



# DUAL COMP POROSITY LOG

Company MURFIN DRILLING CO., INC.  
 Well JONES A #4-17  
 Field JONES CANYON SOUTH  
 County CHEYENNE  
 State KANSAS

Company MURFIN DRILLING CO., INC.  
 Well JONES A #4-17  
 Field JONES CANYON SOUTH  
 County CHEYENNE State KANSAS

**Location:** API #: 15-023-21516-00-00  
 1980' FSL & 1980' FEL  
 SEC 17 TWP 1S RGE 37W  
 Permanent Datum GROUND LEVEL Elevation 3225'  
 Log Measured From KELLY BUSHING  
 Drilling Measured From KELLY BUSHING  
 Other Services  
 DIL/MEL  
 BHCS  
 Elevation  
 K.B. 3230'  
 D.F. N/A  
 G.L. 3225'

Date	9/21/2019						
Run Number	ONE						
Type Log	CNL/CDL						
Depth Driller	4770'						
Depth Logger	4771'						
Bottom Logged Interval	4742'						
Top Logged Interval	3600'						
Type Fluid In Hole	CHEMICAL						
Salinity, PPM CL	1000						
Density	9.1						
Level	FULL						
Max. Rec. Temp. F	124						
Operating Rig Time	5 HOURS						
Equipment -- Location	P-24 HAYS						
Recorded By	IAN MABB						
Witnessed By	WES HANSEN						
Borehole Record							
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	0'	295'	8.625"	23#	0'	295'
TWO	7.875"	295'		TD			
Casing Record							

<<< Fold Here >>>

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.  
  
 BIRD CITY, KS.  
 NORTH TO DD RD,, EAST 2 MILES TO RD 30,  
 SOUTH 1 1/2 MILES & EAST INTO

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

THANK YOU FOR USING PIONEER ENERGY SERVICES  
[www.pioneerenergy.com](http://www.pioneerenergy.com)      785-625-3858

Your Pioneer Energy Services Crew	This Log Record Was Witnessed By
Engineer: IAN MABB	Primary Witness: WES HANSEN
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

# Log Variables

DatabaseC:\ProgramData\Warrior\Data\murfin\_jones\_a\_4\_17.db  
 Dataset field/well/stackmel/pass3.1/\_vars\_

## Top - Bottom

A	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	FLUIDDEN g/cc	M	MATRXDEN g/cc
1	7.875	124	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	340	72	Off	4771

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (233-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (207-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (96-916)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00
RLL3F RLL3	15.80 15.80					
CILD	8.00		DIL-PSI HIGH TEMP (1039)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: murfin\_jones\_a\_4\_17.db: field/well/stackmel/pass3.1  
 Total length: 43.08 ft  
 Total weight: 685.00 lb  
 O.D.: 4.00 in

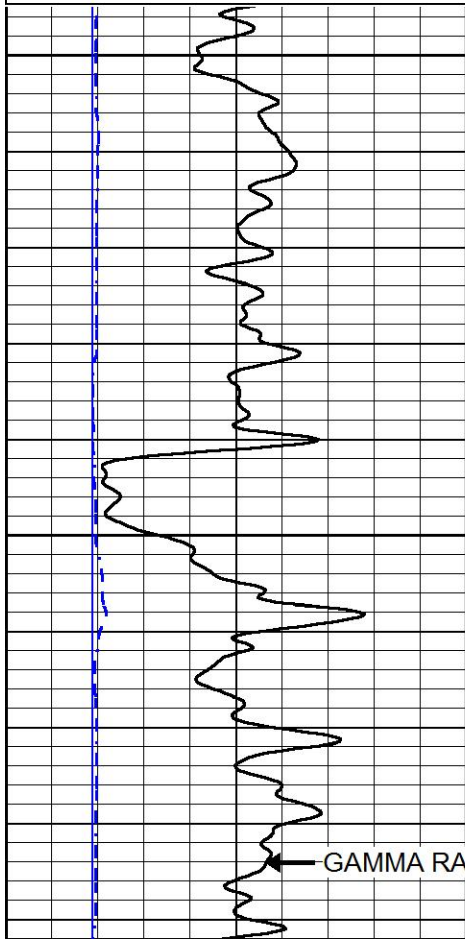


# MAIN PASS

Database File murfin\_jones\_a\_4\_17.db  
 Dataset Pathname stackmel/pass3.1  
 Presentation Format \_cdl  
 Dataset Creation Sat Sep 21 02:13:33 2019  
 Charted by Depth in Feet scaled 1:240

