



**BOREHOLE COMPENSATED  
SONIC LOG**

Company RITCHEE EXPLORATION, INC.  
Well BLAU-SCHROEDER NO.1  
Field TWIN BUTTE  
County LOGAN  
State KANSAS

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County LOGAN State KANSAS

Location: API #: 15-109-21517-00-00  
610' FSL & 2570' FWL  
SEC 16 TWP 15S RGE 36W  
Permanent Datum GROUND LEVEL Elevation 3339'  
Log Measured From KELLY BUSHING  
Drilling Measured From KELLY BUSHING  
Other Services  
DIL/MEL  
CNL/CDL  
Elevation  
K.B. 3344'  
D.F. N/A  
G.L. 3339'

Date	9/4/2017						
Run Number	TWO						
Type Log	BHGS						
Depth Driller	5010'						
Depth Logger	5009'						
Bottom Logged Interval	4999'						
Top Logged Interval	250'						
Type Fluid In Hole	CHEMICAL						
Salinity, PPM CL	6,400						
Density	9.3						
Level	FULL						
Max. Rec. Temp. F	126 DEG/F						
Operating Rig Time	4 HOURS						
Equipment -- Location	108 HAYS						
Recorded By	J. HENRICKSON						
Witnessed By	JOHN GOLDSMITH						
Borehole Record		Casing Record					
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	0	268'	8.625"	23#	0	268'
TWO	7.875"	268'	TD				

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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.  
RUSSELL SPRINGS  
SOUTH TO DAKOTA ROAD, 2 1/2 EAST, NORTH INTO

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

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

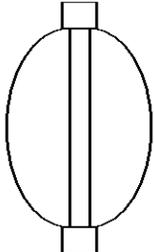
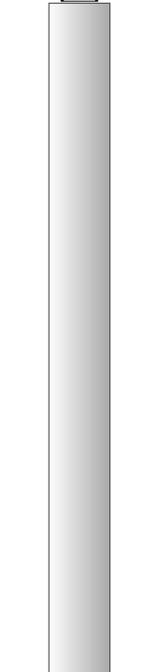
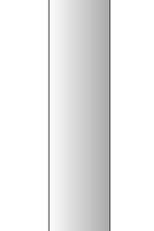
Your Pioneer Energy Services Crew		This Log Record Was Witnessed By	
Engineer: J. HENRICKSON	Operator:	Primary Witness: JOHN GOLDSMITH	Secondary Witness:
Operator:	Operator:	Secondary Witness:	Secondary Witness:
Operator:		Secondary Witness:	

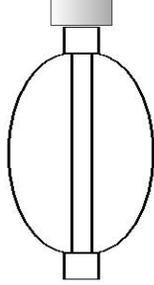
# Log Variables

DatabaseC:\ProgramData\Warrior\Data\ritchie\_blaui\_schroeder\_1.db  
 Dataset field/well/stackml/pass3.1/\_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	0	0	0	-86	75	Off	5009

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			CENT-SIE	3.00	2.00	10.00
WVF4 WVF1	11.00 11.00		SLT-PENGO (0001)	16.00	3.50	300.00
WVF3 WVF2	9.00 9.00		SLT-PENGO (0001)			



CENT-SIE

3.00

2.00

10.00

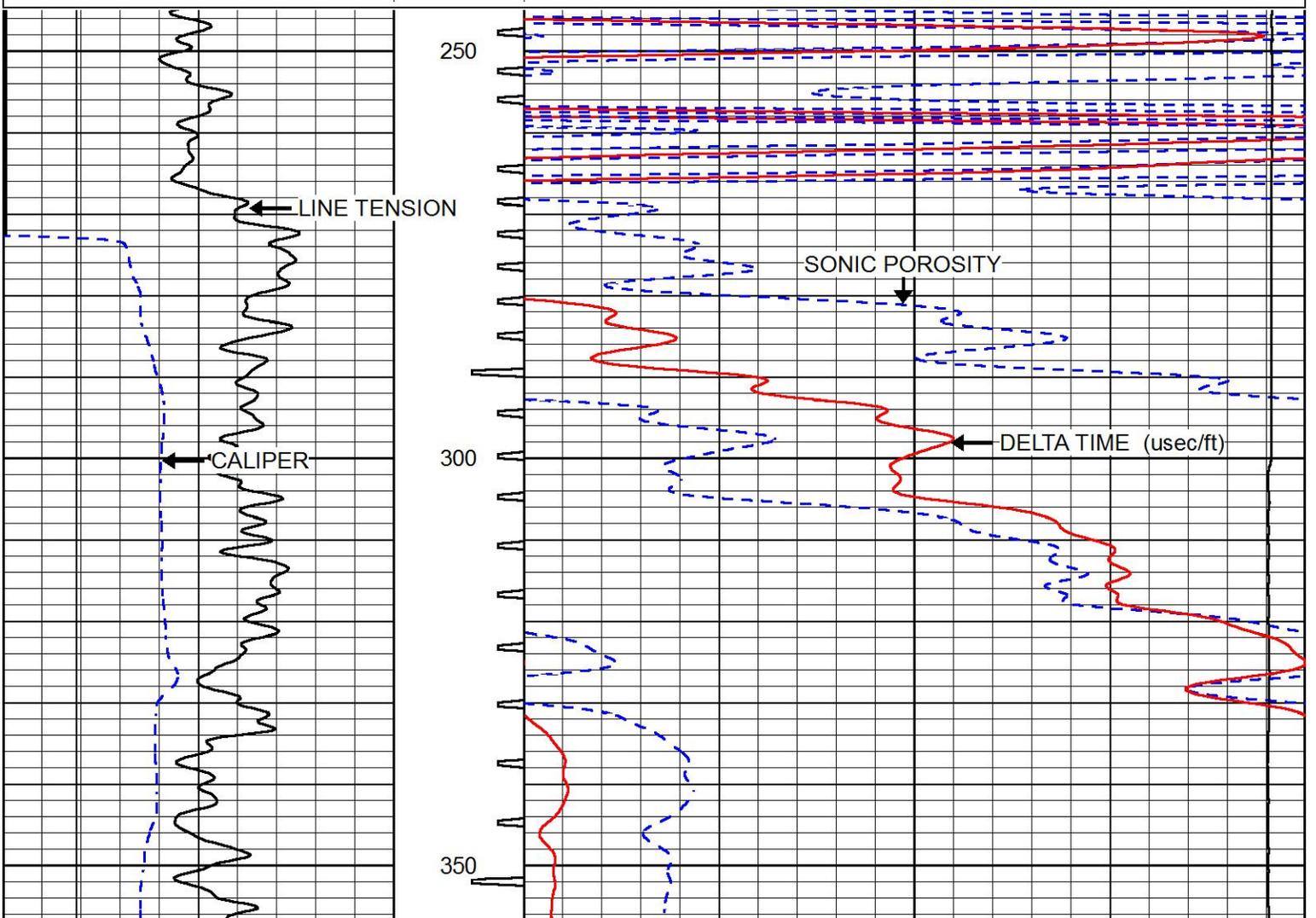
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 Total weight: 320.00 lb  
 O.D.: 3.50 in

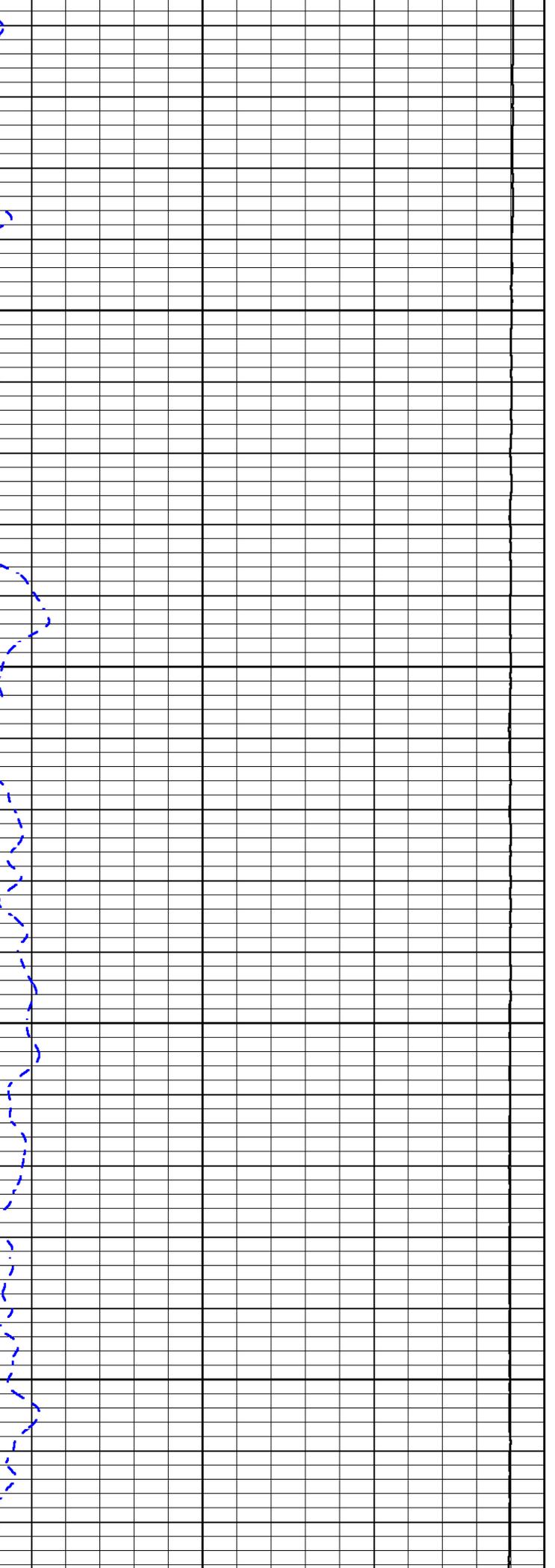
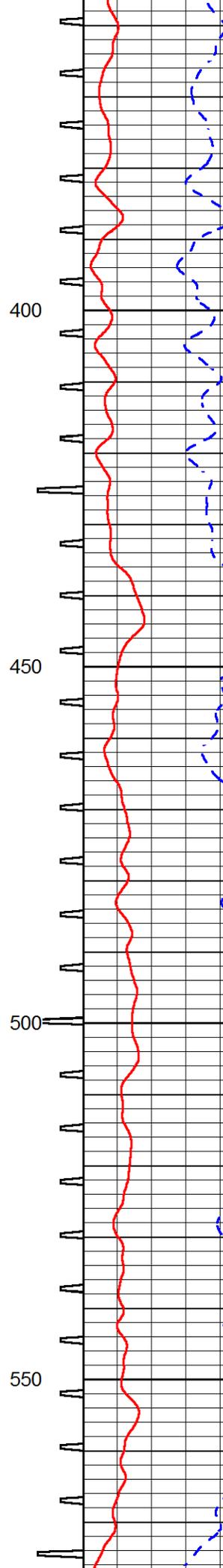
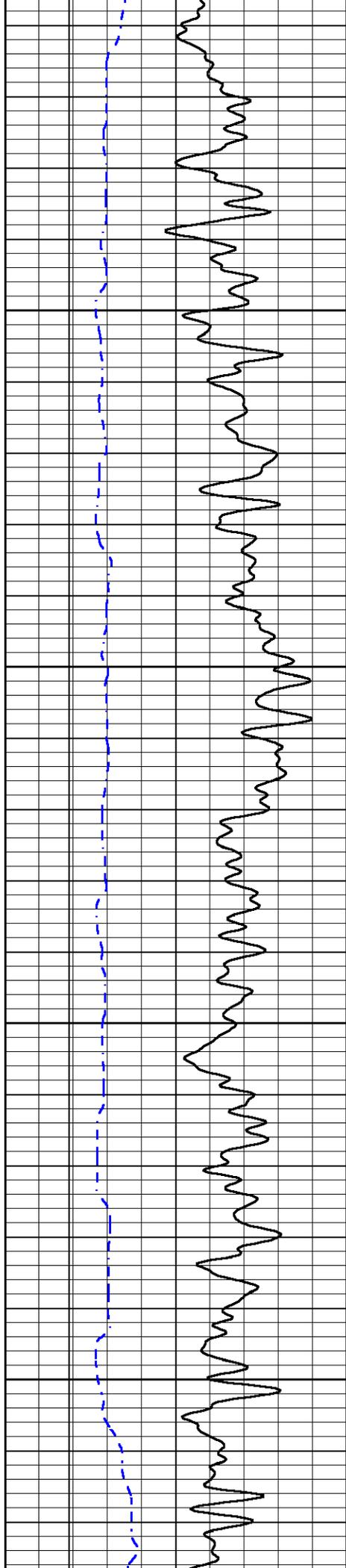


