



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**COMPENSATED  
DENSITY / NEUTRON  
PE LOG**

Company WOOLSEY OPERATING COMPANY, LLC.  
Well GOTTSCH #1  
Field STRANATHAN  
County BARBER  
State KANSAS

Company WOOLSEY OPERATING COMPANY, LLC.  
Well GOTTSCH #1  
Field STRANATHAN  
County BARBER State KANSAS

Location: API #: 15-007-24129-00-00  
1270' FNL & 1560' FEL  
SE - SE - NW - NE  
SEC 14 TWP 35S RGE 12W  
Permanent Datum GROUND LEVEL Elevation 1369  
Log Measured From KELLY BUSHING 12' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
DIL  
Elevation  
K.B. 1381  
D.F. 1379  
G.L. 1369

Date	3-27-14		
Run Number	ONE		
Depth Driller	5505		
Depth Logger	5500		
Bottom Logged Interval	5498		
Top Log Interval	1800		
Casing Driller	13 3/8" @ 223'		
Casing Logger	220'		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 6,800 PPM	
Density / Viscosity	9.2/55		
pH / Fluid Loss	9.5/8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.56 @ 83F		
Rmf @ Meas. Temp	0.42 @ 83F		
Rmc @ Meas. Temp	0.67 @ 83F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	0.43 @ 108F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	108F		
Equipment Number	860		
Location	HAYS, KANSAS		
Recorded By	IAN MABB		
Witnessed By	BILL KLAVER		

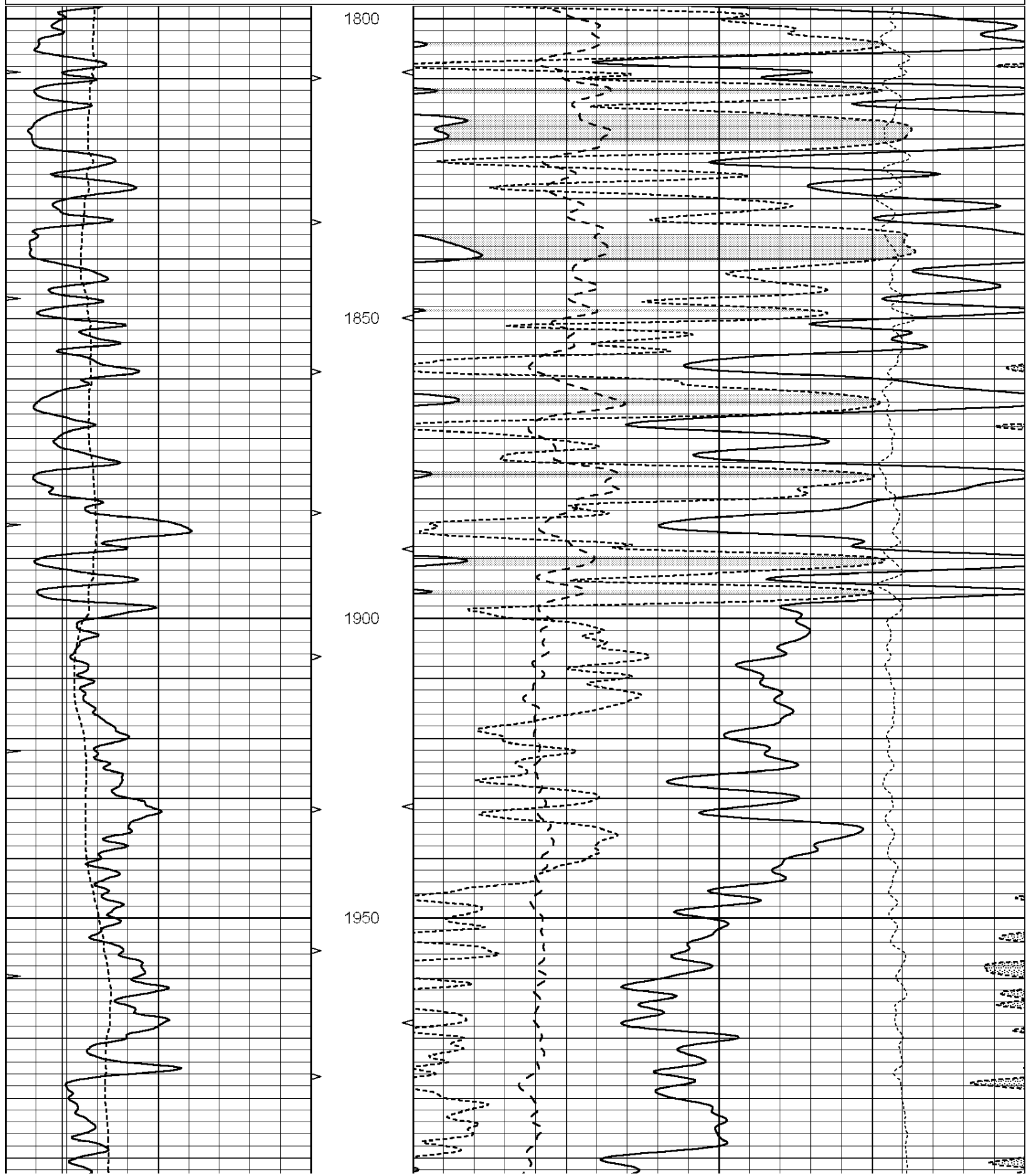
<<< Fold Here >>>

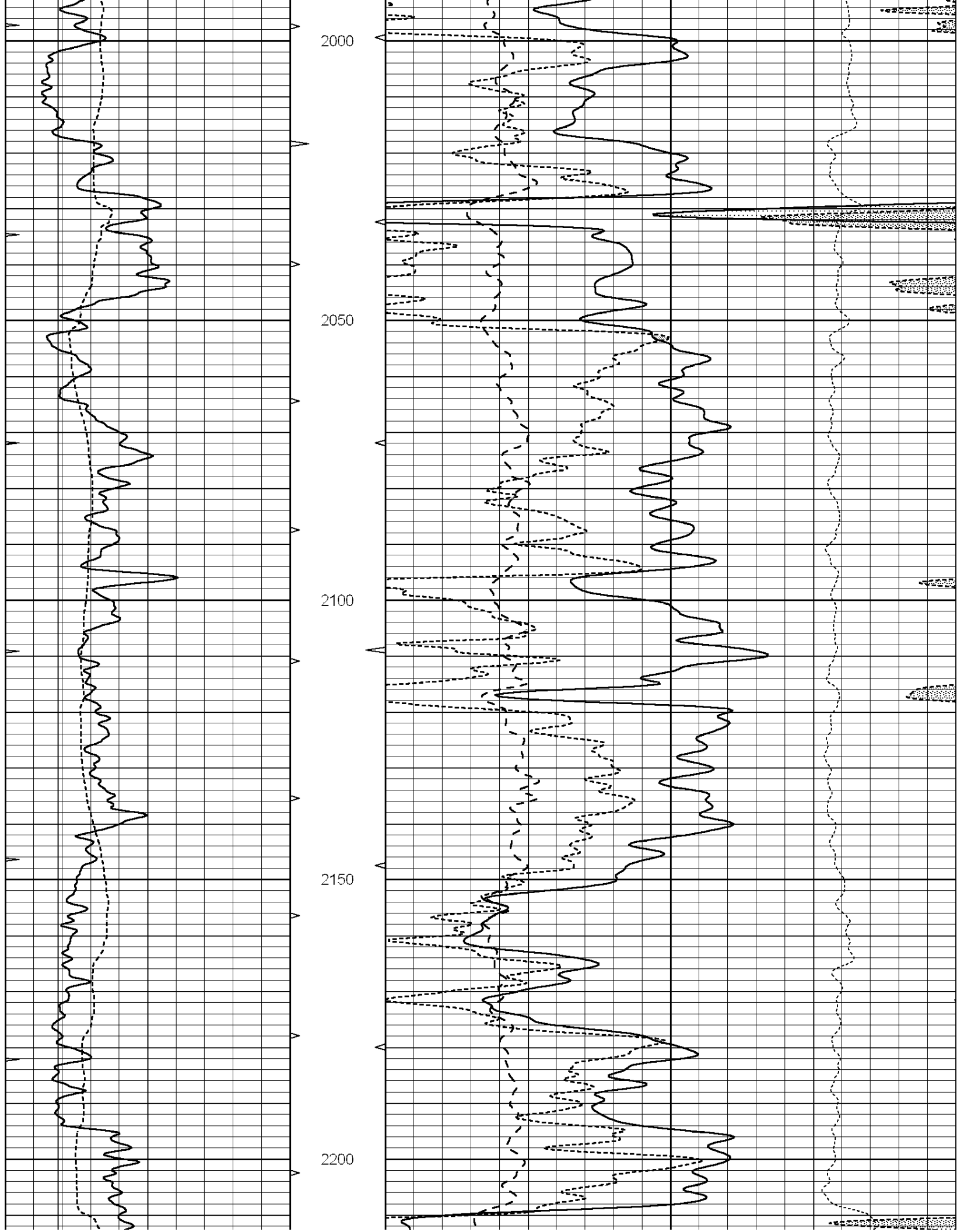
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

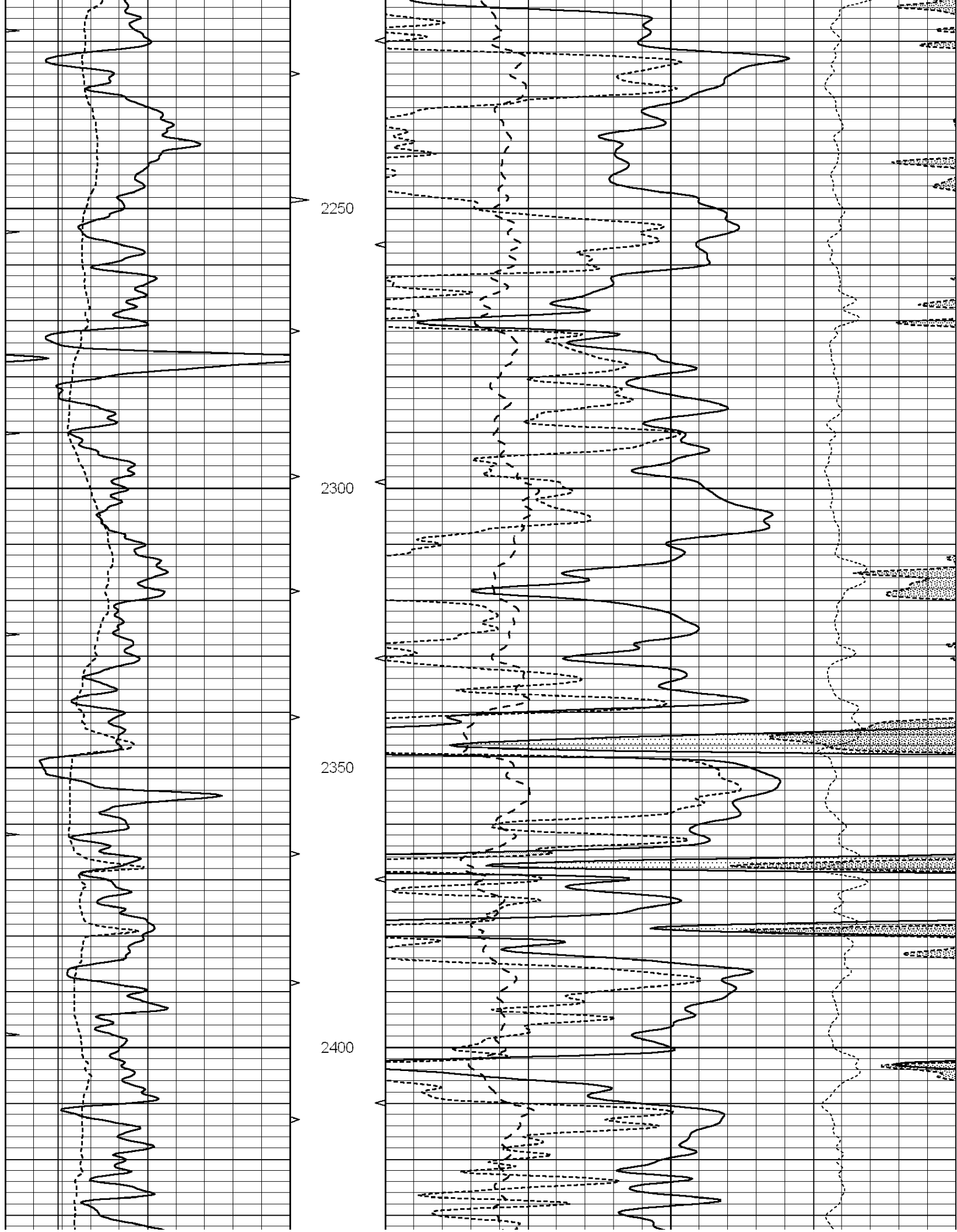
Comments

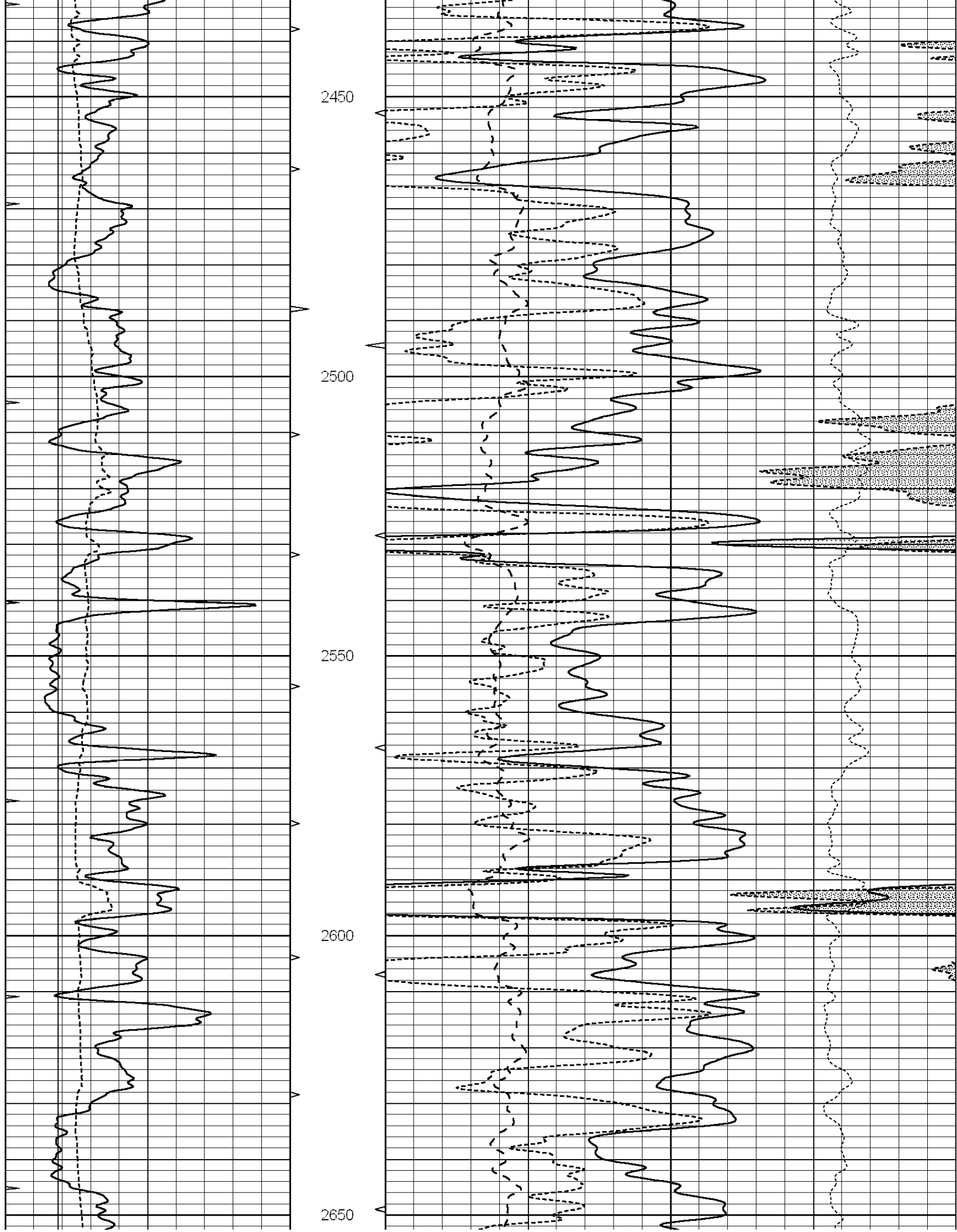
THANK YOU FOR USING "NABORS" HAYS, KANSAS (785) 628-6395  
DIRECTIONS:  
HARDTNER, KS. - 1 SOUTH TO STATE LINE RD. - EAST 3 1/2 MILES NORTH INTO

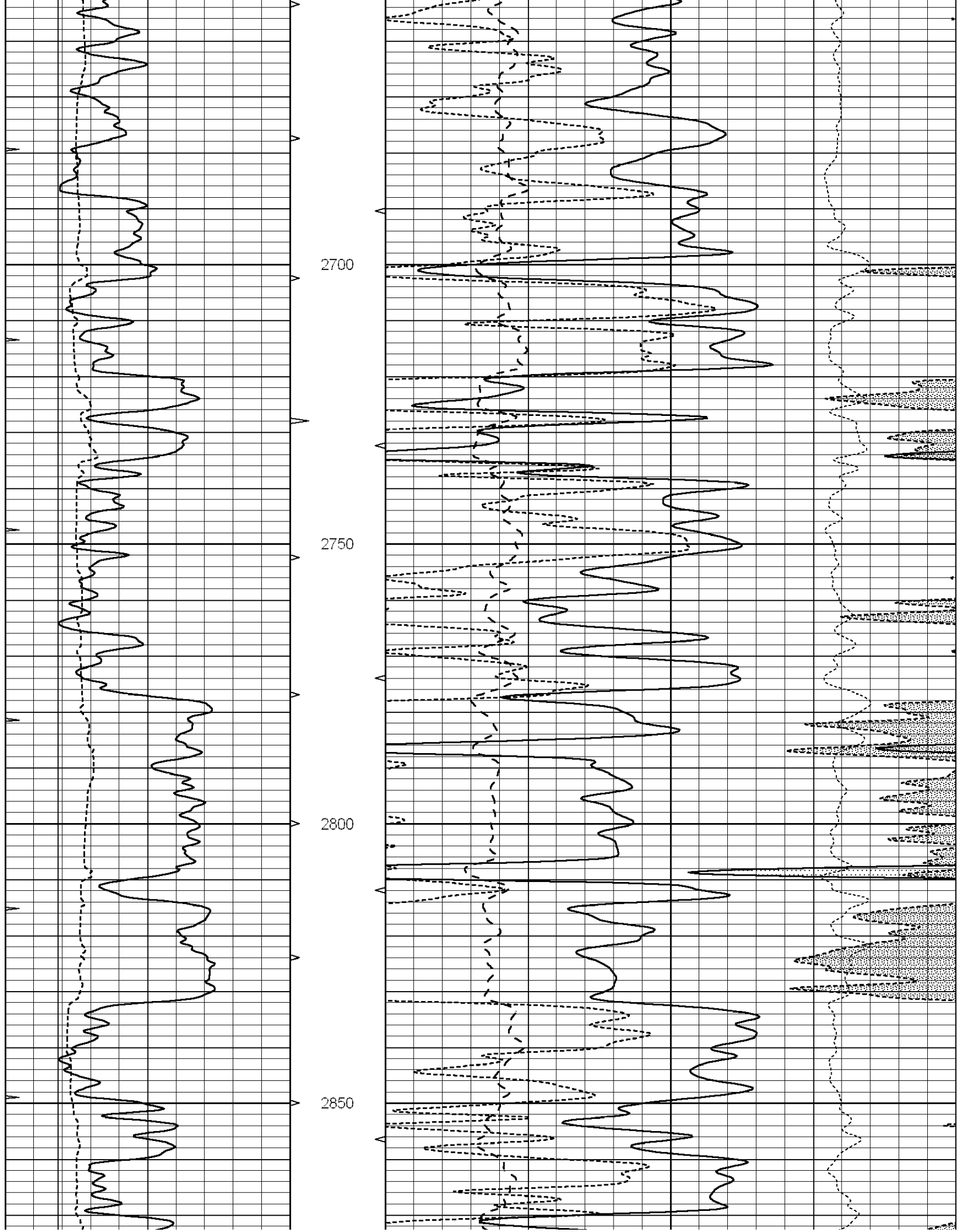
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)			-10	
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)			-10
0	MINMK	20	TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					

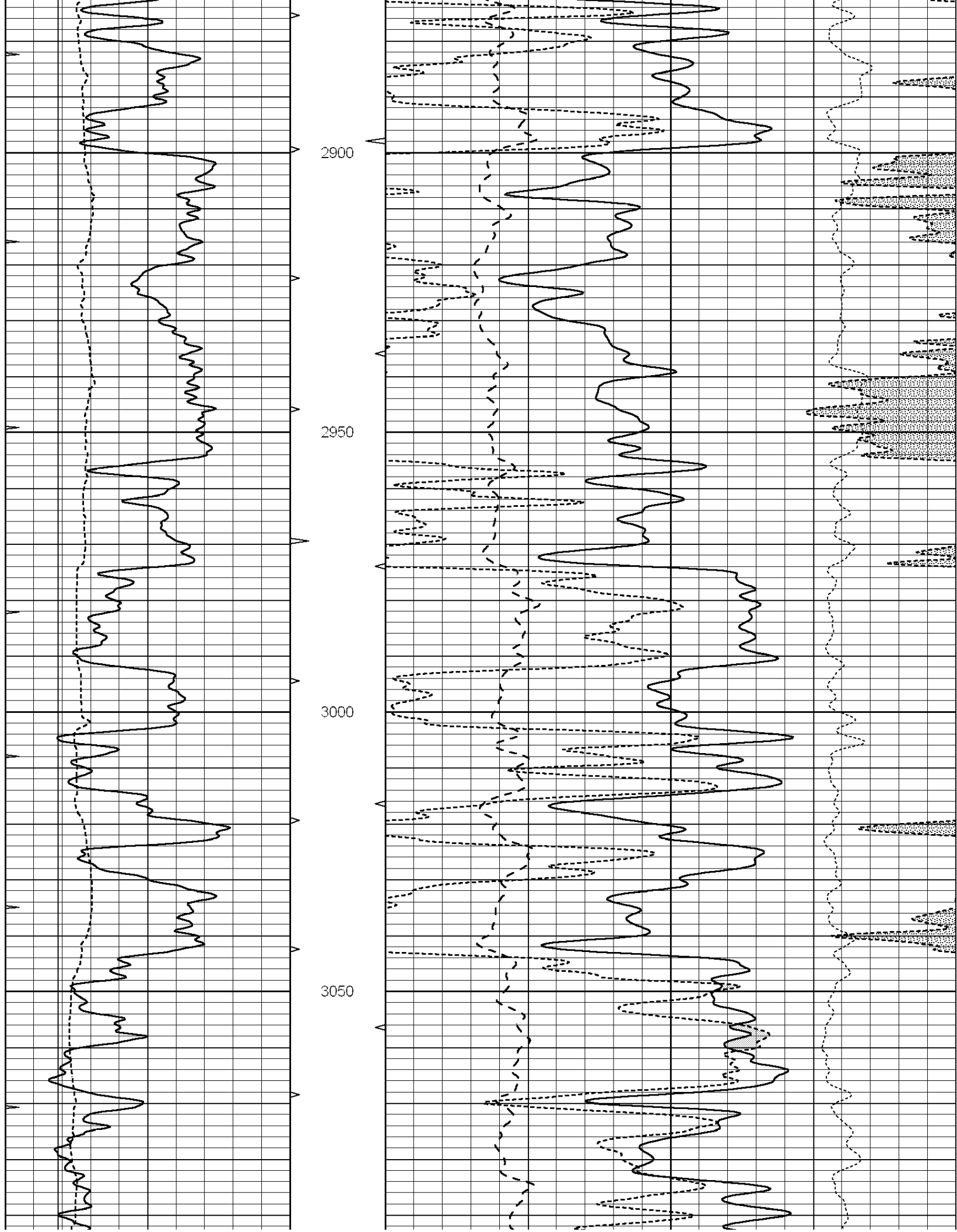


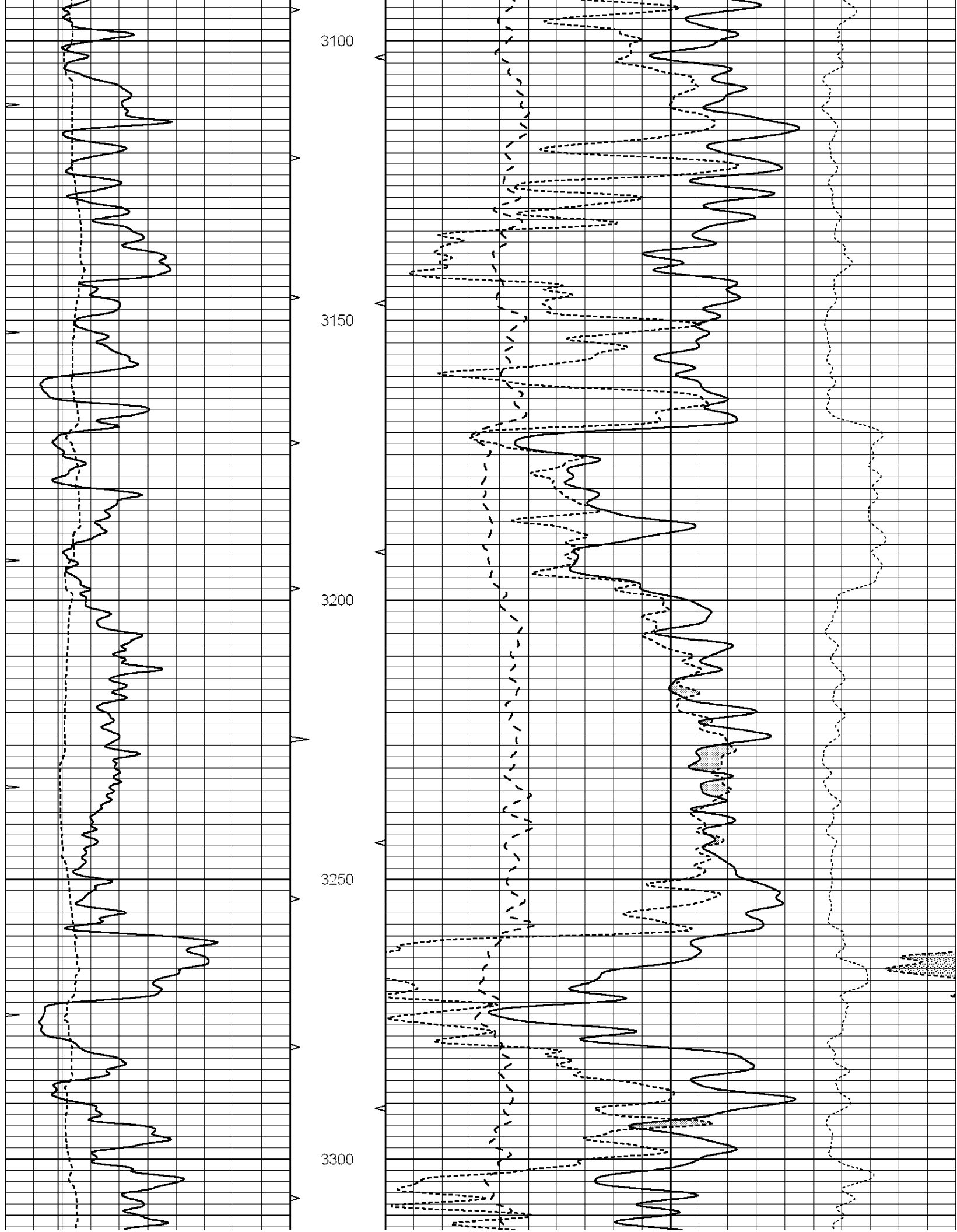




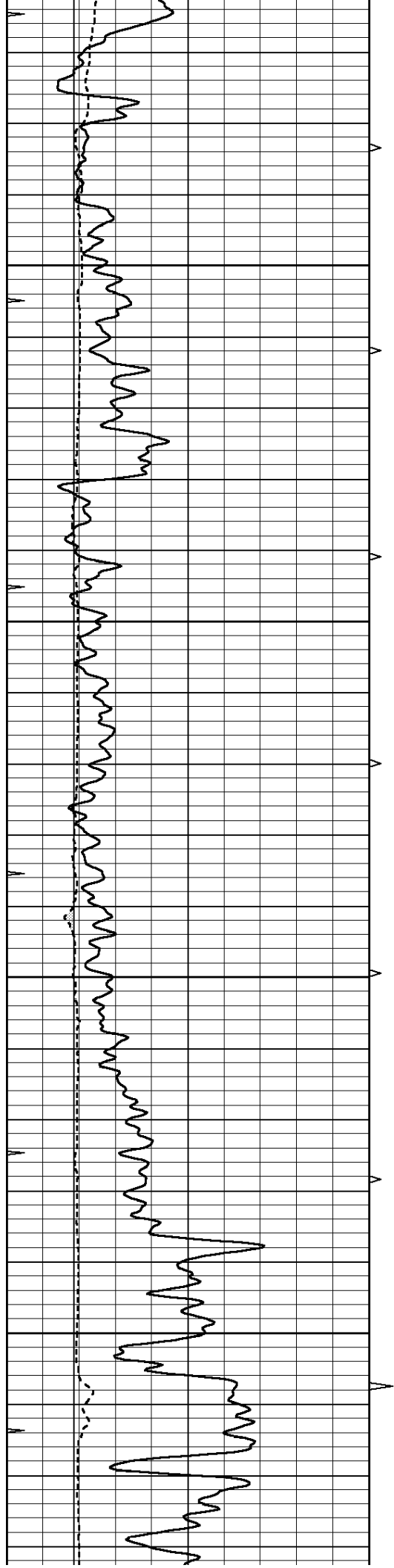










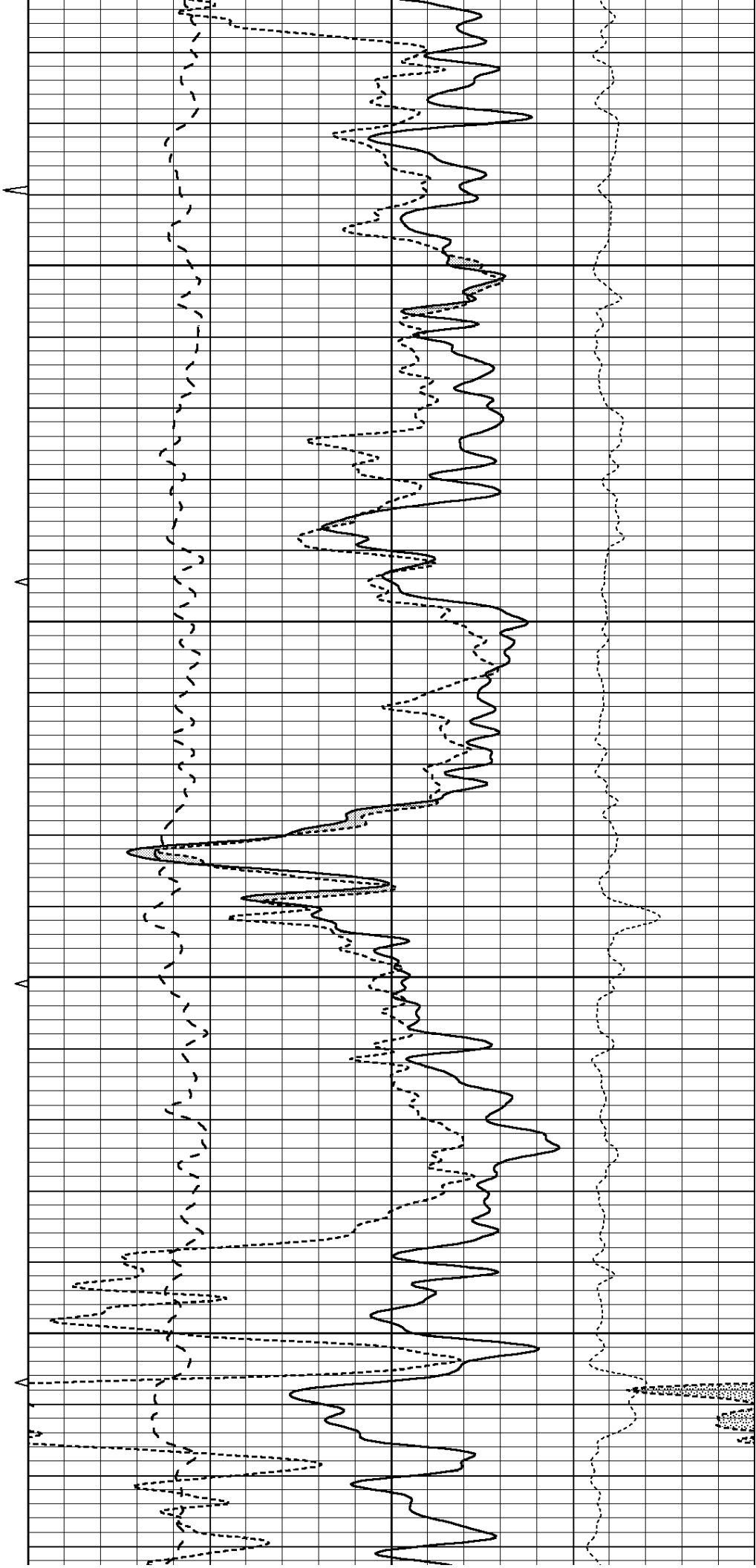


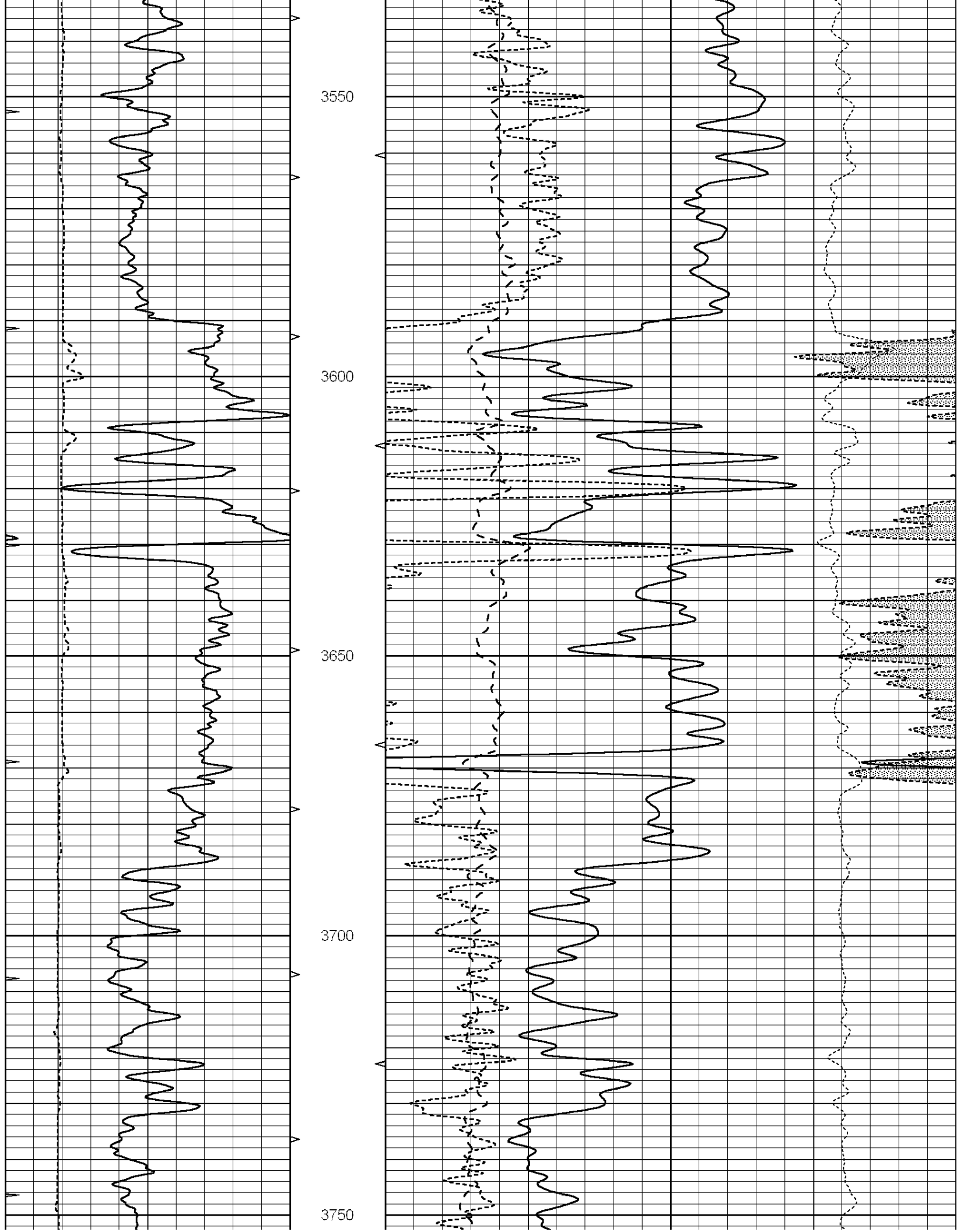
3350

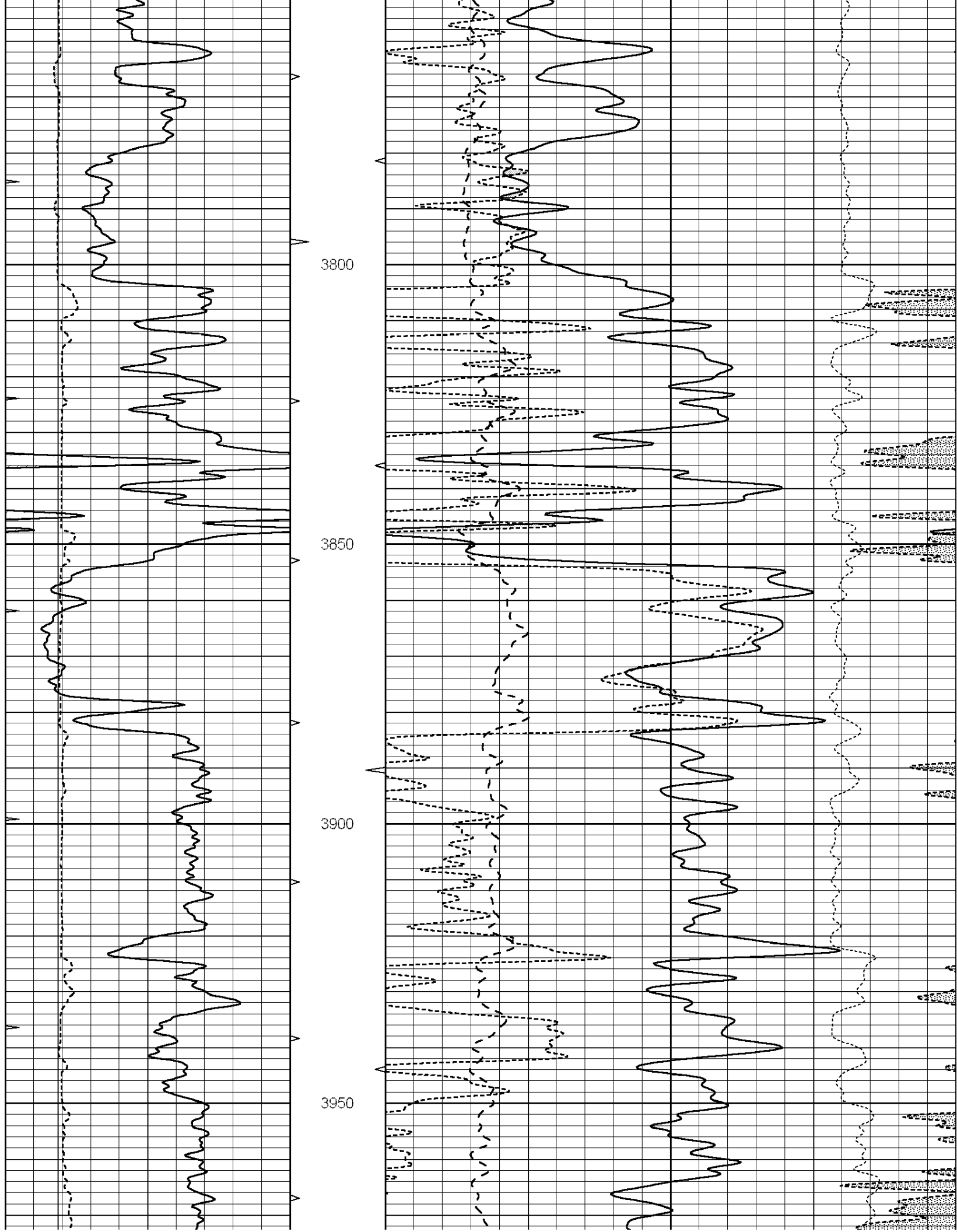
3400

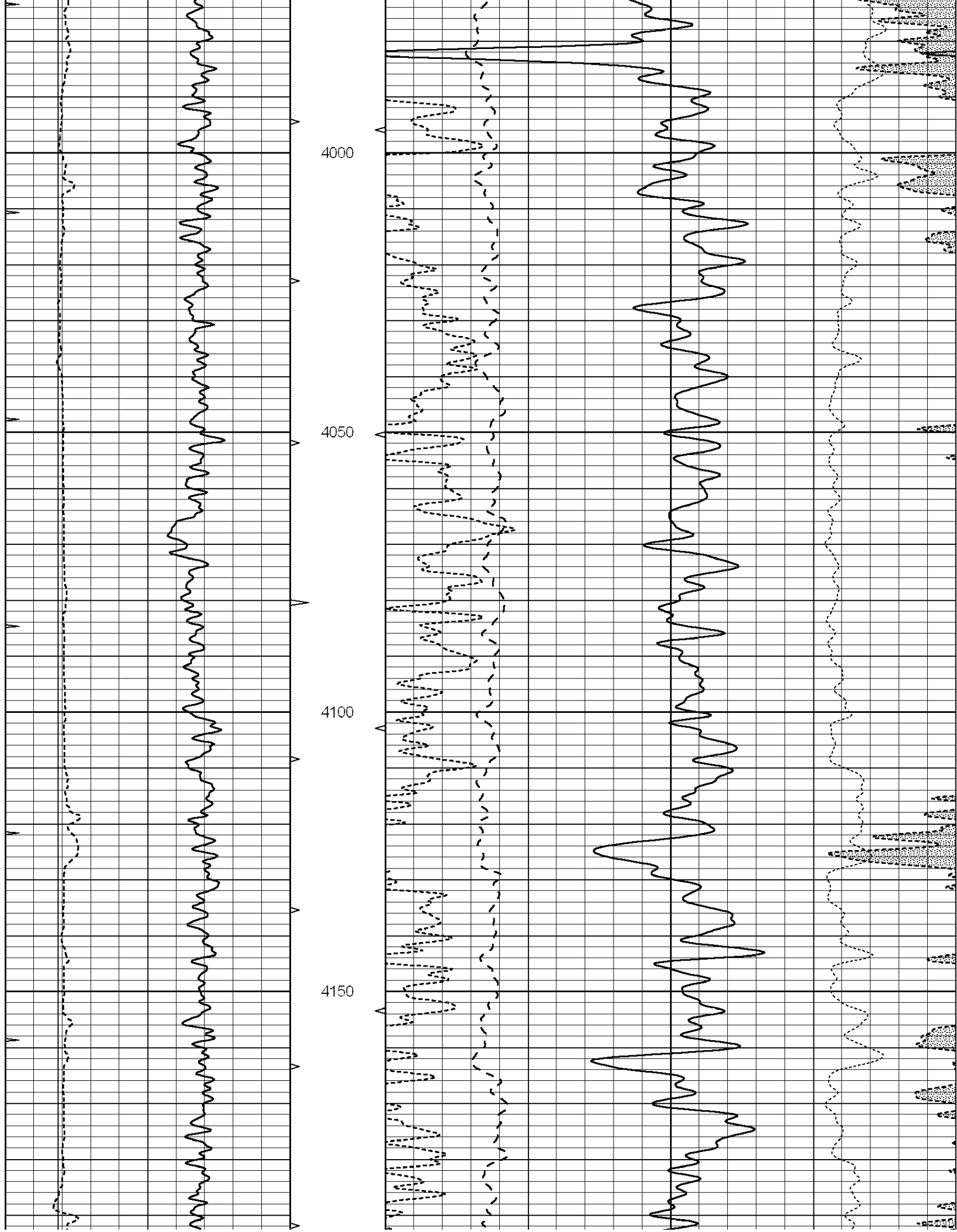
3450

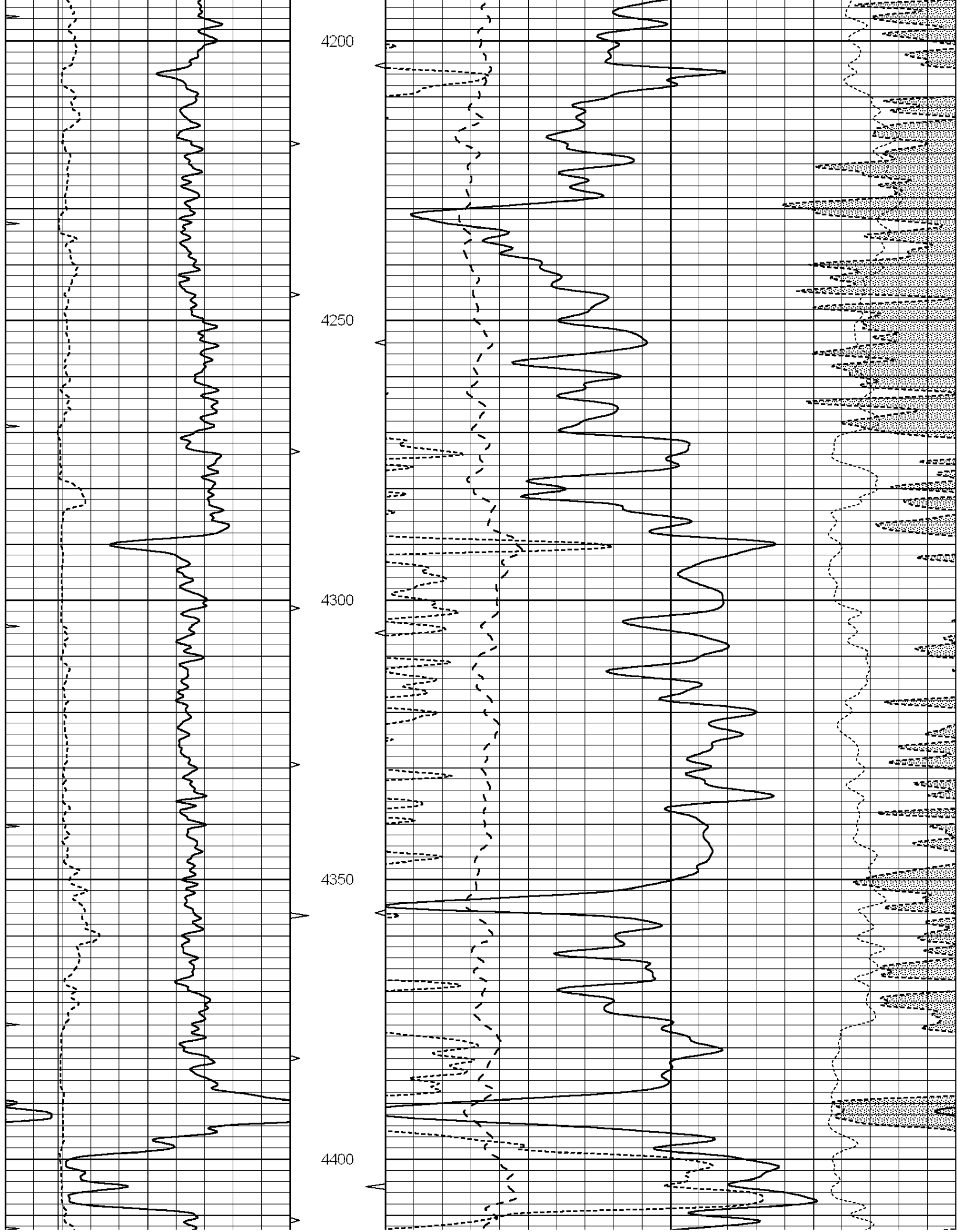
3500

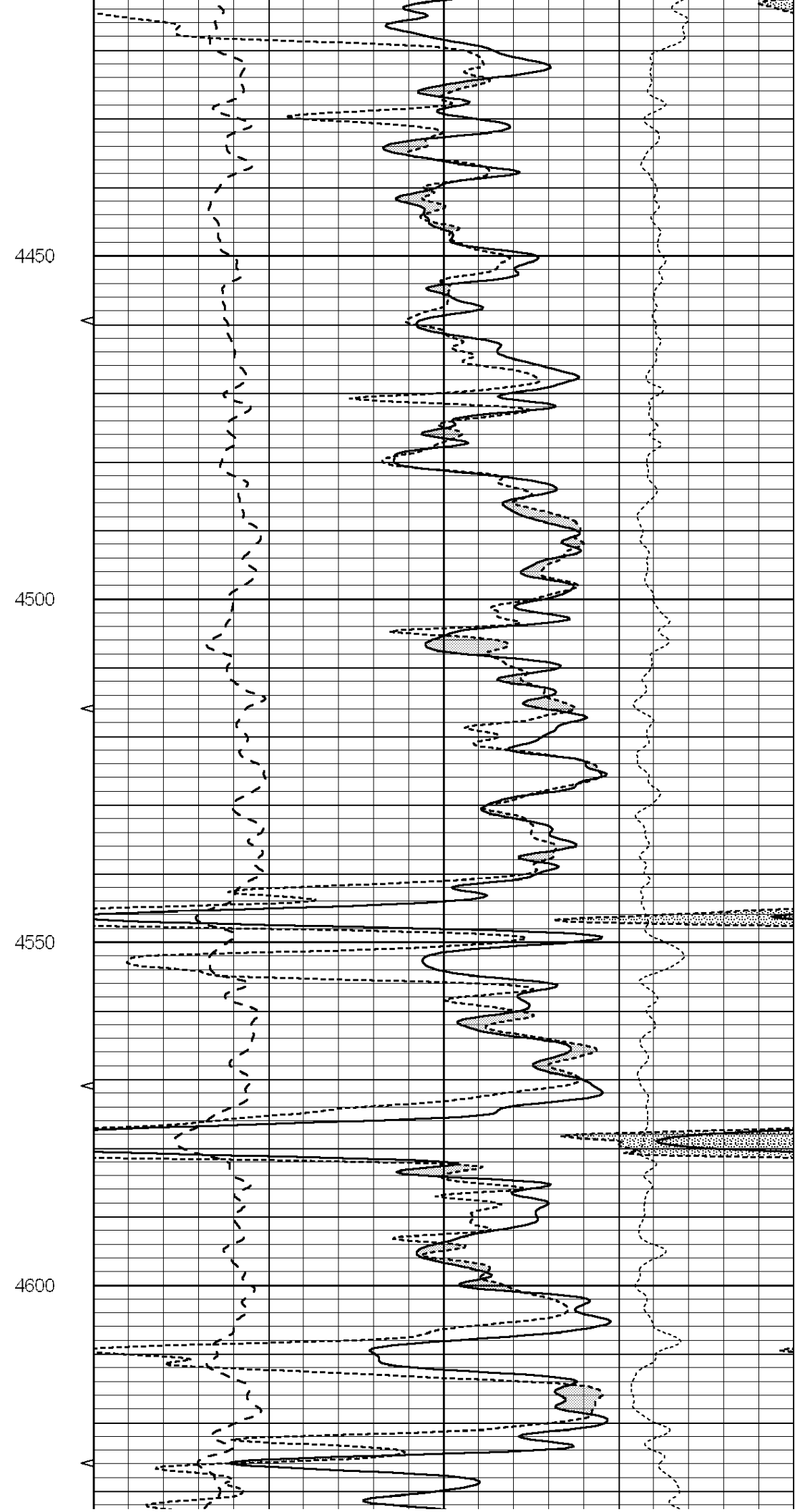
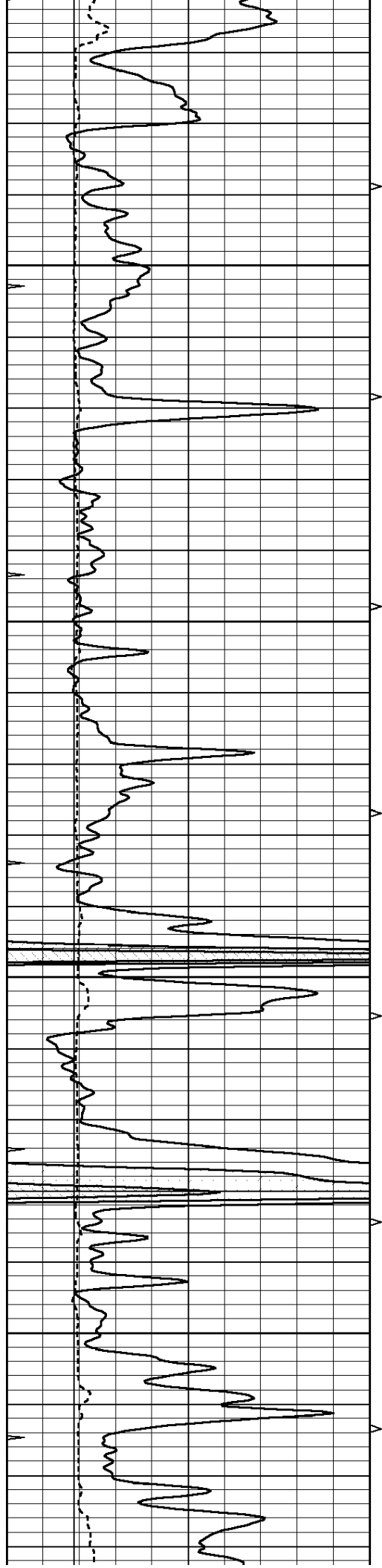


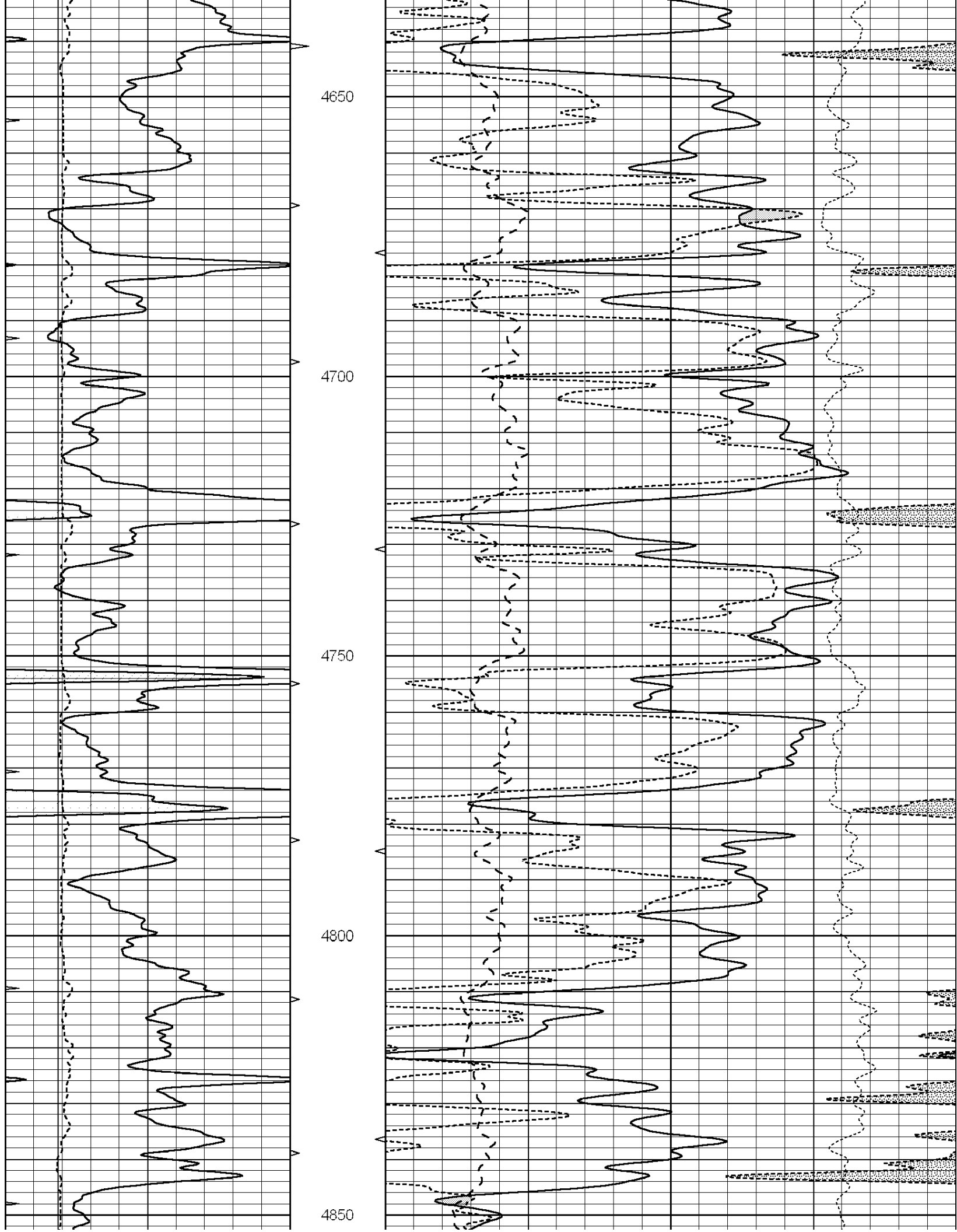


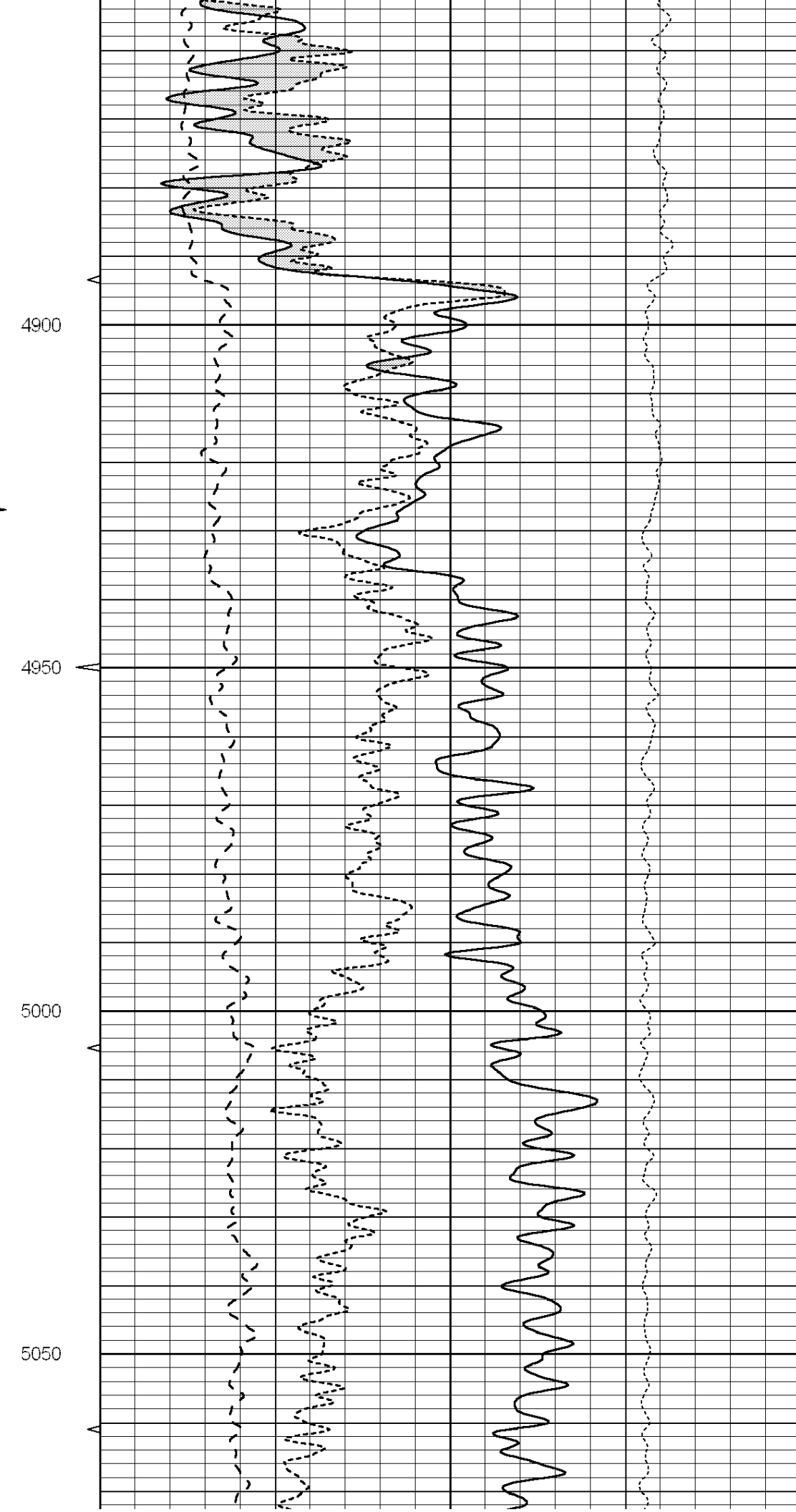
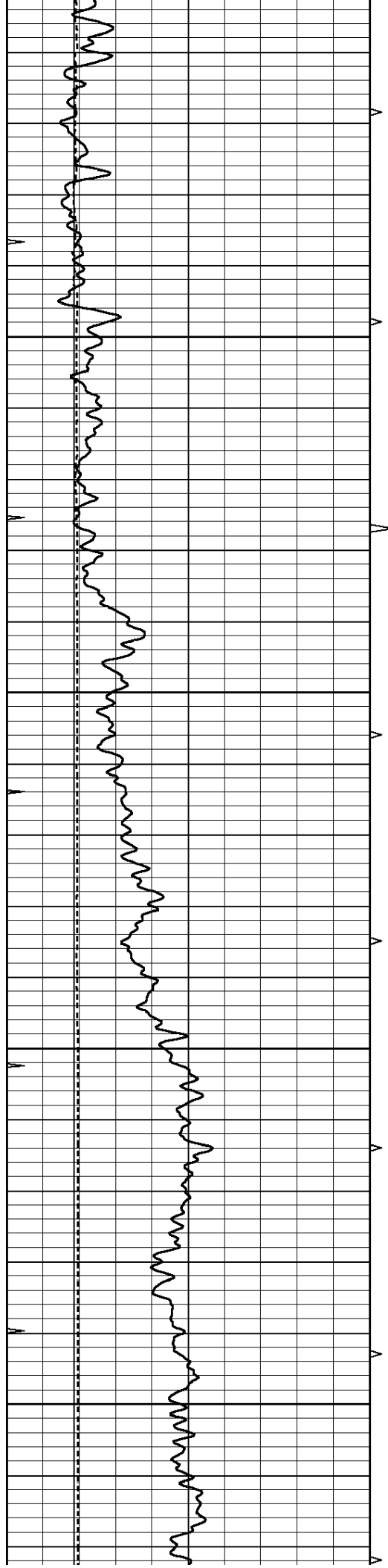




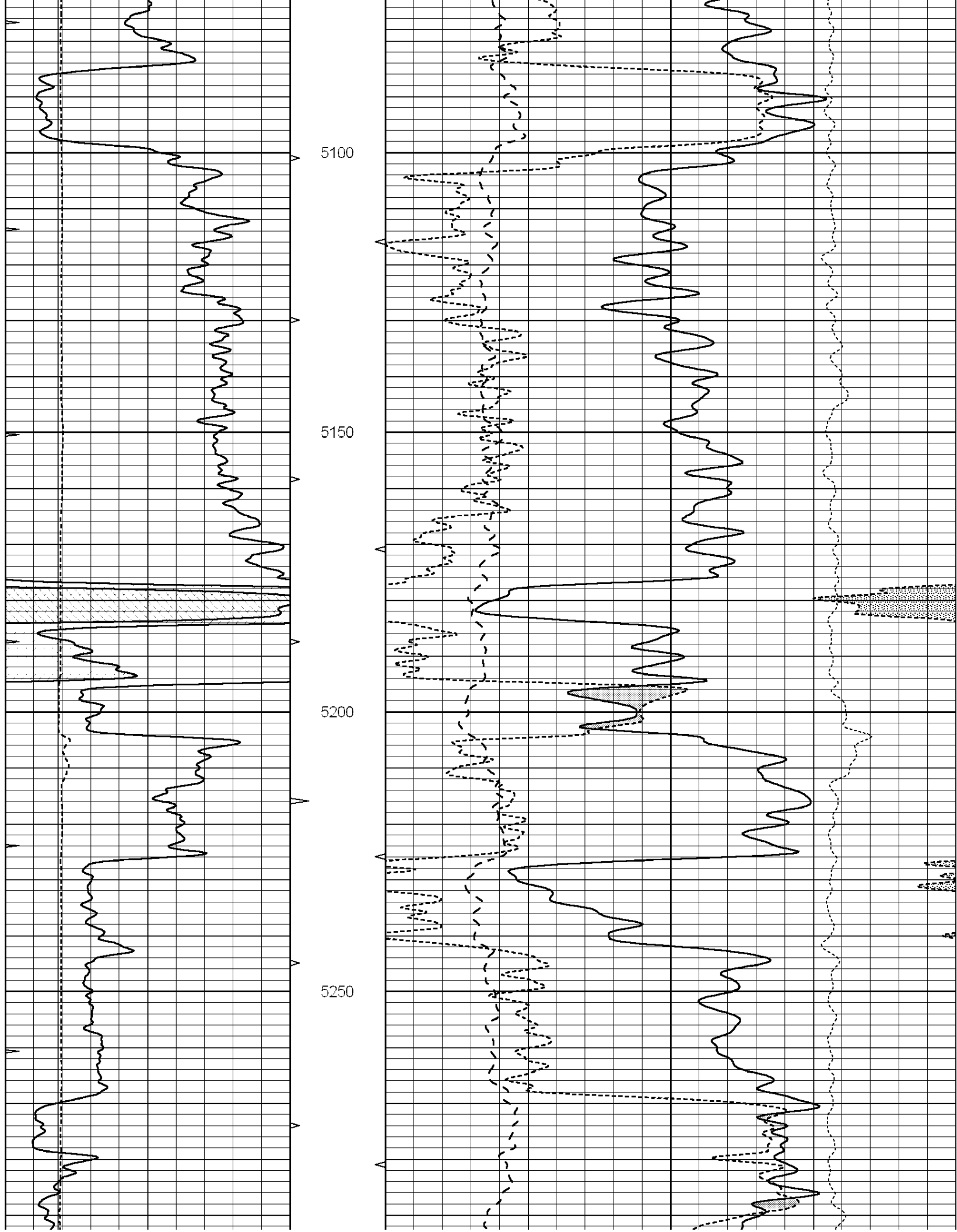


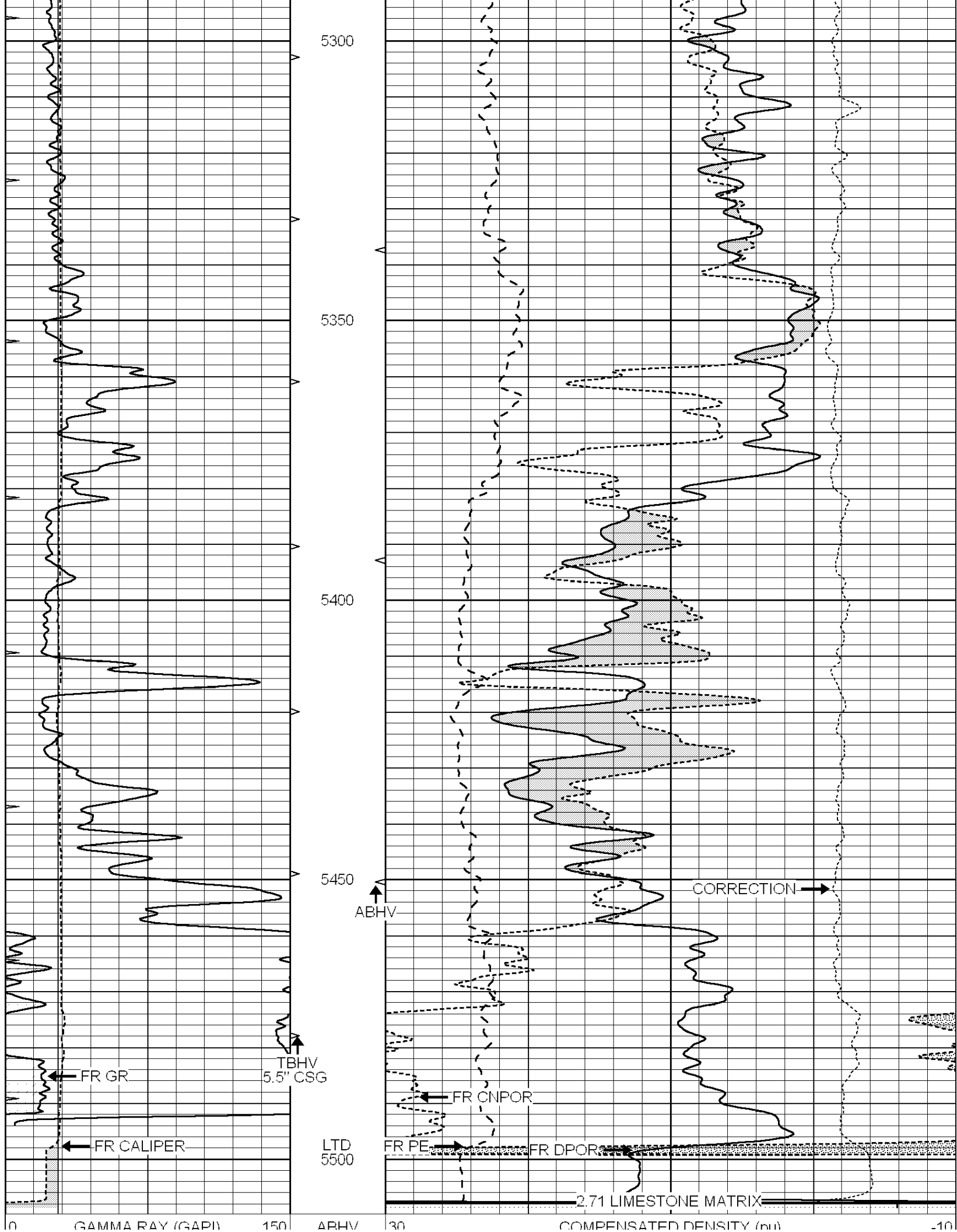












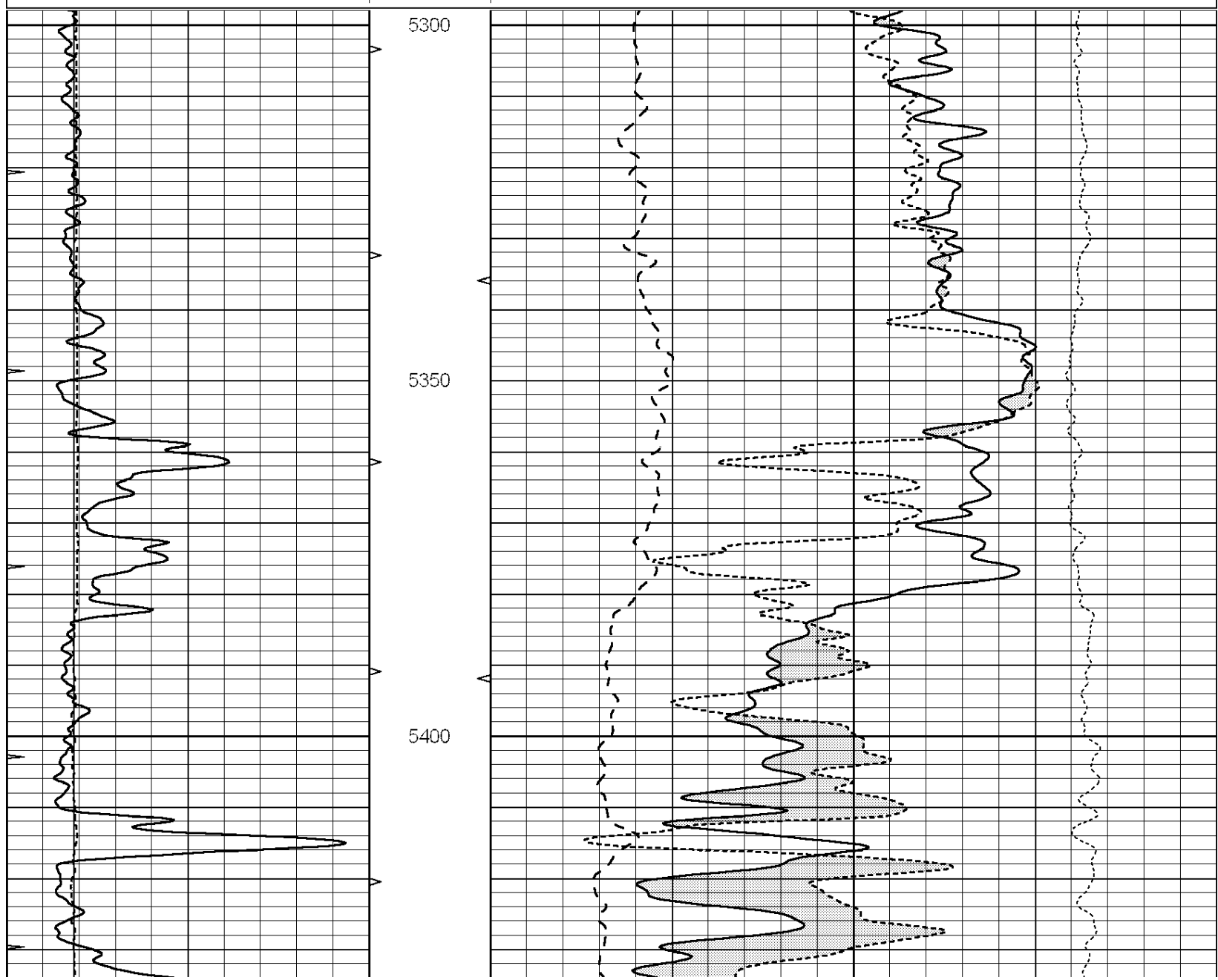
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25	CORRECTION (g/cc) 0.25
			0 (ft3)	10			

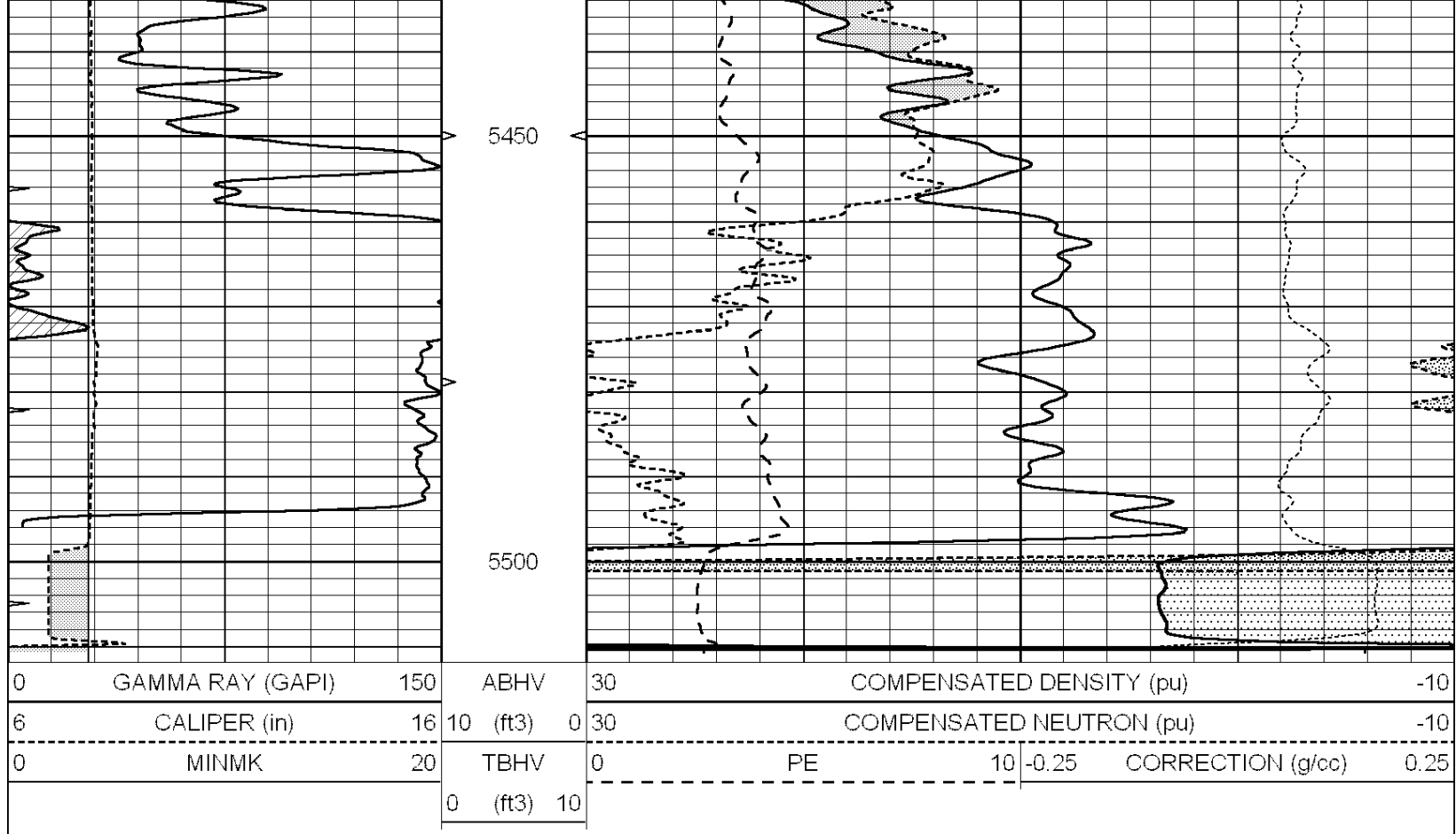


# REPEAT SECTION

Database File: 24126pe.db  
 Dataset Pathname: pass5.2  
 Presentation Format: \_ldt\_neu  
 Dataset Creation: Thu Mar 27 20:27:10 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	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: 24126pe.db  
 Dataset Pathname: pass6.1  
 Dataset Creation: Thu Mar 27 22:08:05 2014 by Calc Open-Cased 090629

Litho Density Calibration Report  
 Serial: 002 Model: PRB  
 Performed Thu Feb 20 13:15:40 2014

#### Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	838.1	7256.9	2235.8	7989.6	cps
Window 2	793.3	6009.5	1923.3	6534.3	cps
Window 3	675.6	3641.9	1293.0	3880.0	cps
Window 4	191.0	190.0	189.0	190.4	cps
Long Space	0.0	5216.1	1130.0	5740.9	cps
Short Space	1.1	1324.1	886.6	1421.3	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 45.3	Rib Slope	: 1.011	Density/Spine Ratio	: 0.560
Spine Angle	: 75.3	Spine Slope	: 3.813	Spine Intercept	: -18.9

#### Caliper

	Readings	Reference	
Low Ref	1.8	8.4	
High Ref	6.1	14.0	
Gain: 1.3			Offset: 2.9

#### 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:	Tue Mar 04 10:47:15 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.4500	GAPI/cps