MIDWEST WIRELINE

DUAL INDUCTION LOG

Company Griffin Management LLC
Well Gwen #3
Field Moffett Northwest
County Barber State Kansas

Location: API #: 15-007-24451-00-00
SE NW NE SW
2305 FSL & 1700 FWL
SEC 5 TWP 30S RGE 15W

Other Services: CNL/CDL, MEL

Permanent Datum: Ground Level Elevation: 1957
Log Measured From: Kelly Bushing
Drilling Measured From: Kelly Bushing

Elevation: K.B. 1969, D.F., G.L. 1957

Company Griffin Management LLC
Well Gwen #3
Field Moffett Northwest
County Barber
State Kansas

Date	11/22/2022		
Run Number	One		
Depth Driller	4850		
Depth Logger	4850		
Bottom Logged Interval	4849		
Top Log Interval	250		
Casing Driller	8.625 @ 260		
Casing Logger	268		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	9000		
Density / Viscosity	9.6 / 70		
pH / Fluid Loss	10.0 / 10.0		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.75 @ 70		
Rmf @ Meas. Temp	0.56 @ 70		
Rmc @ Meas. Temp	1.01 @ 70		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.42 @ 125		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	125		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Eli Felts		

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

Pratt, KS, W to Croft Blktp,
S to 'Y', E then N into

Log Measured From: Kelly Bushing 12 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew	This Log Record Was Witnessed By
Engineer: T. Martin	Primary Witness: Eli Felts
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.33		GR-M&W (106)	3.00	3.50	50.00
CNLSC	37.23		CNT-M&W (207-MW)	5.00	3.50	100.00
CNSSC	36.48					
			CDL-M&W (305-24)	8.50	4.00	250.00
LSD	28.18					
DCAL	28.17					
SSD	27.68					
			ML-PSIML (401)	7.58	4.00	65.00
MCAL	19.58					
MI	19.58					
MN	19.58					
RLL3F	15.50					
RLL3	15.50					
			DIL-M&W (502 HT)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset:	griffin_gwen #3.db: field/well/StkMl/pass3.1
Total length:	42.33 ft
Total weight:	685.00 lb
O.D.:	4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\griffin_gwen #3.db
Dataset field/well/StkMl/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	125	5.5	0	1	2	2.71

NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	0	0	0	0	40	Off	4850

Variable Description

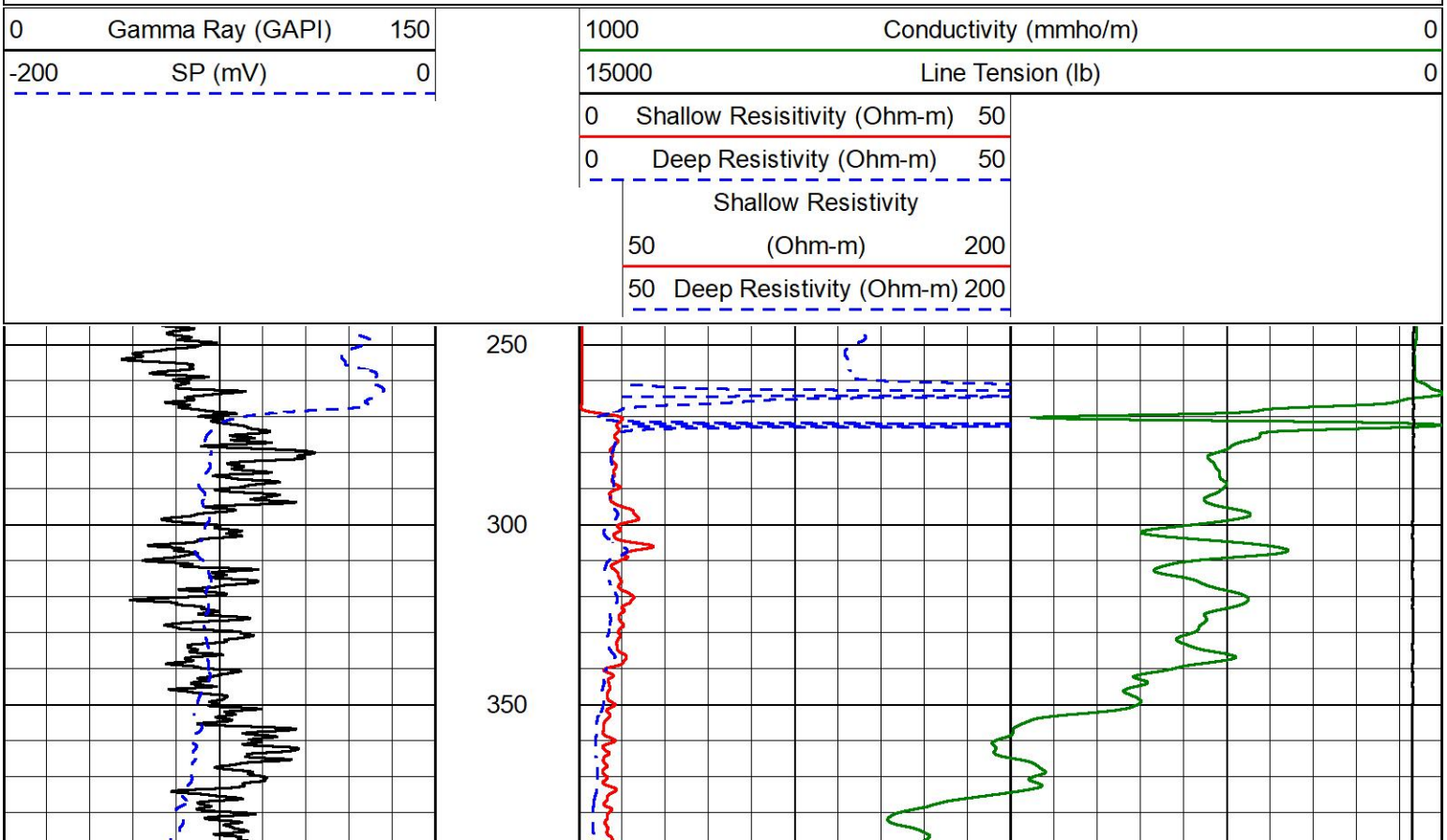
A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

