



COMPENSATED DENSITY/NEUTRON PE LOG

Company	HAYES OIL & GAS, LLC.	Company	HAYES OIL & GAS, LLC.
Well	HUCK #2-5	Well	HUCK #2-5
Field	COLDWATER TOWNSITE NORTHEAST F	Field	COLDWATER TOWNSITE NORTHEAST FIELD
County	COMANCHE	County	COMANCHE
State	KANSAS	State	KANSAS
Location:	API # : 15-033-21797-0000 1980' FNL & 1512' FEL E2 - E2 - SW - NE	Other Services DIL/MEL SONIC	
Permanent Datum	SEC 5 TWP 32S RGE 18W	Elevation	
Log Measured From	GROUND LEVEL Elevation 2168 KELLY BUSHING 12' A.G.L.	K.B. 2180 D.F. 2178 G.L. 2168	
Drilling Measured From	KELLY BUSHING		
Date	4/22/23		
Run Number	ONE		
Depth Driller	6050		
Depth Logger	6051		
Bottom Logged Interval	6027		
Top Log Interval	3400		
Casing Driller	8 5/8" @ 813		
Casing Logger	813		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 8,600 PPM	28# LCM
Density / Viscosity	9.2/63		
pH / Fluid Loss	9.5/10.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.10 @ 65F		
Rmf @ Meas. Temp	.825 @ 65F		
Rmc @ Meas. Temp	1.32 @ 65F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.534 @ 134F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom	5:30 P.M.		
Maximum Recorded Temperature	134F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	COLE ROBBEN		
Witnessed By	ED GRIEVES	TIM HEDRICK	SHAYNE HAYES

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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:

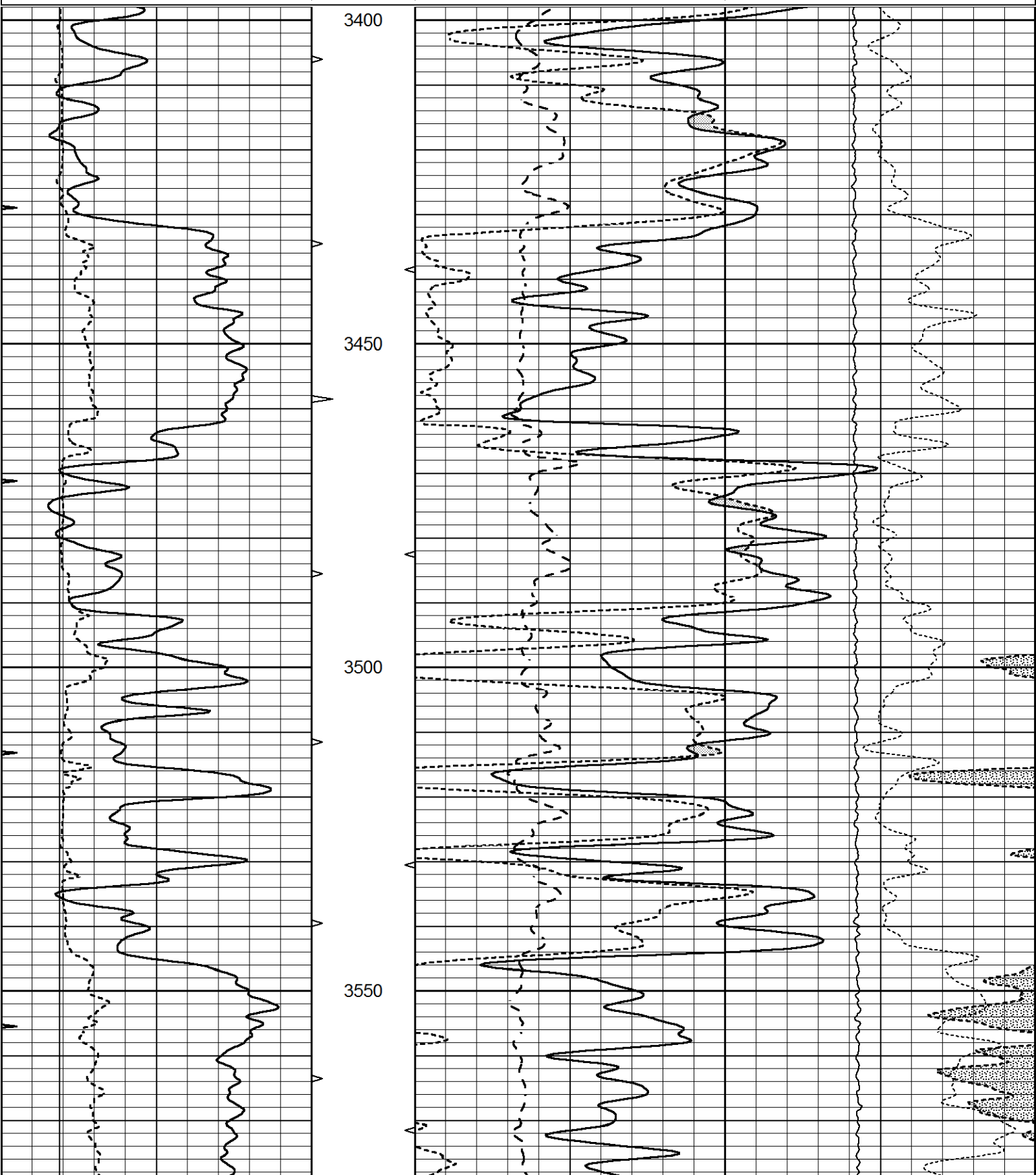
FROM HIGHWAY 183/160 JUNCTION NORTH OF COLDWATER, GO EAST ON HIGHWAY 160 FOR 2 MILES, NORTH ON ROAD 15 FOR A MILE, WEST INTO NORTH OF RED SHED



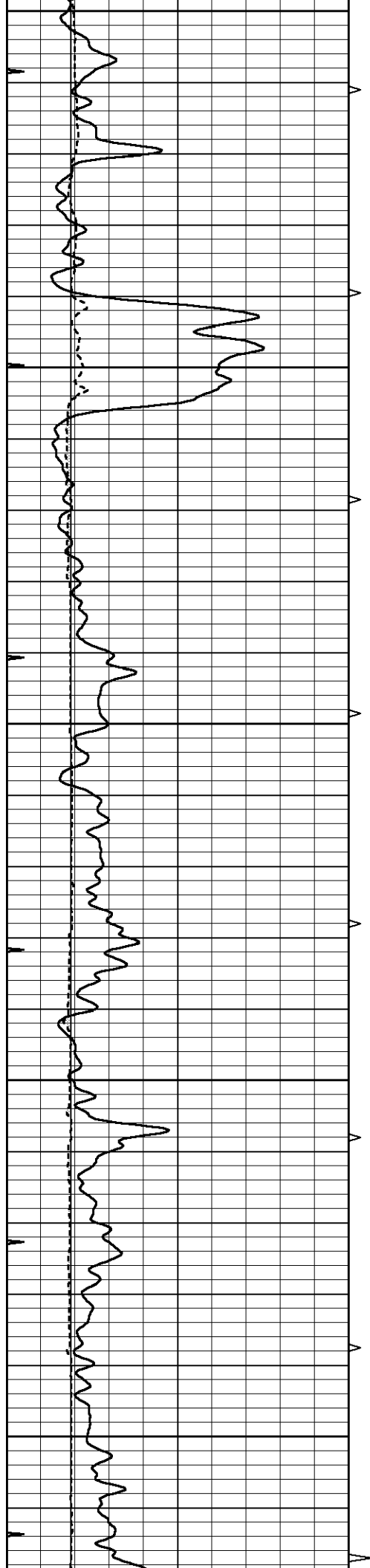
MAIN SECTION

Database File	7673pe.db
Dataset Pathname	pass3D
Presentation Format	_ldt_neu
Dataset Creation	Sat Apr 22 20:19:11 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	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10
			0 (ft3)	10	-0.25	CORRECTION (g/cc)
					0	LTEN (lb)
						5000







