



DUAL INDUCTION LOG

Company: AMERICAN WARRIOR, INC.
 Well: BLAESI #9-6
 Field: UNKNOWN
 County: WALLACE
 State: KANSAS

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 Well: BLAESI #9-6
 Field: UNKNOWN
 County: WALLACE
 State: KANSAS

Location: 335' FSL & 1800' FEL
 SEC 6 TWP 15S RGE 41W
 Permanent Datum: GROUND LEVEL Elevation 3775'
 Log Measured From: KELLY BUSHING
 Drilling Measured From: KELLY BUSHING
 Other Services: CNL/CDL MEL
 Elevation: K.B. 3783', D.F. N/A, G.L. 3775'

Date	8/11/2017
Run Number	ONE
Depth Driller	5200'
Depth Logger	5202'
Bottom Logged Interval	5201'
Top Log Interval	350'
Casing Driller	8.625" @ 366'
Casing Logger	364'
Bit Size	7.875"
Type Fluid in Hole	CHEMICAL
Salinity, ppm CL	5000
Density / Viscosity	9.4 58
pH / Fluid Loss	9.5 8.8
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.60 @ 80
Rmt @ Meas. Temp	0.45 @ 80
Rmc @ Meas. Temp	0.81 @ 80
Source of Rmf / Rmc	CHARTS
Rm @ BHT	0.38 @ 128
Operating Rig Time	4 HOURS
Max Rec. Temp. F	128
Equipment Number	91
Location	HAYS
Recorded By	D. SCHMIDT
Witnessed By	LUKE THOMPSON

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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.

SHARON SPRINGS,
 9 WEST TO 9 RD, 8 SOUTH,
 WEST AND NORTH TO LOCATION

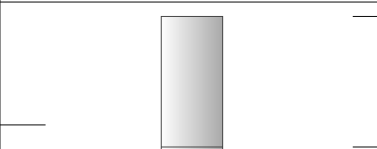
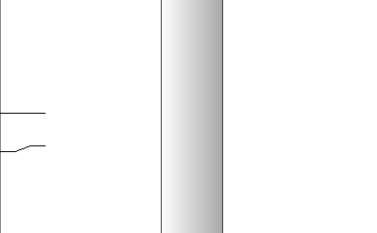
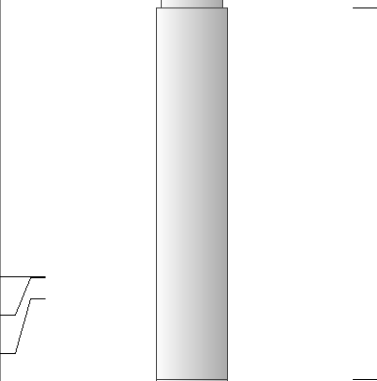
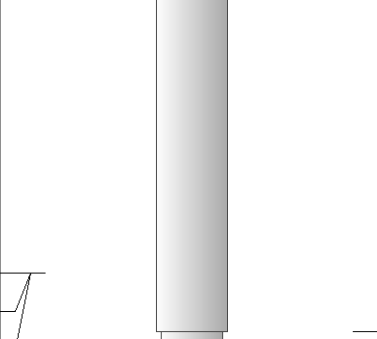
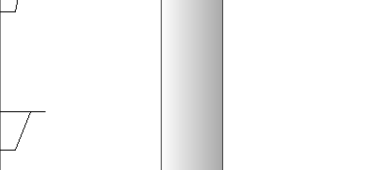
Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
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: LUKE THOMPSON 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	500	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	80	0	5.5	0	5202	128	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (90-1031)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					

			DIL-M&W (PSI 91)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset:			american warrior_blaesi_9-6.db: field/well/STKML/pass3.7			
Total length:			43.08 ft			
Total weight:			685.00 lb			
O.D.:			4.00 in			

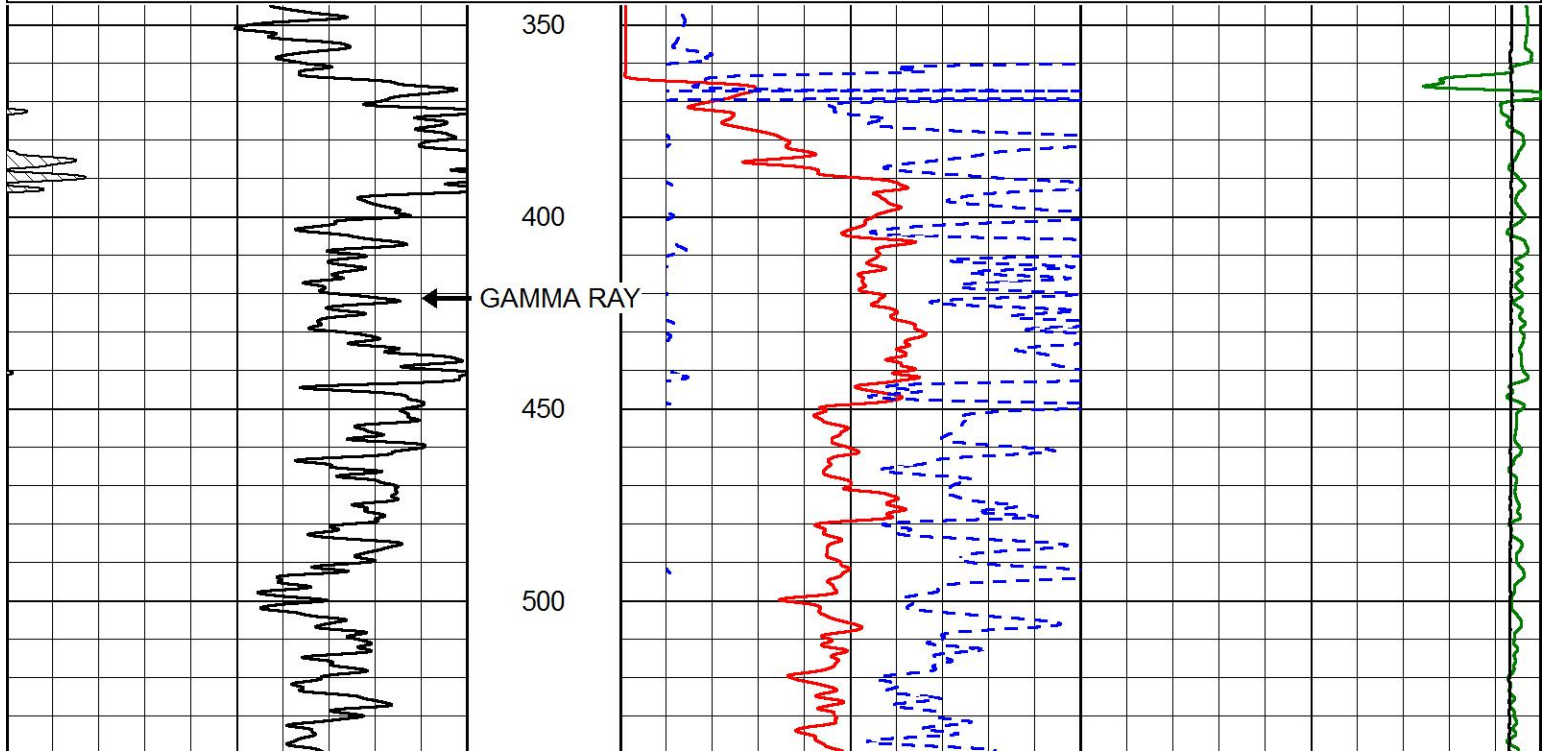


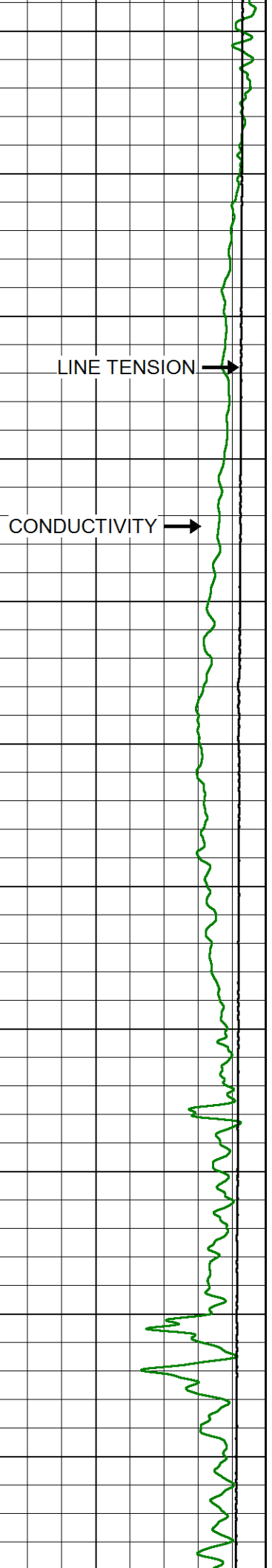
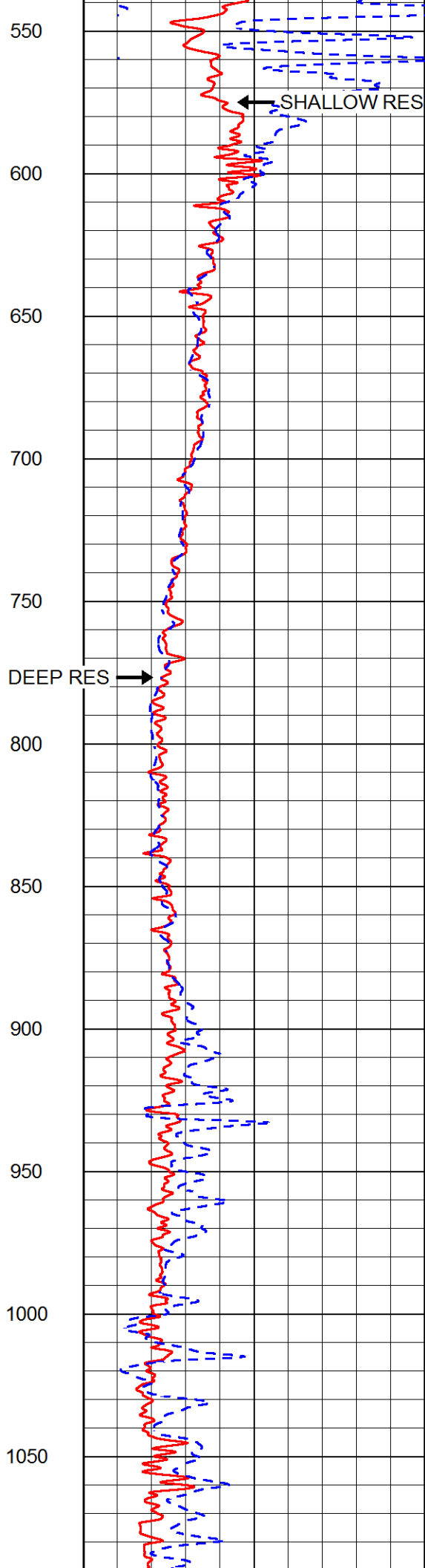
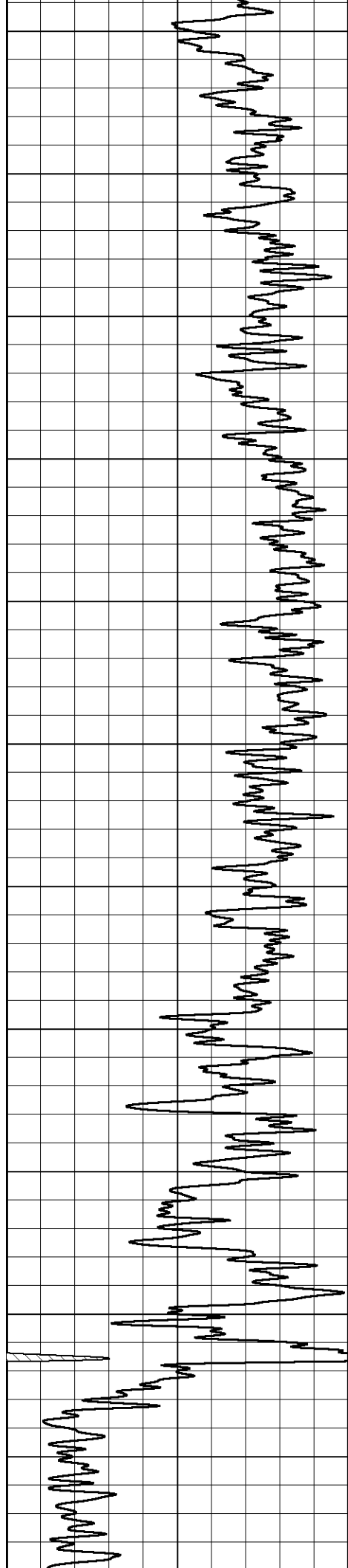
PIONEER
Pioneer Energy Services