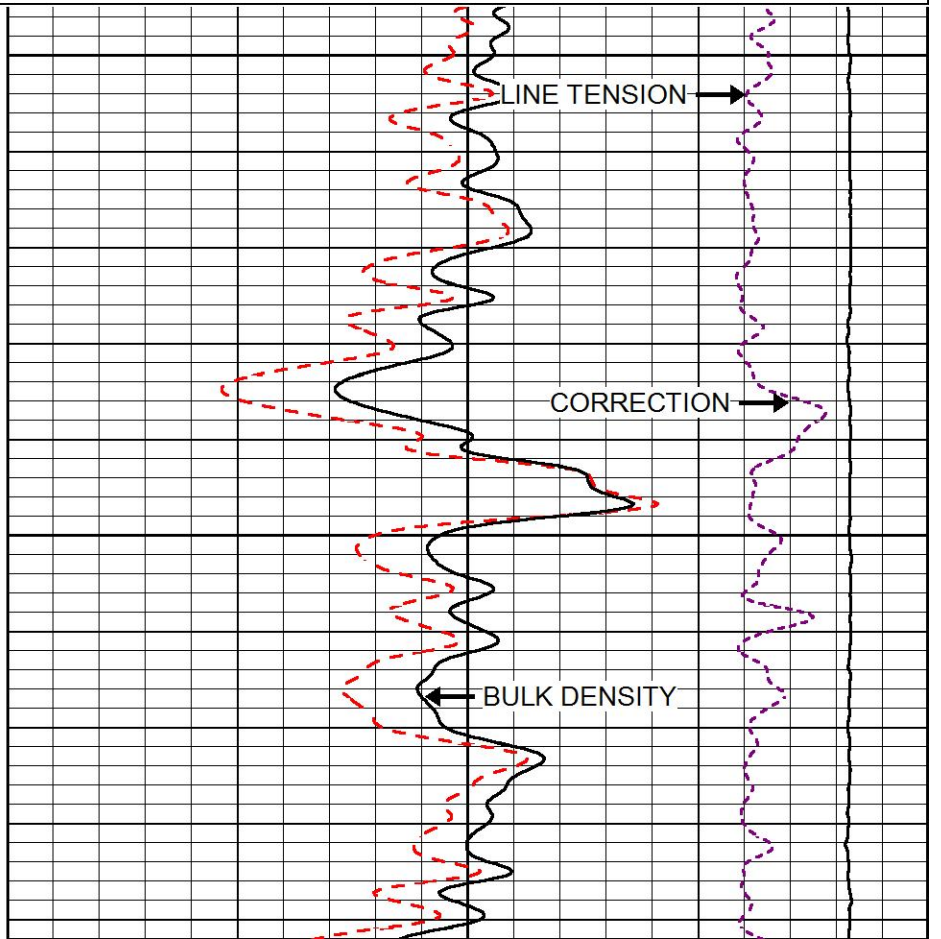
0	GAMMA RAY (GAPI)	150
6	DCAL (in)	16

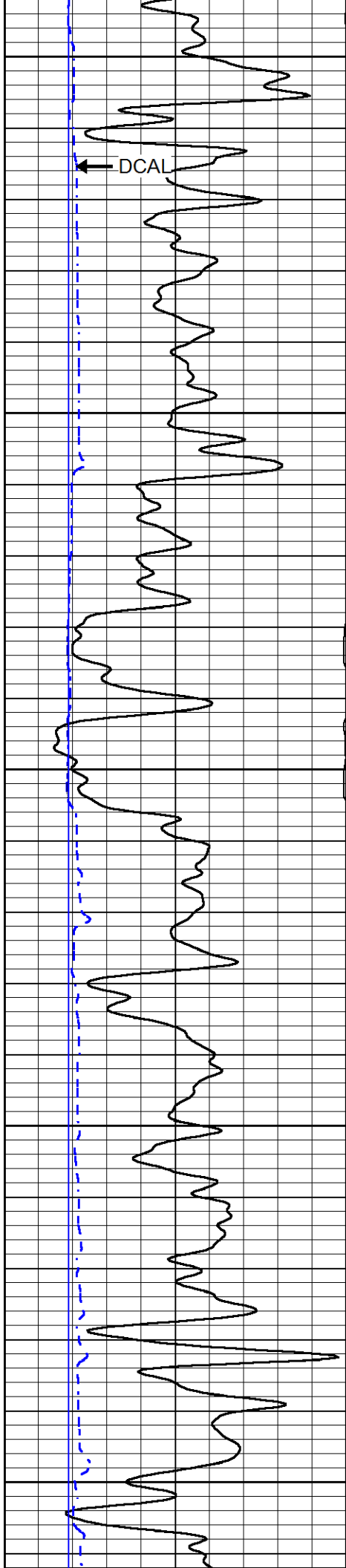
COMPENSATED DENSITY (2.71 MA)	
30	(pu) -10
2	BULK DENSITY (g/cc) 3
15000	LINE TENSION (lb) 0
-0.25	CORRECTION (g/cc) 0.25



3600

3650





3700

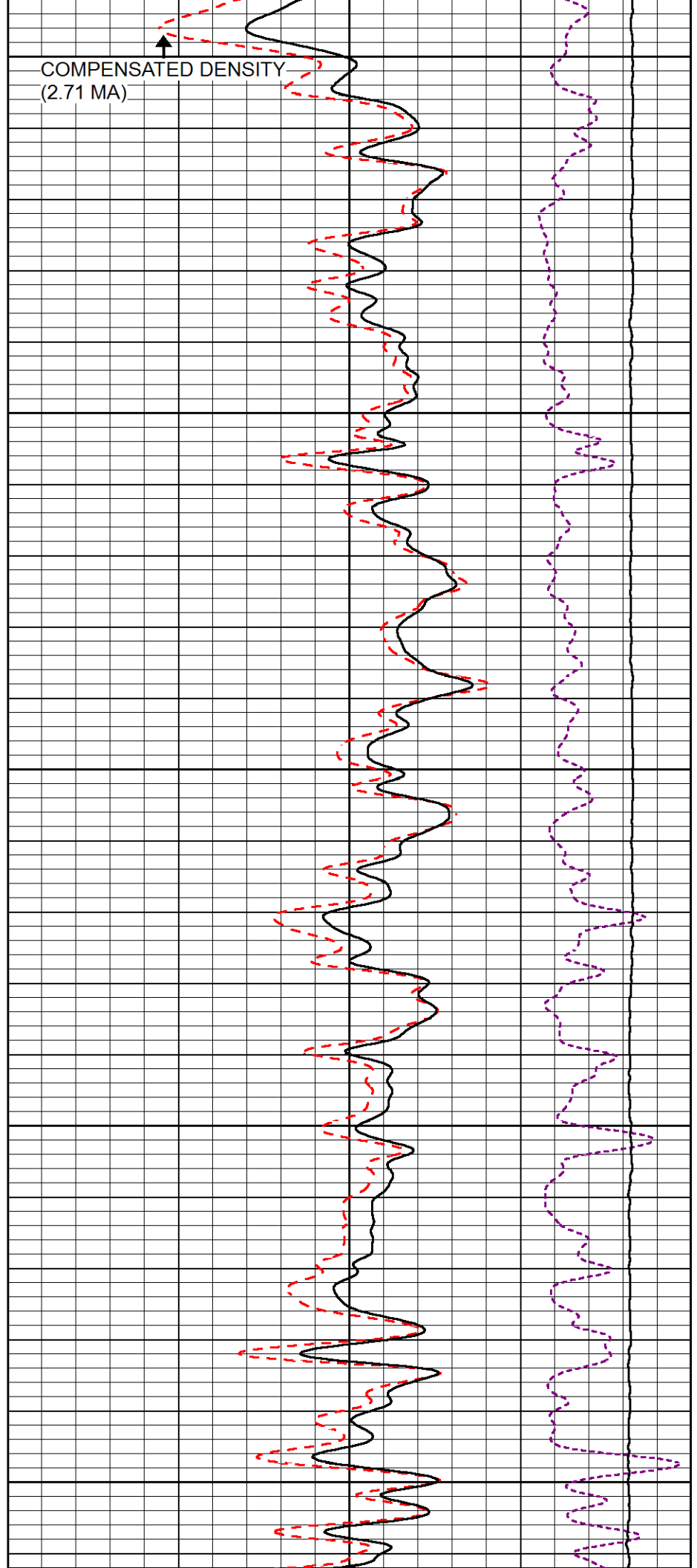
COMPENSATED DENSITY  
(2.71 MA)

