



DUAL COMP POROSITY LOG

Company MURFIN DRILLING COMPANY, INC
 Well CWA 'E' #1-17
 Field WILDCAT
 County RAWLINS
 State KANSAS

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Location: API #: 15-153-21200-00-00
 1100' FNL & 330' FWL
 SEC 17 TWP 3S RGE 35W
 Permanent Datum GROUND LEVEL Elevation 3253'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services DIL/MEL BHCS
 Elevation 3258'
 K.B. N/A
 D.F. N/A
 G.L. 3253'

Date	9/20/2017
Run Number	ONE
Type Log	CNL/CDL
Depth Driller	4900'
Depth Logger	4902'
Bottom Logged Interval	4873'
Top Logged Interval	3850'
Type Fluid In Hole	CHEMICAL
Salinity, PPM CL	3400
Density	9.2
Level	FULL
Max. Rec. Temp. F	125
Operating Rig Time	5 HOURS
Equipment -- Location	91 HAYS
Recorded By	D. SCHMIDT
Witnessed By	PAUL GUNZELMAN

Run No.	Bit	Borehole Record			Casing Record		
		From	To	Size	Wgt.	From	To
ONE	12.25"	0'	345'	8.625"	23#	0'	345'
TWO	7.875"	345'					

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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.

ATWOOD,
 WEST TO 8 RD, 3/4 NORTH,
 EAST INTO

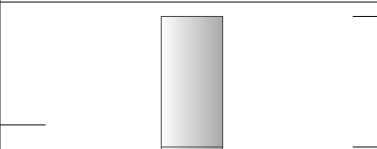
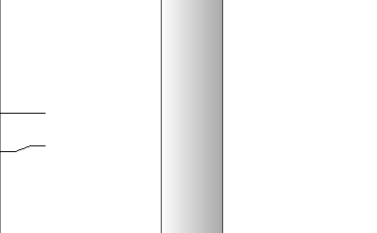
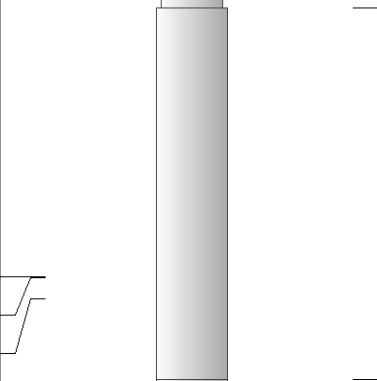
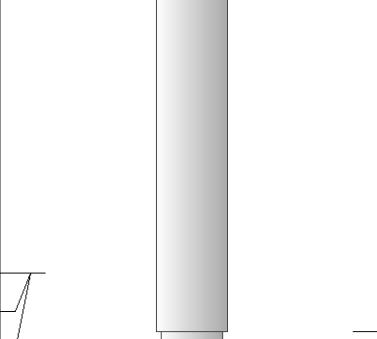
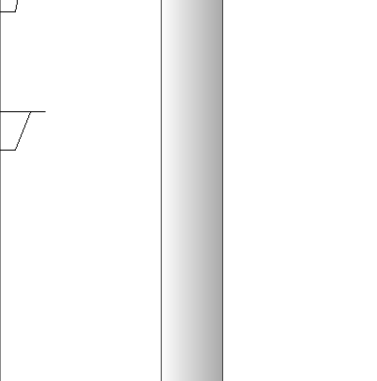
Log Measured From: KELLY BUSHING 5 Ft. Above Permanent Datum

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: D. SCHMIDT	Primary Witness: PAUL GUNZELMAN
Operator:	Secondary Witness:
Operator:	Secondary Witness:
Operator:	Secondary Witness:

Top - Bottom

M 2	A 1	SPSHIFT mV 140	SNDERRM mmho/m 0	SNDERR mmho/m 0	SZCOR Off	NPORSEL Limestone	FLUIDDEN g/cc 1
MATRXDEN g/cc 2.71	SRFTEMP degF 80	CASETHCK in 0	CASEOD in 5.5	PERFS 0	TDEPTH ft 4902	BOTTEMP degF 125	BOREID in 7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89)	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 (90-1031)	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-M&W (PSI 91)	18.50	3.50	220.00
CILM	4.70					
SP	0.20					

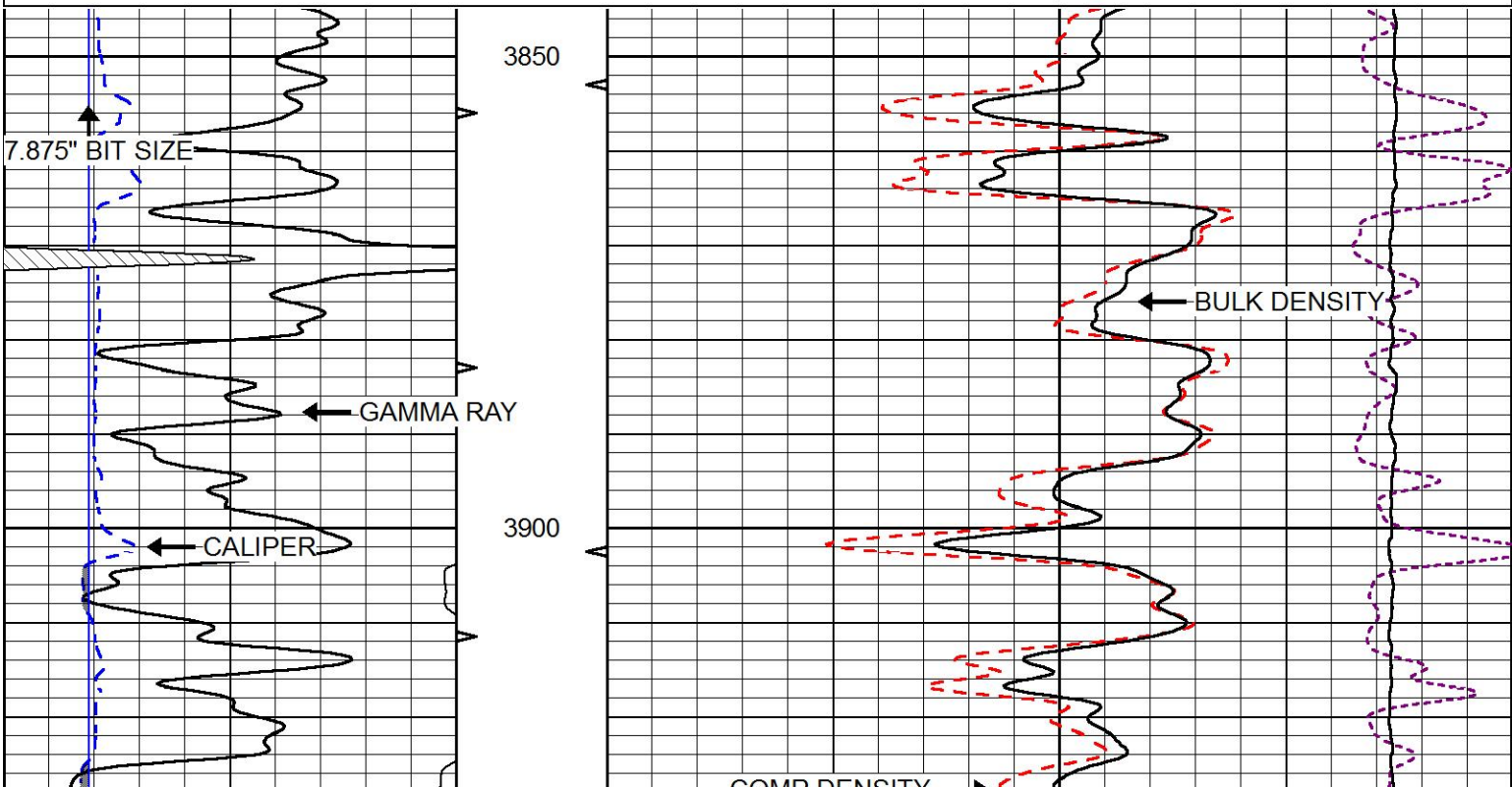
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 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

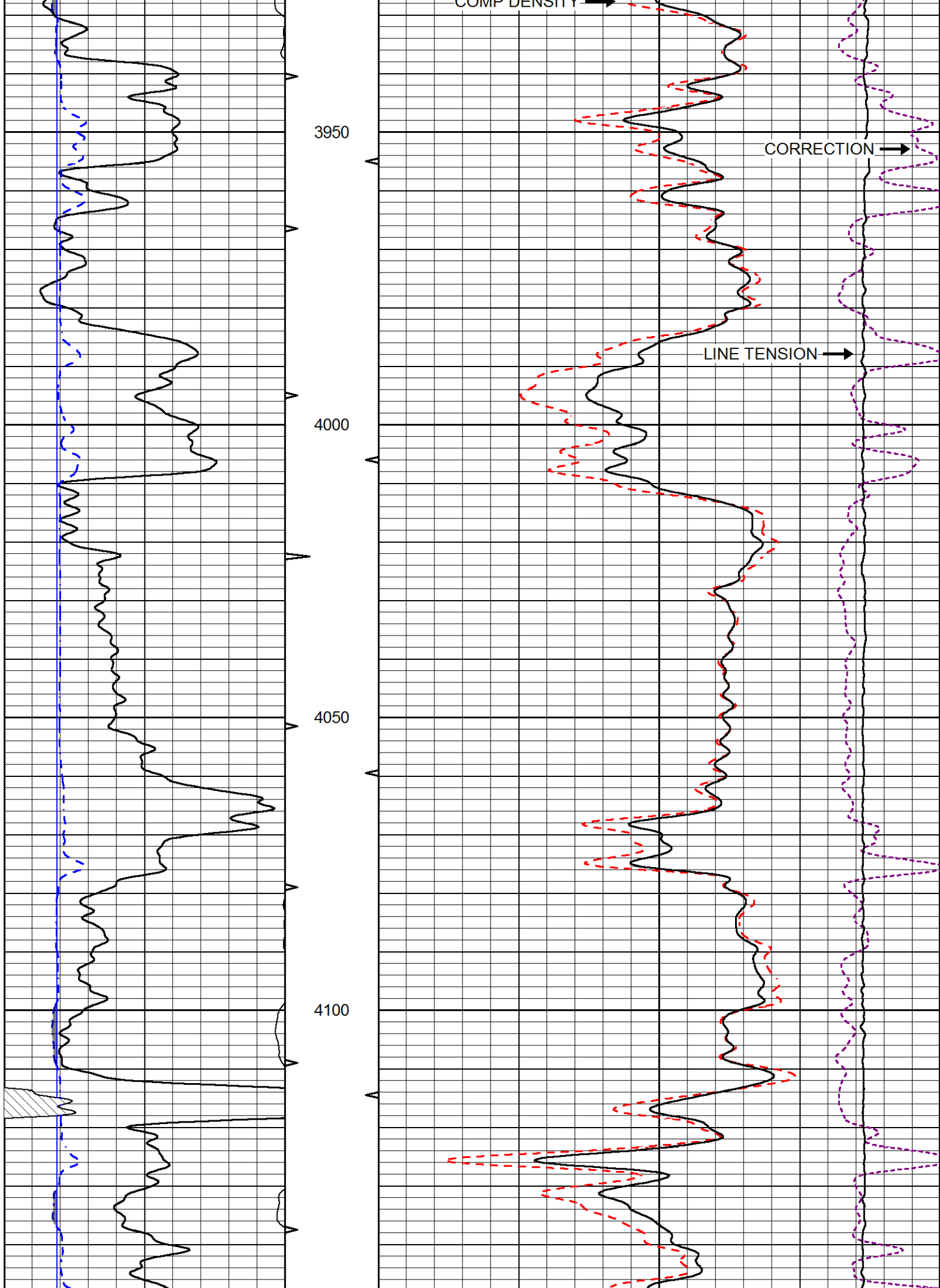


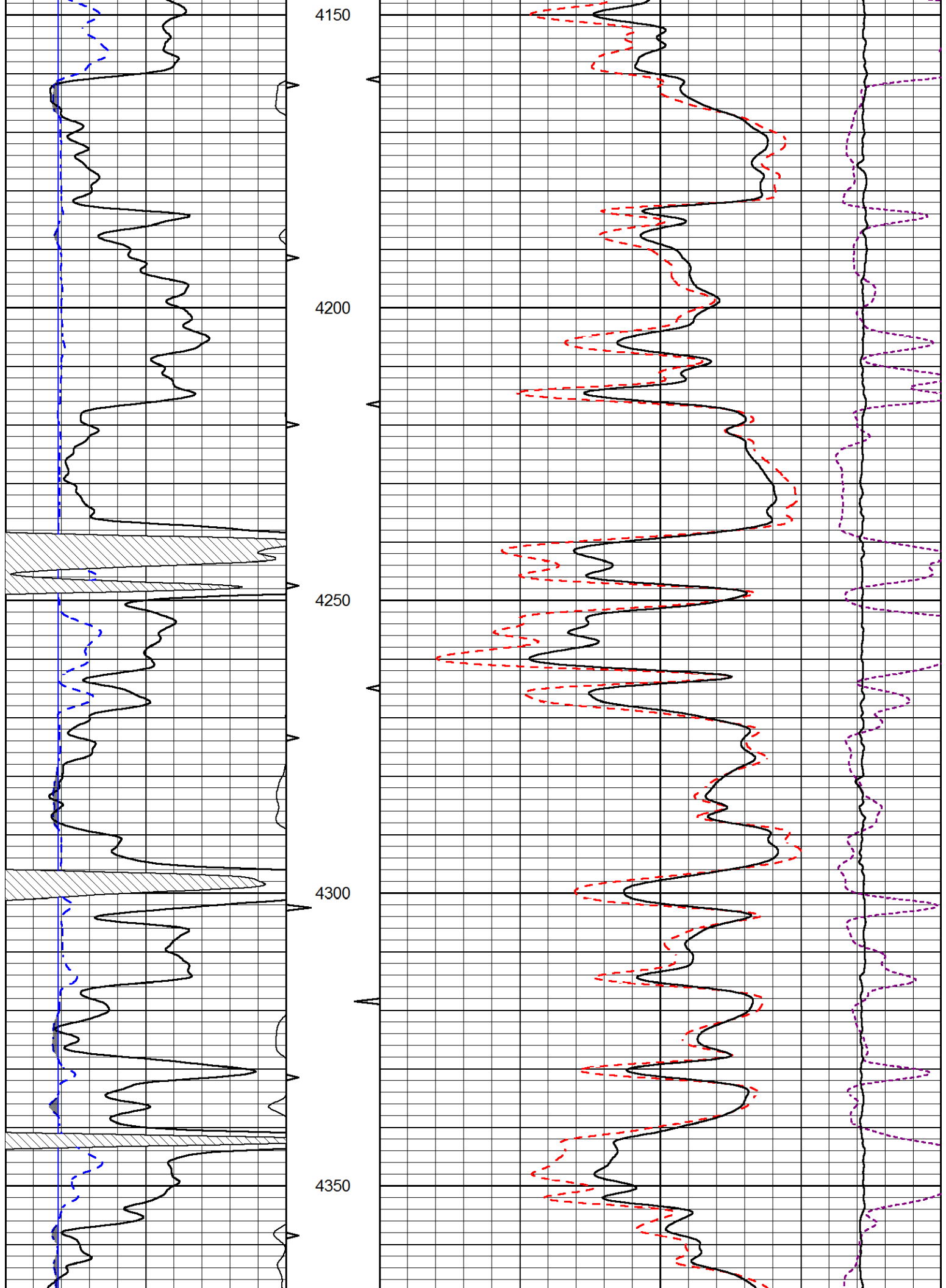
MAIN PASS

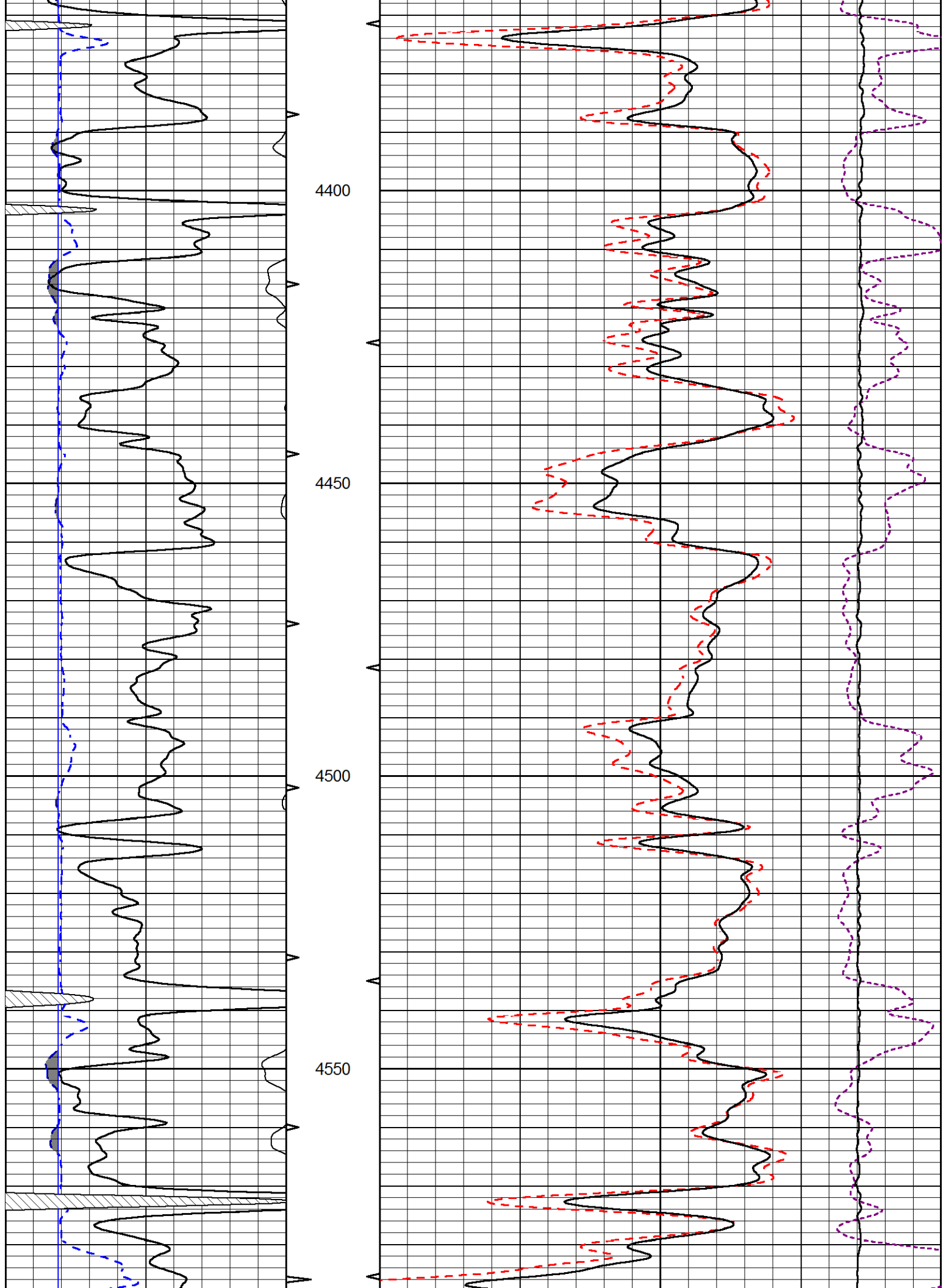
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 Charted by: Depth in Feet scaled 1:240

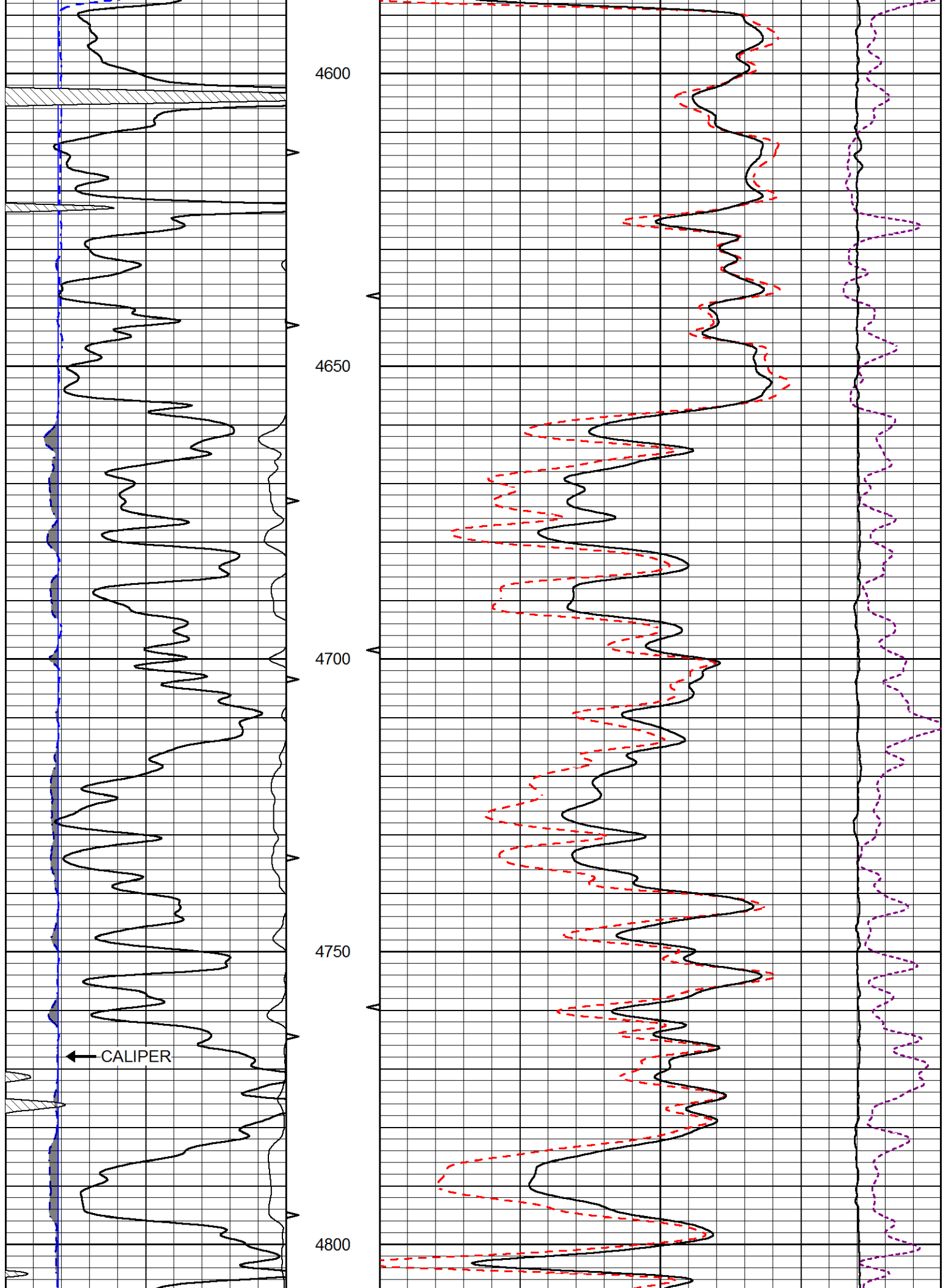
0	Gamma Ray (GAPI)	150	Compensated Density (2.71 MA)	
6	Caliper (in)	16	(pu)	-10
			Bulk Density (g/cc)	3
			Line Tension (lb)	0
			-0.25 Correction (g/cc)	0.25

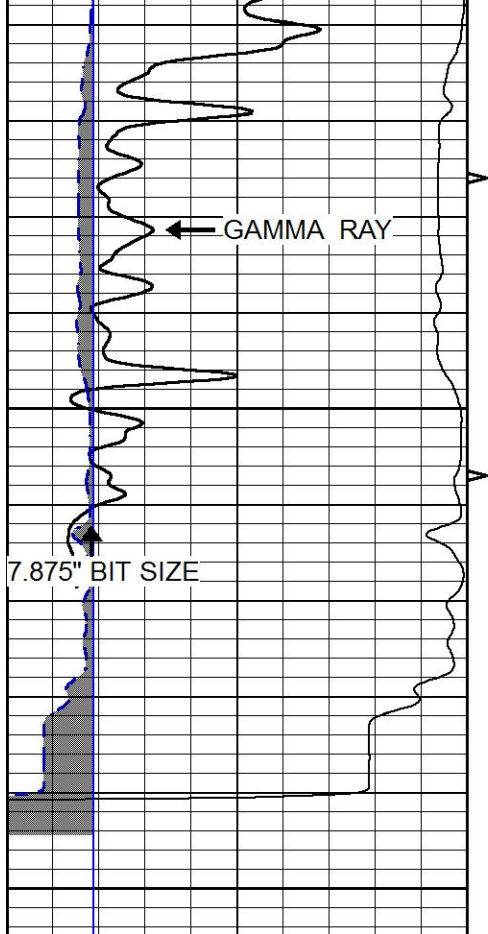








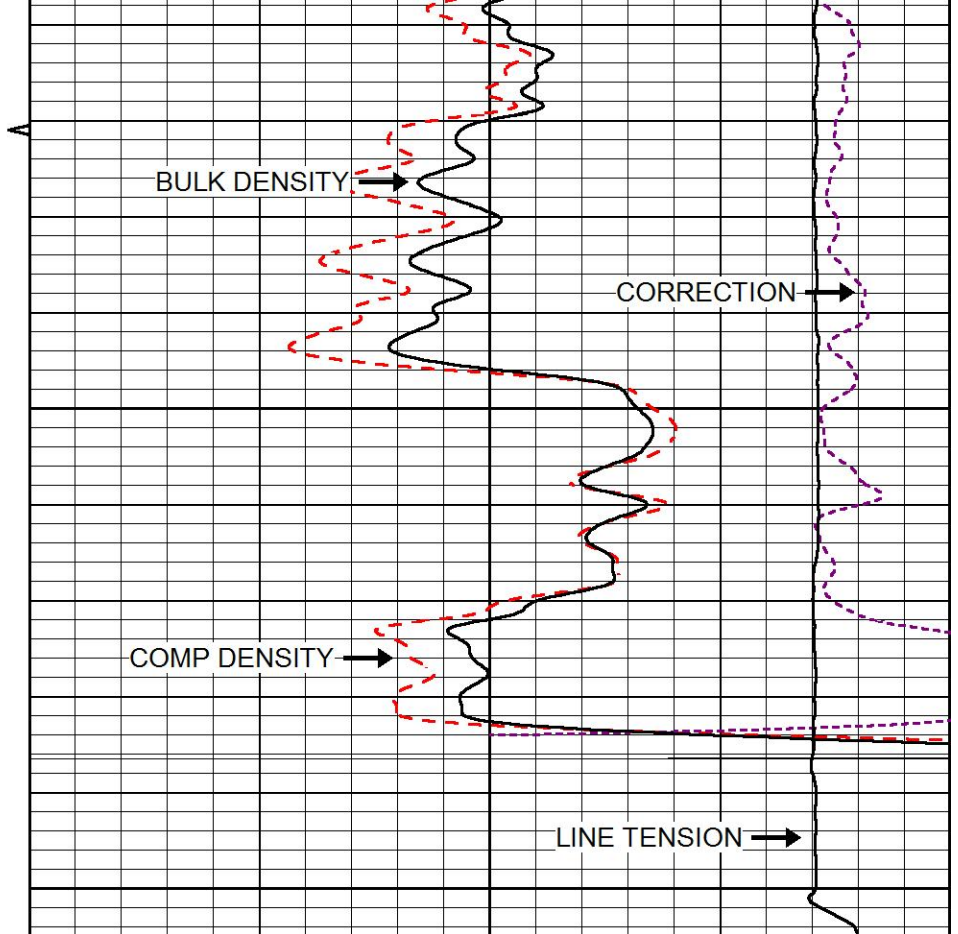




0	Gamma Ray (GAPI)	150
6	Caliper (in)	16

4850

4900



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

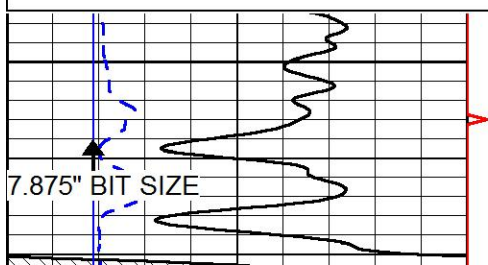


MAIN PASS

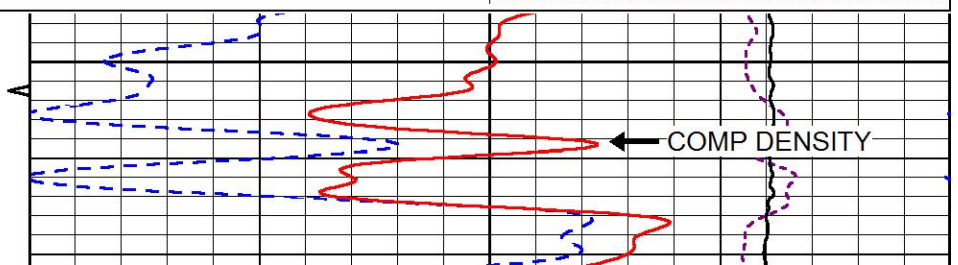
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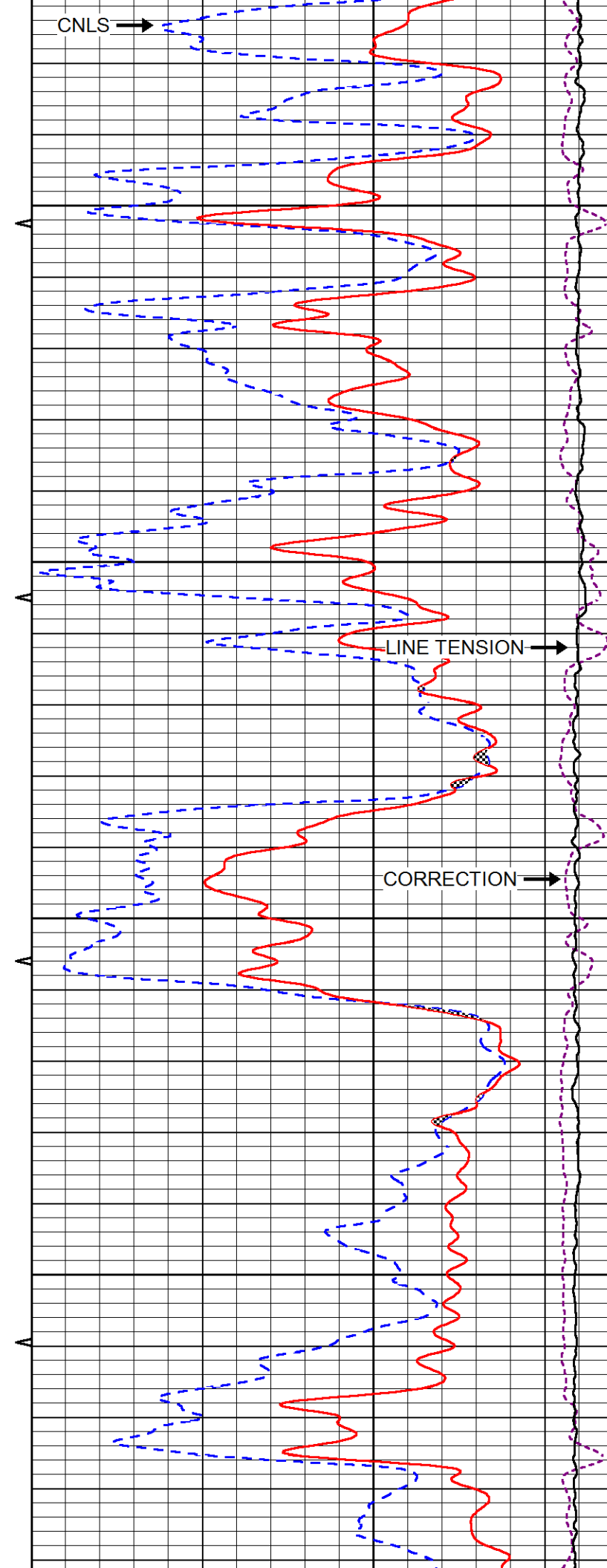
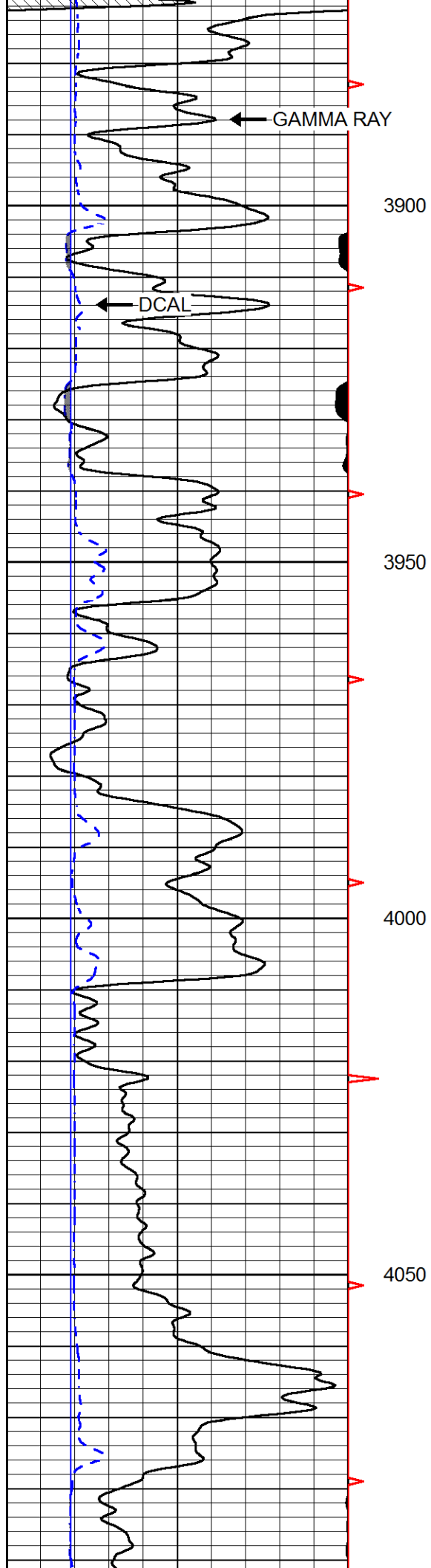
0	Gamma Ray (GAPI)	150
6	DCAL (in)	16

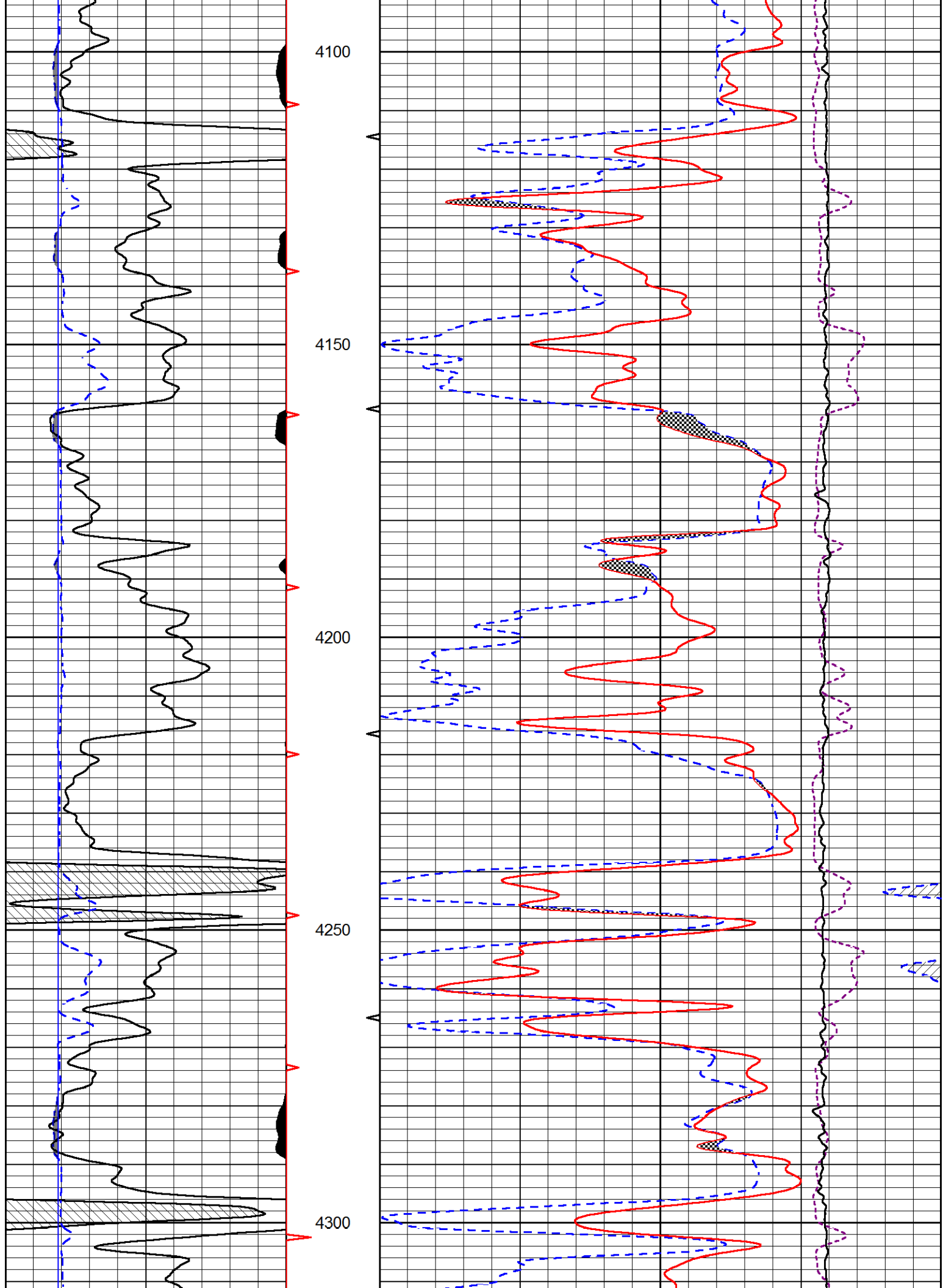
30	CNLS (pu)	-10
30	Compensated Density 2.71 g/cc (pu)	-10
10000	Line Tension (lb)	0
-0.75	Correction (g/cc)	0.75

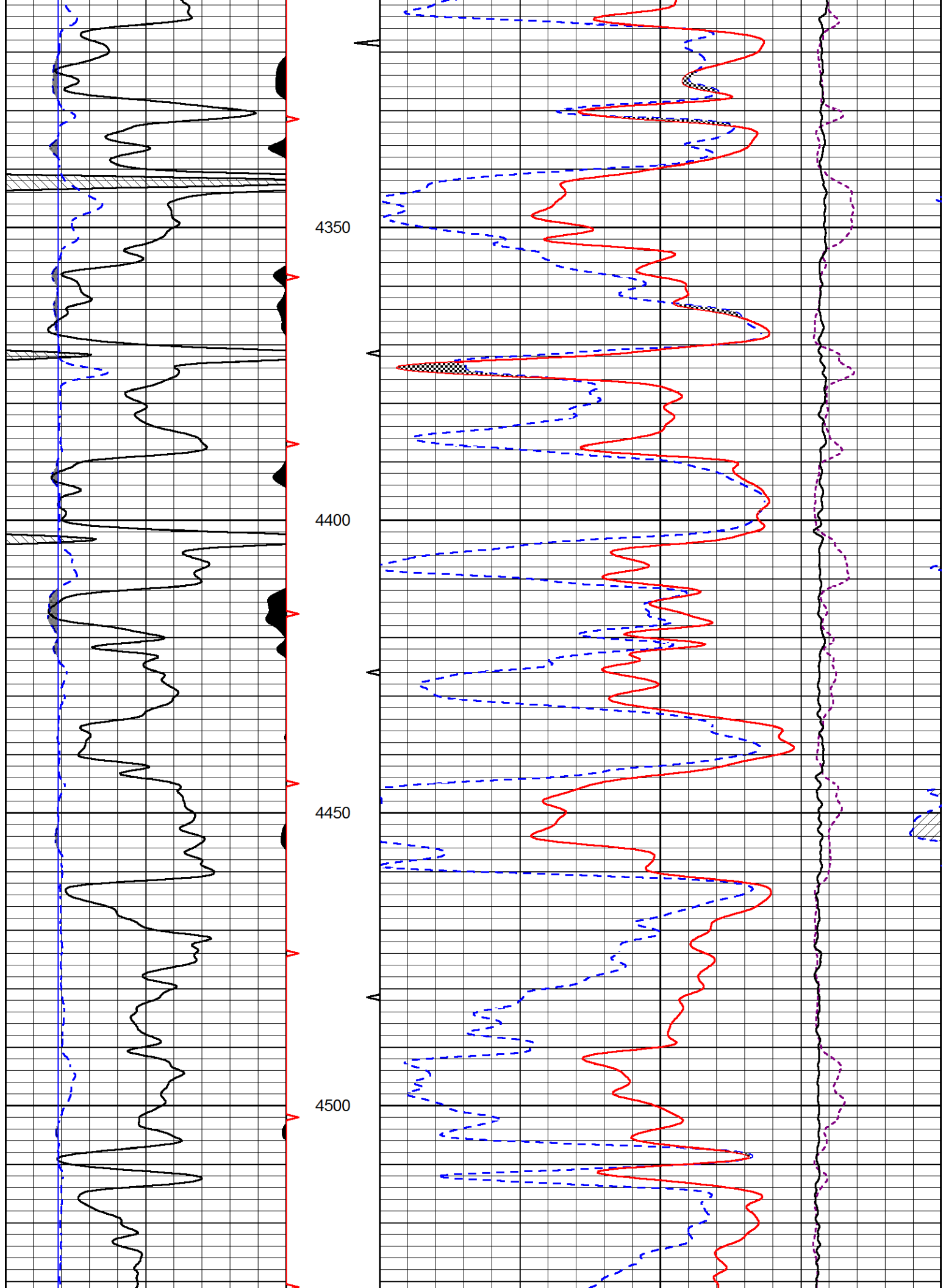


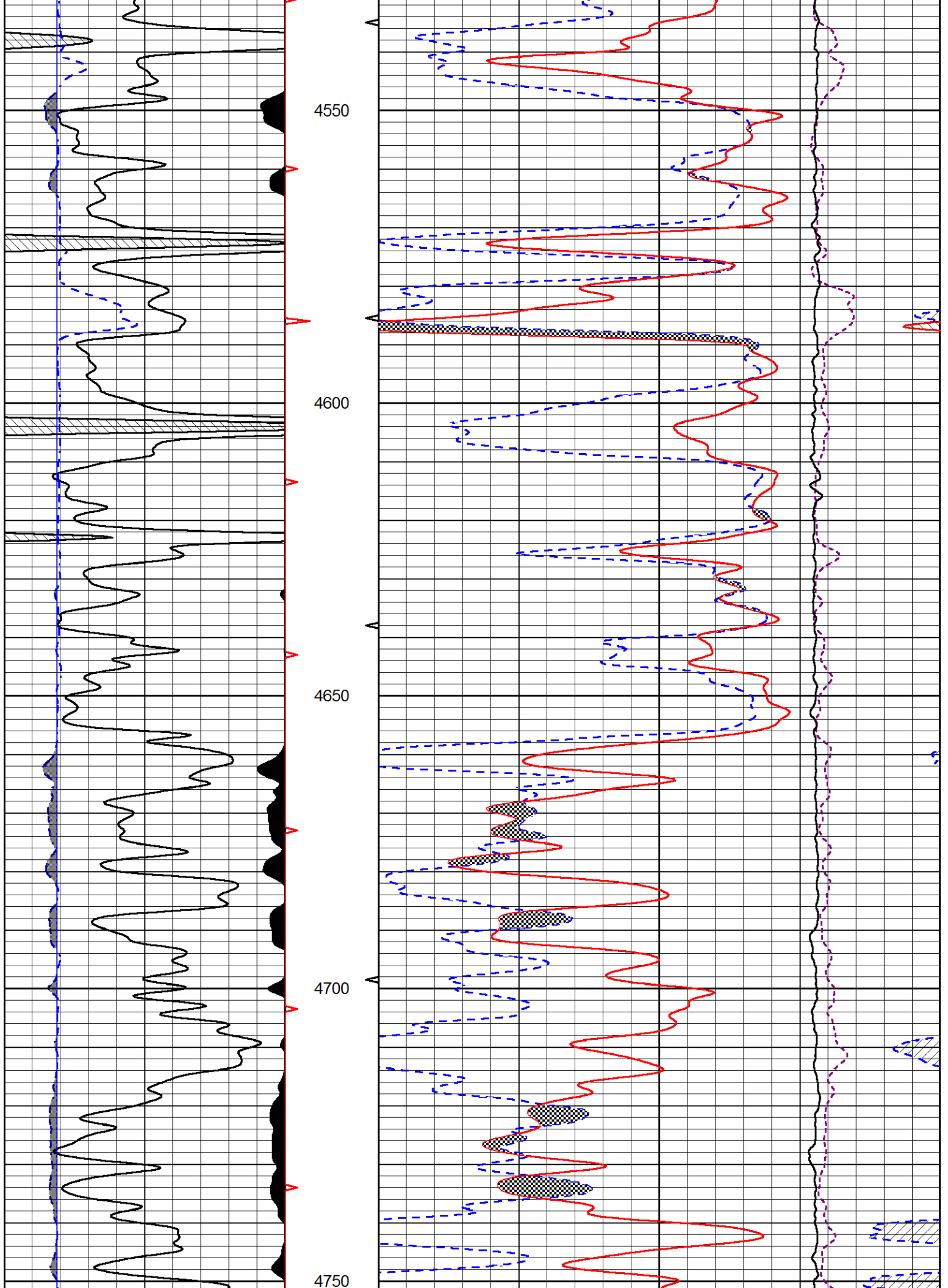
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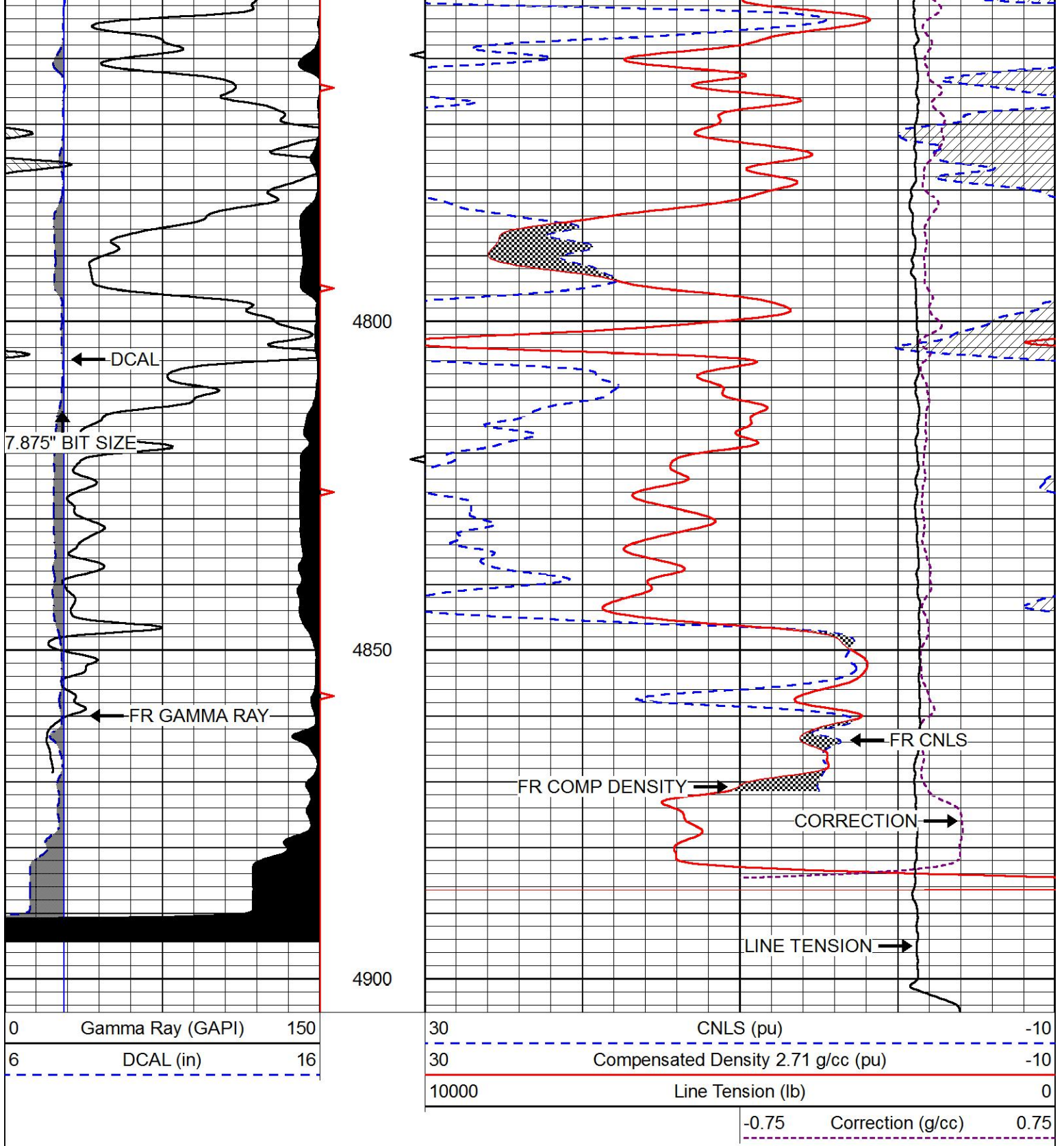












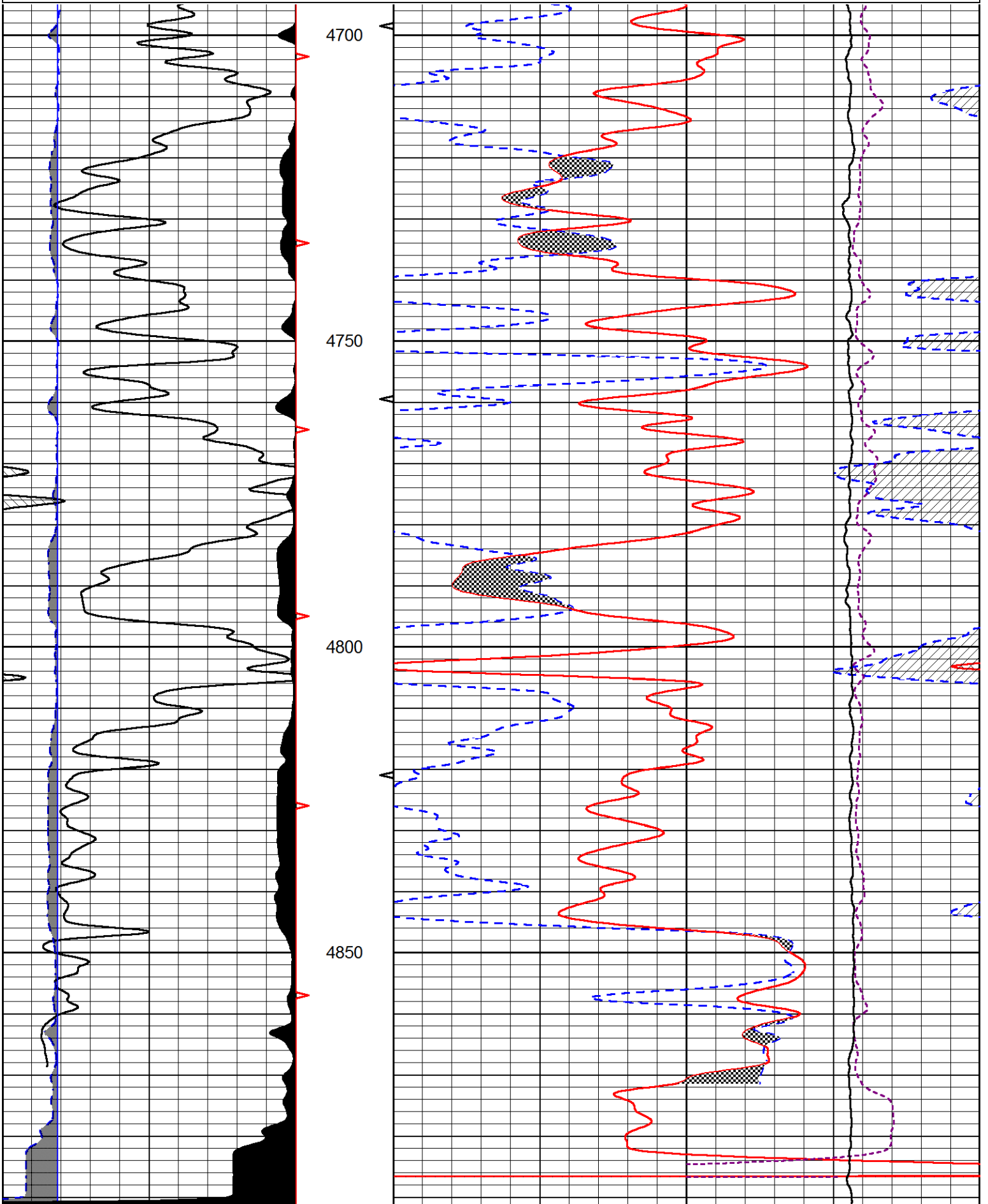
REPEAT SECTION

Database File murfin_cwa_e 1-17.db
 Dataset Pathname stkml/pass2.1
 Presentation Format cndlspec
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 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	DCAL (in)	16

30	CNLS (pu)	-10
30	Compensated Density 2.71 g/cc (pu)	-10
10000	Line Tension (lb)	0

-0.75	Correction (g/cc)	0.75
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Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W
 Calibration Performed: WED SEP 6 10:30:30 2017

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
 Tool Model: M&W
 Calibration Performed: Wed Sep 06 19:51:14 2017

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps



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