



DUAL INDUCTION LOG

MIDWEST WIRELINE

CompanyGriffin Management LLC		Company Griffin Management LLC	
Well	Marla #4	Well	Marla #4
Field		Field	
County	Barber	County	Barber
State	Kansas	State	Kansas
Location: API #: 15-007-24428-00-00		Other Services	
Permanent Datum		E2 W2 E2	
Log Measured From		2640 FSL & 1650 FEL	
Drilling Measured From		SEC 5 TWP 30S RGE 15W	
Ground Level		Elevation 2005	
Kelly Bushing		K.B. 2010	
Kelly Bushing		D.F. 2005	
G.L. 2005		C.N.L./C.D.L. M.E.L.	
Date	7/19/2022		
Run Number	One		
Depth Driller	4850		
Depth Logger	4850		
Bottom Logged Interval	4849		
Top Log Interval	250		
Casing Driller	8.625 @ 261		
Casing Logger	261		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	7500		
Density / Viscosity	9.4 50		
pH / Fluid Loss	10.0 10.4		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.75 @ 72		
Rmf @ Meas. Temp	0.56 @ 72		
Rmc @ Meas. Temp	1.01 @ 72		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.43 @ 126		
Operating Rig Time	2.5 Hours		
Max Rec. Temp. F	126		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Chuck Griffin	Eli Felts	

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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.

Pratt, KS, W to Croft Blkt(SW 140)
S to SW 110th, 1 E, ~1.5 S

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: Chuck Griffin
Secondary Witness: Eli Felts
Secondary Witness:
Secondary Witness:

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)	
GR	40.33			GR-M&W (106)	3.00	3.50	50.00	
CNLSC CNSSC	37.23 36.48			CNT-M&W (207-MW)	5.00	3.50	100.00	
LSD DCAL SSD	28.18 28.17 27.68			CDL-M&W (302-02)	8.50	4.00	250.00	
	ML-PSIML (402)			7.58	4.00	65.00		
							MCAL MI MN	19.58 19.58 19.58
RLL3F RLL3								15.50 15.50
								CILD
CILM							4.50	
SP	0.20			DIL-M&W (507)	18.25	3.50	220.00	
Dataset: griffin_marla #4.db: field/well/StkMI/pass3.2								
Total length: 42.33 ft								
Total weight: 685.00 lb								
O.D.: 4.00 in								

Log Variables

DatabaseC:\ProgramData\Warrior\Data\griffin_marla #4.db
Dataset field/well/StkMI/pass3.2/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 126	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 105	degF 80	Off	ft 4850

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

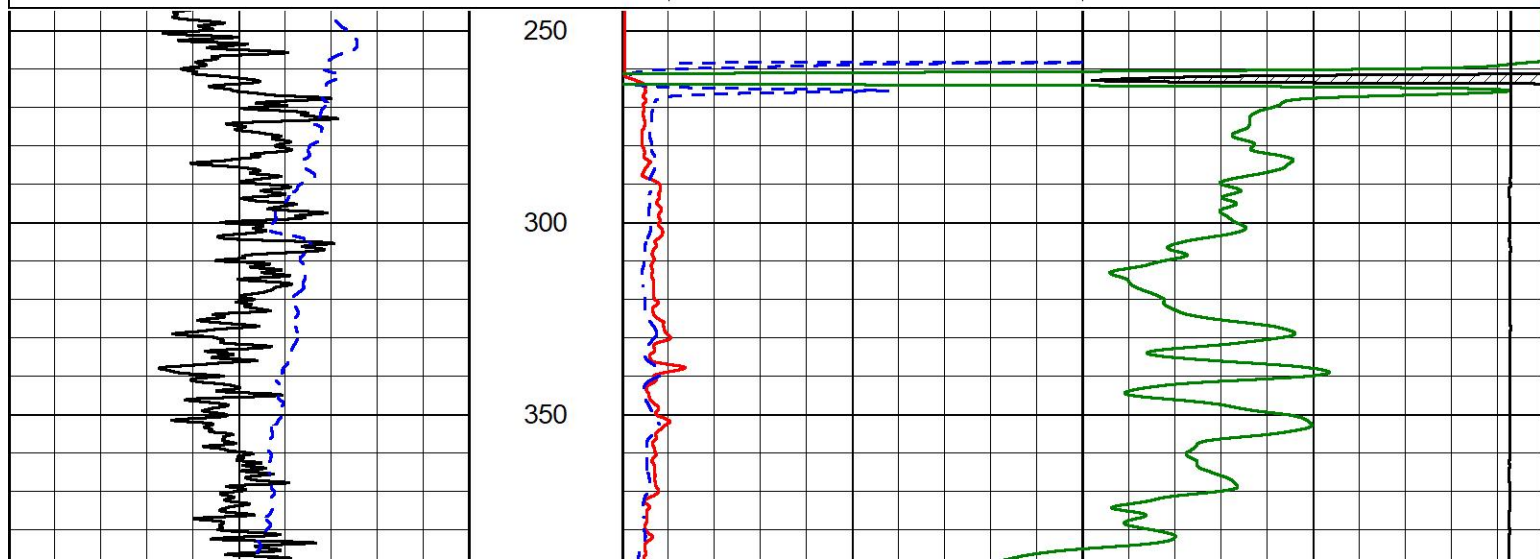


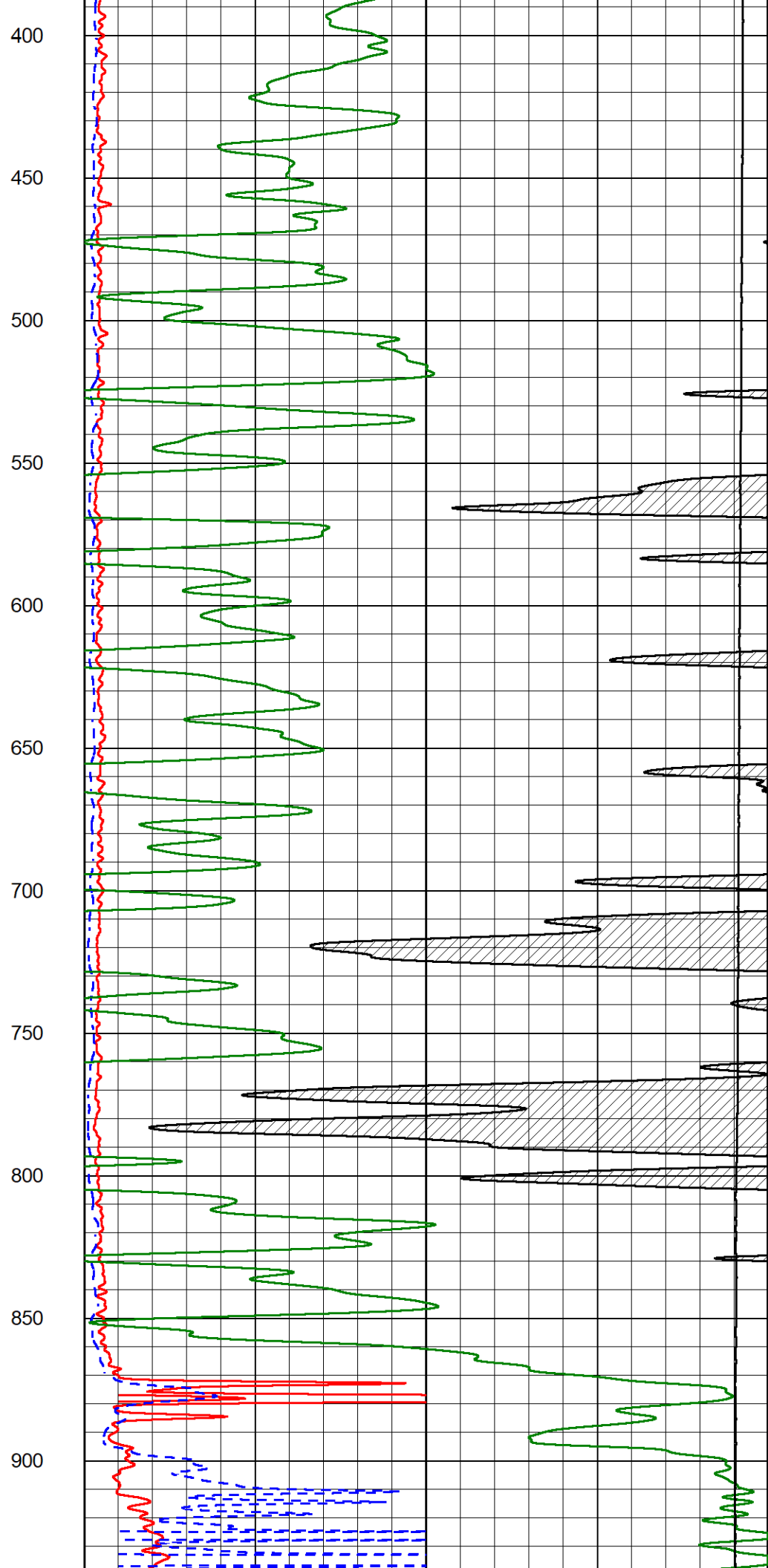
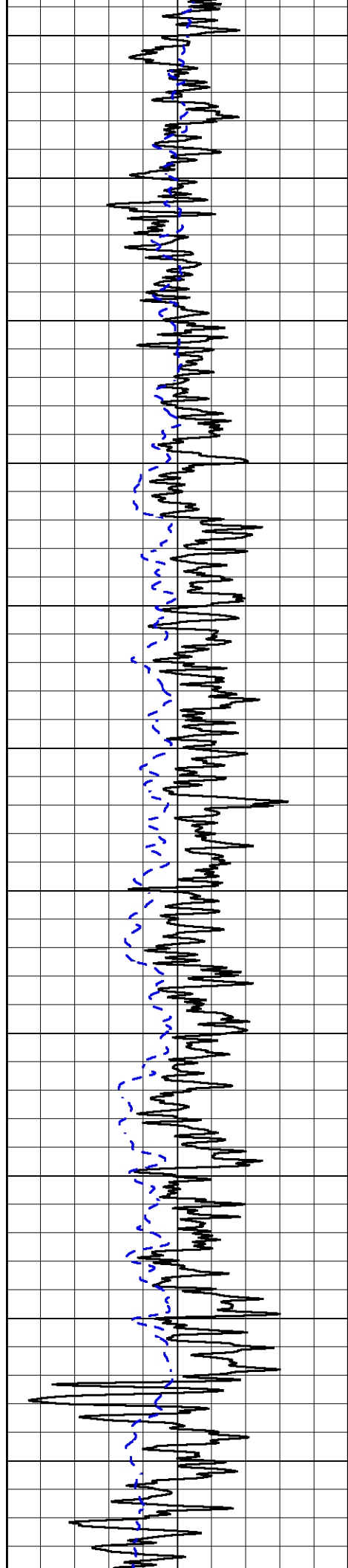
2" SCALE RESISTIVITY

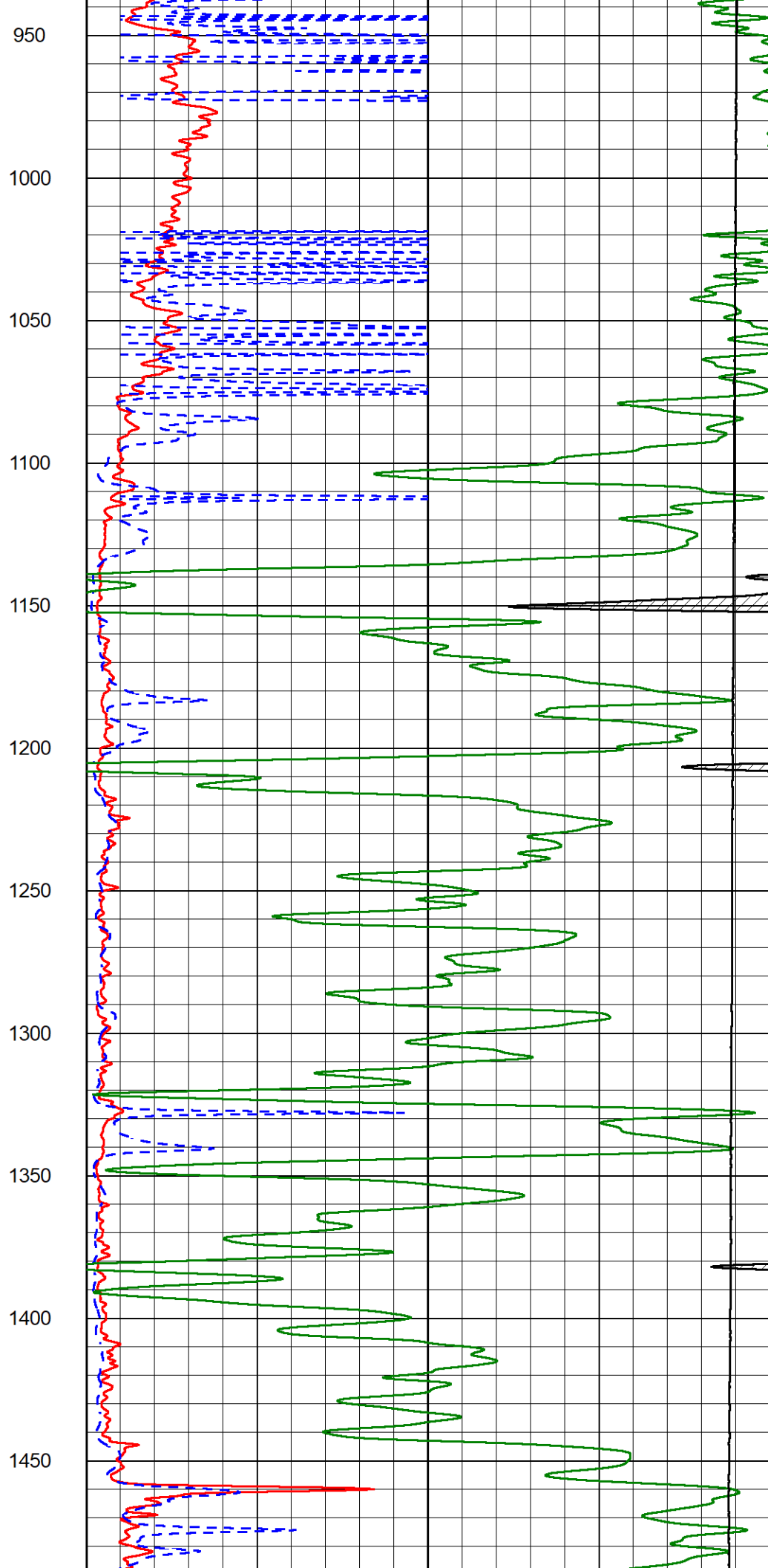
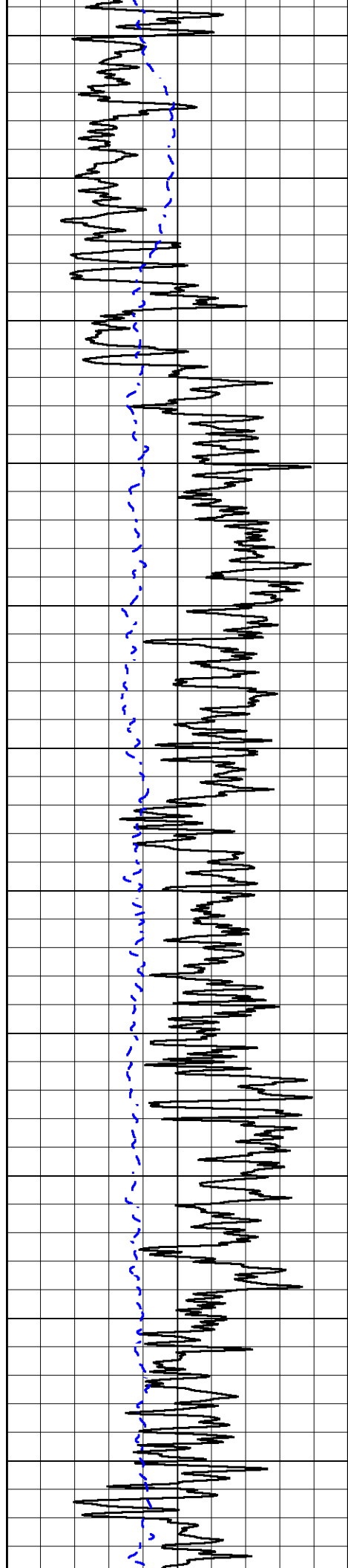
MAIN PASS

