



MIDWEST WIRELINE

# DUAL INDUCTION LOG

Company American Warrior, Inc.  
 Well Mann #1-28  
 Field Unnamed  
 County Thomas  
 State Kansas

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 Well Mann #1-28  
 Field Unnamed  
 County Thomas  
 State Kansas

Location: API #: 15-193-21127-00-00  
 SW NE NW SW  
 2020 FSL & 842 FWL  
 SEC 28 TWP 6S RGE 31W  
 Permanent Datum Ground Level Elevation 2955  
 Log Measured From Kelly Bushing  
 Drilling Measured From Kelly Bushing  
 Other Services  
 CNL/CDL  
 MEL/BHCS  
 Elevation  
 K.B. 2963  
 D.F.  
 G.L. 2955

Date	5/14/2024
Run Number	One
Depth Driller	4576
Depth Logger	4576
Bottom Logged Interval	4575
Top Log Interval	350
Casing Driller	8.625 @ 354
Casing Logger	349
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	2000
Density / Viscosity	9.3 55
pH / Fluid Loss	11.30 7.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.95 @ 72
Rmt @ Meas. Temp	0.71 @ 72
Rmc @ Meas. Temp	1.28 @ 72
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.56 @ 122
Operating Rig Time	4 Hours
Max Rec. Temp. F	122
Equipment Number	P-108
Location	HAYS
Recorded By	T. Martin
Witnessed By	Marc Downing

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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.

Rexford, KS, SE corner, 1 N to Y Rd,  
 1 W, 1 N, 2 W, N into

Log Measured From: Kelly Bushing                      8    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: Marc Downing  
 Secondary Witness:  
 Secondary Witness:  
 Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	32.75		GR-M&W (102)	3.00	3.50	50.00
CNLSC CNSSC	29.65 28.90		CNT-M&W (207)	5.00	3.50	100.00
LSD DCAL SSD	20.60 20.58 20.10		CDL-M&W (305-24)	8.50	4.00	250.00
RLL3F RLL3	15.50 15.50		DIL-M&W (507)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset: amwar\_mann #1-28.db: field/well/Stack/pass3.1  
 Total length: 34.75 ft  
 Total weight: 620.00 lb  
 O.D.: 4.00 in

# Log Variables

DatabaseC:\ProgramData\Warrior\Data\amwar\_mann #1-28.db  
 Dataset field/well/Stack/pass3.1/\_vars\_

## Top - Bottom

BOREID in 7.875	BOTTEMP degF 122	CASEOD in 5.5	CASETHCK in 0	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	NPORSEL Limestone	PERFS No
SNDERR mmho/m 0	SNDERRM mmho/m -3.5	SPSHIFT mV 635	SRFTEMP degF 80	SZCOR Off	TDEPTH ft 4576		

## Variable Description

BOREID : Borehole I.D.  
 BOTTEMP : Bottom Hole Temperature  
 CASEOD : Casing O.D.  
 CASETHCK : Casing Thickness  
 FLUIDDEN : Fluid Density  
 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

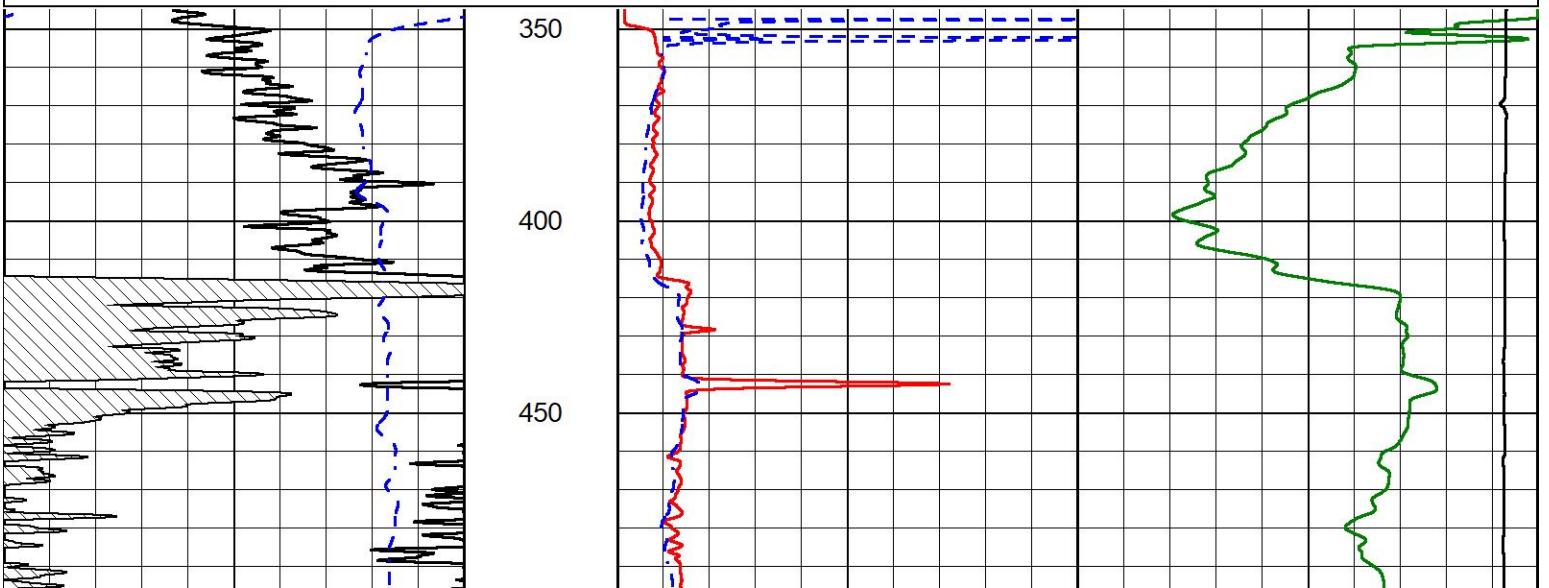


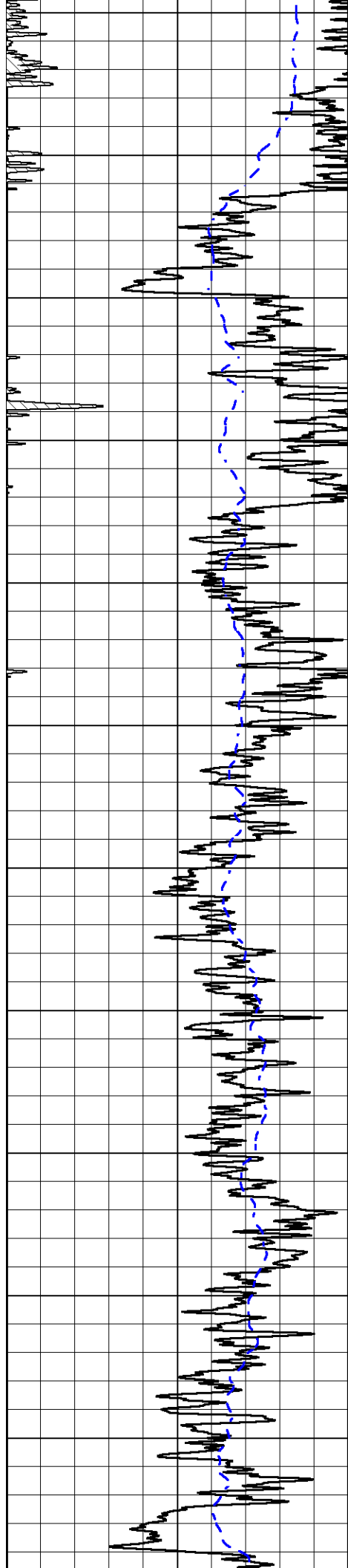
## 2" SCALE RESISTIVITY

### MAIN PASS

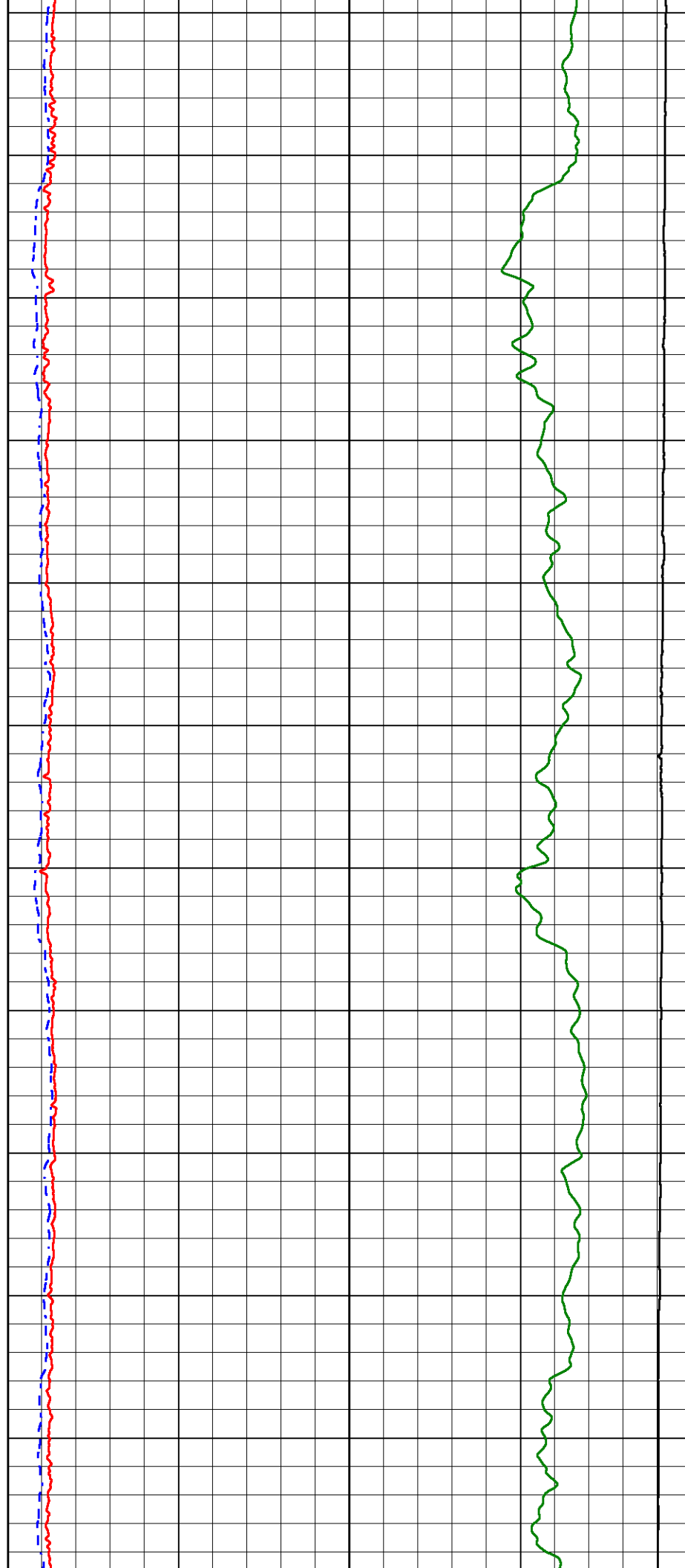
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 Presentation Format \_dil2in  
 Dataset Creation Tue May 14 16:58:02 2024  
 Charted by Depth in Feet scaled 1:600

