

COMPENSATED
DENSITY / NEUTRON
PE LOG

Company MULL DRILLING COMPANY, INC.

Well NUTTLE #1-7

Field PRARIE RIDGE NORTH

County NESS State KANSAS

Location: API #: 15-135-26140-0000
335' FNL & 224' FEL
SE - NW - NW - NE

Other Services
DILMEL
SONIC

SEC 7 TWP 16S RGE 26W

Permanent Datum GROUND LEVEL Elevation 2655
Log Measured From KELLY BUSHING 11' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 2666
D.F. 2664
G.L. 2655

Date 1/9/22

Run Number ONE

Depth Driller 4670

Depth Logger 4672

Bottom Logged Interval 4648

Top Log Interval 3800

Casing Driller 8 5/8" @ 220'

Casing Logger 220

Bit Size 7 7/8"

Type Fluid in Hole CHEMICAL MUD

Density / Viscosity 9.4/51

pH / Fluid Loss 11.0/6.8

Source of Sample FLOWLINE

Rm @ Meas. Temp 1.10 @ 78F

Rmf @ Meas. Temp .825 @ 78F

Rmc @ Meas. Temp 1.32 @ 78F

Source of Rmf / Rmc MEASUREMENT

Rm @ BHT .703 @ 122F

Time Circulation Stopped 3.5 HOURS

Time Logger on Bottom 7:00 P.M.

Maximum Recorded Temperature 122F

Equipment Number 922339

Location HAYS, KANSAS

Recorded By JEFF LUEBBERS

Witnessed By BLAKE MILLER

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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.

15-135-26140-0000 Comments

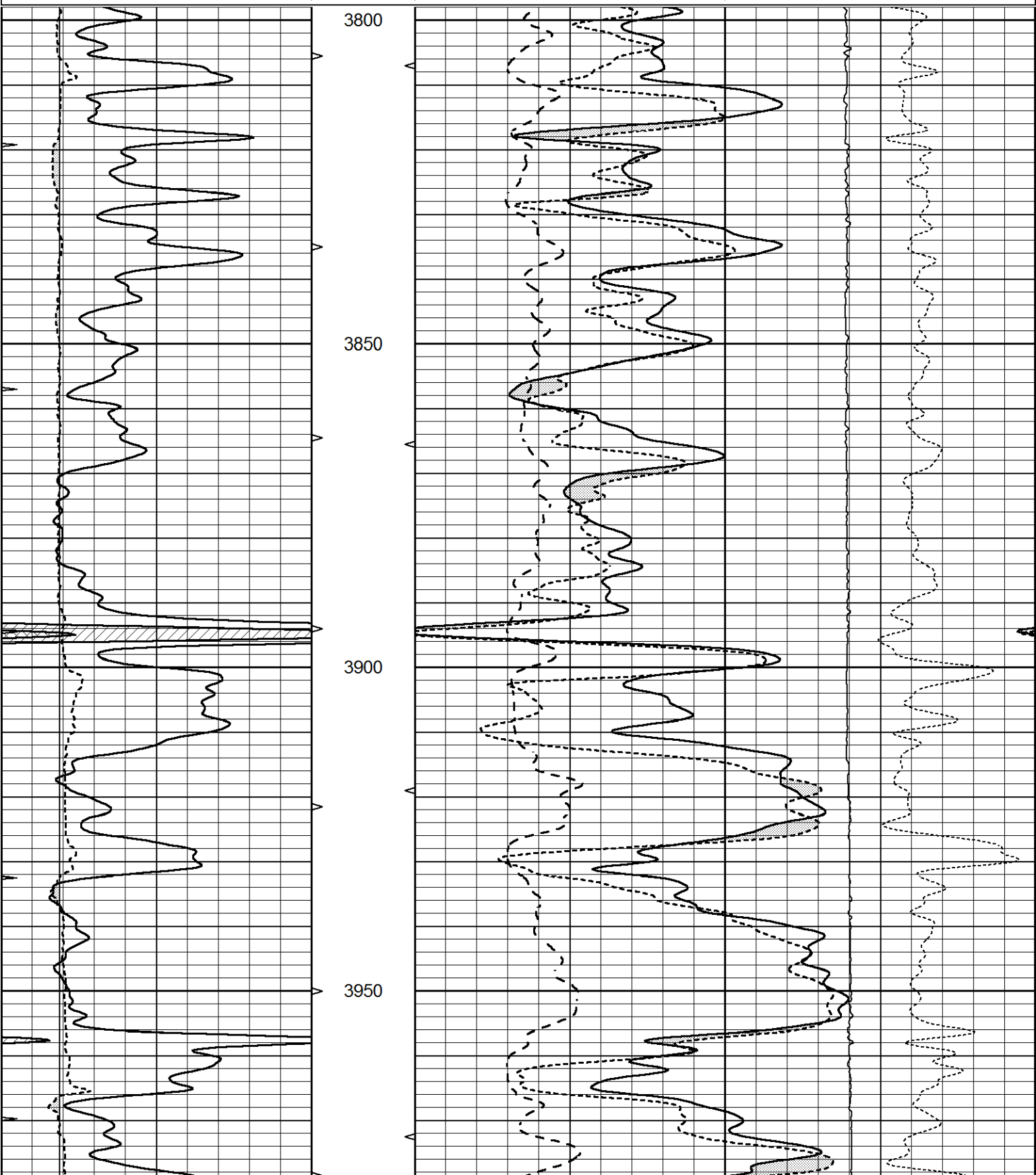
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
UTICA, KS., 3W. ON HWY 4 TO "CASTLE ROCK RD.", N. TO CURVE, WEST, BACK NORTH @
CURVE 1/2 MILE E. INTO

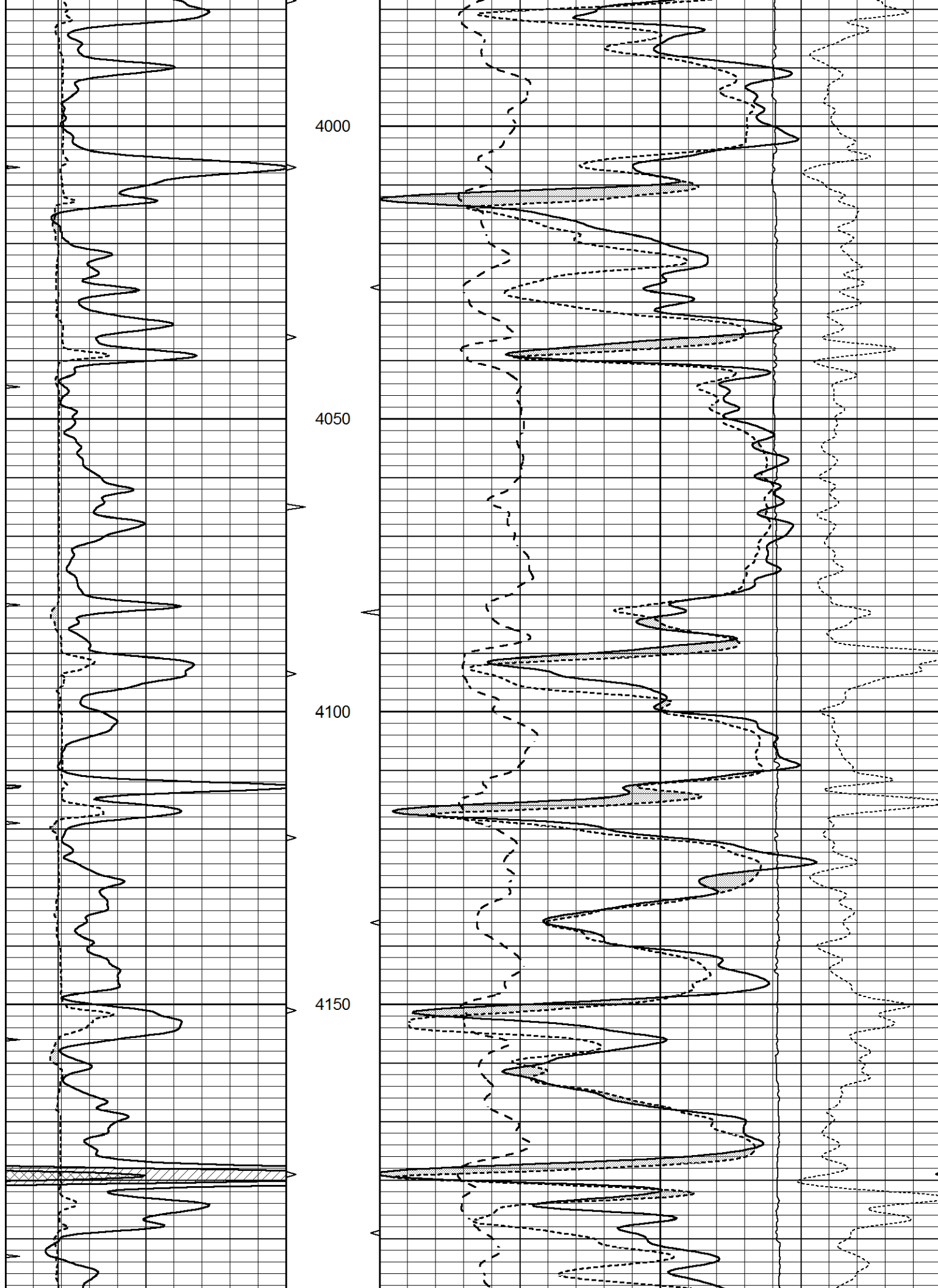


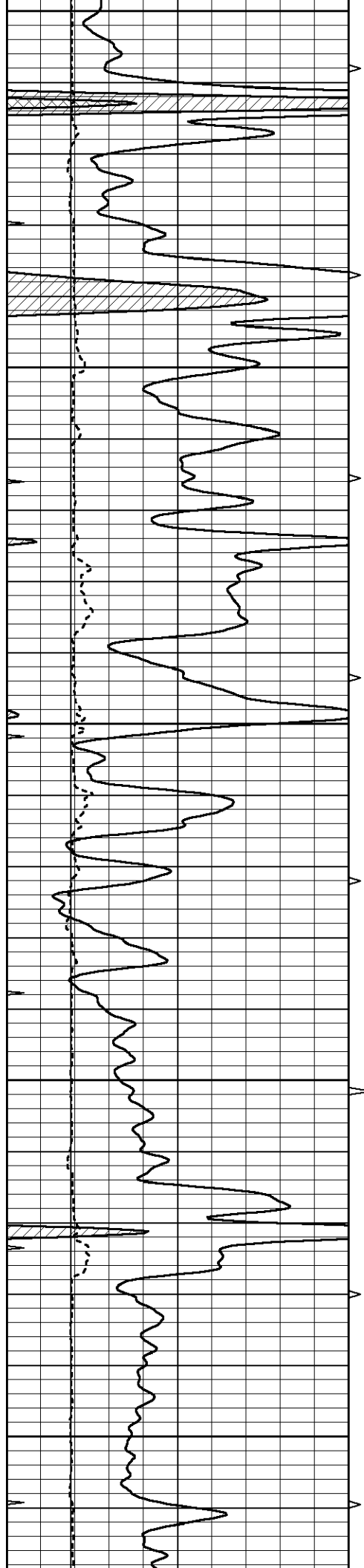
MAIN SECTION

Database File	5933pe.db
Dataset Pathname	pass3.1M
Presentation Format	ldt_neu
Dataset Creation	Sun Jan 09 20:01:12 2022
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
0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10			0	LTEN (lb)	5000	







