



MIDWEST WIRELINE

**BOREHOLE COMPENSATED
SONIC LOG**

Company Murfin Drilling Company, Inc.
Well Keller B #1-36
Field
County Cheyenne
State Kansas

Company Murfin Drilling Company, Inc.
Well Keller B #1-36
Field
County Cheyenne State Kansas

Location: API #: 15-023-21564-00-00
1320 FSL 500 FEL
SEC 36 TWP 2S RGE 39W
Permanent Datum Ground Level Elevation 3404
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing
Other Services
CNL/CDL
DIL/MEL
Elevation
K.B. 3409
D.F.
G.L. 3404

Date	1/24/2022						
Run Number	Two						
Type Log	BHCS						
Depth Driller	5200						
Depth Logger	5204						
Bottom Logged Interval	5192						
Top Logged Interval	300						
Type Fluid In Hole	Chemical						
Salinity, PPM CL	900						
Density	9.2						
Level	Full						
Max. Rec. Temp. F	128						
Operating Rig Time	6 Hours						
Equipment -- Location	P-24 Hays						
Recorded By	D. Schmidt						
Witnessed By	Wes Hansen						
Borehole Record							
Run No.	Bit	From	To	Size	Wgt.	Casing Record	
One	12.25	0	322	8.625	23	From	To
Two	7.875	322	TD			0	322

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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.

Bird City,
5 West to 23 Rd, 5 1/4 North,
West into

Log Measured From: Kelly Bushing 5 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: Wes Hansen
Secondary Witness:
Secondary Witness:
Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CENT-PENGO (3-PENGO)	4.25	3.00	70.00
WVF4 WVF1	12.50 12.50		SLT-PENGO (601)	15.92	3.50	300.00
WVF3 WVF2	10.50 10.50					
			CENT-PENGO (4-PENGO)	4.25	3.00	70.00

Dataset: murfin_keller b 1-36.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\murfin_keller b 1-36.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	129	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	480	40	Off	5204

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

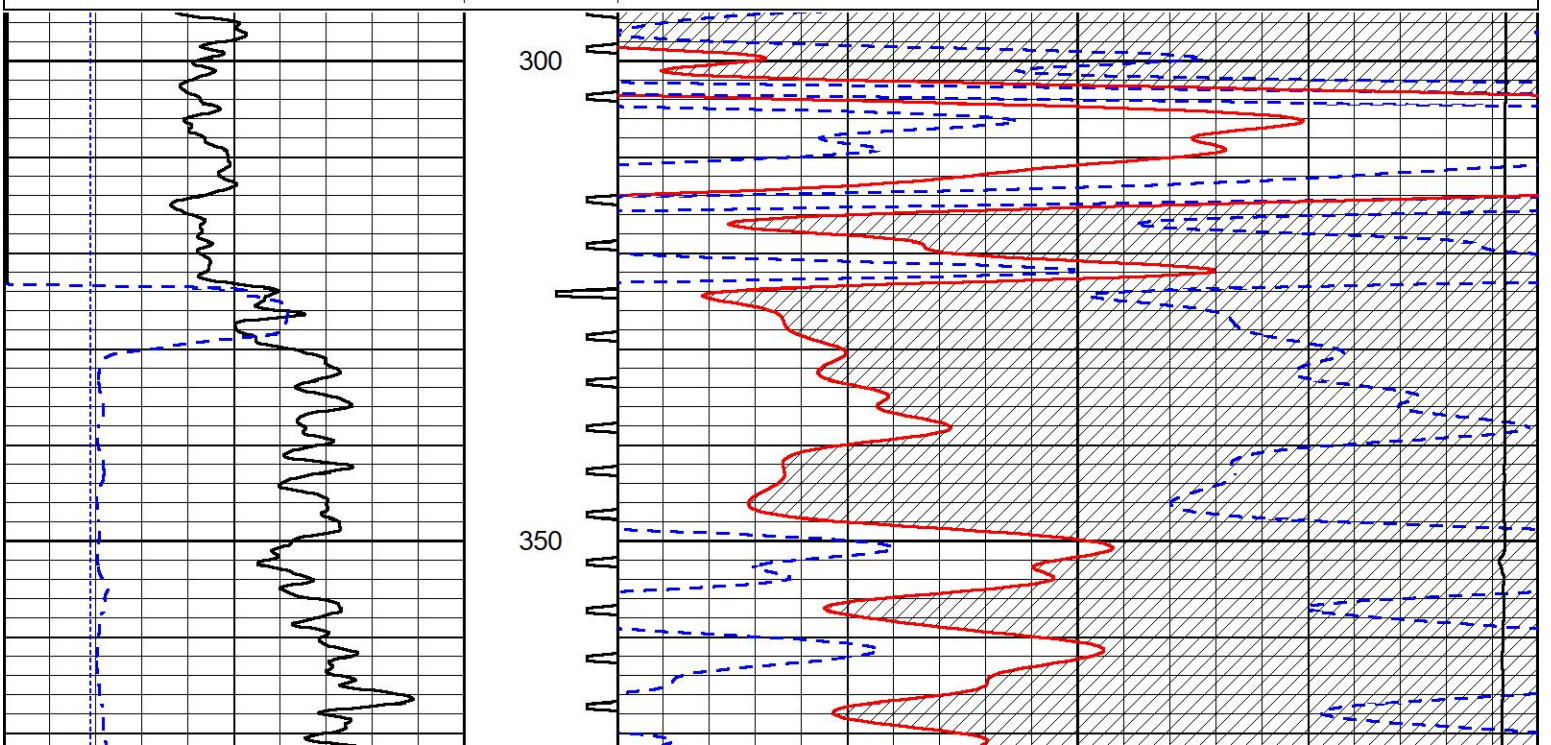


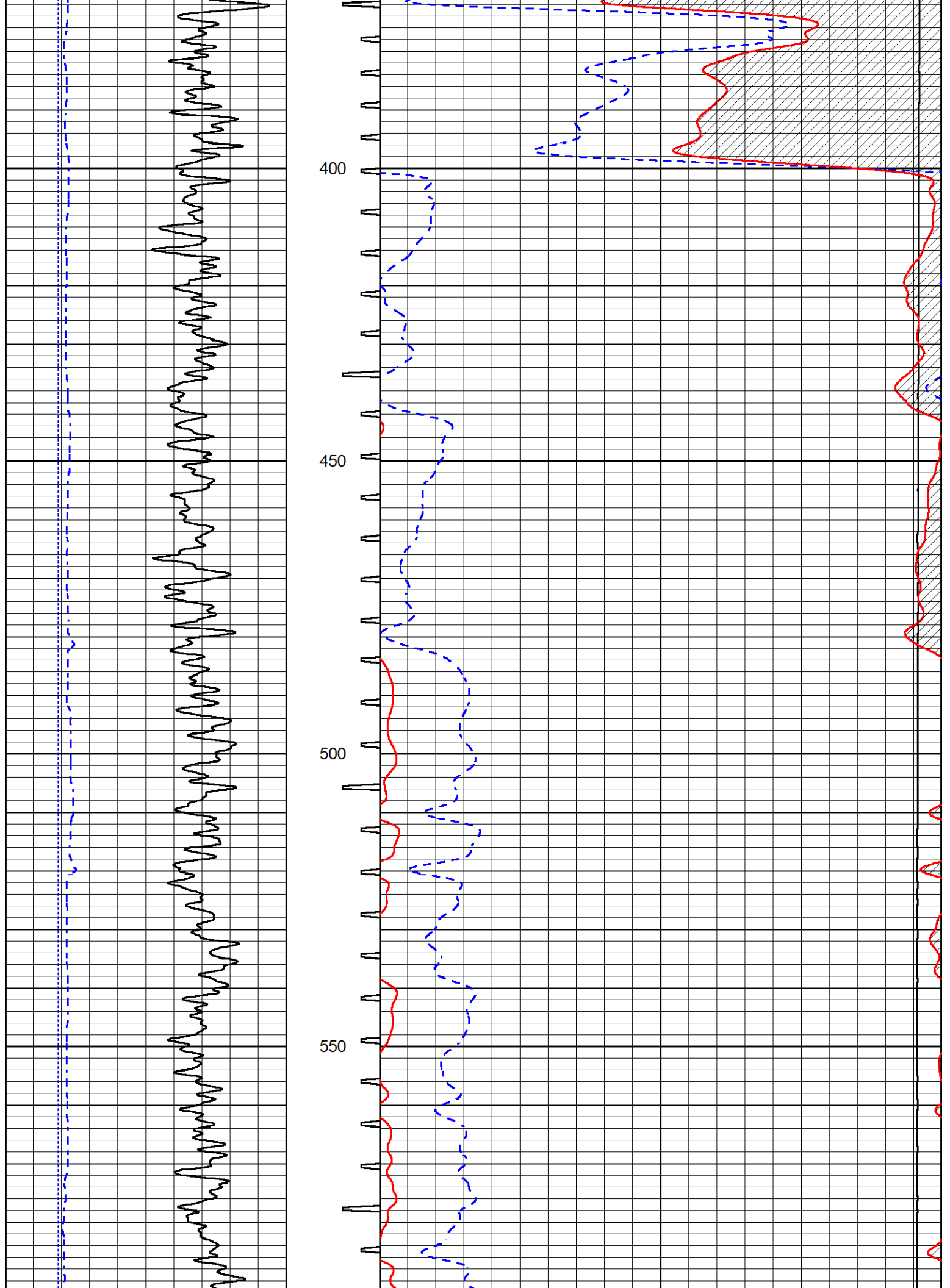
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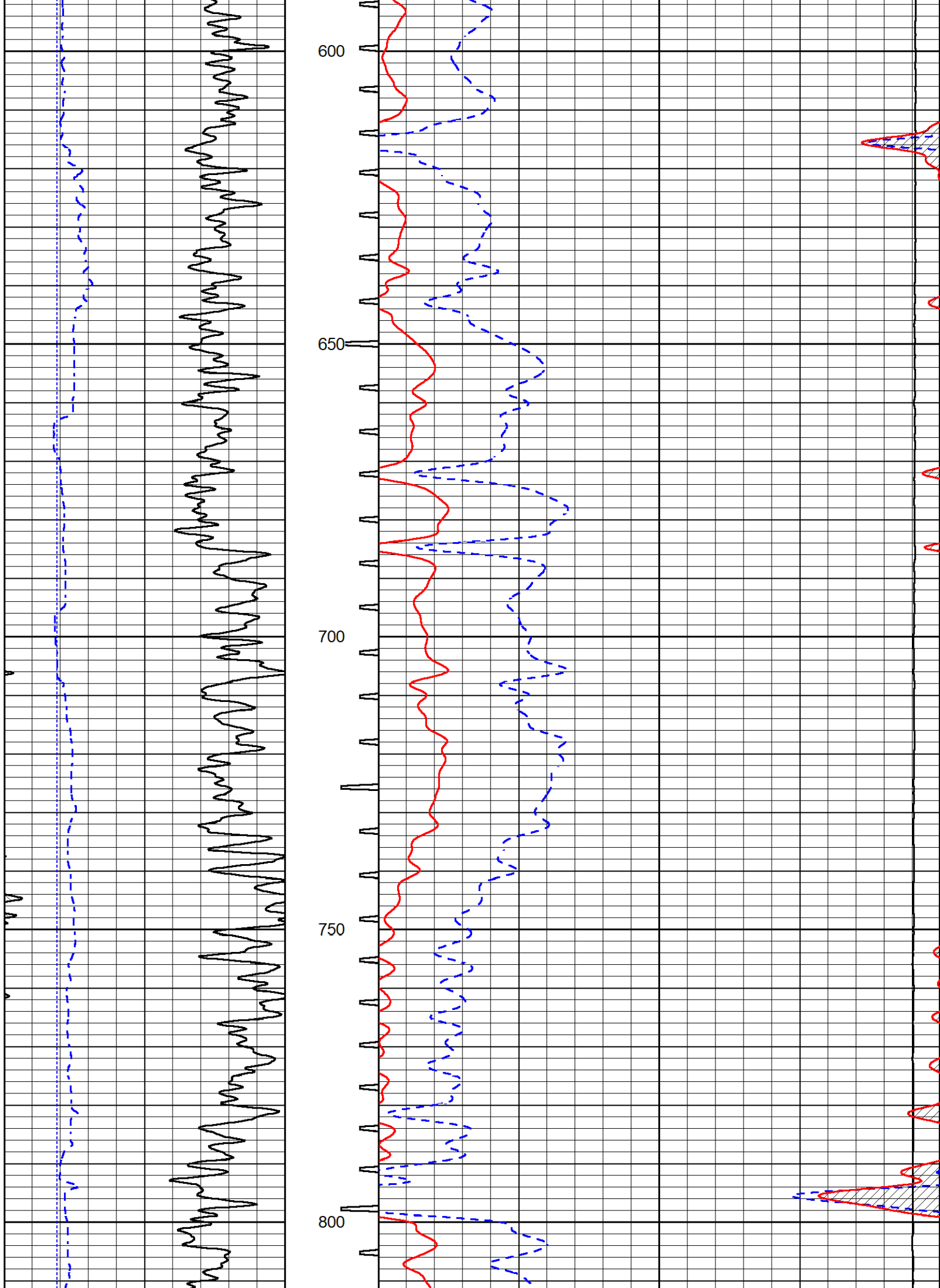
MAIN PASS