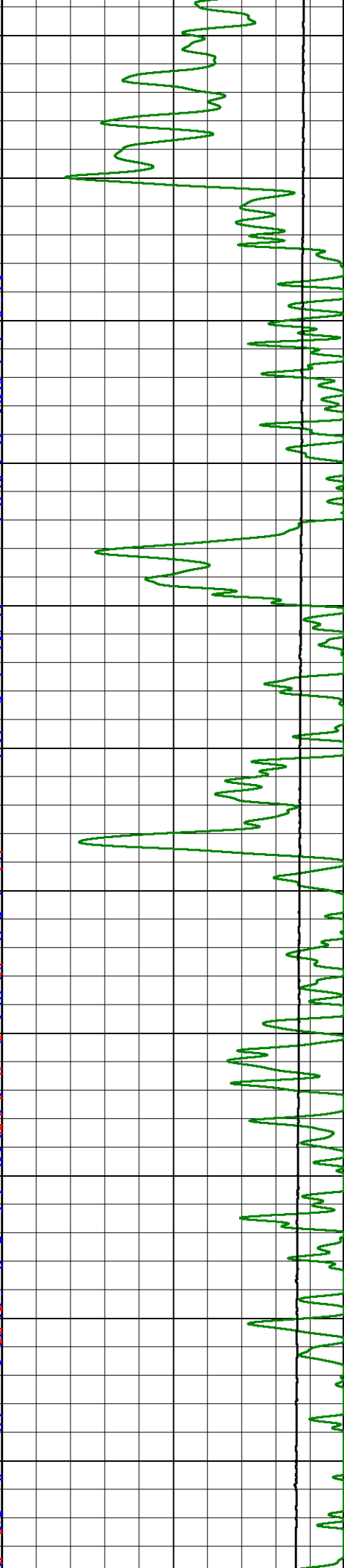
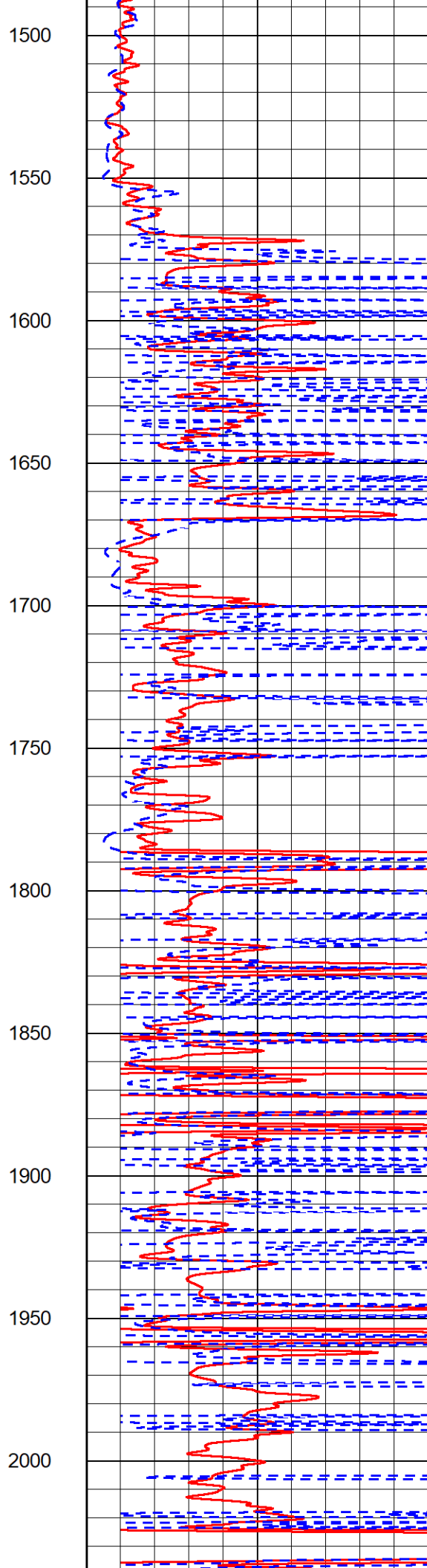
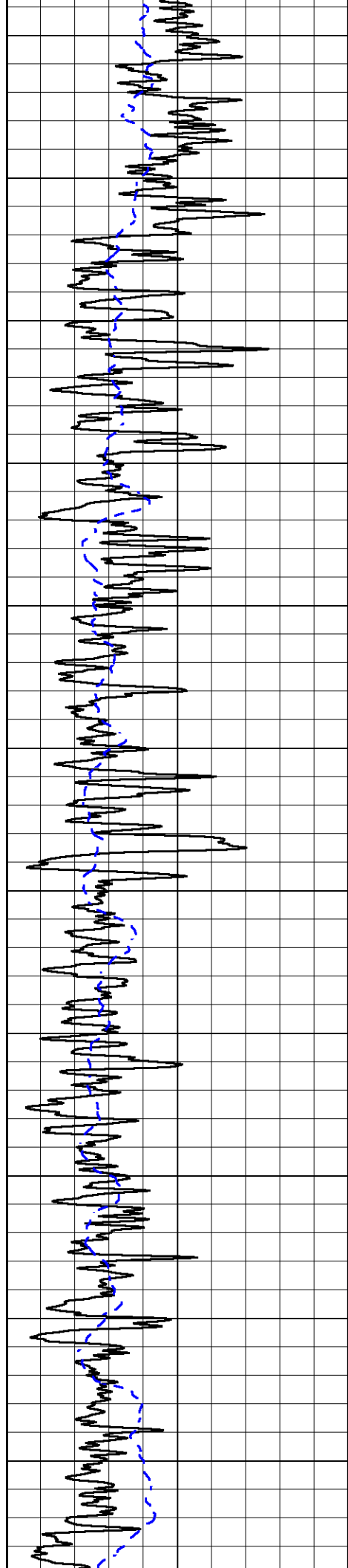
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Dataset Pathname StkMI/pass3.2
Presentation Format _dil2in
Dataset Creation Tue Jul 19 06:45:10 2022
Charted by Depth in Feet scaled 1:600

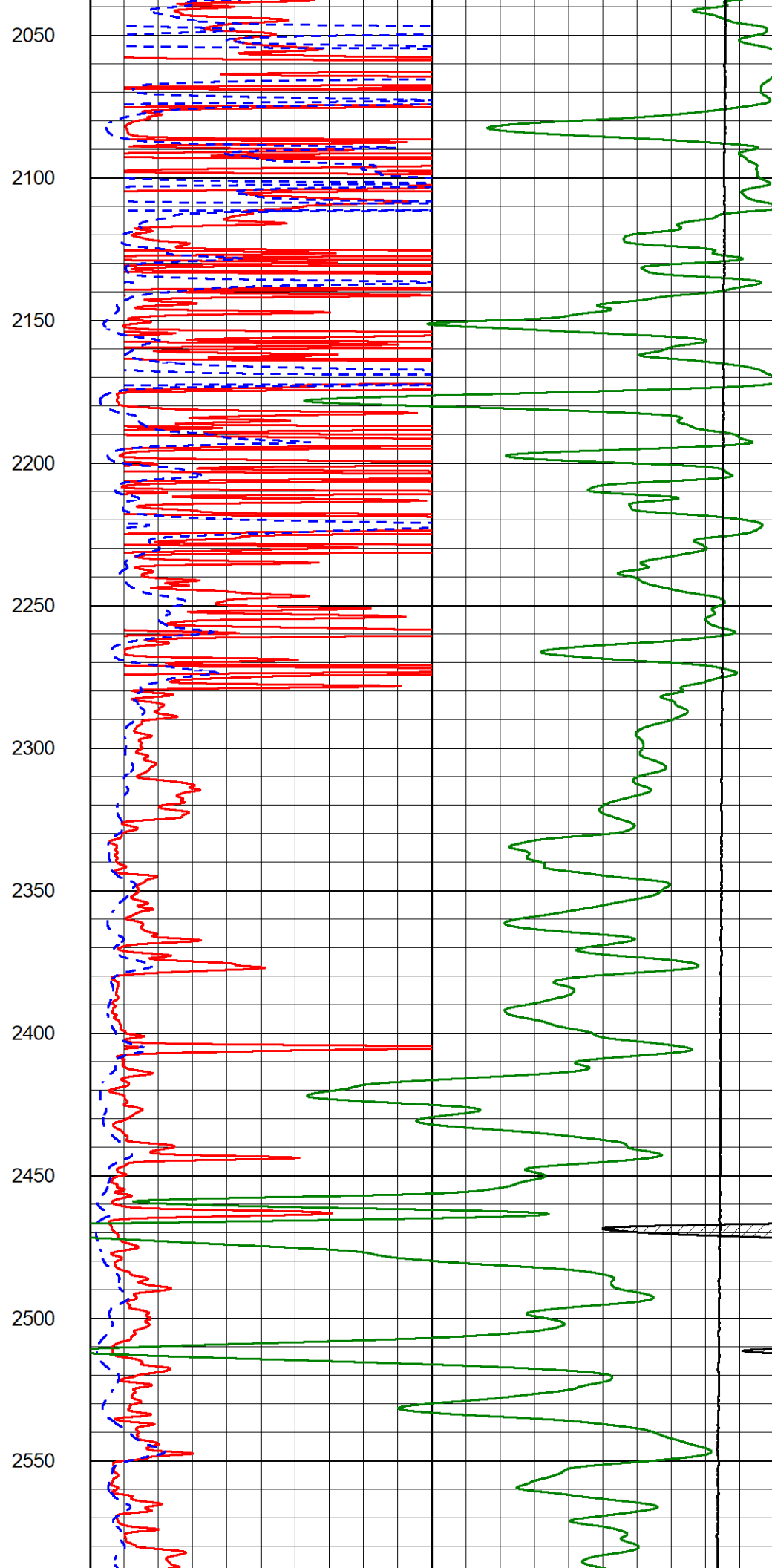
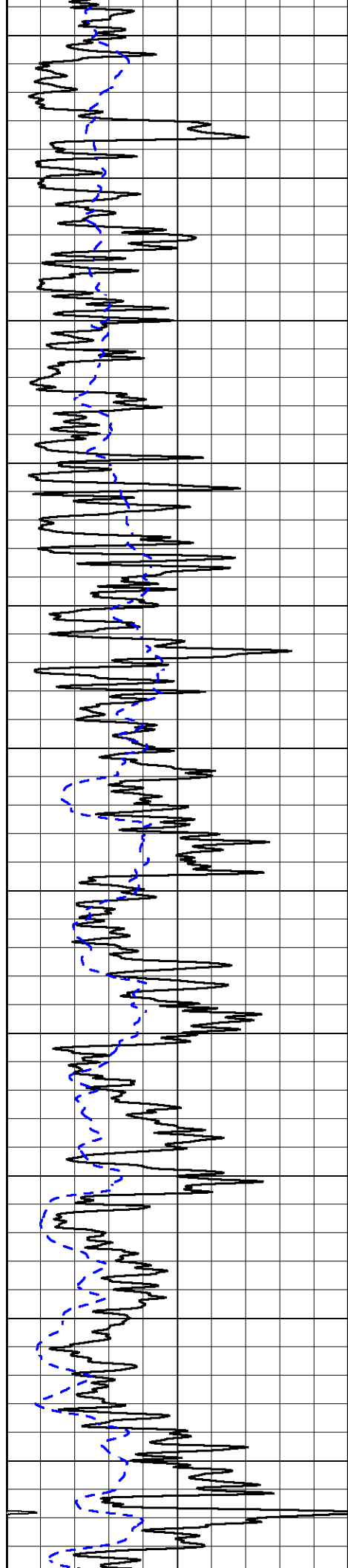
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-100	SP (mV)	100	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			Shallow Resistivity		
			50	(Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200