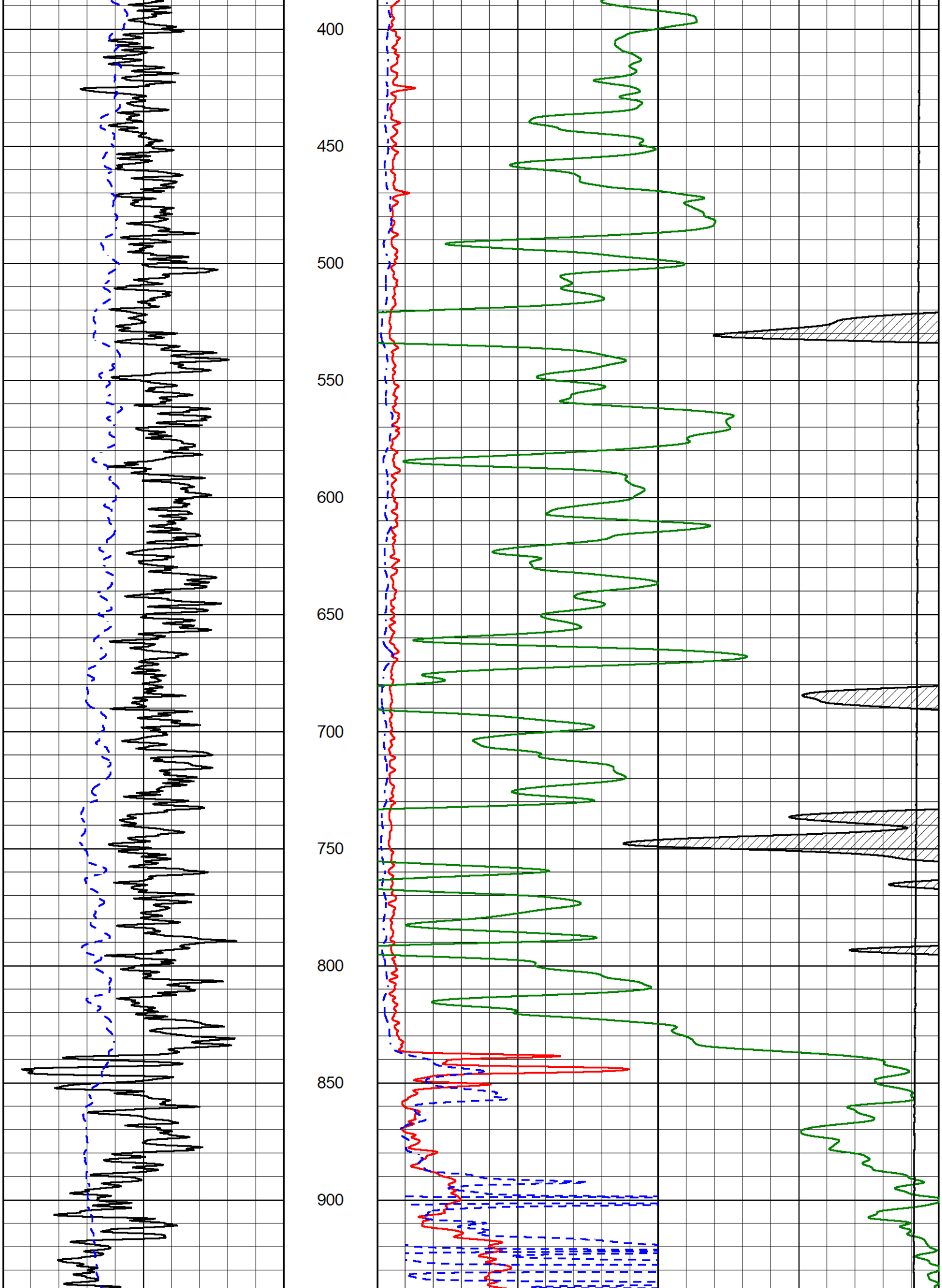
MIDWEST WIRELINE

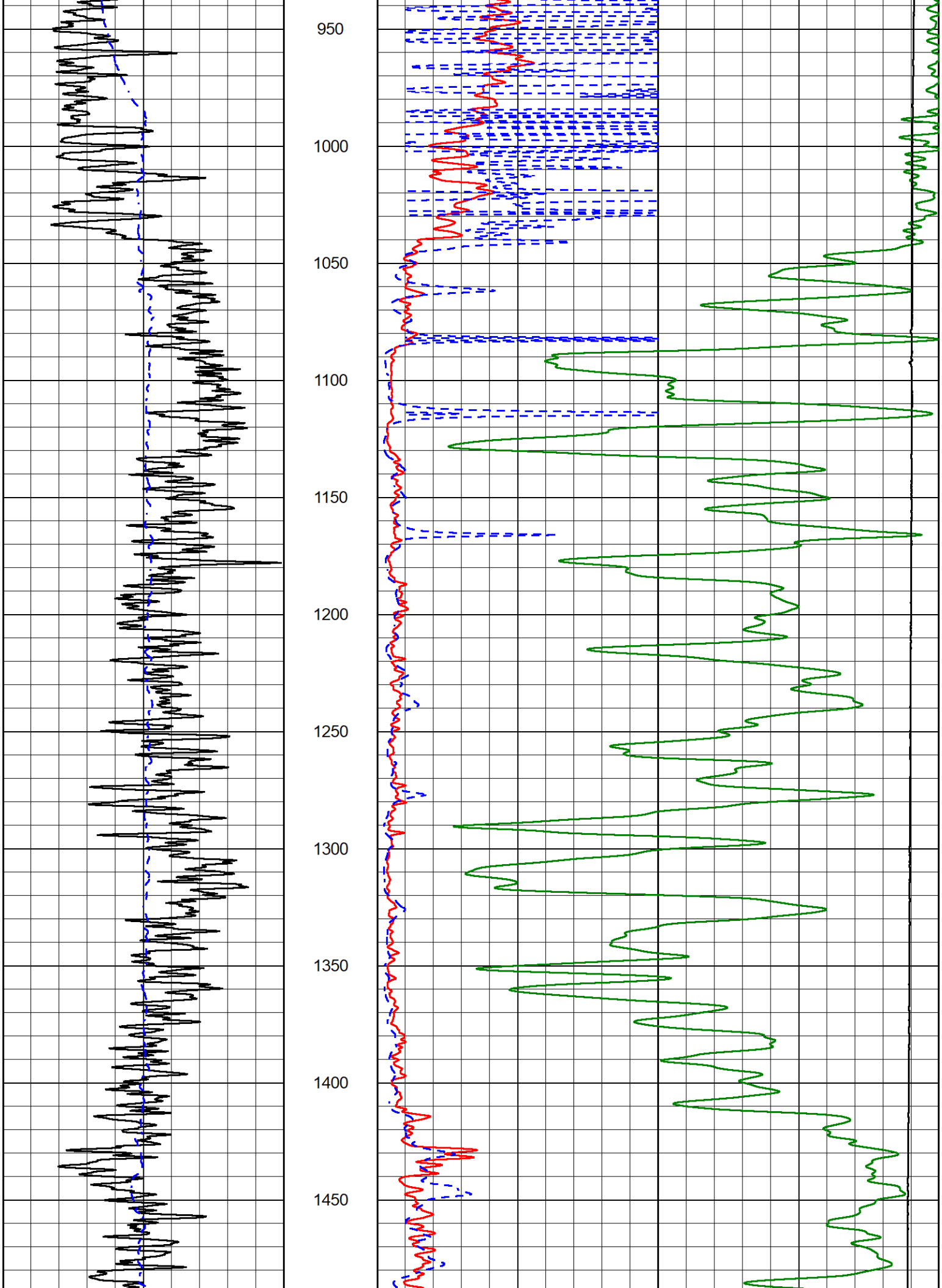
2" SCALE RESISTIVITY

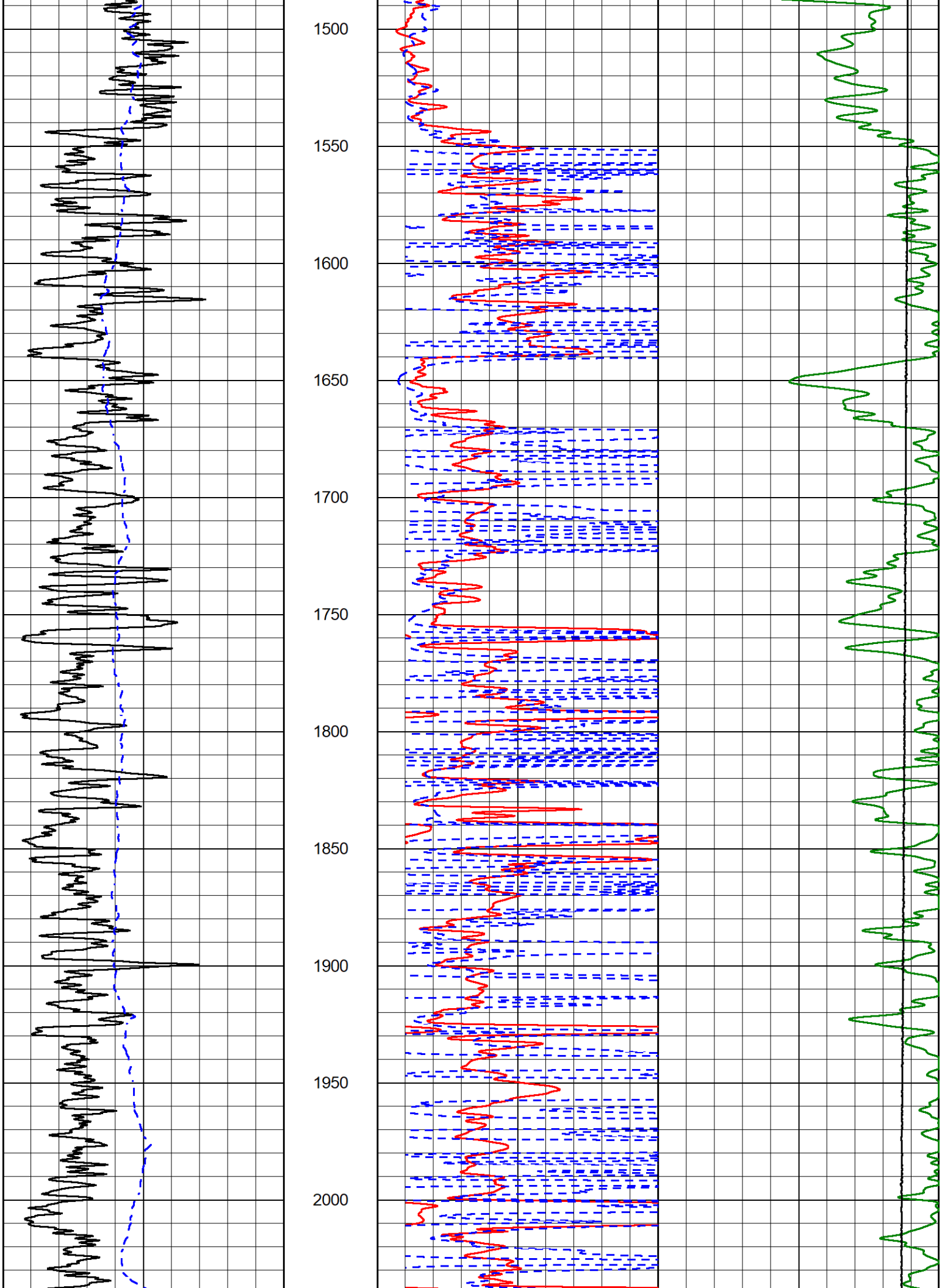
MAIN PASS

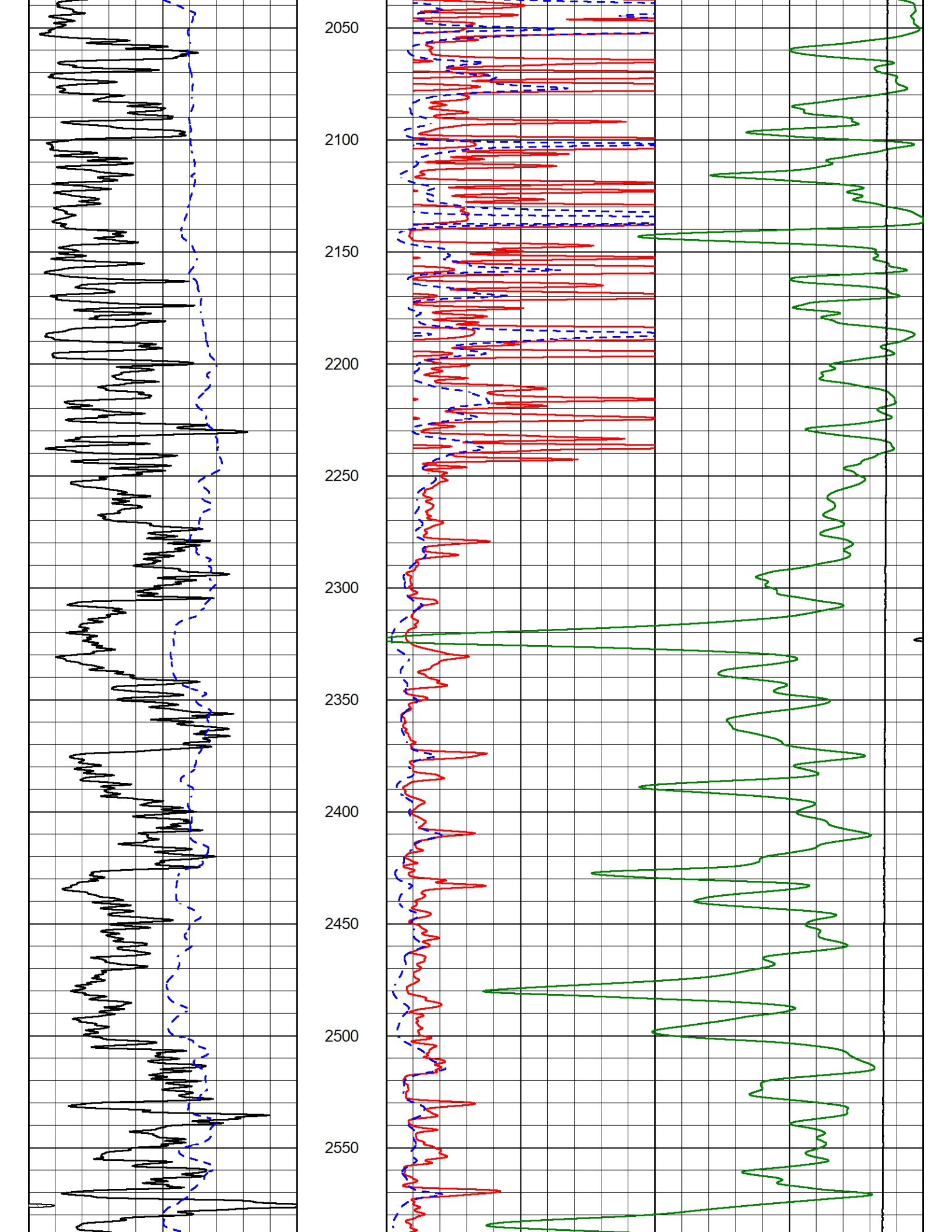
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Presentation Format	_dil2in
Dataset Creation	Tue Nov 22 05:55:31 2022
Charted by	Depth in Feet scaled 1:600