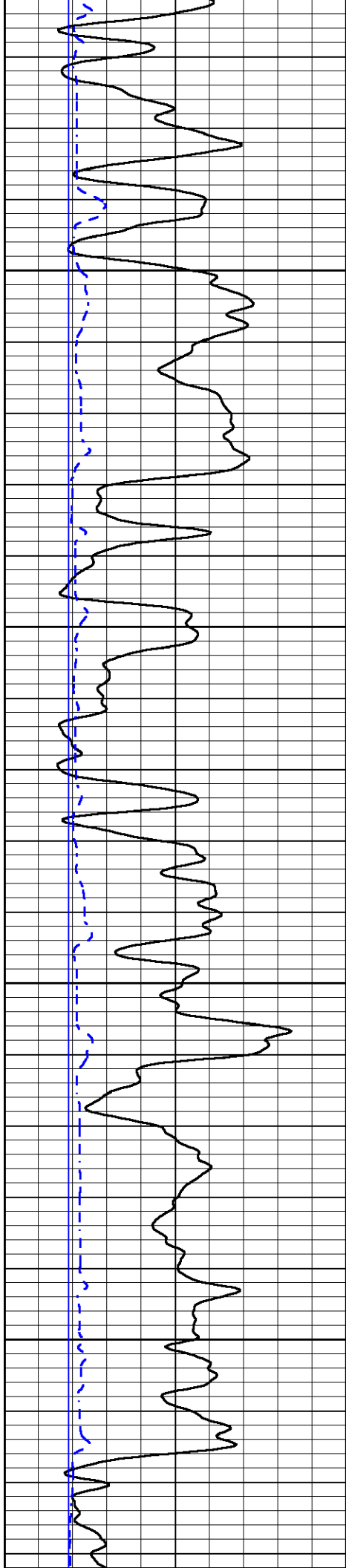
3750

3800

3850

3900



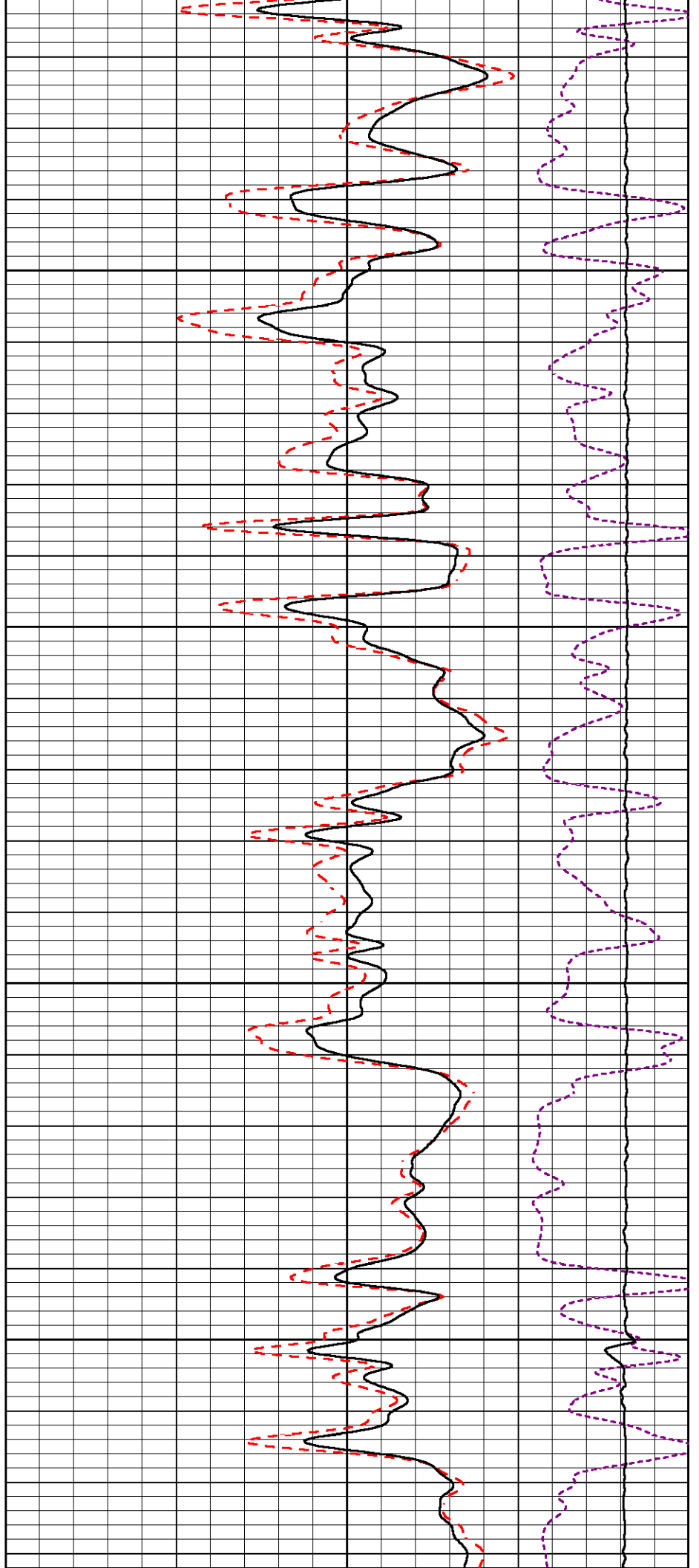


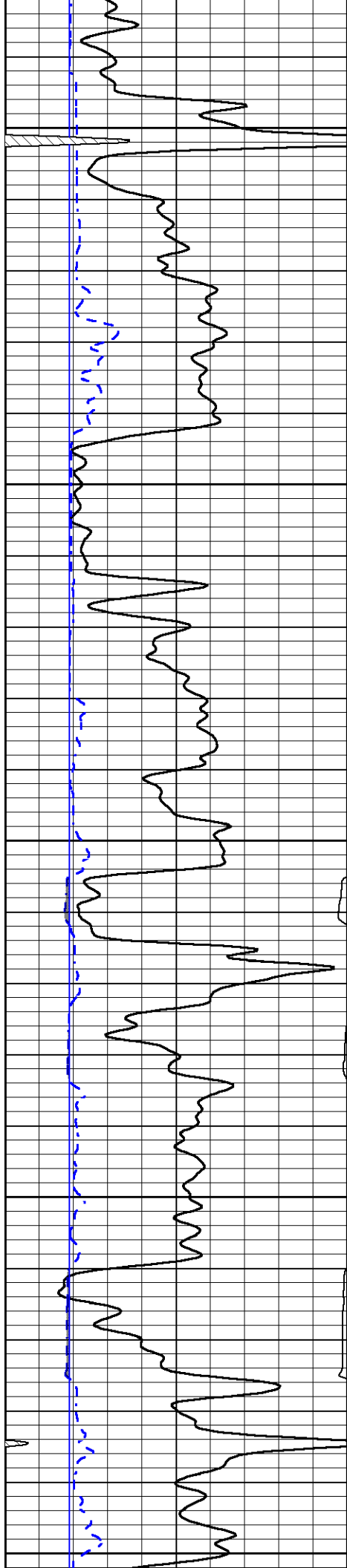
3950

4000

4050