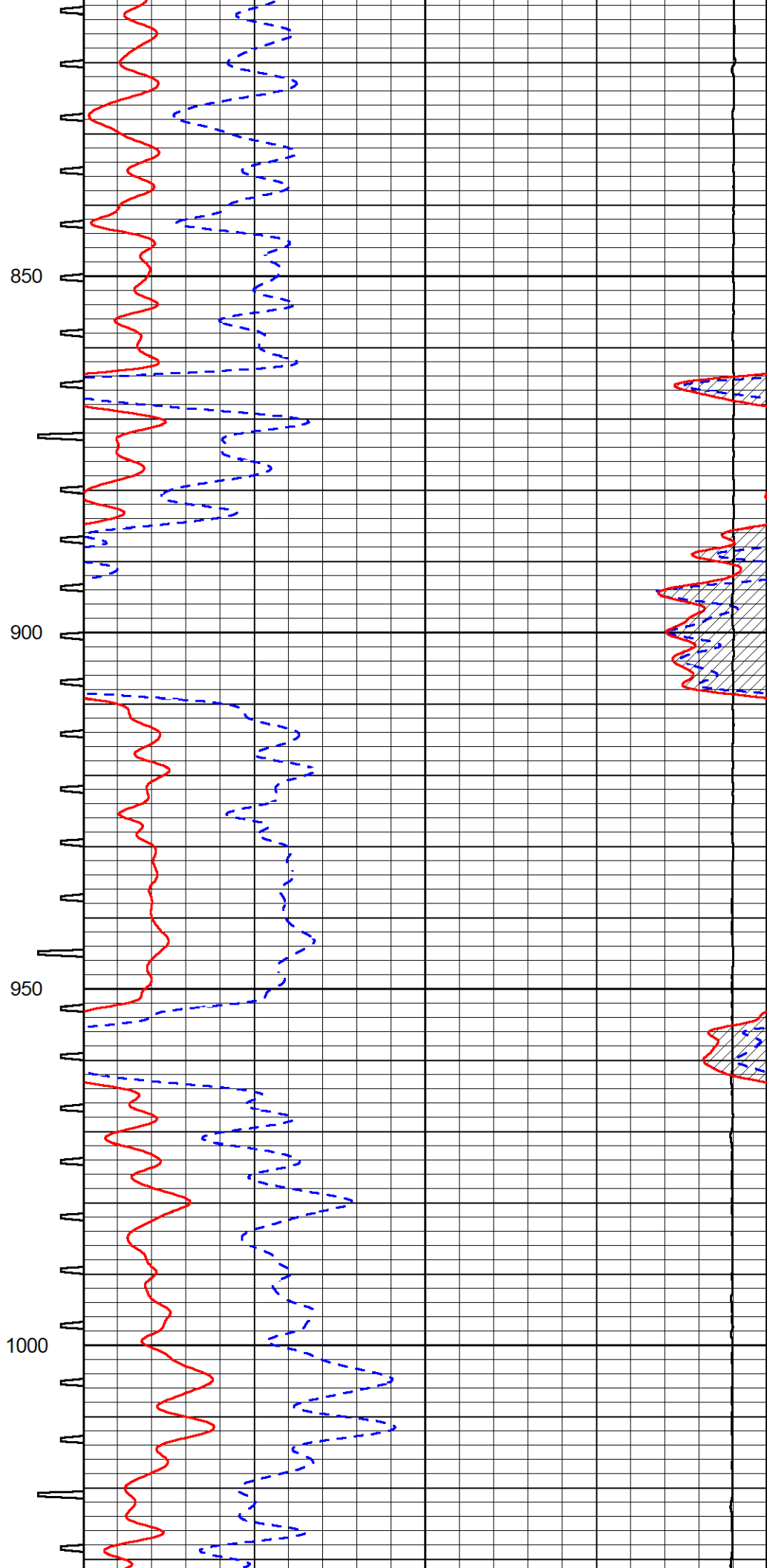
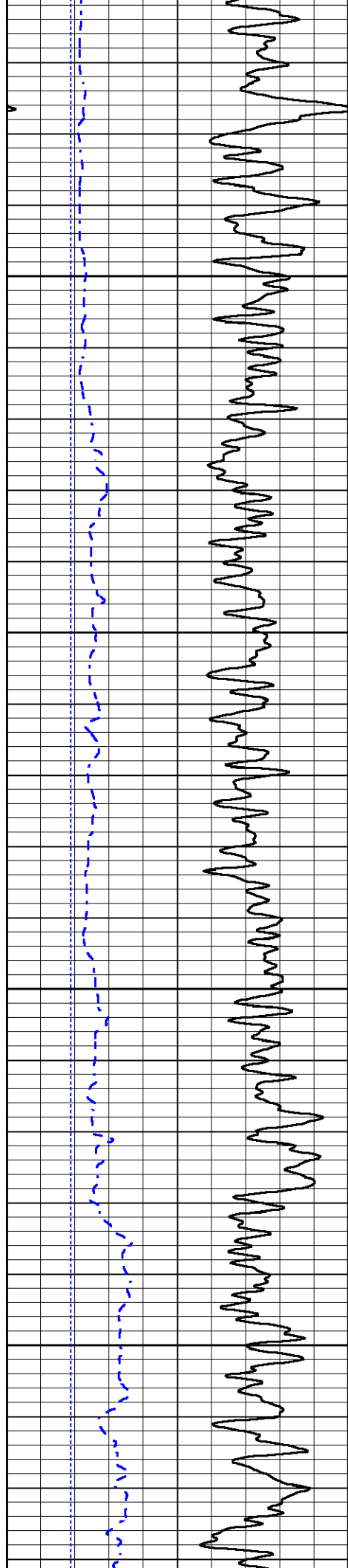
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 Presentation Format _sonic
 Dataset Creation Mon Jan 24 23:38:30 2022
 Charted by Depth in Feet scaled 1:240

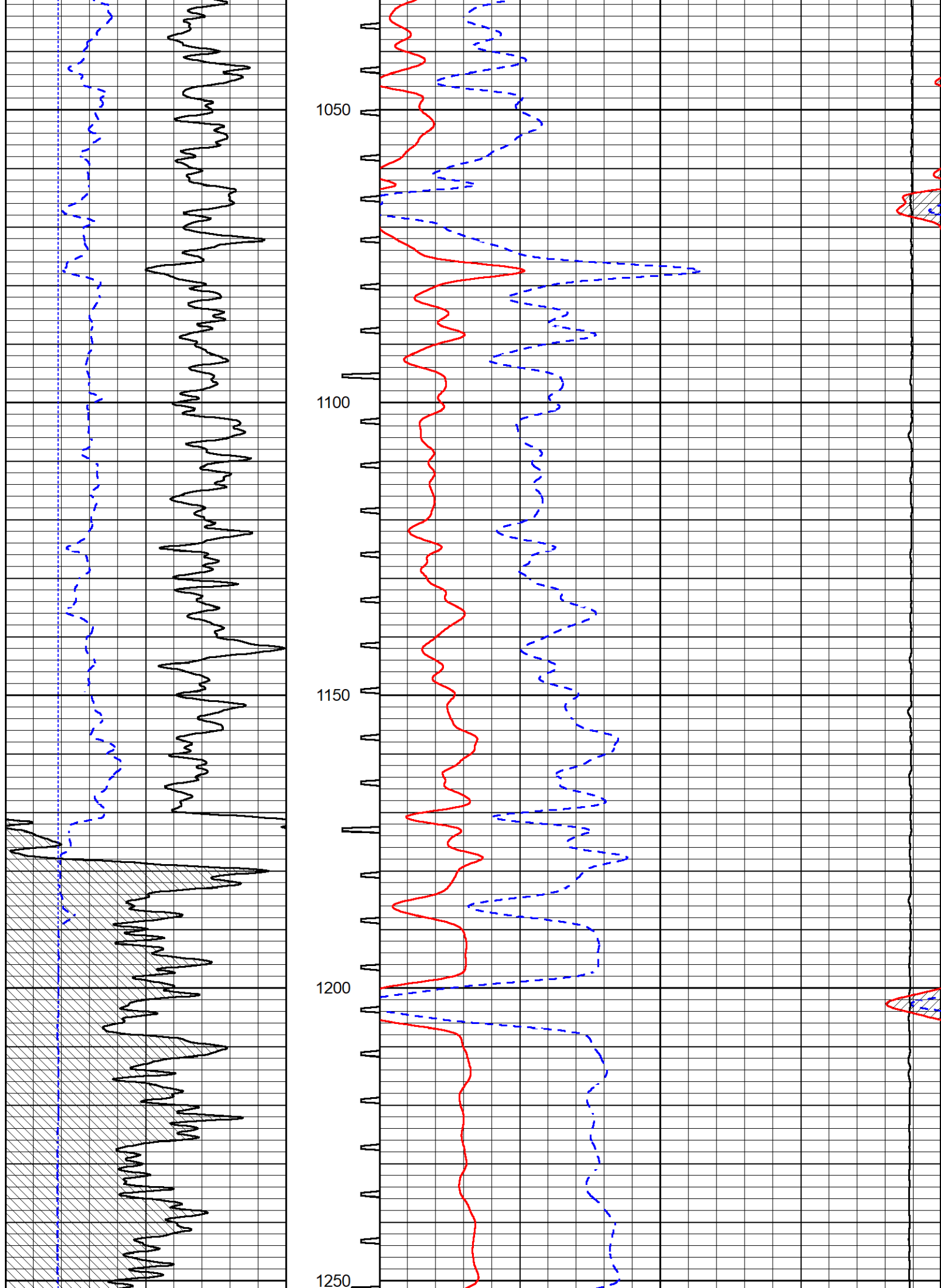
0	Gamma Ray (GAPI)	150	Sonic Int	140	Delta Time (usec/ft) (usec/ft)	40
150	GR (GAPI)	300	5 (msec) 0	30	Sonic Porosity (pu) (pu)	-10
6	Caliper (in)	16		15000	Line Tension (lb)	0

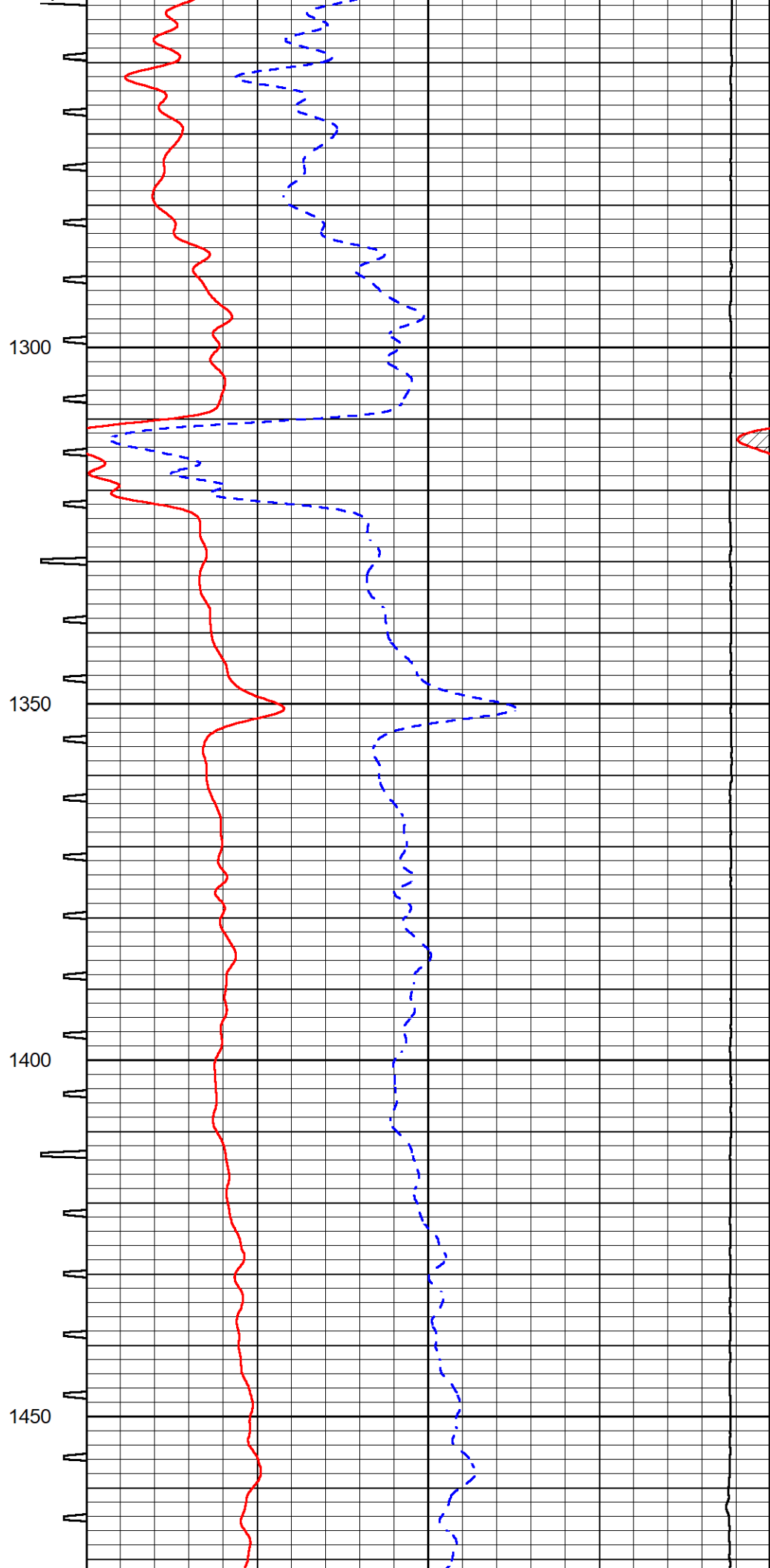
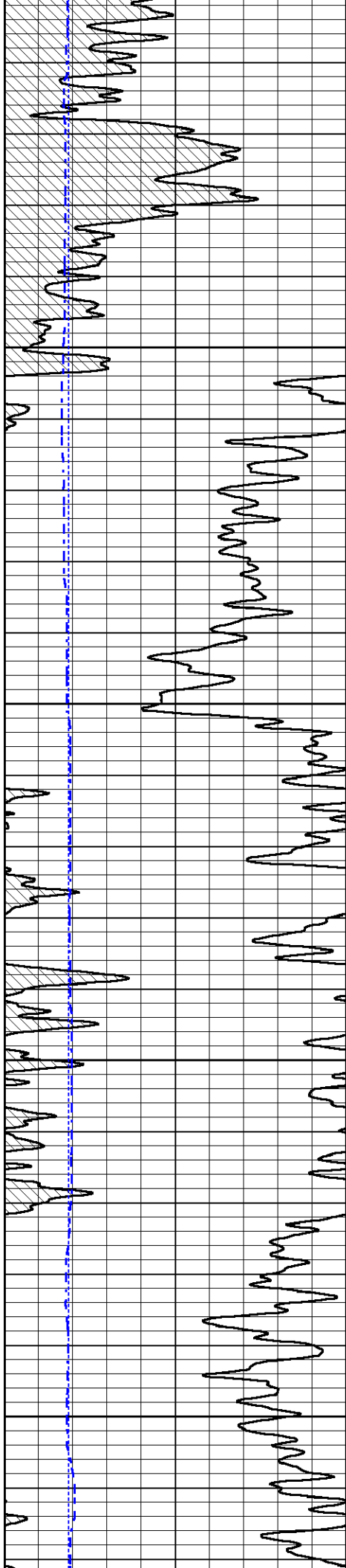


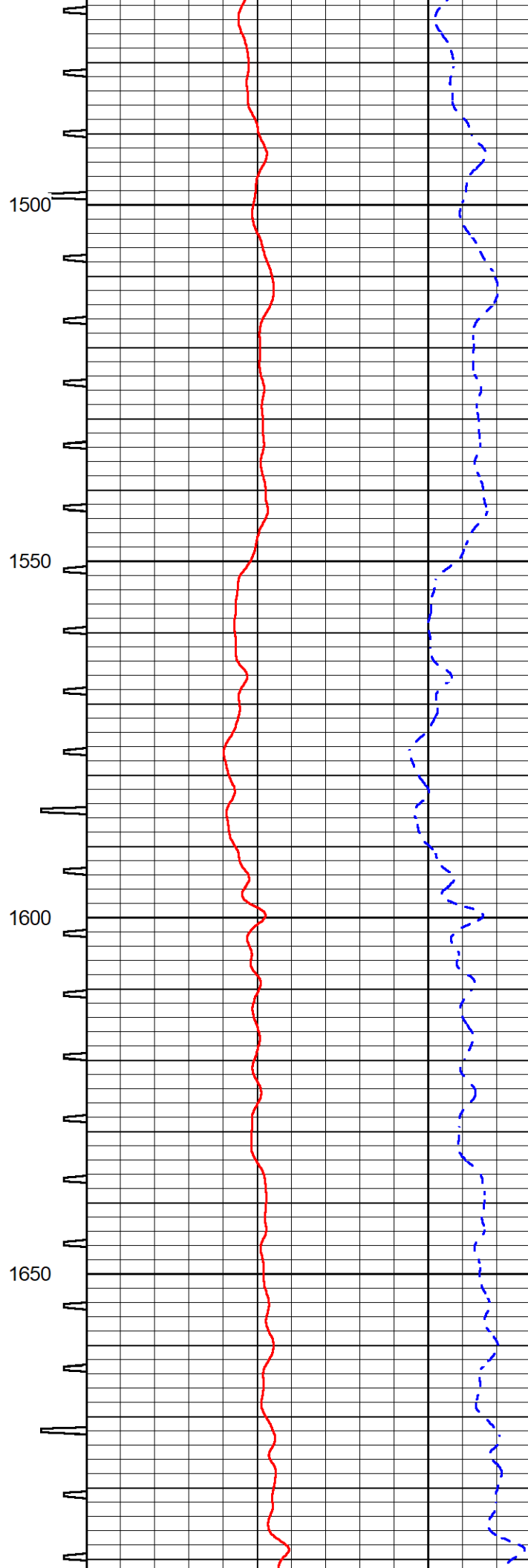
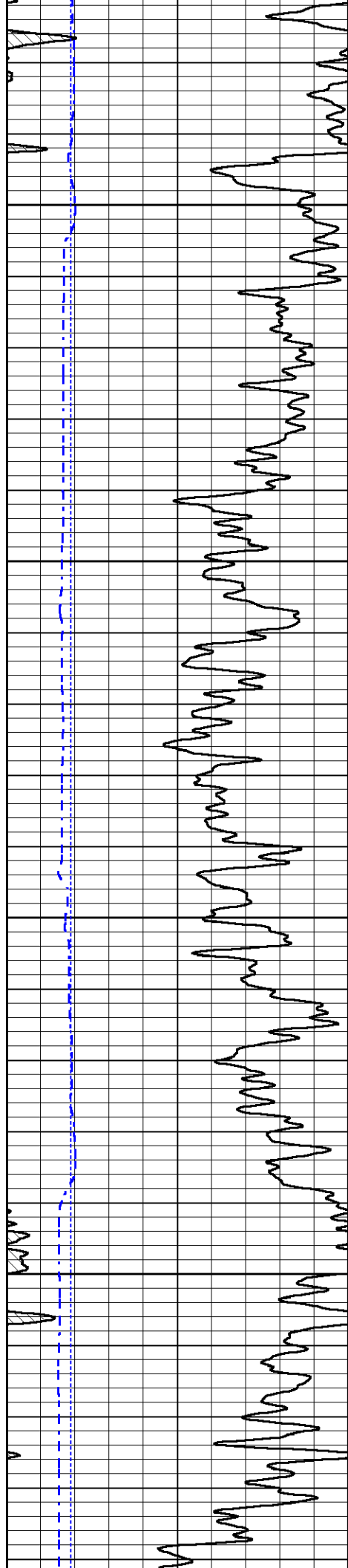










