



Pioneer Energy Services

BOREHOLE COMPENSATED SONIC LOG

Company VAL ENERGY, INC.

Well ROUGH MATTSON UNIT #1-4

Field

County THOMAS State KANSAS

Location: API #: 15-193-20981-00-00

Other Services

SE NE SE SW
893' FSL & 2517' FWL

SEC 4 TWP 8S RGE 35W

Permanent Datum	GROUND LEVEL	Elevation	3311
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Drilling Measured From	KELLY BUSHING	G.L. 3311
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	12/10/2016
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	BHCS
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	4872'
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250'	
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L	5500
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FULL

3	4 1/2 HOUR
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	T. MARTIN
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Vehicle Record	
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00'	264'	
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1

1

1

1

1

1

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

LEVANT, KS, 1 1/2 W ON R RD,
CROSS RR AND STAY N INTO

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

Engineer: T. MARTIN
Operator: C. SCHOENROGGE
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: TIM PRIEST
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\val_koughmattsonunit_#1-4.db
Dataset field/well/stack/pass3.1/_vars_

Top - Bottom

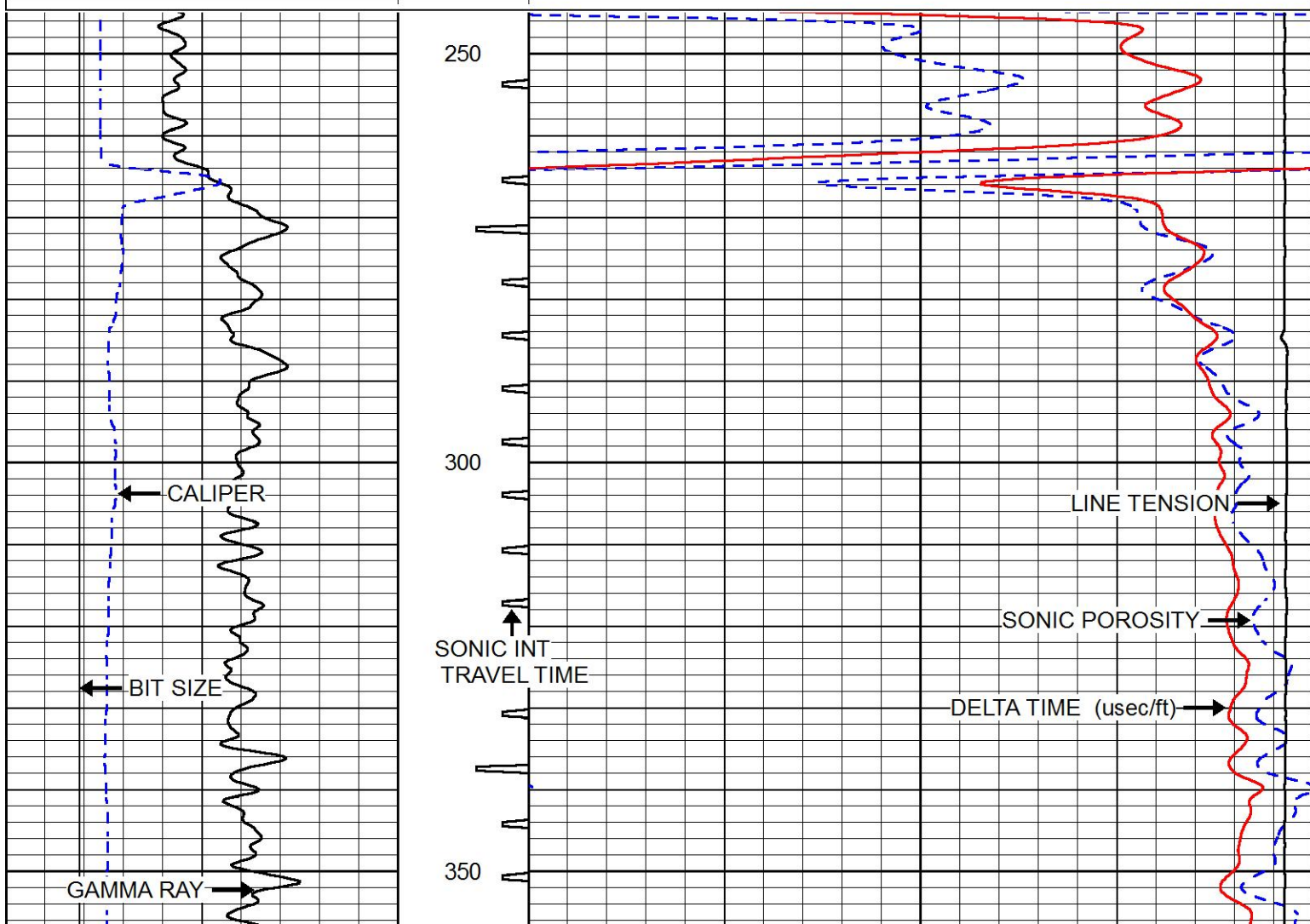
A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	125	5.5	0	1		2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m	mmho/m	mV	degF	Off	ft
		0	0	-375	20		4872

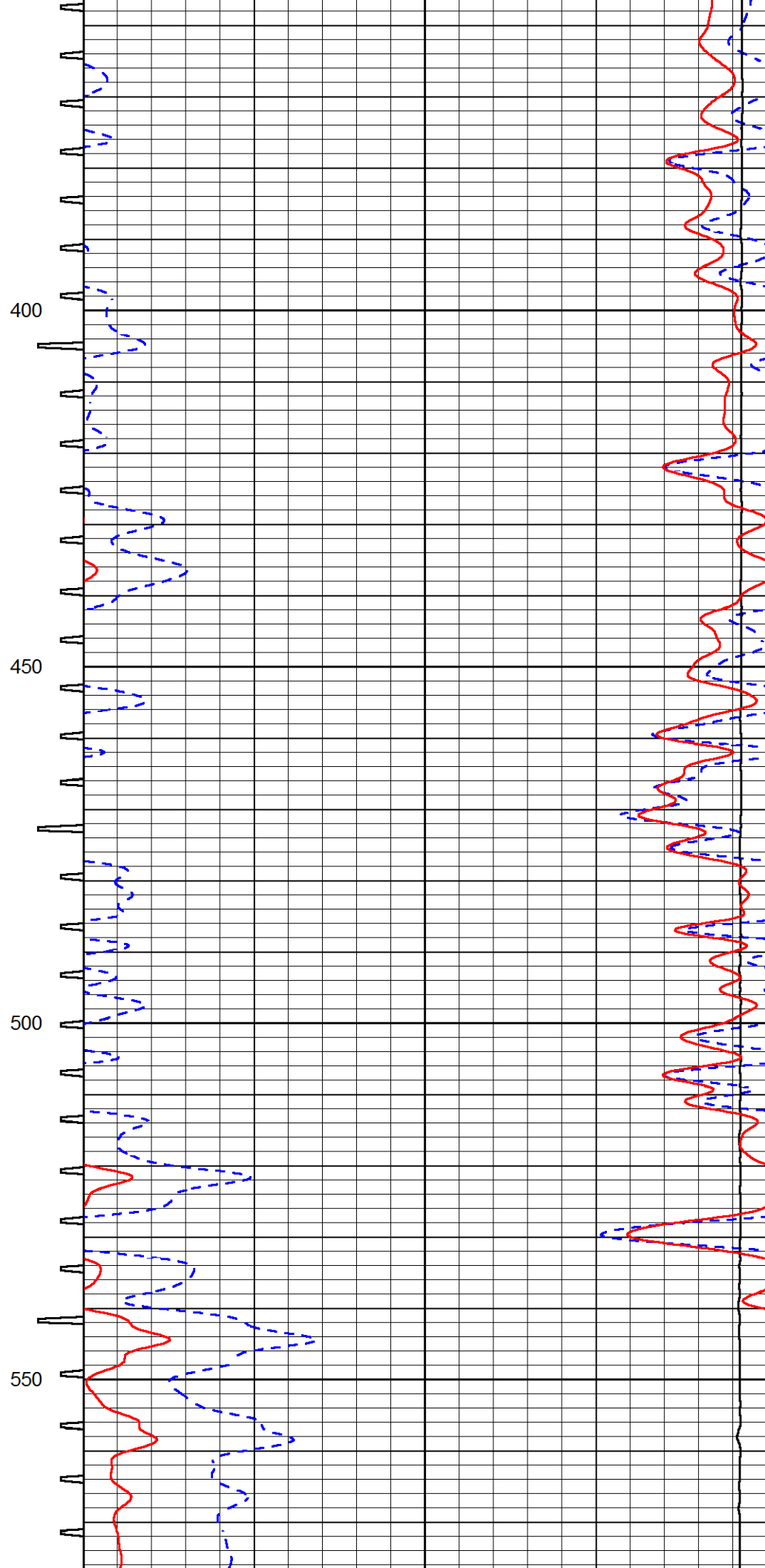
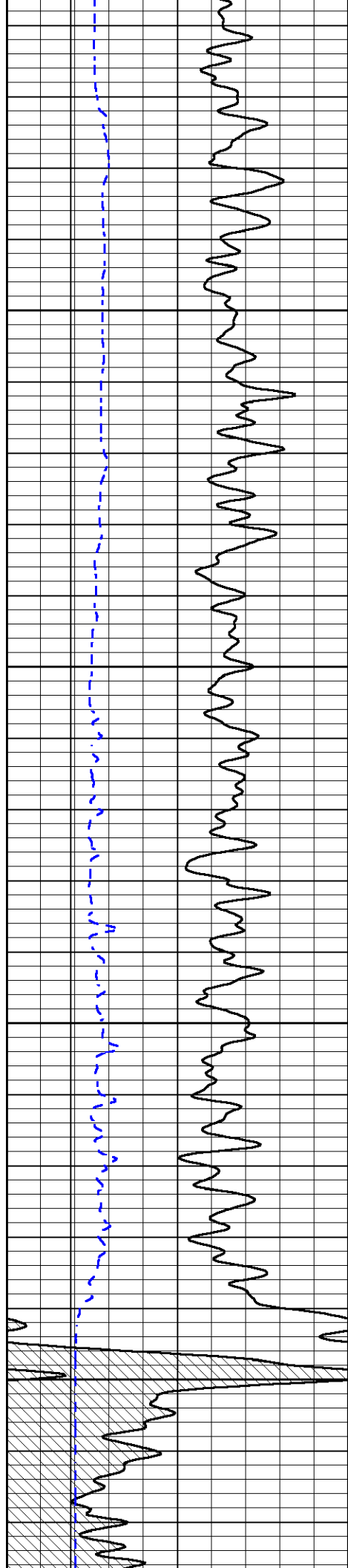


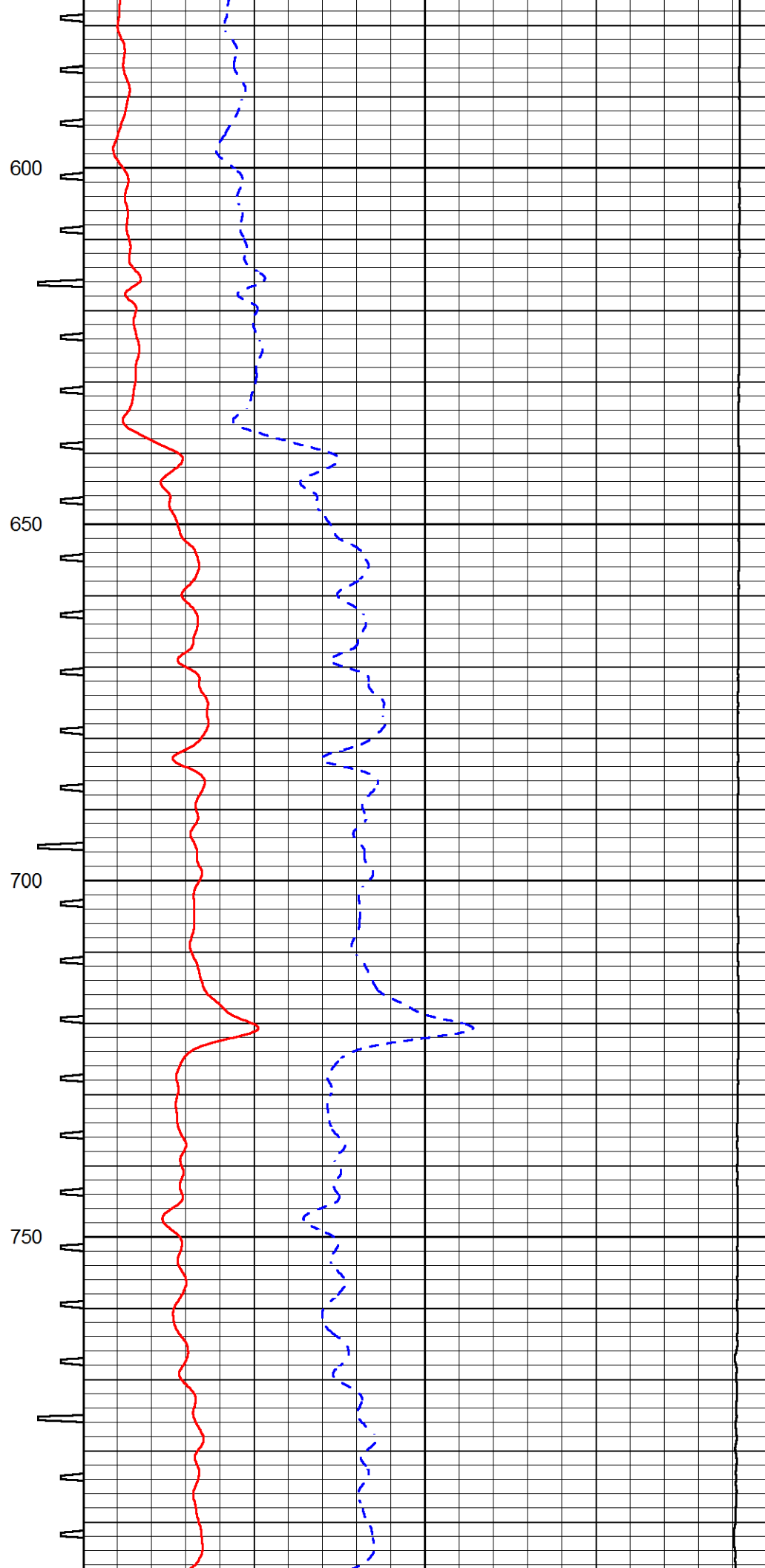
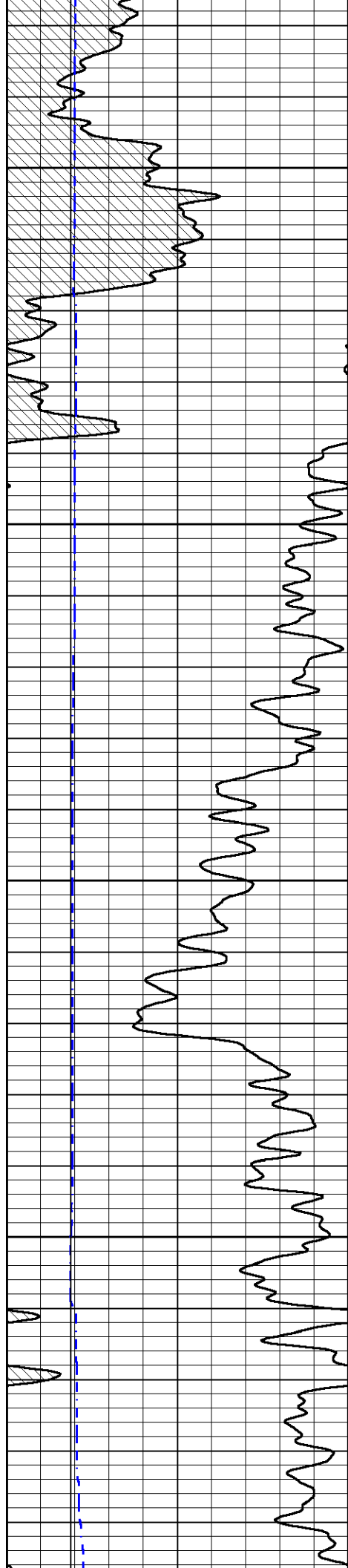
MAIN PASS