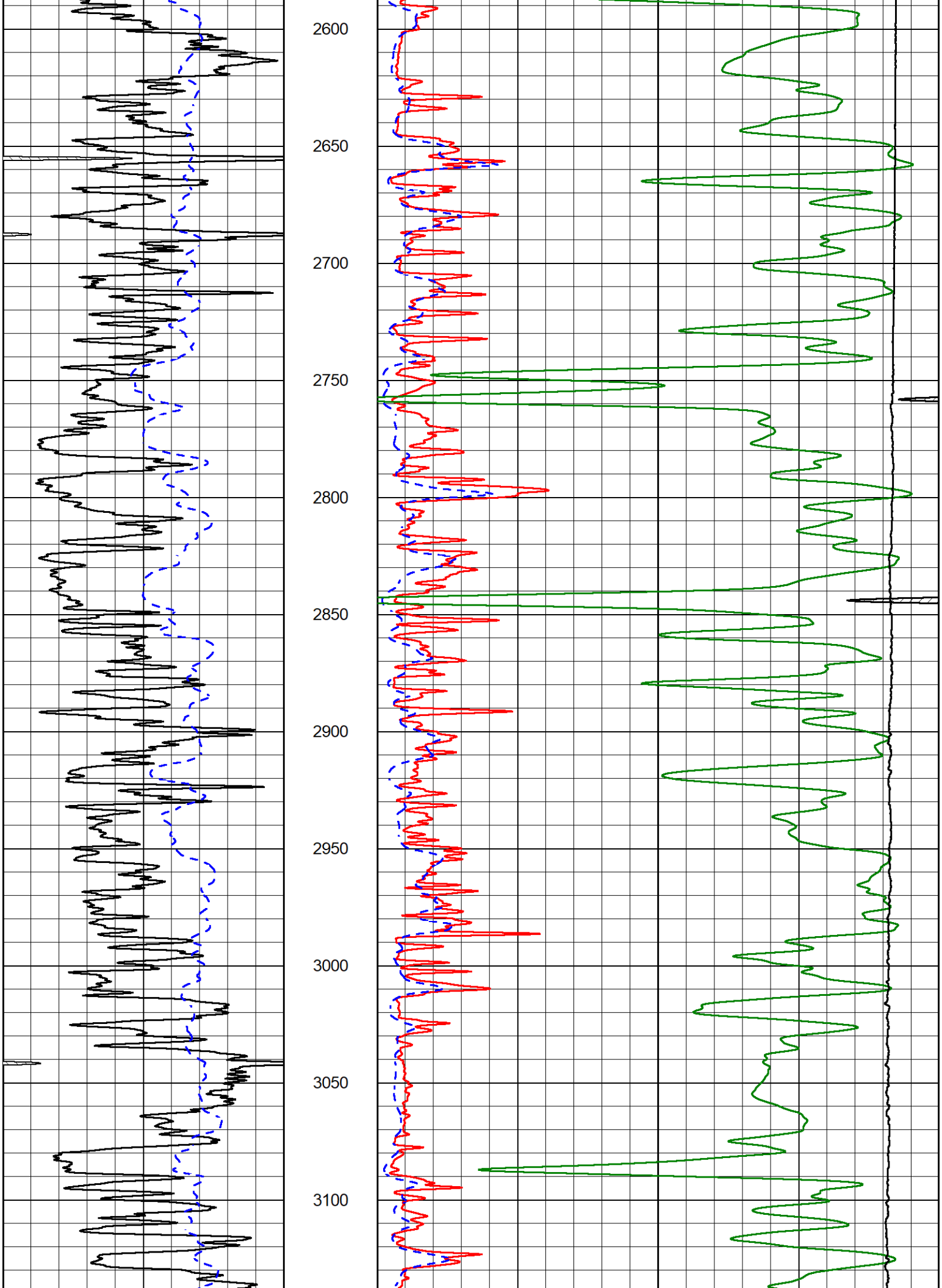


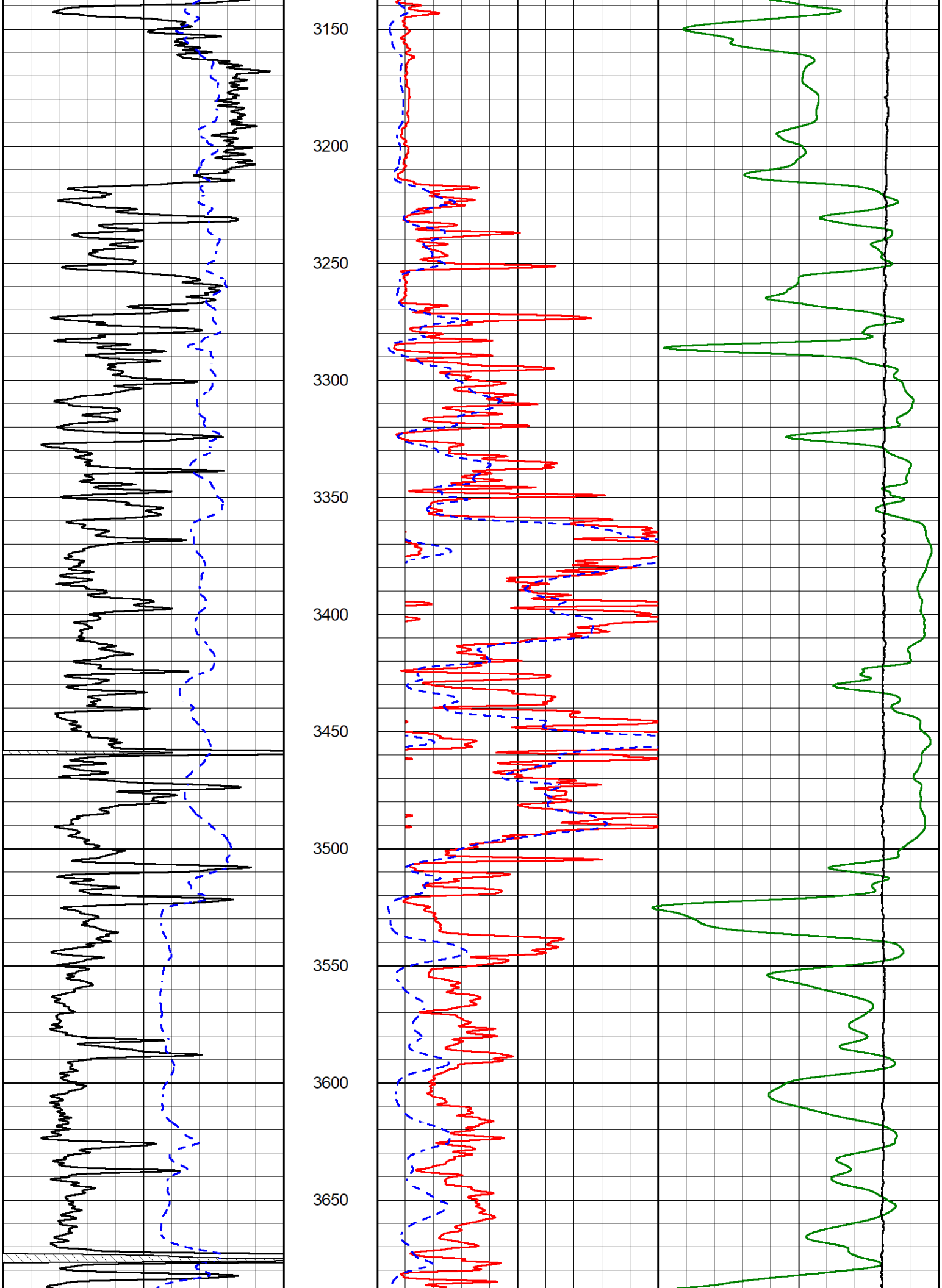

400
450
500
550
600
650
700
750
800
850
900

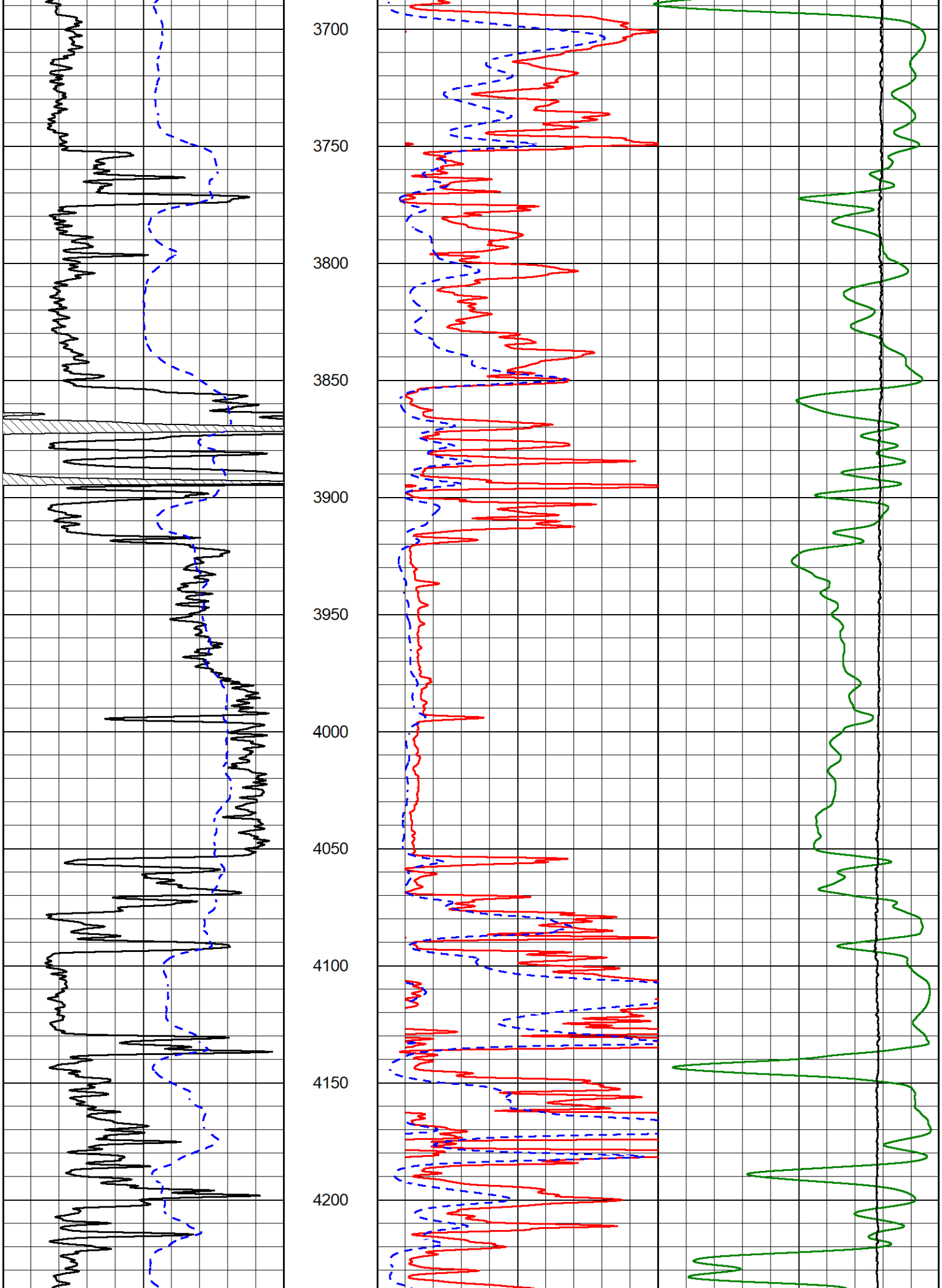

950
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450

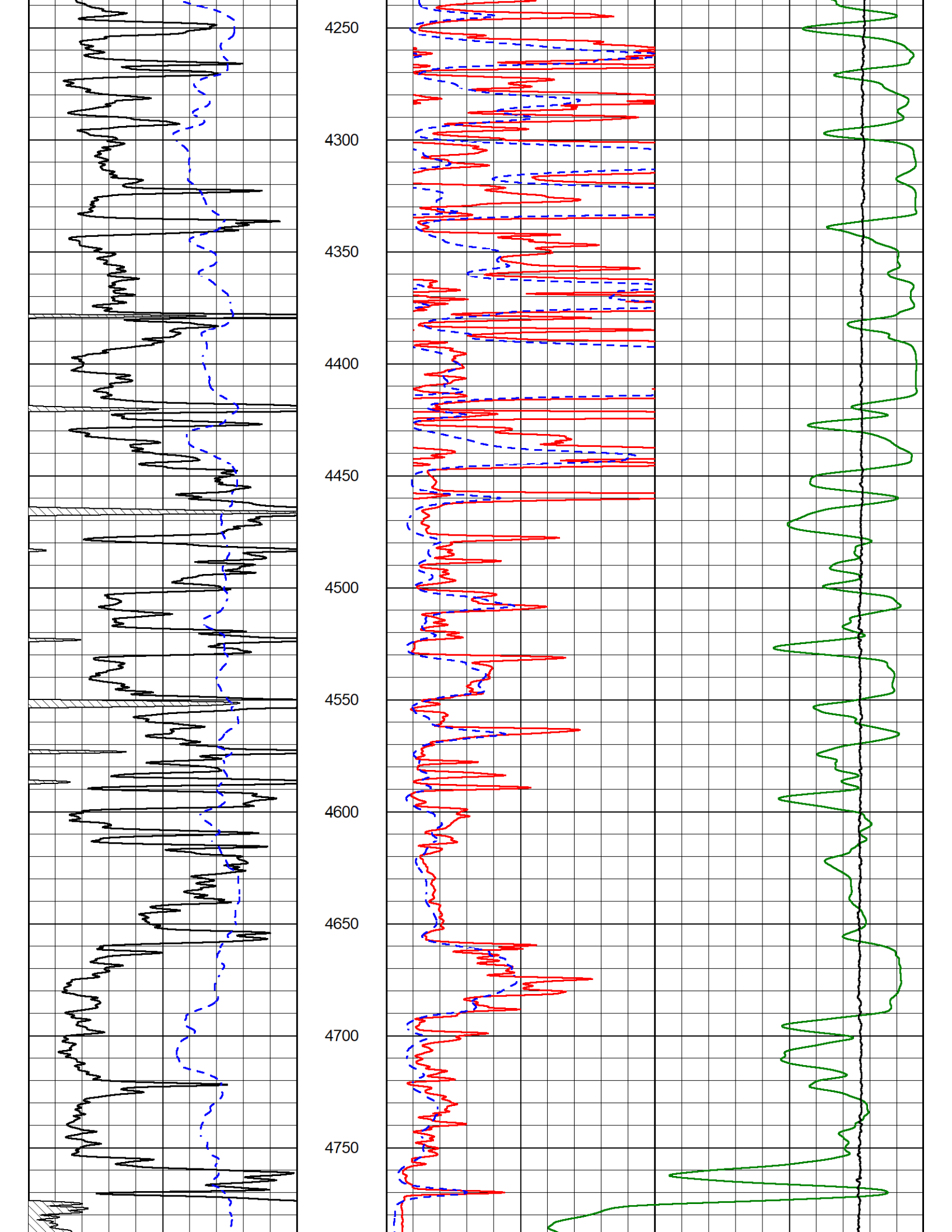

1500
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000

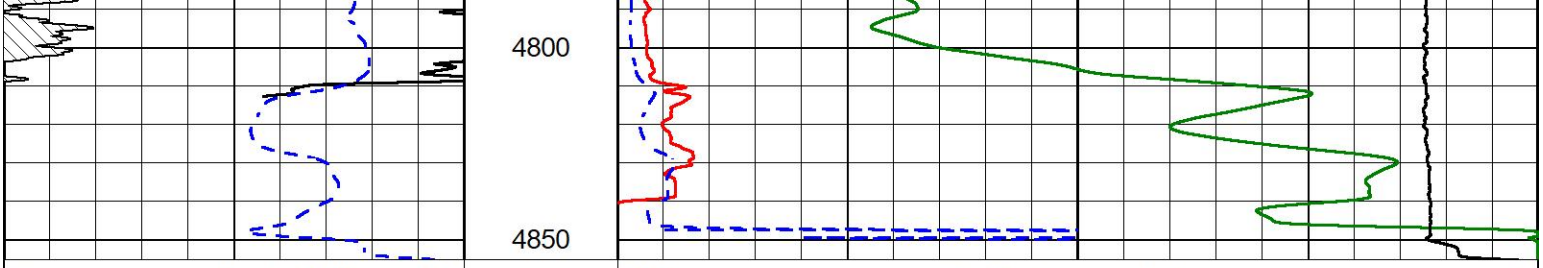

2050
2100
2150
2200
2250
2300
2350
2400
2450
2500
2550


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
4450
4500
4550
4600
4650
4700
4750



0	Gamma Ray (GAPI)	150
-200	SP (mV)	0
1000	Conductivity (mmho/m)	0
15000	Line Tension (lb)	0
0	Shallow Resisitivity (Ohm-m)	50
0	Deep Resistivity (Ohm-m)	50
50	Shallow Resistivity (Ohm-m)	200
50	Deep Resistivity (Ohm-m)	200

