



MIDWEST WIRELINE

BOREHOLE COMPENSATED SONIC LOG

Company Ritchie Exploration, Inc.
Well Tubbs Unit #1
Field Wildcat
County Logan **State** Kansas

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Location: 218' FNL & 159' FEL SEC 19 TWP 11S RGE 35W	API #: 15-109-21615-00-00 Other Services: DIL/MEL CNL/CDL
Permanent Datum Log Measured From Drilling Measured From	Ground Level Kelly Bushing Kelly Bushing
Elevation 3273'	Elevation K.B. 3278' D.F. Na/ G.L. 3273'

Date	4/30/2021						
Run Number	Two						
Type Log	BHCS						
Depth Driller	4950'						
Depth Logger	4950'						
Bottom Logged Interval	4939'						
Top Logged Interval	200'						
Type Fluid In Hole	Chemical						
Salinity, PPM CL	5000						
Density	9.4						
Level	Full						
Max. Rec. Temp. F	126 Deg/F						
Operating Rig Time	4 Hours						
Equipment -- Location	P-108 HAYS						
Recorded By	J. Henrickson						
Witnessed By	Max Lovely						
Borehole Record							
Run No.	Bit	From	To	Size	Wgt.	Casing Record	
One	12.25"	0	208'	8.625"	24#	From	To
Two	7.875"	208'	TD			0	208'

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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.

Winona Kansas
 2 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: J. Henrickson Operator: M. Hiss Operator: Operator:	This Log Record Was Witnessed By Primary Witness: Max Lovely Secondary Witness: Secondary Witness: Secondary Witness:
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\ritchie_tubbs_unit_1.db
 Dataset field/well/stackml/pass4.1/_vars_

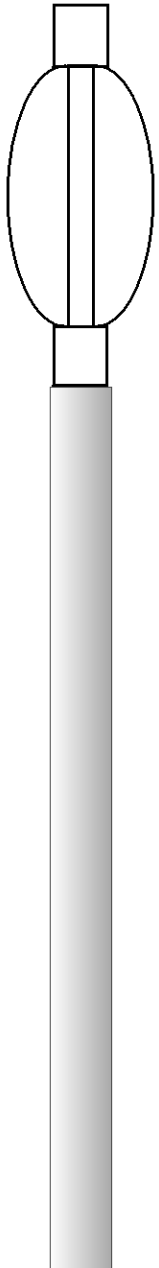


Top - Bottom

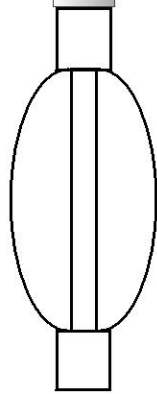
A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	126	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	No	0	0	285	61	Off	4950

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

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CENT-PENGO (3-PENGO)	5.50	3.00	70.00
WVF4 WVF1	13.50 13.50		SLT-PENGO (0001)	16.00	3.50	300.00
WVF3 WVF2	11.50 11.50					



CENT-PENGO (4-PENGO)

5.50

3.00

70.00

Dataset: ritchie_tubbs_unit_1.db: field/well/sonic/pass2
 Total length: 27.00 ft
 Total weight: 440.00 lb
 O.D.: 3.50 in

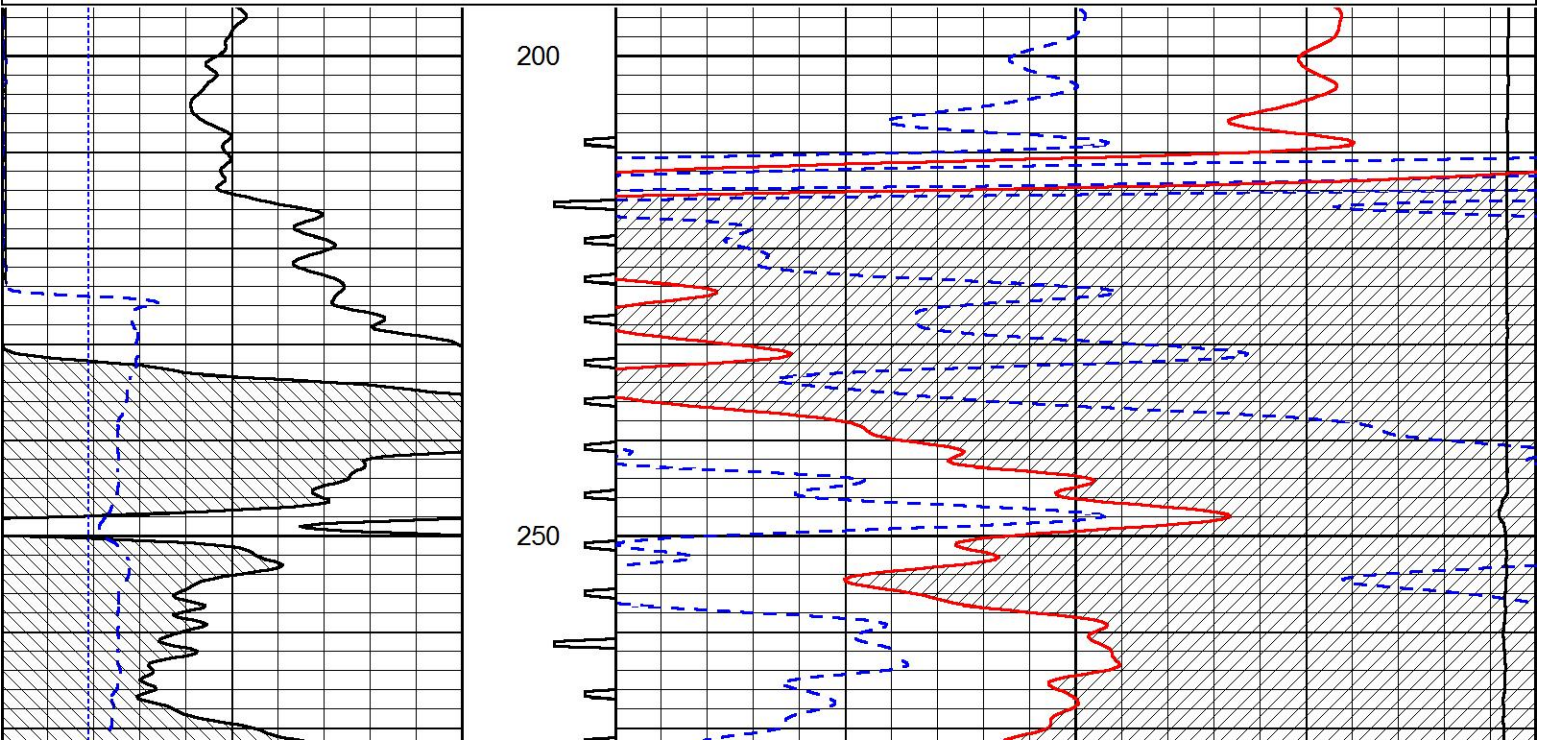


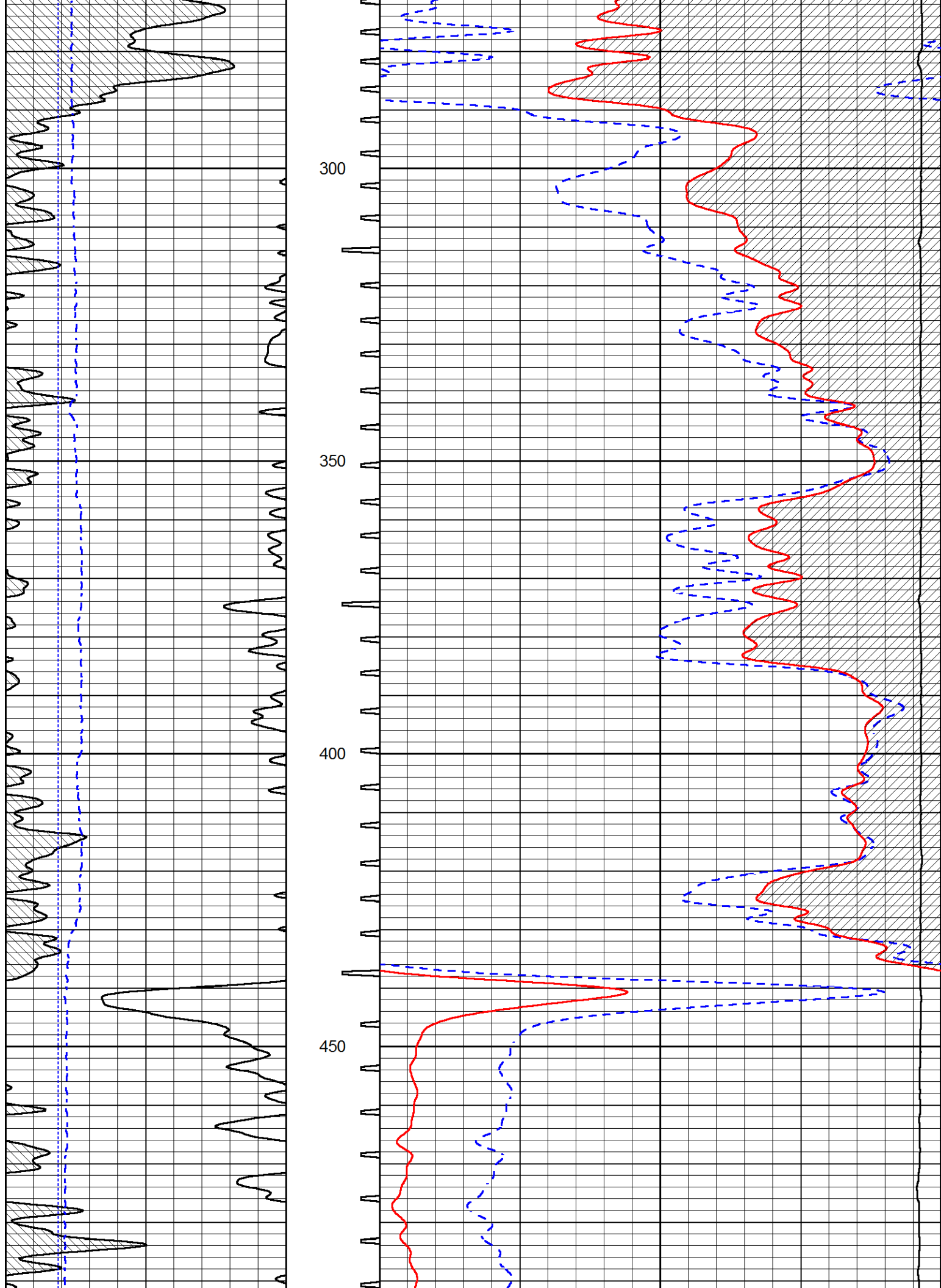
MIDWEST WIRELINE

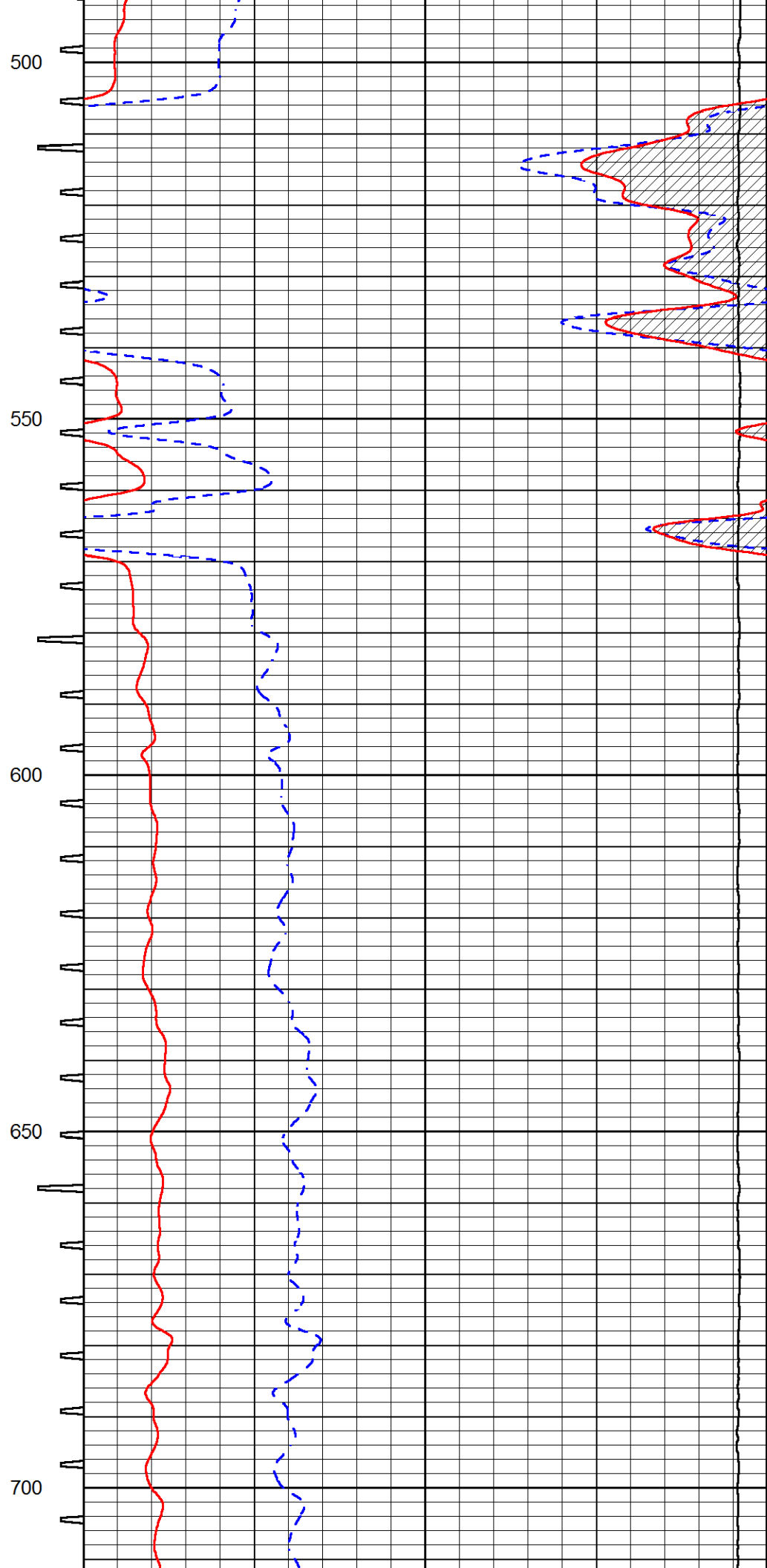
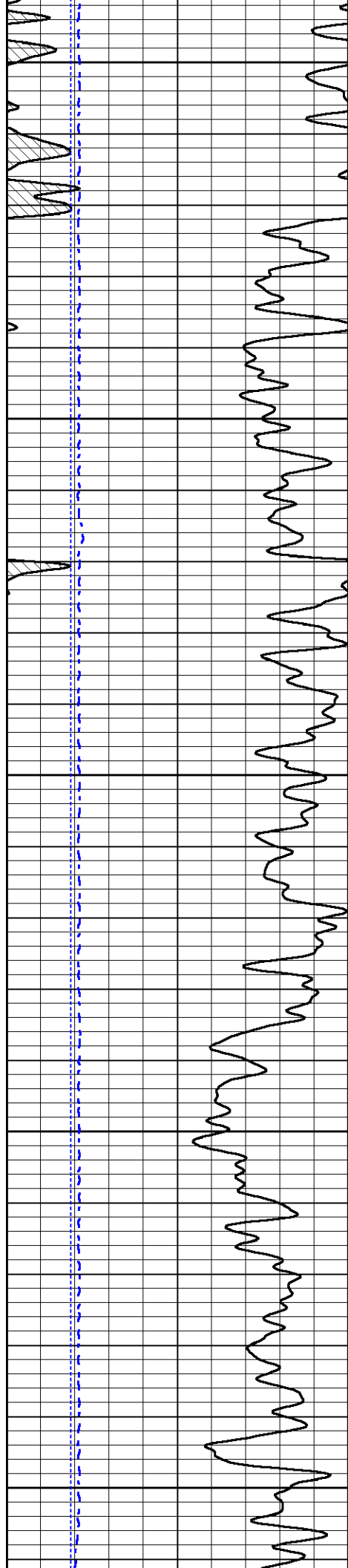
MAIN PASS

