



**COMPENSATED
DENSITY/NEUTRON
PE LOG**

Company GRAND MESA OPERATING
Well PRETTY WOMAN #1-20
Field BUTTERFIELD - OVERLAND NORTHEAS
County GOVE
State KANSAS

Company GRAND MESA OPERATING
Well PRETTY WOMAN #1-20
Field BUTTERFIELD - OVERLAND NORTHEAST
County GOVE State KANSAS

Location: API #: 15-063-22422-0000
1450' FNL & 529' FEL
NW - NE - SE - SE
SEC 20 TWP 14S RGE 20W
Permanent Datum GROUND LEVEL Elevation 2818
Log Measured From KELLY BUSHING 11' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
DIL/MEL
SONIC
Elevation
K.B. 2829
D.F. 2827
G.L. 2818

Date	12/3/22
Run Number	ONE
Depth Driller	4571
Depth Logger	4572
Bottom Logged Interval	4548
Top Log Interval	3800
Casing Driller	10 3/4"@246'
Casing Logger	246
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/60
pH / Fluid Loss	10.5/6.4
Source of Sample	FLOWLINE
Rm @ Meas. Temp	2.00@65F
Rmf @ Meas. Temp	1.50@65F
Rmc @ Meas. Temp	2.40@65F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	1.07@120F
Time Circulation Stopped	2.5 HOURS
Time Logger on Bottom	11:00 P.M.
Maximum Recorded Temperature	120F
Equipment Number	8916
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	GARET DINKEL

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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

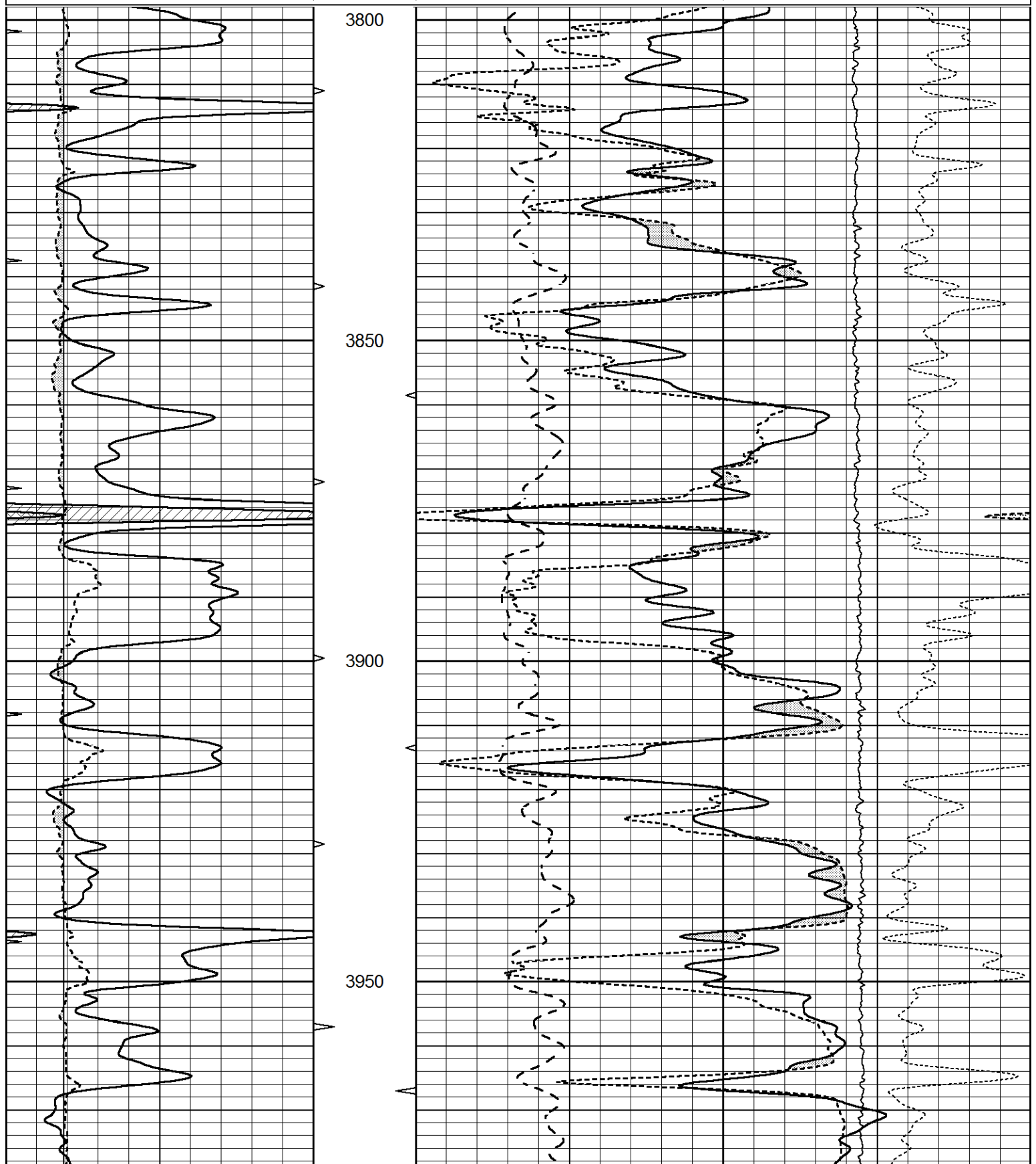
THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395
DIRECTIONS:
GOVE, KS., 11S. ON HWY 23 TO "RD. I", (COBERLY SIGN) 8 1/4W., 1N. INTO

