



PIONEER
Pioneer Energy Services

DUAL INDUCTION LOG

Company **EVERGLOW ENERGY, LLC**
Well **HACKNEY #1-15**
Field **WILDCAT**
County **COMANCHE** State **KANSAS**

Location: API #: 15-033-21782-00-00

Other Services

SEC 15 TWP 32S RGE 17W
1980' FNL & 660' FWL

CNL/CDL
MEL

Permanent Datum GROUND LEVEL Elevation 2105'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2110'
D.F. N/A
G.L. 2105'

Date 1/28/2018

Run Number ONE

Depth Driller 5300'

Depth Logger 5300'

Bottom Logged Interval 5299'

Top Log Interval 200'

Casing Driller 13.375" @ 240'

Casing Logger 242'

Bit Size 7.875"

Type Fluid in Hole CHEMICAL

Salinity, ppm CL 9000

Density / Viscosity 9.3 60

pH / Fluid Loss 9.5 10.8

Source of Sample FLOWLINE

Rm @ Meas. Temp 0.30 @ 45

Rmf @ Meas. Temp 0.23 @ 45

Rmc @ Meas. Temp 0.41 @ 45

Source of Rmf / Rmc CHARTS

Rm @ BHT 0.10 @ 129

Operating Rig Time 3 HOURS

Max Rec. Temp. F 129

Equipment Number 91

Location HAYS

Recorded By D. SCHMIDT

Witnessed By TOM CASTELLI

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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.

COLDWATER,
10 EAST, 1 1/2 SOUTH,
EAST INTO

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

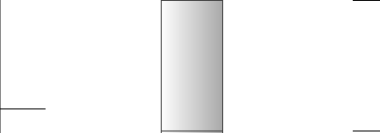
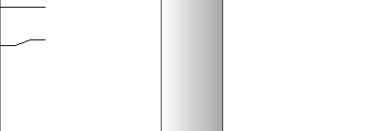
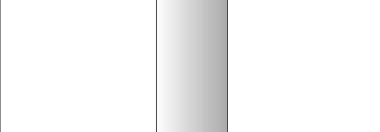
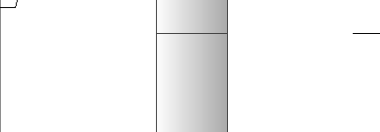
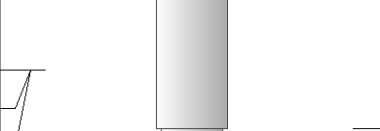
Engineer: D. SCHMIDT
Operator:
Operator:
Operator:

This Log Record Was Witnessed By

Primary Witness: TOM CASTELLI
Secondary Witness:
Secondary Witness:
Secondary Witness:

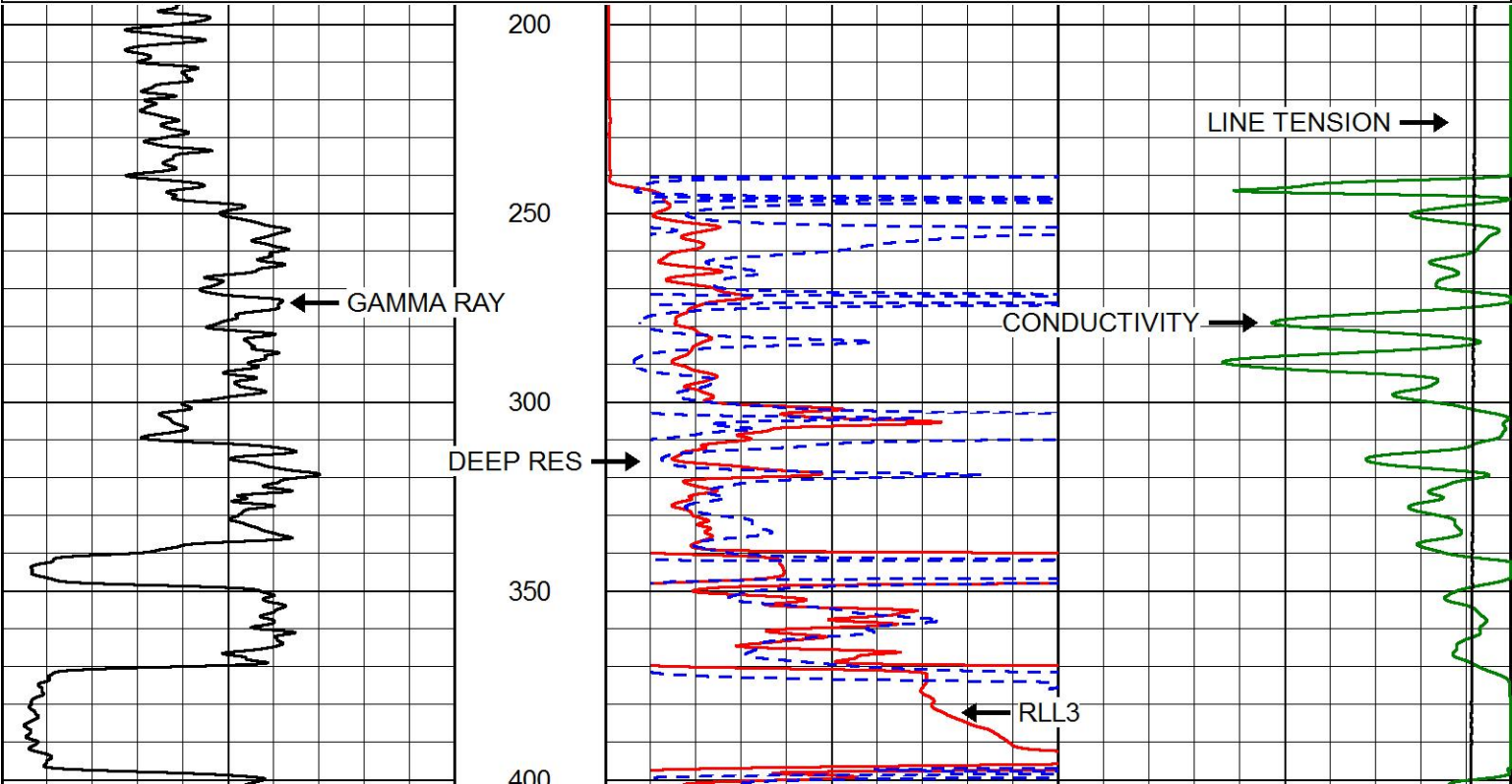
Top - Bottom

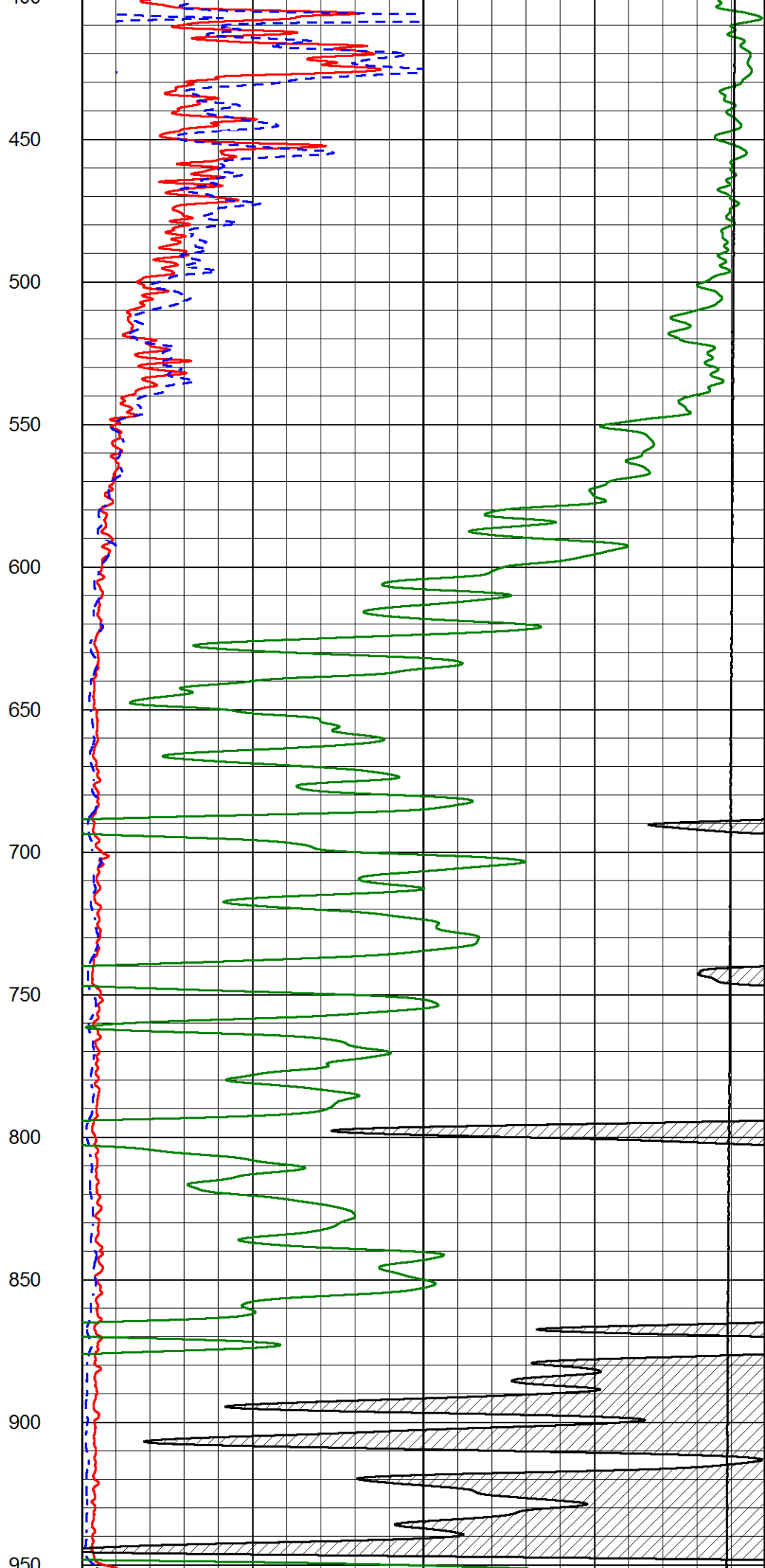
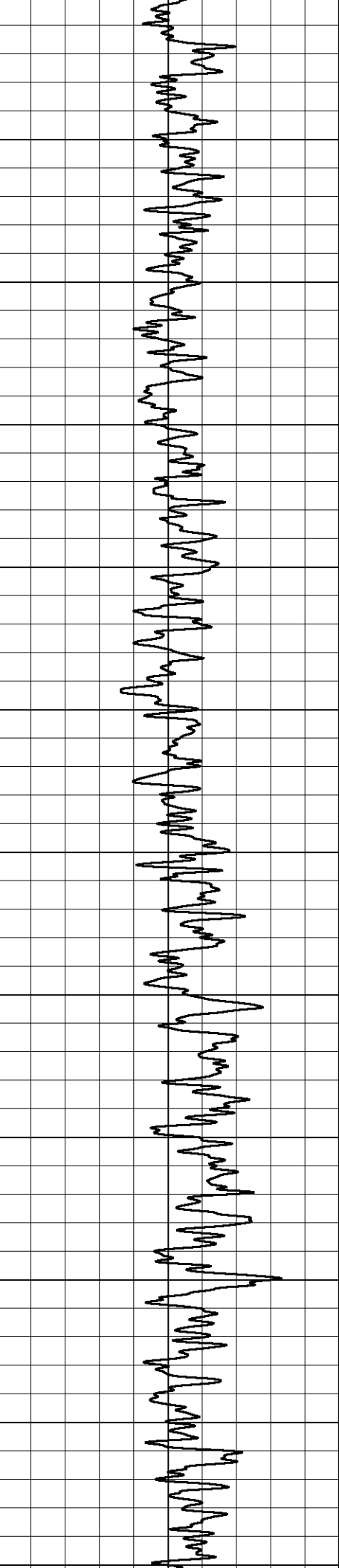
M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	-147	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	50	0	5.5	0	5300	129	7.875

