



SUPERIOR
Hays,
Kansas

COMPENSATED
DENSITY / NEUTRON
PE LOG

Company	CMX, INC.	Company	CMX, INC.
Well	HIRT FARMS #1	Well	HIRT FARMS #1
Field	KUMBERG	Field	KUMBERG
County	BARBER	County	BARBER
State	KANSAS	State	KANSAS
Location:	API # : 15-007-23805-0000	Other Services	DILMEL SONIC
	380' FNL & 1276' FWL		
Permanent Datum	GROUND LEVEL	Elevation	1805
Log Measured From	KELLY BUSHING 13' A.G.L.	K.B.	1818
Drilling Measured From	KELLY BUSHING	D.F.	1816
		G.L.	1805
Date	12/29/11		
Run Number	ONE		
Depth Driller	4730		
Depth Logger	4730		
Bottom Logged Interval	4706		
Top Log Interval	1900		
Casing Driller	13 3/8" @ 355'		
Casing Logger	350		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES	6,300 PPM
Density / Viscosity	9.072		
pH / Fluid Loss	9.5/8.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.700 @ 75F		
Rmf @ Meas. Temp	.525 @ 75F		
Rmc @ Meas. Temp	.840 @ 75F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.427 @ 123F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	9:15 A.M.		
Maximum Recorded Temperature	123F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KEN LeBLANC		

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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 SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
SAWYER, KS. 4E. ON HWY 42 TO "70 AVE." AKA "SPRING CREEK RD.", 2 1/2S. TO "FALCON RD.", 1/4E., S.
& W. INTO