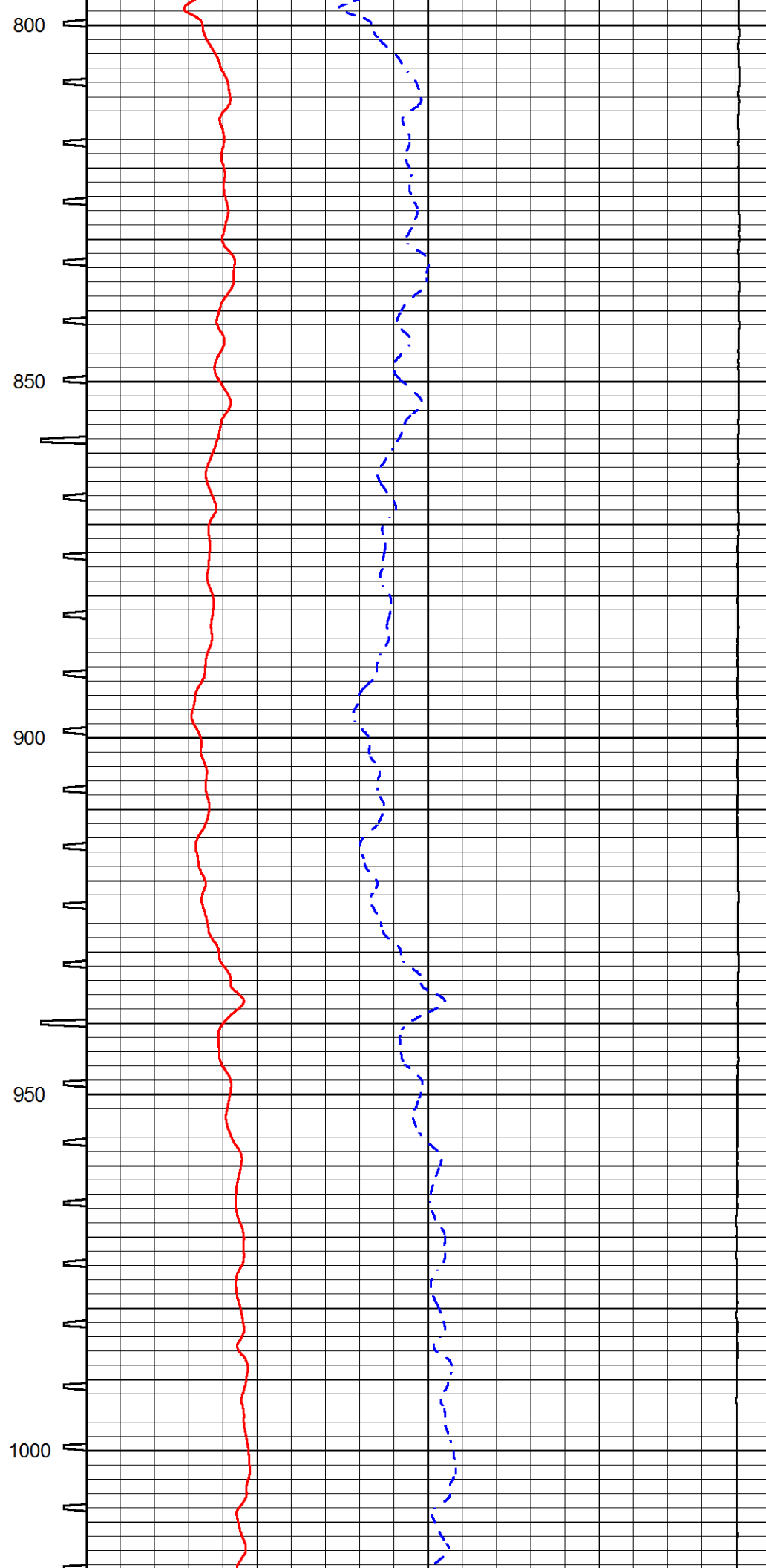
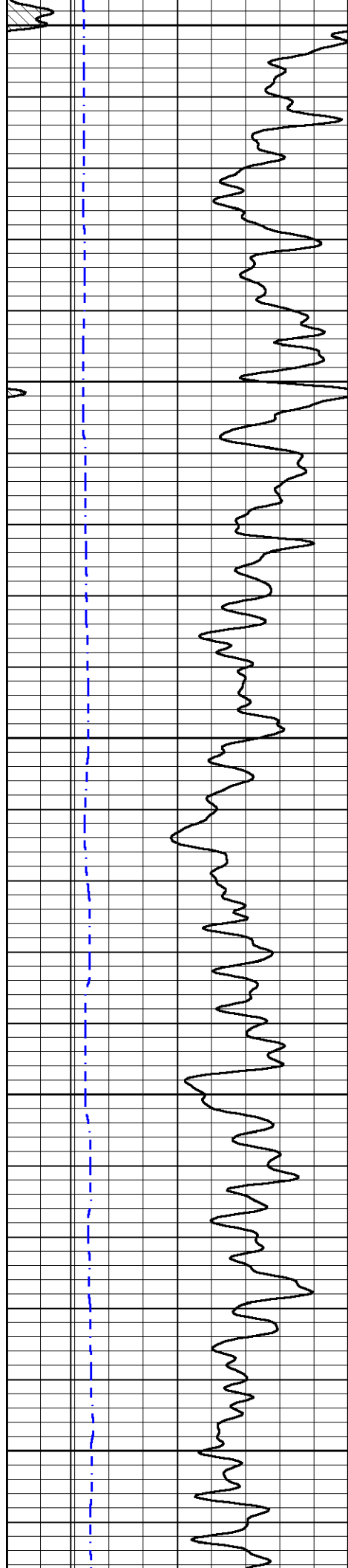
Database File val_koughmattsonunit_#1-4.db
Dataset Pathname stack/pass3.1
Presentation Format sonic
Dataset Creation Sat Dec 10 10:54:21 2016
Charted by Depth in Feet scaled 1:240

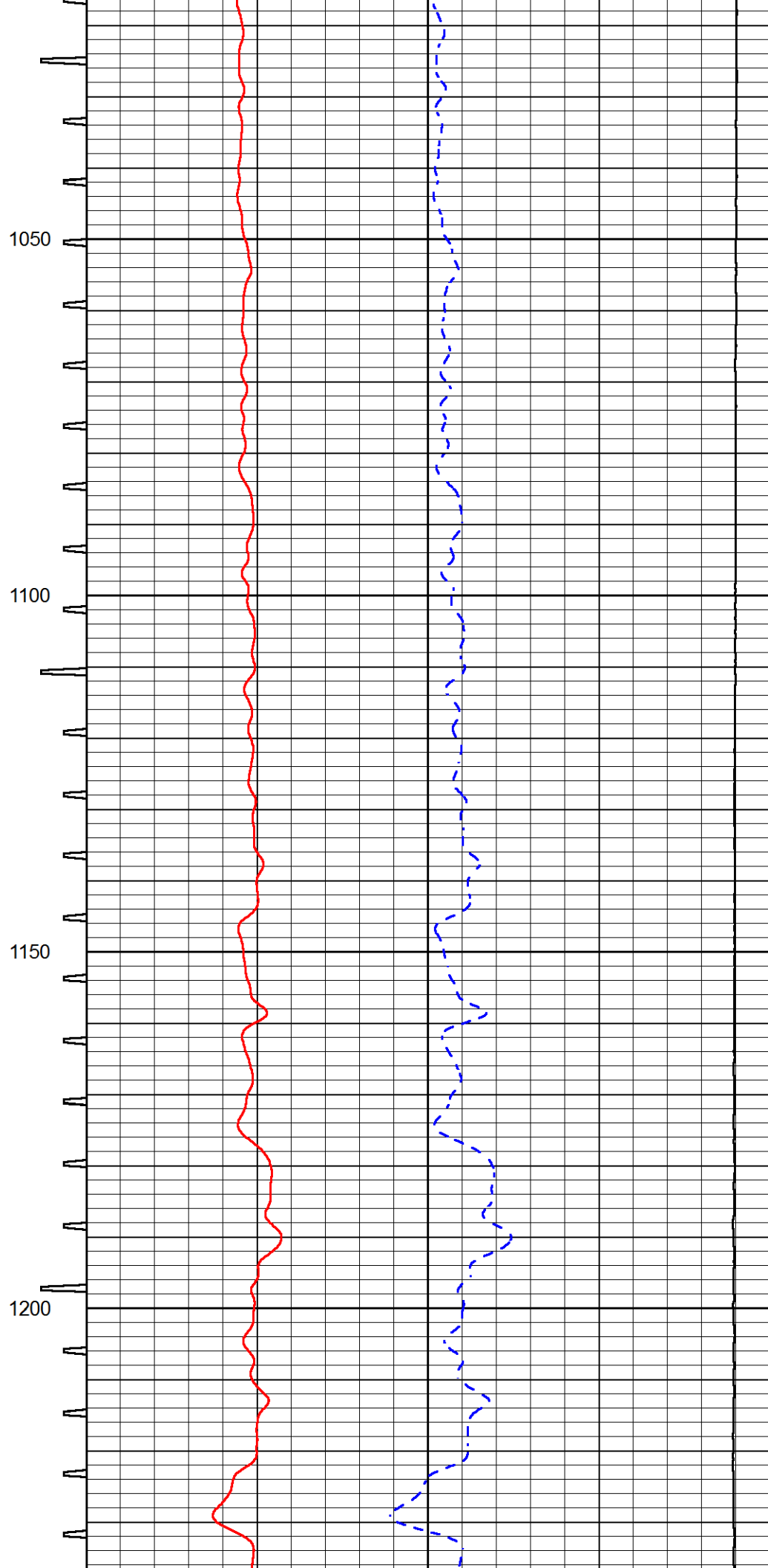
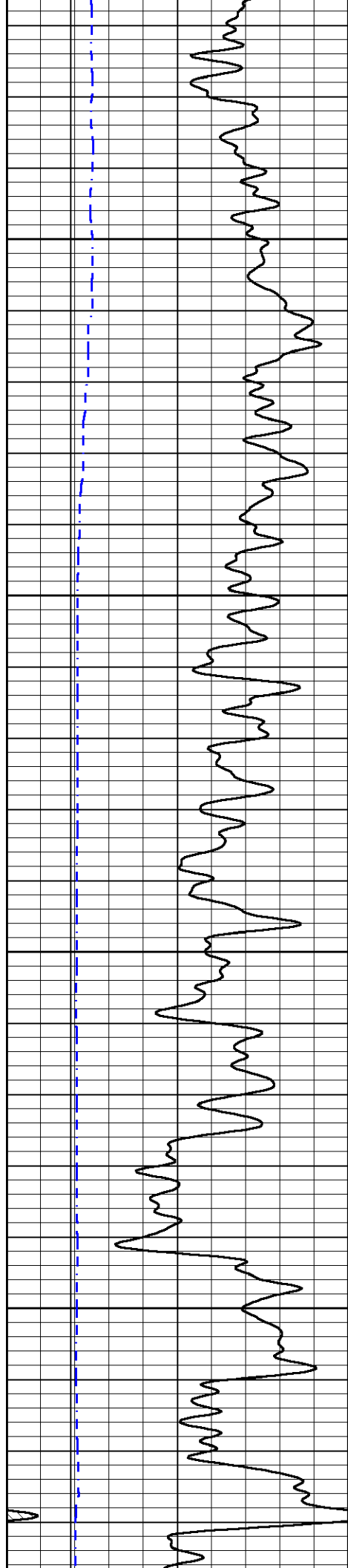
0	GAMMA RAY (GAPI)	150	SONIC INT	140	DELTA TIME (usec/ft) (usec/ft)	40
6	CALIPER (in)	16	RAVEL TIM	30	SONIC POROSITY (pu)	-10
6	BIT SIZE	16	(msec)	15000	LINE TENSION (lb)	0

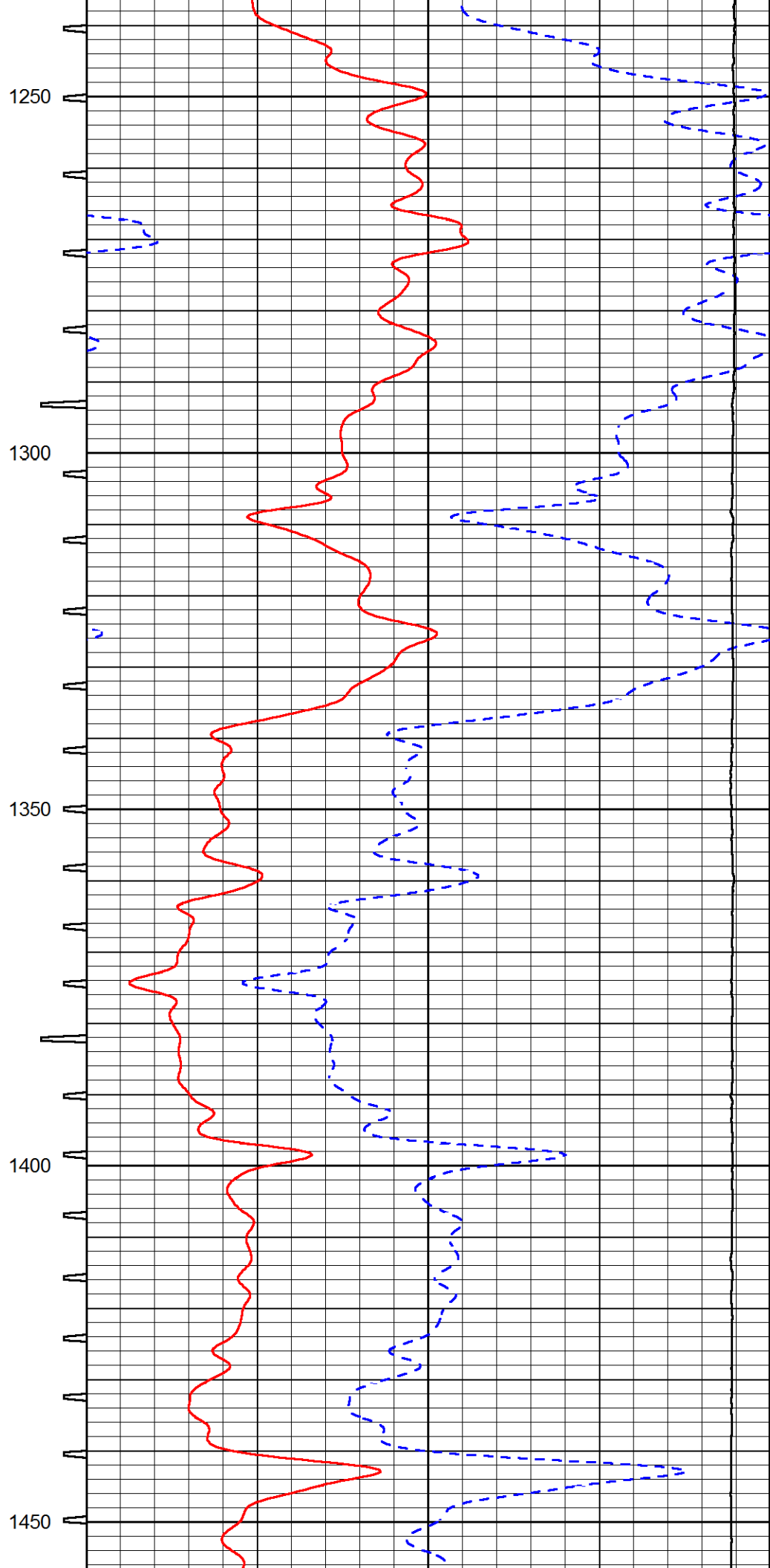
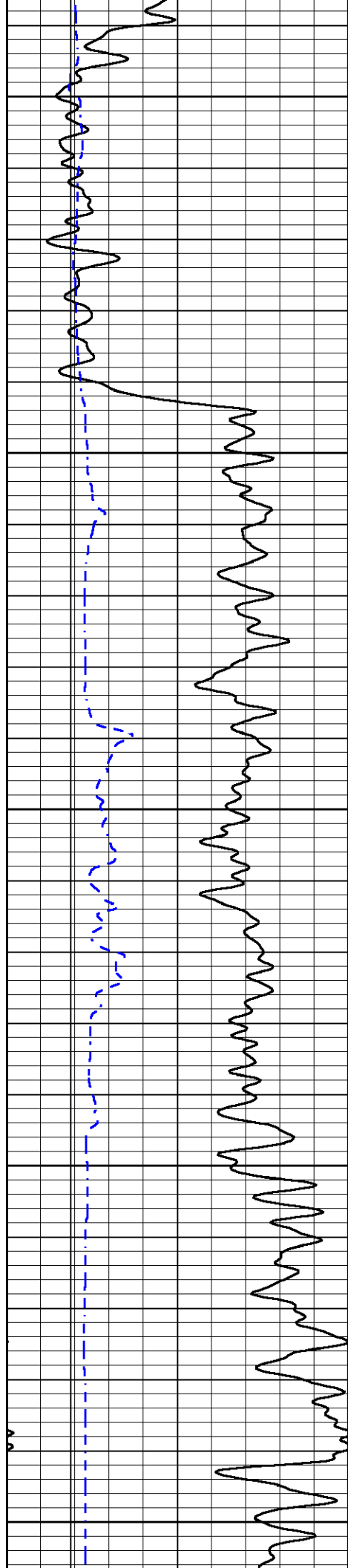


