



SUPERIOR
Hays,
Kansas

COMPENSATED
DENSITY / NEUTRON
PE LOG

Company MULL DRILLING COMPANY, INC.
Well APC - MEDFORD STATE UNIT #1-9
Field WILDCAT
County CHEYENNE
State COLORADO

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County CHEYENNE State COLORADO

Location: API # : 05-017-07706

398' FSL & 1083' FEL

SEC 9 TWP 16S RGE 46W

Permanent Datum GROUND LEVEL Elevation 4202
Log Measured From KELLY BUSHING 11' A.G.L.
Drilling Measured From KELLY BUSHING

Other Services
DIL/MEL
SONIC

Elevation

K.B. 4213
D.F. 4211
G.L. 4202

Date 11/7/11

Run Number ONE

Depth Driller 5500

Depth Logger 5500

Bottom Logged Interval 5476

Top Log Interval 3600

Casing Driller 8 5/8" @ 526'

Casing Logger 526

Bit Size 7 7/8"

Type Fluid in Hole CHEMICAL MUD

Density / Viscosity 9.3/55

pH / Fluid Loss 10.0/8.0

Source of Sample FLOWLINE

Rim @ Meas. Temp .900 @ 80F

Rinf @ Meas. Temp .675 @ 80F

Rmc @ Meas. Temp 1.08 @ 80F

Source of Rmf / Rmc MEASUREMENT

Rim @ BHT .554 @ 130F

Time Circulation Stopped 3 HOURS

Time Logger on Bottom 9:45 P.M.

Maximum Recorded Temperature 130F

Equipment Number 0836

Location HAYS, KANSAS

Recorded By JEFF LUEBBERS

Witnessed By MACKLIN ARMSTRONG

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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

CHEYENNE WELLS, CO. (JUNCTION OF OLD 40 & HWY 385) 9S. ON HWY 385 TO "RD. G", 12W. TO "RD. 34", 2 1/2S., TO "RD. D", 1W., 1N., 1/4 W. INTO

