



DUAL COMP POROSITY LOG

Company AMERICAN WARRIOR, INC.
 Well BLAESI #9-6
 Field UNKNOWN
 County WALLACE
 State KANSAS

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Location: 335' FSL & 1800' FEL
 SEC 6 TWP 15S RGE 41W
 Permanent Datum GROUND LEVEL Elevation 3775'
 Log Measured From KELLY BUSHING
 Drilling Measured From KELLY BUSHING
 API #: 15-199-20444-00-00
 Other Services DIL/MEL
 K.B. 3783'
 D.F. N/A
 G.L. 3775'

Date	8/11/2017
Run Number	ONE
Type Log	CNL/CDL
Depth Driller	5200'
Depth Logger	5202'
Bottom Logged Interval	5173'
Top Logged Interval	3900'
Type Fluid In Hole	CHEMICAL
Salinity, PPM CL	5000
Density	9.4
Level	FULL
Max. Rec. Temp. F	128
Operating Rig Time	4 HOURS
Equipment -- Location	91 HAYS
Recorded By	D. SCHMIDT
Witnessed By	LUKE THOMPSON

Run No.	Bit	Borehole Record			Casing Record		
		From	To	Size	Wgt.	From	To
ONE	12.25"	0'	366'	8.625"	23#	0'	366'
TWO	7.875"	366'	TD				

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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.
 SHARON SPRINGS,
 9 WEST TO 9 RD, 8 SOUTH,
 WEST AND NORTH TO LOCATION

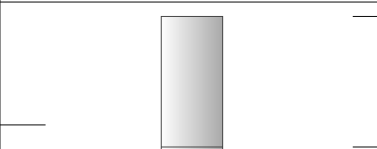
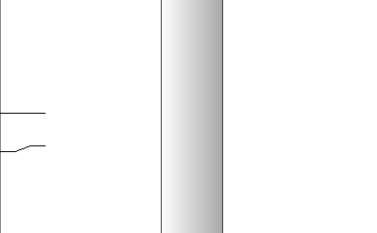
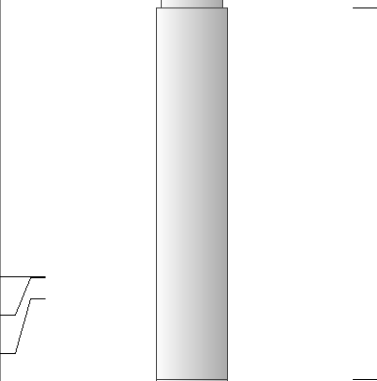
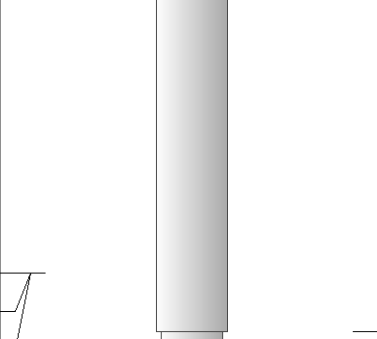
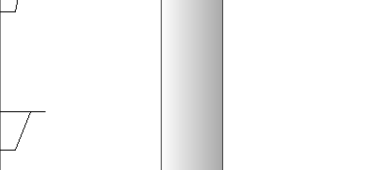
Log Measured From: KELLY BUSHING 8 Ft. Above Permanent Datum

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:
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Top - Bottom

M	A	SZCOR	NPORSEL	FLUIDDEN g/cc	MATRXDEN g/cc	SPSHIFT mV	SNDERRM mmho/m
2	1	Off	Limestone	1	2.71	500	0
SNDERR mmho/m	SRFTEMP degF	CASETHCK in	CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
0	80	0	5.5	0	5202	128	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 91)

18.50

3.50

220.00

Dataset: american warrior_blaesi_9-6.db: field/well/STKML/pass3.7
 Total length: 43.08 ft
 Total weight: 685.00 lb
 O.D.: 4.00 in

