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Pioneer Energy Services

DUAL INDUCTION LOG

Company EVERGLOW ENERGY, LLC
Well WARREN #1-25
Field SHIMER SOUTH
County COMANCHE State KANSAS

Location: API #: 15-033-21783-00-00
1650' FNL & 2310' FWL
SEC 25 TWP 33S RGE 17W

Permanent Datum GROUND LEVEL Elevation 1829'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Other Services
CNL/CDL
MEL

Elevation
K.B. 1834'
D.F. N/A
G.L. 1829'

Date	2/13/2018					
Run Number	ONE					
Depth Driller	5225'					
Depth Logger	5228'					
Bottom Logged Interval	5227'					
Top Log Interval	300'					
Casing Driller	8.625" @ 328'					
Casing Logger	320'					
Bit Size	7.875"					
Type Fluid in Hole	CHEMICAL					
Salinity,ppm CL	9000					
Density / Viscosity	9.3	60				
pH / Fluid Loss	10.5	9.2				
Source of Sample	FLOWLINE					
Rm @ Meas. Temp	0.30 @ 50					
Rmf @ Meas. Temp	0.23 @ 50					
Rmc @ Meas. Temp	0.41 @ 50					
Source of Rmf / Rmc	CHARTS					
Rm @ BHT	0.12 @ 128					
Operating Rig Time	3 HOURS					
Max Rec. Temp. F	128					
Equipment Number	91					
Location	HAYS					
Recorded By	D. SCHMIDT					
Witnessed By	TOM CASTELLI	DAN PITTMAN				

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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 TO 22 RD, 4 SOUTH,
1 EAST, 5 SOUTH, 1 1/4 EAST, 1/2 SOUTH,
EAST INTO

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

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

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: D. SCHMIDT	Primary Witness: TOM CASTELLI
Operator:	Secondary Witness: DAN PITTMAN
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Log Variables

DatabaseC:\ProgramData\Warrior\Data\everglow_warren 1-25.db
Dataset field/well/STKML/pass4.1/_vars_

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	5228	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	37.48		CNT-M&W (207-MW)	5.50	3.50	100.00
CNSSC	36.73					
			CDL-M&W (182-152)	8.50	4.00	250.00
LSD	28.43					
DCAL	28.42					
SSD	27.93					
			ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
MCAL	19.83					
MI	19.83					
MN	19.83					
RLL3F	15.80					
RLL3	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_warren 1-25.db: field/well/STKML/pass4.1
Total length: 43.08 ft
Total weight: 685.00 lb
O.D.: 4.00 in

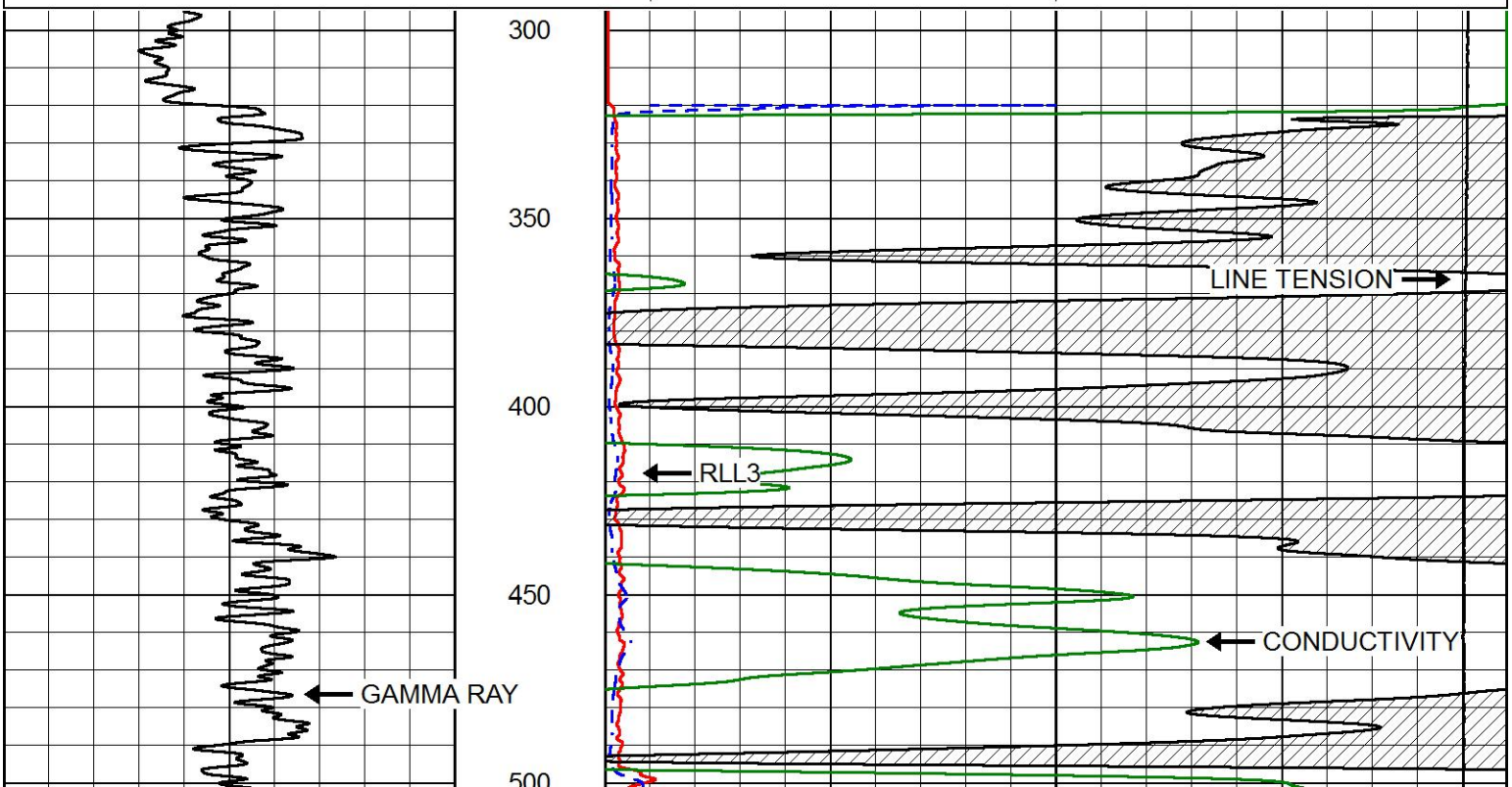
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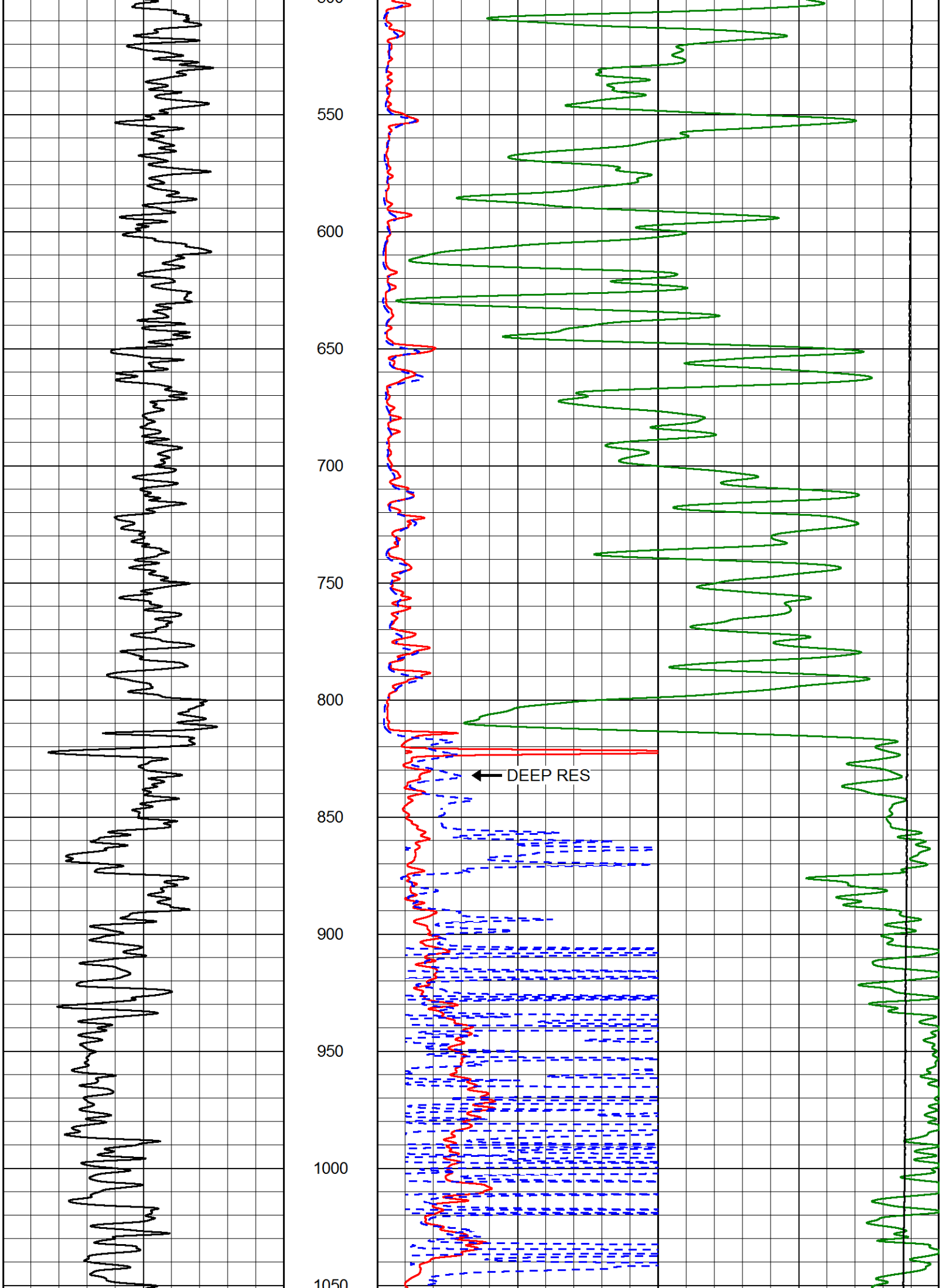
MAIN PASS