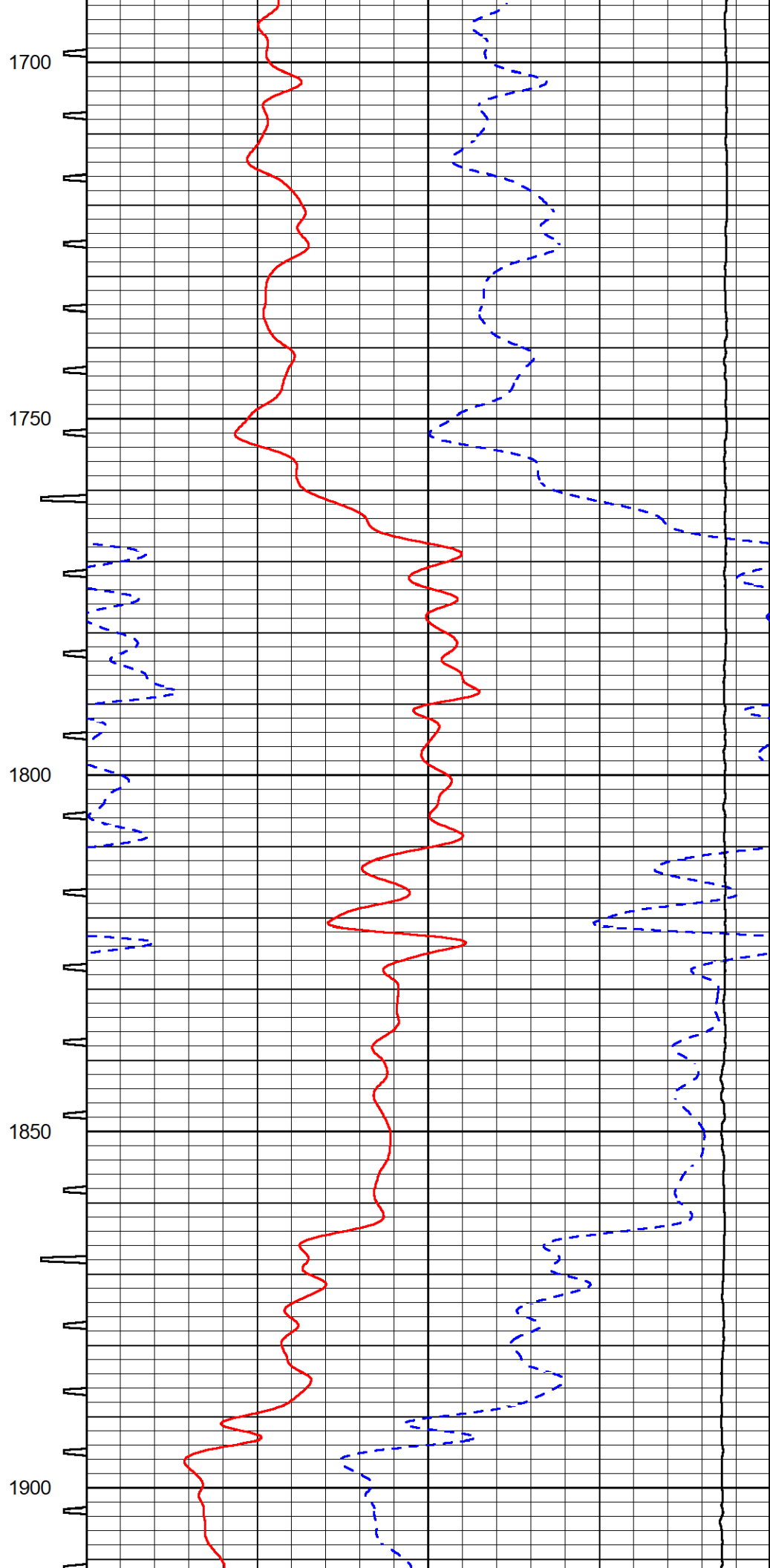
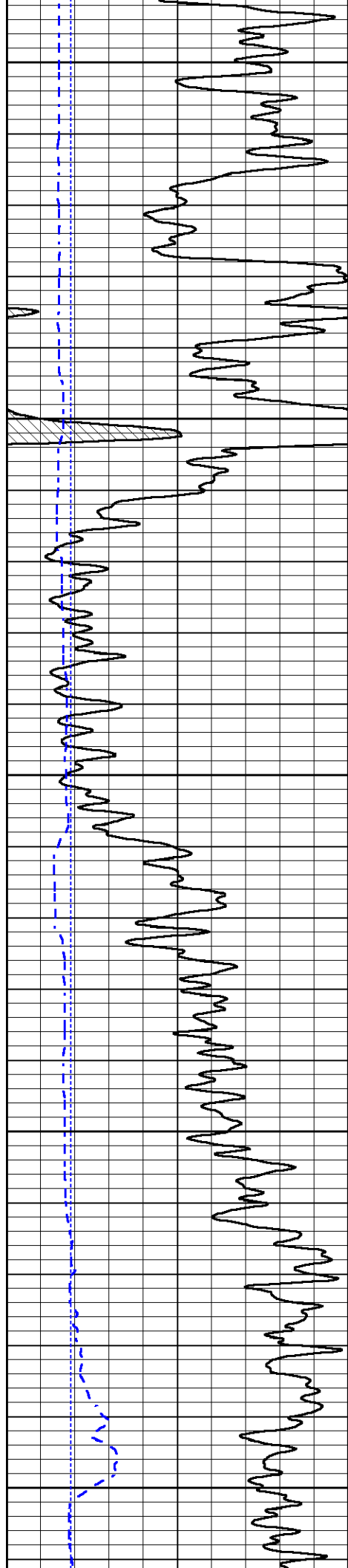