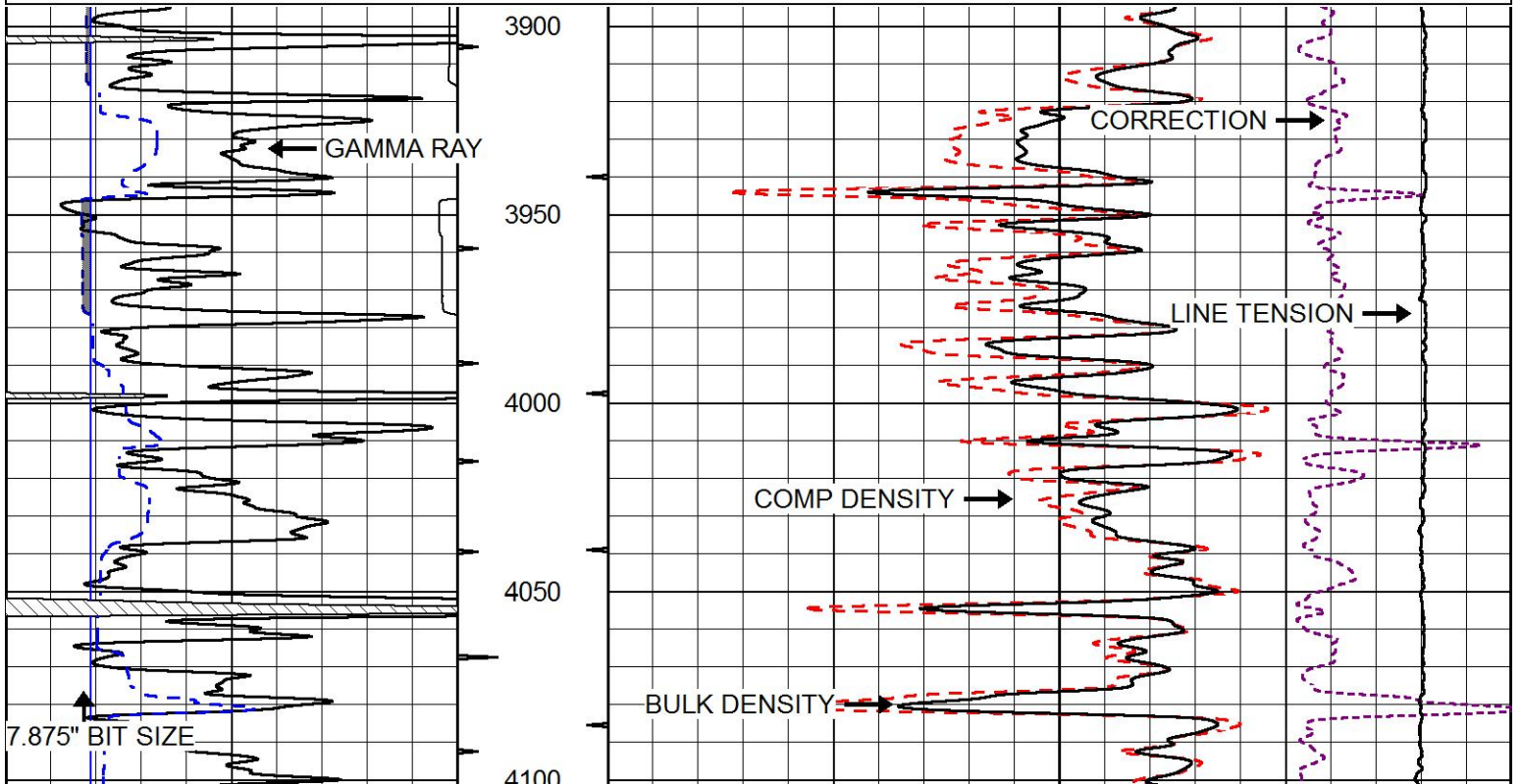
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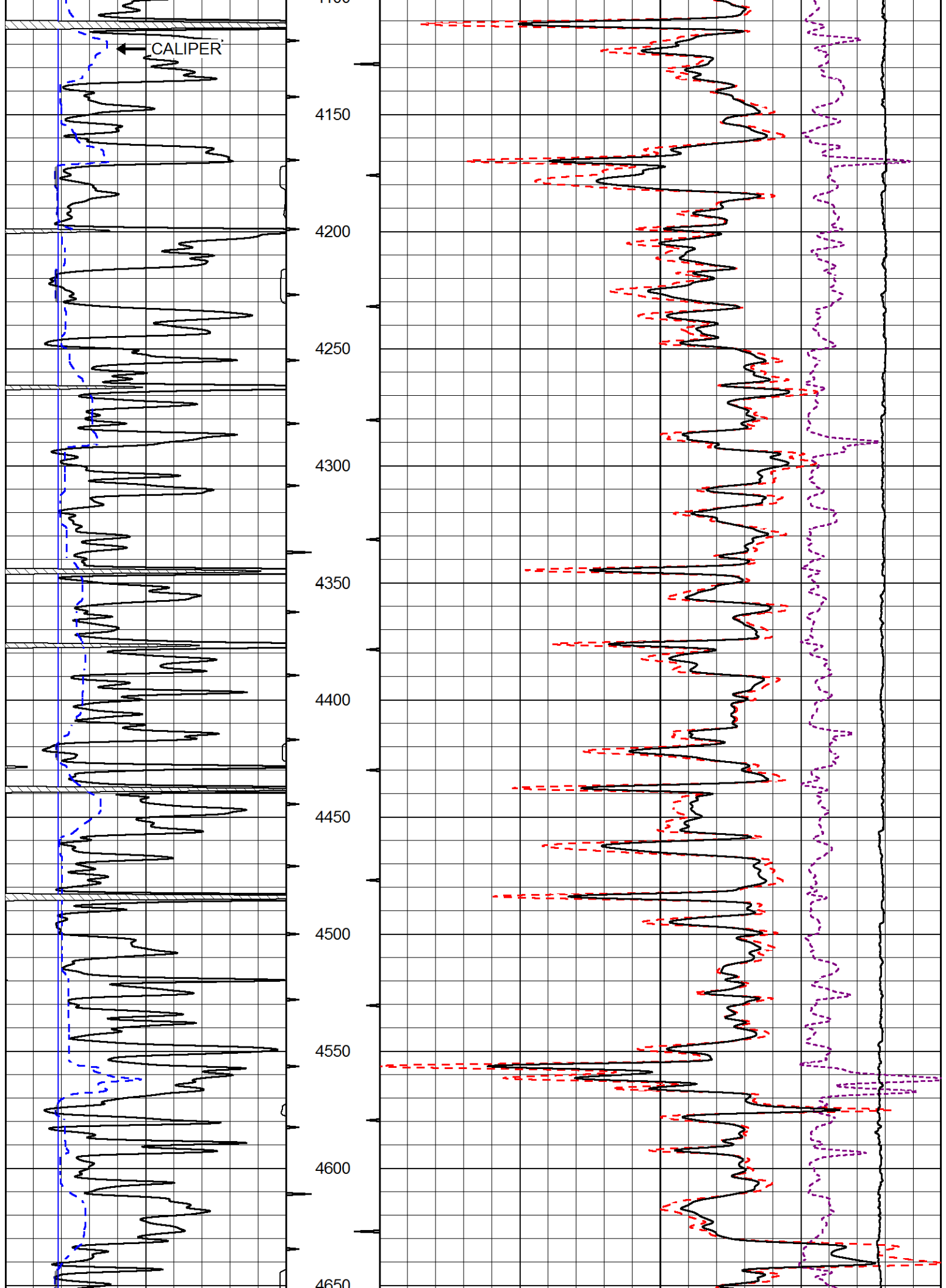
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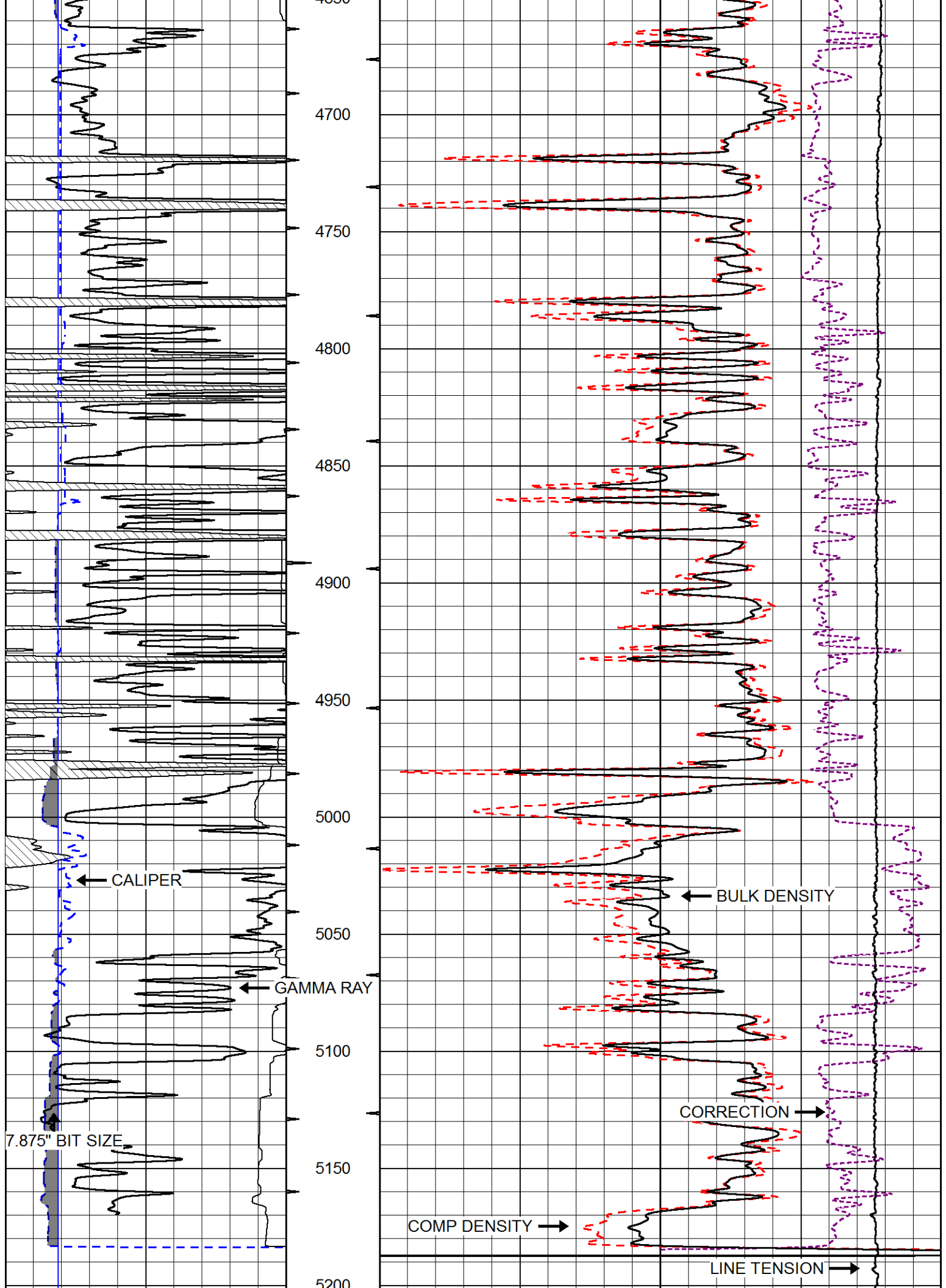
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 Dataset Pathname: STKML/pass3.1
 Presentation Format: cdl
 Dataset Creation: Fri Aug 11 13:20:09 2017
 Charted by: Depth in Feet scaled 1:600