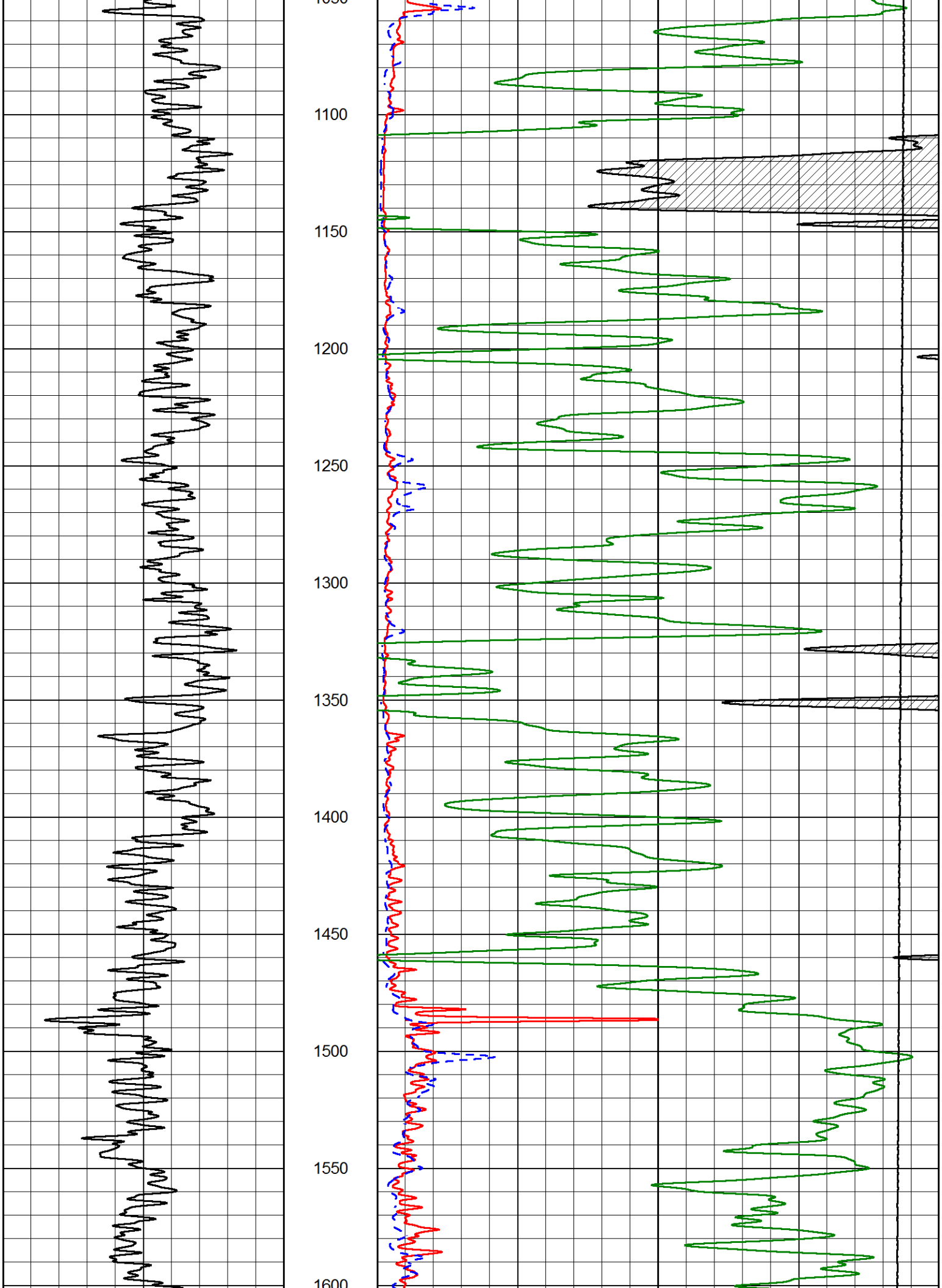
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Dataset Pathname: STKML/pass5.1
Presentation Format: dil2in
Dataset Creation: Tue Feb 13 23:15:51 2018
Charted by: Depth in Feet scaled 1:600