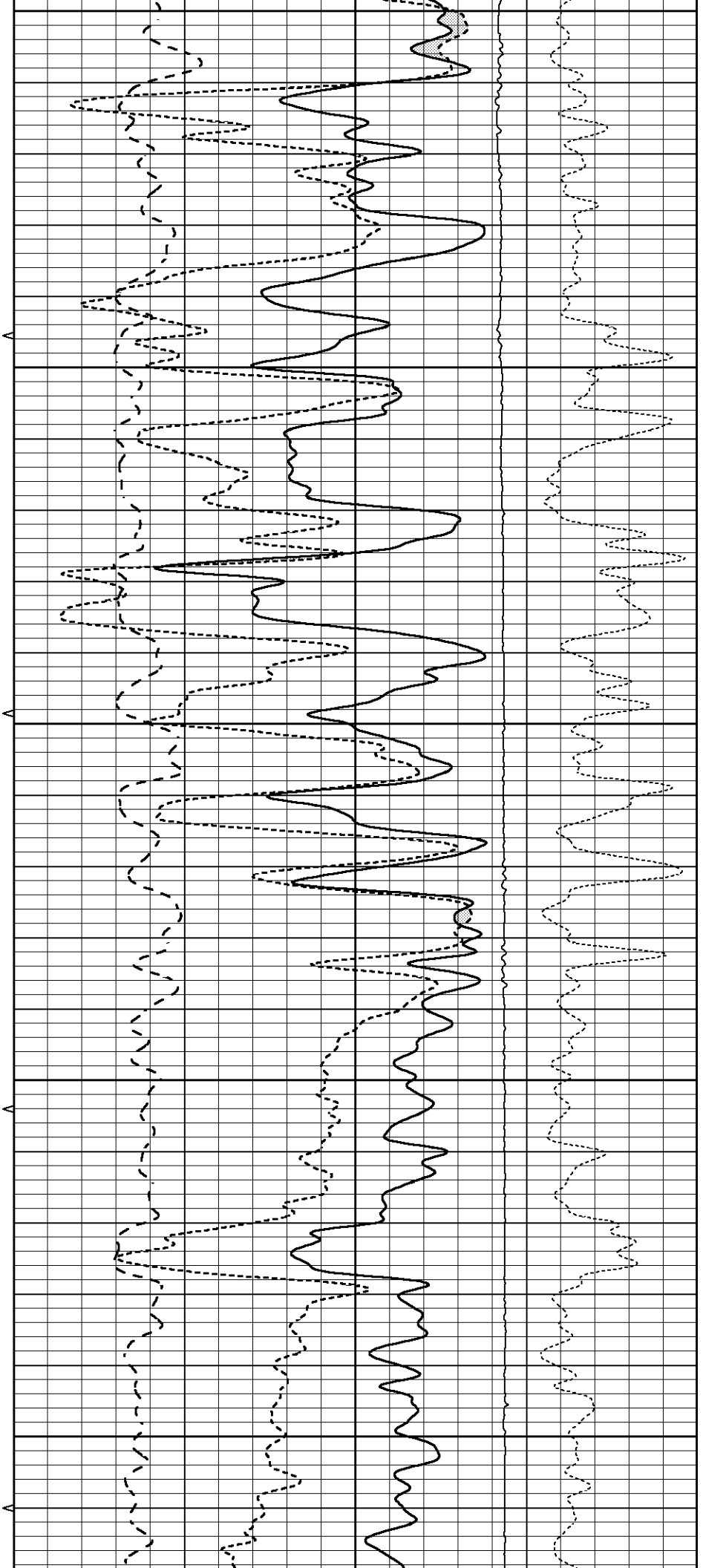
4200

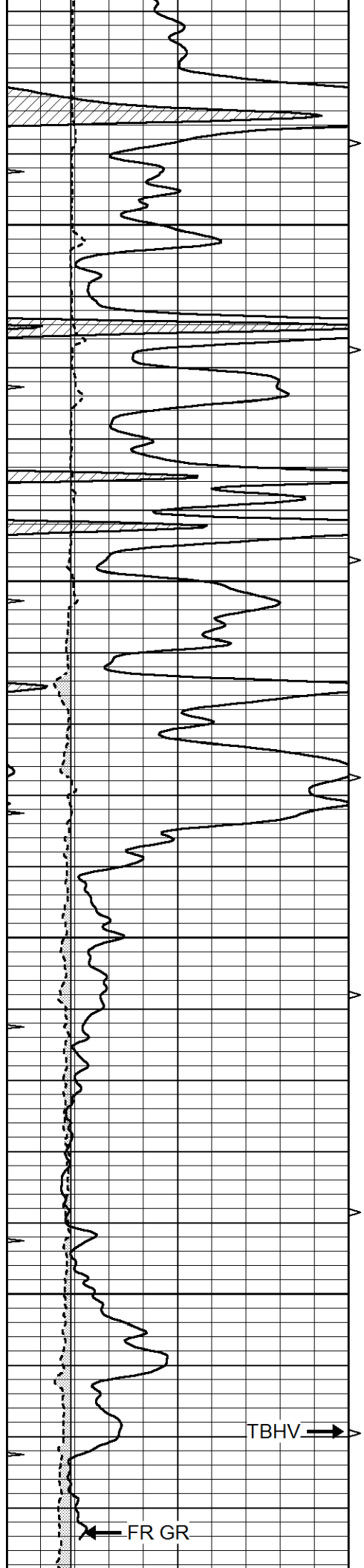
4250

4300

4350

4400





4450

4500

4550

4600

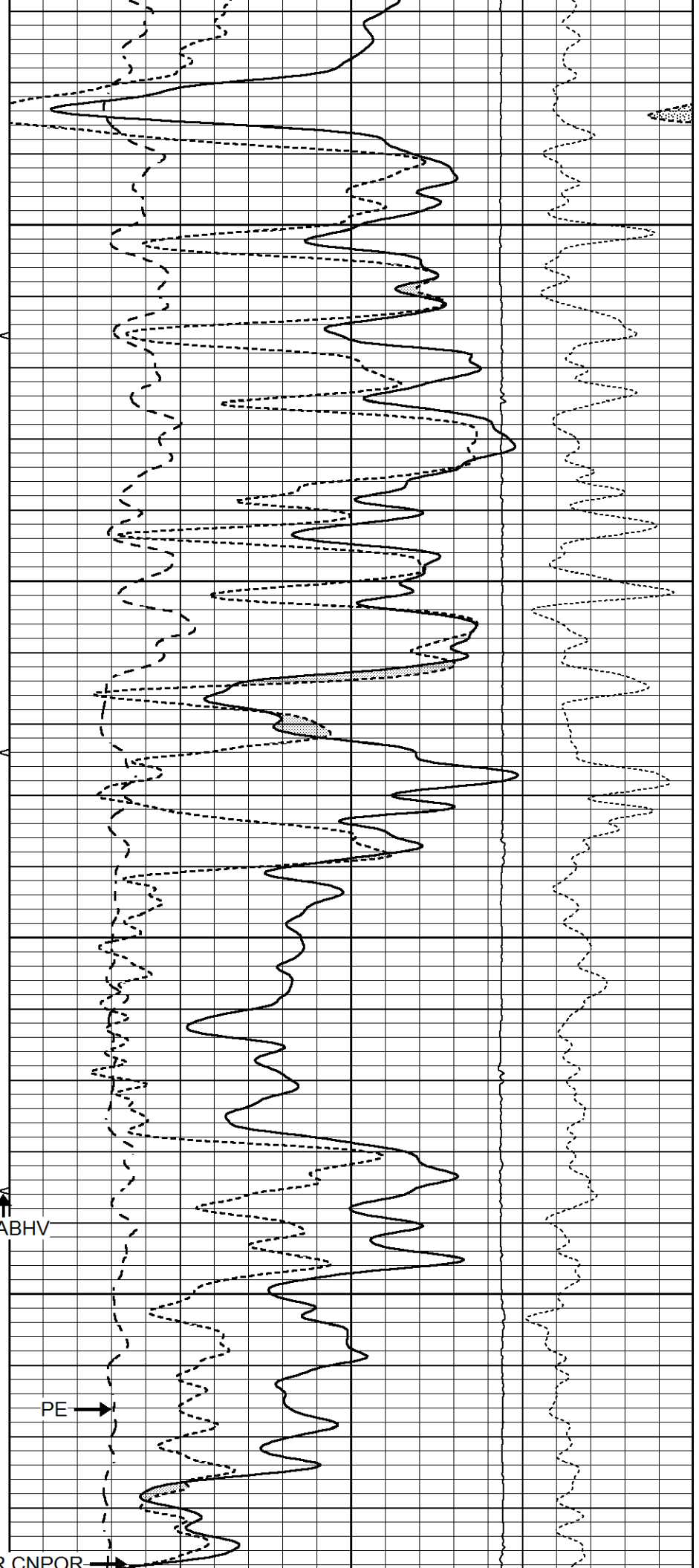
TBHV →

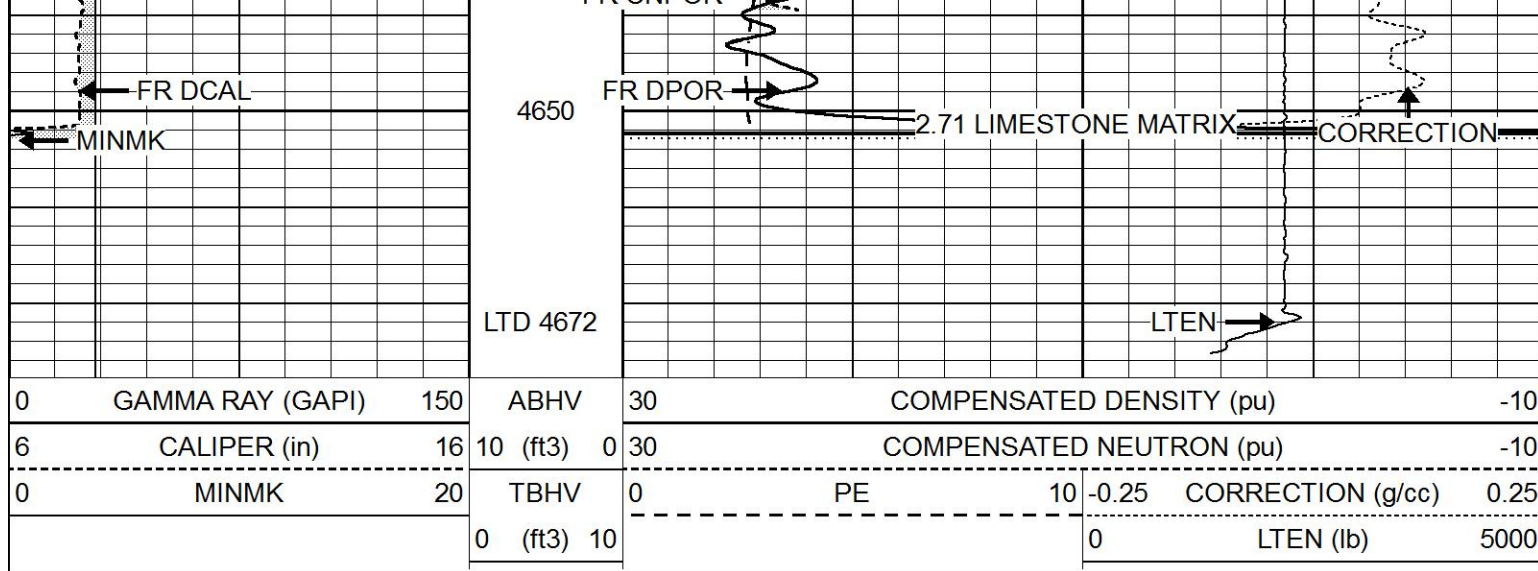
← FR GR

5.5" ABHV

PE →

FR CNPOR →

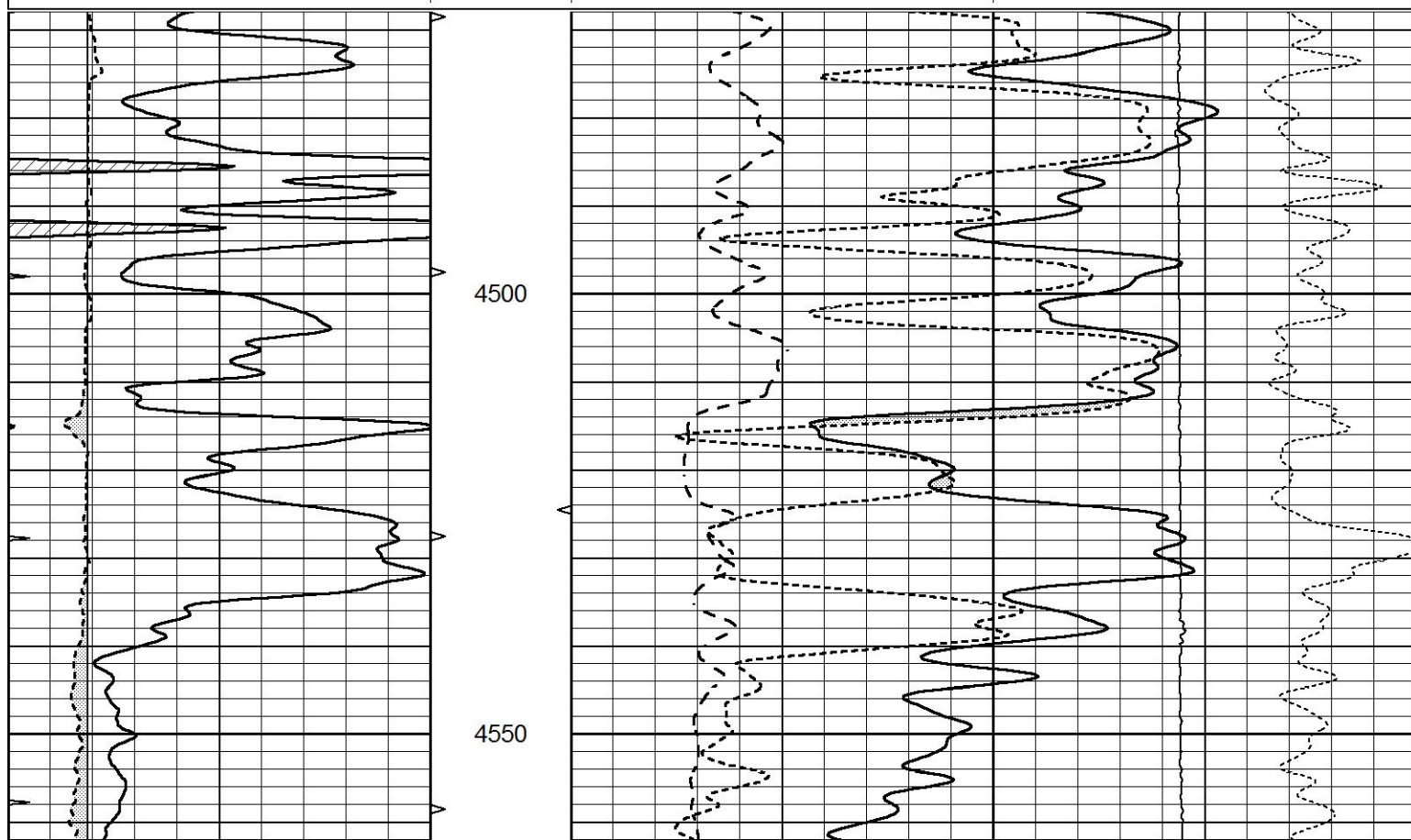


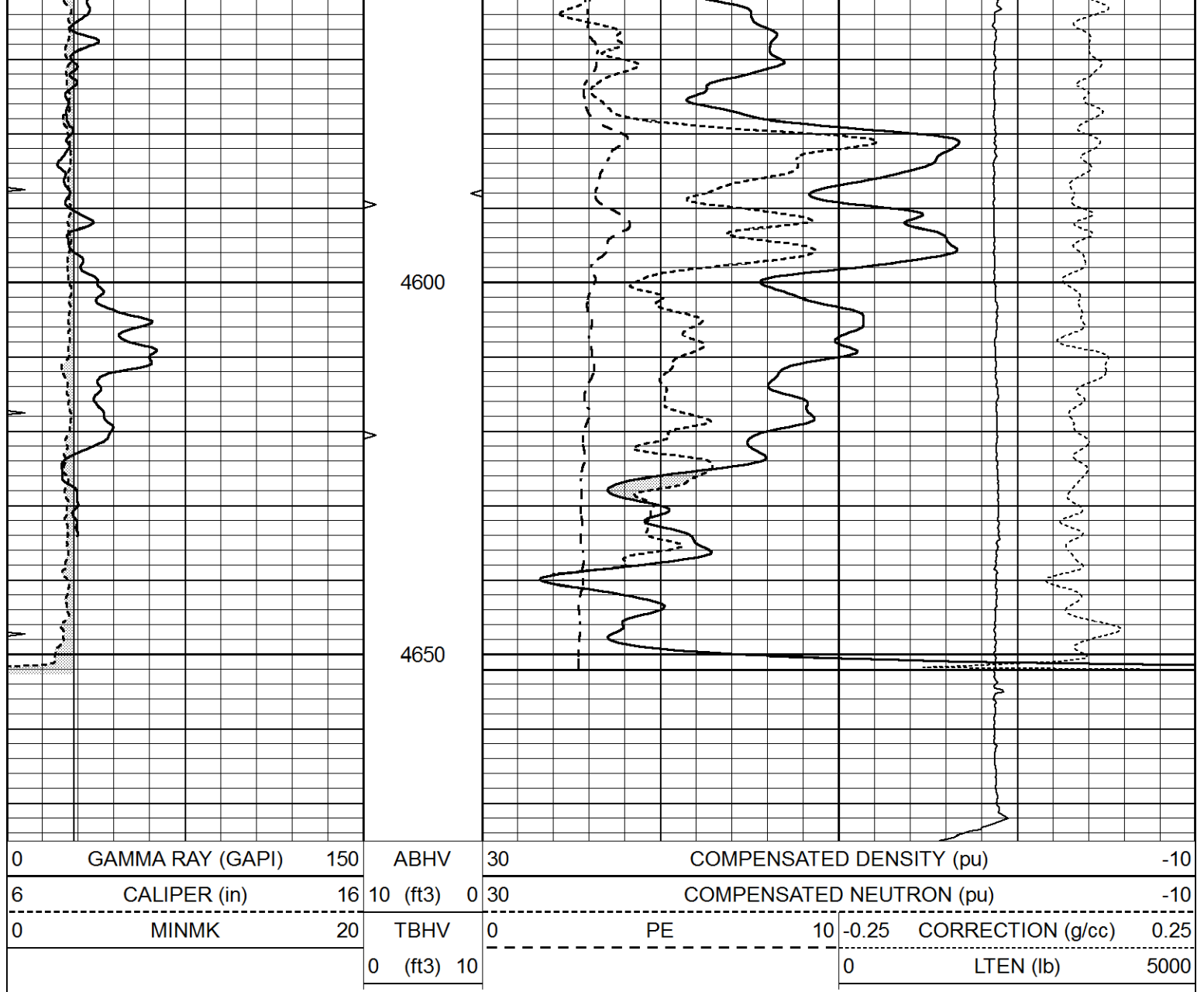


REPEAT SECTION

Database File 5933pe.db
 Dataset Pathname pass2.1R
 Presentation Format ldt_neu
 Dataset Creation Sun Jan 09 20:11:04 2022
 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
0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3) 10				0	LTEN (lb)	5000





Calibration Report								
Database File	5933pe.db							
Dataset Pathname	pass3.1M							
Dataset Creation	Sun Jan 09 20:01:12 2022							
Dual Induction Calibration Report								
Serial-Model:			DIL4-GEAR					
Surface Cal Performed:			Sun Jan 09 19:15:20 2022					
Downhole Cal Performed:			Tue Sep 25 17:01:29 2001					
After Survey Verification Performed:			Sat Jun 11 16:07:12 2005					
Surface Calibration								
Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.008	0.666	V	0.000	400.000	mmho/m	580.000	-5.000
Medium	-0.003	0.769	V	0.000	462.500	mmho/m	560.000	-5.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.013	0.651	V	0.000	400.000	mmho/m	627.541	-8.365
Medium	0.020	0.754	V	0.000	462.500	mmho/m	630.311	-12.549

Downhole Calibration								
Readings			References			Results		
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	2.525	0.026	V	500.000	2.000	Ohm-m	250.000	-5.000
After Survey Verification								
Readings			Targets			Results		
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000
Litho Density Calibration Report Serial: 004 Model: PRB								
Master Calibration			Performed Tue May 18 11:02:48 2021					
	Background	Magnesium		Aluminum		Aluminum+Fe		
Window 1	1187.1	10004.0		3142.5		2810.8		cps
Window 2	1084.9	8556.6		2749.3		2502.4		cps
Window 3	923.1	5129.8		1819.8		1719.3		cps
Window 4	263.5	263.6		259.7		262.8		cps
Long Space	0.0	7471.7		1664.4		1417.5		cps
Short Space	1.5	984.9		645.6		561.2		cps
Rho		1.7100		2.5900		0.0000		g/cc
Pe		2.0000		2.7500		5.7900		
Rib Angle	: 44.3	Rib Slope	: 0.976	Density/Spine Ratio			: 0.564	
Spine Angle	: 74.3	Spine Slope	: 3.555	Spine Intercept			: -15.6	
Before Survey Verification			Performed Wed Dec 31 18:00:00 1969					