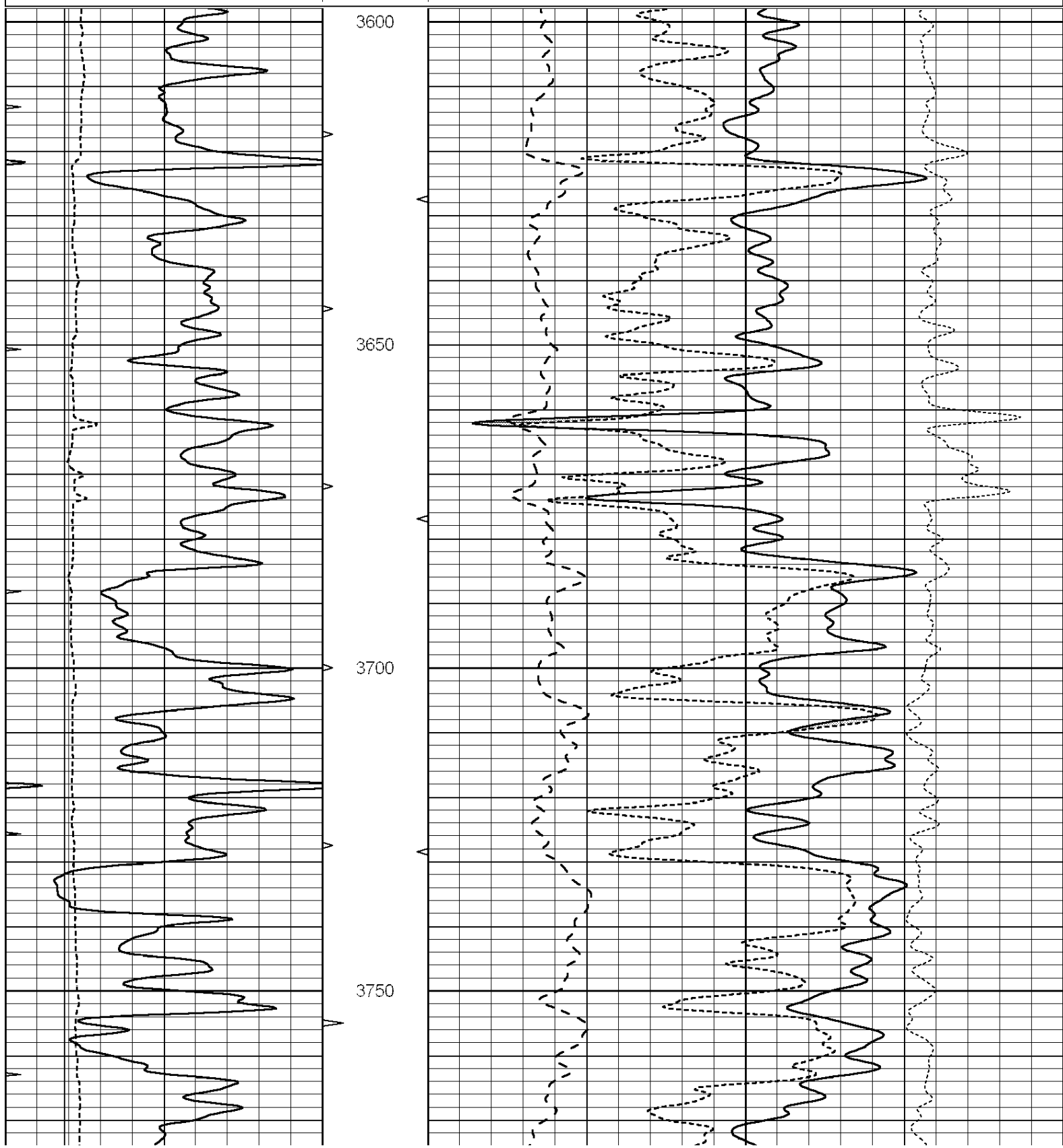


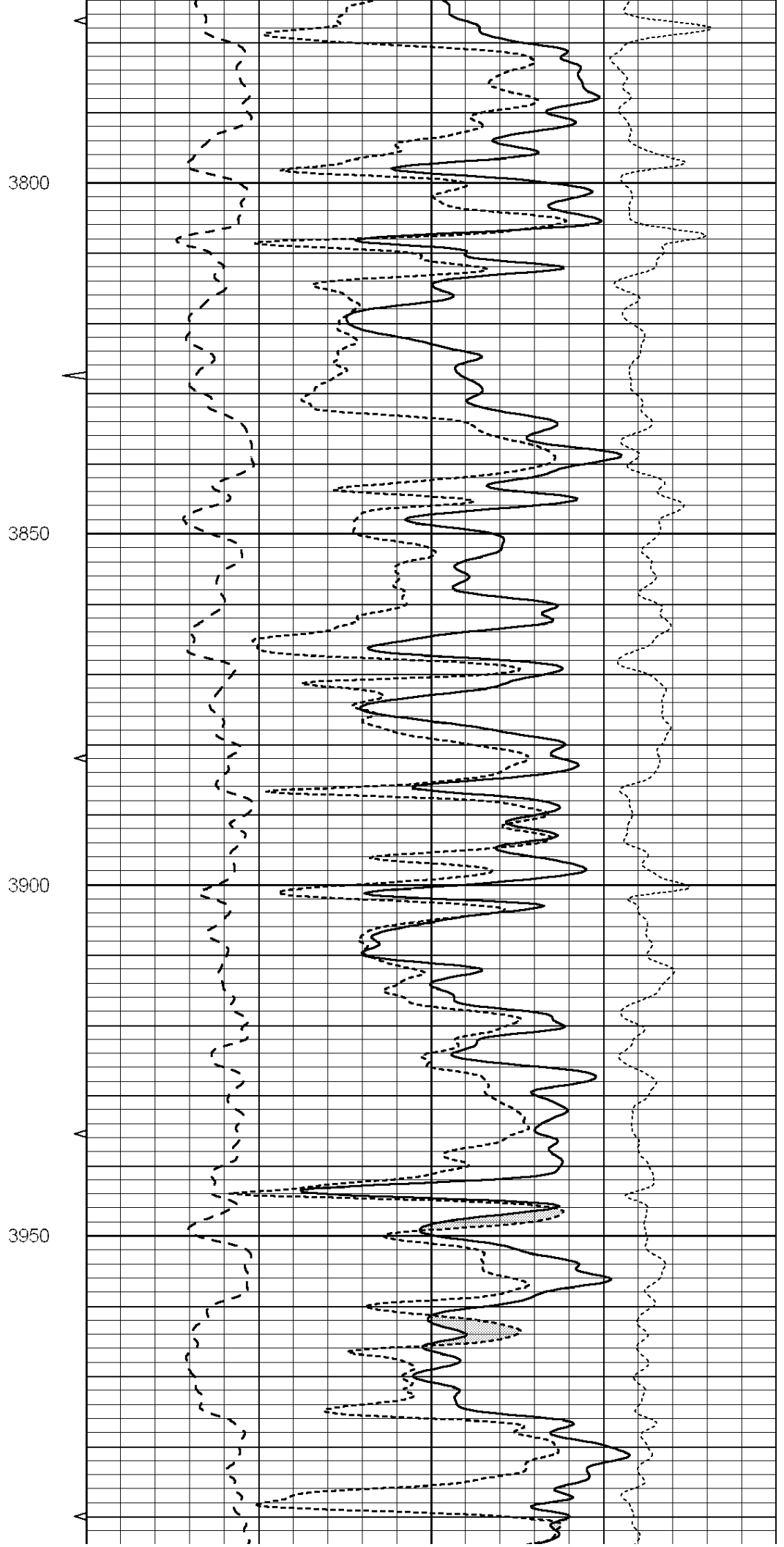
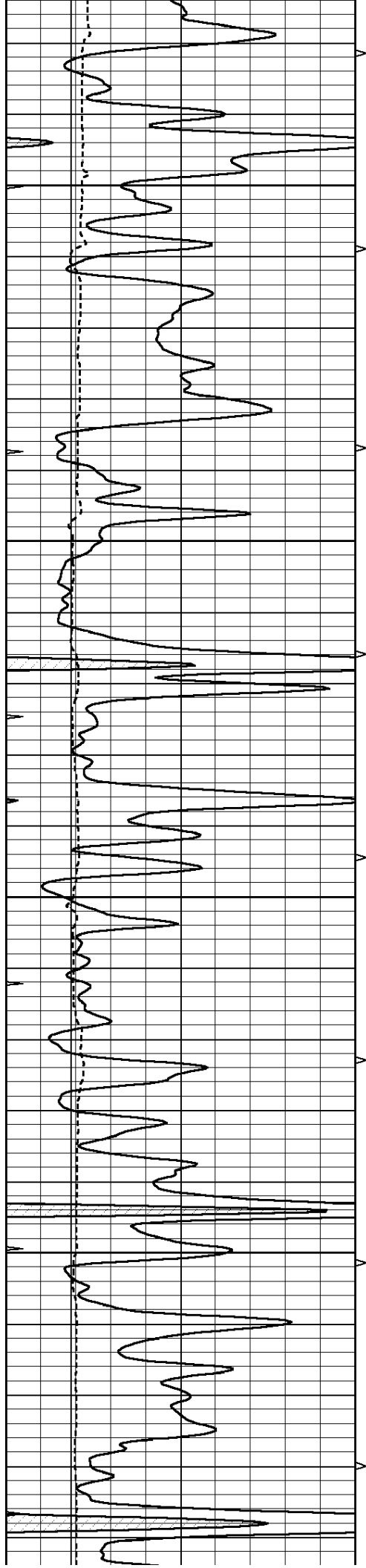
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