MIDWEST WIRELINE

MICRORESISTIVITY LOG

Company Murfin Drilling Company, Inc.
Well P&P Unit #1-35
Field
County Decatur State Kansas

Location: API # : 15-039-21287-00-00
S2 SW SW SE
200 FSL & 2310 FEL
SEC 35 TWP 5S RGE 29W

Other Services
CNL/CDL
DIL/BHCS

Elevation
K.B. 2826
D.F.
G.L. 2821

Permanent Datum Ground Level Elevation 2821
Log Measured From Kelly Bushing
Drilling Measured From Kelly Bushing

Date	8/11/2022		
Run Number	One		
Depth Driller	4200		
Depth Logger	4199		
Bottom Logged Interval	4198		
Top Log Interval	3250		
Casing Driller	8.625 @ 311		
Casing Logger	304		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	1800		
Density / Viscosity	9.2 / 69		
pH / Fluid Loss	11.0 / 6.8		
Source of Sample	Flowline		
Rm @ Meas. Temp	0.85 @ 72		
Rmf @ Meas. Temp	0.64 @ 72		
Rmc @ Meas. Temp	1.15 @ 72		
Source of Rmf / Rmc	Charts		
Rm @ BHT	0.52 @ 118		
Operating Rig Time	5 Hours		
Max Rec. Temp. F	118		
Equipment Number	P-24		
Location	Hays		
Recorded By	T. Martin		
Witnessed By	Robert Hendrix		

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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.

Selden, NE to 83 N, 1 N, 1/2 W, N into

Log Measured From: Kelly Bushing 5 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: Robert Hendrix
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 (301-01)	8.50	4.00	250.00
LSD	28.18					
DCAL	28.17					
SSD	27.68					
			ML-PSIML (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 (507)	18.25	3.50	220.00
CILD	8.33					
CILM	4.50					
SP	0.20					

Dataset:	murfin_p&p unit #1-35.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\murfin_p&p unit #1-35.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	118	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	180	75	Off	4199

