



SUPERIOR
Hays,
Kansas

COMPENSATED DENSITY / NEUTRON LOG

Company PIONEER EXPLORATION, LLC.
Well DIRKS #8
Field SPIVEY-GRABS-BASIL
County HARPER
State KANSAS

Company PIONEER EXPLORATION, INC.
Well DIRKS #8
Field SPIVEY-GRABS-BASIL
County HARPER State KANSAS

Location: API # : 15-077-21676-0000
990' FSL & 990' FWL
NE - SW - SW
SEC 28 TWP 31S RGE 9W
Permanent Datum GROUND LEVEL Elevation 1633
Log Measured From KELLY BUSHING 10' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL/MEL
Elevation
K.B. 1643
D.F. 1641
G.L. 1633

Date	3/29/10		
Run Number	CNE		
Depth Driller	4600		
Depth Logger	4608		
Bottom Logged Interval	4584		
Top Log Interval	2400		
Casing Driller	8 5/8"@266'		
Casing Logger	262		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4,000 PPM	
Density / Viscosity	9.3/60		
pH / Fluid Loss	10.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.900@84F		
Rmf @ Meas. Temp	.675@84F		
Rmc @ Meas. Temp	1.08@84F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.625@121F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	2:15 P.M.		
Maximum Recorded Temperature	121F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	SEAN DEENIHAN		

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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
SHARON, KS. E. ON HWY 160 TO "RD. 150" (2E. OF BARBER/HARPER COUNTY LINE) 4 1/2N., E. INTO

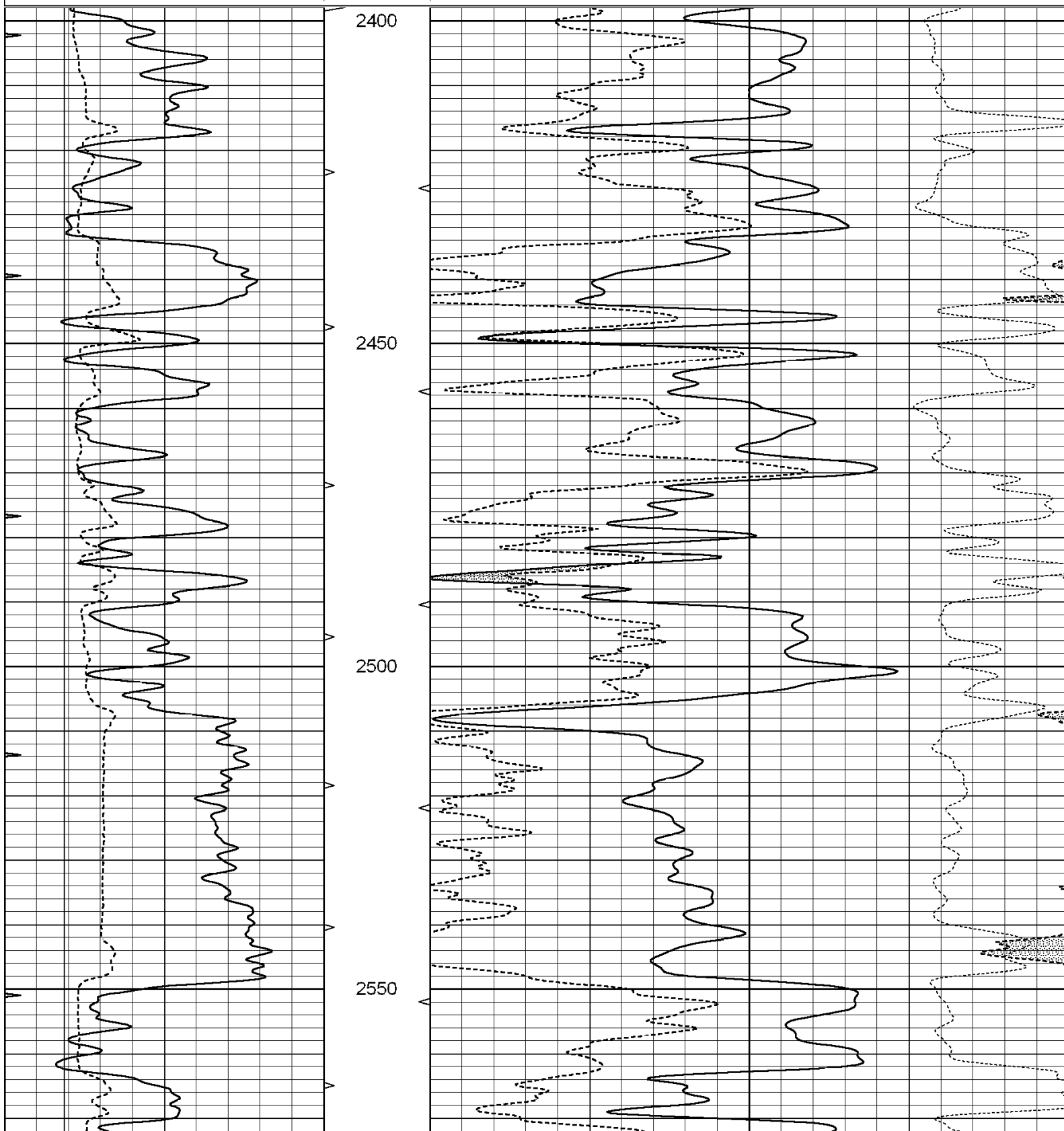


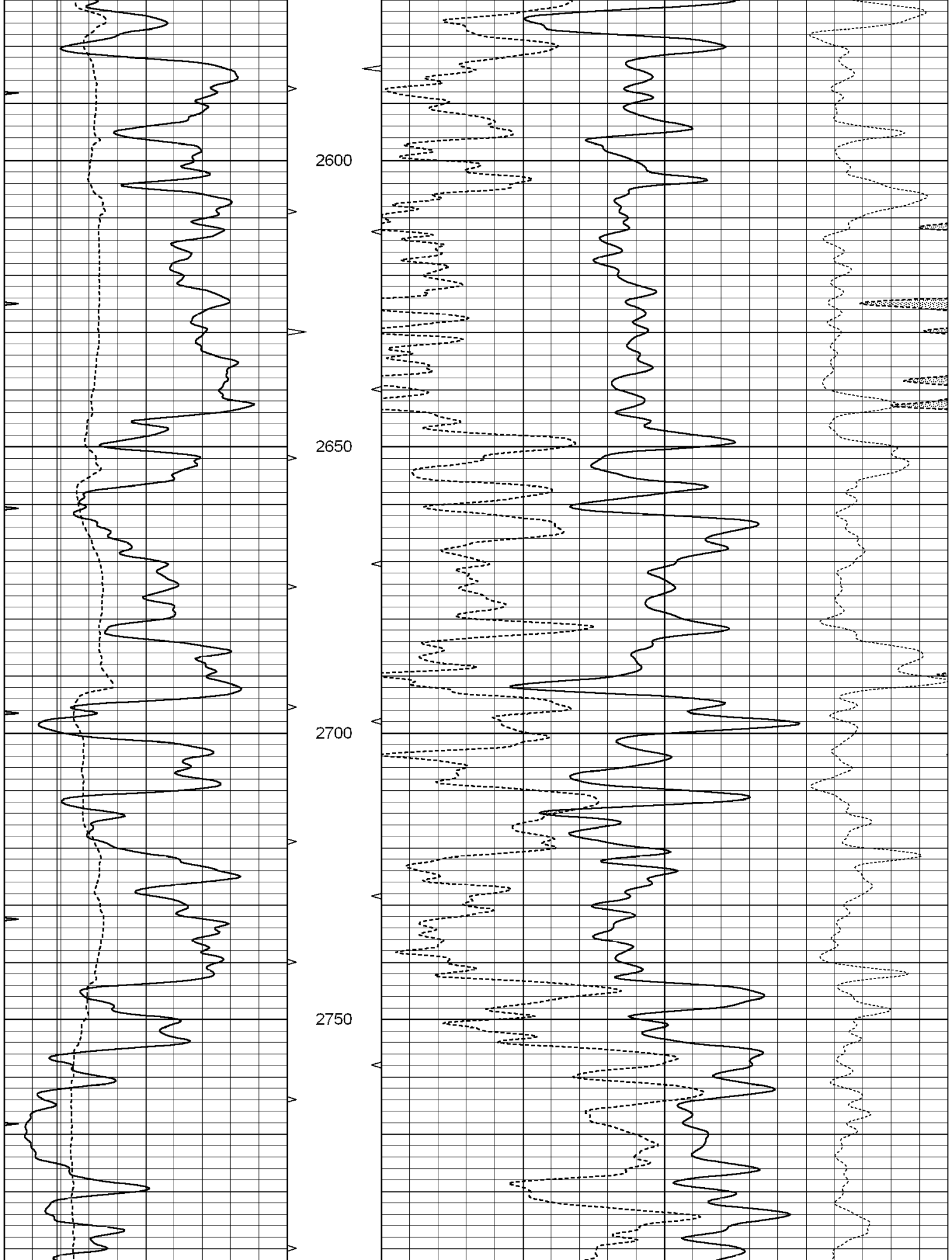
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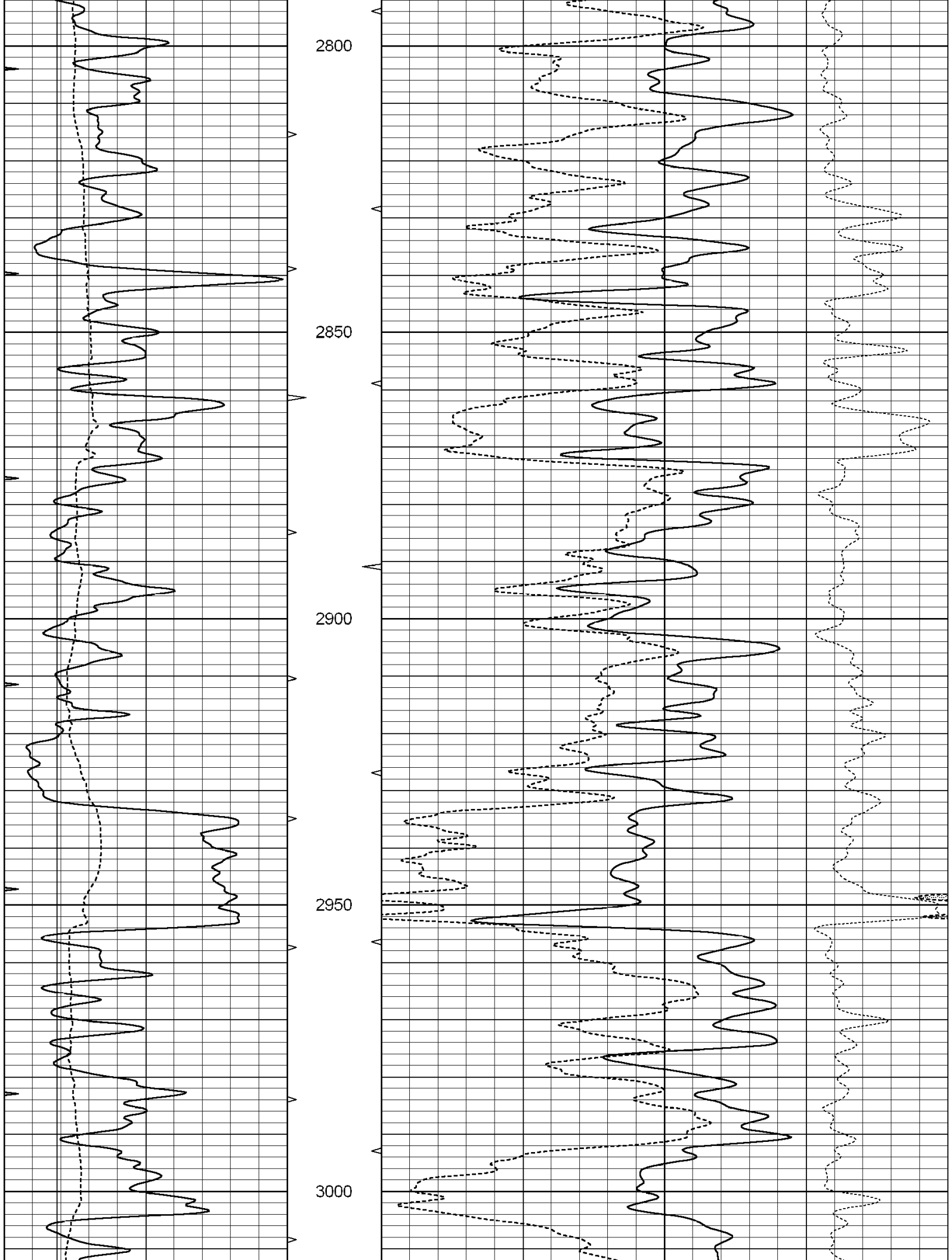
MAIN SECTION

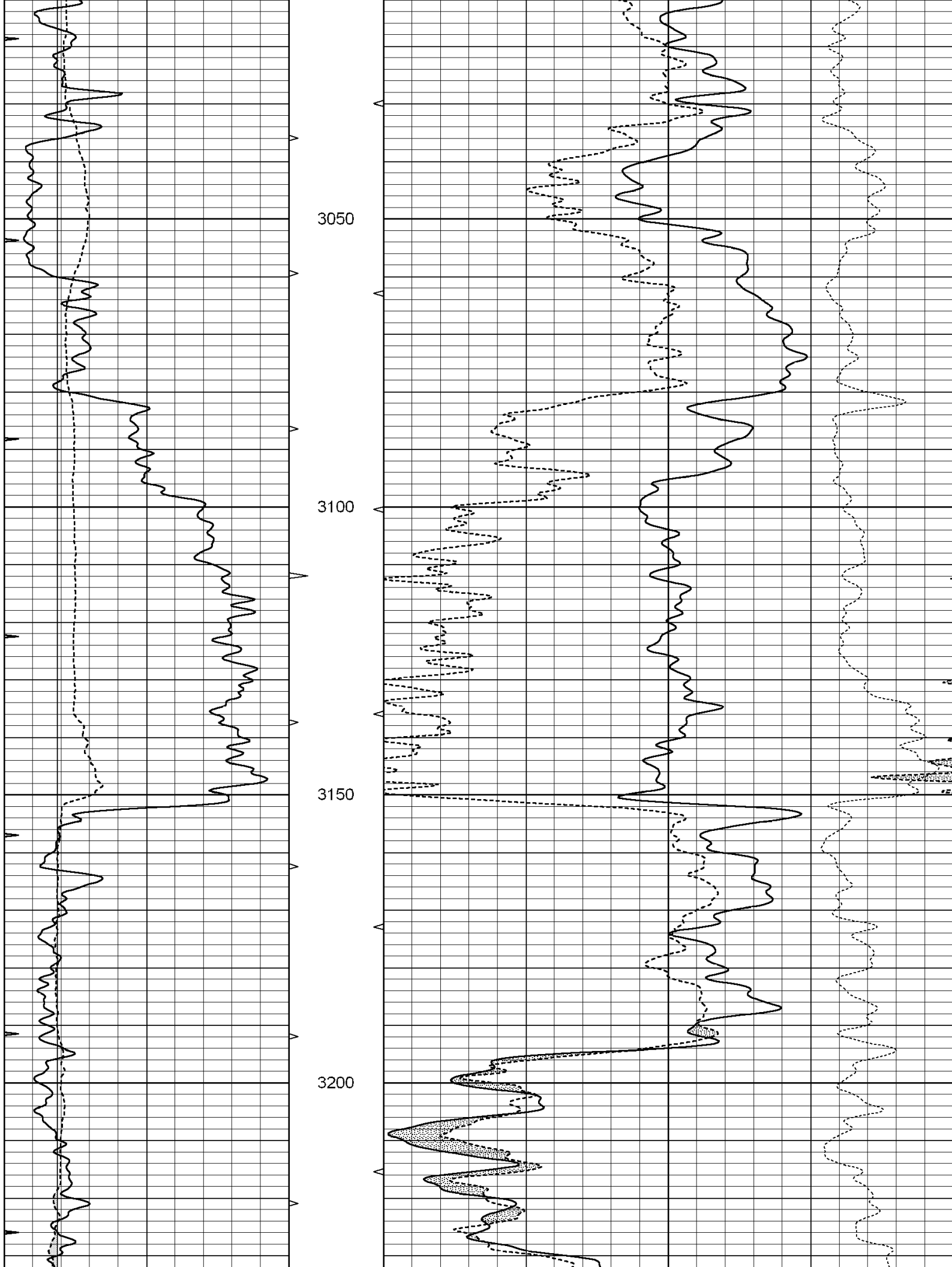
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Charted by: Depth in Feet scaled 1:240

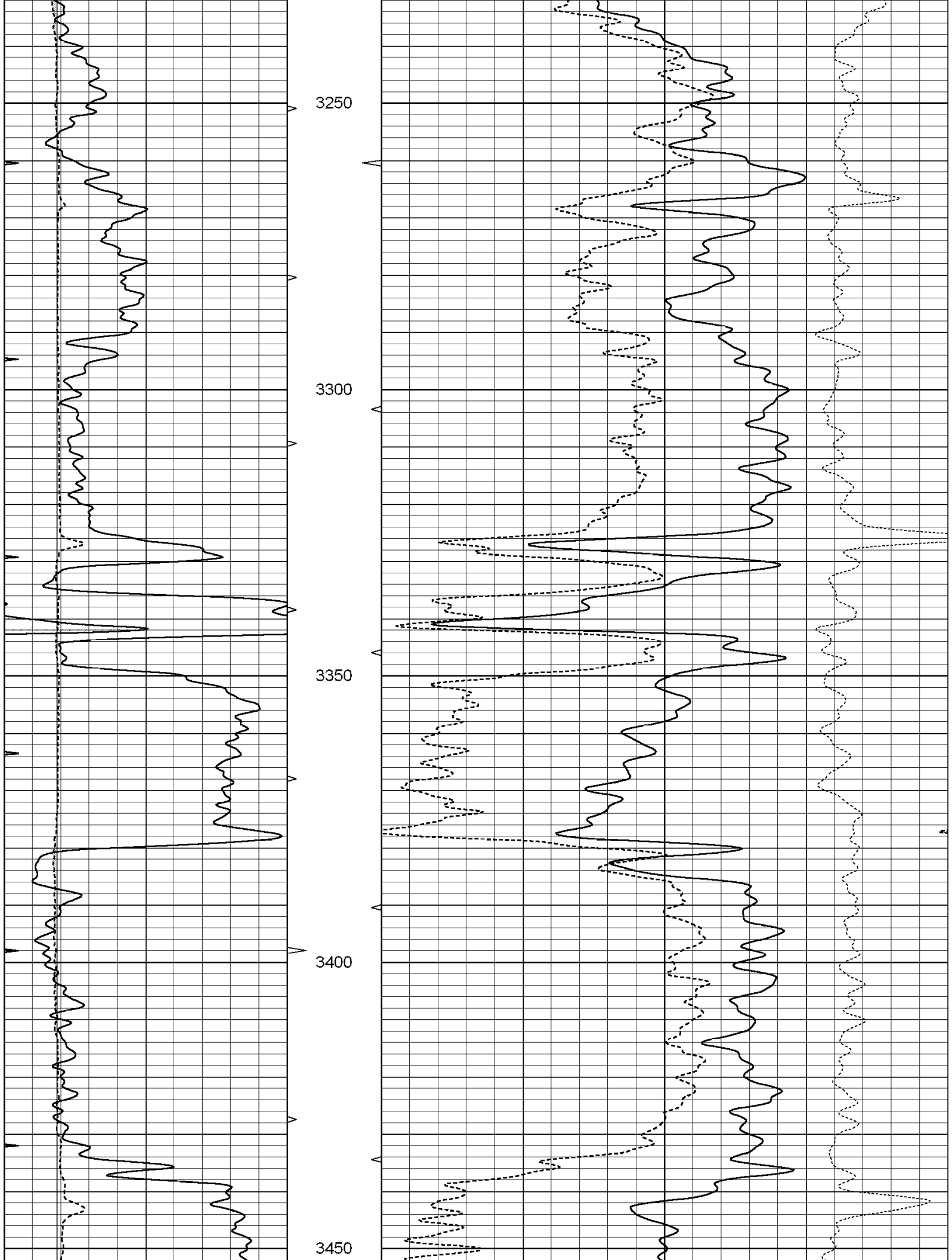
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10			

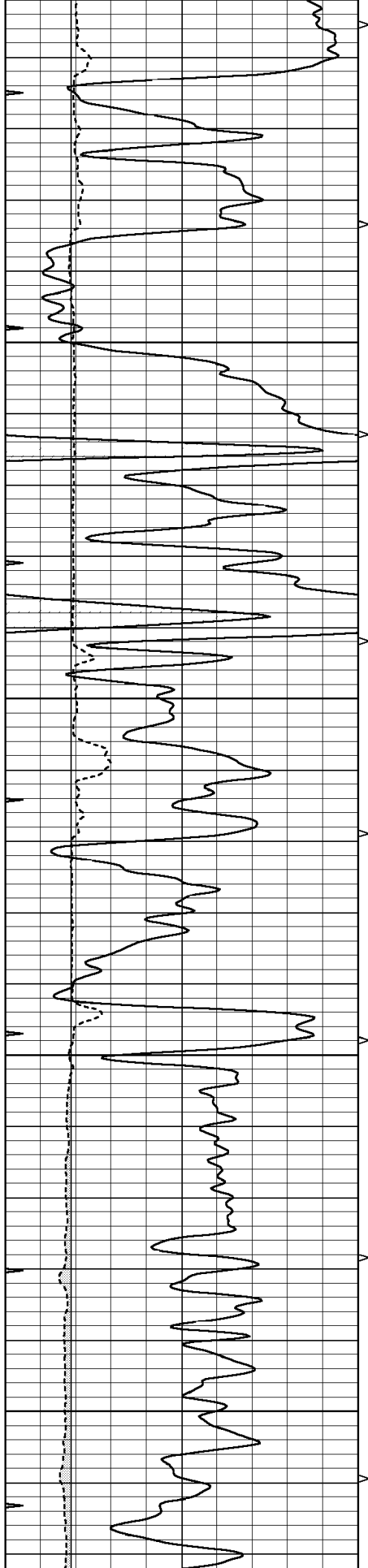










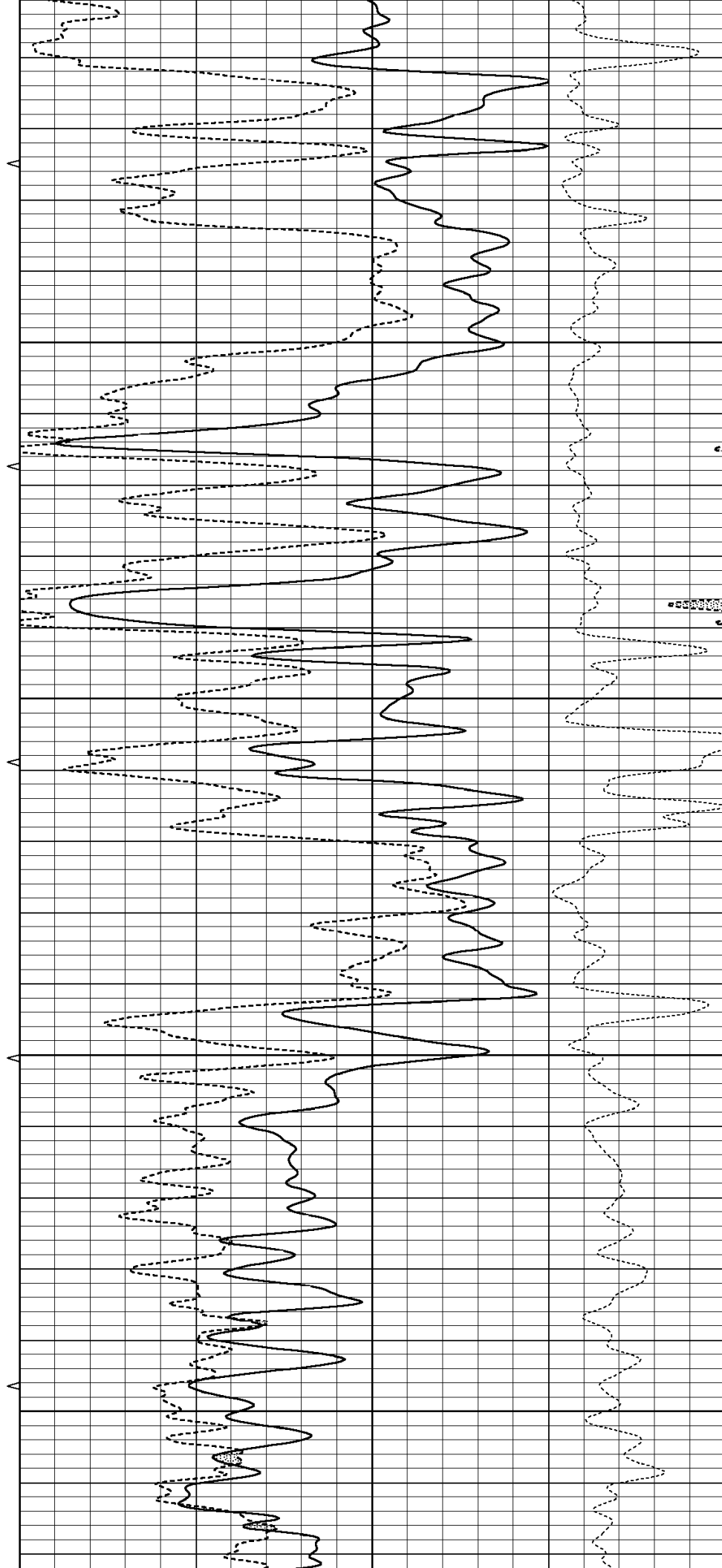


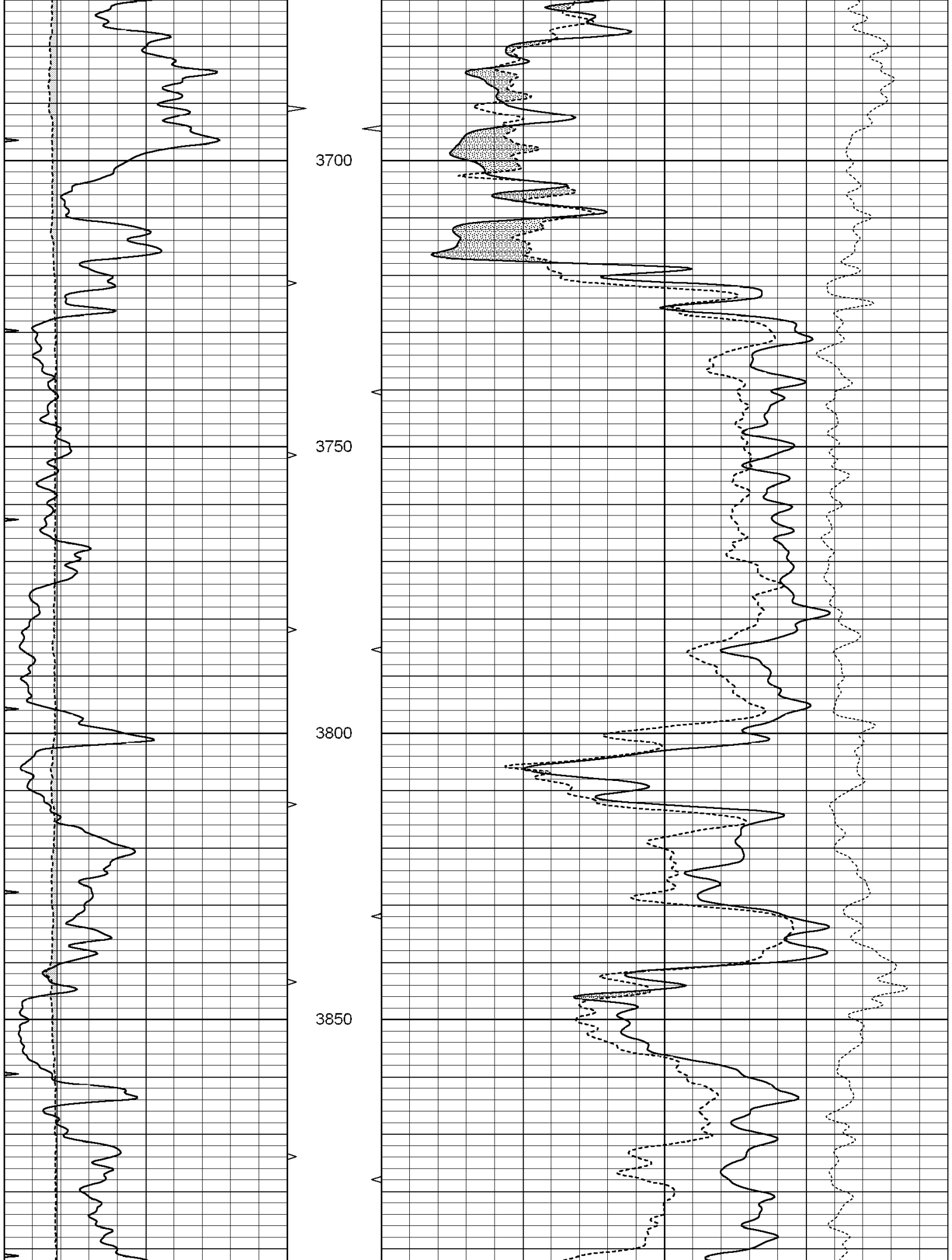
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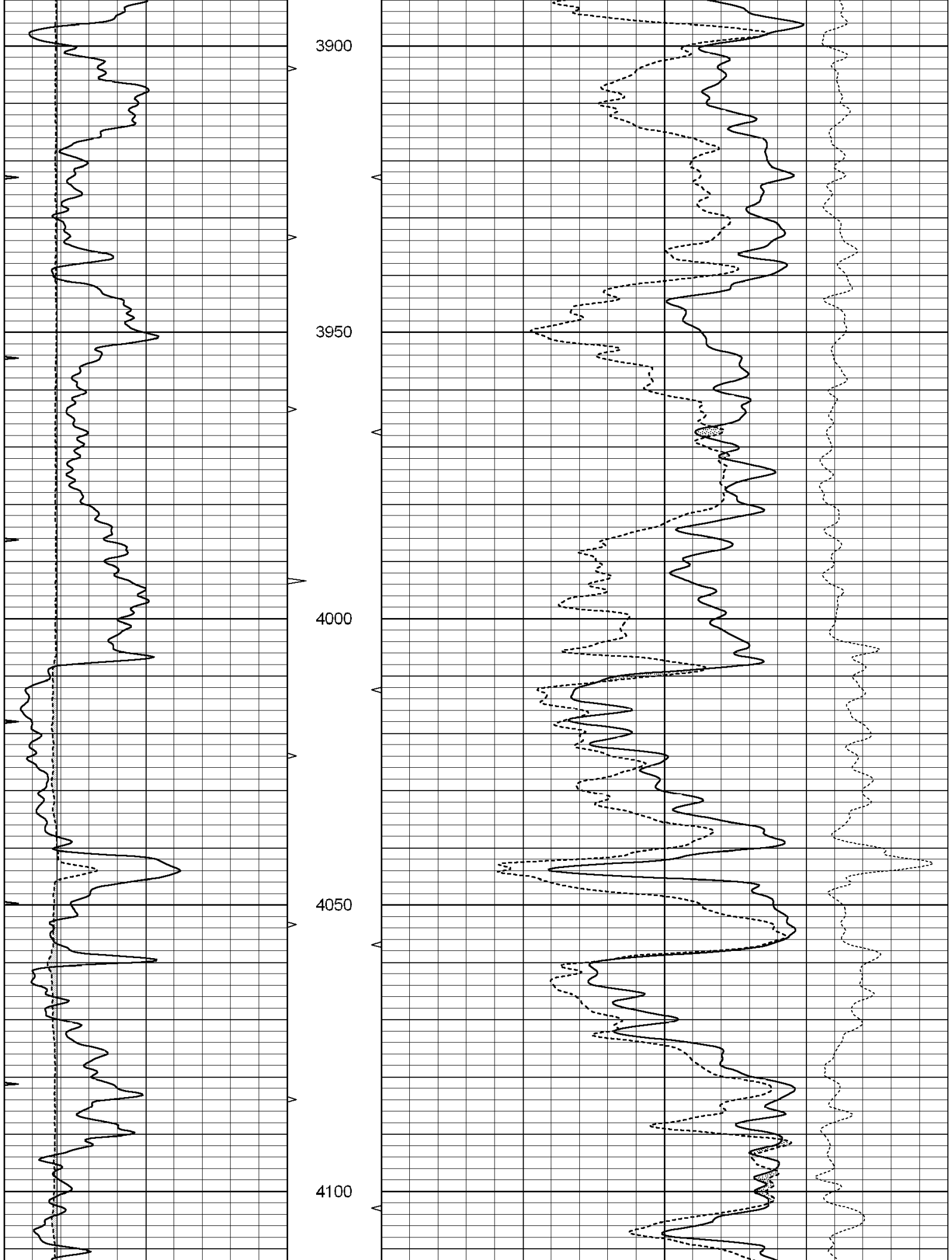
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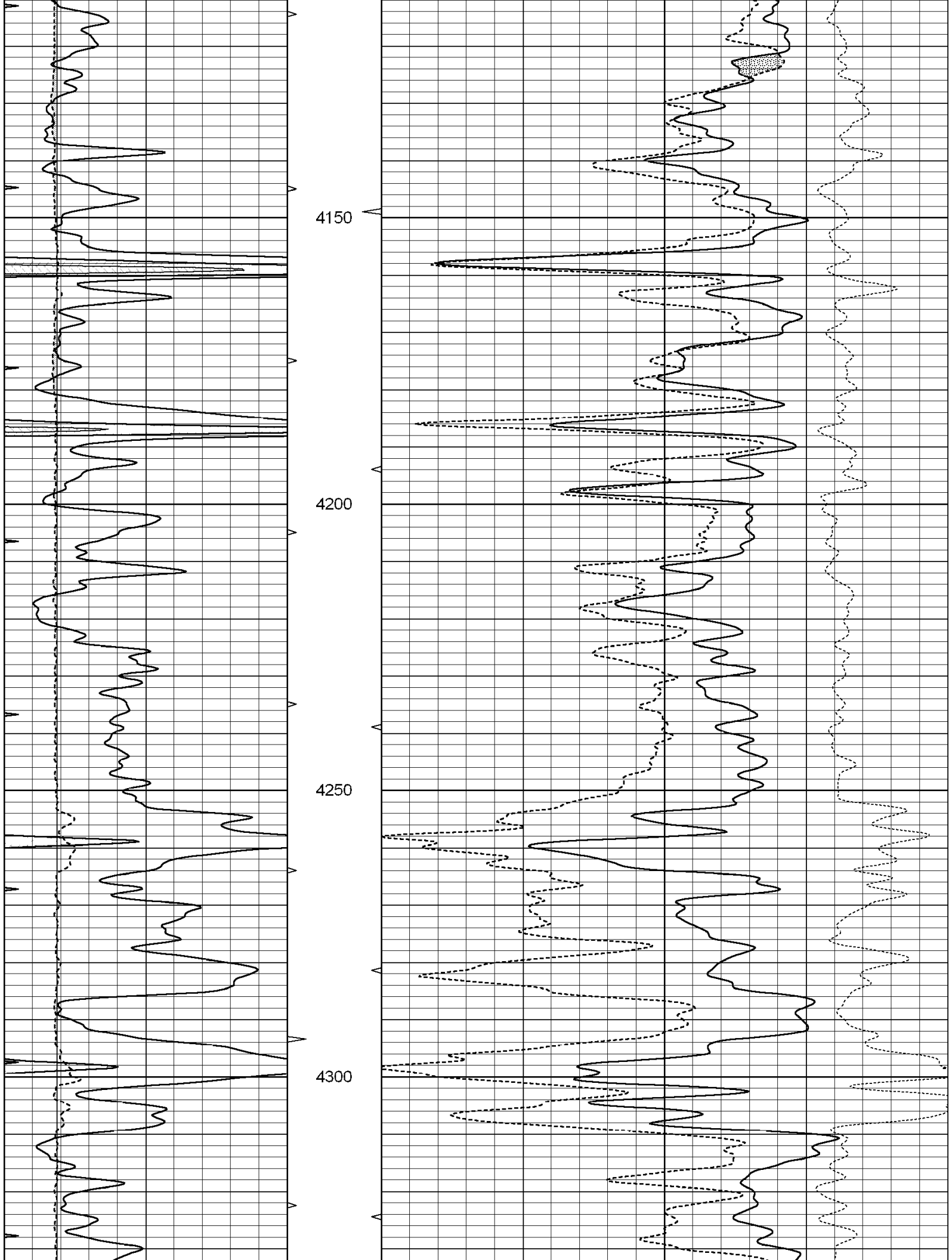
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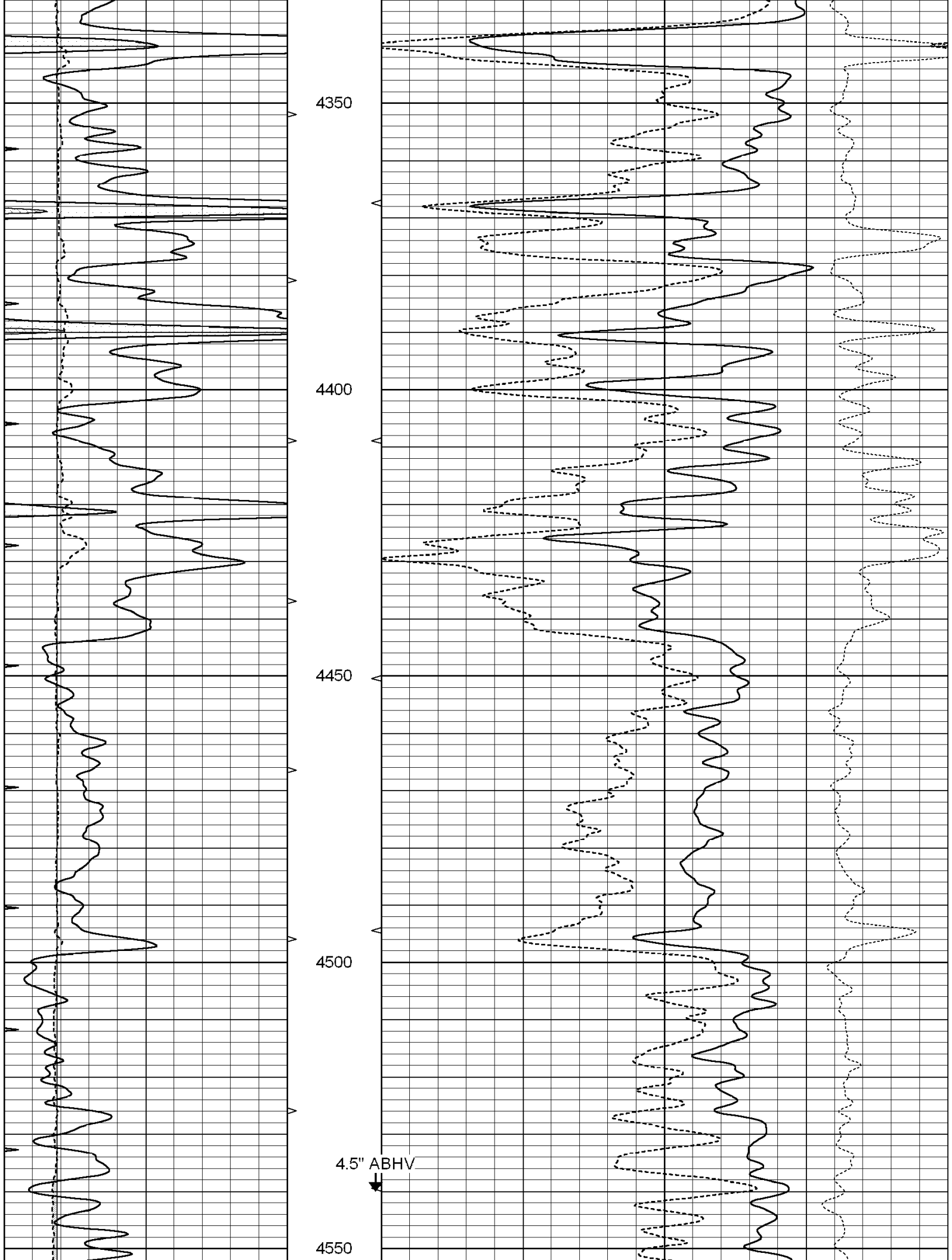
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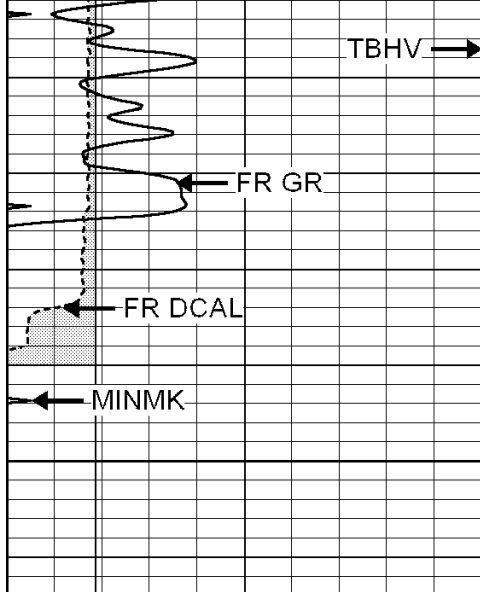




