



MIDWEST WIRELINE

**DUAL COMPENSATED
POROSITY W/PE**

Company **Griffin Management, LLC**
 Well **Reta #1**
 Field **Sawyer**
 County **Pratt** State **Kansas**

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Location: **API #: 15-151-22577-00-00**
1650 FSL & 2310 FWL
SEC 26 TWP 29S RGE 13W
 Permanent Datum **Ground Level** Elevation **1871**
 Log Measured From **Kelly Bushing**
 Drilling Measured From **Kelly Bushing**
 Other Services **DIL/MEL BHCs**
 Elevation **1876**
 K.B. **1876**
 D.F. **1871**
 G.L. **1871**

Date	10/31/2023						
Run Number	One						
Type Log	CNL/CDL						
Depth Driller	4741						
Depth Logger	4744						
Bottom Logged Interval	4712						
Top Logged Interval	2800						
Type Fluid In Hole	Chemical						
Salinity, PPM CL	4000						
Density	9.3						
Level	Full						
Max. Rec. Temp. F	123						
Operating Rig Time	5 Hours						
Equipment -- Location	P-108 Hays						
Recorded By	D. Schmidt						
Witnessed By	Eli Felts						
Borehole Record							
Run No.	Bit	From	To	Size	Wgt.	From	To
One	12.25	0	386	8.625	23	0	386
Two	7.875	386	TD				
Casing Record							

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All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline Services, LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest 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.

**Sawyer,
1 South to 110th St,
3/4 West, North in driveway,
East to location**

Log Measured From: Kelly Bushing 5 Ft. Above Permanent Datum

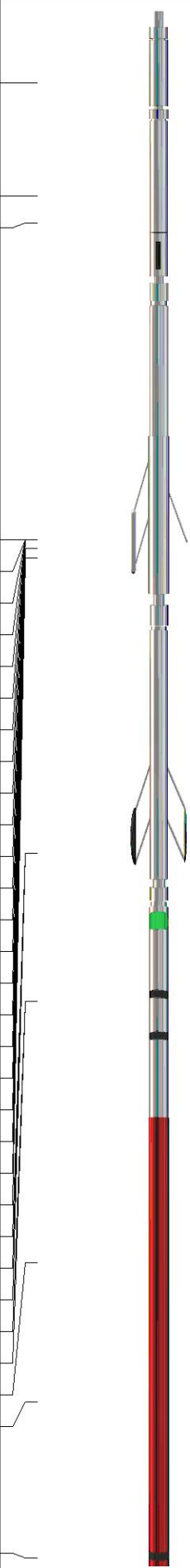
**THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858**

Your Midwest Wireline Crew

**Engineer: D. Schmidt
Operator:
Operator:
Operator:**

This Log Record Was Witnessed By

**Primary Witness: Eli Felts
Secondary Witness:
Secondary Witness:
Secondary Witness:**

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	40.75		GR-M&W (105)	3.00	3.50	50.00
CNLSC CNSSC	37.65 36.90		CNT-M&W (210)	5.00	3.50	100.00
			MWLith-STEP LITHO (704-10)	8.92	5.00	250.00
LCAL	28.21					
LLW8N	28.21					
LLW7N	28.21					
LLW6N	28.21					
LLW5N	28.21					
LLW4N	28.21					
LLW3N	28.21					
LLW2N	28.21					
LLW1N	28.21					
LSLOCK	27.96					
LLLOCK	27.96					
PELTMPR	27.96					
LSHVNG	27.96					
LLHVNG	27.96					
LSW8N	27.71					
LSW7N	27.71					
LSW6N	27.71					
LSW5N	27.71					
LSW4N	27.71					
LSW3N	27.71					
LSW2N	27.71					
LSW1N	27.71					
MCAL	19.58					
MI	19.58					
MN	19.58					
RLL3F	15.50					
RLL3	15.50					
CILD	8.33					
CILM	4.50					
SP	0.20					
			ML-PSI STKBL ML (402)	7.58	4.00	65.00
			DIL-M&W (505 HT)	18.25	3.50	220.00

Dataset: griffin_reta 1.db: field/well/stkml/pass3.1
 Total length: 42.75 ft
 Total weight: 685.00 lb
 O.D.: 5.00 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\griffin_reta 1.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	123	5.5	0	1	2	2.71
NPORSEL	PERFS	SNDERR mmho/m	SNDERRM mmho/m	SPSHIFT mV	SRFTEMP degF	SZCOR	TDEPTH ft
Limestone	No	-6	2	450	30	Off	4744

Variable Description

A : Cement Factor (a)
 BOREID : Borehole I.D.
 BOTTEMP : Bottom Hole Temperature
 CASEOD : Casing O.D.
 CASETHCK : Casing Thickness
 FLUIDDEN : Fluid Density
 M : Cement Exp (m)
 MATRXDEN : Matrix Density

NPORSEL : Neutron Porosity Curve Select
 PERFS : Perforation Flag
 SNDERR : Deep Sonde Error Correction
 SNDERRM : Medium Sonde Error Correction
 SPSHIFT : S.P. Baseline Offset
 SRFTEMP : Surface Temperature
 SZCOR : CN Size Cor. ?
 TDEPTH : Total Depth