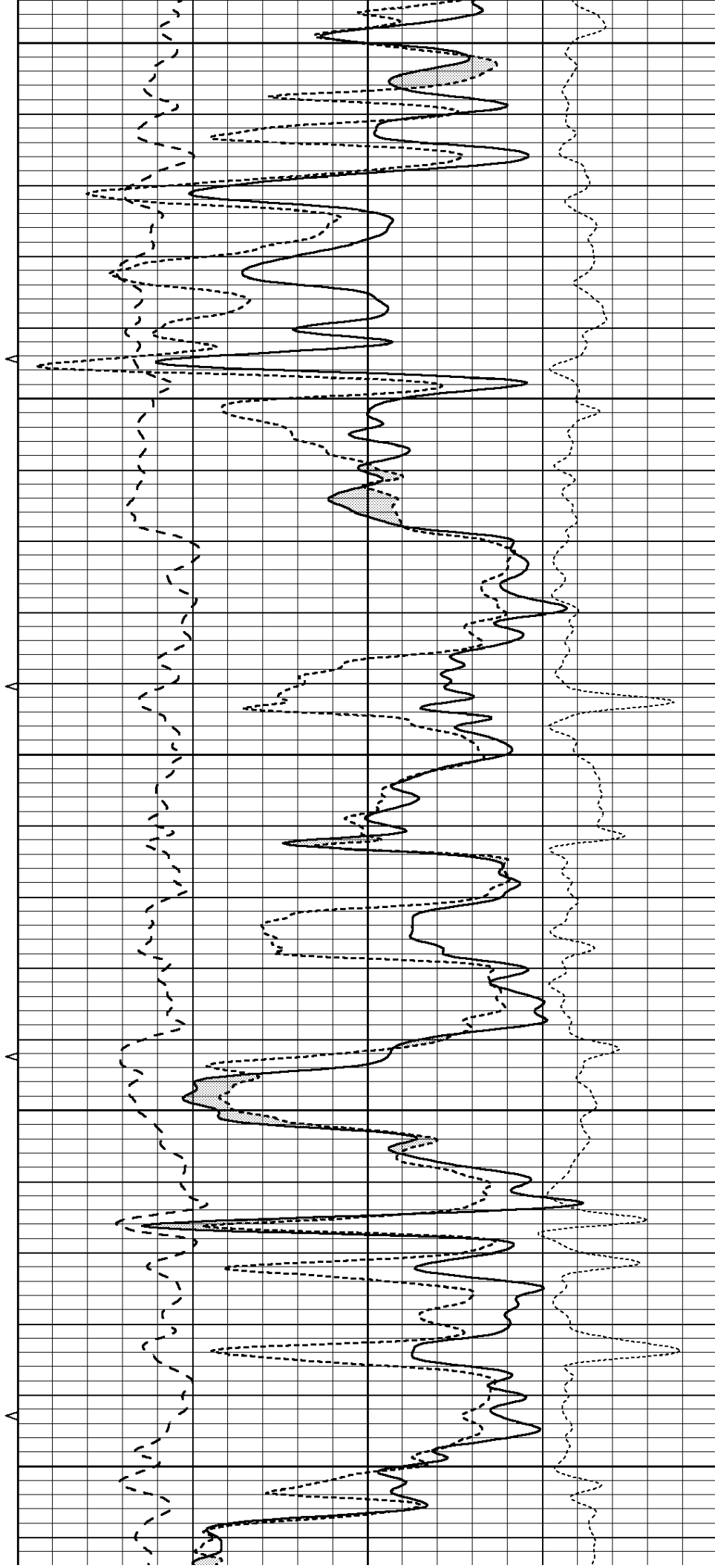
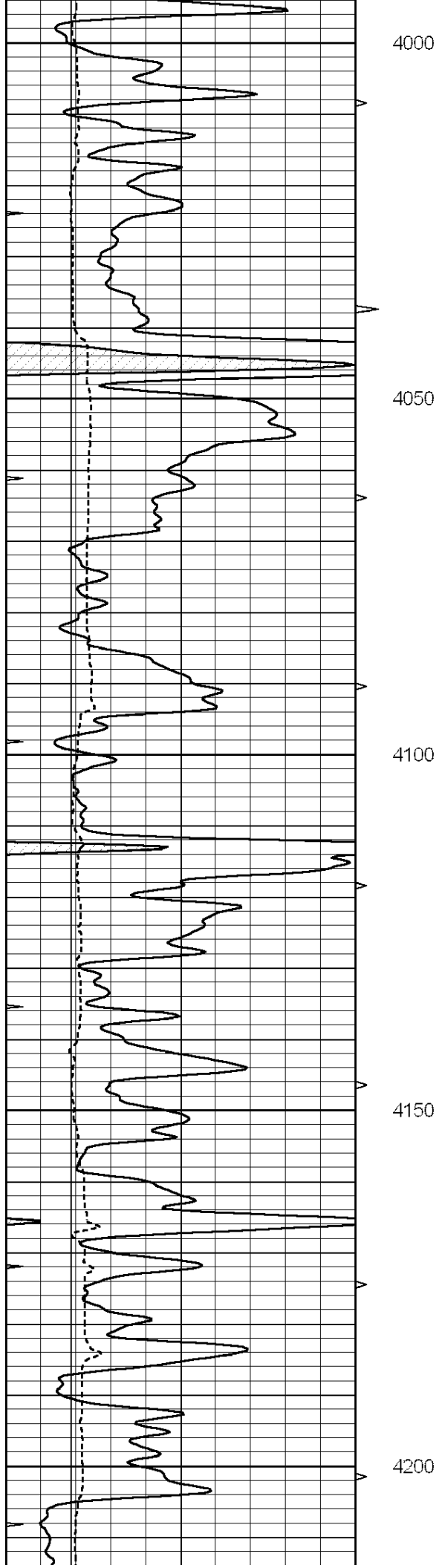
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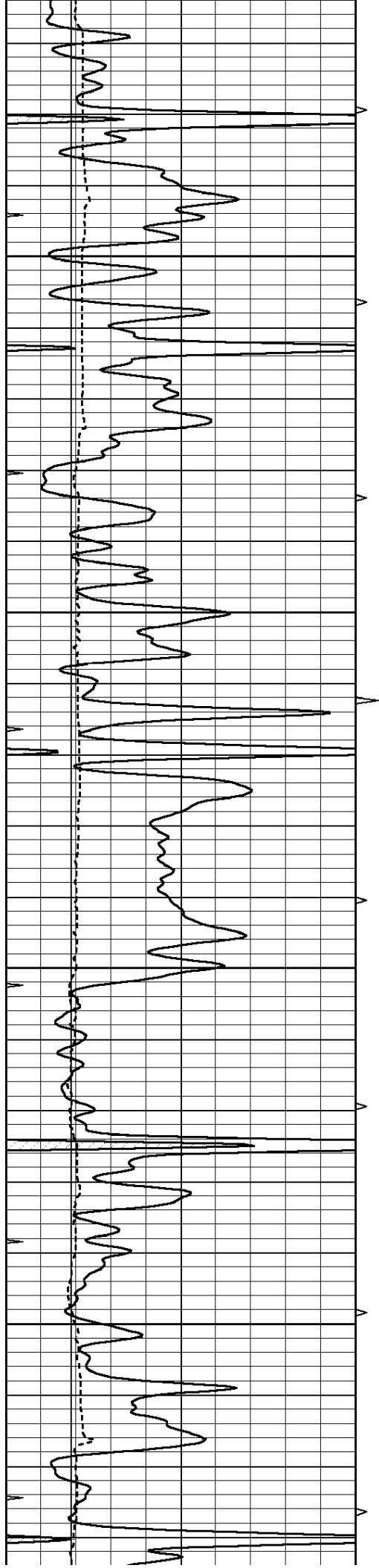
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 Presentation Format: ldt_neu
 Dataset Creation: Tue Nov 08 00:54:27 2011
 Charted by: Depth in Feet scaled 1:240

