



**SUPERIOR
Hays,
Kansas**

COMPENSATED DENSITY / NEUTRON LOG

Company MULL DRILLING COMPANY, INC.
Well #1-14 TT&G
Field TROOPER
County KIOWA
State COLORADO

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Field TROOPER
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Location: API # : 05-061-06837-0000
958' FNL & 1048' FWL
SEC 14 TWP 18S RGE 45W
Permanent Datum GROUND LEVEL Elevation 3951
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DIL/MEL
SONIC
Elevation
K.B. 3964
D.F. 3962
G.L. 3951

Date	12/5/09		
Run Number	CNE		
Depth Driller	4975		
Depth Logger	4972		
Bottom Logged Interval	4948		
Top Log Interval	3200		
Casing Driller	8 5/8"@337'		
Casing Logger	335		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2,500 PPM	
Density / Viscosity	9.2/66		
pH / Fluid Loss	9.5/7.2		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.10@66F		
Rmf @ Meas. Temp	.825@66F		
Rmc @ Meas. Temp	1.32@66F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.581@125F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	5:00 P.M.		
Maximum Recorded Temperature	125F		
Equipment Number	0836		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KEVIN KESSLER		

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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 SERVICES HAYS, KANSAS (785) 628-6395
DIRECTIONS
BRANDON, CO. & HWY 96 E. EDGE @MM #186, 3 N. ON RD. #59, 1/4 E., N. INTO

