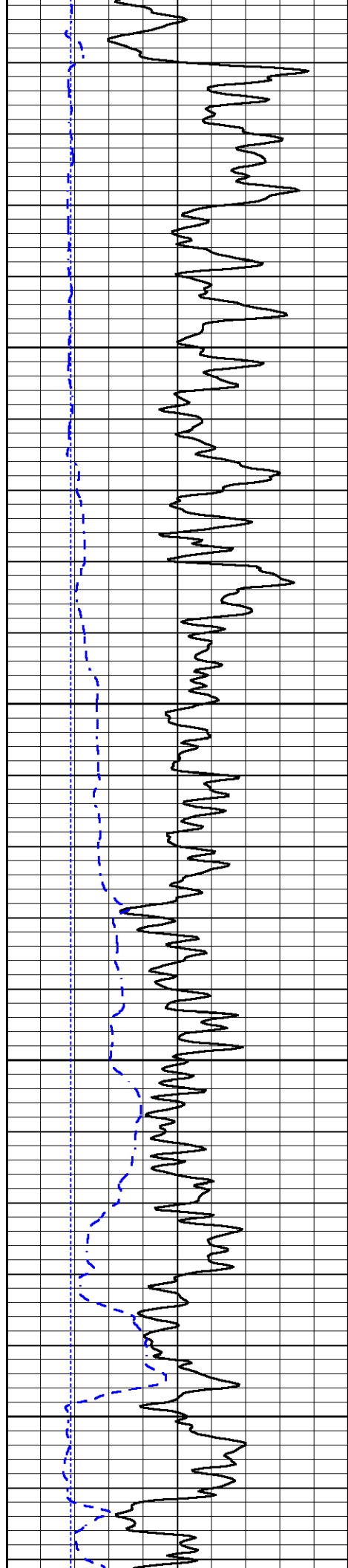


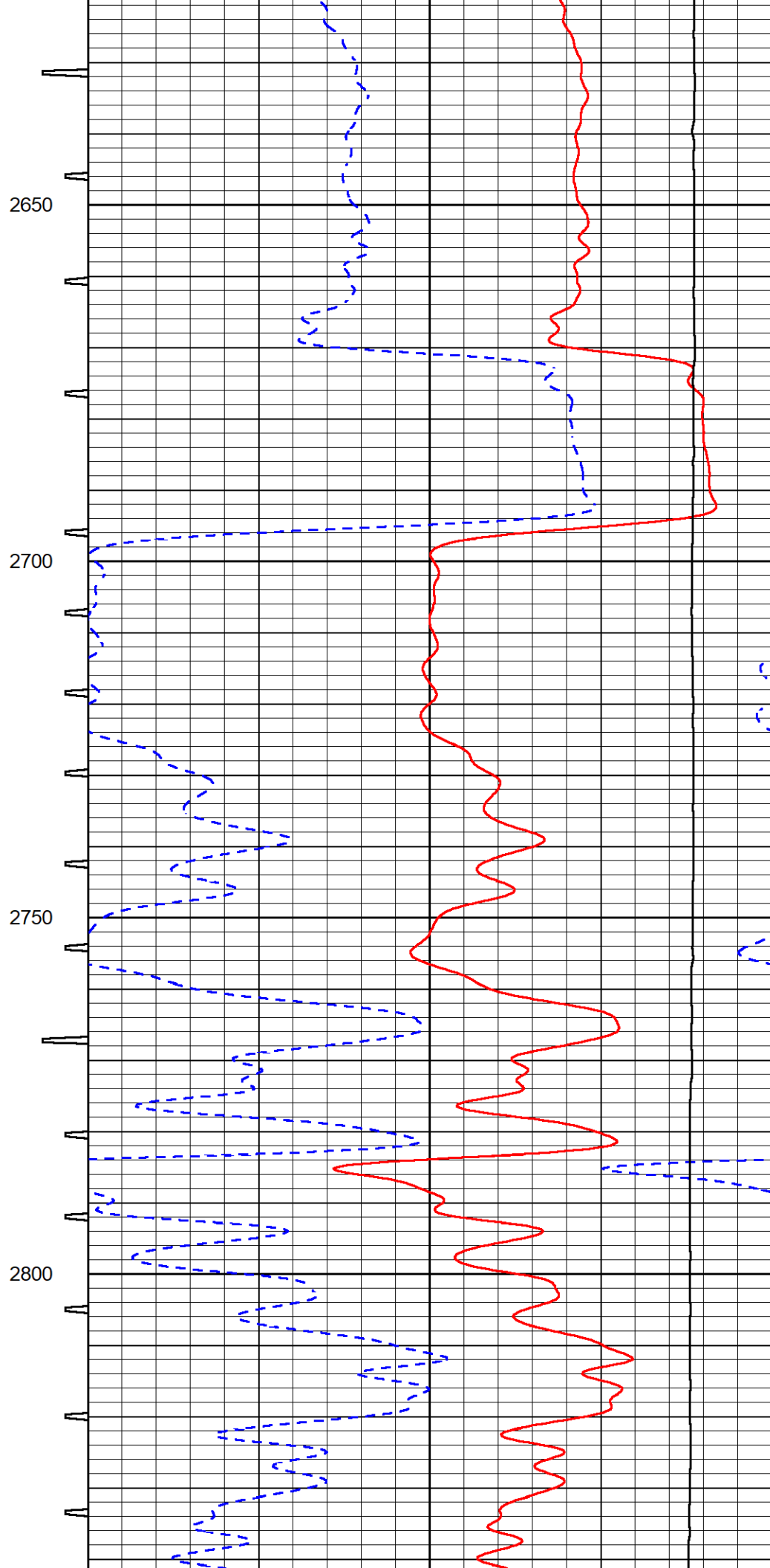
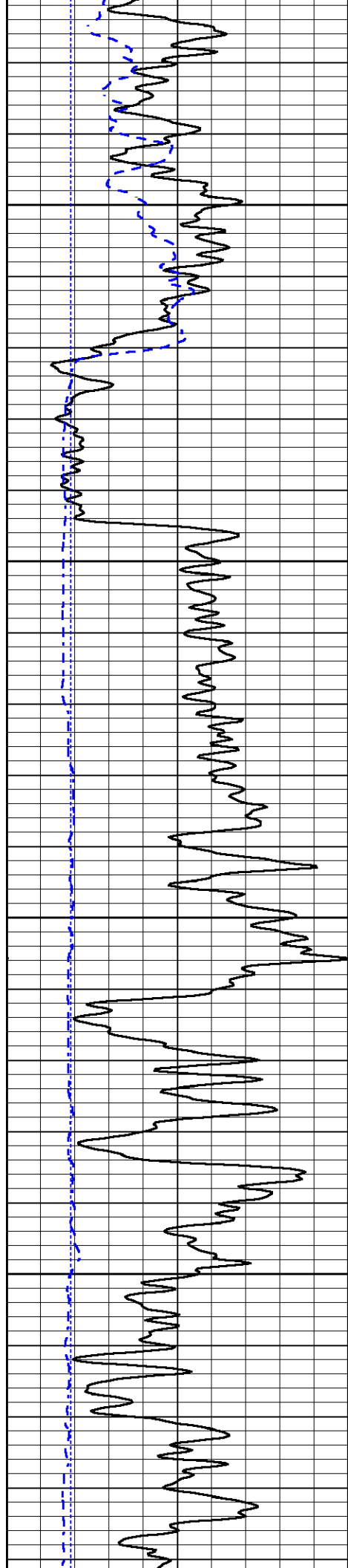


