



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company		WHITE & ELLIS DRILLING INC.	
Well		CHAIN RANCH A #1	
Field		AMBER CREEK SOUTH	
County		BARBER	
State		KANSAS	
Location:		API # : 15-007-24161-00-00	
SEC 12 TWP 31S RGE 12W		Other Services DIL/MEL SONIC	
Permanent Datum	GROUND LEVEL	Elevation	1598
Log Measured From	KELLY BUSHING 10' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	5-7-14		
Run Number	ONE		
Depth Driller	4675		
Depth Logger	4670		
Bottom Logged Interval	4646		
Top Log Interval	3200		
Casing Driller	13 3/8" @ 337'		
Casing Logger	350'		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 34.00 PPM	
Density / Viscosity	9.4/7.1		
pH / Fluid Loss	11.5/9.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.60 @ 96F		
Rmf @ Meas. Temp	0.45 @ 96F		
Rmc @ Meas. Temp	0.72 @ 96F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	0.47 @ 122F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	122F		
Equipment Number	860		
Location	HAYS, KANSAS		
Recorded By	IAN MABB		
Witnessed By	DAVID GOULD		

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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.

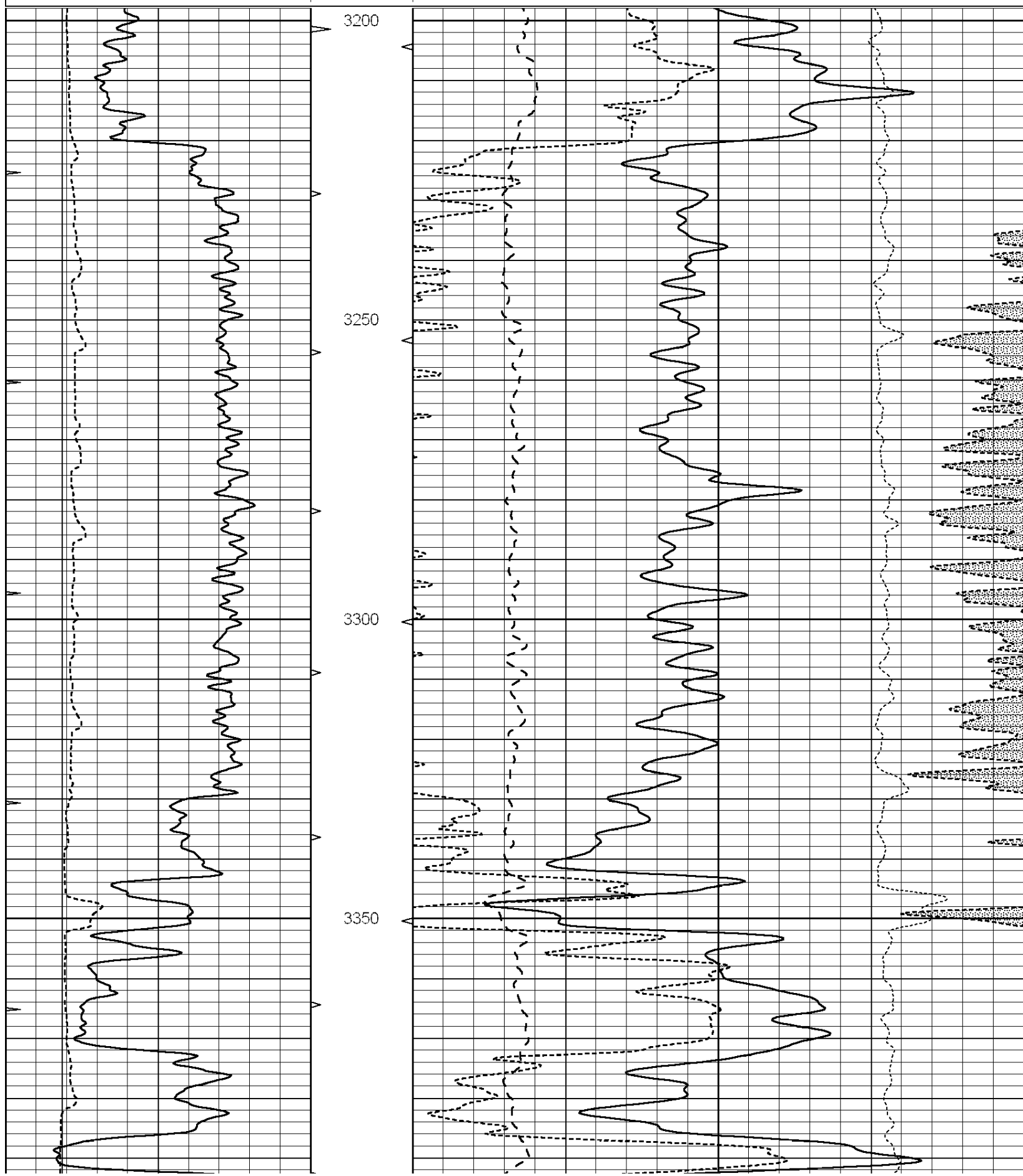
Comments

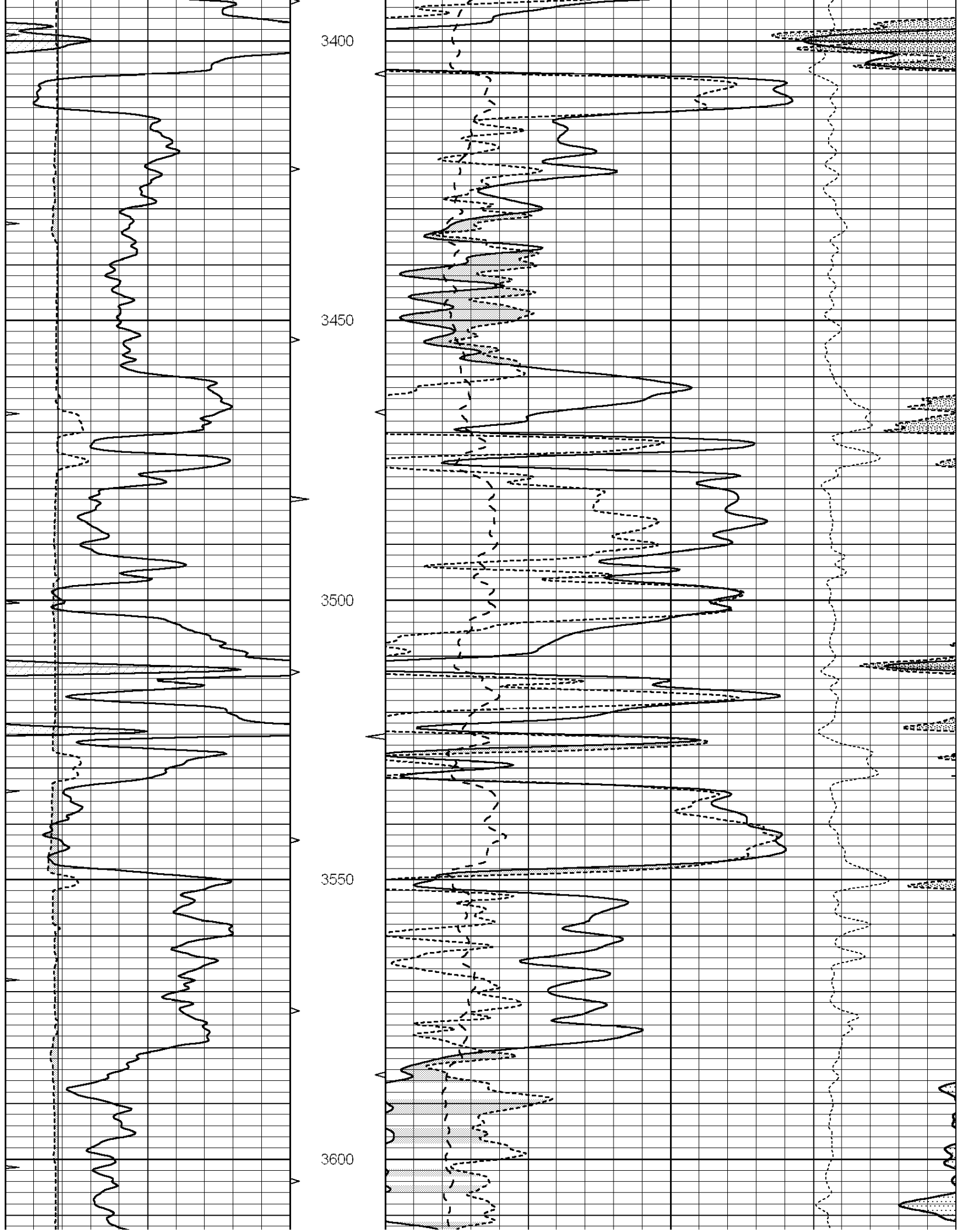
THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395

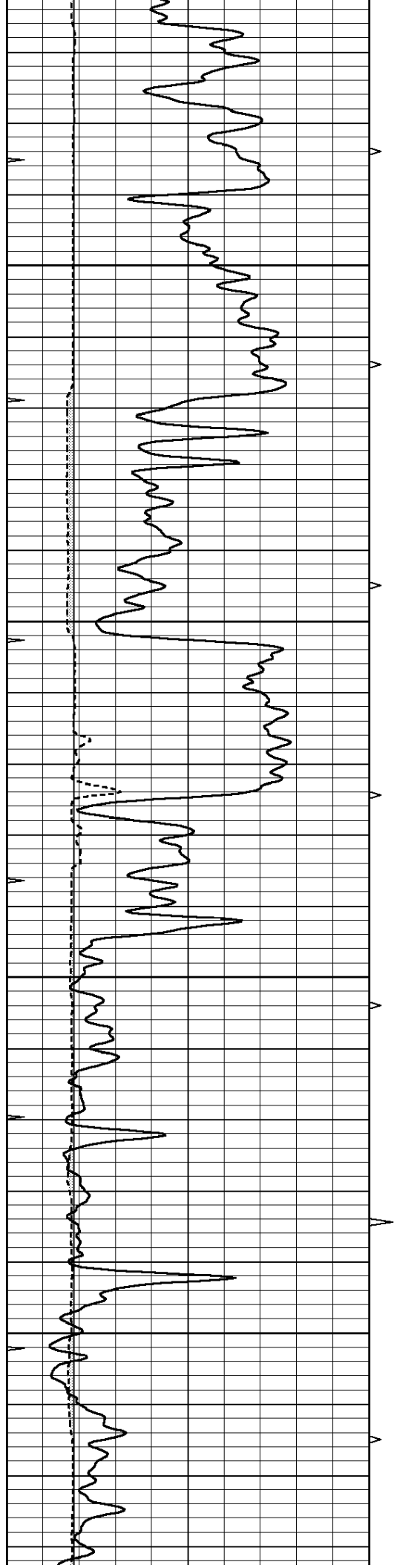
DIRECTIONS:

