

DUAL INDUCTION LOG

MIDWEST WIRELINE

Company American Warrior, Inc.		Company American Warrior, Inc.	
Well	Langhofer #1-23	Well	Langhofer #1-23
Field	Novinger	Field	Novinger
County	Meade	County	Meade
State	Kansas	State	Kansas
Location: API #: 15-119-21459-00-00		Other Services	
1849' FSL & 1382' FWL		CNL/CDL MEL/BHCS	
Permanent Datum	Ground Level	Elevation	2709'
Log Measured From	Kelly Bushing	K.B.	2720'
Drilling Measured From	Kelly Bushing	D.F.	N/A
		G.L.	2709'
Date	8/23/2021		
Run Number	One		
Depth Driller	6300'		
Depth Logger	6296'		
Bottom Logged Interval	6295'		
Top Log Interval	1700'		
Casing Driller	8.625" @ 1748'		
Casing Logger	1748'		
Bit Size	7.875"		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	1500		
Density / Viscosity	9.1 66		
pH / Fluid Loss	9.5 8.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.80 @ 80		
Rmt @ Meas. Temp	0.60 @ 80		
Rmc @ Meas. Temp	1.08 @ 80		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.46 @ 139		
Operating Rig Time	5 Hours		
Max Rec. Temp. F	139		
Equipment Number	P-24		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Kevin Timson		

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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.

Plains,
6 South to V Rd, 1 East, 1 South,
East into

Log Measured From: Kelly Bushing

11 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: Kevin Timson
Secondary Witness:
Secondary Witness:
Secondary Witness:

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)						
GR	33.00			GR-M&W (233-M&W)	3.00	3.50	50.00						
CNLSC	29.90			CNT-M&W (207-MW)	5.50	3.50	100.00						
CNSSC	29.15												
LSD DCAL SSD	20.85			CDL-M&W (934-226)	8.50	4.00	250.00						
	20.83												
	20.35												
RLL3F RLL3	15.80 15.80			DIL-PSI HIGH TEMP (952-828)	18.50	3.50	220.00						
CILD	8.00												
CILM	4.70												
SP	0.20												
Dataset: aw_langhofer 1-23.db: field/well/stack/pass3.1													
Total length: 35.50 ft													
Total weight: 620.00 lb													
O.D.: 4.00 in													

Log Variables

DatabaseC:\ProgramData\Warrior\Data\aw_langhofer 1-23.db
Dataset field/well/stack/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 139	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m 0	mmho/m 0	mV 158	degF 80	Off	ft 6296

