



DUAL INDUCTION LOG

MIDWEST WIRELINE

Company Pioneer Oil Company, Inc.
Well Schamberger Sheep Head Unit #1-7
Field
County Sheridan
State Kansas

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Field
County Sheridan State Kansas

Location: API #: 15-179-21478-00-00
NE SE SE NE
2207 FNL & 109 FEL
SEC 7 TWP 9S RGE 28W
Permanent Datum Ground Level Elevation 2800
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing
Other Services
CNL/CDL
MEL/BHCS
Elevation
K.B. 2808
D.F.
G.L. 2800

Date	4/9/2022		
Run Number	One		
Depth Driller	4245		
Depth Logger	4249		
Bottom Logged Interval	4248		
Top Log Interval	250		
Casing Driller	8.625 @ 271		
Casing Logger	266		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	3400		
Density / Viscosity	9.5 54		
pH / Fluid Loss	10.5 8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.85 @ 68		
Rmt @ Meas. Temp	0.64 @ 68		
Rmc @ Meas. Temp	1.15 @ 68		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.49 @ 118		
Operating Rig Time	4.5 Hours		
Max Rec. Temp. F	118		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Jim Musgrove		

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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.

Hoxie, KS, 3.5 S to Rd 45 S,
2 W to Rd 20 W, 1 S, W 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: Jim Musgrove
Secondary Witness:
Secondary Witness:
Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\pioneer_schamberger sheep head unit #1-7.db
Dataset field/well/Stack/pass3.1/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in	degF	in	in	g/cc	2	g/cc
	7.875	118	5.5	0	1		2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	0	mmho/m	mmho/m	mV	degF	Off	ft
		0	0	-240	50		4249

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

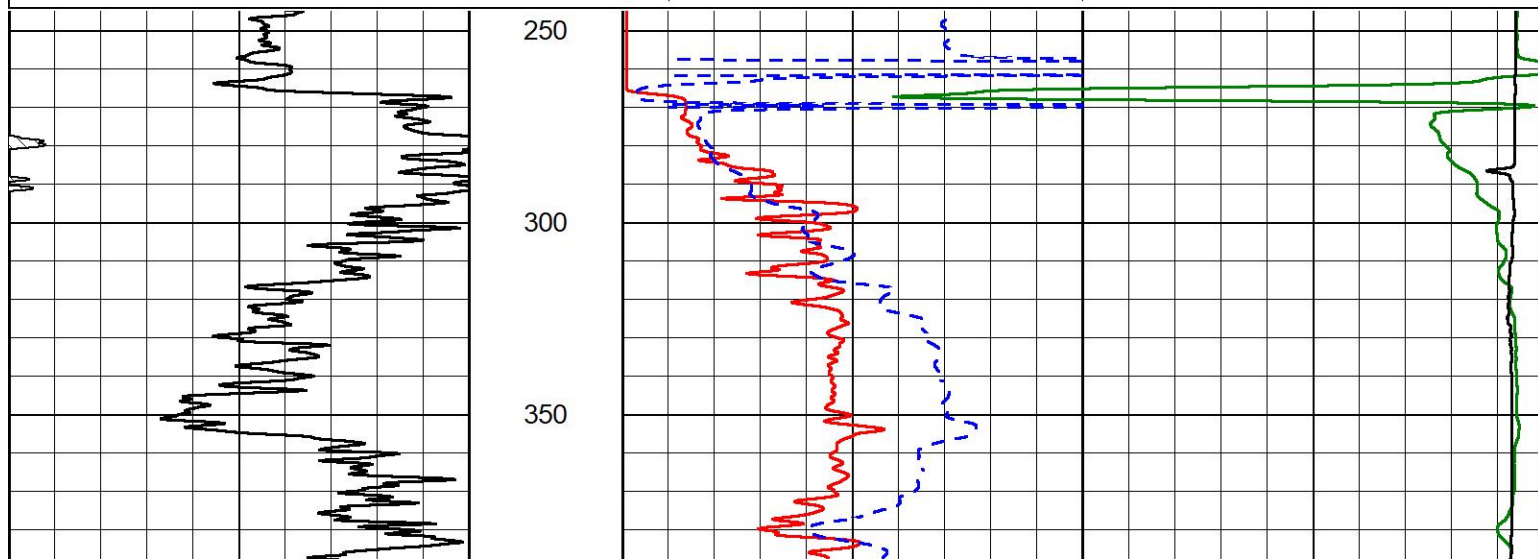


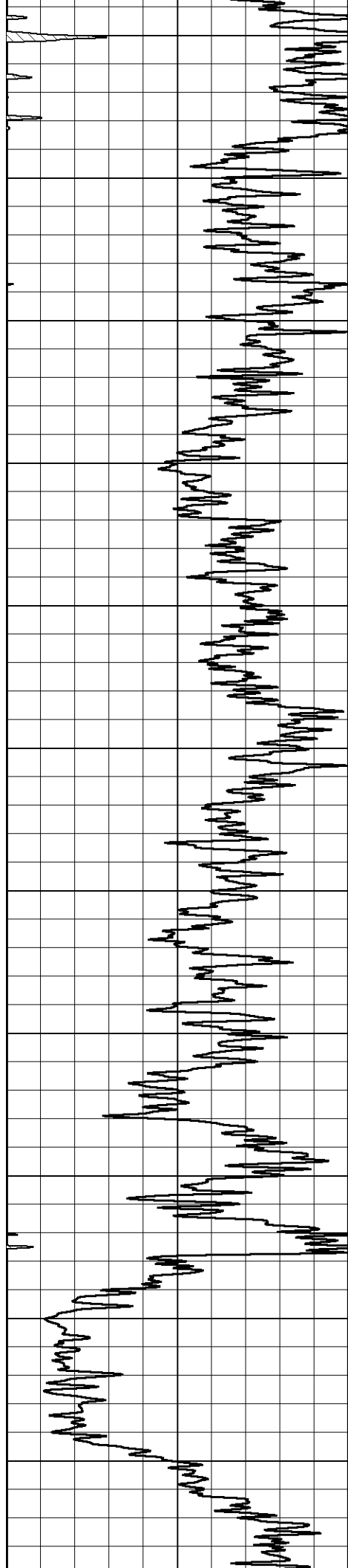
2" SCALE RESISTIVITY

MAIN PASS

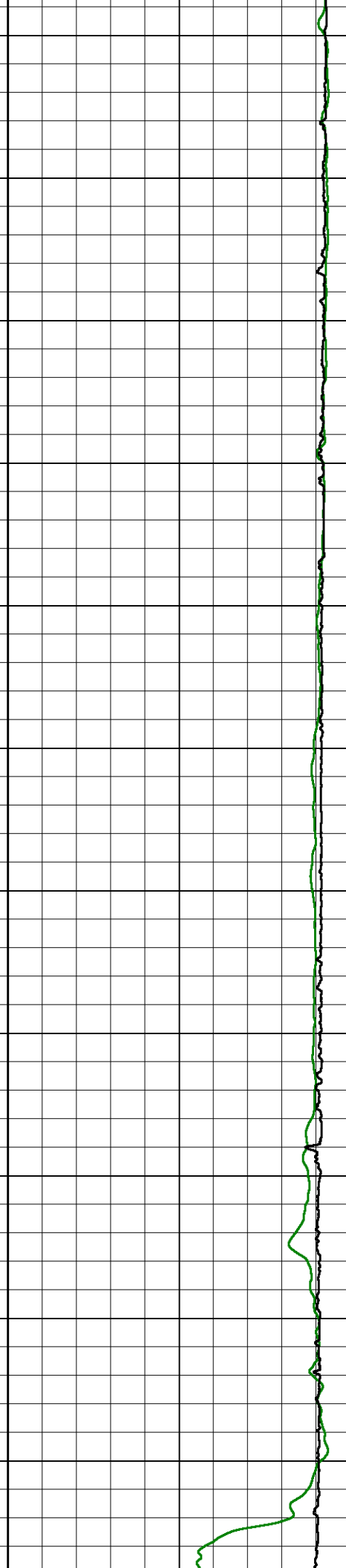
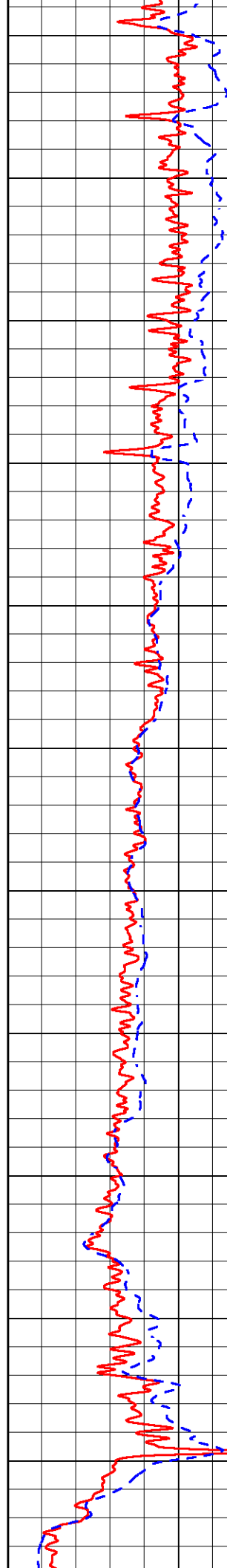
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Dataset Pathname Stack/pass3.2
Presentation Format _dil2in
Dataset Creation Sat Apr 09 02:58:36 2022
Charted by Depth in Feet scaled 1:600

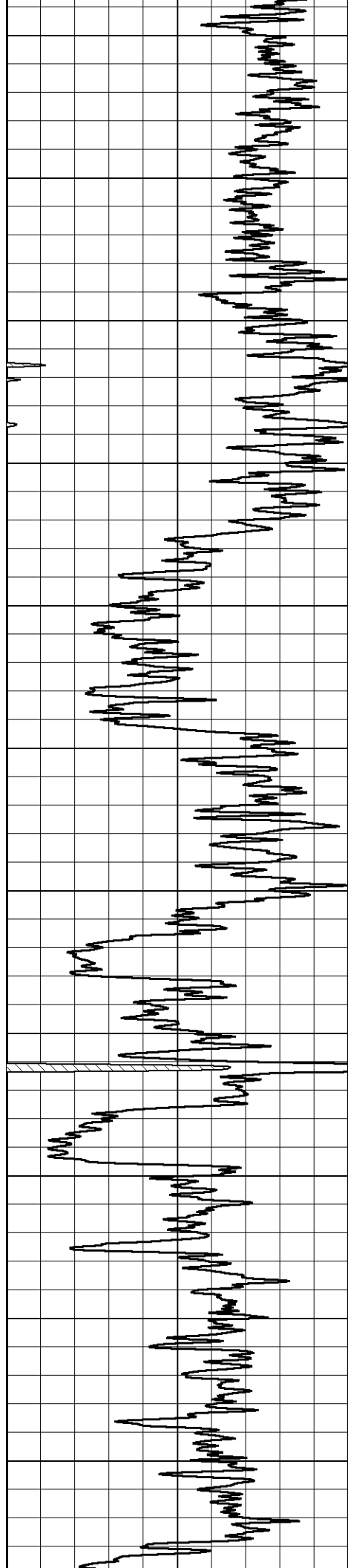
0	Gamma Ray (GAPI)	150	1000	Conductivity (mmho/m)	0
			15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
				Shallow Resistivity	
			50	(Ohm-m)	200
			50	Deep Resistivity (Ohm-m)	200



