



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company CHIEFTAIN OIL COMPANY, INC.
Well ROARK #1
Field WILDCAT
County BARBER
State KANSAS

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Well ROARK #1
Field WILDCAT
County BARBER State KANSAS

Location: API # : 15-007-23956-0000
520' FSL & 340' FWL
NE - SW - SW - SW
SEC 10 TWP 35S RGE 11W
Permanent Datum GROUND LEVEL Elevation 1322
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services DIL/MEL
Elevation K.B. 1335
D.F. 1333
G.L. 1322

Date	10/21/12		
Run Number	ONE		
Depth Driller	5545		
Depth Logger	5546		
Bottom Logged Interval	5522		
Top Log Interval	3400		
Casing Driller	13 3/8"@334'		
Casing Logger	334		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4,600 PPM	
Density / Viscosity	9.2/60		
pH / Fluid Loss	10.5/7.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.600@80F		
Rmt @ Meas. Temp	.450280F		
Rmc @ Meas. Temp	.720@80F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.369@130F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	9:45 P.M.		
Maximum Recorded Temperature	130F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	DAVE BARKER		

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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

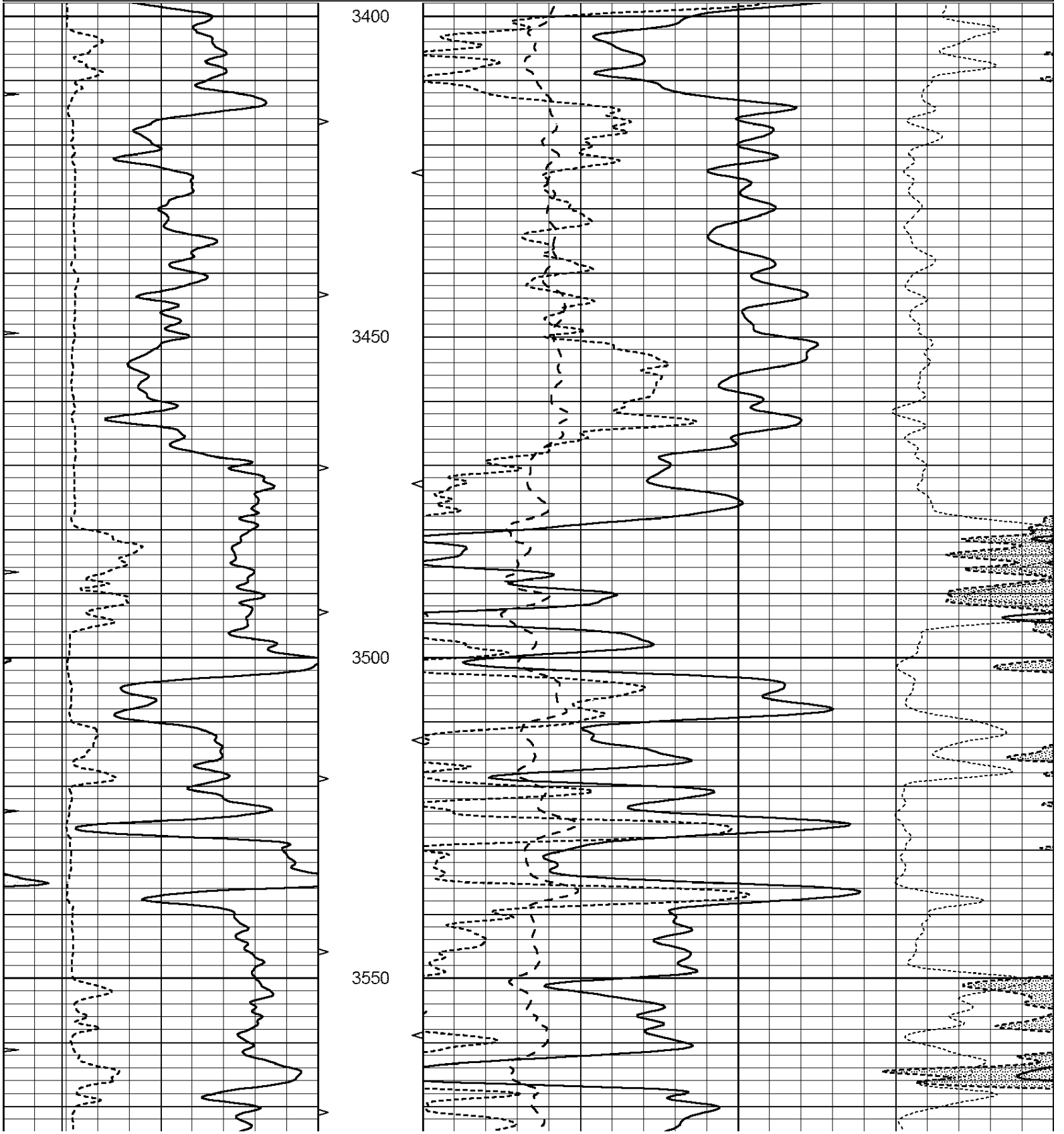
THANK YOU FOR USING "NABORS" HAYS, KS.(785) 628-6395
DIRECTIONS
KIOWA, KS. 1/2 W. ON HWY 2, @CURVE, 1S. ON "BARE RD.", W. INTO