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

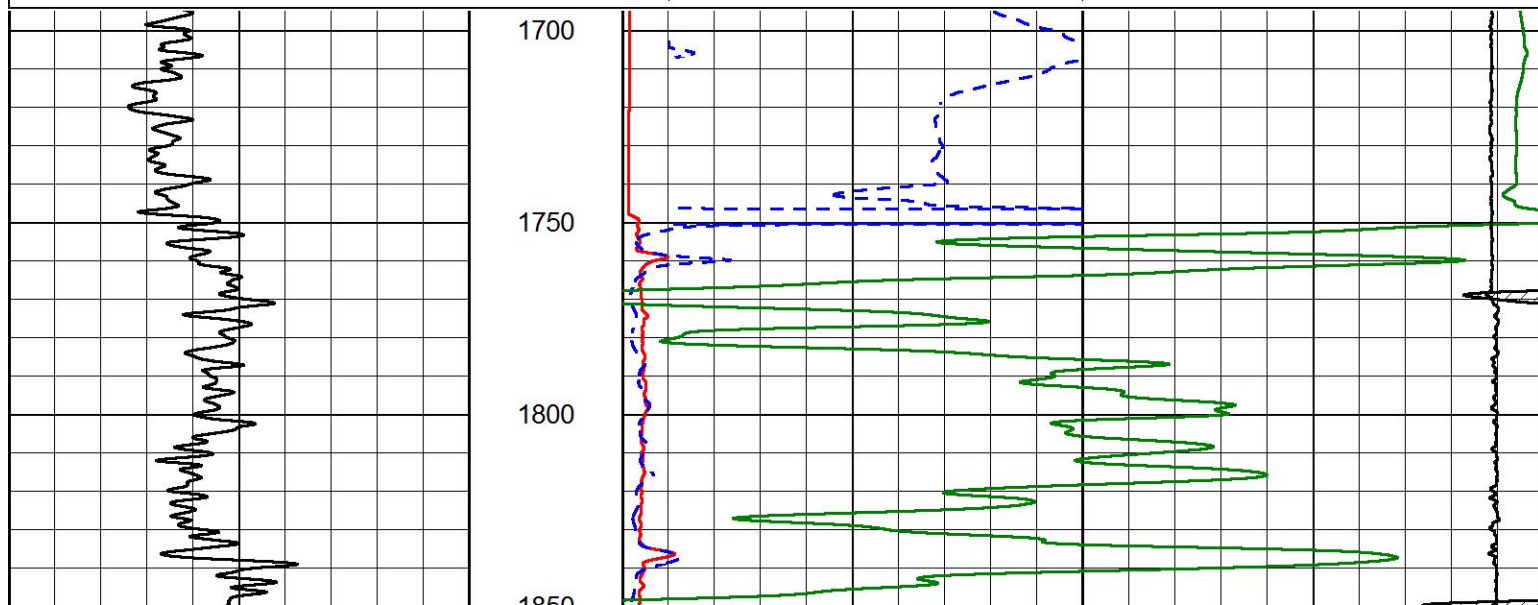


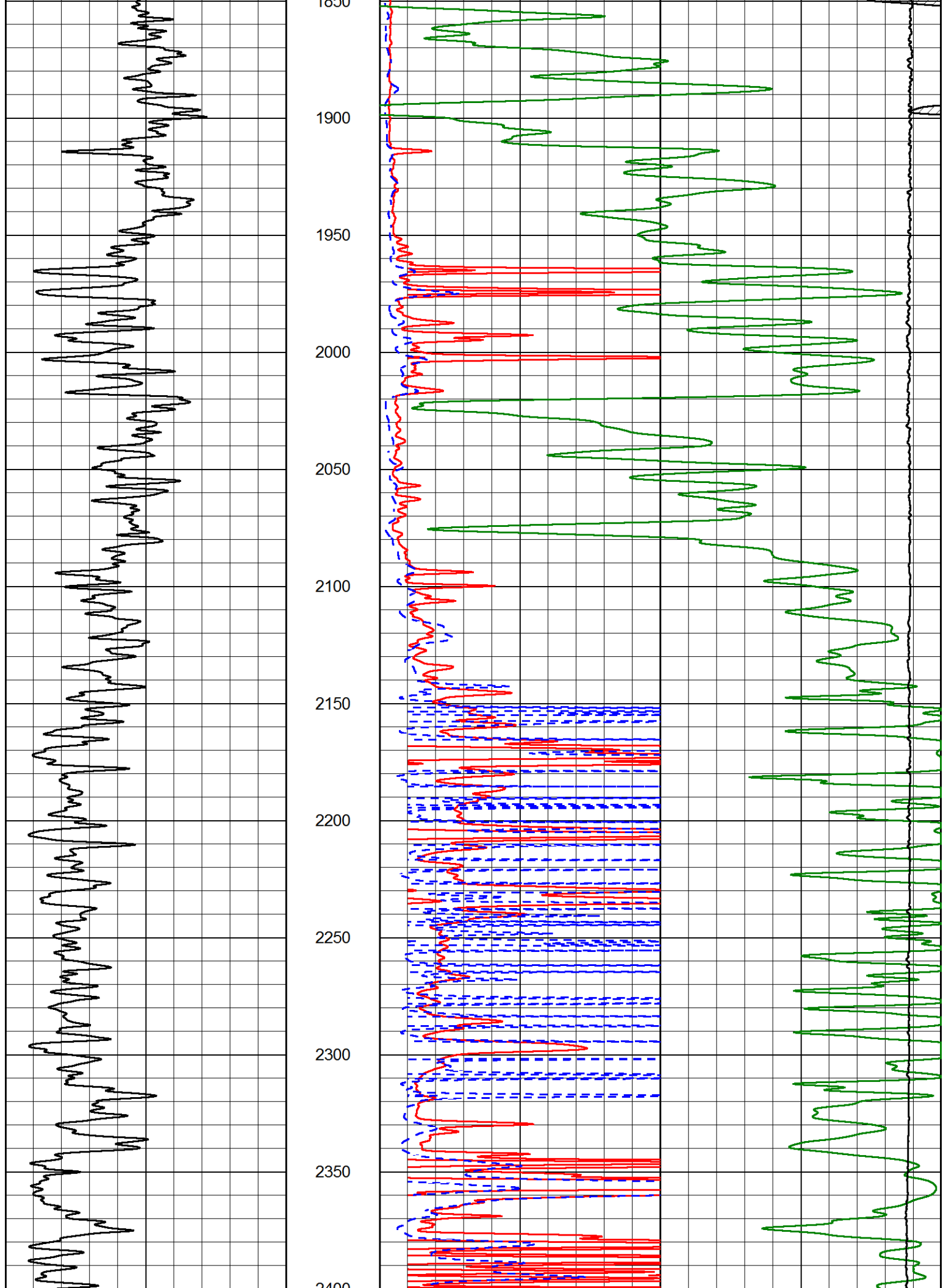
2" SCALE RESISTIVITY

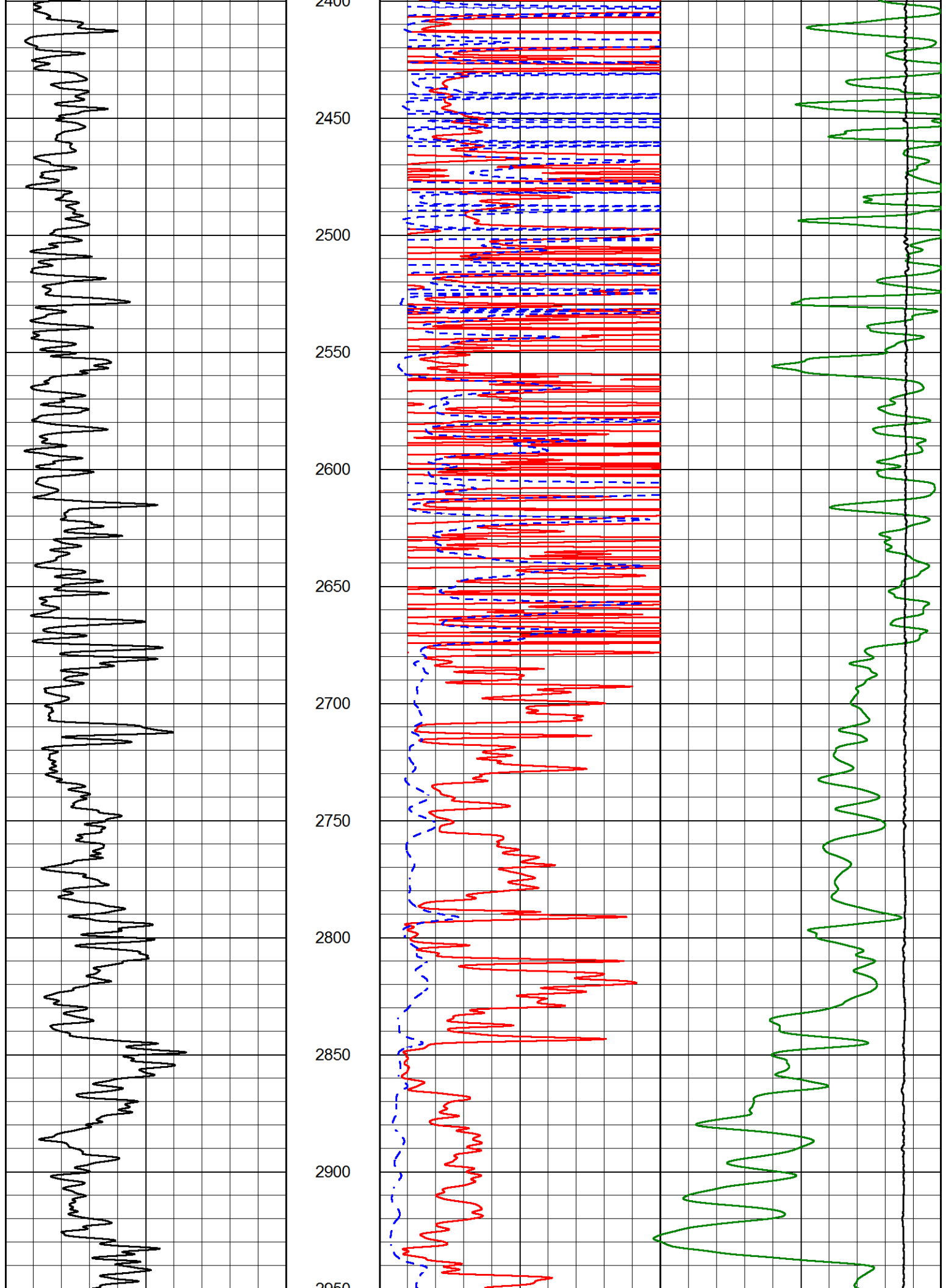
MAIN PASS

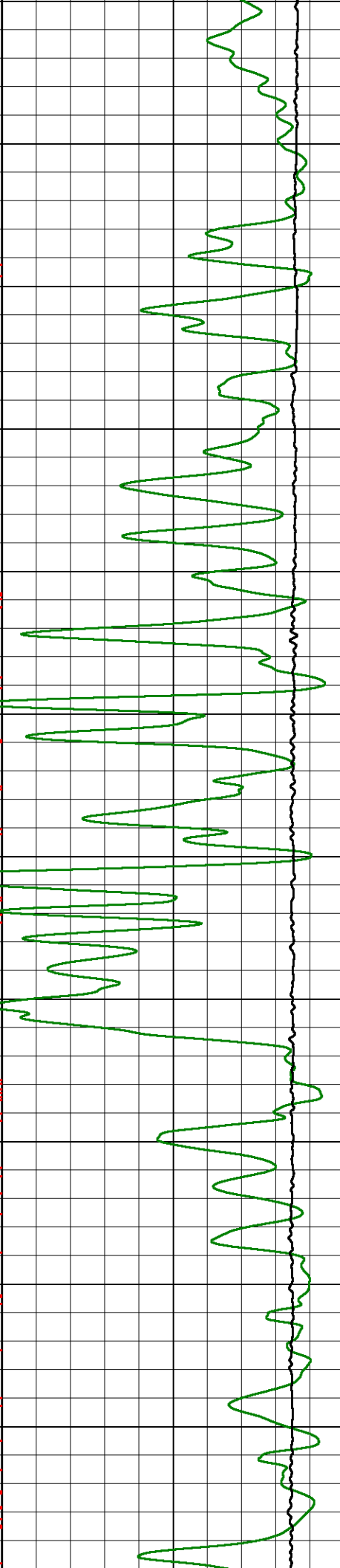
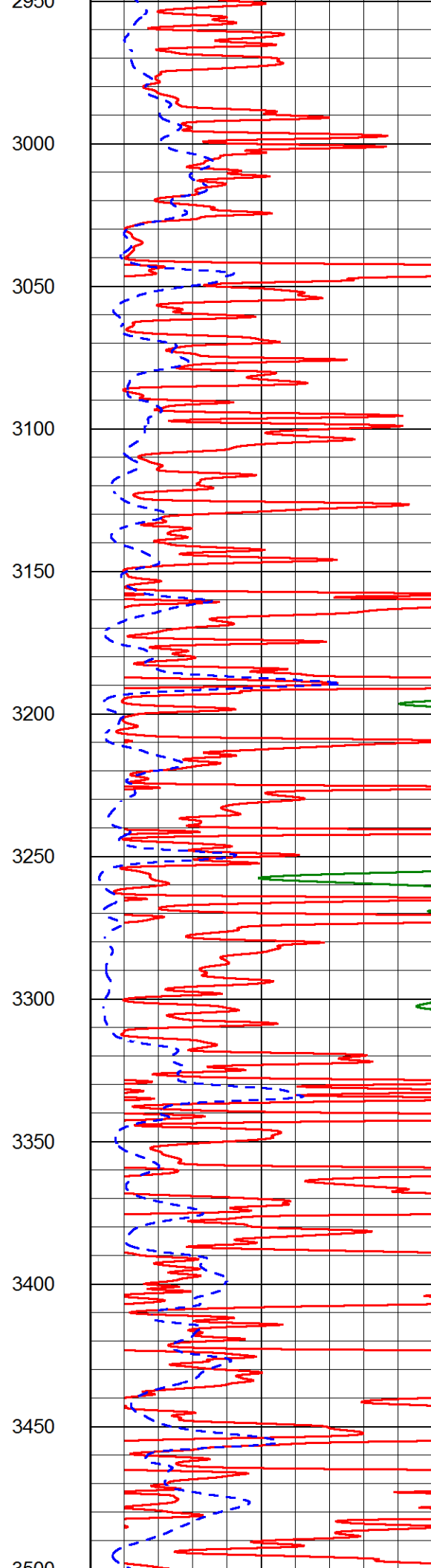
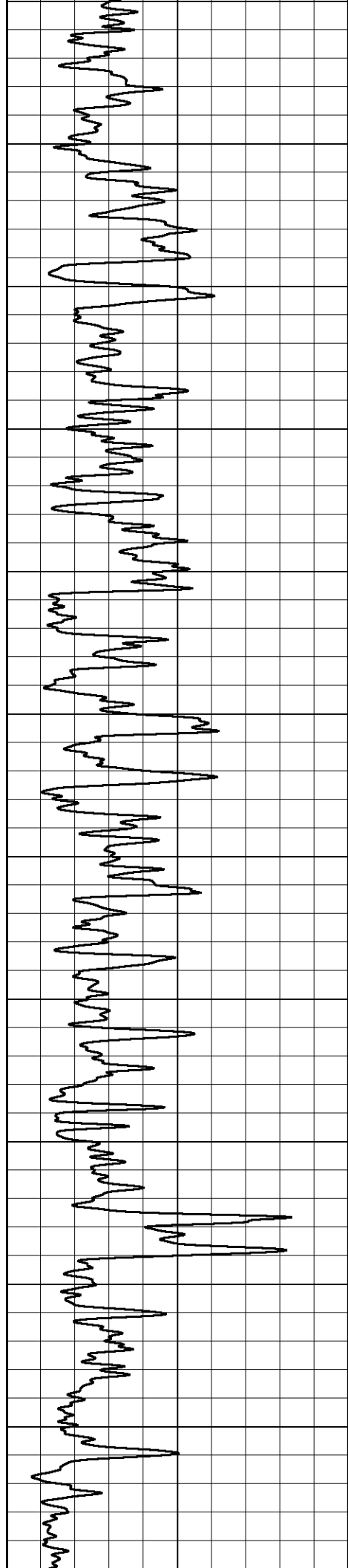
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Dataset Pathname stack/pass5.1
Presentation Format _dil2in
Dataset Creation Mon Aug 23 03:31:25 2021
Charted by Depth in Feet scaled 1:600

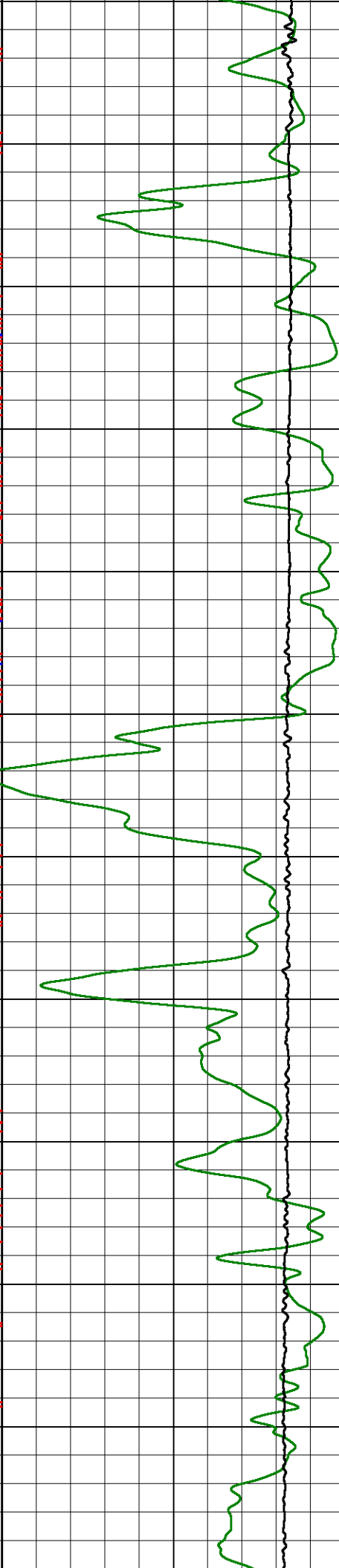
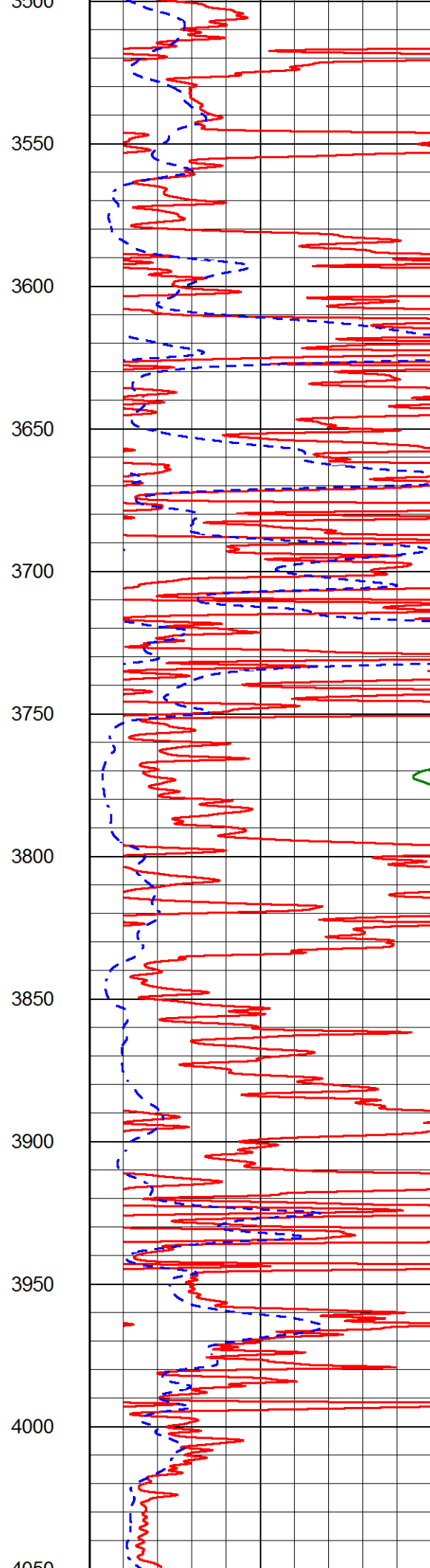
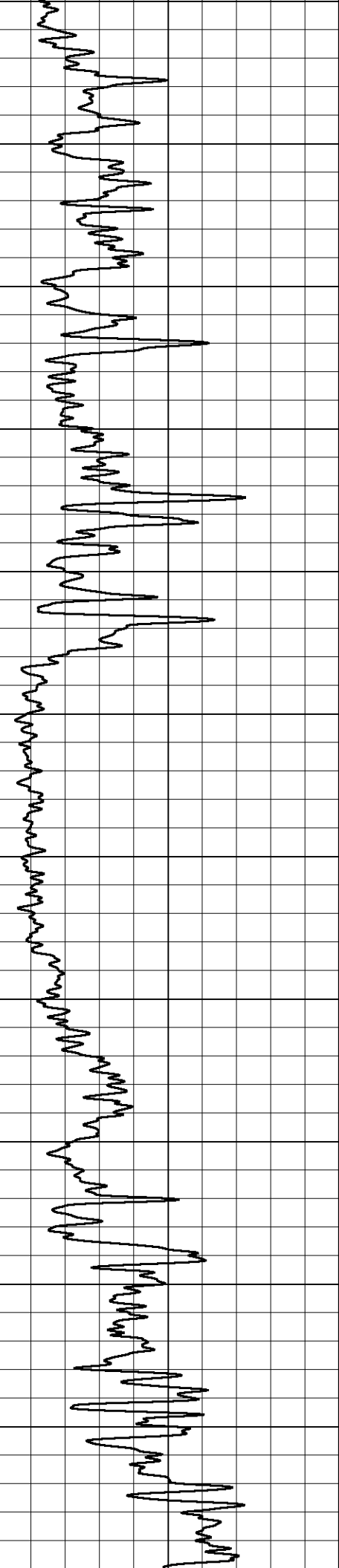
GAMMA RAY		1000 CONDUCTIVITY (mmho/m)		0
		15000 Line Tension (lb)		0
0	(GAPI)	150	0 RLL3 (Ohm-m)	50
			0 RILD (Ohm-m)	50
			50 RLL3 (Ohm-m)	200
			50 Deep Resistivity (Ohm-m)	200

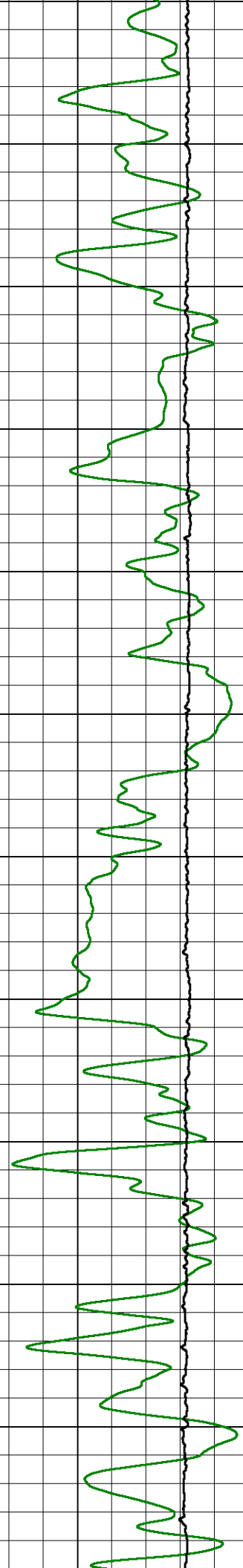
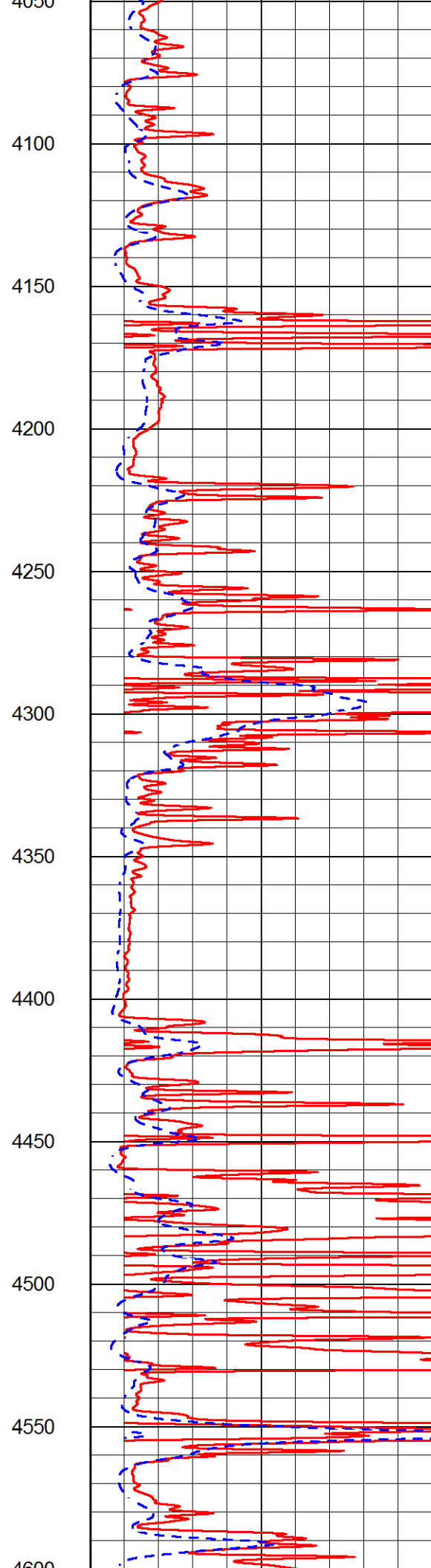
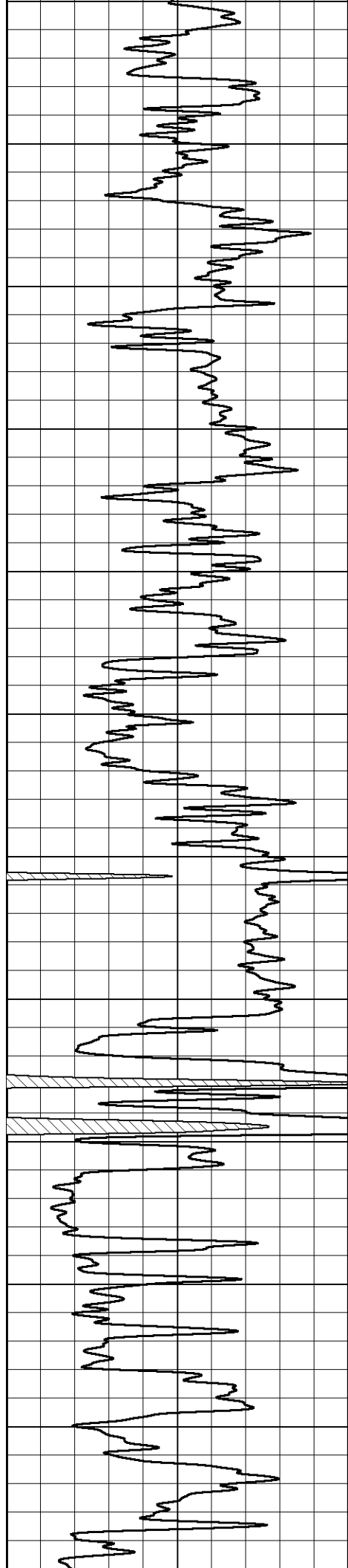


