



DUAL COMP POROSITY LOG

Company MURFIN DRILLING COMPANY, INC.
 Well SHARP 'C' #1-6
 Field UNNAMED
 County CHEYENNE
 State KANSAS

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 County CHEYENNE State KANSAS

Location: API #: 15-023-21539-00-00
 2230' FSL & 2310' FWL
 SEC 6 TWP 3S RGE 40W
 Permanent Datum GROUND LEVEL Elevation 3449'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services DIL MEL/BHCS
 Elevation K.B. 3454'
 D.F. N/A
 G.L. 3449'

Date	3/8/2020						
Run Number	ONE						
Type Log	CNL/CDL						
Depth Driller	5193'						
Depth Logger	5194'						
Bottom Logged Interval	5162'						
Top Logged Interval	4000'						
Type Fluid In Hole	CHEMICAL						
Salinity, PPM CL	800						
Density	9.2						
Level	FULL						
Max. Rec. Temp. F	128 DEG/F						
Operating Rig Time	4 HOURS						
Equipment -- Location	P-108 HAYS						
Recorded By	J. HENRICKSON						
Witnessed By	ROBERT HENDRIX						
Borehole Record							
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	0	345'	8.625"	24#	0	345'
TWO	7.875"	345'					
Casing Record							

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All interpretations are opinions based on inferences from electrical or other measurements and Pioneer Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Pioneer Wireline Services, 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.
 ST. FRANCIS KANSAS
 WEST TO HWY 27, 4 NORTH TO S ROAD, 1/2 WEST
 SOUTH INTO

Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

THANK YOU FOR USING PIONEER ENERGY SERVICES
www.pioneerenergy.com 785-625-3858

Your Pioneer Energy Services Crew		This Log Record Was Witnessed By	
Engineer: J. HENRICKSON	Operator:	Primary Witness: ROBERT HENDRIX	Secondary Witness:
Operator:	Operator:	Secondary Witness:	Secondary Witness:
Operator:		Secondary Witness:	

Log Variables

DatabaseC:\ProgramData\Warrior\Data\murfin_sharp_c_1_6.db
 Dataset field/well/stackml/pass3.1/_vars_

Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	100	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	290	50	Off	5194

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
GR	44.50		GR-M&W (89-M&W)	3.00	3.50	50.00	
CNLSC CNSSC	41.40 40.65		CNT-M&W (tk10-MW)	5.50	3.50	100.00	
LSD DCAL SSD	32.35 32.33 31.85		CDL-M&W (934-229)	8.50	4.00	250.00	
ML-PSI UDM ML (UDM-01) Stackable Microlog Tools			11.50	4.00	215.00		
MCAL MI MN	20.87 20.87 20.87						
RLL3 RLL3F	15.80 15.79						
CILD	8.00			DIL-M&W (55-222)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: murfin_sharp_c_1_6.db: field/well/stackml/pass3.1
 Total length: 47.00 ft
 Total weight: 835.00 lb
 O.D.: 4.00 in