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

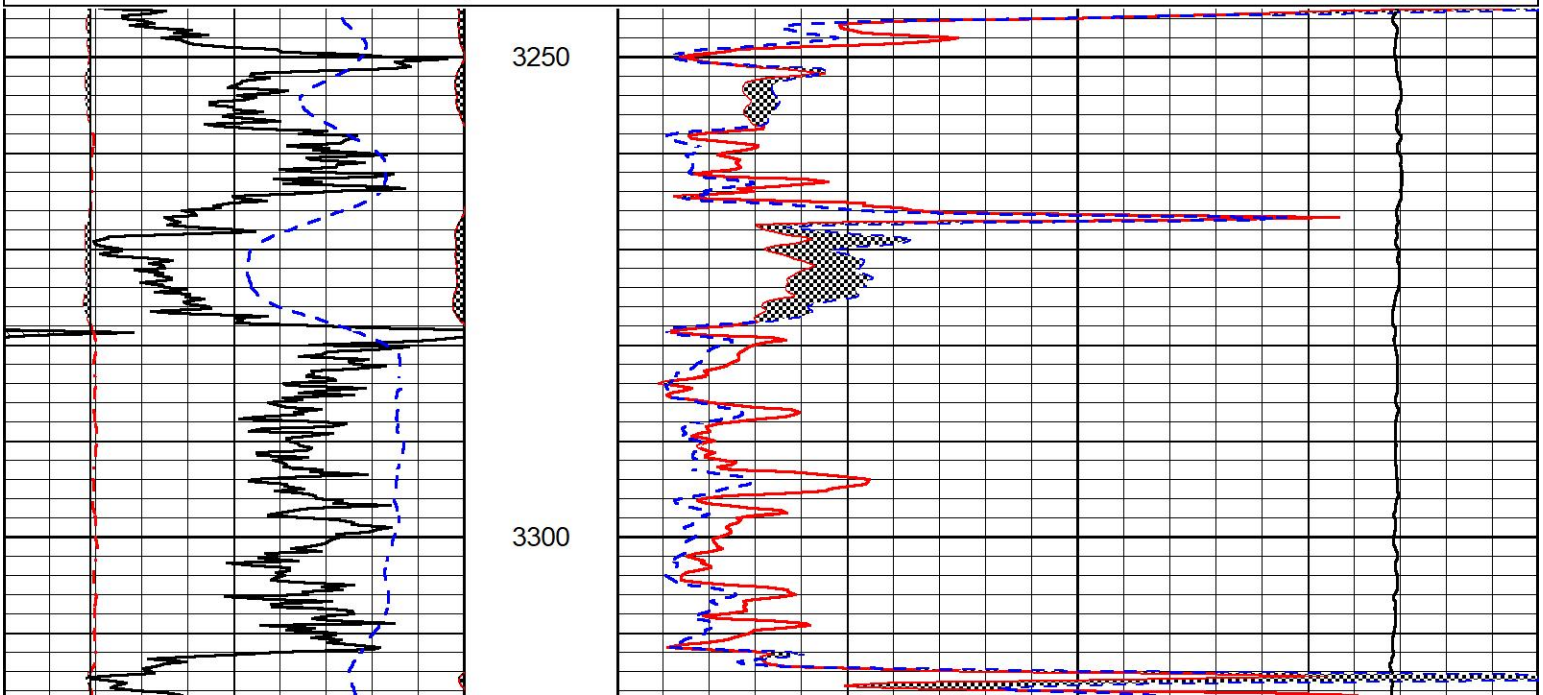
DETAIL SECTION

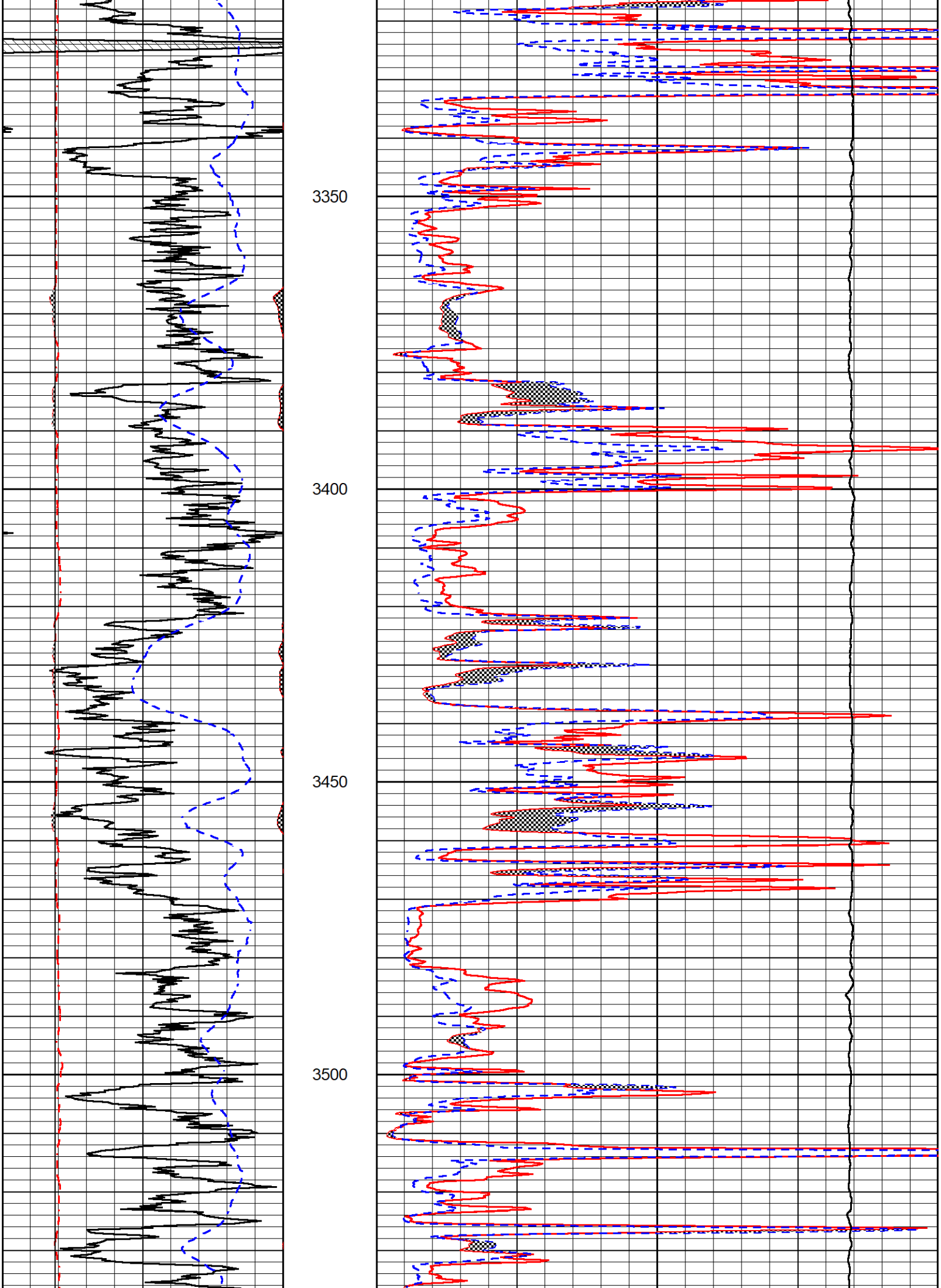
MAIN PASS

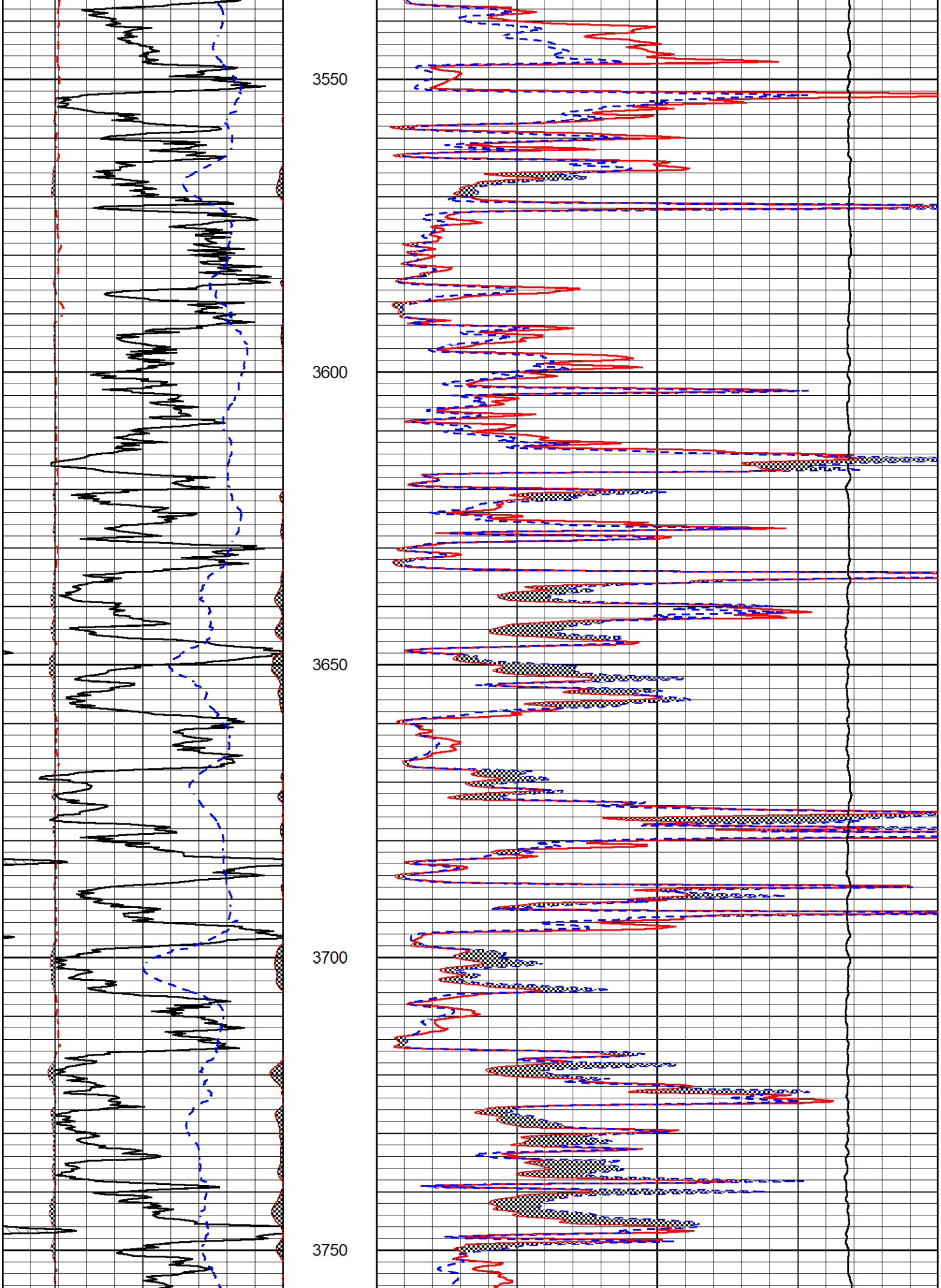
Database File	murfin_p&p unit #1-35.db
Dataset Pathname	StkMl/pass3.1
Presentation Format	_micro
Dataset Creation	Thu Aug 11 03:13:20 2022
Charted by	Depth in Feet scaled 1:240

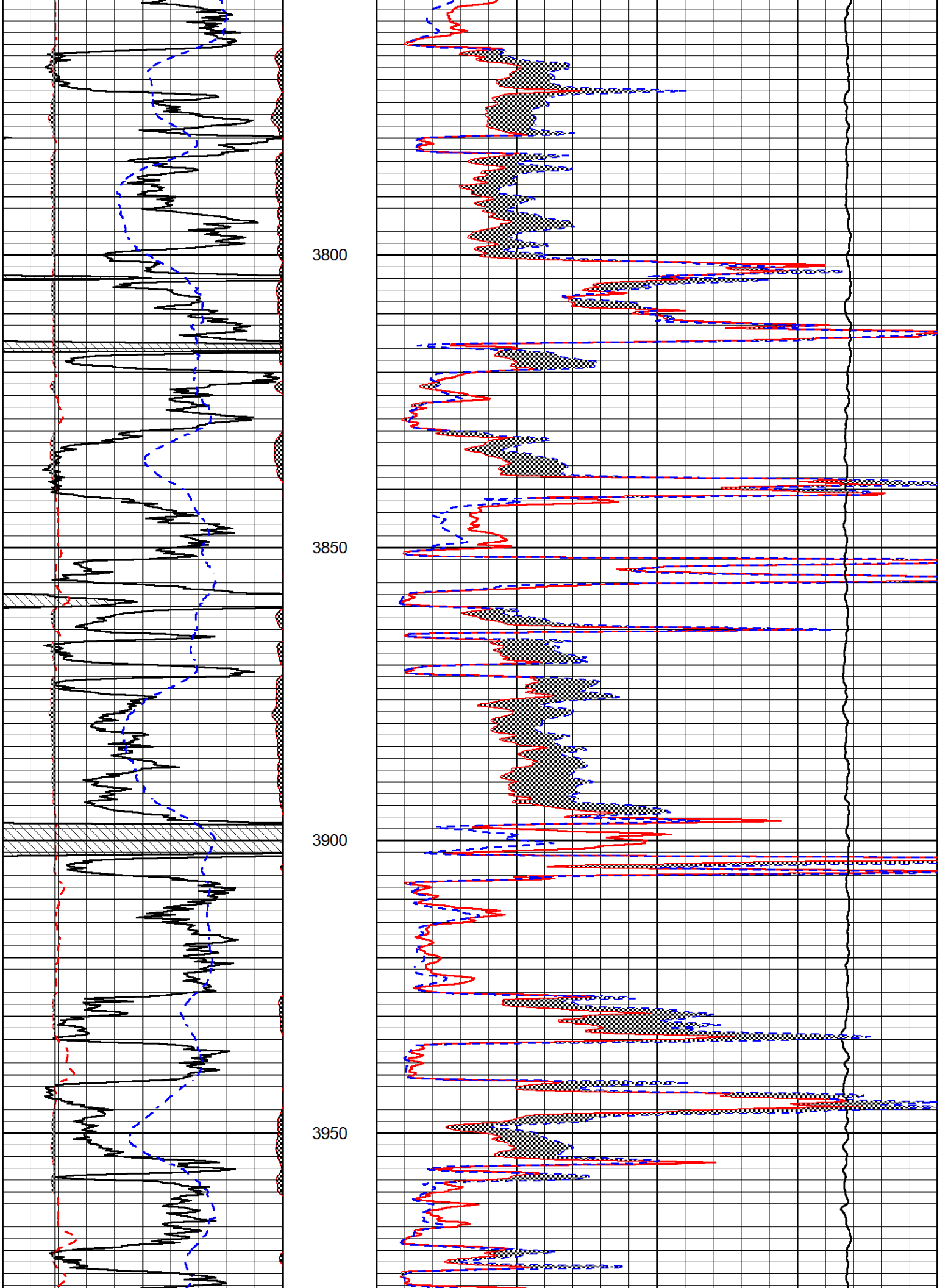
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16
2.875	mcal (in)	7.875
-200	sp (mV)	0