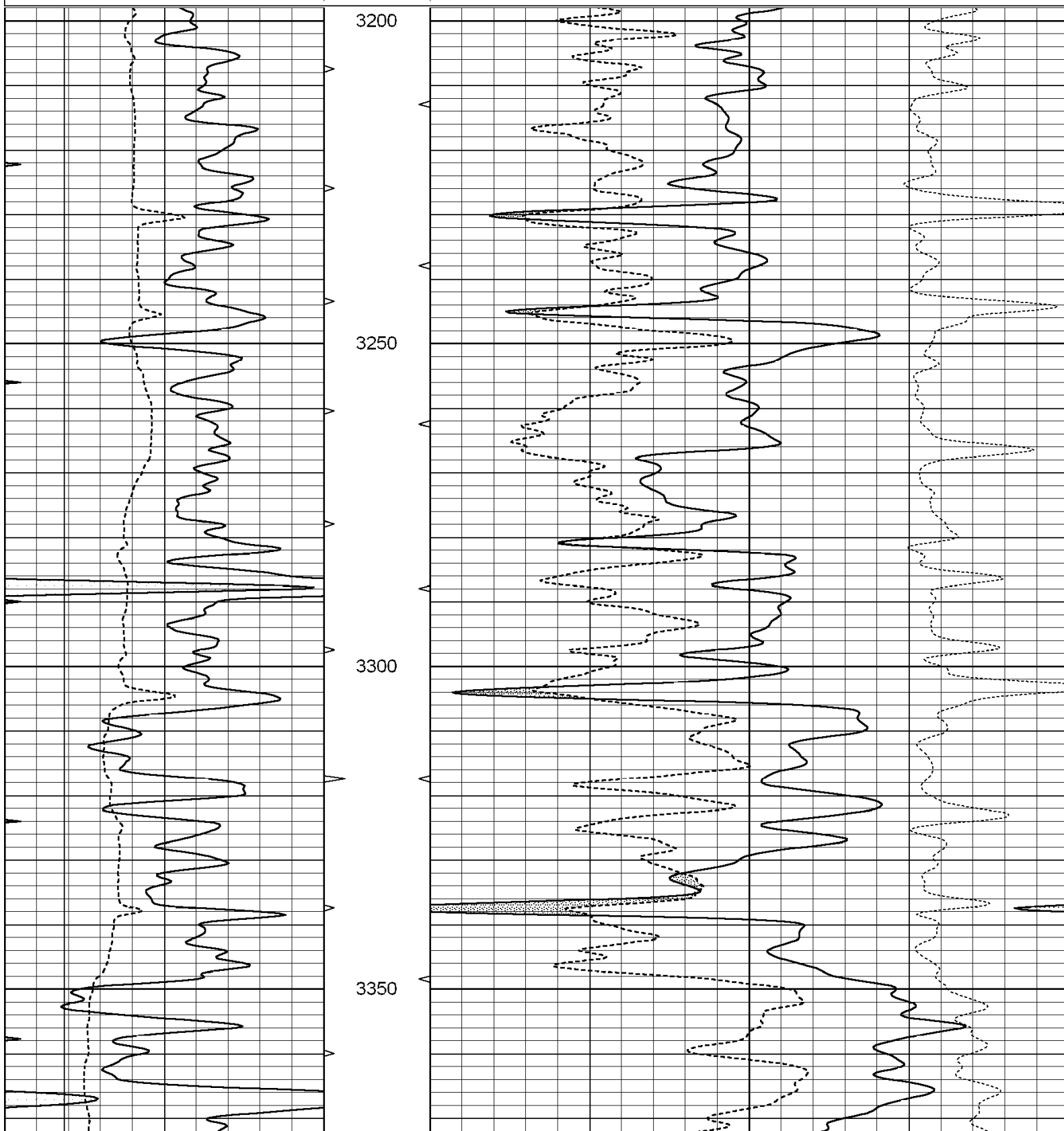


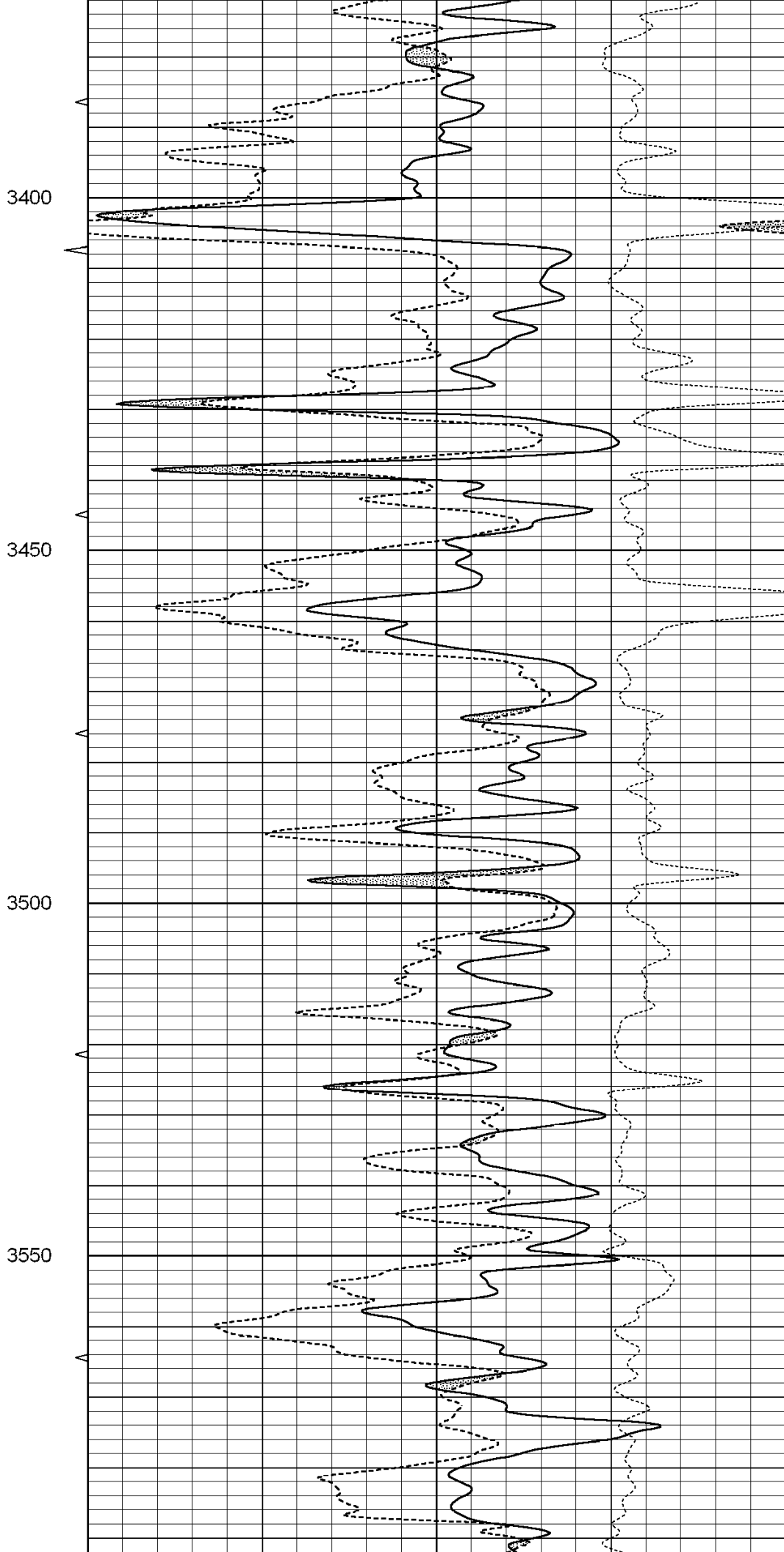
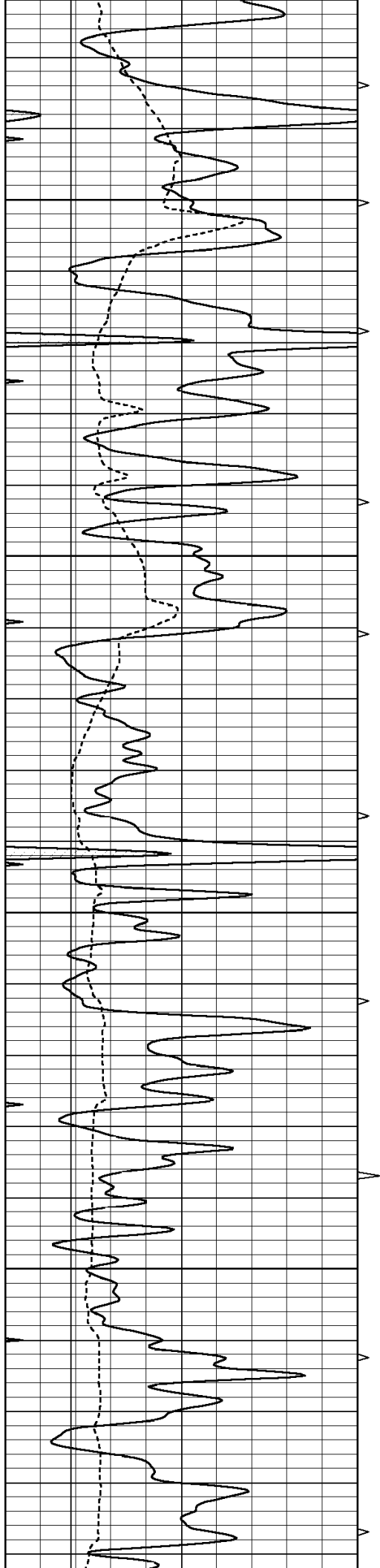