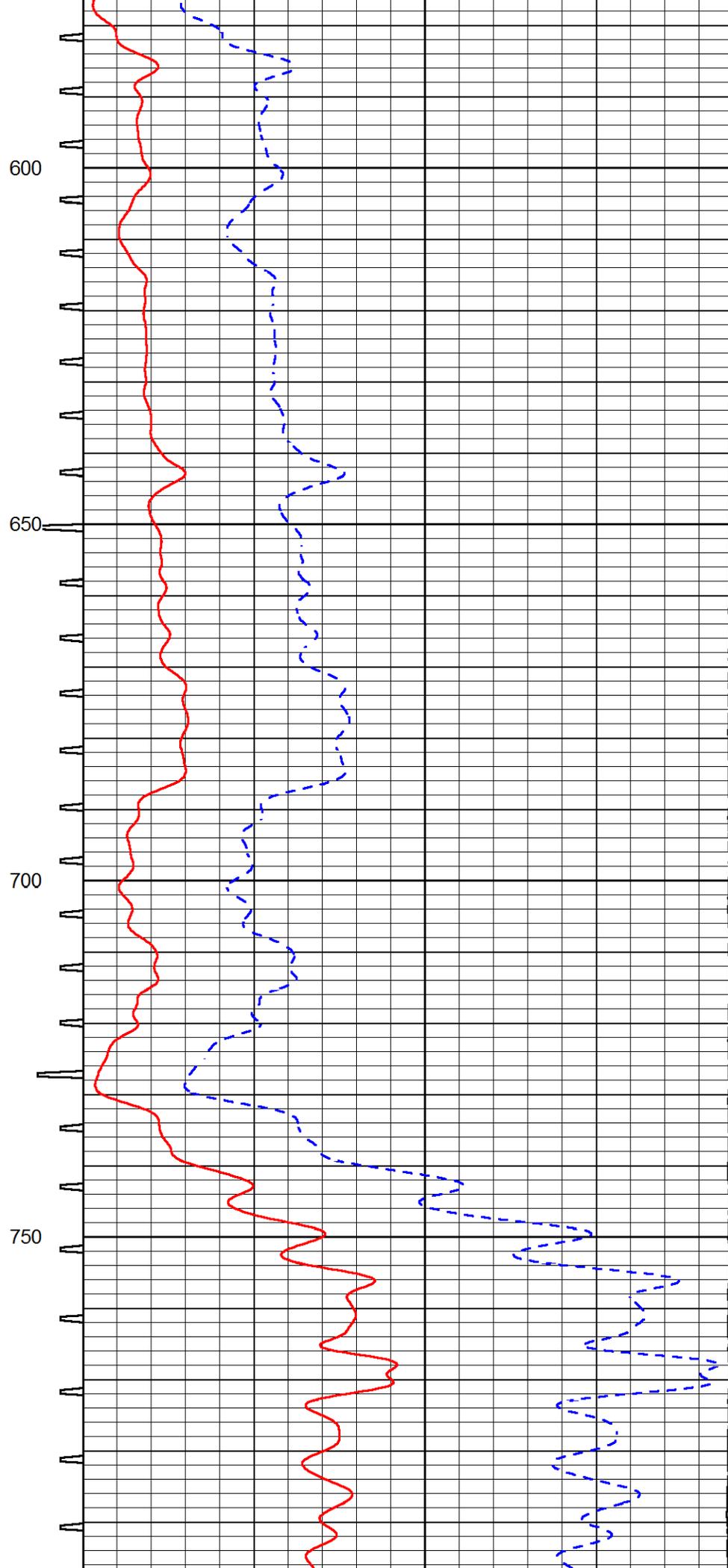
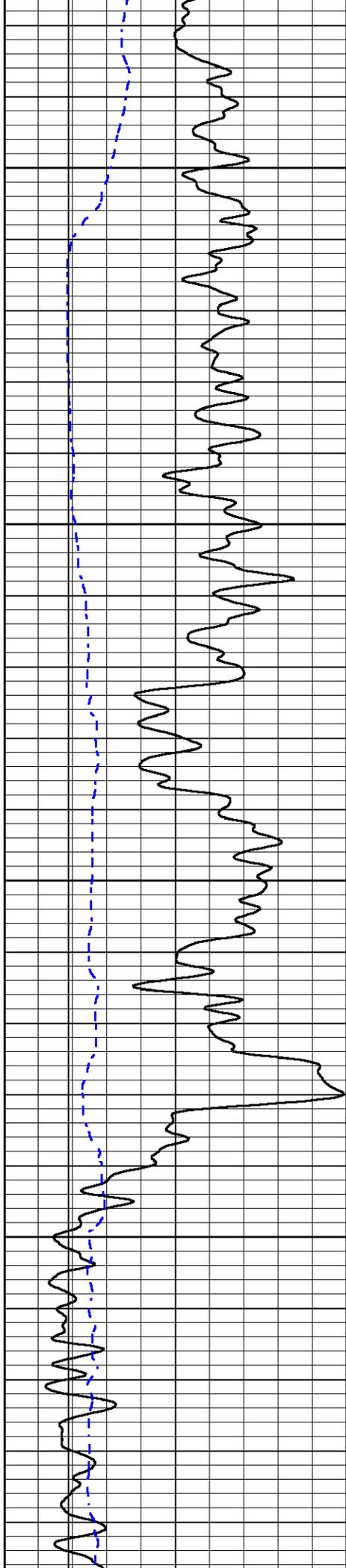
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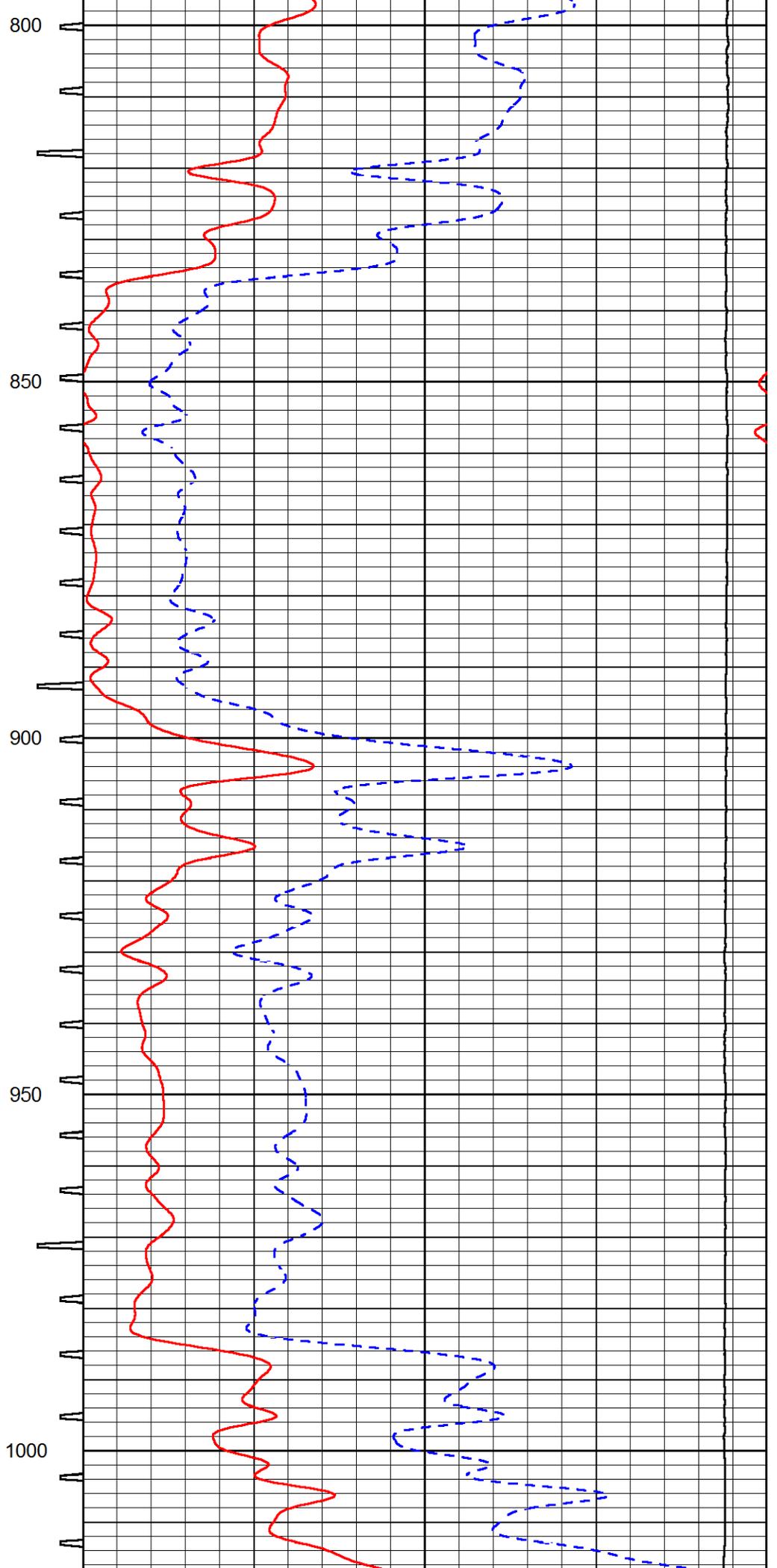
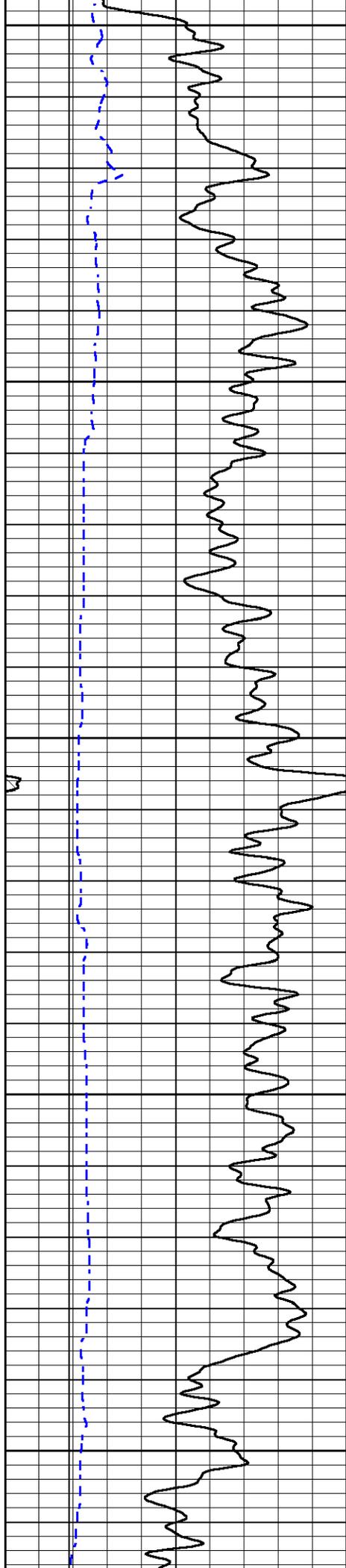
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 Dataset Creation Mon Sep 04 13:37:48 2017  
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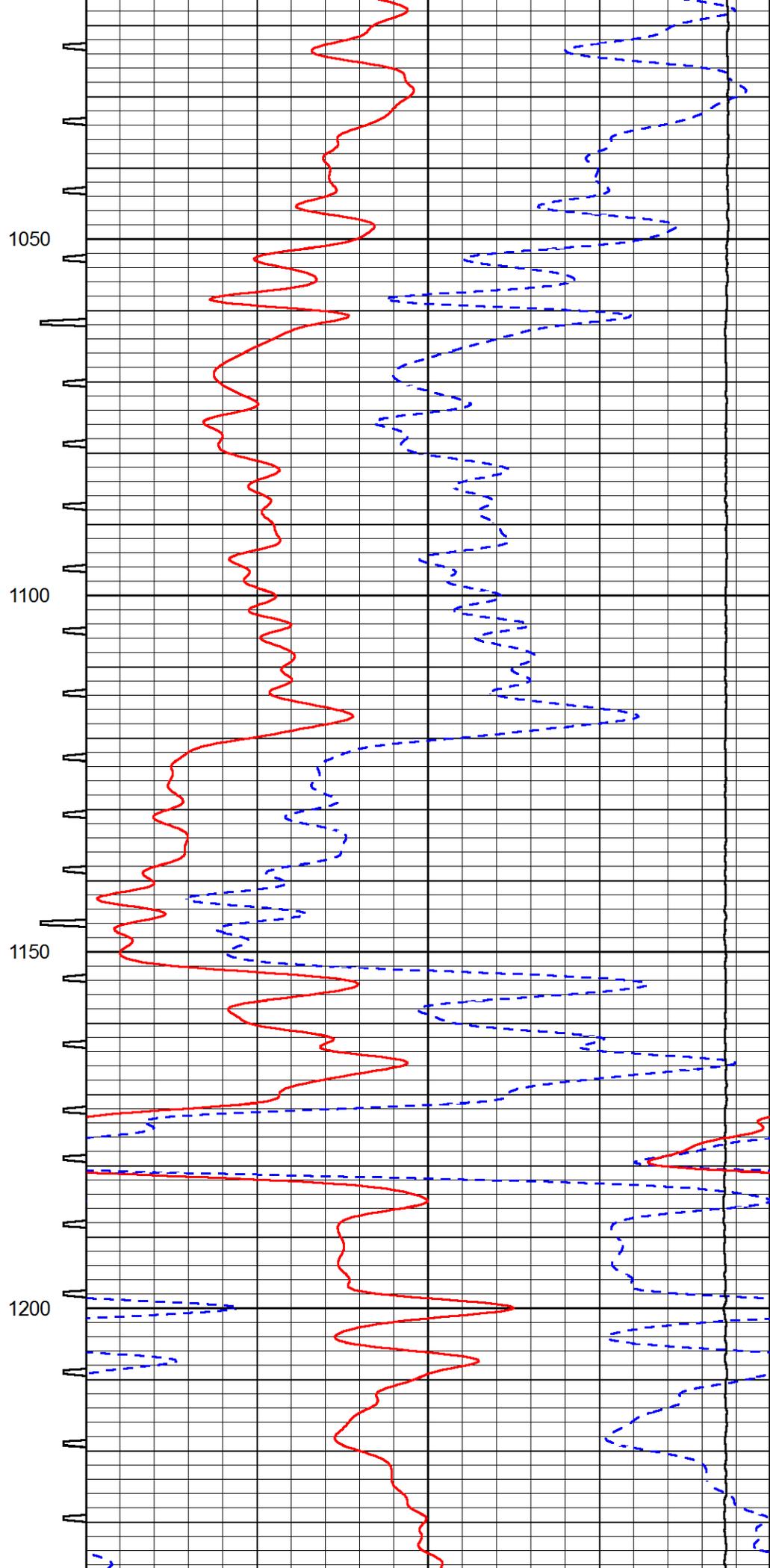
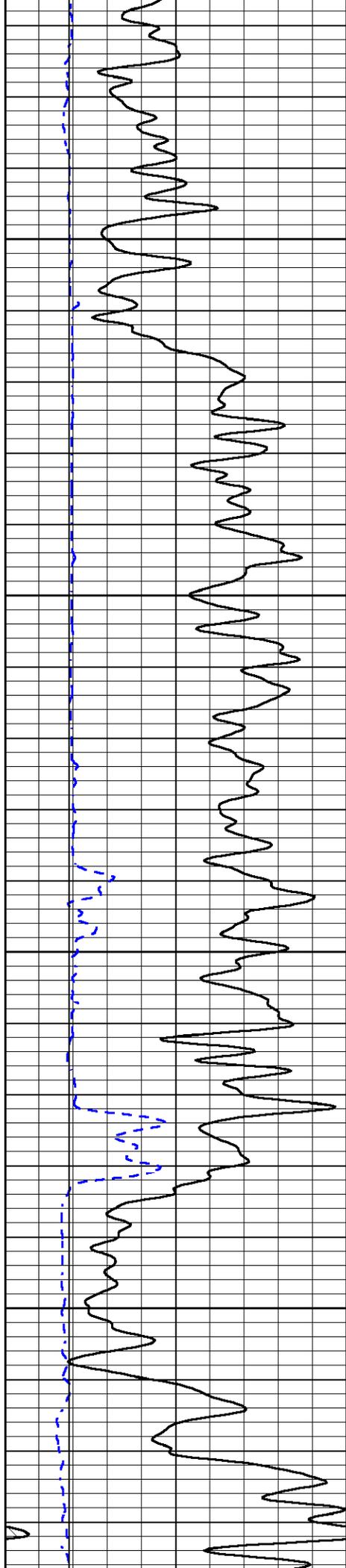
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6	CALIPER (in)	16	TRAVEL TIME	30	SONIC POROSITY (pu)	-10
6	BIT SIZE	16	(msec)	15000	LINE TENSION (lb)	0

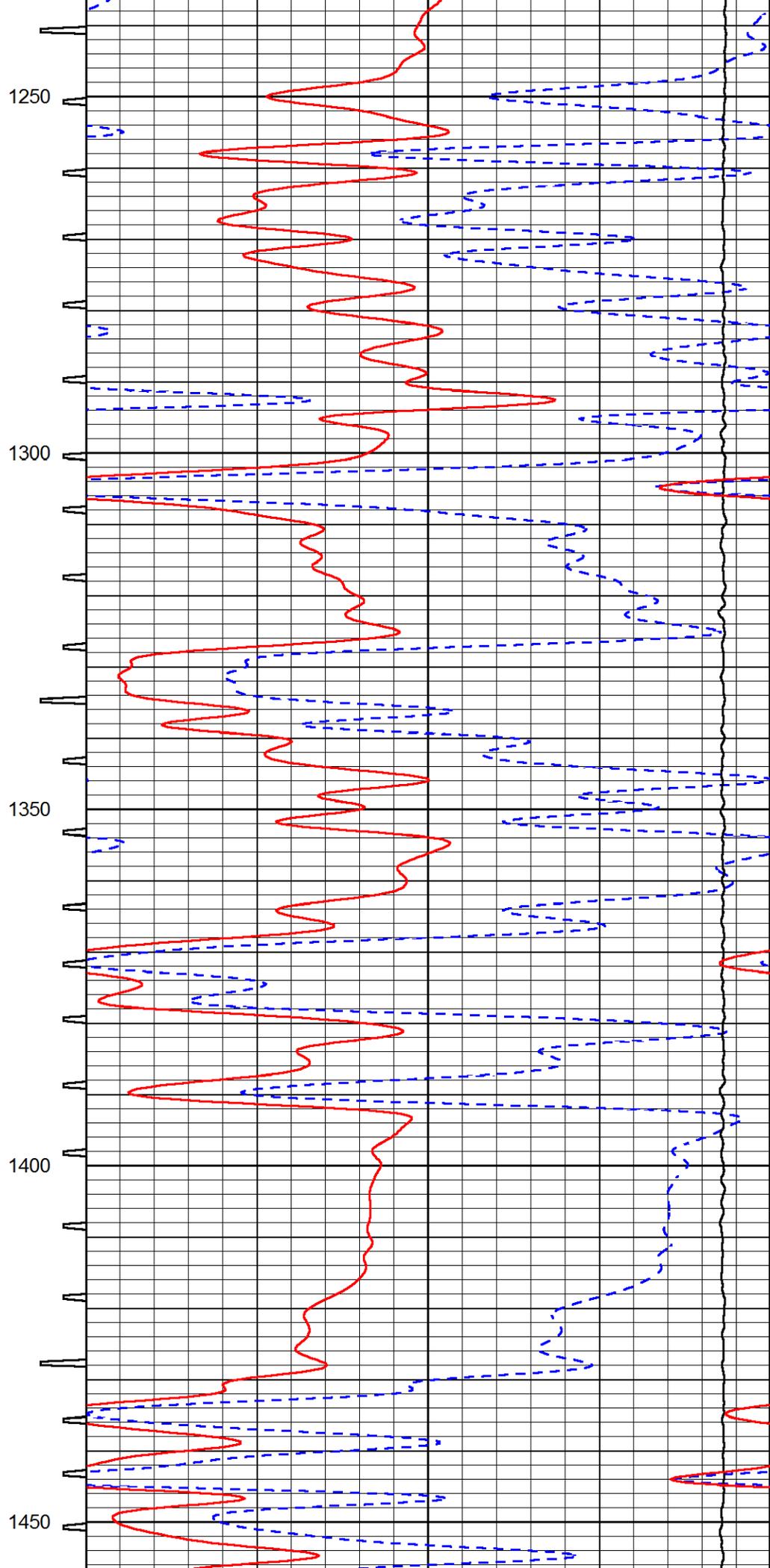
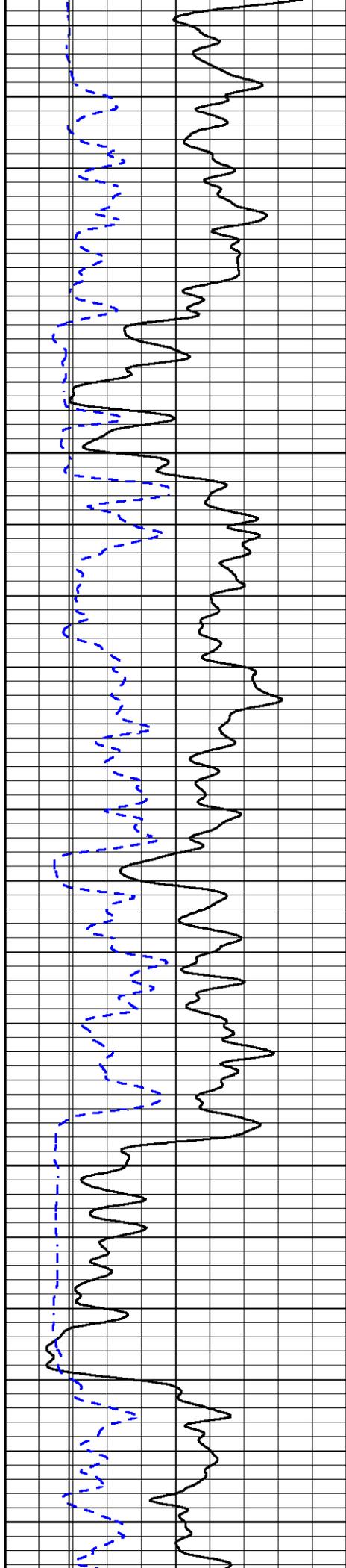