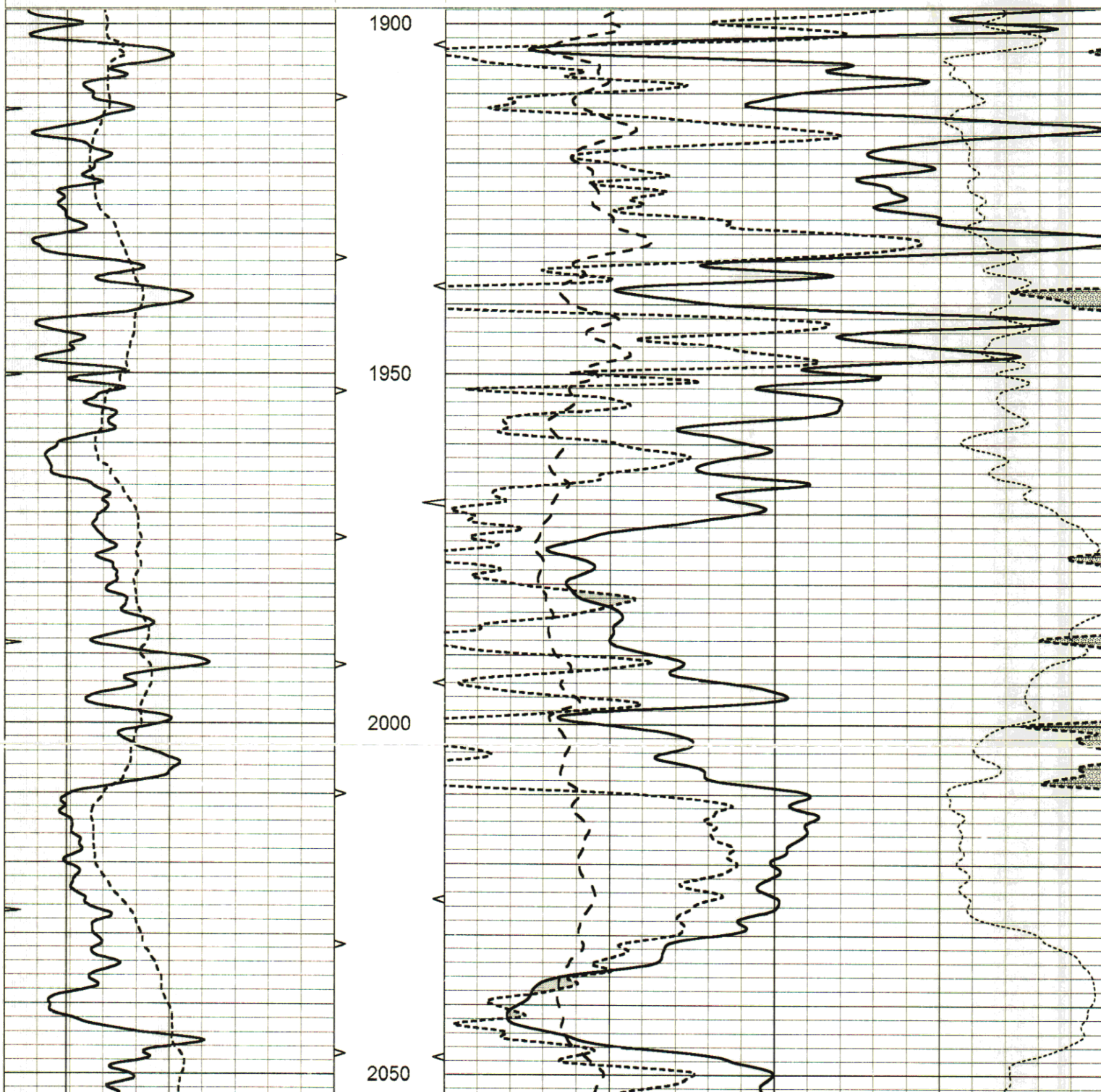
SUPERIOR

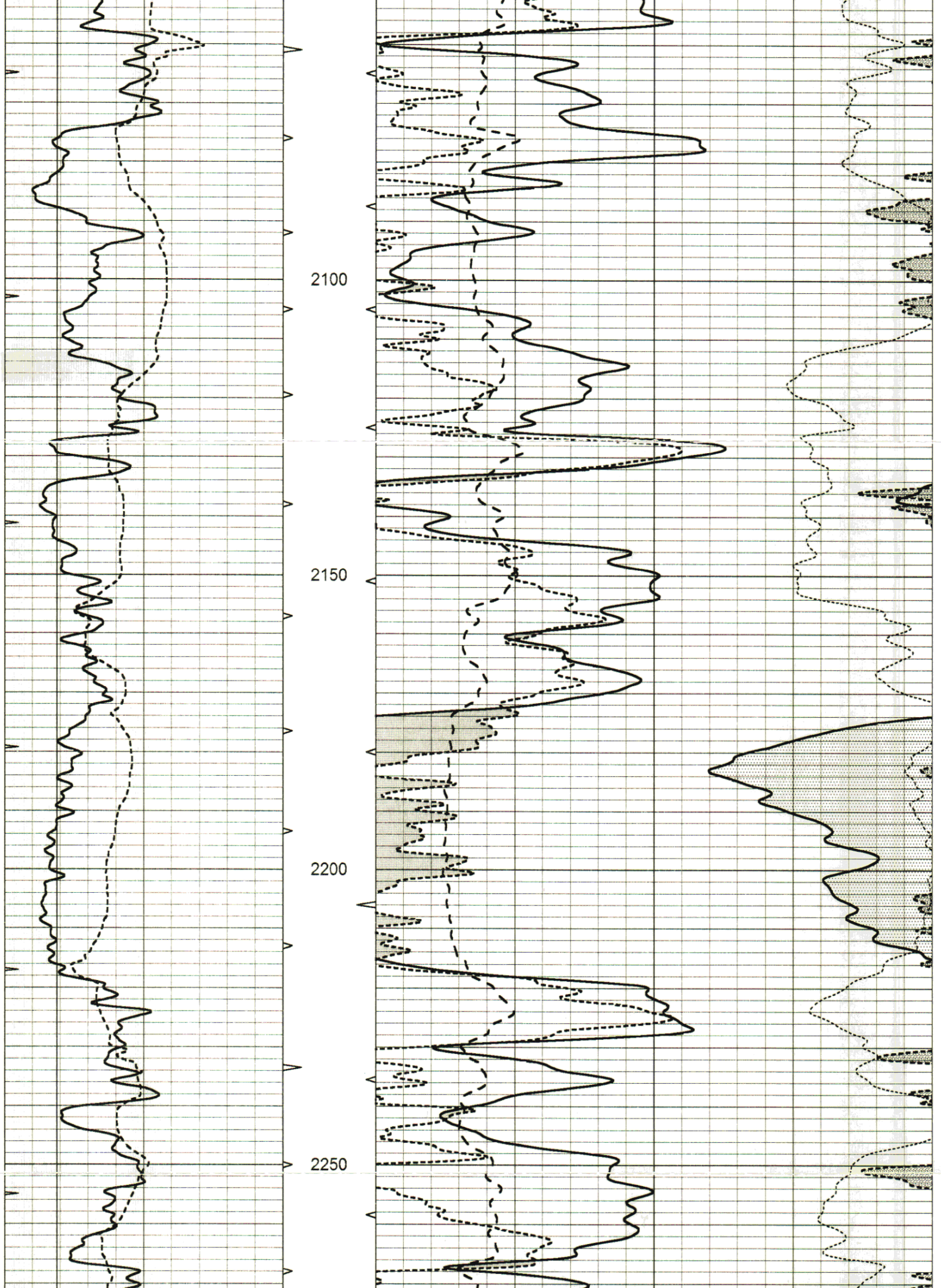
Hays,
Kansas

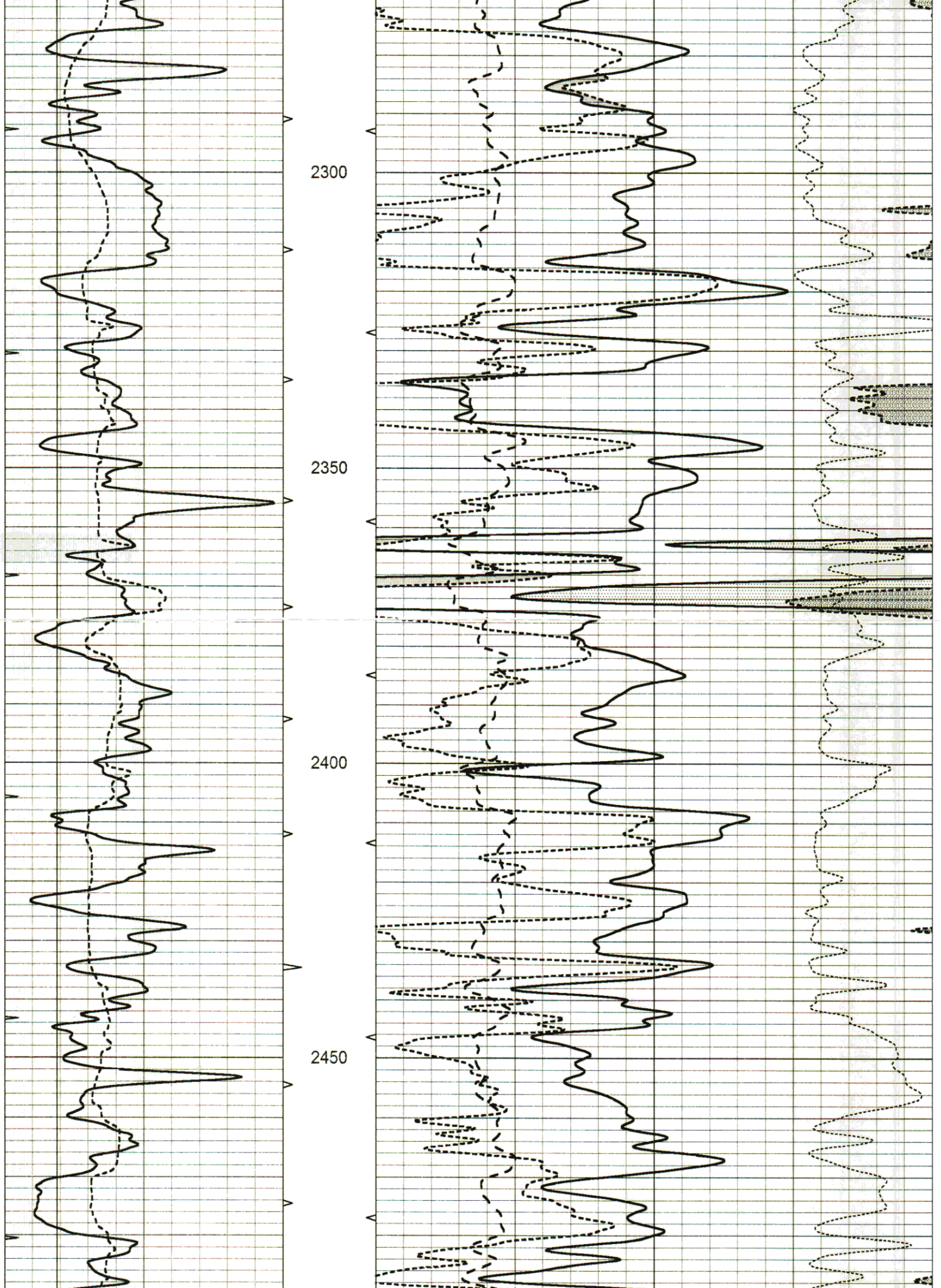
MAIN SECTION

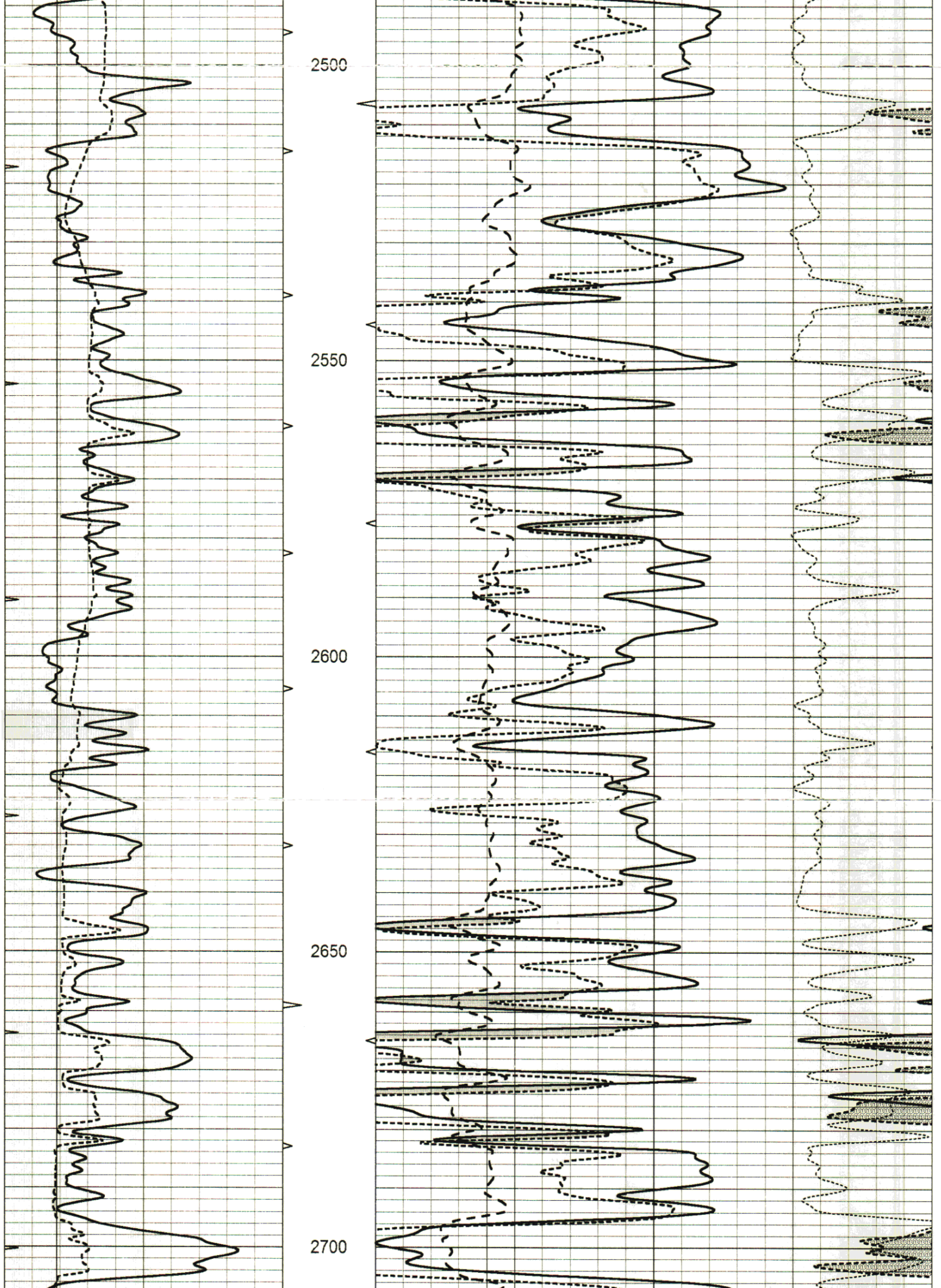
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Presentation Format: ldt_neu
Dataset Creation: Thu Dec 29 11:47:40 2011
Charted by: Depth in Feet scaled 1:240