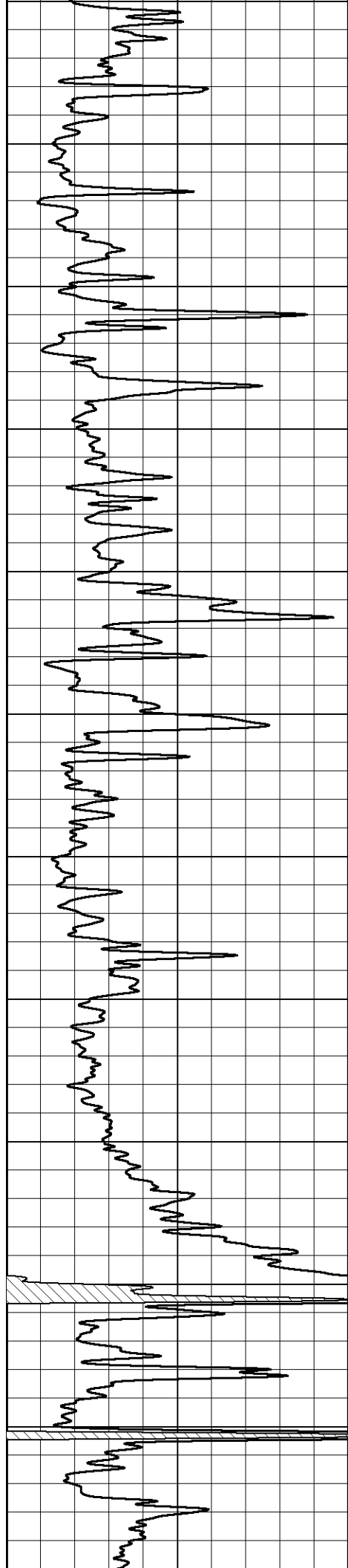




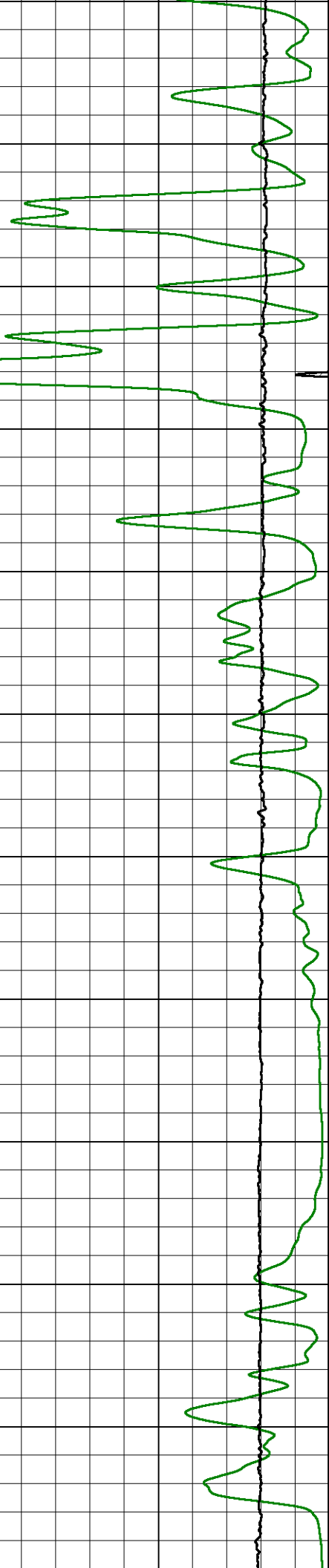
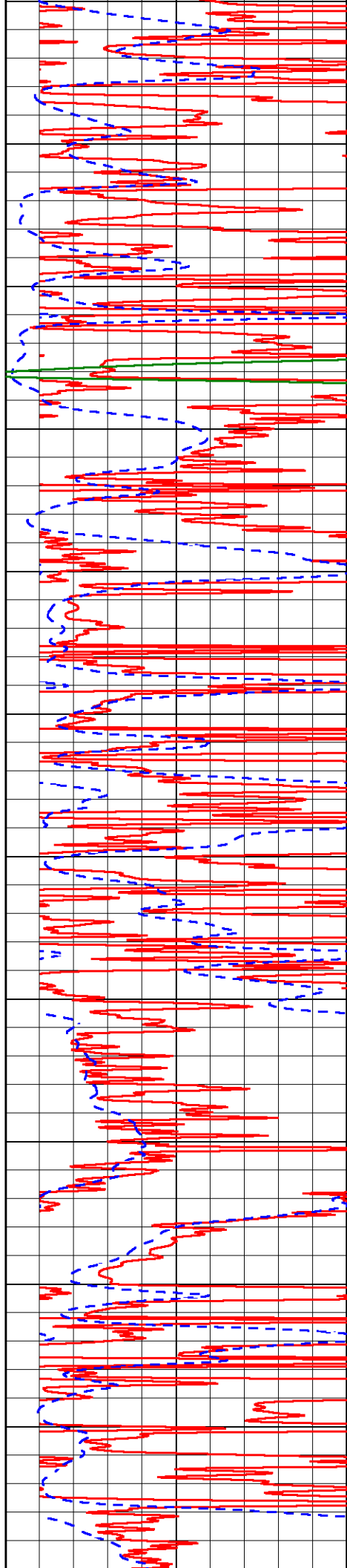


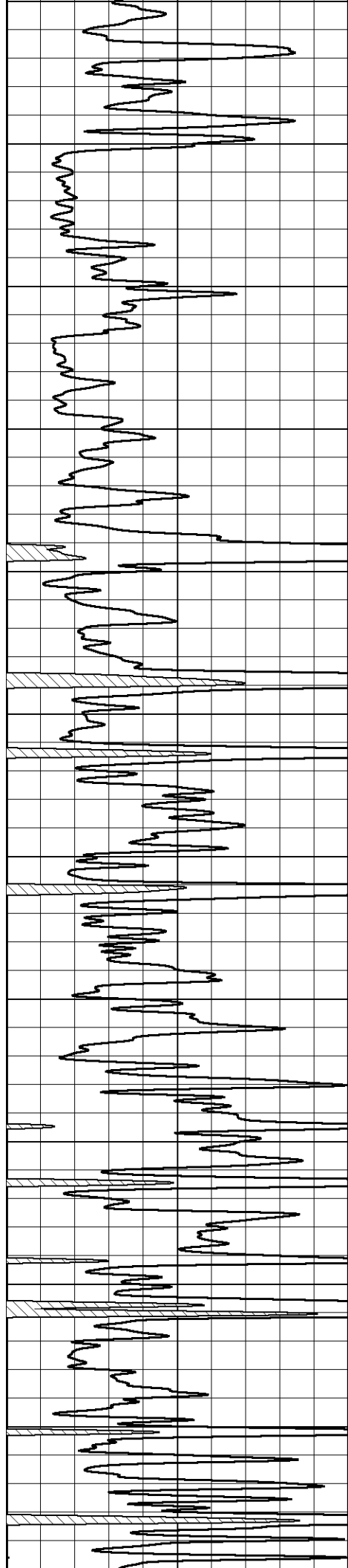




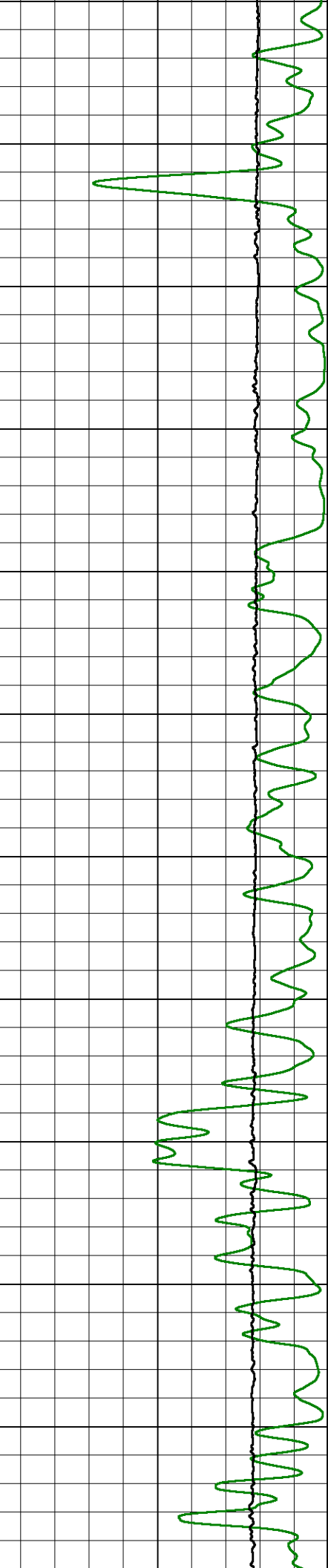
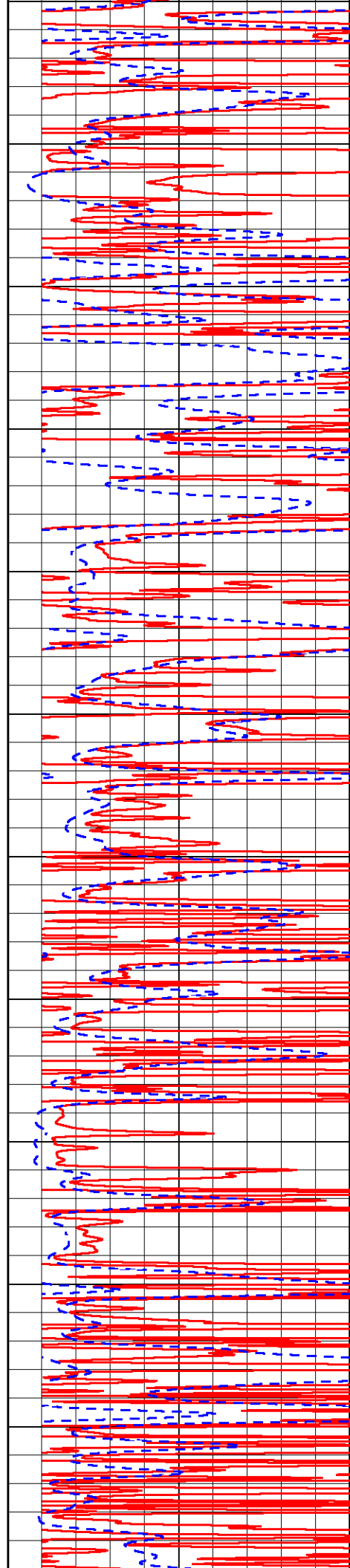


