MIDWEST WIRELINE

DUAL COMPENSATED POROSITY / MICRO 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: 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

Company	Murfin Drilling Company, Inc.
Well	P&P Unit #1-35
Field	
County	Decatur
State	Kansas
Date	8/11/2022
Run Number	One
Type Log	CNL / CDL / ML
Depth Driller	4200
Depth Logger	4199
Bottom Logged Interval	4171
Top Logged Interval	3250
Type Fluid In Hole	Chemical
Salinity, PPM CL	1800
Density	9.2
Level	Full
Max. Rec. Temp. F	118
Operating Rig Time	5 Hours
Equipment -- Location	P-24 Hays
Recorded By	T. Martin
Witnessed By	Robert Hendrix

Borehole Record

Run No.	Bit	From	To
One	12.25	00	308
Two	7.875	308	TD

Casing Record

Size	Wgt.	From	To
8.625	23	00	308

<<< Fold Here >>>

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

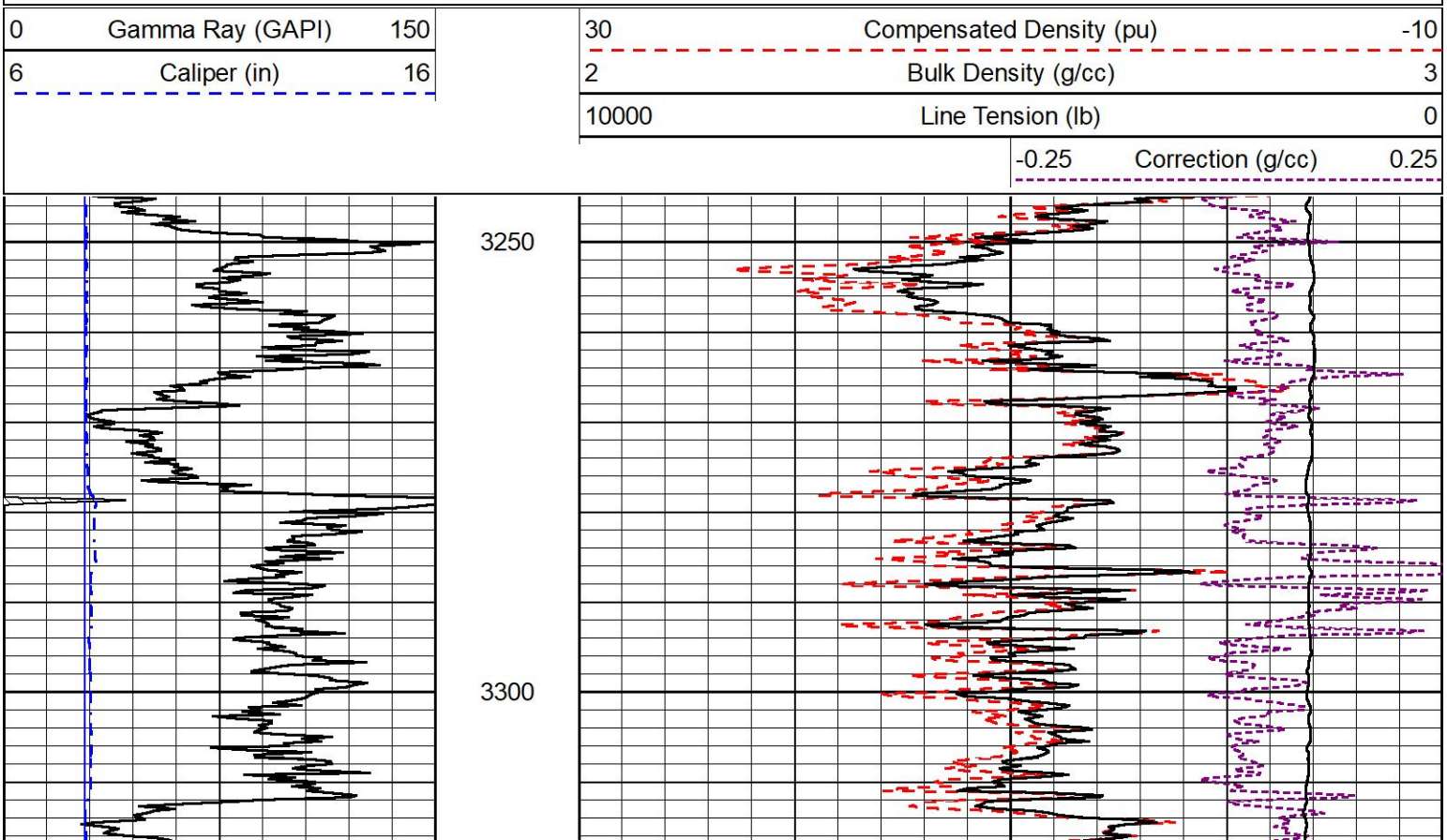
A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density
NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM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

