MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company Herman L. Loeb, LLC
Well Olson Farm # 1-16
Field Fralick West Ext.
County Kiowa
State Kansas

Location: API # : 15-097-21860-00-00
671 FNL & 918 FEL
SEC 16 TWP 28S RGE 20W

Other Services
CDL/CNL
DIL

Permanent Datum Ground Level Elevation 2312
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Elevation
K.B. 2325
D.F.
G.L. 2312

Date	5/18/2022		
Run Number	One		
Depth Driller	5000		
Depth Logger	5000		
Bottom Logged Interval	4999		
Top Log Interval	4000		
Casing Driller	8.625 @ 585		
Casing Logger	585		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	4400		
Density / Viscosity	9.5 60		
pH / Fluid Loss	10.0 9.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.4 @ 65		
Rmf @ Meas. Temp	0.3 @ 65		
Rmc @ Meas. Temp	0.54 @ 65		
Source of Rmf / Rmc	CHARTS		
Rm @ BHT	0.21 @ 126		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	126		
Equipment Number	P-108		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Jon Christensen		

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Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Mullinville,
North to I5 Avenue, 1 1/2 West, 1/4 North, West 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: Jon Christensen
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 (402)	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: herman loeb_olson farm#1-16.db: field/well/stkml/pass3.12
Total length: 42.33 ft
Total weight: 685.00 lb
O.D.: 4.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\herman loeb_olson farm#1-16.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	126	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	520	60	Off	5000

