



DUAL COMP POROSITY LOG

Company AMERICAN WARRIOR, INC.
Well DOWDY OWENS #4-36
Field SHUCK NW
County STEVENS **State** KANSAS

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State KANSAS

Location: API #: 15-189-22,841-00-00
 NE SW NE SW
 1859' FSL & 1942' FWL
 SEC 36 TWP 32S RGE 35W
 Permanent Datum GROUND LEVEL Elevation 2927'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING

Other Services
 DIL/MEL
 Elevation
 K.B. 2939'
 D.F. N/A
 G.L. 2927'

Date	5/22/2016						
Run Number	ONE						
Type Log	CNL/CDL						
Depth Driller	6350'						
Depth Logger	6325'						
Bottom Logged Interval	6296'						
Top Logged Interval	4100'						
Type Fluid In Hole	CHEMICAL						
Salinity, PPM CL	6,700						
Density	9.3						
Level	FULL						
Max. Rec. Temp. F	140						
Operating Rig Time	4 HOURS						
Equipment -- Location	108 COLBY						
Recorded By	T. MARTIN						
Witnessed By	KEVIN TIMSON						
Borehole Record		Casing Record					
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	00'	1745'	8.625"	23#	00'	1745'
TWO	7.875"	1745'					

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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.

HUGOTON, 14.5 E TO 27 RD,
3.5 N, E INTO

Log Measured From: KELLY BUSHING 12 Ft. Above Permanent Datum

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

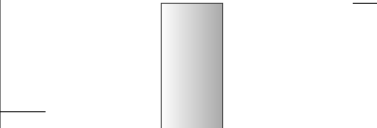
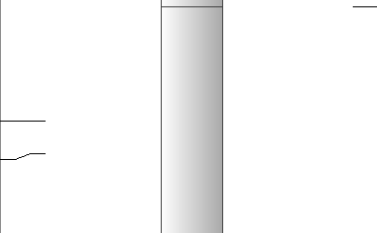
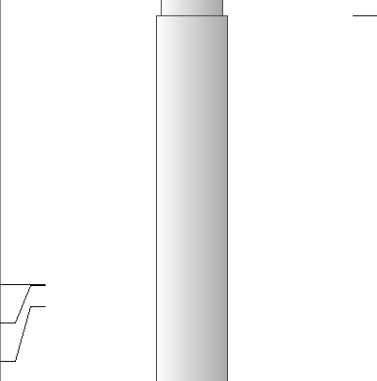
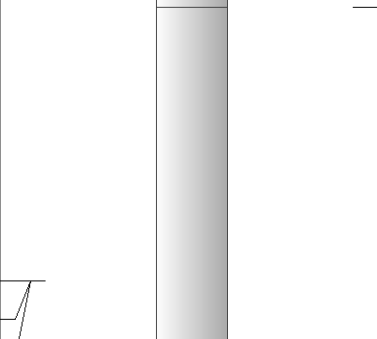
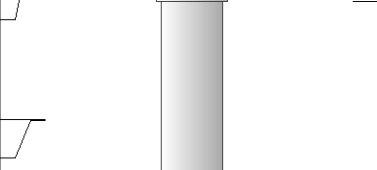
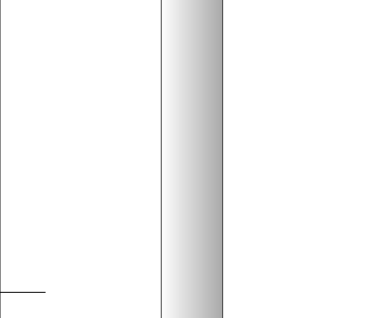
Your Pioneer Energy Services Crew Engineer: T. MARTIN Operator: Operator: Operator:	This Log Record Was Witnessed By Primary Witness: KEVIN TIMSON Secondary Witness: Secondary Witness: Secondary Witness:
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Log Variables

DatabaseC:\ProgramData\Warrior\Data\lamwar_dowdyowes_#4-36.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	140	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	-580	72	Off	6325

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.58		GR-M&W (89-M&W)	3.00	3.50	50.00
CNLSC CNSSC	37.48 36.73		CNT-M&W (tk10-MW)	5.50	3.50	100.00
LSD DCAL SSD	28.43 28.42 27.93		CDL-M&W (71-914)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSI STKBL ML (PSI-02) Stackable Microlog Tools	7.58	4.00	65.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (1987)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: amwar_dowdyowes_#4-36.db: field/well/stkml/pass3.1
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

