



# DUAL COMP POROSITY LOG

**Company BRITO OIL COMPANY, INC.**  
**Well METZGER NO. 1-18**  
**Field WILDCAT**  
**County SCOTT**      **State KANSAS**

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<b>Location:</b> API #: 15-171-21212-00-00 1478' FSL & 1304' FEL SEC 18 TWP 19S RGE 34W	Other Services DIL MEL
Permanent Datum      GROUND LEVEL      Elevation 3127' Log Measured From      KELLY BUSHING Drilling Measured From      KELLY BUSHING	Elevation K.B. 3132' D.F. N/A G.L. 3127'

Date	1/4/2018				
Run Number	ONE				
Type Log	CNL/CDL				
Depth Driller	4970'				
Depth Logger	4965'				
Bottom Logged Interval	4936'				
Top Logged Interval	3700'				
Type Fluid In Hole	CHEMICAL				
Salinity, PPM CL	6500				
Density	9.5				
Level	FULL				
Max. Rec. Temp. F	126 DEG/F				
Operating Rig Time	2 HOURS				
Equipment -- Location	108 HAYS				
Recorded By	J. HENRICKSON				
Witnessed By	ROBERT HENDRIX				

Borehole Record			Casing Record				
Run No.	Bit	From	To	Size	Wgt.	From	To
ONE	12.25"	0	301'	8.625"	23#	0	301'
TWO	7.875"	301'					

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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.**  
**SCOTT CITY KANSAS**  
**11 WEST, 6 SOUTH, 3/4 EAST, NORTH 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**

Engineer: J. HENRICKSON  
 Operator:  
 Operator:  
 Operator:

**This Log Record Was Witnessed By**

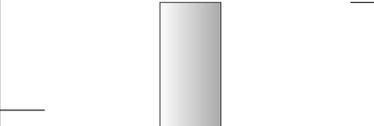
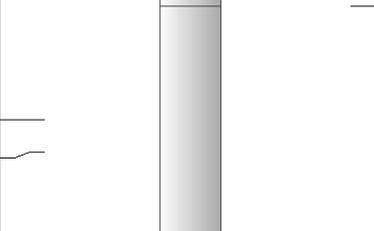
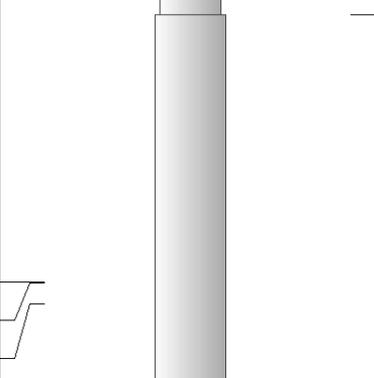
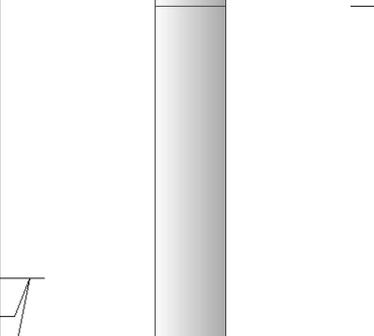
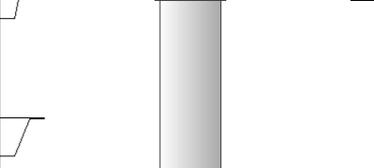
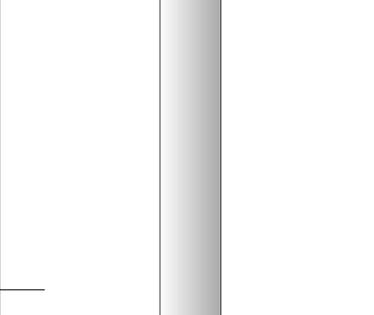
Primary Witness: ROBERT HENDRIX  
 Secondary Witness:  
 Secondary Witness:  
 Secondary Witness:

# Log Variables

DatabaseC:\ProgramData\Warrior\Data\brito\_metzger\_1\_18.db  
Dataset field/well/stackml/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	-400	24	Off	4966

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 (168-986)	8.50	4.00	250.00
MCAL MI MN	19.83 19.83 19.83		ML-PSI STKBL ML (PSI-01) Stackable Microlog Tools	7.58	4.00	65.00
RLL3 RLL3F	15.80 15.79					
CILD	8.00		DIL-M&W (PSI 978)	18.50	3.50	220.00

CILM 4.70

SP 0.20

Dataset: brito\_metzger\_1\_18.db: field/well/stackml/pass3.1  
 Total length: 43.08 ft  
 Total weight: 685.00 lb  
 O.D.: 4.00 in

