MIDWEST WIRELINE

DUAL INDUCTION LOG

Company Mull Drilling Company, Inc.
Well Johnson Farms #2-17
Field Spivey-Grabs-Basil
County Kingman State Kansas

Location: 1724 FNL & 693 FWL
SEC 17 TWP 30S RGE 7W
API #: 15-095-22345-00-00

Permanent Datum Ground Level Elevation 1466
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Other Services: CNL/CDL MEL/BHCS

Elevation
K.B. 1479
D.F.
G.L. 1466

Company	Mull Drilling Company, Inc.		
Well	Johnson Farms #2-17		
Field	Spivey-Grabs-Basil		
County	Kingman		
State	Kansas		
Date	7/29/2022		
Run Number	One		
Depth Driller	4400		
Depth Logger	4399		
Bottom Logged Interval	4398		
Top Log Interval	200		
Casing Driller	8.625 @ 226		
Casing Logger	224		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	5000		
Density / Viscosity	9.2 / 55		
pH / Fluid Loss	11.5 / 8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.40 @ 76		
Rmf @ Meas. Temp	0.30 @ 76		
Rmc @ Meas. Temp	0.54 @ 76		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.25 @ 120		
Operating Rig Time	5 Hours		
Max Rec. Temp. F	120		
Equipment Number	P-108		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Rusty Mourning		

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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.

Spivey,
South to 150th, 2 East,
North into

Log Measured From: Kelly Bushing 13 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: D. Schmidt	Primary Witness: Rusty Mourning
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 (103)	3.00	3.50	50.00
CNLSC	37.23		CNT-M&W (210)	5.00	3.50	100.00
CNSSC	36.48					
			CDL-M&W (303-03)	8.50	4.00	250.00
LSD	28.18					
DCAL	28.17					
SSD	27.68					
			ML-PSI STKBL ML (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 (504 HT)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset: mull_johnson farms 2-17.db: field/well/stkml/pass3.11
Total length: 42.33 ft
Total weight: 685.00 lb
O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\mull_johnson farms 2-17.db
Dataset field/well/stkml/pass3.11/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	120	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	510	80	Off	4399

Variable Description

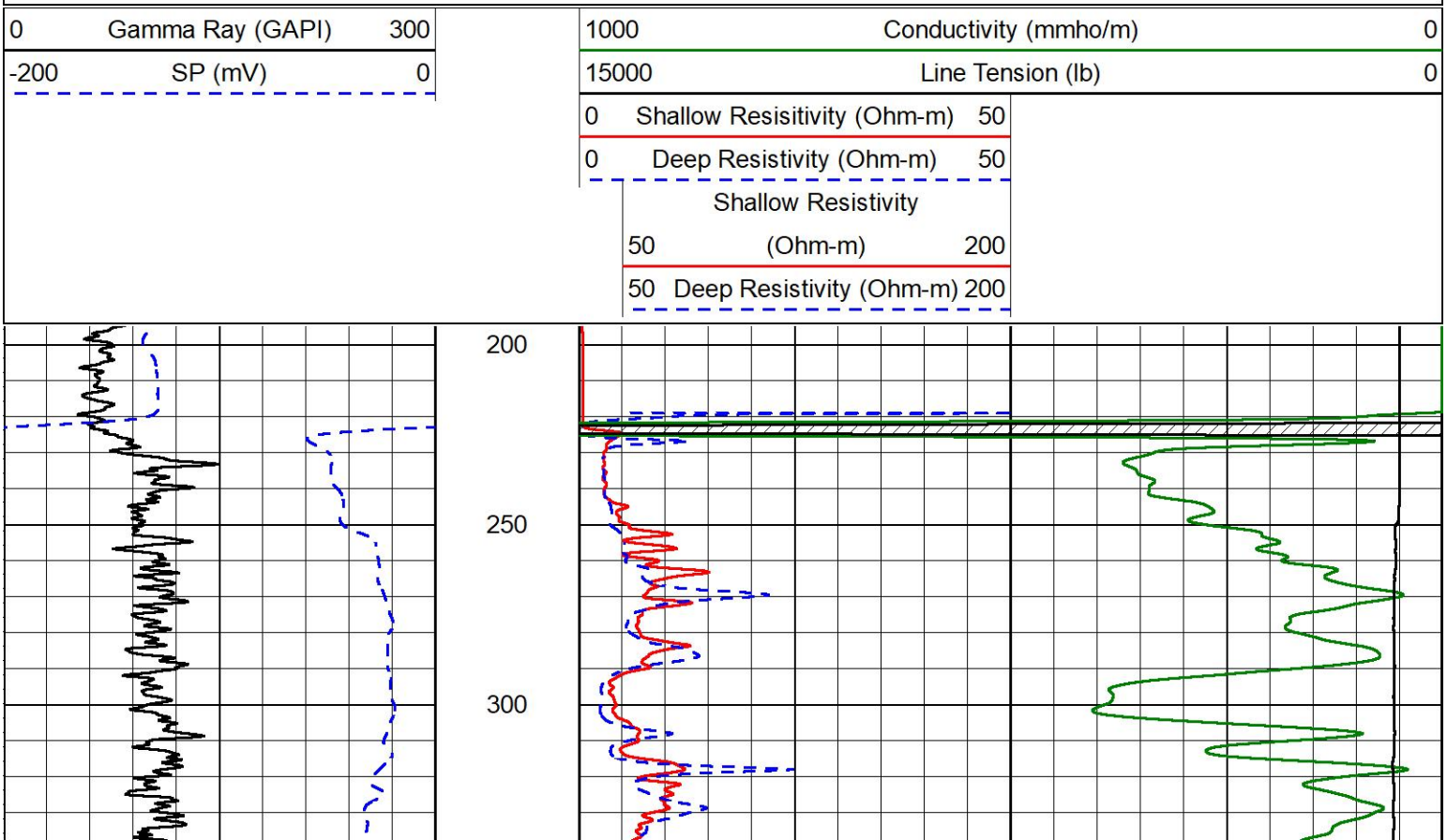
A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM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