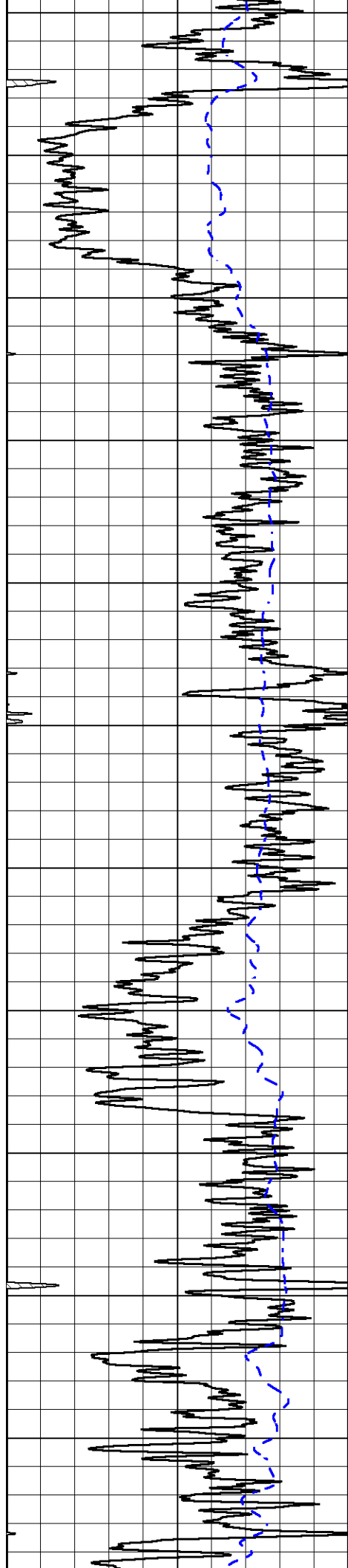
0	Gamma Ray (GAPI)	150	1000	Conductivity (mmho/m)	0
-200	SP (mV)	0	15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
				Shallow Resistivity	
			50	(Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200



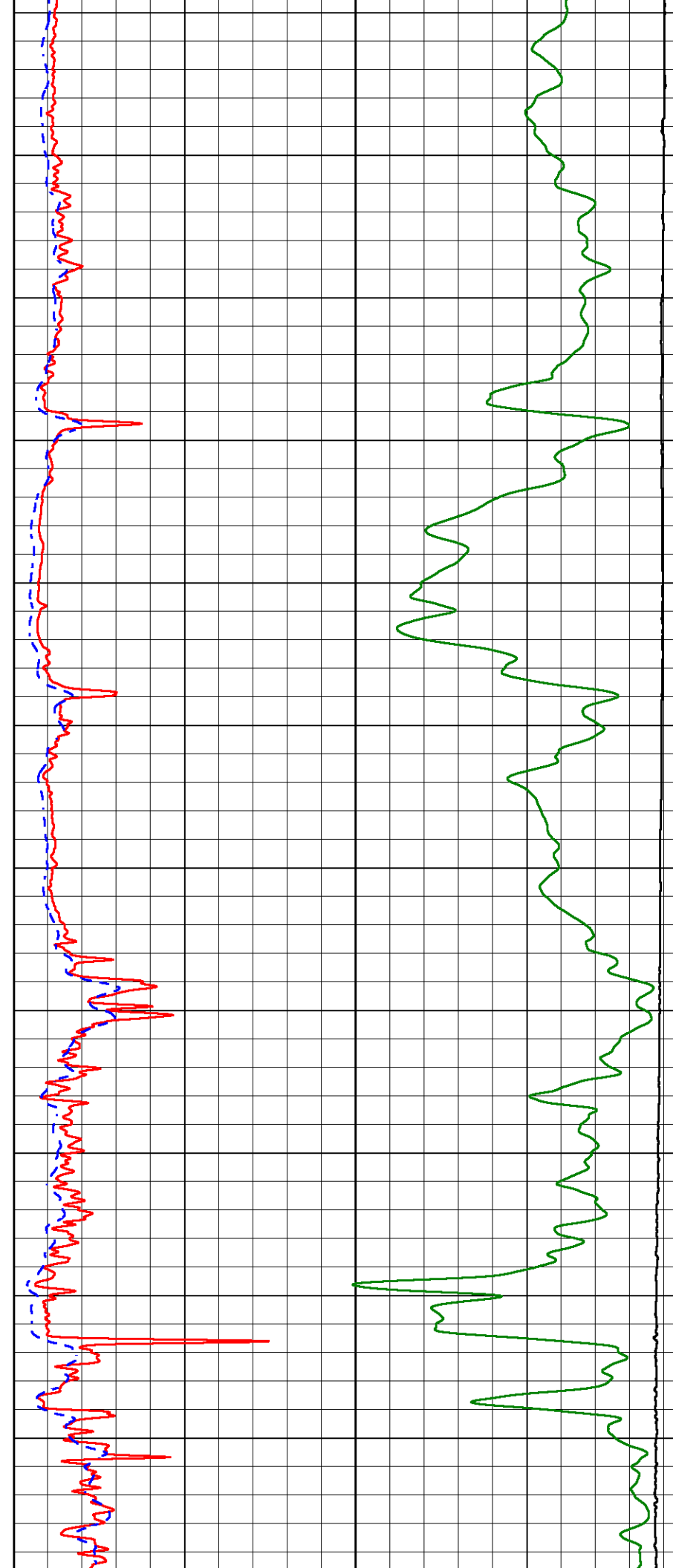


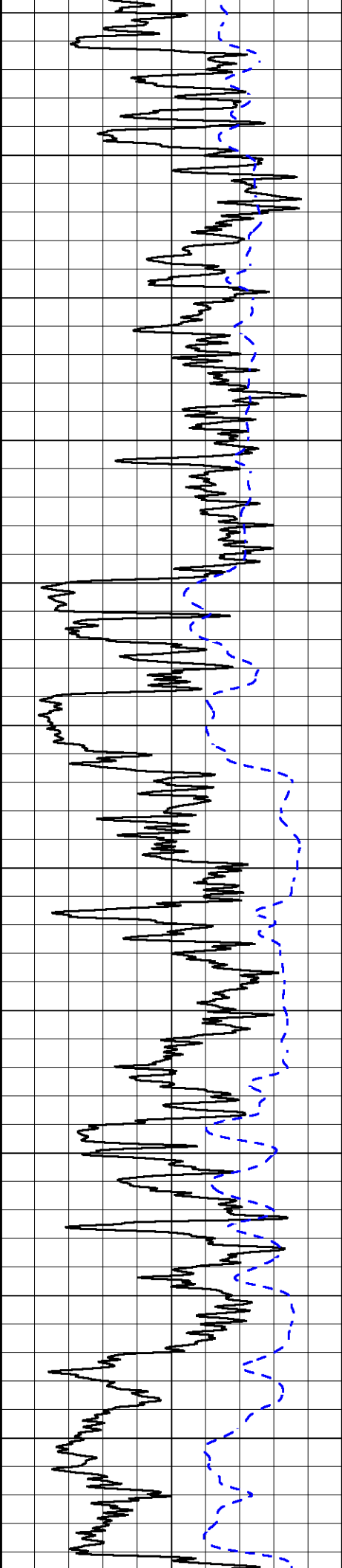
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900  
950  
1000



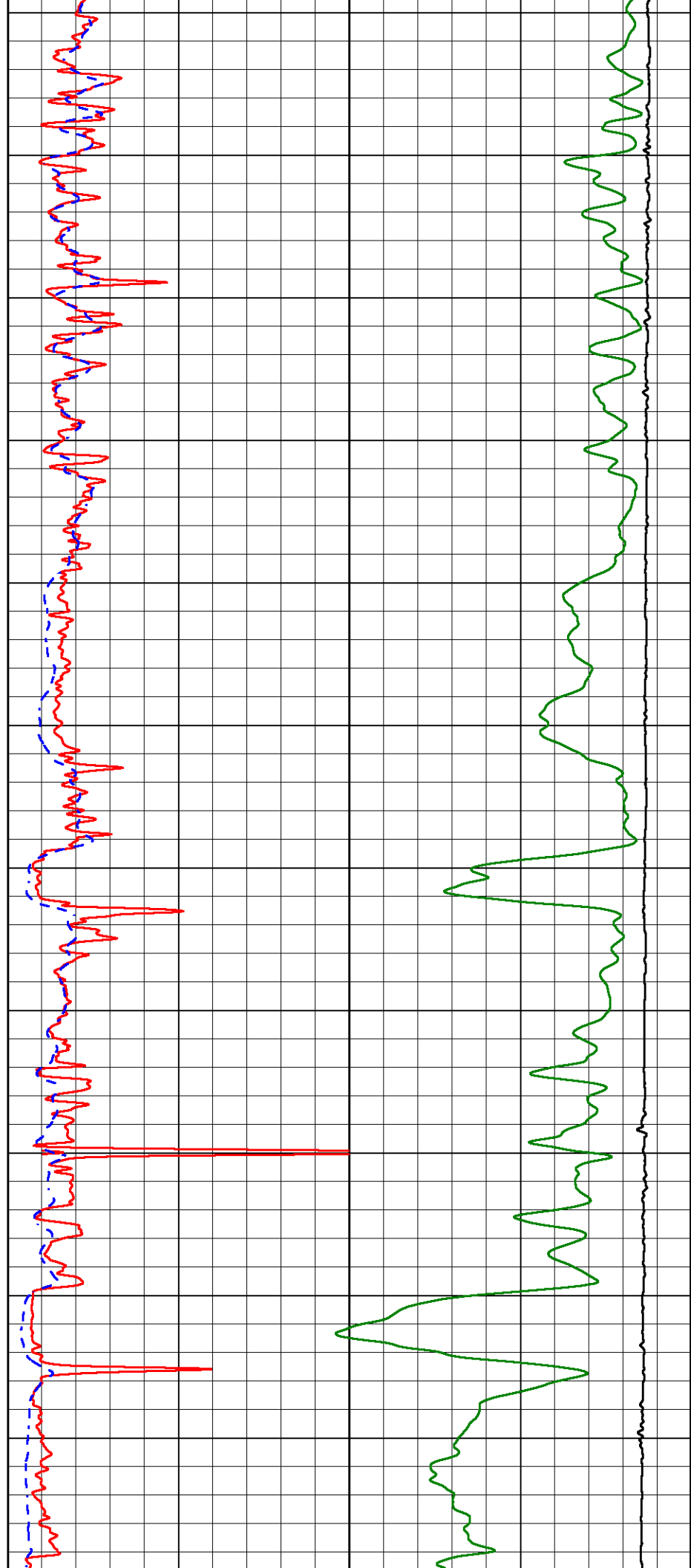


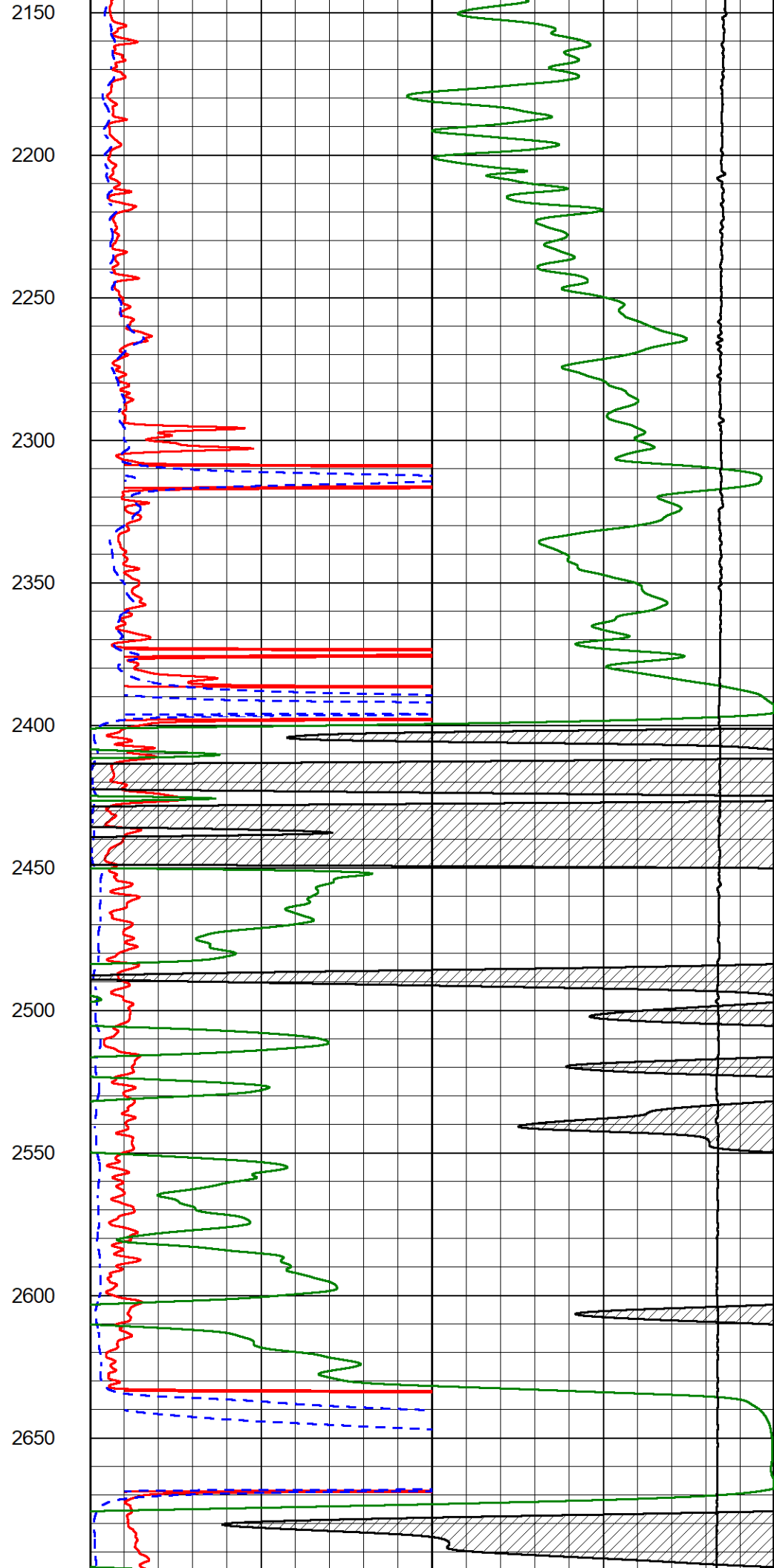
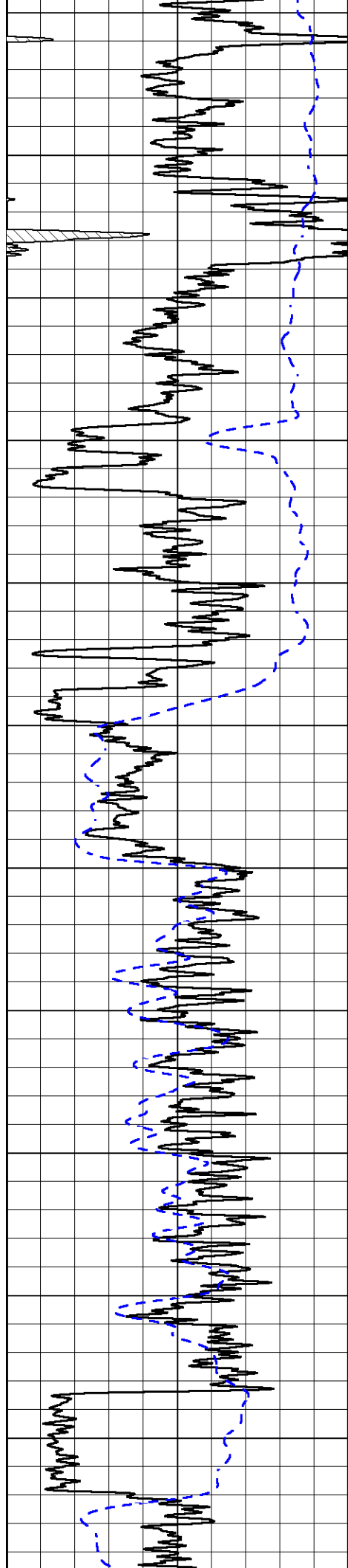
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1300  
1350  
1400  
1450  
1500  
1550

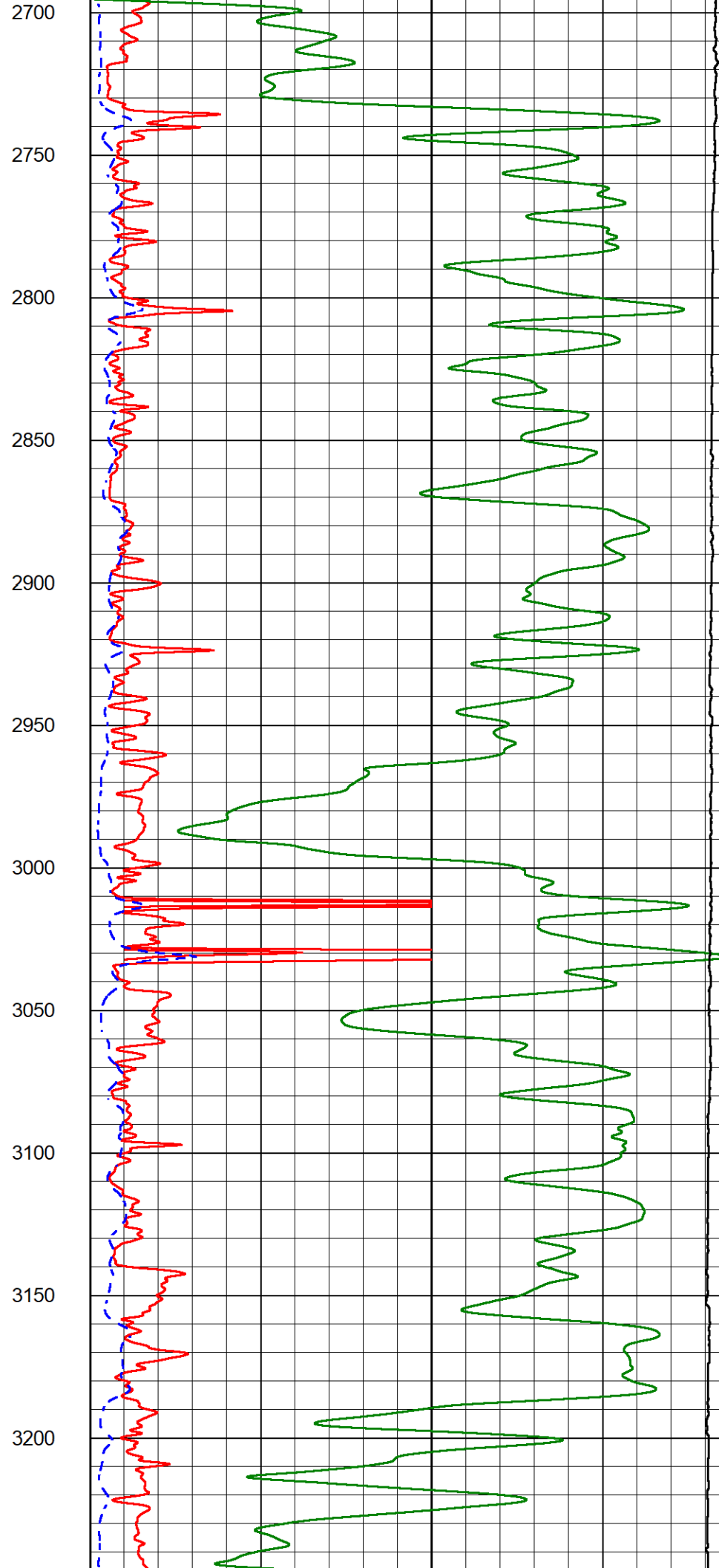
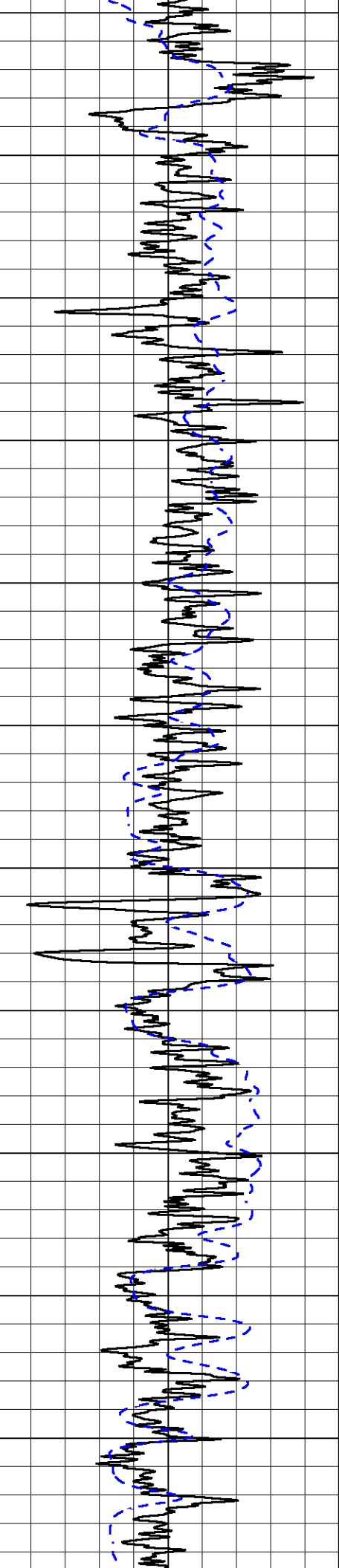