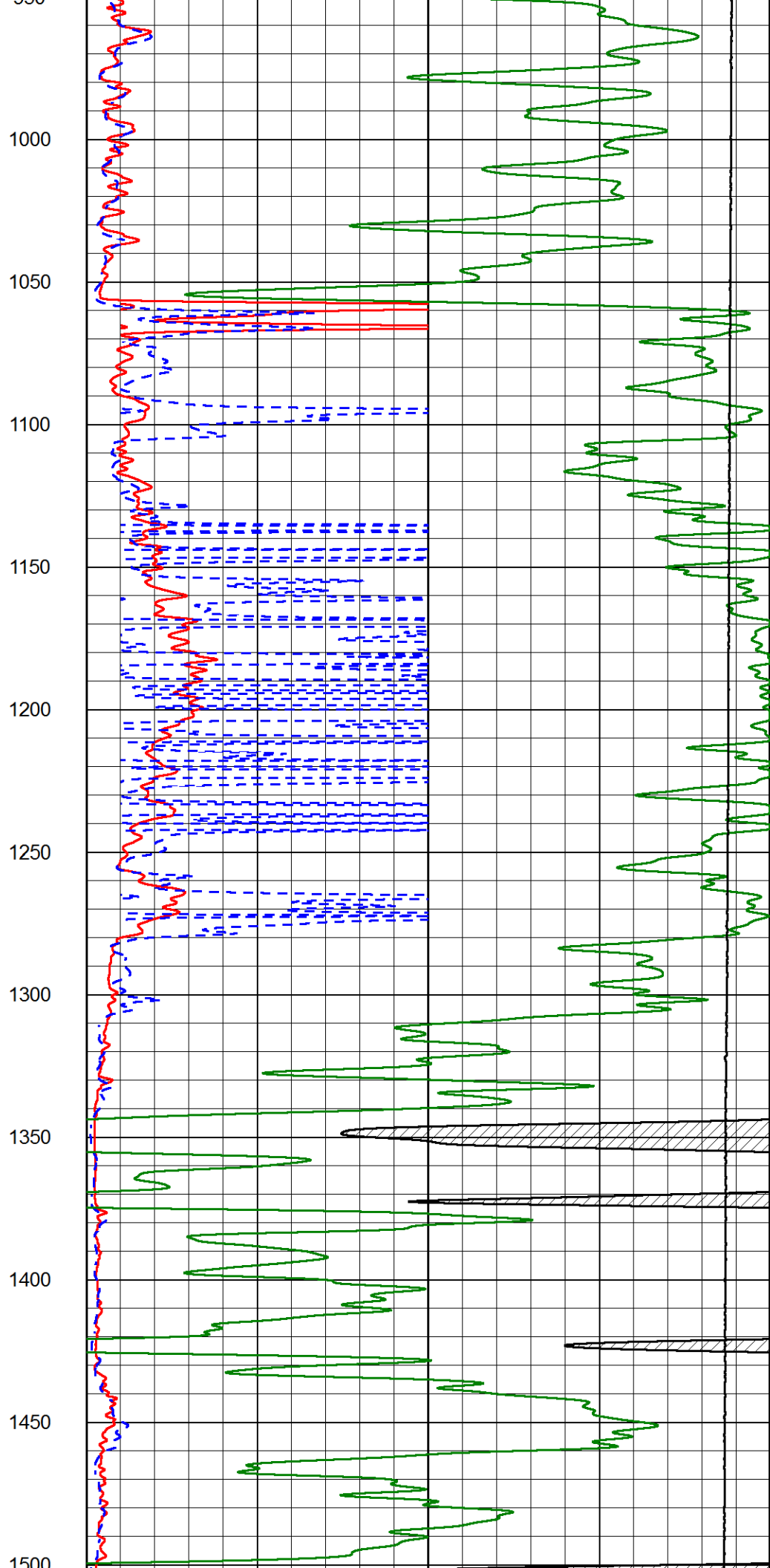
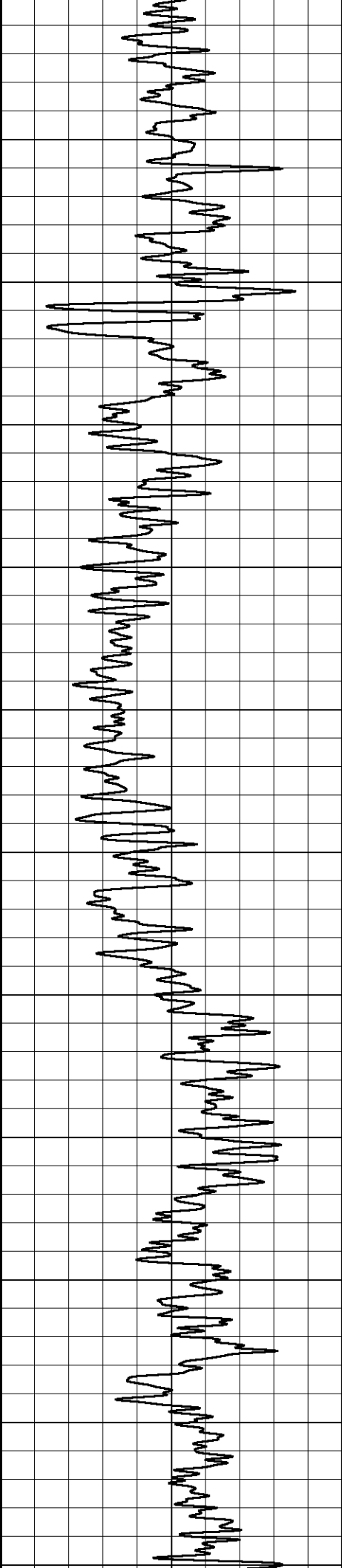
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (227-771)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					

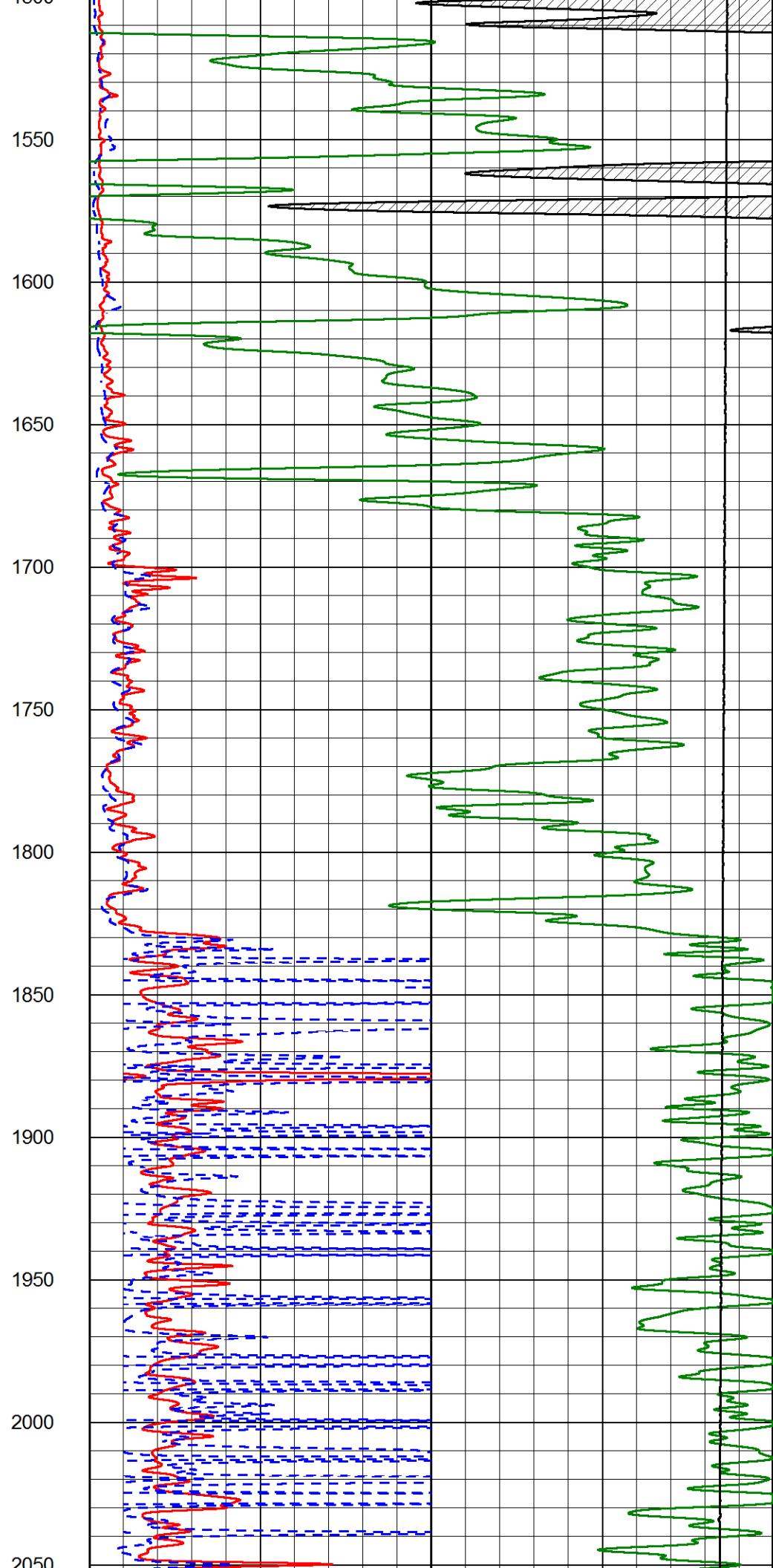
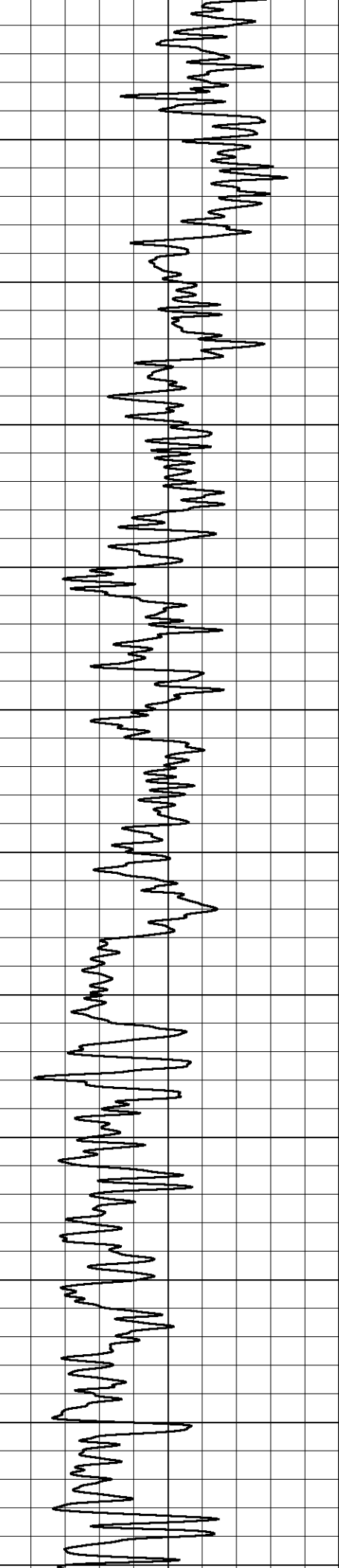
			DIL-PSI HIGH TEMP (933 (HT))	18.50	3.50	220.00
CILD	8.00					
CILM	4.70					
SP	0.20					
Dataset: everglow_hackney 1-15.db: field/well/STKML/pass3.1 Total length: 43.08 ft Total weight: 685.00 lb O.D.: 4.00 in						