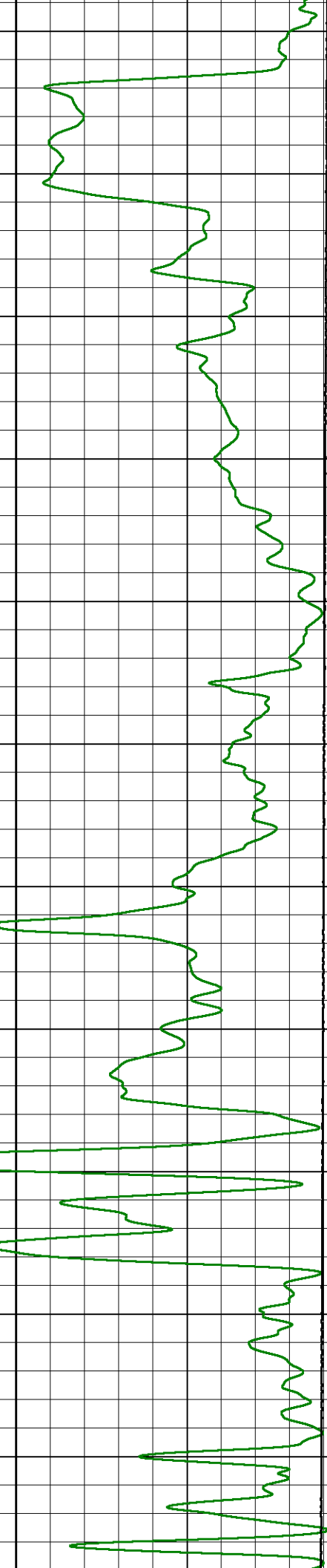
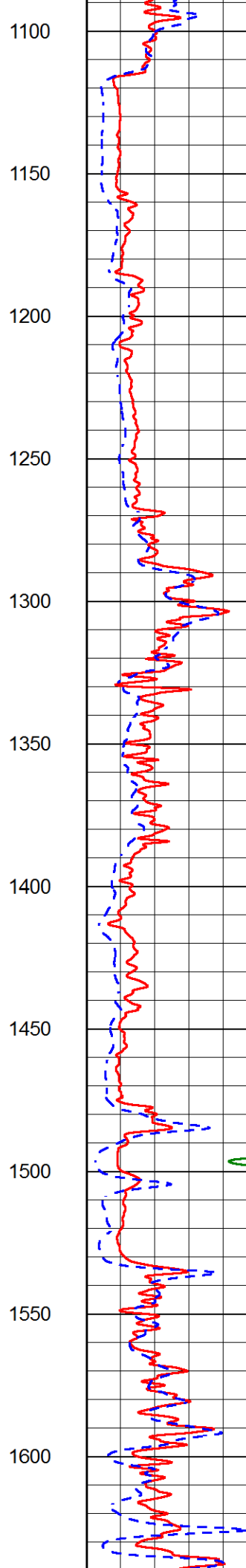
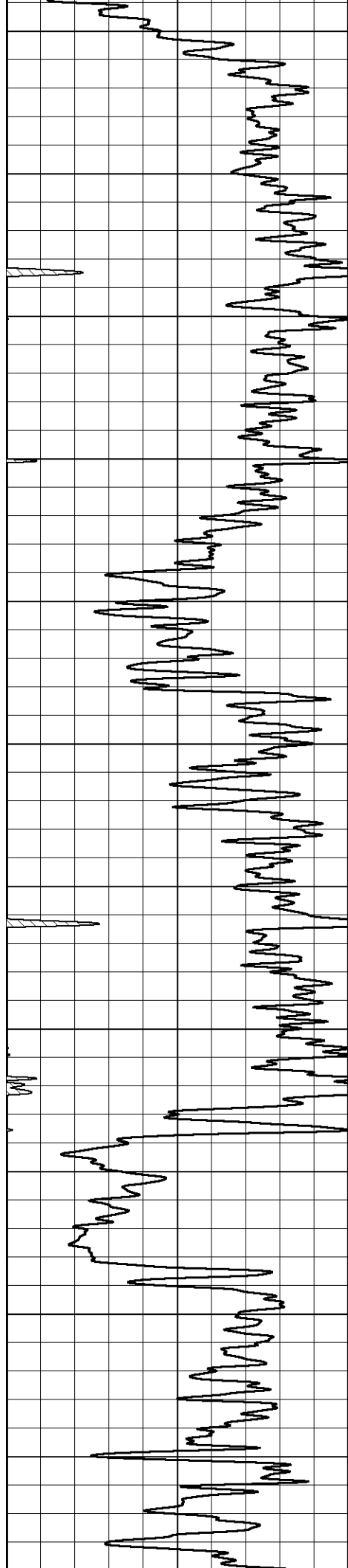
MAIN PASS

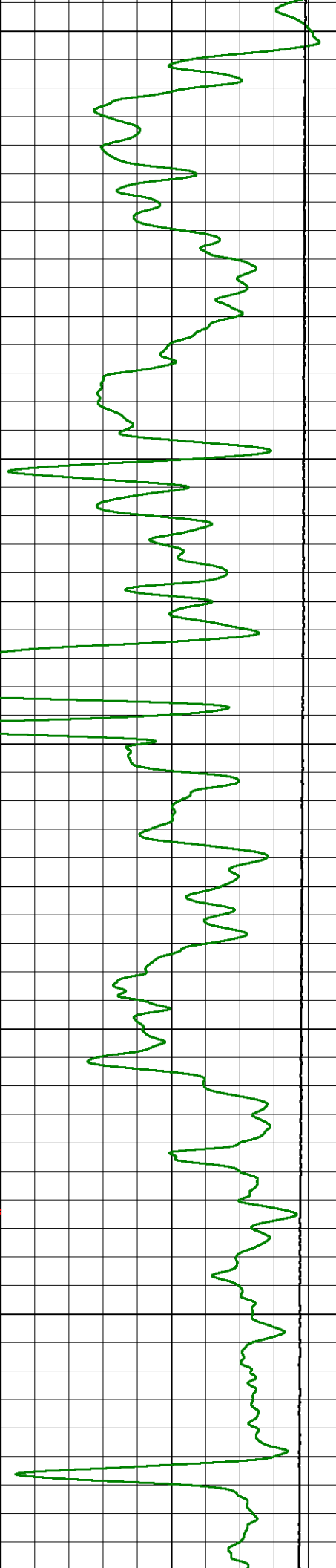
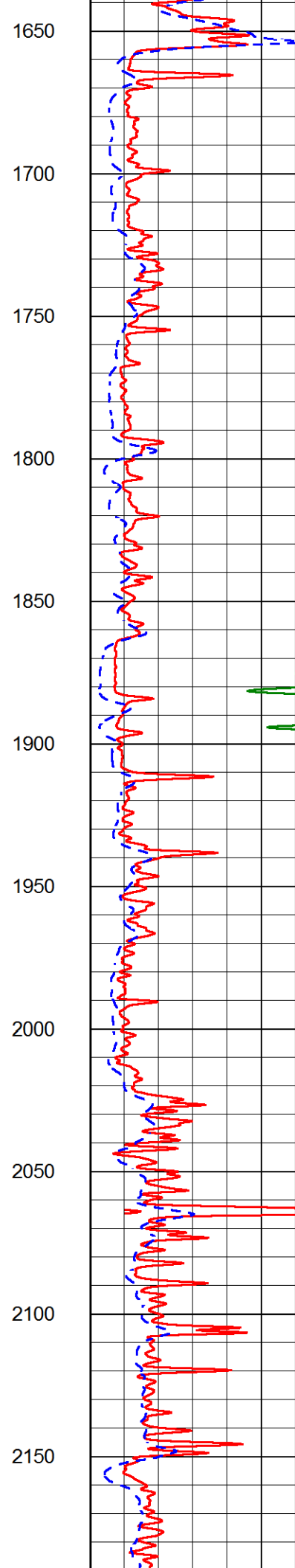
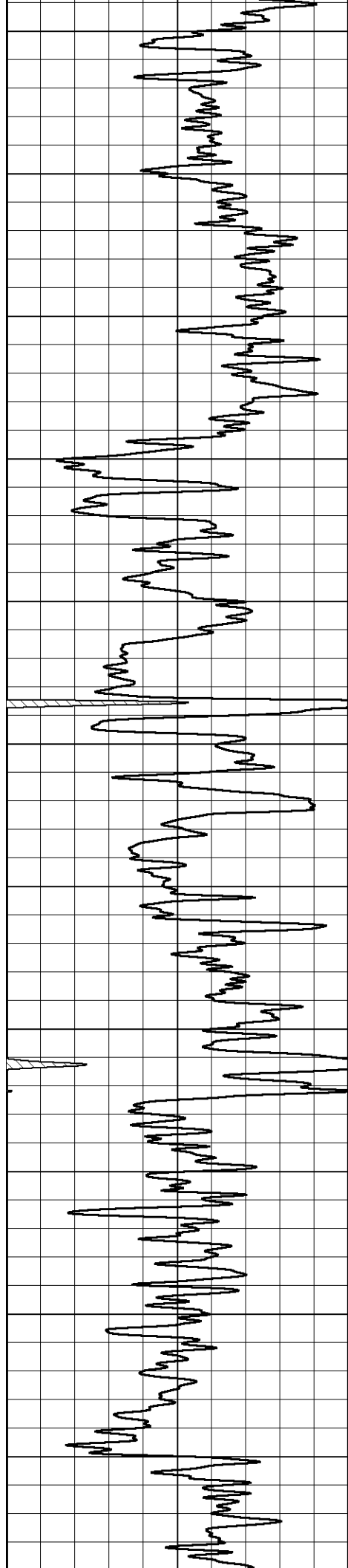
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Dataset Pathname	STKML/pass4.1
Presentation Format	dil2in
Dataset Creation	Fri Aug 11 13:47:38 2017
Charted by	Depth in Feet scaled 1:600

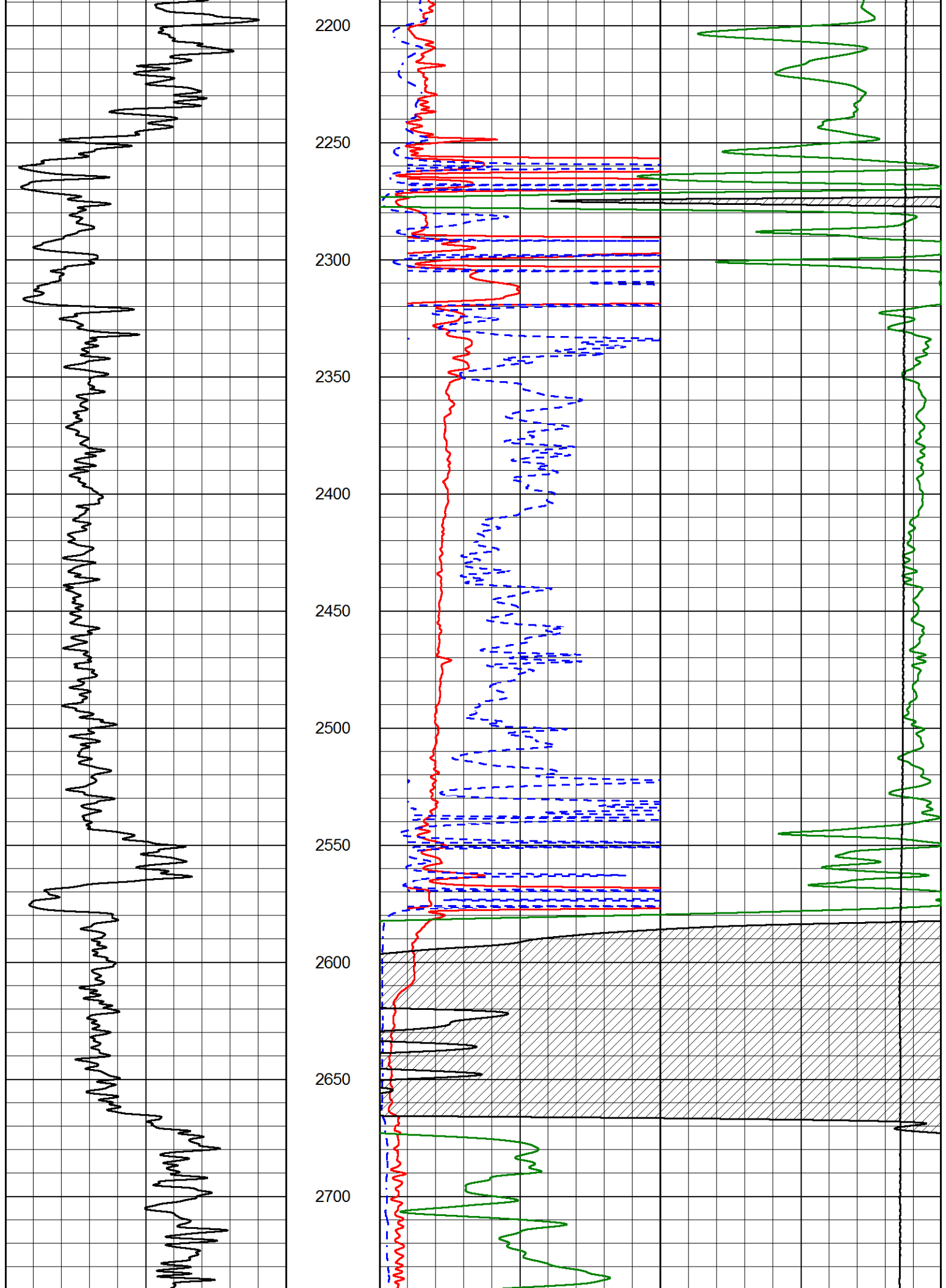
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				15000	Line Tension (lb)	0
	0	Shallow Resistivity (Ohm-m)	50			
	0	Deep Resistivity (Ohm-m)	50			
		Shallow Resistivity				
		50	(Ohm-m)	500		
		50	Deep Resistivity (Ohm-m)	500		

