



PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company **CHARLES N. GRIFFIN**
Well **SHERRY #3-9**
Field **MEDICINE LODGE - BOGGS**
County **BARBER** State **KANSAS**

Location: API #: 15-007-24319-00-00

Other Services

330' FNL & 330' FWL
SEC 9 TWP 33S RGE 12W

CNL/CDL

Permanent Datum GROUND LEVEL Elevation 1535'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 1546'
D.F. N/A
G.L. 1535'

Date	5/23/2017		
Run Number	ONE		
Depth Driller	4875'		
Depth Logger	4875'		
Bottom Logged Interval	4874'		
Top Log Interval	250'		
Casing Driller	8.625" @ 261'		
Casing Logger	257'		
Bit Size	7.875"		
Type Fluid in Hole	CHEMICAL		
Salinity, ppm CL	4000		
Density / Viscosity	9.4 48		
pH / Fluid Loss	12.0 8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.55 @ 74		
Rmt @ Meas. Temp	0.41 @ 74		
Rmc @ Meas. Temp	0.74 @ 74		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.33 @ 125		
Operating Rig Time	3 HOURS		
Max Rec. Temp. F	125		
Equipment Number	91		
Location	HAYS		
Recorded By	D. SCHMIDT		
Witnessed By	CHARLES GRIFFIN		

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, 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.

MEDICINE LODGE,
SOUTH TO SUMAC RD, 3 WEST TO CATTLE GUARD,
1/4 WEST, 1 NORTH, 1 WEST, 1 SOUTH,
WEST AND SOUTH TO LOCATION

Log Measured From: KELLY BUSHING

11 Ft. Above Permanent Datum

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www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

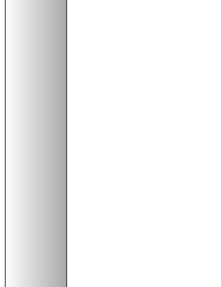
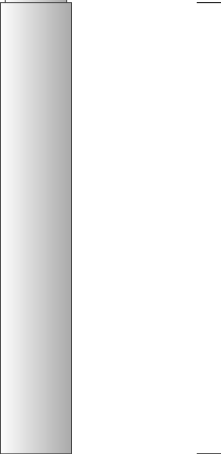
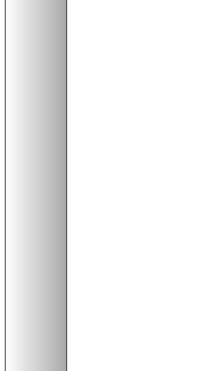
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: CHARLES GRIFFIN
Secondary Witness:
Secondary Witness:
Secondary Witness:

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	250	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	0	0	5.5	0	0	100	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	33.00		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	29.90 29.15		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	20.85 20.83 20.35		CDL-M&W (90-1031)	8.50	4.00	250.00
RLL3F RLL3	15.80 15.80					
CILD	8.00		DIL-M&W (PSI 91)	18.50	3.50	220.00

CILM	4.70								
SP	0.20								
Dataset: charles griffin__sherry 3-9.db: field/well/STACK/pass5.2 Total length: 35.50 ft Total weight: 620.00 lb O.D.: 4.00 in									



Database File

Dataset Pathname

Presentation Format

Dataset Creation

Charted by

charles griffin__sherry 3-9.db

STACK/pass6.1

dil2in

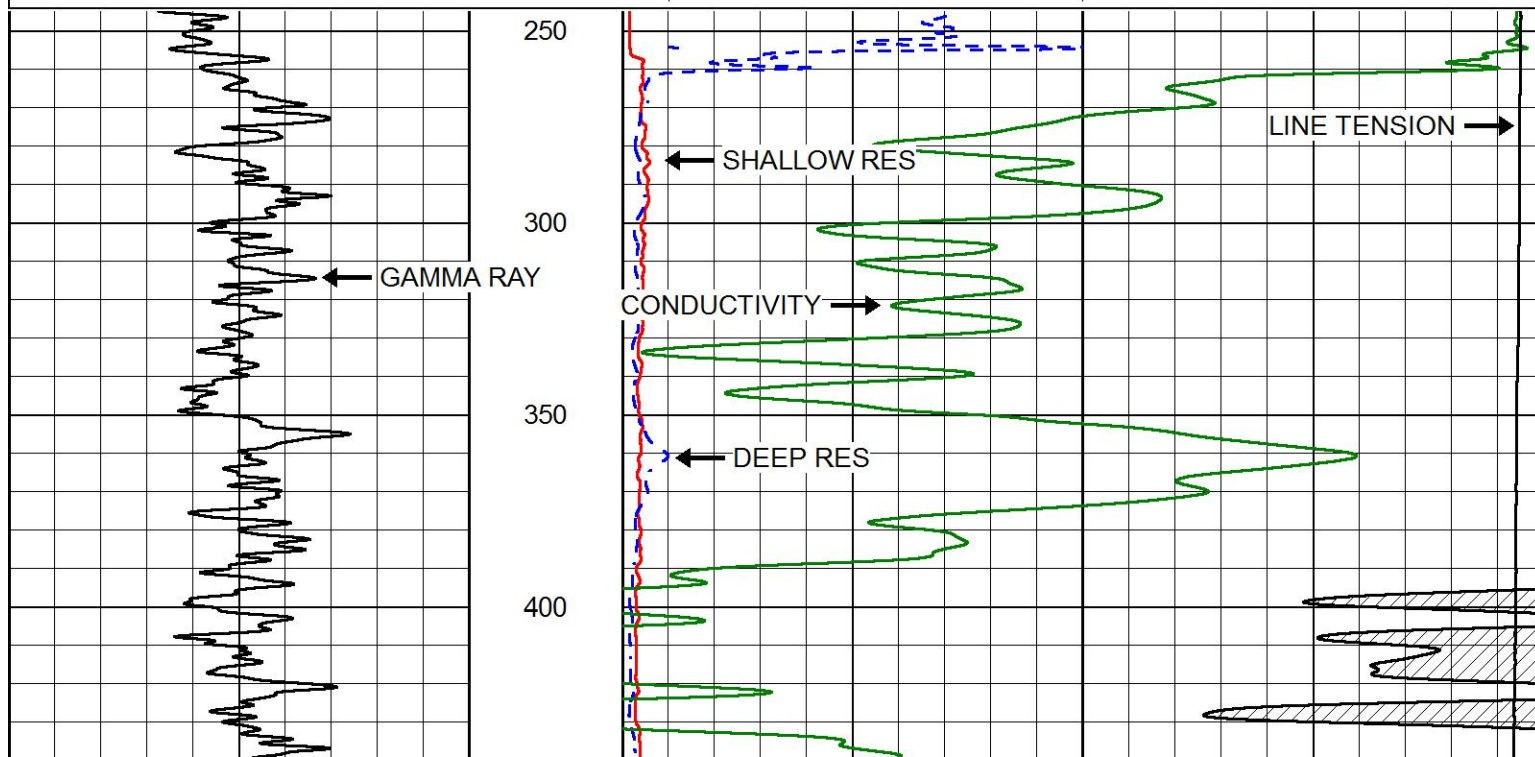
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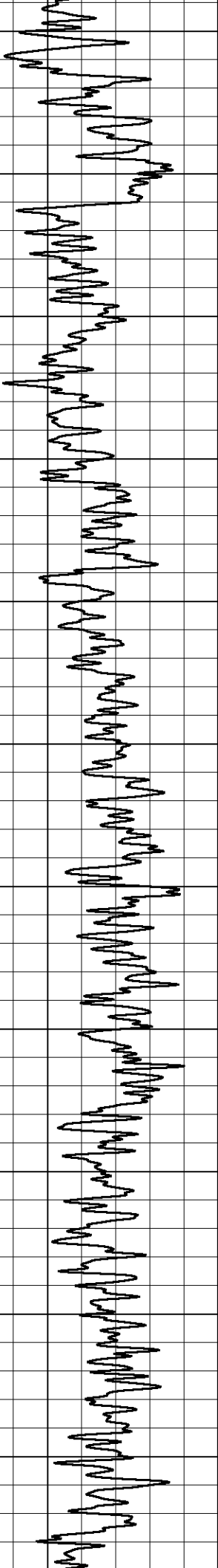
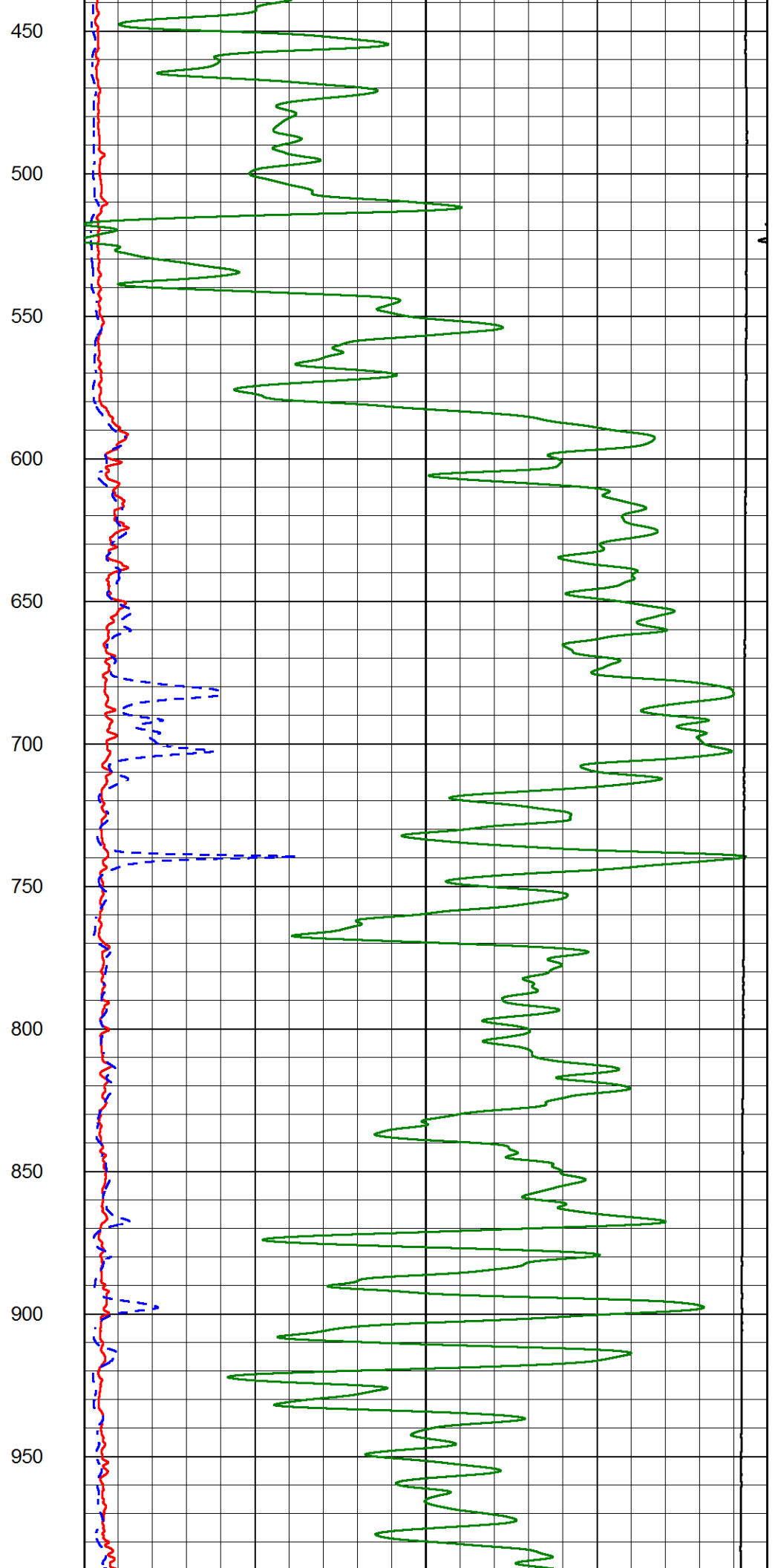
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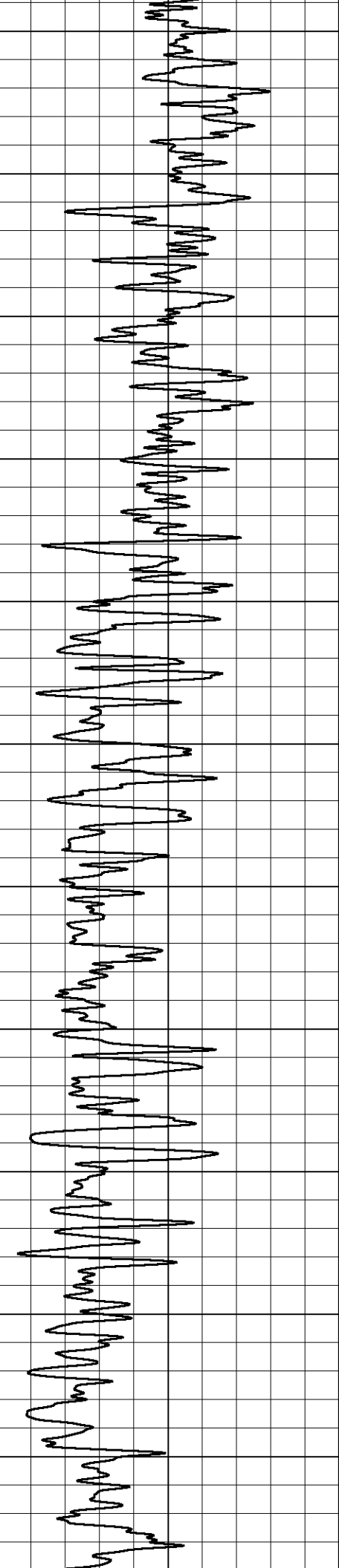
MAIN PASS