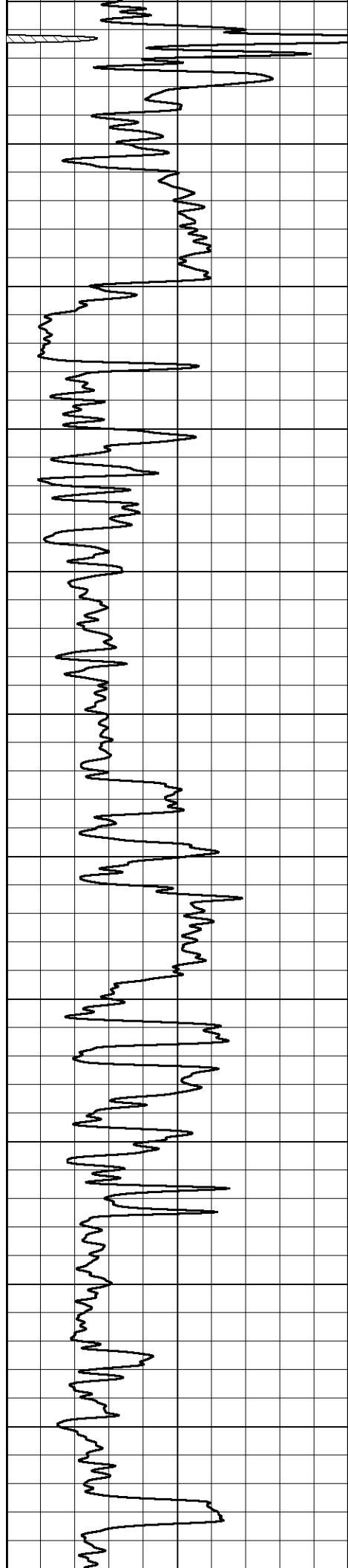
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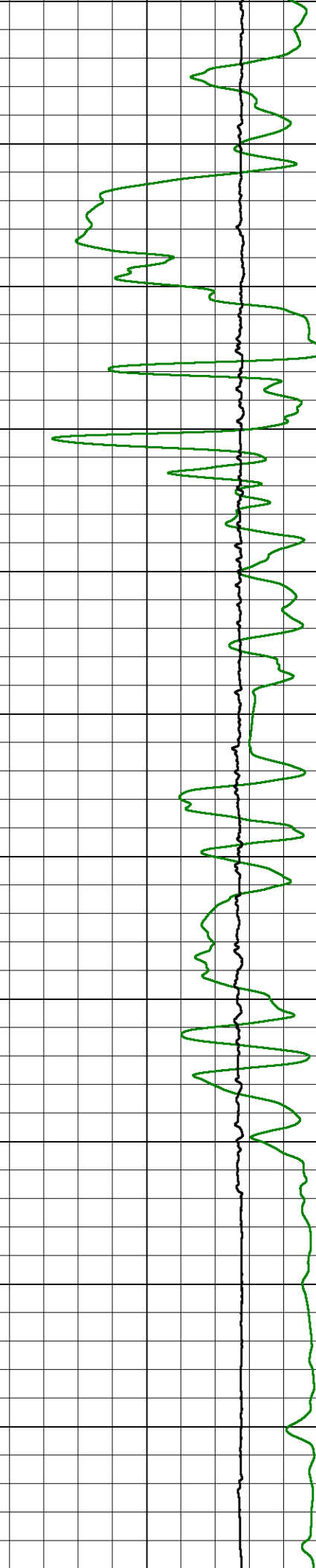
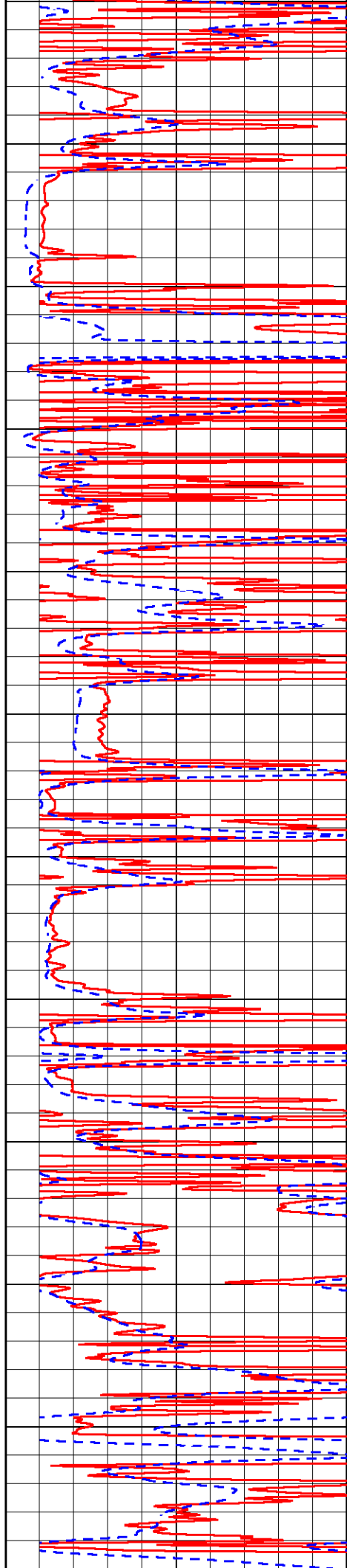


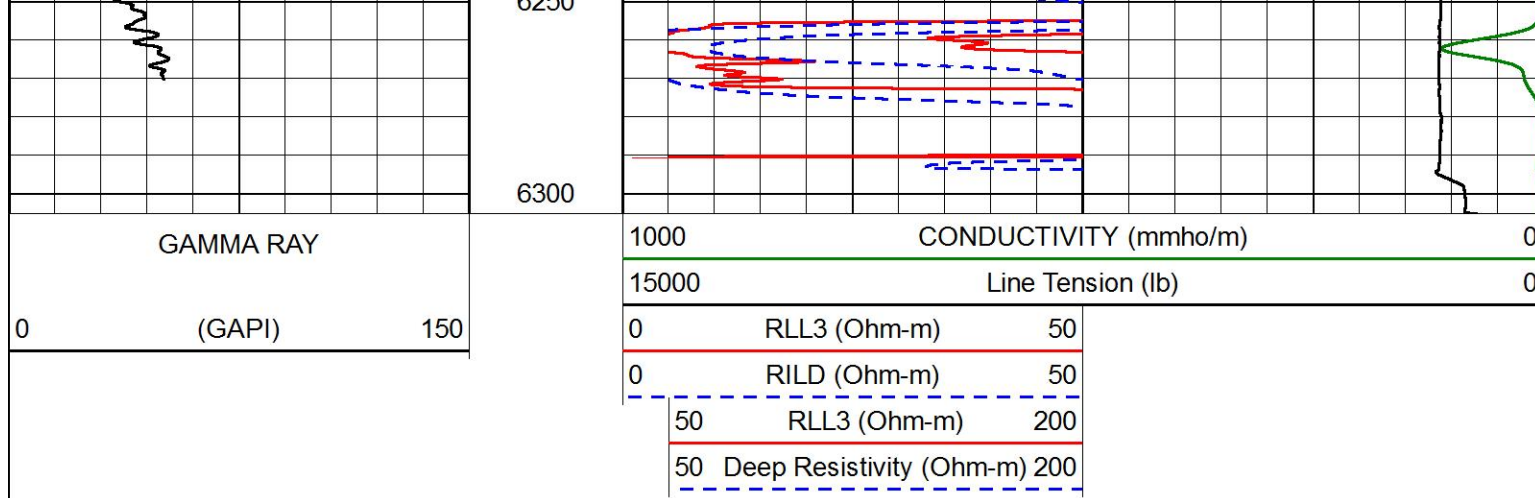
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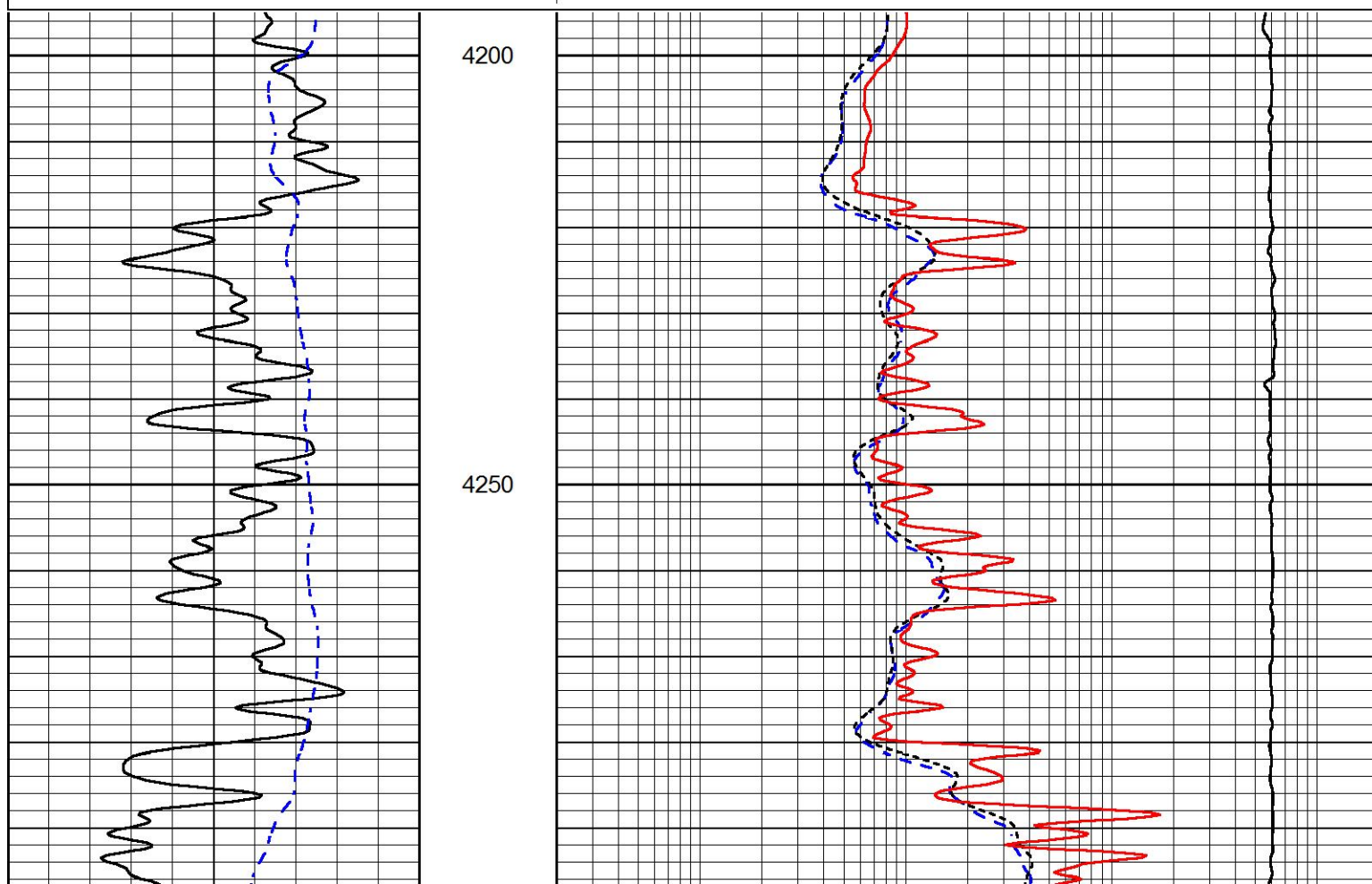


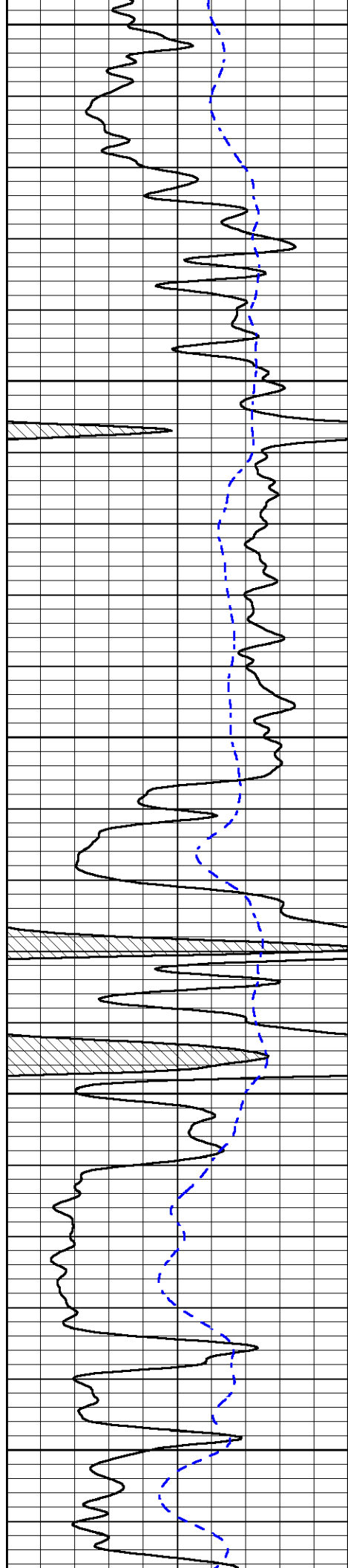
DETAIL SECTION

MAIN PASS

Database File aw_langhofer 1-23.db
 Dataset Pathname stack/pass3.1
 Presentation Format _dil
 Dataset Creation Mon Aug 23 03:19:46 2021
 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
			10000	LINE TENSION (lb)	0