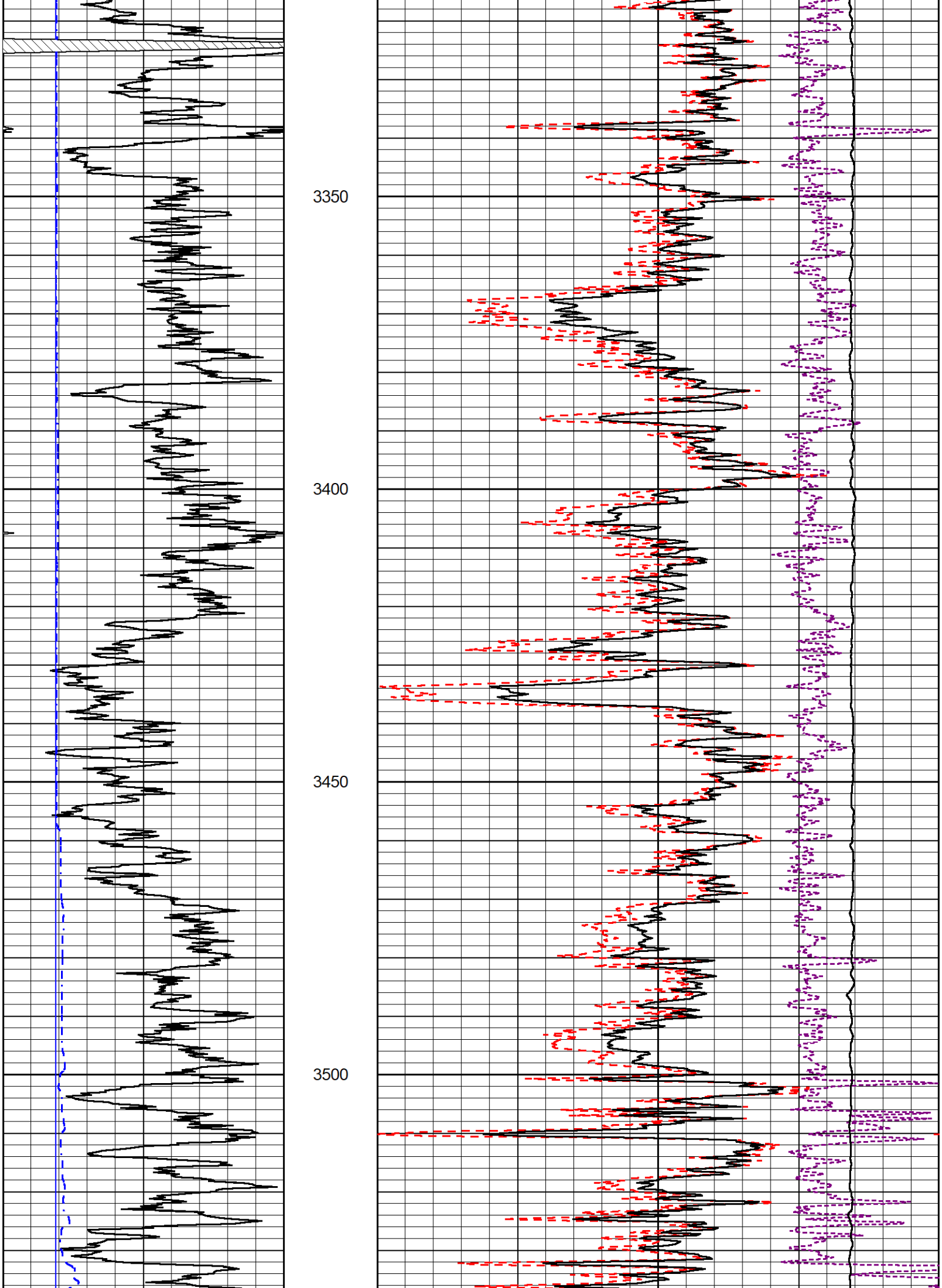
MIDWEST WIRELINE

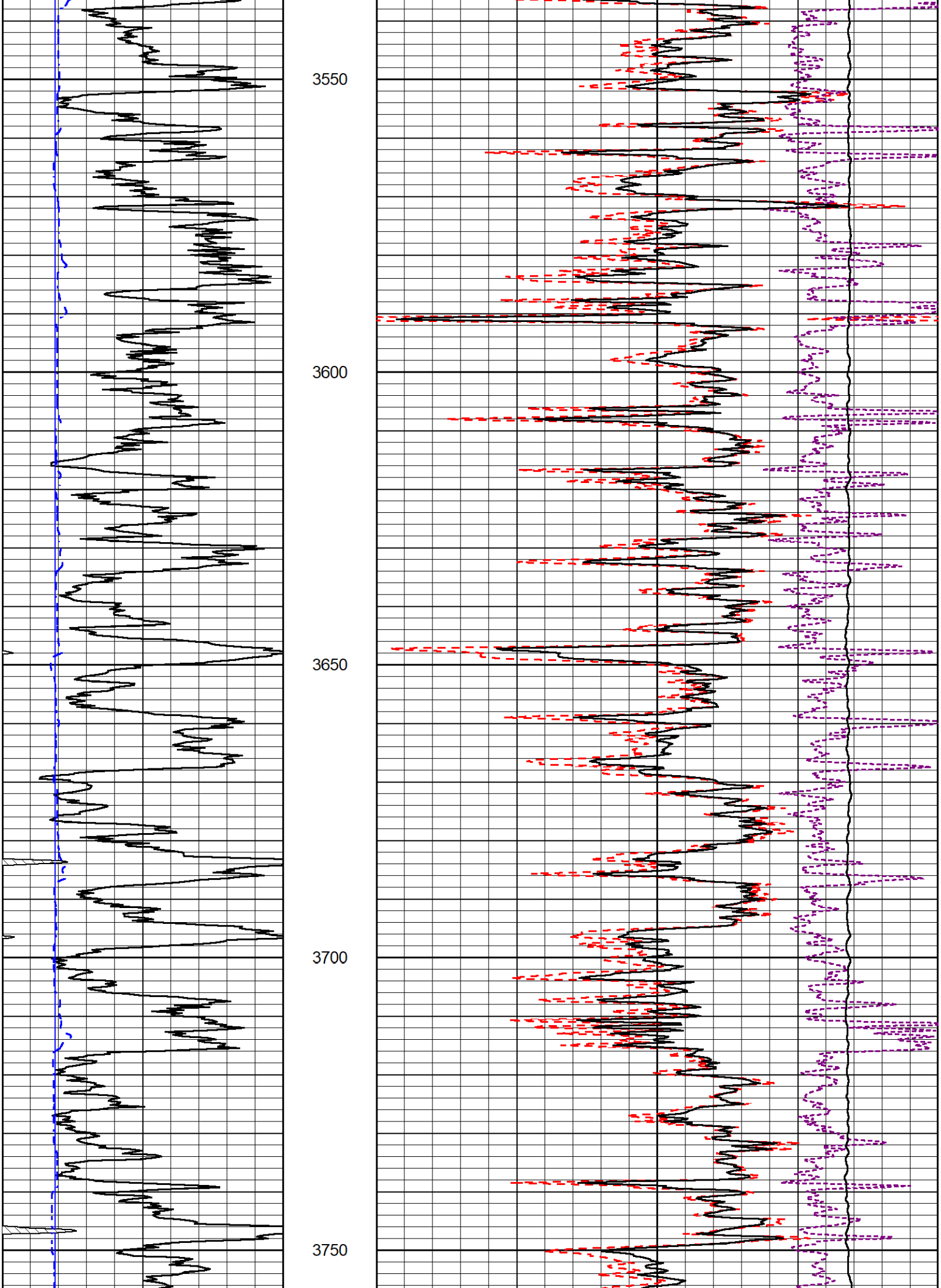
5" SCALE BULK DENSITY