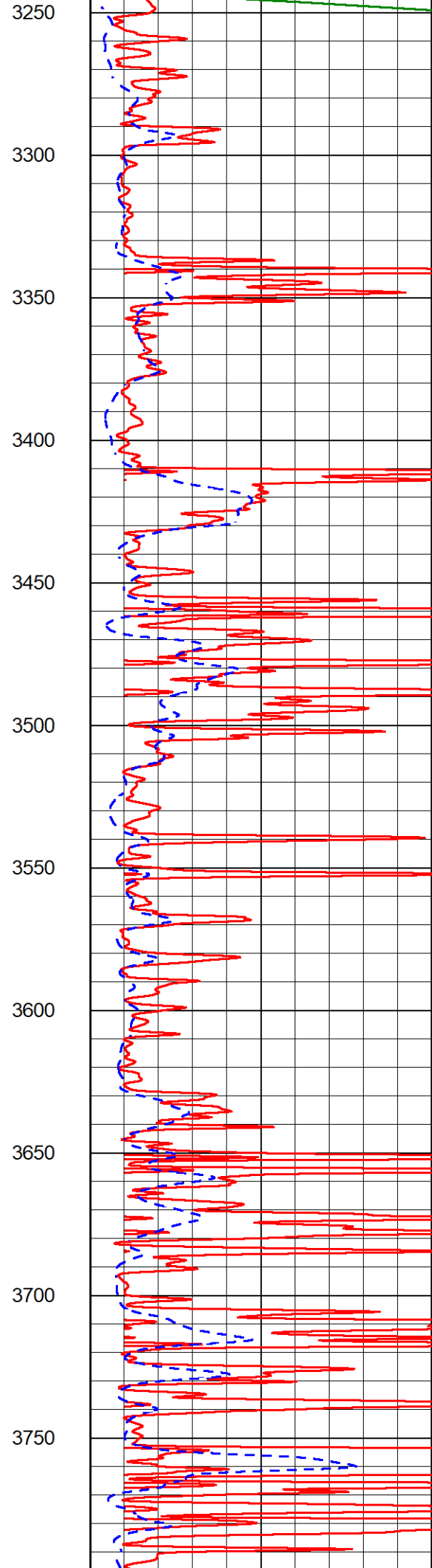
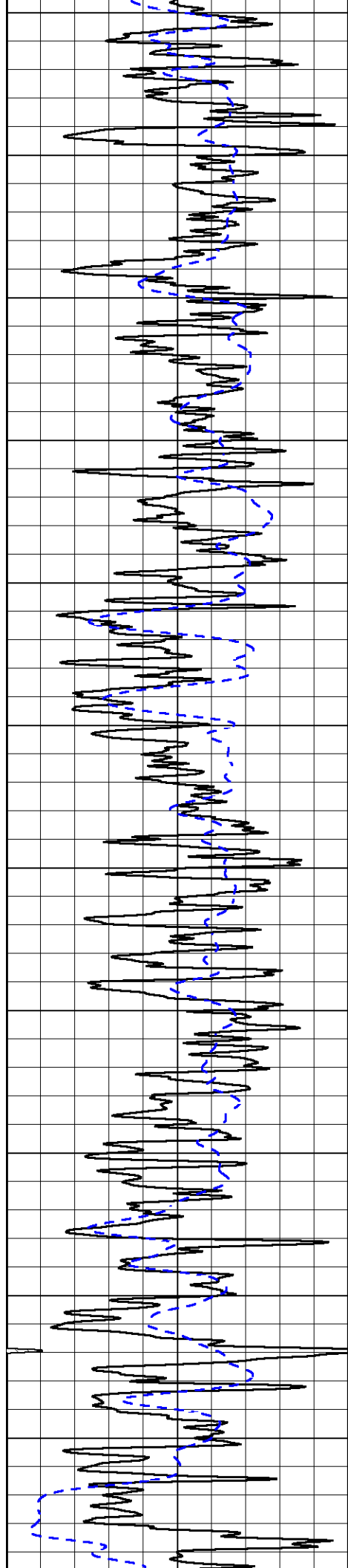


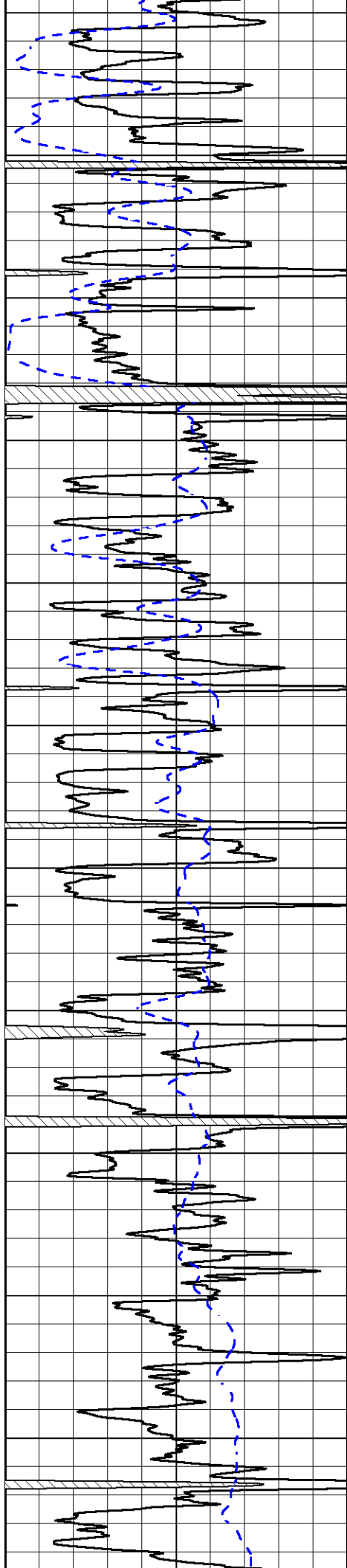
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1950  
2000  
2050  
2100



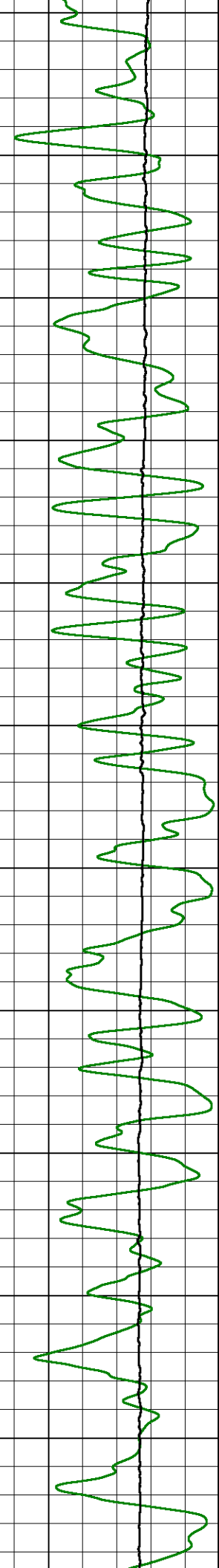
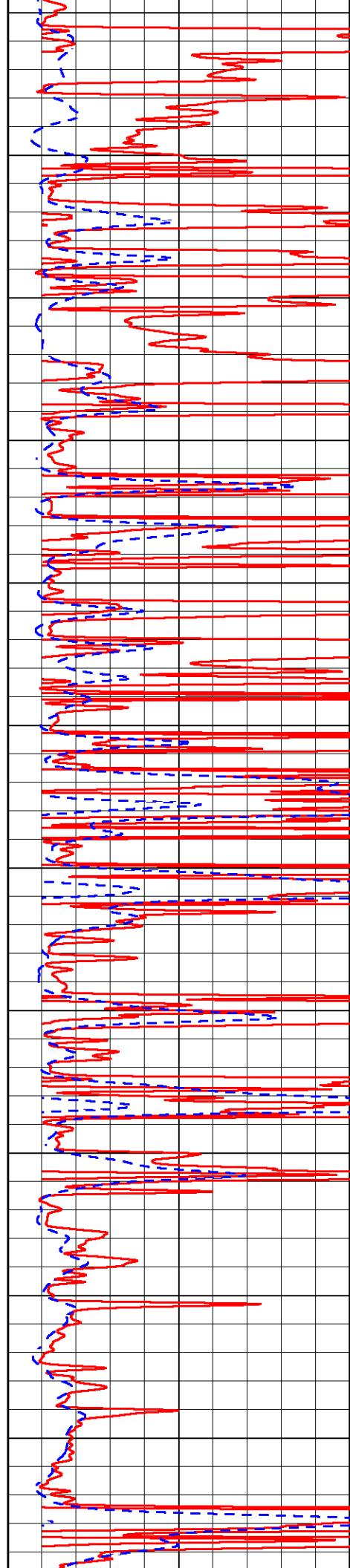