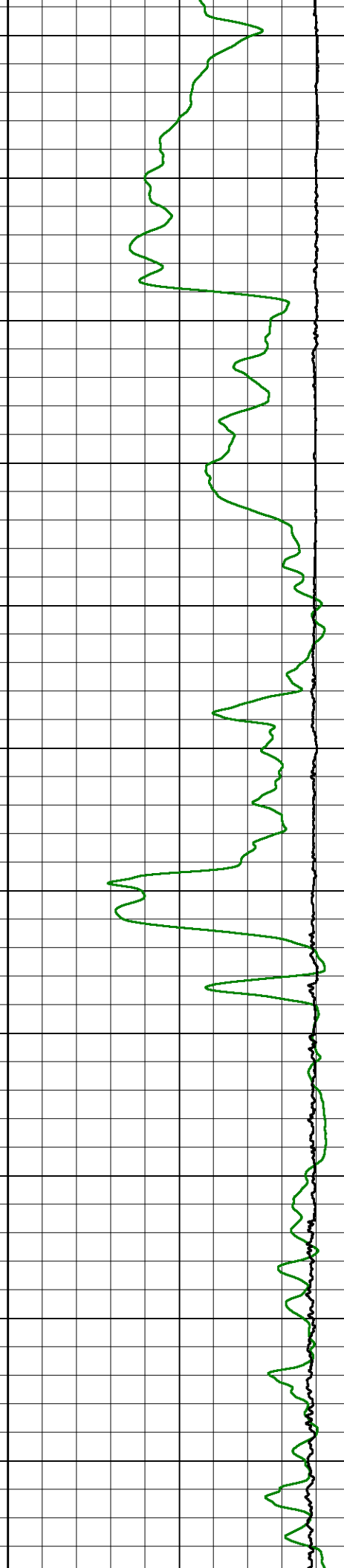
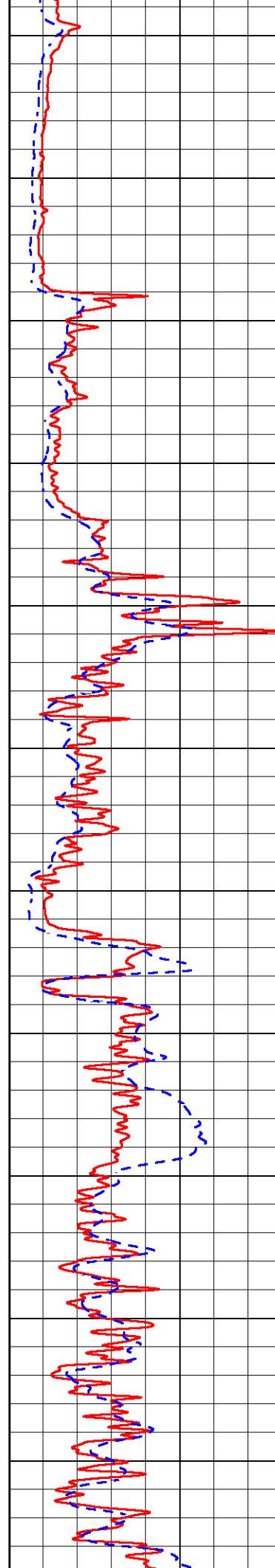


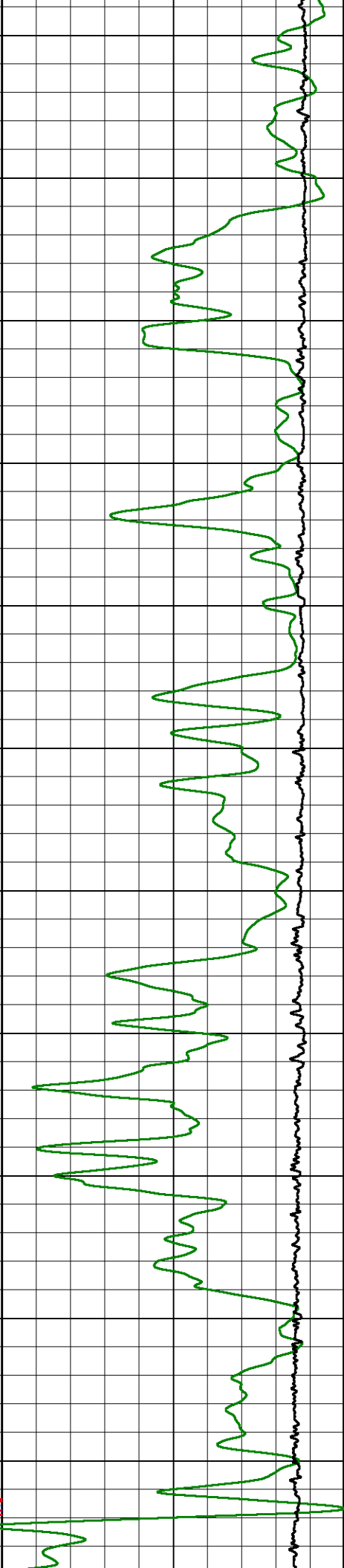
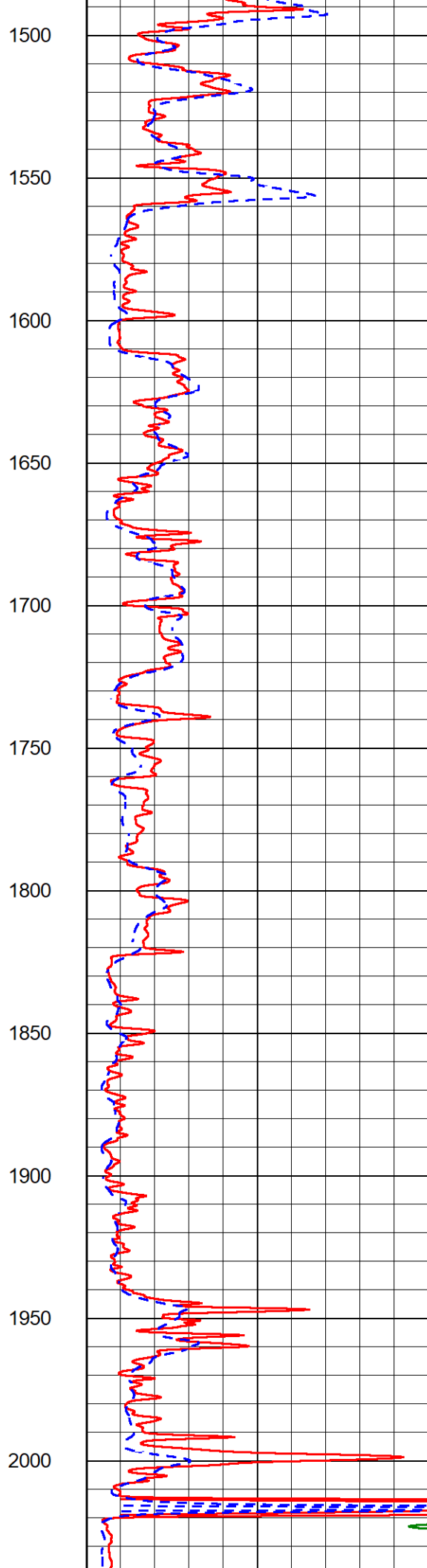
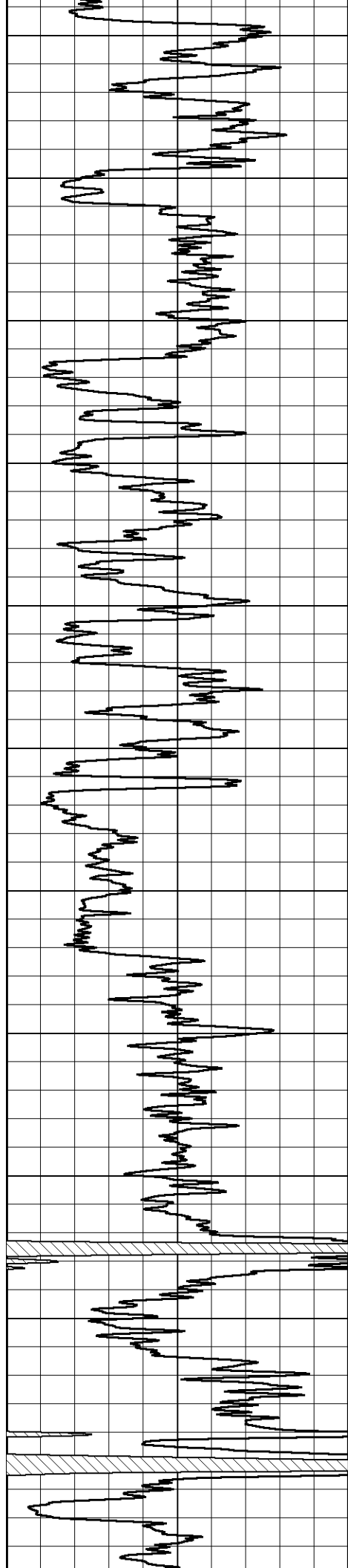
400
450
500
550
600
650
700
750
800
850
900