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







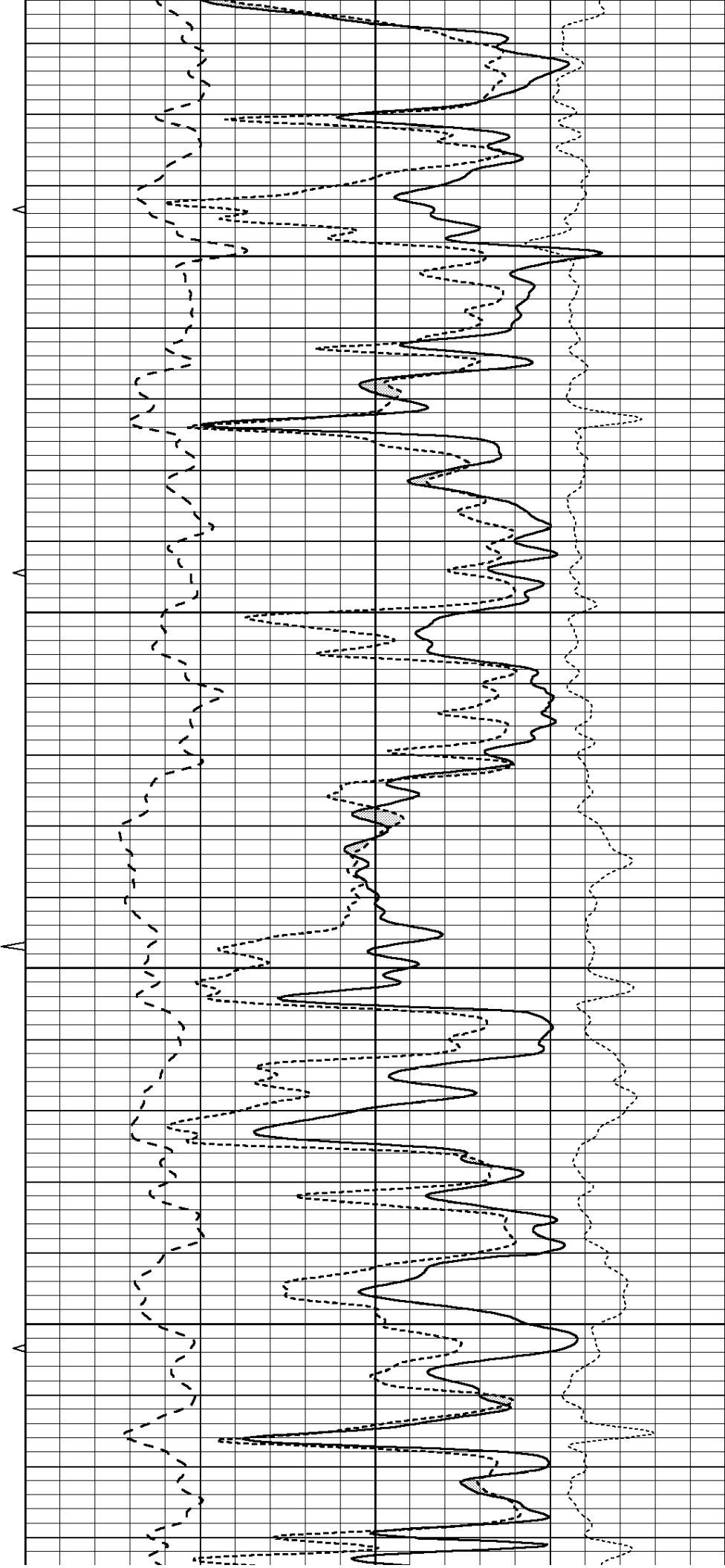


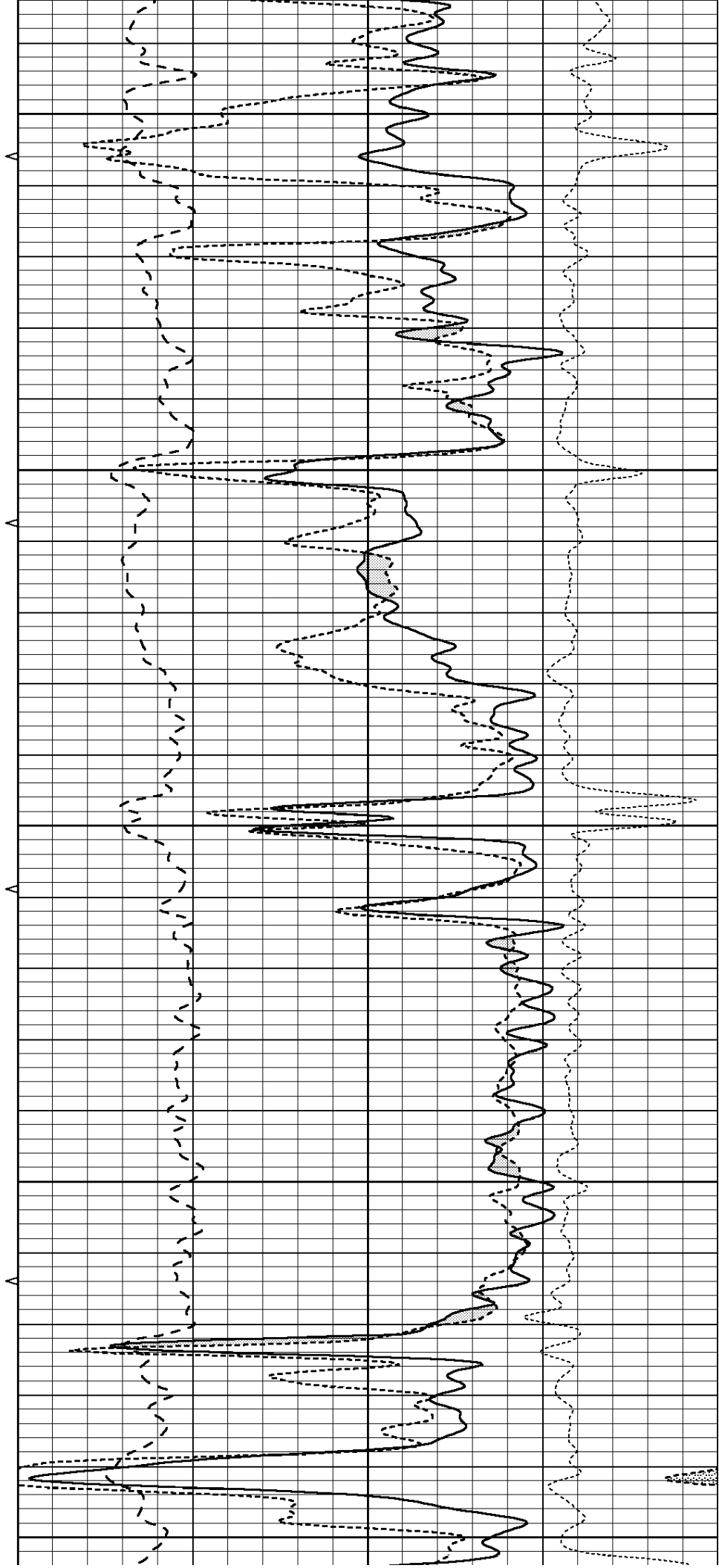
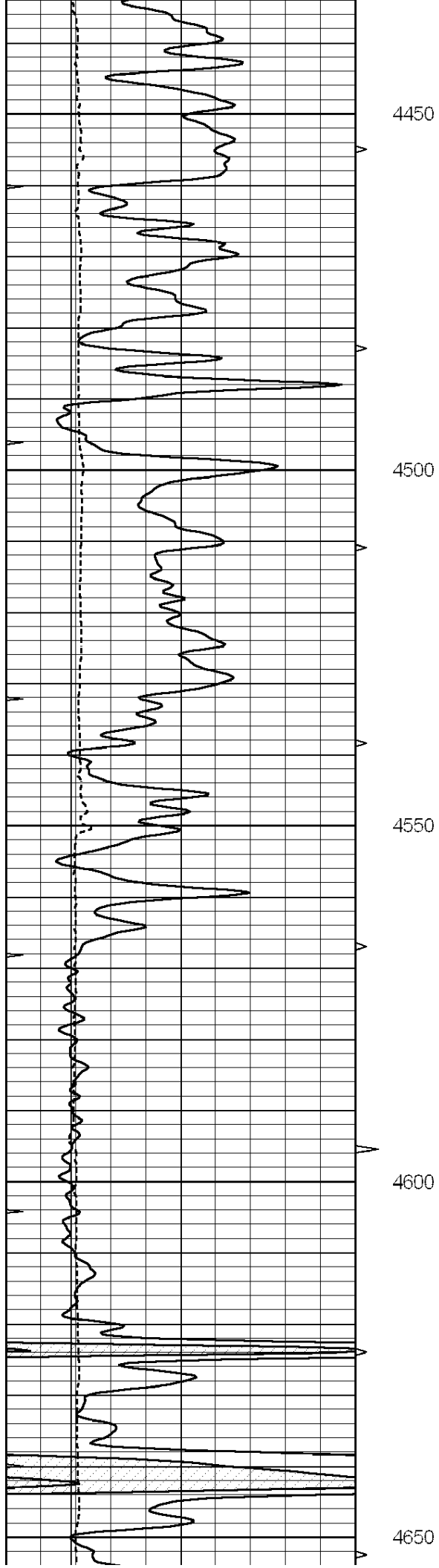