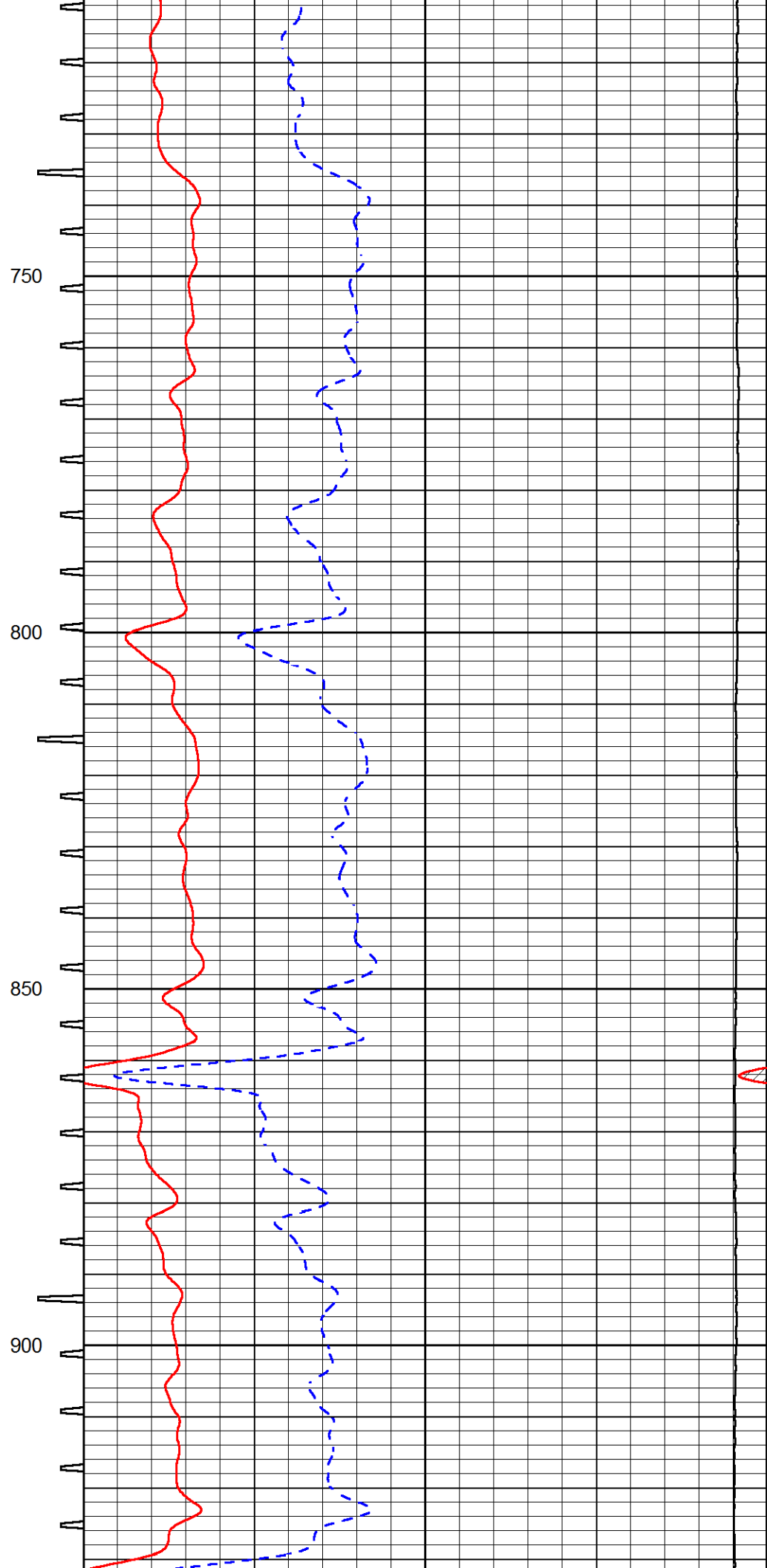
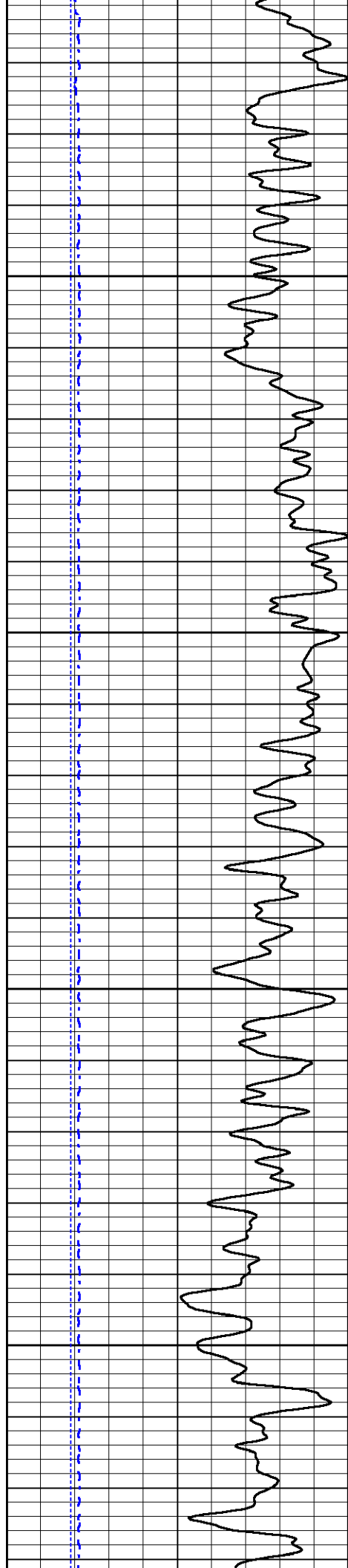
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 Presentation Format _sonic
 Dataset Creation Sat May 01 01:27:32 2021
 Charted by Depth in Feet scaled 1:240

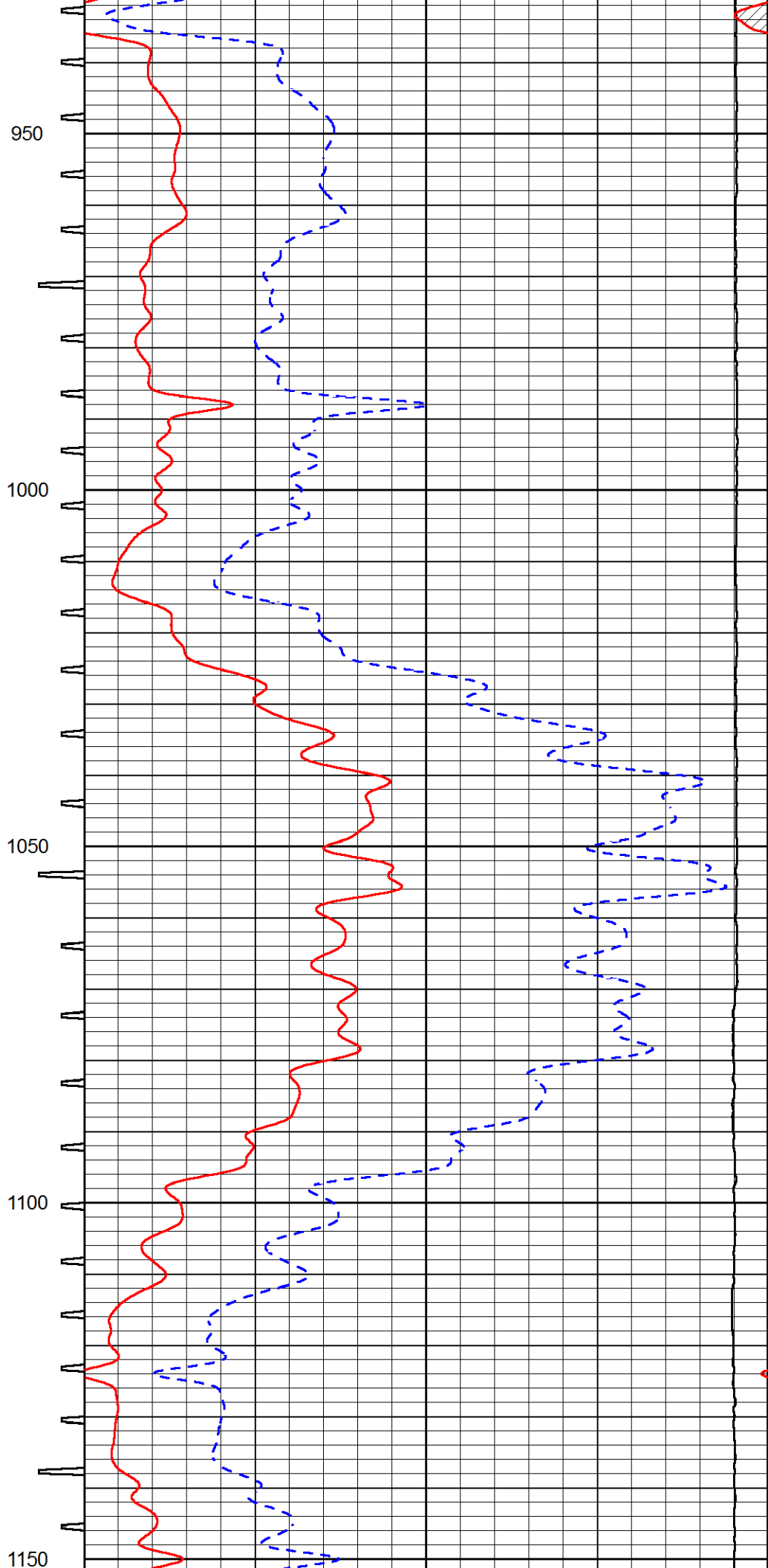
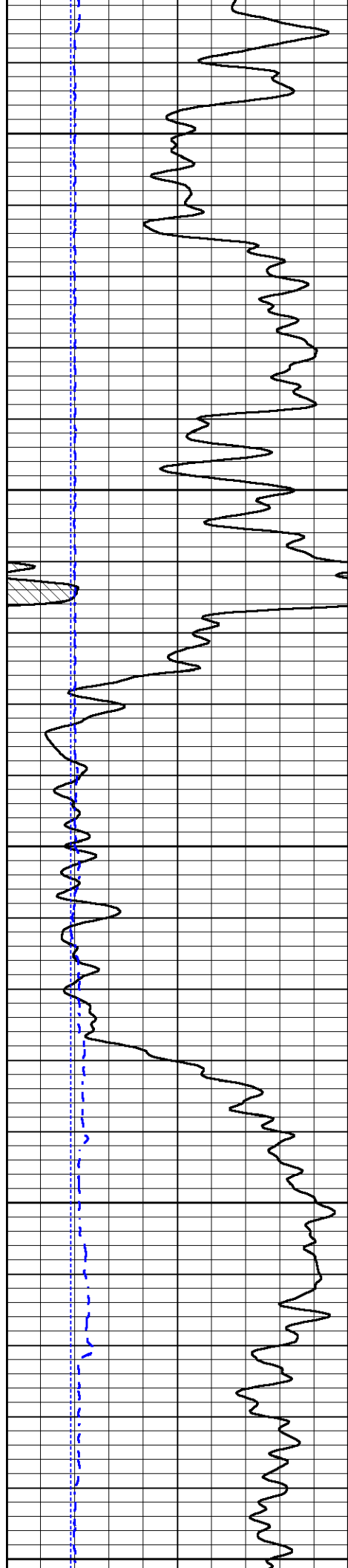
0	Gamma Ray (GAPI)	150	Sonic Int	140	Delta Time (usec/ft) (usec/ft)	40
150	GR (GAPI)	300	5 (msec) 0	30	Sonic Porosity (pu)	-10
6	DCAL (in)	16		15000	LTEN (lb) (lb)	0