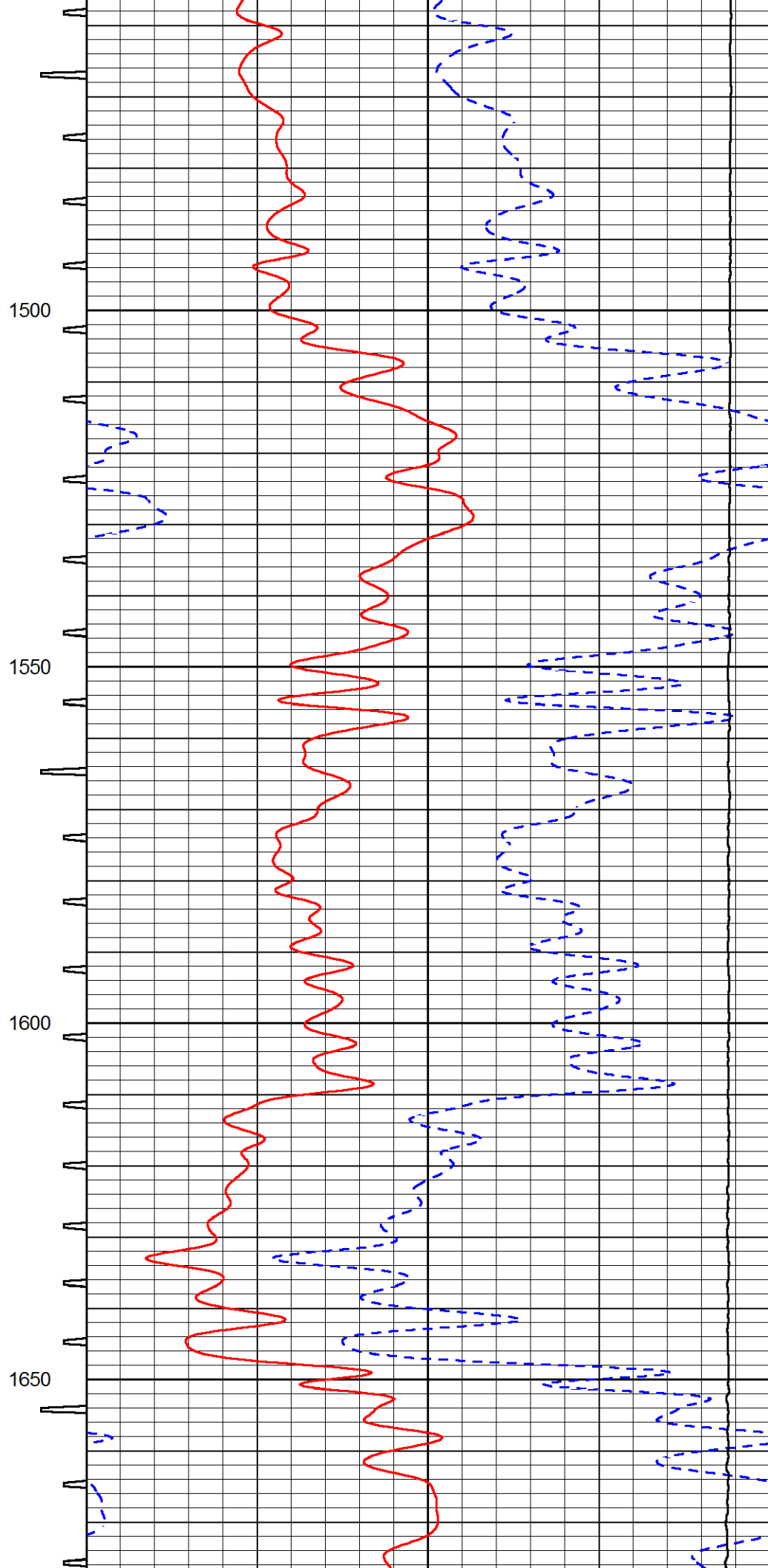
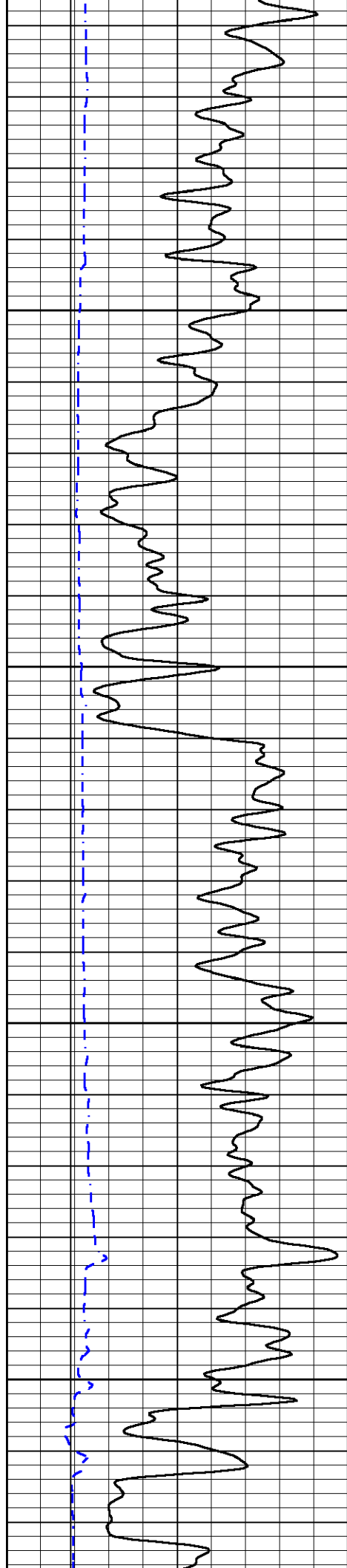


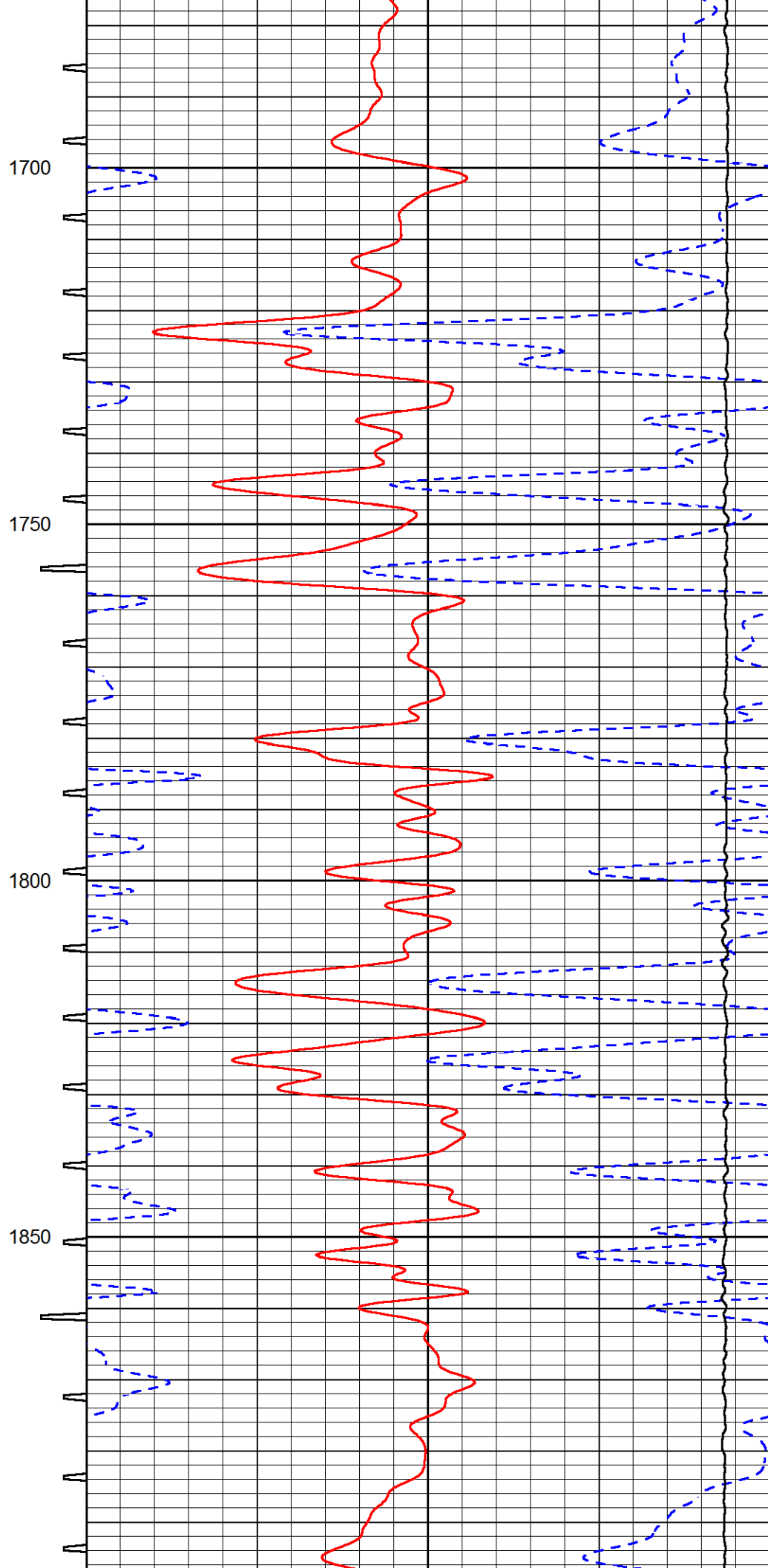
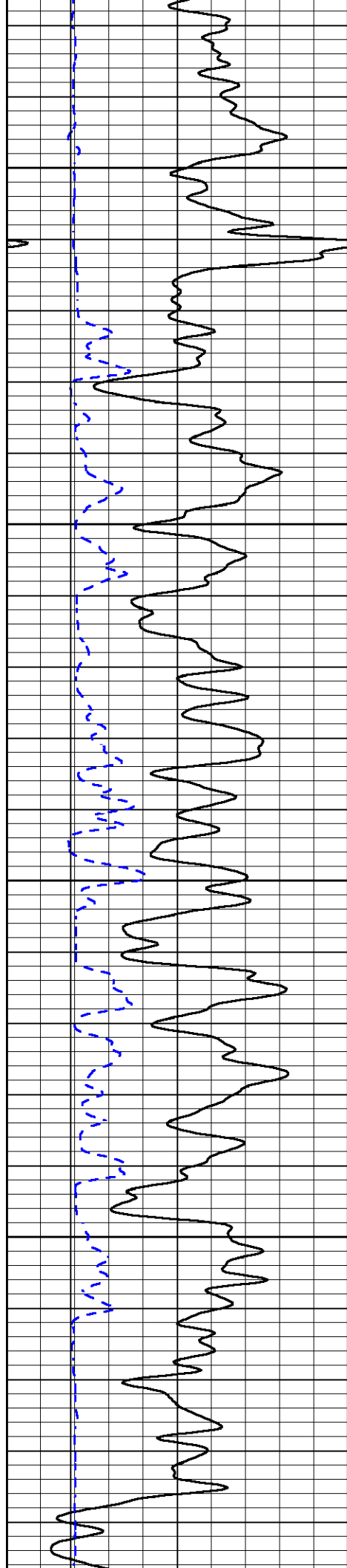