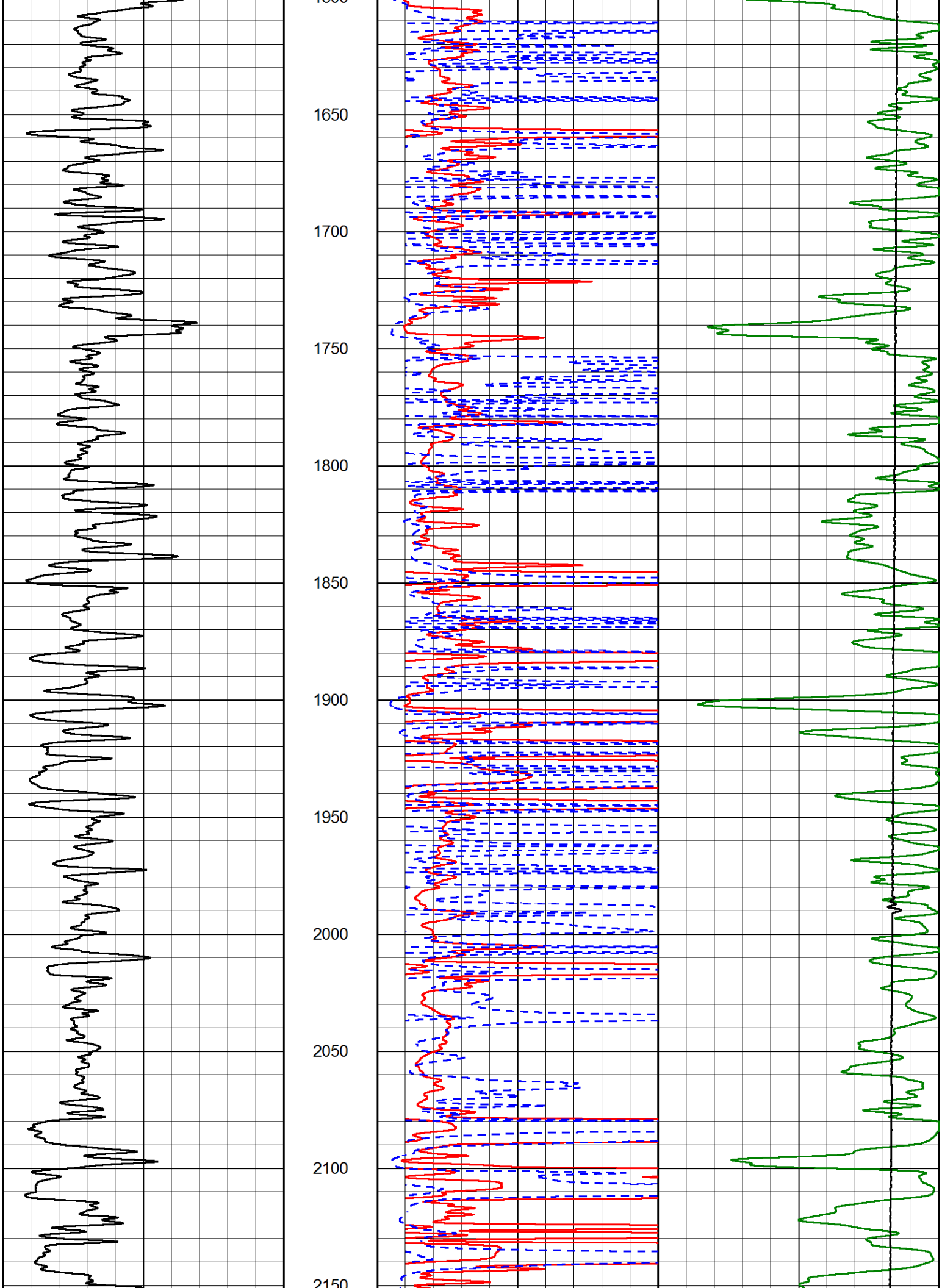
0 Gamma Ray (GAPI) 150

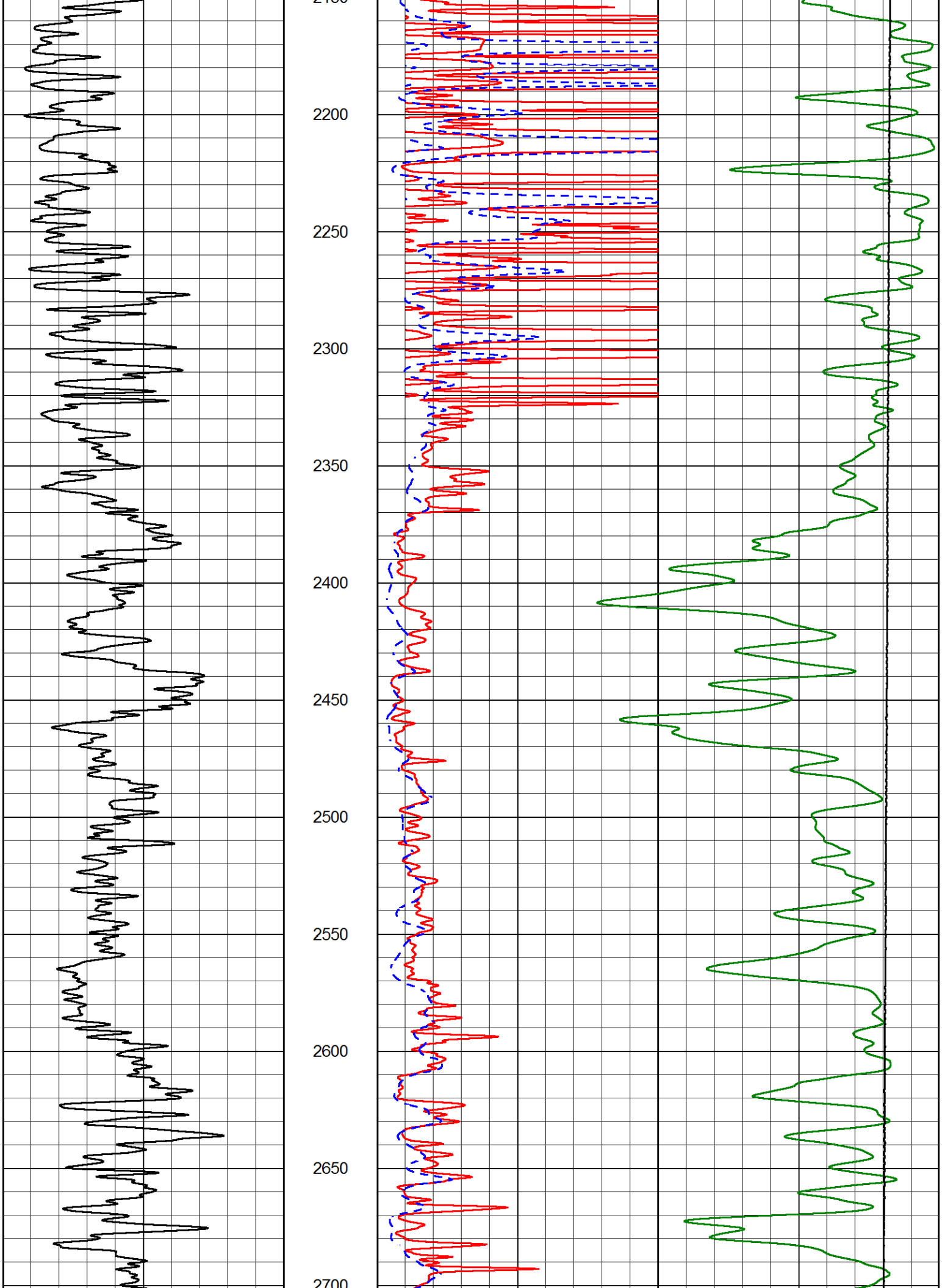
1000 Conductivity (mmho/m) 0
15000 Line Tension (lb) 0
0 RLL3 (Ohm-m) 50
0 Deep Resistivity (Ohm-m) 50
50 RLL3 (Ohm-m) 500
50 Deep Resistivity (Ohm-m) 500