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

Compensated Density (2.71 MA) (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

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

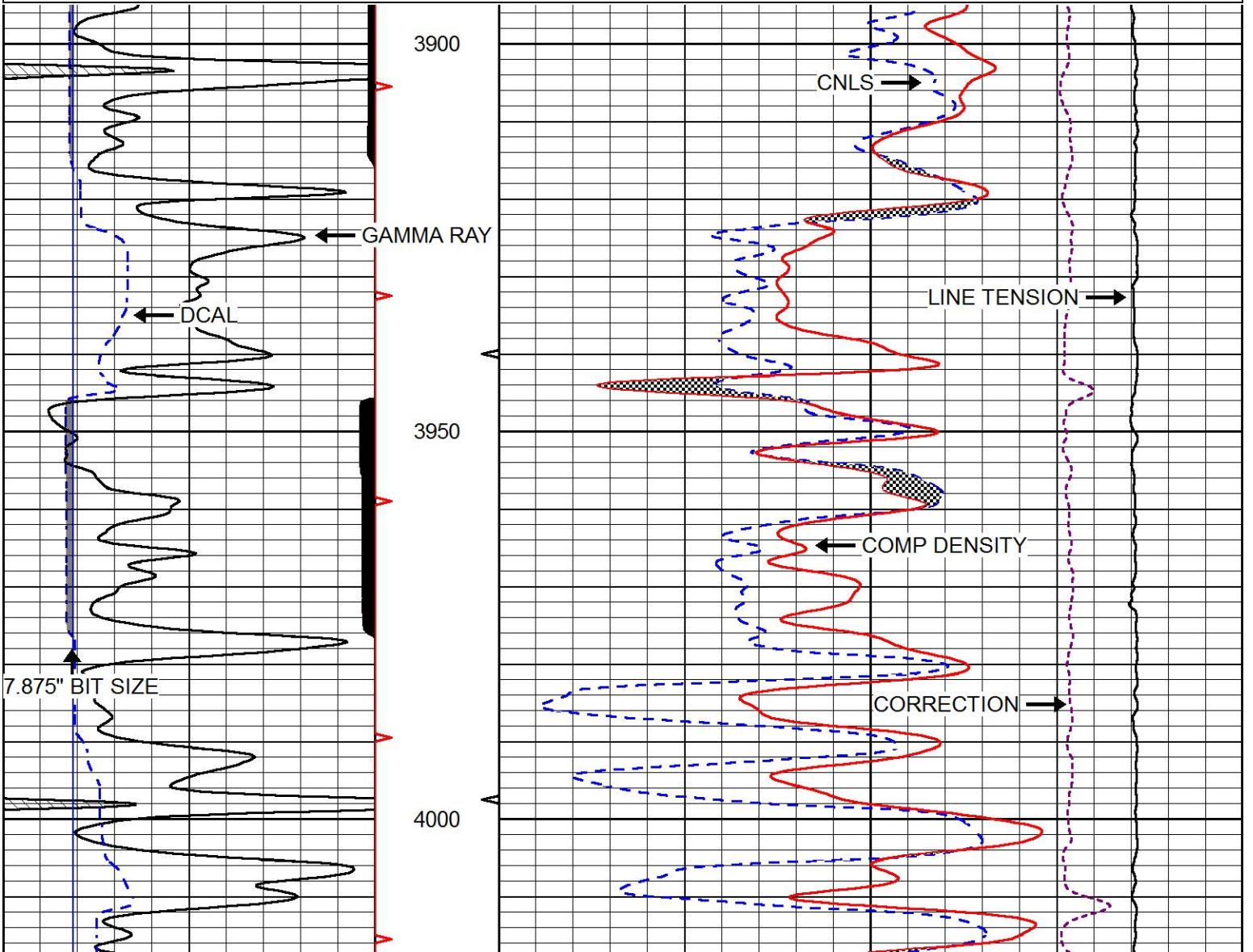


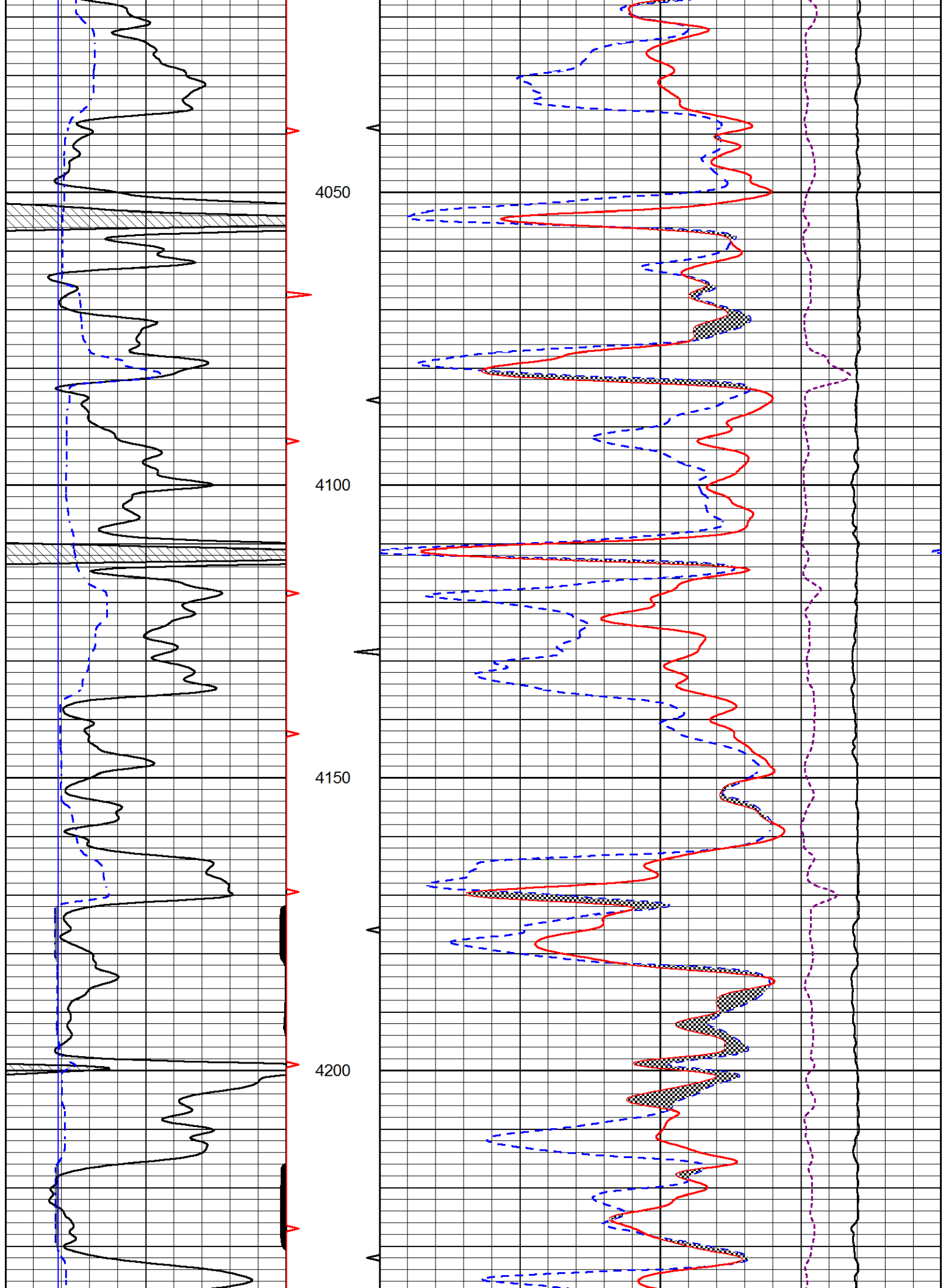
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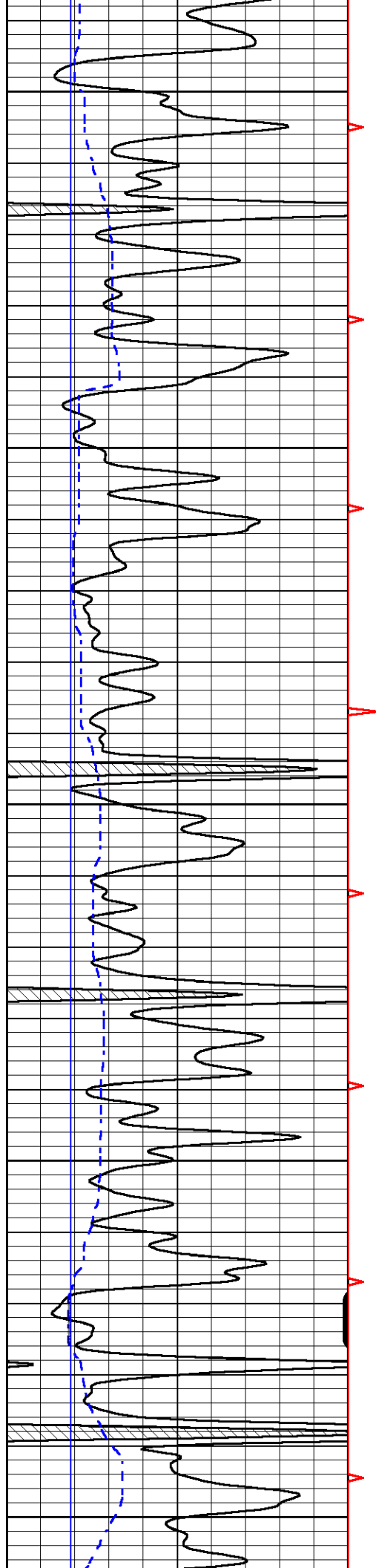
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 Dataset Pathname: STKML/pass3.1
 Presentation Format: cndlspec
 Dataset Creation: Fri Aug 11 13:20:09 2017
 Charted by: Depth in Feet scaled 1:240

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
	-0.75 Correction (g/cc)	0.75