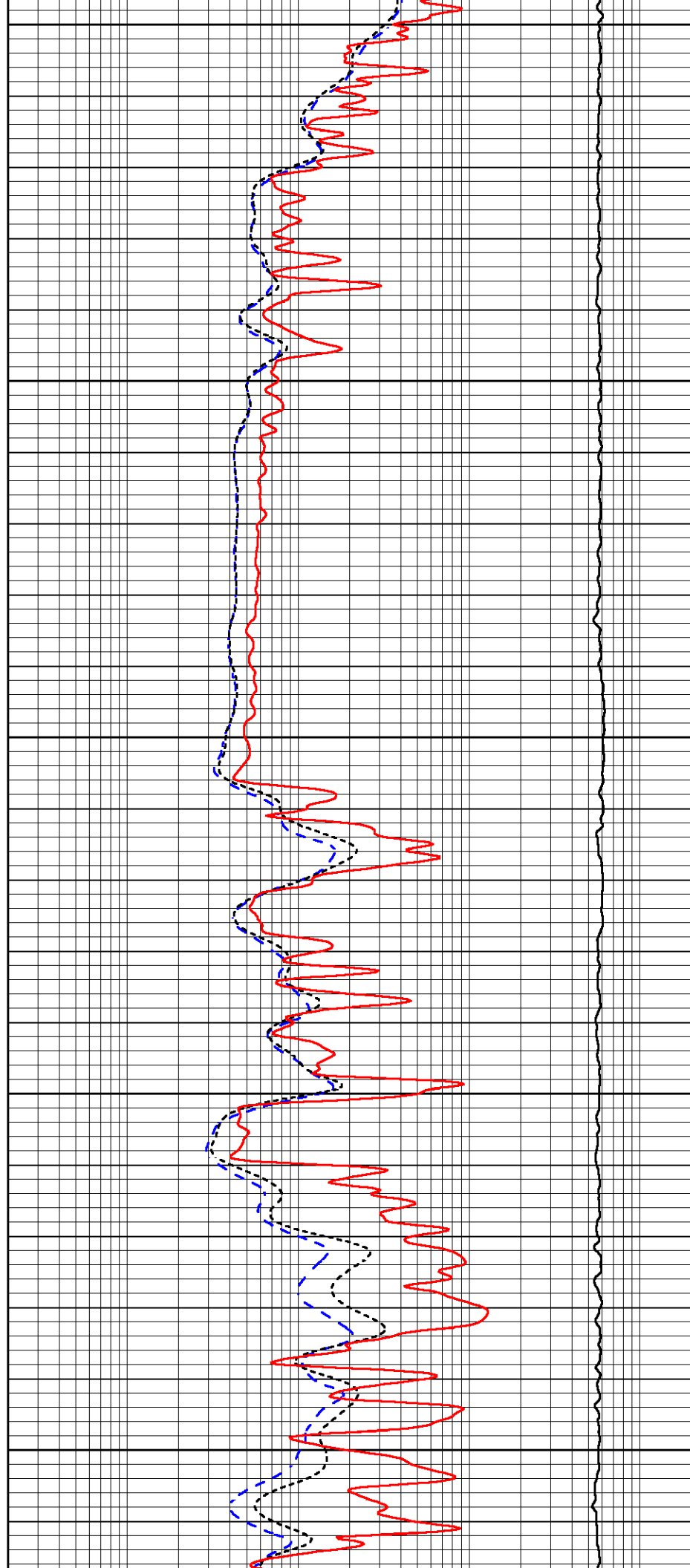
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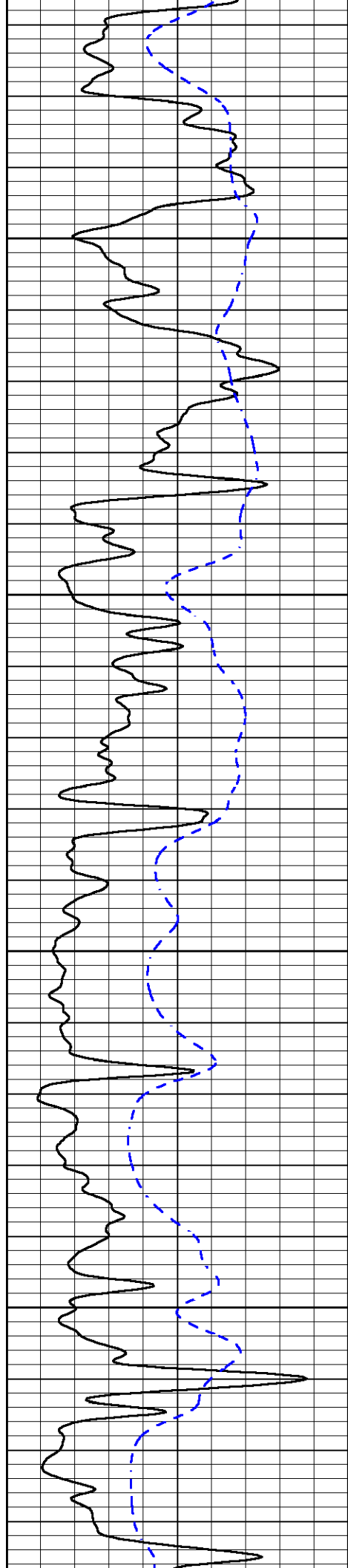
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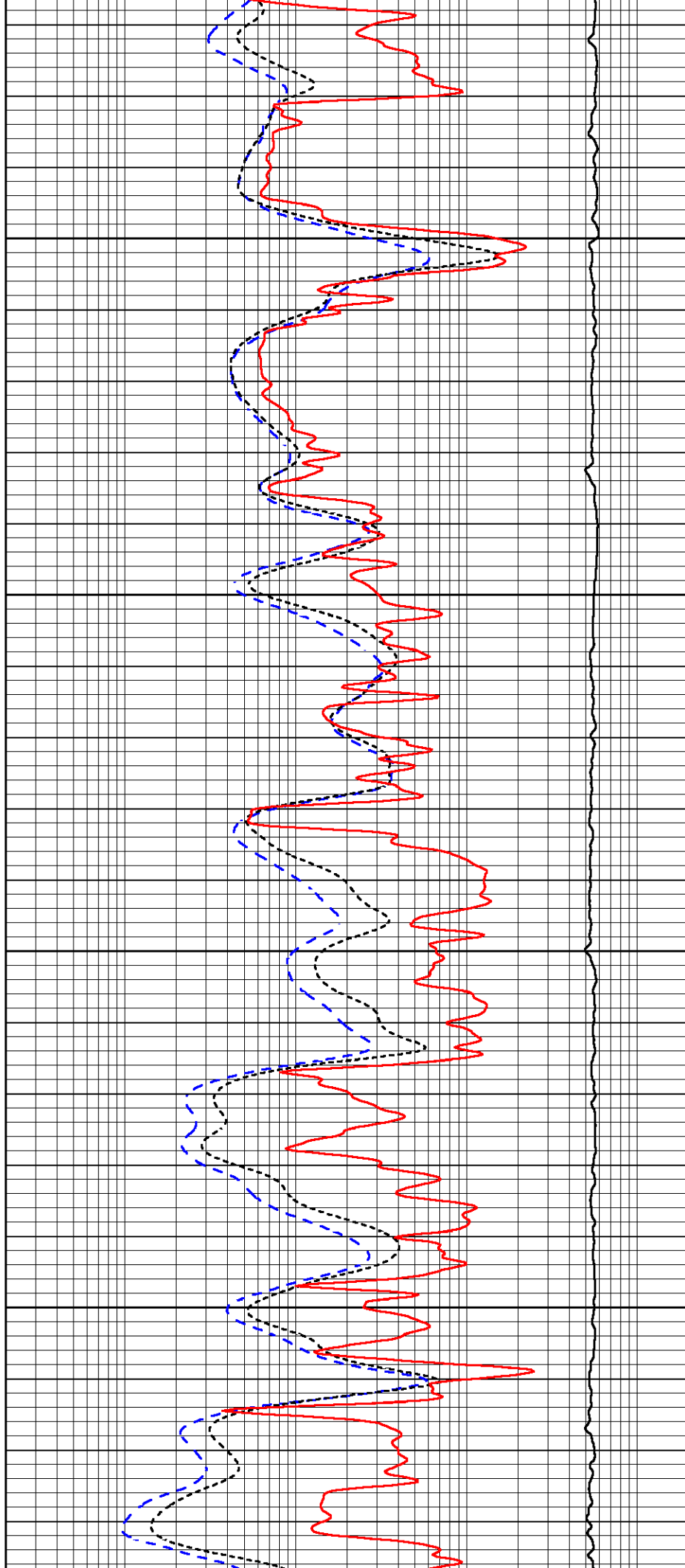


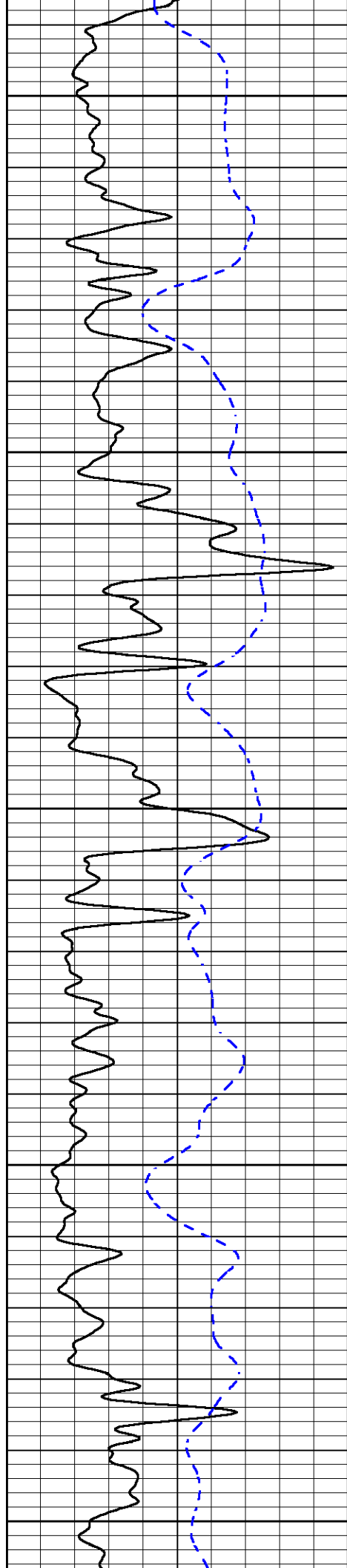
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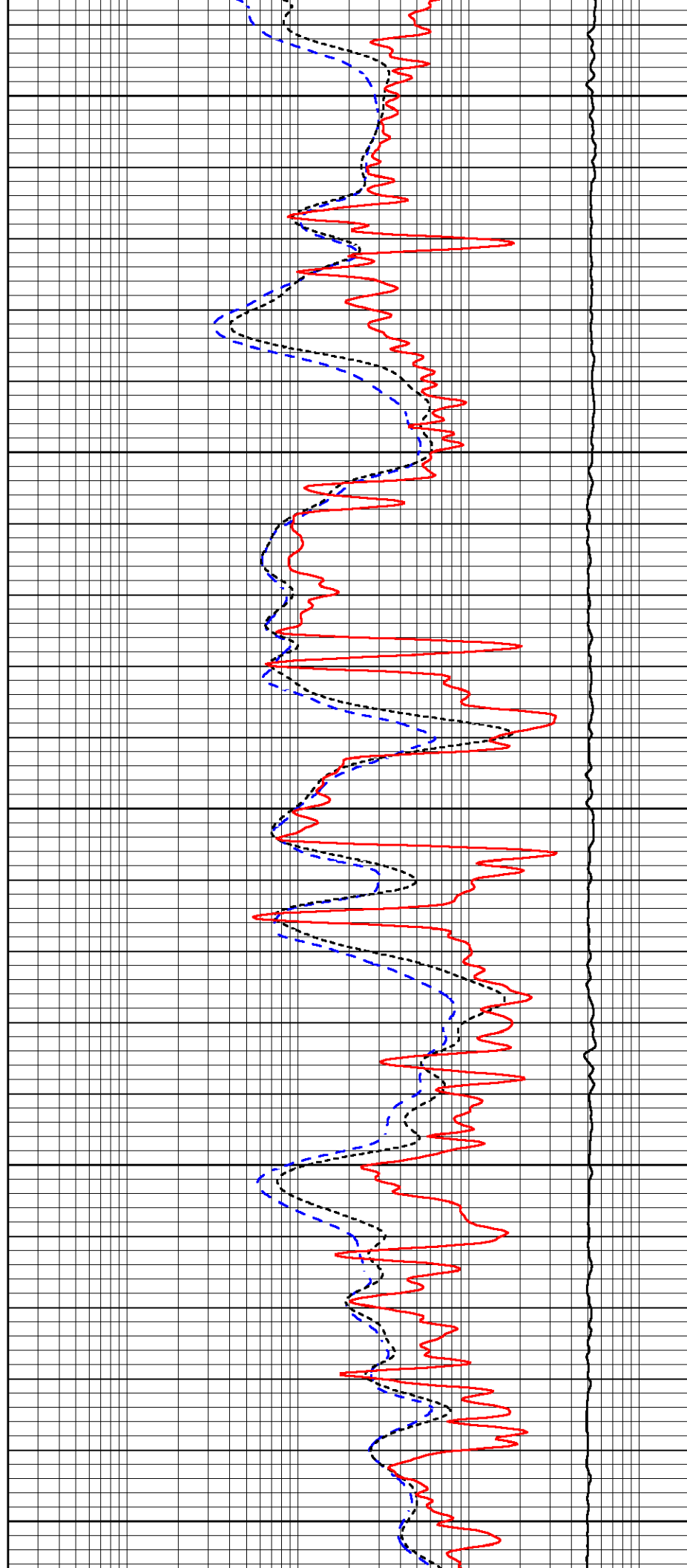
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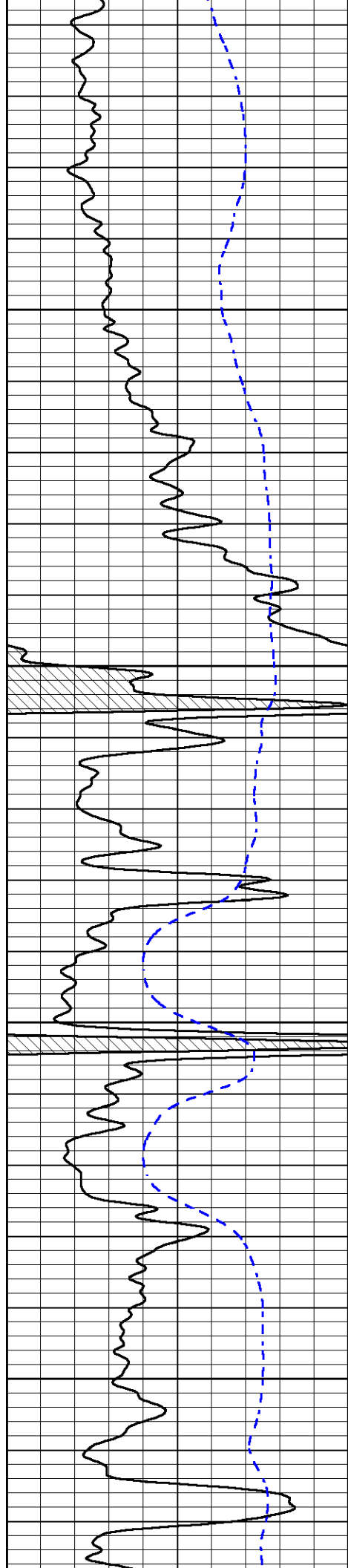
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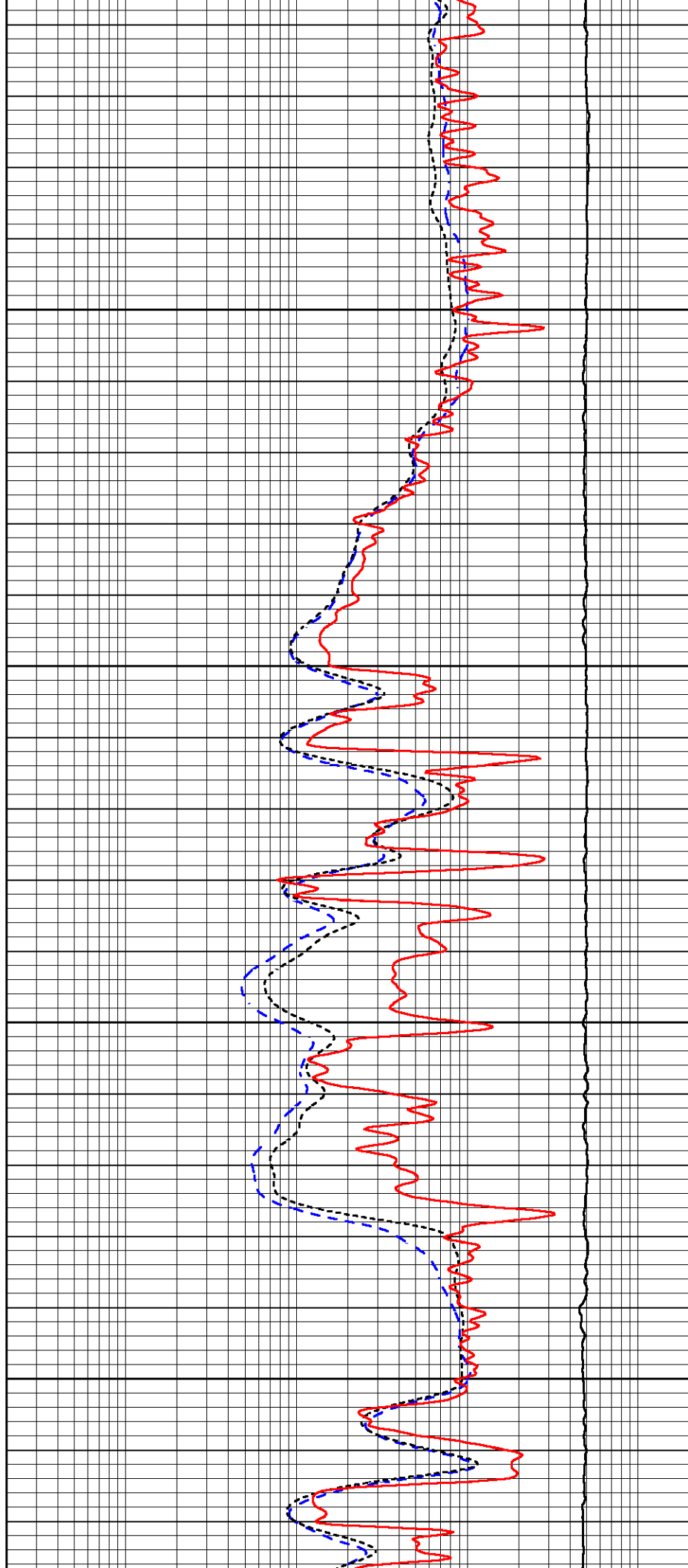


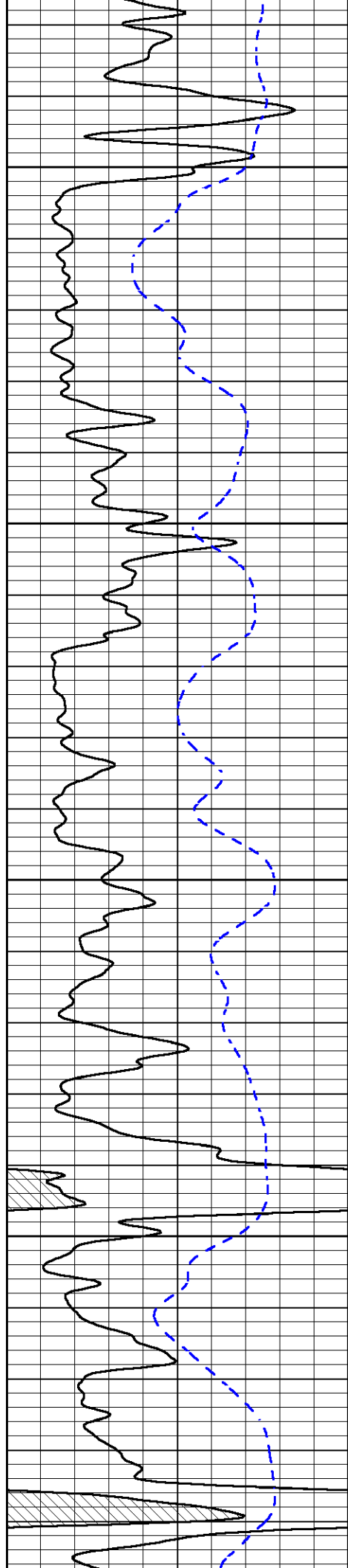
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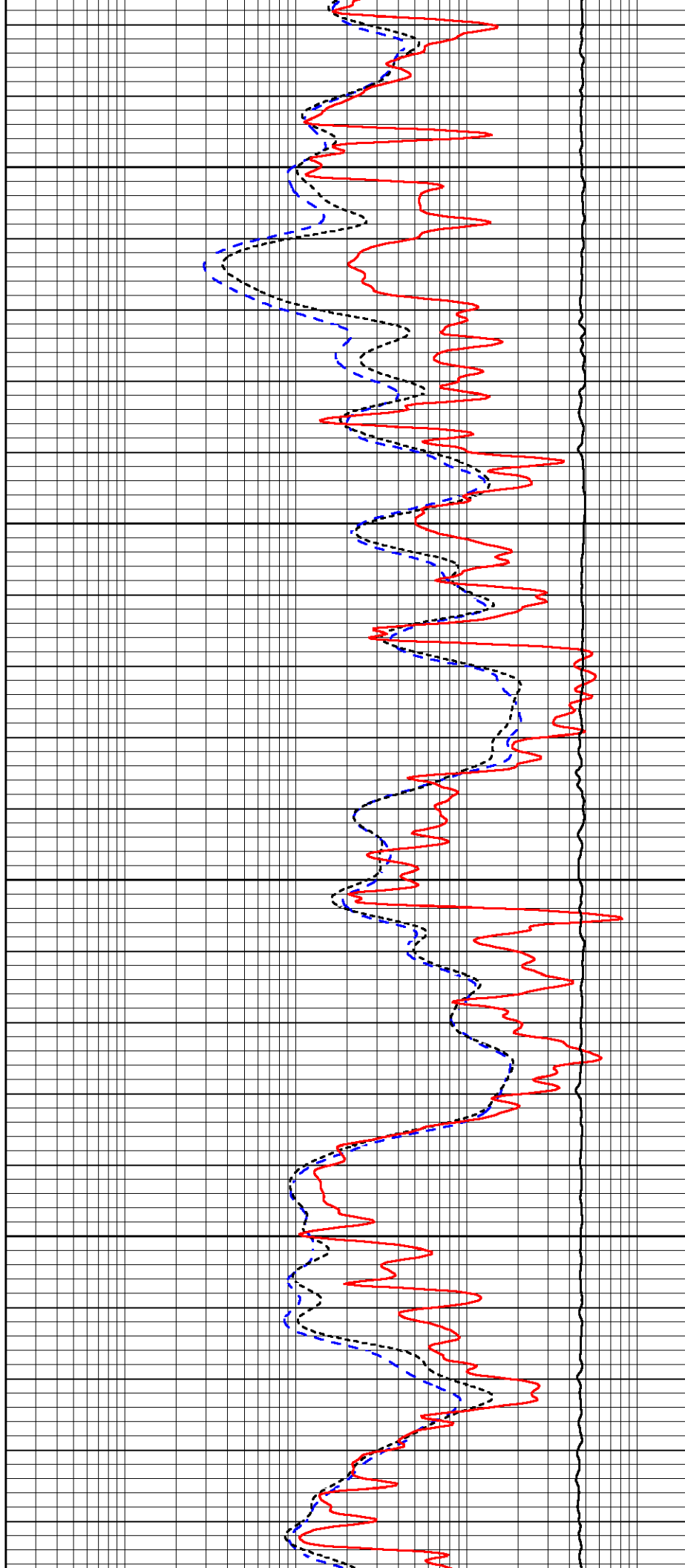


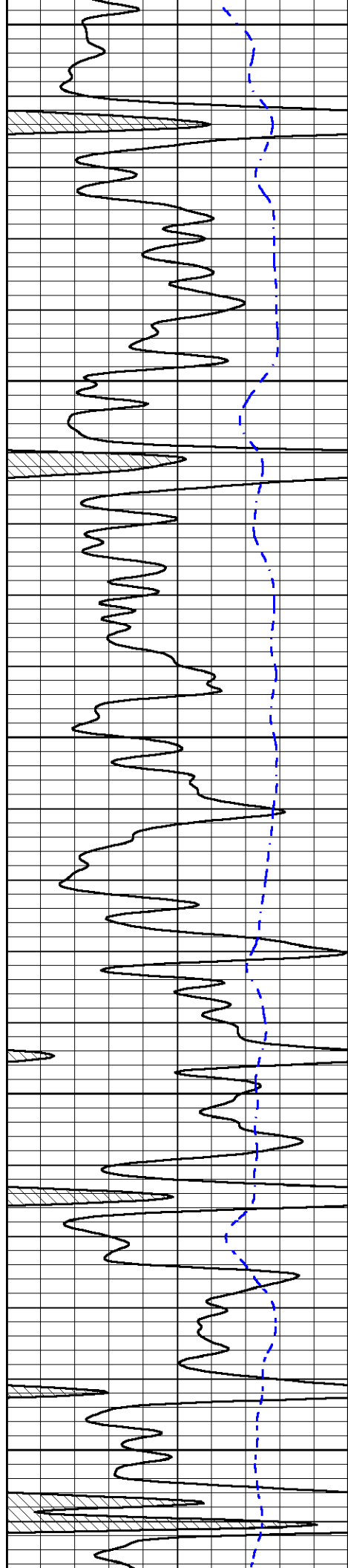
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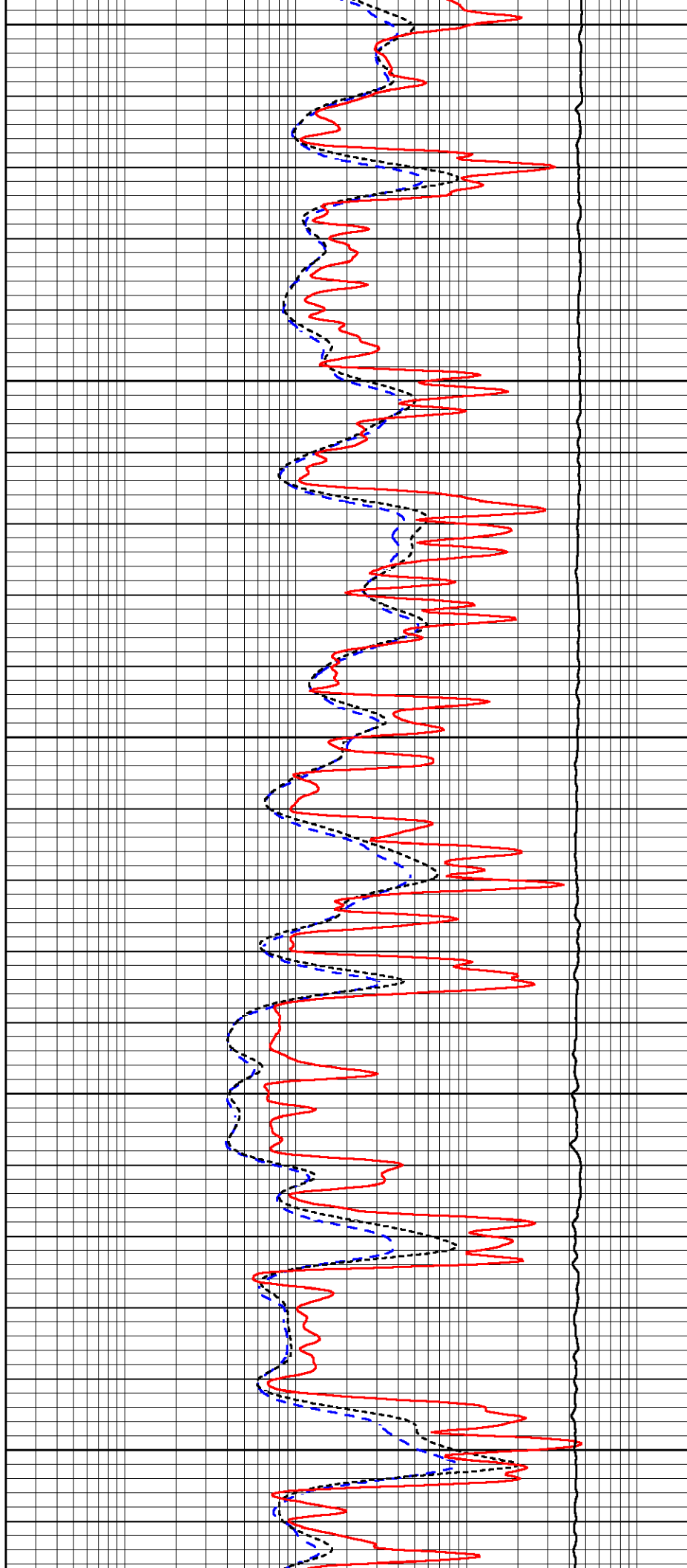
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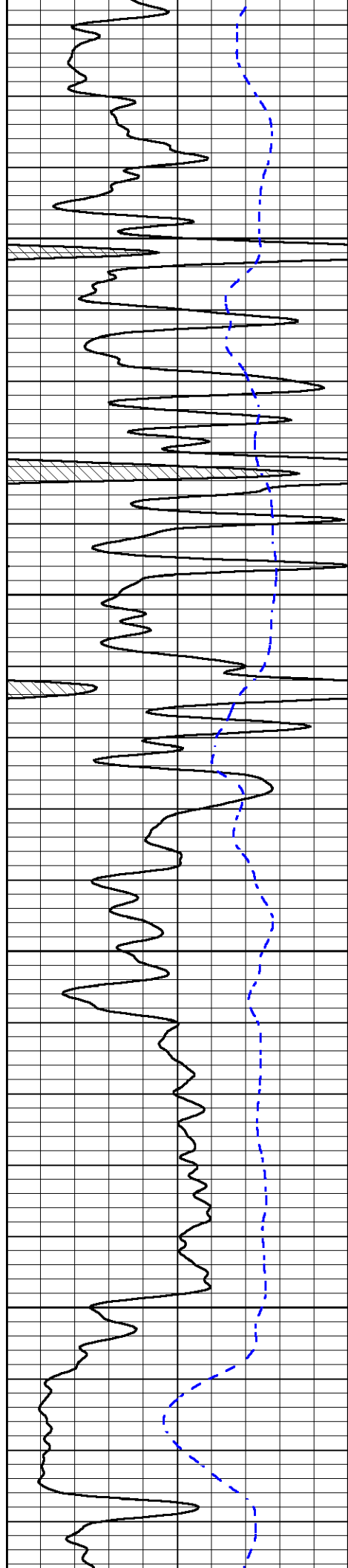
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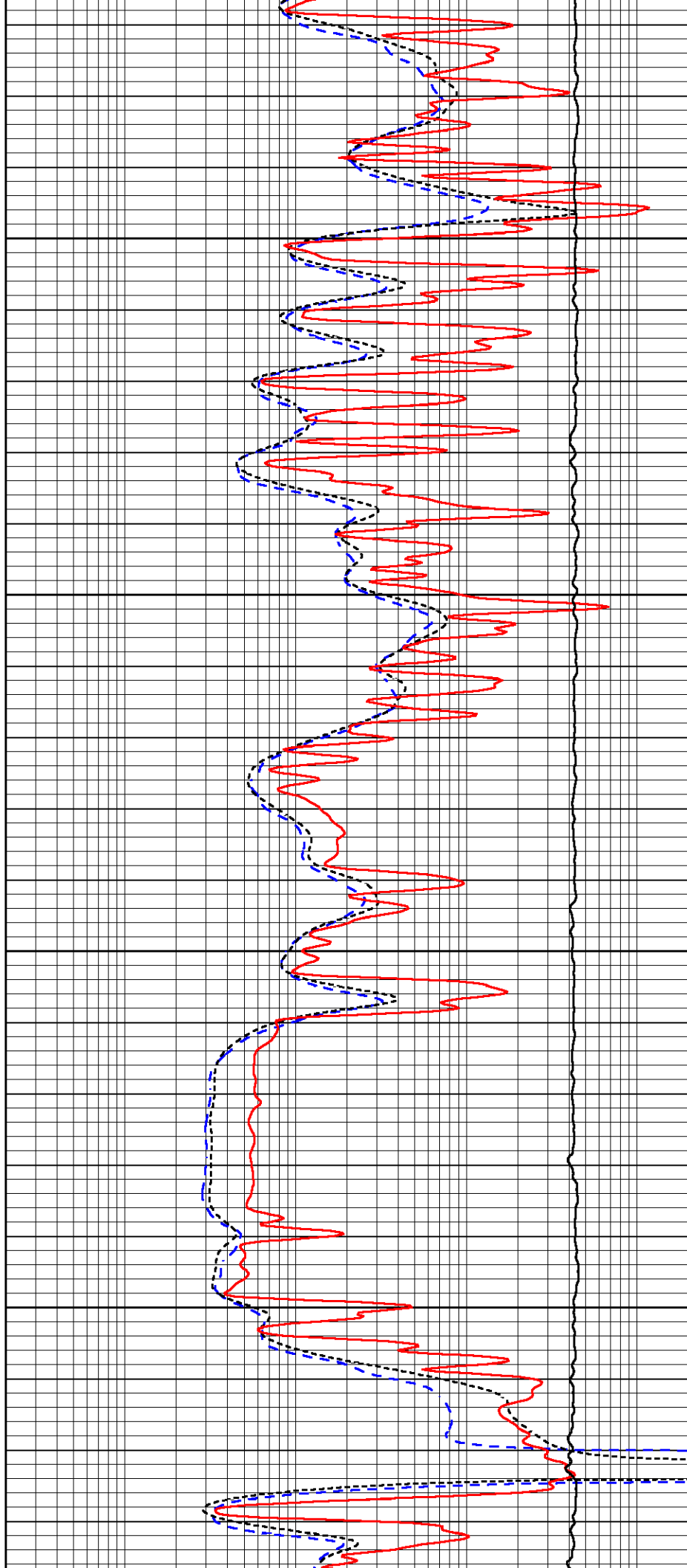


