

DUAL INDUCTION LOG

MIDWEST WIRELINE

Company Ritchie Exploration, Inc.		Company Ritchie Exploration, Inc.	
Well	#3 Frusher 9D	Well	#3 Frusher 9D
Field	Sandpit North	Field	Sandpit North
County	Hodgeman	County	Hodgeman
State	Kansas	State	Kansas
Location: API #: 15-083-21988-00-00		Other Services	
NW SE SE 948' FSL & 1062' FEL SEC 9 TWP 21S RGE 23W		CNL/CDL MEL/BHCS	
Permanent Datum	Ground Level	Elevation	2316'
Log Measured From	Kelly Bushing	K.B.	2321'
Drilling Measured From	Kelly Bushing	D.F.	
		G.L.	2316'
Date	6/13/2021		
Run Number	One		
Depth Driller	4600'		
Depth Logger	4602'		
Bottom Logged Interval	4601'		
Top Log Interval	200'		
Casing Driller	8.625" @ 252'		
Casing Logger	252'		
Bit Size	7.875"		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	9200		
Density / Viscosity	9.05 55		
pH / Fluid Loss	10.0 12.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.75 @ 74		
Rmf @ Meas. Temp	0.56 @ 74		
Rmc @ Meas. Temp	1.01 @ 74		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.45 @ 122		
Operating Rig Time	4.5 Hours		
Max Rec. Temp. F	122 Deg F		
Equipment Number	P-24		
Location	HAYS		
Recorded By	T. Martin		
Witnessed By	Kent Matson		

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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.

Jetmore, KS, 9 N to V Rd, 3 E, 1 N, NW 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: T. Martin
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: Kent Matson
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\ritchie_#3 frusher 9d.db
Dataset field/well/StkMI/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 122	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	No	mmho/m 0	mmho/m 0	mV 580	degF 70	Off	ft 4602

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

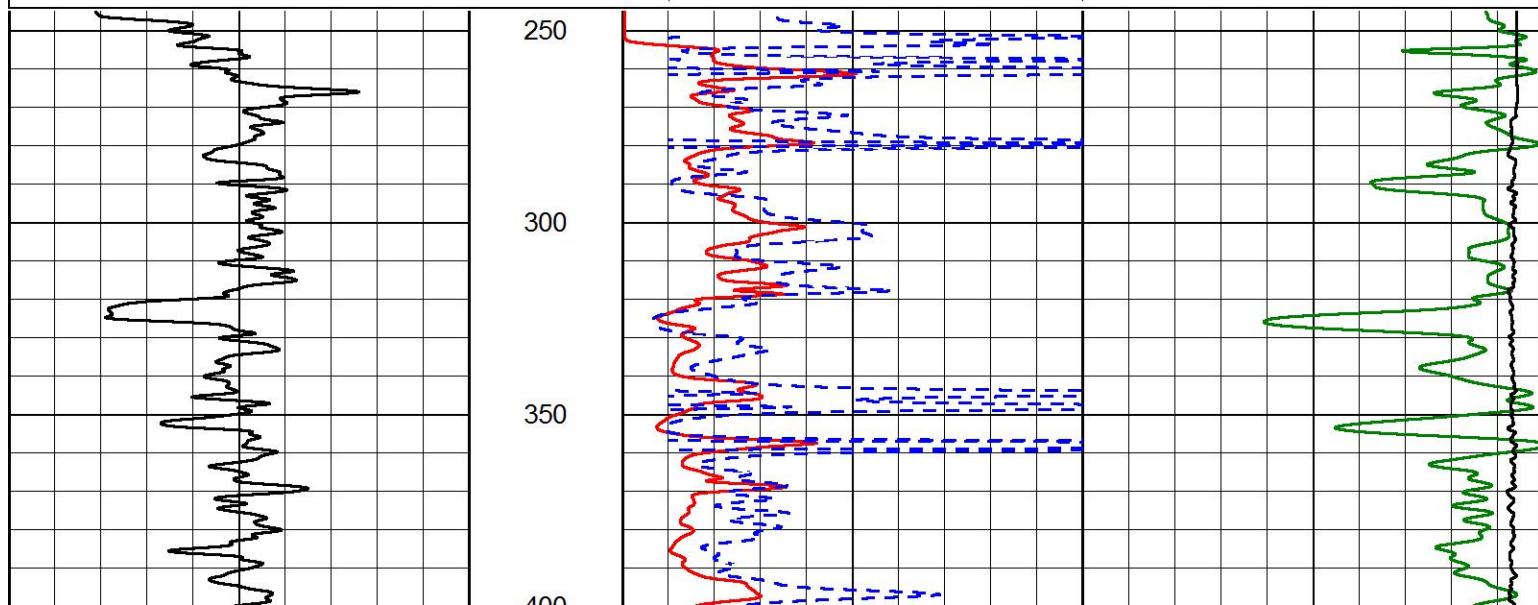


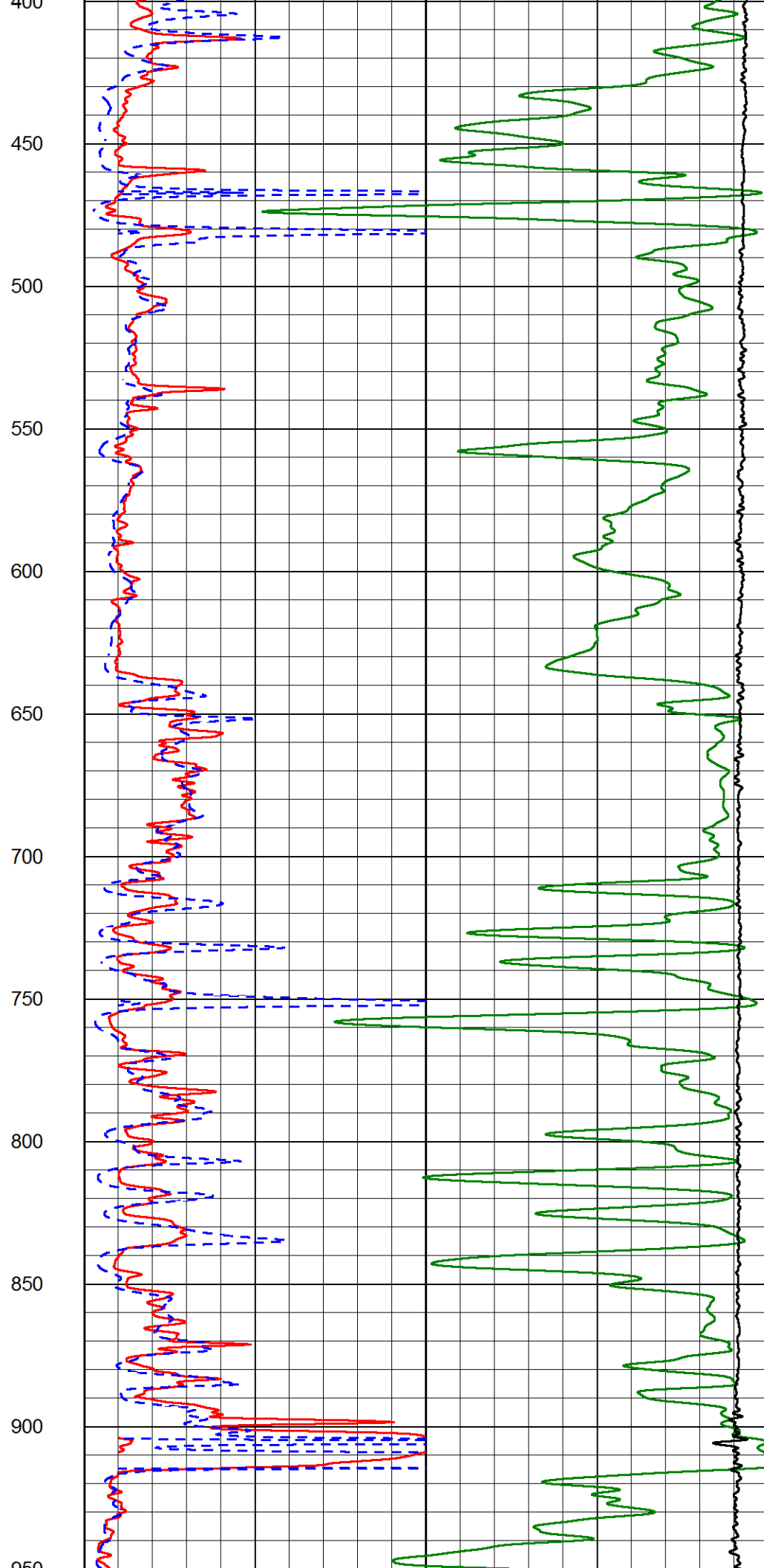
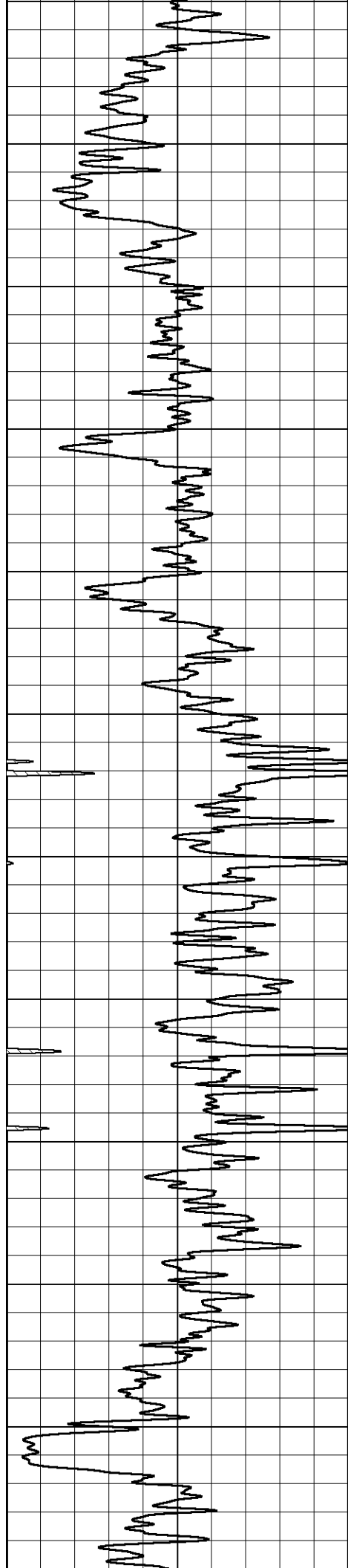
2" SCALE RESISTIVITY