4100





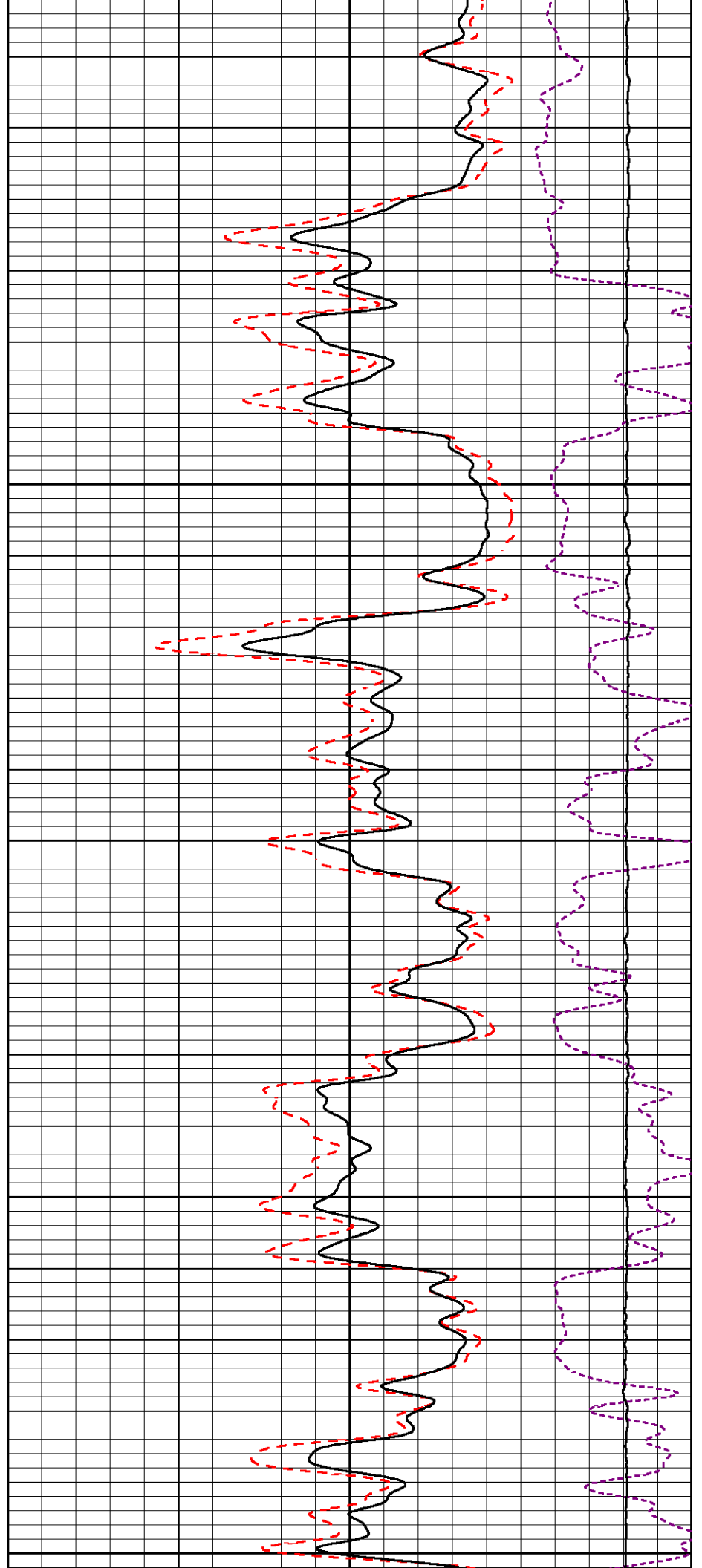
4150

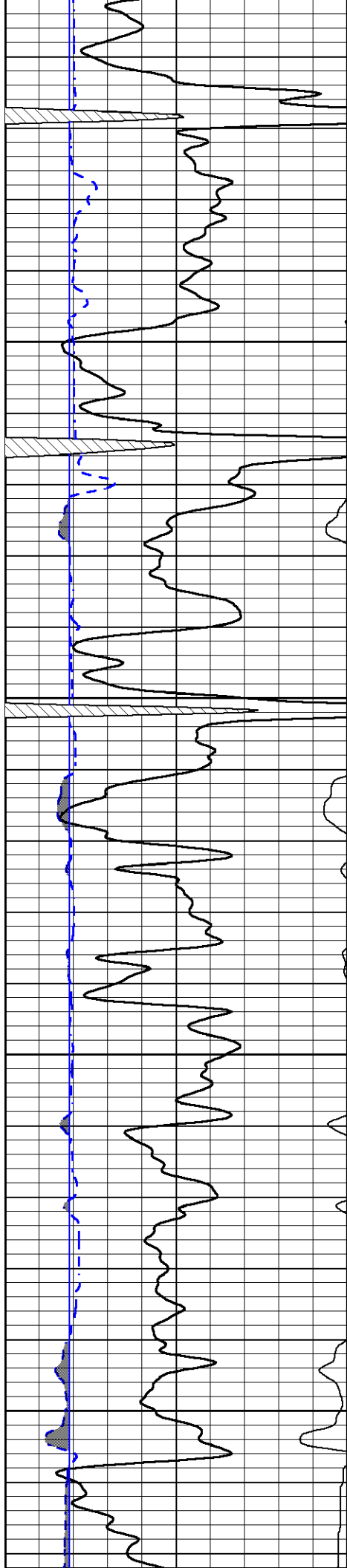
4200

4250

4300

4350



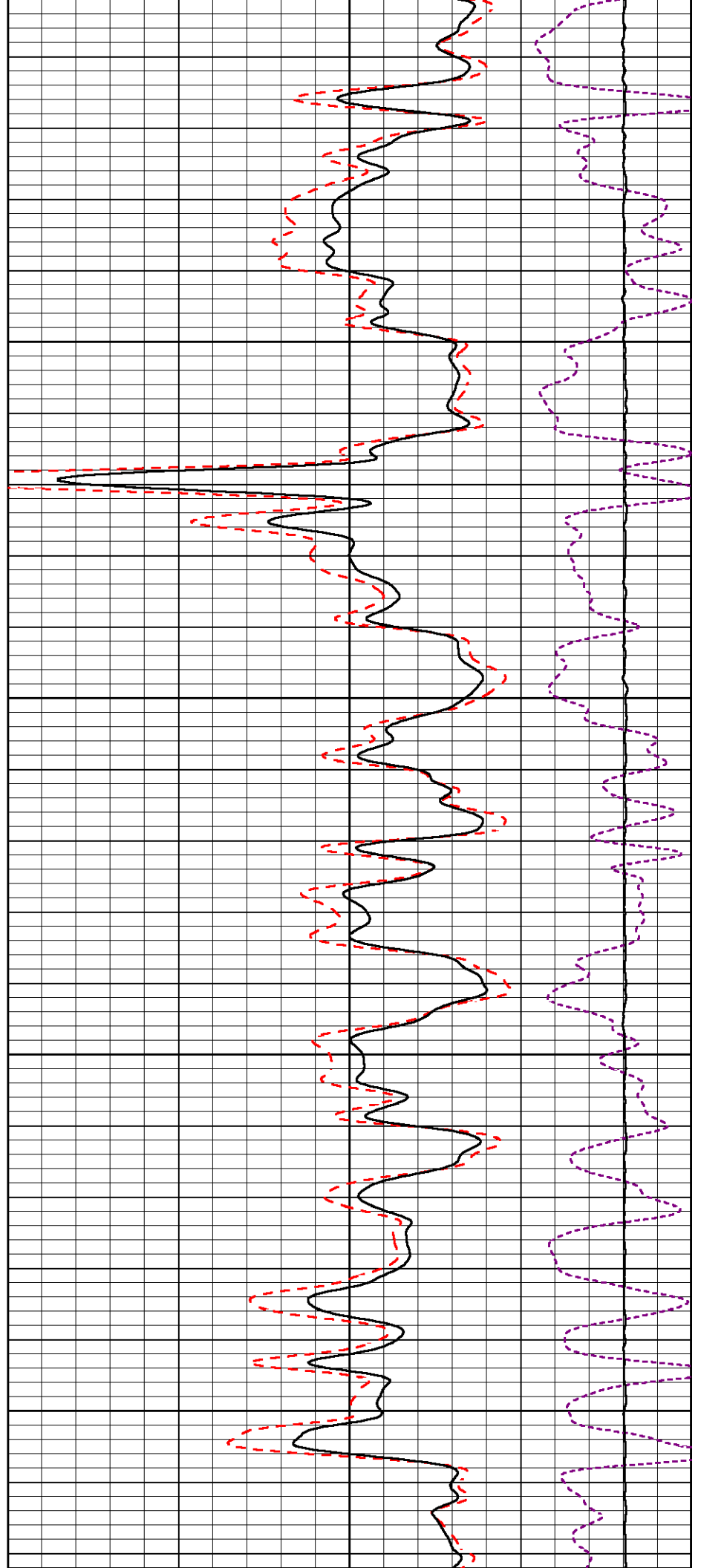