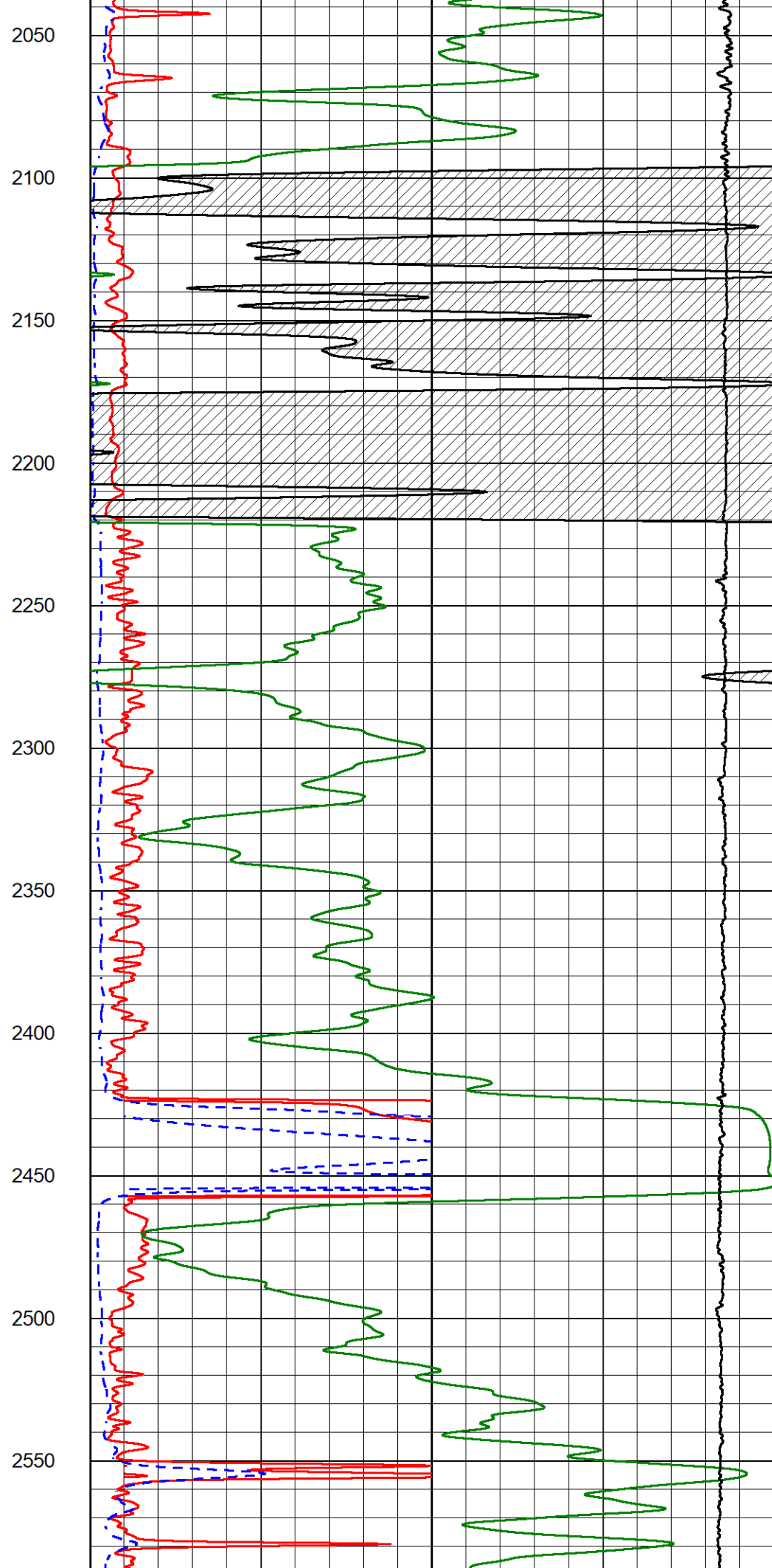
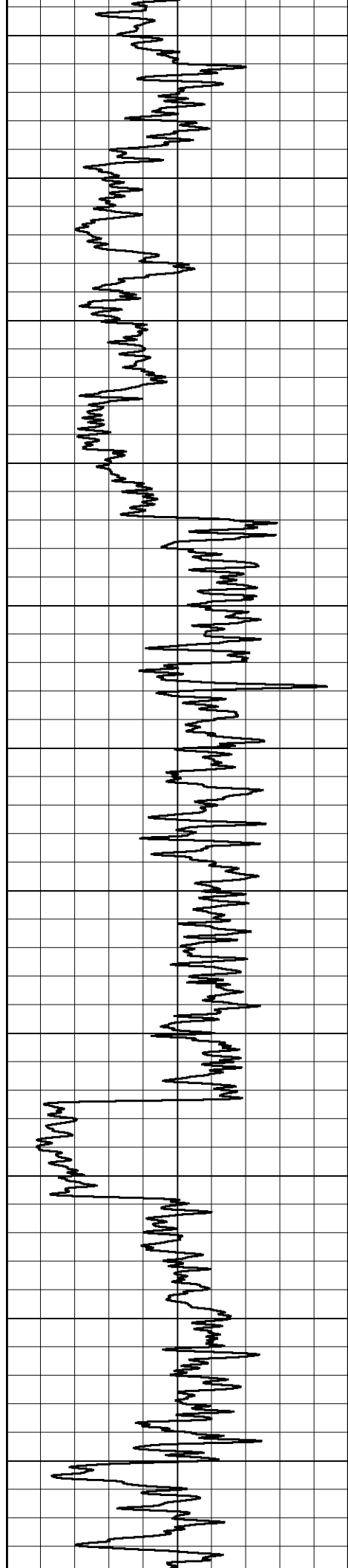


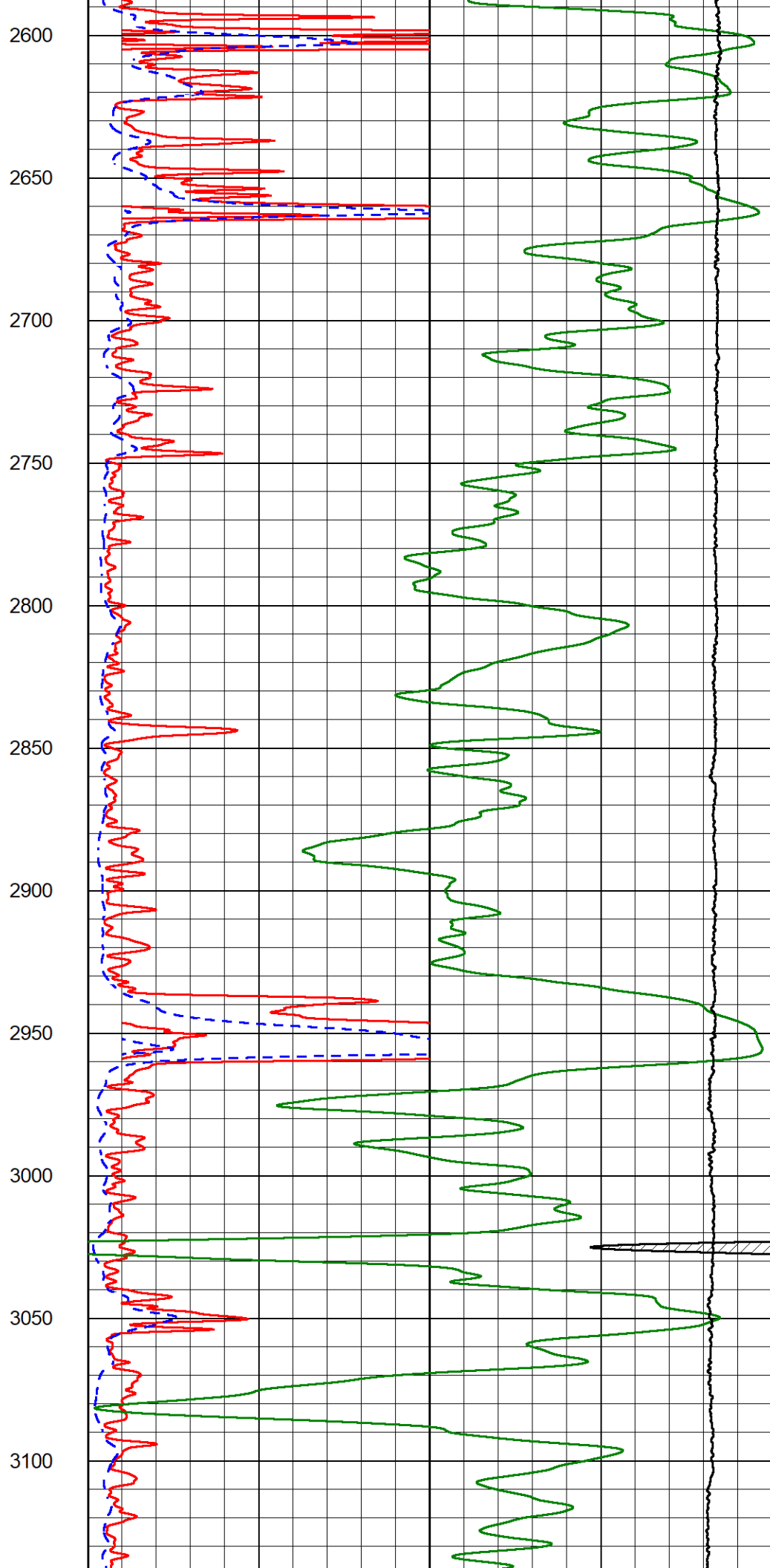
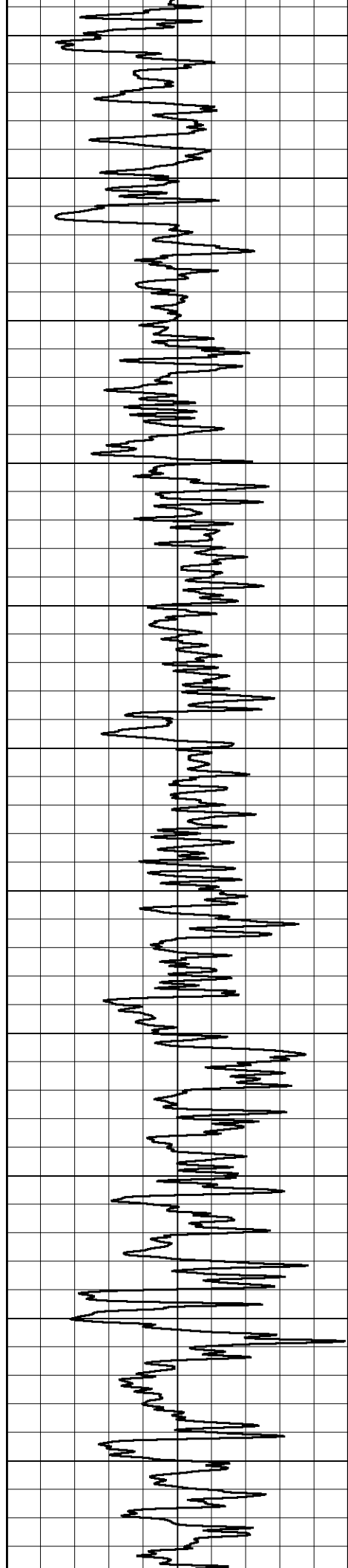


