



MIDWEST WIRELINE

# BOREHOLE COMPENSATED SONIC LOG

**Company** Castle Resources, Inc.  
**Well** Hund #1  
**Field** Newberry  
**County** Wabaunsee **State** Kansas

Company Castle Resources, Inc.  
 Well Hund #1  
 Field Newberry  
 County Wabaunsee  
 State Kansas

<b>Location:</b> 2260 FNL & 1300 FEL SEC 2 TWP 11S RGE 11E	<b>API #:</b> 15-197-20322-00-00 <b>Other Services:</b> CNL/CDL DIL/MEL
--	--

Date	3/28/2023			
Run Number	Two			
Type Log	BHCS			
Depth Driller	3203			
Depth Logger	3205			
Bottom Logged Interval	3193			
Top Logged Interval	250			
Type Fluid In Hole	Chemical			
Salinity, PPM CL	4000			
Density	9.6			
Level	Full			
Max. Rec. Temp. F	108			
Operating Rig Time	4 Hours			
Equipment -- Location	P-108   HAYS			
Recorded By	D. Schmidt			
Witnessed By	Jerry Green			

Borehole Record			Casing Record				
Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25	0	300	8.625	23	0	300
Two	7.875	300	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.**

I-70 and Paxico Rd,  
 5 North to Homestead Rd, 1 East,  
 1/4 North, West and North to location

Log Measured From: Kelly Bushing                      5 Ft. Above Permanent Datum

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

<b>Your Midwest Wireline Crew</b> Engineer: D. Schmidt Operator: Operator: Operator:	<b>This Log Record Was Witnessed By</b> Primary Witness: Jerry Green 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
WWF4 WWF1	12.50 12.50		SLT-PENGO Short (607)	16.00	3.50	300.00
WWF3 WWF2	10.50 10.50					
			CENT-PENGO	4.25	3.00	70.00

Dataset: castle\_hund1.db: field/well/son/pass2  
 Total length: 24.50 ft  
 Total weight: 440.00 lb  
 O.D.: 3.50 in

# Log Variables

DatabaseC:\ProgramData\Warrior\Data\castle\_hund1.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	108	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	No	-8	-0.2	250	50	Off	3203

## 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

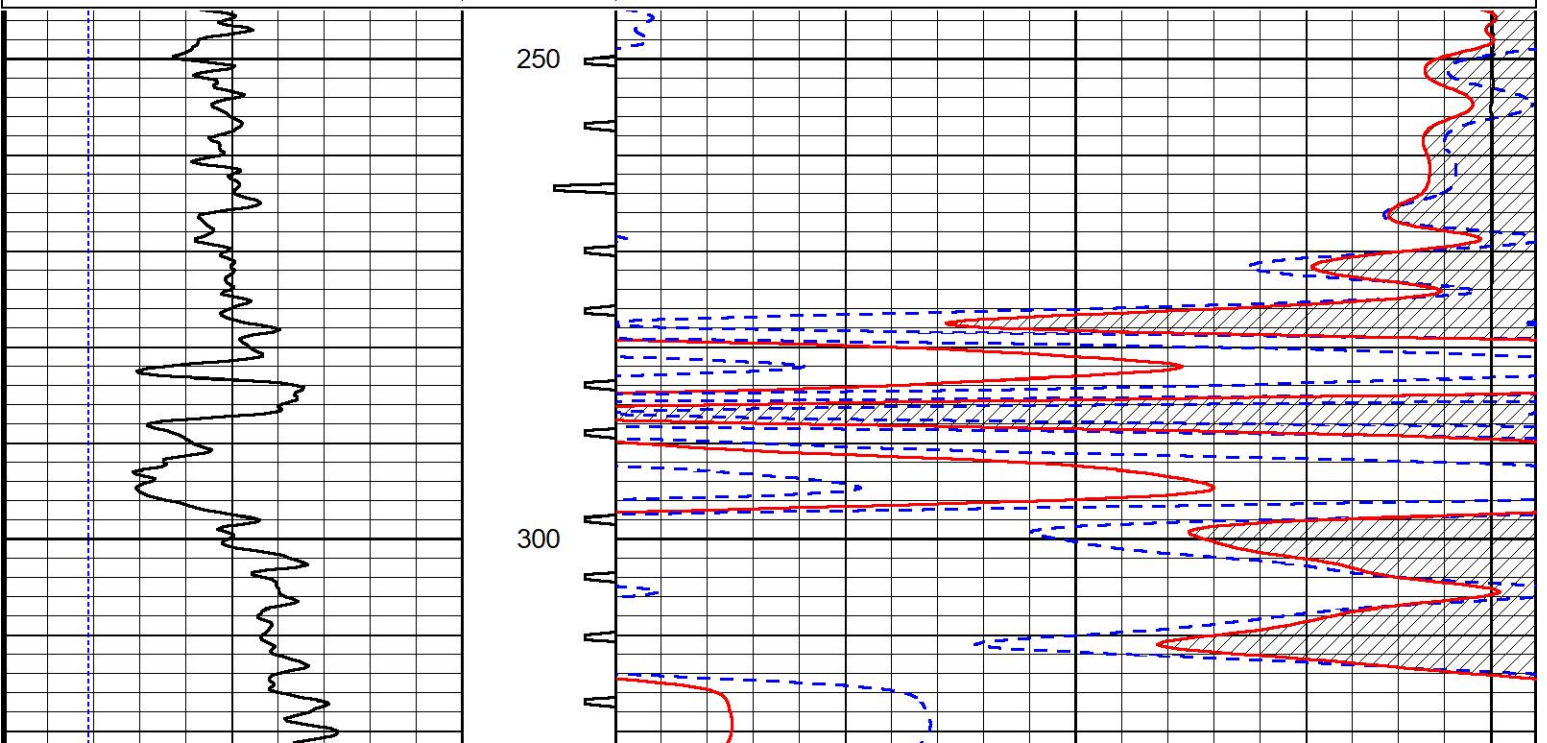


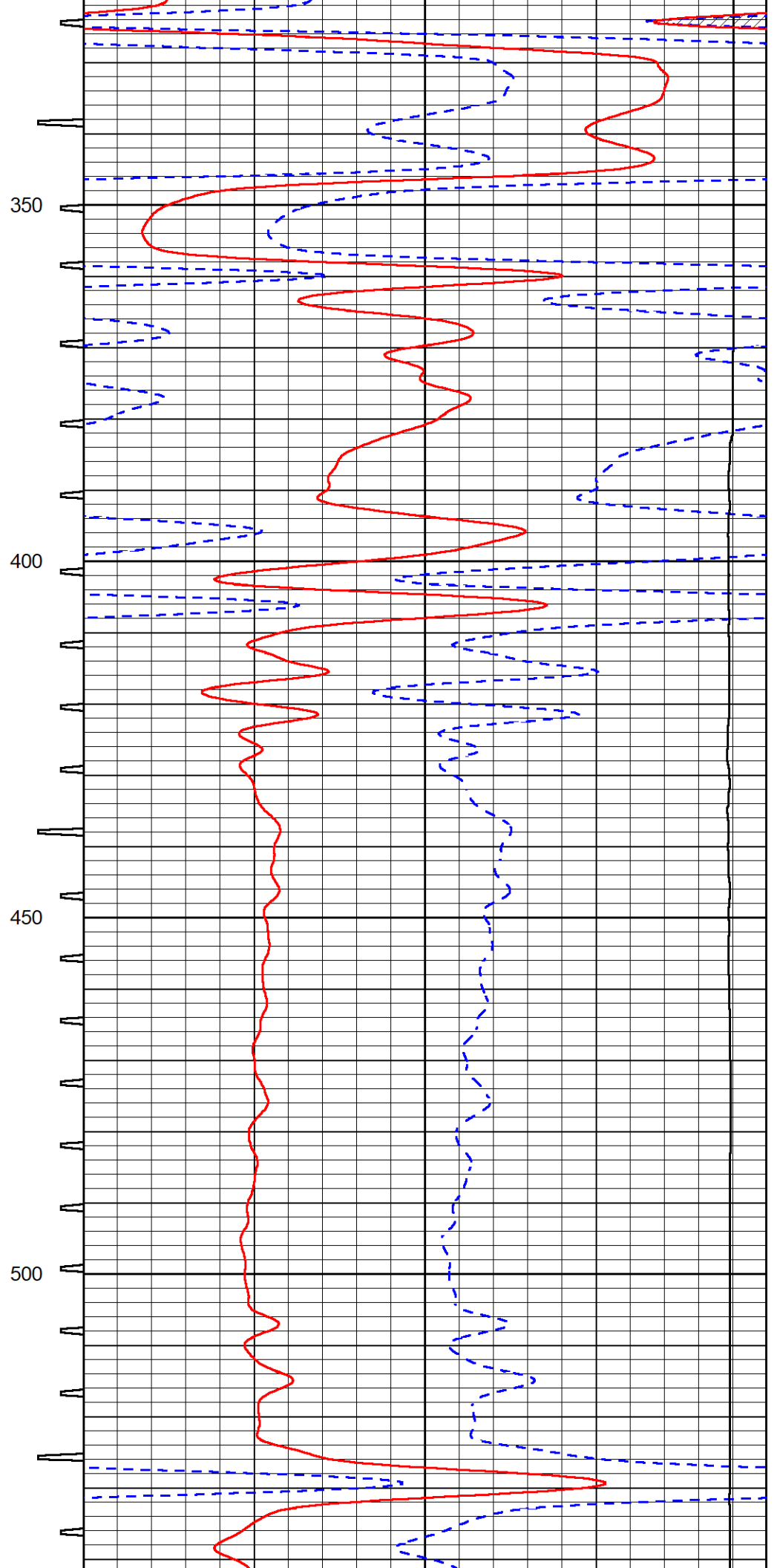
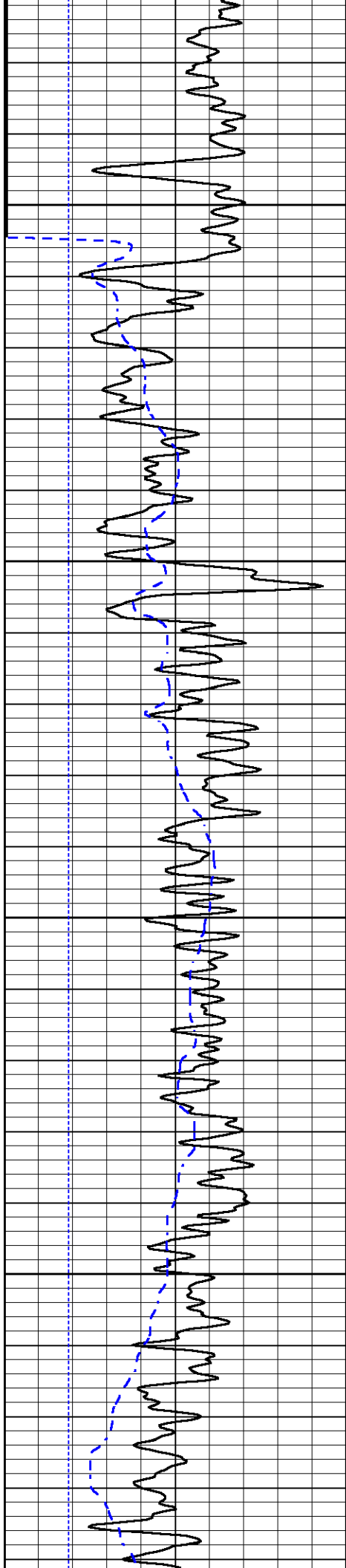
## DETAIL SECTION

