



DUAL INDUCTION LOG

MIDWEST WIRELINE

Company Murfin Drilling Company, Inc.

Well Frisbie B #2-15

Field

County Rawlins

State Kansas

Location: API #: 15-153-21278-00-00

Other Services

1250 FSL & 2640 FWL

SEC 15 TWP 2S RGE 35W

CNL/CDL
MEL/BHCS

Permanent Datum Ground Level Elevation 3190
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation
K.B. 3195
D.F.
G.L. 3190

Date 1/5/2022

Run Number One

Depth Driller 4800

Depth Logger 4801

Bottom Logged Interval 4800

Top Log Interval 0

Casing Driller 8.625 @ 330

Casing Logger 324

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 1600

Density / Viscosity 9.1 65

pH / Fluid Loss 11.5 6.0

Source of Sample FLOWLINE

Rm @ Meas. Temp 0.95 @ 50

Rmt @ Meas. Temp 0.71 @ 50

Rmc @ Meas. Temp 1.28 @ 50

Source of Rmt / Rmc CHARTS

Rm @ BHT 0.38 @ 124

Operating Rig Time 6 Hours

Max Rec. Temp. F 124

Equipment Number P-24

Location Hays

Recorded By D. Schmidt

Witnessed By Clayton Erickson

<<< 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.

Beardsley,
5 North, East 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: Clayton Erickson
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\murfin_frisbie b 2-15.db
Dataset field/well/stkml/pass3.12/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	124	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	355	20		4801

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

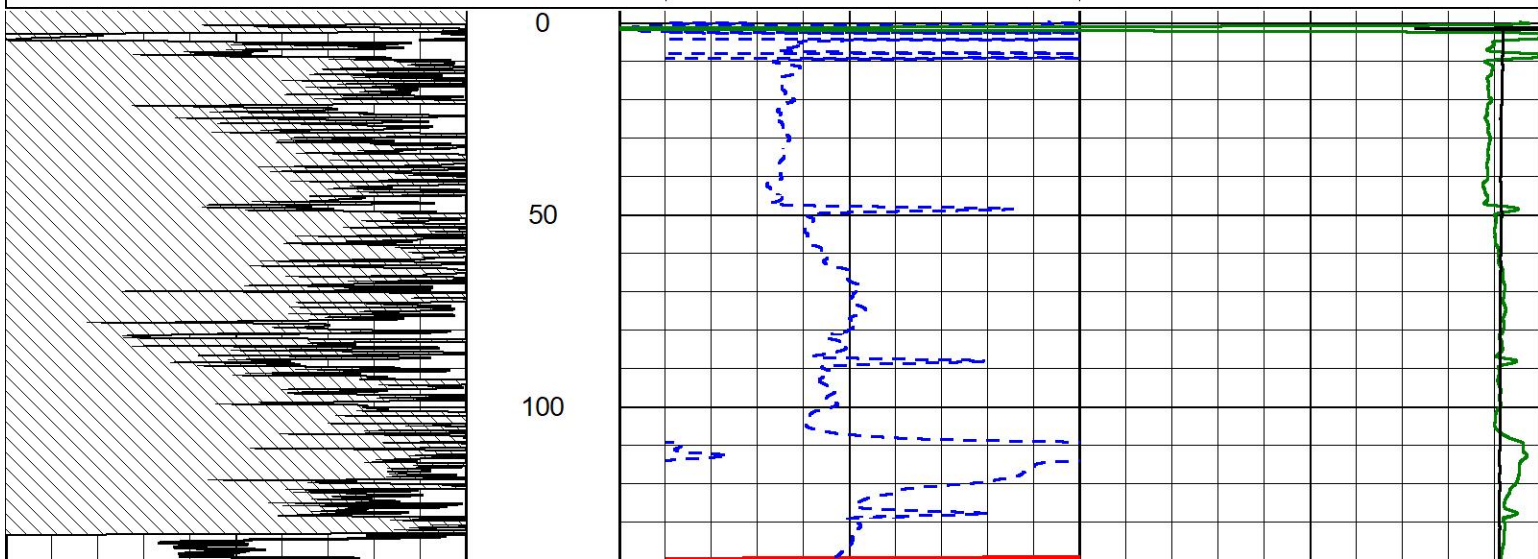


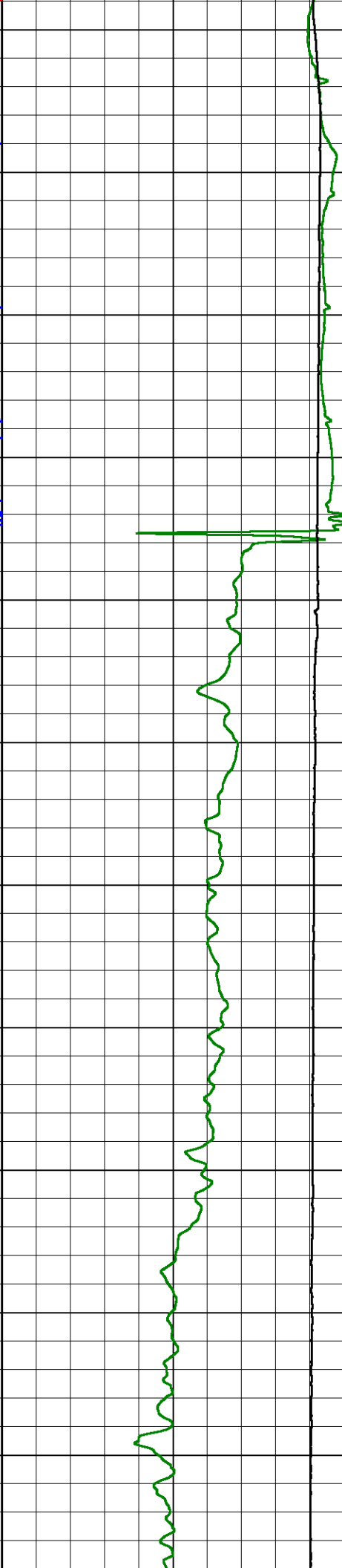
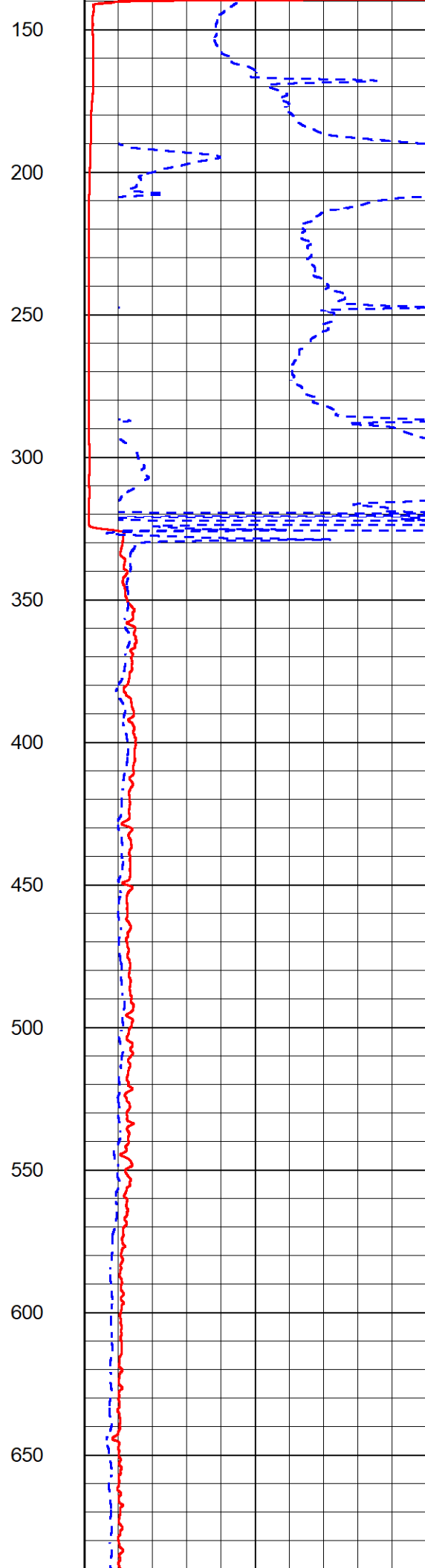
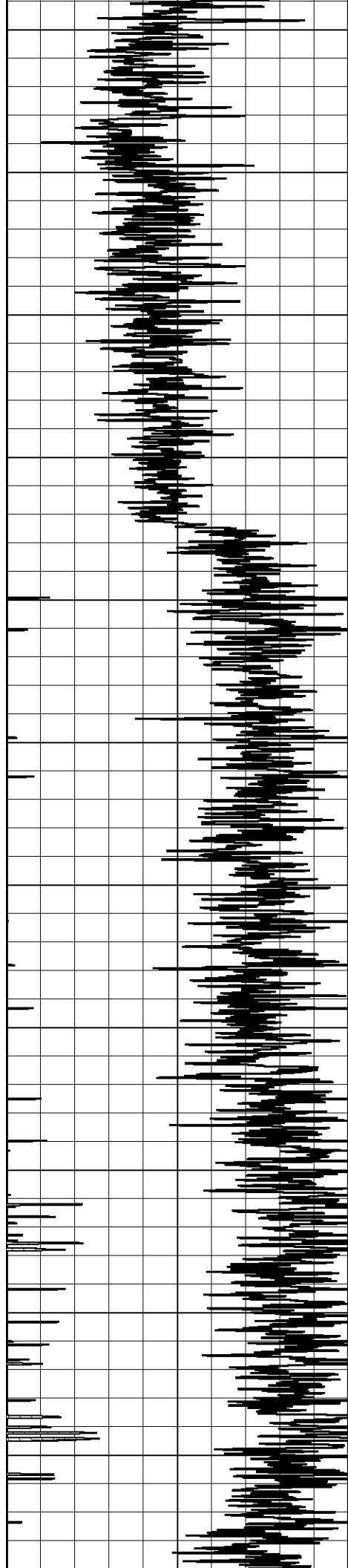
2" SCALE RESISTIVITY

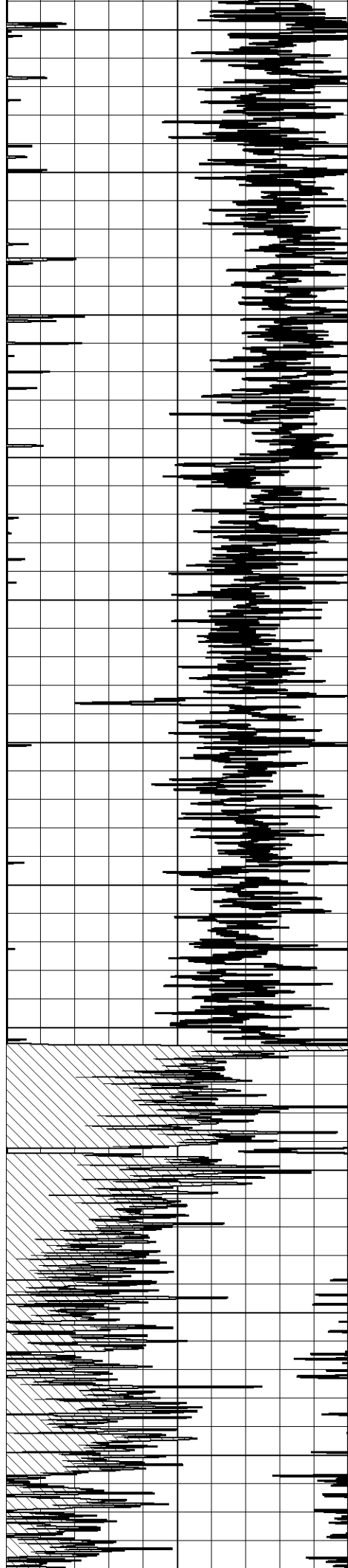
MAIN PASS

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Presentation Format _dil2in
Dataset Creation Wed Jan 05 09:33:43 2022
Charted by Depth in Feet scaled 1:600

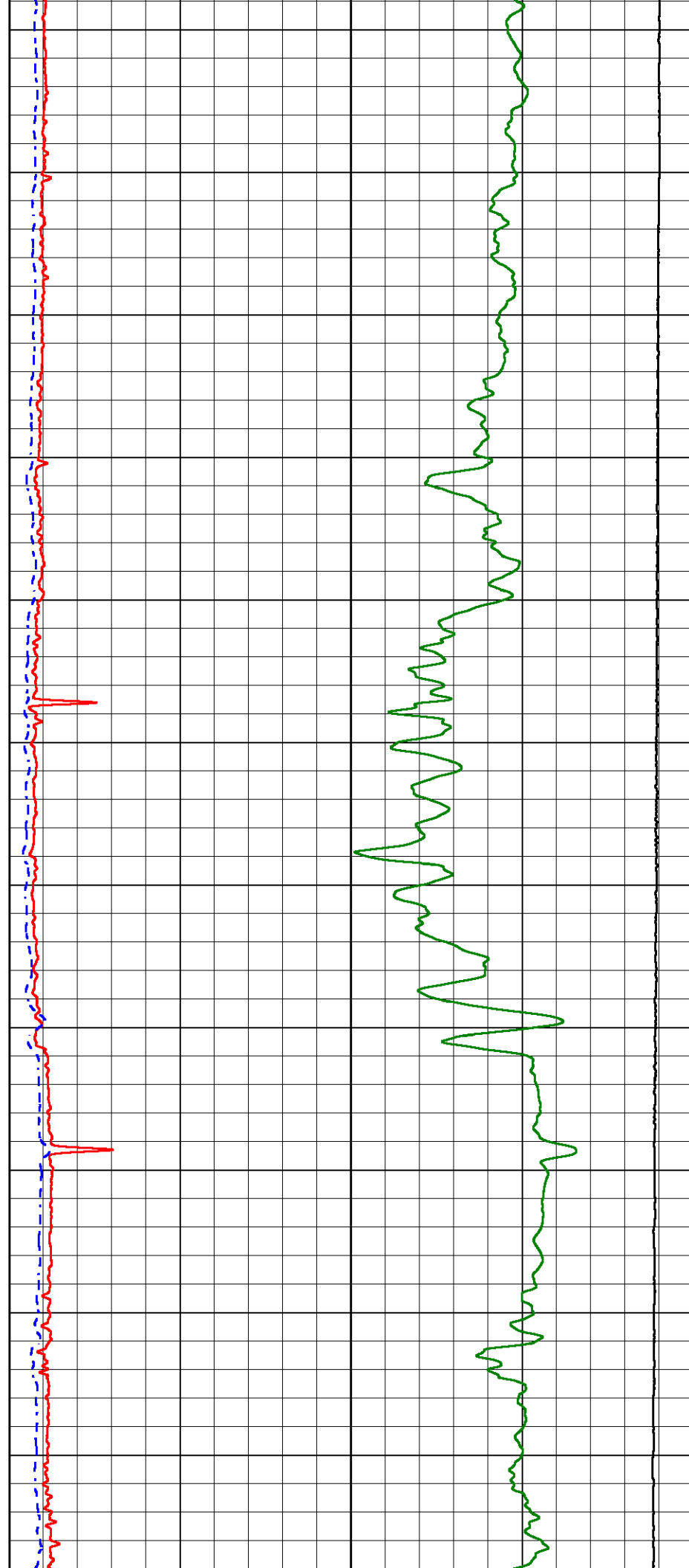
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			15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
				Shallow Resistivity	
			50	(Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200

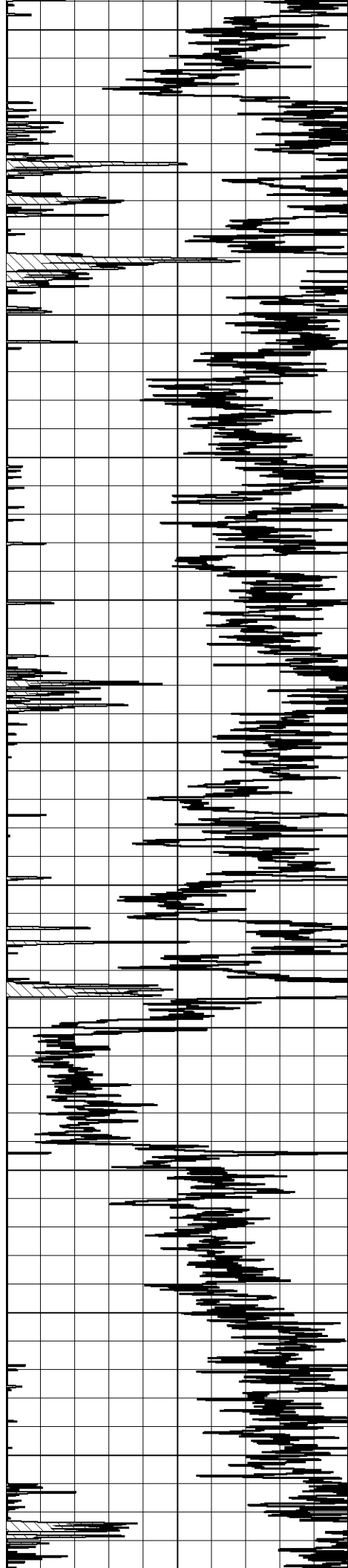




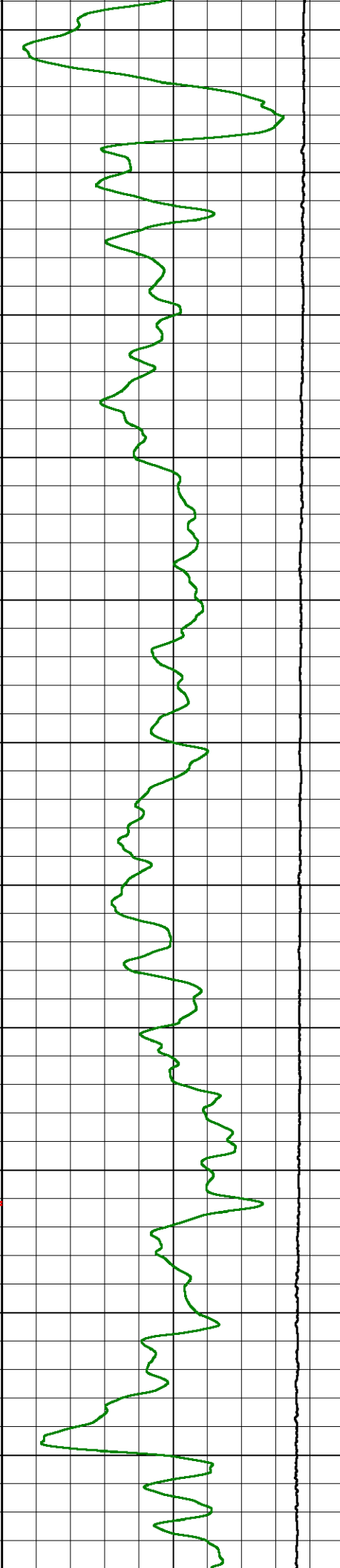
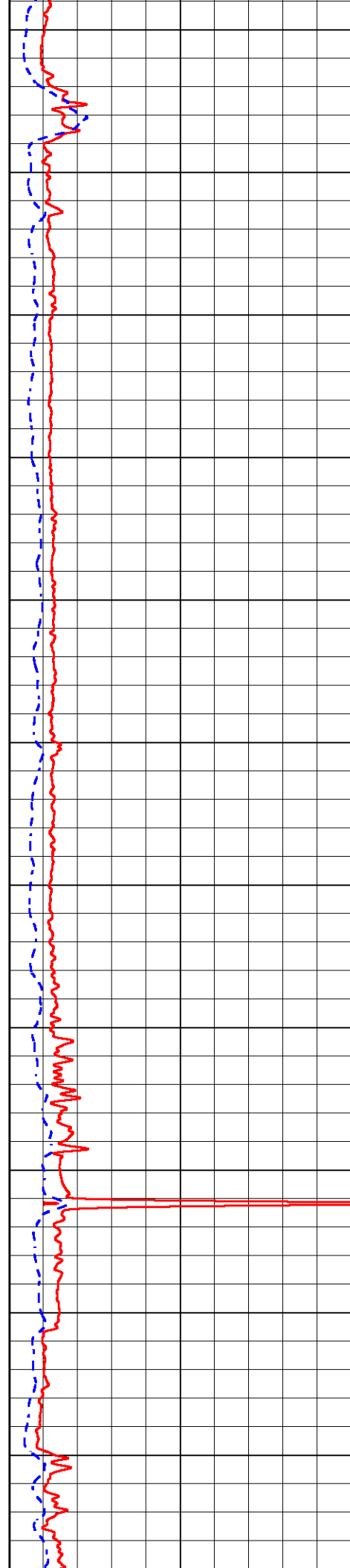


