



# DUAL INDUCTION LOG

Company: F.G. HOLL COMPANY, LLC  
 Well: LEROY FARMING TRUST #2-30  
 Field: WILDCAT  
 County: BARTON  
 State: KANSAS

Company: F.G. HOLL COMPANY, LLC  
 Well: LEROY FARMING TRUST #2-30  
 Field: WILDCAT  
 County: BARTON  
 State: KANSAS

Location: API #: 15-009-26279-00-00  
 945' FNL & 1400' FWL  
 SEC 30 TWP 19S RGE 14W  
 Permanent Datum: GROUND LEVEL Elevation 1907'  
 Log Measured From: KELLY BUSHING  
 Drilling Measured From: KELLY BUSHING  
 Other Services: CNL/CDL MEL/BHCS  
 Elevation: K.B. 1915', D.F. N/A, G.L. 1907'

Date	11/13/2019
Run Number	ONE
Depth Driller	3625'
Depth Logger	3626'
Bottom Logged Interval	3625'
Top Log Interval	00
Casing Driller	8.625" @ 844'
Casing Logger	843'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	5900
Density / Viscosity	9.3 55
pH / Fluid Loss	10.5 8.4
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.65 @ 76
Rmt @ Meas. Temp	.49 @ 76
Rmc @ Meas. Temp	.88 @ 76
Source of Rmf / Rmc	CHARTS
Rm @ BHT	.44 @ 112
Operating Rig Time	5 HOURS
Max Rec. Temp. F	112 DEGF
Equipment Number	P-108
Location	HAYS
Recorded By	J. HENRICKSON
Witnessed By	RENE HUSTEAD

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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.  
 HEIZER KANSAS  
 1 WEST, 3 1/2 SOUTH, 1 WEST, 1/4 SOUTH, EAST INTO

Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES  
[www.pioneerenergy.com](http://www.pioneerenergy.com) 785-625-3858

Your Pioneer Energy Services Crew Engineer: J. HENRICKSON Operator: Operator: Operator:	This Log Record Was Witnessed By Primary Witness: RENE HUSTEAD Secondary Witness: Secondary Witness: Secondary Witness:
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# Log Variables

DatabaseC:\ProgramData\Warrior\Data\fg\_holl\_leroy\_farming\_trust\_2\_30.db  
 Dataset field/well/stack/pass4.1/\_vars\_

## Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	112	4.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	160	0	Off	3625

## 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)
GR	33.00		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	29.90 29.15		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	20.85 20.83 20.35		CDL-M&W (979-229)	8.50	4.00	250.00
RLL3 RLL3F	15.80 15.79					

CILD 8.00

CILM 4.70

SP 0.20

DIL-M&W (55-222)

18.50

3.50

220.00

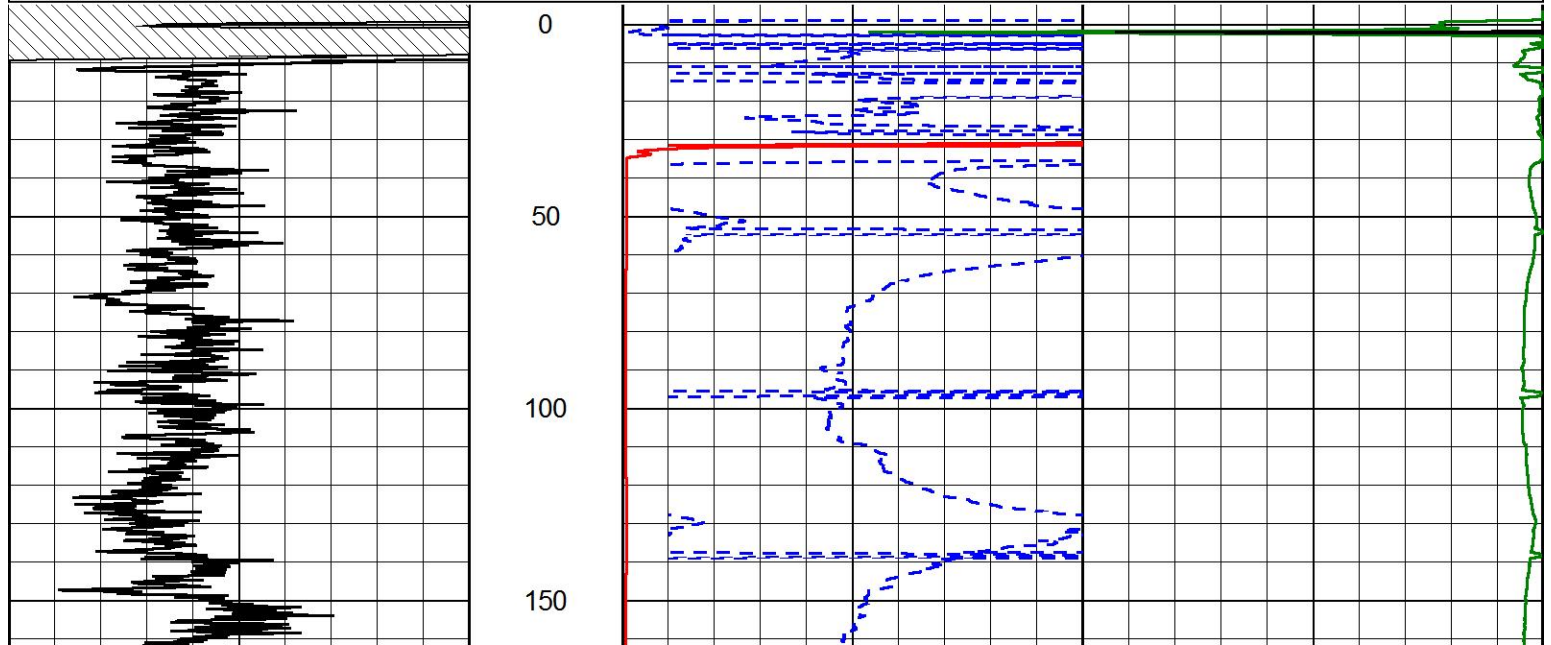
Dataset: fg\_holl\_leroy\_farming\_trust\_2\_30.db: field/well/stack/pass4.1  
 Total length: 35.50 ft  
 Total weight: 620.00 lb  
 O.D.: 4.00 in

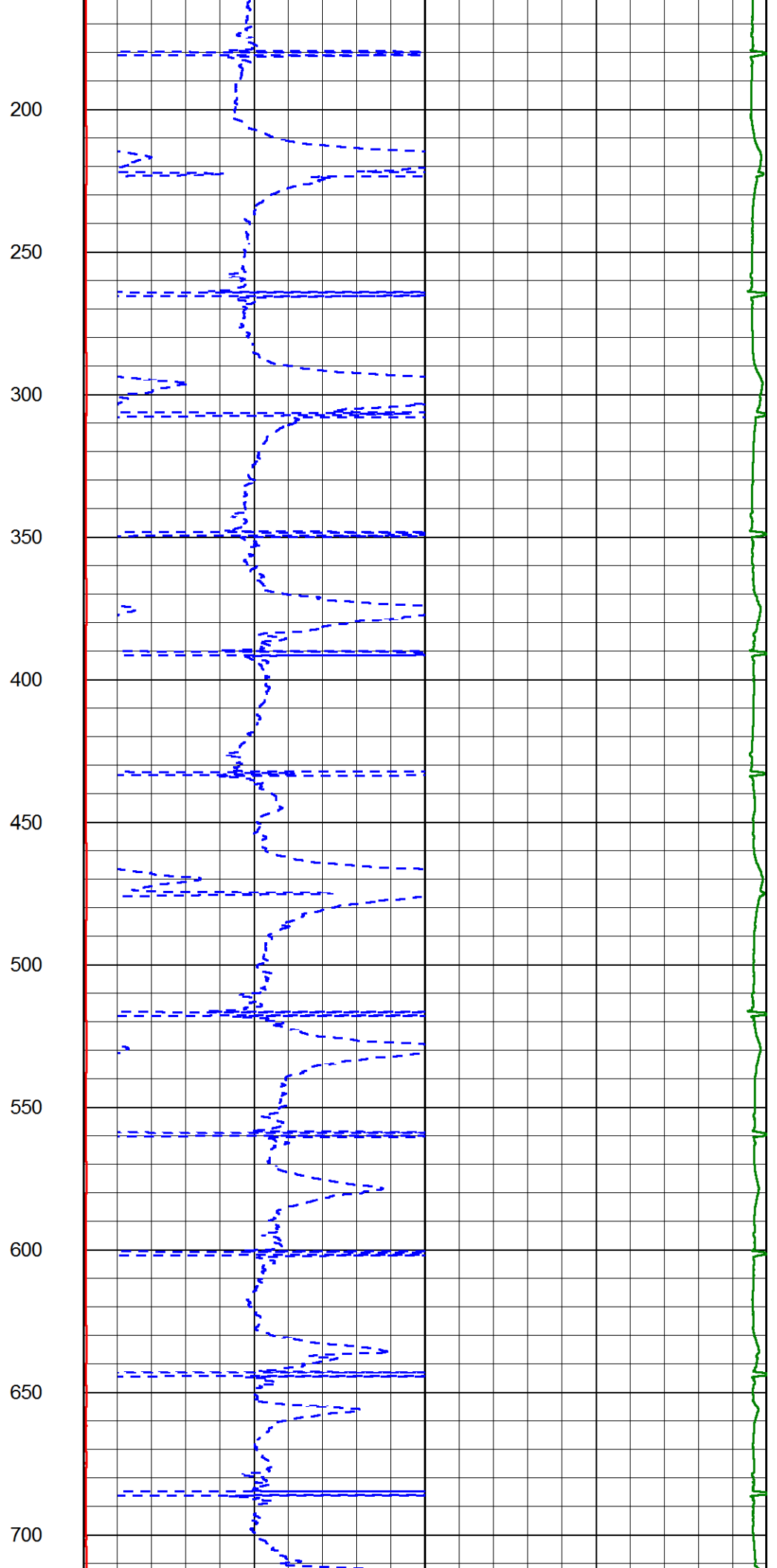
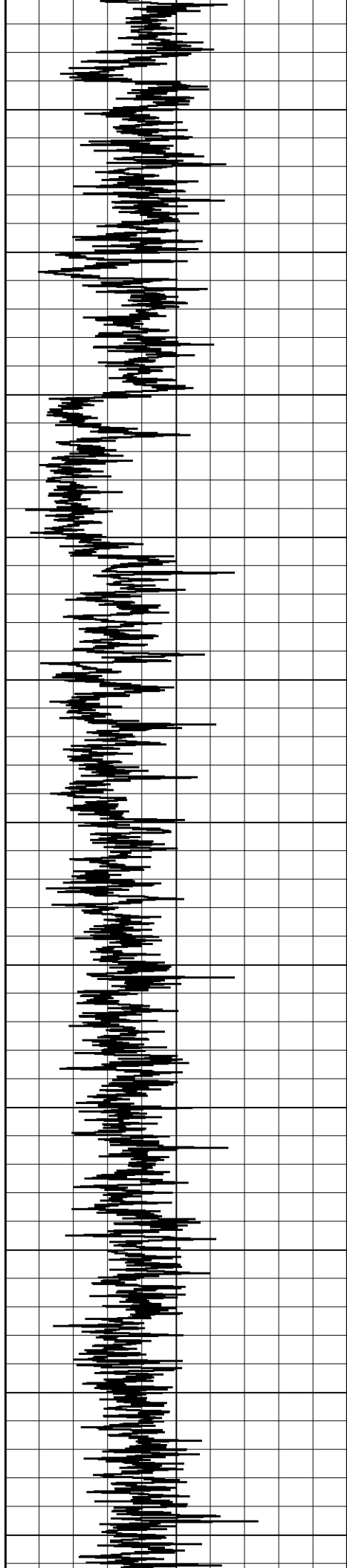


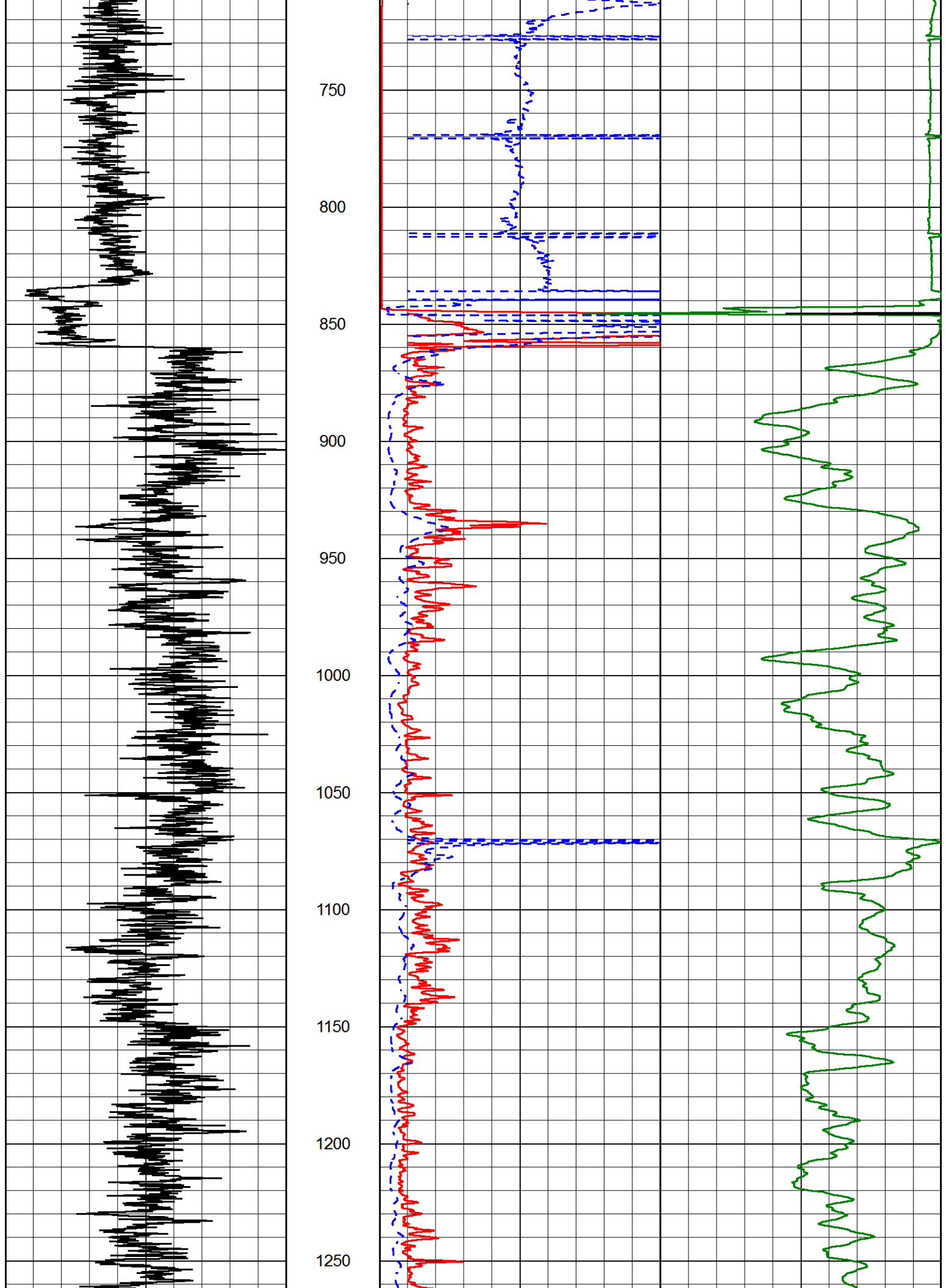
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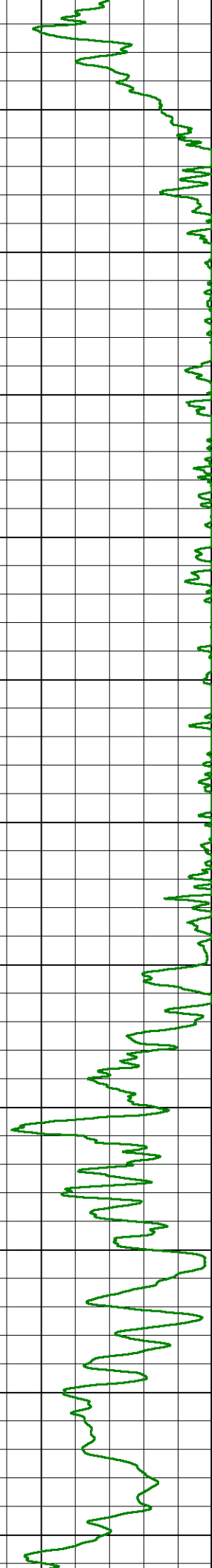
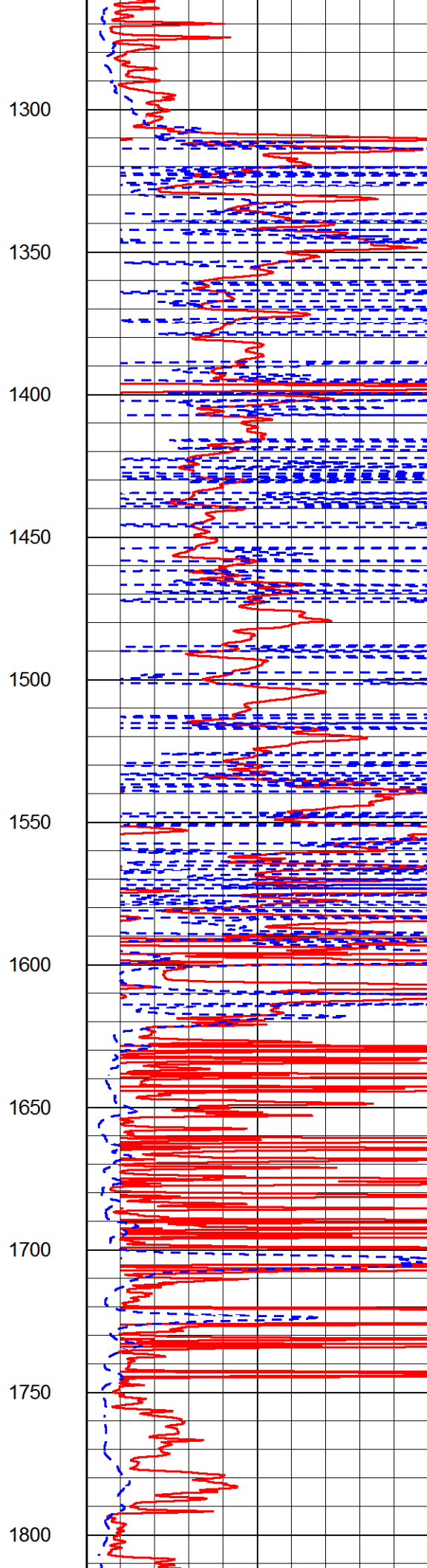
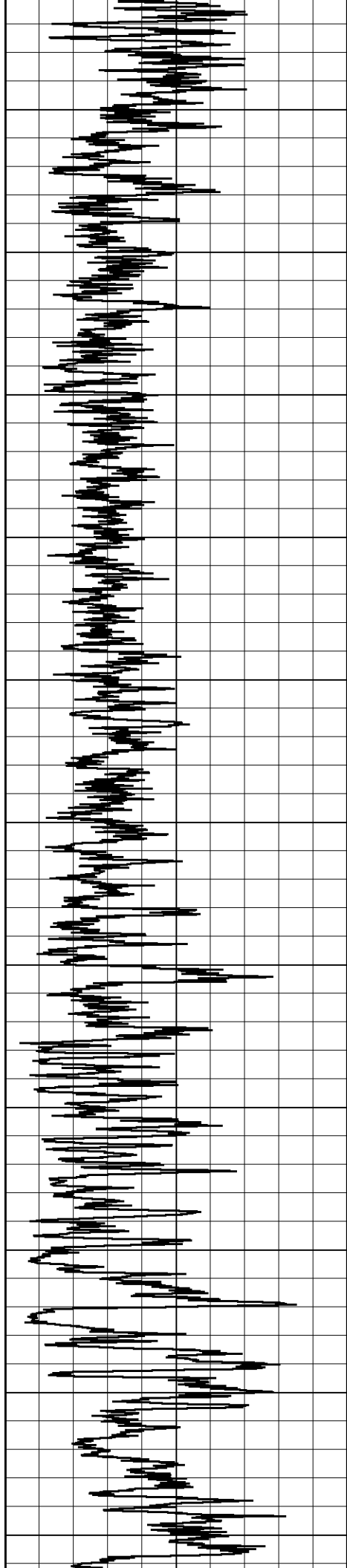
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 Presentation Format dil2in  
 Dataset Creation Wed Nov 13 18:37:58 2019  
 Charted by Depth in Feet scaled 1:600

