

**COMPENSATED
DENSITY / NEUTRON
LOG**

Company DARRAH OIL COMPANY, LLC.
Well YOUNKIN #1-10
Field WILDCAT
County LOGAN State KANSAS

Location: API #: 15-109-21604-0000
2355' FSL & 290' FEL
NE - NE - NE - SE
SEC 10 TWP 14s RGE 34W
Permanent Datum GROUND LEVEL Elevation 2927
Log Measured From KELLY BUSHING 11" A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DILMEL
SONIC
Elevation
K.B. 2938
D.F. 2936
G.L. 2927

Date	6/18/20
Run Number	ONE
Depth Driller	4675
Depth Logger	4672
Bottom Logged Interval	4648
Top Log Interval	3000
Casing Driller	8 5/8"@263'
Casing Logger	263
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.3/54
pH / Fluid Loss	9.5/7.5
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.590@85F
Rmf @ Meas. Temp	.443@85F
Rmc @ Meas. Temp	.708@85F
Source of Rmf / Rmc	MEASUREMENT
Rm @ BHT	.411@122F
Time Circulation Stopped	2.5 HOURS
Time Logger on Bottom	3:30 P.M.
Maximum Recorded Temperature	122F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	SETH EVENSON

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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

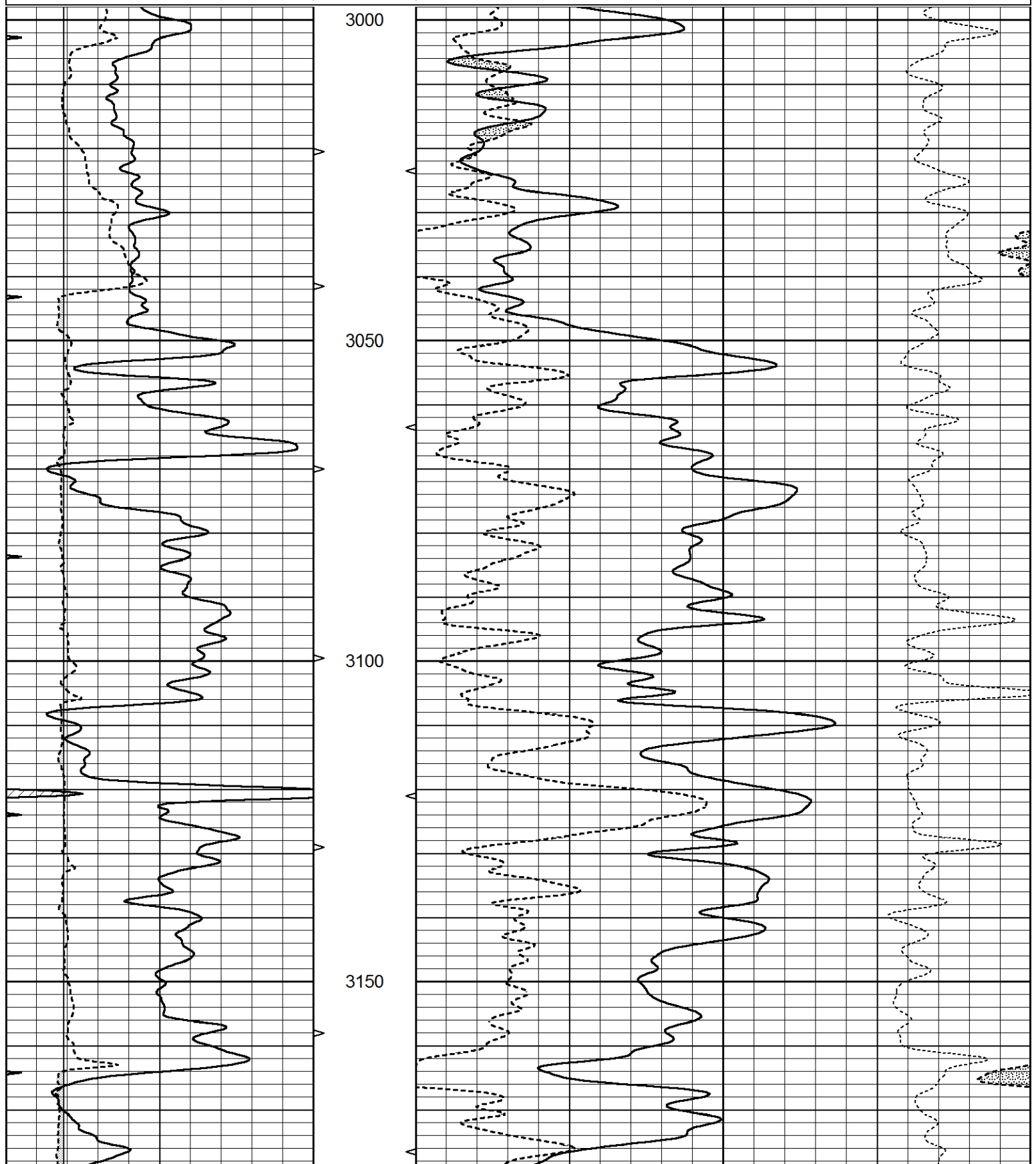
THANK YOU FOR USING E.L.I. WIRELINE SERVICES HAYS, KANSAS (785)628-6395
DIRECTIONS
OAKLEY, KS., 13S. ON HWY 83 TO "QUAIL RD.", 7W. TO "RD. 370" 1S. TO "PLAINS RD.", 2W. TO "RD. 350", 4S. TO "LARIAT RD.", 1W. TO CATTLE GUARD, 1W. IN PASTURE THEN TAKE LEFT FORK

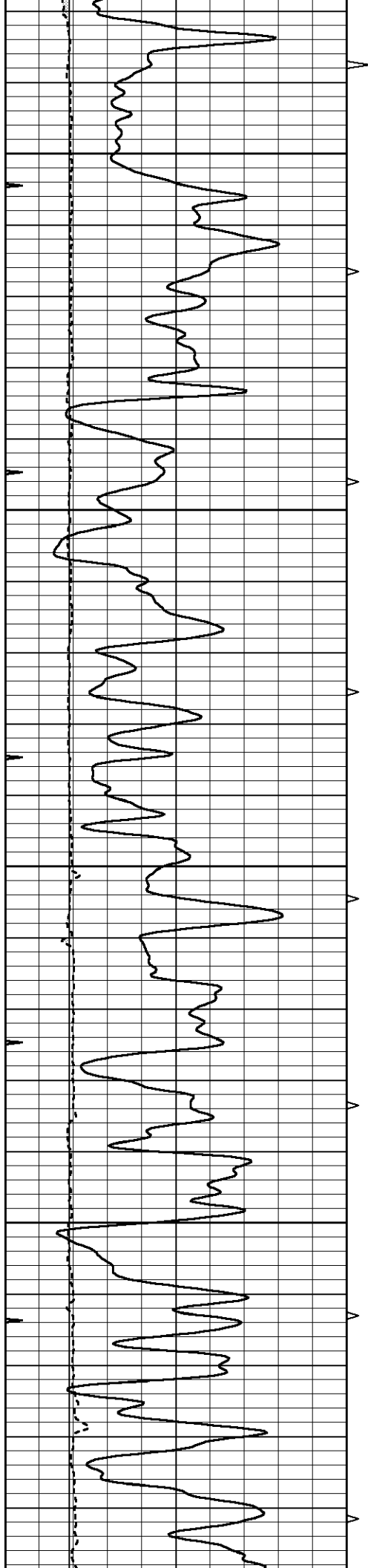


MAIN SECTION

Database File 4546pe.db
 Dataset Pathname pass3.7
 Presentation Format den_neu
 Dataset Creation Thu Jun 18 17:13:35 2020
 Charted by Depth in Feet scaled 1:240

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



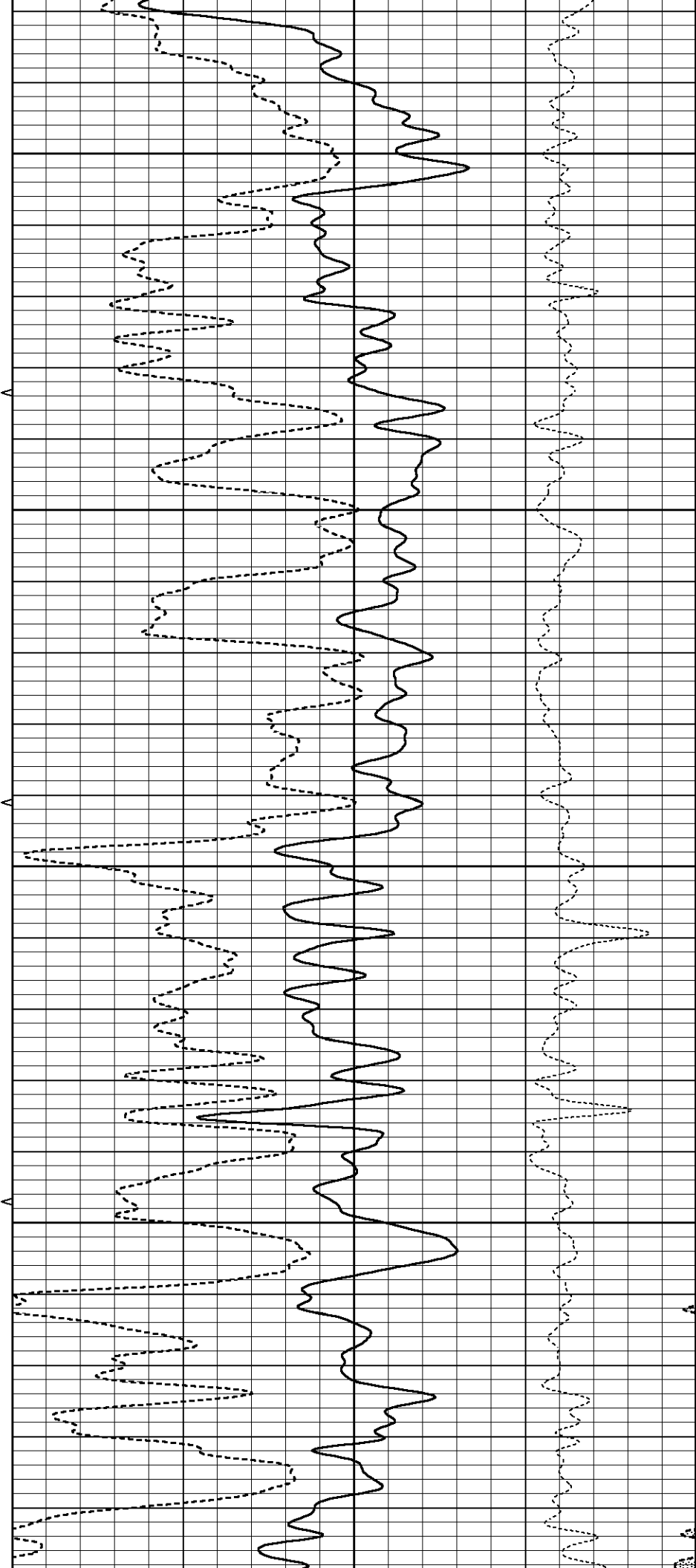


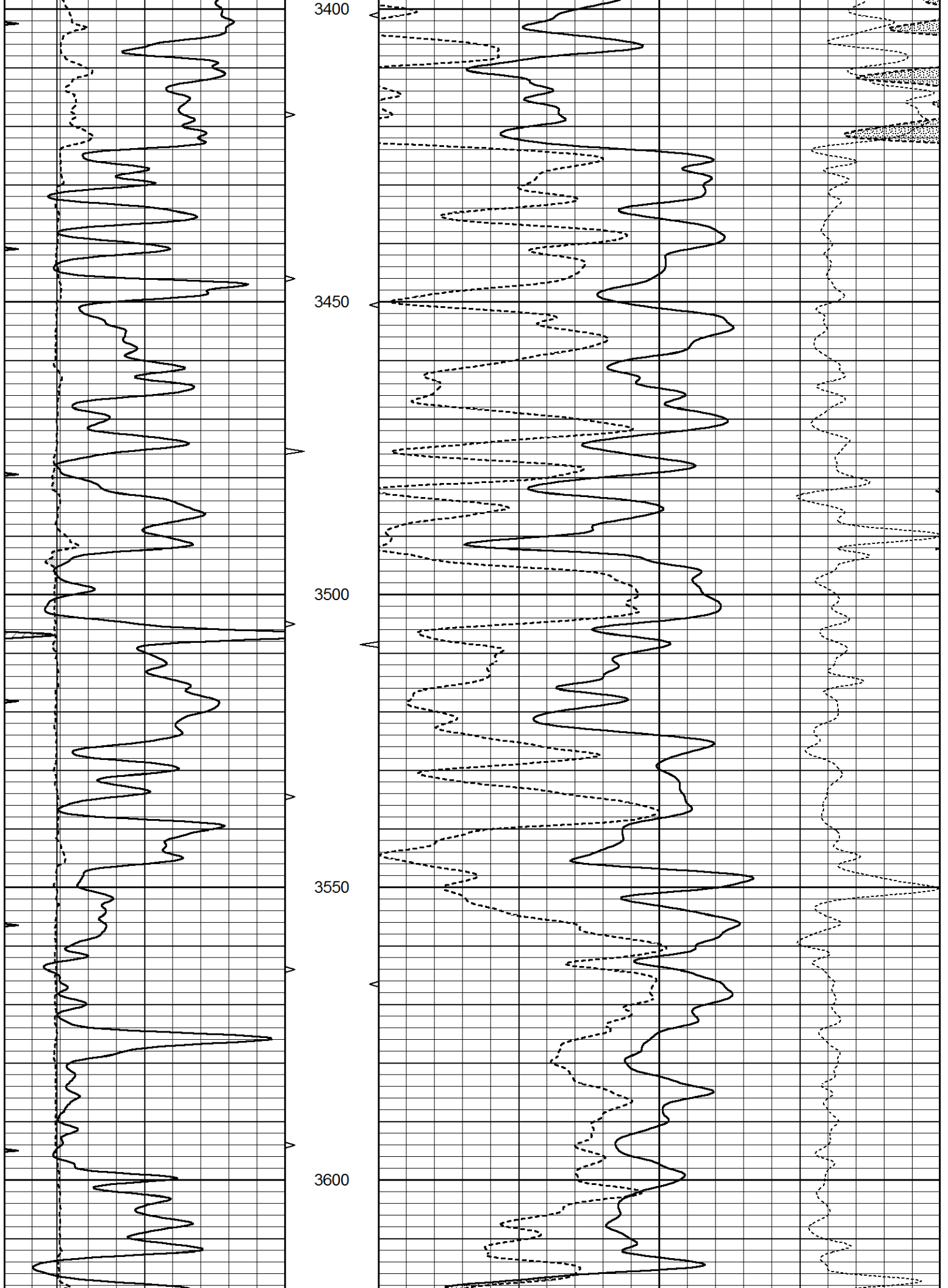
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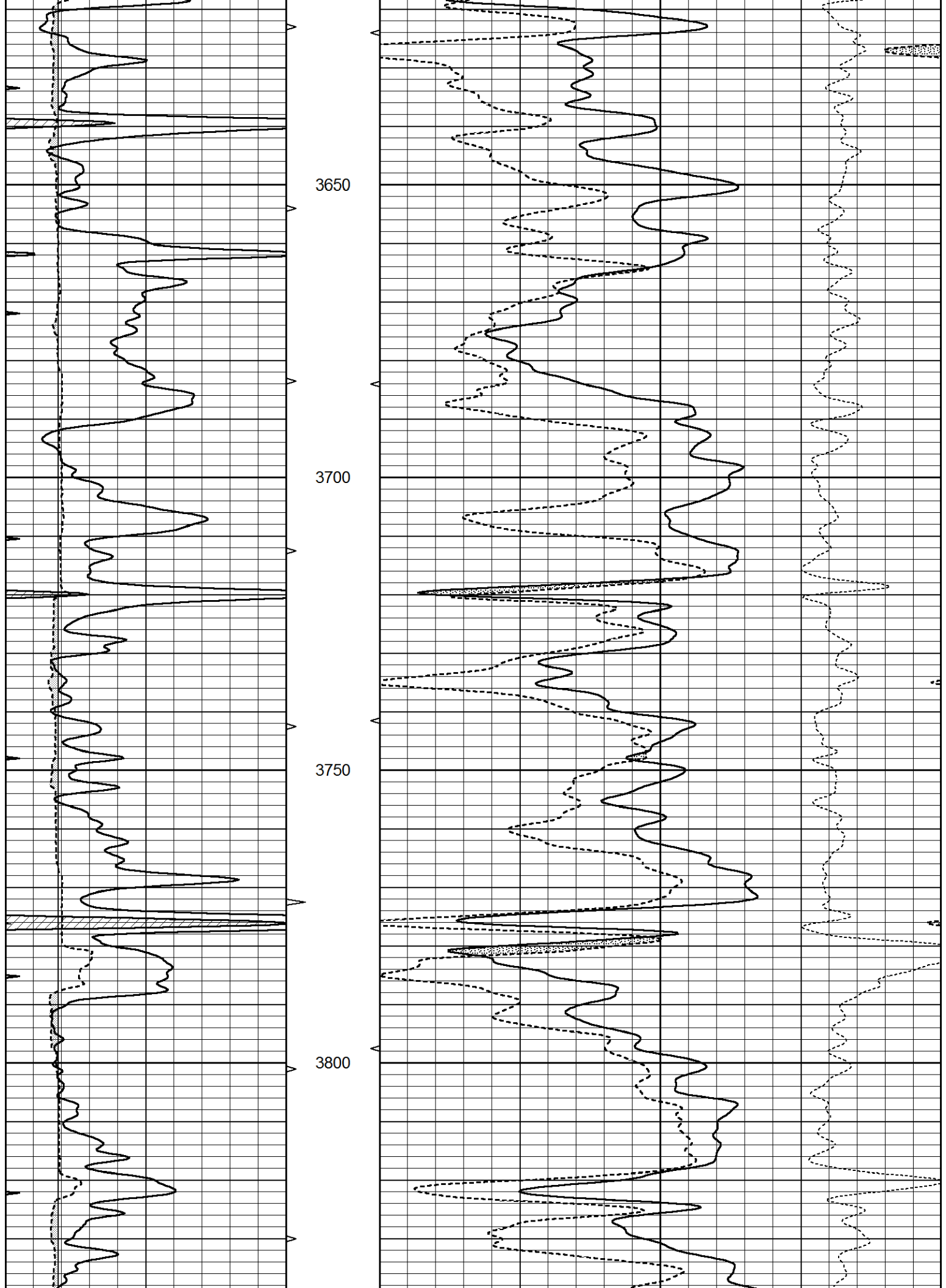
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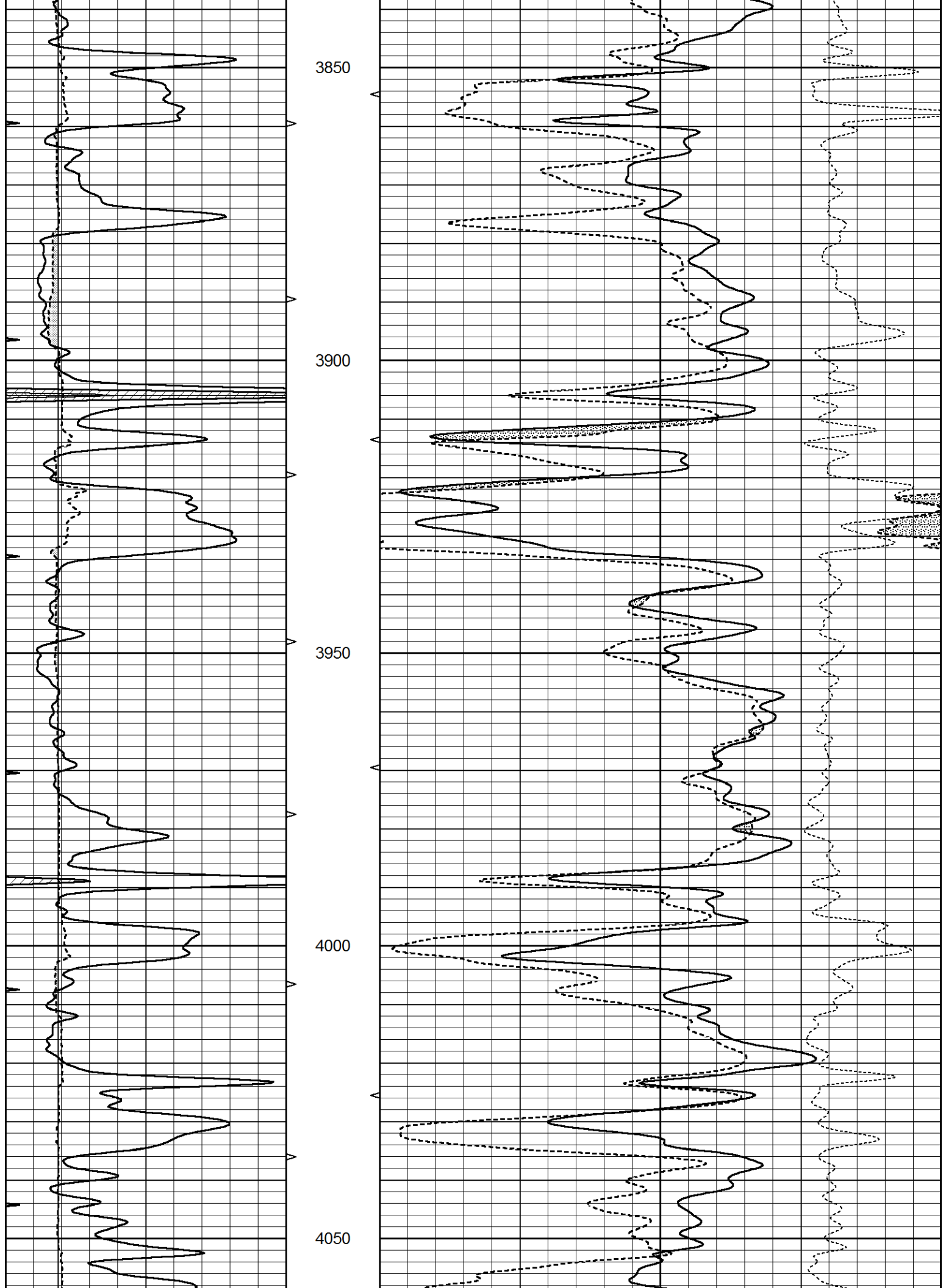
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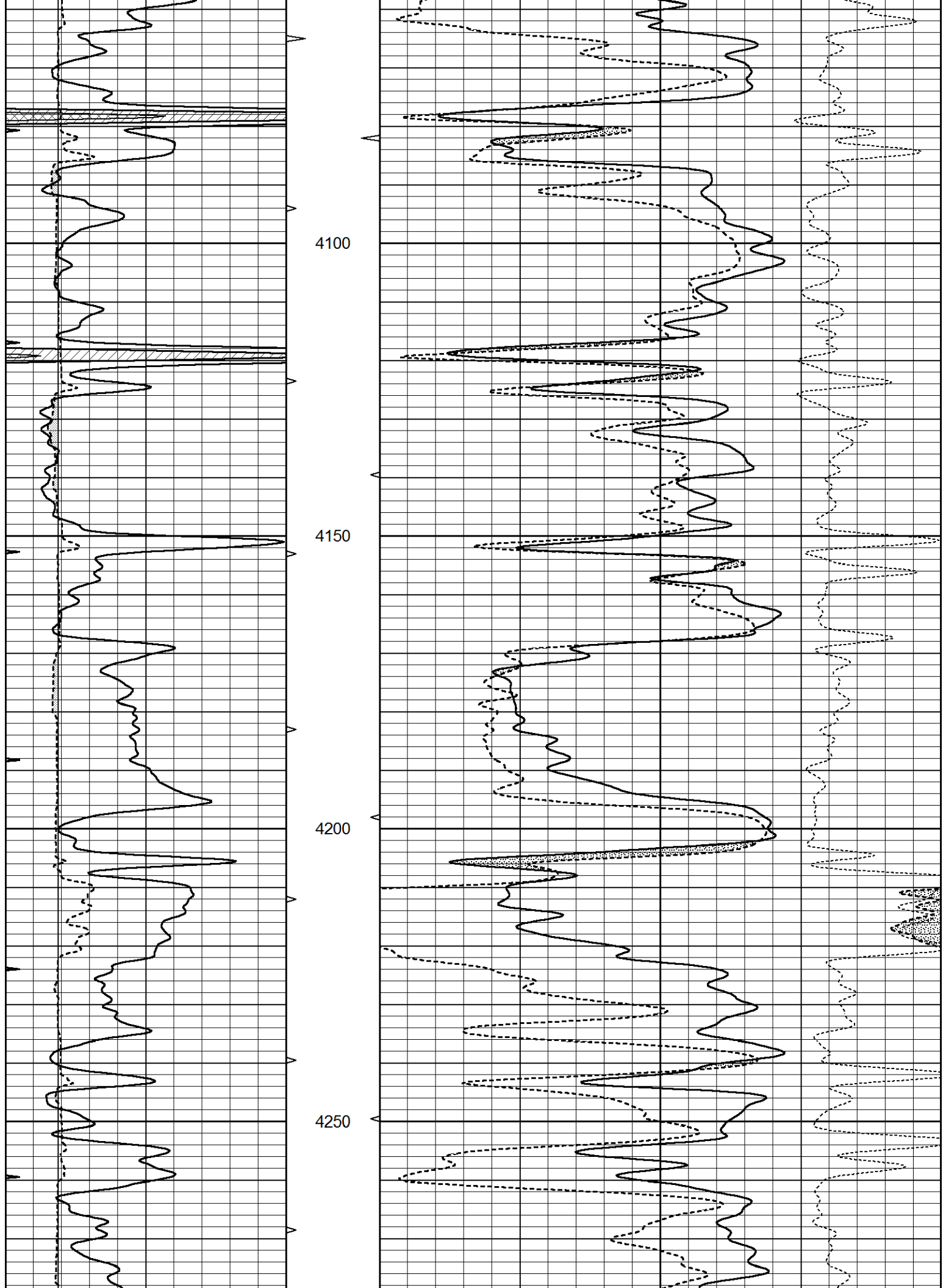
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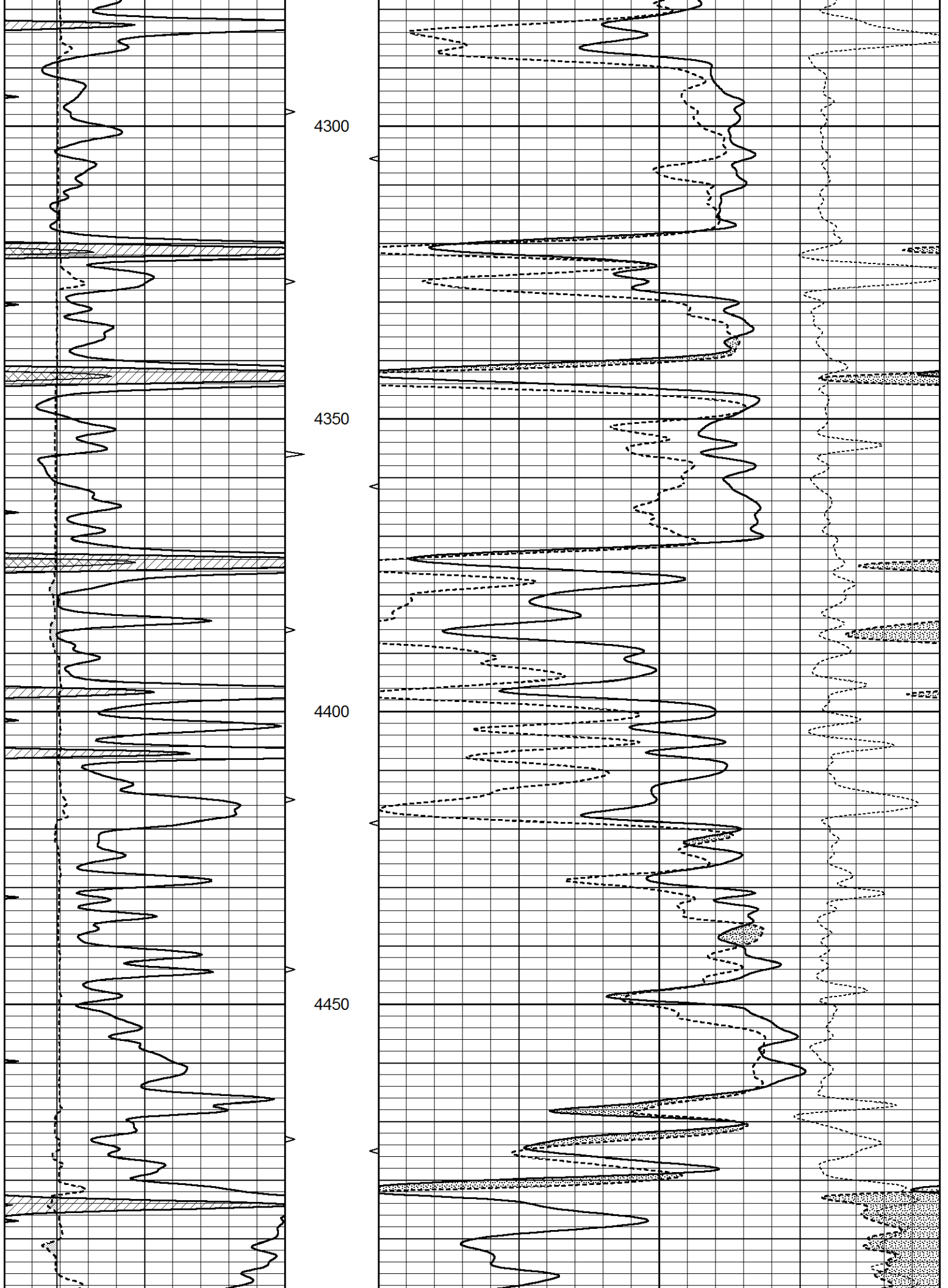


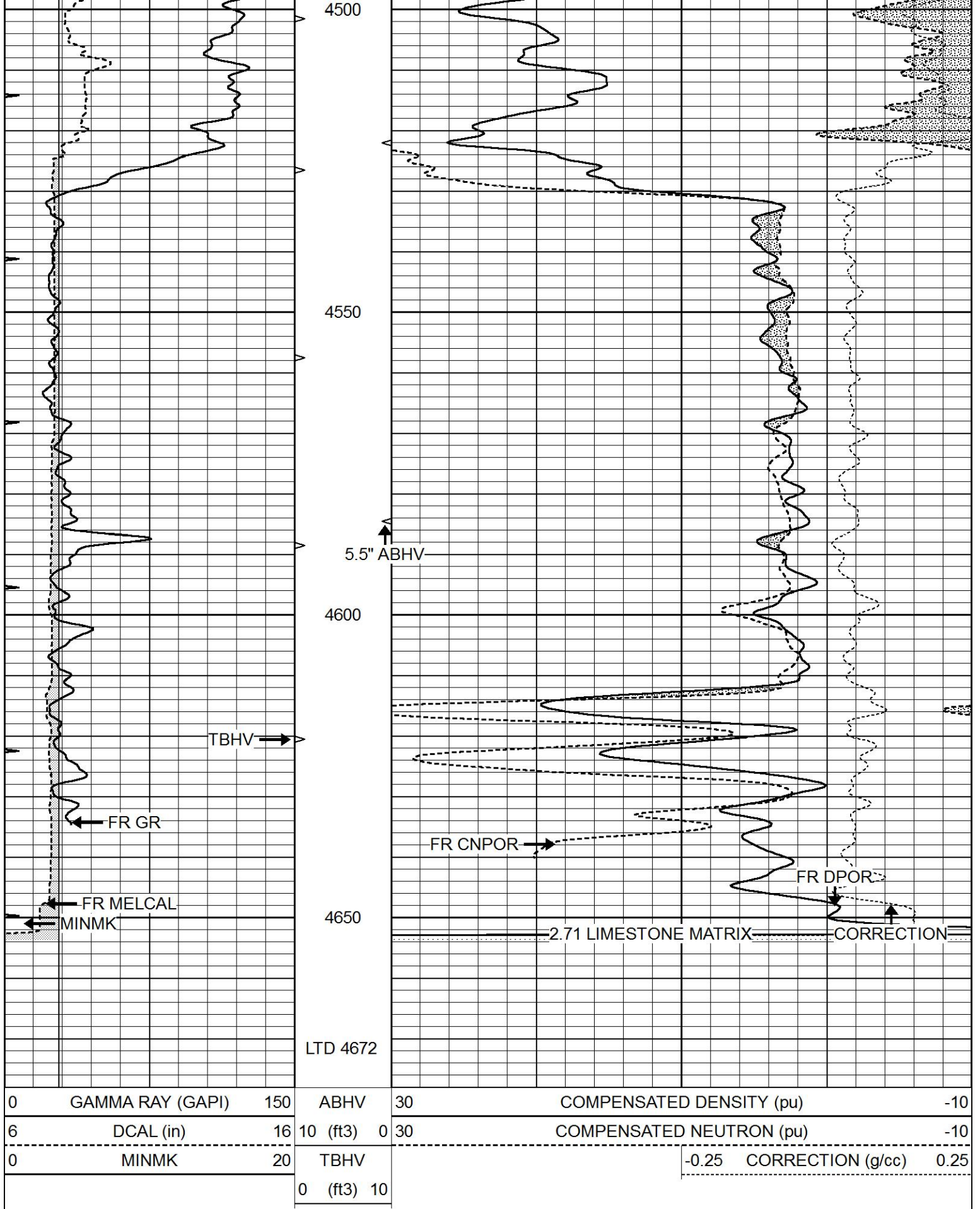








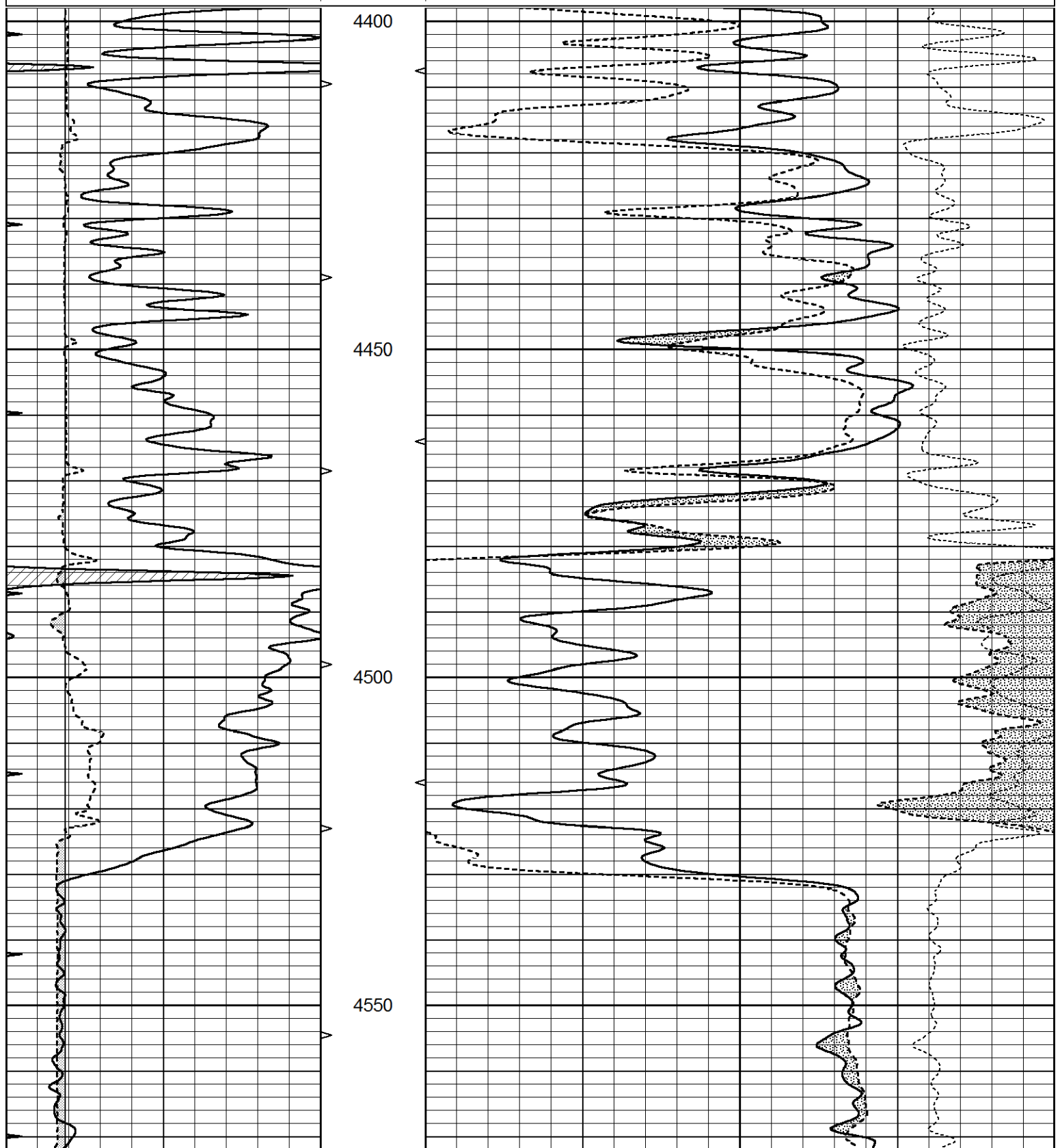


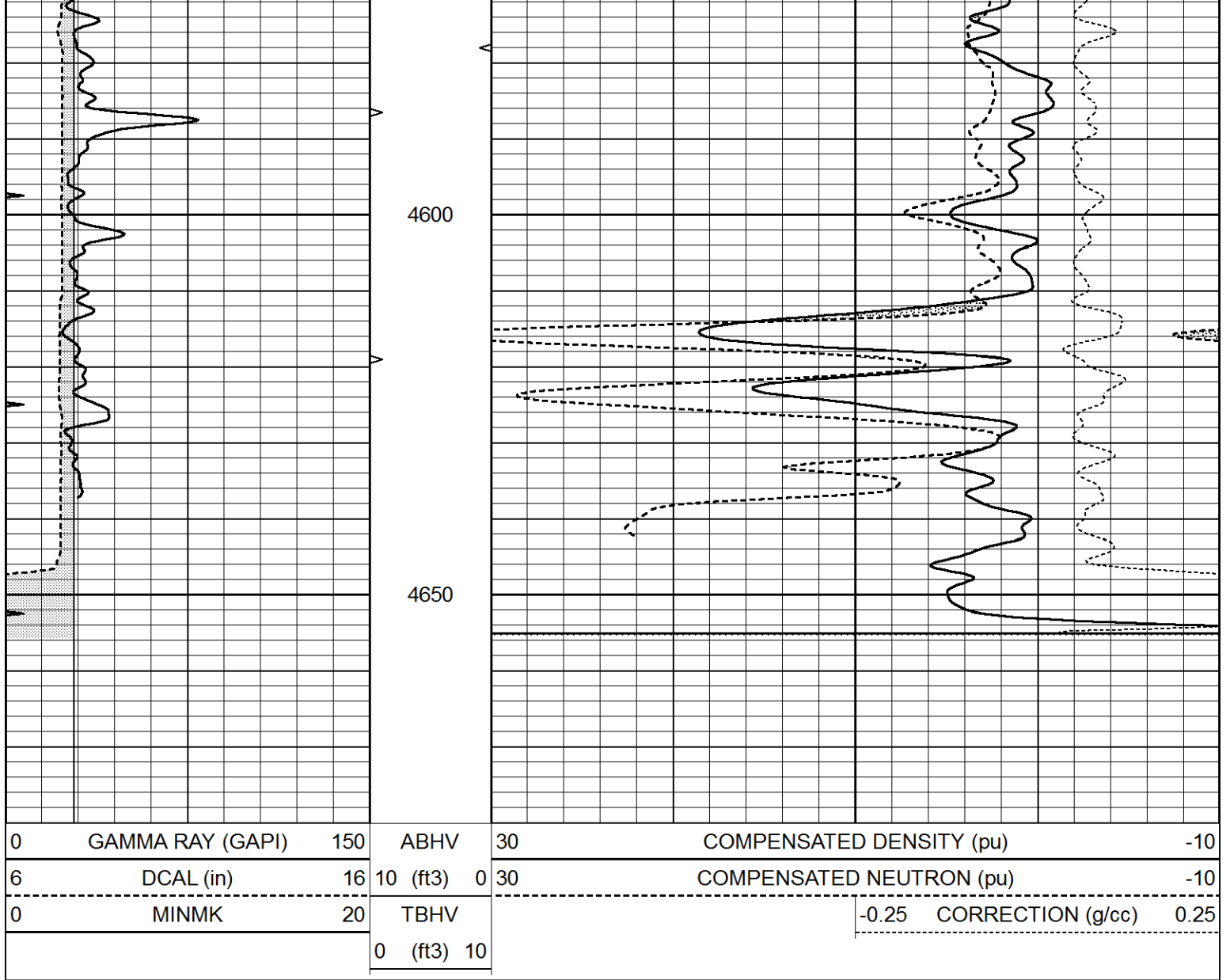


REPEAT SECTION

Database File 4546pe.db
 Dataset Pathname pass2.3
 Presentation Format den_neu
 Dataset Creation Thu Jun 18 16:04:49 2020
 Charted by Depth in Feet scaled 1:240

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





Calibration Report

Database File 4546pe.db
 Dataset Pathname pass3.7
 Dataset Creation Thu Jun 18 17:13:35 2020

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Thu Jun 18 15:47:26 2020
 Downhole Cal Performed: Thu Mar 12 11:45:10 2020
 After Survey Verification Performed: Thu Mar 12 11:45:00 2020

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	-8.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-63.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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		
		0.000	mmho-m		4000.000	mmho-m		

Litho Density Calibration Report
Serial: 004 Model: PRB

Master Calibration		Performed Mon May 11 10:45:58 2020				
	Background	Magnesium	Aluminum	Aluminum+Fe		
Window 1	1199.7	10039.4	3208.4	2838.9	cps	
Window 2	1096.3	8590.5	2806.1	2527.9	cps	
Window 3	934.1	5176.2	1855.7	1739.5	cps	
Window 4	267.0	271.6	264.8	264.9	cps	
Long Space	0.0	7494.2	1709.8	1431.6	cps	
Short Space	1.1	1784.3	1183.7	971.1	cps	
Rho		1.7100	2.5900	0.0000	g/cc	
Pe		2.0000	2.7500	5.7900		
Rib Angle	: 44.5	Rib Slope	: 0.982	Density/Spine Ratio	: 0.574	
Spine Angle	: 74.5	Spine Slope	: 3.601	Spine Intercept	: -18.0	

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				
	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		

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: Wed Jul 03 10:25:53 2019

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.3000 GAPI/cps