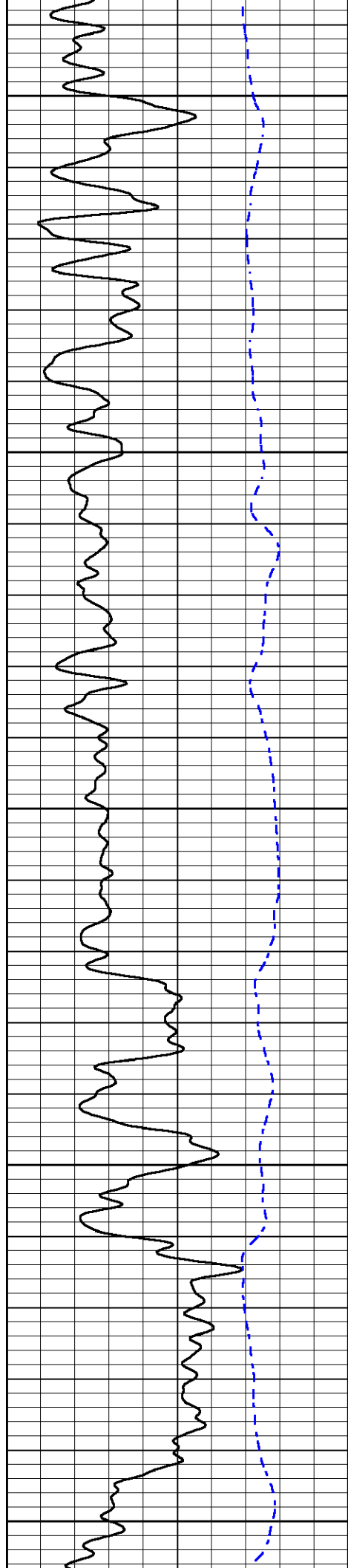
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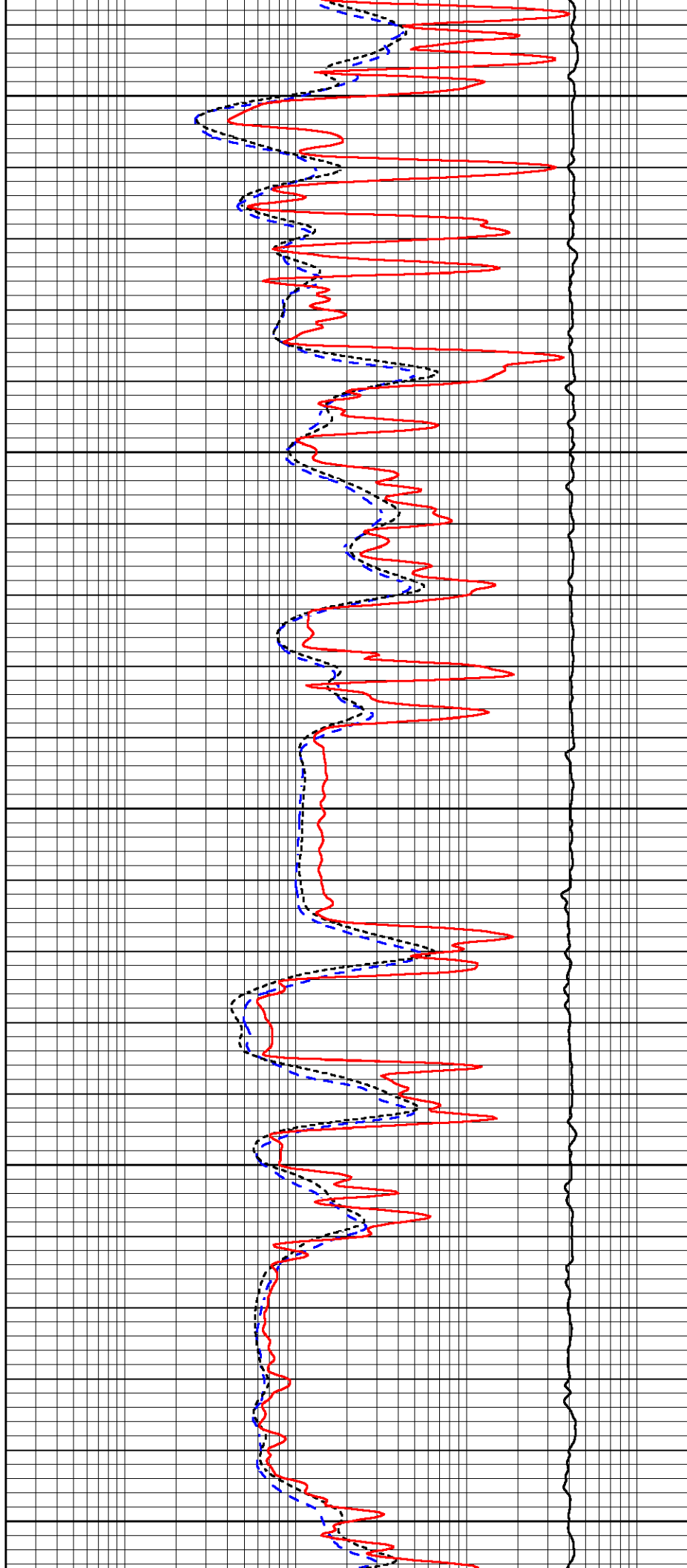
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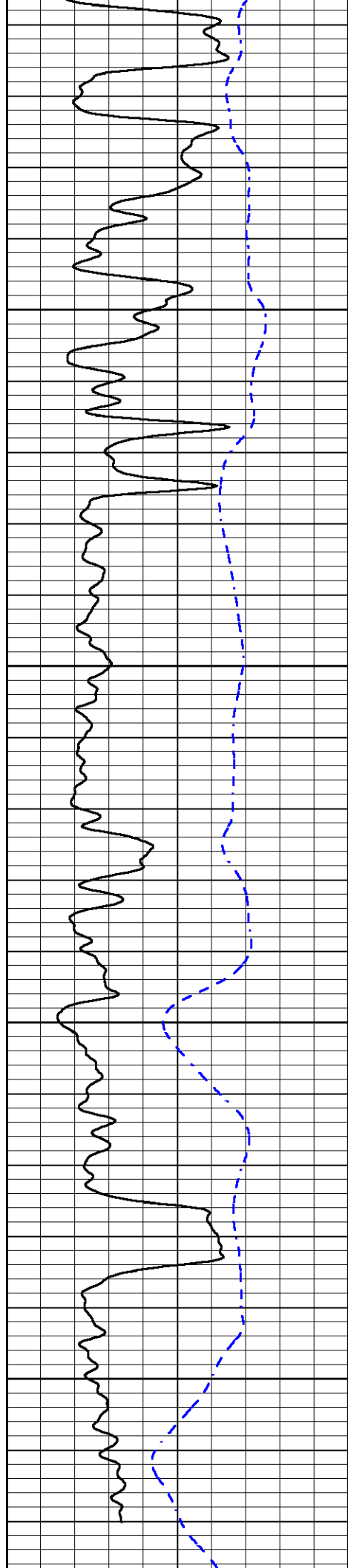
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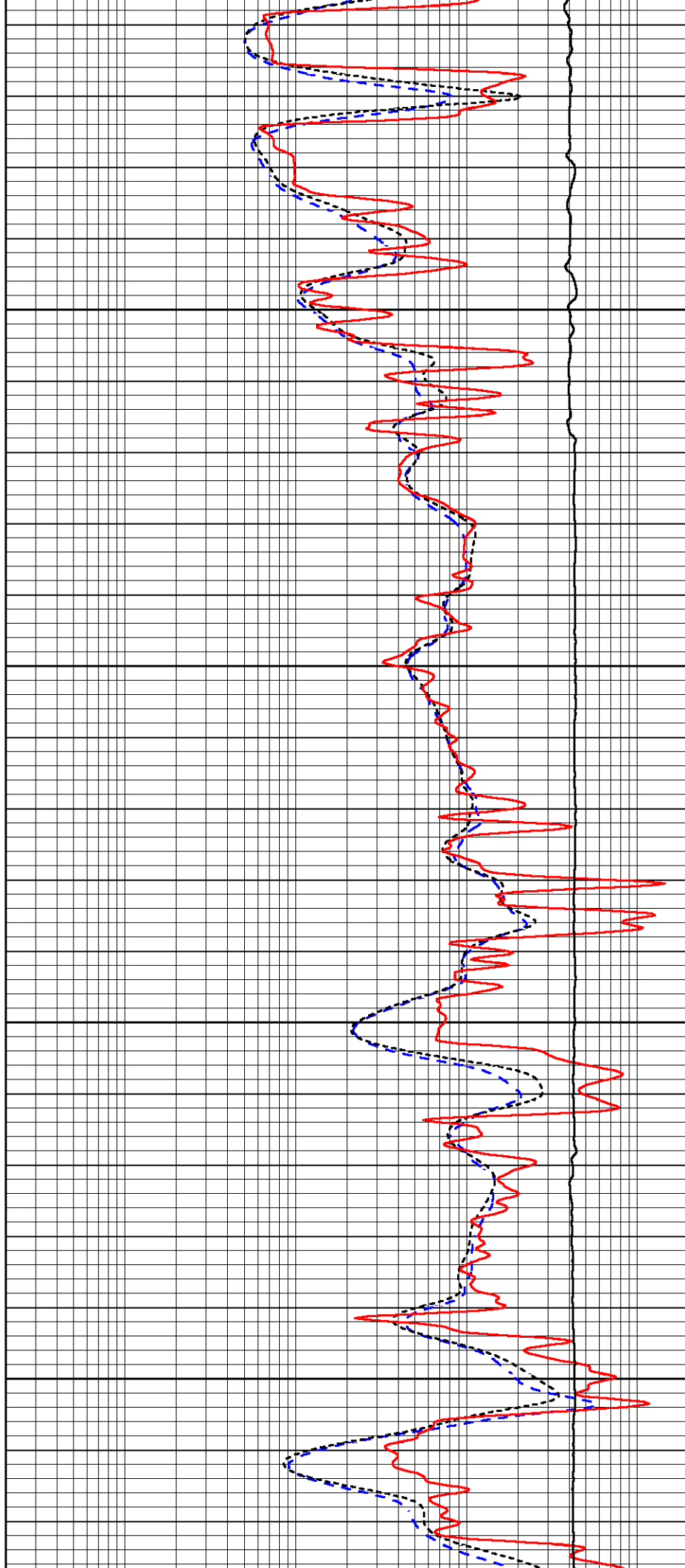


