



PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company PICKRELL DRILLING COMPANY, INC.
Well LAFON TRUST B #1
Field RANSOM NW
County NESS
State KANSAS

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Location: API #: 15-135-25949-00-00

2135' FNL & 1255' FEL

SEC 17 TWP 16S RGE 24W

Permanent Datum GROUND LEVEL Elevation 2500'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2507'
D.F. N/A
G.L. 2500'

Date 5/6/2017

Run Number

ONE

Depth Driller

4600'

Depth Logger

4598'

Bottom Logged Interval

4597'

Top Log Interval

200'

Casing Driller

8.625" @ 207'

Casing Logger

205'

Bit Size

7.875"

Type Fluid in Hole

CHEMICAL

Salinity, ppm CL

3300

Density / Viscosity

9.4 54

pH / Fluid Loss

9.0 8.8

Source of Sample

FLOWLINE

Rm @ Meas. Temp

0.70 @ 80

Rmt @ Meas. Temp

0.53 @ 80

Rmc @ Meas. Temp

0.95 @ 80

Source of Rmt / Rmc

CHARTS

Rm @ BHT

0.46 @ 122

Operating Rig Time

3 HOURS

Max Rec. Temp. F

122

Equipment Number

91

Location

HAYS

Recorded By

D. SCHMIDT

Witnessed By

AARON YOUNG

<<< Fold Here >>>

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.

RANSOM,
3 WEST,
1 NORTH, 1/4 WEST,
NORTH INTO

Log Measured From: KELLY BUSHING 7 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew

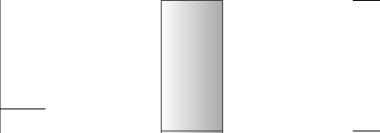
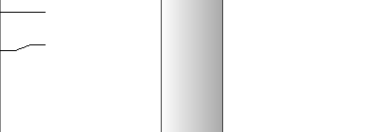
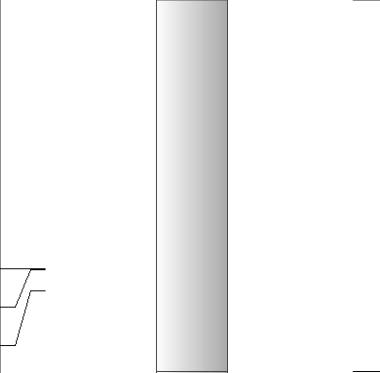
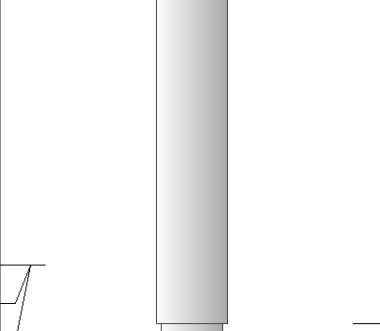
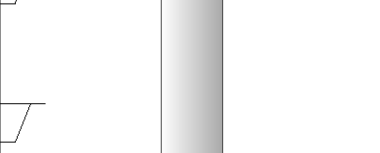
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: AARON YOUNG
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	340	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	80	0	5.5	0	4598	122	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					

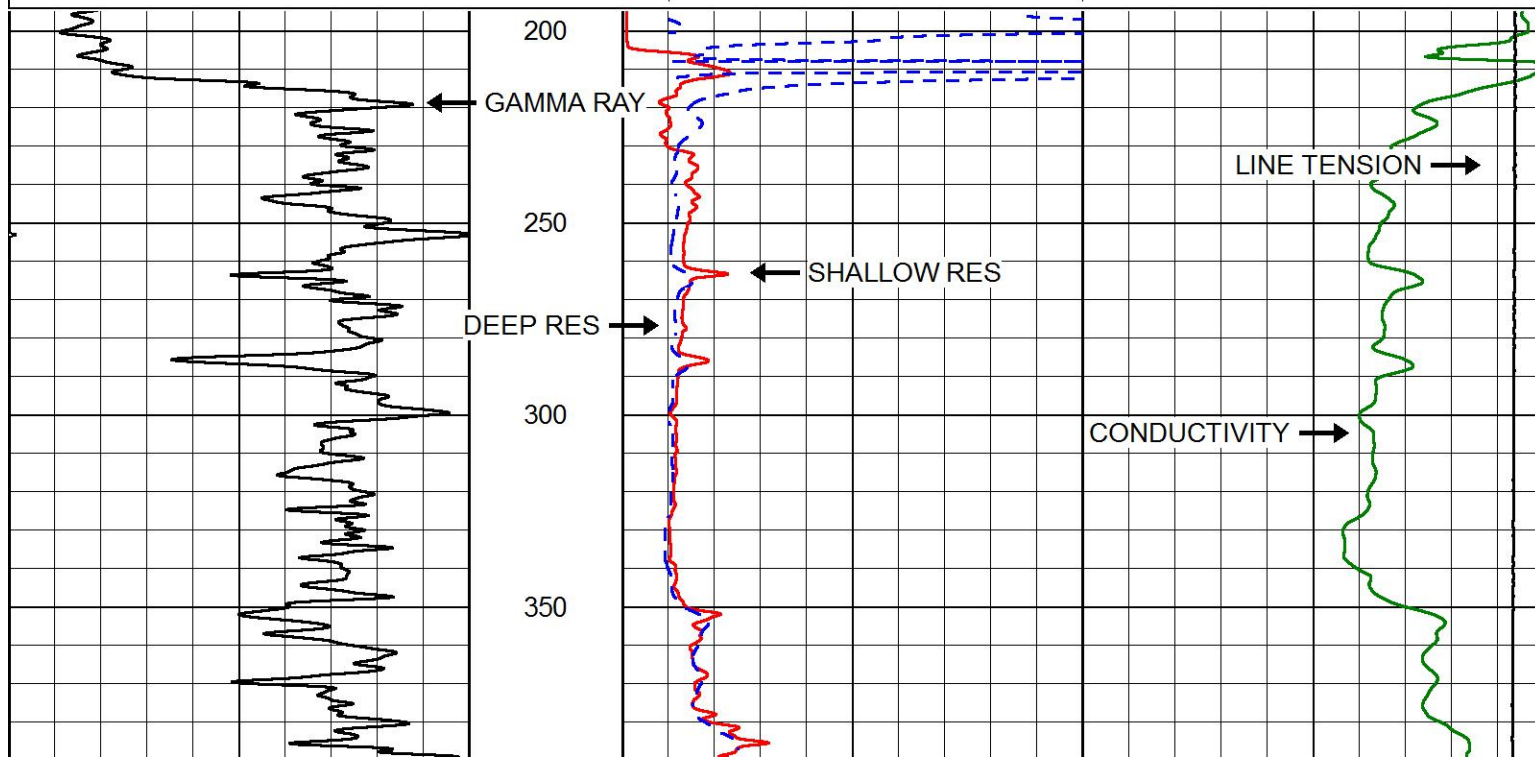
			DIL-M&W (PSI 91)	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset: pickrell drilling_lafon trust_b 1.db: field/well/STKML/pass3.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in						

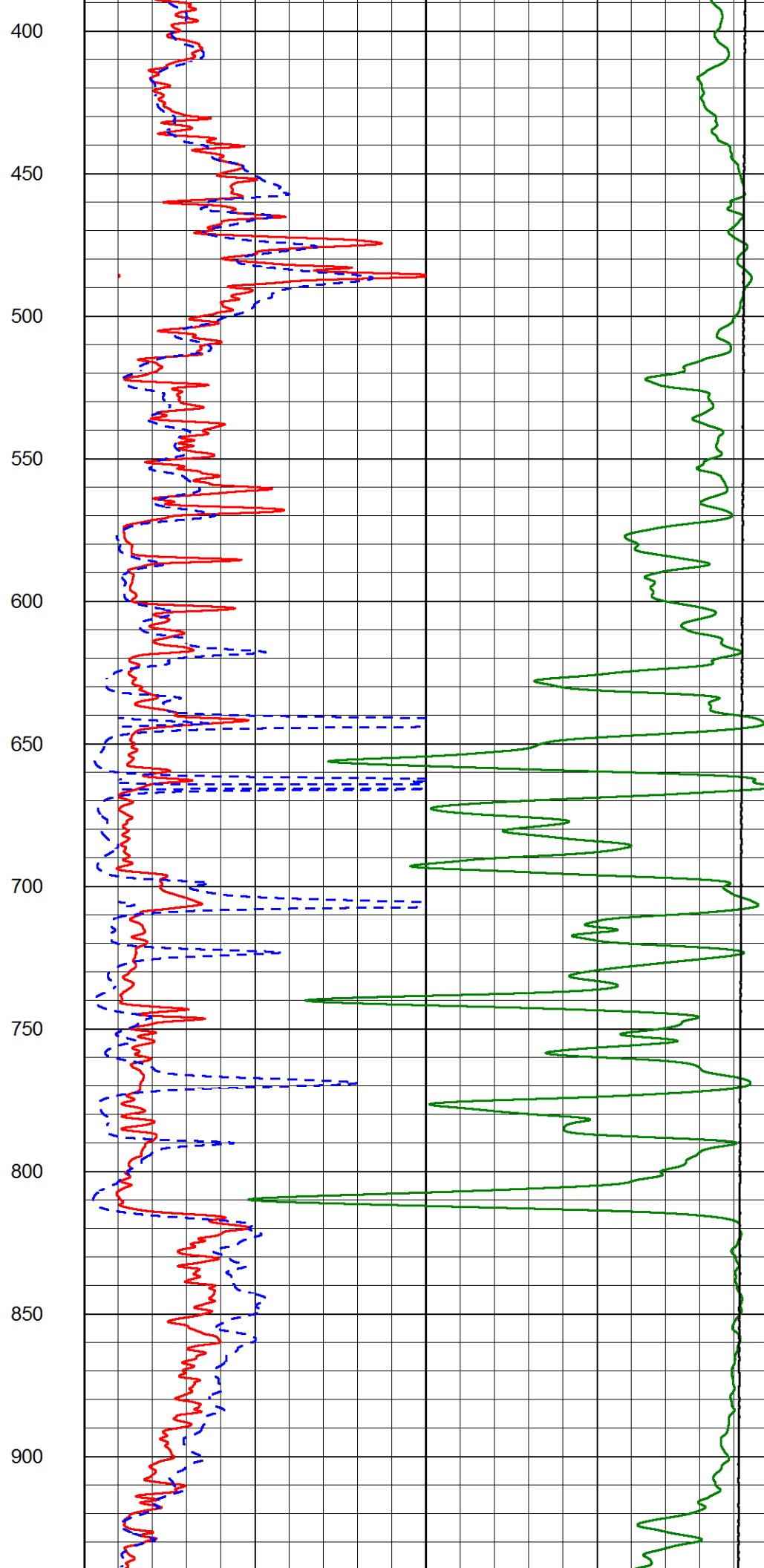
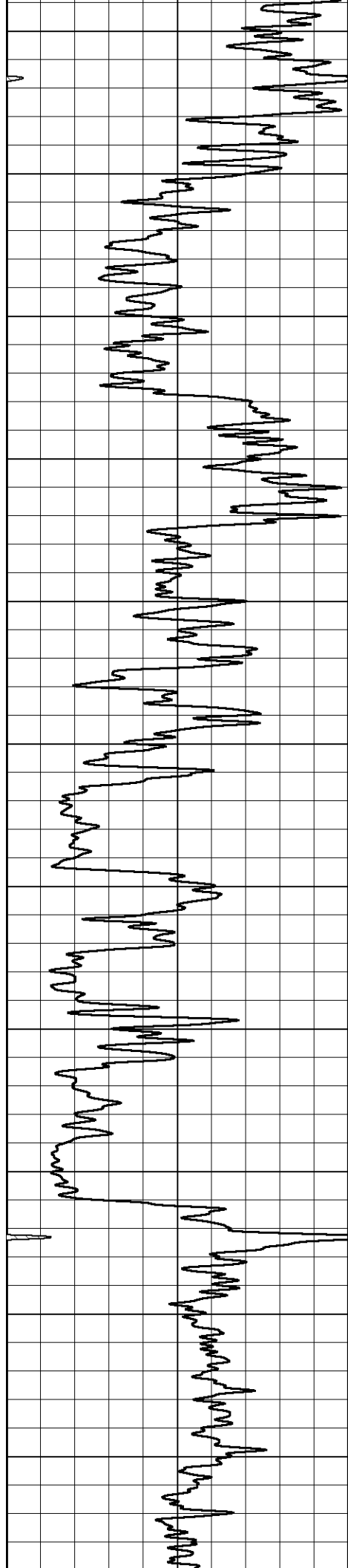


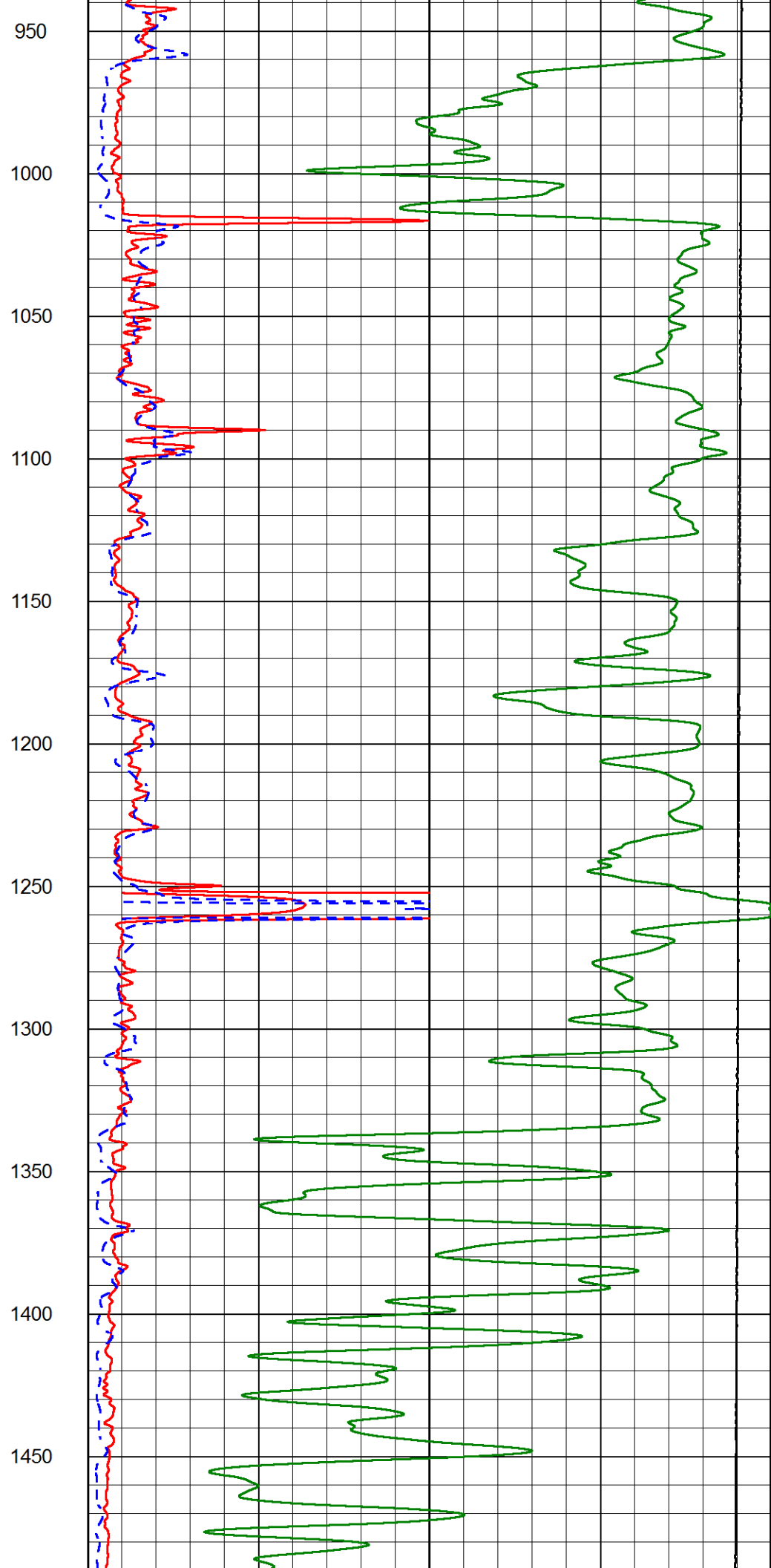
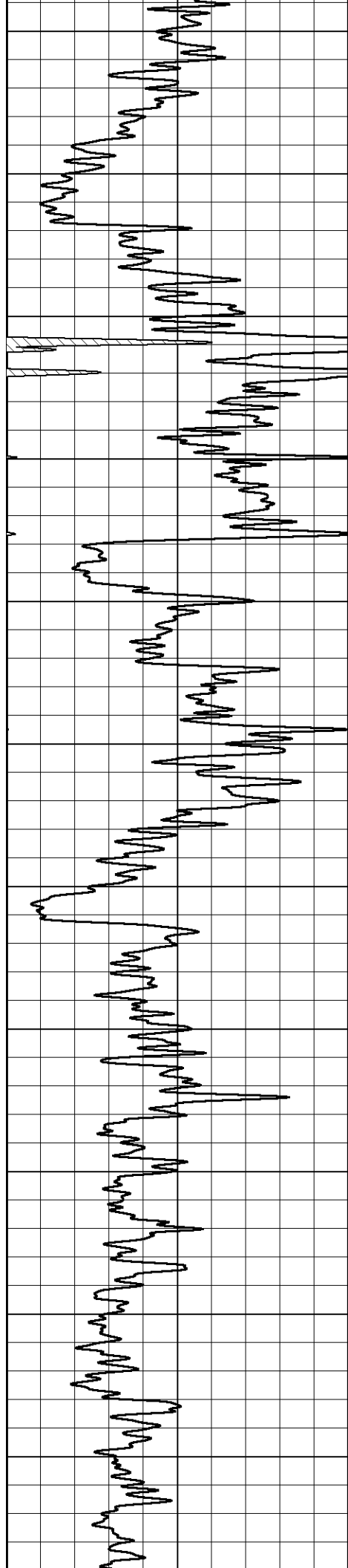
MAIN PASS

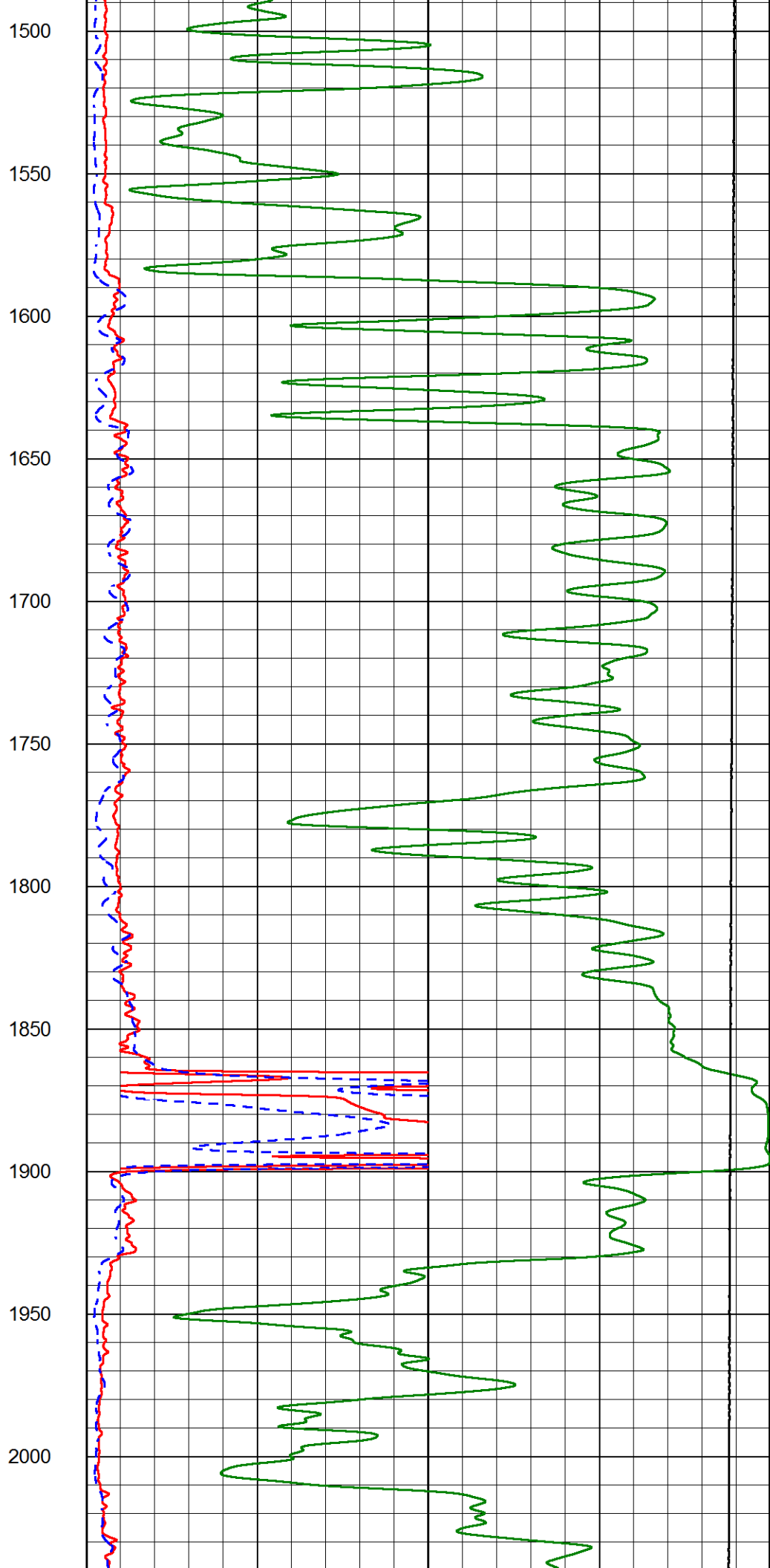
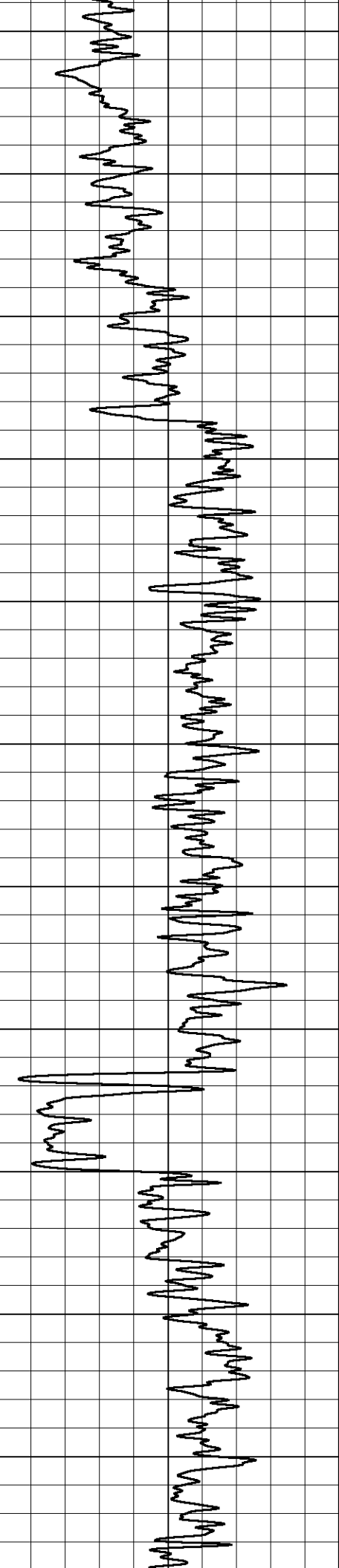
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Dataset Pathname	STKML/pass4.1
Presentation Format	dil2in
Dataset Creation	Sat May 06 19:31:09 2017
Charted by	Depth in Feet scaled 1:600

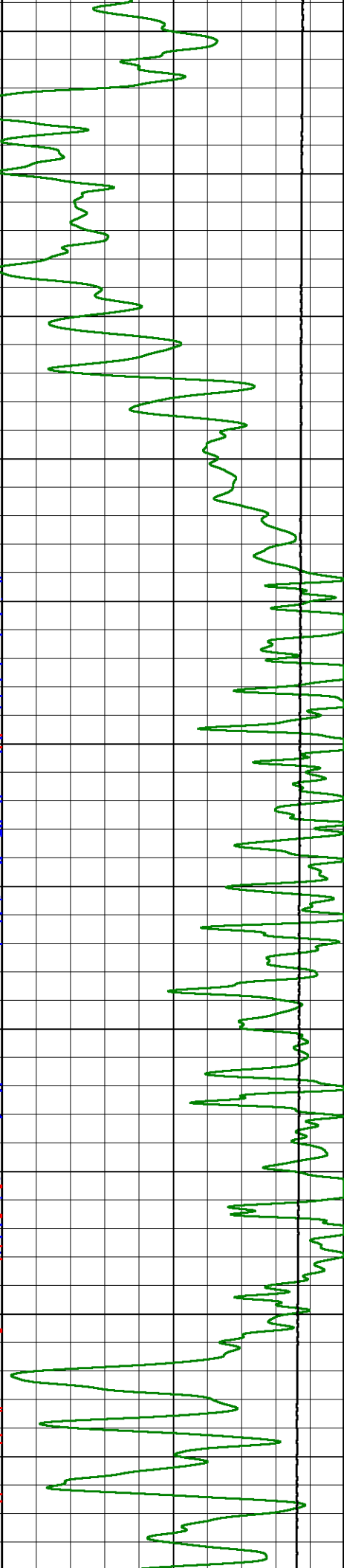
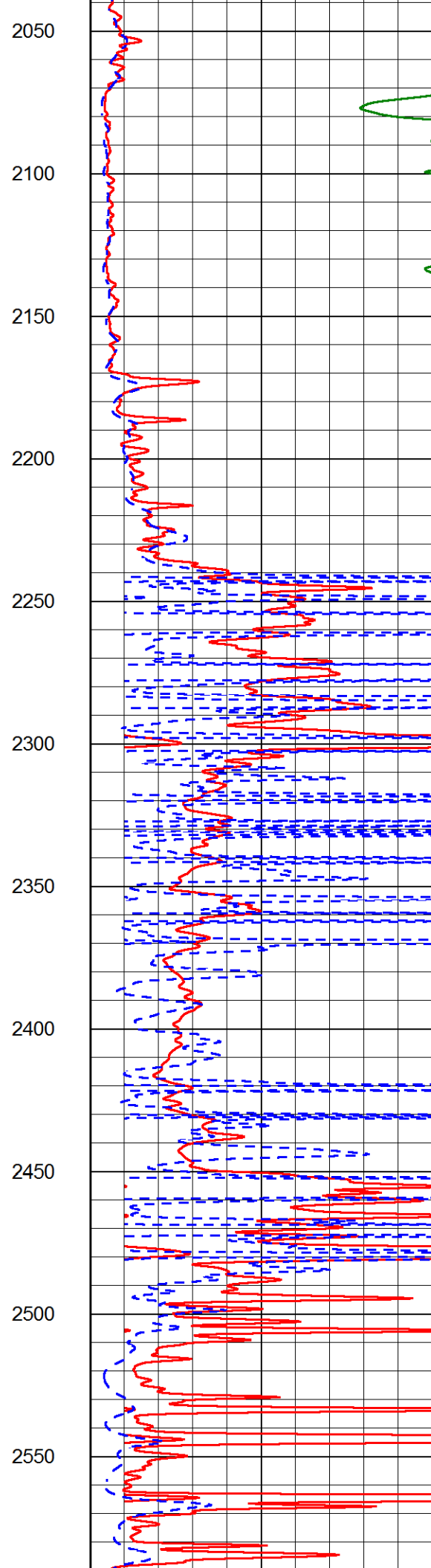
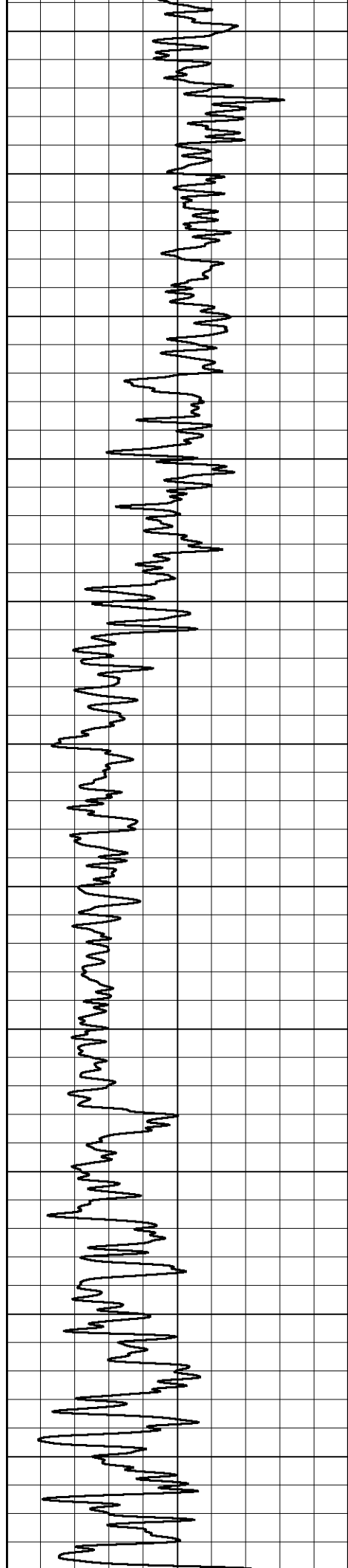
0	Gamma Ray (GAPI)	150	1000	Conductivity (mmho/m)	0
			15000	Line Tension (lb)	0
			0	Shallow Resistivity (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
				Shallow Resistivity	
			50	(Ohm-m)	500
			50	Deep Resistivity (Ohm-m)	500

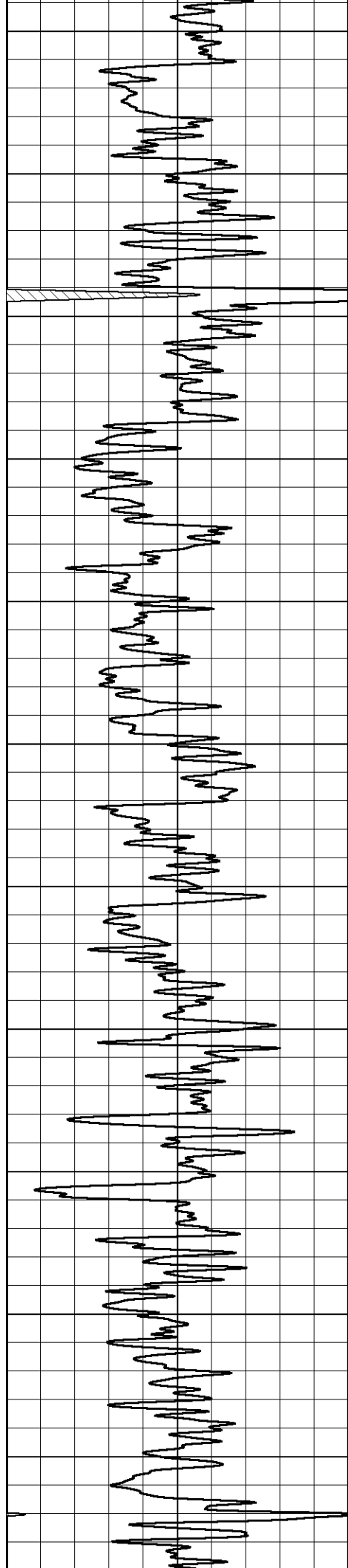




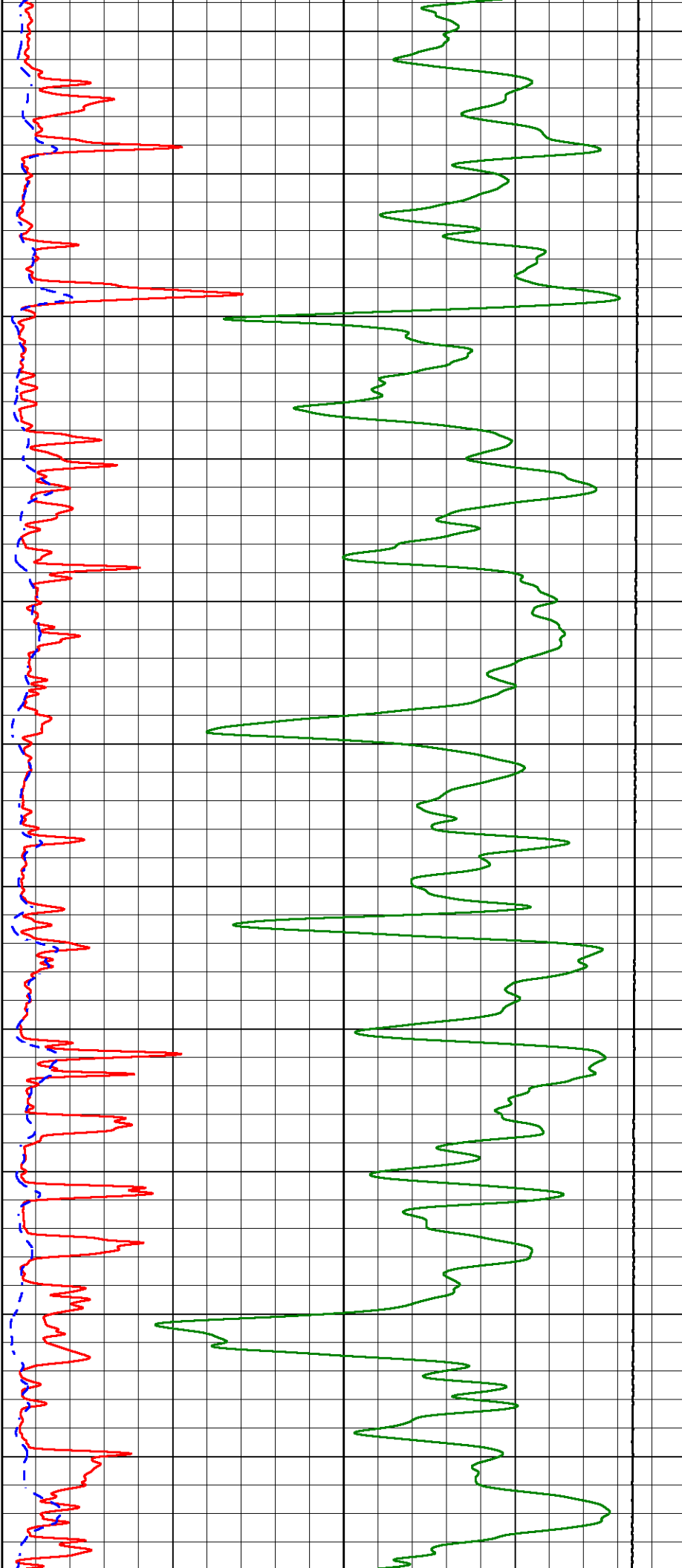


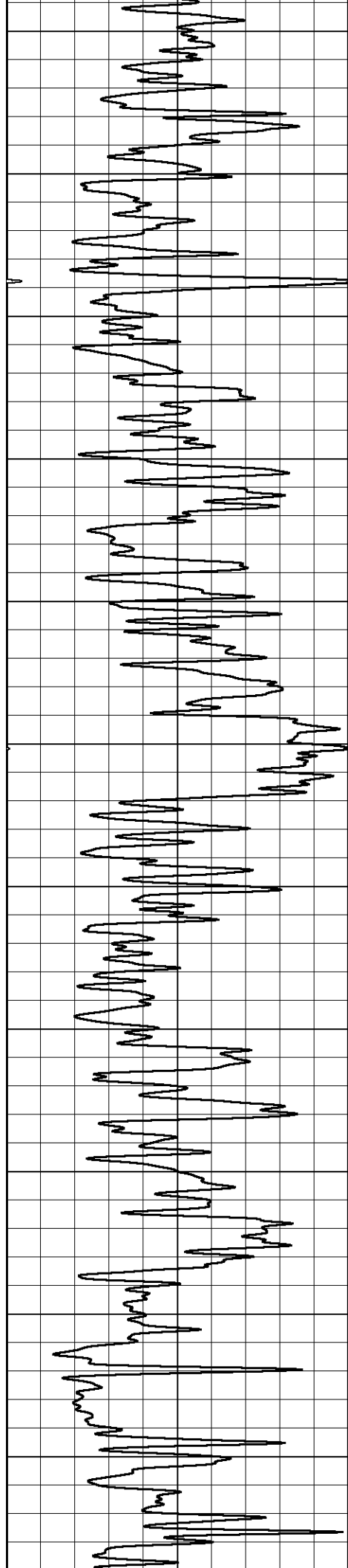




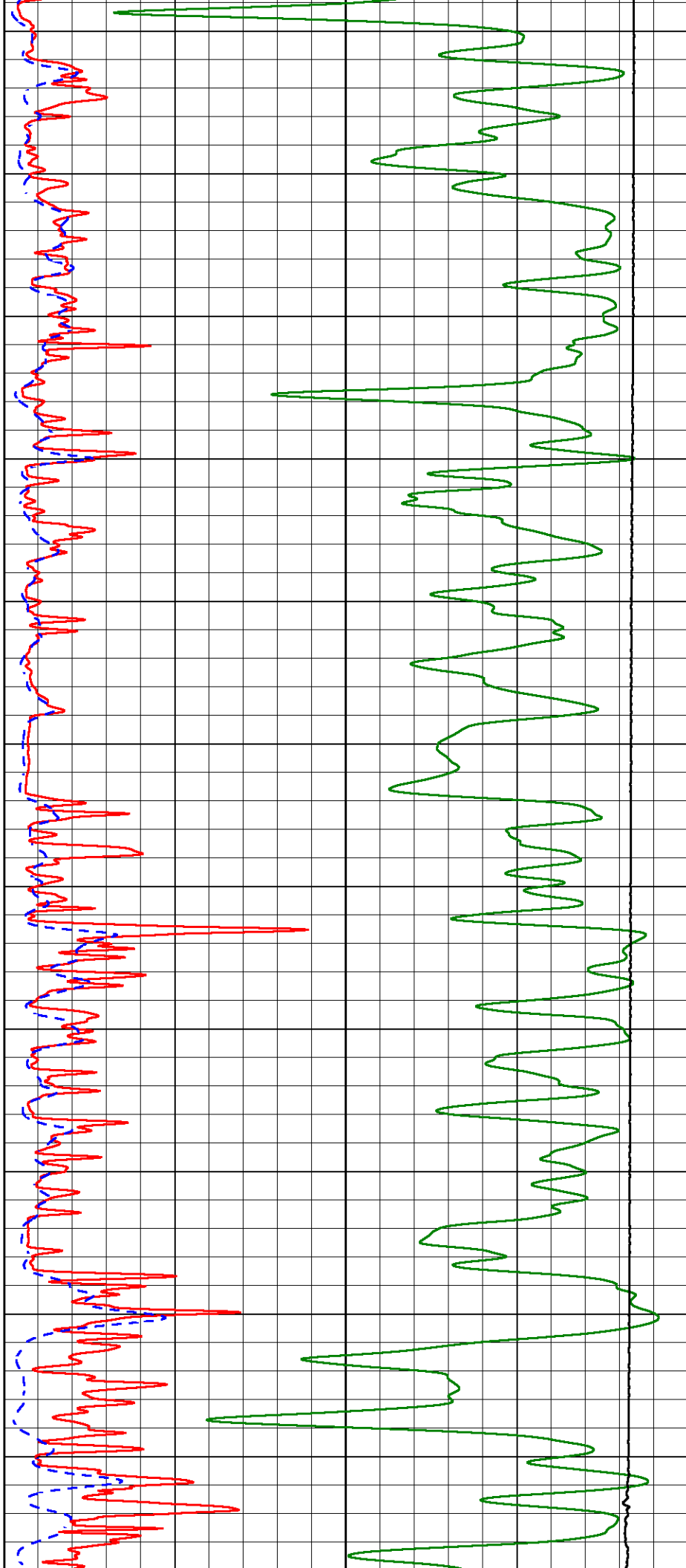


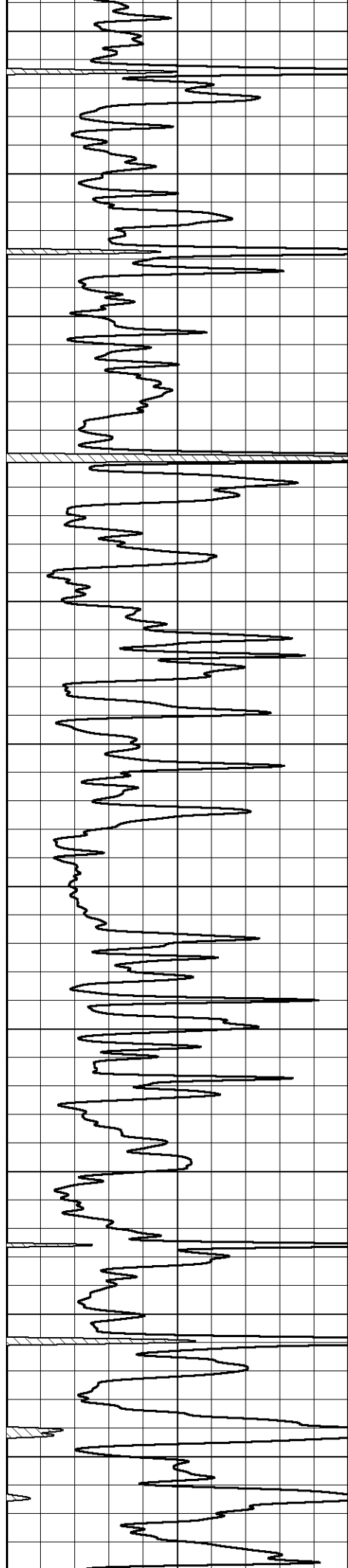
2600
2650
2700
2750
2800
2850
2900
2950
3000
3050
3100





3150
3200
3250
3300
3350
3400
3450
3500
3550
3600
3650





3700

3750

3800

3850

3900

3950

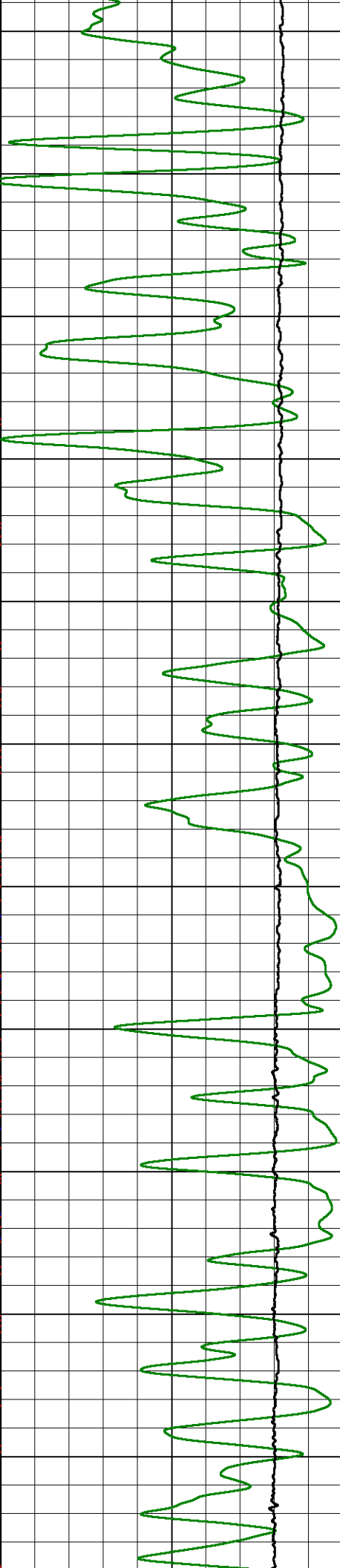
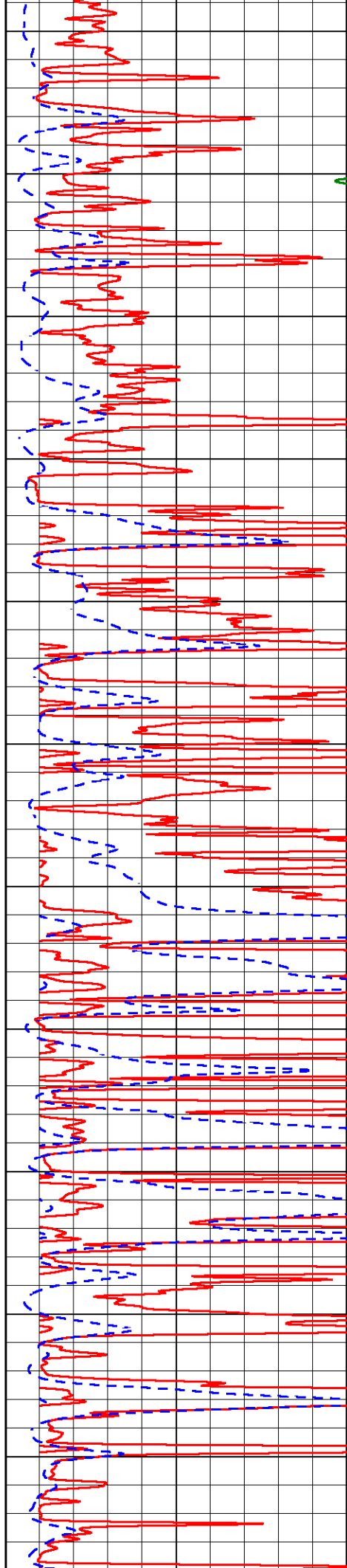
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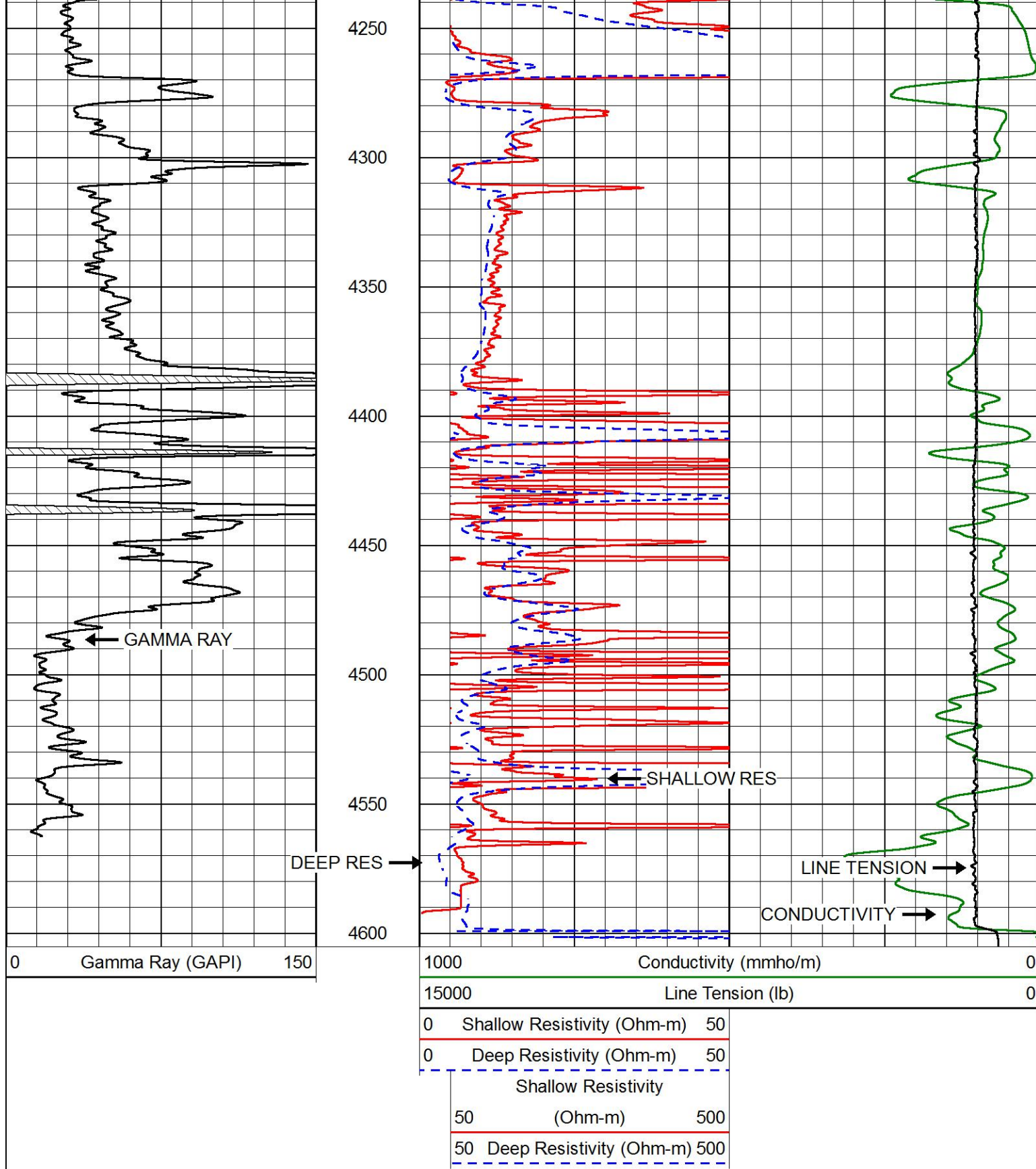
4050

4100

4150

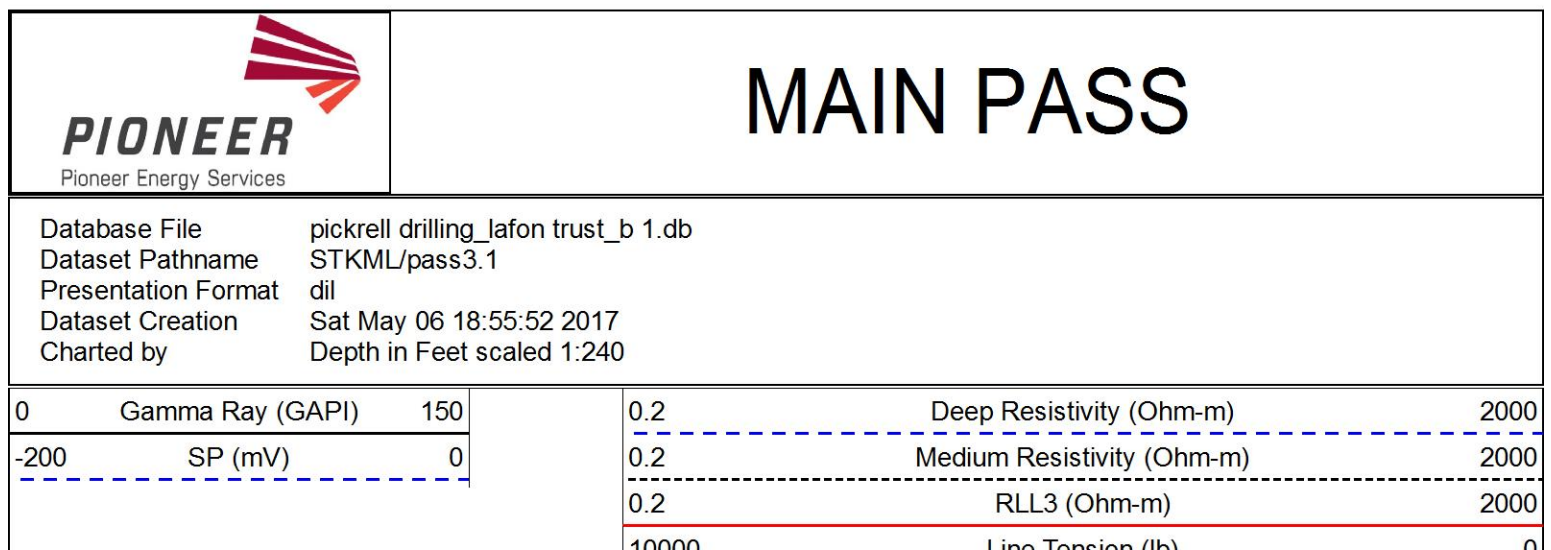
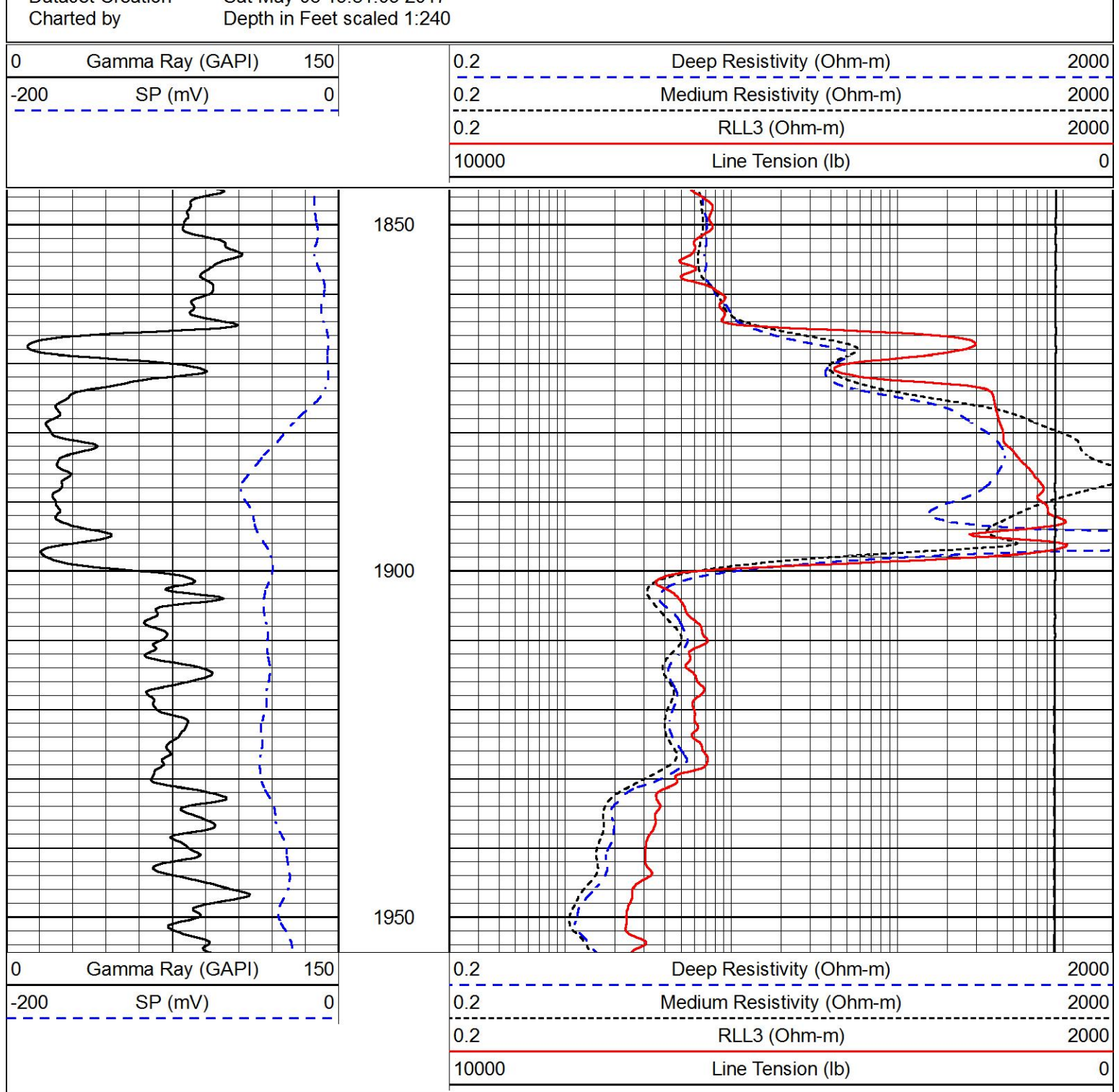
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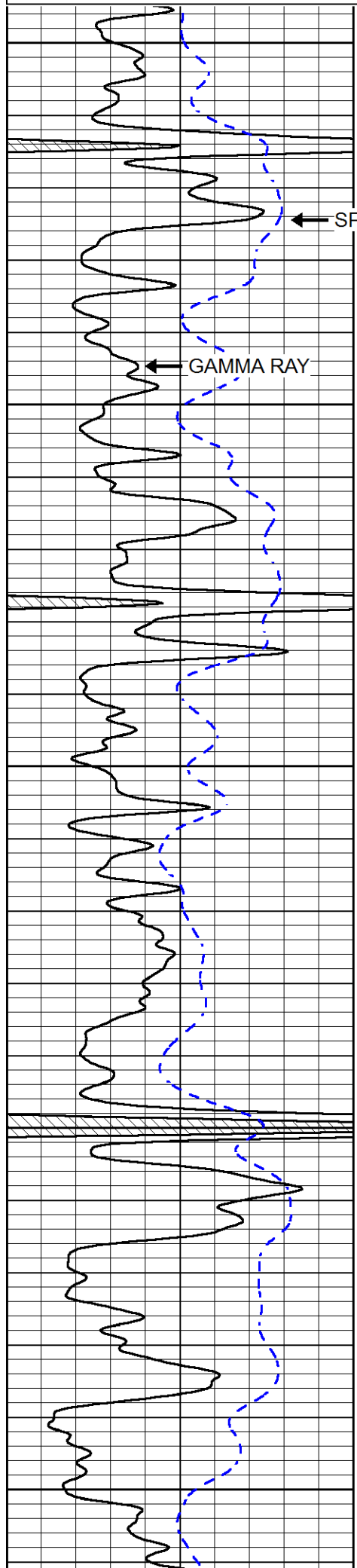




MAIN PASS

Database File pickrell drilling_lafon trust_b 1.db
 Dataset Pathname STKML/pass4.1
 Presentation Format dil
 Dataset Creation Sat May 06 19:31:09 2017





3700

← SP

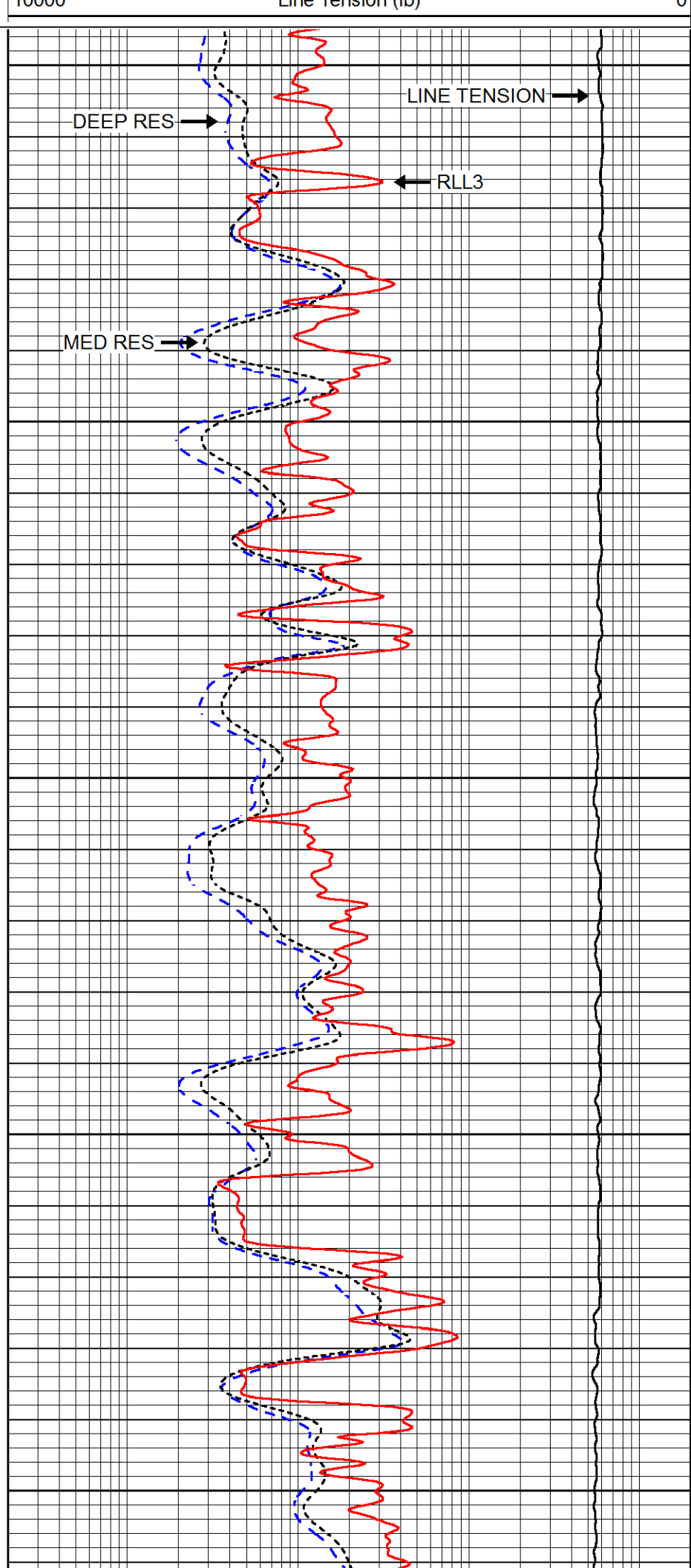
← GAMMA RAY

3750

3800

3850

3900

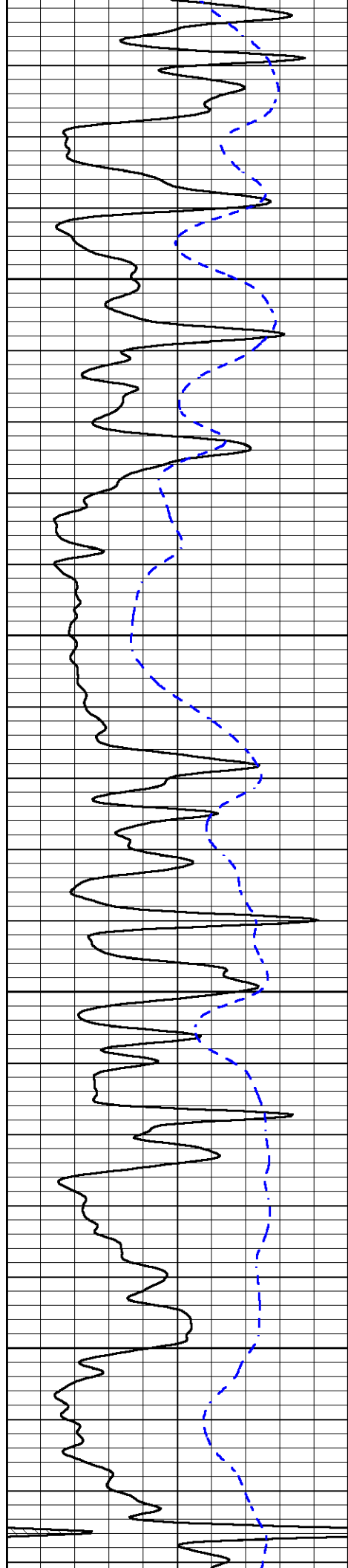


DEEP RES →

MED RES →

LINE TENSION →

← RLL3

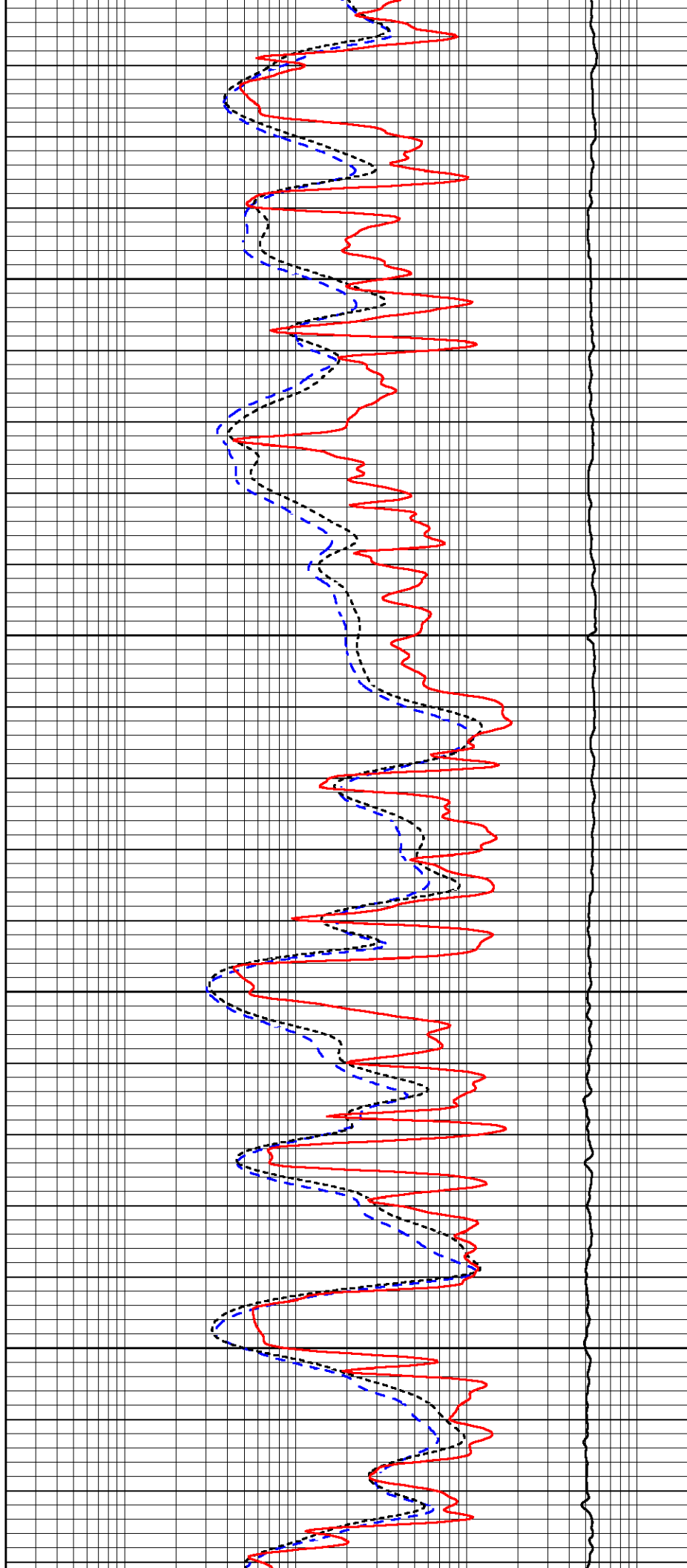


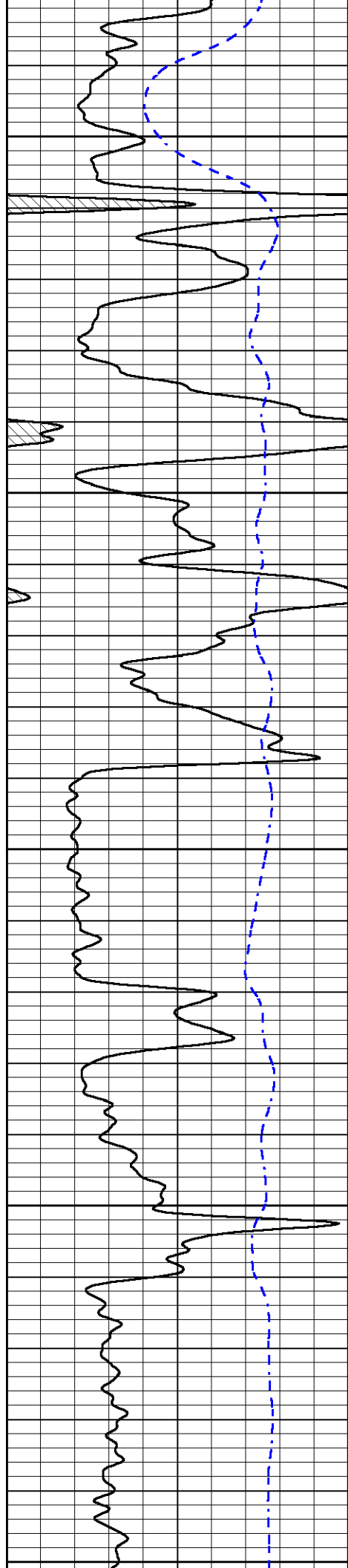
3950

4000

4050

4100





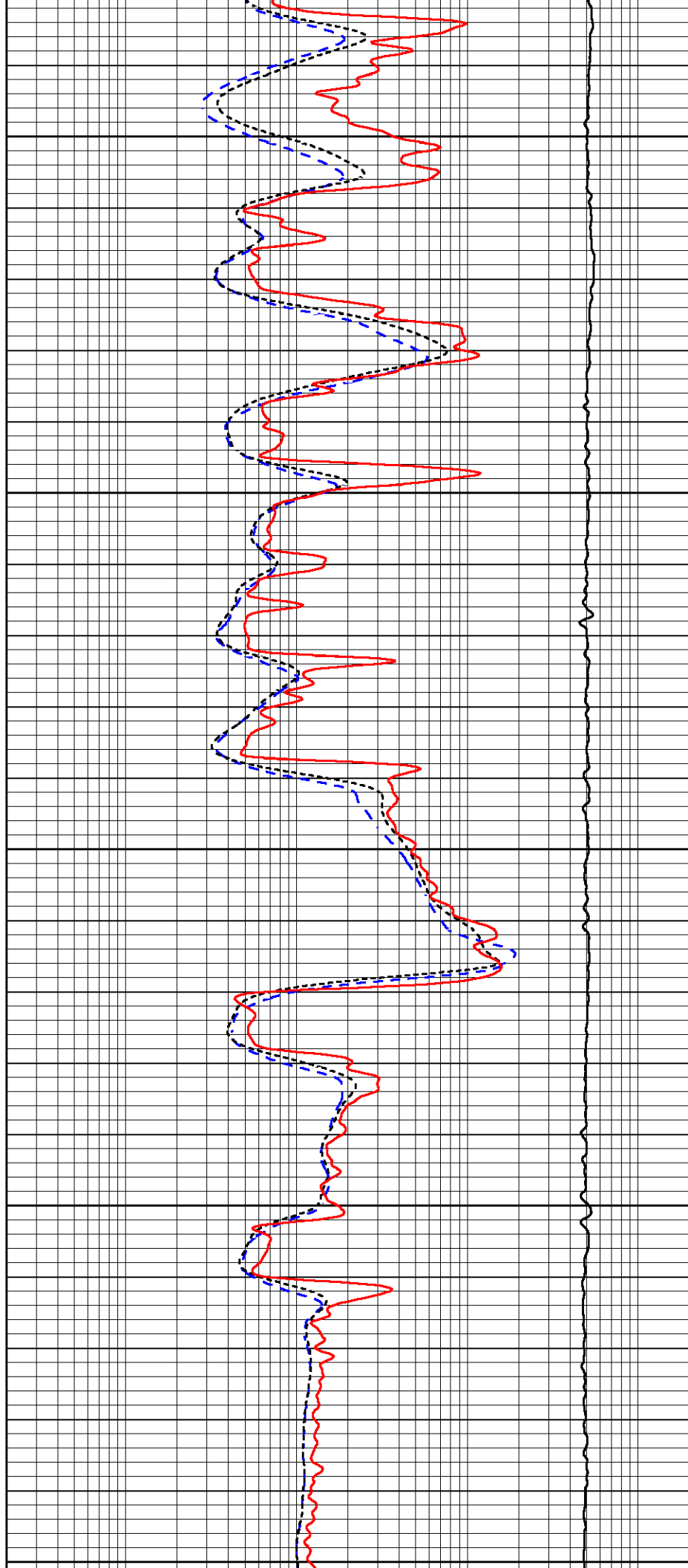
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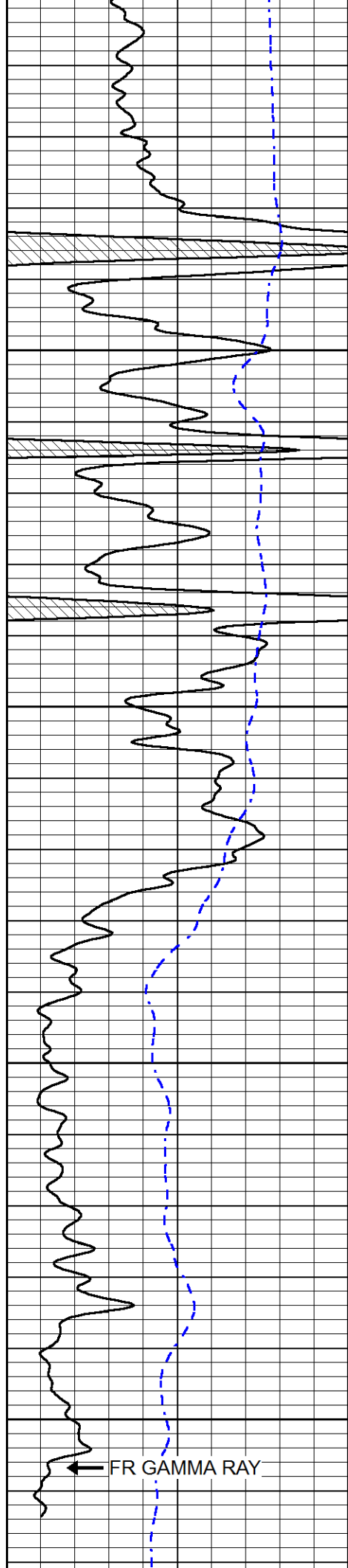
4200

4250

4300

4350





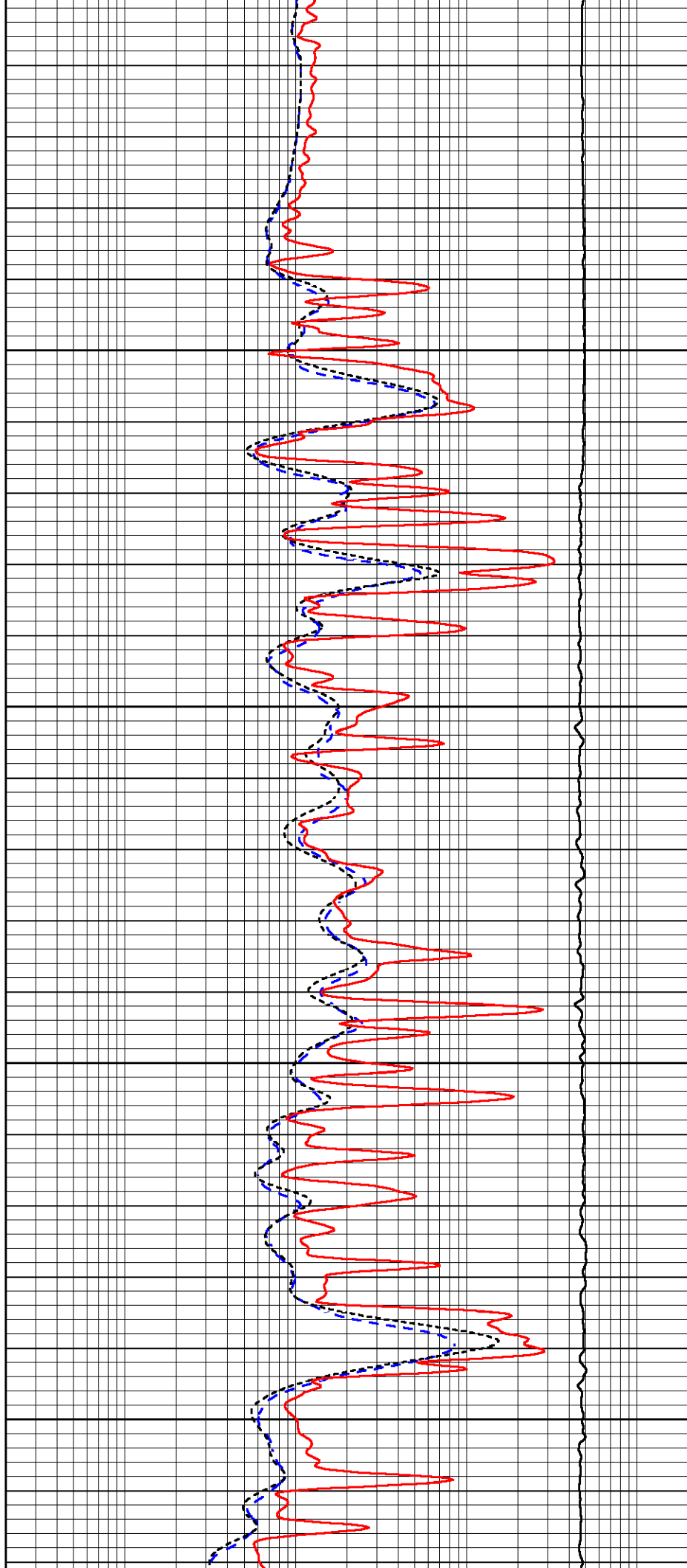
4400

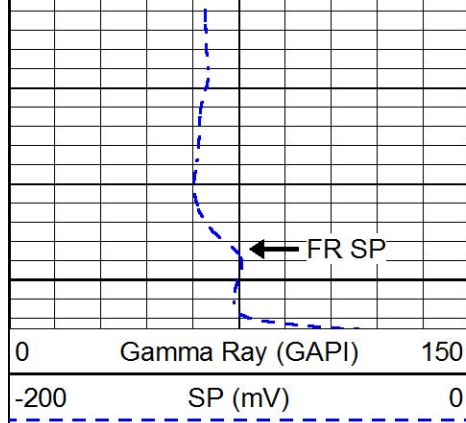
4450

4500

4550

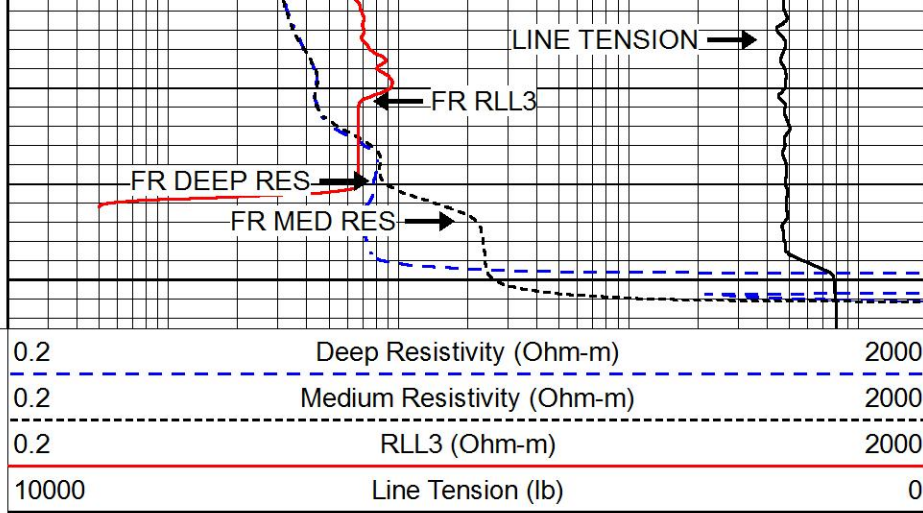
FR GAMMA RAY





4600

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

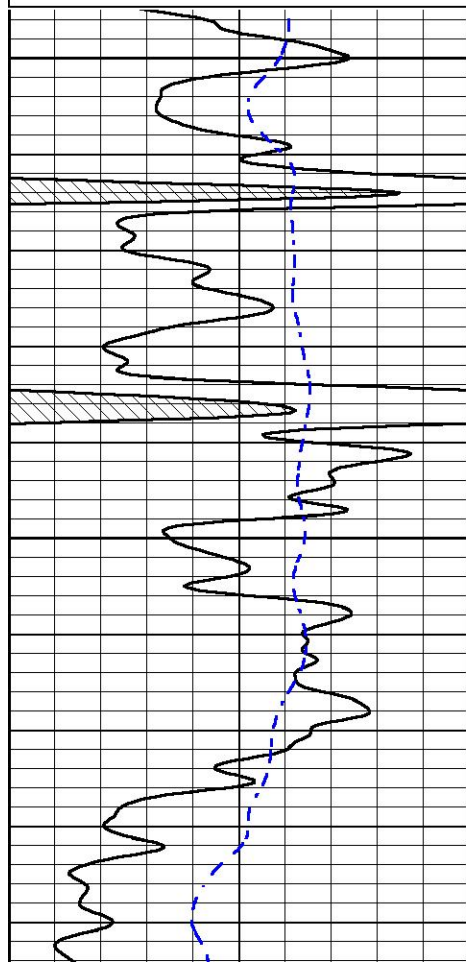


REPEAT SECTION

Database File pickrell drilling_lafon trust_b 1.db
Dataset Pathname STKML/pass2.1
Presentation Format dil
Dataset Creation Sat May 06 18:59:58 2017
Charted by Depth in Feet scaled 1:240

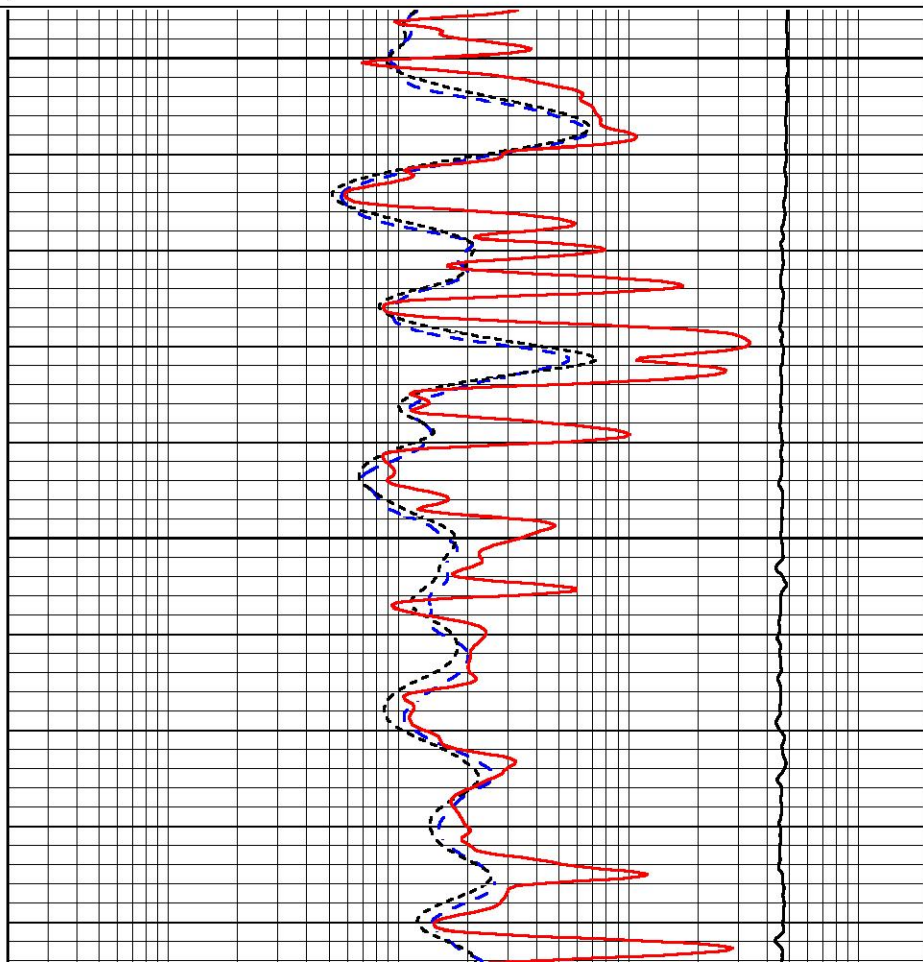
0 Gamma Ray (GAPI) 150
-200 SP (mV) 0

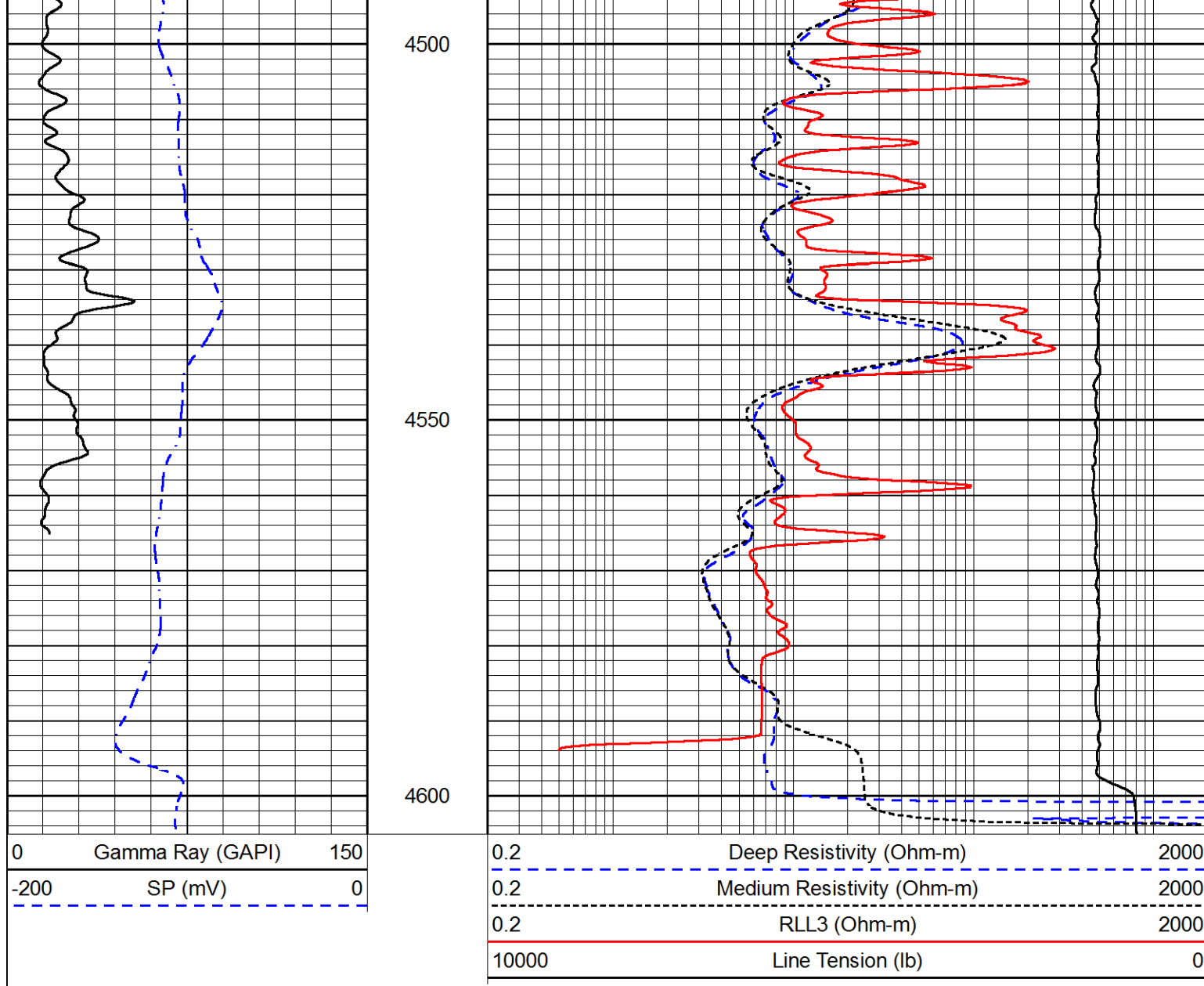
0.2 Deep Resistivity (Ohm-m) 2000
0.2 Medium Resistivity (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000
10000 Line Tension (lb) 0



4400

4450





Calibration Report

Database File pickrell drilling_lafon trust_b 1.db
 Dataset Pathname STKML/pass3.1
 Dataset Creation Sat May 06 18:55:52 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	0.410	-30.000
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.360	-31.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Sat May 06 17:53:42 2017

Readings References Results

	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	21500.0000	-1.1000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	20000.0000	-0.3000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.3750

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



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