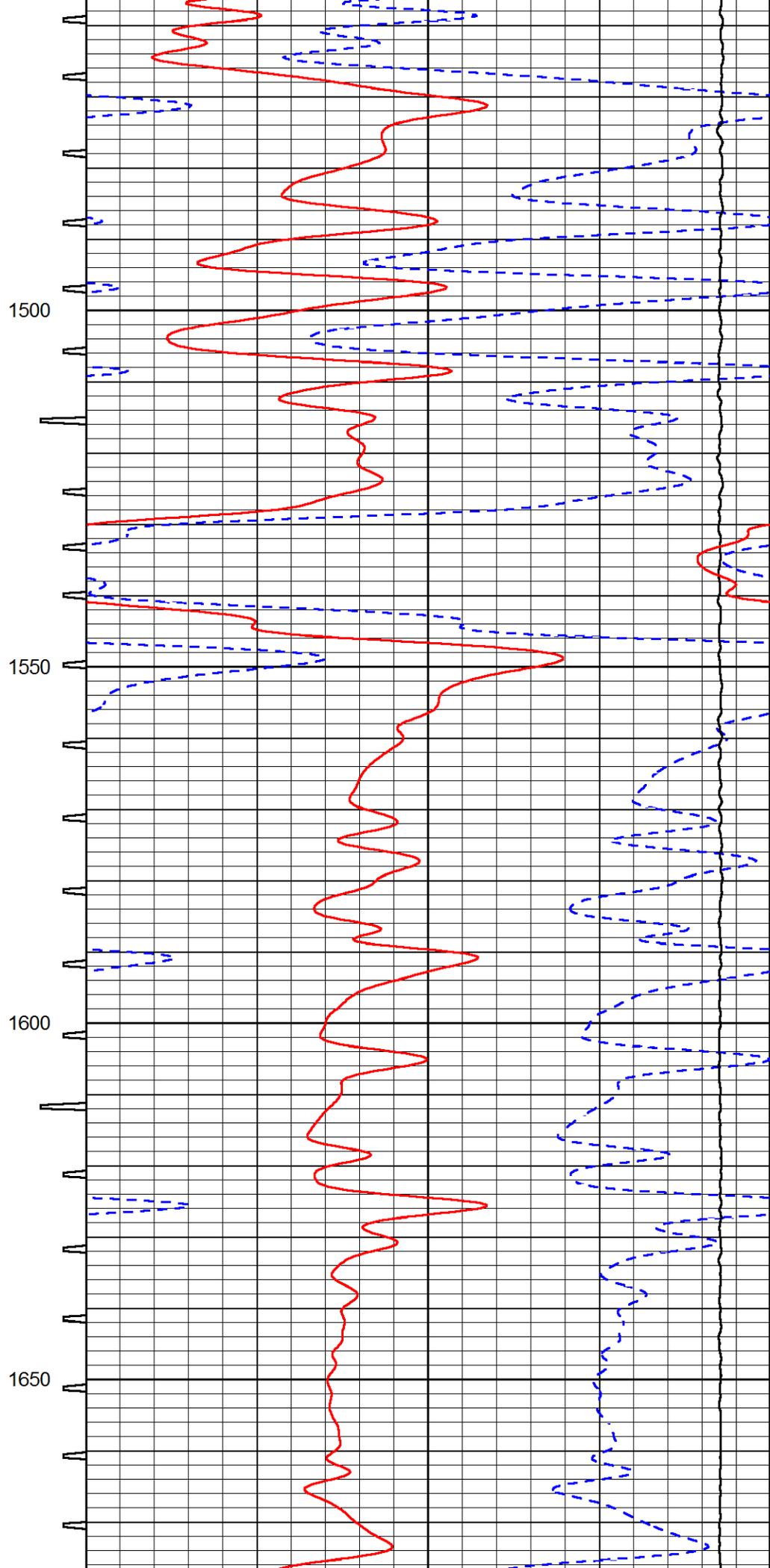
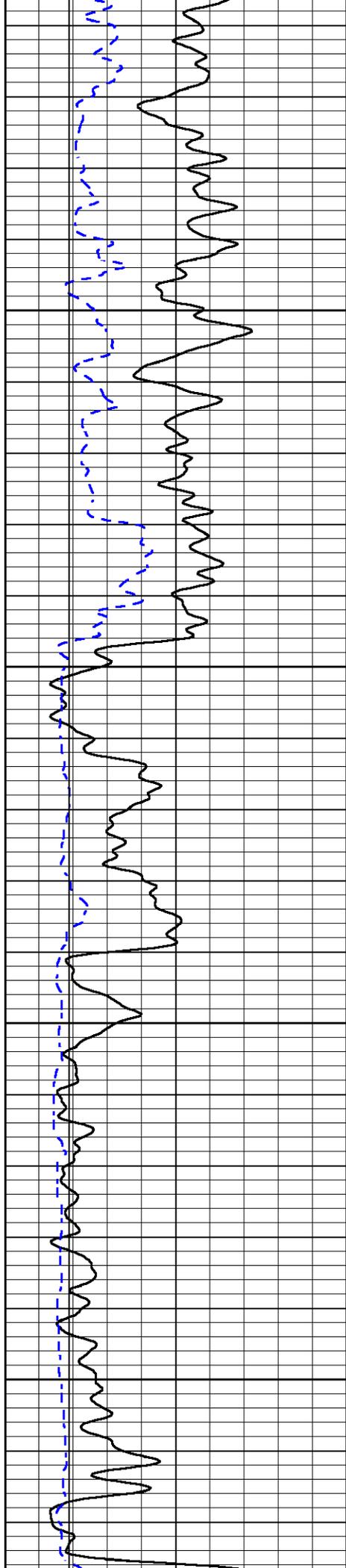