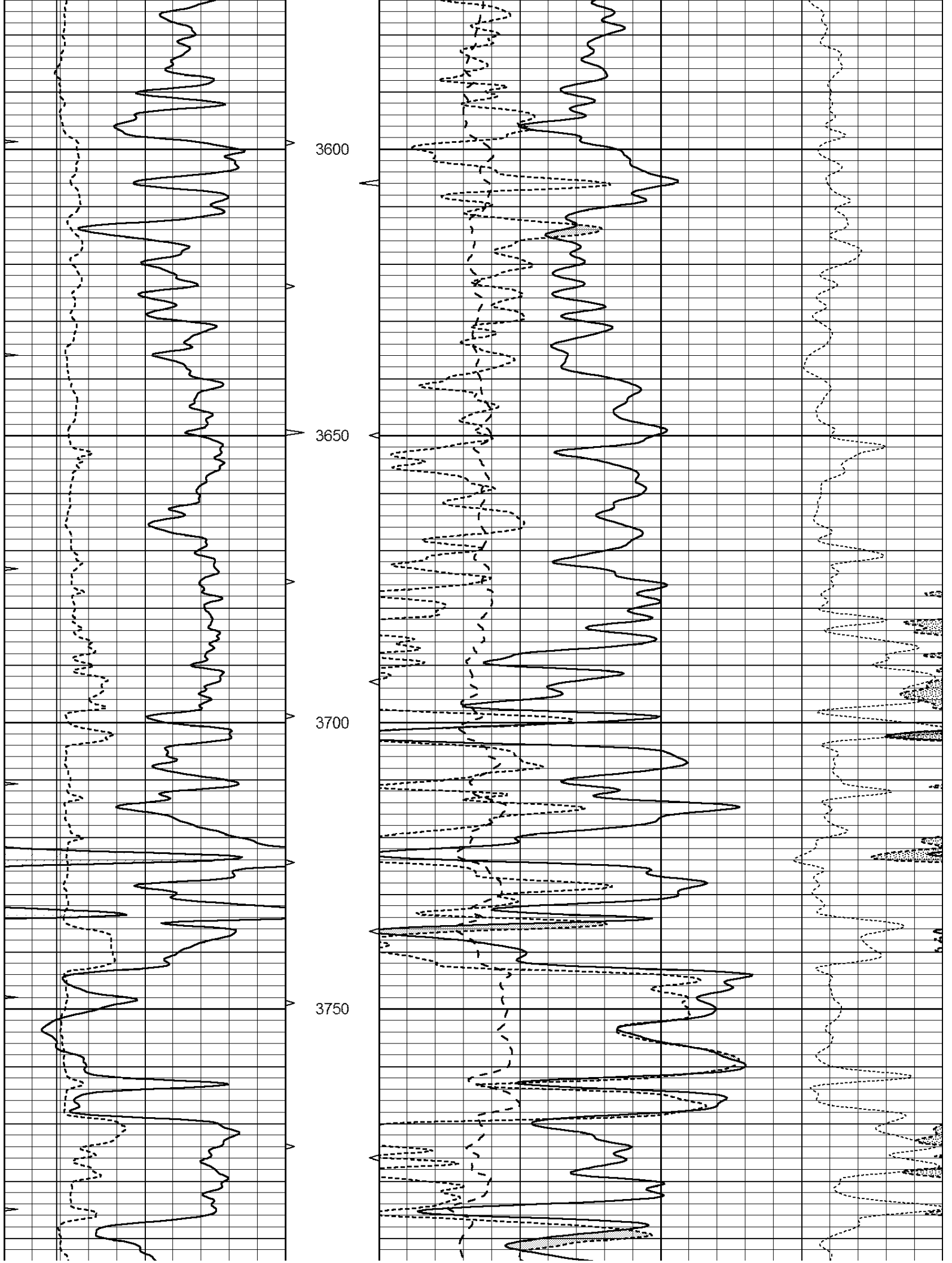


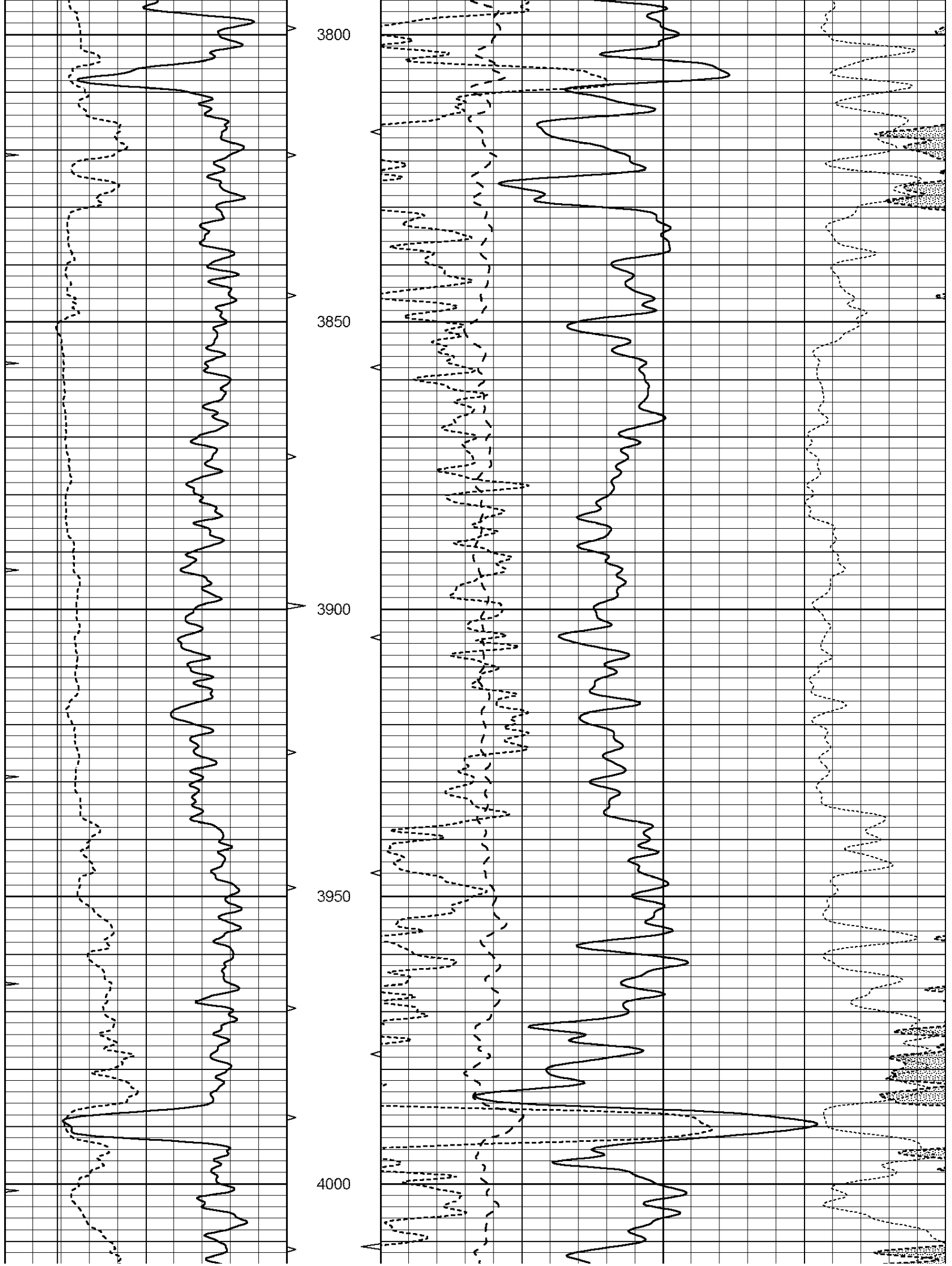
MAIN SECTION

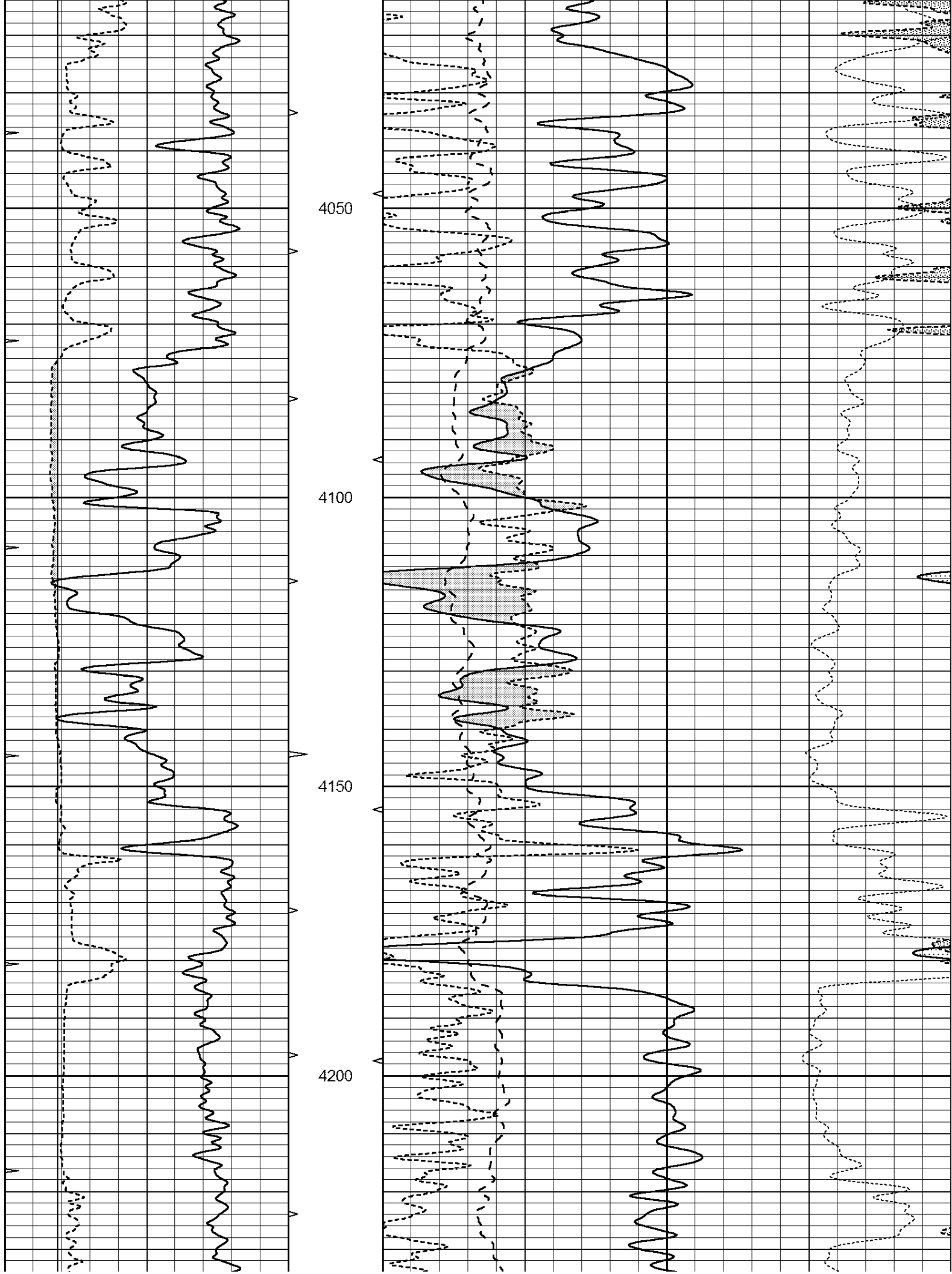
Database File: 409698pe.db
 Dataset Pathname: pass3.8
 Presentation Format: ldt_neu
 Dataset Creation: Mon Oct 22 00:38:56 2012