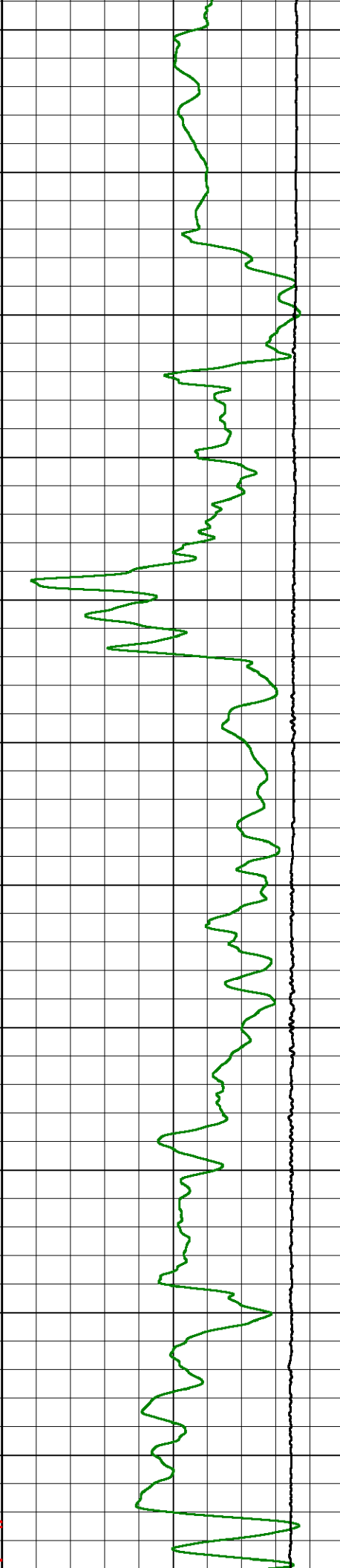
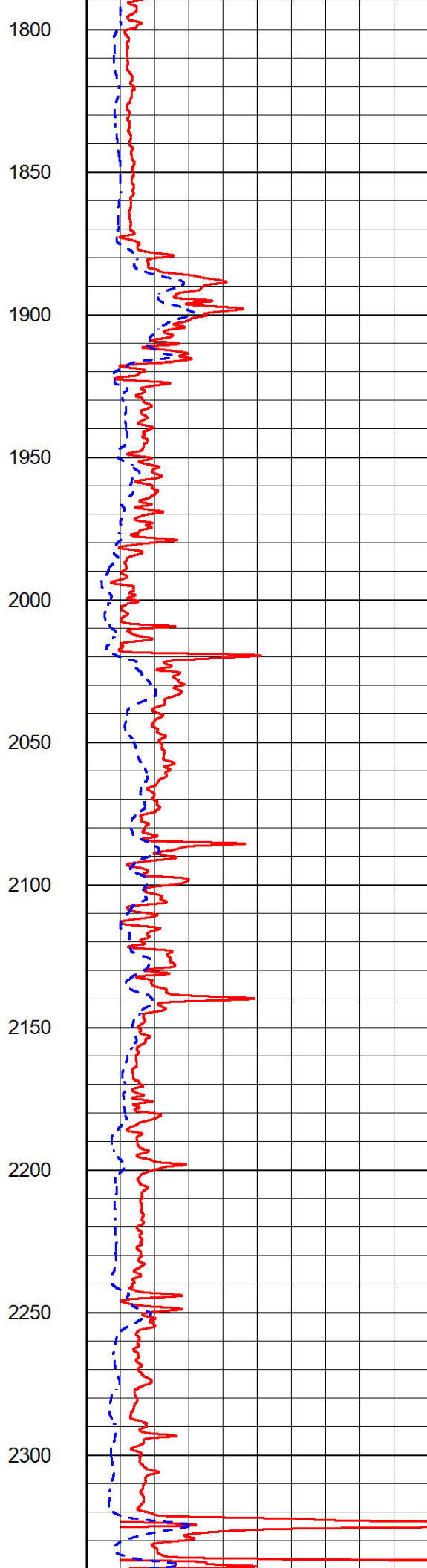
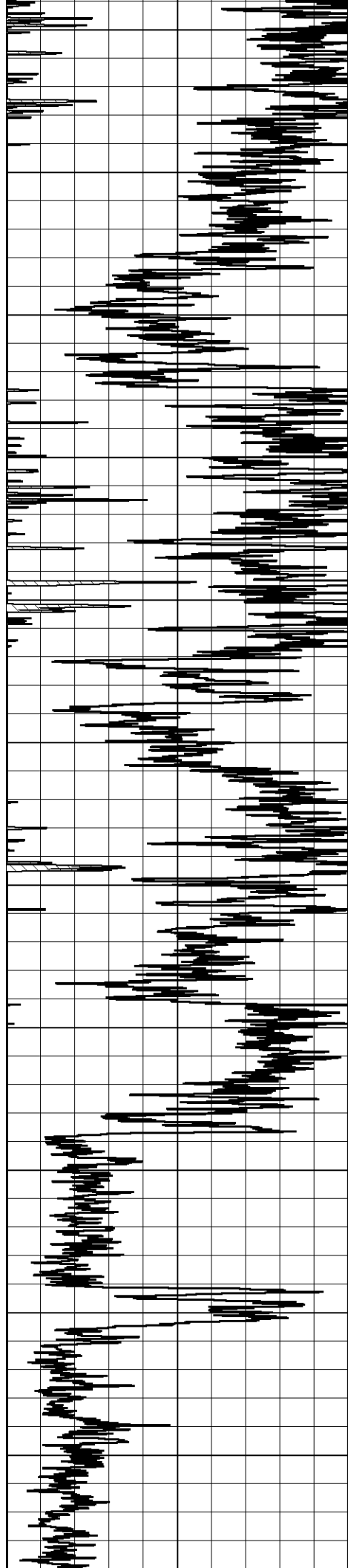
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1100
1150
1200

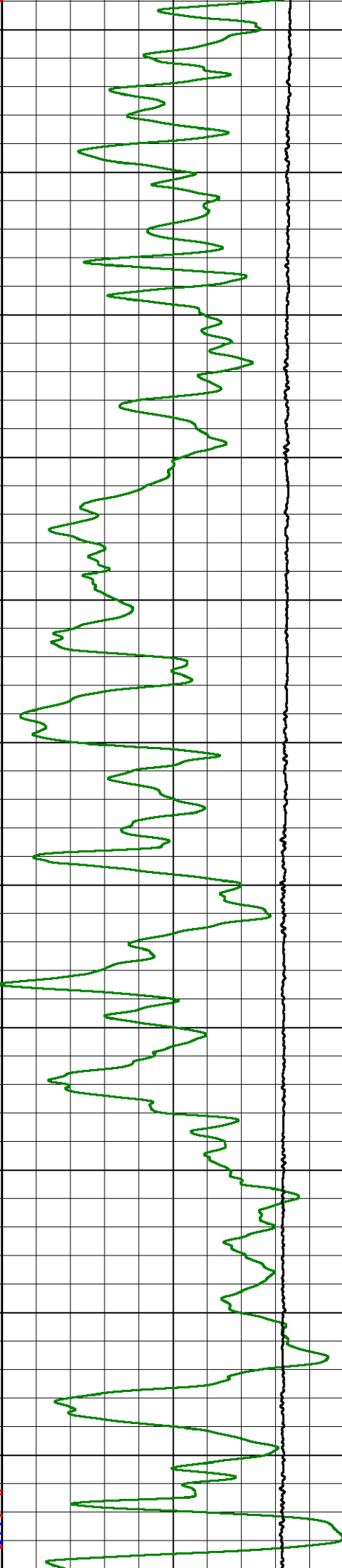
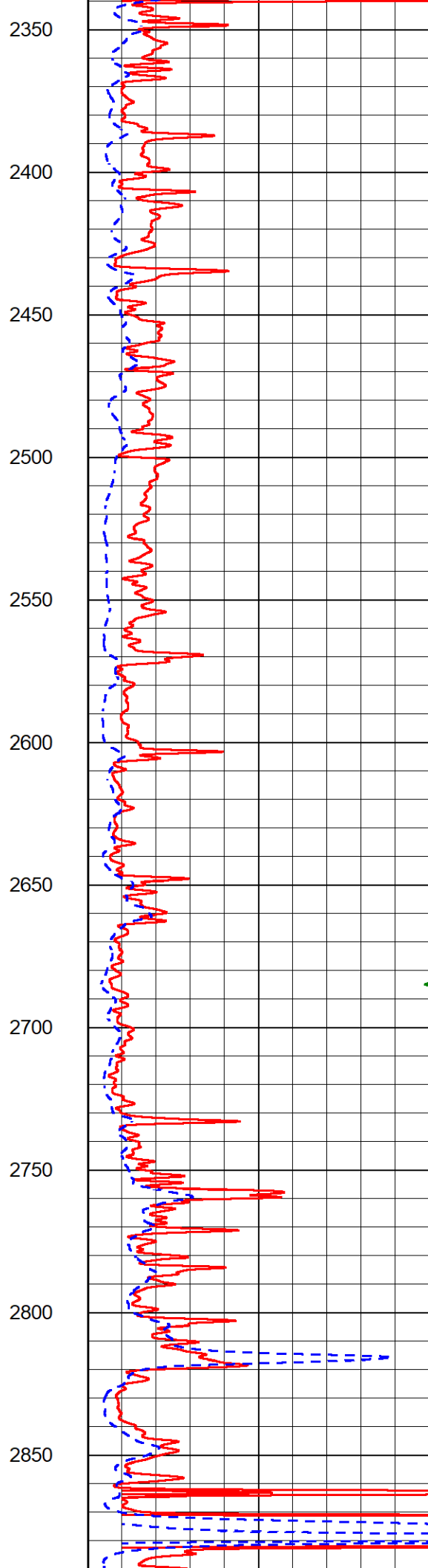
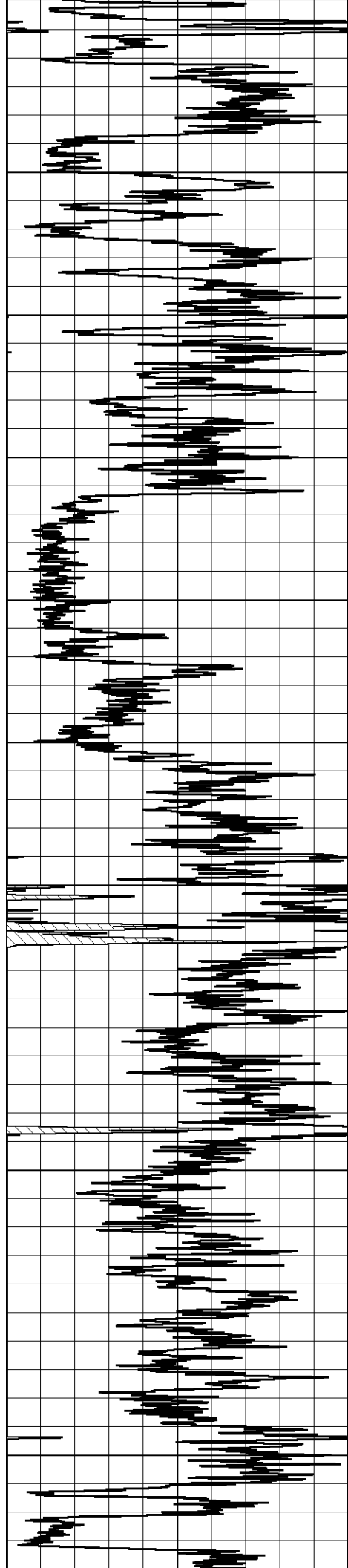


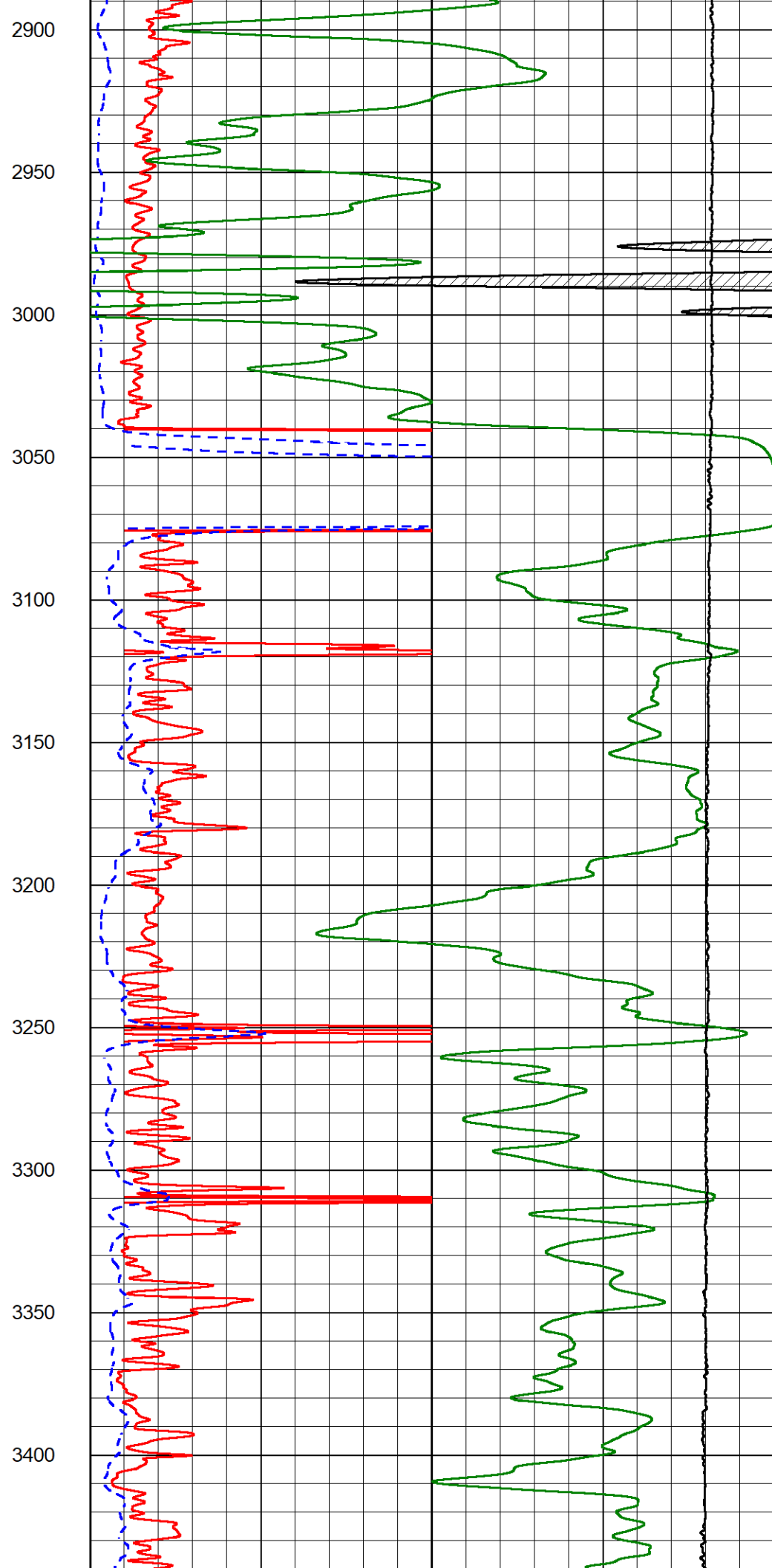
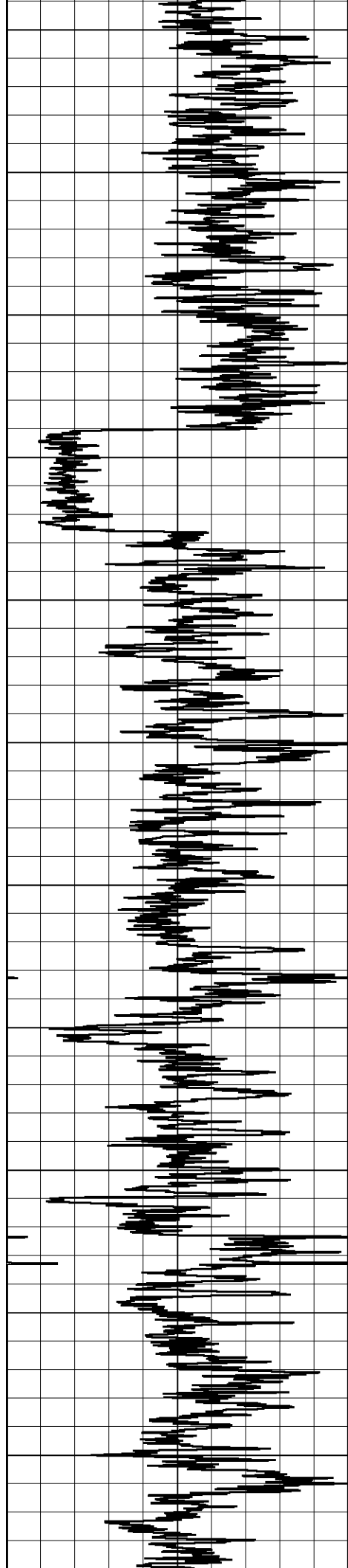


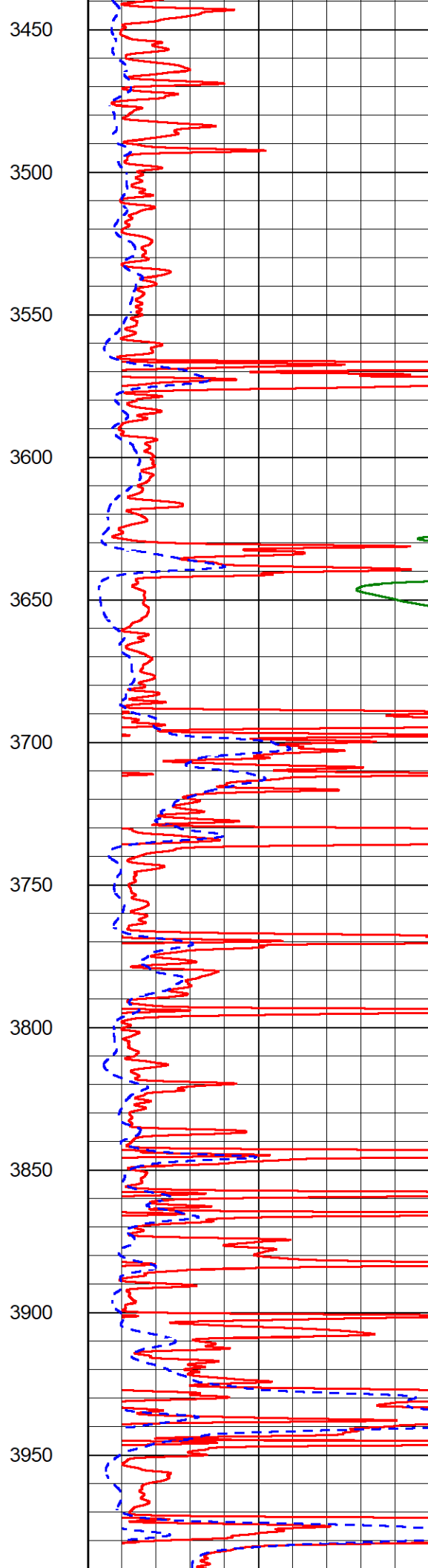
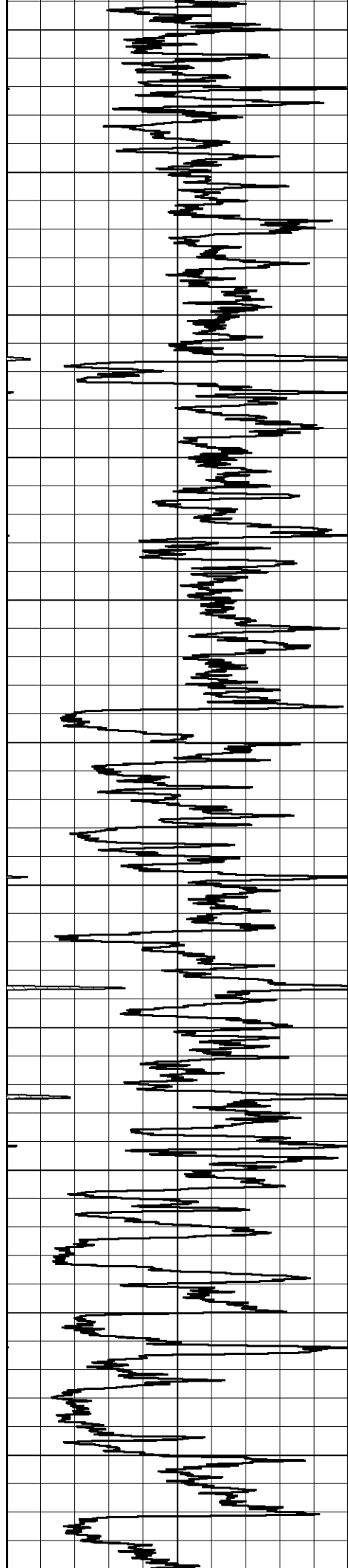
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1500
1550
1600
1650
1700
1750