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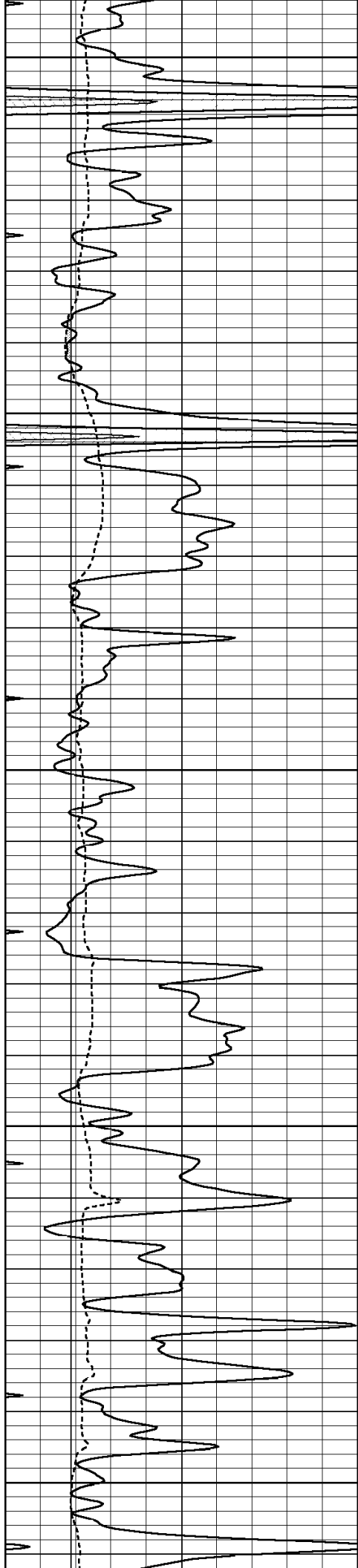
MAIN SECTION