SAWYER, KS. - 10 MILES SOUTH TO 99 SPRINGS RD. - NE 1/2 MILE GAILLANDIA RD. - EAST 1/2 MILE - 1 1/2 MILE SOUTH INTO

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			





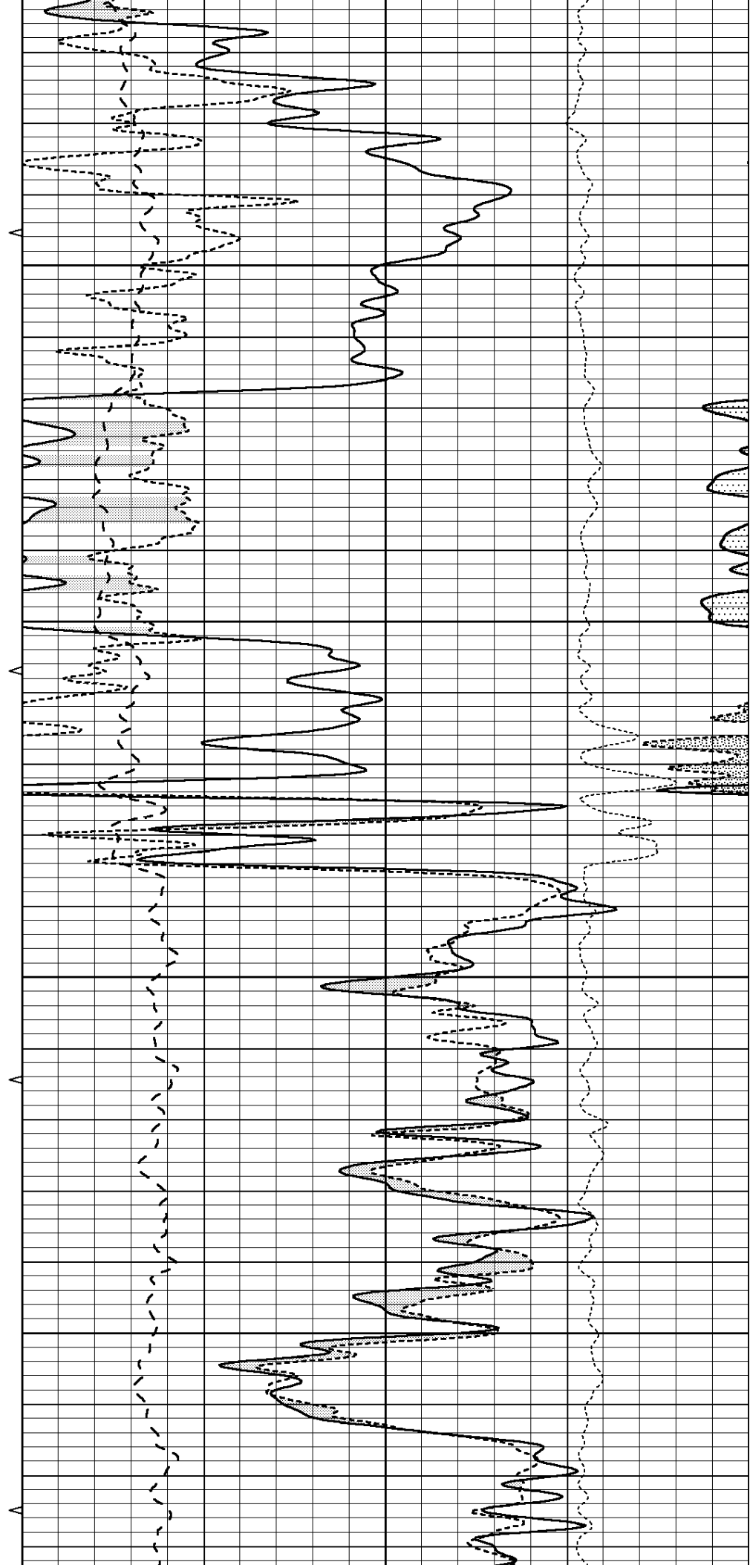


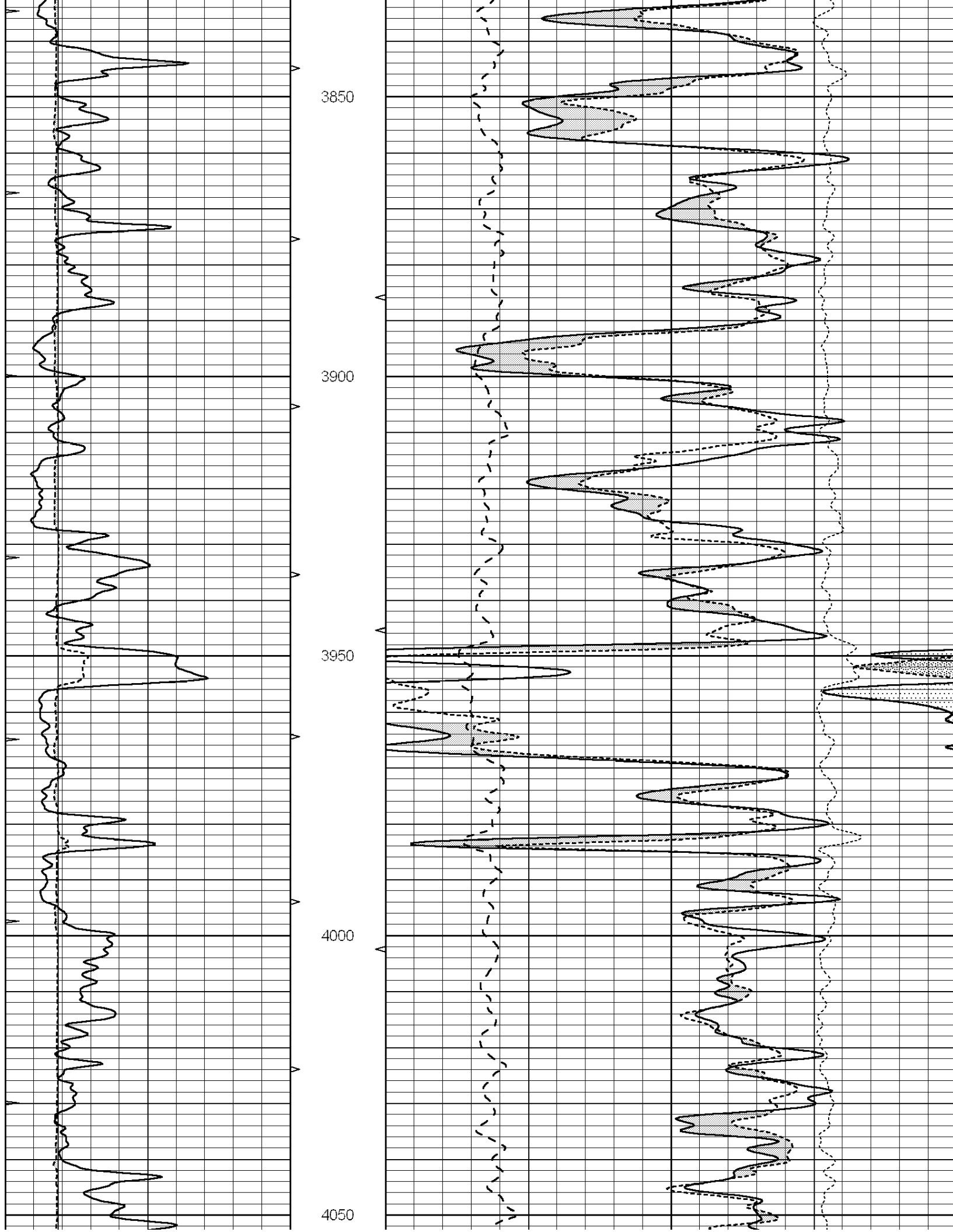
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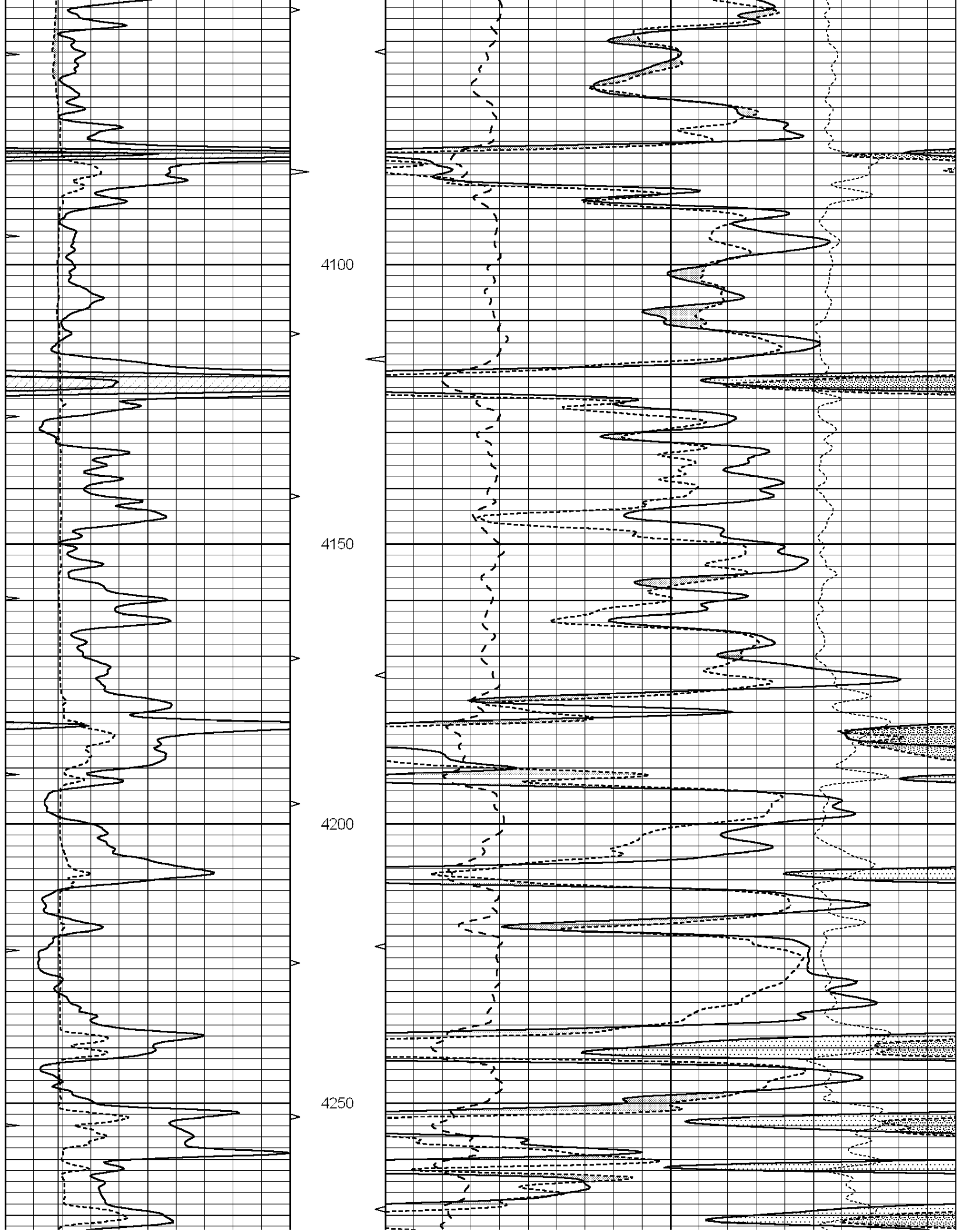