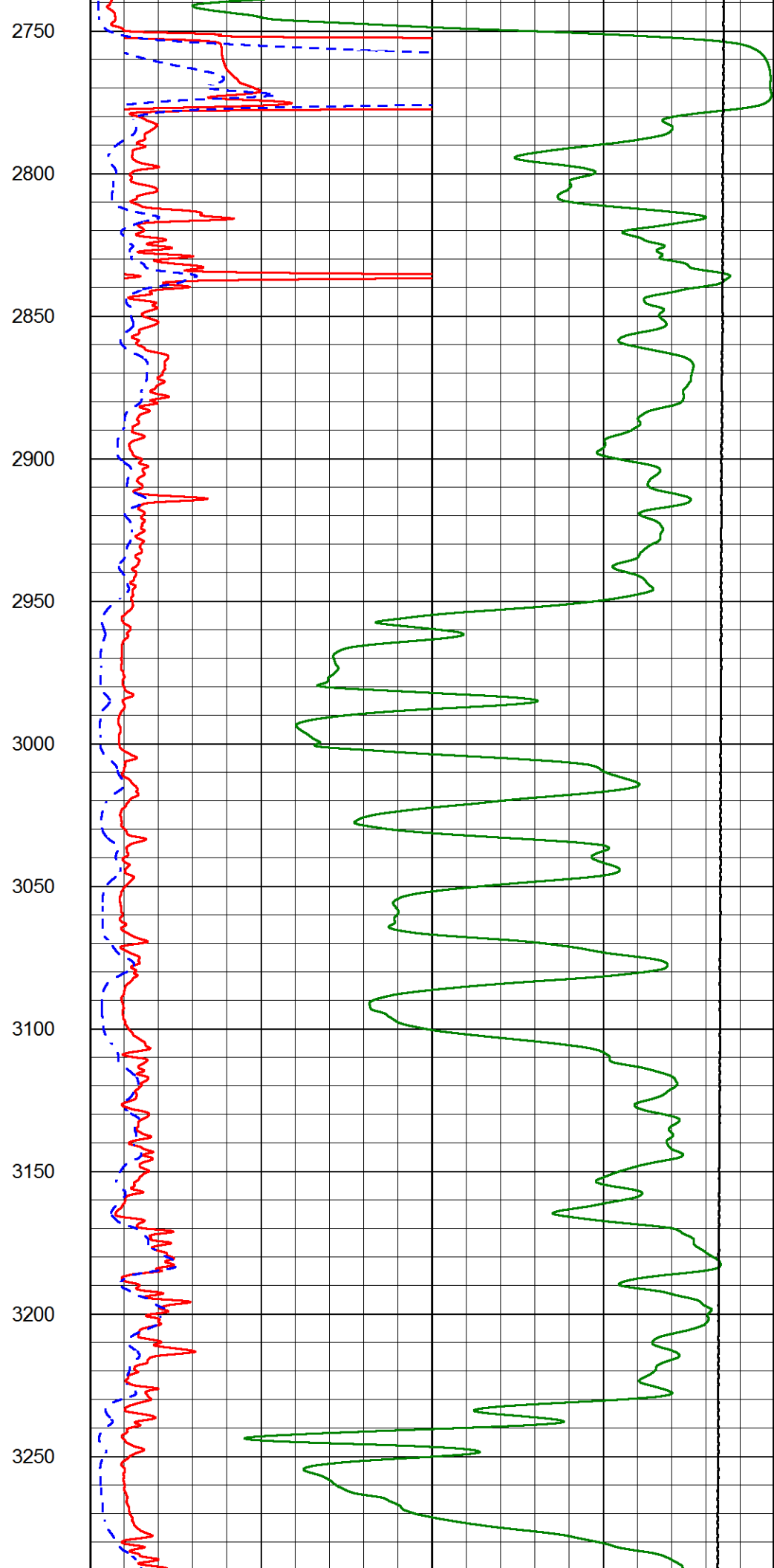
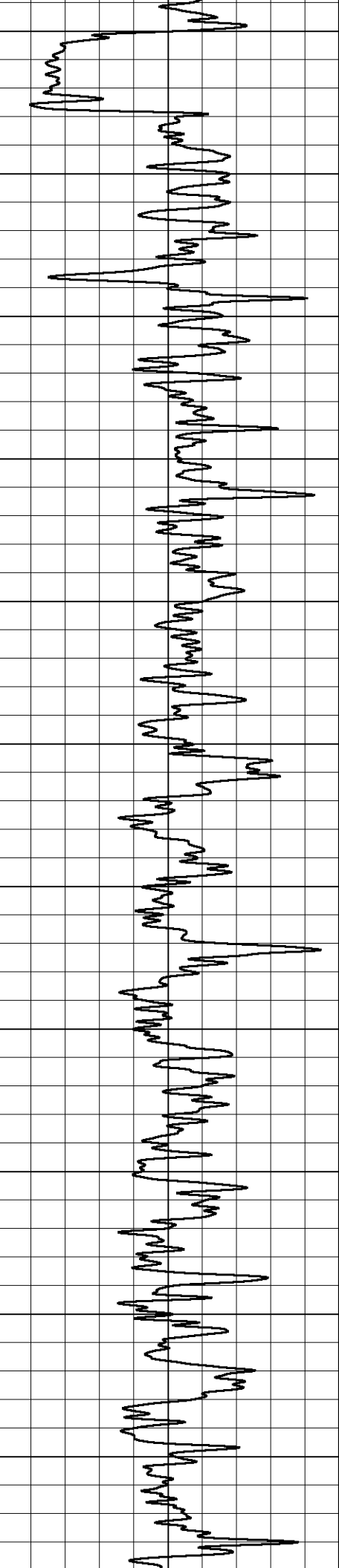


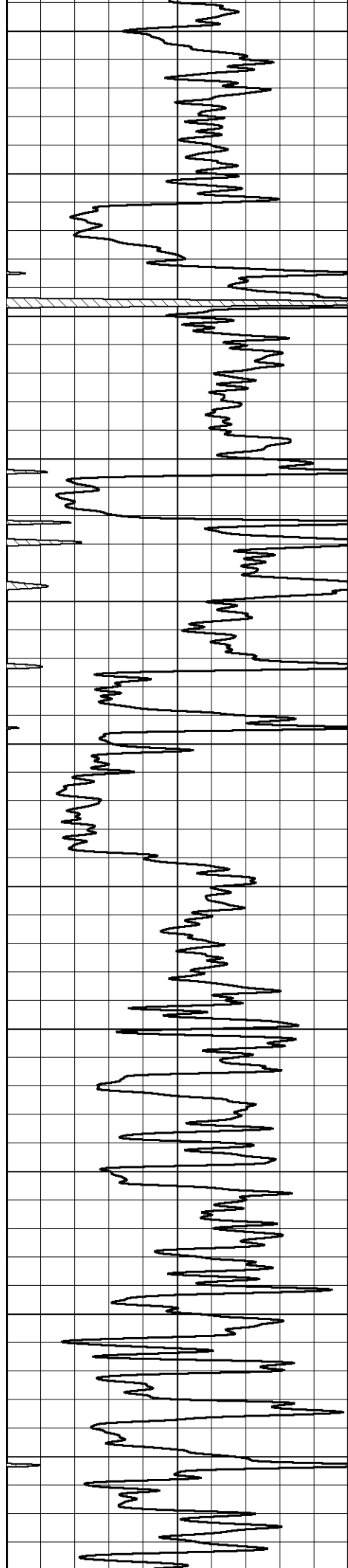




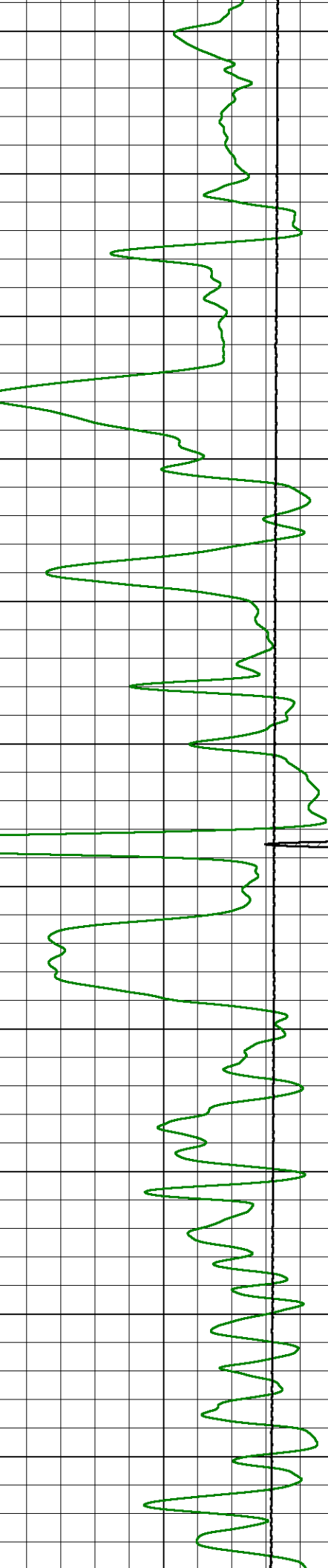
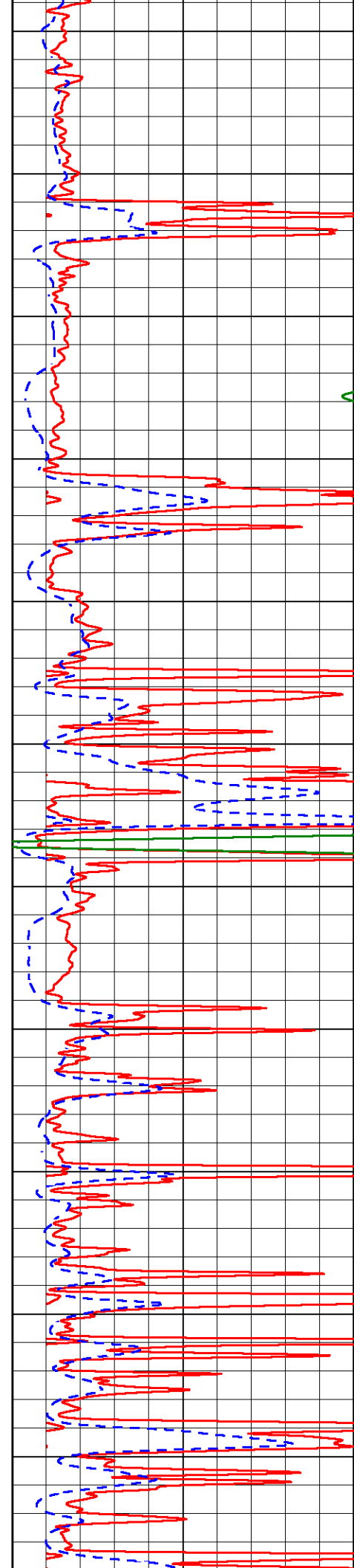