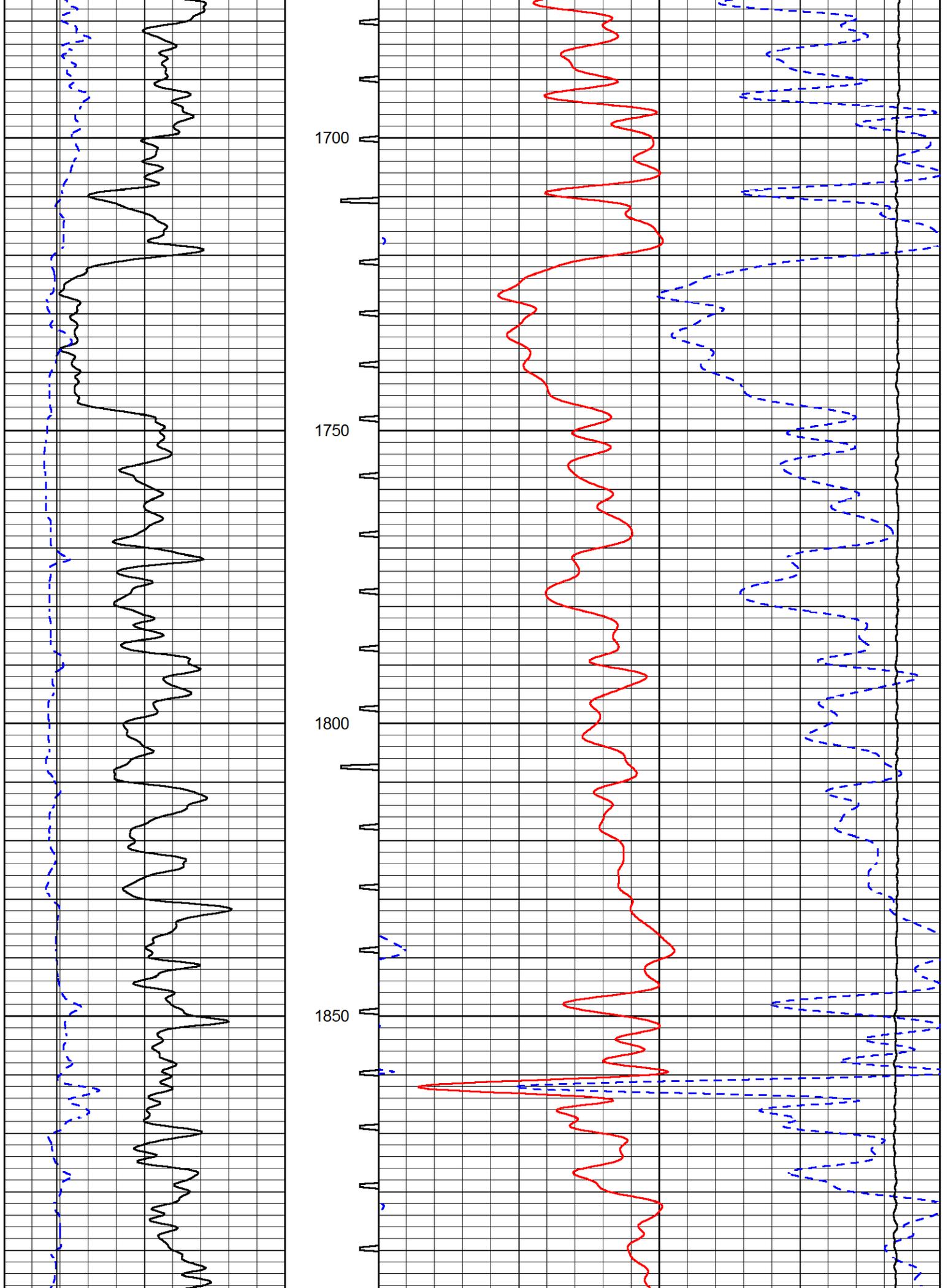


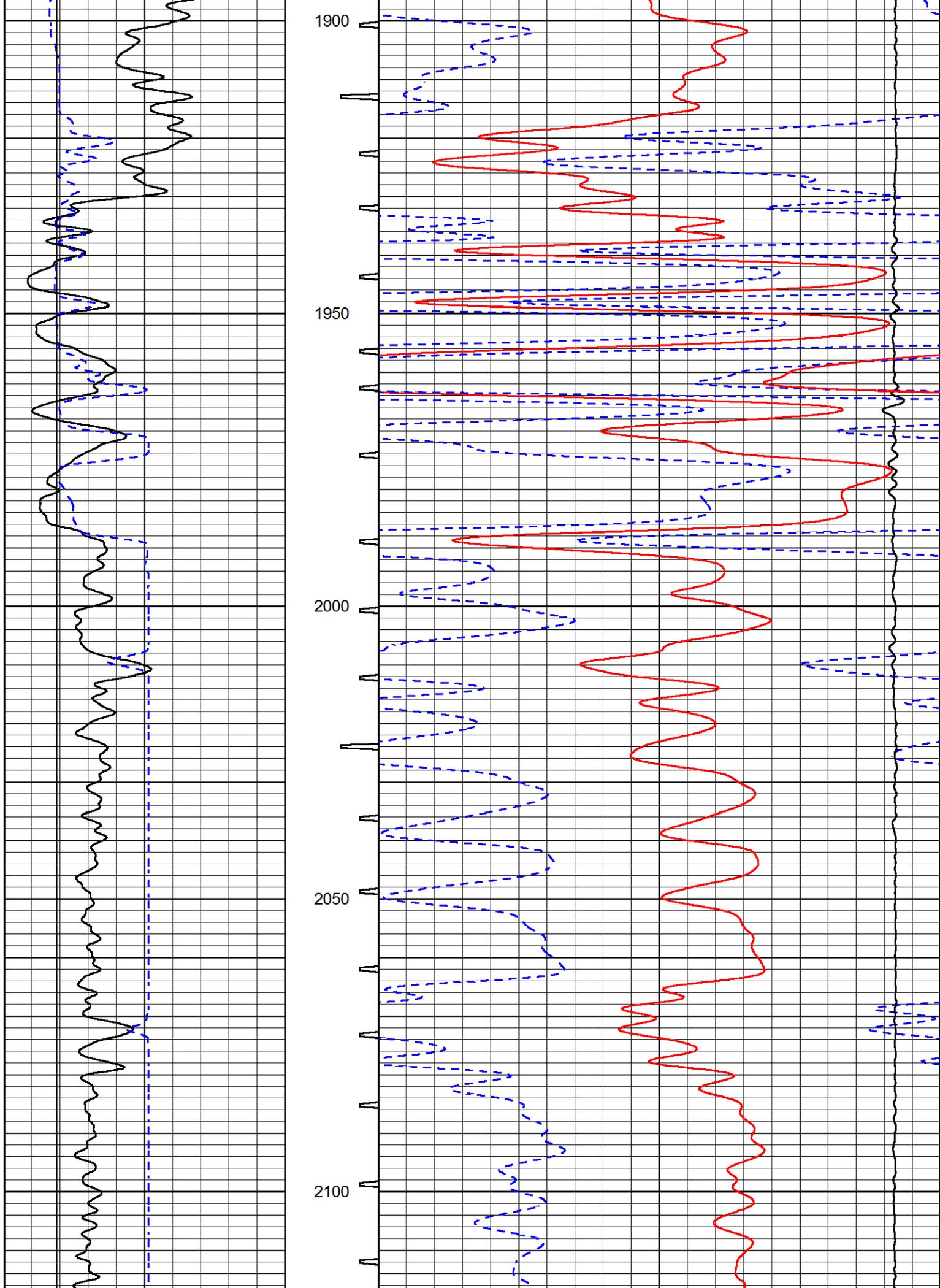


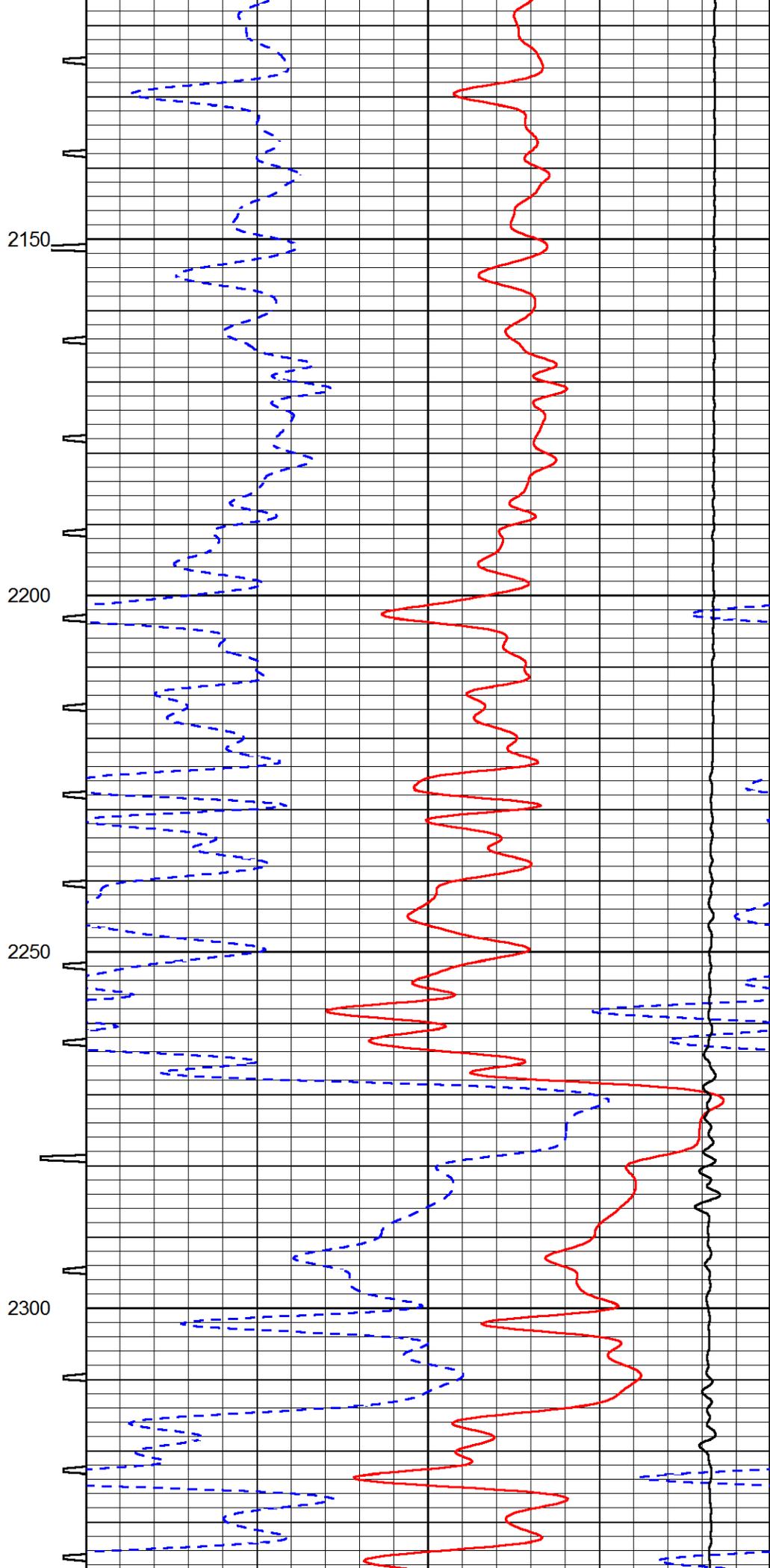
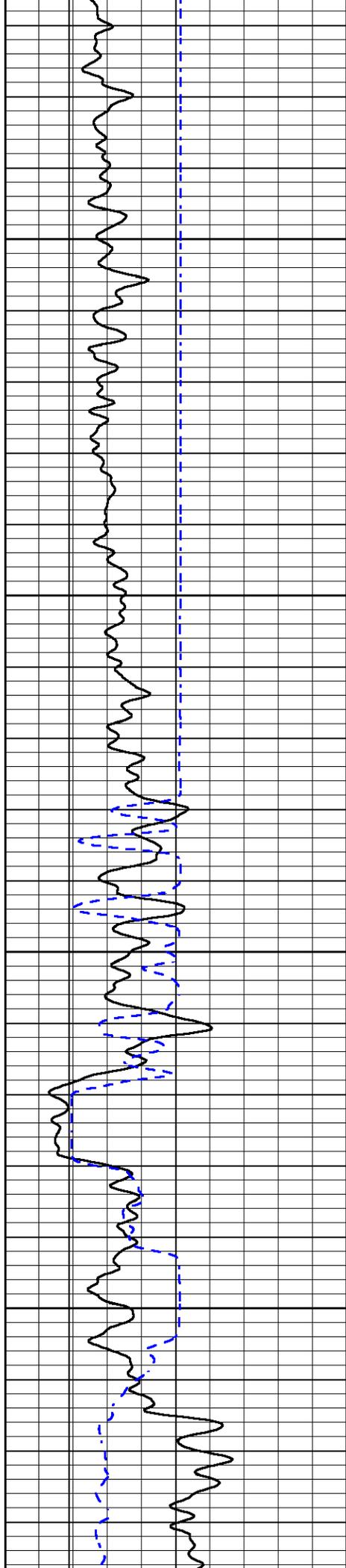


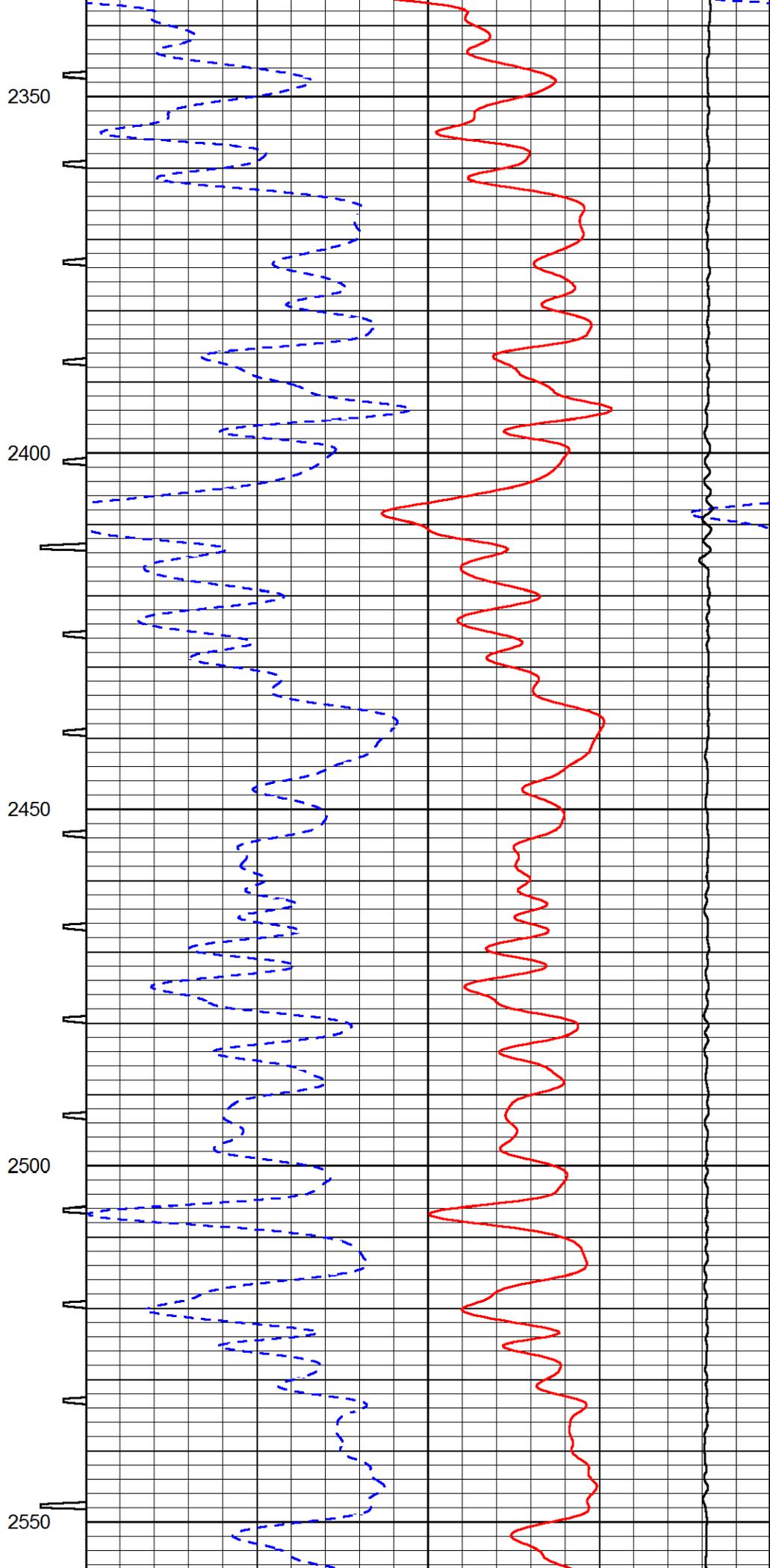
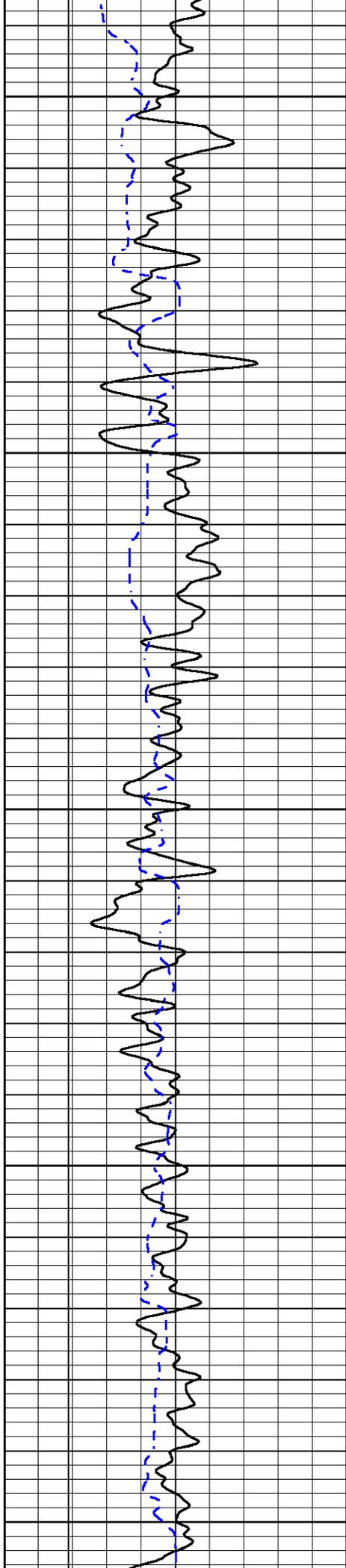


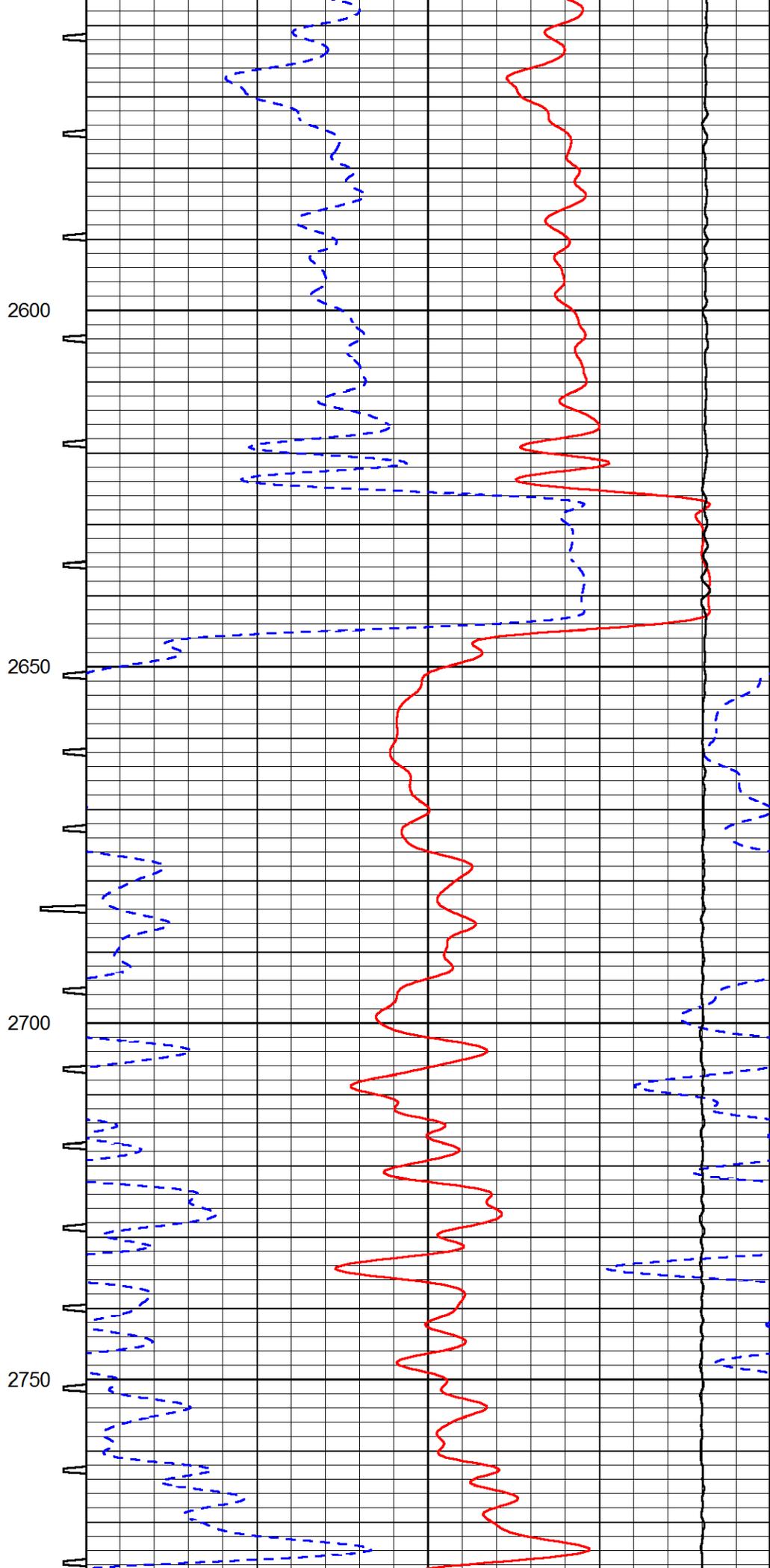
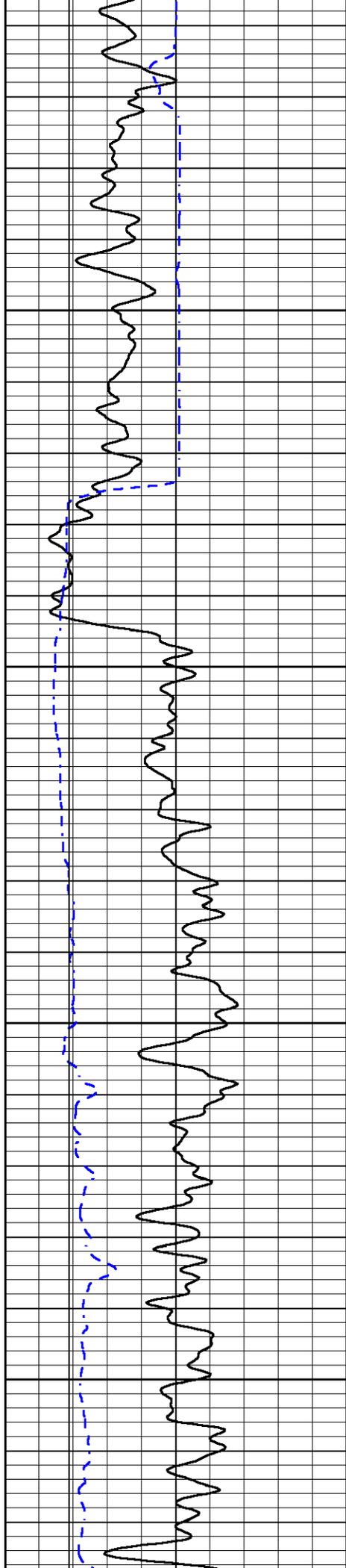


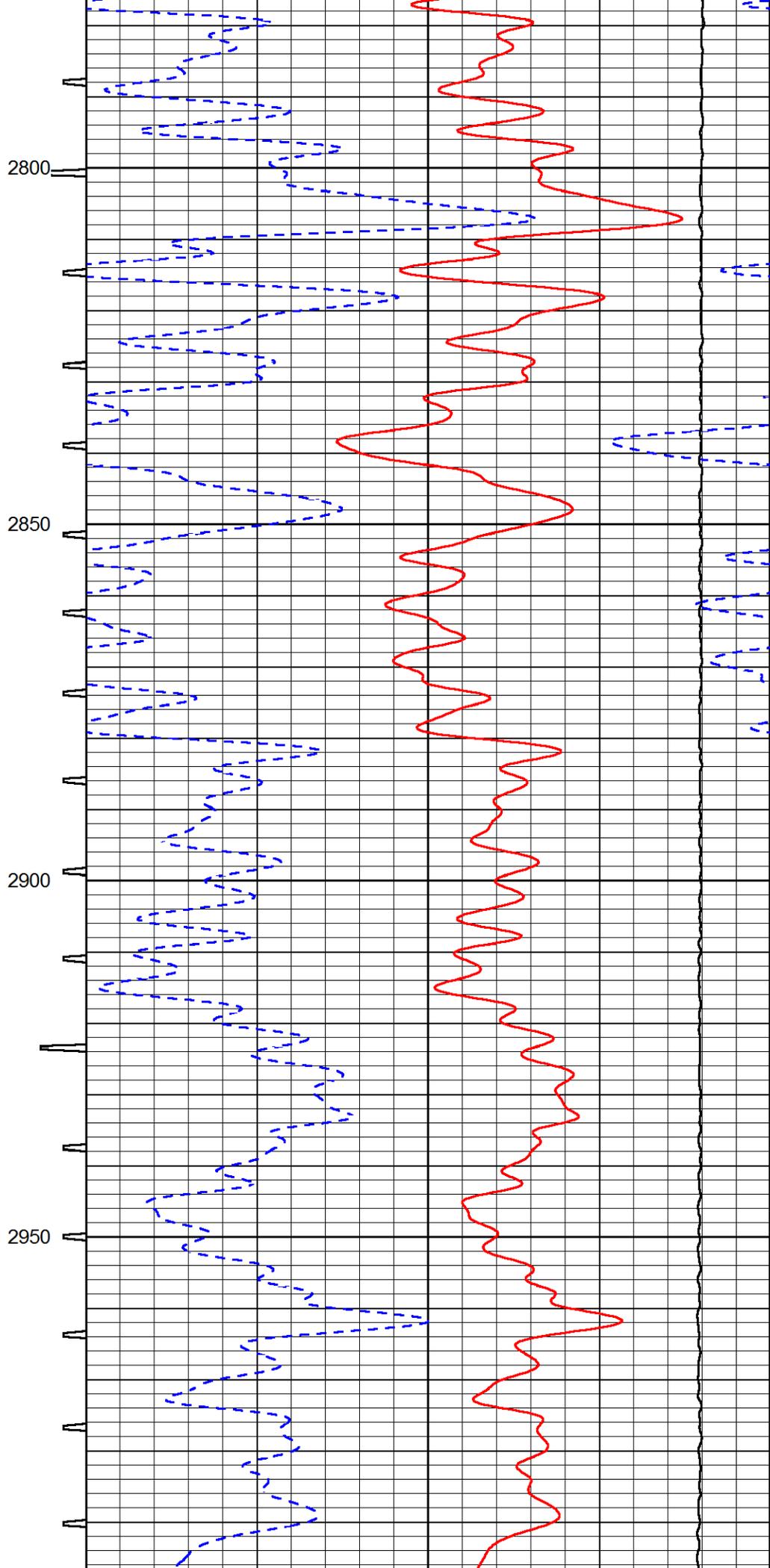
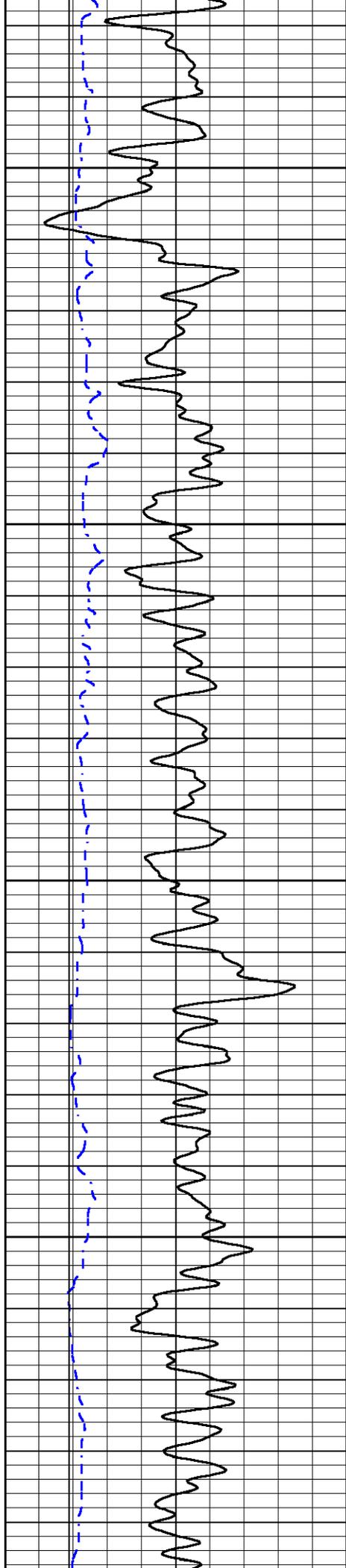


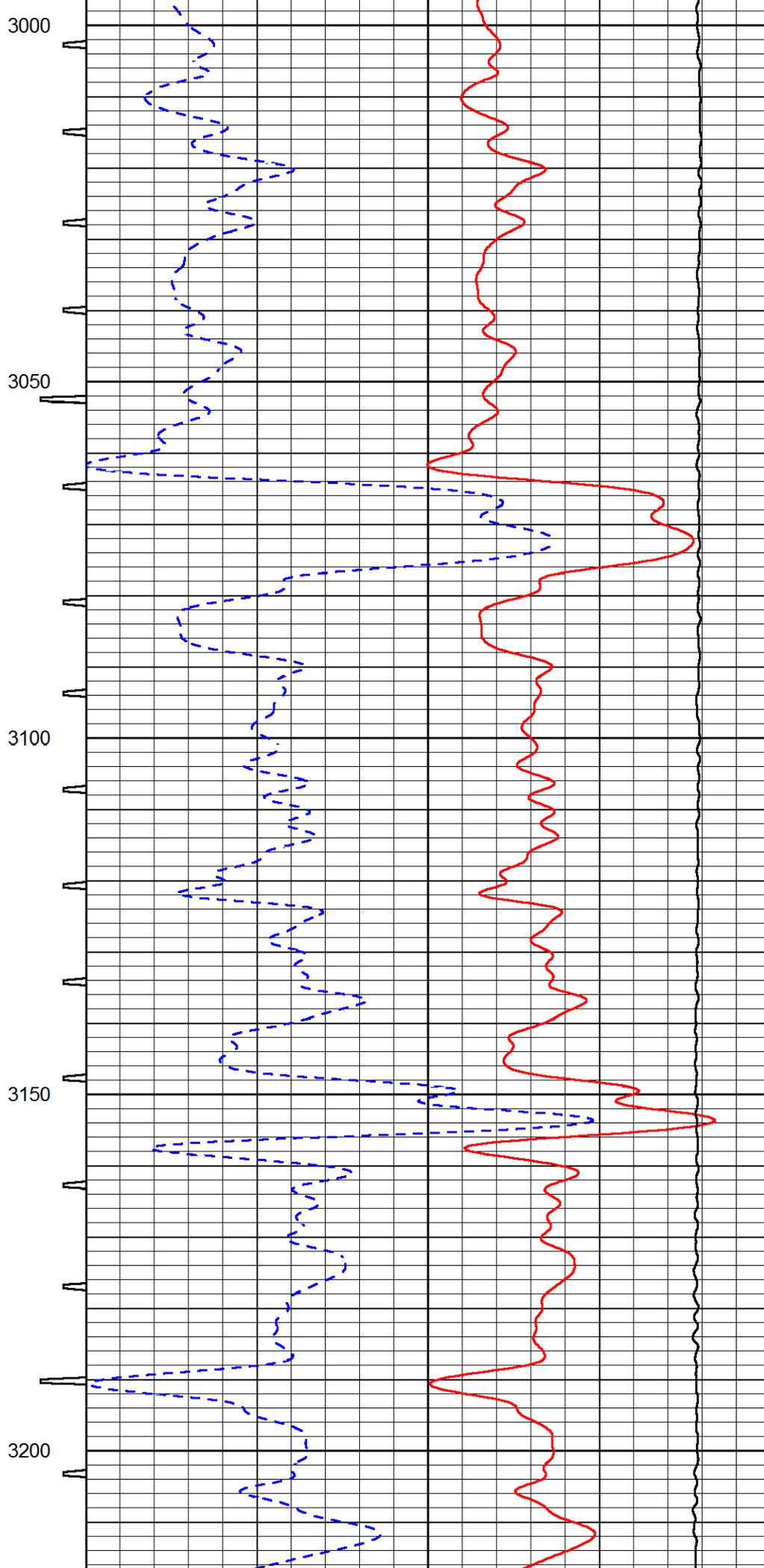
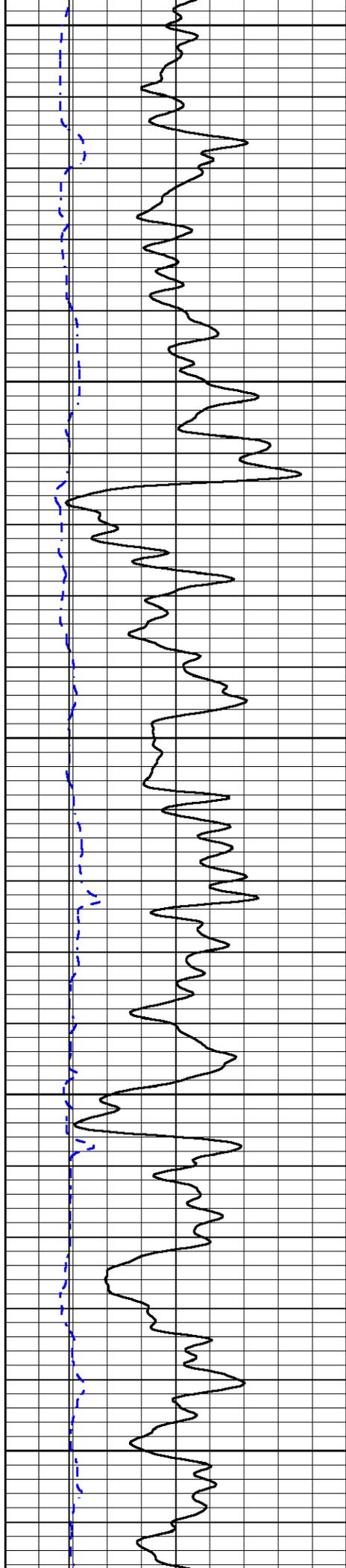


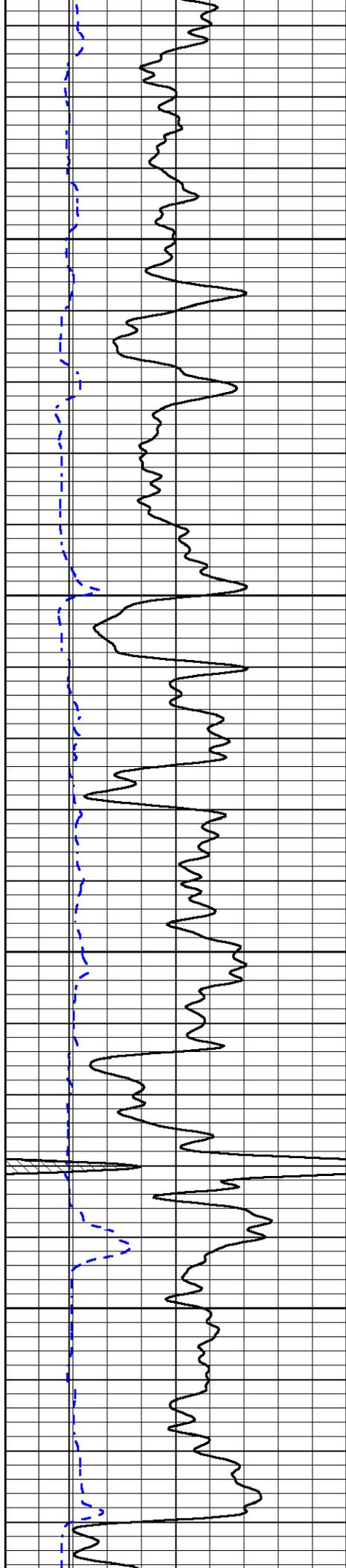










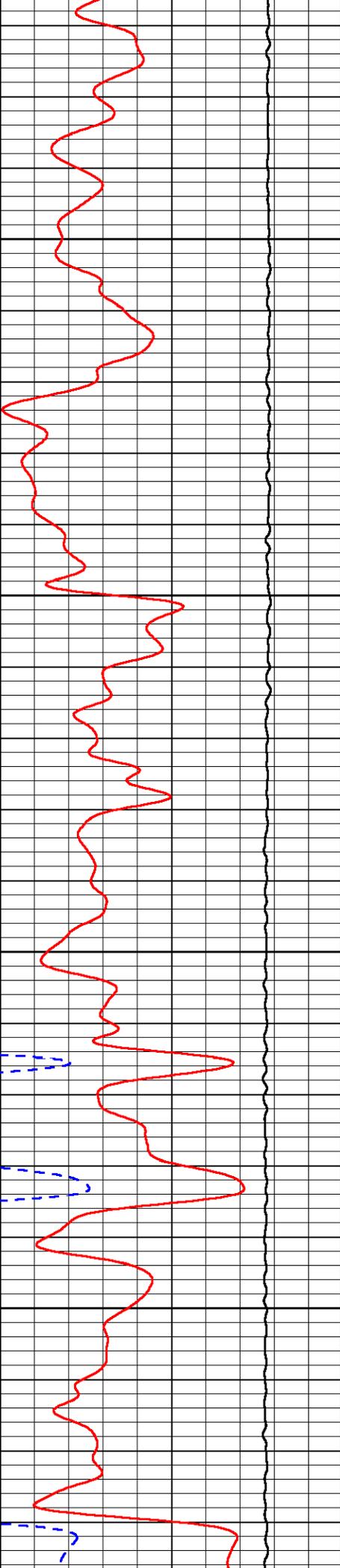
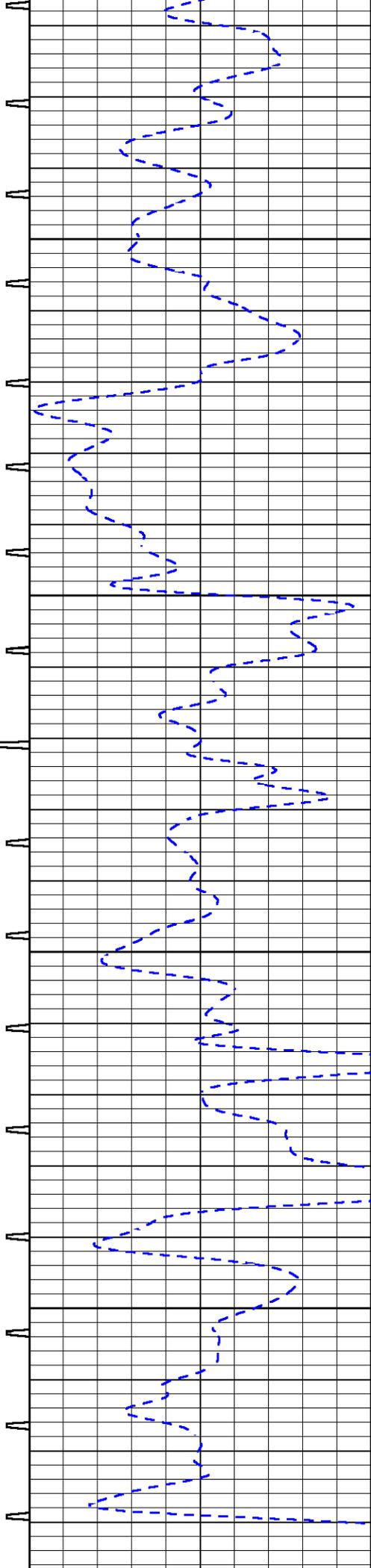


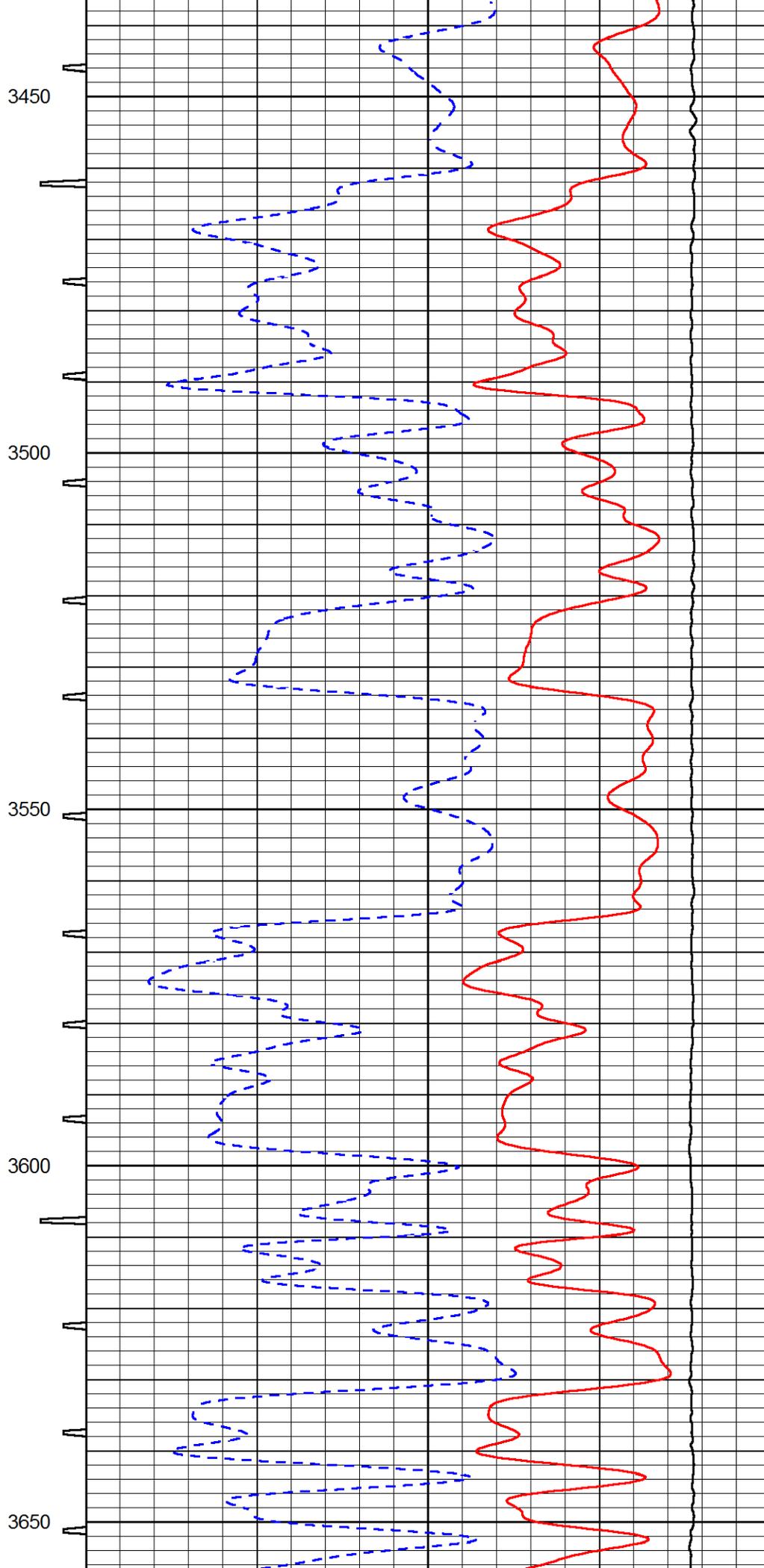
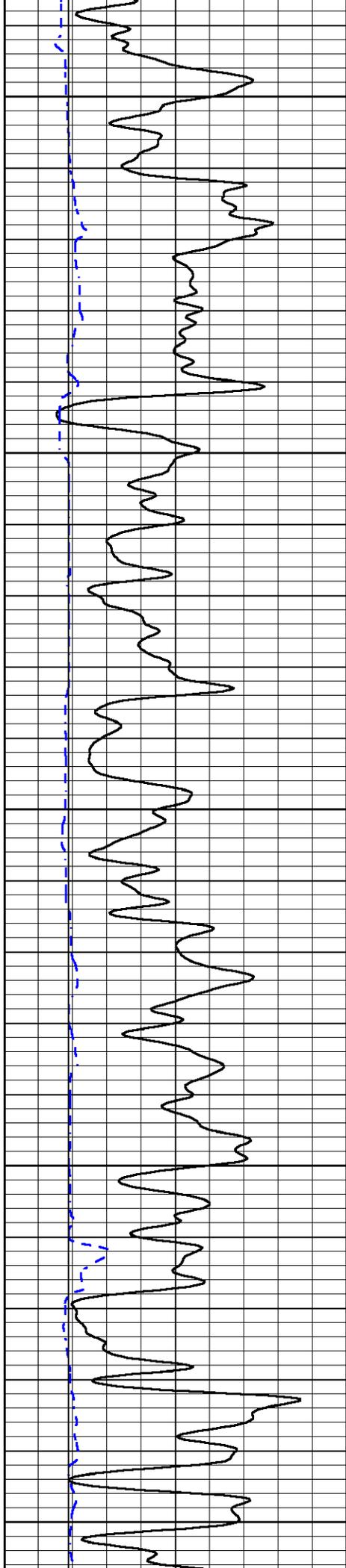
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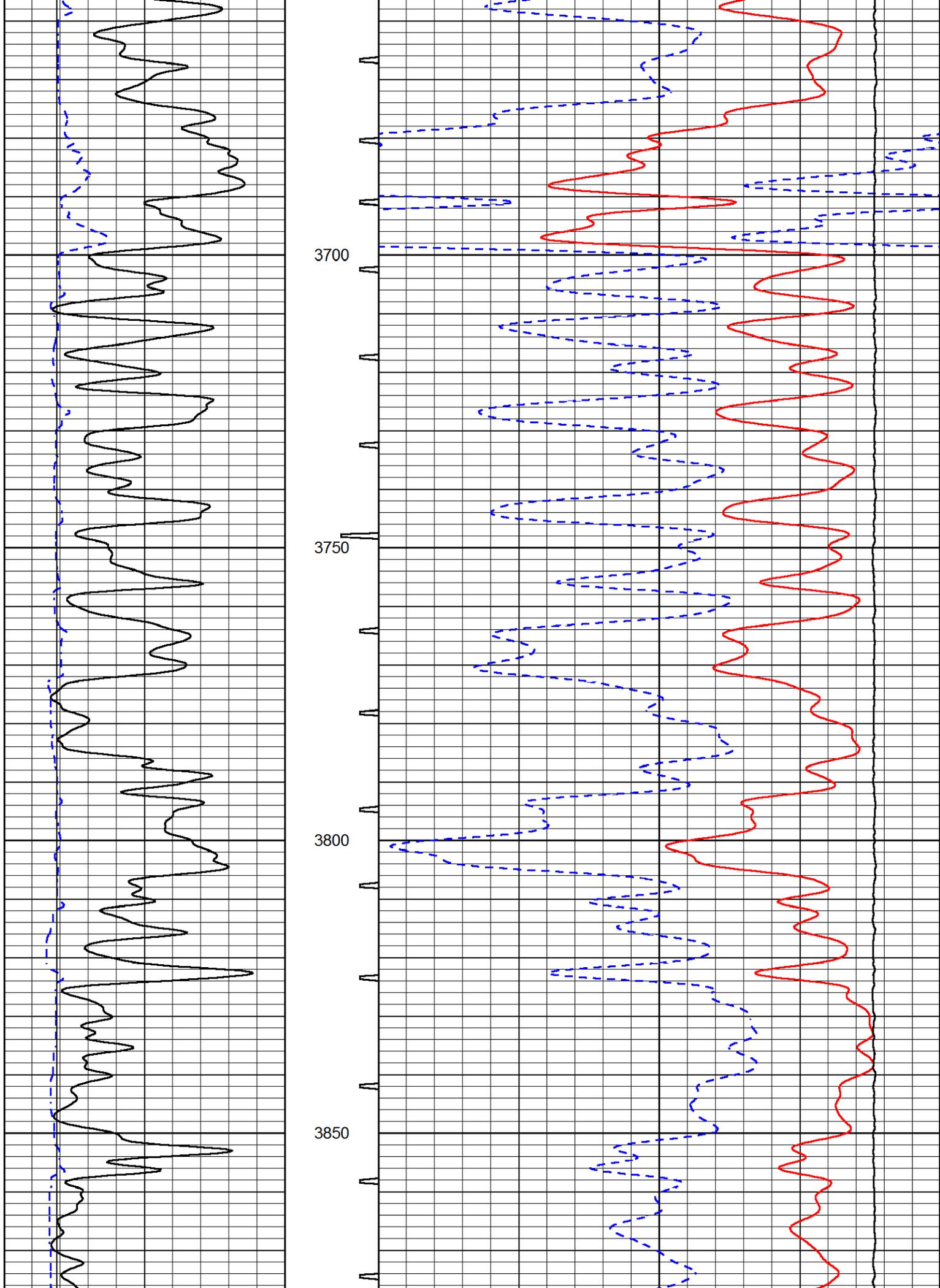
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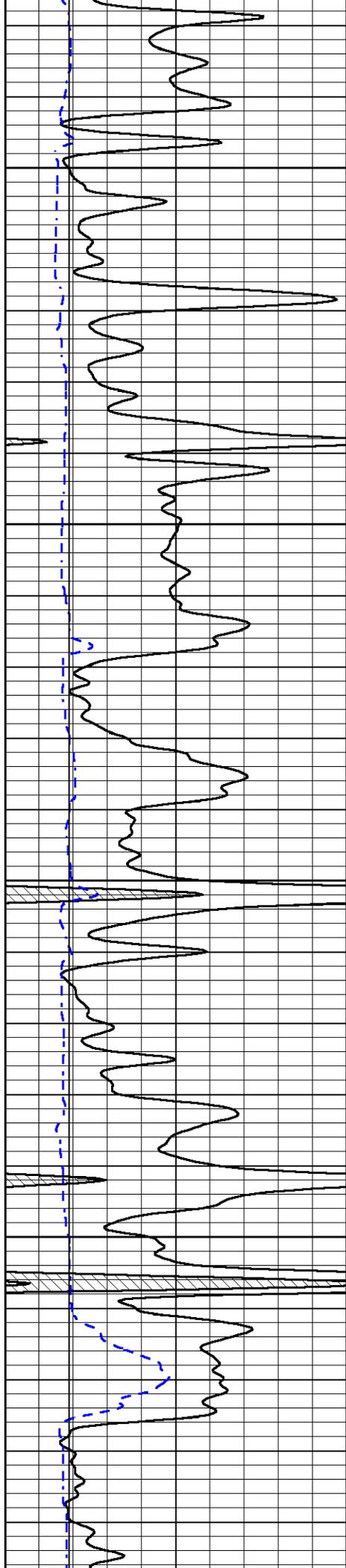
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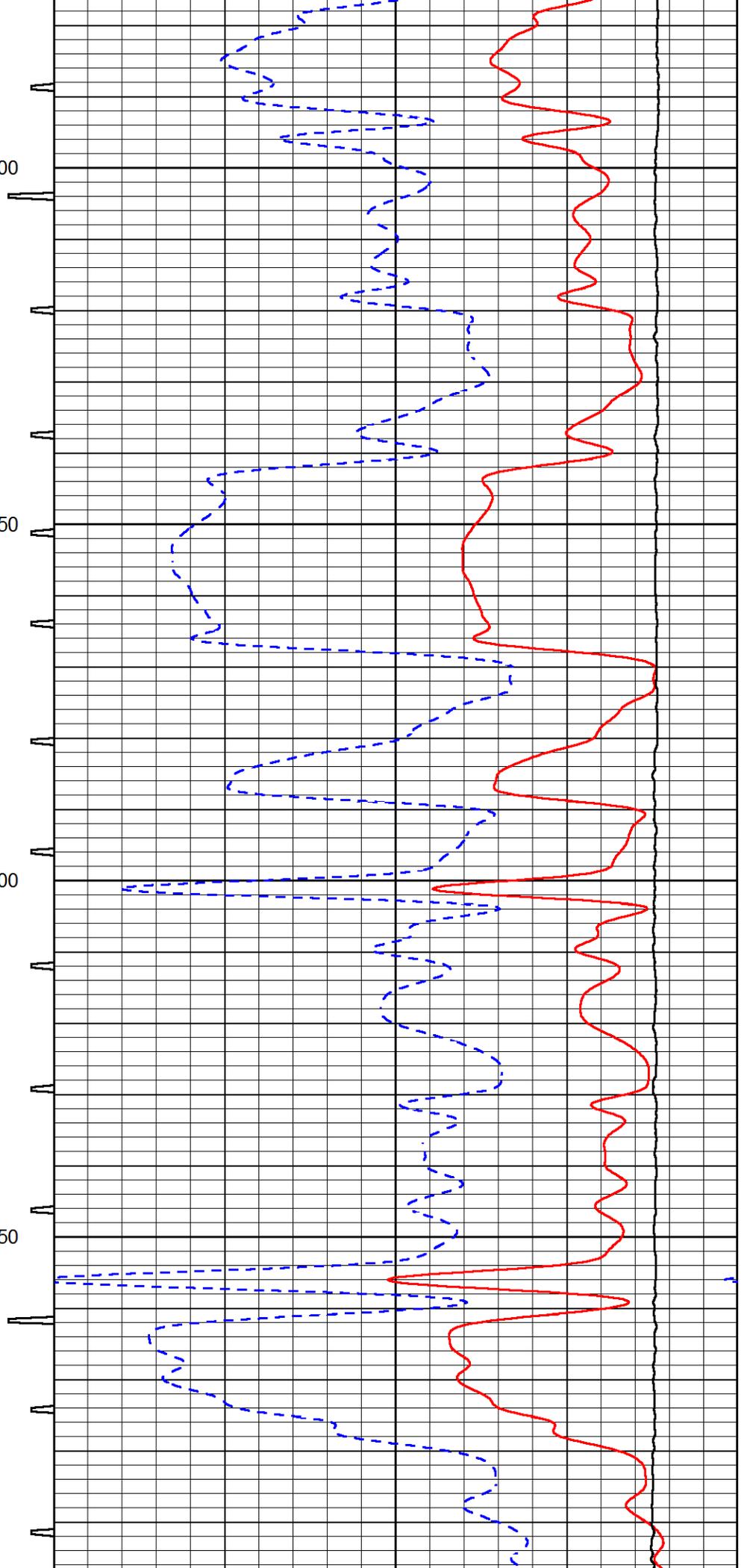