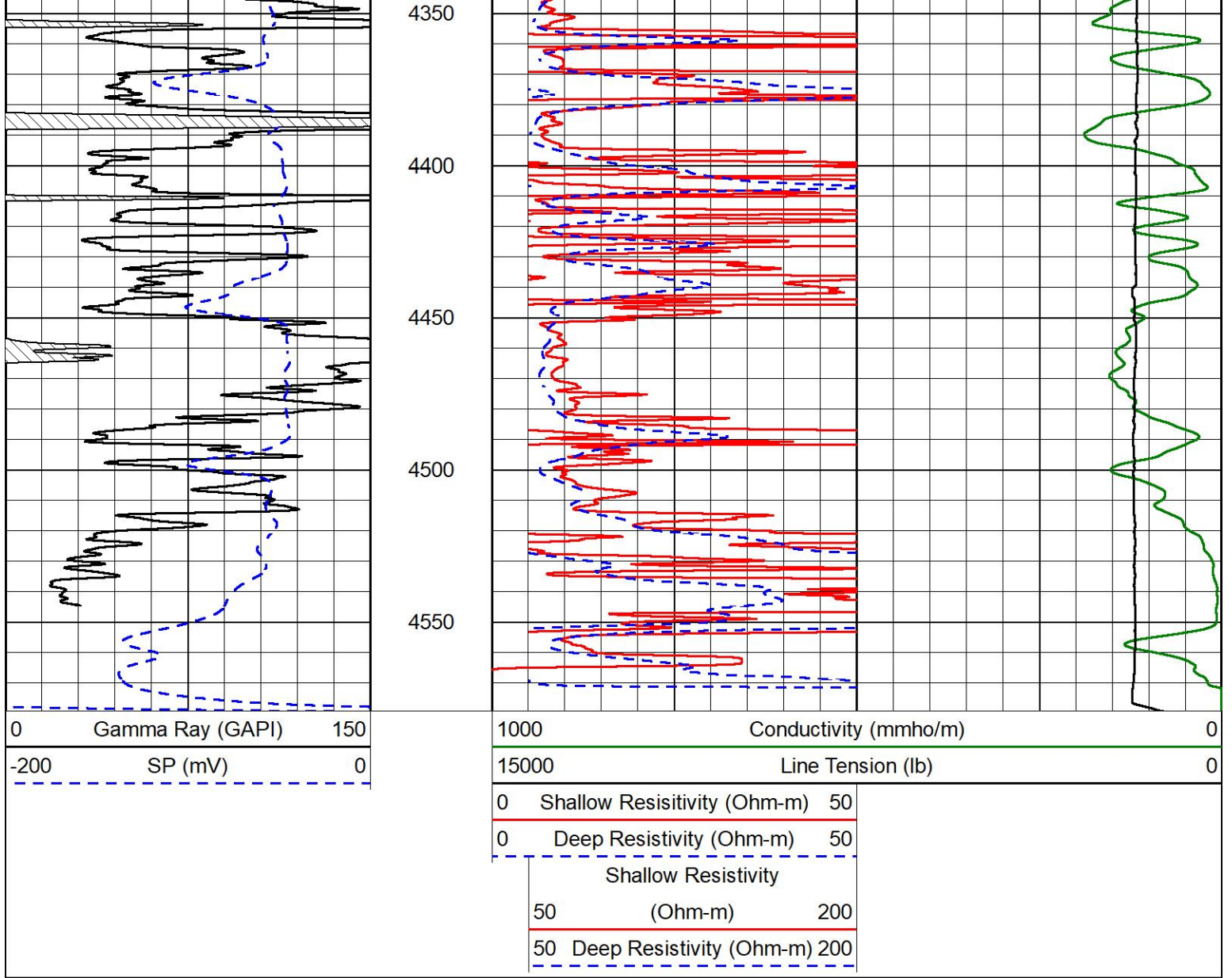






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3850  
3900  
3950  
4000  
4050  
4100  
4150  
4200  
4250  
4300

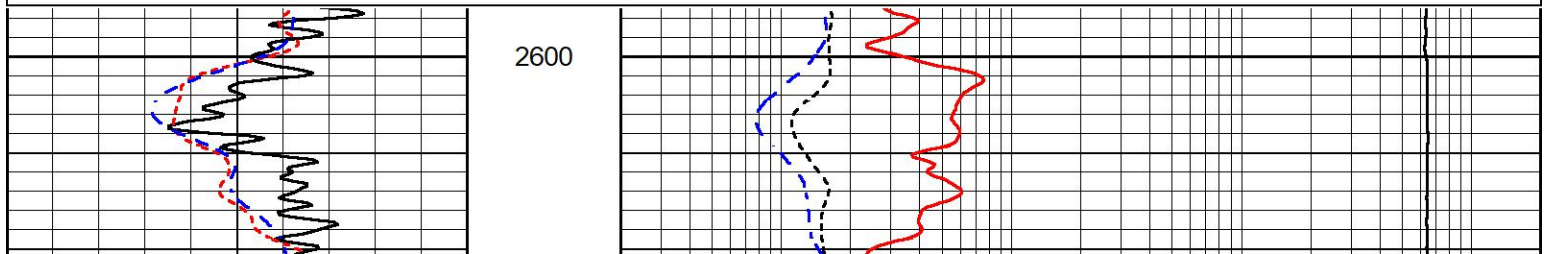
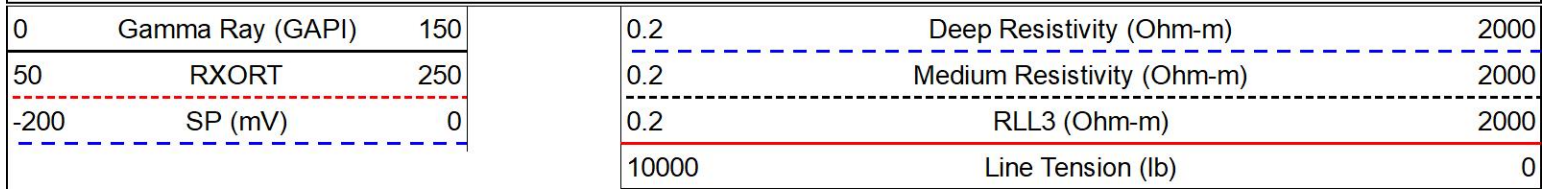


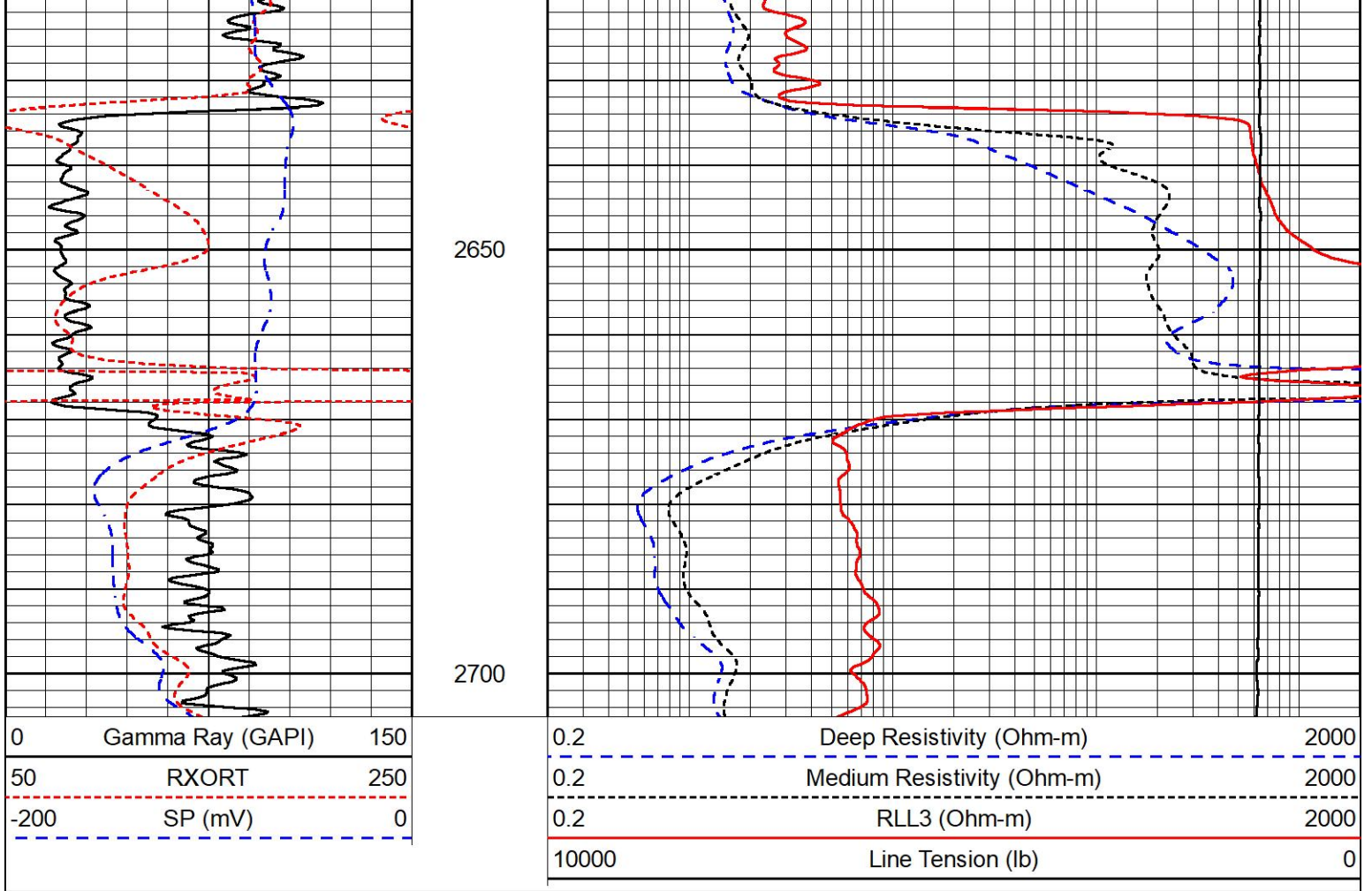


# ANHYDRITE SECTION

## MAIN PASS

Database File amwar\_mann #1-28.db  
 Dataset Pathname Stack/pass3.4  
 Presentation Format \_dil  
 Dataset Creation Tue May 14 16:43:41 2024  
 Charted by Depth in Feet scaled 1:240

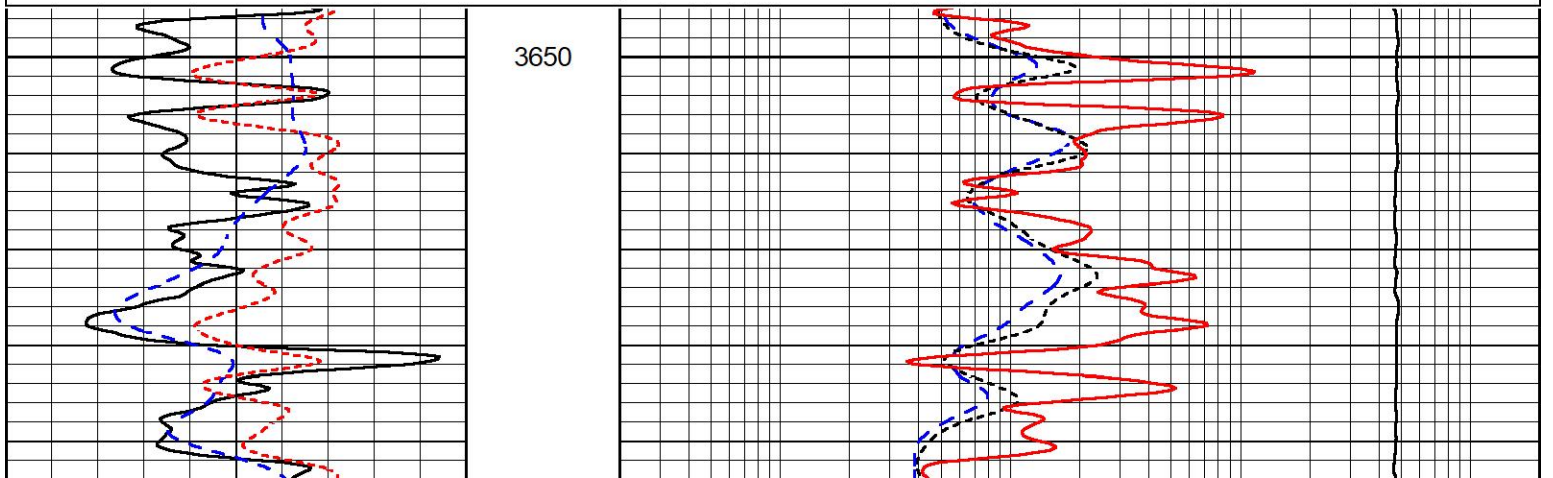
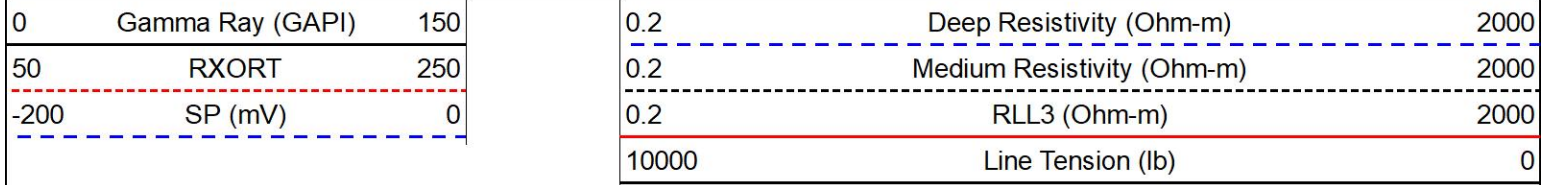