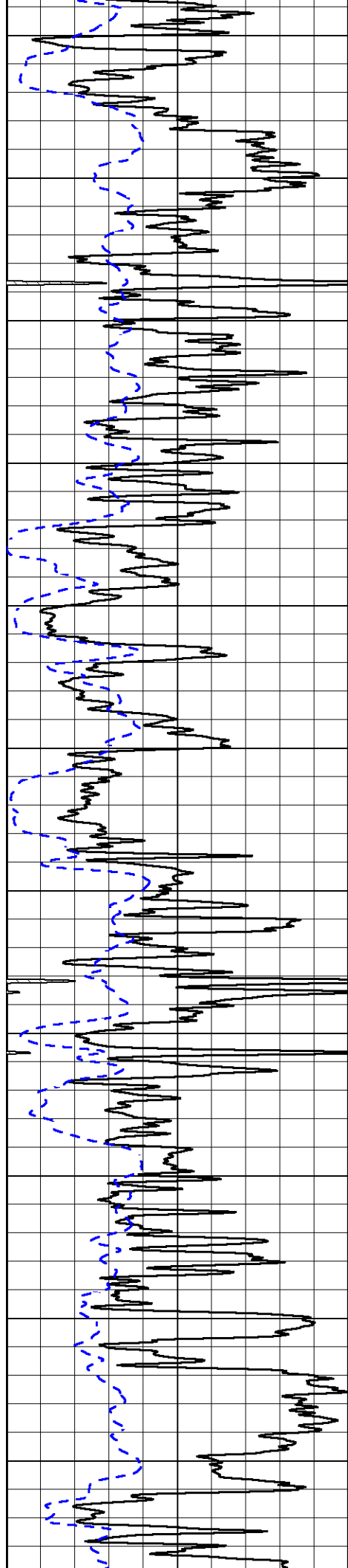












2600

2650

2700

2750

2800

2850

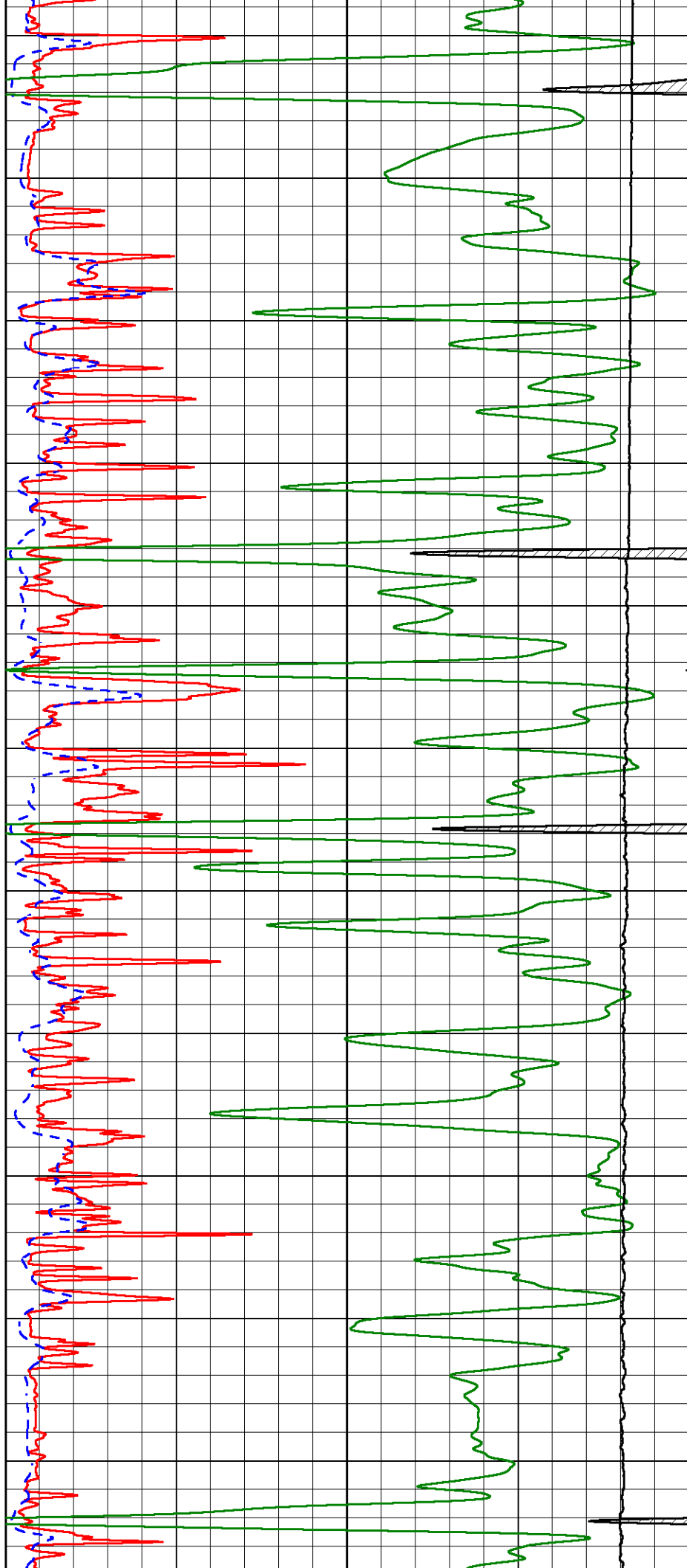
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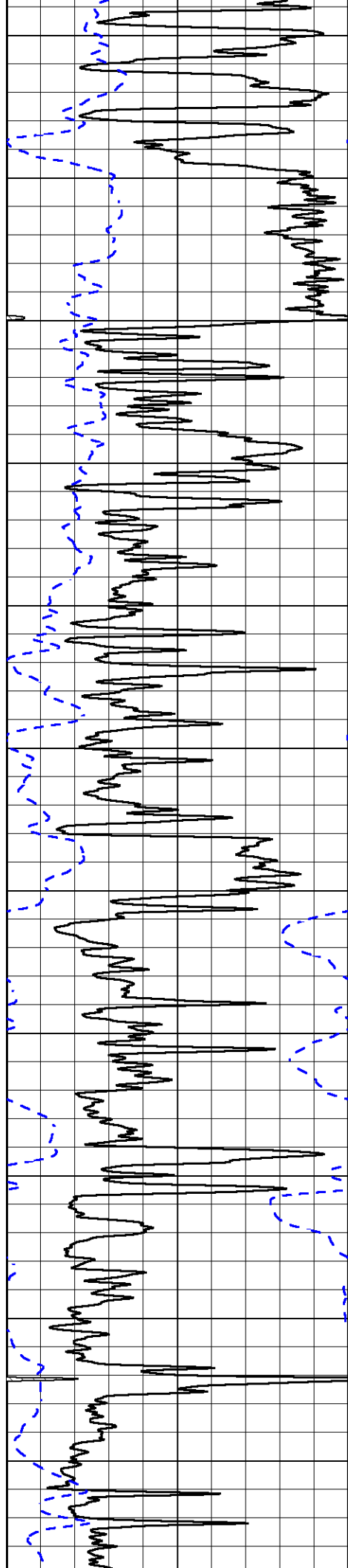
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3000

3050

3100





3150

3200

3250

3300

3350

3400

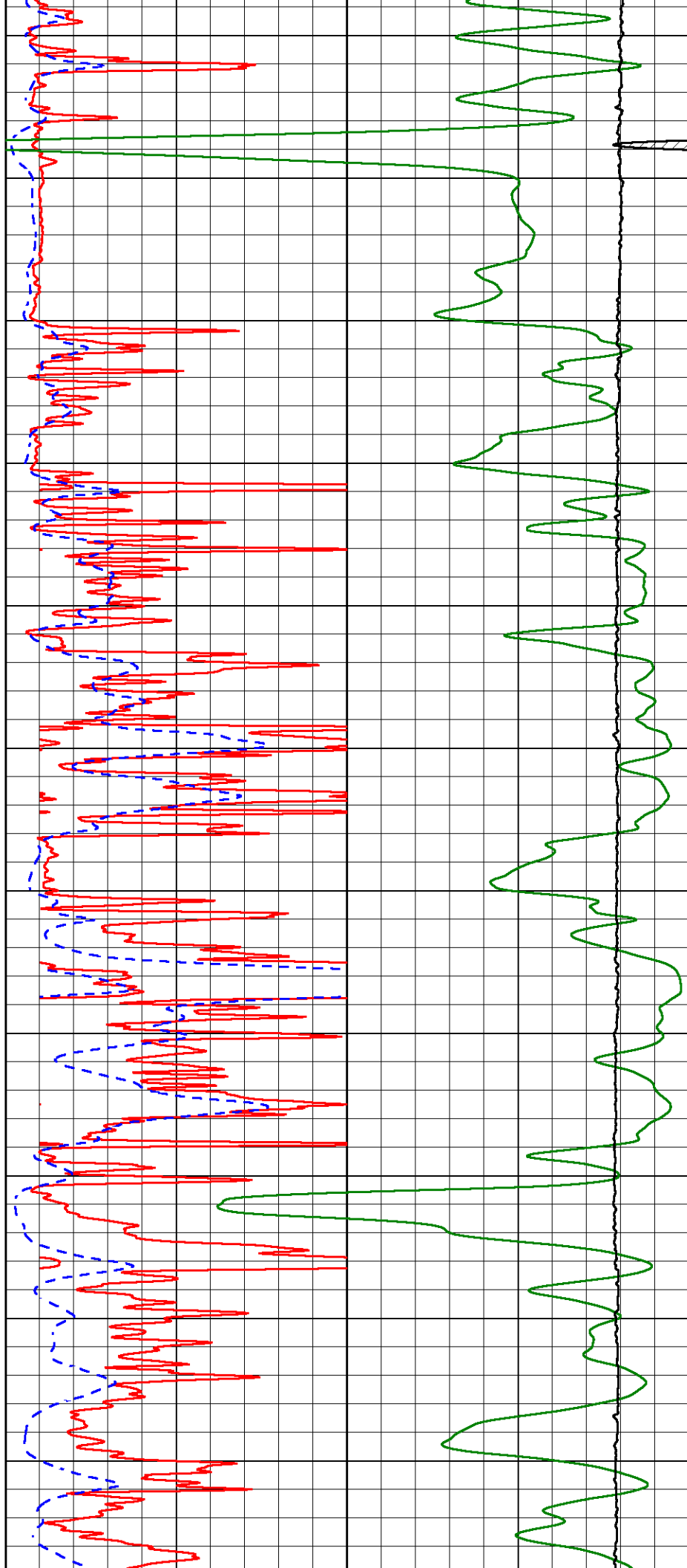
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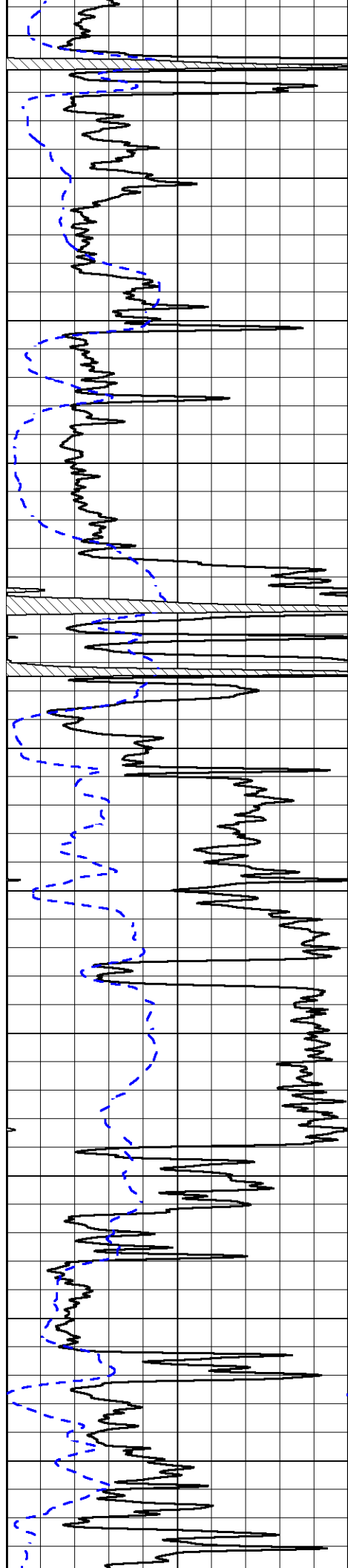
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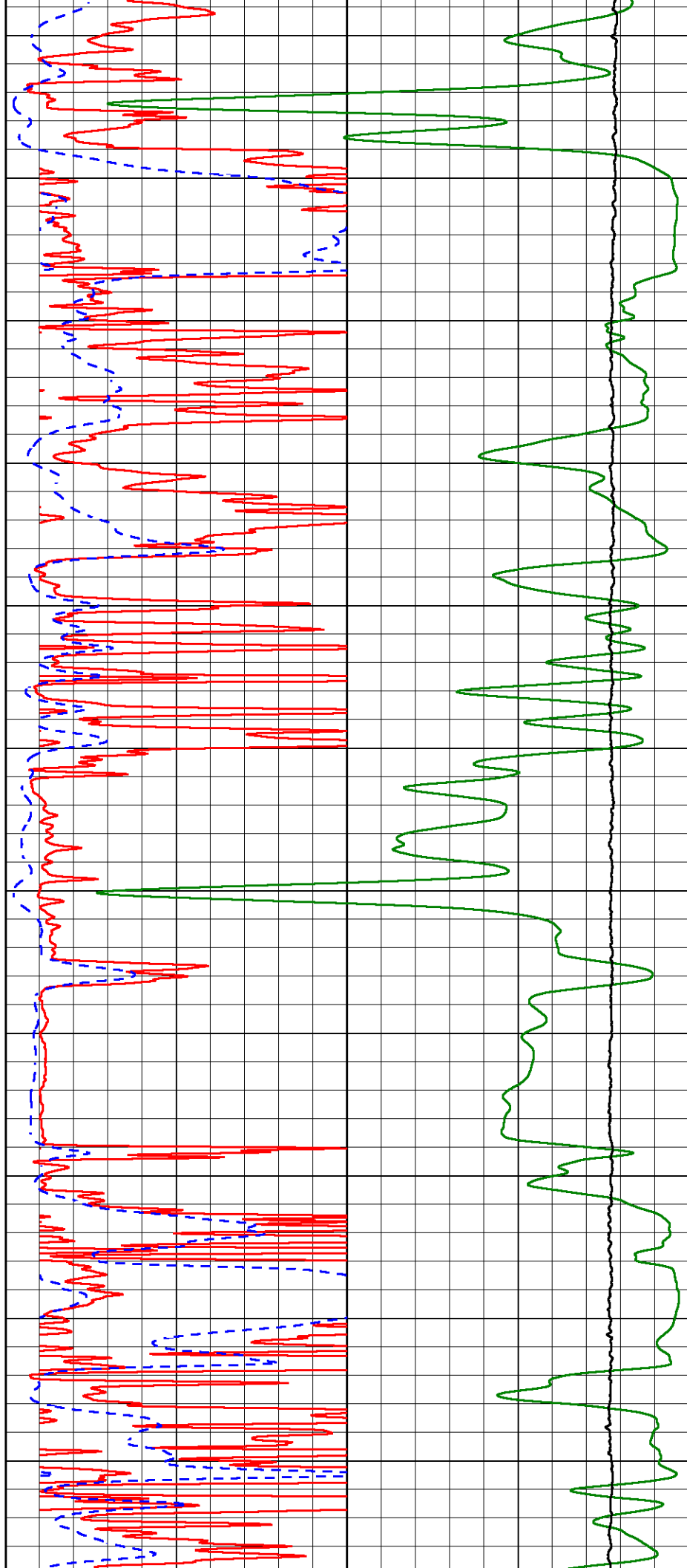
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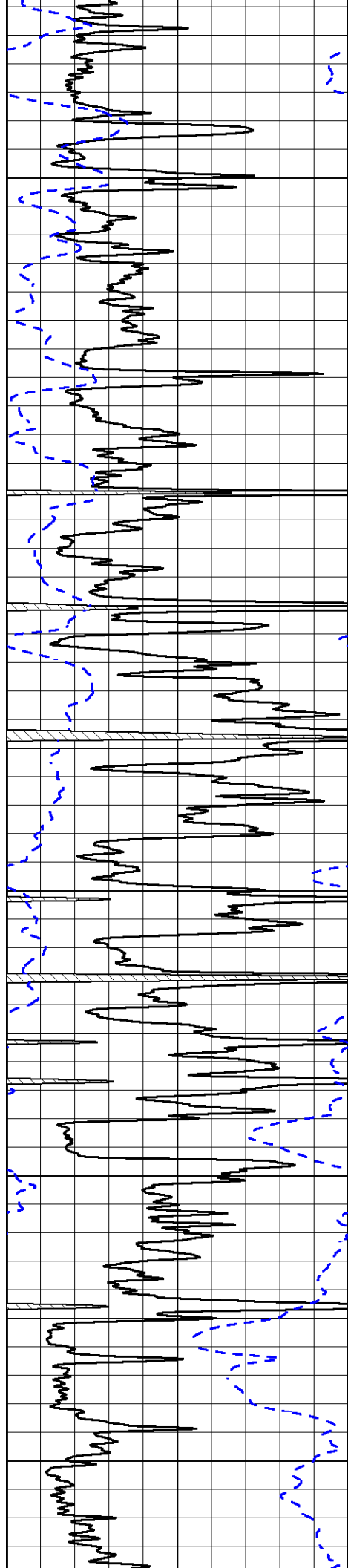
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4100