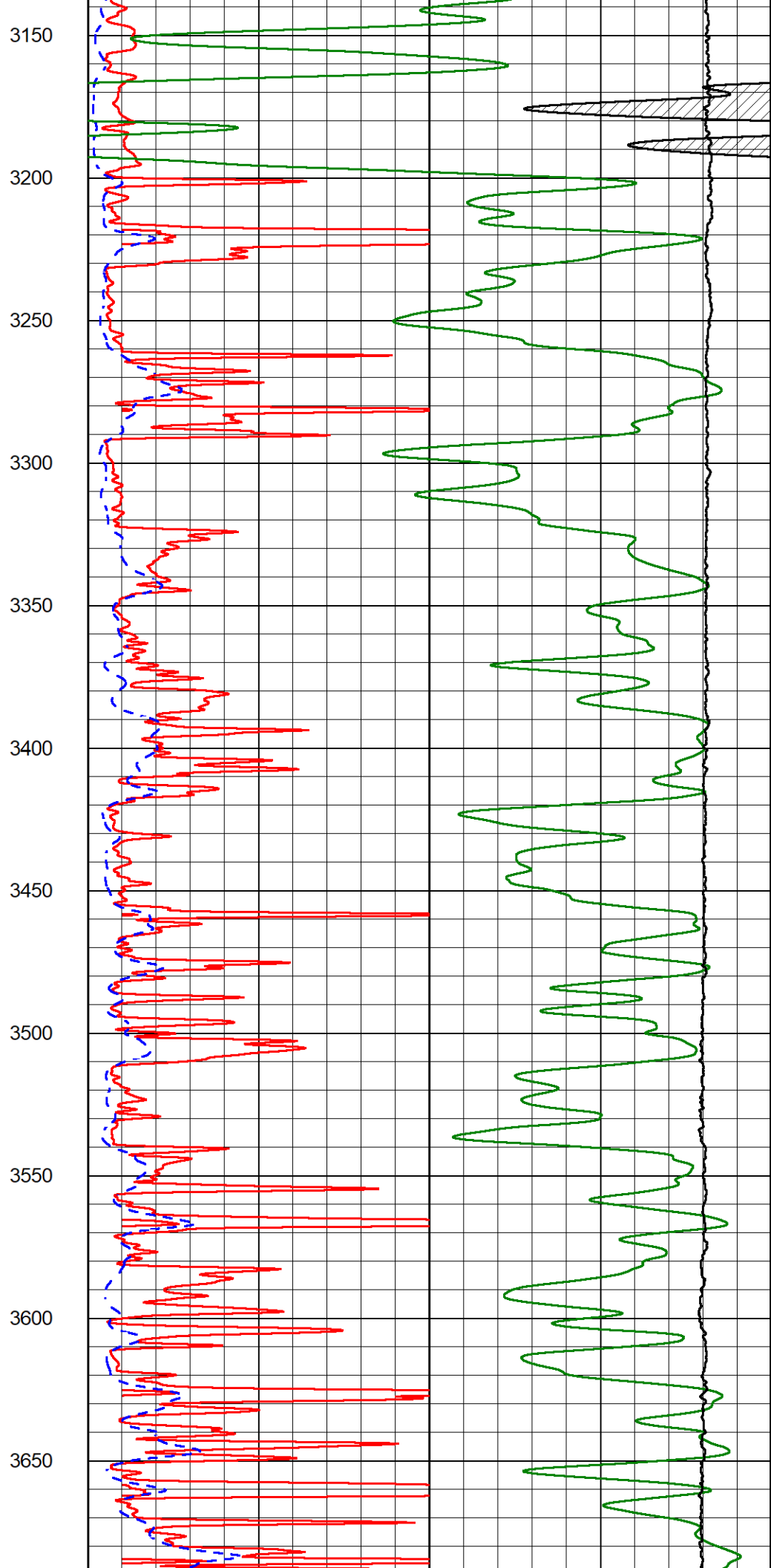
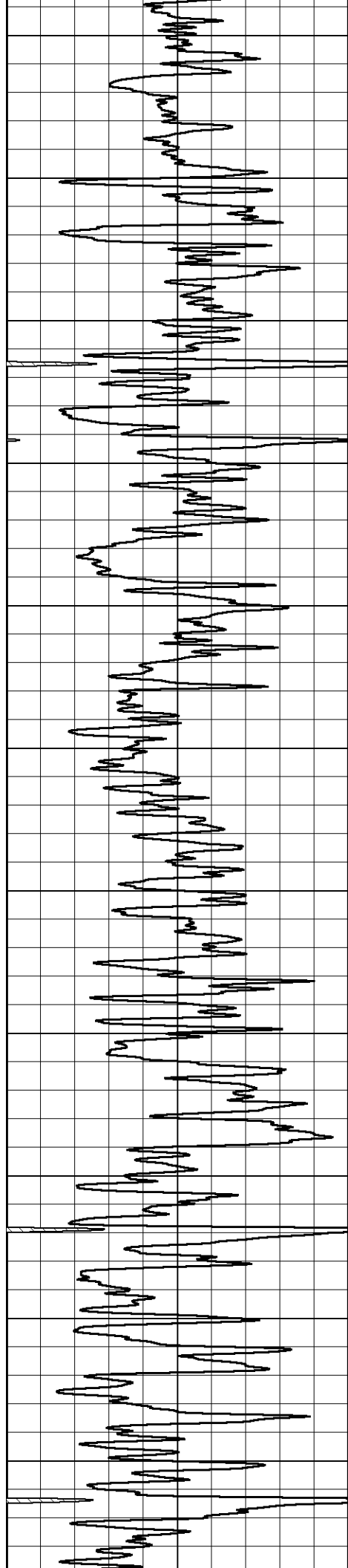
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1000
1050
1100
1150
1200
1250
1300
1350
1400
1450

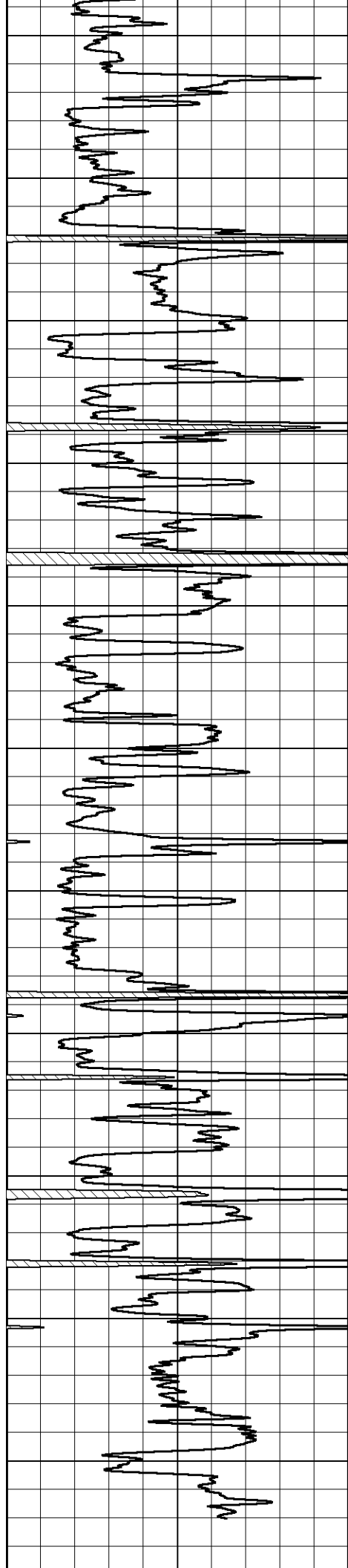












3700

3750

3800

3850

3900

3950

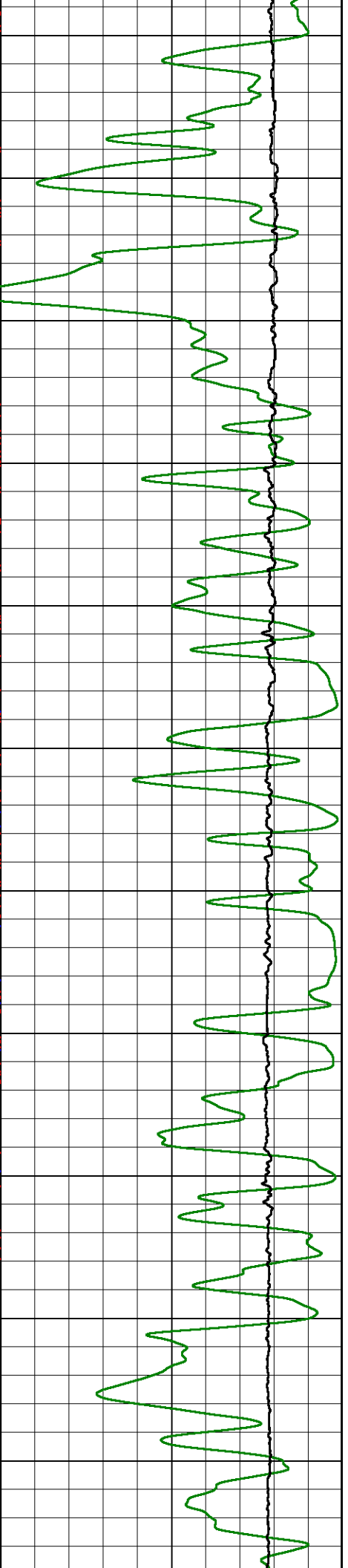
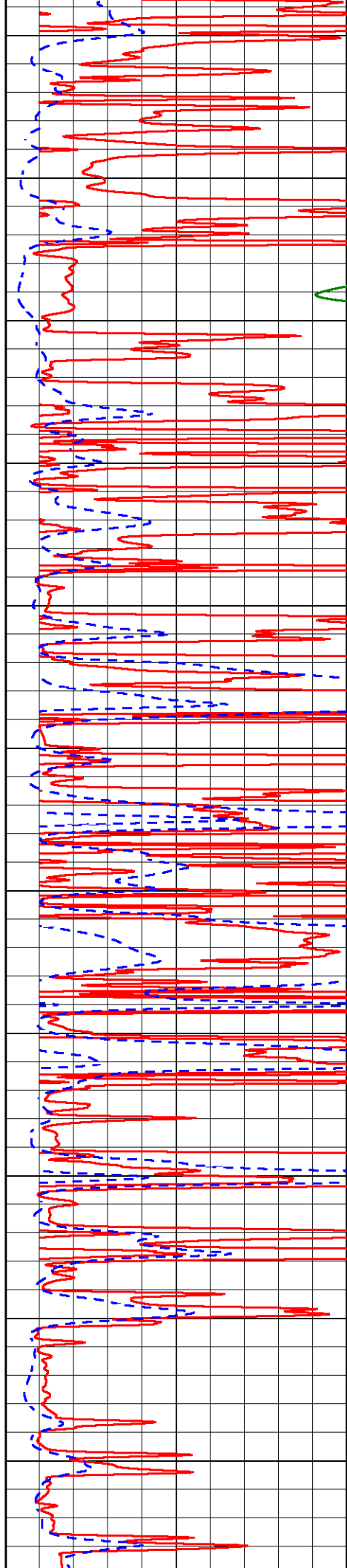
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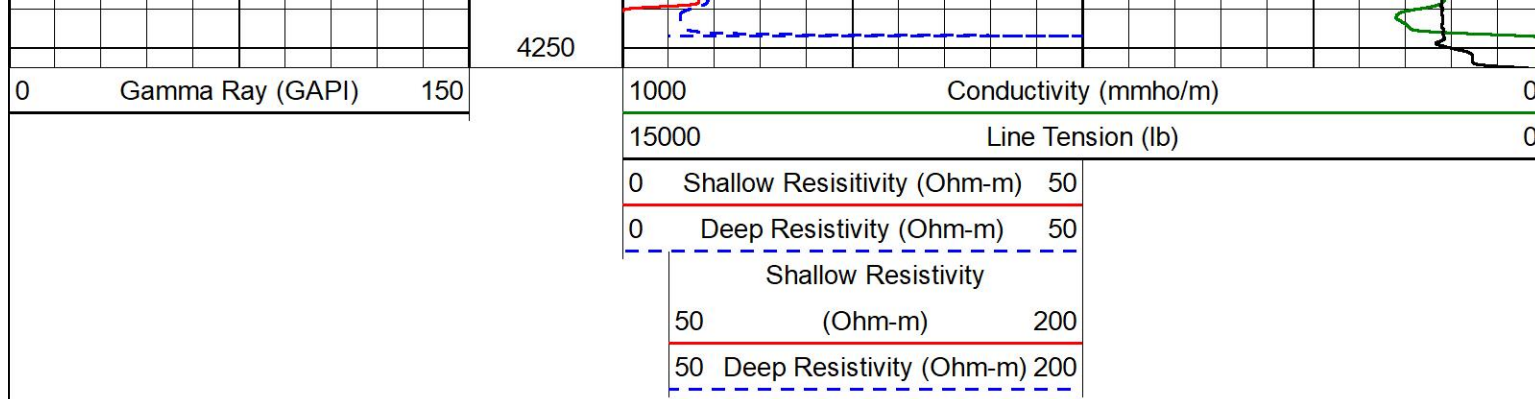
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4100

4150

4200



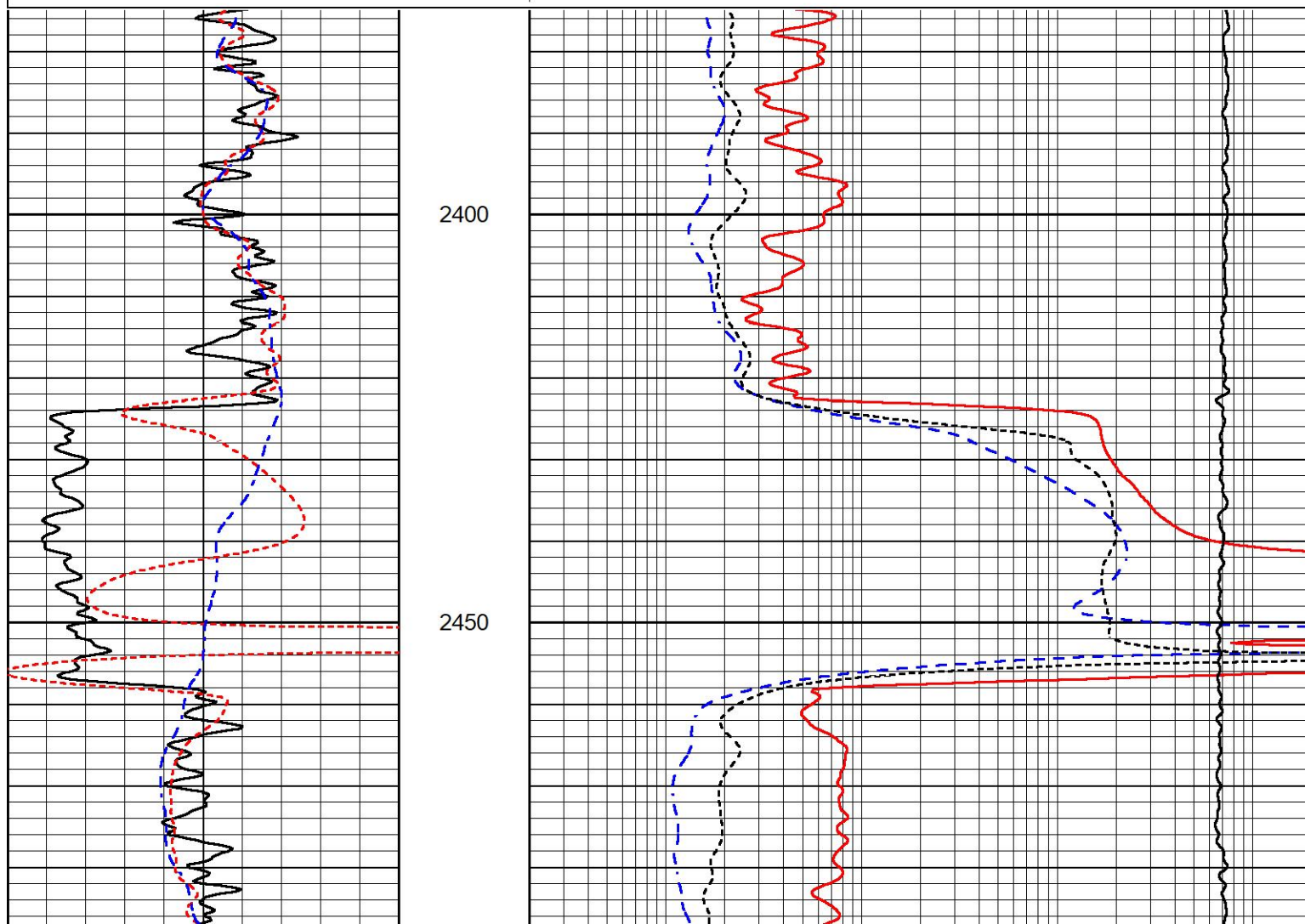
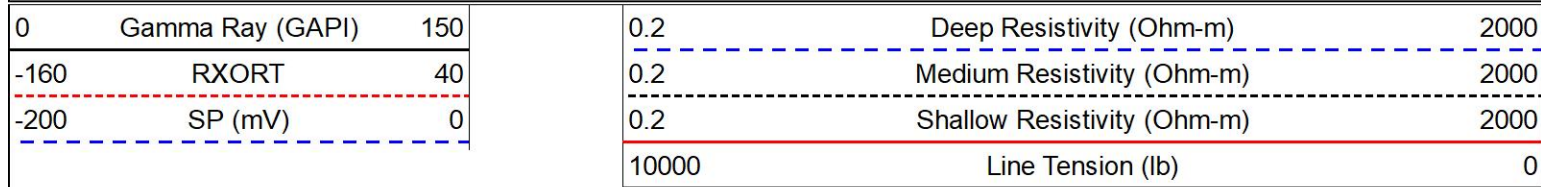


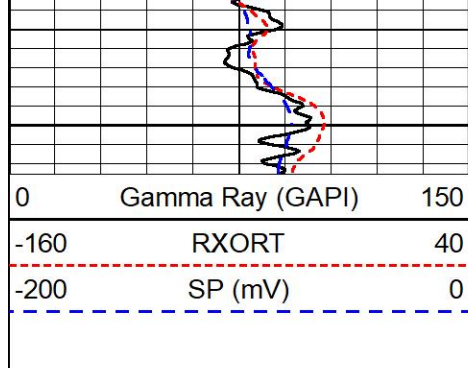
MIDWEST WIRELINE

ANHYDRITE SECTION

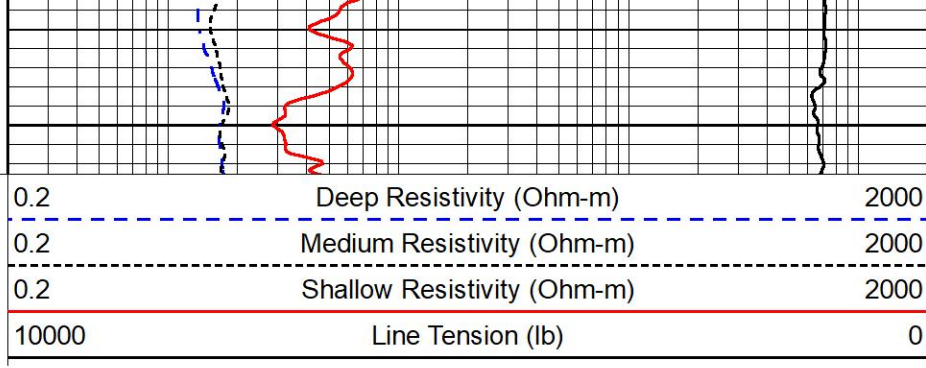
MAIN PASS

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Dataset Pathname Stack/pass3.4
Presentation Format _dil
Dataset Creation Sat Apr 09 02:31:04 2022
Charted by Depth in Feet scaled 1:240





2500

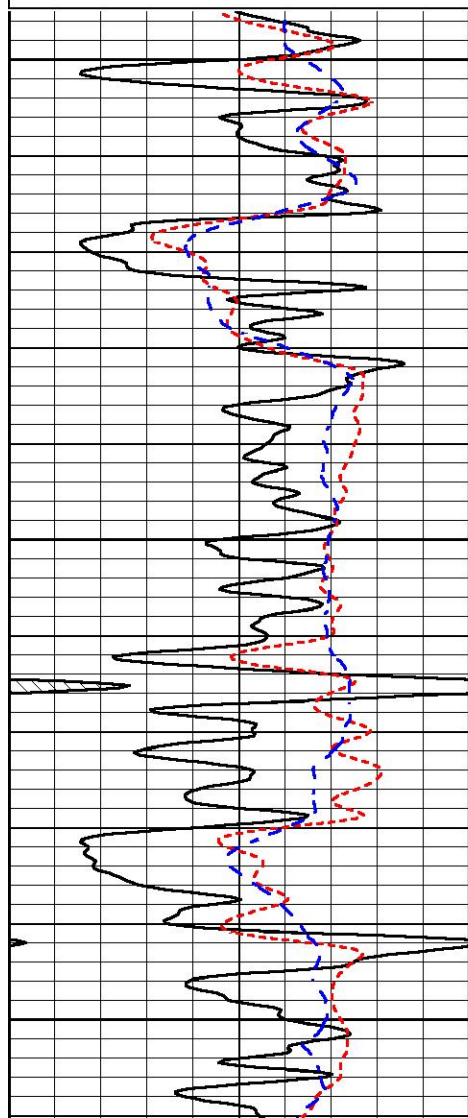
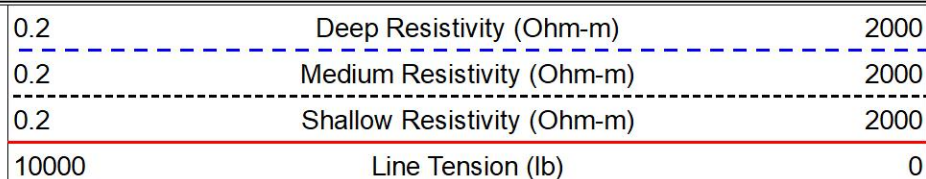
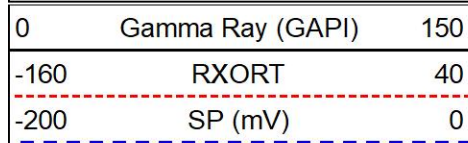


MIDWEST WIRELINE

DETAIL SECTION

MAIN PASS

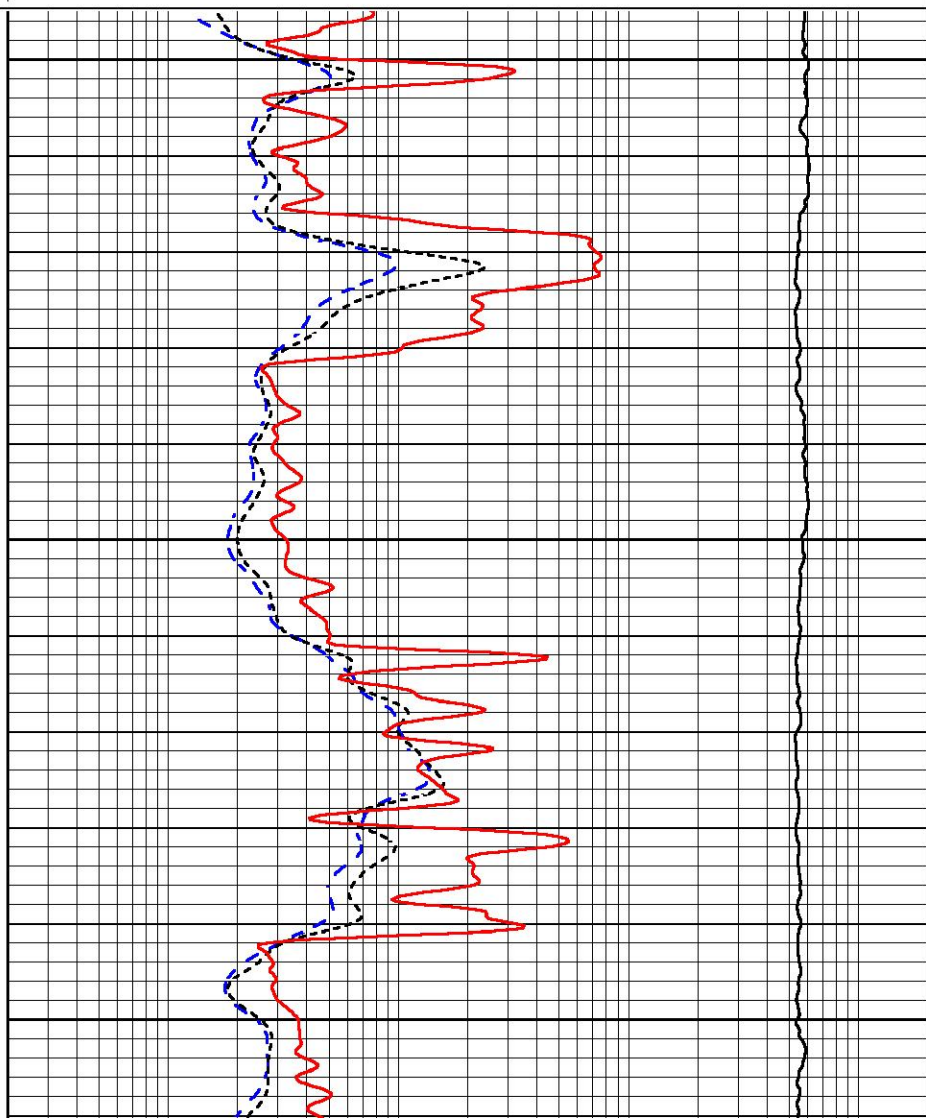
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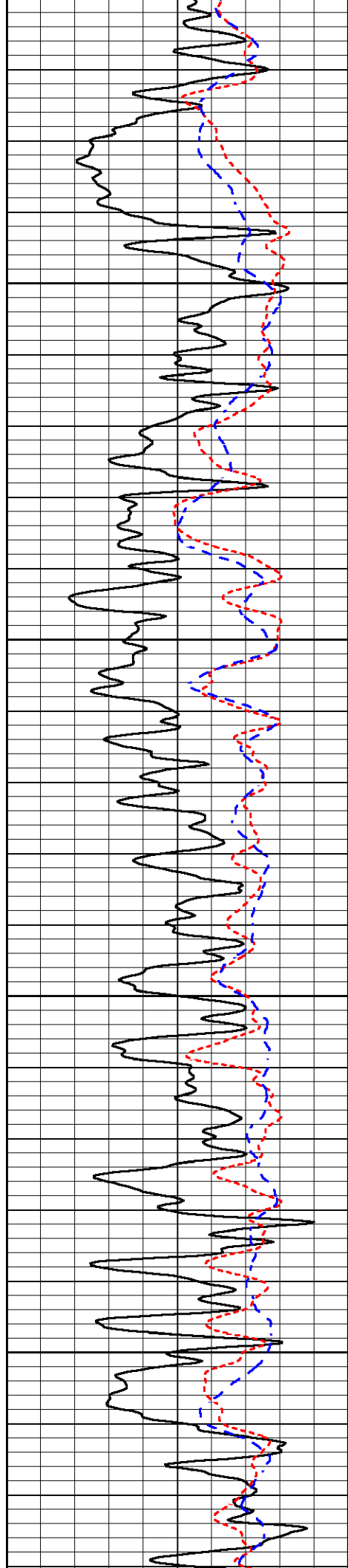


3200

3250

3300



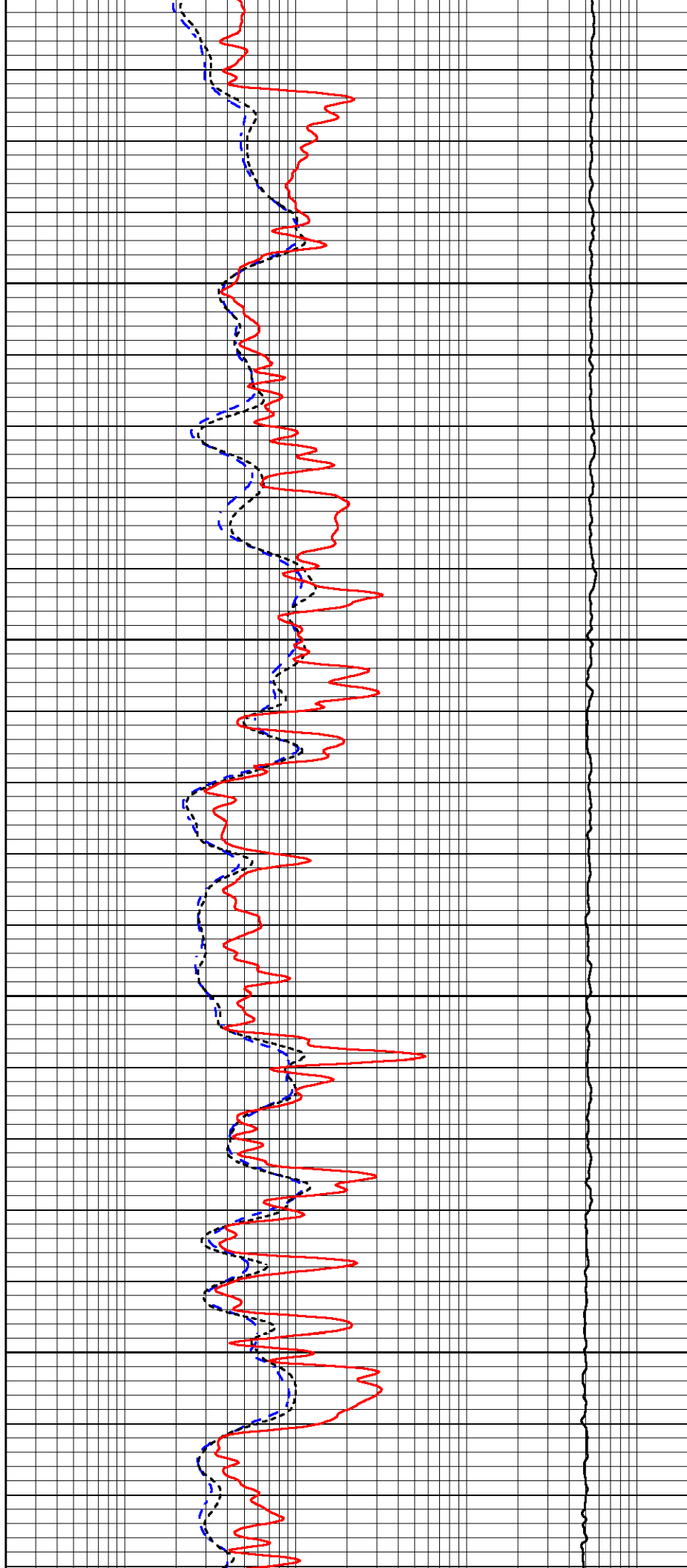


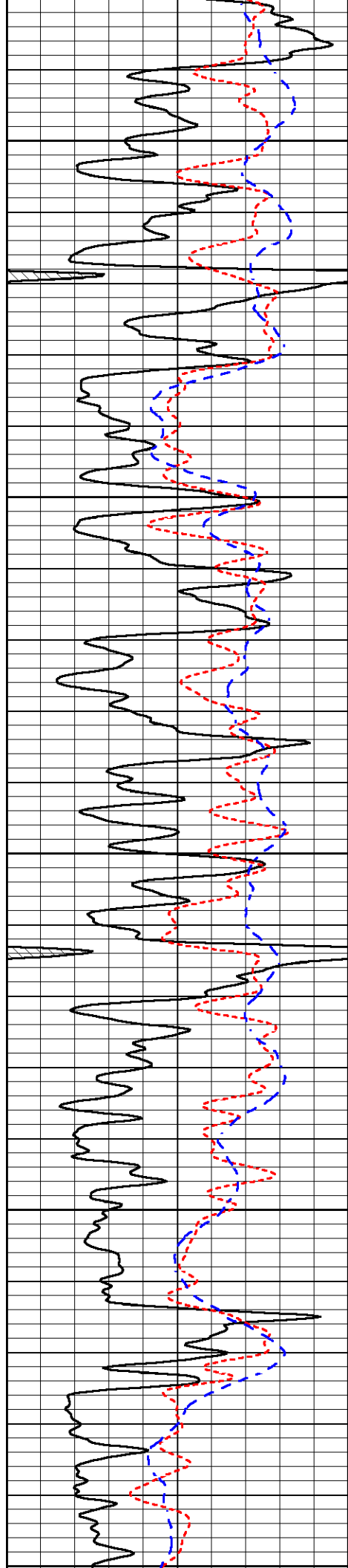
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3400

3450

3500





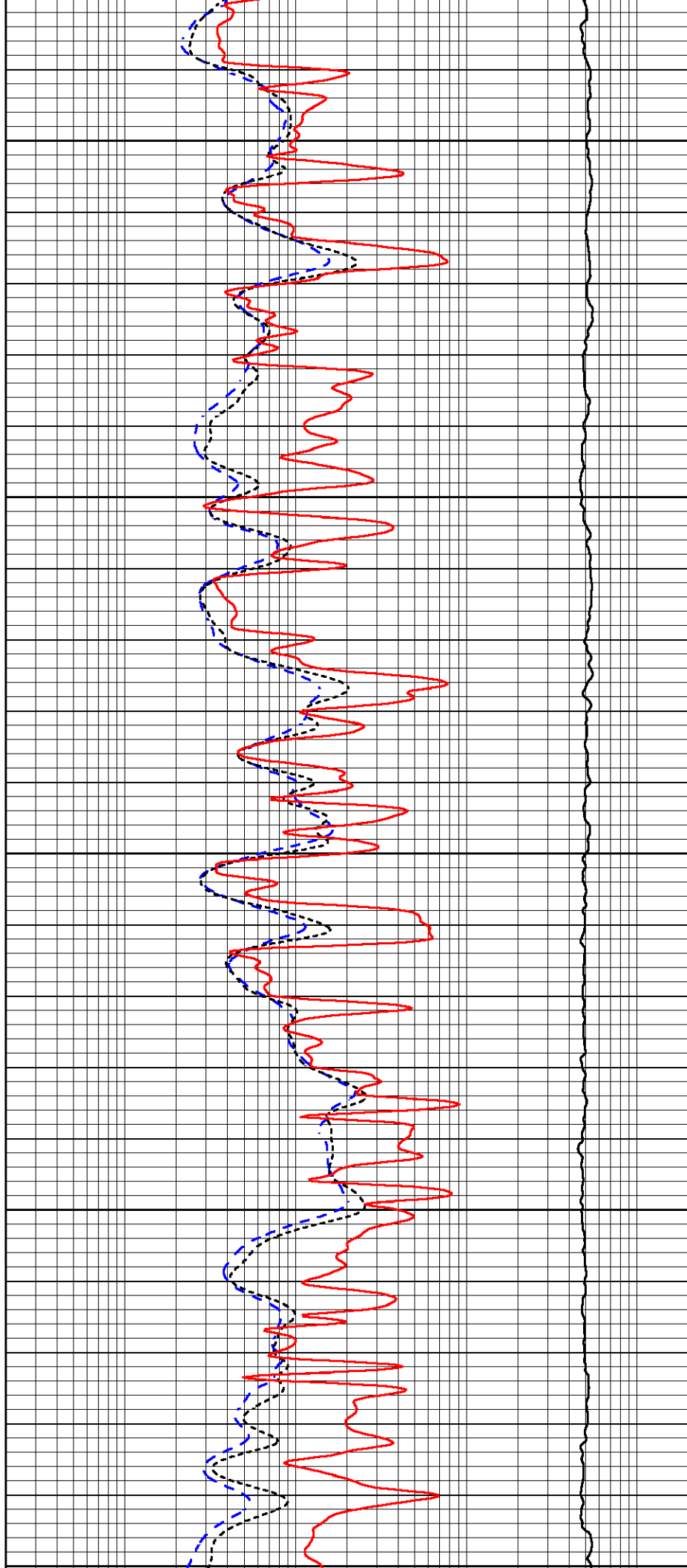
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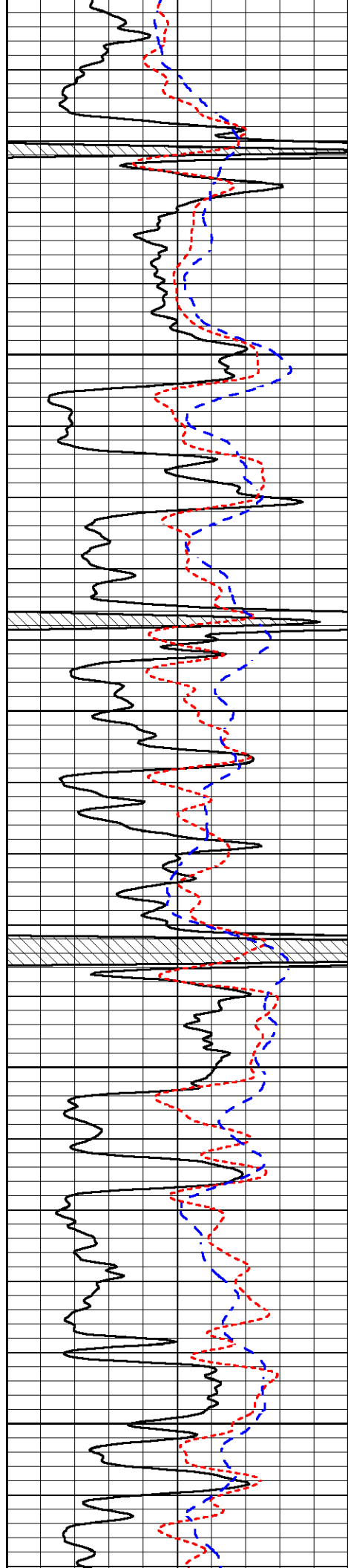
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3650

3700

3750





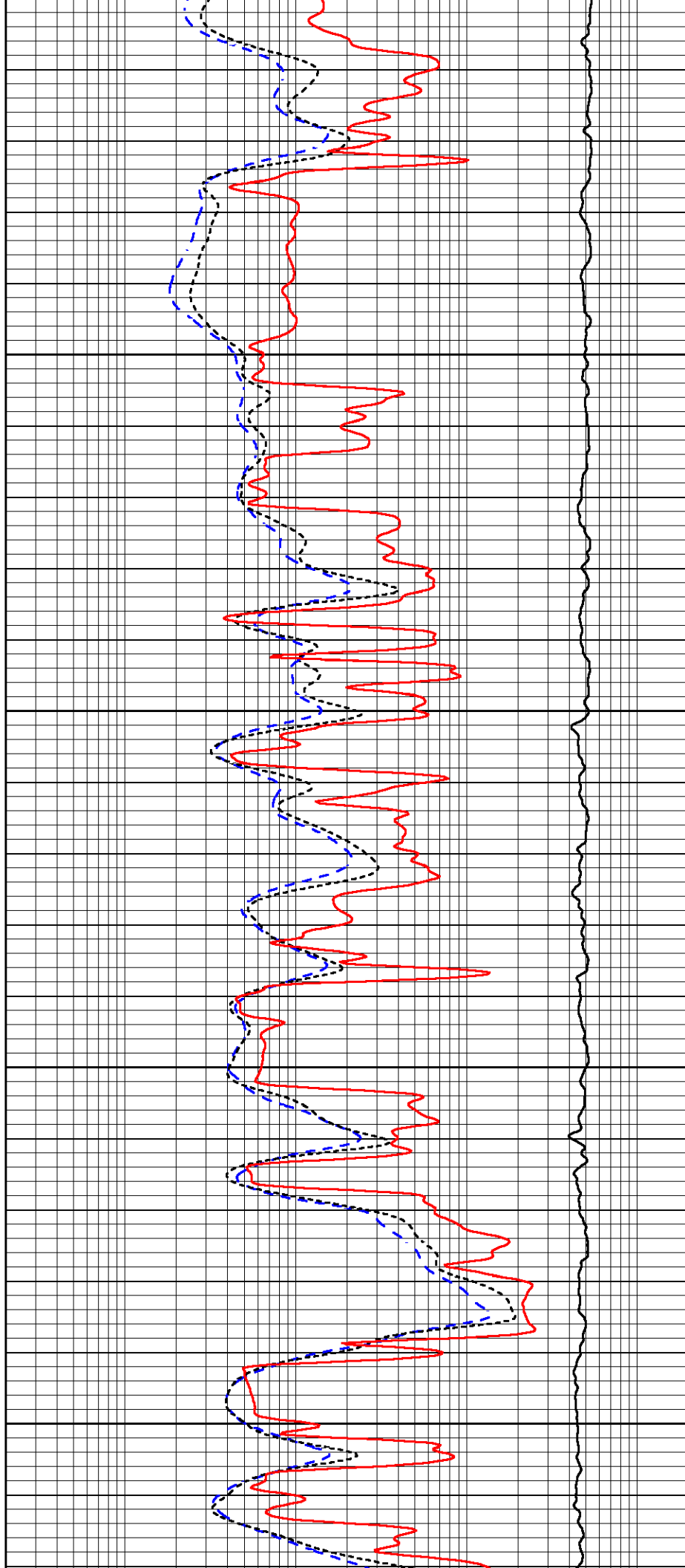
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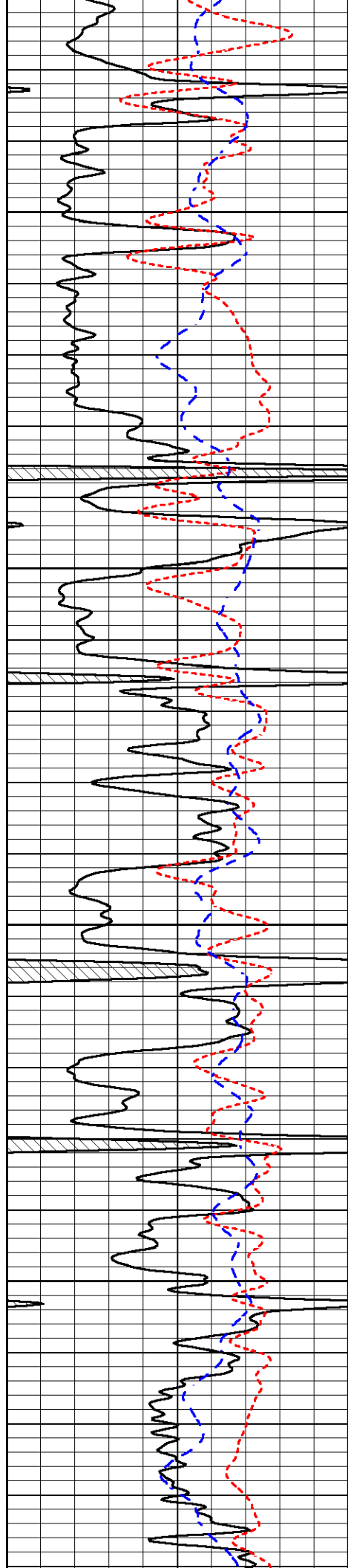
3800

3850

3900

3950



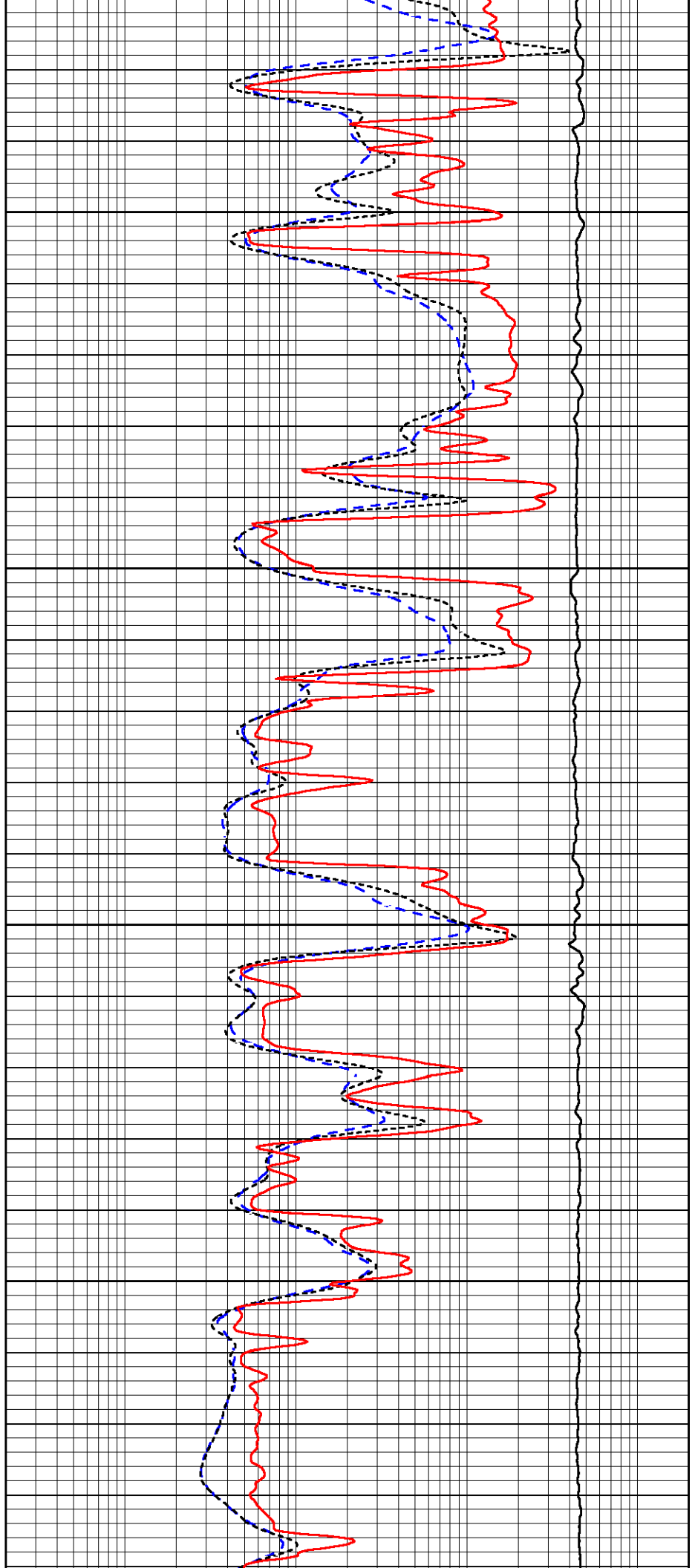


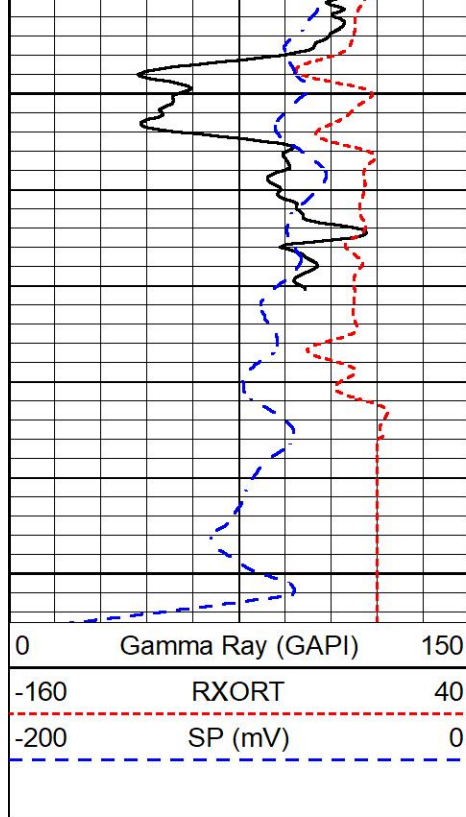
4000

4050

4100

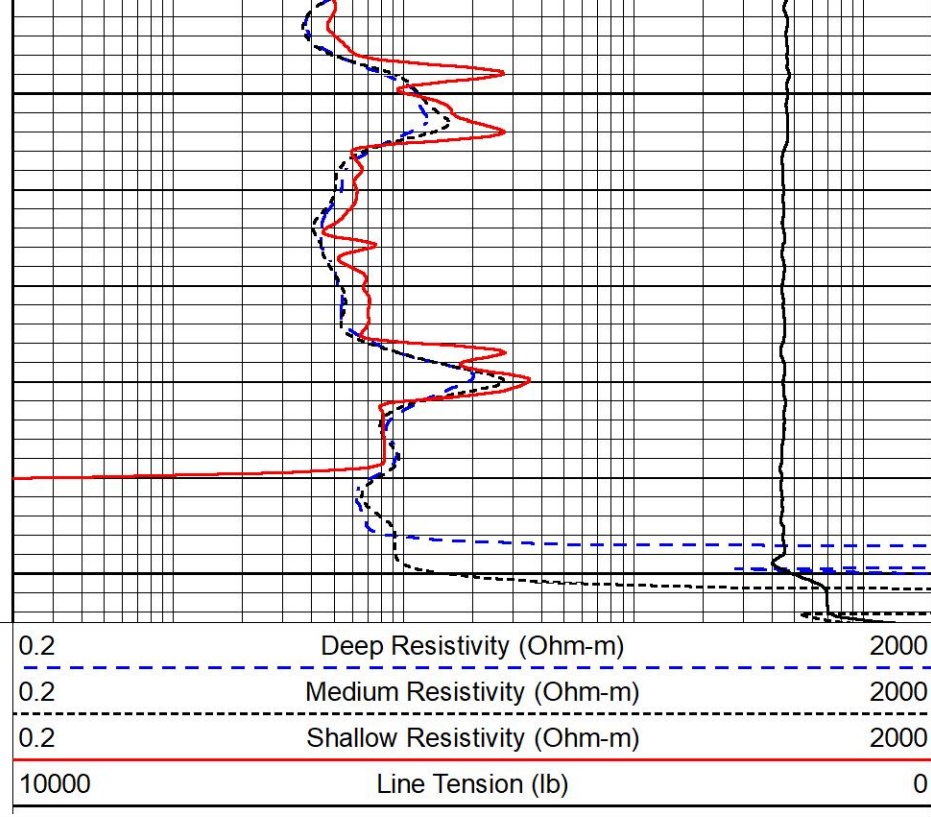
4150





4200

4250

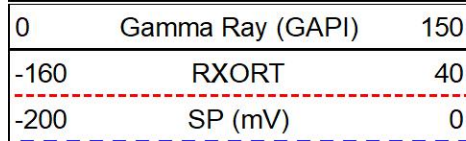


MIDWEST WIRELINE

REPEAT SECTION

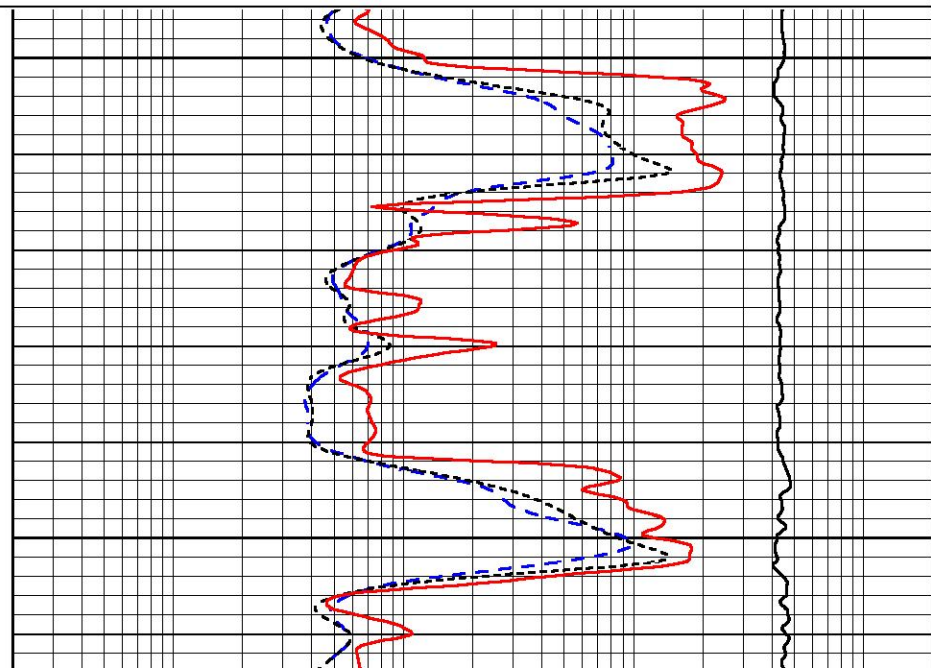
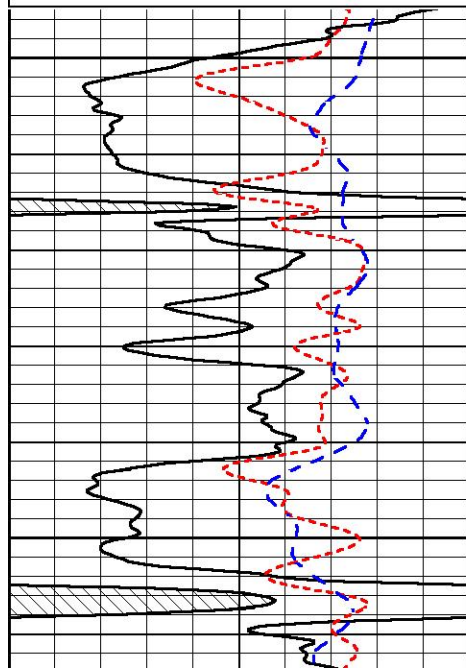
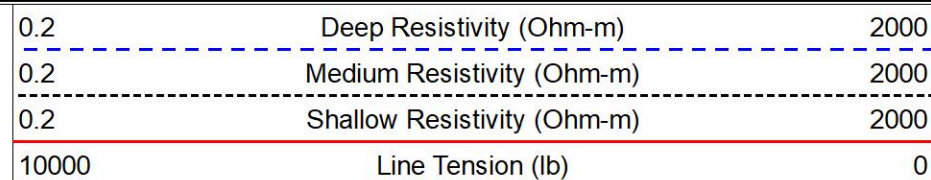
REPEAT PASS

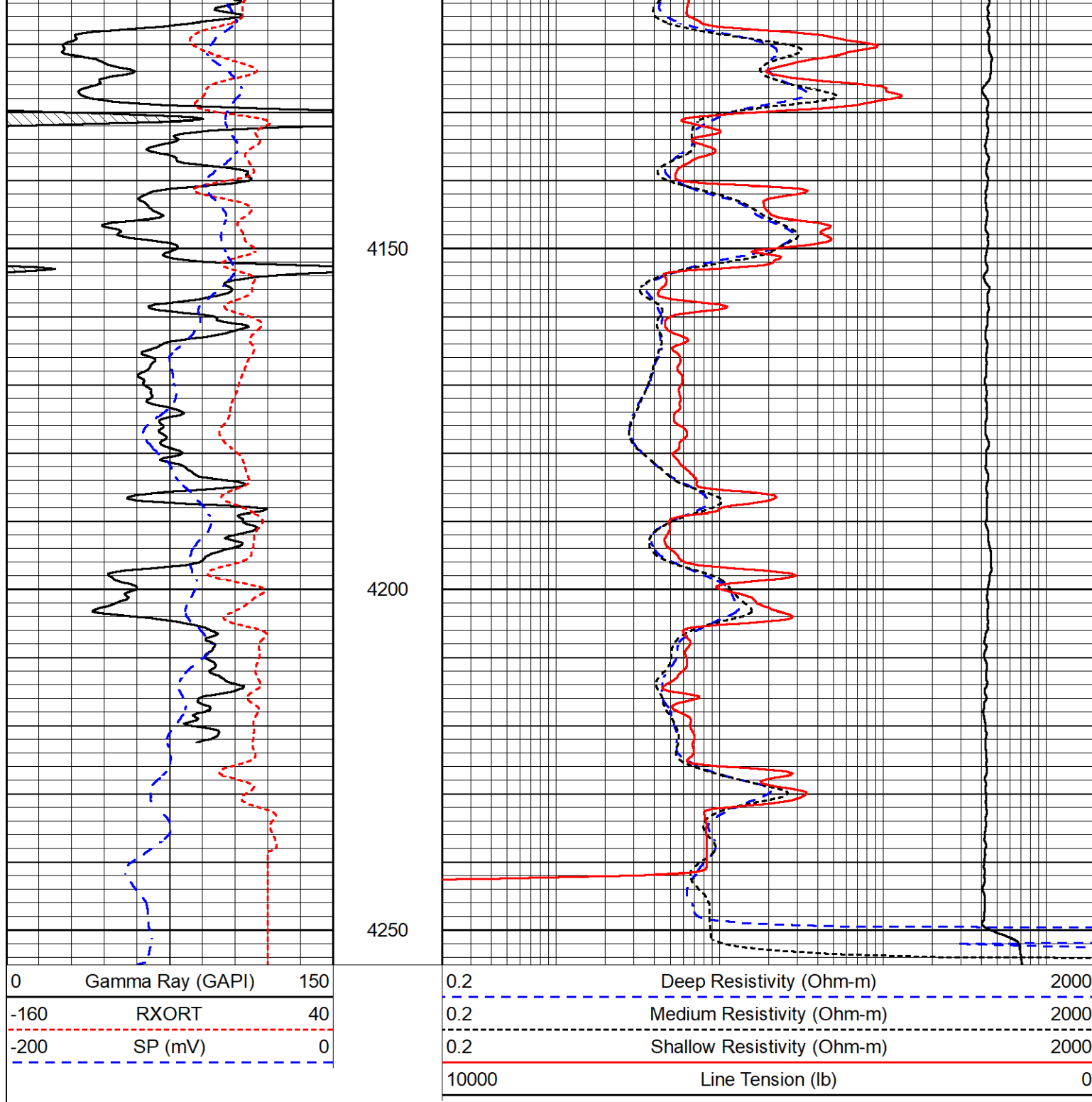
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 Presentation Format _dil
 Dataset Creation Sat Apr 09 02:16:18 2022
 Charted by Depth in Feet scaled 1:240



4050

4100





Calibration Report

Database File: pioneer_schamberger sheep head unit #1-7.db
 Dataset Pathname: Stack/pass3.1
 Dataset Creation: Sat Apr 09 02:58:47 2022

Dual Induction Calibration Report

Serial-Model: 502 HT-M&W
 Surface Cal Performed: Wed Feb 9 17:39:00 2022

Readings

References

Results

Loop:	Air	Loop	Air	Loop	m	b
Deep	83.639	487.104	0.000	183.000 mmho/m	0.454	-34.000

Medium 113.335 1585.690 0.000 442.000 mmho/m 0.350 -10.000

Compensated Density Calibration Report

Serial-Model: 301-01-M&W
Source #: 20762B
Master Calibration Performed: Thu Feb 3 00:43:14 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3559.05	2566.81	cps
Aluminum	2.675	g/cc	664.63	1636.12	cps
Spine Angle = 74.98			Density/Spine Ratio = 0.530		
	Size		Reading		
Small Ring	8.00	in	1.16		
Large Ring	13.00	in	1.02		

Compensated Neutron Calibration Report

Serial-Model: 207-MW-M&W
Source #: 100046B
Master Calibration Performed: Mon Nov 29 15:06:24 2021

Master 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: 101
Tool Model: M&W
Performed: Mon Jan 24 19:14:46 2022

Calibrator Value: 500.0 GAPI

Background Reading: 24.0 cps
Calibrator Reading: 637.0 cps

Sensitivity: 0.5500 GAPI/cps



Company Pioneer Oil Company, Inc.
Well Schamberger Sheep Head Unit #1-7
Field
County Sheridan
State Kansas