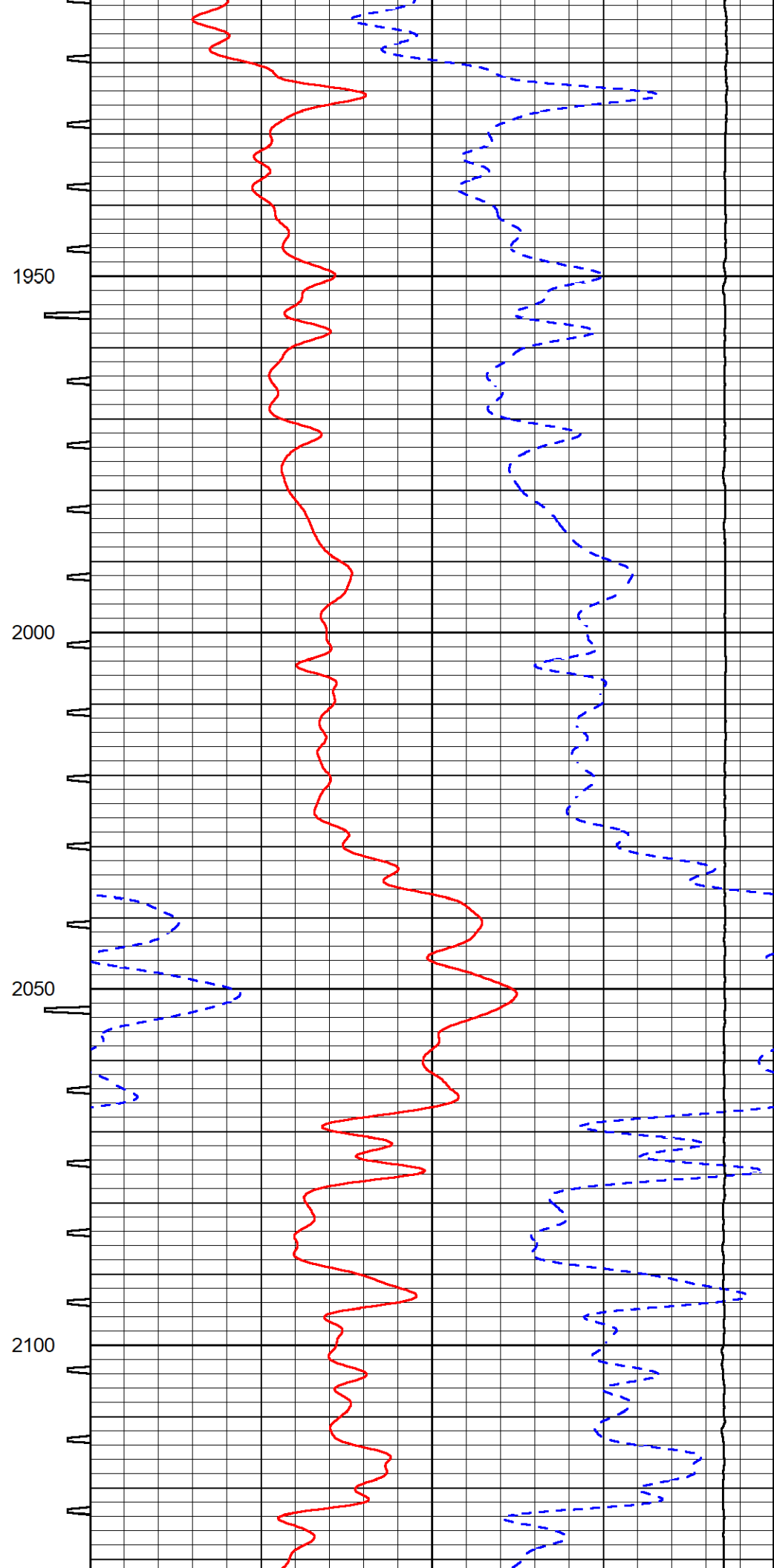
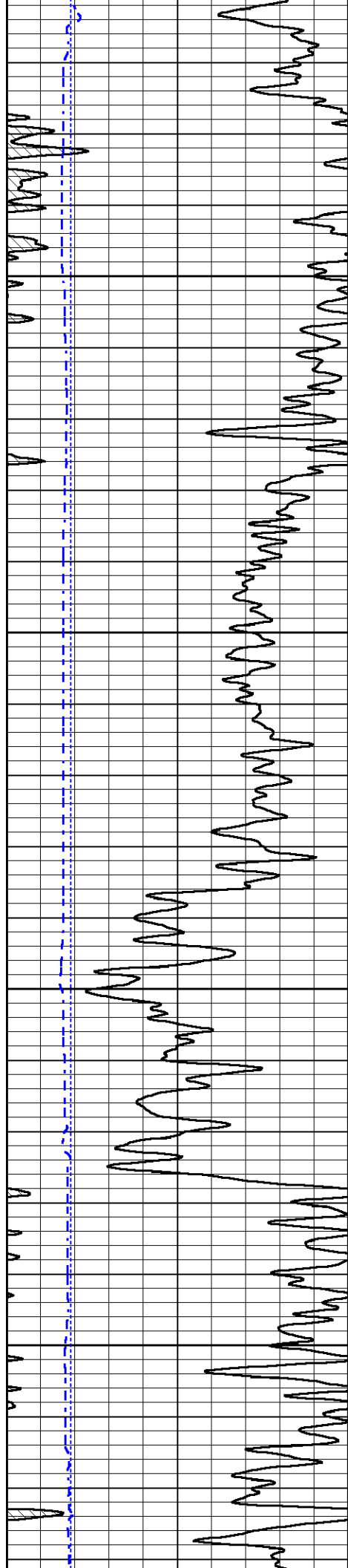
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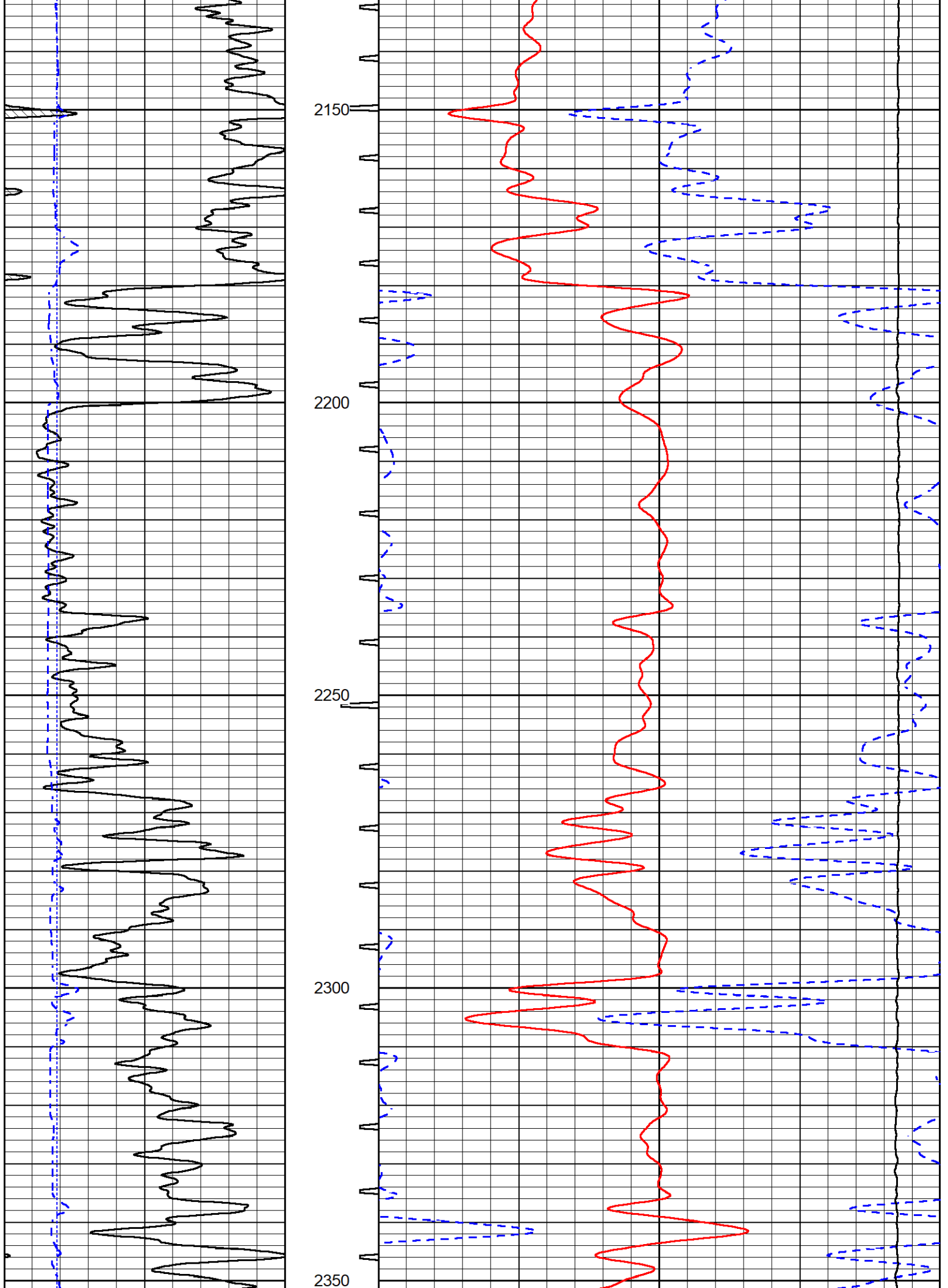
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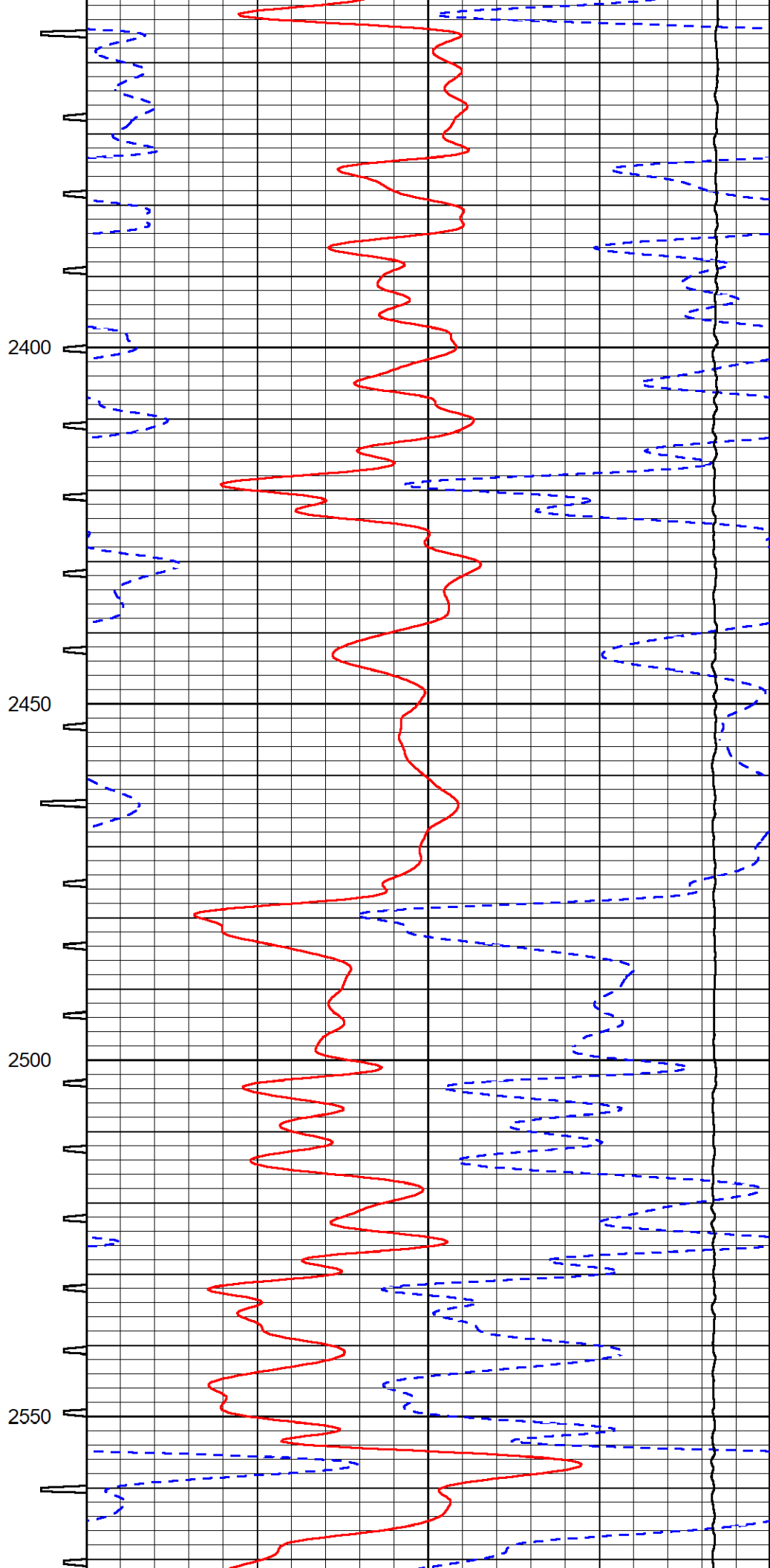
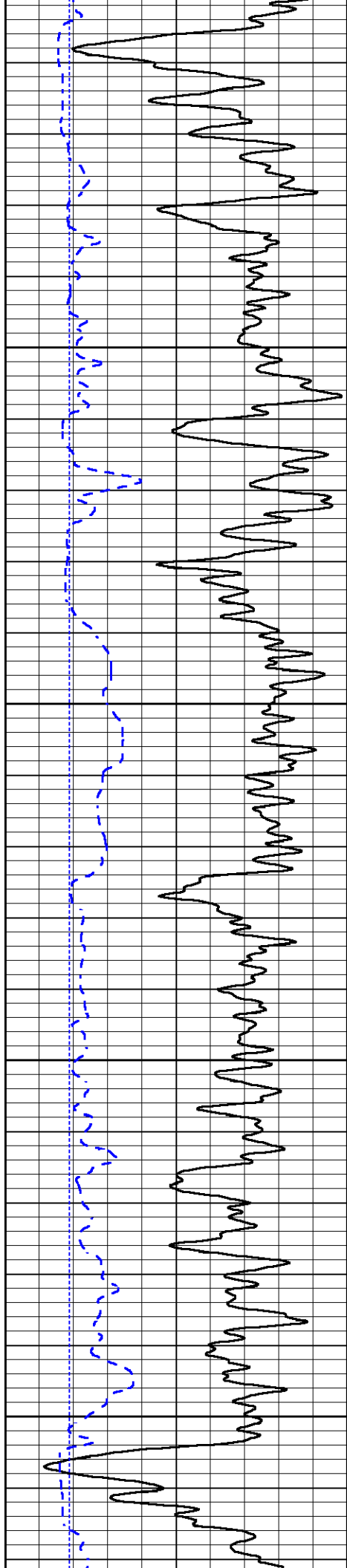
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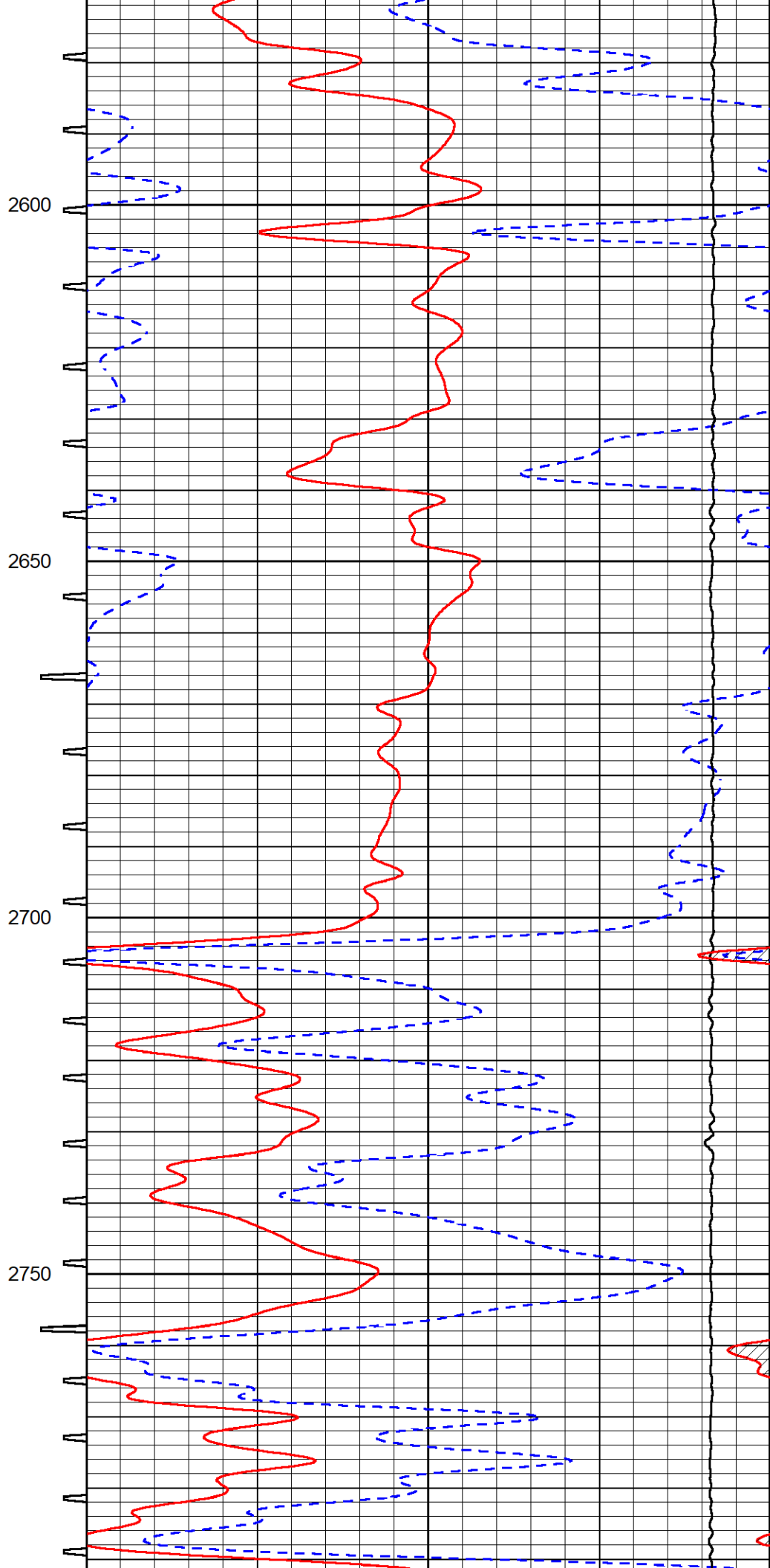
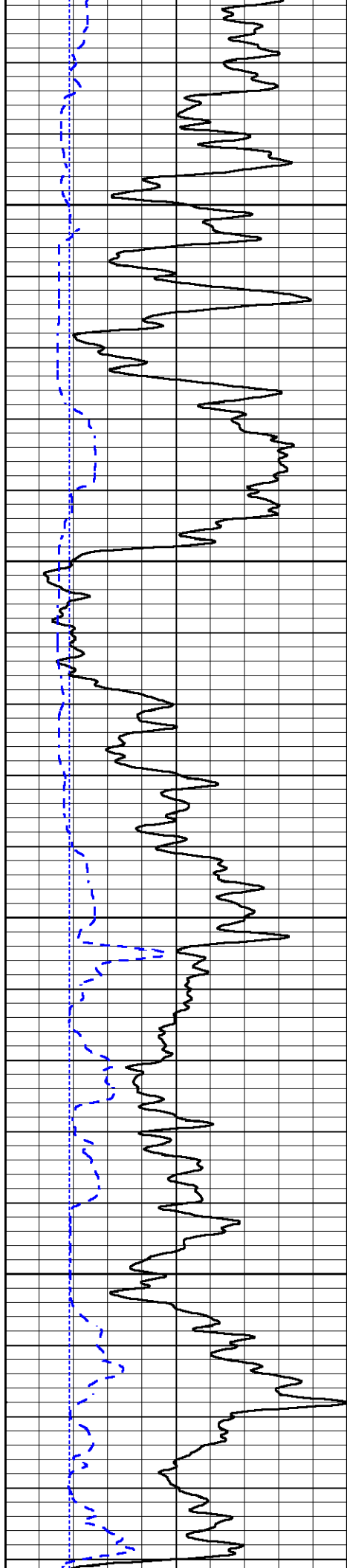


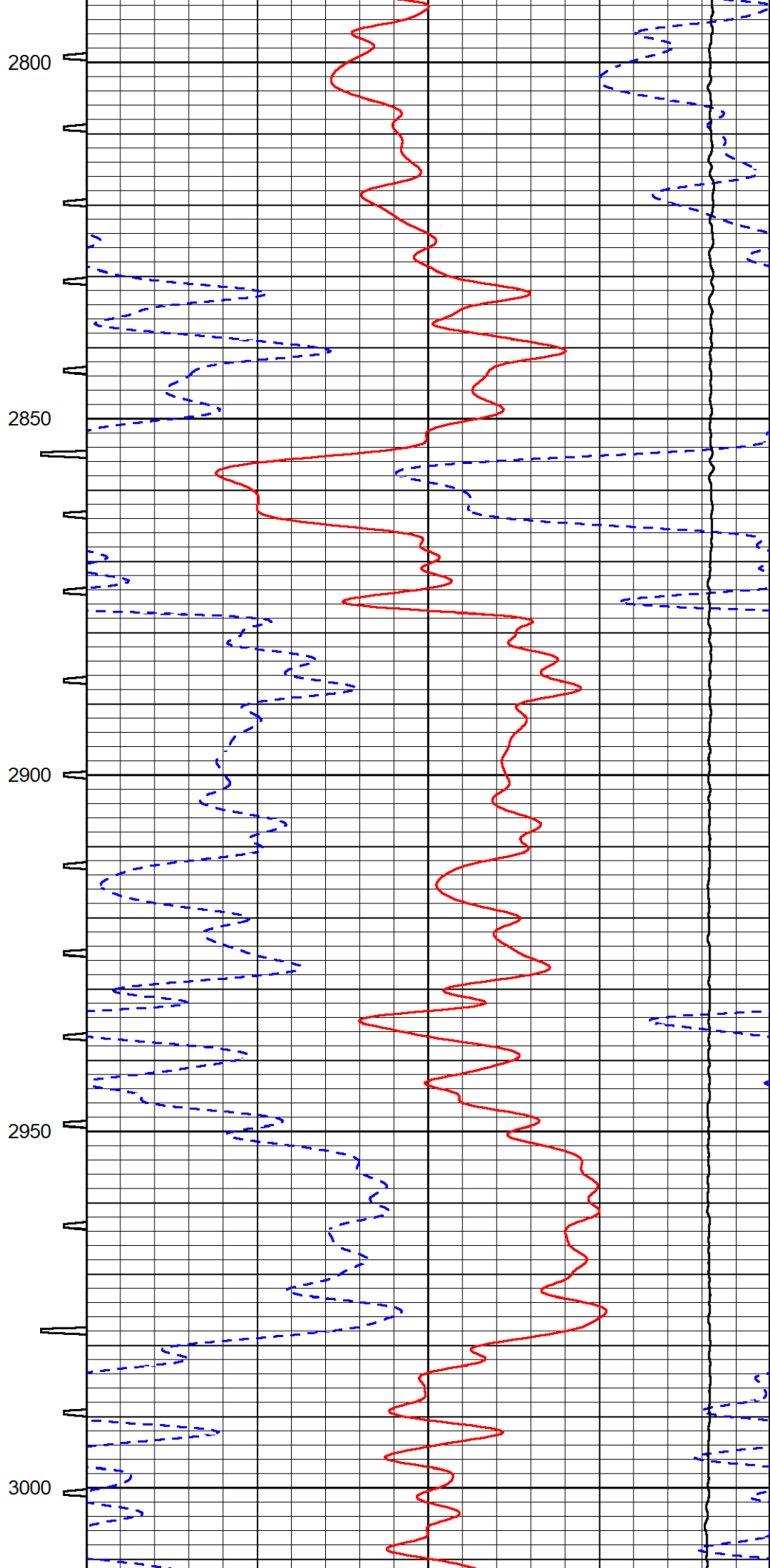
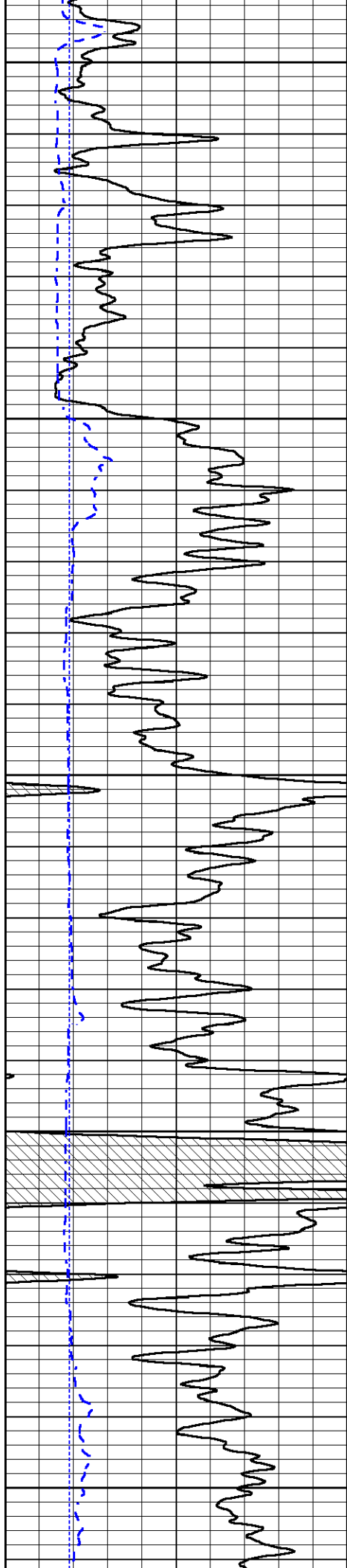
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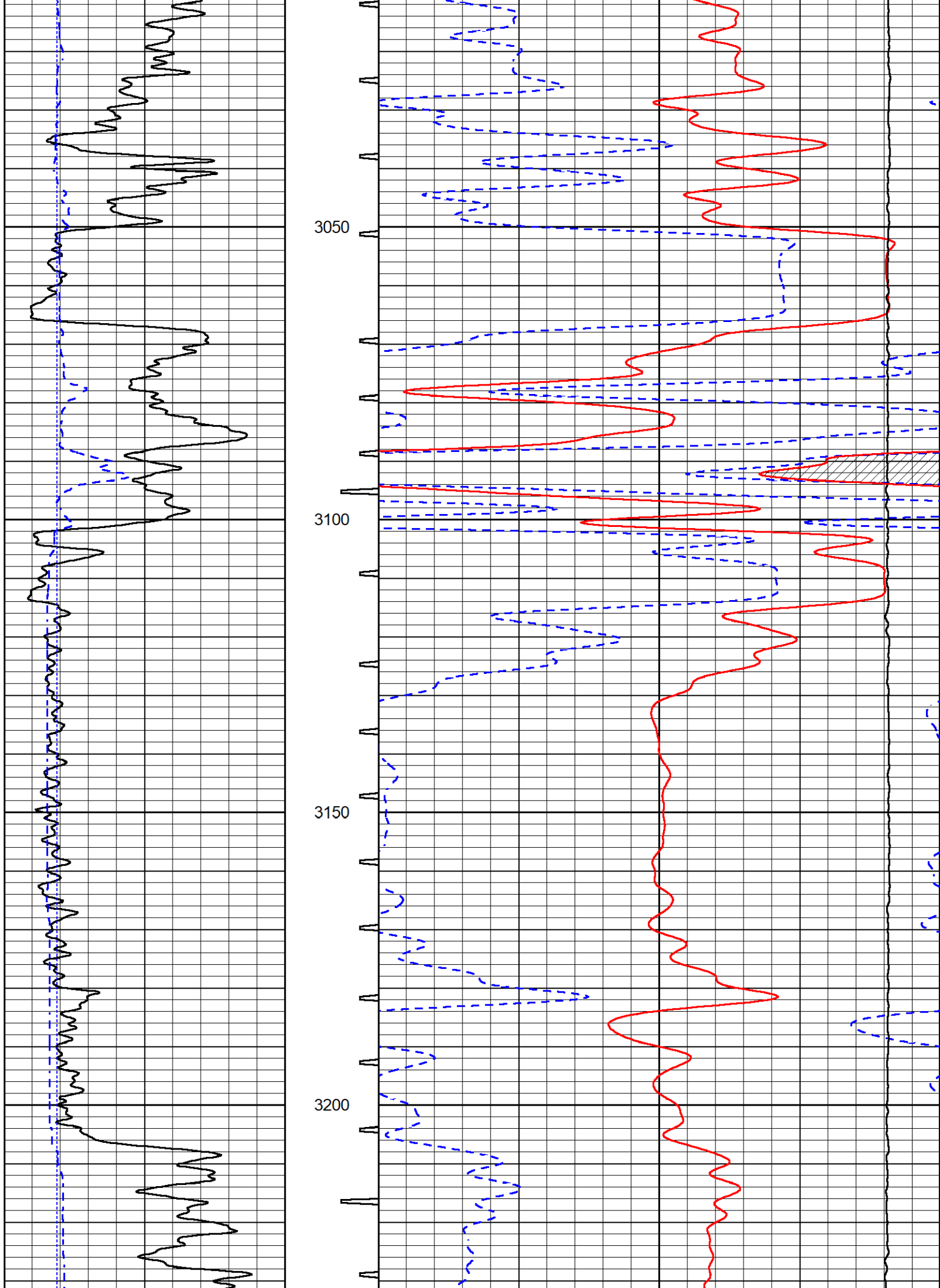
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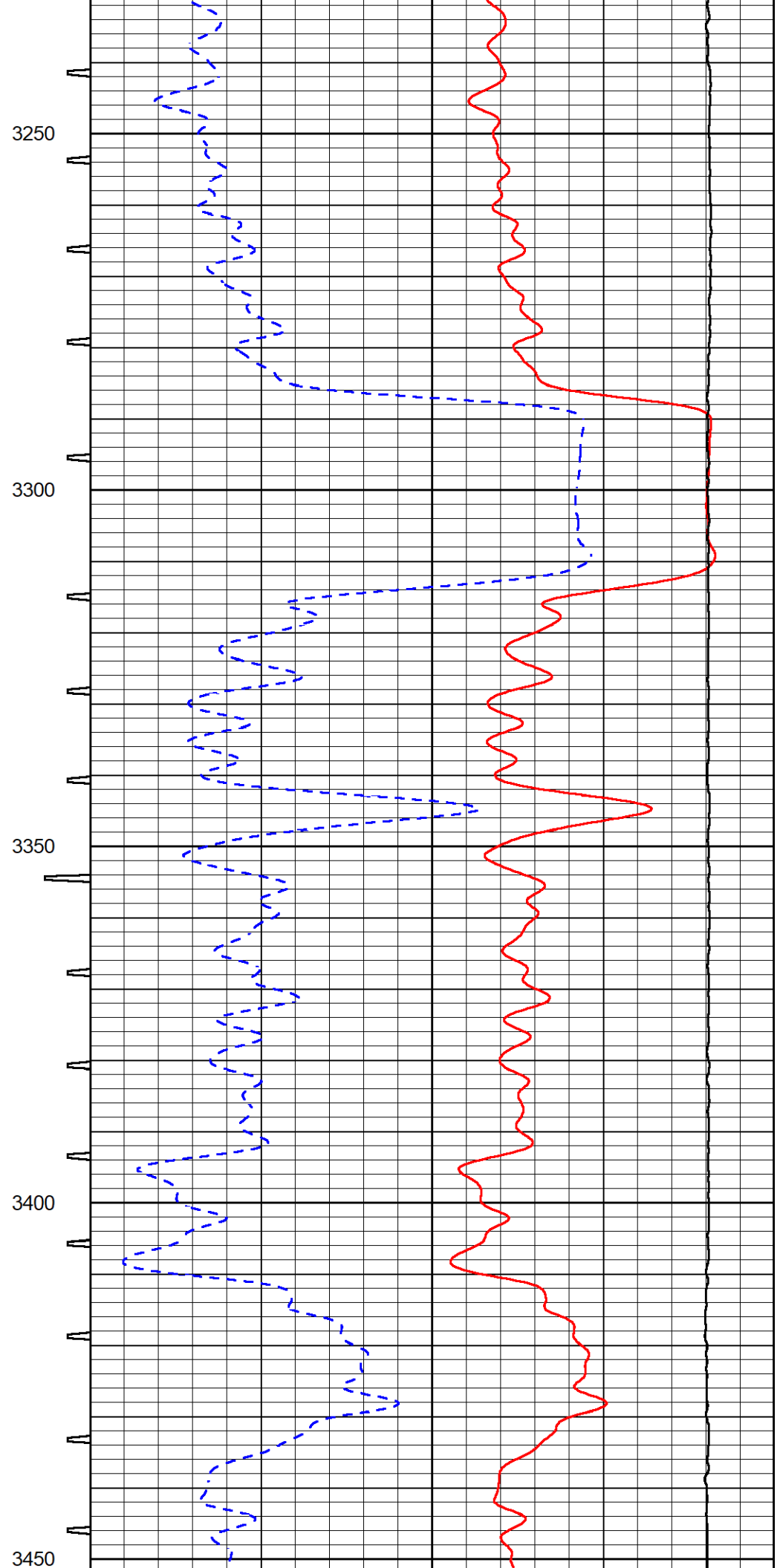
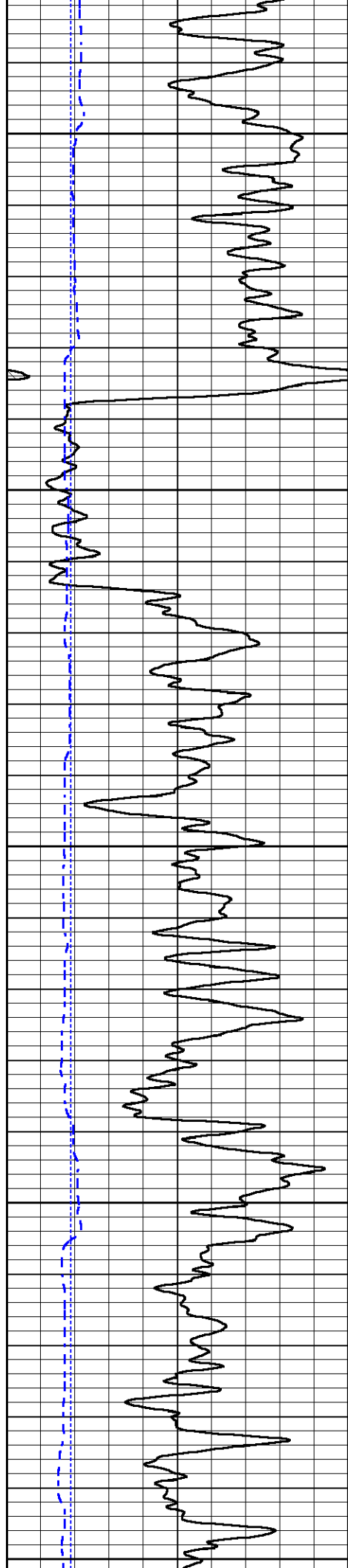
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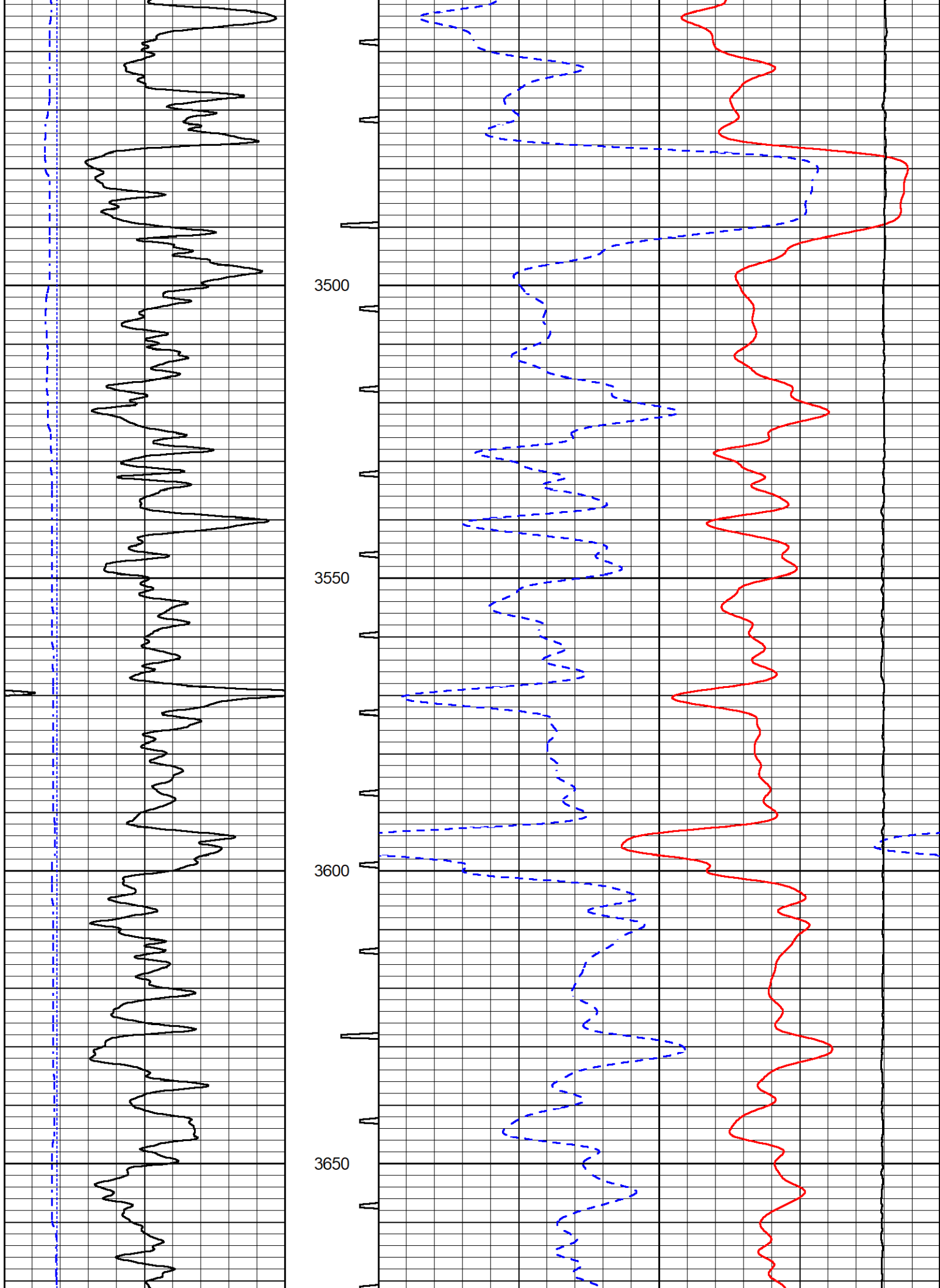
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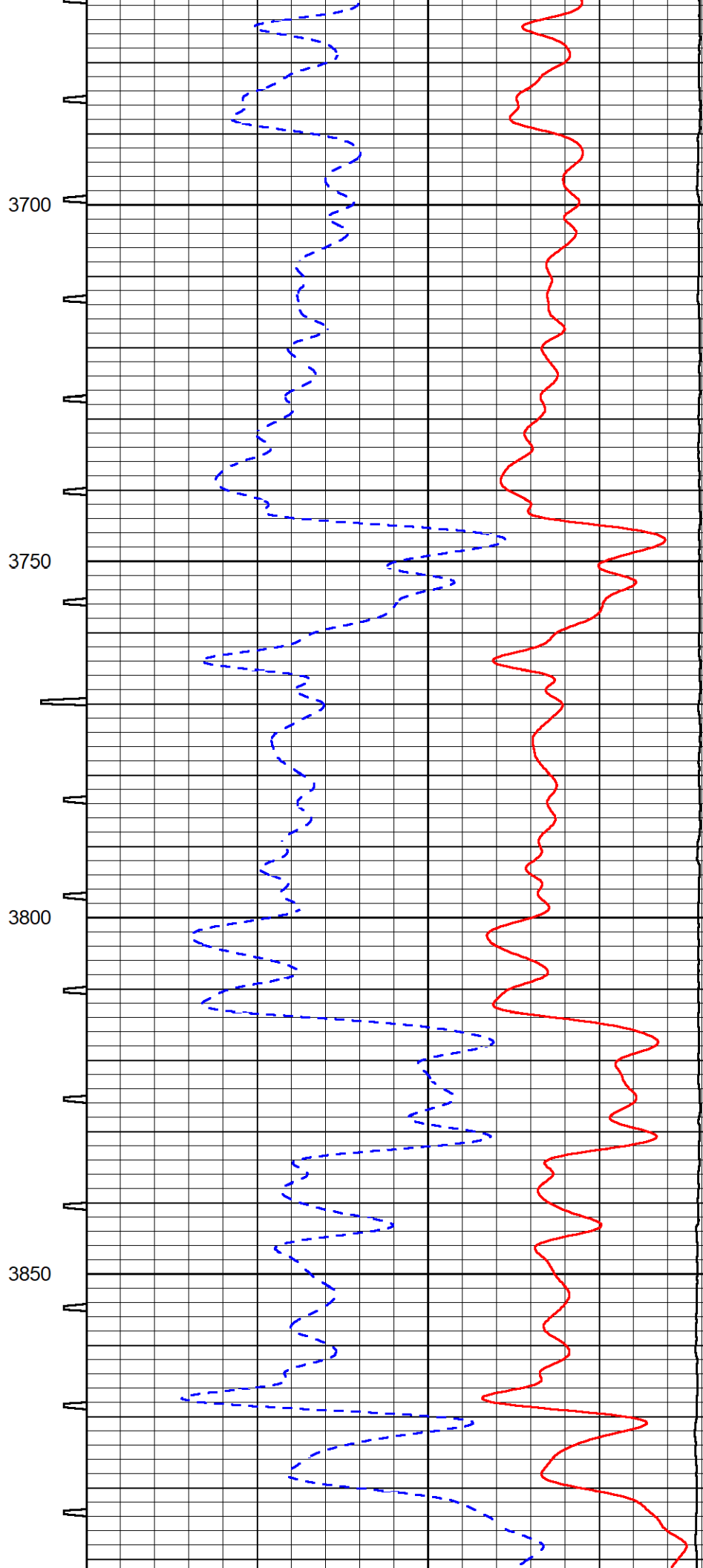
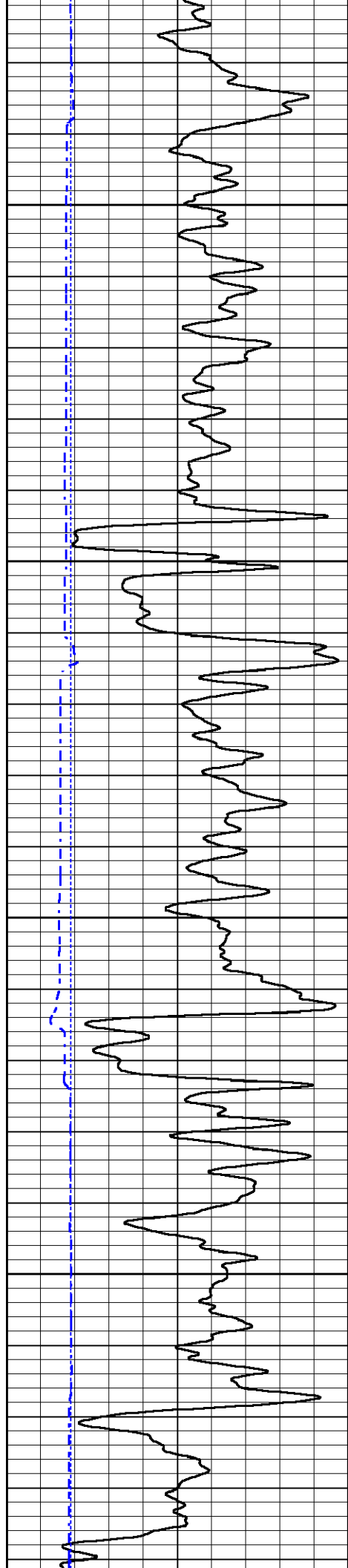










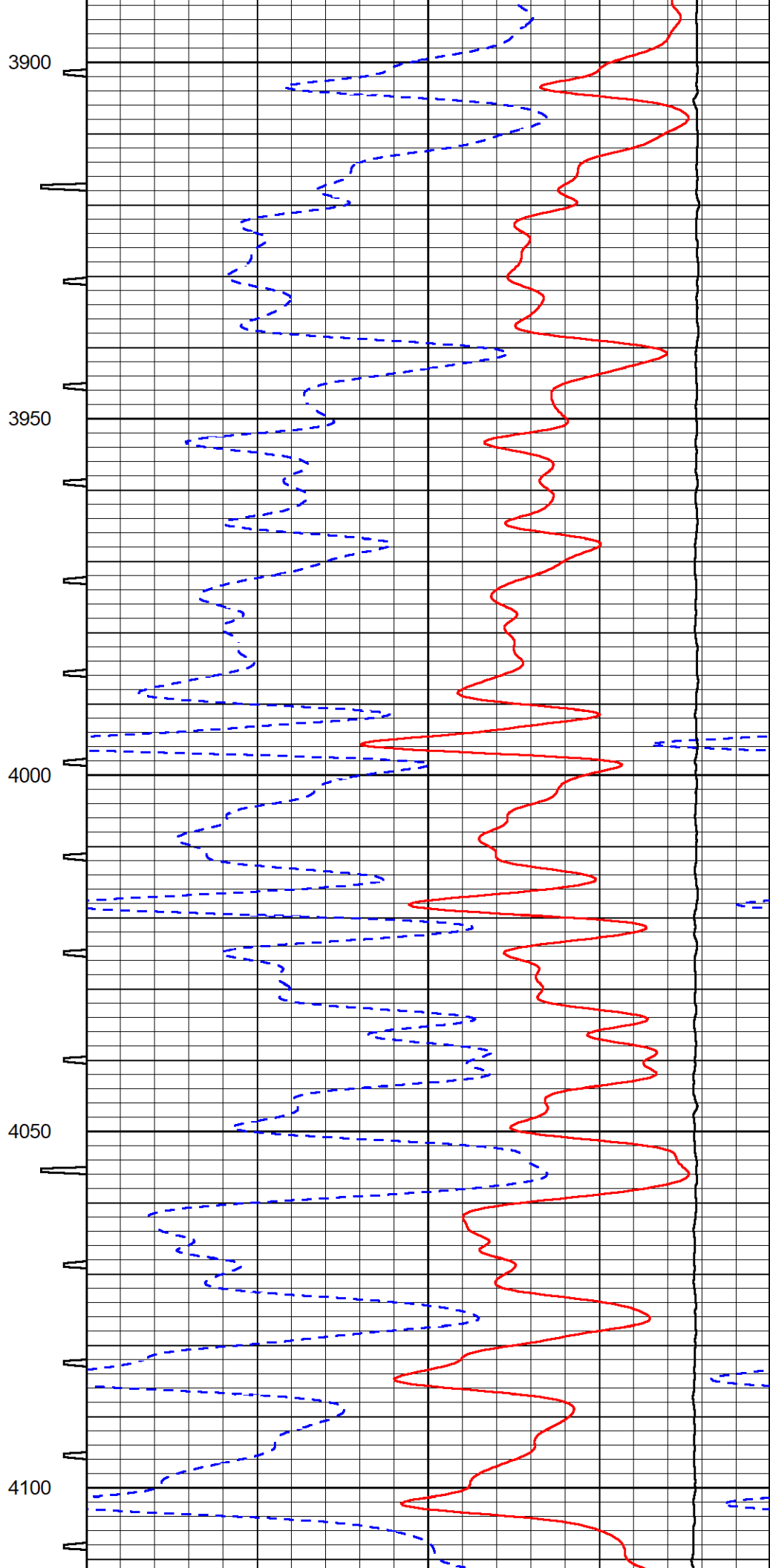
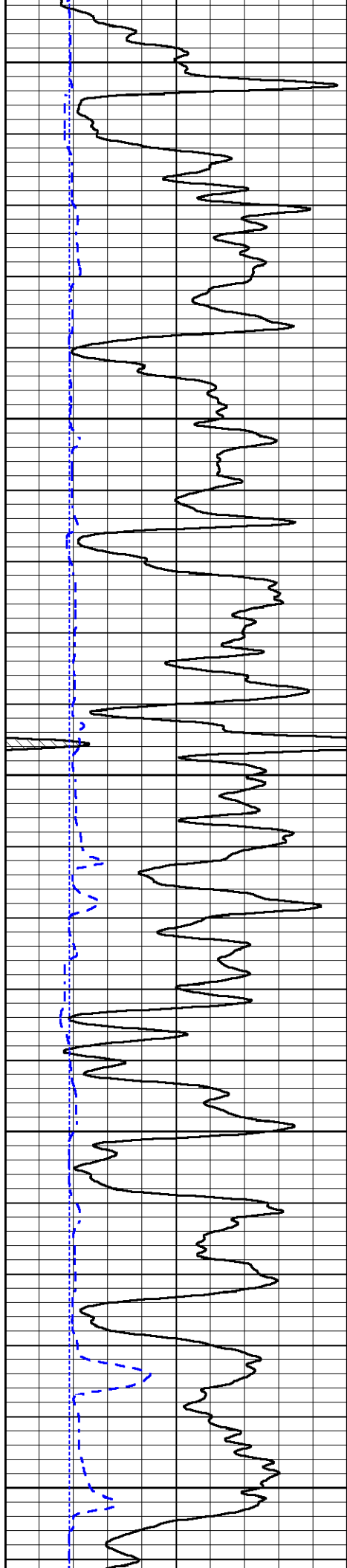


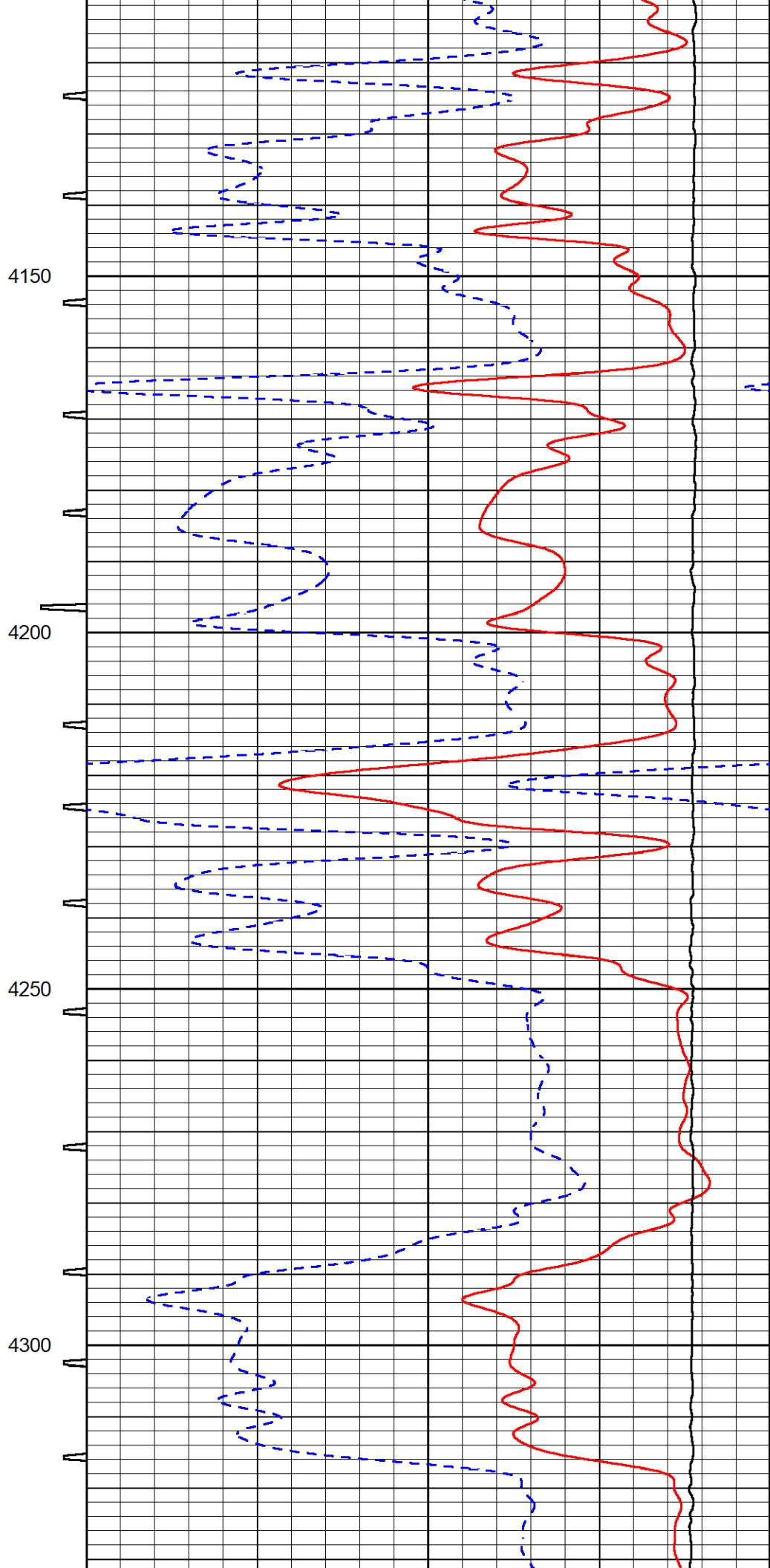
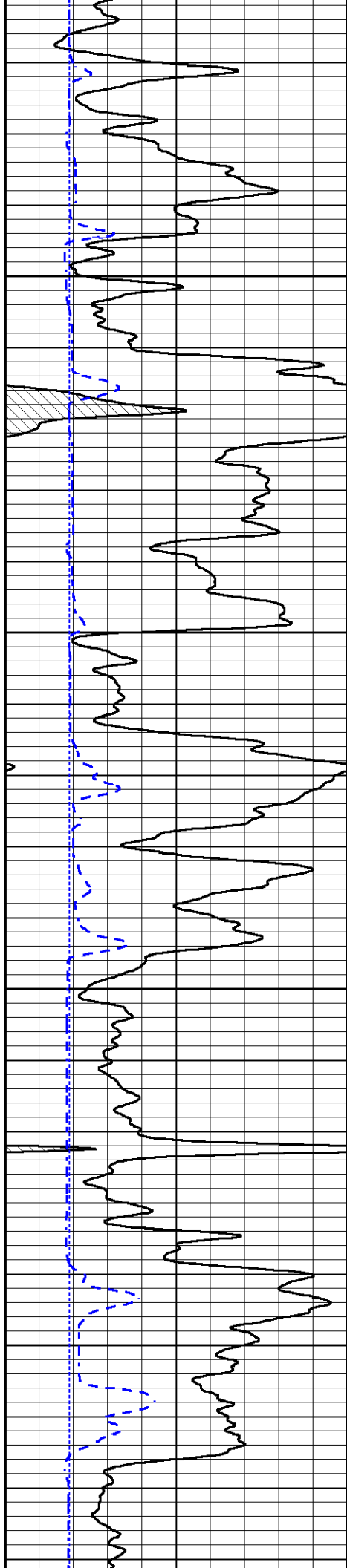
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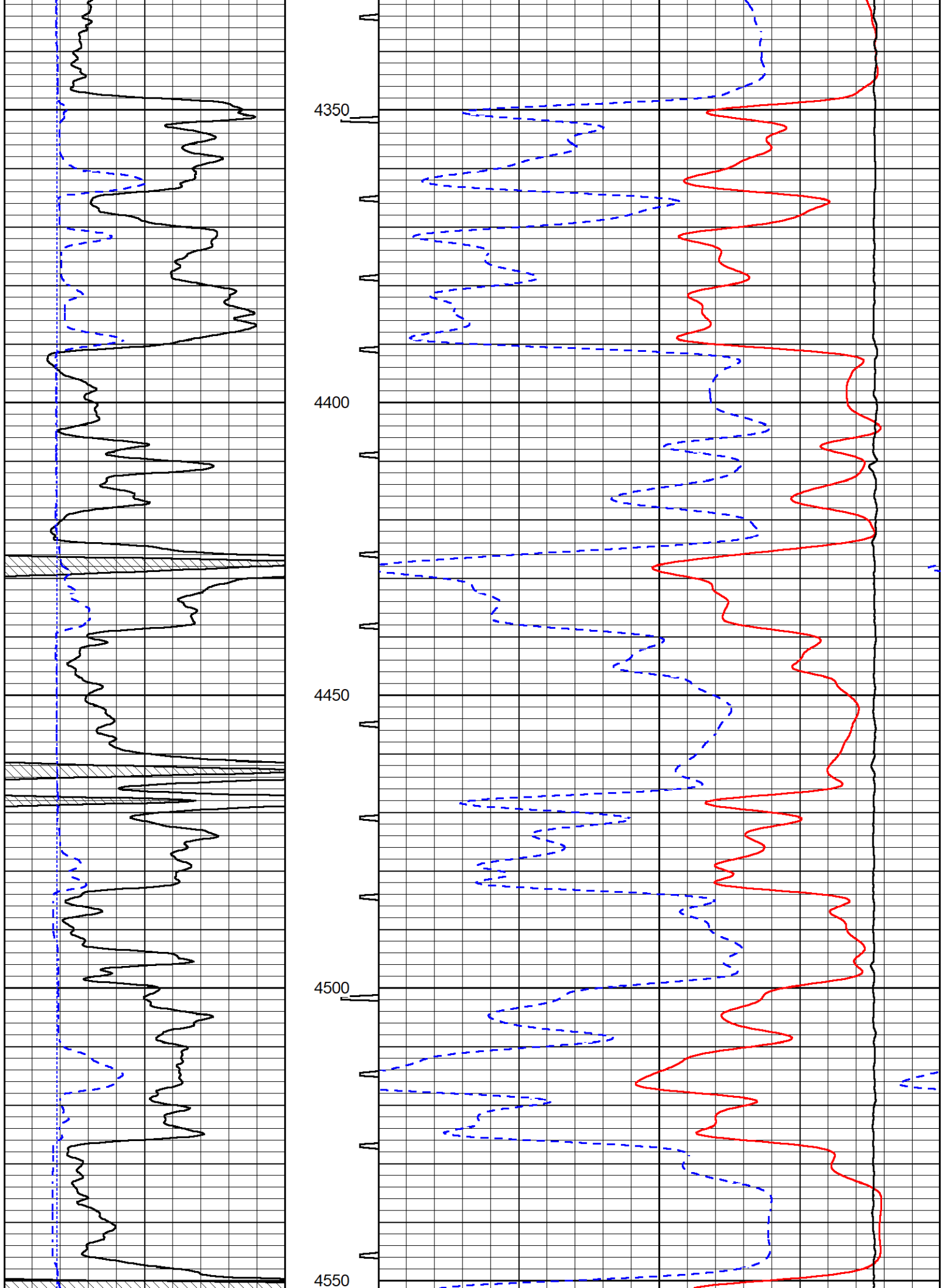
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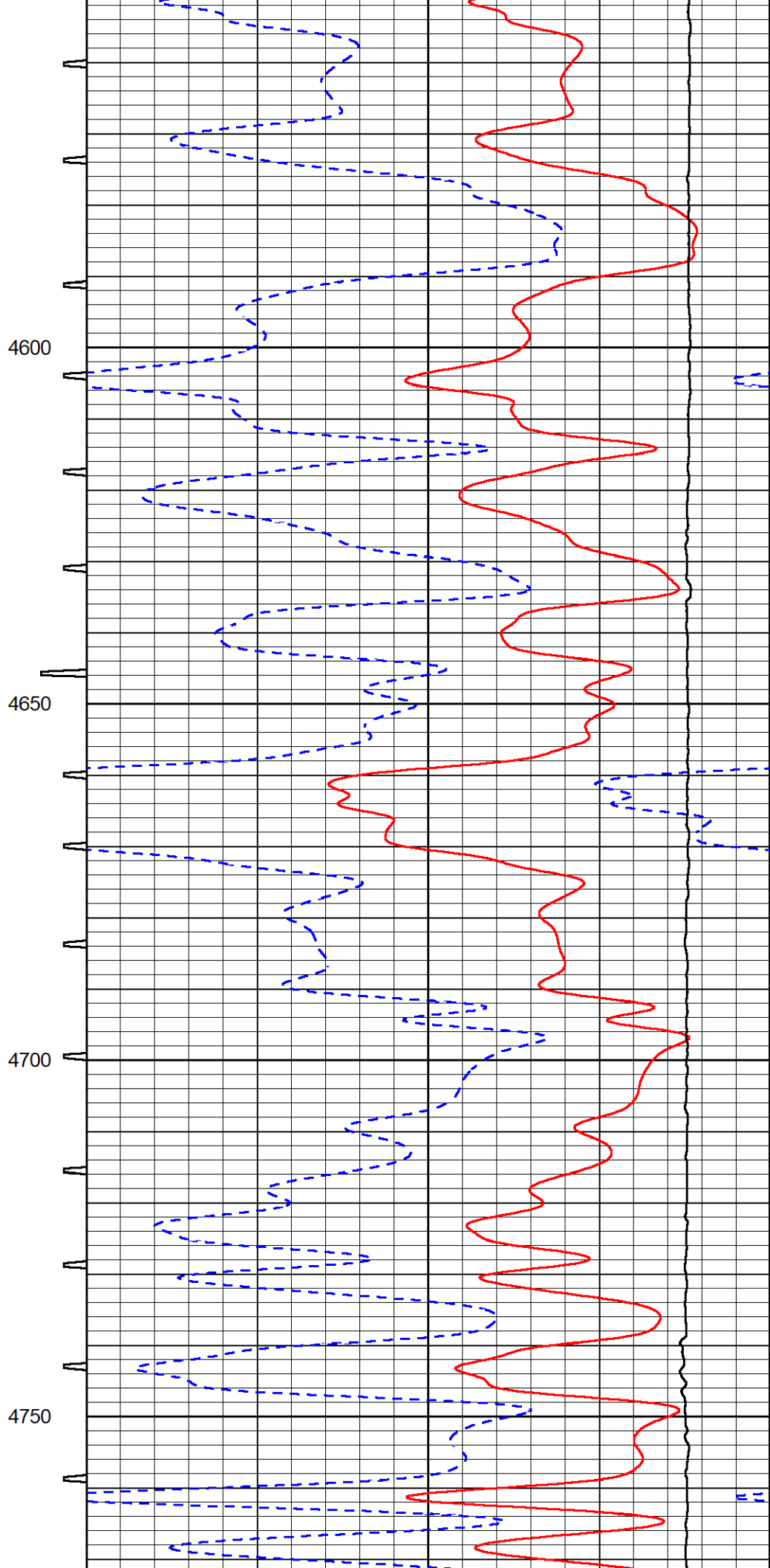
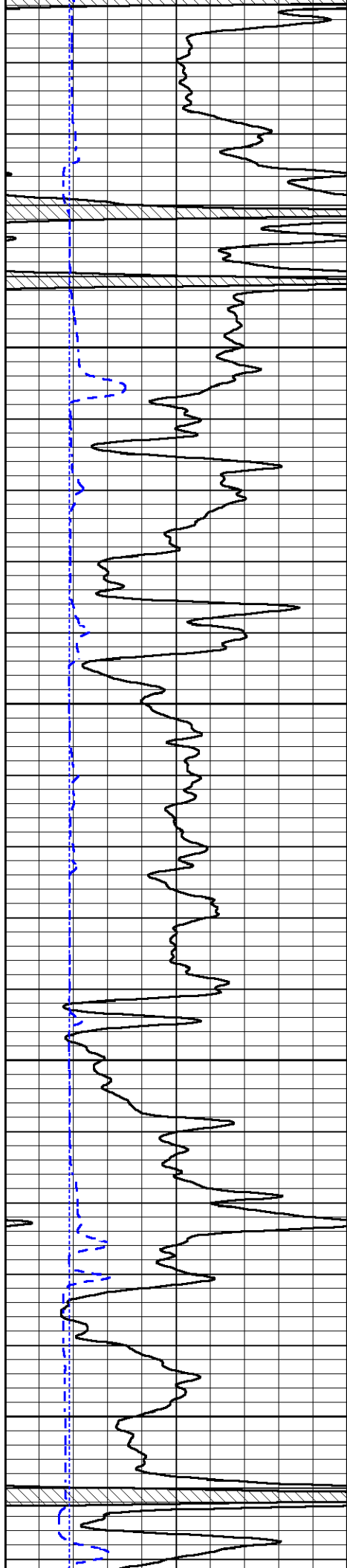
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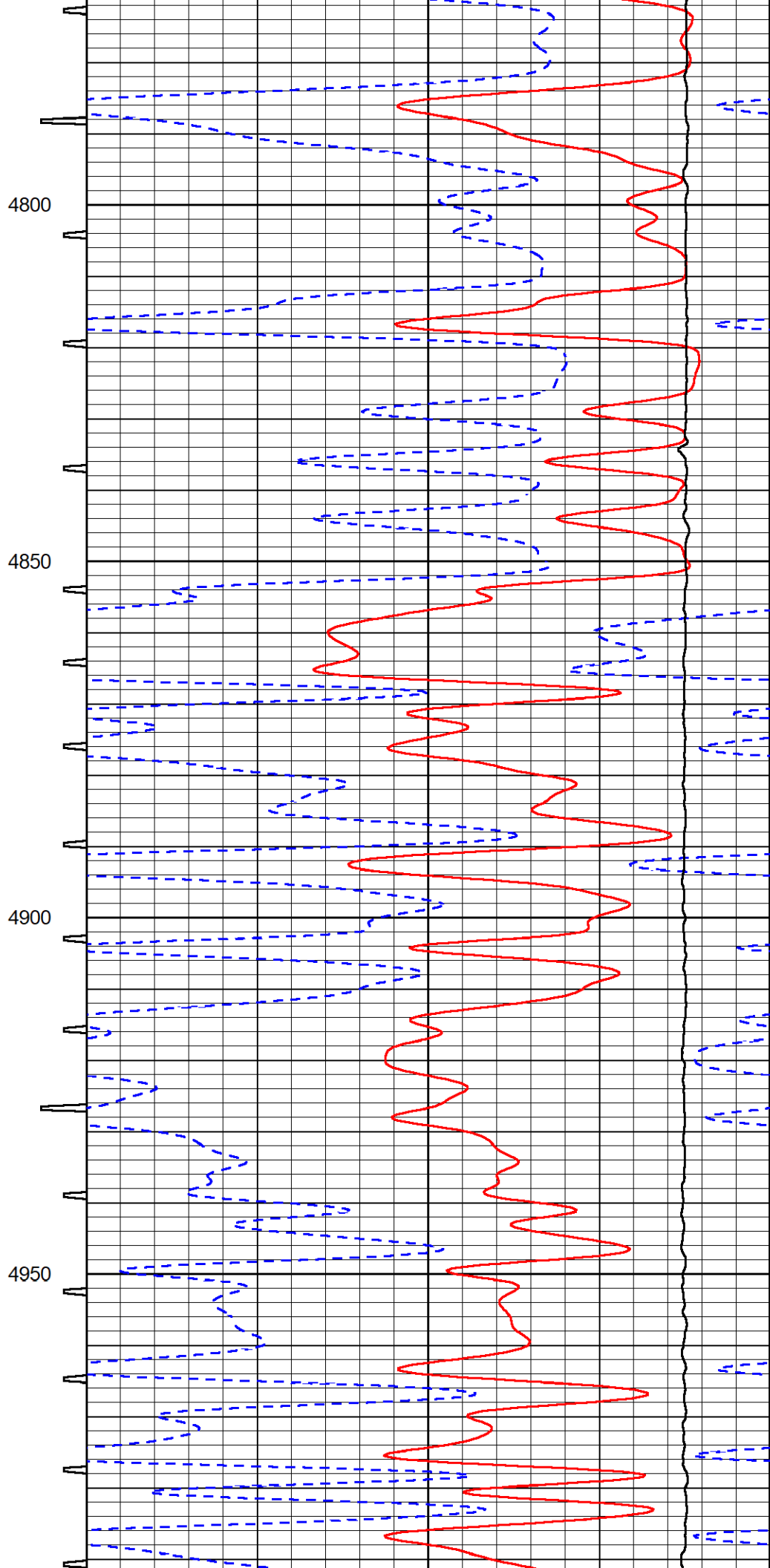
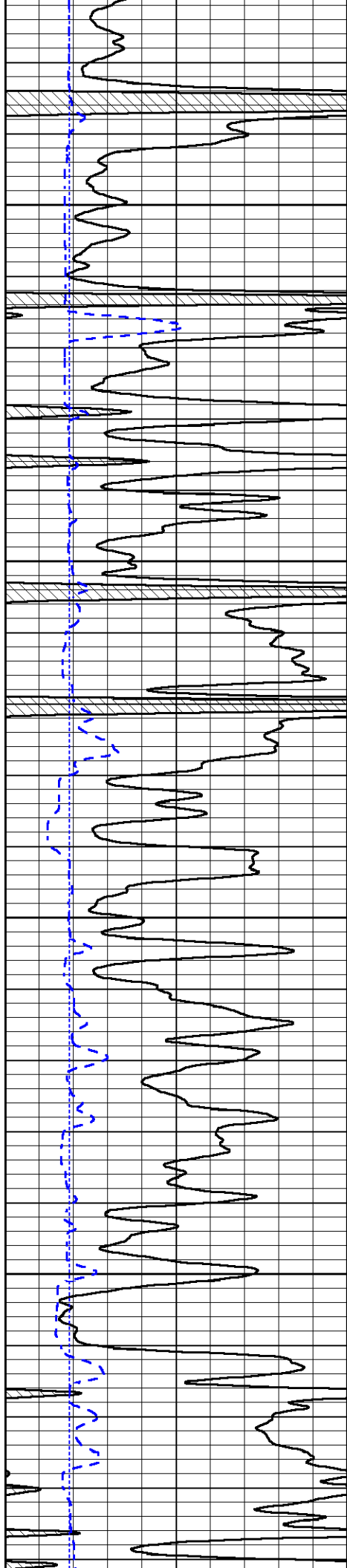
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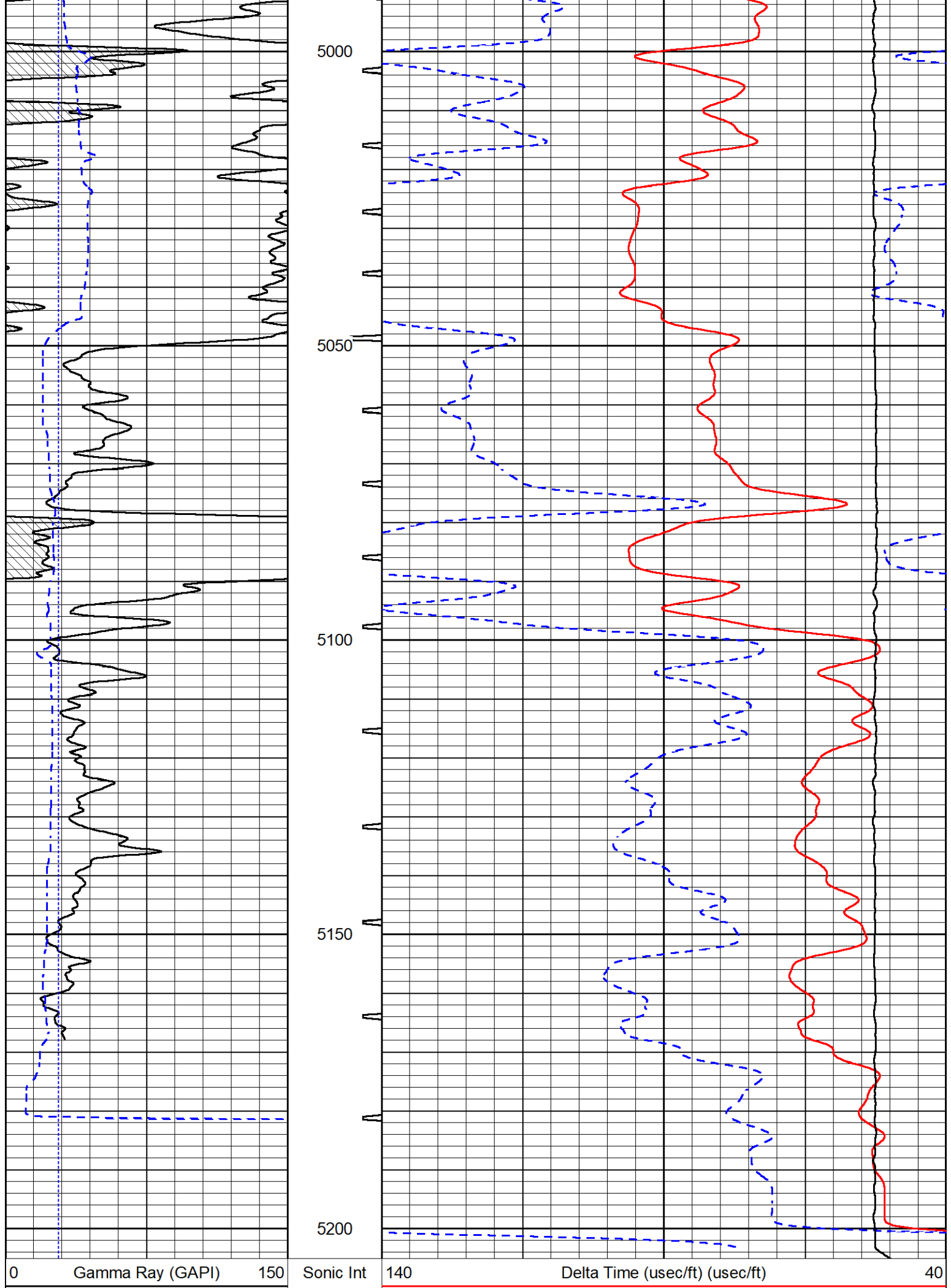












