



**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company SHAKESPEARE OIL COMPANY, INC.
Well OTTLEY #4-10
Field CHALK BUTTES
County LOGAN
State KANSAS

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Well OTTLEY #4-10
Field CHALK BUTTES
County LOGAN State KANSAS

Location: 513' FSL & 1612' FEL
NE - SE - SW - SE
API #: 15-109-21667-0000
SEC 10 TWP 14S RGE 32W
Permanent Datum GROUND LEVEL Elevation 2768
Log Measured From KELLY BUSHING 9' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services DILMEL SONIC
Elevation K.B. 2777
D.F. 2775
G.L. 2768

Date	6/1/23
Run Number	ONE
Depth Driller	5030
Depth Logger	5030
Bottom Logged Interval	5006
Top Log Interval	3500
Casing Driller	8 5/8"@264'
Casing Logger	264
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/63
pH / Fluid Loss	10.0/7.2
Source of Sample	FLOWLINE
Rm @ Meas. Temp	1.00@80F
Rmf @ Meas. Temp	.750@80F
Rmc @ Meas. Temp	1.20@80F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.640@125F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	6:30 A.M.
Maximum Recorded Temperature	125F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	KENT MATSON

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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.

15-109-21667-0000 Comments

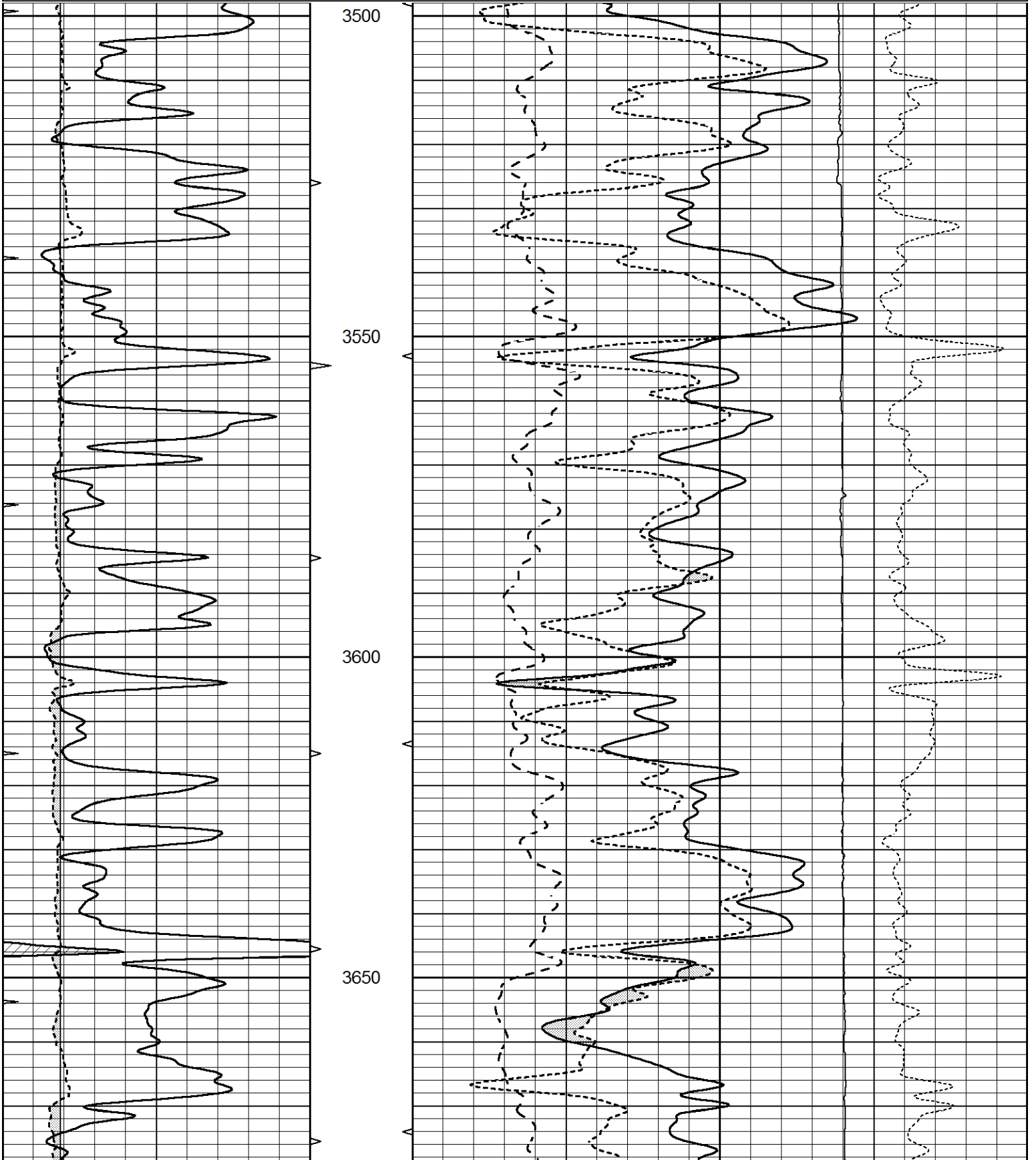
THANK YOU FOR USING ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
OAKLEY, KS., 19S. ON HWY 83, 1/2 W. INTO

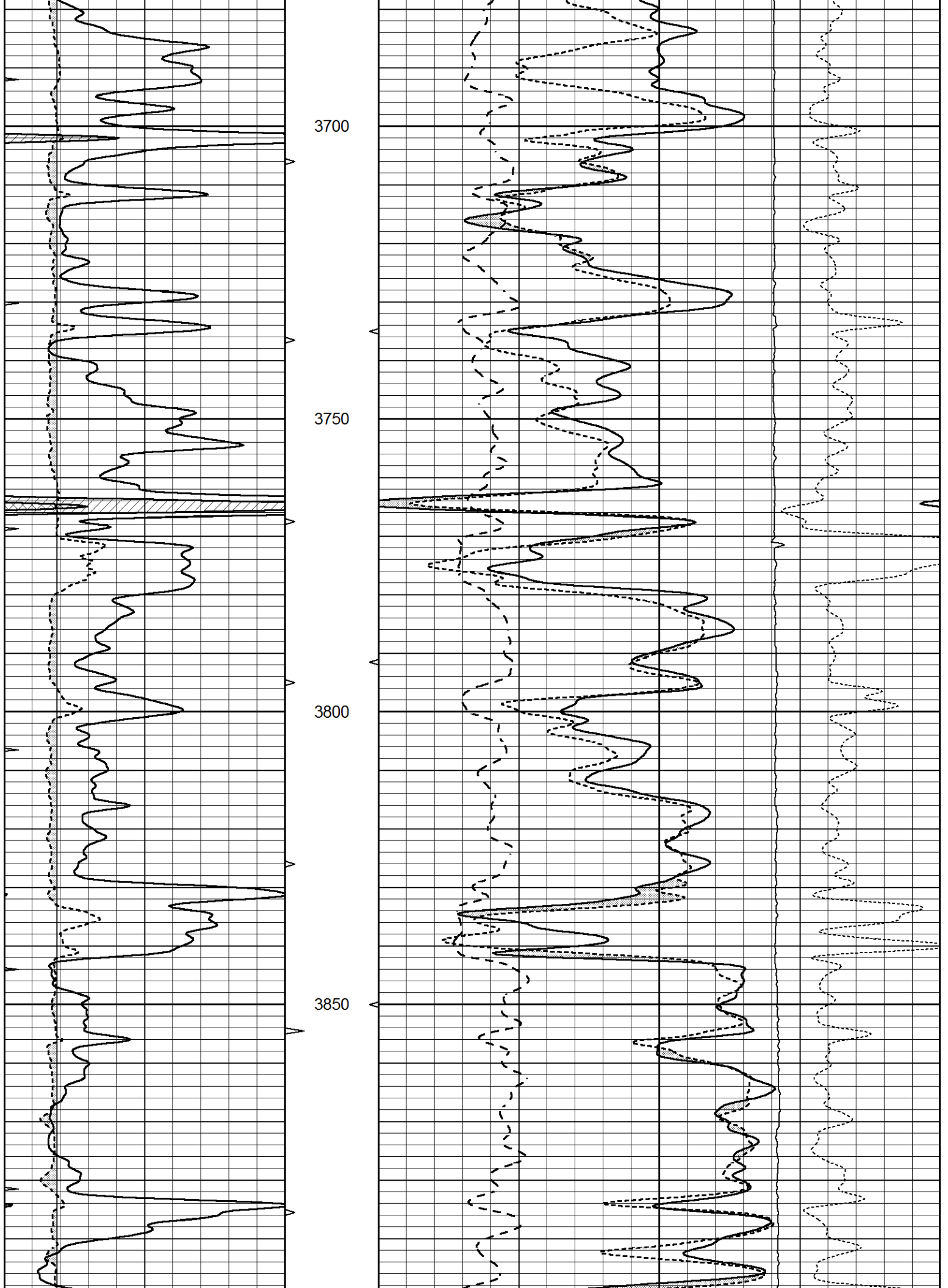


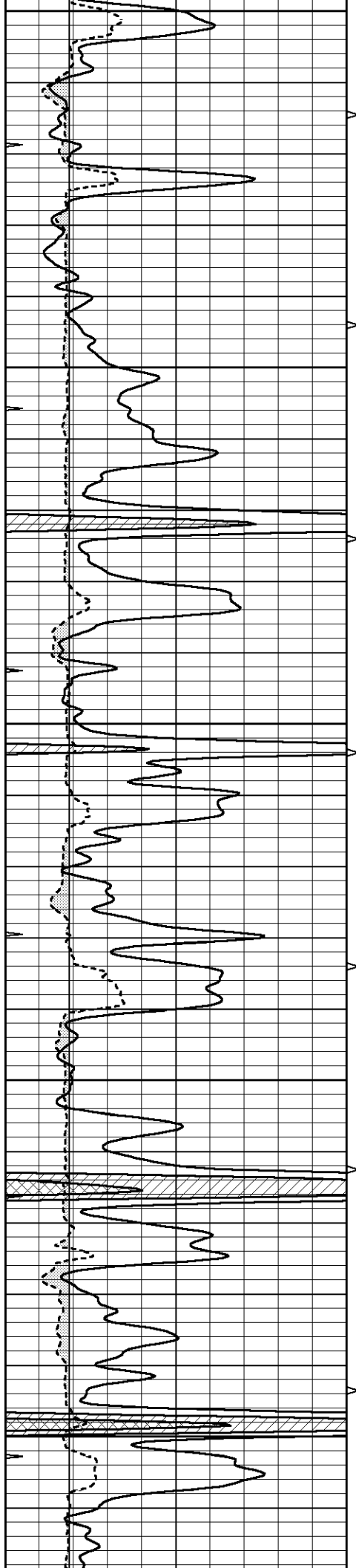
MAIN SECTION

Database File 7891pe.db
 Dataset Pathname pass3.1M
 Presentation Format _ldt_neu
 Dataset Creation Thu Jun 01 08:39:50 2023
 Charted by Depth in Feet scaled 1:240

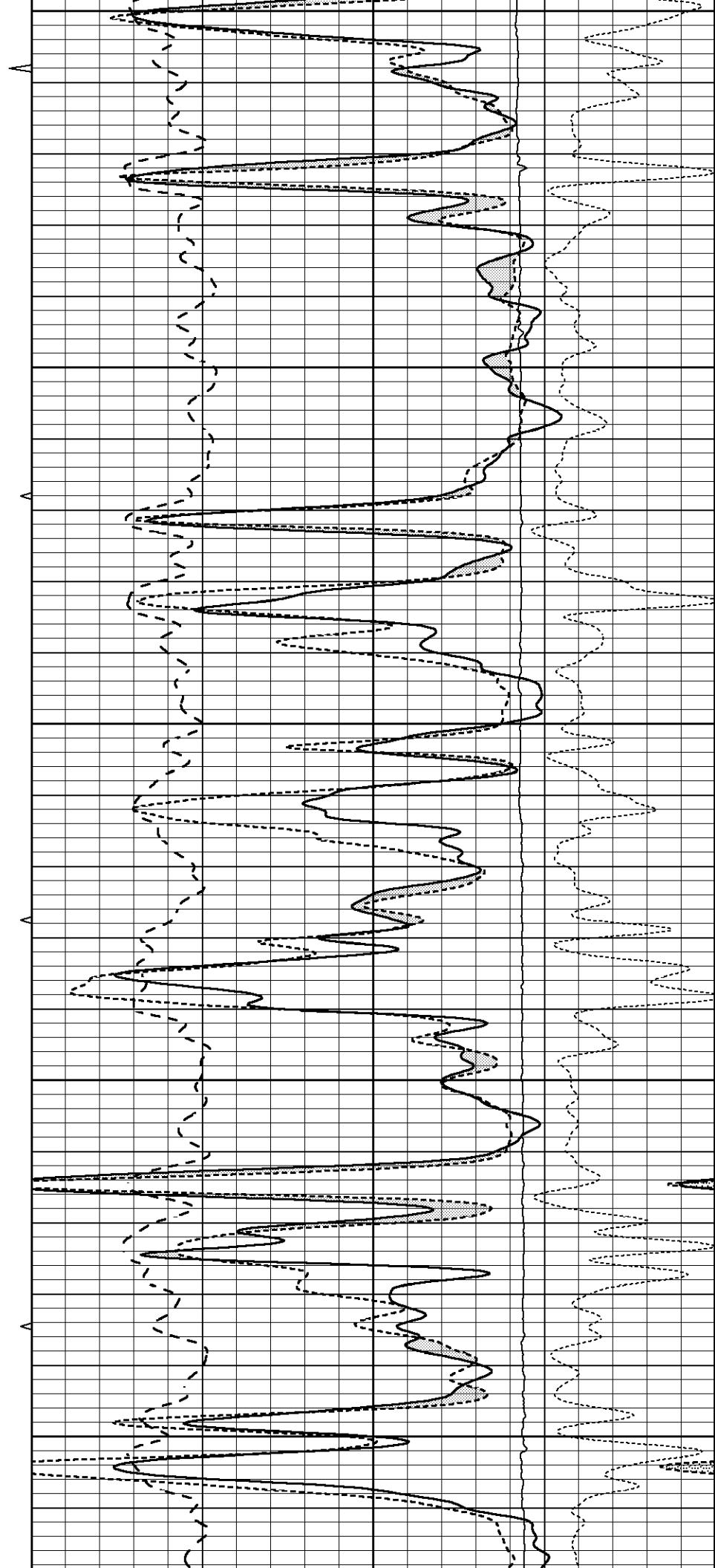
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)				-10	
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)				-10
0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10			0	LTEN (lb)	5000	

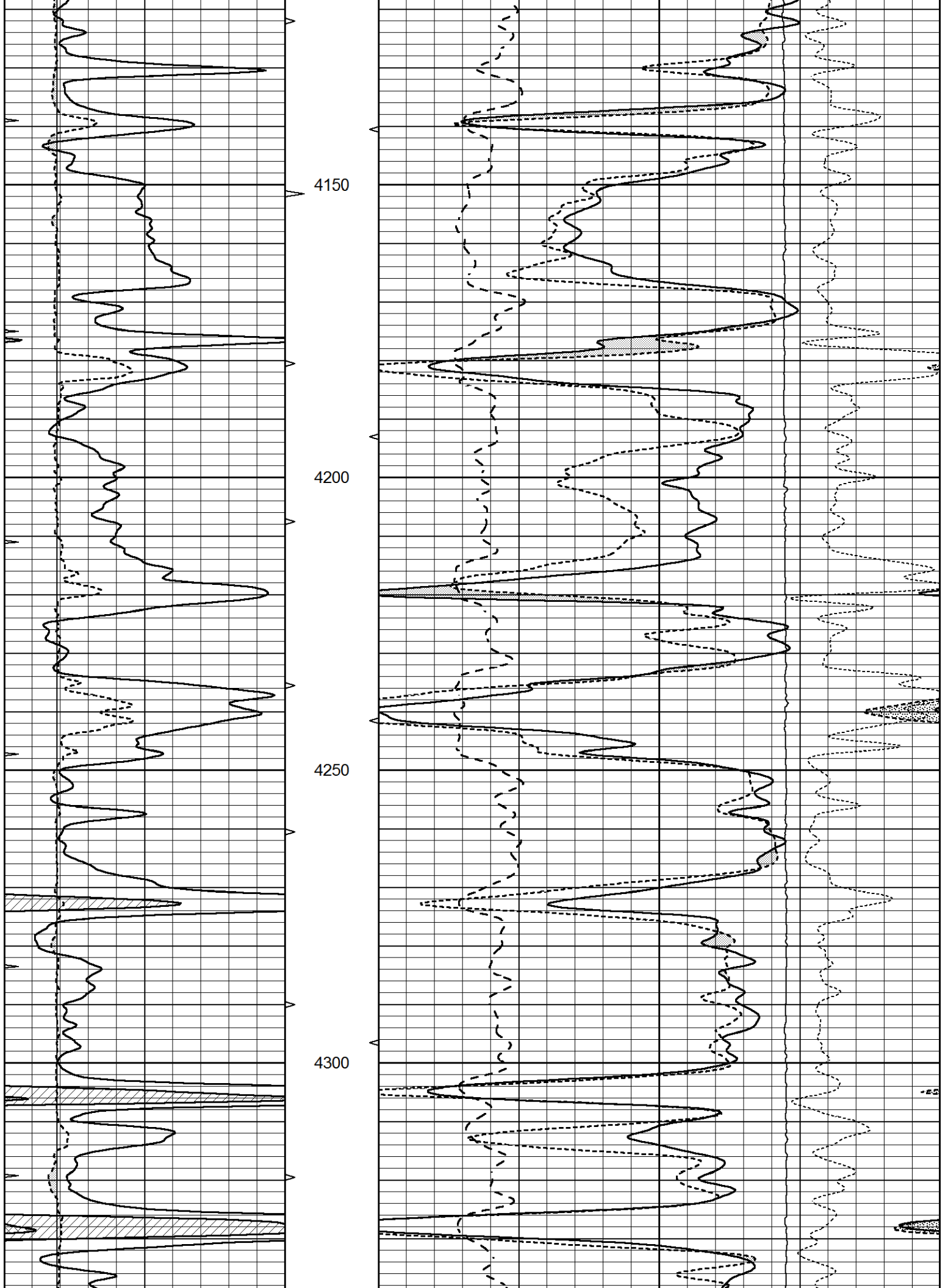


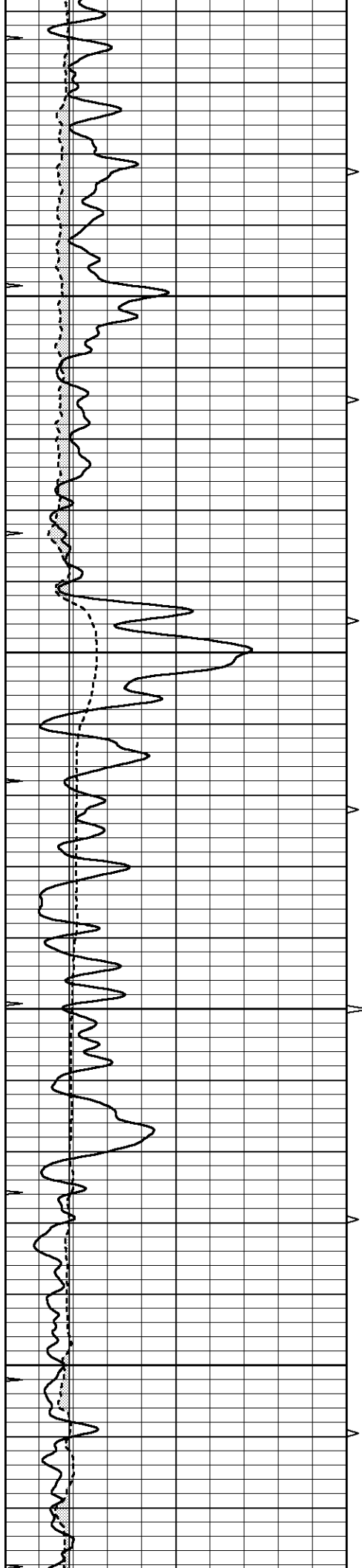




3900
3950
4000
4050
4100





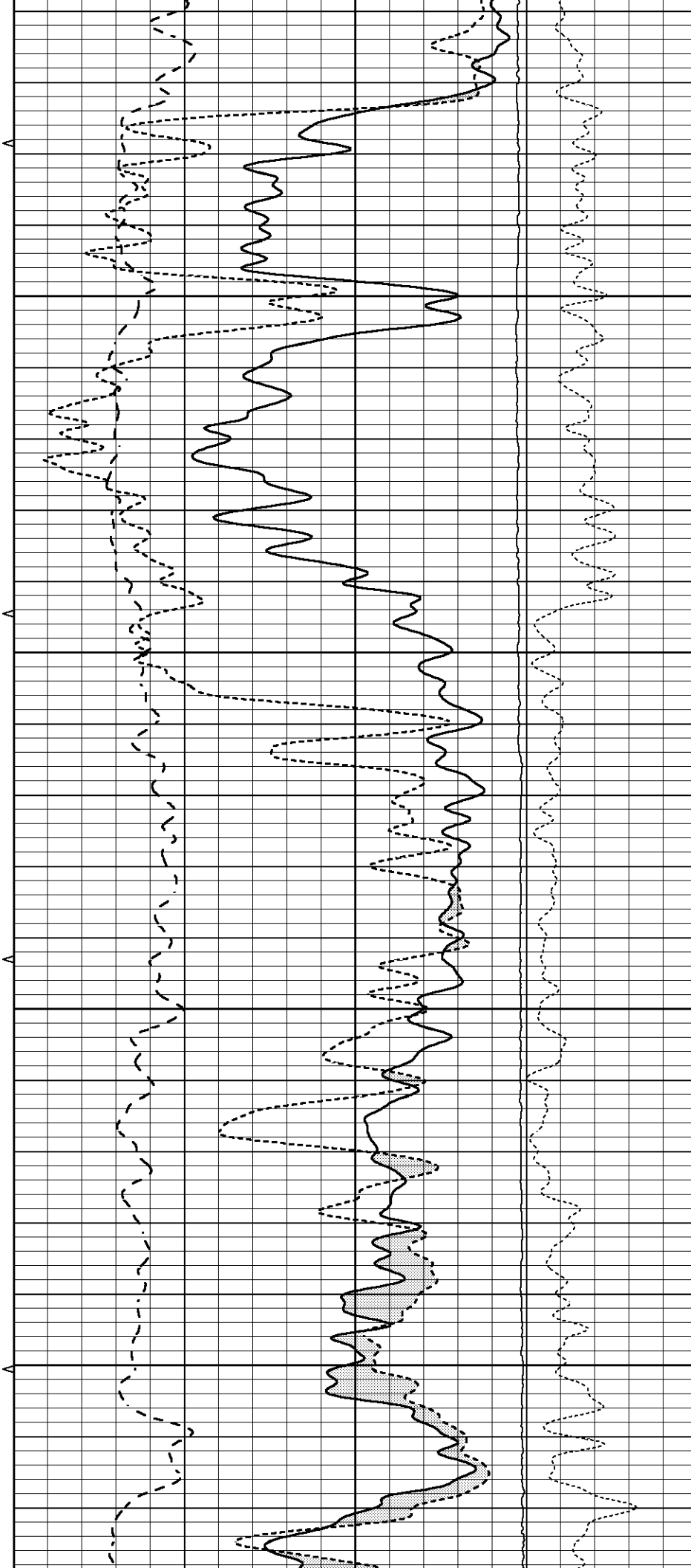
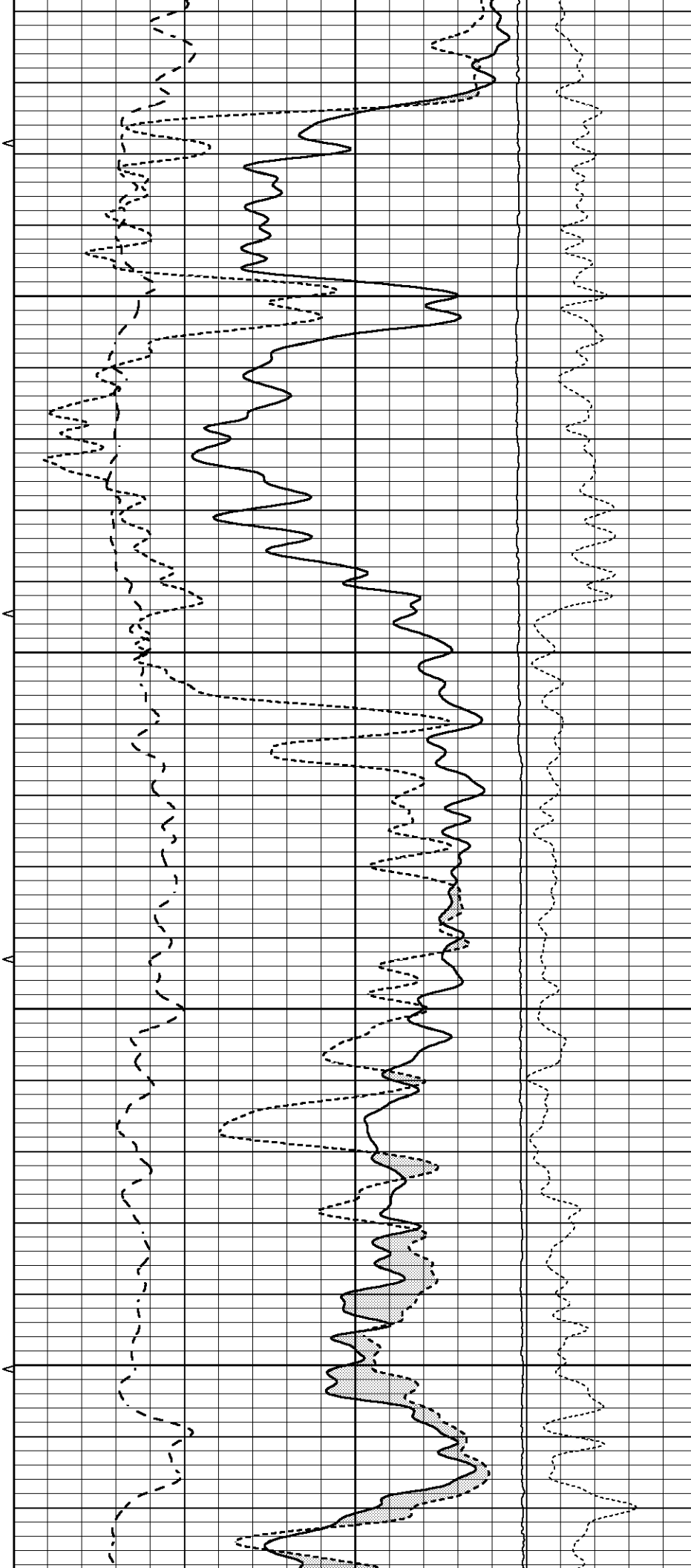


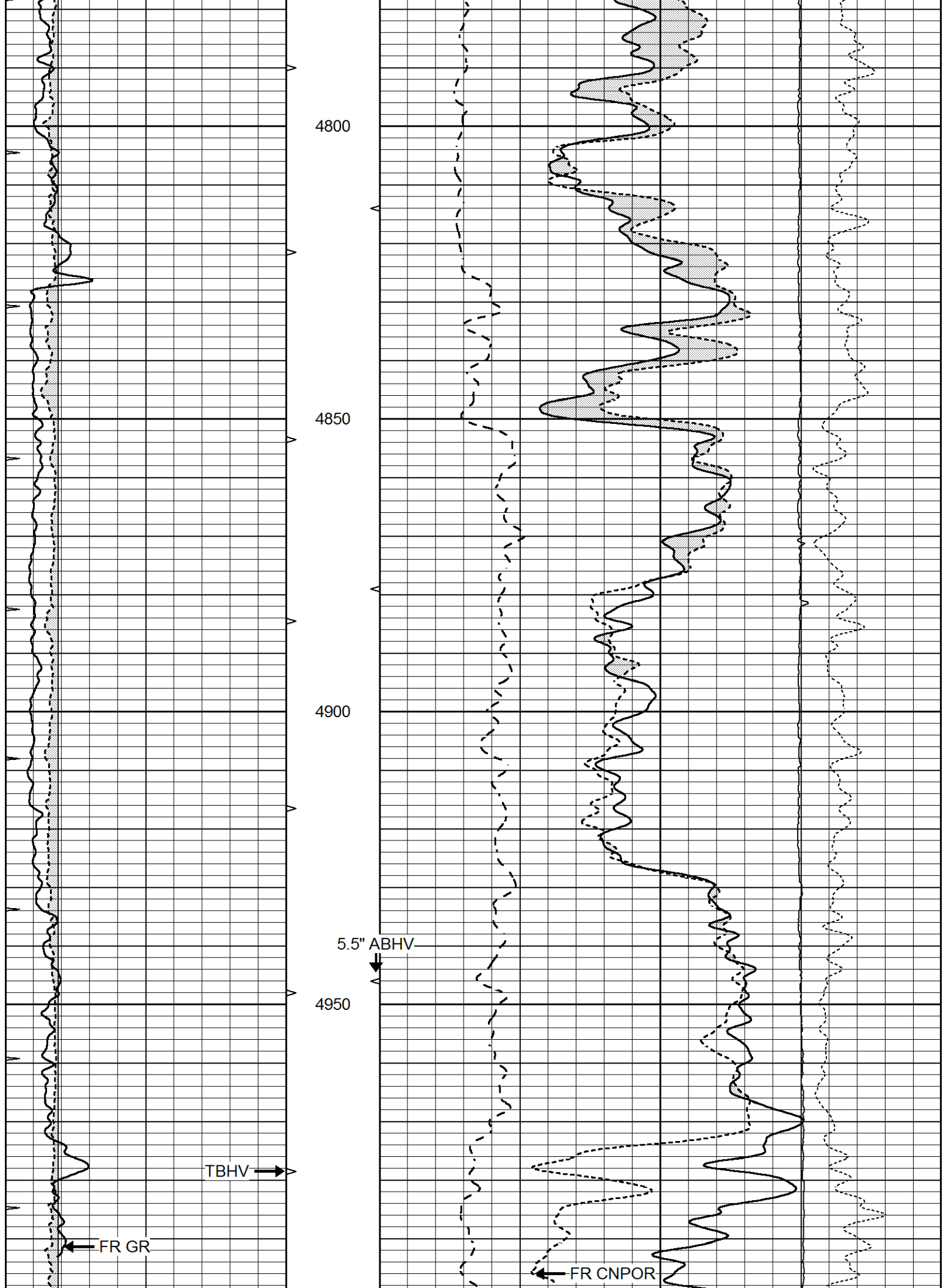
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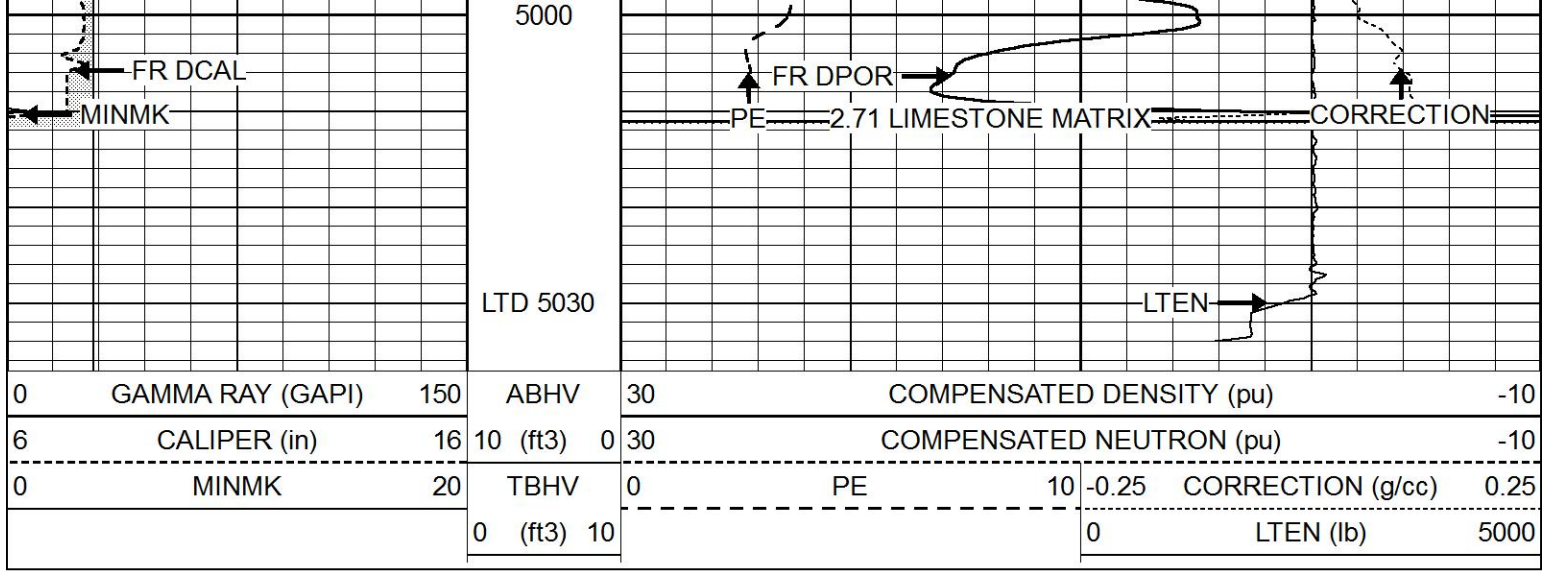
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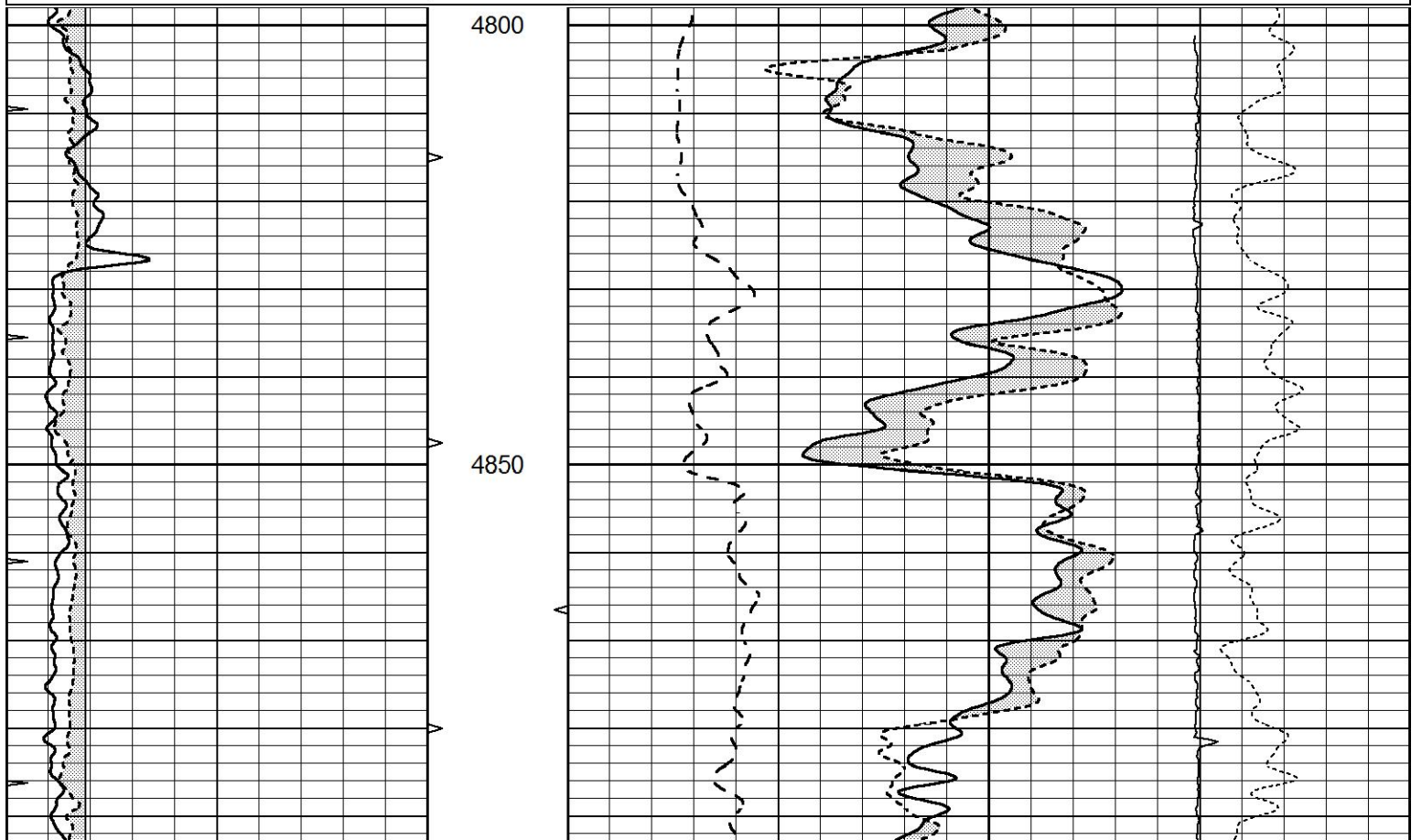
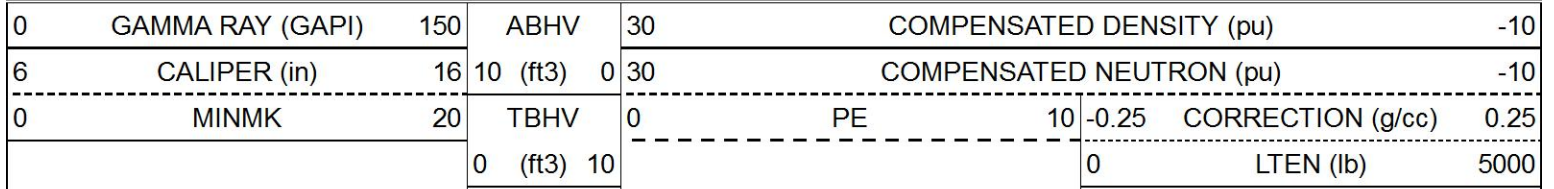


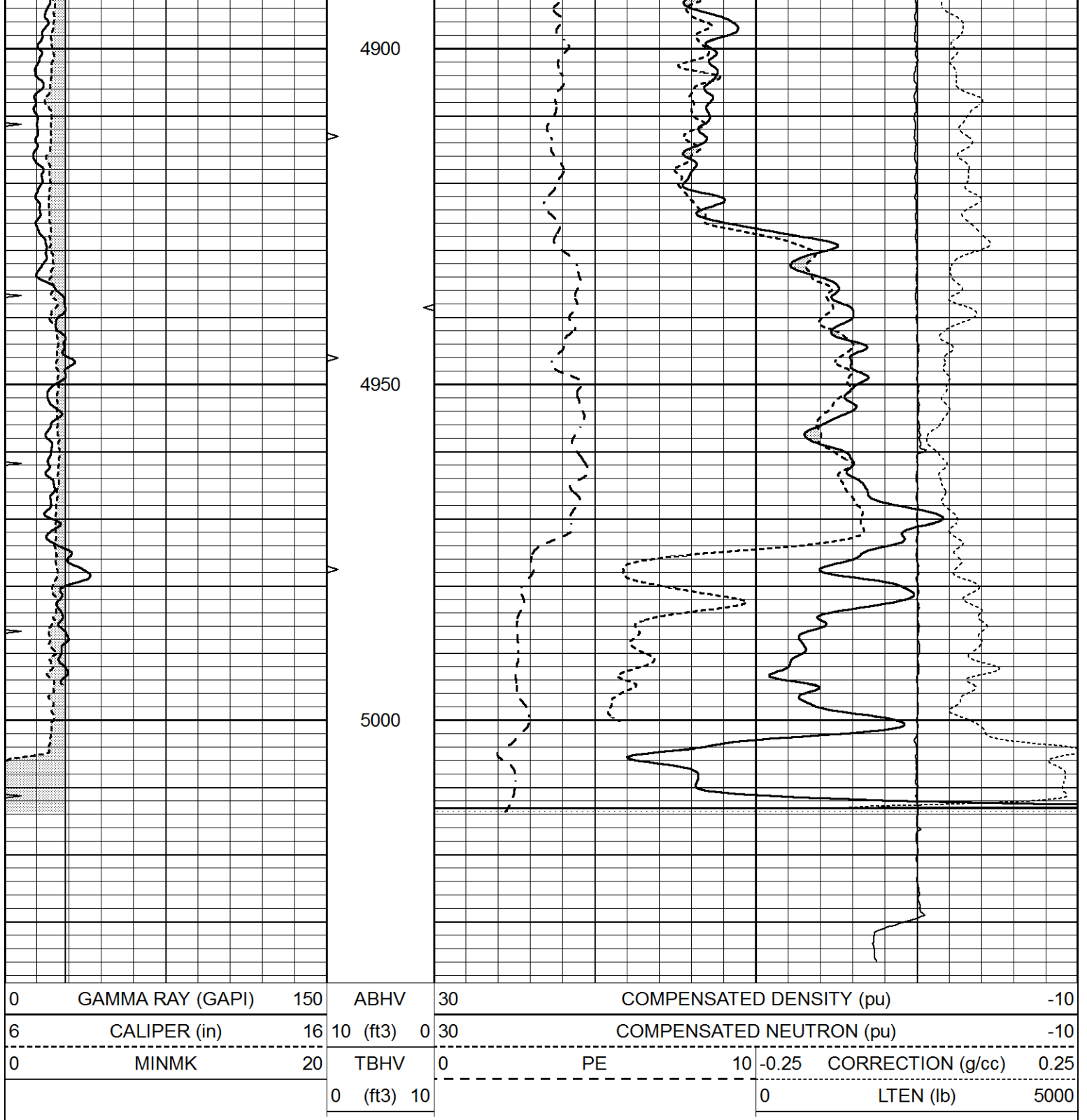




REPEAT SECTION

Database File 7891pe.db
 Dataset Pathname pass2.1R
 Presentation Format _ldt_neu
 Dataset Creation Thu Jun 01 08:02:08 2023
 Charted by Depth in Feet scaled 1:240





Calibration Report

Database File 7891pe.db
 Dataset Pathname pass3.1M
 Dataset Creation Thu Jun 01 08:39:50 2023

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Thu Jun 01 08:22:59 2023
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Readings

References

Results

Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	640.000	14.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	600.000	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		

Litho Density Calibration Report
Serial: 004 Model: PRB

Master Calibration		Performed Tue Aug 02 11:29:35 2022						
	Background	Magnesium	Aluminum	Aluminum+Fe				
Window 1	1154.2	10019.5	3137.9	2795.6			cps	
Window 2	1054.4	8597.6	2733.4	2469.5			cps	
Window 3	902.3	5241.4	1832.1	1719.3			cps	
Window 4	251.9	261.1	255.8	252.9			cps	
Long Space	0.0	7543.2	1679.0	1415.0			cps	
Short Space	4.4	2049.3	1321.7	1116.8			cps	
Rho		1.7100	2.5900	0.0000			g/cc	
Pe		2.0000	2.7500	5.7900				
Rib Angle	: 43.7	Rib Slope	: 0.957	Density/Spine Ratio			: 0.562	
Spine Angle	: 73.7	Spine Slope	: 3.426	Spine Intercept			: -17.2	

Before Survey Verification		Performed Wed Dec 31 18:00:00 1969						
	Background	Magnesium	Aluminum	Aluminum+Fe				
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: 070808PMC
Tool Model: 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: 070558
Tool Model: OPEN_GR
Performed: Tue May 30 23:16:26 2023

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.3000 GAPI/cps