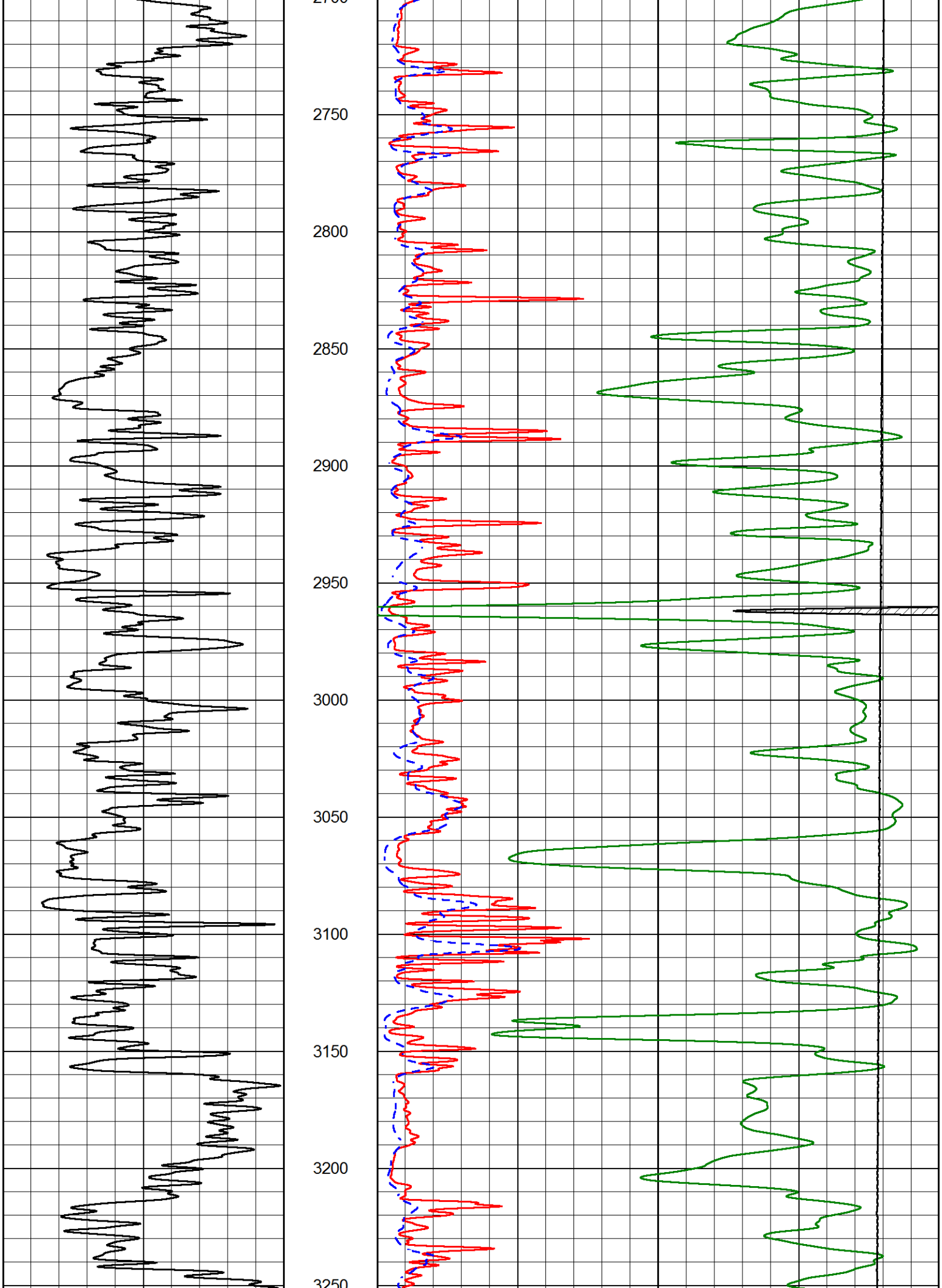


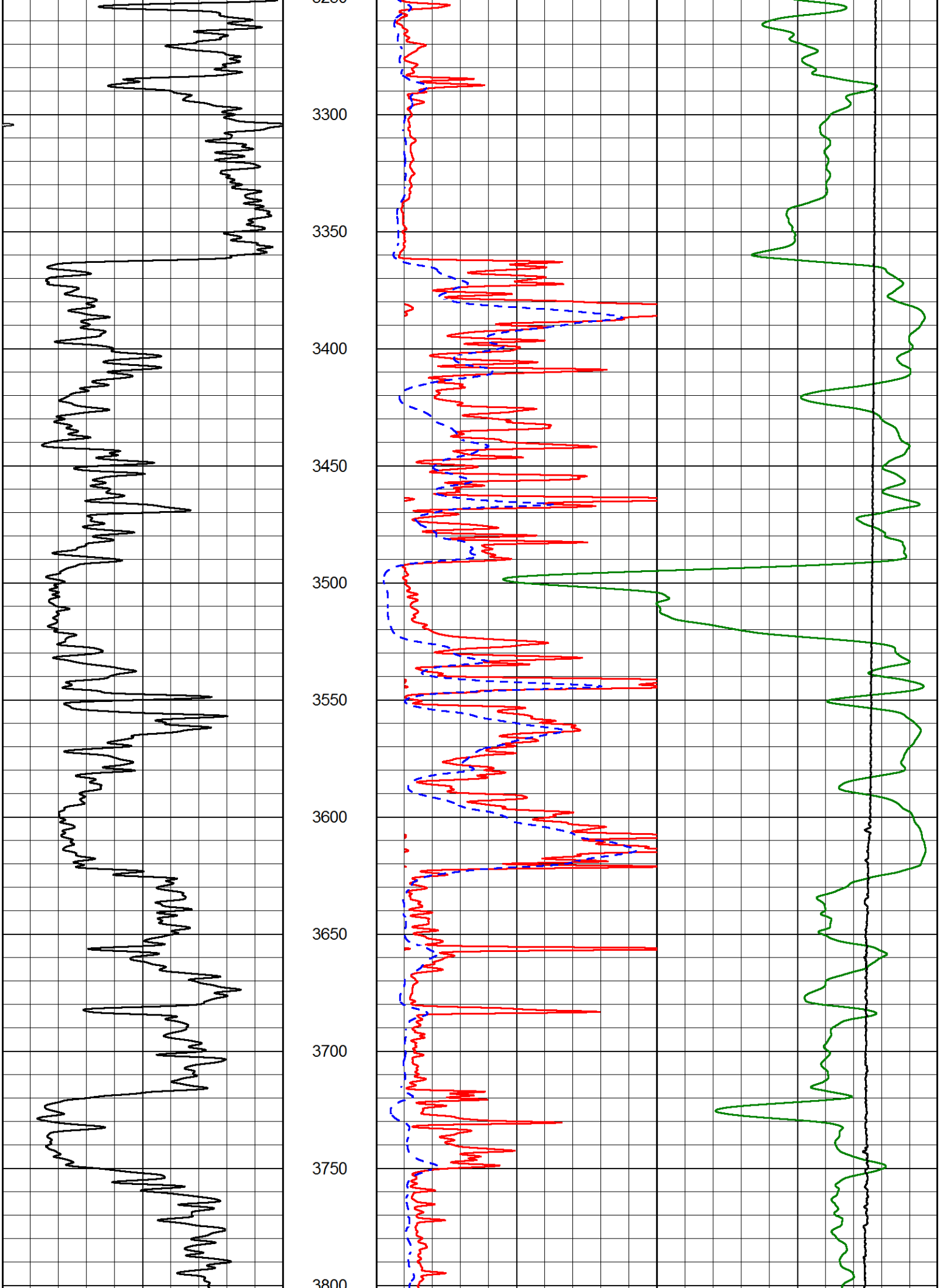

550
600
650
700
750
800
850
900
950
1000
1050
DEEP RES

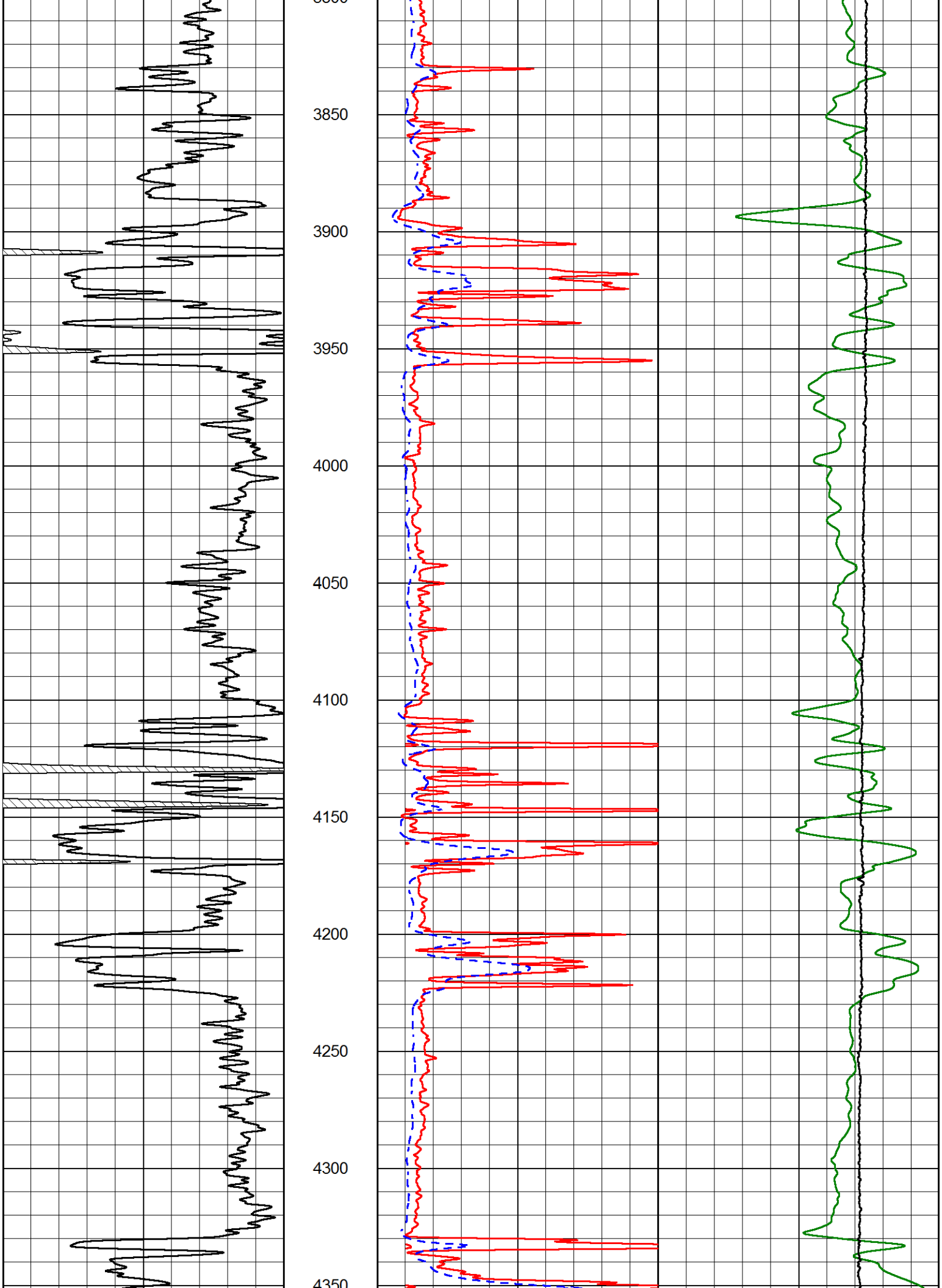

1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600

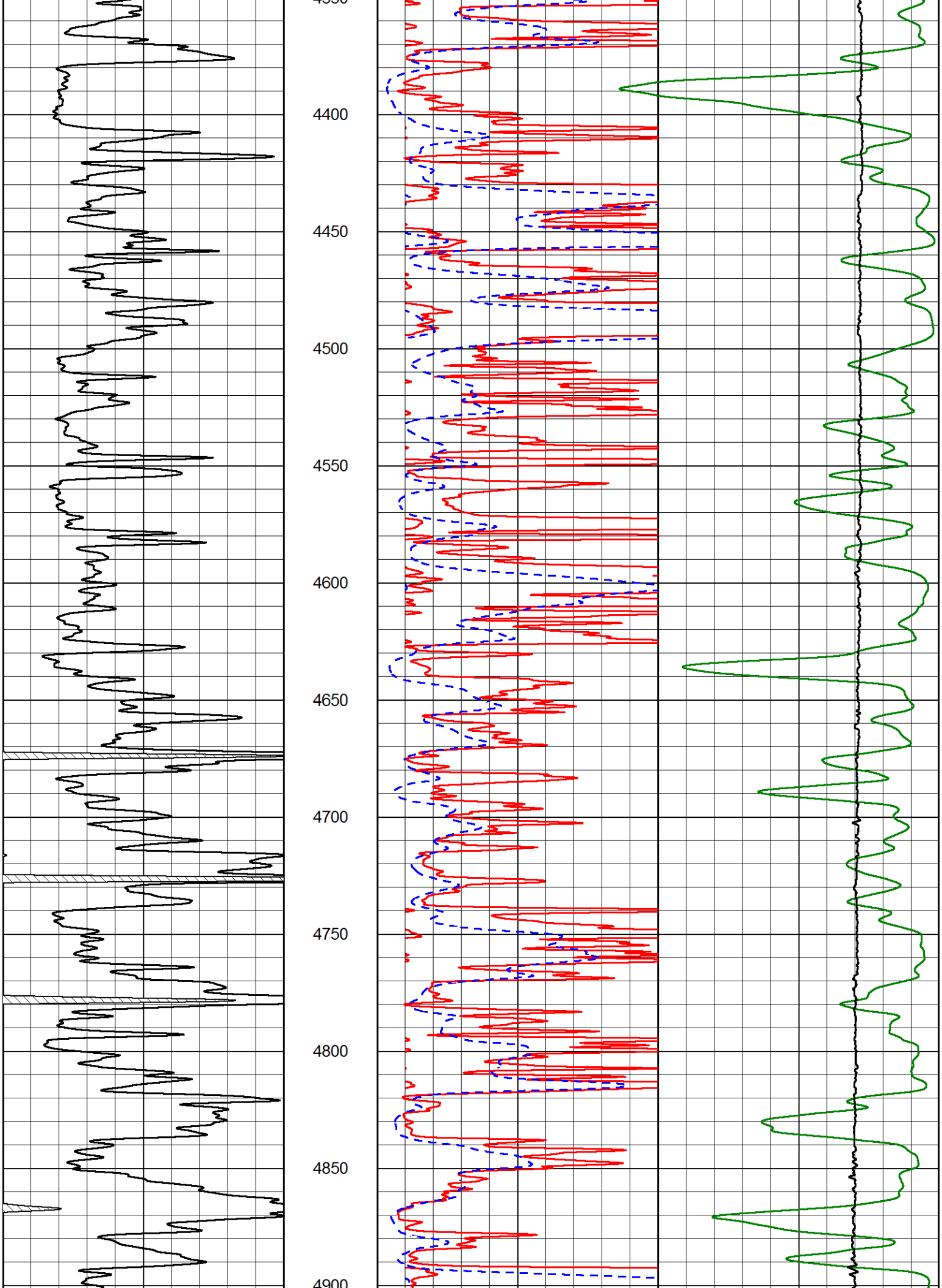

1650
1700
1750
1800
1850
1900
1950
2000
2050
2100
2150

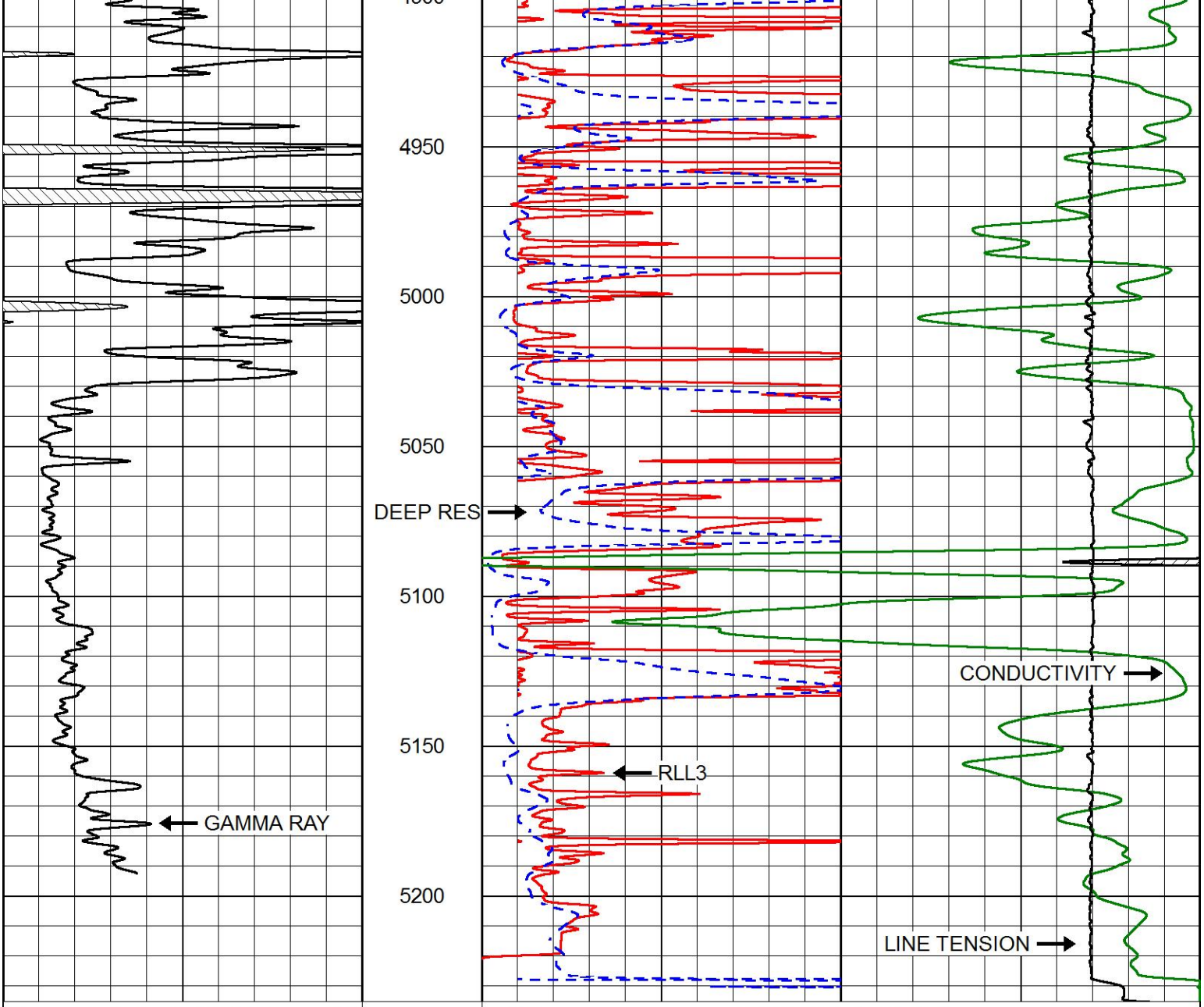

2200
2250
2300
2350
2400
2450
2500
2550
2600
2650
2700


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
4000
4050
4100
4150
4200
4250
4300
4350


4400
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4800
4850
4900



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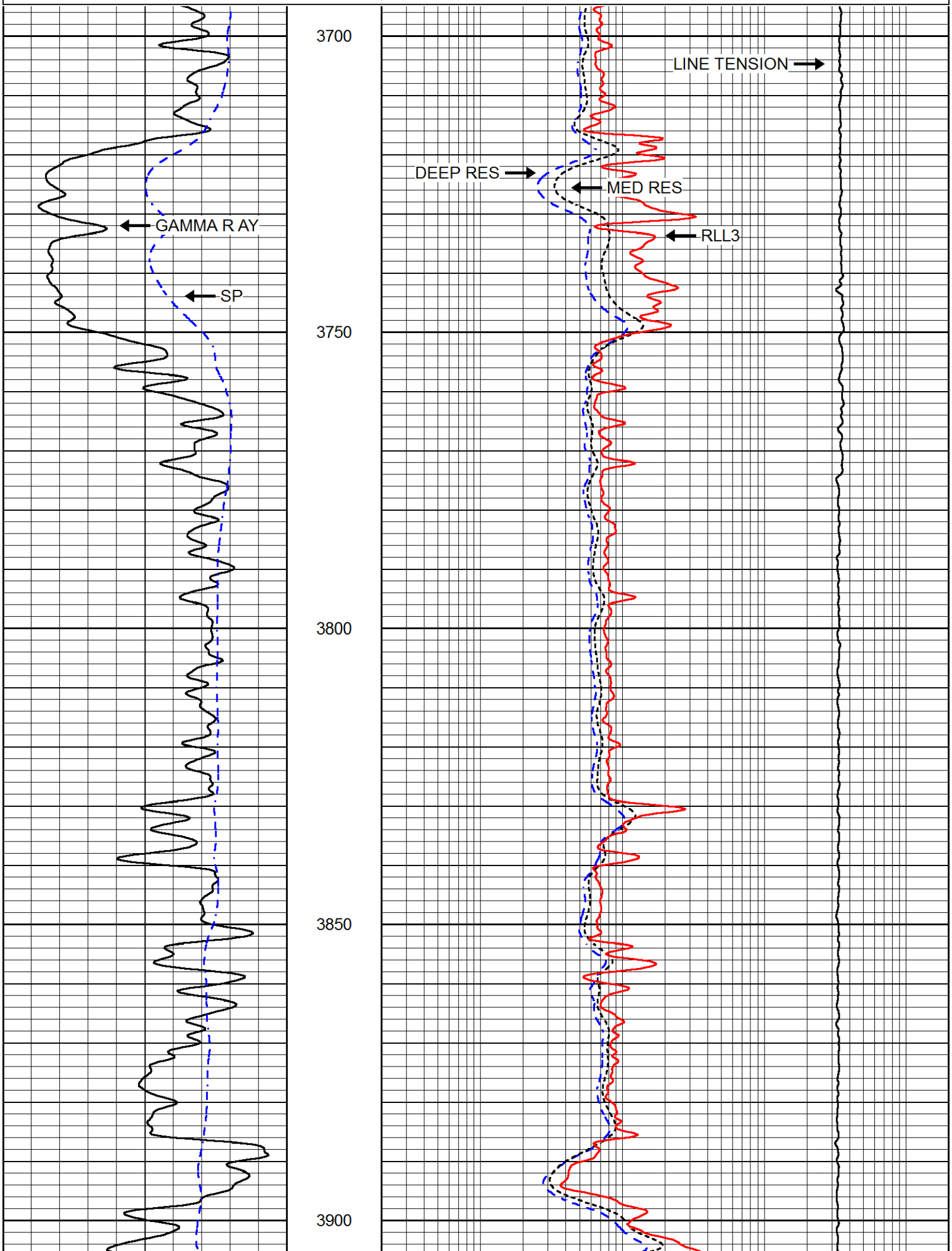
MAIN PASS

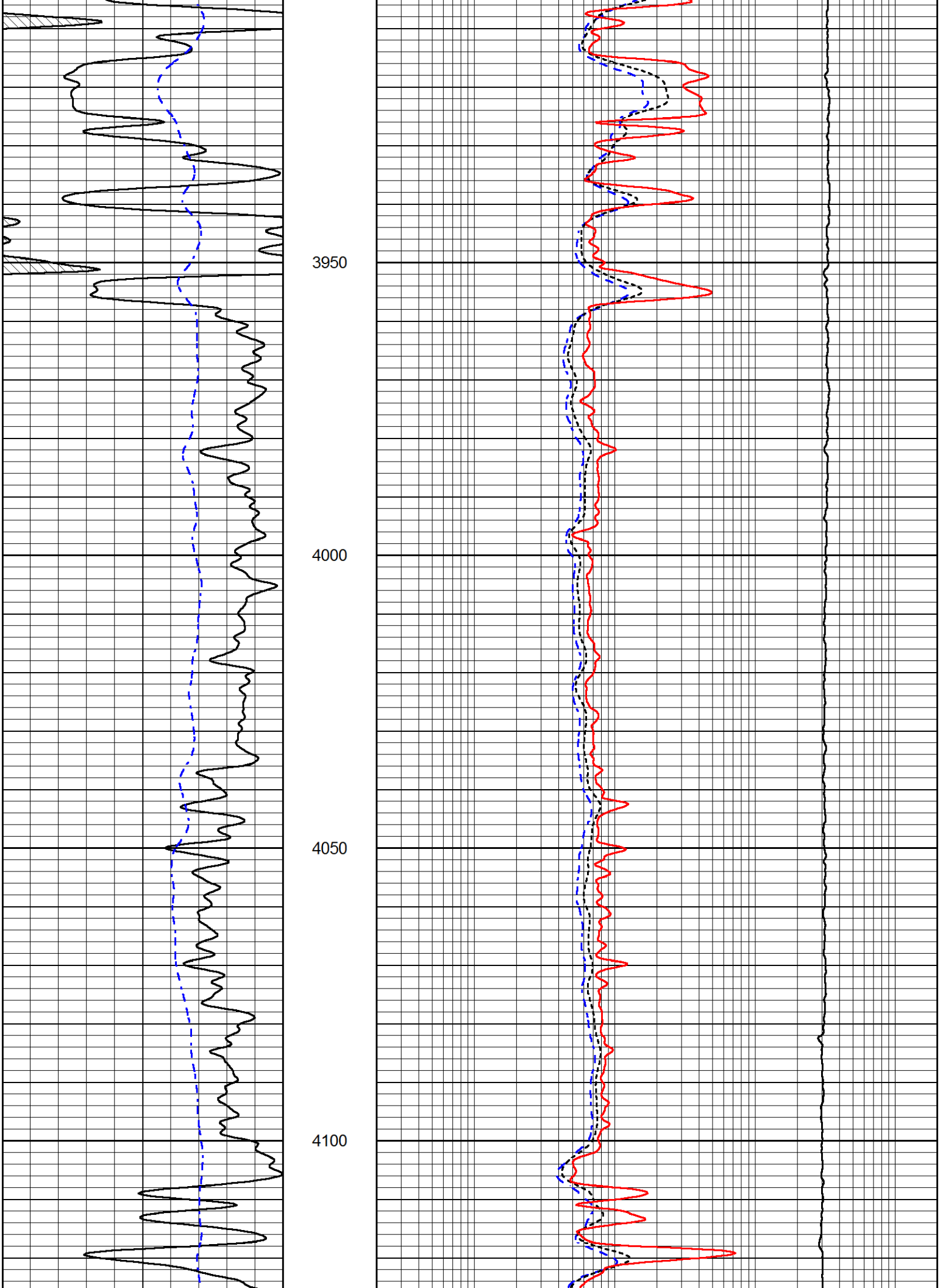
Database File	everglow_warren 1-25.db
Dataset Pathname	STKML/pass4.1
Presentation Format	dil
Dataset Creation	Tue Feb 13 22:36:20 2018
Charted by	Depth in Feet scaled 1:240

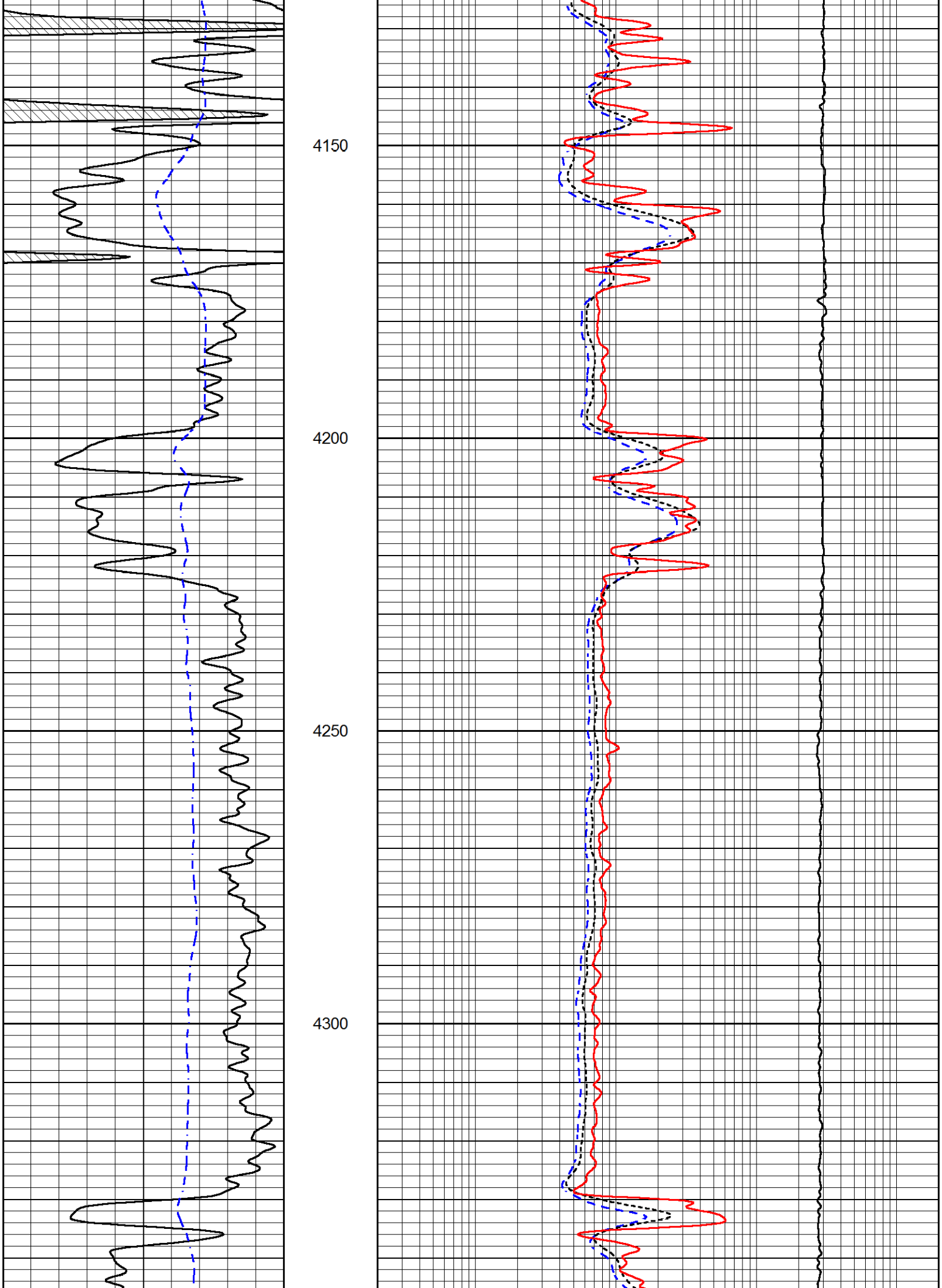
0	Gamma Ray (GAPI)	150
-200	SP (mV)	0

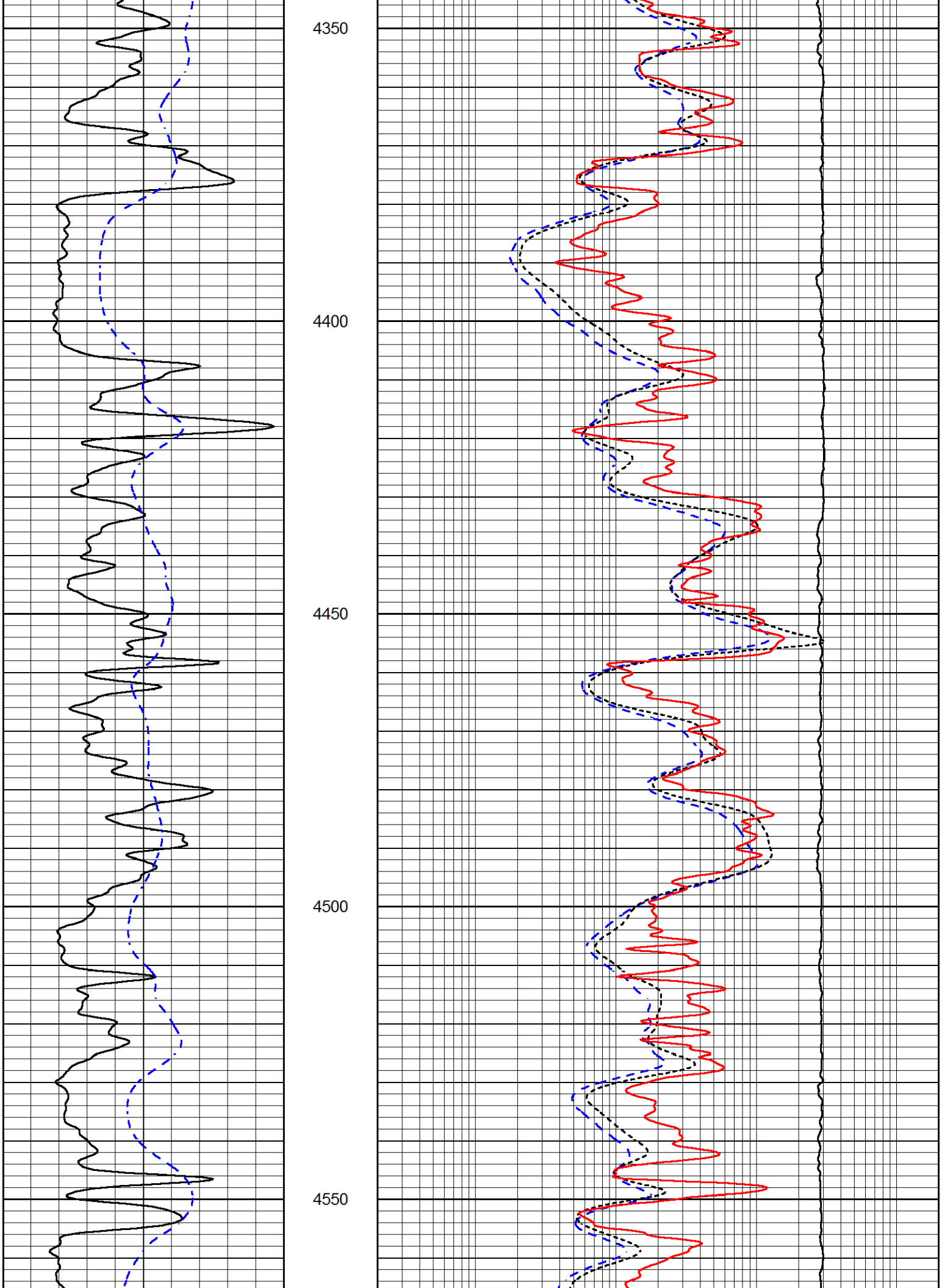
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000

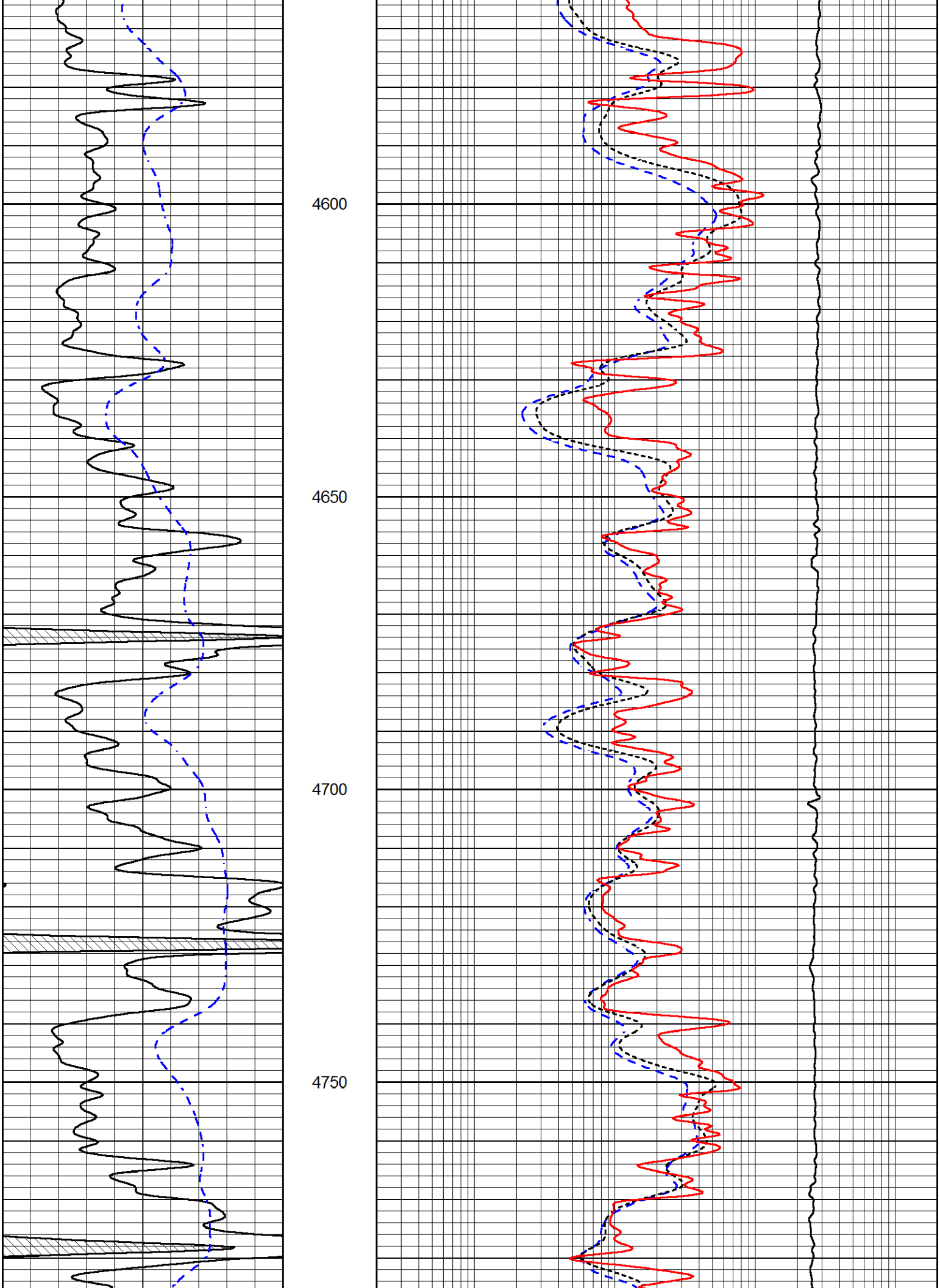
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

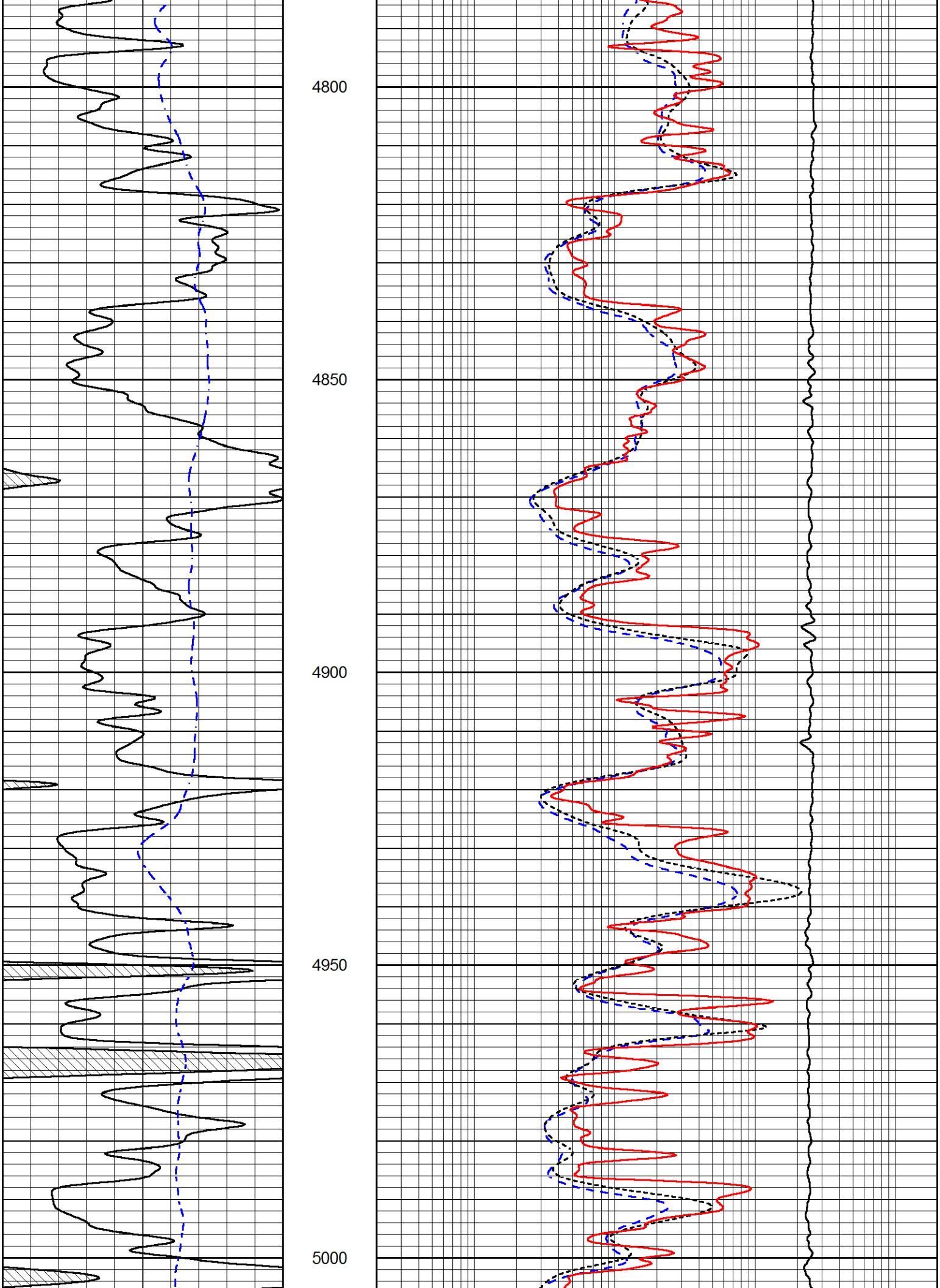


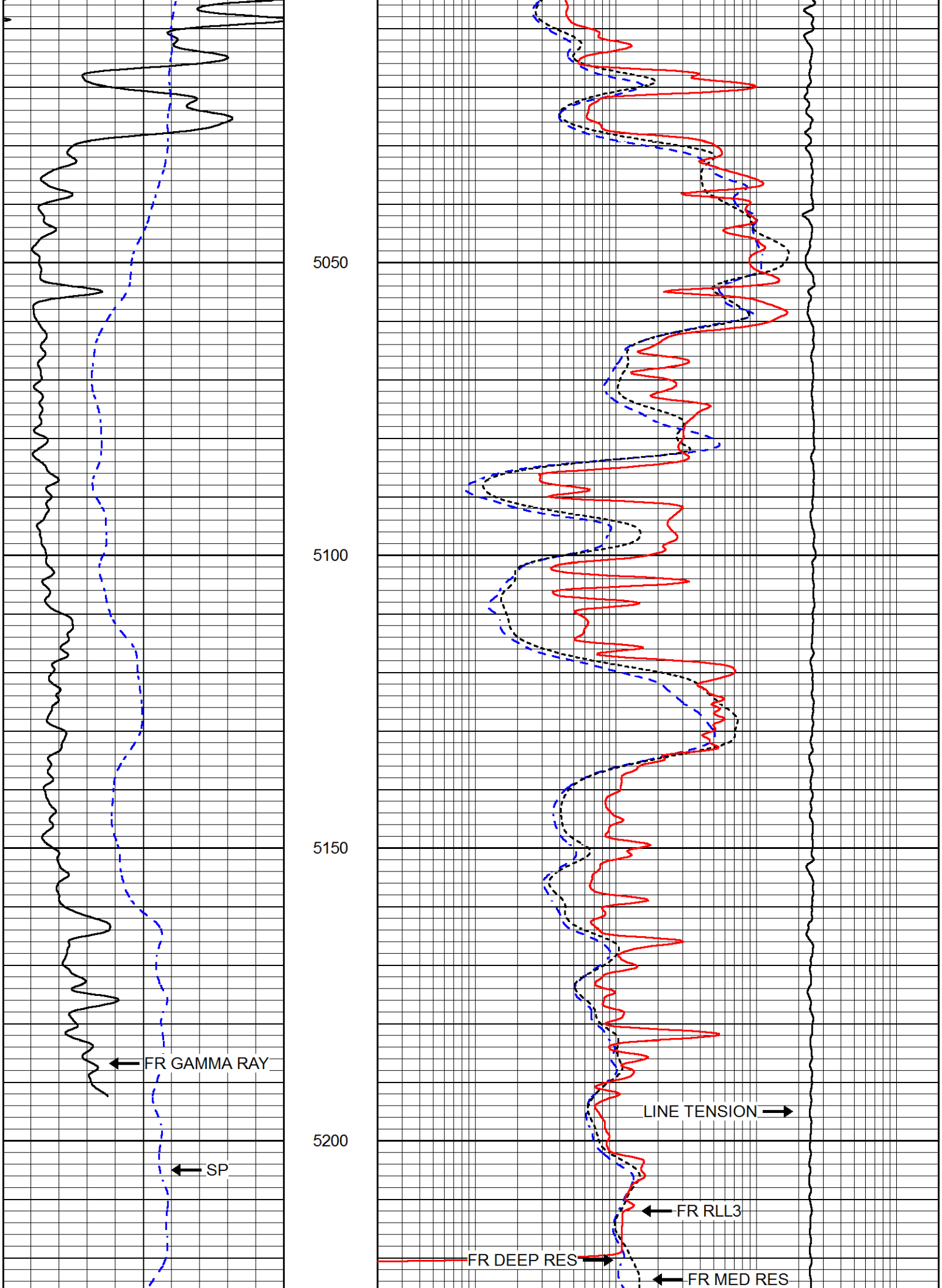

3950
4000
4050
4100

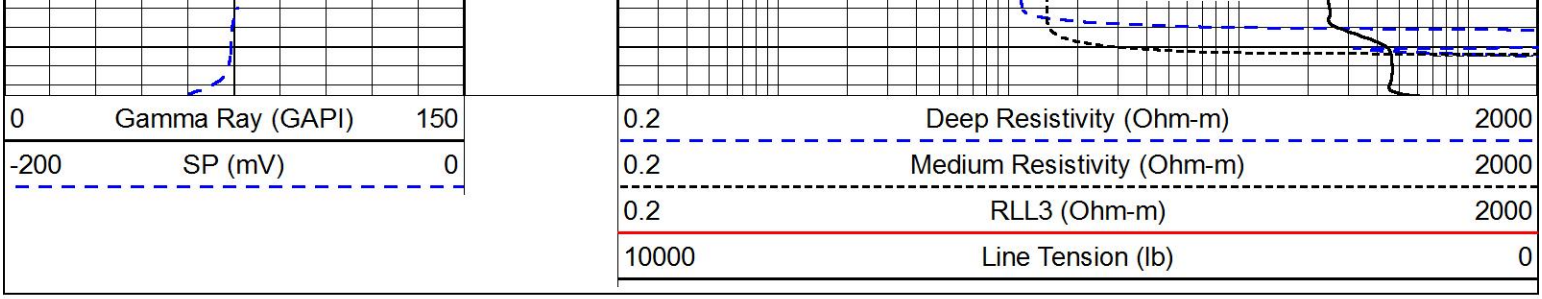

4150
4200
4250
4300


4350
4400
4450
4500
4550


4600
4650
4700
4750


4800
4850
4900
4950
5000

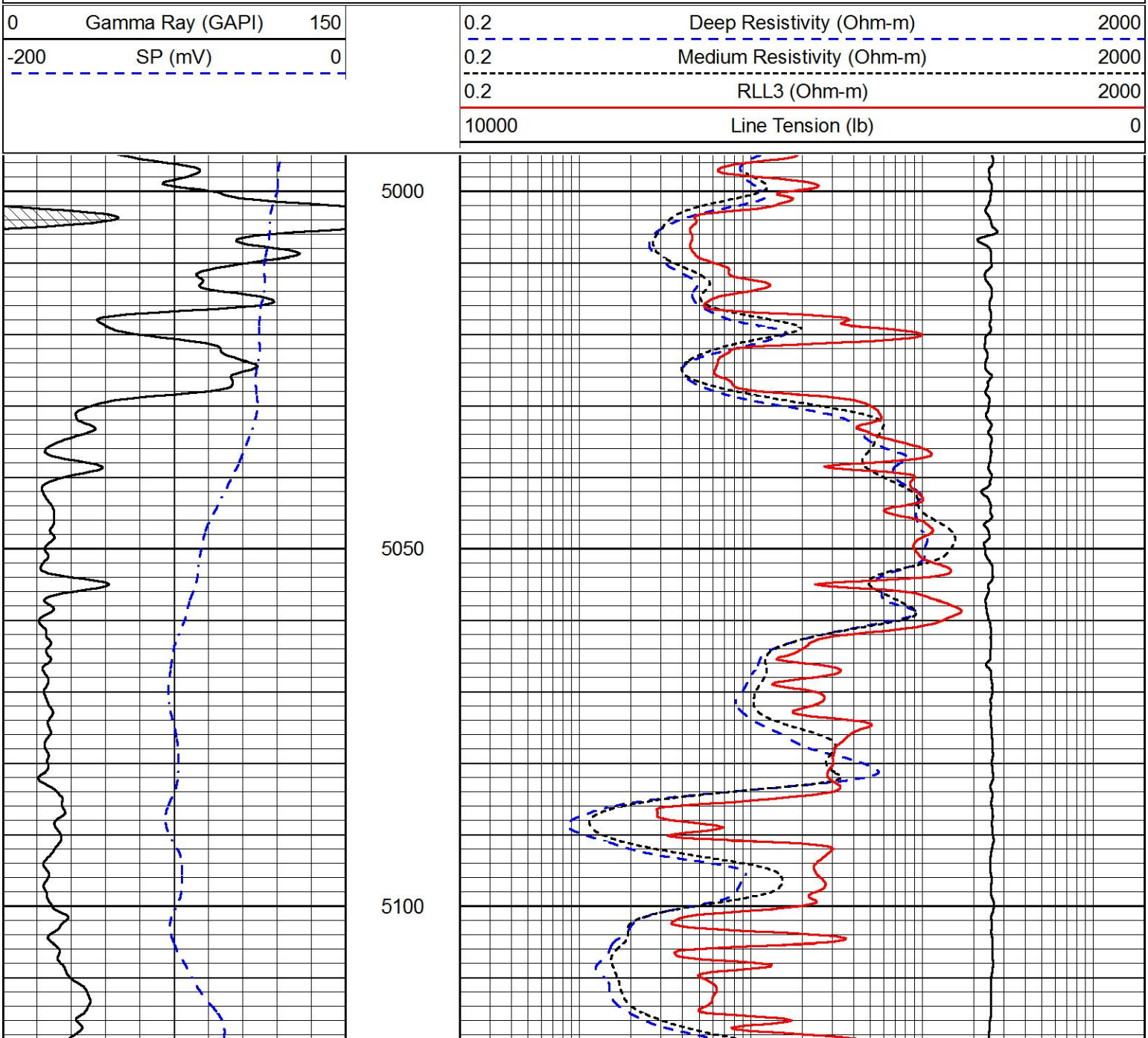

5050
5100
5150
5200
FR GAMMA RAY
SP
LINE TENSION
FR RLL3
FR DEEP RES
FR MED RES

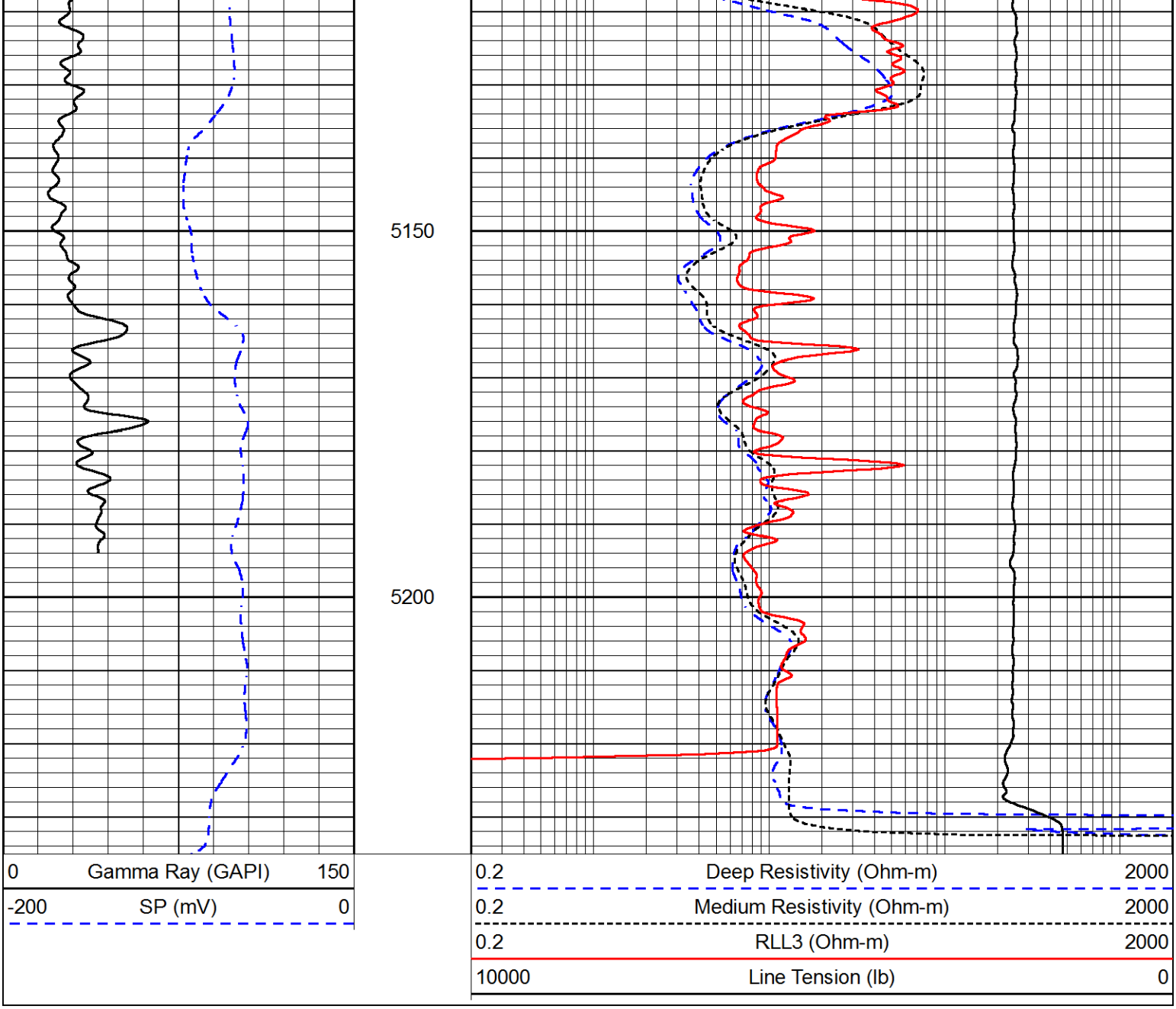


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REPEAT SECTION

Database File	everglow_warren 1-25.db
Dataset Pathname	STKML/pass2.1
Presentation Format	dil
Dataset Creation	Tue Feb 13 22:33:21 2018
Charted by	Depth in Feet scaled 1:240





Calibration Report

Database File	everglow_warren 1-25.db
Dataset Pathname	STKML/pass4.1
Dataset Creation	Tue Feb 13 22:36:20 2018

Dual Induction Calibration Report

Serial-Model:	933 (HT)-PSI HIGH TEMP
Calibration Performed:	Mon Feb 12 17:16:25 2018

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.000	mmho/m	0.720	-18.350
Medium	142.000	1349.000	0.000	255.000	mmho/m	0.560	-63.000

Microlog Calibration Report

Serial-Model:	PSI-01-PSIML
Performed:	Mon Jan 15 11:19:55 2018

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	34500.0000	-0.5000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	36000.0000	0.0000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.4000

Compensated Density Calibration Report

Serial-Model: 182-152-M&W
Source / Verifier: 16955B / 2ci
Master Calibration Performed: Mon Feb 12 16:20:26 2018

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4992.81	6098.44	cps
Aluminum	2.675	g/cc	945.67	3945.60	cps

Spine Angle = 75.33 Density/Spine Ratio = 0.535

	Size		Reading
Small Ring	4.50	in	1.09
Large Ring	15.00	in	1.03

Compensated Neutron Calibration Report

Serial Number: 207-MW
Tool Model: M&W
Calibration Performed: MON JAN 15 10:30:30 2018

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

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Company EVERGLOW ENERGY, LLC
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