PIONEER

Pioneer Energy Services

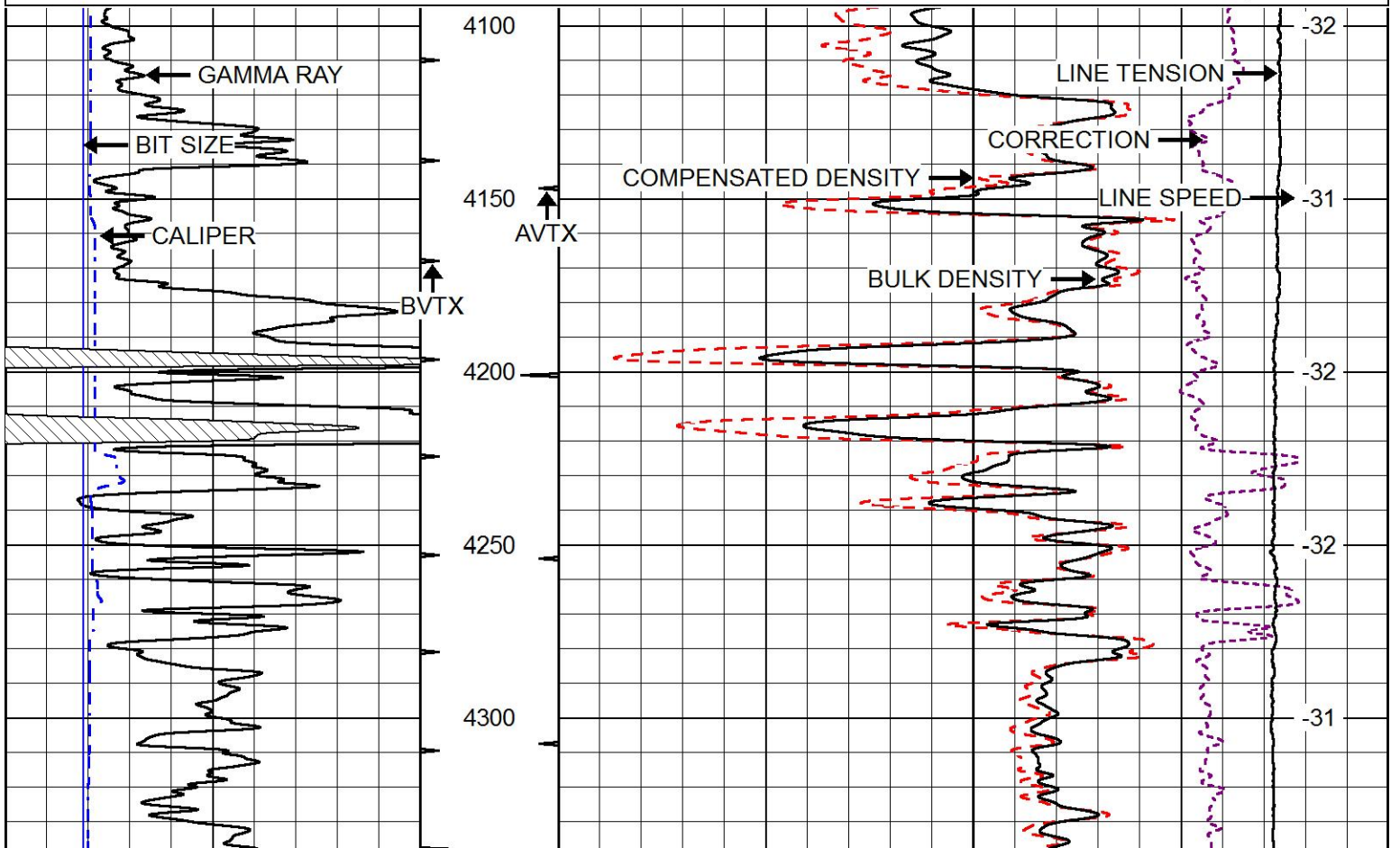
2IN SCALE BULK DENSITY

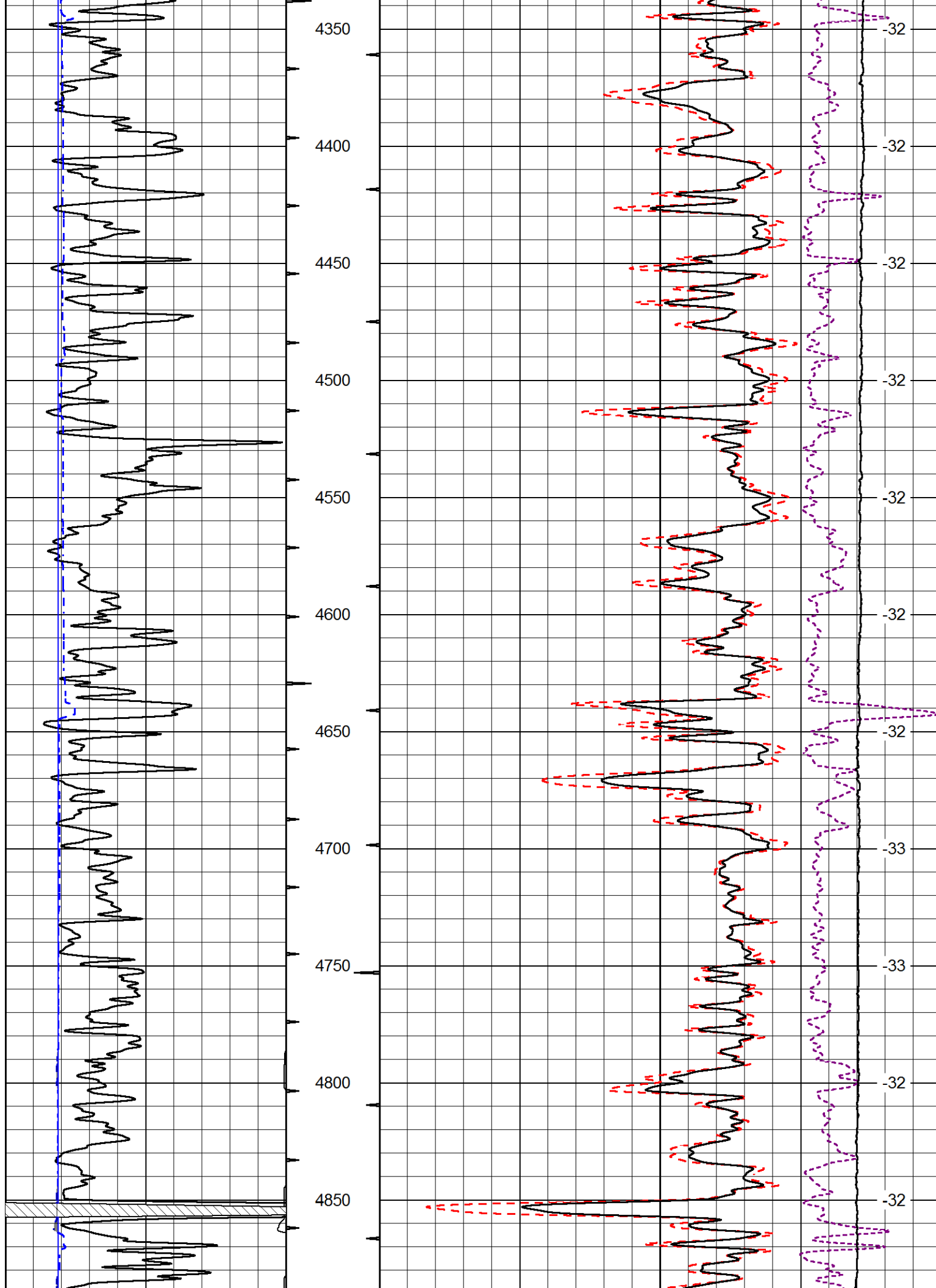
MAIN PASS

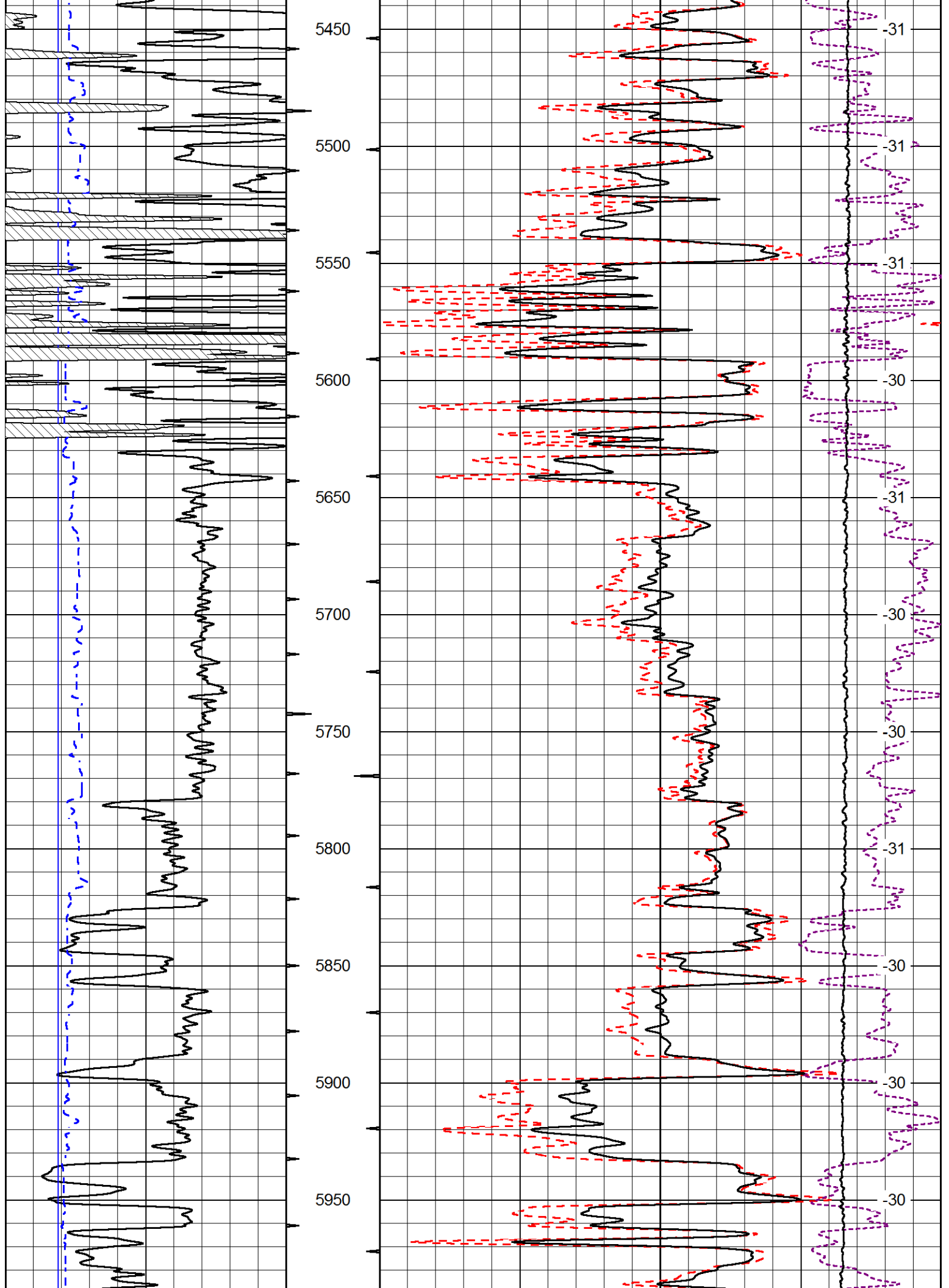
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 Charted by Depth in Feet scaled 1:600

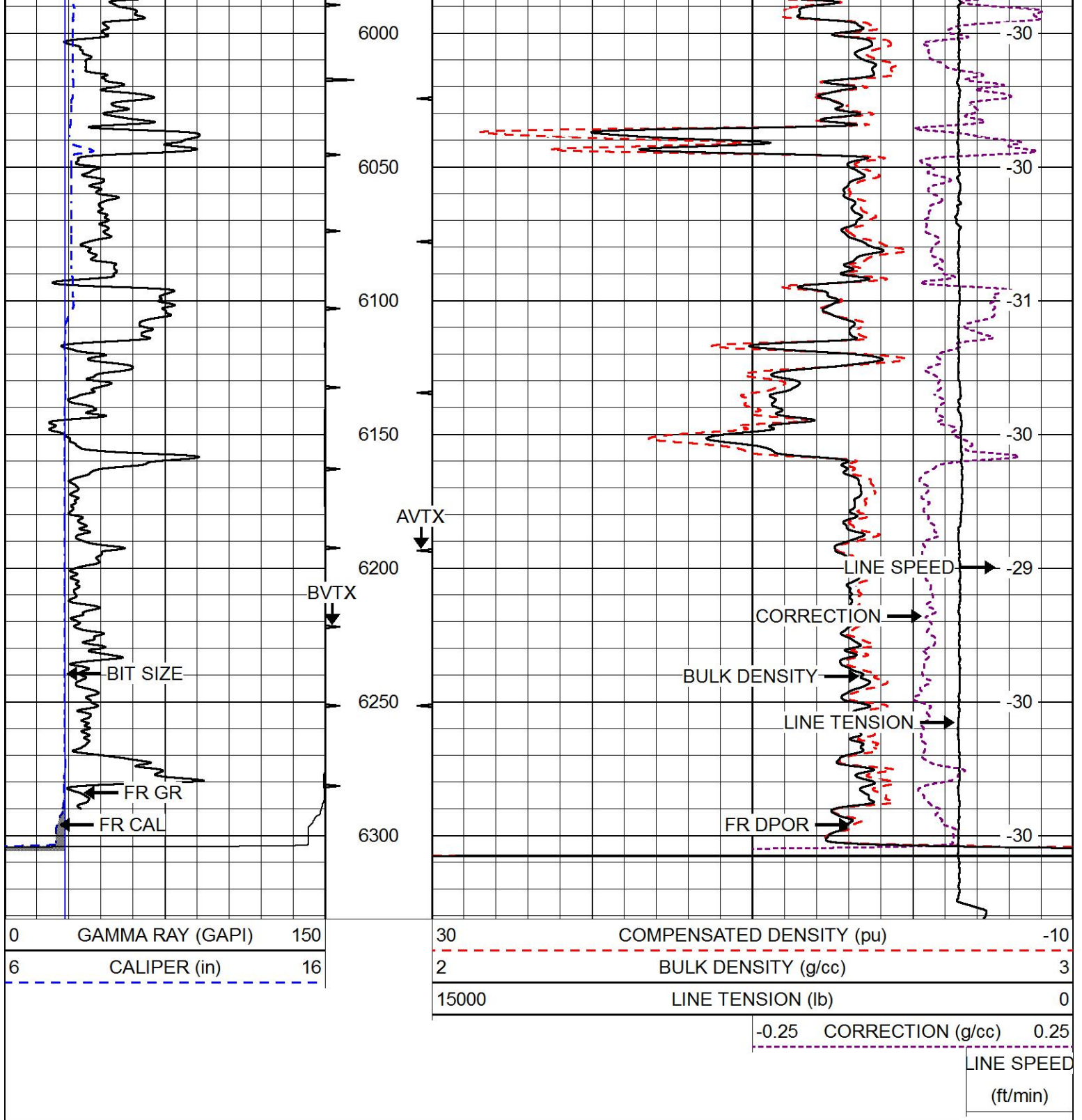
0	GAMMA RAY (GAPI)	150
6	CALIPER (in)	16

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



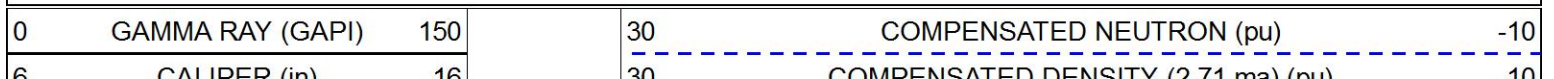






MAIN PASS

Database File amwar_dowdyowes_#4-36.db
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 Dataset Creation Sun May 22 07:13:39 2016
 Charted by Depth in Feet scaled 1:240

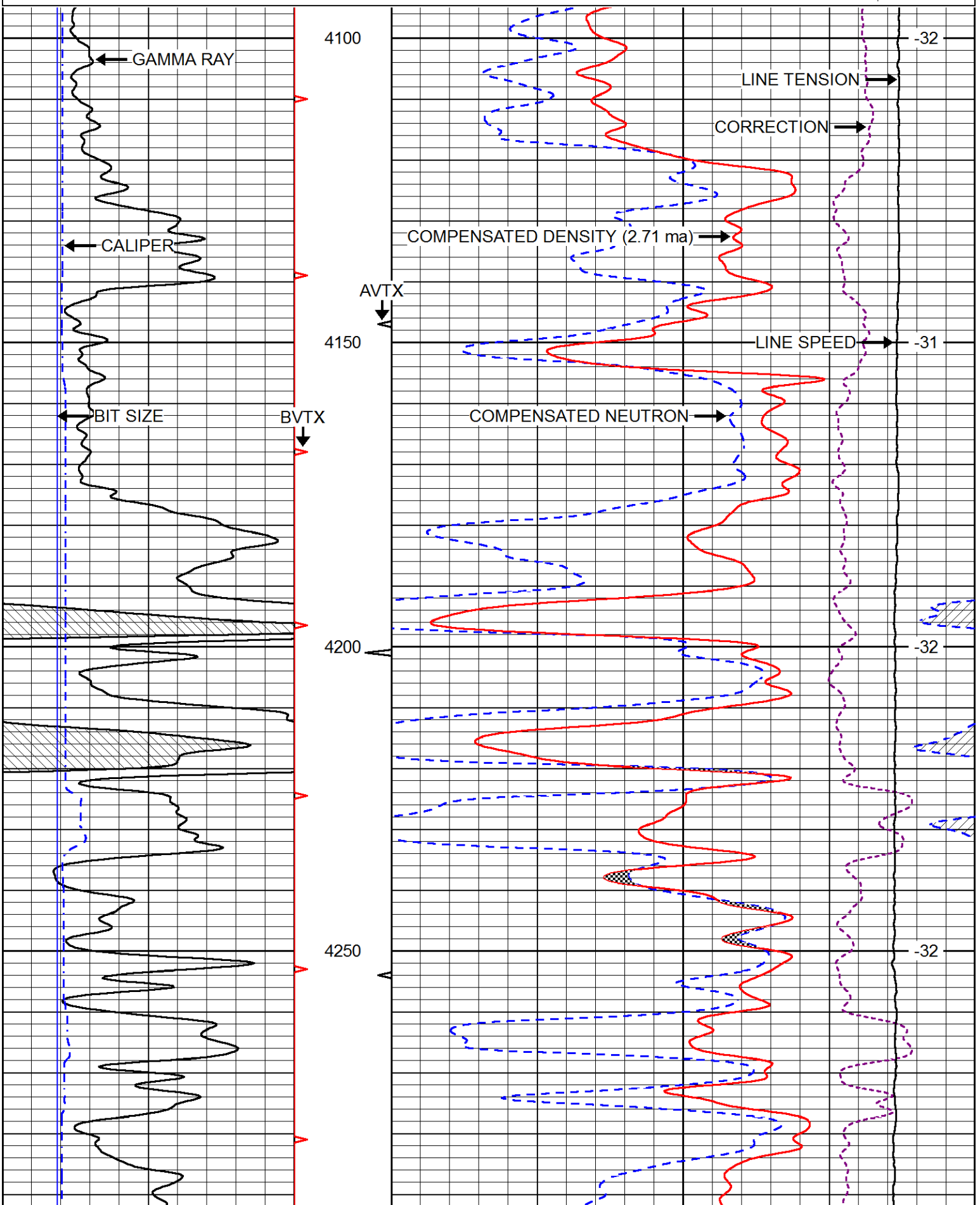


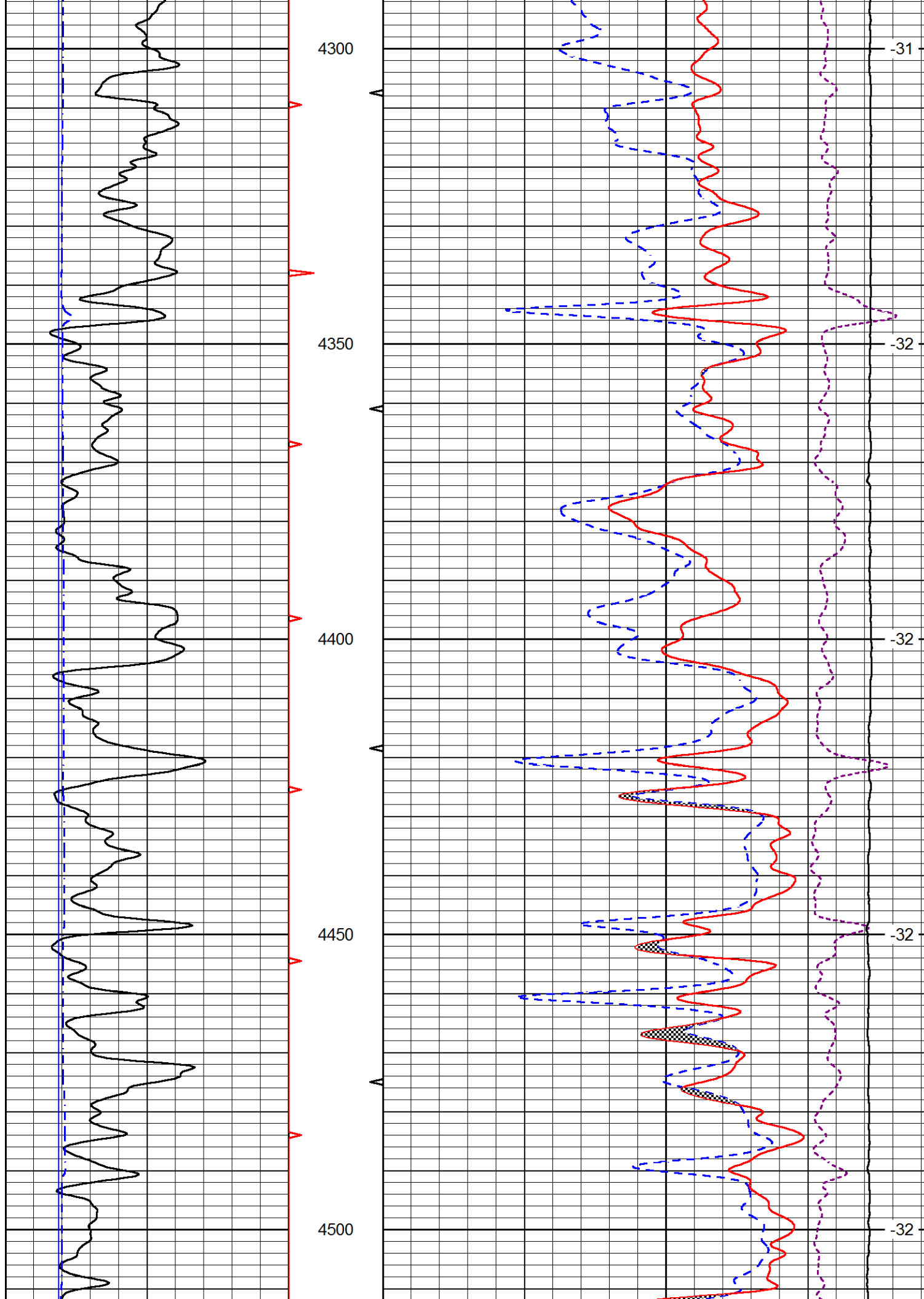
CALIPER (in) 16
6 BIT SIZE (in) 16

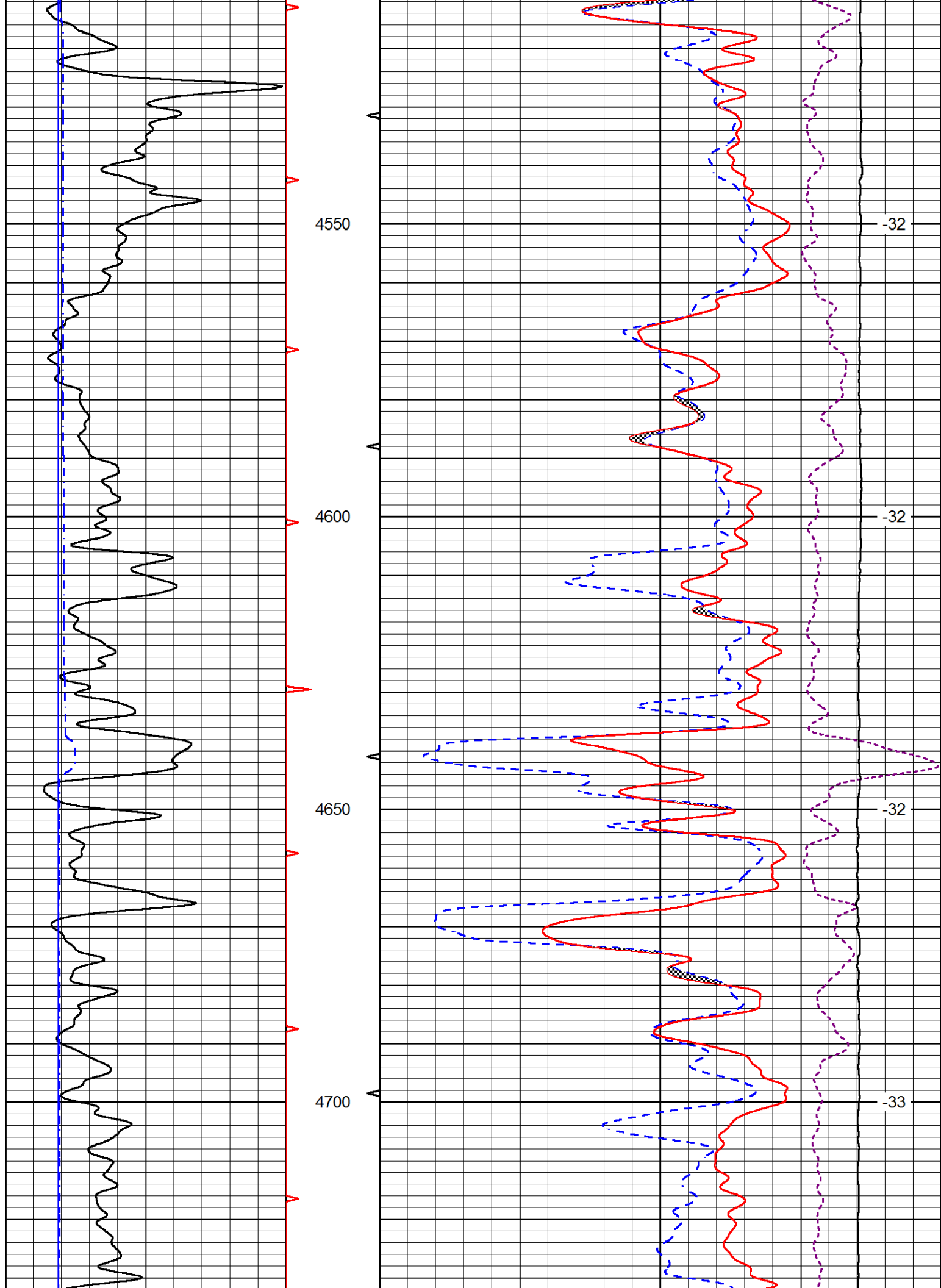
50 COMPENSATED DENSITY (2.71 ma) (pu) -10
15000 LINE TENSION (lb) 0

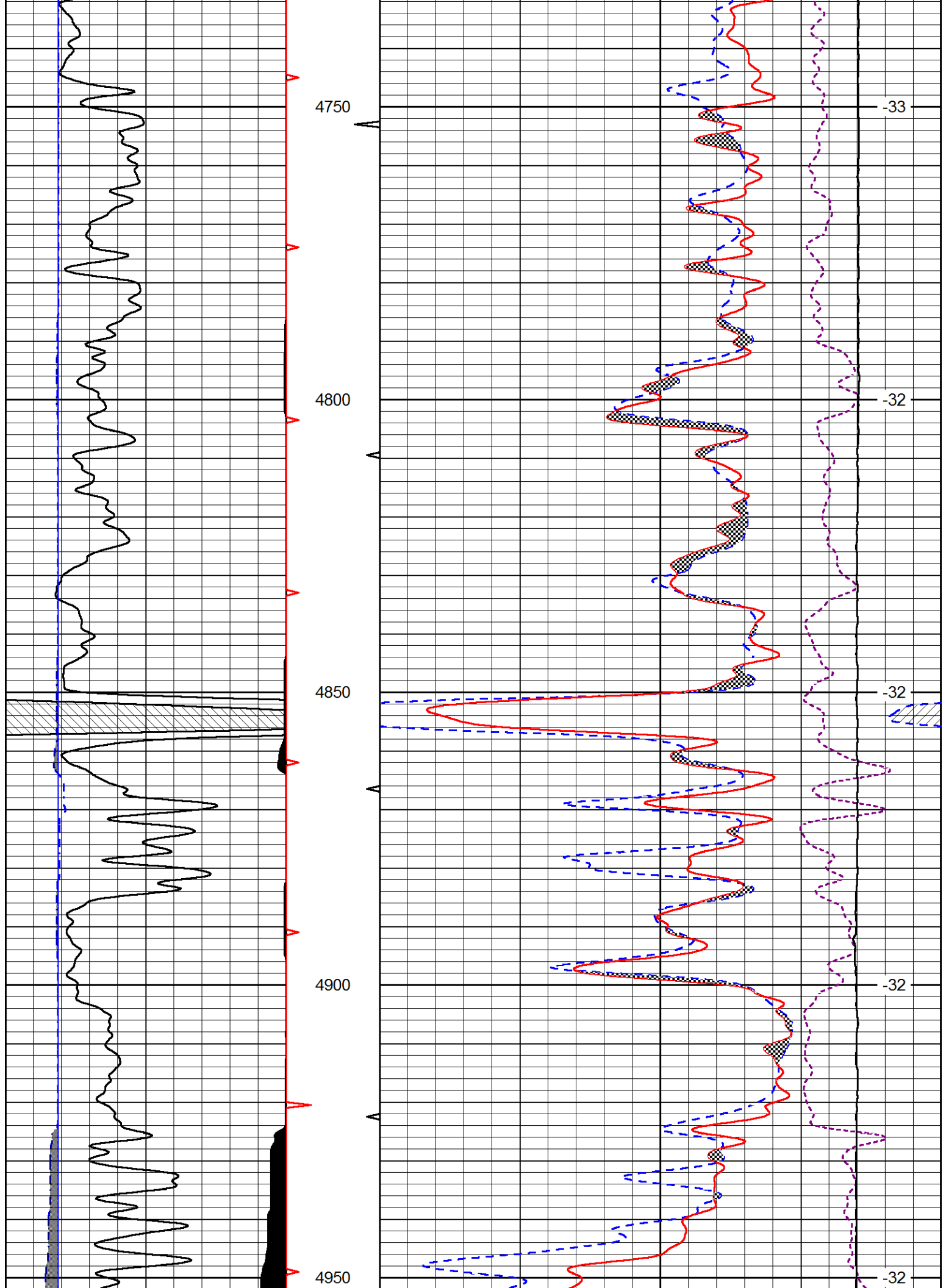
-0.25 CORRECTION (g/cc) 0.25

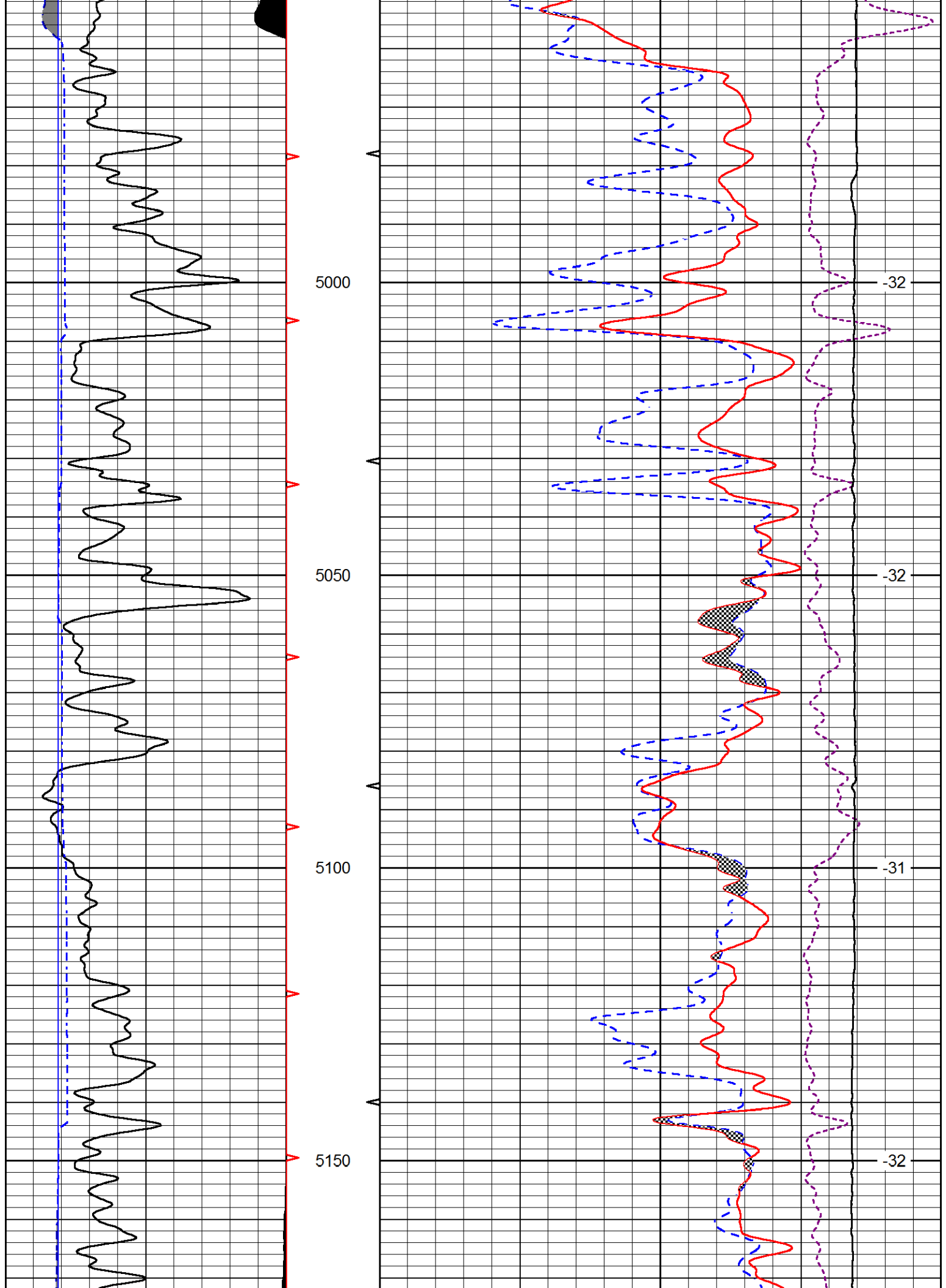
LINE SPEED
(ft/min)

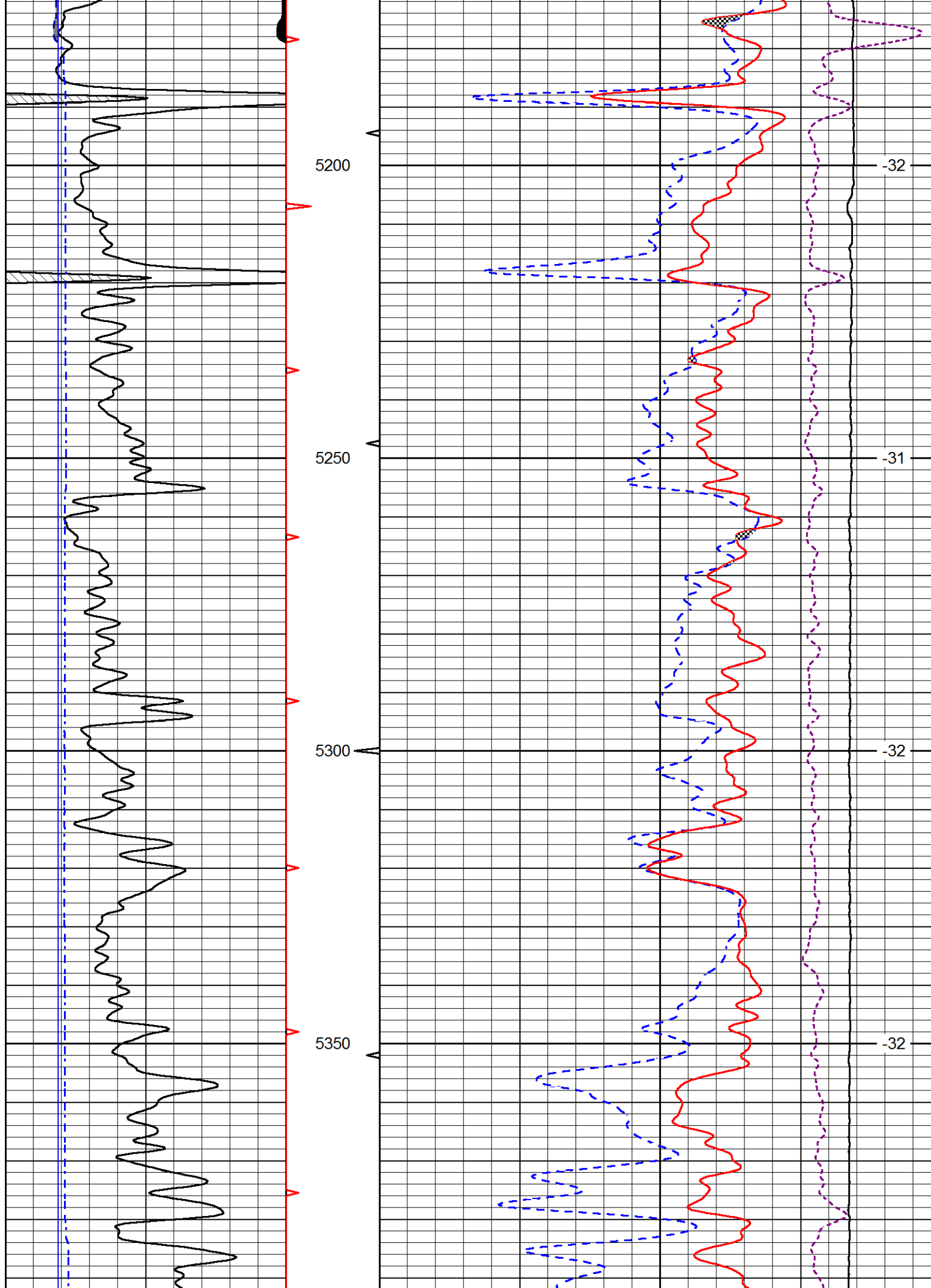


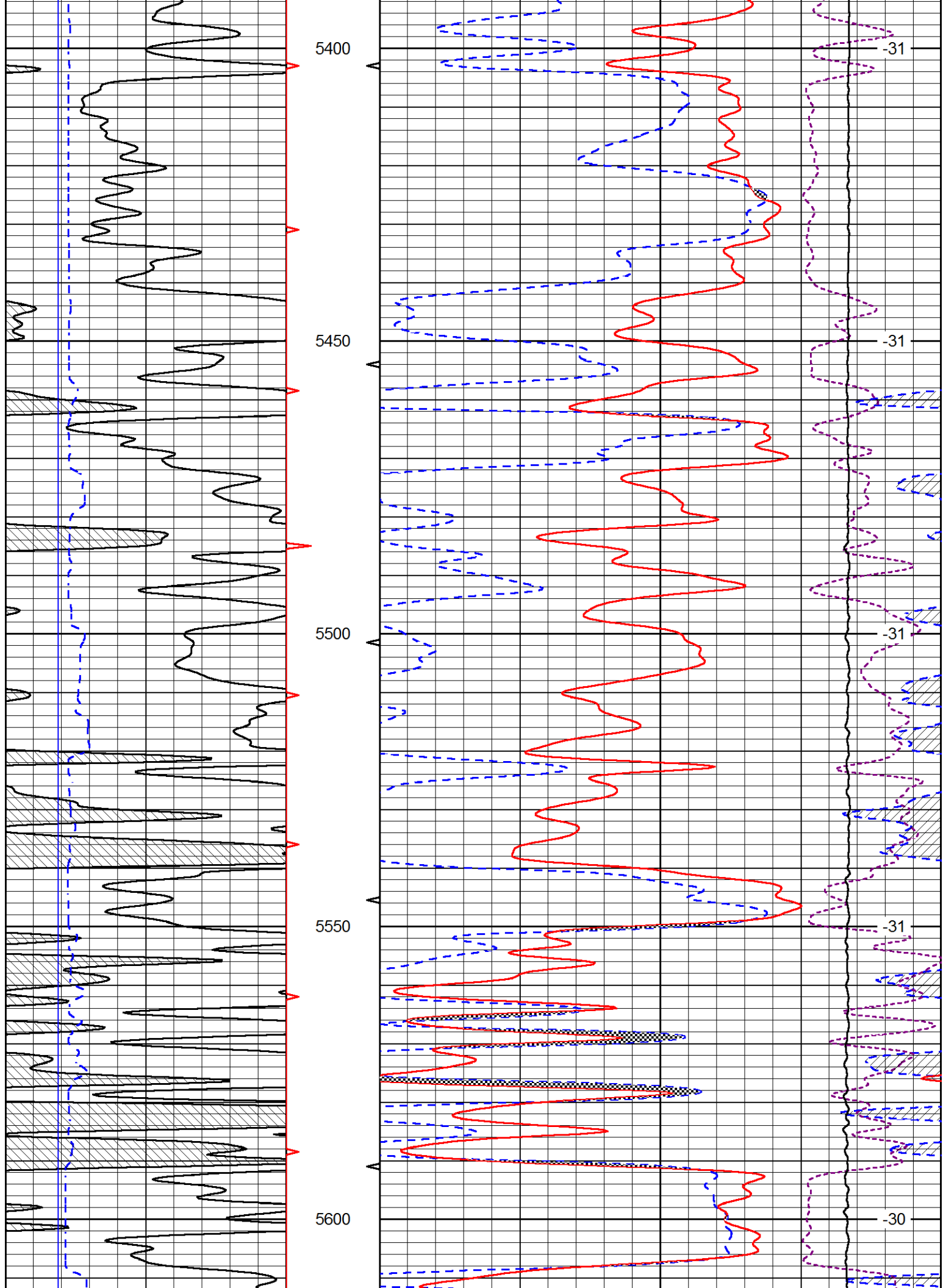


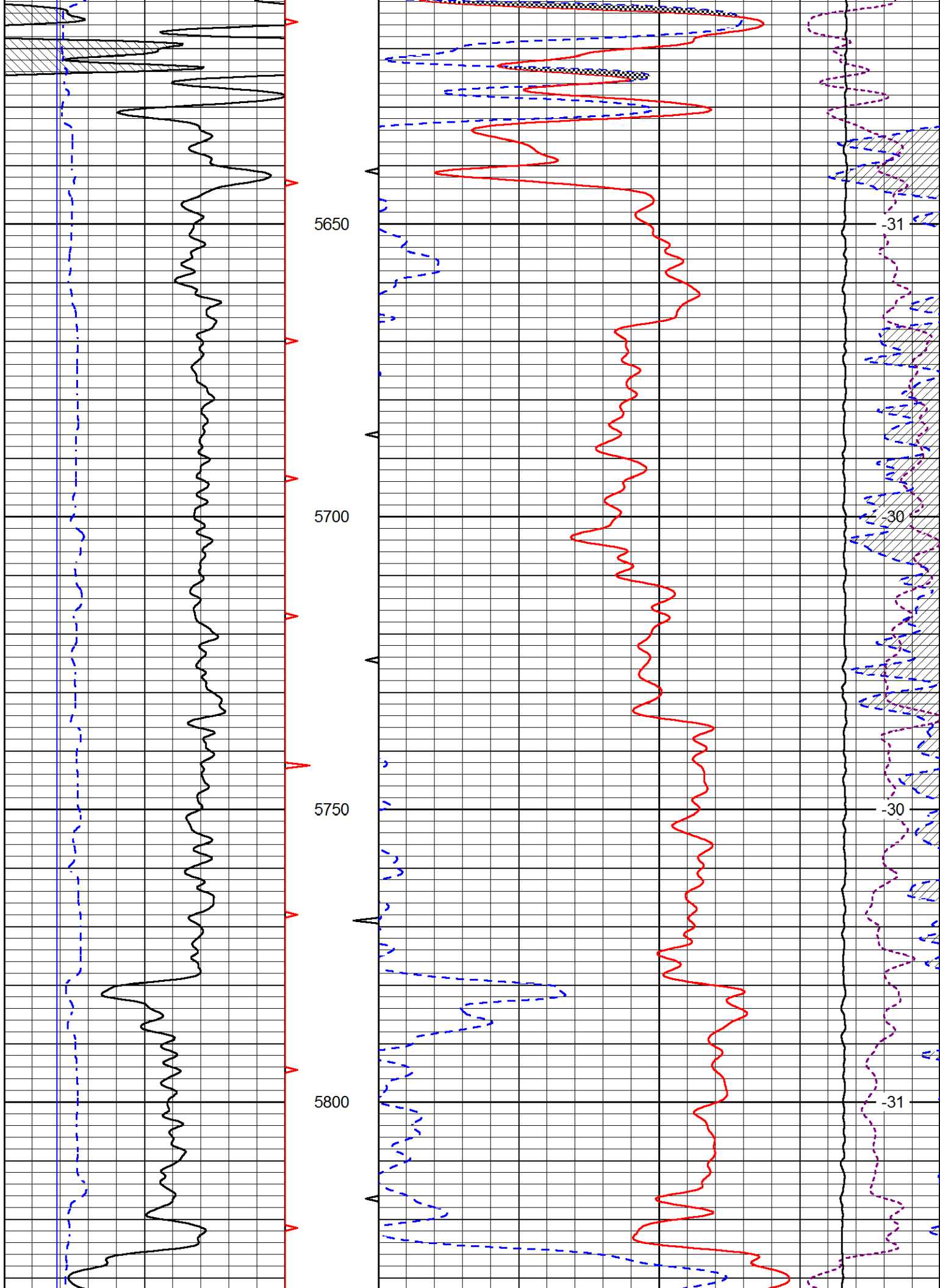


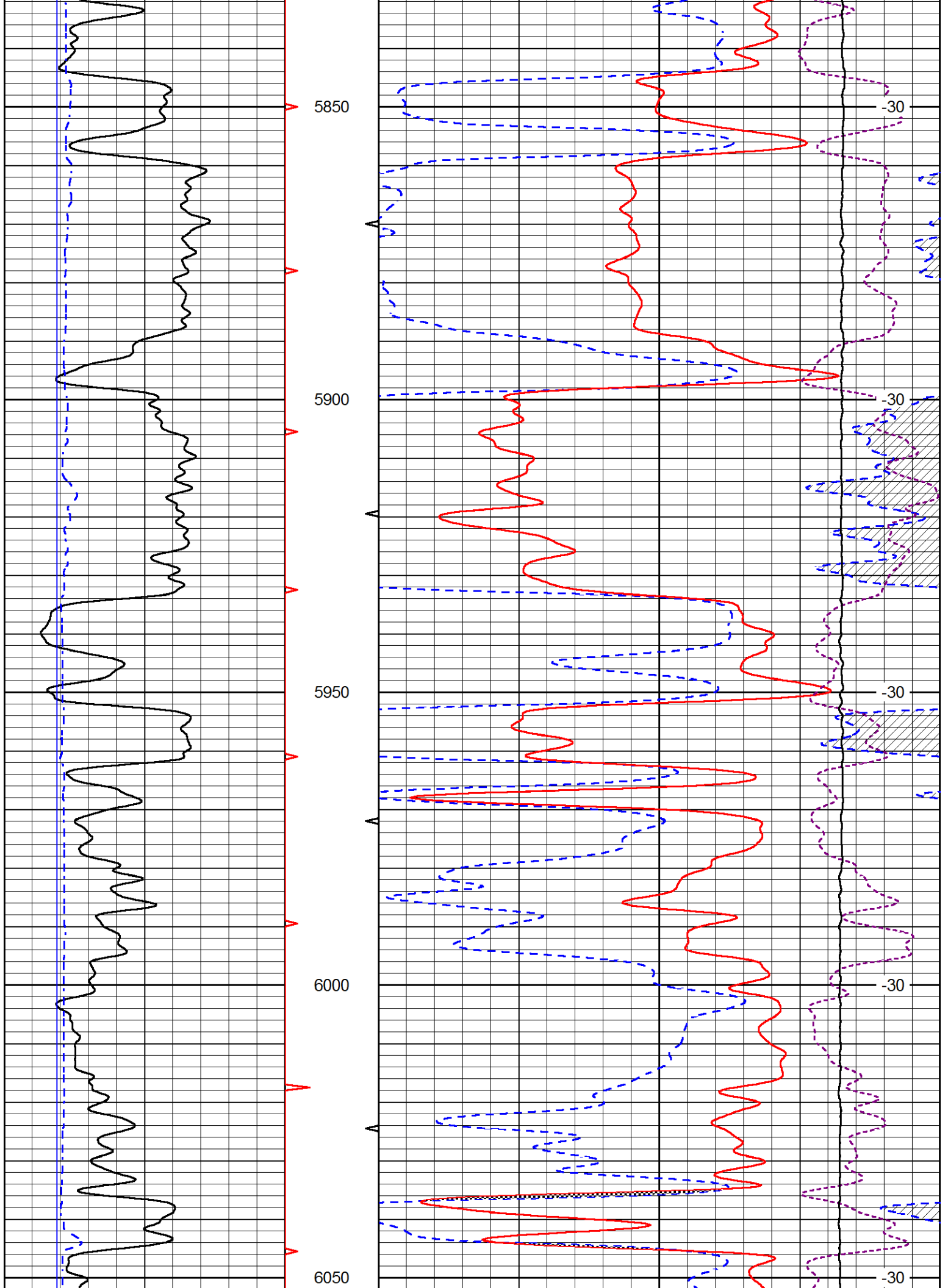


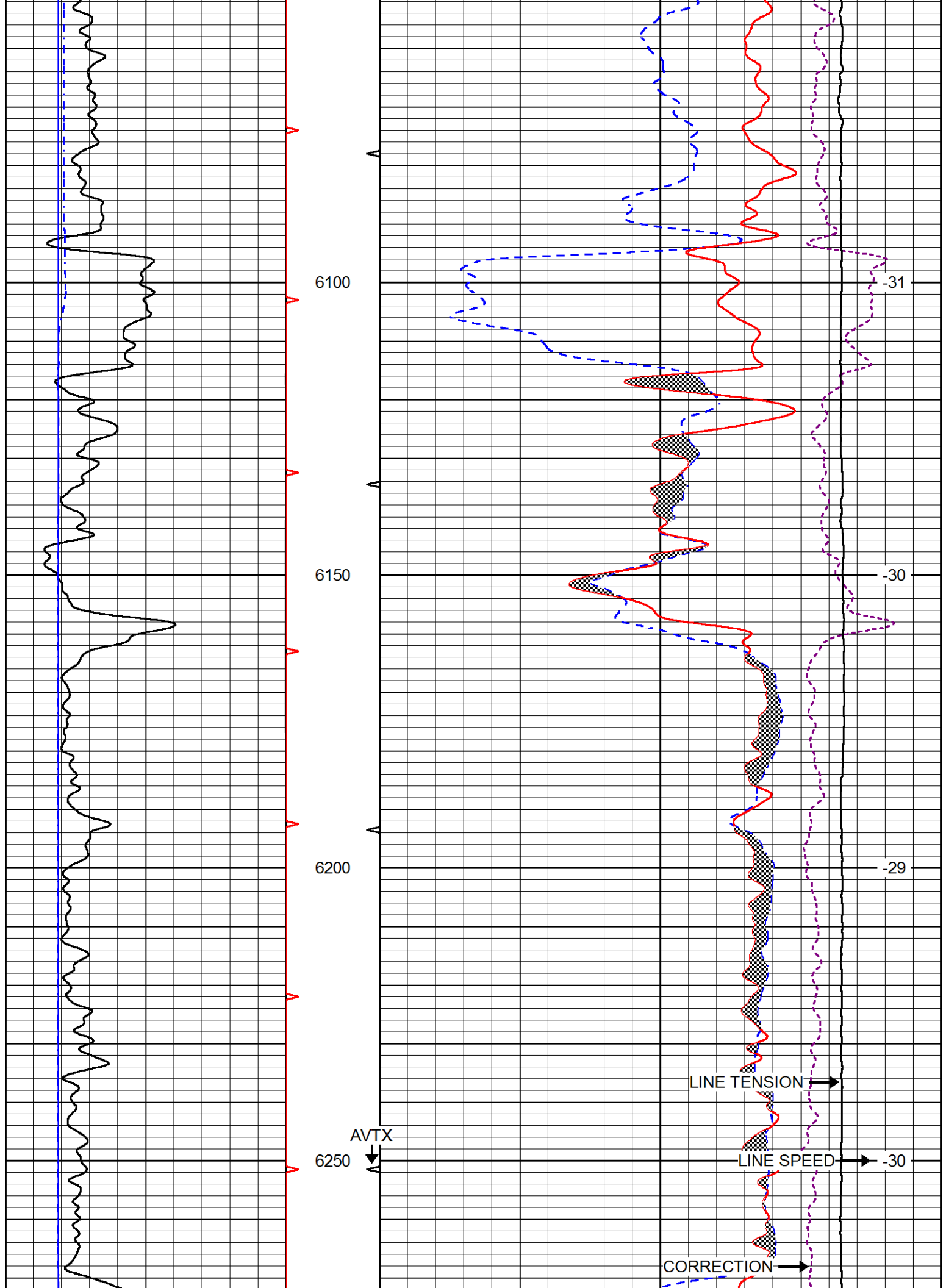


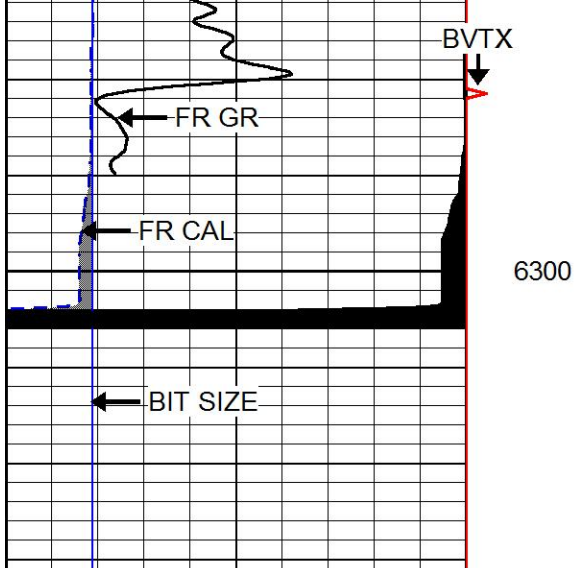




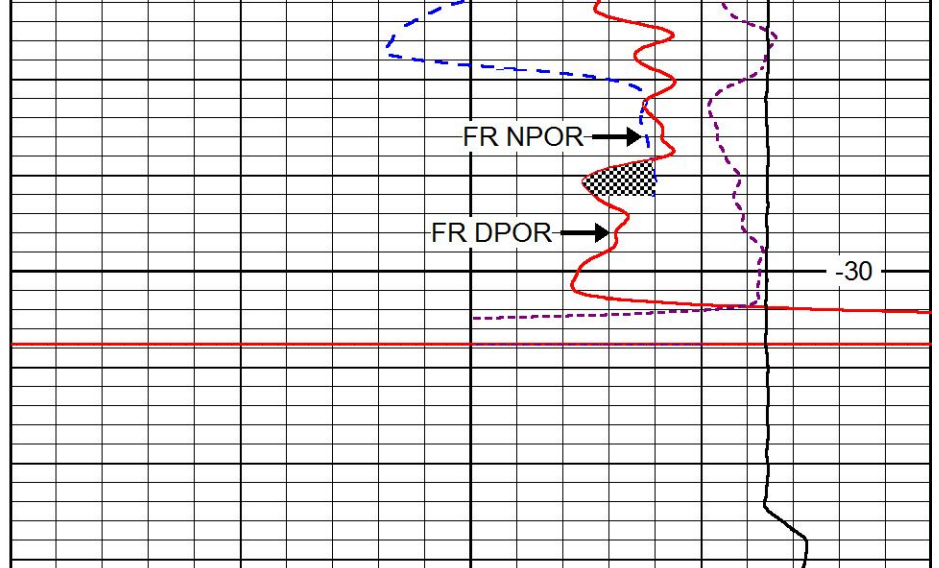








0	GAMMA RAY (GAPI)	150
6	CALIPER (in)	16
6	BIT SIZE (in)	16



30	COMPENSATED NEUTRON (pu)	-10
30	COMPENSATED DENSITY (2.71 ma) (pu)	-10
15000	LINE TENSION (lb)	0

-0.25 CORRECTION (g/cc) 0.25

LINE SPEED
(ft/min)



REPEAT SECTION

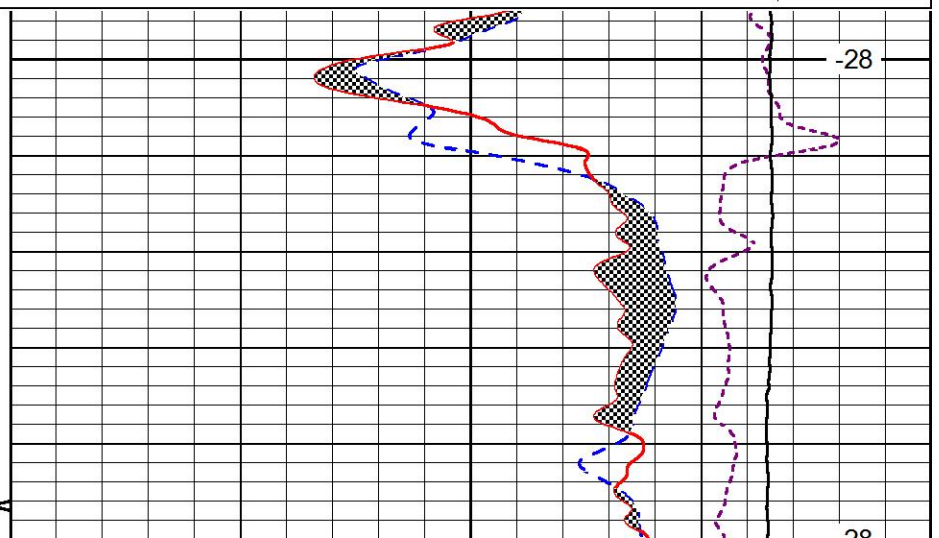
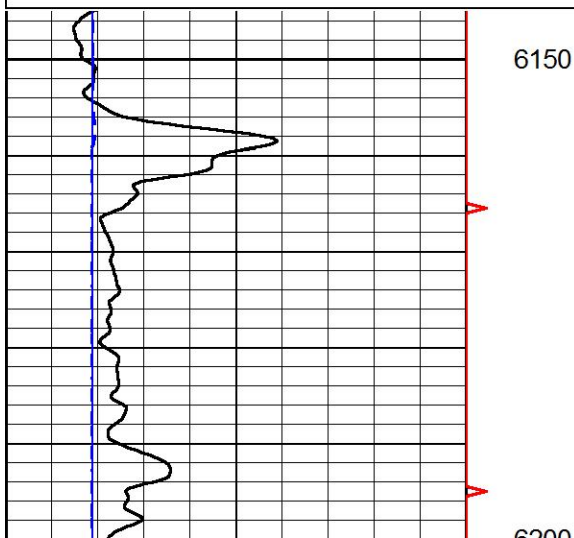
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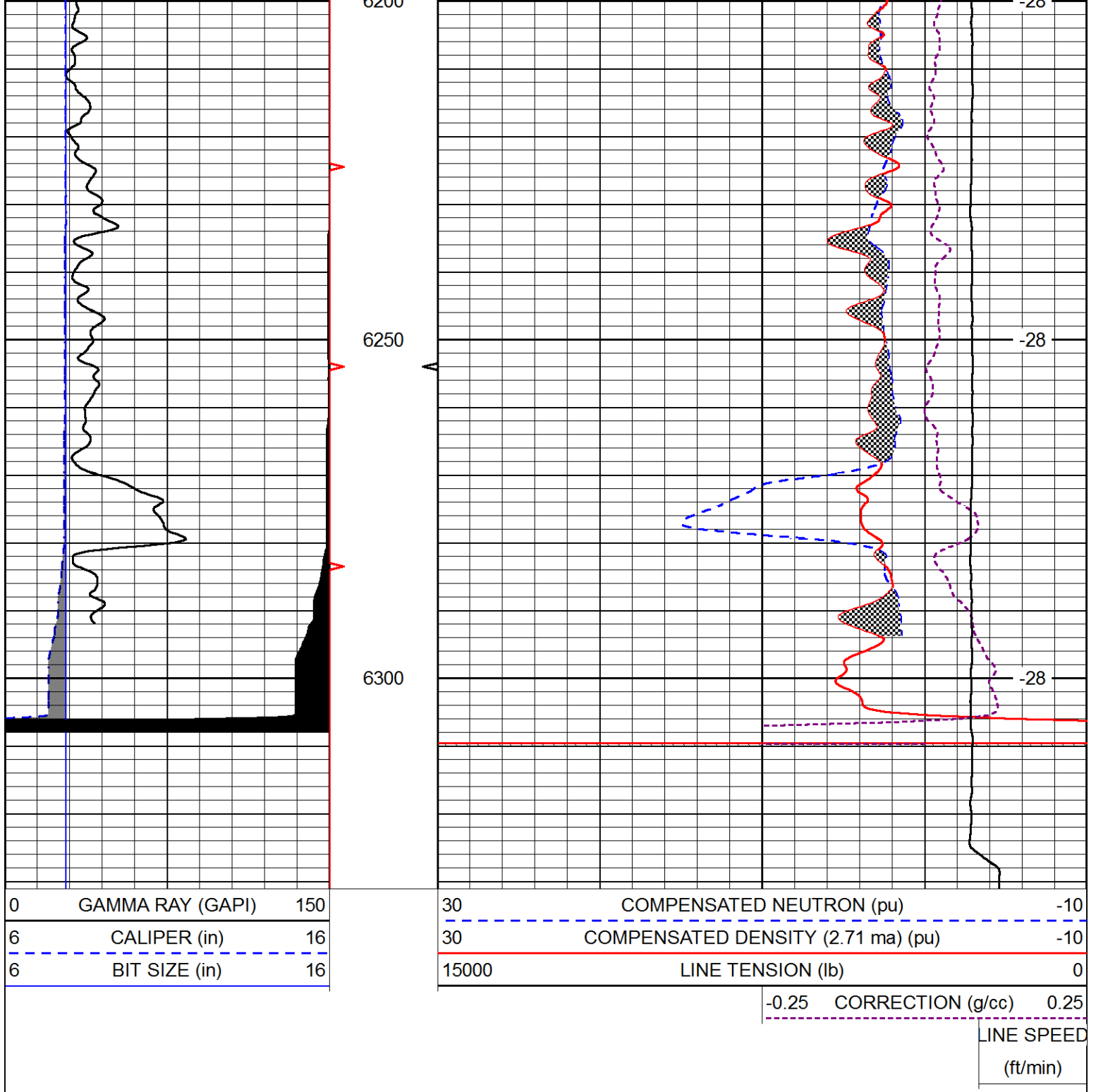
0	GAMMA RAY (GAPI)	150
6	CALIPER (in)	16
6	BIT SIZE (in)	16

30	COMPENSATED NEUTRON (pu)	-10
30	COMPENSATED DENSITY (2.71 ma) (pu)	-10
15000	LINE TENSION (lb)	0

-0.25 CORRECTION (g/cc) 0.25

LINE SPEED
(ft/min)





Calibration Report

Database File amwar_dowdyowes_#4-36.db
 Dataset Pathname stkml/pass3.1
 Dataset Creation Sun May 22 07:13:39 2016

Dual Induction Calibration Report

Serial-Model: 1987-M&W
 Calibration Performed: Thu May 05 13:07:05 2016

Loop:	Readings		References		Results	
	Air	Loop	Air	Loop	Gain	Offset
Deep	178.615	710.235	0.000	255.800	0.530	-36.500

Microlog Calibration Report

Serial-Model: PSI-02-PSI STKBL ML
 Performed: Sun May 22 04:14:29 2016

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0031	0.0043	0.0000	10.0000	Ohm-m	12508.9000	0.0000
Inverse	0.0000	0.0013	0.0000	10.0000	Ohm-m	11967.3000	-0.0096
Caliper	1.0020	1.0834	5.5000	16.5000	in	135.1560	-131.1500

Compensated Density Calibration Report

Serial-Model: 71-914-M&W
 Source / Verifier: /
 Master Calibration Performed: Thu Mar 31 16:30:19 2016

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4314.49	5307.52	cps
Aluminum	2.670	g/cc	822.19	3456.36	cps
Spine Angle = 75.49			Density/Spine Ratio = 0.534		
	Size		Reading		
Small Ring	4.00	in	1.16		
Large Ring	14.00	in	1.57		

Compensated Neutron Calibration Report

Serial Number: tk10-MW
 Tool Model: M&W
 Calibration Performed: Wed May 4 11:04:05 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: Sun May 22 04:14:23 2016

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps





Well	DOWDY OWENS #4-36
Field	SHUCK NW
County	STEVENS
State	KANSAS