Database File: 004382ddn.db
Dataset Pathname: pass3.4
Presentation Format: den_neu
Dataset Creation: Sat Dec 05 18:19:39 2009 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
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10			







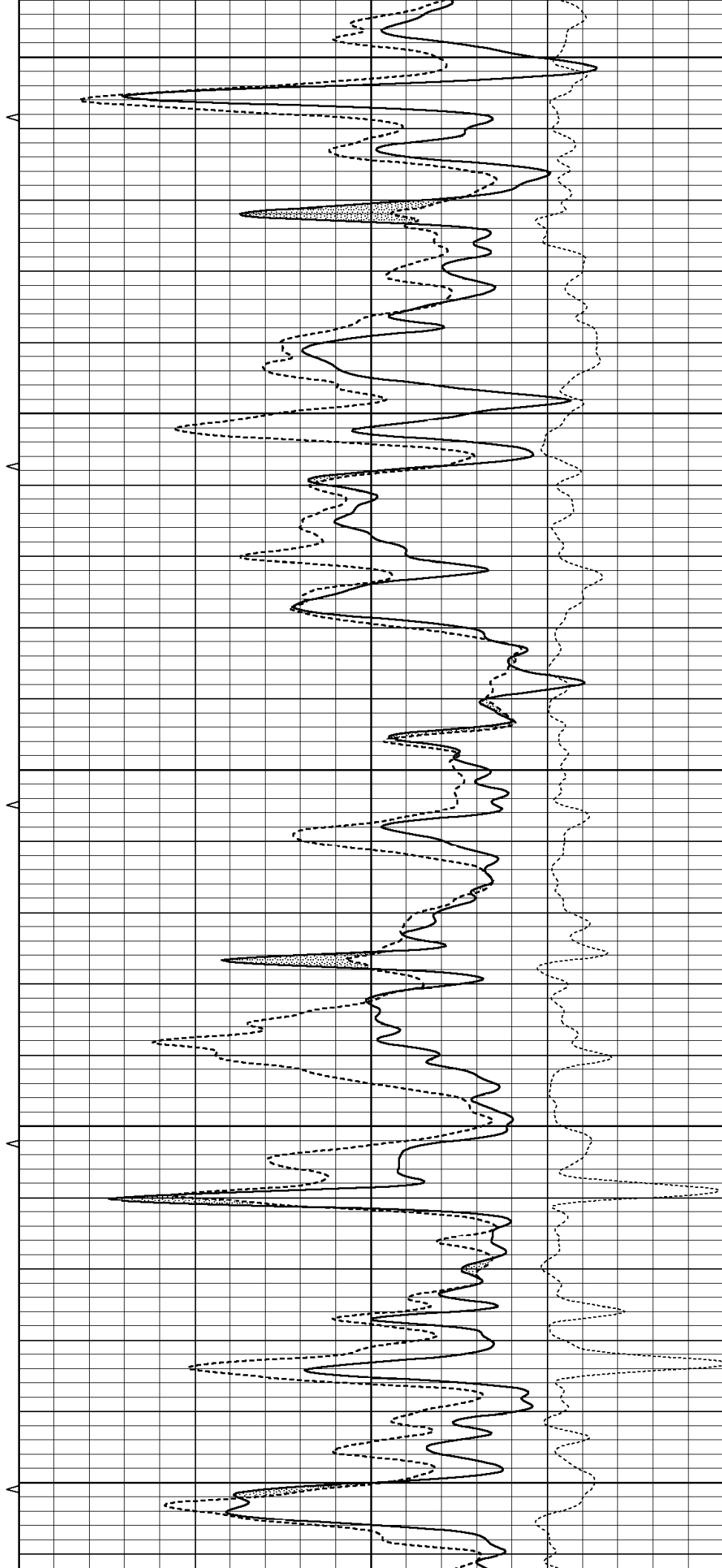