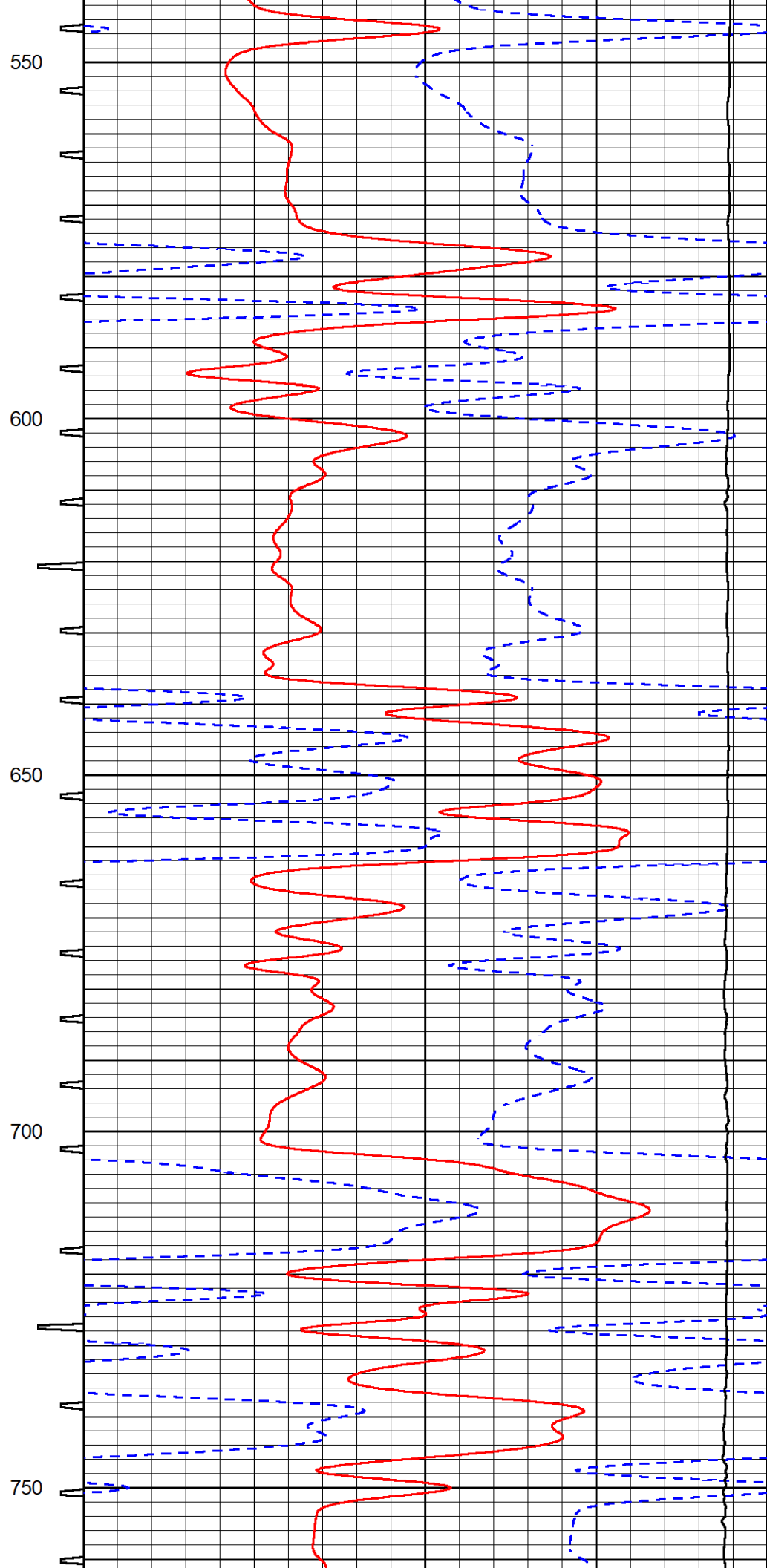
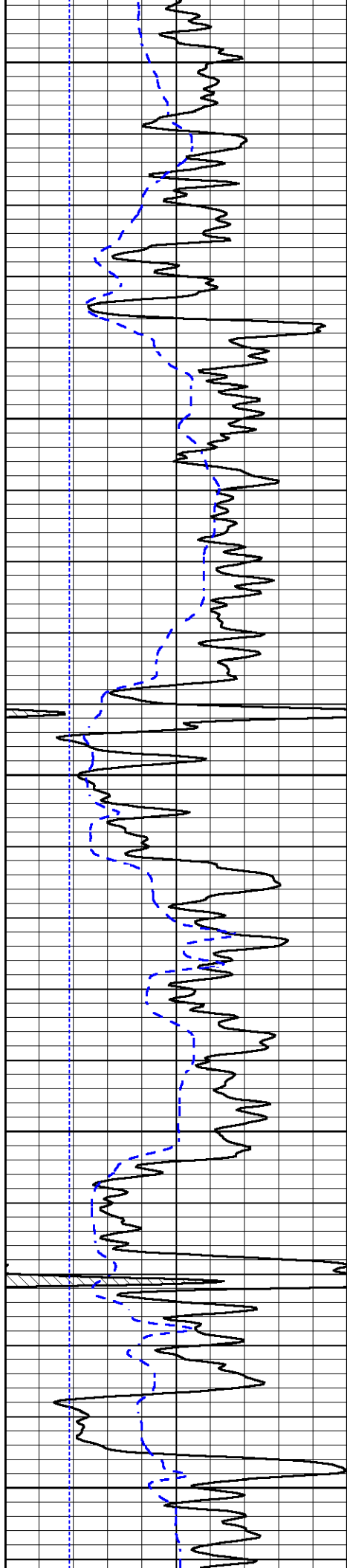
### MAIN PASS

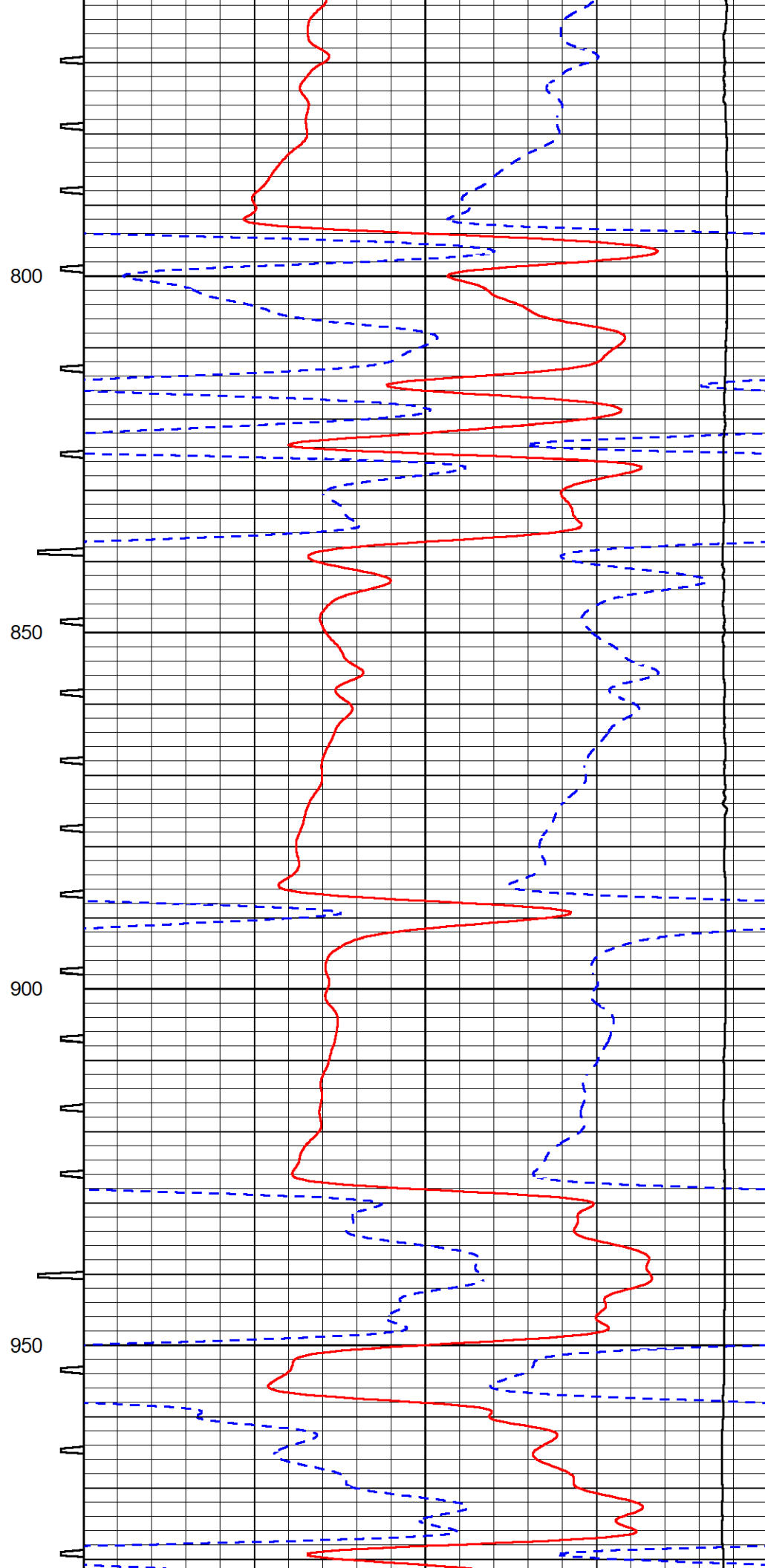
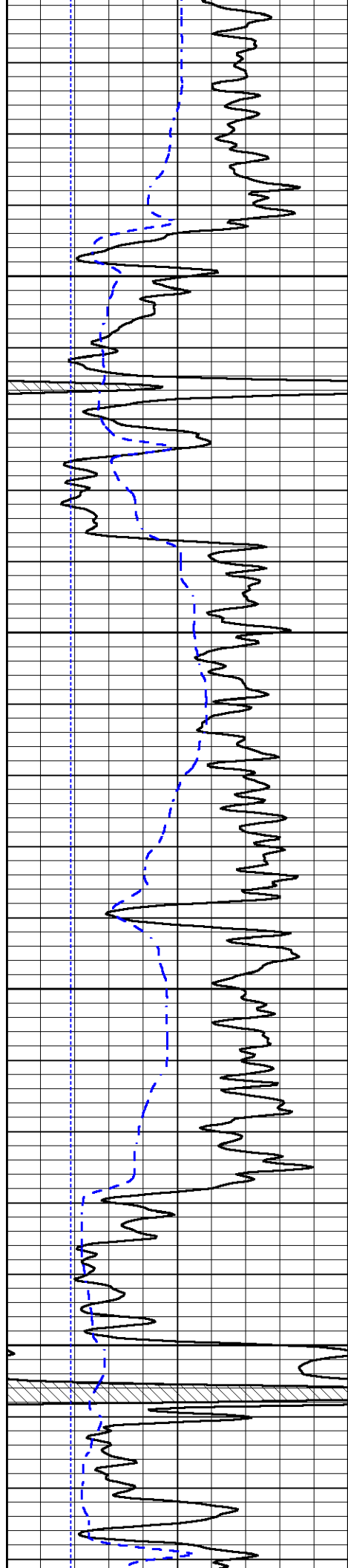
Database File castle\_hund1.db  
 Dataset Pathname stkml/pass3.1  
 Presentation Format \_sonic  
 Dataset Creation Tue Mar 28 19:45:01 2023  
 Charted by Depth in Feet scaled 1:240