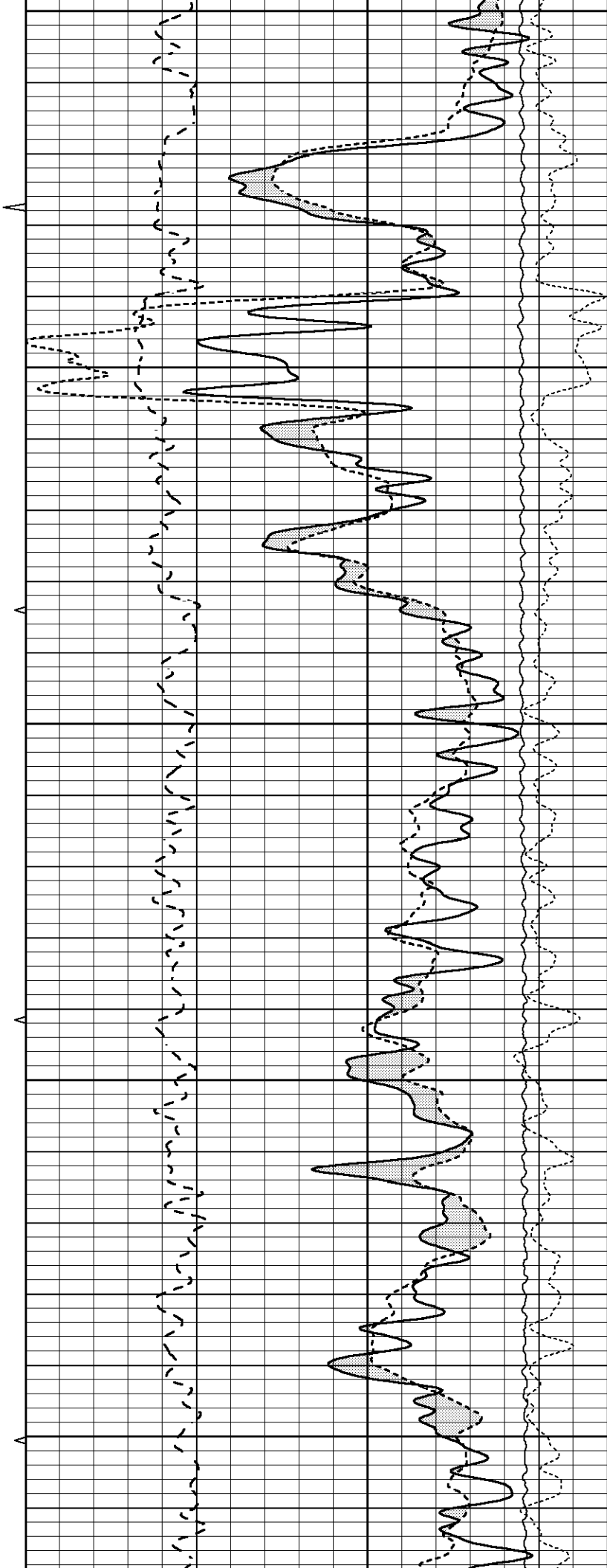
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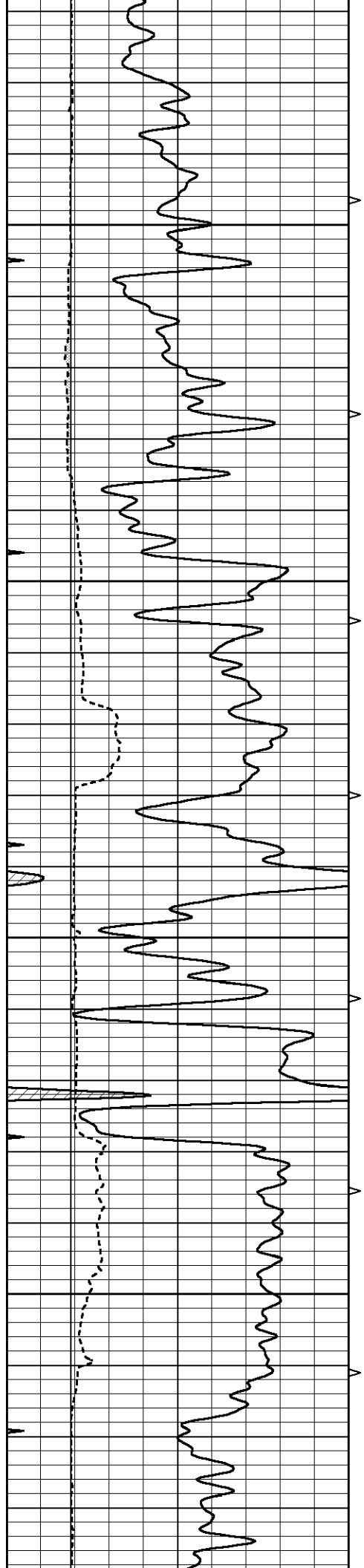
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3900