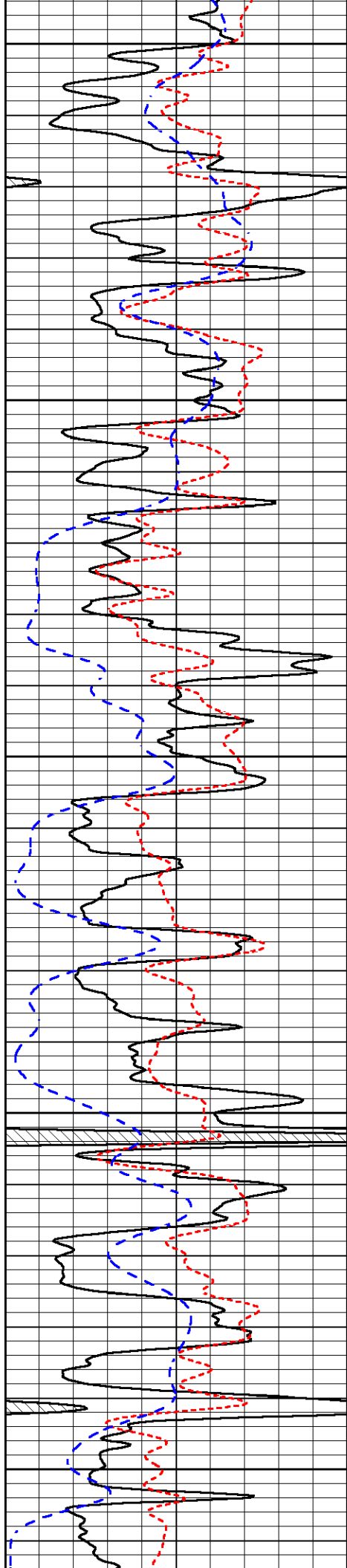


## DETAIL SECTION

### MAIN PASS

Database File amwar\_mann #1-28.db  
 Dataset Pathname Stack/pass3.1  
 Presentation Format \_dil  
 Dataset Creation Tue May 14 16:58:16 2024  
 Charted by Depth in Feet scaled 1:240





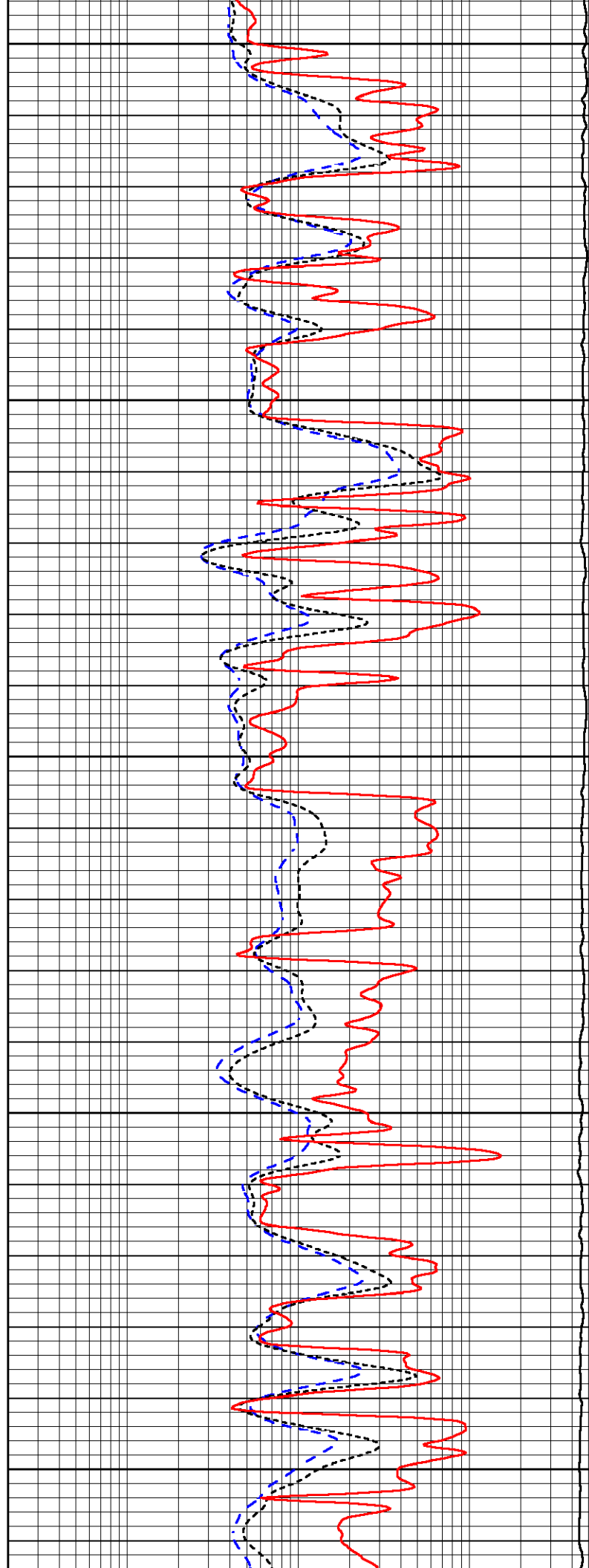
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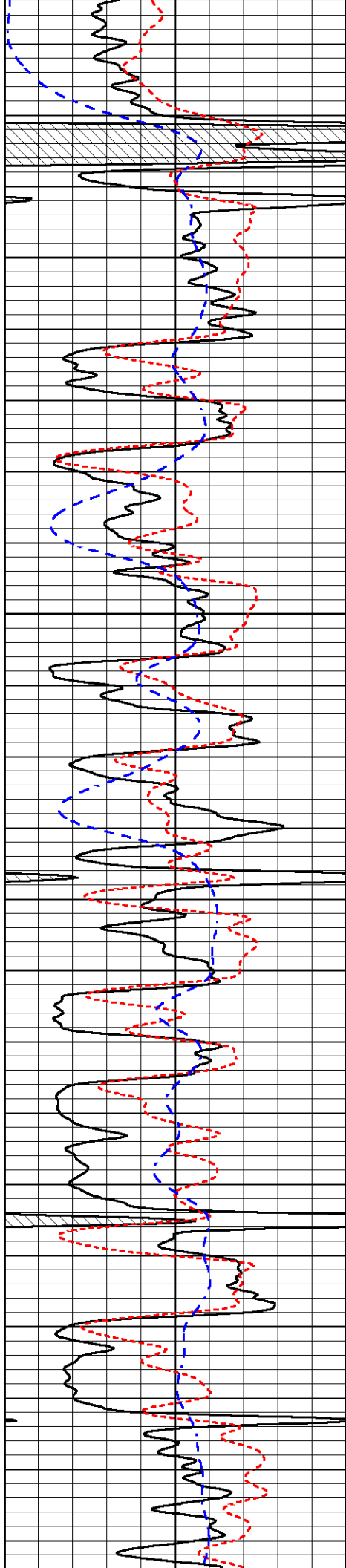
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3850