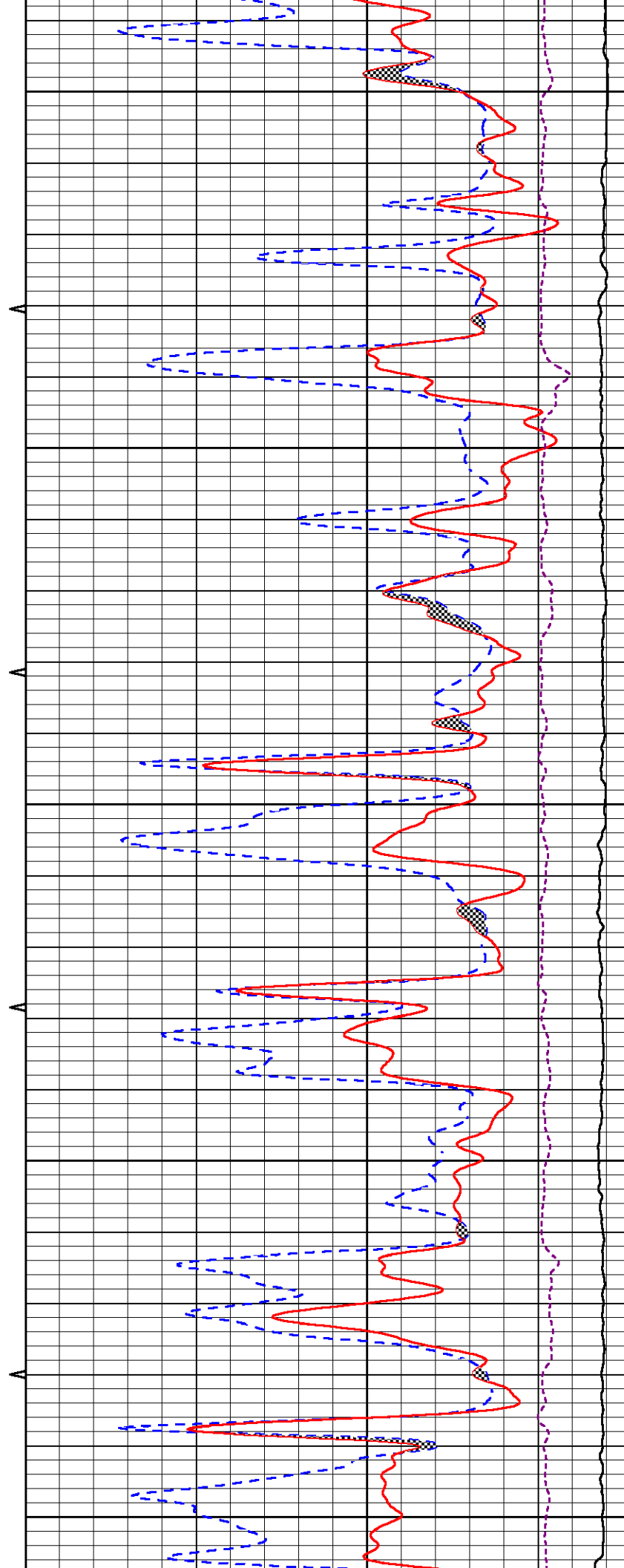
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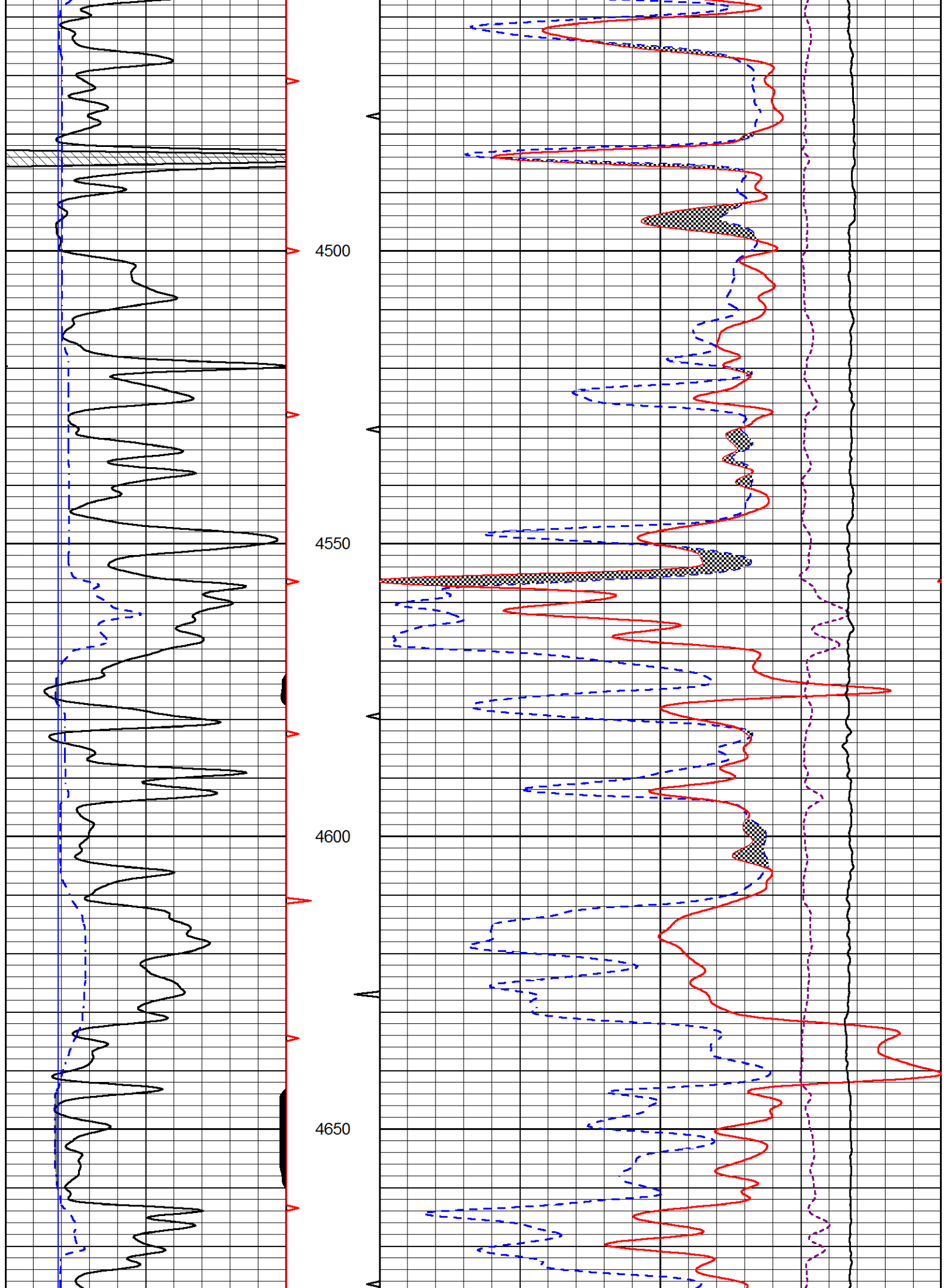
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