0	Gamma Ray (GAPI)	150
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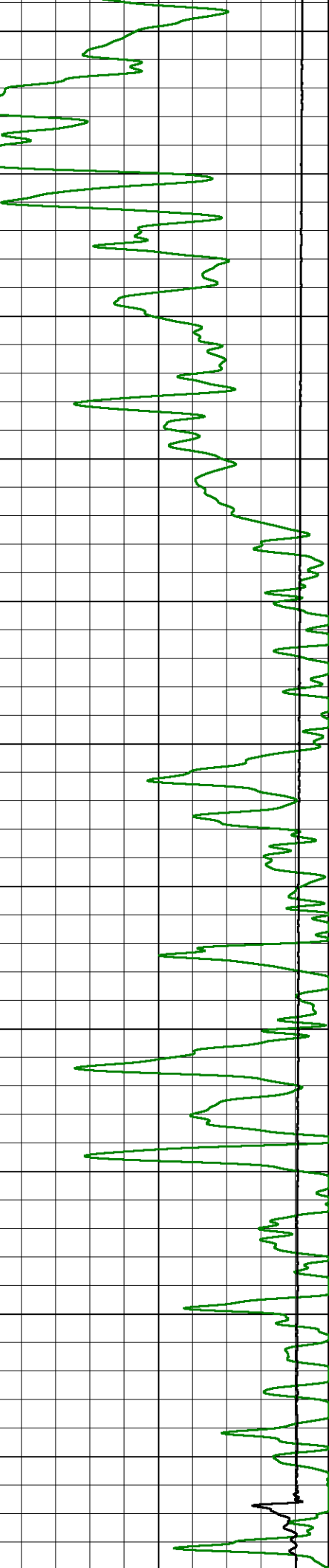
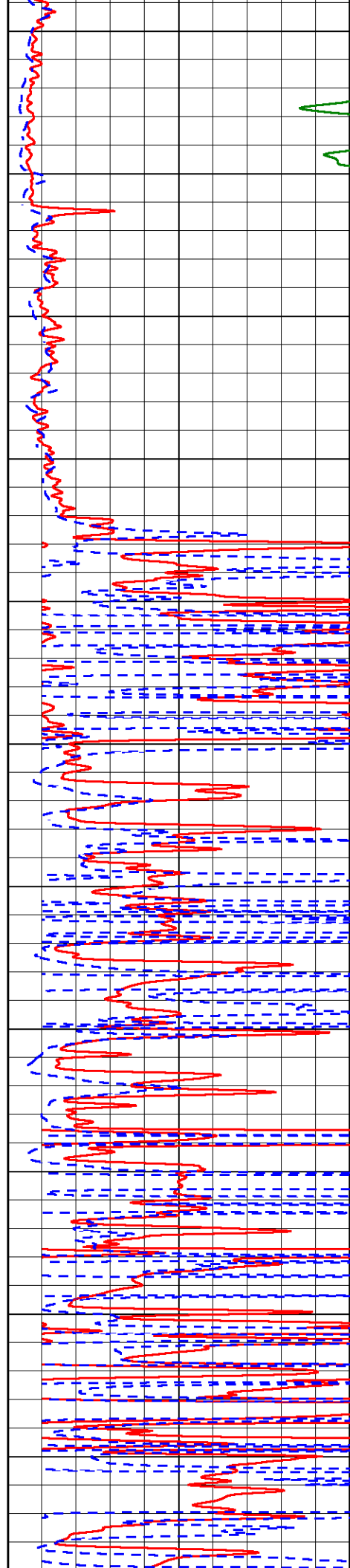
1000	Conductivity (mmho/m)	0
15000	Line Tension (lb)	0
0	Shallow Resistivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
	Shallow Resistivity	
50	(Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500

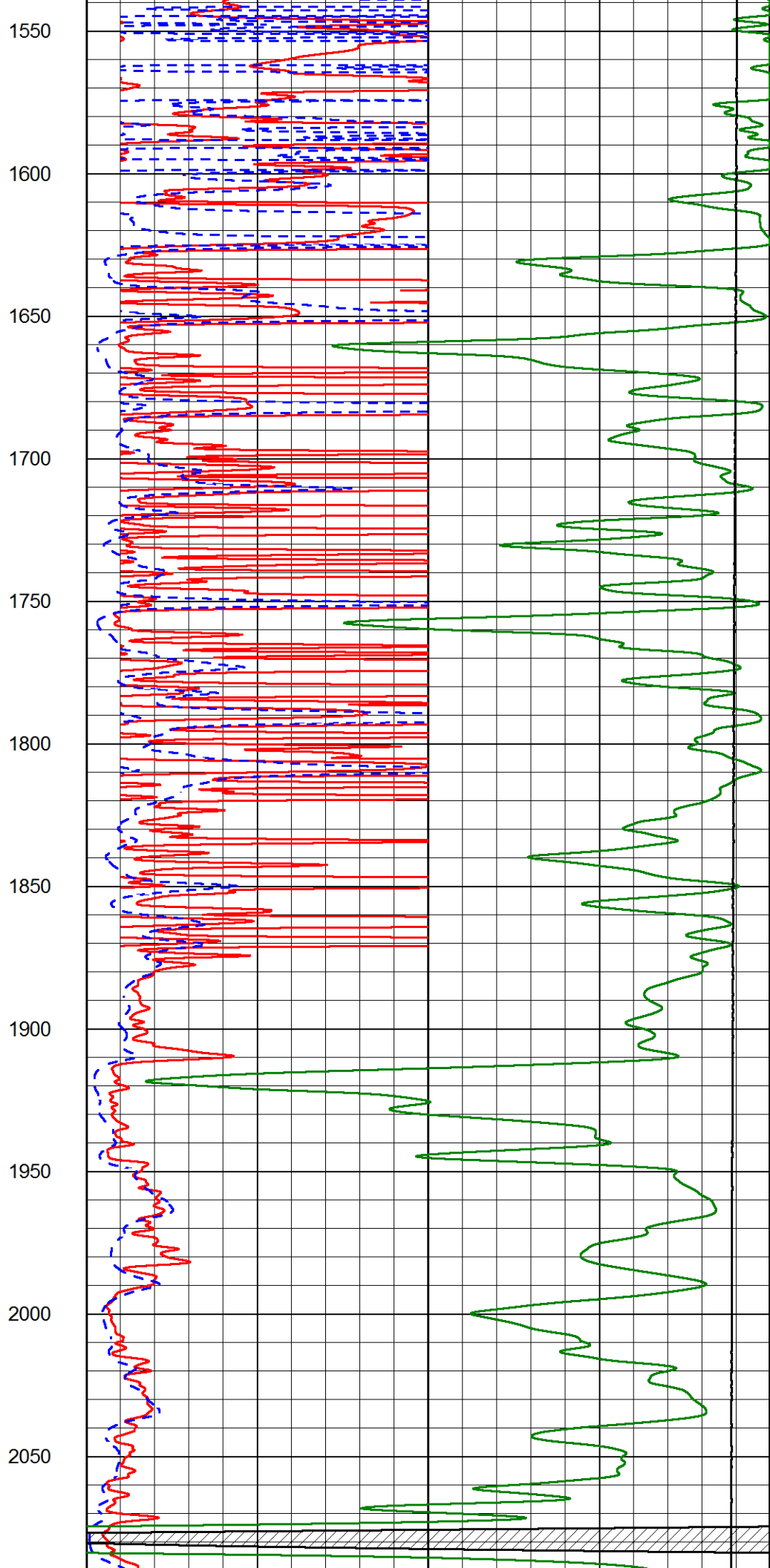
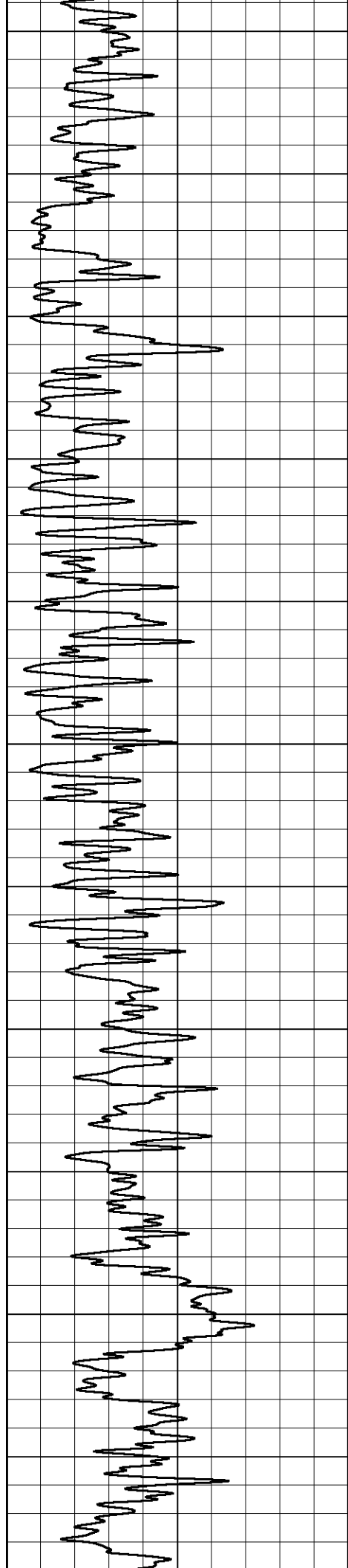


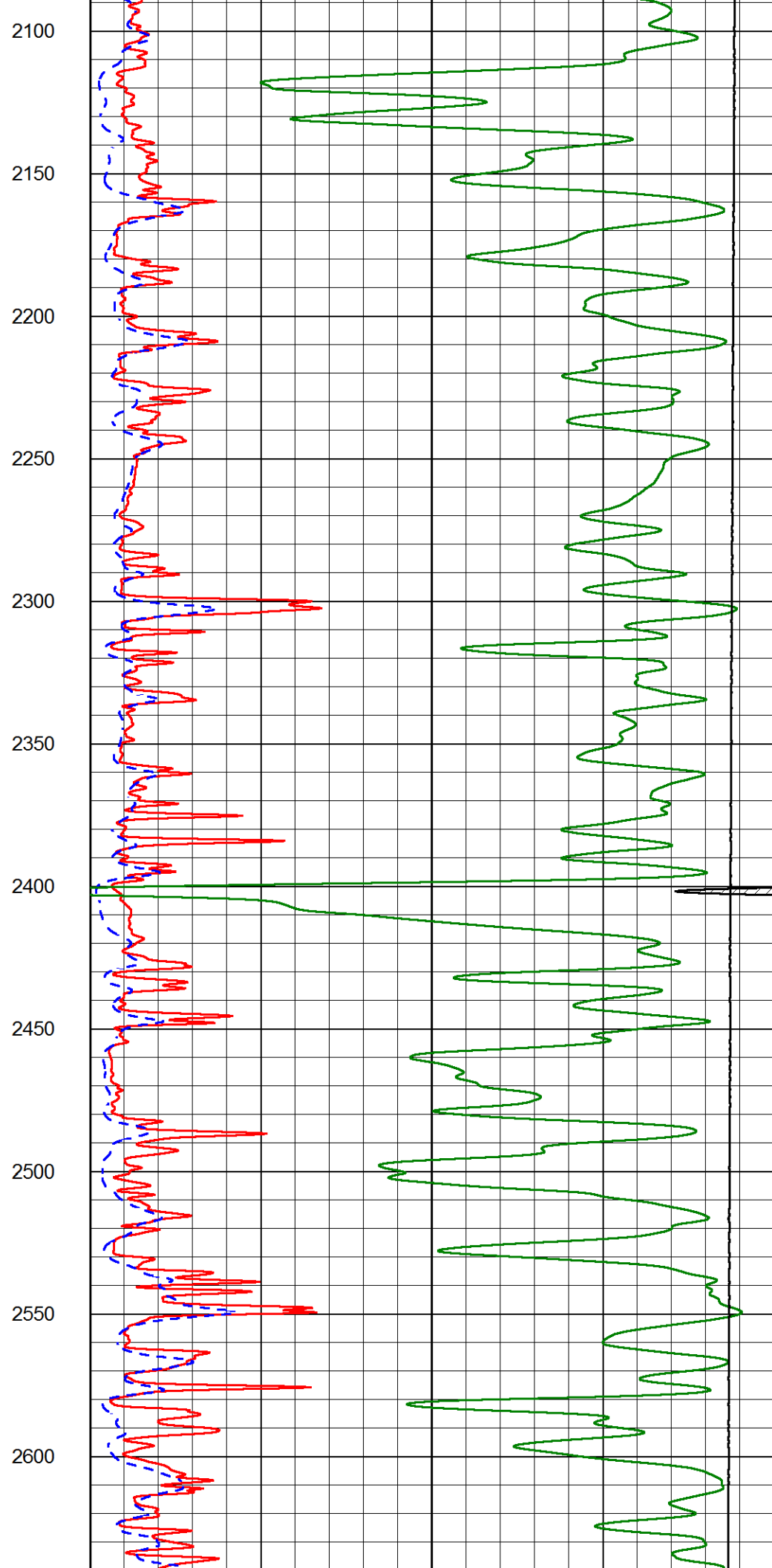
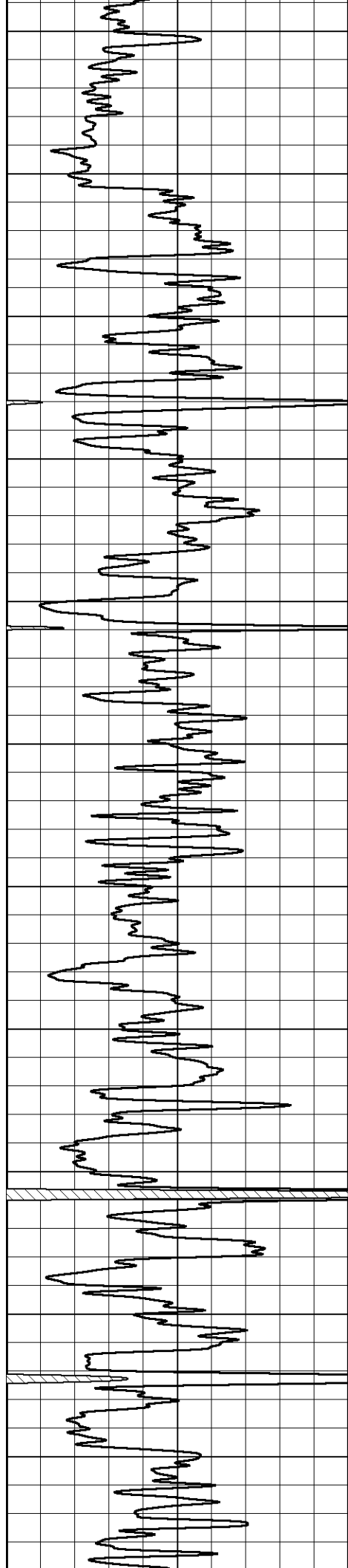