3900



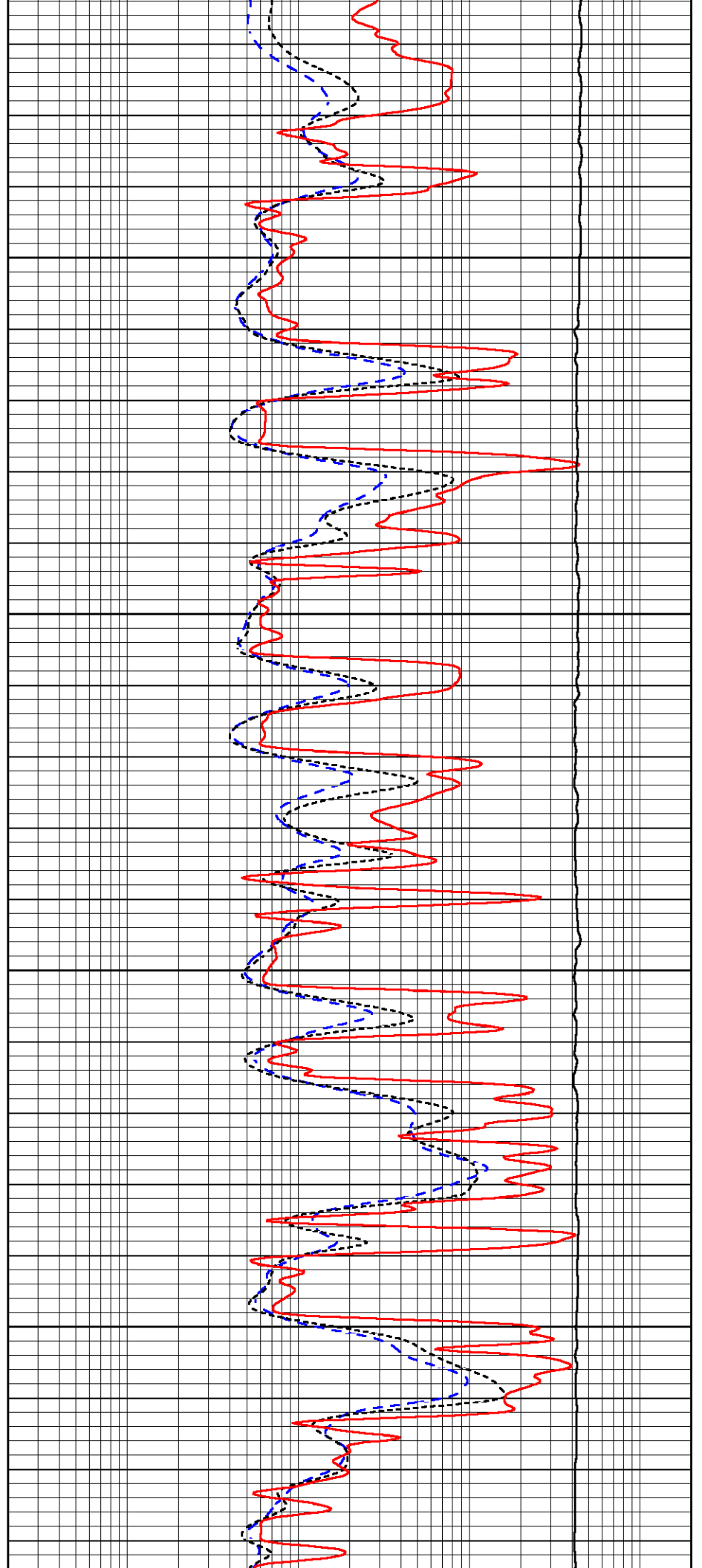


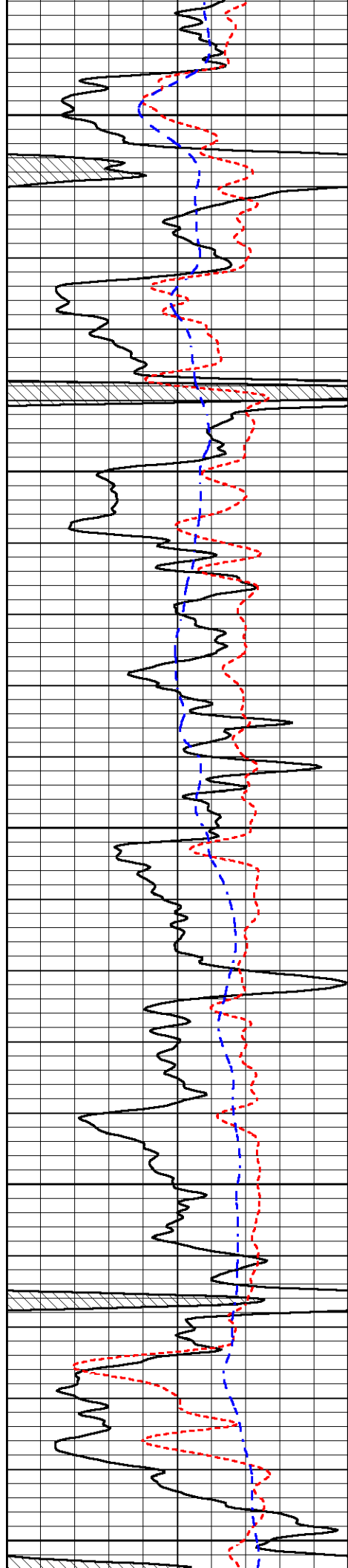
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4000

4050

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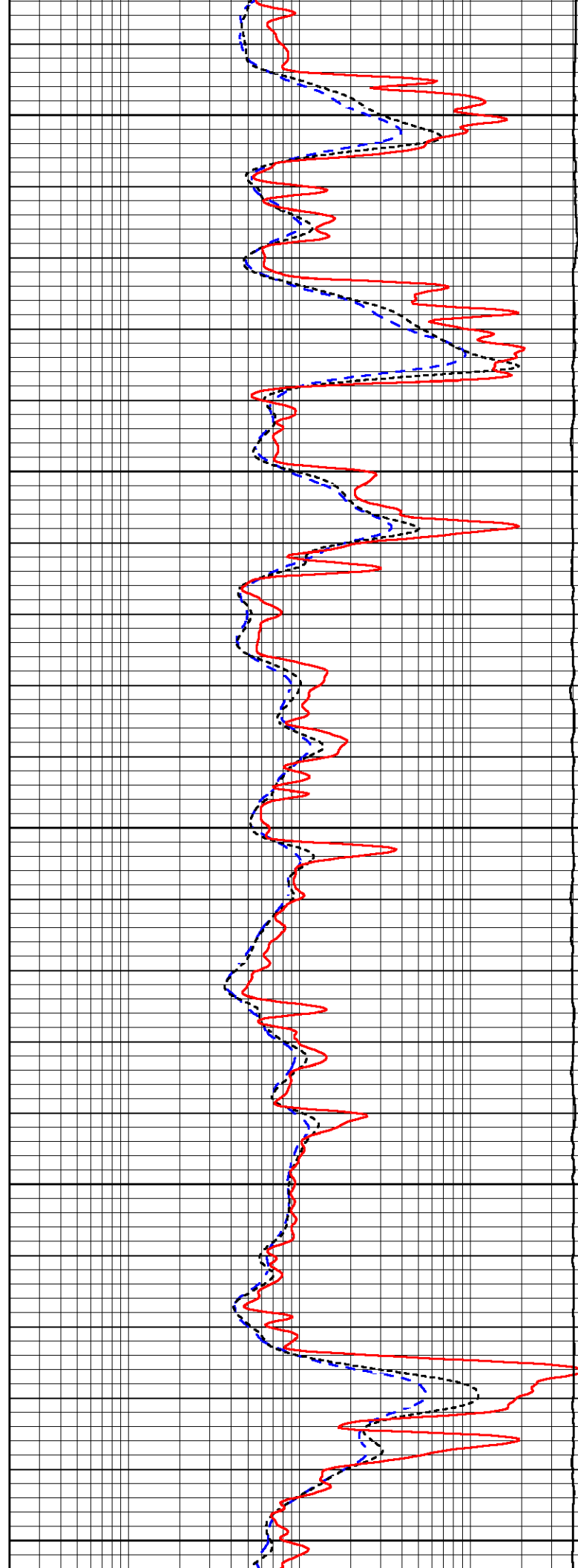
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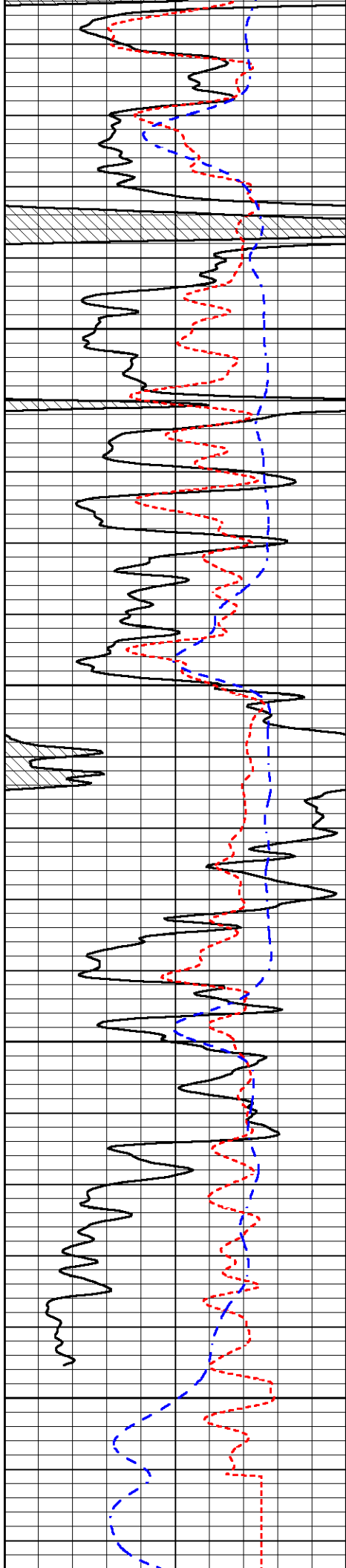
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4250