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

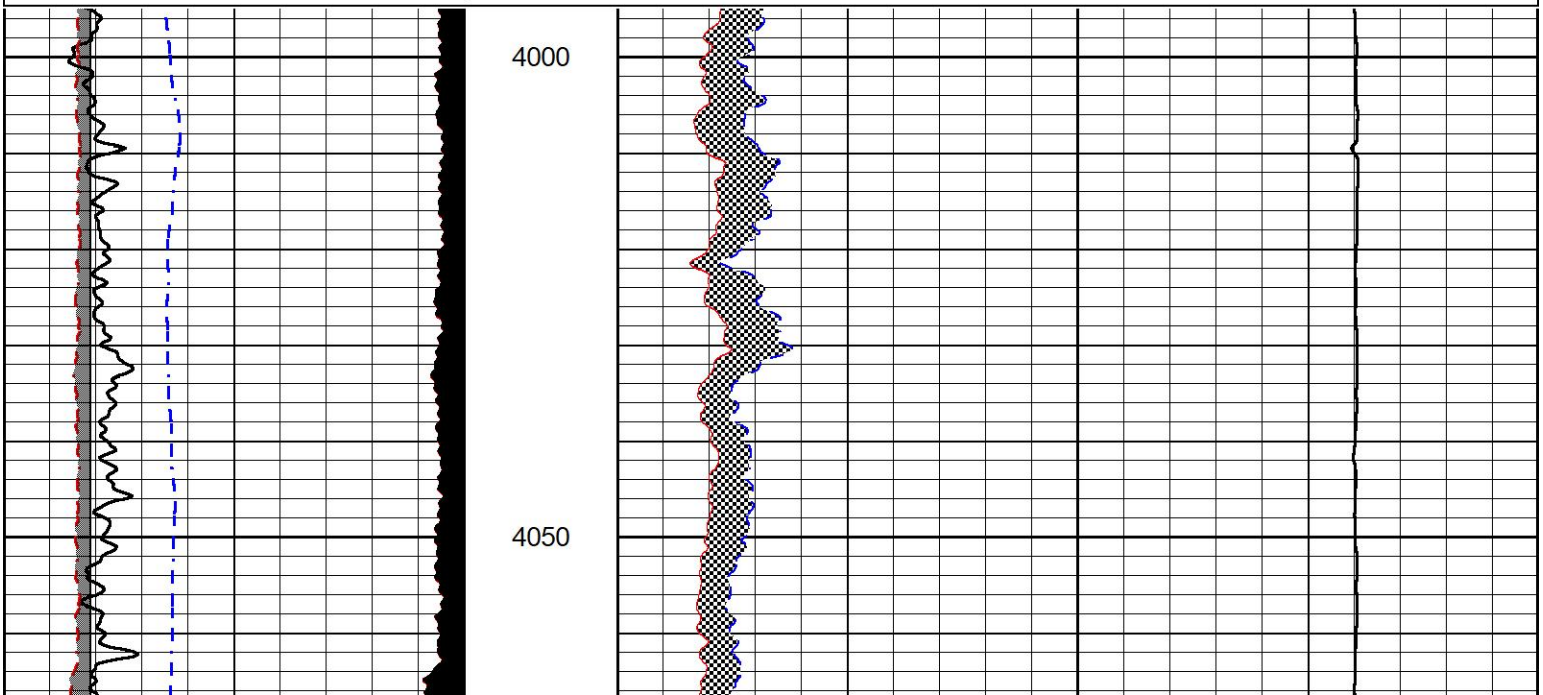
DETAIL SECTION

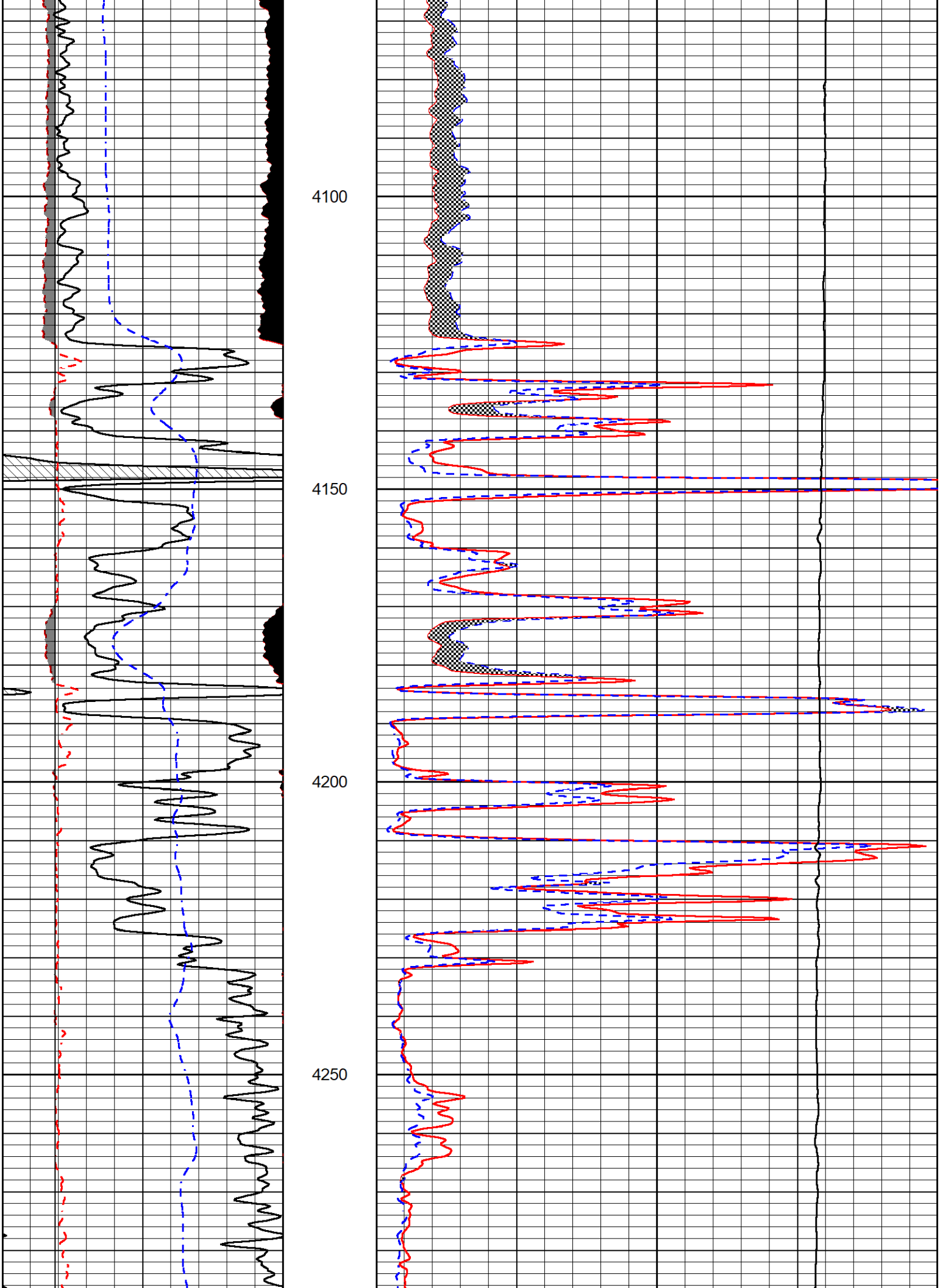
MAIN PASS

Database File	herman loeb_olson farm#1-16.db
Dataset Pathname	stkml/pass3.1
Presentation Format	_micro
Dataset Creation	Wed May 18 09:21:08 2022
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

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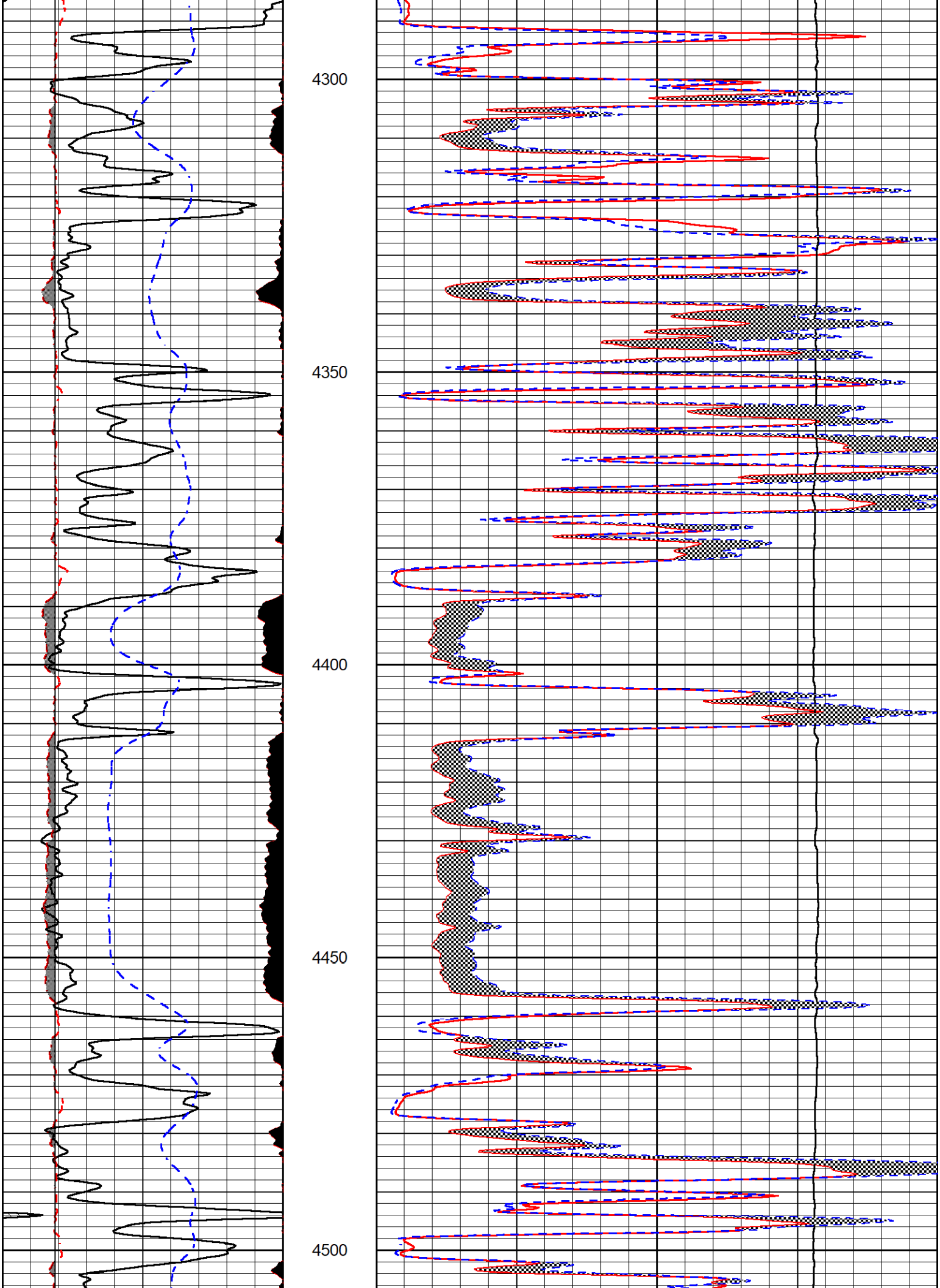
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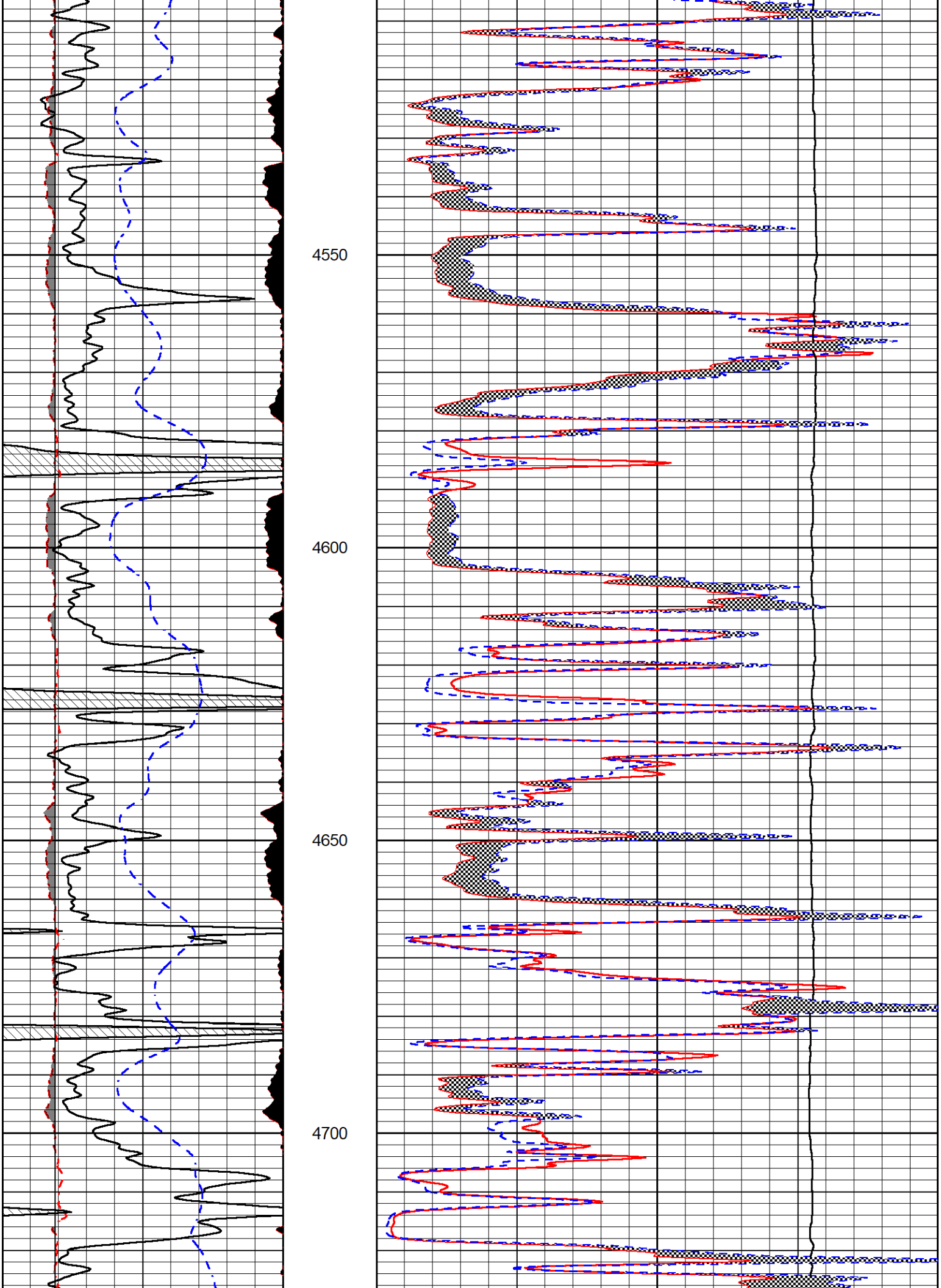
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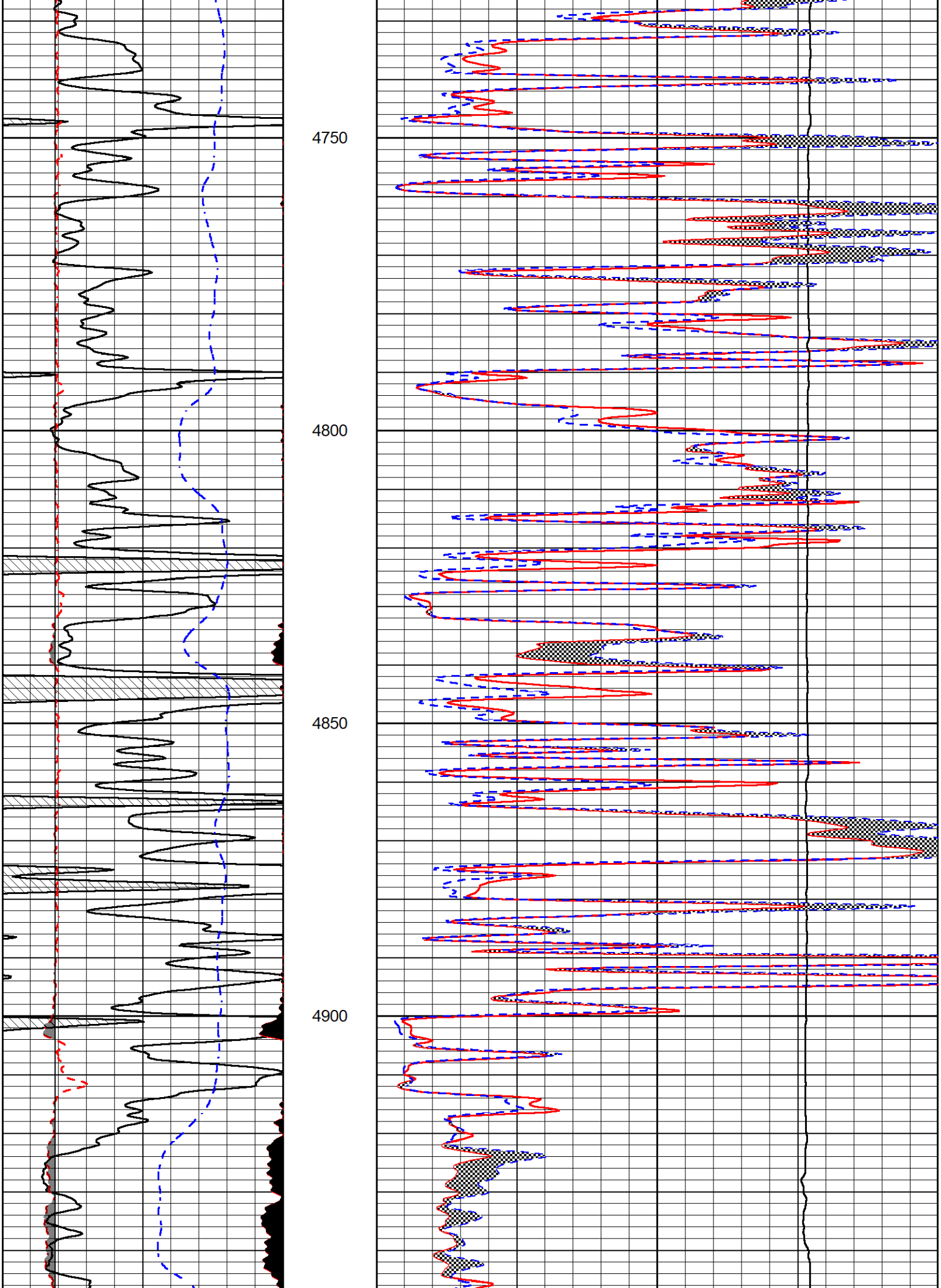
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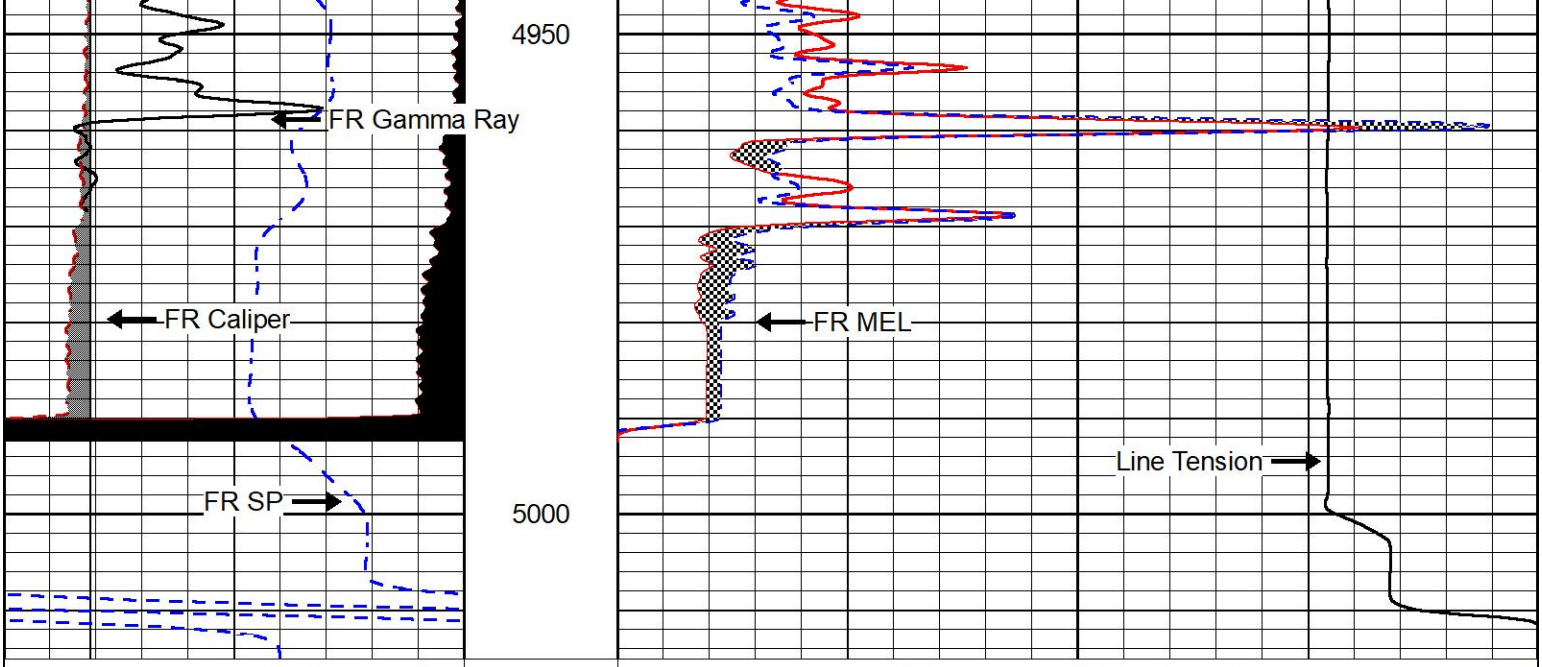


0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

MIDWEST WIRELINE

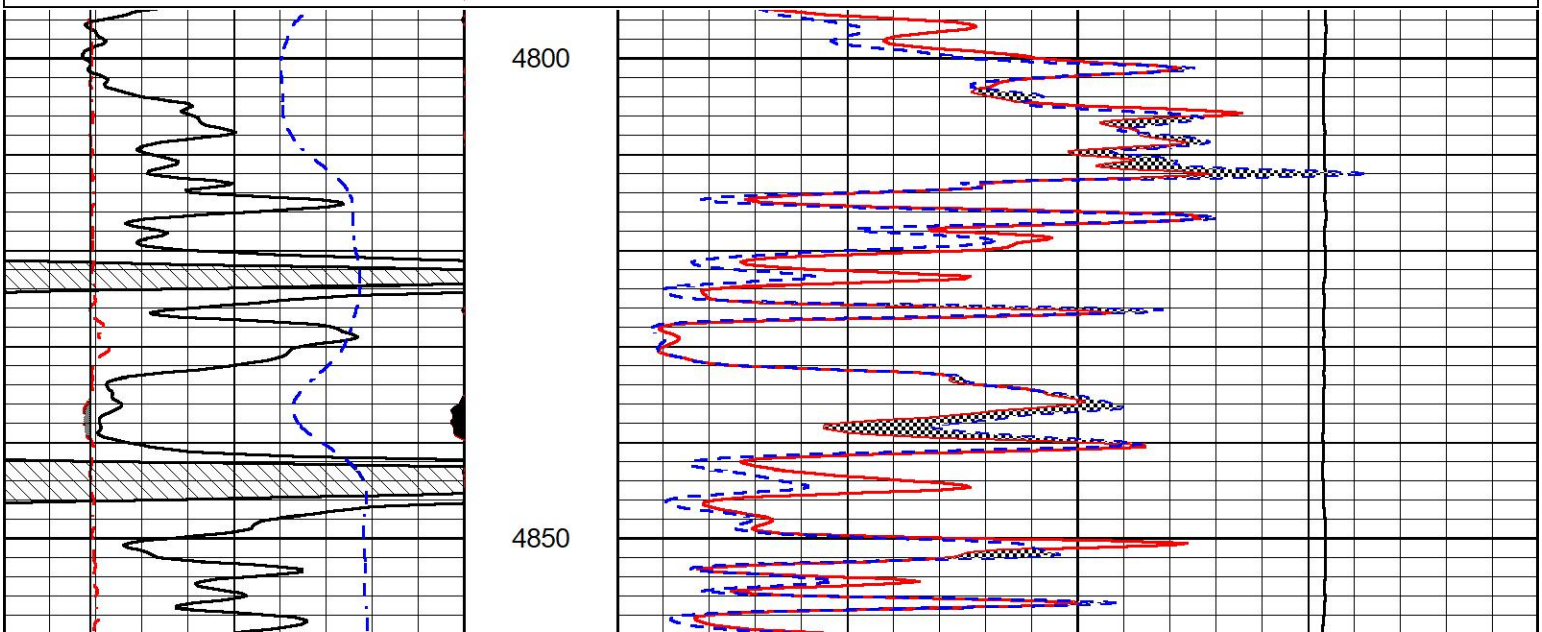
REPEAT SECTION

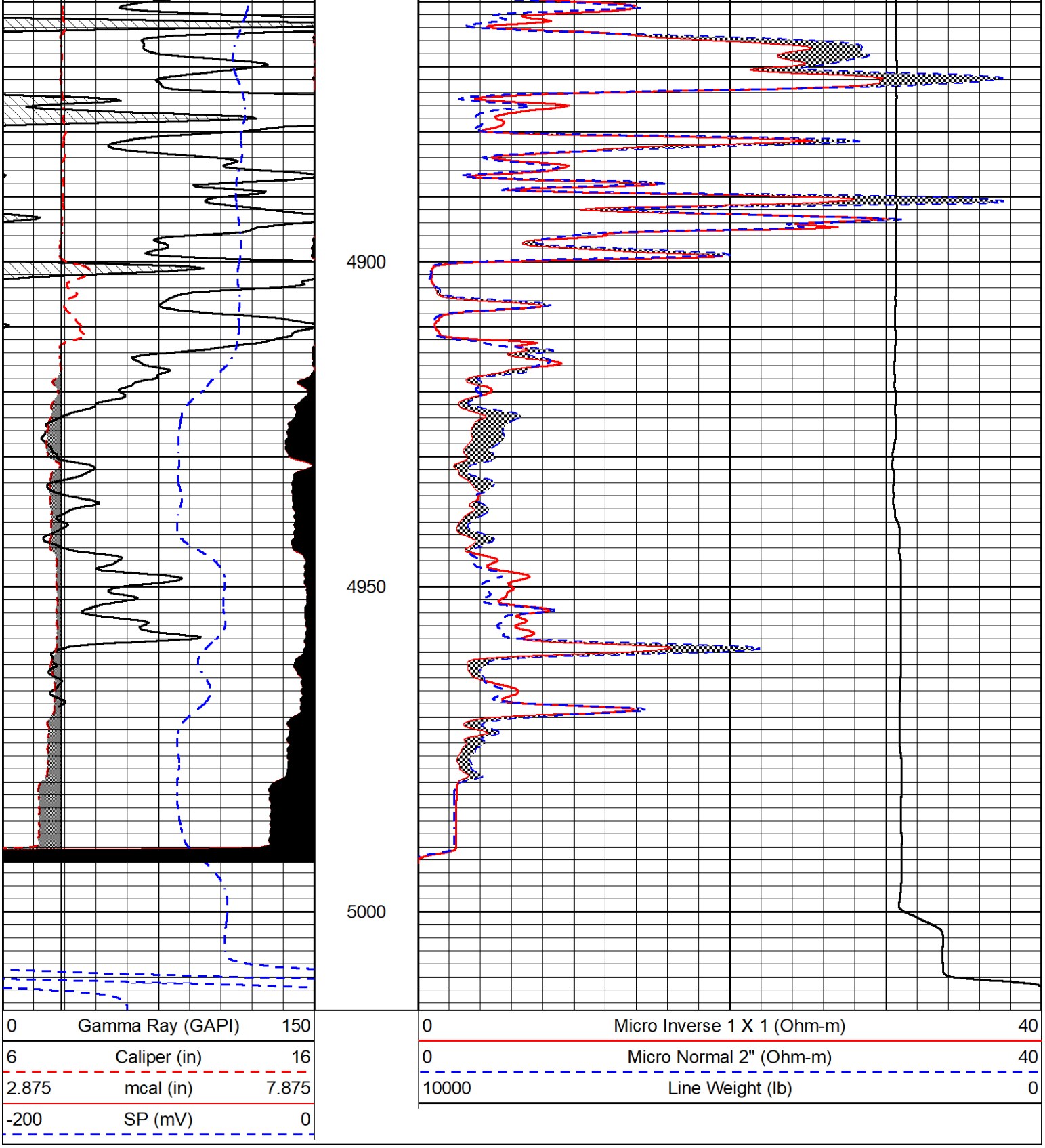
REPEAT PASS

Database File	herman loeb_olson farm#1-16.db
Dataset Pathname	stkml/pass2.1
Presentation Format	_micro
Dataset Creation	Wed May 18 08:29:17 2022
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	SP (mV)	0

0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0





Calibration Report

Database File	herman loeb_olson farm#1-16.db
Dataset Pathname	stkml/pass3.12
Dataset Creation	Wed May 18 08:22:31 2022

Dual Induction Calibration Report

Serial-Model:	504 HT-M&W
Surface Cal Performed:	Thu Dec 16 22:32:49 2021

Readings	References	Results

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	178.615	710.235	0.000	255.800	mmho/m	0.650	-19.000
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.450	-45.500

Microlog Calibration Report

Serial-Model: 402-PSI STKBL ML
Performed: Sat Mar 19 19:10:40 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	9000.0000	-0.5000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	8500.0000	0.0000
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1520	-131.3500

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	Herman L. Loeb, LLC
Well	Olson Farm # 1-16
Field	Fralick West Ext.
County	Kiowa
State	Kansas