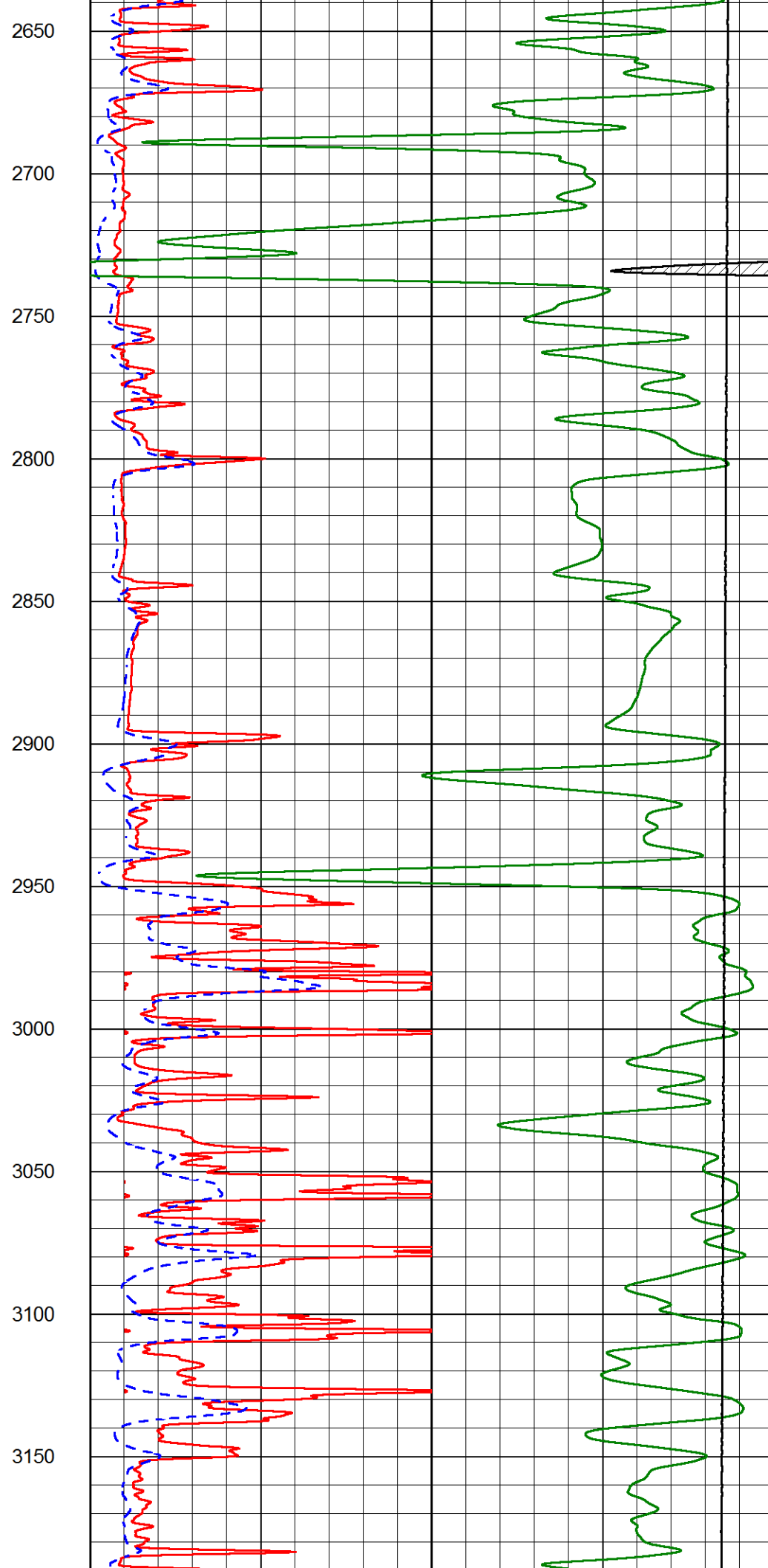
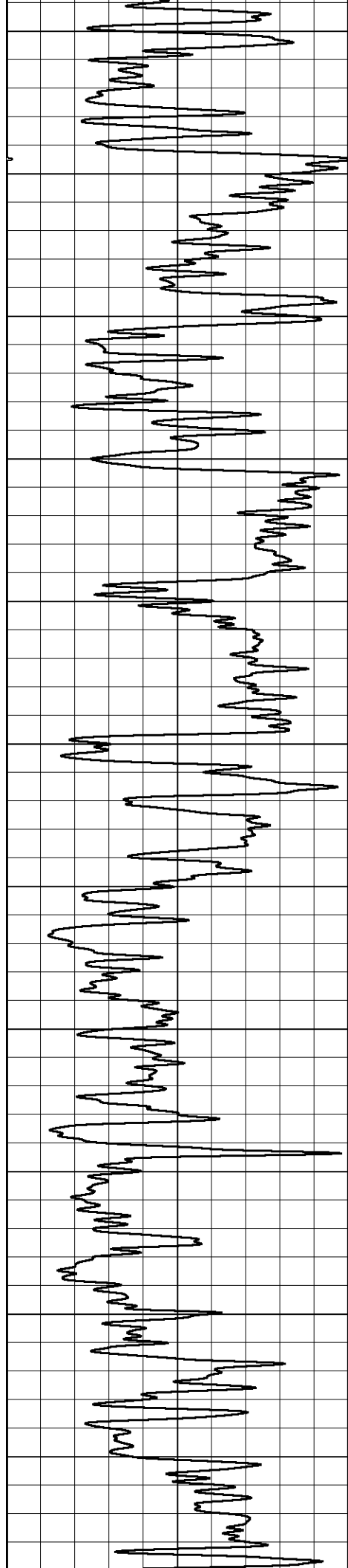


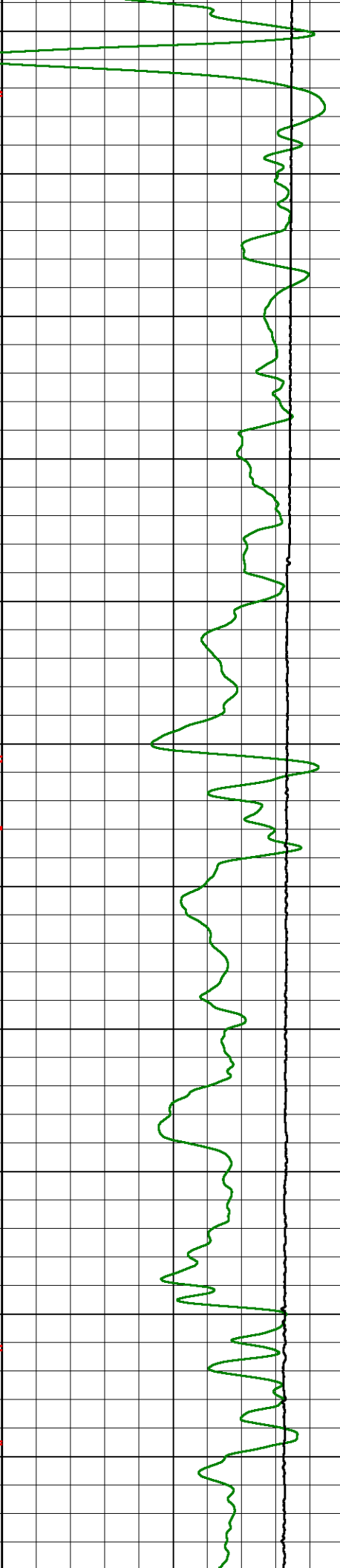
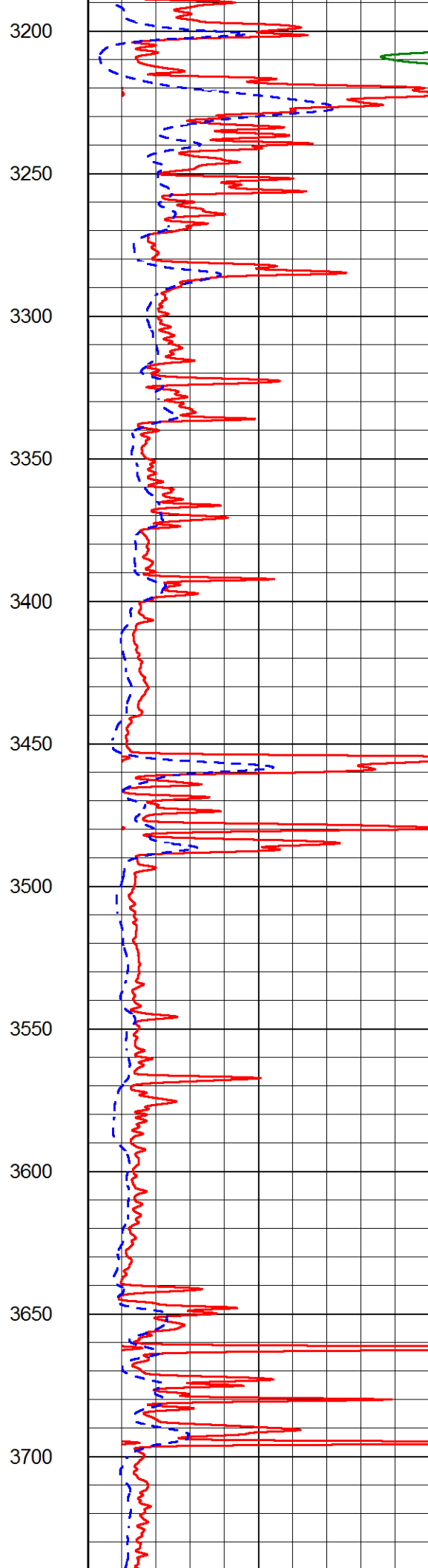
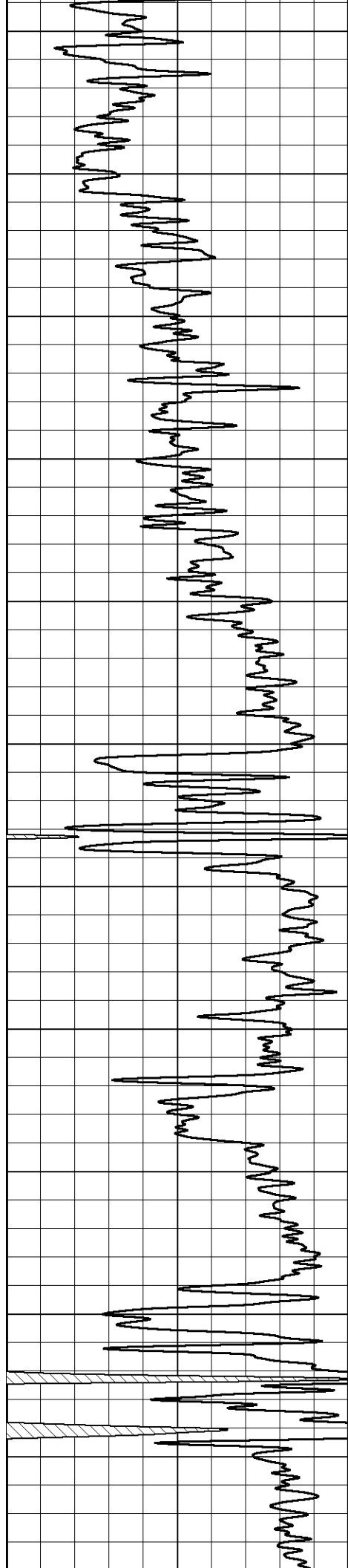
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1050
1100
1150
1200
1250
1300
1350
1400
1450
1500