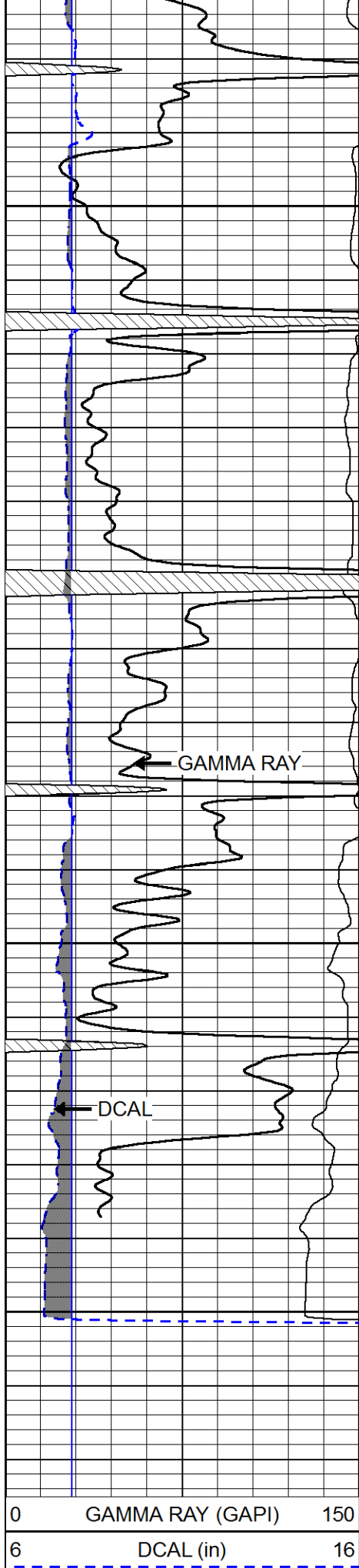
4400

4450

4500

4550





4600

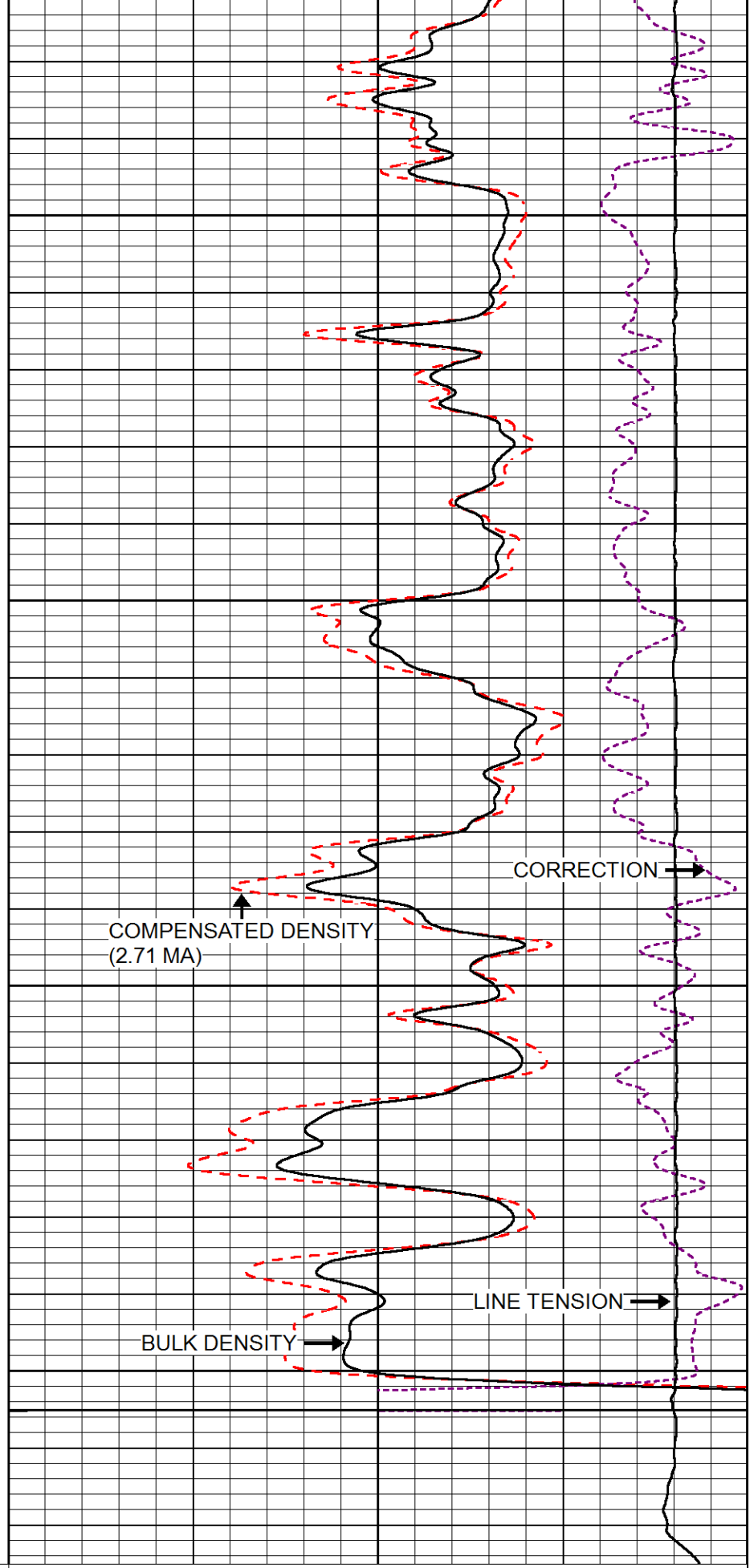
4650

4700

4750

GAMMA RAY

DCAL



COMPENSATED DENSITY (2.71 MA)