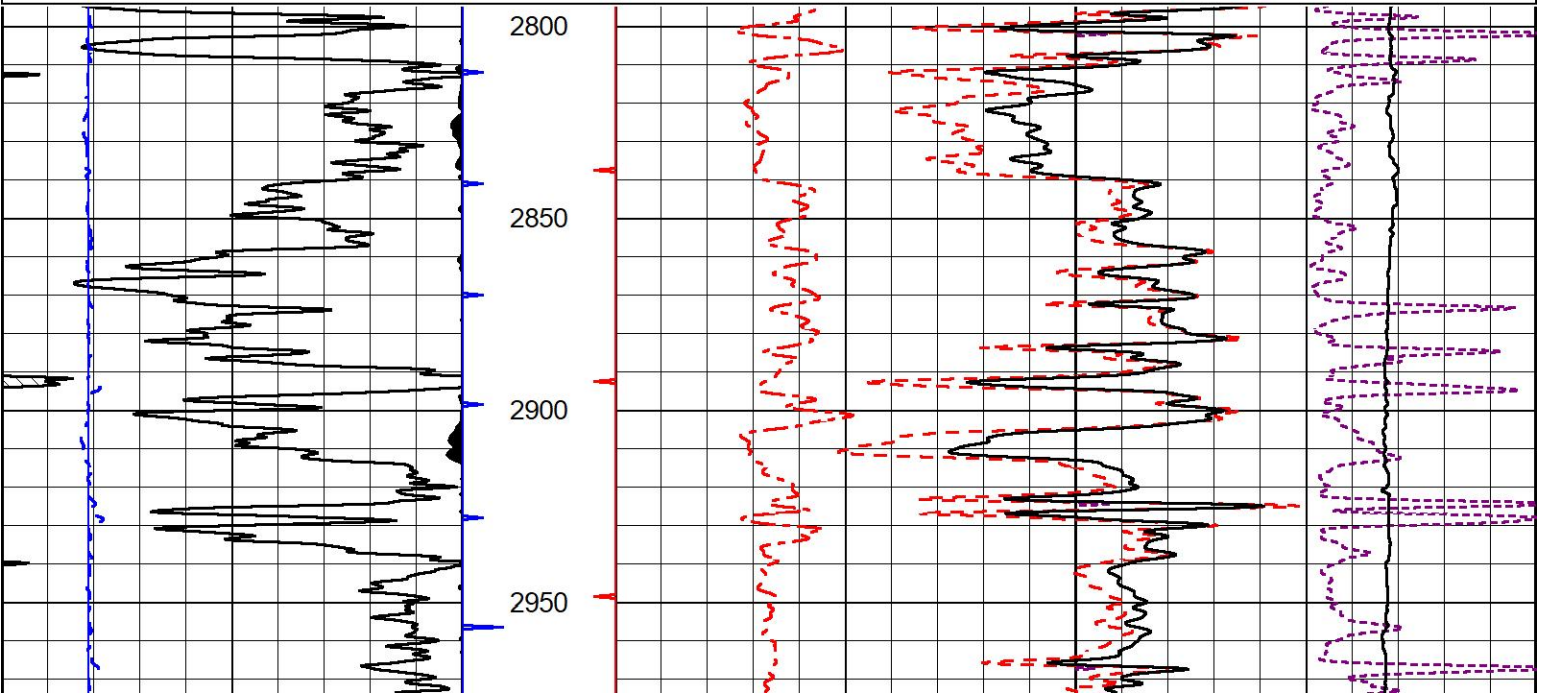


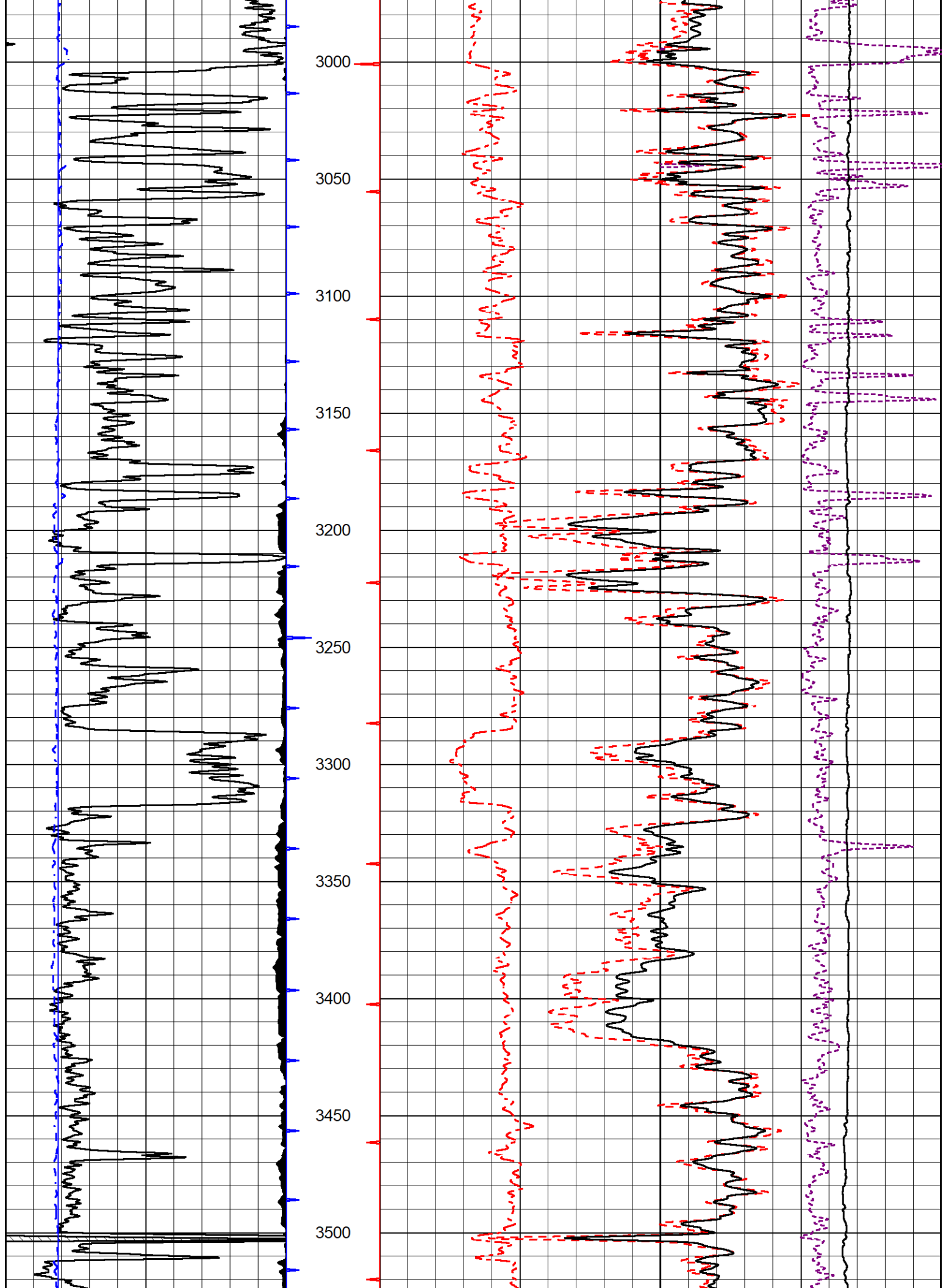
2" SCALE BULK DENSITY

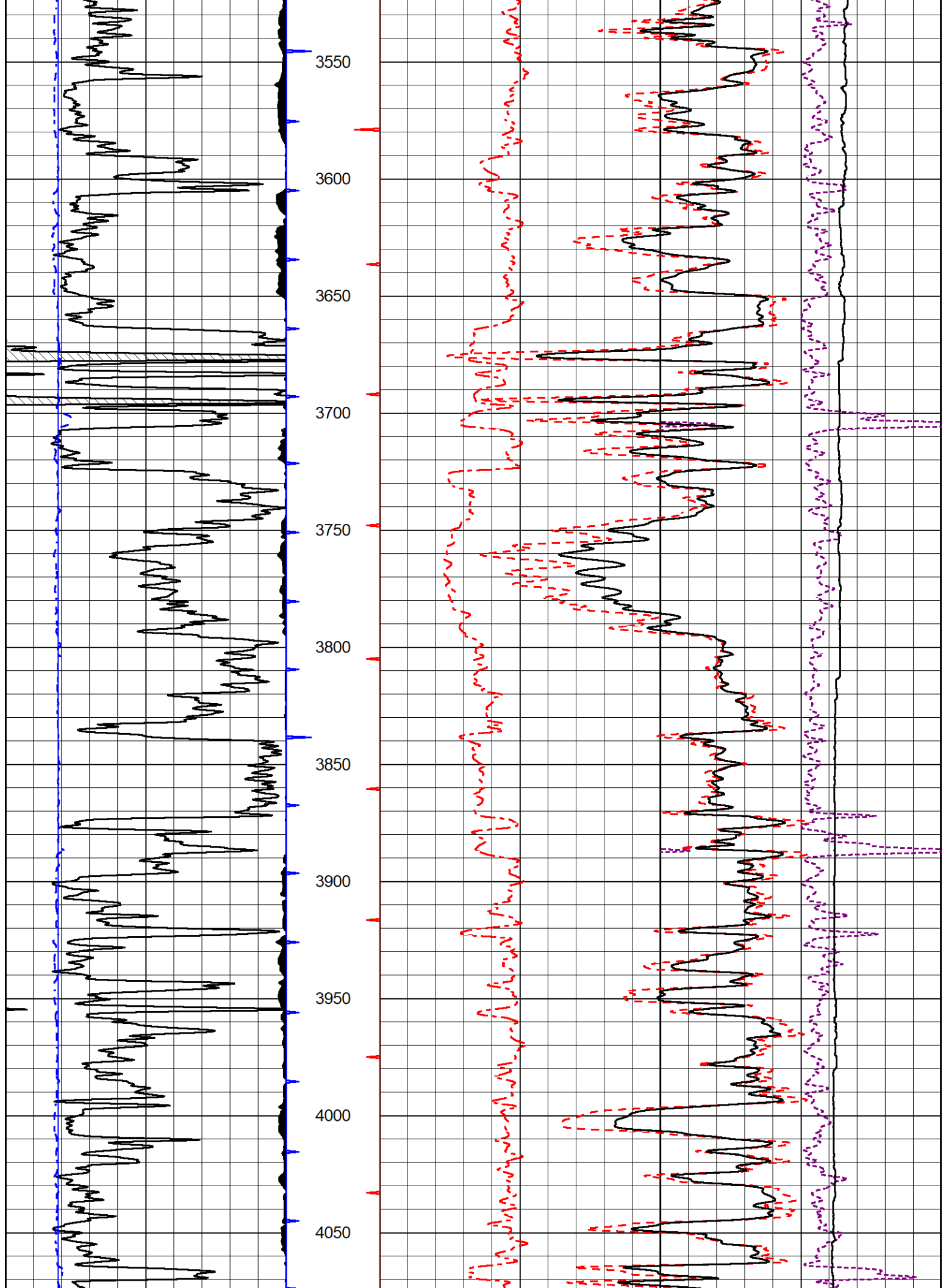
MAIN PASS

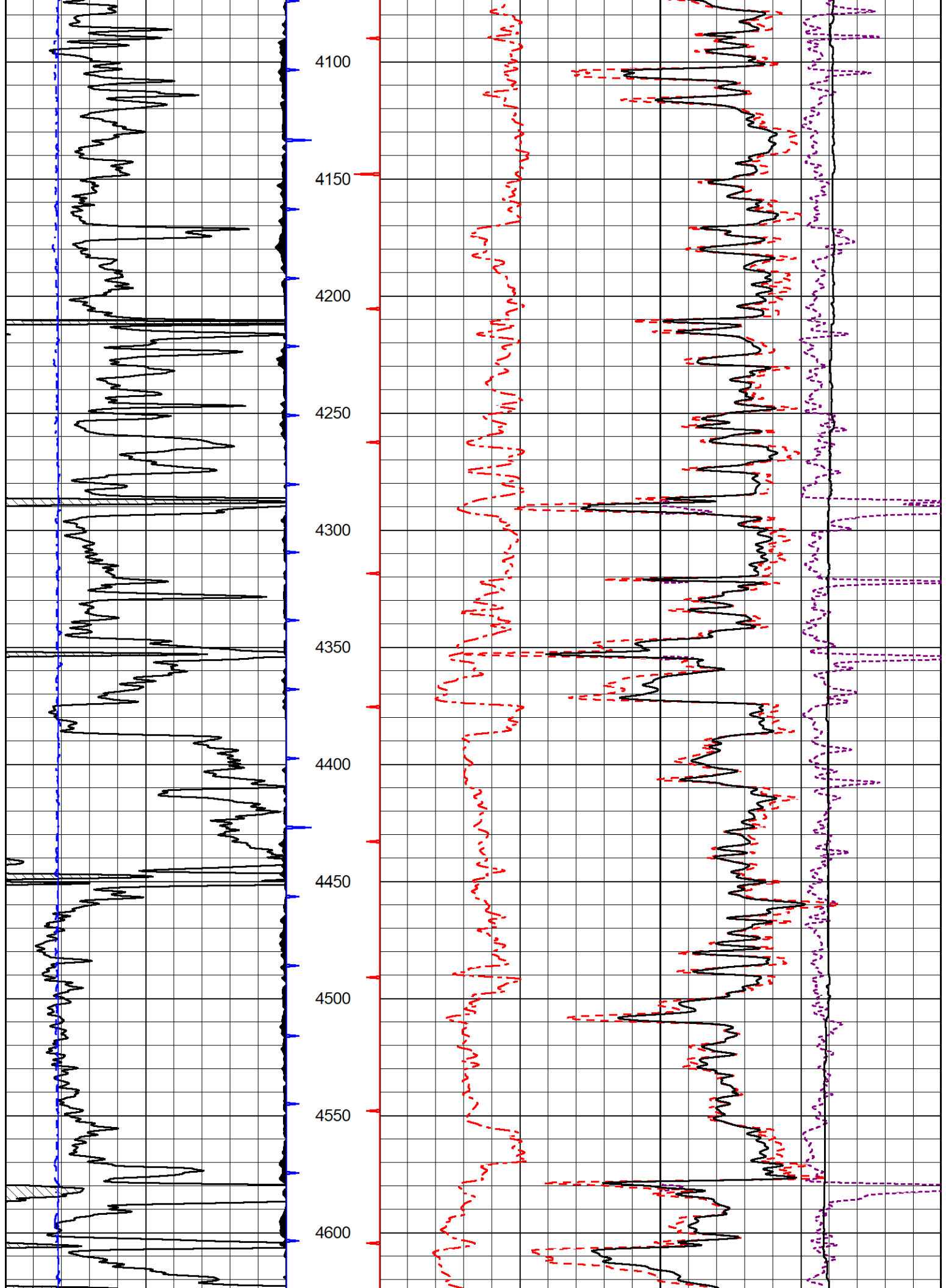
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 Presentation Format _cdlpe
 Dataset Creation Wed Nov 01 02:31:02 2023
 Charted by Depth in Feet scaled 1:600

