



**COMPENSATED  
DENSITY/NEUTRON  
PE LOG**

Company ARP OPERATING, LLC.  
Well CV #2-9  
Field SWEET WILLIAM NORTHWEST  
County ELLIS  
State KANSAS

Company ARP OPERATING, LLC.  
Well CV #2-9  
Field SWEET WILLIAM NORTHWEST  
County ELLIS State KANSAS

Location: API #: 15-051-26984-0000  
500' FSL & 1300' FEL  
Permanent Datum GROUND LEVEL Elevation 2296  
Log Measured From KELLY BUSHING 5' A.G.L  
Drilling Measured From KELLY BUSHING  
Elevation  
K.B. 2301  
D.F. 2299  
G.L. 2296

Date	5/18/20	
Run Number	ONE	
Depth Driller	4059	
Depth Logger	4056	
Bottom Logged Interval	4032	
Top Log Interval	3400	
Casing Driller	8 5/8" @ 217'	
Casing Logger	220'	
Bit Size	7 7/8	
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4100 PPM
Density / Viscosity	9.1/56	
pH / Fluid Loss	11.0/6.0	
Source of Sample	FLOWLINE	
Rm @ Meas. Temp	.70 @ 82F	
Rmf @ Meas. Temp	.52 @ 82F	
Rmc @ Meas. Temp	.84 @ 82F	
Source of Rmf / Rmc	MEASUREMENT	
Rm @ BHT	.49 @ 117F	
Time Circulation Stopped	2 HOURS	
Time Logger on Bottom	////	
Maximum Recorded Temperature	117F	
Equipment Number	3802	
Location	HAYS, KANSAS	
Recorded By	JASON CAPPELLUCCI	
Witnessed By	SEAN DEENIHAN	

<<< Fold Here >>>

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**

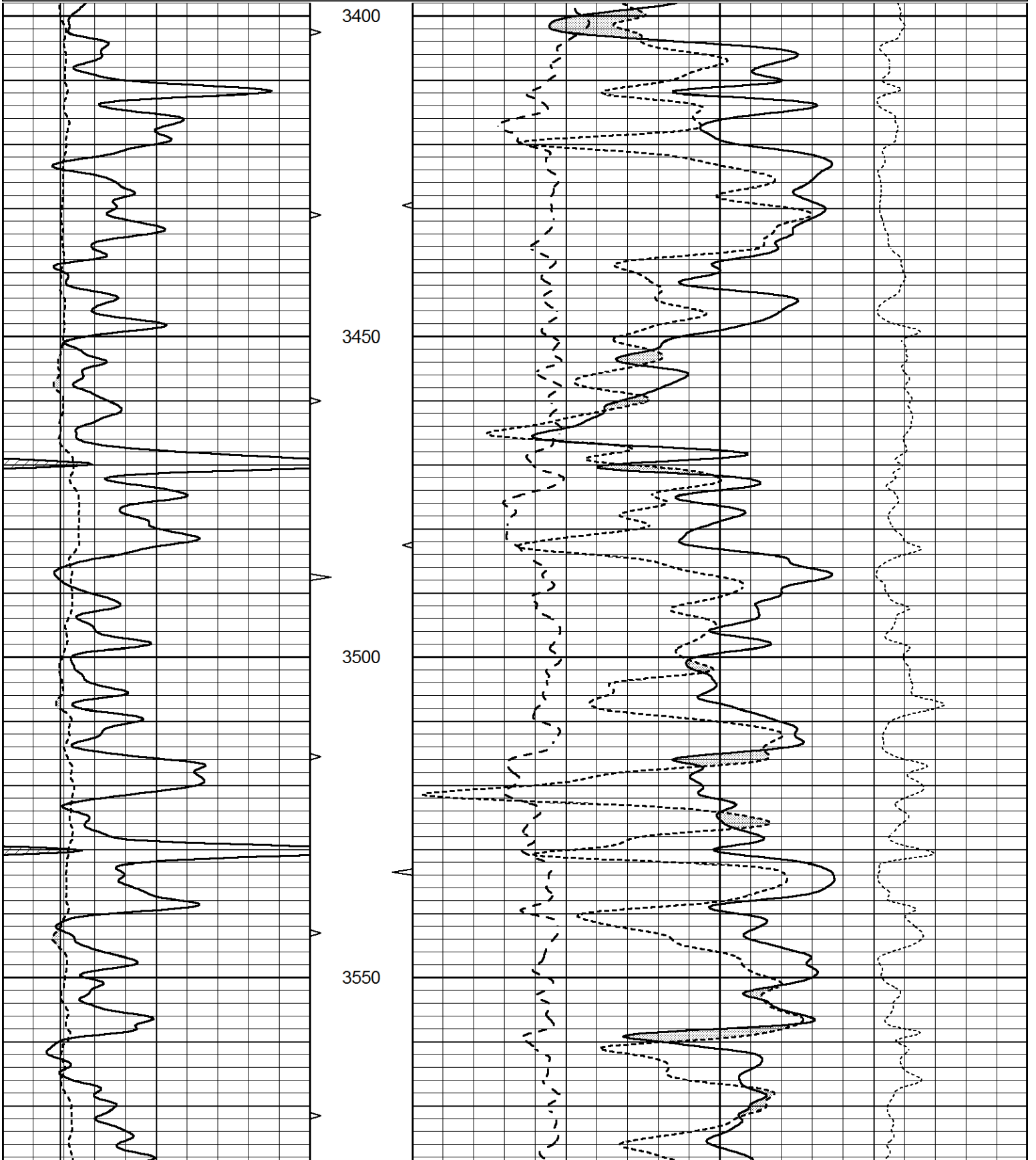
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. ( 785 ) 628-6395  
DIRECTIONS  
ELLIS KS. - 5 NORTH ON BLKTOP TO SEVERIN RD. - 1/2 WEST - NORTH INTO

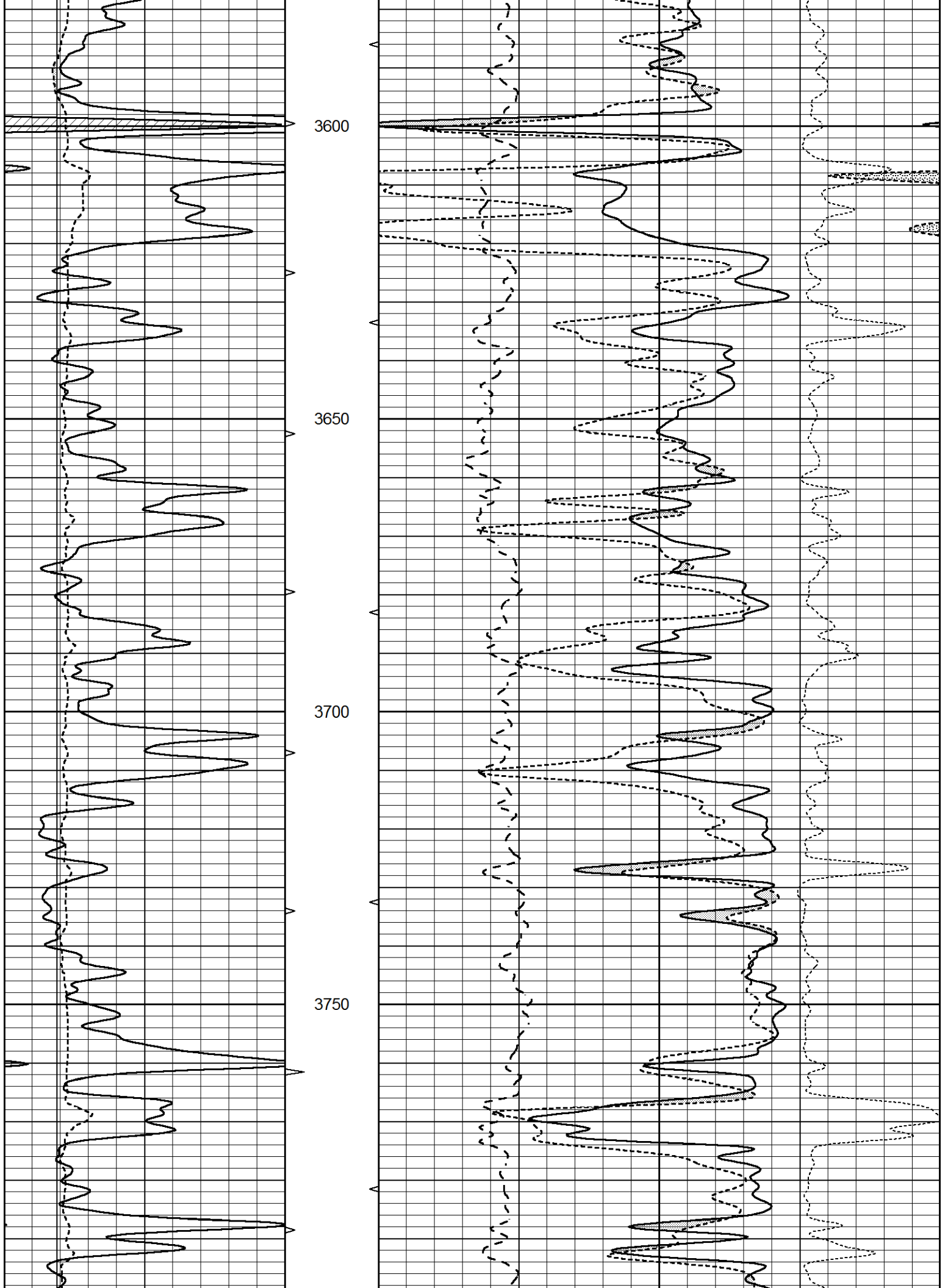


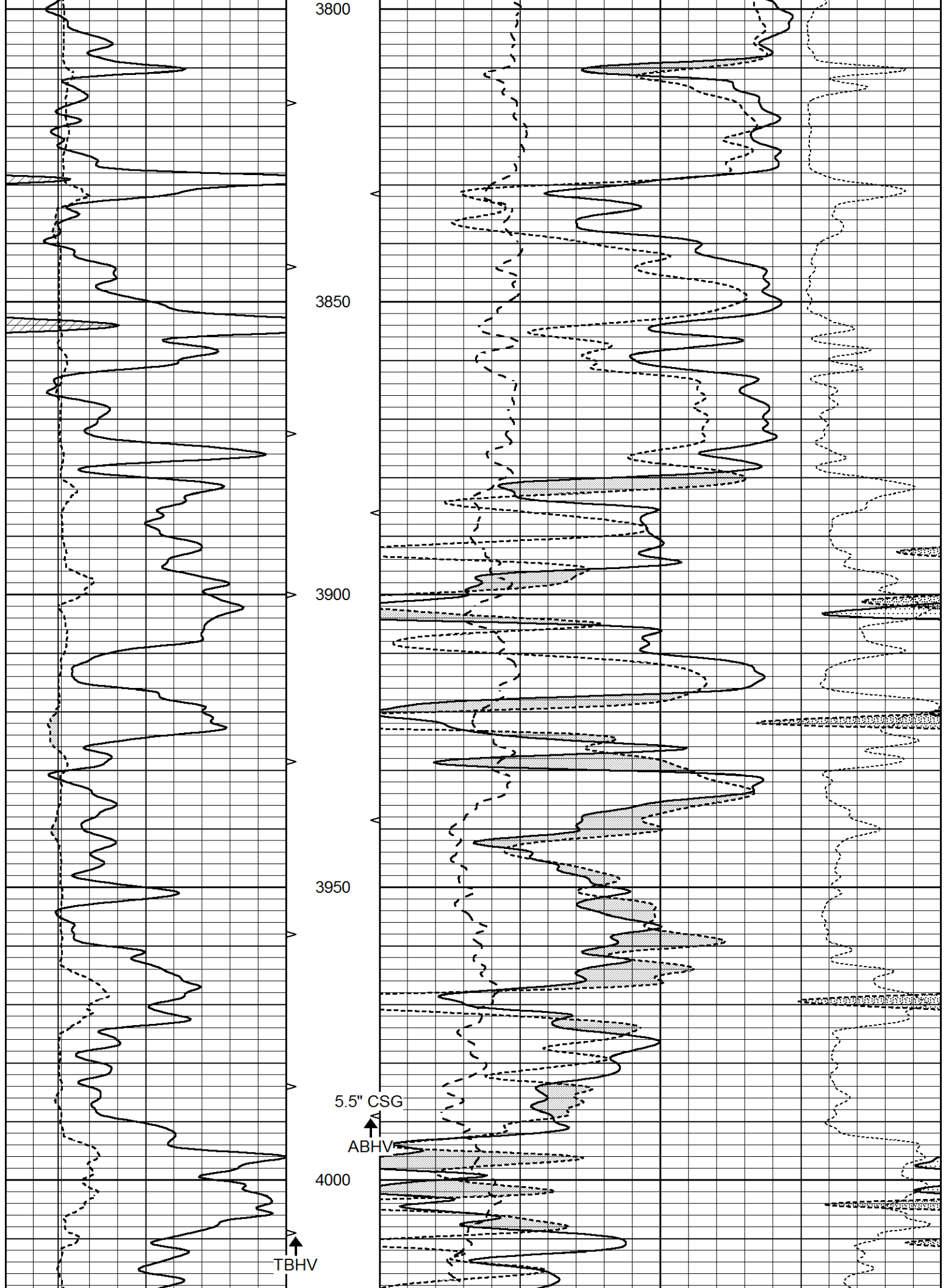
**MAIN SECTION**