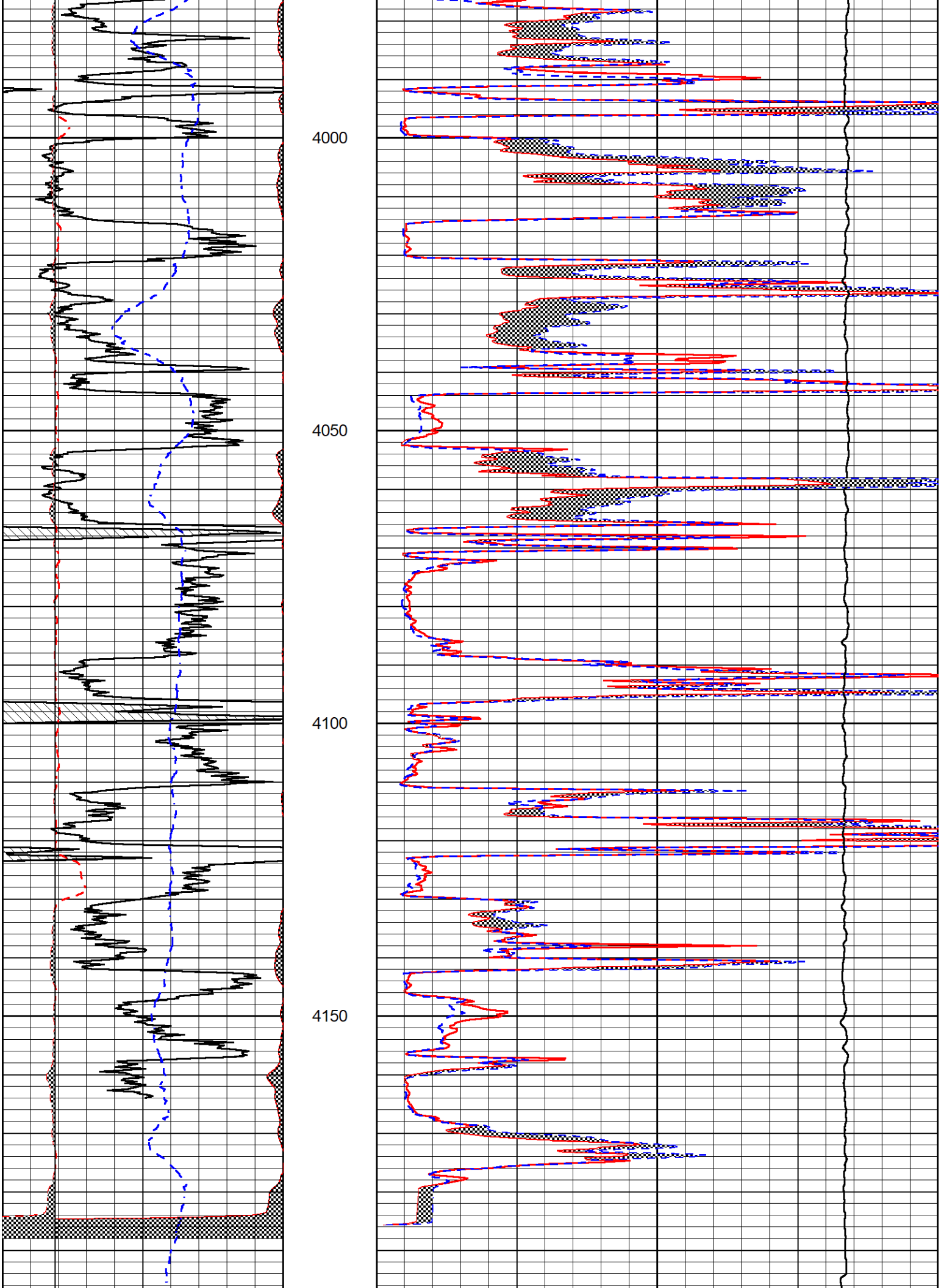
0	Micro Inverse 1 X 1 (Ohm-m)	40
0	Micro Normal 2" (Ohm-m)	40
10000	Line Weight (lb)	0

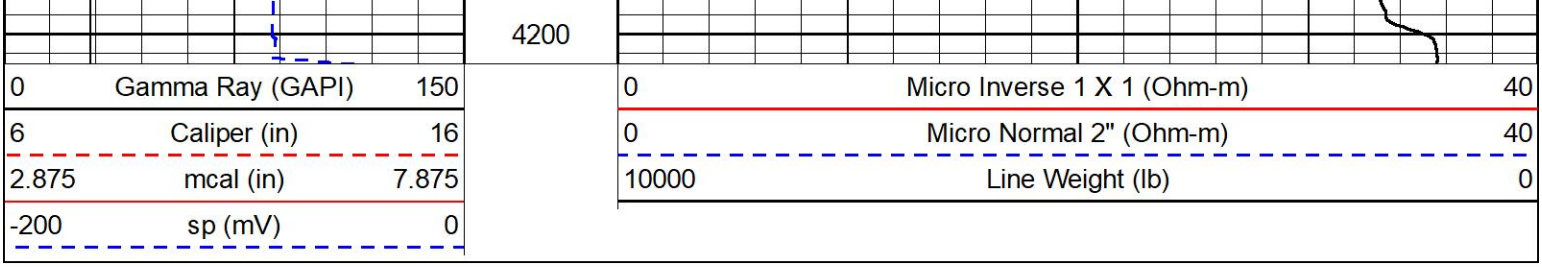



3350
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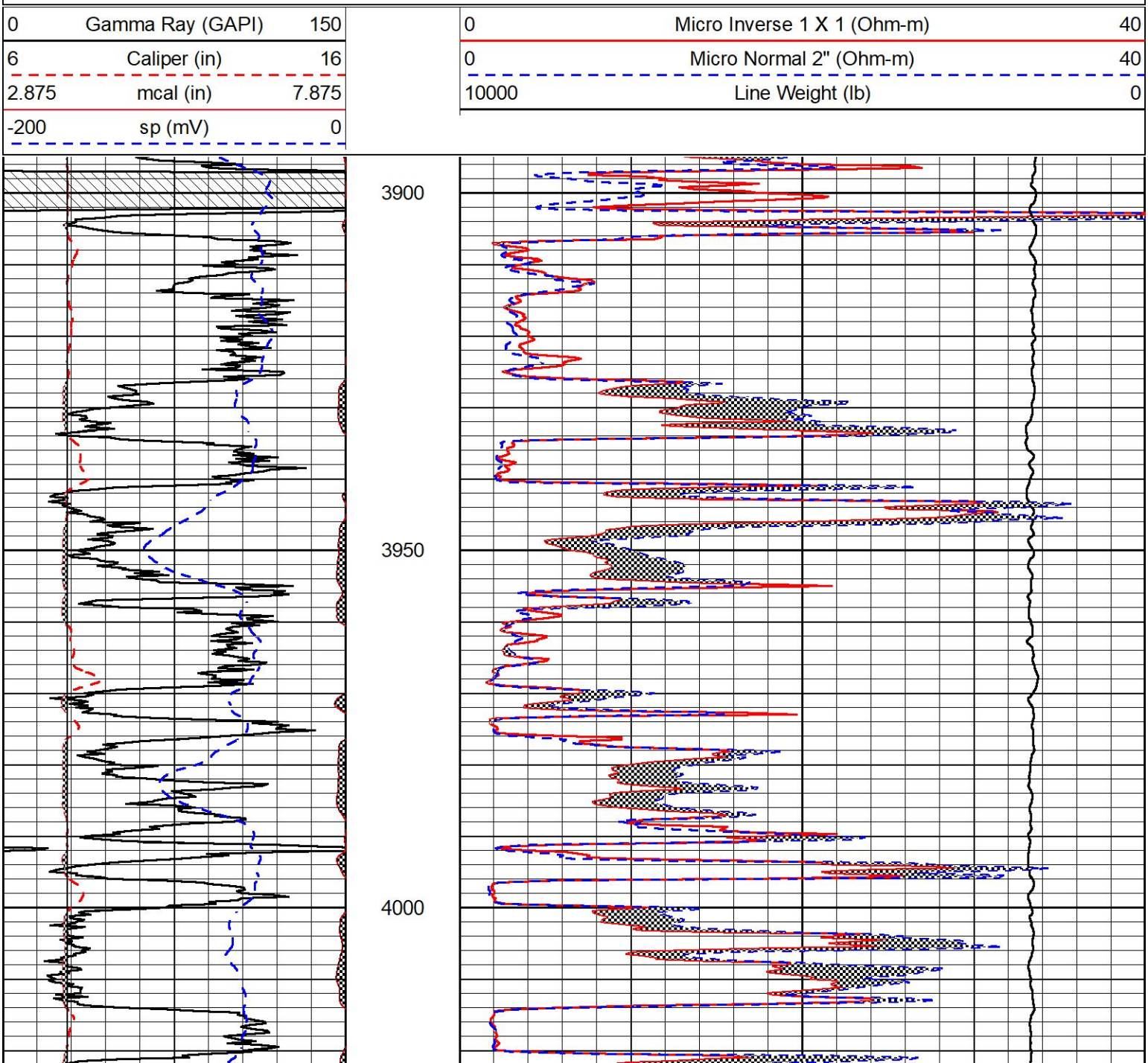