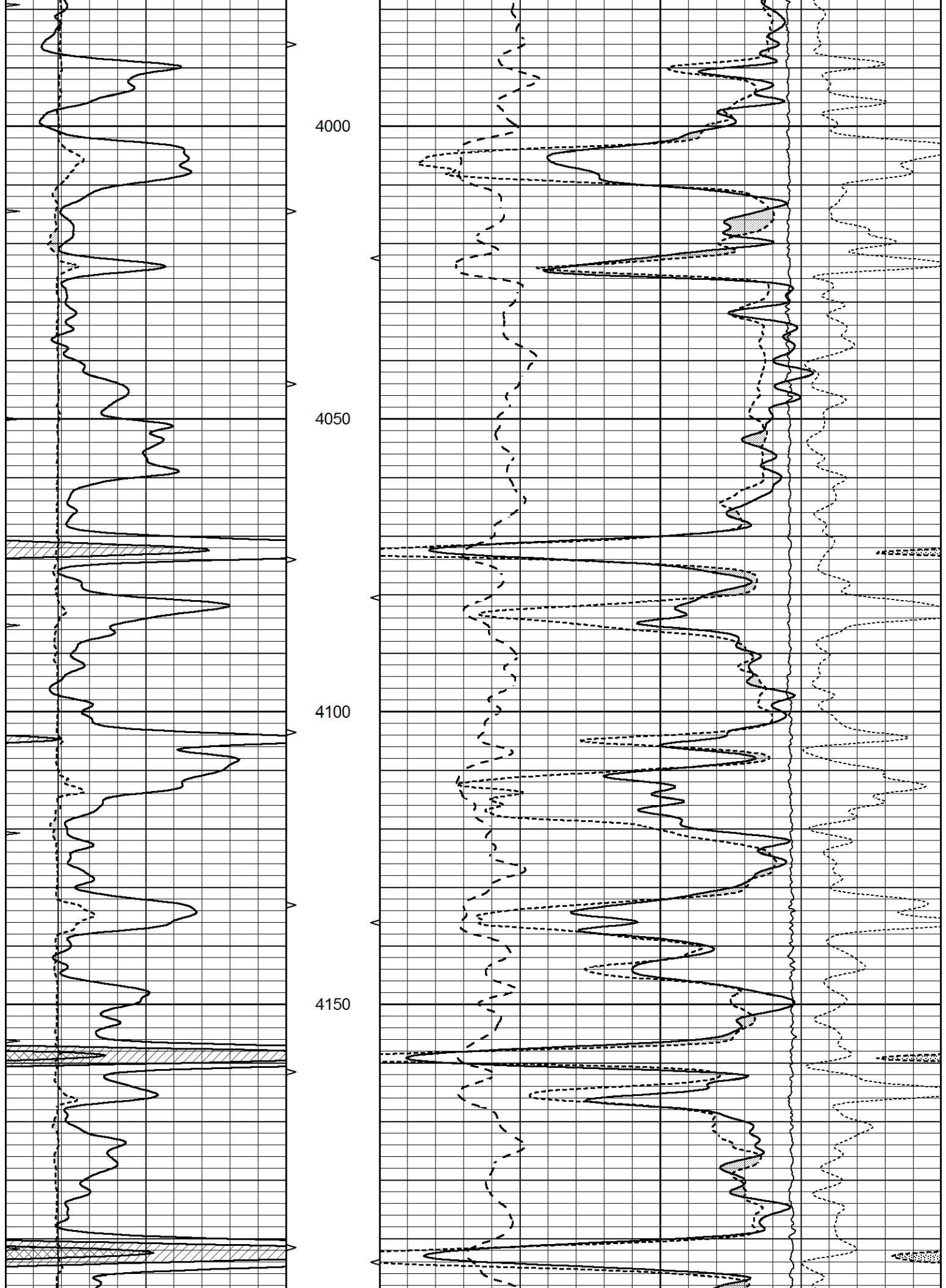


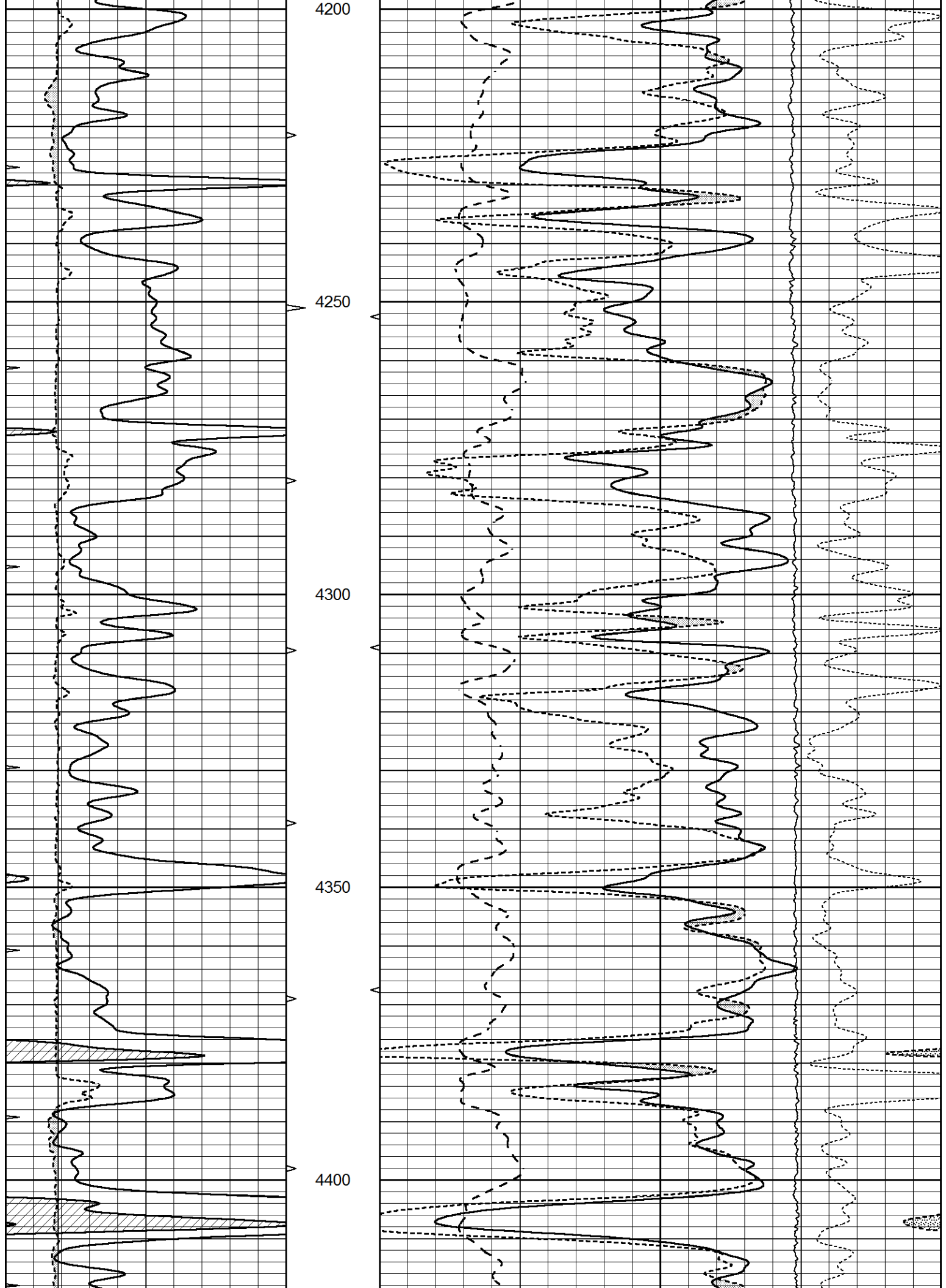
MAIN SECTION

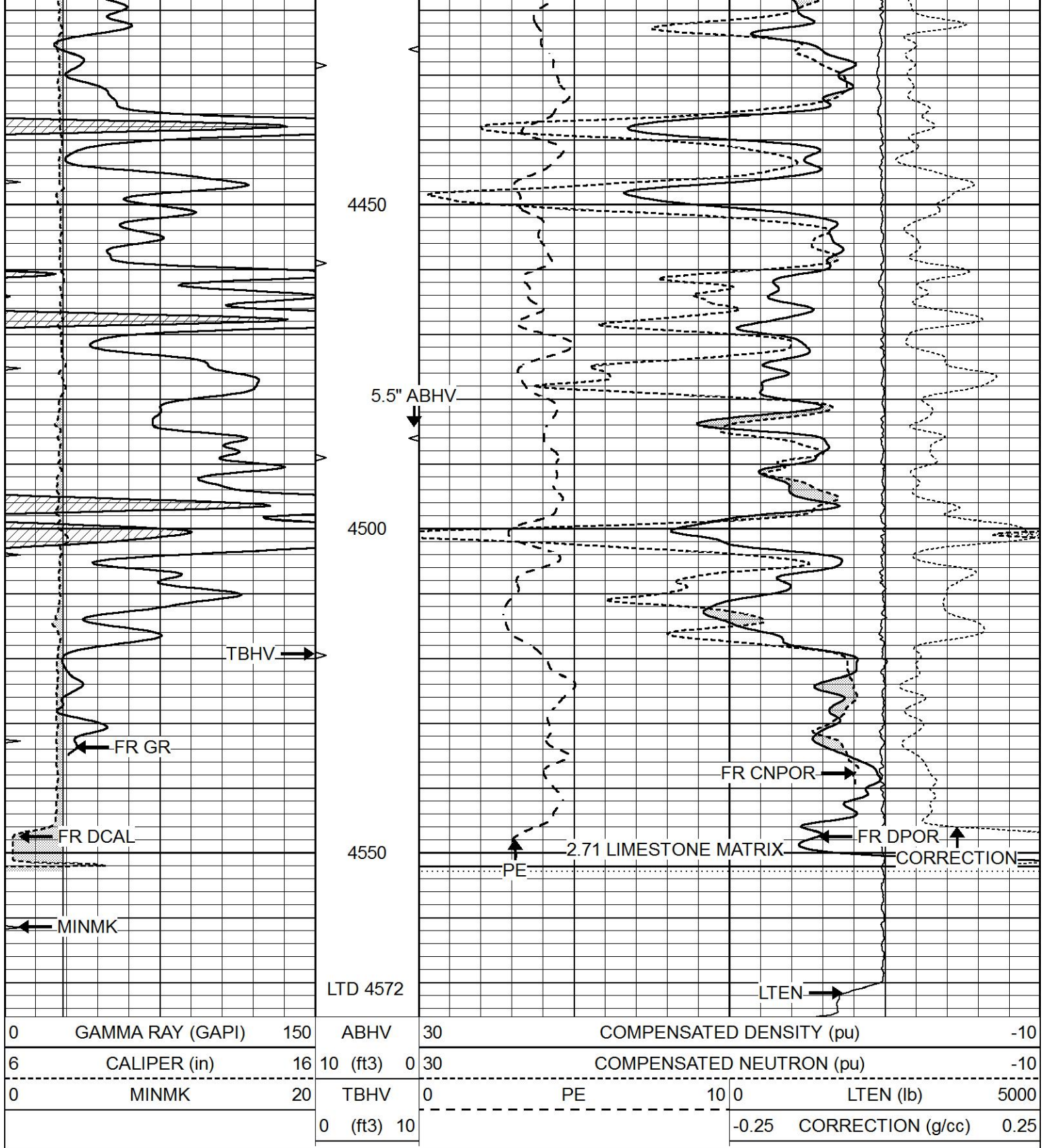
Database File 6809pe.db
 Dataset Pathname pass3.1M
 Presentation Format ldt_neu
 Dataset Creation Sun Dec 04 00:56:06 2022
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10		
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)		-10		
0	MINMK	20	TBHV	0	PE	10	LTEN (lb)	5000	
			0 (ft3)	10			-0.25	CORRECTION (g/cc)	0.25





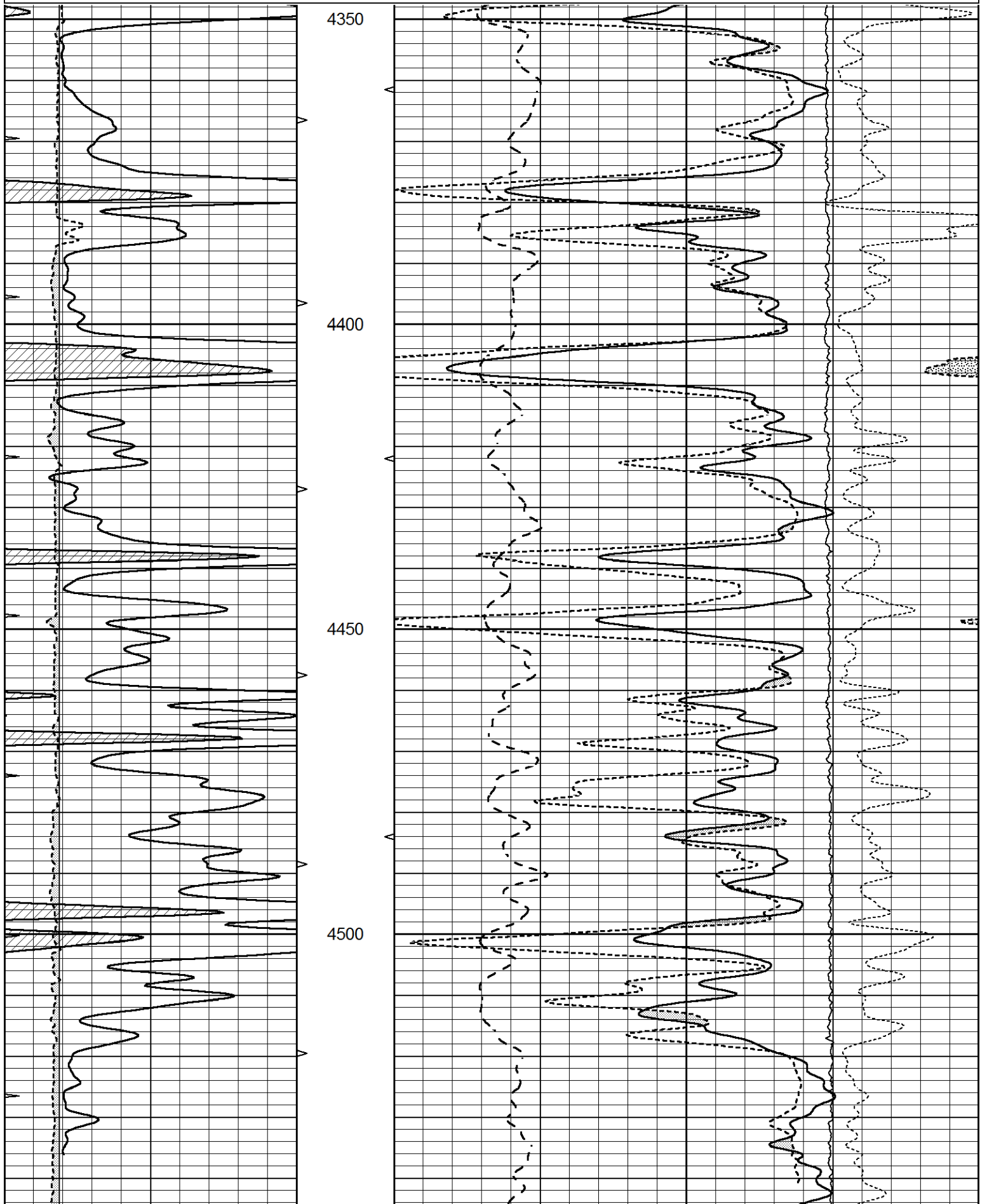





REPEAT SECTION

Database File 6809pe.db
 Dataset Pathname pass2.1R
 Presentation Format ldt_neu
 Dataset Creation Sun Dec 04 00:44:15 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	LTEN (lb) 5000
			0 (ft3) 10			-0.25	CORRECTION (g/cc) 0.25



			4550					
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	LTEN (lb)	5000
			0 (ft3) 10				-0.25	CORRECTION (g/cc) 0.25

Calibration Report

Database File 6809pe.db
 Dataset Pathname pass3.1M
 Dataset Creation Sun Dec 04 00:56:06 2022

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Thu Nov 17 16:51:10 2022
 Downhole Cal Performed: Mon Sep 10 14:28:38 2018
 After Survey Verification Performed: Mon Sep 10 14:28:40 2018

Surface Calibration

Loop:	Readings				References			Results	
	Air	Loop			Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	8.000	
Medium	0.029	0.796	V	0.000	464.000	mmho/m	620.000	-4.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619	
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739	

Downhole Calibration

	Readings				References			Results	
	Zero	Cal			Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000	
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000	
LL3		7.500	V		1500.000	Ohm-m			
		0.000	V		20.000	Ohm-m			
		-7.200	V		3800.000	mmho-m			

After Survey Verification

	Readings				Targets			Results	
	Zero	Cal			Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000	
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000	
LL3		1.000	Ohm-m		1.000	Ohm-m			
		0.000	Ohm-m		0.000	Ohm-m			
		1.000	mmho-m		1.000	mmho-m			

	Background	Magnesium	Aluminum	Aluminum+Fe	
Window 1	1153.2	7232.1	2536.8	2279.5	cps
Window 2	1055.6	6225.5	2222.3	2030.5	cps
Window 3	902.5	3849.3	1546.4	1462.0	cps
Window 4	254.4	258.2	253.1	253.9	cps
Long Space	0.0	5169.9	1166.7	974.9	cps
Short Space	4.7	1383.0	950.5	792.1	cps
Rho		1.7100	2.5900	0.0000	g/cc
Pe		2.0000	2.7500	5.7900	
Rib Angle	: 45.9	Rib Slope	: 1.031	Density/Spine Ratio	: 0.573
Spine Angle	: 75.9	Spine Slope	: 3.970	Spine Intercept	: -20.2

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	

Compensated Neutron Calibration Report

Serial Number: 6I
Tool Model: G

CALIBRATION

Detector	Readings	Target	Normalization
Short Space	1.00 cps	1.00 cps	1.0000
Long Space	1.00 cps	1.00 cps	1.0000

PRE-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space	cps		
	Long Space	cps	pu	pu
2)	Short Space	cps		
	Long Space	cps	pu	

Long Space

cps

pu

3) Short Space
Long Space

cps
cps

pu

POST-SURVEY VERIFICATION

	Detector	Readings	Measured	Target
1)	Short Space Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu

Gamma Ray Calibration Report

Serial Number: GR6
 Tool Model: OPEN
 Performed: Tue Nov 08 13:43:57 2022

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps
 Calibrator Reading: 276.0 cps

Sensitivity: 0.8500 GAPI/cps