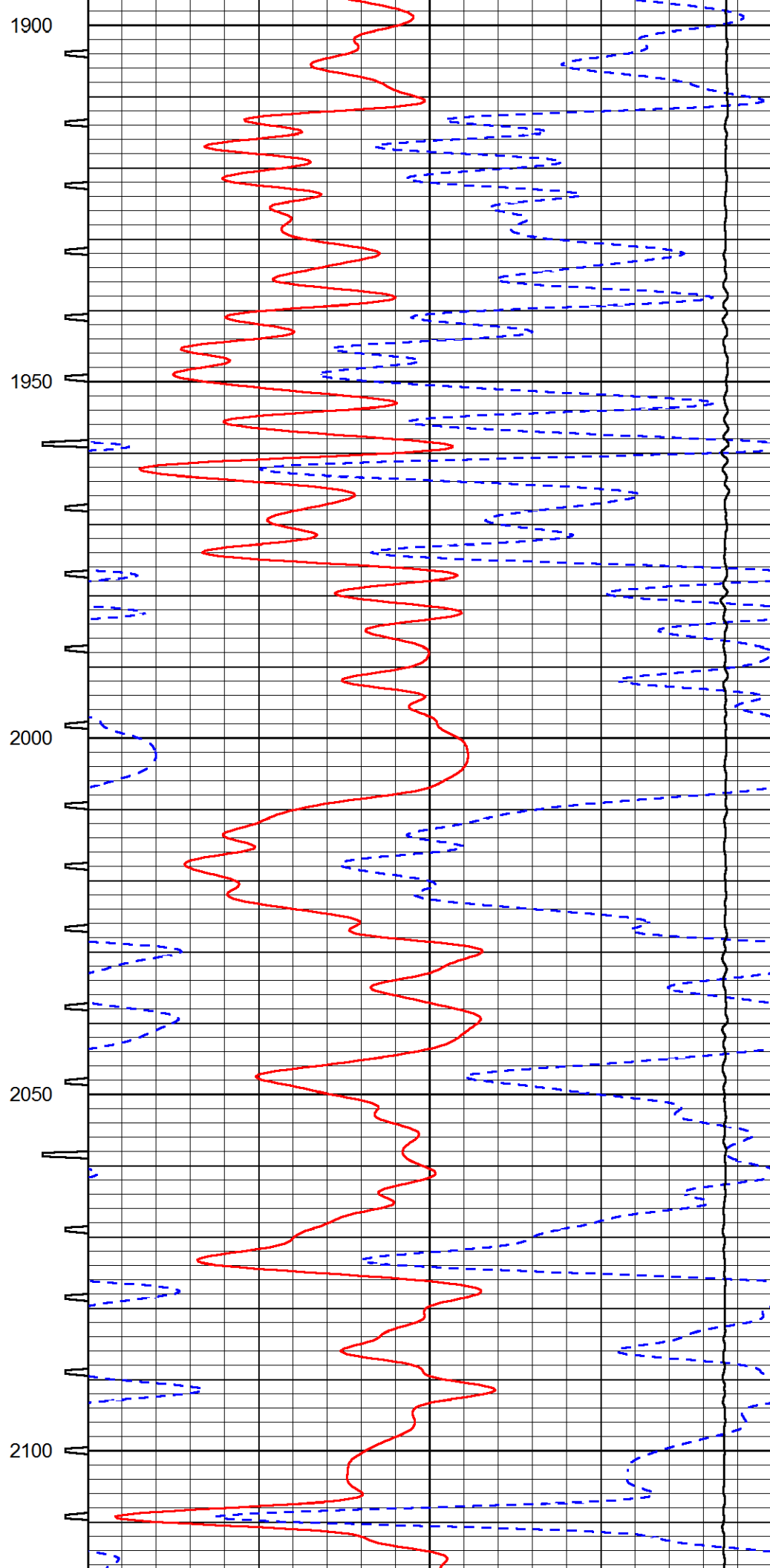
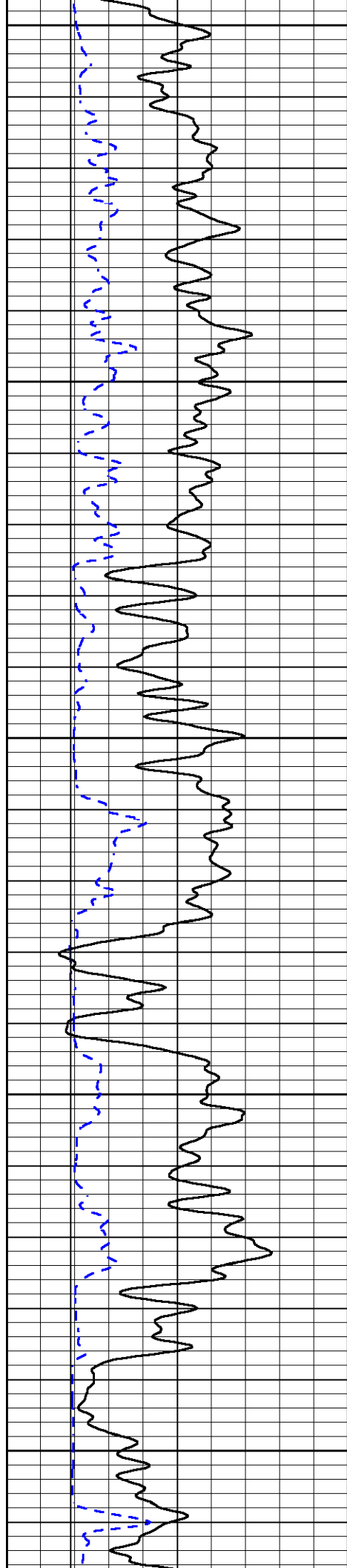


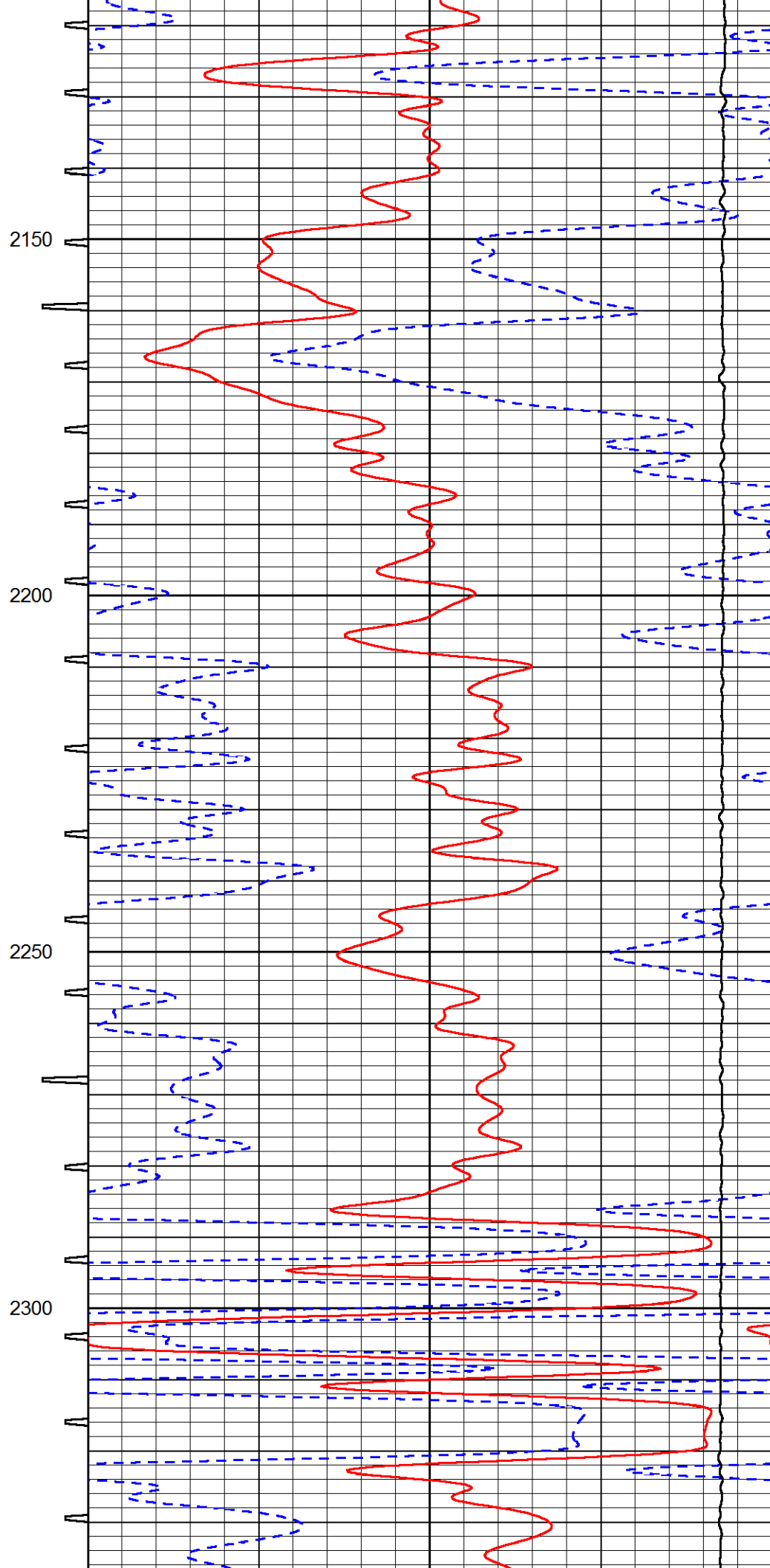
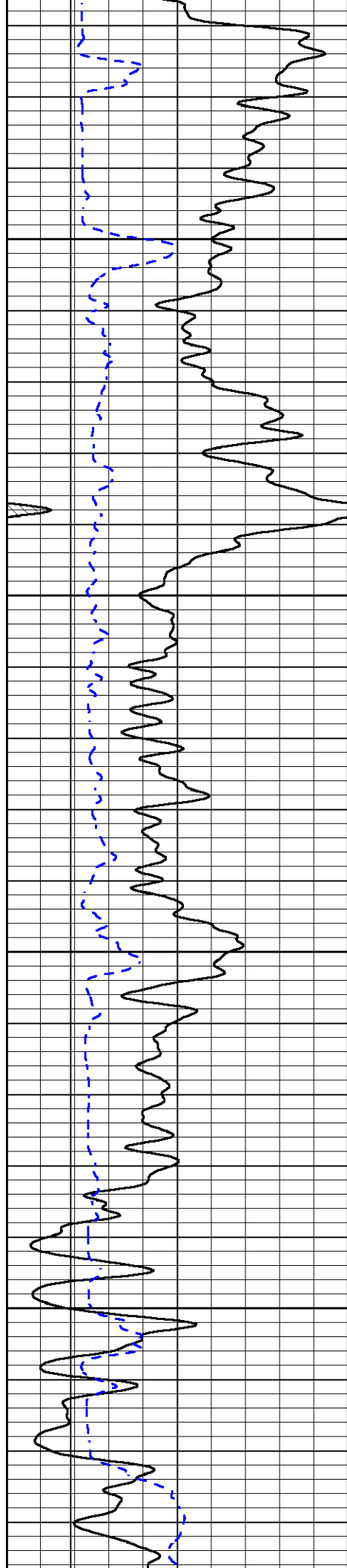


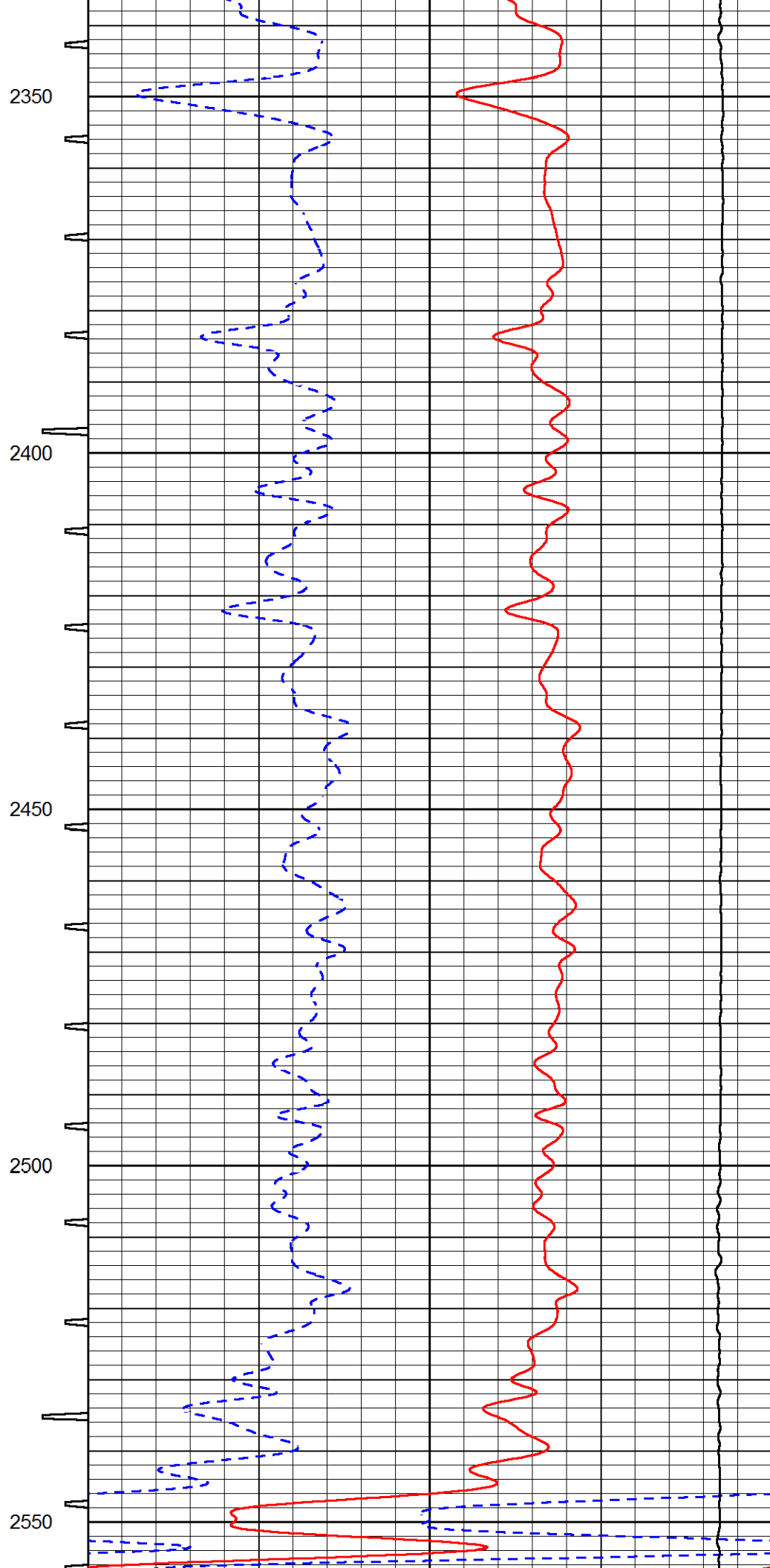
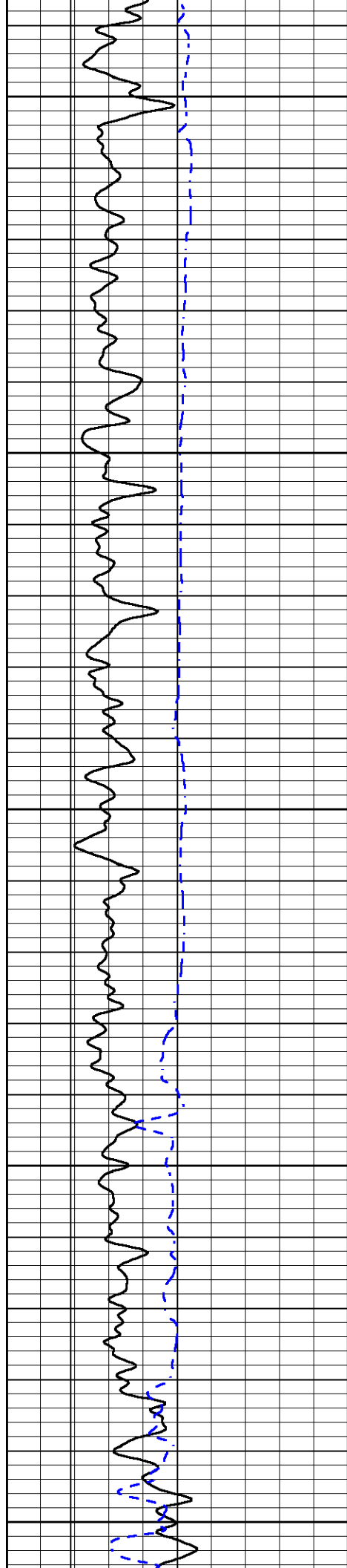