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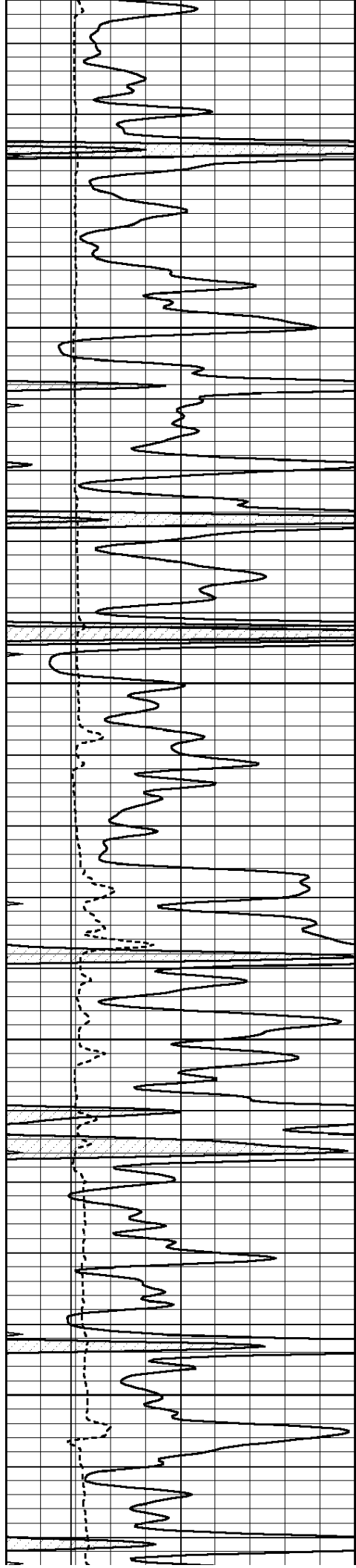
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4400