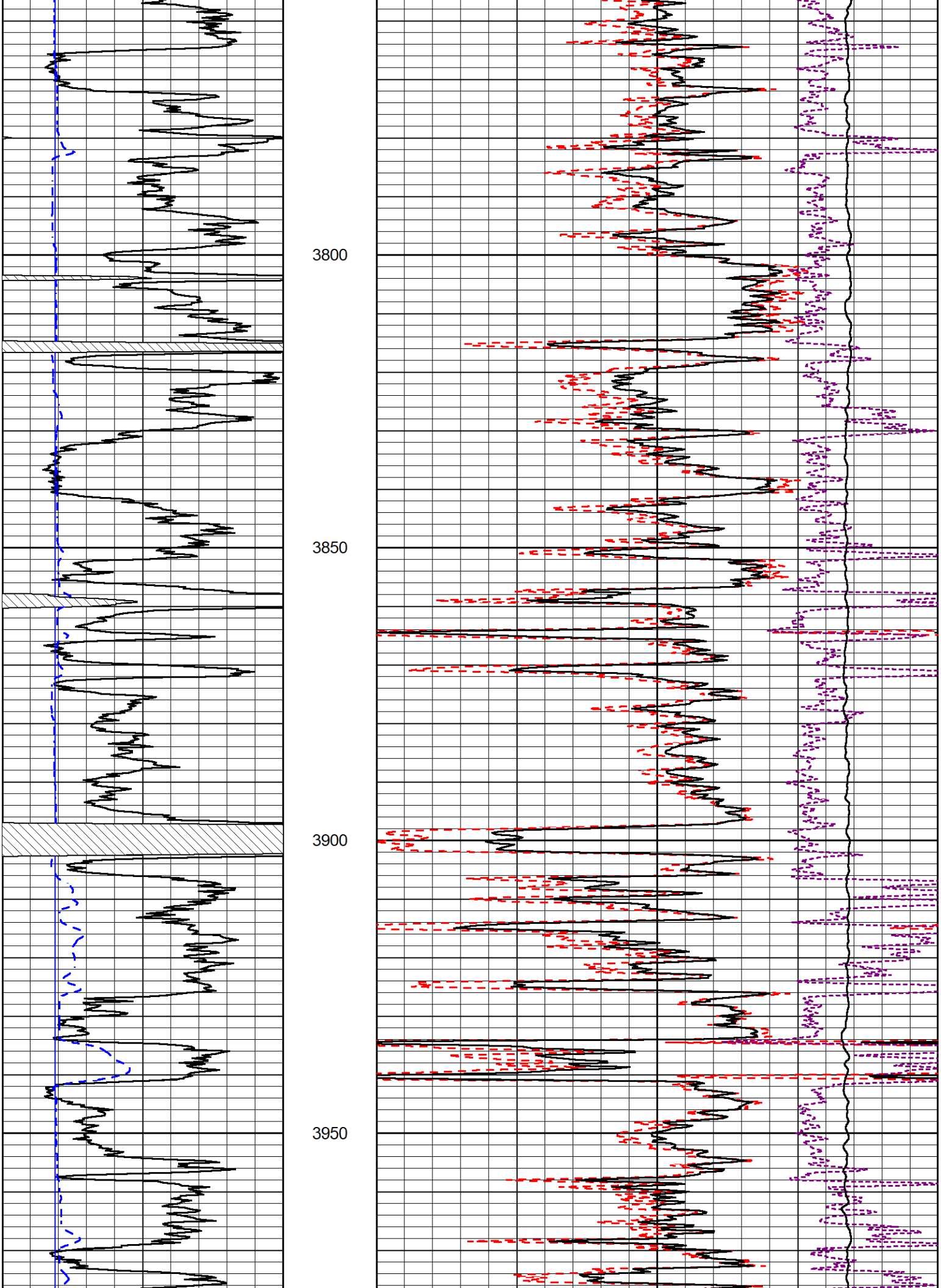
MAIN PASS

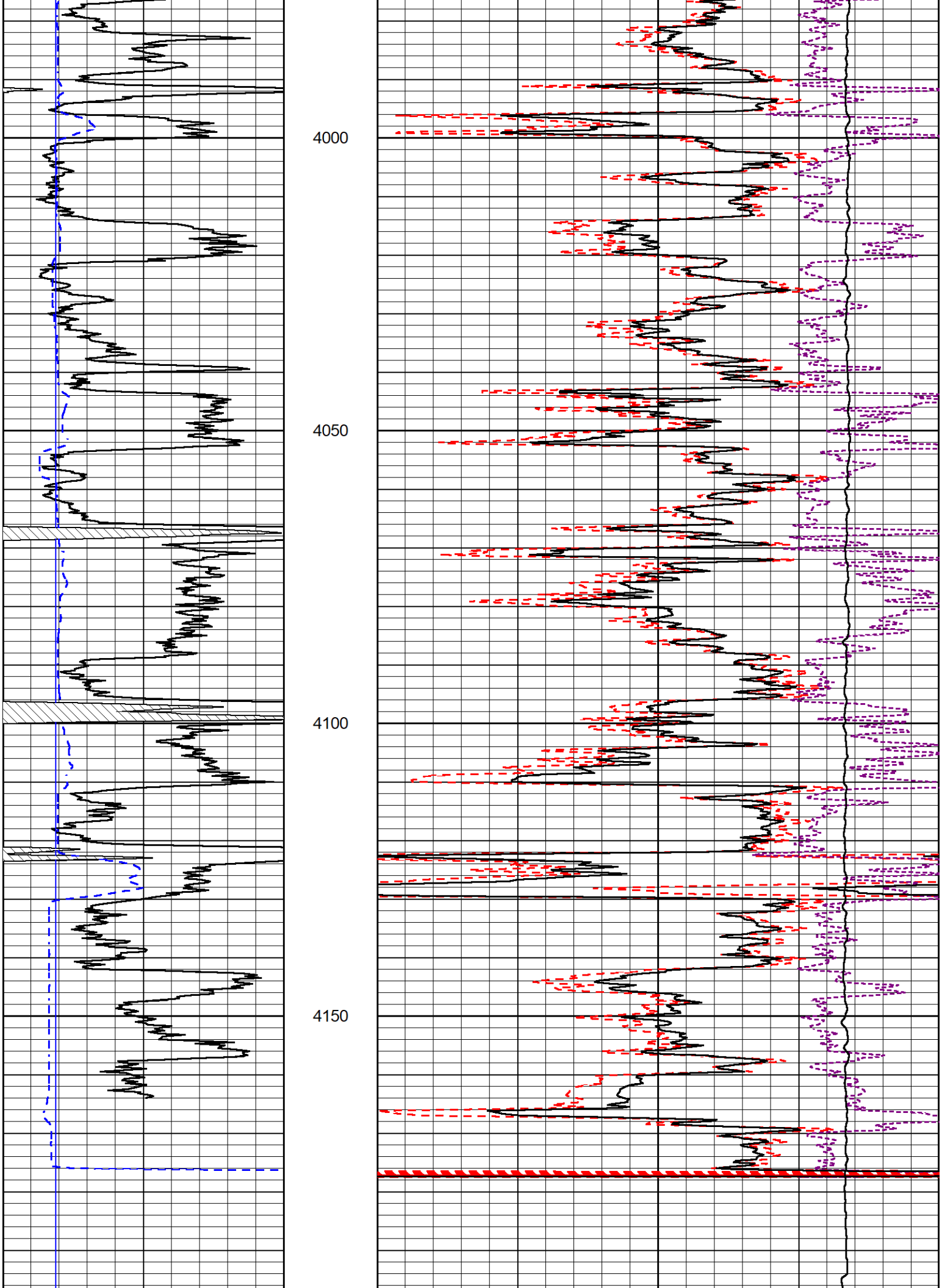
Database File	murfin_p&p unit #1-35.db
Dataset Pathname	StkMl/pass3.3
Presentation Format	_cdl
Dataset Creation	Thu Aug 11 02:38:49 2022
Charted by	Depth in Feet scaled 1:240