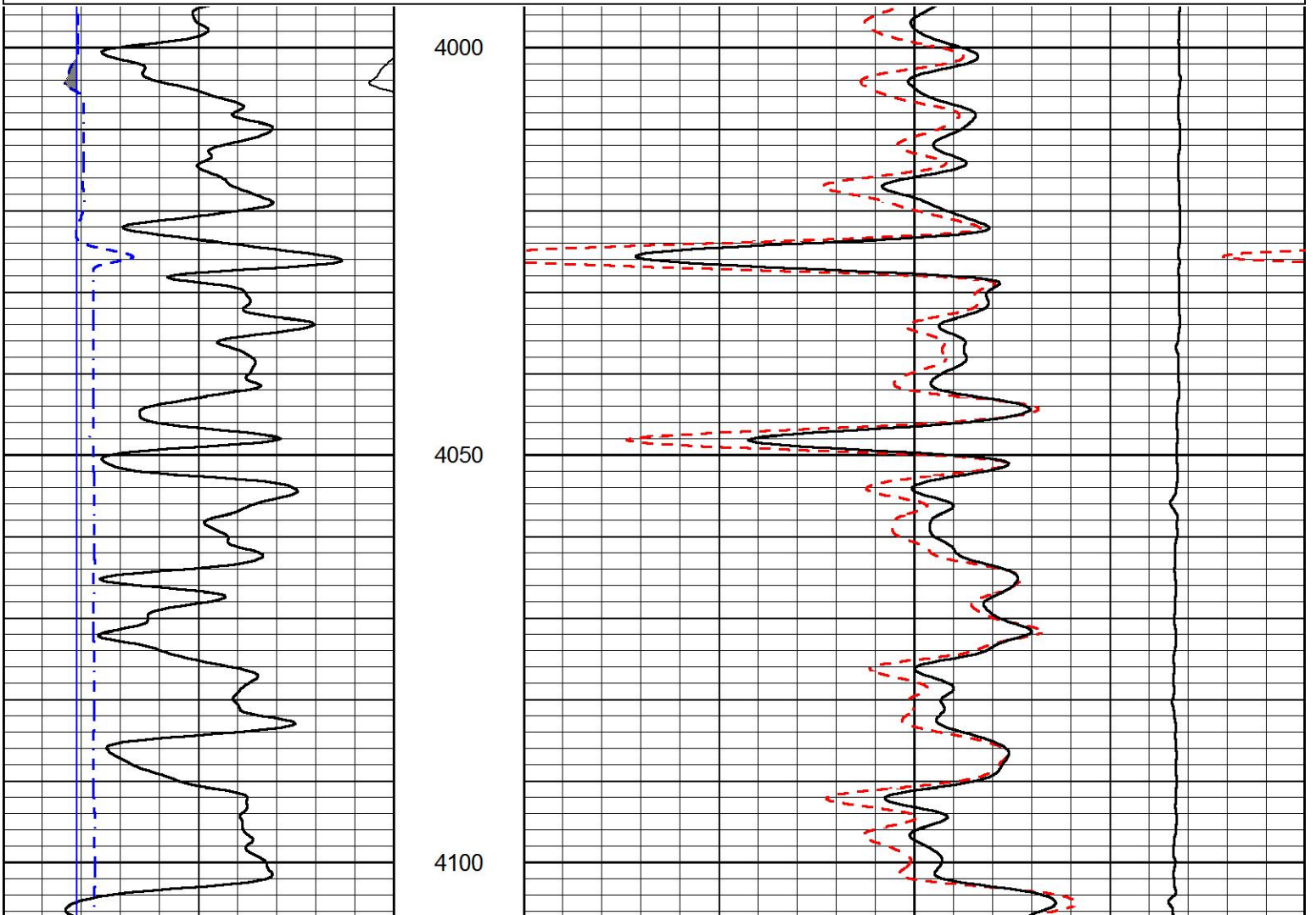


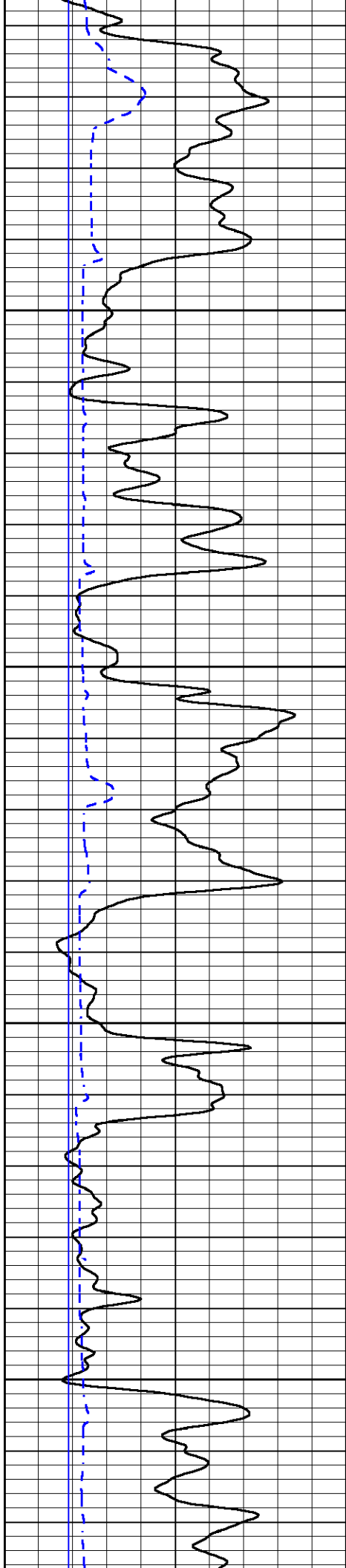
MAIN PASS

Database File murfin_sharp_c_1_6.db
 Dataset Pathname stackml/pass3.1
 Presentation Format cdl
 Dataset Creation Mon Mar 09 01:24:08 2020
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	CALIPER (in)	16