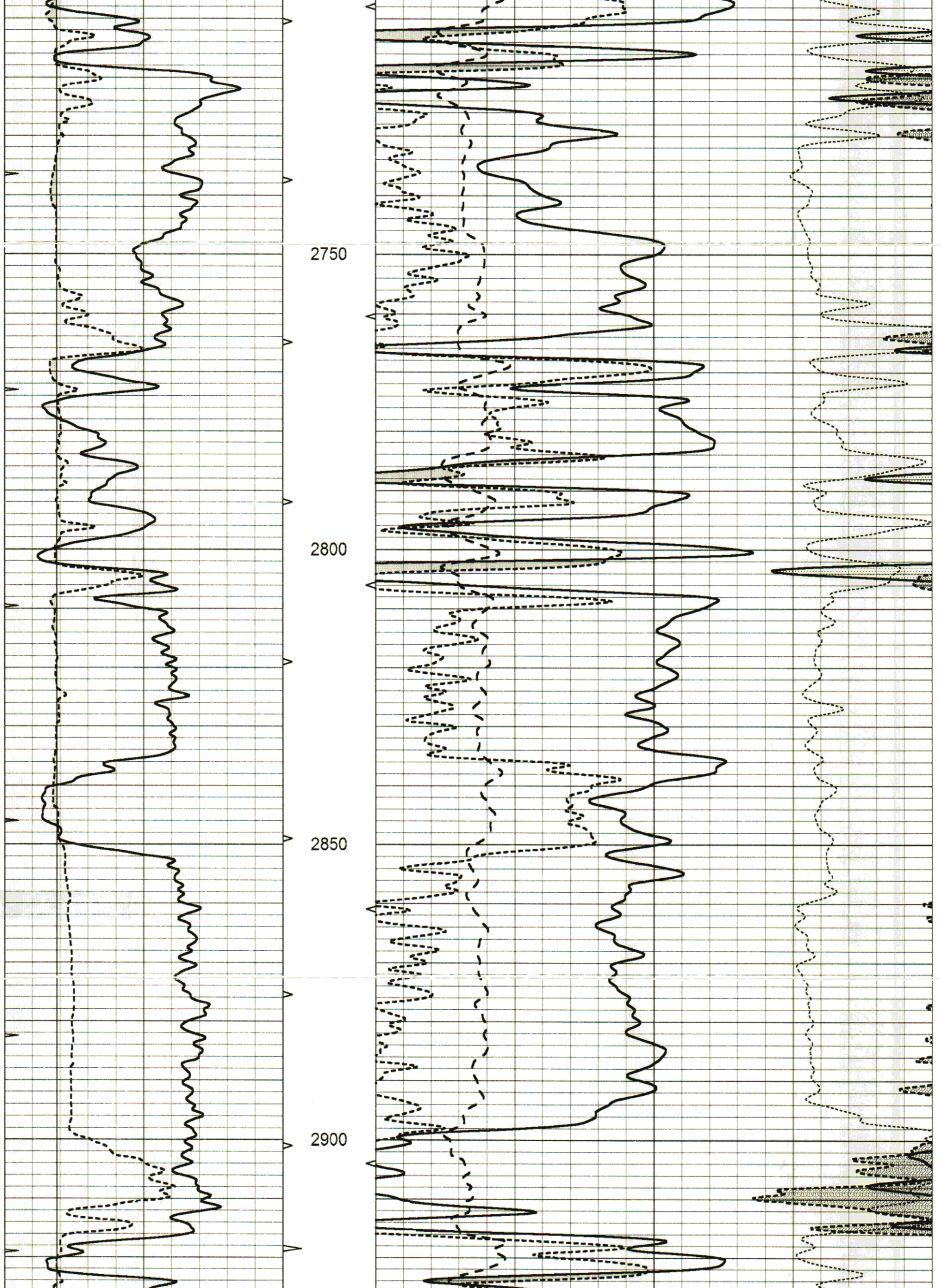
0	CAMMAY (CAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		

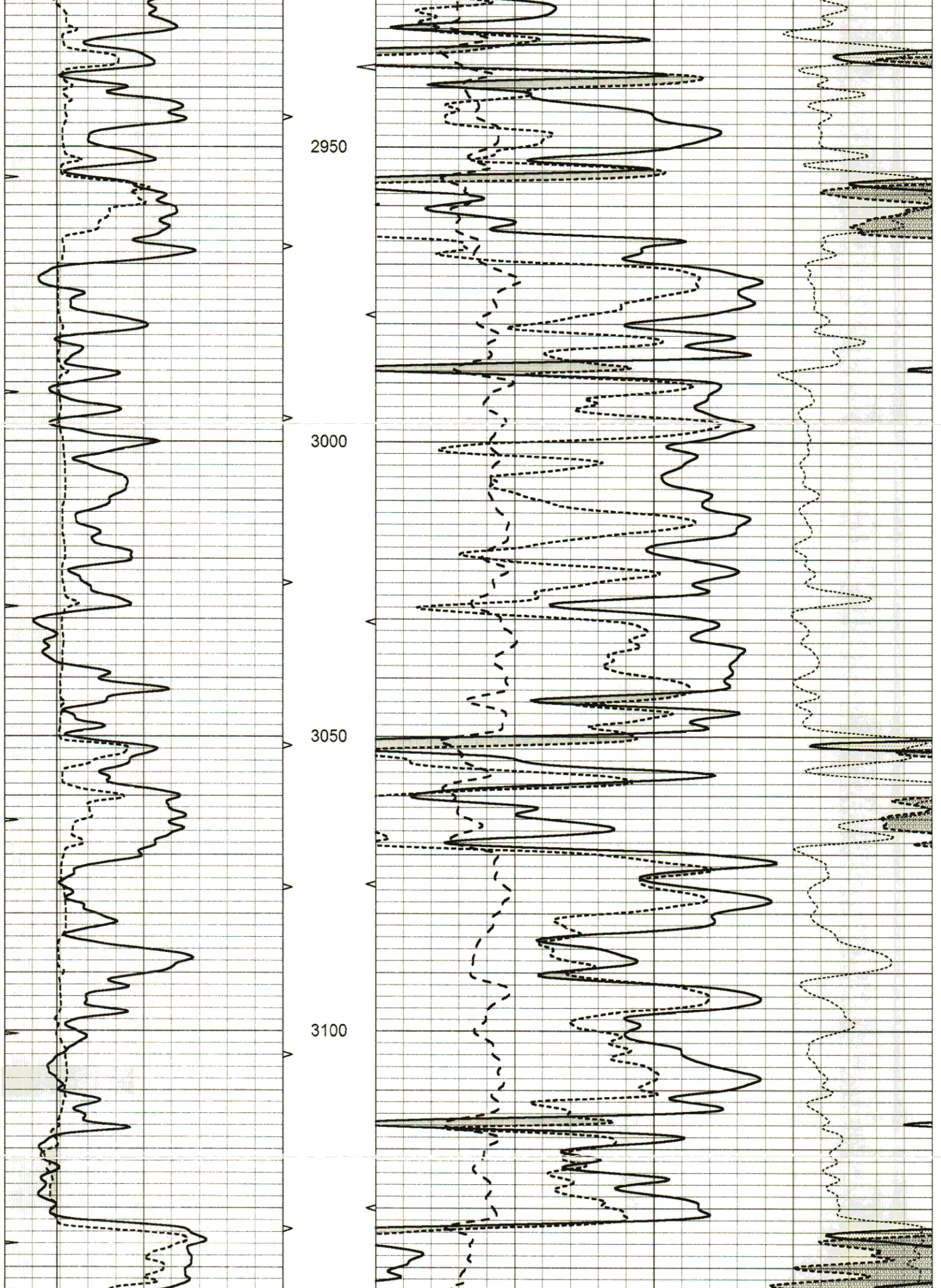


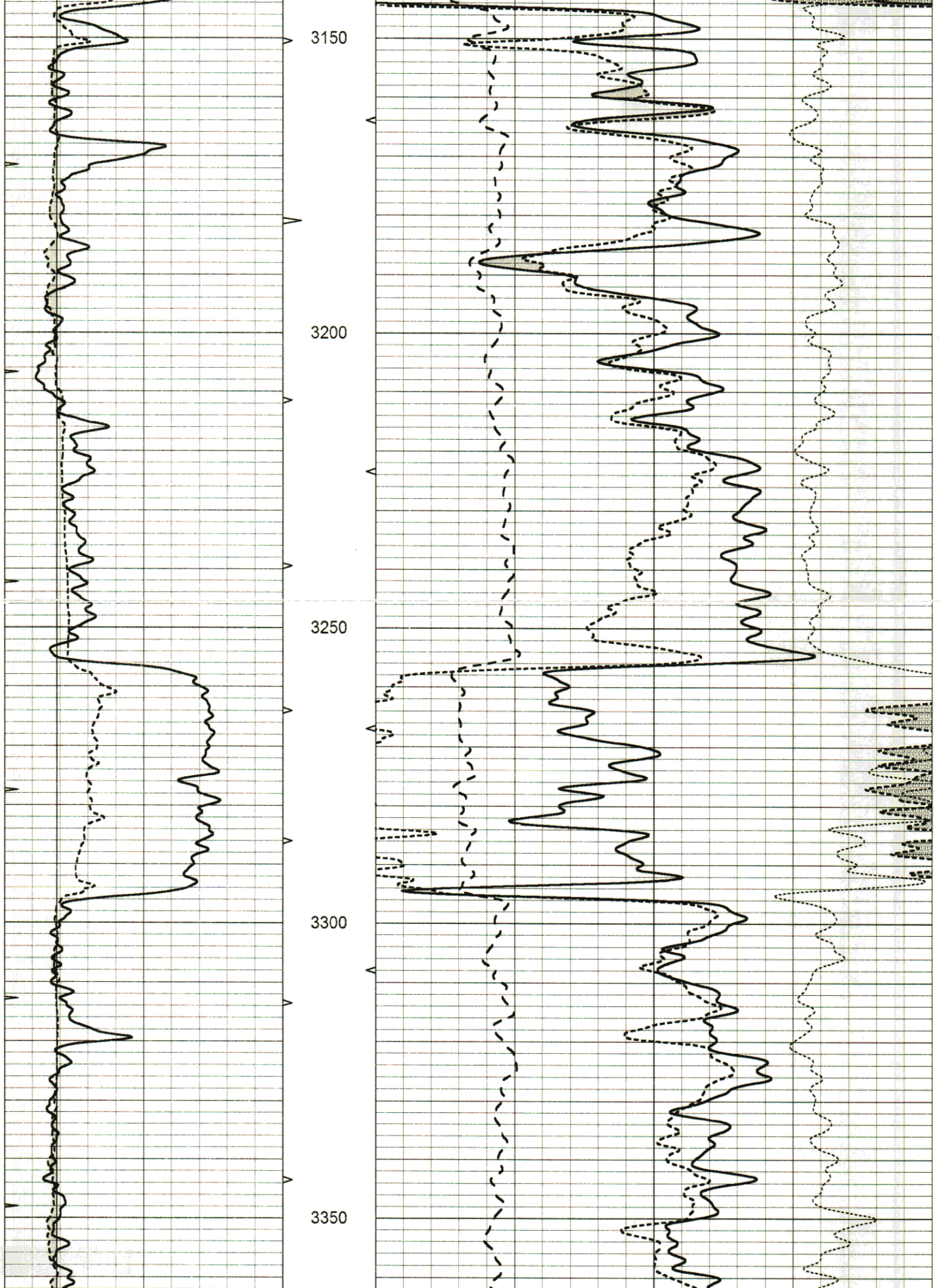


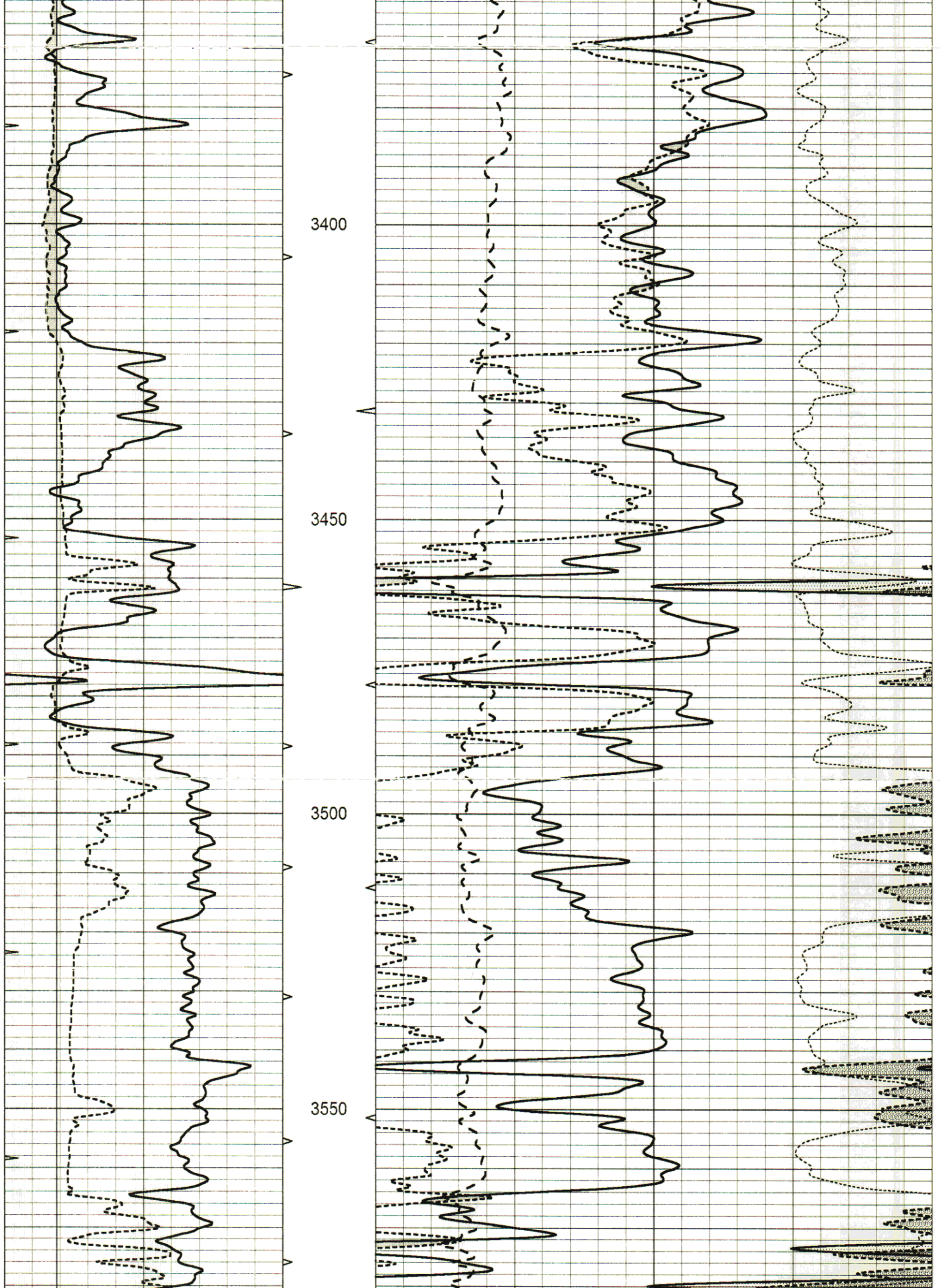