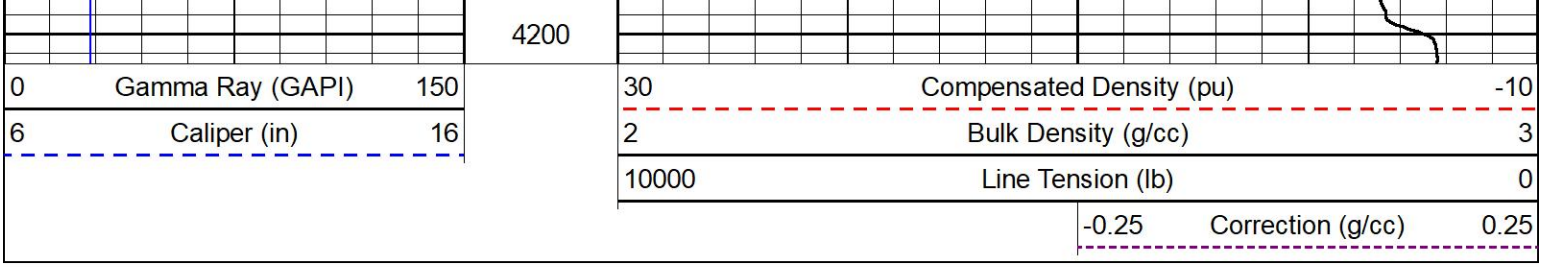



3350
3400
3450
3500


3550
3600
3650
3700
3750


3800
3850
3900
3950


4000
4050
4100
4150

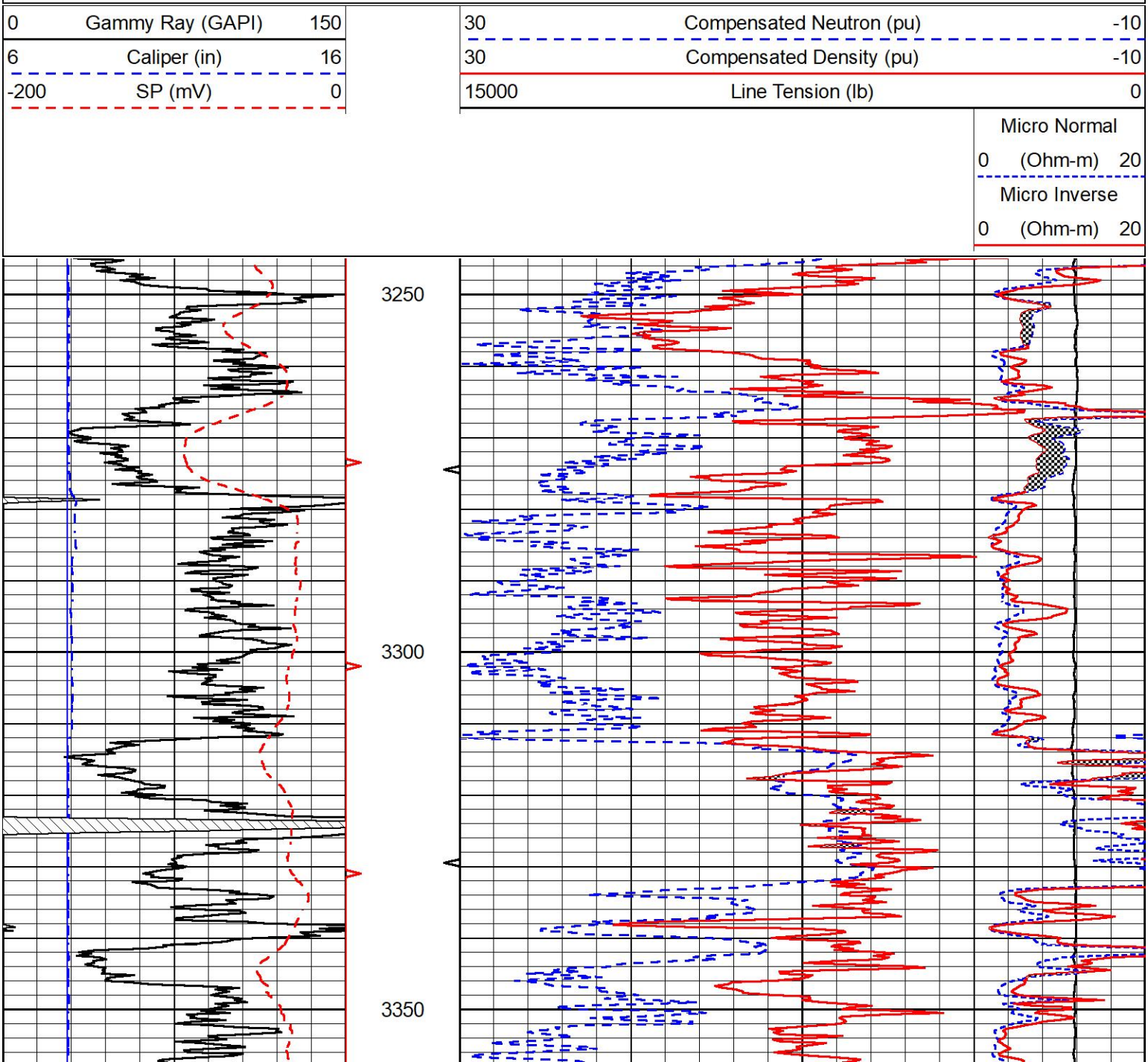


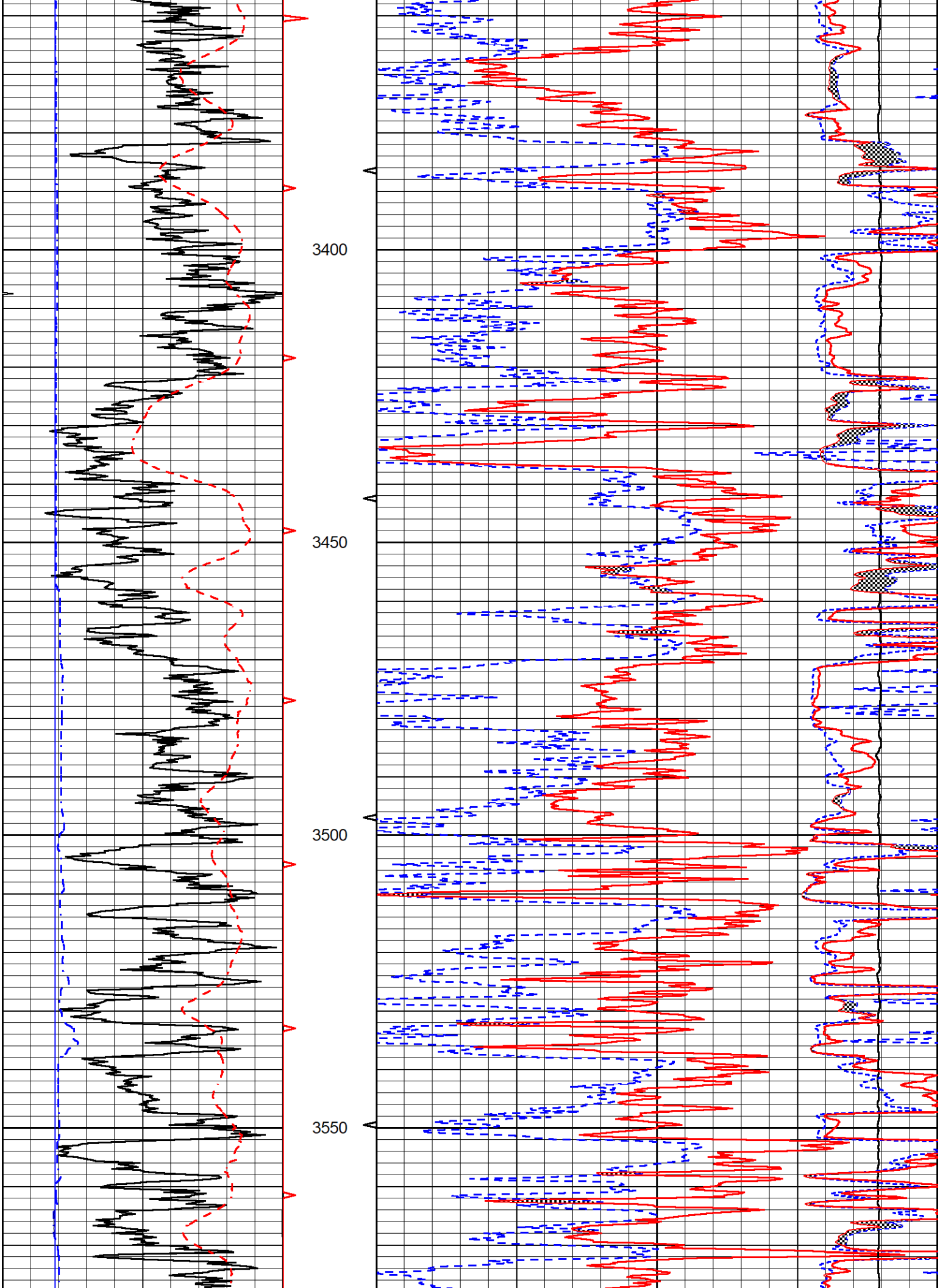
MIDWEST WIRELINE

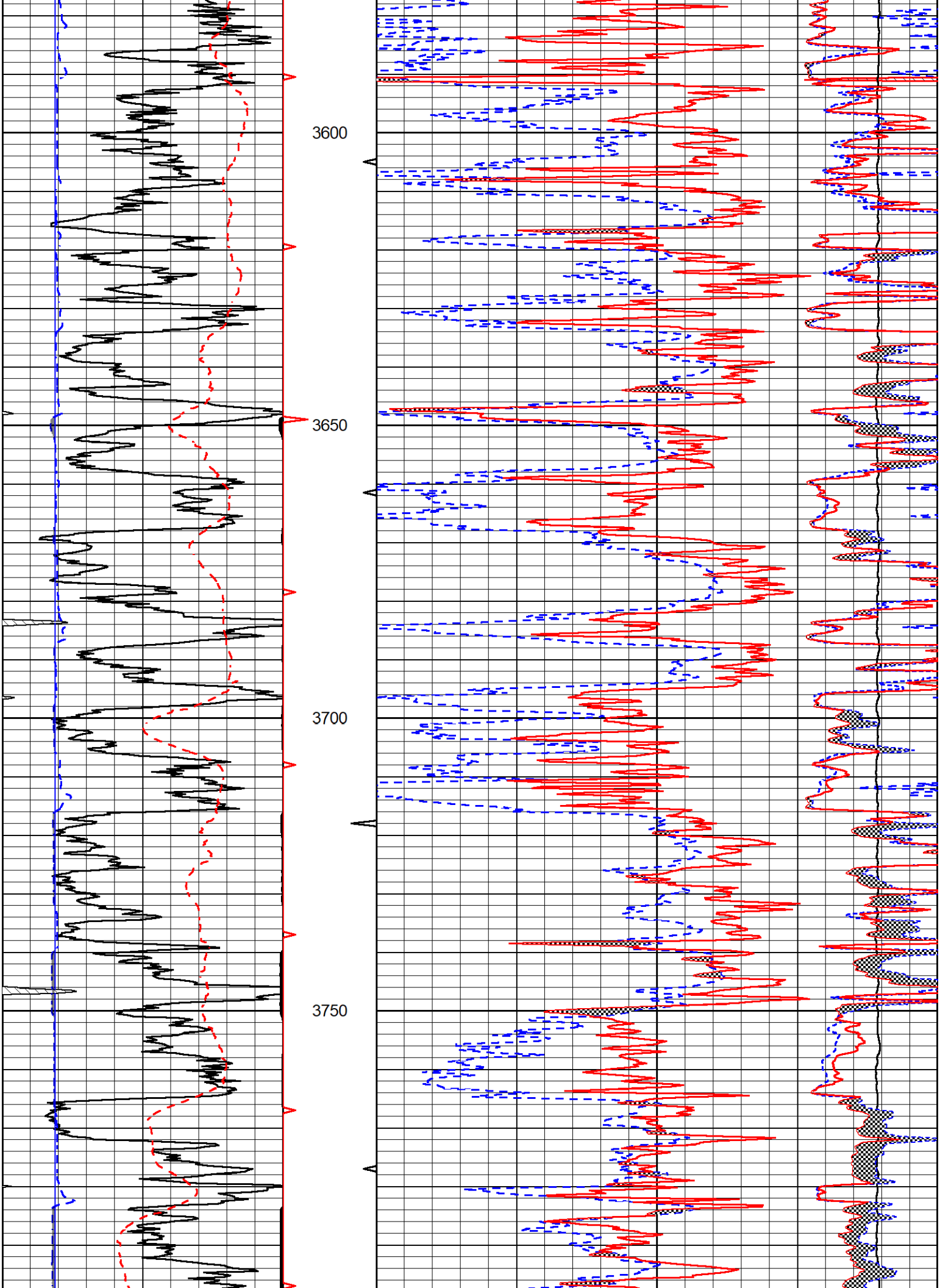
DETAIL SECTION