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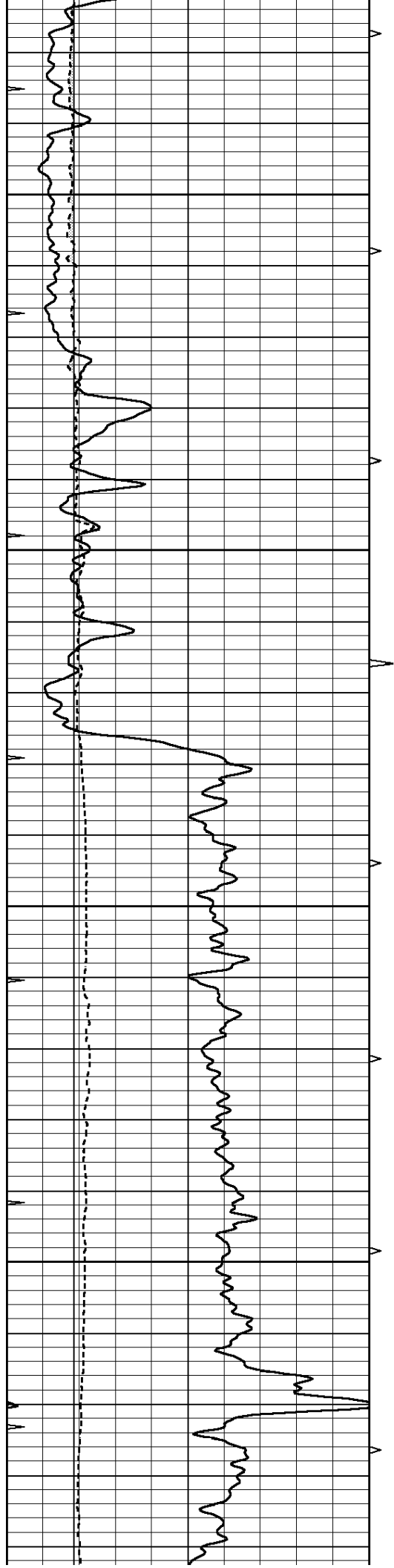
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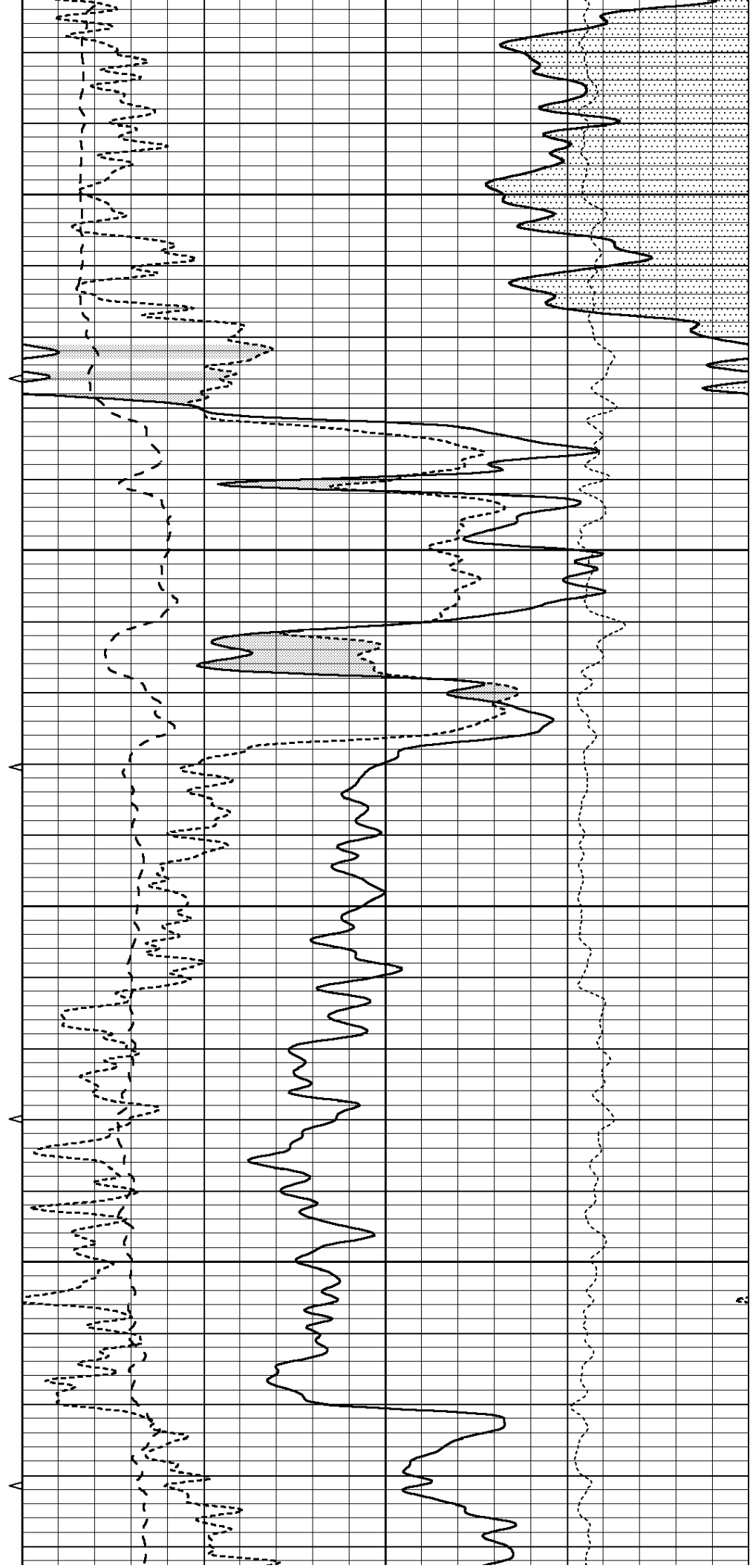