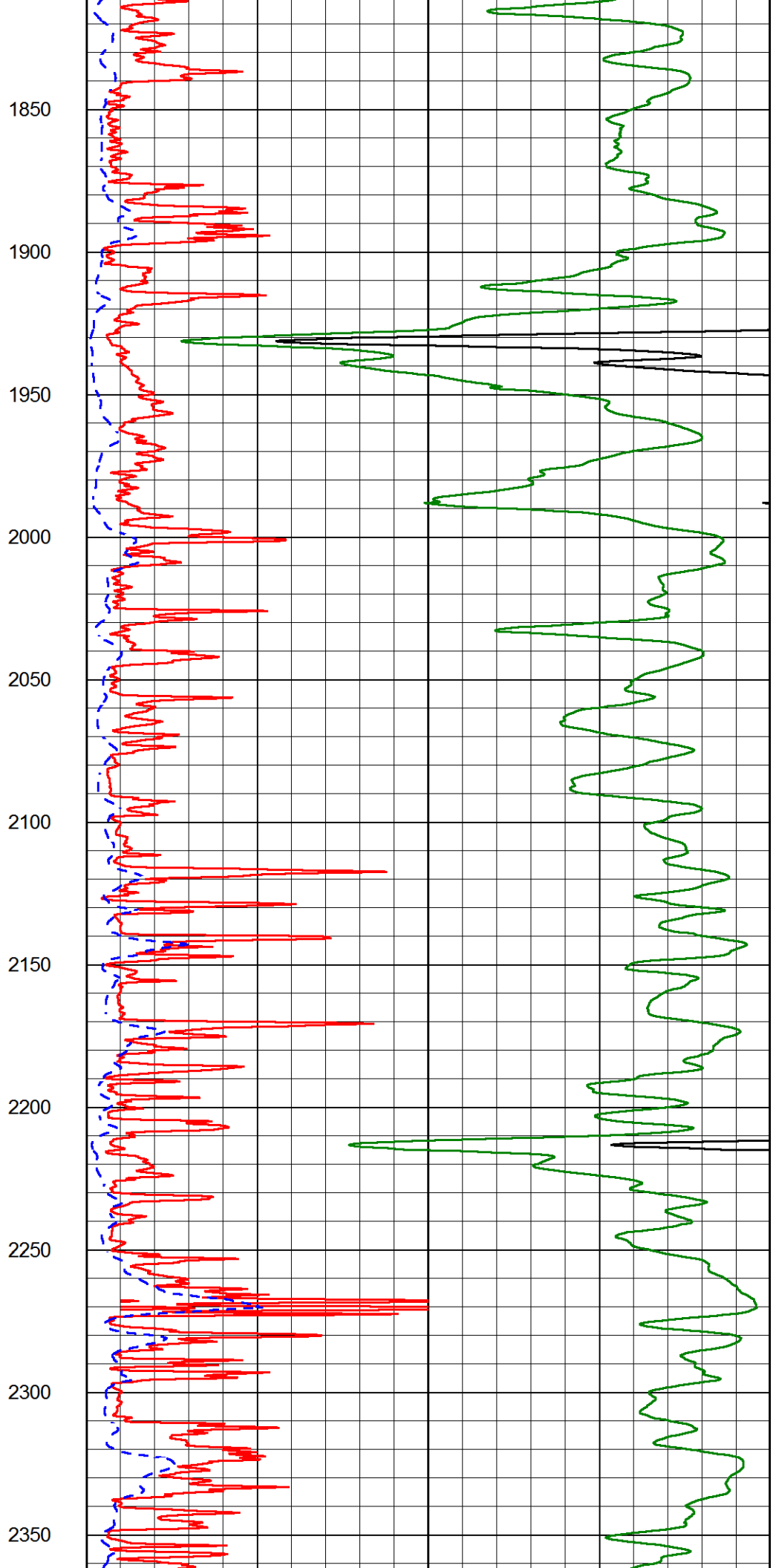
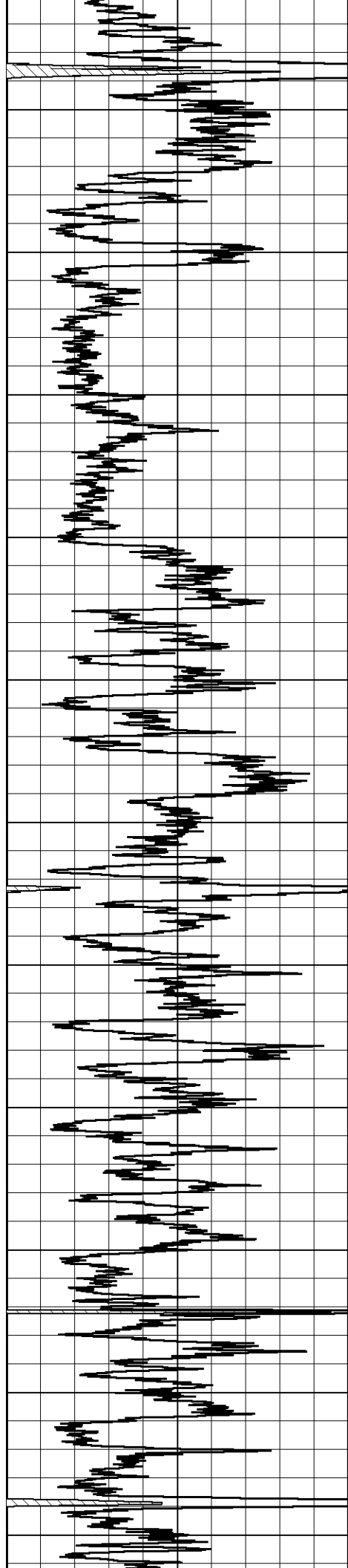
0	GAMMA RAY (GAPI)	150	2000	CILD (mmho/m)	0
0	RLL3 (Ohm-m)	50			
0	DEEP RESISTIVITY (Ohm-m)	50			
50	RLL3 (Ohm-m)	200			
50	RILD (Ohm-m)	200			

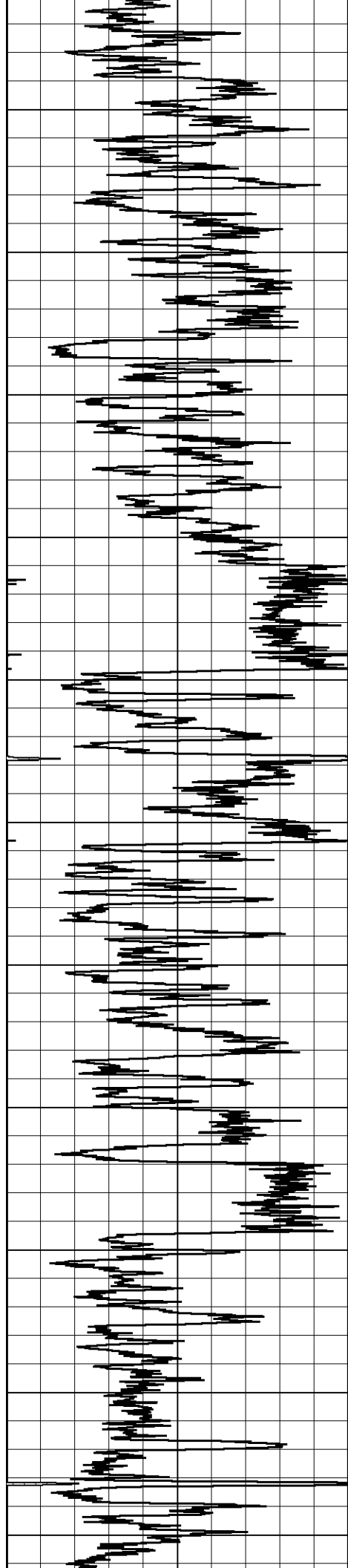




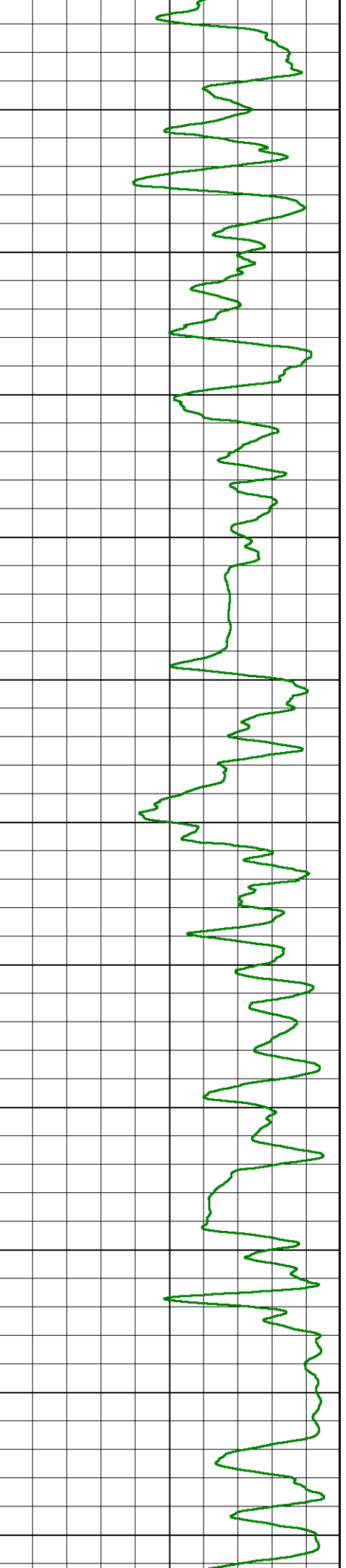
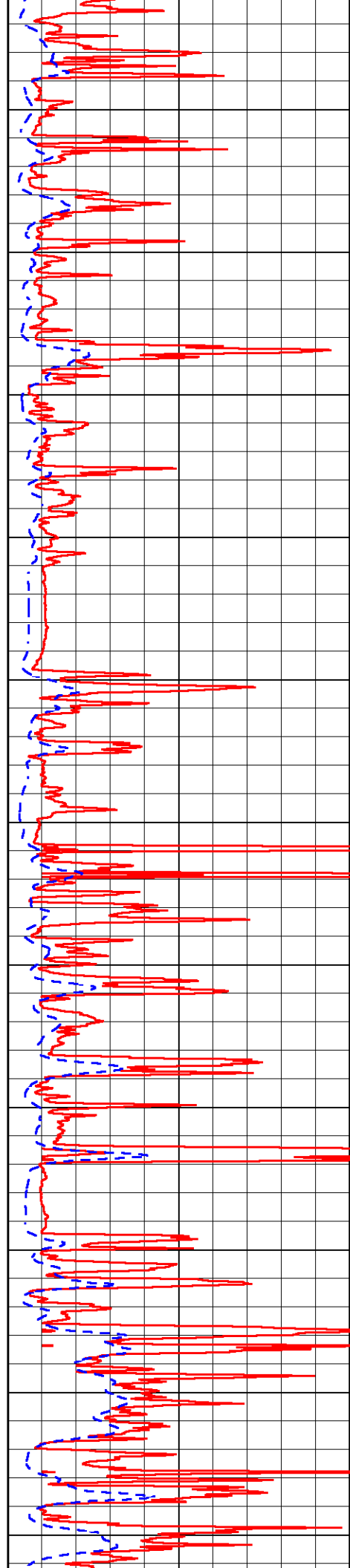


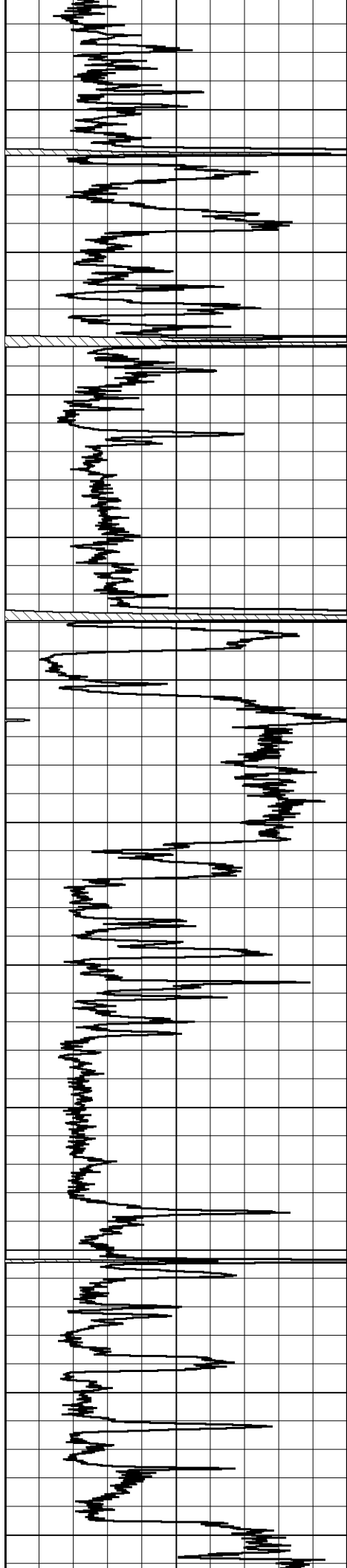






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2450  
2500  
2550  
2600  
2650  
2700  
2750  
2800  
2850  
2900





2950

3000

3050

3100

3150

3200

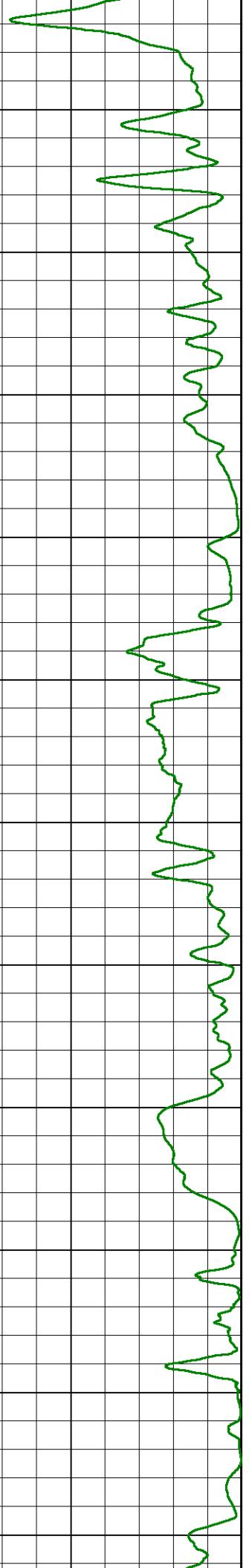
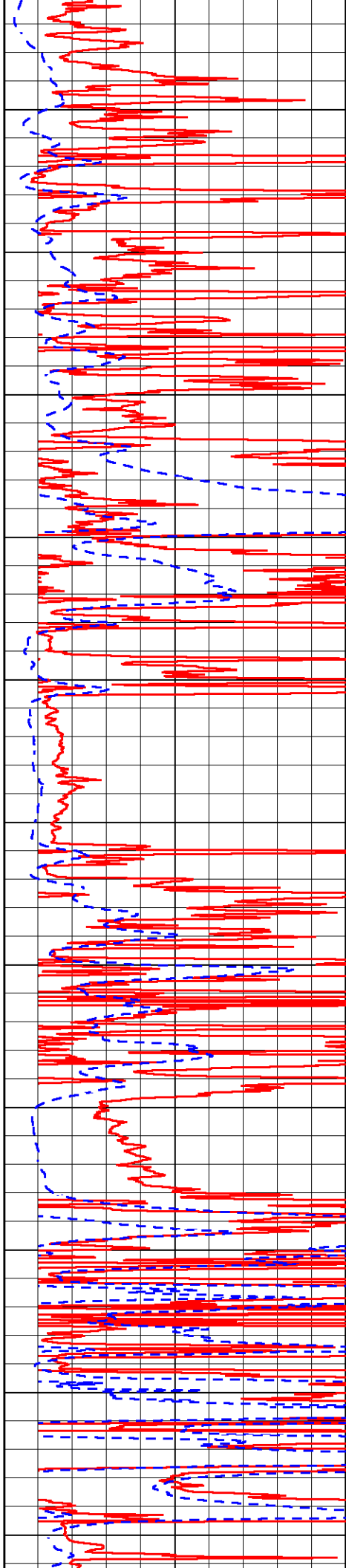
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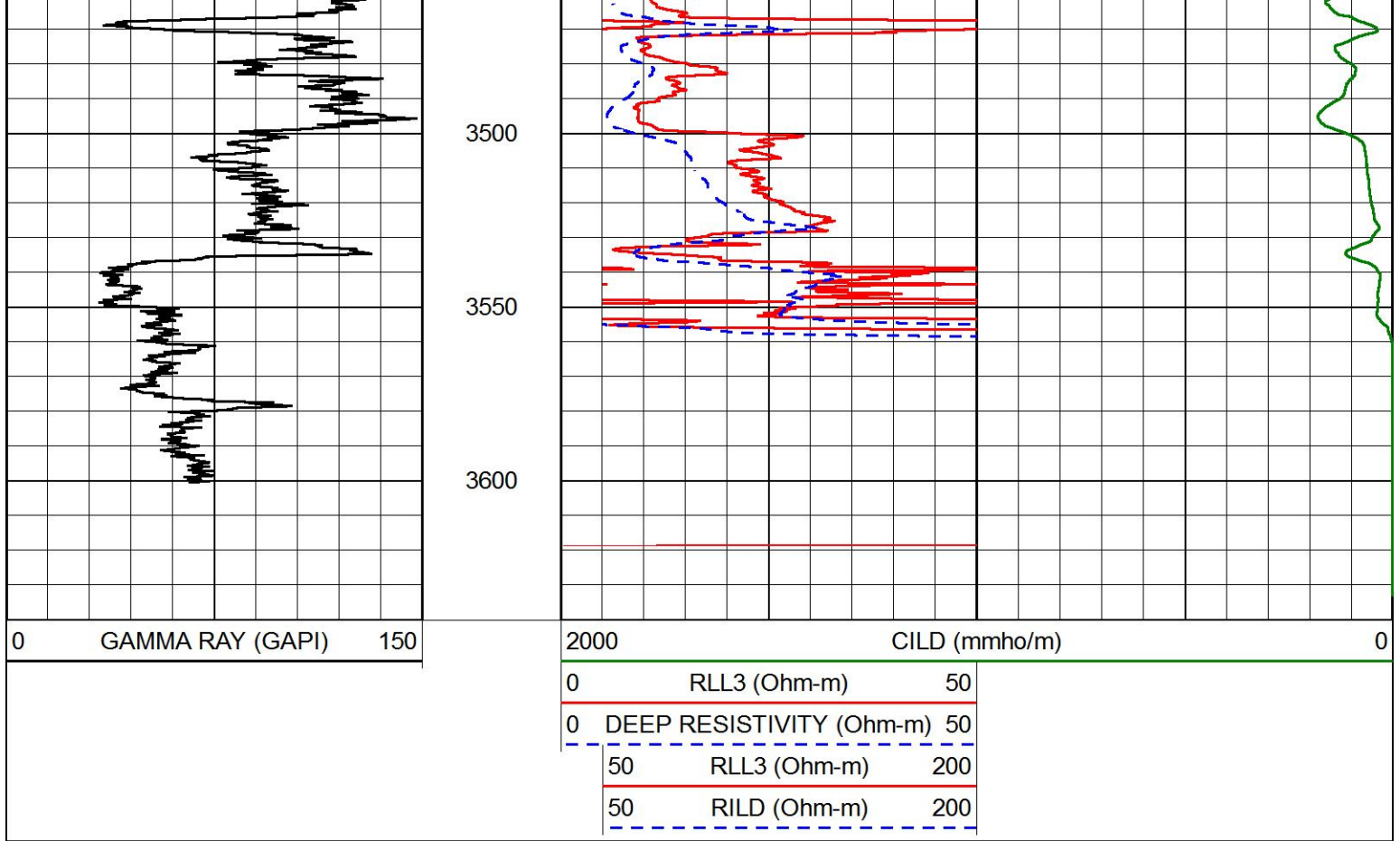
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3350

3400

3450

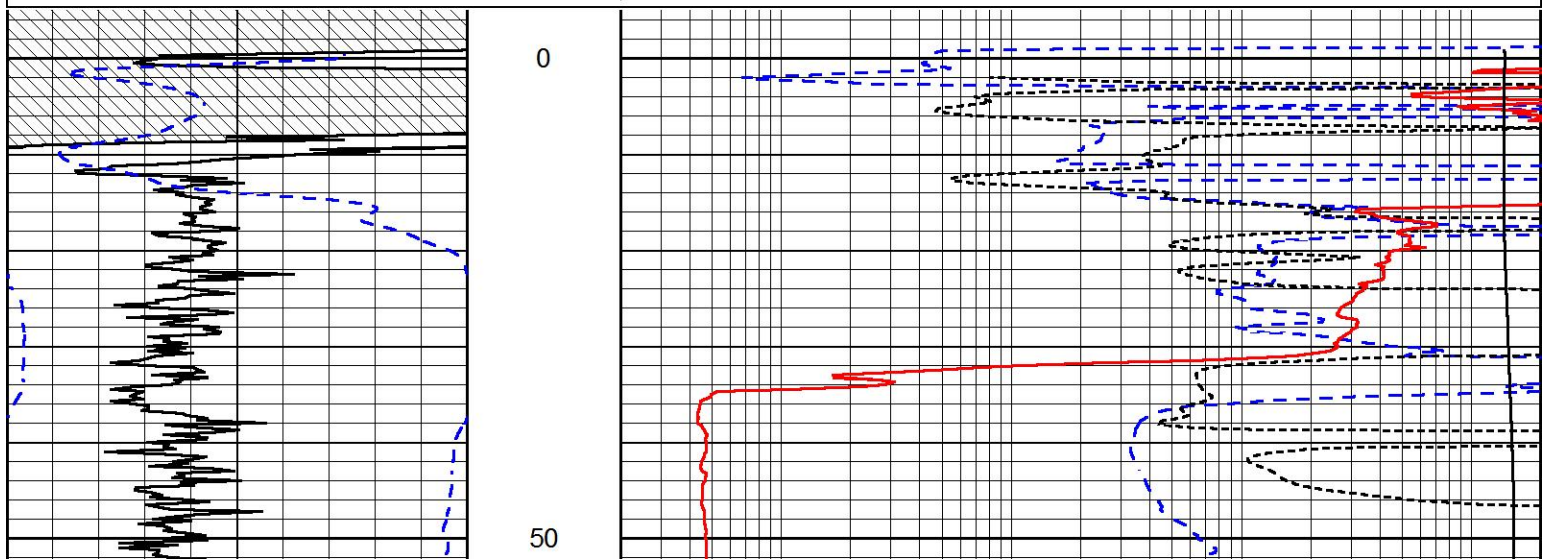


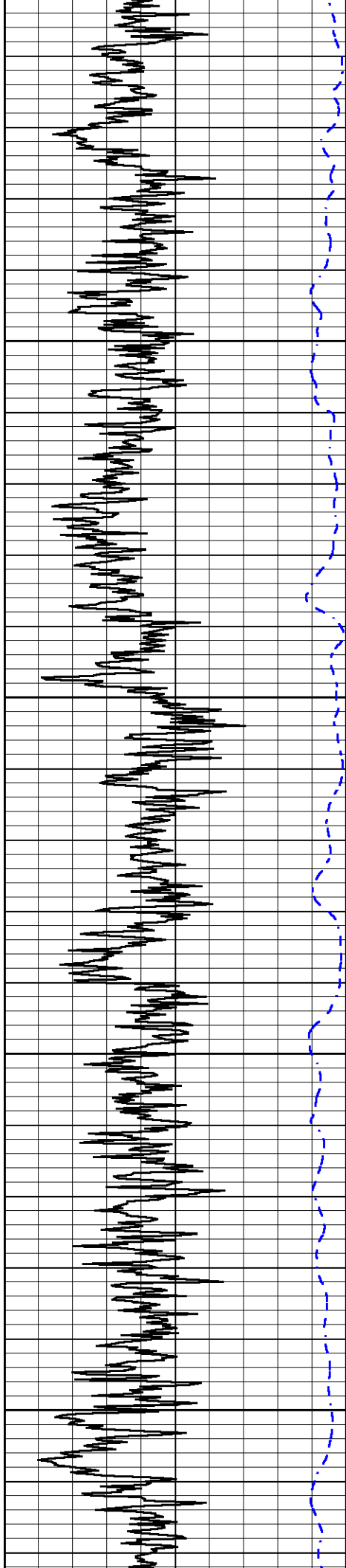


# MAIN PASS

Database File fg\_holl\_leroy\_farming\_trust\_2\_30.db  
 Dataset Pathname stack/pass4.1  
 Presentation Format dil  
 Dataset Creation Wed Nov 13 18:37:58 2019  
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	DEEP RESISTIVITY (Ohm-m)	2000
-200	SP (mV)	0	0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000
			15000	LINE TENSION (lb)	0



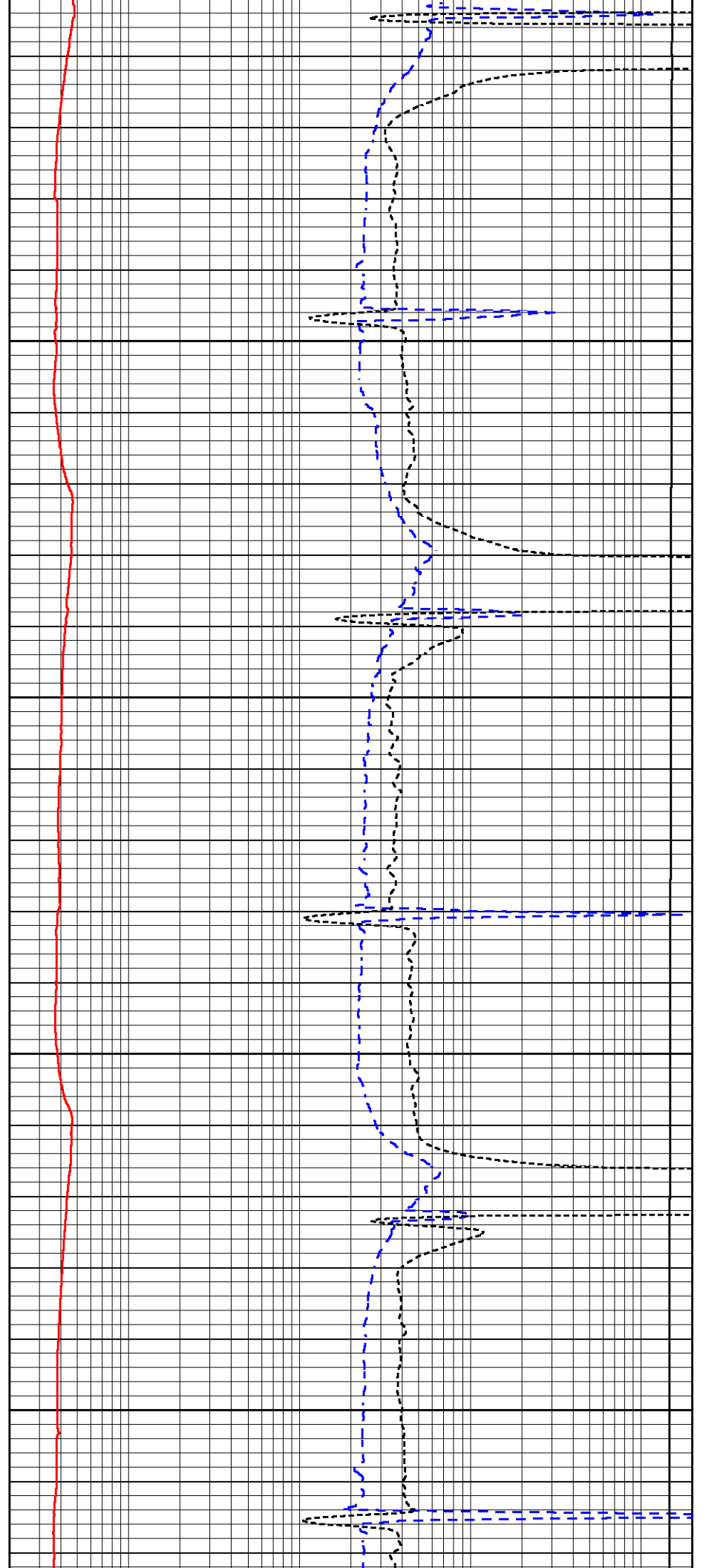


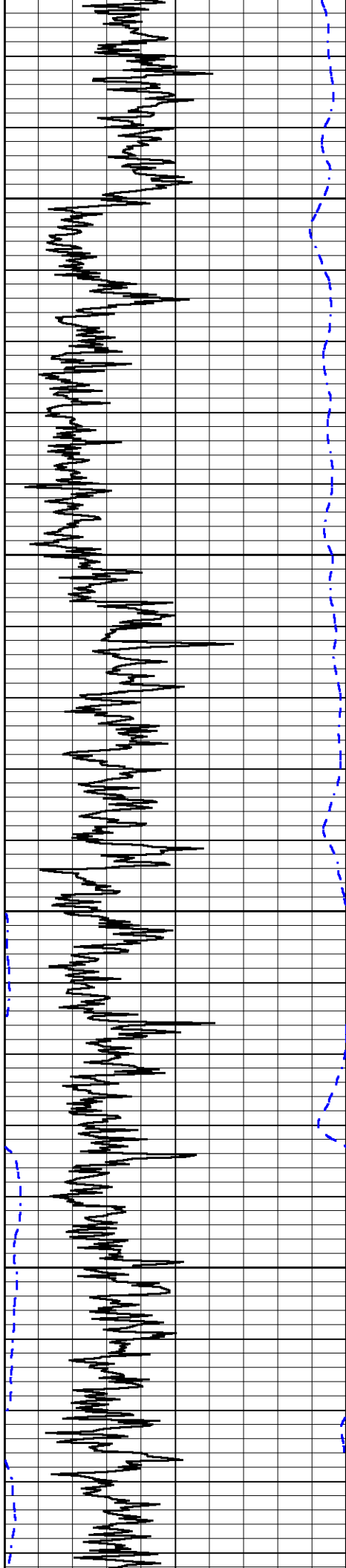
100

150

200

250



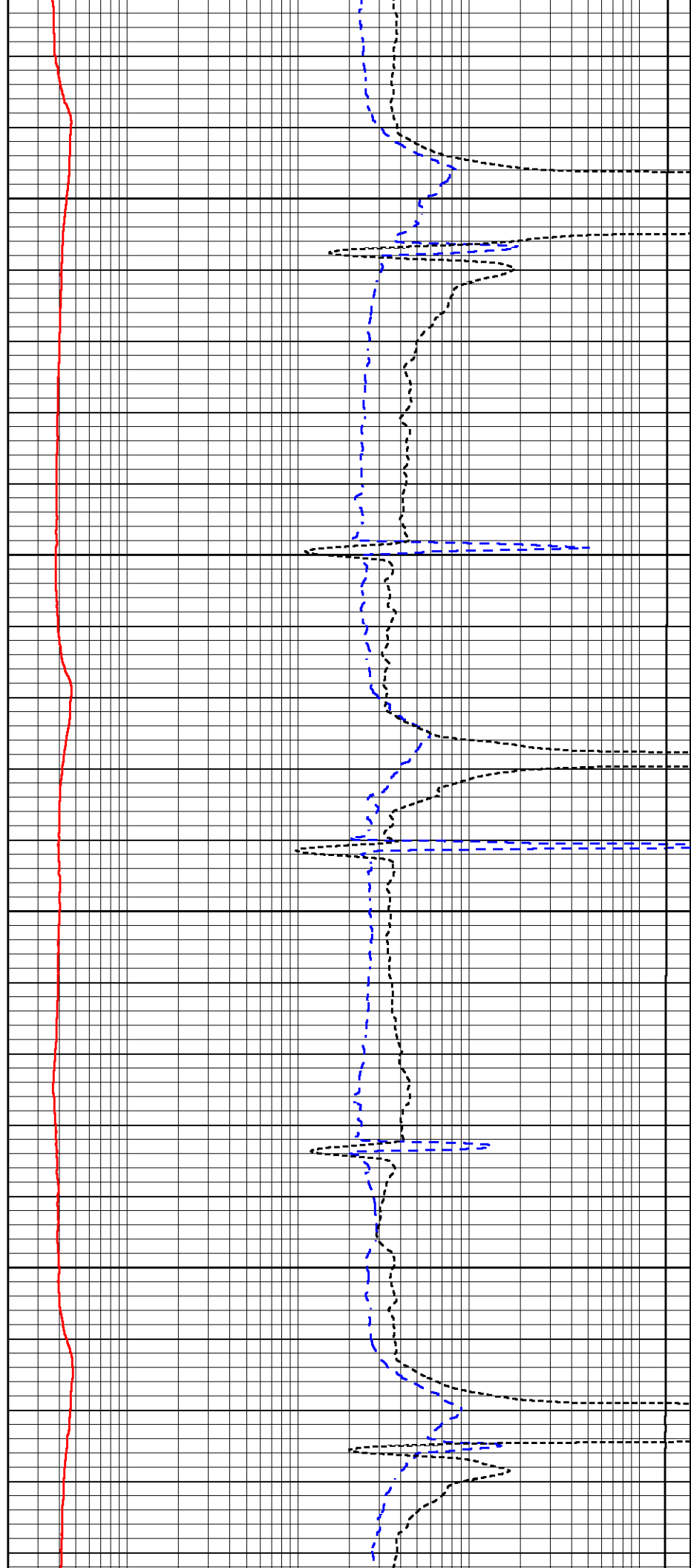


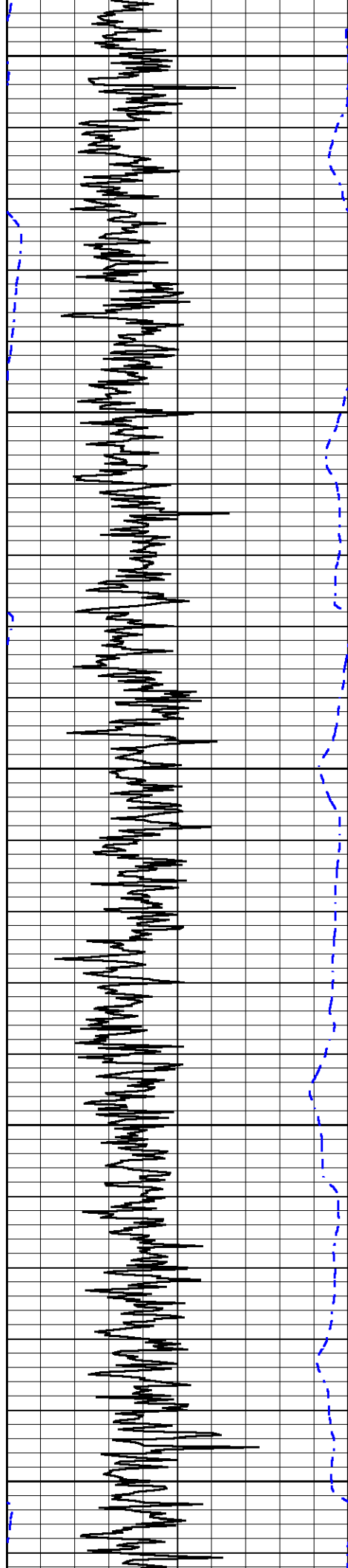
300

350

400

450





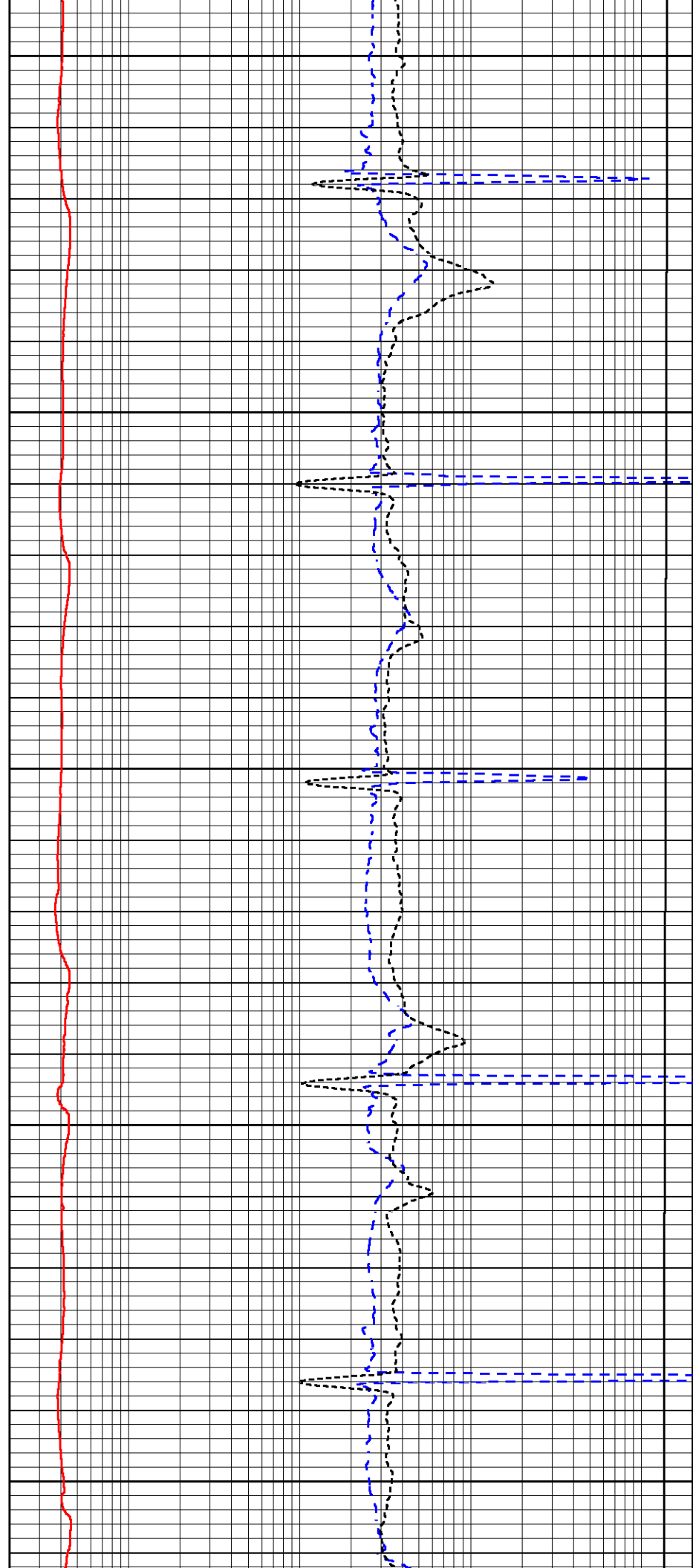
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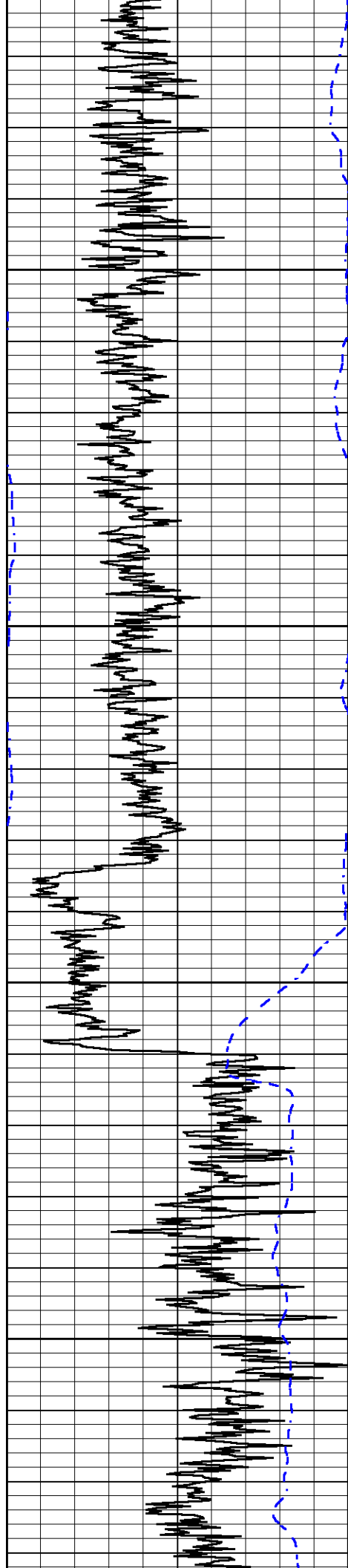
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650

700



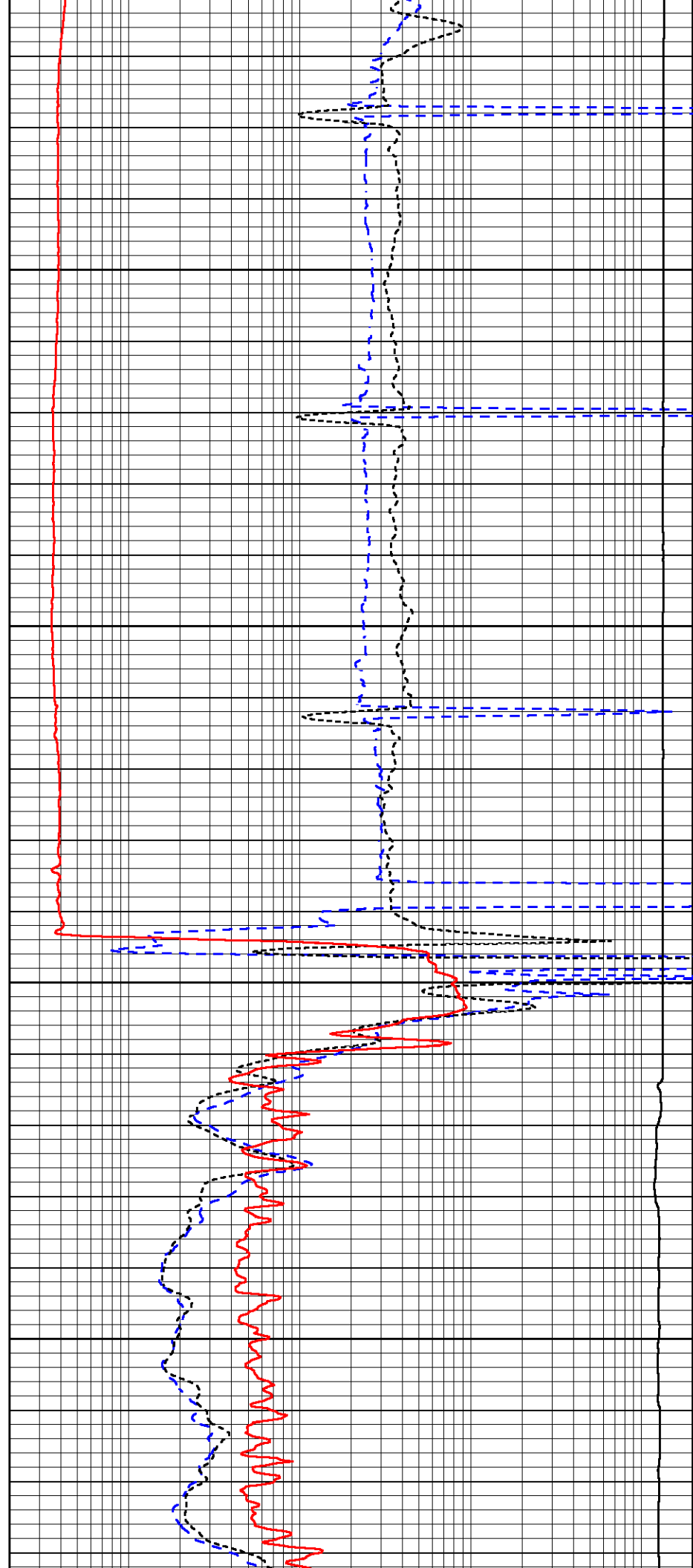


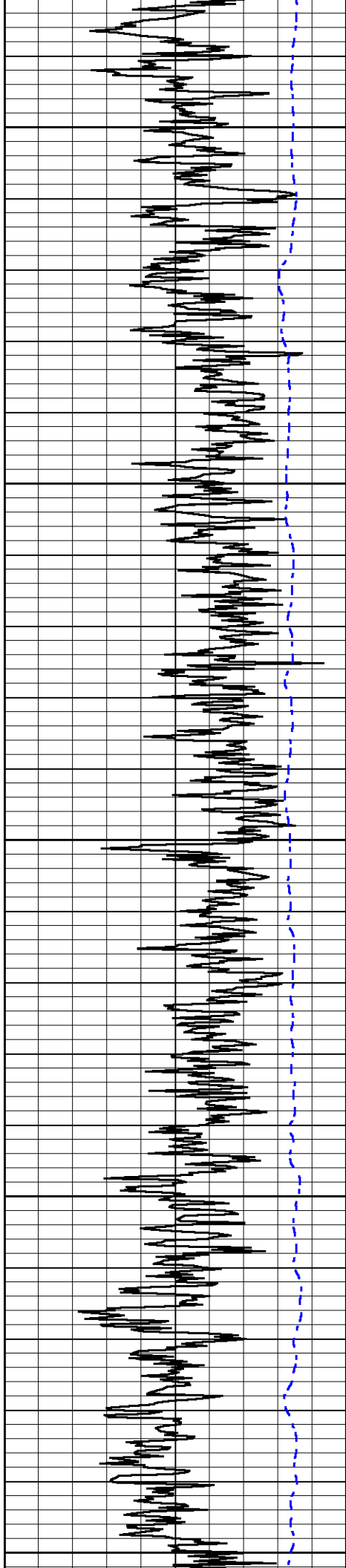
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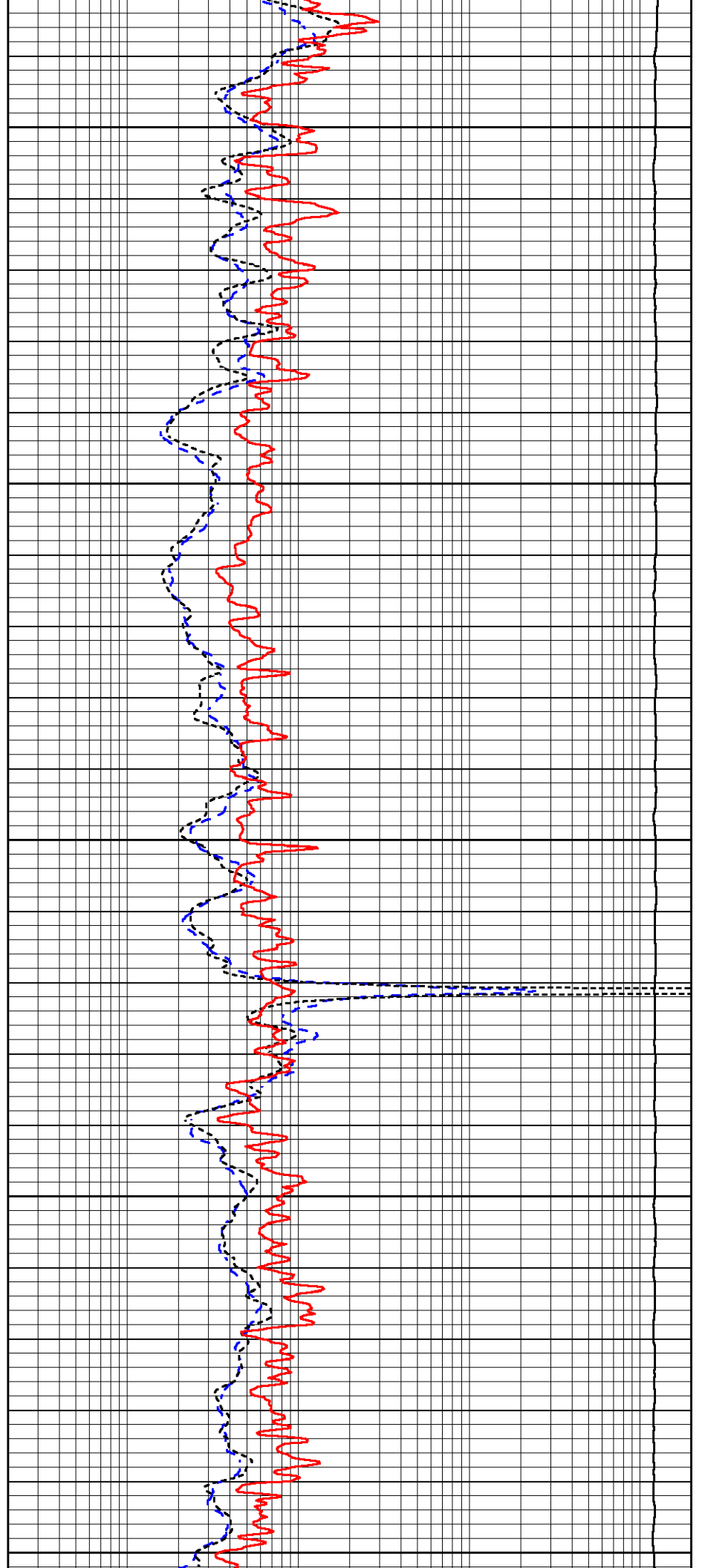
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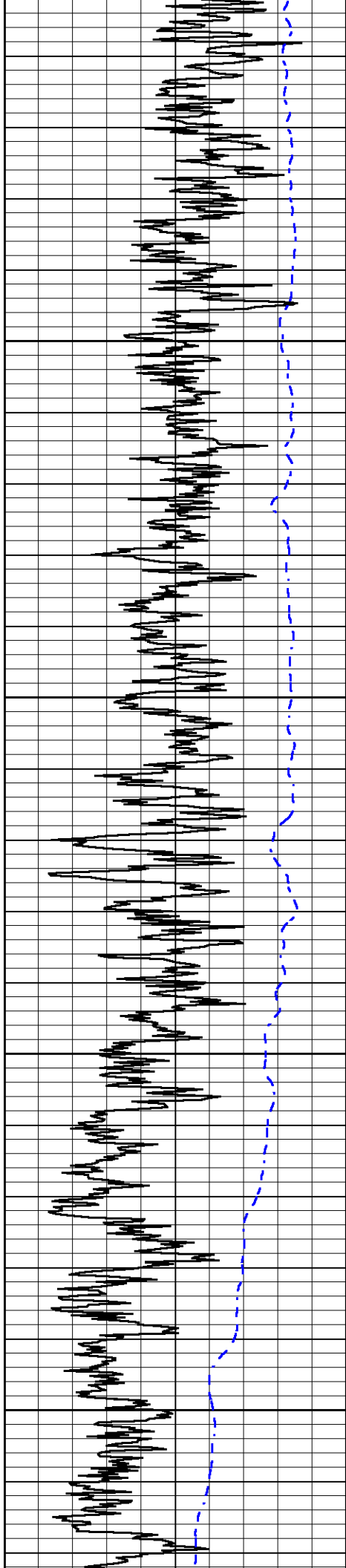
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1050

1100

1150



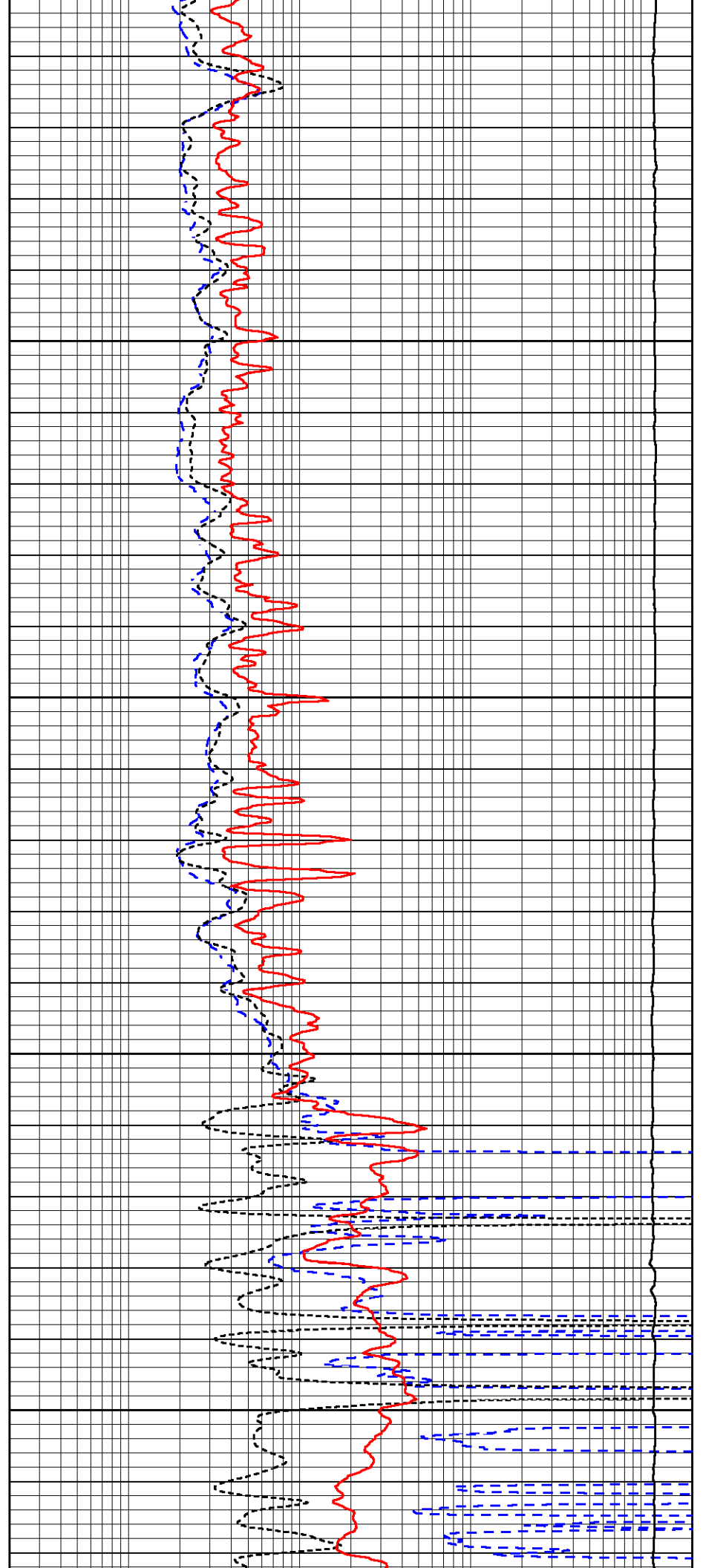


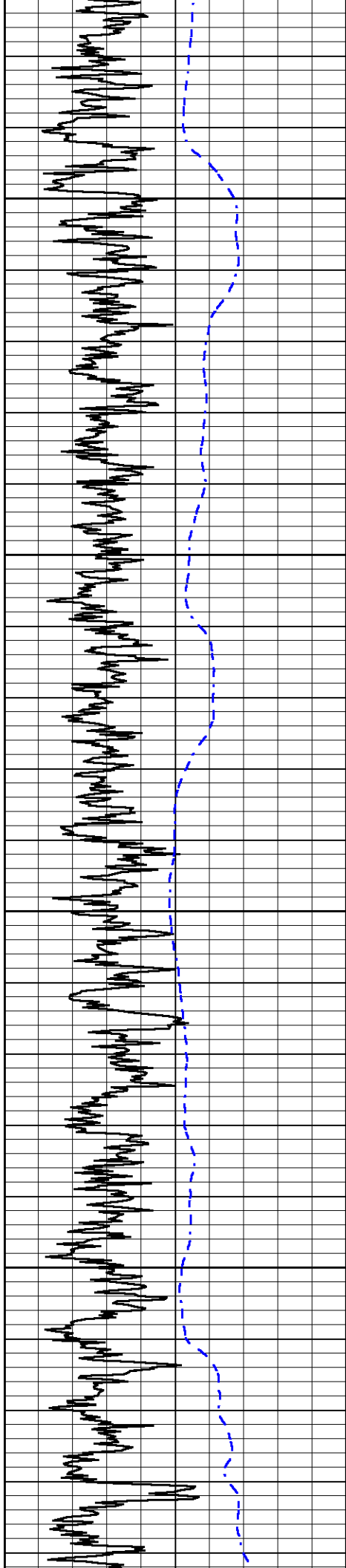
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1250

1300

1350



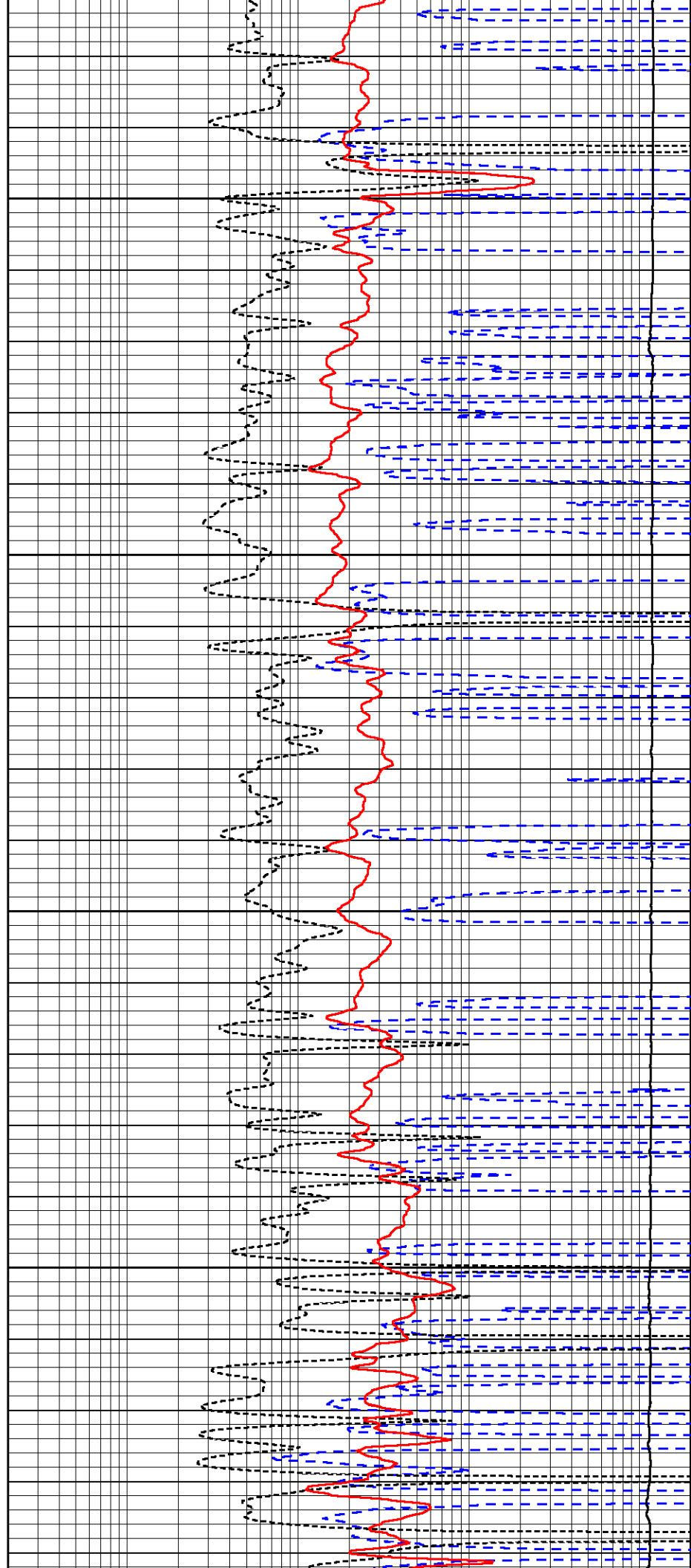


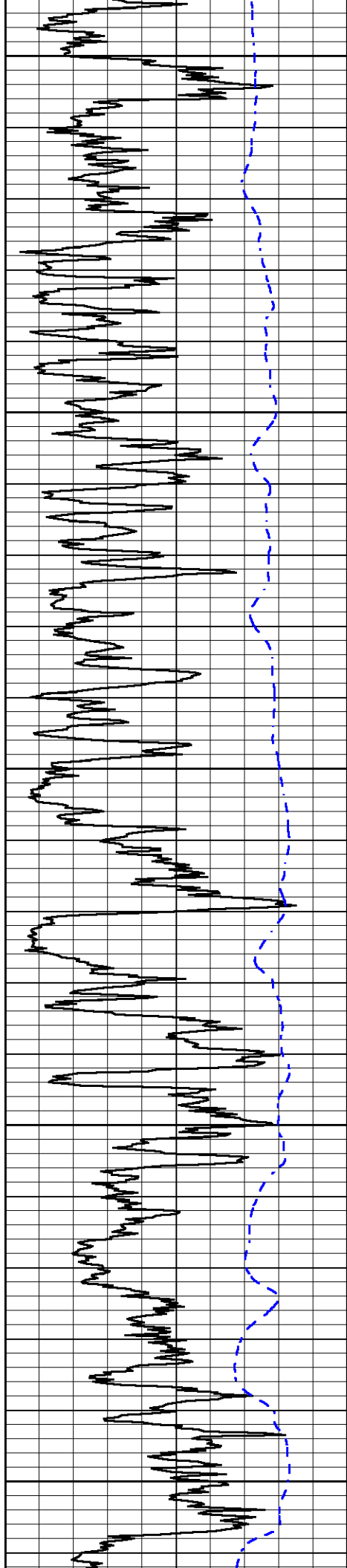
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1450

1500

1550





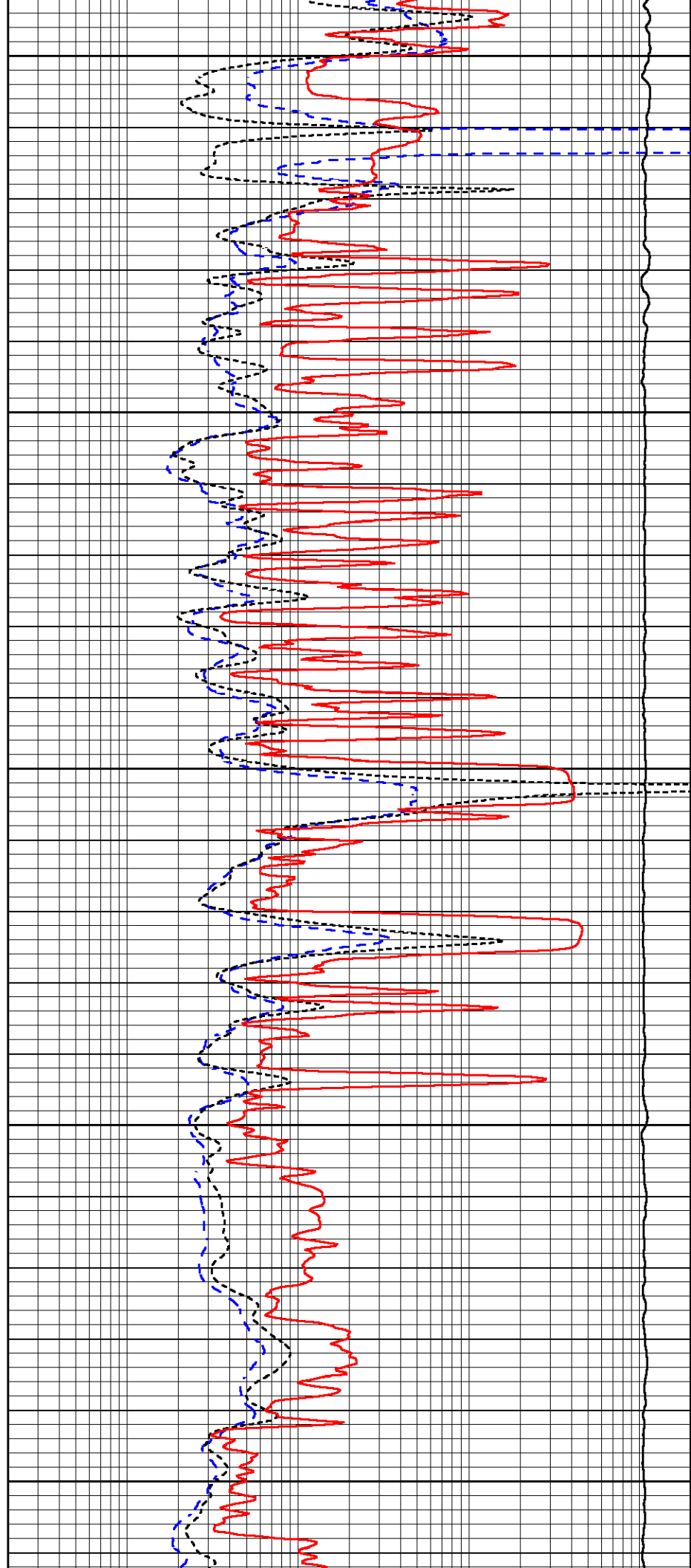
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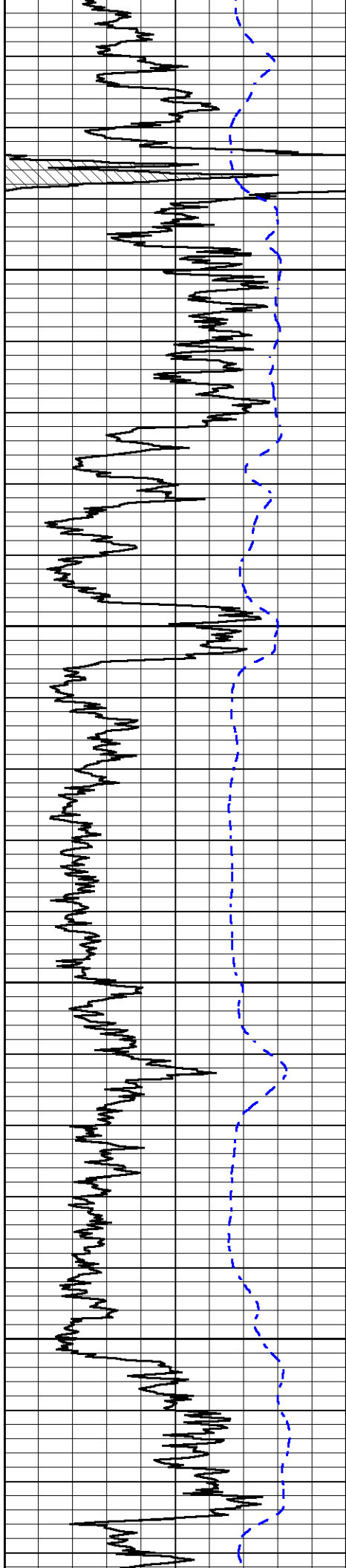
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1750

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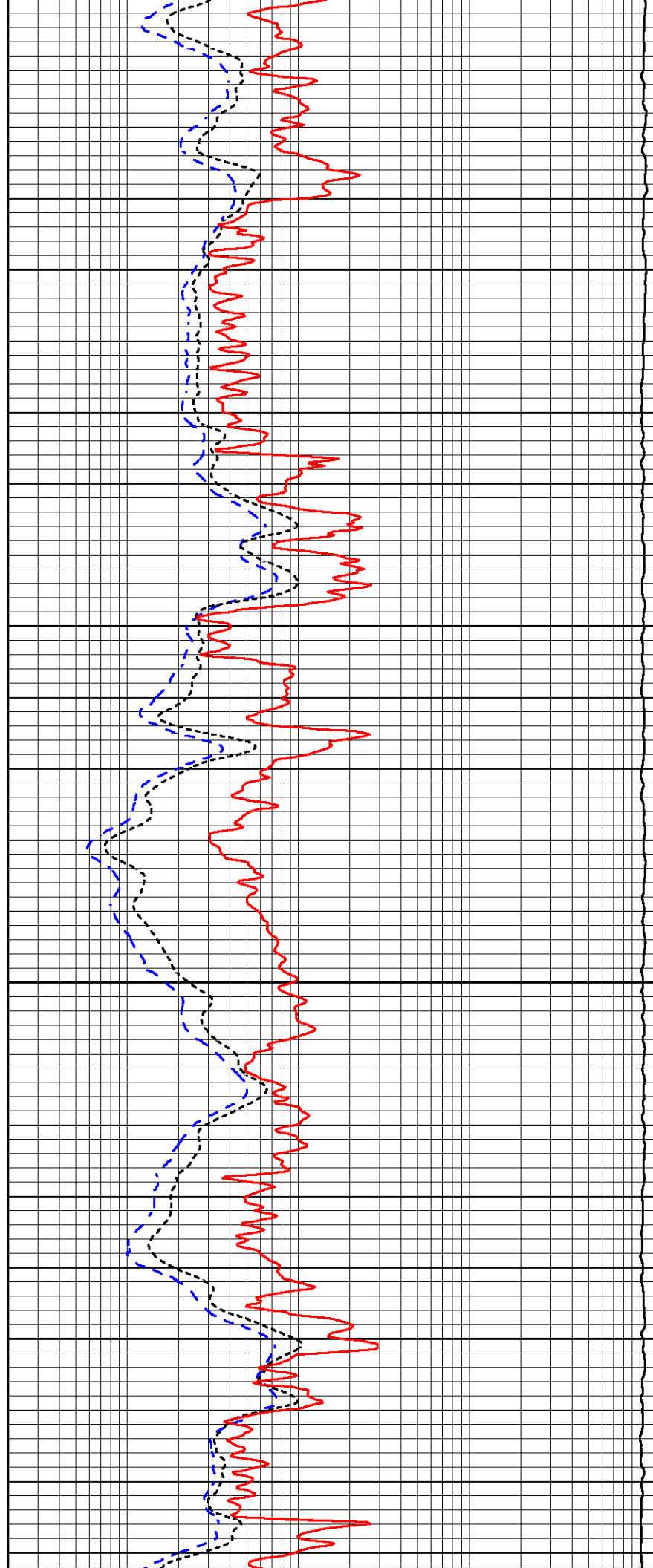


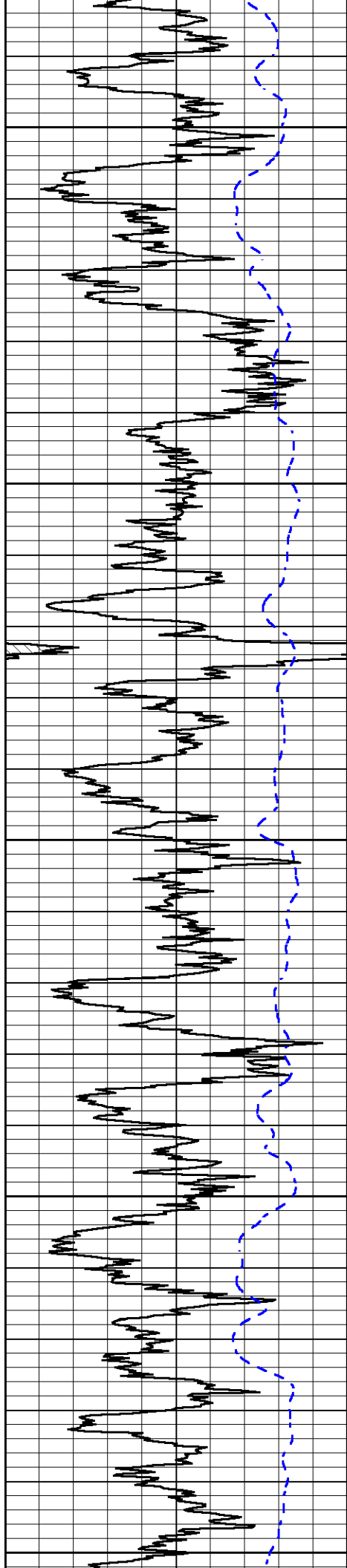
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1900

1950

2000





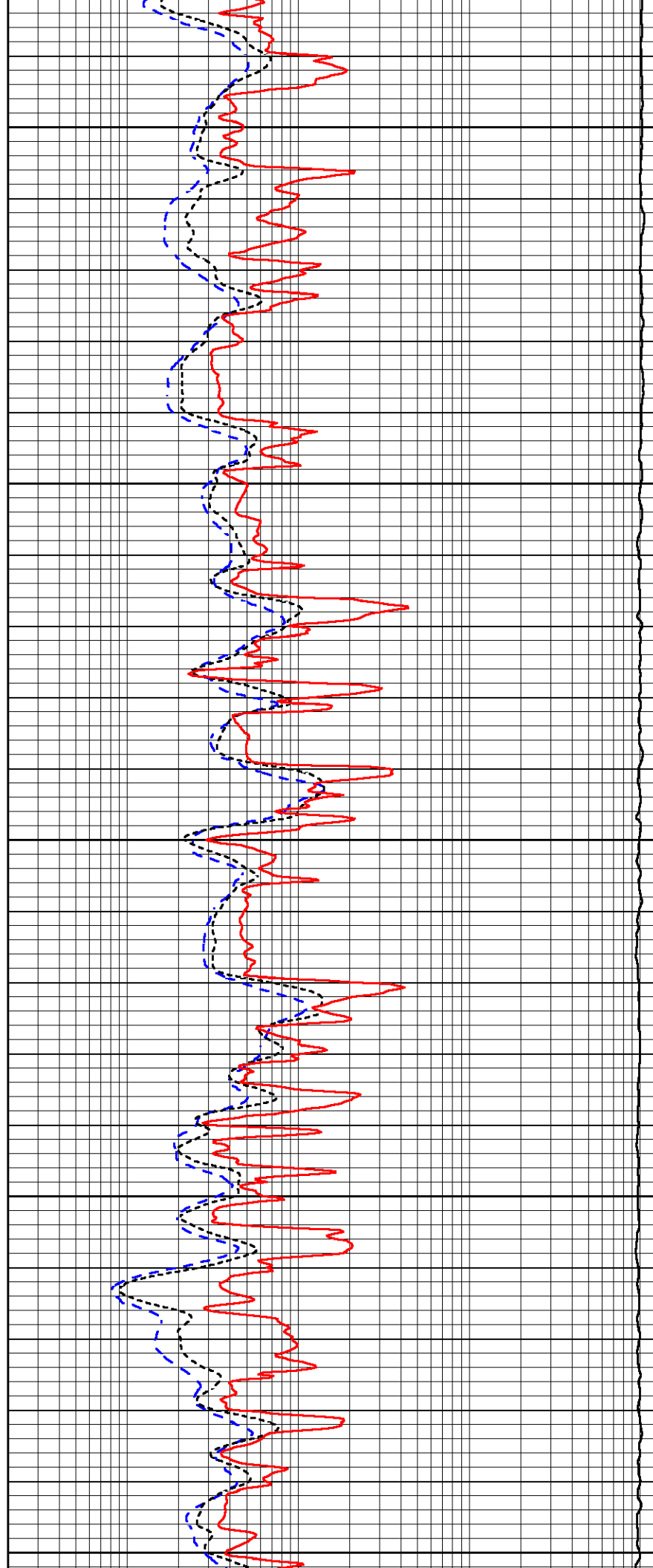
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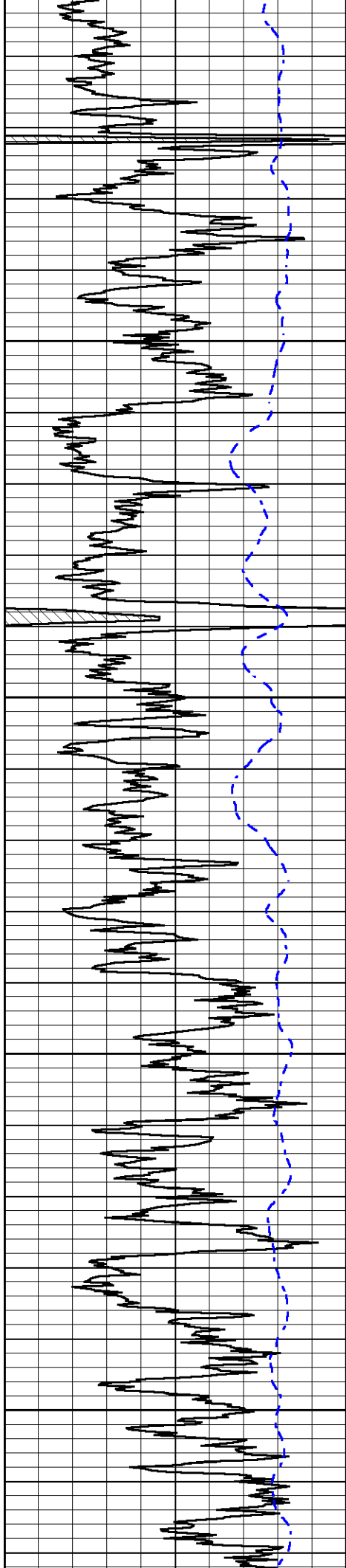
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2150

2200

2250



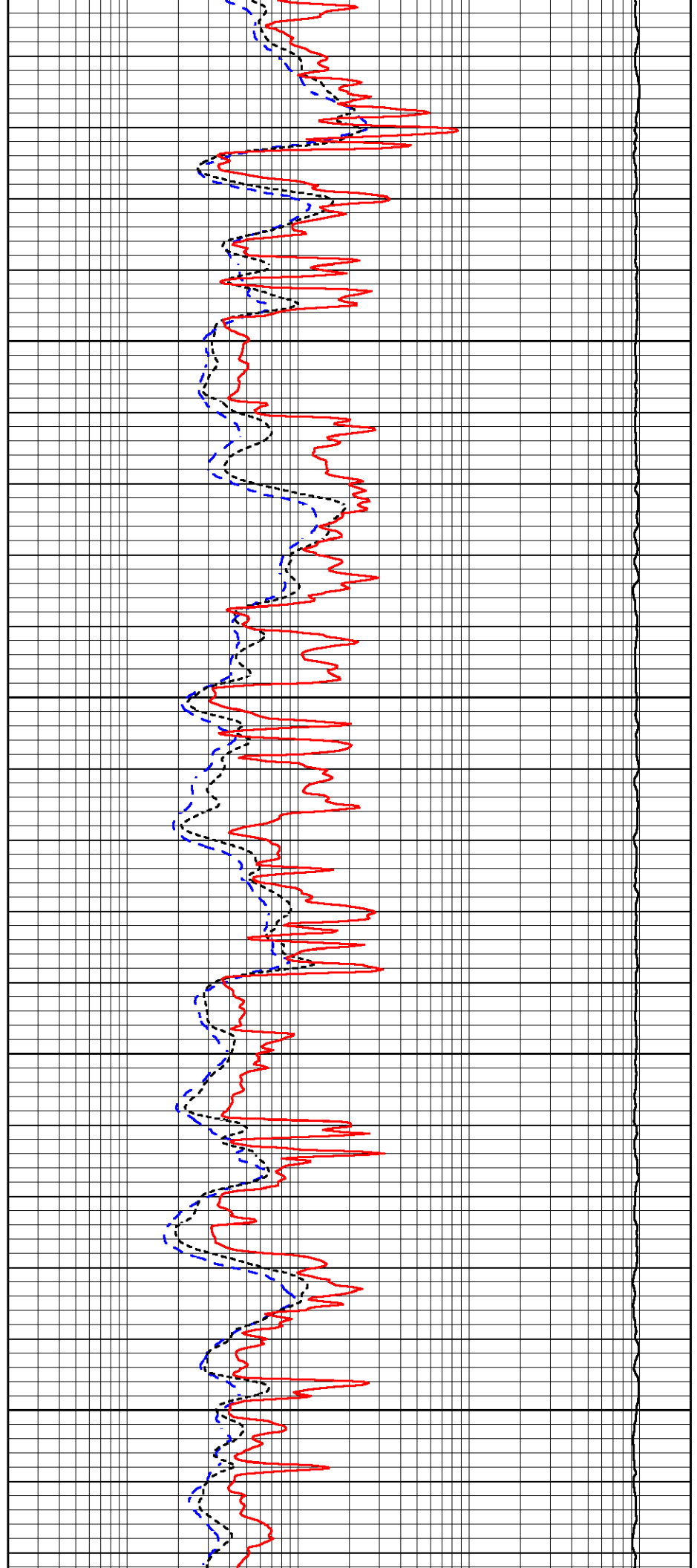


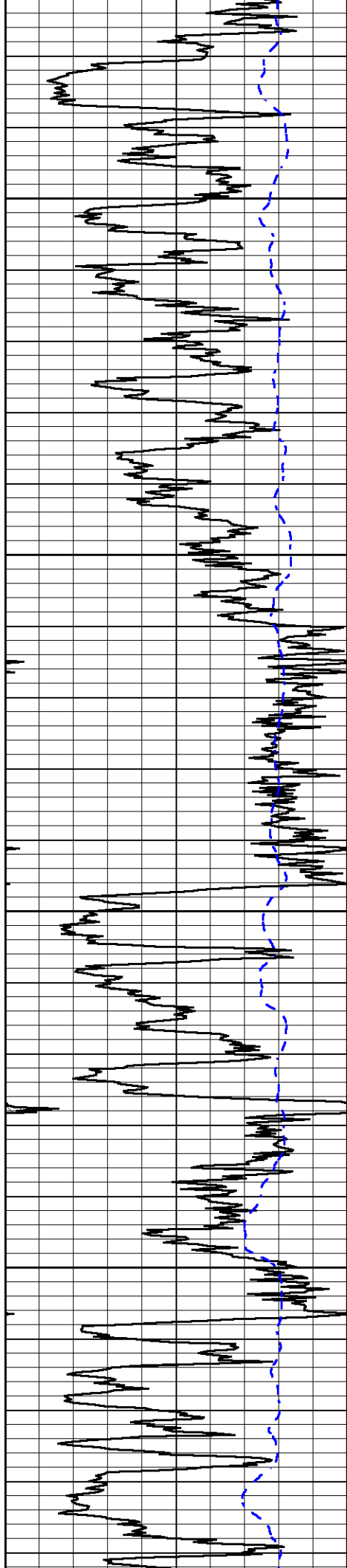
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2350

2400

2450



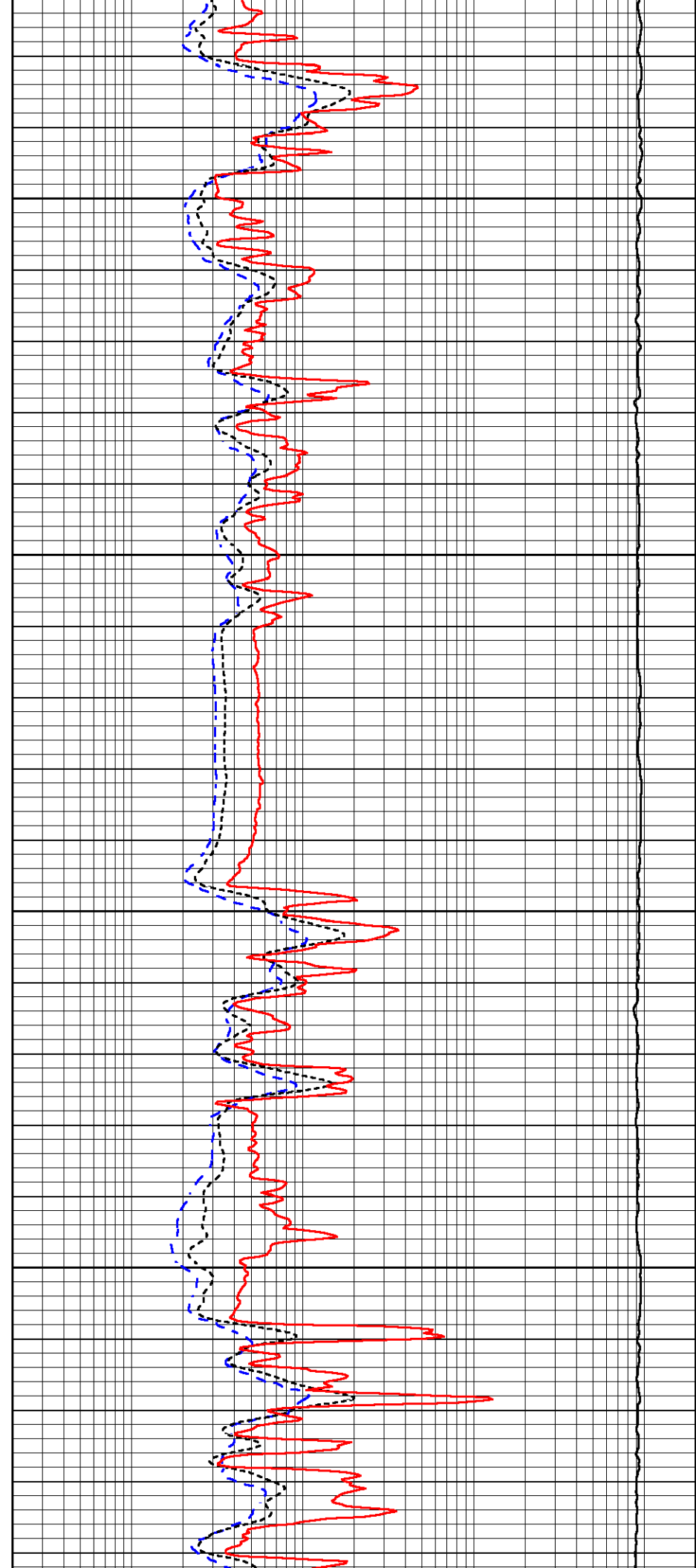


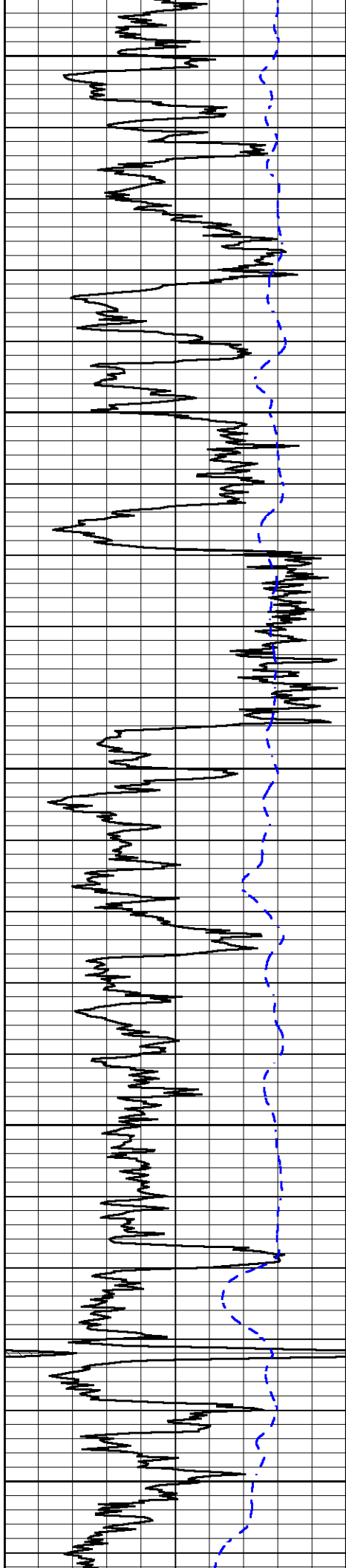
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2550

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2650





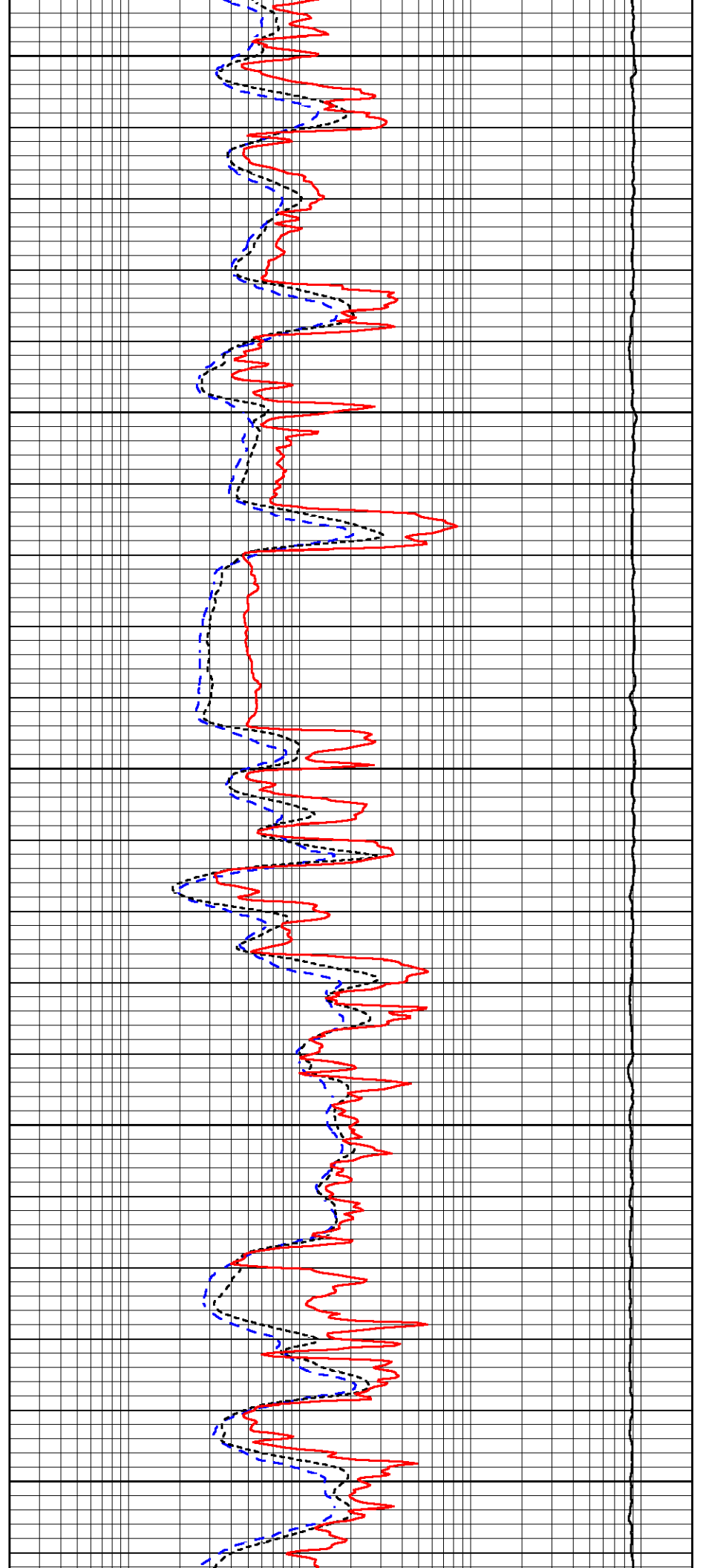
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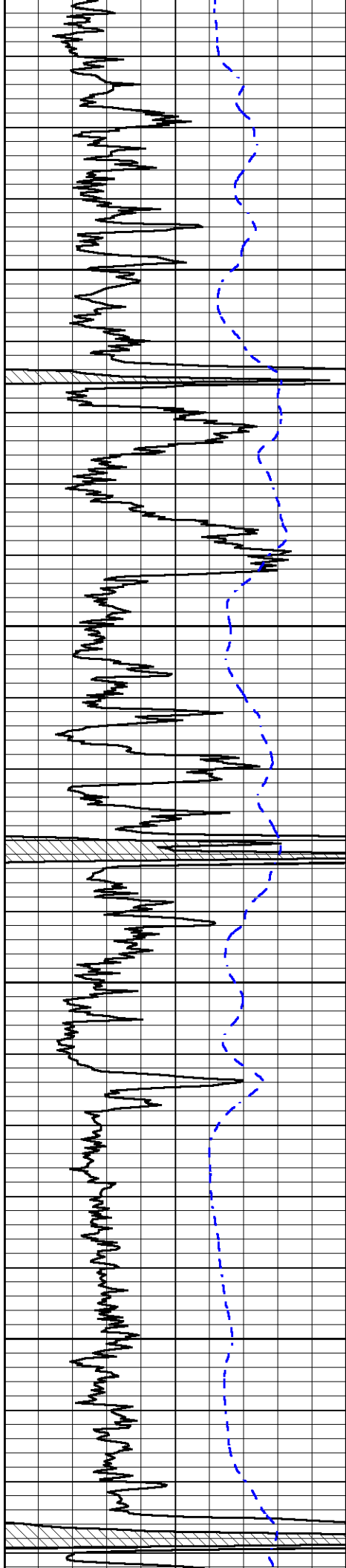
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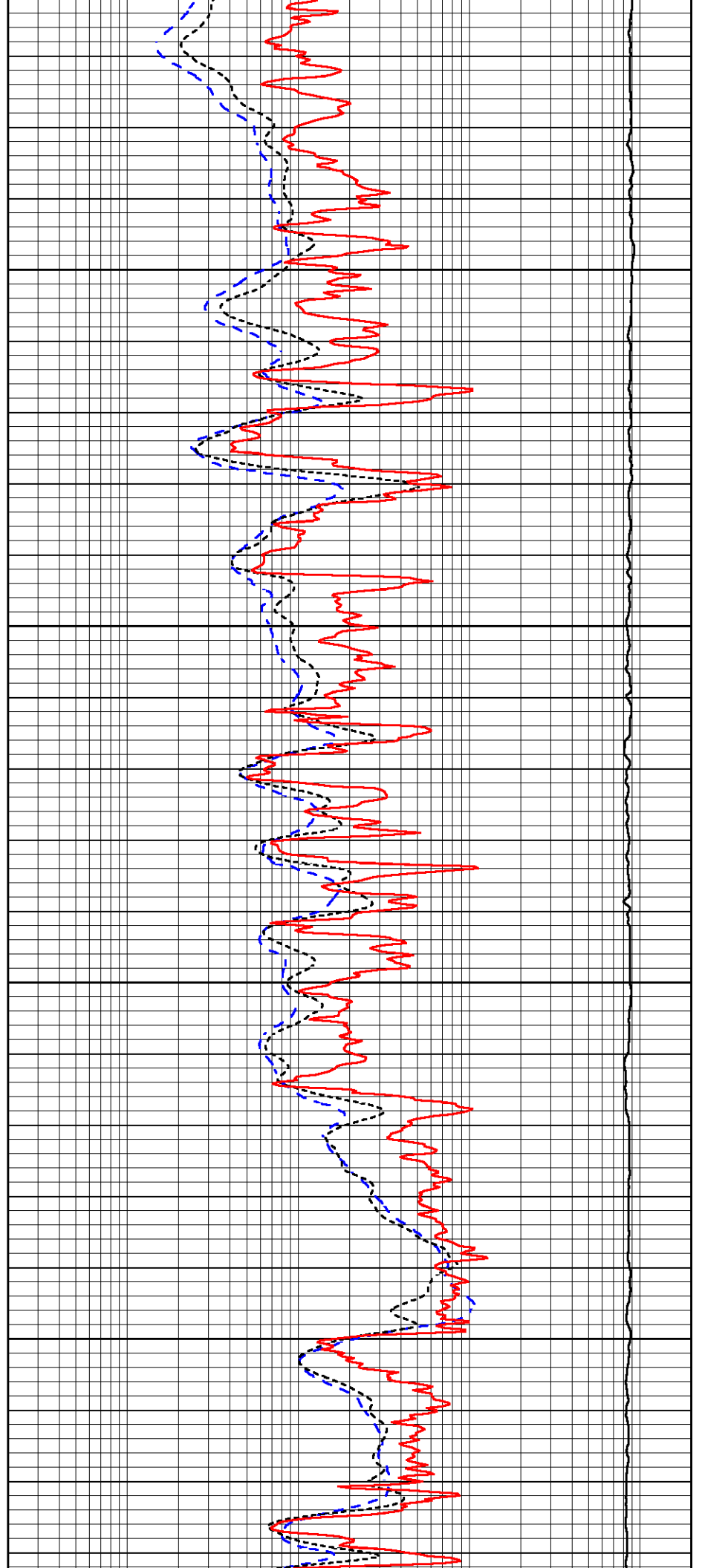


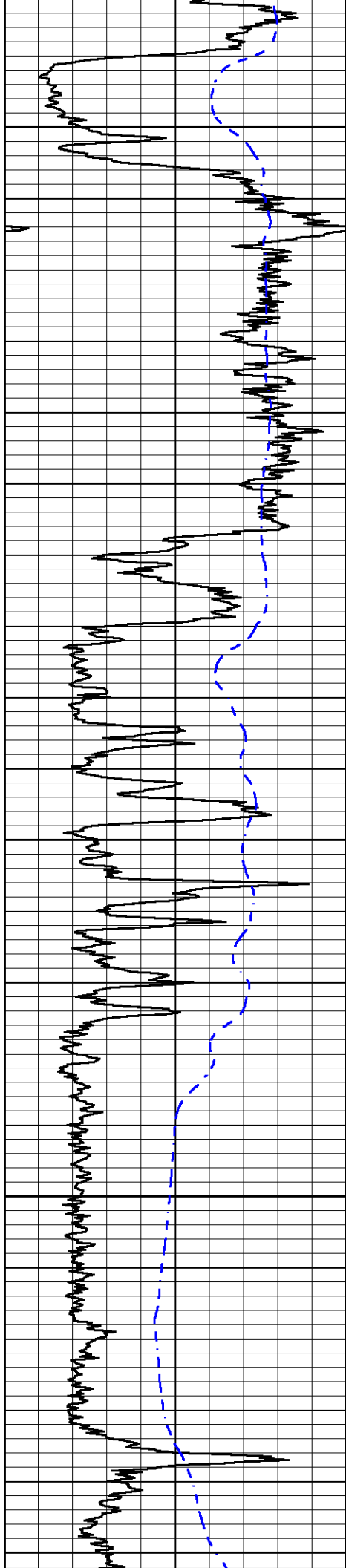
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3050

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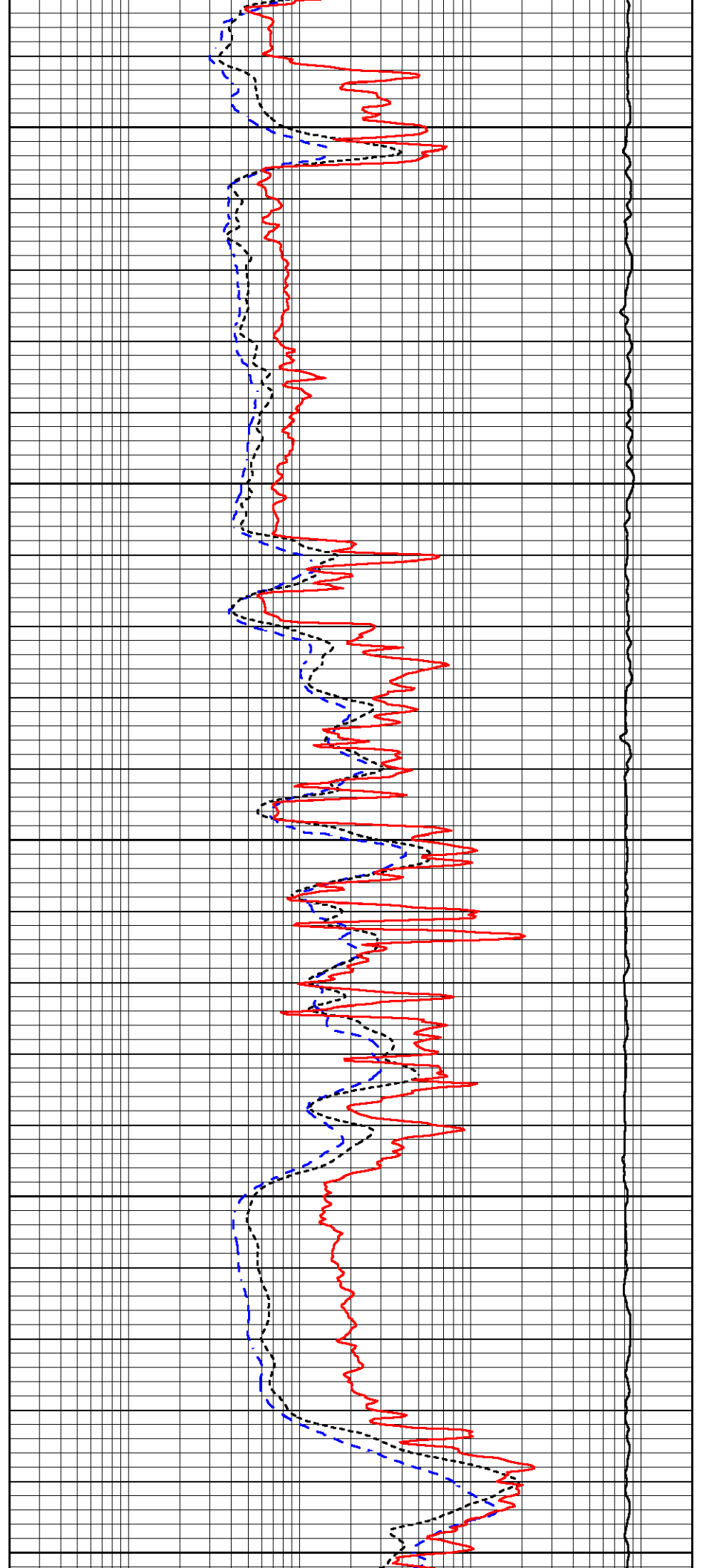
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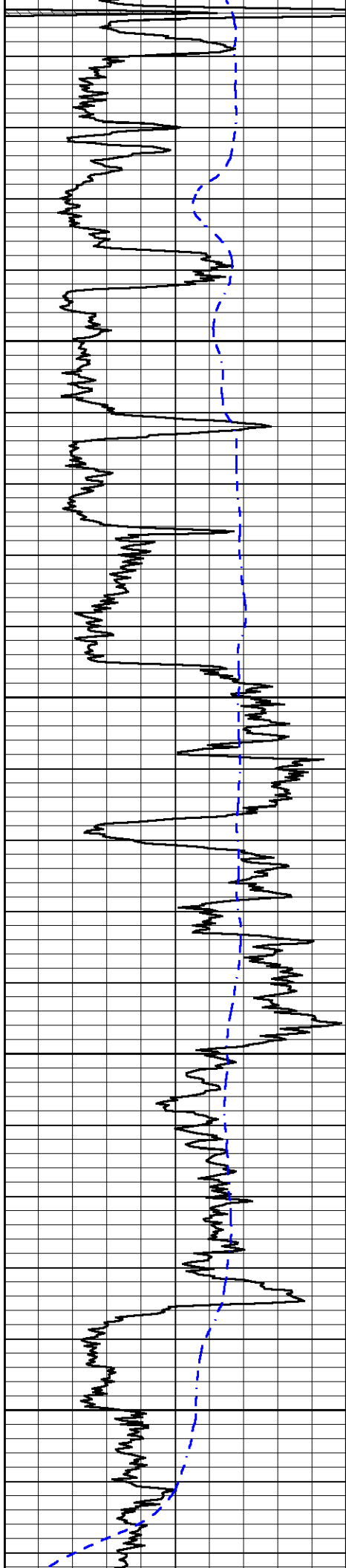
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3250

3300

3350



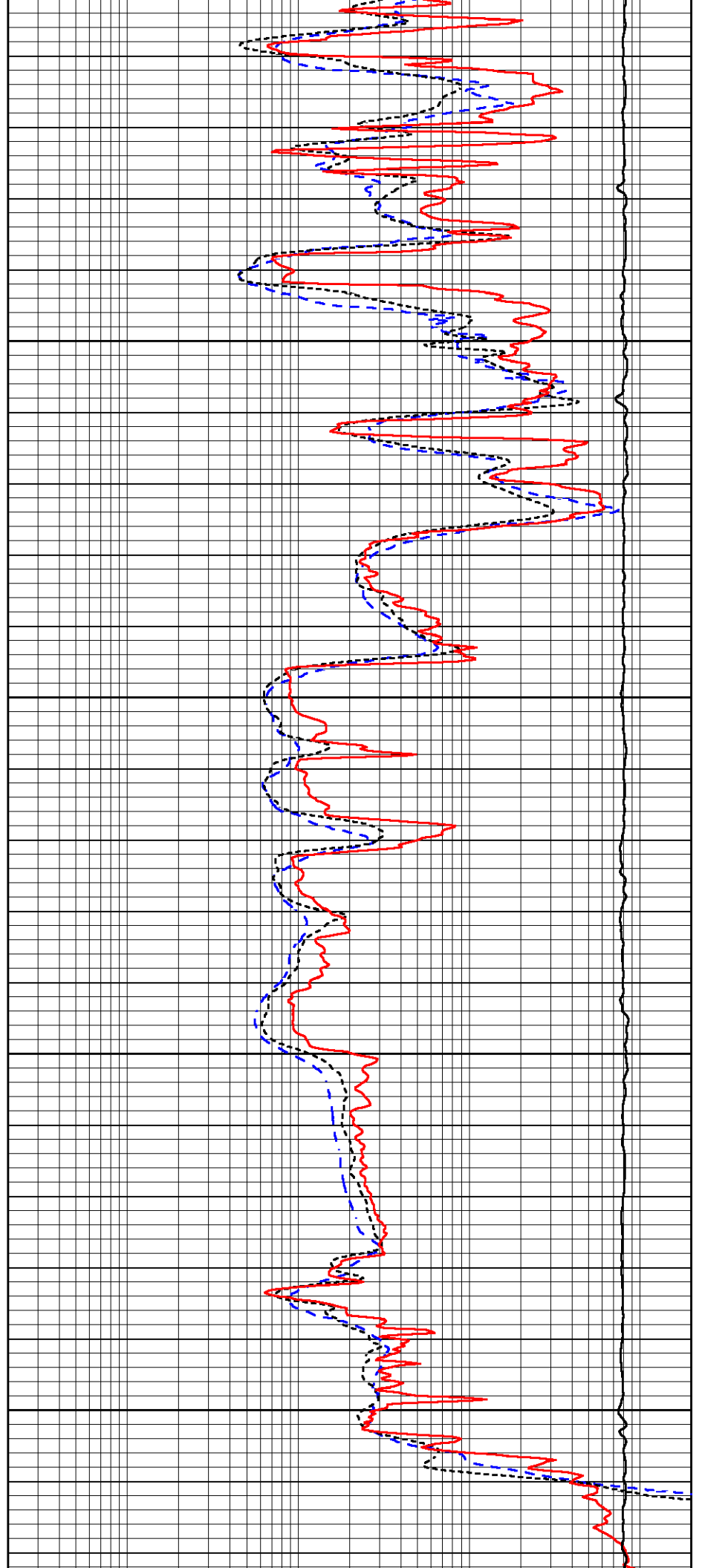


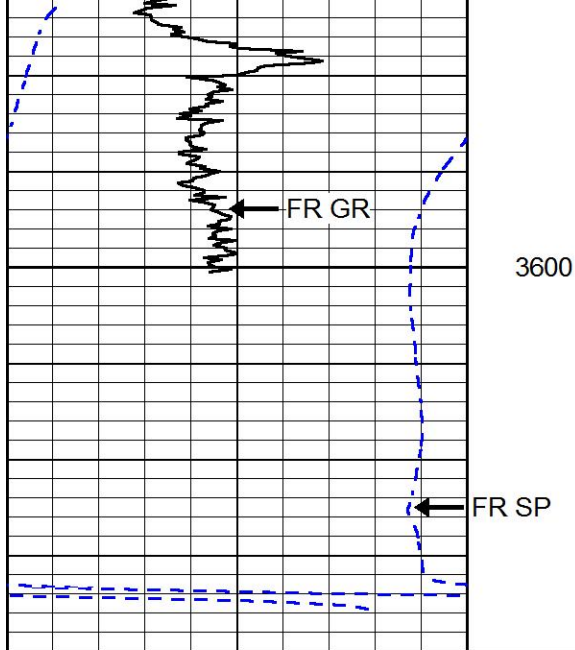
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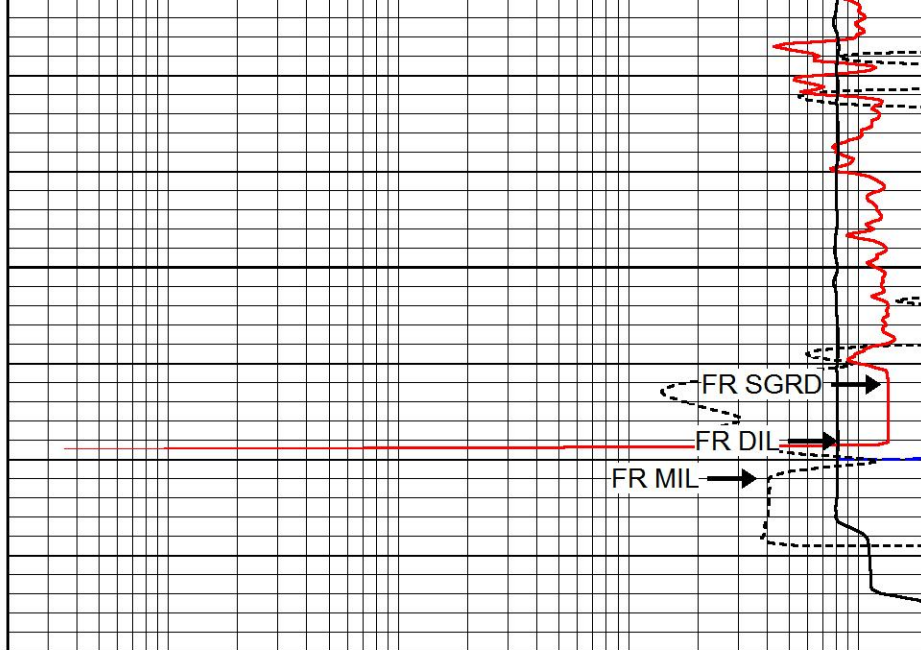
3500

3550





0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0



0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0

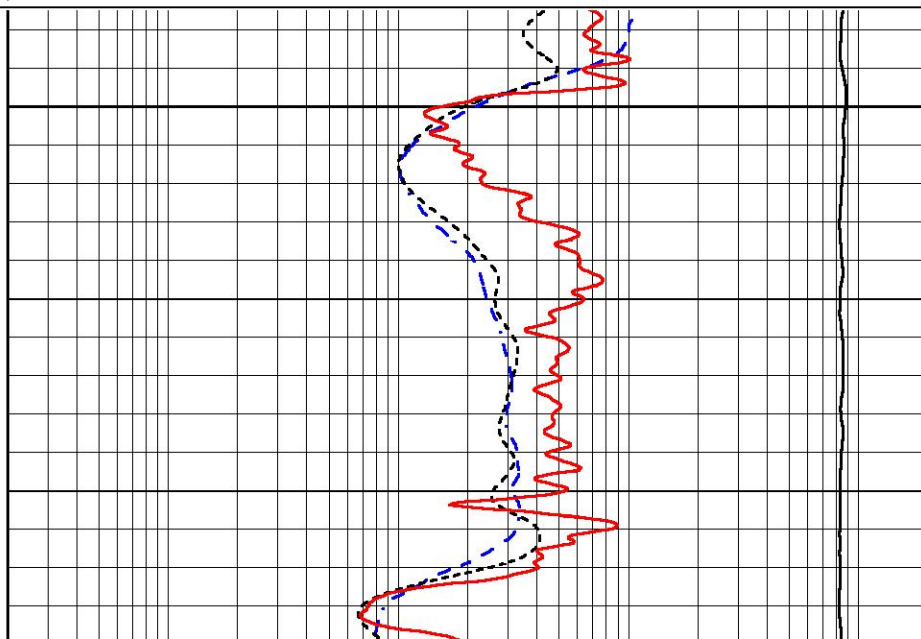
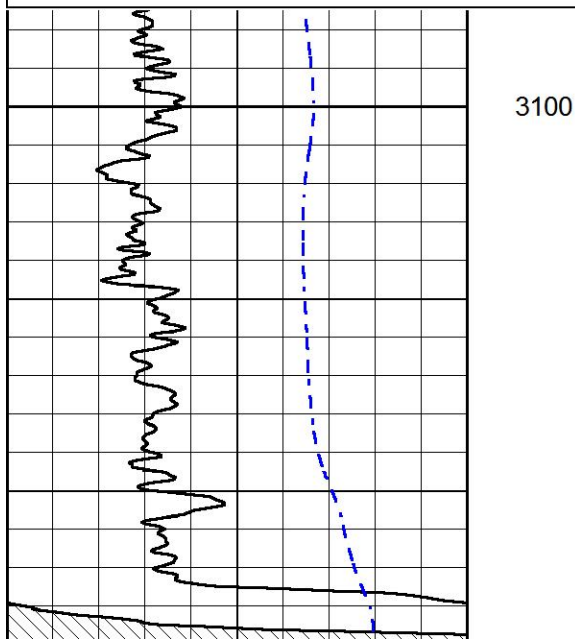


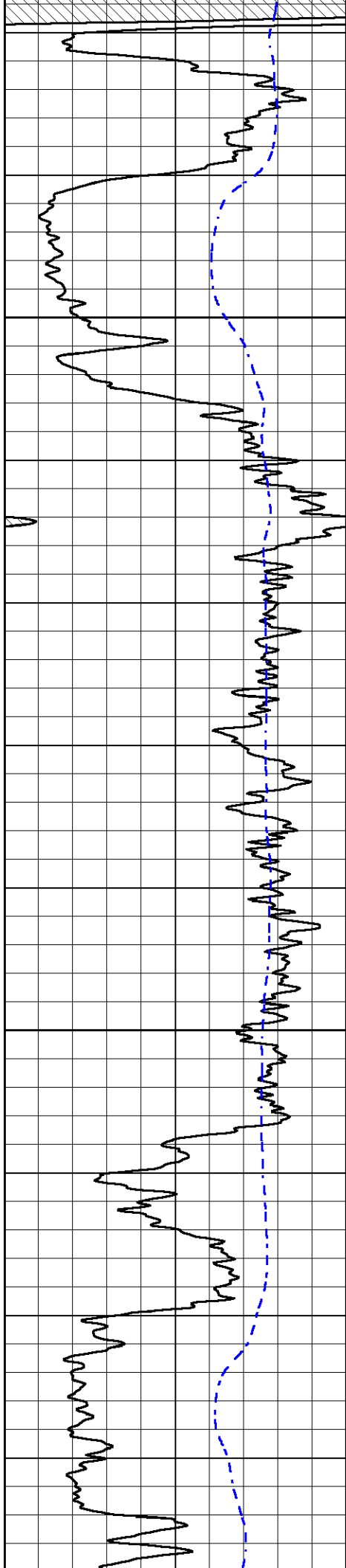
# HI RESOLUTION

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 Presentation Format dil  
 Dataset Creation Wed Nov 13 17:39:45 2019  
 Charted by Depth in Feet scaled 1:120

0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

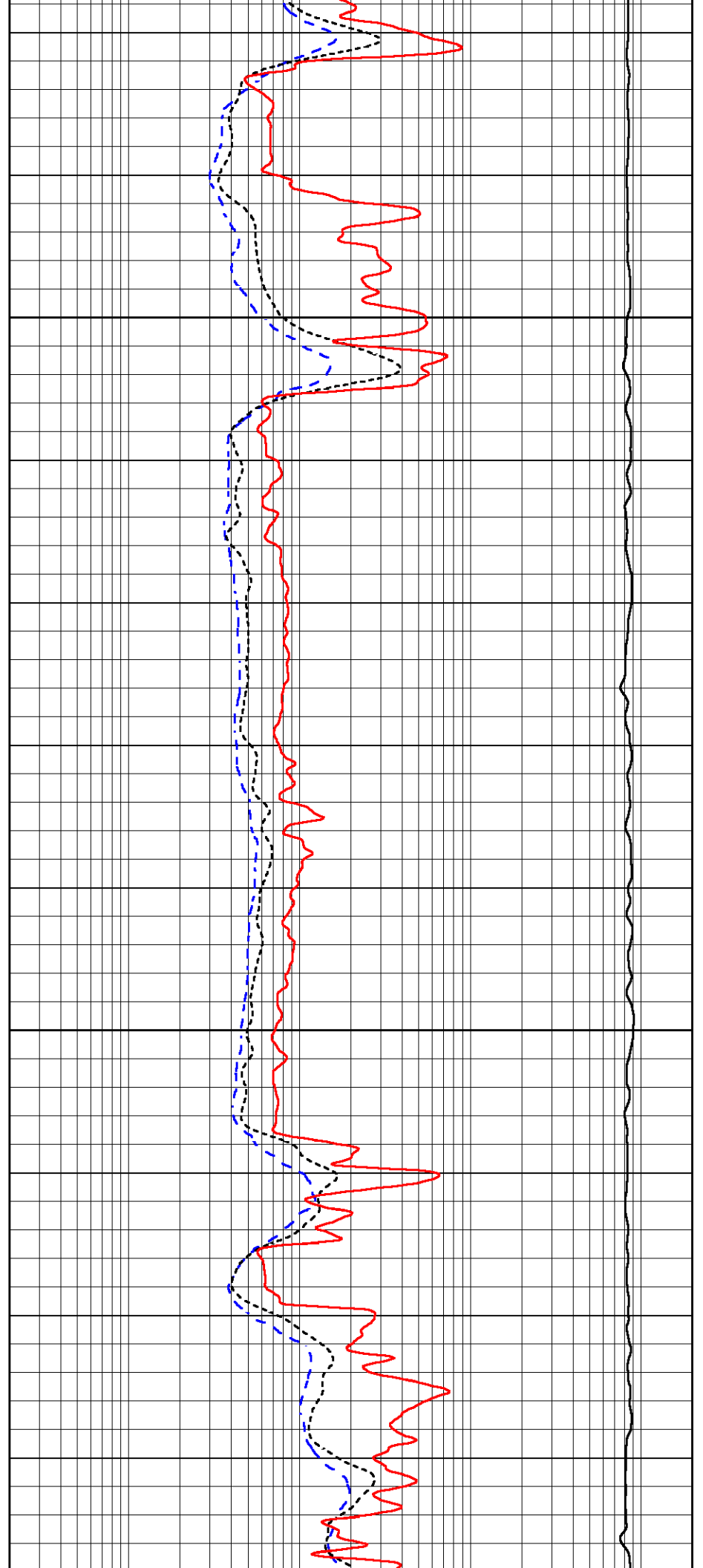
0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0

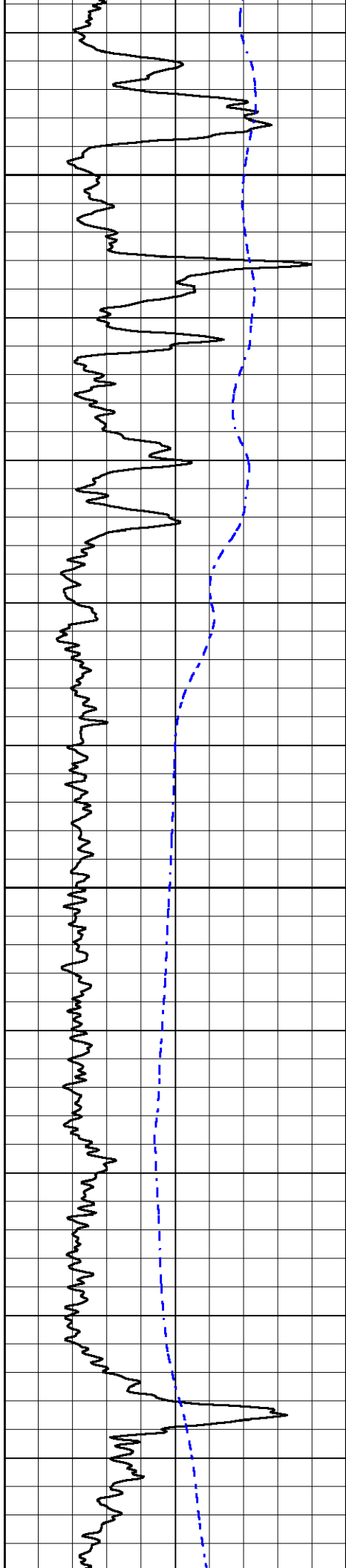




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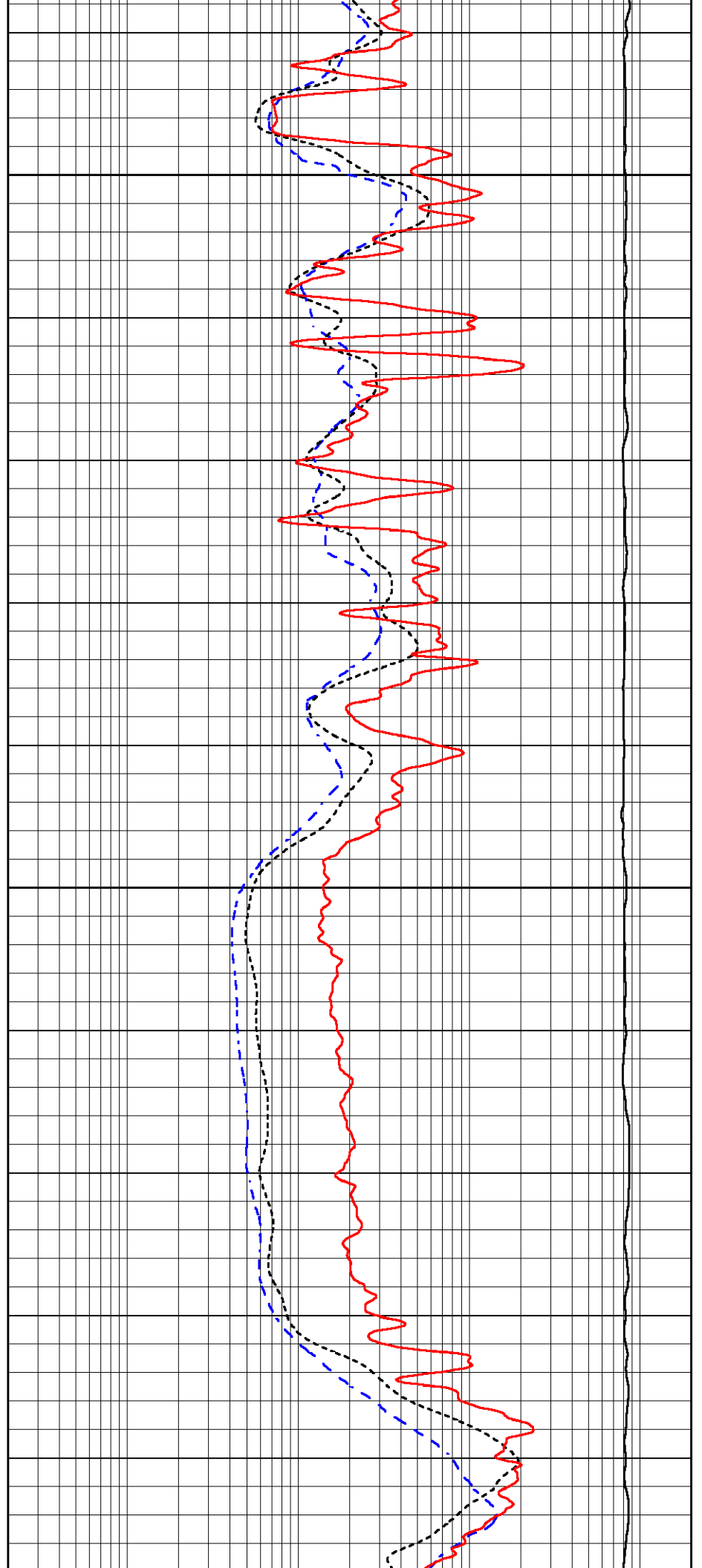
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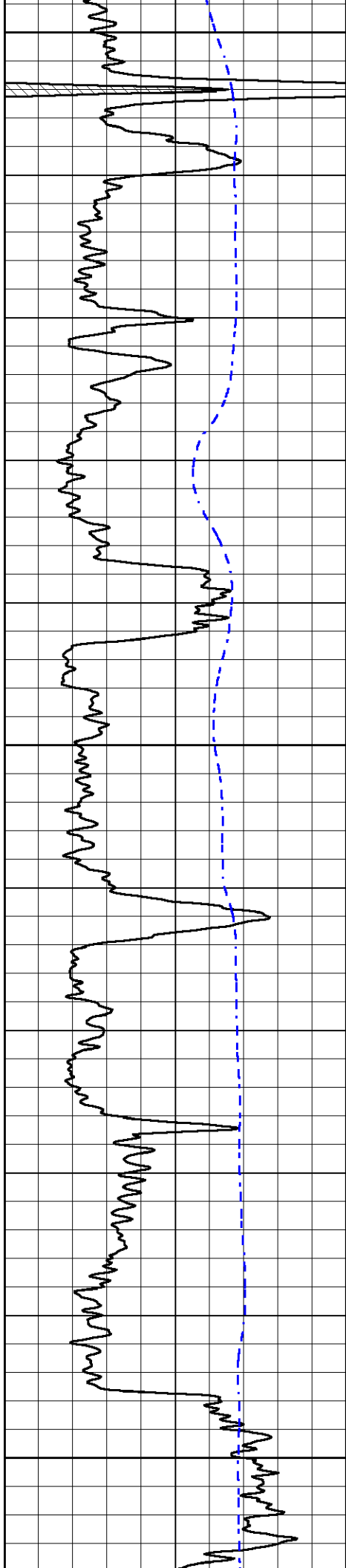




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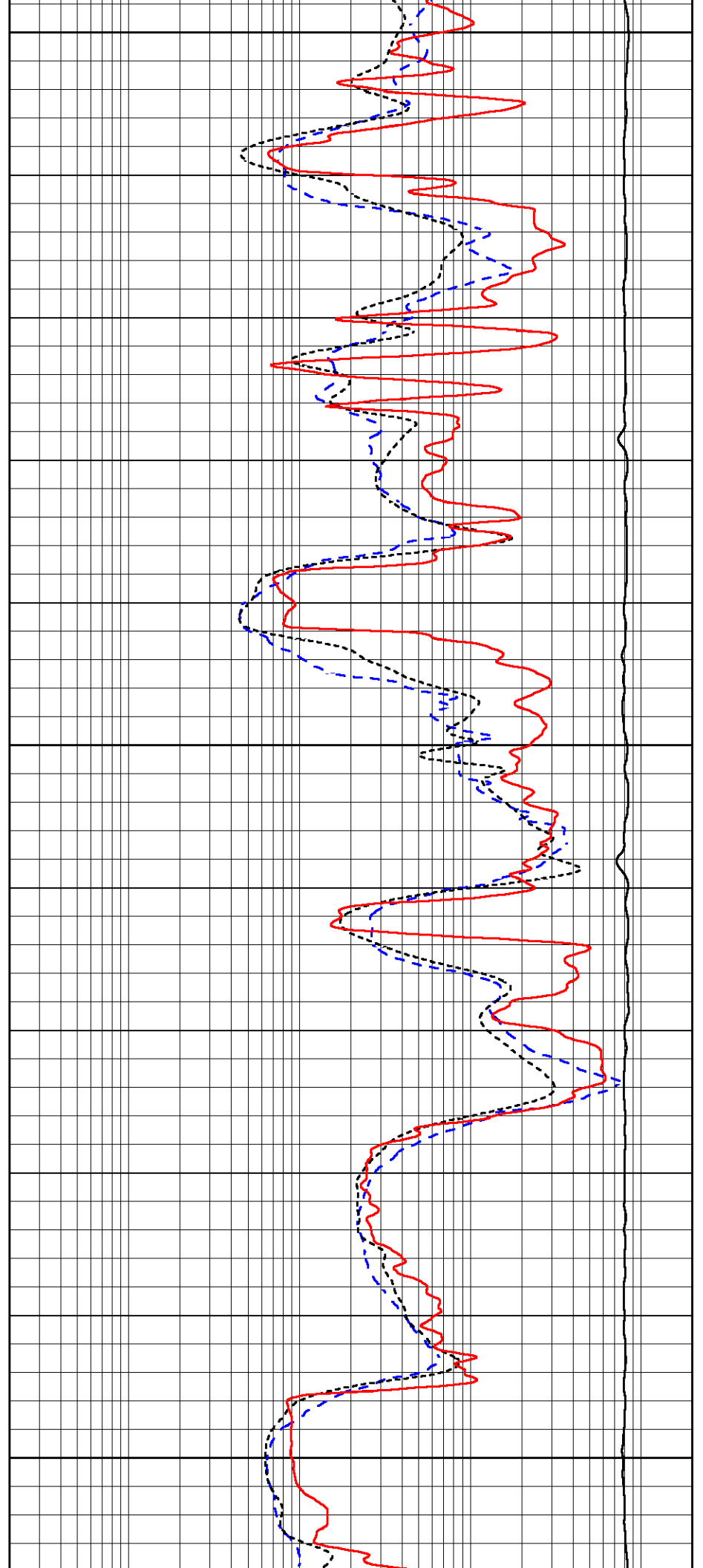


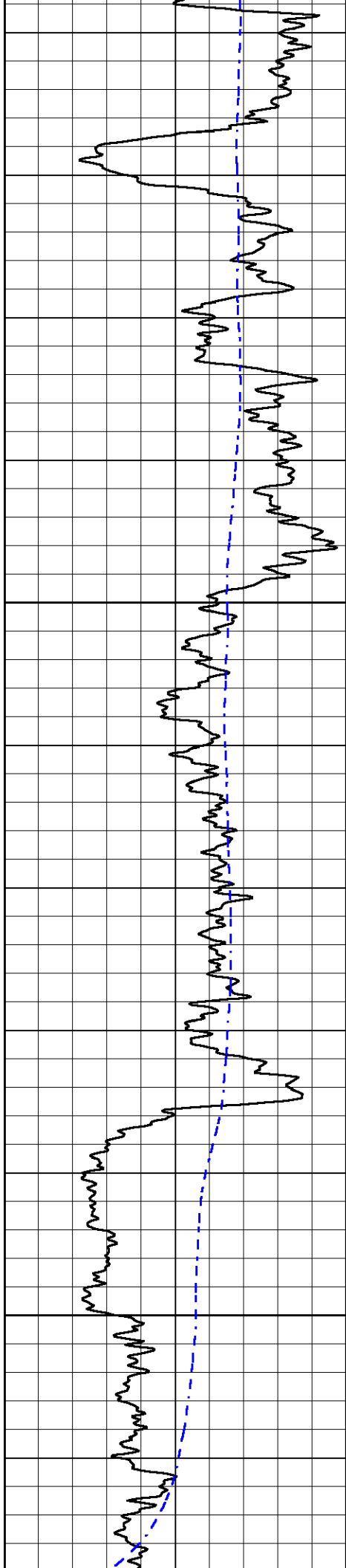


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3400

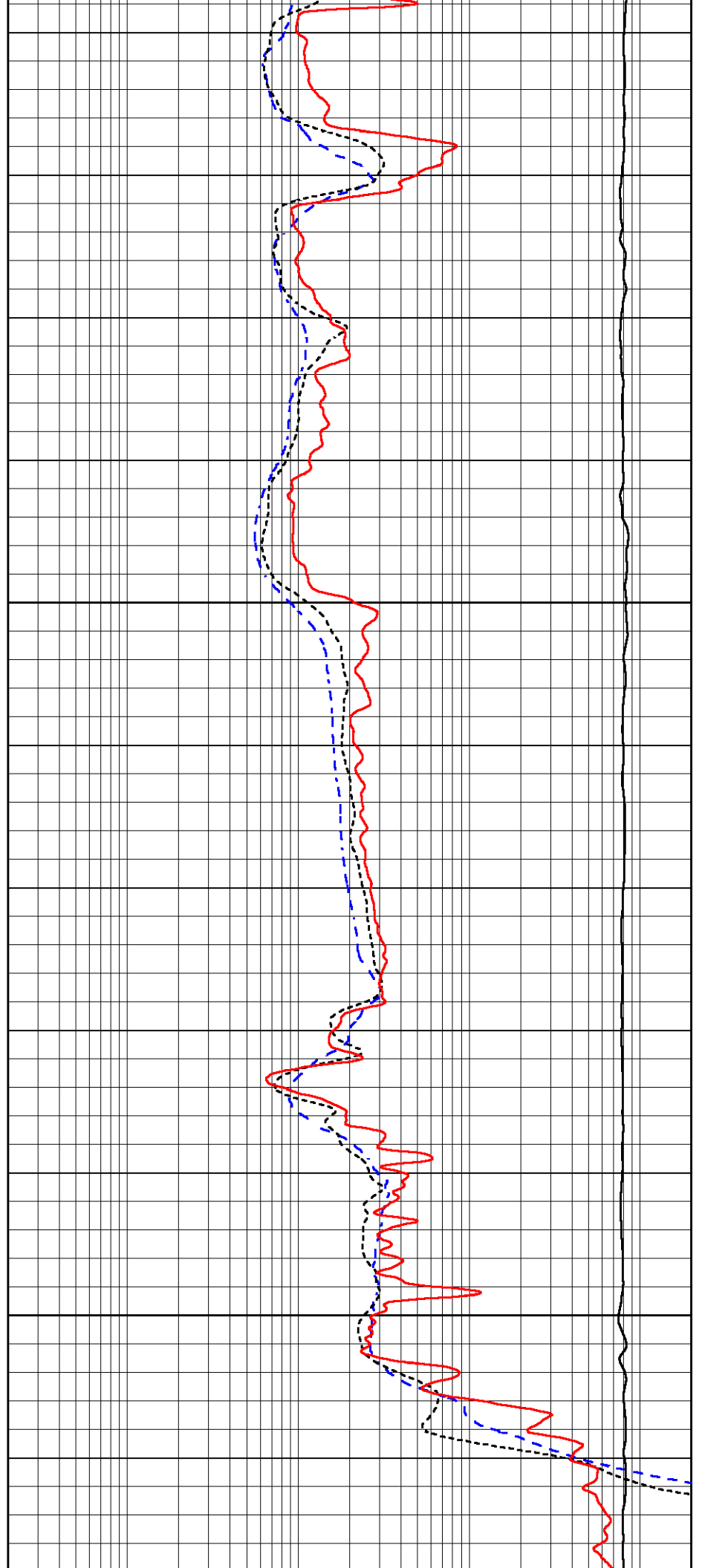
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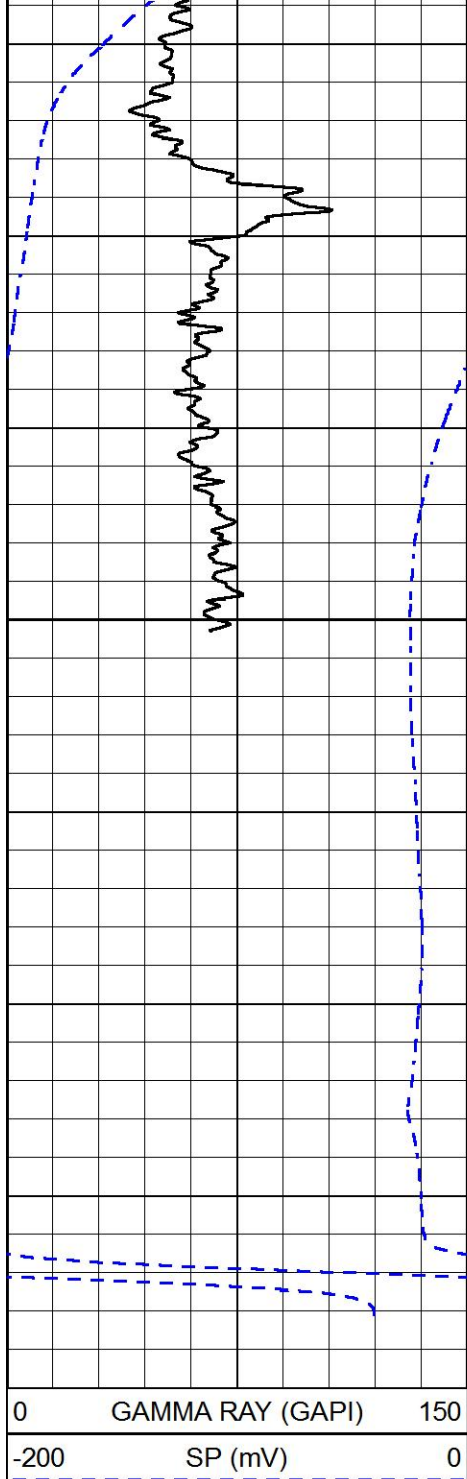




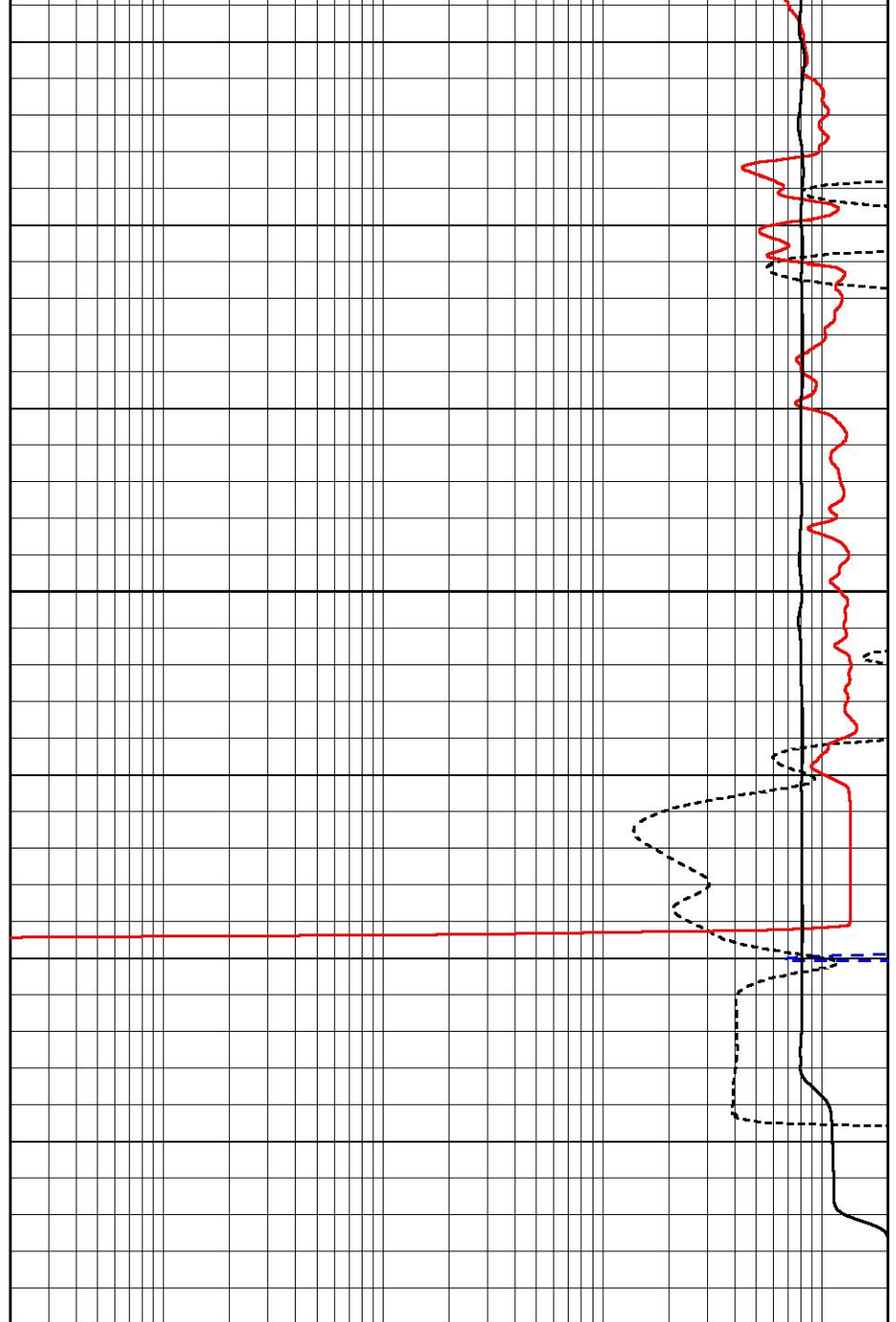
3500

3550





3600



0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
15000	LINE TENSION (lb)	0



# REPEAT SECTION

Database File fg\_holl\_leroy\_farming\_trust\_2\_30.db  
 Dataset Pathname stack/pass3.1  
 Presentation Format dil  
 Dataset Creation Wed Nov 13 17:36:30 2019  
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000

0.2

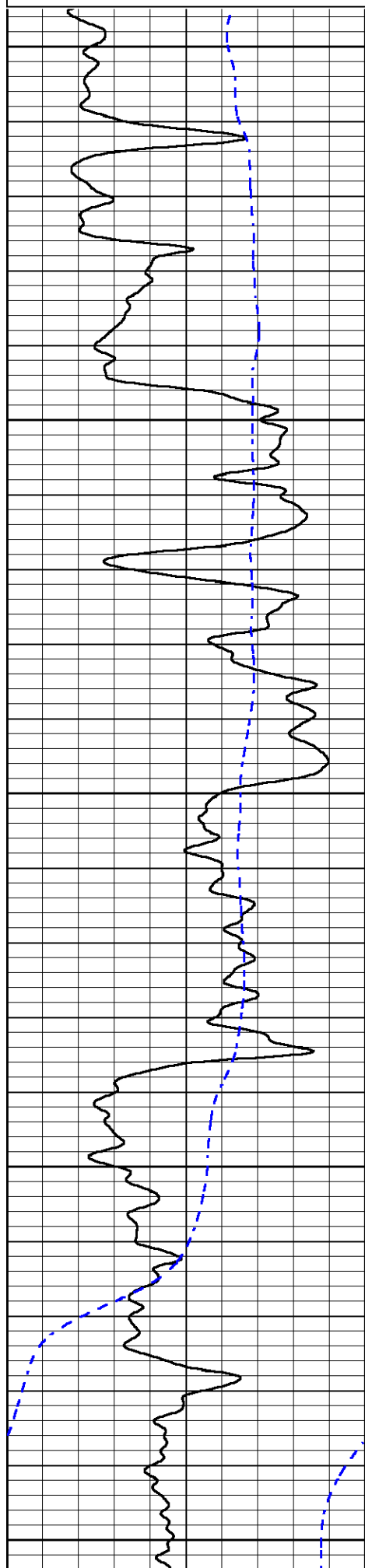
RLL3 (Ohm-m)

2000

15000

LINE TENSION (lb)

0



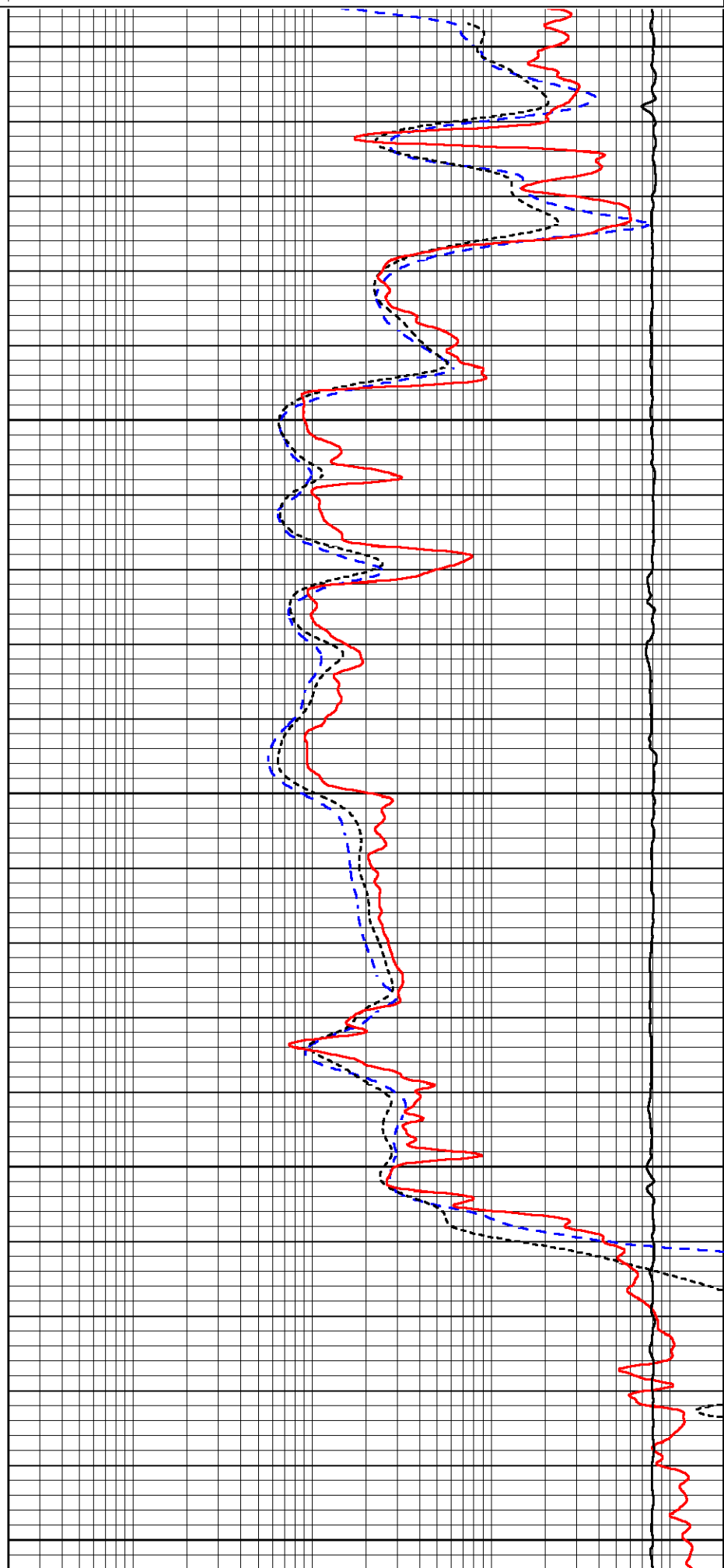
3400

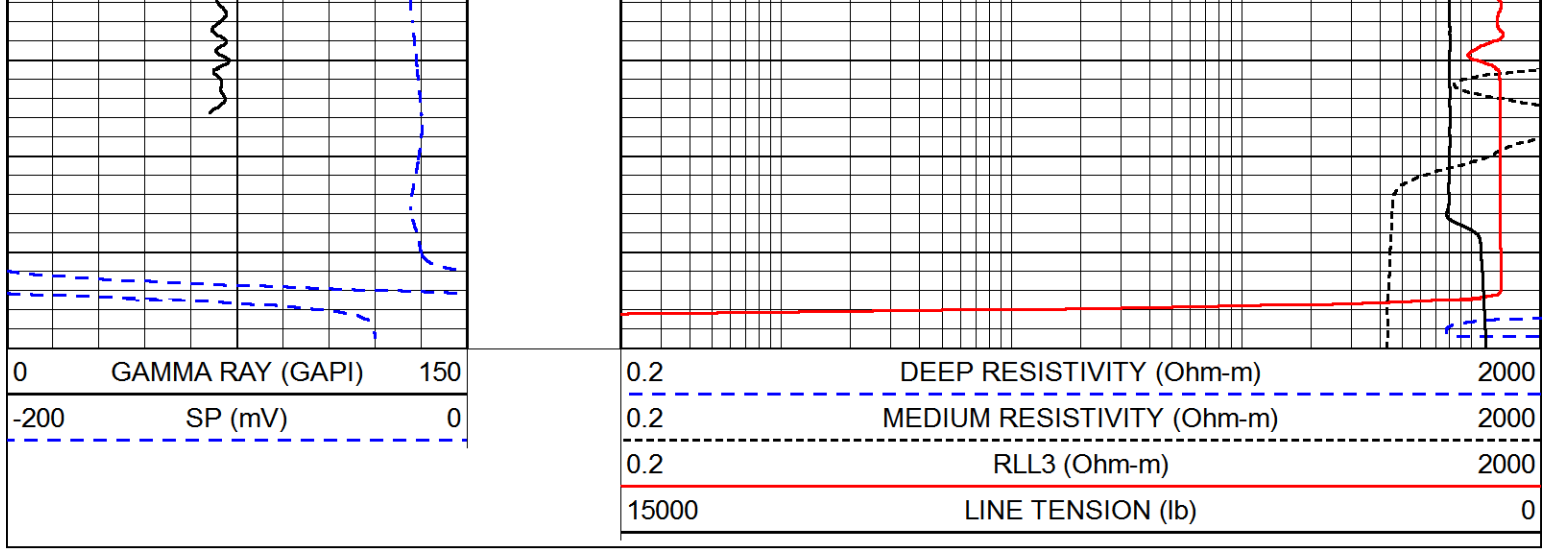
3450

3500

3550

3600





Calibration Report

Database File fg\_holl\_leroy\_farming\_trust\_2\_30.db  
 Dataset Pathname stack/pass4.1  
 Dataset Creation Wed Nov 13 18:37:58 2019

Dual Induction Calibration Report

Serial-Model: 55-222-M&W  
 Calibration Performed: Sun Oct 27 17:18:15 2019

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.510	-41.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.360	-15.000

Compensated Density Calibration Report

Serial-Model: 979-229-M&W  
 Source / Verifier: 21170B /  
 Master Calibration Performed: Tue Jul 23 10:17:03 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	7680.82	9959.08	cps
Aluminum	2.690	g/cc	1424.07	6427.19	cps
Spine Angle = 75.43			Density/Spine Ratio = 0.537		
	Size		Reading		
Small Ring	4.00	in	1.15		
Large Ring	14.00	in	1.02		

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:	Tue Apr 11 17:08:01 2017	
Calibrator Value:	1000.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	6.2	cps
Sensitivity:	0.5200	GAPI/cps



**PIONEER**  
Pioneer Energy Services

Company	F.G. HOLL COMPANY, LLC
Well	LEROY FARMING TRUST #2-30
Field	WILDCAT
County	BARTON
State	KANSAS