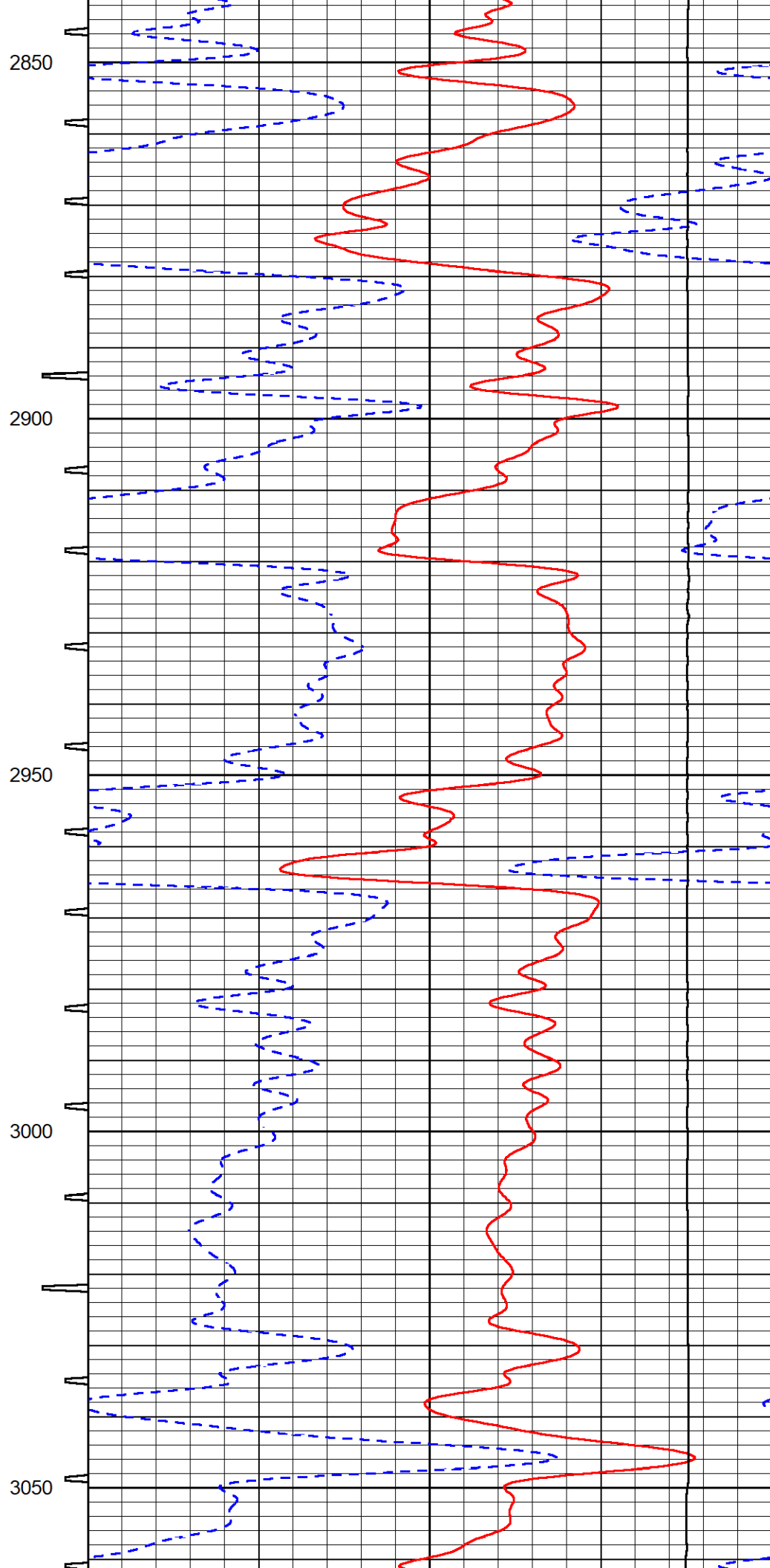
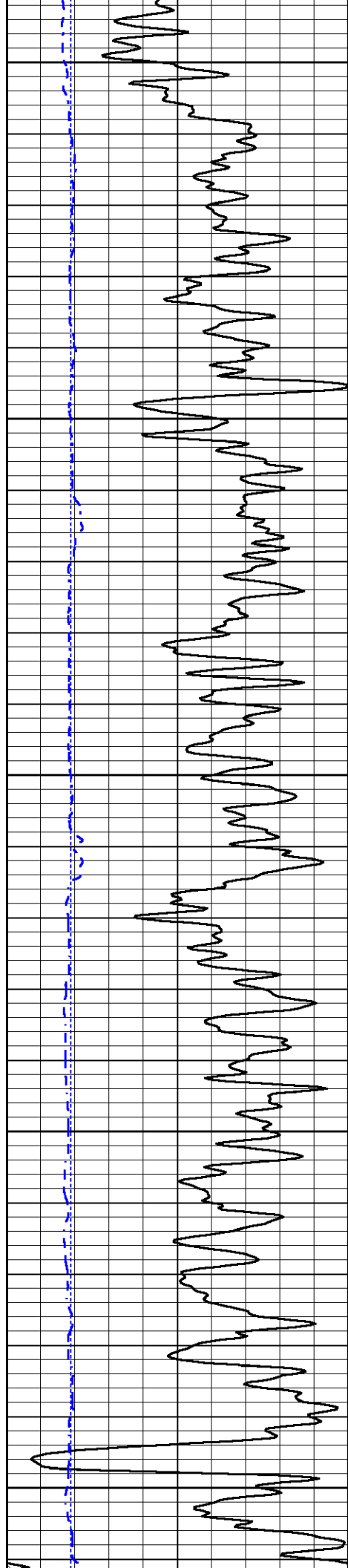


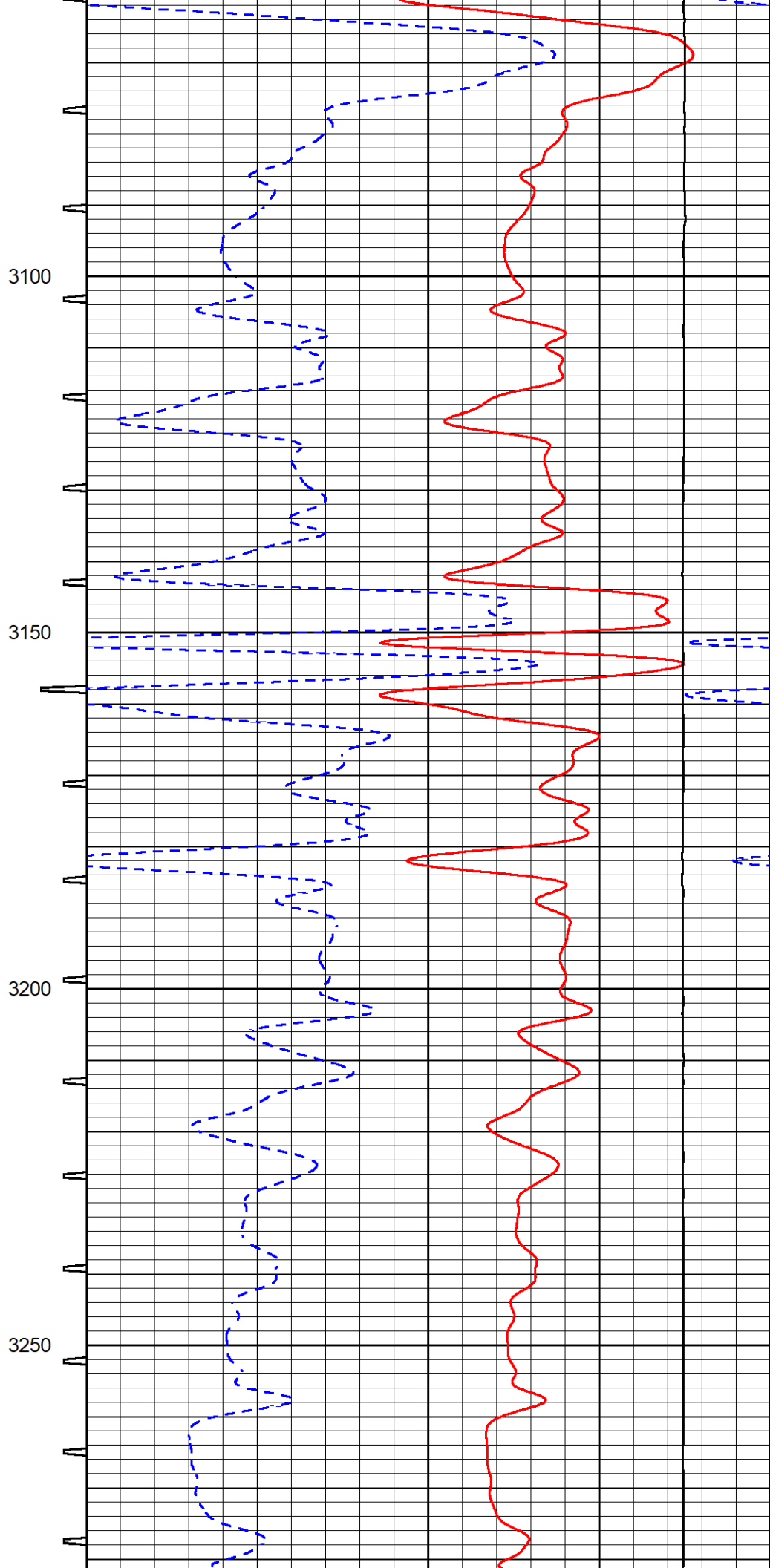
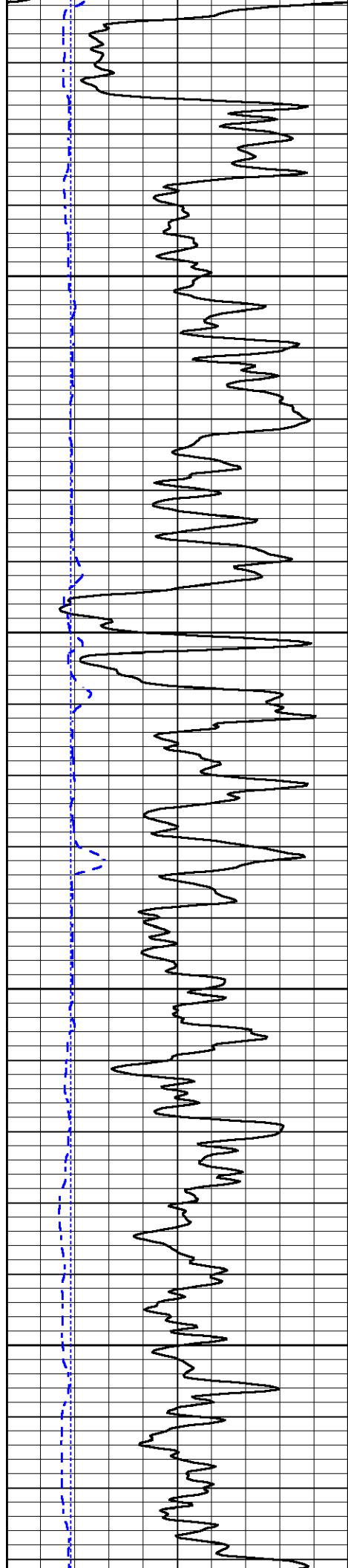