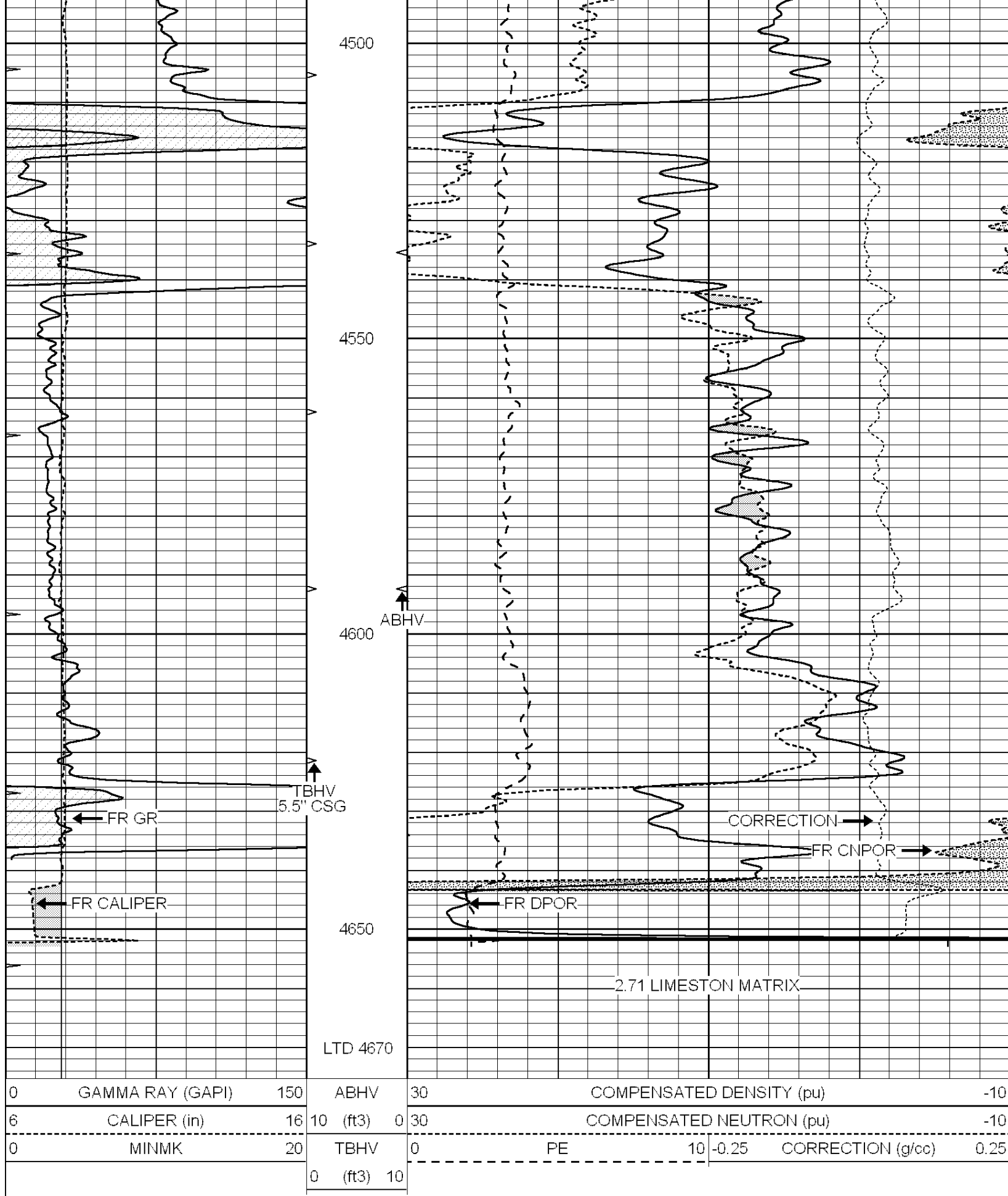
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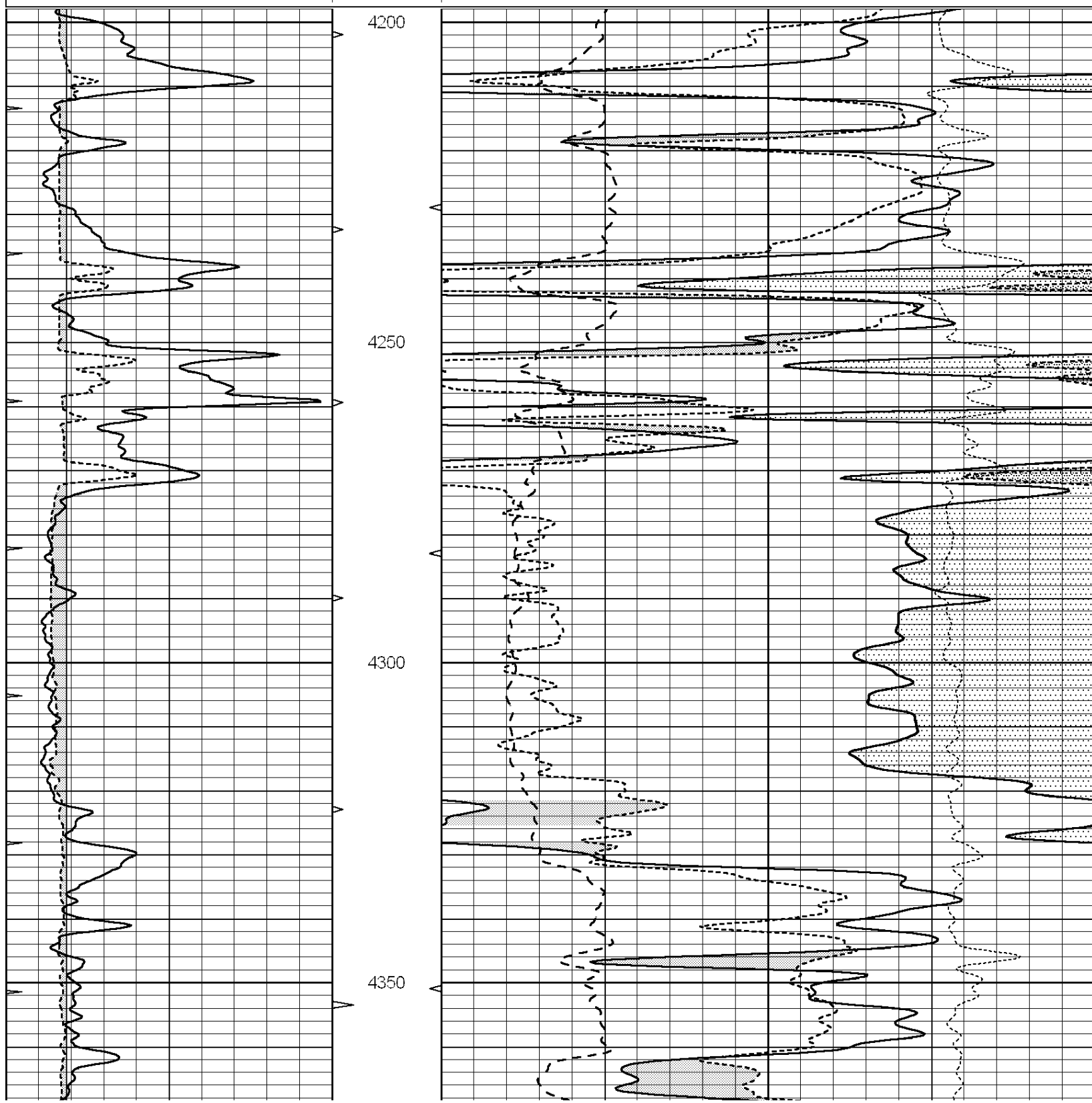
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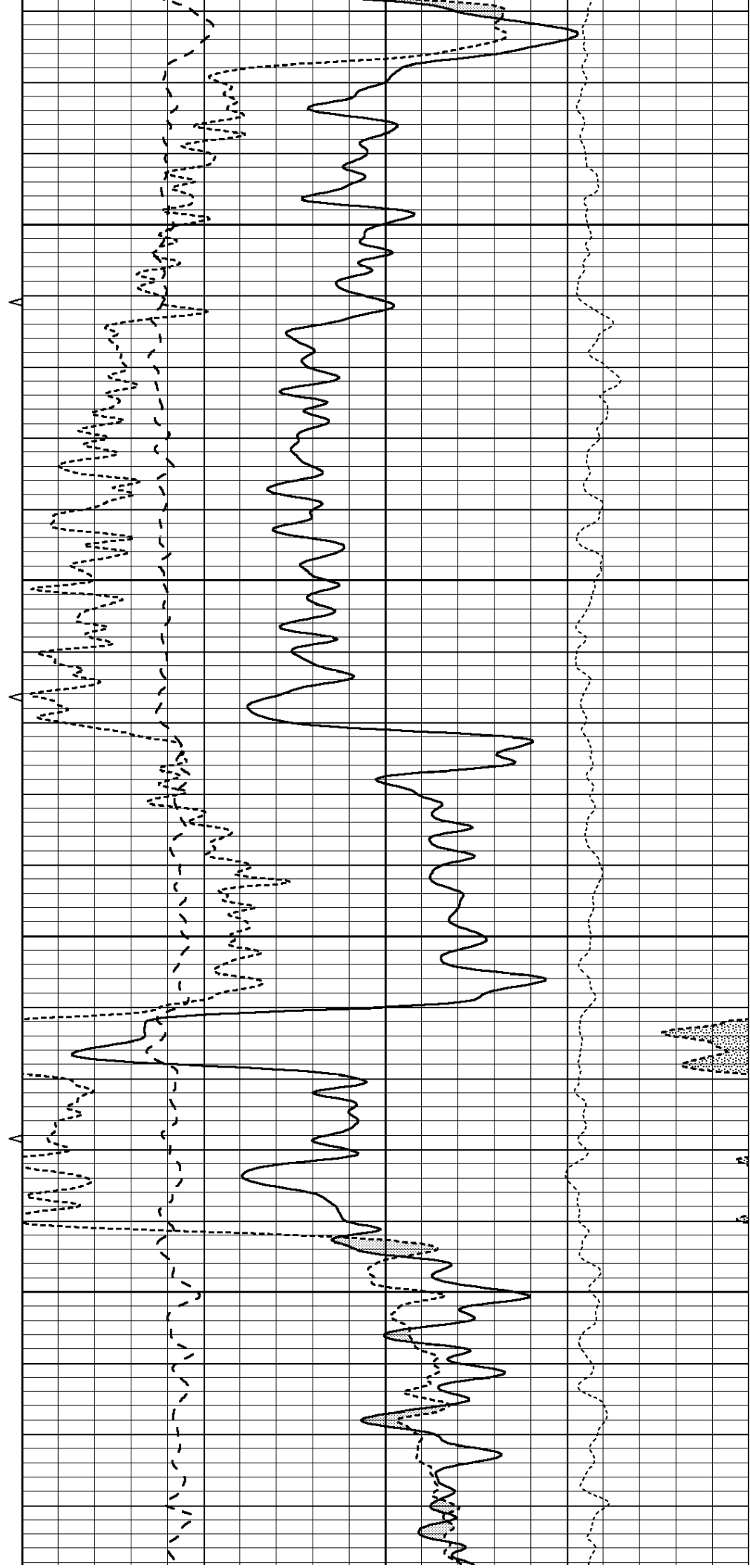
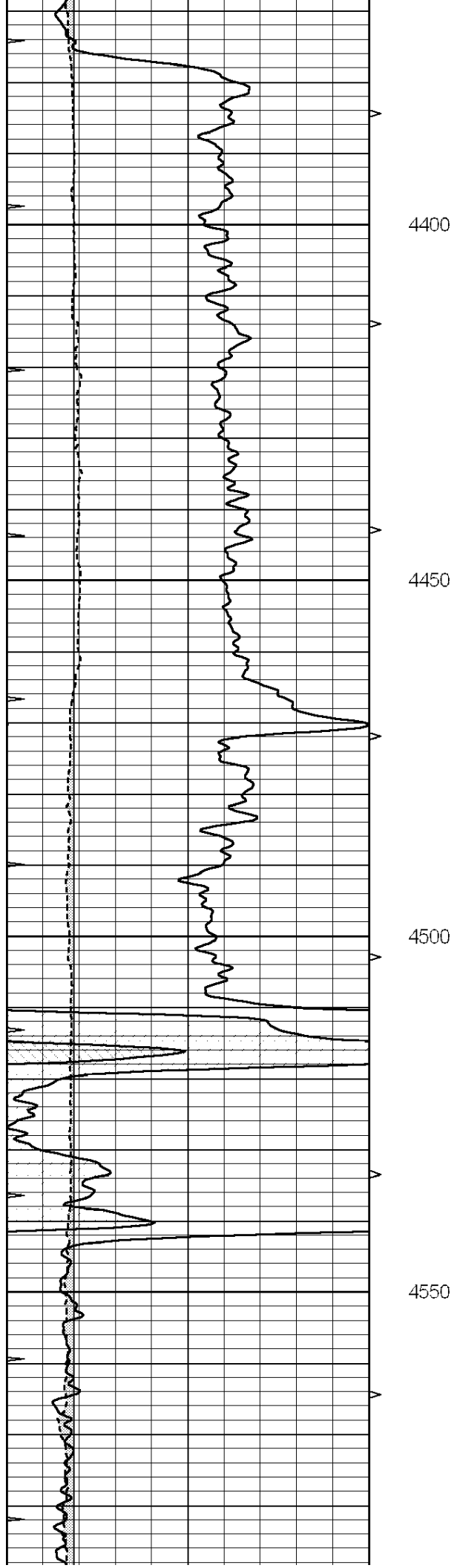