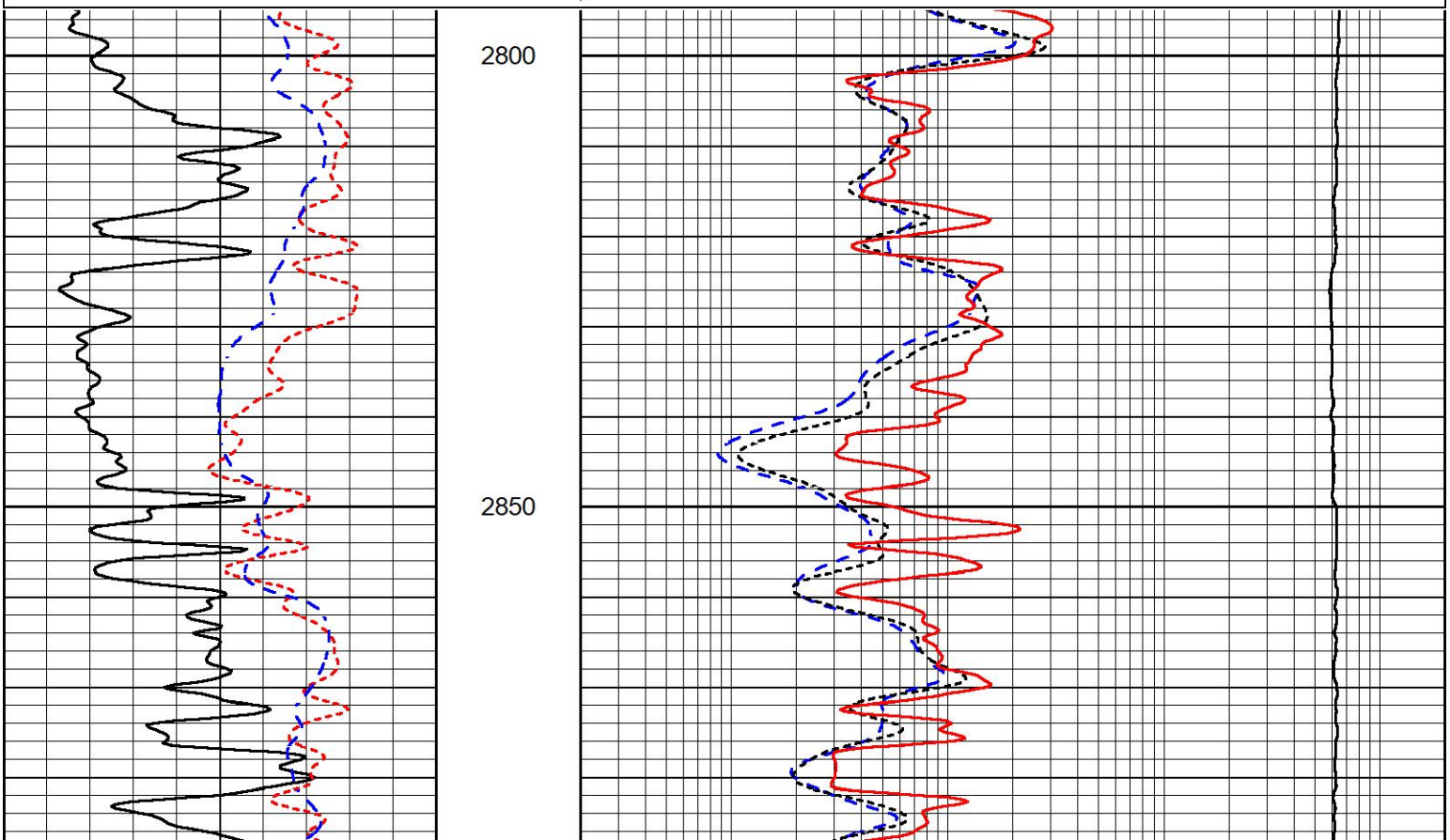
DETAIL SECTION

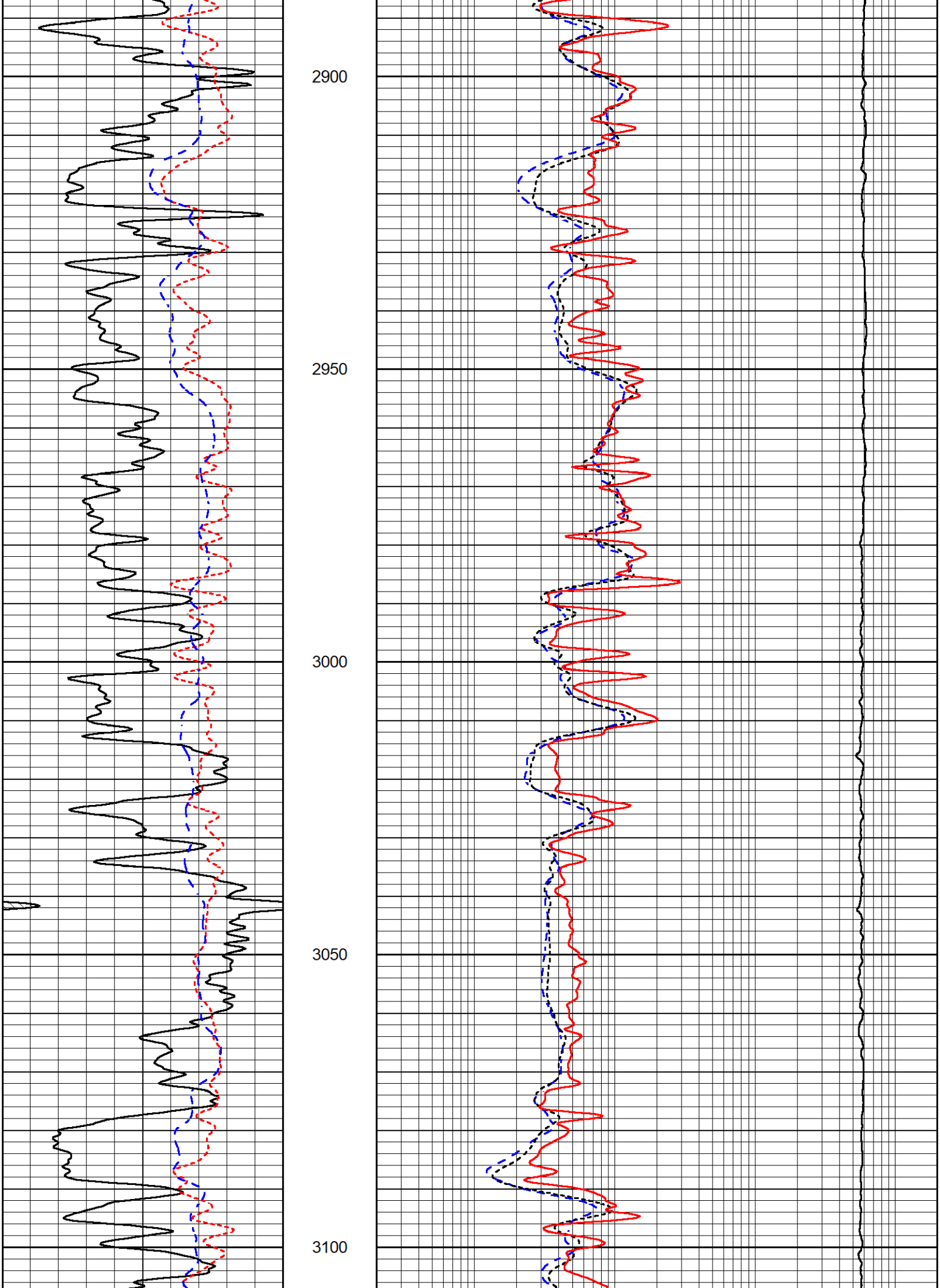
MAIN PASS

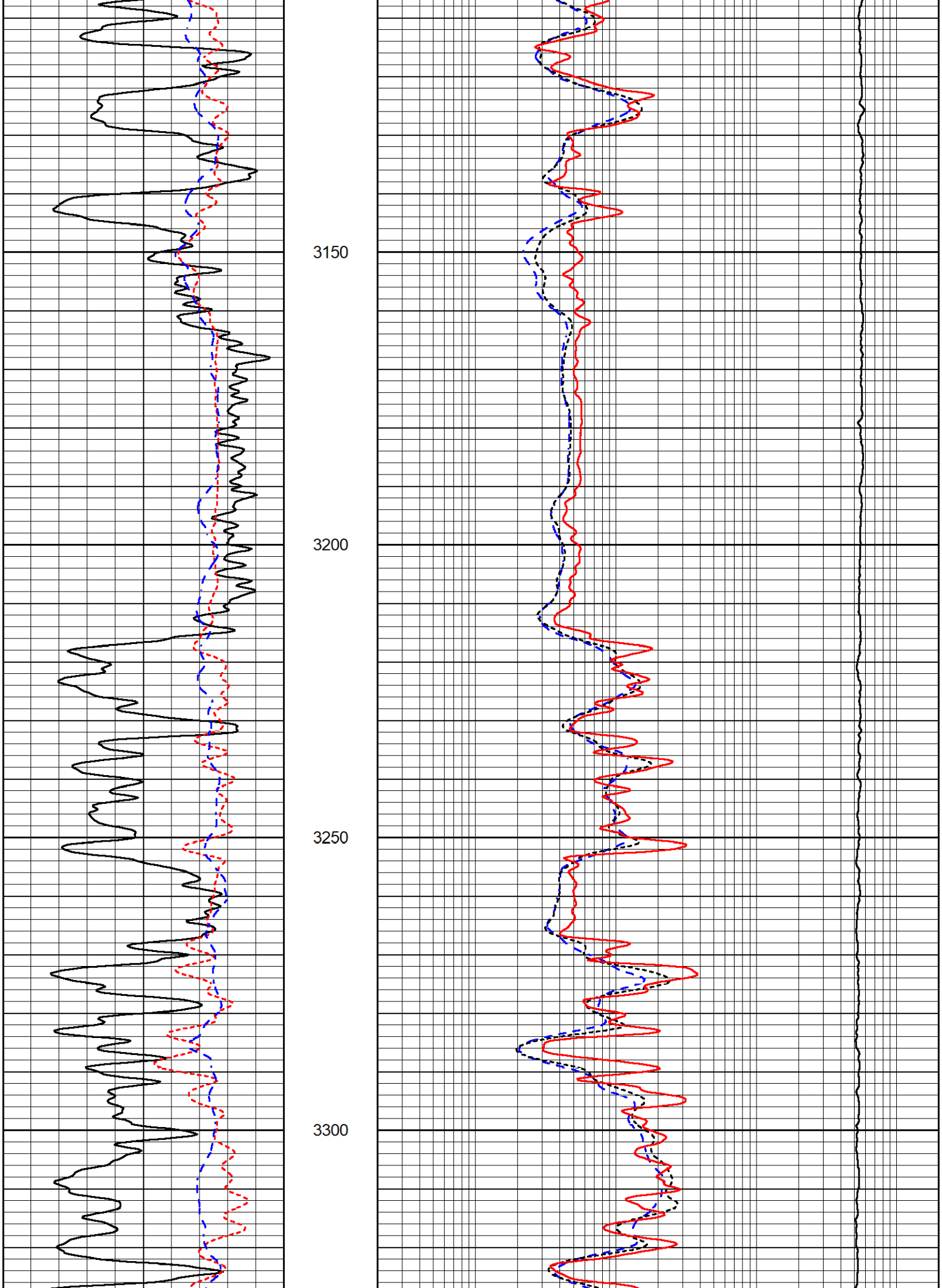
MIDWEST WIRELINE

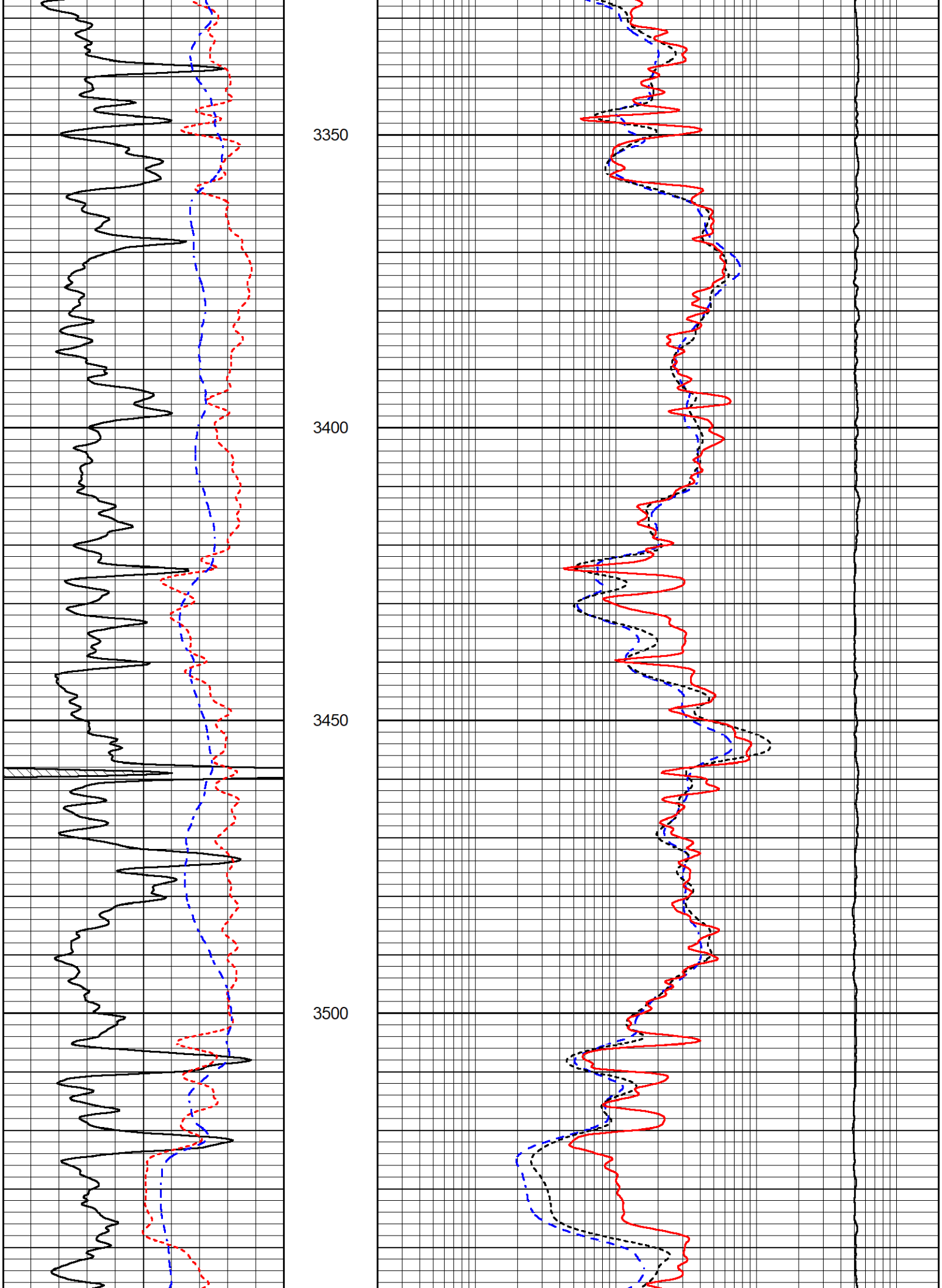
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Dataset Pathname	StkMI/pass3.1
Presentation Format	_dil
Dataset Creation	Tue Nov 22 05:56:29 2022
Charted by	Depth in Feet scaled 1:240