30	COMPENSATED DENSITY (pu)	-10
2	BULK DENSITY (g/cc)	3
15000	LINE TENSION (lb)	0



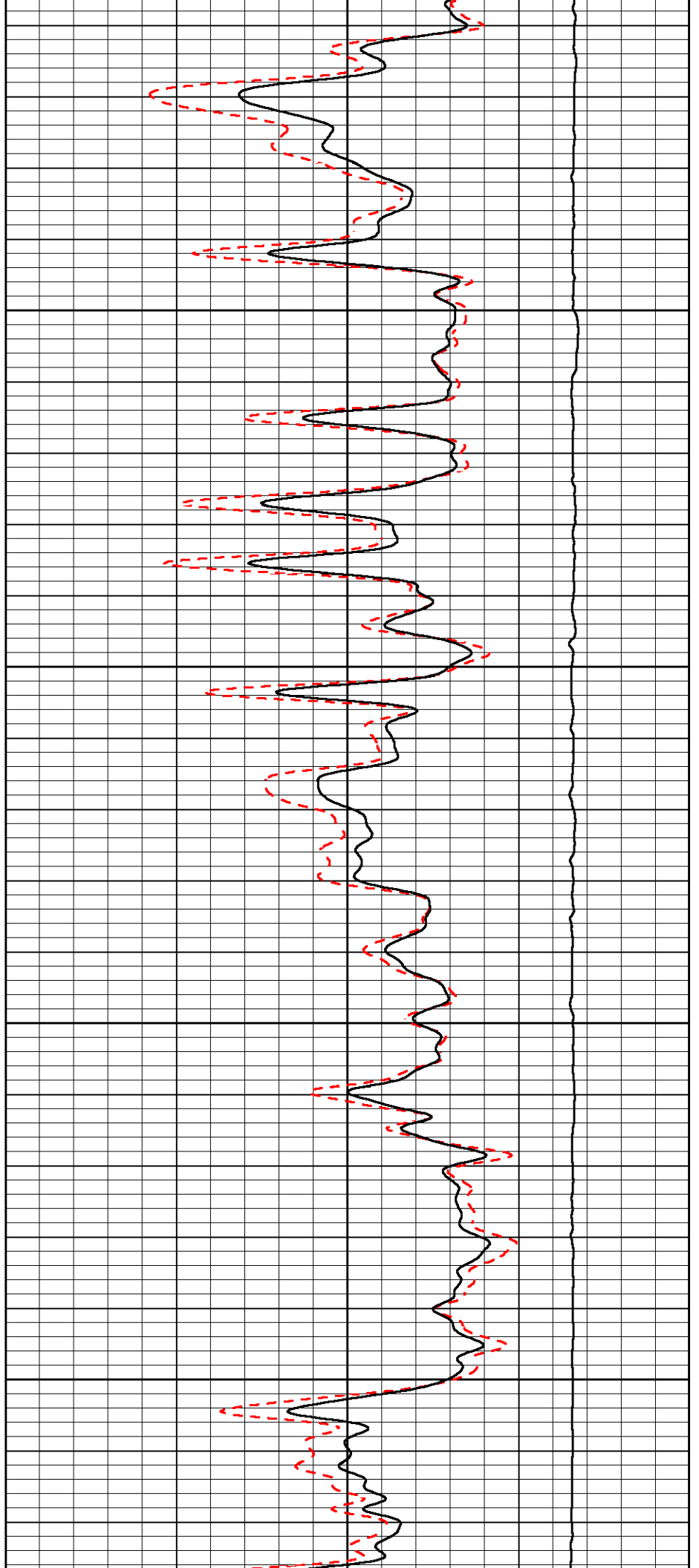


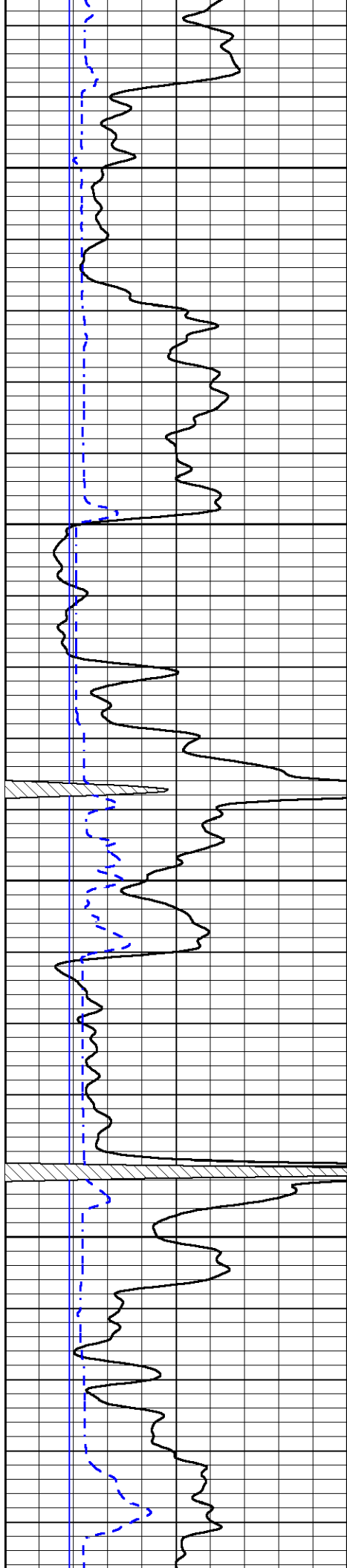
4150

4200

4250

4300



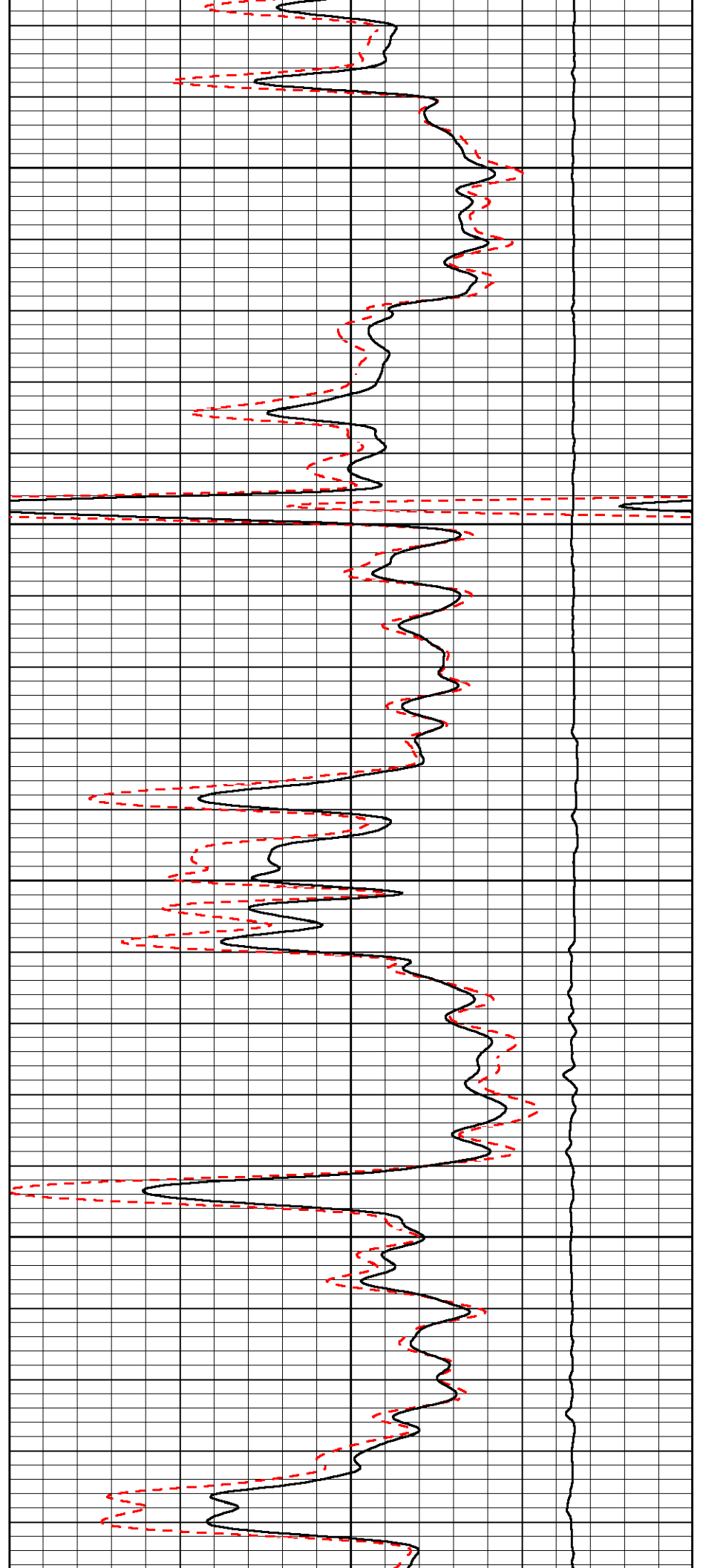


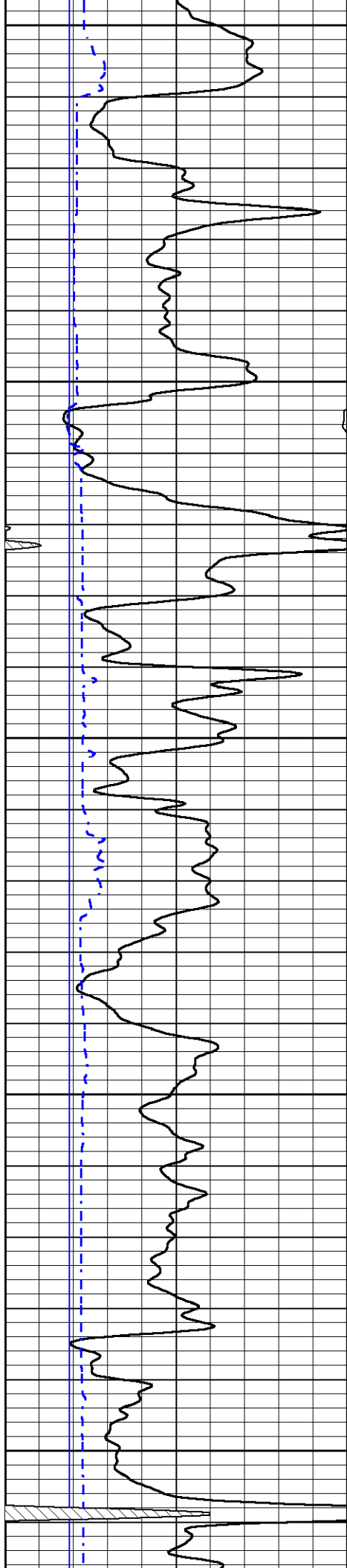
4350

4400

4450

4500





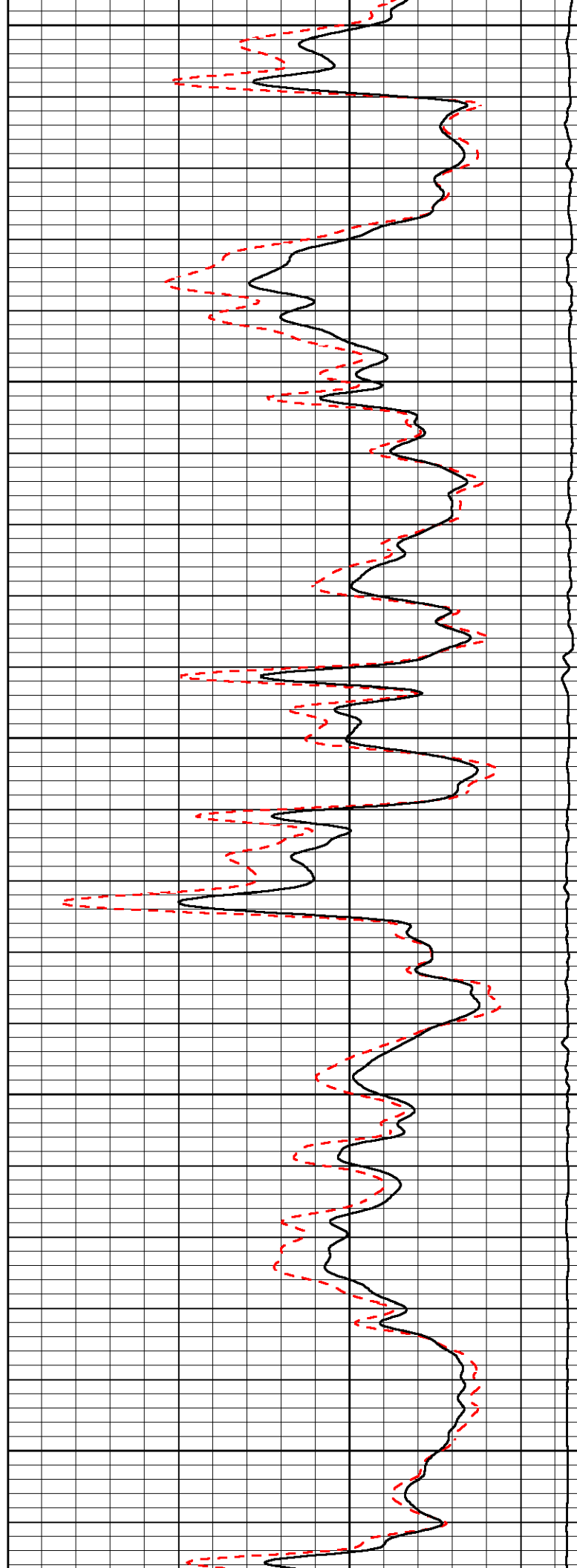
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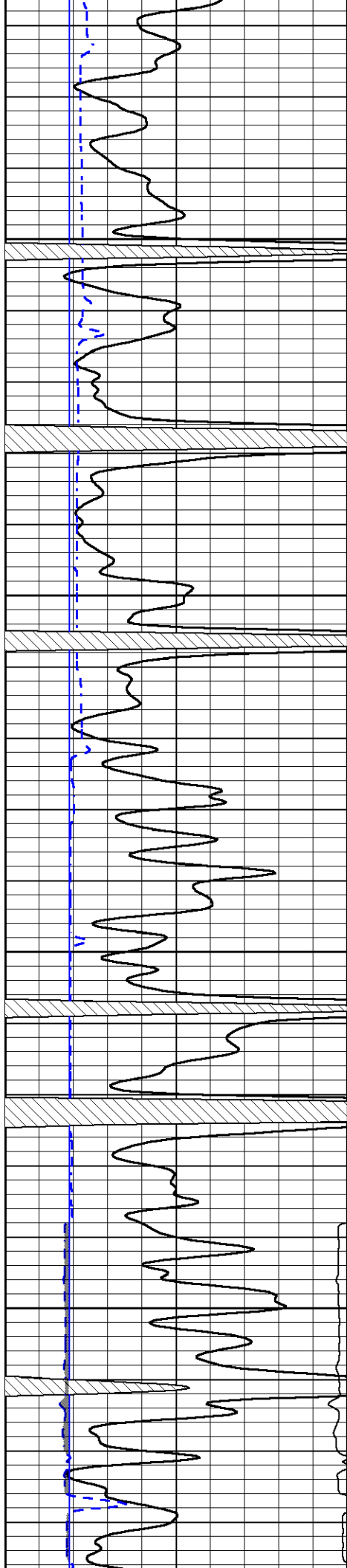
4600

4650

4700

4750



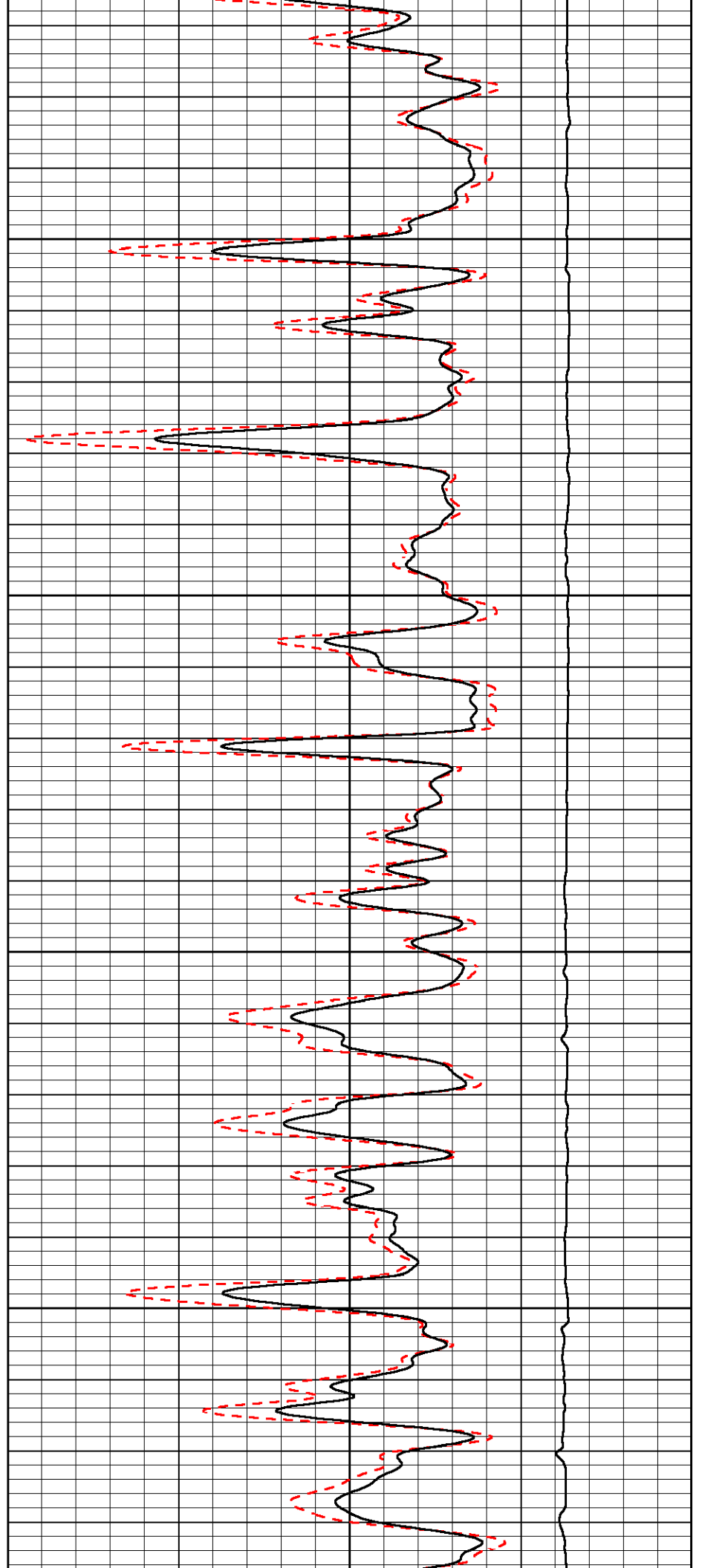


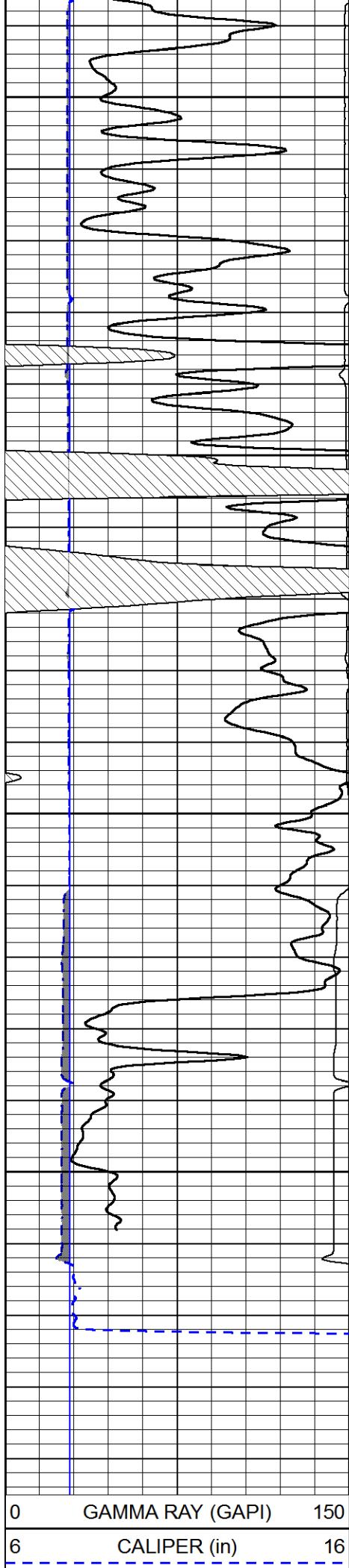
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4850

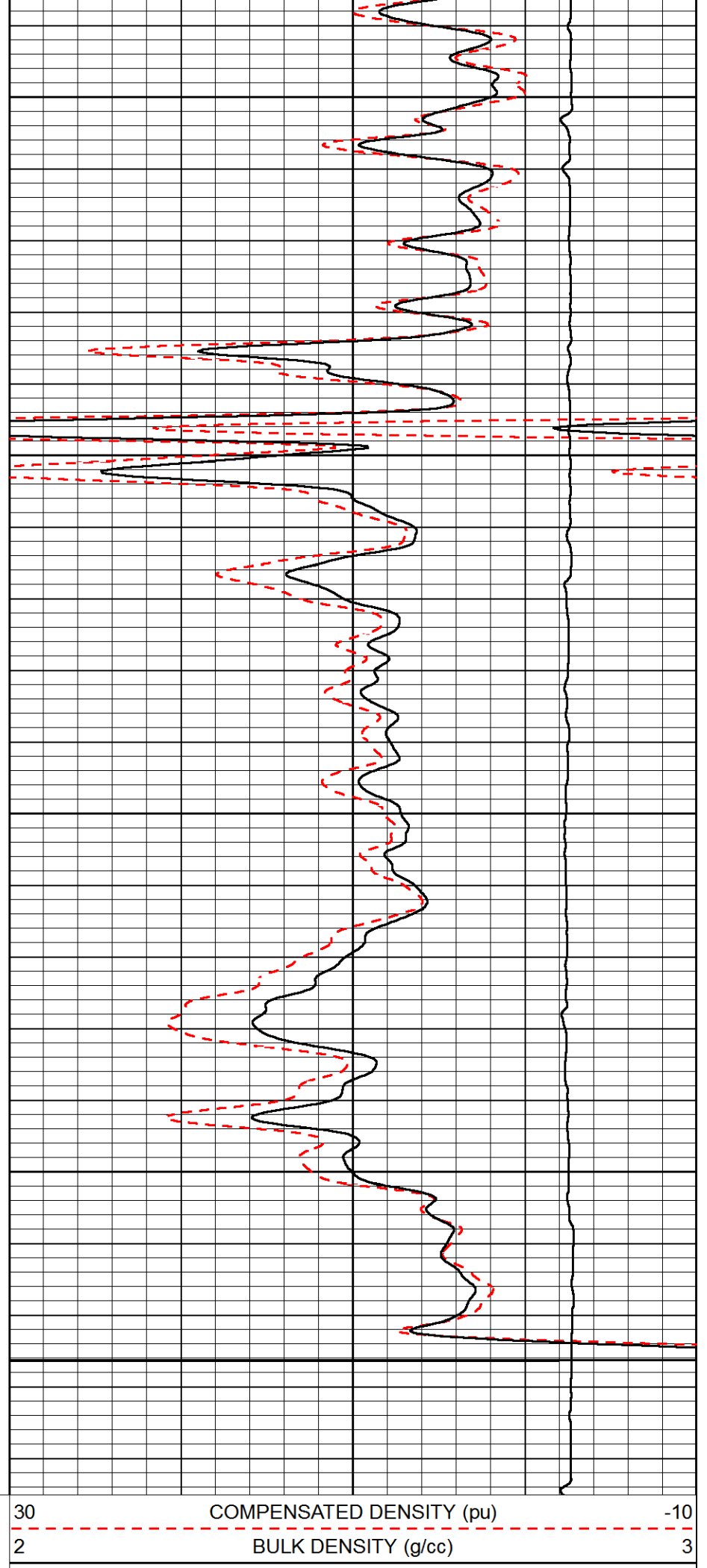
4900

4950





5000
5050
5100
5150



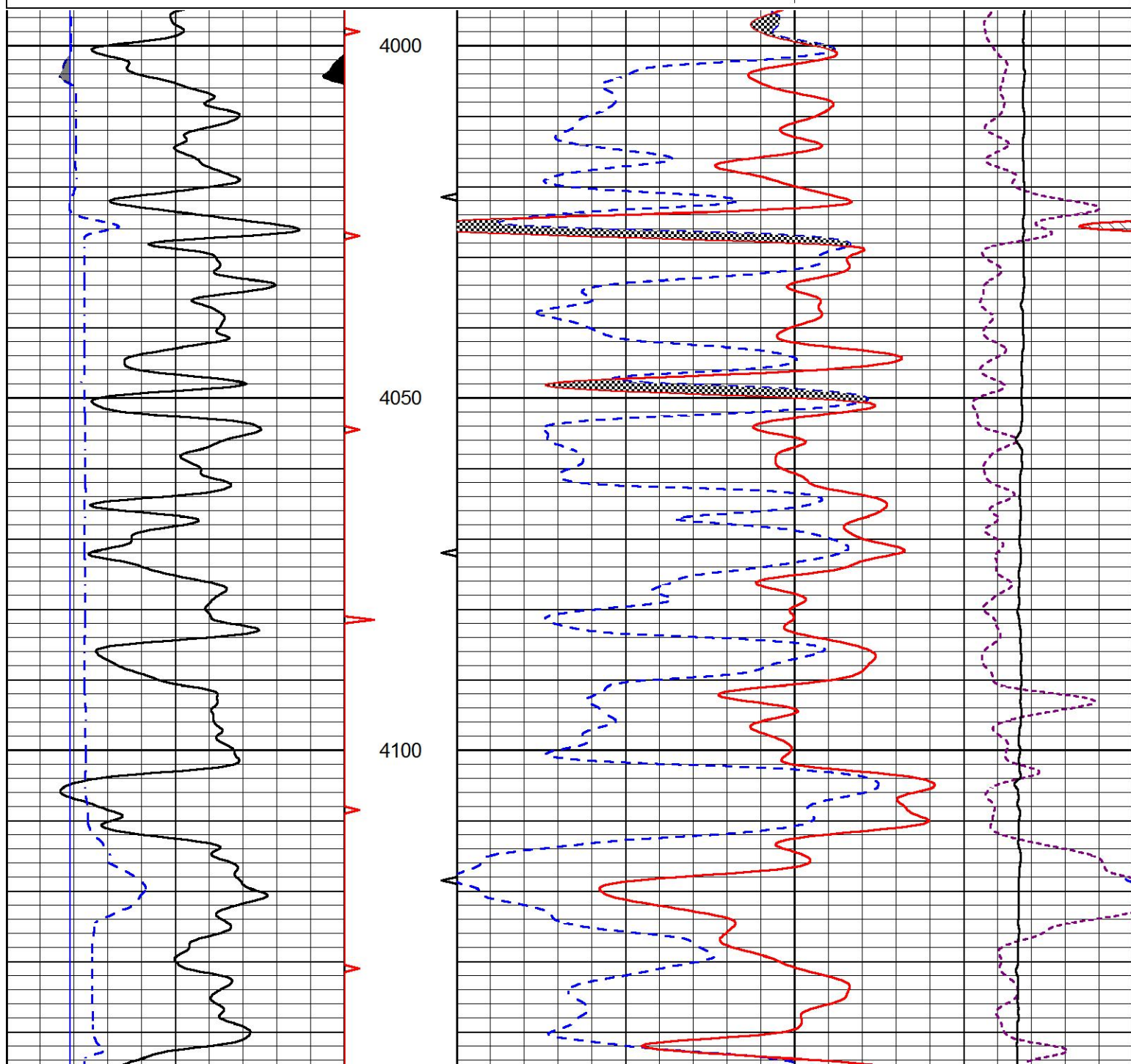


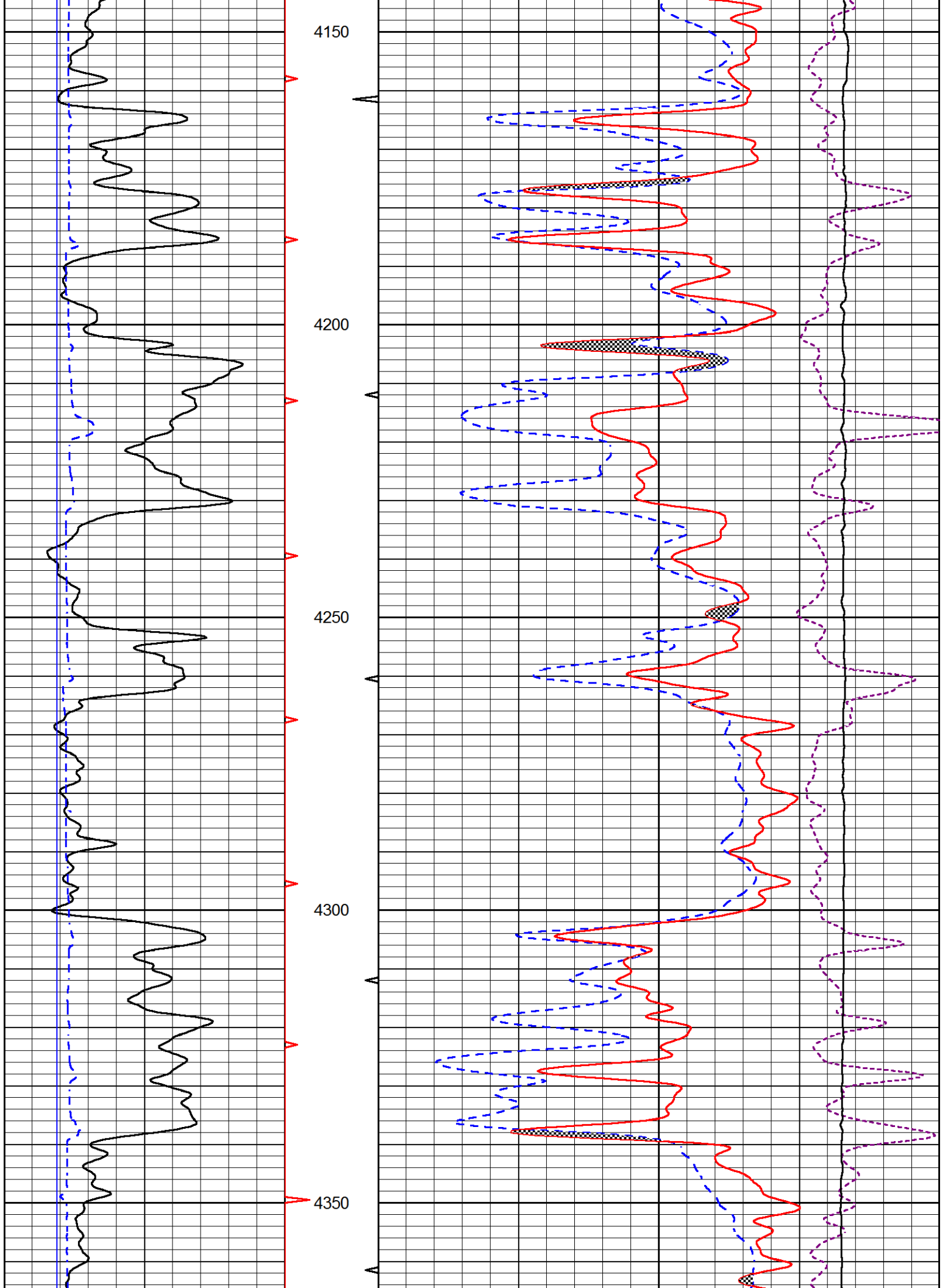
MAIN PASS

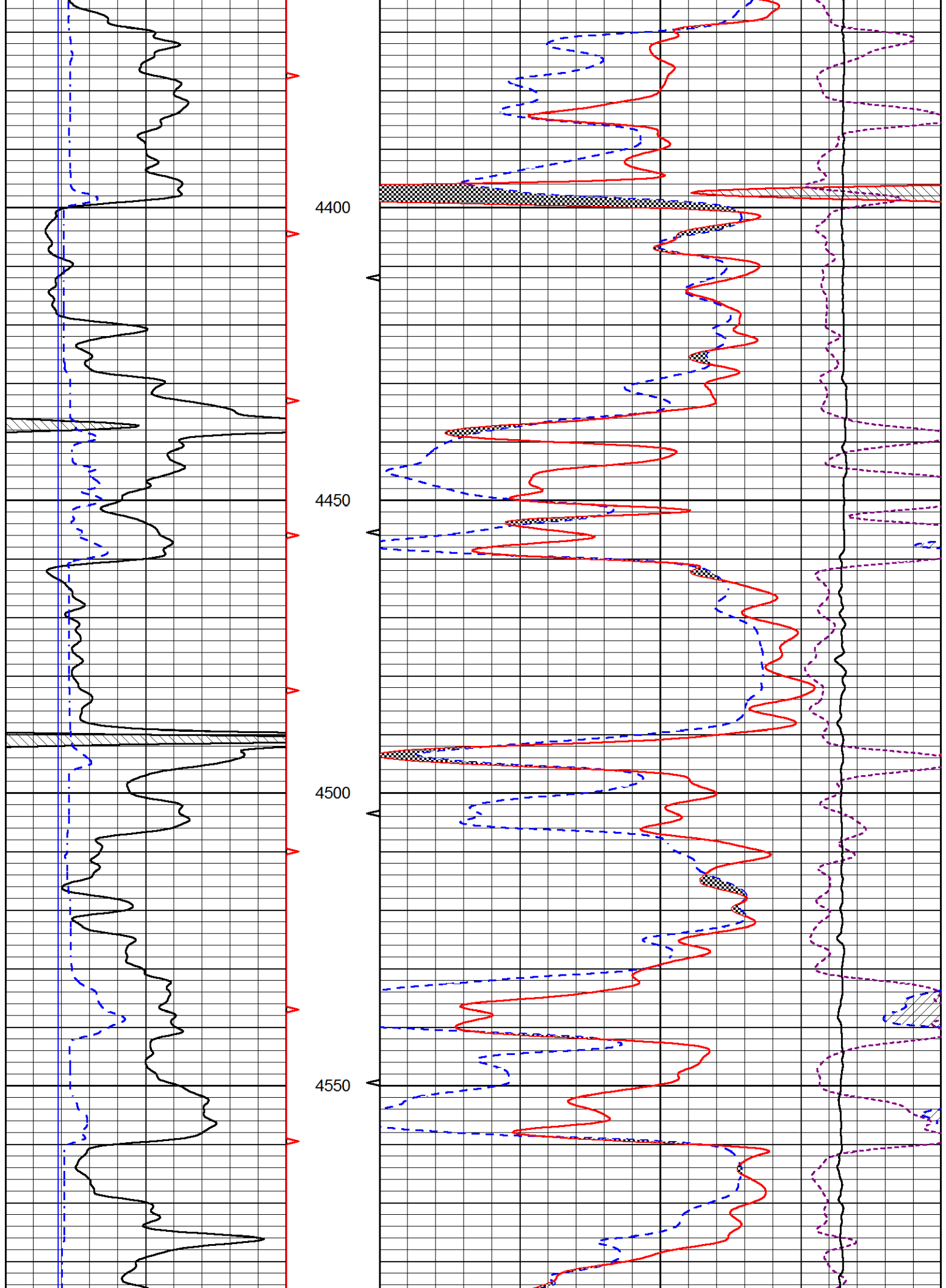
Database File murfin_sharp_c_1_6.db
 Dataset Pathname stackml/pass3.1
 Presentation Format cndlspec
 Dataset Creation Mon Mar 09 01:24:08 2020
 Charted by Depth in Feet scaled 1:240

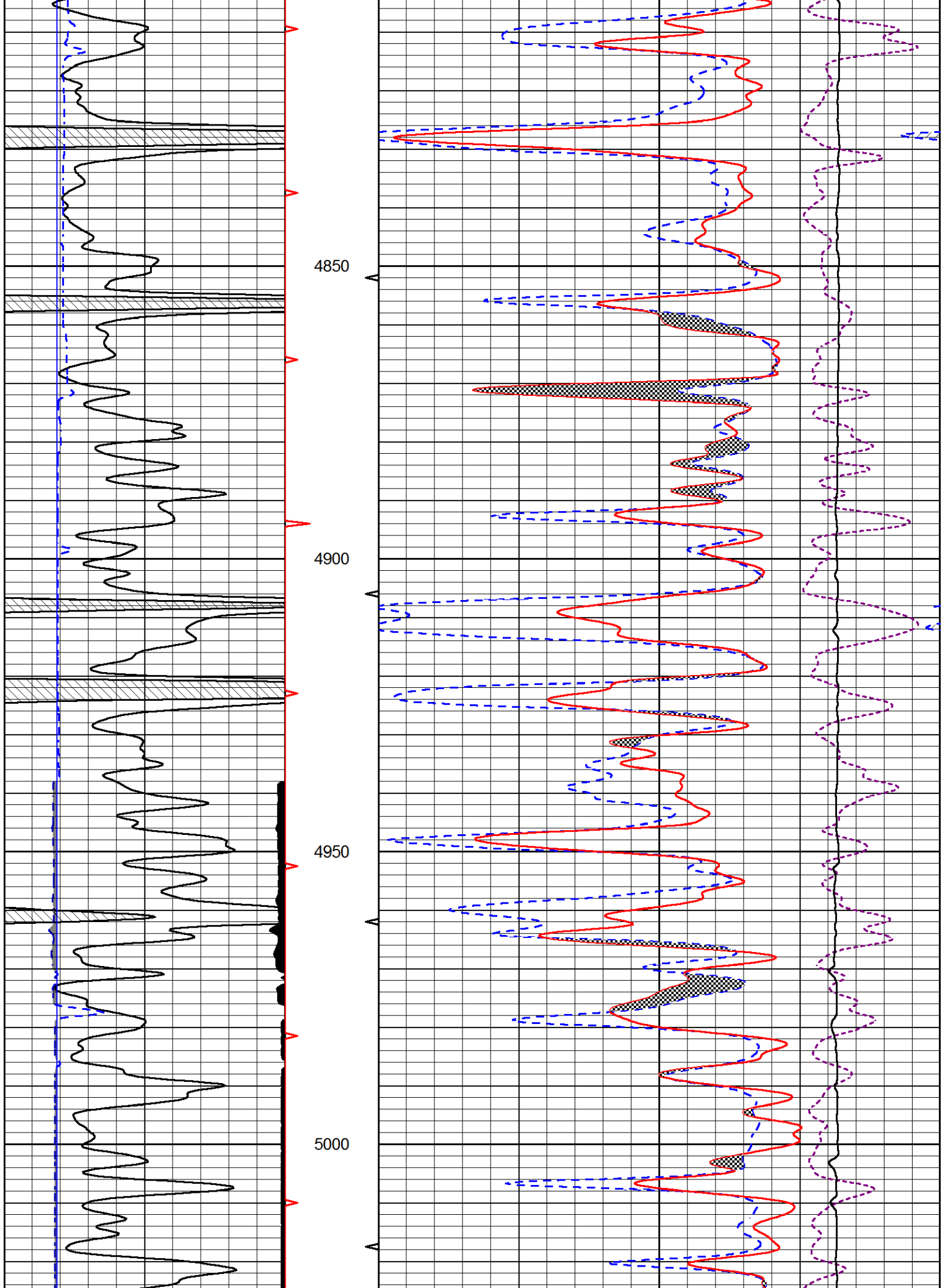
0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

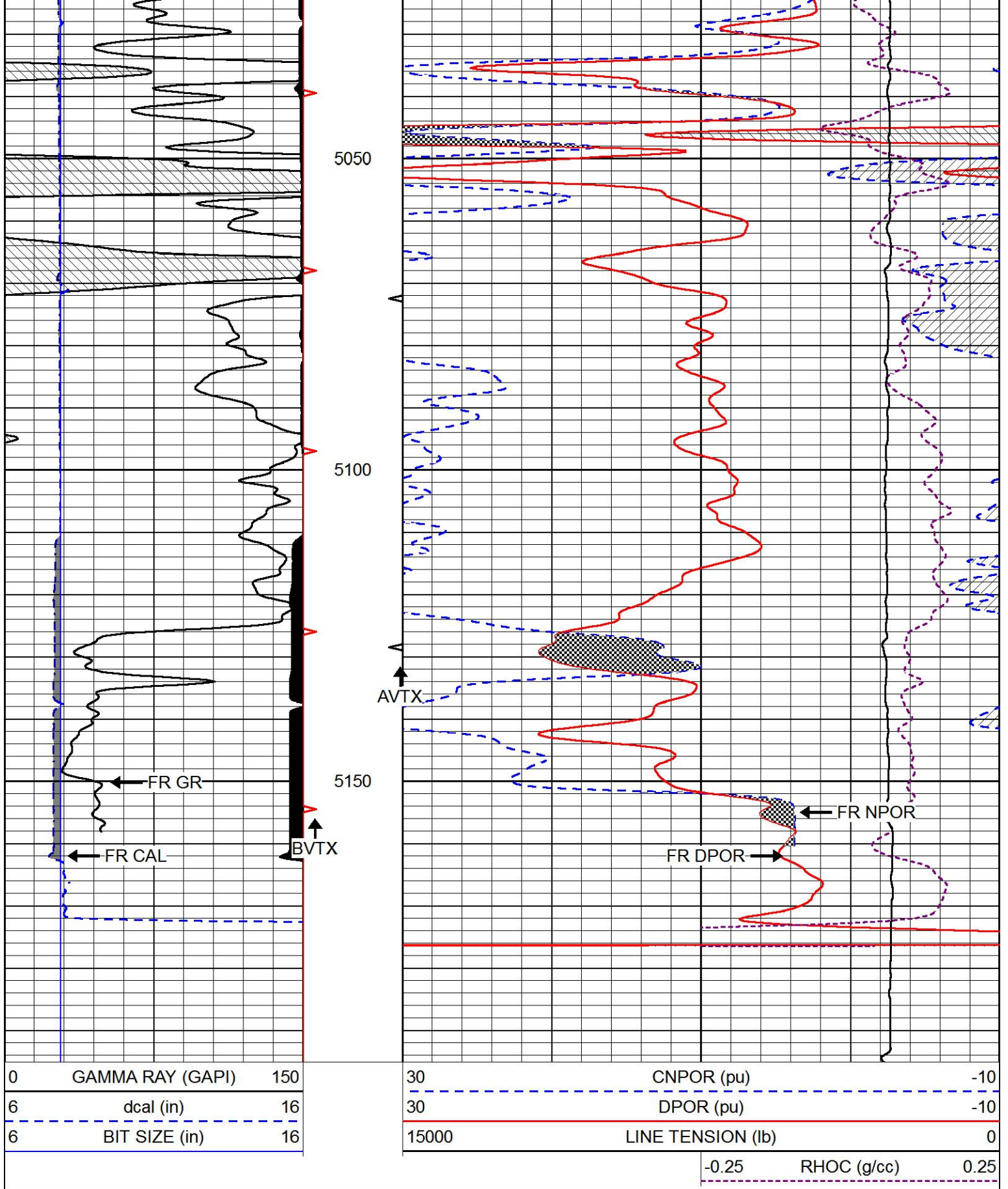
30	CNPOR (pu)	-10
30	DPOR (pu)	-10
15000	LINE TENSION (lb)	0
-0.25	RHOC (g/cc)	0.25











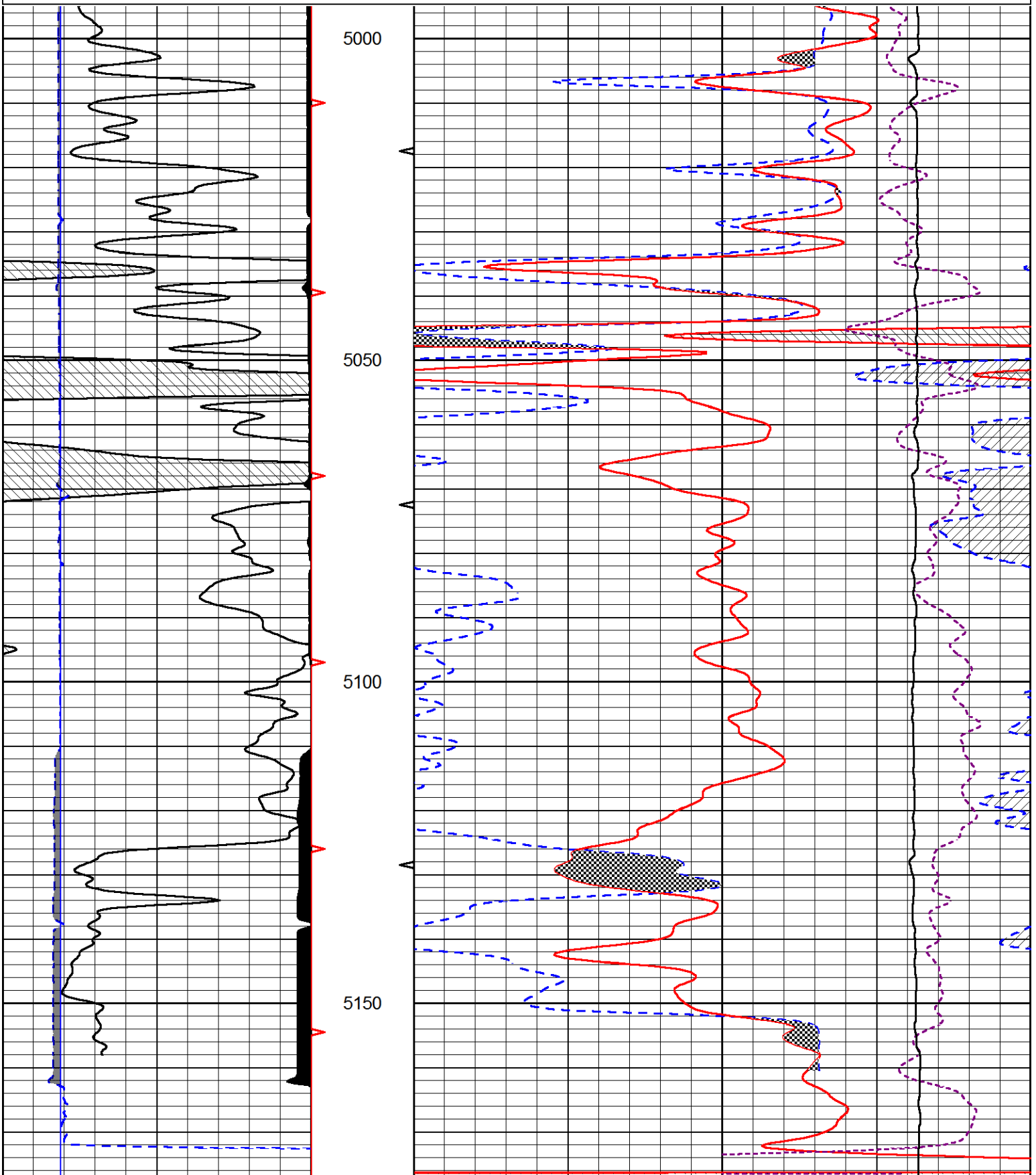
REPEAT SECTION

Database File: mainm_cenar_p0_1_0.db
 Dataset Pathname: stackml/pass2.1
 Presentation Format: cndlspec
 Dataset Creation: Mon Mar 09 00:24:14 2020
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

30	CNPOR (pu)	-10
30	DPOR (pu)	-10
15000	LINE TENSION (lb)	0

-0.25 RHOc (g/cc) 0.25



0	GAMMA RAY (GAPI)	150	30	CNPOR (pu)	-10
6	dcal (in)	16	30	DPOR (pu)	-10
6	BIT SIZE (in)	16	15000	LINE TENSION (lb)	0
				-0.25	RHOC (g/cc) 0.25

Calibration Report

Database File murfin_sharp_c_1_6.db
 Dataset Pathname stackml/pass3.1
 Dataset Creation Mon Mar 09 01:24:08 2020

Dual Induction Calibration Report

Serial-Model: 55-222-M&W
 Calibration Performed: Tue Dec 10 05:11:10 2019

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	167.000	835.000	0.000	255.800	mmho/m	0.500	-41.000
Medium	0.000	1348.000	142.000	255.800	mmho/m	0.370	-15.000

Microlog Calibration Report

Serial-Model: UDM-01-PSI UDM ML
 Performed: Fri May 31 06:10:42 2019

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	25000.0000	-1.8000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	25000.0000	-1.5000
Caliper	1.0019	1.2642	8.0000	22.0000	in	53.3774	-47.4000

Compensated Density Calibration Report

Serial-Model: 934-229-M&W
 Source / Verifier: 21170B /
 Master Calibration Performed: Thu Dec 19 15:46:53 2019

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	3391.68	2392.26	cps
Aluminum	2.670	g/cc	645.86	1568.99	cps
Spine Angle = 75.73			Density/Spine Ratio = 0.535		
	Size		Reading		
Small Ring	4.00	in	1.39		
Large Ring	14.00	in	1.04		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
Tool Model: M&W
Calibration Performed: Wed Nov 16 11:21:36 2016

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: 89-M&W
Tool Model: M&W
Calibration Performed: Tue Dec 10 05:11:34 2019

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



PIONEER
Pioneer Energy Services

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