 Charted by: Depth in Feet scaled 1:240

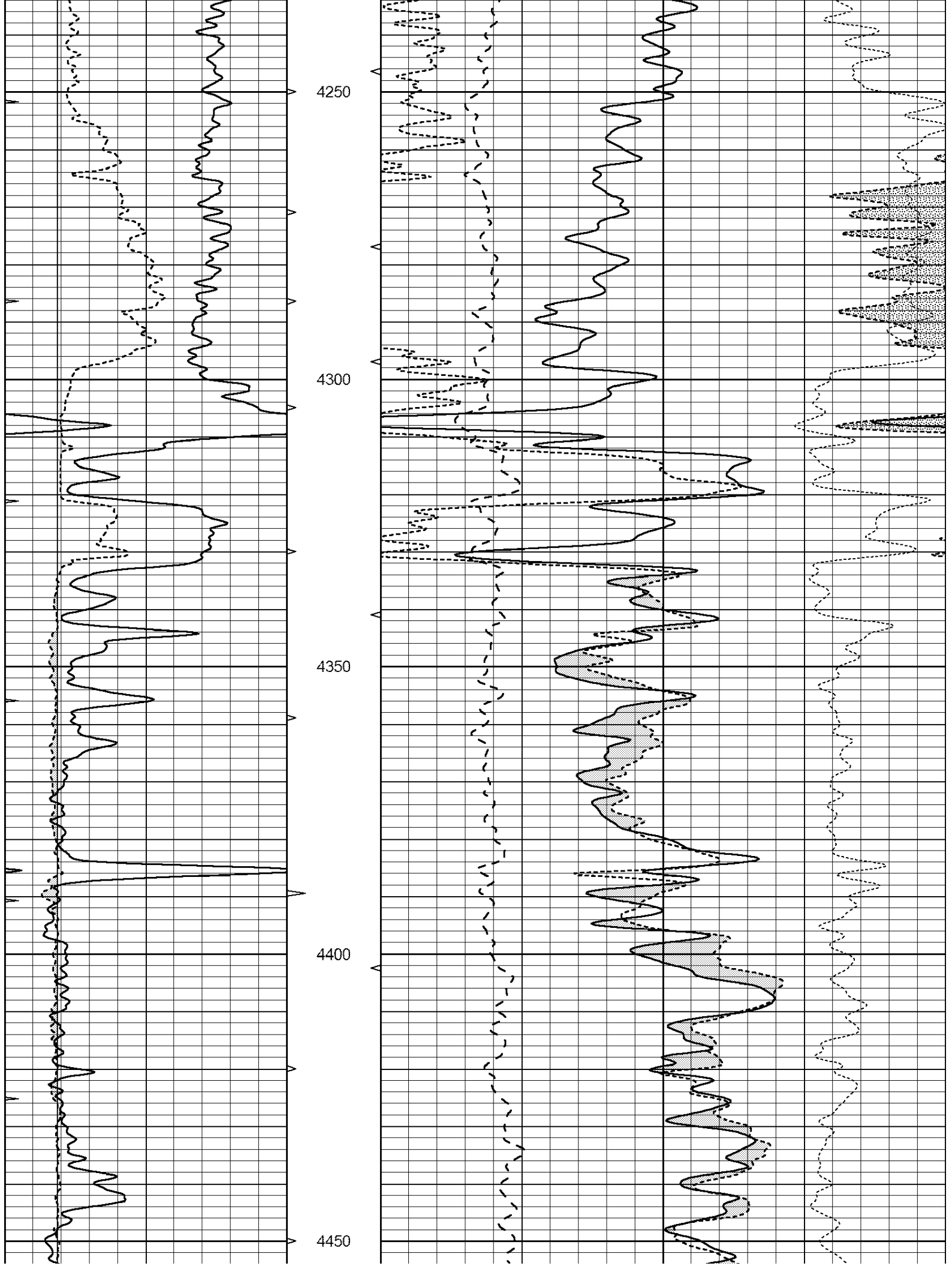
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)		-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)		-10
0	MINMK	20	TBHV	0	PE	10	-0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10			