30 (pu) -10  
 2 BULK DENSITY (g/cc) 3

2	BULK DENSITY (g/cc)	3
15000	LINE TENSION (lb)	0
	-0.25 CORRECTION (g/cc)	0.25

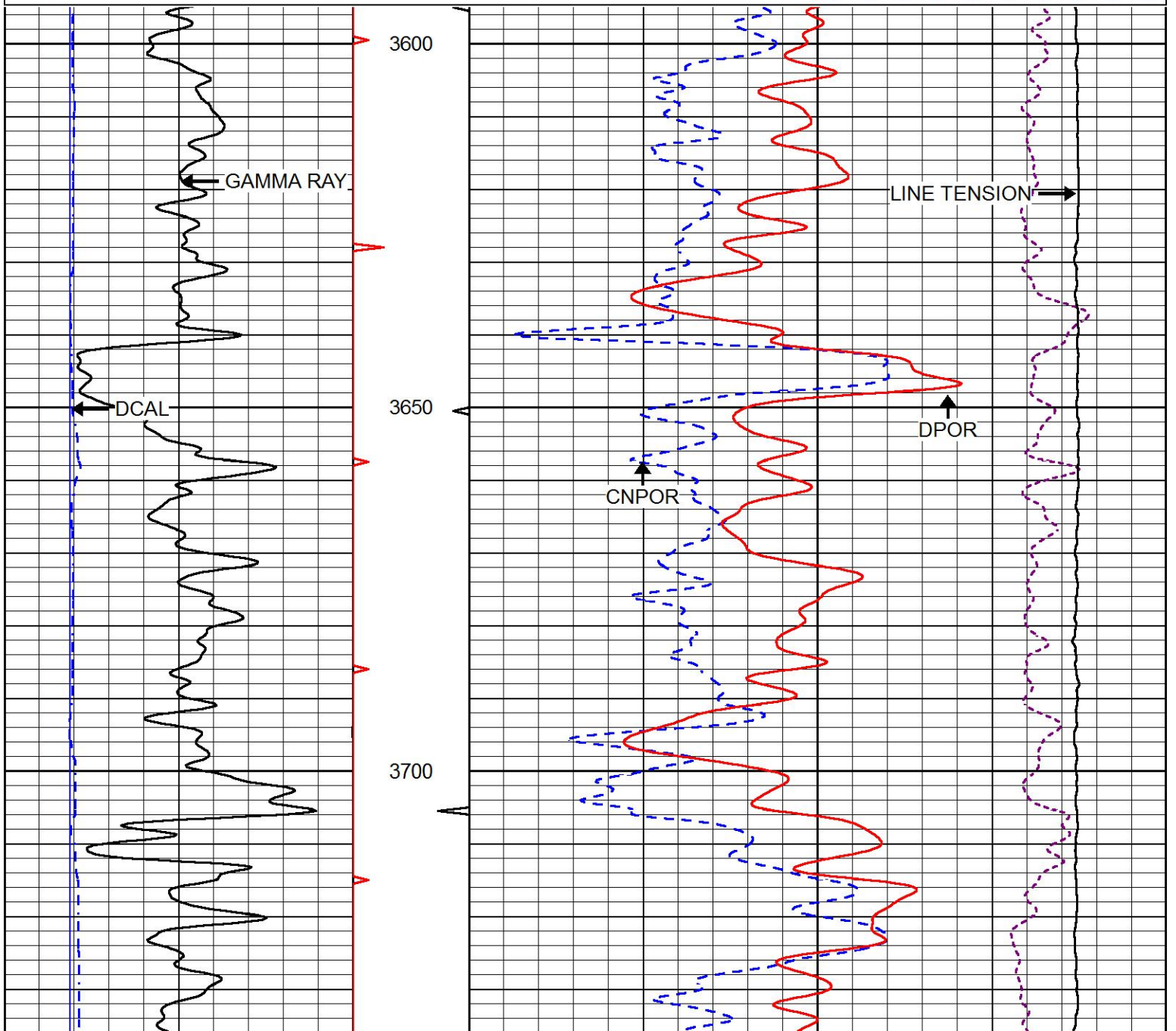


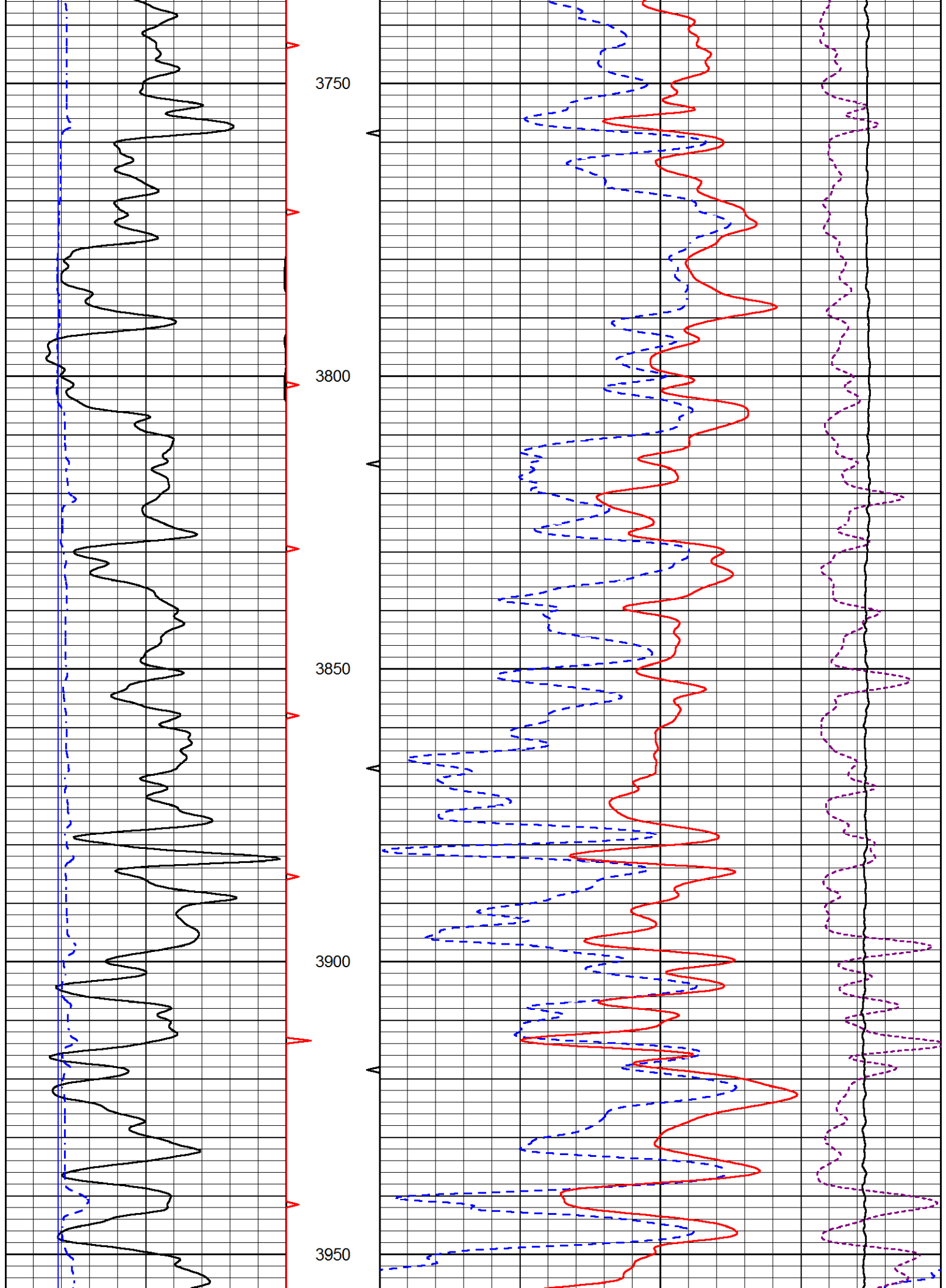
# MAIN PASS

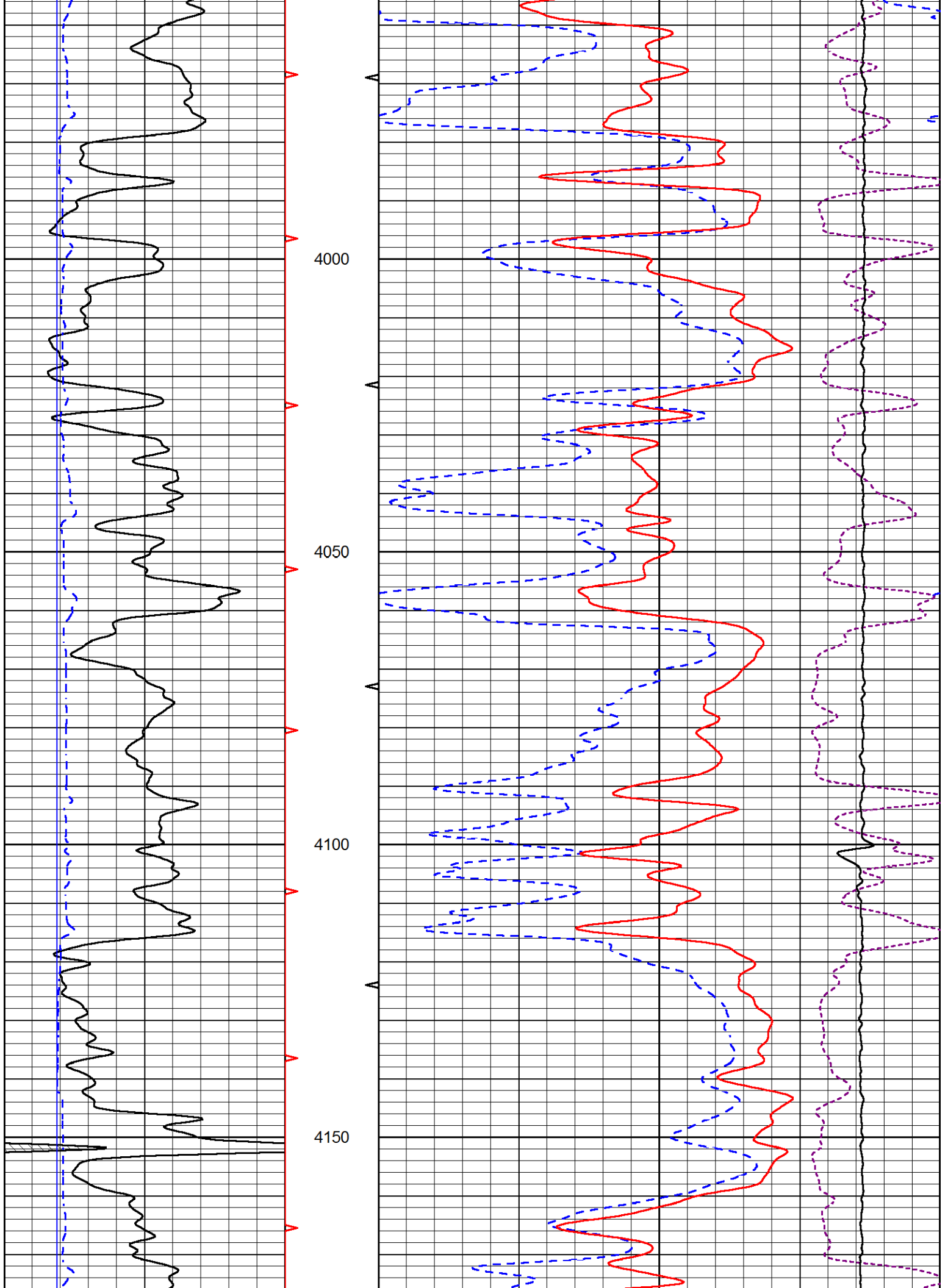
Database File      murfin\_jones\_a\_4\_17.db  
 Dataset Pathname    stackmel/pass3.1  
 Presentation Format    \_CNDLS~1  
 Dataset Creation      Sat Sep 21 02:13:33 2019  
 Charted by            Depth in Feet scaled 1:240