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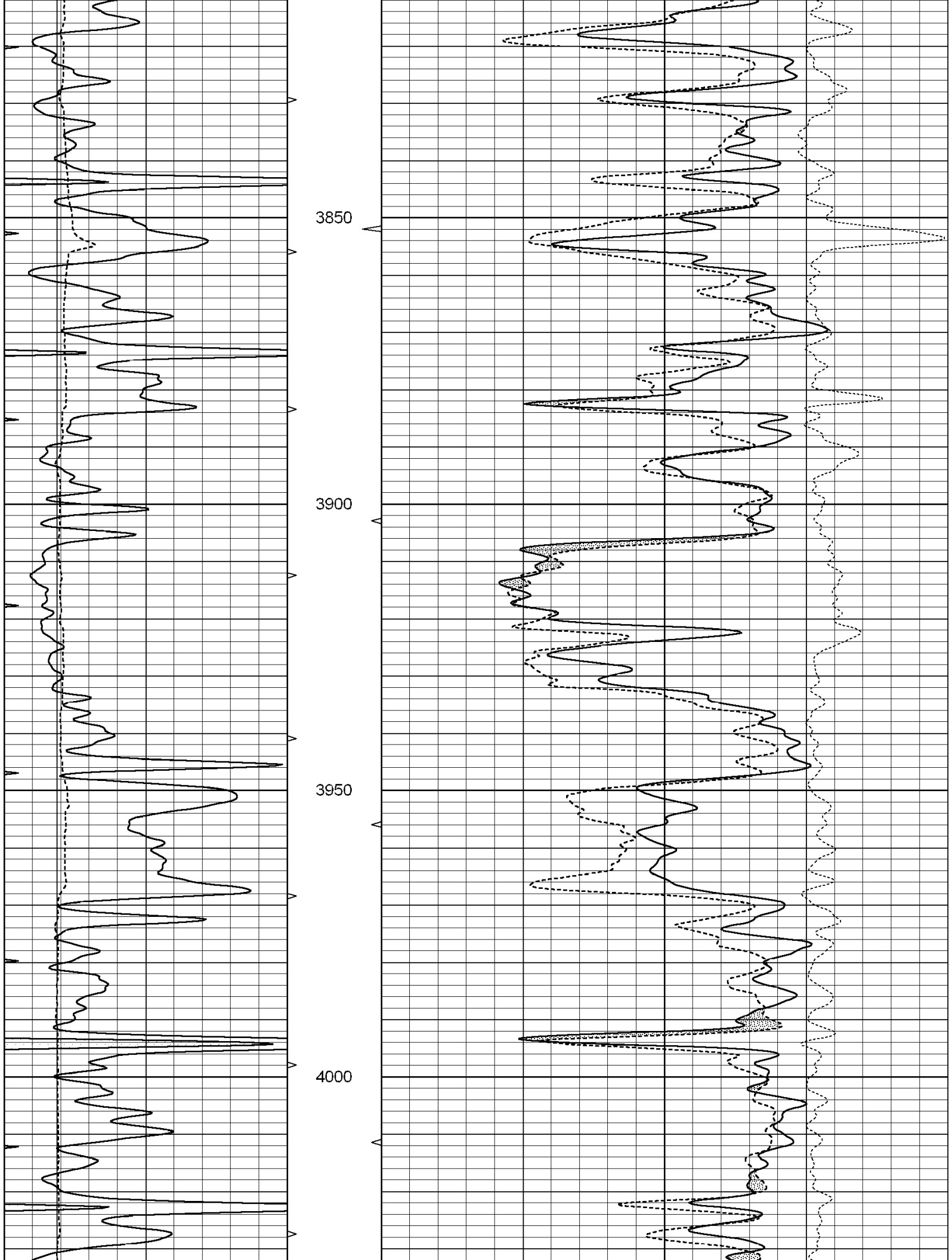
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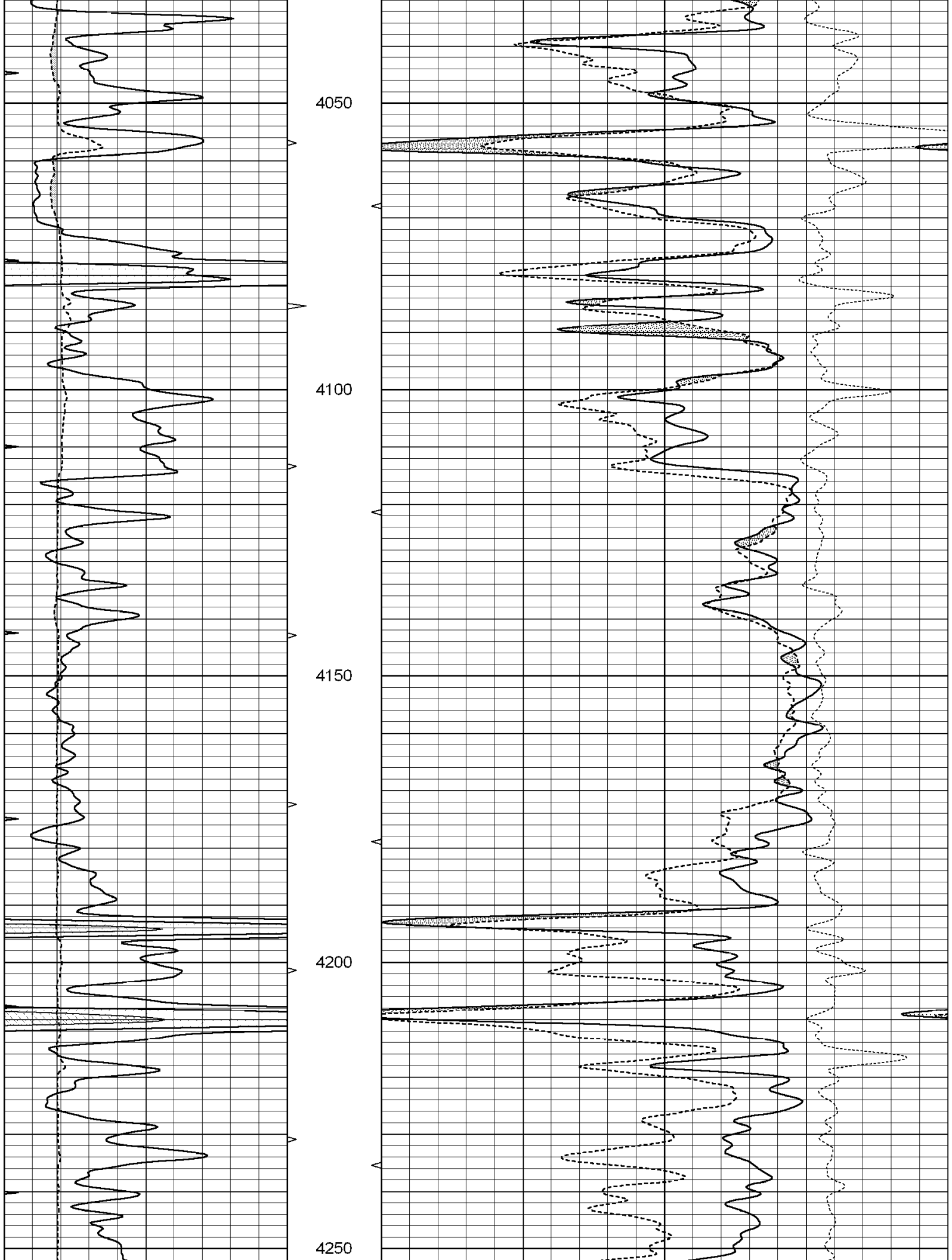
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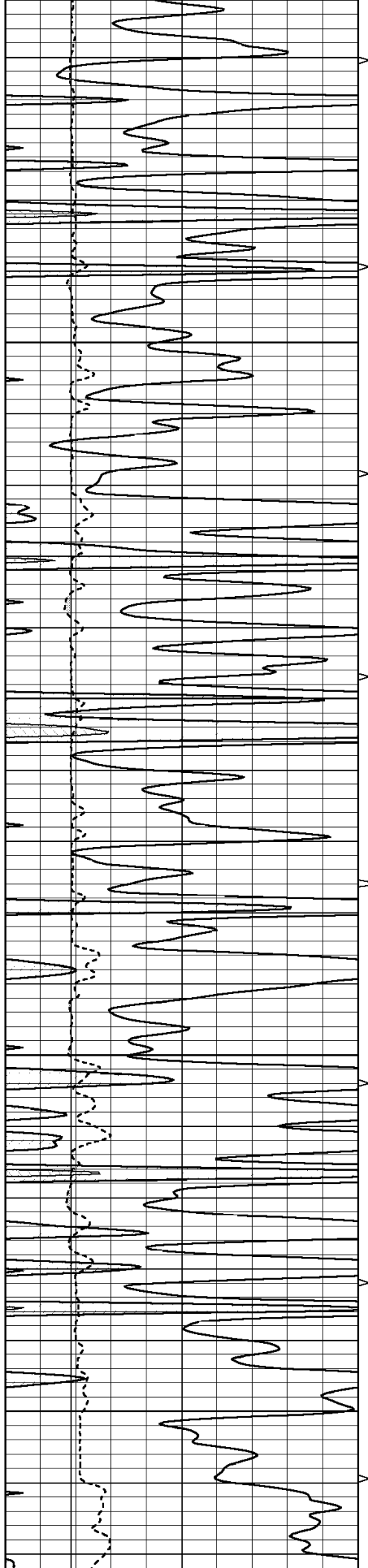
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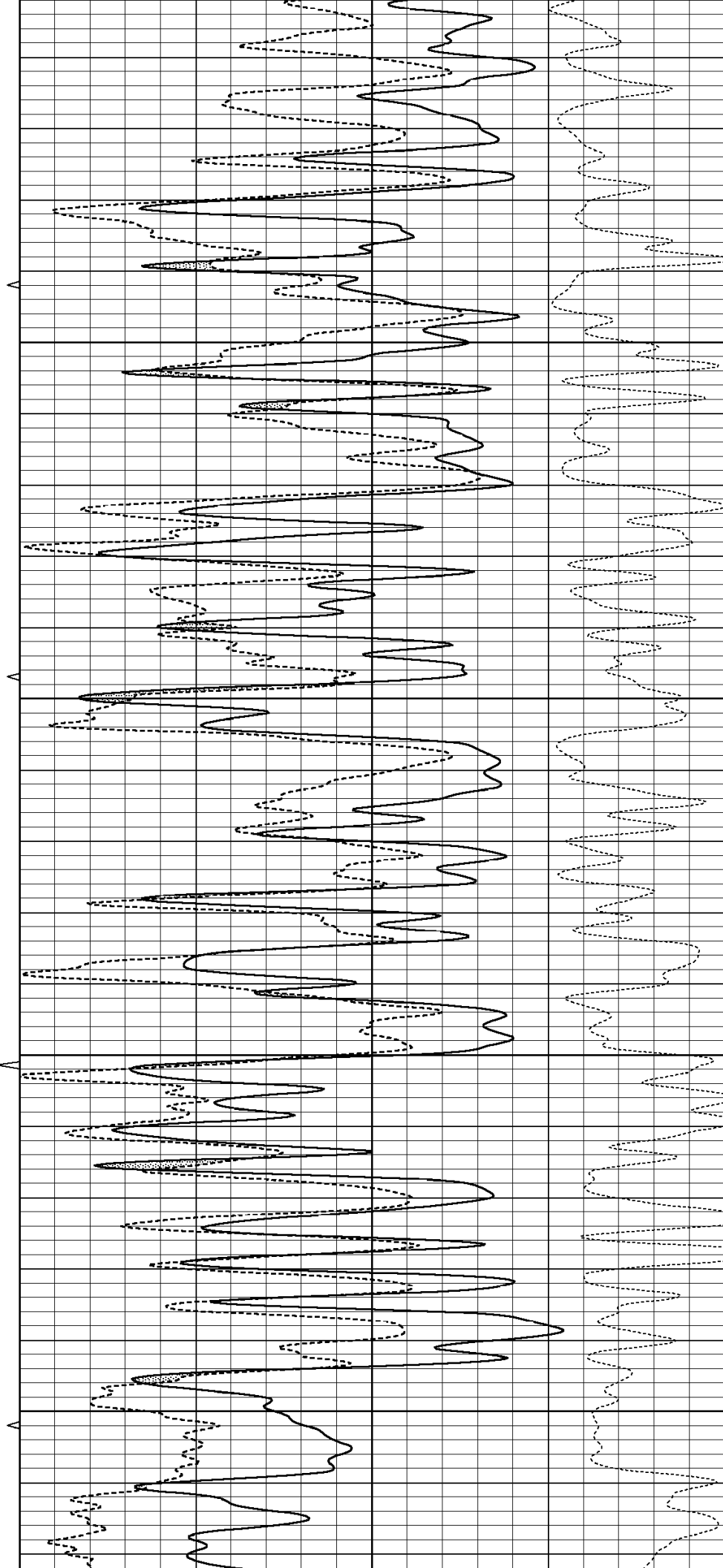