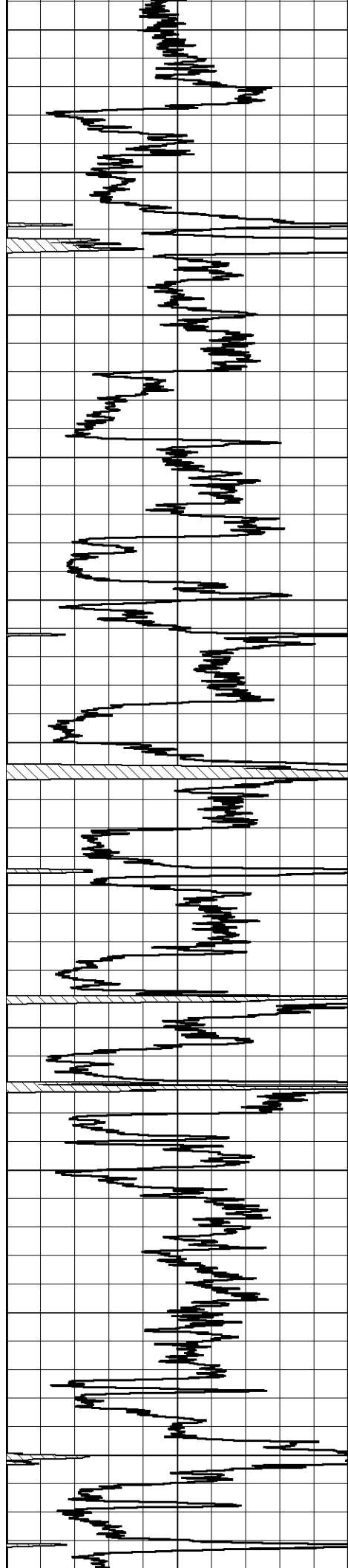




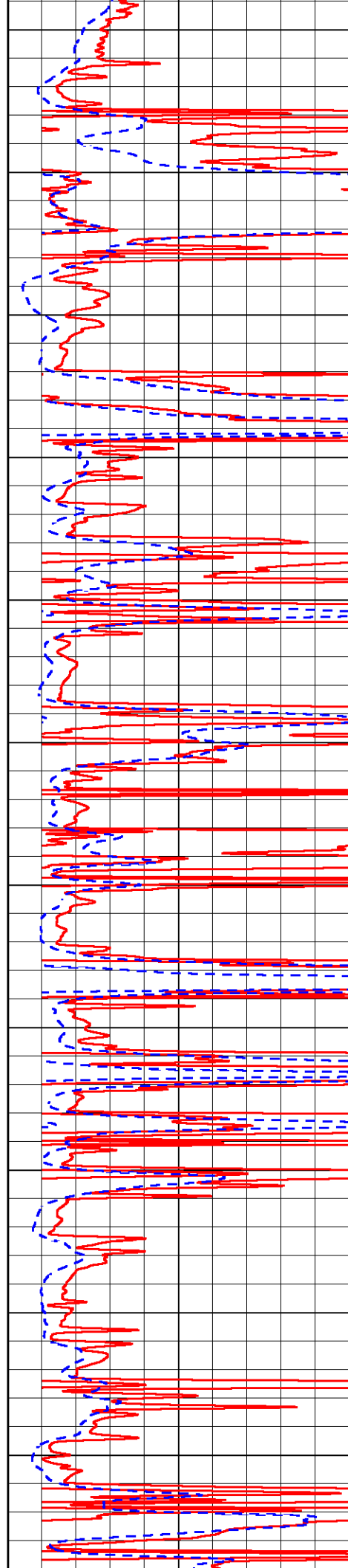


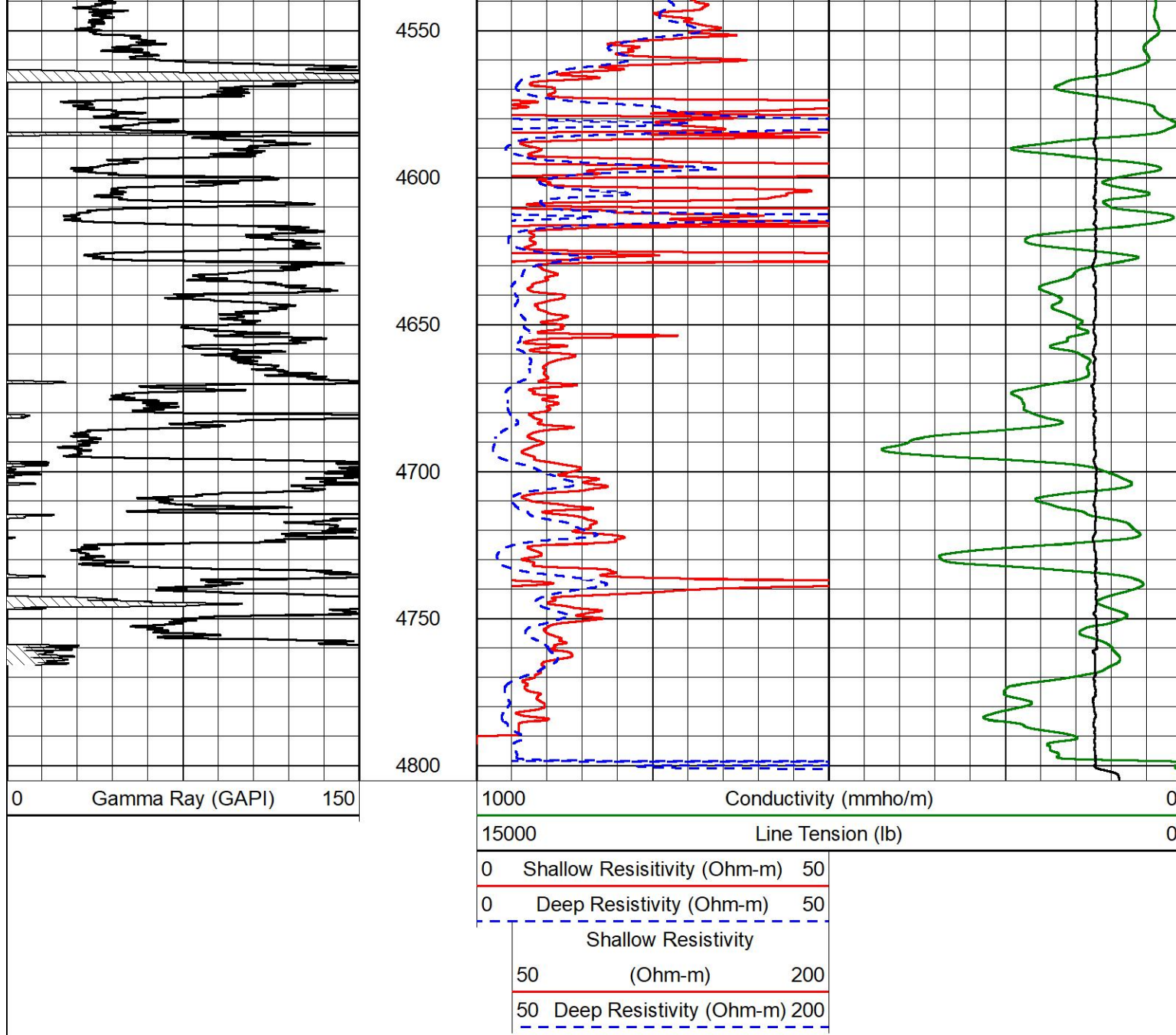






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4300
4350
4400
4450
4500





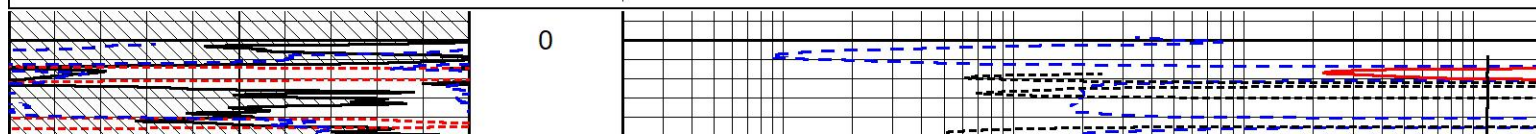
MIDWEST WIRELINE

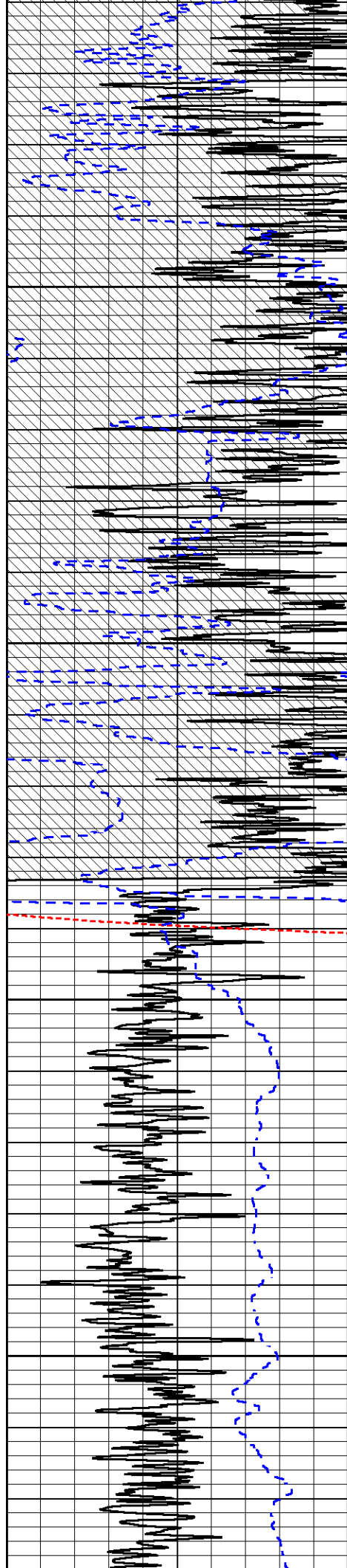
DETAIL SECTION

MAIN PASS

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 Presentation Format: _dil
 Dataset Creation: Wed Jan 05 09:23:05 2022
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0.2	Deep Resistivity (Ohm-m)	2000
-160	RXORT	40	0.2	Medium Resistivity (Ohm-m)	2000
-200	SP (mV)	0	0.2	Shallow Resistivity (Ohm-m)	2000
			10000	Line Tension (lb)	0



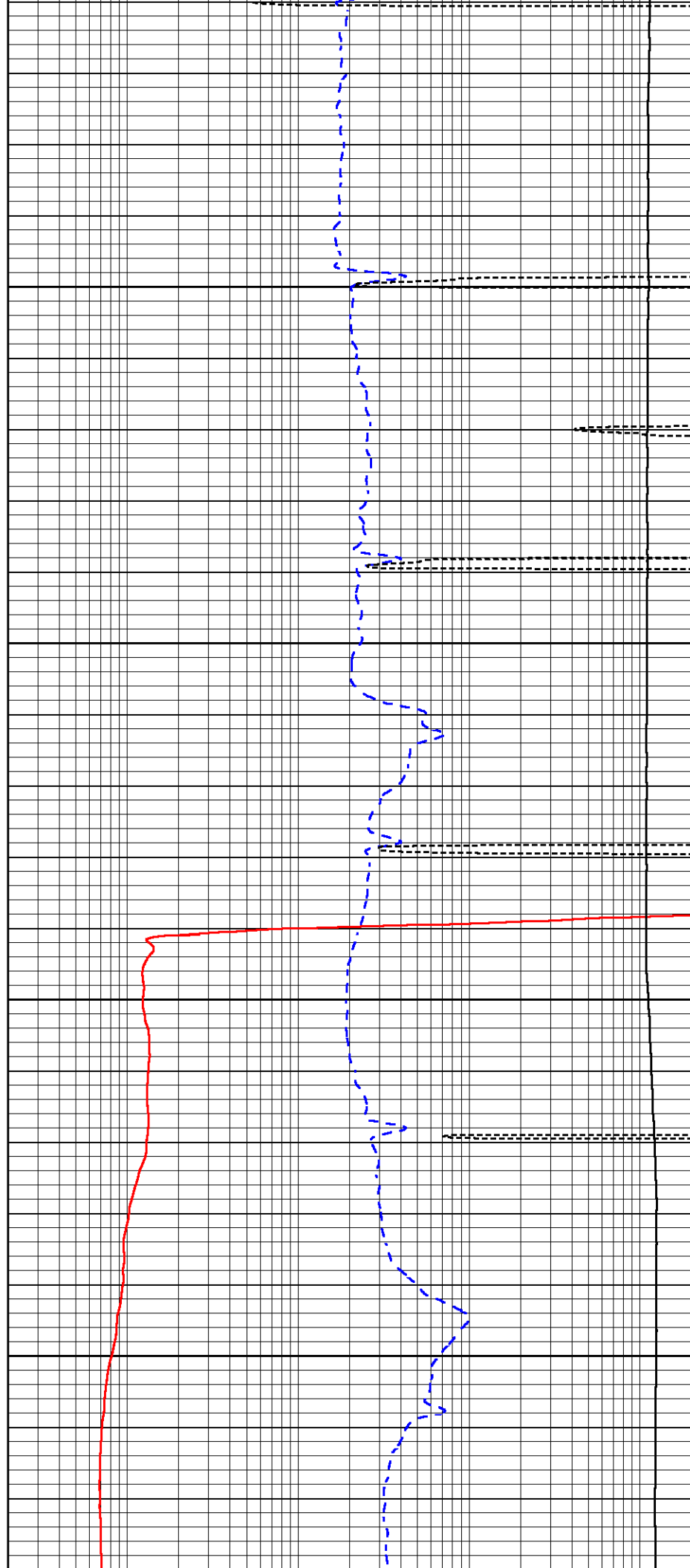


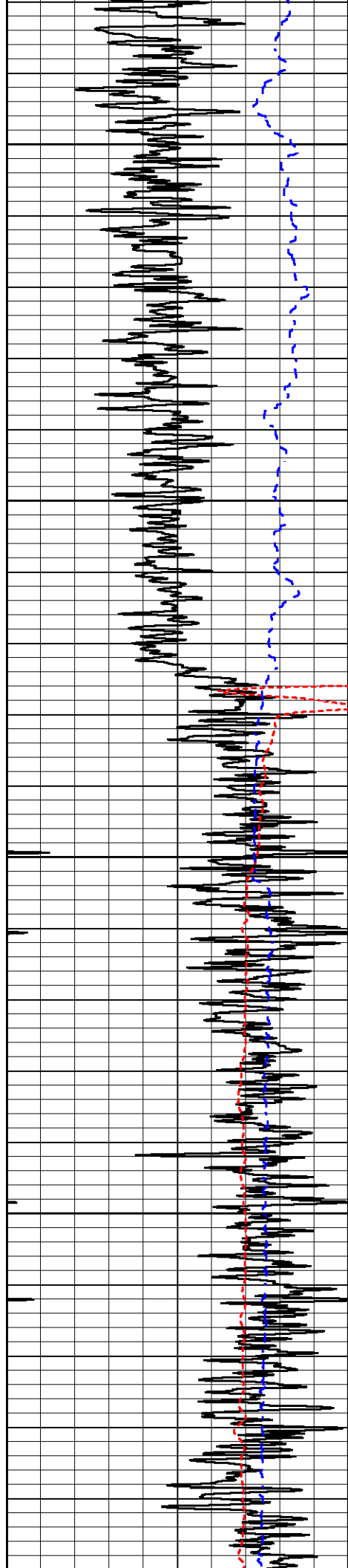
50

100

150

200





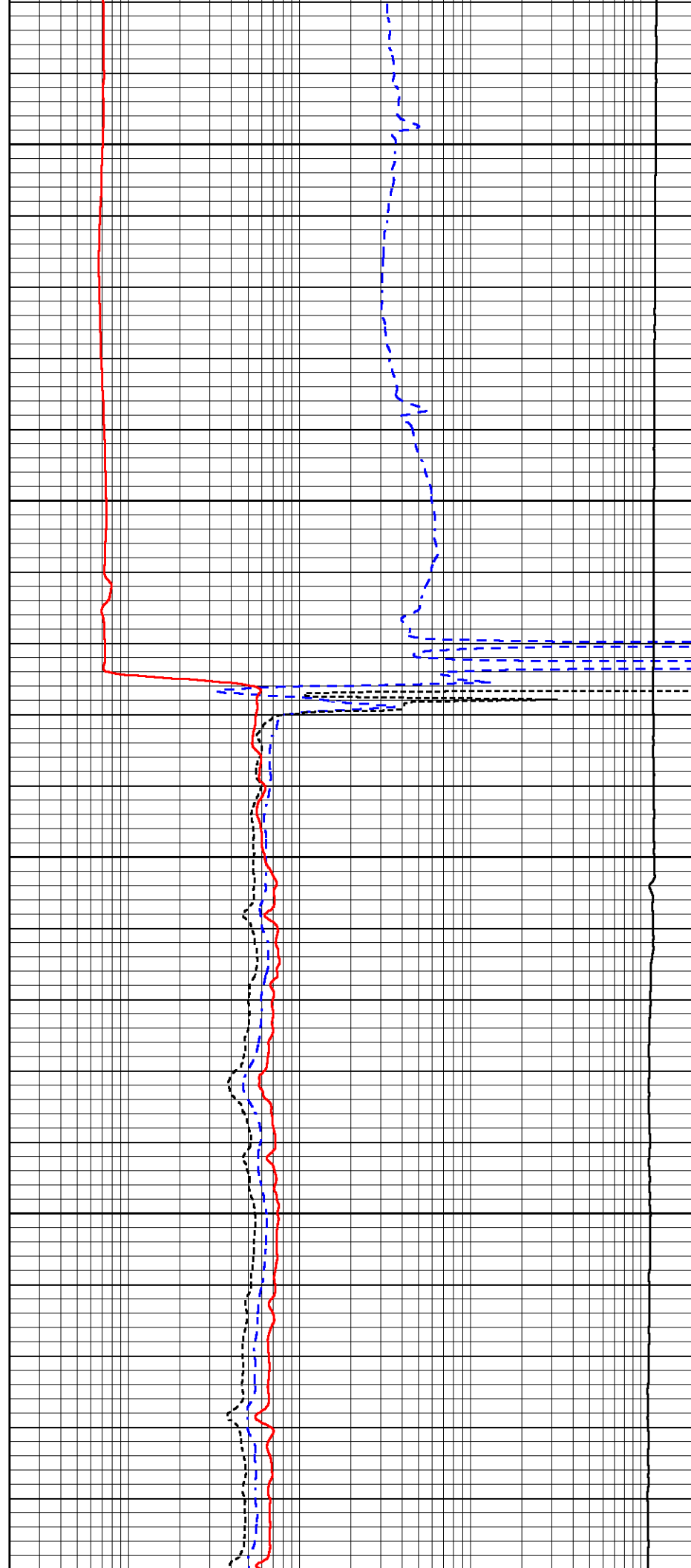
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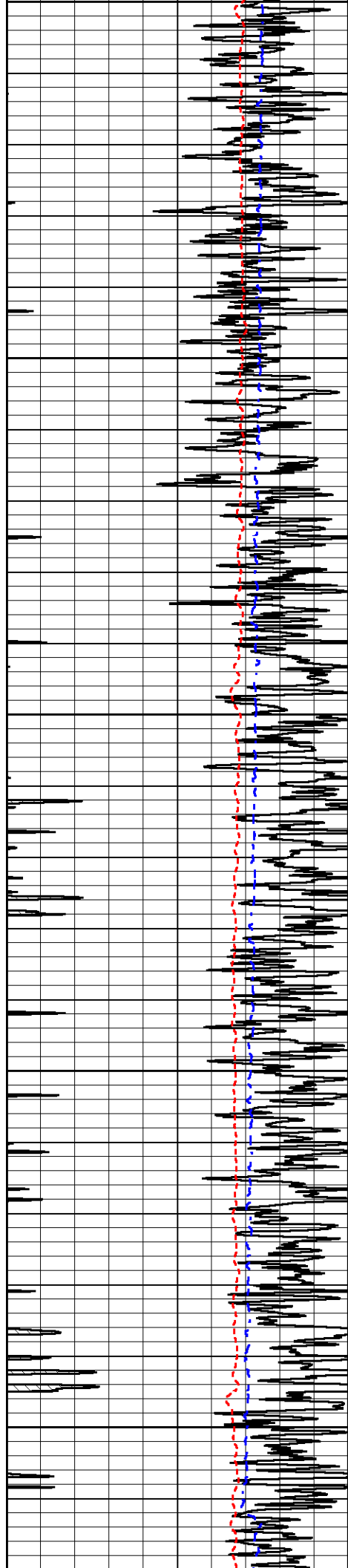
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350

400

450





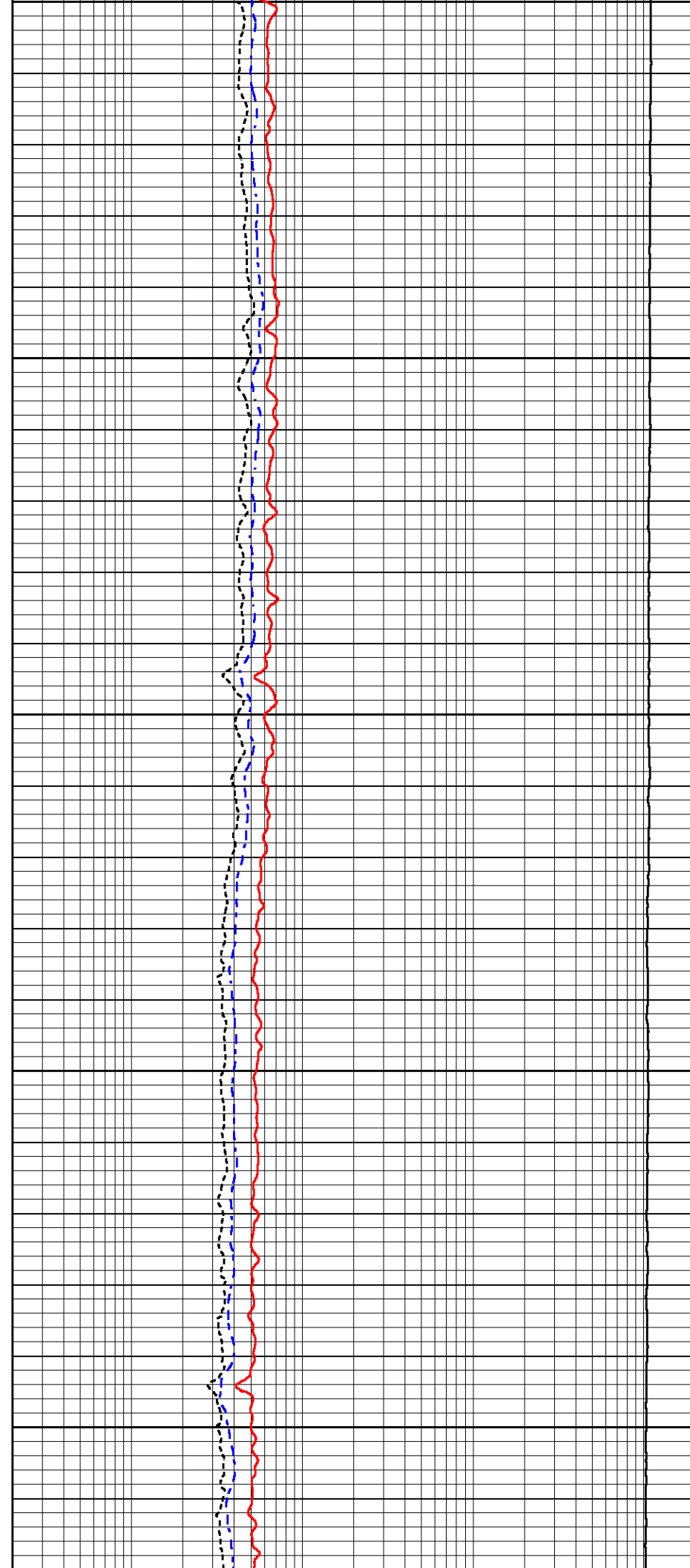
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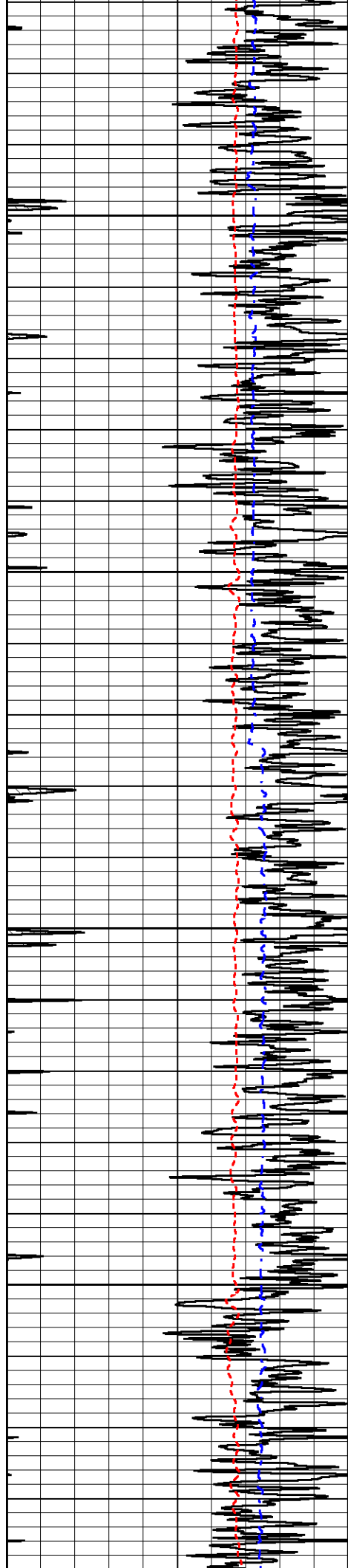
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550