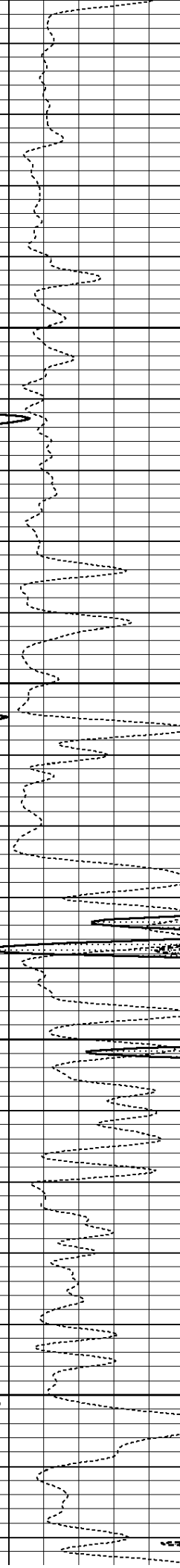
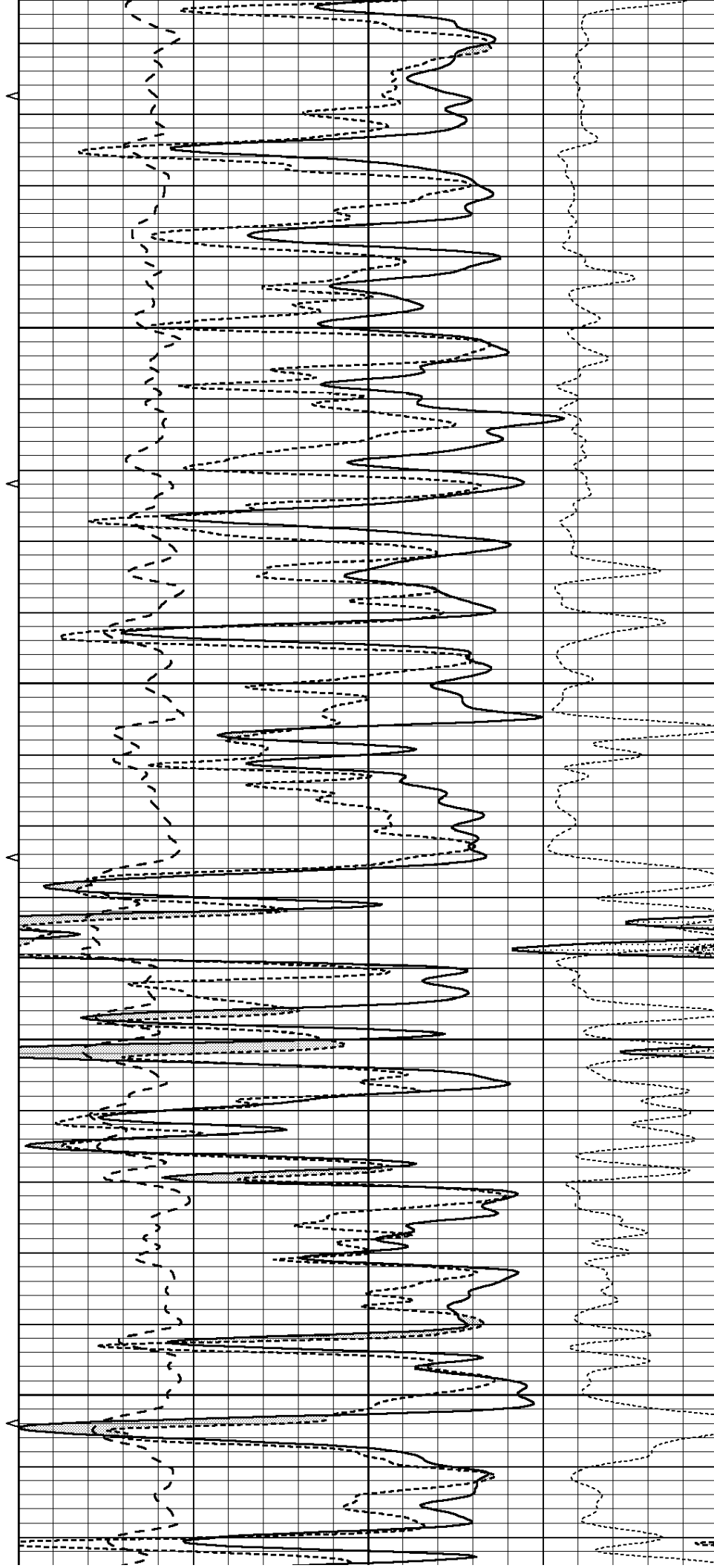