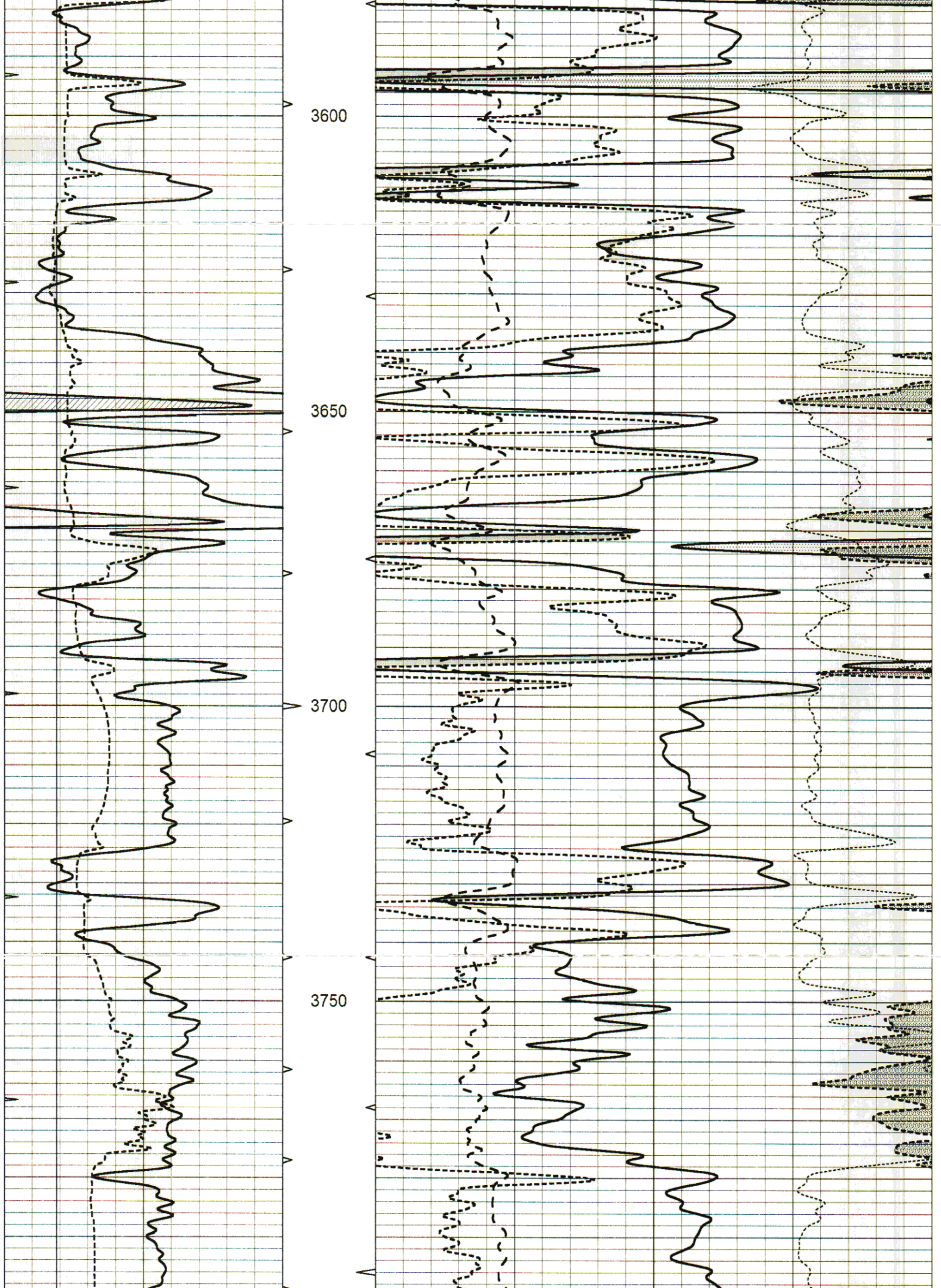


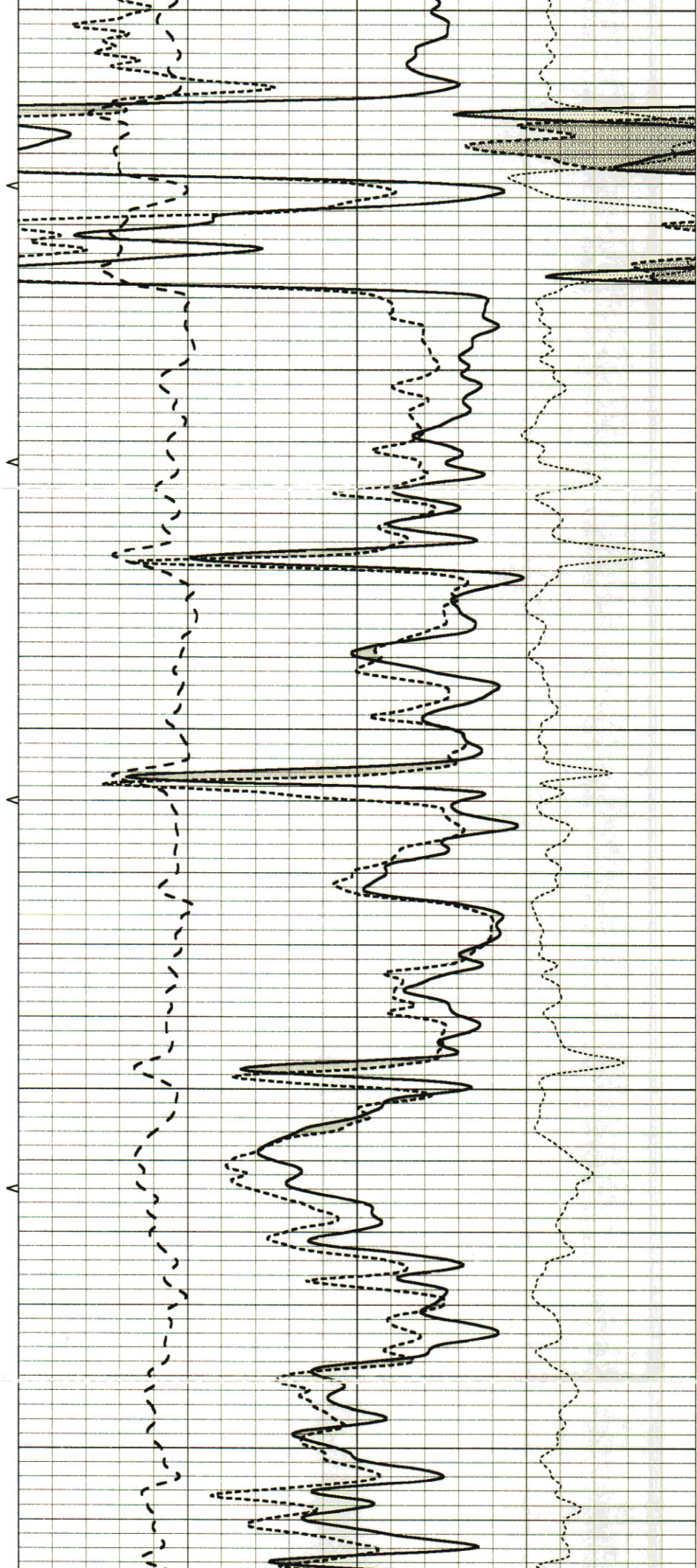
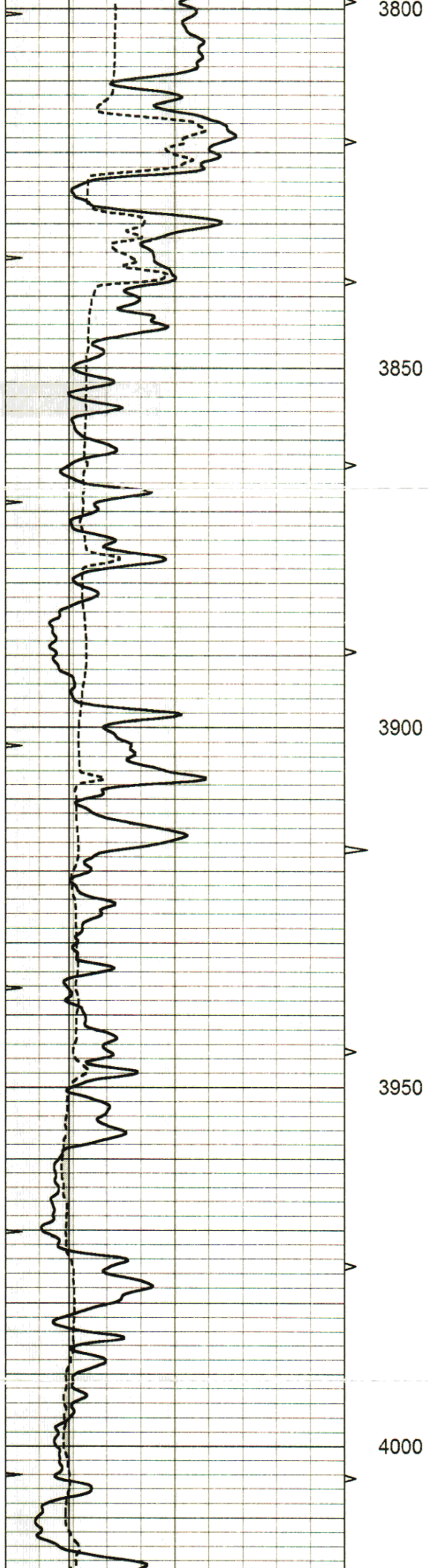