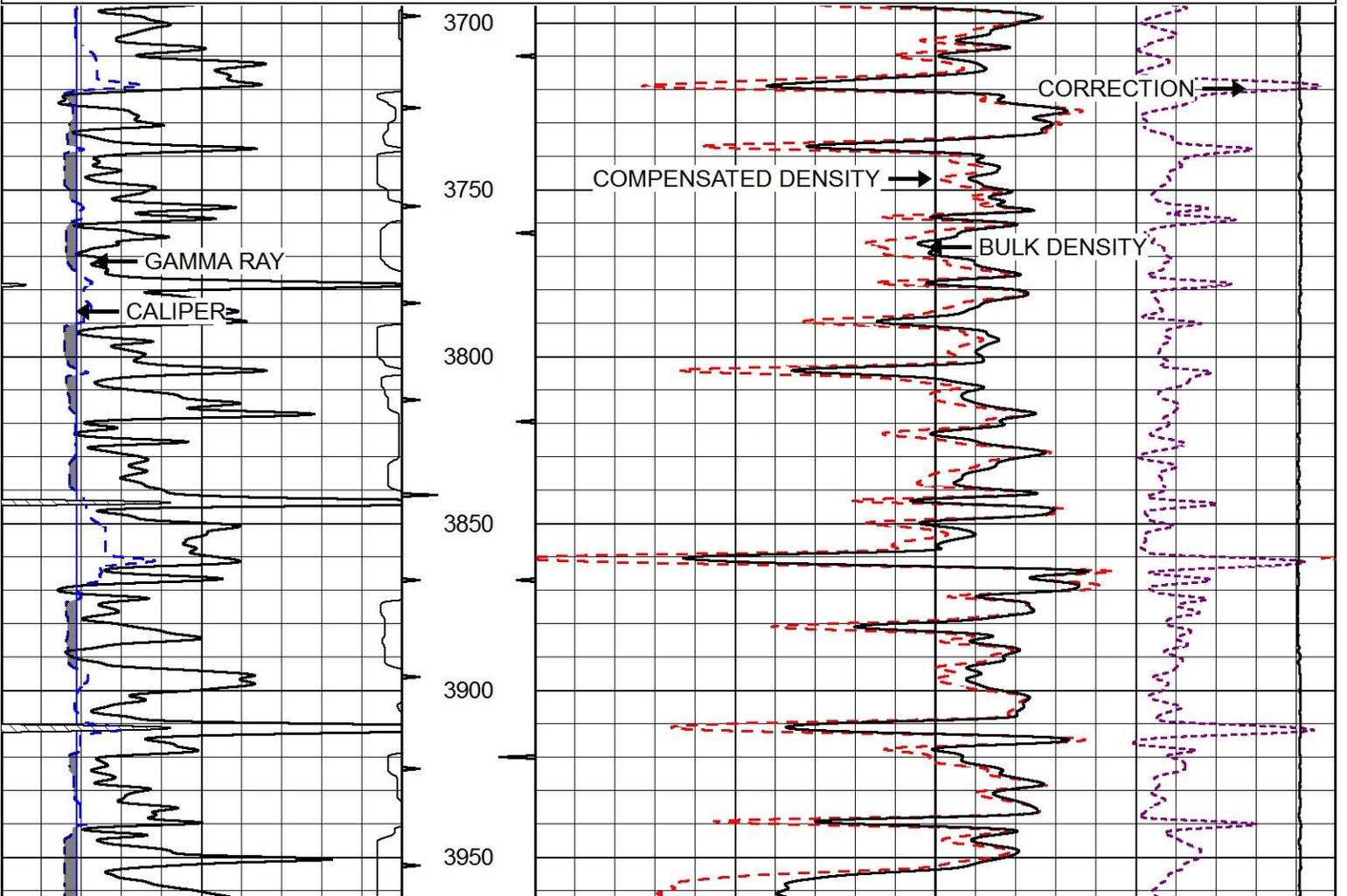


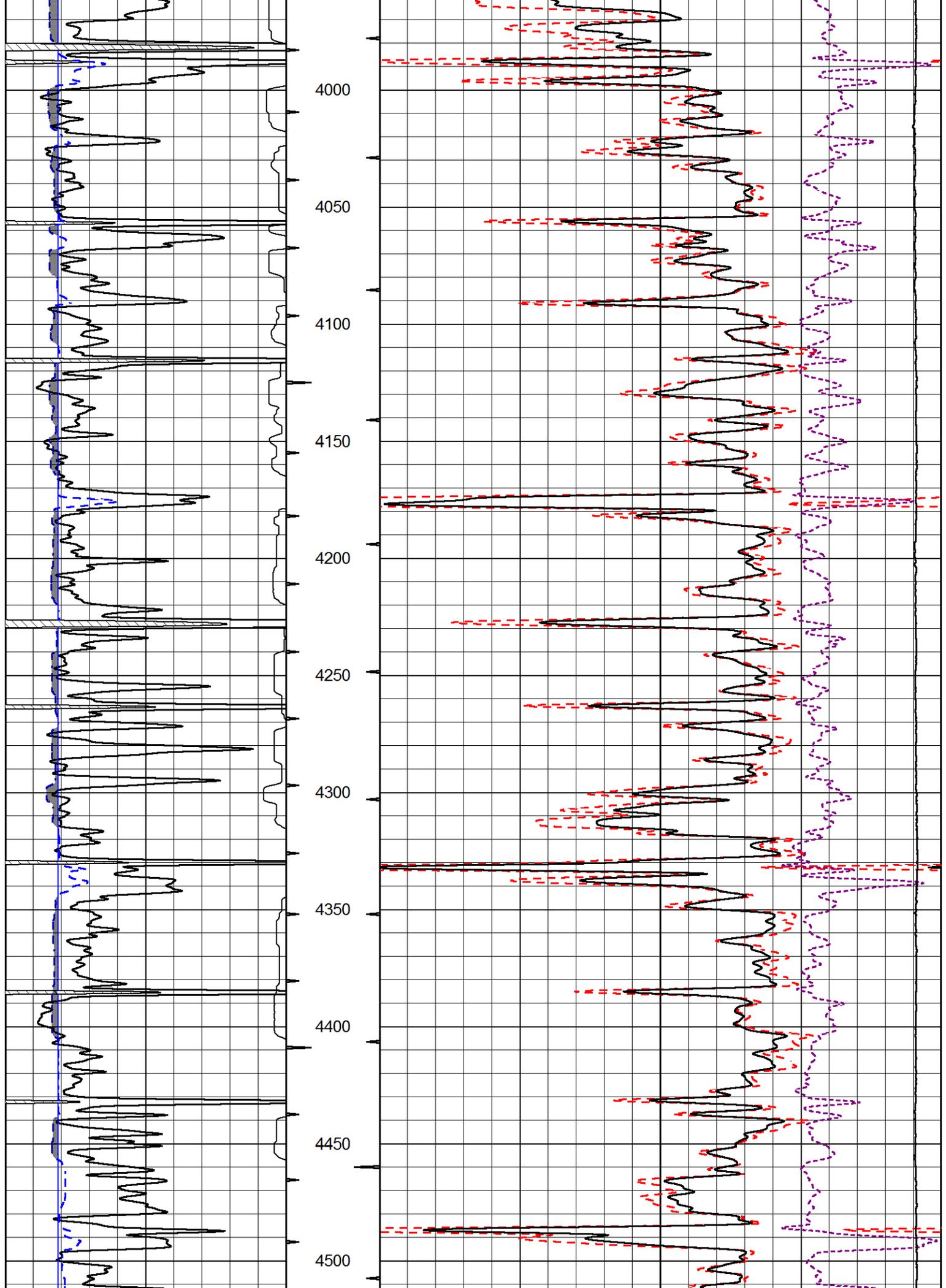
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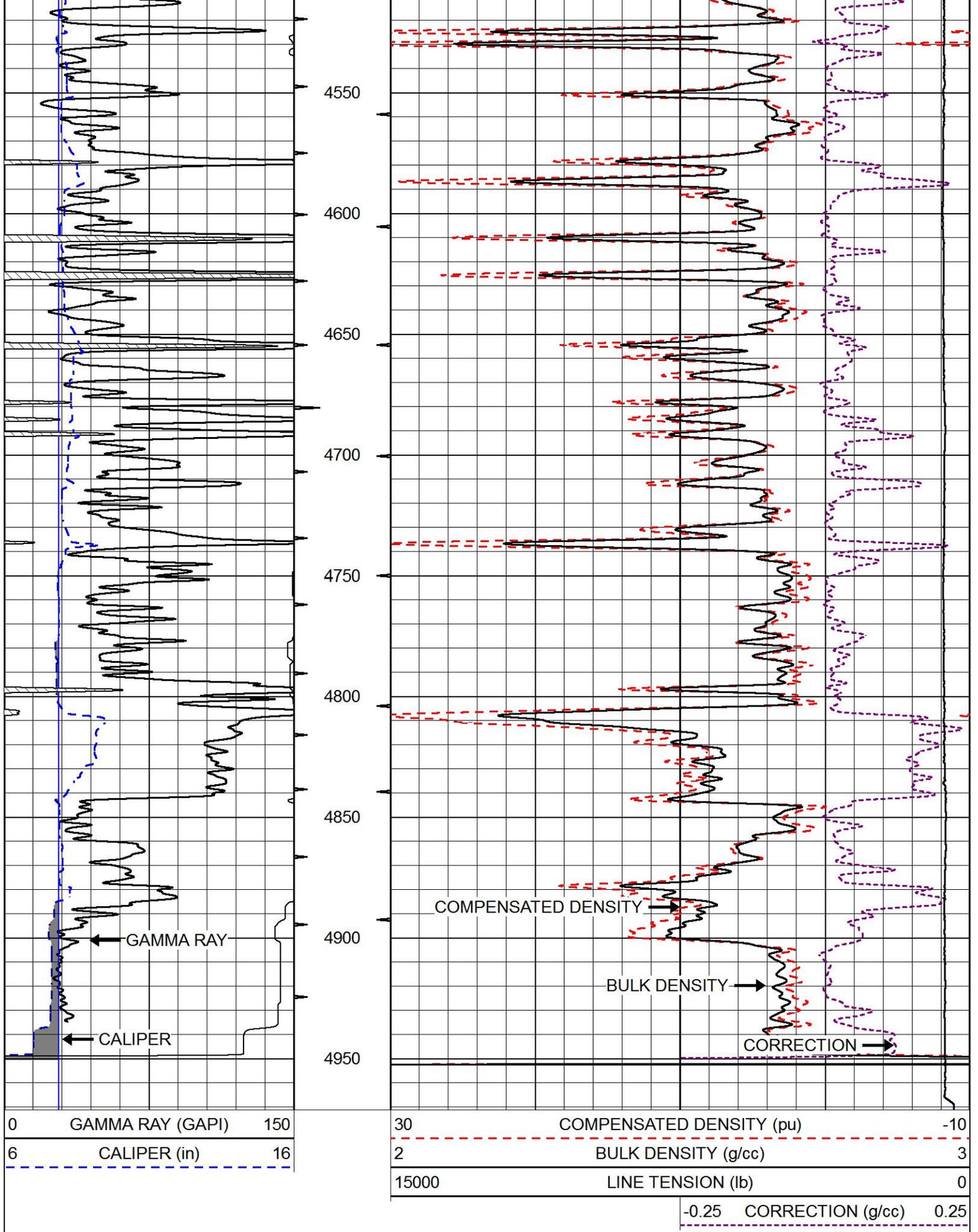
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 Dataset Pathname stackml/pass3.1  
 Presentation Format cdl  
 Dataset Creation Thu Jan 04 10:10:47 2018  
 Charted by Depth in Feet scaled 1:600