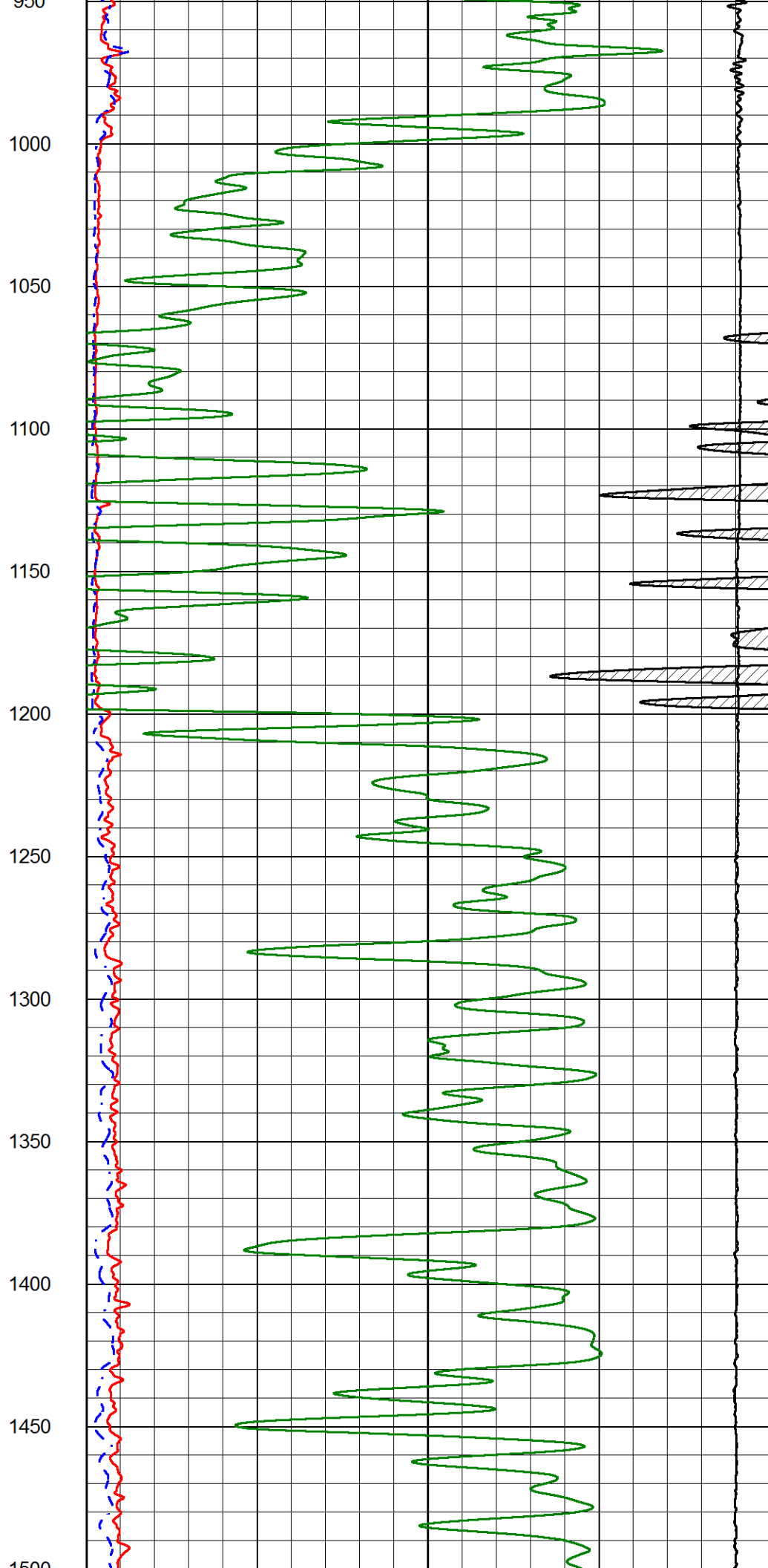
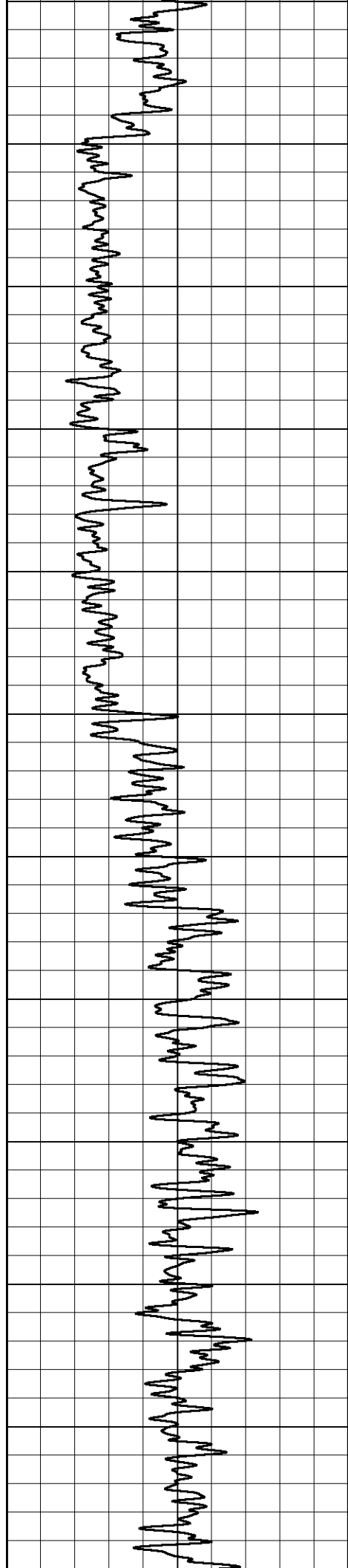
MAIN PASS

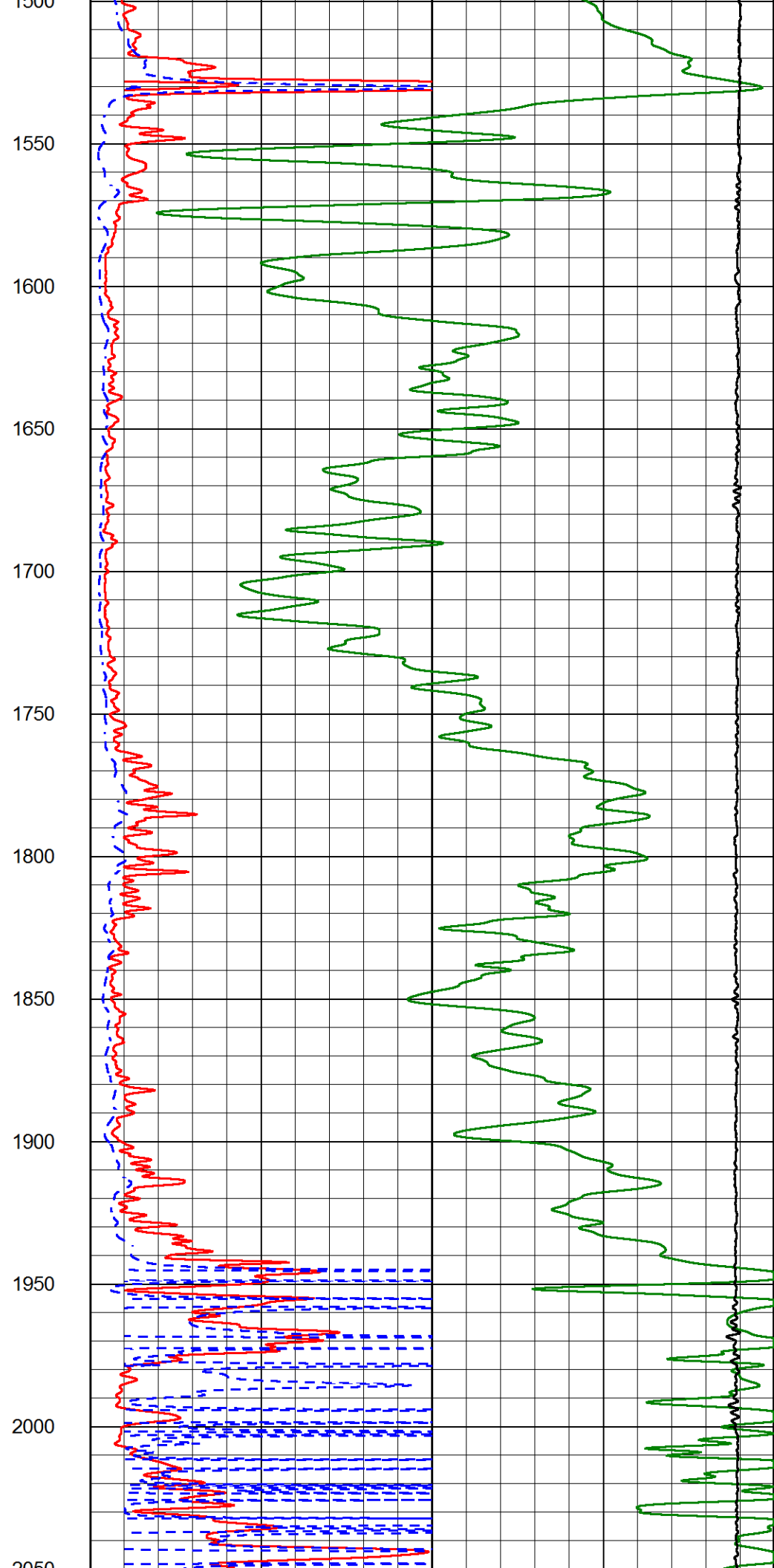
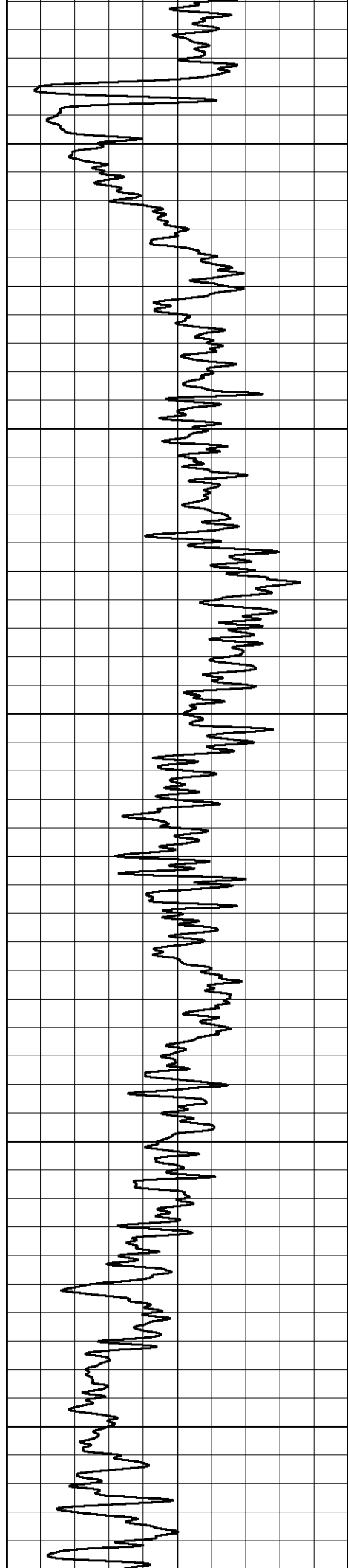
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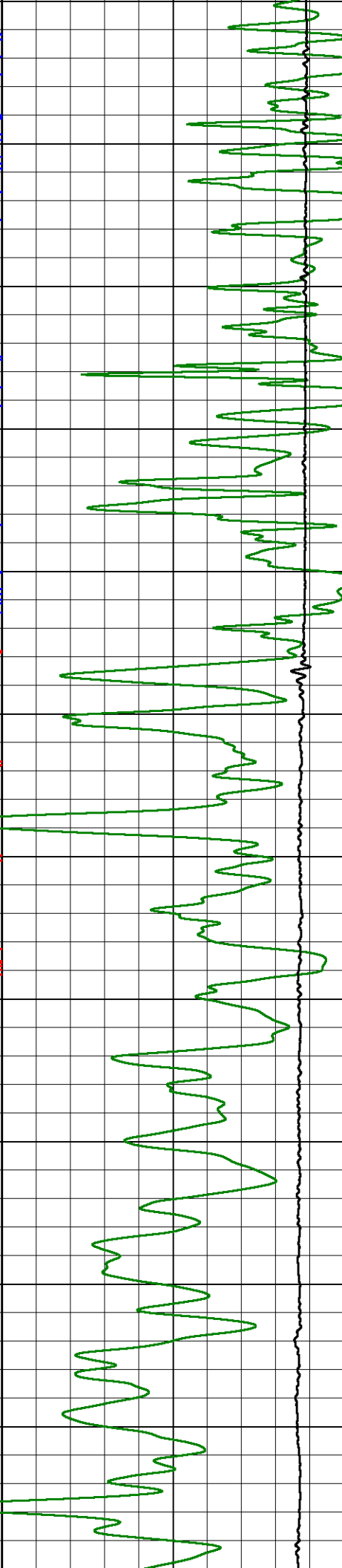
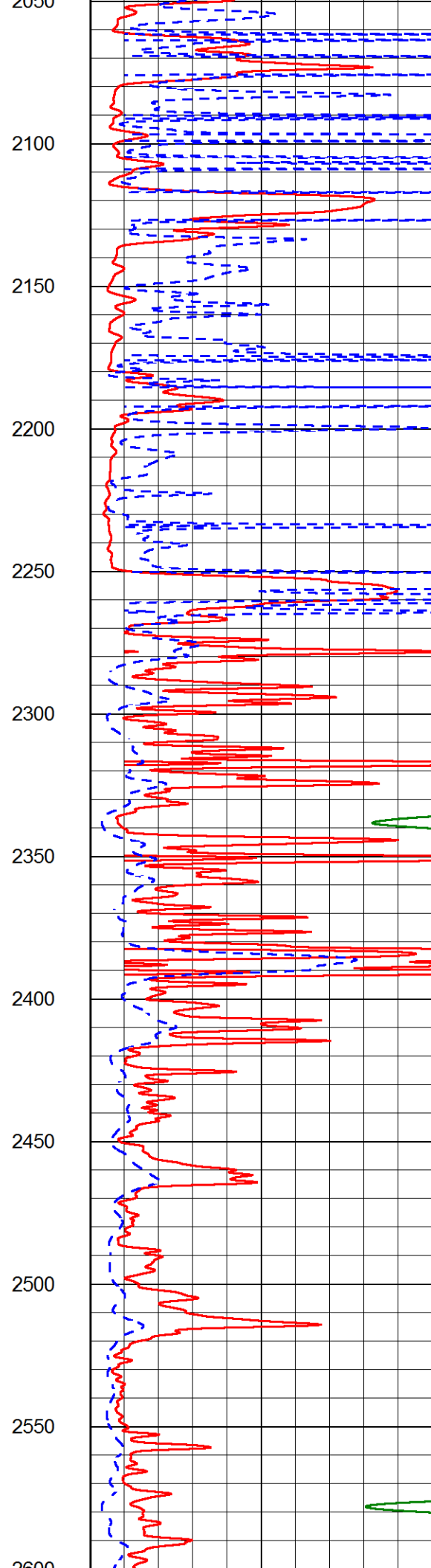
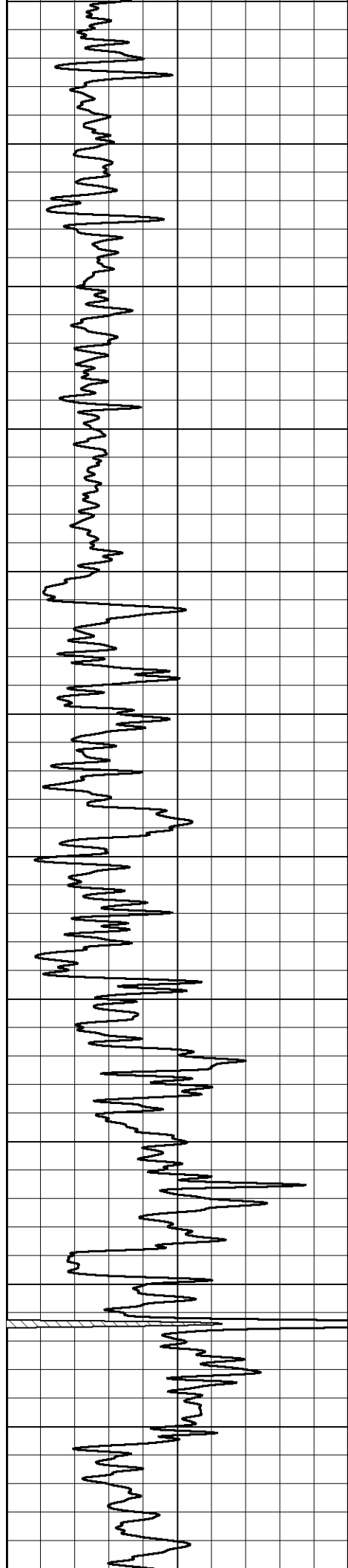
0	GAMMA RAY (GAPI)	150	1000	CONDUCTIVITY (mmho/m)	0
			15000	Line Tension (lb)	0
			0	RLL3 (Ohm-m)	50
			0	RILD (Ohm-m)	50
			50	RLL3 (Ohm-m)	100
			50	Deep Resistivity (Ohm-m)	200

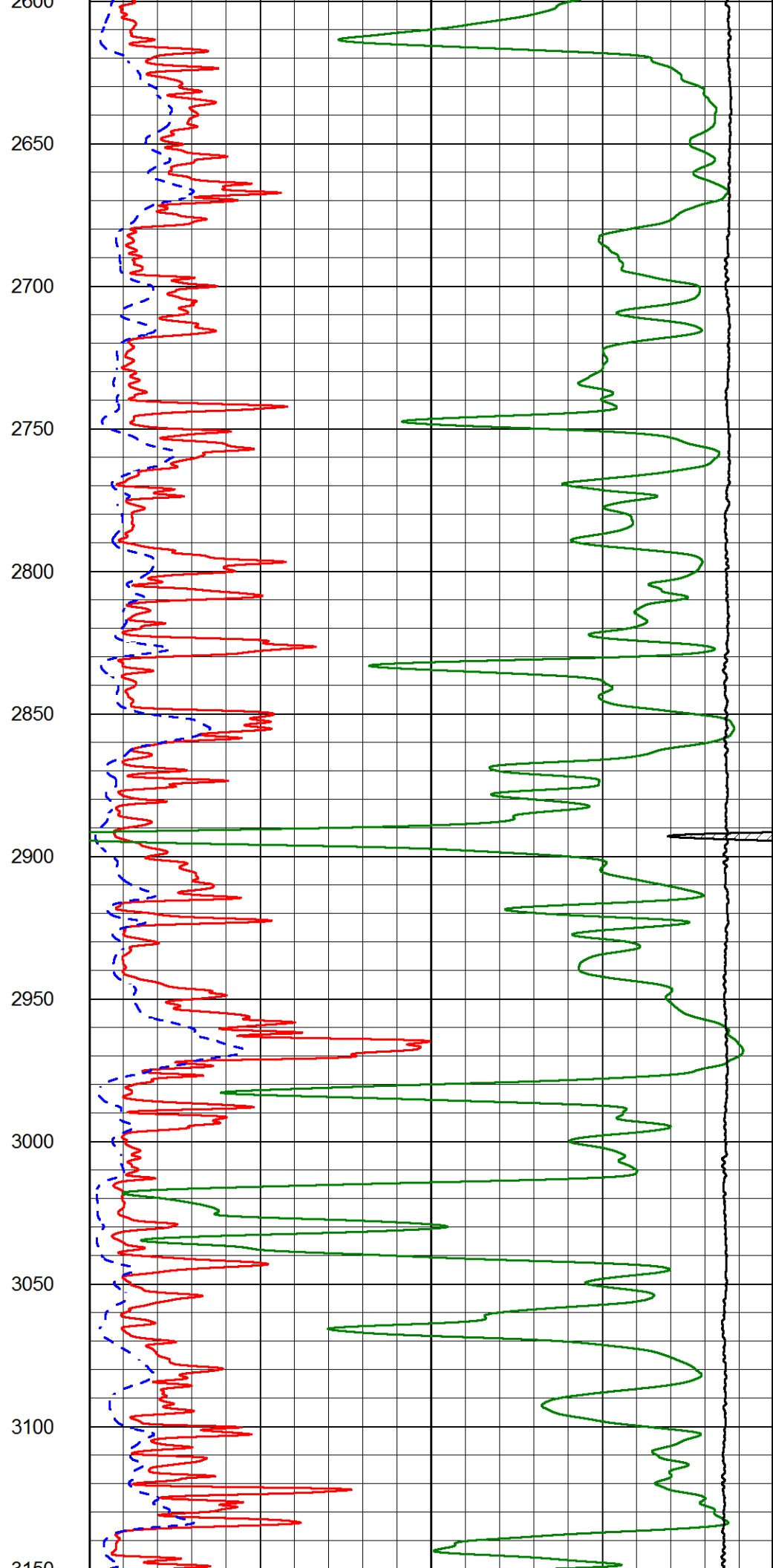
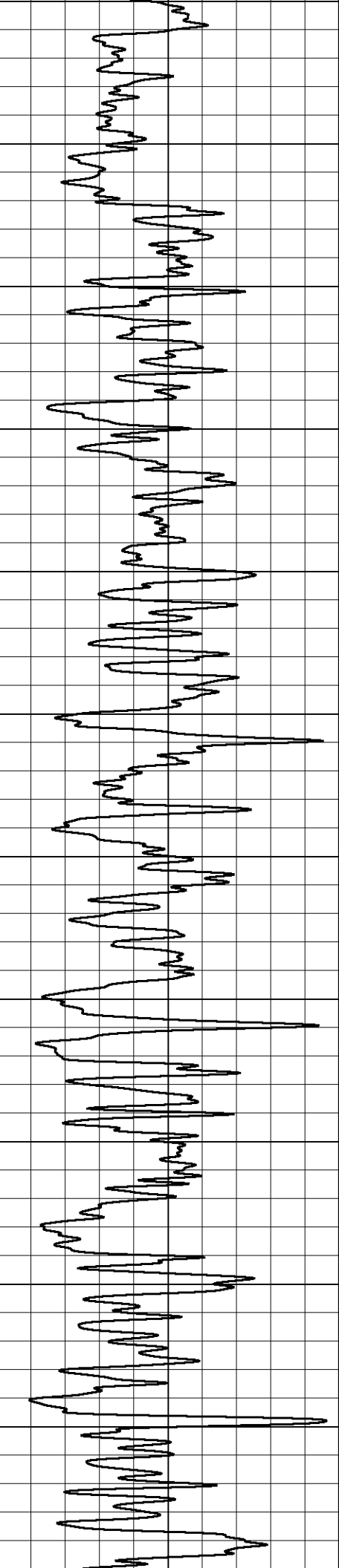


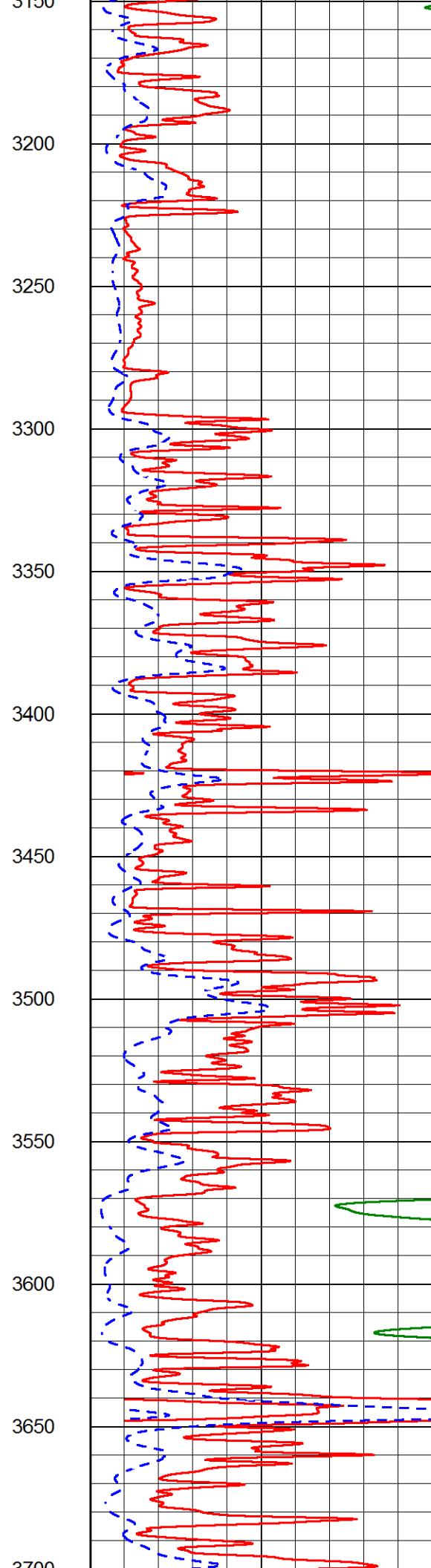
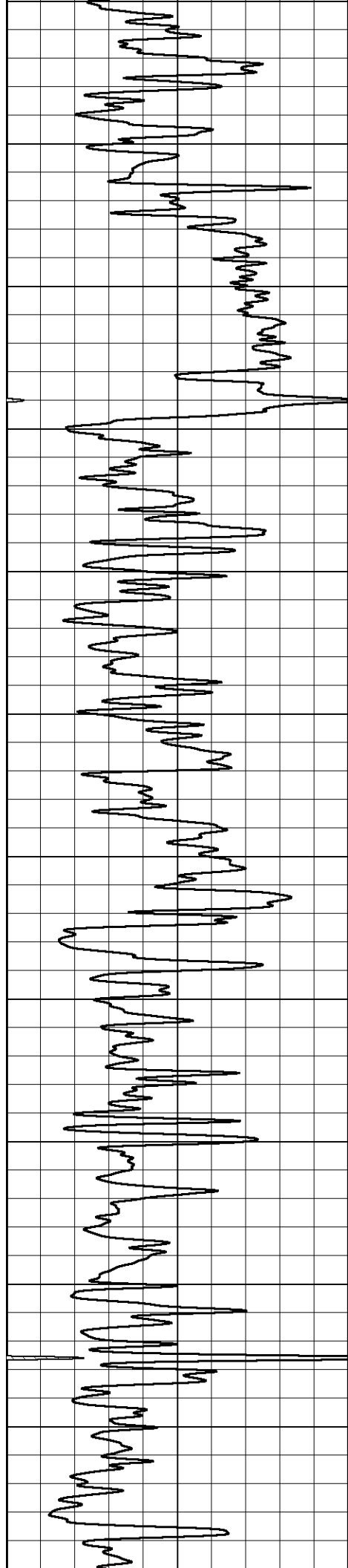


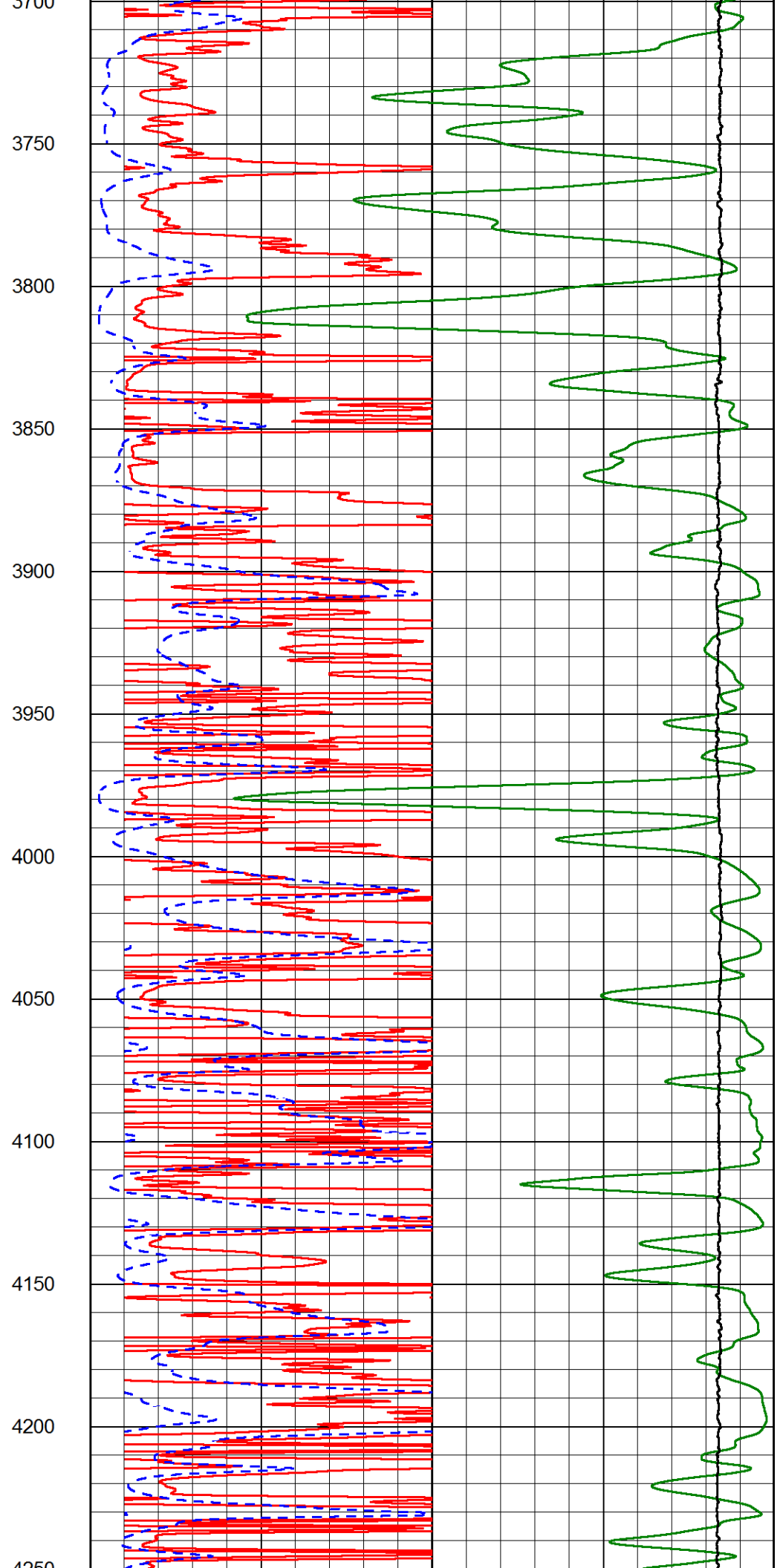
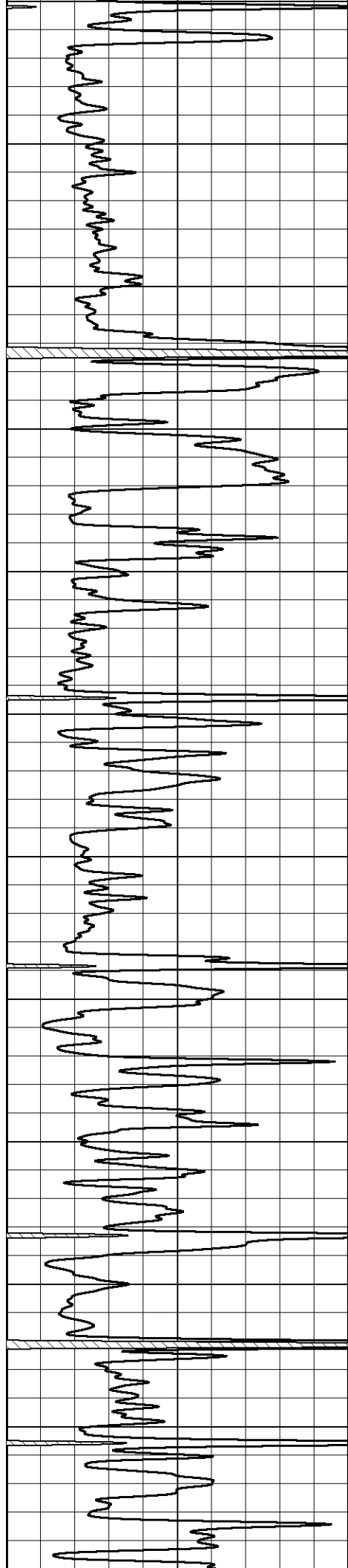


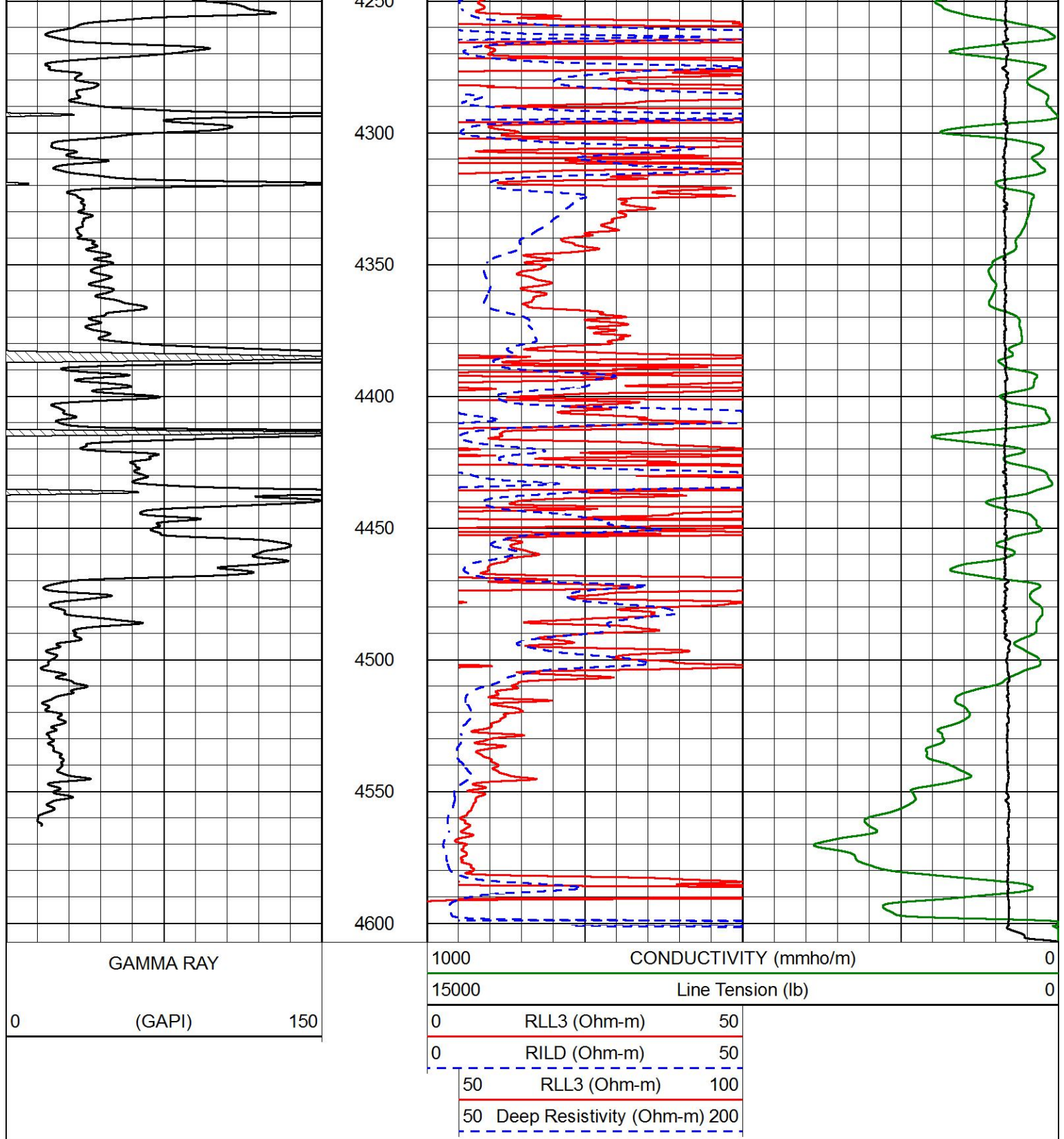












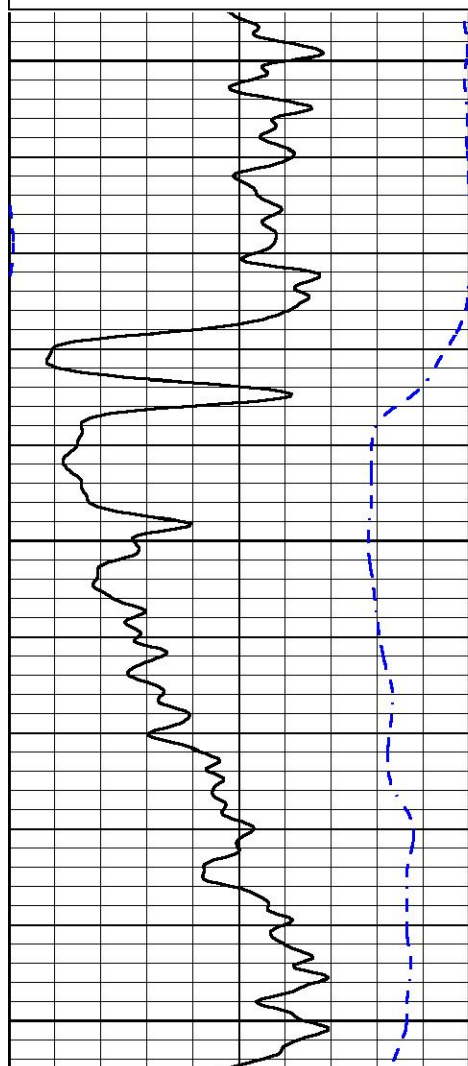
MIDWEST WIRELINE

ANHYDRITE SECTION

MAIN PASS

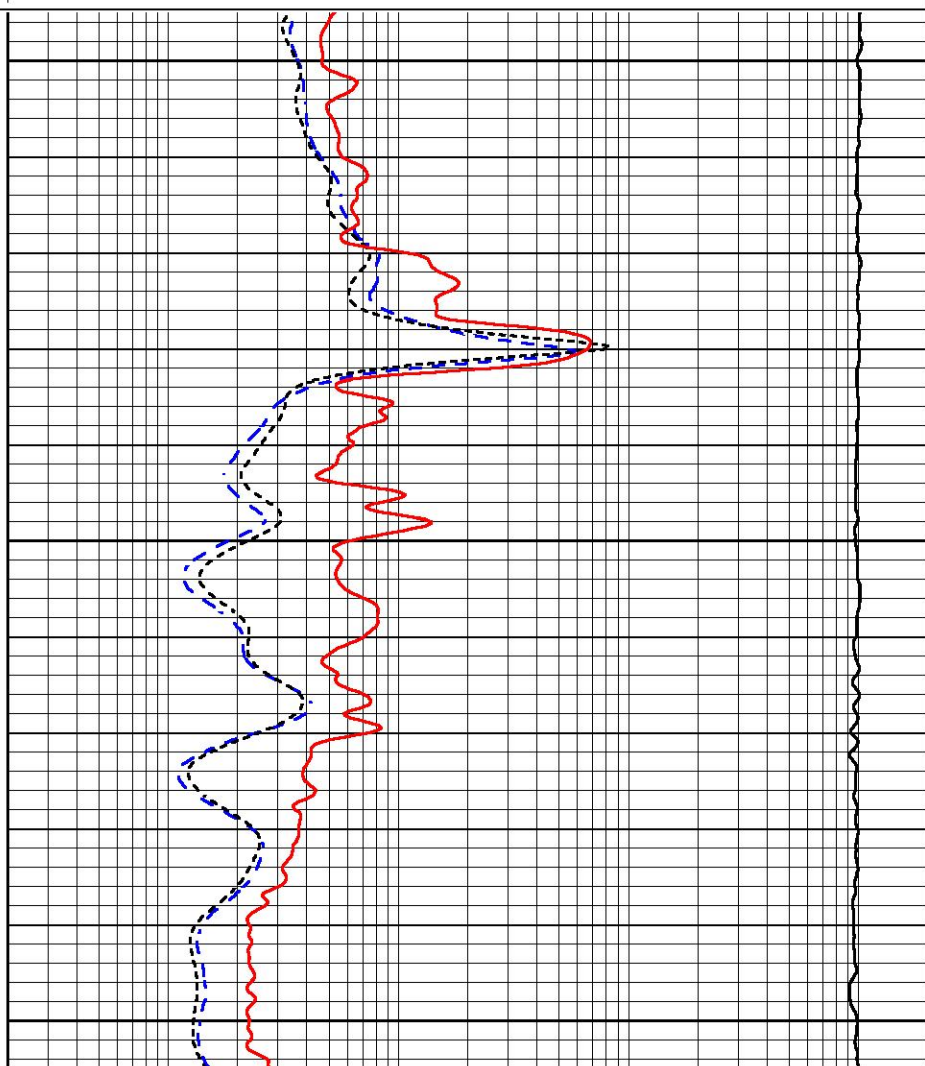
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Presentation Format _dil
Dataset Creation Sun Jun 13 12:27:09 2021
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0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0



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
10000	LINE TENSION (lb)	0



0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	LINE TENSION (lb)	0



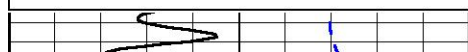
MIDWEST WIRELINE

DETAIL SECTION

MAIN PASS

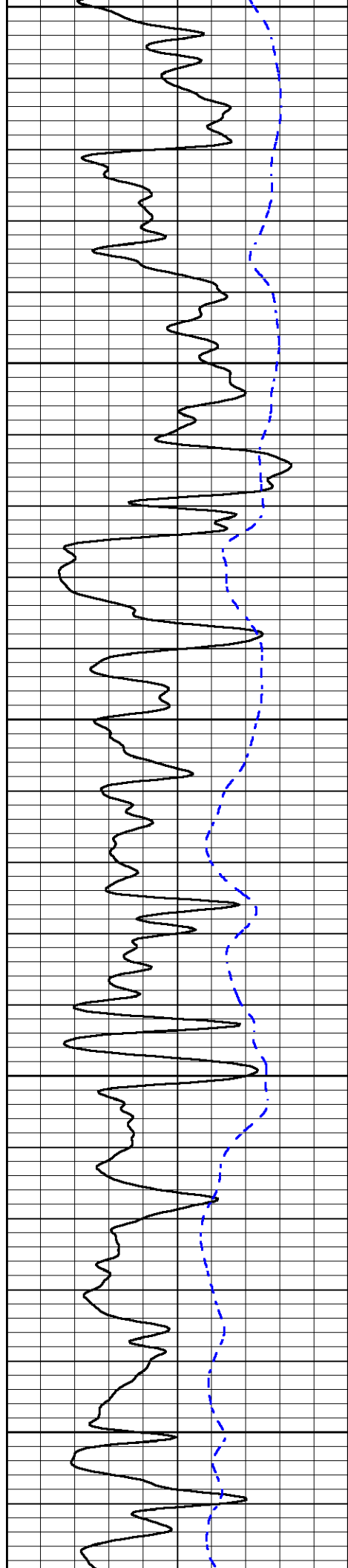
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Presentation Format _dil
Dataset Creation Sun Jun 13 09:46:34 2021
Charted by Depth in Feet scaled 1:240

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
10000	LINE TENSION (lb)	0





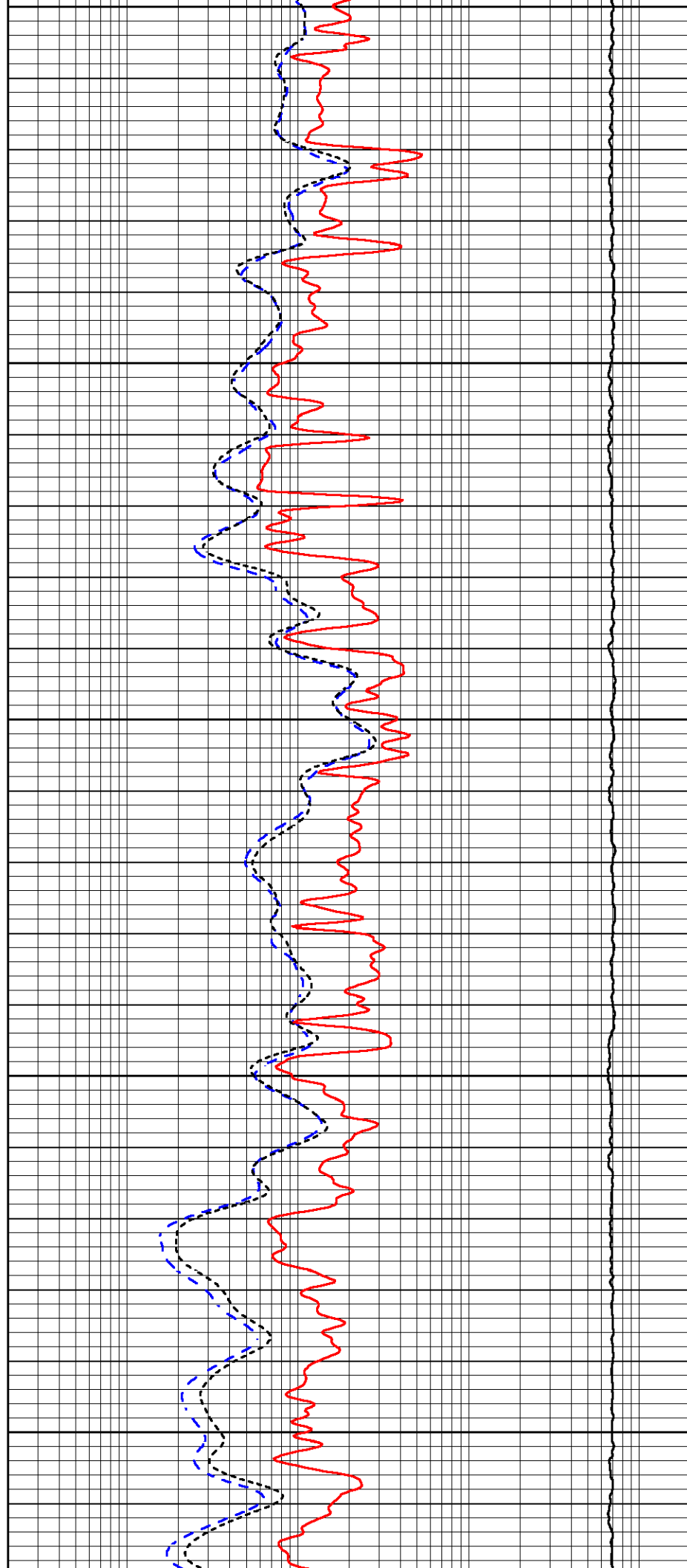
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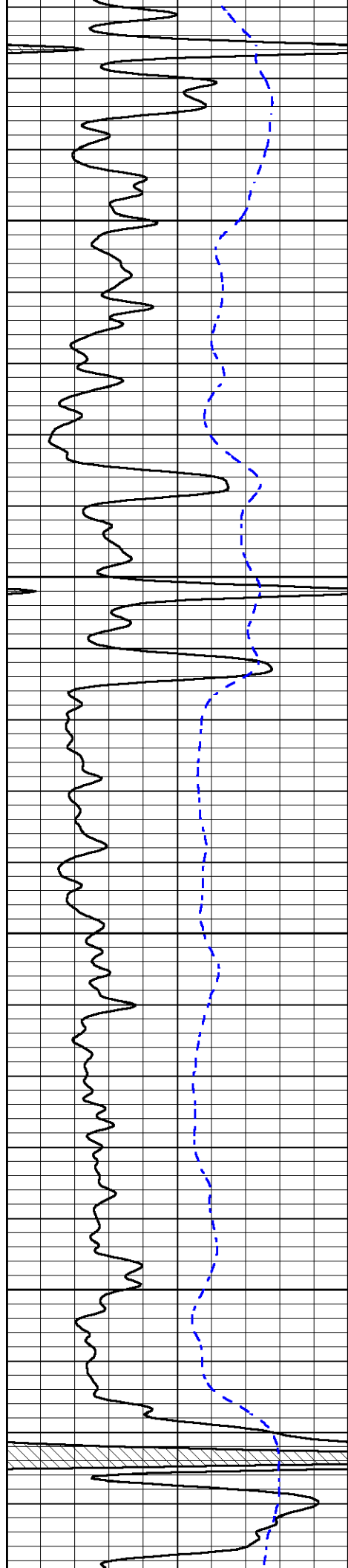
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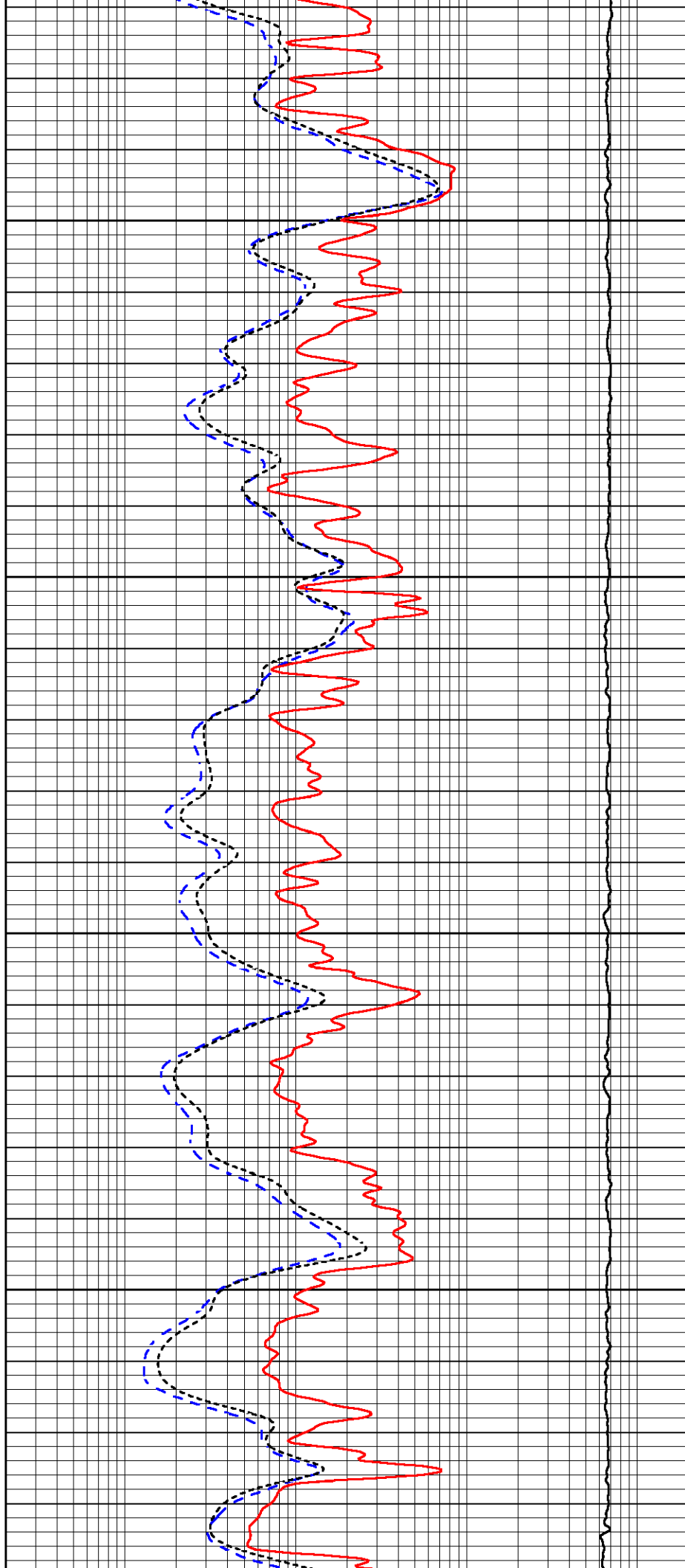


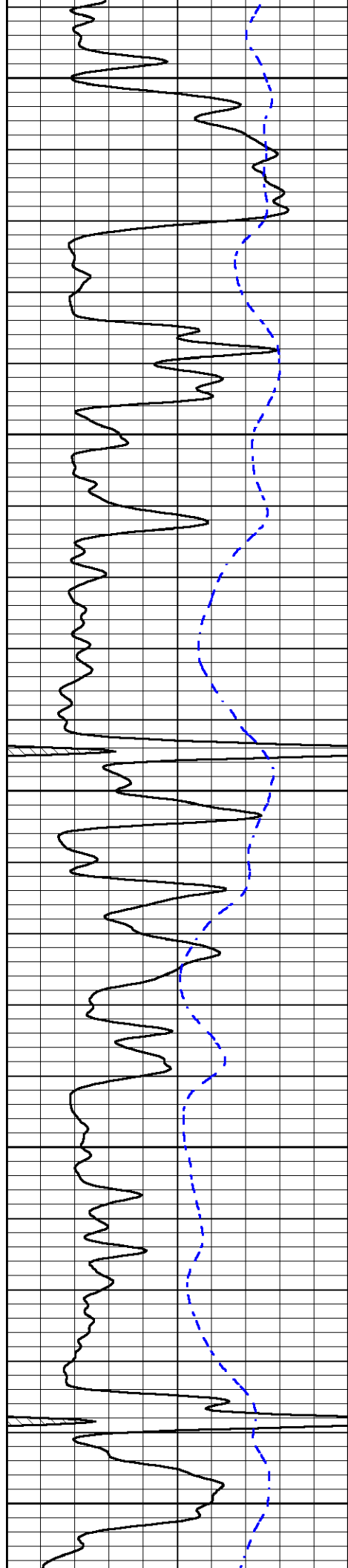
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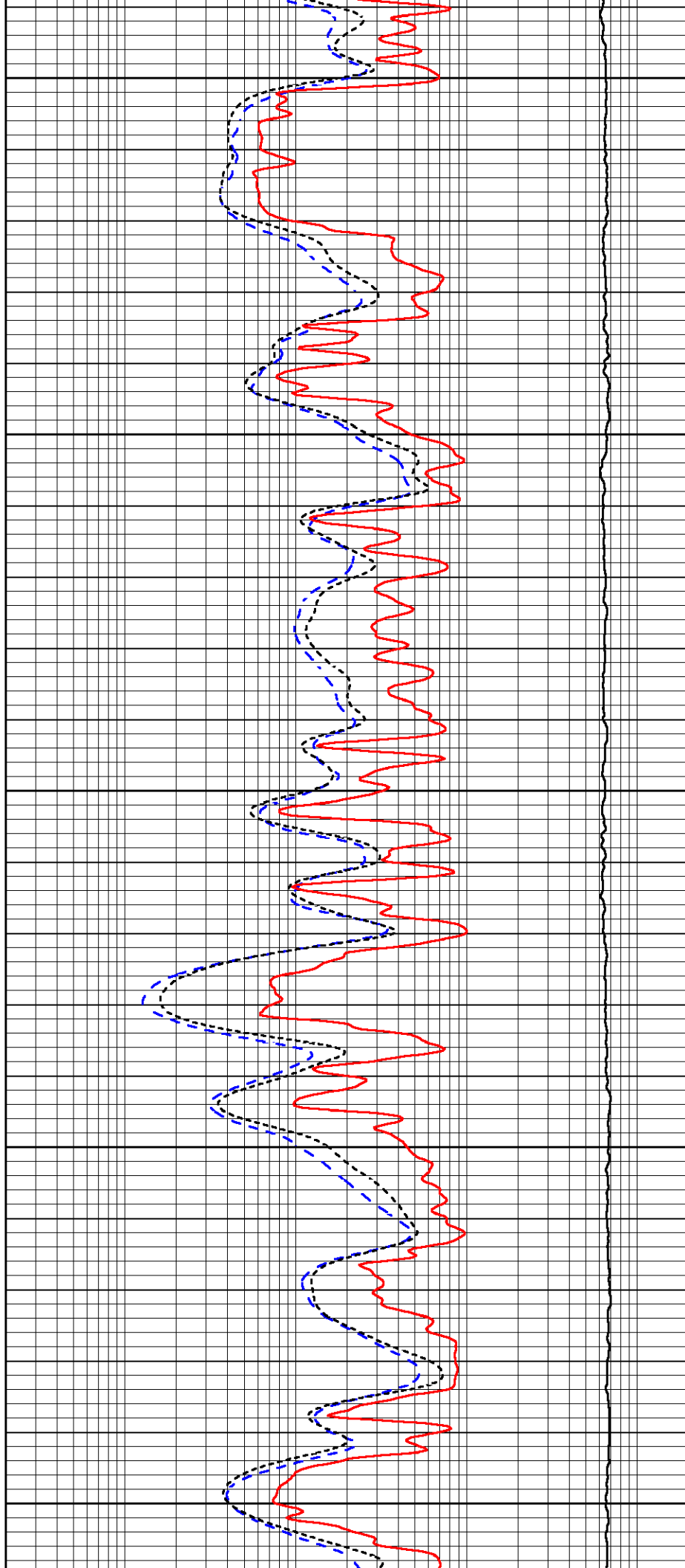
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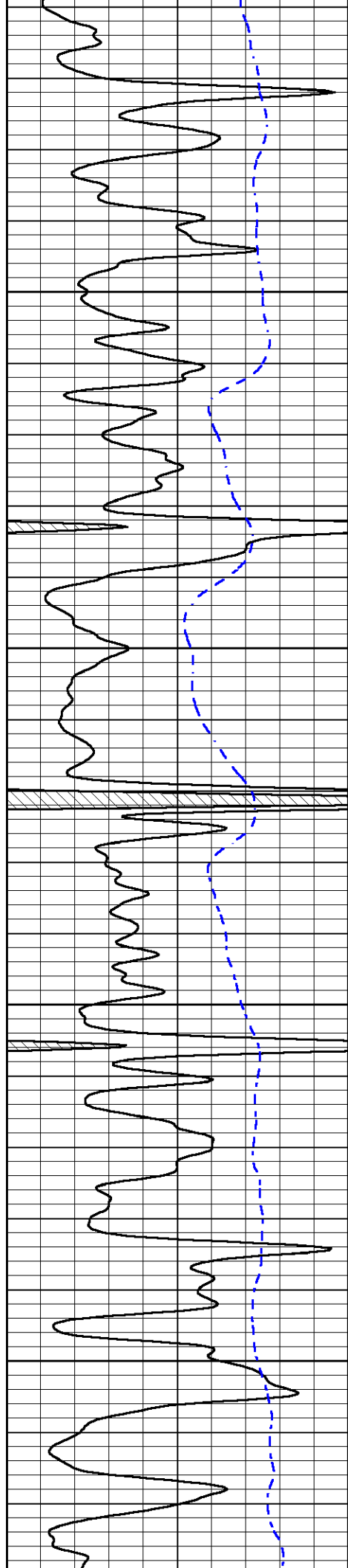
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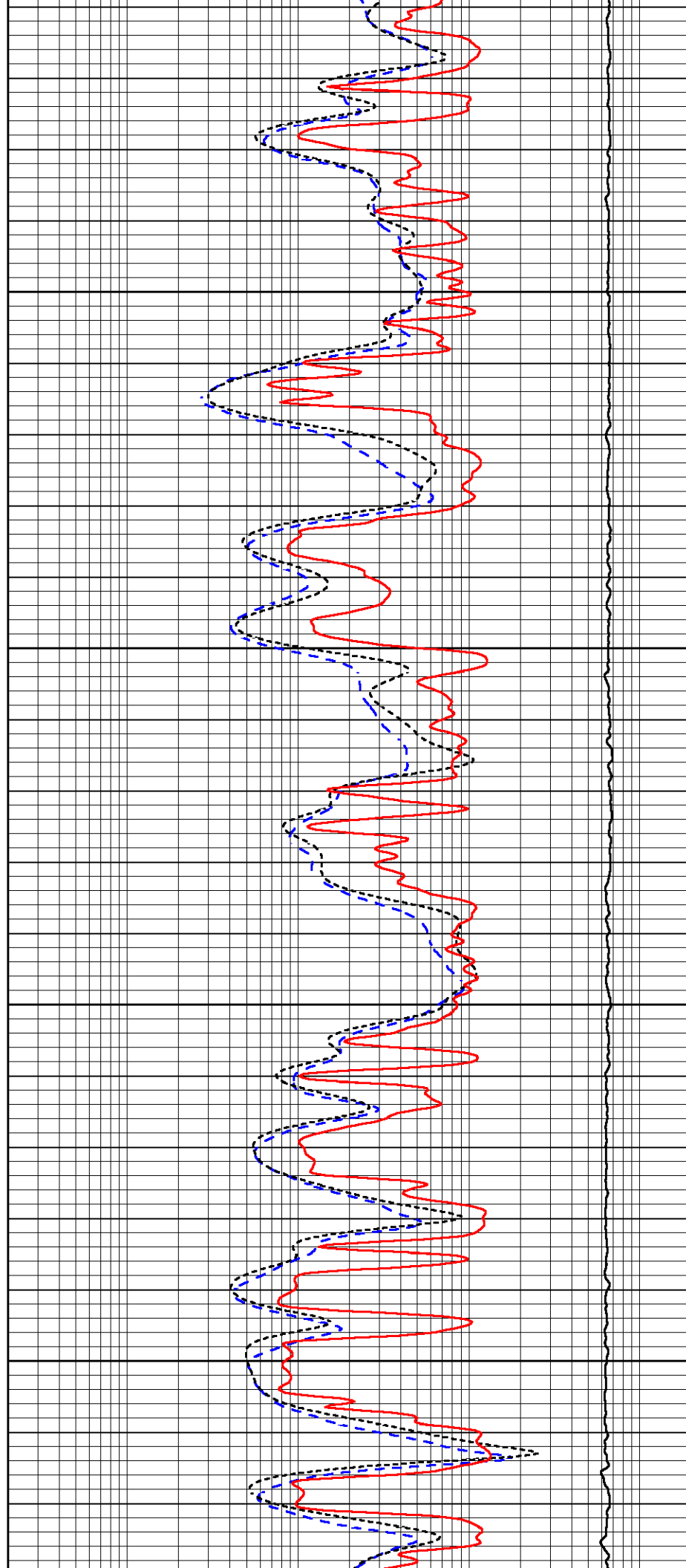