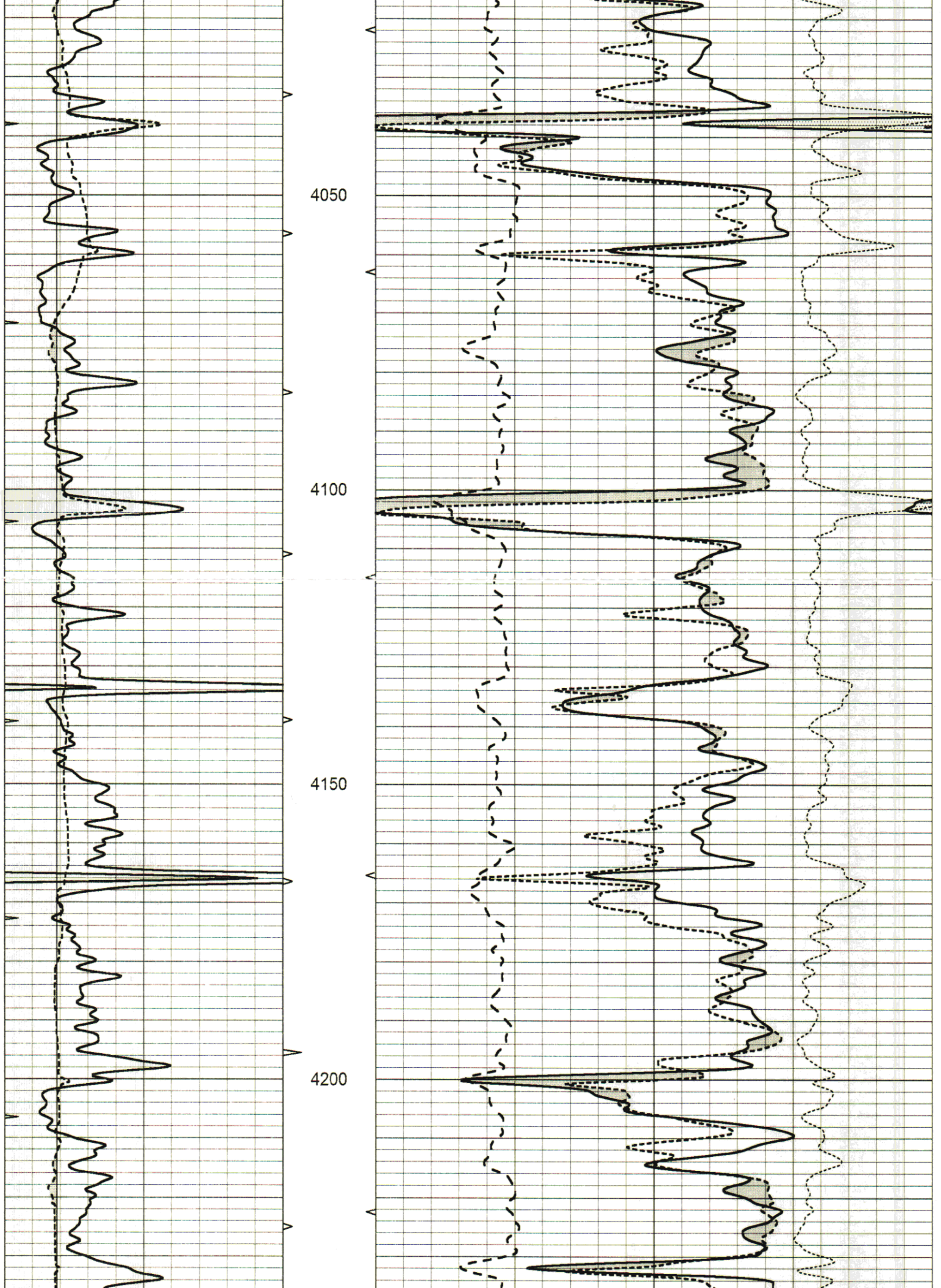


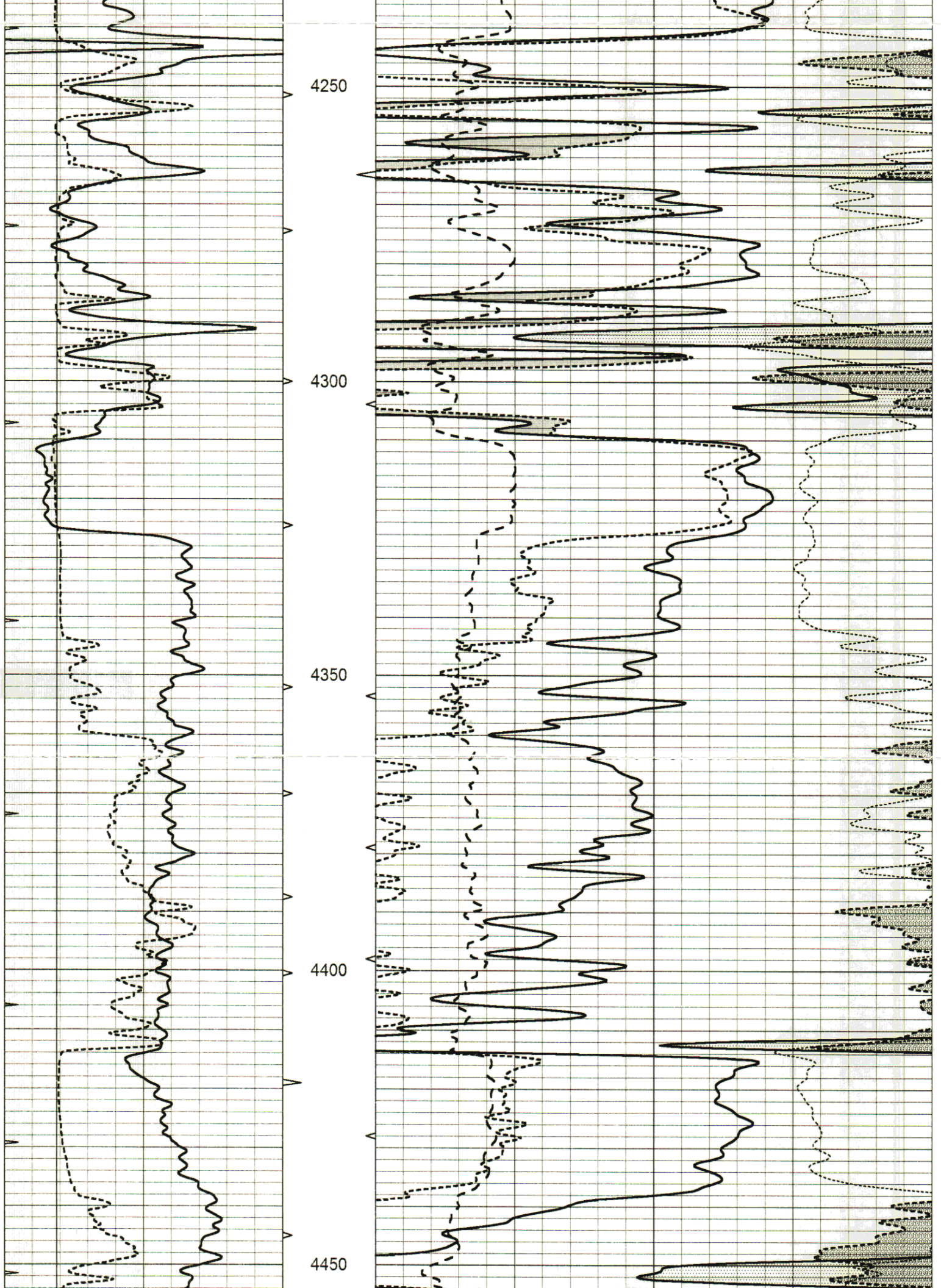


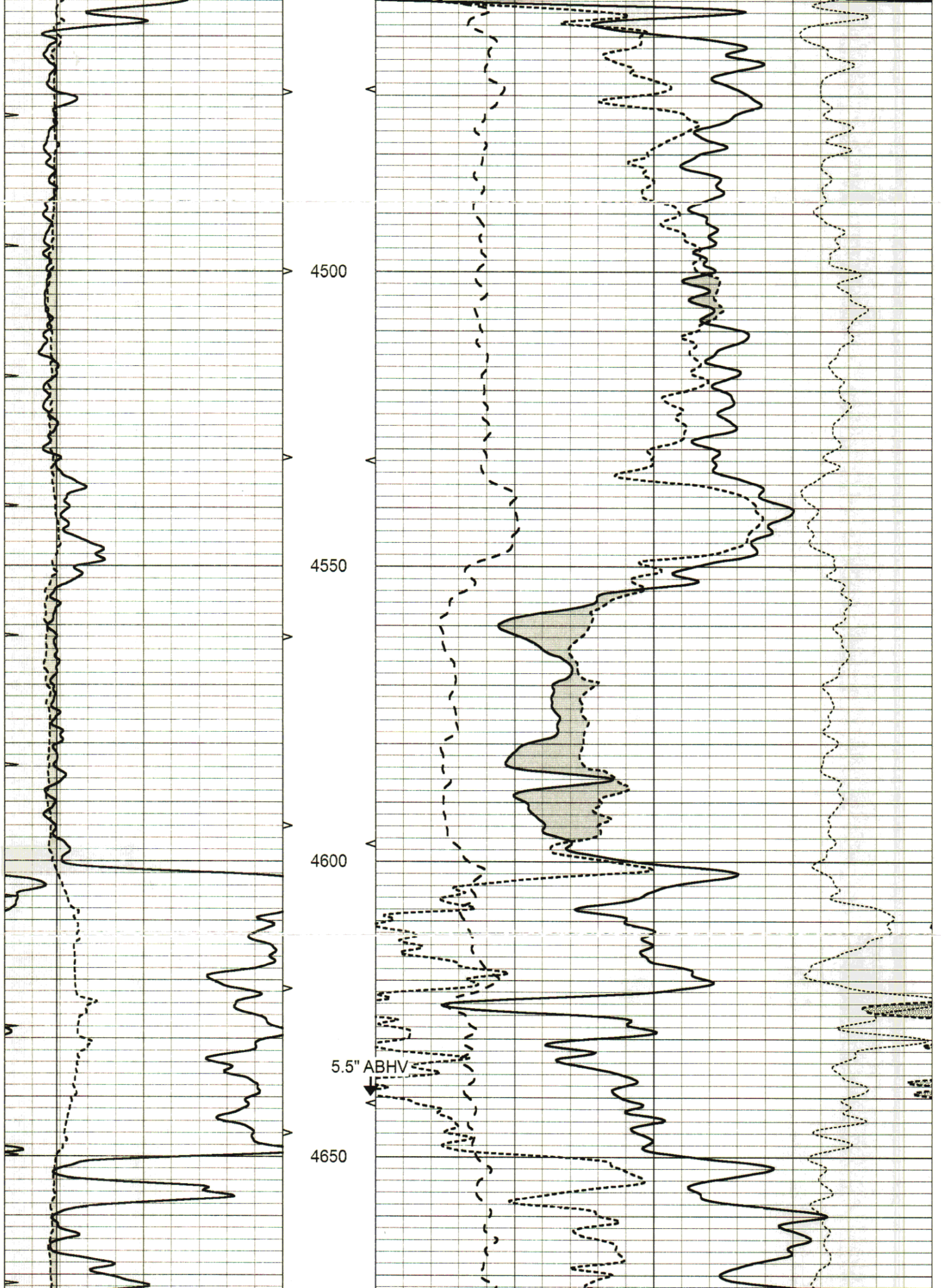


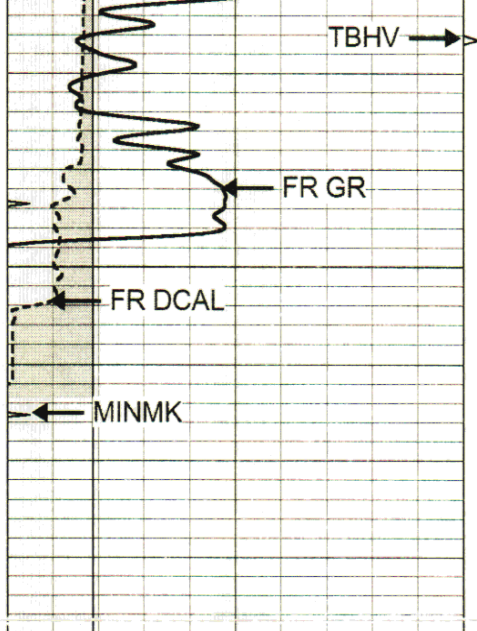




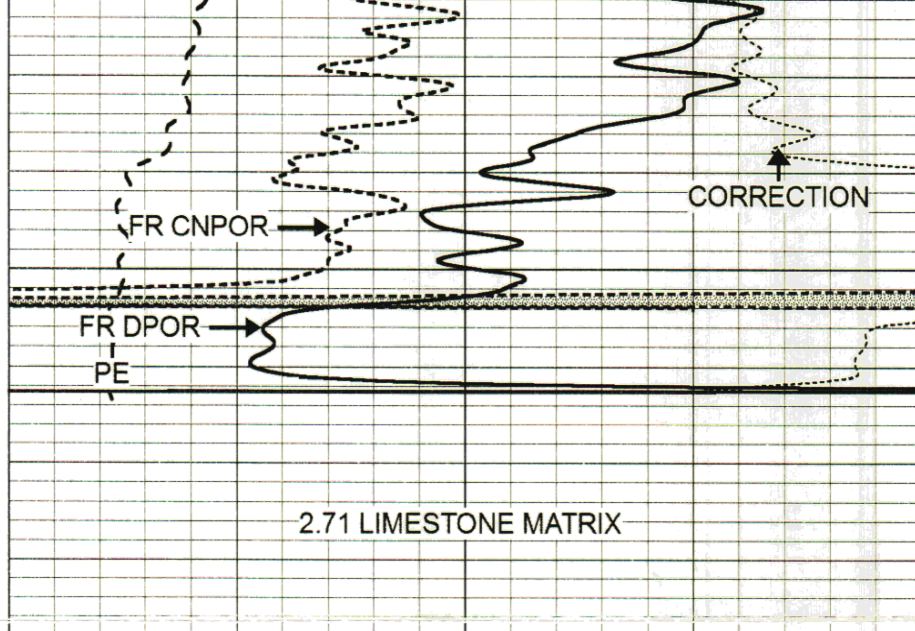








4700



2.71 LIMESTONE MATRIX