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





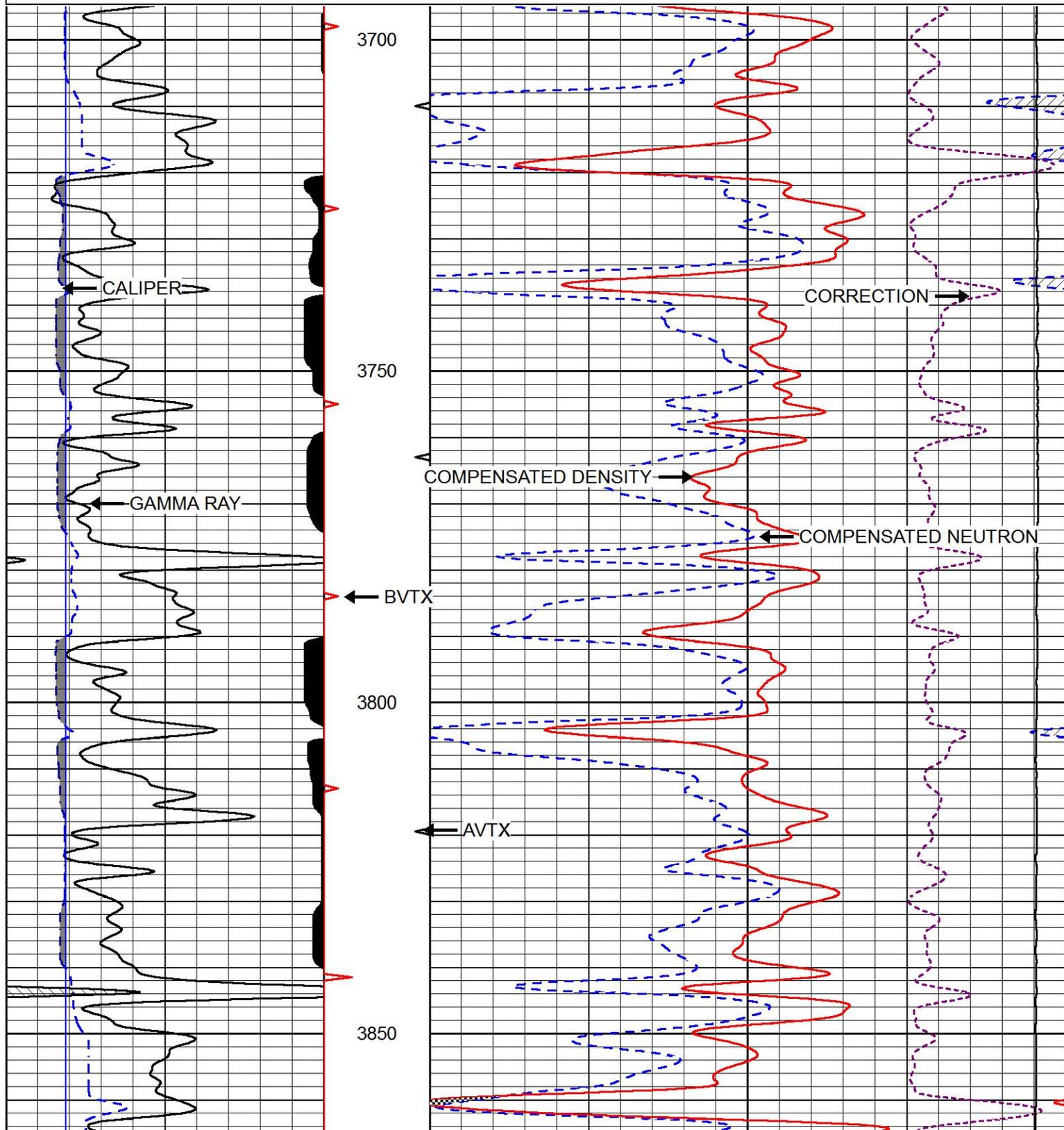


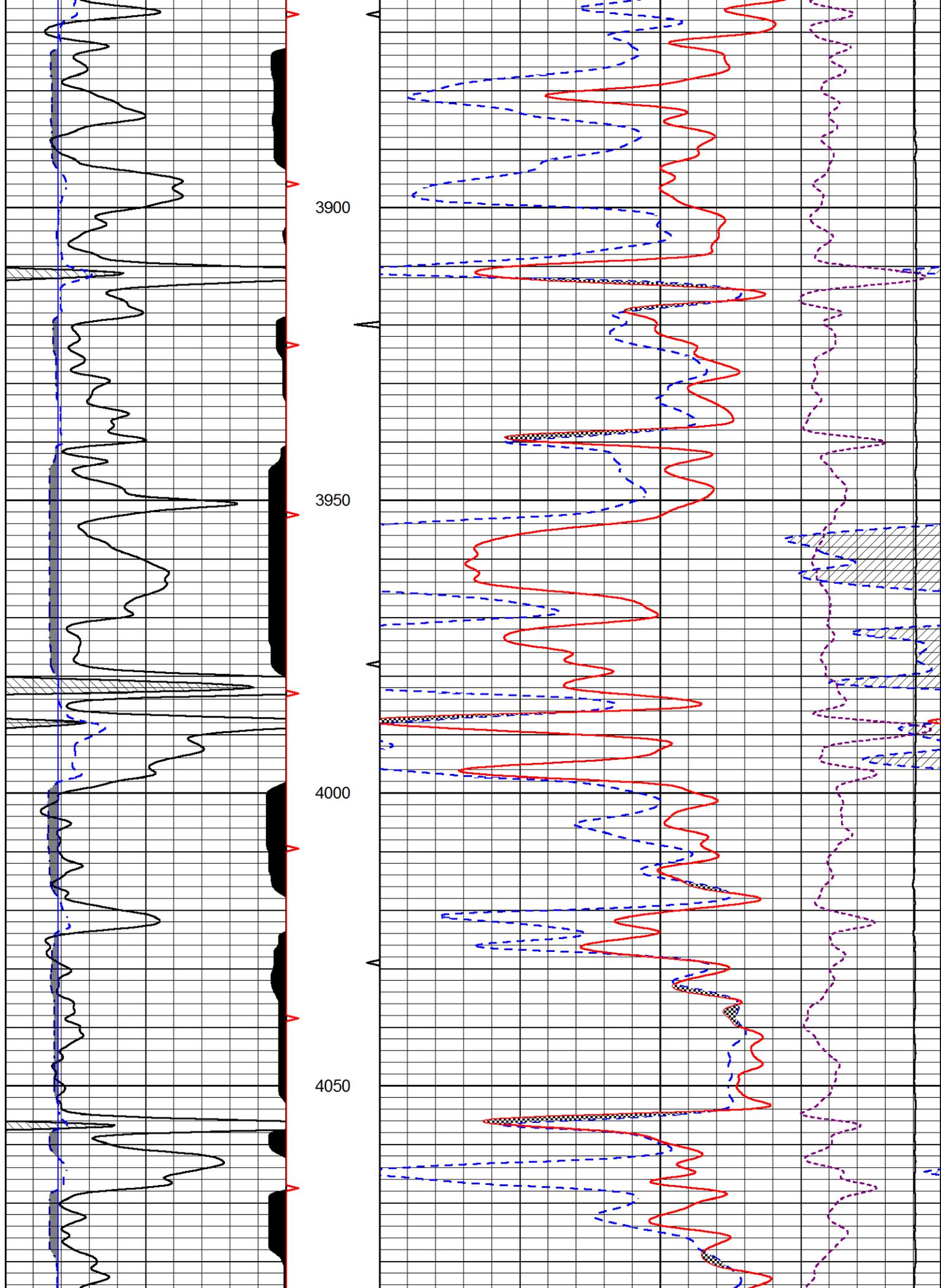
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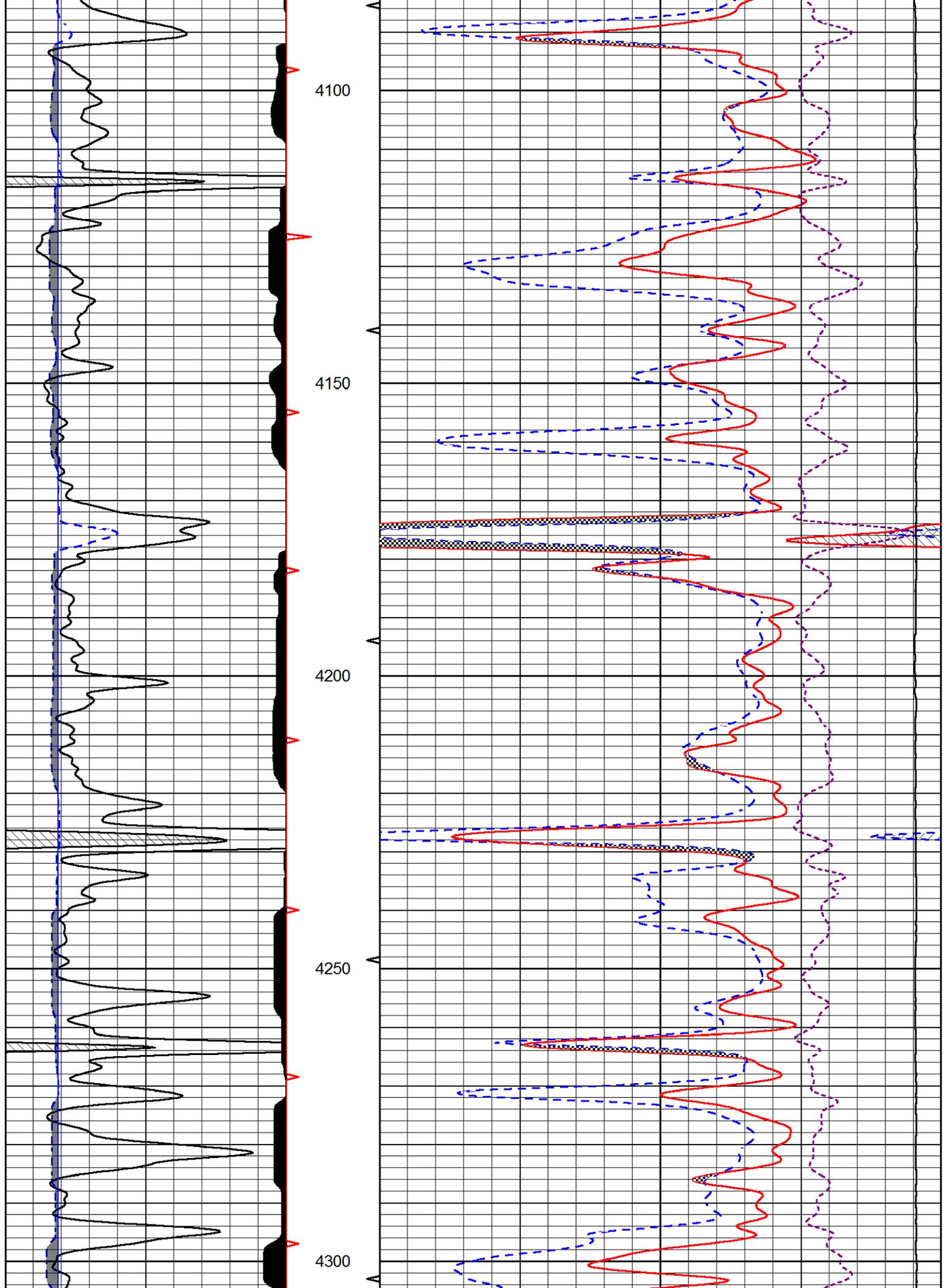
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 Presentation Format    cndlspec  
 Dataset Creation      Thu Jan 04 10:10:47 2018  
 Charted by            Depth in Feet scaled 1:240