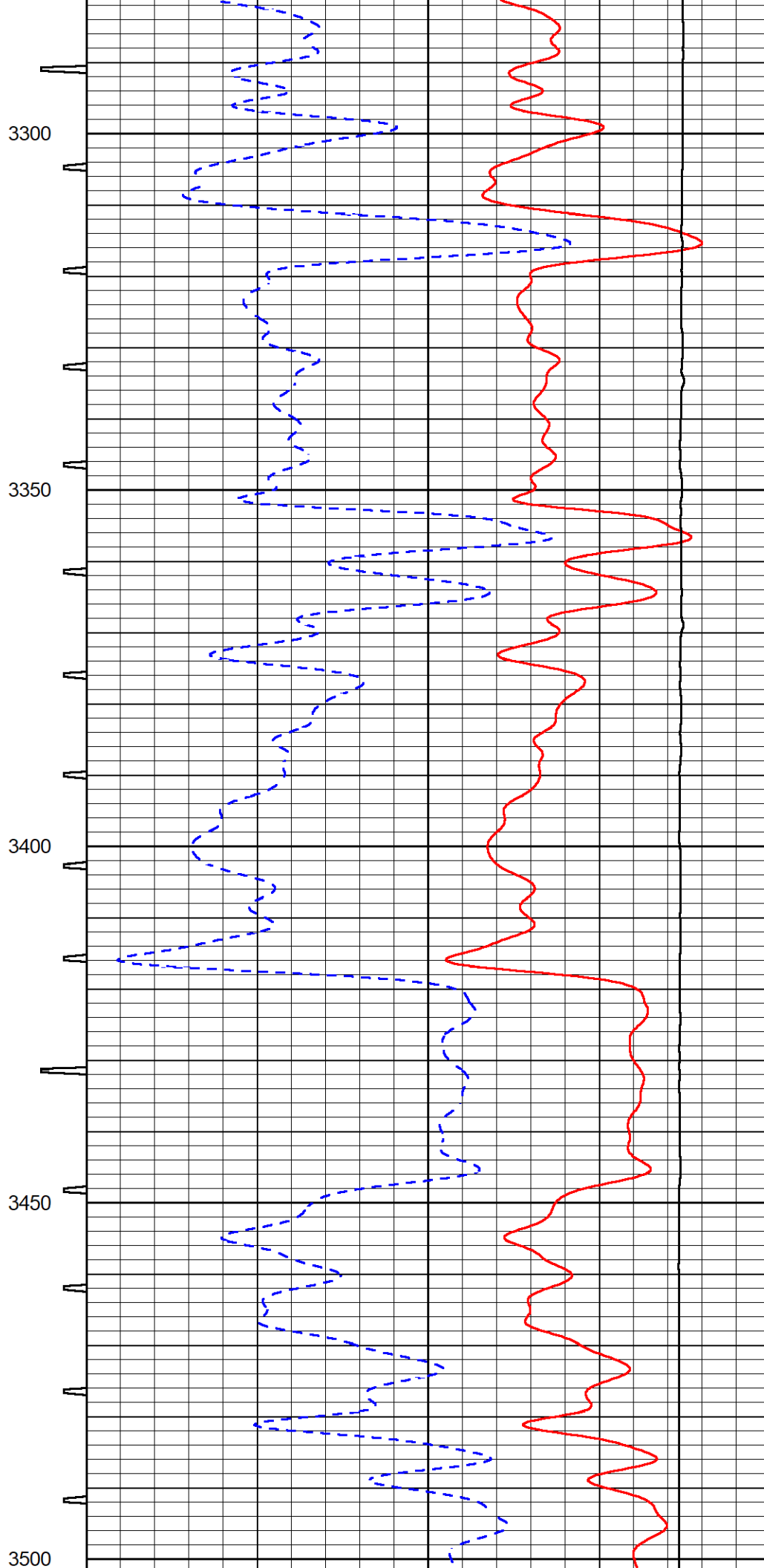
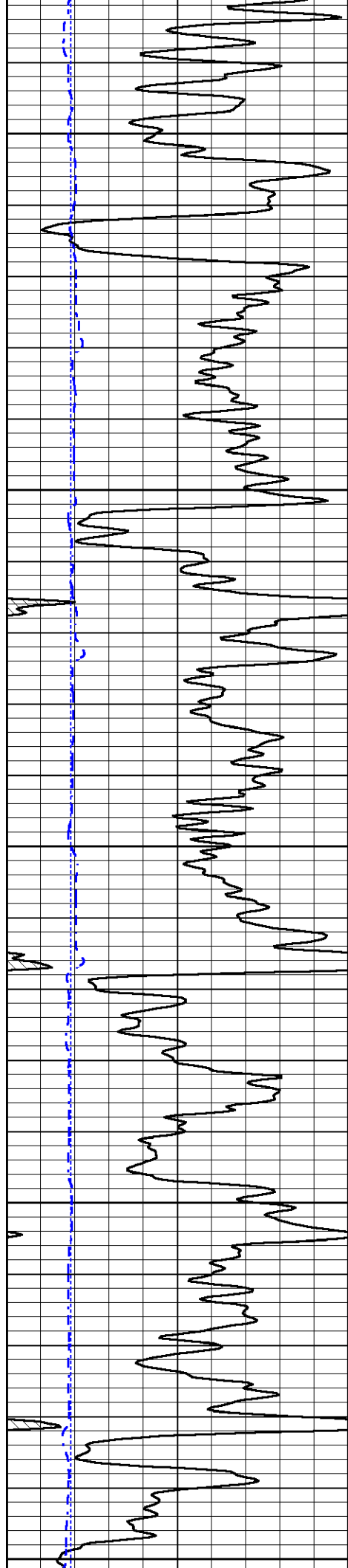


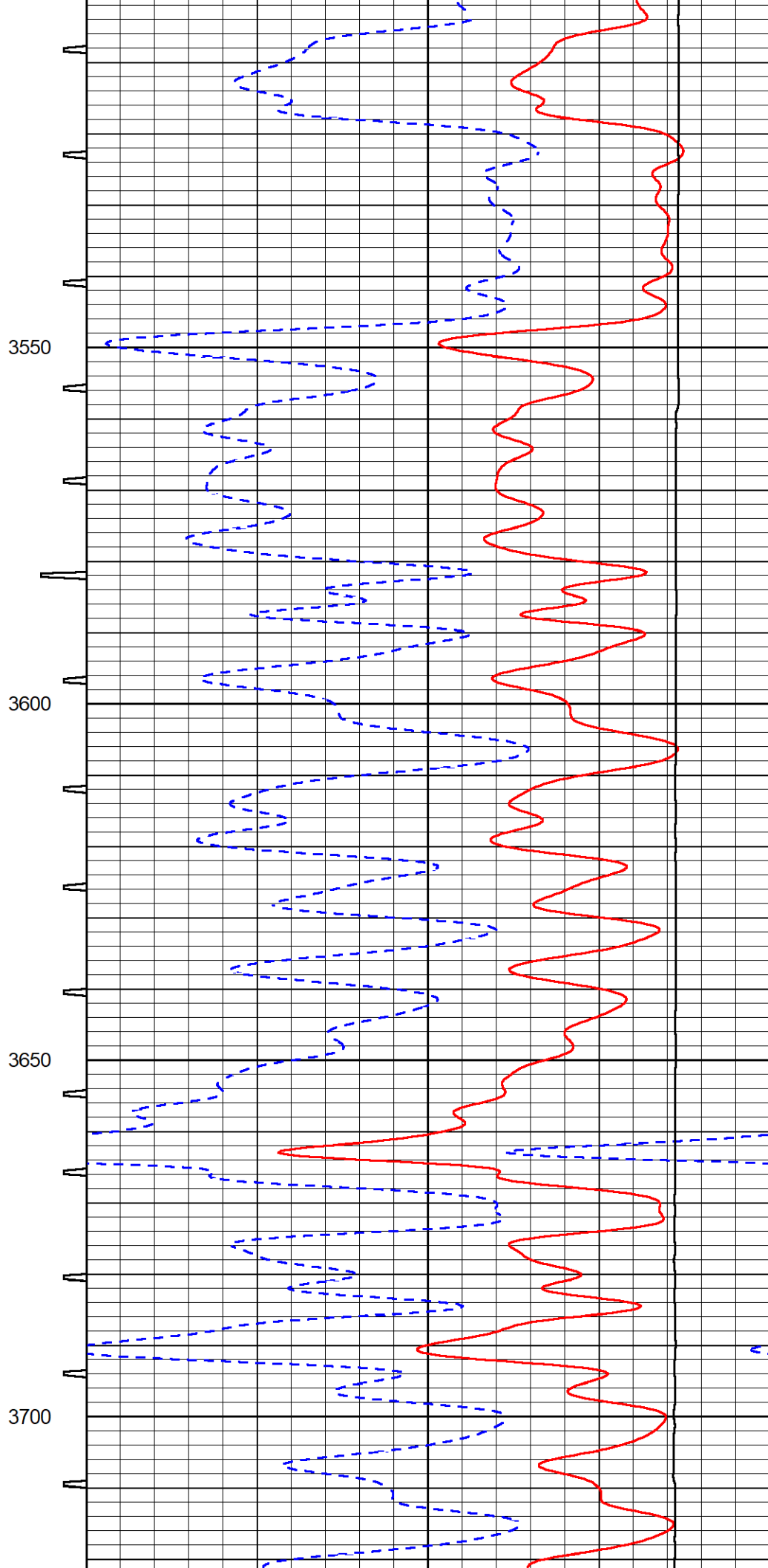
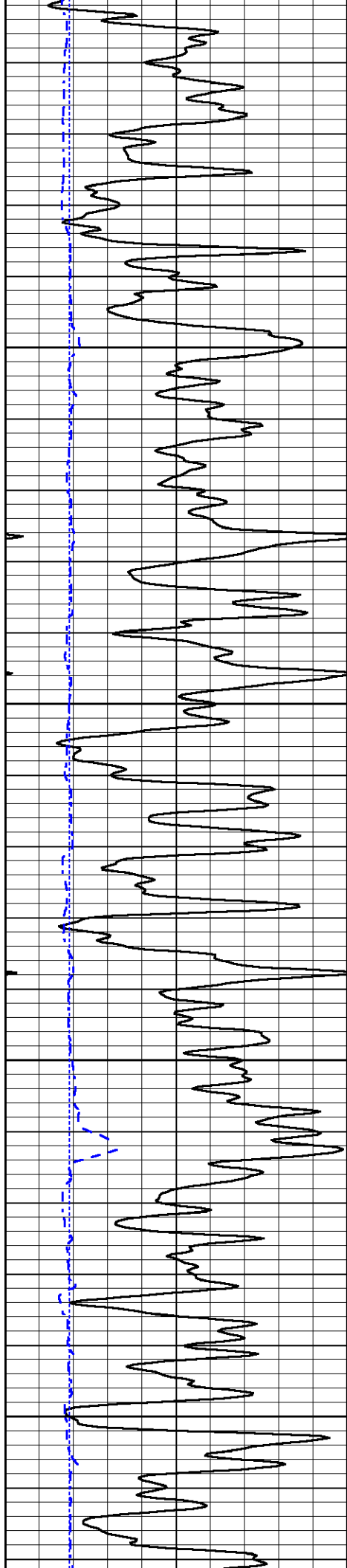


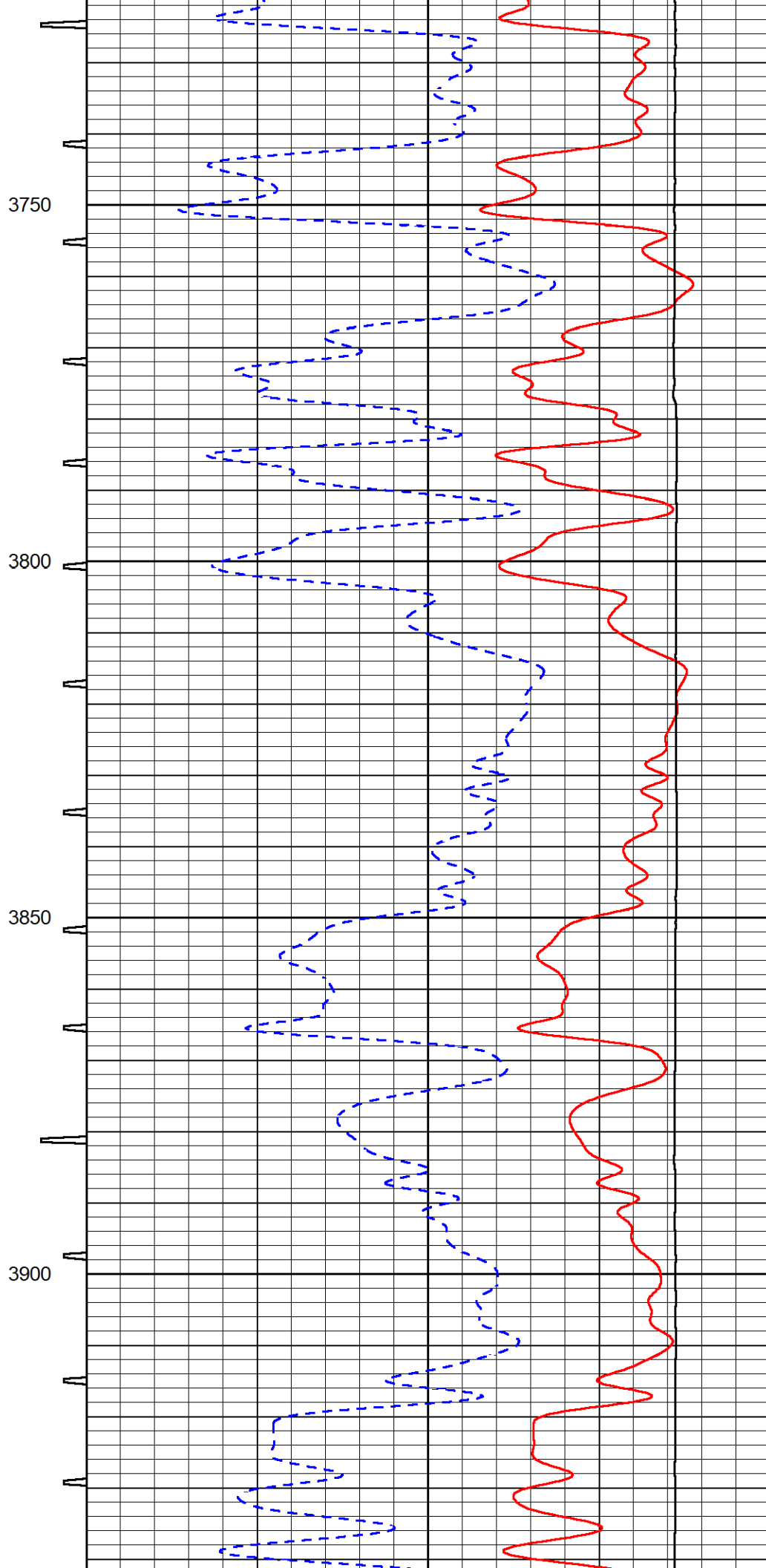
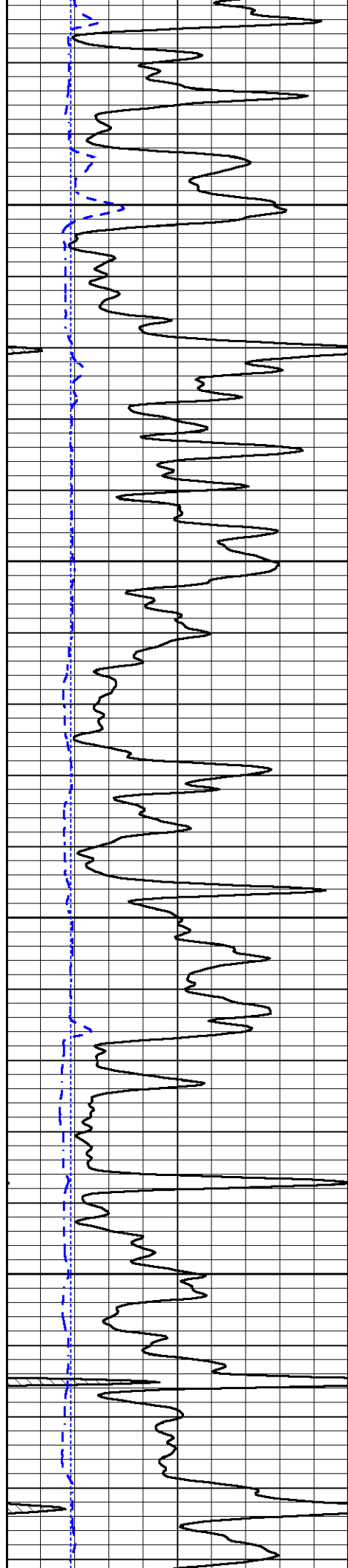


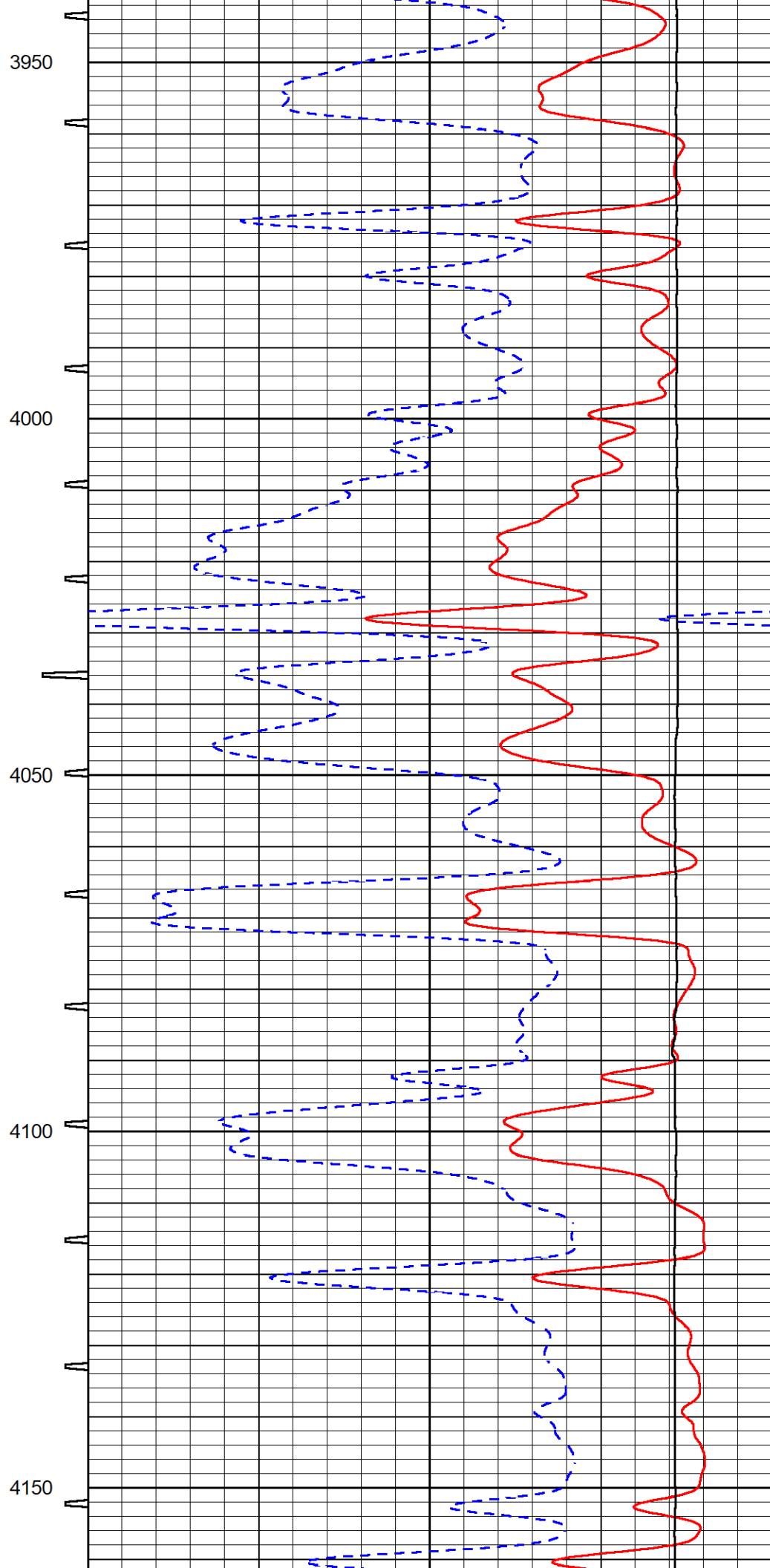
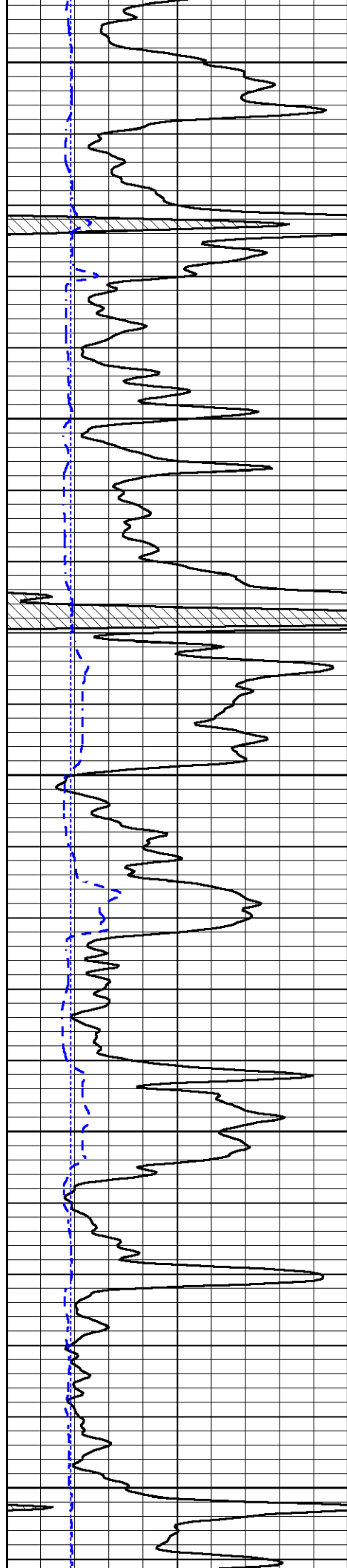


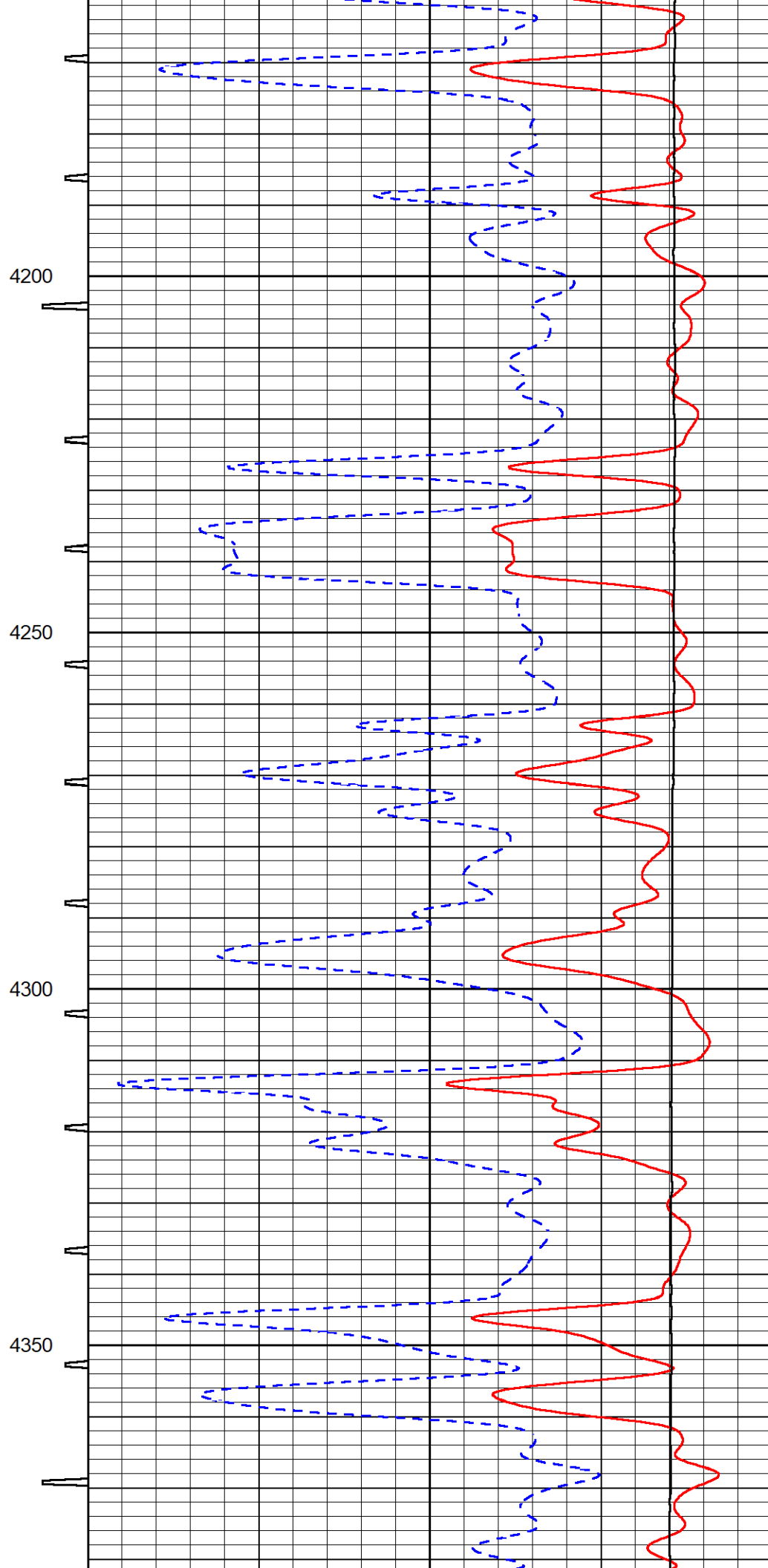
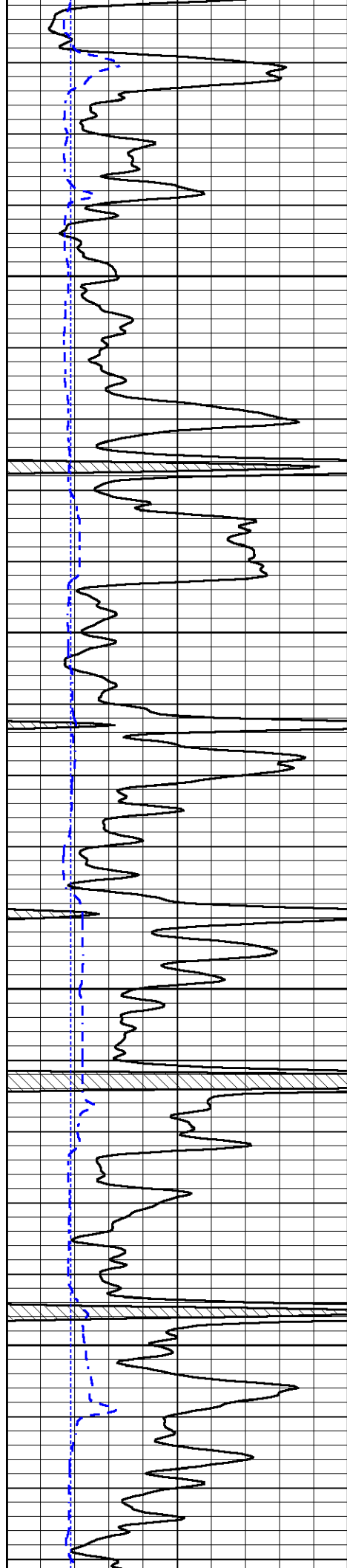


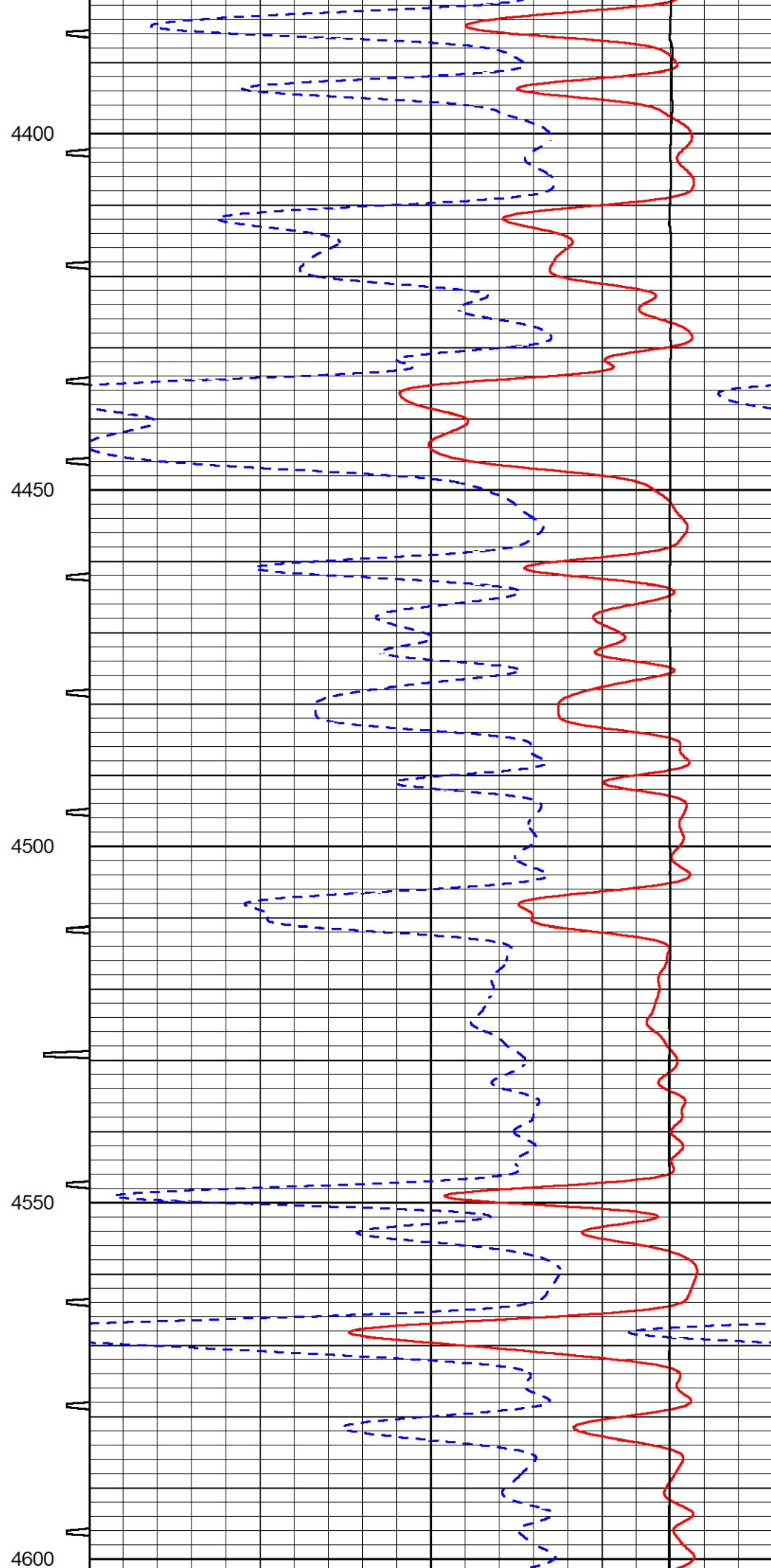
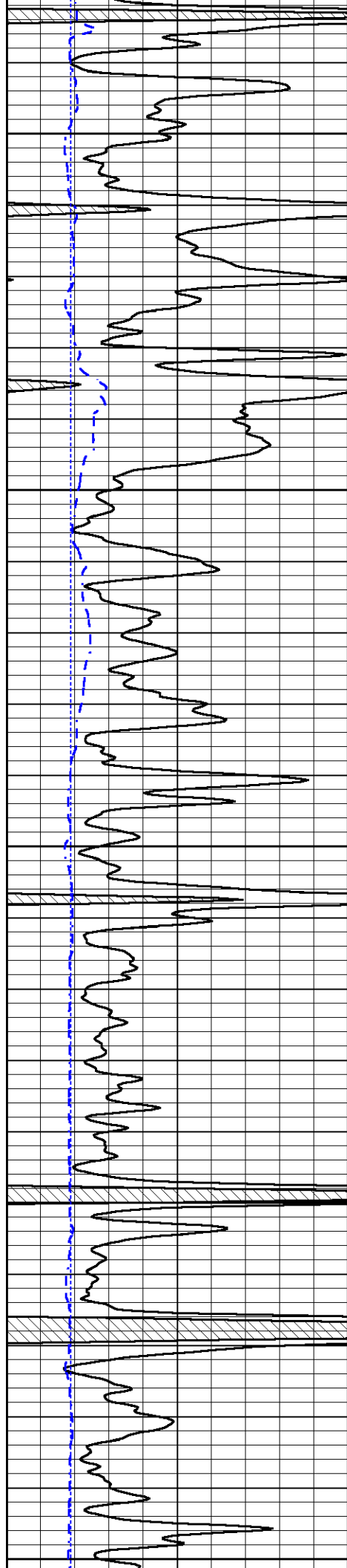


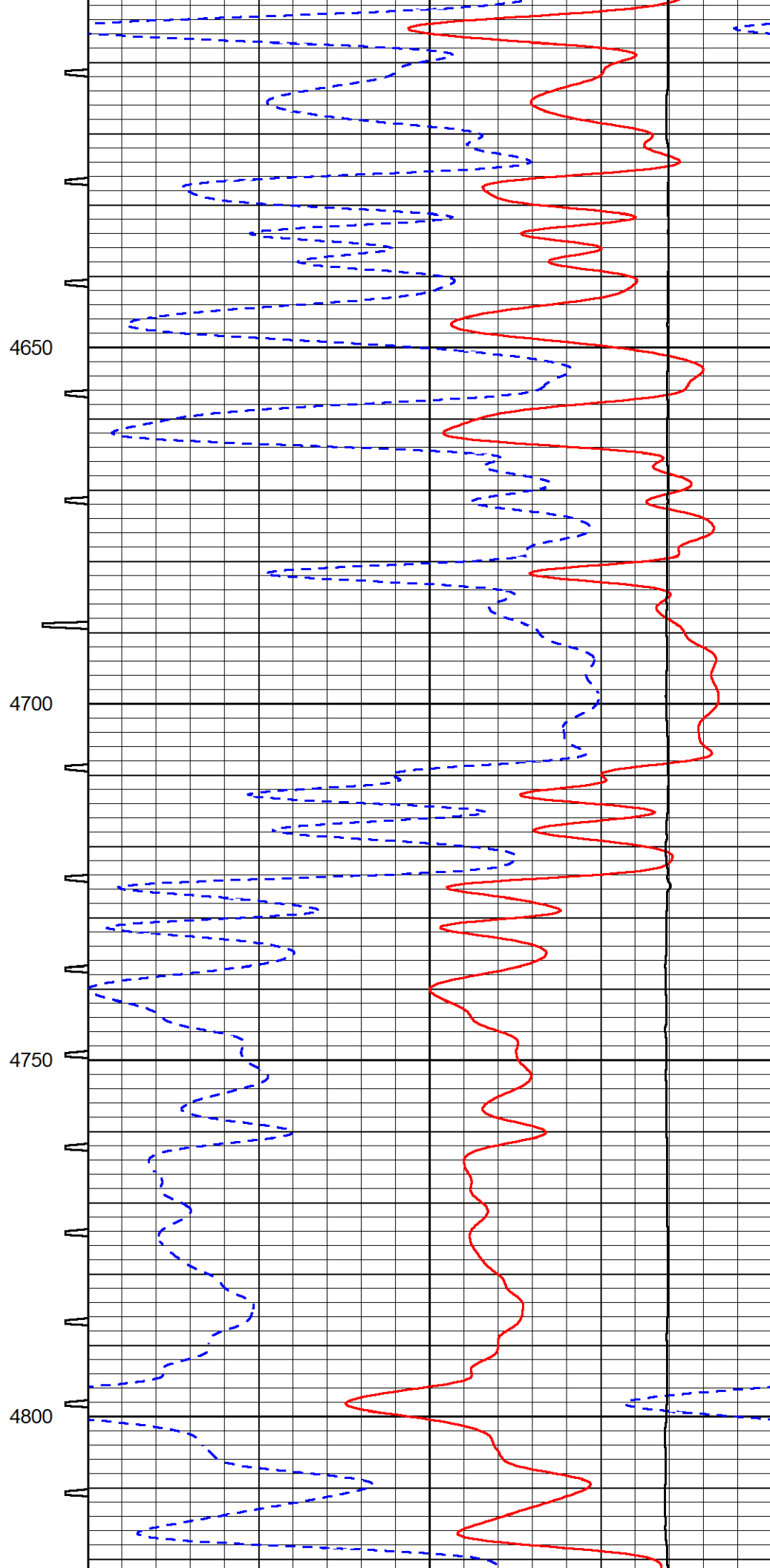
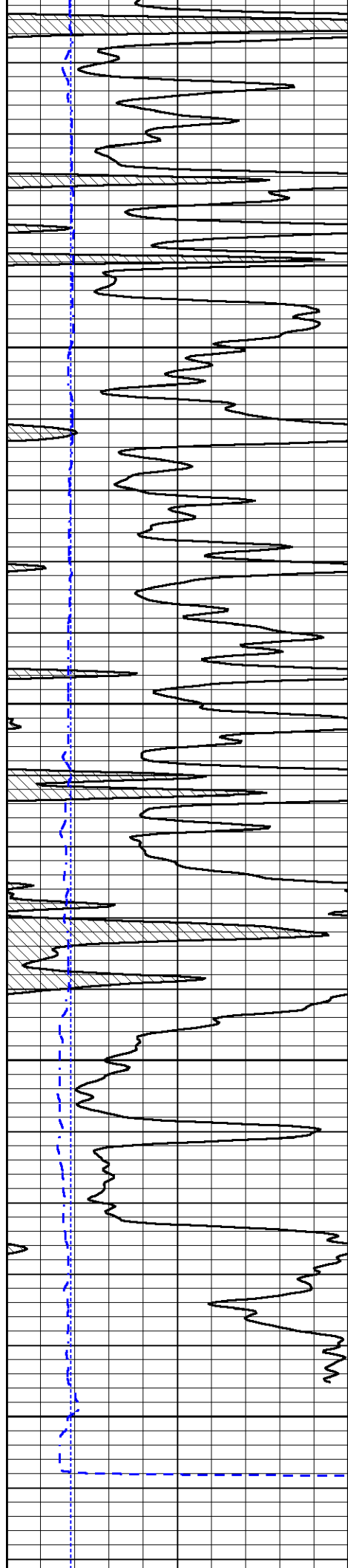












0	Gamma Ray (GAPI)	150	Sonic Int	140	Delta Time (usec/ft) (usec/ft)	40
150	GR (GAPI)	300	5 (msec) 0	30	Sonic Porosity (pu) (pu)	-10
6	Caliper (in)	16		15000	Line Tension (lb)	0



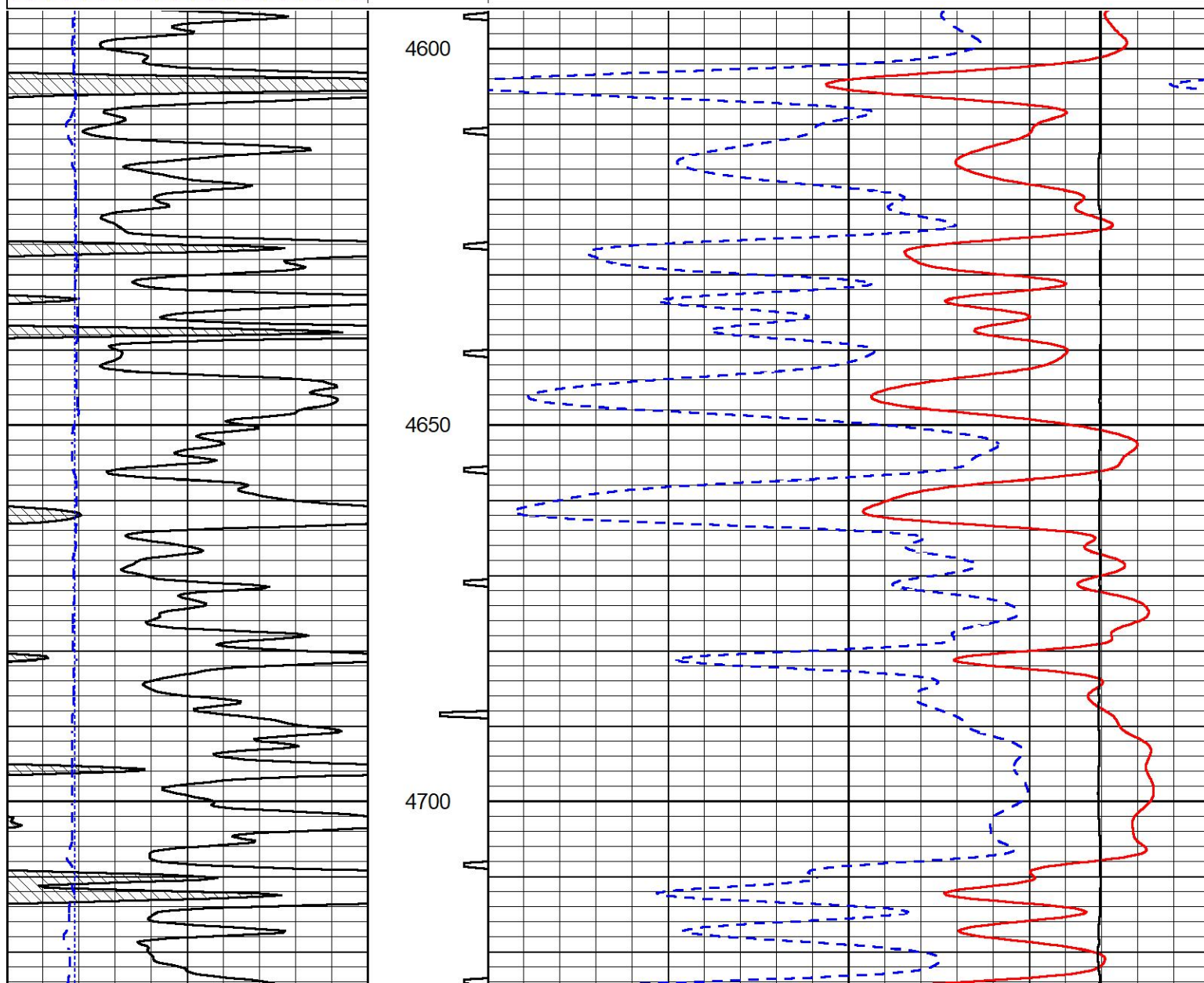
MIDWEST WIRELINE

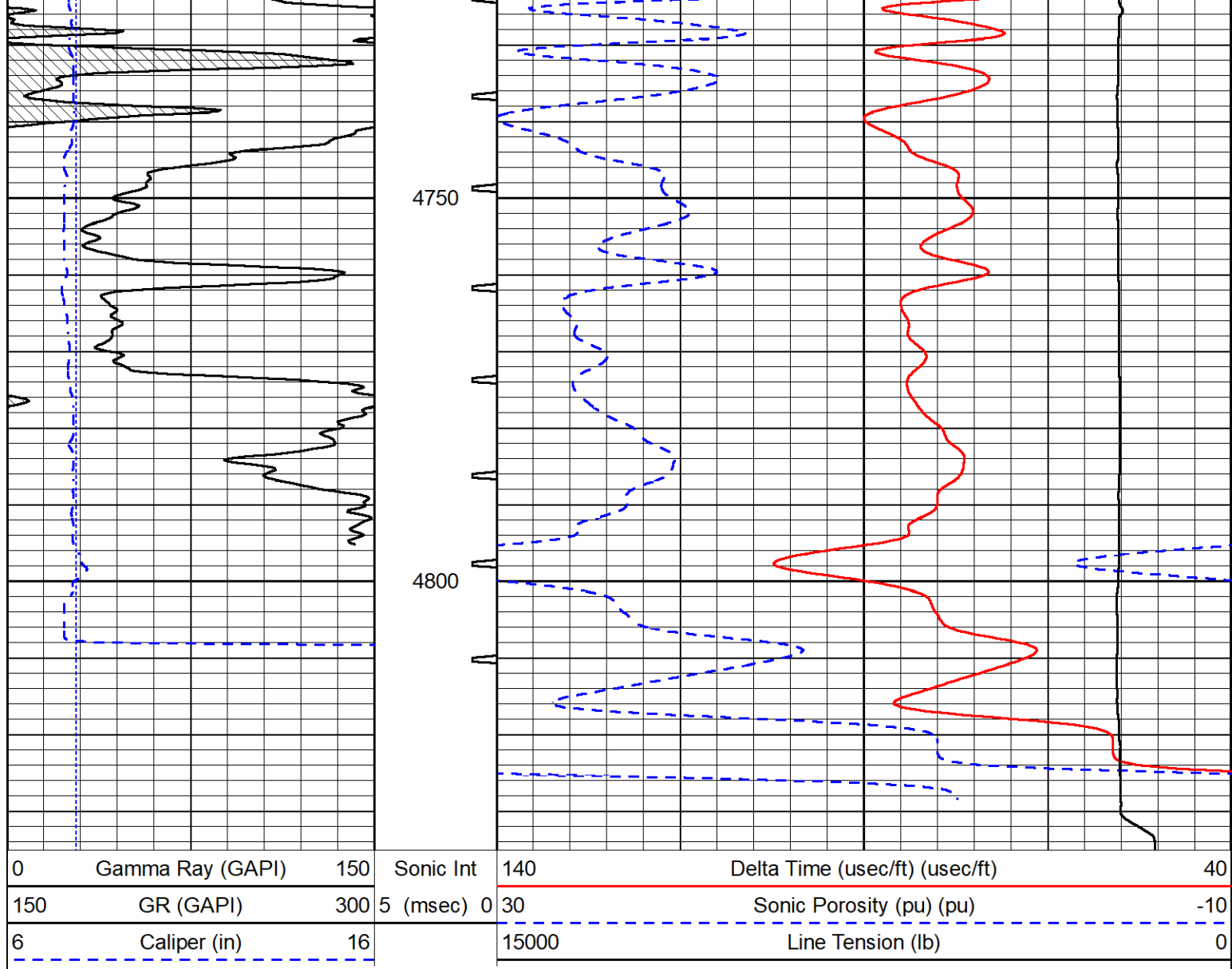
REPEAT SECTION

REPEAT PASS

Database File american_warrior_ward unit 1-10.db
Dataset Pathname stkml/pass2.1
Presentation Format _sonic
Dataset Creation Mon Jul 25 03:47:31 2022
Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	Sonic Int	140	Delta Time (usec/ft) (usec/ft)	40
150	GR (GAPI)	300	5 (msec) 0	30	Sonic Porosity (pu) (pu)	-10
6	Caliper (in)	16		15000	Line Tension (lb)	0





Calibration Report							
Database File	american warrior_ward unit 1-10.db						
Dataset Pathname	stkml/pass3.12						
Dataset Creation	Mon Jul 25 03:46:45 2022						
Dual Induction Calibration Report							
Serial-Model:				504 HT-M&W			
Surface Cal Performed:				Wed Jun 29 12:51:29 2022			
		Readings		References		Results	
Loop:	Air	Loop		Air	Loop		
						m	b
Deep	178.615	710.235		0.000	255.800	mmho/m	0.650
Medium	161.982	1441.110		0.000	255.800	mmho/m	-19.000
							-48.500
Microlog Calibration Report							
Serial-Model:				401-PSI STKBL ML			
Performed:				Sat Jul 16 16:13:48 2022			
		Readings		References		Results	
	Zero	Cal		Zero	Cal		
						m	b

Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	26500.0000	-2.8000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	18700.0000	-1.2000
Caliper	1.0049	1.0846	5.5000	20.0000	in	90.0000	-84.7000

Compensated Density Calibration Report

Serial-Model: 303-03-M&W
 Source #: 21170B
 Master Calibration Performed: Thu Dec 16 23:28:34 2021

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.670	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.515		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	14.00	in	1.04		

Compensated Neutron Calibration Report

Serial-Model: 210-M&W
 Source #: N-1238
 Master Calibration Performed: Fri Dec 3 09:16:24 2021

Master Calibration

Detector	Readings		Target	Normalization
Short Space	6240.00	cps	1000.00 cps	1.6025
Long Space	460.00	cps	1000.00 cps	1.9500

Gamma Ray Calibration Report

Serial Number: 103
 Tool Model: M&W
 Performed: Fri Dec 3 12:13:24 2021
 Calibrator Value: 500.0 GAPI
 Background Reading: 28.0 cps
 Calibrator Reading: 986.0 cps
 Sensitivity: 0.5700 GAPI/cps



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