



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company WHITE & ELLIS DRILLING, INC.
Well CHAIN RANCH "C" #1
Field AMBER CREEK
County BARBER
State KANSAS

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Field AMBER CREEK
County BARBER State KANSAS

Location: API # : 15-007-24162-0000
330' FNL & 660' FEL
N/2 - NE - NE
SEC 2 TWP 31S RGE 12W
Permanent Datum GROUND LEVEL Elevation 1605
Log Measured From KELLY BUSHING 10' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL/MEL
SONIC
Elevation
K.B. 1615
D.F. 1613
G.L. 1605

Date	4/29/14	
Run Number	ONE	
Depth Driller	5152	
Depth Logger	5152	
Bottom Logged Interval	5128	
Top Log Interval	3300	
Casing Driller	8 5/8"@350'	
Casing Logger	348	
Bit Size	7 7/8"	
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 7,000 PPM
Density / Viscosity	9.5/56	
pH / Fluid Loss	9.5/9.6	
Source of Sample	FLOWLINE	
Rim @ Meas. Temp	.950@50F	
Rmf @ Meas. Temp	.713@50F	
Rmc @ Meas. Temp	1.14@50F	
Source of Rmf / Rmc	MEASUREMENT	
Rim @ BHT	.377@126F	
Time Circulation Stopped	4 HOURS	
Time Logger on Bottom	7:15 P.M.	
Maximum Recorded Temperature	126F	
Equipment Number	4854	
Location	HAYS, KANSAS	
Recorded By	JEFF LUEBBERS	
Witnessed By	ADAM NIGHSWONGER	

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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

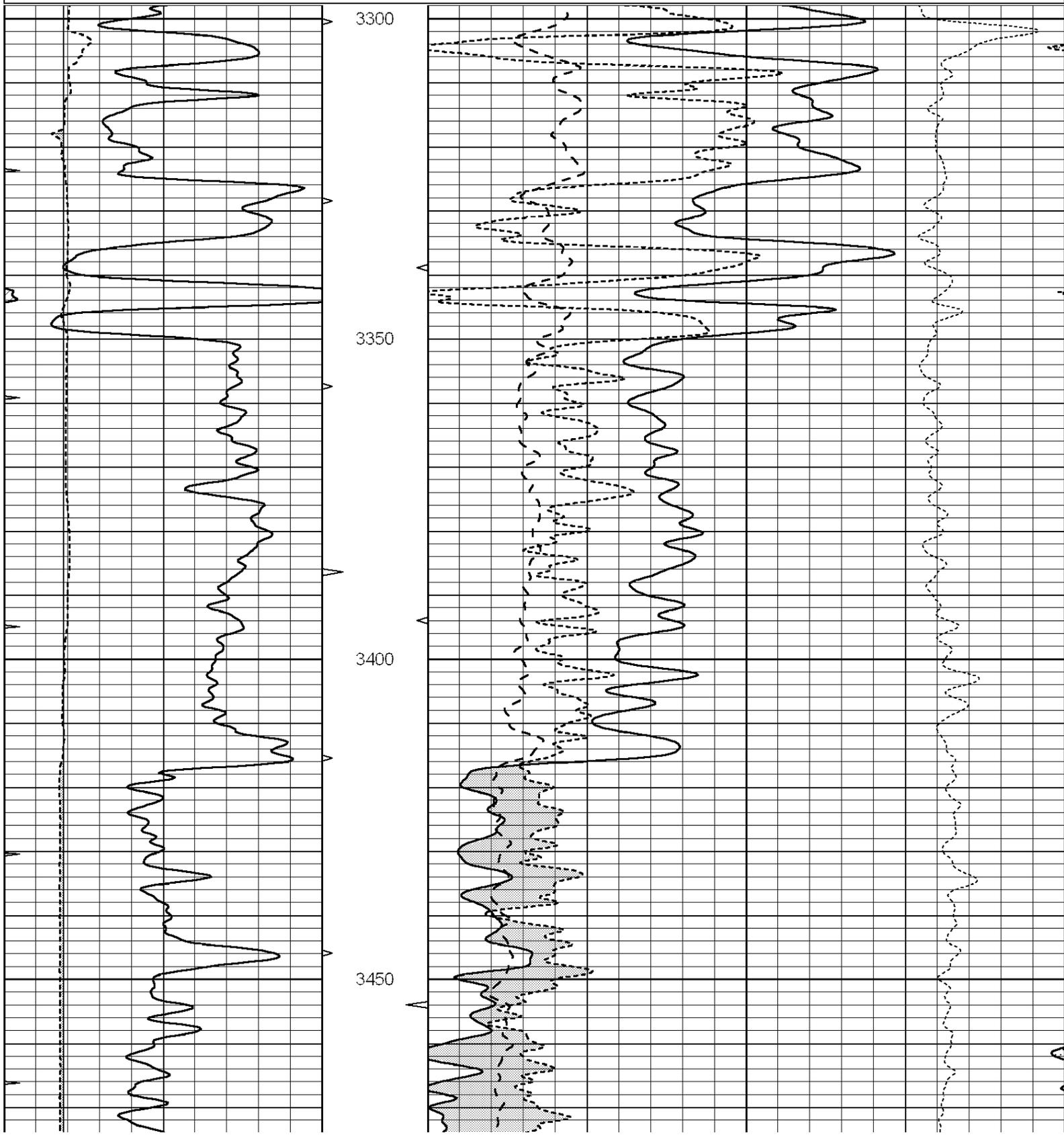
THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS
MEDININE LODGE, KS., 7N. ON HWY 281 TO "99 SPRINGS RD.", 1/2E. TO "GALLARDIA RD.", 1/2S. TO
CATTLE GUARD, W. INTO THEN BACK NORTH
(ALTERNATE) - 10S. OF SAWYER, KS.

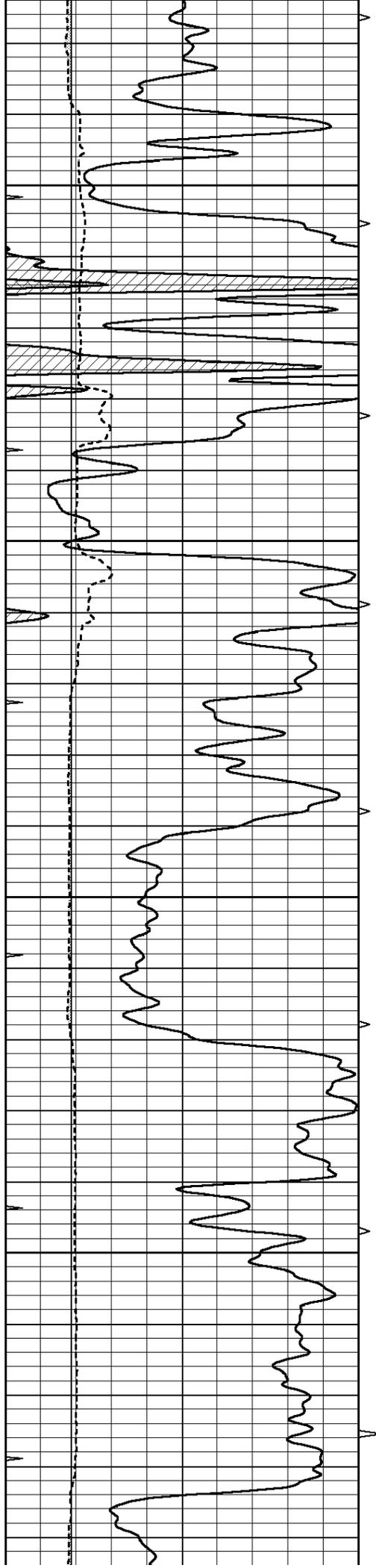


MAIN SECTION

Database File: 23819pe.db
 Dataset Pathname: pass3.6
 Presentation Format: ldt_neu
 Dataset Creation: Tue Apr 29 21:47:30 2014 by Calc SOC 120430
 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					