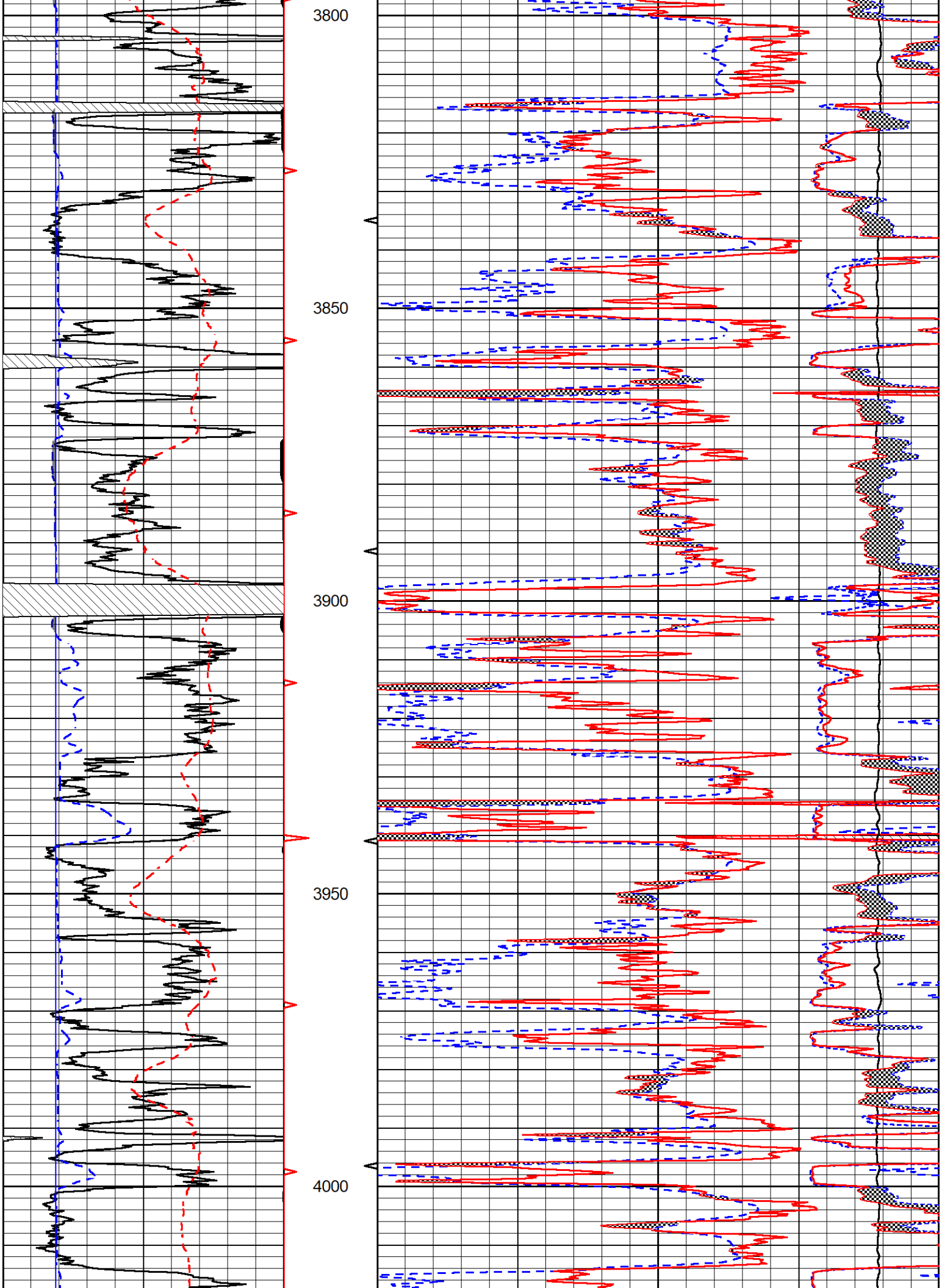
MAIN PASS

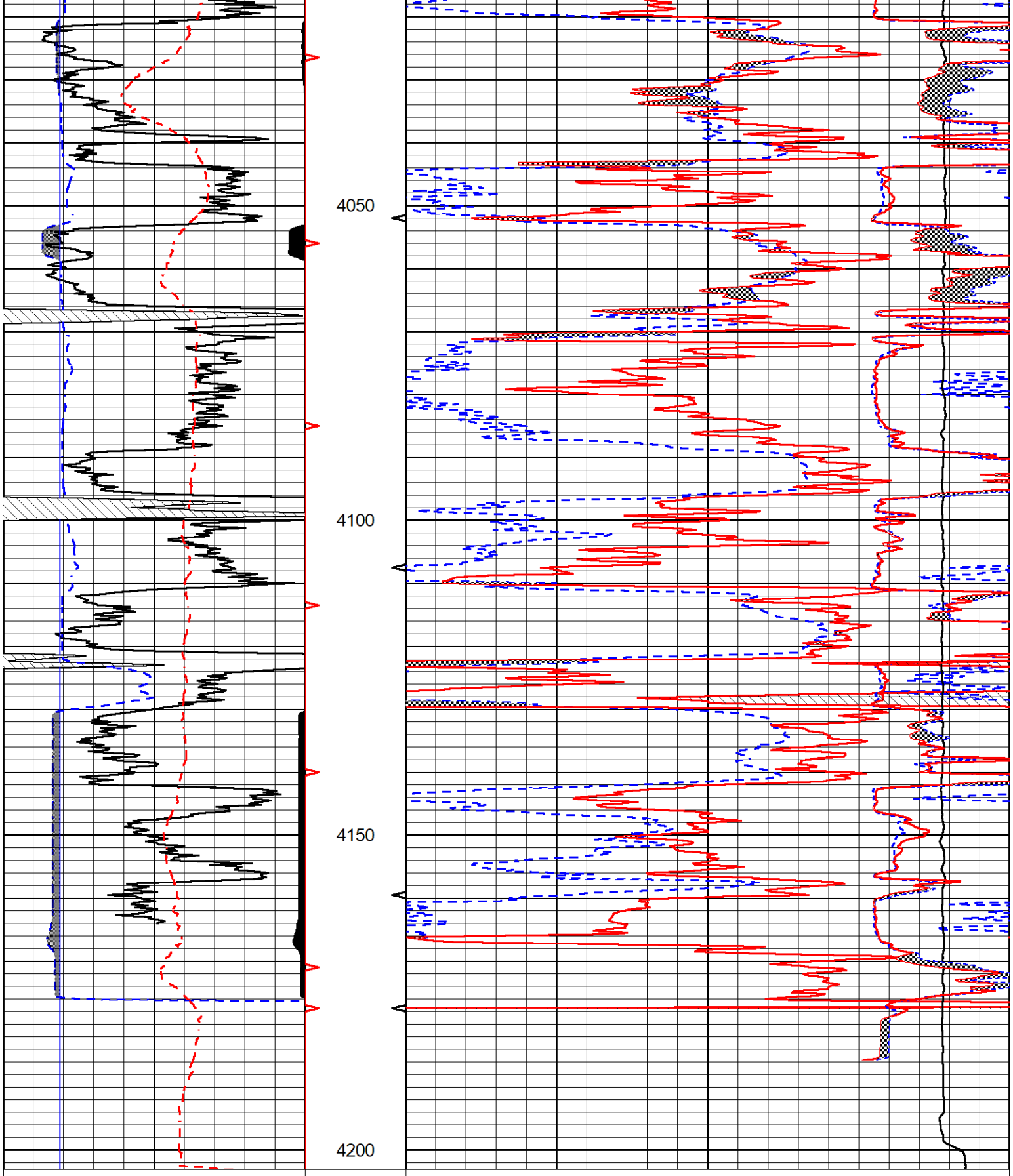
Database File	murfin_p&p unit #1-35.db
Dataset Pathname	StkMl/pass3.1
Presentation Format	_cndlspml
Dataset Creation	Thu Aug 11 03:13:20 2022
Charted by	Depth in Feet scaled 1:240




3400
3450
3500
3550


3600
3650
3700
3750


3800
3850
3900
3950
4000


4050
4100
4150
4200
0 Gammy Ray (GAPI) 150
6 Caliper (in) 16
-200 SP (mV) 0
30 Compensated Neutron (pu) -10
30 Compensated Density (pu) -10
15000 Line Tension (lb) 0
Micro Normal
0 (Ohm-m) 20
Micro Inverse
0 (Ohm-m) 20