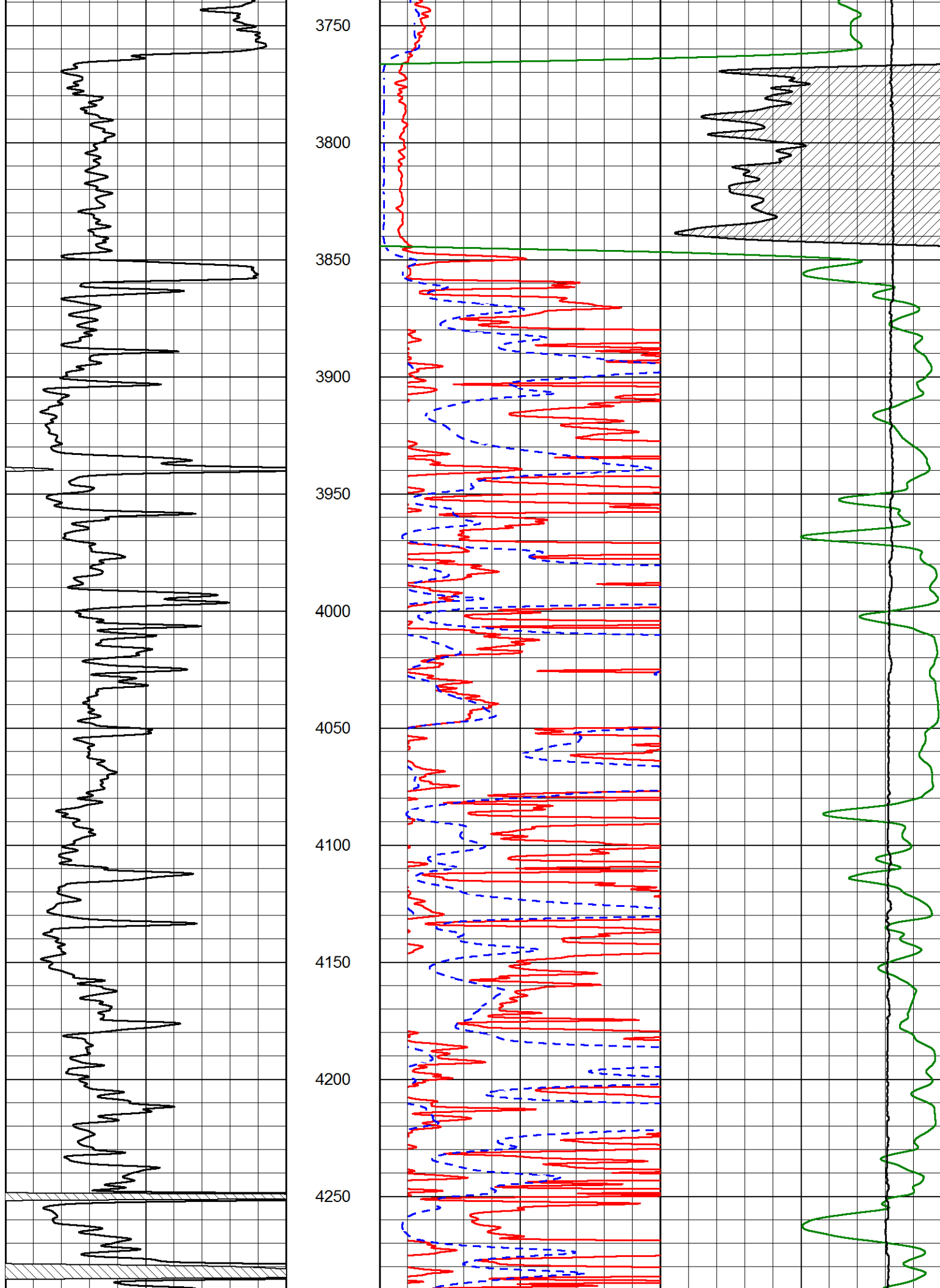


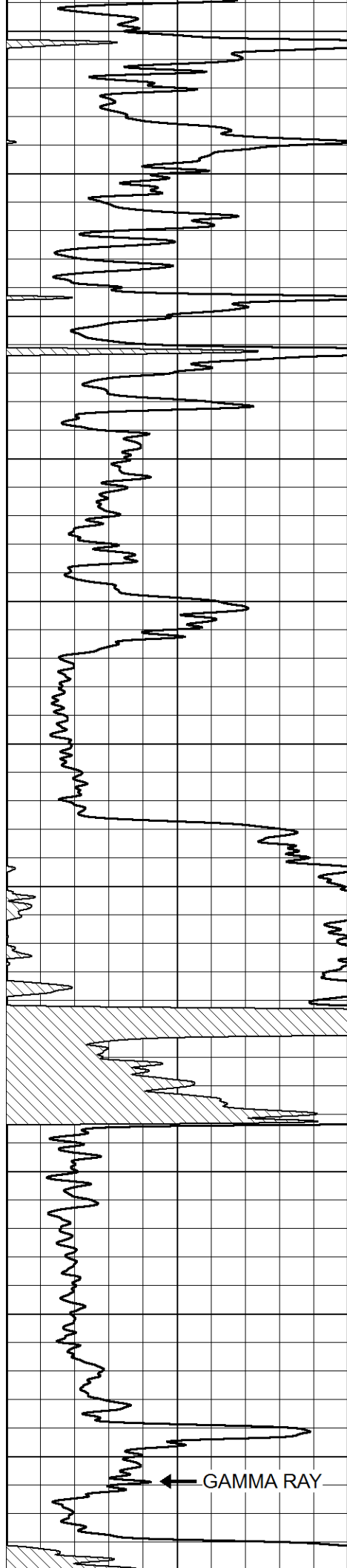












4300

4350

4400

4450

4500

4550

4600

4650

4700

4750

4800

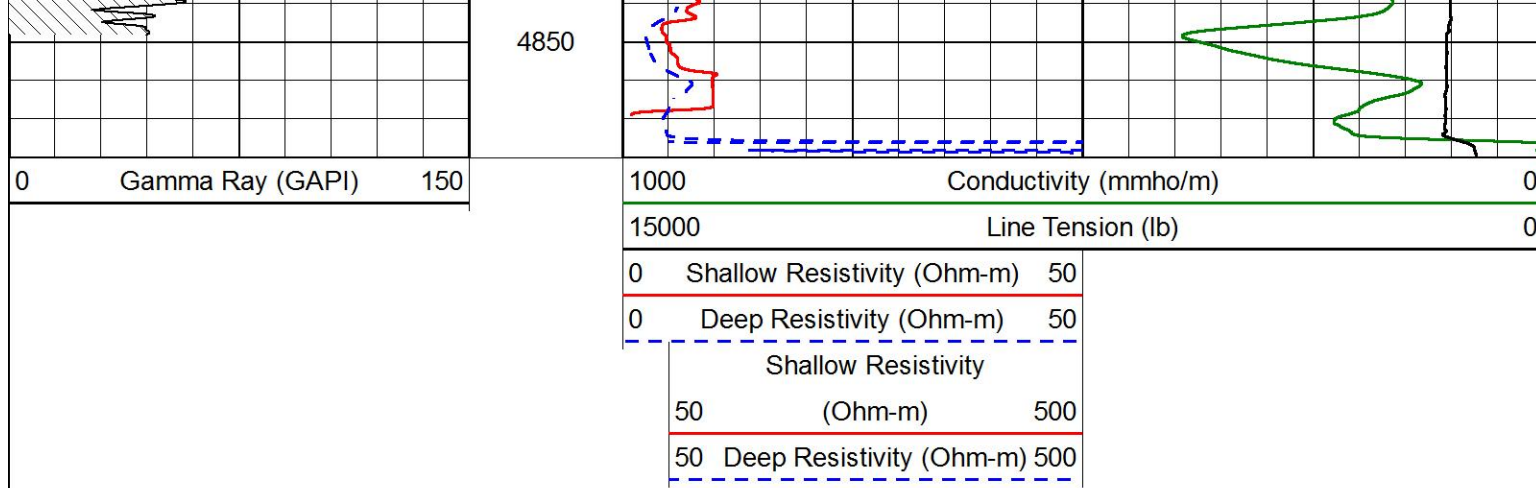
← GAMMA RAY

DEEP RES →

← SHALLOW RES

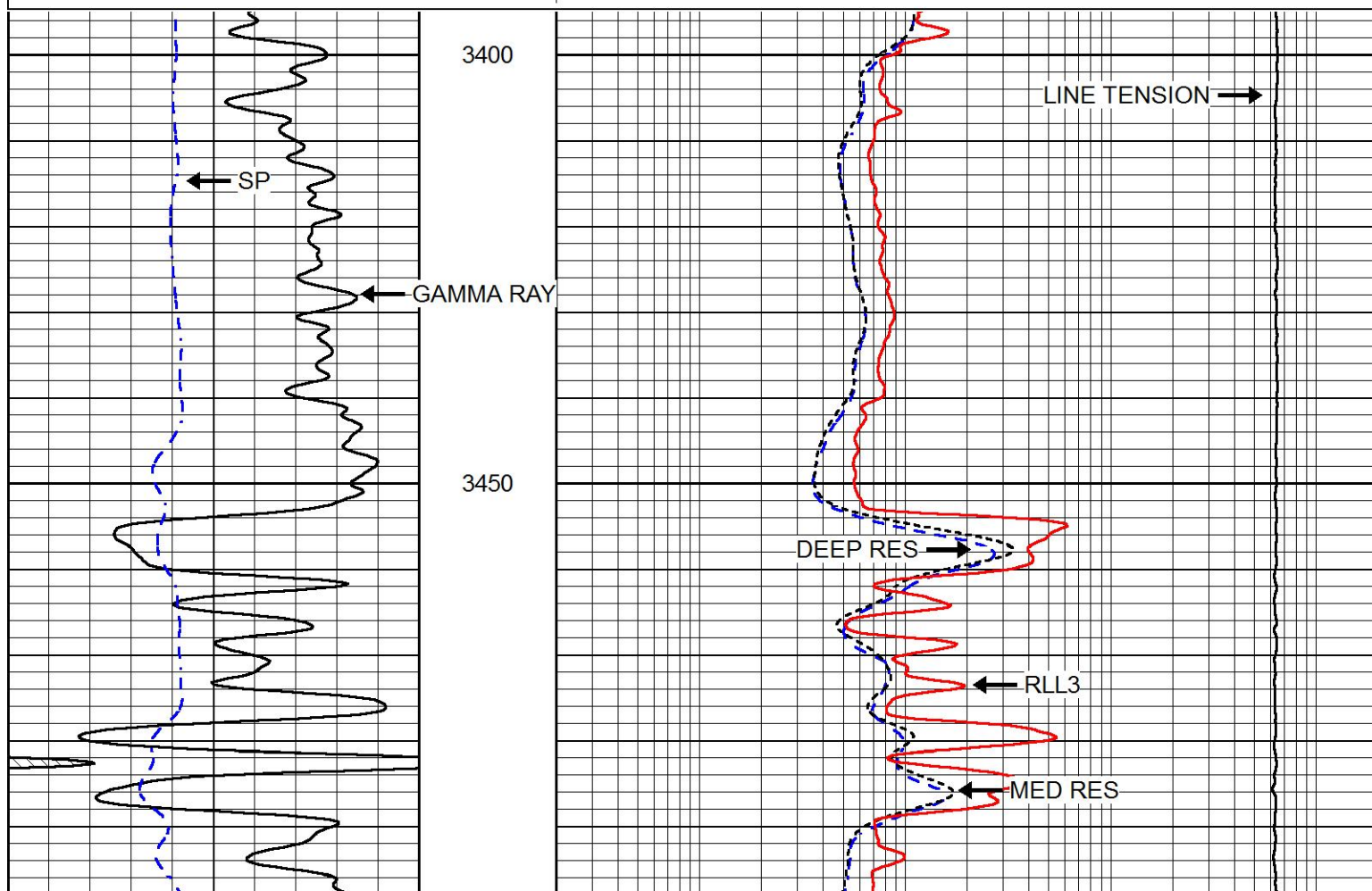
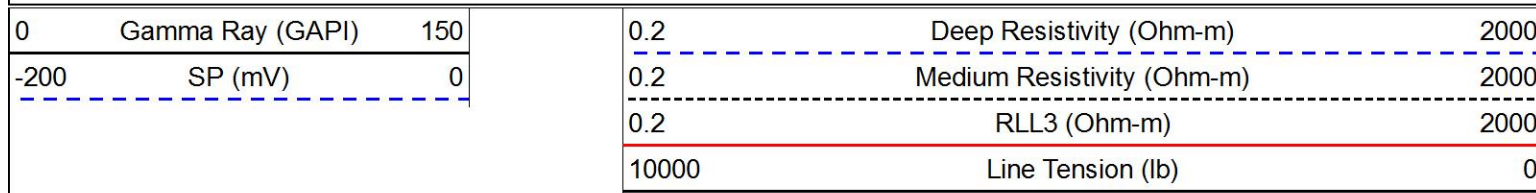
CONDUCTIVITY →

