



DUAL COMP POROSITY LOG

Company AMERICAN WARRIOR, INC.
 Well LEE A #6-28
 Field LAKIN
 County KEARNY
 State KANSAS

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Location: API #: 15-093-21952-00-00
 381' FSL & 335' FWL
 SEC 28 TWP 25S RGE 36W
 Permanent Datum GROUND LEVEL Elevation 3045'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 Other Services DIL/MEL
 K.B. 3056'
 D.F. N/A
 G.L. 3045'

Date	1/25/2017
Run Number	ONE
Type Log	CNL/CDL
Depth Driller	5050'
Depth Logger	5050'
Bottom Logged Interval	5029'
Top Logged Interval	3500'
Type Fluid In Hole	CHEMICAL
Salinity, PPM CL	775
Density	9.3
Level	FULL
Max. Rec. Temp. F	127
Operating Rig Time	3 HOURS
Equipment -- Location	91 COLBY
Recorded By	D. SCHMIDT
Witnessed By	LUKE THOMPSON

Borehole Record		Casing Record					
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	0'	1817'	8.625"	23#	0'	1817'
TWO	7.875"	1817'					

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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.

LAKIN,
 SOUTH ON HWY 25 TO R RD, 3/4 SOUTH,
 EAST INTO

Log Measured From: KELLY BUSHING 11 Ft. Above Permanent Datum

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

Your Pioneer Energy Services Crew

Engineer: D. SCHMIDT
 Operator:
 Operator:
 Operator:

This Log Record Was Witnessed By

Primary Witness: LUKE THOMPSON
 Secondary Witness:
 Secondary Witness:
 Secondary Witness:

Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	70	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	22	0	5.5	0	5050	127	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

CILM 4.70

SP 0.20

DIL-M&W (PSI 13)

18.50

3.50

220.00

Dataset: american_warrior_lee_a_6-28.db: field/well/STKML/pass3.3
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in



MAIN PASS

Database File: american_warrior_lee_a_6-28.db
 Dataset Pathname: STKML/pass3.1
 Presentation Format: cdl
 Dataset Creation: Wed Jan 25 07:18:59 2017
 Charted by: Depth in Feet scaled 1:600

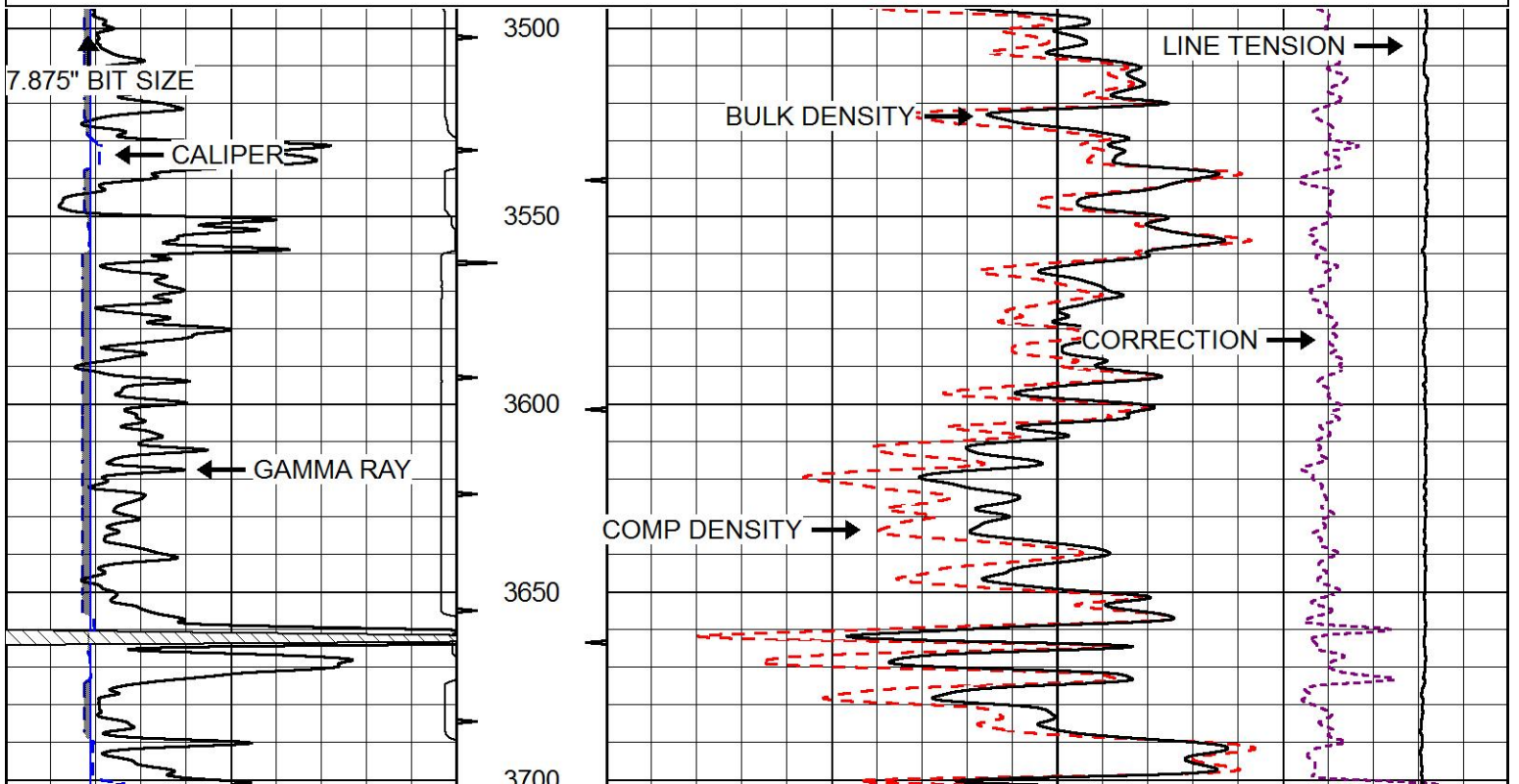
0	Gamma Ray (GAPI)	150
6	Caliper (in)	16