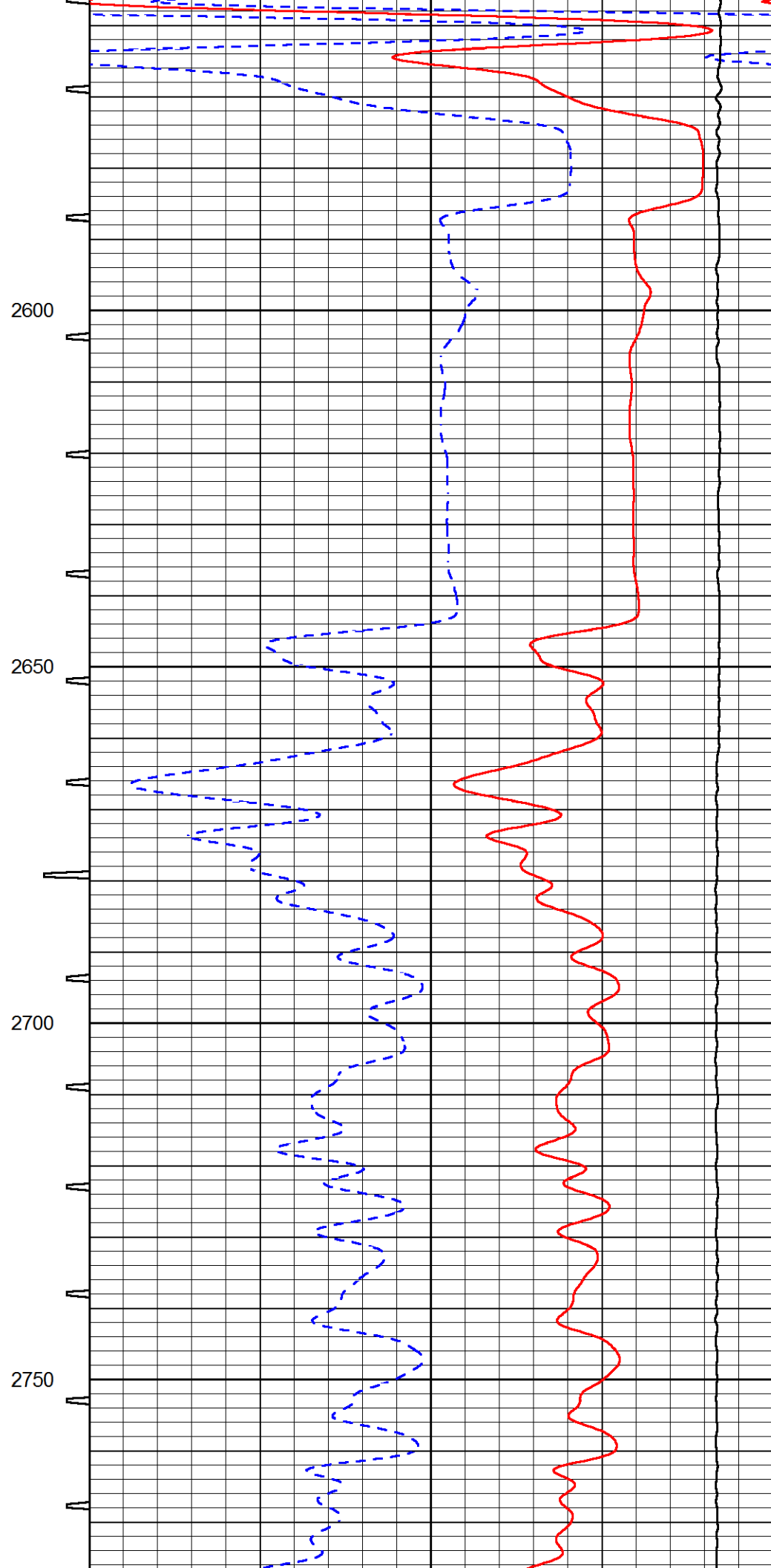
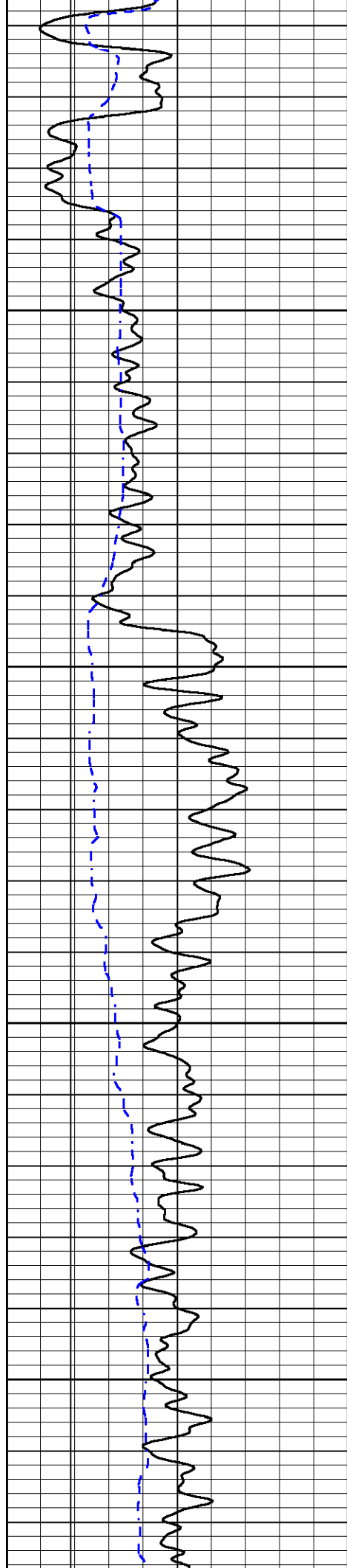


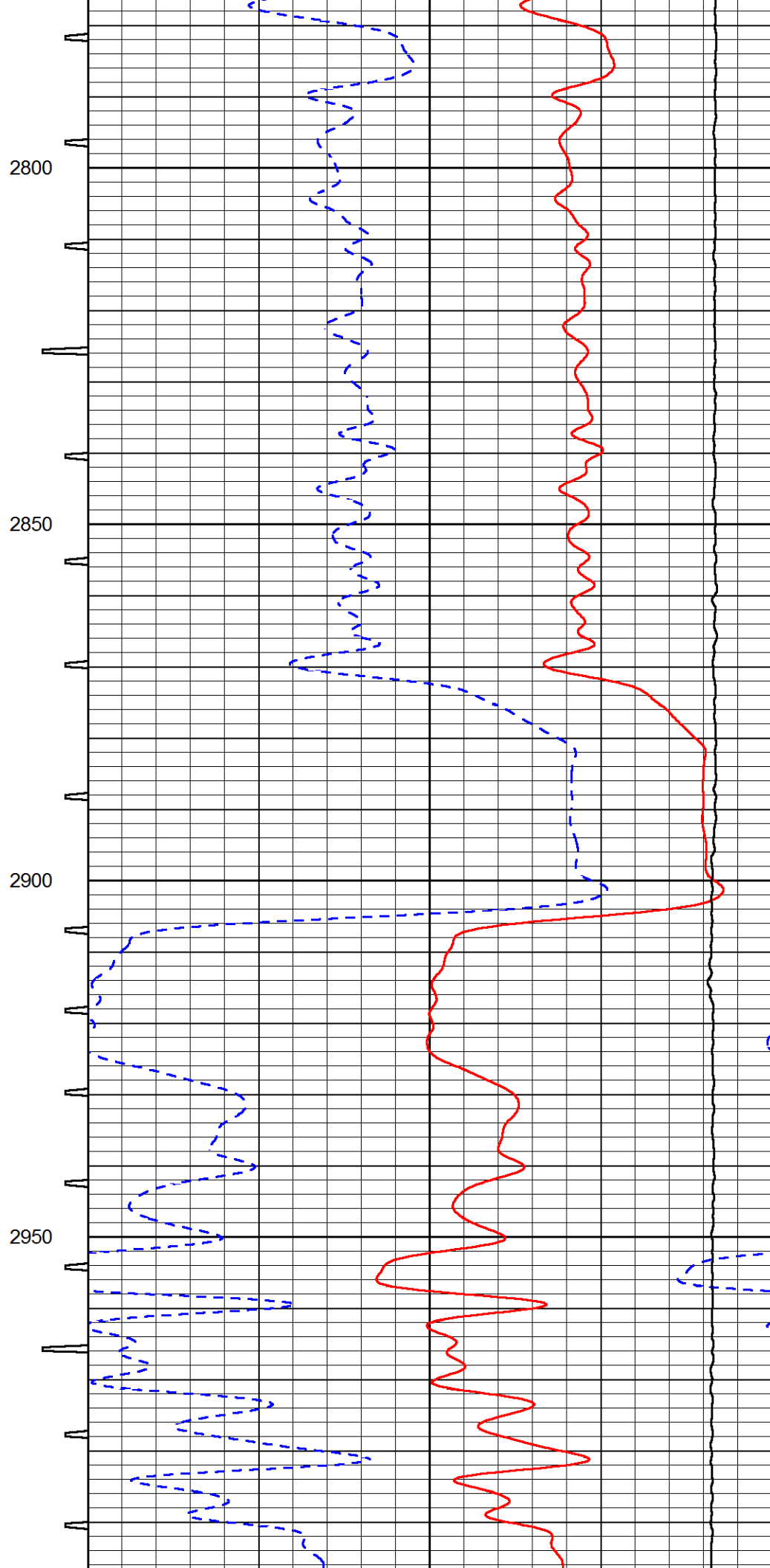
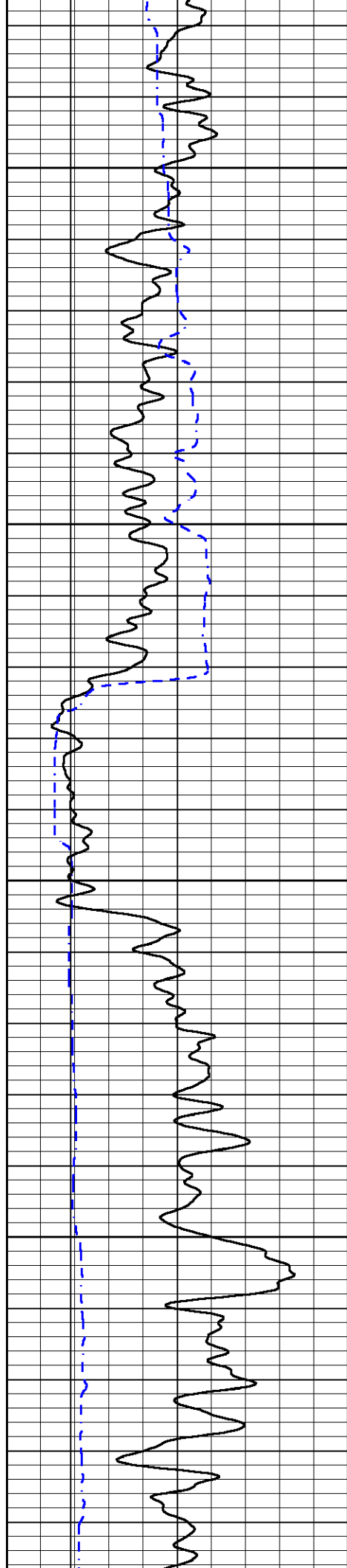


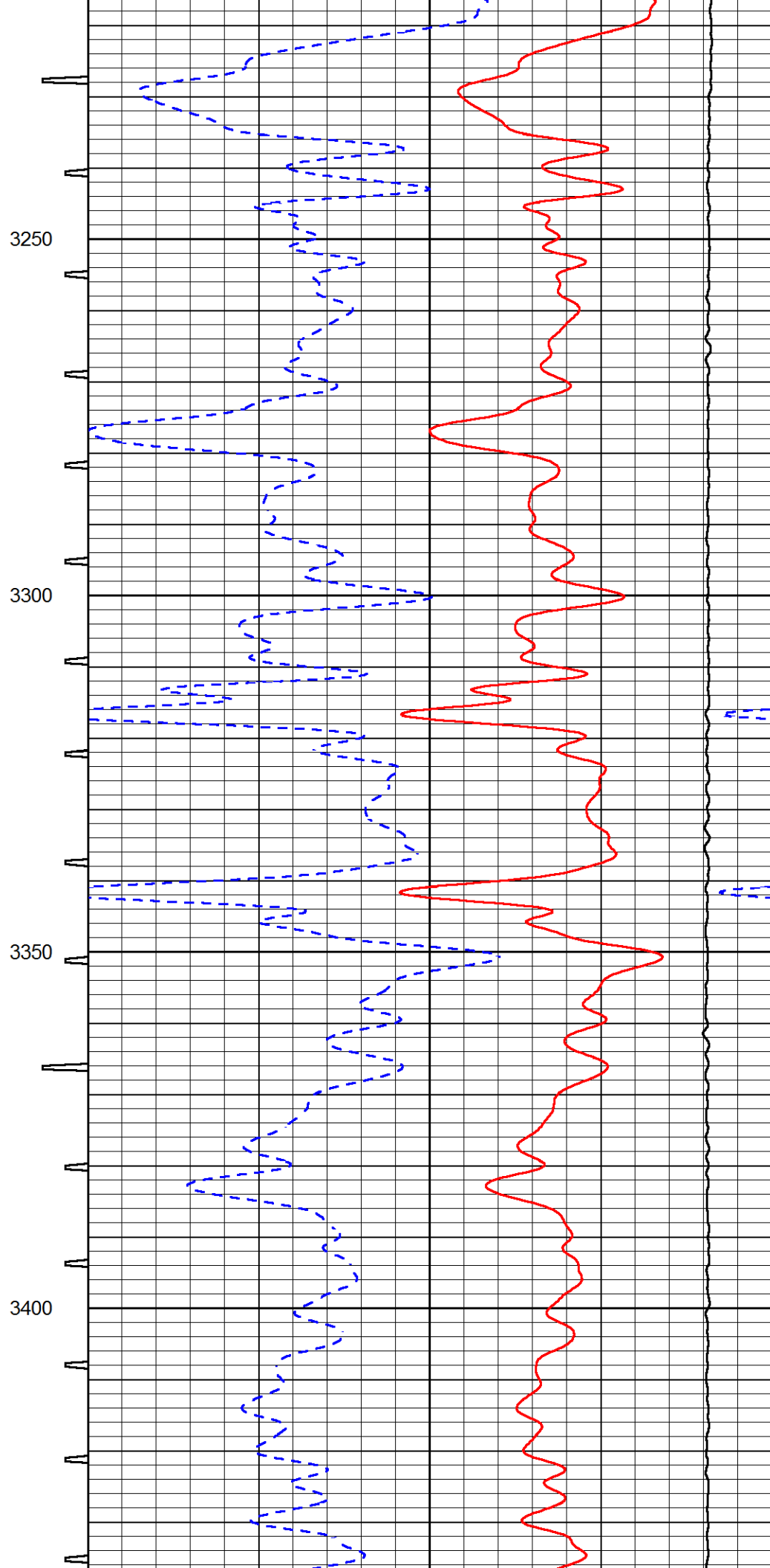
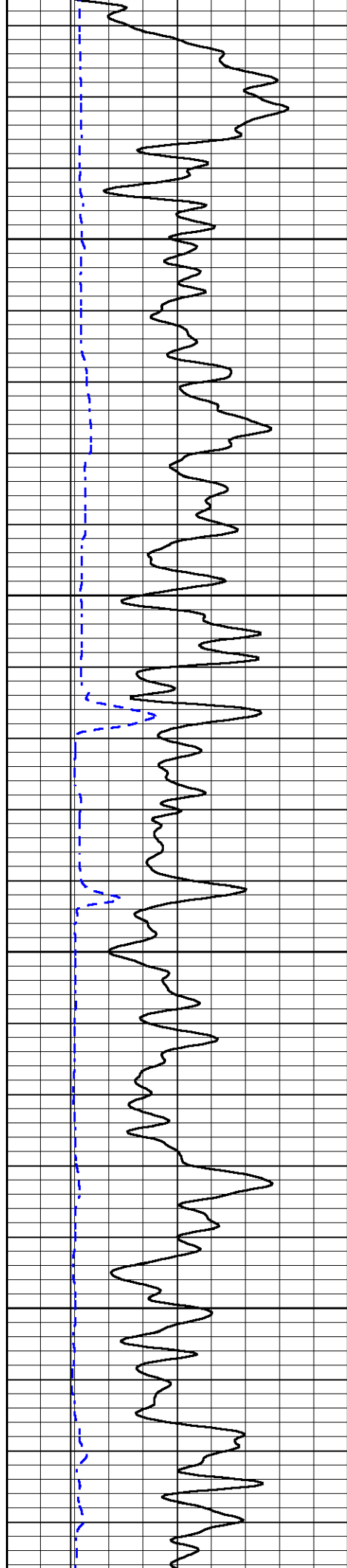


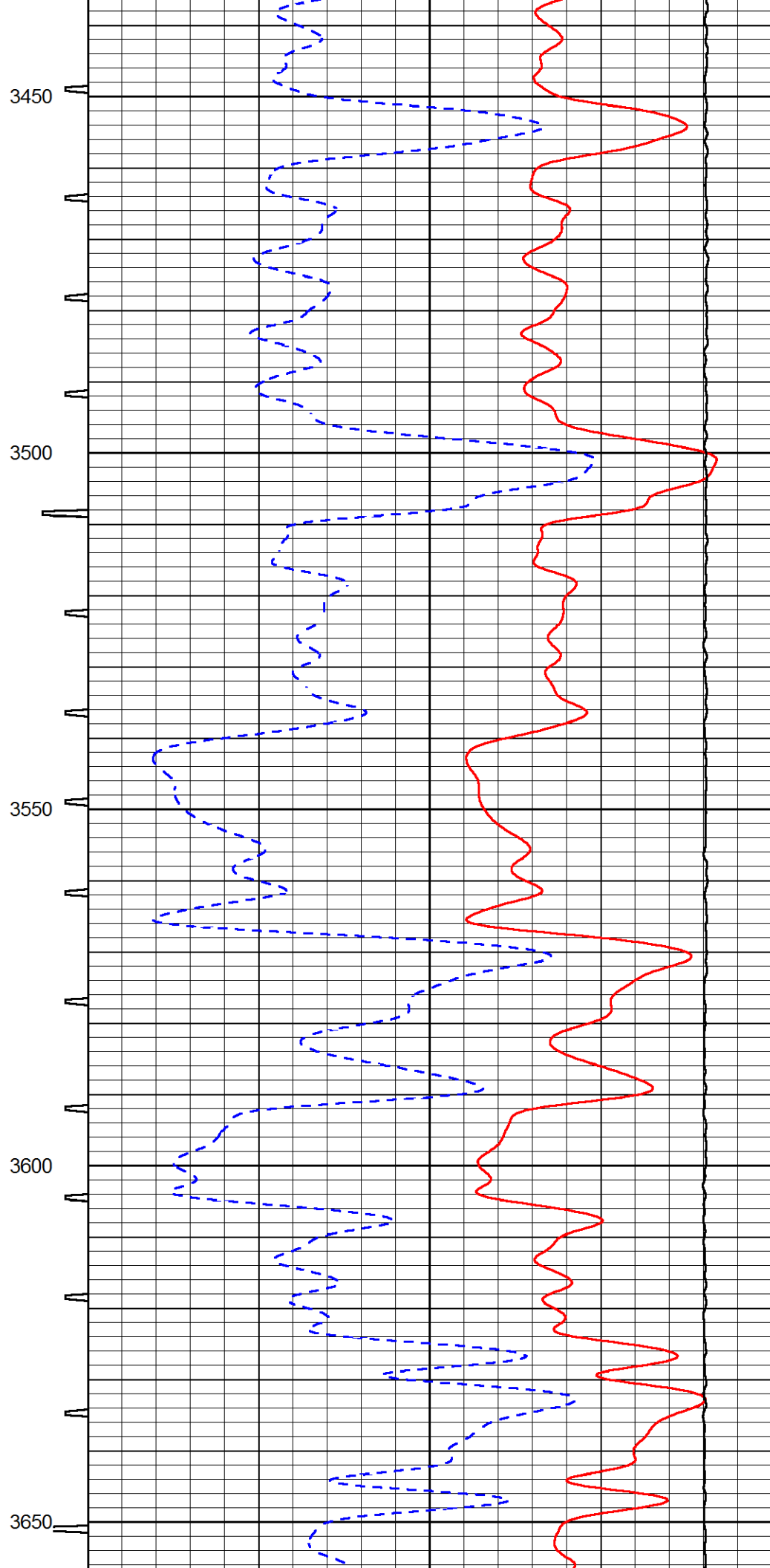
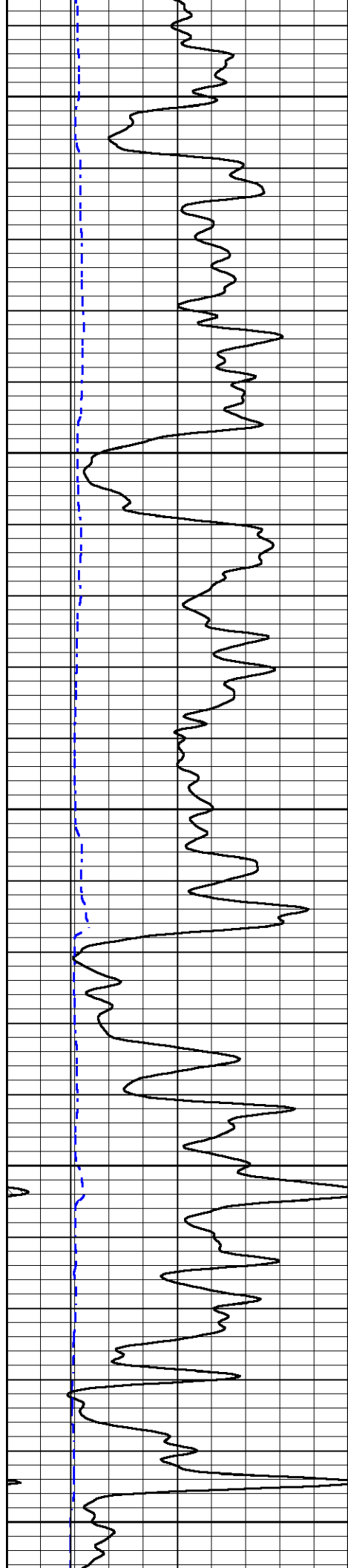


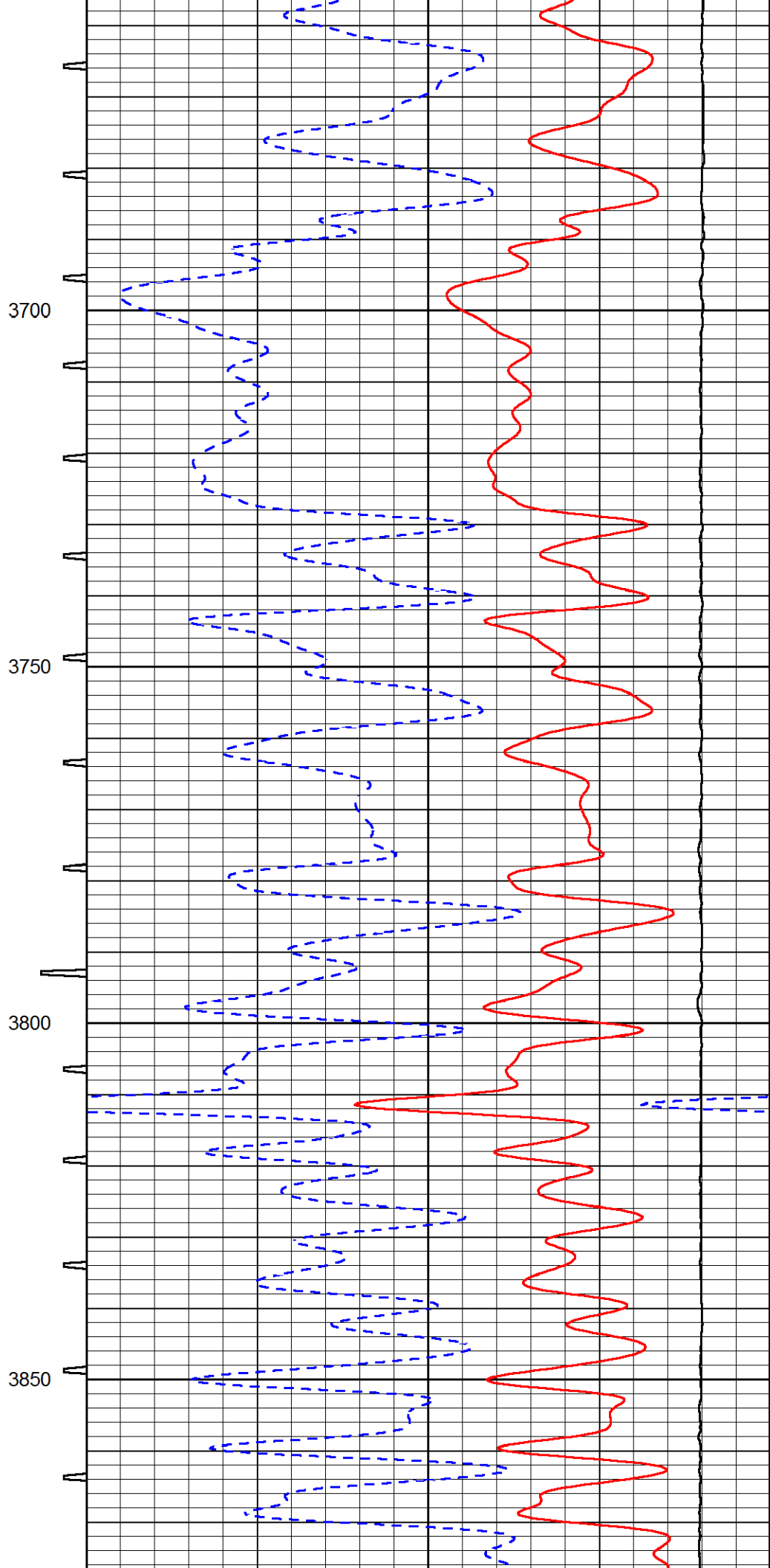
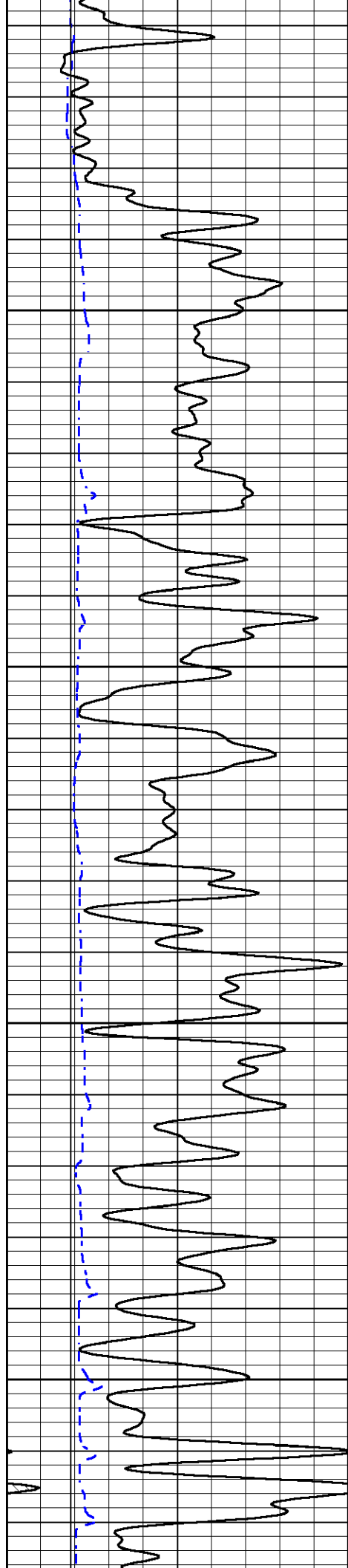


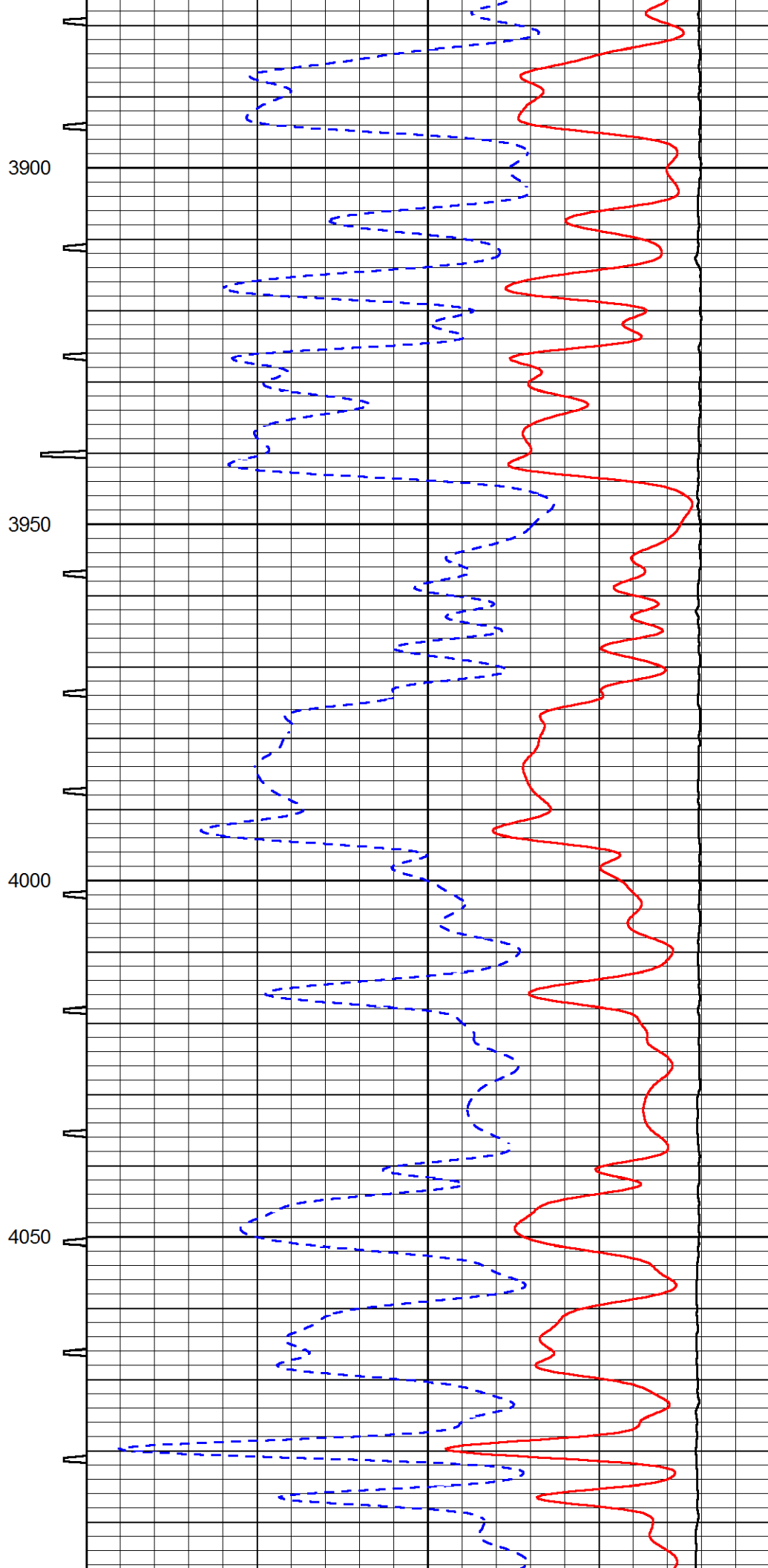
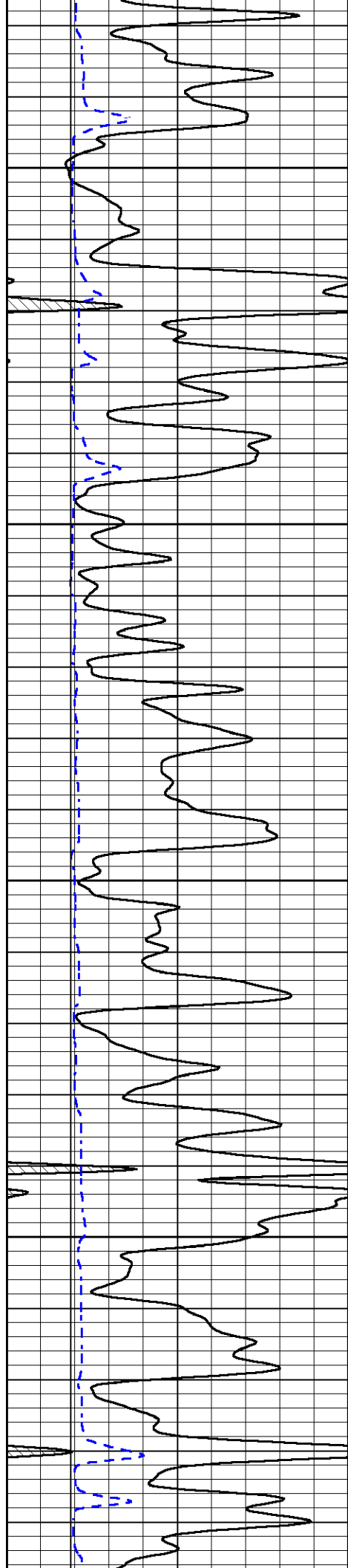


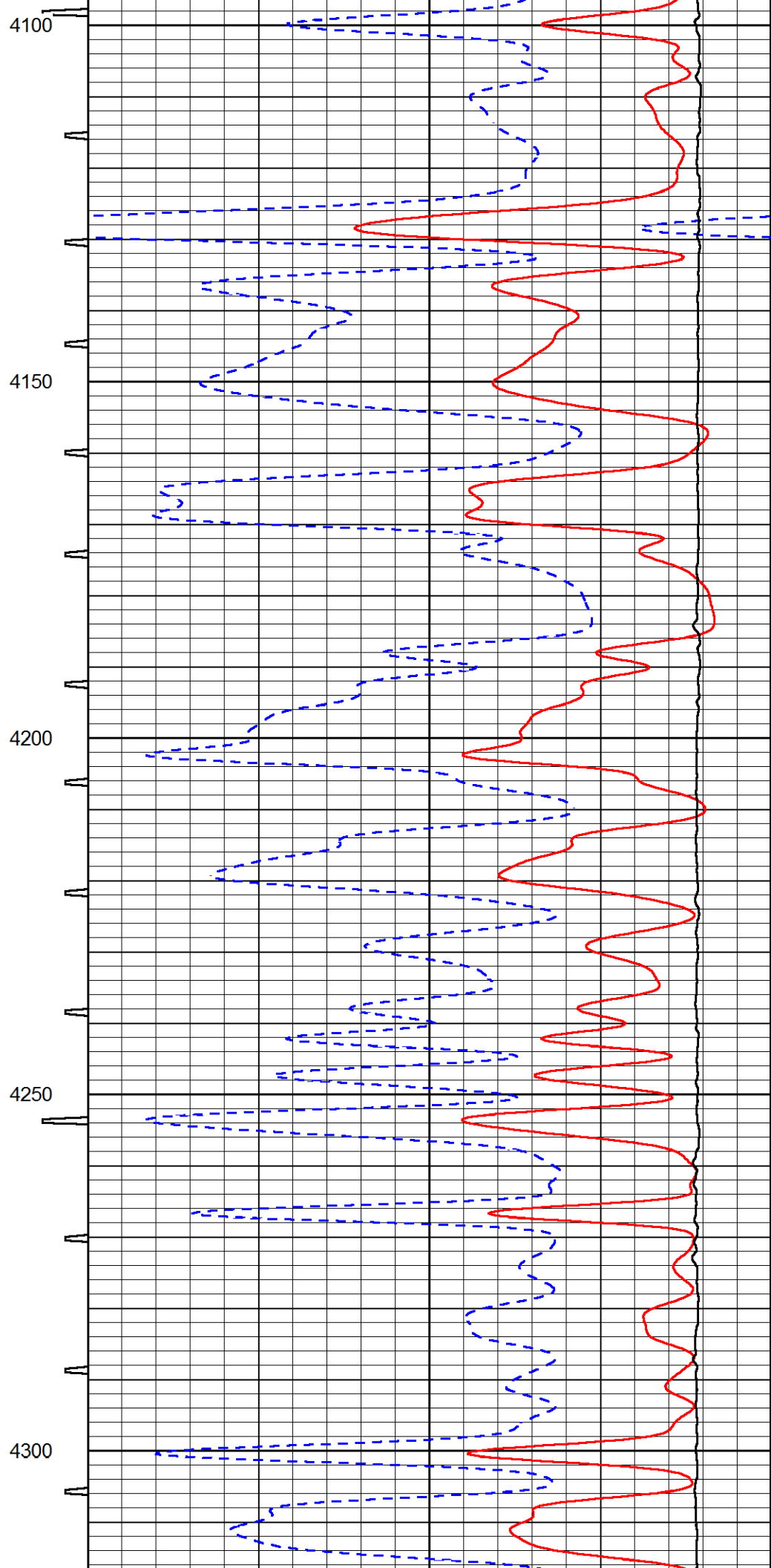
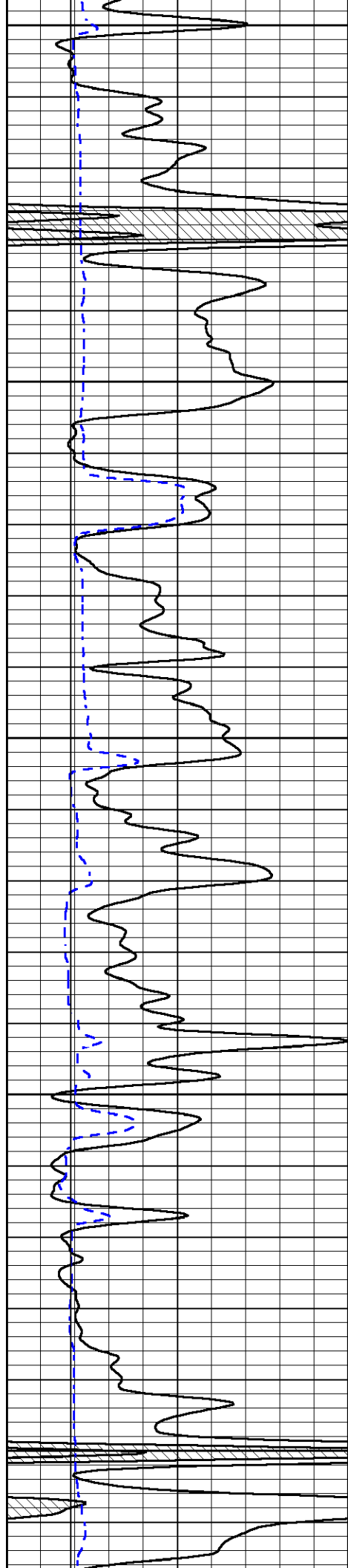


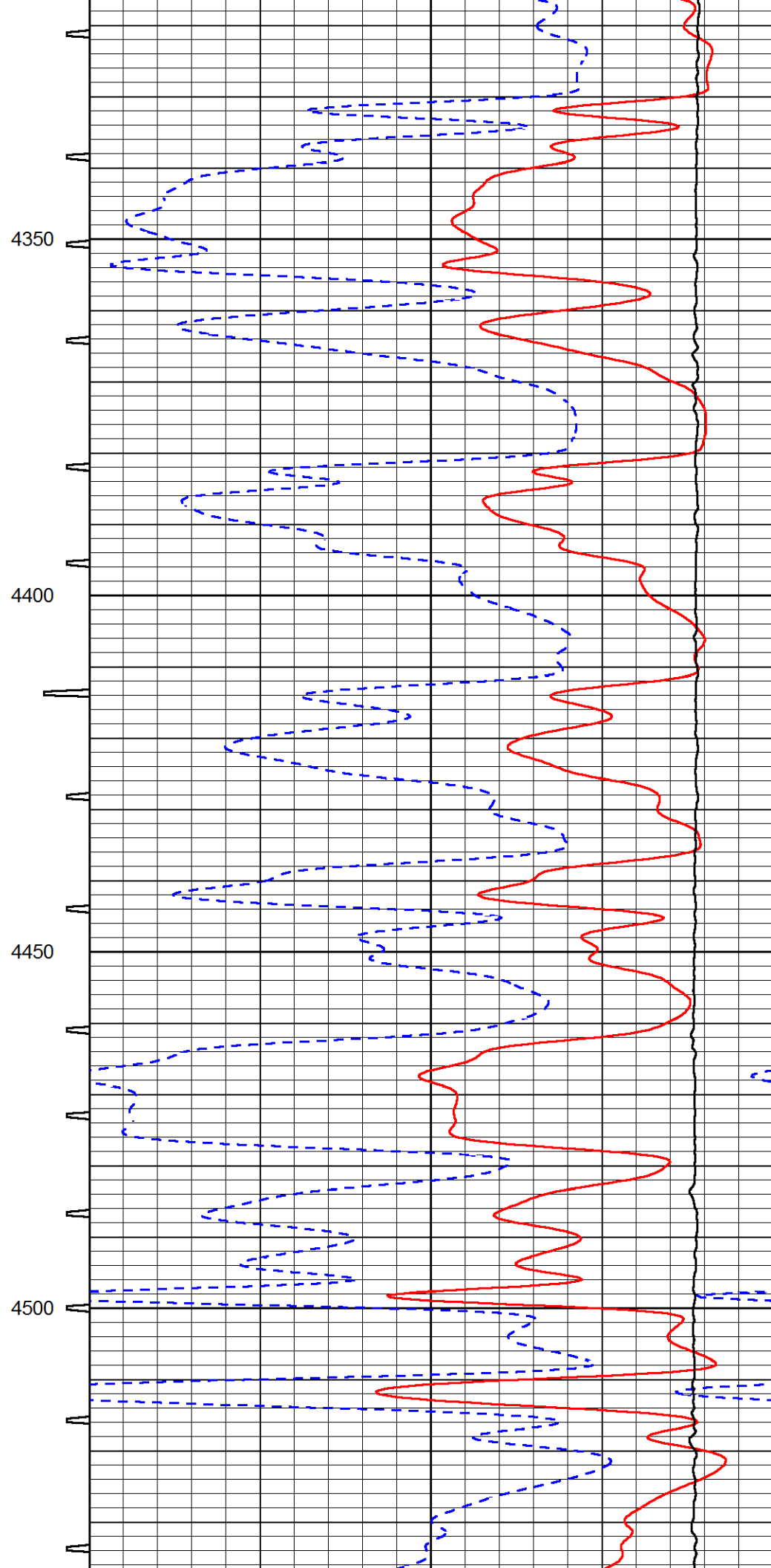
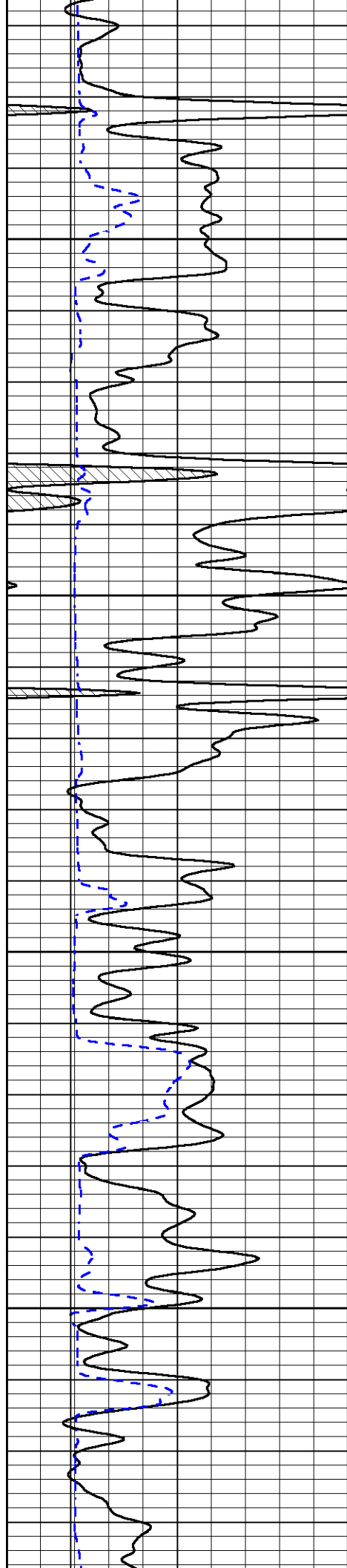