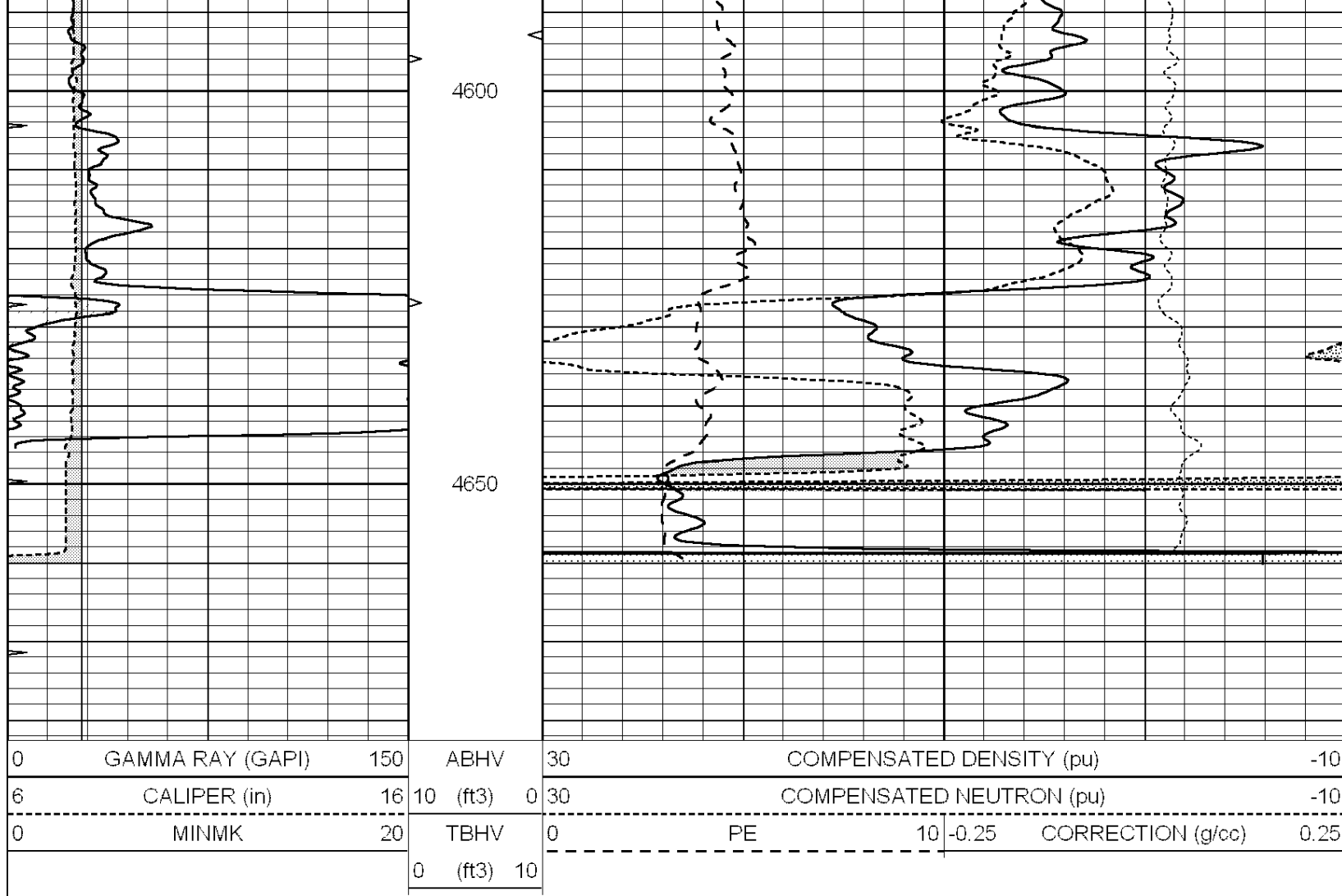


Database File: 24427pe.db
Dataset Pathname: pass2.2.1
Presentation Format: _ldt_neu
Dataset Creation: Wed May 07 13:25:01 2014 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		







Calibration Report

Database File: 24427pe.db
 Dataset Pathname: pass3.2
 Dataset Creation: Wed May 07 14:14:28 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Fri Apr 18 20:58:05 2014

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	6.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	540.000	5.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	540.000	-4.000

Litho Density Calibration Report
 Serial: 001 Model: PRB
 Performed Tue Jul 03 11:37:32 2007

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2170.6	9915.1	3855.3	11241.6	cps

Window 2	2029.2	8716.5	3483.5	9750.8	cps
Window 3	1665.0	4929.7	2356.8	5332.0	cps
Window 4	493.3	492.1	490.0	486.8	cps
Long Space	0.0	6687.3	1454.3	7721.6	cps
Short Space	1.9	2149.3	1403.9	2354.5	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.556
Spine Angle	: 74.4	Spine Slope	: 3.583	Spine Intercept	: -18.7

Caliper			
Low Ref	Readings 3.5	Reference 8.3	
High Ref	5.4	14.0	
	Gain: 2.0		Offset: 1.5

Compensated Neutron Calibration Report

Serial Number:	080620
Tool Model:	Probe

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:	7	
Tool Model:	Probe1	
Performed:	Fri Apr 18 20:57:05 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.4500	GAPI/cps