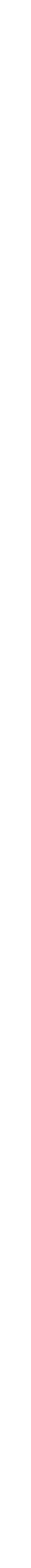
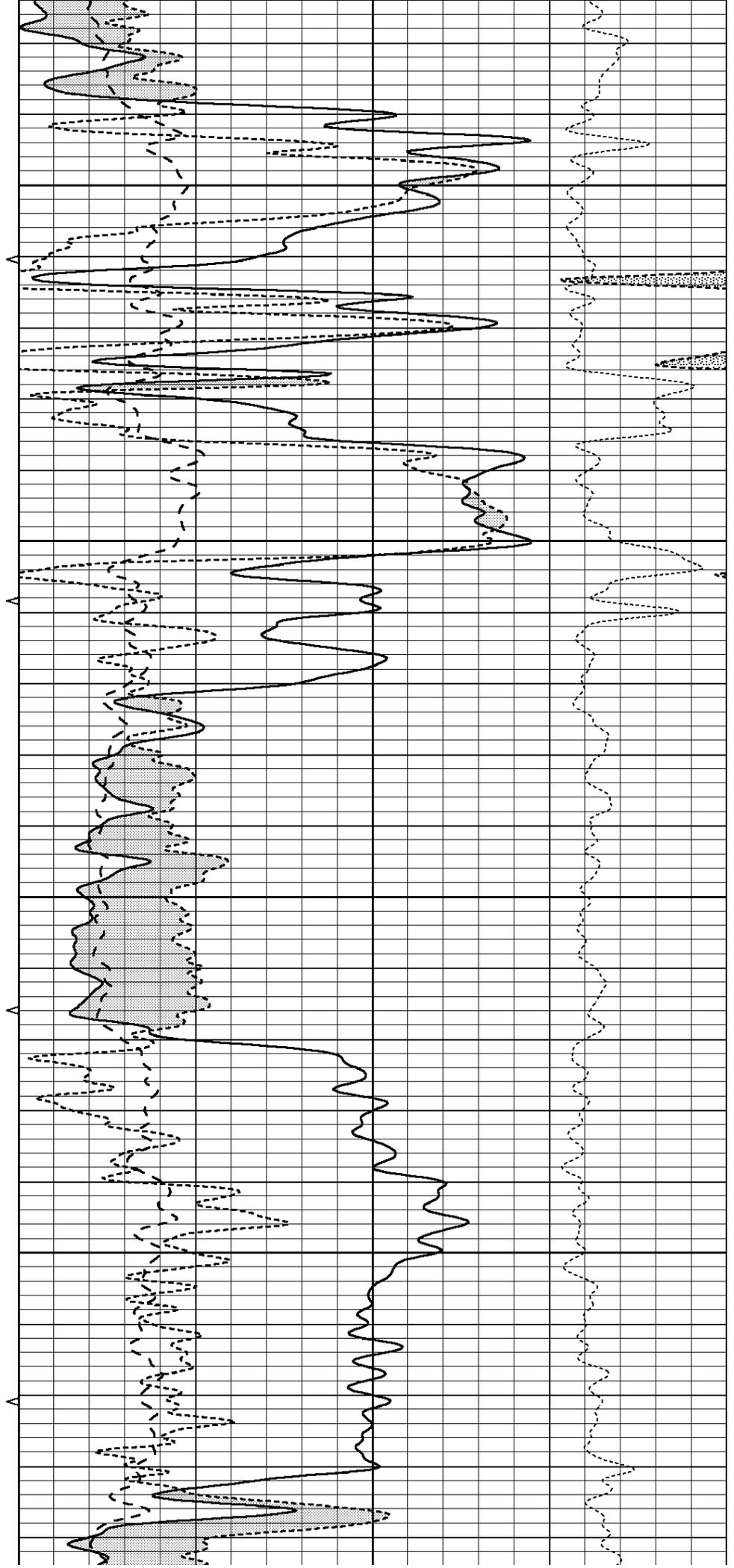


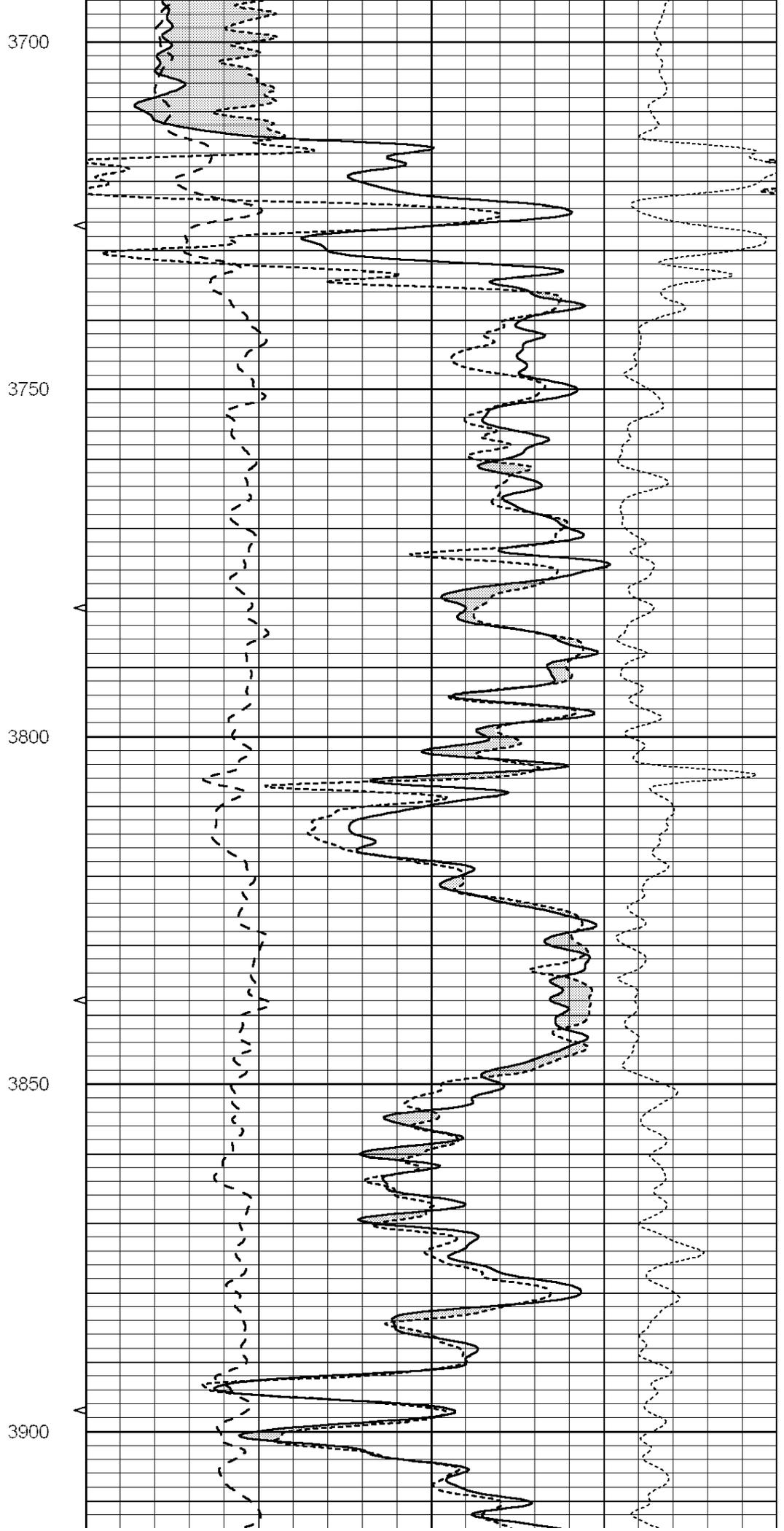
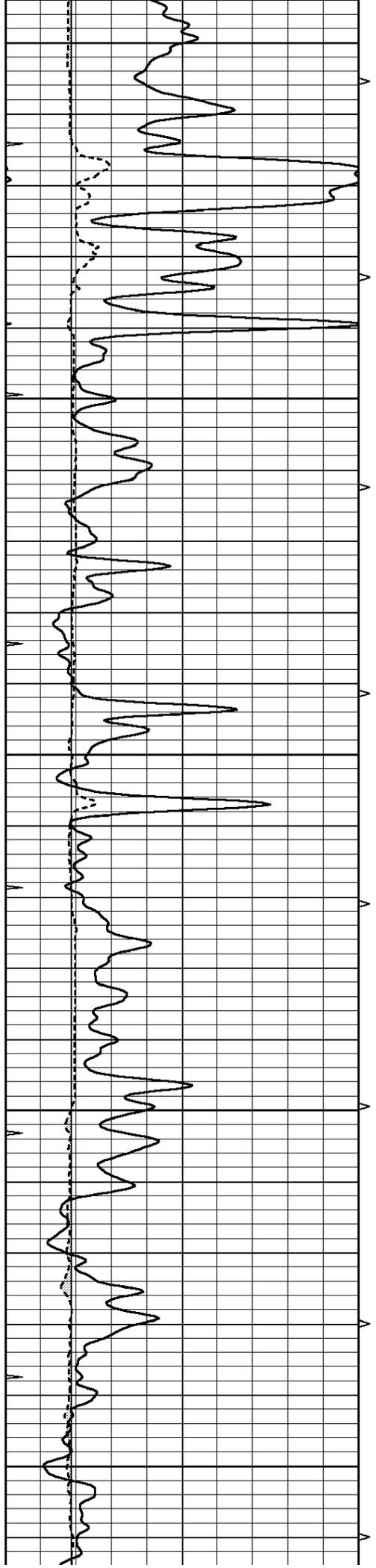
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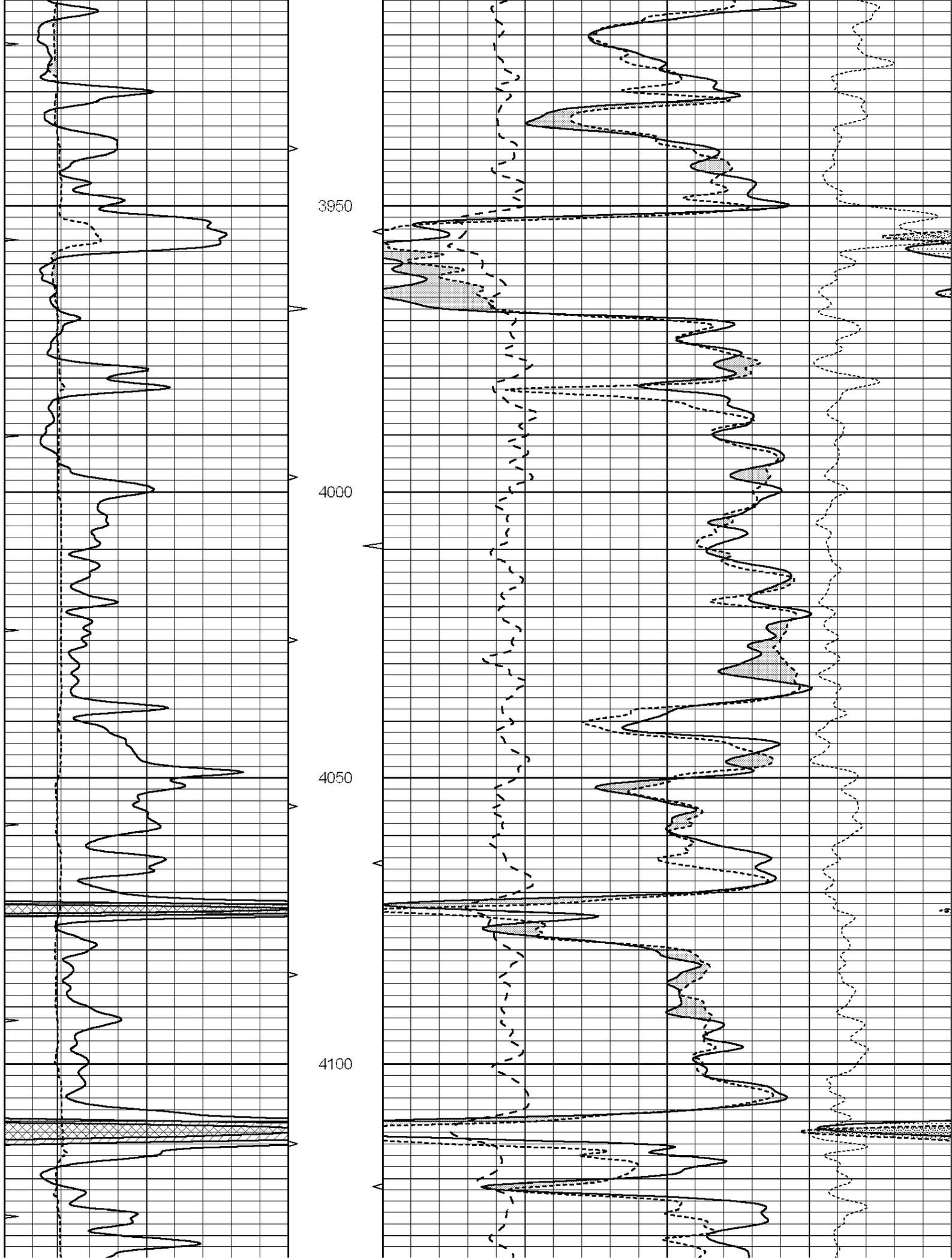
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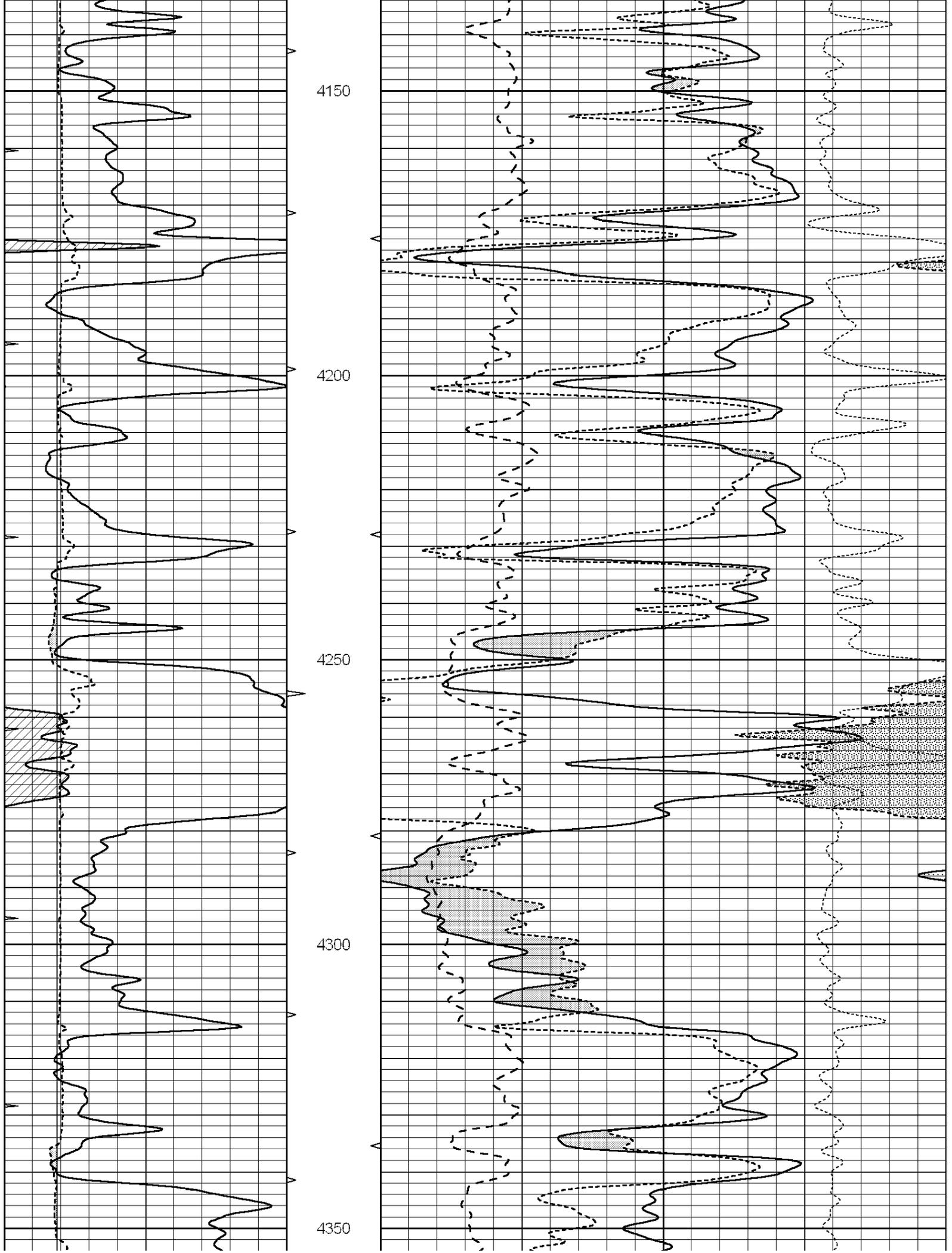
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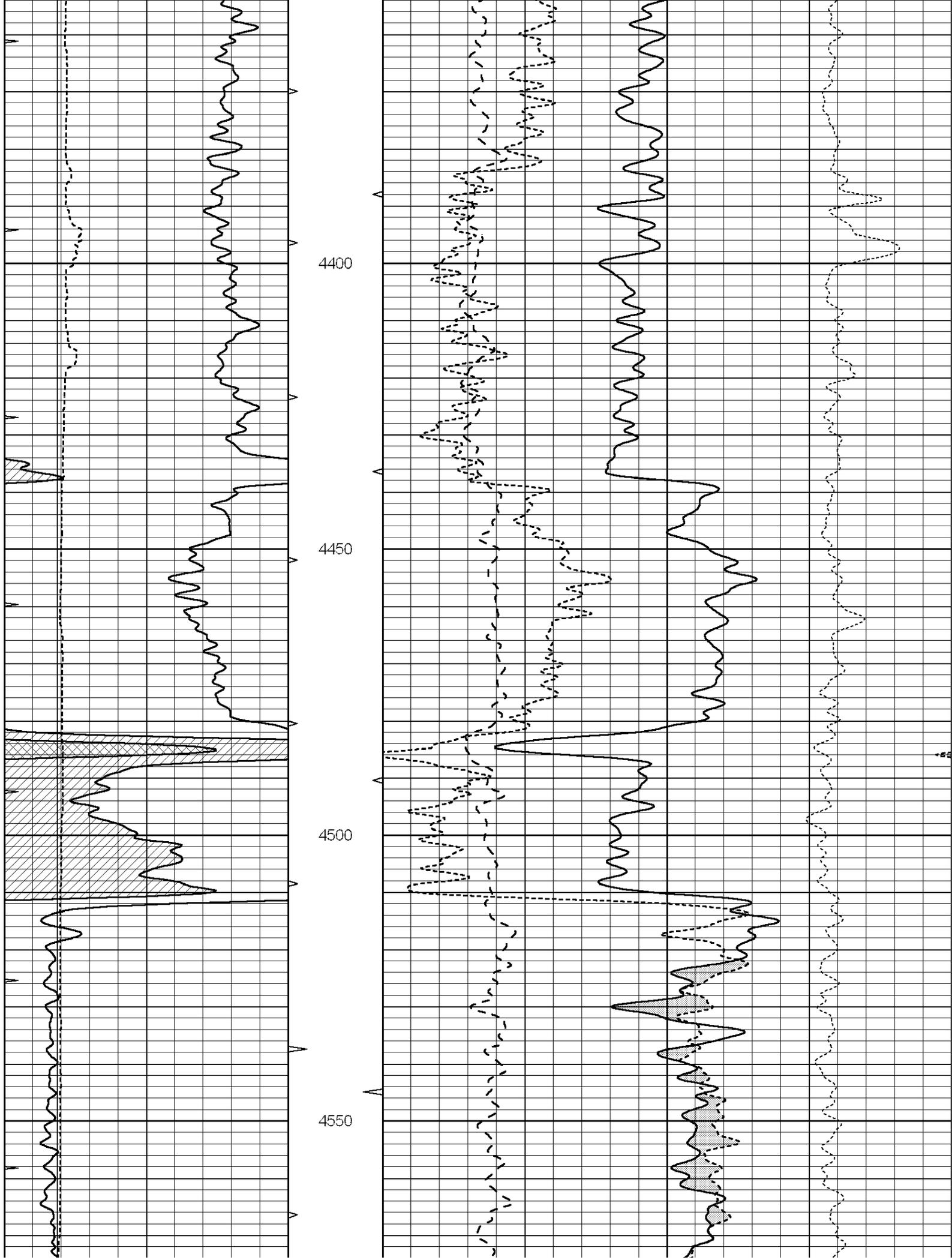
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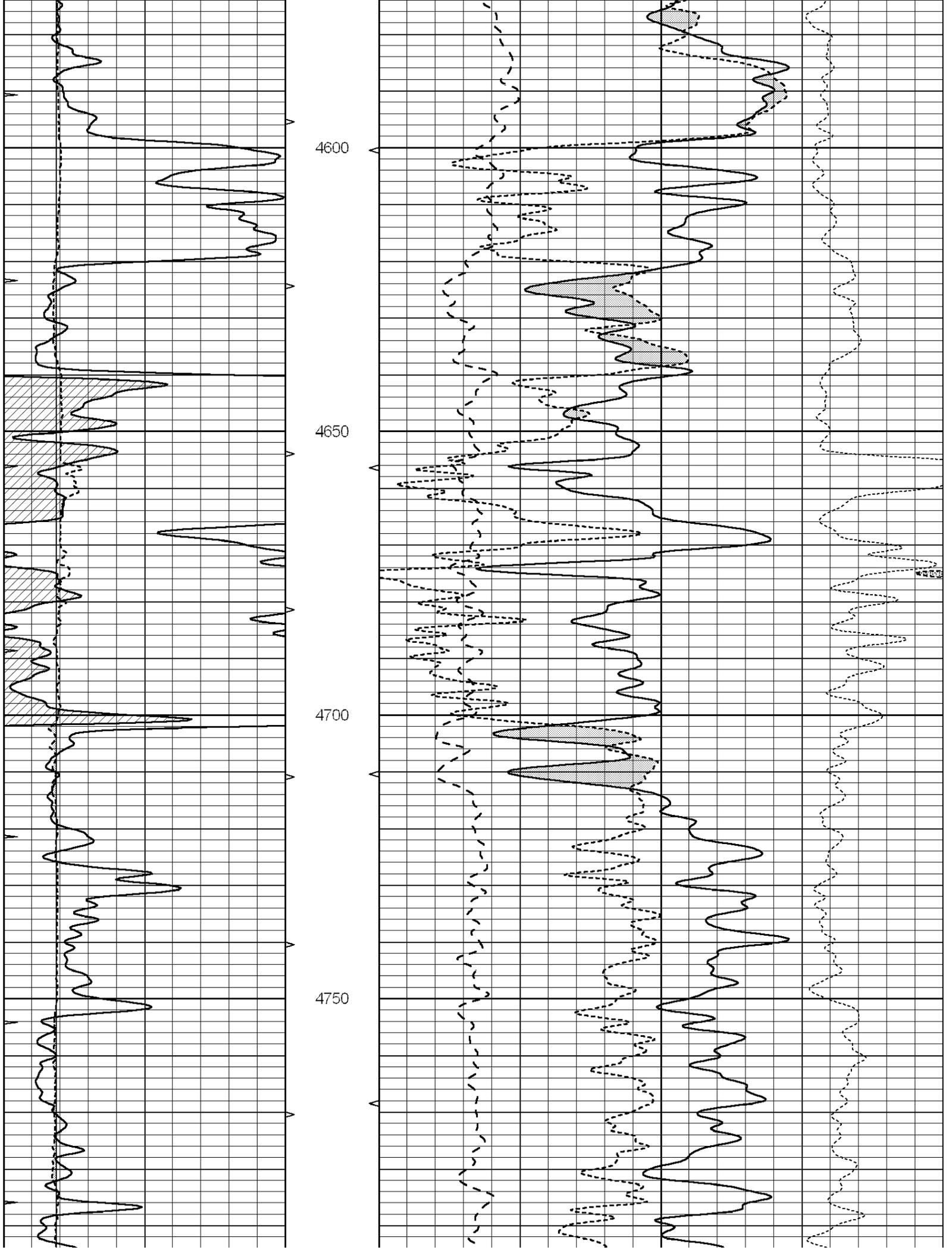


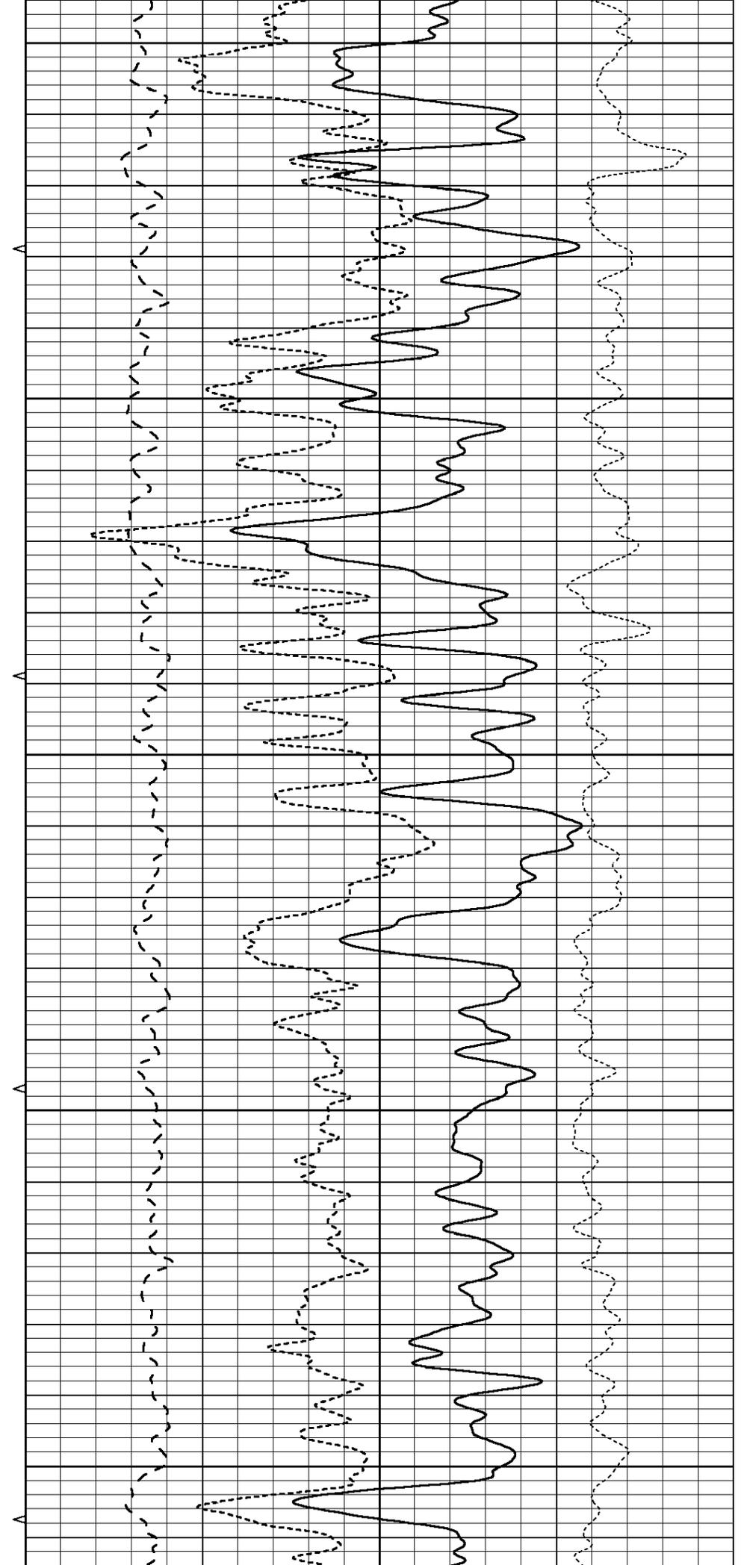
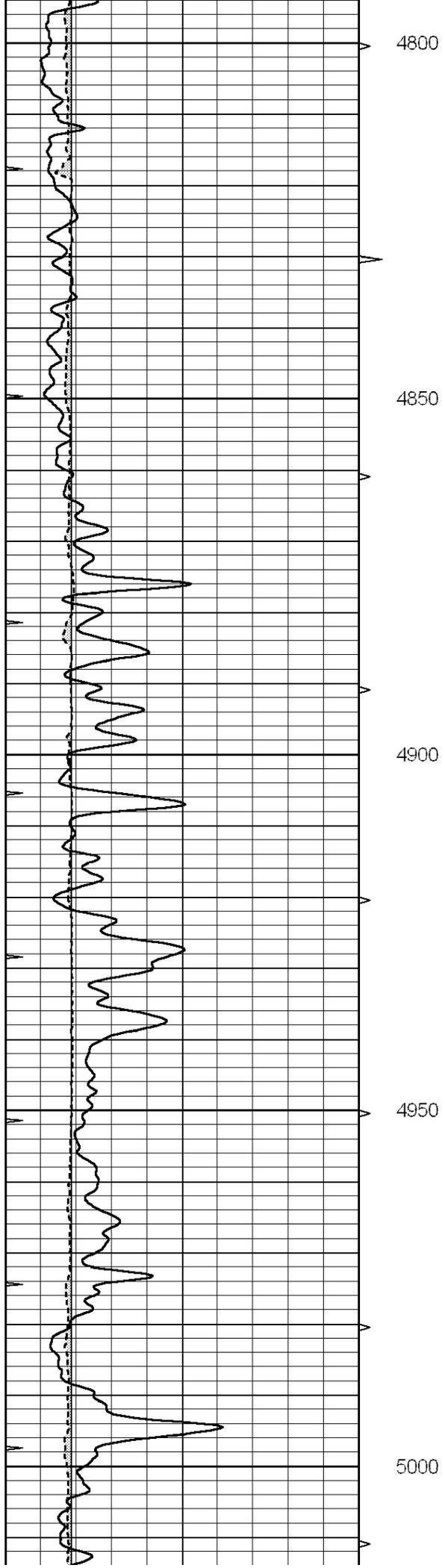


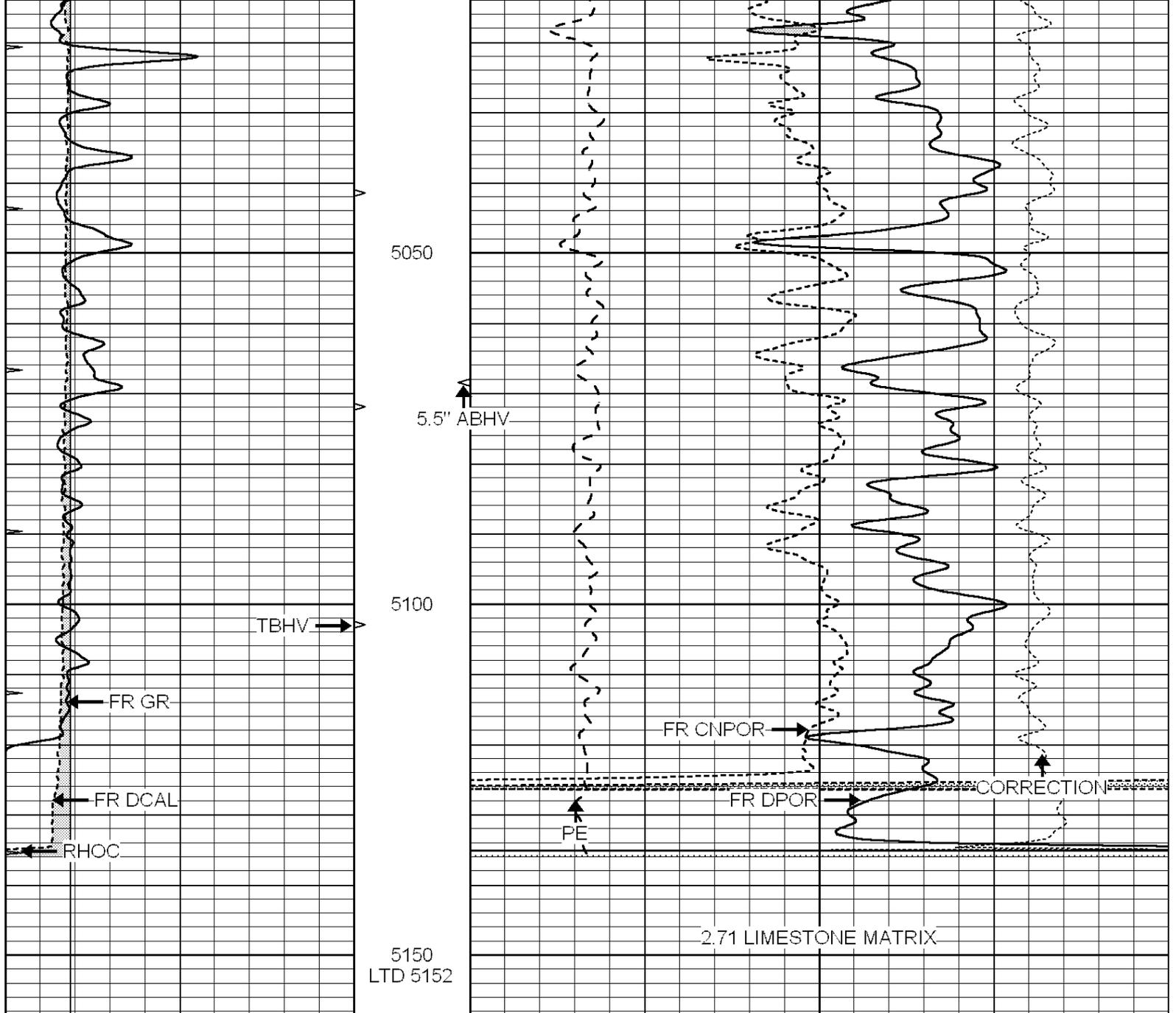












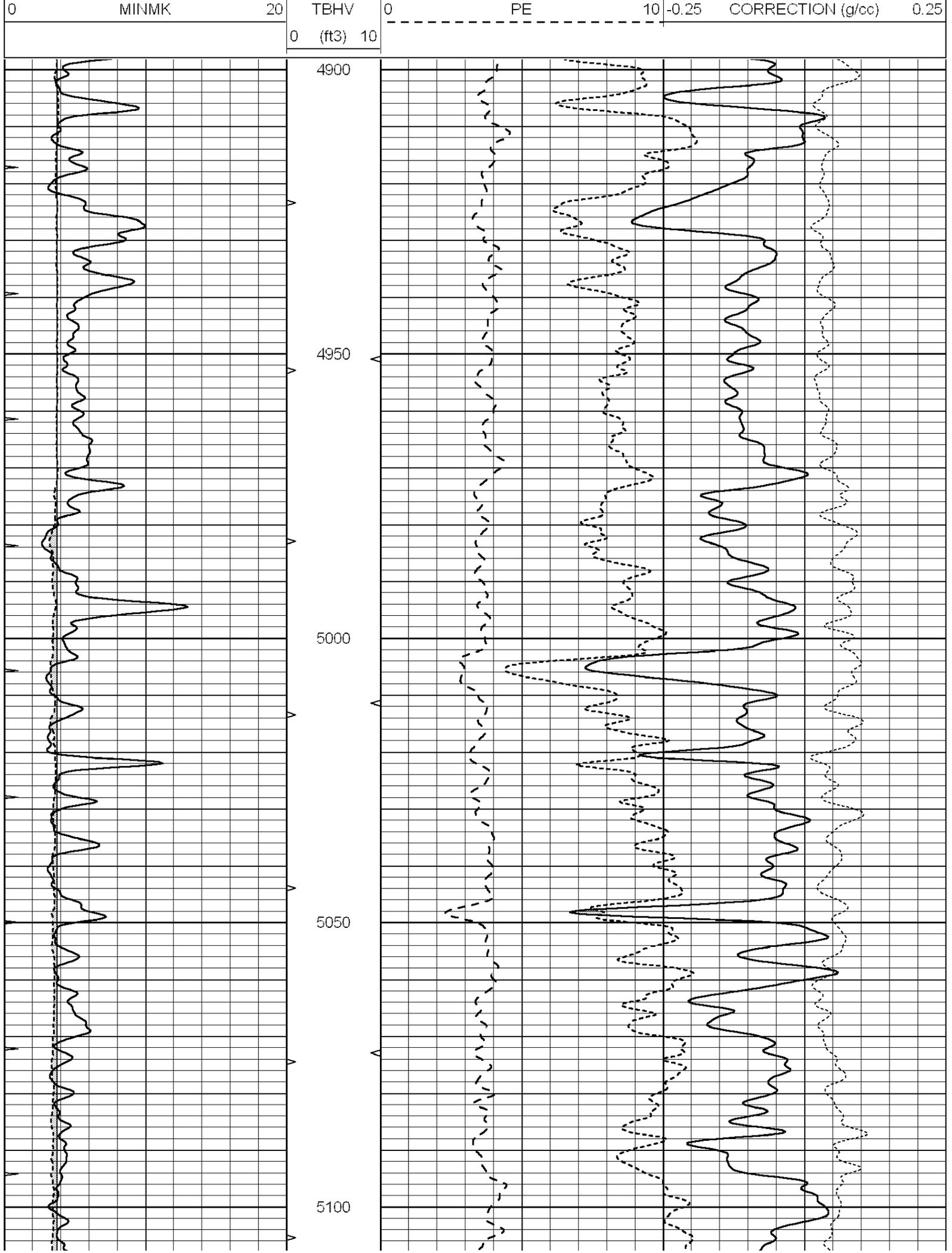
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25
			0 (ft3)	10	CORRECTION (g/cc)	0.25

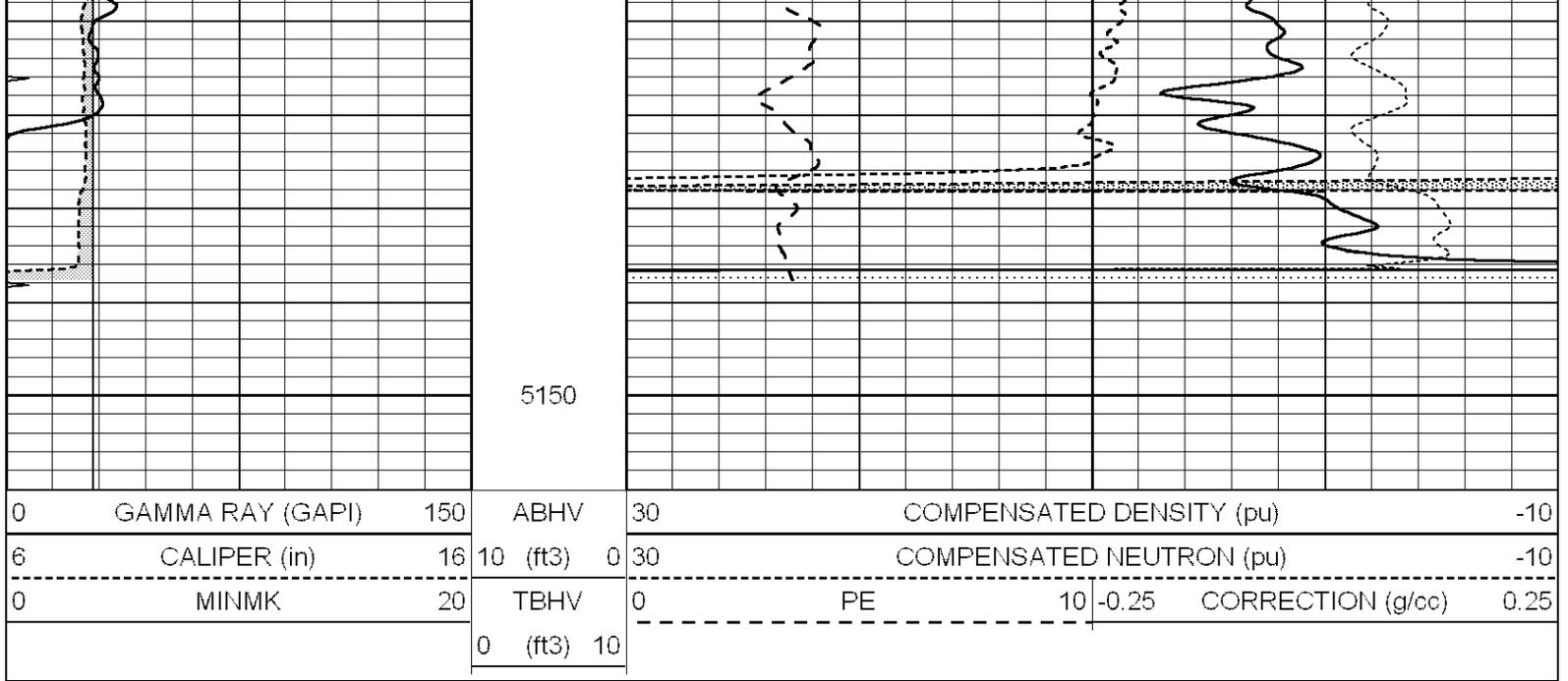


REPEAT SECTION

Database File: 23819pe.db
 Dataset Pathname: pass2.3
 Presentation Format: ldt_neu
 Dataset Creation: Tue Apr 29 20:09:11 2014 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

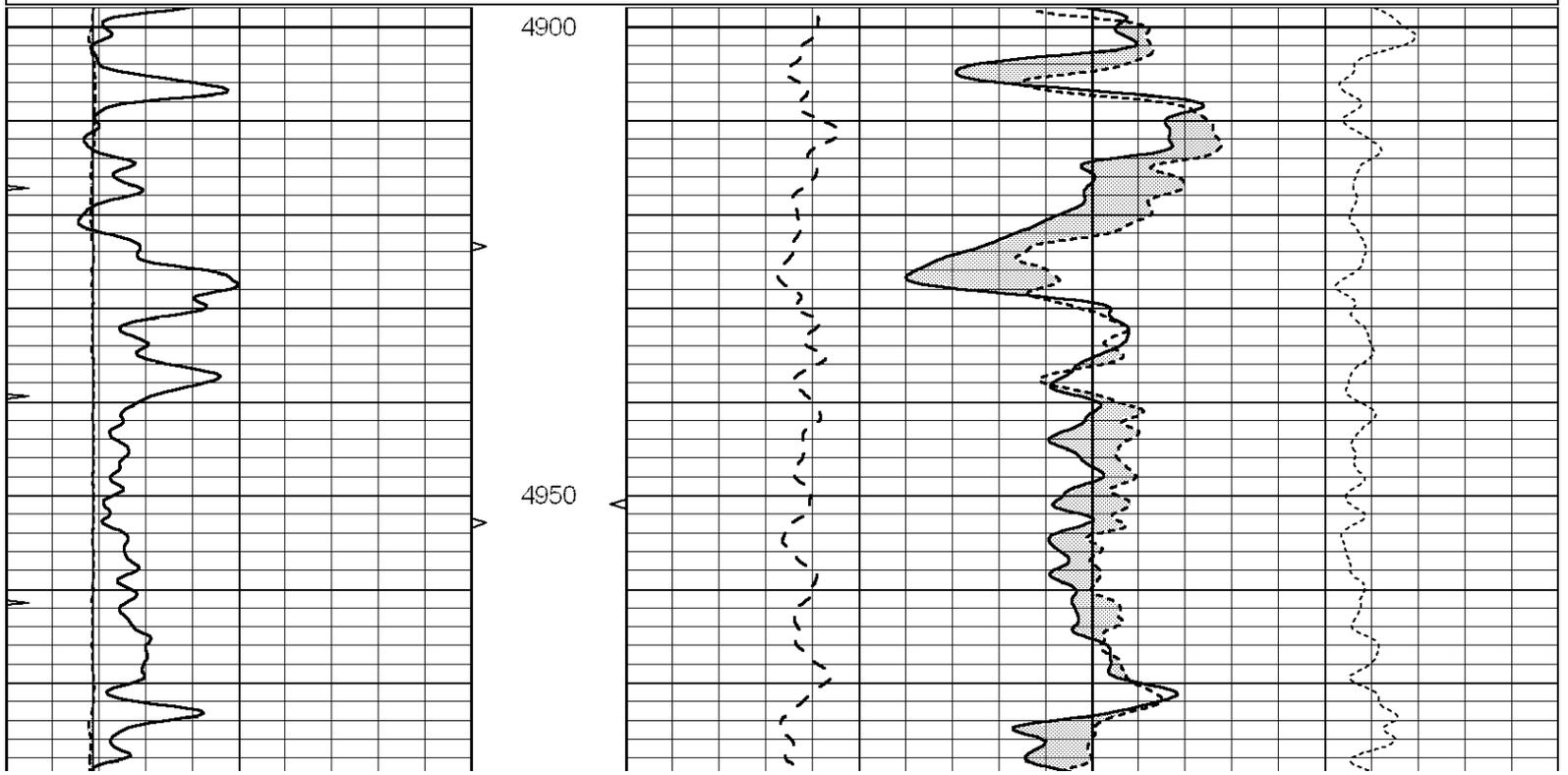
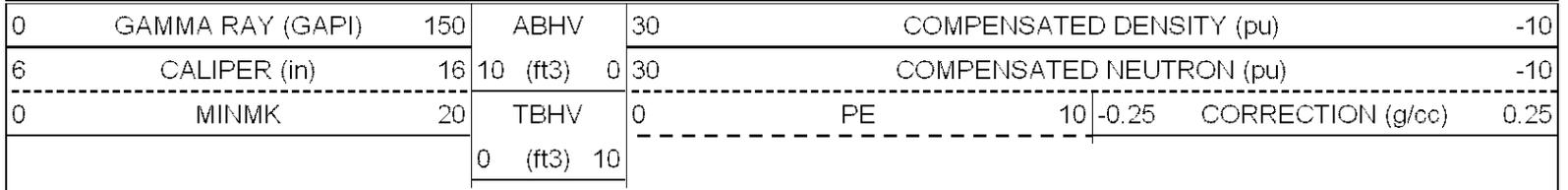
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)	-10

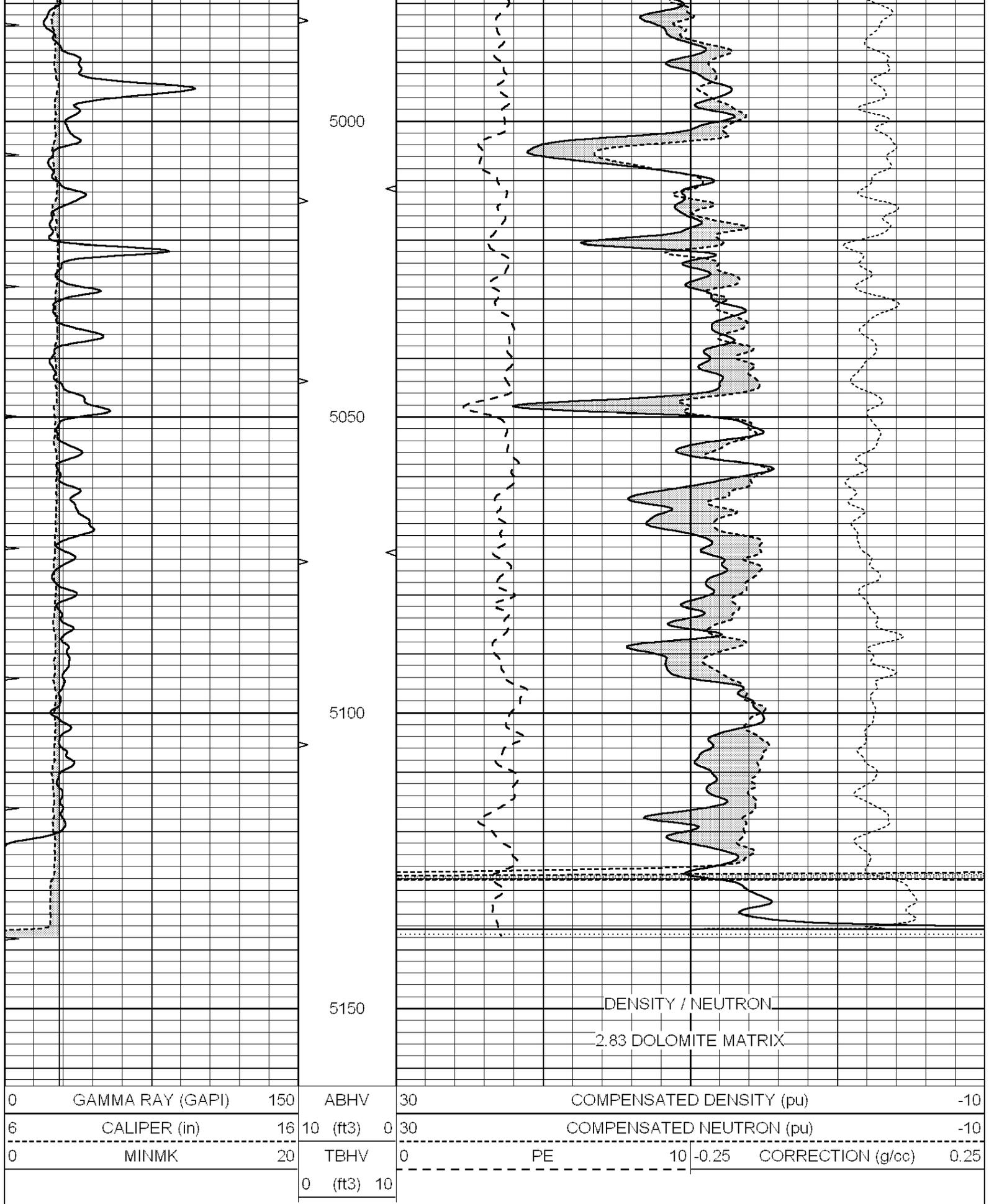




DOLOMITE MATRIX

Database File: 23819pe.db
 Dataset Pathname: pass2.5
 Presentation Format: ldt_neu
 Dataset Creation: Tue Apr 29 22:02:32 2014
 Charted by: Depth in Feet scaled 1:240





Calibration Report

Database File: 23819pe.db
 Dataset Pathname: pass3.6

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Mon Apr 28 20:10:56 2014
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	660.000	-12.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	650.000	-20.000
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		
		1.000	mmho-m		1.000	mmho-m		

Litho Density Calibration Report

Serial: 004N Model: PRB

Master Calibration

Performed Mon Jun 03 09:36:56 2013

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1417.6	10391.4	3464.6	11537.5	cps
Window 2	1295.0	8959.7	3050.1	9816.4	cps
Window 3	1105.1	5464.2	2051.0	5838.8	cps
Window 4	315.0	317.7	312.9	319.8	cps
Long Space	0.0	7664.6	1755.0	8521.3	cps
Short Space	1.8	1582.4	1040.8	1699.4	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 44.1	Rib Slope	: 0.970	Density/Spine Ratio	: 0.574
Spine Angle	: 74.1	Spine Slope	: 3.519	Spine Intercept	: -17.0

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 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: 070808
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: 070558
Tool Model: OPEN_GR
Performed: Mon Mar 24 01:53:40 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.3000 GAPI/cps