Window 1	0.0	0.0		0.0		0.0		cps
Window 2	0.0	0.0		0.0		0.0		cps
Window 3	0.0	0.0		0.0		0.0		cps
Window 4	0.0	0.0		0.0		0.0		cps
Long Space	0.0	0.0		0.0		0.0		cps
Short Space	0.0	0.0		0.0		0.0		cps
Measured Rho		0.0000		0.0000		0.0000		g/cc
Measured Correction		0.0000		0.0000		0.0000		g/cc
Measured Pe				0.0000		0.0000		
After Survey Verification			Performed Wed Dec 31 18:00:00 1969					
Window 1	0.0	0.0		0.0		0.0		cps
Window 2	0.0	0.0		0.0		0.0		cps
Window 3	0.0	0.0		0.0		0.0		cps
Window 4	0.0	0.0		0.0		0.0		cps
Long Space	0.0	0.0		0.0		0.0		cps
Short Space	0.0	0.0		0.0		0.0		cps
Measured Rho		0.0000		0.0000		0.0000		g/cc
Measured Correction		0.0000		0.0000		0.0000		g/cc
Measured Pe				0.0000		0.0000		

Measured Pe	0.0000	0.0000
Compensated Neutron Calibration Report		
	Serial Number: Tool Model:	070808PMC NABORS
PRE-SURVEY VERIFICATION		
Detector	Readings	Measured Target
Short Space	cps	
Long Space	cps	pu pu
POST-SURVEY VERIFICATION		
Detector	Readings	Measured Target
Short Space	cps	
Long Space	cps	pu pu
Gamma Ray Calibration Report		
Serial Number: Tool Model: Performed:	070558 OPEN_GR Wed Jan 05 15:49:21 2022	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps