



**COMPENSATED  
DENSITY/NEUTRON  
PE LOG**

Company PIONEER OIL COMPANY, INC.

Well DEPE #11-1

Field ROLLING THUNDER

County THOMAS State KANSAS

Location: API #: 15-193-21090-0000

1553' FSL & 1545' FWL

Other Services  
DILMEL  
SONIC

SEC 1 TWP 7S RGE 32W

Elevation

Permanent Datum GROUND LEVEL Elevation 2984

Log Measured From KELLY BUSHING 9' A.G.L

Drilling Measured From KELLY BUSHING

K.B. 2993  
D.F. 2991  
G.L. 2984

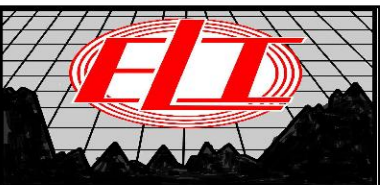
Date	12/14/21		
Run Number	ONE		
Depth Driller	4610		
Depth Logger	4617		
Bottom Logged Interval	4593		
Top Log Interval	3500		
Casing Driller	8 5/8" @ 246		
Casing Logger	246		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 700 PPM	
Density / Viscosity	9.1/54		
pH / Fluid Loss	10.5/6.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.45 @ 57F		
Rmf @ Meas. Temp	1.08 @ 57F		
Rmc @ Meas. Temp	1.74 @ 57F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	0.67 @ 122F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	////		
Maximum Recorded Temperature	122F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI	TJ DREILING	
Witnessed By	ROD ANDERSON		

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, 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. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

**Comments**

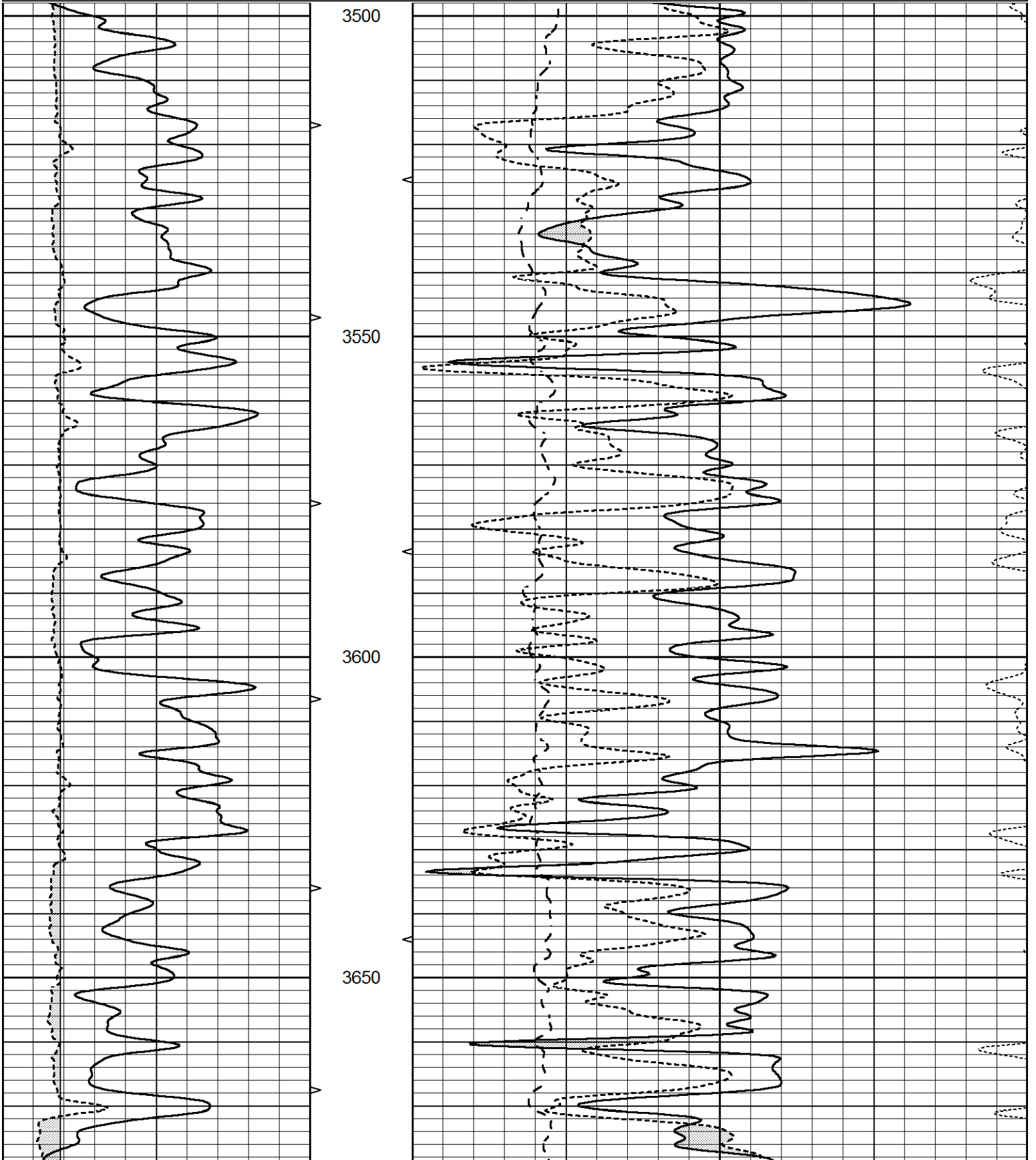
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. ( 785 ) 628-6395  
 DIRECTIONS  
 OAKLEY, KS. - I 70 & HWY 83 - NORTH TO HWY 24 - STAY NORTH TO CURVE EAST  
 1 MILE TO RD. 30 - NORTH TO TANK BATTERY - EAST & NORTH ABOUT 1 MILE  
 BACK WEST INTO

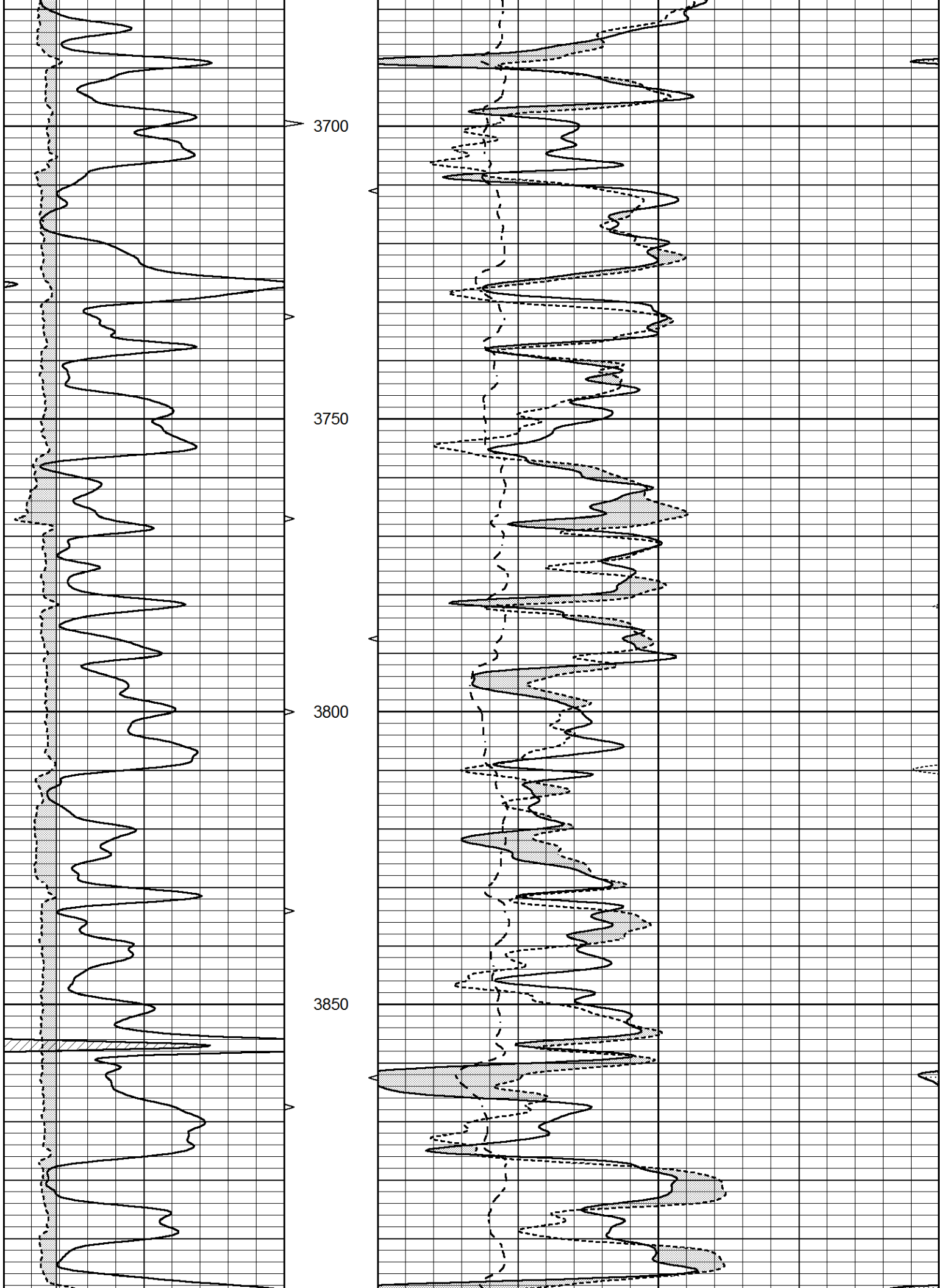


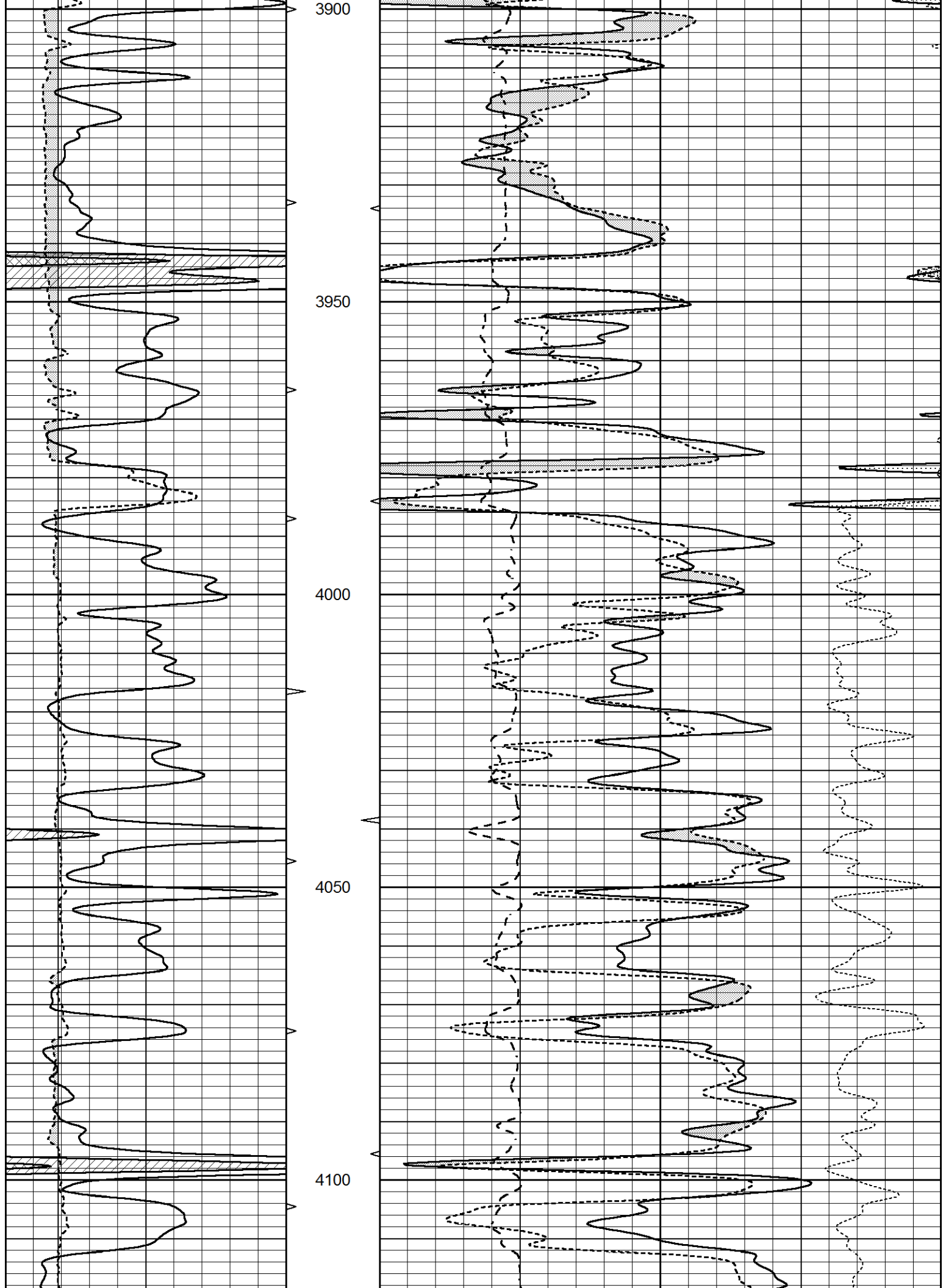
**MAIN SECTION**

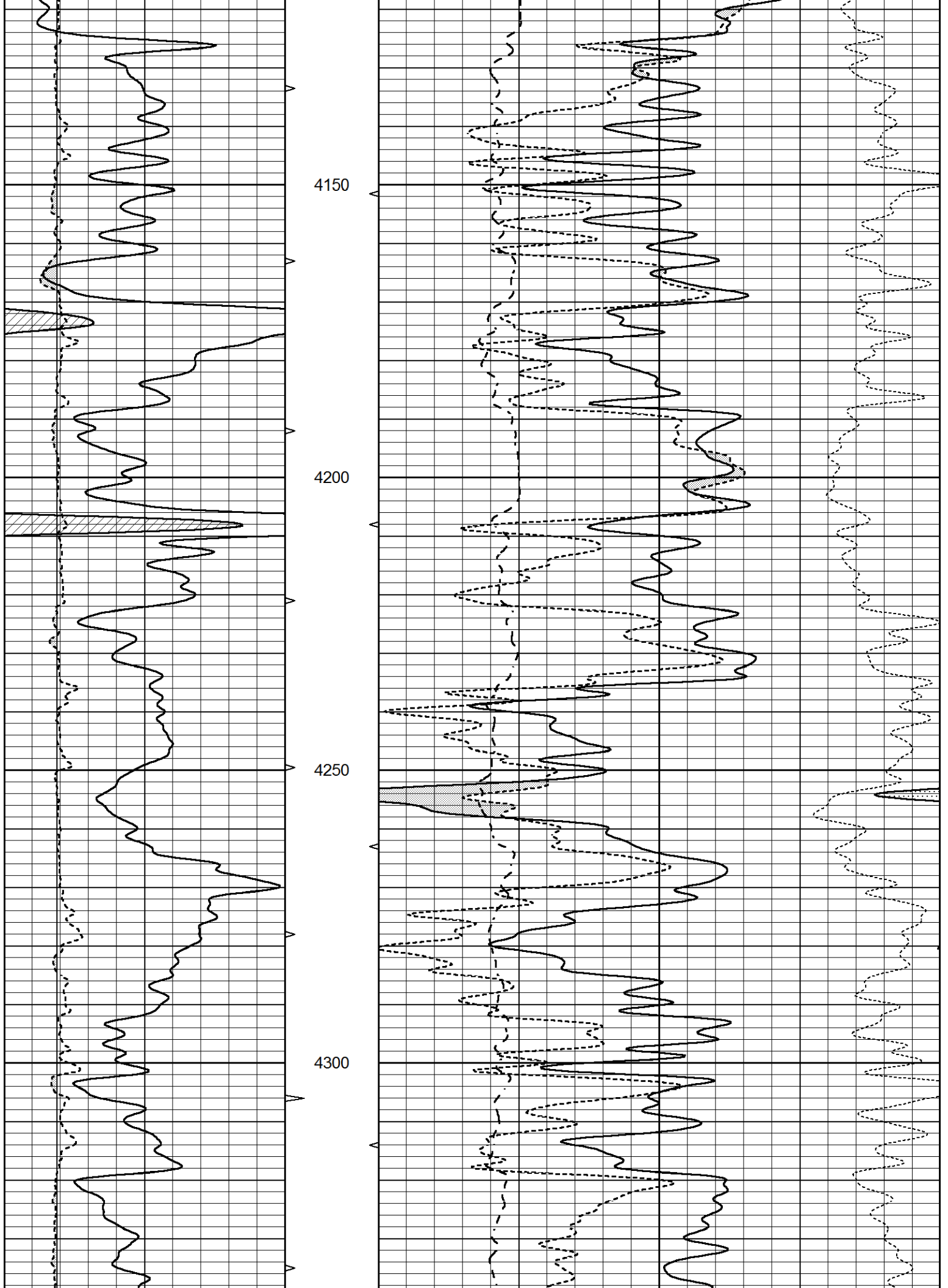
Database File 6064pe.db  
 Dataset Pathname pass3.1  
 Presentation Format \_ldt\_neu  
 Dataset Creation Tue Dec 14 08:28:23 2021  
 Charted by Depth in Feet scaled 1:240

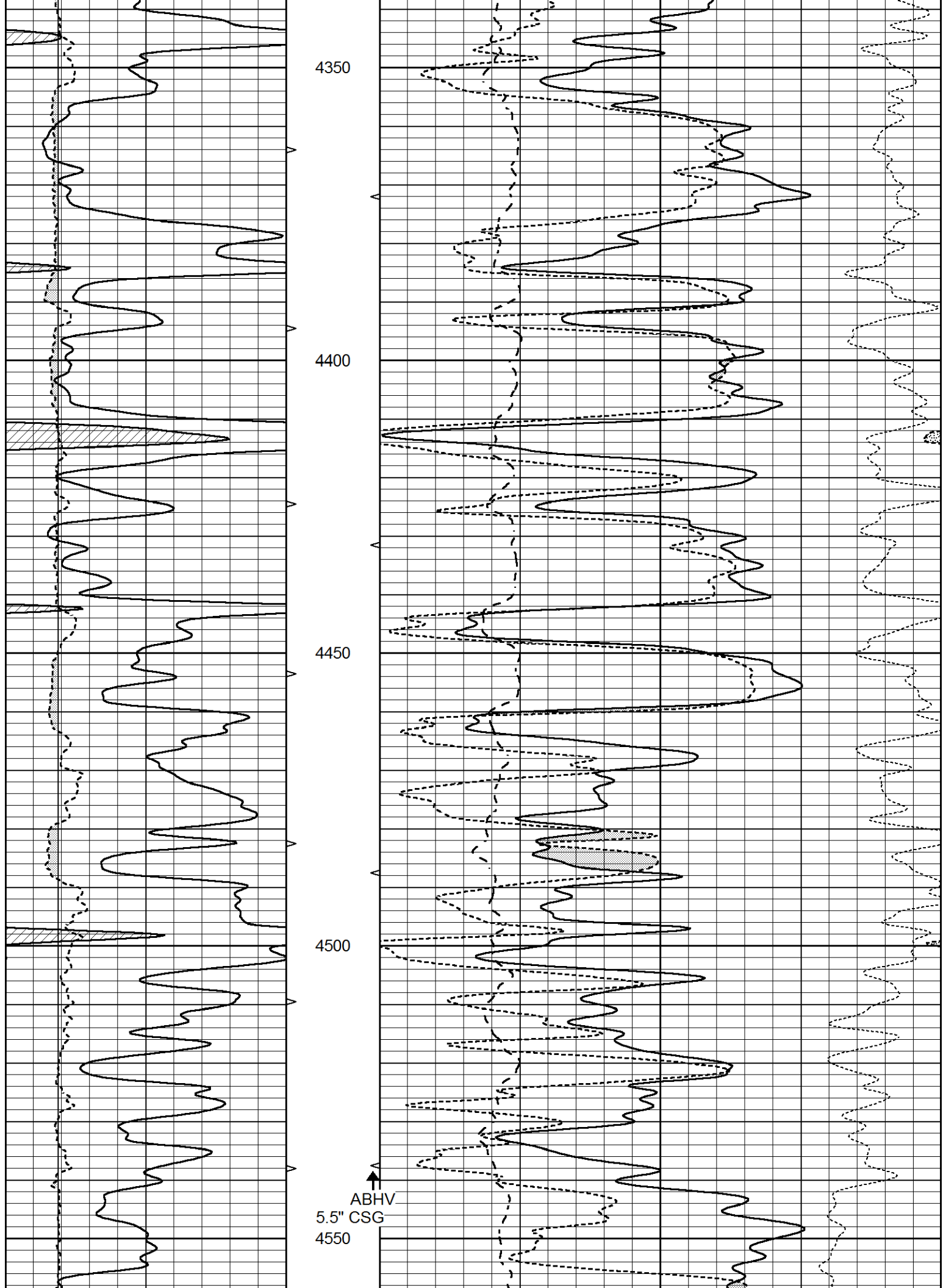
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)		-10
			TBHV	0	PE	10	-0.25
			0 (ft3)	10	CORRECTION (g/cc)		0.25
					0	LTEN (lb)	5000

