



SUPERIOR
Hays,
Kansas

COMPENSATED
DENSITY / NEUTRON
PE LOG

Company	WOOLSEY OPERATING COMPANY, LLC.		
Well	SUMMERS "A" #4		
Field	SHORT		
County	BARBER		
State	KANSAS		
Location:	API # : 15-007-23497-0000		Other Services DIL
	2140' FNL & 2310' FWL N/2 - SE - SE - NW SEC 20 TWP 34S RGE 11W		
Permanent Datum	GROUND LEVEL	Elevation	1372
Log Measured From	KELLY BUSHING 11' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	2/10/10		
Run Number	ONE		
Depth Driller	4900		
Depth Logger	4906		
Bottom Logged Interval	4882		
Top Log Interval	1600		
Casing Driller	10 3/4"@223'		
Casing Logger	220		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4,000 PPM	
Density / Viscosity	9.3/60		
pH / Fluid Loss	9.0/10.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.20@50F		
Rmf @ Meas. Temp	.900@50F		
Rmc @ Meas. Temp	1.44@50F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.484@124F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	1:45 A.M.		
Maximum Recorded Temperature	124F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	SCOTT ALBERG		

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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
MEDICINE LODGE, KS. (HWY 160 & 281 JUNCTION) 13S.ON HWY 281 TO "SCOTT CANYON RD.", 2E.
TO "NORSTAR RD.", 1S., W. INTO PAST CATTLE PENS THEN BACK S. IN PASTURE

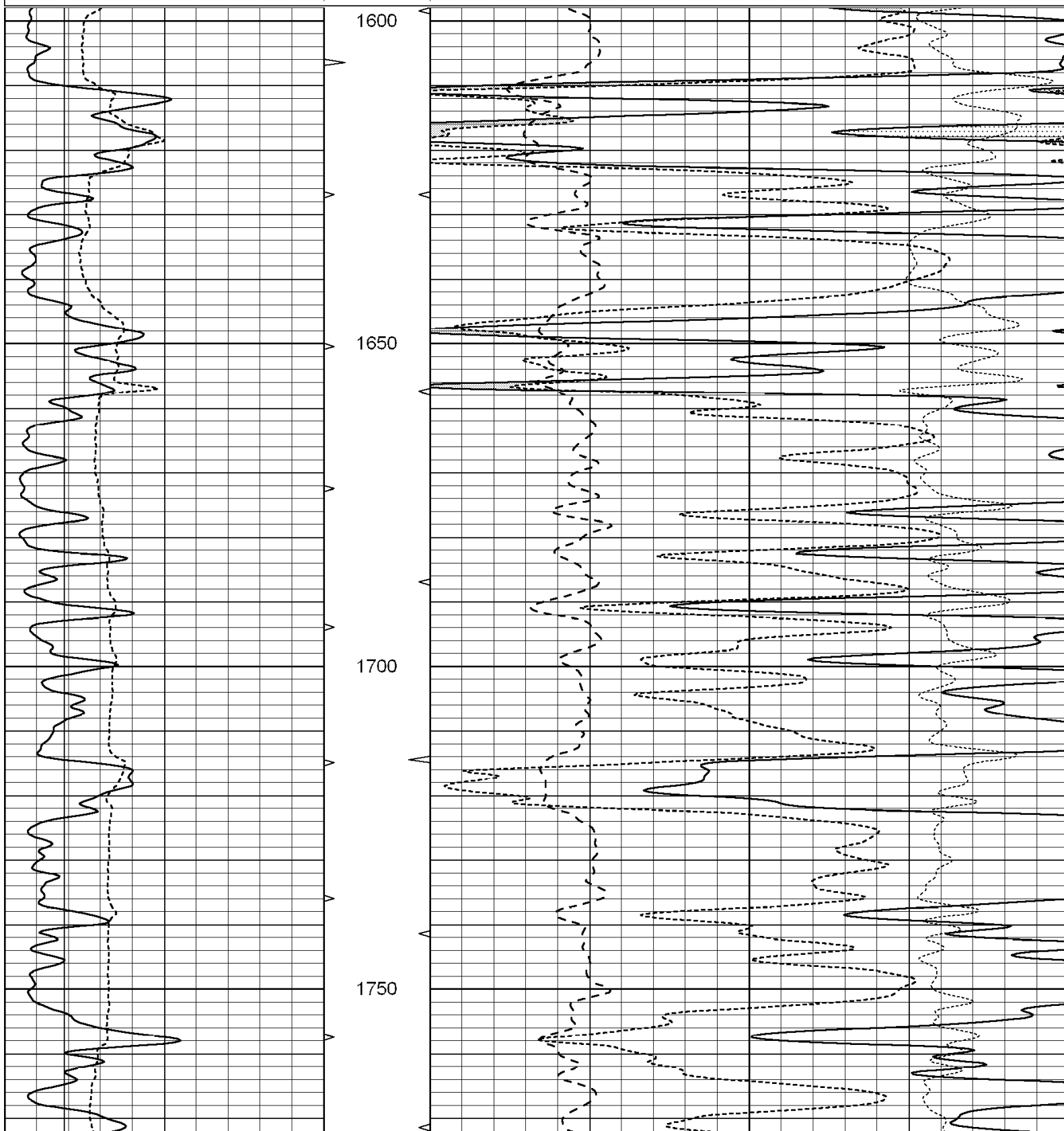


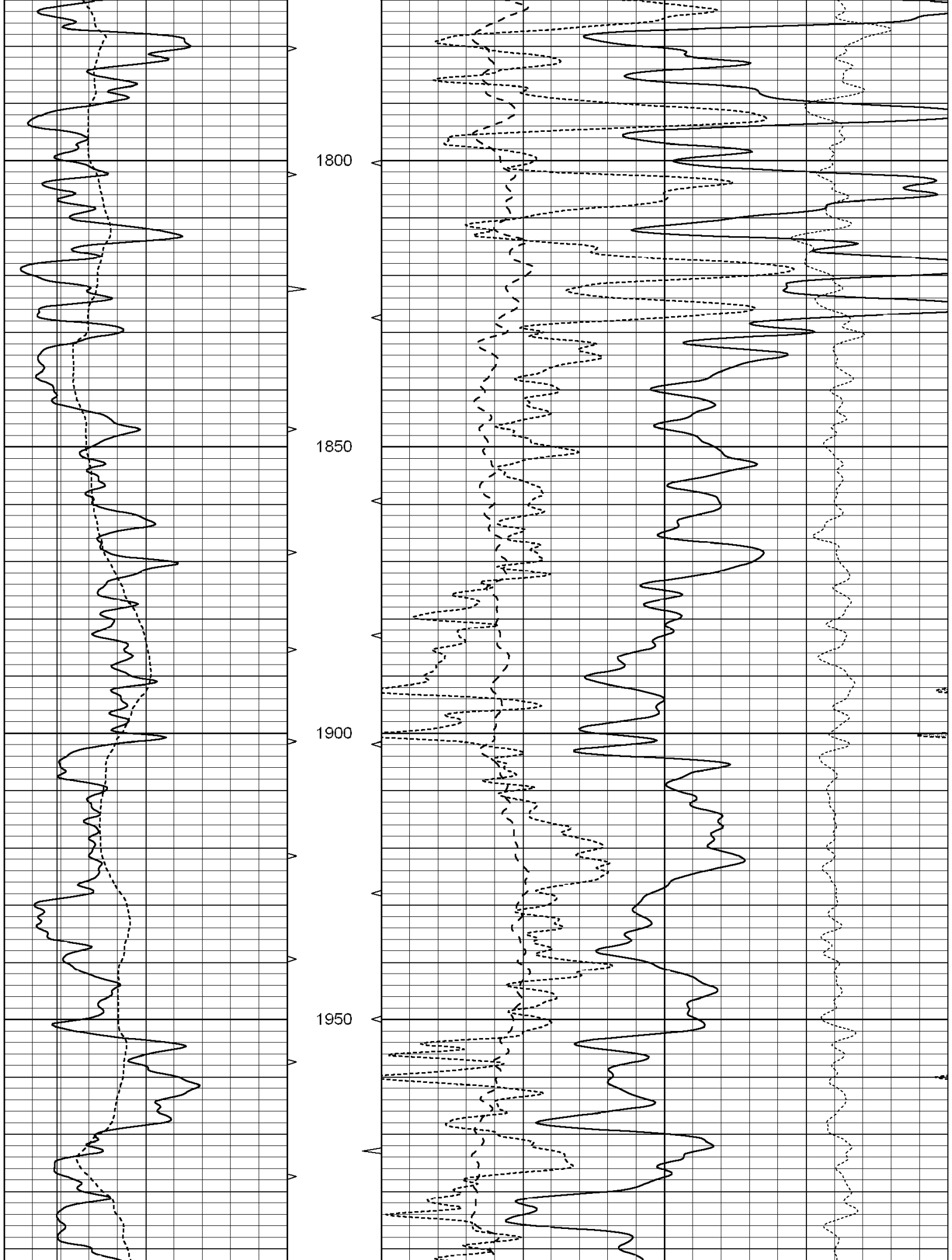
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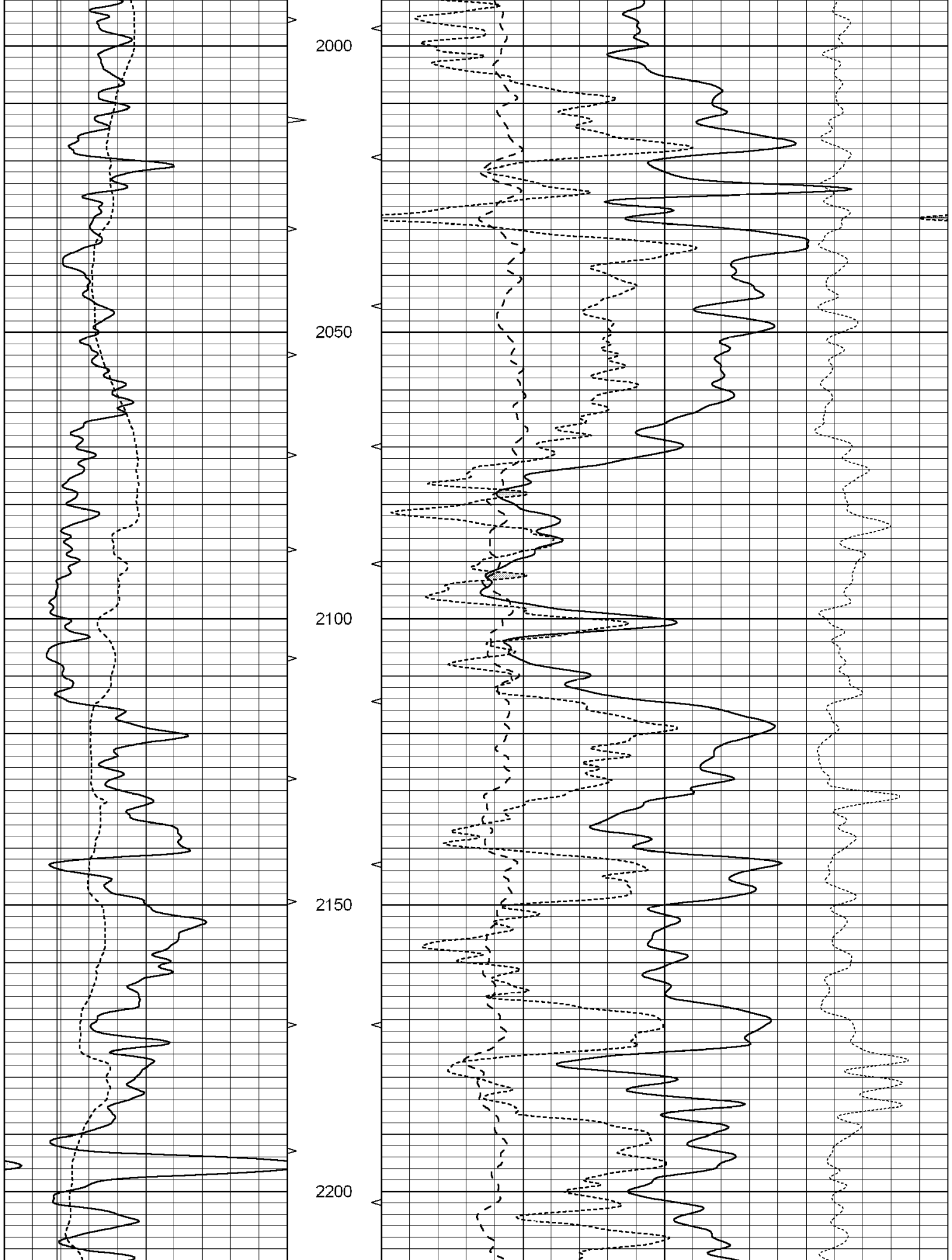
MAIN SECTION

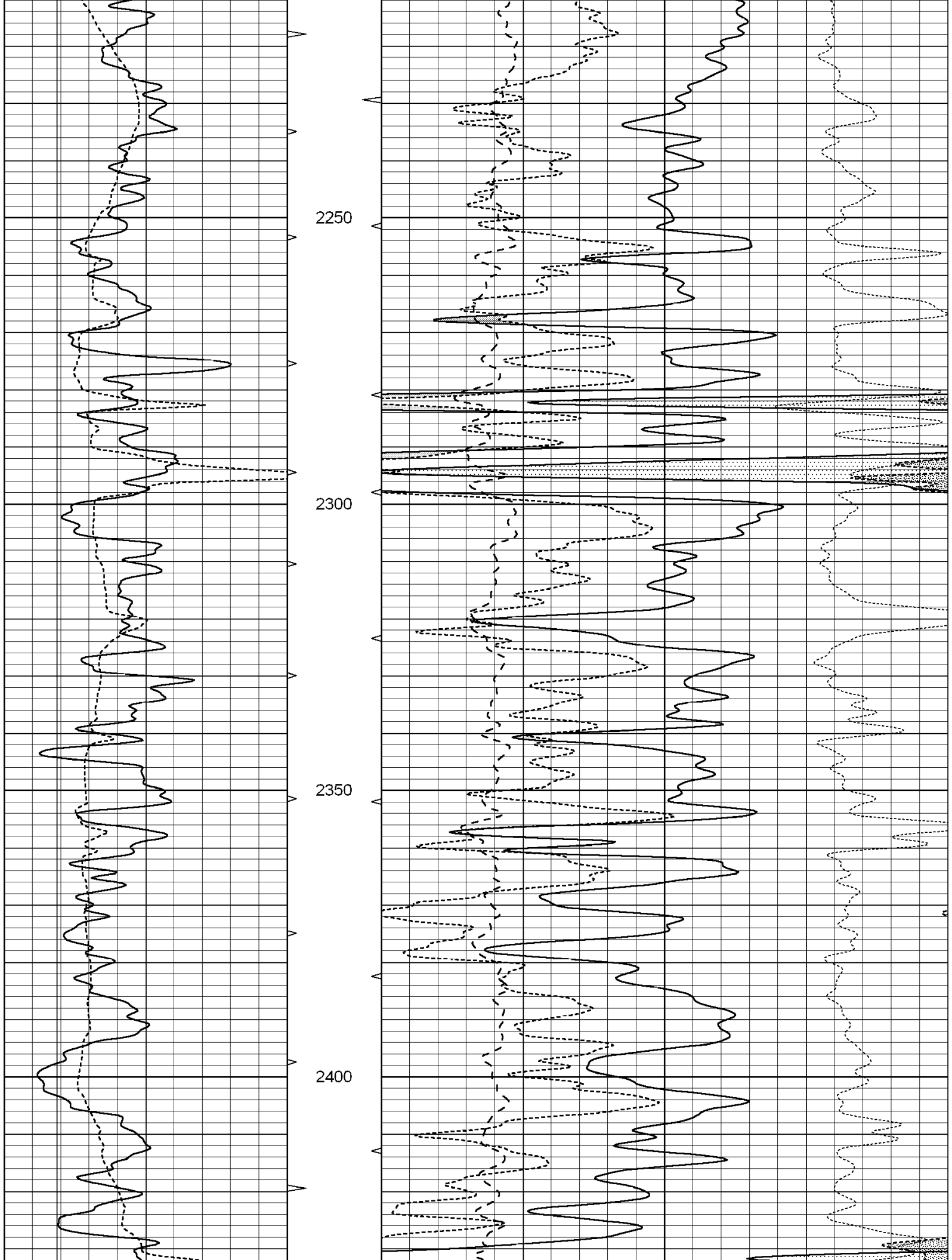
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Dataset Creation: Wed Feb 10 03:44:59 2010 by Calc Open-Cased 060407
Charted by: Depth in Feet scaled 1:240

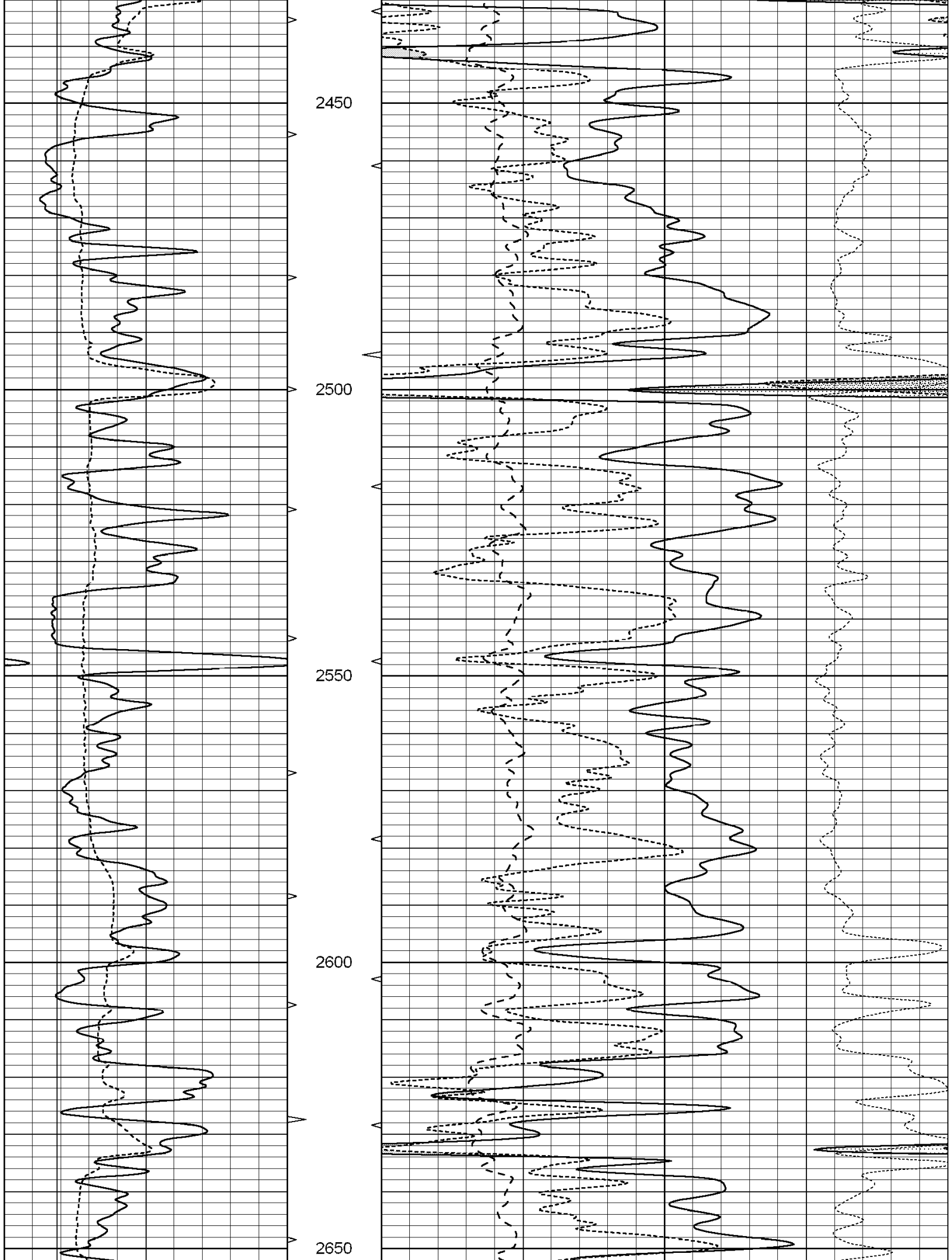
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
			TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10			

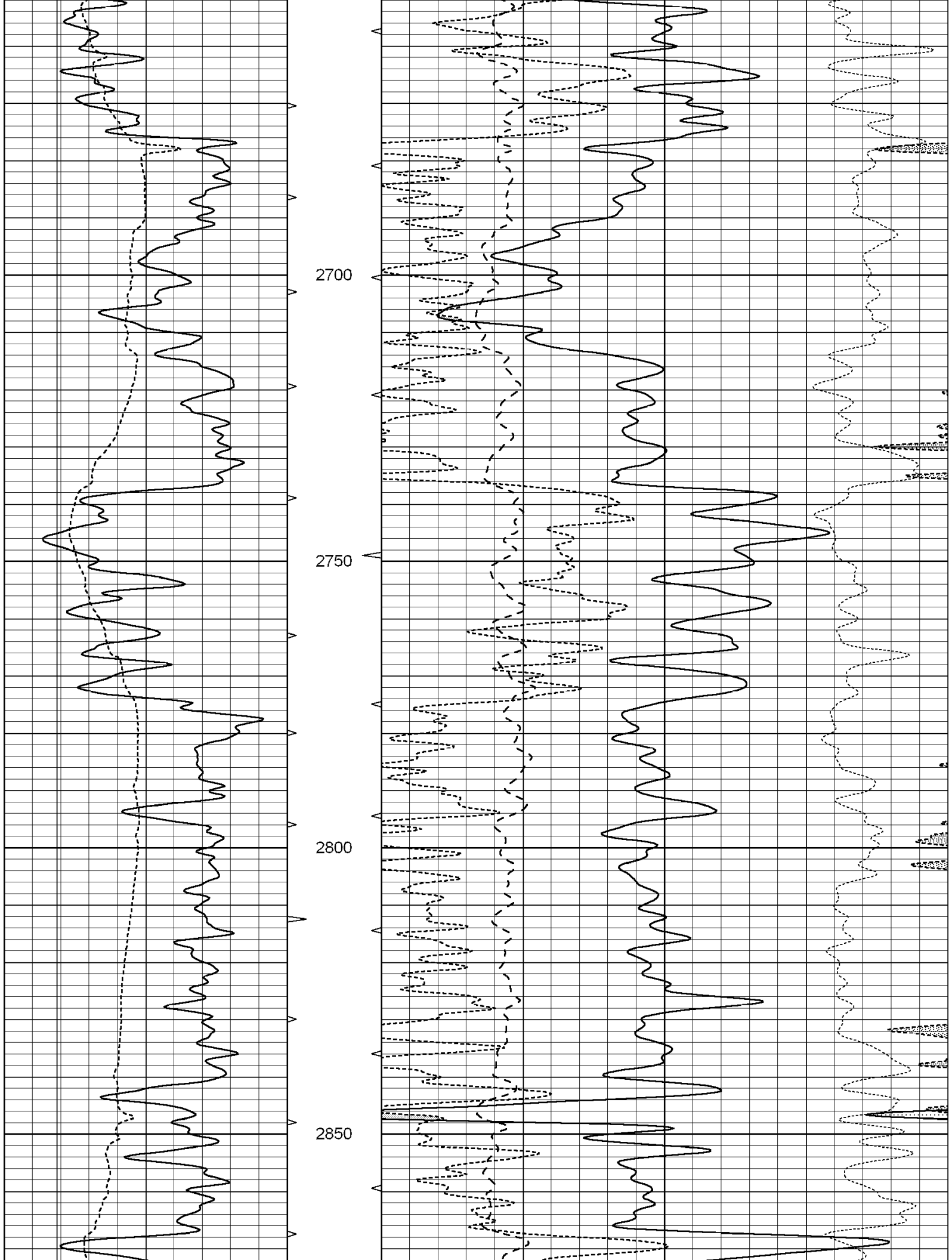


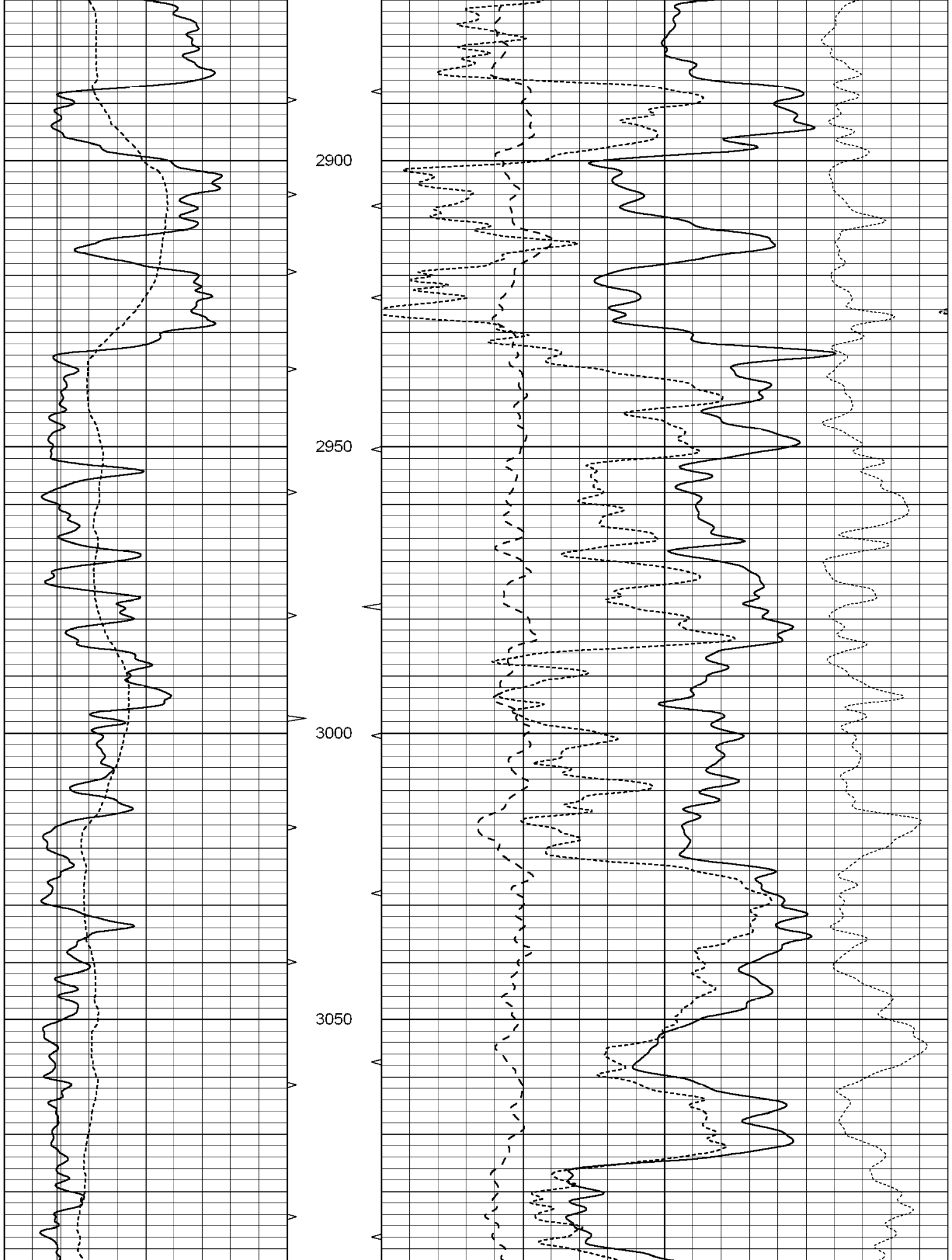


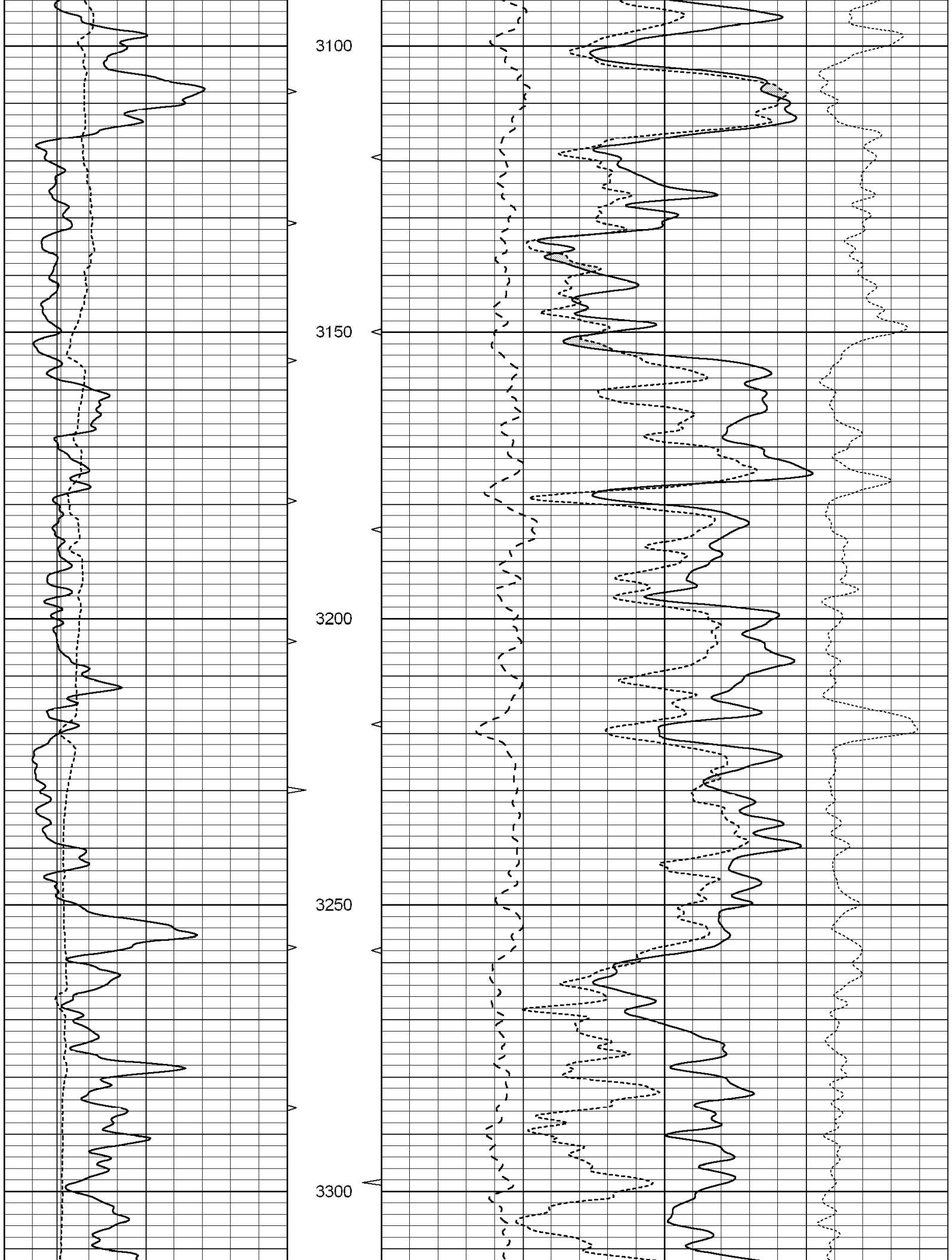


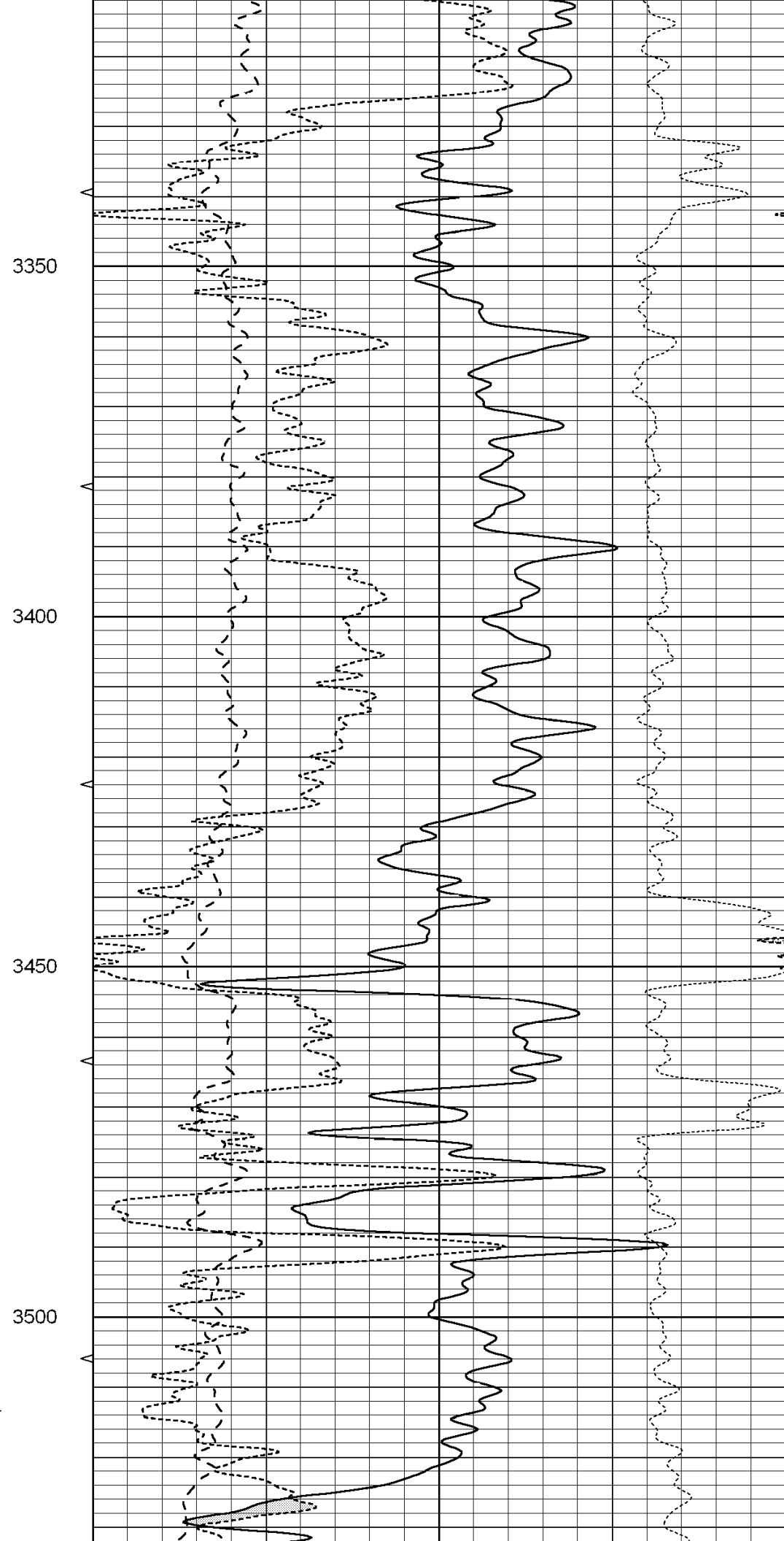
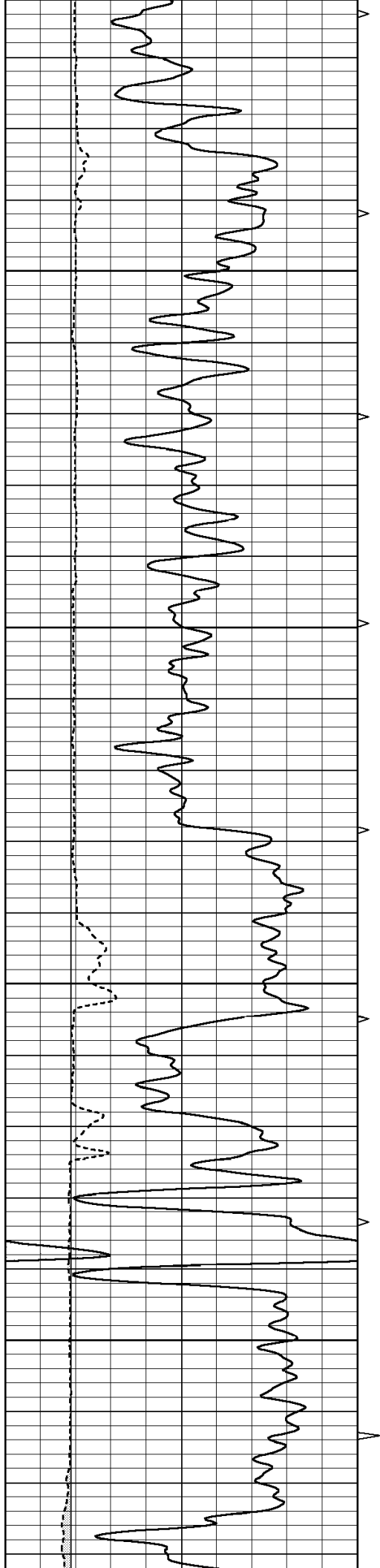


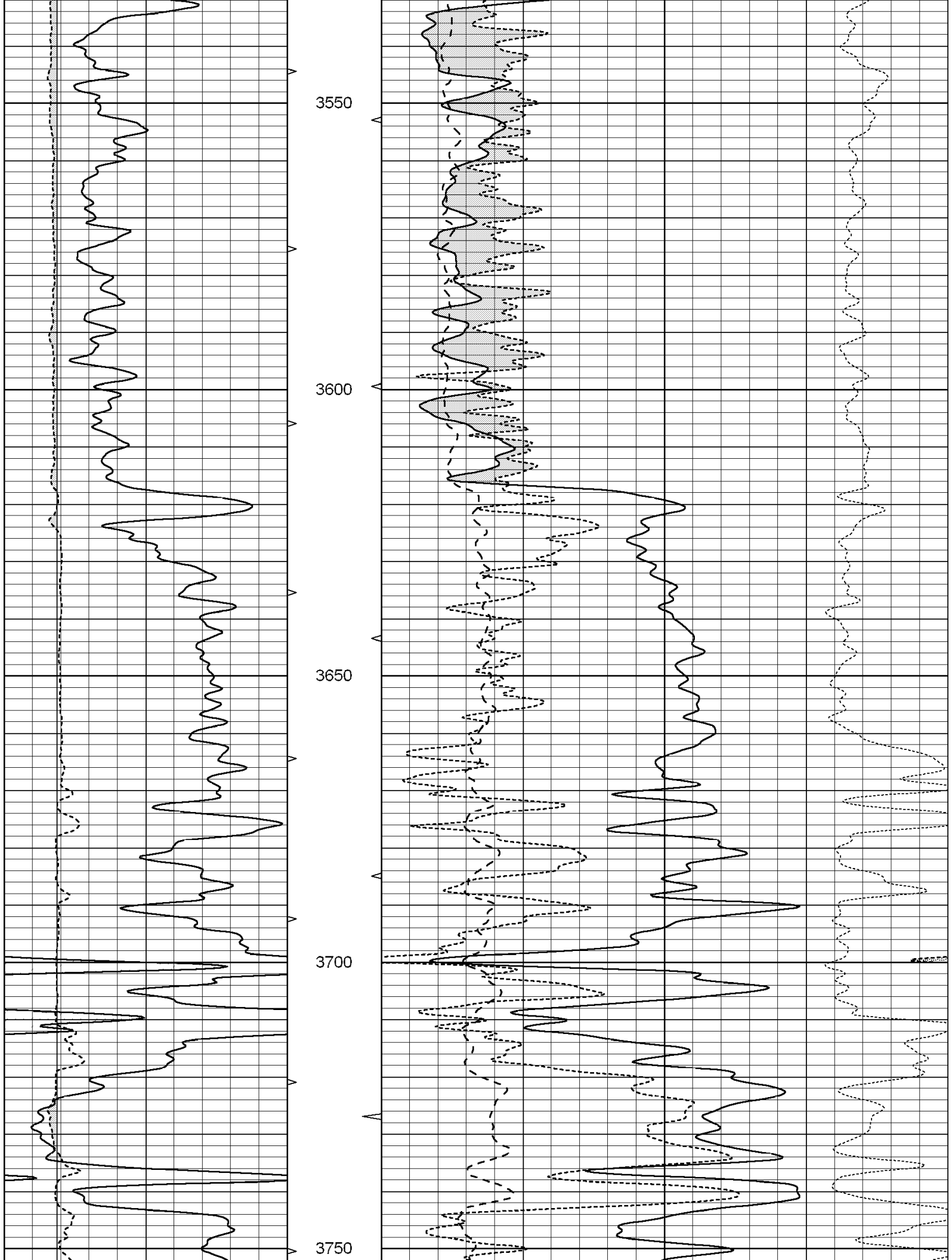


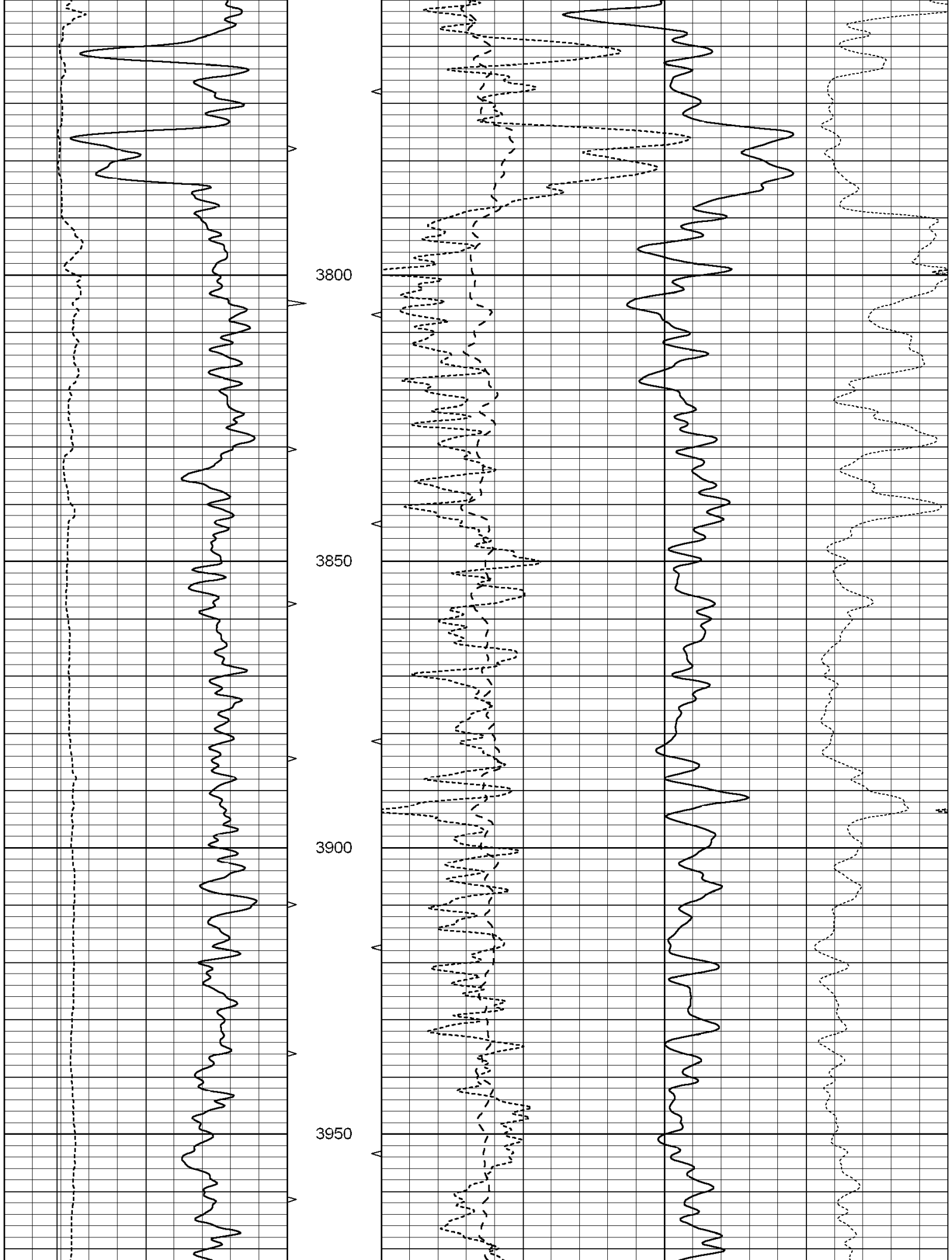


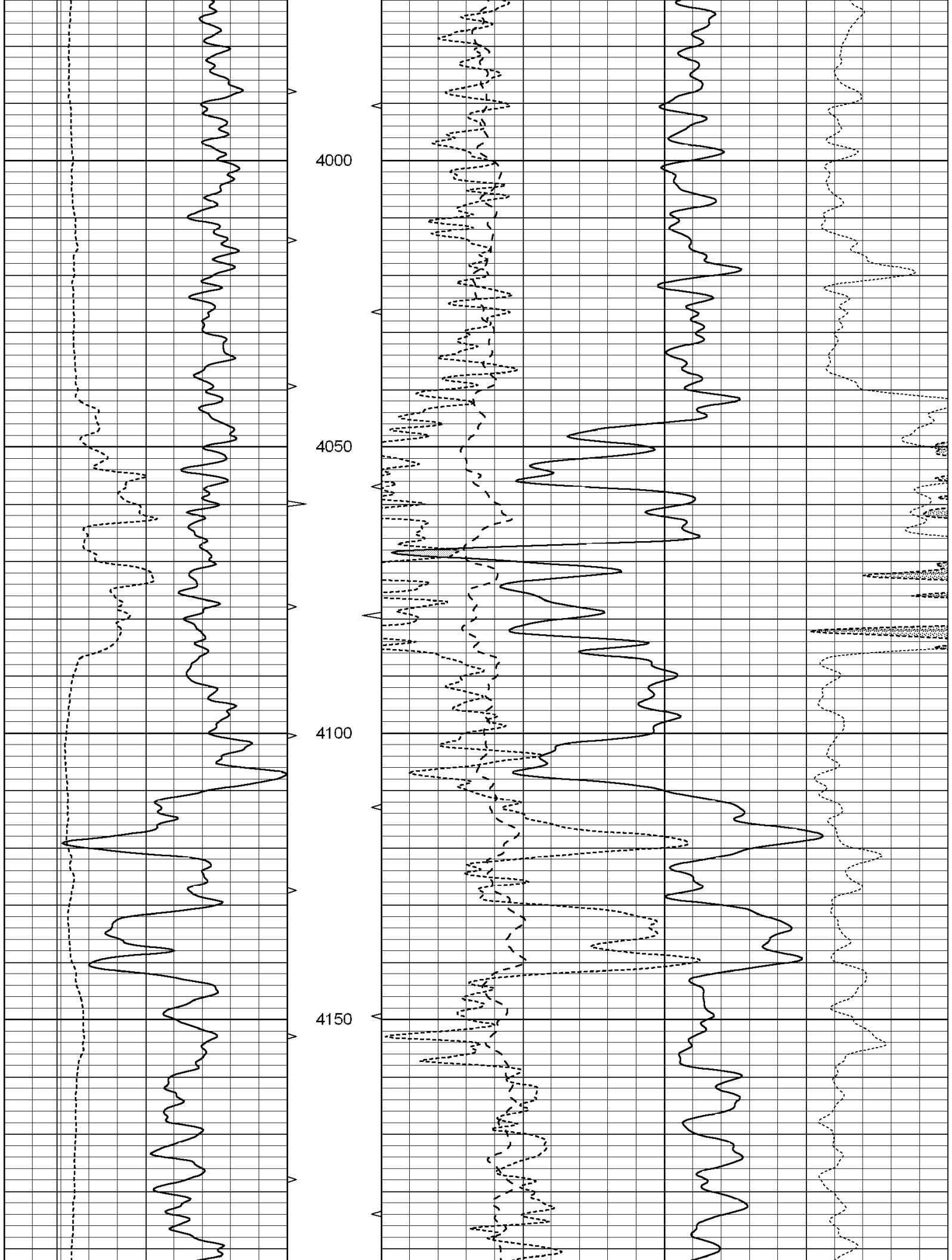


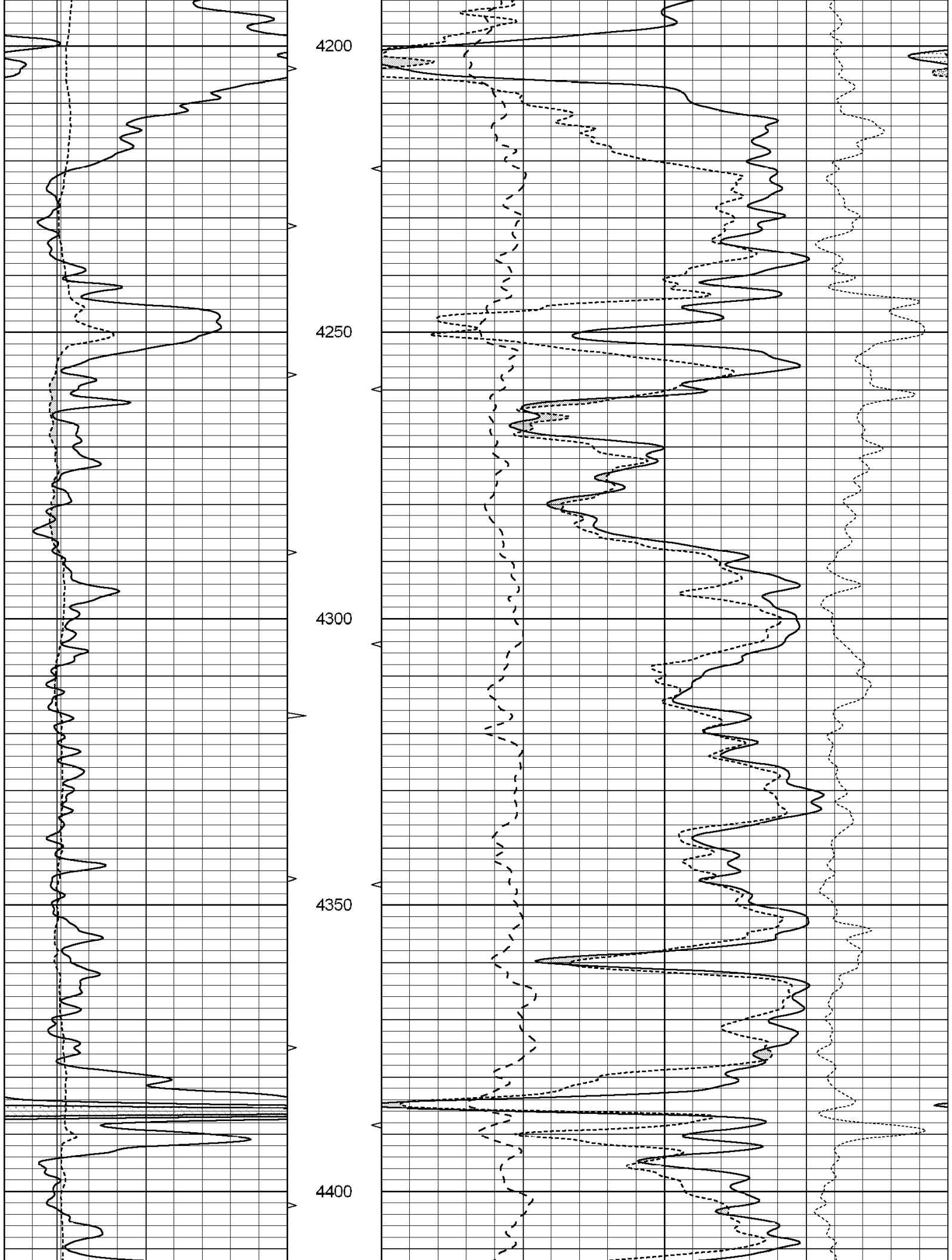


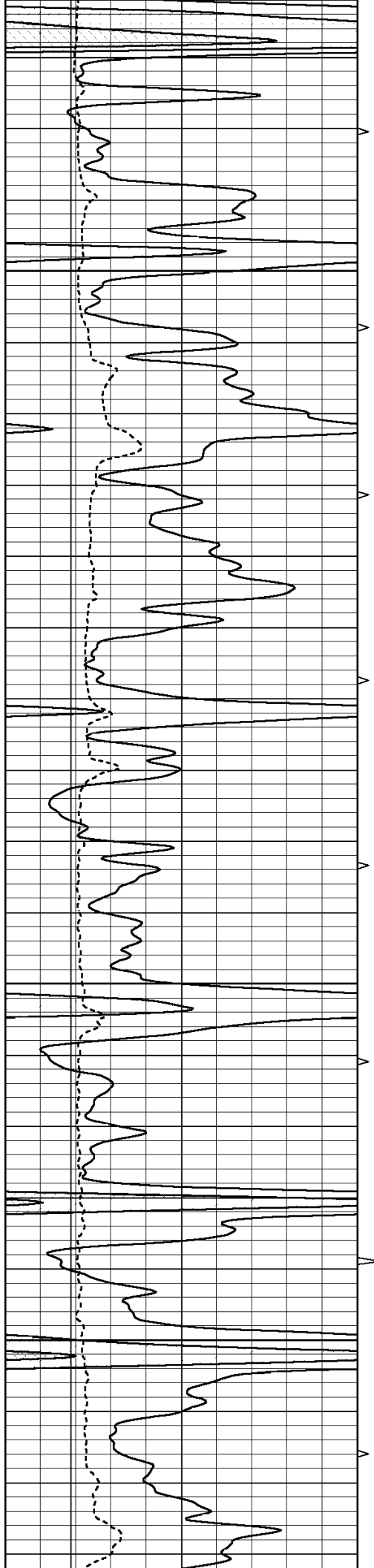










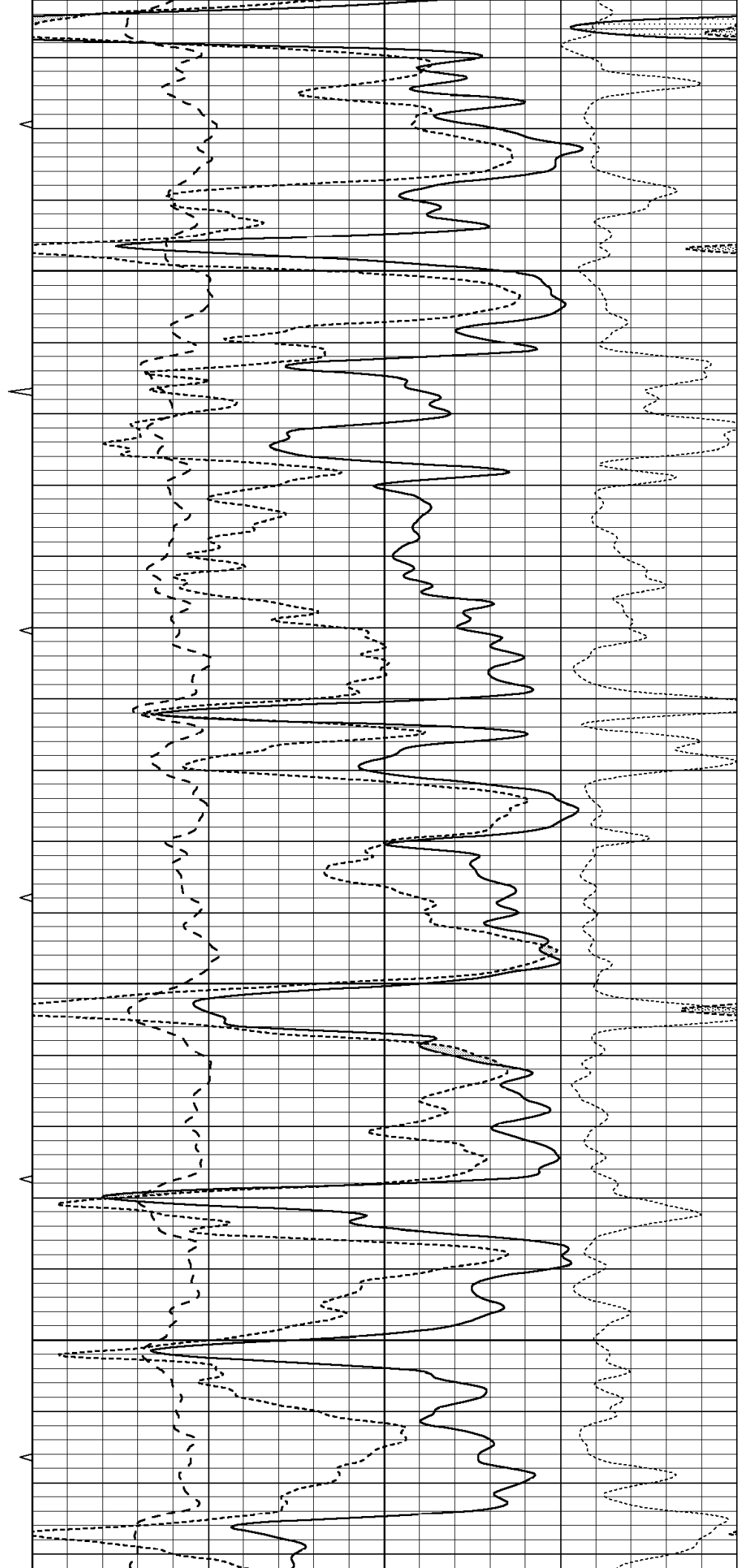


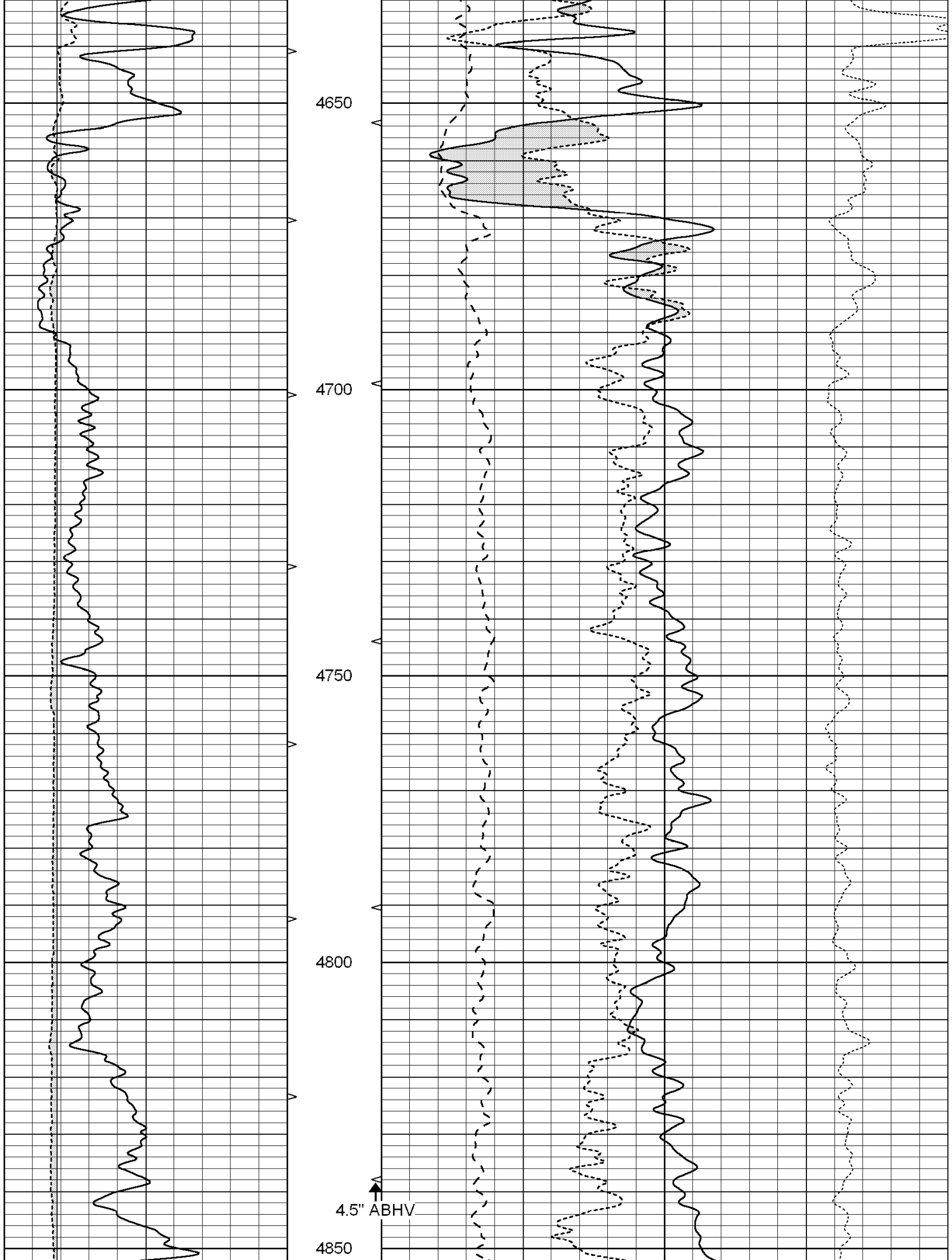
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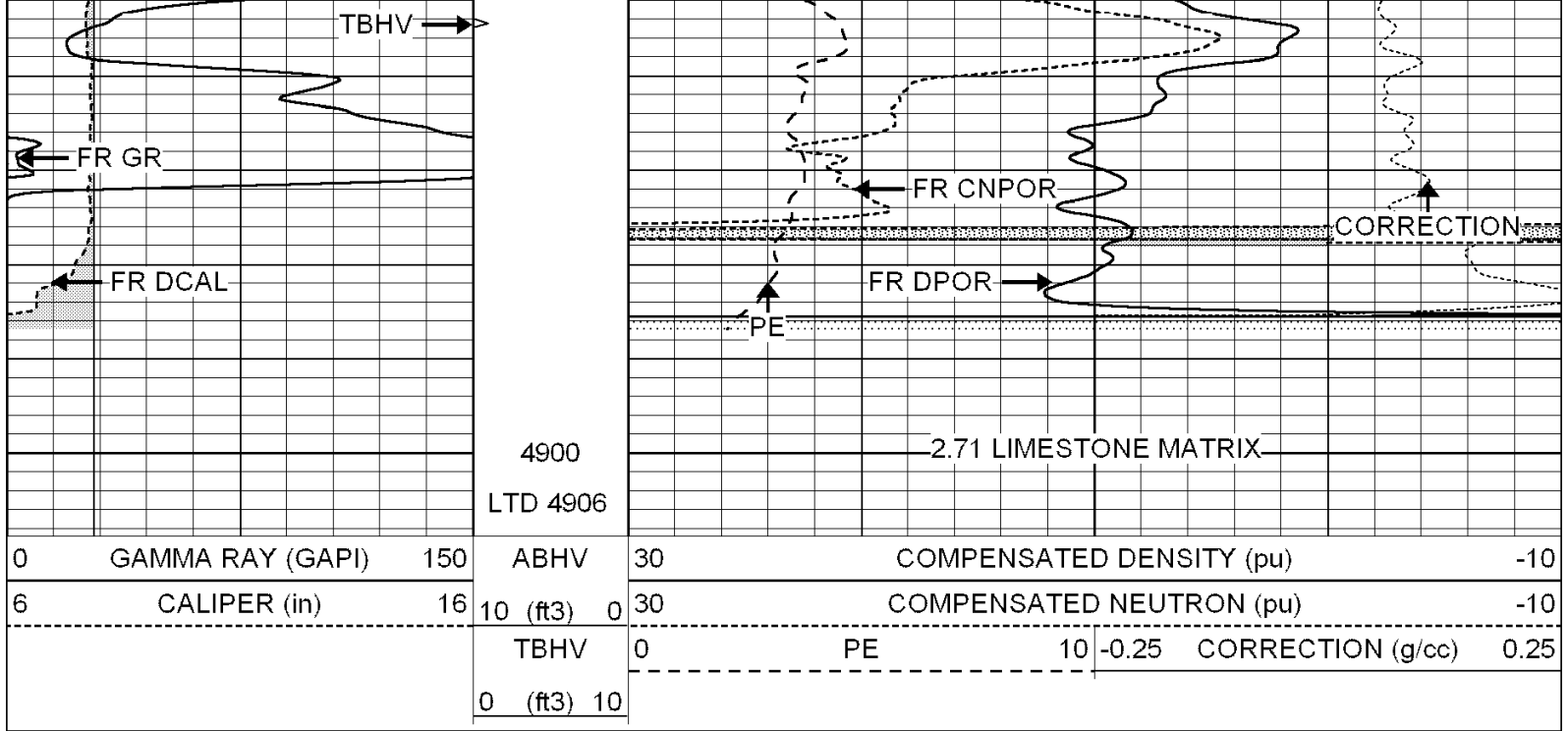
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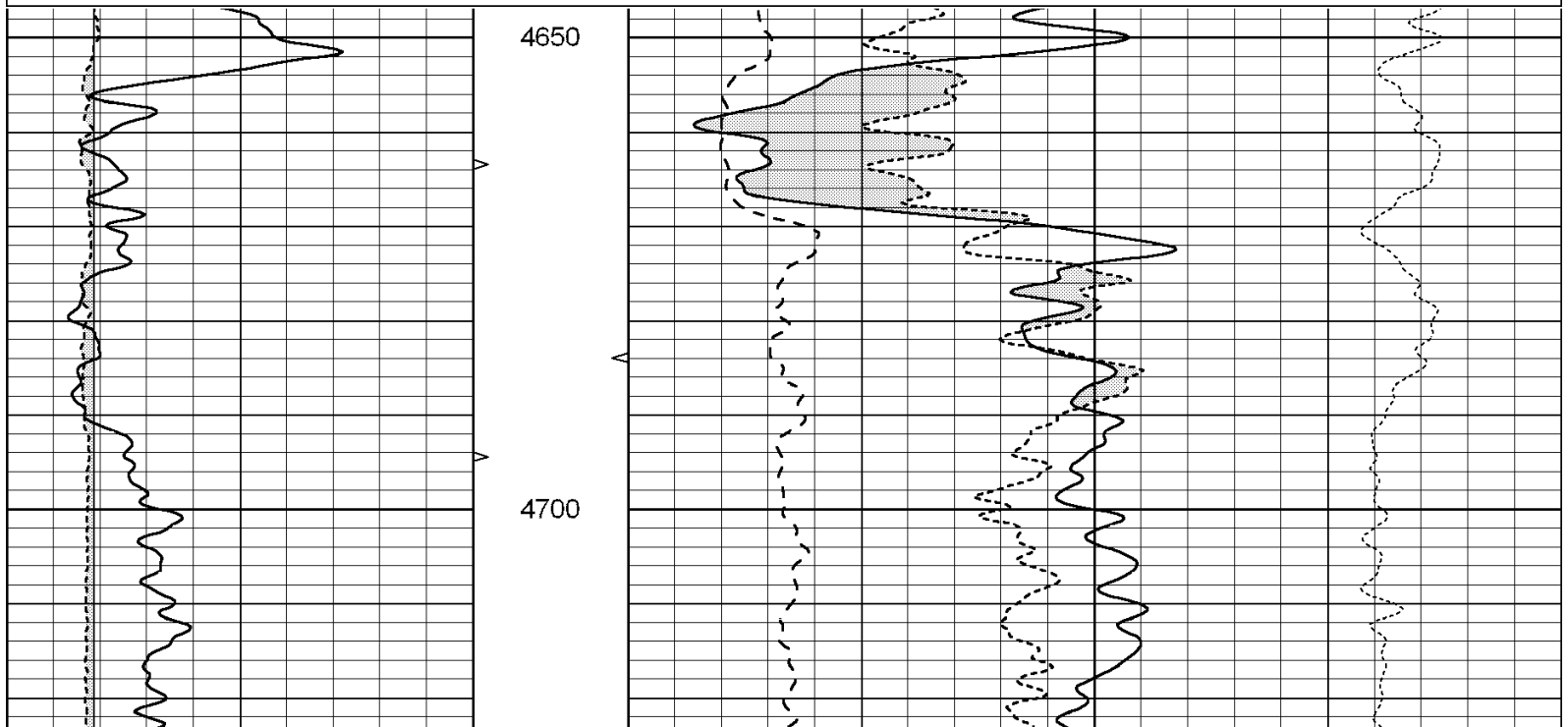


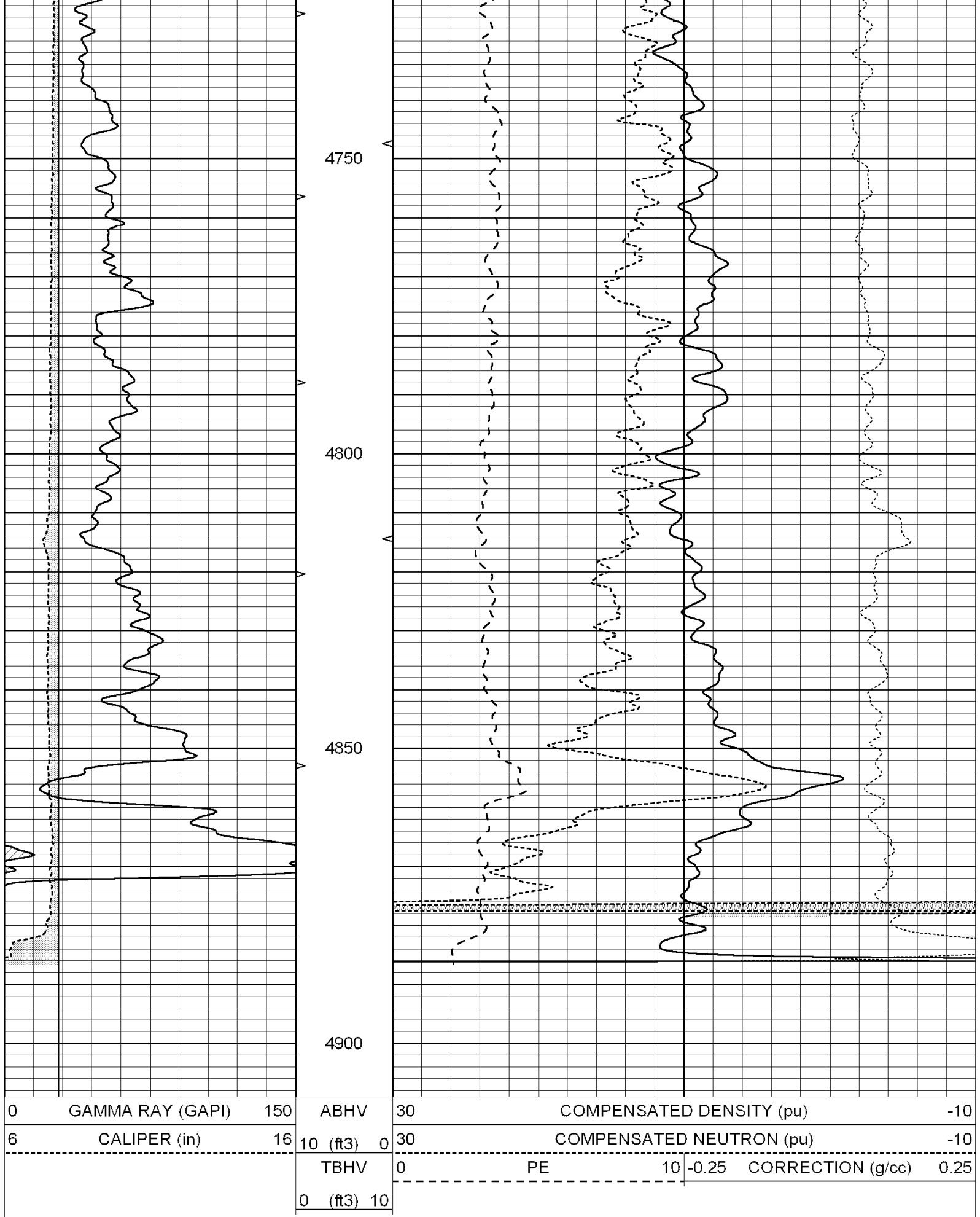
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REPEAT SECTION

Database File: 004717pe.db
 Dataset Pathname: pass2.8
 Presentation Format: ldt_neu
 Dataset Creation: Wed Feb 10 03:46:51 2010 by Calc Open-Cased 060407
 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
			TBHV	0	PE	10	-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10						





Dual Induction Calibration Report

Serial-Model:
Performed:

DIL6-GEAR
Wed Feb 10 01:38:59 2010

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.001	0.644	V	0.000	400.000	mmho-m	660.000	-4.000
Medium	0.020	0.738	V	0.000	462.500	mmho-m	740.000	-25.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.000	1.000	V	0.000	1.000	mmho-m	1.000	0.000
Medium	0.000	1.000	V	0.000	1.000	mmho-m	1.000	0.000

Litho Density Calibration Report
Serial: 004N Model: PRB
Performed Tue Sep 08 13:49:55 2009

Litho Density Calibration					
	Background	Magnesium	Aluminum	Sandstone	
Window 1	1535.8	11161.3	3721.6	12498.8	cps
Window 2	1402.6	9435.7	3219.7	10417.7	cps
Window 3	1077.6	4422.0	1779.2	4753.4	cps
Window 4	337.3	342.8	337.4	343.7	cps
Long Space	0.0	8033.1	1817.0	9015.1	cps
Short Space	1.2	1671.8	1138.1	1813.0	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 45.5	Rib Slope	: 1.017	Density/Spine Ratio	: 0.573
Spine Angle	: 75.5	Spine Slope	: 3.865	Spine Intercept	: -19.7

Caliper		
Low Ref	Readings 1.1	Reference 6.9
High Ref	3.0	14.0
	Gain: 3.7	Offset: 2.8

Compensated Neutron Calibration Report

Serial Number:
Tool Model:

NEU_4I
G

CALIBRATION						
Detector		Readings		Target		Normalization
Short Space		996.00	cps	1000.00	cps	1.0000
Long Space		977.00	cps	1000.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number:	GR4
Tool Model:	OPEN
Performed:	Wed Feb 10 01:37:04 2010
Calibrator Value:	200.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	189.0 cps

Calibrator Reading.

189.0

cps

Sensitivity:

0.6500

GAPI/cps