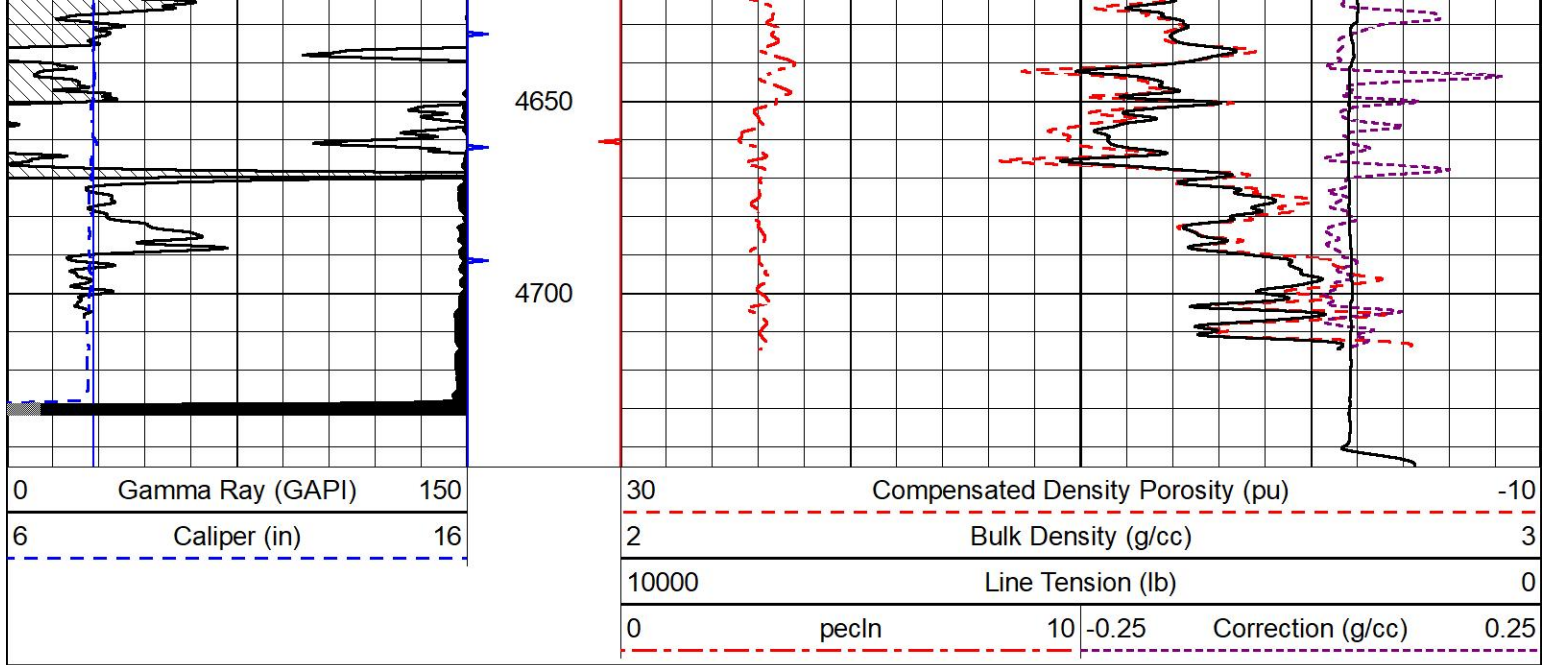
0	Gamma Ray (GAPI)	150	30	Compensated Density Porosity (pu)	-10
6	Caliper (in)	16	2	Bulk Density (g/cc)	3
			10000	Line Tension (lb)	0
			0	pecln	10 -0.25
				Correction (g/cc)	0.25









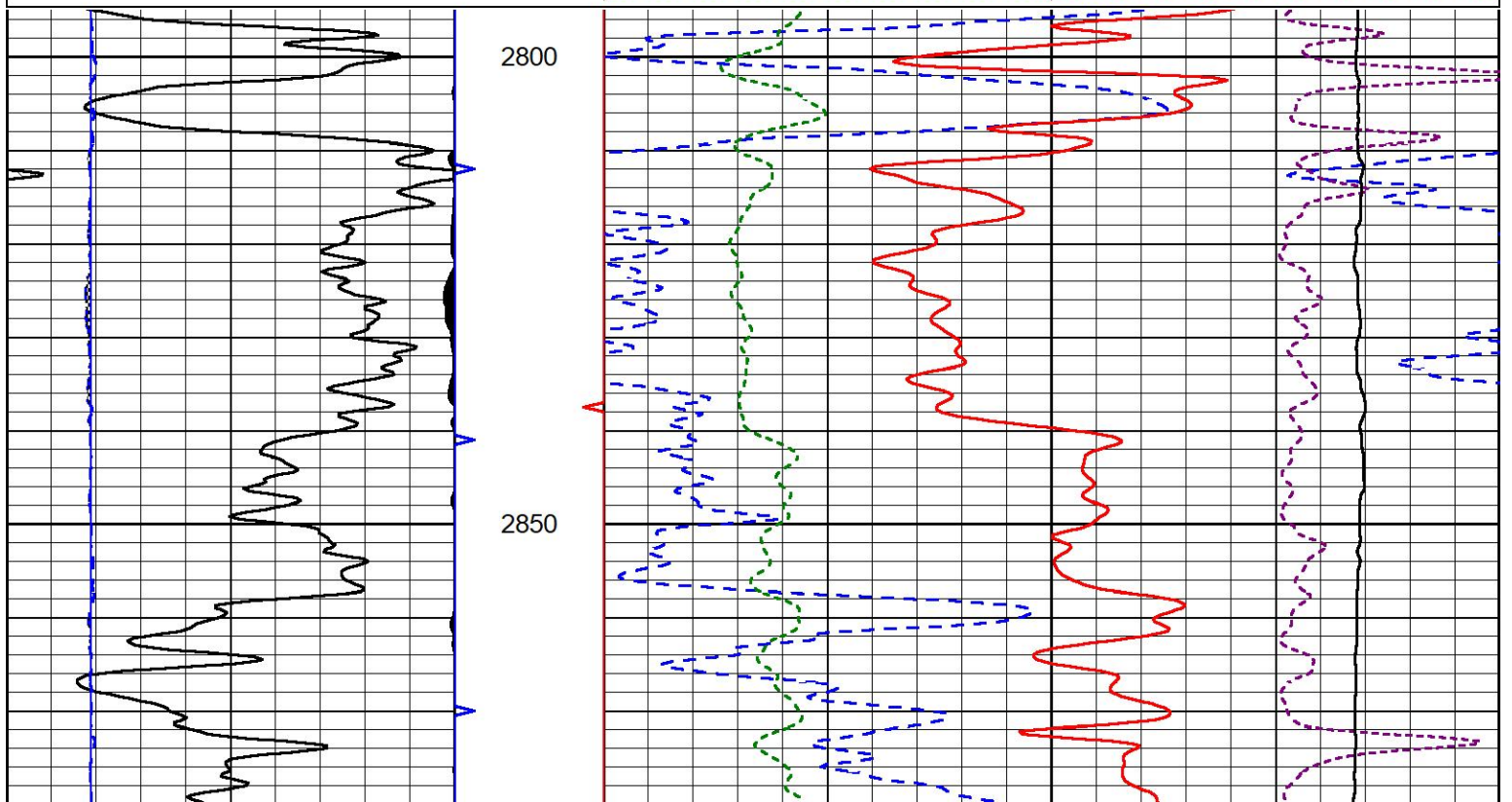
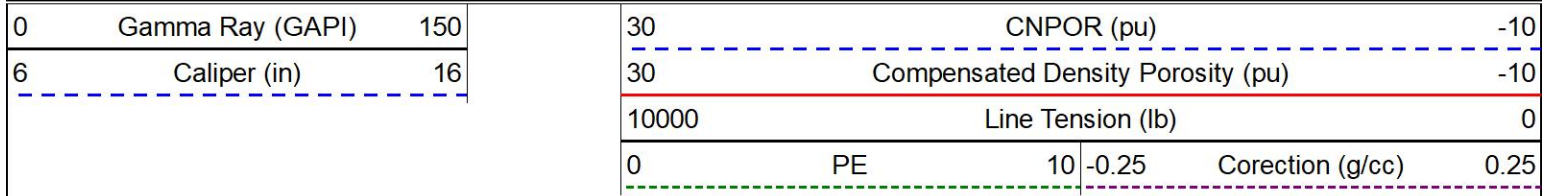