4300

4350



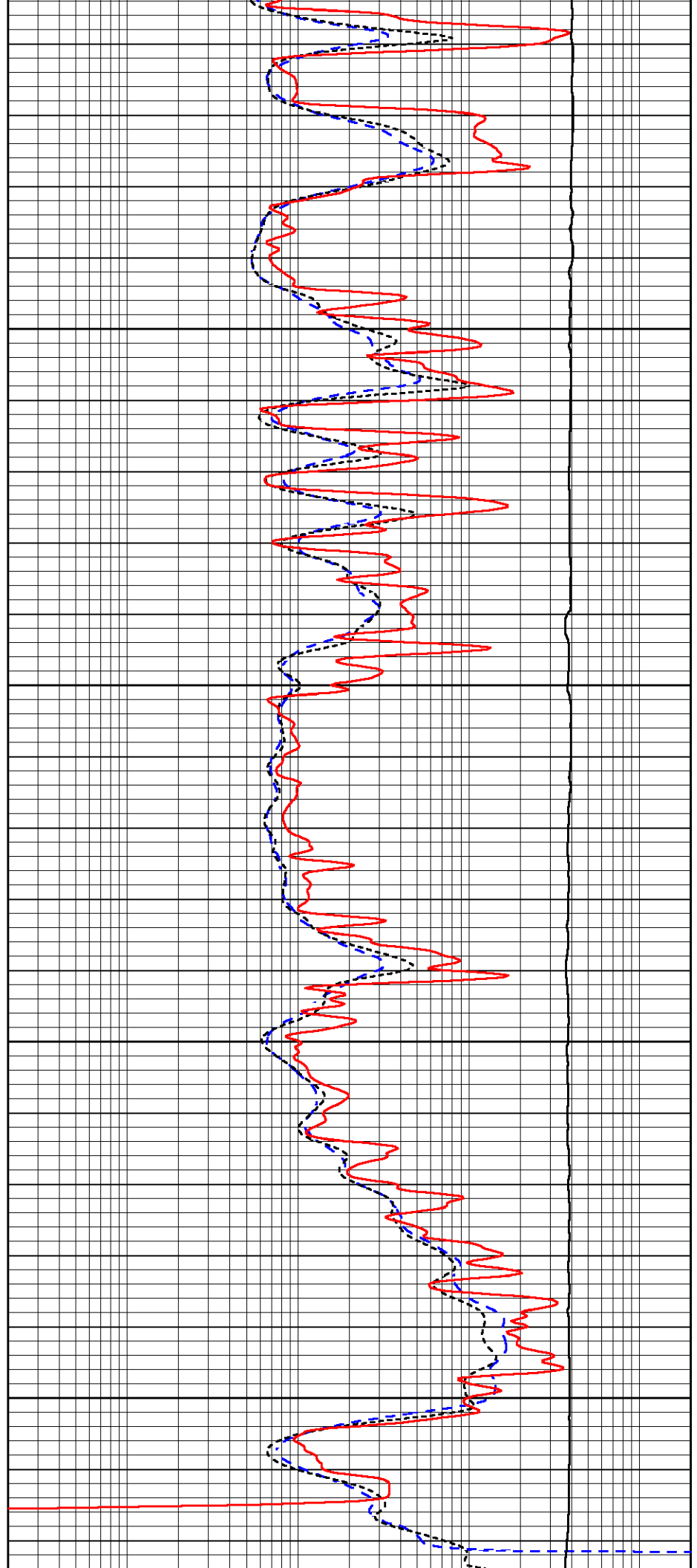


4400

4450

4500

4550



0	Gamma Ray (GAPI)	150
50	RXORT	250
-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



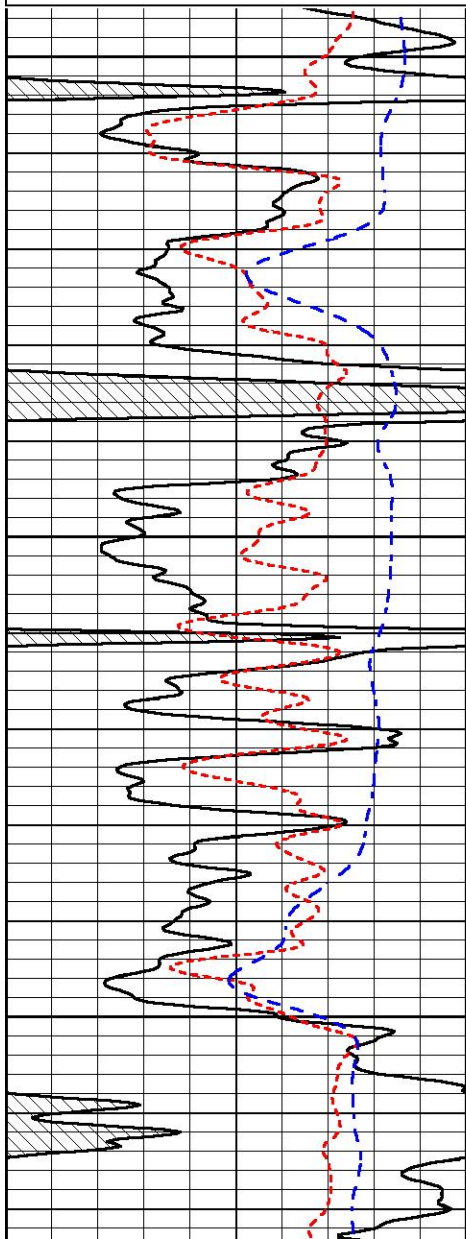
# REPEAT SECTION

## REPEAT PASS

Database File amwar\_mann #1-28.db  
 Dataset Pathname Stack/pass2.1  
 Presentation Format \_dil  
 Dataset Creation Tue May 14 16:39:23 2024  
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
50	RXORT	250
-200	SP (mV)	0

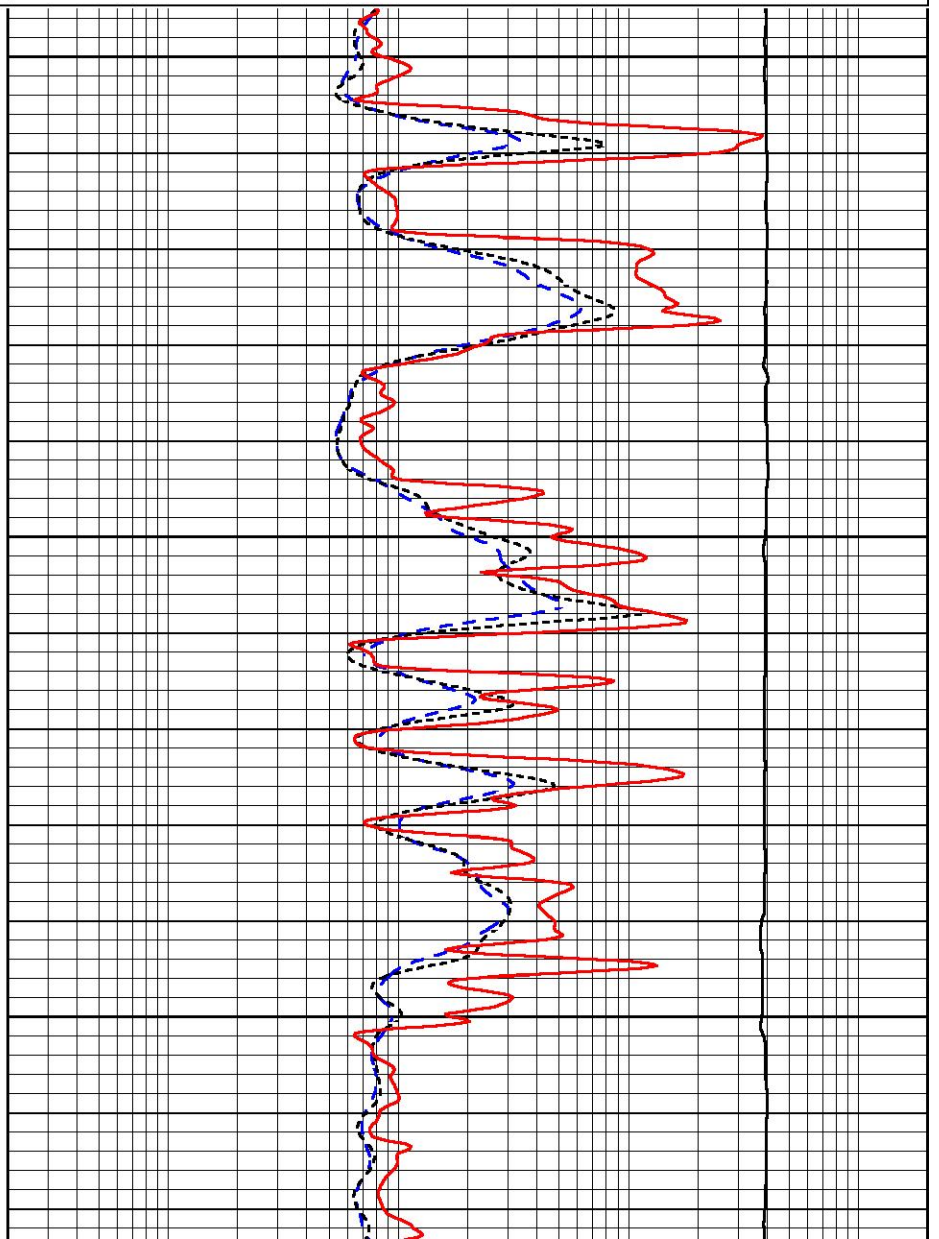
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

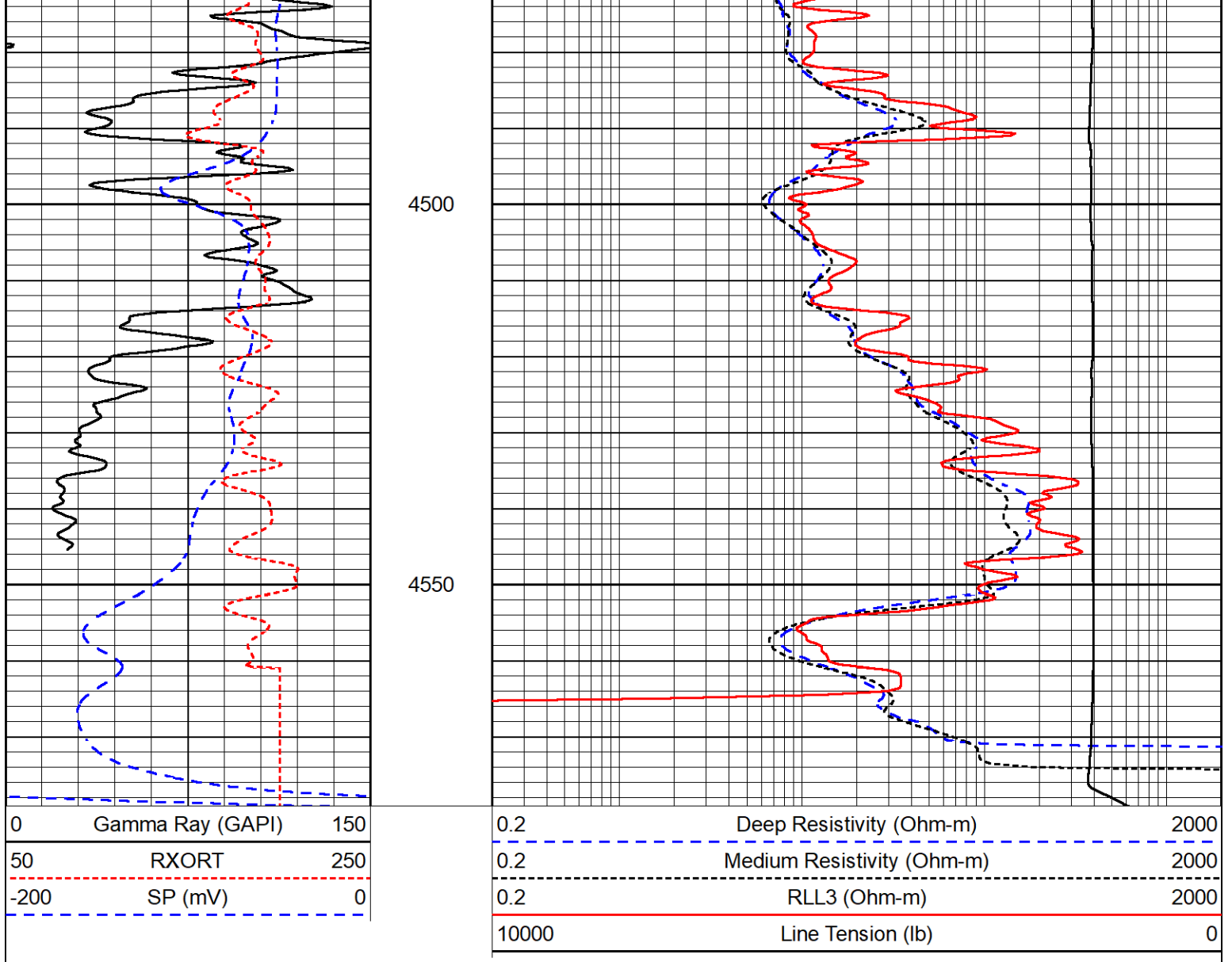


4350

4400

4450





### Calibration Report

Database File amwar\_mann #1-28.db  
 Dataset Pathname Stack/pass3.1  
 Dataset Creation Tue May 14 16:58:16 2024

### Dual Induction Calibration Report

Serial-Model: 507-M&W  
 Surface Cal Performed: Fri Jul 14 14:17:56 2023

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	68.570	638.100	0.000	255.800	mmho/m	0.500	-37.000
Medium	184.288	716.191	0.000	255.800	mmho/m	0.450	-79.000

### Compensated Density Calibration Report

Serial-Model: 305-24-M&W  
 Source #: 20762B  
 Master Calibration Performed: Tue Feb 6 18:43:03 2024

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.680	g/cc	5028.88	5761.57	cps
Aluminum	2.560	g/cc	1122.37	3952.02	cps
Spine Angle = 75.89			Density/Spine Ratio = 0.569		
	Size		Reading		
Small Ring	4.00	in	1.74		
Large Ring	14.00	in	1.38		

Compensated Neutron Calibration Report

Serial Number: 207  
 Tool Model: M&W

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

Gamma Ray Calibration Report

Serial Number: 102  
 Tool Model: M&W  
 Performed: Mon Sep 25 22:02:33 2023

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.5250 GAPI/cps



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