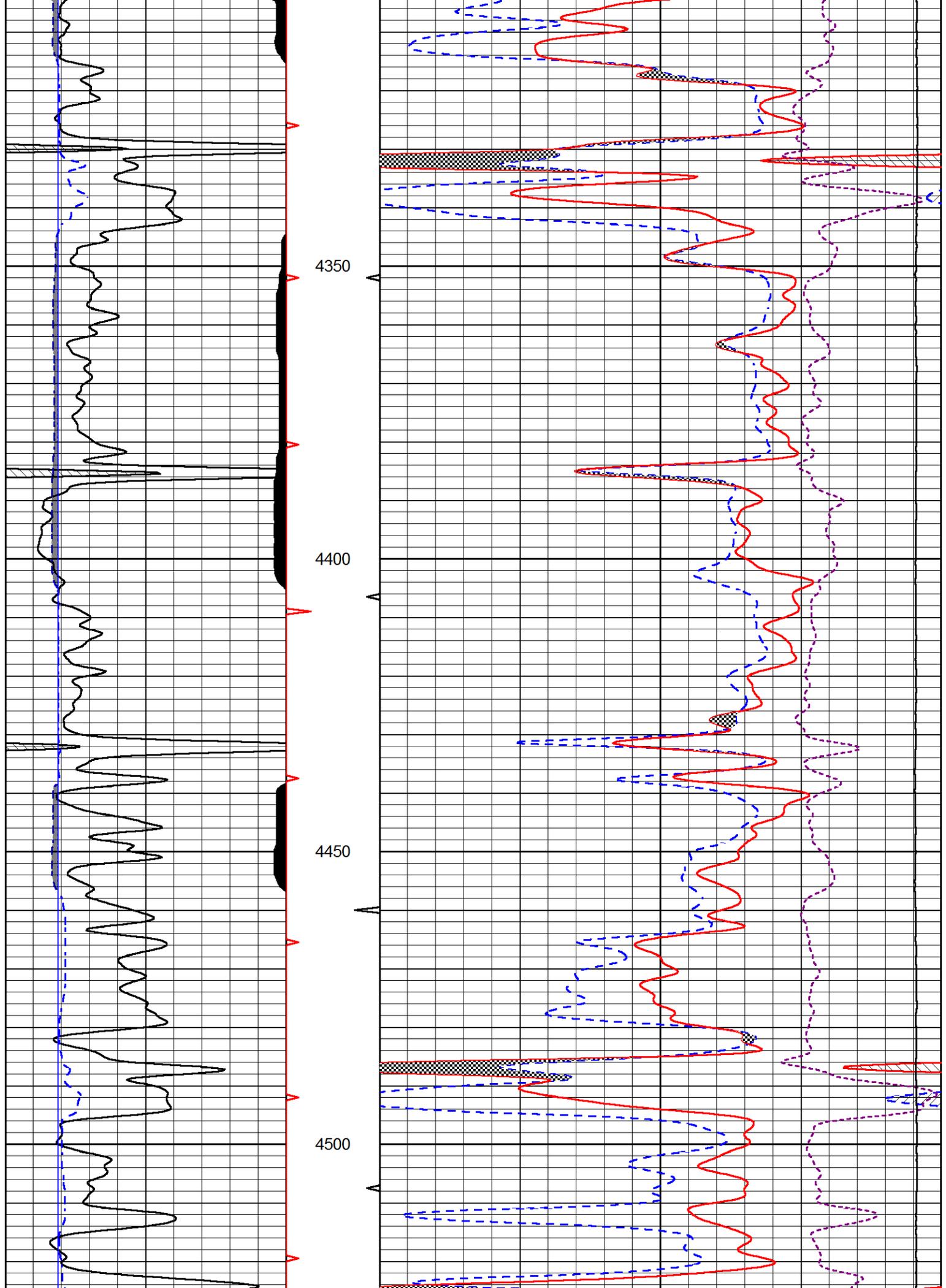
0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

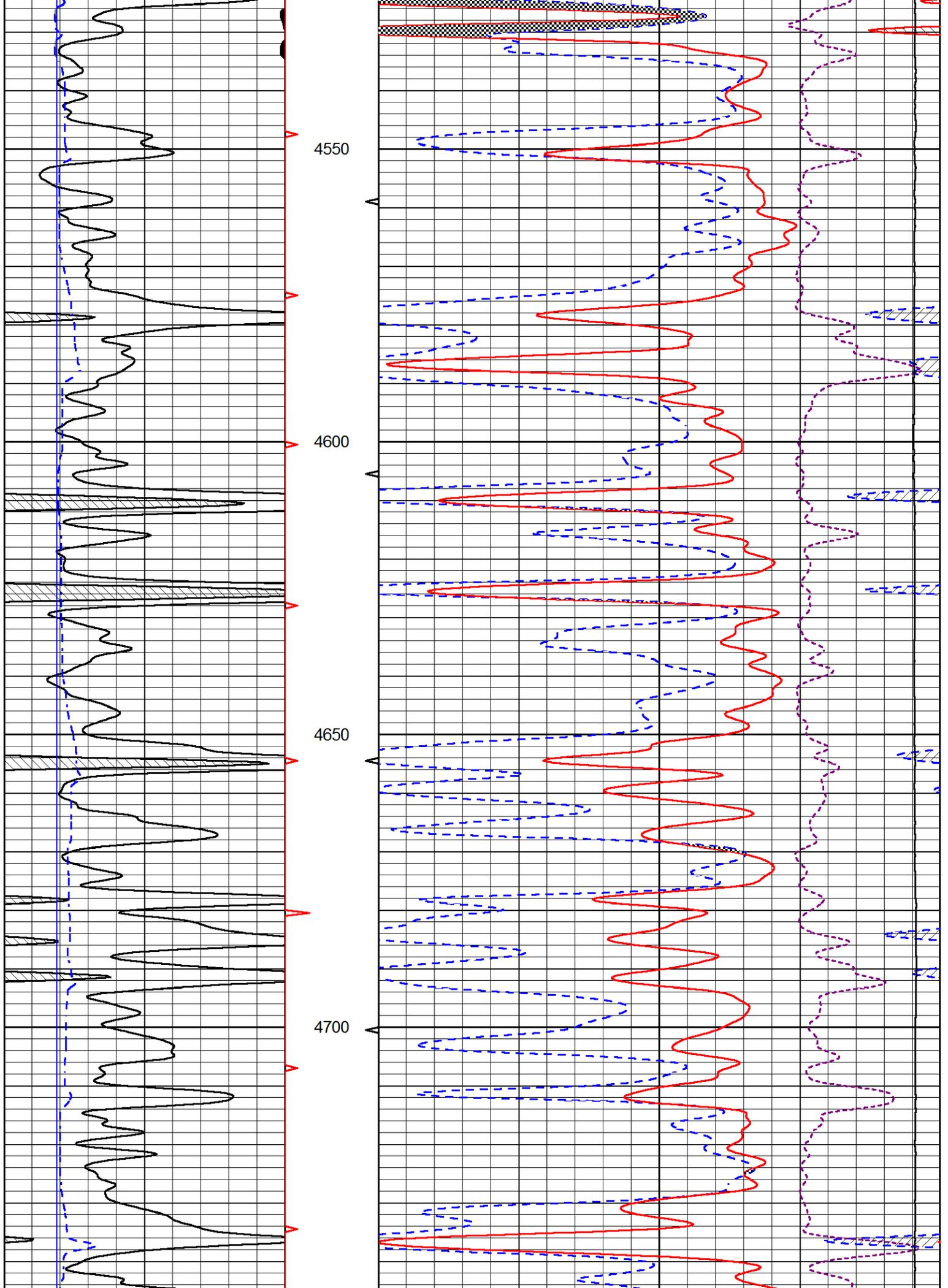
30	CNLS (pu)	-10
30	COMPENSATED DENSITY (2.71 ma) (pu)	-10
15000	LINE TENSION (lb)	0
	-0.25 CORRECTION (g/cc)	0.25

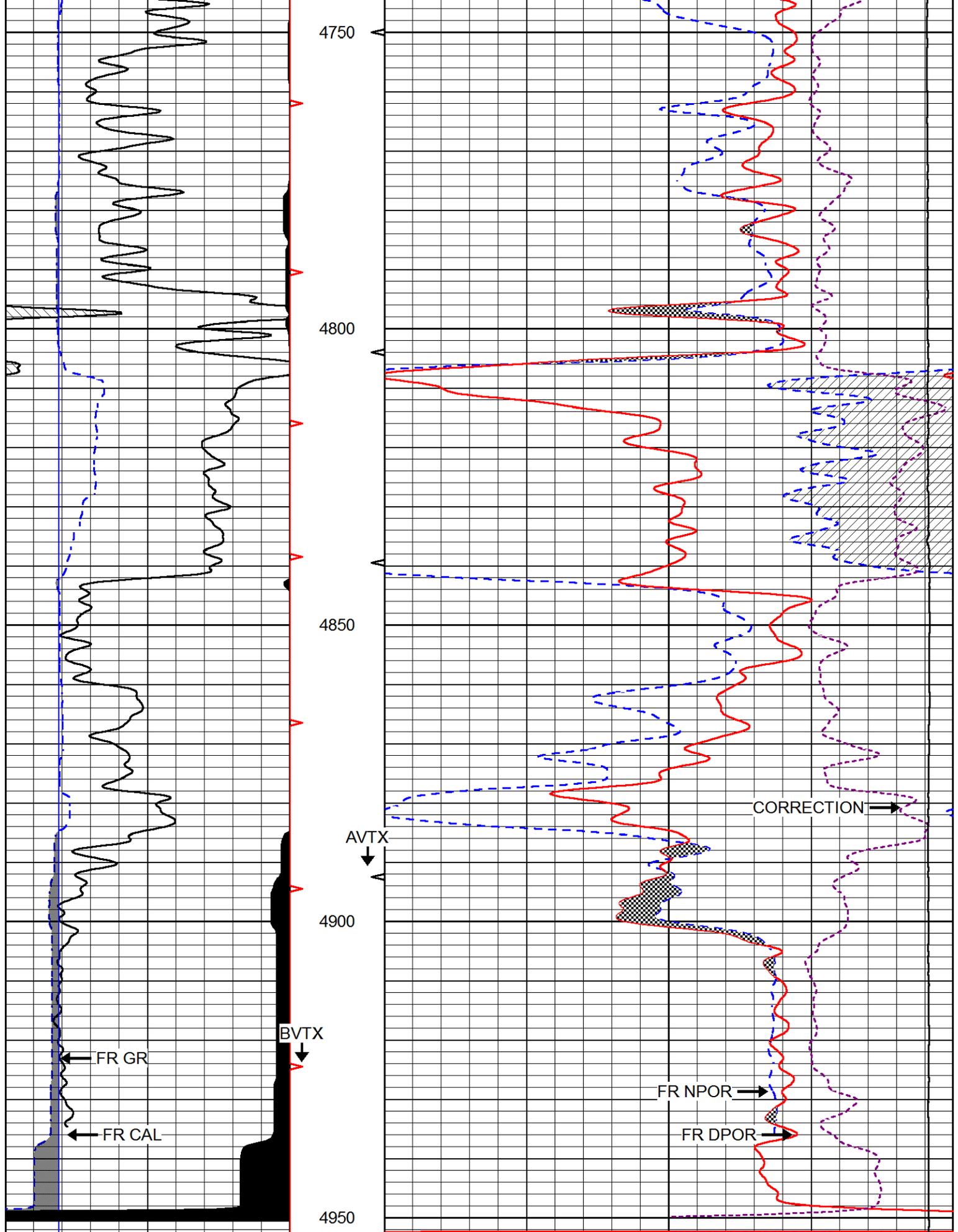












0	GAMMA RAY (GAPI)	150
6	dcal (in)	16
6	BIT SIZE (in)	16

30	CNLS (pu)	-10
30	COMPENSATED DENSITY (2.71 ma) (pu)	-10
15000	LINE TENSION (lb)	0
-0.25	CORRECTION (g/cc)	0.25

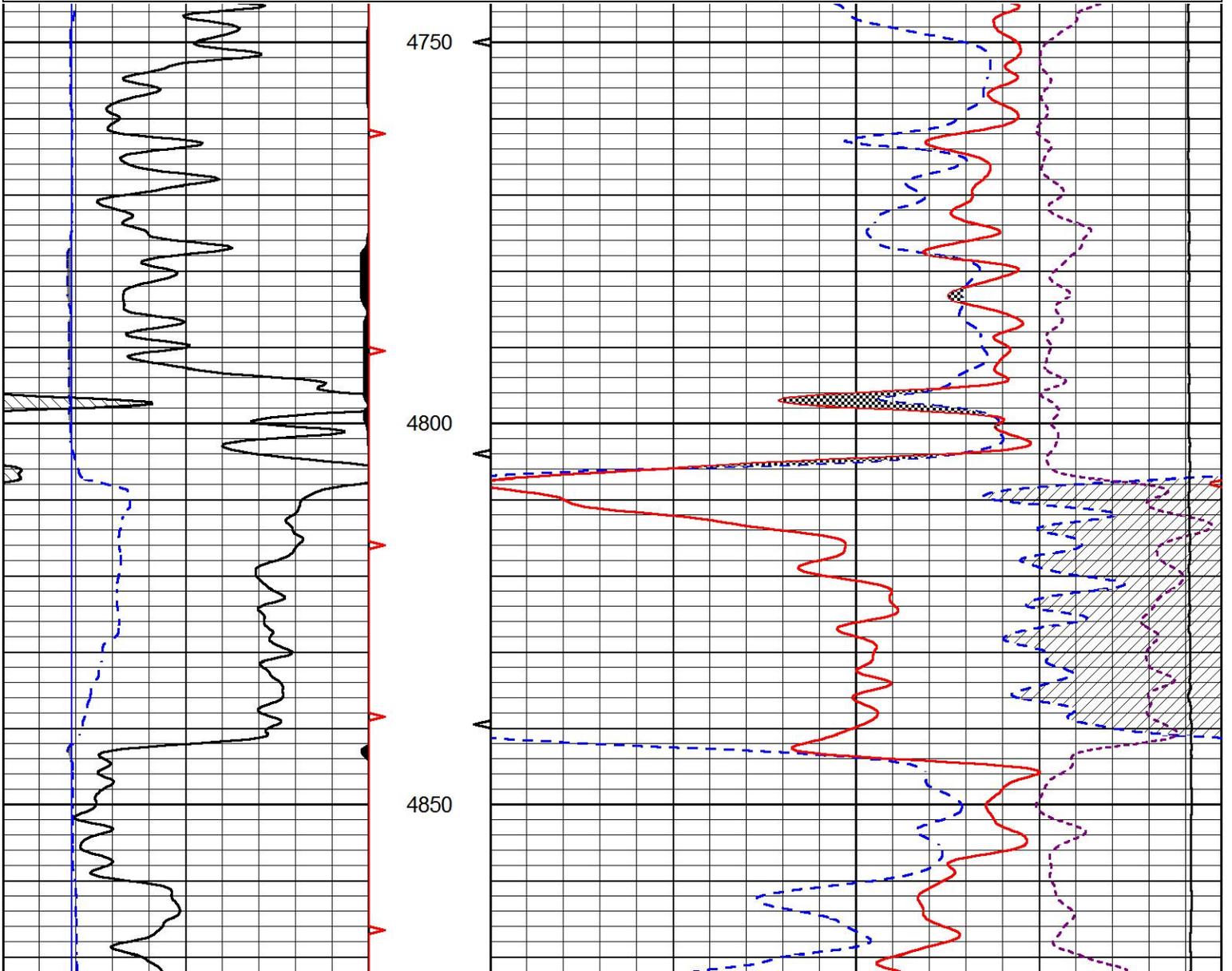


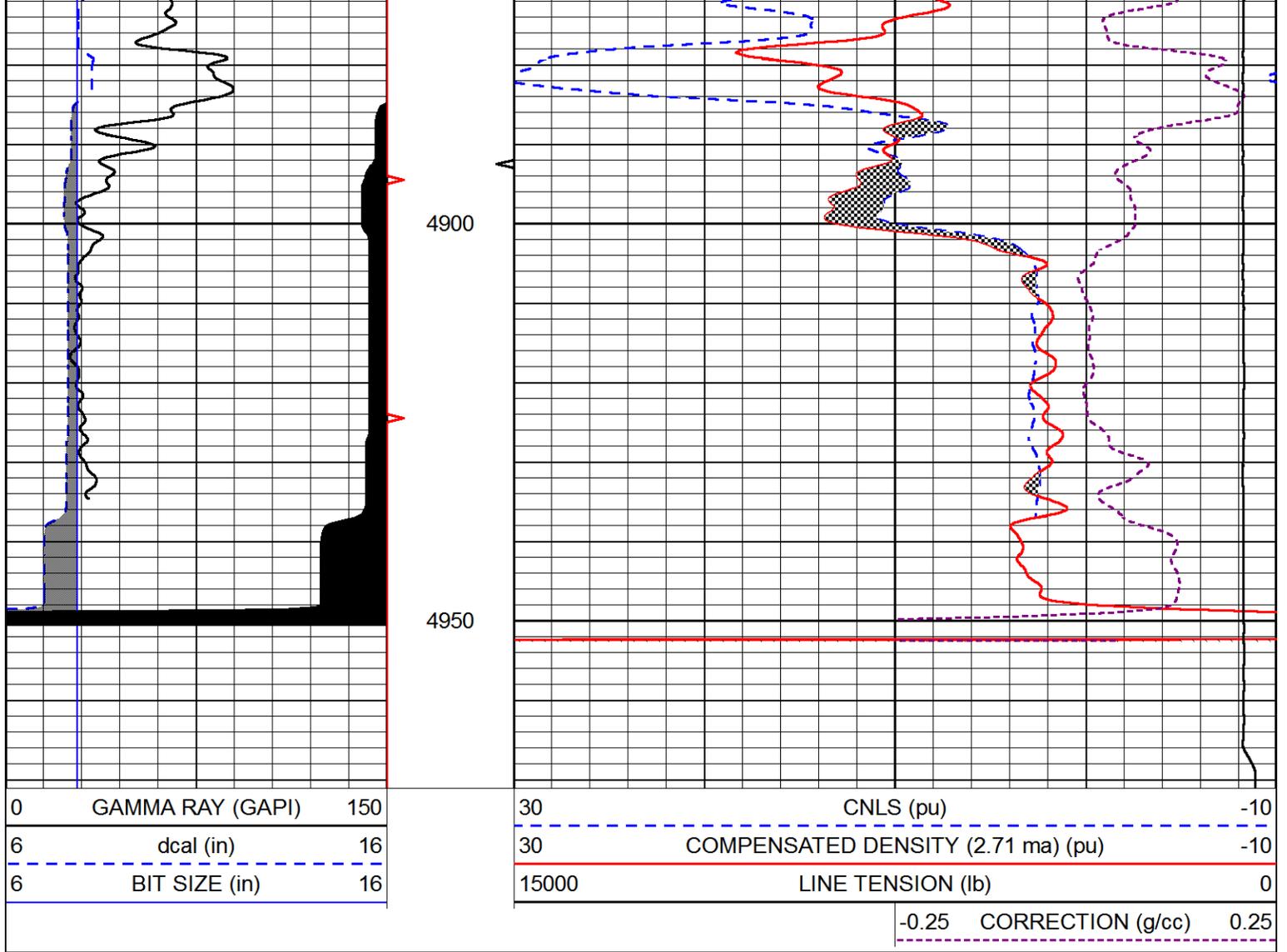
# REPEAT SECTION

Database File      brito\_metzger\_1\_18.db  
 Dataset Pathname    stackml/pass2.1  
 Presentation Format    cndlspec  
 Dataset Creation      Thu Jan 04 10:11:16 2018  
 Charted by            Depth in Feet scaled 1:240

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

30	CNLS (pu)	-10
30	COMPENSATED DENSITY (2.71 ma) (pu)	-10
15000	LINE TENSION (lb)	0
-0.25	CORRECTION (g/cc)	0.25





### Calibration Report

Database File: brito\_metzger\_1\_18.db  
 Dataset Pathname: stackml/pass3.1  
 Dataset Creation: Thu Jan 04 10:10:47 2018

### Dual Induction Calibration Report

Serial-Model: PSI 978-M&W  
 Calibration Performed: Wed Dec 13 12:45:09 2017

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		Gain	Offset
Deep	178.615	710.235	0.000	255.800	mmho/m	0.570	-36.500
Medium	161.982	1441.110	0.000	255.800	mmho/m	0.420	-35.000