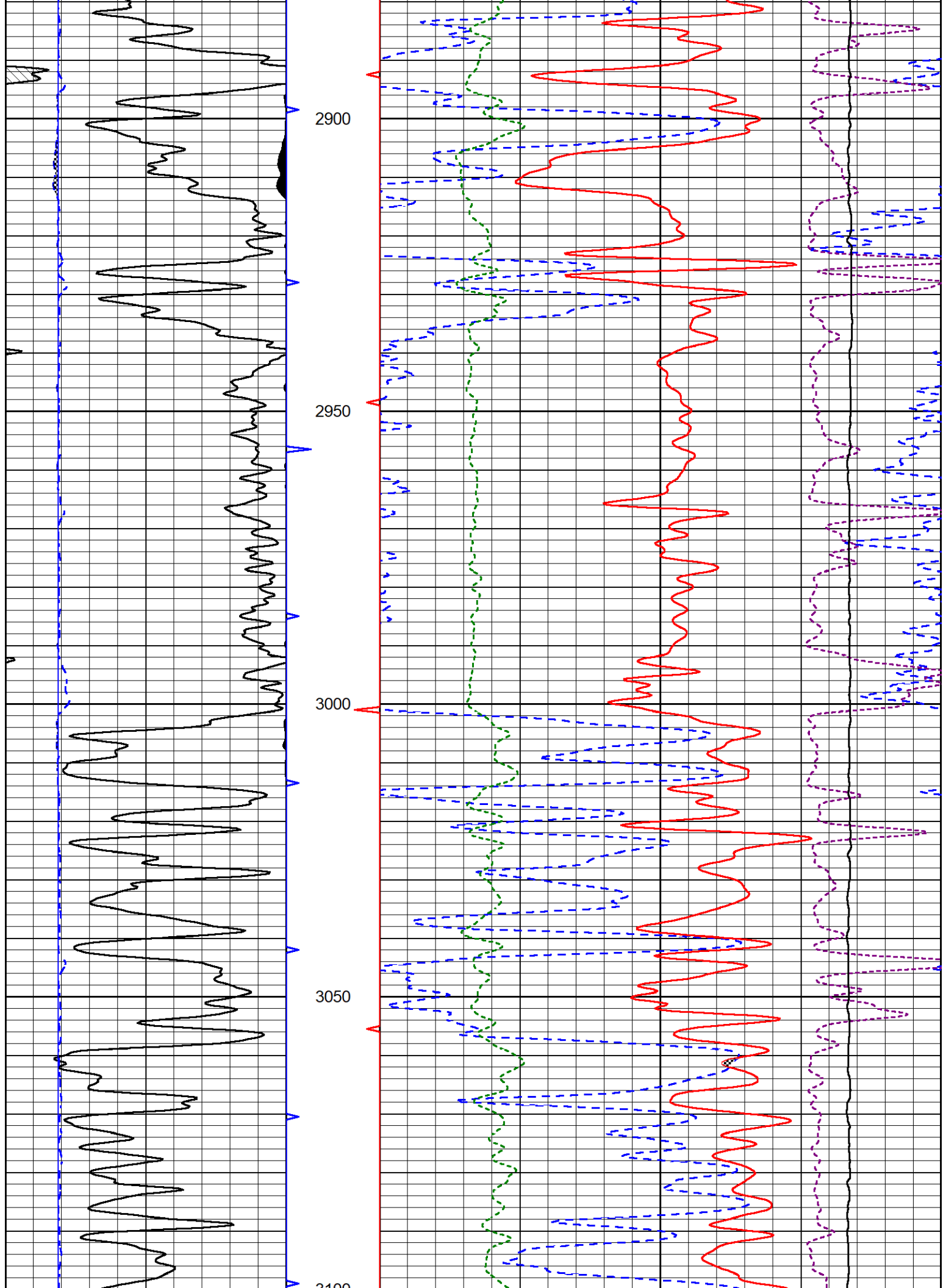
MIDWEST WIRELINE

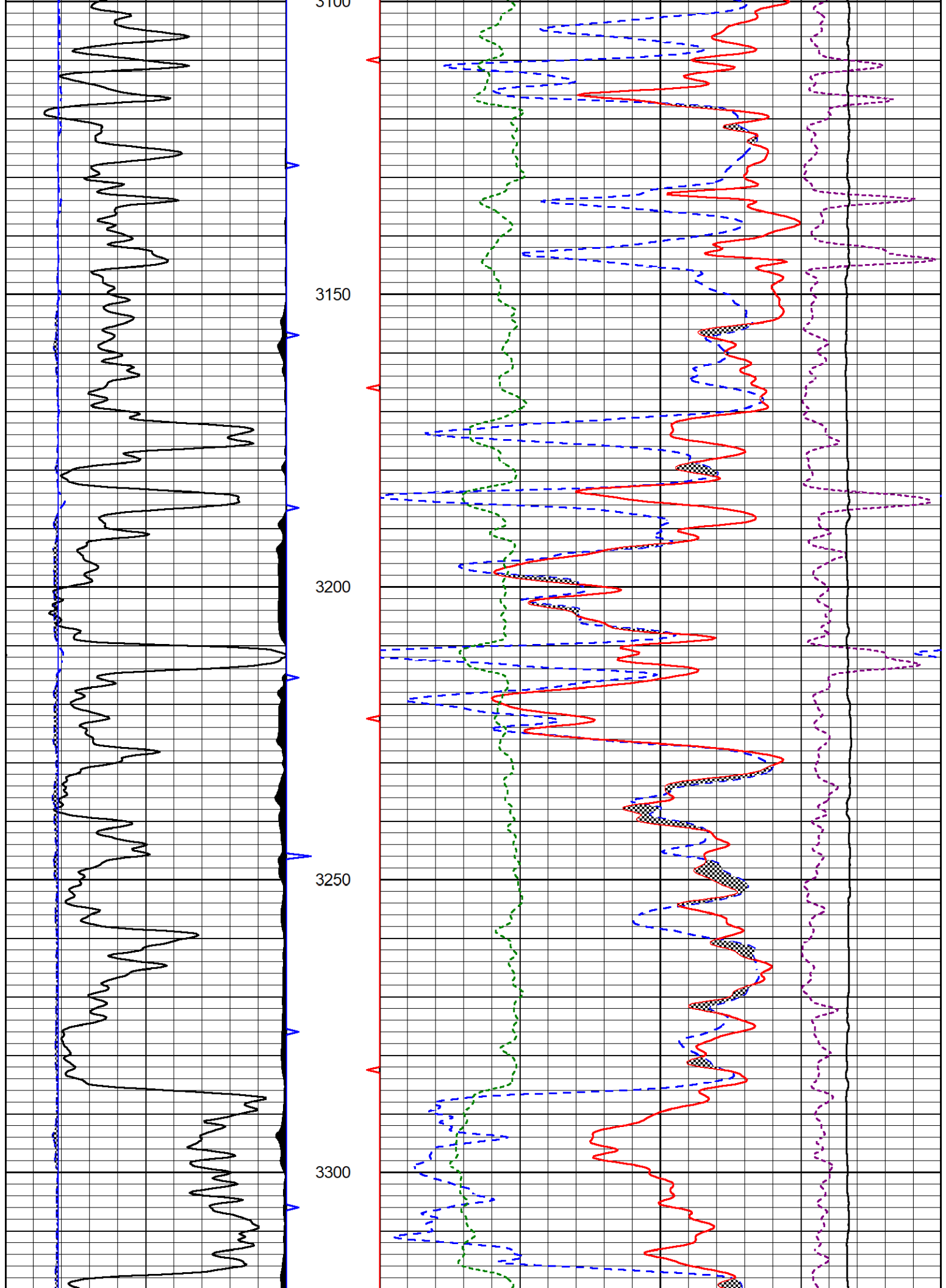
DETAIL SECTION

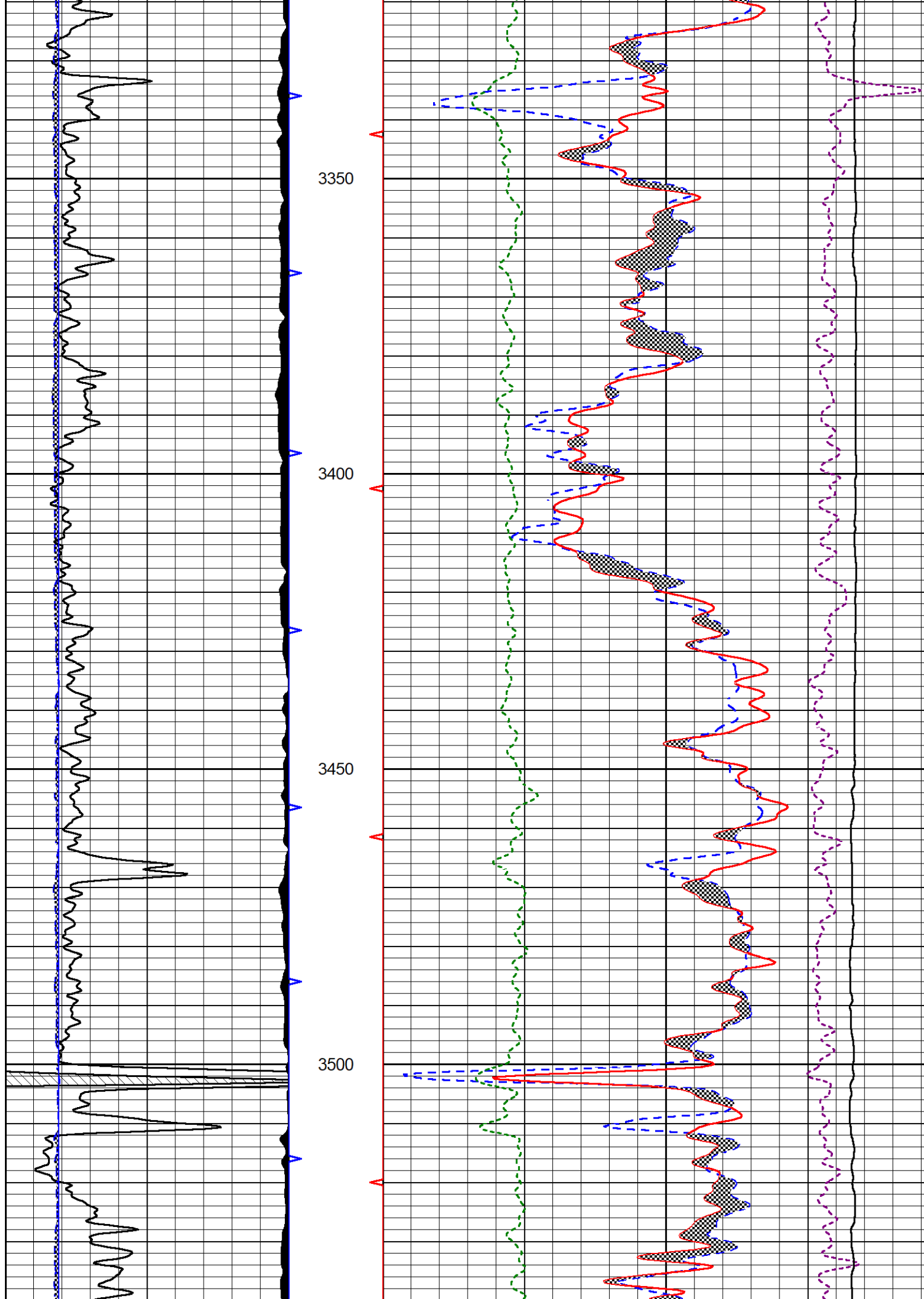
MAIN PASS

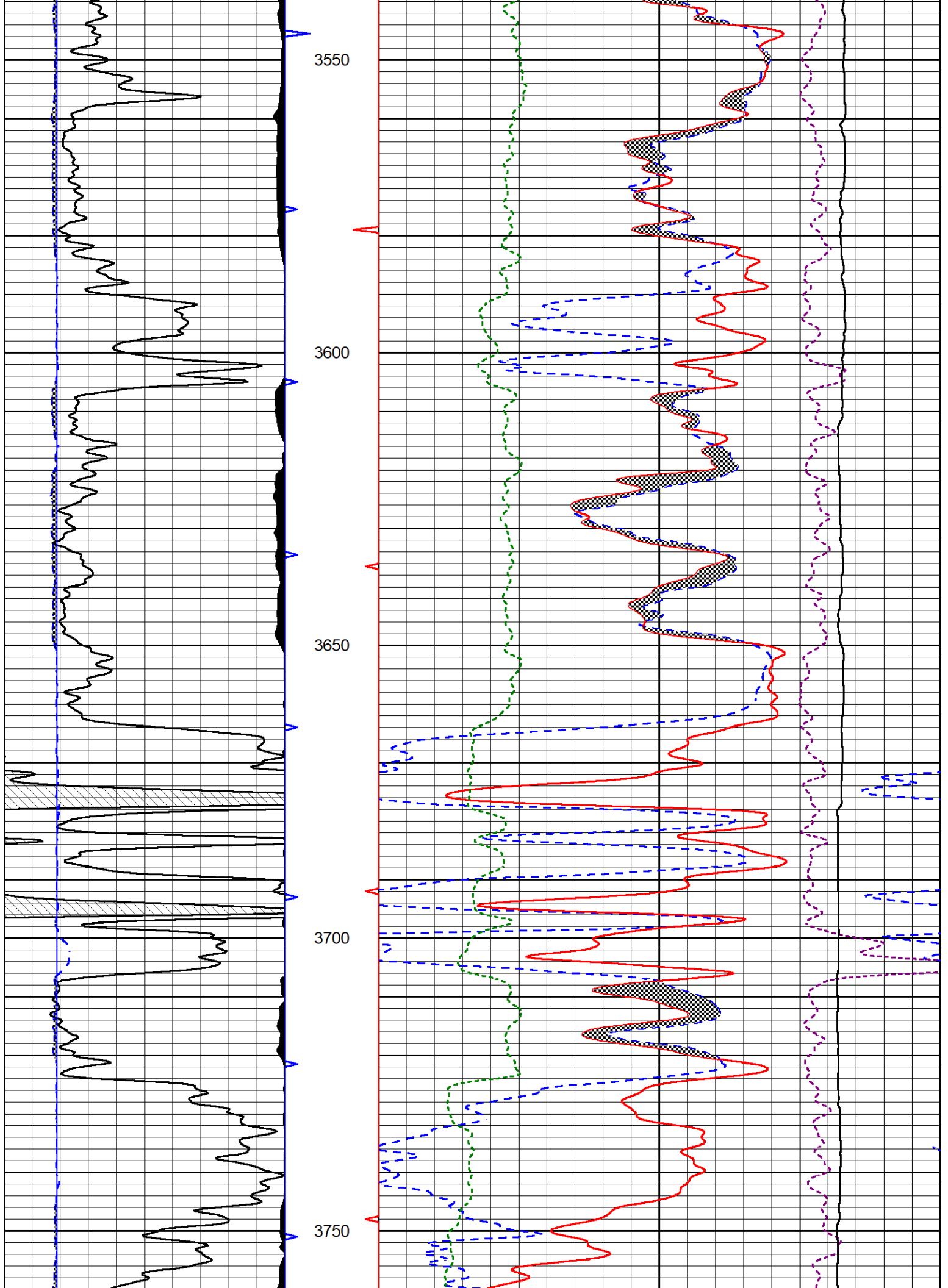
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 Dataset Pathname stkml/pass3.1
 Presentation Format _CNDLS~4
 Dataset Creation Wed Nov 01 02:38:22 2023
 Charted by Depth in Feet scaled 1:240