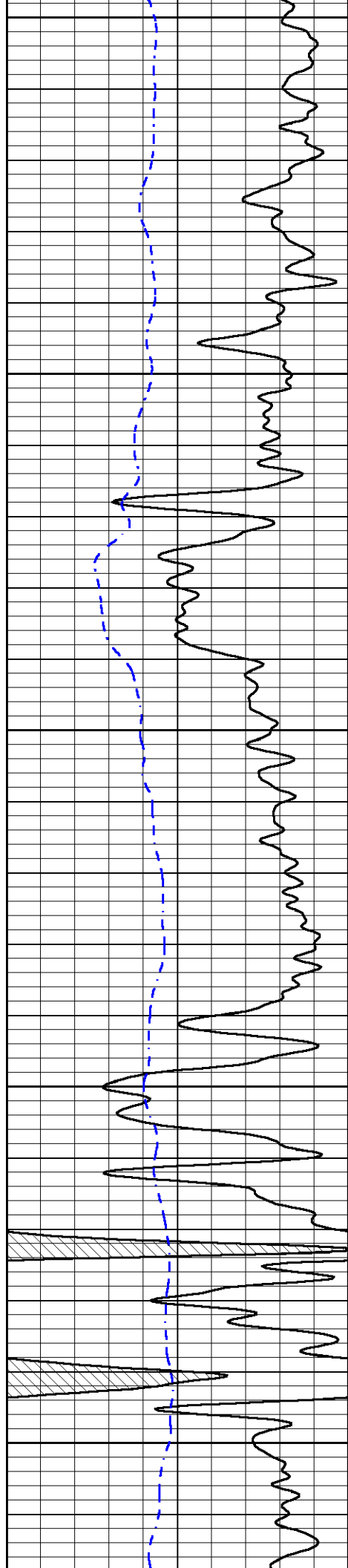
LINE TENSION →



MAIN PASS

Database File: charles griffin__sherry 3-9.db
 Dataset Pathname: STACK/pass5.1
 Presentation Format: dil
 Dataset Creation: Tue May 23 02:16:46 2017
 Charted by: Depth in Feet scaled 1:240





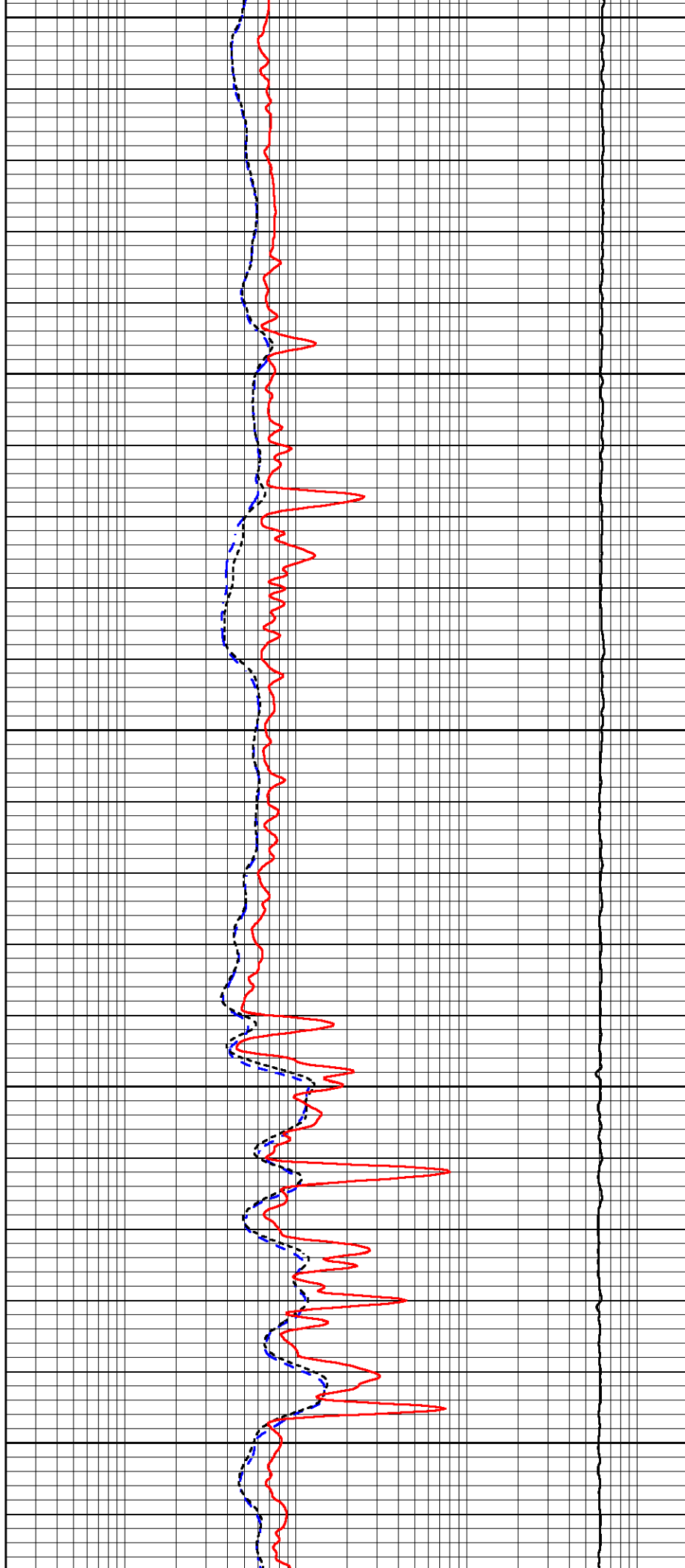
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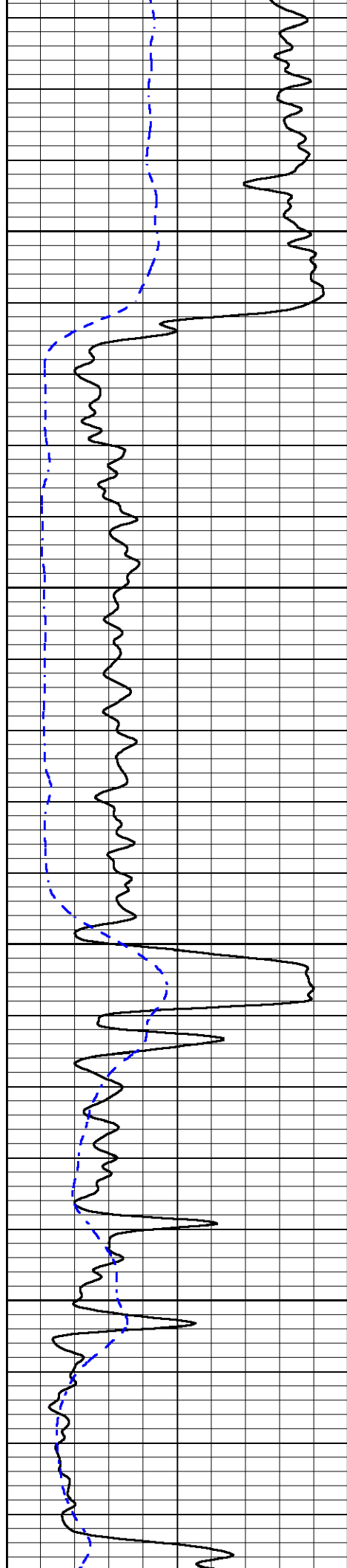
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3600

3650

3700



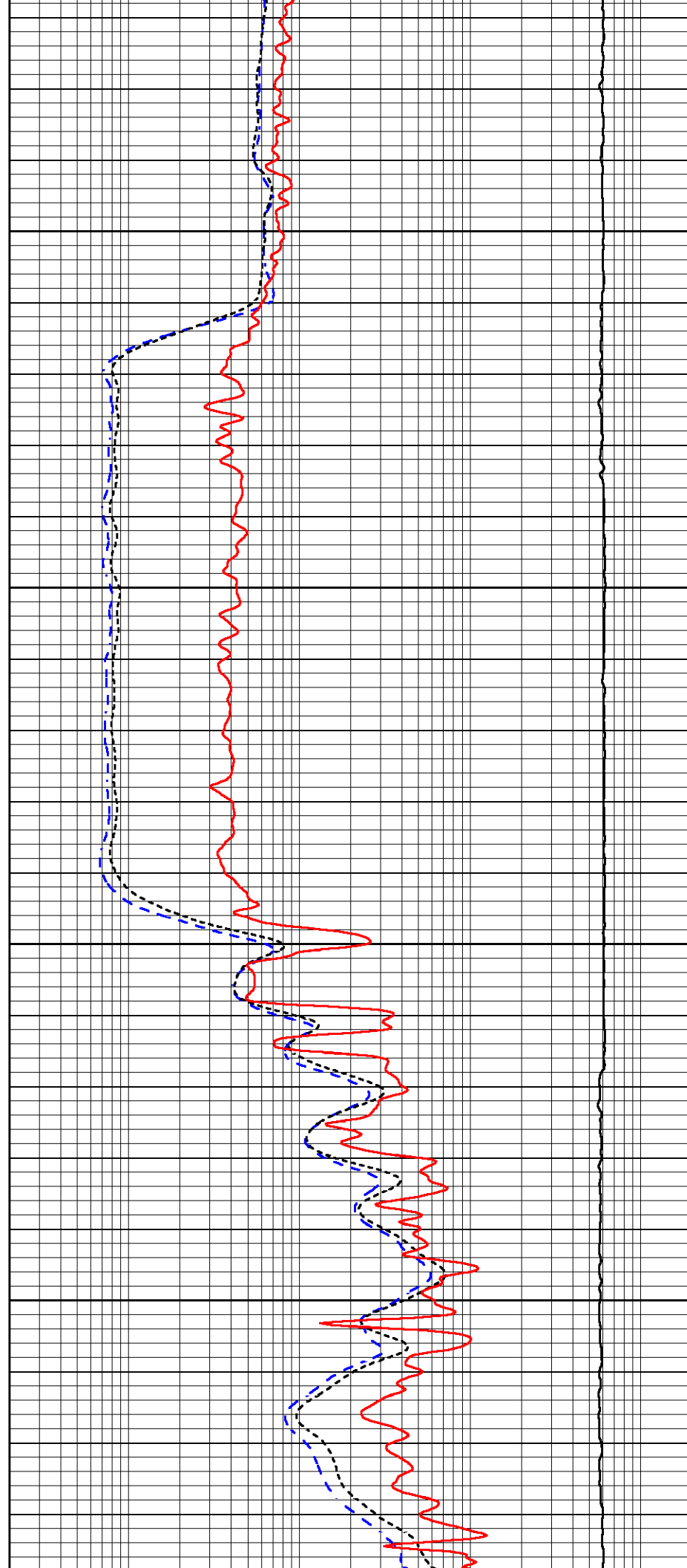


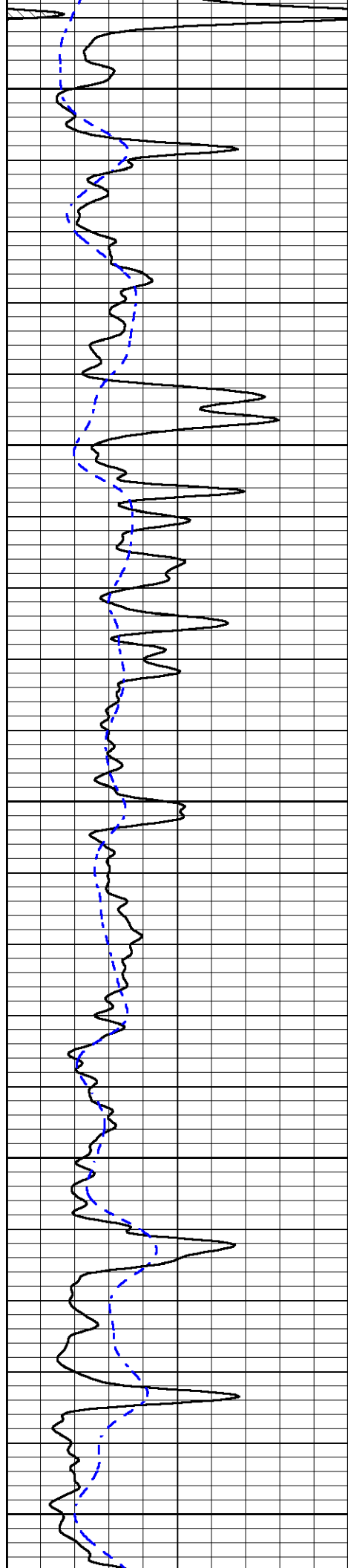
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3850