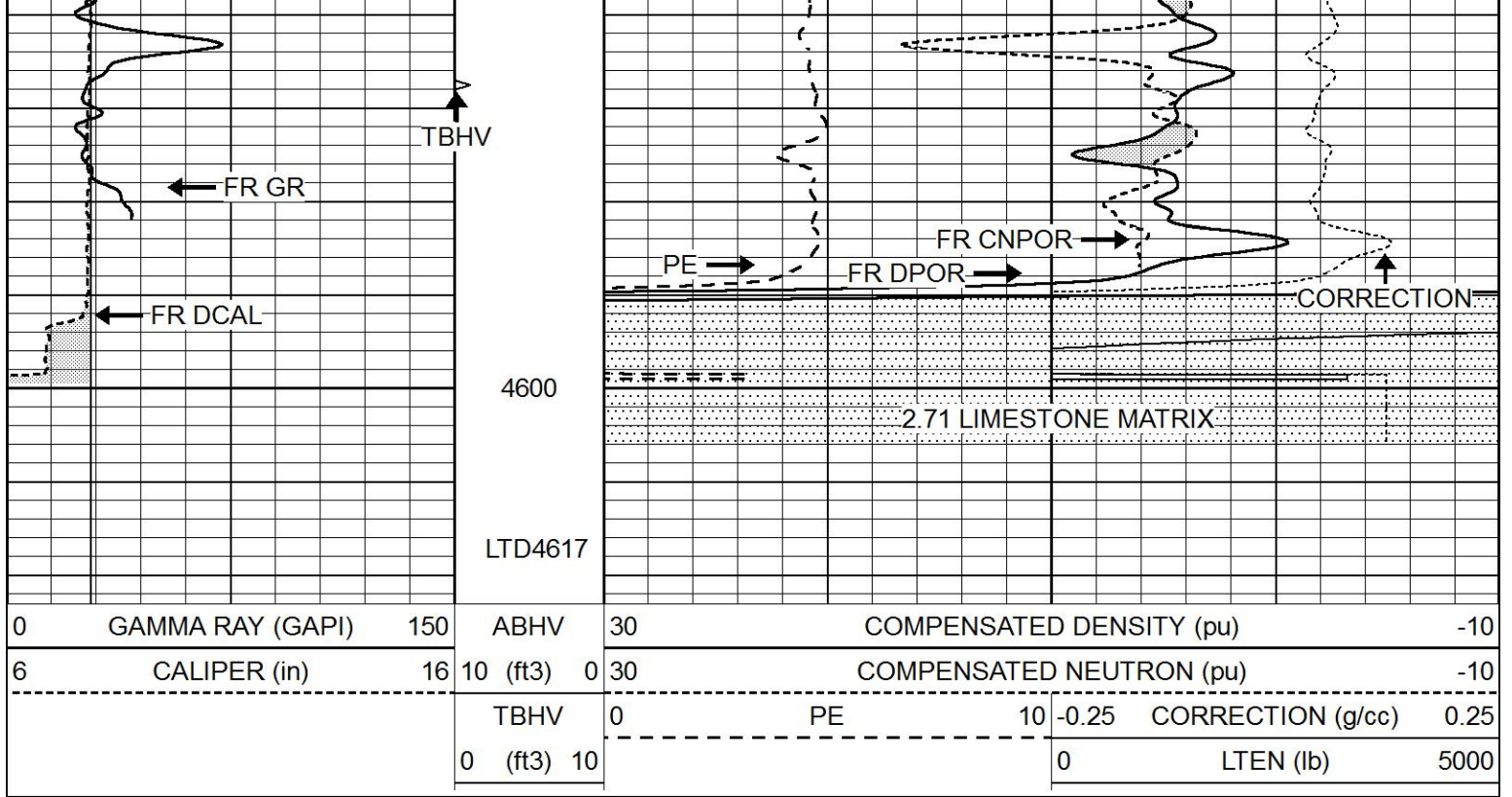








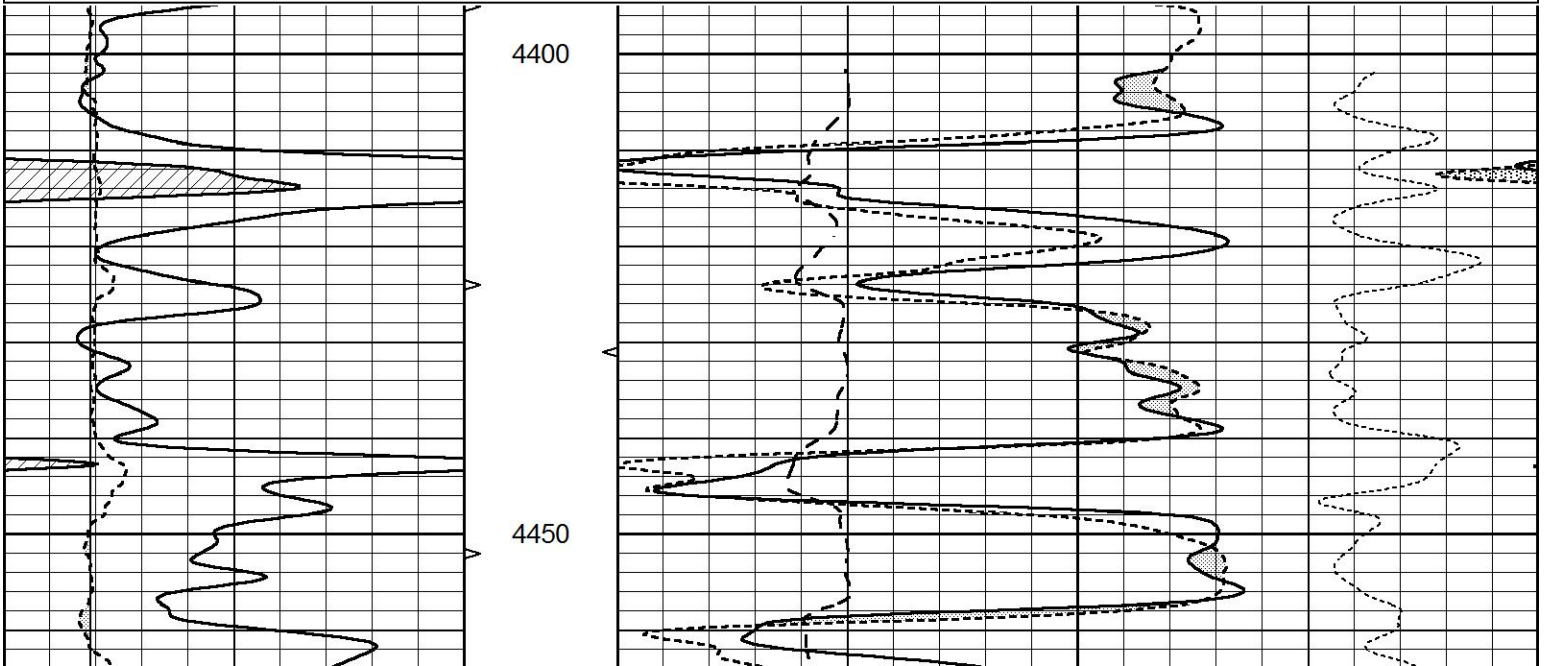


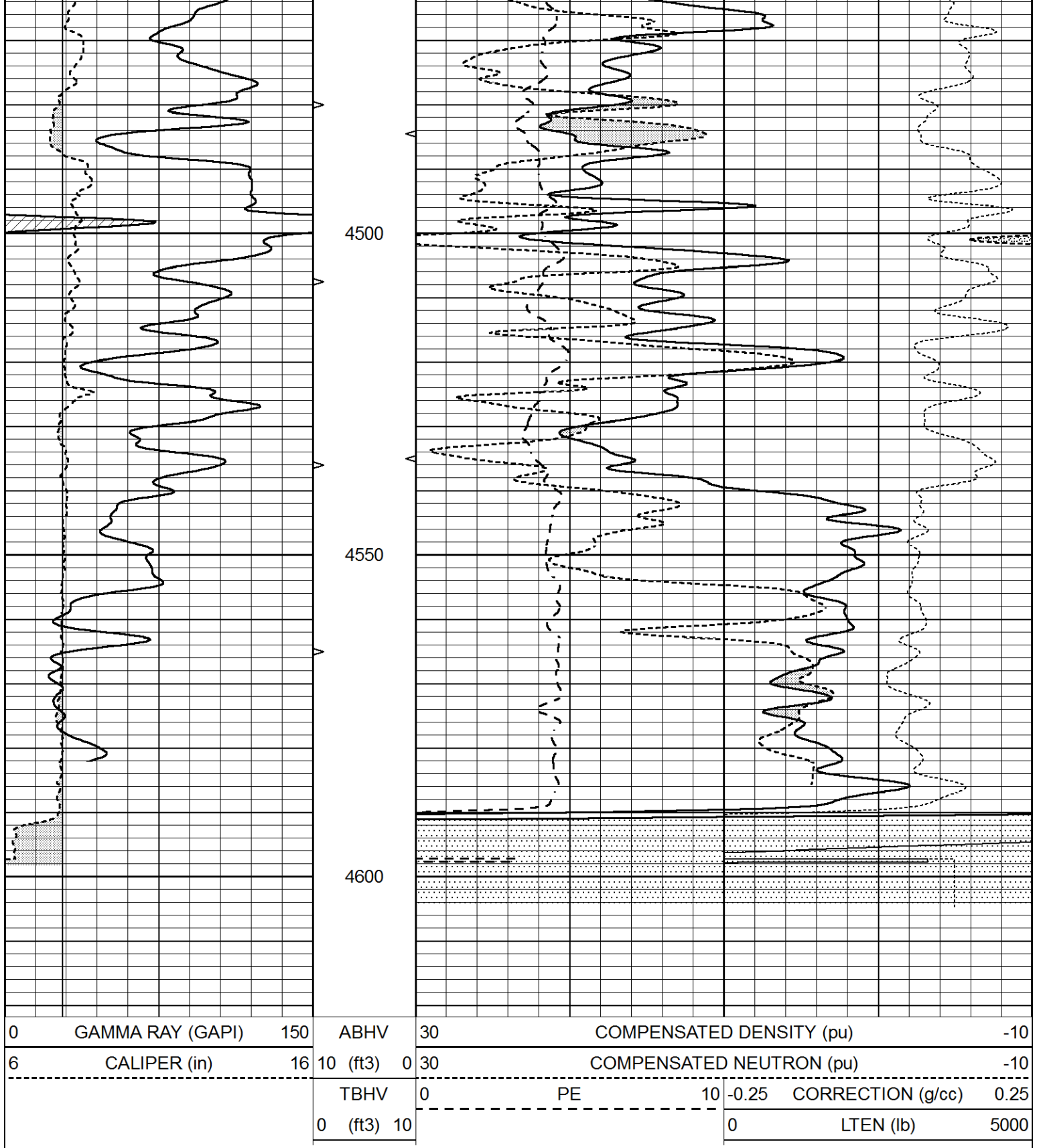


# REPEAT SECTION

Database File 6064pe.db  
 Dataset Pathname pass2.2  
 Presentation Format \_ldt\_neu  
 Dataset Creation Tue Dec 14 08:18:09 2021  
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
			TBHV	0	PE	10 -0.25
			0 (ft3)	10		CORRECTION (g/cc) 0.25
					0	LTEN (lb) 5000





### Calibration Report

Database File 6064pe.db  
 Dataset Pathname pass2.2  
 Dataset Creation Tue Dec 14 08:18:09 2021

### Dual Induction Calibration Report

Serial-Model: FW1410-56-Probe  
 Surface Cal Performed: Mon Jun 15 22:52:02 2020  
 Downhole Cal Performed: Tue Jul 25 12:15:37 2017  
 After Survey Verification Performed: Tue Jul 25 12:15:38 2017

Surface Calibration								
Readings			References			Results		
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.008	0.765	V	1.000	400.000	mmho/m	400.061	-3.201
Medium	-0.056	0.761	V	1.000	464.000	mmho/m	425.187	32.510
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.005	0.624	V	0.000	400.000	mmho/m	645.611	-3.034
Medium	0.012	0.721	V	0.000	464.000	mmho/m	653.591	-7.532

Downhole Calibration								
Readings			References			Results		
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.647	301.329	mmho/m	-0.780	336.378	mmho/m	1.117	-0.058
Medium	38.256	411.013	mmho/m	39.046	441.706	mmho/m	1.080	-2.280
LL3		7.471	V		2500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.085	V		5000.000	mmho-m		

After Survey Verification								
Readings			Targets			Results		
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.647	301.329	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	38.256	411.013	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Litho Density Calibration Report  
 Serial: 140704  
 Model: V4\_10P  
 Source Number: 74GBq-19

Master Calibration				Performed: Mon Dec 07 12:12:14 2020			
	Background	Aluminum		Magnesium			
Window 1	557.73	5525.14		24361.20		cps	
Window 2	47.08	1245.09		5901.17		cps	
Window 4	239.06	1250.70		5456.76		cps	
Window 5	564.08	8300.56		16134.07		cps	
Window 6	44.21	1356.78		2705.40		cps	
Window 8	267.87	2686.97		5150.30		cps	
Bulk Density	-	2.6020		1.6830		g/cc	
Pe	-	3.0000		2.5070		b/e	
LS Alpha:	: -1.8719	SS Alpha:	: -0.8000	LS CPE:		: 1.1424	
LS Beta:	: 135562.6841	SS Beta:	: 20128.7209	SS CPE:		: 1.5489	

Before Survey Background Counts Verification			Performed: Wed Dec 31 18:00:00 1969		
Window 1	0.00	cps			
Window 2	0.00	cps			
Window 4	0.00	cps			
Window 5	0.00	cps			
Window 6	0.00	cps			

Window 8	0.00	cps
After Survey Background Counts Verification		Performed: Wed Dec 31 18:00:00 1969
Window 1	0.00	cps
Window 2	0.00	cps
Window 4	0.00	cps
Window 5	0.00	cps
Window 6	0.00	cps
Window 8	0.00	cps

Lithodensity Caliper Calibration		Performed: Mon Dec 07 12:12:14 2020			
Results	Readings	References (in)		Gain	Offset
Low	High	Low	High		
5852.8	8972.7	8.0	14.0	0.0	-3.4

Before Survey Caliper Verification		Performed:			
	Reference	Reading			
Caliper (in)	_____	_____			

After Survey Caliper Verification		Performed:			
	Reference	Reading			
Caliper (in)	_____	_____			

**Compensated Neutron Calibration Report**

Serial Number:	080621PMC
Tool Model:	NABORS

<b>PRE-SURVEY VERIFICATION</b>				
Detector	Readings	Measured	Target	
Short Space	cps			
Long Space	cps	pu		pu

<b>POST-SURVEY VERIFICATION</b>				
Detector	Readings	Measured	Target	
Short Space	cps			
Long Space	cps	pu		pu

**Gamma Ray Calibration Report**

Serial Number:	7	
Tool Model:	Probe1	
Performed:	Tue Jan 19 17:50:08 2021	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.5300	GAPI/cps