600

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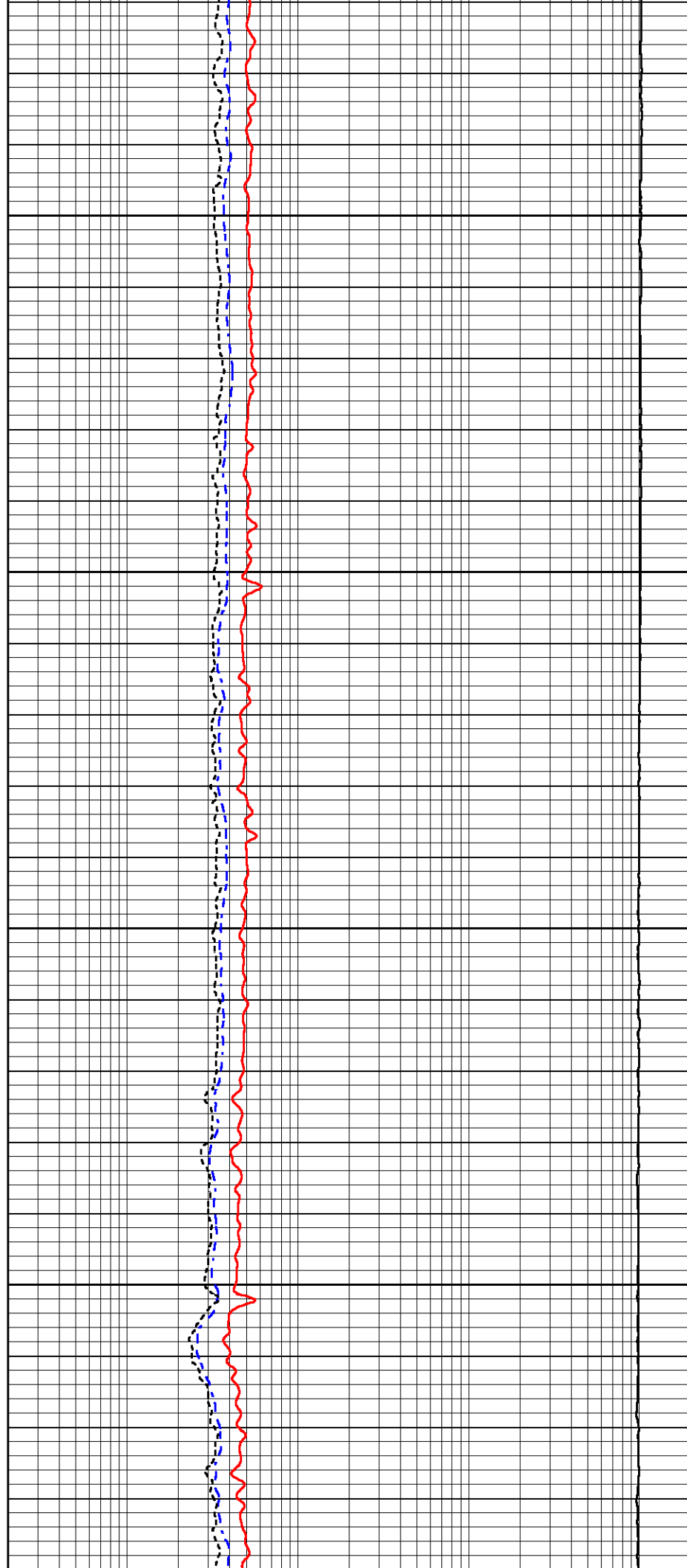


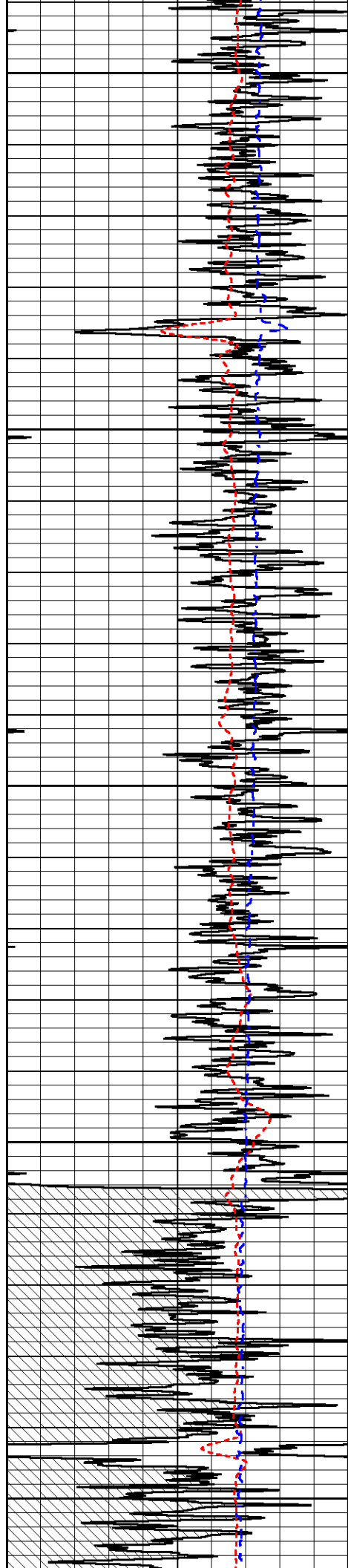
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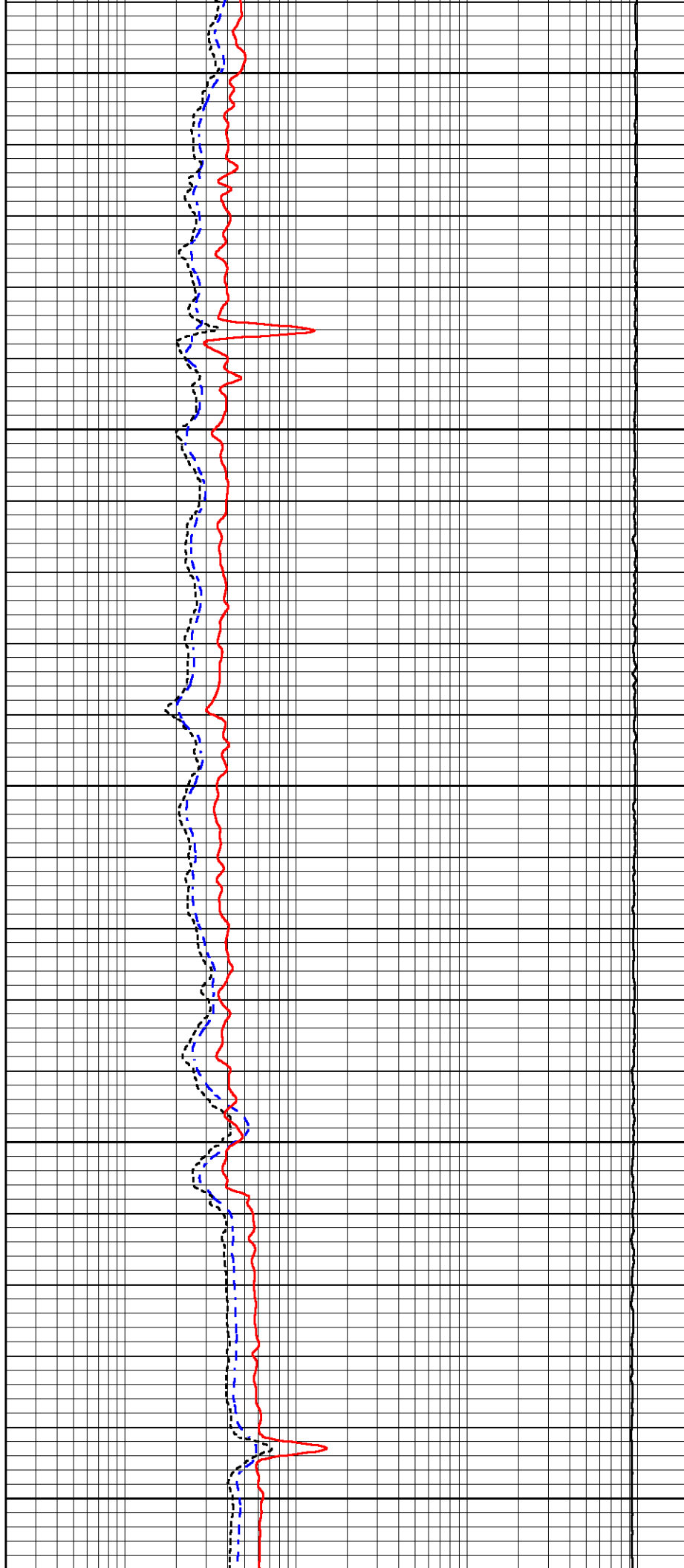
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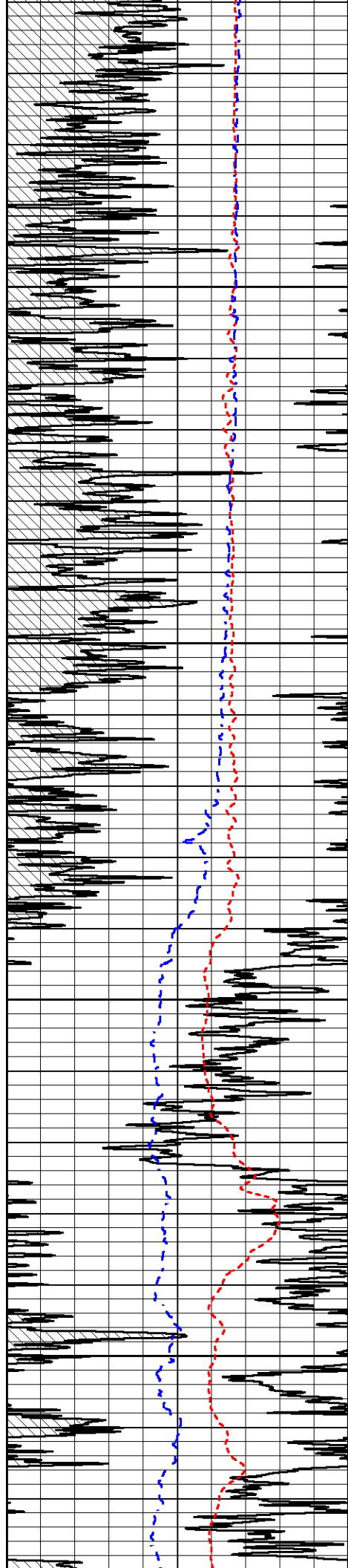
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1000

1050

1100



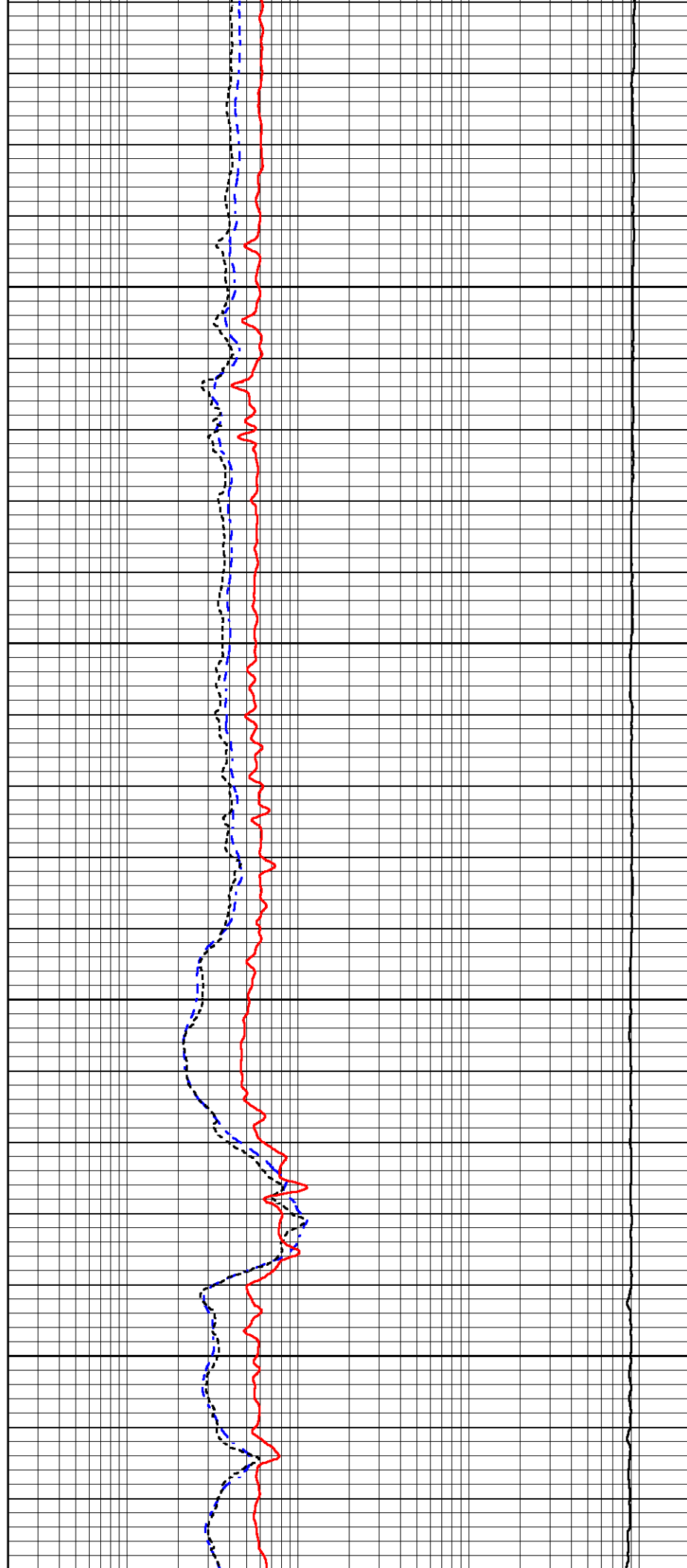


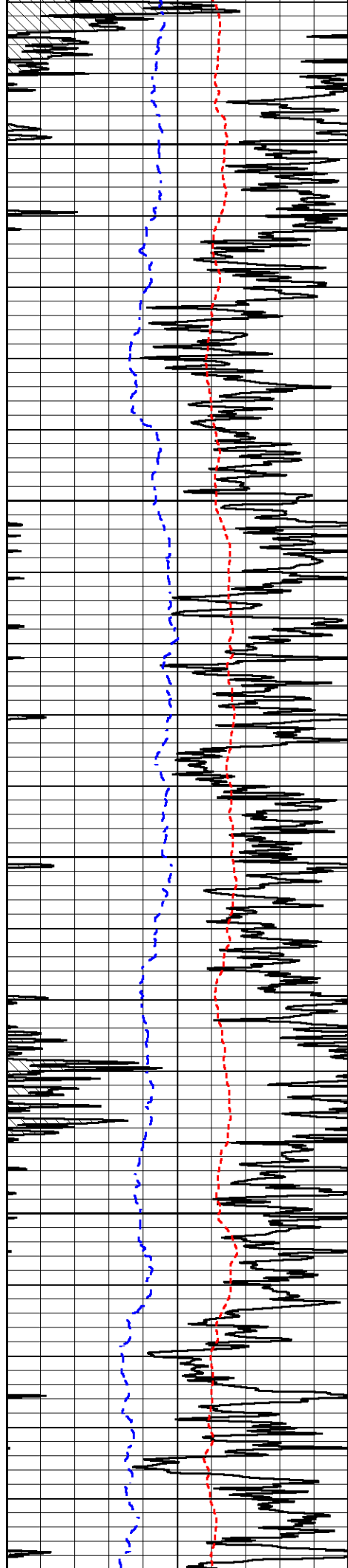
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1200

1250

1300





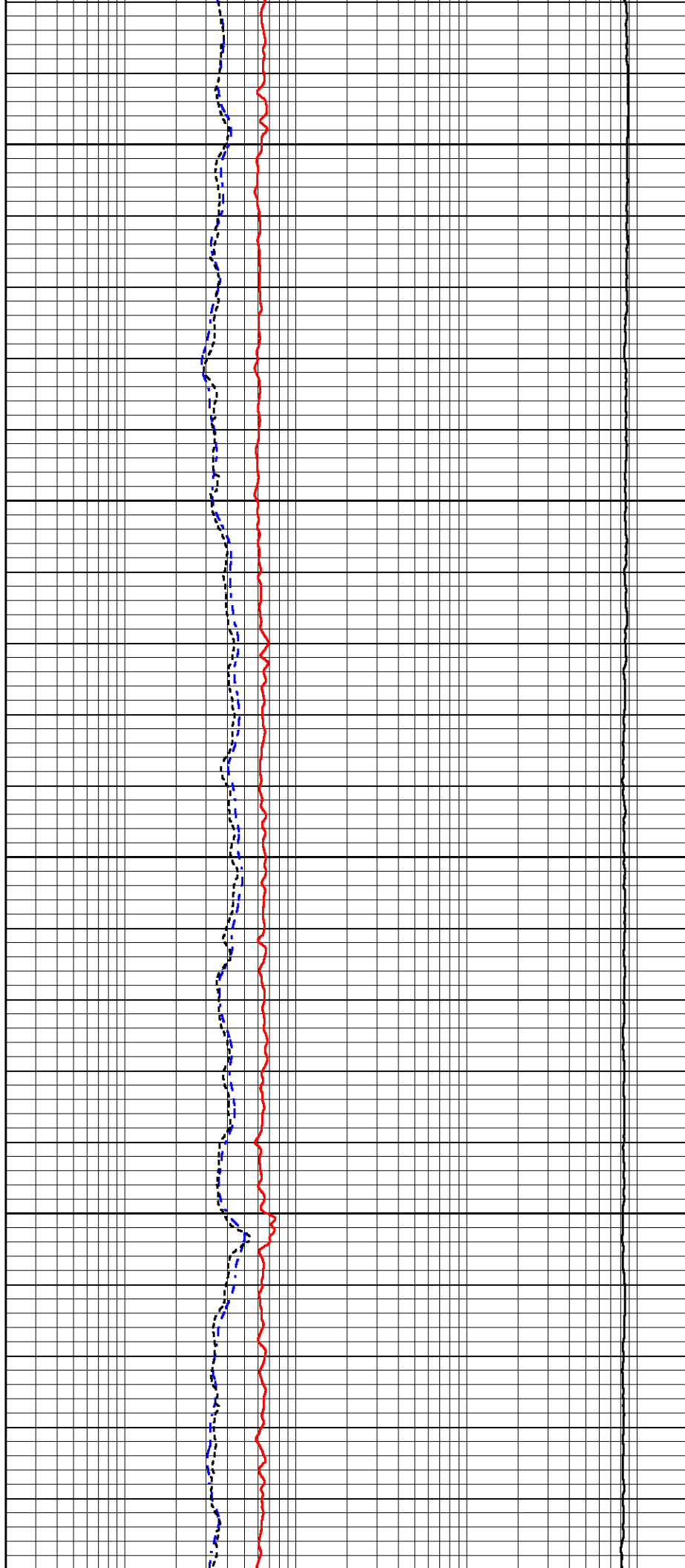
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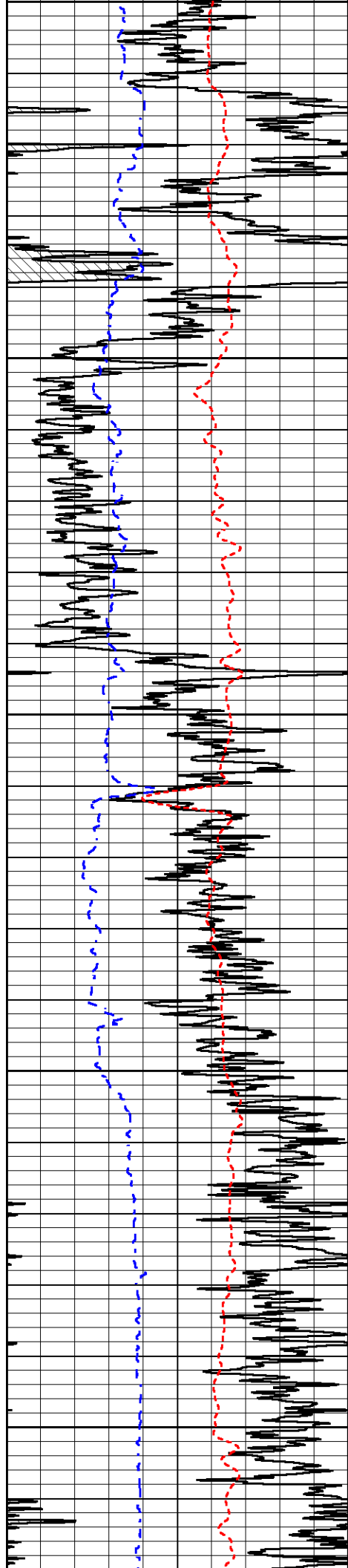
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1500