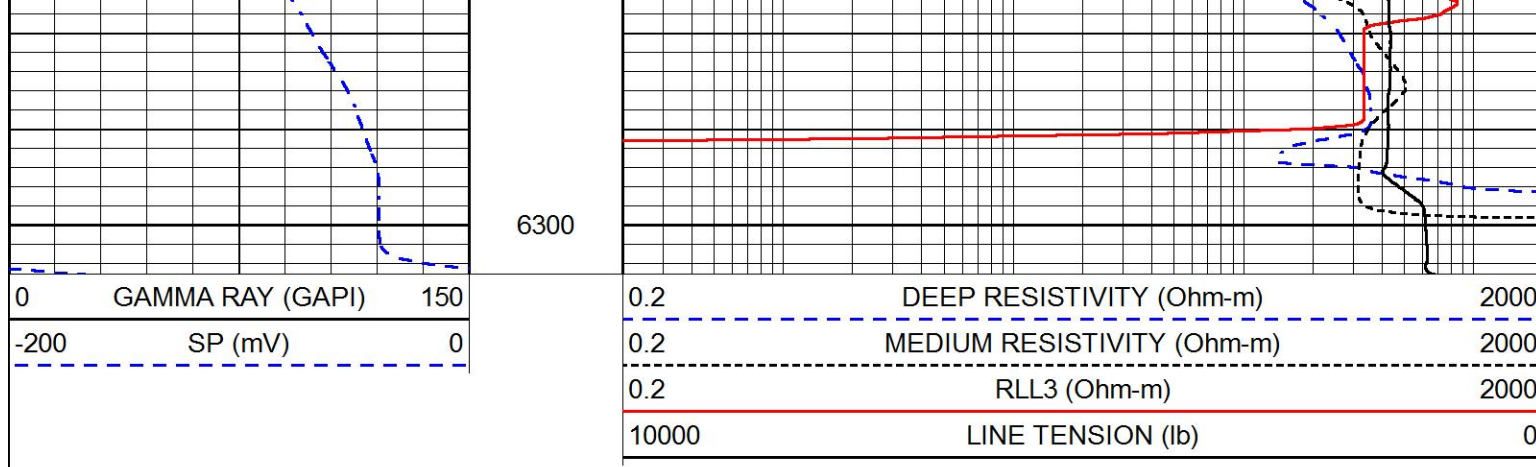
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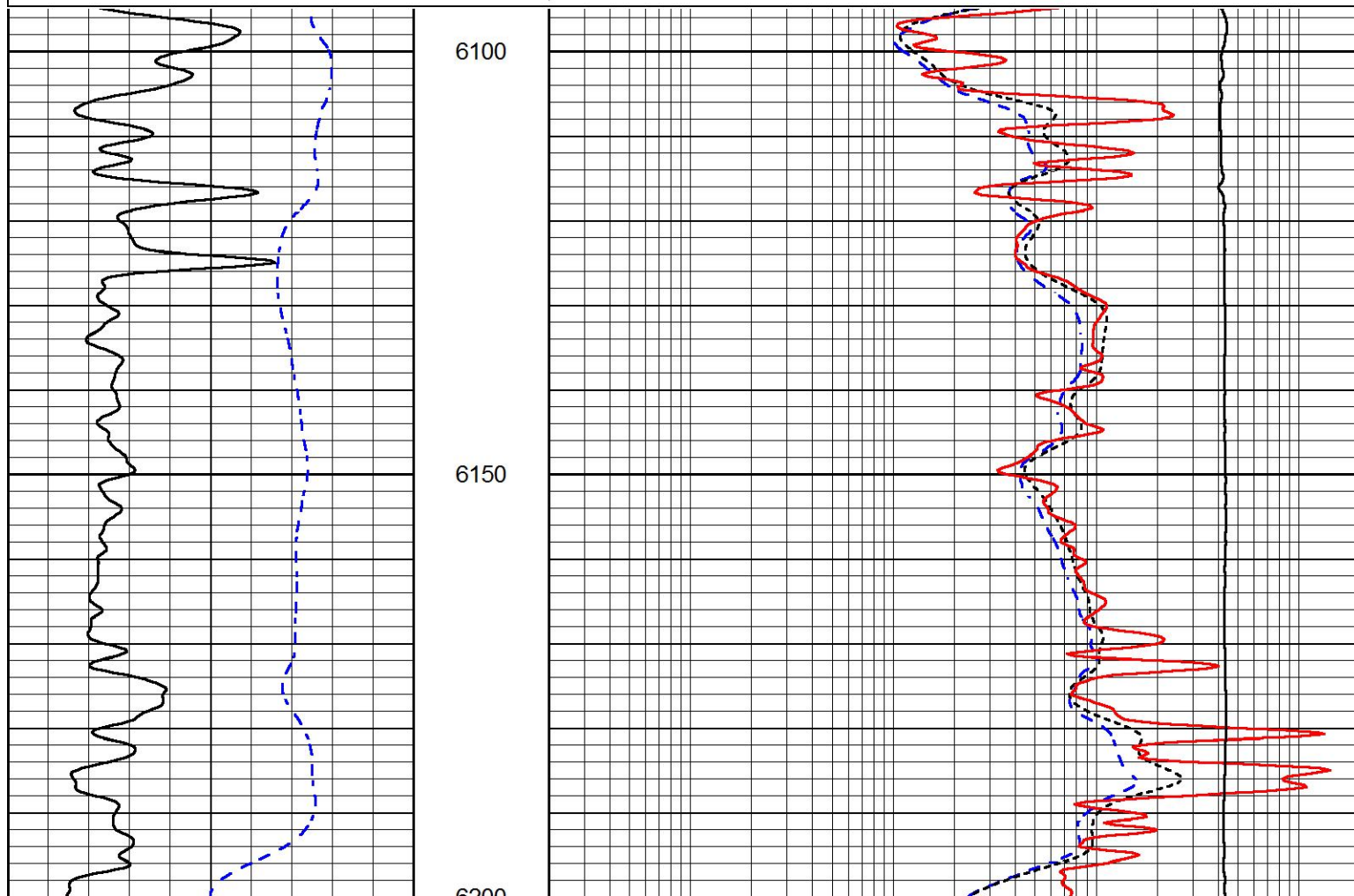
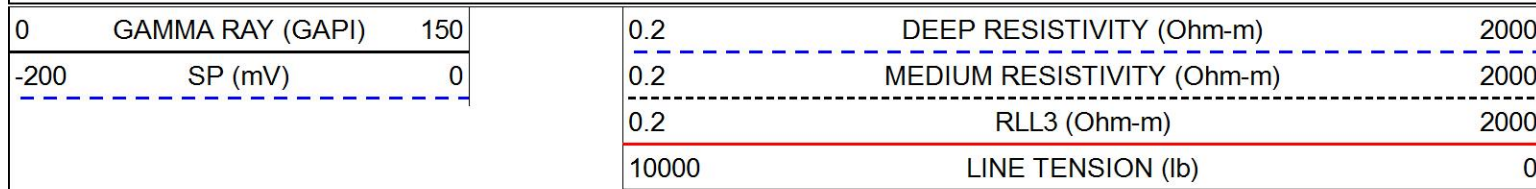


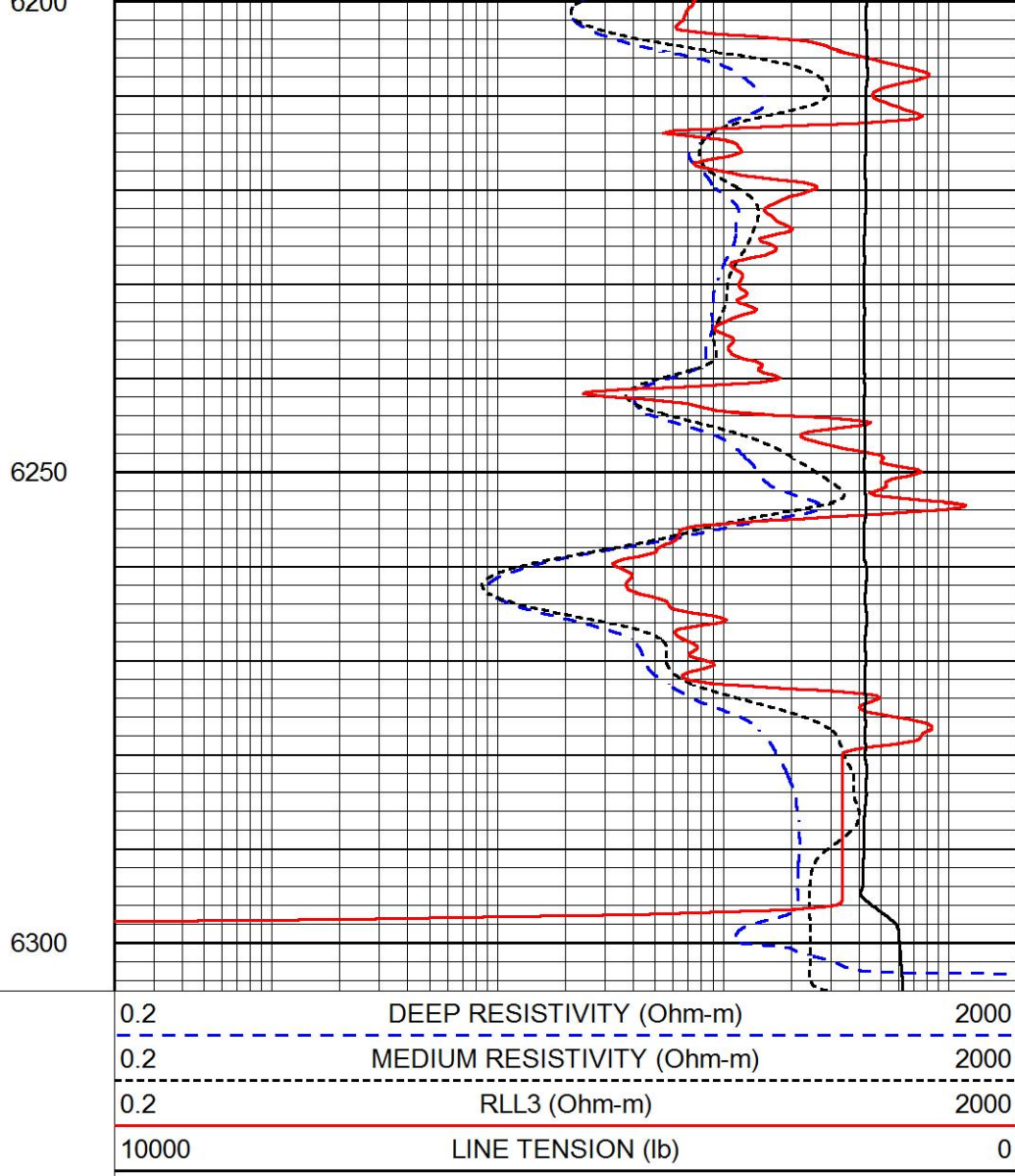
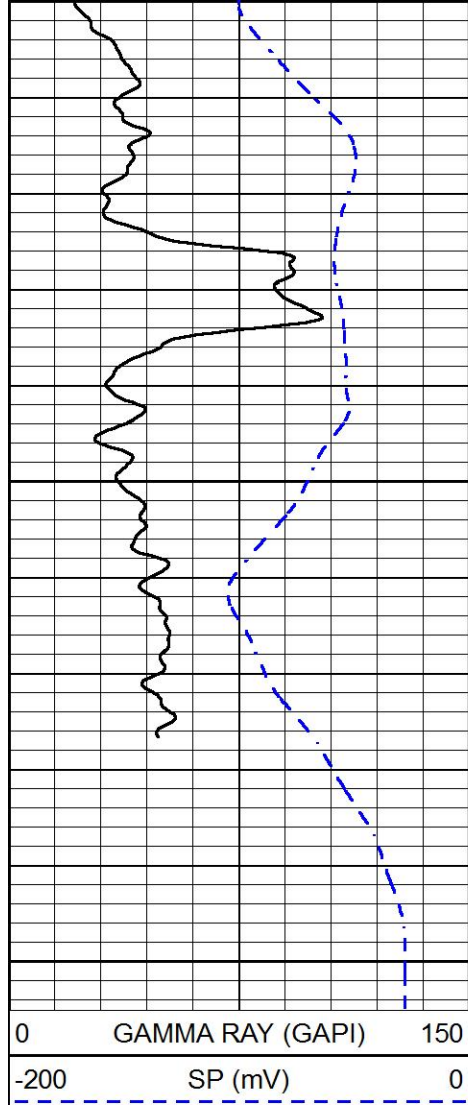


REPEAT SECTION

REPEAT PASS

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 Dataset Pathname stack/pass2.1
 Presentation Format _dil
 Dataset Creation Mon Aug 23 02:52:17 2021
 Charted by Depth in Feet scaled 1:240





Company American Warrior, Inc.

Well Langhofer #1-23

Field Novinger

County Meade

State Kansas