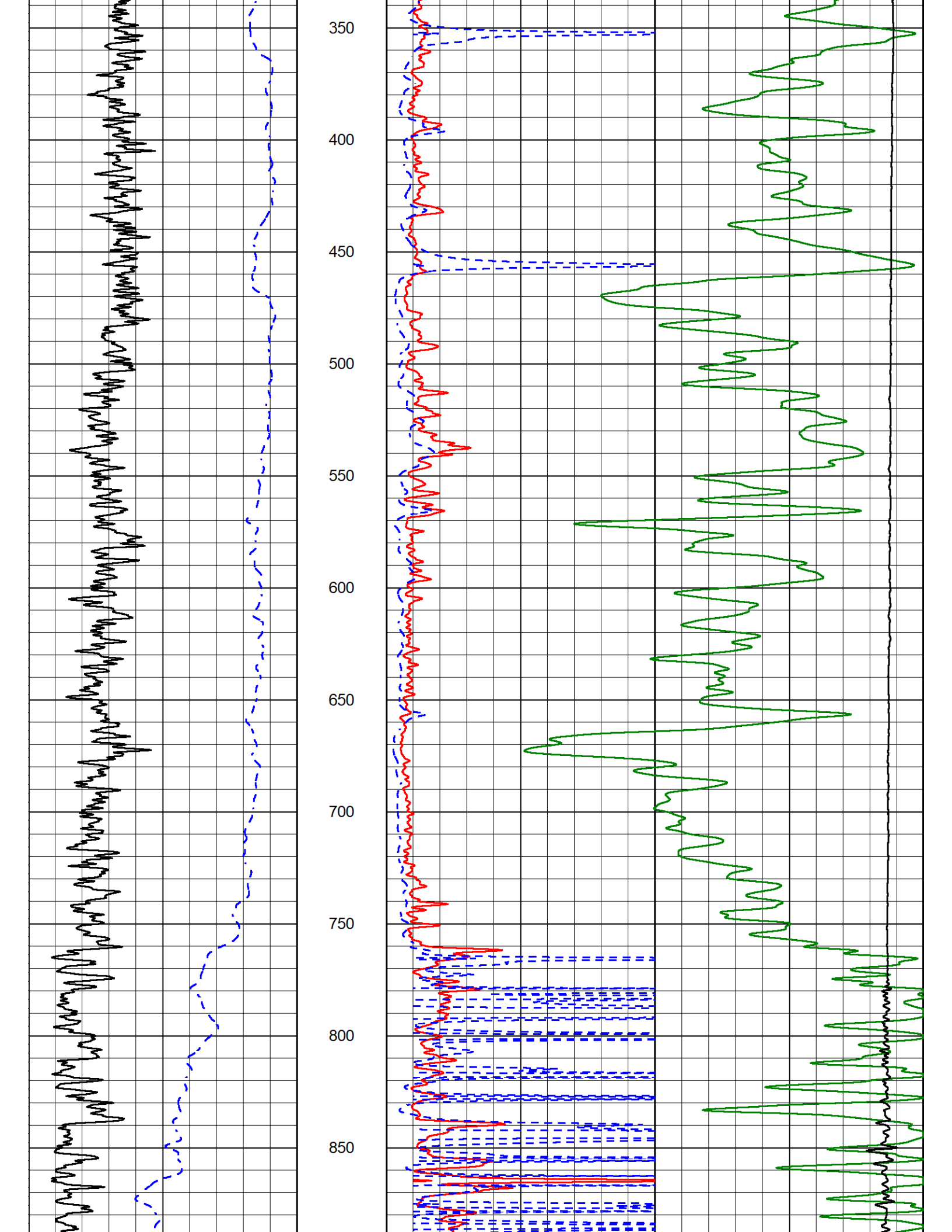
MIDWEST WIRELINE

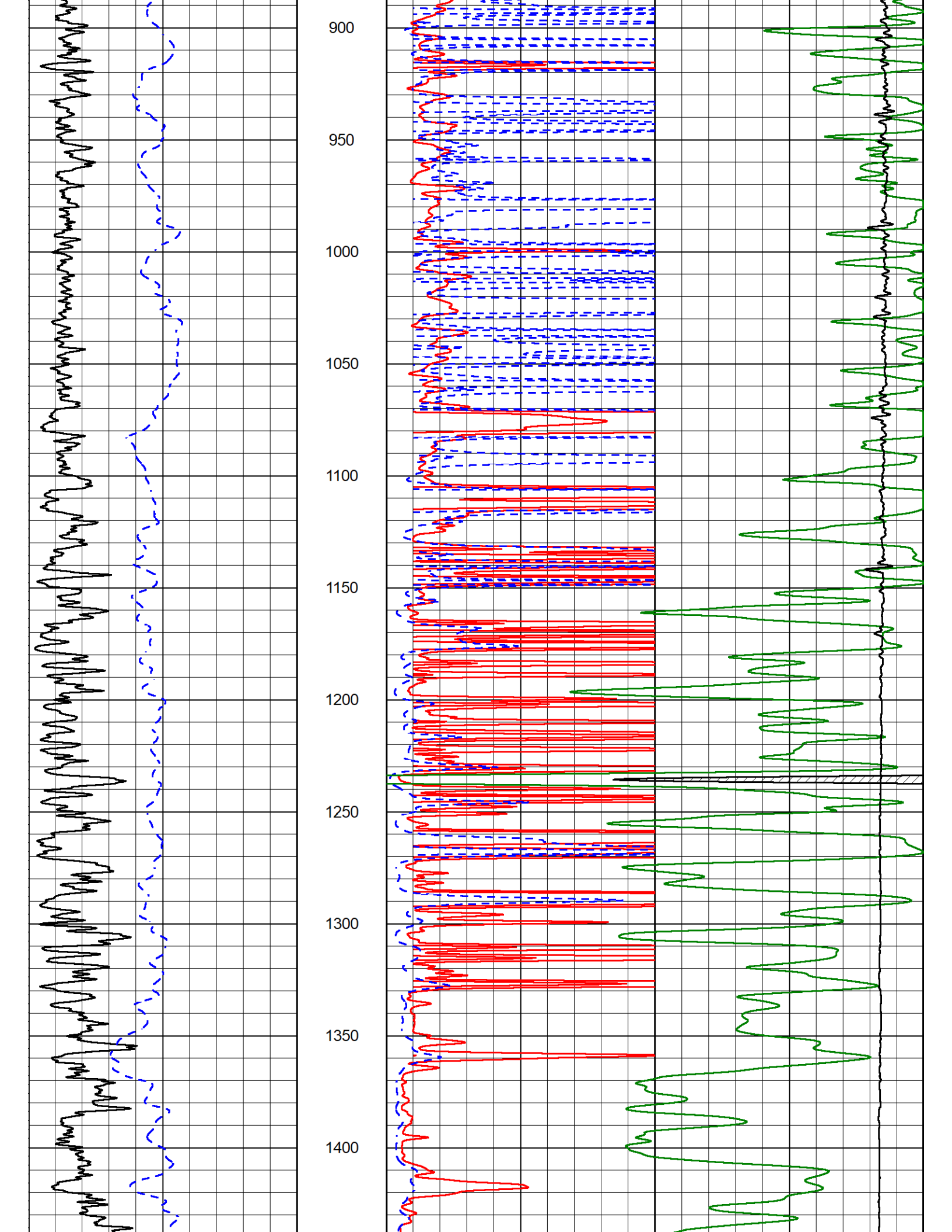
2" SCALE RESISTIVITY

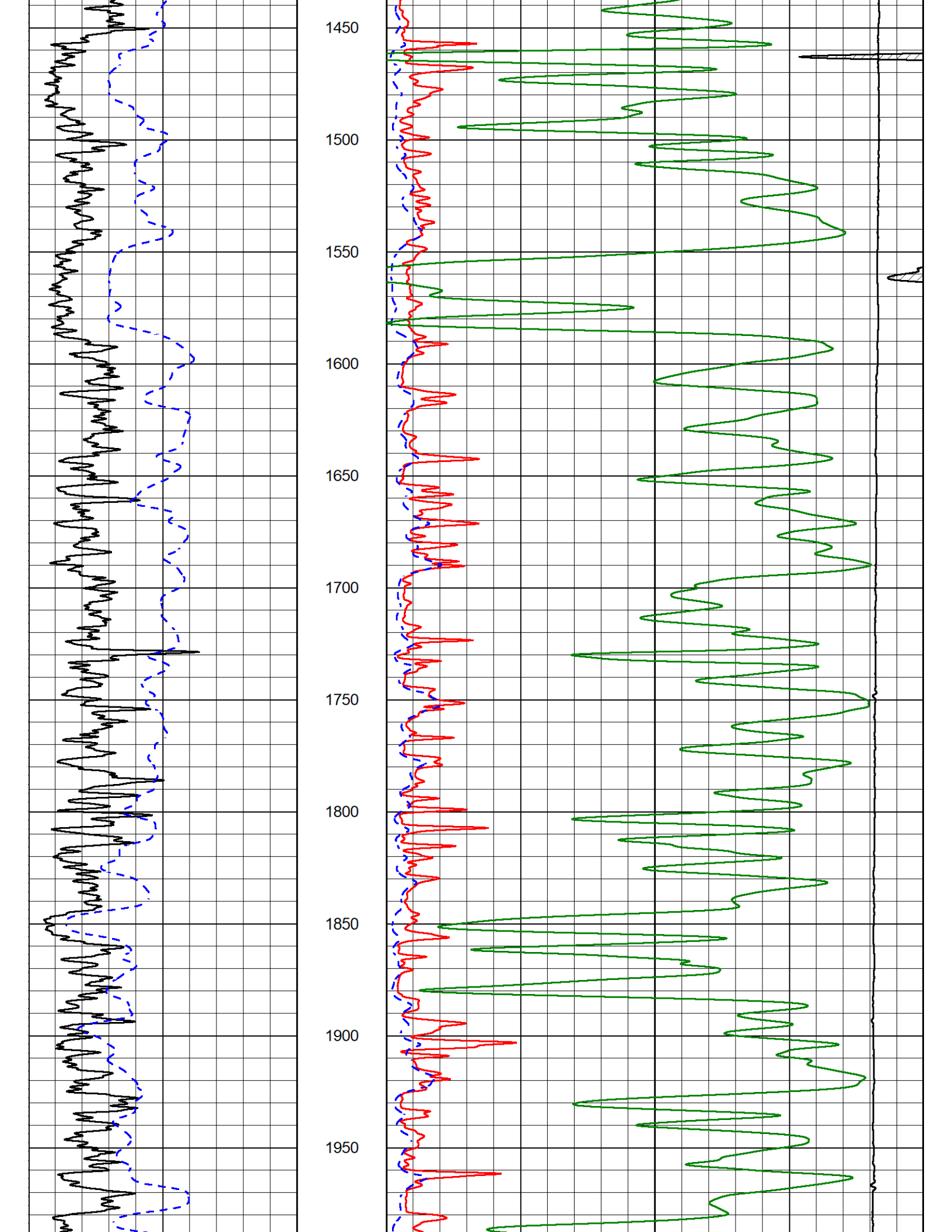
MAIN PASS

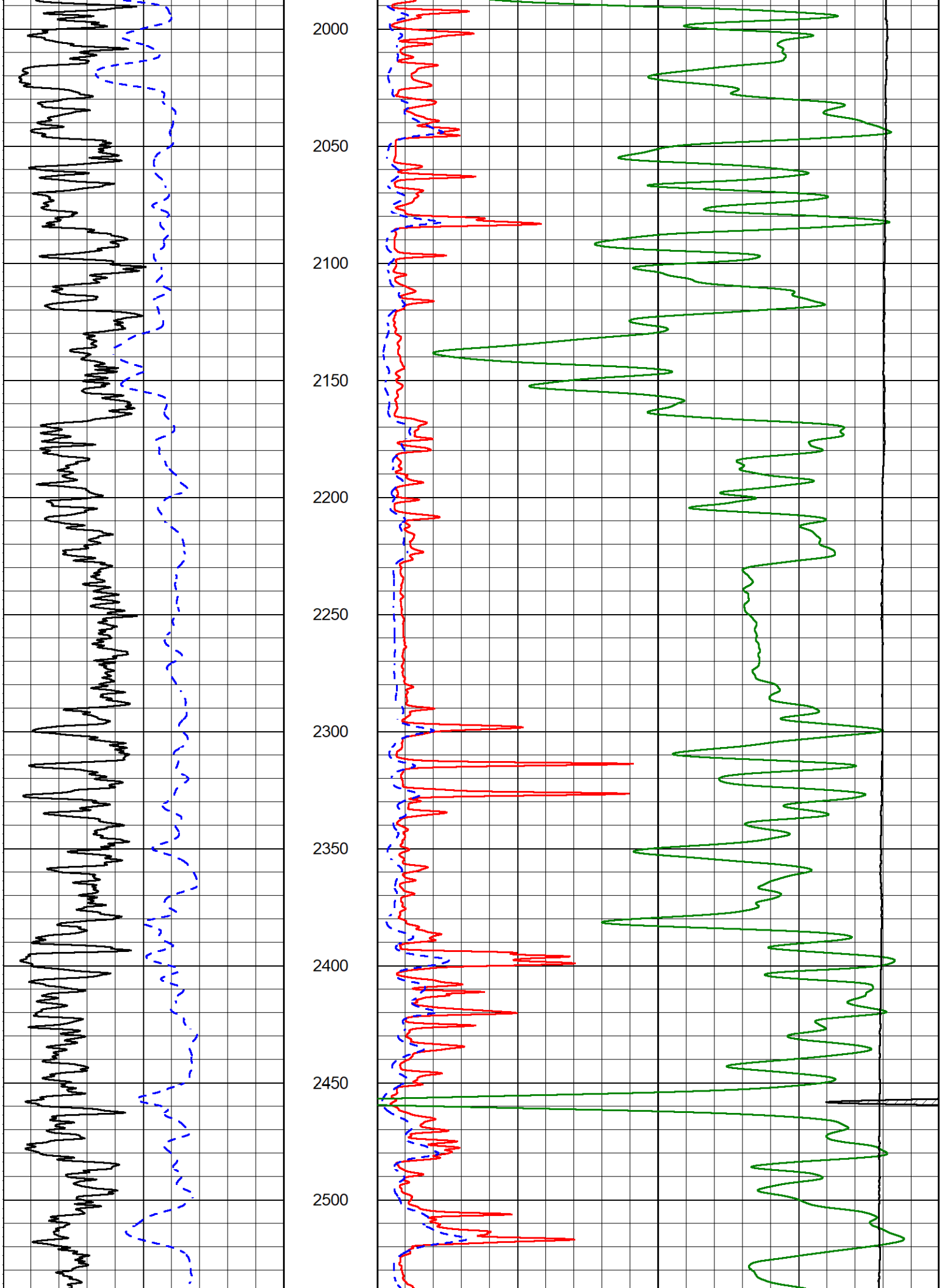
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Dataset Pathname	stkml/pass3.3
Presentation Format	_dil2in
Dataset Creation	Fri Jul 29 11:12:23 2022
Charted by	Depth in Feet scaled 1:600

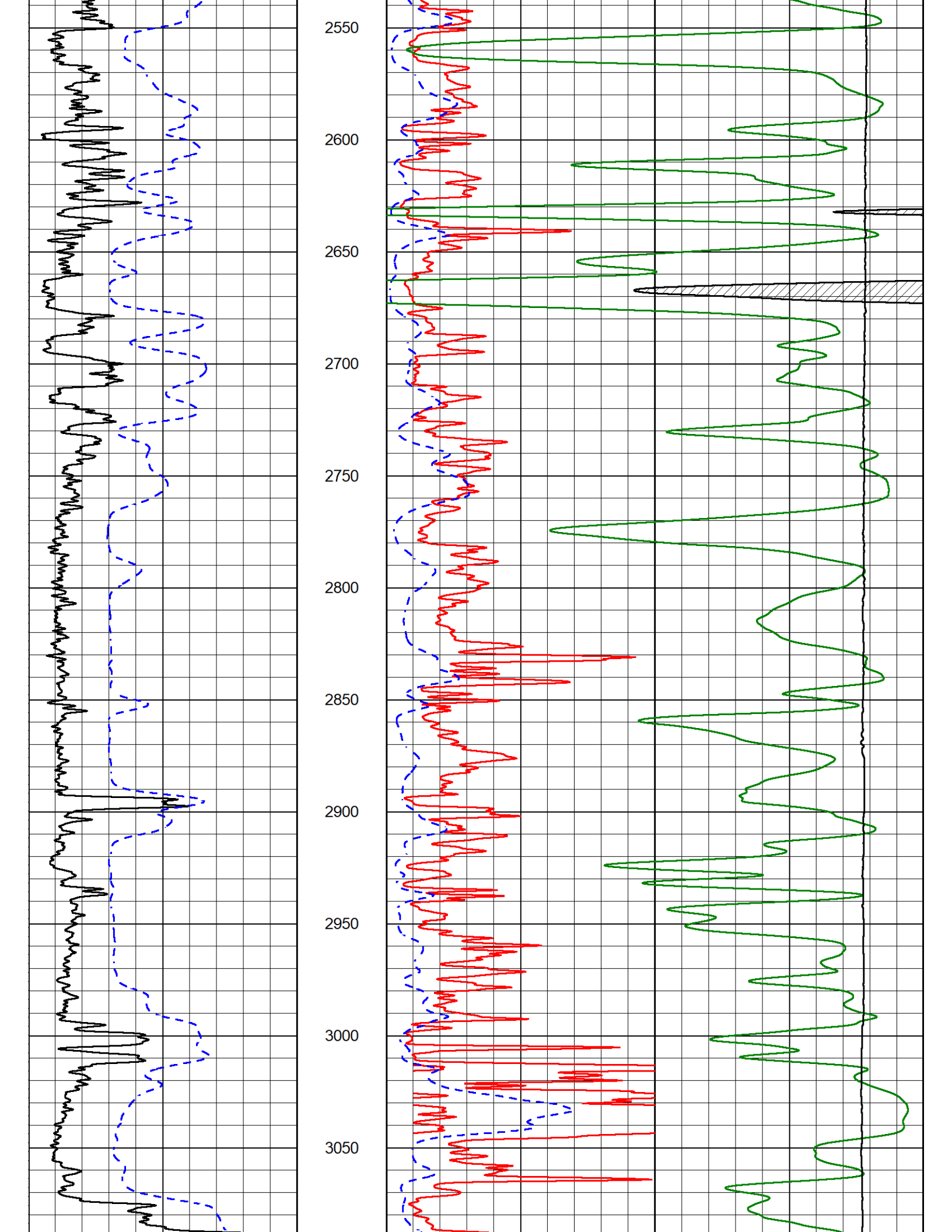


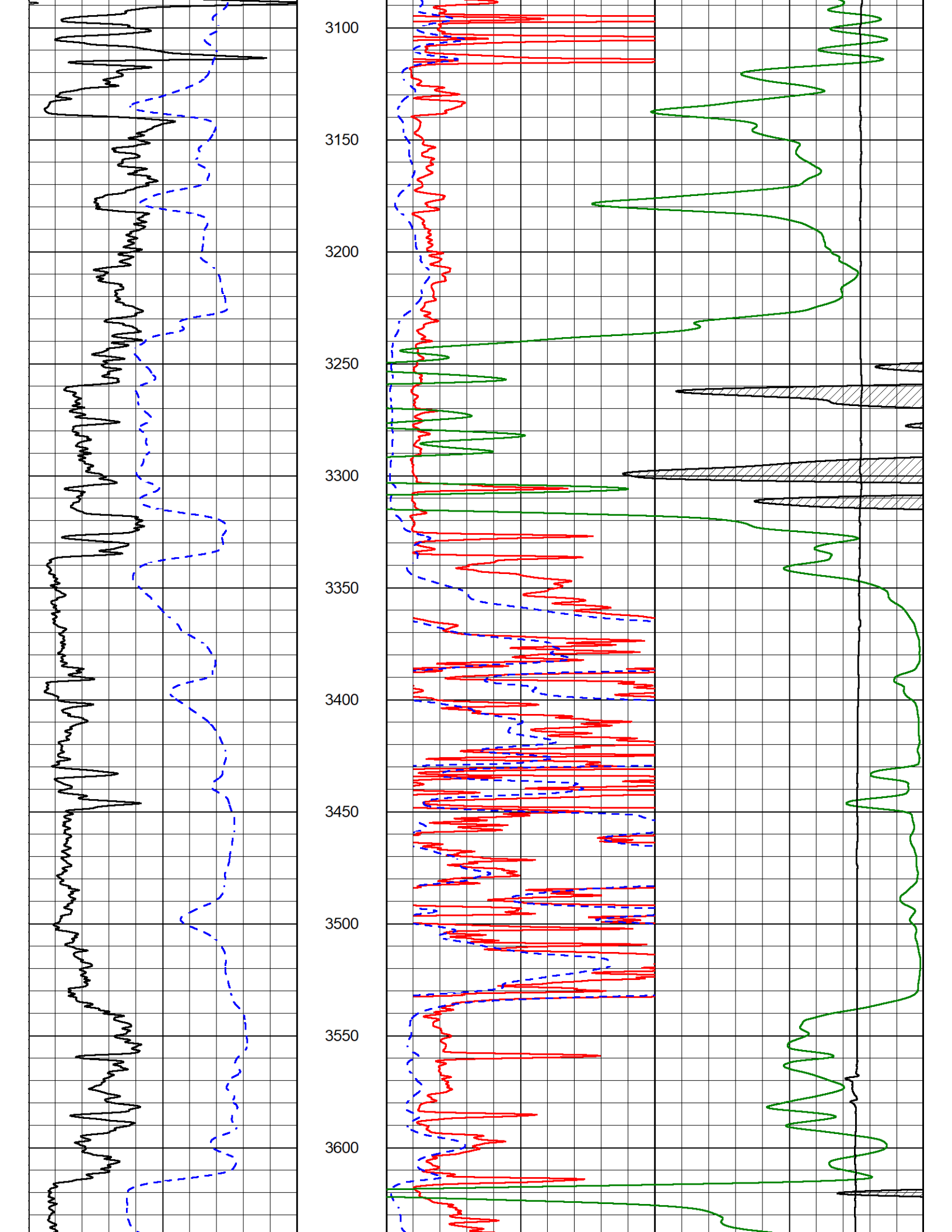

350
400
450
500
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600
650
700
750
800
850

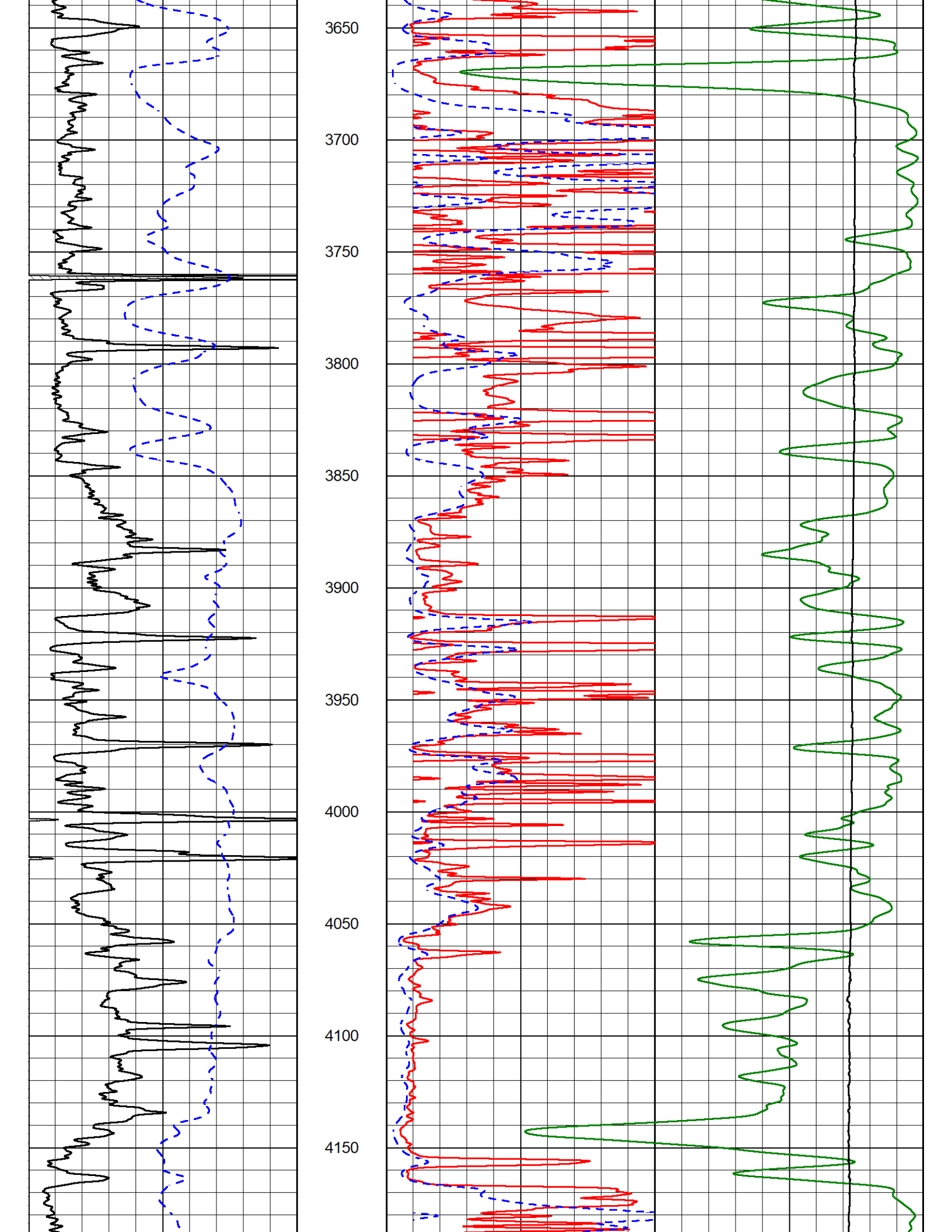

900
950
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1050
1100
1150
1200
1250
1300
1350
1400

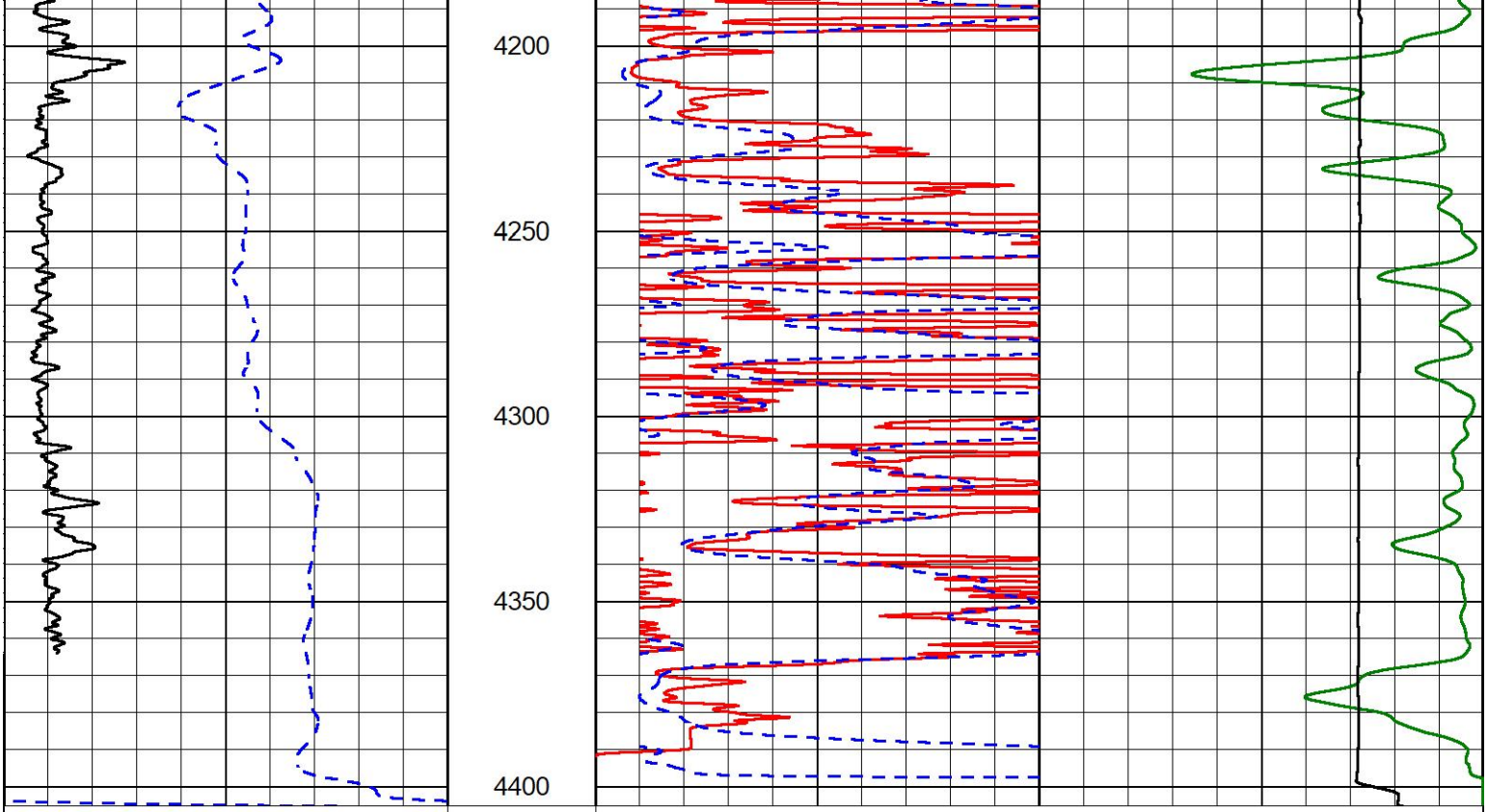

1450
1500
1550
1600
1650
1700
1750
1800
1850
1900
1950


2000
2050
2100
2150
2200
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2300
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3100
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3400
3450
3500
3550
3600


3650
3700
3750
3800
3850
3900
3950
4000
4050
4100
4150



0	Gamma Ray (GAPI)	300
-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
	Shallow Resistivity	
50	(Ohm-m)	200
50	Deep Resistivity (Ohm-m)	200

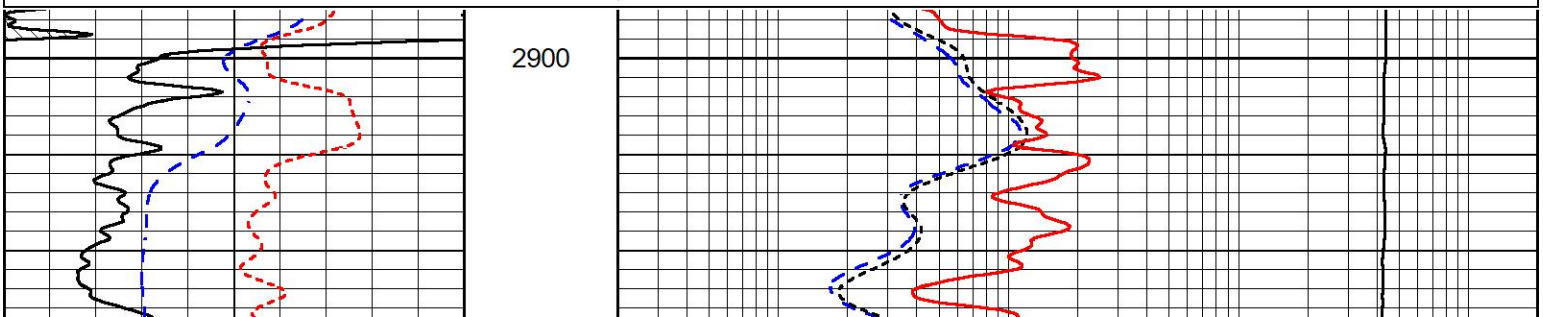
MIDWEST WIRELINE

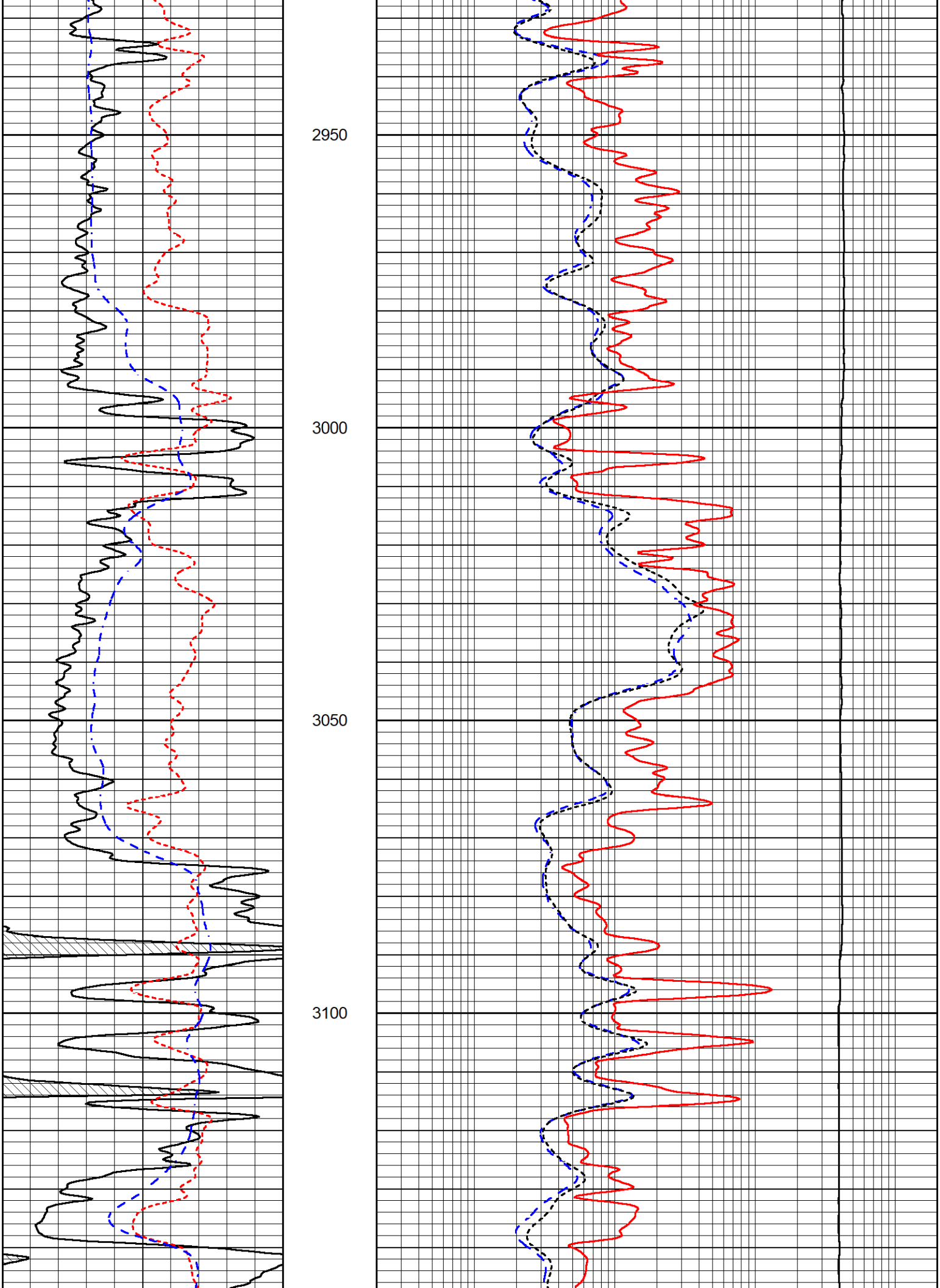
DETAIL SECTION

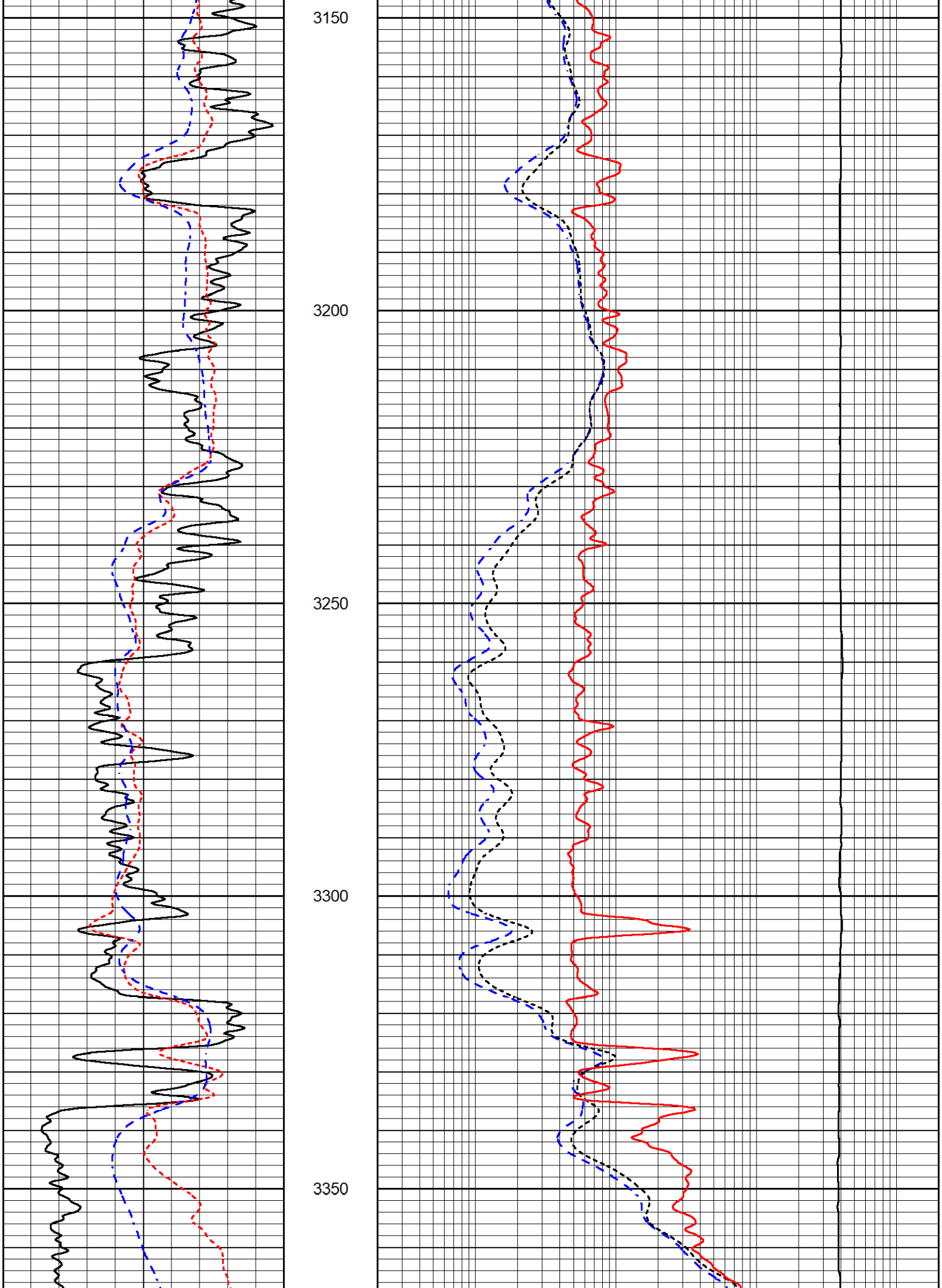
MAIN PASS

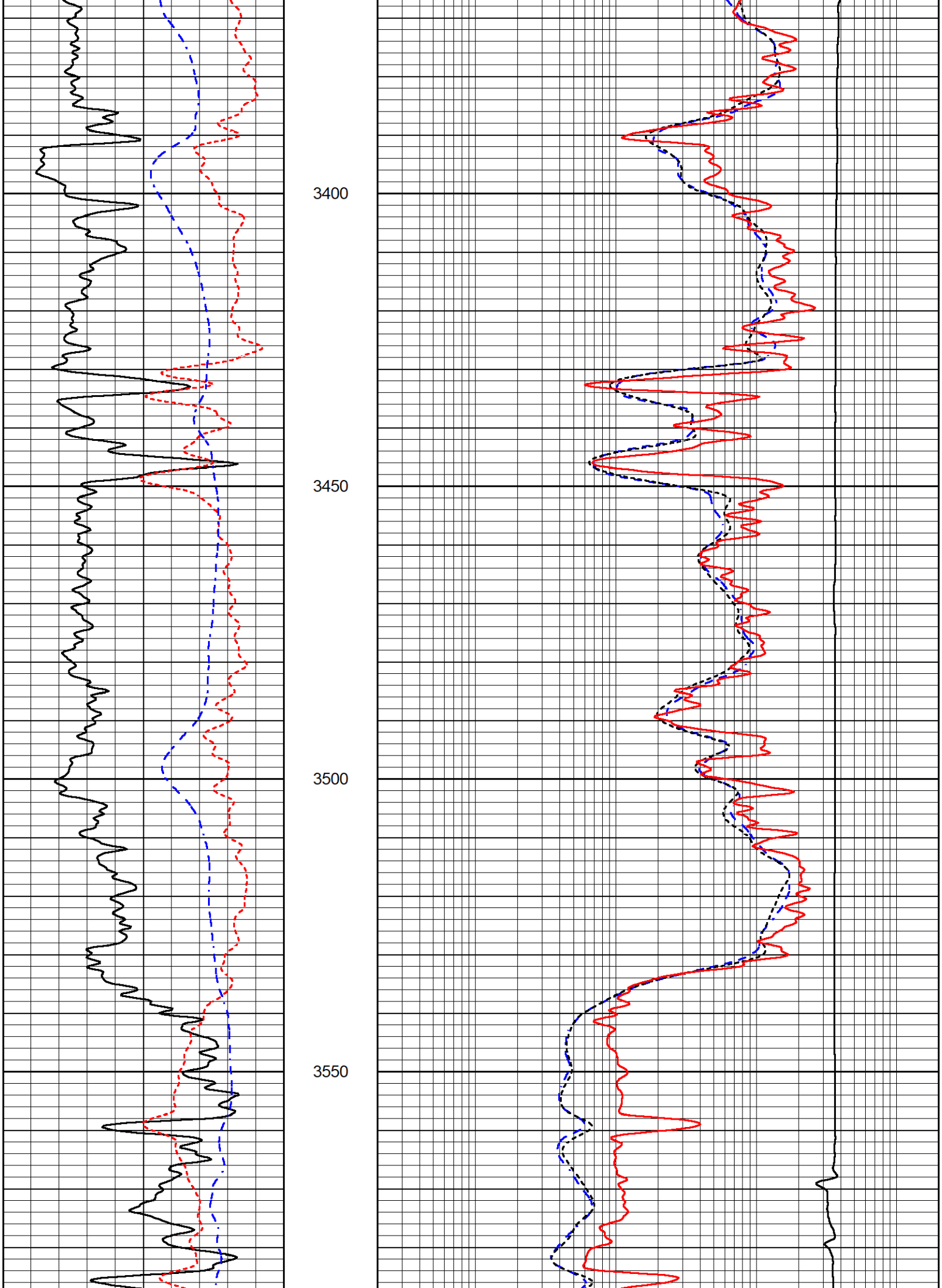
Database File	mull_johnson farms 2-17.db
Dataset Pathname	stkml/pass3.1
Presentation Format	_dil
Dataset Creation	Fri Jul 29 11:11:57 2022
Charted by	Depth in Feet scaled 1:240

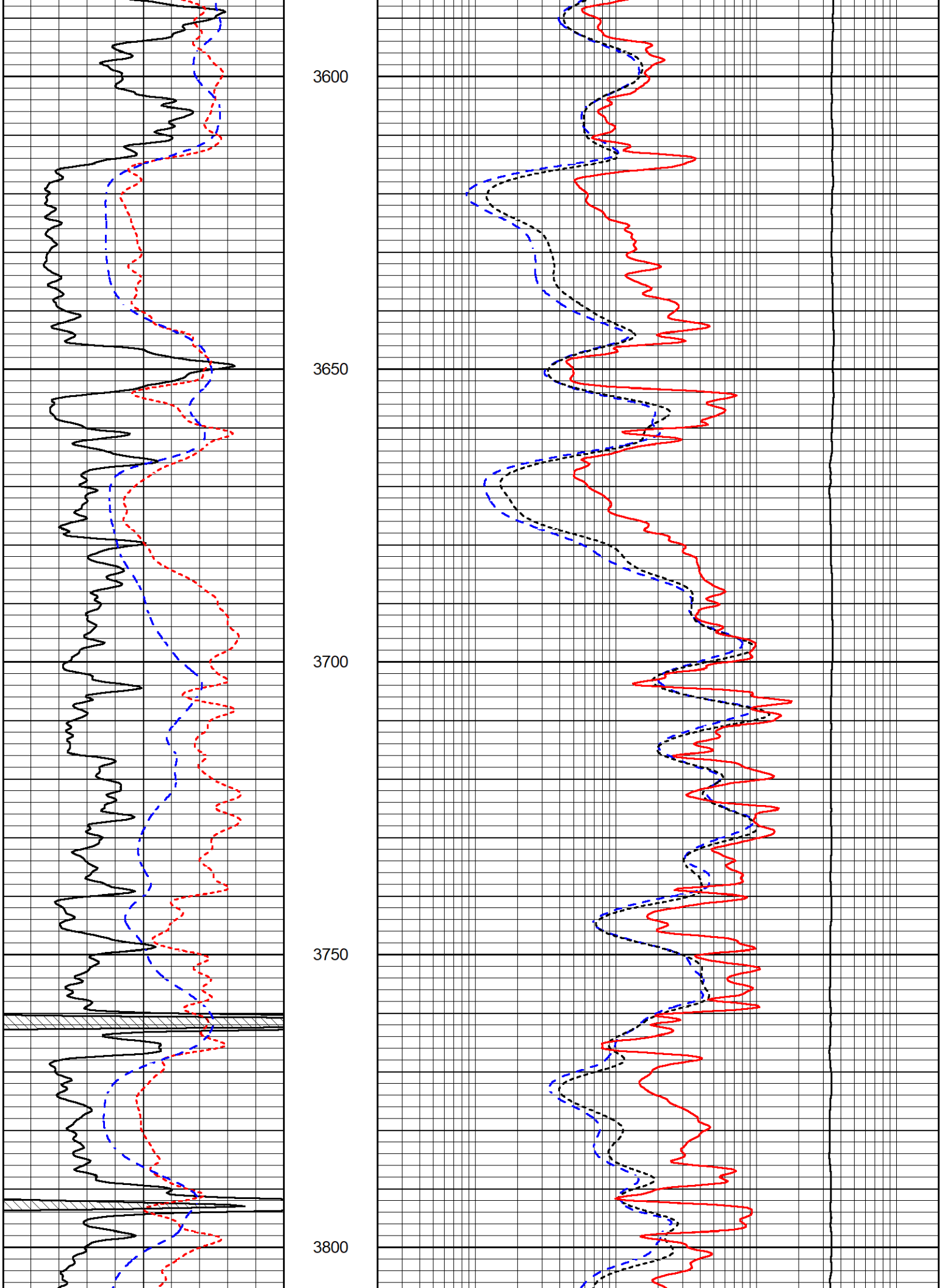
0	Gamma Ray (GAPI)	150
-160	RXORT	40
-200	SP (mV)	0
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	Line Tension (lb)	0

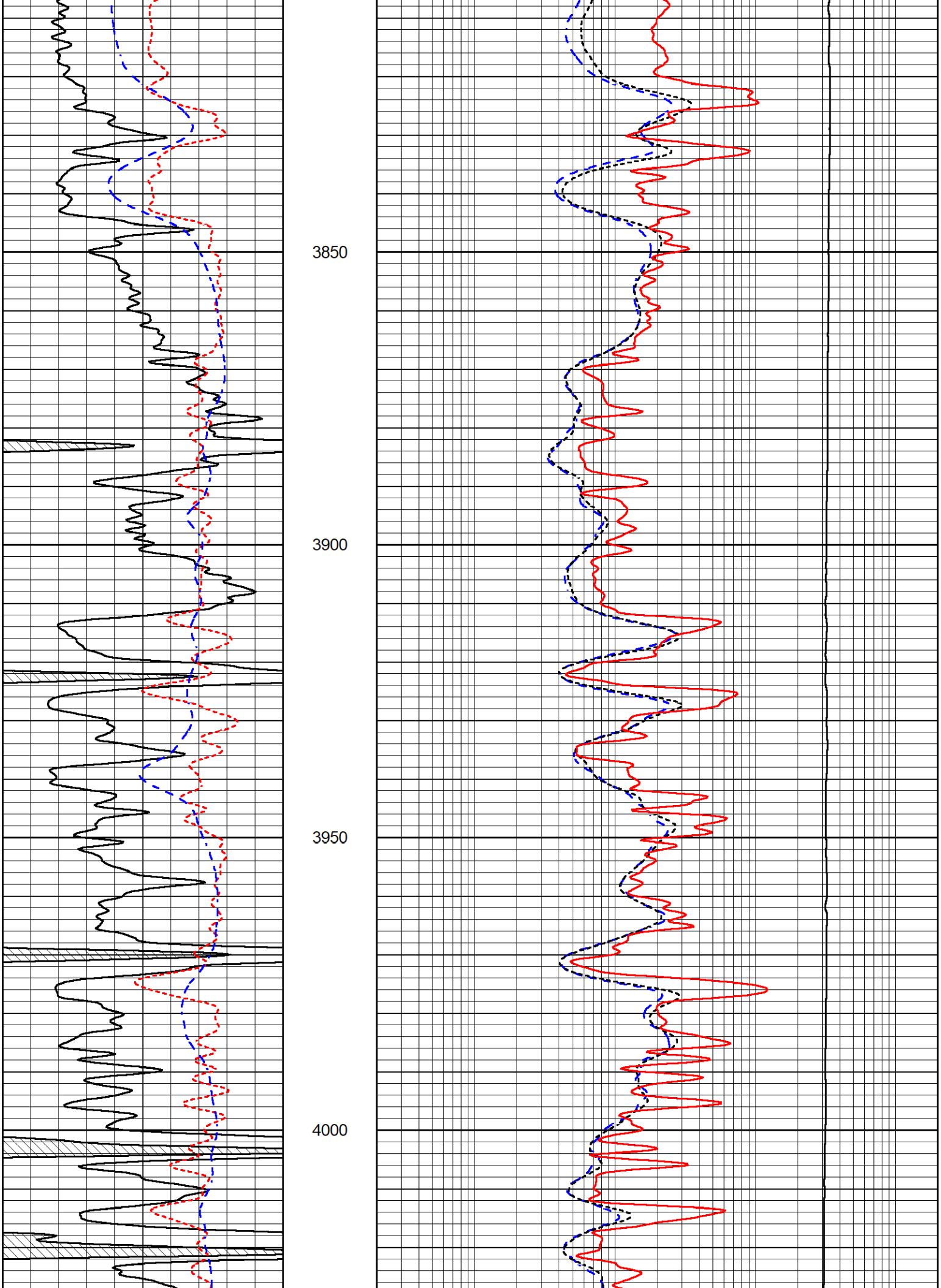


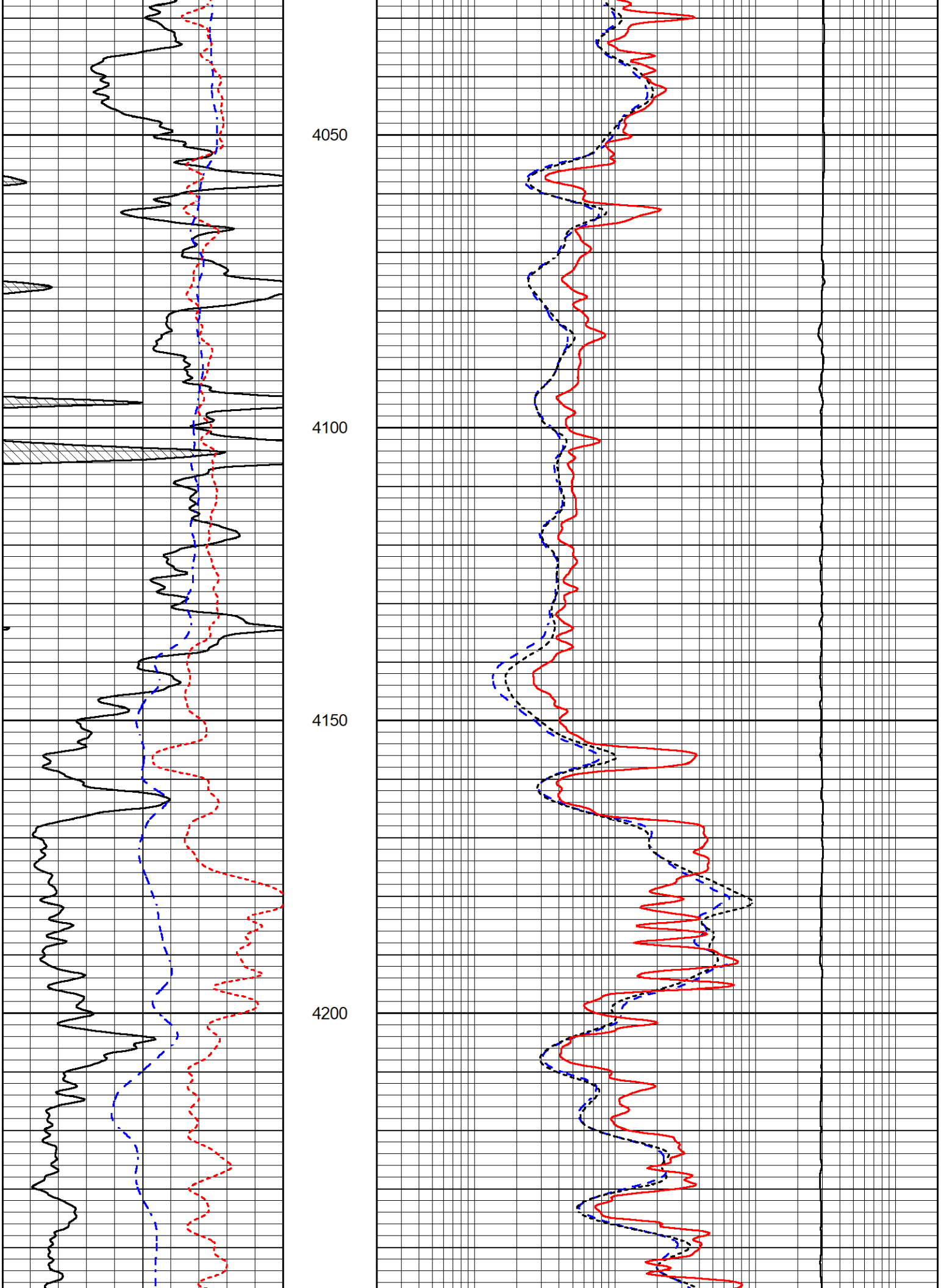

2950
3000
3050
3100

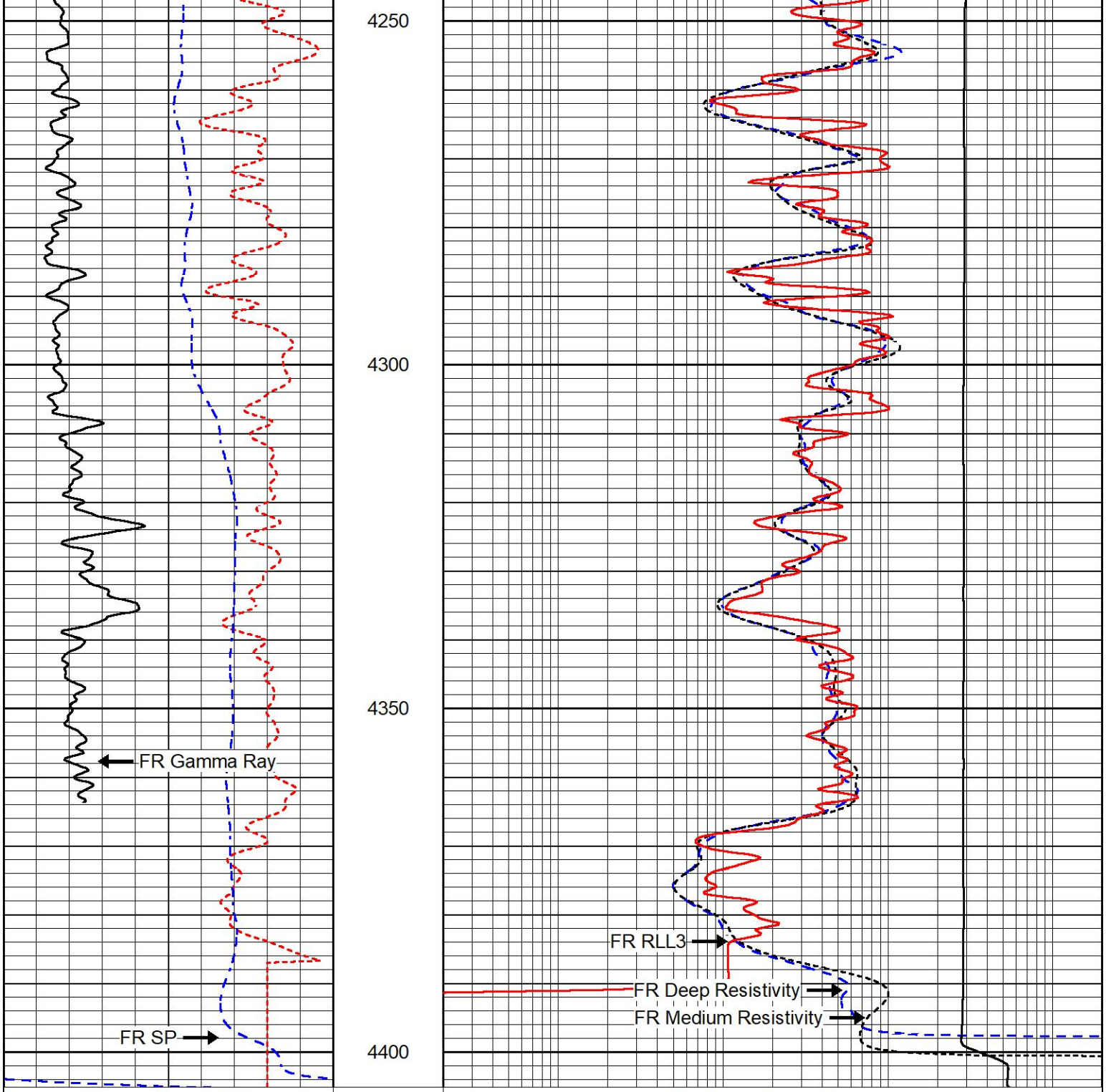

3150
3200
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3350


3400
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3600
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3850
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3950
4000


4050
4100
4150
4200



MIDWEST WIRELINE

REPEAT SECTION

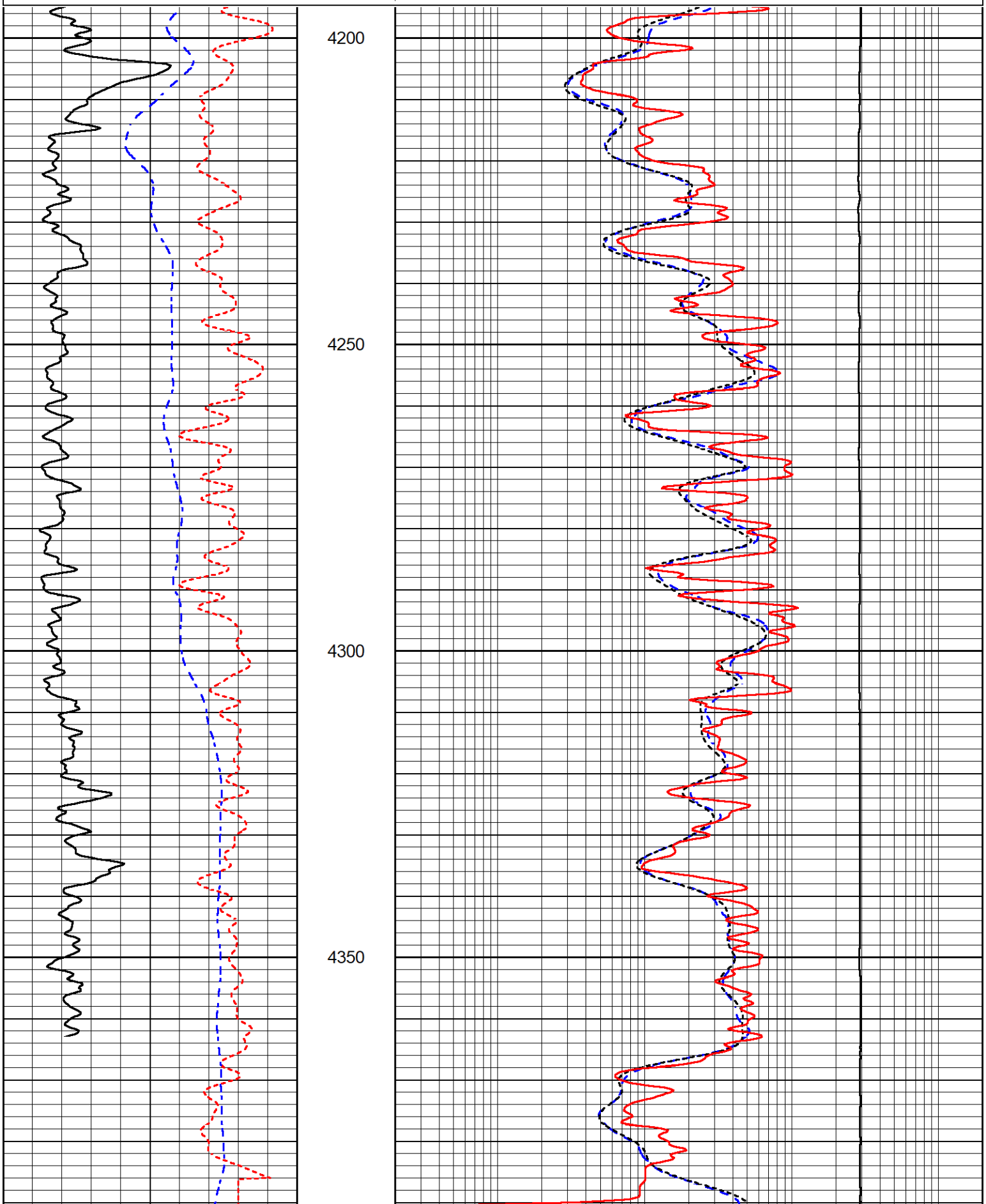
REPEAT PASS

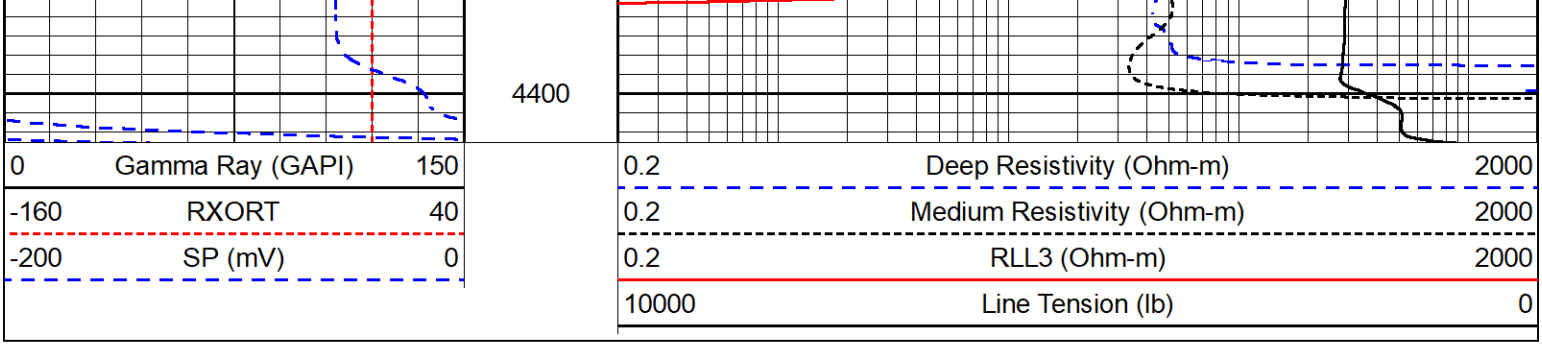
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Dataset Pathname	stkml/pass2
Presentation Format	_dil
Dataset Creation	Fri Jul 29 09:37:25 2022
Charted by	Depth in Feet scaled 1:240

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





Calibration Report

Database File	mull_johnson farms 2-17.db
Dataset Pathname	stkml/pass3.11
Dataset Creation	Fri Jul 29 10:14:32 2022

Dual Induction Calibration Report

Serial-Model:	504 HT-M&W
Surface Cal Performed:	Wed Jun 29 12:51:29 2022

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	178.615	710.235	0.000	255.800	mmho/m	0.650	-16.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-45.000

Microlog Calibration Report

Serial-Model:	401-PSI STKBL ML
Performed:	Sat Jul 16 16:13:48 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	25000.0000	-2.2000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	18700.0000	-0.7000
Caliper	1.0049	1.0846	5.5000	20.0000	in	90.0000	-84.8000

Compensated Density Calibration Report

Serial-Model:	303-03-M&W
Source #:	21170B
Master Calibration Performed:	Thu Dec 16 23:28:34 2021

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3841.78	5151.73	cps
Aluminum	2.670	g/cc	700.98	3068.49	cps

Spine Angle = 73.06

Density/Spine Ratio = 0.515

	Size		Reading
Small Ring	4.00	in	1.17
Large Ring	14.00	in	1.04

Compensated Neutron Calibration Report

Serial-Model:	210-M&W
Source #:	N-1238
Master Calibration Performed:	Fri Dec 3 09:16:24 2021

Master 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

Gamma Ray Calibration Report

Serial Number:	103	
Tool Model:	M&W	
Performed:	Fri Dec 3 12:13:24 2021	
Calibrator Value:	500.0	GAPI
Background Reading:	28.0	cps
Calibrator Reading:	986.0	cps
Sensitivity:	0.5700	GAPI/cps

MIDWEST WIRELINE

Company	Mull Drilling Company, Inc.
Well	Johnson Farms #2-17
Field	Spivey-Grabs-Basil
County	Kingman
State	Kansas