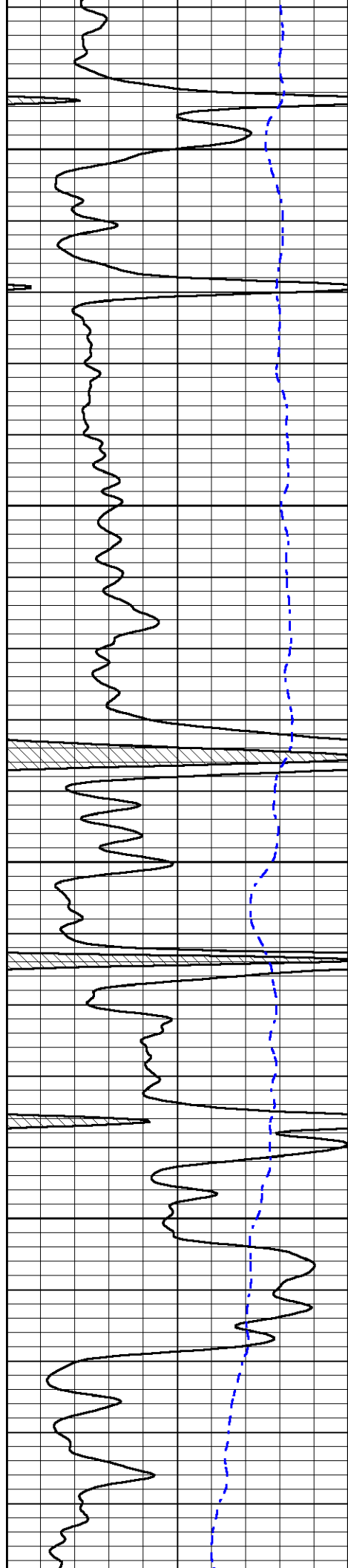
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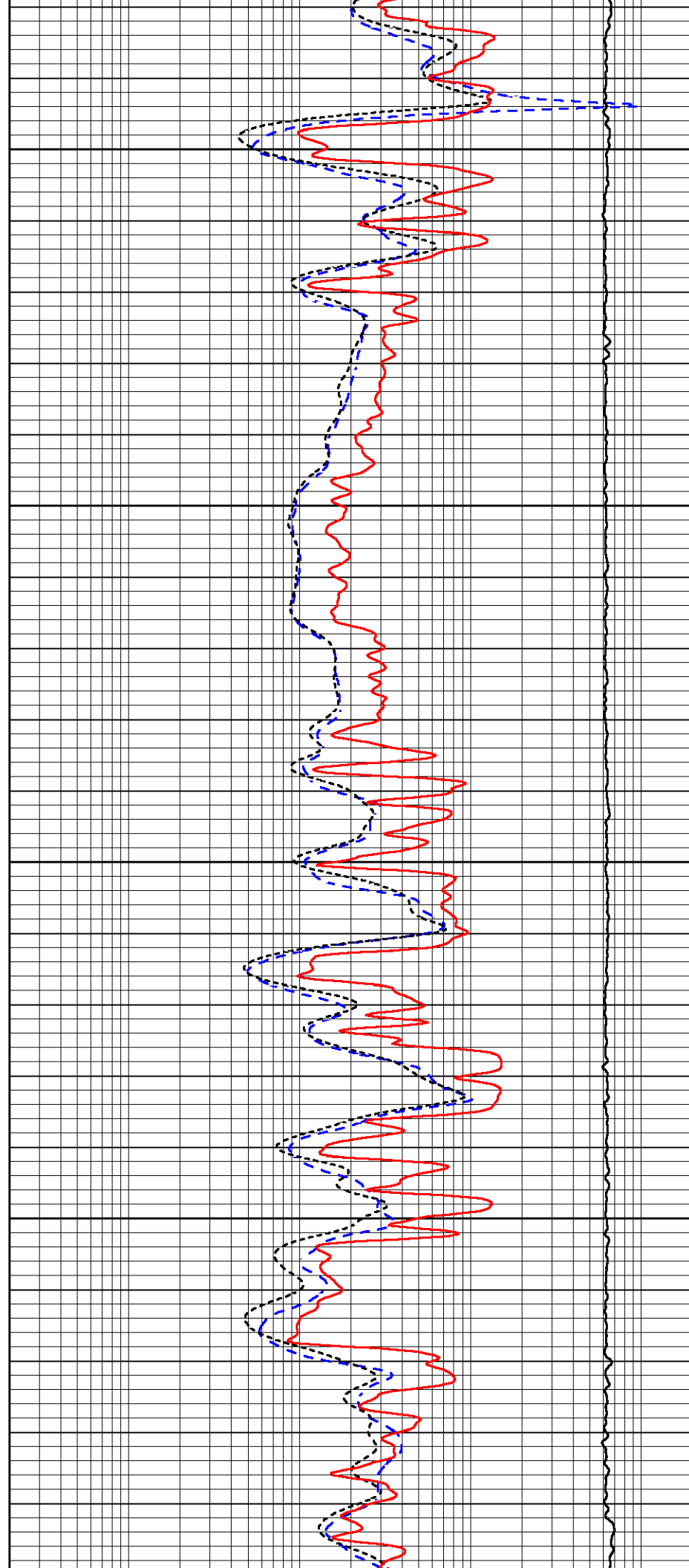


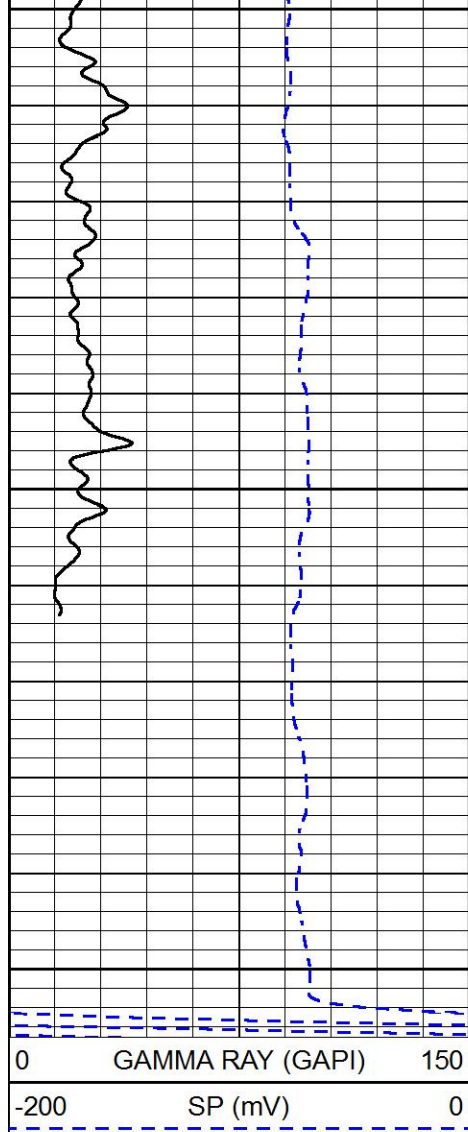
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4450

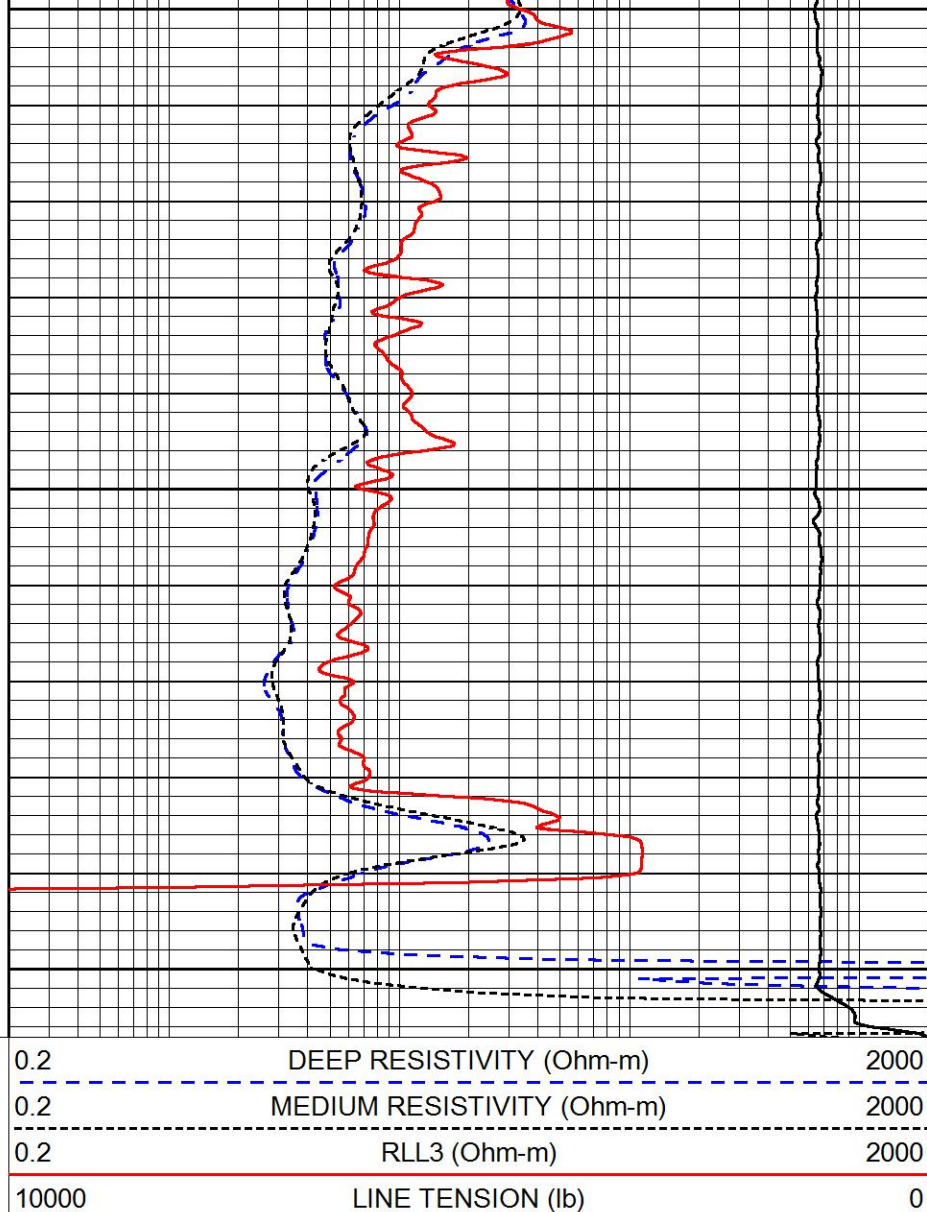




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4600

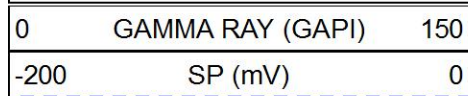


MIDWEST WIRELINE

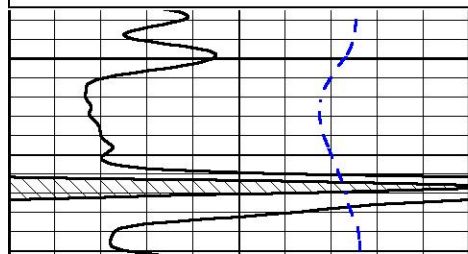
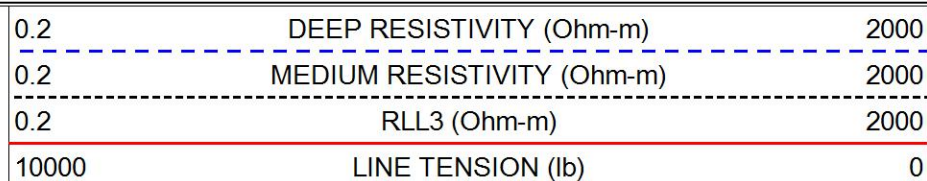
REPEAT SECTION

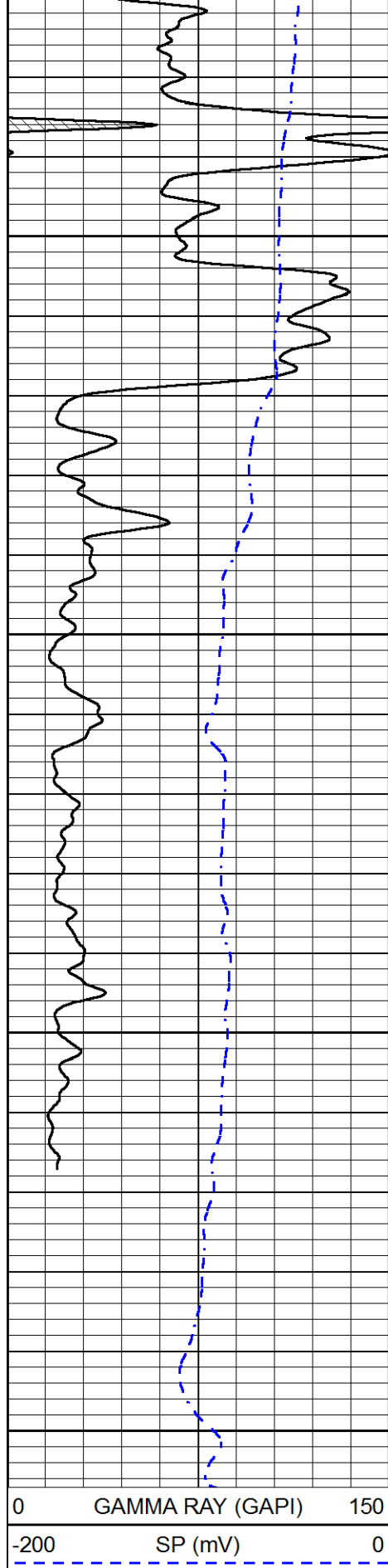
REPEAT PASS

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 Charted by Depth in Feet scaled 1:240



4400



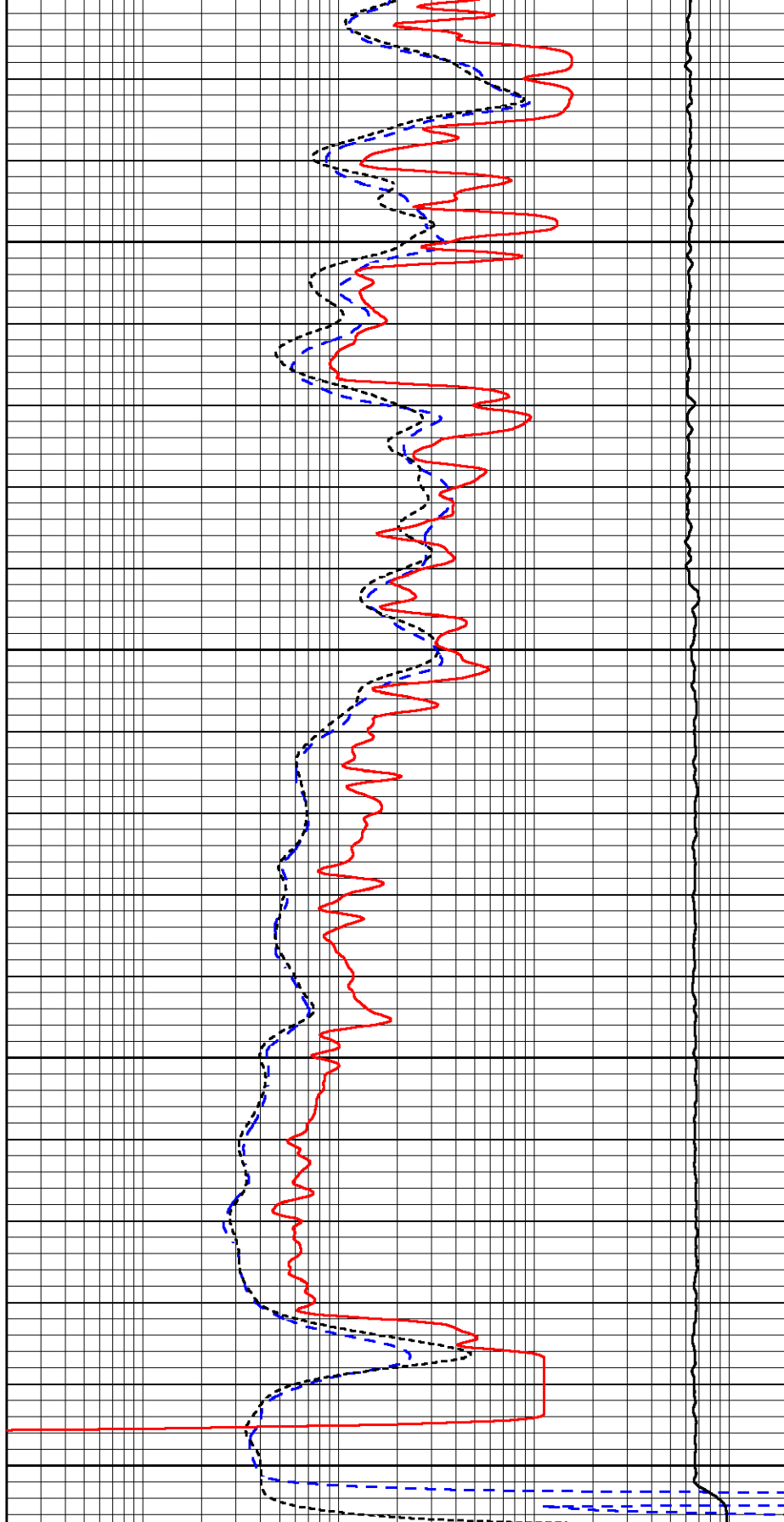


4450

4500

4550

4600





MIDWEST WIRELINE

Well	#3 Frusher 9D
Field	Sandpit North
County	Hodgeman
State	Kansas