3900





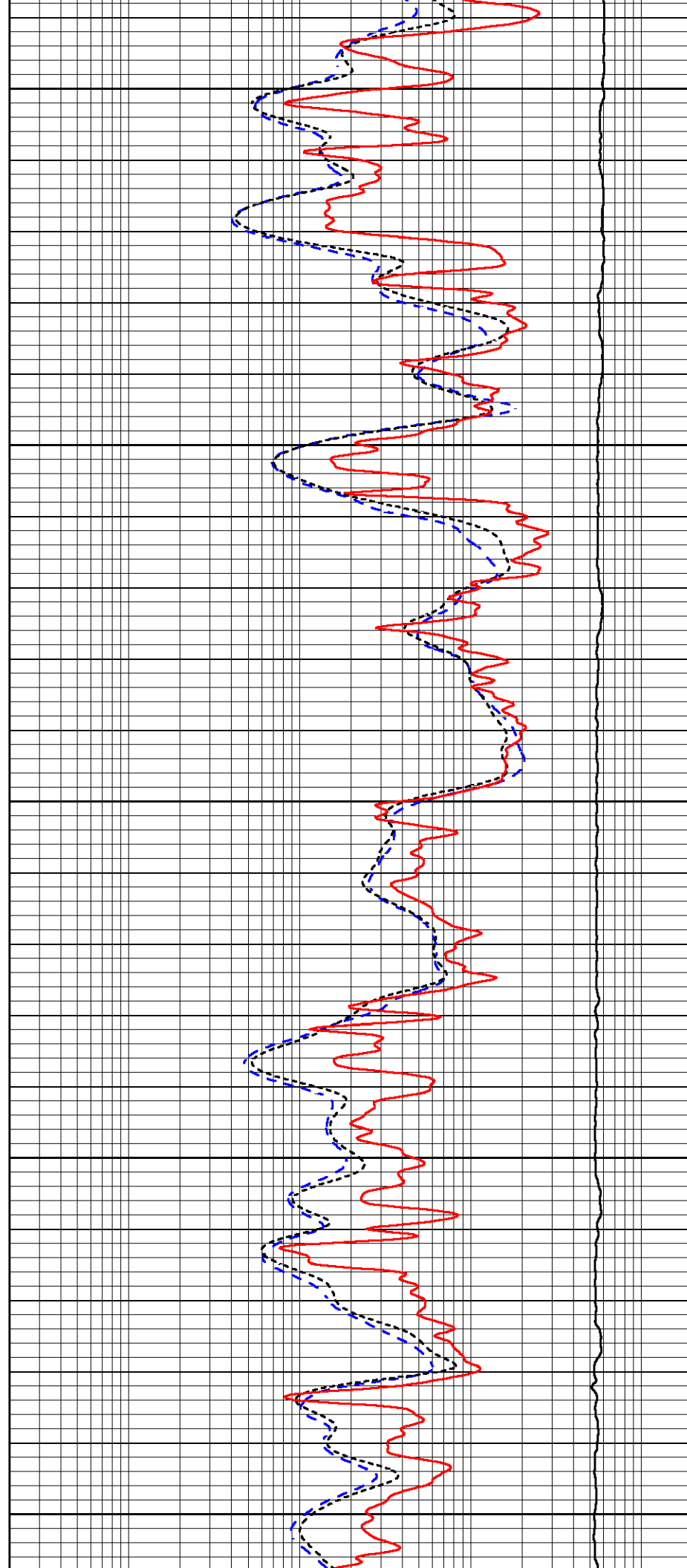
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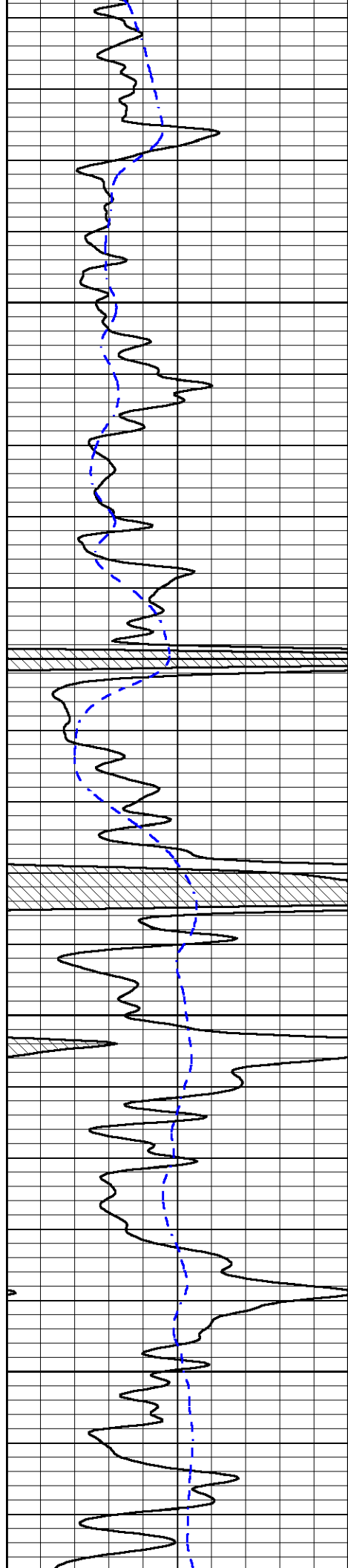
4000

4050

4100

4150



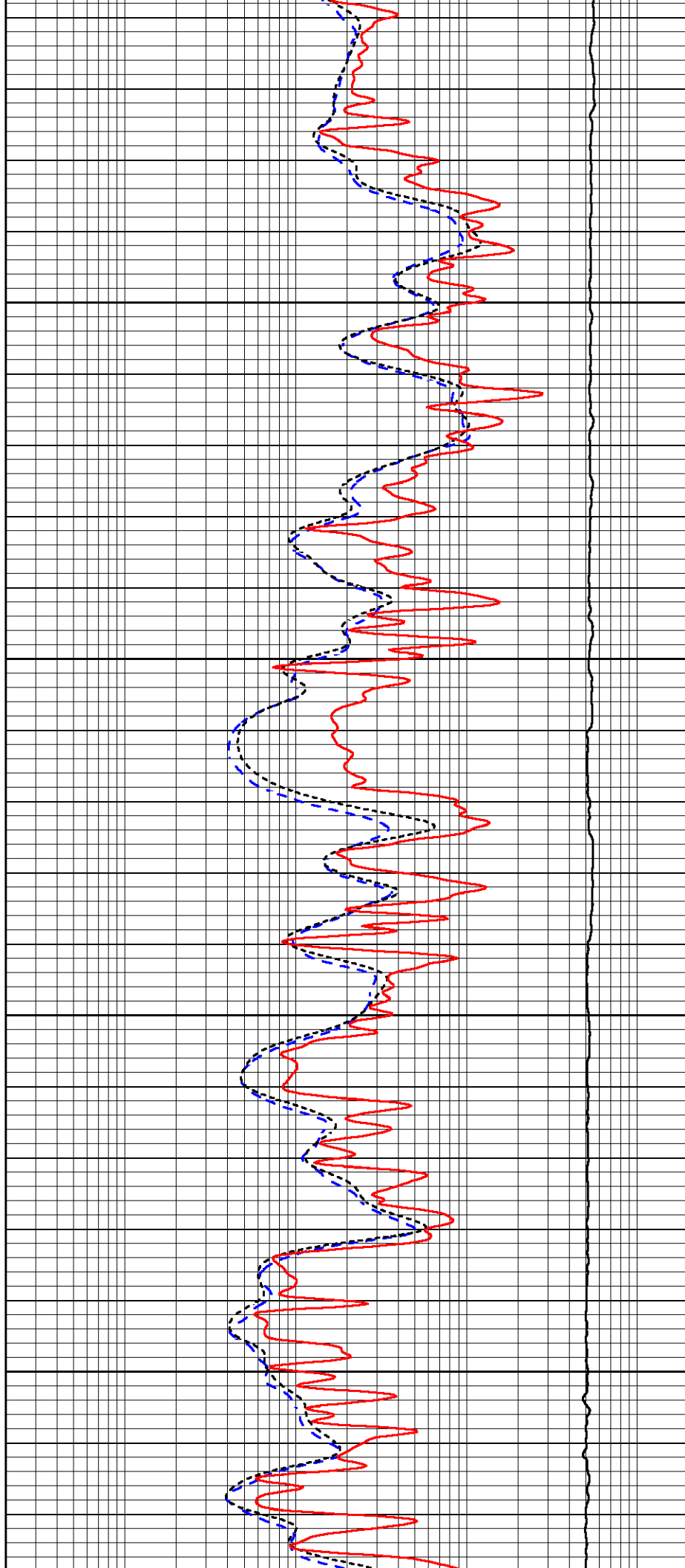


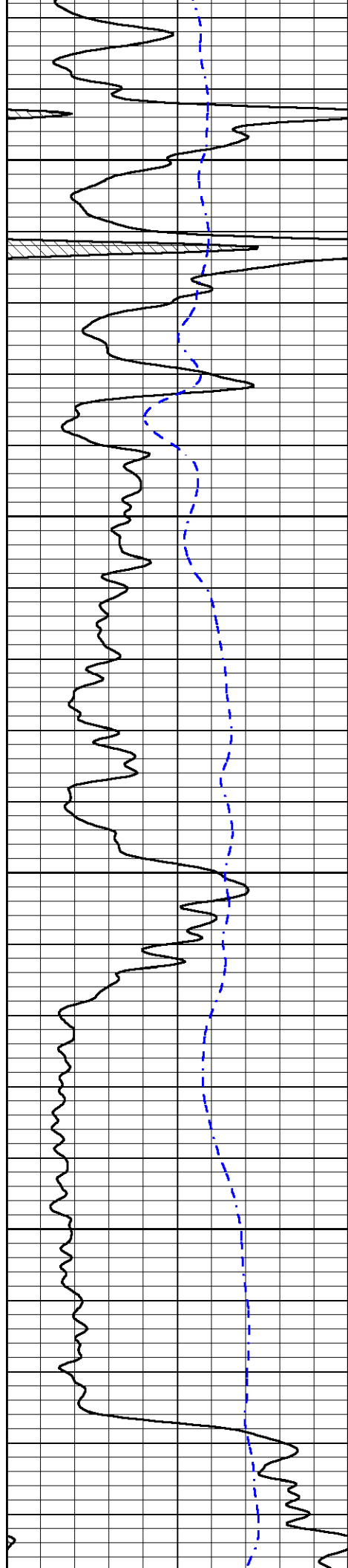
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4250