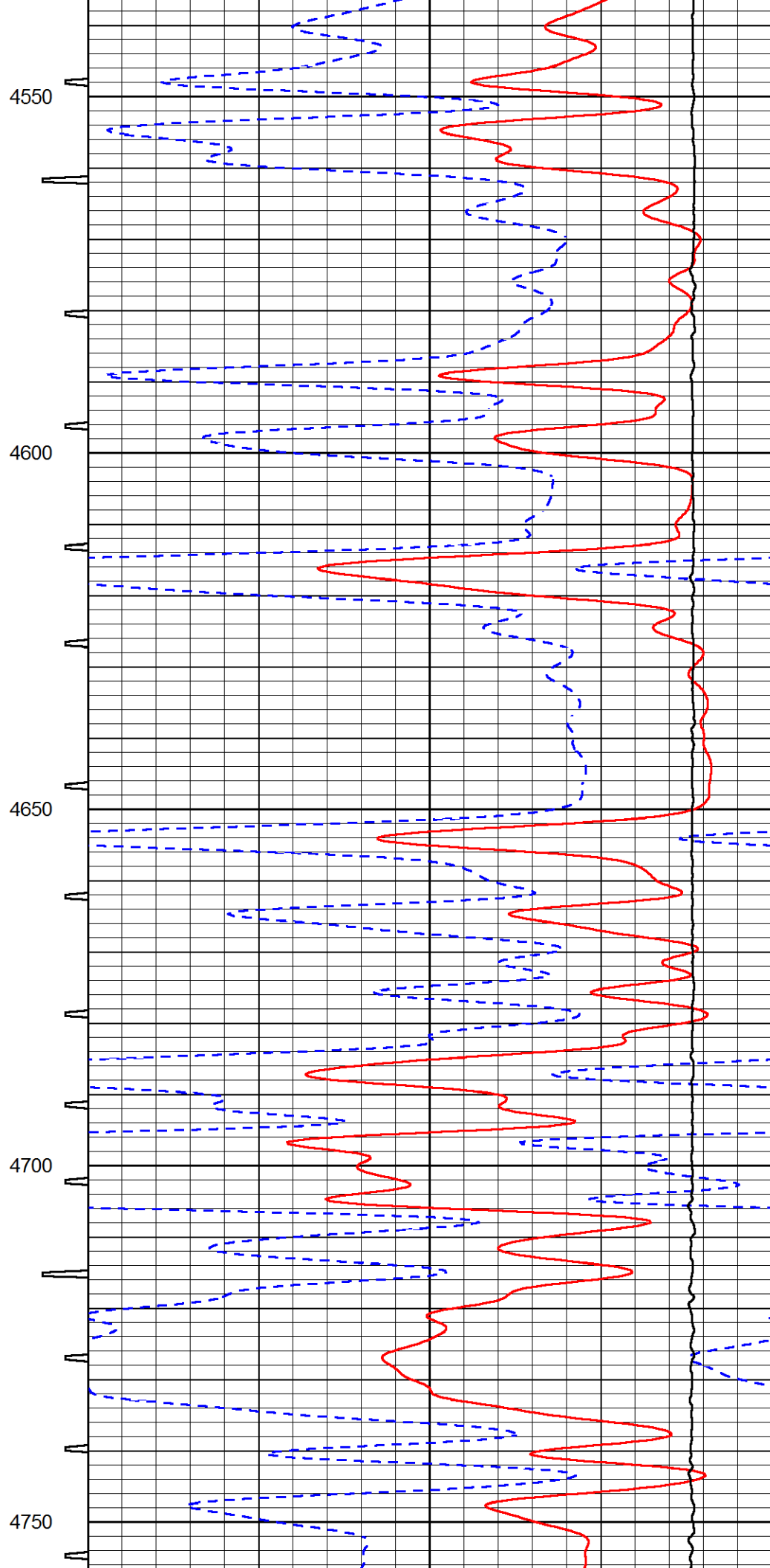
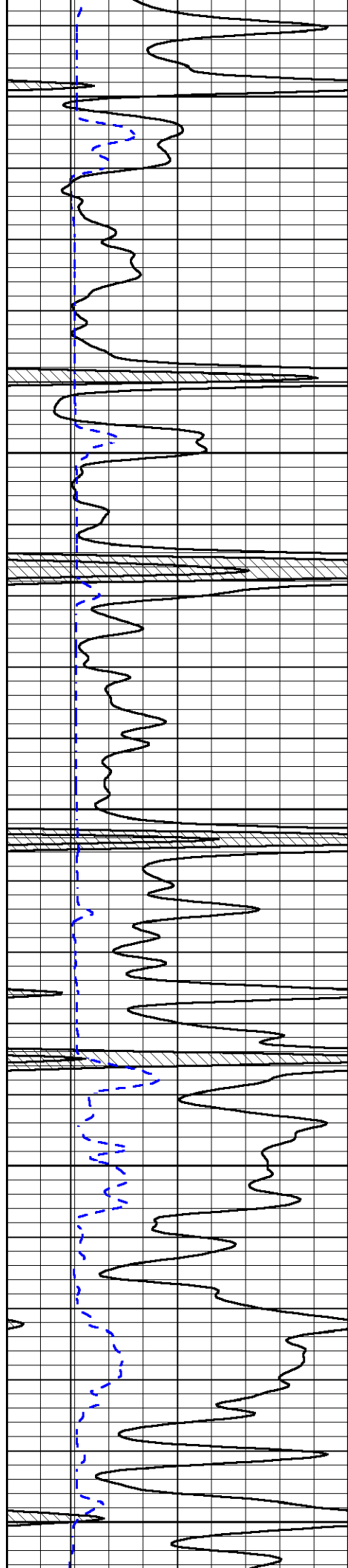


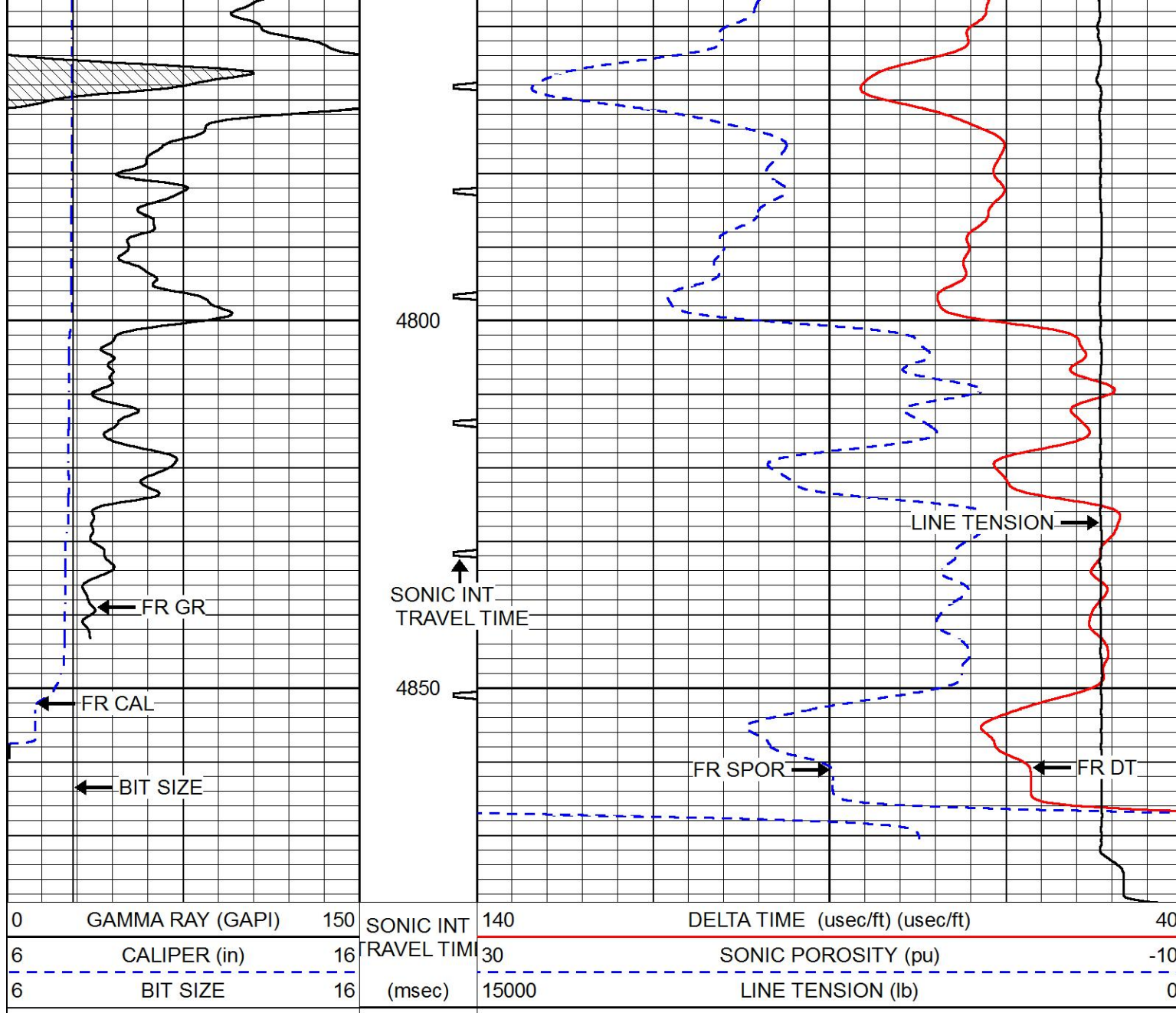








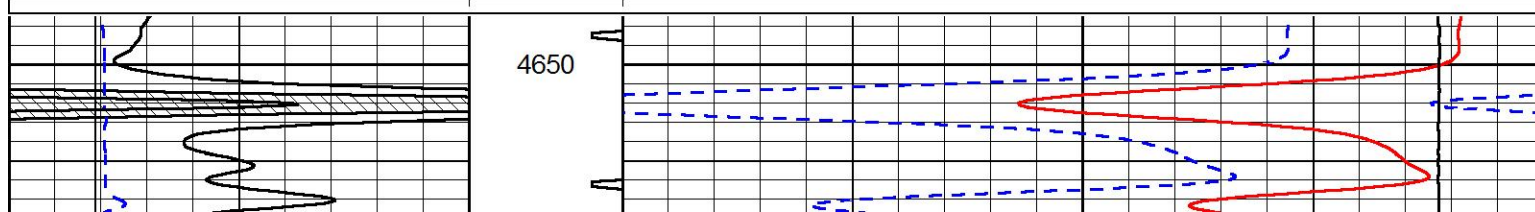


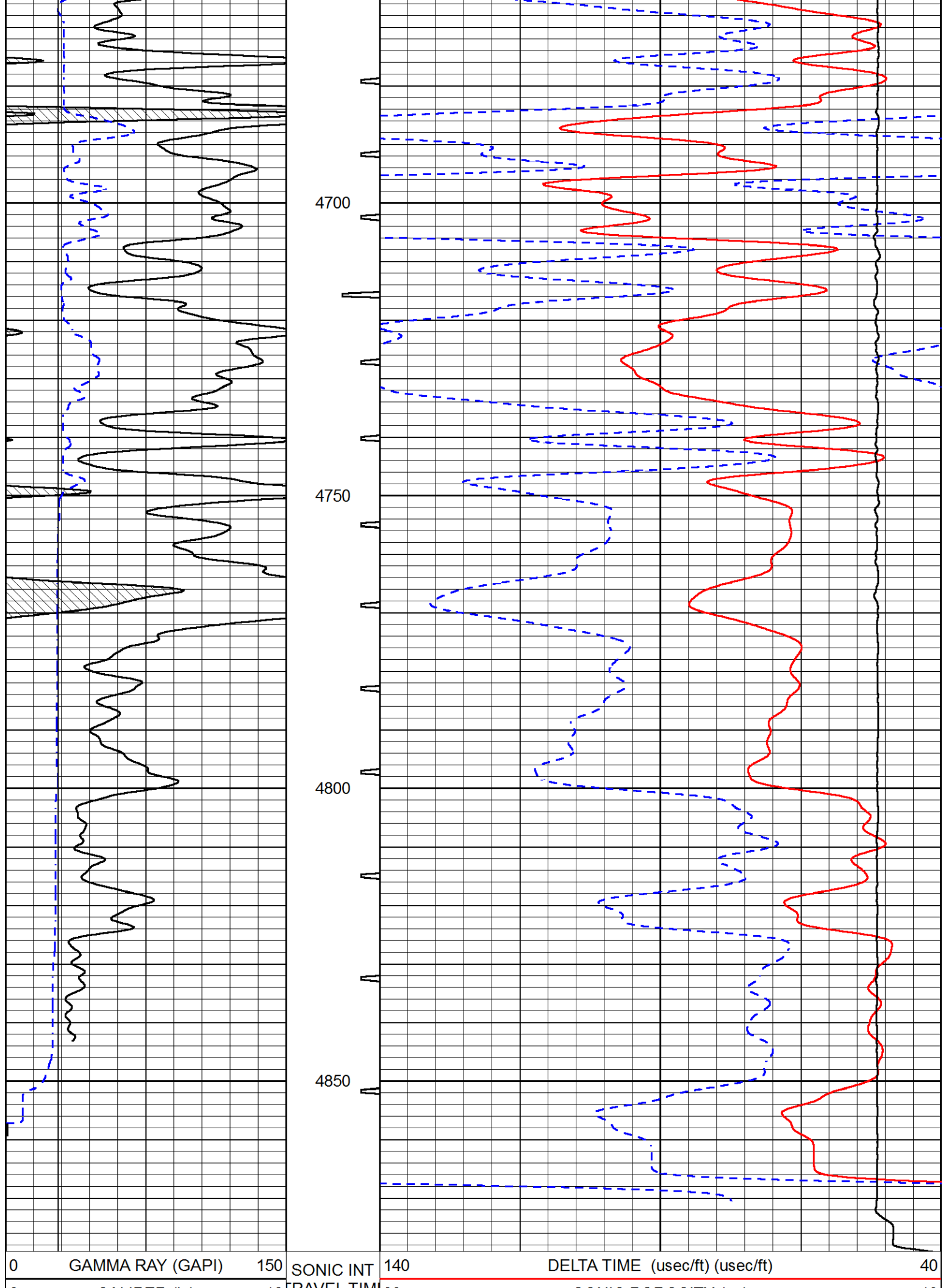


REPEAT SECTION

Database File	val_koughmattsonunit_#1-4.db
Dataset Pathname	stack/pass2.1
Presentation Format	sonic
Dataset Creation	Sat Dec 10 09:54:32 2016
Charted by	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	SONIC INT TRAVEL TIME (msec)	140	DELTA TIME (usec/ft) (usec/ft)	40
6	CALIPER (in)	16	SONIC INT TRAVEL TIME (msec)	30	SONIC POROSITY (pu)	-10
6	BIT SIZE	16	SONIC INT TRAVEL TIME (msec)	15000	LINE TENSION (lb)	0





6	CALIPER (in)	16	RAVEL TIME (msec)	30	SONIC POROSITY (pu)	-10
6	BIT SIZE	16	(msec)	15000	LINE TENSION (lb)	0

Calibration Report						
Database File	val_koughmattsonunit_#1-4.db					
Dataset Pathname	stack/pass3.1					
Dataset Creation	Sat Dec 10 10:54:21 2016					

Dual Induction Calibration Report						
Serial-Model:			1987-M&W			
Calibration Performed:			Thu Nov 17 20:52:56 2016			

		Readings		References			Results	
Loop:		Air	Loop	Air	Loop		Gain	Offset
Deep		178.615	710.235	0.000	255.800	mmho/m	0.530	-38.500
Medium		161.982	1441.110	0.000	255.800	mmho/m	0.440	-116.000

Compensated Density Calibration Report						
Serial-Model:			71-914-M&W			
Source / Verifier:			/			
Master Calibration Performed:			Thu Nov 17 21:42:33 2016			

Master Calibration						
		Density		Far Detector	Near Detector	
Magnesium		1.755	g/cc	4314.49	5307.52	cps
Aluminum		2.675	g/cc	822.19	3456.36	cps
Spine Angle = 75.49			Density/Spine Ratio = 0.537			
		Size		Reading		
Small Ring		4.00	in	1.16		
Large Ring		14.00	in	1.57		

Compensated Neutron Calibration Report						
Serial Number:			tk10-MW			
Tool Model:			M&W			
Calibration Performed:			Wed Nov 16 11:21:36 2016			

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:			89-M&W			
Tool Model:			M&W			
Calibration Performed:			Thu Nov 17 21:13:32 2016			
Calibrator Value:			1000.0	GAPI		
Background Reading:			0.0	cps		

Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps



Company	VAL ENERGY, INC.
Well	KOUGH MATTSON UNIT #1-4
Field	
County	THOMAS
State	KANSAS