3950

4000



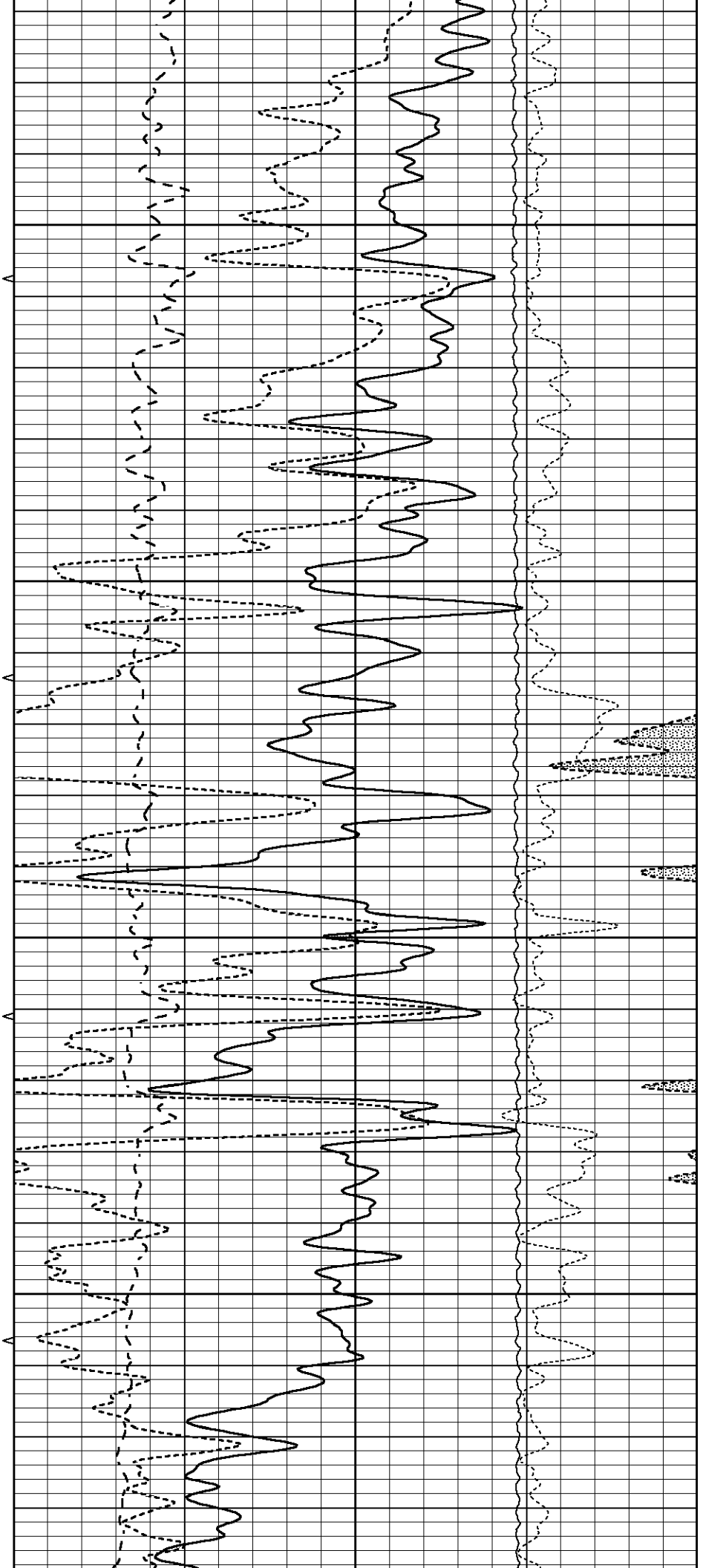


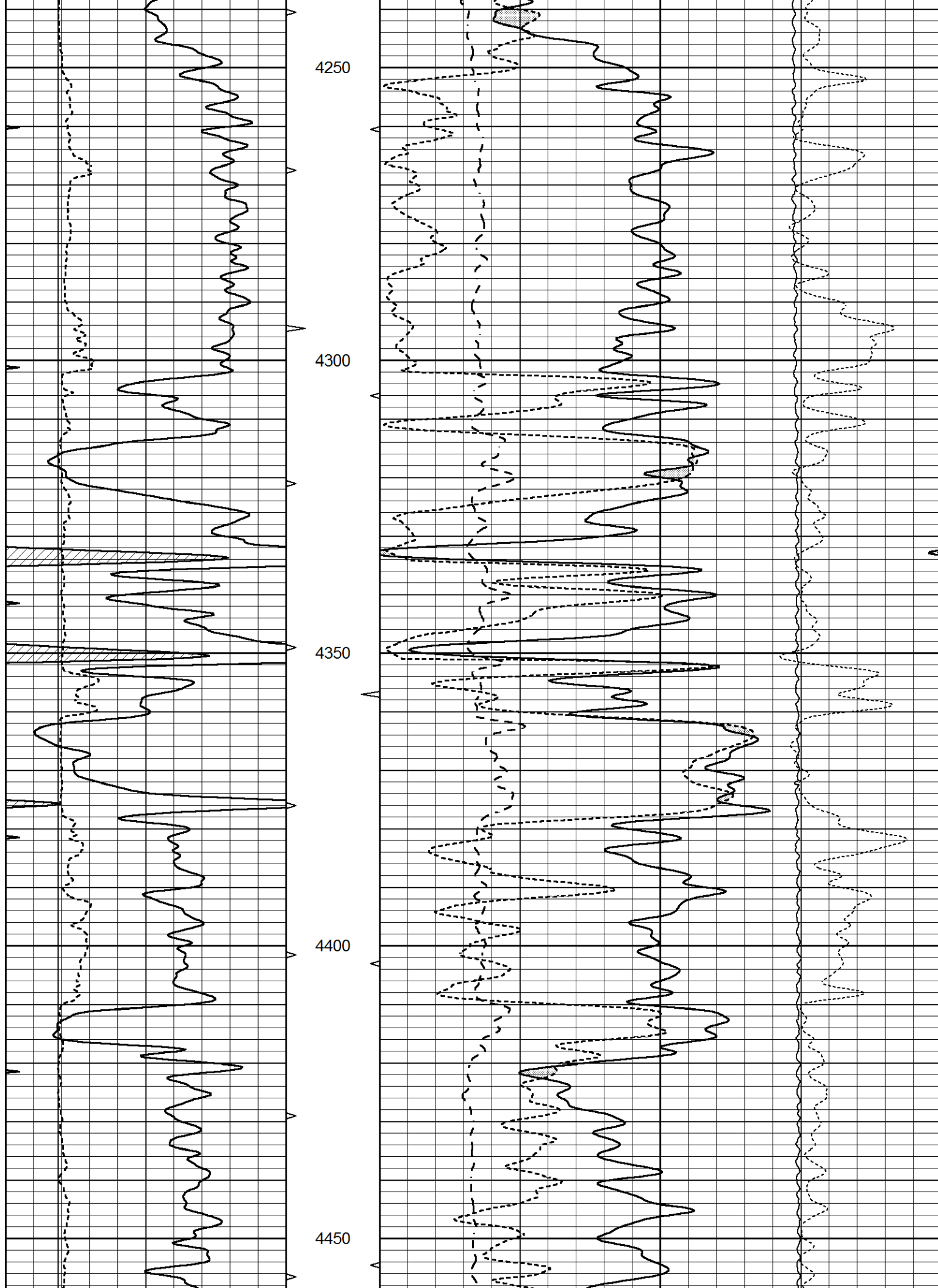
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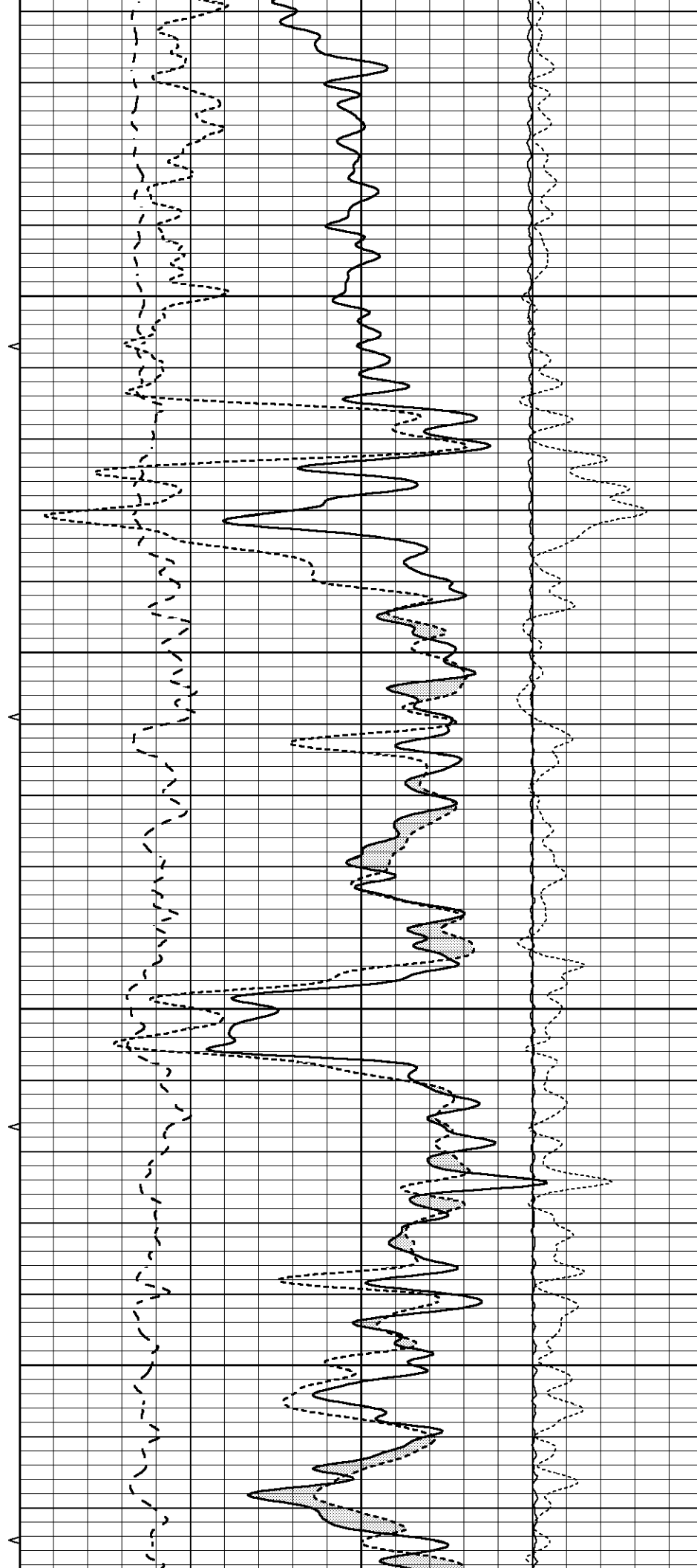
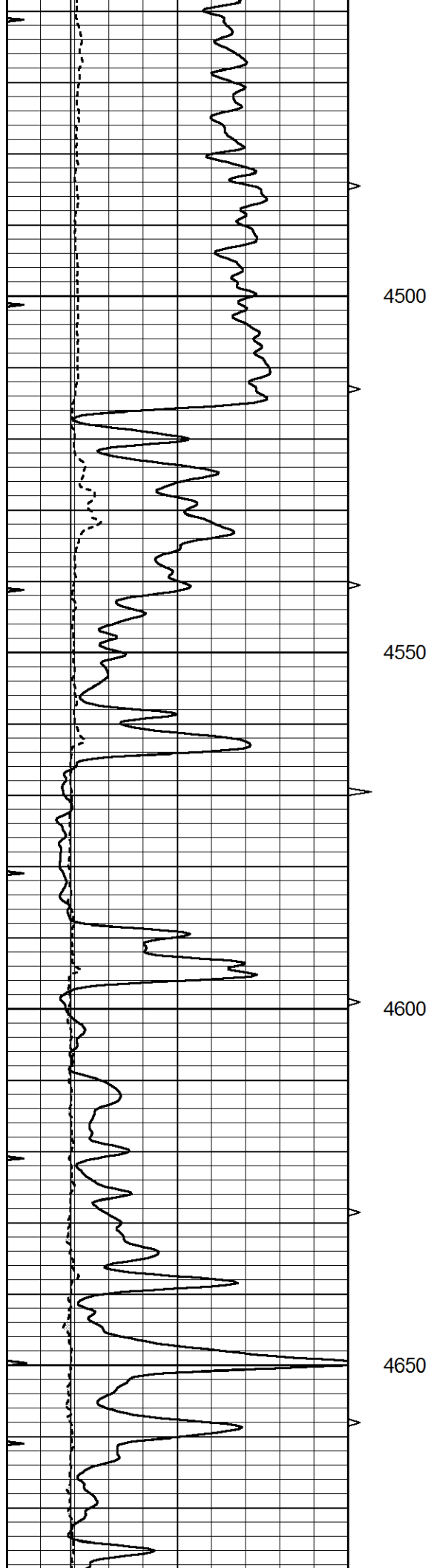
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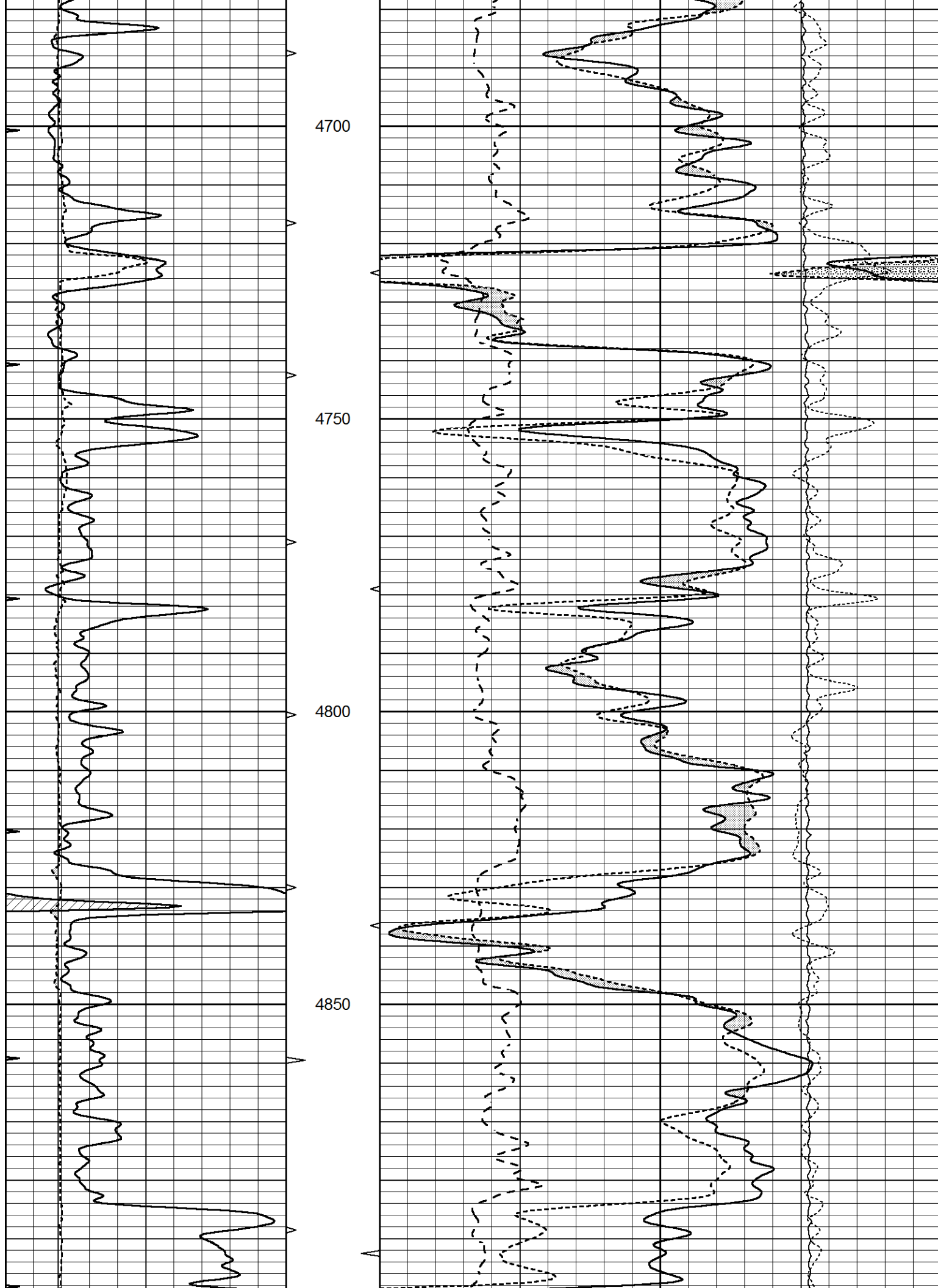
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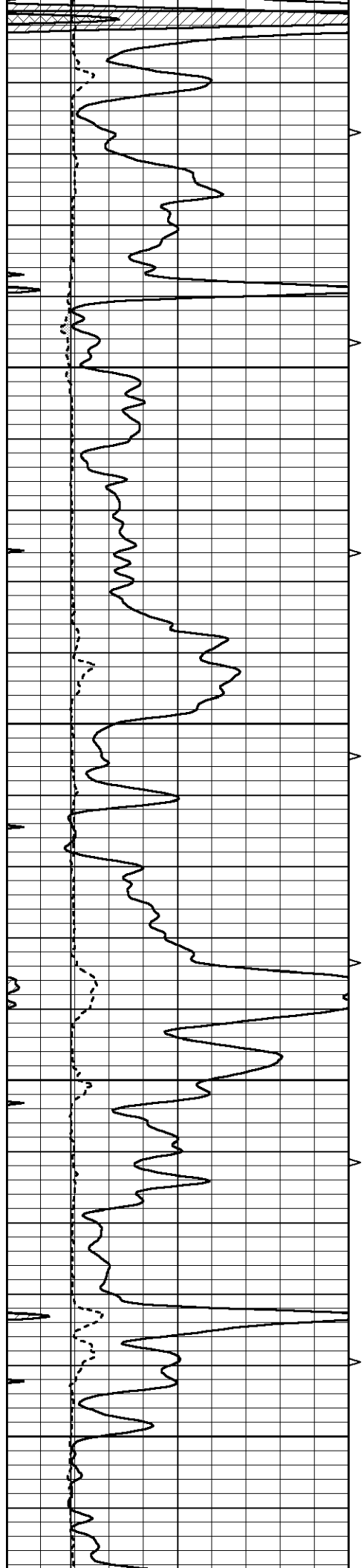