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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REPEAT SECTION

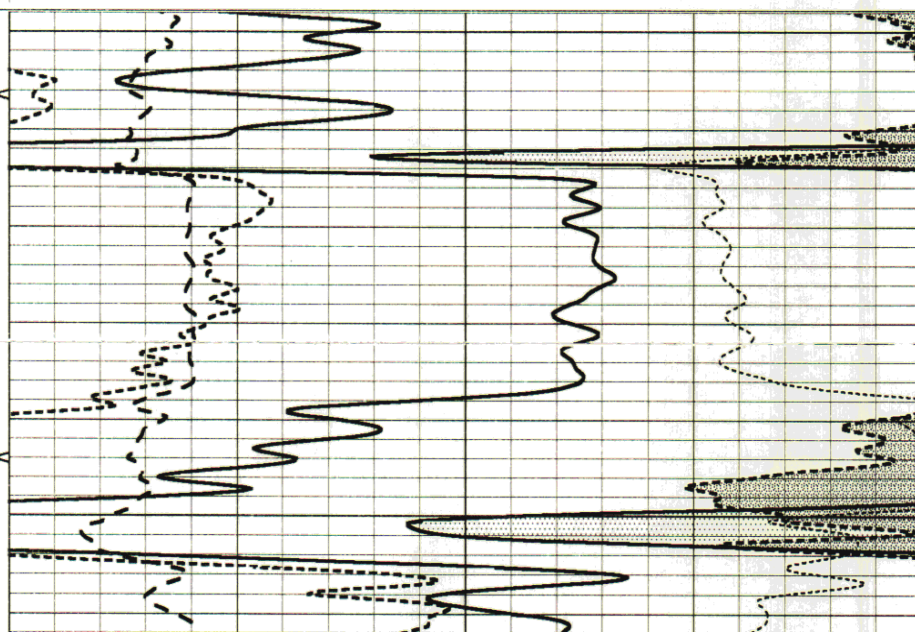
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Charted by: Depth in Feet scaled 1:240