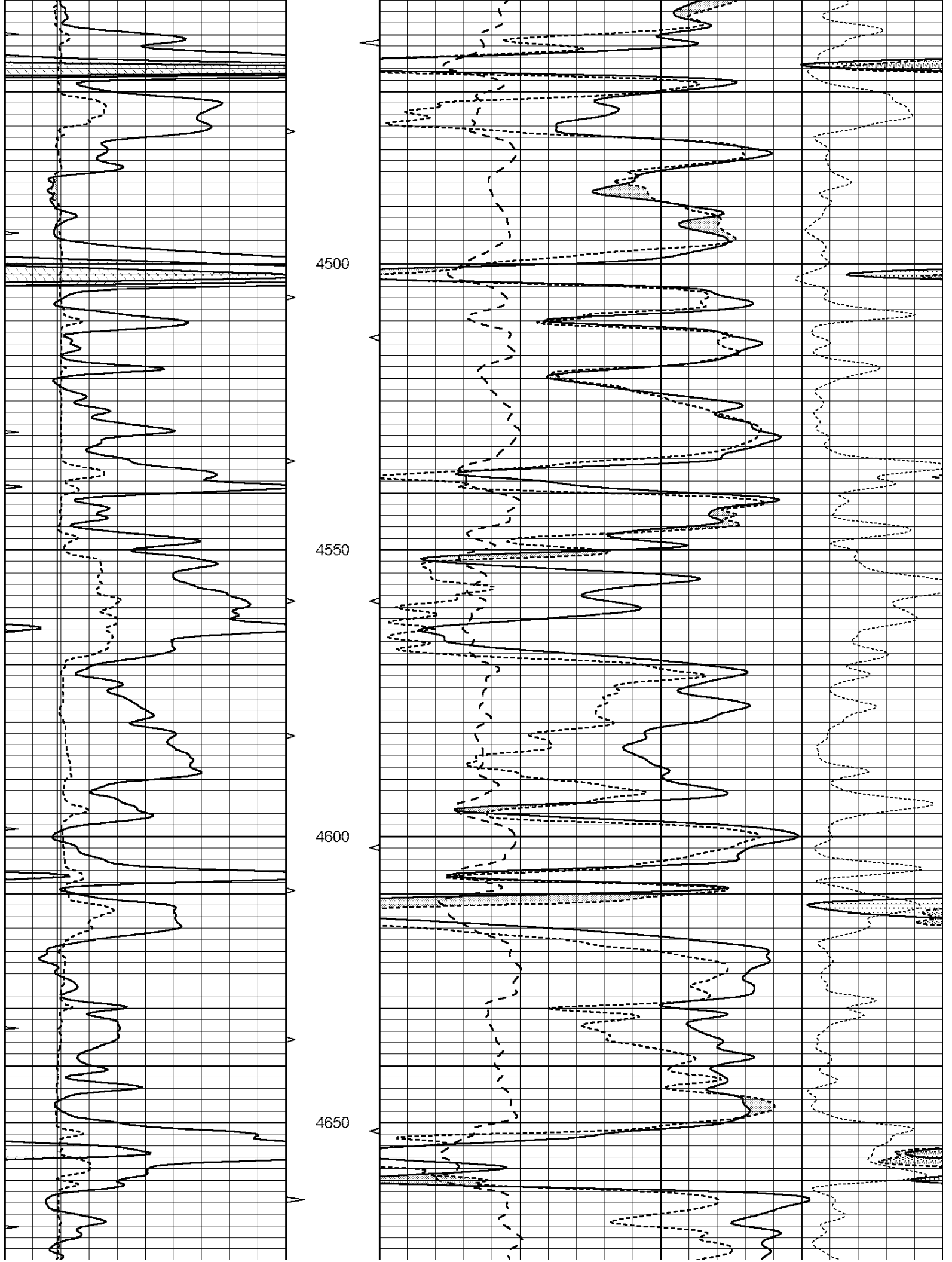


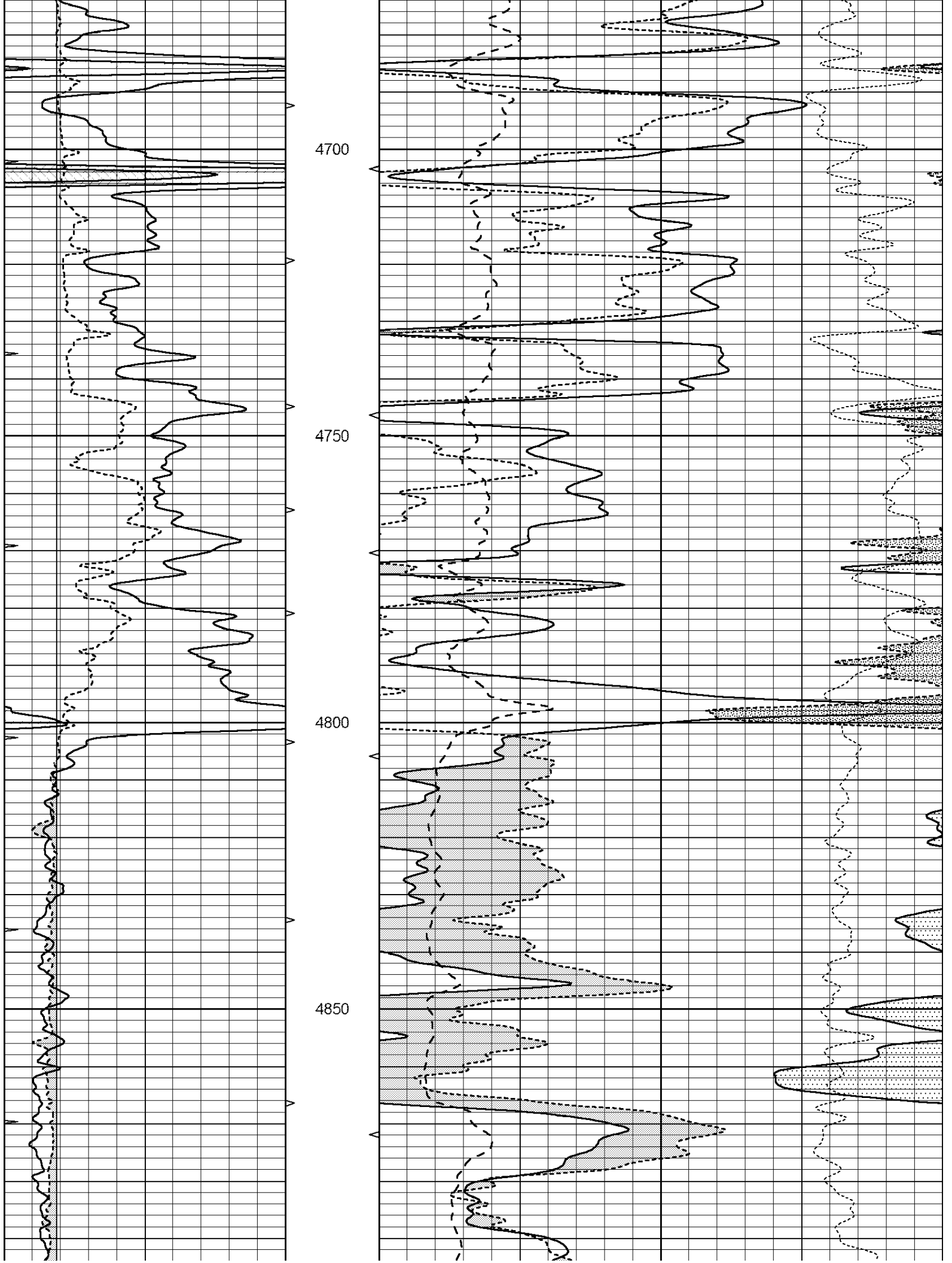


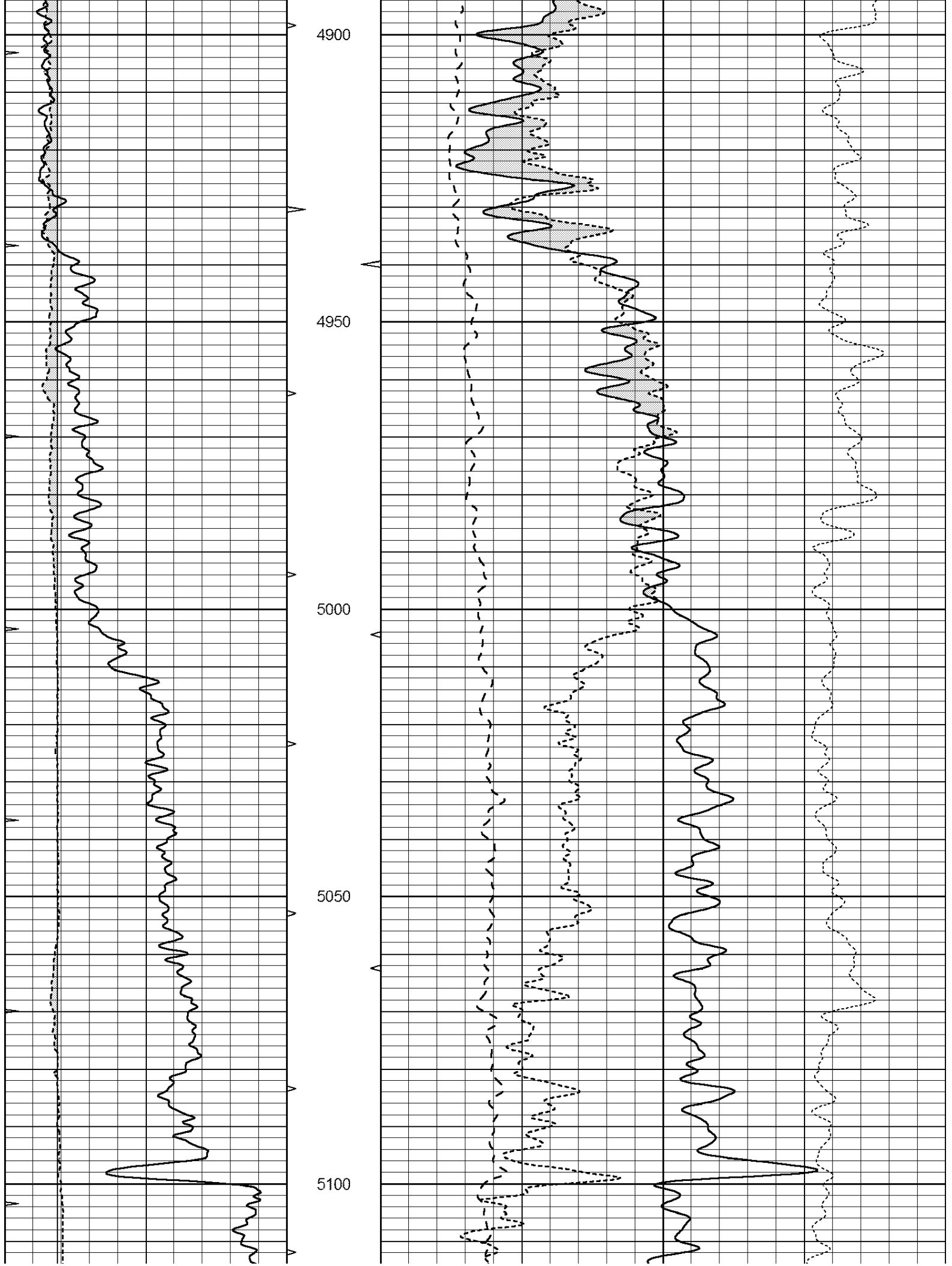


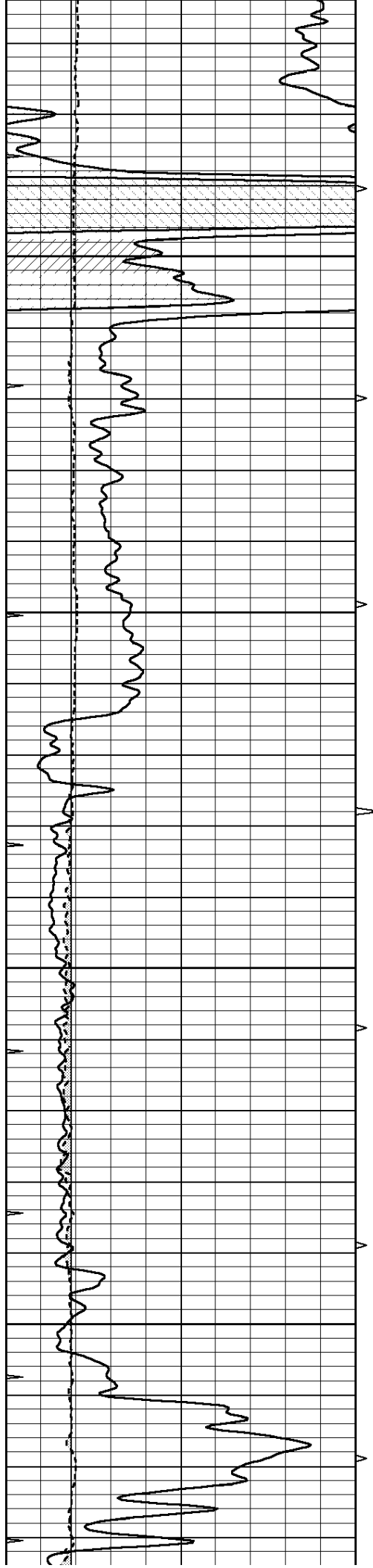










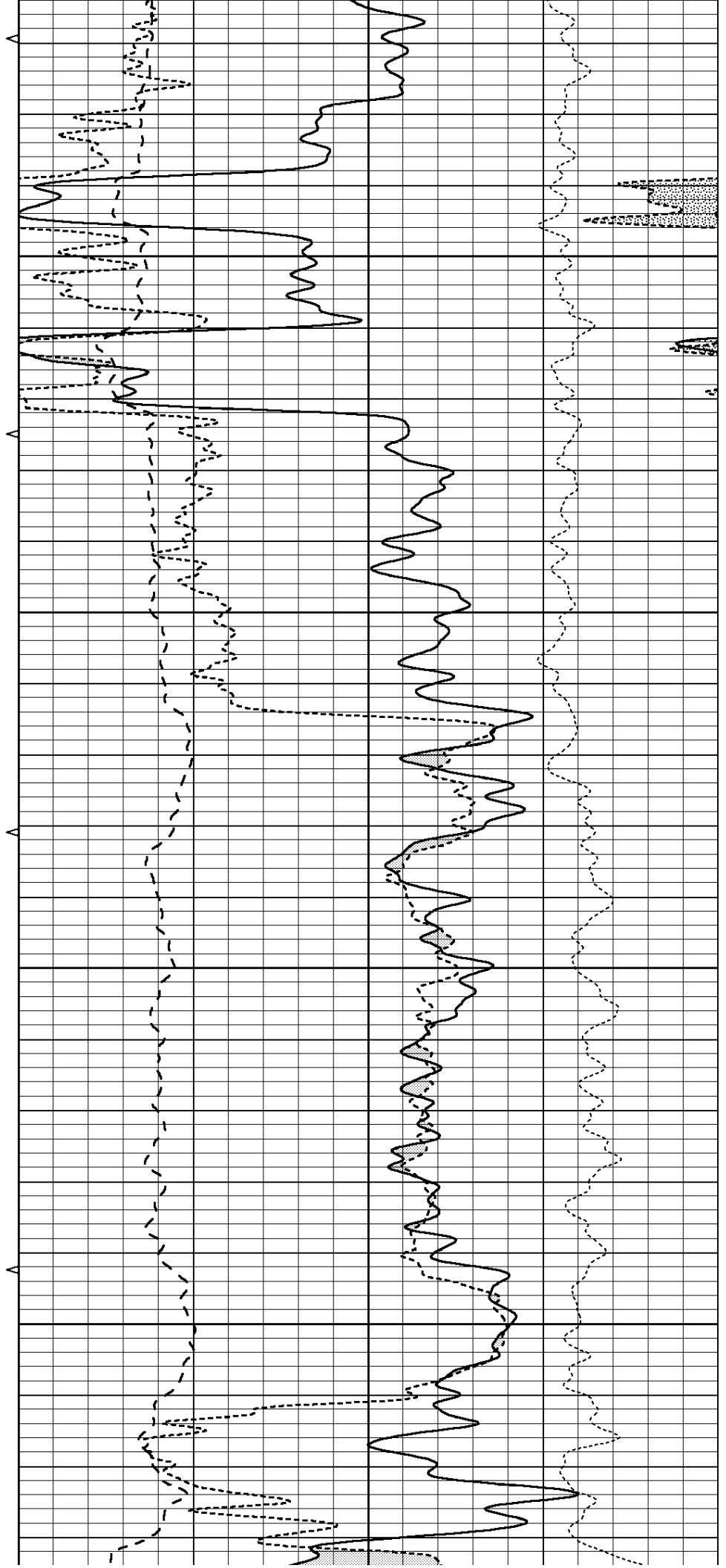


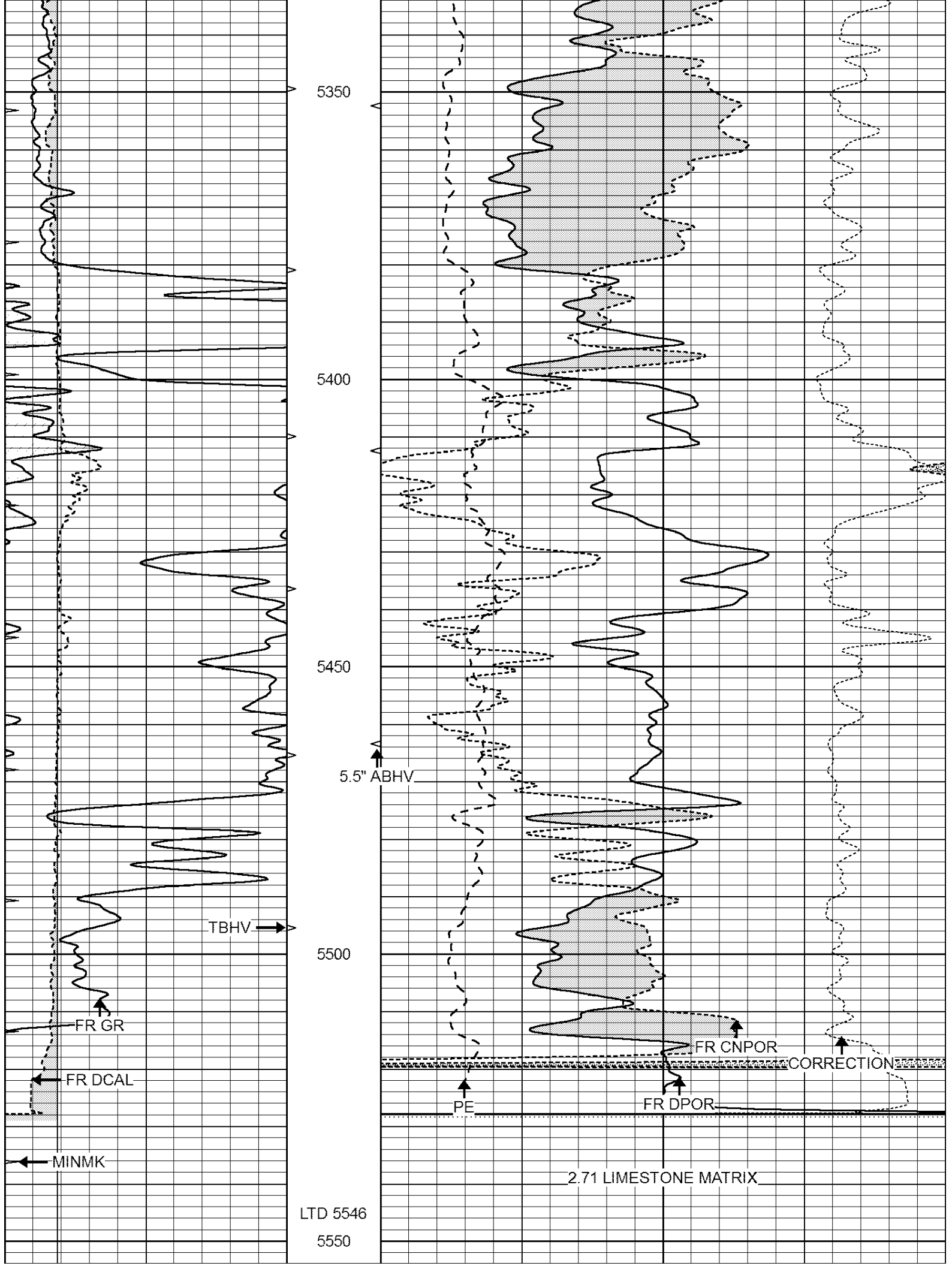
5150

5200

5250

5300





5350

5400

5450

5.5" ABHV

5500

TBHV

FR GR

