



**SUPERIOR**  
Hays,  
Kansas

**COMPENSATED  
DENSITY / NEUTRON  
LOG**

Company NOBLE PETROLEUM, INC.  
Well HARTMAN #1  
Field PERTH  
County SUMNER  
State KANSAS

Company NOBLE PETROLEUM, INC.  
Well HARTMAN #1  
Field PERTH  
County SUMNER State KANSAS

Location: API # : 15-191-22582-0000  
500' FNL & 1650' FEL  
SEC 11 TWP 33S RGE 2W  
Permanent Datum GROUND LEVEL Elevation 1225  
Log Measured From KELLY BUSHING 9' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
DIL  
SONIIC  
Elevation  
K.B. 1234  
D.F. 1232  
G.L. 1225

Date	10/6/10		
Run Number	ONE		
Depth Driller	4274		
Depth Logger	4274		
Bottom Logged Interval	4250		
Top Log Interval	2600		
Casing Driller	8 5/8"@264'		
Casing Logger	262		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 10,000PPM	
Density / Viscosity	9.2/42		
pH / Fluid Loss	10.5/11.4		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.520@84F		
Rmf @ Meas. Temp	.390@84F		
Rmc @ Meas. Temp	.624@84F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.367@119F		
Time Circulation Stopped	8 HOURS		
Time Logger on Bottom	7:45 A.M.		
Maximum Recorded Temperature	119F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KENT CRISLER		

<<< 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 SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395  
DIRECTIONS  
WELLINGTON, KS. 3 1/2W. ON HWY 160 TO "DRURY RD." 5S. TO "RD. 60", 1 1/2W., S. INTO

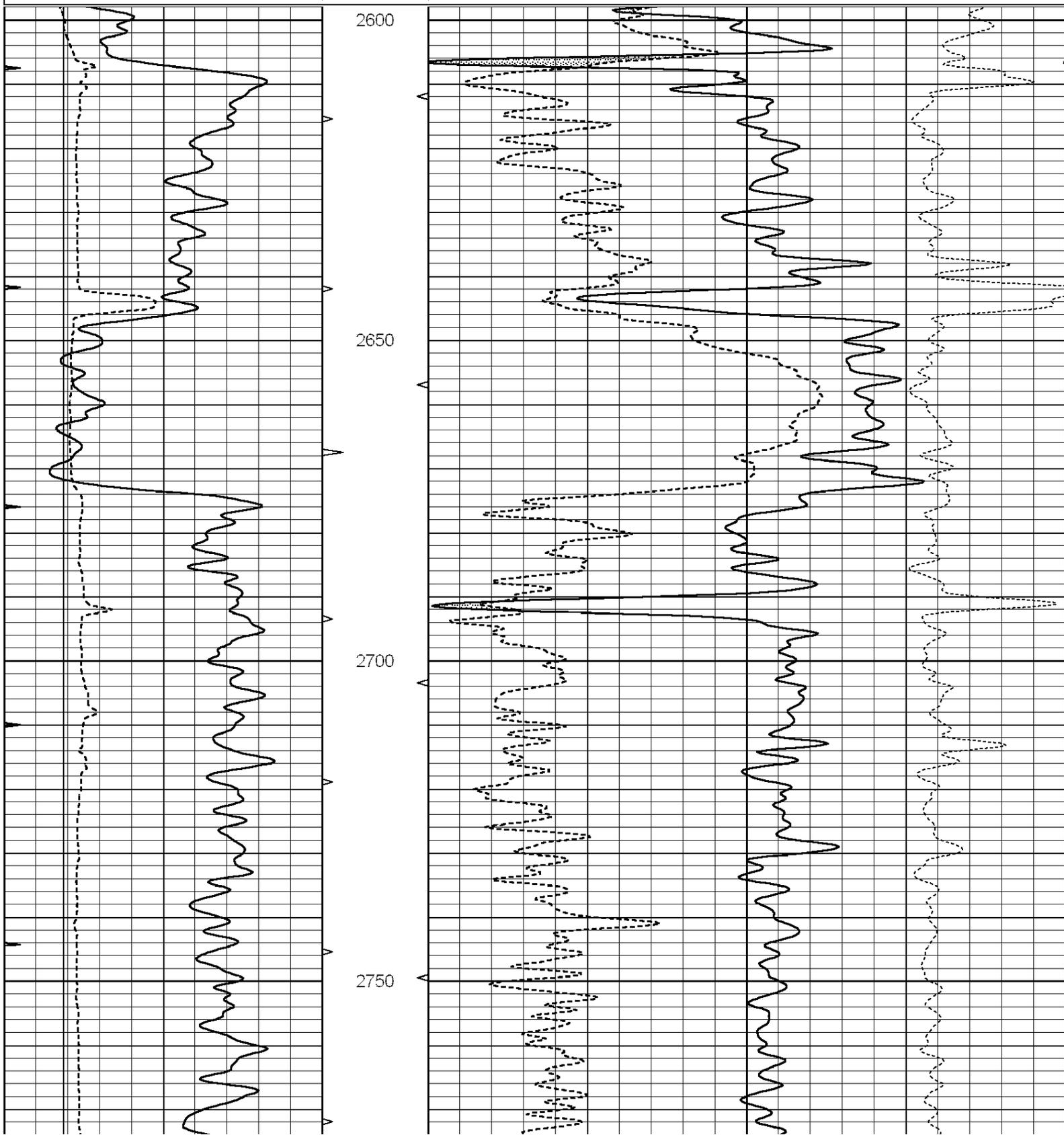


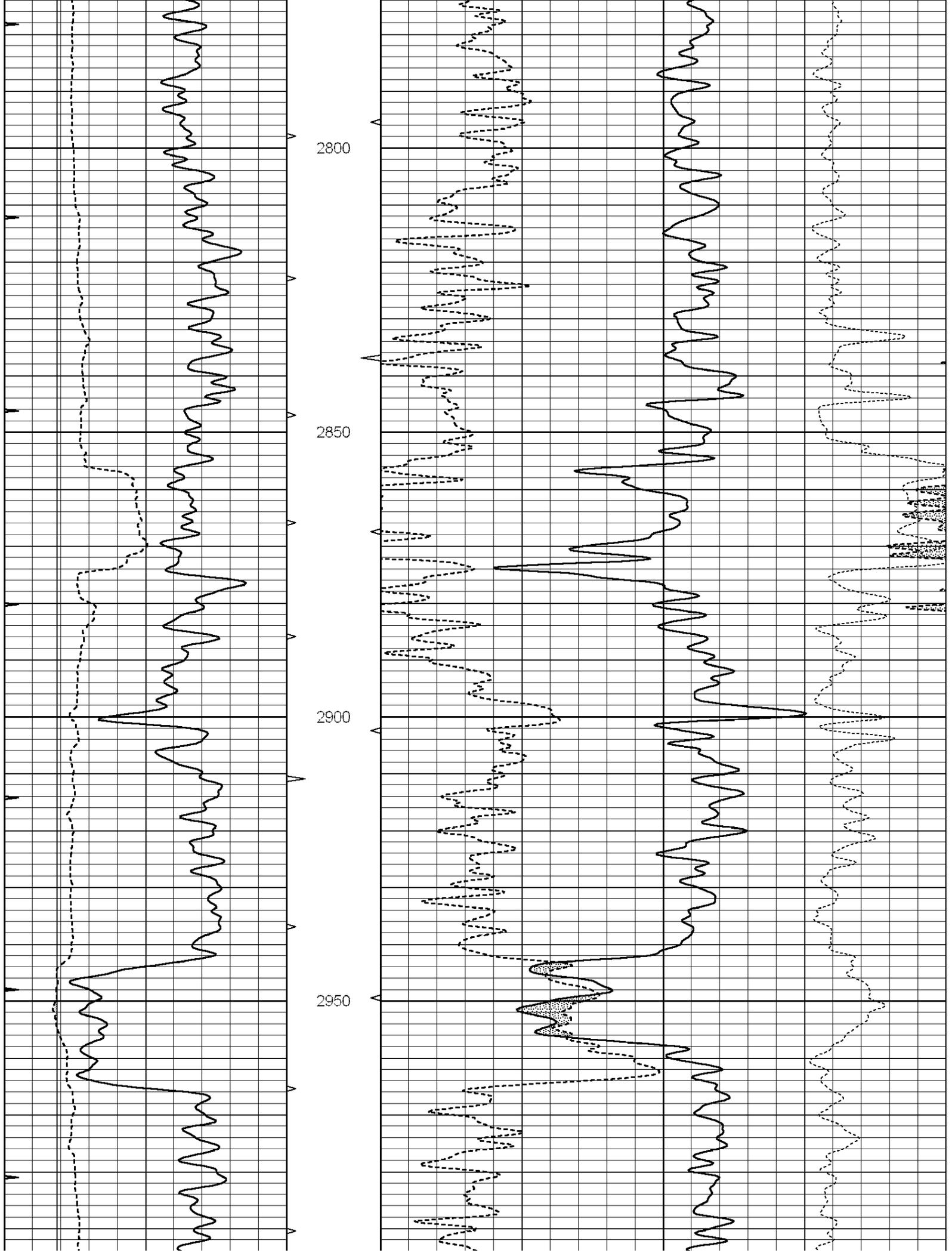
**SUPERIOR**  
Hays,  
Kansas

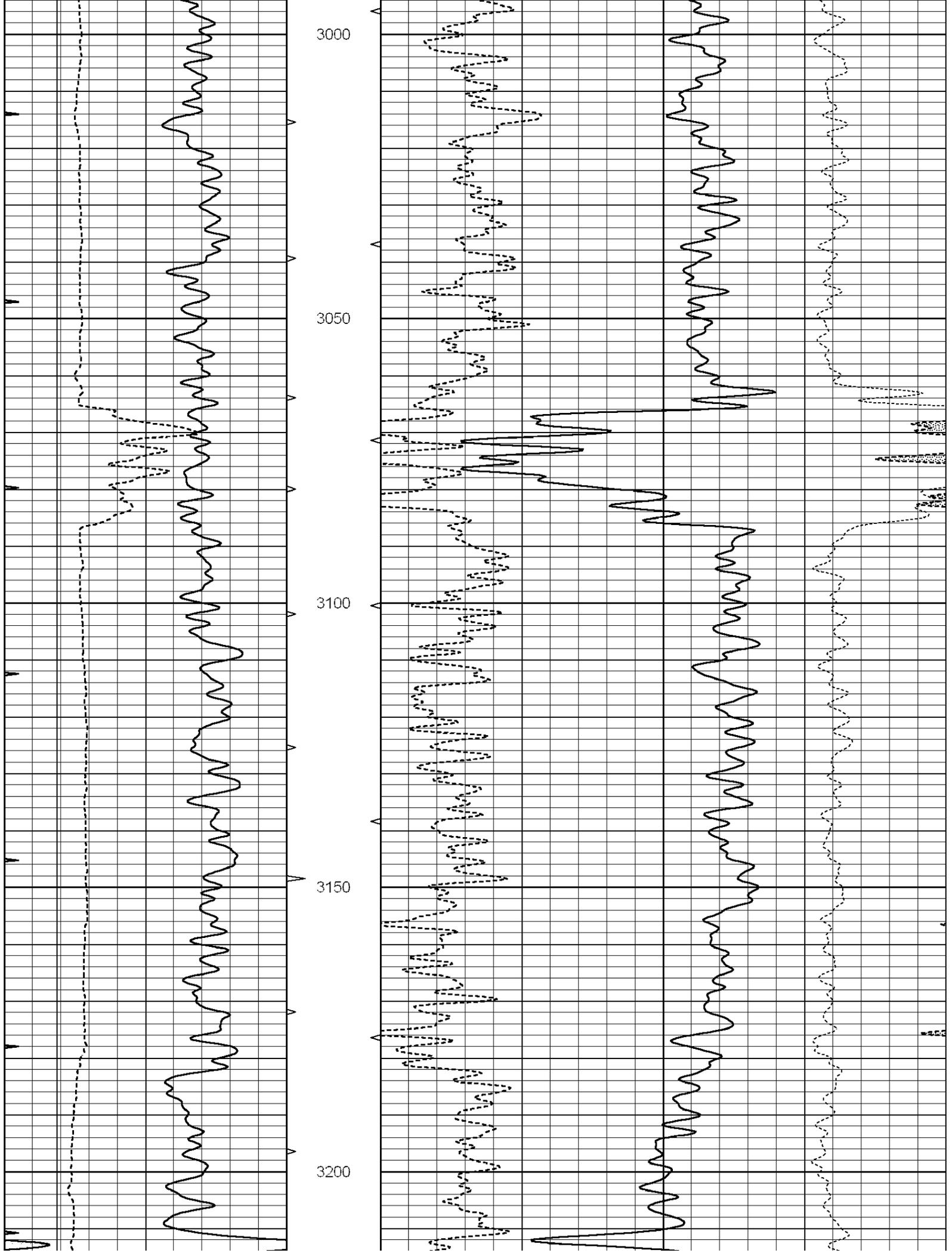
**MAIN SECTION**

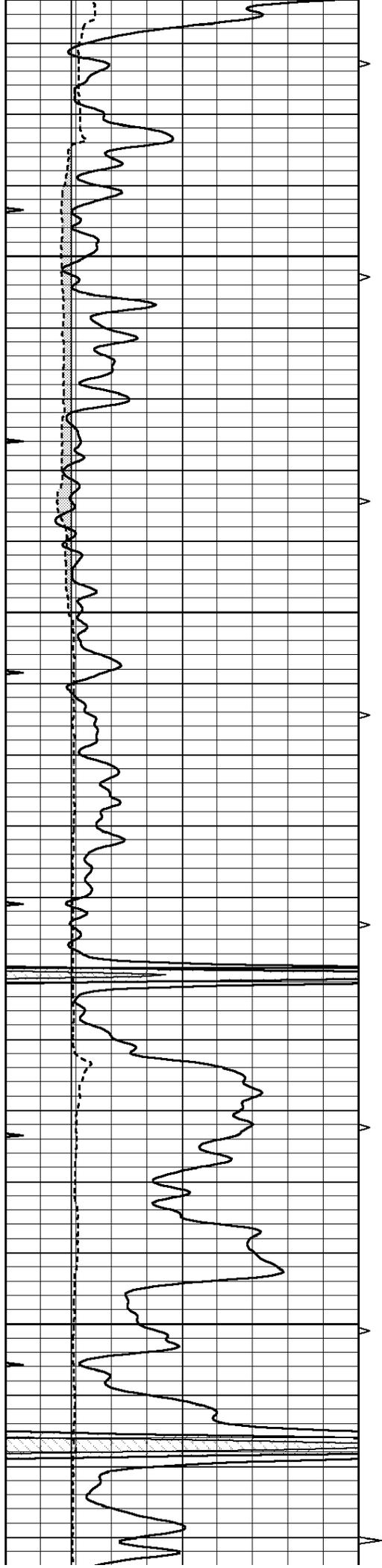
Database File: 005989ddn.db  
 Dataset Pathname: pass3.10  
 Presentation Format: den\_neu  
 Dataset Creation: Wed Oct 06 10:17:14 2010  
 Charted by: Depth in Feet scaled 1:240

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		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		







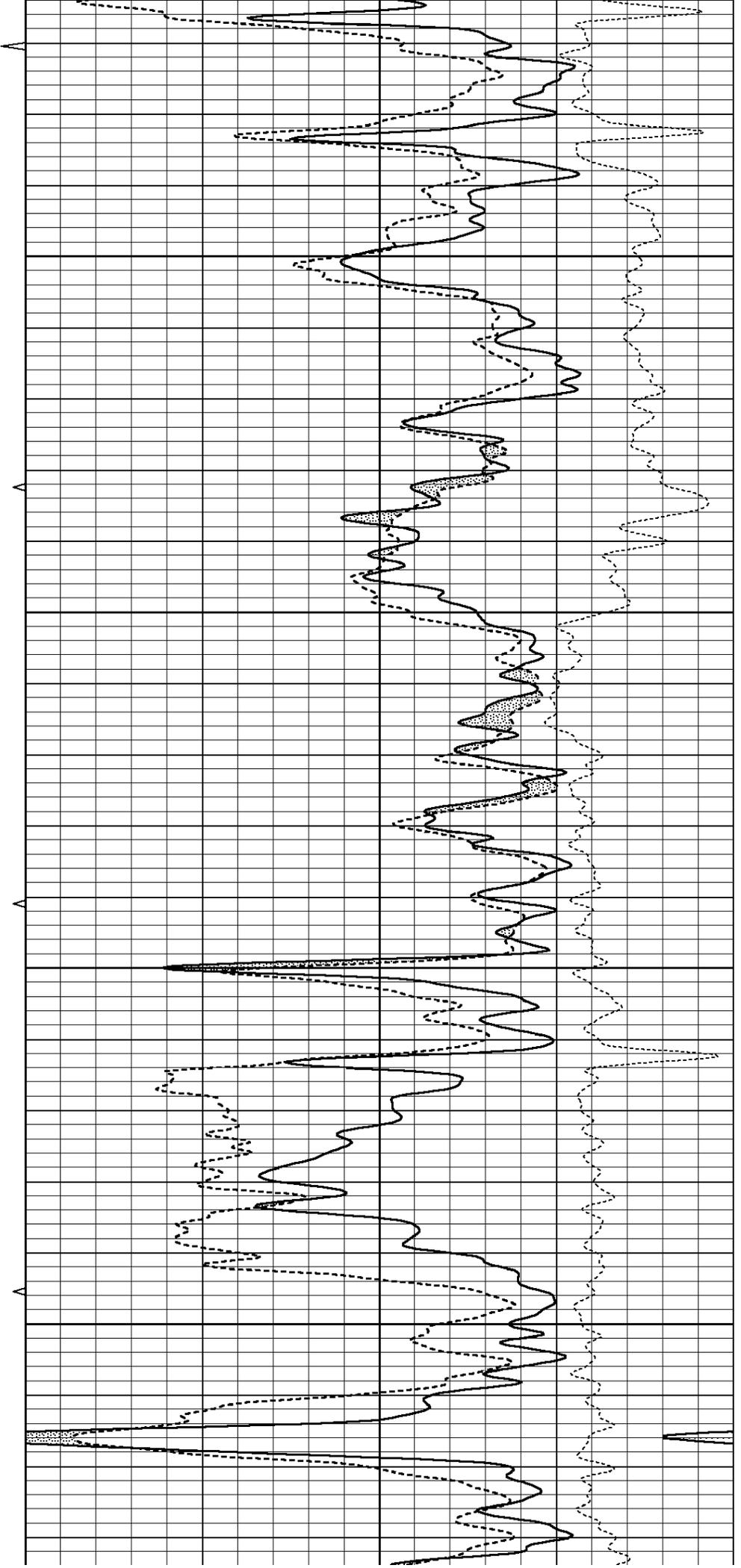


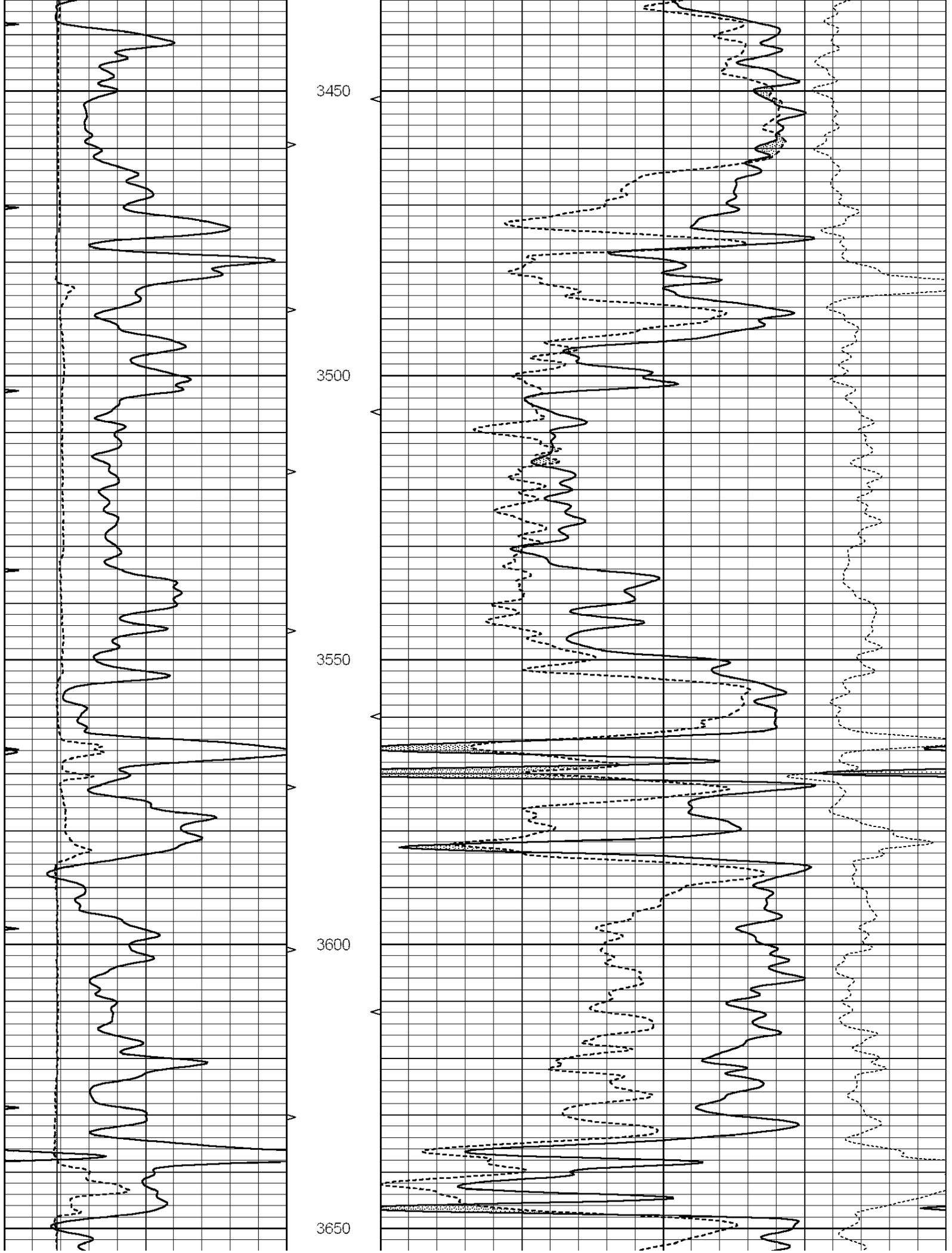
3250

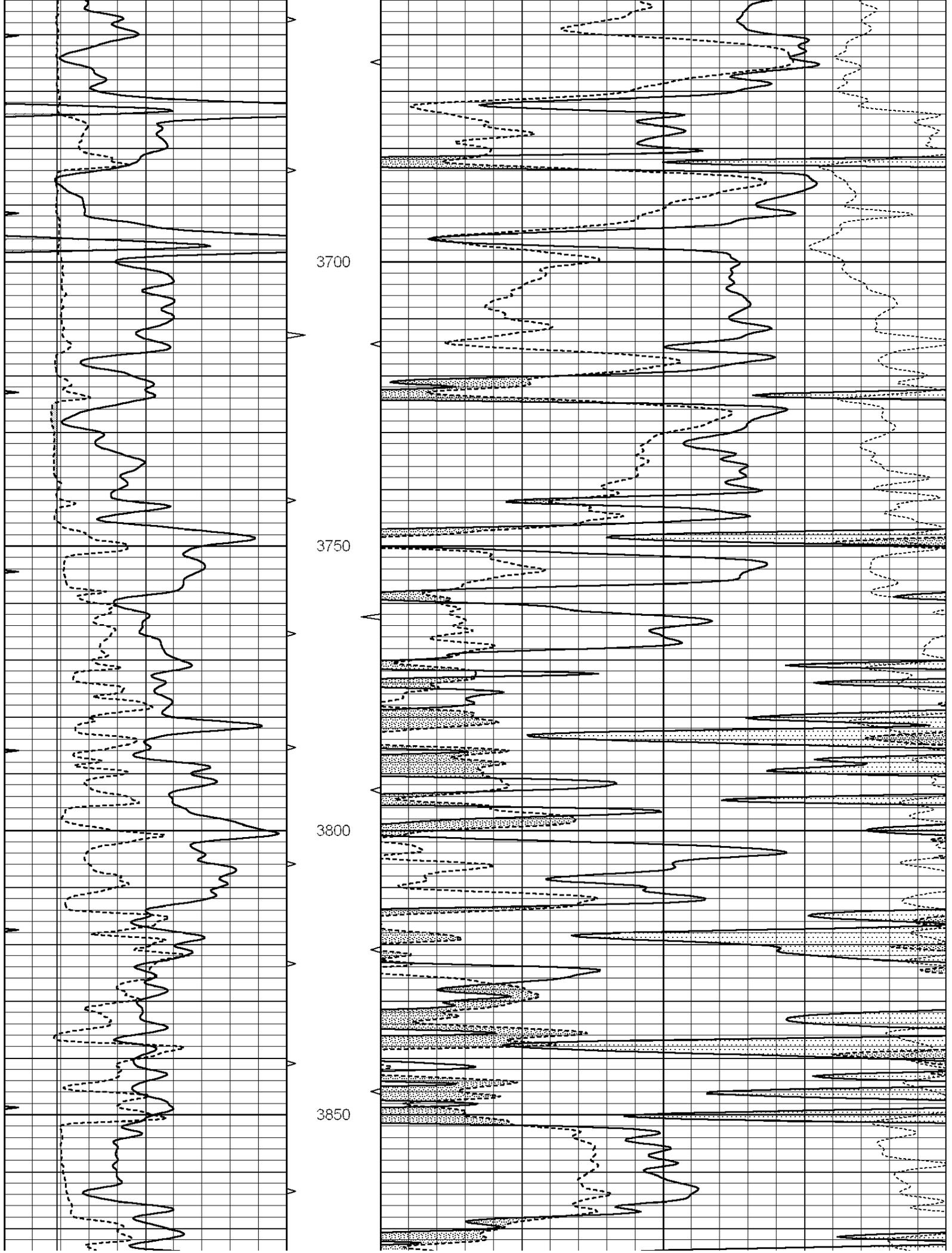
3300

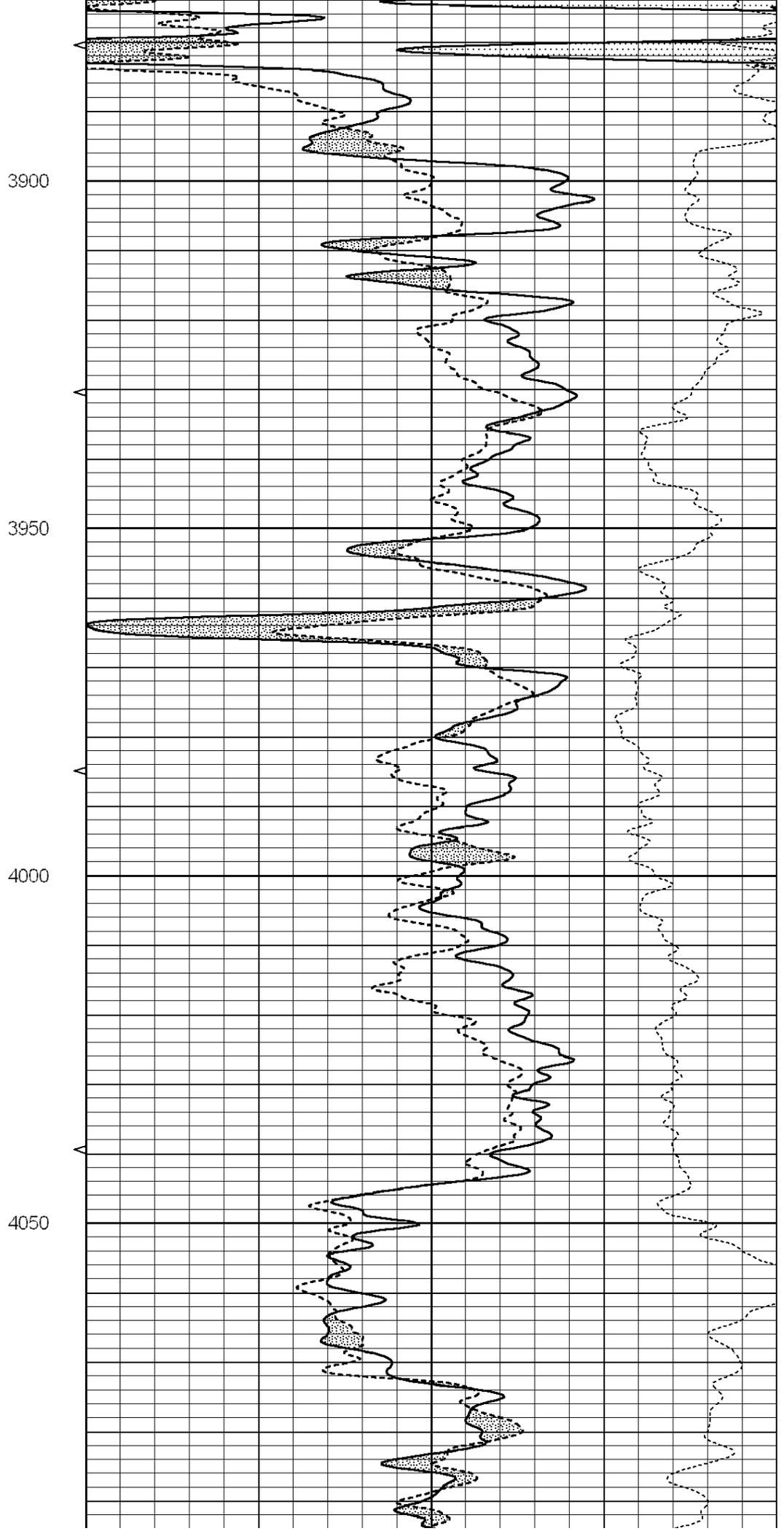
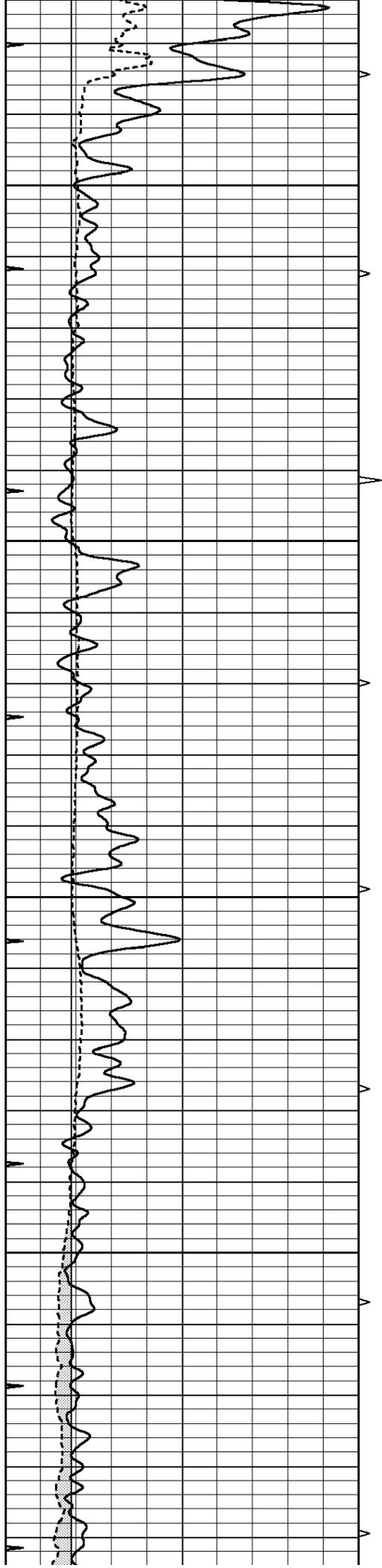
3350

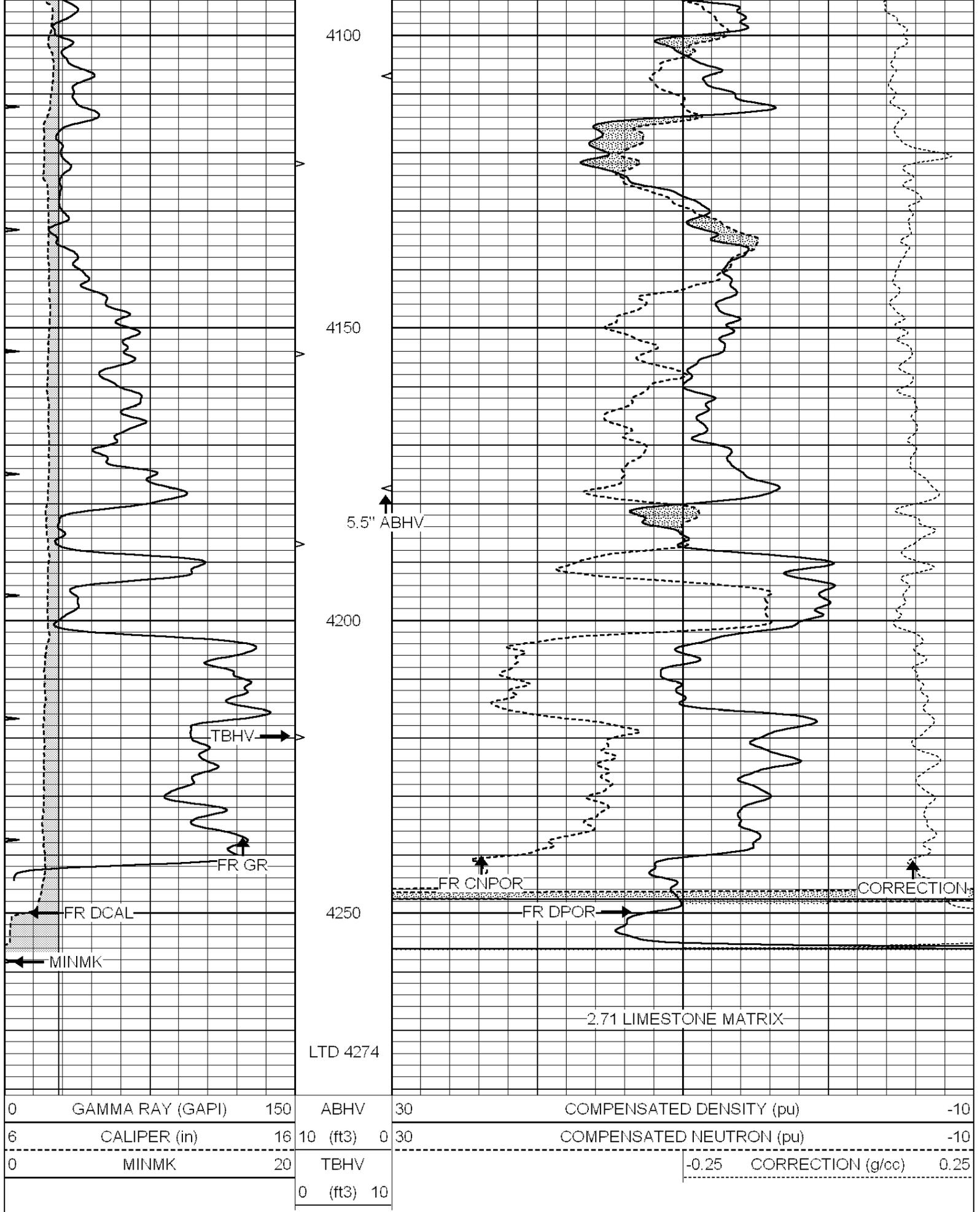
3400











LTD 4274

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		-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10			

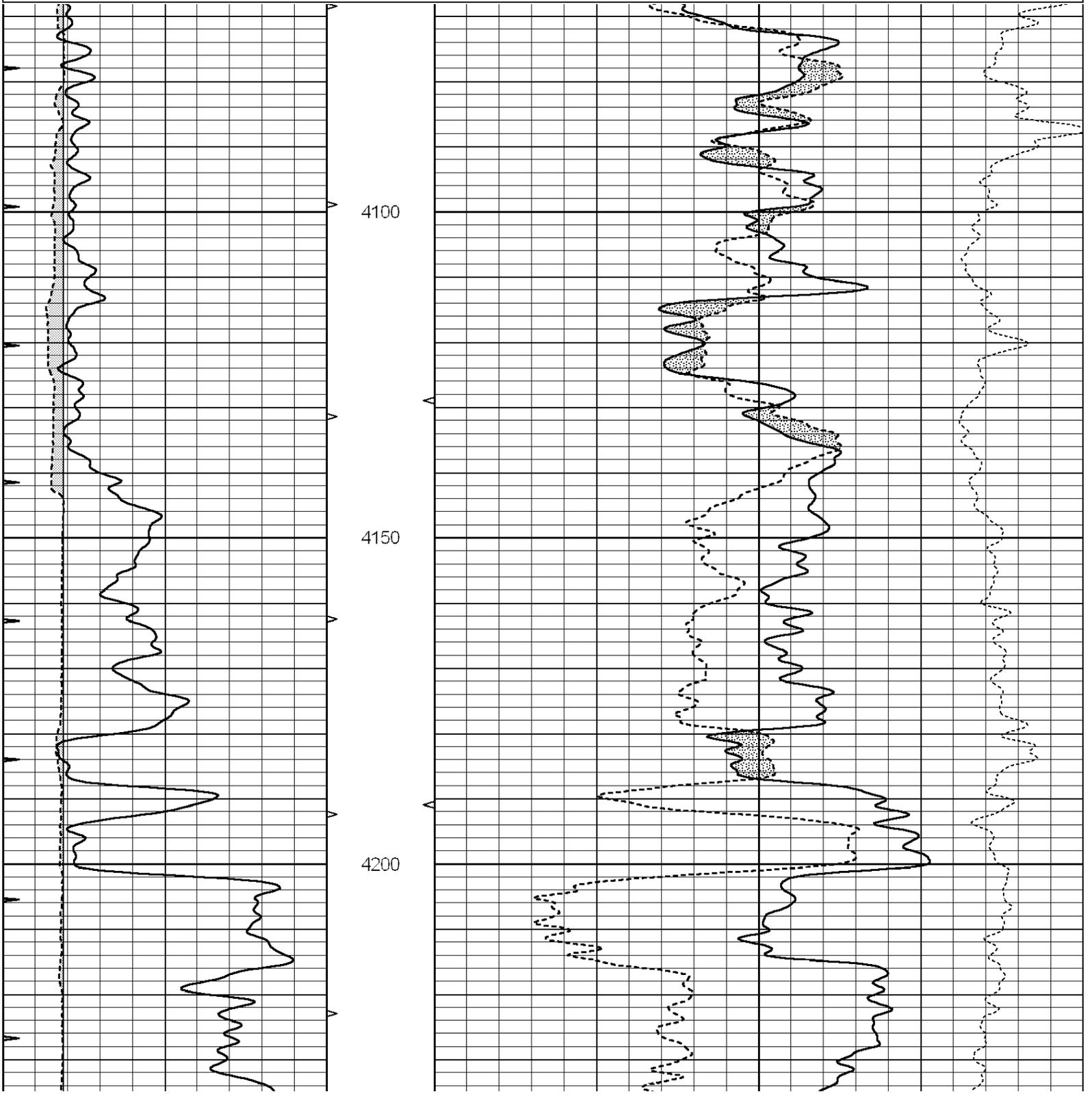


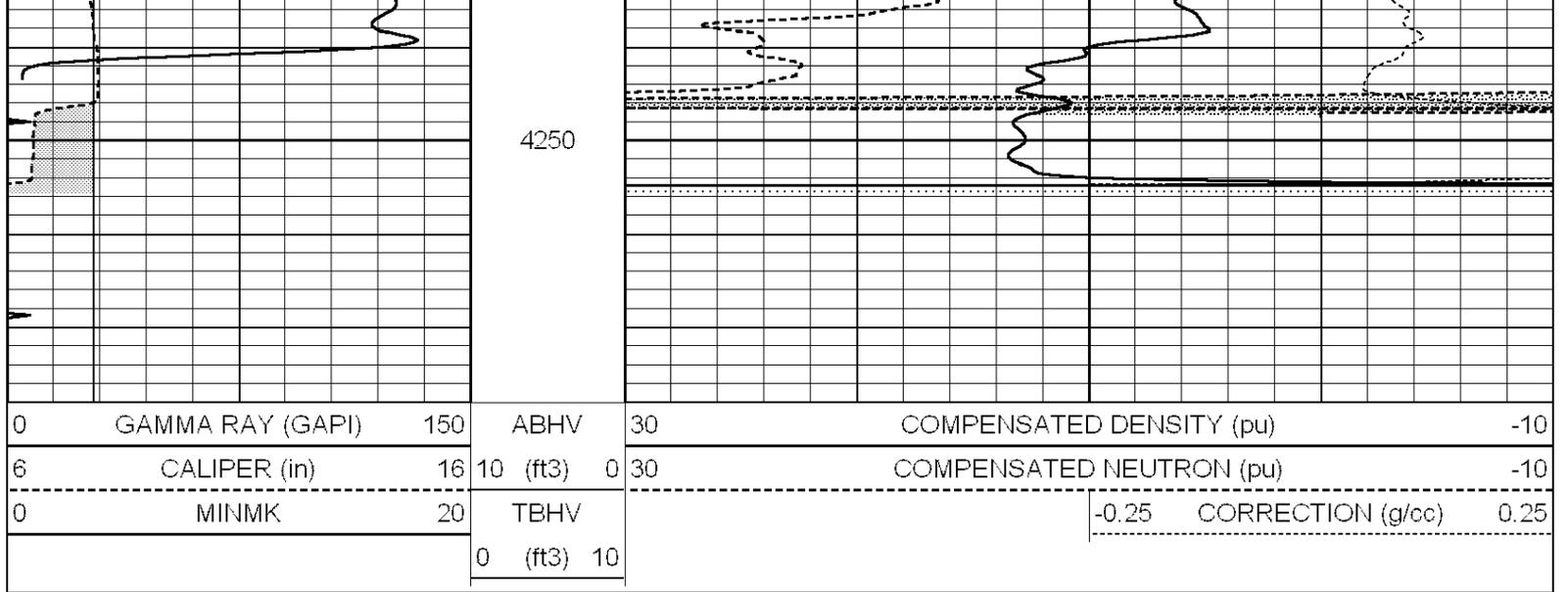
Hays,  
Kansas

# REPEAT SECTION

Database File: 005989ddn.db  
 Dataset Pathname: pass2.6  
 Presentation Format: den\_neu  
 Dataset Creation: Wed Oct 06 10:18:13 2010 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			-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10			





### Calibration Report

Database File: 005989ddn.db  
 Dataset Pathname: pass3.10  
 Dataset Creation: Wed Oct 06 10:17:14 2010

### Dual Induction Calibration Report

Serial-Model: DIL6-GEAR  
 Performed: Wed Oct 06 07:31:54 2010

Loop:	Readings				References		Results	
	Air	Loop			Air	Loop	m	b
Deep	0.001	0.644	V	0.000	400.000	mmho/m	660.000	-2.000
Medium	0.020	0.738	V	0.000	462.500	mmho/m	740.000	-22.000
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

	Readings	Reference
Low Ref	1.2	7.0
High Ref	3.2	14.0

## Compensated Neutron Calibration Report

Serial Number: NEU\_4I  
Tool Model: 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: GR3  
Tool Model: OPEN  
Performed: Wed Oct 06 07:31:44 2010

Calibrator Value: 200.0 GAPI

Background Reading: 3.0 cps  
Calibrator Reading: 186.0 cps

Sensitivity: 1.7000 GAPI/cps