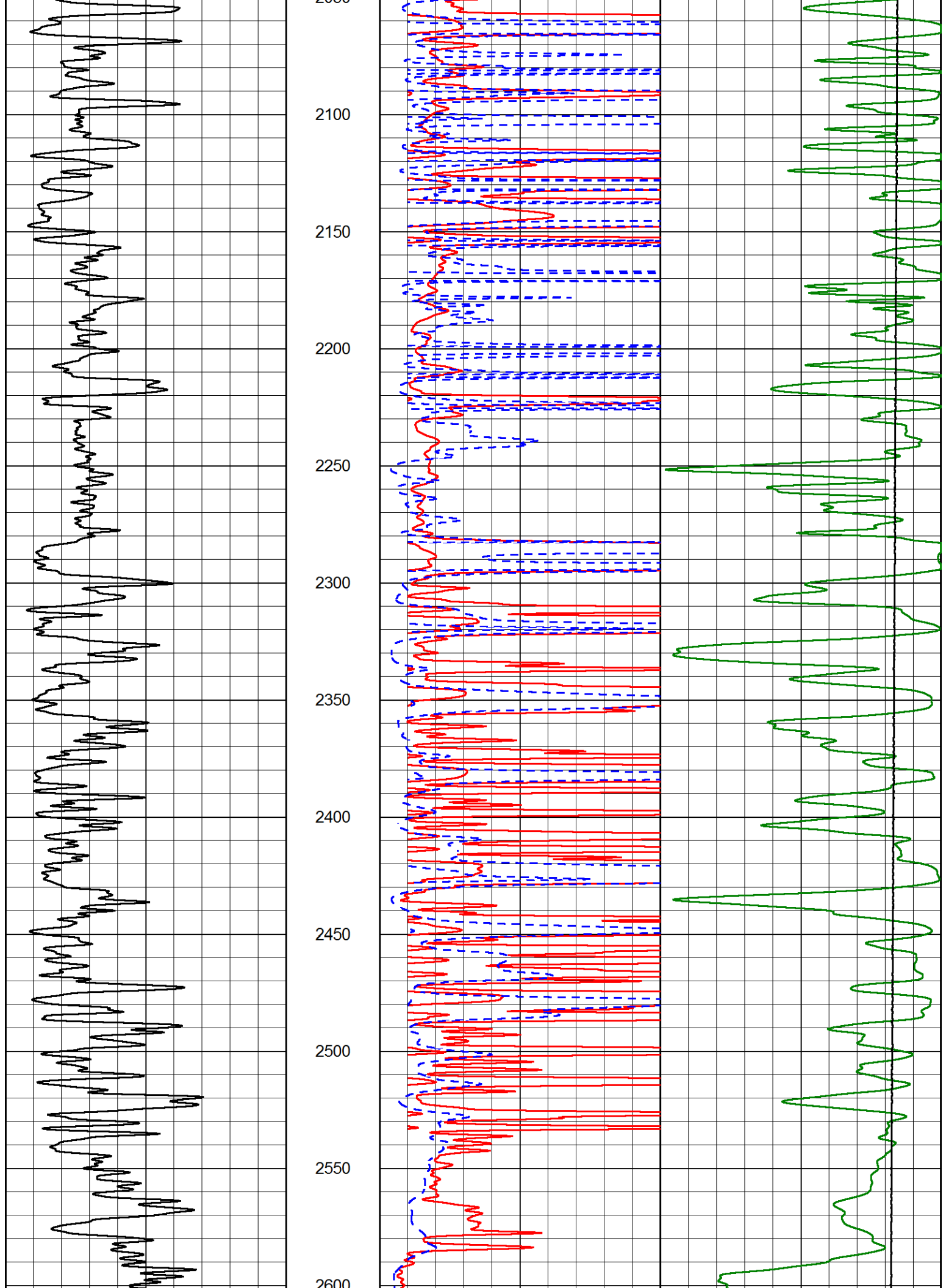
			MAIN PASS		
Database File everglow_hackney 1-15.db Dataset Pathname STKML/pass4.1 Presentation Format dil2in Dataset Creation Sun Jan 28 19:52:43 2018 Charted by Depth in Feet scaled 1:600					
0	Gamma Ray (GAPI)	150	1000	Conductivity (mmho/m)	0
			15000	Line Tension (lb)	0
			0	RLL3 (Ohm-m)	50
			0	Deep Resistivity (Ohm-m)	50
			50	RLL3 (Ohm-m)	500
			50	Deep Resistivity (Ohm-m)	500

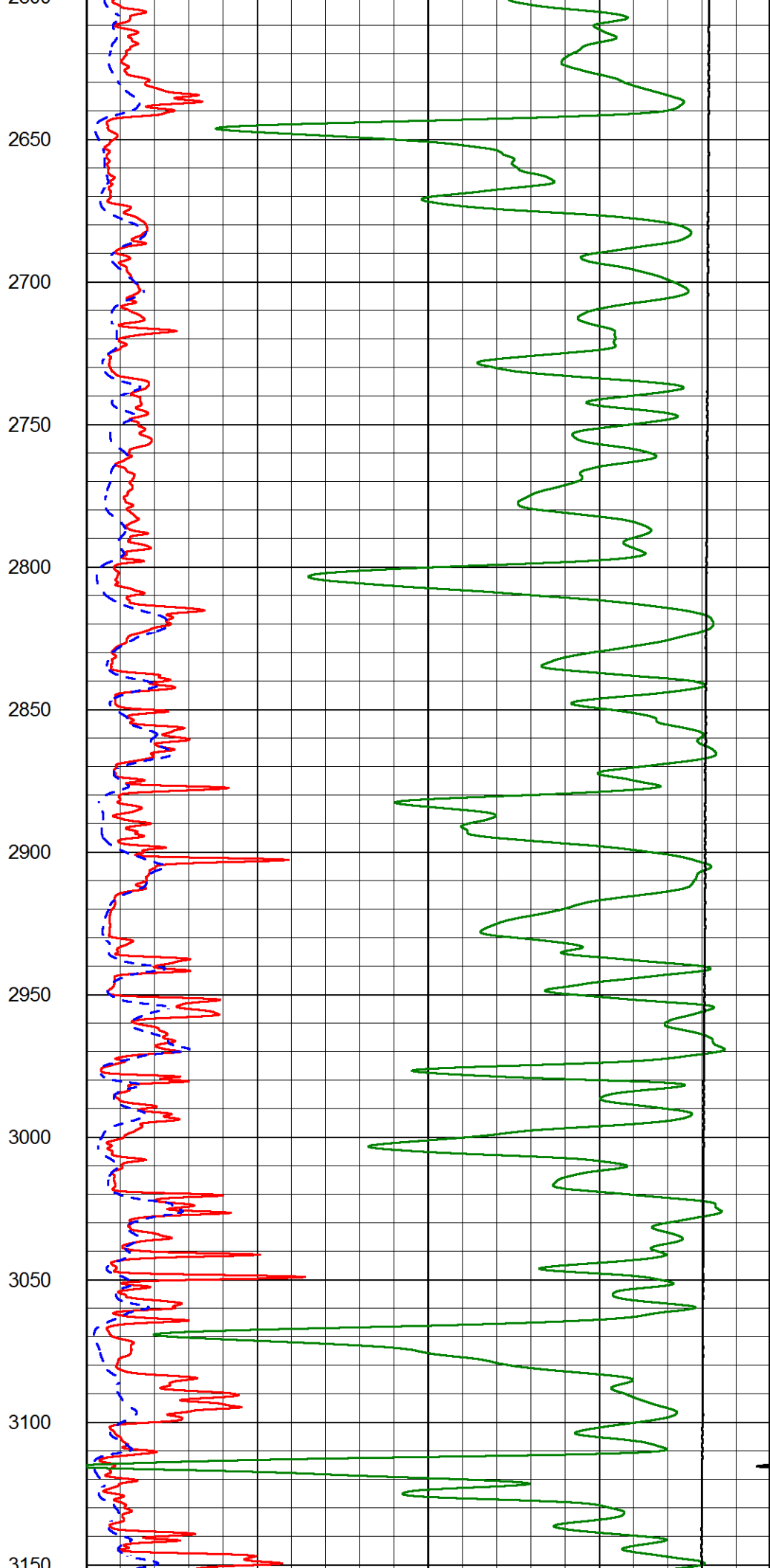
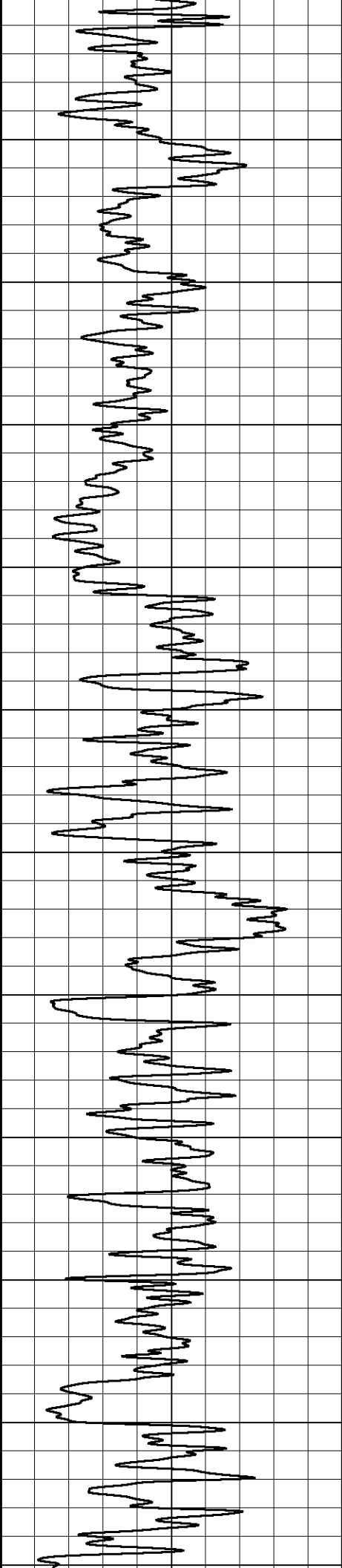


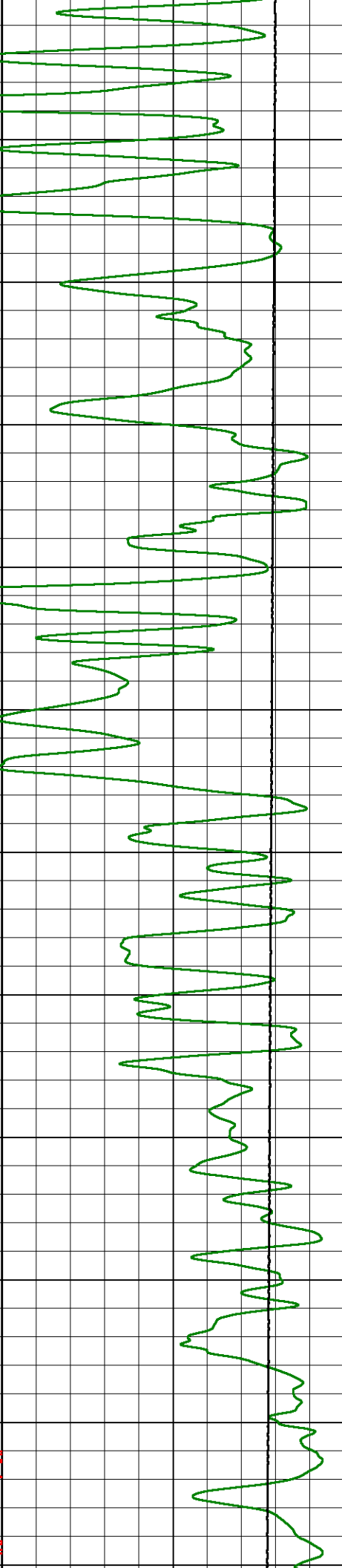
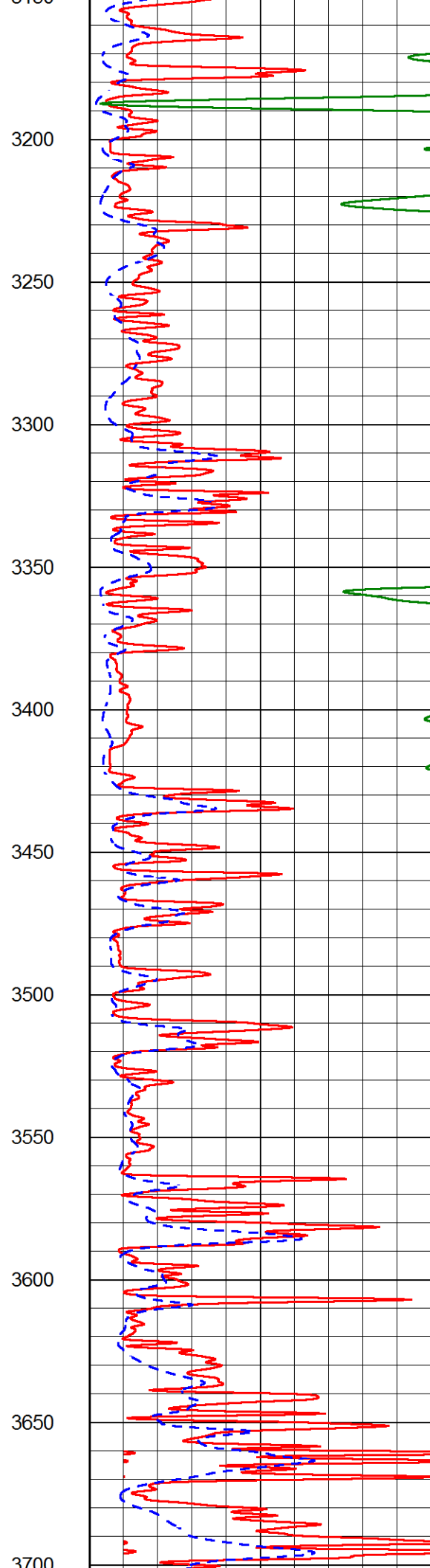
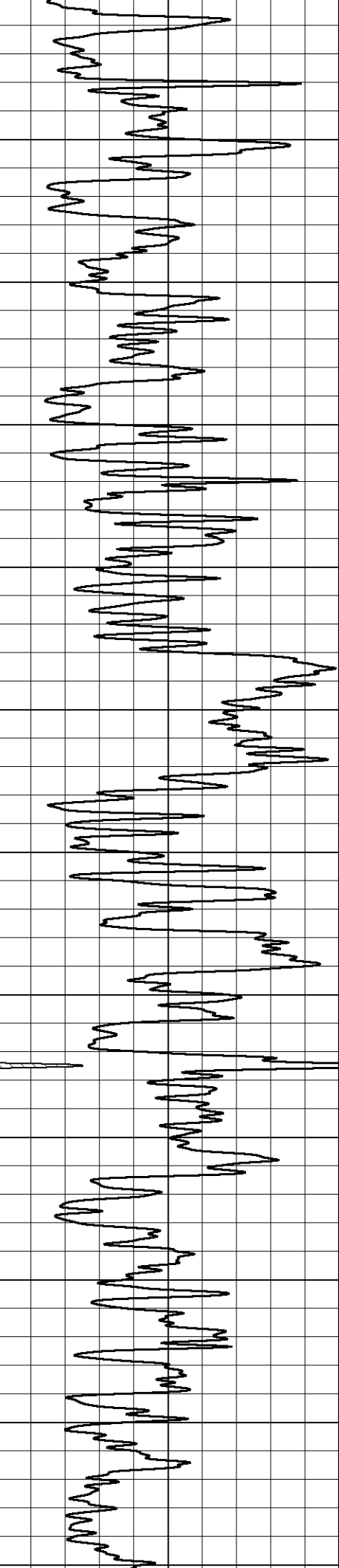