FR DCAL

MINMK

PE

FR CNPOR

FR DPOR

CORRECTION

2.71 LIMESTONE MATRIX

LTD 5546

5550

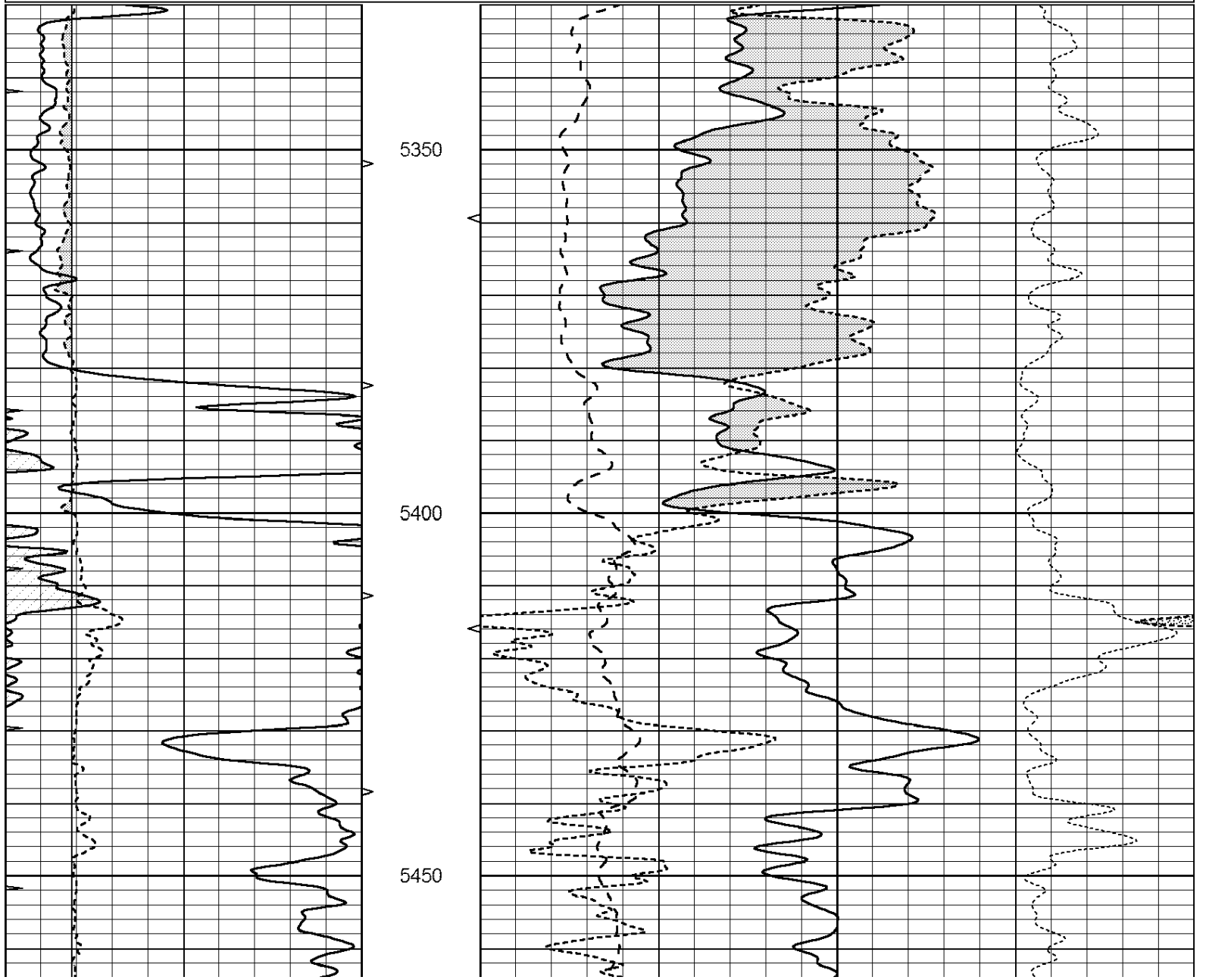
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10		
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)	-10	
0	MINMK	20	TBHV	0	PE	10	-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10				