4300

4350



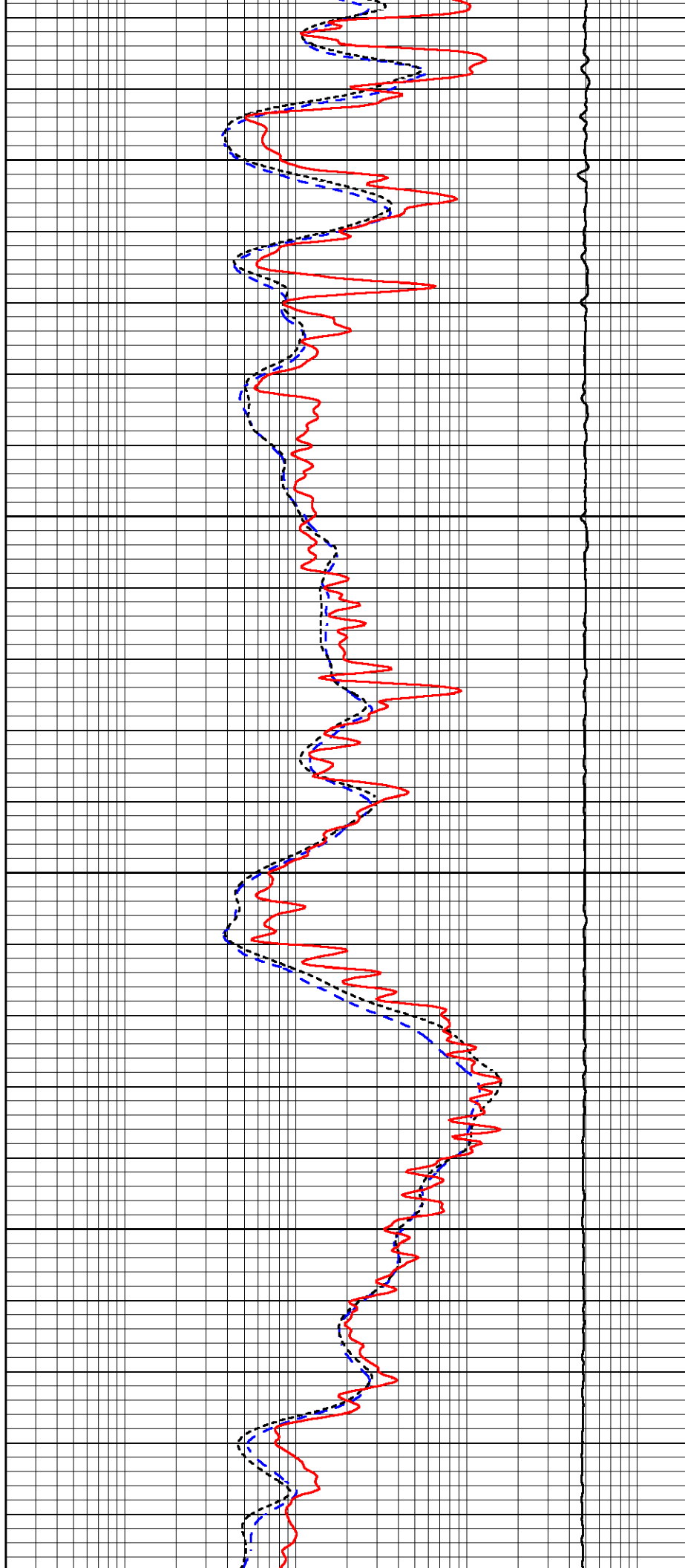


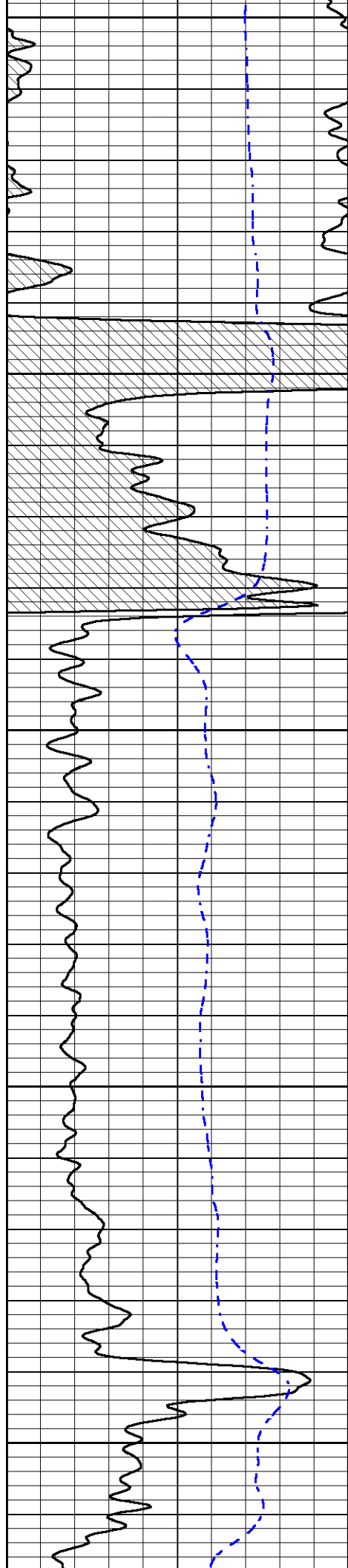
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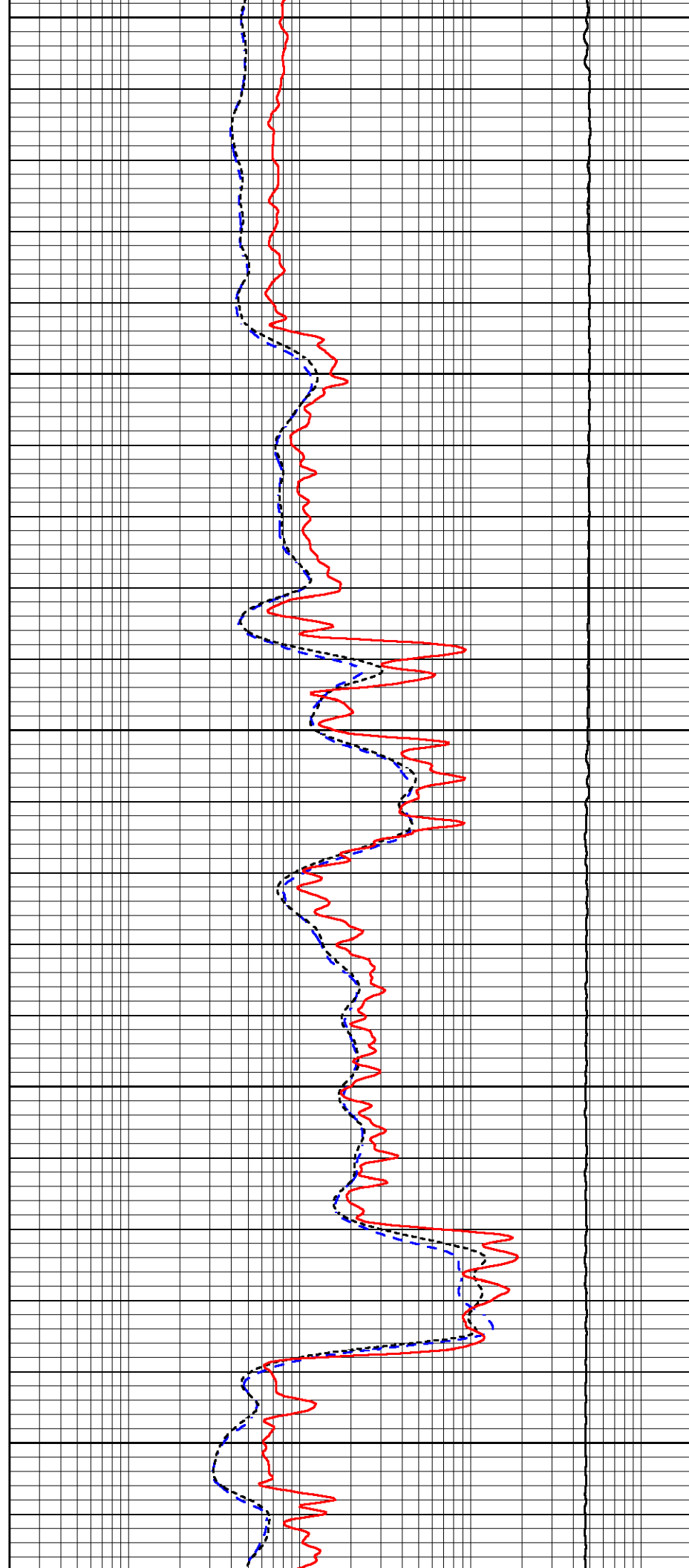
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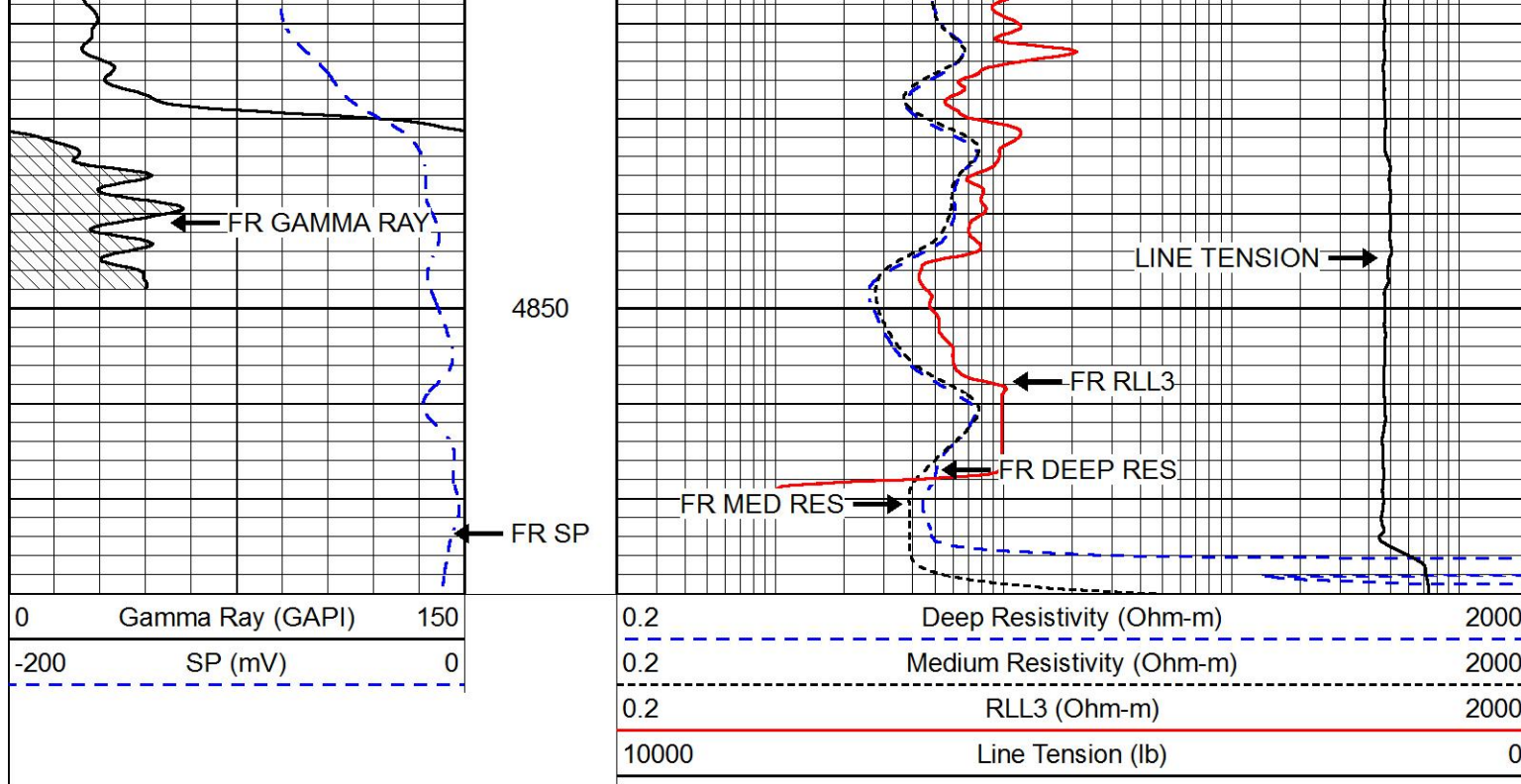
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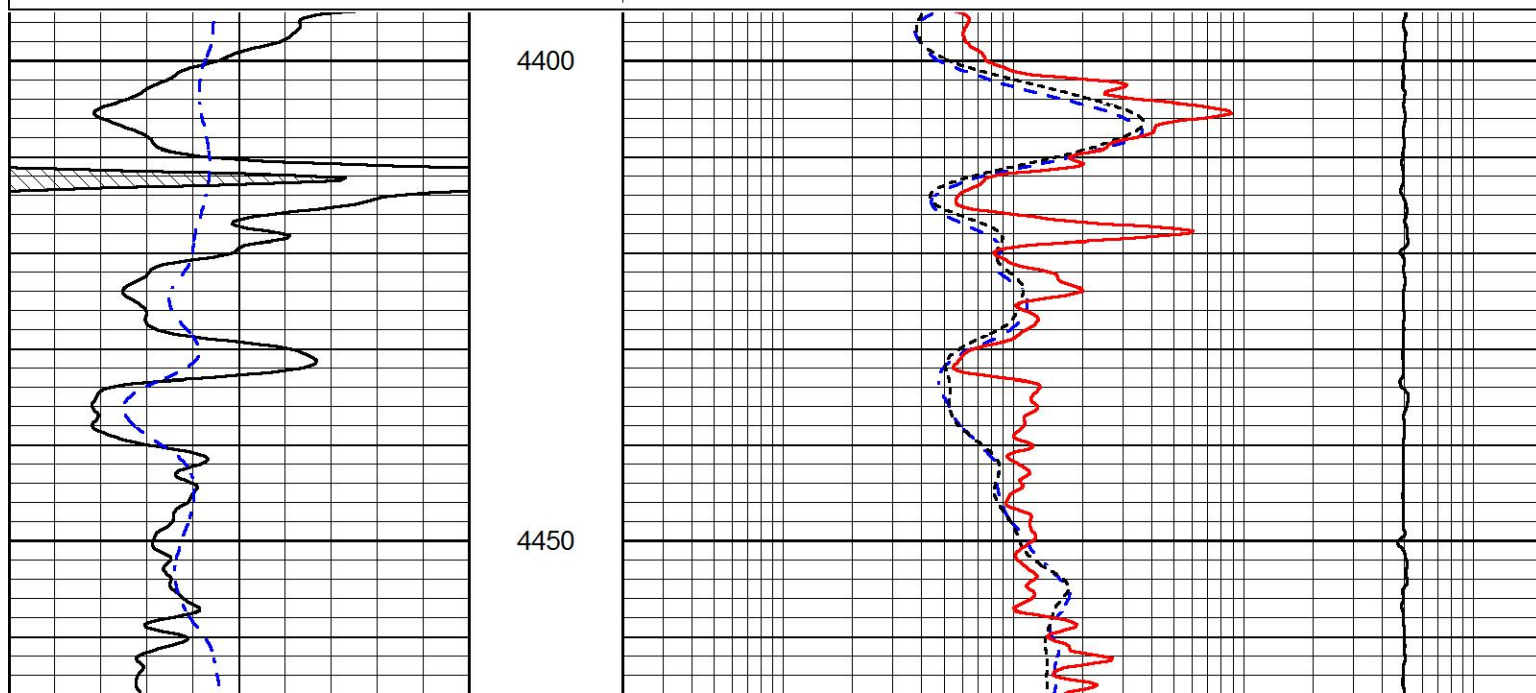
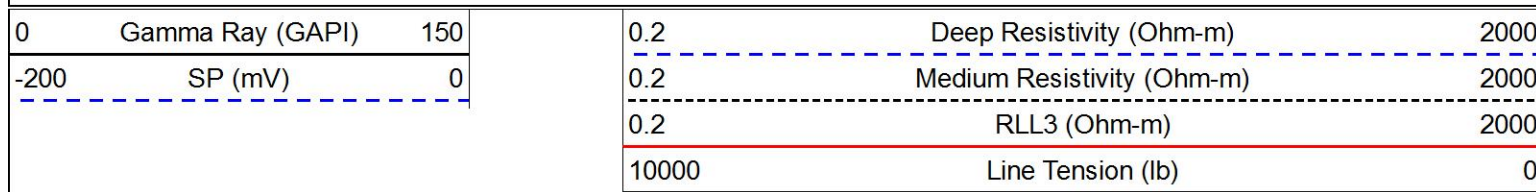
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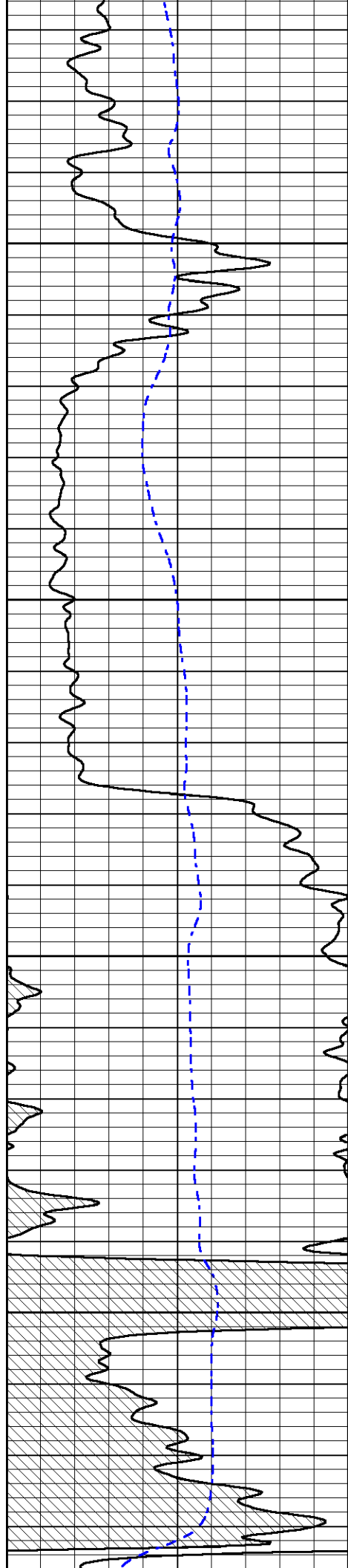