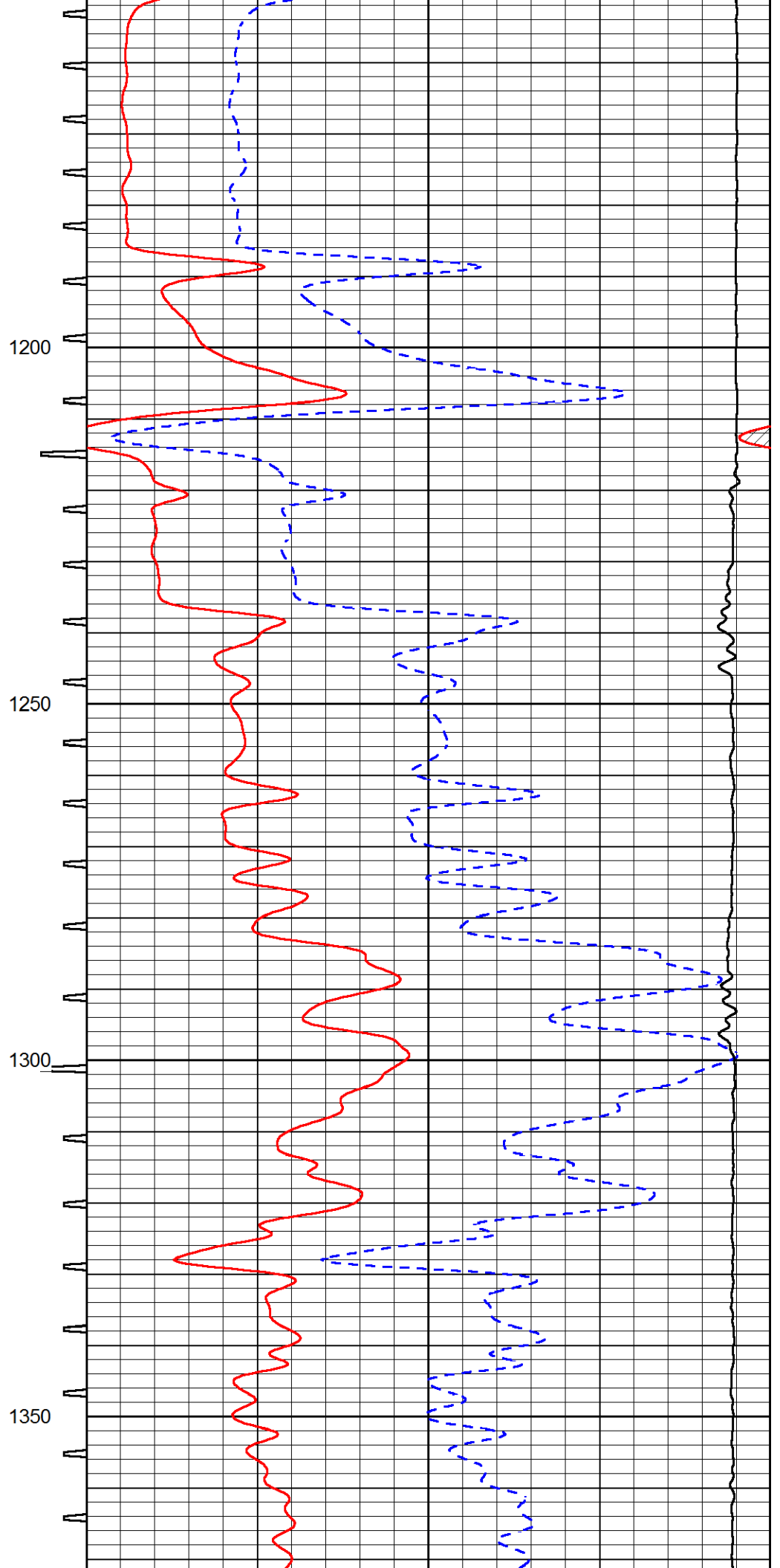
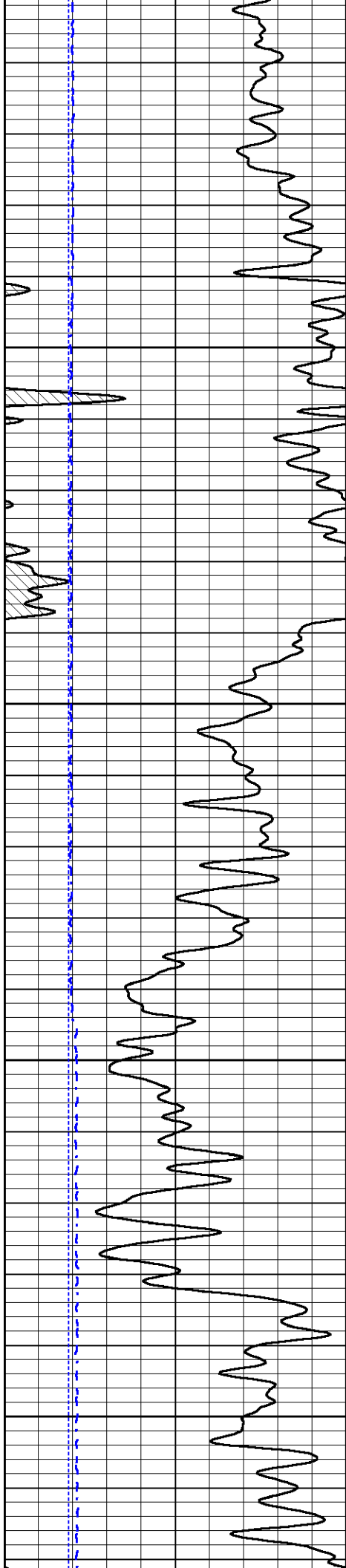


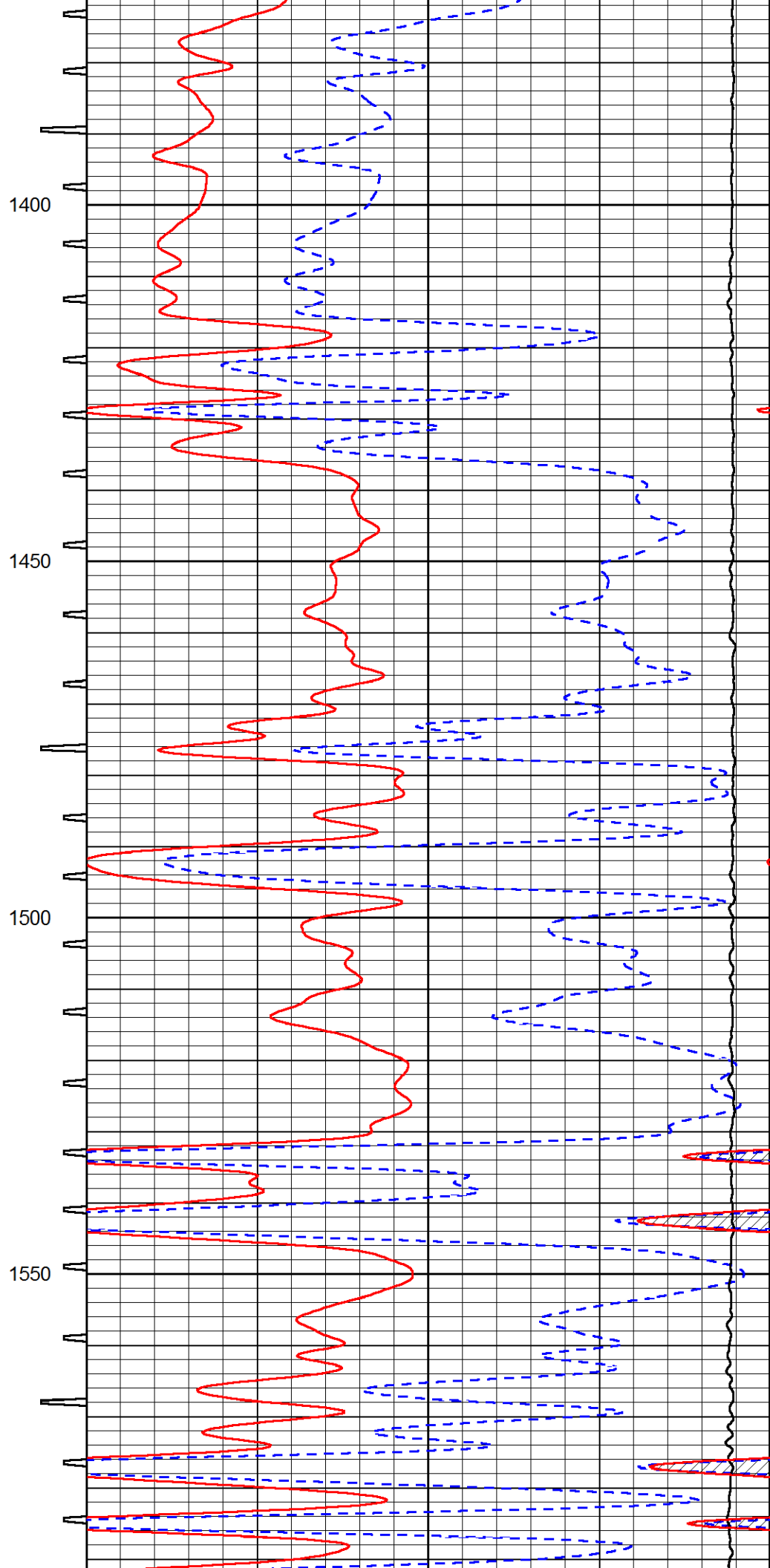
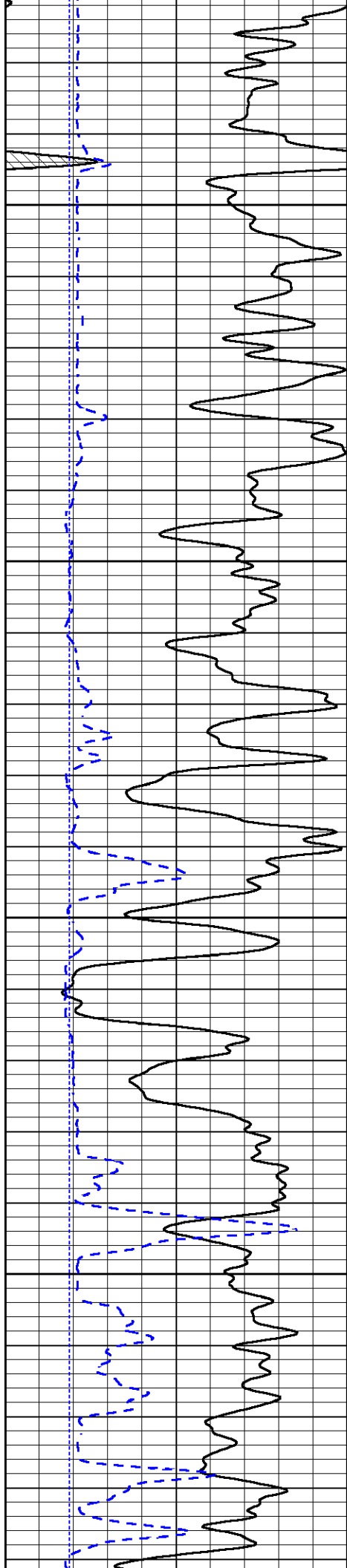


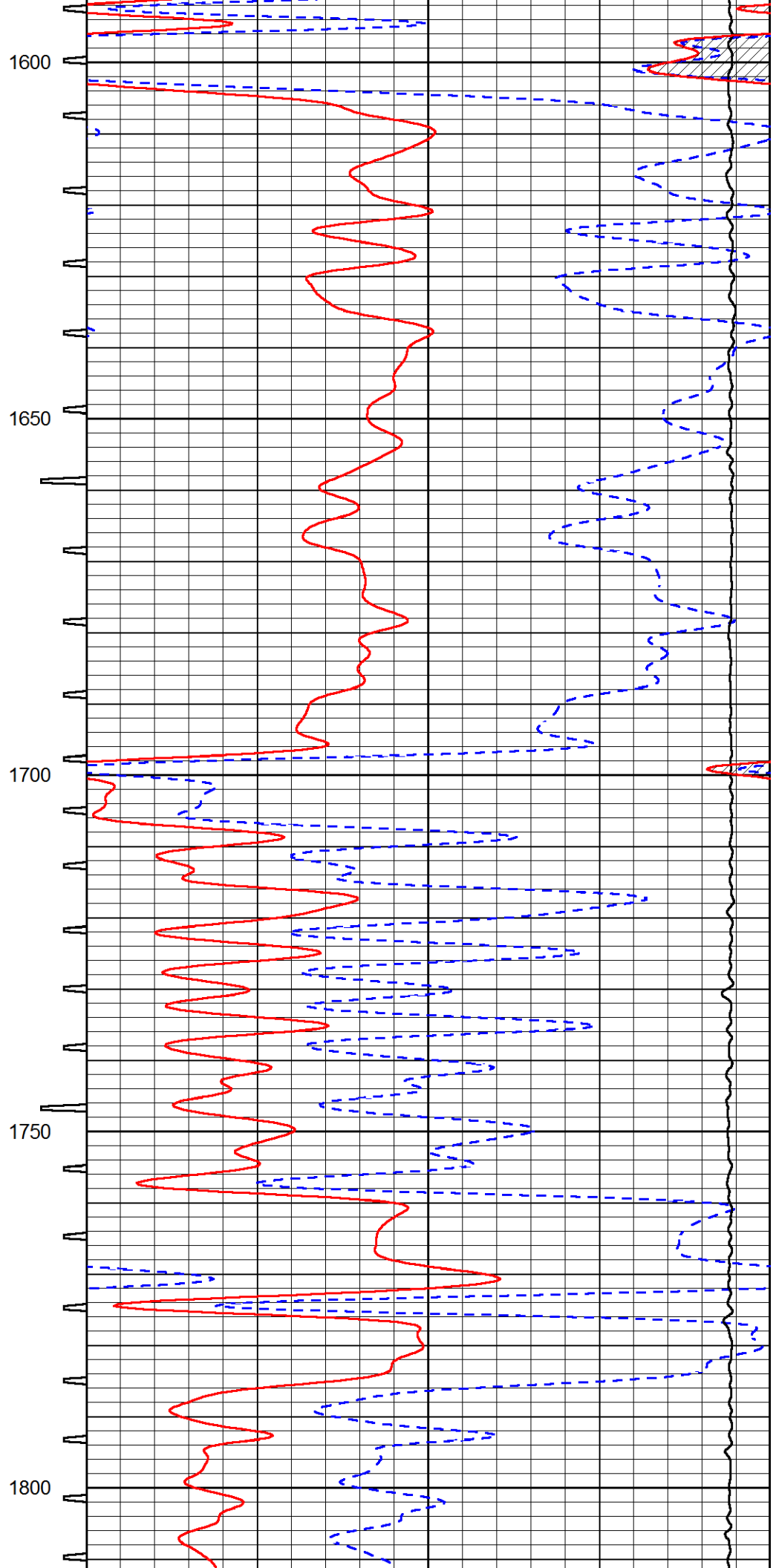
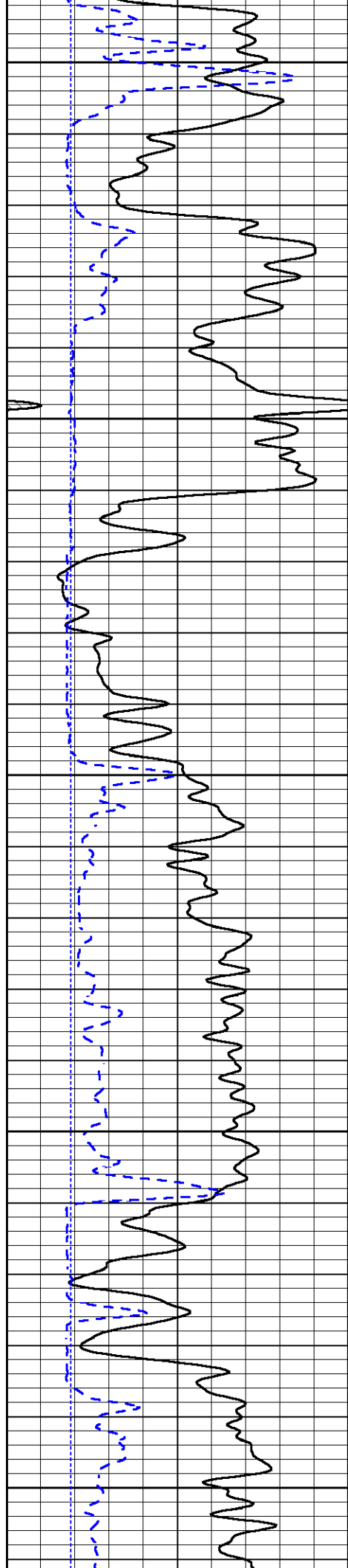