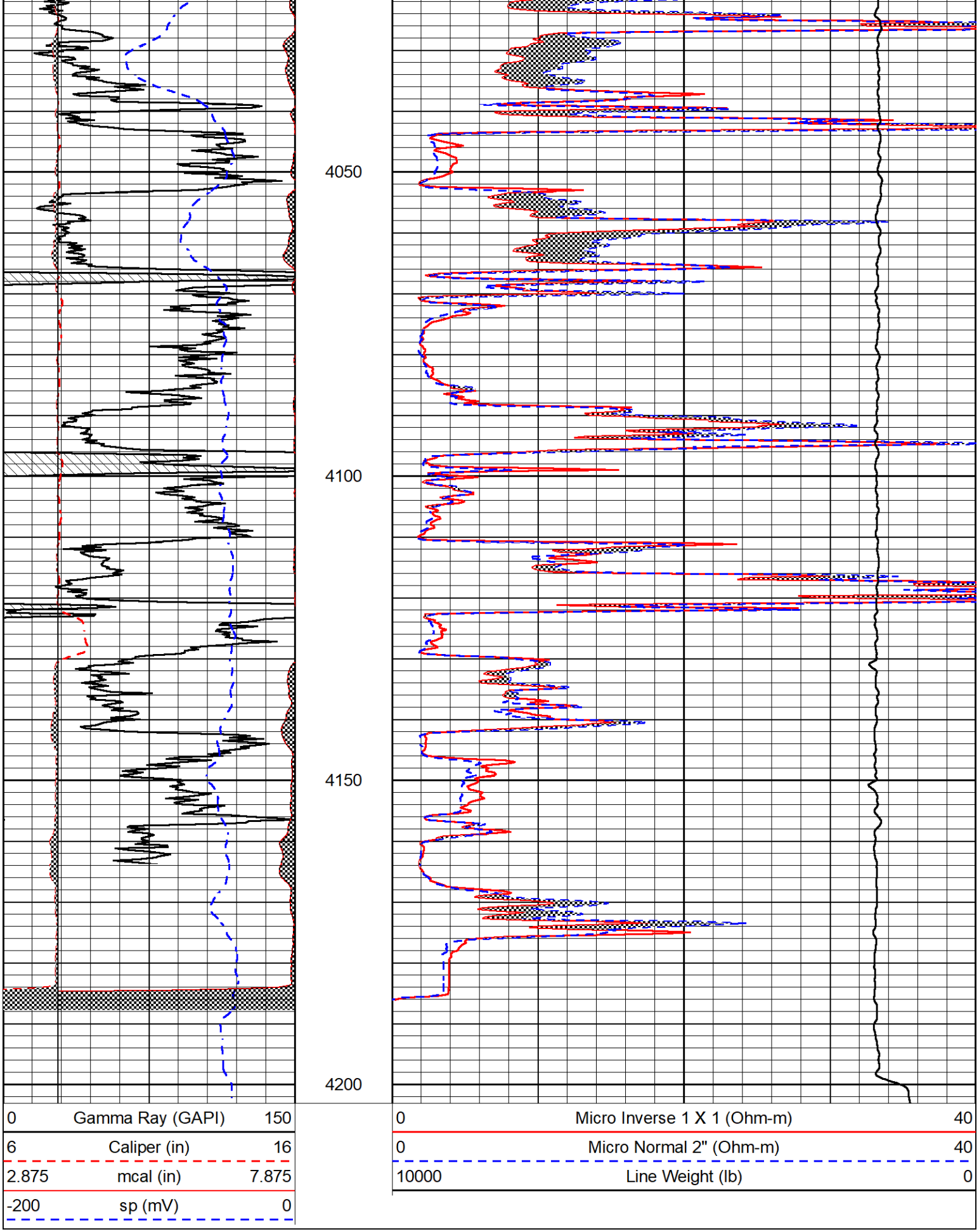
MIDWEST WIRELINE

REPEAT SECTION

REPEAT PASS

Database File	murfin_p&p unit #1-35.db
Dataset Pathname	StkMl/pass2.1
Presentation Format	_micro
Dataset Creation	Thu Aug 11 02:22:31 2022
Charted by	Depth in Feet scaled 1:240





Calibration Report

Database File	murfin_p&p unit #1-35.db
Dataset Pathname	StkMl/pass3.1

Dataset Creation Thu Aug 11 03:13:20 2022

Dual Induction Calibration Report

Serial-Model: 507-M&W
Surface Cal Performed: Wed Aug 3 13:14:16 2022

	Readings		References			Results	
Loop:	Air	Loop	Air	Loop		m	b
Deep	82.972	482.449	0.000	255.800	mmho/m	0.590	-33.130
Medium	120.285	668.174	0.000	255.800	mmho/m	0.517	-57.500

Microlog Calibration Report

Serial-Model: 402-PSIML
Performed: Sun Jul 17 13:11:21 2022

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	18000.0000	0.0000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	24000.0000	-0.5000
Caliper	1.0052	1.0858	5.0000	16.5000	in	65.0000	-59.8500

Compensated Density Calibration Report

Serial-Model: 301-01-M&W
Source #: 20762B
Master Calibration Performed: Thu Feb 3 00:43:14 2022

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3559.05	2566.81	cps
Aluminum	2.675	g/cc	664.63	1636.12	cps

Spine Angle = 74.98 Density/Spine Ratio = 0.530

	Size		Reading
Small Ring	8.00	in	1.16
Large Ring	13.00	in	1.02

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:	0.6000	GAPI/cps

MIDWEST WIRELINE

Company	Murfin Drilling Company, Inc.
Well	P&P Unit #1-35
Field	
County	Decatur
State	Kansas