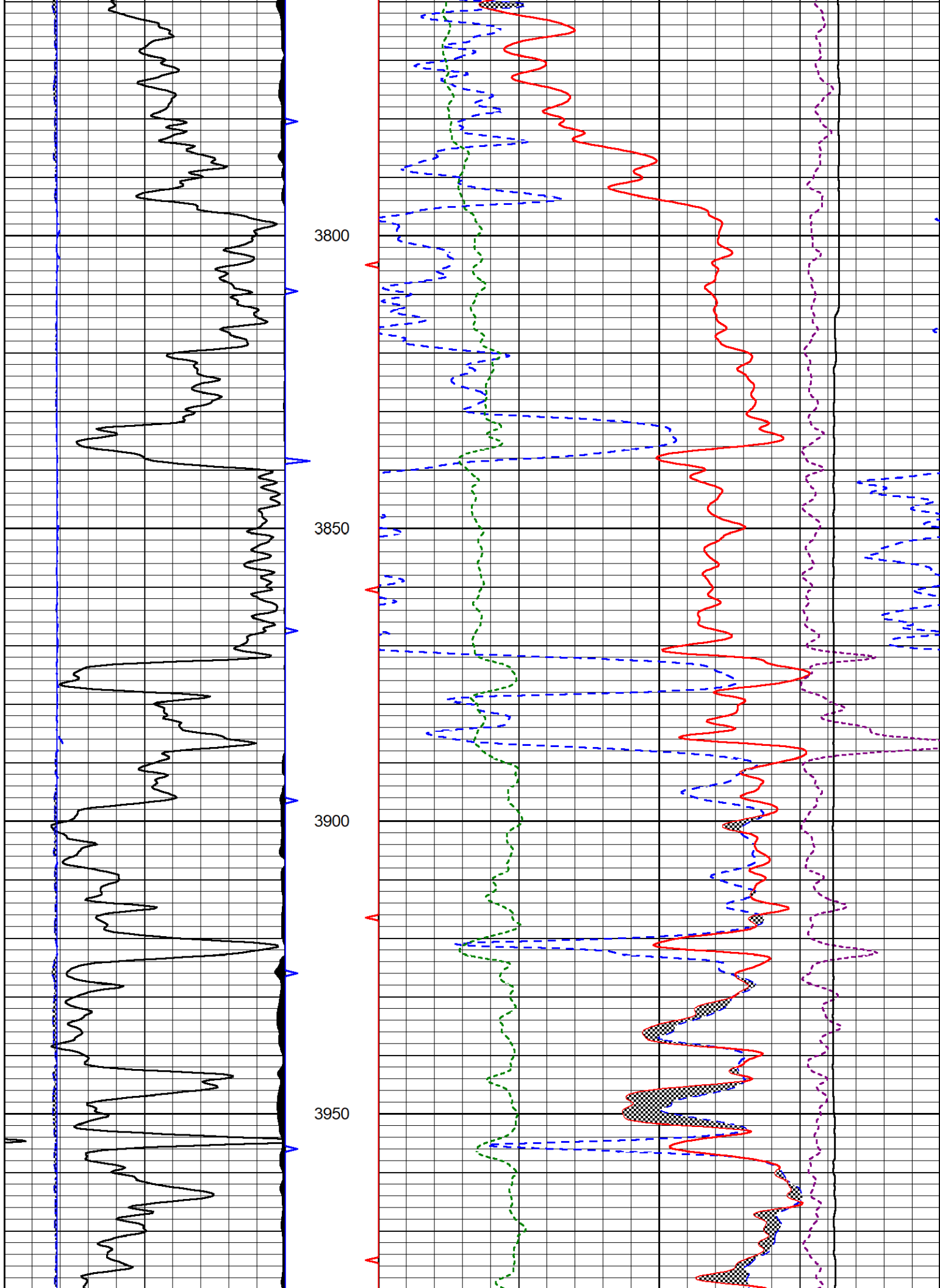


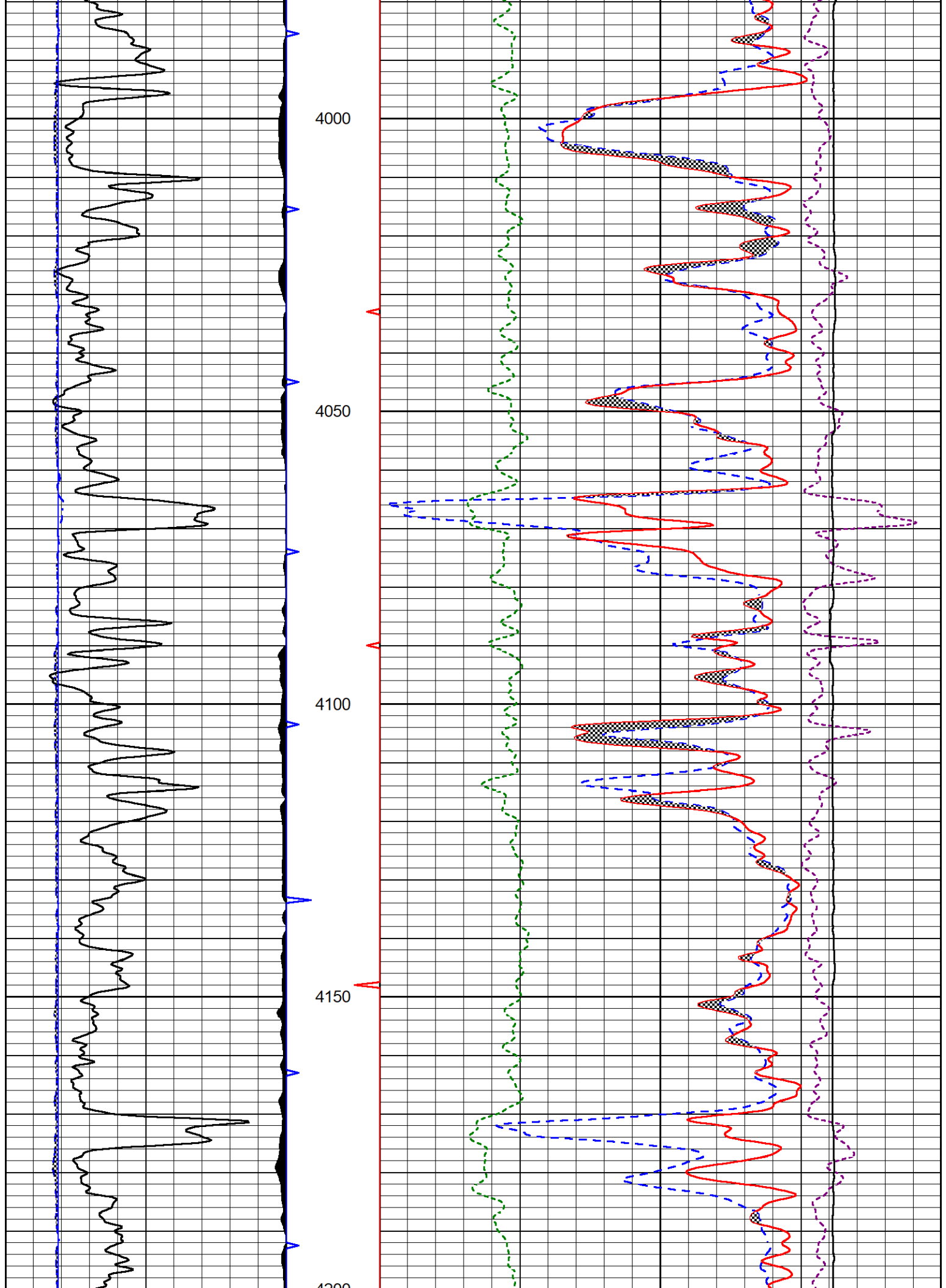


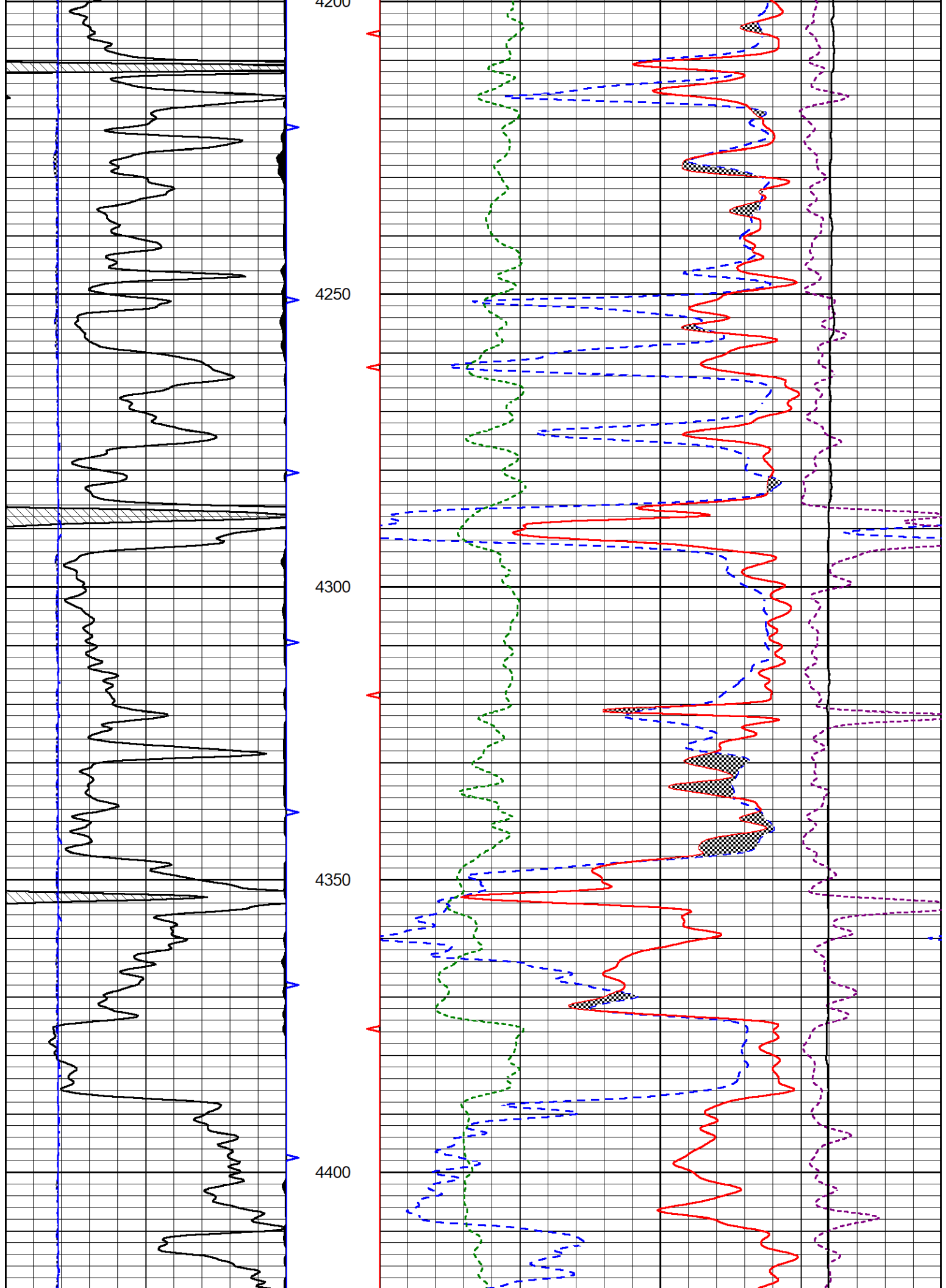


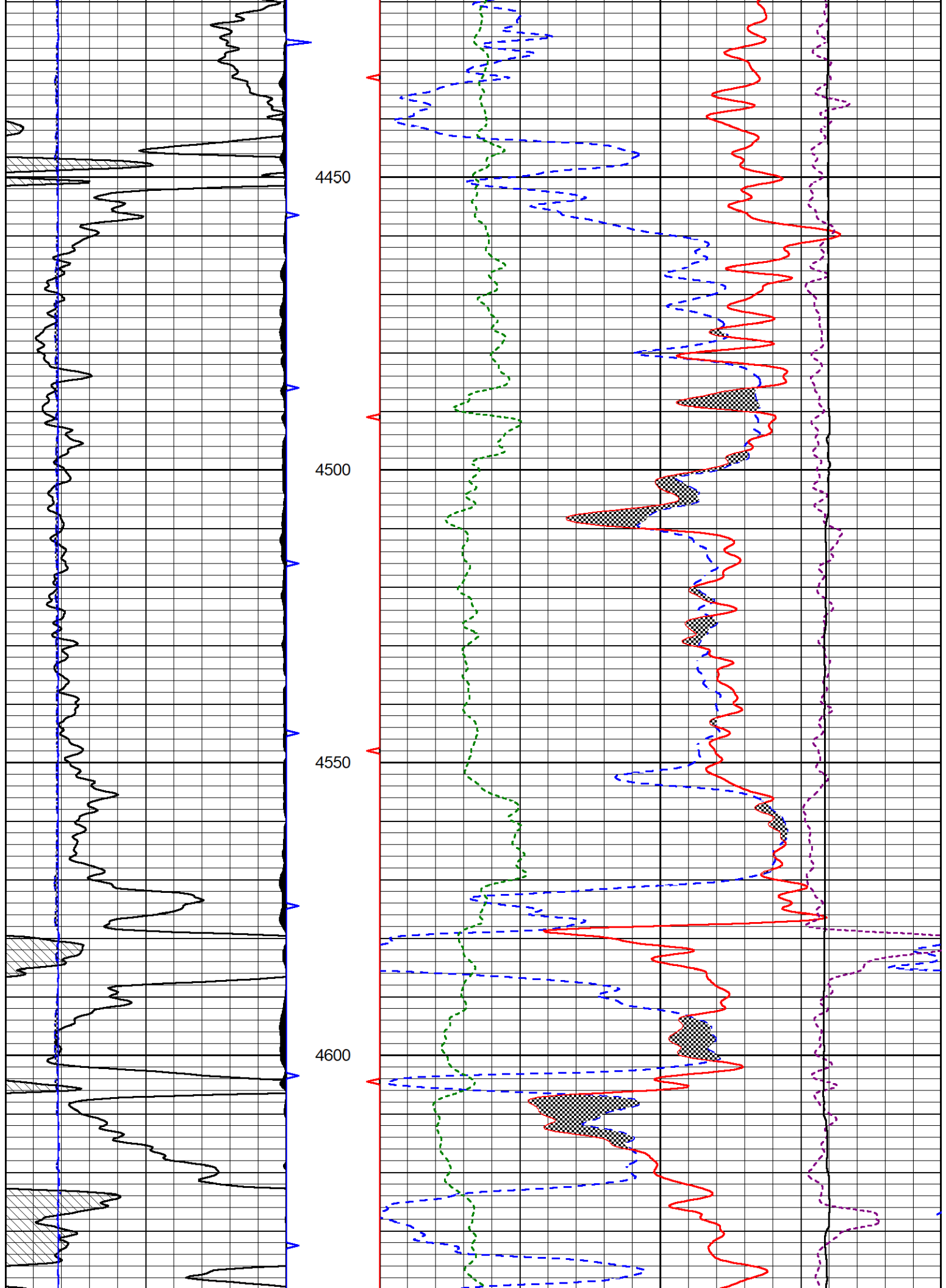