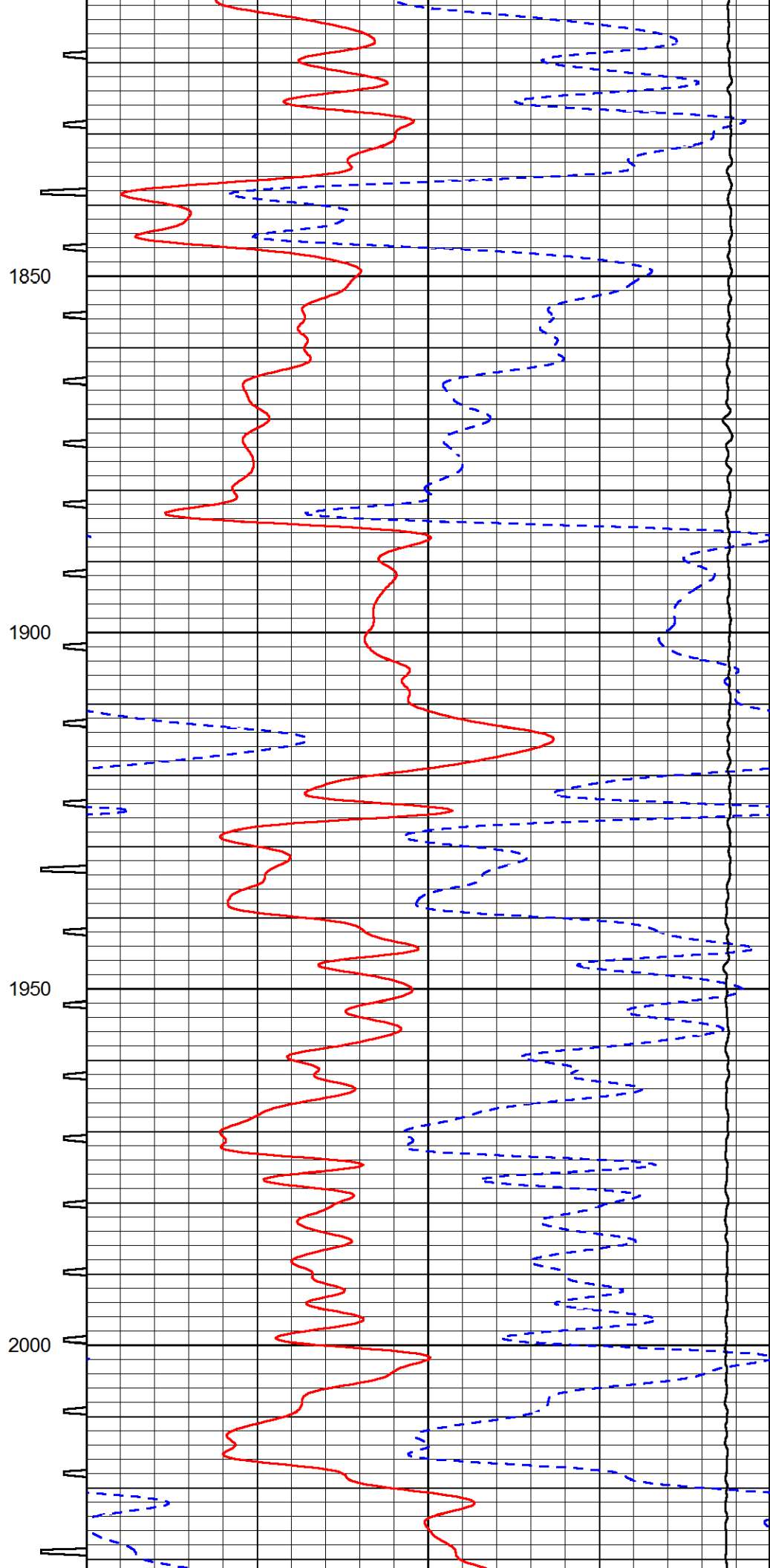
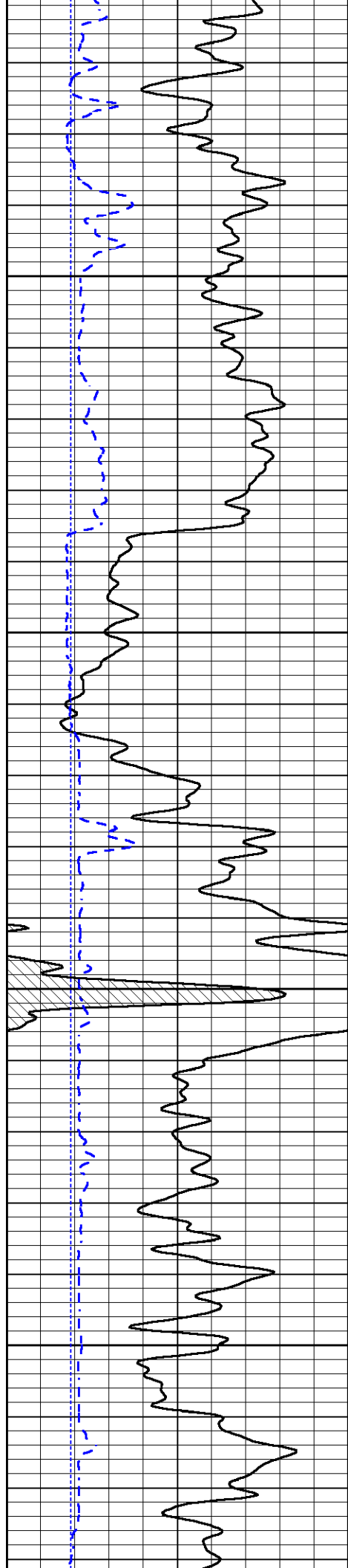