4150

4200





4250

4300

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4500

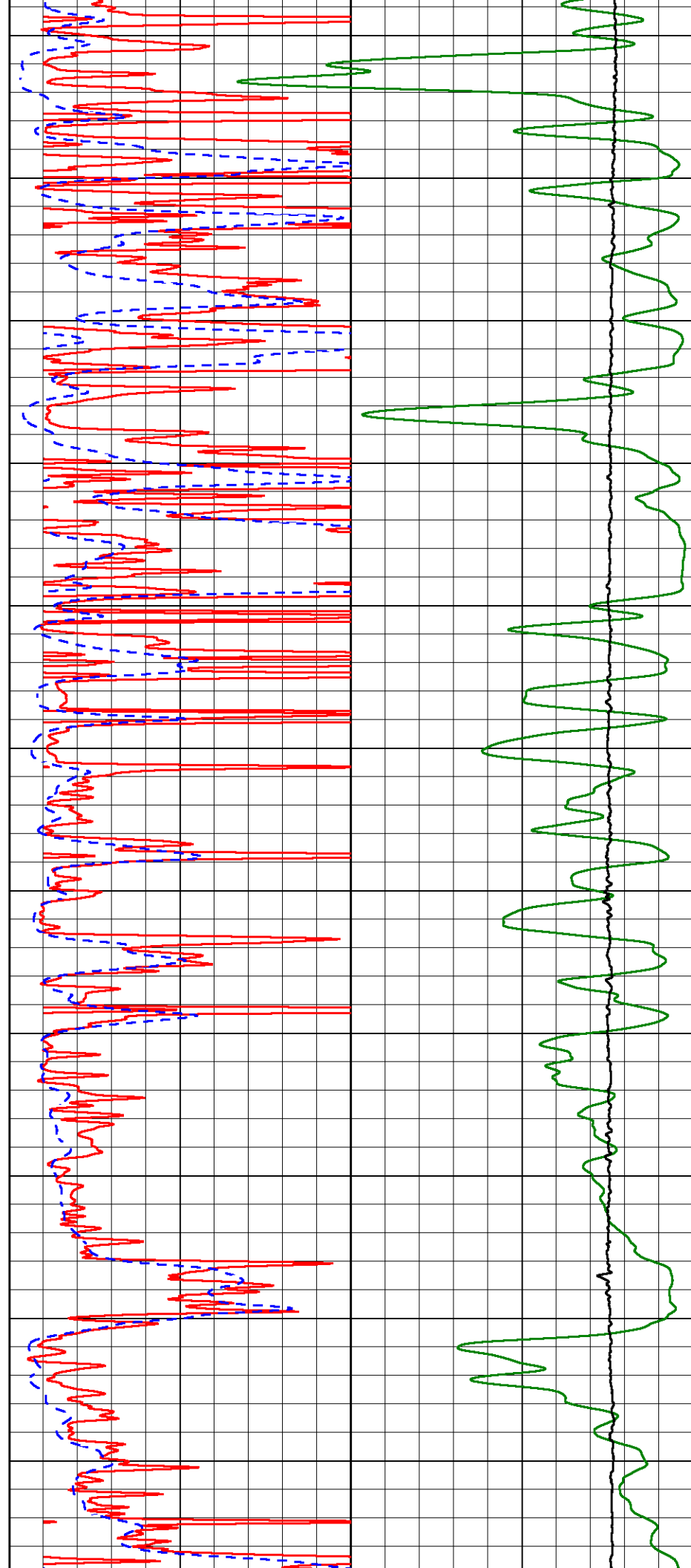
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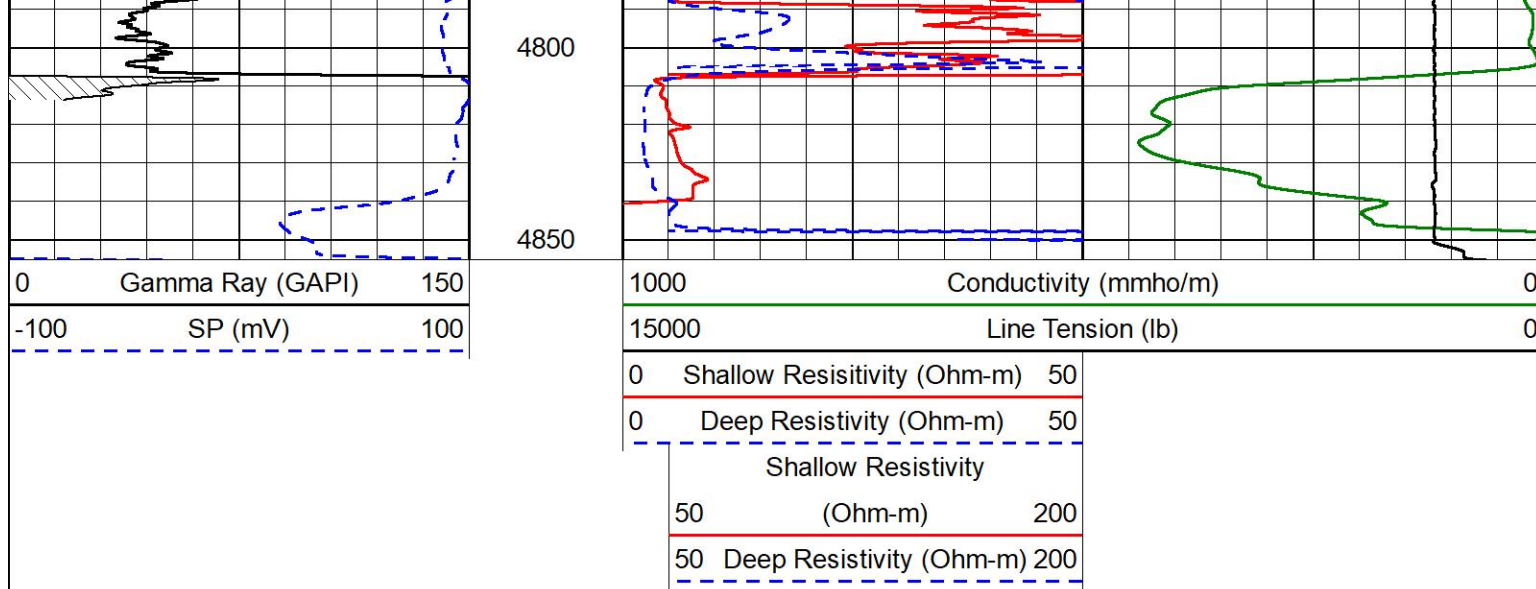
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4700

4750



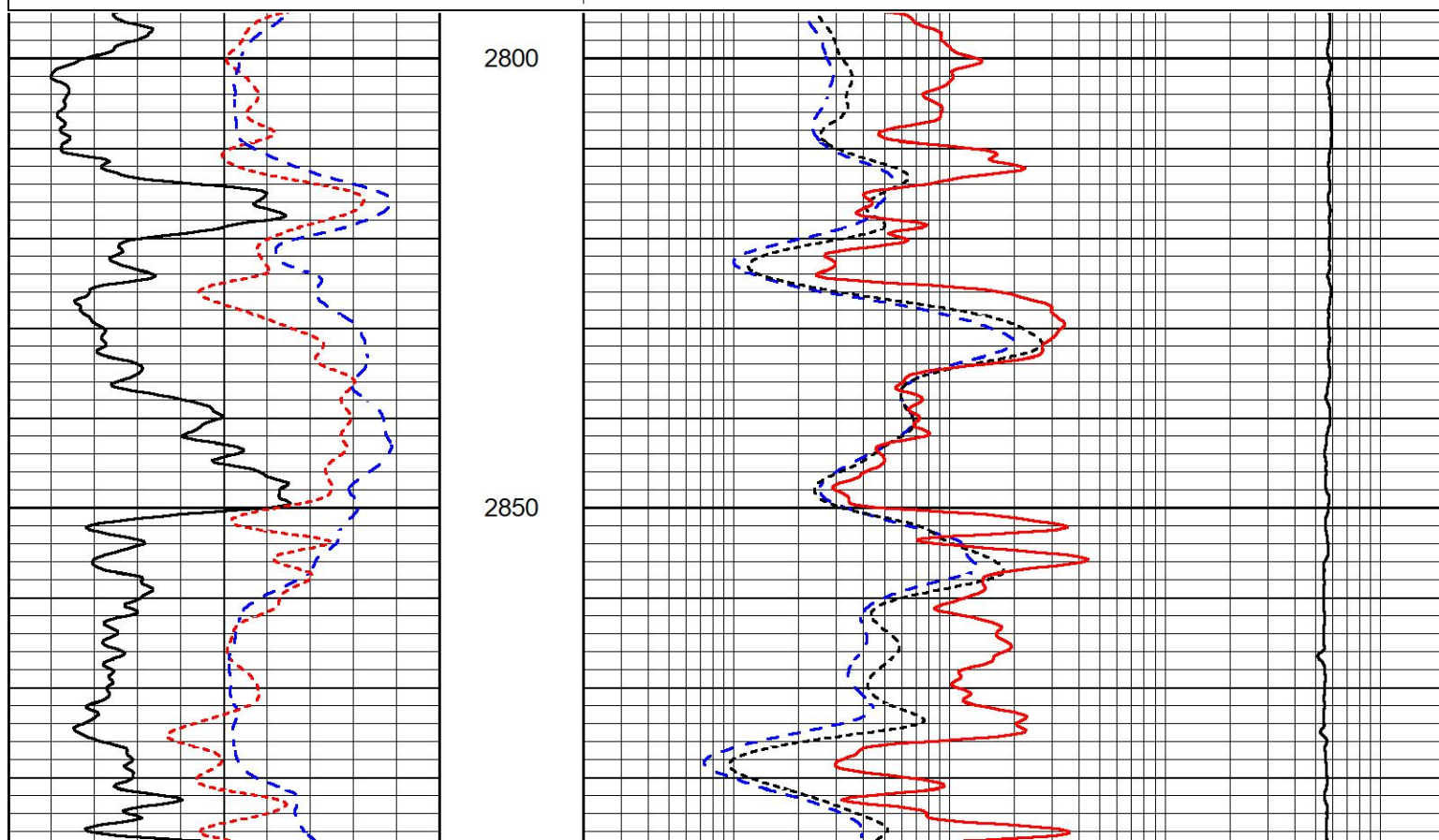
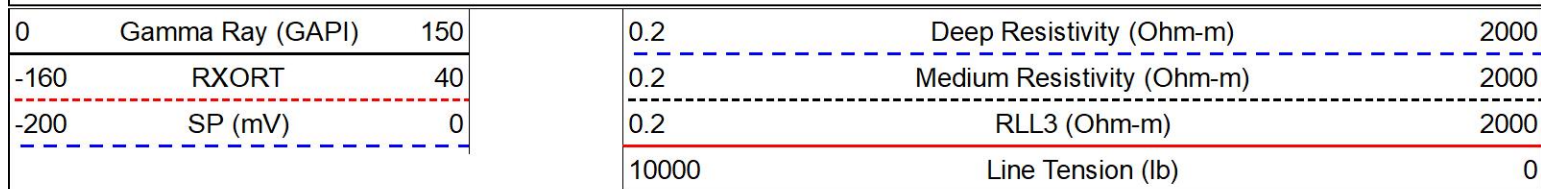


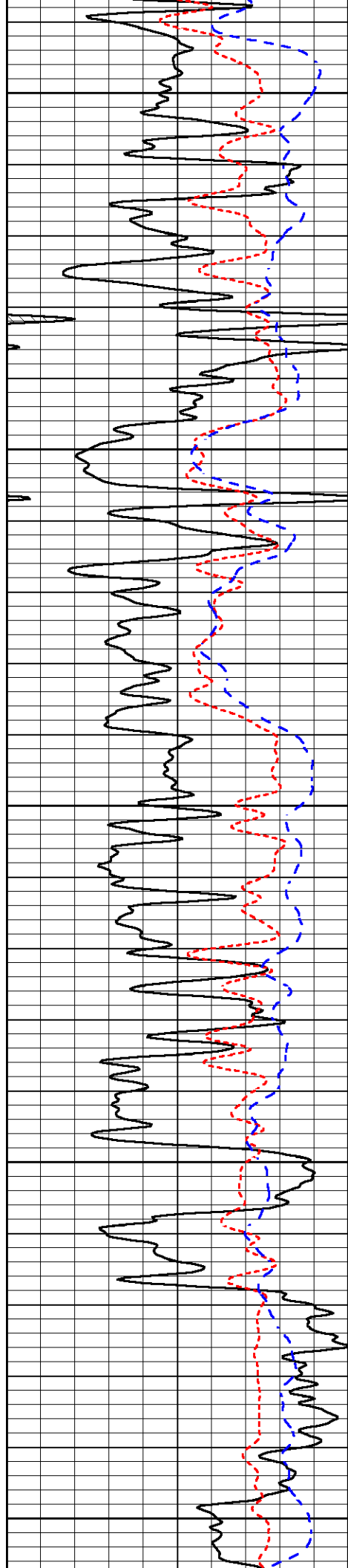
MIDWEST WIRELINE

DETAIL SECTION

MAIN PASS

Database File griffin_marla #4.db
 Dataset Pathname StkMI/pass3.1
 Presentation Format _dil
 Dataset Creation Tue Jul 19 06:45:20 2022
 Charted by Depth in Feet scaled 1:240





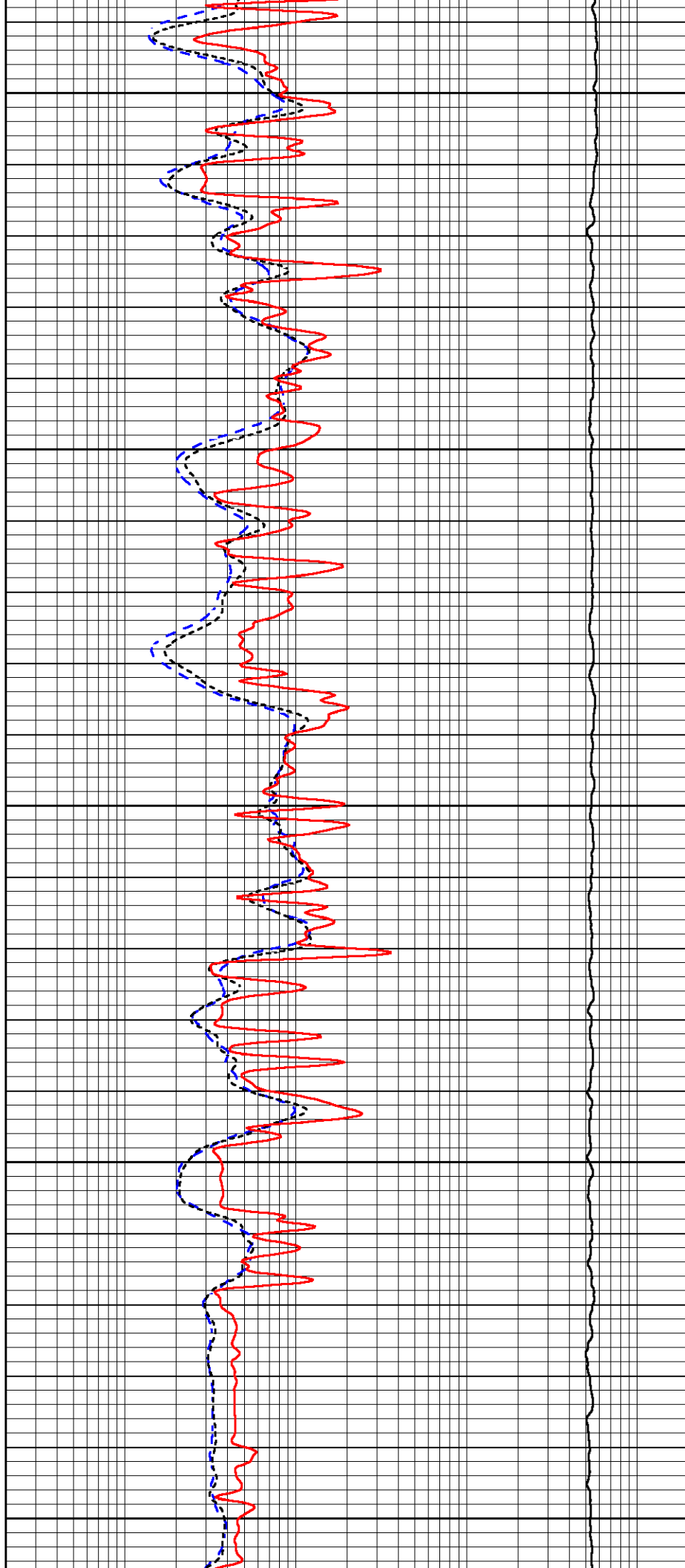
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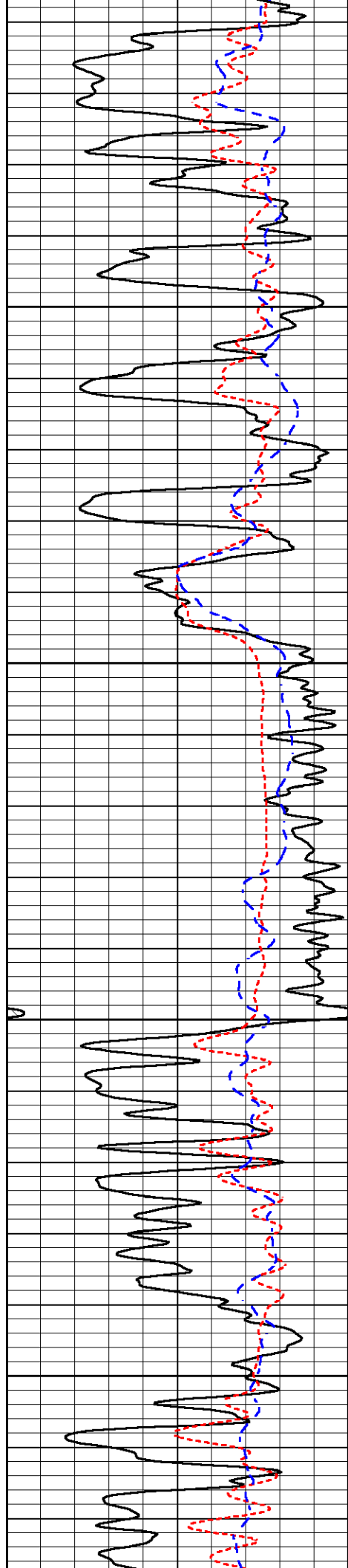
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3000

3050

3100



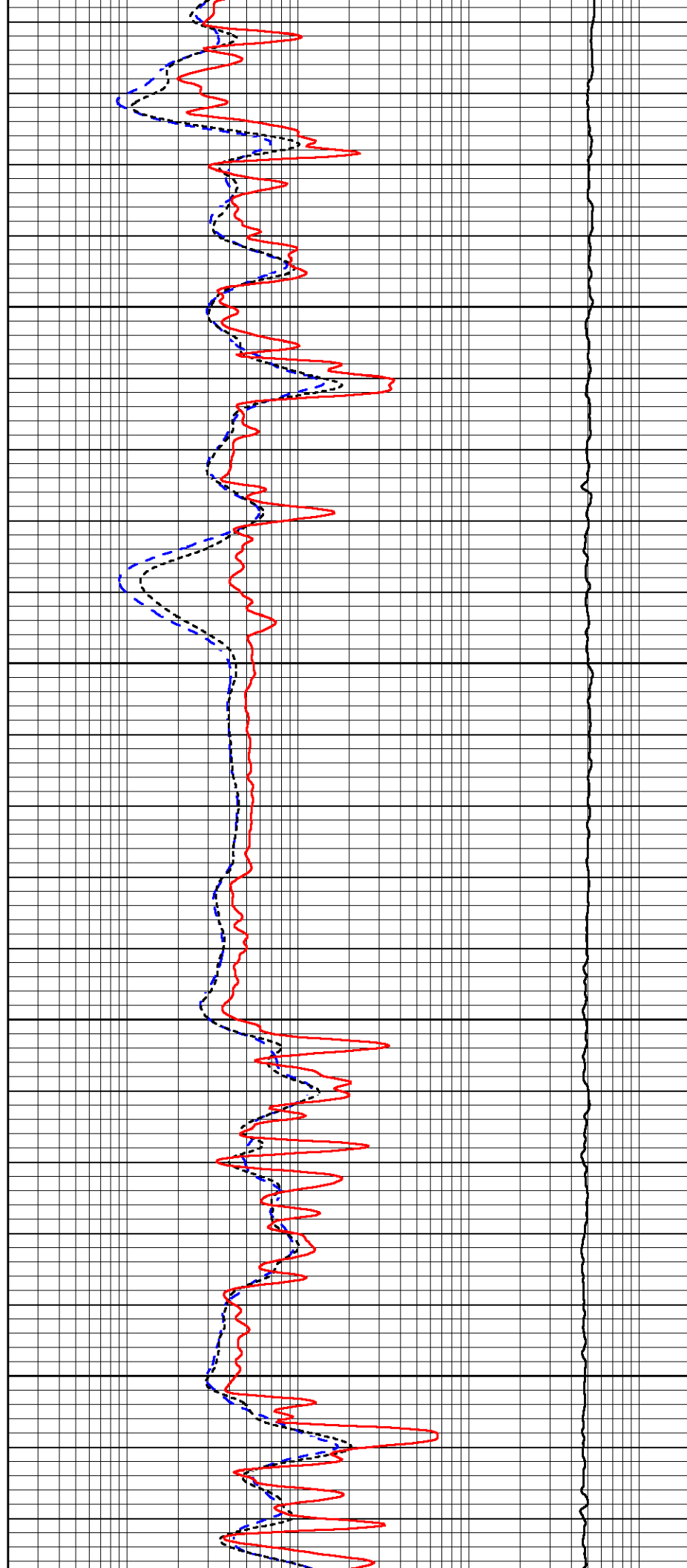


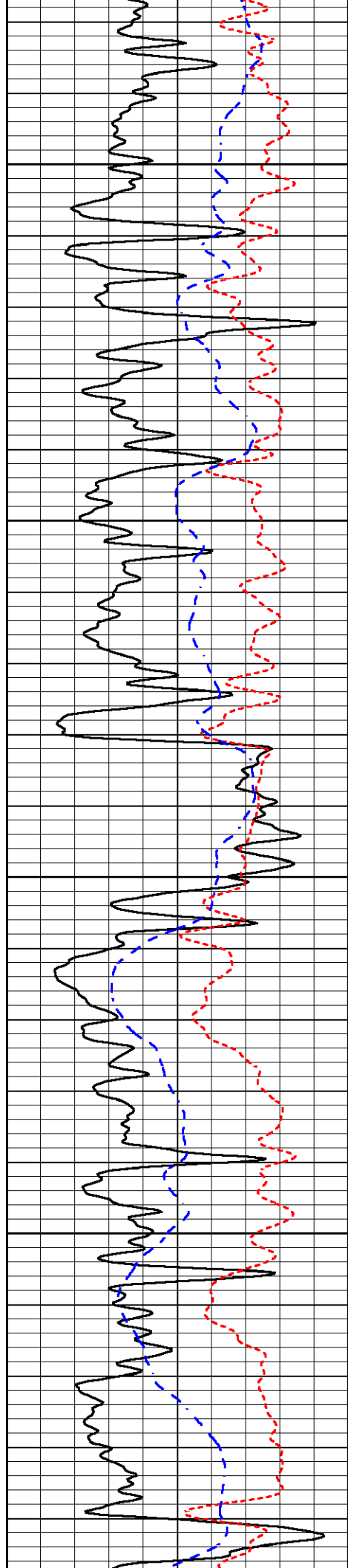
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3200

3250

3300



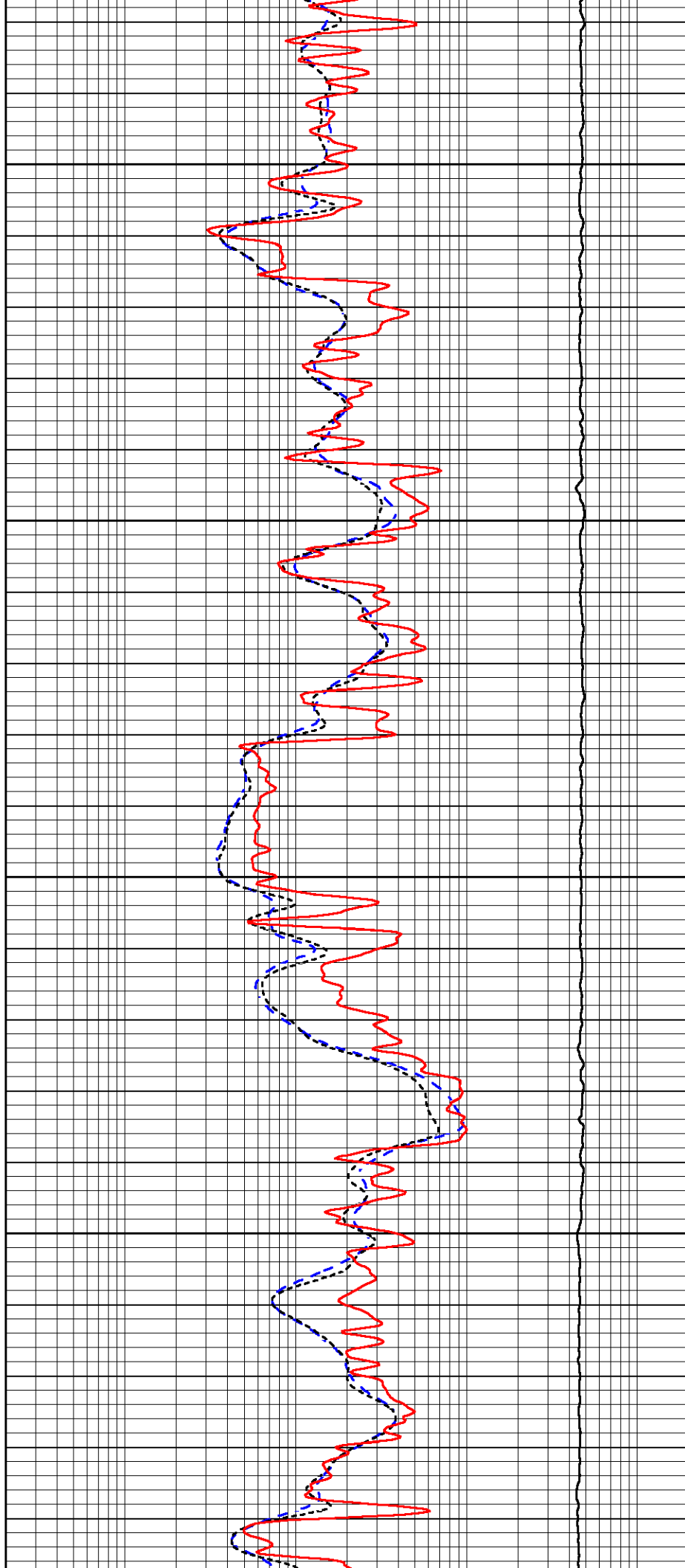


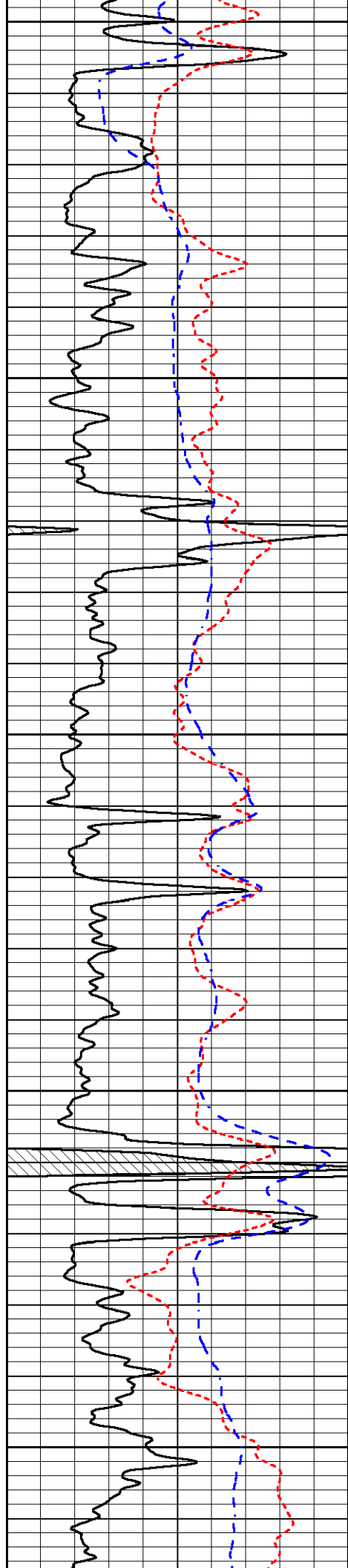
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3400

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3500





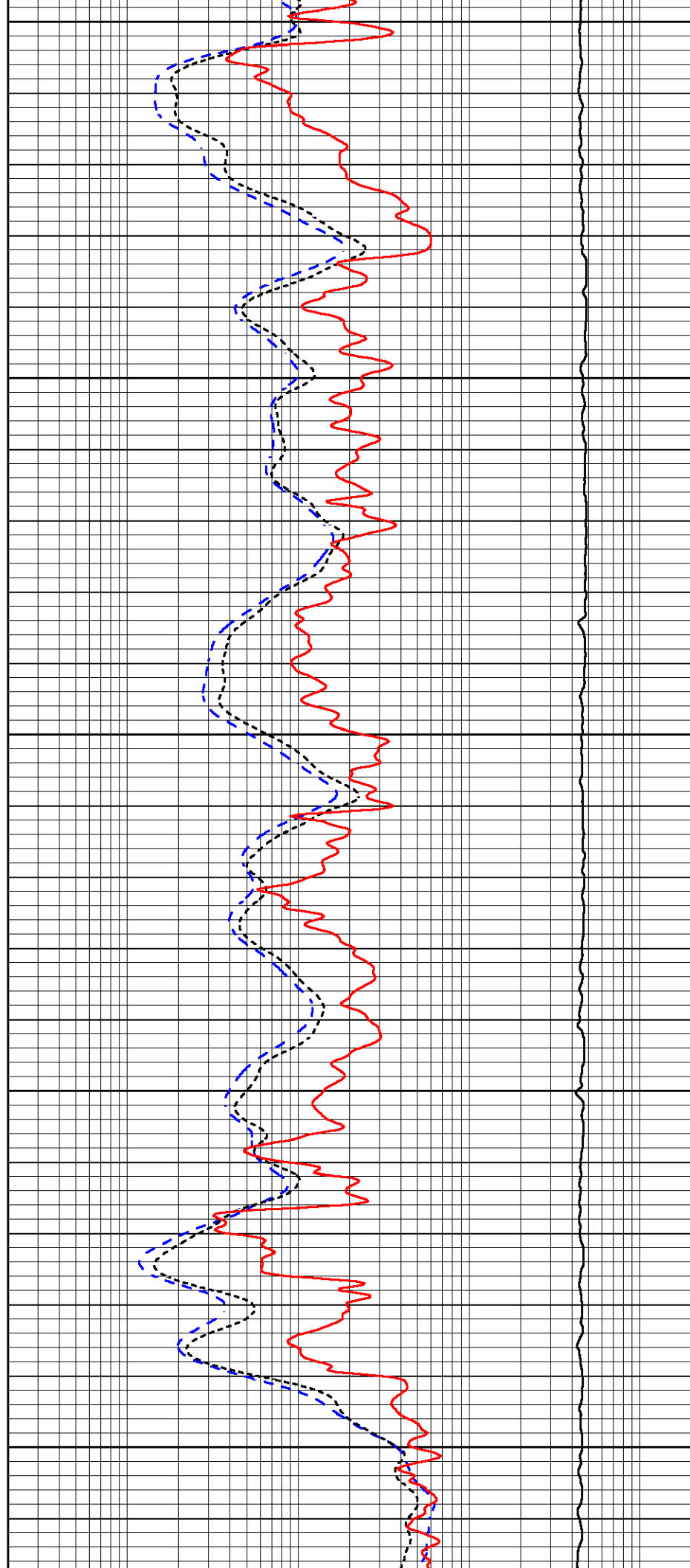
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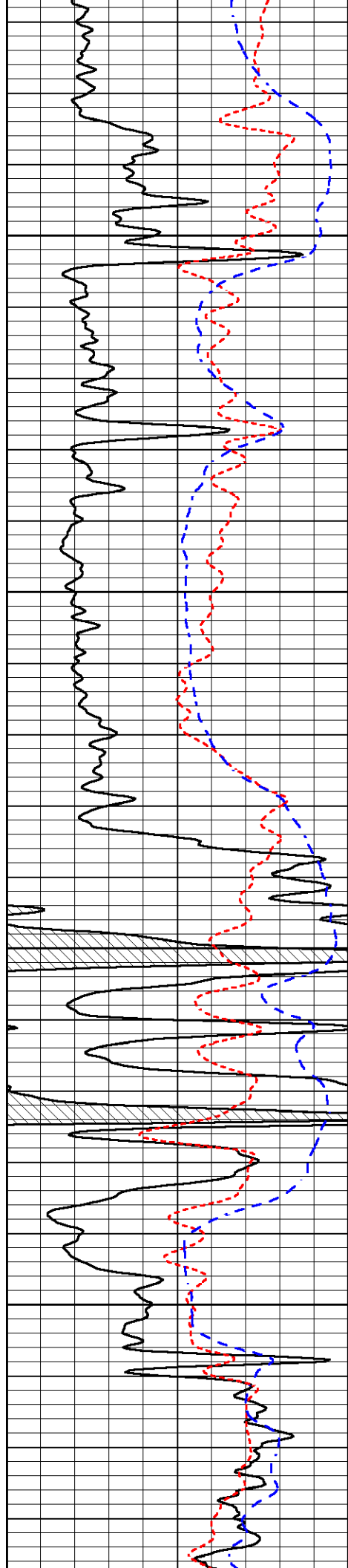
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3750



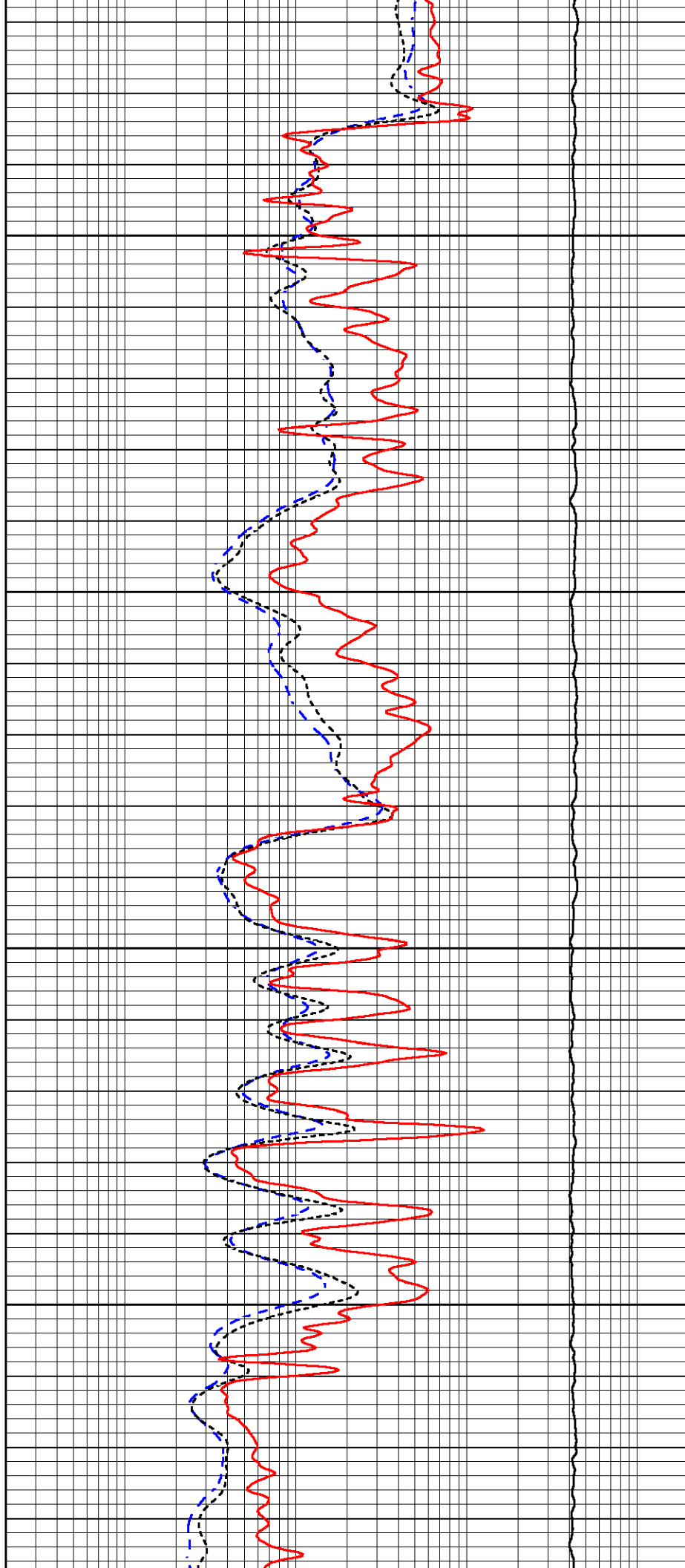


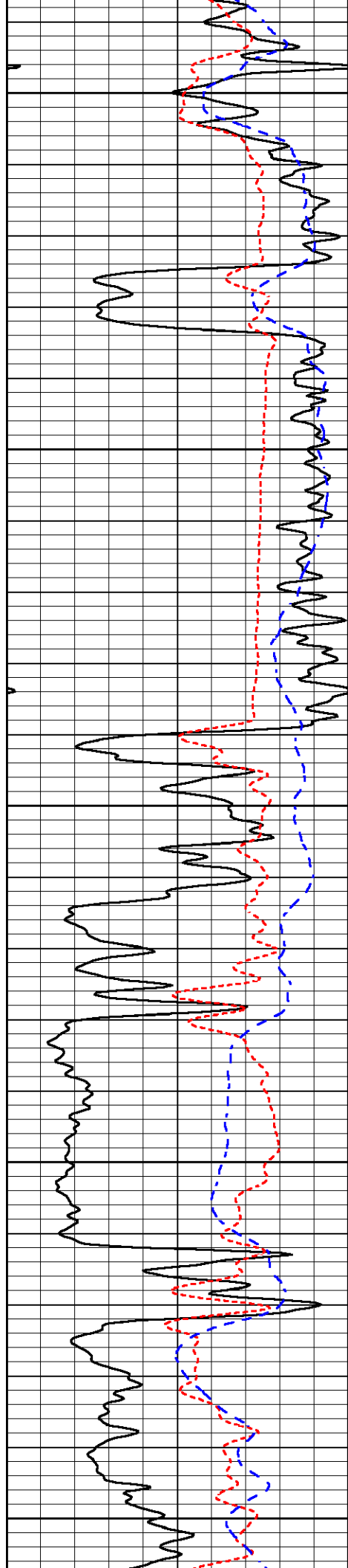
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3850