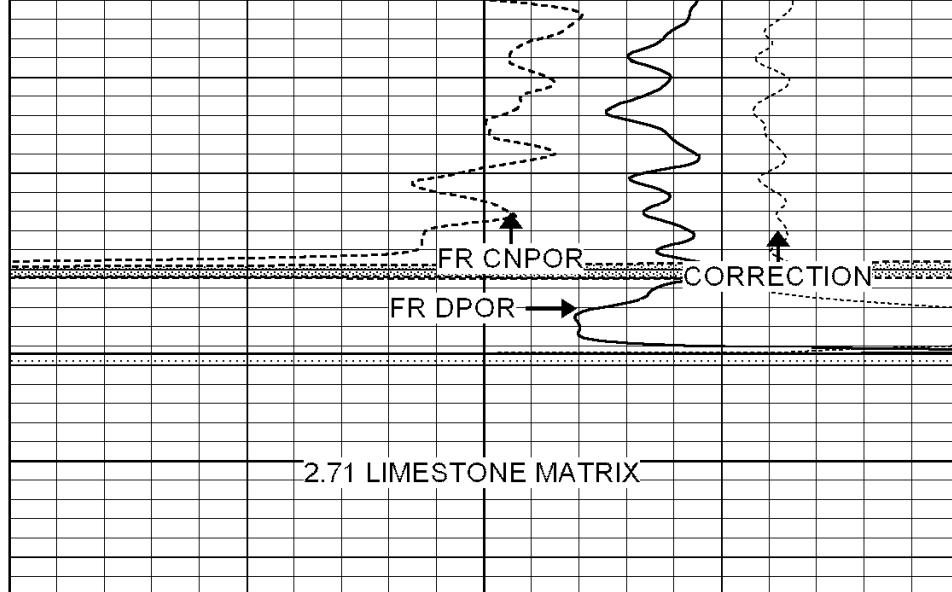








4600
LTD 4608



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

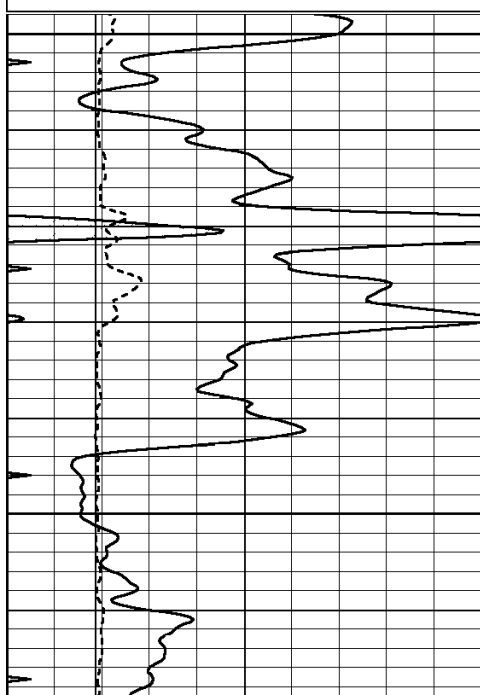


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REPEAT SECTION

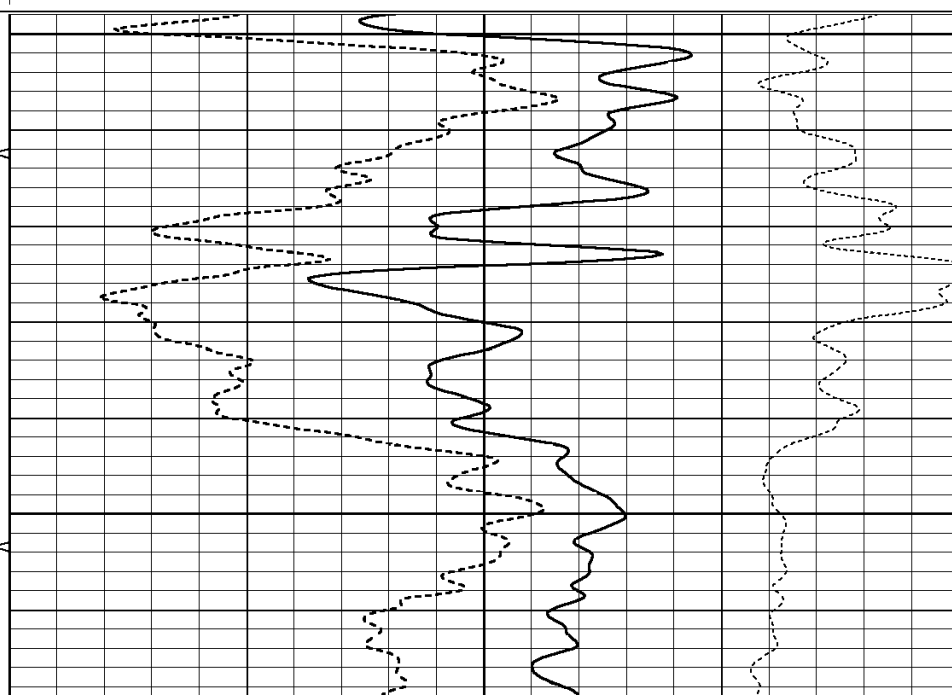
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Charted by: Depth in Feet scaled 1:240

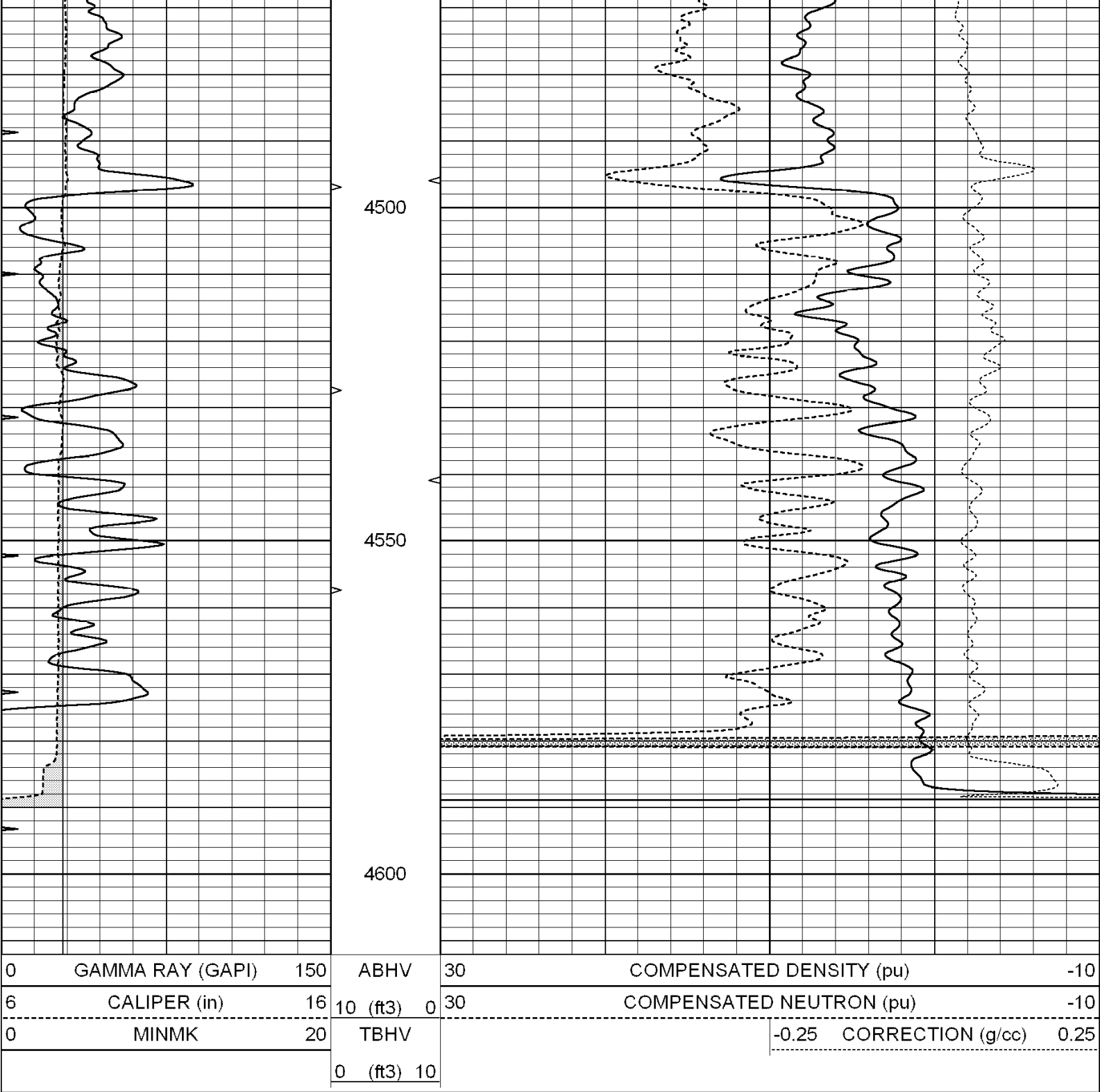
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10			



4400

4450





Calibration Report								
Database File:		004840ddn.db						
Dataset Pathname:		pass3.3						
Dataset Creation:		Mon Mar 29 15:52:31 2010 by Calc Open-Cased 060407						
Dual Induction Calibration Report								
Serial-Model:		DIL6-GEAR						
Performed:		Mon Mar 29 13:23:34 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	-5.000
Multi	0.000	0.700	V	0.000	100.000	mmho-m	710.000	00.000

Medium	0.020	0.738	V	0.000	462.500	mmho-m	740.000	-26.000
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	0.9	6.6						
High Ref	2.9	14.0						
	Gain: 3.6			Offset: 3.4				
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:		GR4					
	Tool Model:		OPEN					
	Performed:		Mon Mar 29 14:34:59 2010					
	Calibrator Value:	200.0		GAPI				
	Background Reading:	0.0		cps				
	Calibrator Reading:	189.0		cps				
	Sensitivity:	0.7000		GAPI/cps				