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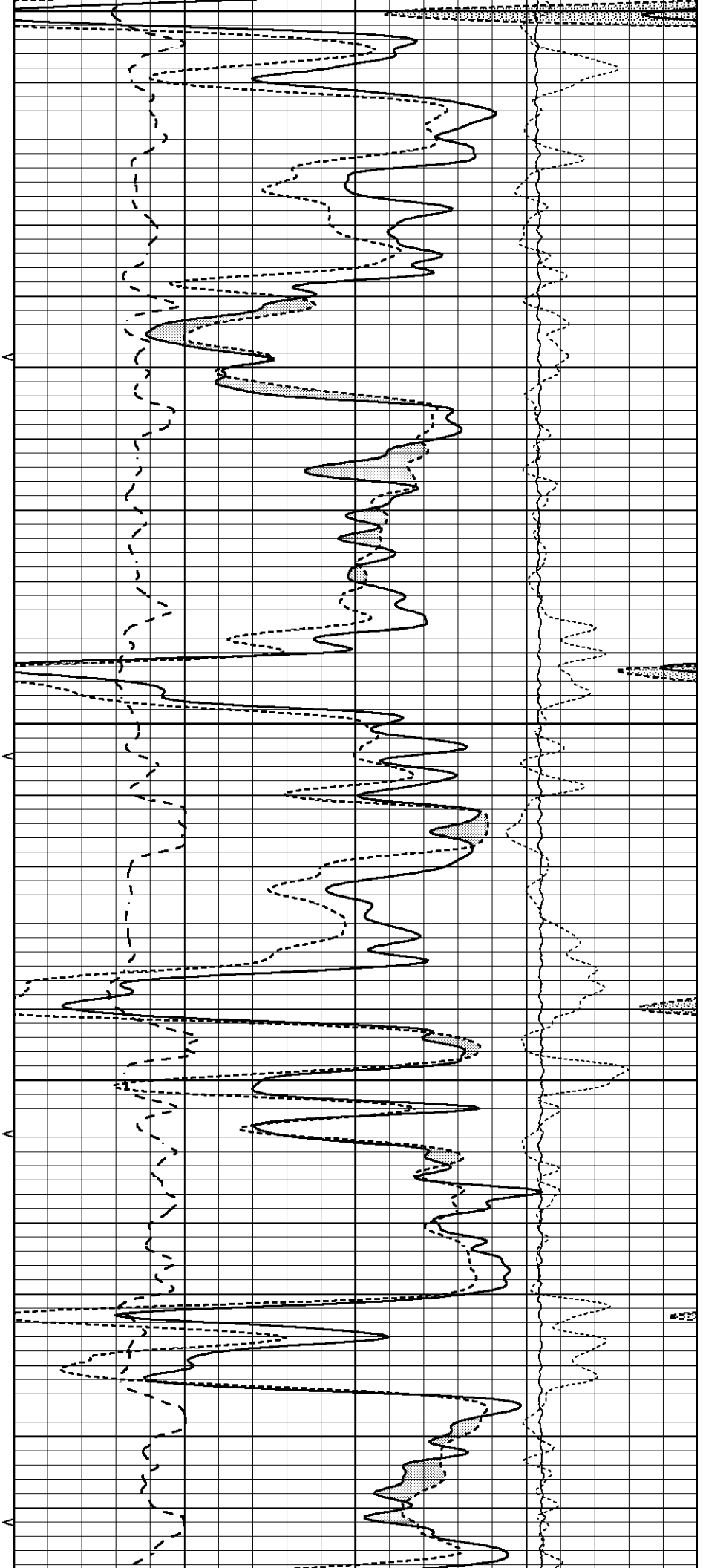
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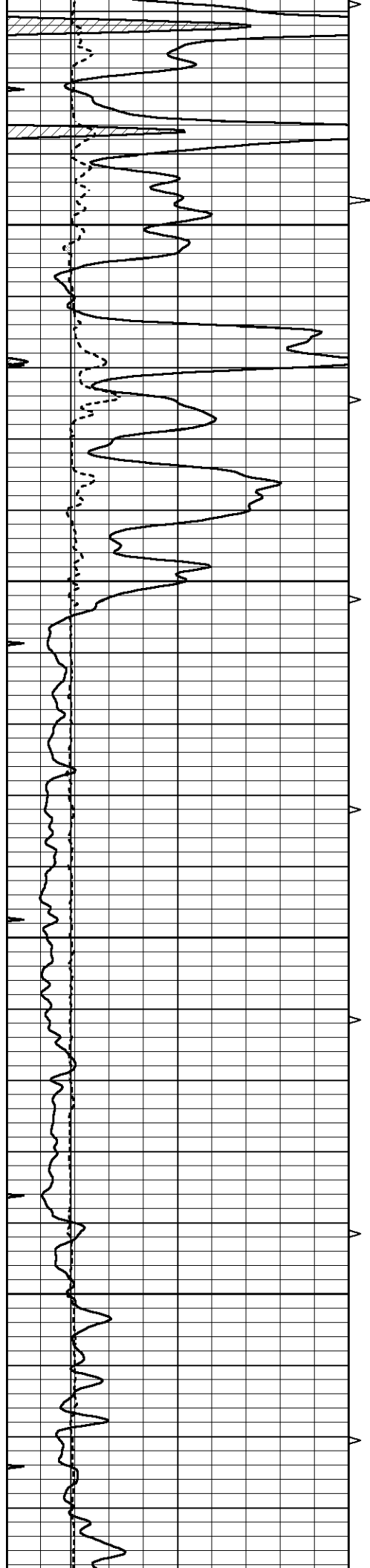
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5000

5050

5100



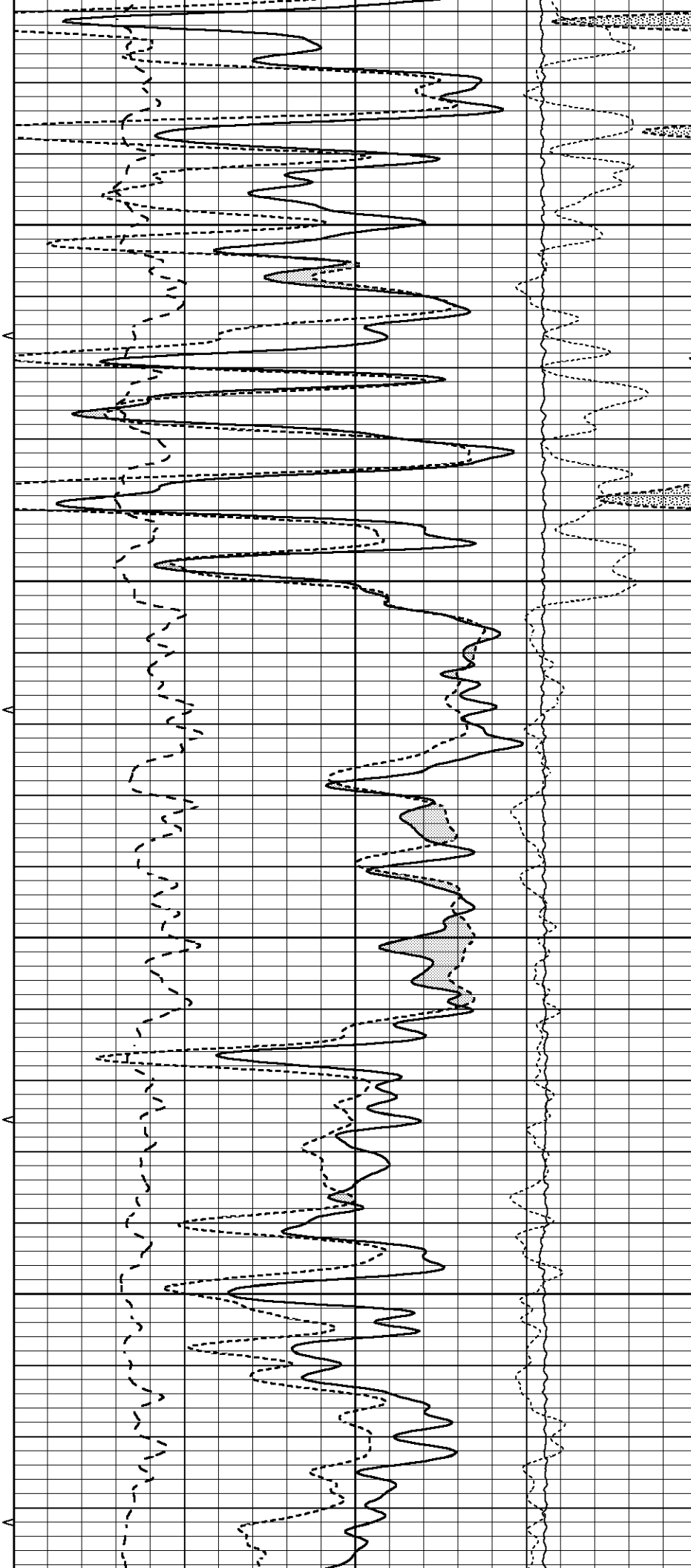


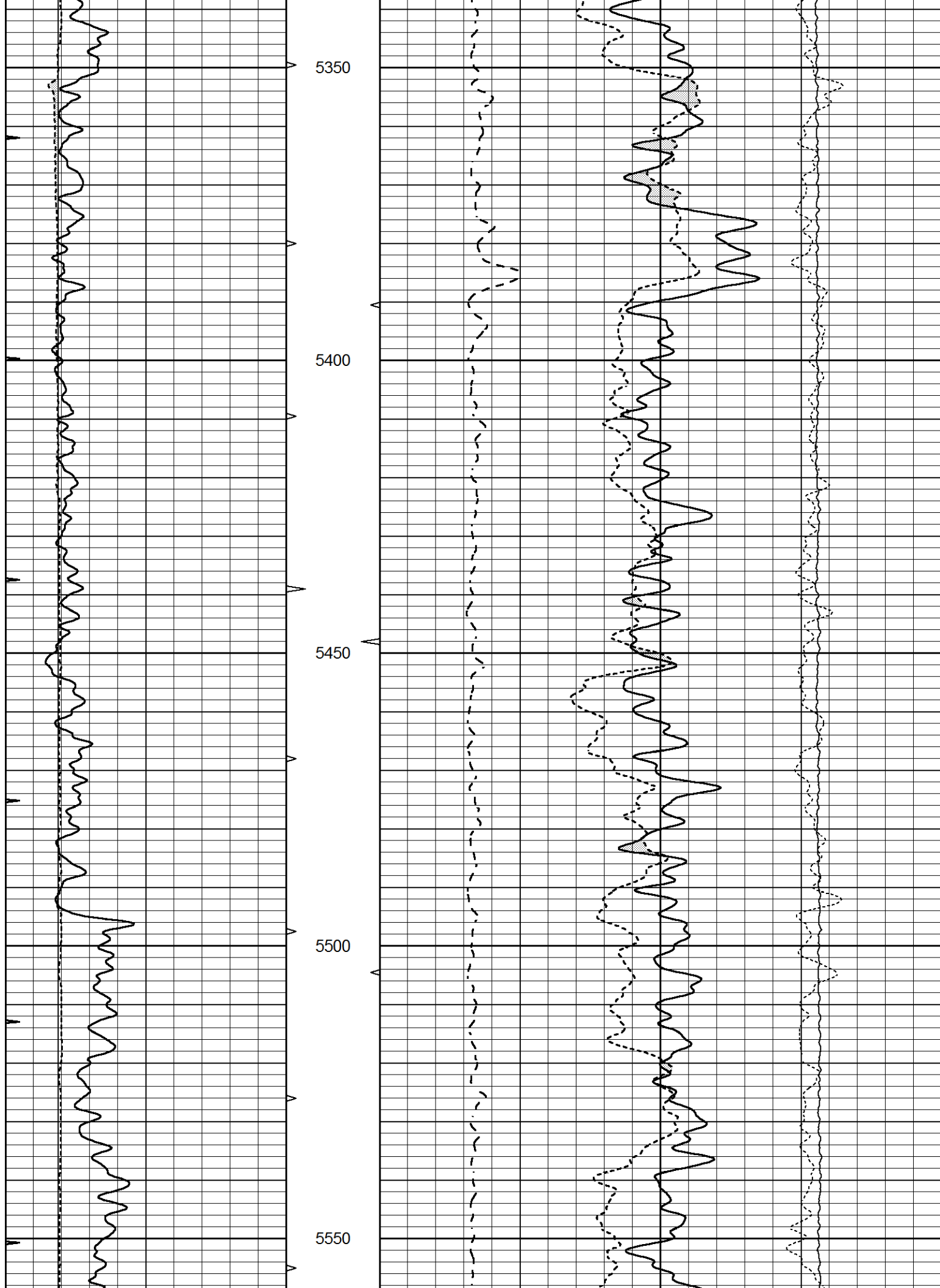
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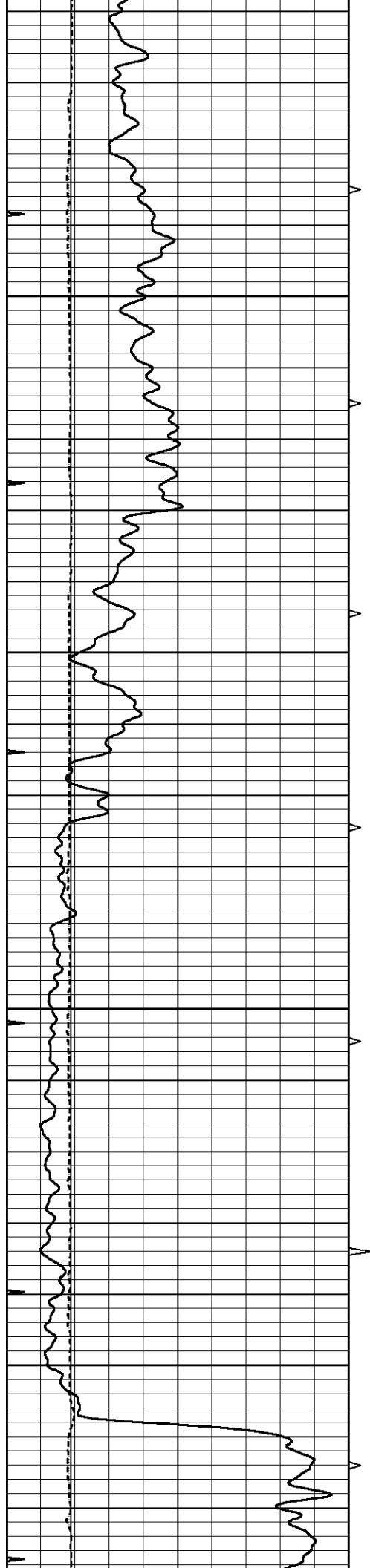
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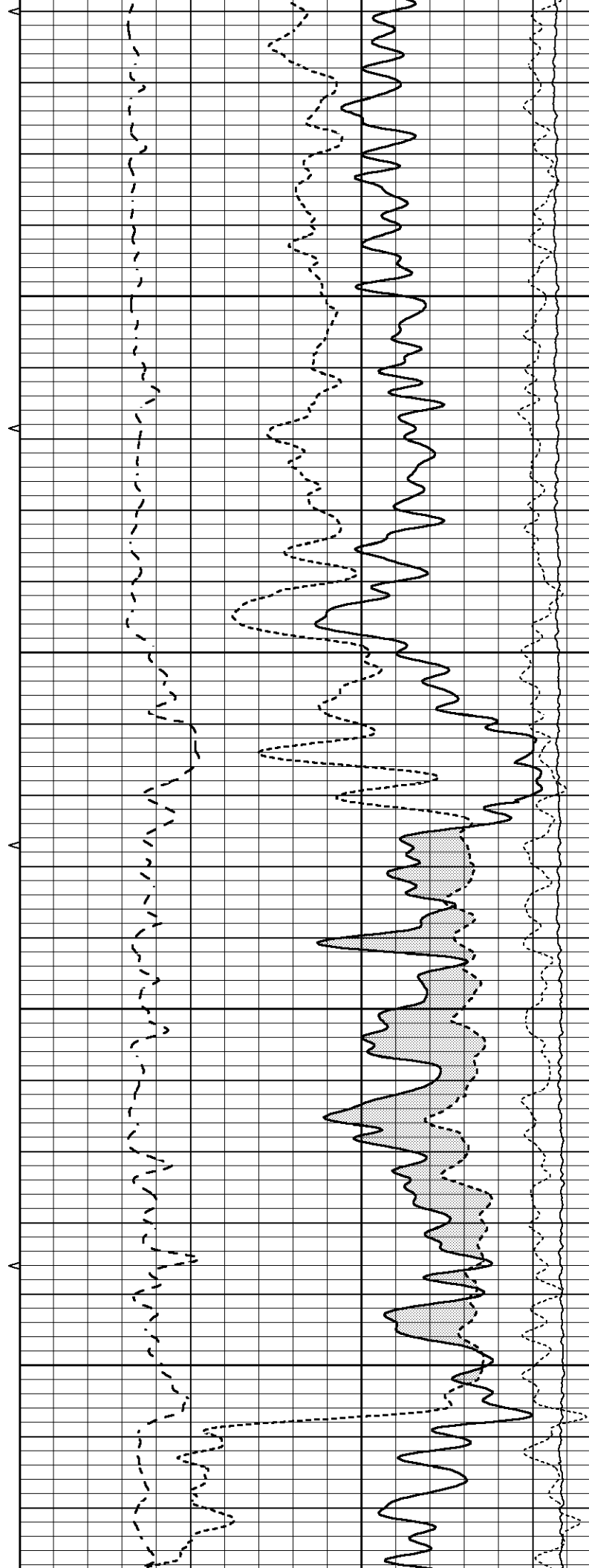
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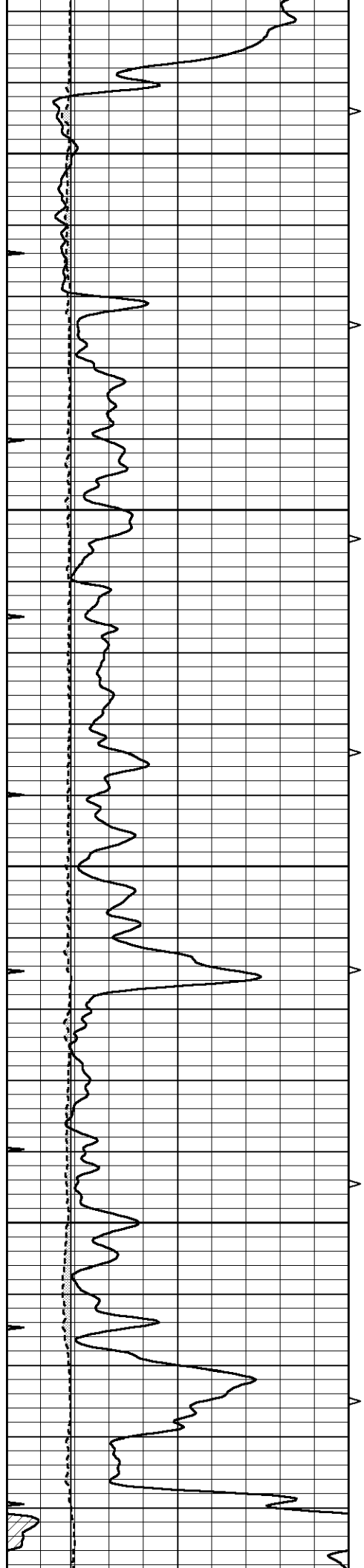






5600
5650
5700
5750





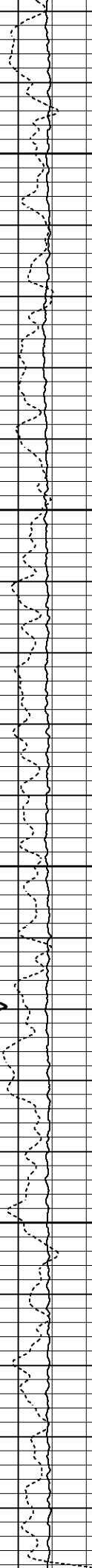
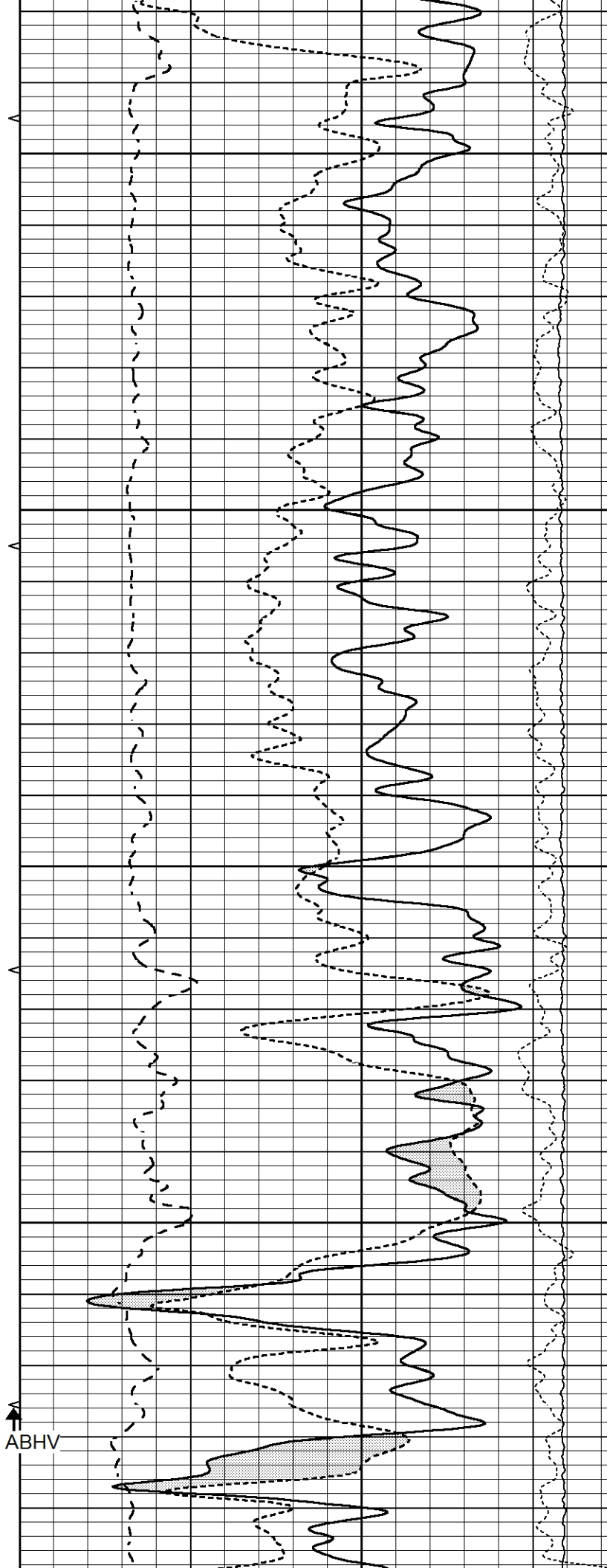
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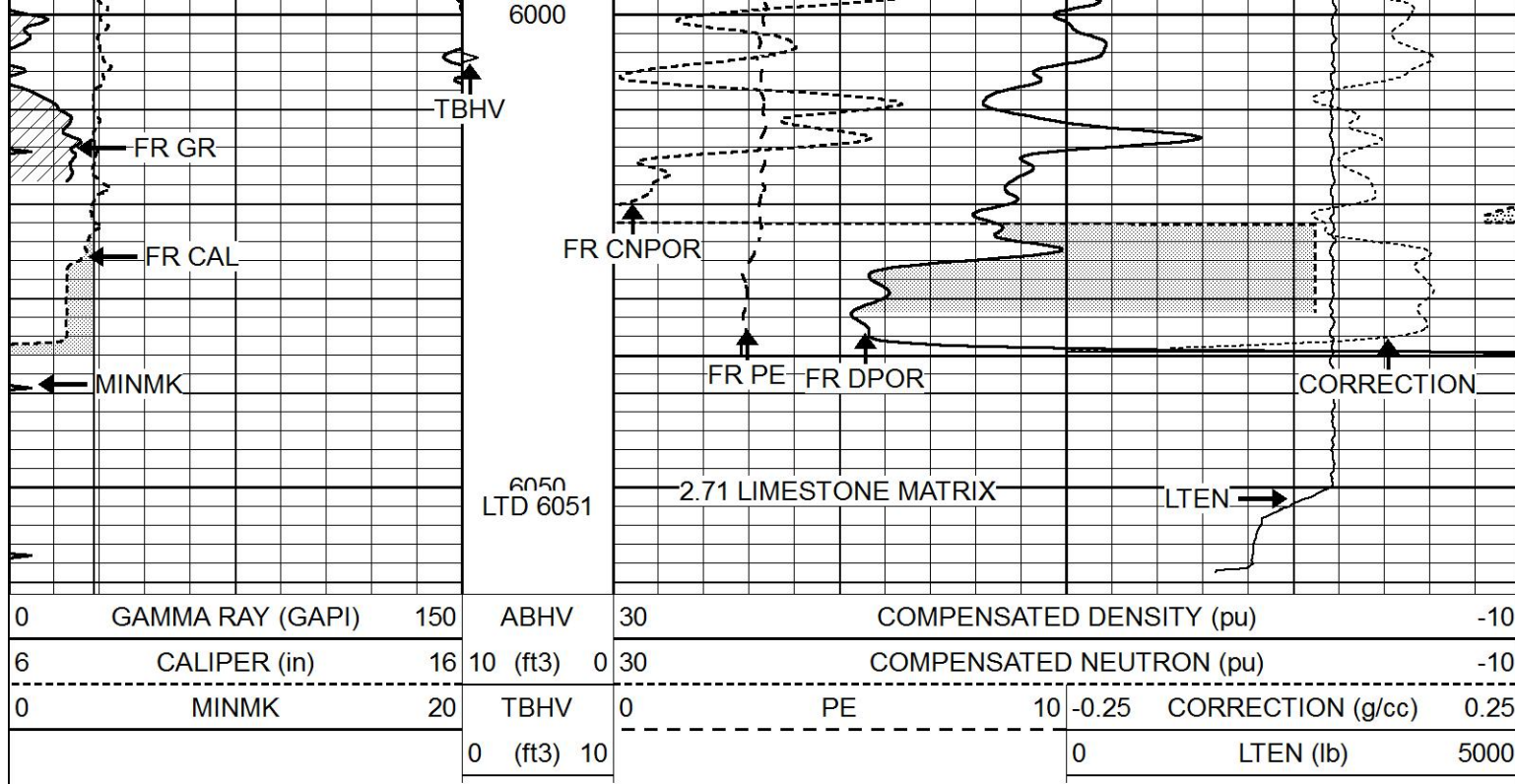
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5950