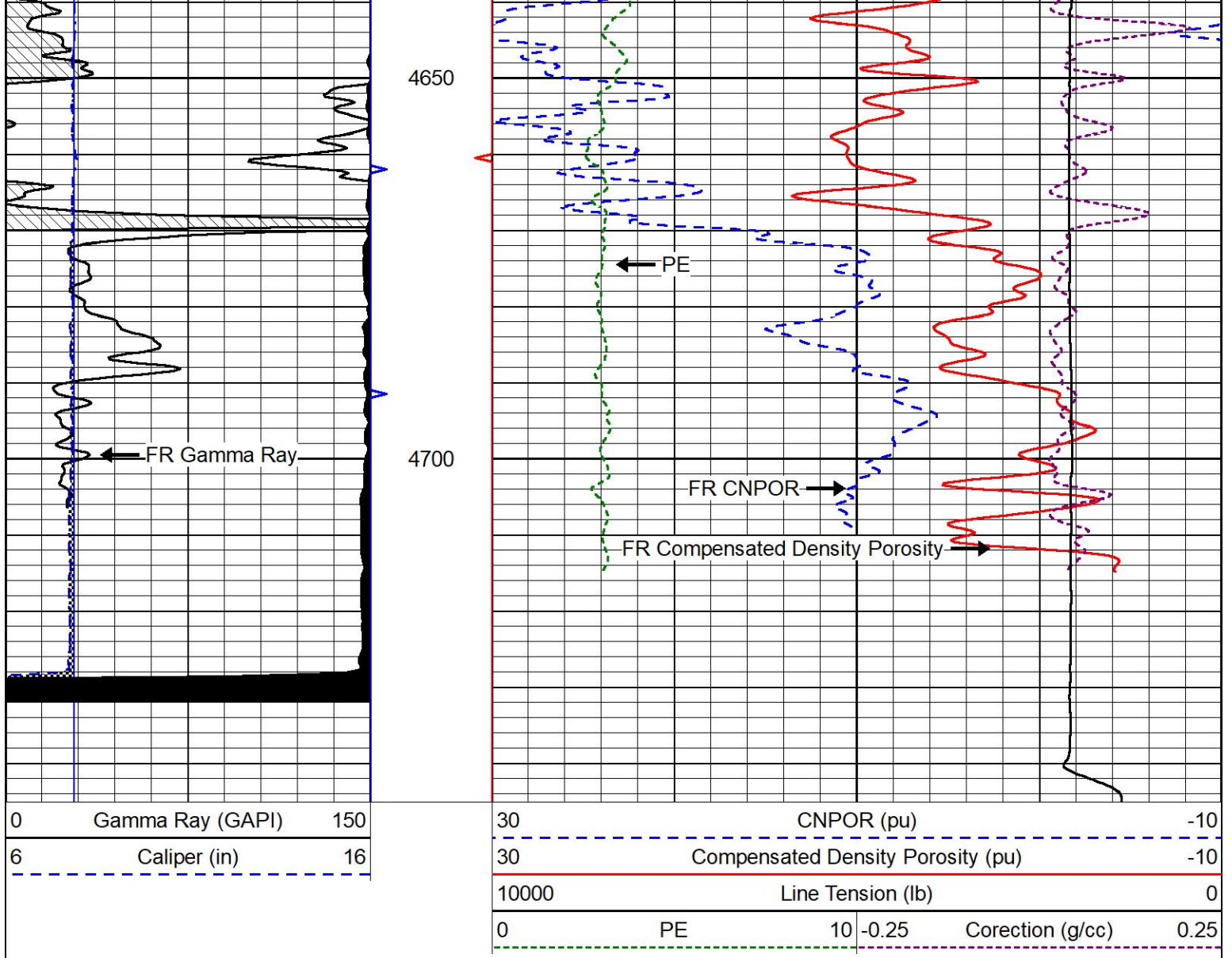








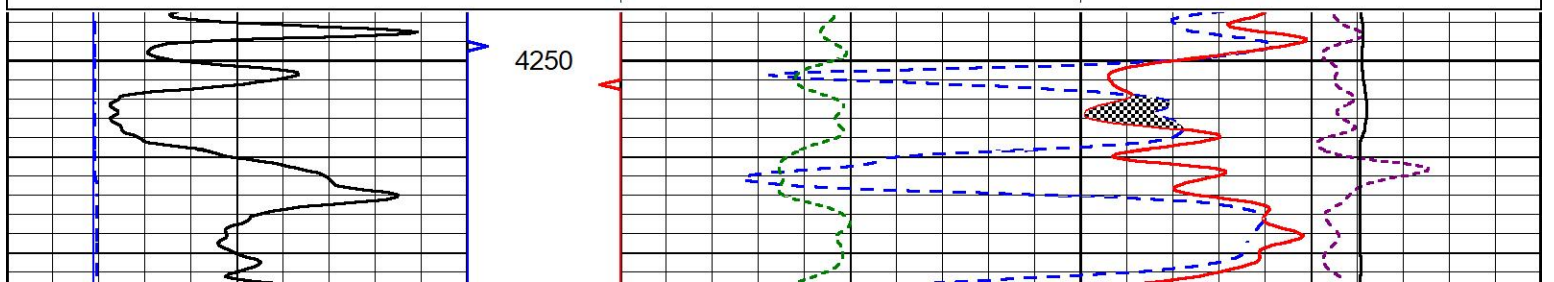
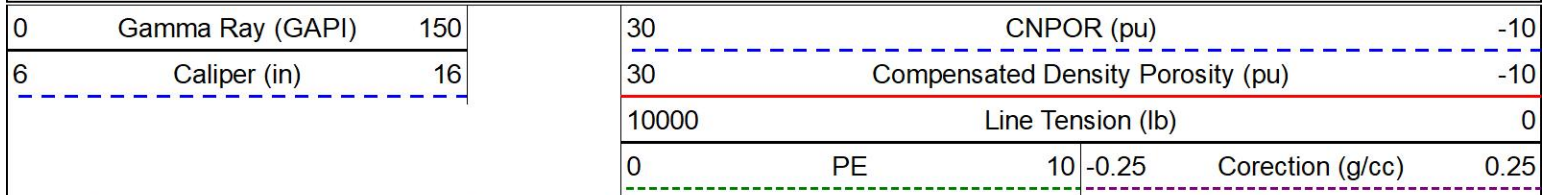