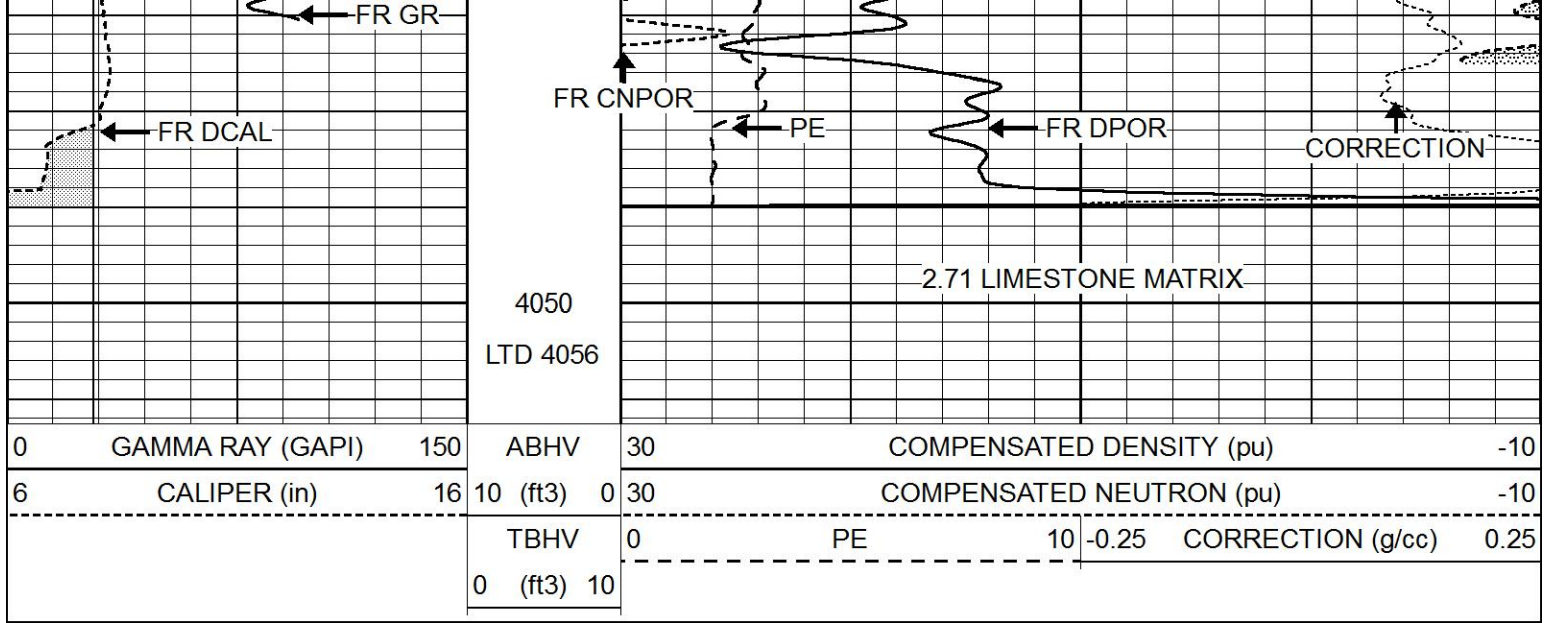
Database File 4736pe.db  
 Dataset Pathname pass3.1  
 Presentation Format \_ldt\_neu  
 Dataset Creation Mon May 18 20:03:27 2020  
 Charted by Depth in Feet scaled 1:240