1550





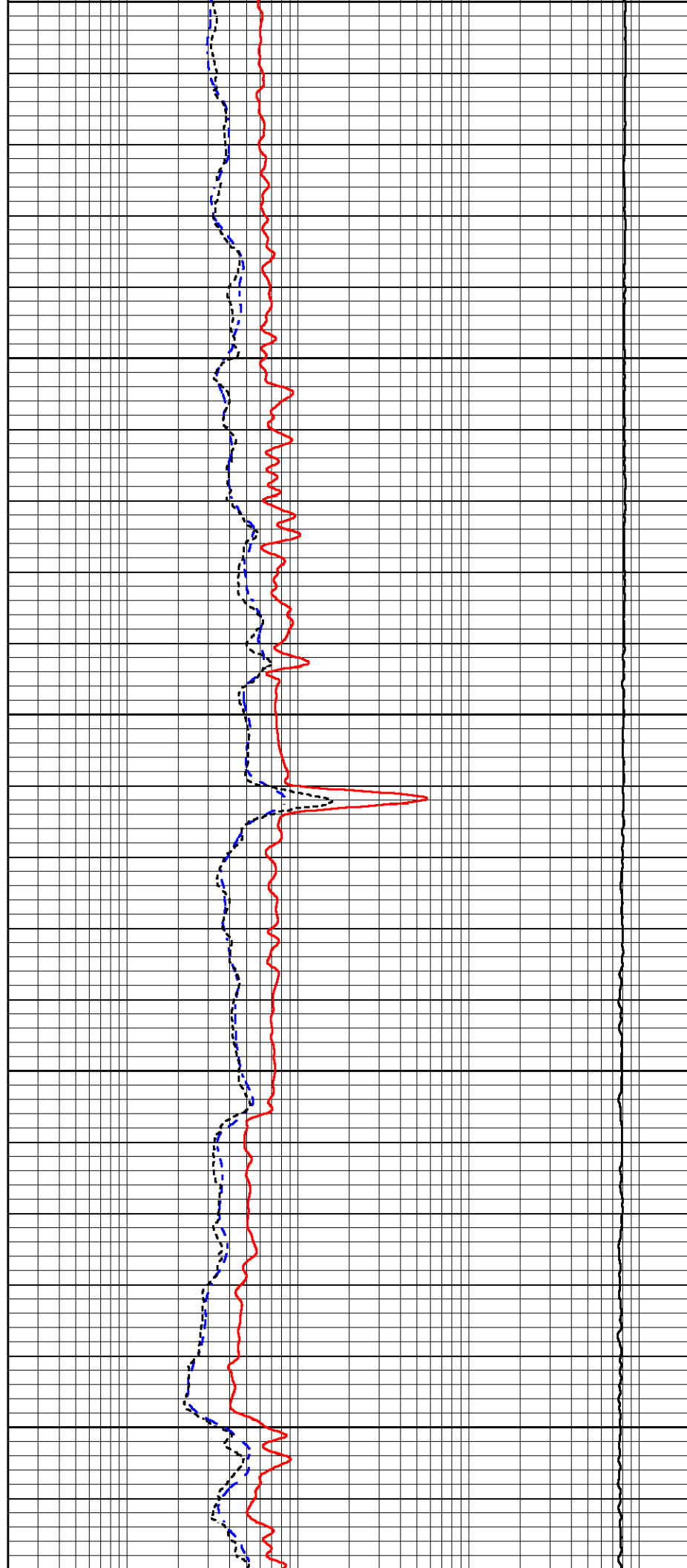
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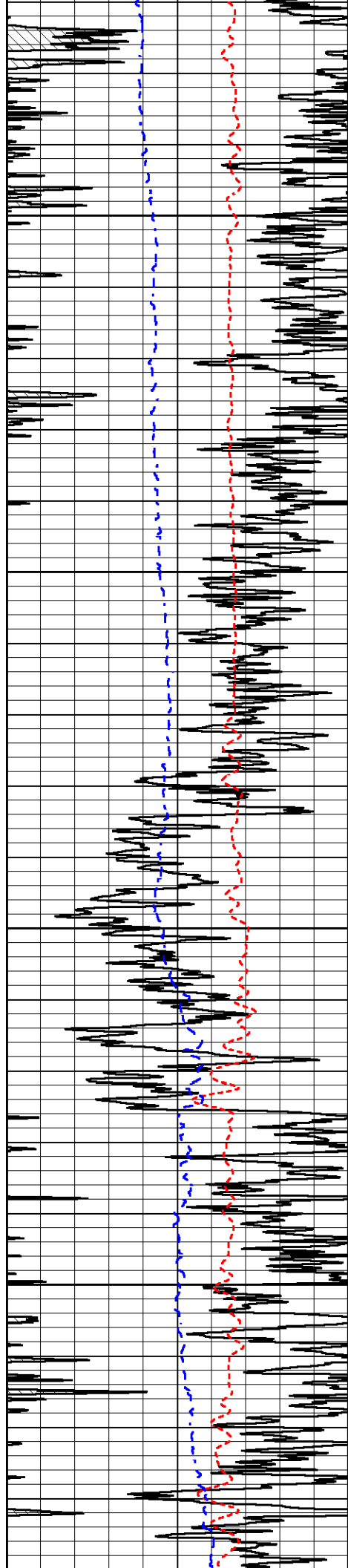
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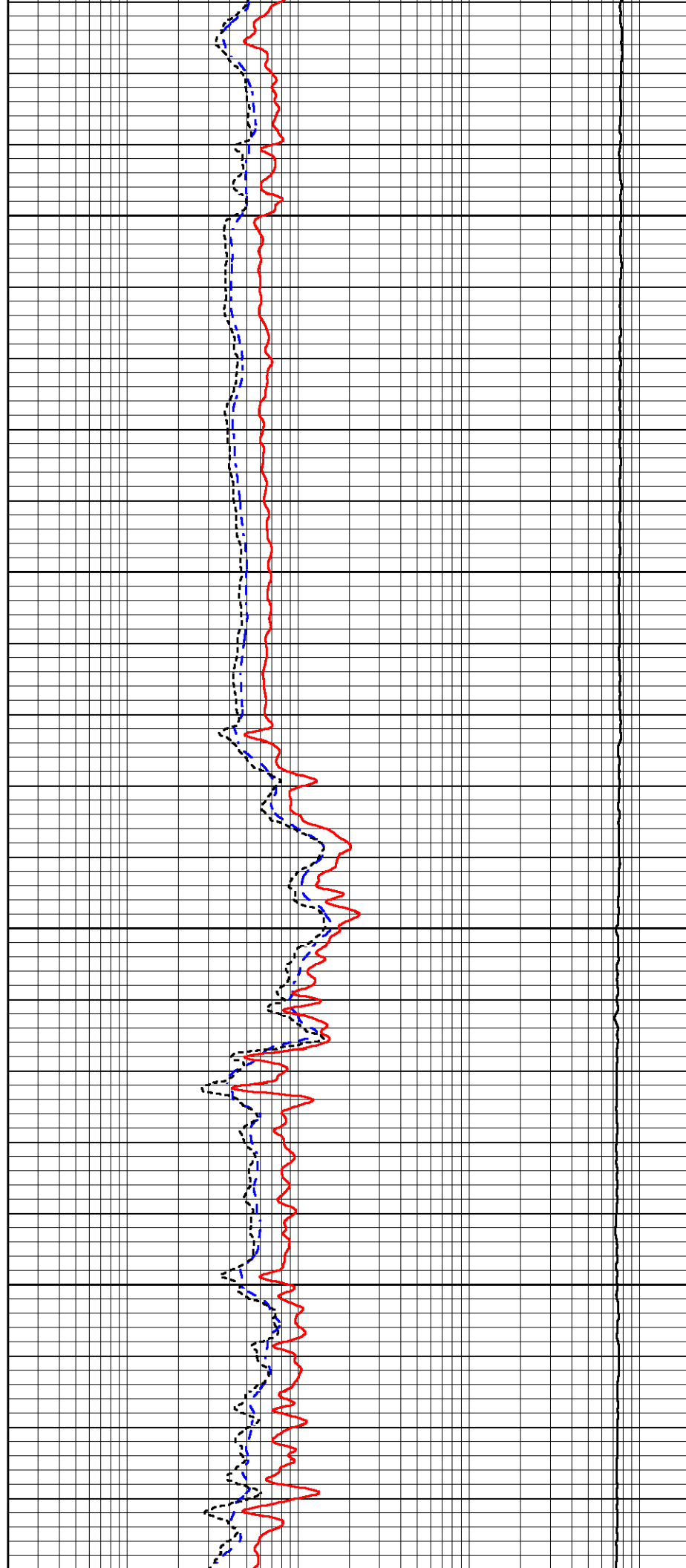


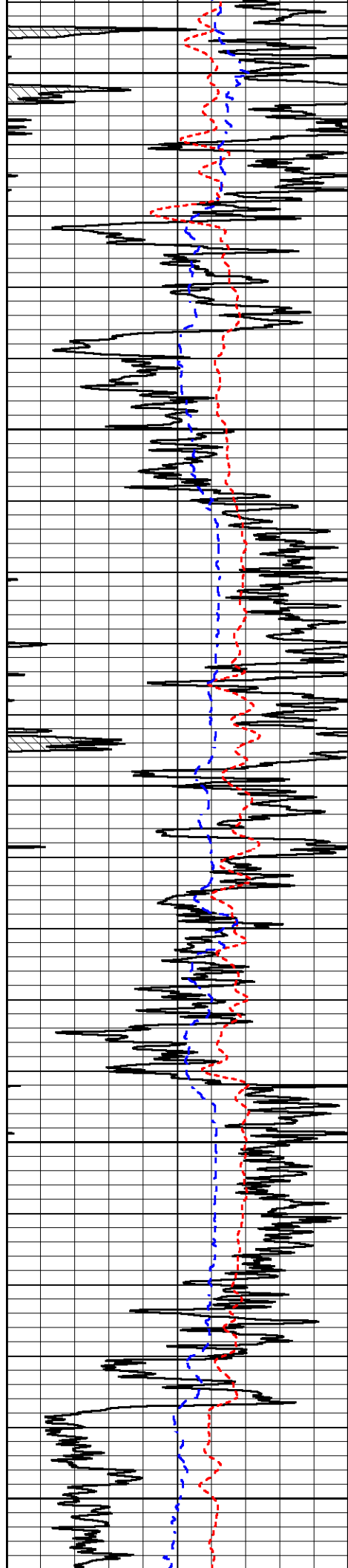
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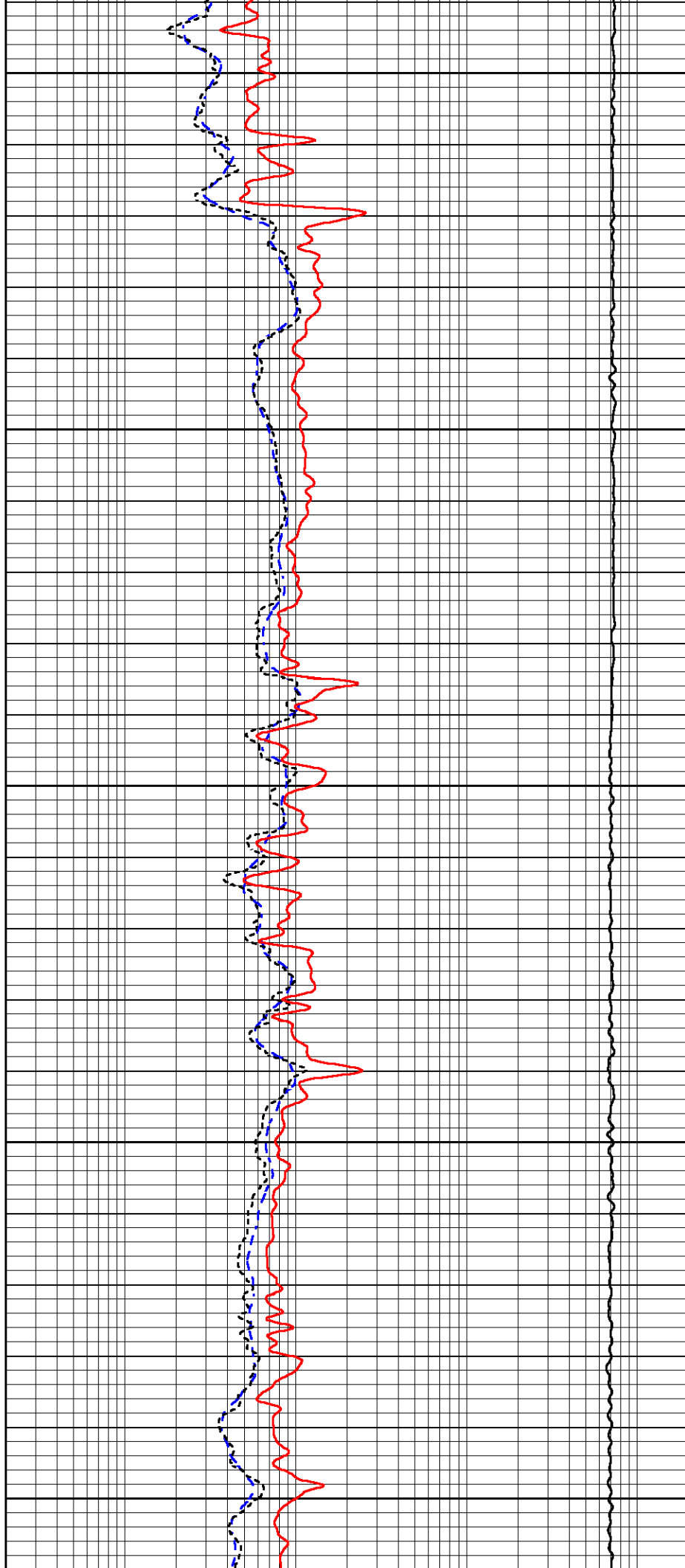
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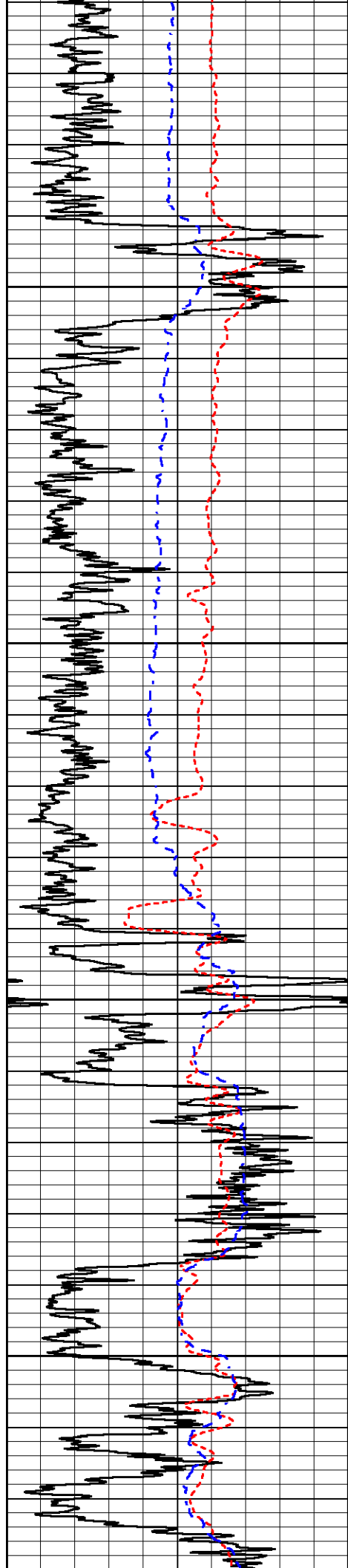
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2150

2200



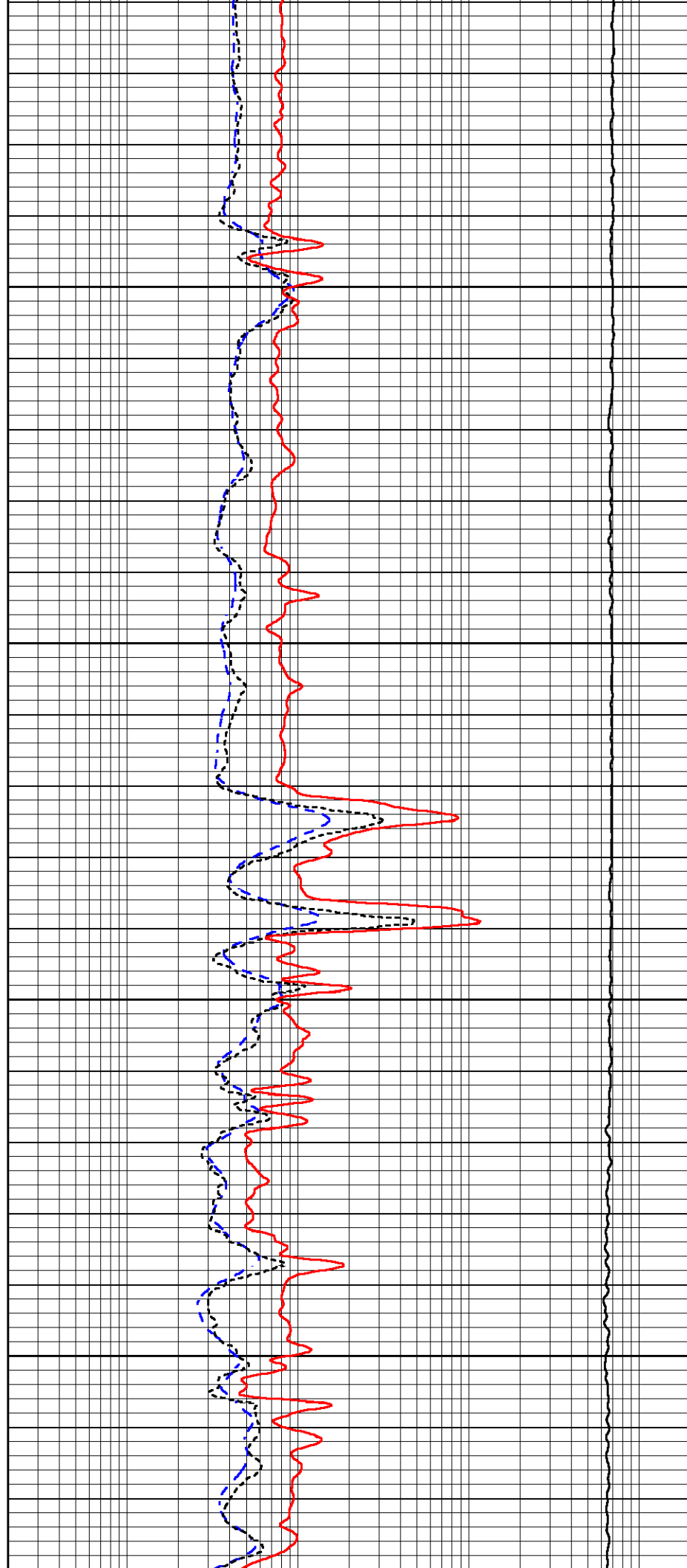


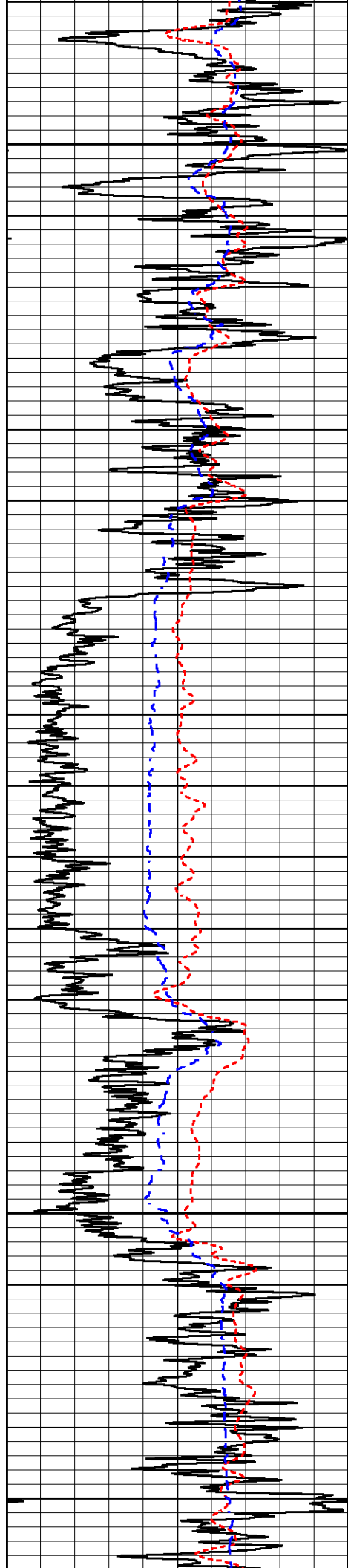
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2400





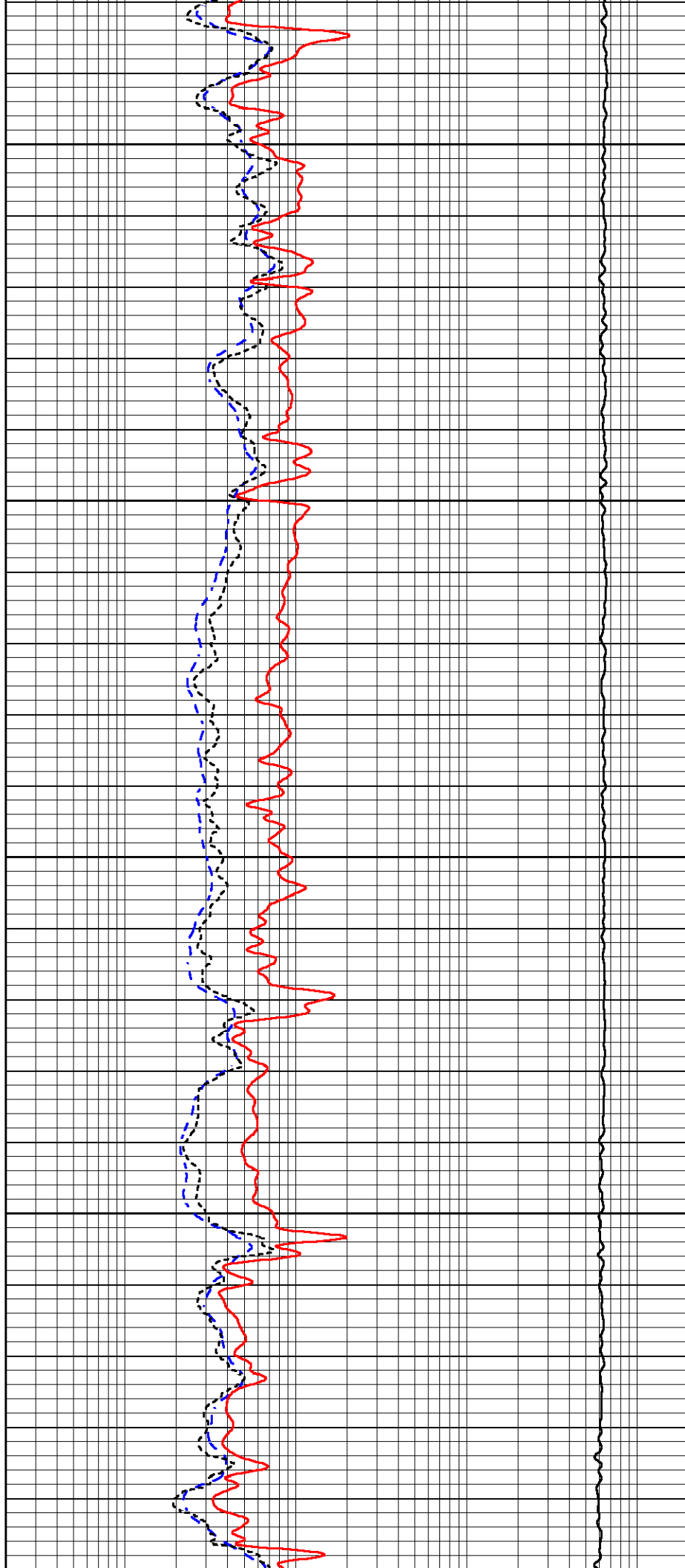
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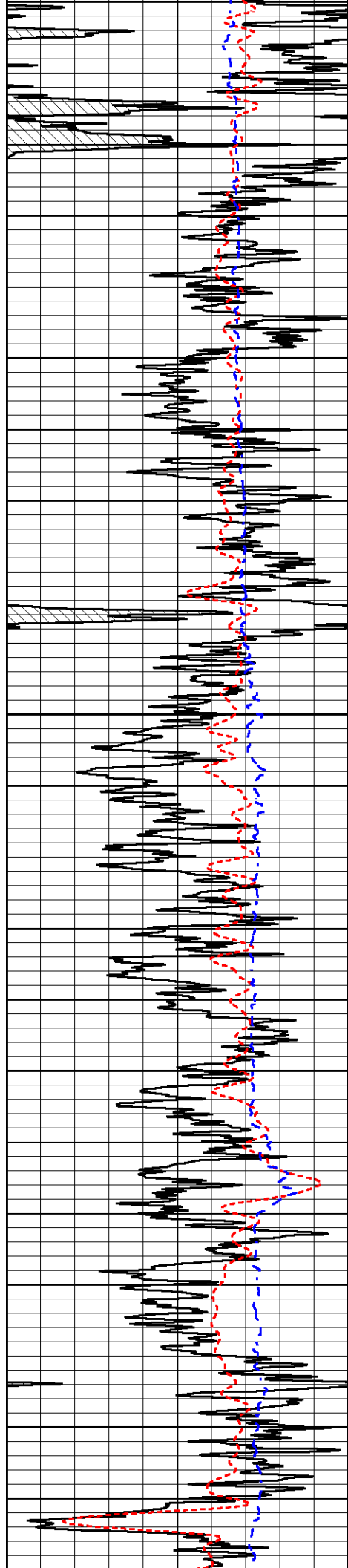
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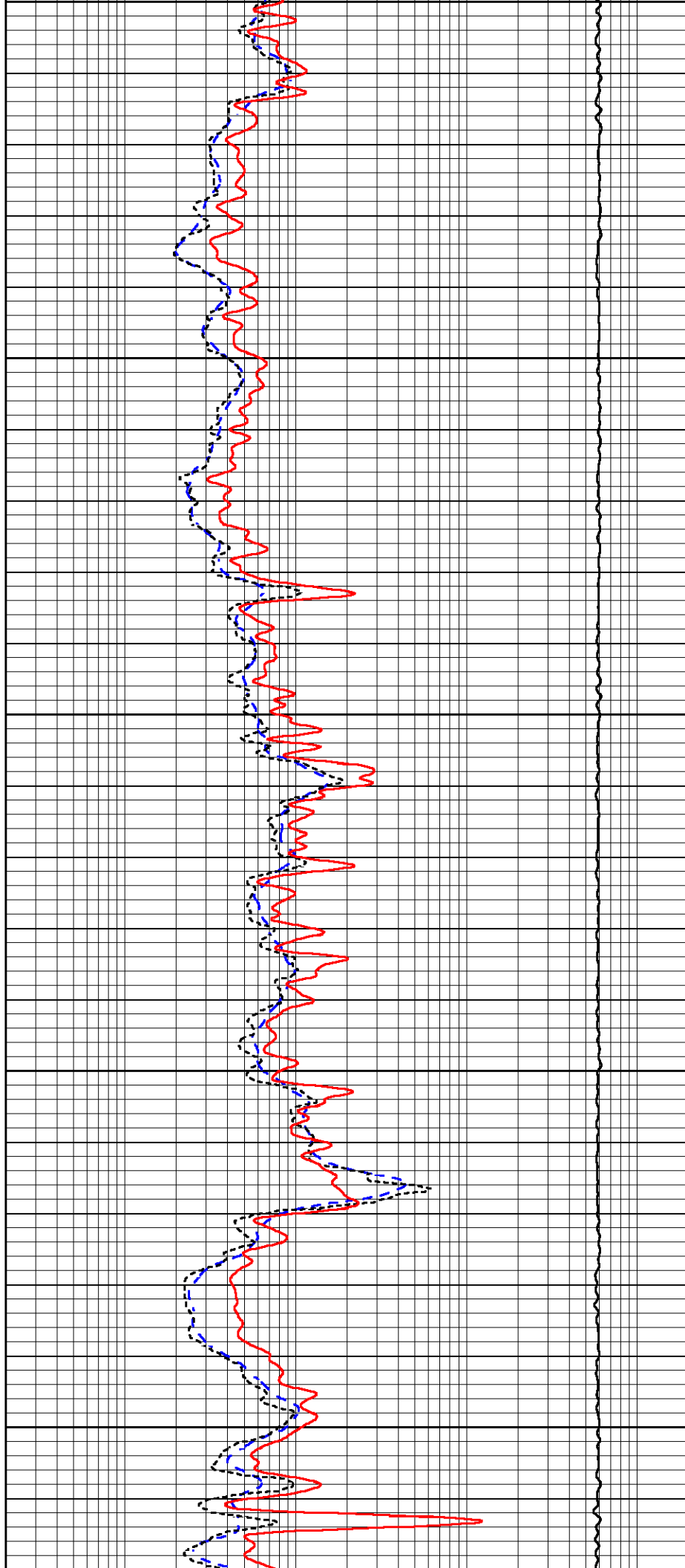
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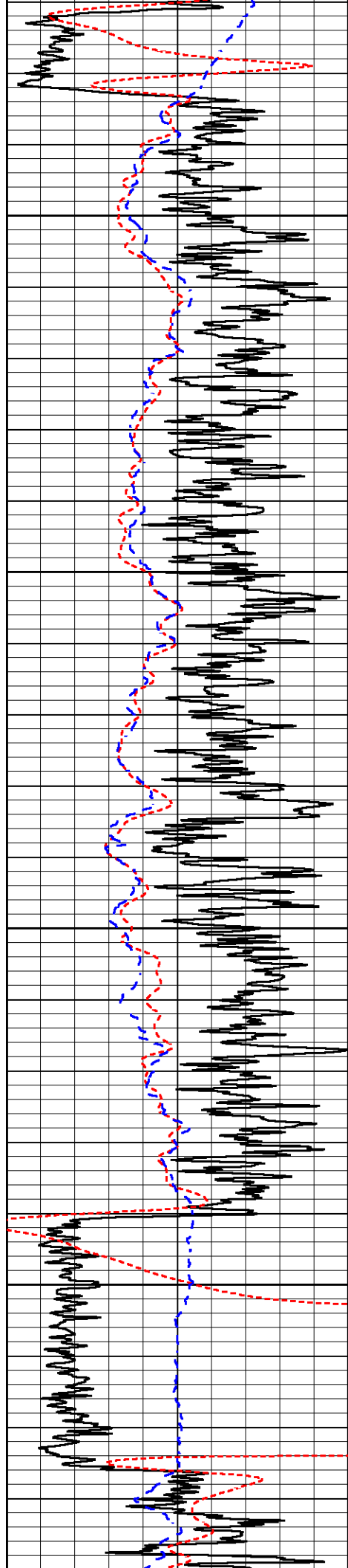
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2850



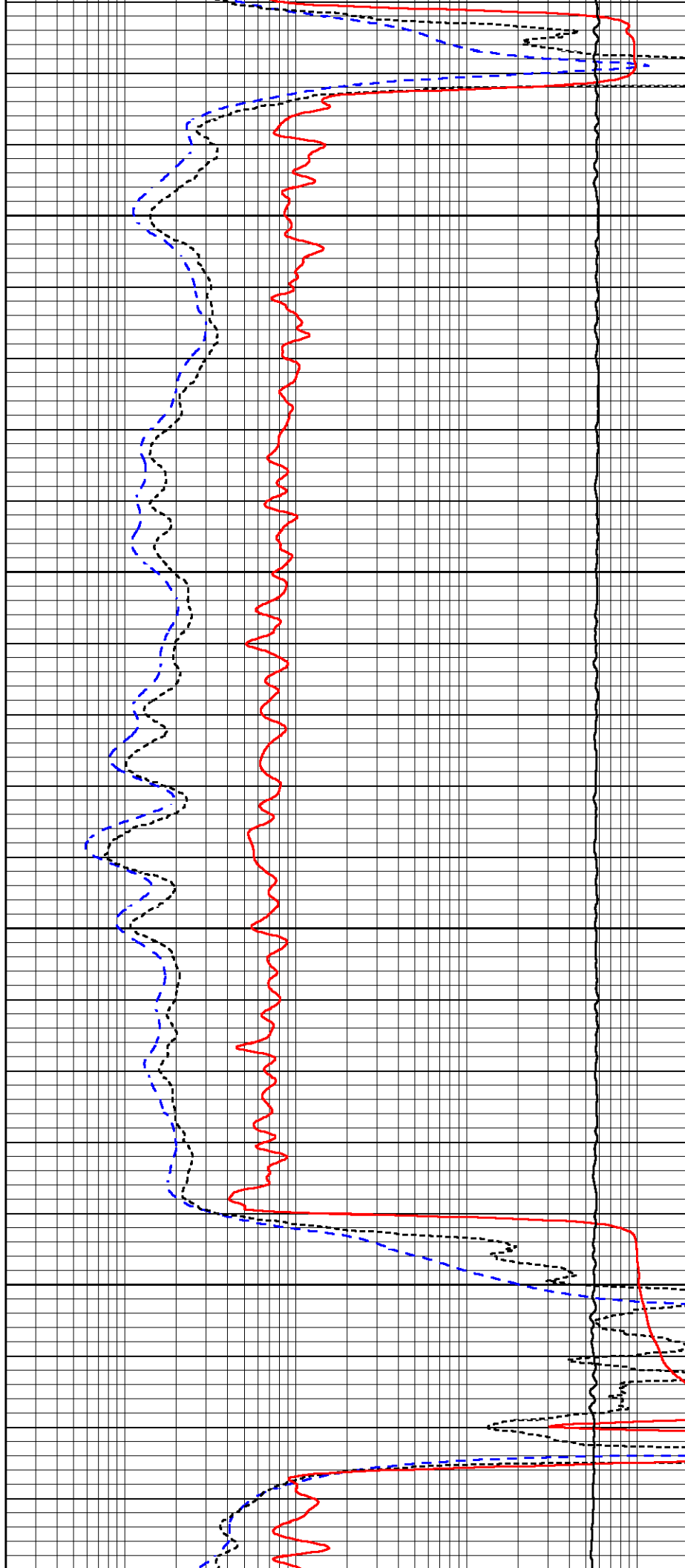


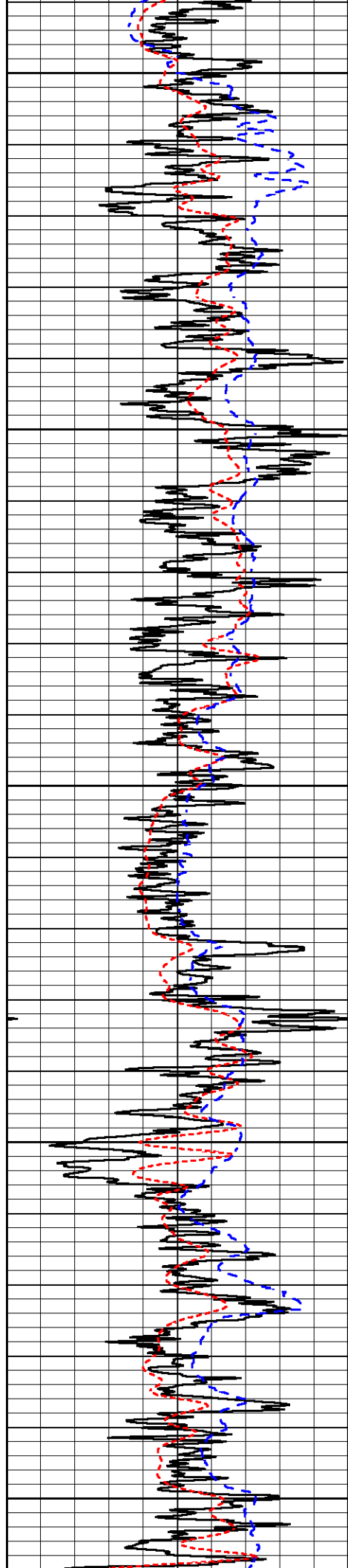
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3050





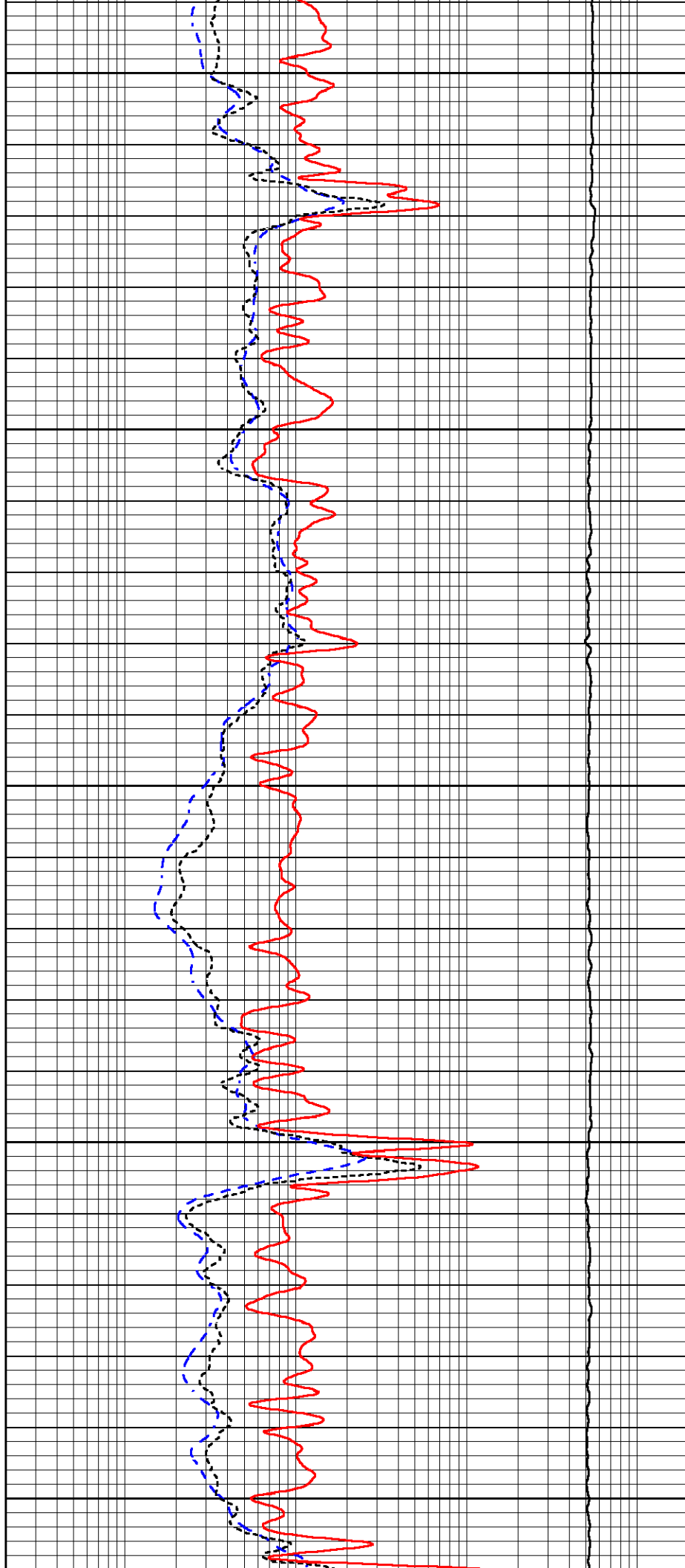
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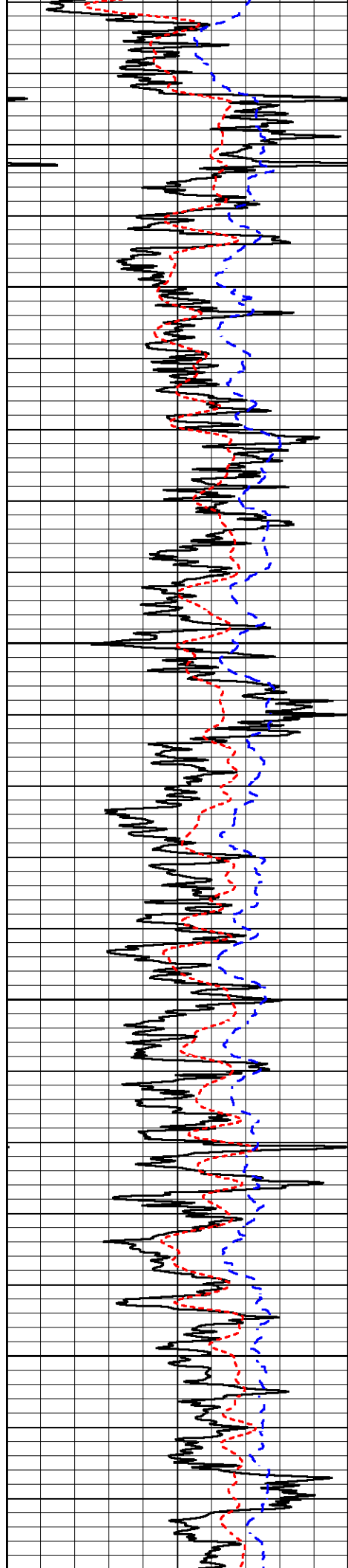
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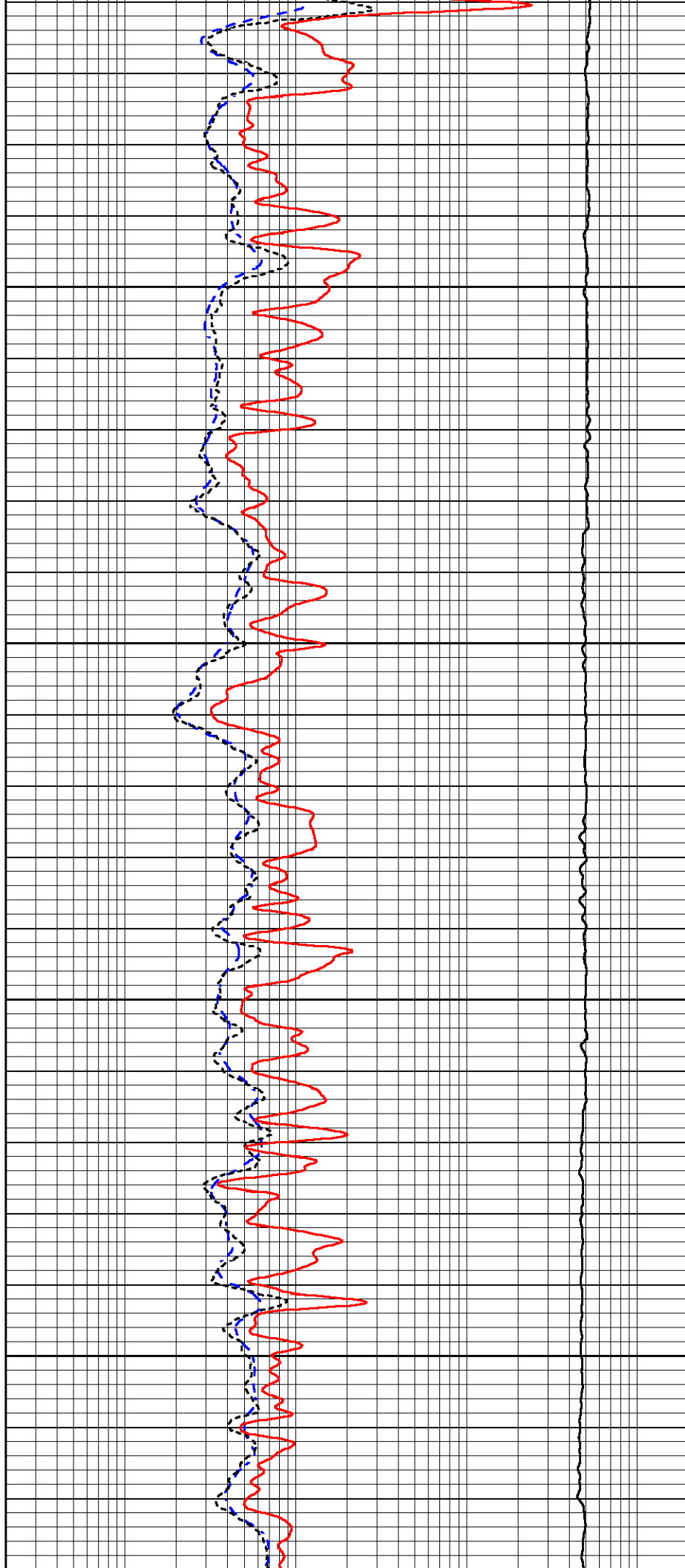


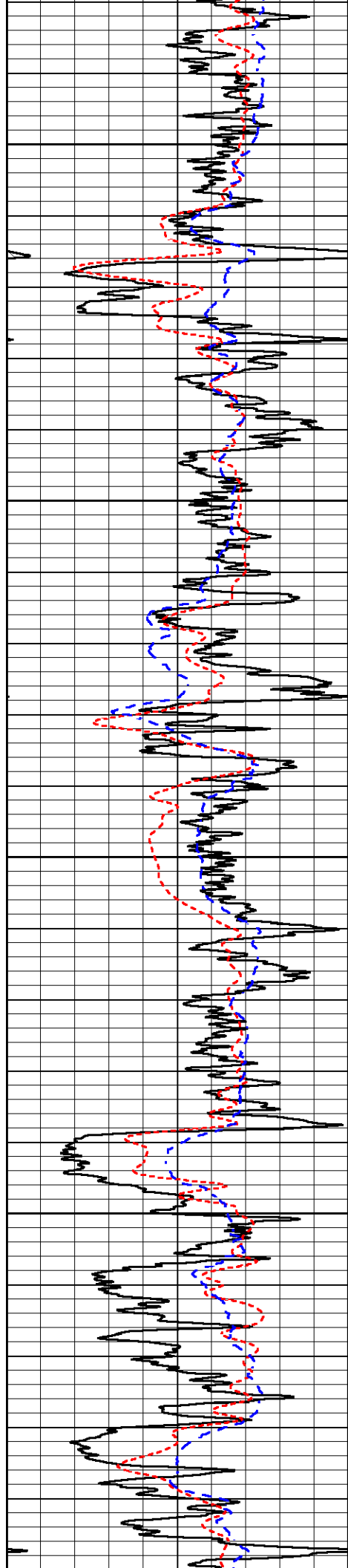
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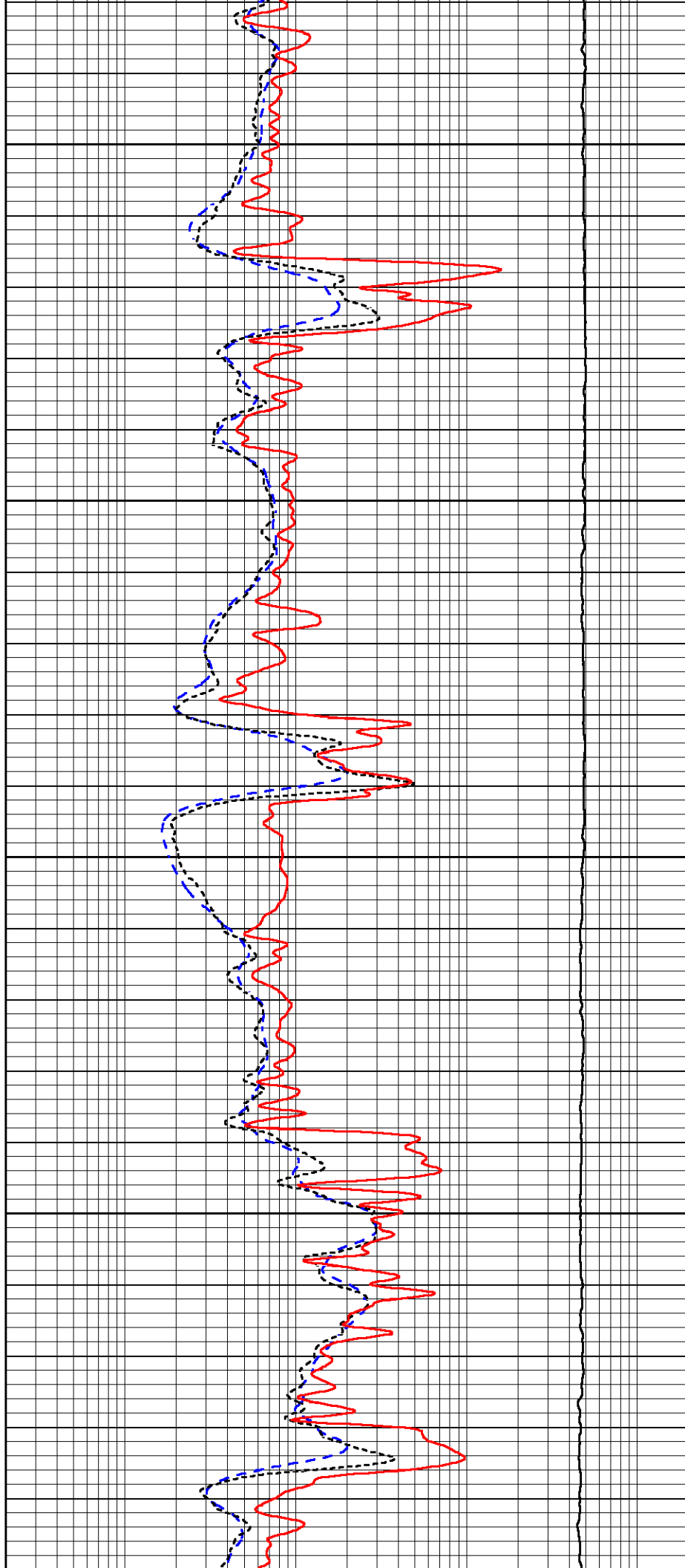
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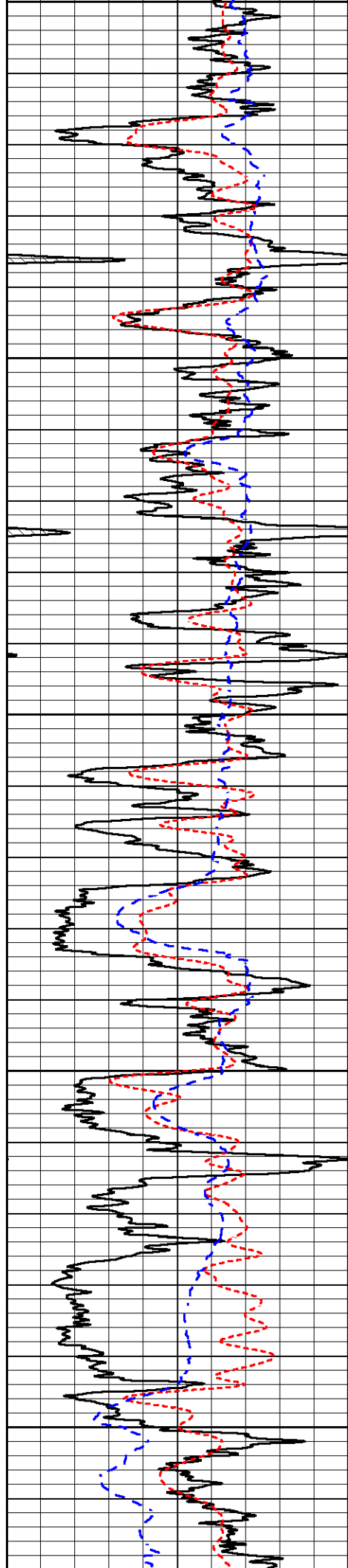
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3700

3750





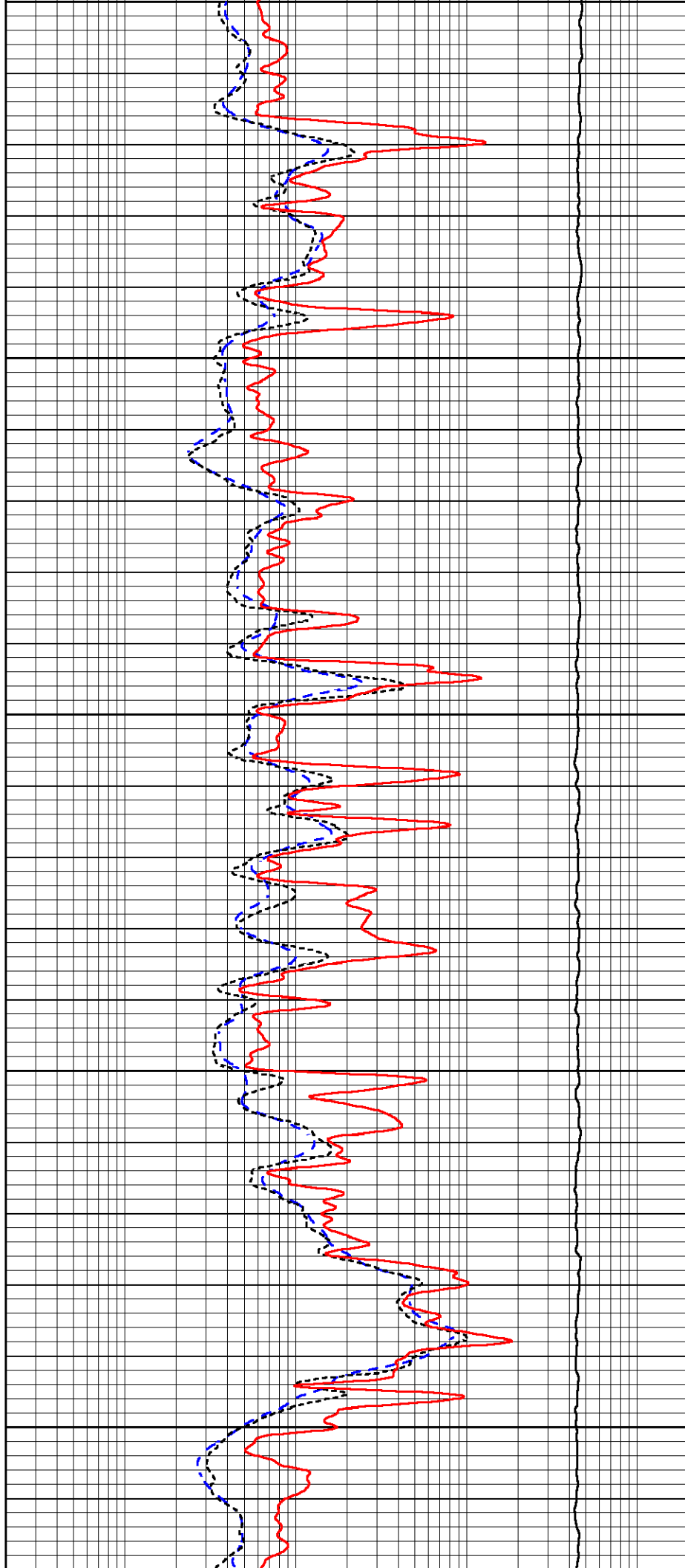
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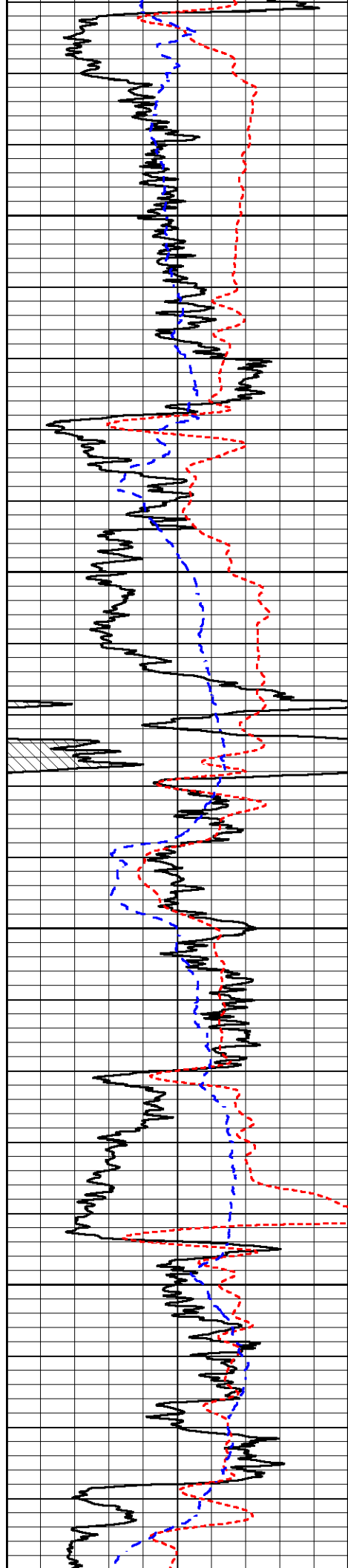
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3900

3950



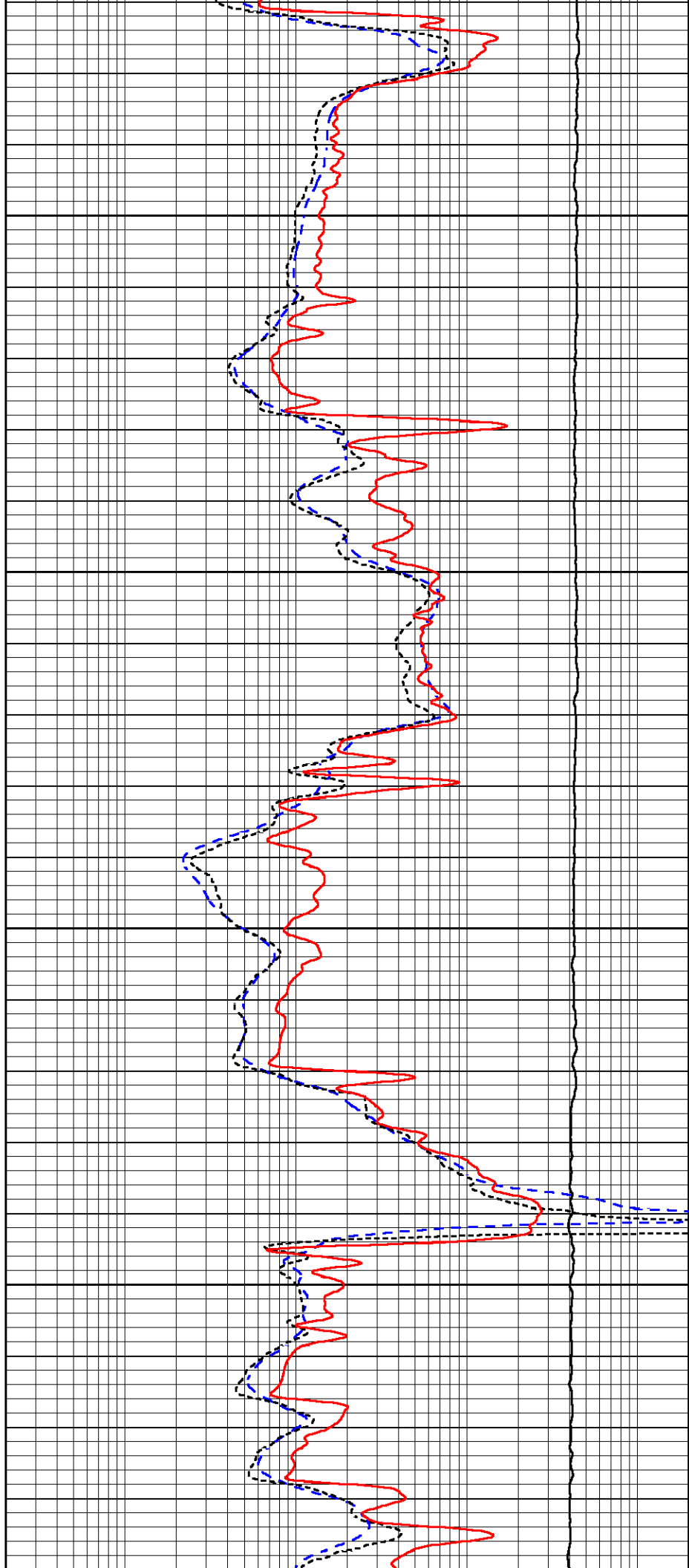


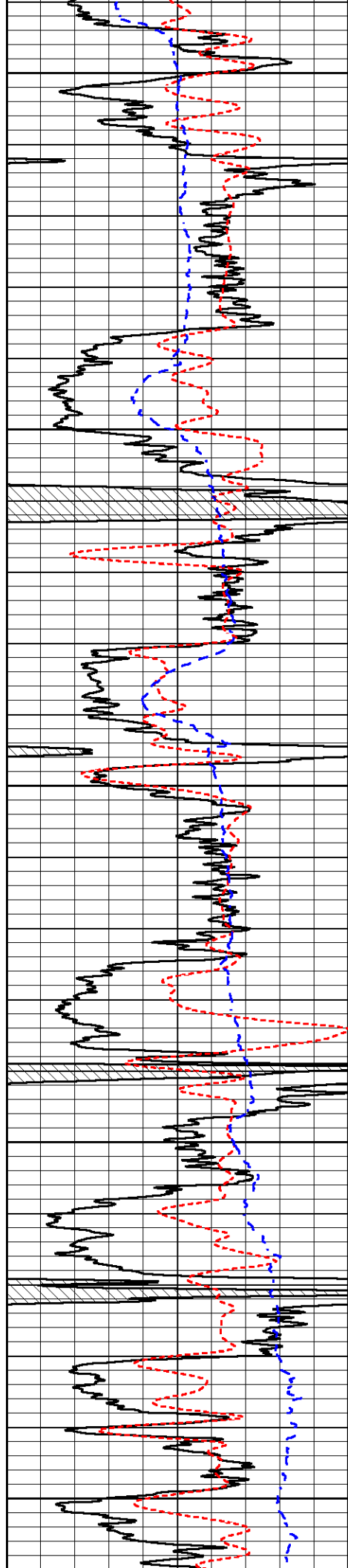
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4150





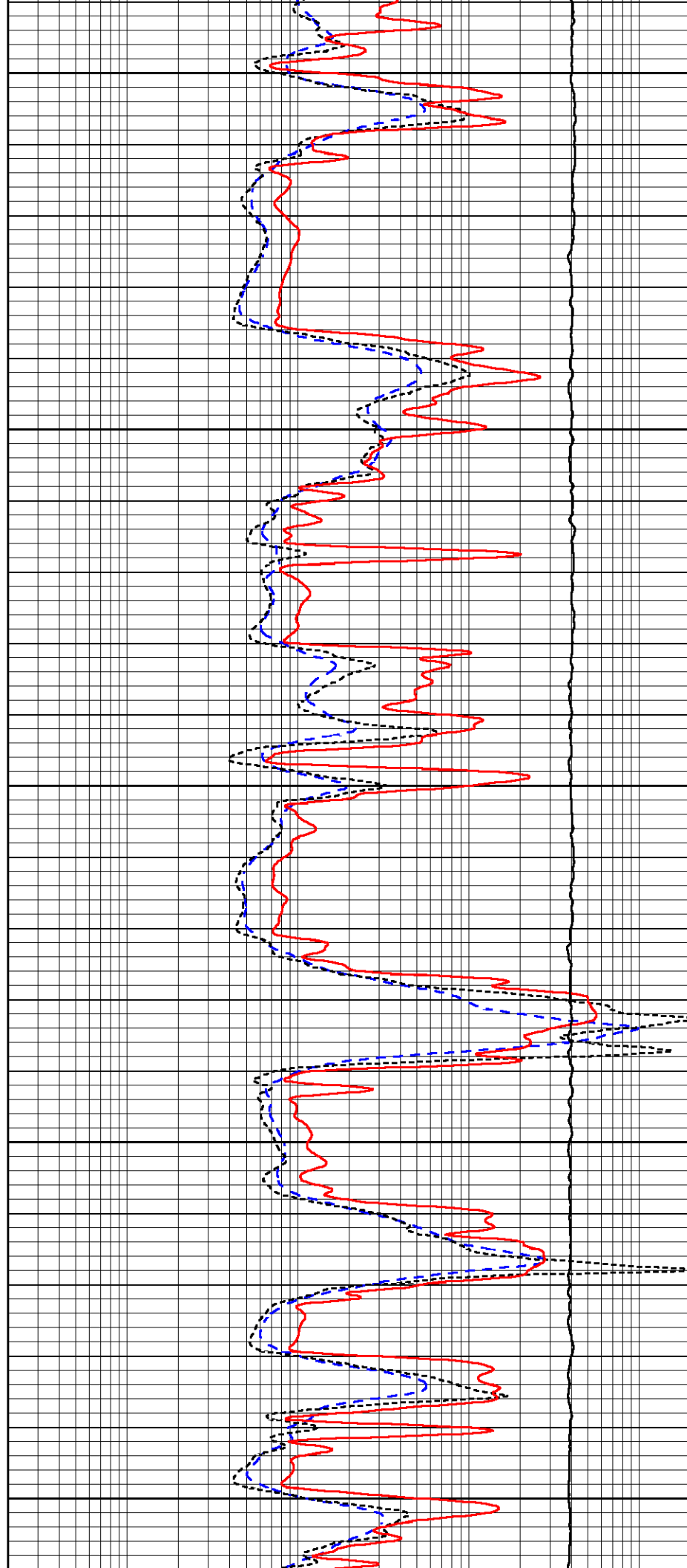
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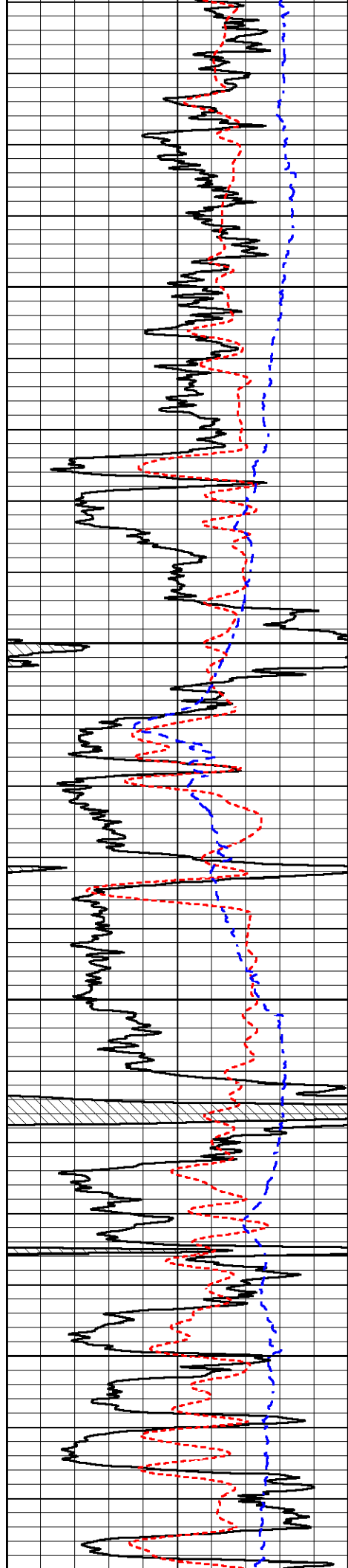
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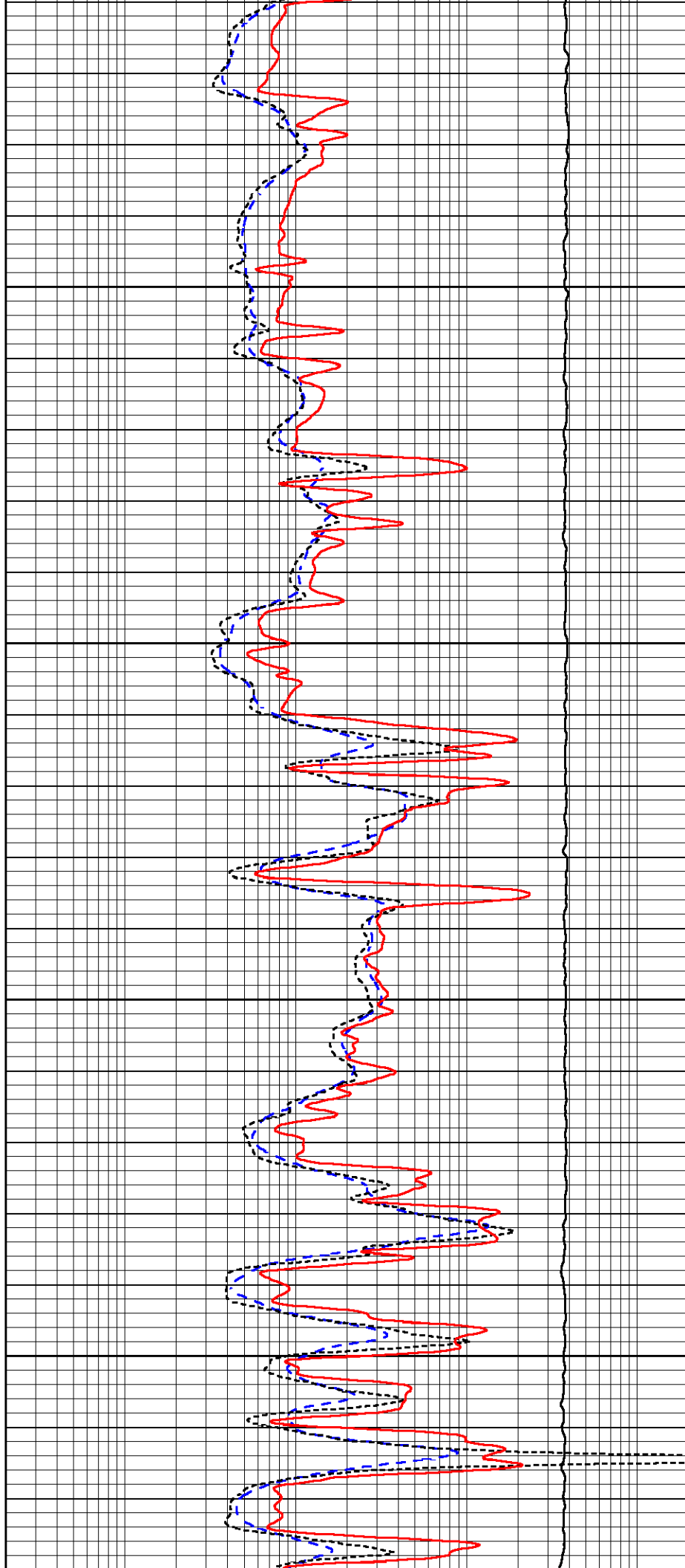


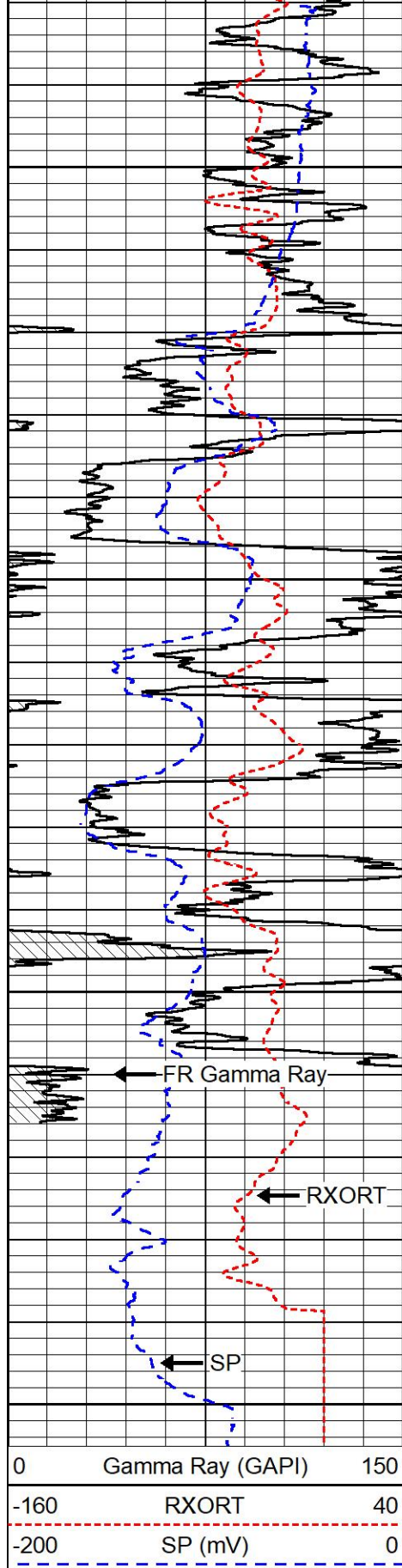
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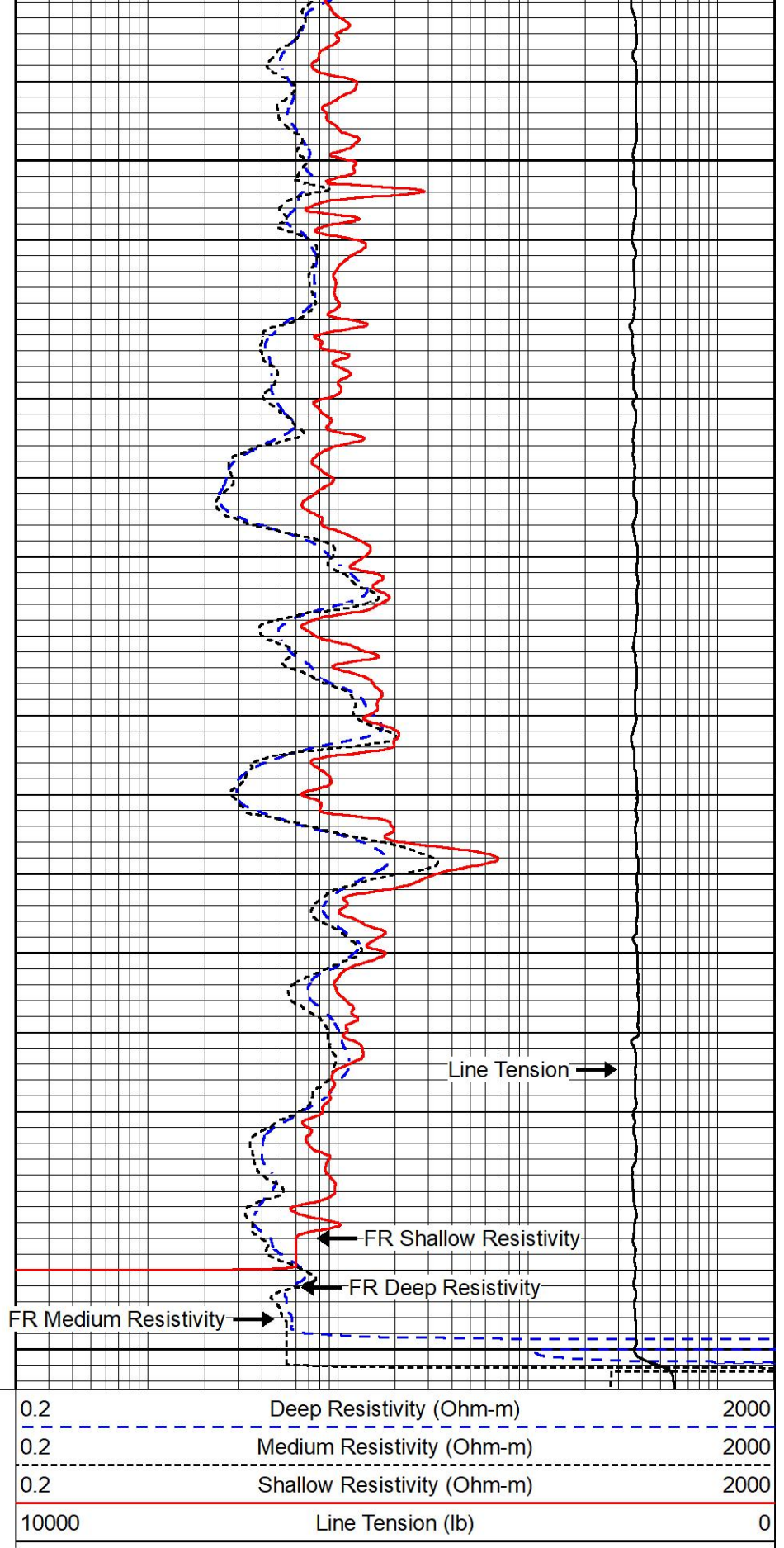


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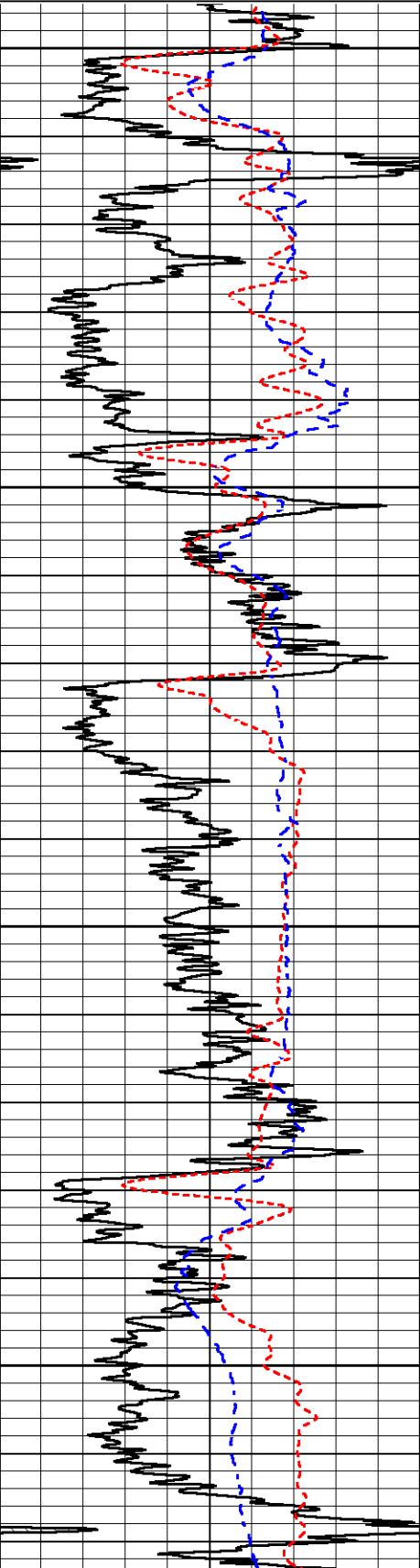
MIDWEST WIRELINE

REPEAT SECTION

REPEAT PASS

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0

0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

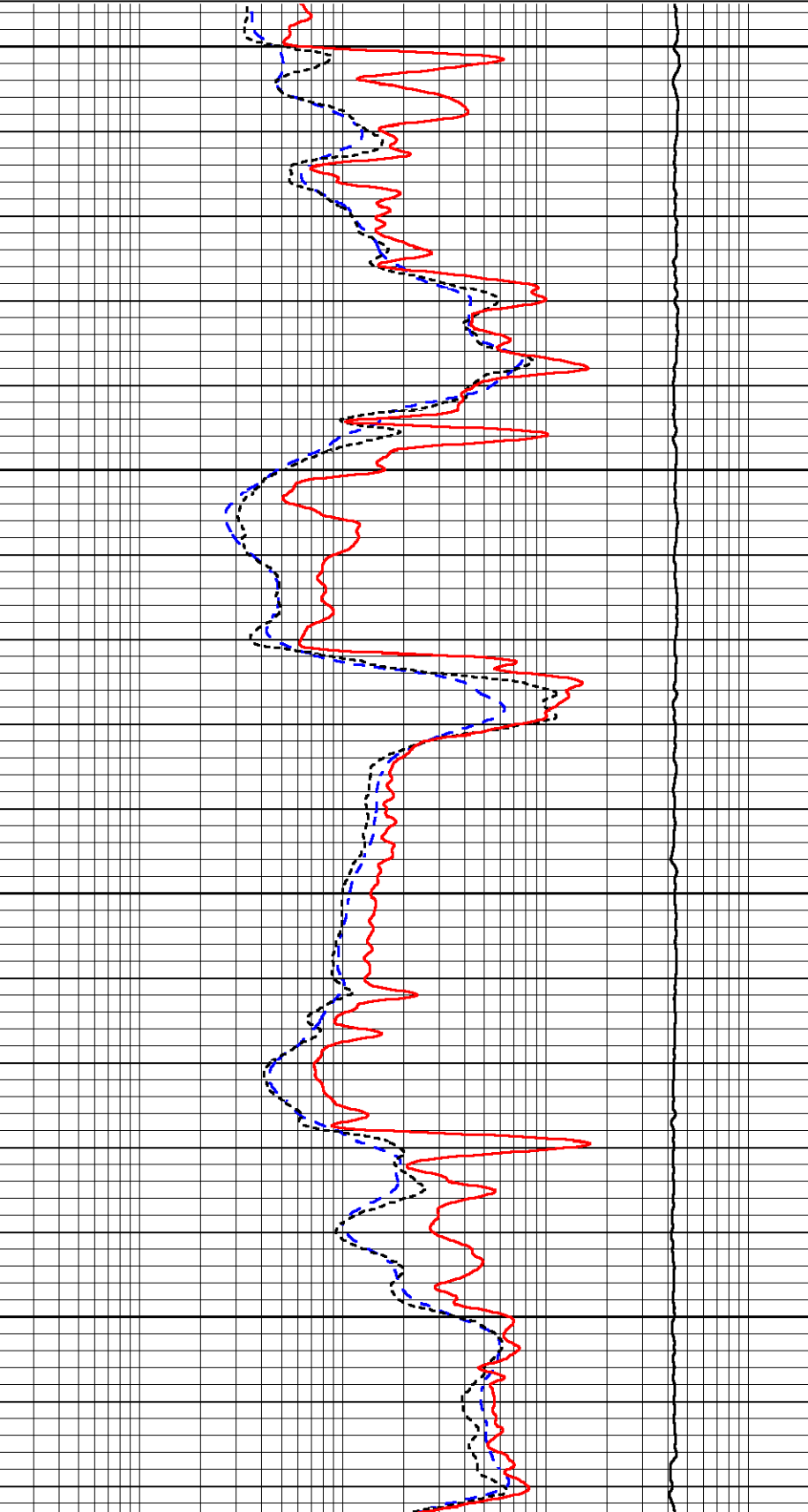


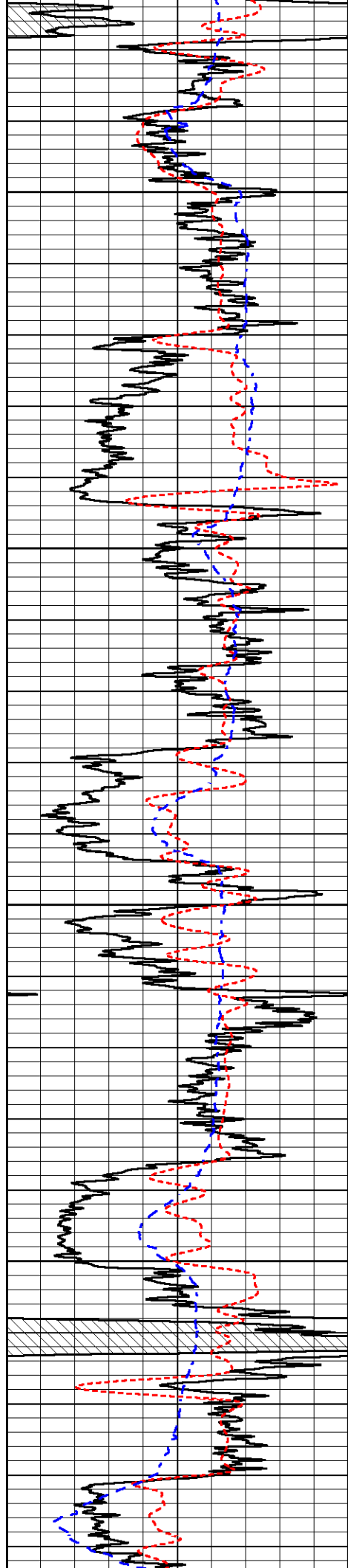
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3950

4000

4050



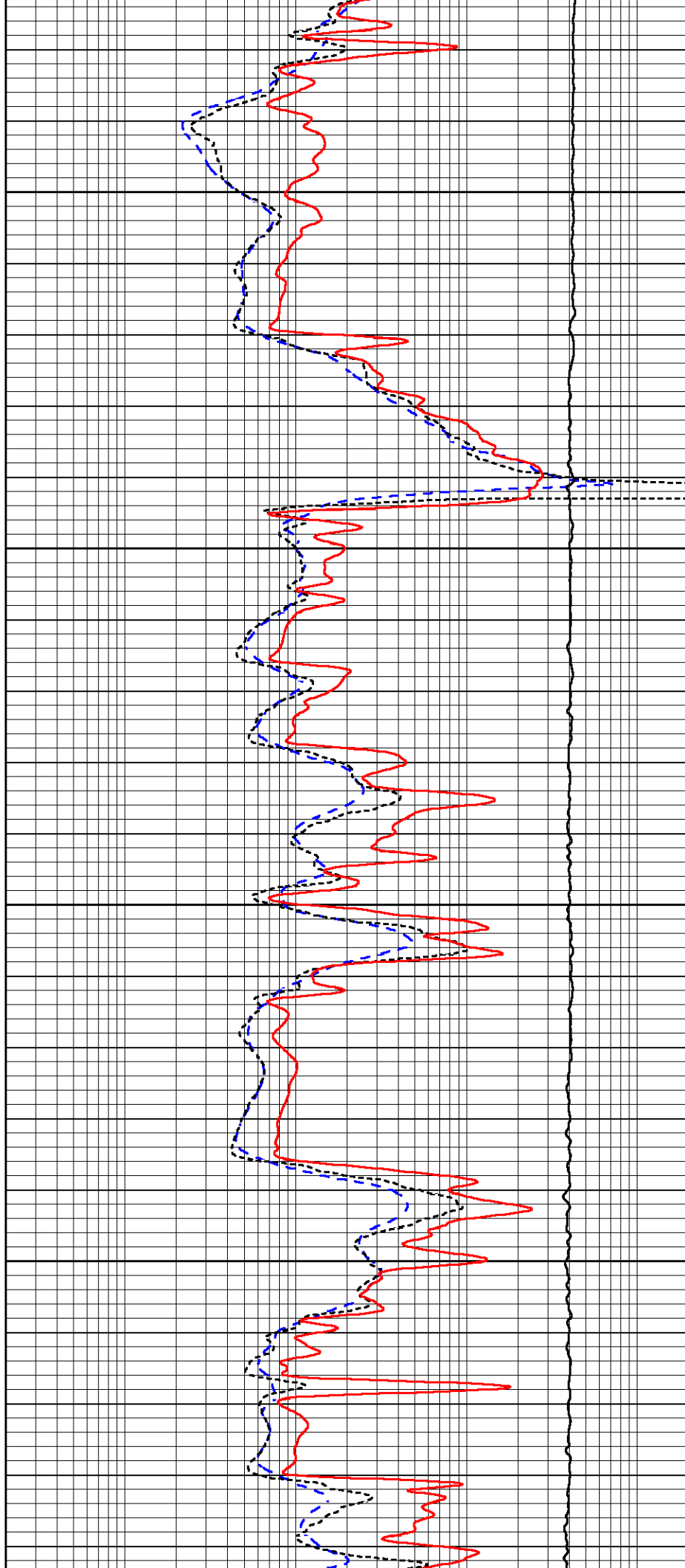


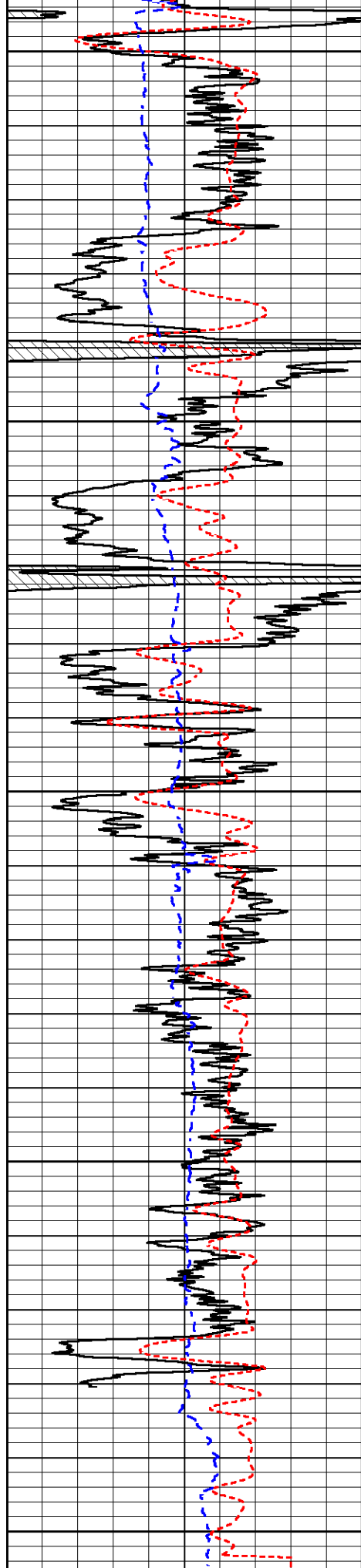
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4150

4200

4250





4300

4350

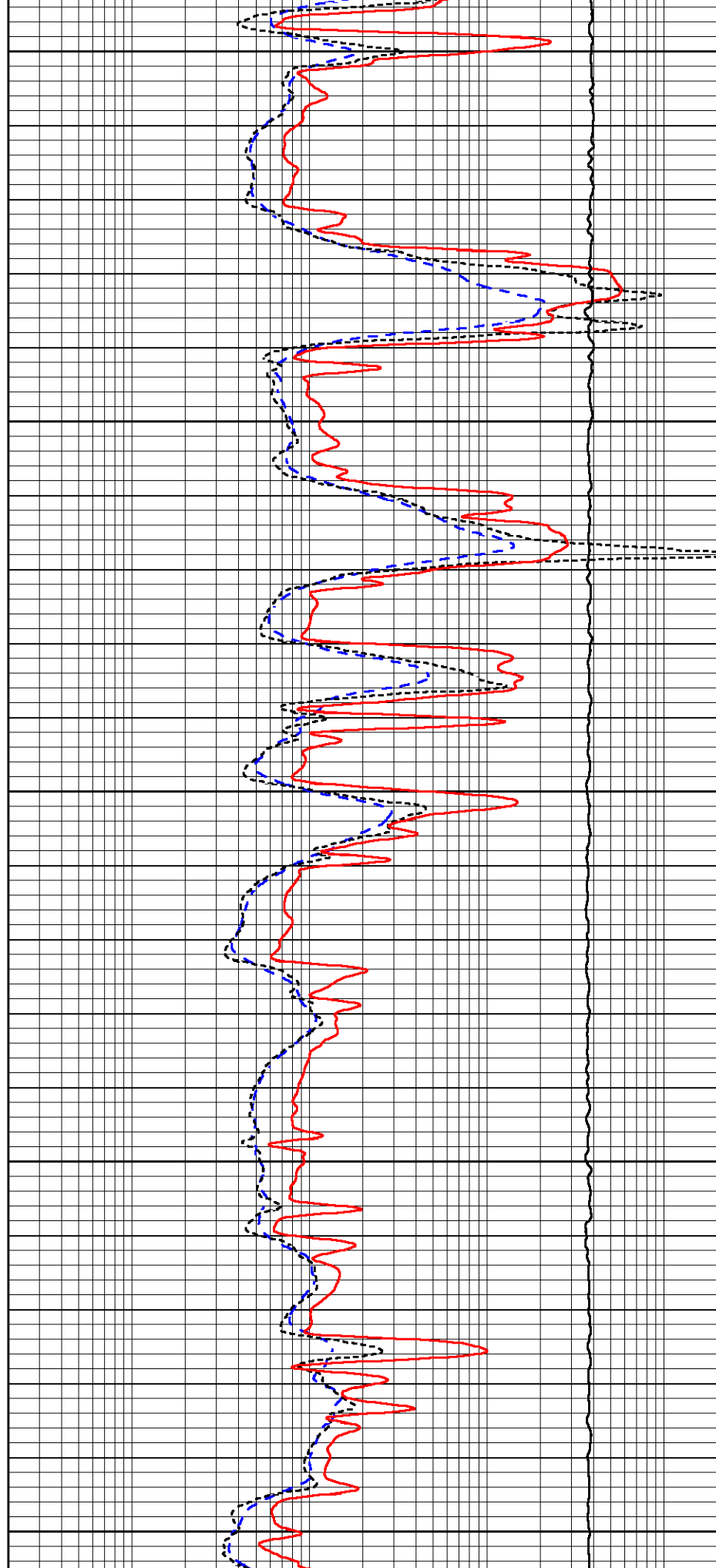
4400

4450

4500

0 Gamma Ray (GAPI) 150

-160 RXORT 40



0.2 Deep Resistivity (Ohm-m) 2000

0.2 Medium Resistivity (Ohm-m) 2000

-200	SP (mV)	0	0.2	Shallow Resistivity (Ohm-m)	2000
			10000	Line Tension (lb)	0

Calibration Report

Database File murfin_frisbie b 2-15.db
Dataset Pathname stkml/pass3.12
Dataset Creation Wed Jan 05 08:53:30 2022

Dual Induction Calibration Report

Serial-Model: 501 HT-M&W
Surface Cal Performed: Mon Dec 20 13:26:03 2021

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	183.000	mmho/m	0.420	-35.500
Medium	113.335	1585.690	0.000	442.000	mmho/m	0.300	-30.500

Microlog Calibration Report

Serial-Model: 402-PSIML
Performed: Wed Jan 5 07:26:27 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	33000.0000	-1.5500
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	24000.0000	0.0000
Caliper	1.0052	1.0858	5.0000	16.5000	in	142.7190	-142.5000

Compensated Density Calibration Report

Serial-Model: 305-05-M&W
Source #: 20762B
Master Calibration Performed: Mon Dec 13 15:18:29 2021

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

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Gamma Ray Calibration Report

Serial Number:	101	
Tool Model:	M&W	
Performed:	Fri Dec 3 15:10:46 2021	
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	Frisbie B #2-15
	Field	
	County	Rawlins
	State	Kansas