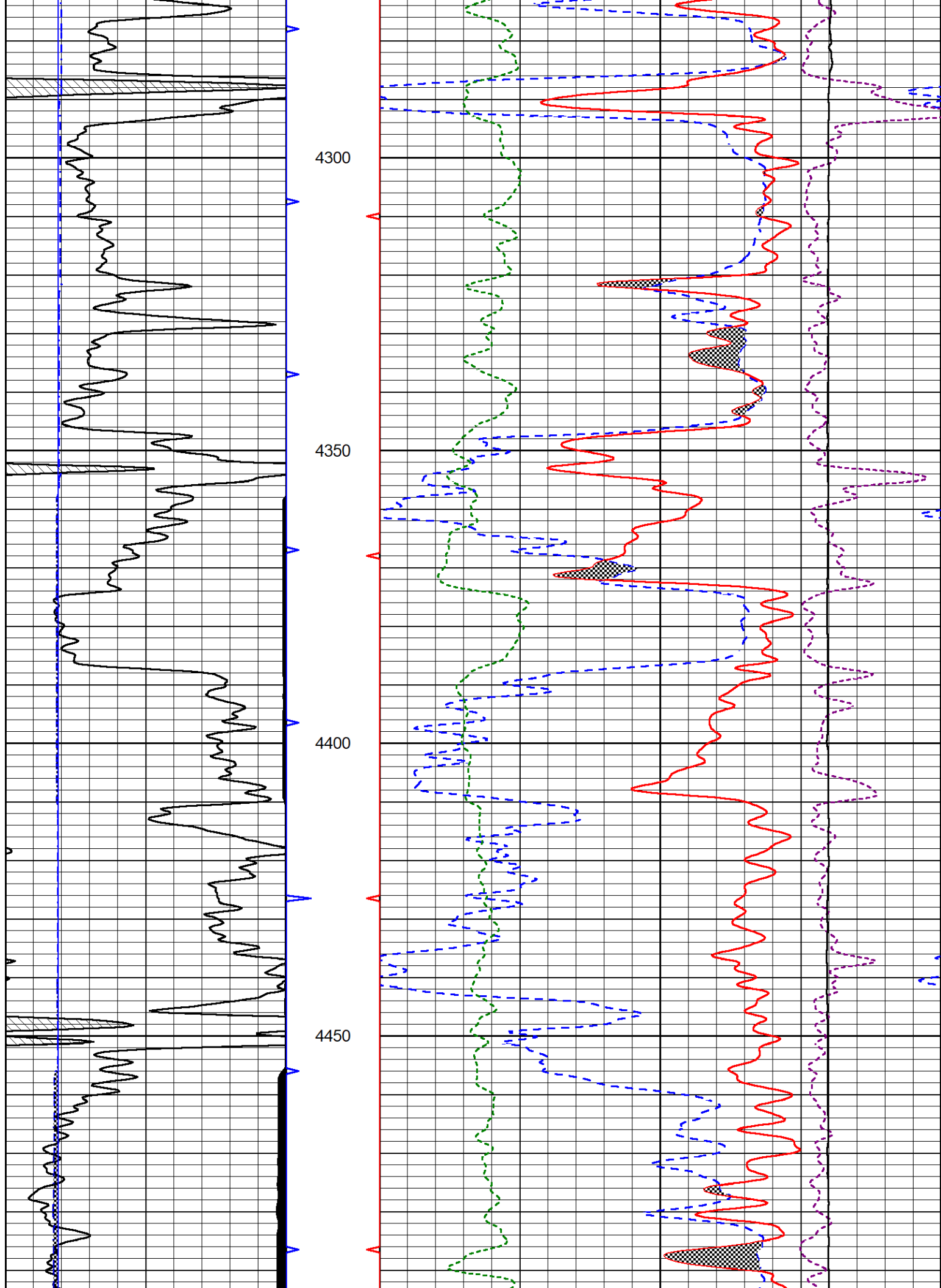


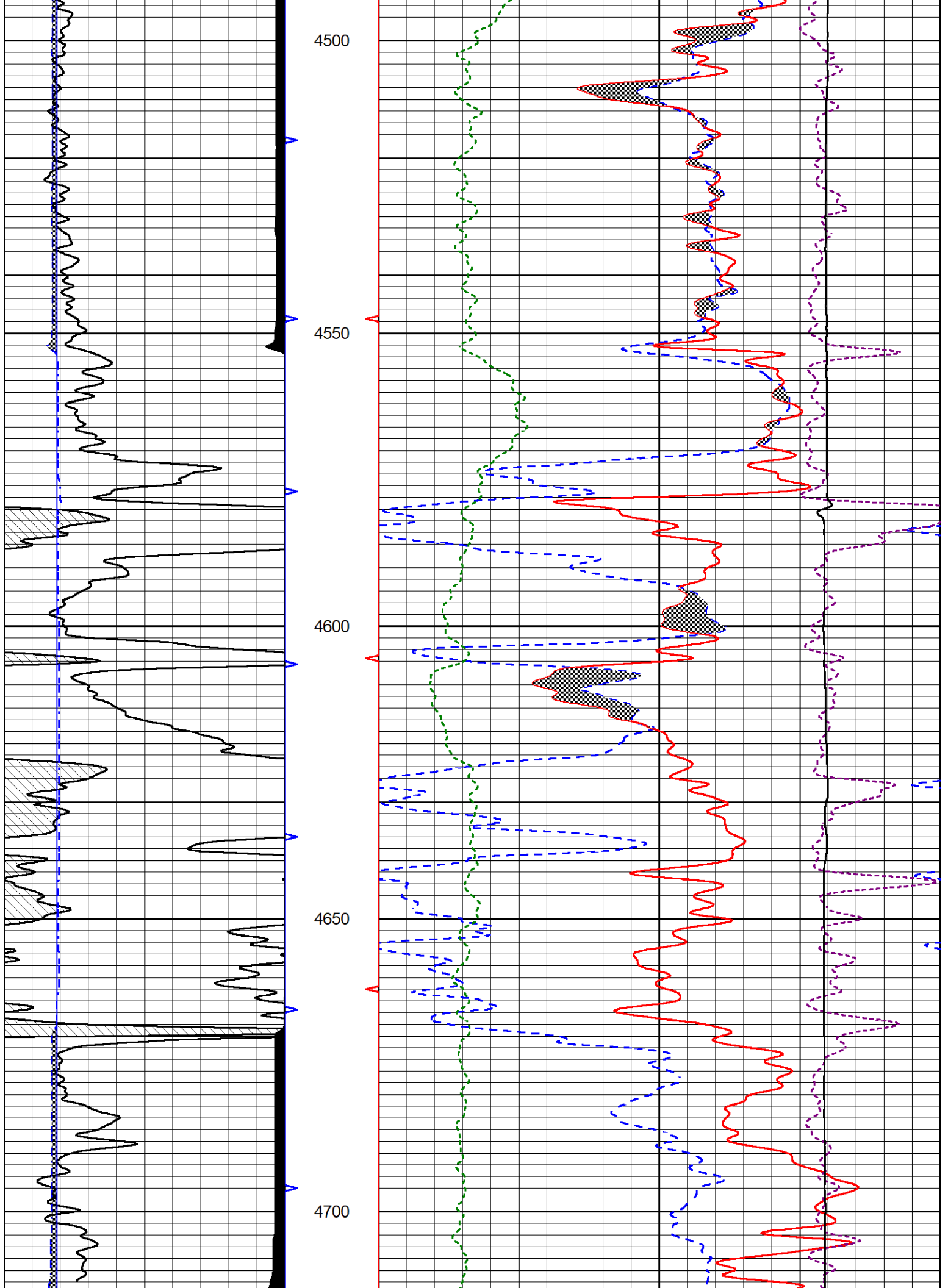
REPEAT SECTION

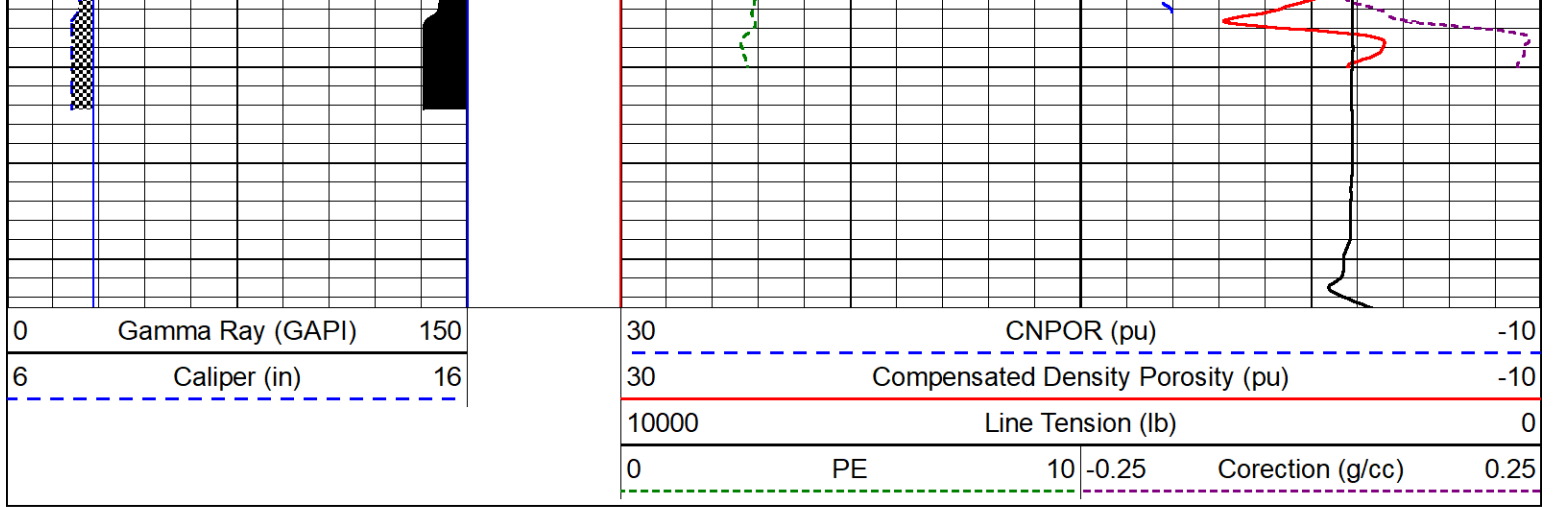
REPEAT PASS

Database File griffin_reta 1.db
 Dataset Pathname stkml/pass2.1
 Presentation Format _CNDLS~4
 Dataset Creation Wed Nov 01 01:05:46 2023
 Charted by Depth in Feet scaled 1:240









Calibration Report

Database File griffin_reta 1.db
 Dataset Pathname stkml/pass3.1
 Dataset Creation Wed Nov 01 02:38:22 2023

Dual Induction Calibration Report

Serial-Model: 505 HT-M&W
 Surface Cal Performed: Sat Oct 21 23:47:45 2023

Loop:	Readings		References			Results	
	Air	Loop	Air	Loop		m	b
Deep	167.000	835.000	0.000	255.800	mmho/m	0.500	-50.000
Medium	1348.000	1348.000	0.000	255.800	mmho/m	0.430	-45.000

Microlog Calibration Report

Serial-Model: 402-PSI STKBL ML
 Performed: Fri Oct 20 13:01:04 2023

	Readings		References			Results	
	Zero	Cal	Zero	Cal		m	b
Normal	0.0037	0.0043	0.0000	10.0000	Ohm-m	21500.0000	-0.5000
Inverse	0.1208	0.0013	0.0000	10.0000	Ohm-m	21000.0000	0.0000
Caliper	1.0046	1.1419	5.5000	20.0000	in	50.0000	-44.5000

LITHODENSITY Calibration Report

Serial Number: 704-10
 Tool Model: STEP LITHO
 Performed: Mon Jul 10 14:32:46 2023

Source:

	Win1	Win2	Win3	Win4	Win5	Win6	Win7	Win8	
Background:									
SS:	51	52	200	248	22	69	43	1	cps
LS:	86	98	369	472	53	149	98	3	cps
Aluminum:									
SS:	770	911	2087	1811	37	71	43	2	cps
LS:	972	1684	3061	1465	60	147	96	5	cps

Magnesium:

SS:	1299	1502	3449	2640	40	69	47	3	cps
LS:	4207	6947	11930	4497	91	136	95	12	cps

Aluminum+Iron:									
SS:	502	651	1766	1595	36	70	46	1	cps
LS:	571	1190	2606	1318	59	148	98	5	cps

	Density			PE					
	Actual	Calibrated		Actual	Calibrated	Quality			
Background:									
SS:						0.235			
LS:						0.209			
Aluminum:									
SS:	2.6000	2.6000	g/cc			0.245			
LS:	2.6000	2.6000	g/cc			0.210			
Magnesium:									
SS:	1.6800	1.6800	g/cc	2.5700	2.5700	0.192			
LS:	1.6800	1.6800	g/cc	2.5700	2.5700	0.177			
Aluminum+Iron:									
SS:						6.1800	0.198		
LS:						6.1800	0.206		

Caliper:	Reference:	Reading:
Small Ring:	6.0 in	0.2
Large Ring:	16.0 in	0.8
Gain:	18.088	
Offset:	0.255	

Compensated Neutron Calibration Report

Serial Number:	210
Tool Model:	M&W

CALIBRATION

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:	105
Tool Model:	M&W
Performed:	Sat Oct 21 23:48:19 2023
Calibrator Value:	500.0 GAPI
Background Reading:	24.0 cps
Calibrator Reading:	637.0 cps
Sensitivity:	0.6000 GAPI/cps



Company	Griffin Management, LLC
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Field	Sawyer
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State	Kansas