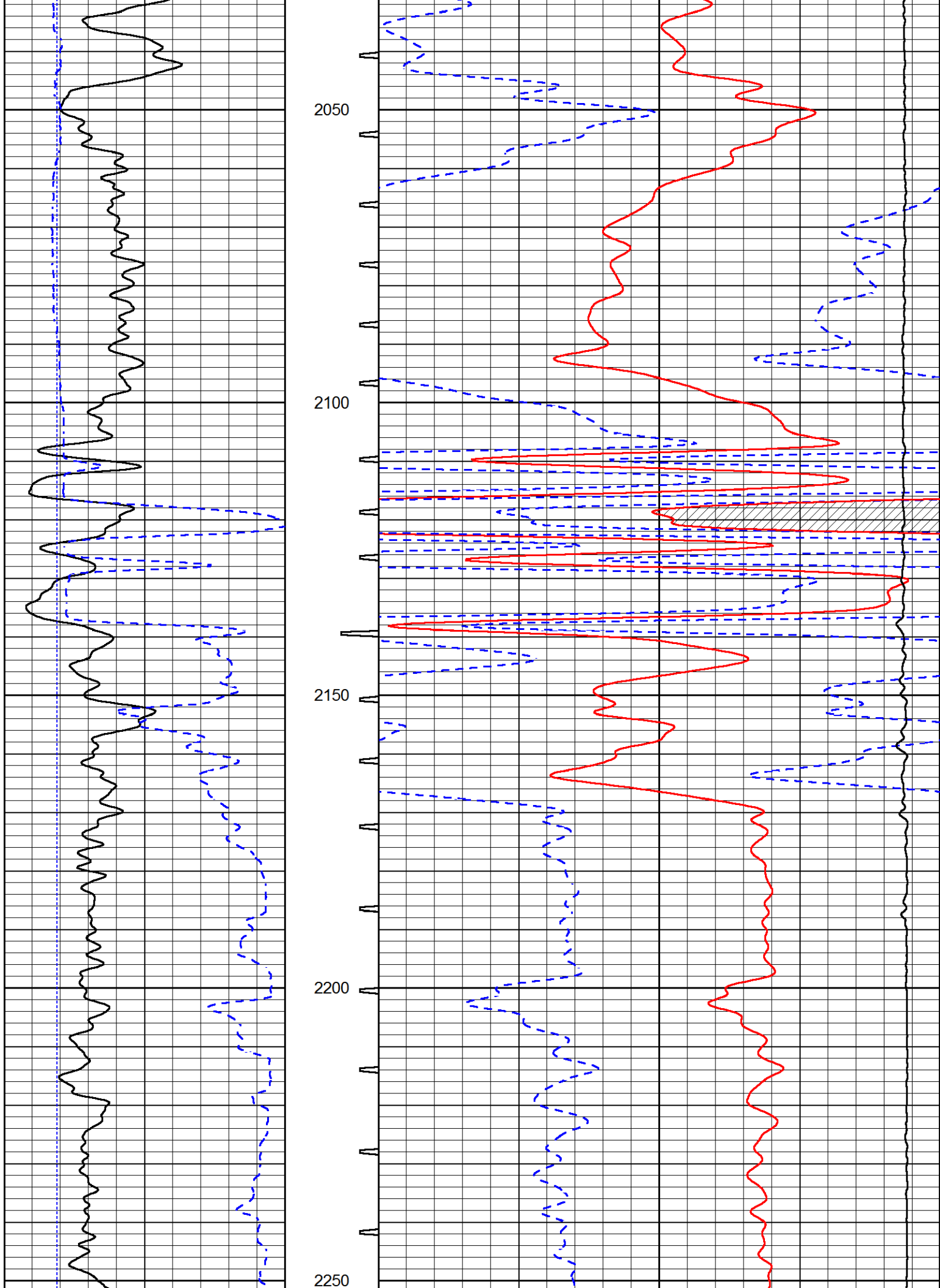


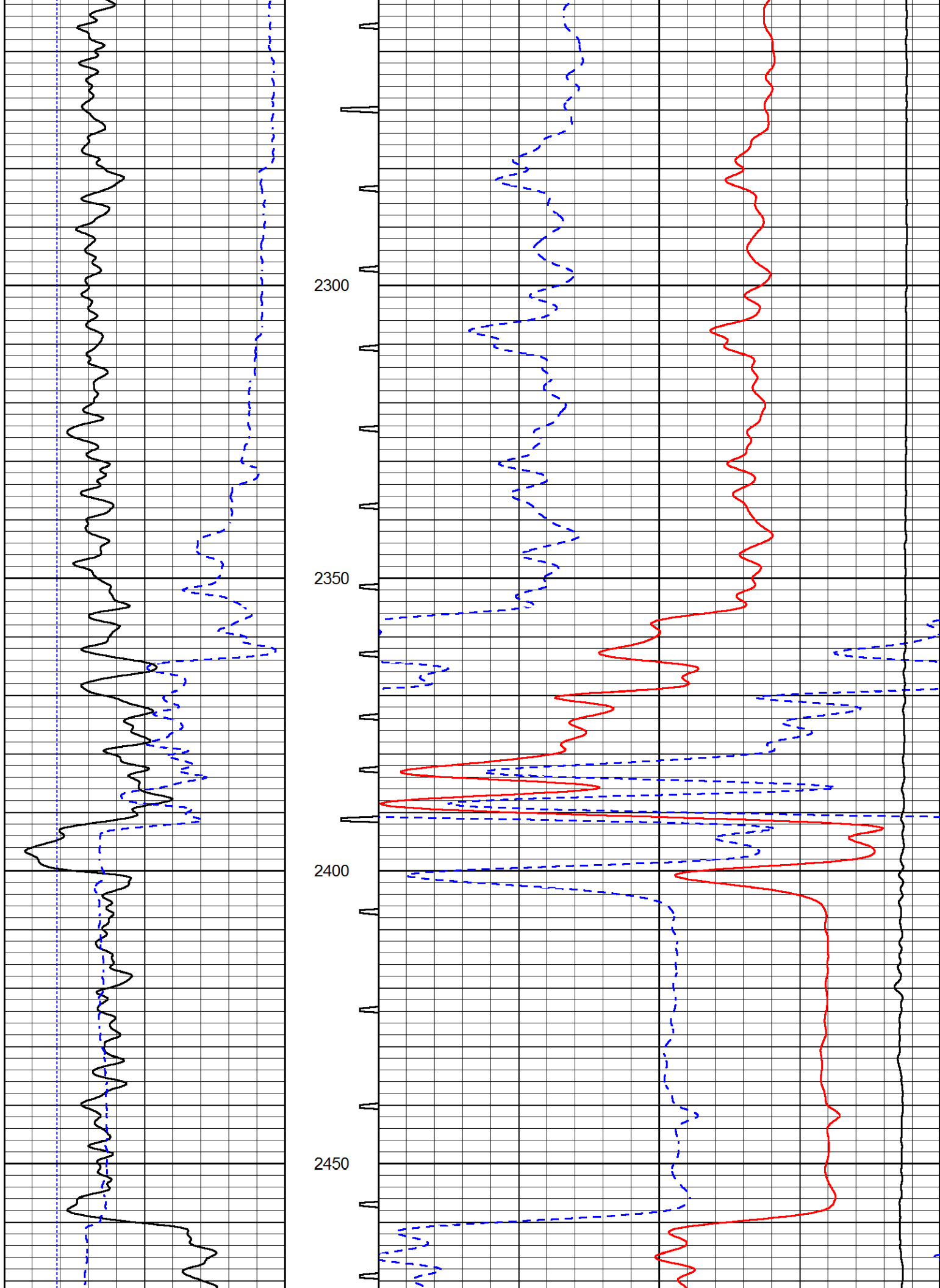


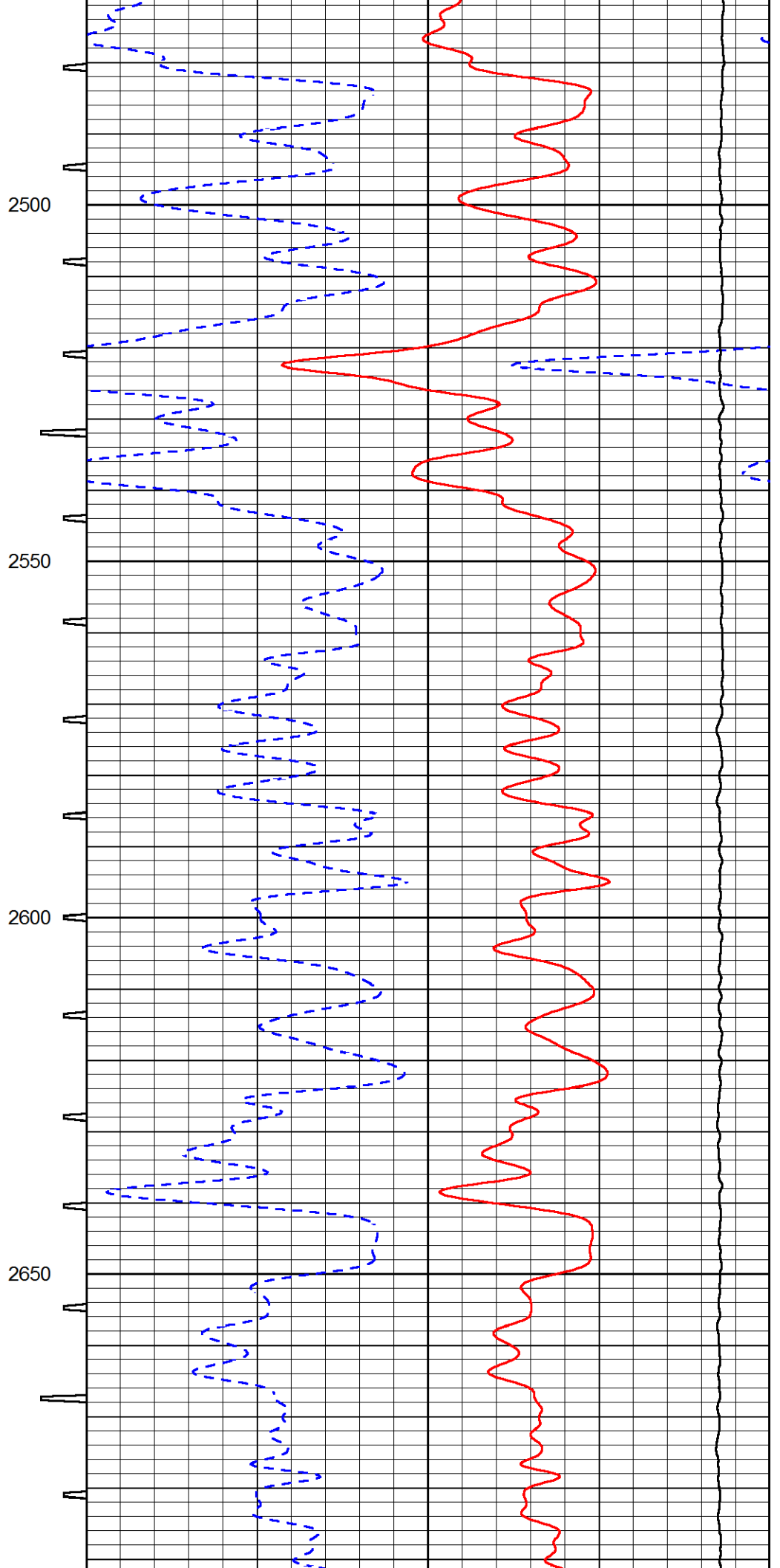
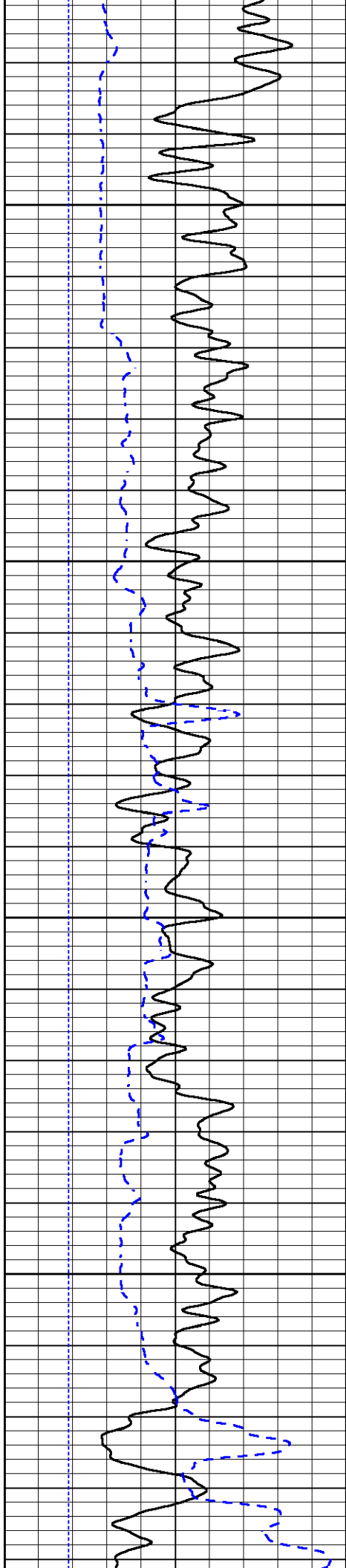


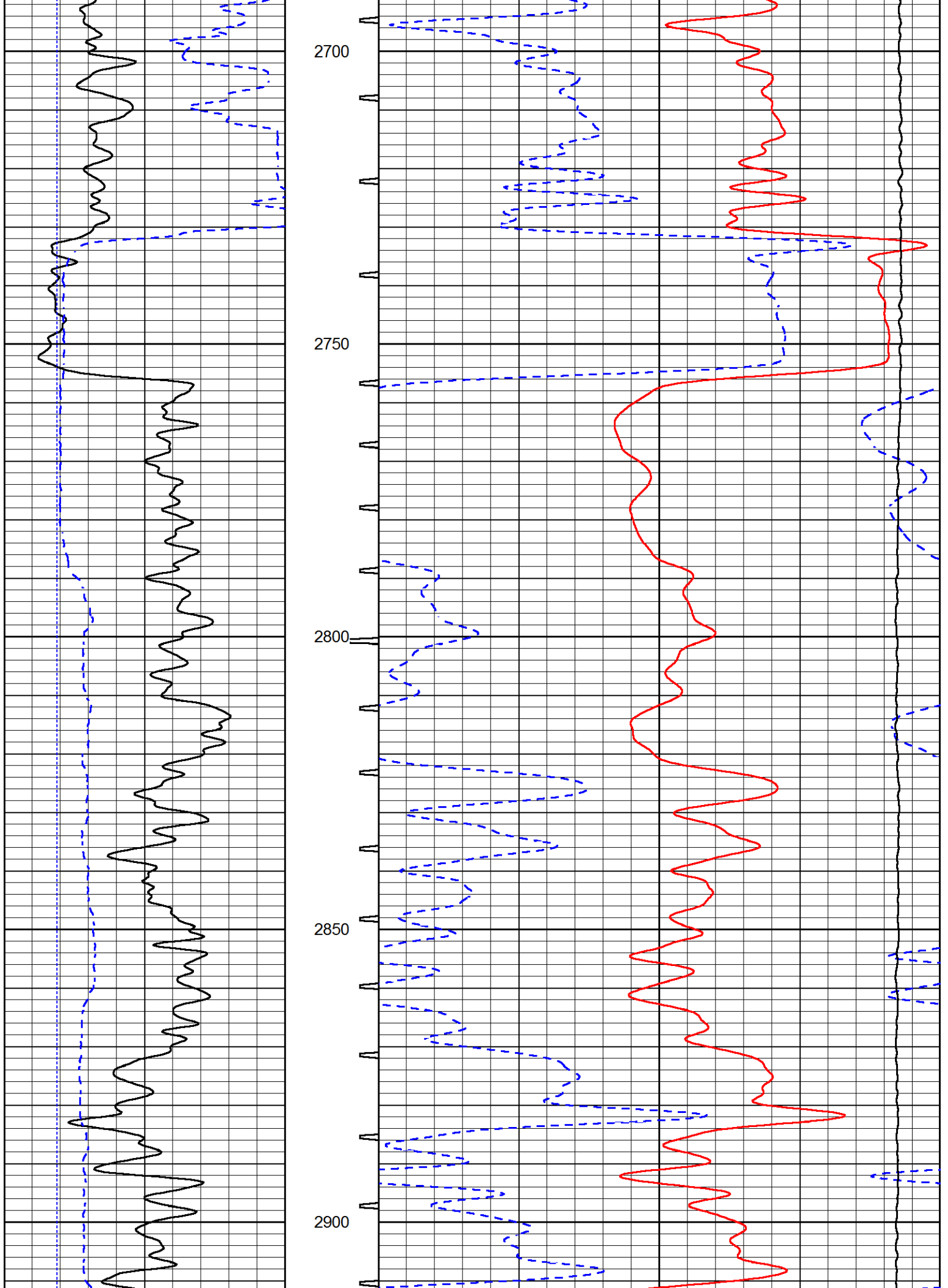


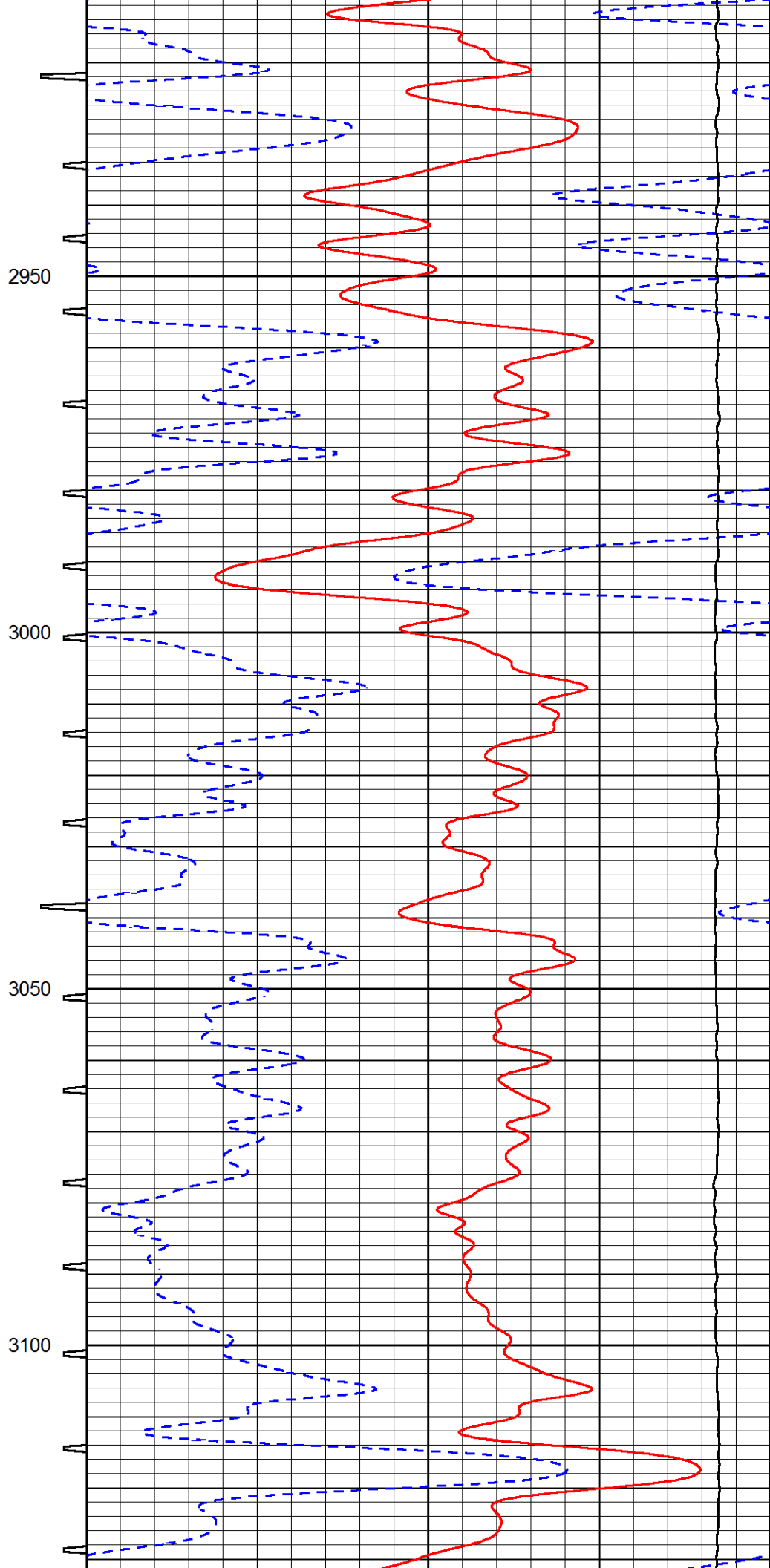
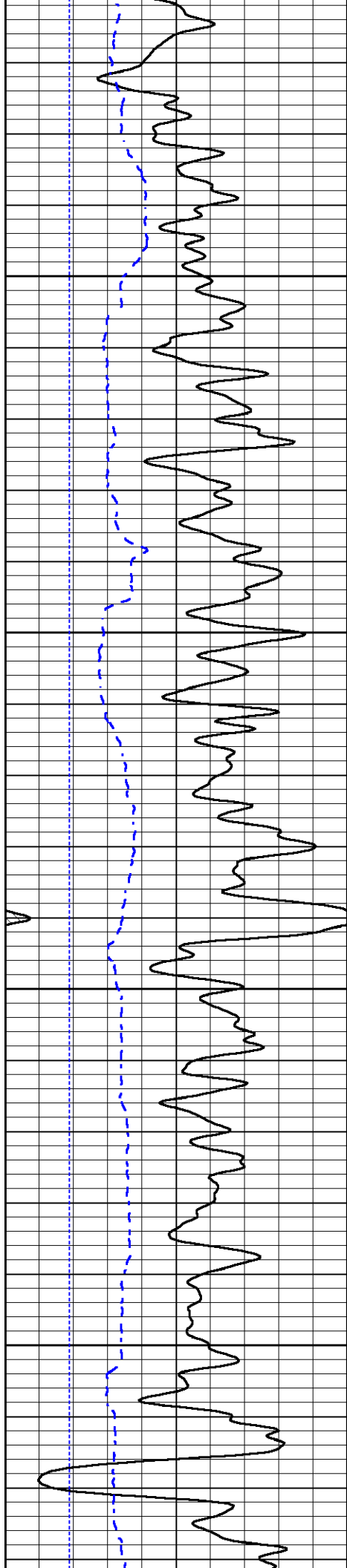