150	GR (GAPI)	300	5 (msec)	0	30	Sonic Porosity (pu) (pu)	-10
6	Caliper (in)	16			15000	Line Tension (lb)	0



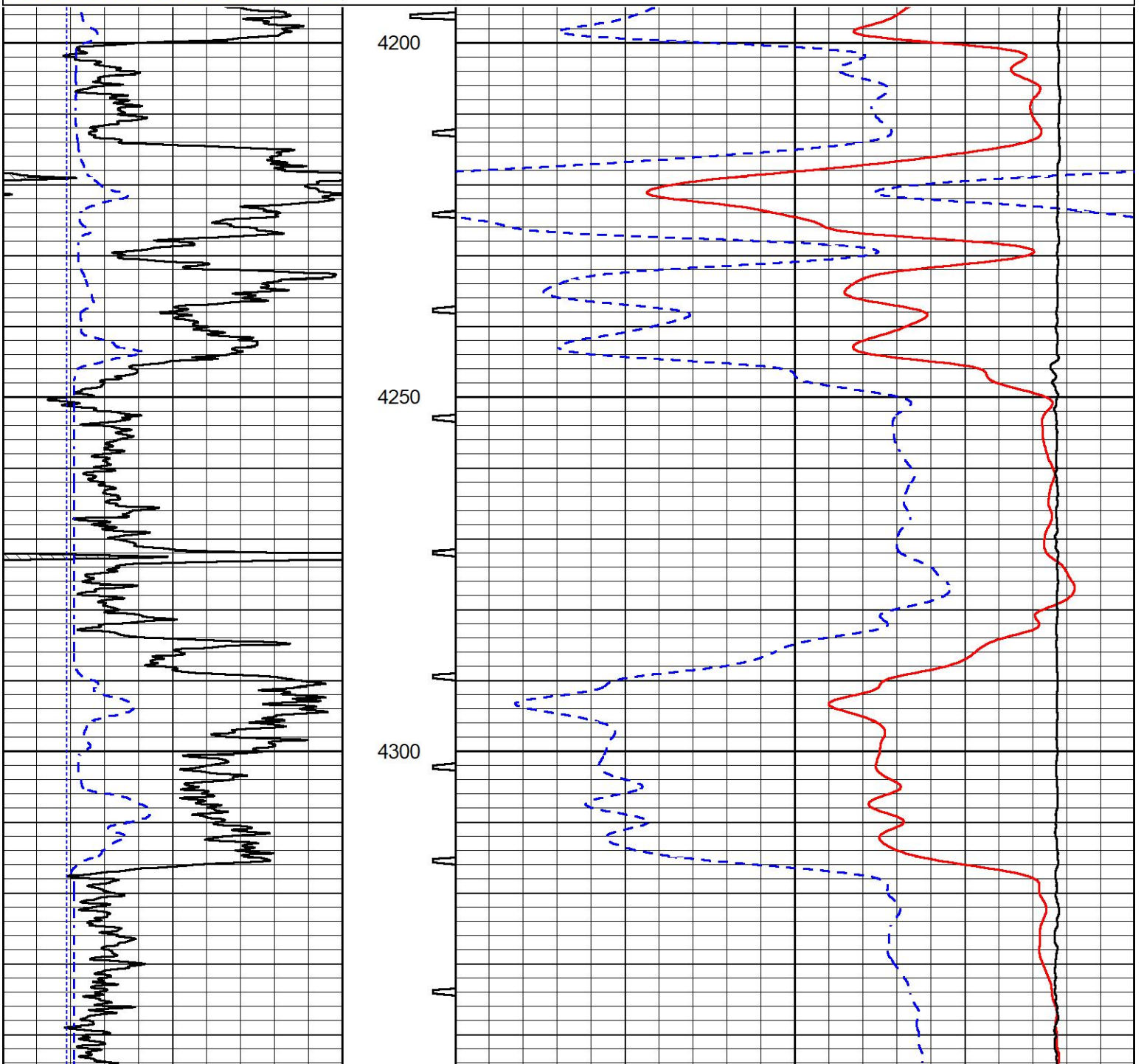
MIDWEST WIRELINE

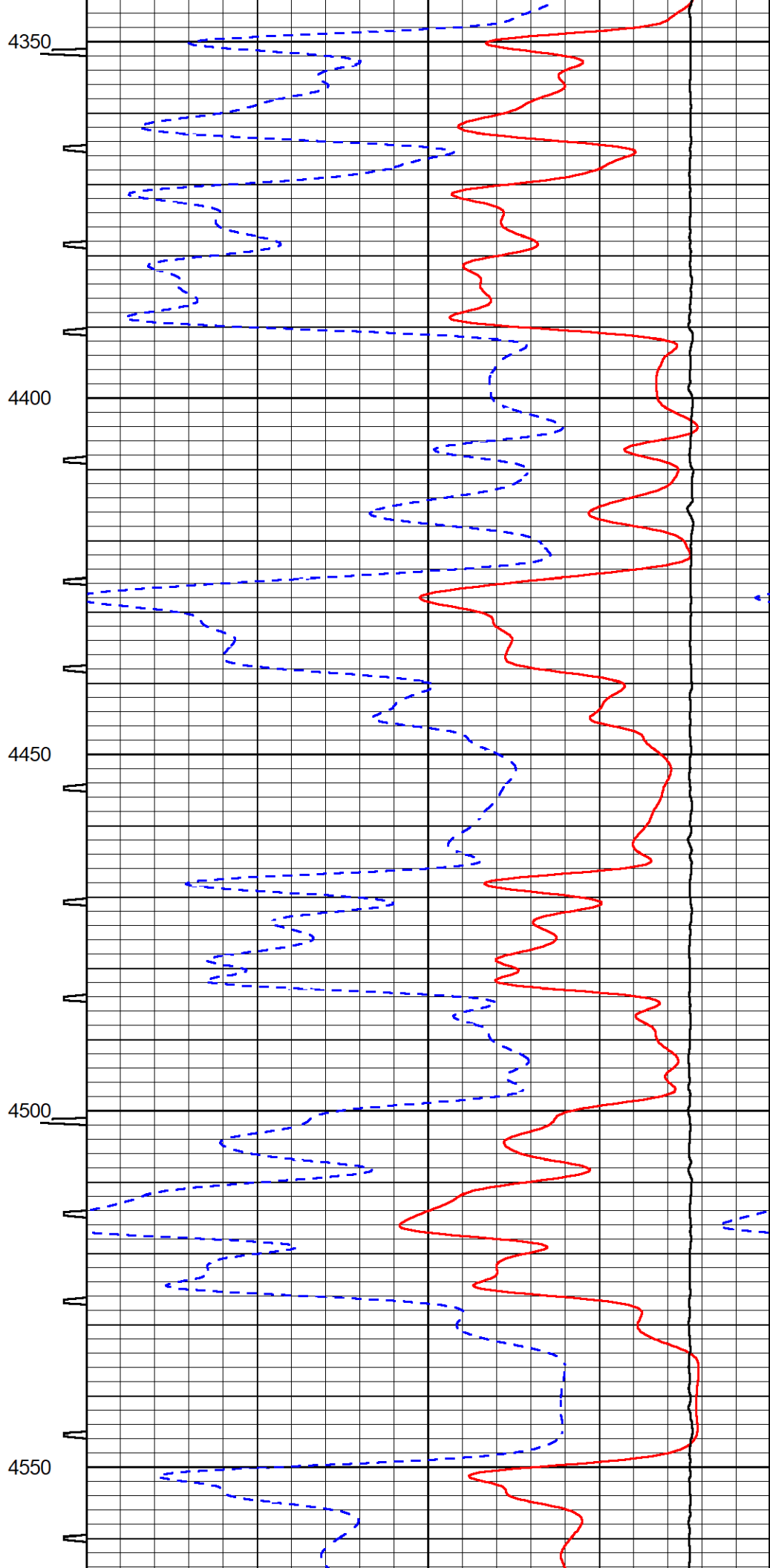
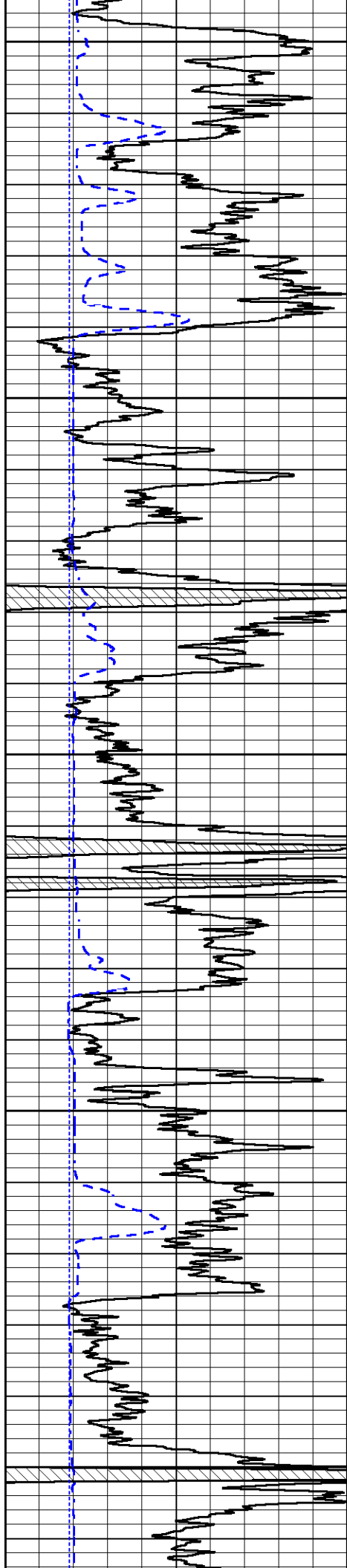
REPEAT SECTION

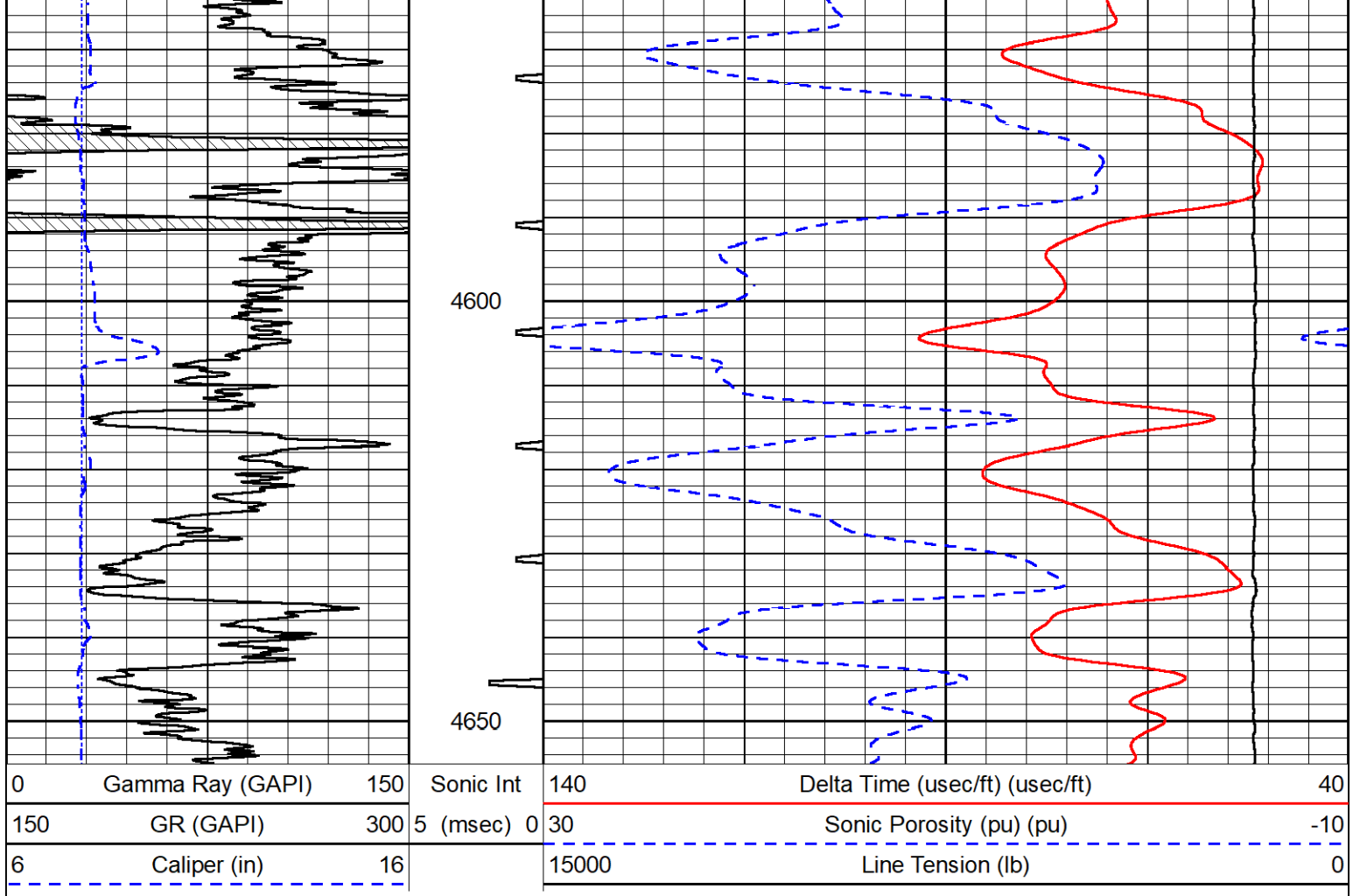
REPEAT PASS

Database File murfin_keller b 1-36.db
 Dataset Pathname stkml/pass2.1
 Presentation Format _sonic
 Dataset Creation Mon Jan 24 22:14:24 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 murfin_keller b 1-36.db
 Dataset Pathname stkml/pass3.1
 Dataset Creation Mon Jan 24 22:15:54 2022

Dual Induction Calibration Report

Serial-Model: 501 HT-M&W
 Surface Cal Performed: Mon Jan 24 19:13:55 2022

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.420	-33.500
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.300	-32.000

Microlog Calibration Report

Serial-Model: 402-PSIML
 Performed: Mon Jan 24 20:31:16 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	34000.0000	-2.5000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	20000.0000	0.0000
Caliper	1.0052	1.0858	5.0000	16.5000	in	125.0000	-124.0000

Compensated Density Calibration Report

Serial-Model:	305-05-M&W
Source #:	20762B
Master Calibration Performed:	Mon Jan 24 19:14:33 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	8758.11	9709.36	cps
Aluminum	2.630	g/cc	1513.14	5652.54	cps
Spine Angle = 72.88			Density/Spine Ratio = 0.476		
	Size		Reading		
Small Ring	4.00	in	1.75		
Large Ring	14.00	in	1.38		

Compensated Neutron Calibration Report

Serial-Model:	207-MW-M&W
Source #:	100046B
Master Calibration Performed:	Mon Nov 29 15:06:24 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:	101
Tool Model:	M&W
Performed:	Mon Jan 24 19:14:46 2022
Calibrator Value:	500.0 GAPI
Background Reading:	24.0 cps
Calibrator Reading:	637.0 cps
Sensitivity:	0.5500 GAPI/cps



Company	Murfin Drilling Company, Inc.
Well	Keller B #1-36
Field	
County	Cheyenne
State	Kansas