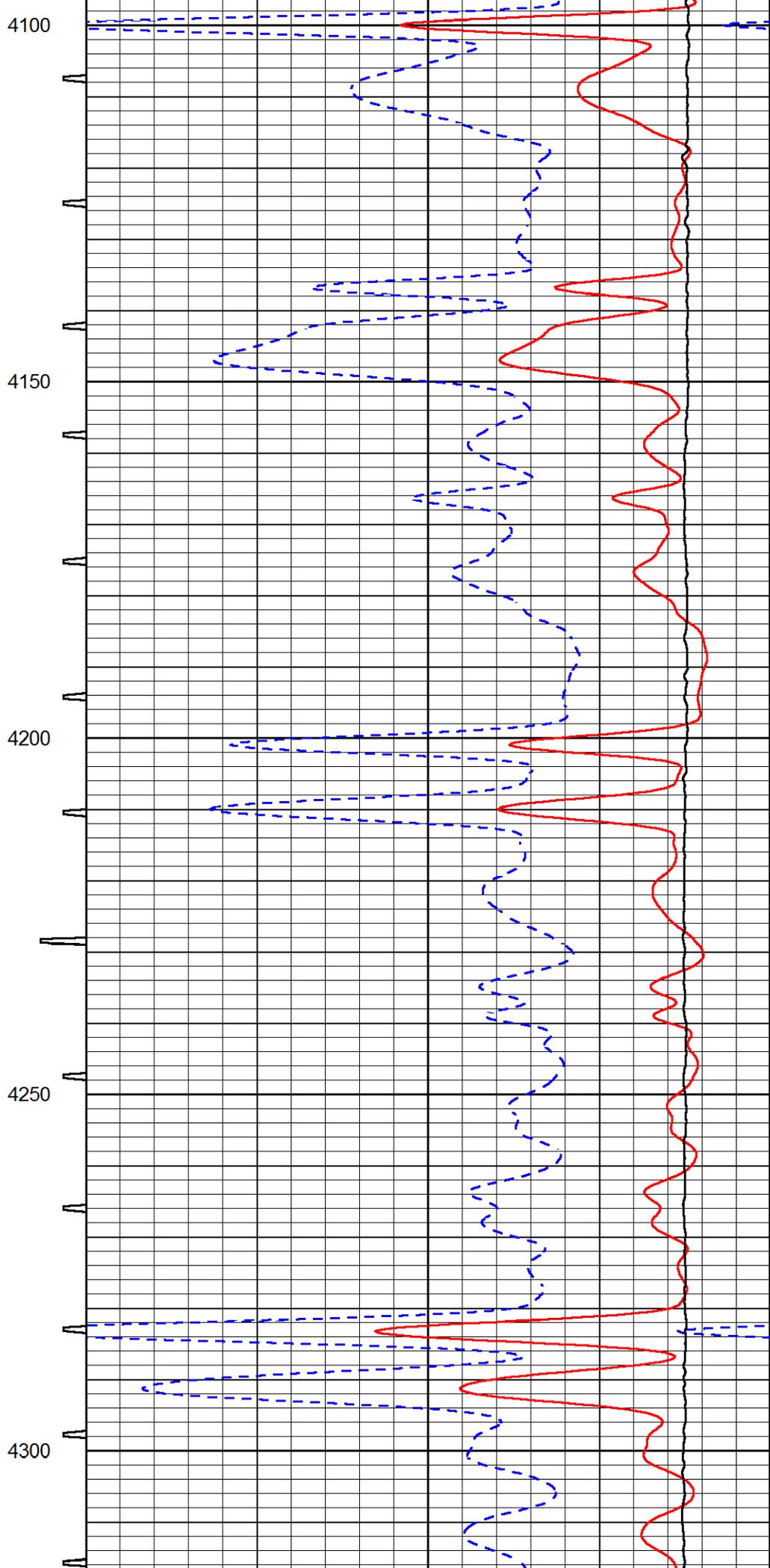
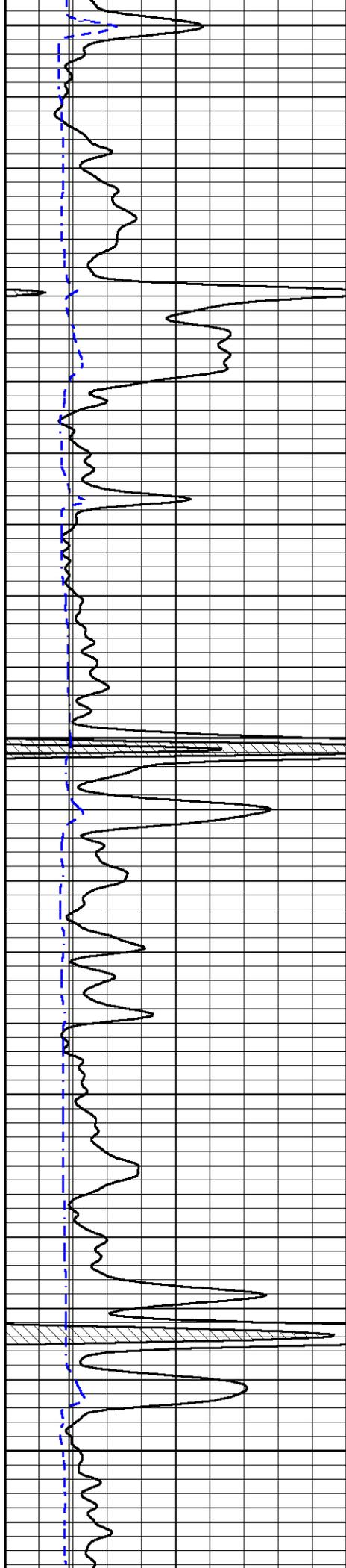
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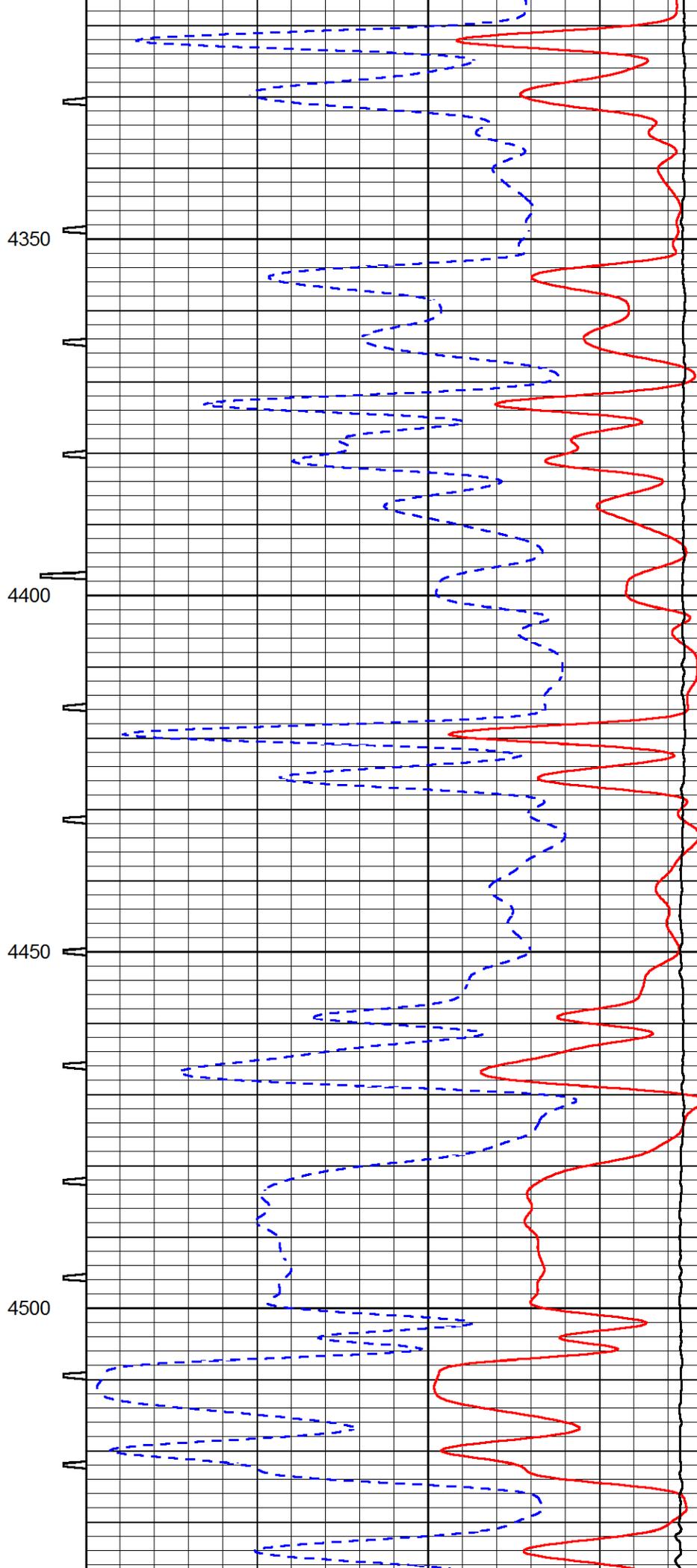
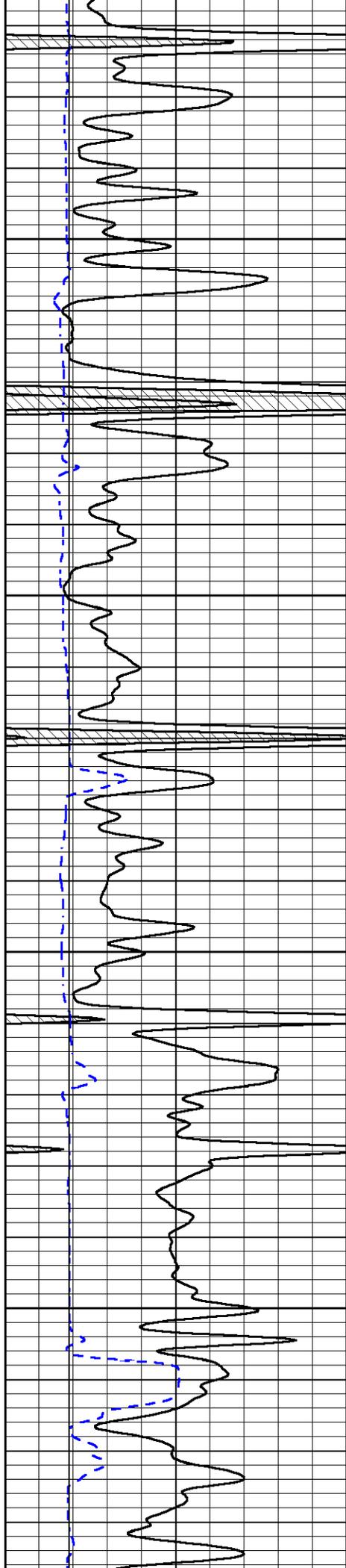
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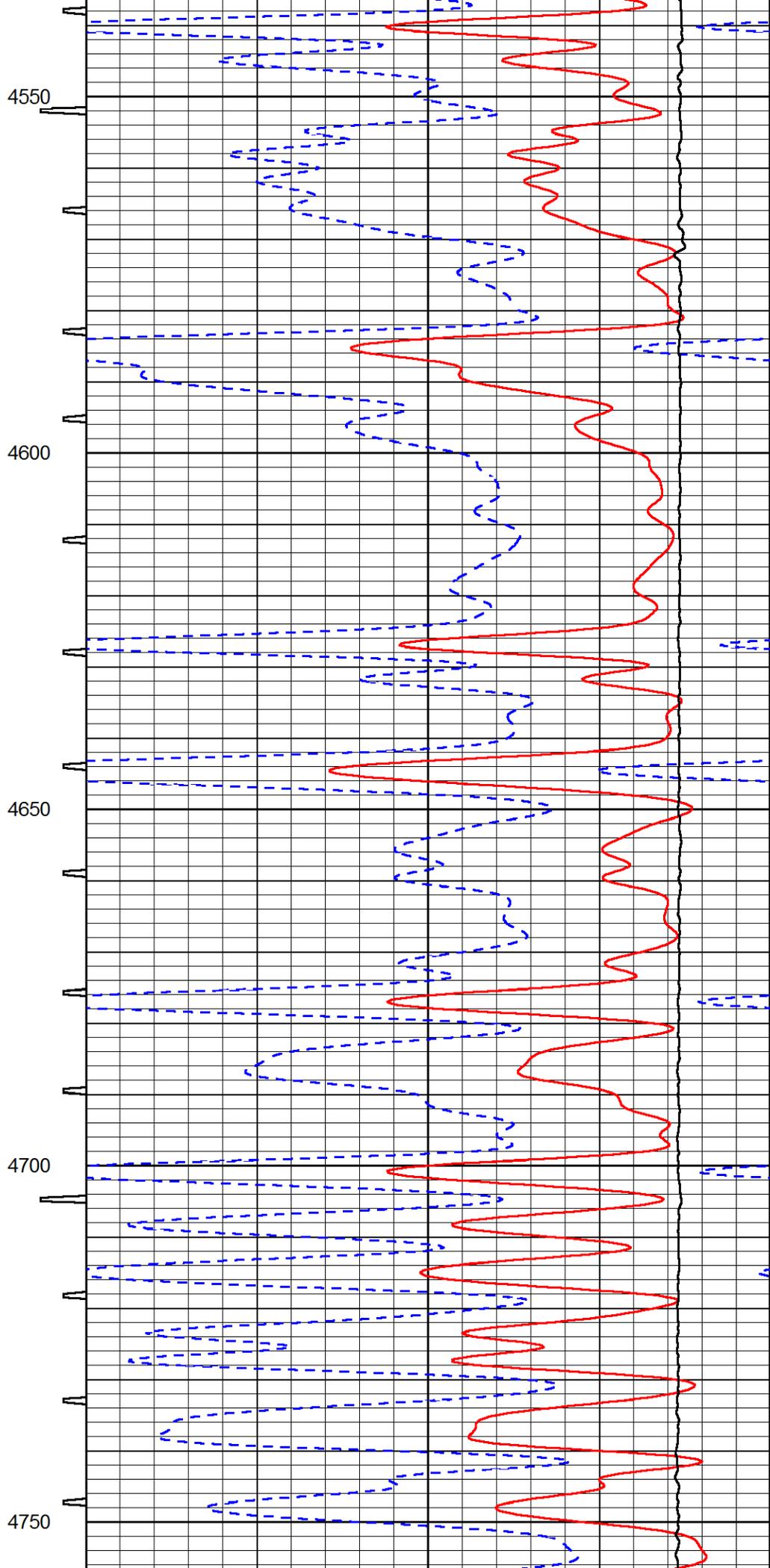
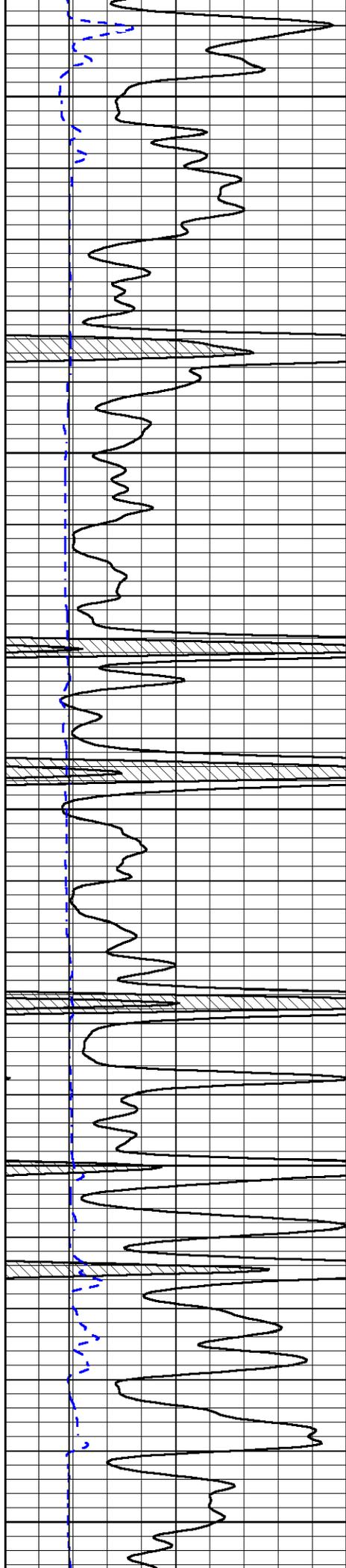
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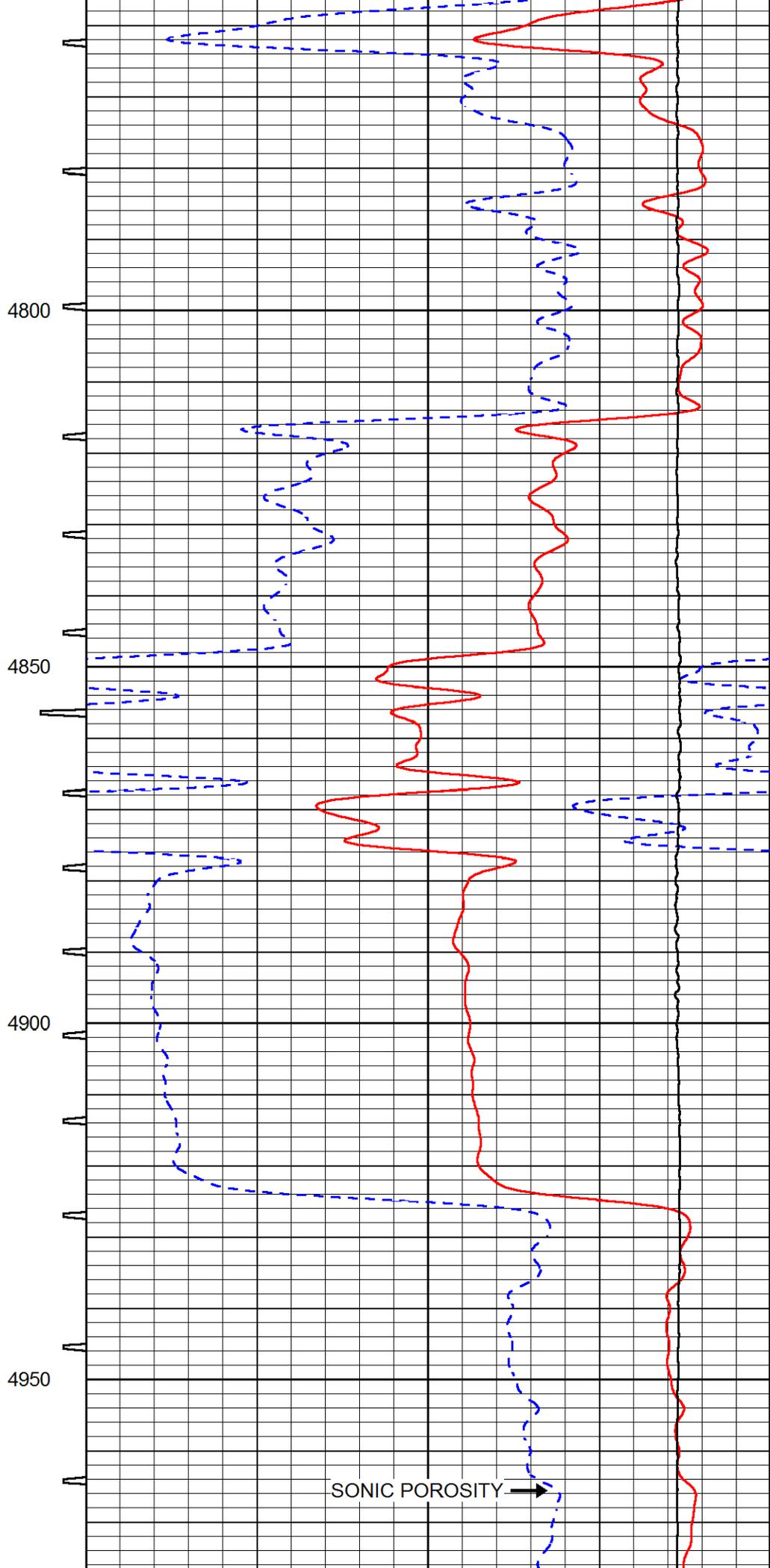
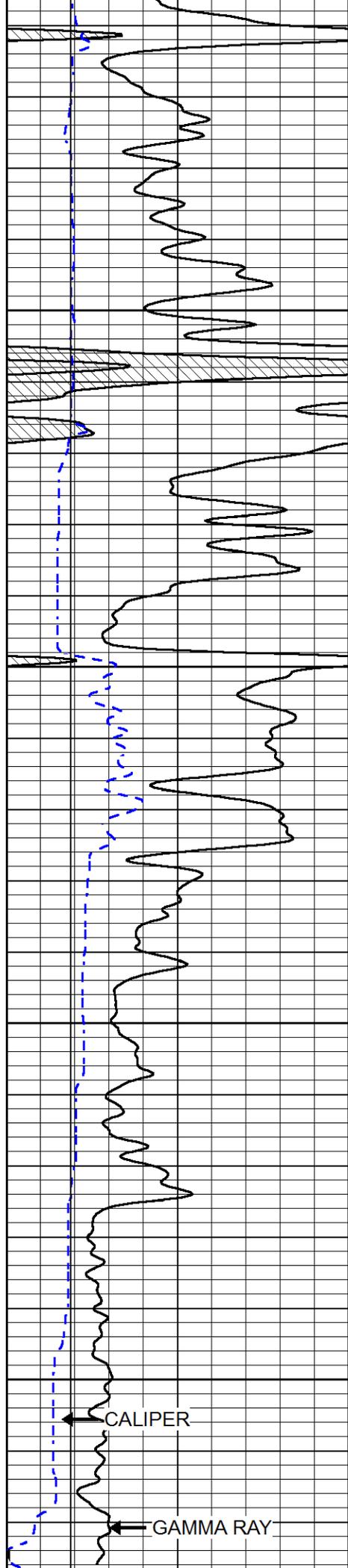
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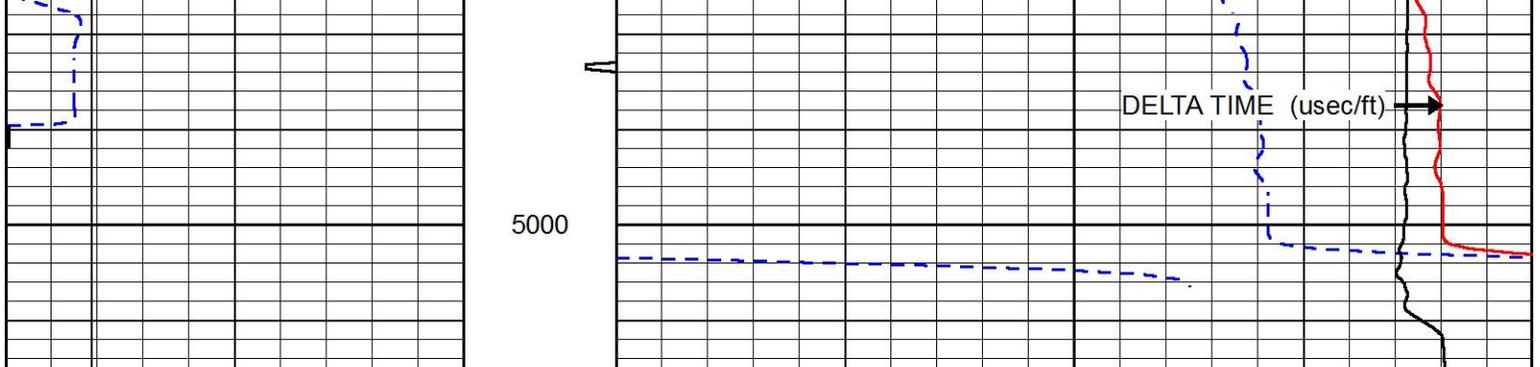
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CALIPER

GAMMA RAY

SONIC POROSITY



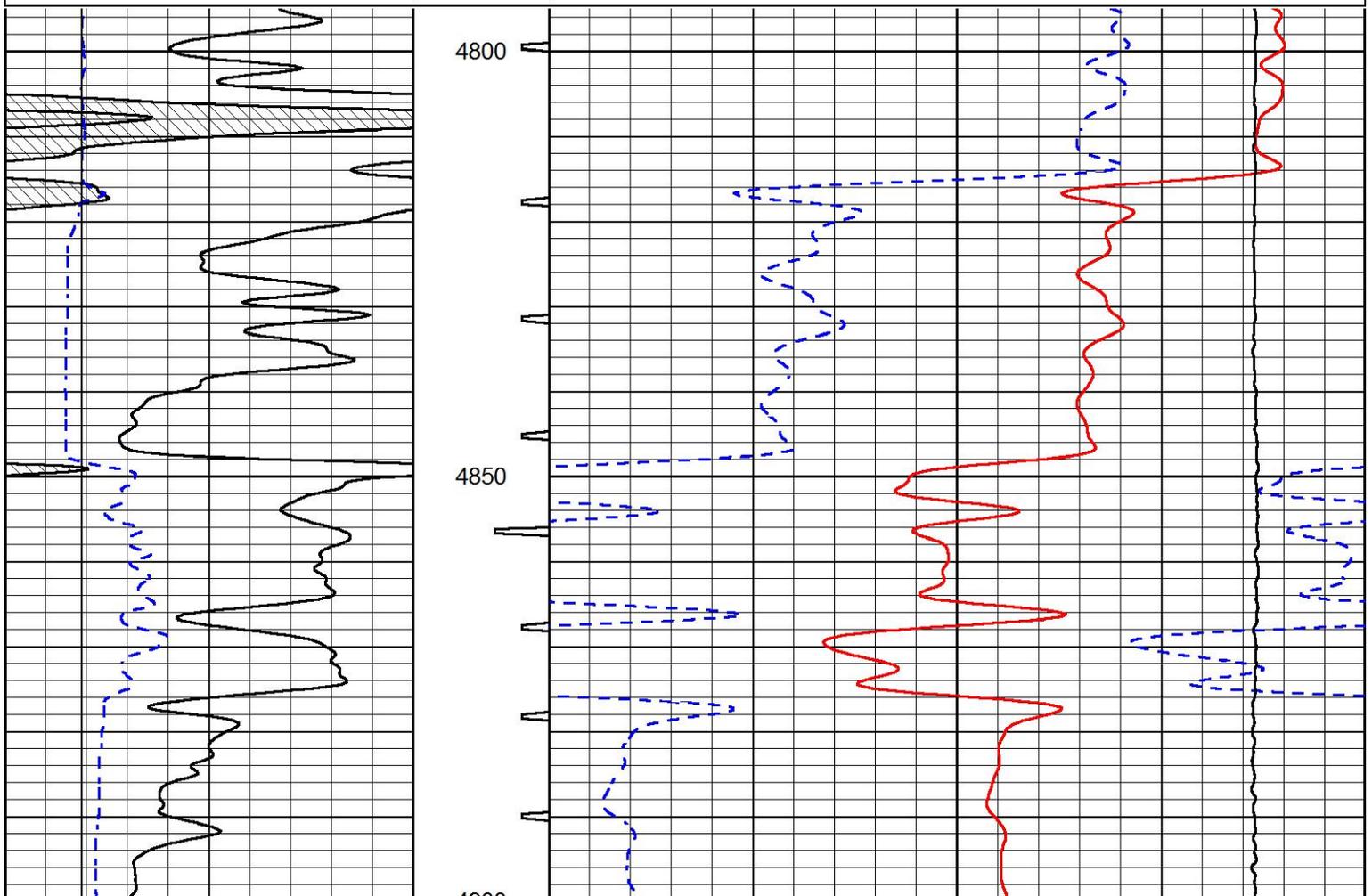
0	GAMMA RAY (GAPI)	150	SONIC INT	140	DELTA TIME (usec/ft) (usec/ft)	40
6	CALIPER (in)	16	TRAVEL TIME	30	SONIC POROSITY (pu)	-10
6	BIT SIZE	16	(msec)	15000	LINE TENSION (lb)	0

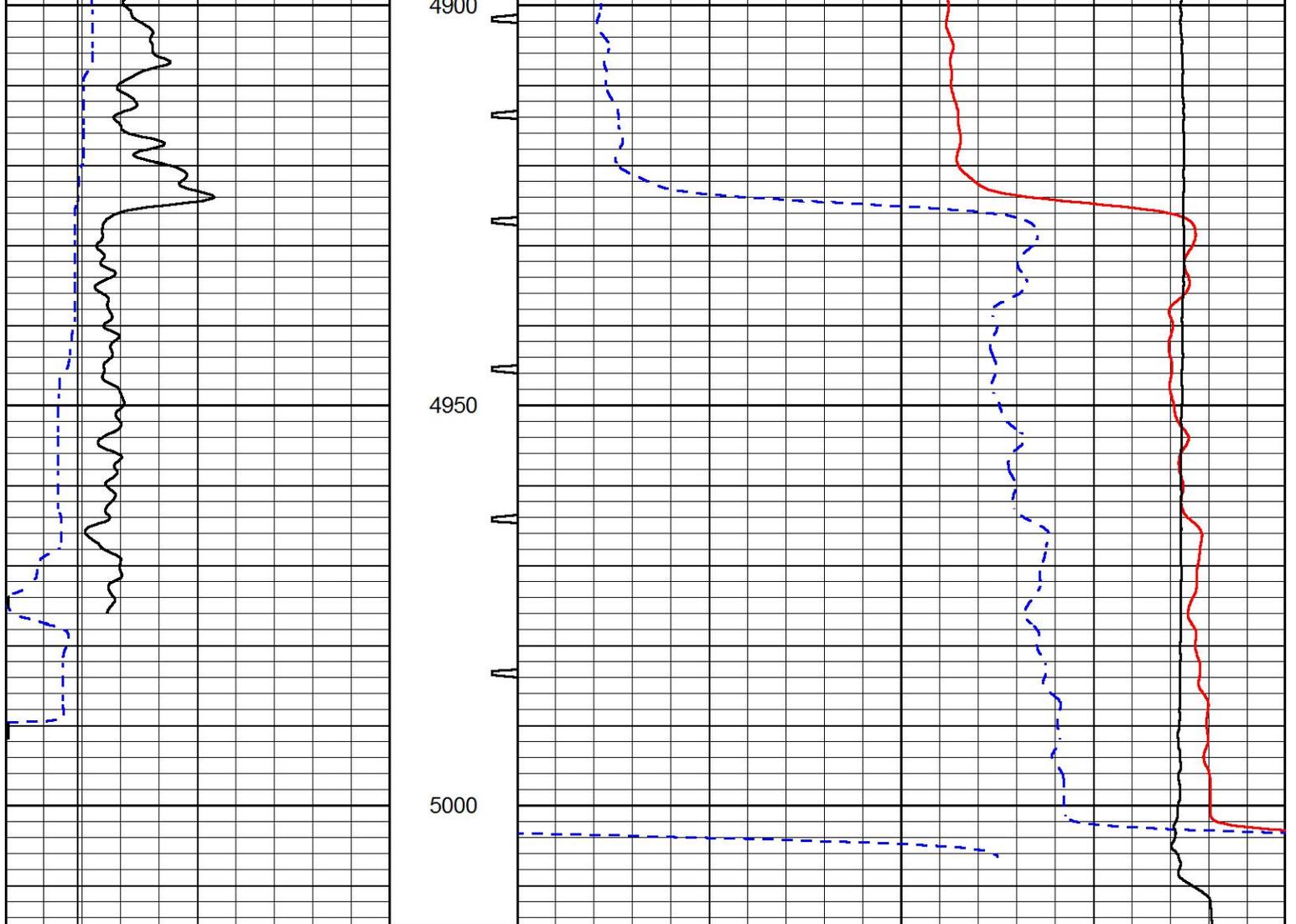


# REPEAT SECTION

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 Dataset Pathname    stackml/pass2.1  
 Presentation Format    sonic  
 Dataset Creation      Mon Sep 04 12:37:28 2017  
 Charted by            Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	SONIC INT	140	DELTA TIME (usec/ft) (usec/ft)	40
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