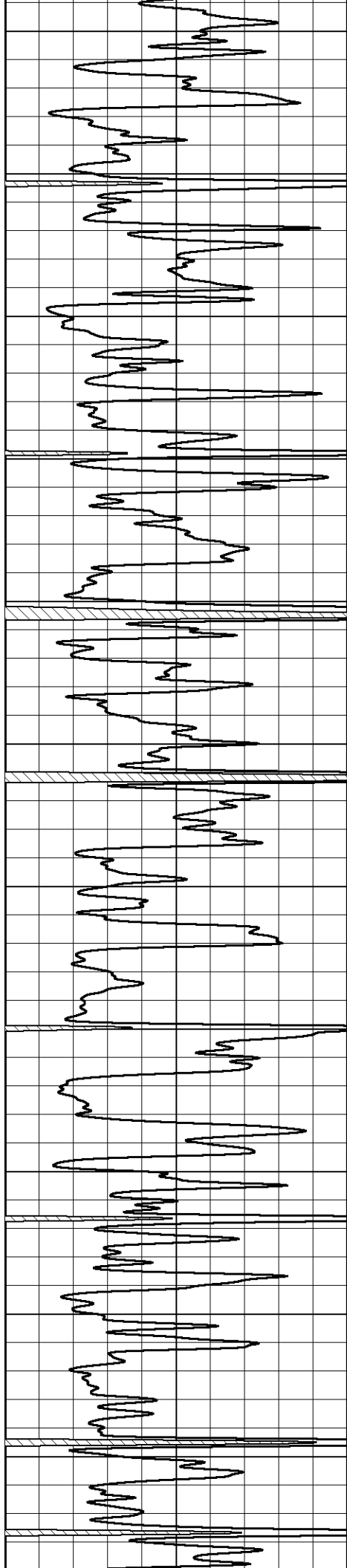




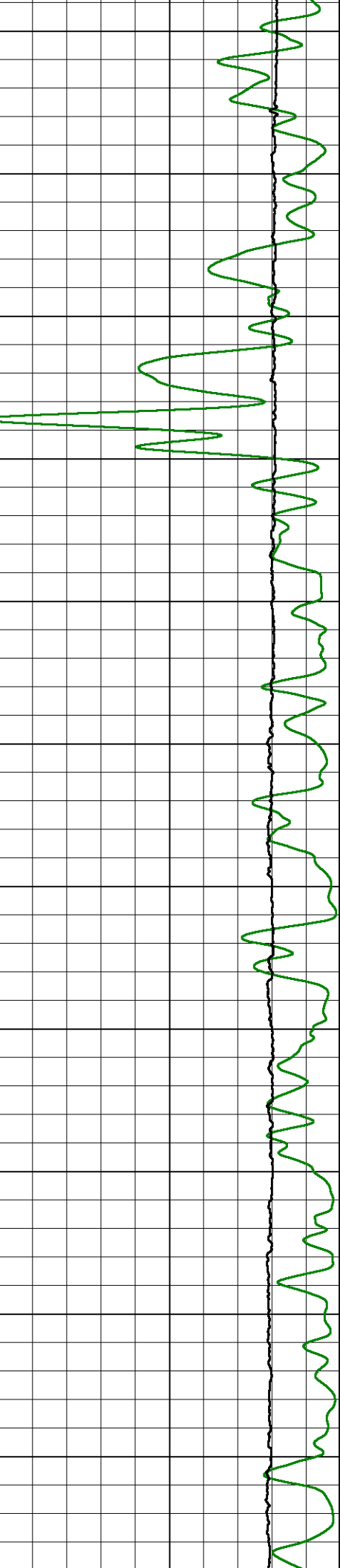
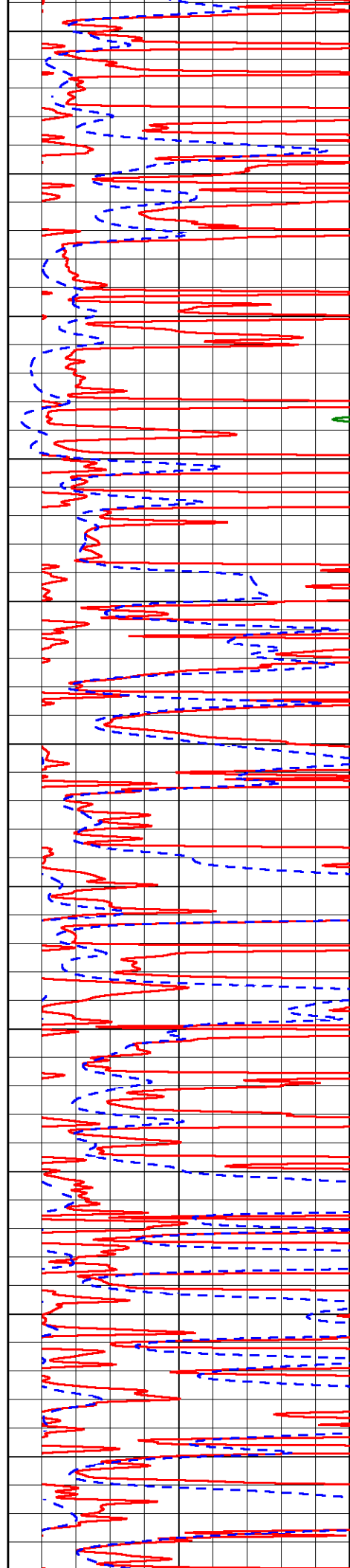


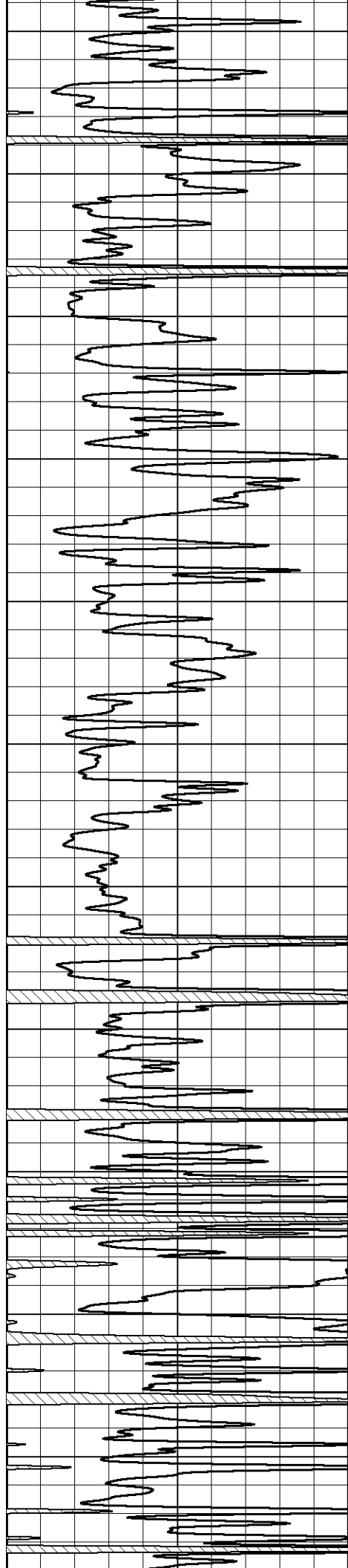
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3400
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3550
3600
3650
3700
3750
3800



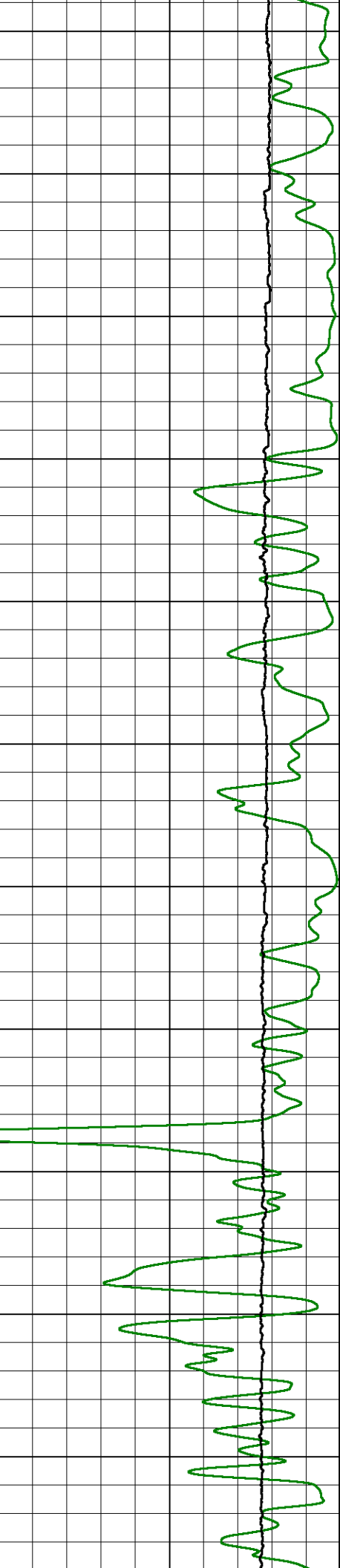
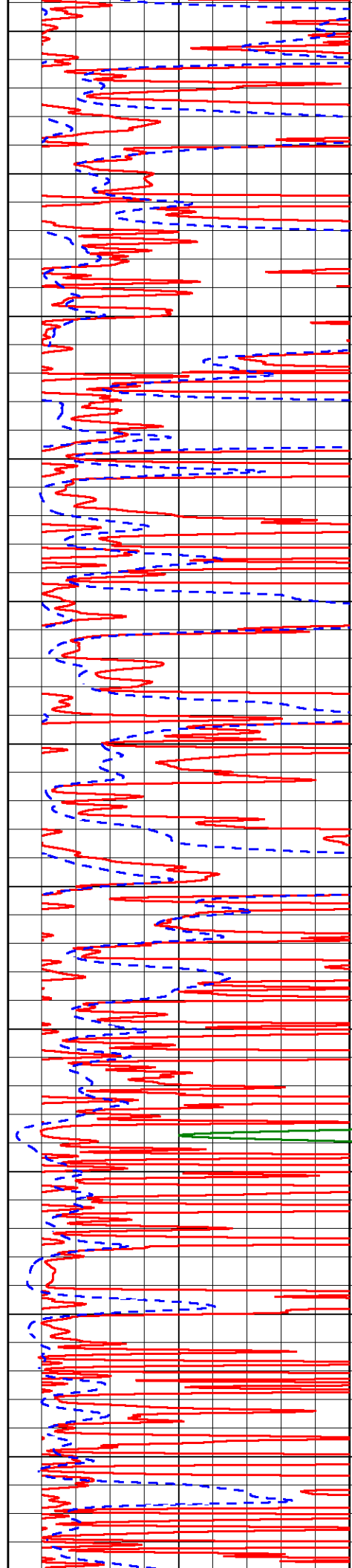