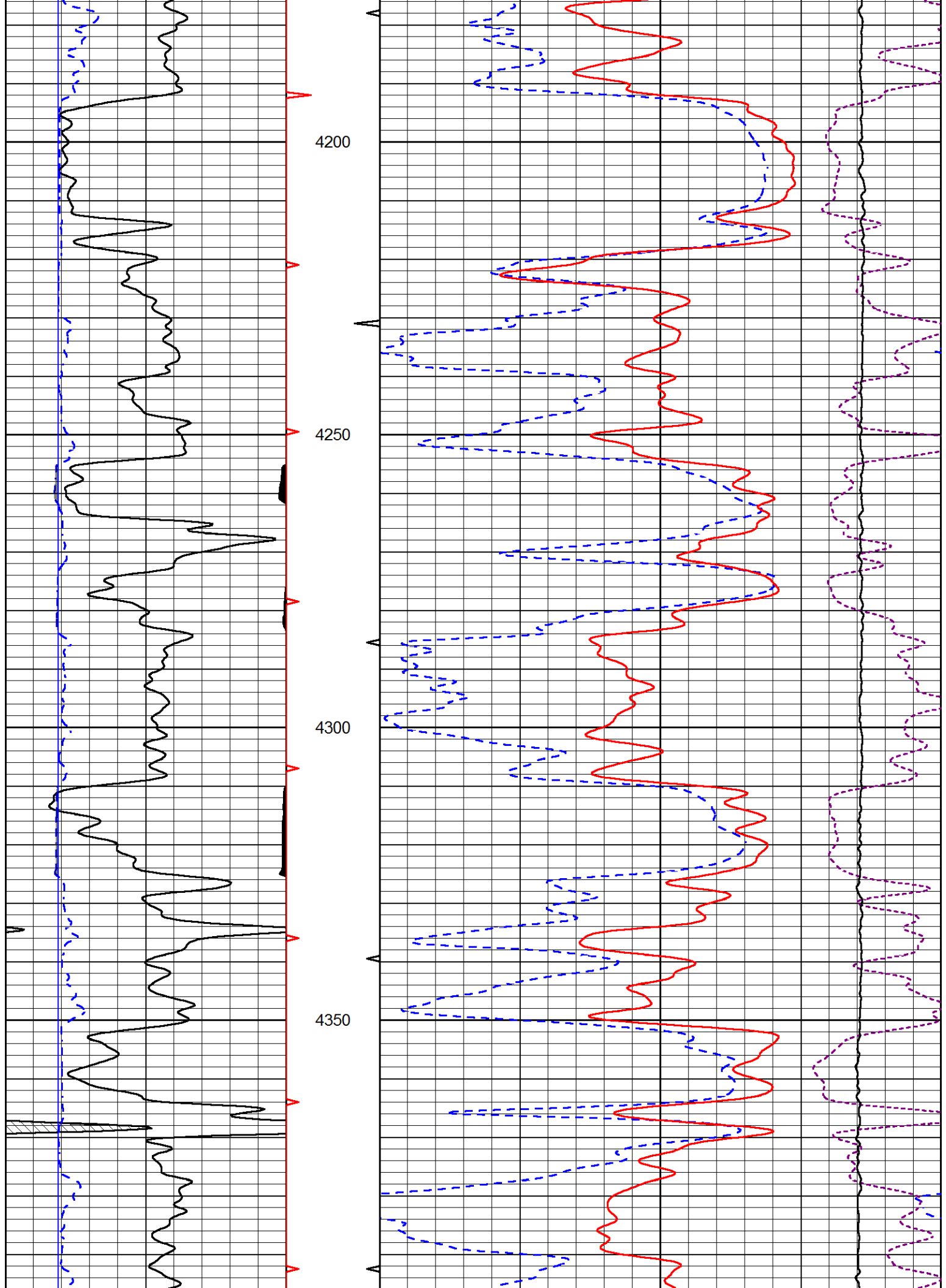
0	GAMMA RAY (GAPI)	150
6	DCAL (in)	16

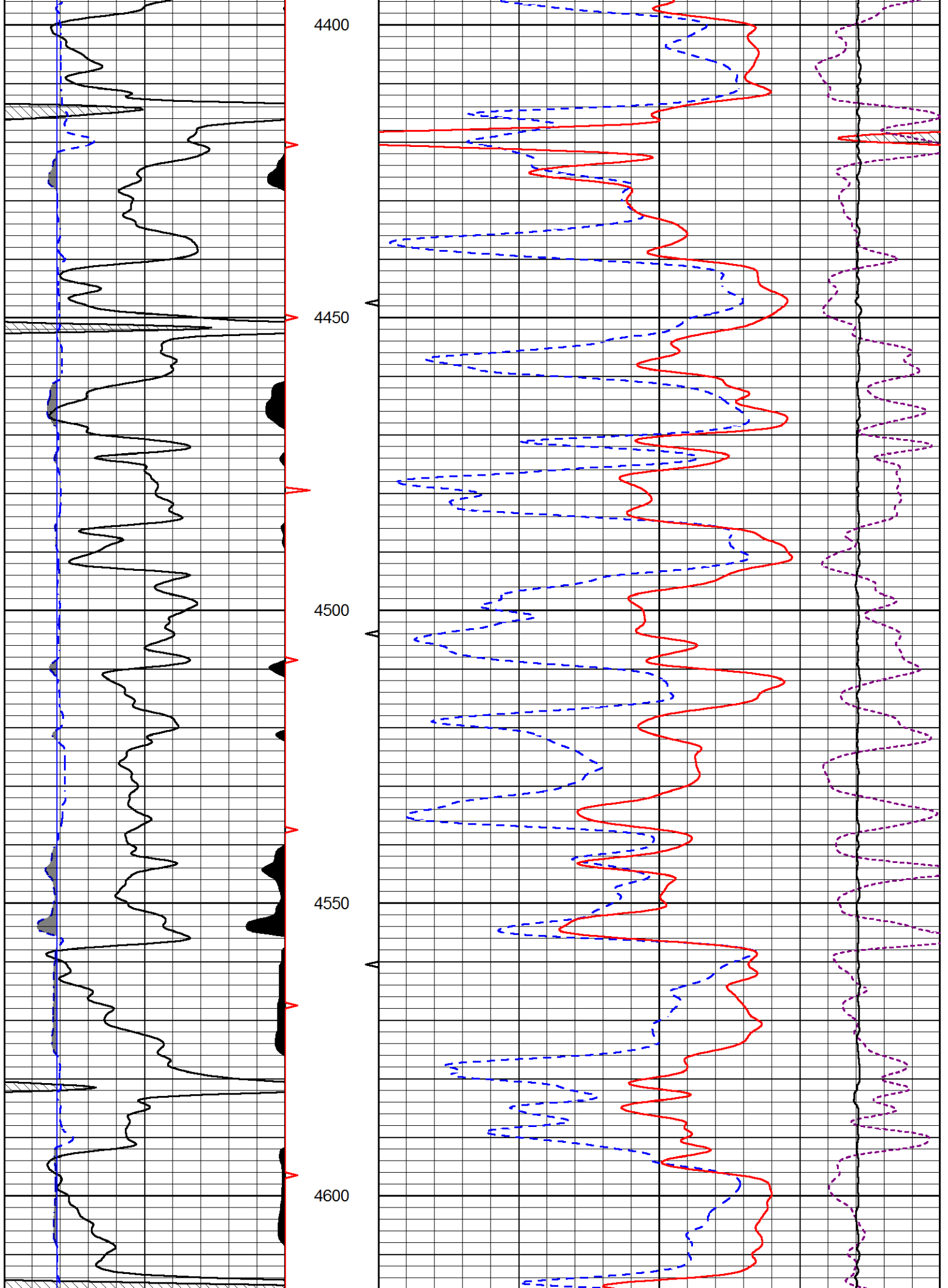
30	CNPOR (pu)	-10
30	DPOR (pu)	-10
10000	LINE TENSION (lb)	0
	-0.25 CORRECTION (g/cc)	0.25

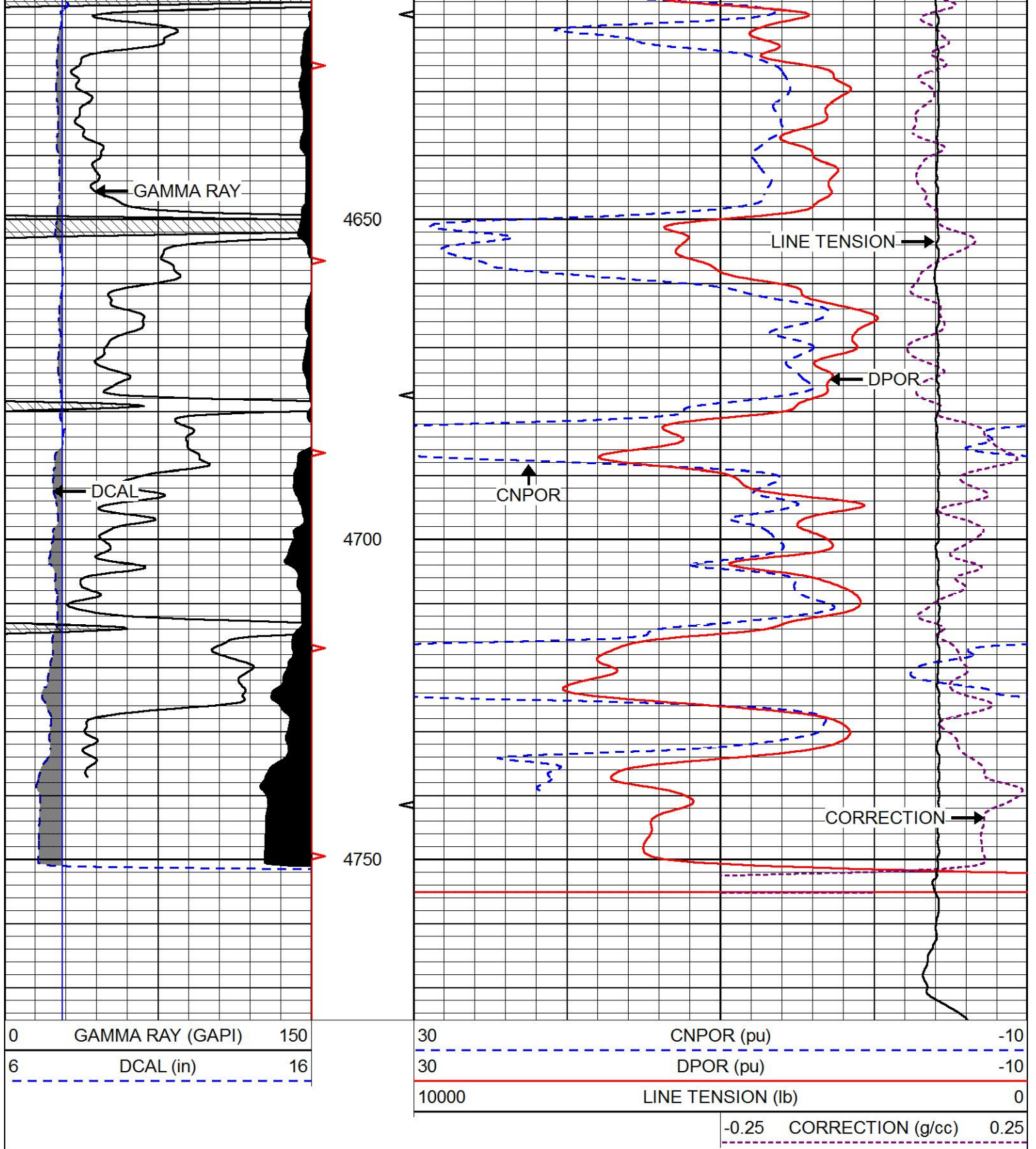










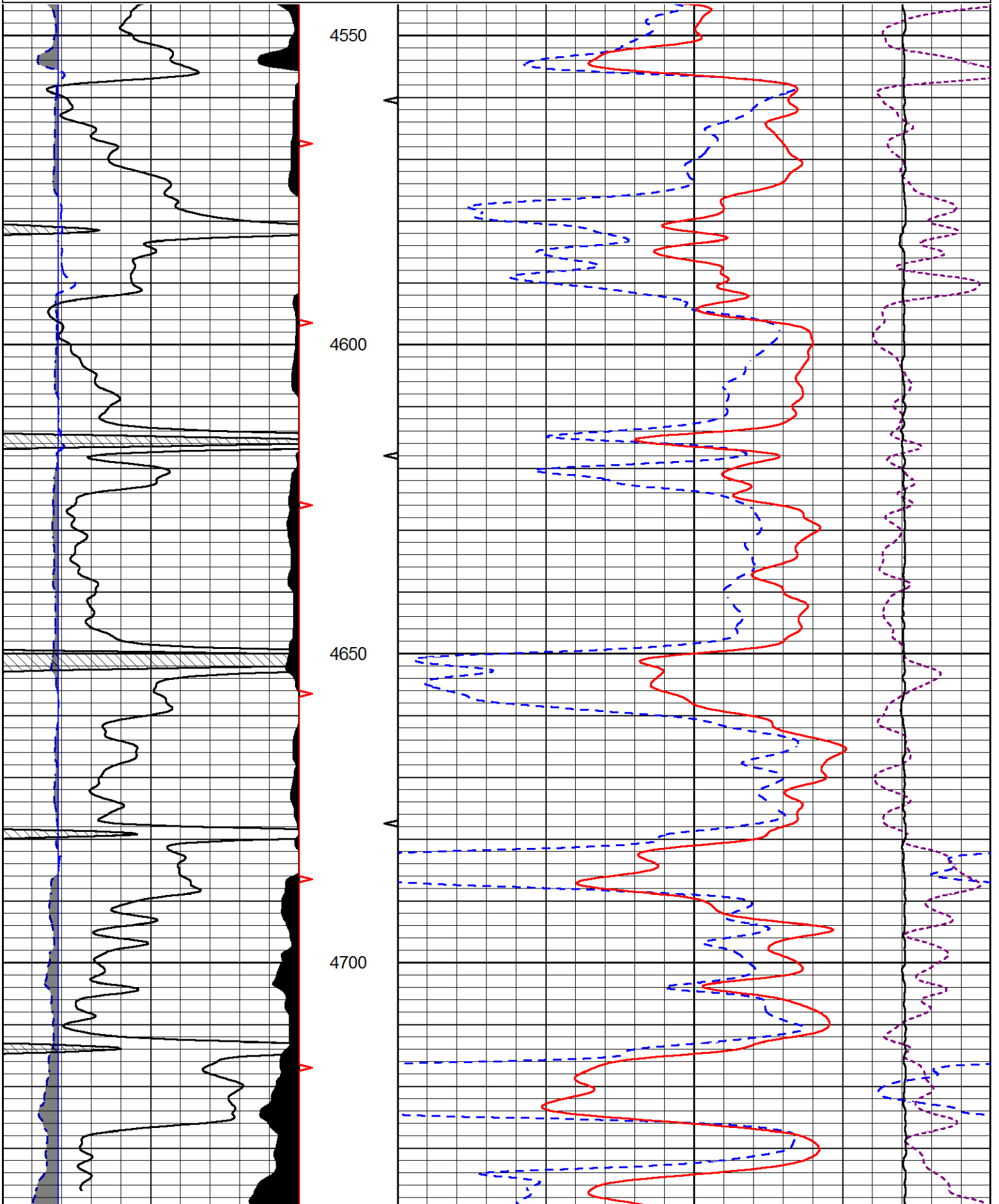


# REPEAT SECTION

Database File      murfin\_jones\_a\_4\_17.db  
 Dataset Pathname    stackmel/pass2.1  
 Presentation Format    \_CNDLS~1  
 Dataset Creation      Sat Sep 21 02:21:25 2019

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

30	CNPOR (pu)	-10
30	DPOR (pu)	-10
10000	LINE TENSION (lb)	0
-0.25	CORRECTION (g/cc)	0.25





	Size		Reading
Small Ring	4.00	in	1.74
Large Ring	16.00	in	1.38

## Compensated Neutron Calibration Report

Serial Number: 207-MW  
 Tool Model: M&W  
 Calibration Performed: WED FEB 13 10:30:30 2019

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: 233-M&W  
 Tool Model: M&W  
 Calibration Performed: Fri Feb 07 01:42:40 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.5500 GAPI/cps



**PIONEER**  
 Pioneer Energy Services

Company MURFIN DRILLING CO., INC.  
 Well JONES A #4-17  
 Field JONES CANYON SOUTH  
 County CHEYENNE  
 State KANSAS