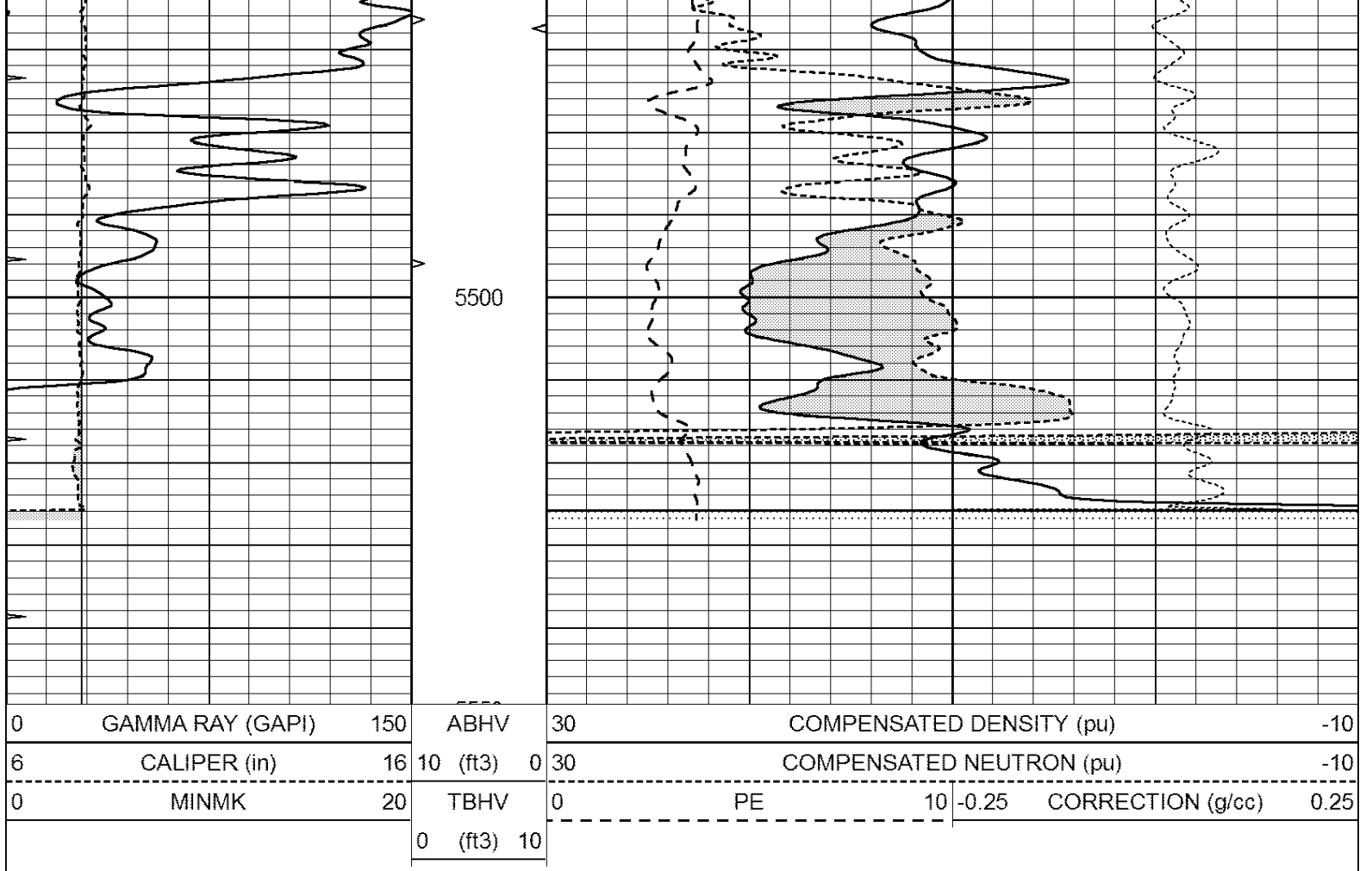


REPEAT SECTION

Database File: 409698pe.db
Dataset Pathname: pass2.3
Presentation Format: ldt_neu
Dataset Creation: Mon Oct 22 00:08:36 2012 by Calc Open-Cased 110302
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				





Calibration Report

Database File: 409698pe.db
 Dataset Pathname: pass3.8
 Dataset Creation: Mon Oct 22 00:38:56 2012

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Mon Oct 01 18:43:03 2012

Loop:	Readings				References		Results	
	Air	Loop			Air	Loop	m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	8.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-7.500
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report

Serial: 006 Model: PRB
 Performed Sun Aug 15 09:48:41 2010

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps

Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

Caliper	Readings	Reference	
Low Ref	3.5	6.7	
High Ref	5.5	15.0	
	Gain: 4.3		Offset: -8.6

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:	070559	
Tool Model:	OPEN_GR	
Performed:	Wed Sep 19 15:58:00 2012	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps