



MIDWEST WIRELINE

# BOREHOLE COMPENSATED SONIC LOG

Company: Darrah Oil Company, LLC  
 Well: Fanshier #1-4  
 Field: Shaeffer-Rothgarn  
 County: Stafford  
 State: Kansas

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 County: Stafford  
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Location: API #: 15-185-24120-00-00  
 1019 FSL & 2241 FWL  
 SEC 4 TWP 21S RGE 13W  
 Permanent Datum: Ground Level Elevation: 1888  
 Log Measured From: Kelly Bushing  
 Drilling Measured From: Kelly Bushing  
 Other Services: CNL/CDL DIL/MEL  
 Elevation: K.B. 1901, D.F., G.L. 1888

Date	10/10/2022						
Run Number	Two						
Type Log	BHCS						
Depth Driller	3700						
Depth Logger	3701						
Bottom Logged Interval	3689						
Top Logged Interval	200						
Type Fluid In Hole	Chemical						
Salinity, PPM CL	5000						
Density	9.4						
Level	Full						
Max. Rec. Temp. F	113						
Operating Rig Time	4 Hours						
Equipment -- Location	P-108   HAYS						
Recorded By	D. Schmidt						
Witnessed By	Jim Musgrove						
Borehole Record							
Run No.	Bit	From	To	Size	Wgt.	Casing Record	
One	12.25	0	225	8.625	23	From	To
Two	7.875	225	TD			0	225

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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.

Great Bend,  
South to county line, 1 South, 1/2 West

Log Measured From: Kelly Bushing                      13 Ft. Above Permanent Datum

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

Your Midwest Wireline Crew	This Log Record Was Witnessed By
Engineer: D. Schmidt	Primary Witness: Jim Musgrove
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	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: darrah\_fanshier 1-4.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\darrah)\_fanshier 1-4.db  
 Dataset field/well/stkml/pass3.1/\_vars\_

## Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	113	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	557	80	Off	3701

## 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

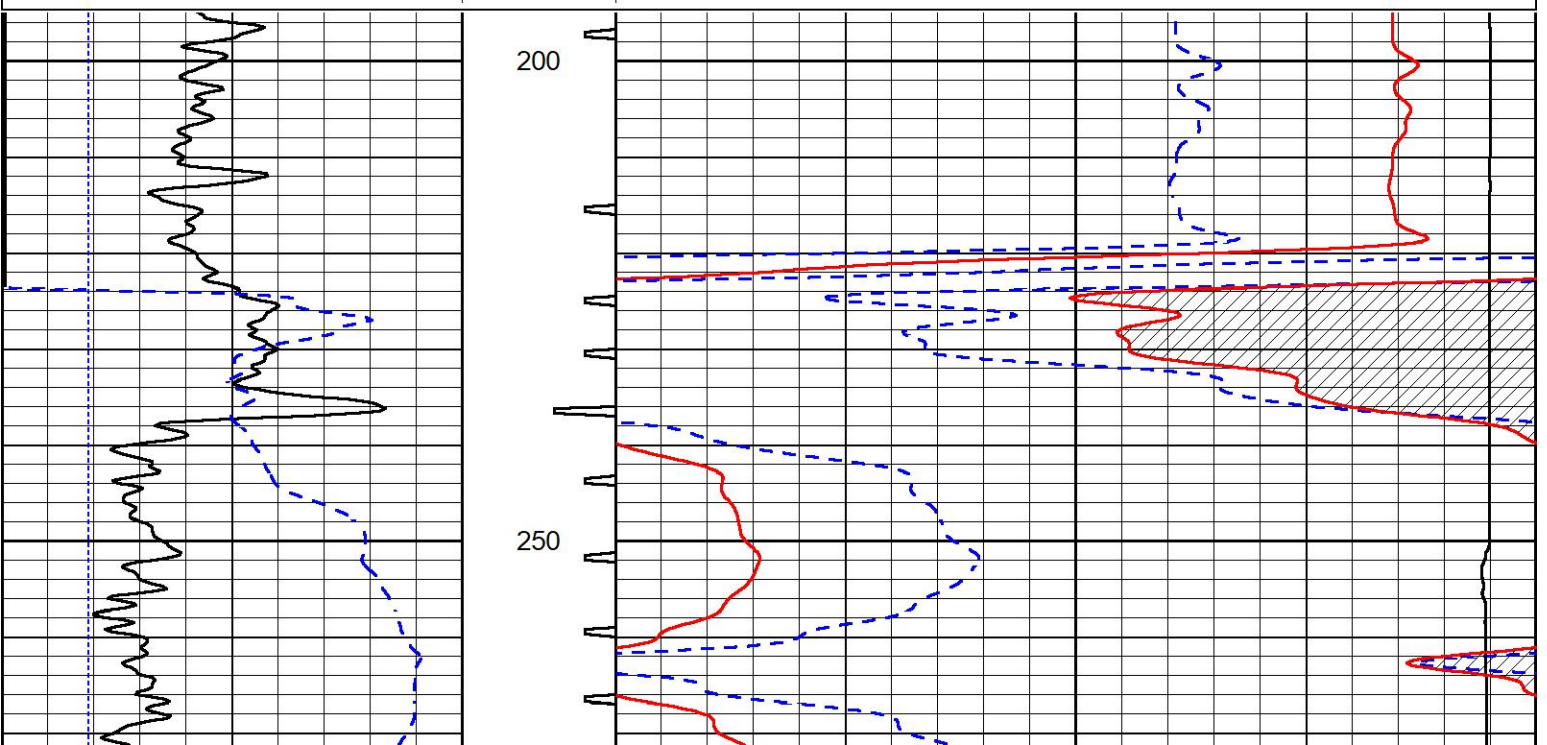


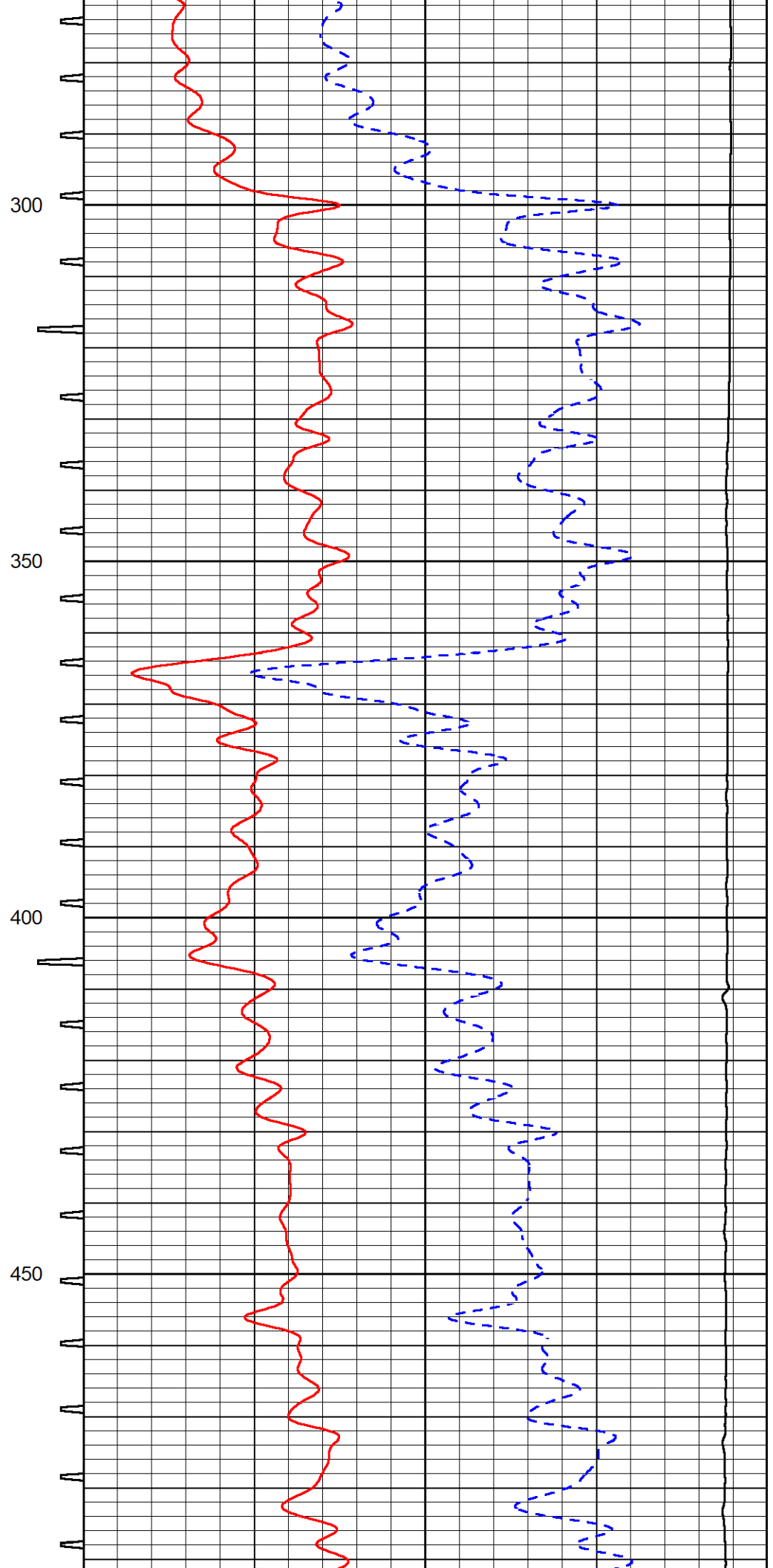
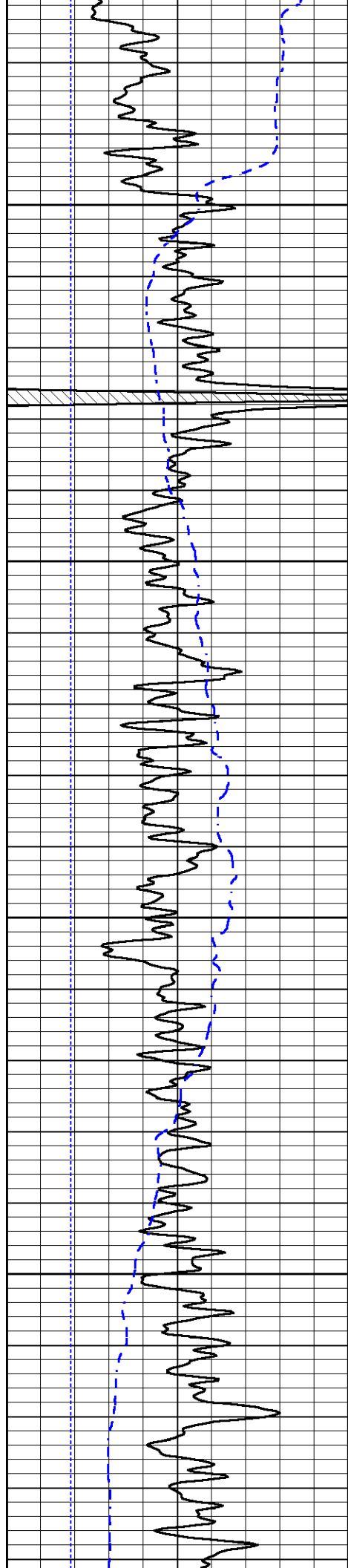
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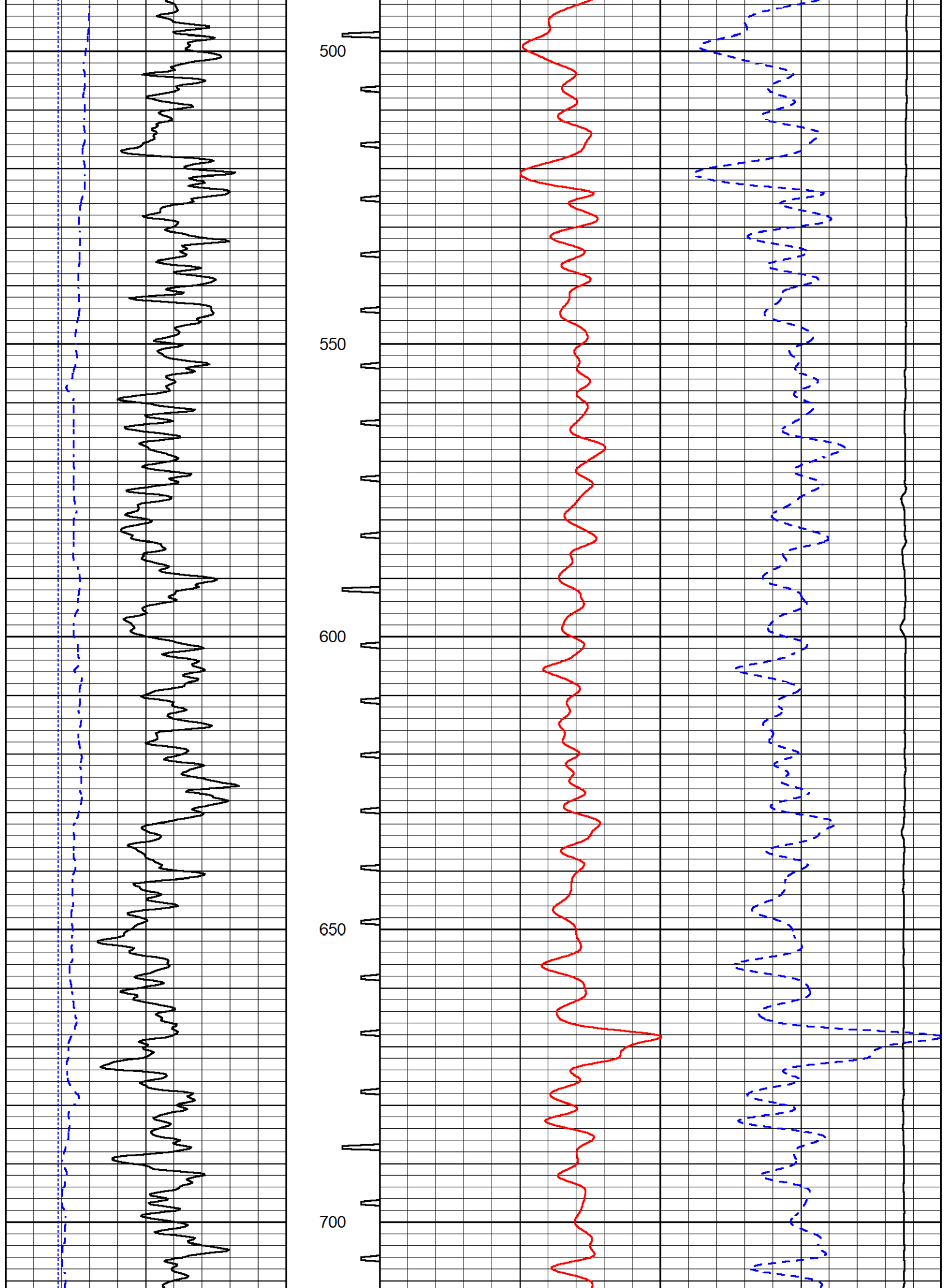
### MAIN PASS

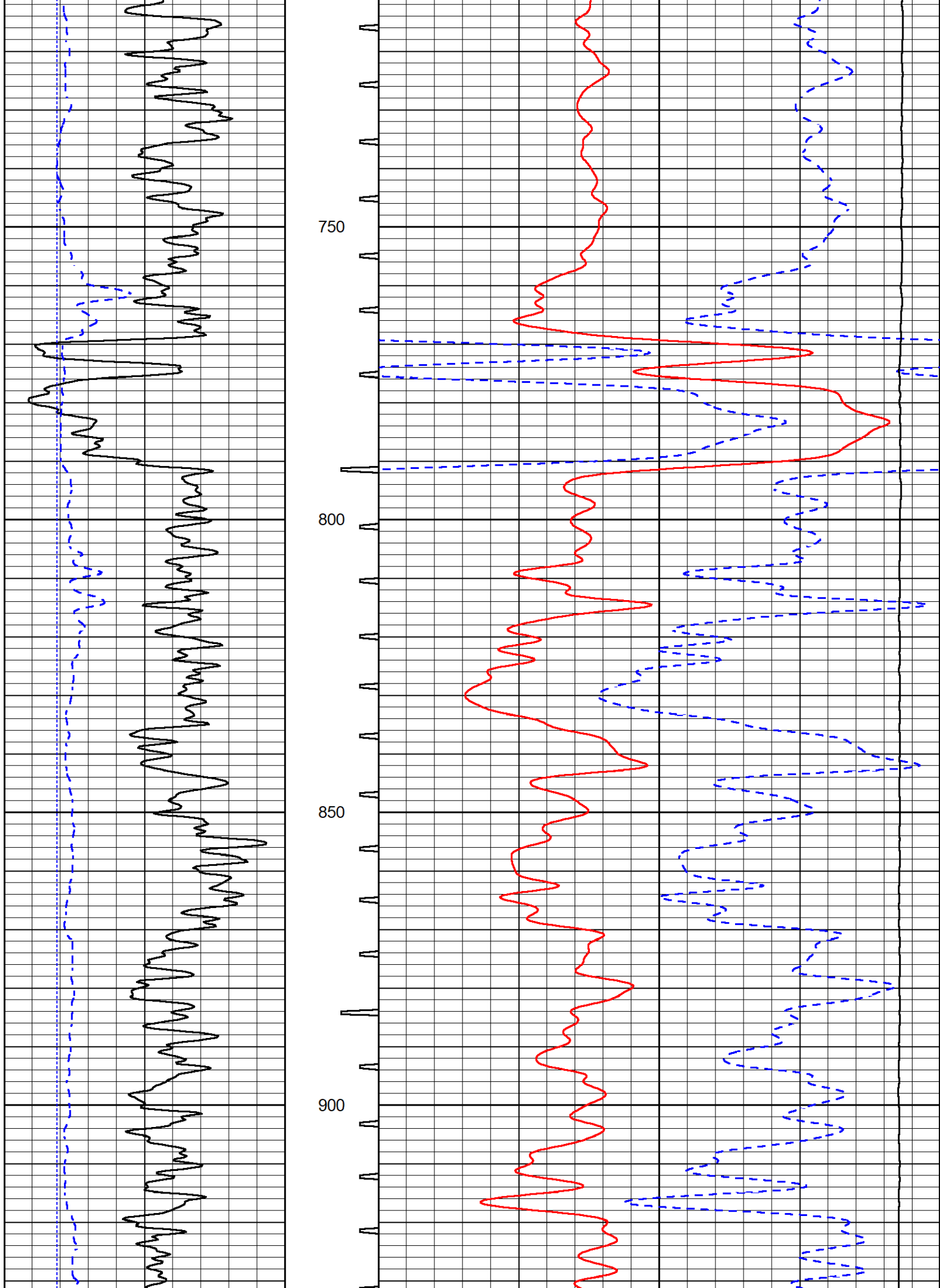
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 Dataset Pathname stkml/pass3.1  
 Presentation Format \_sonic  
 Dataset Creation Mon Oct 10 14:36:48 2022  
 Charted by Depth in Feet scaled 1:240

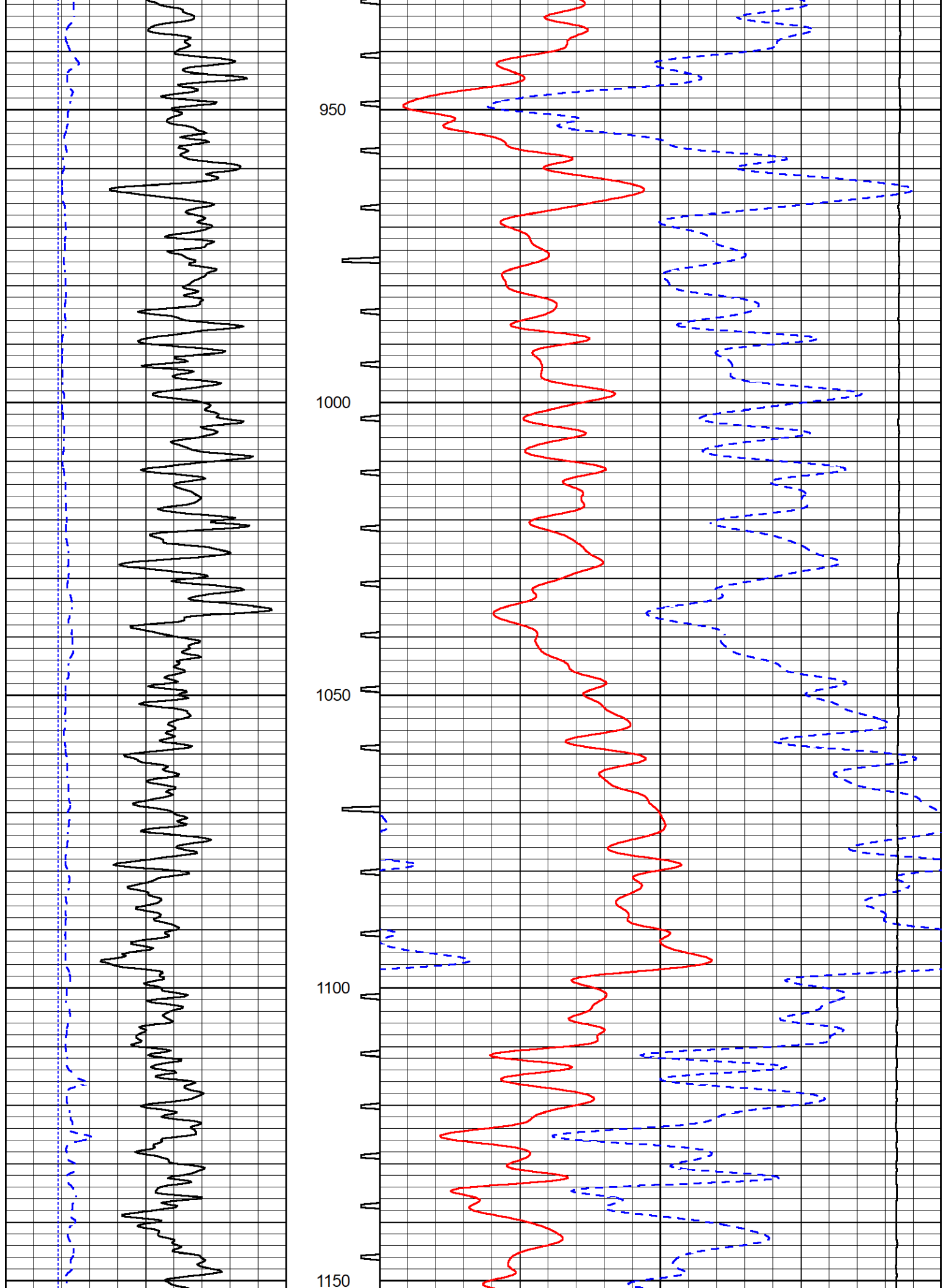
0	Gamma Ray (GAPI)	150	Sonic Int	140	Delta Time (usec/ft) (usec/ft)	40
150	GR (GAPI)	300	5 (msec) 0	30	Sonic Porosity (pu) (pu)	-10
6	Caliper (in)	16		15000	Line Tension (lb)	0

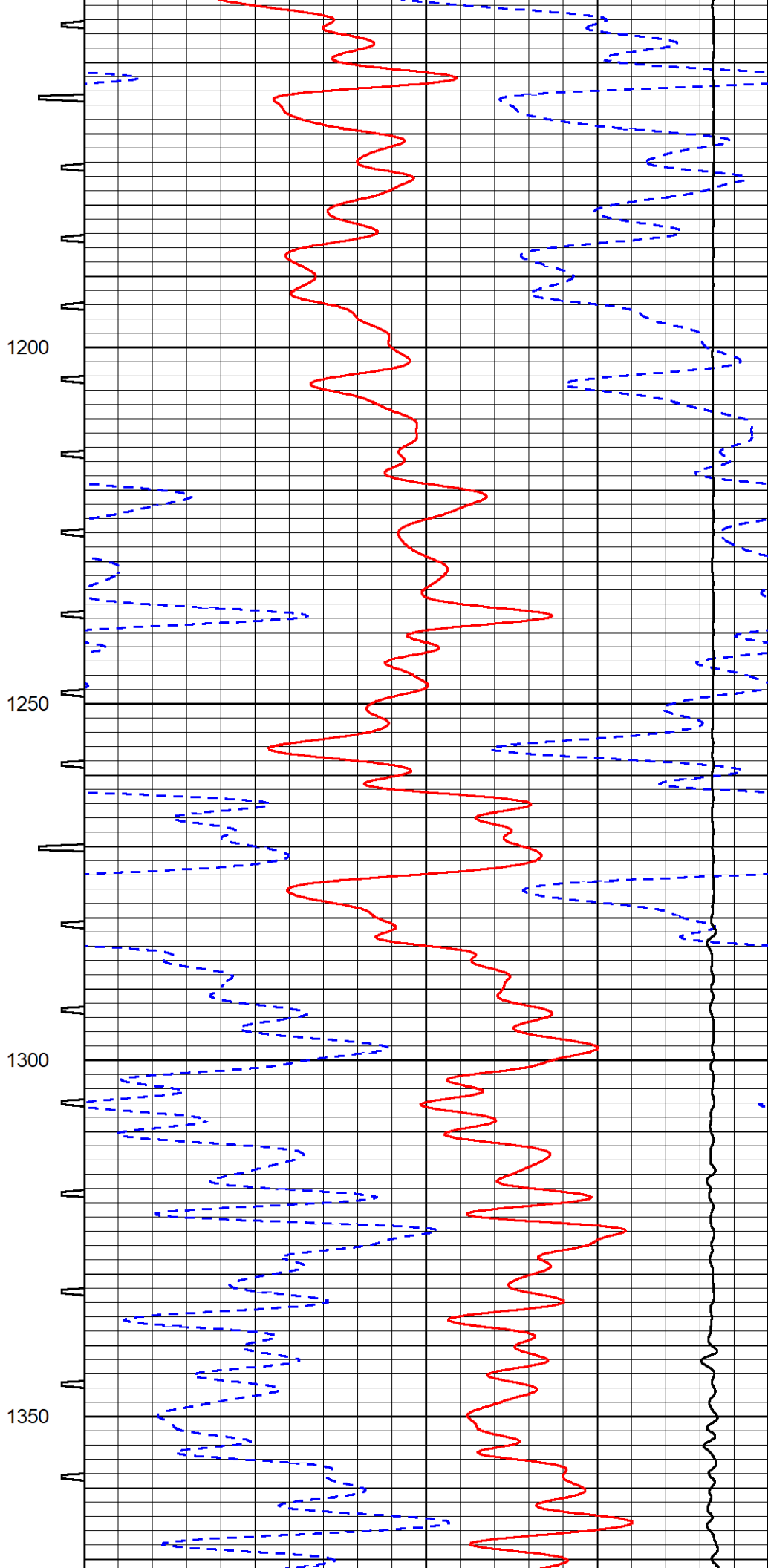
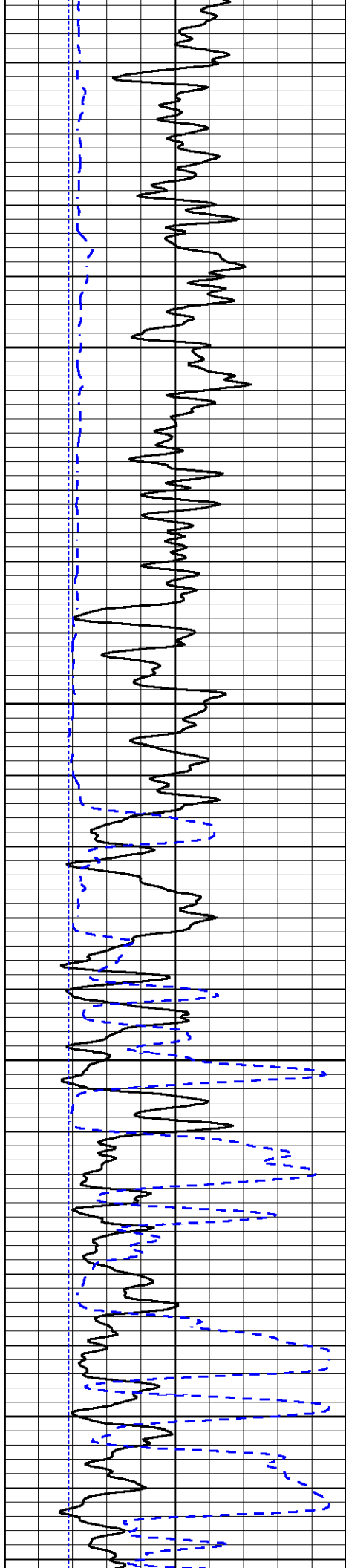