3900

3950





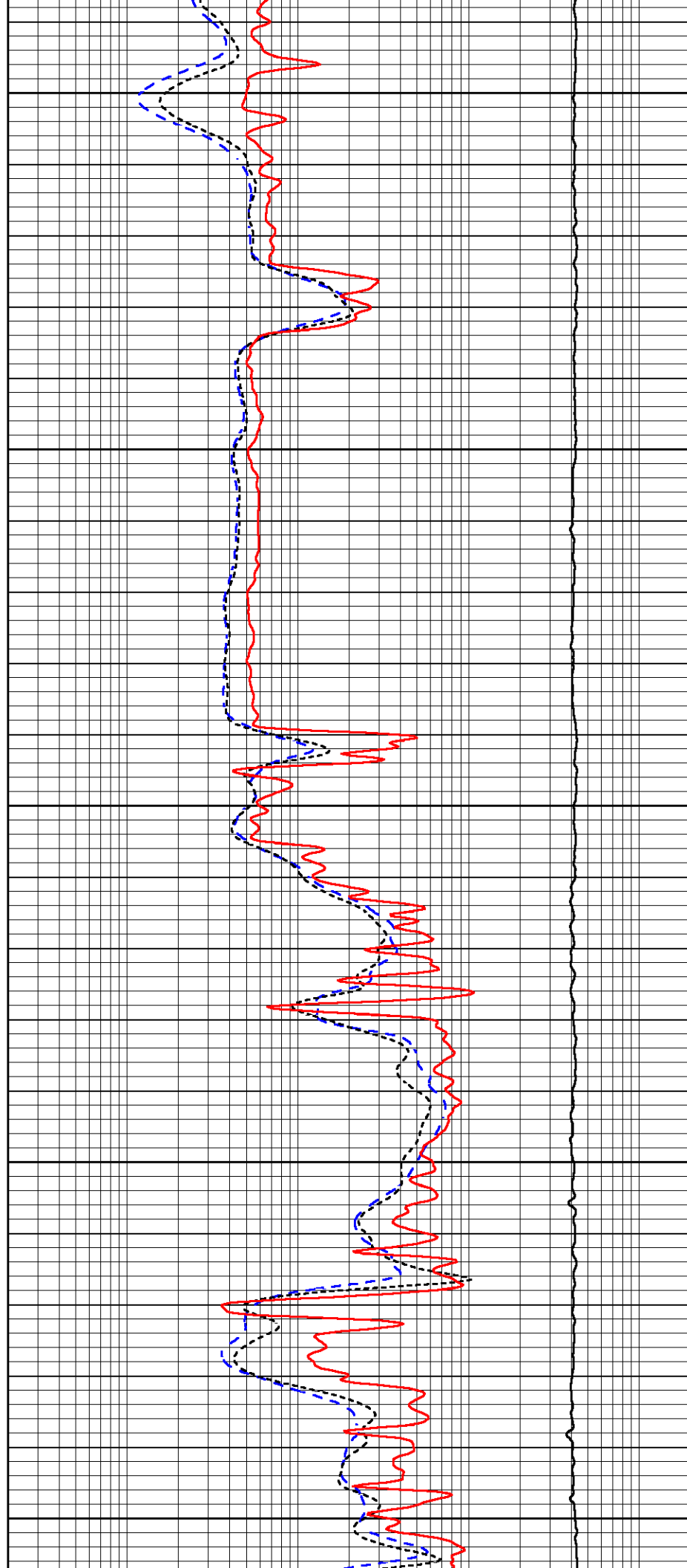
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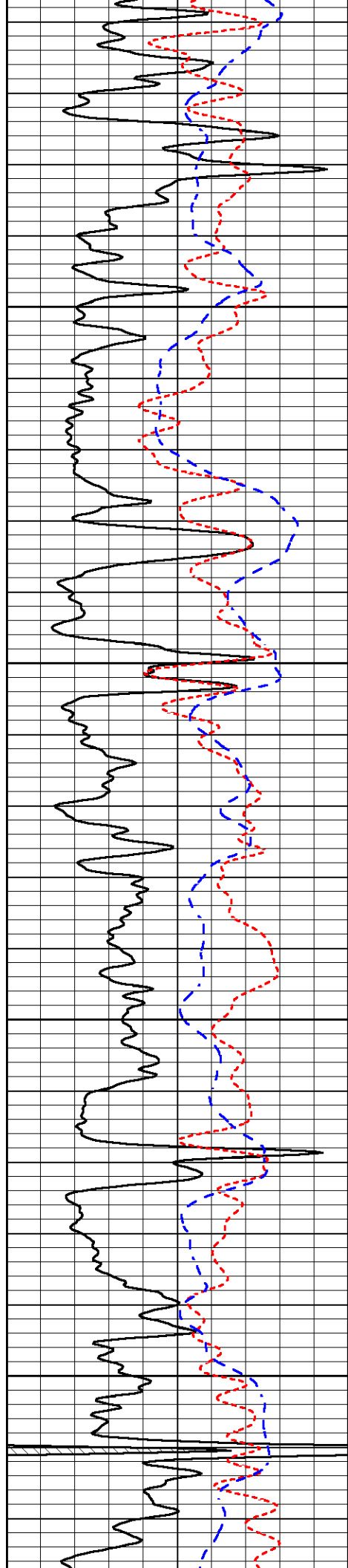
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4100

4150

4200



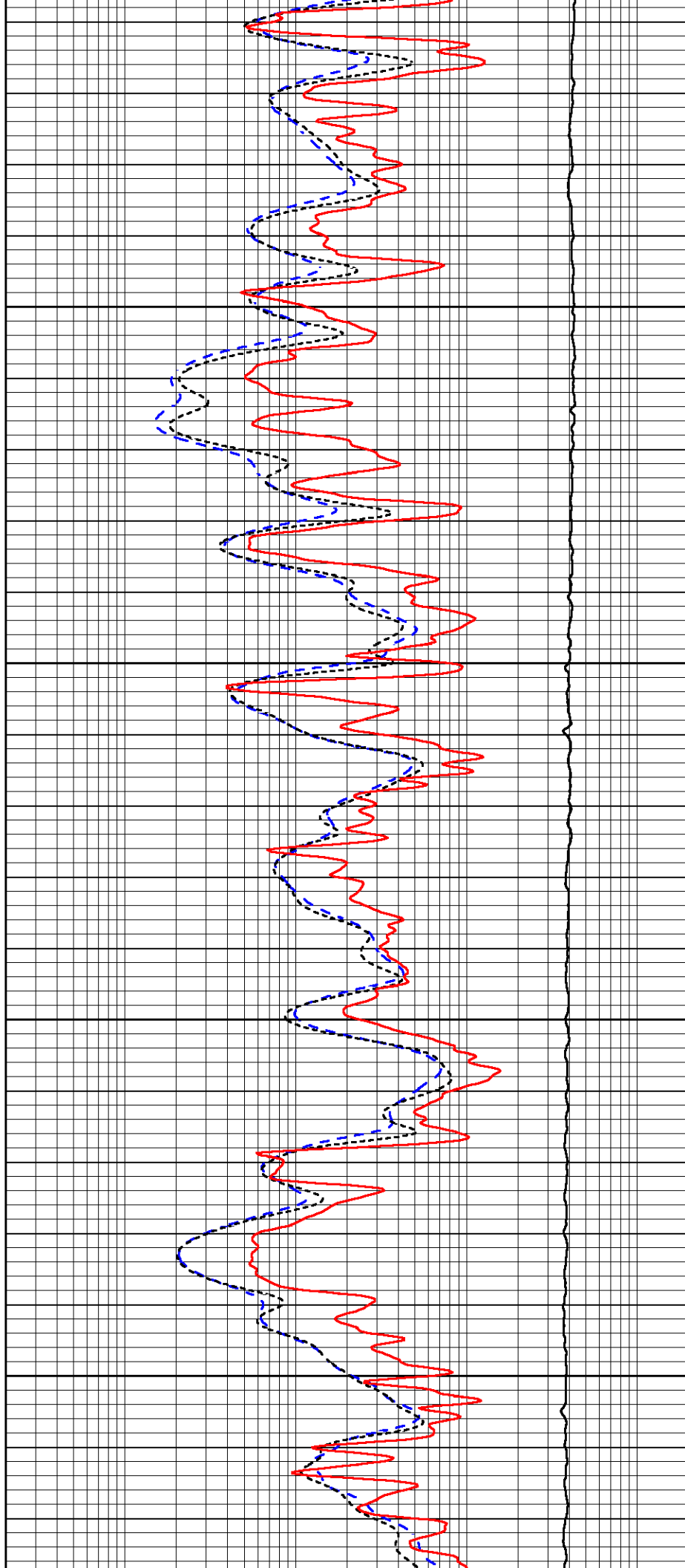


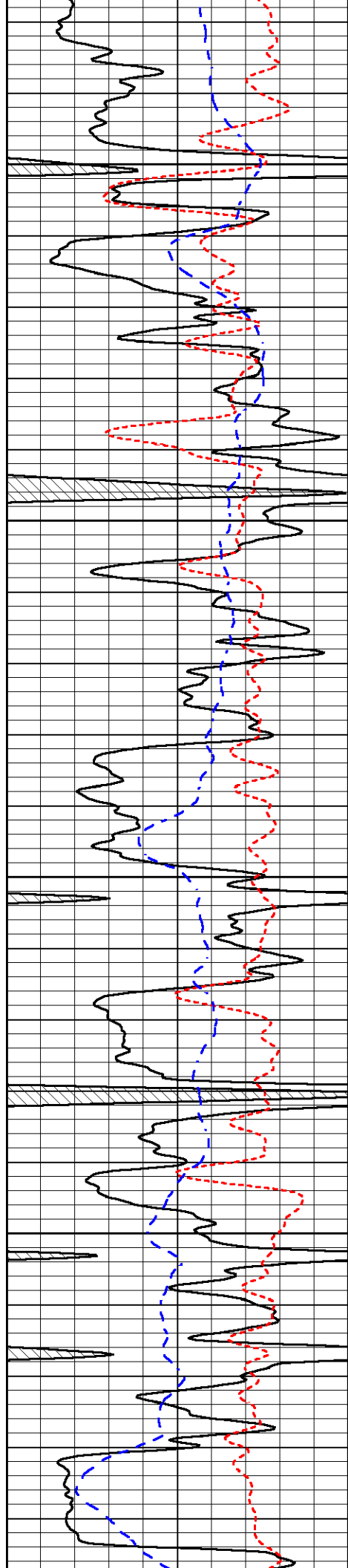
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4300

4350

4400



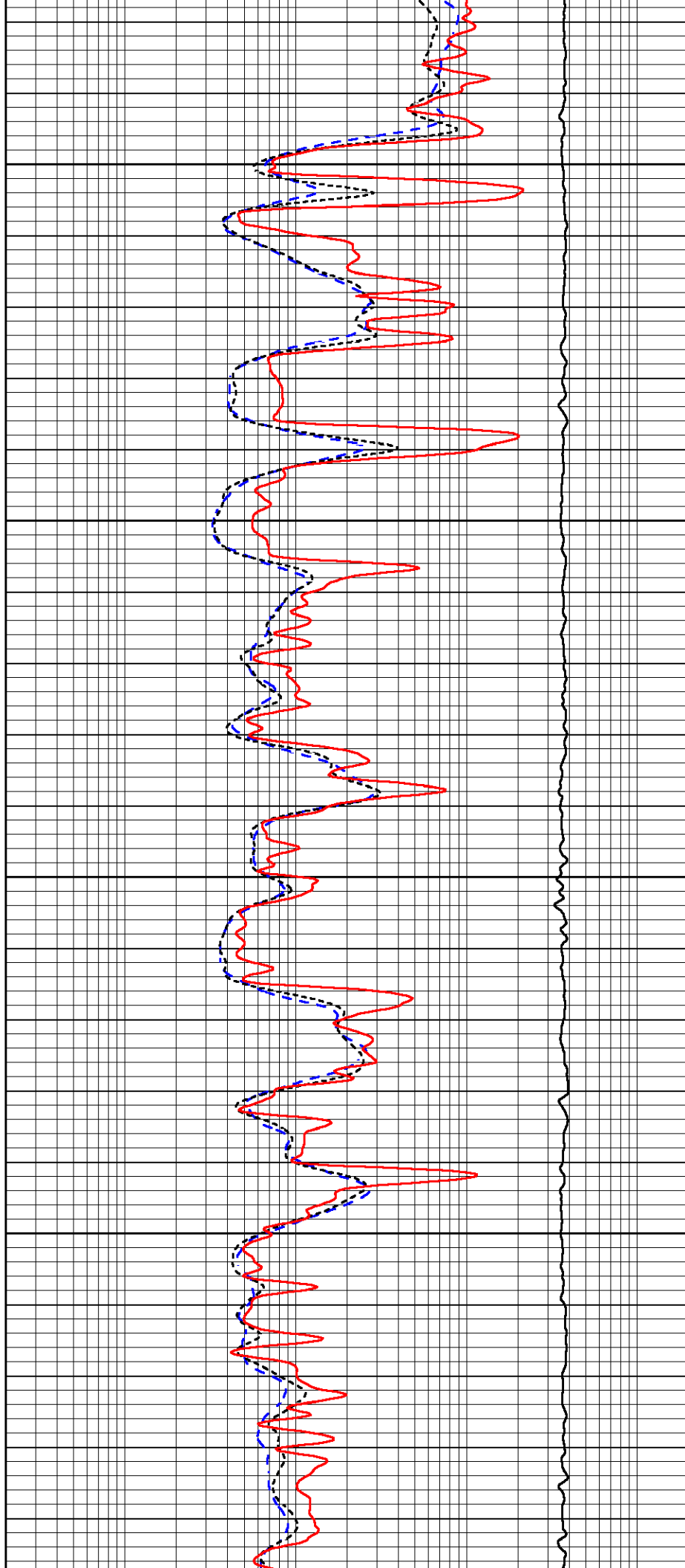


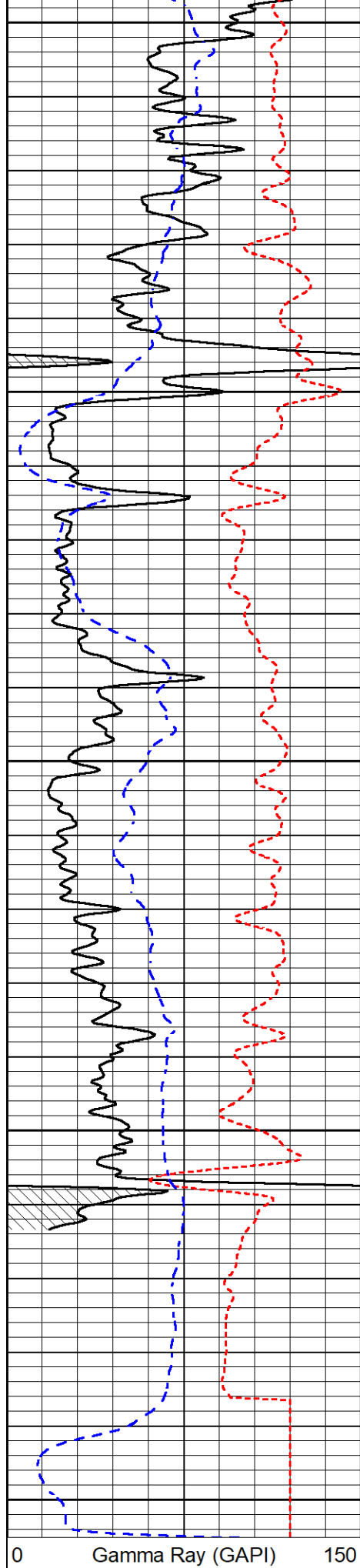
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4500