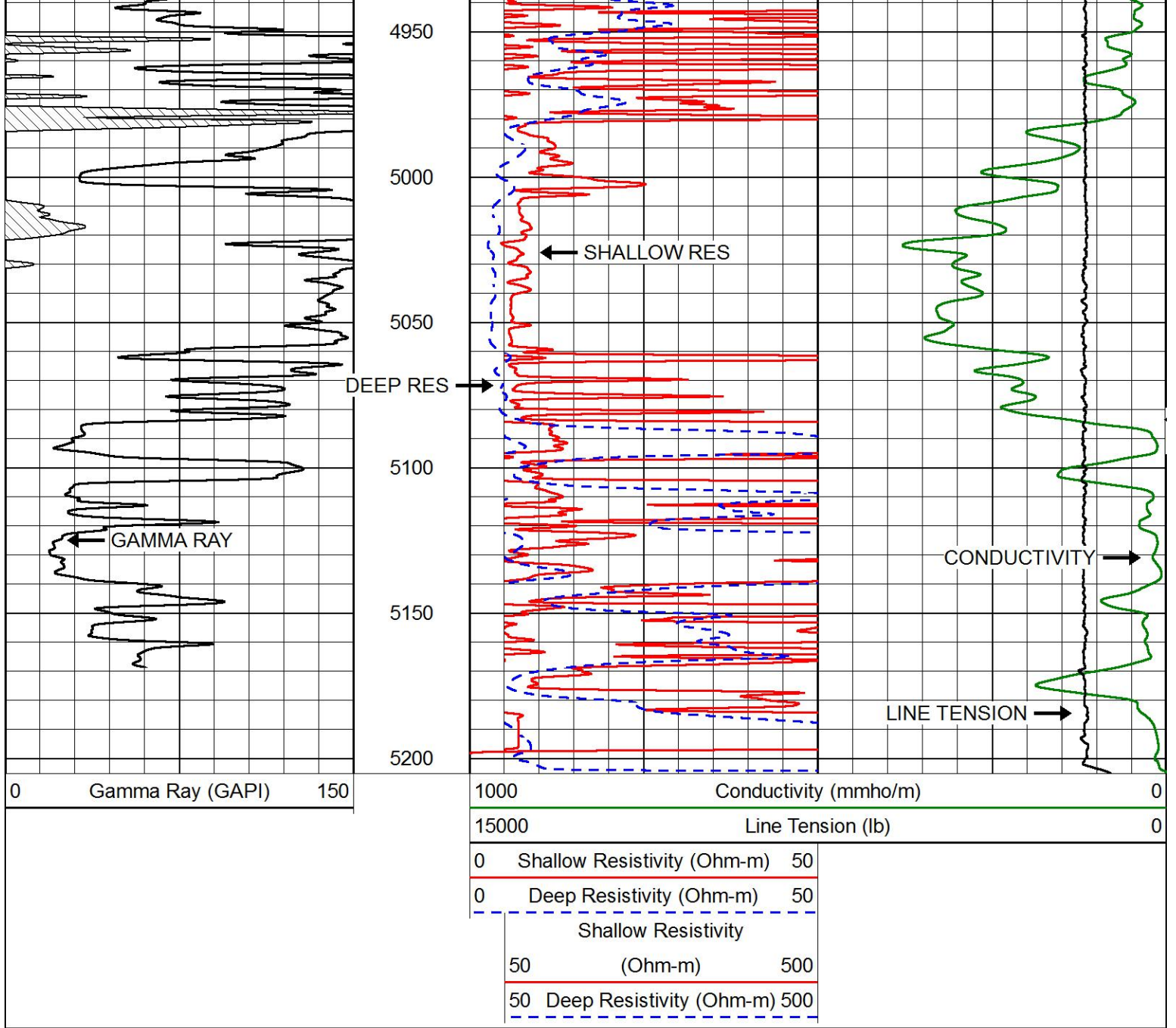
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3900
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4000
4050
4100
4150
4200
4250
4300
4350





4400
4450
4500
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4600
4650
4700
4750
4800
4850
4900

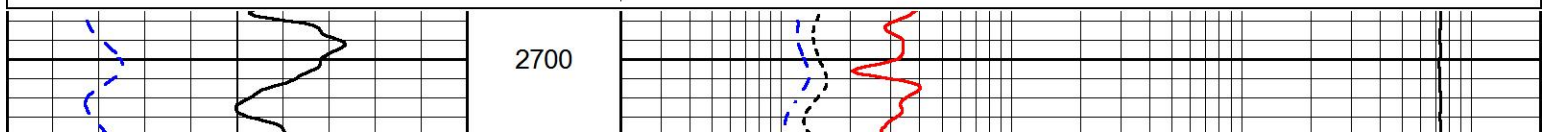


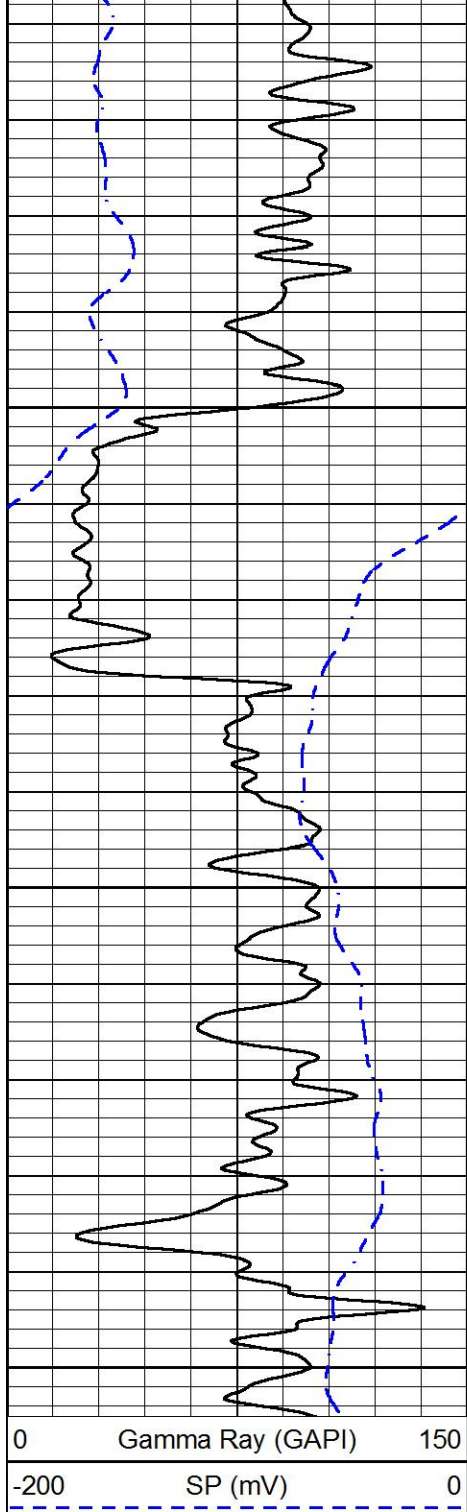



MAIN PASS

Database File: american_warrior_blaesi_9-6.db
 Dataset Pathname: STKML/pass4.1
 Presentation Format: dil
 Dataset Creation: Fri Aug 11 13:47:38 2017
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0.2	Deep Resistivity (Ohm-m)	2000
-200	SP (mV)	0	0.2	Medium Resistivity (Ohm-m)	2000
			0.2	RLL3 (Ohm-m)	2000
			10000	Line Tension (lb)	0