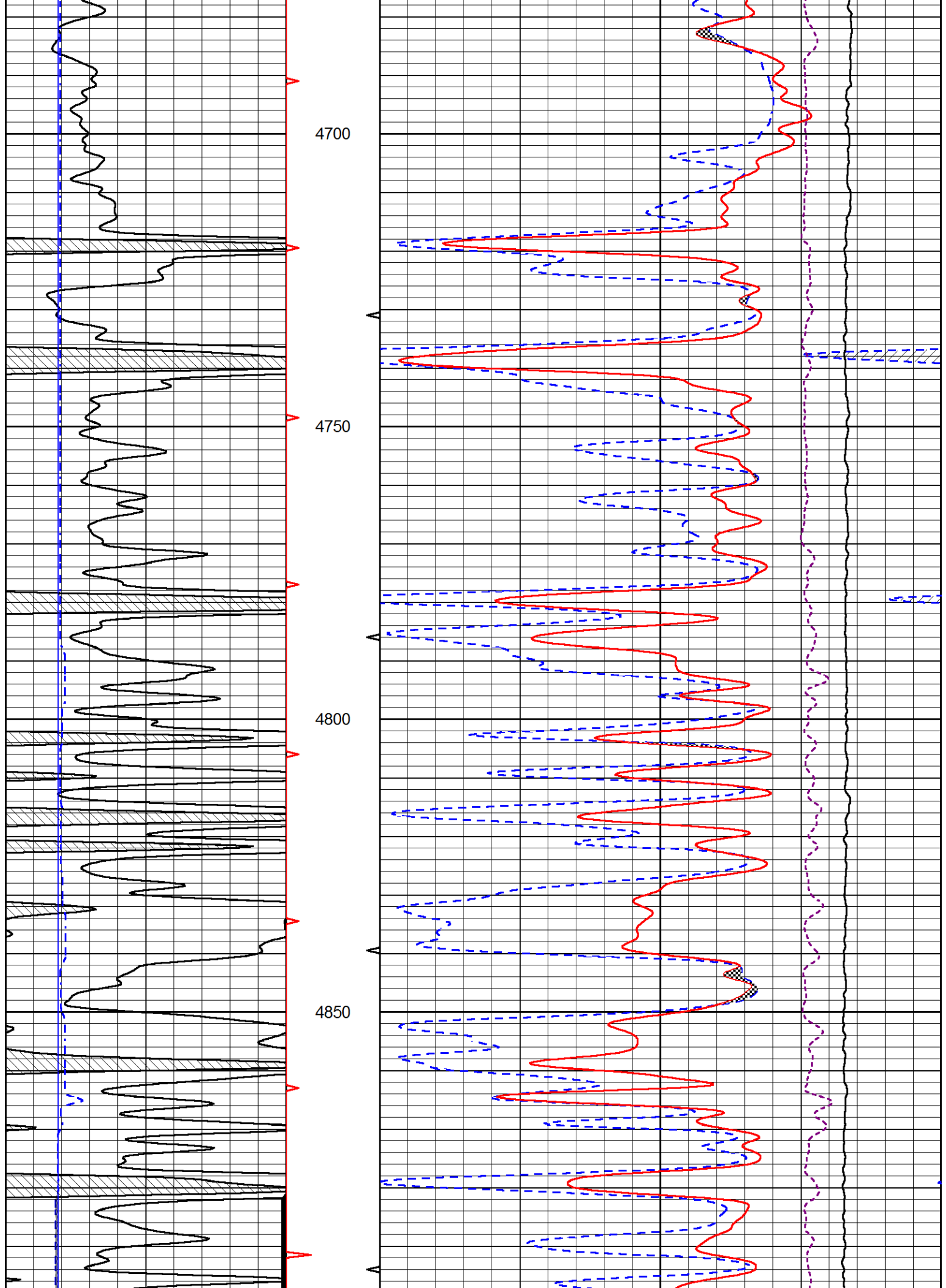
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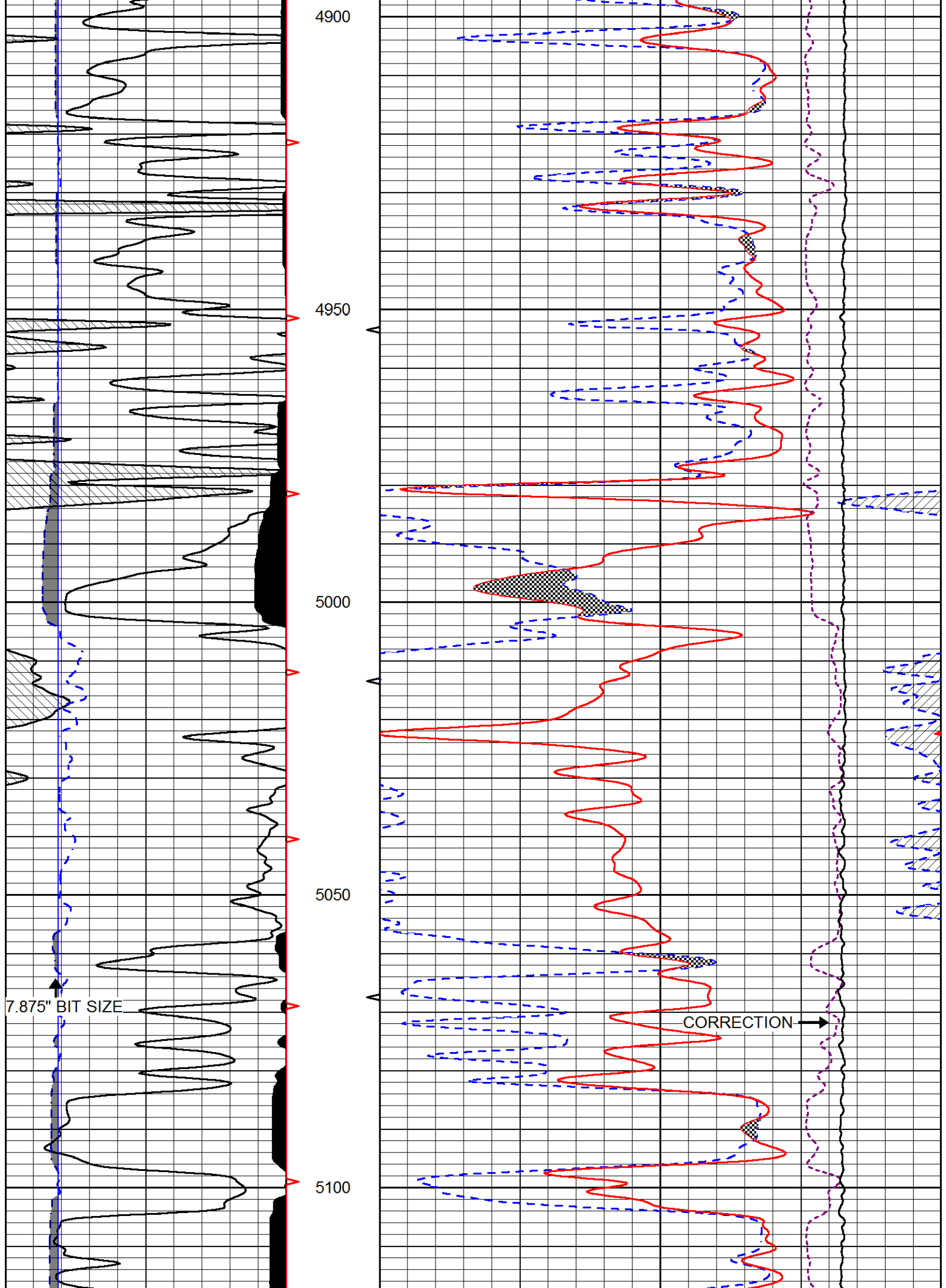
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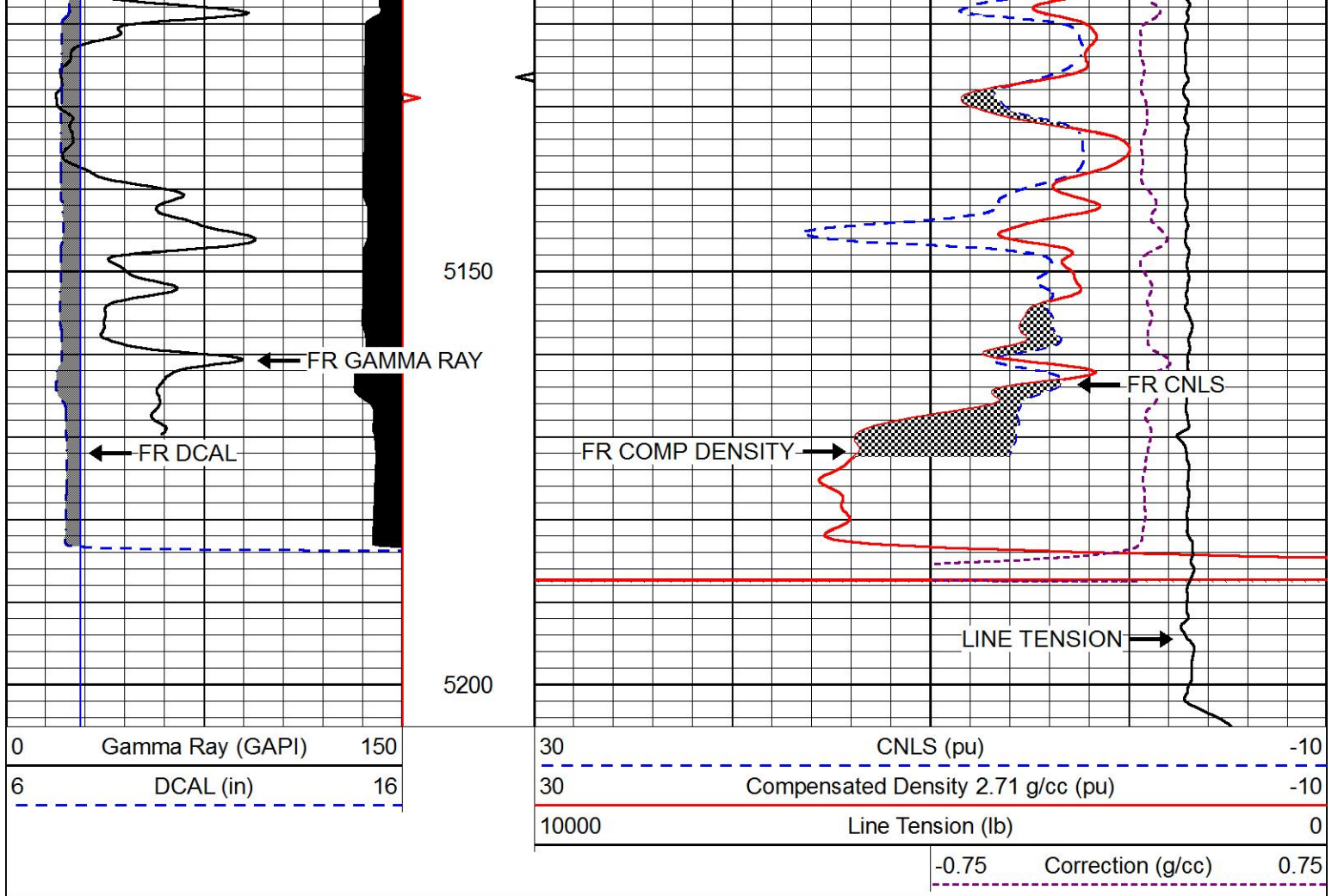
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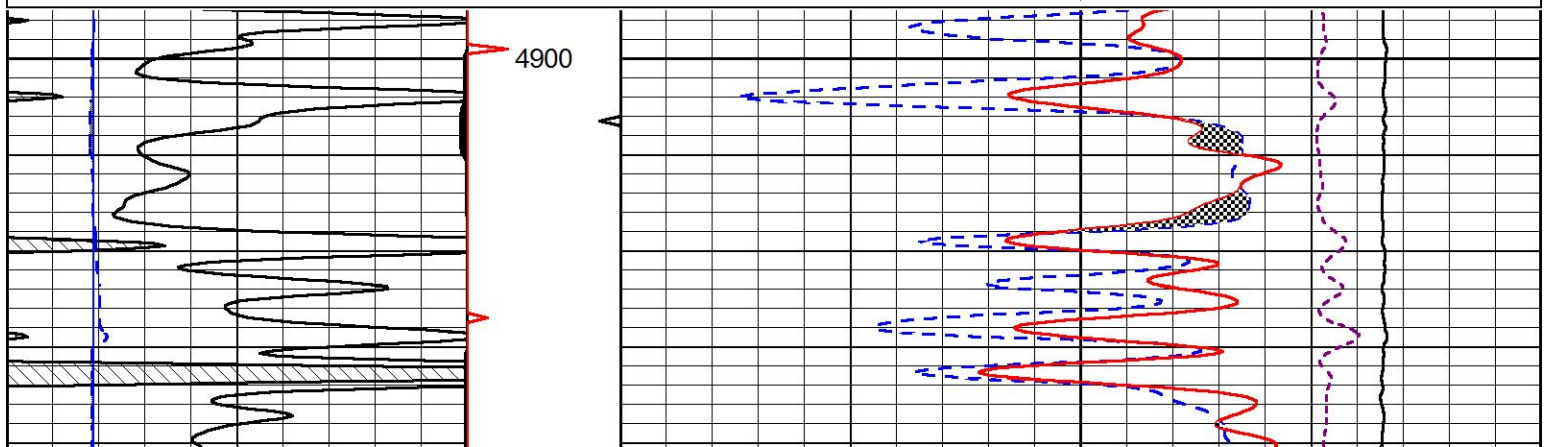
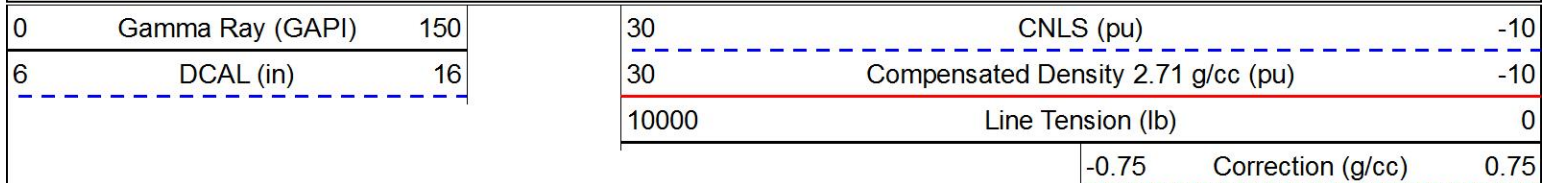


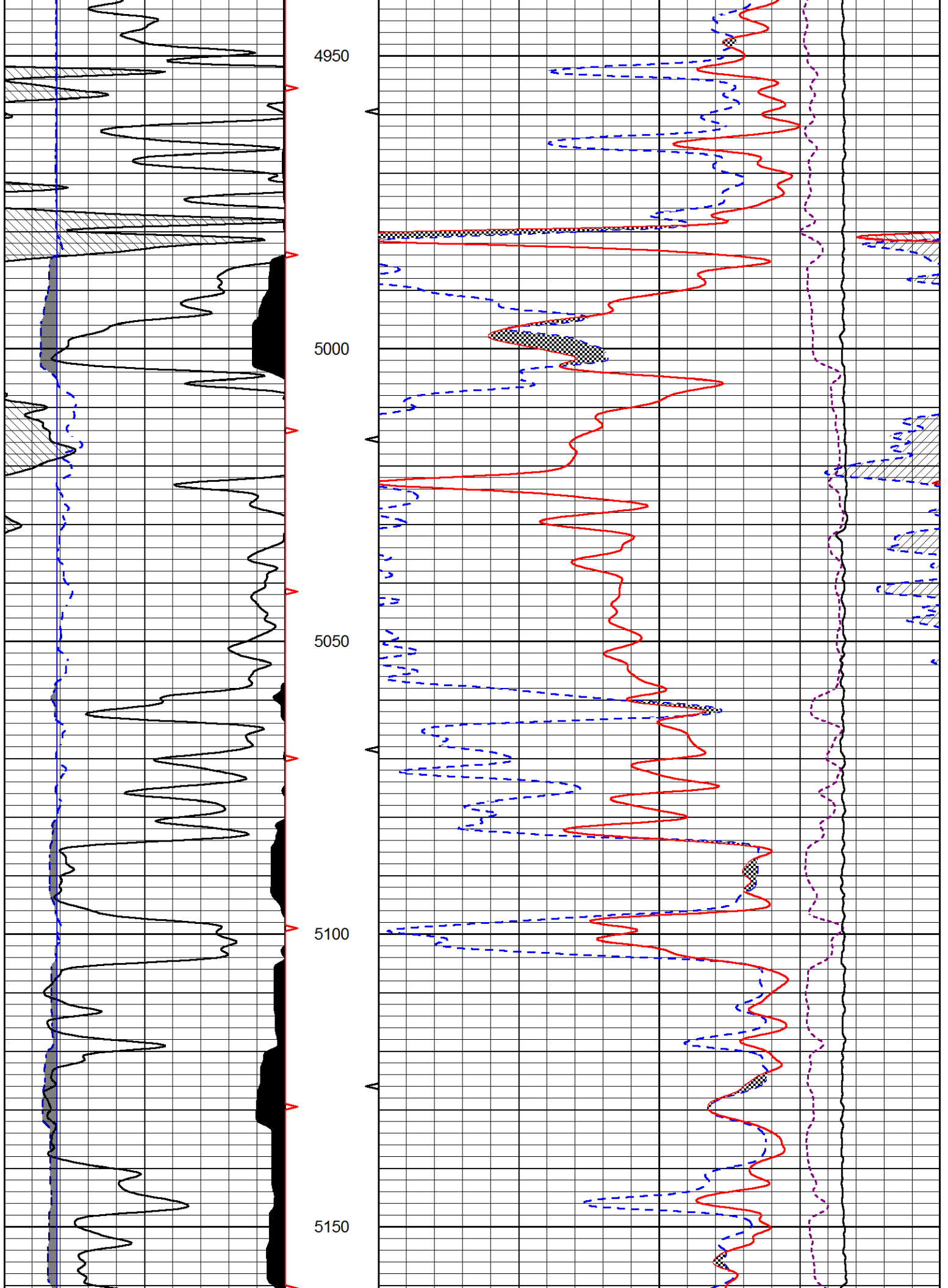


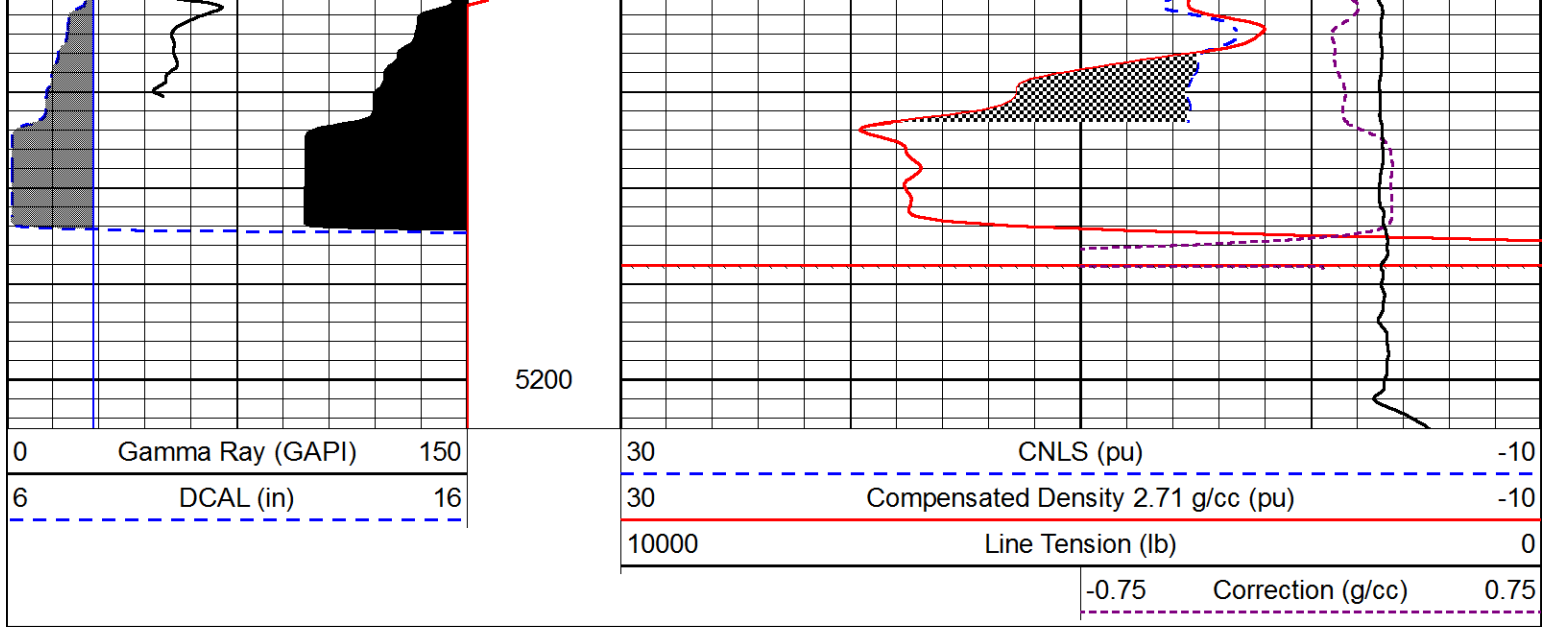


REPEAT SECTION

Database File american_warrior_blaesi_9-6.db
 Dataset Pathname STKML/pass2.1
 Presentation Format cndlspec
 Dataset Creation Fri Aug 11 13:26:14 2017
 Charted by Depth in Feet scaled 1:240







Calibration Report

Database File american warrior_blaesi_9-6.db
 Dataset Pathname STKML/pass3.7
 Dataset Creation Fri Aug 11 12:48:38 2017

Dual Induction Calibration Report

Serial-Model: PSI 91-M&W
 Calibration Performed: Thu Aug 10 08:41:25 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	166.796	835.089	0.000	255.800	mmho/m	0.430	-32.000
Medium	142.009	1348.560	0.000	255.800	mmho/m	0.360	-31.000

Microlog Calibration Report

Serial-Model: PSI-01-PSIML
 Performed: Fri Aug 11 11:41:38 2017

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	21500.0000	-0.6000
Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	26000.0000	-0.6000
Caliper	1.0001	1.1397	6.5000	18.5000	in	100.0000	-97.3300

Compensated Density Calibration Report

Serial-Model: 90-1031-M&W
 Source / Verifier: 16955B / 2ci
 Master Calibration Performed: Wed Aug 02 00:28:57 2017

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4903.44	6153.79	cps

Aluminum 2.685 g/cc 934.50 4021.31 cps

Spine Angle = 75.61

Density/Spine Ratio = 0.543

	Size		Reading
Small Ring	8.00	in	1.84
Large Ring	22.00	in	1.46

Compensated Neutron Calibration Report

Serial Number: 207-MW
 Tool Model: M&W
 Calibration Performed: Tues Aug 1 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 Aug 02 00:29:15 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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