MIDWEST WIRELINE

REPEAT SECTION

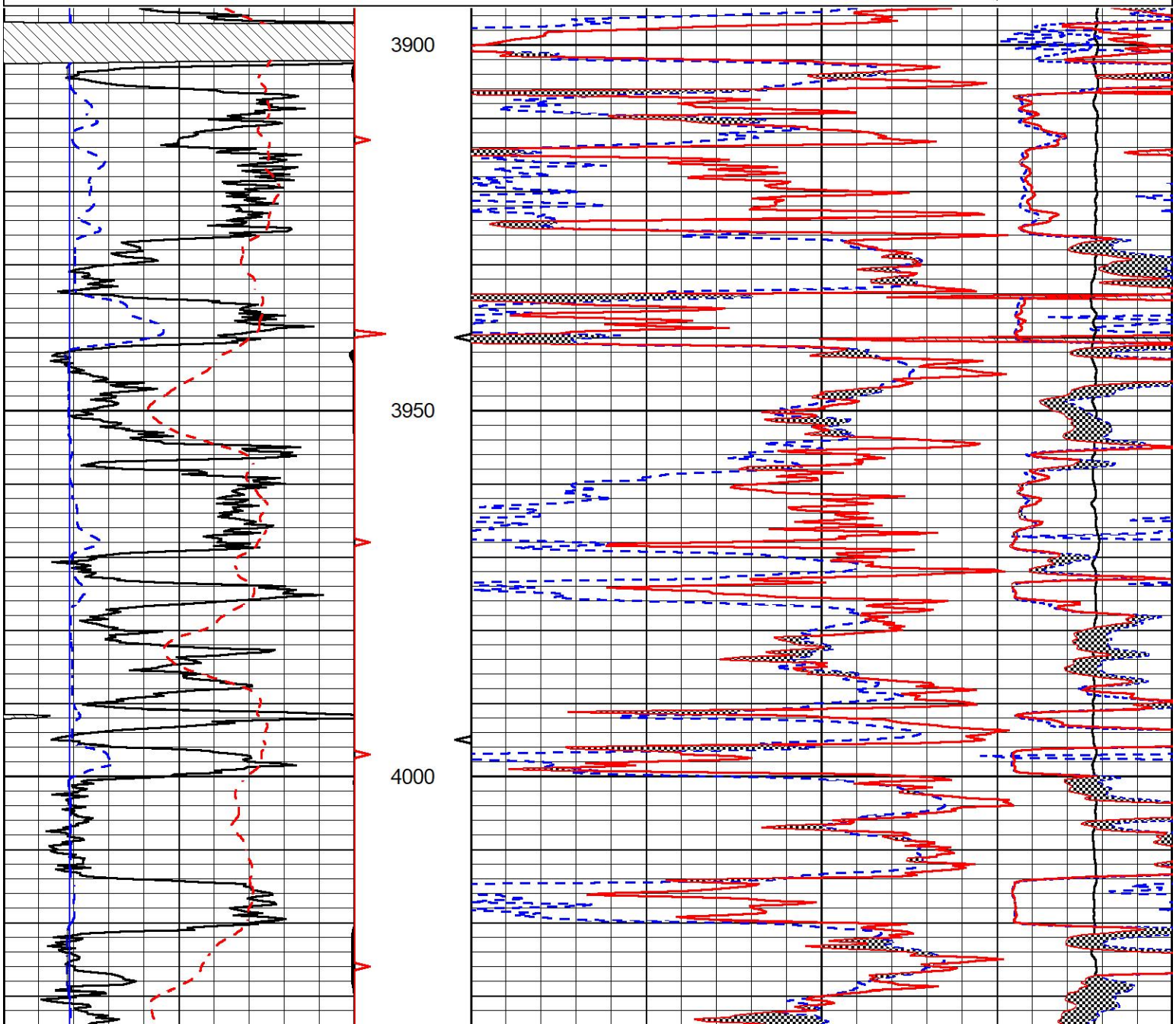
REPEAT PASS

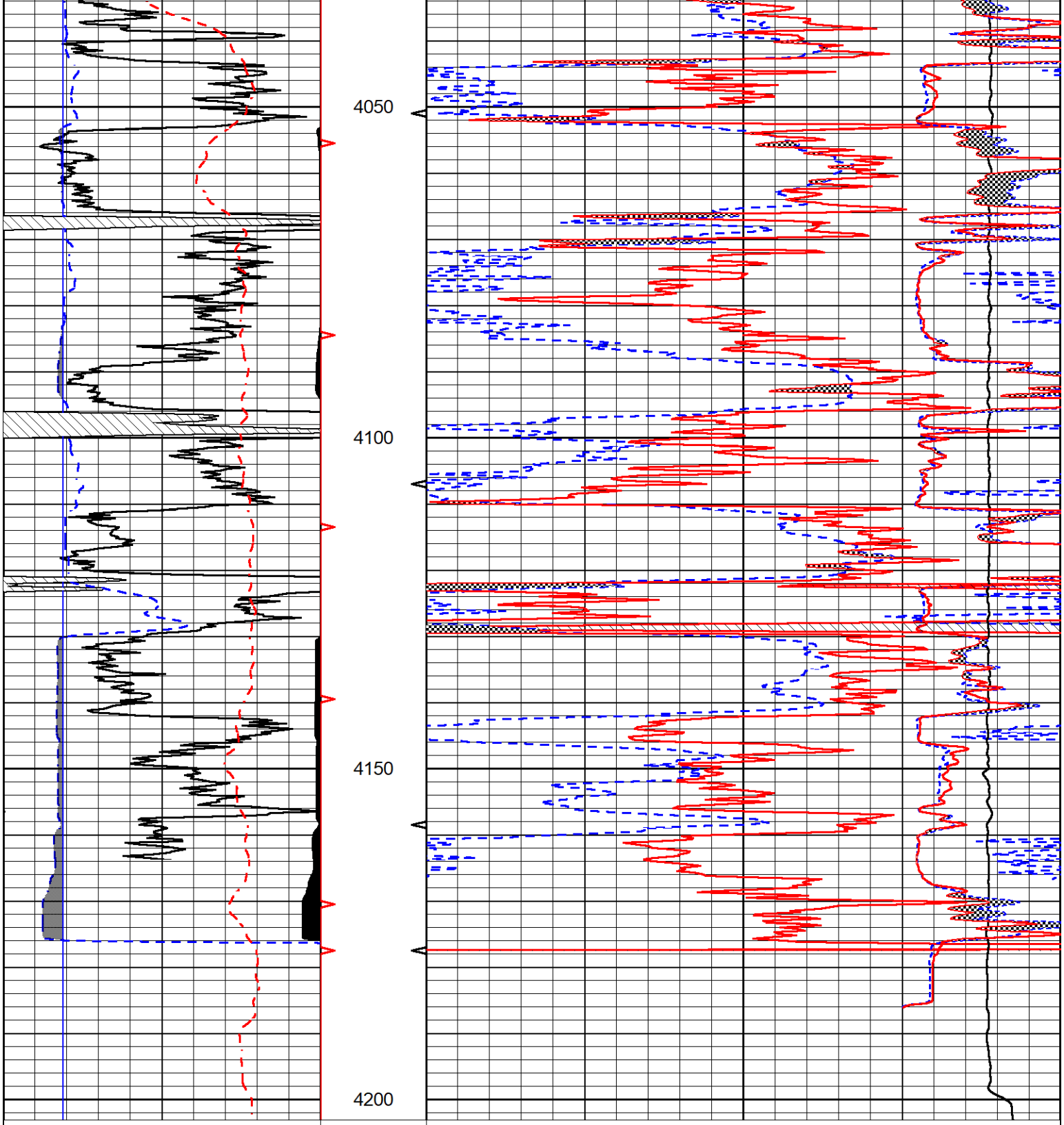
Database File	murfin_p&p unit #1-35.db
Dataset Pathname	StkMI/pass2.1
Presentation Format	_CNDLS~2
Dataset Creation	Thu Aug 11 02:22:31 2022
Charted by	Depth in Feet scaled 1:240

0	Gammy Ray (GAPI)	150
6	Caliper (in)	16
-200	SP (mV)	0

30	Compensated Neutron (pu)	-10
30	Compensated Density (pu)	-10
15000	Line Tension (lb)	0

Micro Normal		
0	(Ohm-m)	20
Micro Inverse		
0	(Ohm-m)	20





Calibration Report

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

Dataset Pathname: Stkml/pass1.1
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