REPEAT SECTION

Database File: charles griffin__sherry 3-9.db
 Dataset Pathname: STACK/pass4.4
 Presentation Format: dil
 Dataset Creation: Tue May 23 01:53:40 2017
 Charted by: Depth in Feet scaled 1:240



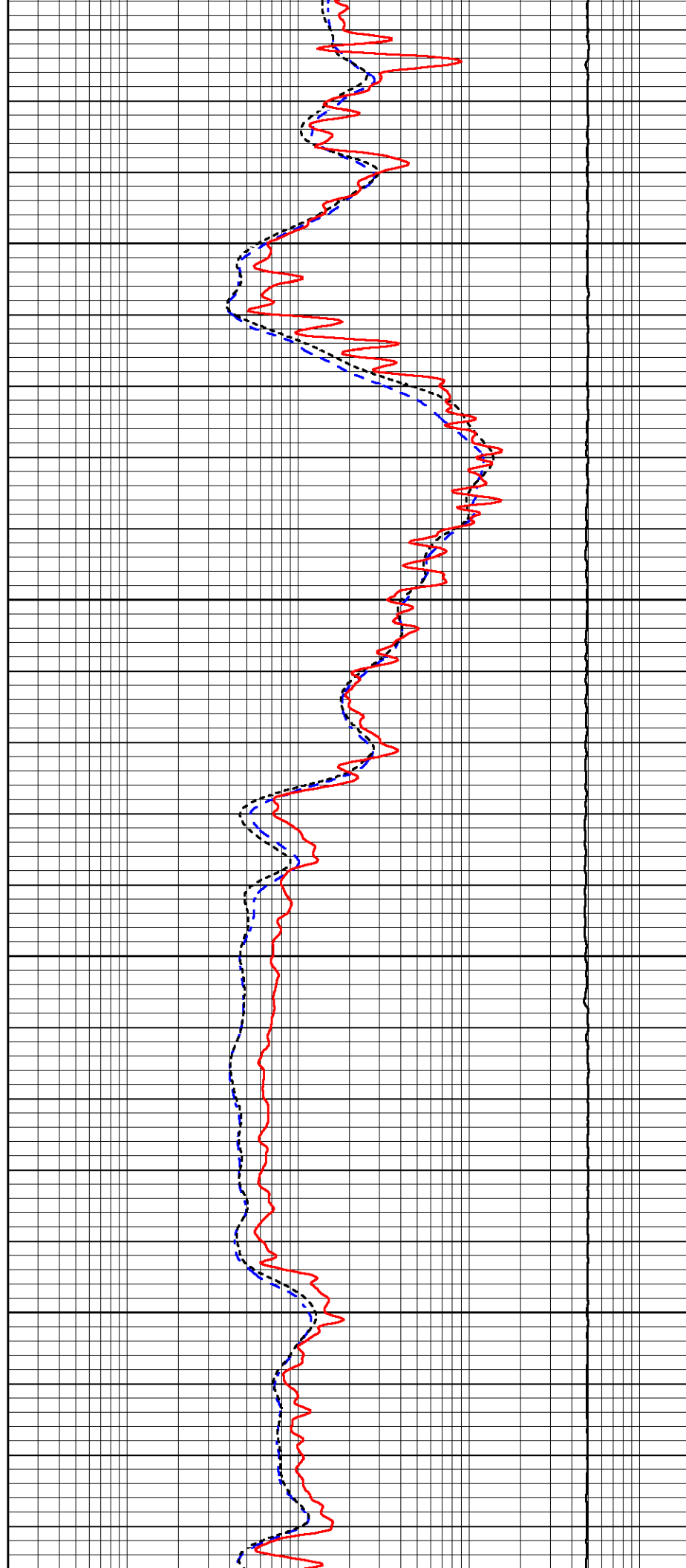


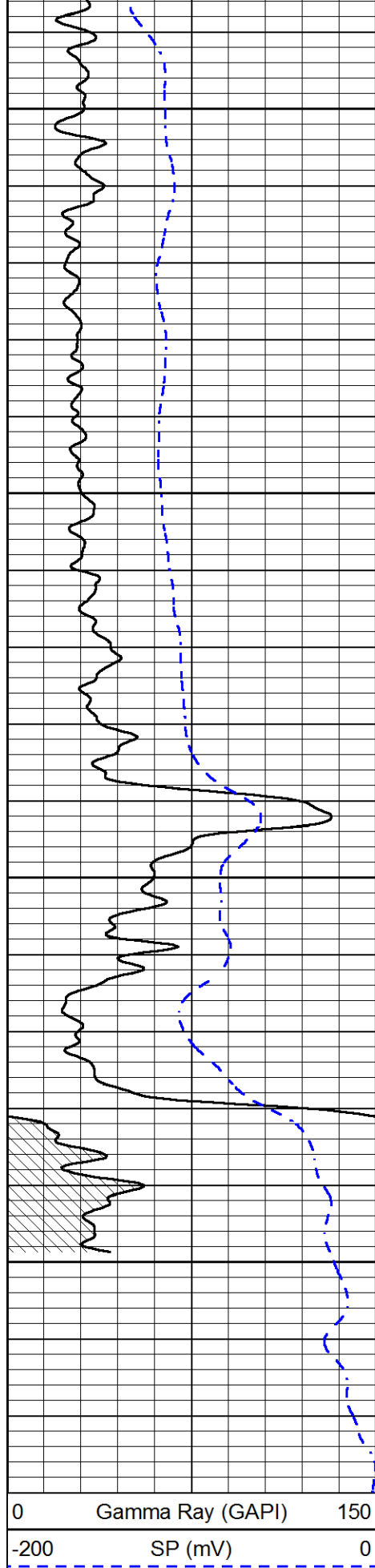
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4650





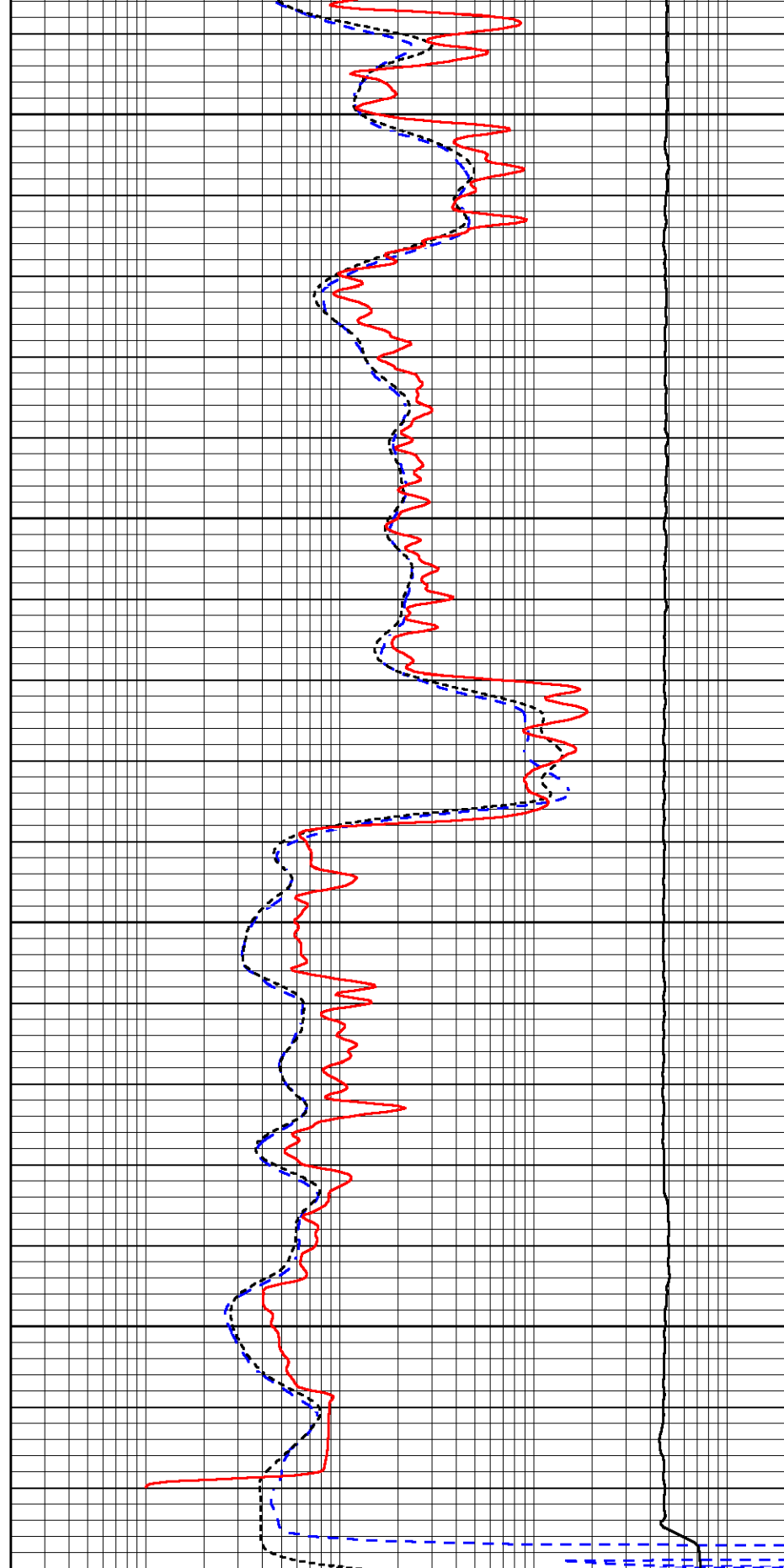
4700

4750

4800

4850

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

Calibration Report

Database File charles griffin__sherry 3-9.db
Dataset Pathname STACK/pass5.2
Dataset Creation Tue May 23 01:51:13 2017

Dual Induction Calibration Report

Serial-Model: PSI 91-M&W
Calibration Performed: Sat May 06 17:53:33 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	166.796	835.089	0.000	255.800	mmho/m	0.430	-30.000
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.360	-31.000

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W
Source / Verifier: 16955B / 2ci
Master Calibration Performed: Sat May 06 17:53:49 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	5174.18	6425.27	cps
Aluminum	2.665	g/cc	963.17	4037.42	cps
Spine Angle = 74.55			Density/Spine Ratio = 0.522		
	Size		Reading		
Small Ring	8.00	in	1.84		
Large Ring	22.00	in	1.46		

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W
Calibration Performed: Sat May 6 10:30:30 2017

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: 89
Tool Model: M&W
Calibration Performed: Sat May 06 17:54:04 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps



Company	CHARLES N. GRIFFIN
Well	SHERRY #3-9
Field	MEDICINE LODGE - BOGGS
County	BARBER
State	KANSAS