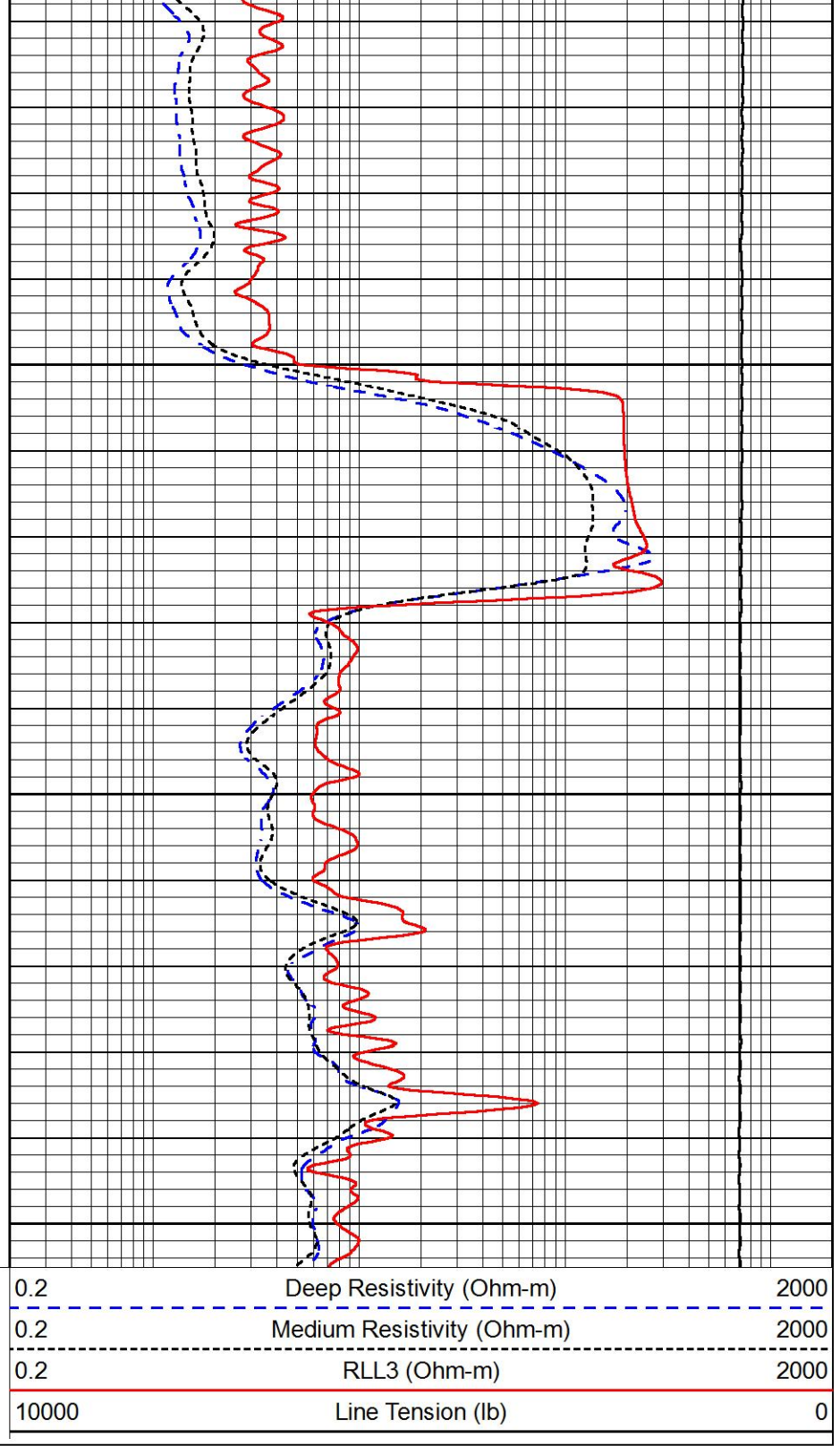




2750

2800

2850



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



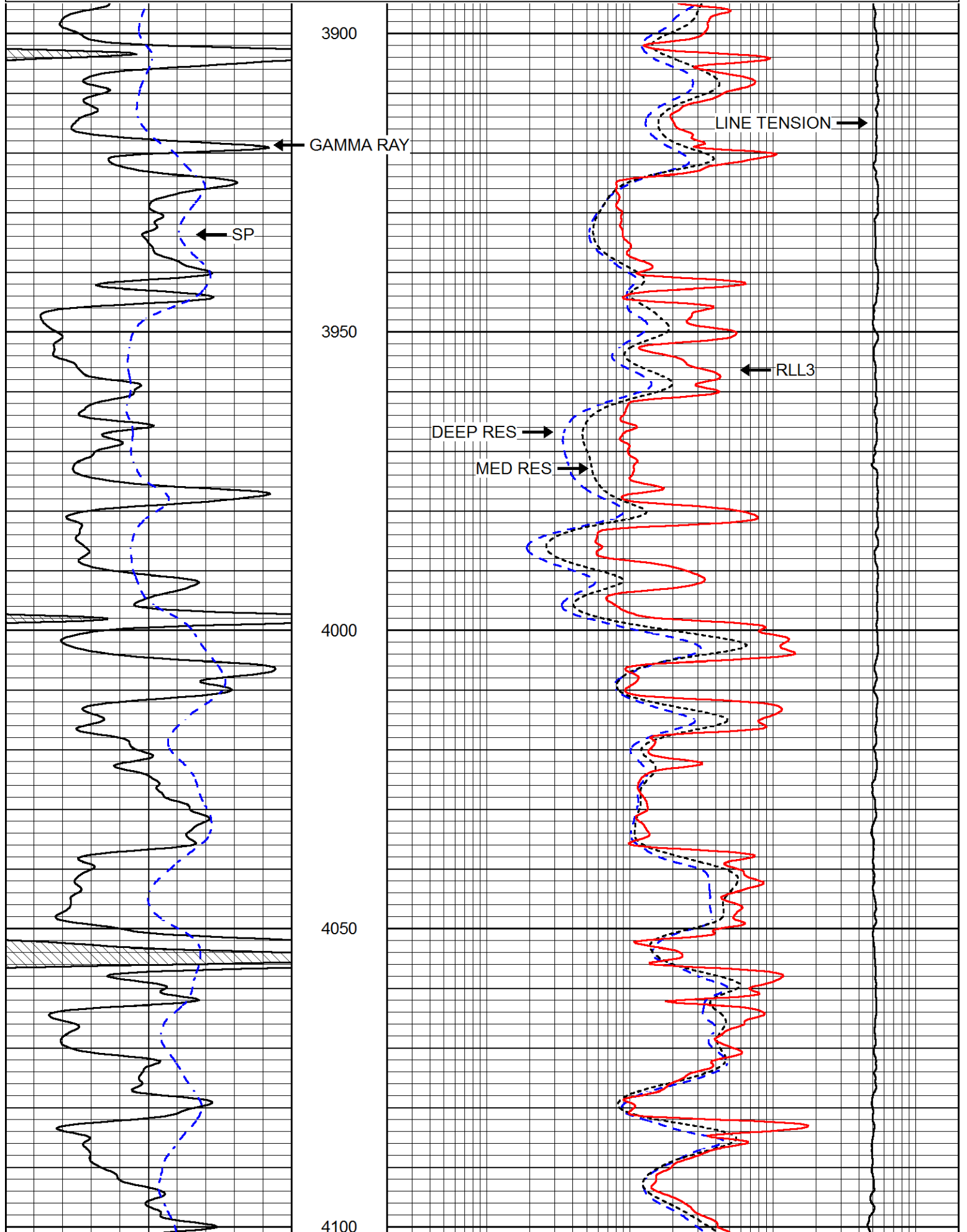
MAIN PASS

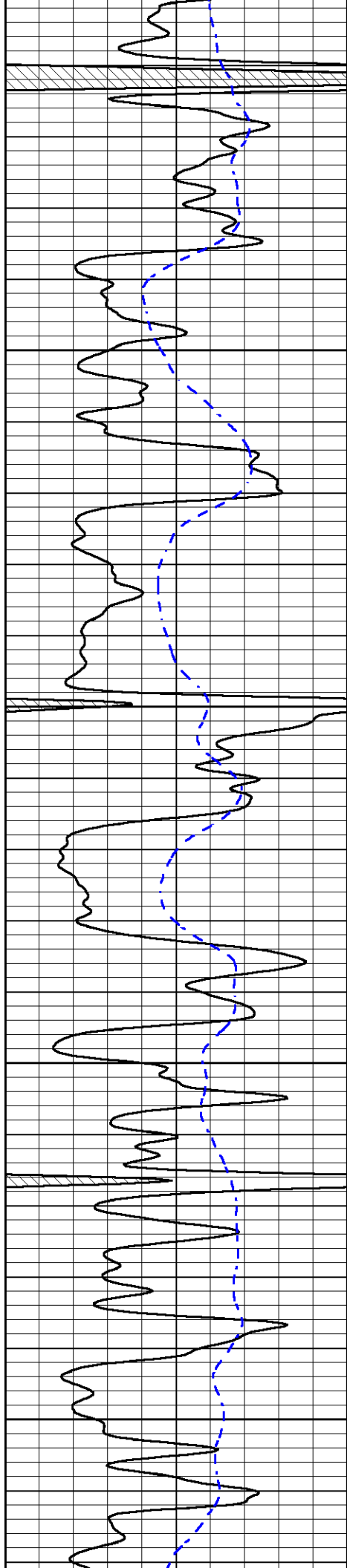
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Dataset Pathname	STKML/pass3.1
Presentation Format	dil
Dataset Creation	Fri Aug 11 13:20:09 2017
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-200	SP (mV)	0
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000

200 SP (mv) 0

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



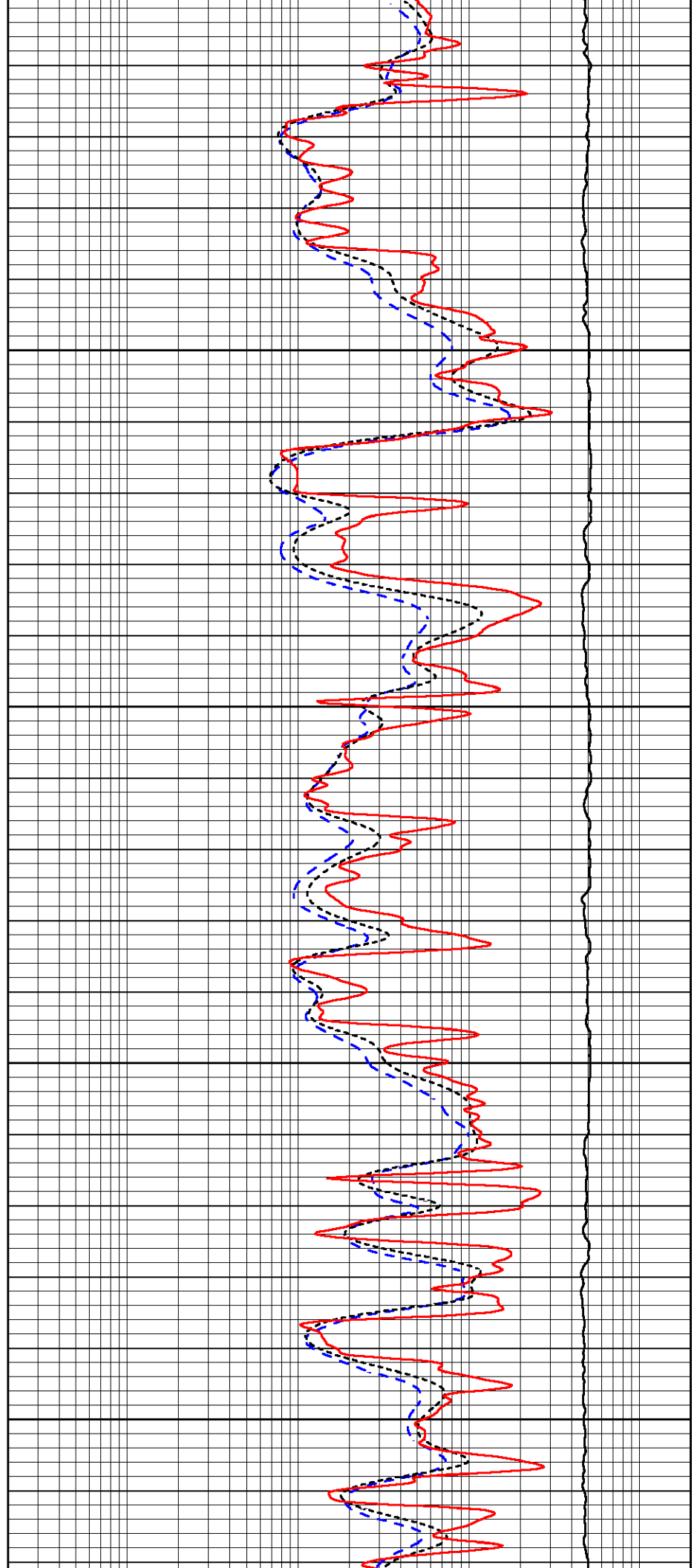


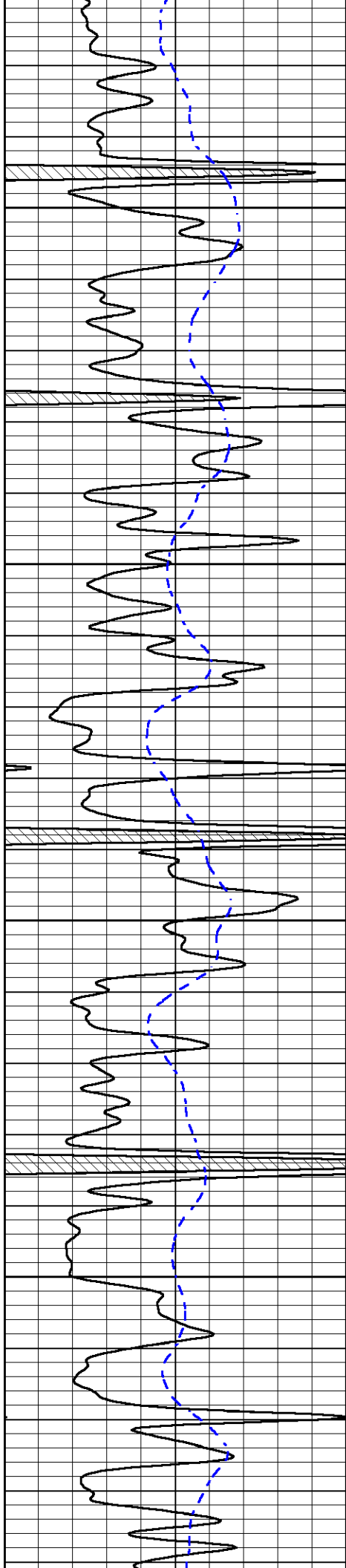
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4200

4250

4300



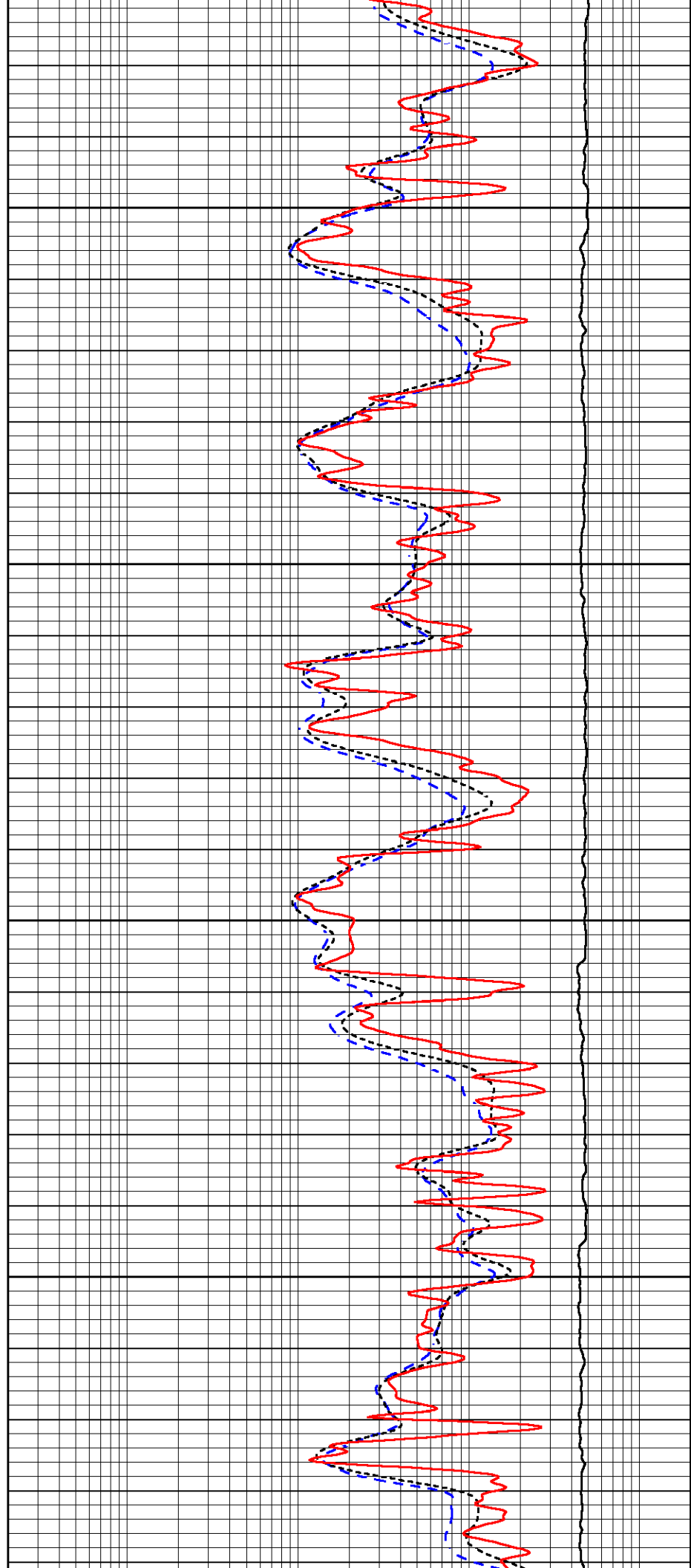


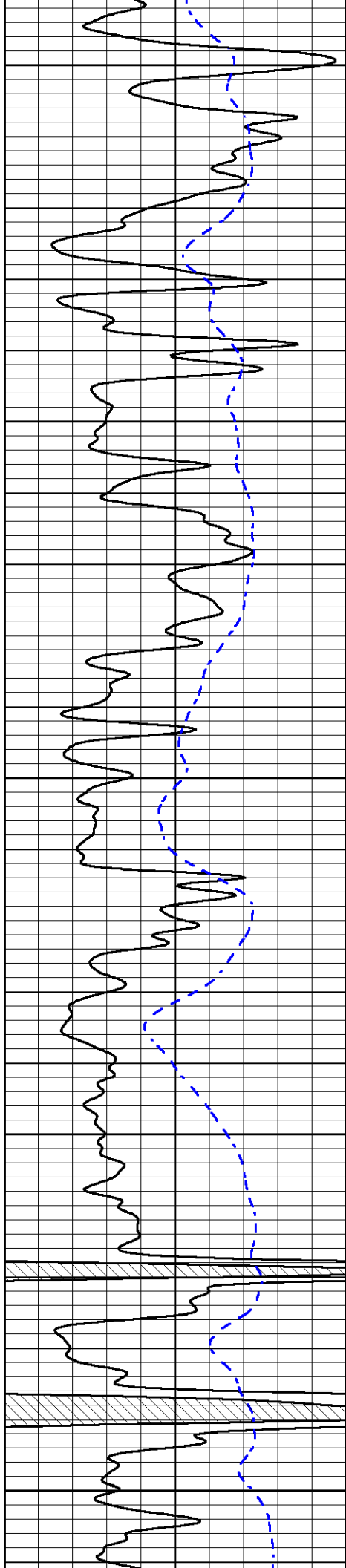
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4400