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	CORRECTION (g/cc) 0.25
			0 (ft3)	10			





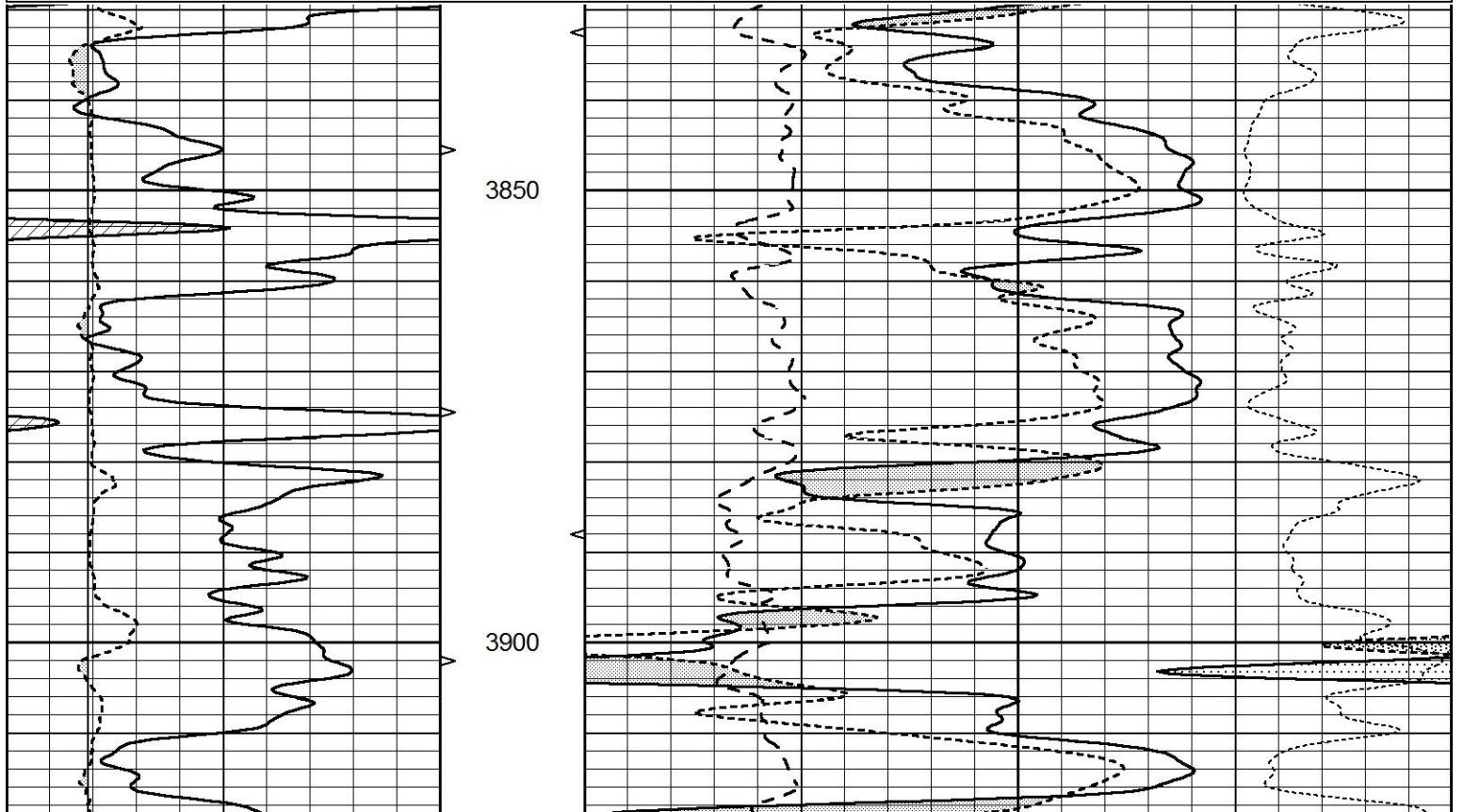


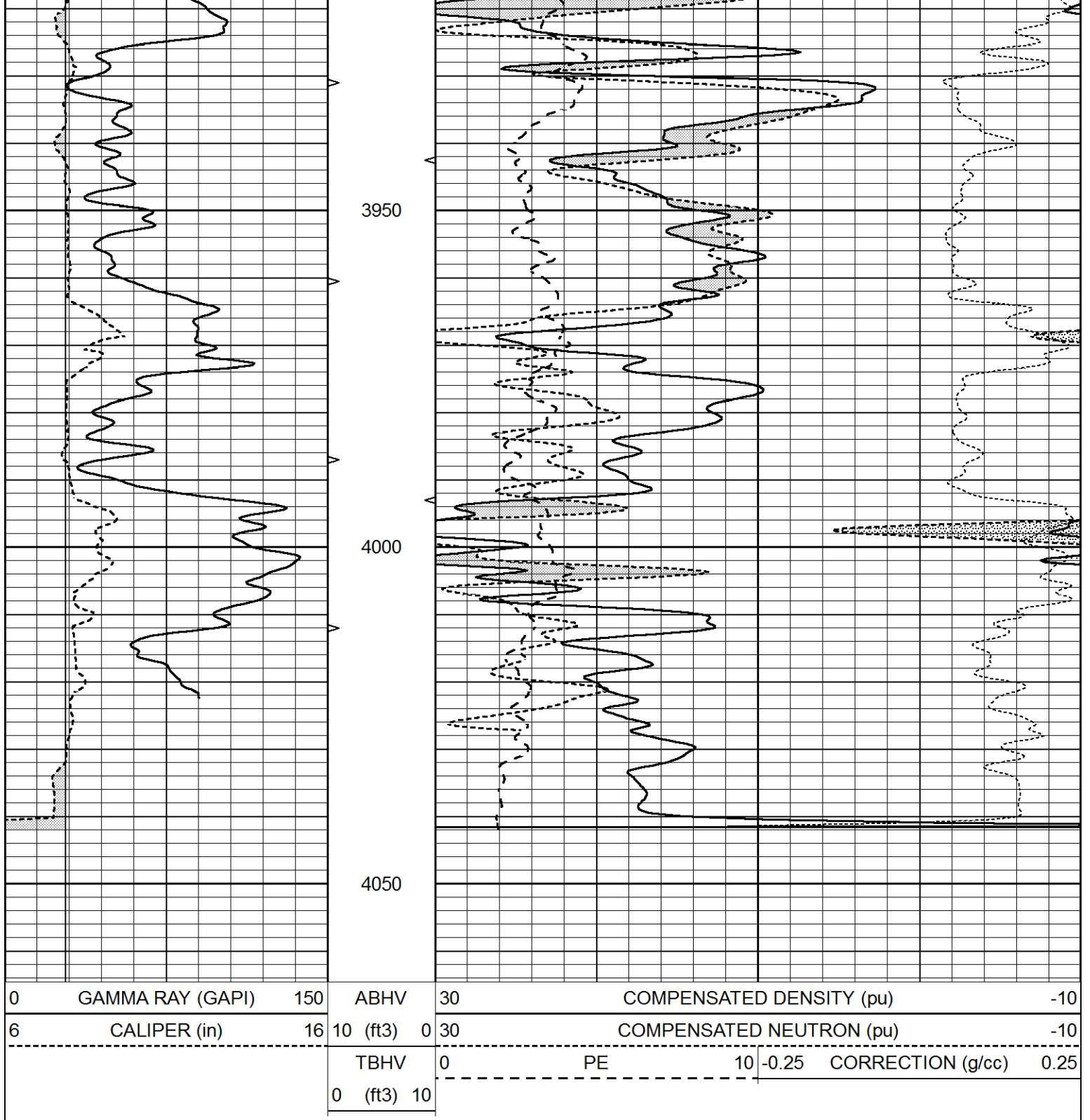


# REPEAT SECTION

Database File 4736pe.db  
 Dataset Pathname pass2.1  
 Presentation Format \_ldt\_neu  
 Dataset Creation Mon May 18 20:01:14 2020  
 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 CORRECTION (g/cc) 0.25
			0 (ft3)	10		





### Calibration Report

Database File 4736pe.db  
 Dataset Pathname pass3.1  
 Dataset Creation Mon May 18 20:03:27 2020

### Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe  
 Surface Cal Performed: Tue Feb 19 11:44:18 2019  
 Downhole Cal Performed: Tue Feb 19 11:44:24 2019  
 After Survey Verification Performed: Tue Feb 19 11:44:27 2019