5.5" ABHV

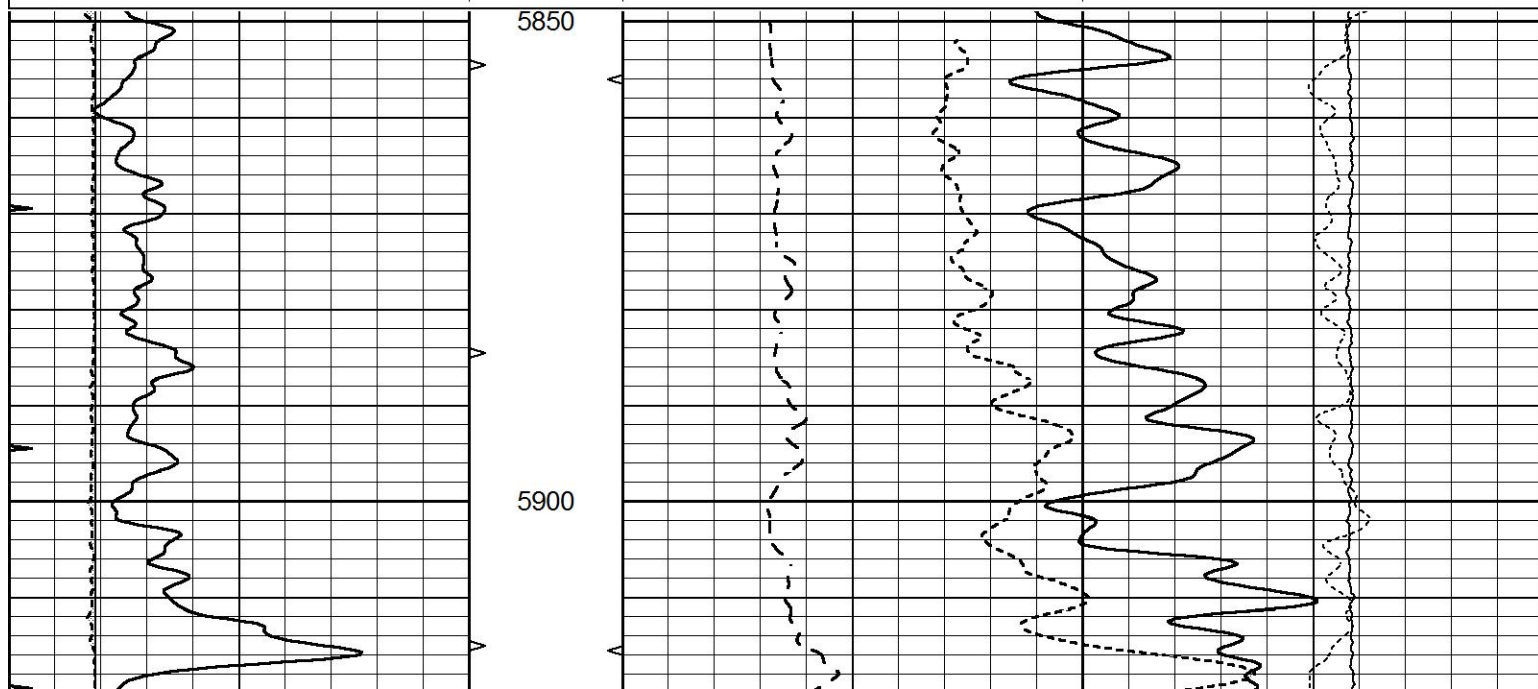


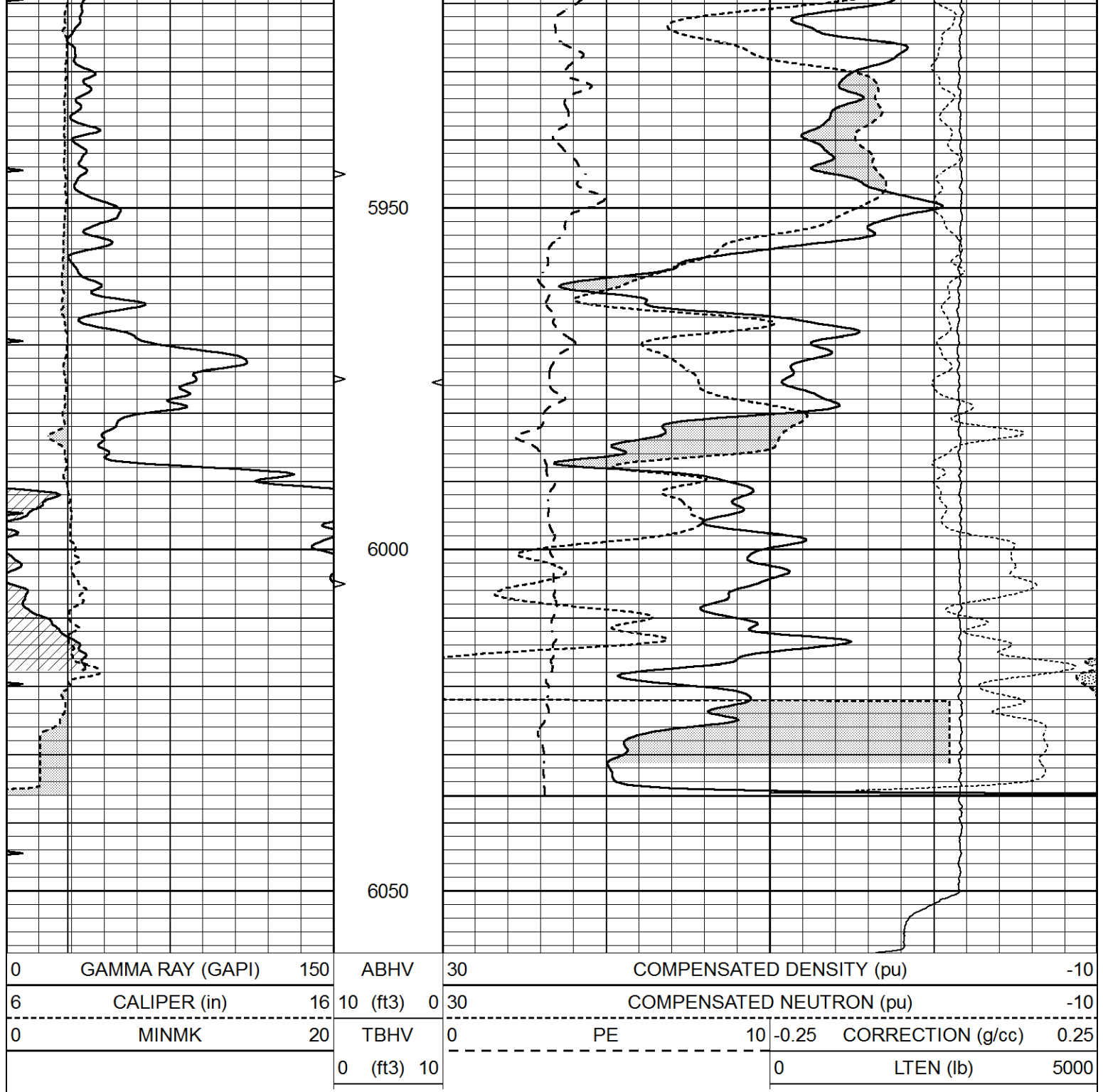


REPEAT SECTION

Database File 7673pe.db
 Dataset Pathname pass2RR
 Presentation Format _ldt_neu
 Dataset Creation Sat Apr 22 20:27:59 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





Calibration Report							
Database File	7673pe.db						
Dataset Pathname	pass3D						
Dataset Creation	Sat Apr 22 20:19:11 2023						
Dual Induction Calibration Report							
Serial-Model:		FW1410-55-Probe					
Surface Cal Performed:		Sun Apr 02 09:22:50 2023					
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	550.000	-1.000
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	530.000	-5.000
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		

Litho Density Calibration Report								
Serial: 002				Model: PRB				

Master Calibration				Performed Thu Apr 06 13:30:36 2013				
	Background		Magnesium	Aluminum		Aluminum+Fe		
Window 1	729.7		6743.5	2011.4		1795.3		
Window 2	674.1		5757.9	1756.3		1602.7		
Window 3	540.0		2871.7	1028.2		982.7		
Window 4	160.6		165.6	162.6		161.5		
Long Space	0.0		5083.7	1082.2		928.6		
Short Space	1.3		1183.0	789.7		665.4		
Rho			1.7100	2.5900		0.0000		
Pe			2.0000	2.7500		5.7900		
Rib Angle	: 45.4		Rib Slope	: 1.013		Density/Spine Ratio		
Spine Angle	: 75.4		Spine Slope	: 3.828		Spine Intercept		
						: 0.550		
						: -18.6		

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				
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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

Type / Serial:	Probe / 080621
Source / Verifier:	22 / N/A
Temperature:	60.0 degF

SHOP CALIBRATION		Wed Mar 11 10:37:04 2015		
	Cal Tube	Units		
Tank Ratio	0.737	SS/LS		
Tank Porosity	11.06	pu		
LS Detector	147.9	cps		
SS Detector	118.0	cps		
Tool Ratio	0.798	SS/LS		
Tool Porosity	11.20	pu		
Tool Constant = 0.924				
Field Verifier	SS Detector	LS Detector	Ratio	Porosity
	0.0	0.0	0.000	0.00

PRE-SURVEY VERIFICATION				
	SS Detector	LS Detector	Ratio	Porosity

POST-SURVEY VERIFICATION				
	SS Detector	LS Detector	Ratio	Porosity

Gamma Ray Calibration Report

Serial Number:	46001			
Tool Model:	Probe1			
Performed:	Thu Apr 20 09:55:57 2023			
Calibrator Value:	1.0	GAPI		
Background Reading:	0.0	cps		
Calibrator Reading:	1.0	cps		
Sensitivity:	0.4300	GAPI/cps		