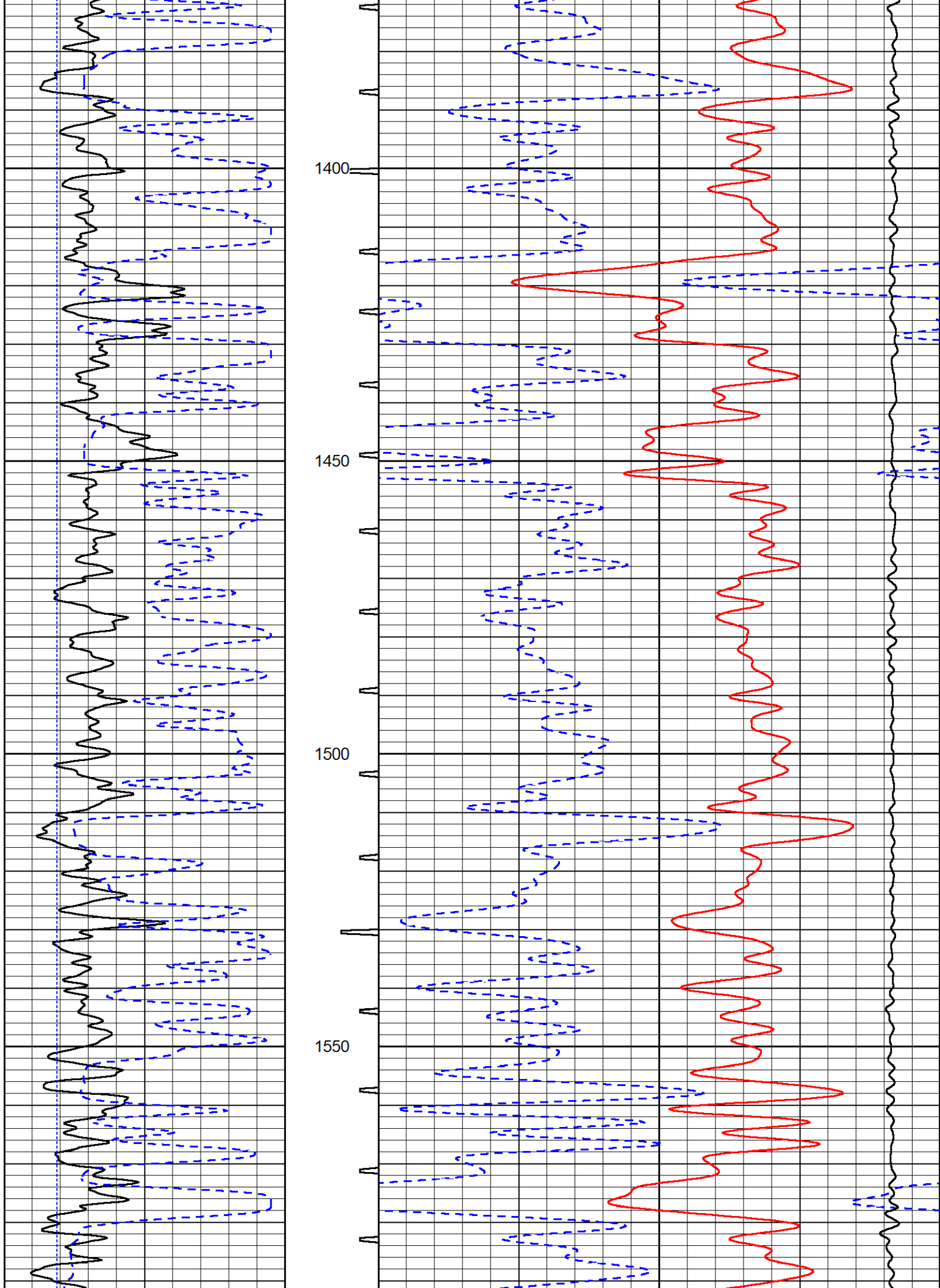


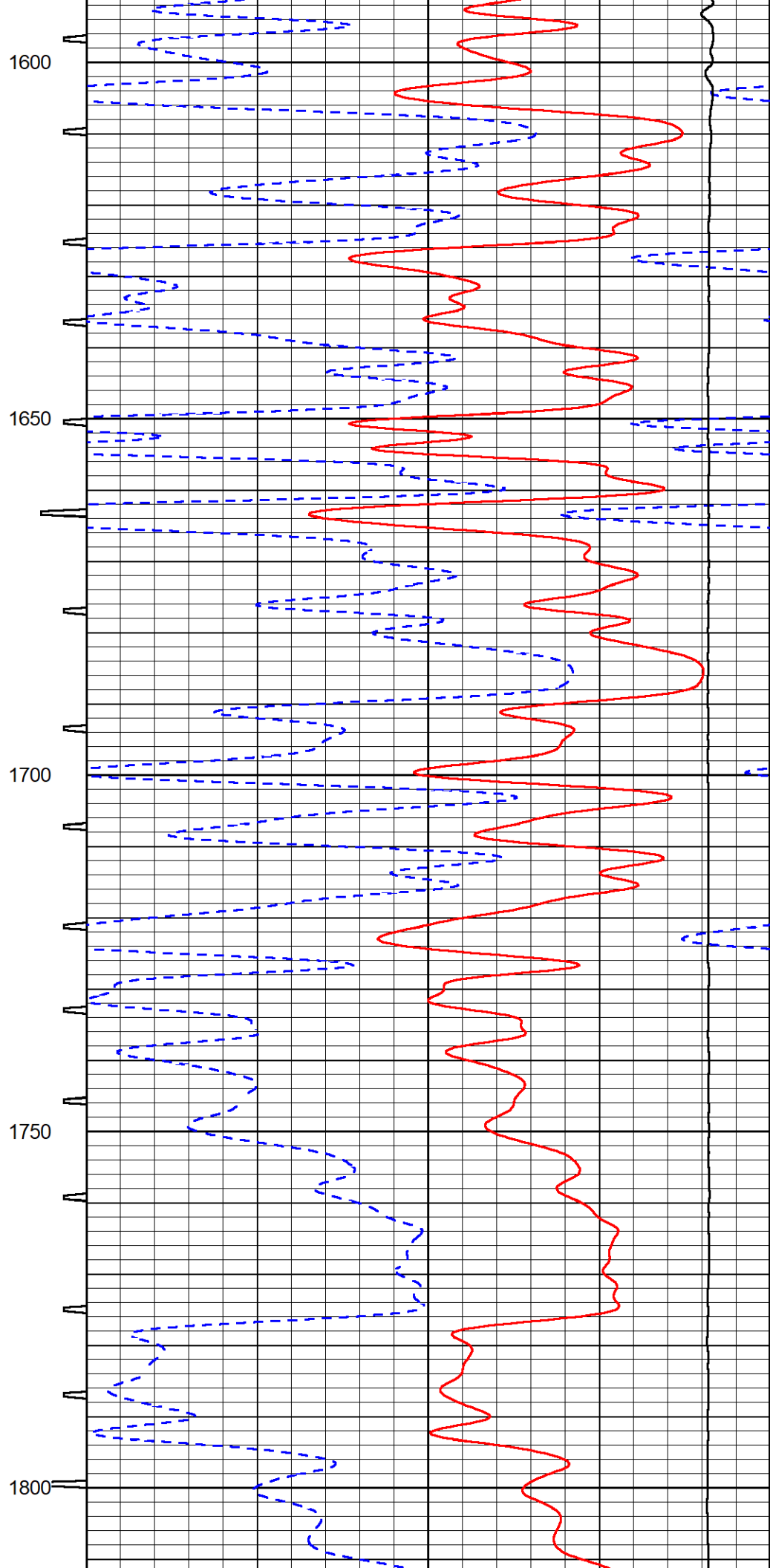
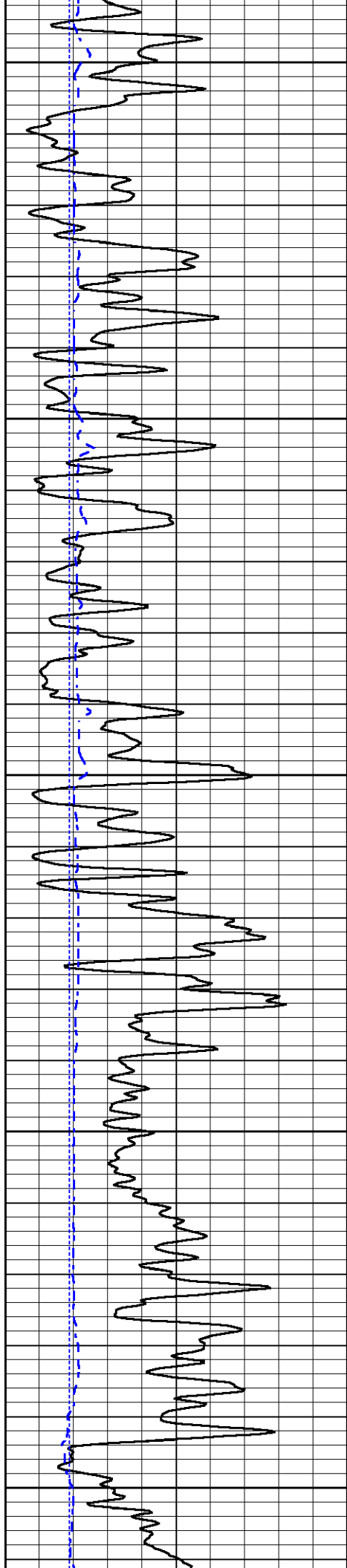


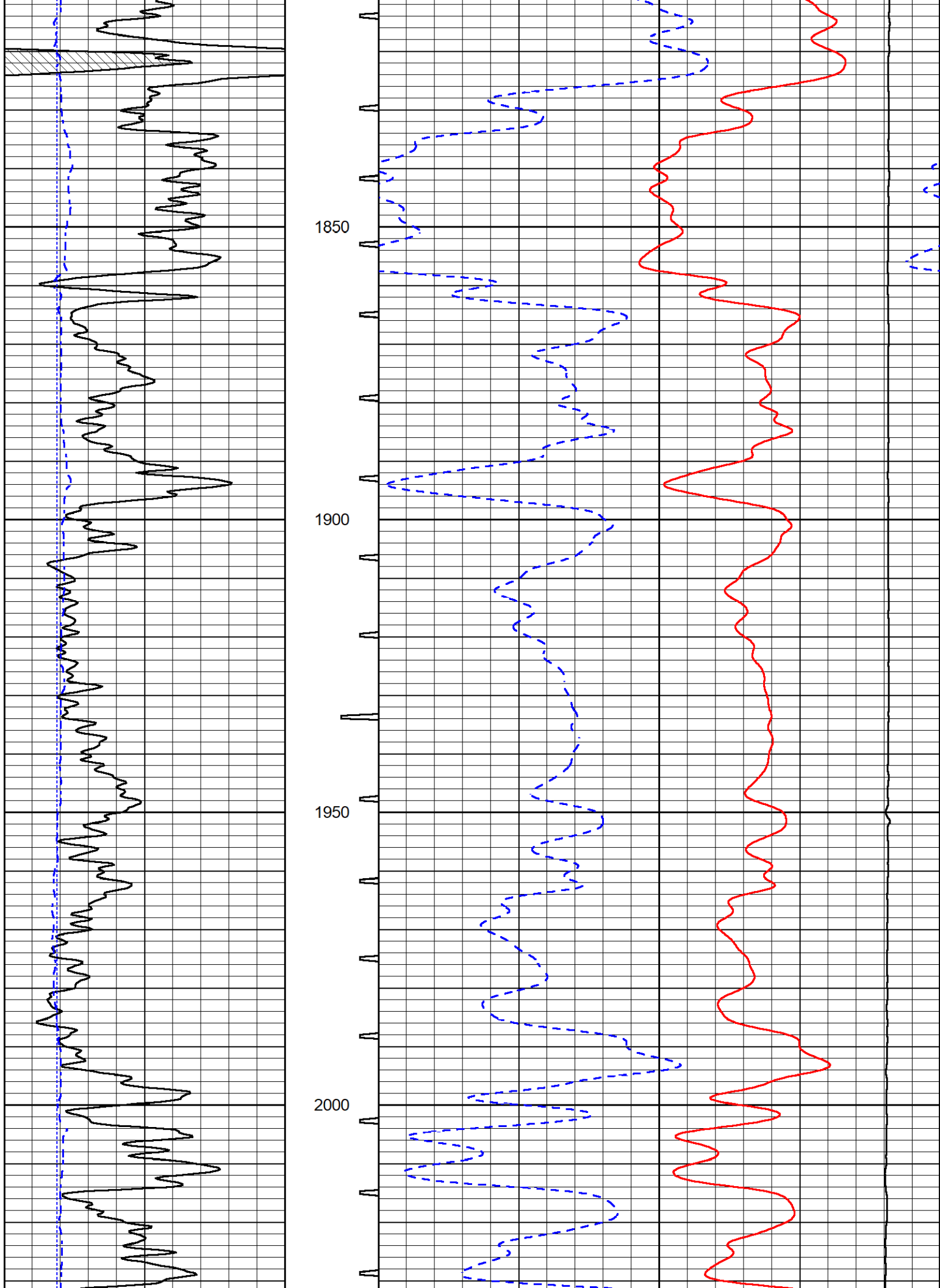


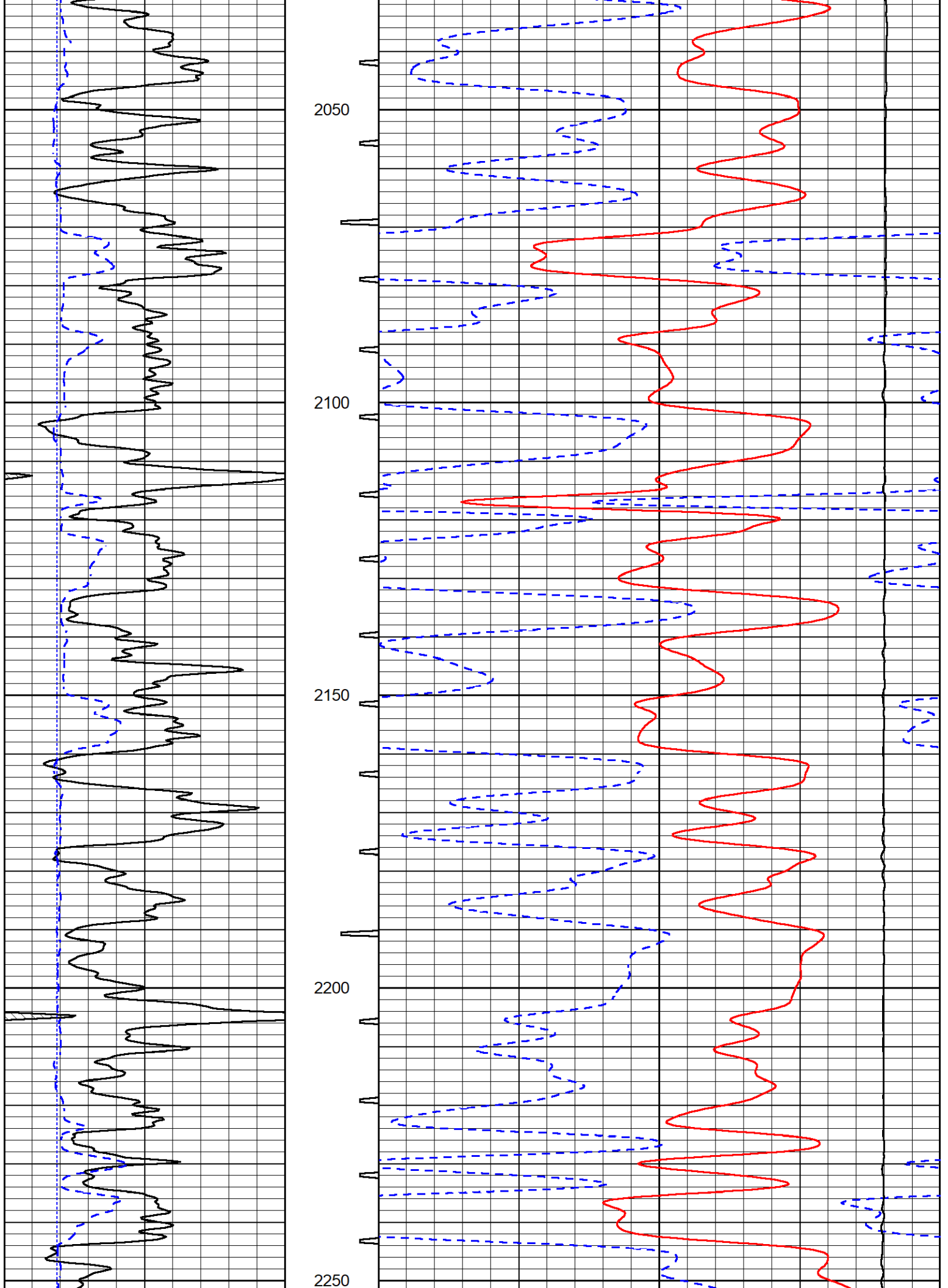


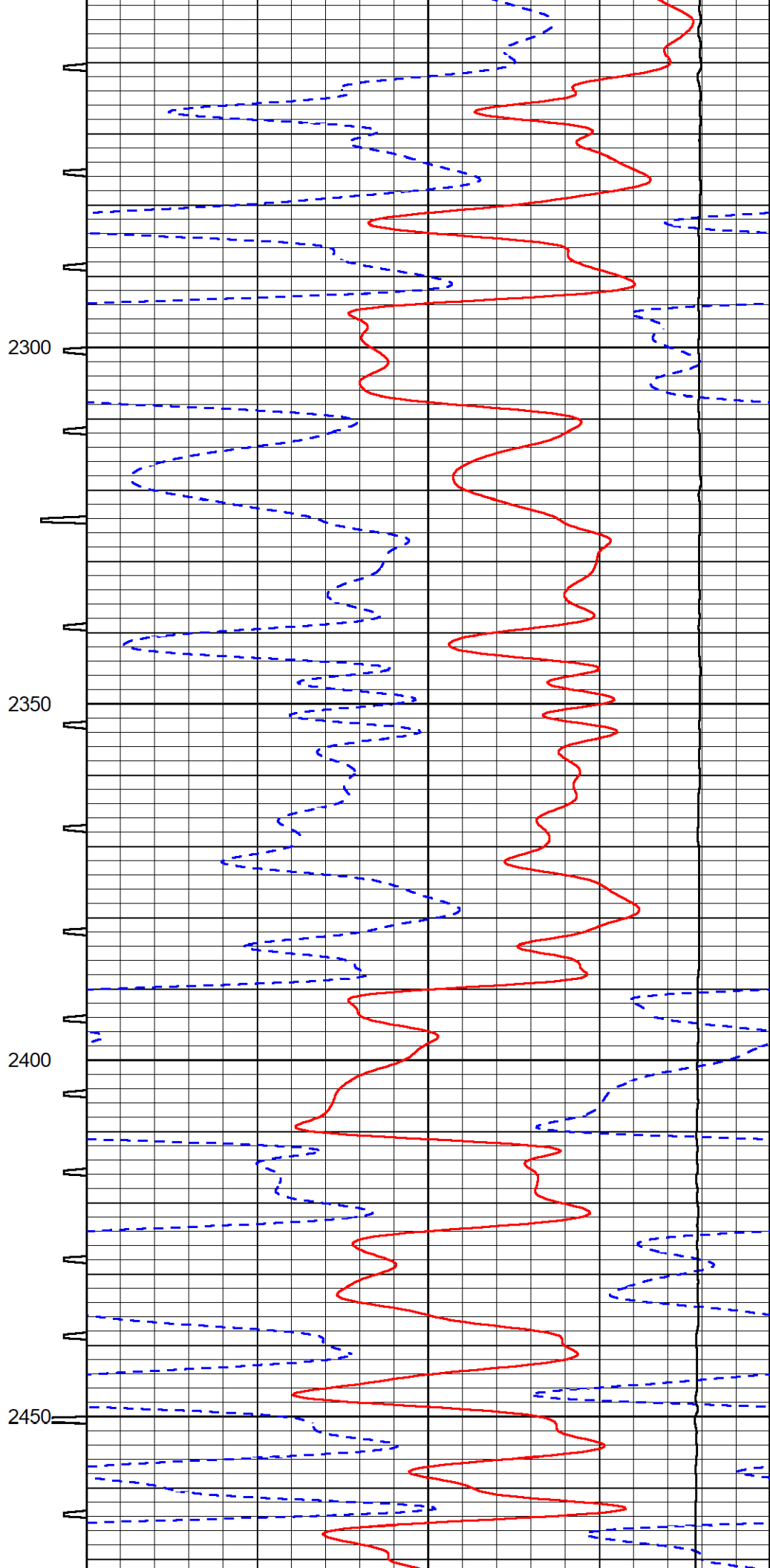
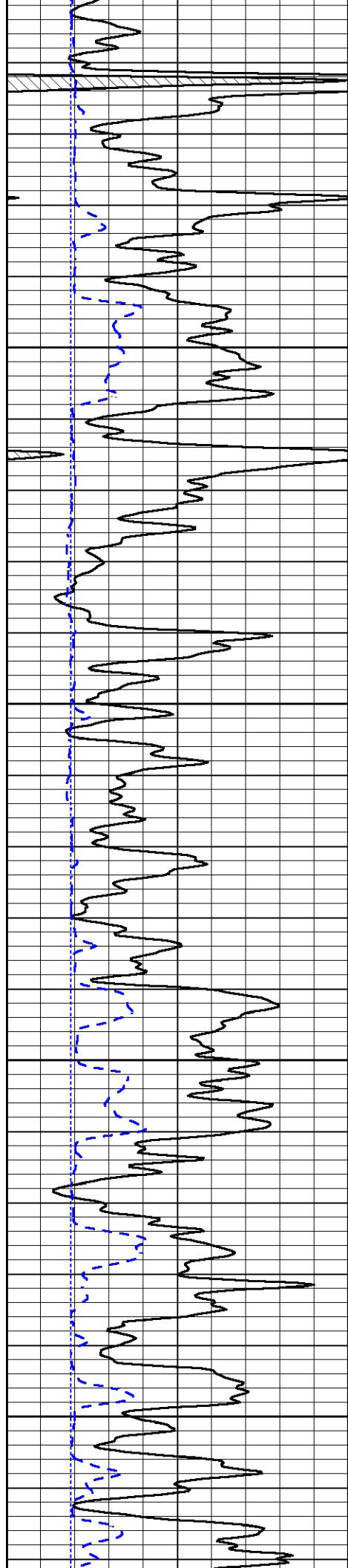


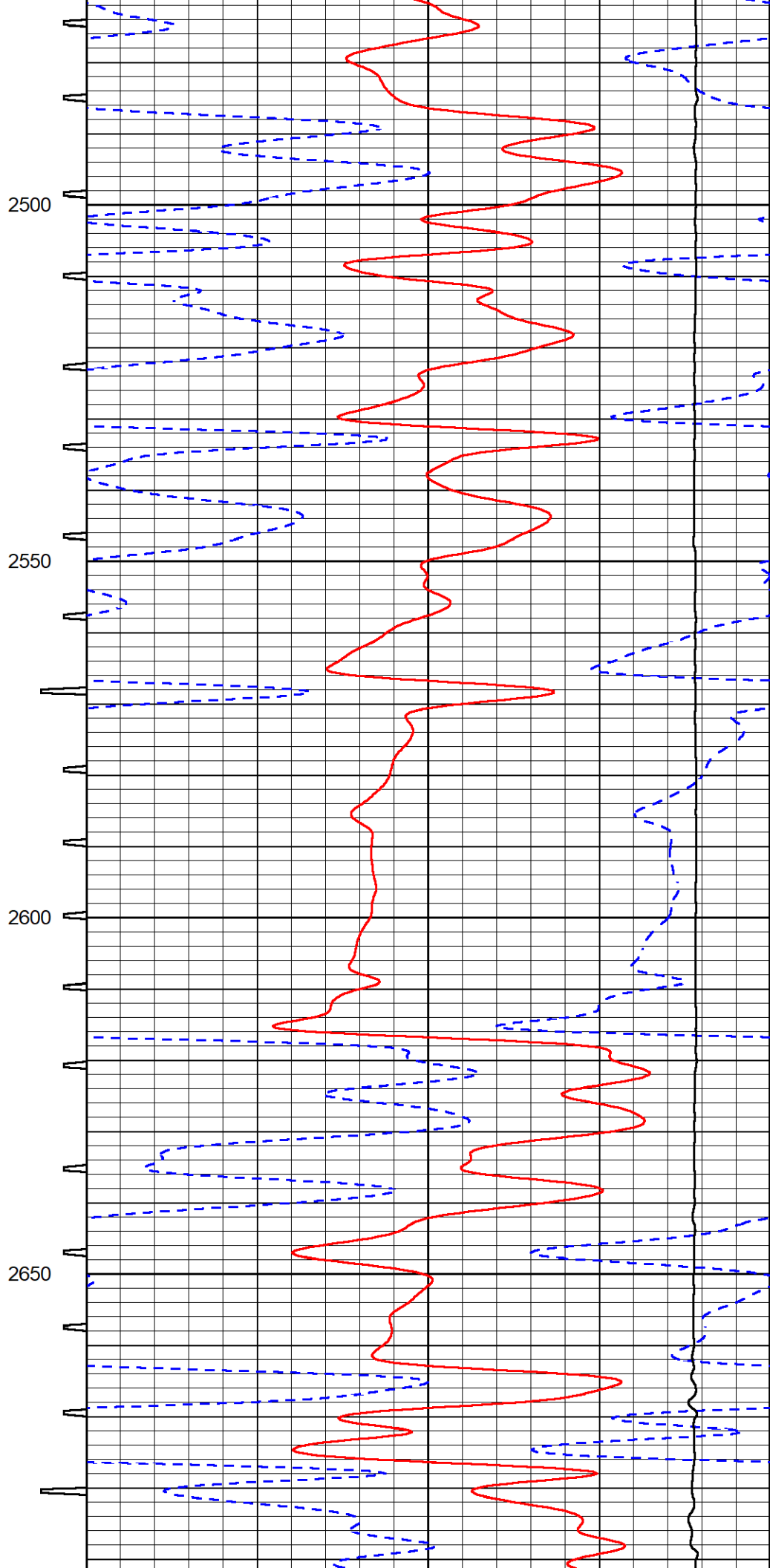
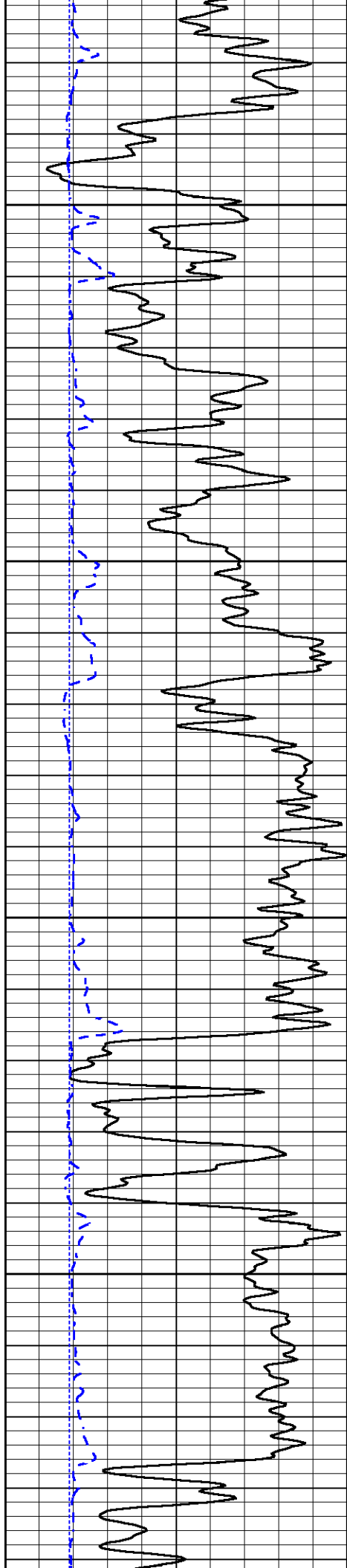


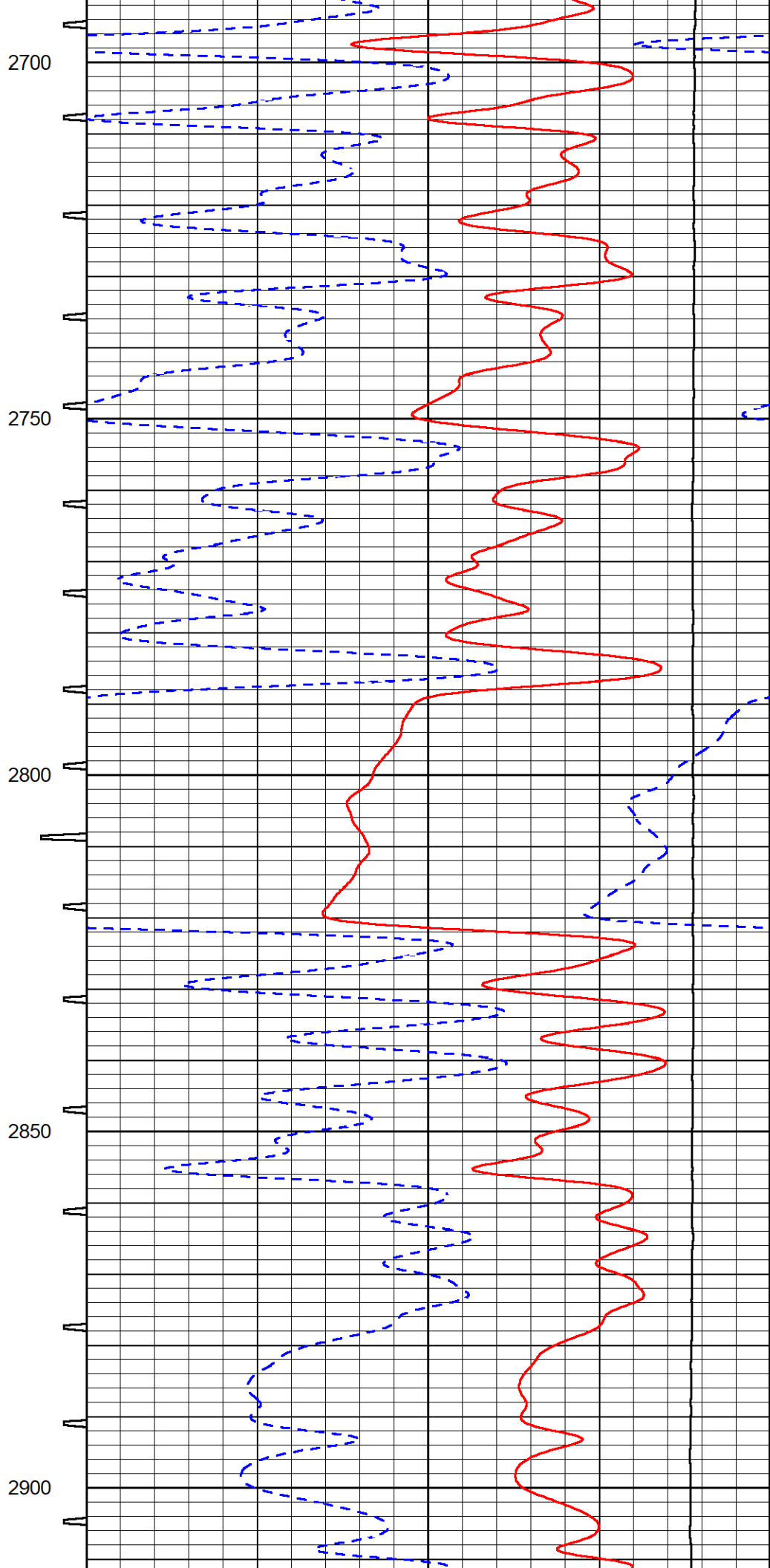
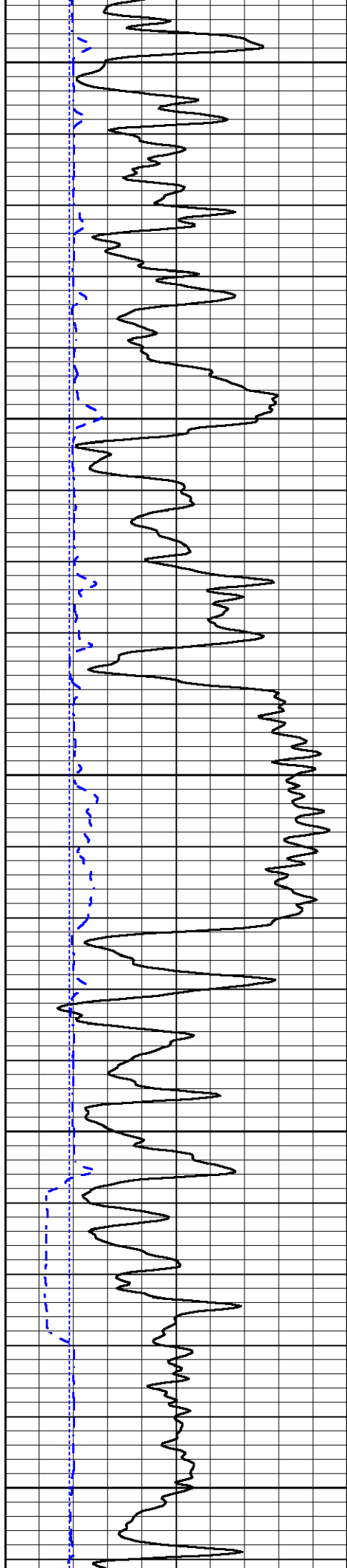


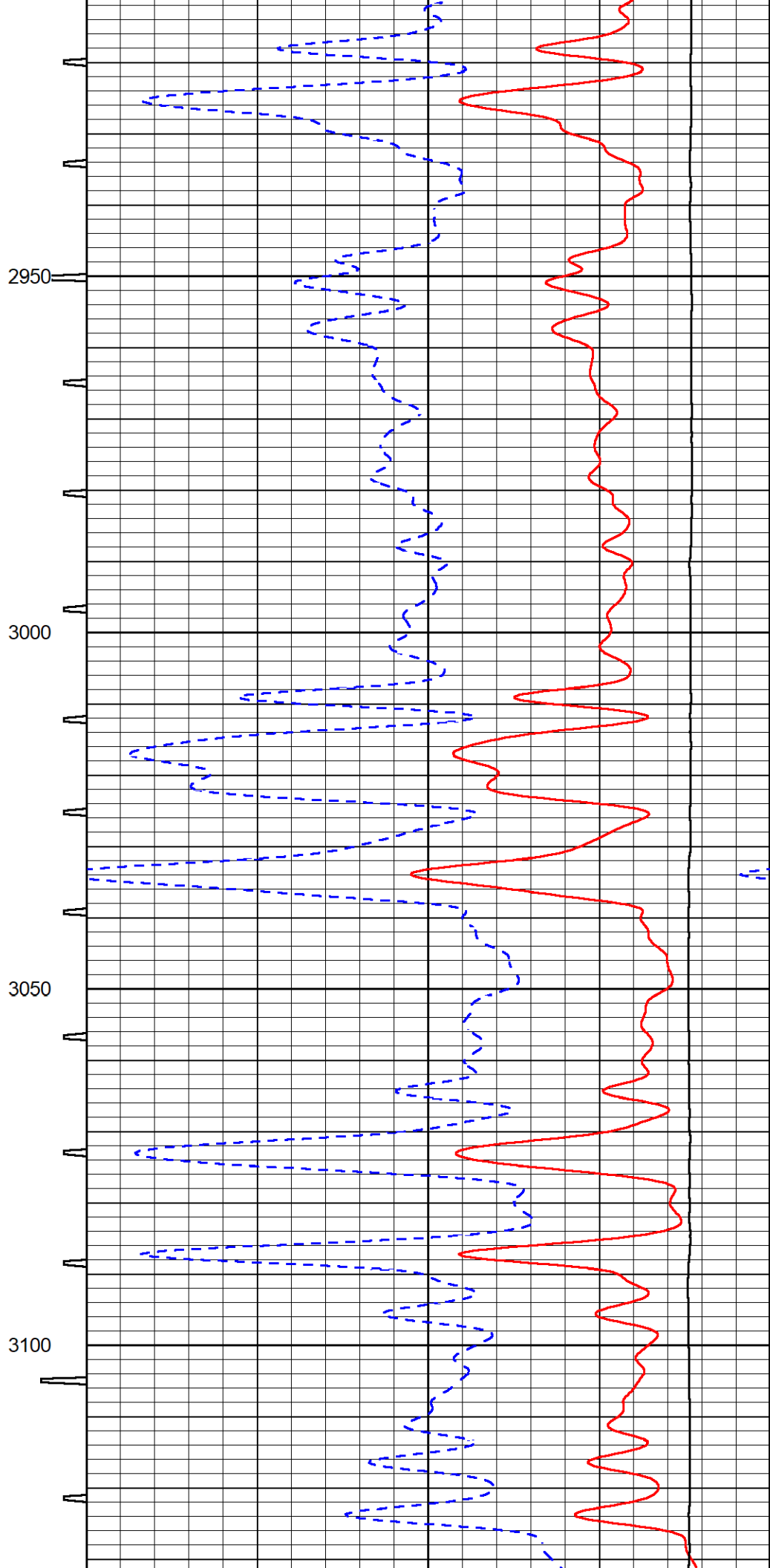
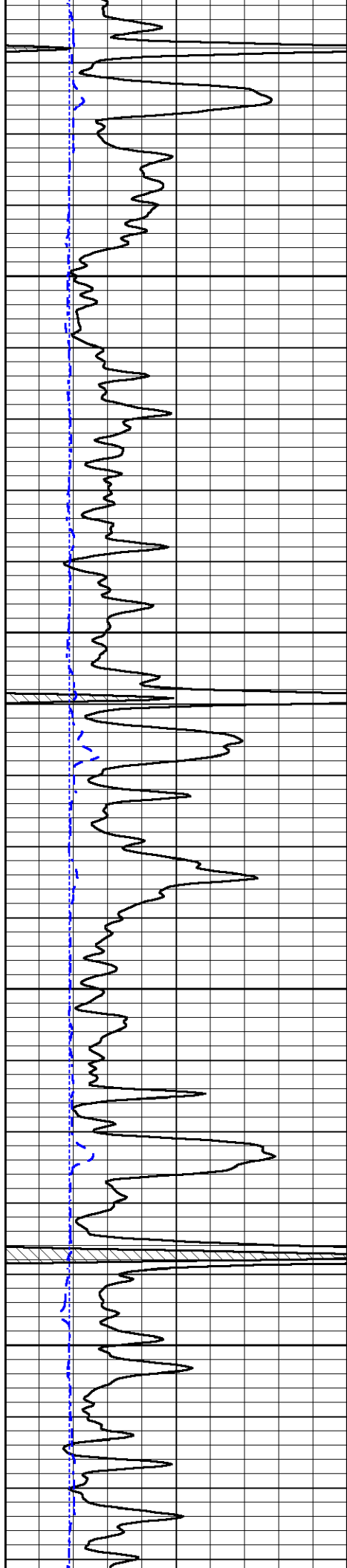


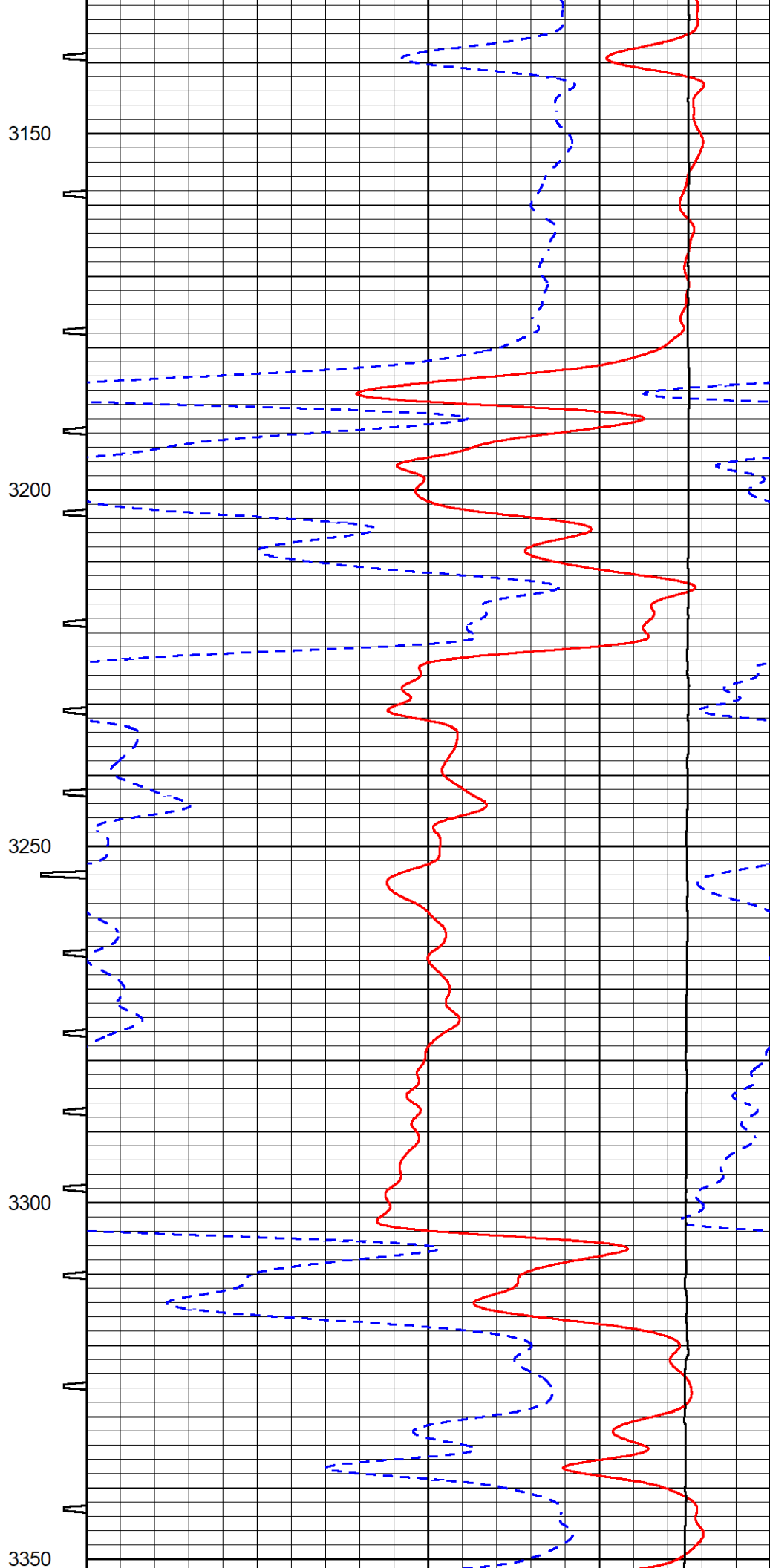
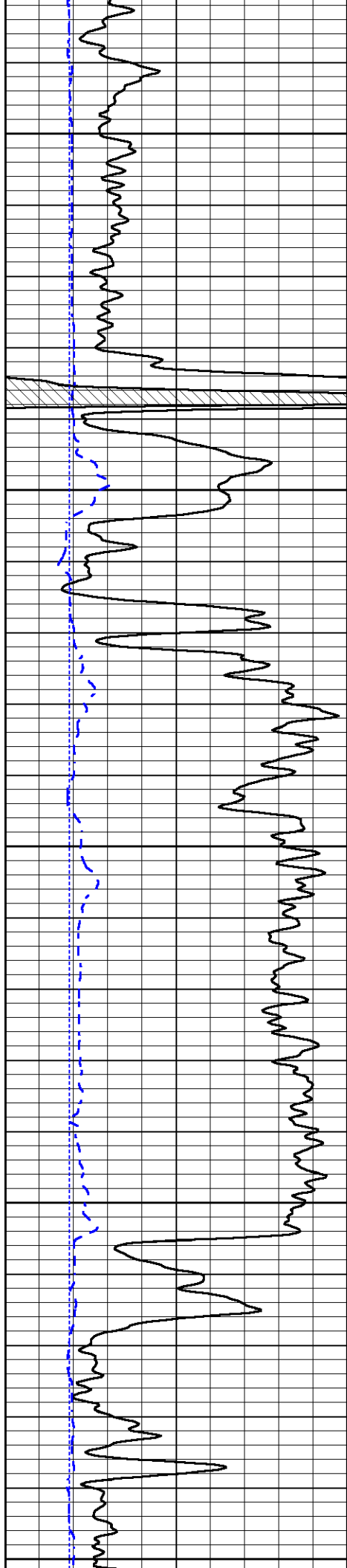


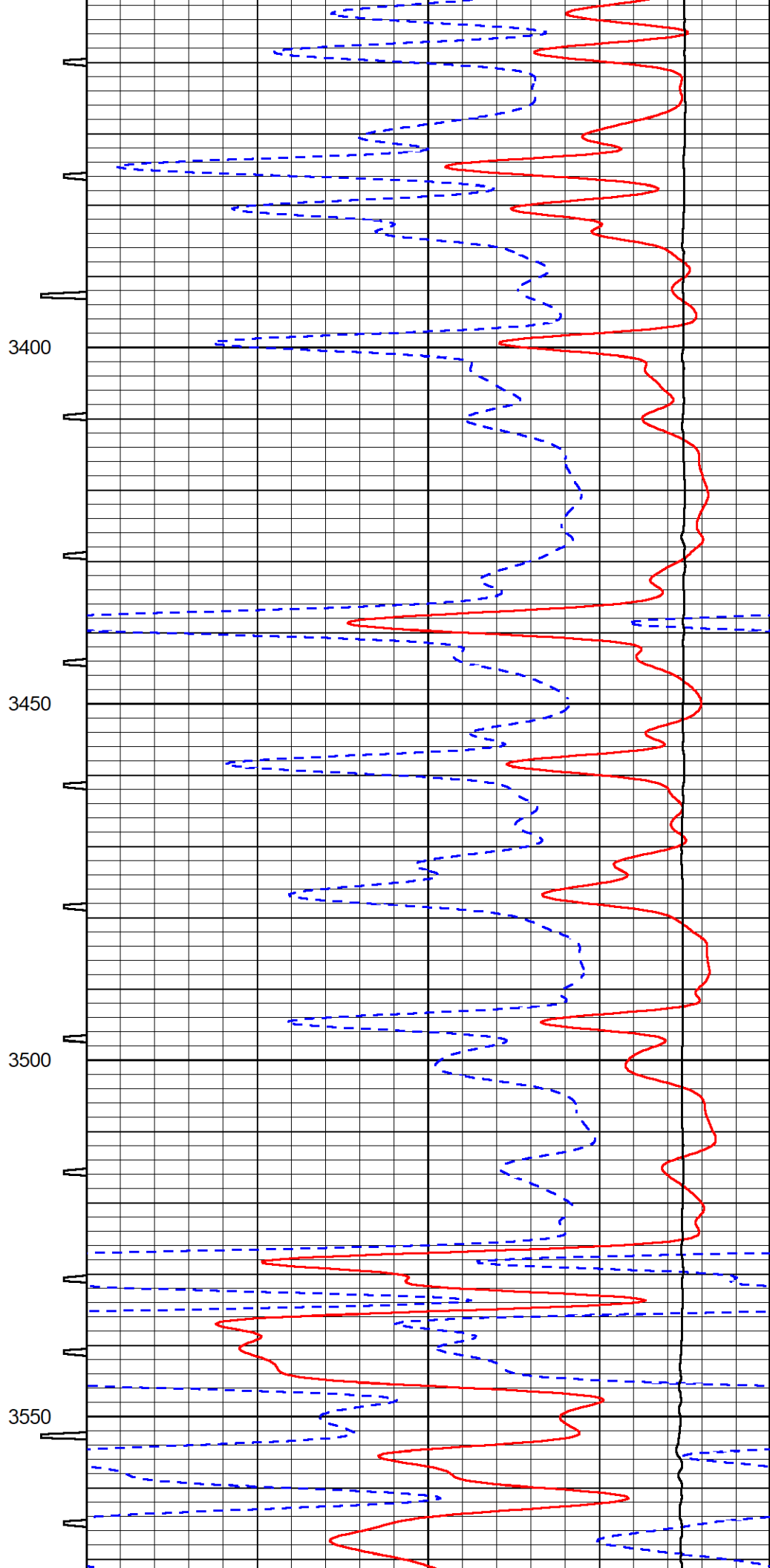
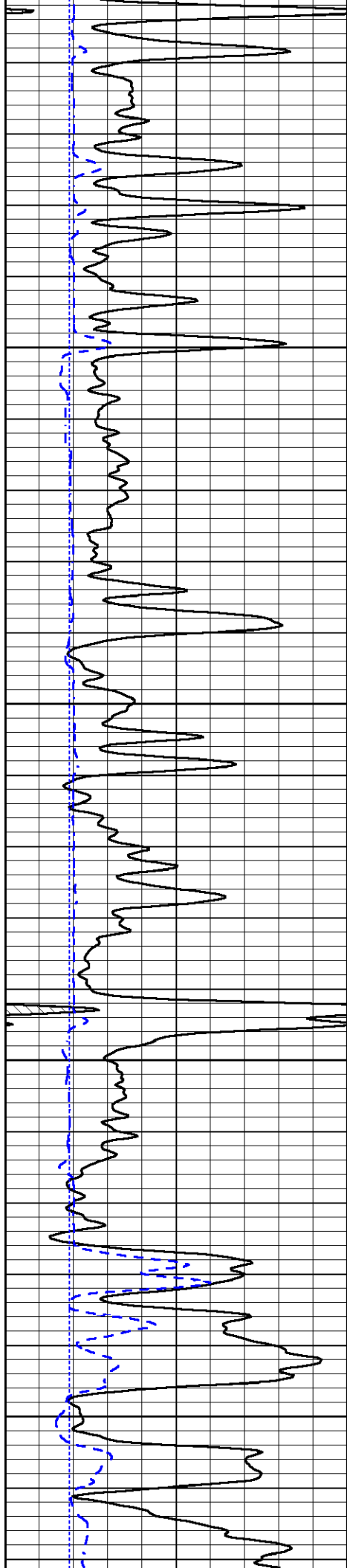


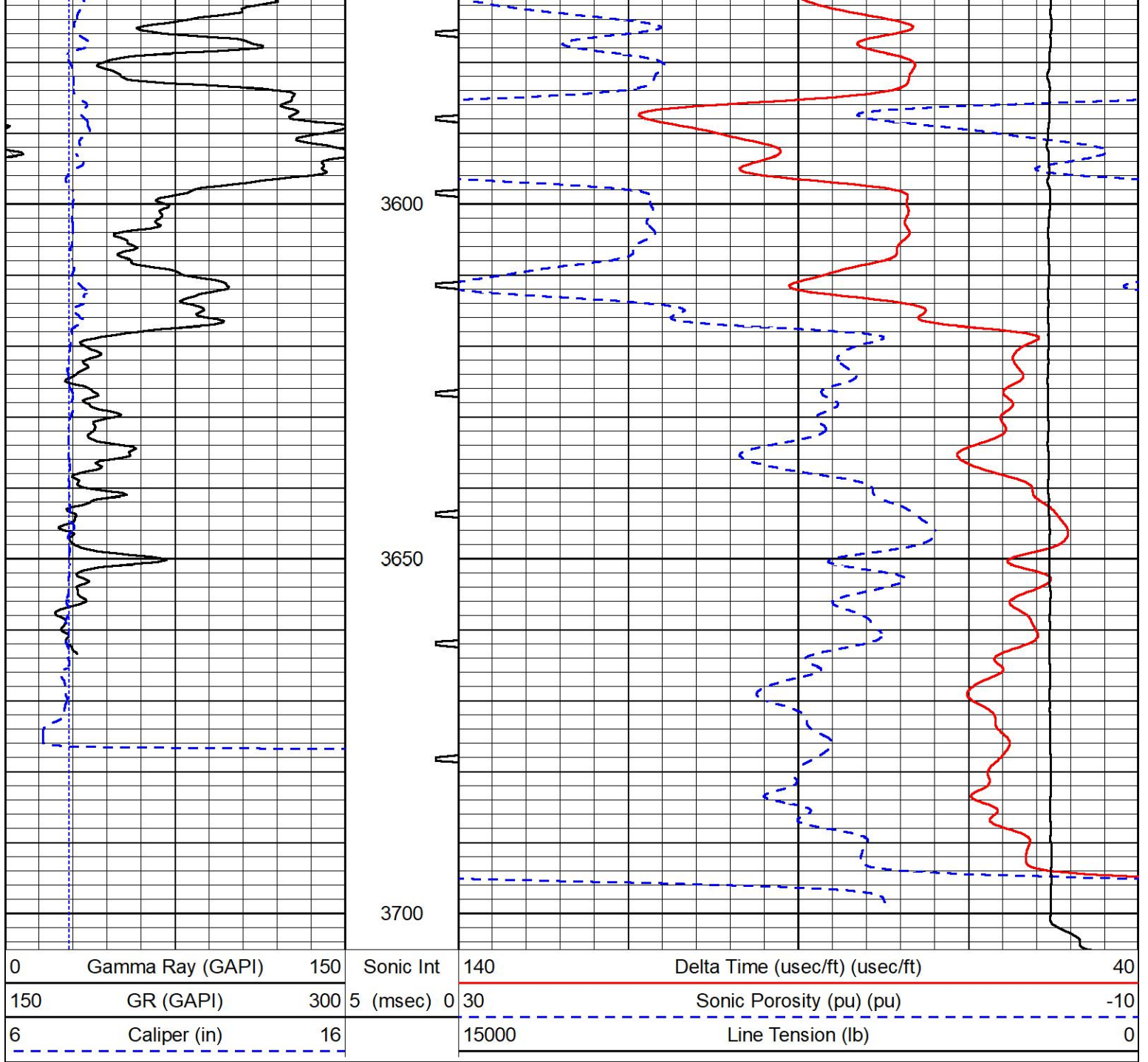










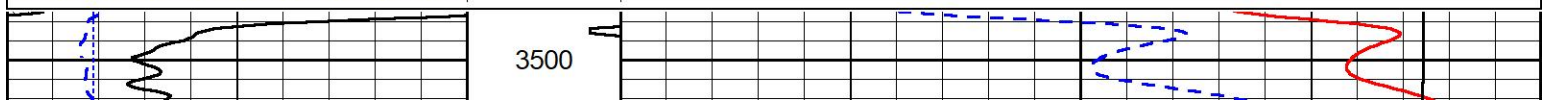


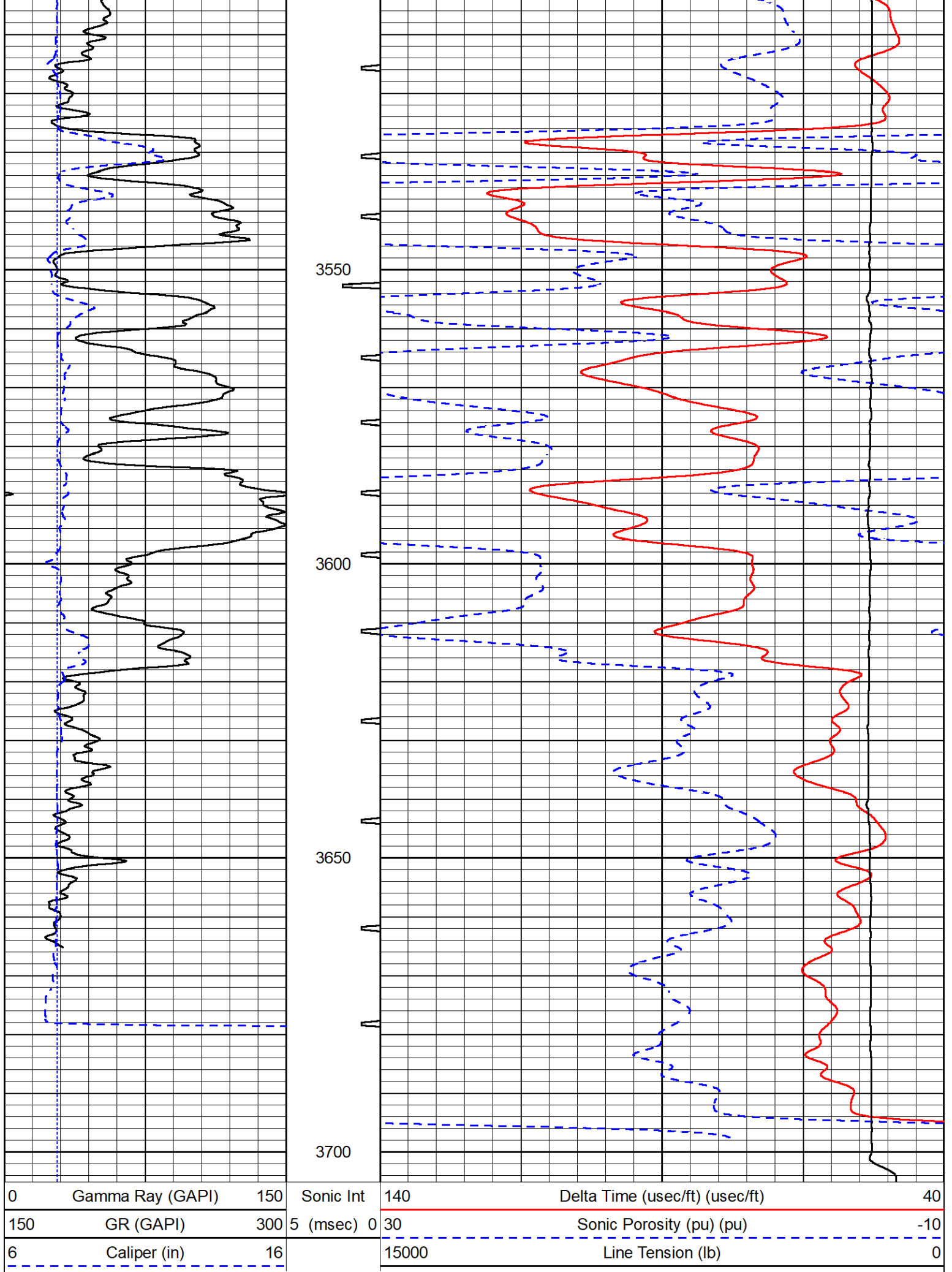
## REPEAT SECTION

### REPEAT PASS

Database File      darrah\_fanshier 1-4.db  
 Dataset Pathname    stkml/pass2.11  
 Presentation Format    \_sonic  
 Dataset Creation      Mon Oct 10 14:00:09 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





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Calibration Report

Database File darrah)\_fanshier 1-4.db  
 Dataset Pathname stkml/pass3.1  
 Dataset Creation Mon Oct 10 14:36:48 2022

Dual Induction Calibration Report

Serial-Model: 504 HT-M&W  
 Surface Cal Performed: Mon Aug 1 06:26:43 2022

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	178.615	710.235	0.000	255.800	mmho/m	0.680	-19.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-46.000

Microlog Calibration Report

Serial-Model: 401-PSI STKBL ML  
 Performed: Mon Oct 10 13:25:02 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	24000.0000	-1.8000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	27000.0000	-1.0000
Caliper	1.0049	1.0846	5.5000	20.0000	in	135.0000	-131.2500

Compensated Density Calibration Report

Serial-Model: 303-03-M&W  
 Source #: 21170B  
 Master Calibration Performed: Mon Oct 10 13:32:26 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.647	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.502		
	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



Company	Darrah Oil Company, LLC
Well	Fanshier #1-4
Field	Shaeffer-Rothgarn
County	Stafford
State	Kansas