### Microlog Calibration Report

Serial-Model: PSI-01-PSI STKBL ML  
 Performed: Thu Mar 31 18:14:32 2016

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0000	1.0000	0.0000	1.0000	Ohm-m	40500.0000	-1.0000

Inverse	0.0000	1.0000	0.0000	1.0000	Ohm-m	51500.0000	-1.0000
Caliper	1.0001	1.1397	6.5000	18.5000	in	86.0000	-82.6000

**Compensated Density Calibration Report**

Serial-Model: 168-986-M&W  
 Source / Verifier: /  
 Master Calibration Performed: Tue Apr 11 17:07:47 2017

**Master Calibration**

	Density		Far Detector	Near Detector	
Magnesium	1.755	g/cc	4691.86	4818.19	cps
Aluminum	2.695	g/cc	859.57	3020.22	cps
Spine Angle = 74.61			Density/Spine Ratio = 0.534		
	Size		Reading		
Small Ring	4.00	in	1.03		
Large Ring	14.00	in	1.23		

**Compensated Neutron Calibration Report**

Serial Number: tk10-MW  
 Tool Model: M&W  
 Calibration Performed: Wed Nov 16 11:21:36 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: Tue Apr 11 17:08:01 2017

Calibrator Value: 1000.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 6.2 cps

Sensitivity: 0.5200 GAPI/cps



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