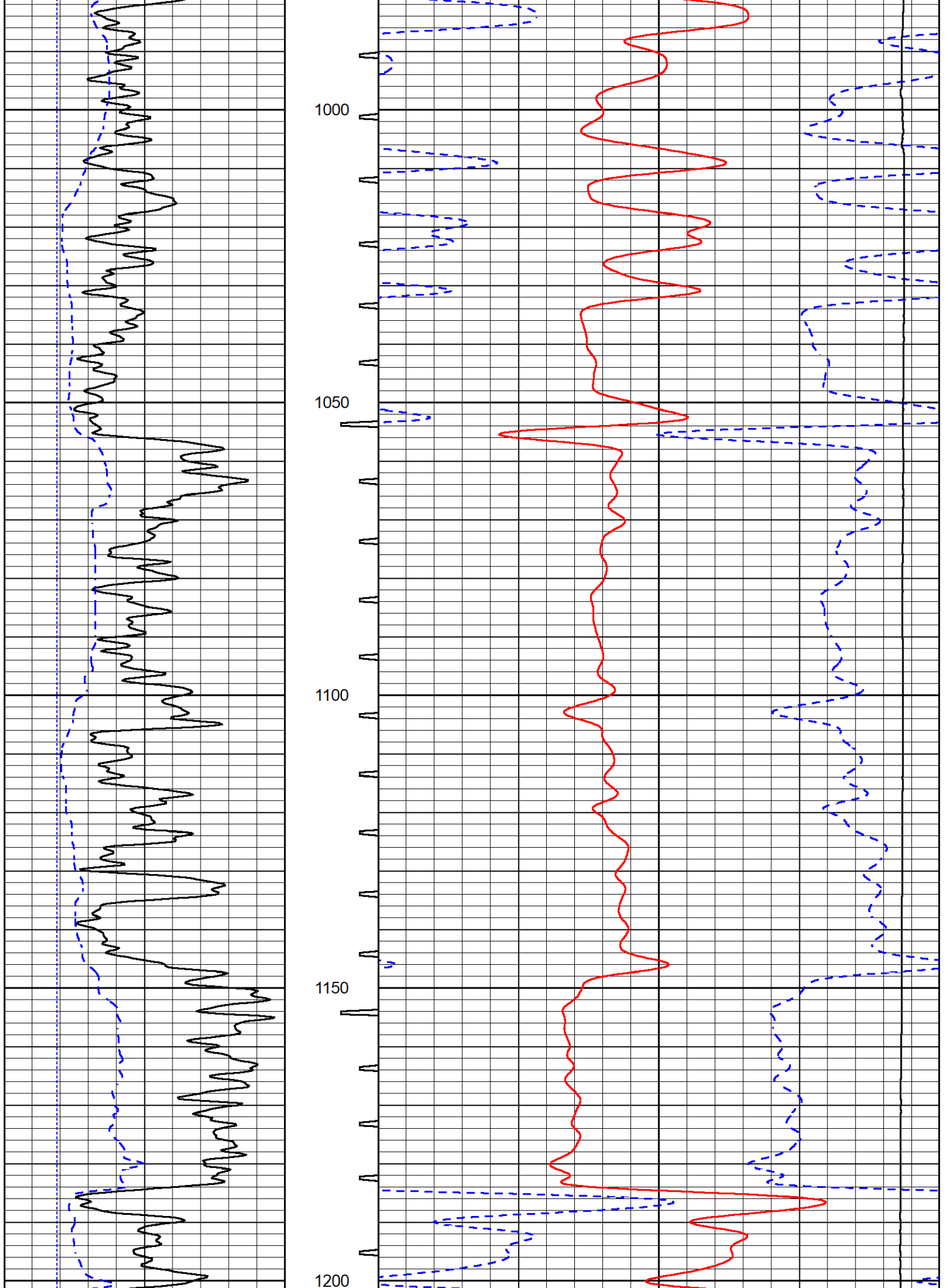
0	Gamma Ray (GAPI)	150	Sonic Int	140	Delta Time (usec/ft) (usec/ft)	40
150	GR (GAPI)	300	5 (msec) 0	30	Sonic Porosity (pu) (pu)	-10
6	Caliper (in)	16		15000	Line Tension (lb)	0

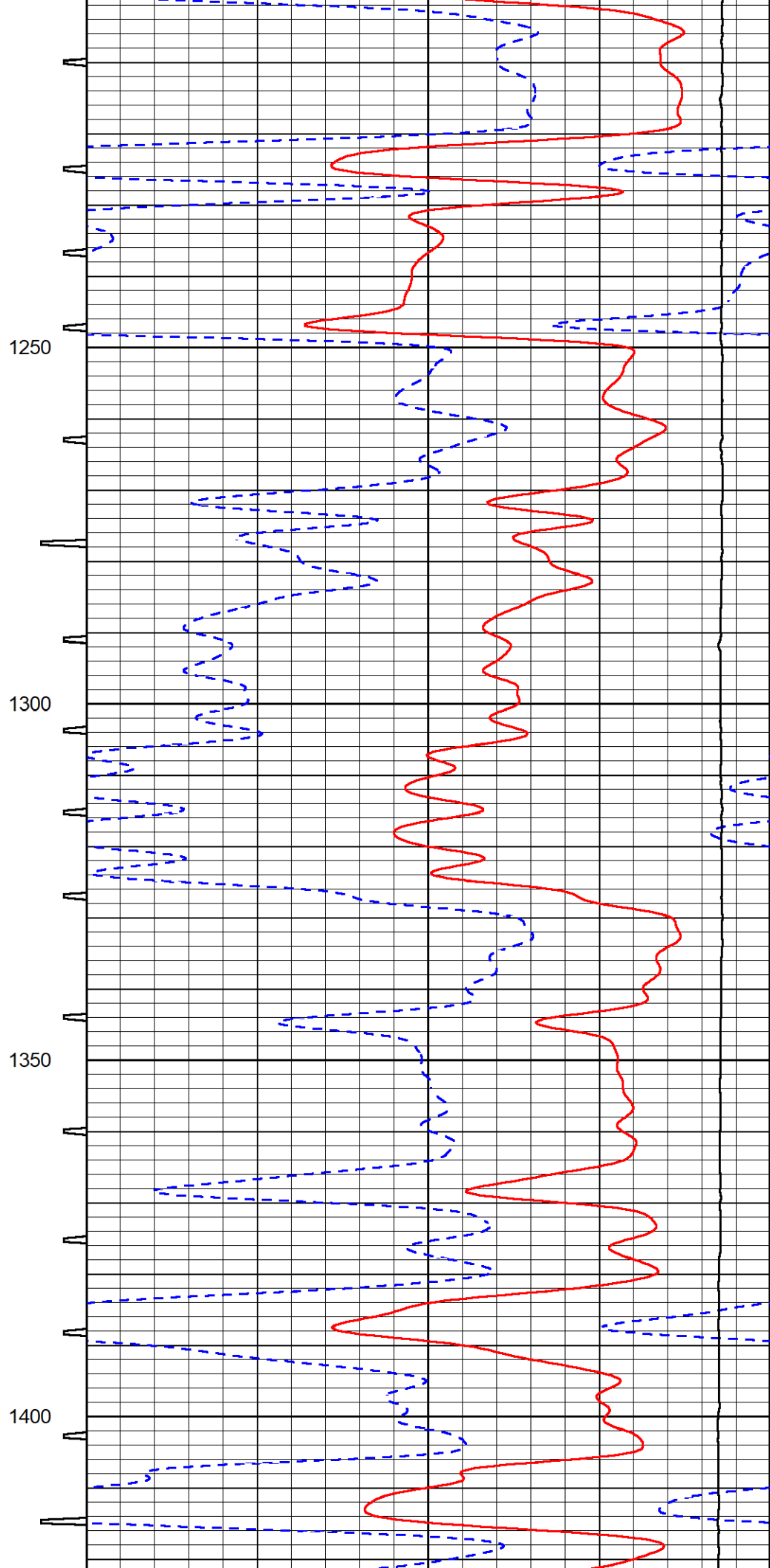
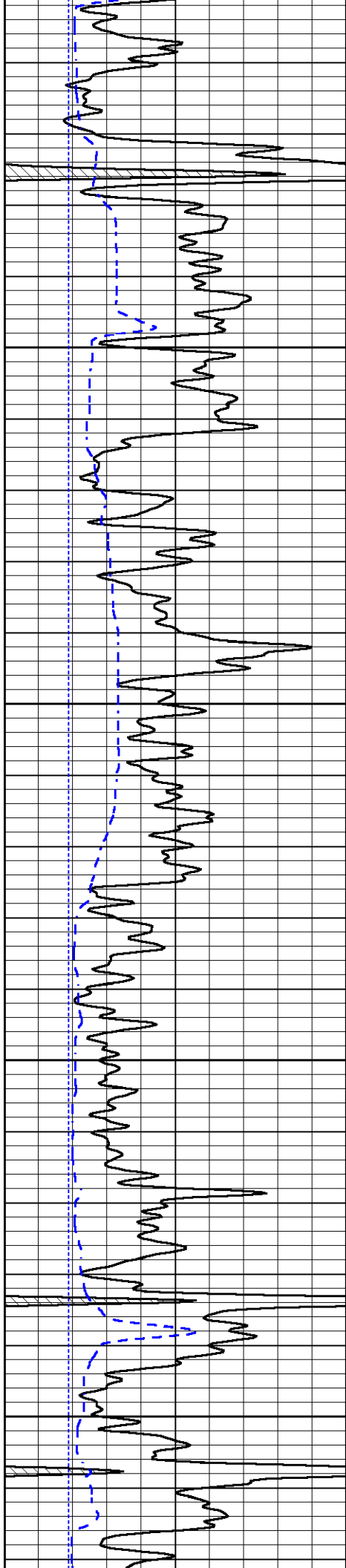


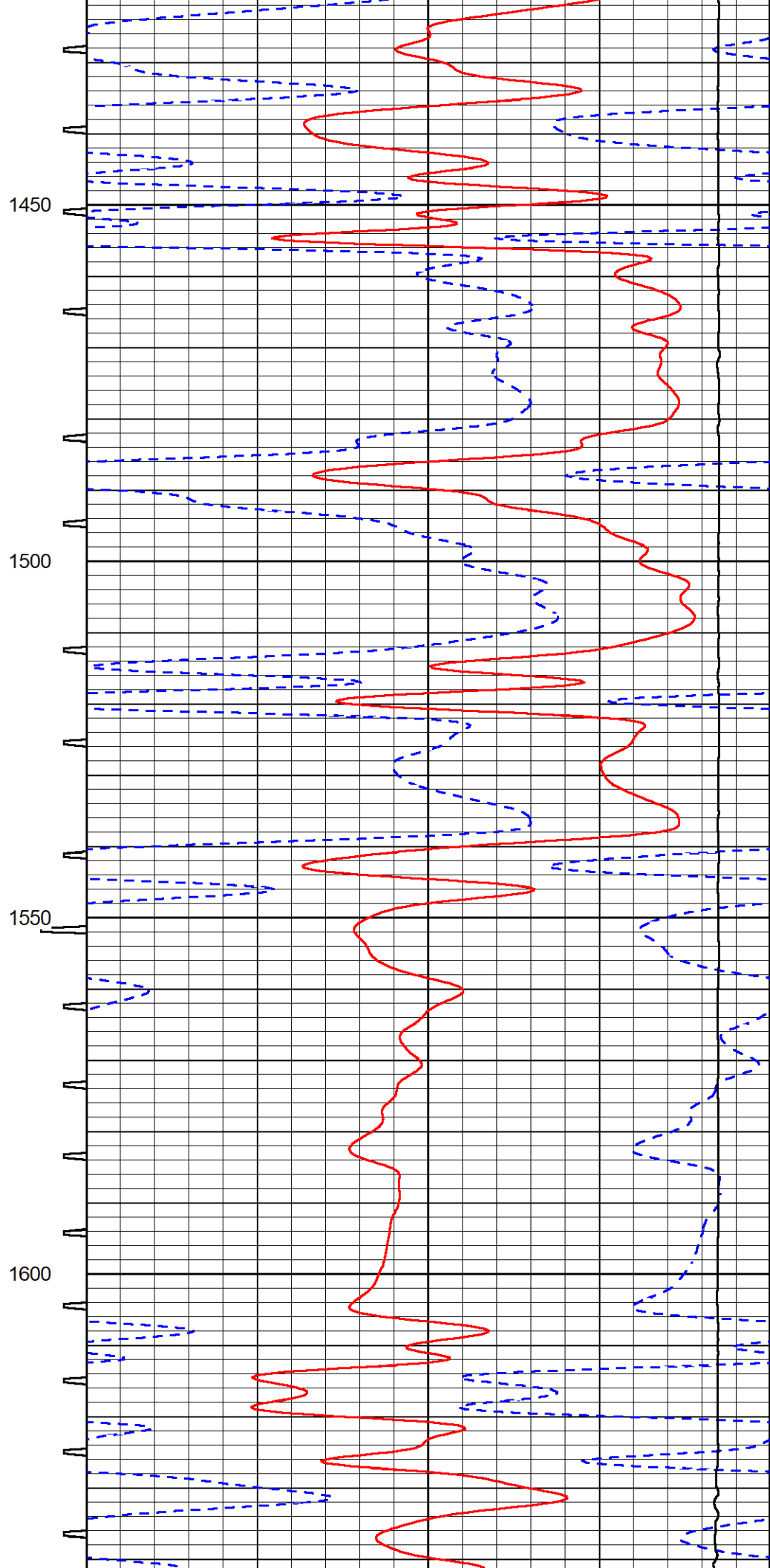
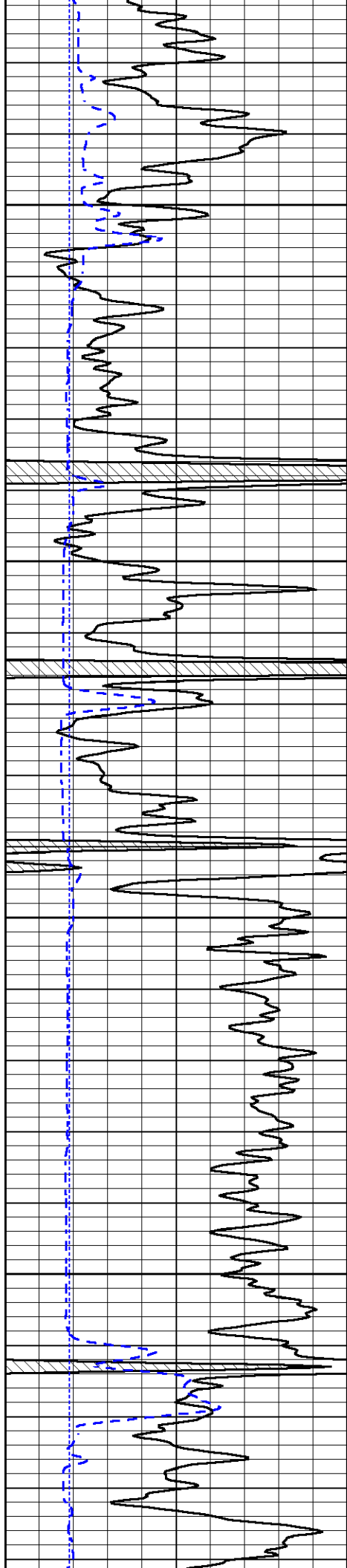


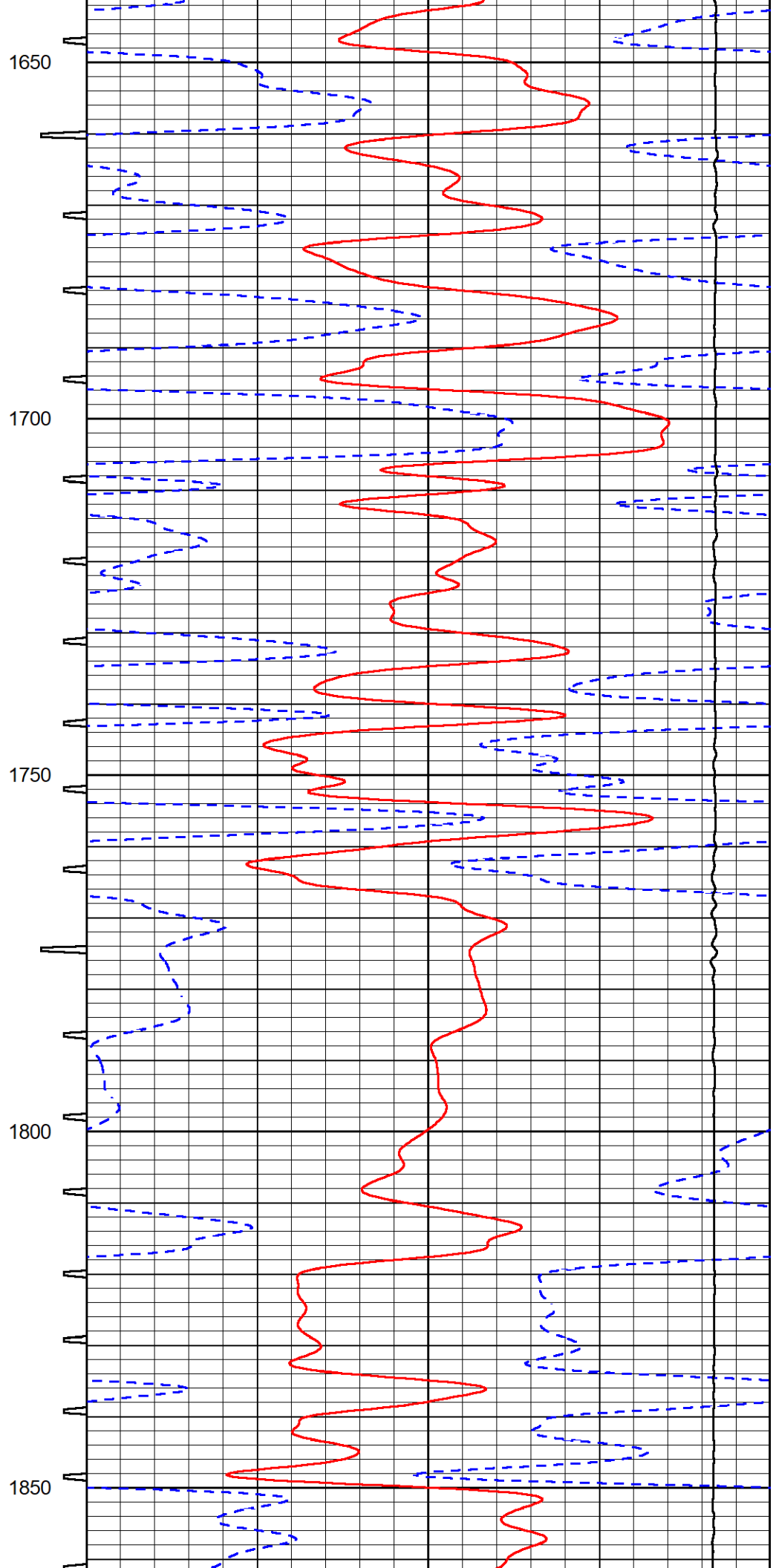
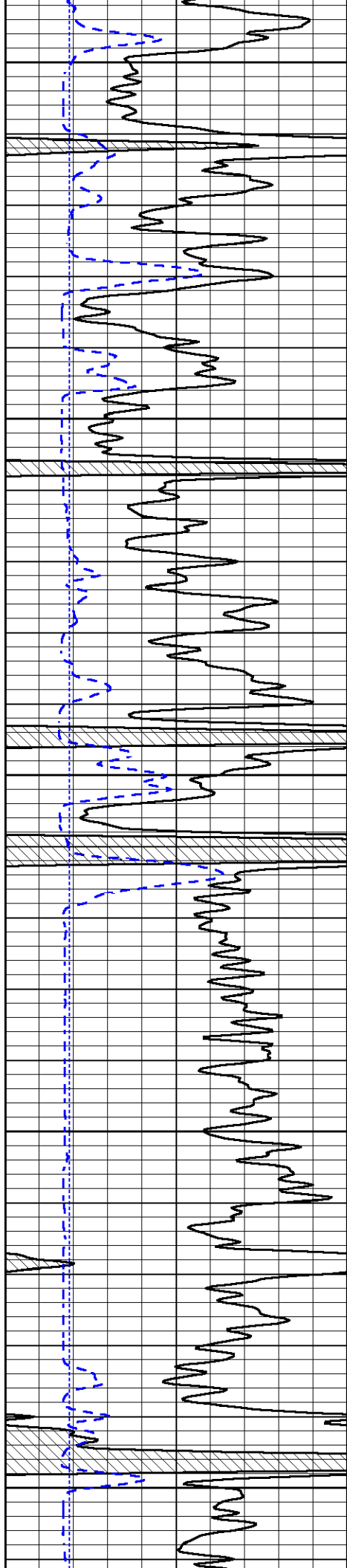


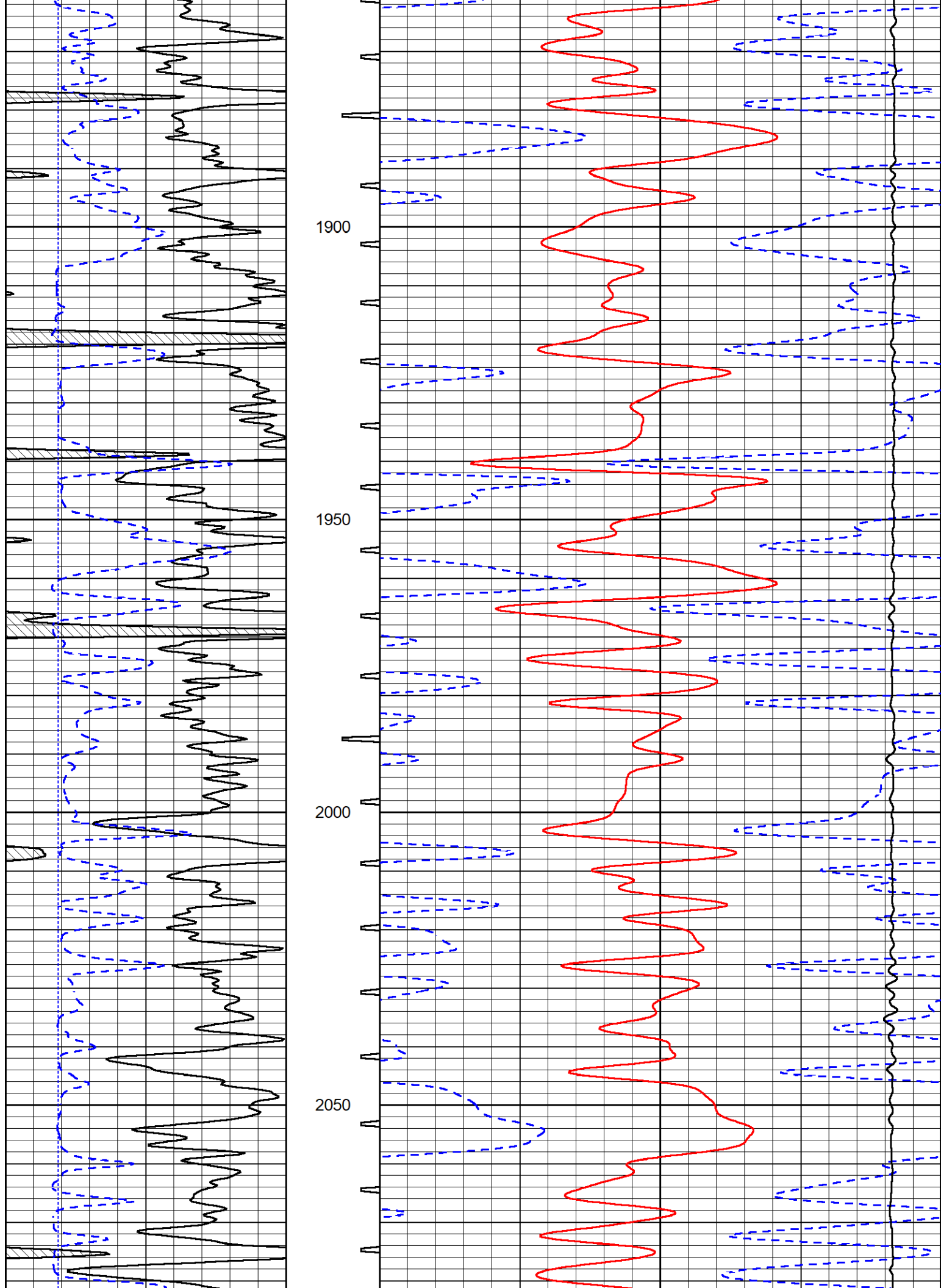


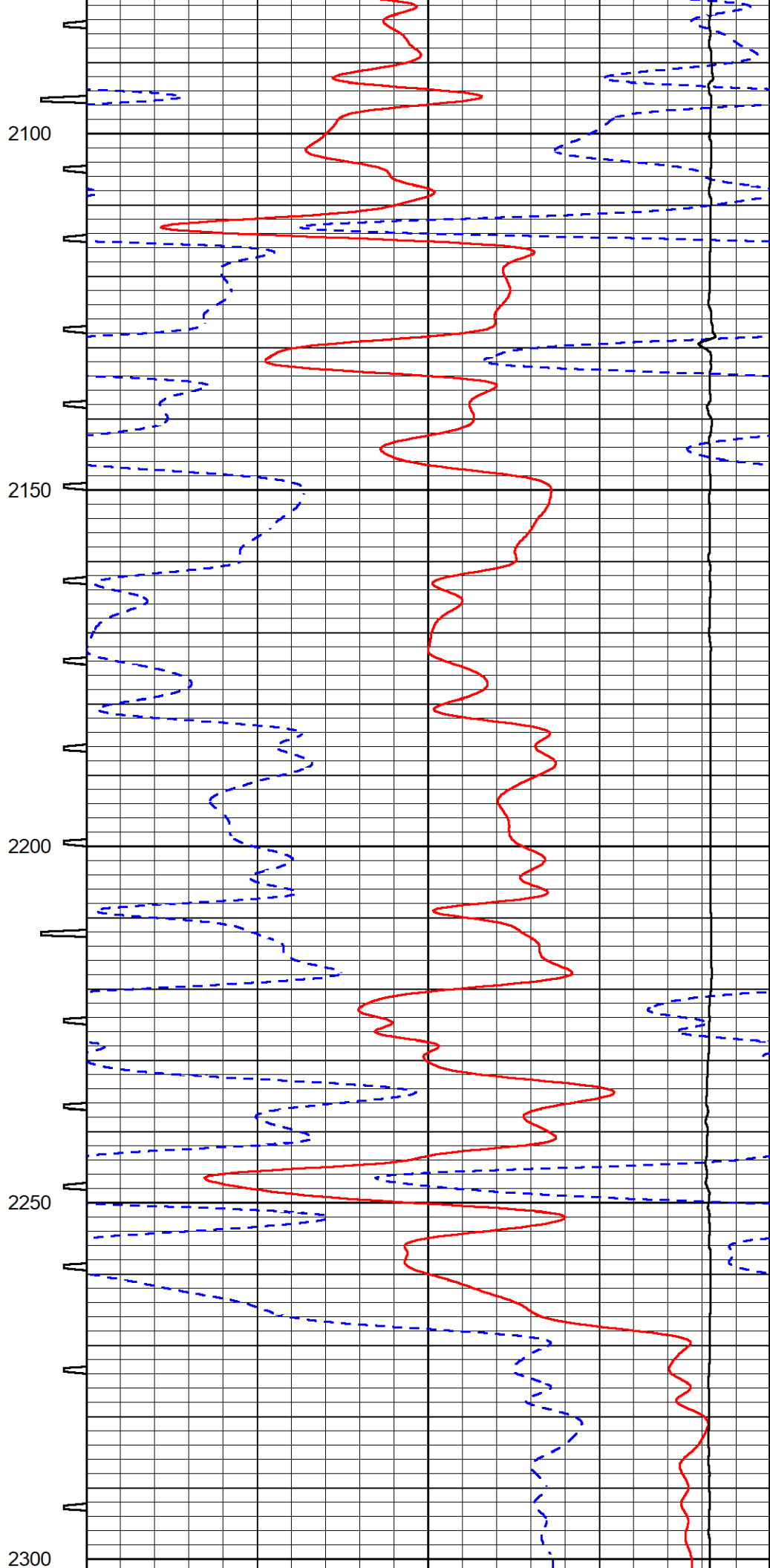
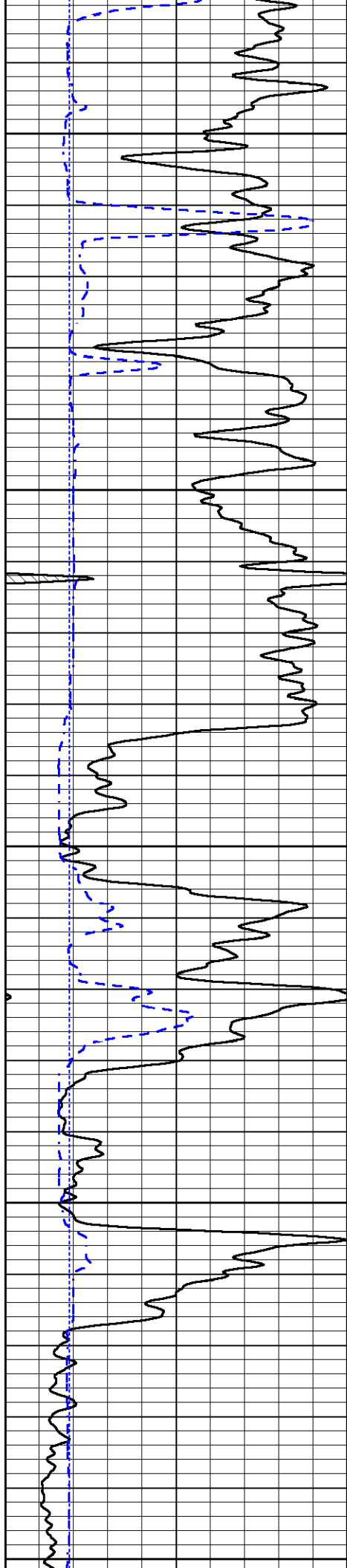












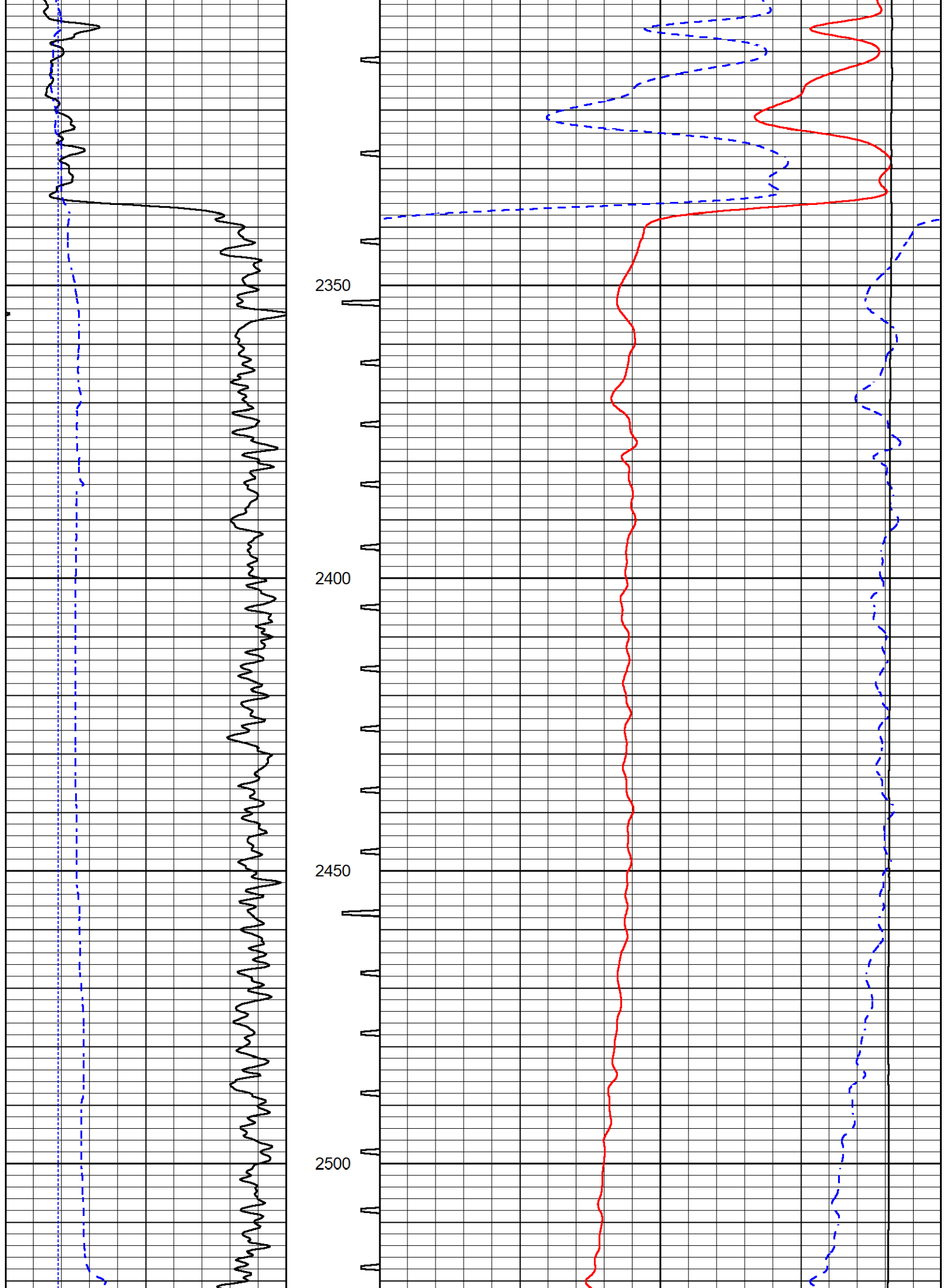
2100

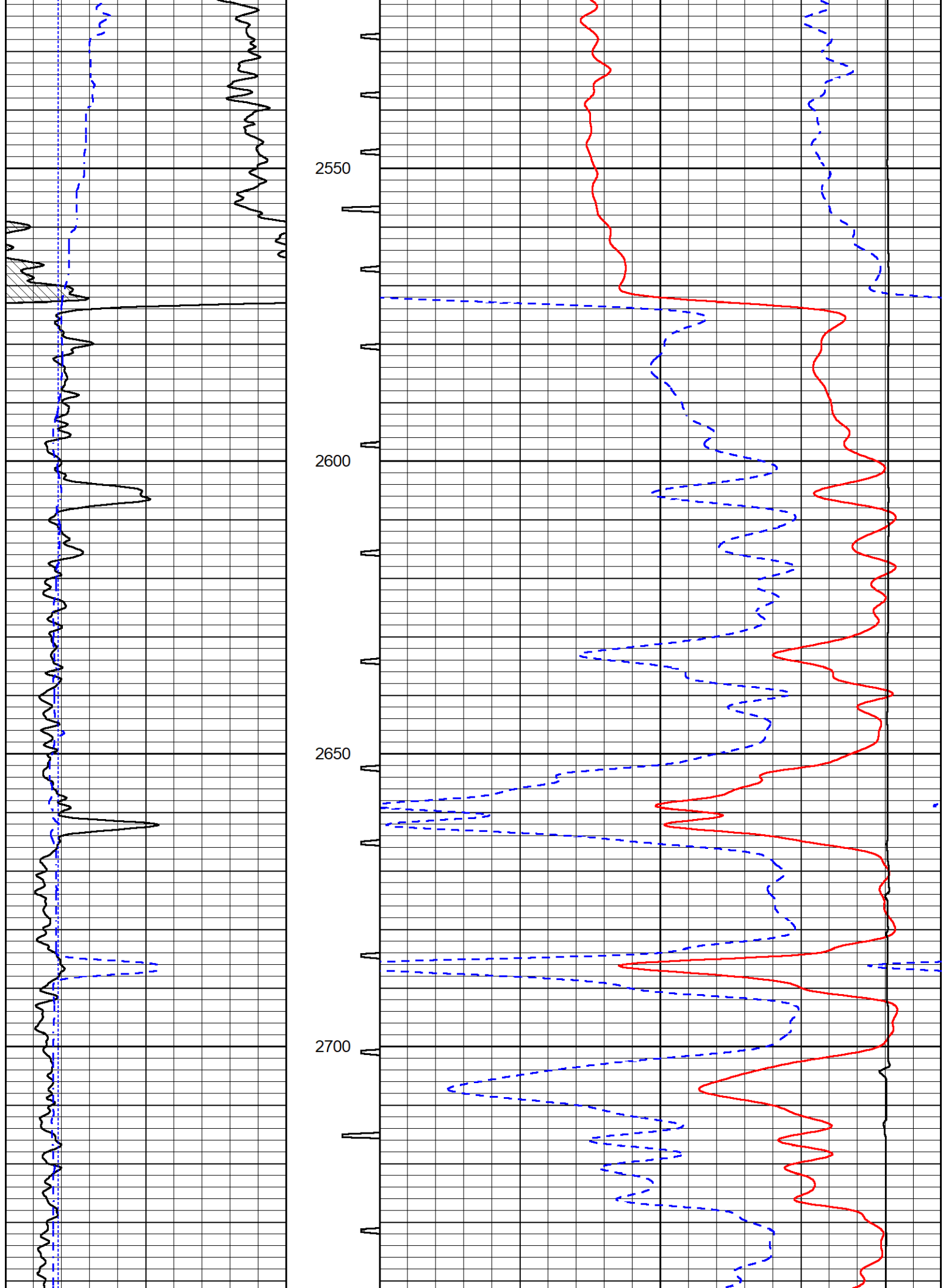
2150

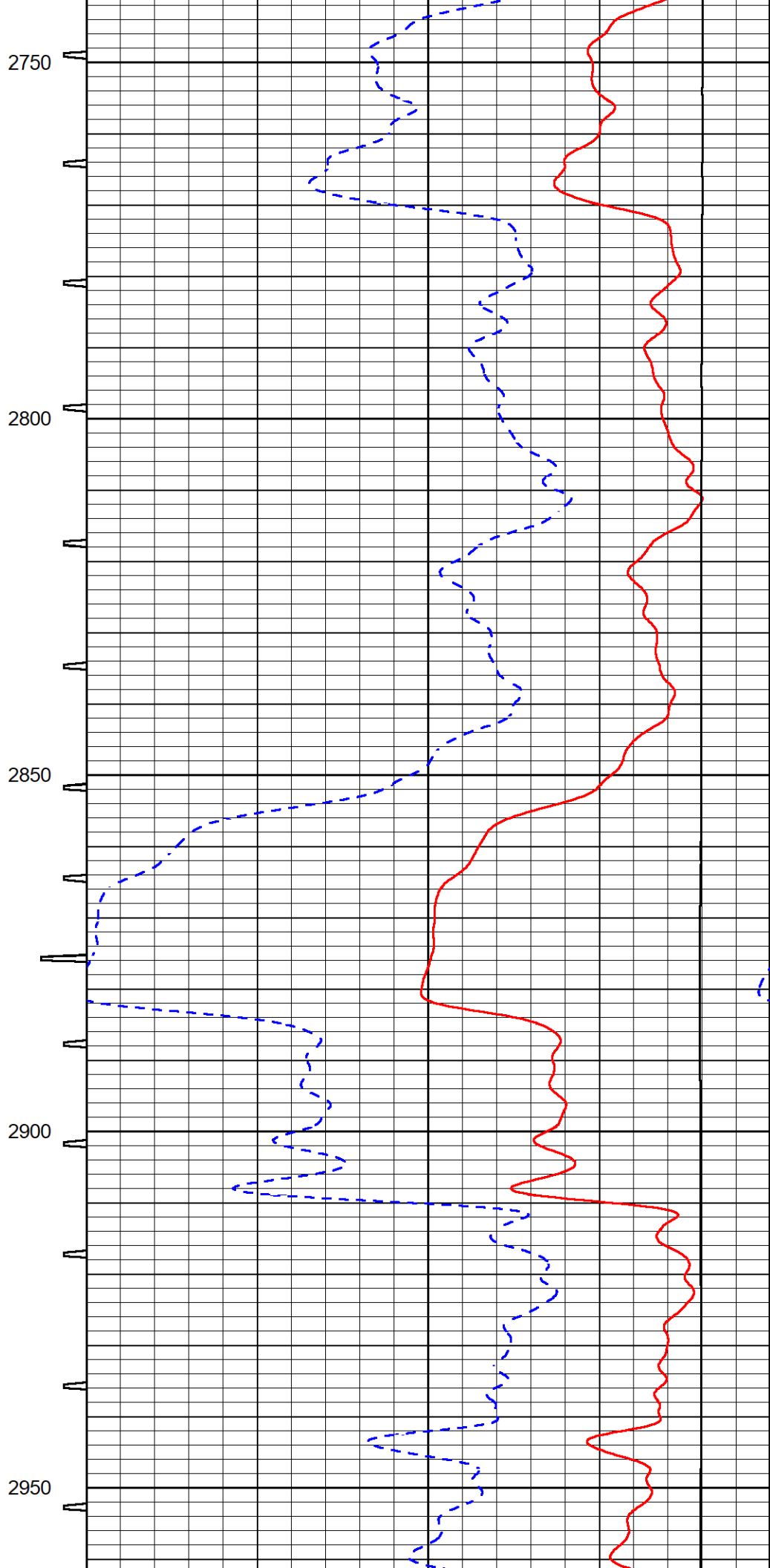
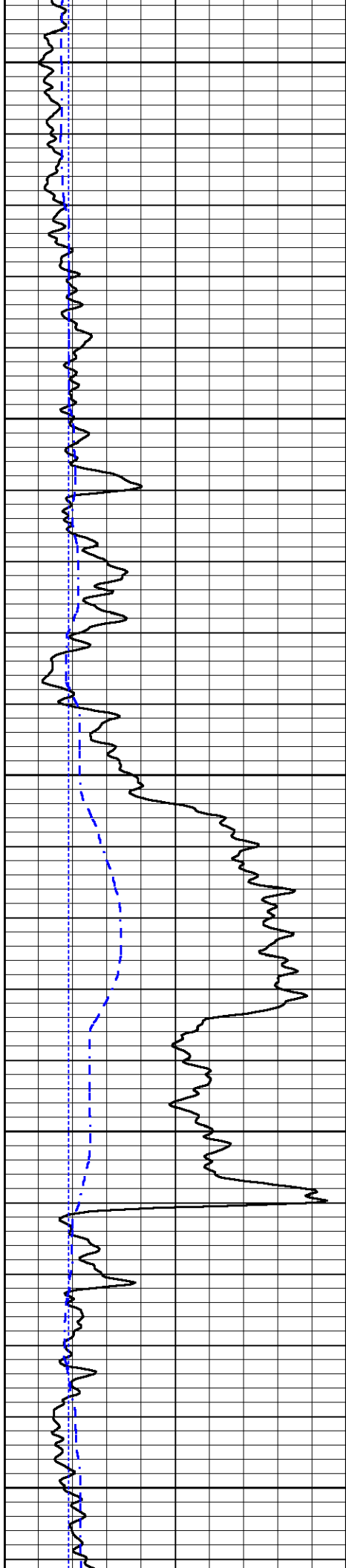
2200

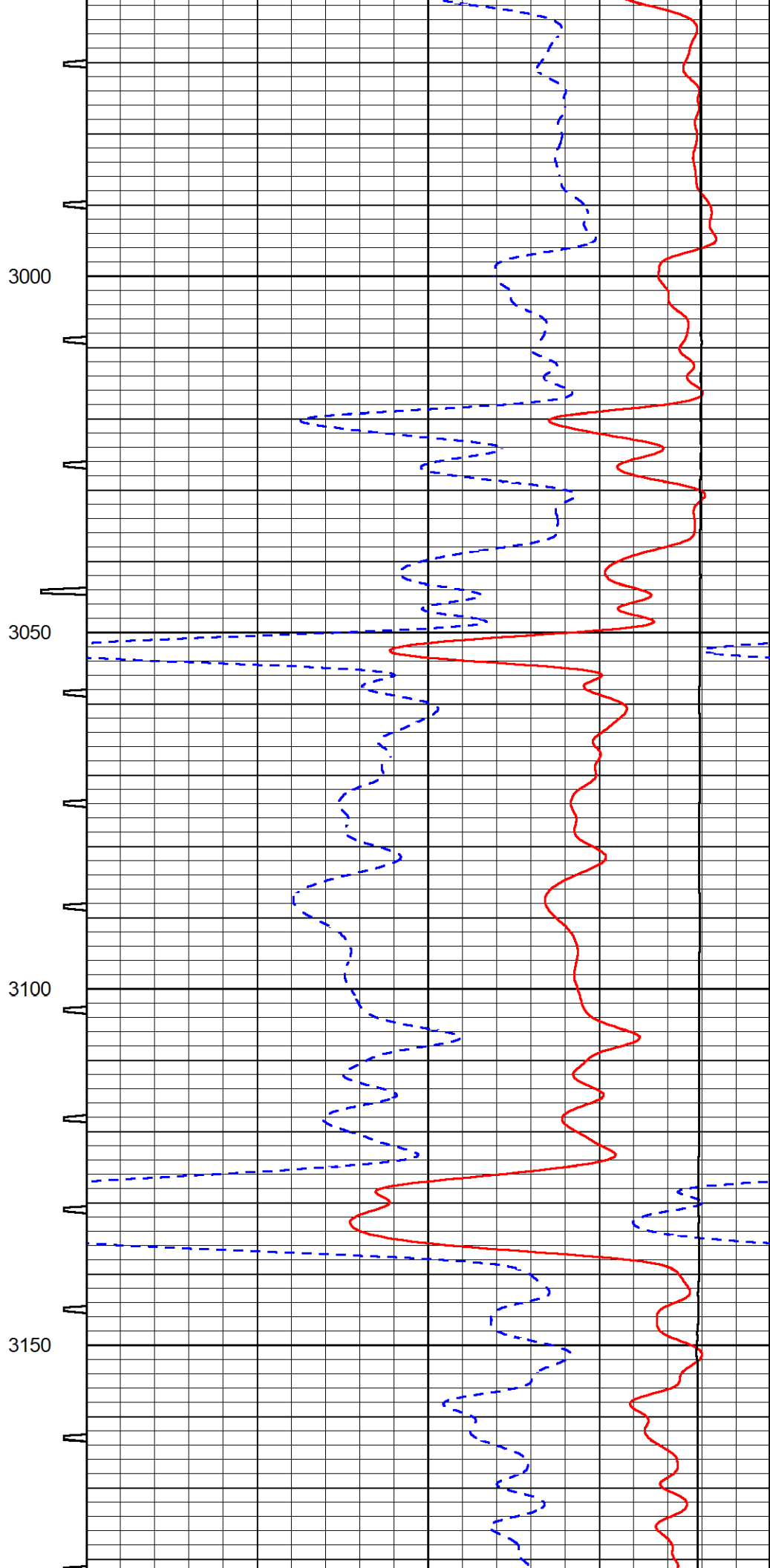
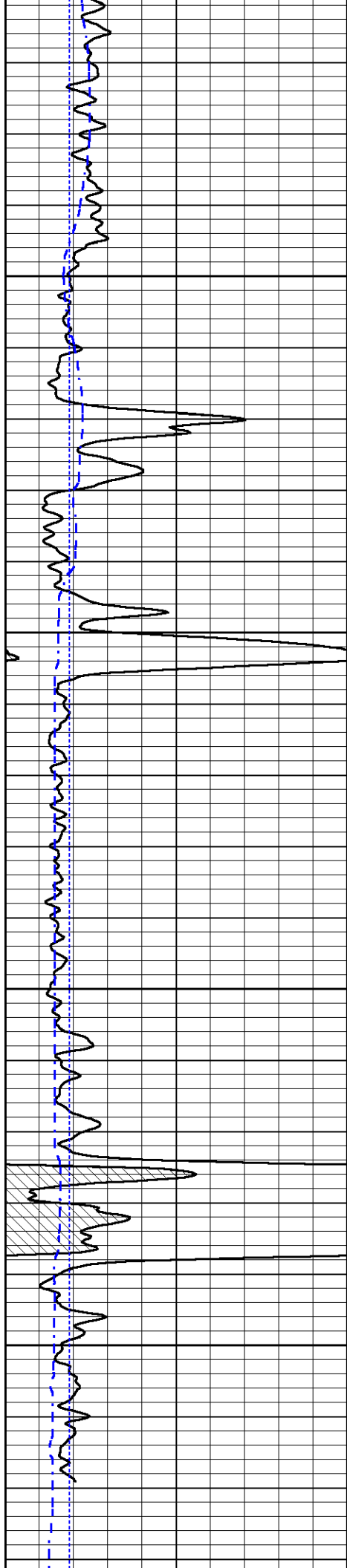
2250