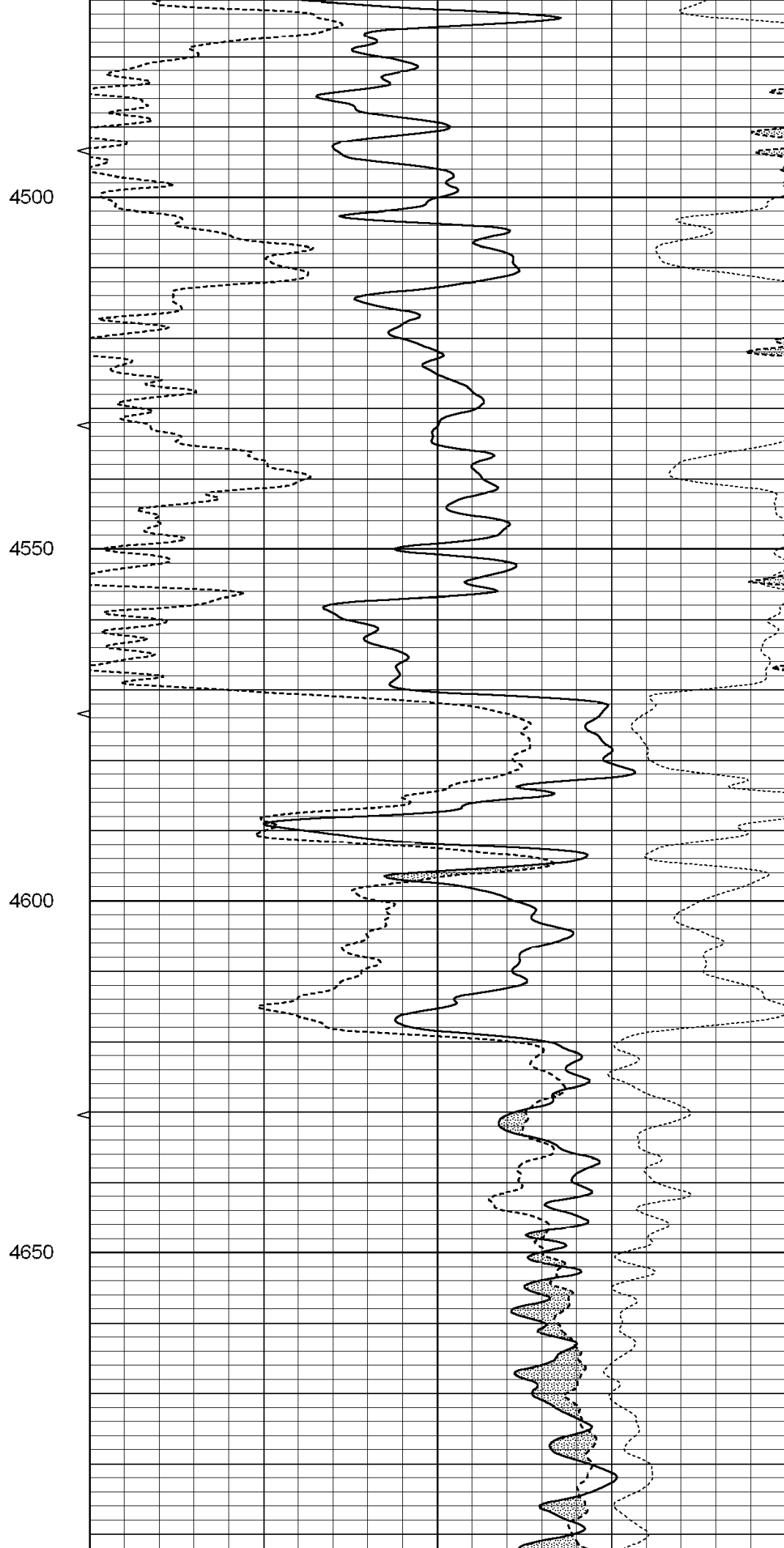
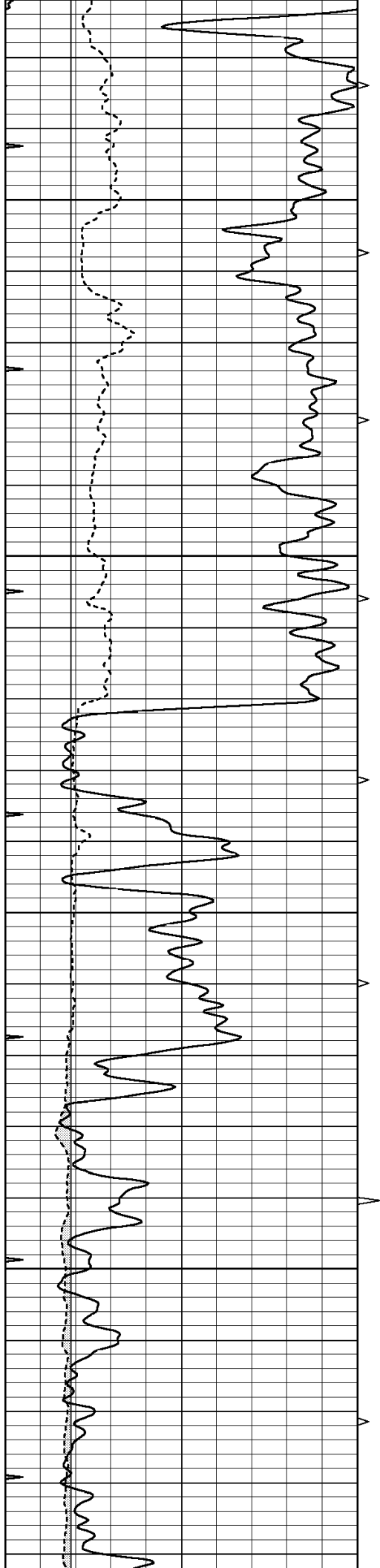
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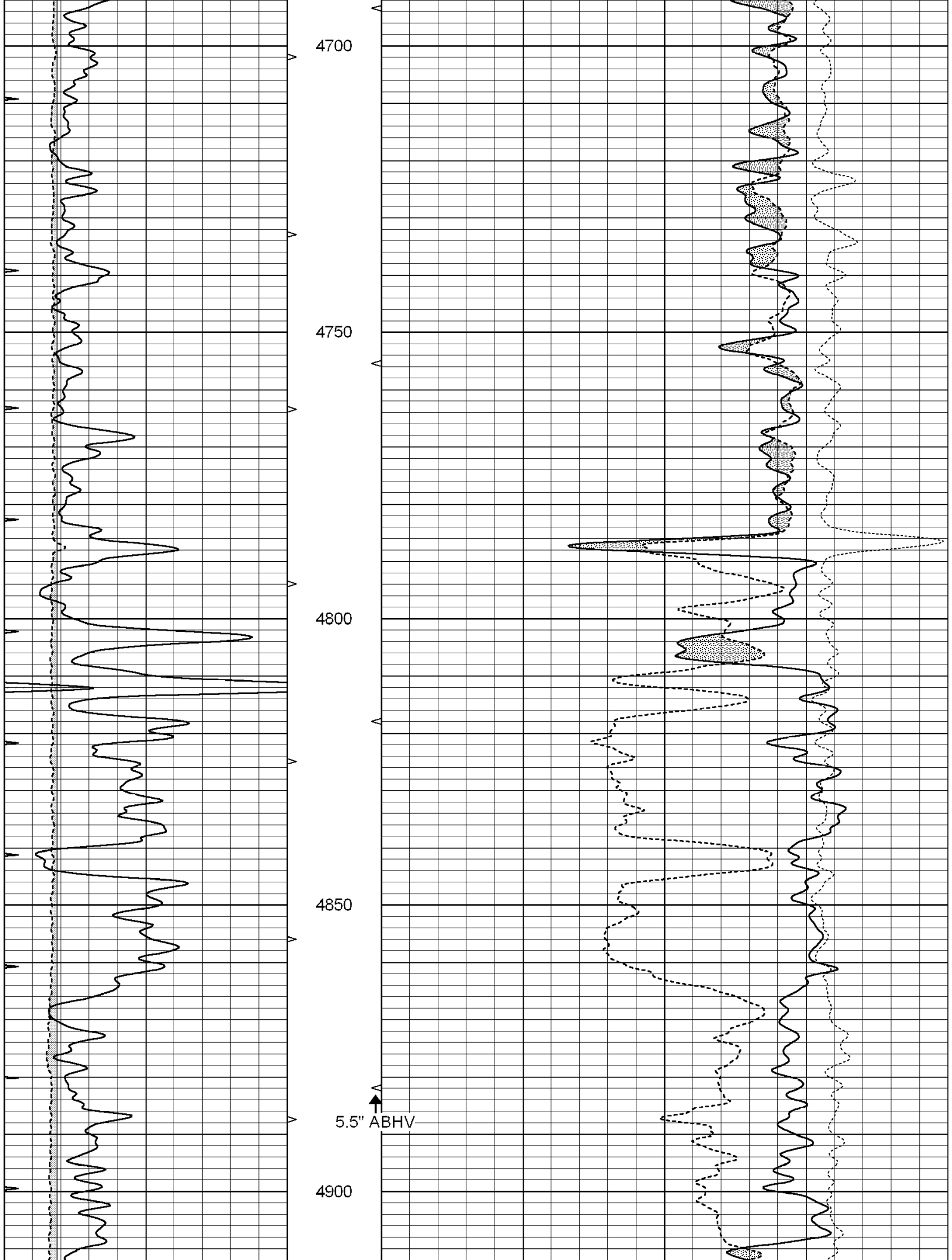
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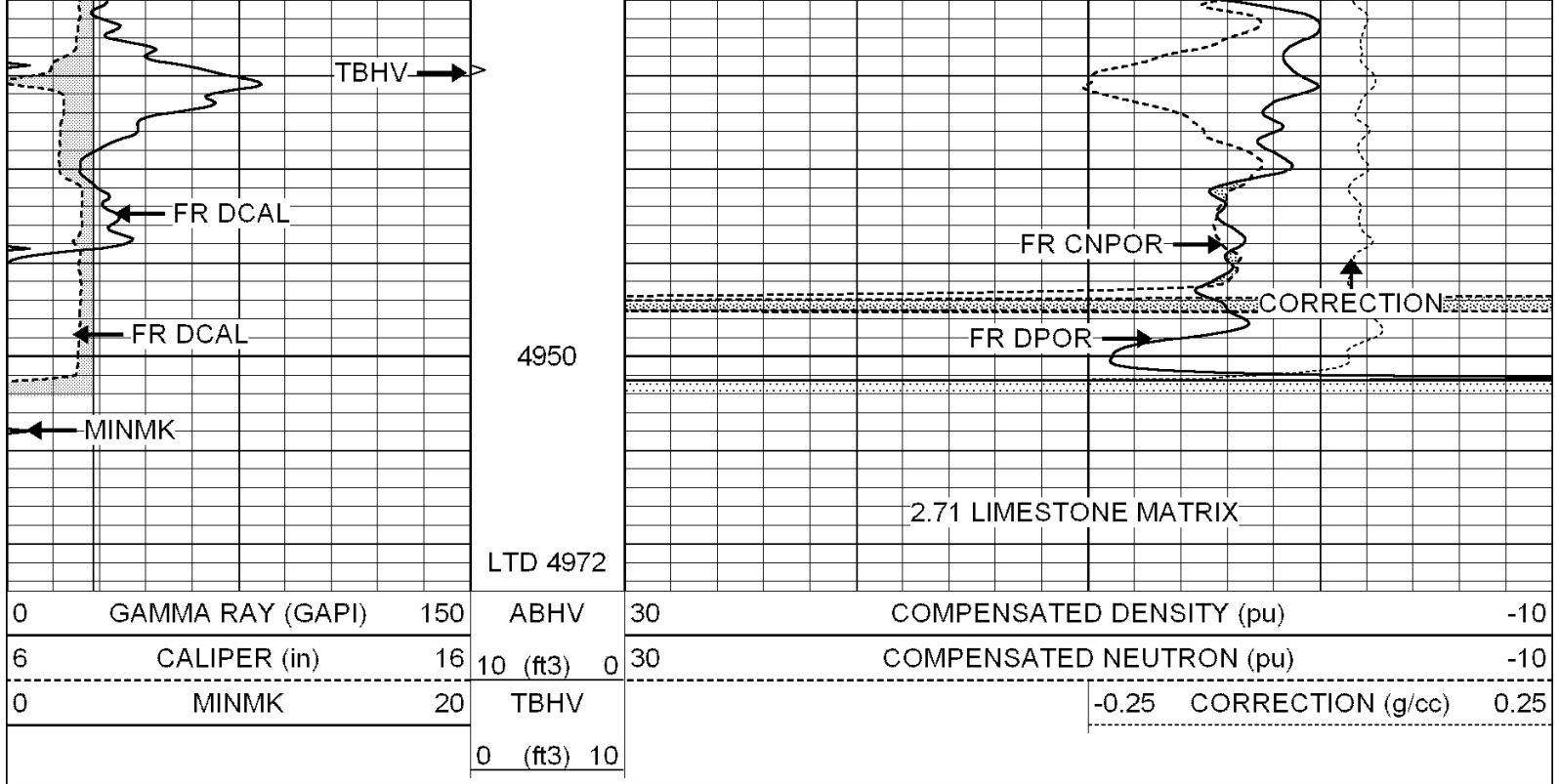
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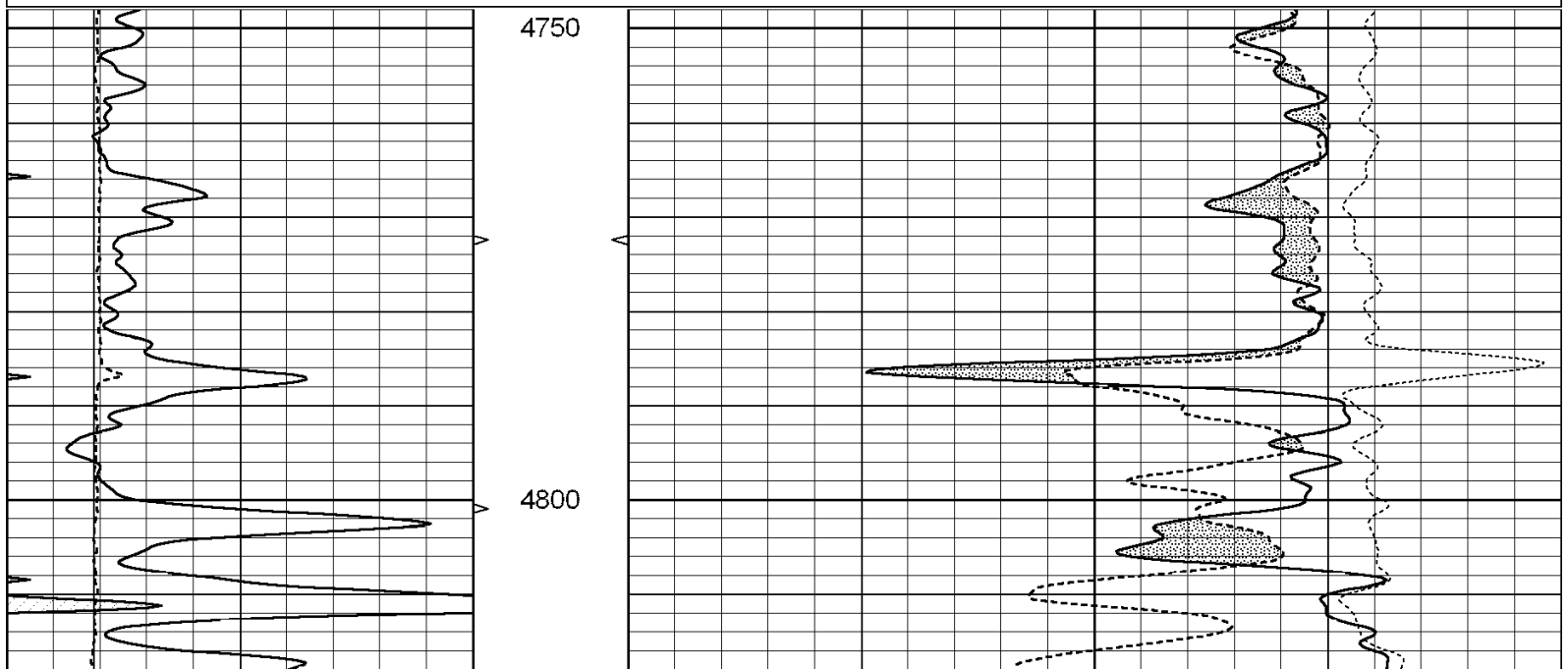


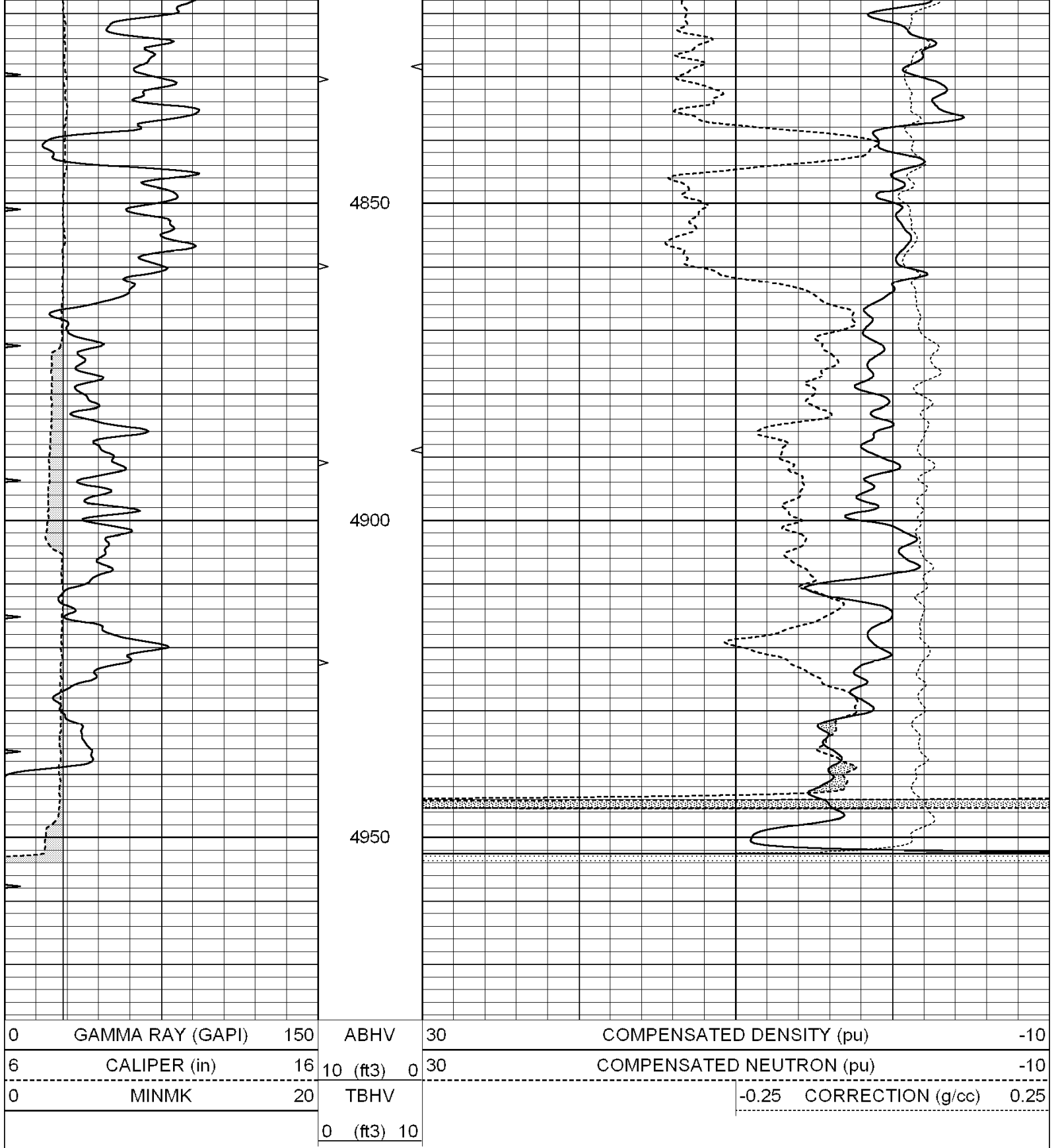


REPEAT SECTION

Database File: 004382ddn.db
 Dataset Pathname: pass2.12
 Presentation Format: den_neu
 Dataset Creation: Sat Dec 05 18:42:55 2009
 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
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0	MINMK	20	TBHV			-0.25	CORRECTION (g/cc)	0.25	
			0 (ft3)	10					





Calibration Report

Database File: 004382ddn.db
Dataset Pathname: pass3.4
Dataset Creation: Sat Dec 05 18:19:39 2009 by Calc Open-Cased 060407

Dual Induction Calibration Report

Serial-Model: DIL6-GEAR
Performed: Sat Dec 05 17:05:48 2009

Readings				References			Results	
Loop:	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	-21.000
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 6.7
High Ref	3.0	14.0
	Gain: 3.8	Offset: 2.5

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:	Sat Dec 05 17:05:34 2009	
Calibrator Value:	200.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	189.0	cps
Sensitivity:	0.7500	GAPI/cps