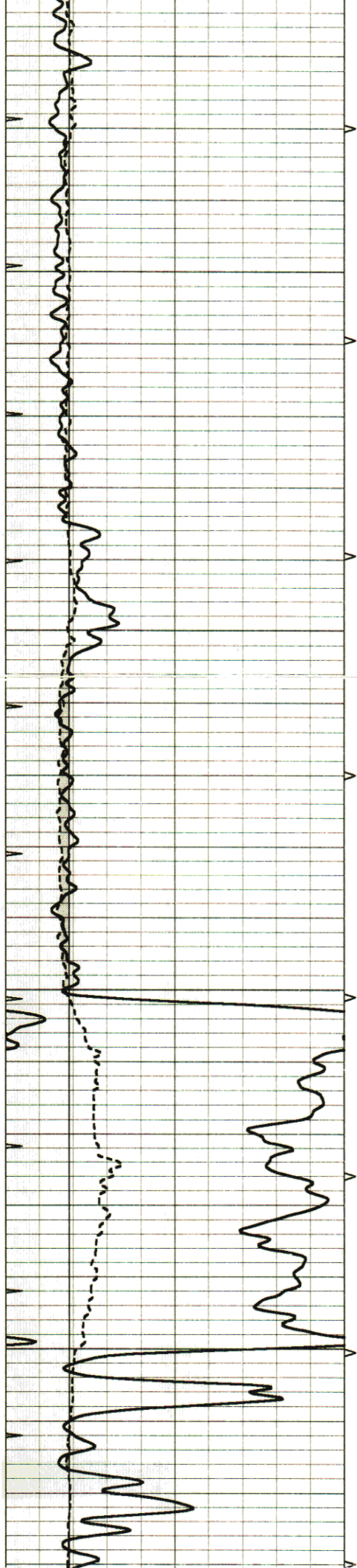
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3)	10		



4400

4450



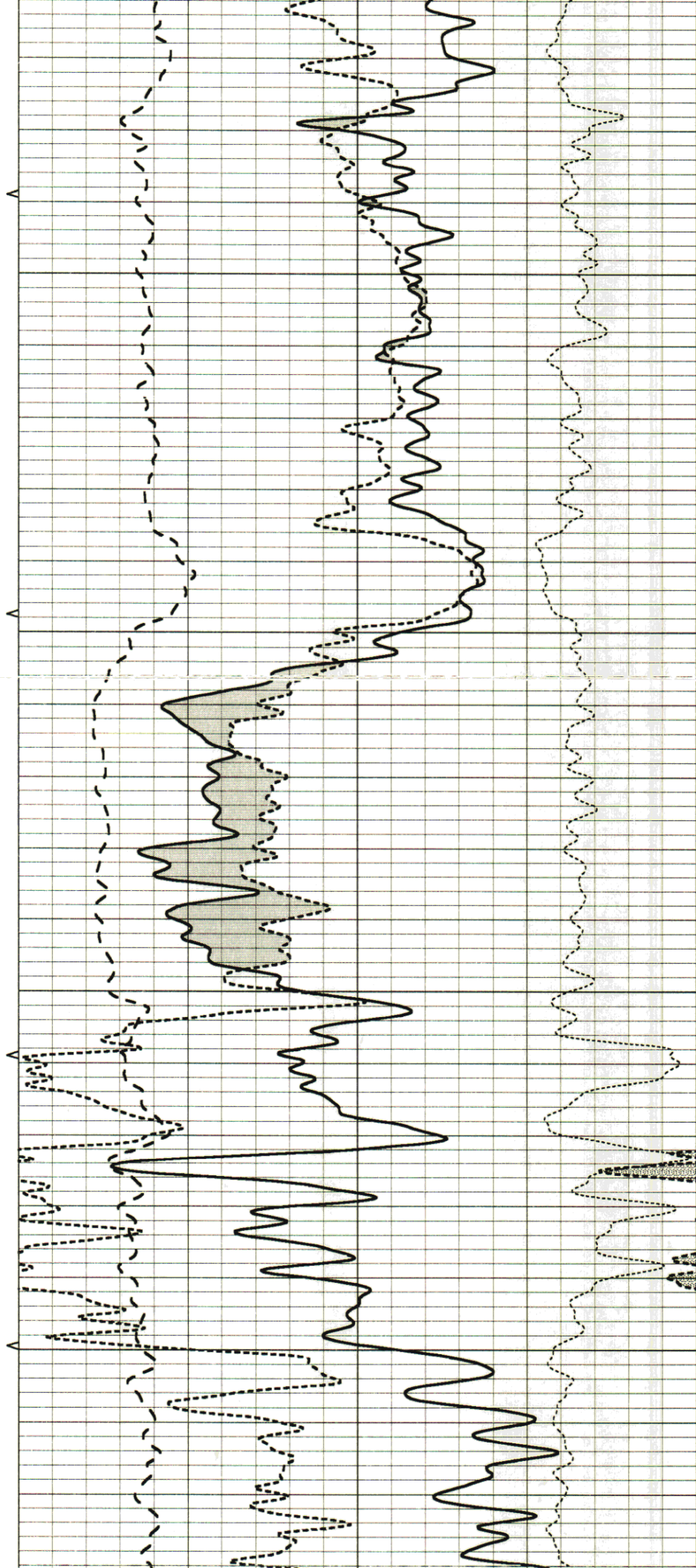


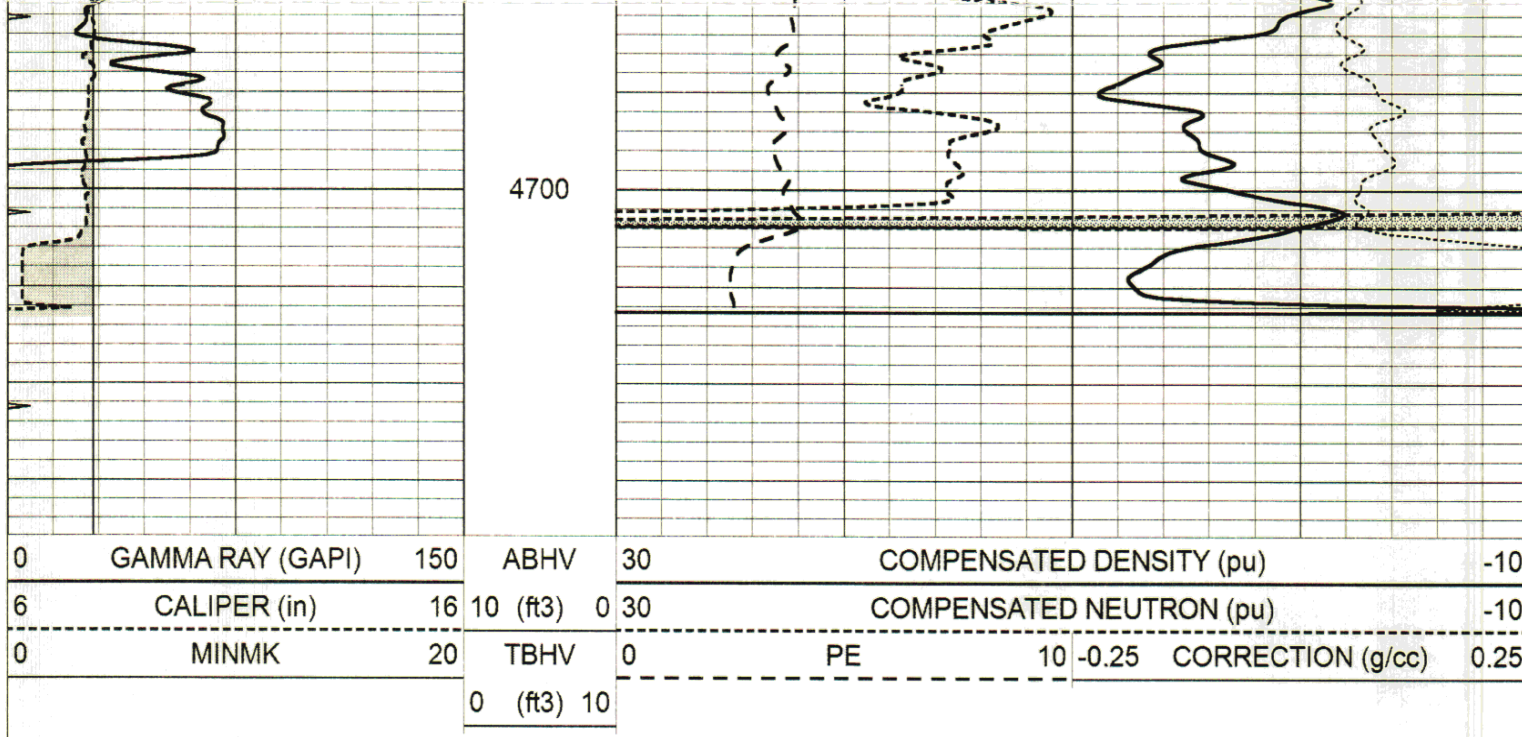
4500

4550

4600

4650





Calibration Report

Database File: 008129pe.db
 Dataset Pathname: pass3.6
 Dataset Creation: Thu Dec 29 11:47:40 2011

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Thu Dec 29 09:35:57 2011

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	7.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-4.000
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	4.0	8.2	
High Ref	5.9	15.0	
	Gain: 3.5		Offset: -5.8

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:	Thu Dec 29 08:14:15 2011	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2600	GAPI/cps