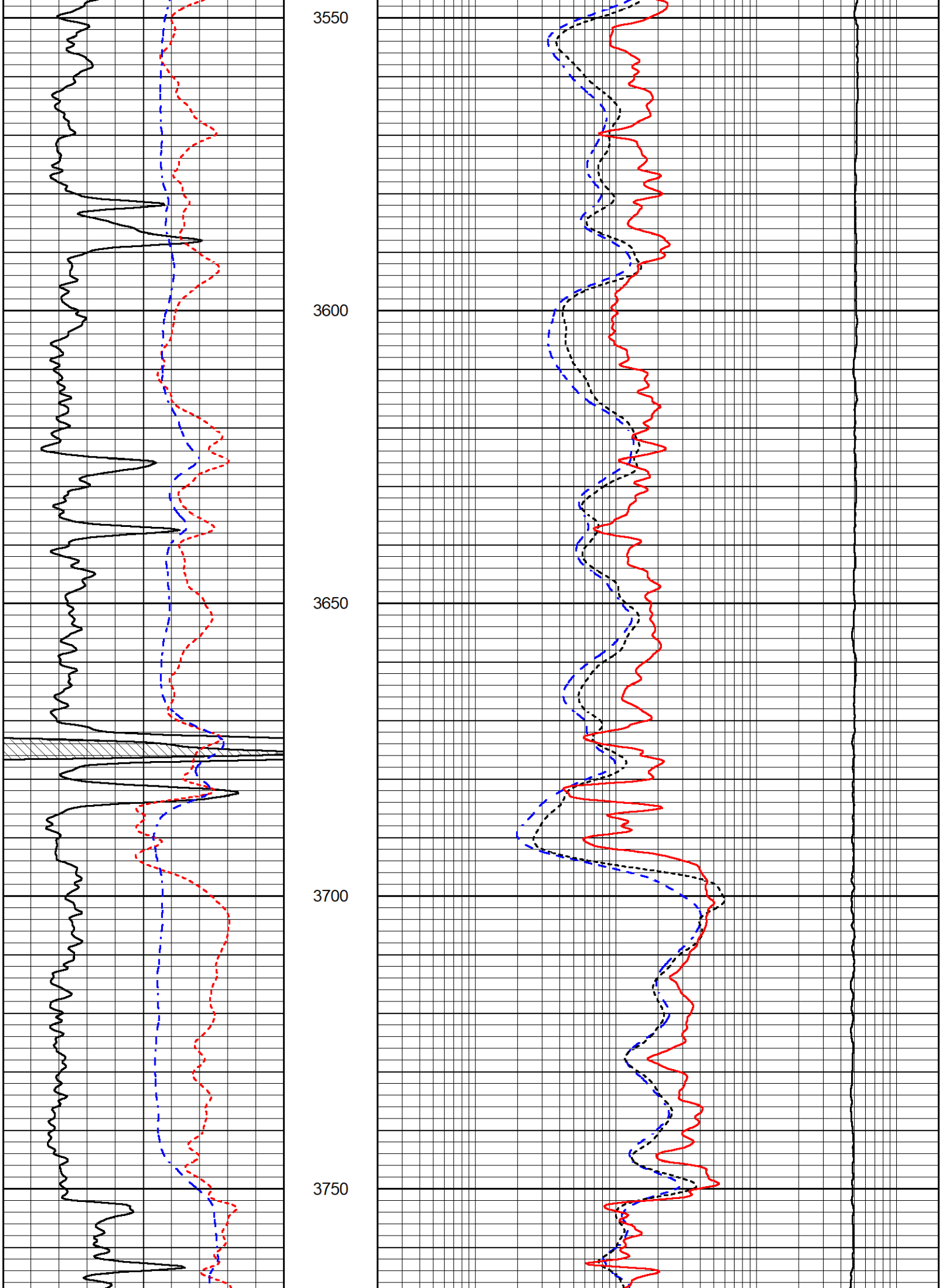
0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

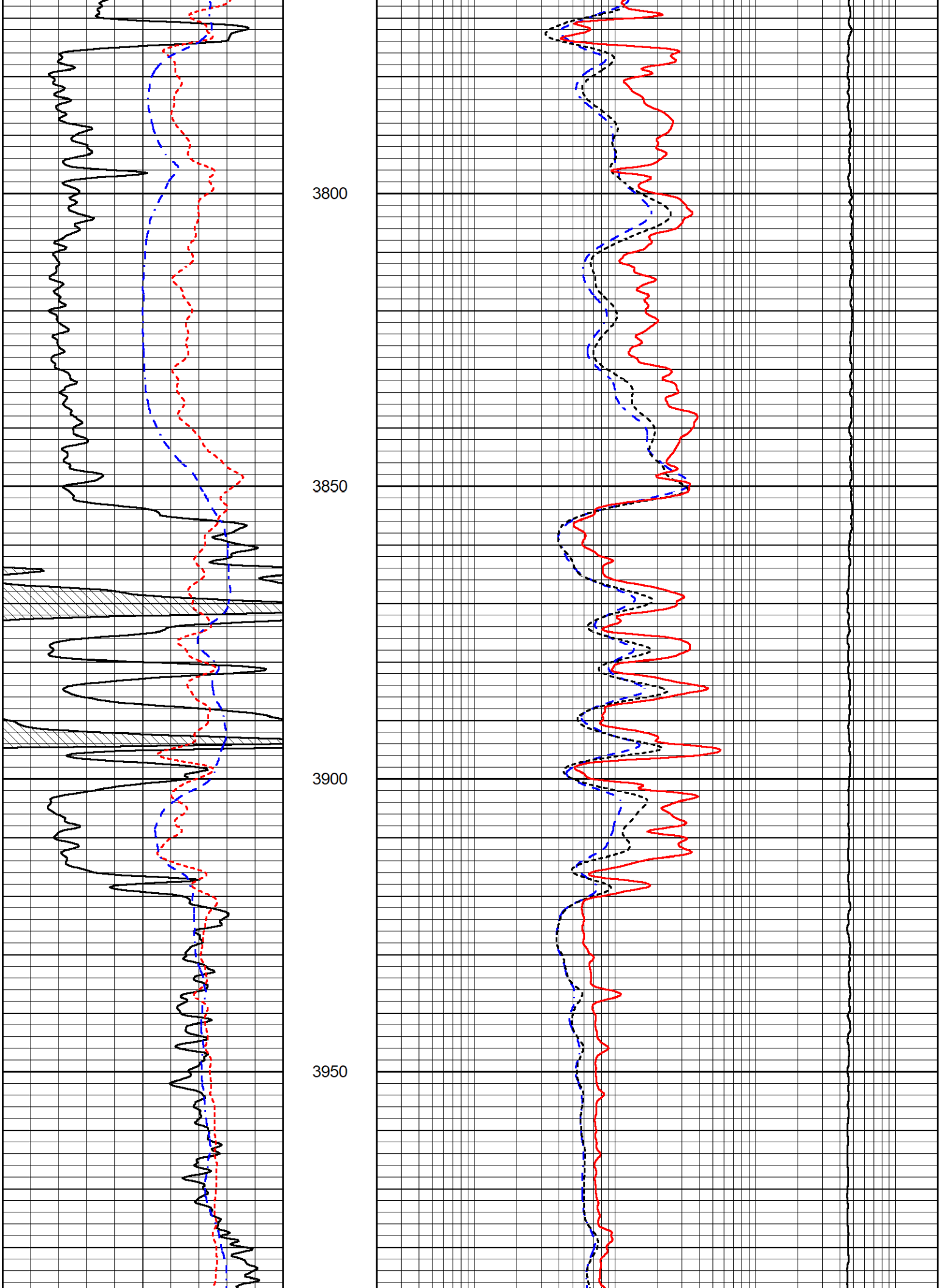


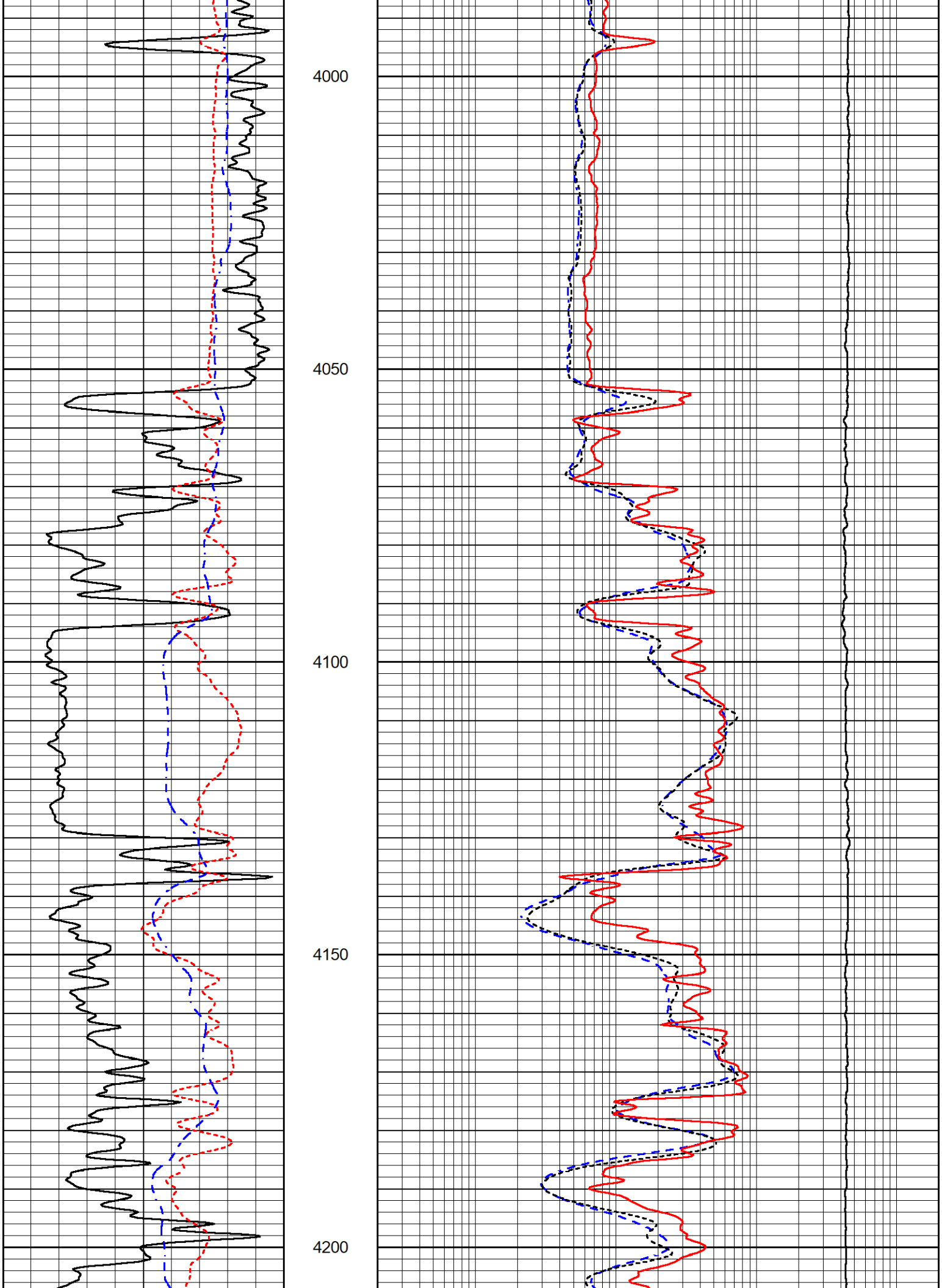

2900
2950
3000
3050
3100

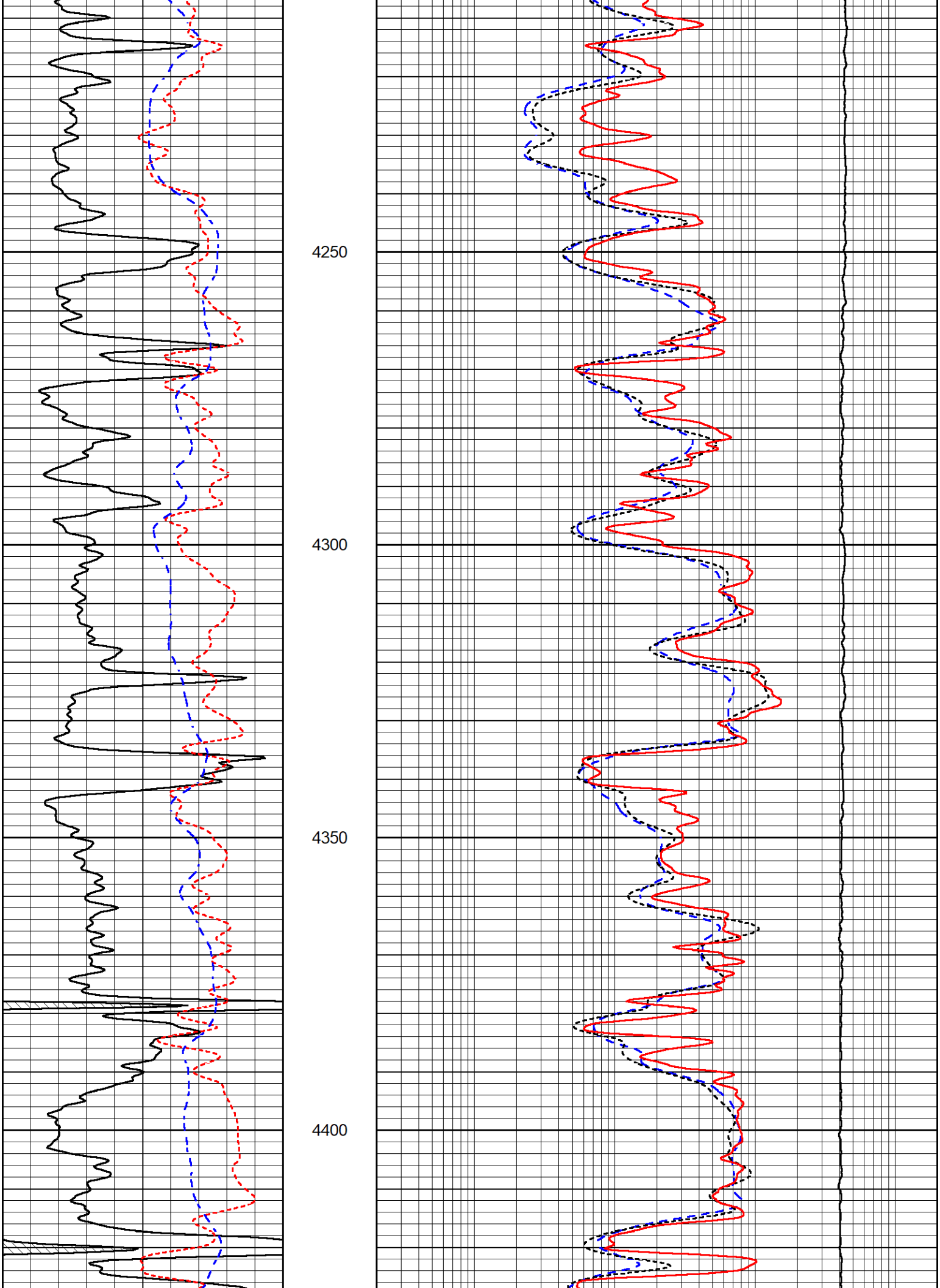

3150
3200
3250
3300

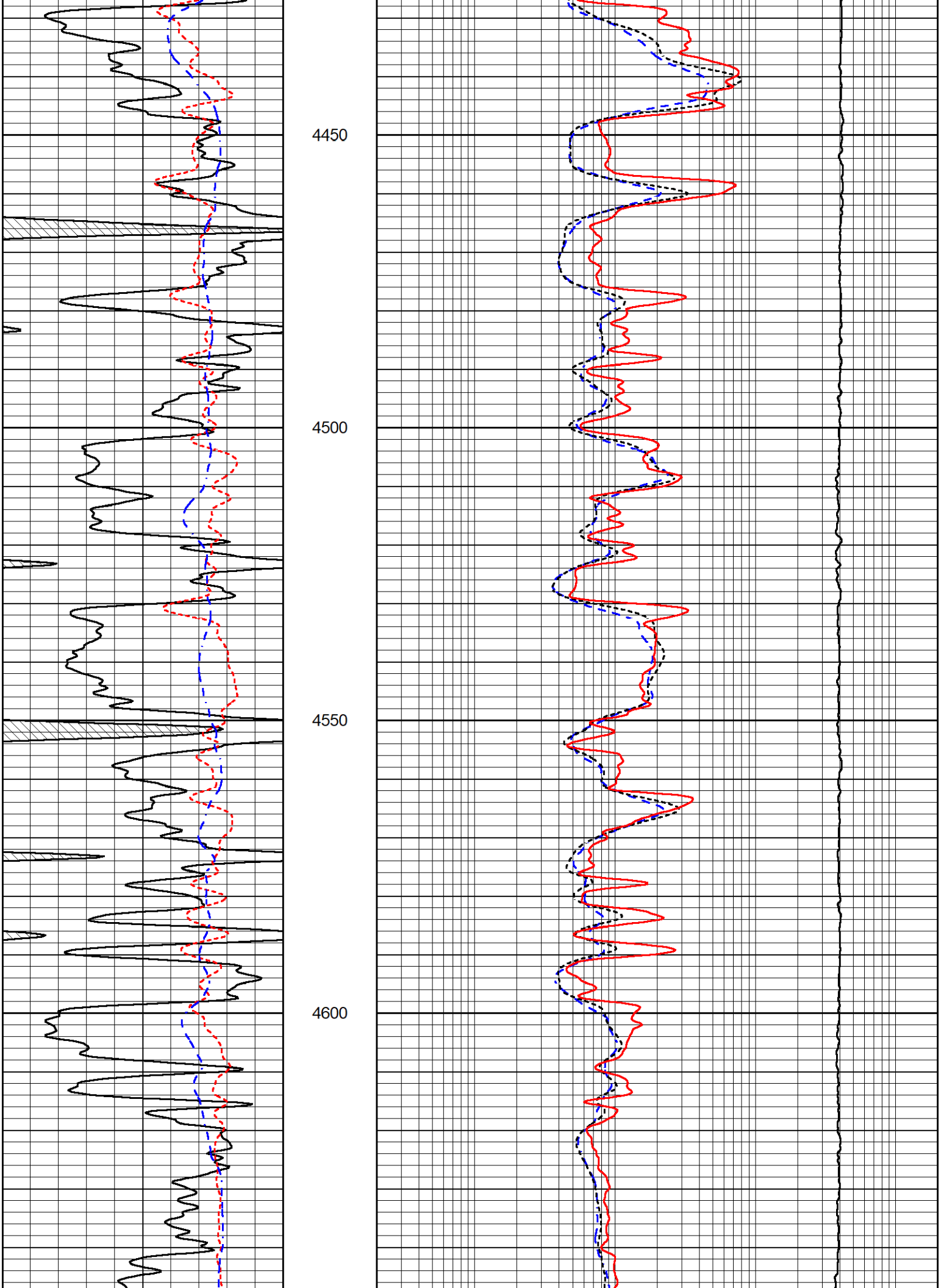

3350
3400
3450
3500

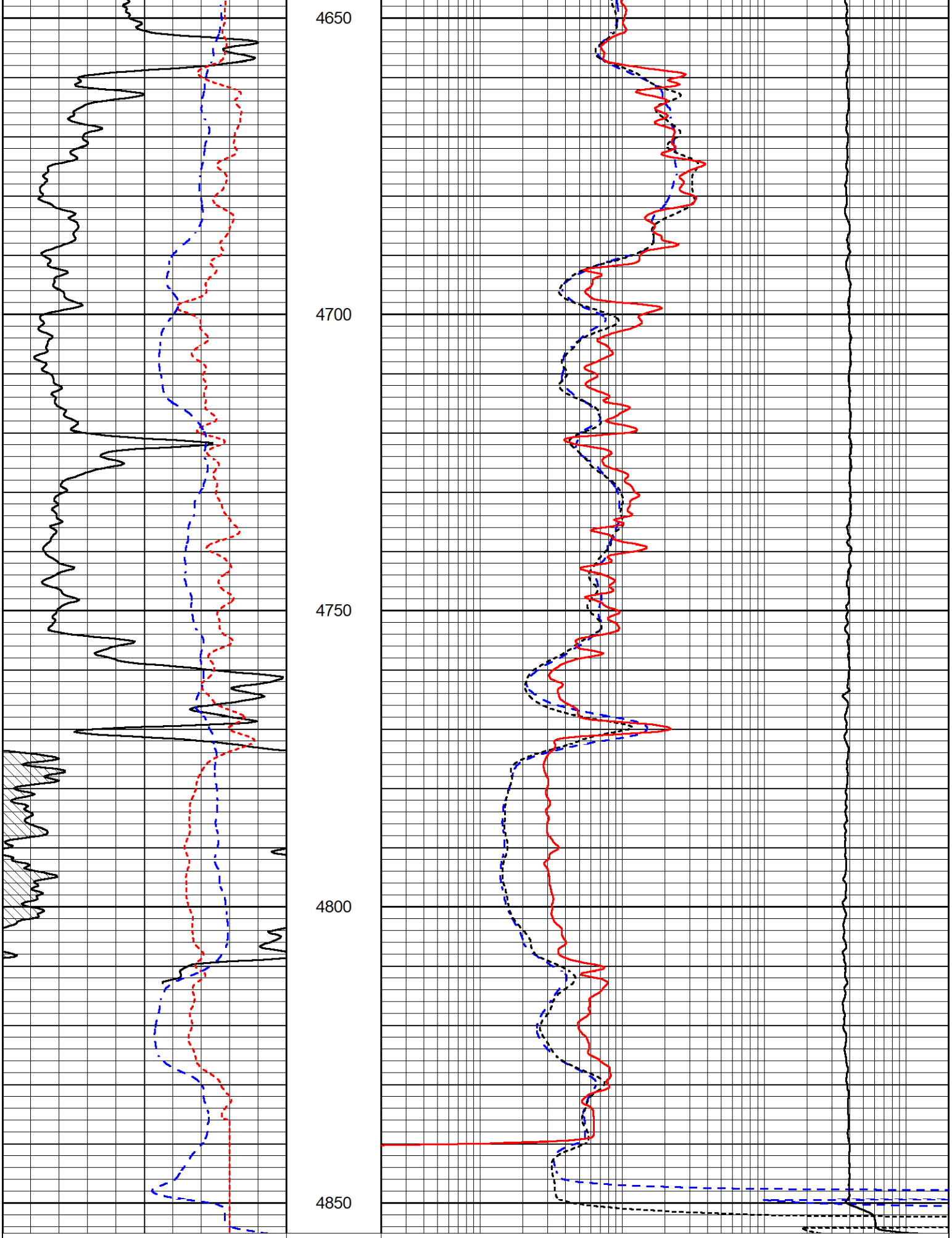

3550
3600
3650
3700
3750


3800
3850
3900
3950


4000
4050
4100
4150
4200


4250
4300
4350
4400


4450
4500
4550
4600


4650
4700
4750
4800
4850
0
Gamma Ray (GAPI)
150
-160
RXORT
40
0.2
Deep Resistivity (Ohm-m)
2000
0.2
Medium Resistivity (Ohm-m)
2000

-200	SP (mV)	0
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

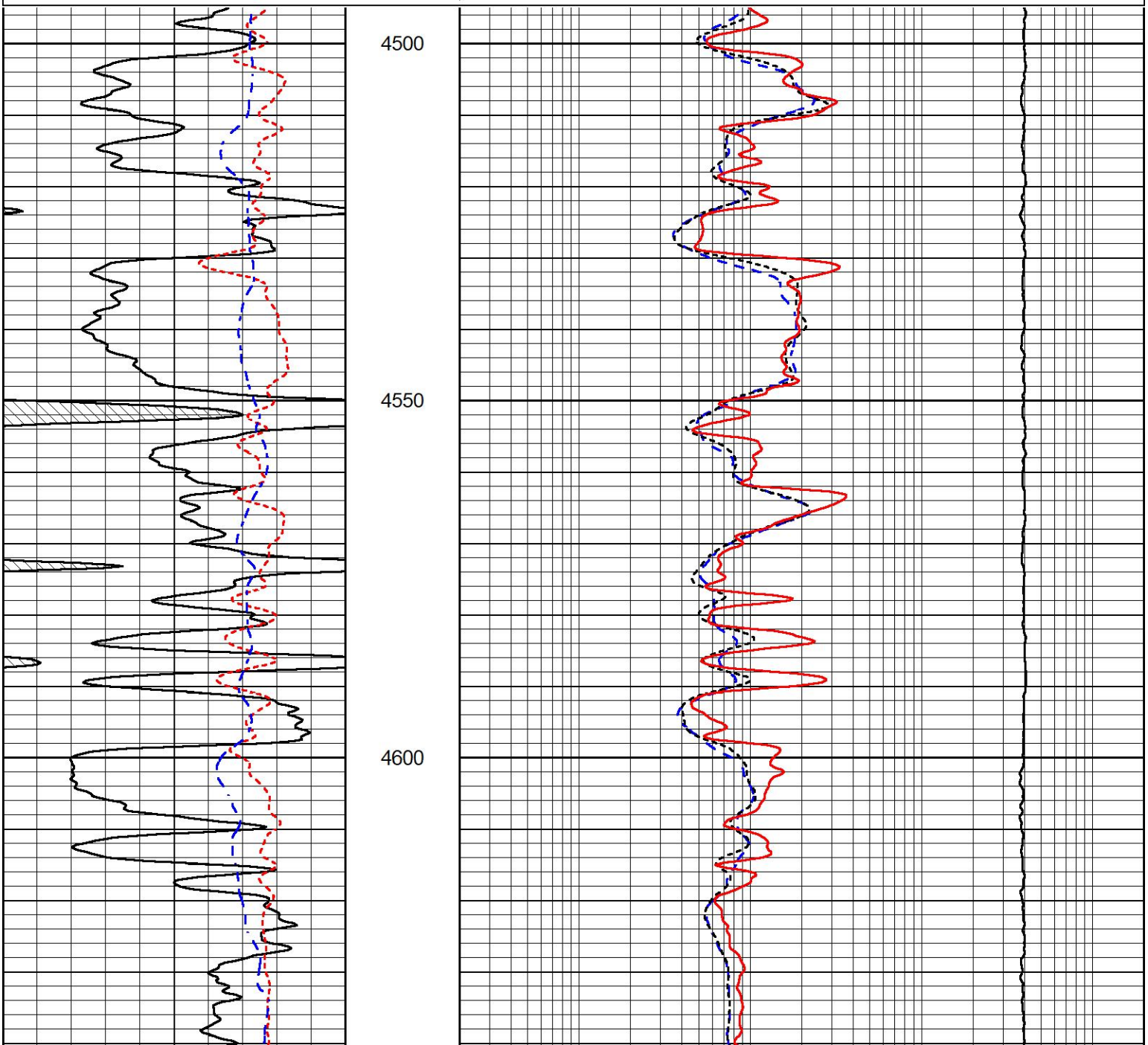
MIDWEST WIRELINE

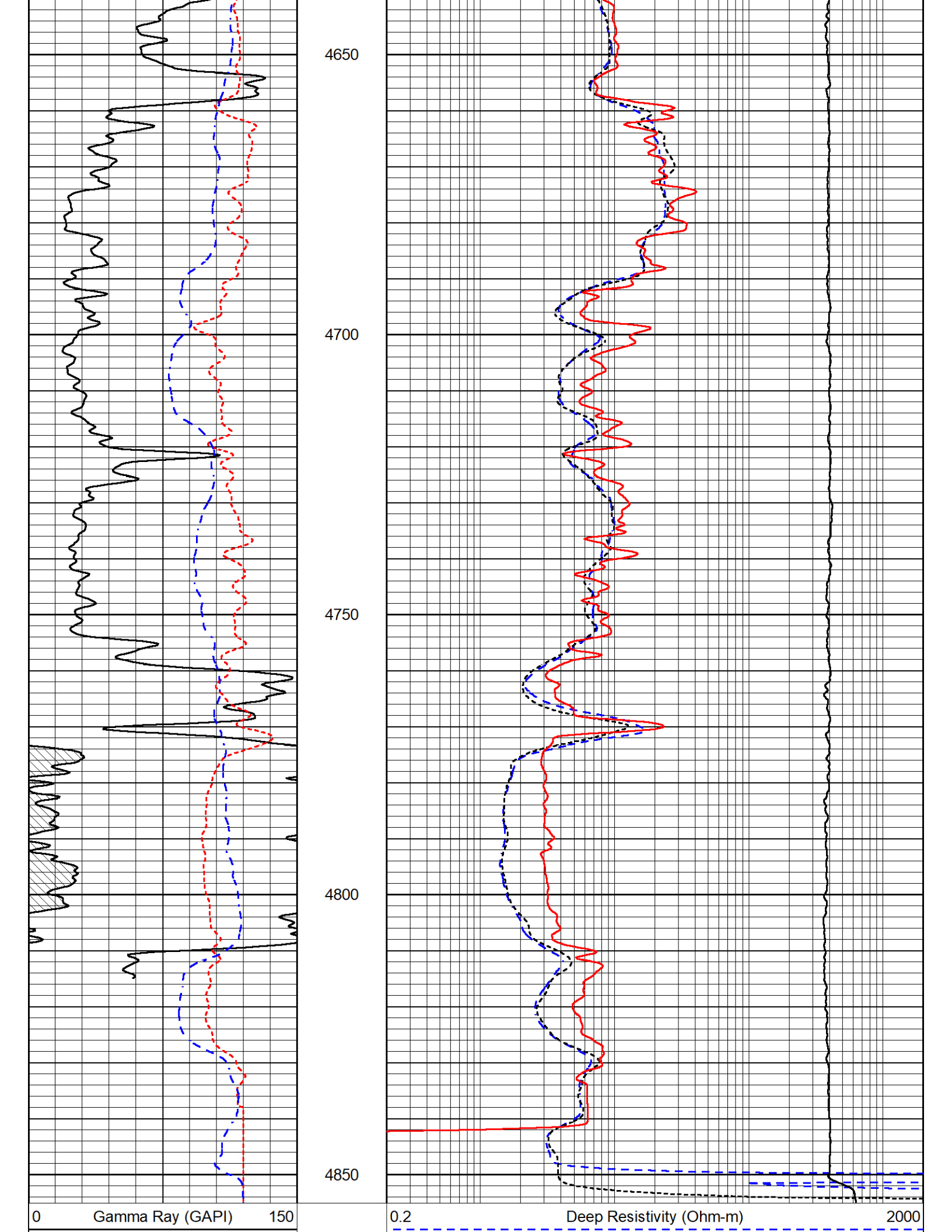
REPEAT SECTION

REPEAT PASS

Database File	griffin_gwen #3.db
Dataset Pathname	StkMI/pass2.1
Presentation Format	_dil
Dataset Creation	Tue Nov 22 05:14:50 2022
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
-160	RXORT	40
-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




4650
4700
4750
4800
4850
0
Gamma Ray (GAPI)
150
0.2
Deep Resistivity (Ohm-m)
2000

-160	RXORT	40
-200	SP (mV)	0

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

Calibration Report

Database File	griffin_gwen #3.db
Dataset Pathname	StkMl/pass3.1
Dataset Creation	Tue Nov 22 05:56:29 2022

Dual Induction Calibration Report

Serial-Model:	502 HT-M&W
Surface Cal Performed:	Mon Nov 7 15:53:48 2022

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	83.639	487.104	0.000	255.800	mmho/m	0.454	-31.000
Medium	113.335	1585.690	0.000	255.800	mmho/m	0.350	-11.000

Microlog Calibration Report

Serial-Model:	401-PSIML
Performed:	Mon Nov 7 15:53:59 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	17000.0000	-0.4000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	15500.0000	0.0000
Caliper	1.0052	1.0858	5.0000	16.5000	in	98.0000	-93.1500

Compensated Density Calibration Report

Serial-Model:	305-24-M&W
Source #:	20762B
Master Calibration Performed:	Mon Jun 20 16:54:11 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4771.35	5494.27	cps
Aluminum	2.650	g/cc	908.54	3539.54	cps

Spine Angle = 75.15

Density/Spine Ratio = 0.522

	Size		Reading
Small Ring	4.00	in	1.74
Large Ring	14.00	in	1.38

Compensated Neutron Calibration Report

Serial Number:	207-MW
Tool Model:	M&W

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	6240.00	cps	1000.00	cps	1.6025
Long Space	460.00	cps	1000.00	cps	1.9500

PRE-SURVEY VERIFICATION

	Detector	Readings		Measured		Target	
1)	Short Space		cps				
	Long Space		cps		pu		pu
2)	Short Space		cps				
	Long Space		cps		pu		
3)	Short Space		cps				
	Long Space		cps		pu		

POST-SURVEY VERIFICATION

	Detector	Readings		Measured		Target	
1)	Short Space		cps				
	Long Space		cps		pu		pu
2)	Short Space		cps				
	Long Space		cps		pu		pu
3)	Short Space		cps				
	Long Space		cps		pu		pu

Gamma Ray Calibration Report

Serial Number:	106	
Tool Model:	M&W	
Performed:	Fri Dec 3 15:10:46 2021	
Calibrator Value:	500.0	GAPI
Background Reading:	24.0	cps
Calibrator Reading:	637.0	cps
Sensitivity:	0.5500	GAPI/cps

MIDWEST WIRELINE

Company	Griffin Management LLC
Well	Gwen #3
Field	Moffett Northwest
County	Barber
State	Kansas