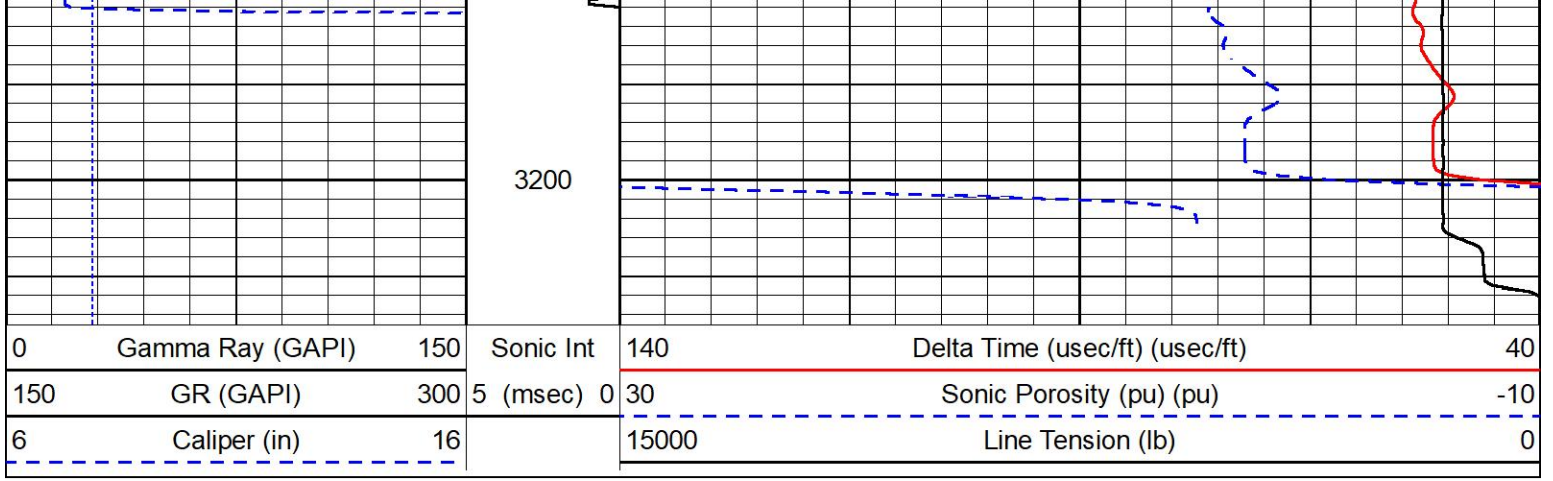
2300









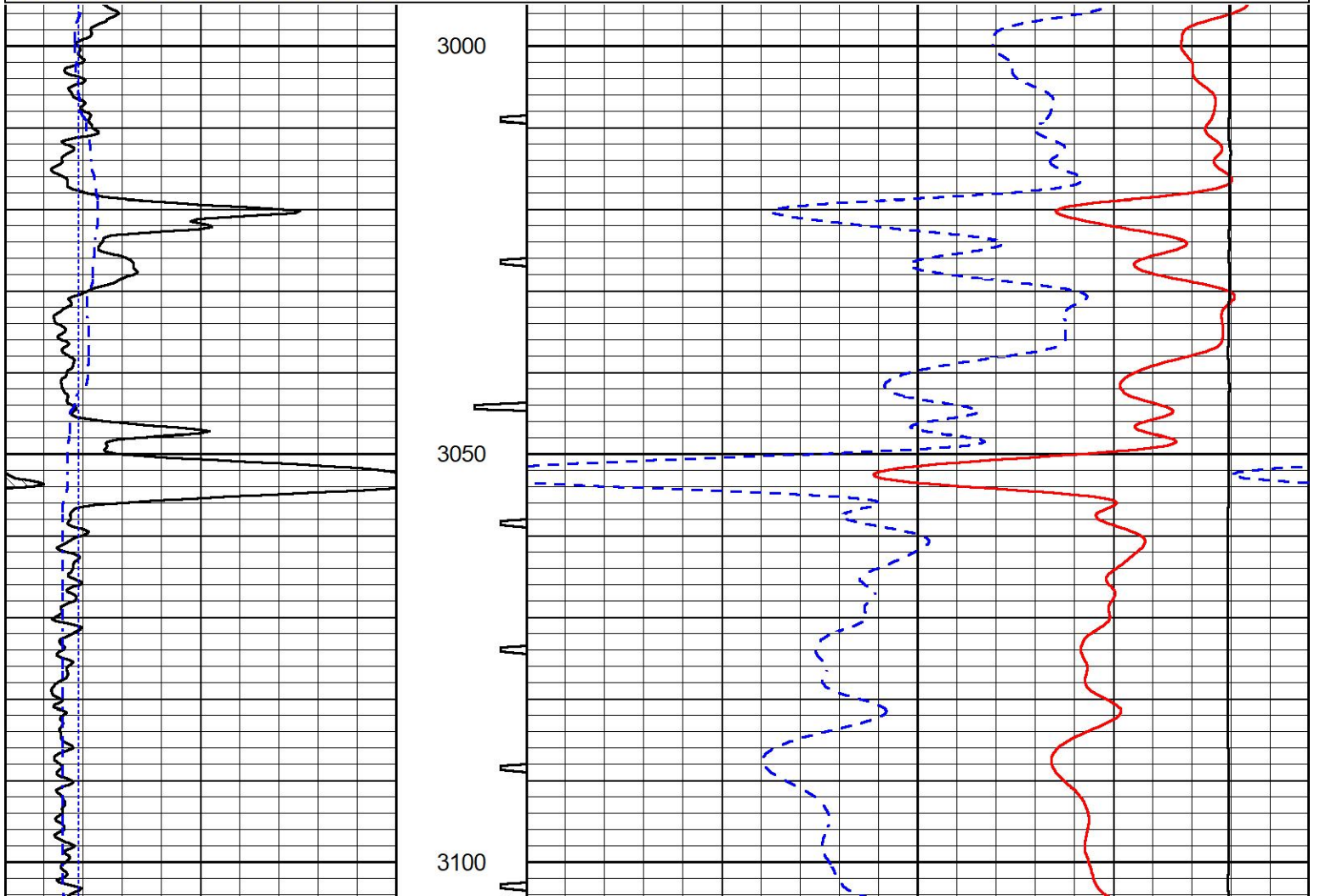


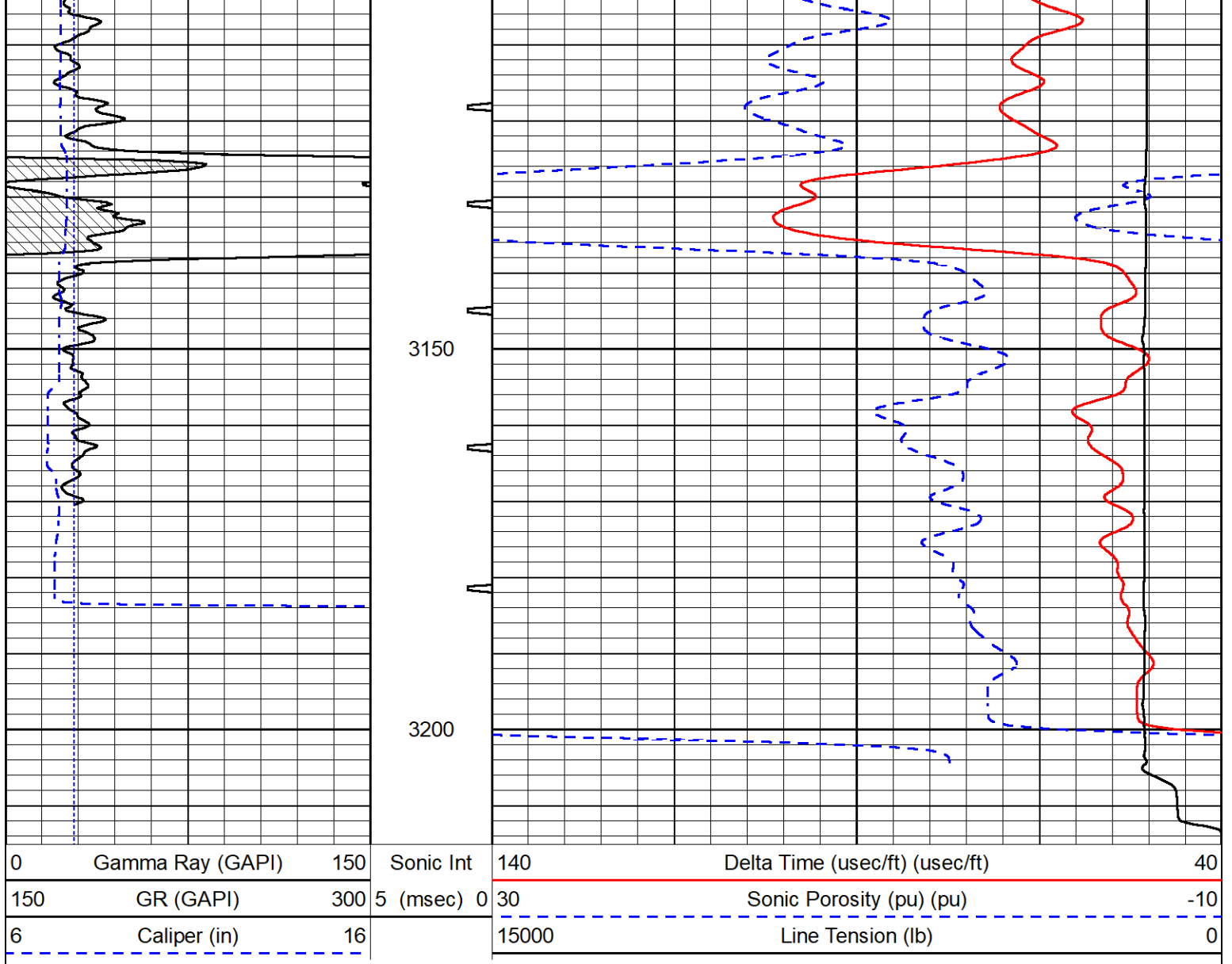
# REPEAT SECTION

## REPEAT PASS

Database File castle\_hund1.db  
 Dataset Pathname stkml/pass2.1  
 Presentation Format \_sonic  
 Dataset Creation Tue Mar 28 19:39:18 2023  
 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 castle\_hund1.db  
 Dataset Pathname stkml/pass3.1  
 Dataset Creation Tue Mar 28 19:45:01 2023

### Dual Induction Calibration Report

Serial-Model: 505 HT-M&W  
 Surface Cal Performed: Mon Mar 20 13:26:49 2023

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop	mmho/m	m	b
Deep	167.000	835.000	0.000	255.800	mmho/m	0.475	-43.000
Medium	1348.000	1348.000	0.000	255.800	mmho/m	0.410	-52.000

### Microlog Calibration Report

Serial-Model: 402-PSI STKBL ML  
 Performed: Wed Jan 25 21:26:04 2023

	Readings		References		Results	
	Zero	Cal	Zero	Cal	m	b

Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	11000.0000	-1.5000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	12000.0000	-1.0000
Caliper	1.0046	1.1419	5.5000	20.0000	in	50.0000	-44.7500

### Compensated Density Calibration Report

Serial-Model: 303-03-M&W  
Source #: 21170B  
Master Calibration Performed: Mon Mar 20 13:27:55 2023

#### Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.655	g/cc	700.98	3068.49	cps
Spine Angle = 73.06			Density/Spine Ratio = 0.506		
	Size		Reading		
Small Ring	4.00	in	1.17		
Large Ring	16.00	in	1.03		

### 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: Wed Jan 25 21:25:33 2023

Calibrator Value: 500.0 GAPI

Background Reading: 28.0 cps  
Calibrator Reading: 986.0 cps

Sensitivity: 0.5700 GAPI/cps



Company Castle Resources, Inc.  
Well Hund #1  
Field Newberry  
County Wabaunsee  
State Kansas