4450

4500





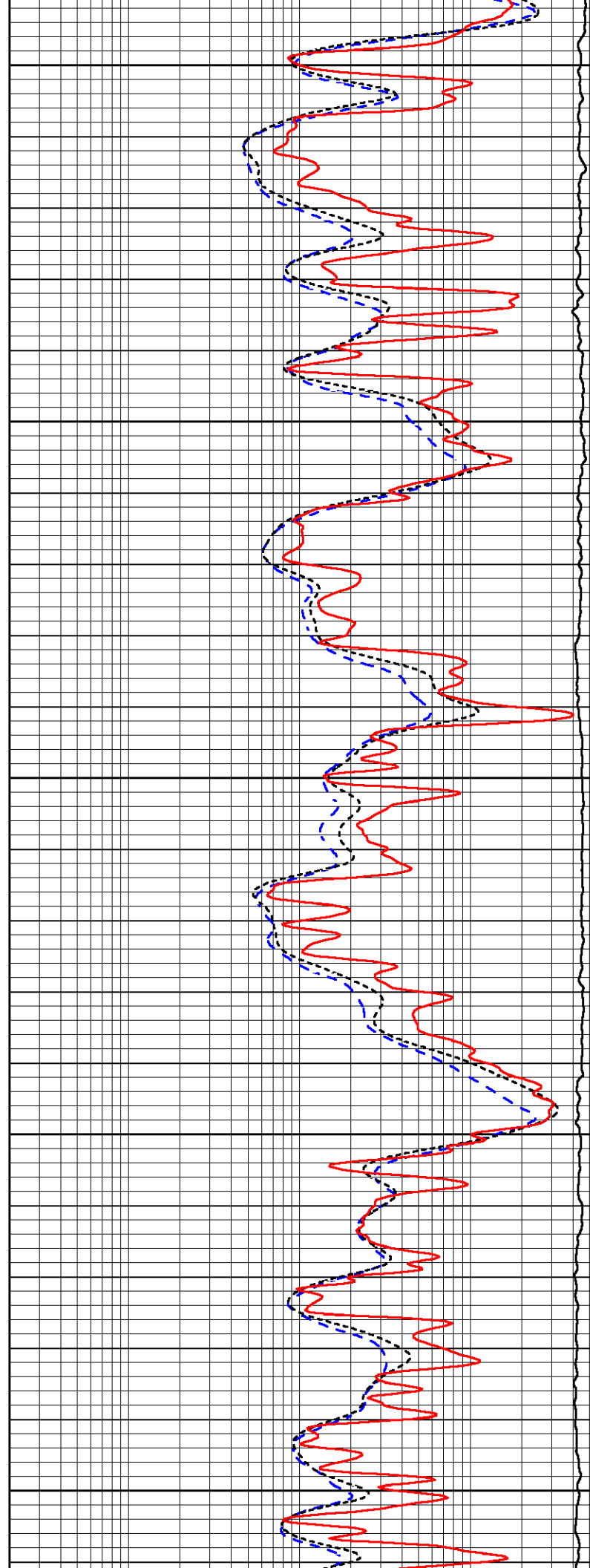
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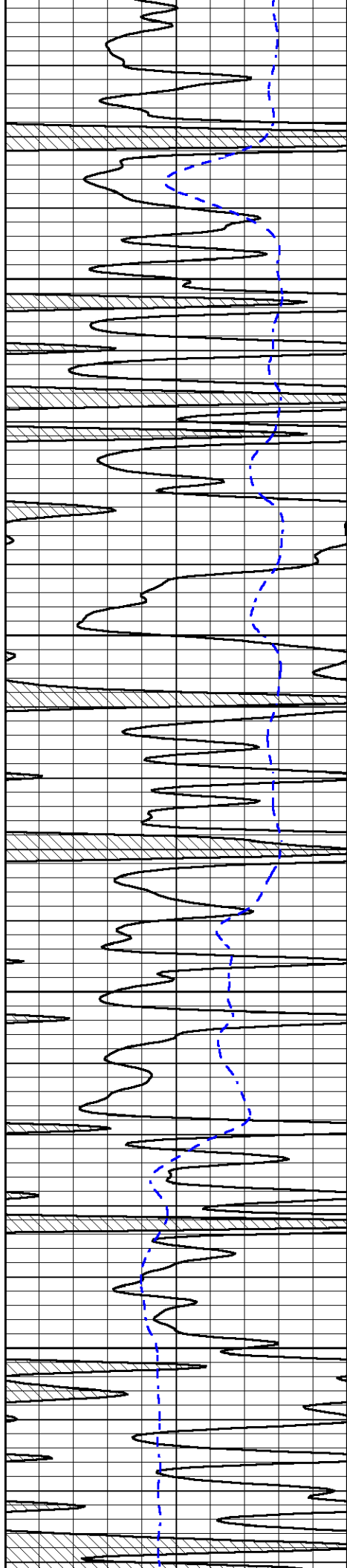
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4650