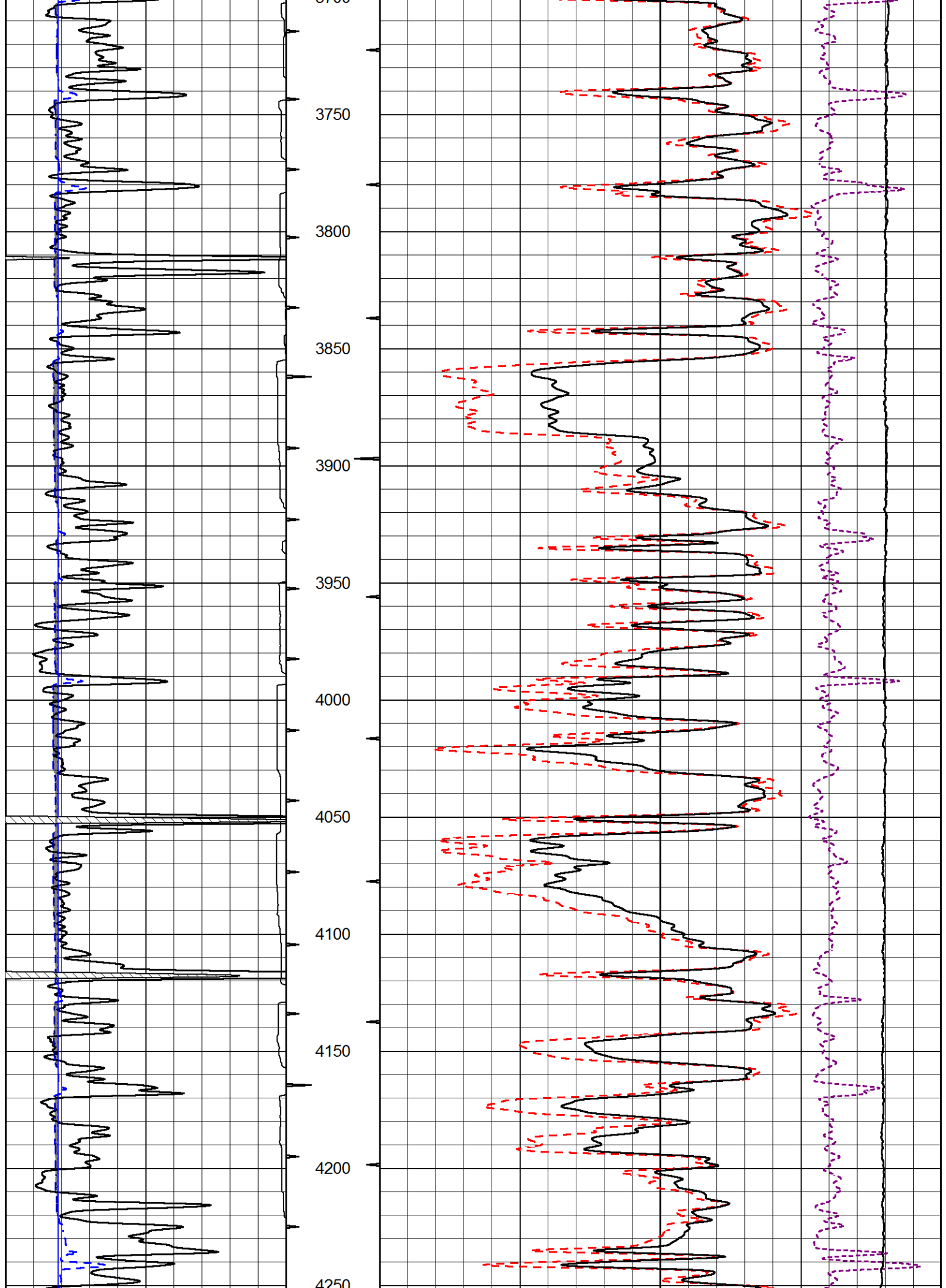
Compensated Density (2.71 MA)	
30	(pu) -10

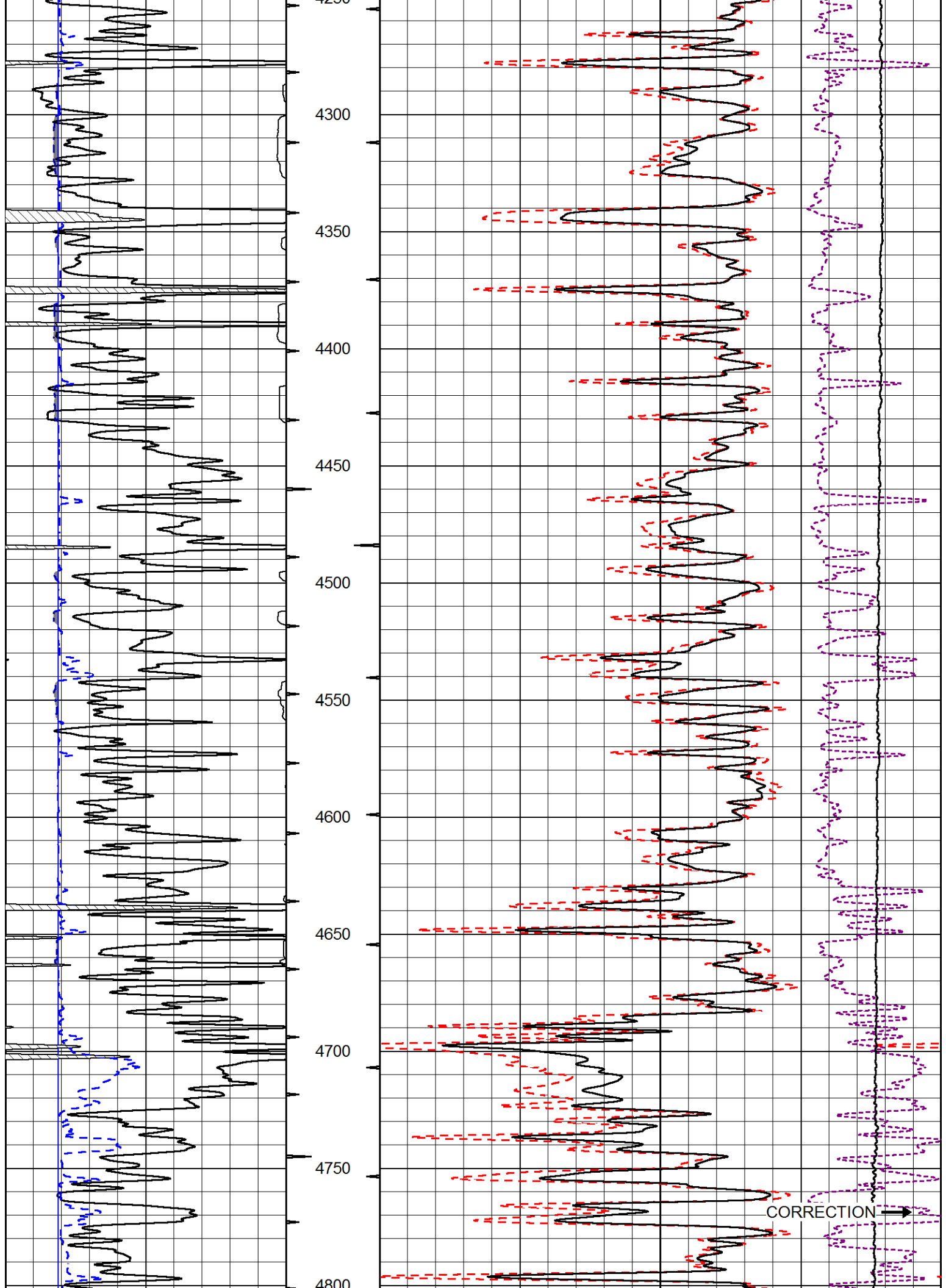
2	Bulk Density (g/cc) 3

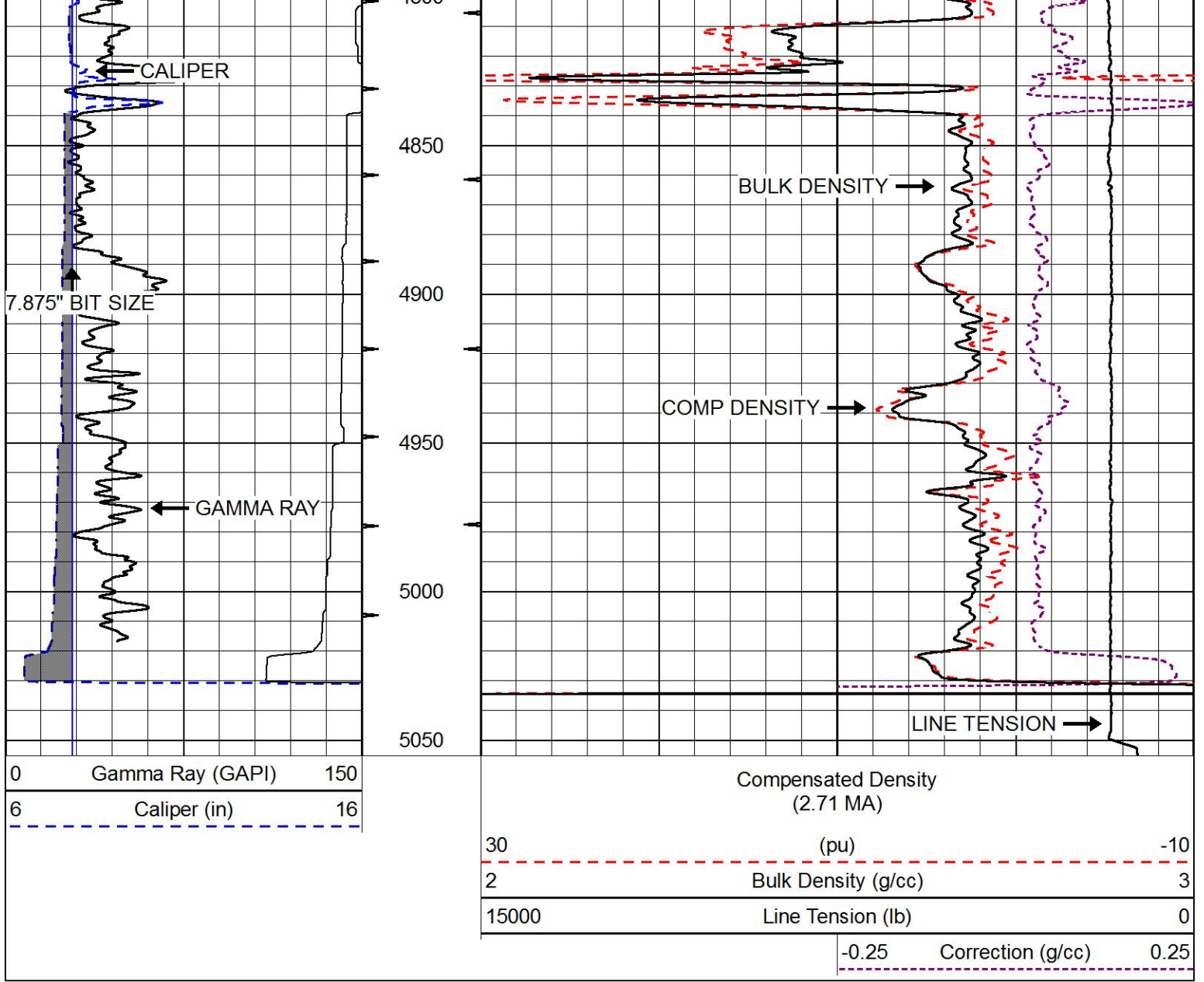
15000	Line Tension (lb) 0

-0.25	Correction (g/cc) 0.25



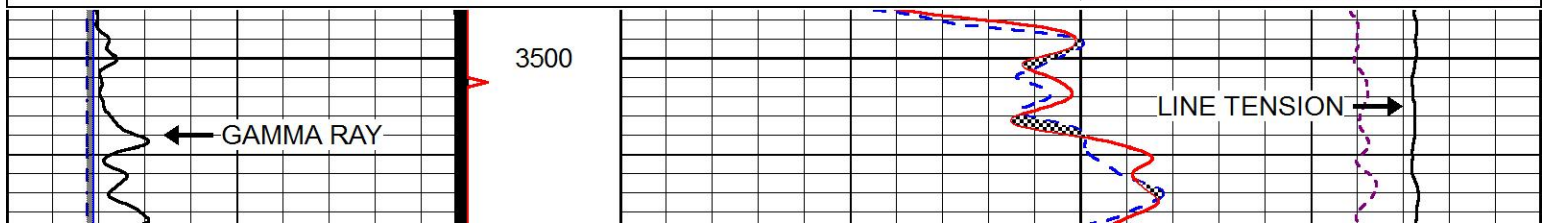
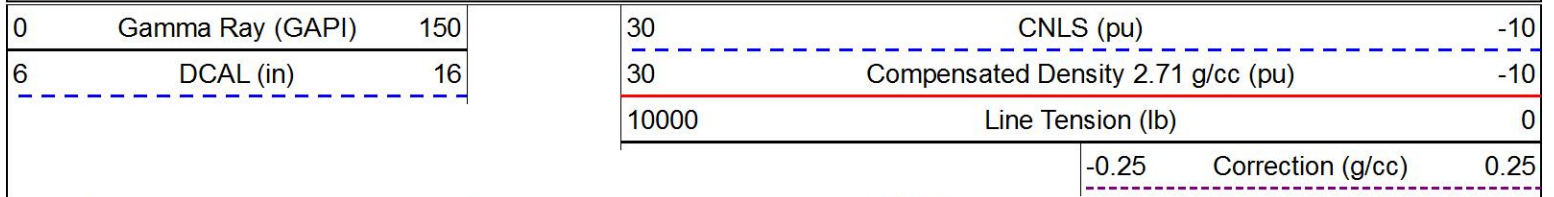


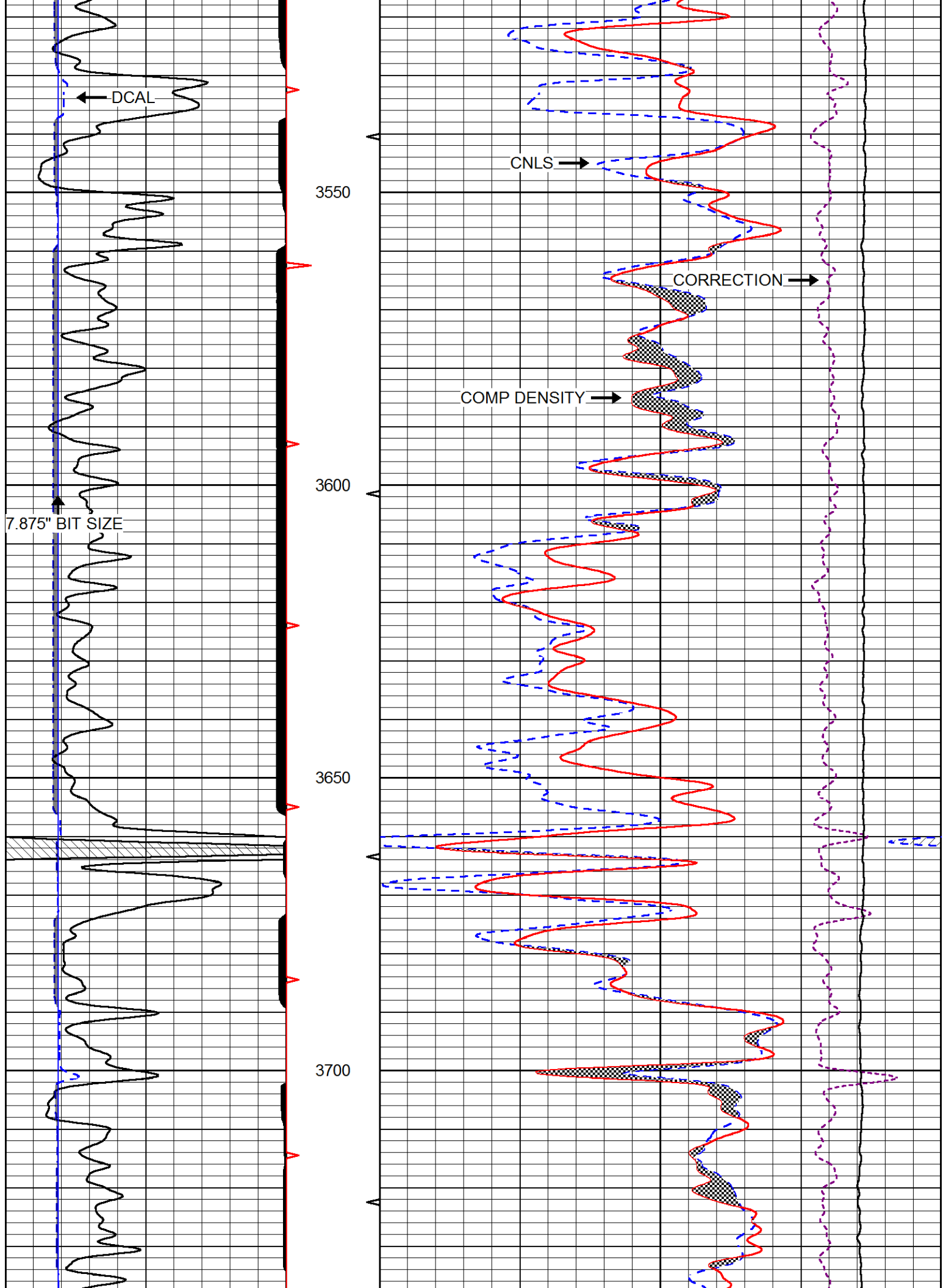


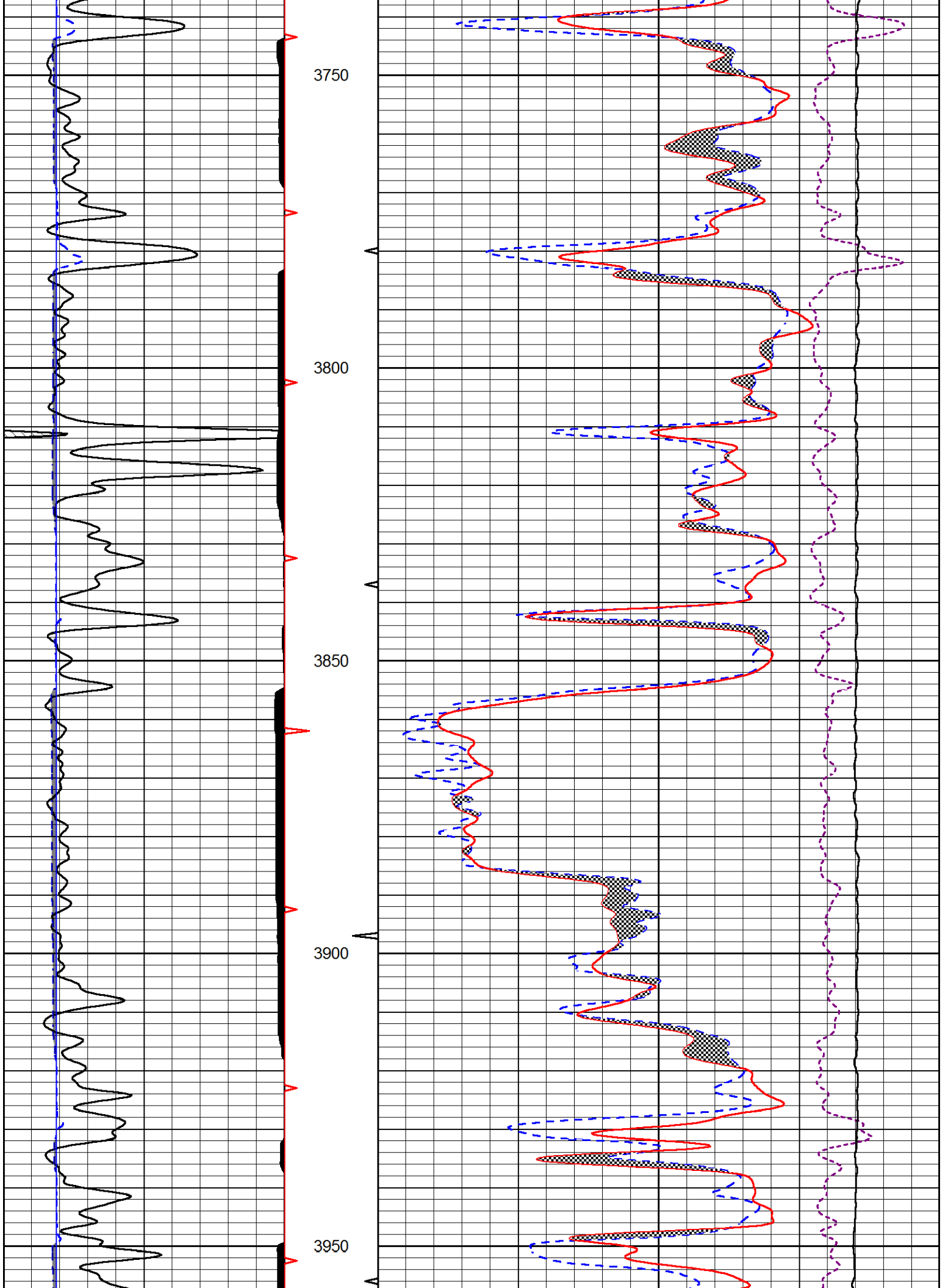


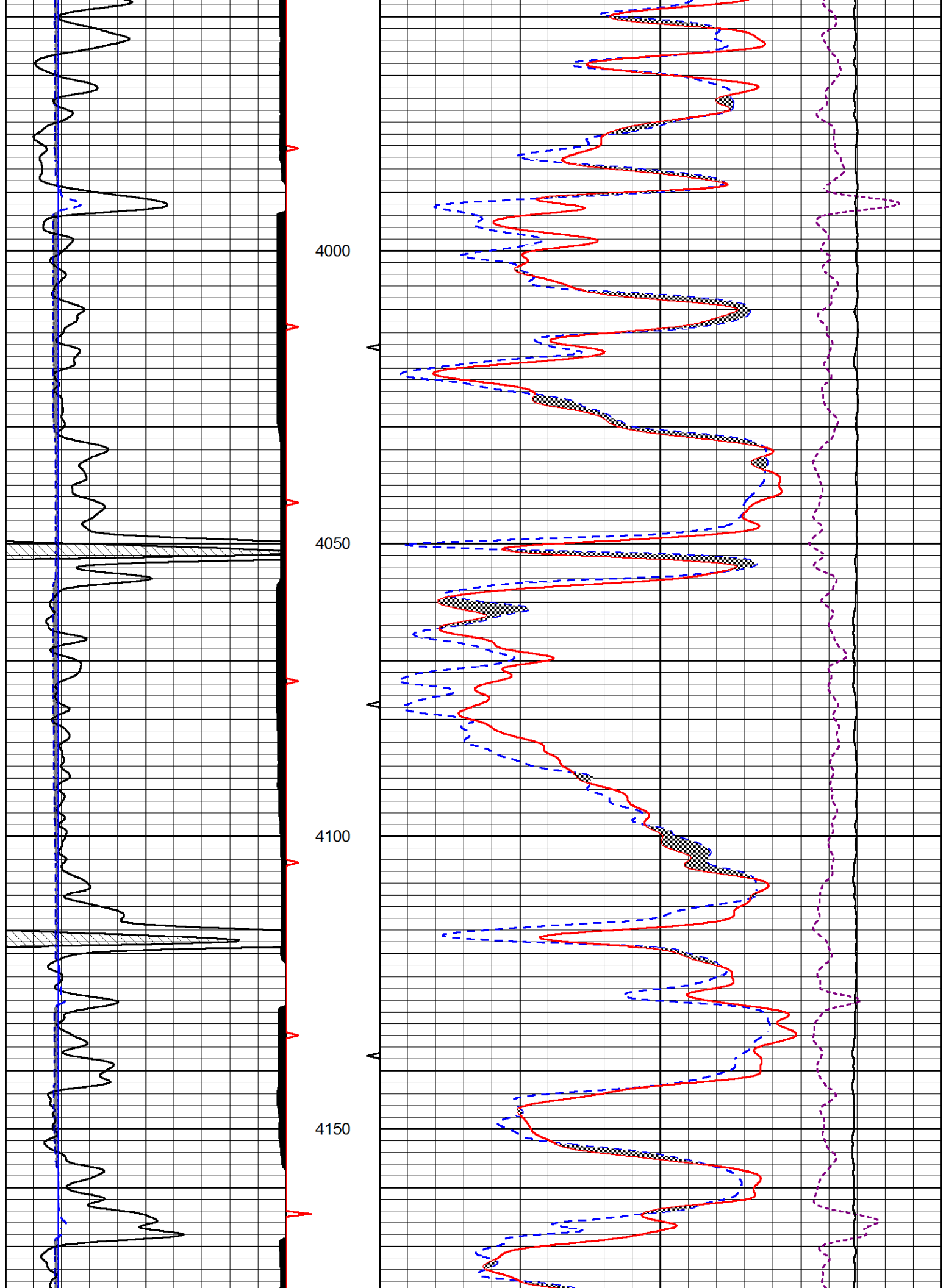
MAIN PASS

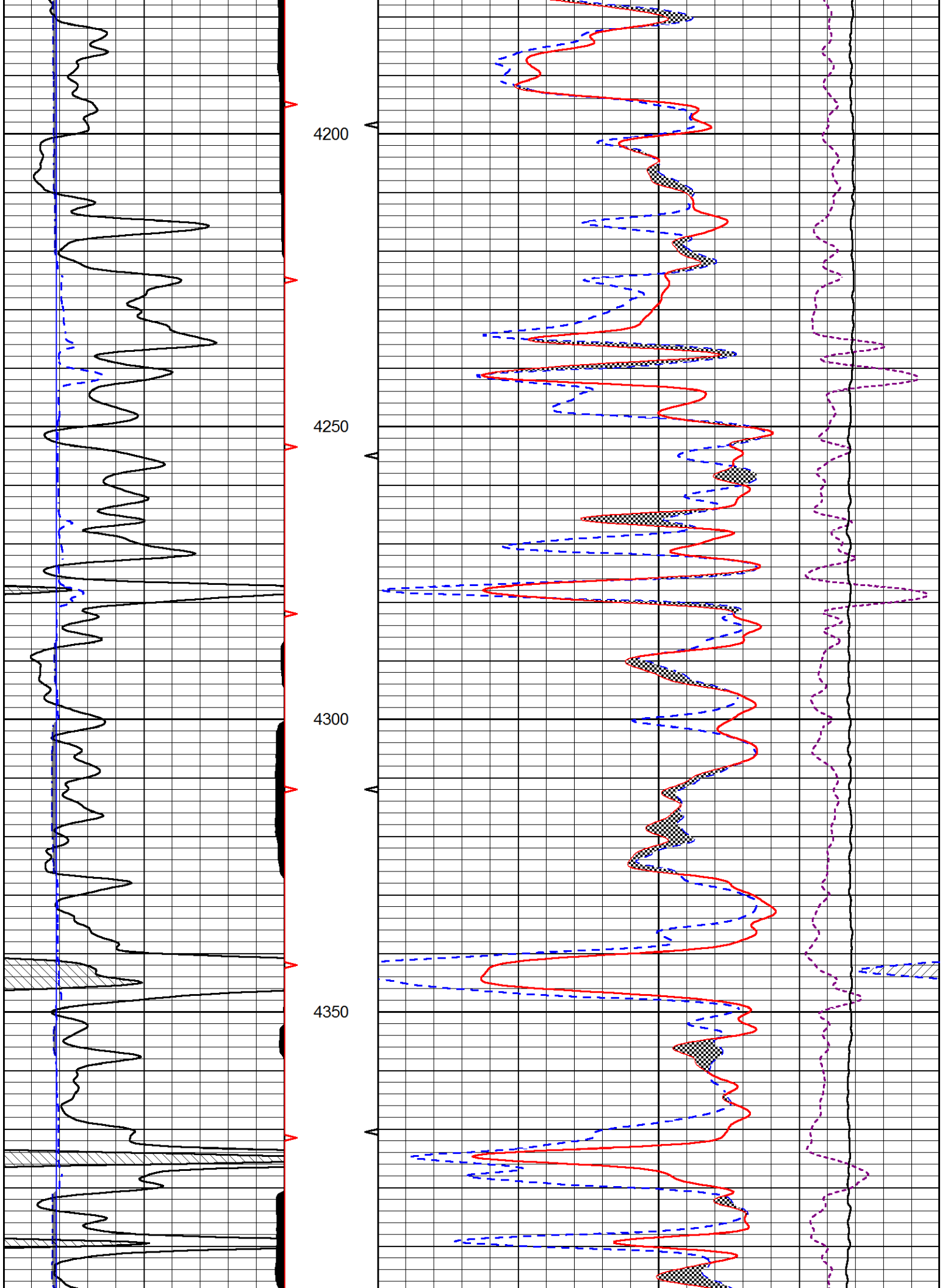
Database File: american warrior_lee_a_6-28.db
 Dataset Pathname: STKML/pass3.1
 Presentation Format: cndlspec
 Dataset Creation: Wed Jan 25 07:18:59 2017
 Charted by: Depth in Feet scaled 1:240

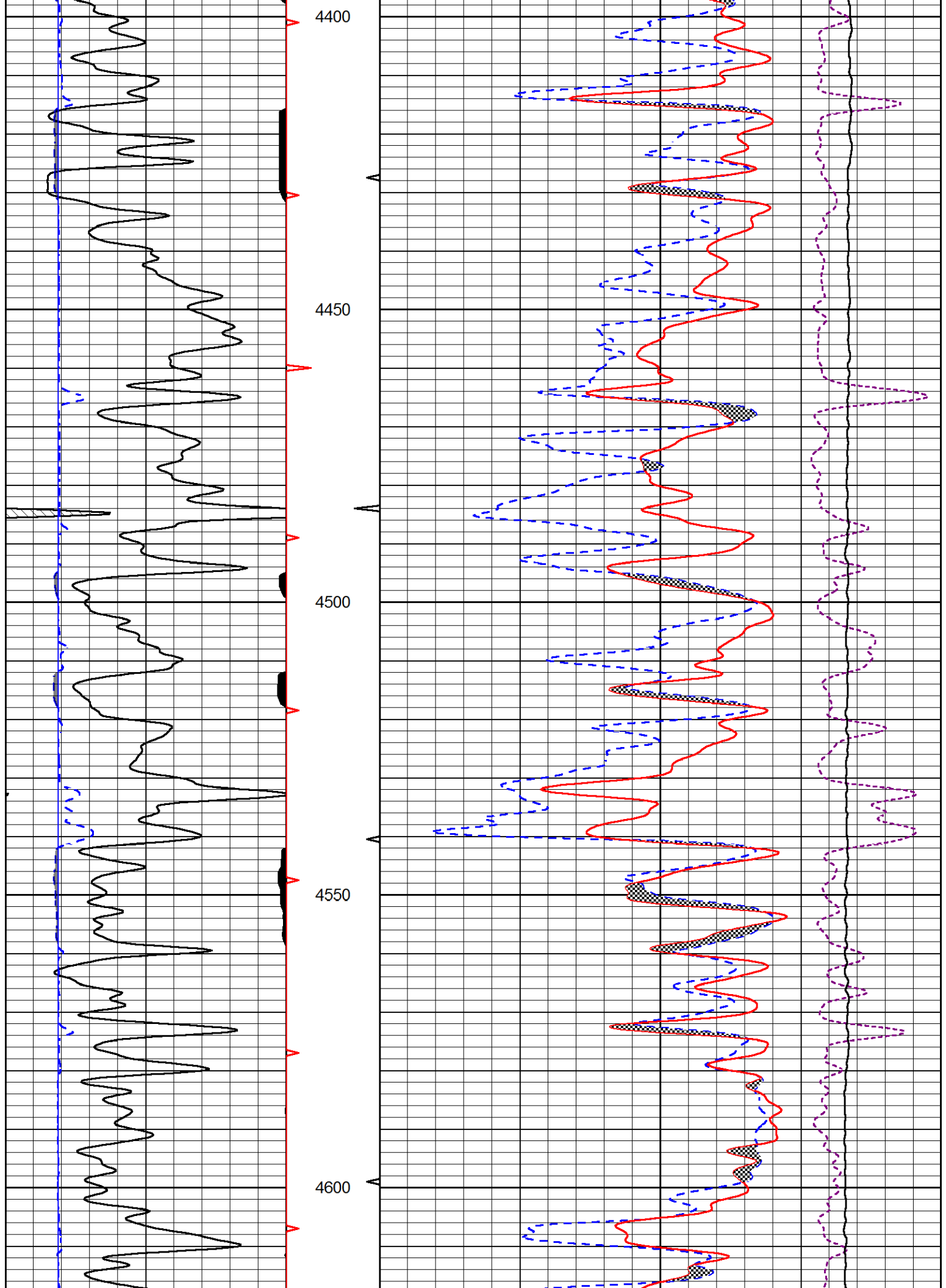


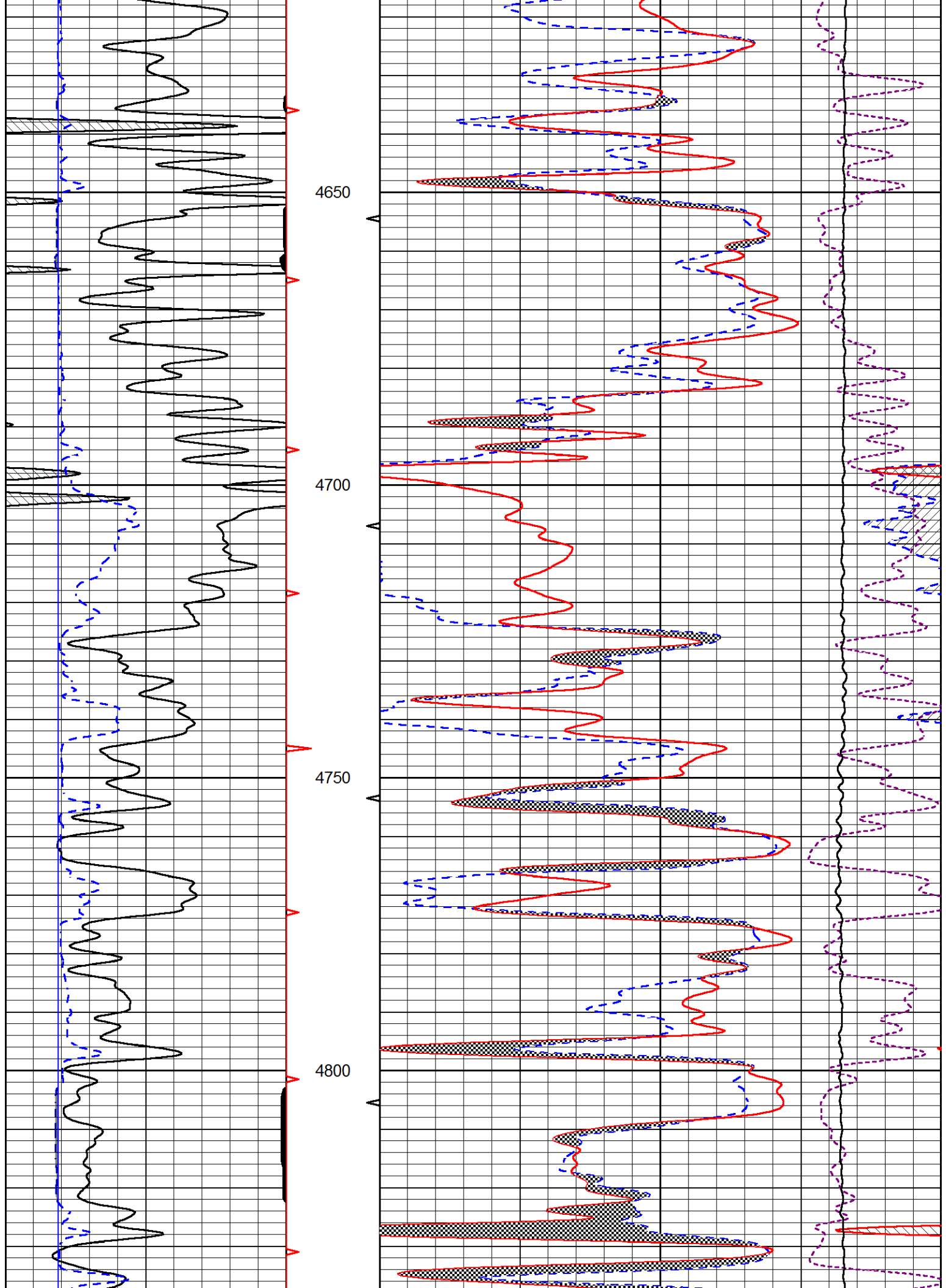


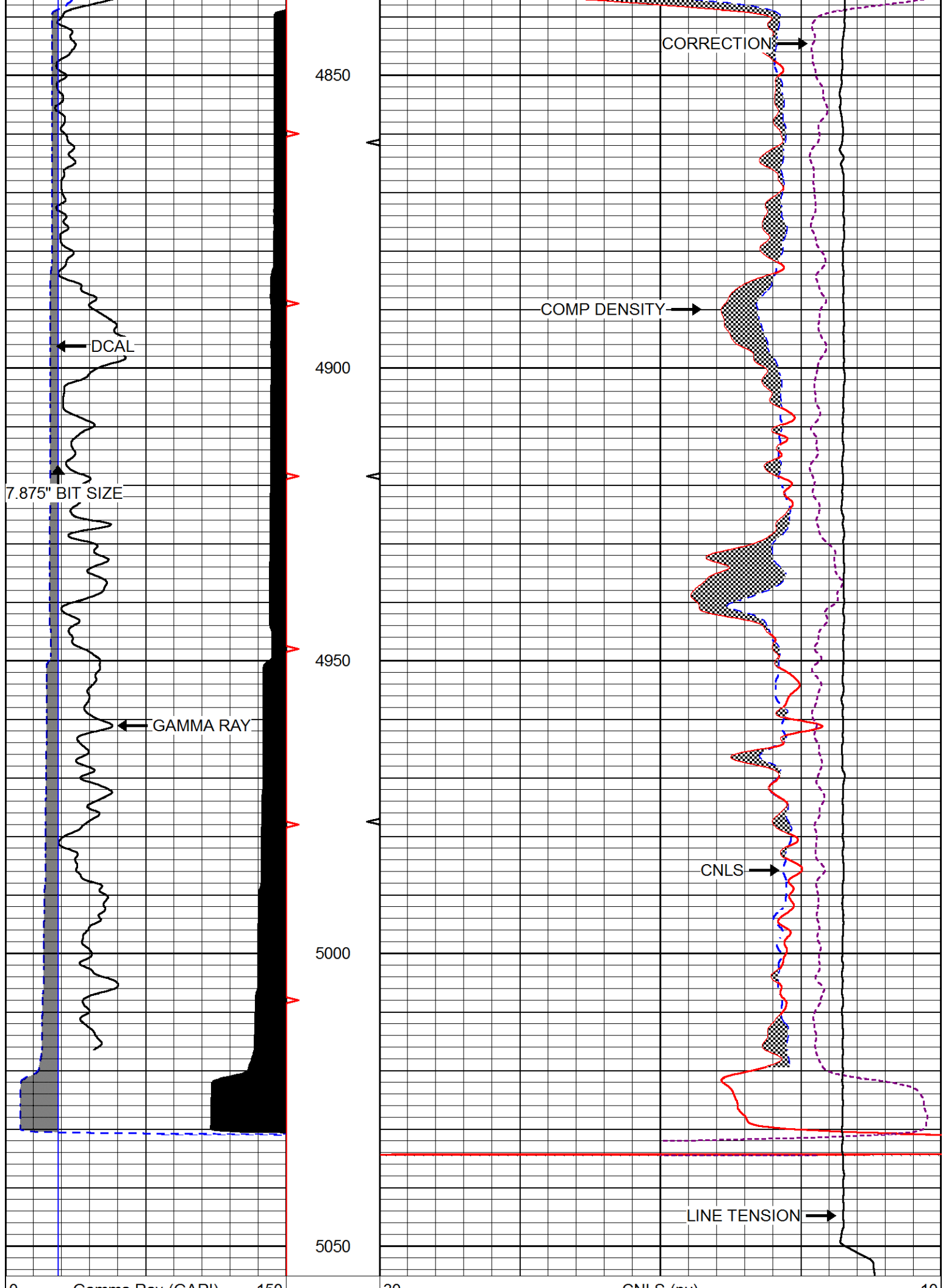












0	Gamma Ray (GAPI)	150
6	DCAL (in)	16

30	CNLS (pu)	-10
30	Compensated Density 2.71 g/cc (pu)	-10
10000	Line Tension (lb)	0
	-0.25 Correction (g/cc)	0.25

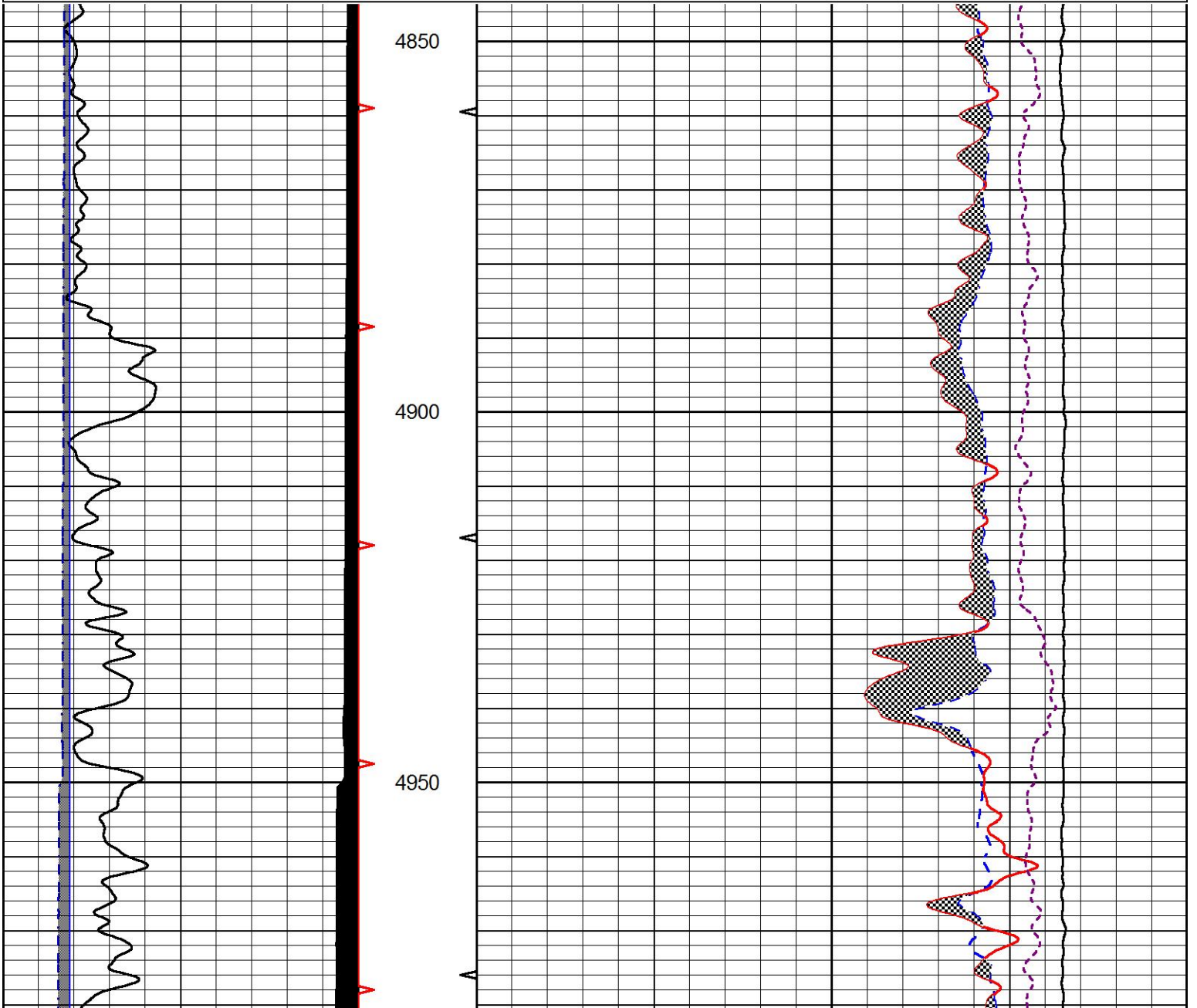


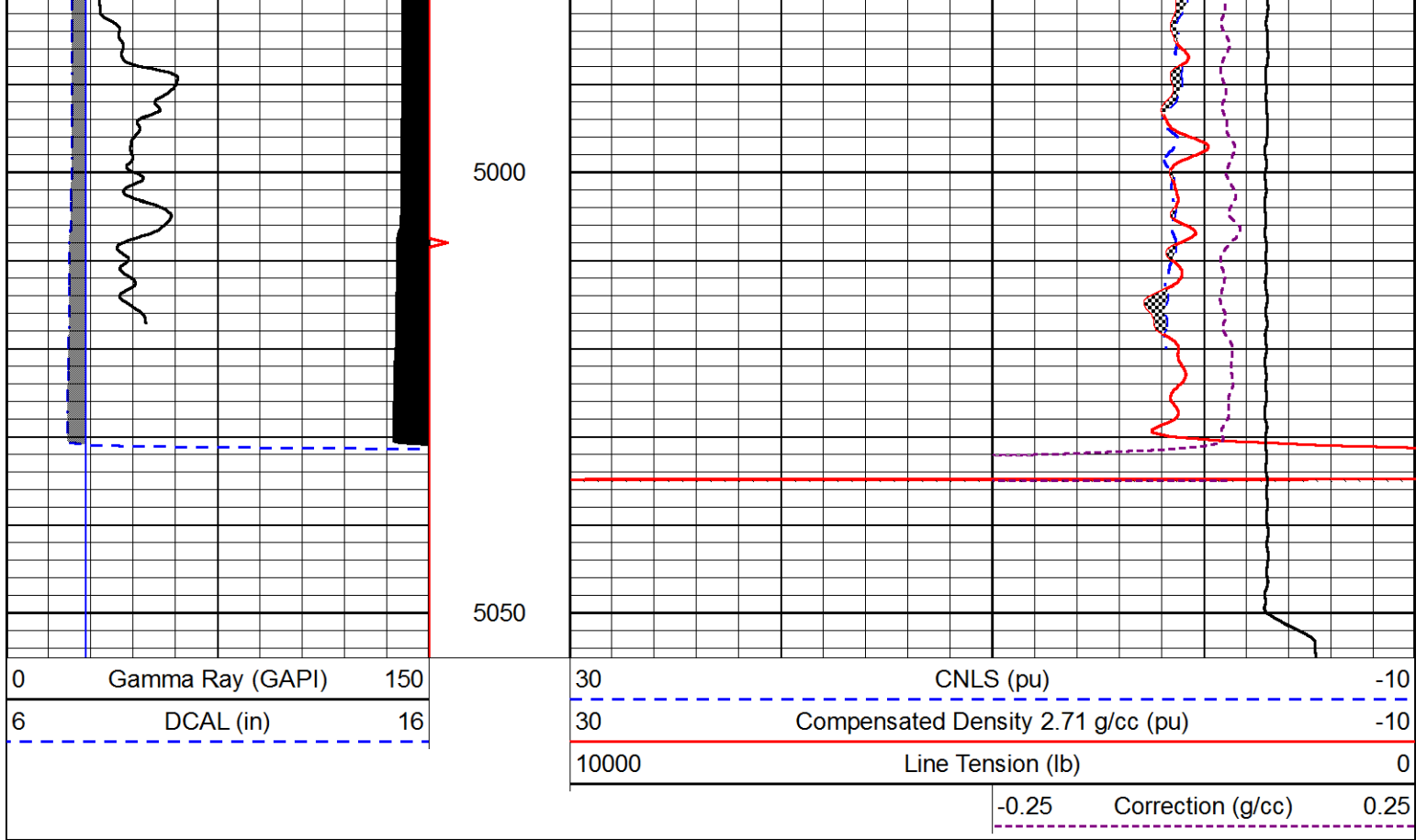
REPEAT SECTION

Database File	american warrior_lee_a_6-28.db
Dataset Pathname	STKML/pass2.3
Presentation Format	cnlspec
Dataset Creation	Wed Jan 25 07:06:09 2017
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
	-0.25 Correction (g/cc)	0.25





Calibration Report

Database File american warrior_lee_a_6-28.db
 Dataset Pathname STKML/pass3.3
 Dataset Creation Wed Jan 25 07:01:48 2017

Dual Induction Calibration Report

Serial-Model: PSI 13-M&W
 Calibration Performed: Mon Jan 02 18:08:07 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop	mmho/m	Gain	Offset
Deep	166.796	835.089	0.000	255.800	mmho/m	0.950	-34.000
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.830	-33.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Mon Jan 02 18:08:17 2017

	Readings		References			Results	
	Zero	Cal	Zero	Cal	Ohm-m	m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	16000.0000	-0.4000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	20000.0000	-0.3000
Caliper	1.0001	1.1397	6.5000	18.5000	in	70.0000	-65.8000

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W
 Source / Verifier: 16055P / 2pi

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	5174.18	6425.27	cps
Aluminum	2.670	g/cc	963.17	4037.42	cps
Spine Angle = 74.55			Density/Spine Ratio = 0.525		
	Size		Reading		
Small Ring	6.00	in	1.83		
Large Ring	16.00	in	1.48		

Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W
 Calibration Performed: Mon Jan 2 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: Mon Jan 02 18:08:34 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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