Surface Calibration

Readings

References

Results

Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	618.595	-5.524
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	632.856	1.197
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.007	0.649	V	0.000	400.000	mmho/m	623.784	-4.595
Medium	0.004	0.743	V	0.000	464.000	mmho/m	627.284	-2.251

Downhole Calibration								
	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.824	395.917	mmho/m	-0.976	397.550	mmho/m	1.004	-0.149
Medium	3.565	471.327	mmho/m	3.468	471.590	mmho/m	1.001	-0.099
LL3		7.503	V		1500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.481	V		3745.000	mmho-m		

After Survey Verification								
	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.824	395.917	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	3.565	471.327	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		

Compensated Neutron Calibration Report								
Serial Number:				080621PMC				
Tool Model:				NABORS				

PRE-SURVEY VERIFICATION								
Detector	Readings		Measured	Target				
Short Space	cps			pu				
Long Space	cps			pu				

POST-SURVEY VERIFICATION								
Detector	Readings		Measured	Target				
Short Space	cps			pu				
Long Space	cps			pu				

Gamma Ray Calibration Report								
Serial Number:			7					
Tool Model:			Probe1					
Performed:			Tue Dec 10 10:02:55 2019					
Calibrator Value:			1.0			GAPI		
Background Reading:			0.0			cps		
Calibrator Reading:			1.0			cps		
Sensitivity:			0.4800			GAPI/cps		