4700

4750



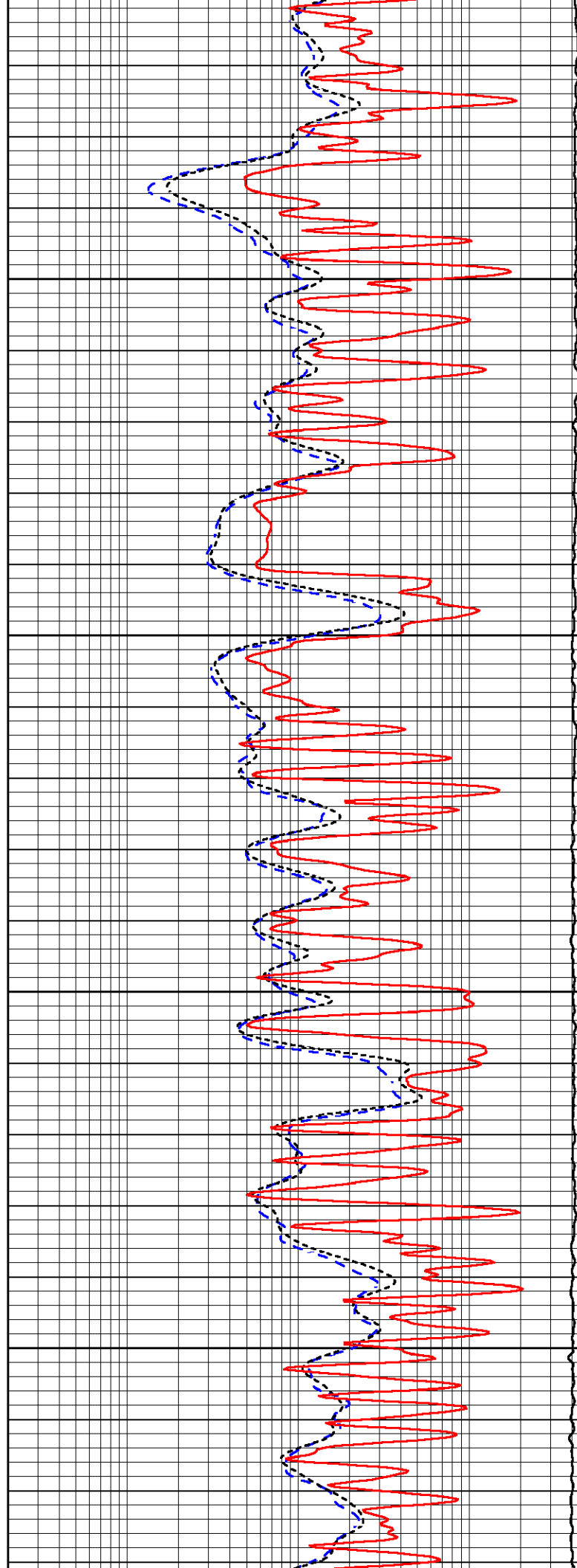


4800

4850

4900

4950

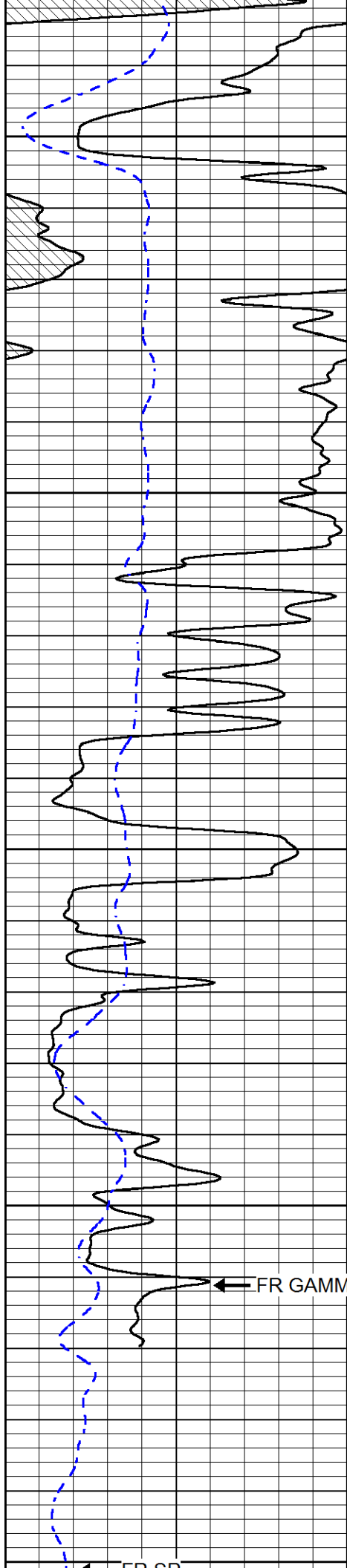


4800

4850

4900

4950



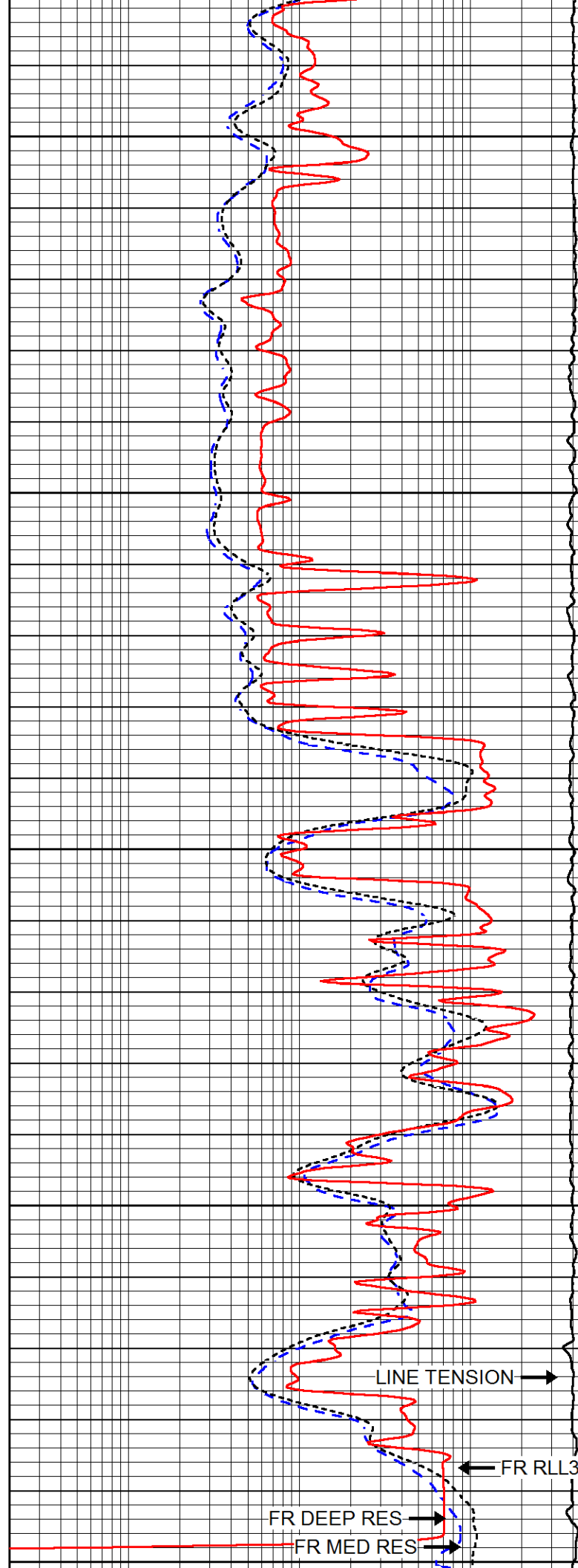
5000

5050

5100

5150

5200



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

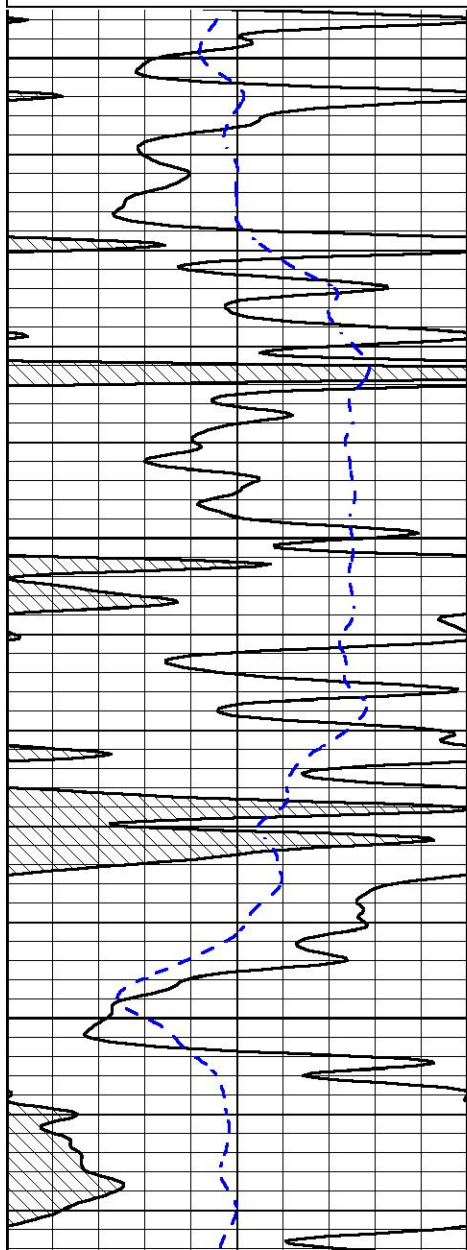


REPEAT SECTION

Database File american_warrior_blaesi_9-6.db
 Dataset Pathname STKML/pass2.1
 Presentation Format dil
 Dataset Creation Fri Aug 11 13:26:14 2017
 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

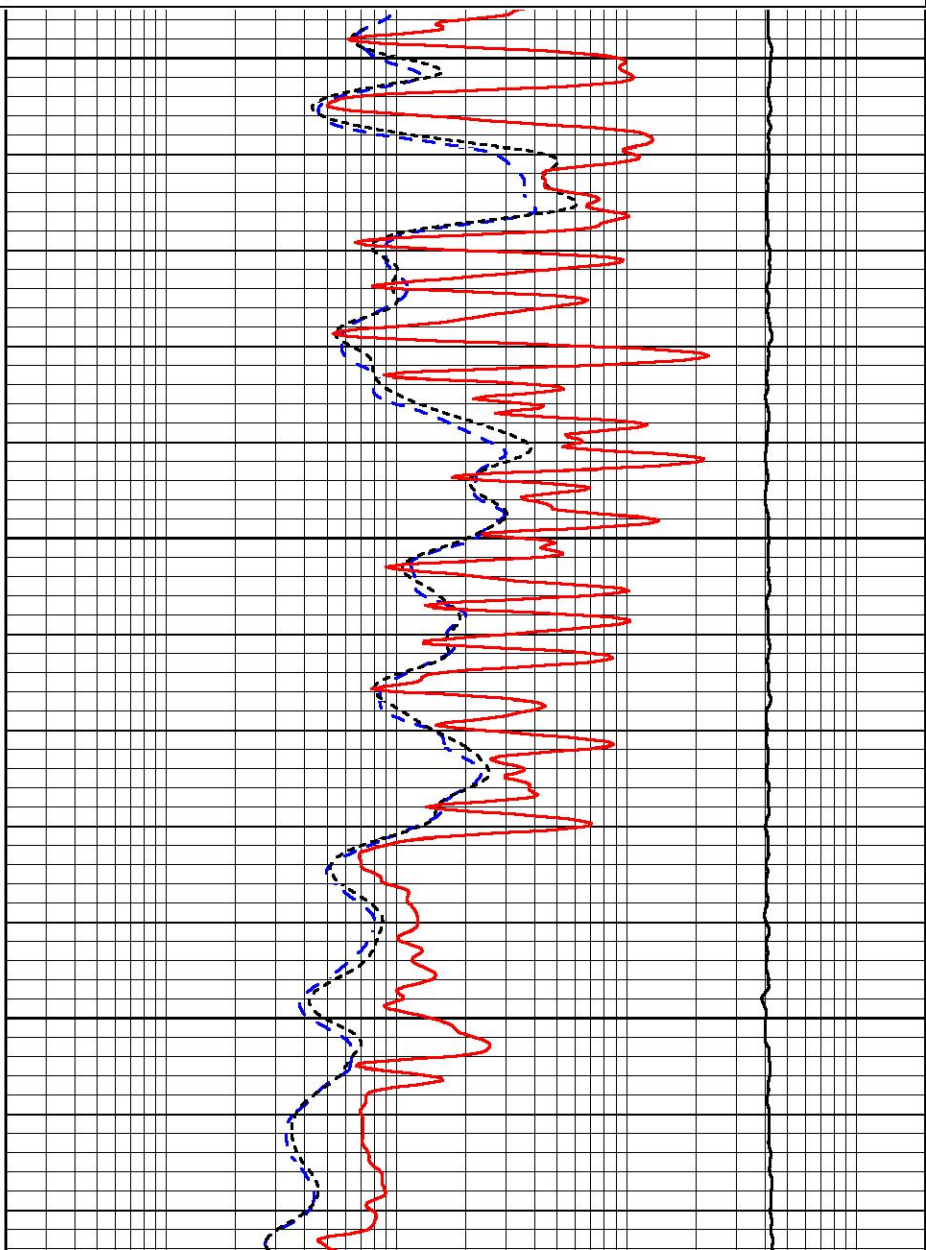
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

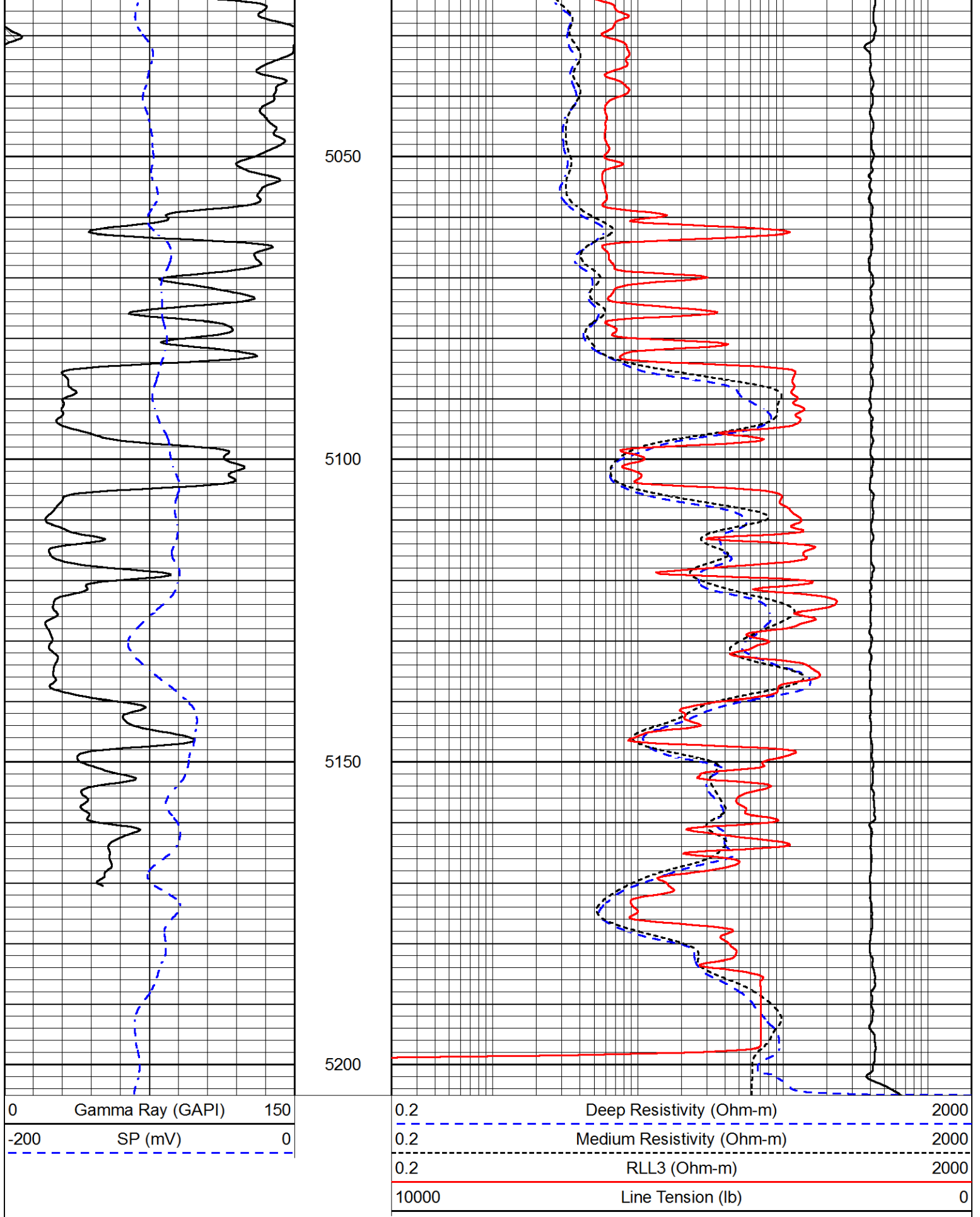


4900

4950

5000





Calibration Report

Database File american_warrior_blaesi_9-6.db
 Dataset Pathname STKML/pass3.7
 Dataset Creation Fri Aug 11 12:48:38 2017

Dual Induction Calibration Report

Serial-Model: PSI 91-M&W
 Calibration Performed: Thu Aug 10 08:41:25 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	166.796	835.089	0.000	255.800	mmho/m	0.430	-32.000
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.360	-31.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Fri Aug 11 11:41:38 2017

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	21500.0000	-0.6000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	26000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.3300

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Wed Aug 02 00:28:57 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4903.44	6153.79	cps
Aluminum	2.685	g/cc	934.50	4021.31	cps
Spine Angle = 75.61			Density/Spine Ratio = 0.543		
	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: Tues Aug 1 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:	Wed Aug 02 00:29:15 2017	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps



PIONEER

Pioneer Energy Services

Company	AMERICAN WARRIOR, INC.
Well	BLAESI #9-6
Field	UNKNOWN
County	WALLACE
State	KANSAS