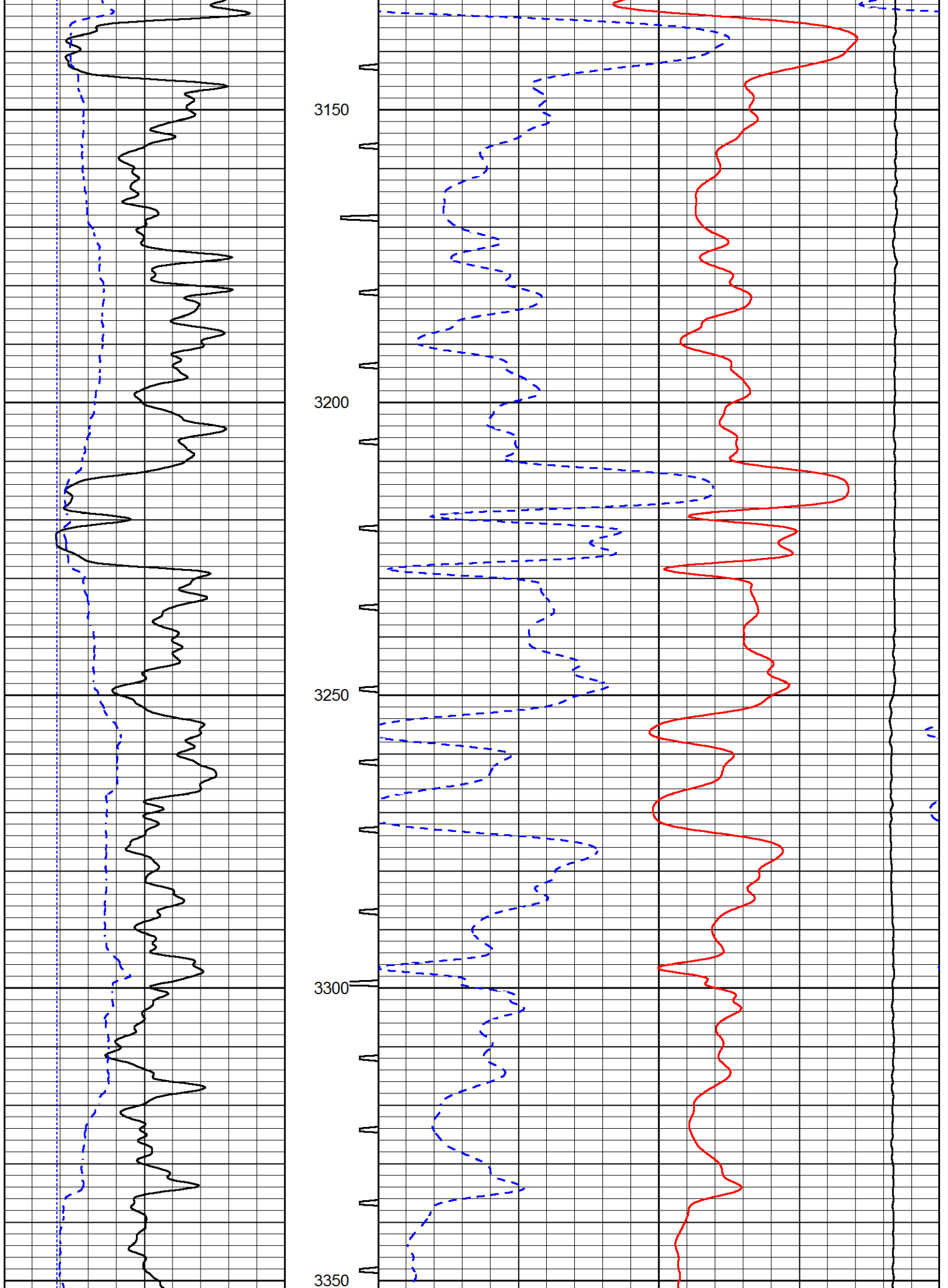


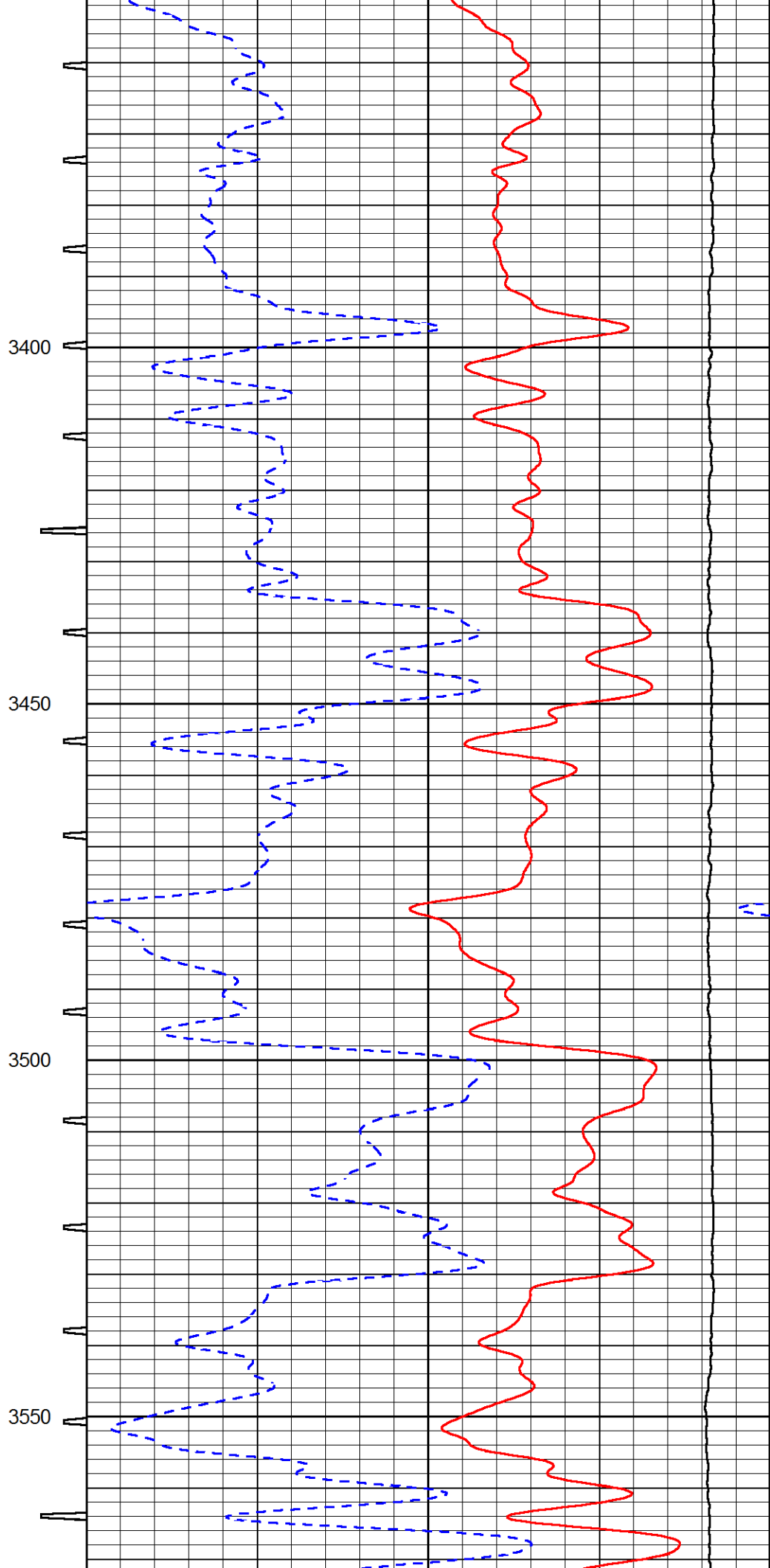
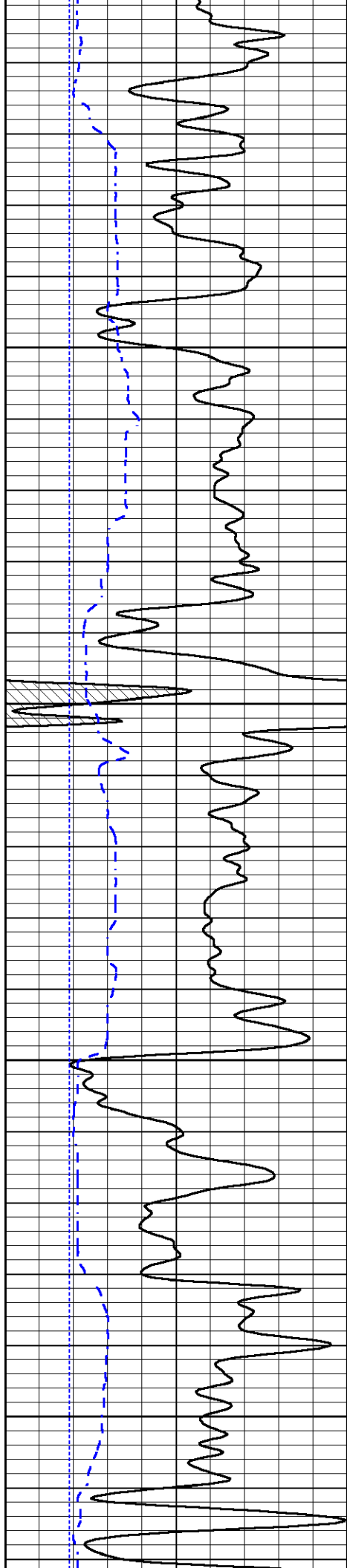


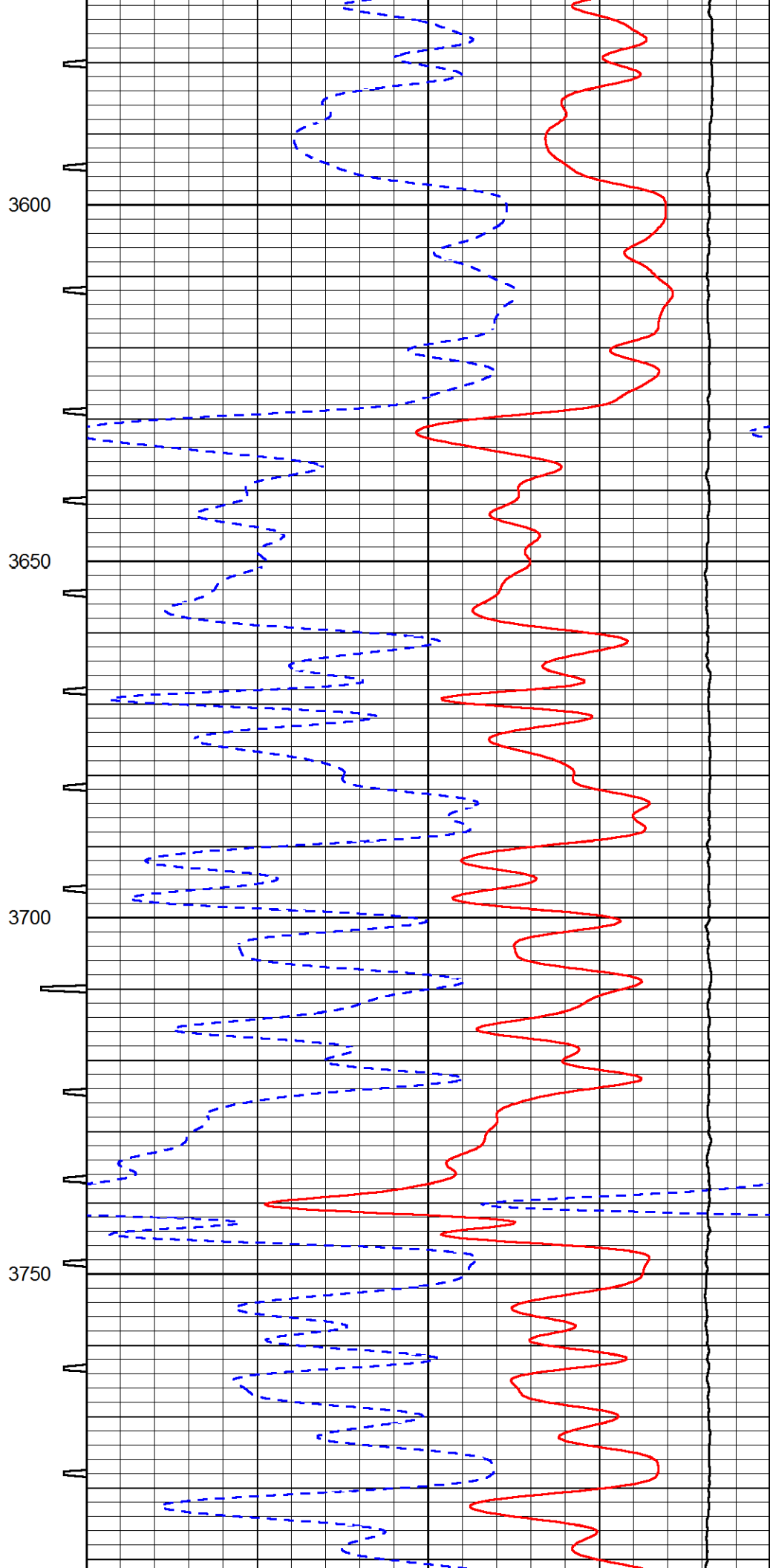
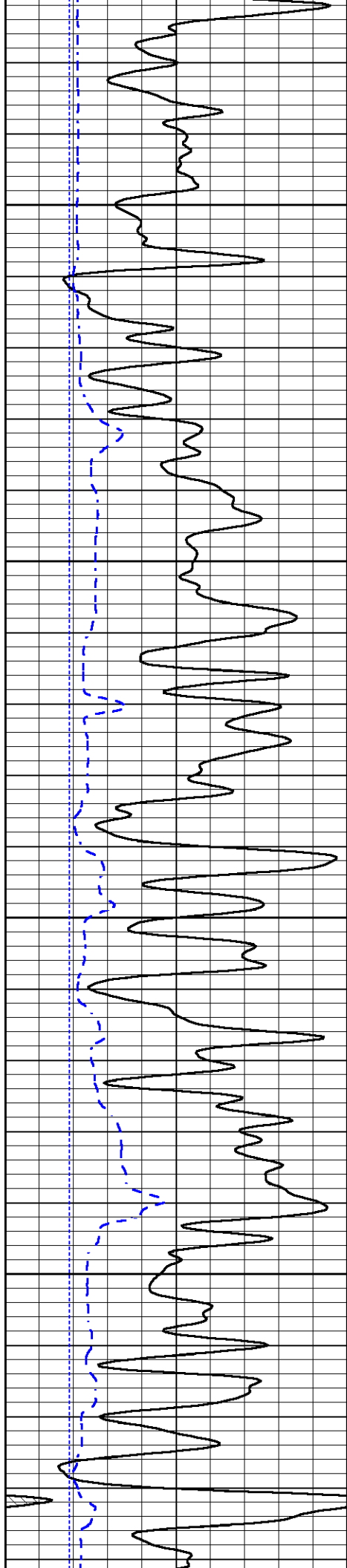


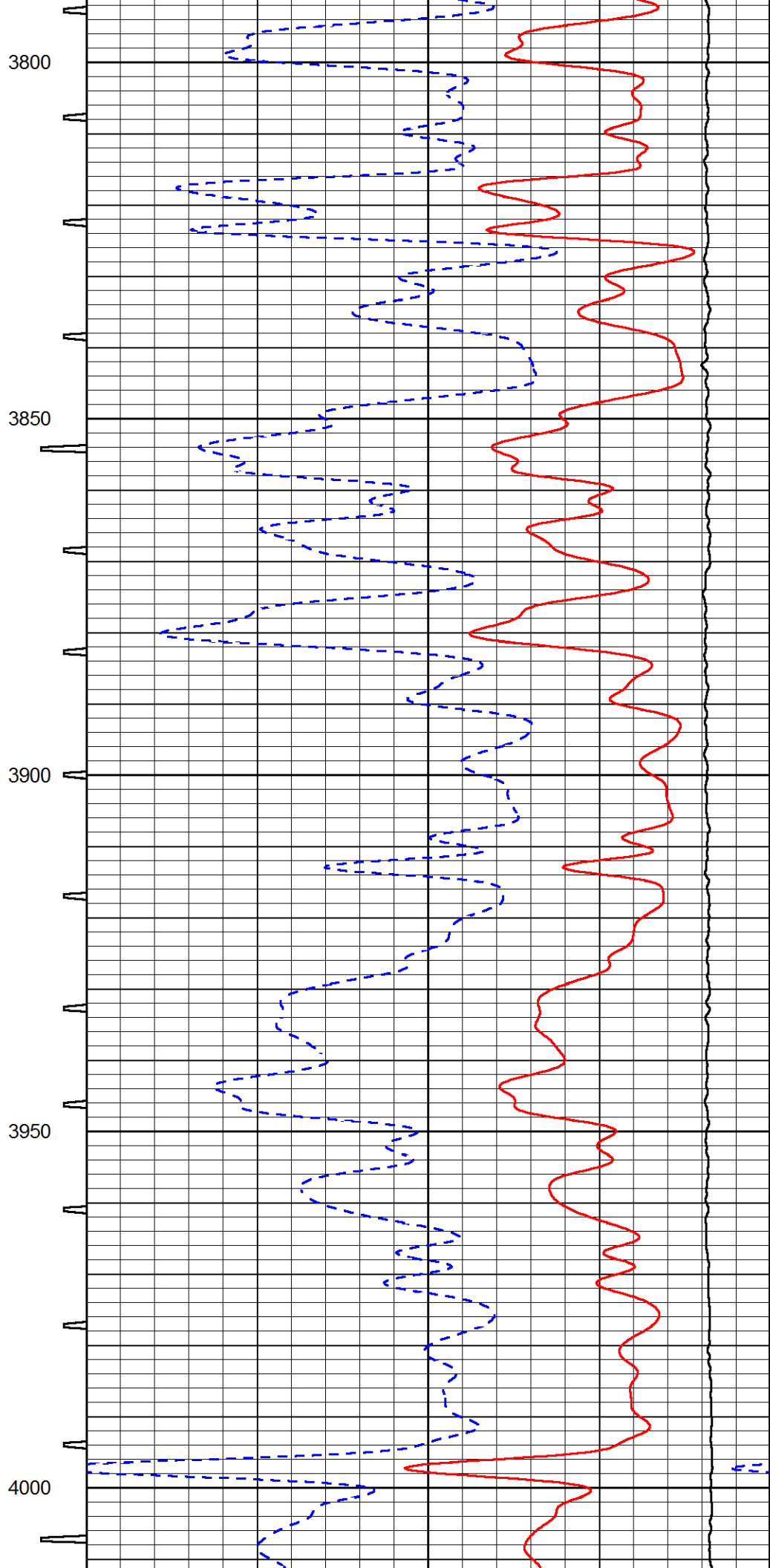
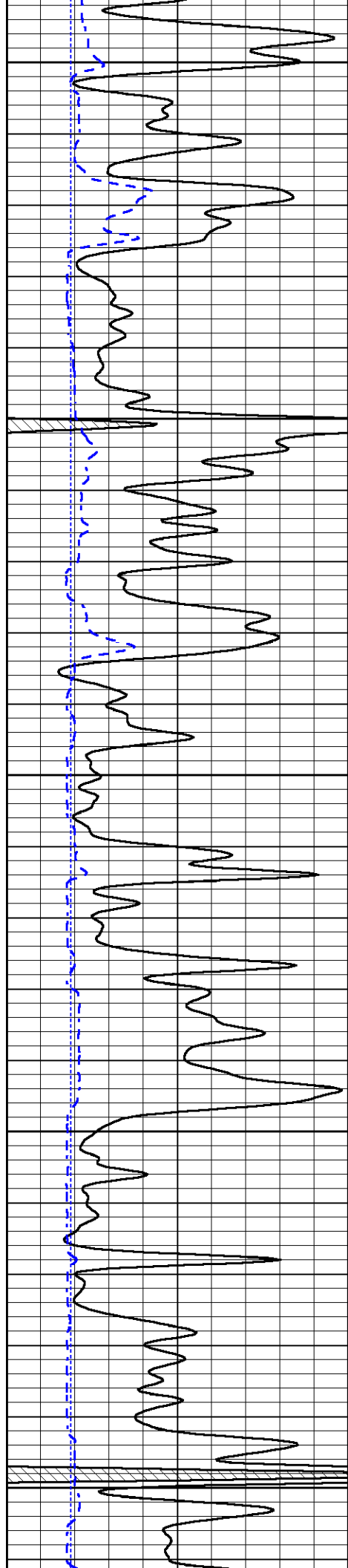


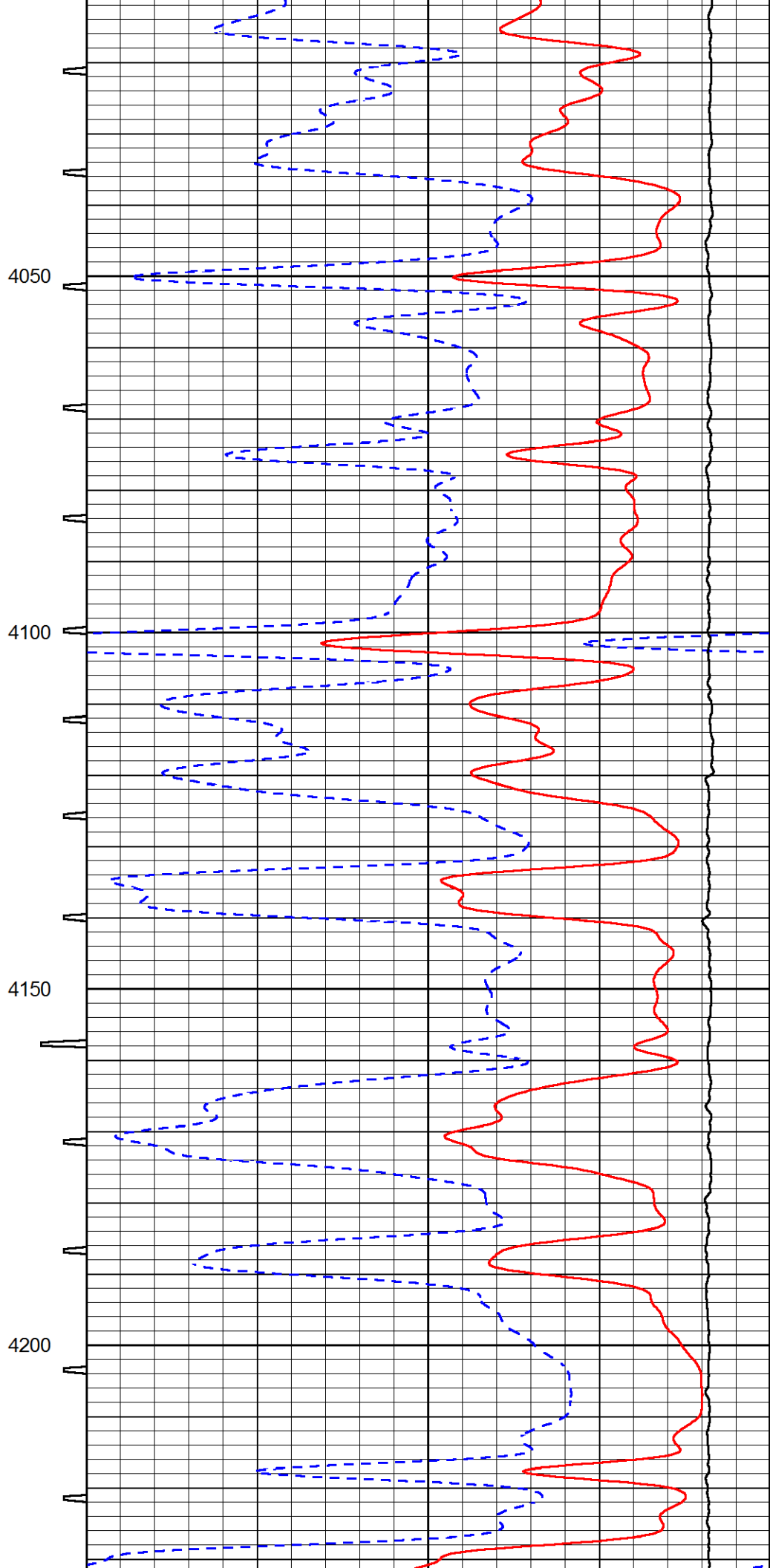
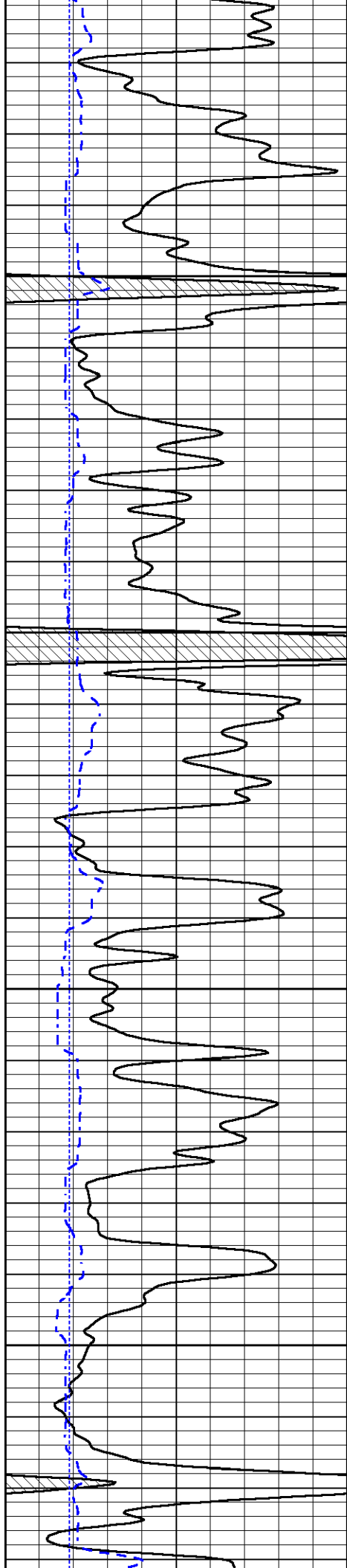


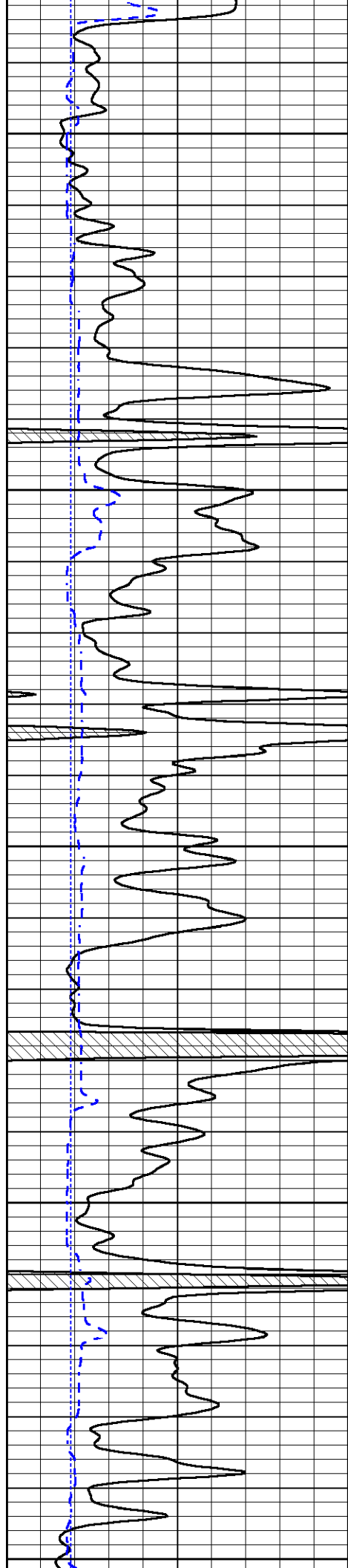












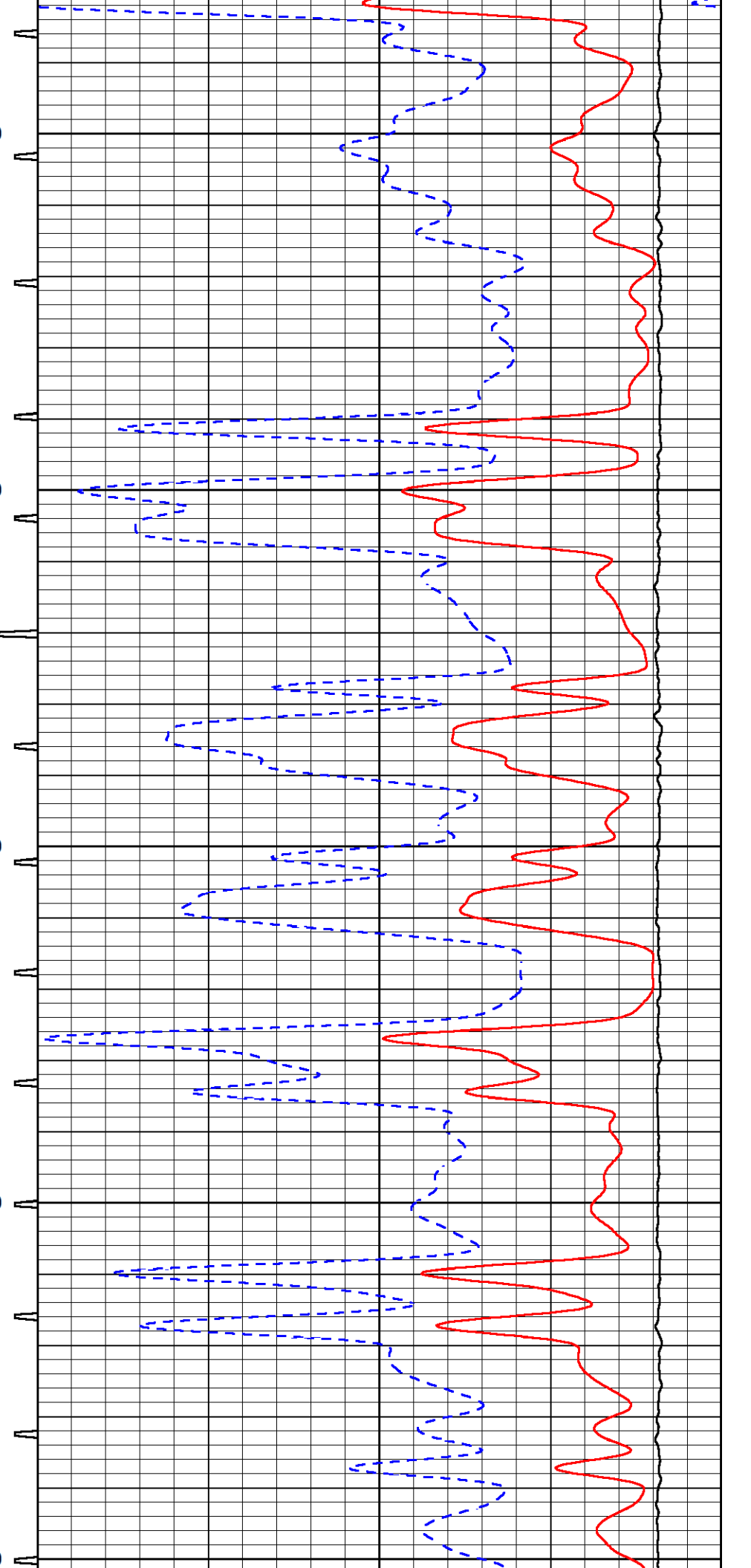
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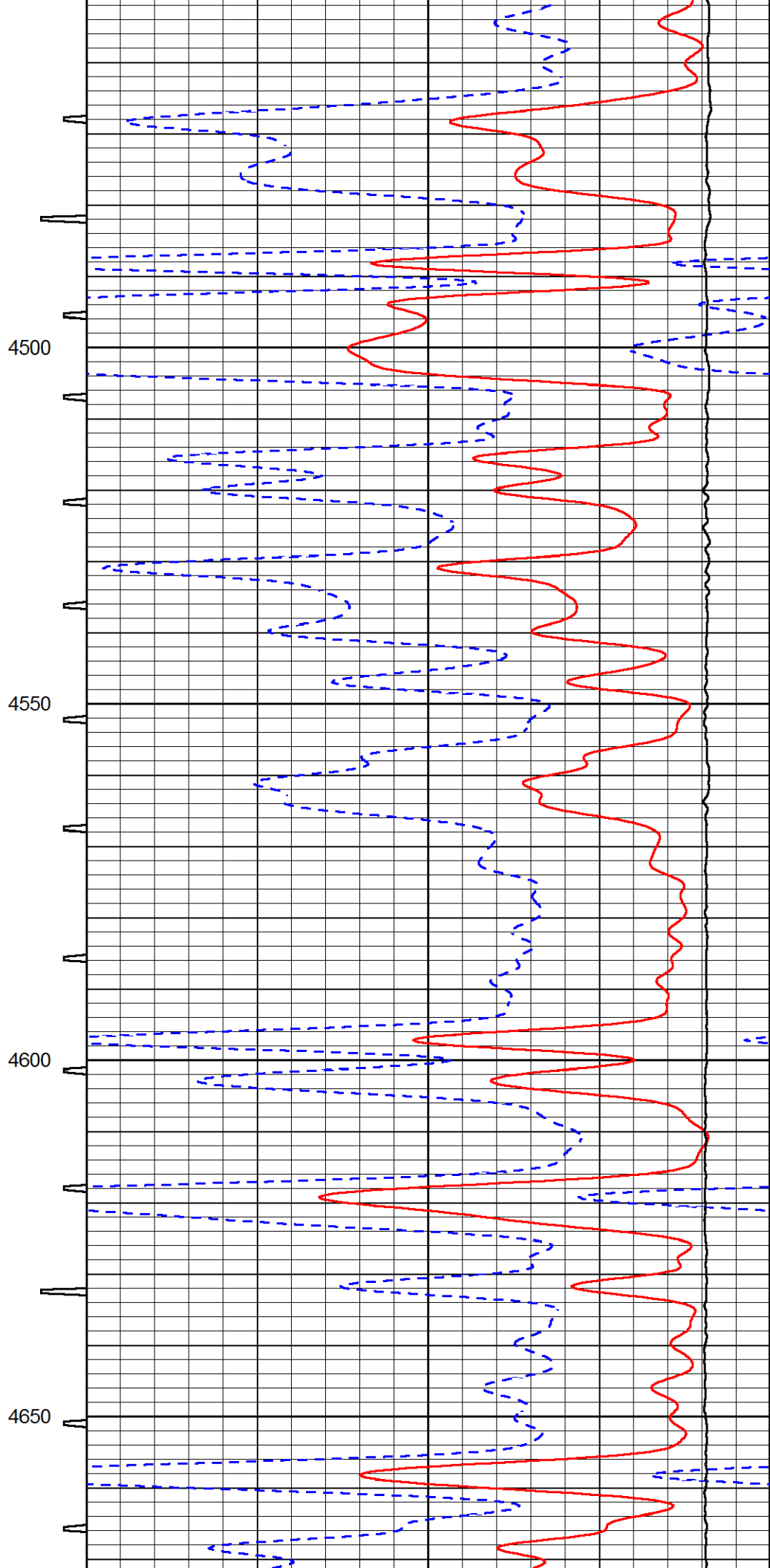
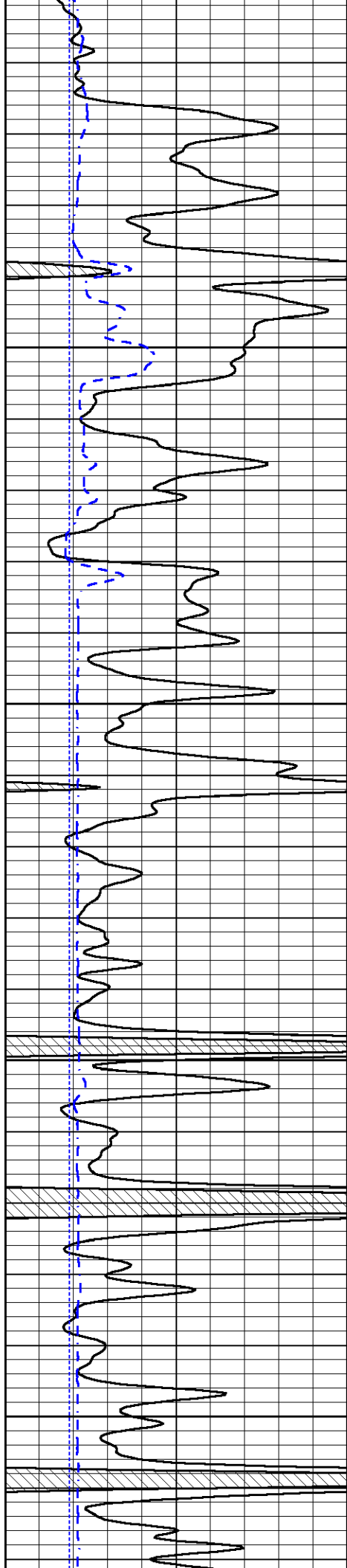
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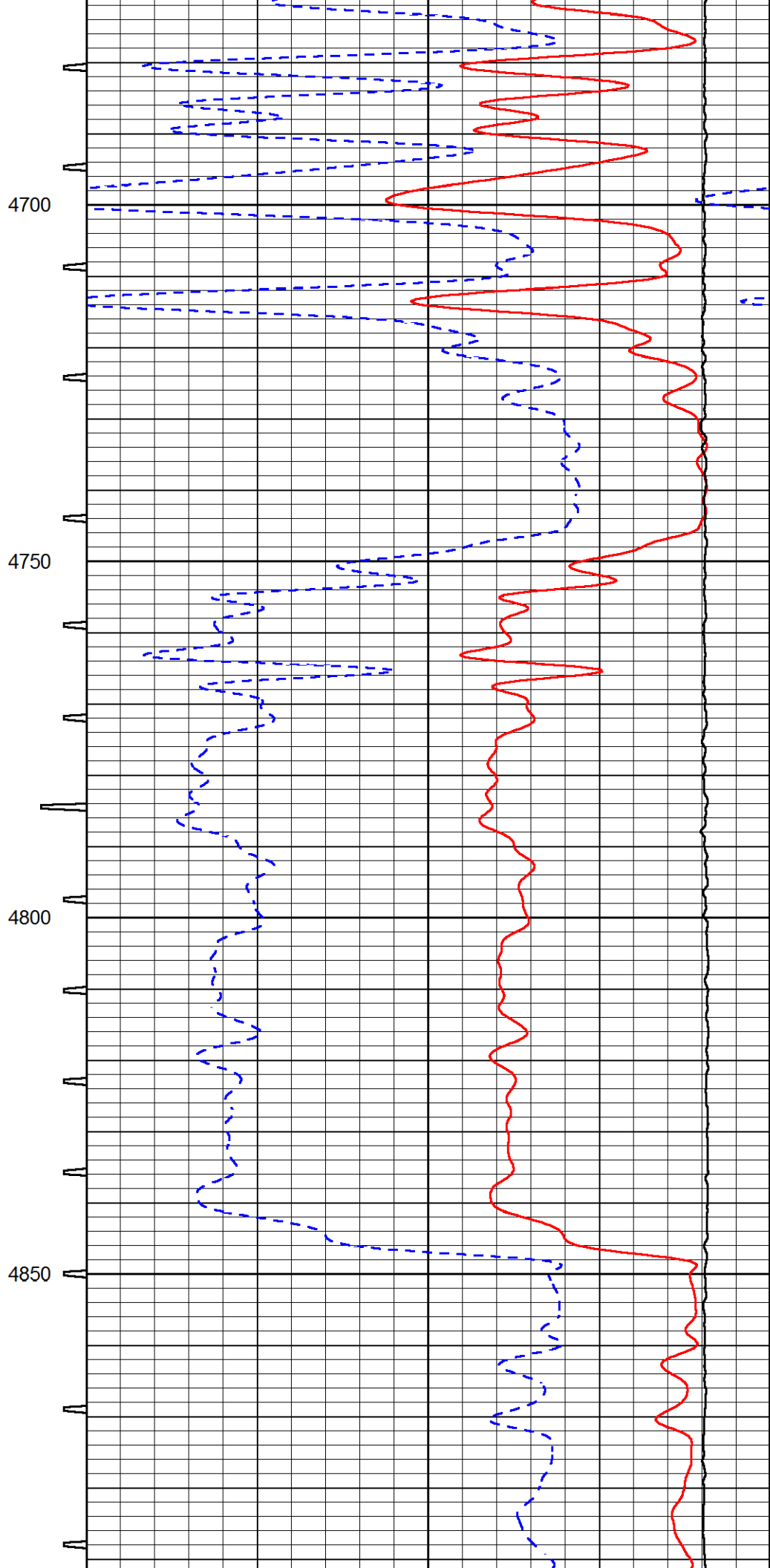
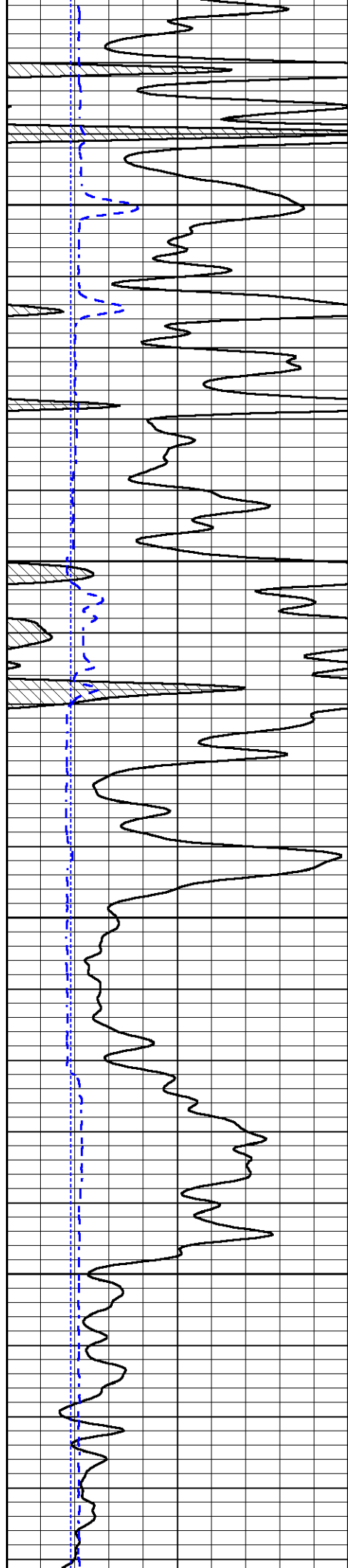
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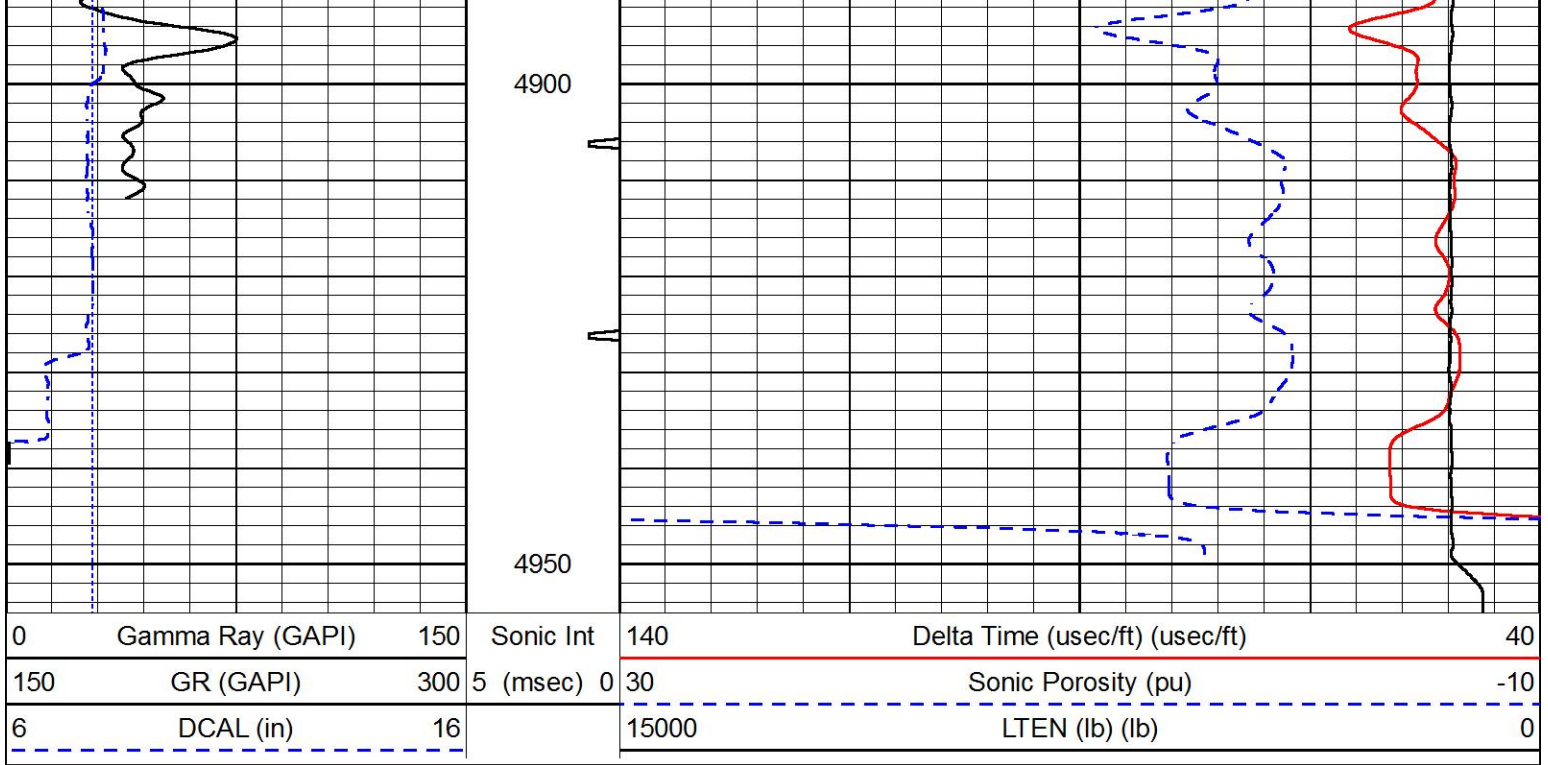
4400

4450









MIDWEST WIRELINE

REPEAT SECTION

Database File ritchie_tubbs_unit_1.db
 Dataset Pathname stackml/pass2.1
 Presentation Format _sonic
 Dataset Creation Sat May 01 00:14:25 2021
 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)	-10
6	DCAL (in)	16		15000	LTEN (lb) (lb)	0