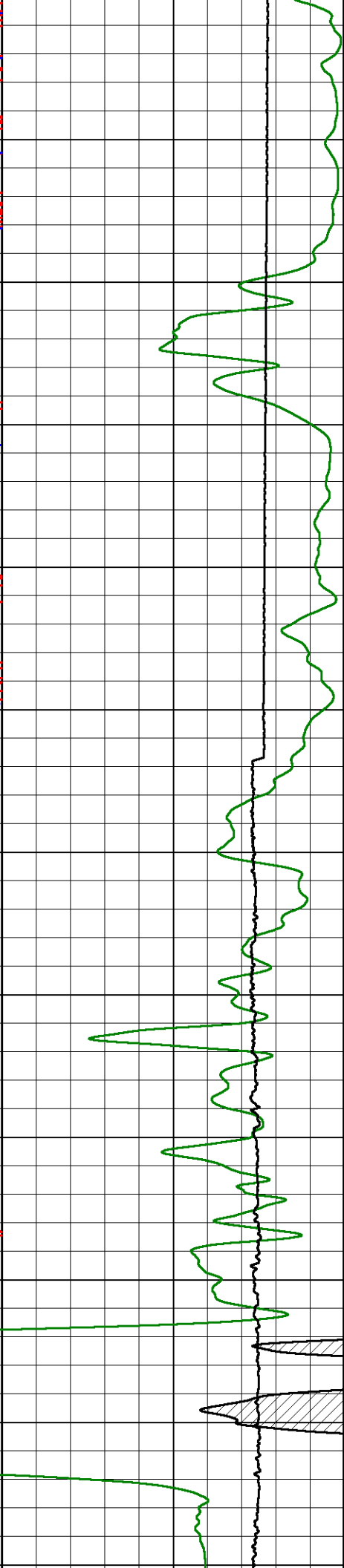
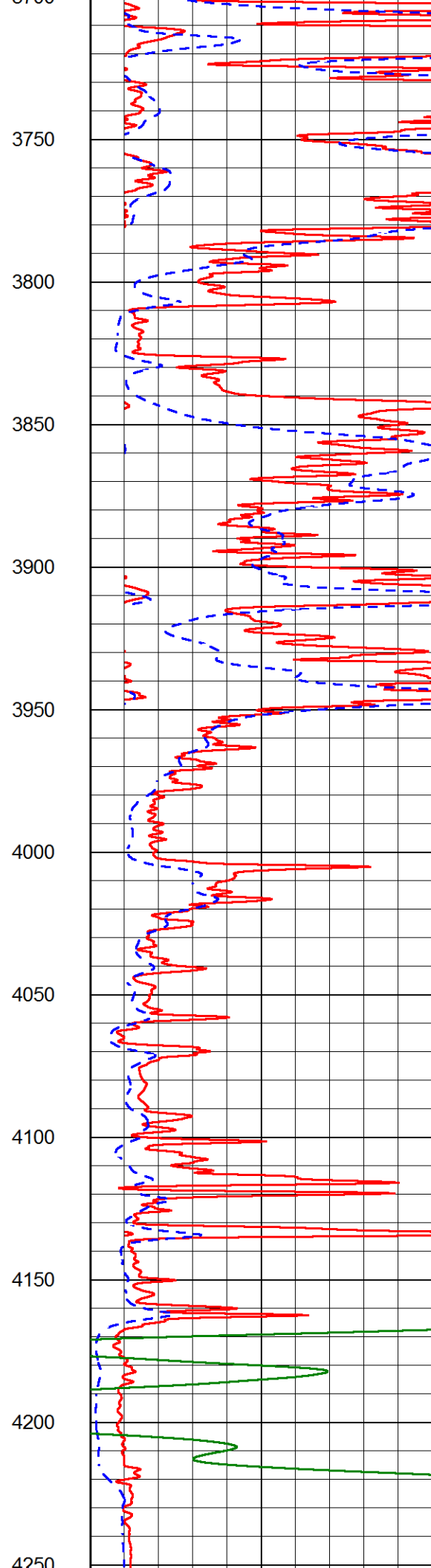
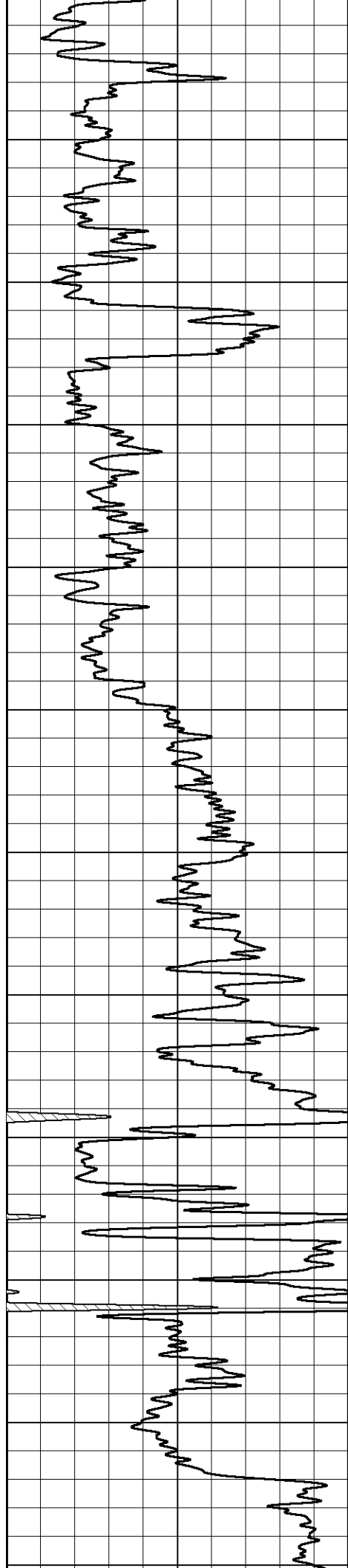


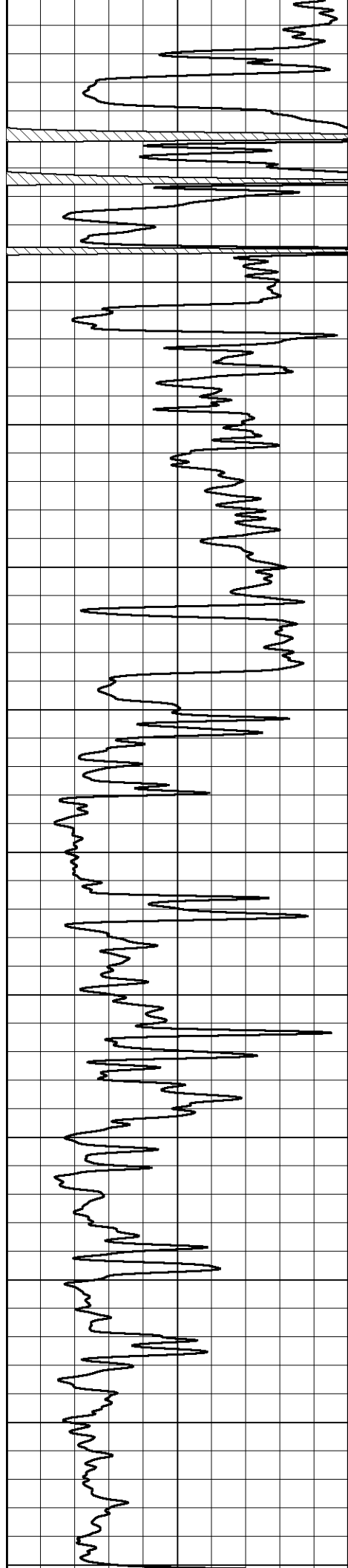




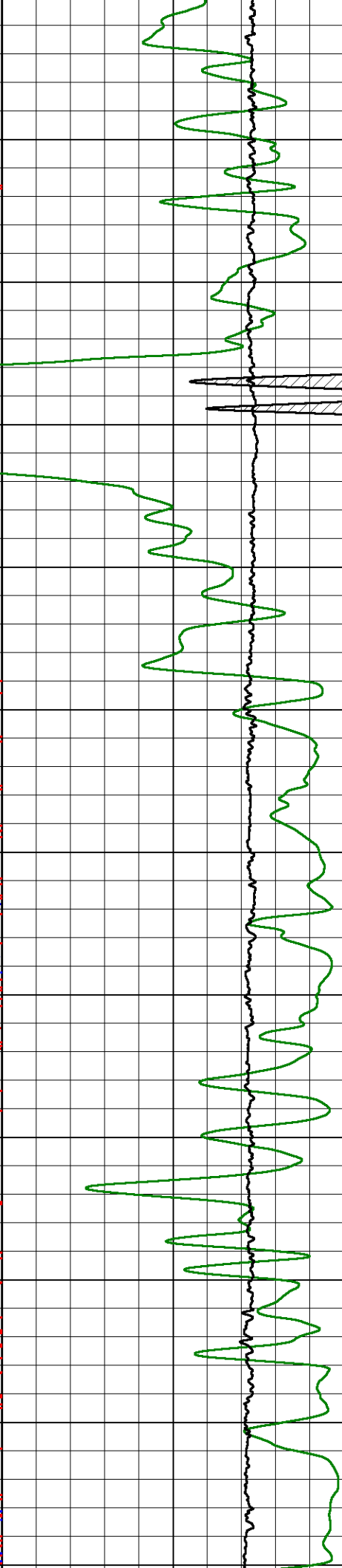
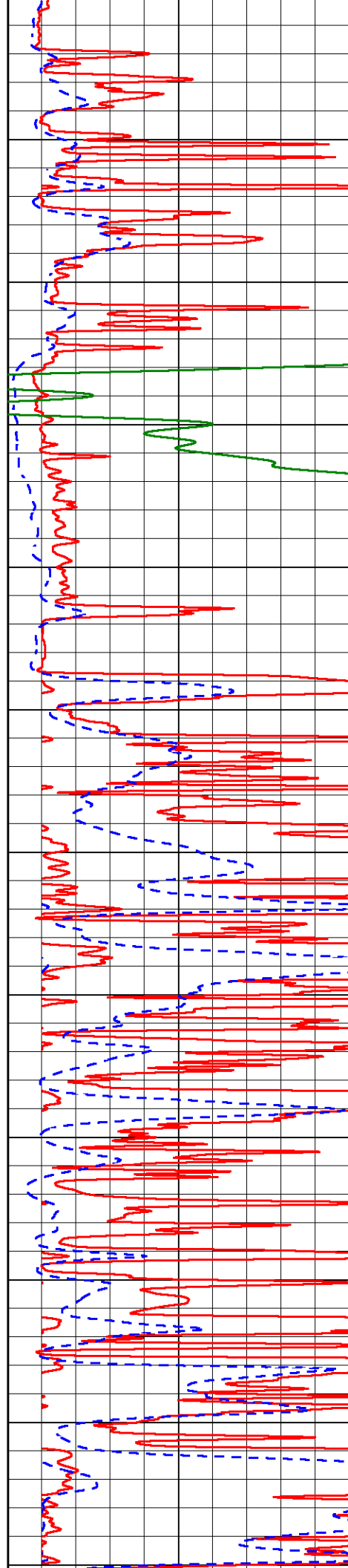


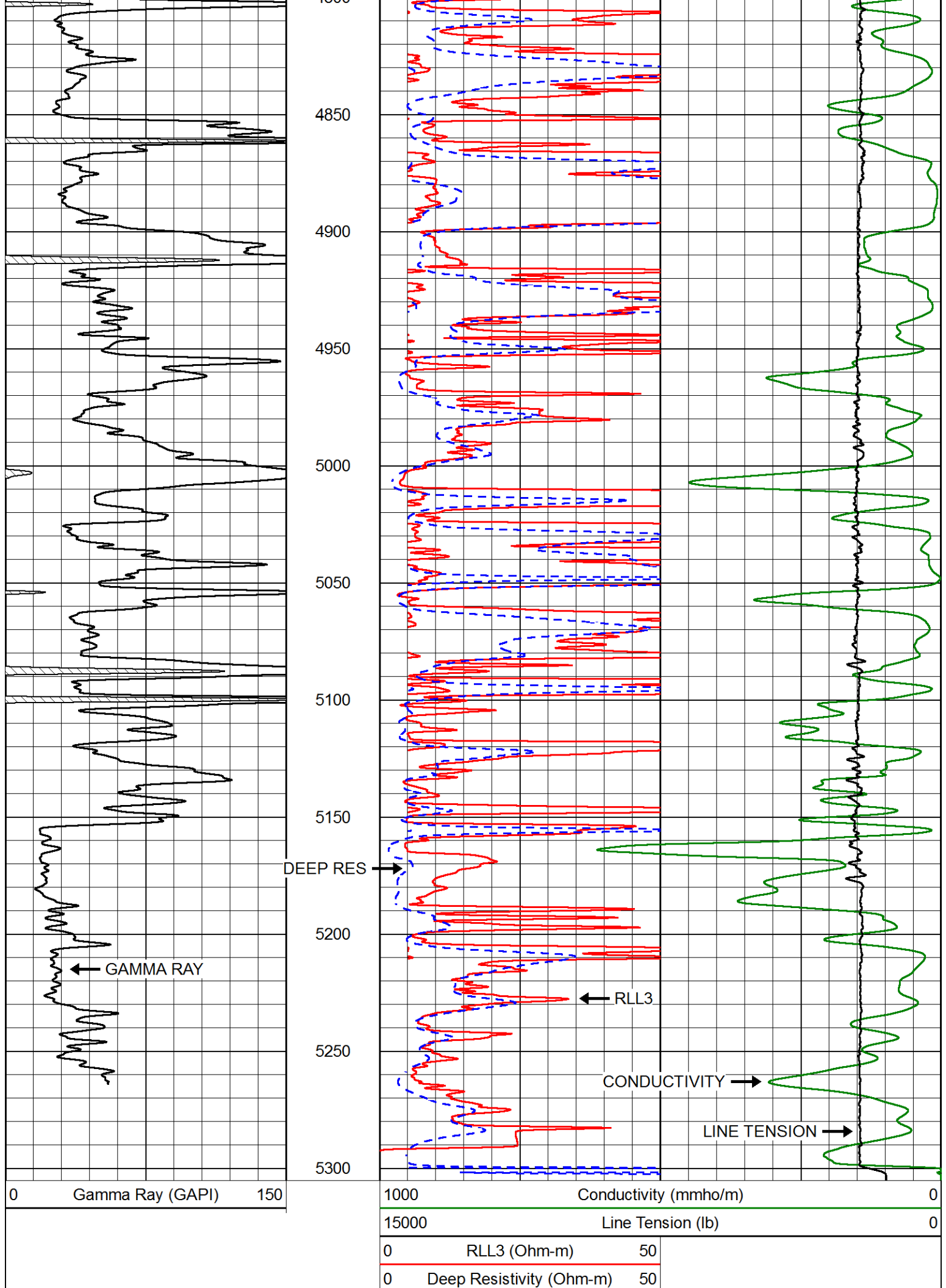






4250
4300
4350
4400
4450
4500
4550
4600
4650
4700
4750
4800





50	RLL3 (Ohm-m)	500
50	Deep Resistivity (Ohm-m)	500

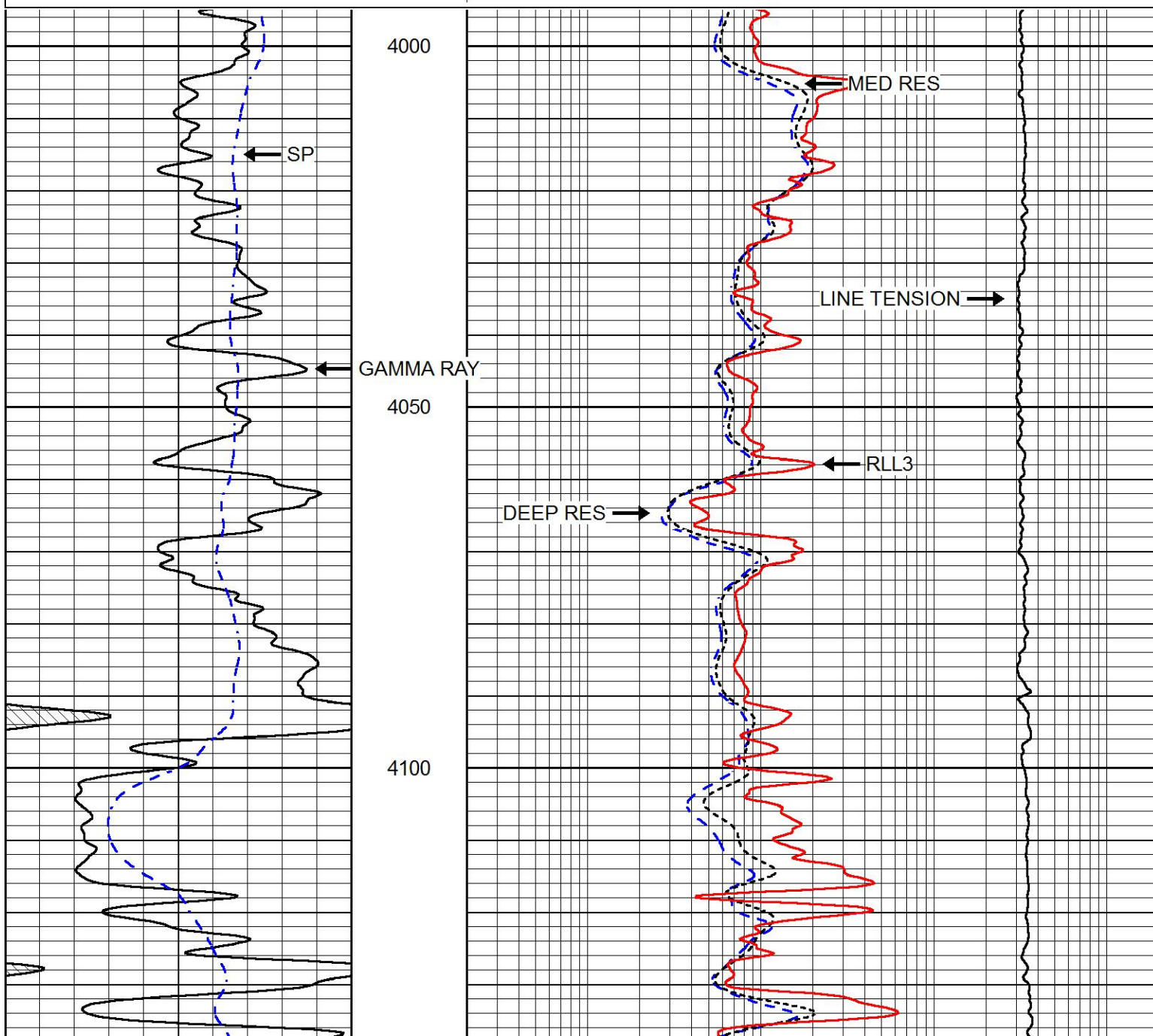


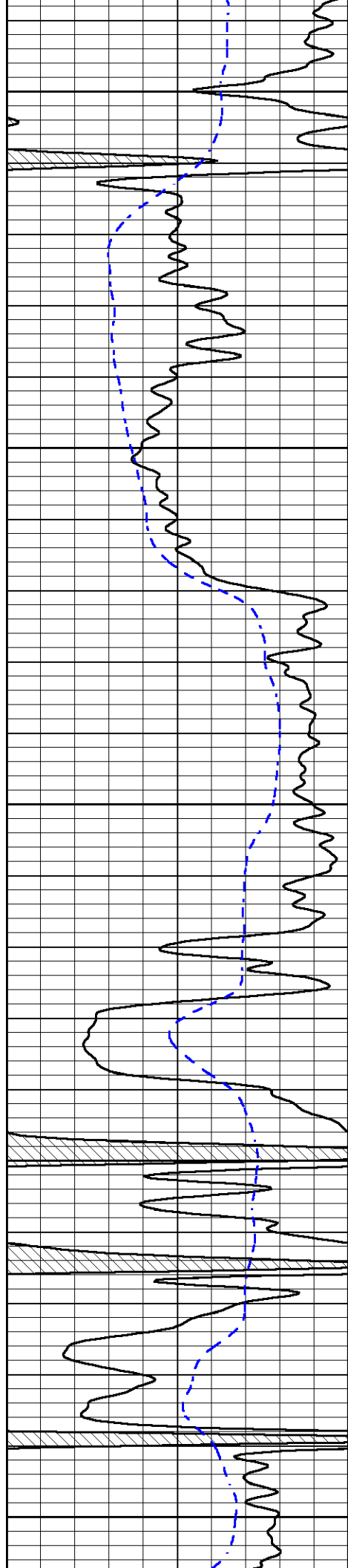
MAIN PASS

Database File everglow_hackney 1-15.db
Dataset Pathname STKML/pass3.1
Presentation Format dil
Dataset Creation Sun Jan 28 19:26:36 2018
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





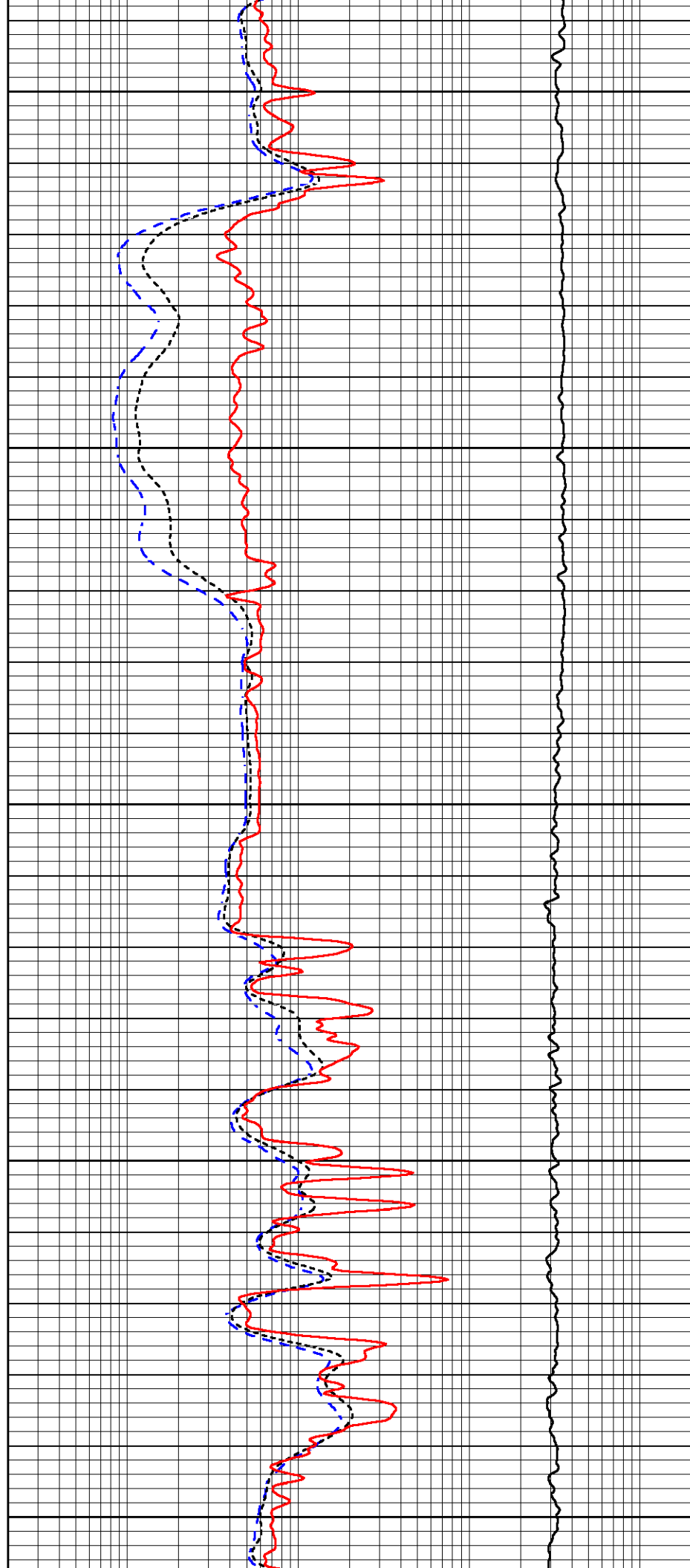
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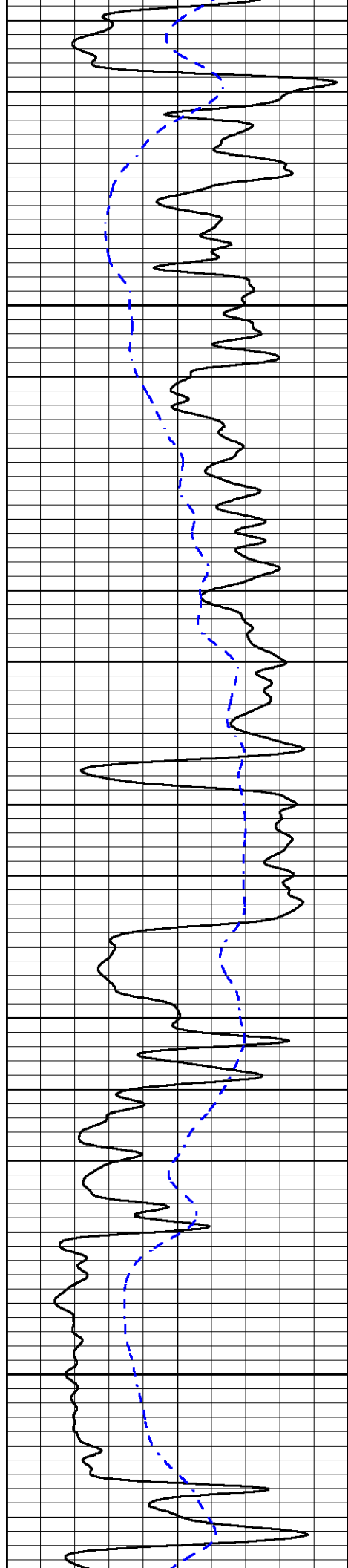
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4250

4300

4350



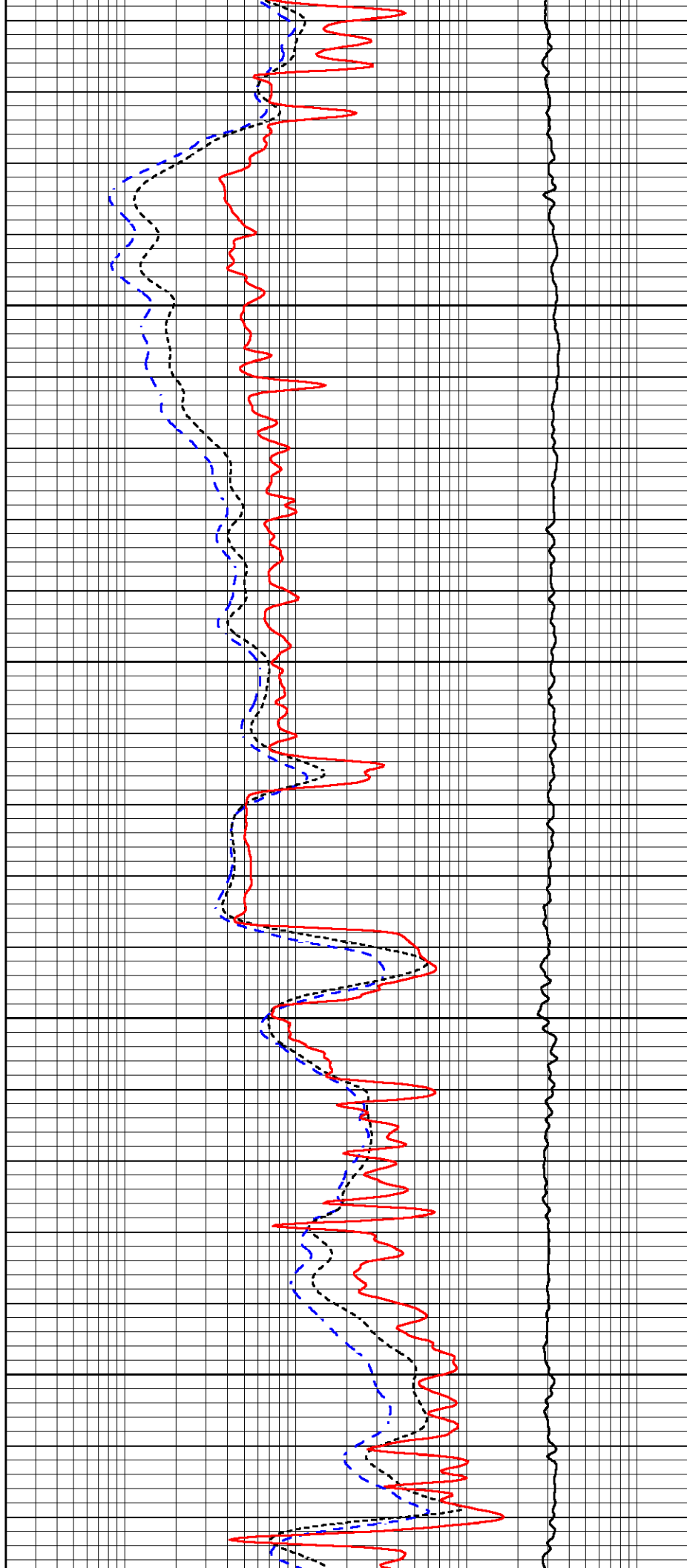


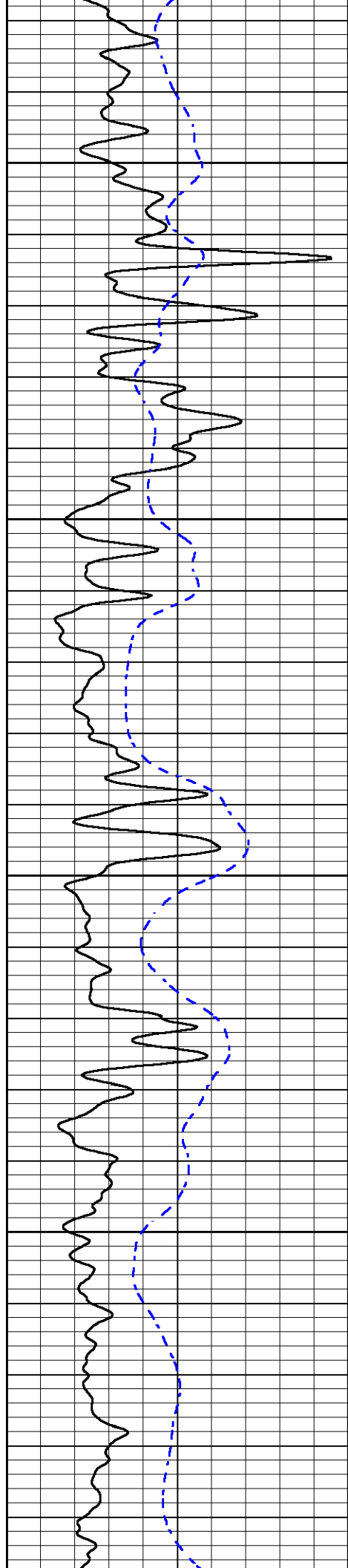
4400

4450

4500

4550



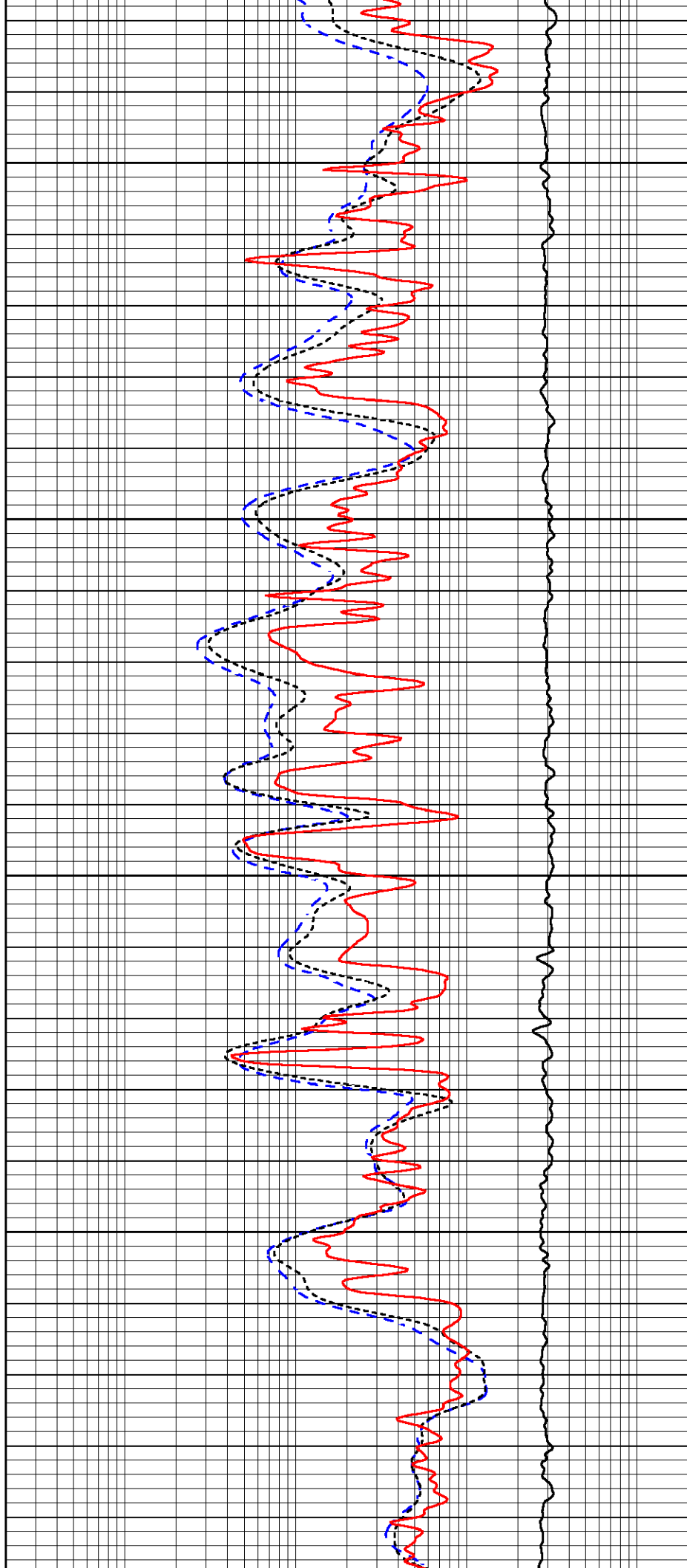


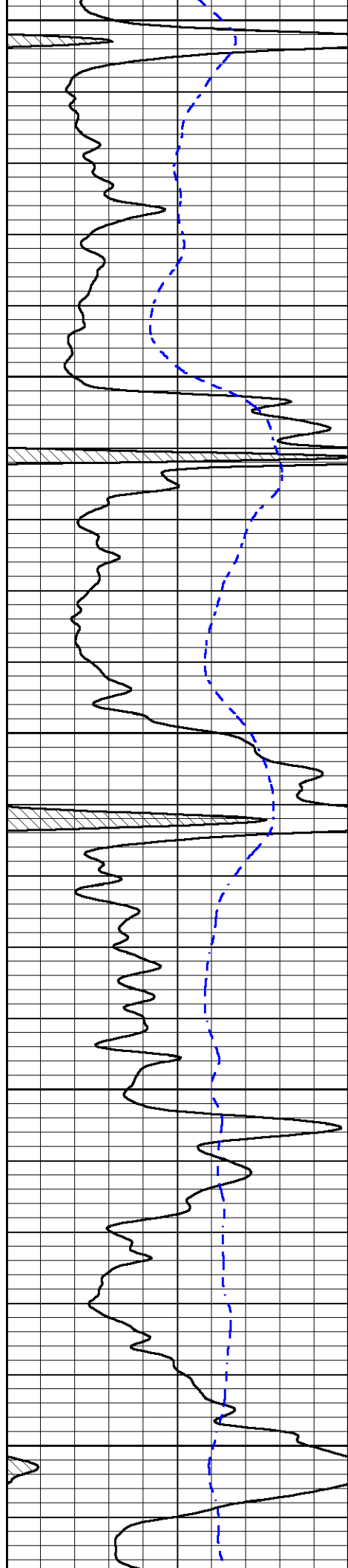
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4650

4700

4750





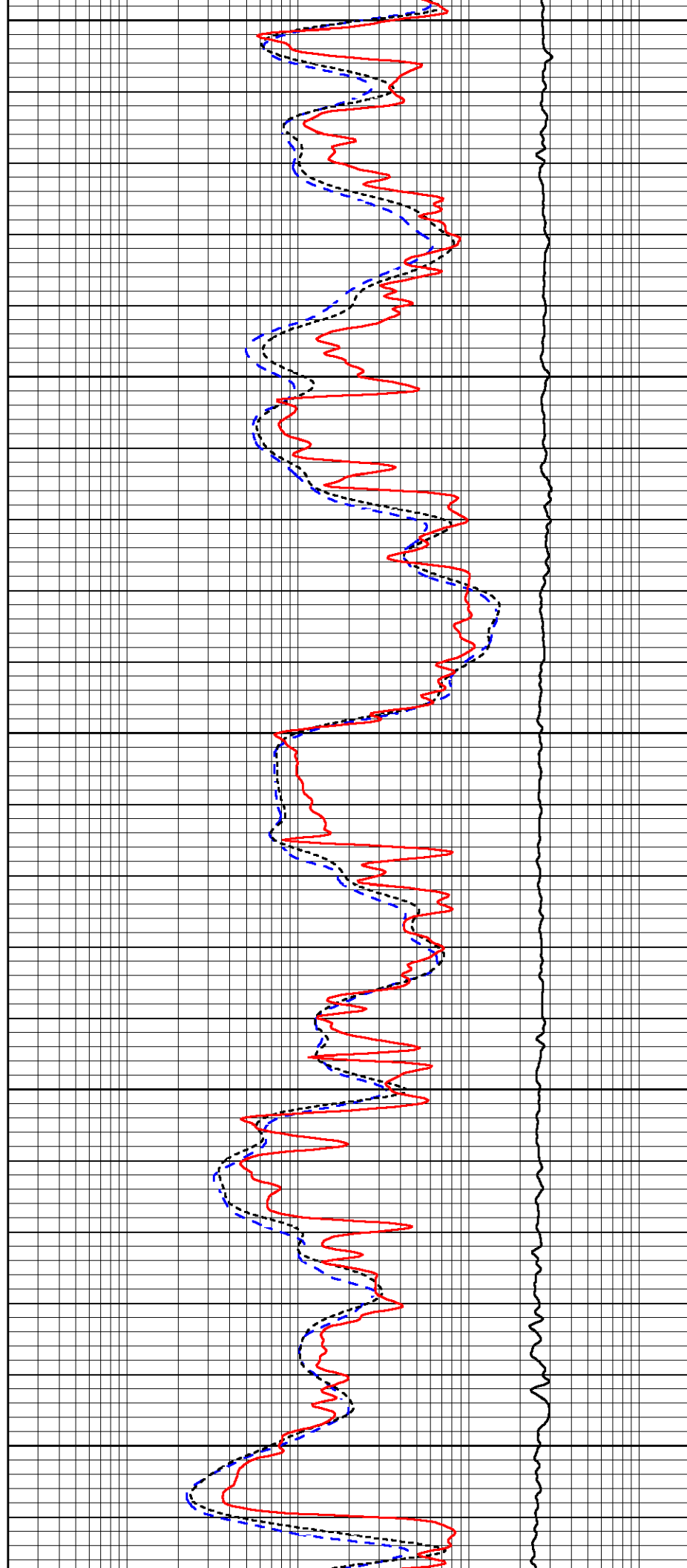
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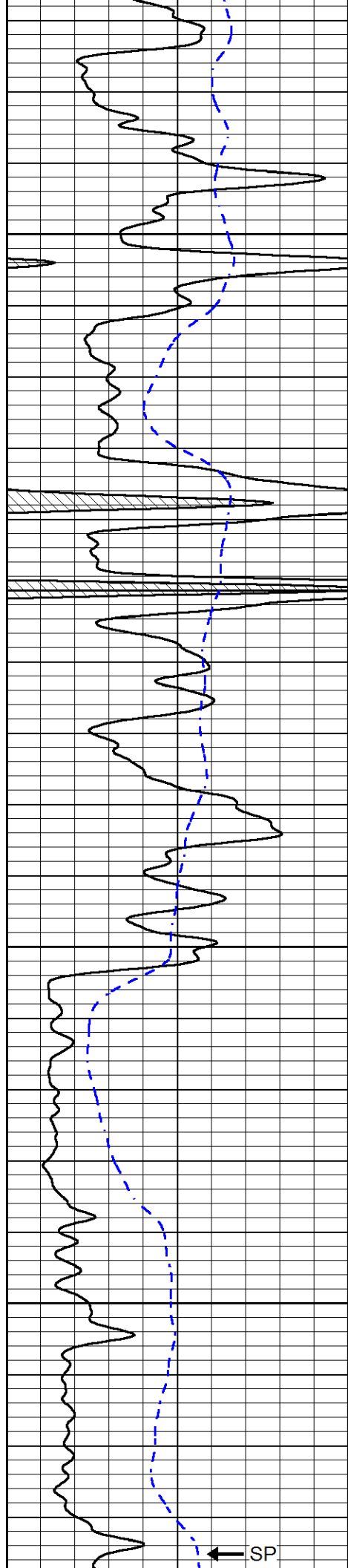
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4900

4950

5000





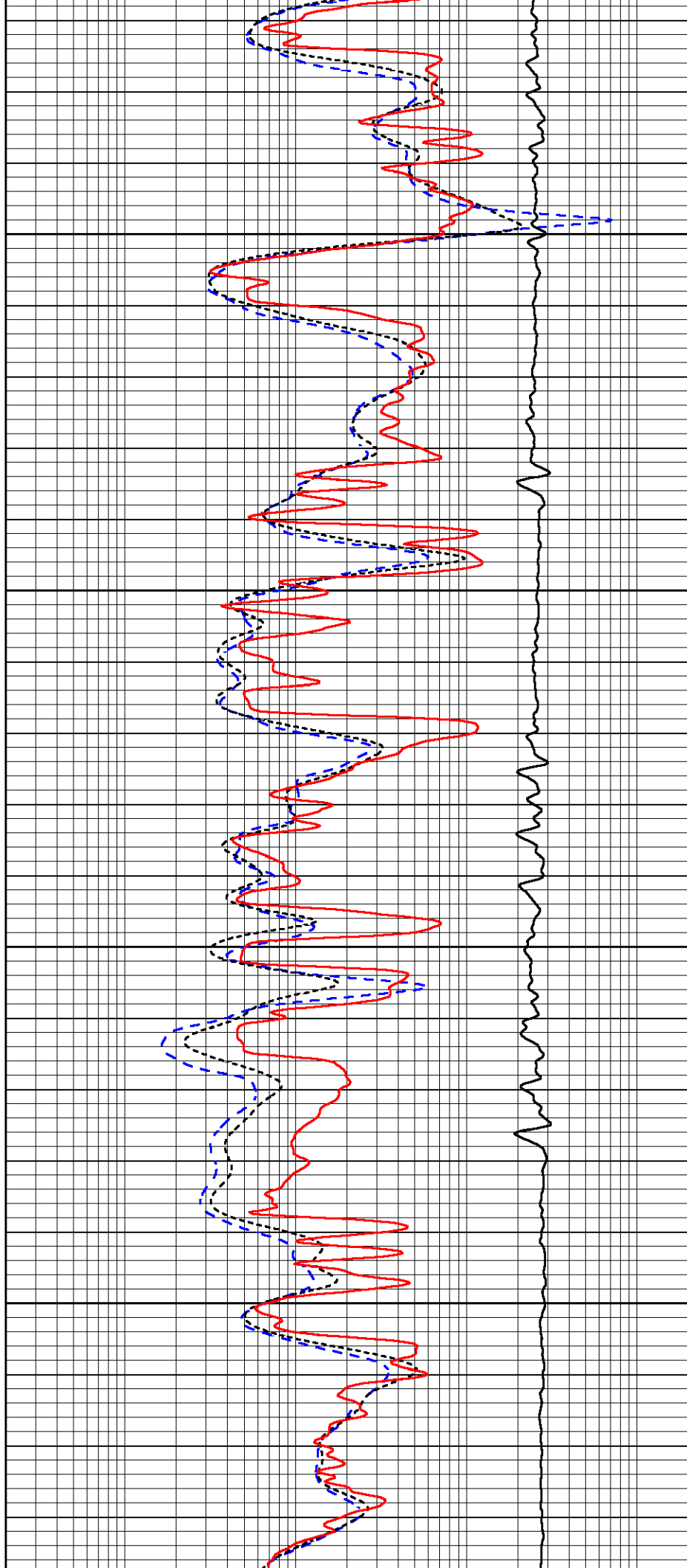
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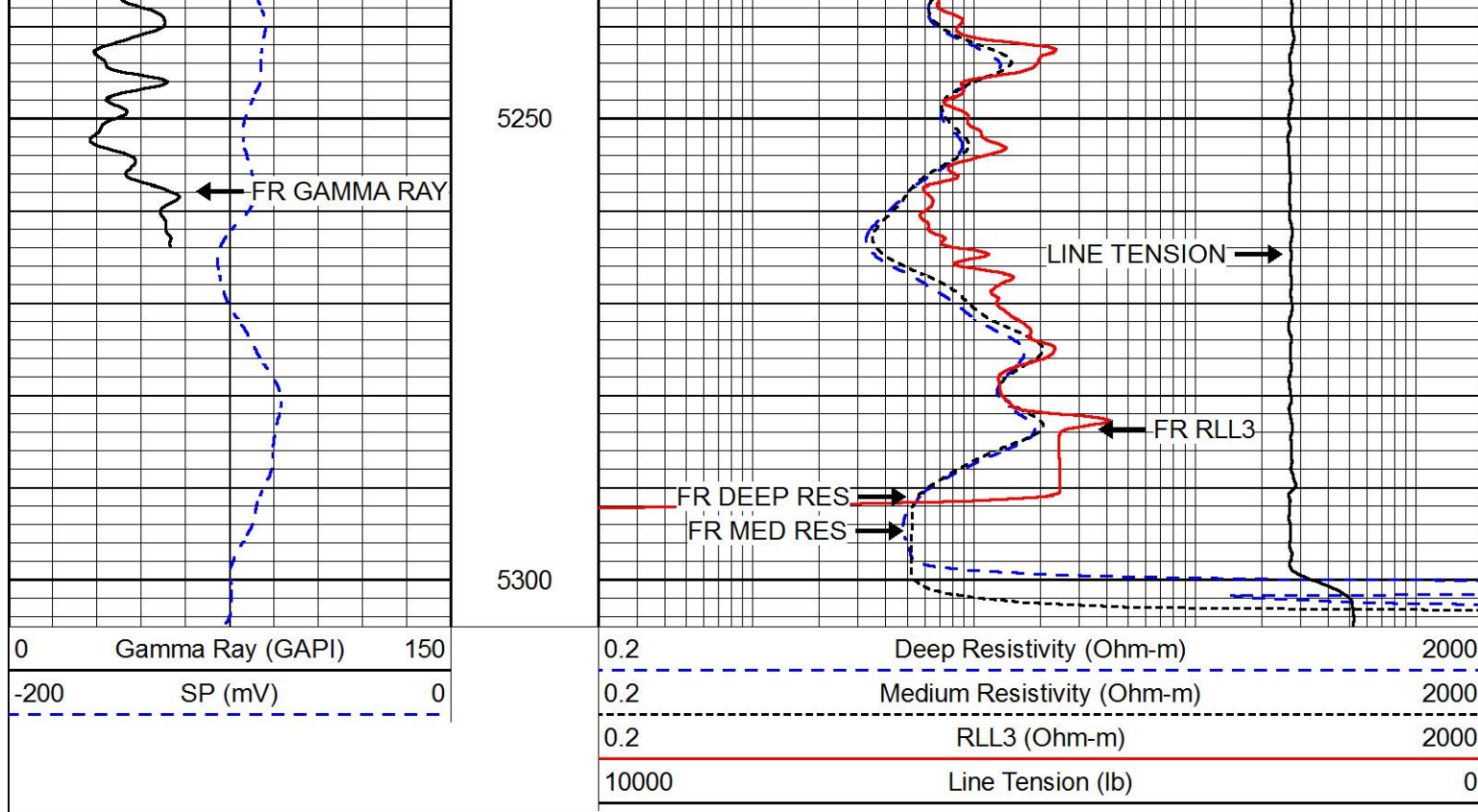
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5150

5200

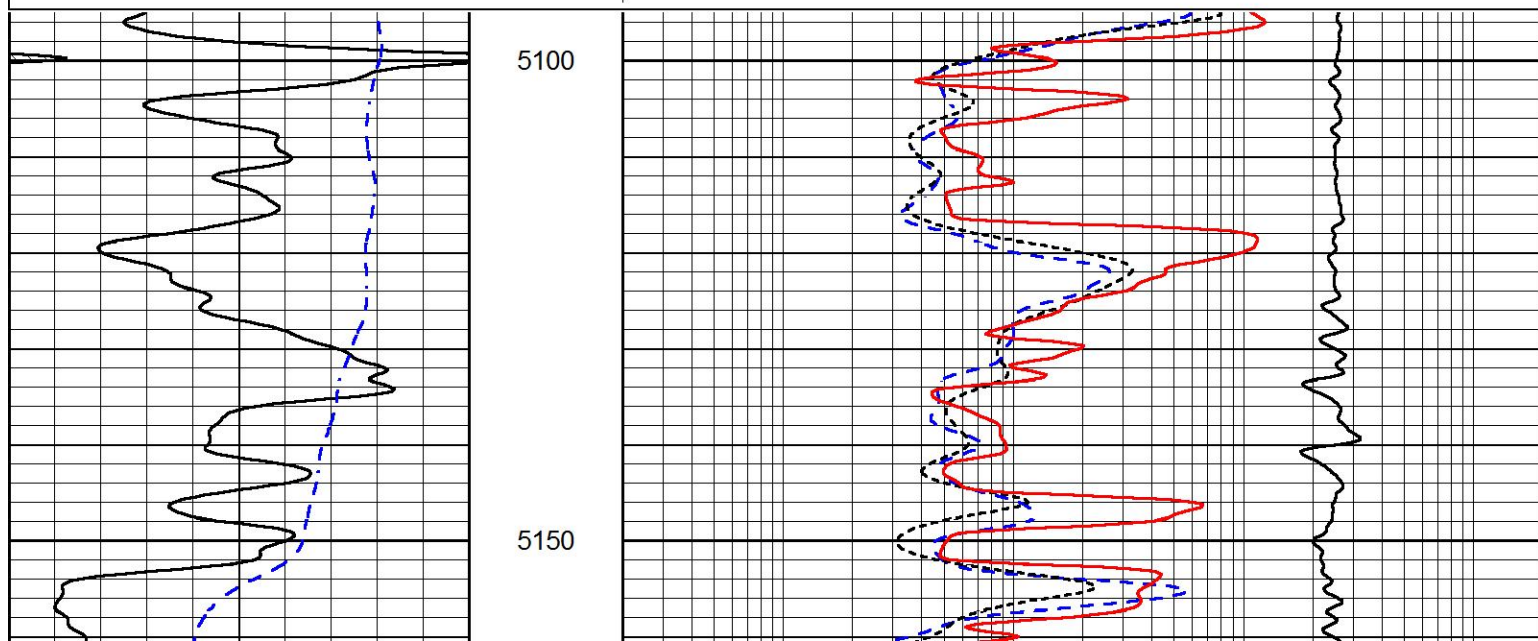
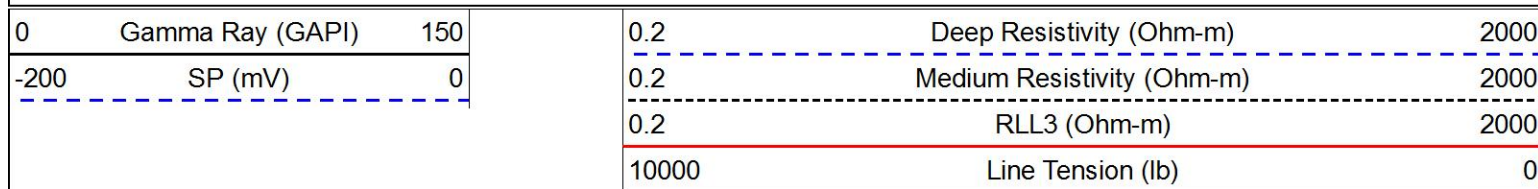
SP

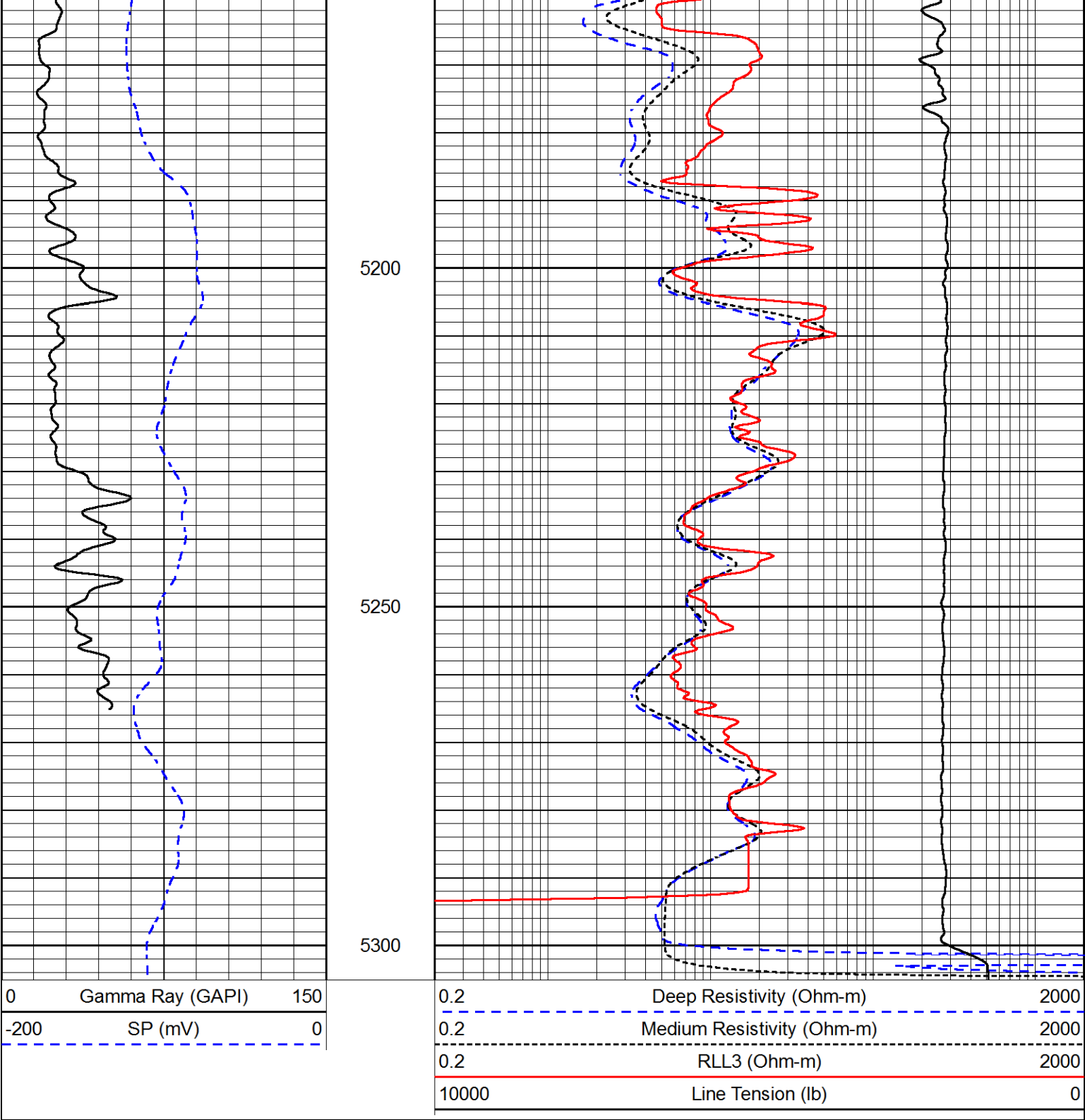




REPEAT SECTION

Database File everglow_hackney 1-15.db
 Dataset Pathname STKML/pass2.2
 Presentation Format dil
 Dataset Creation Sun Jan 28 18:20:08 2018
 Charted by Depth in Feet scaled 1:240





Calibration Report							
Database File		everglow_hackney 1-15.db					
Dataset Pathname		STKML/pass3.1					
Dataset Creation		Sun Jan 28 19:26:36 2018					
Dual Induction Calibration Report							
Serial-Model:				933 (HT)-PSI HIGH TEMP			
Calibration Performed:				Sun Jan 28 18:12:06 2018			
Readings			References			Results	
Loop:	Air	Loop	Air	Loop	Gain	Offset	

Deep	167.000	835.000	0.000	255.000	mmho/m	0.720	-21.000
Medium	142.000	1349.000	0.000	255.000	mmho/m	0.560	-60.500

Microlog Calibration Report

Serial-Model: Performed:	PSI-01-PSIML Mon Jan 15 11:19:55 2018
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	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	35000.0000	-1.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	41000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.3500

Compensated Density Calibration Report

Serial-Model: Source / Verifier: Master Calibration Performed:	227-771-M&W 16955B / 2ci Sat Jan 27 18:11:20 2018
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Master Calibration						
	Density		Far Detector		Near Detector	
Magnesium	1.755	g/cc	4919.18	6345.34	cps	
Aluminum	2.665	g/cc	911.94	4081.94	cps	
Spine Angle = 75.33			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: Tool Model: Calibration Performed:	207-MW M&W MON JAN 15 10:30:30 2018
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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:	Mon Jan 15 11:20:44 2018	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps



Company	EVERGLOW ENERGY, LLC
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