4550

4600





4650

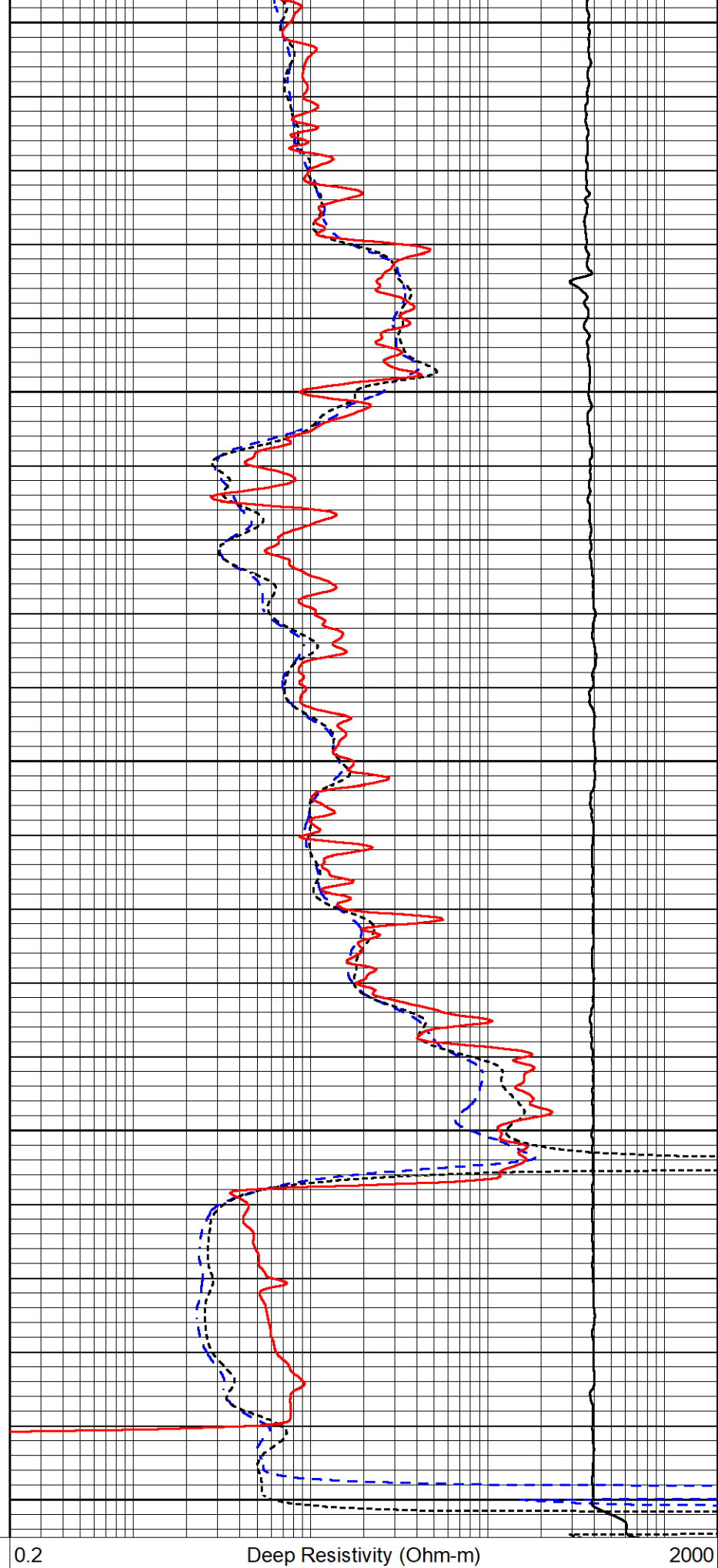
4700

4750

4800

4850

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 RL 3 (Ohm-m) 2000

-200	SP (mV)	0
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0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0



MIDWEST WIRELINE

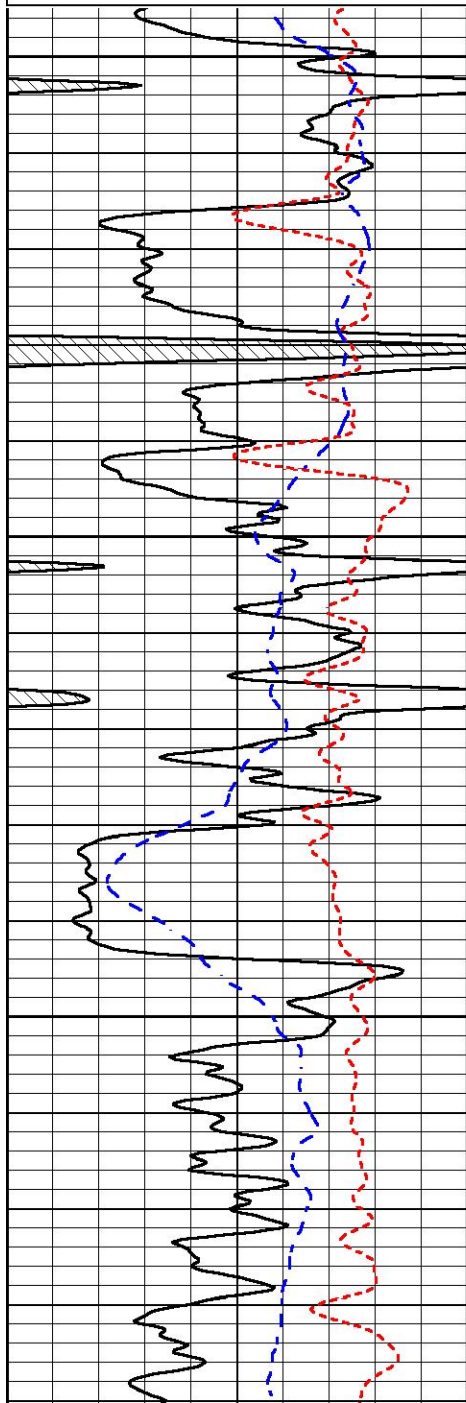
REPEAT SECTION

REPEAT PASS

Database File griffin_marla #4.db
 Dataset Pathname StkMI/pass2.1
 Presentation Format _dil
 Dataset Creation Tue Jul 19 05:55:52 2022
 Charted by Depth in Feet scaled 1:240

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

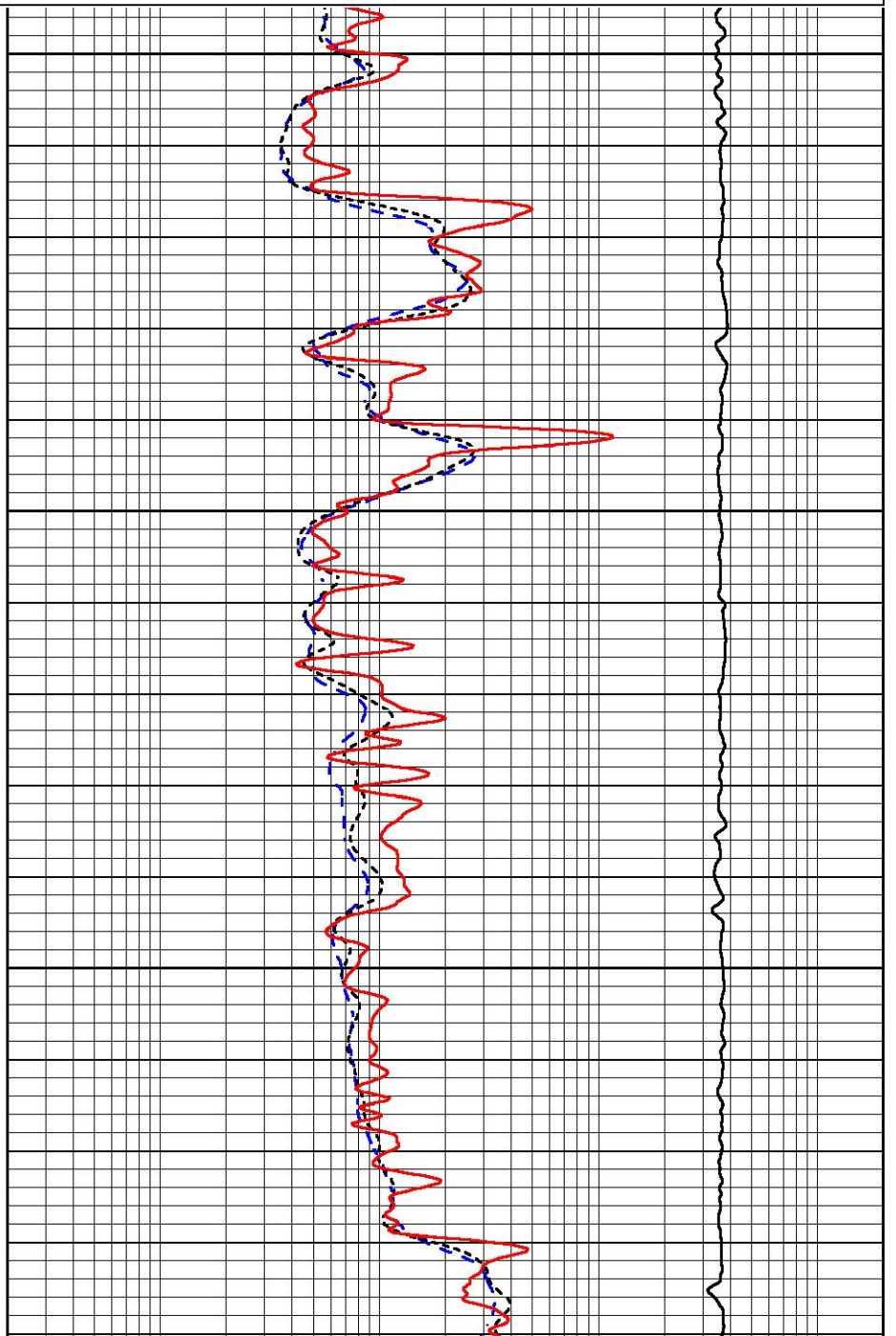
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

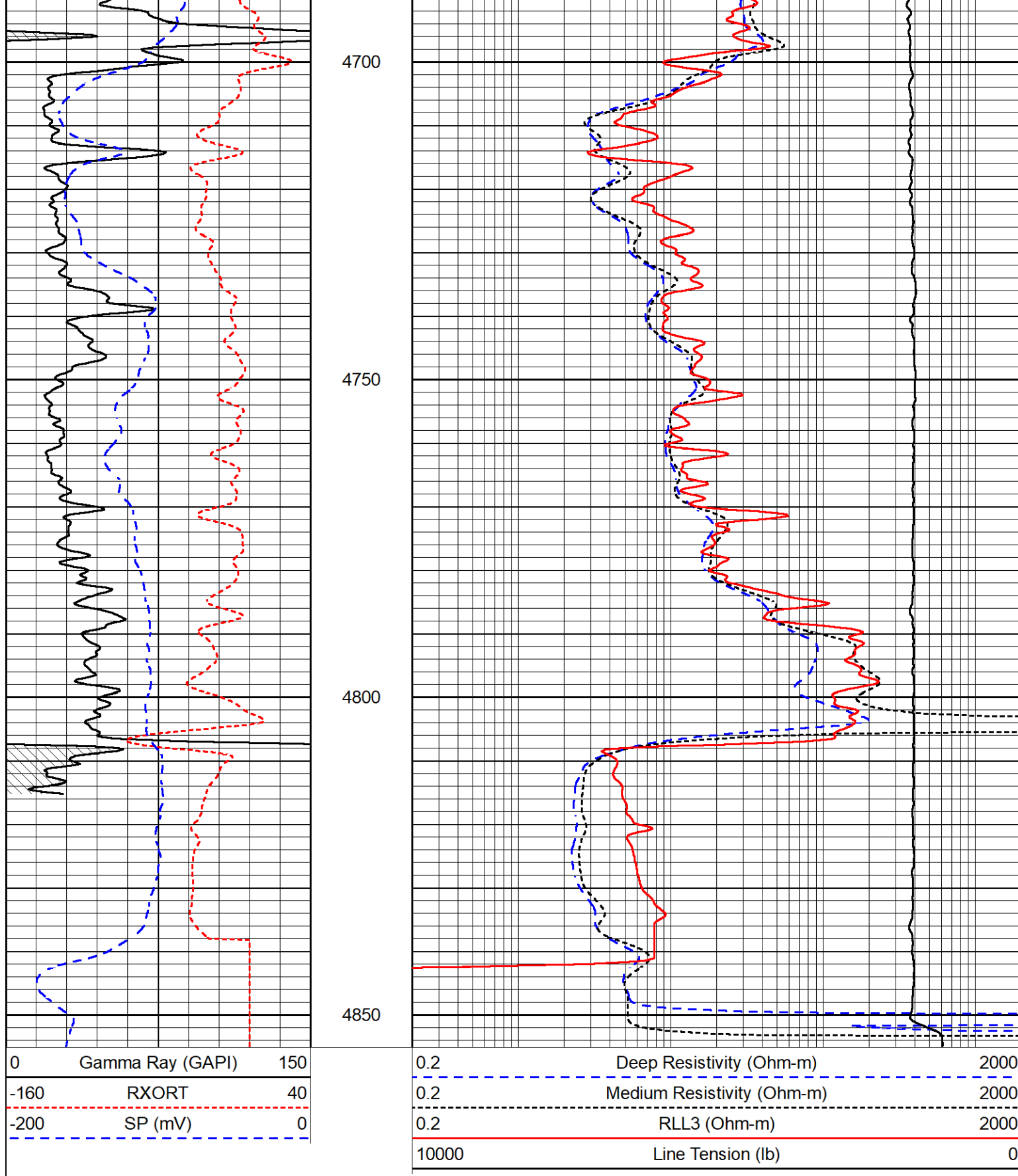


4550

4600

4650





Calibration Report

Database File griffin_marla #4.db
Dataset Pathname StkMI/pass3.1
Dataset Creation Tue Jul 19 06:45:20 2022

Dual Induction Calibration Report

Serial-Model: 507-M&W
Surface Cal Performed: Sat Jul 9 16:55:03 2022

		Readings		References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	82.972	482.449		0.000	255.800	mmho/m	0.640	-31.131
Medium	120.285	668.174		0.000	255.800	mmho/m	0.517	-63.500

Microlog Calibration Report

Serial-Model: Performed:	402-PSIML Sun Jul 17 13:11:21 2022
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		Readings		References			Results	
	Zero	Cal		Zero	Cal		m	b
Normal	0.0000	1.0000		0.0000	1.0000	Ohm-m	22000.0000	0.0000
Inverse	0.0000	1.0000		0.0000	1.0000	Ohm-m	24000.0000	0.2000
Caliper	1.0052	1.0858		5.0000	16.5000	in	65.0000	-59.7500

Compensated Density Calibration Report

Serial-Model: Source #: Master Calibration Performed:	302-02-M&W 20762B Wed Jun 22 01:19:51 2022
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Master Calibration							
	Density			Far Detector		Near Detector	
Magnesium	1.755	g/cc		4422.04		6163.44	cps
Aluminum	2.665	g/cc		835.14		3912.91	cps
Spine Angle = 74.75				Density/Spine Ratio = 0.527			
	Size			Reading			
Small Ring	8.00	in		0.53			
Large Ring	30.00	in		0.60			

Compensated Neutron Calibration Report

Serial Number: Tool Model:	207-MW M&W
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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

PRE-SURVEY VERIFICATION						
	Detector	Readings		Measured	Target	
1)	Short Space	cps				
	Long Space	cps		pu	pu	
2)	Short Space	cps				
	Long Space	cps		pu		

3)	Short Space Long Space	cps cps	pu
POST-SURVEY VERIFICATION			
	Detector	Readings	Measured Target
1)	Short Space Long Space	cps cps	pu pu
2)	Short Space Long Space	cps cps	pu pu
3)	Short Space Long Space	cps cps	pu pu
Gamma Ray Calibration Report			
Serial Number:		106	
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	Griffin Management LLC
	Well	Marla #4
	Field	
	County	Barber
	State	Kansas