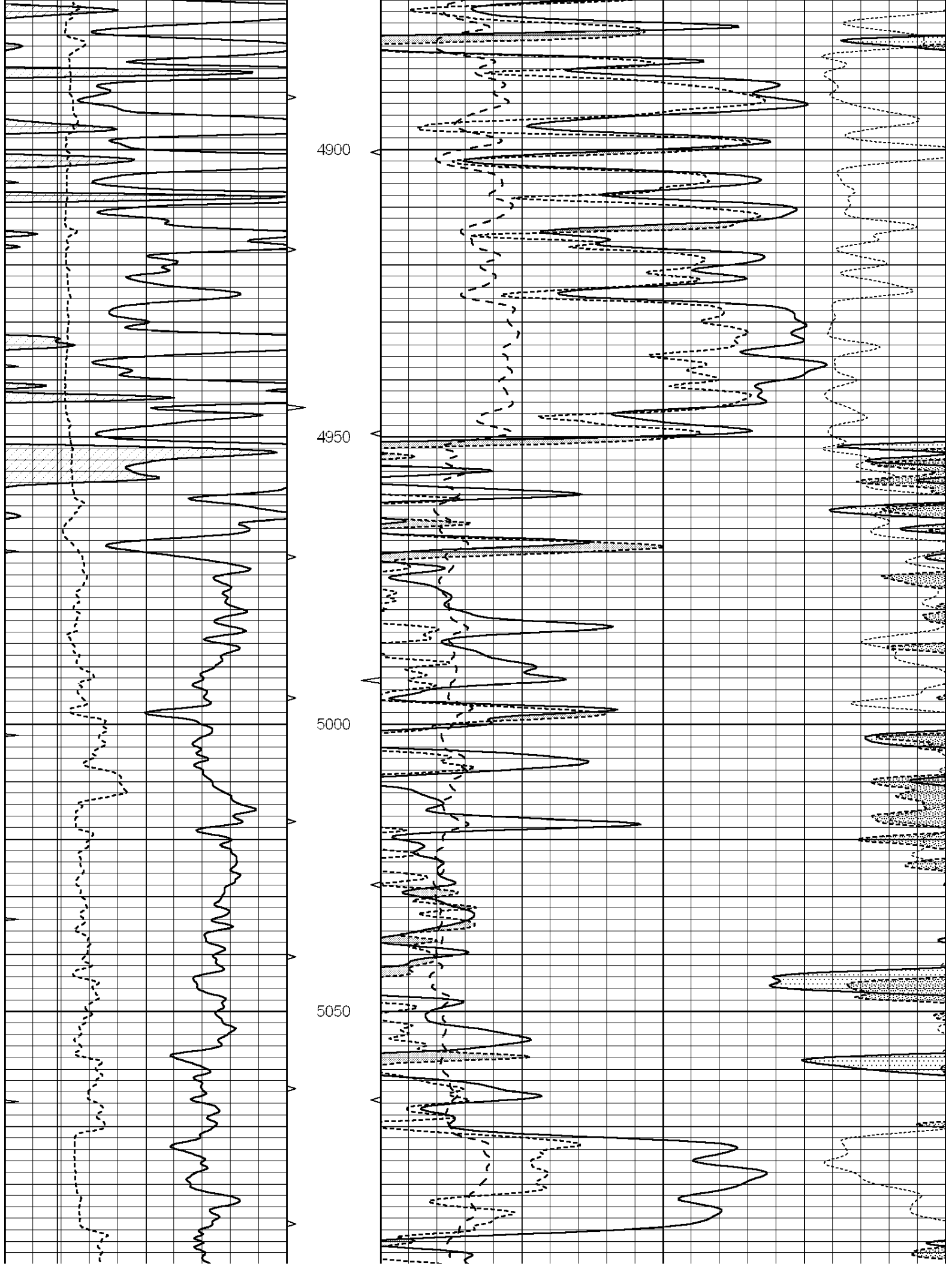
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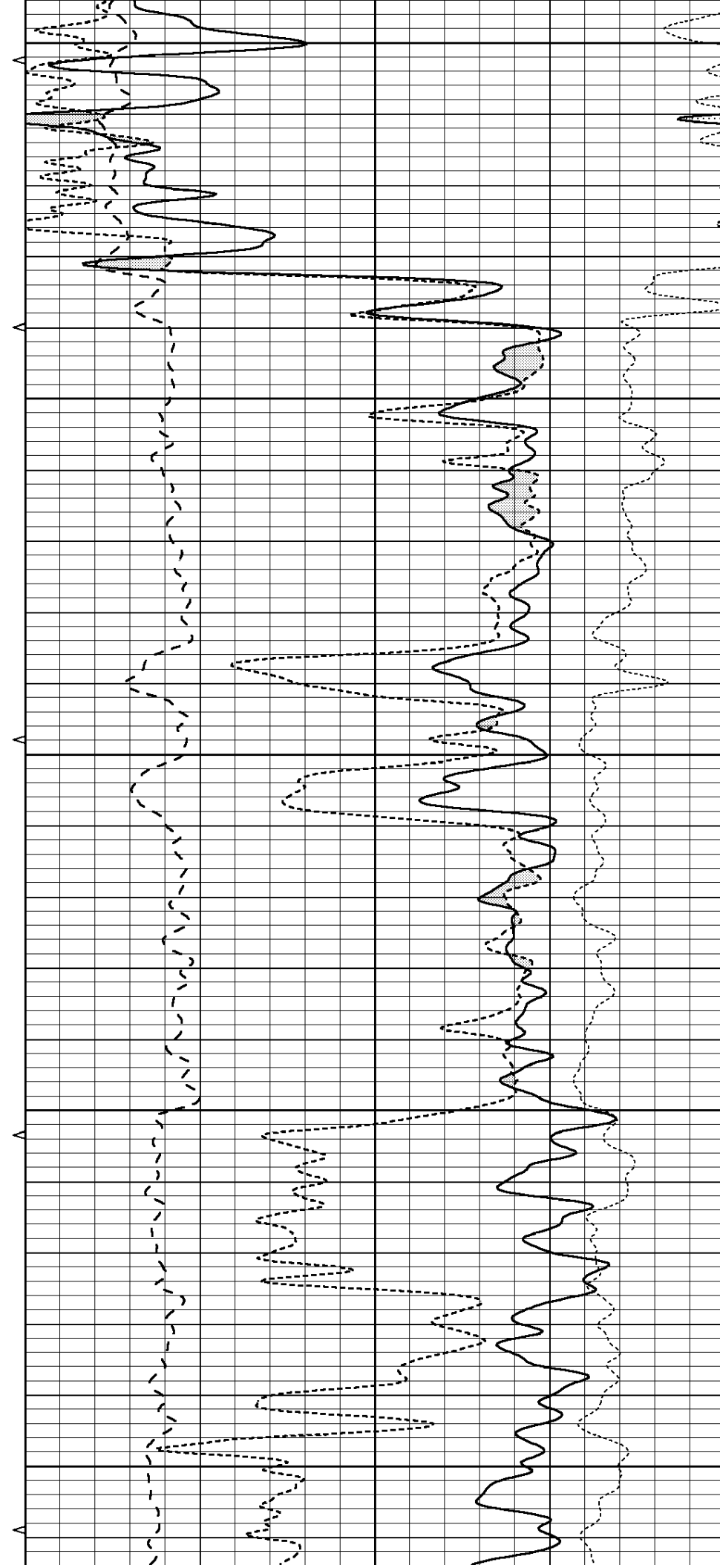
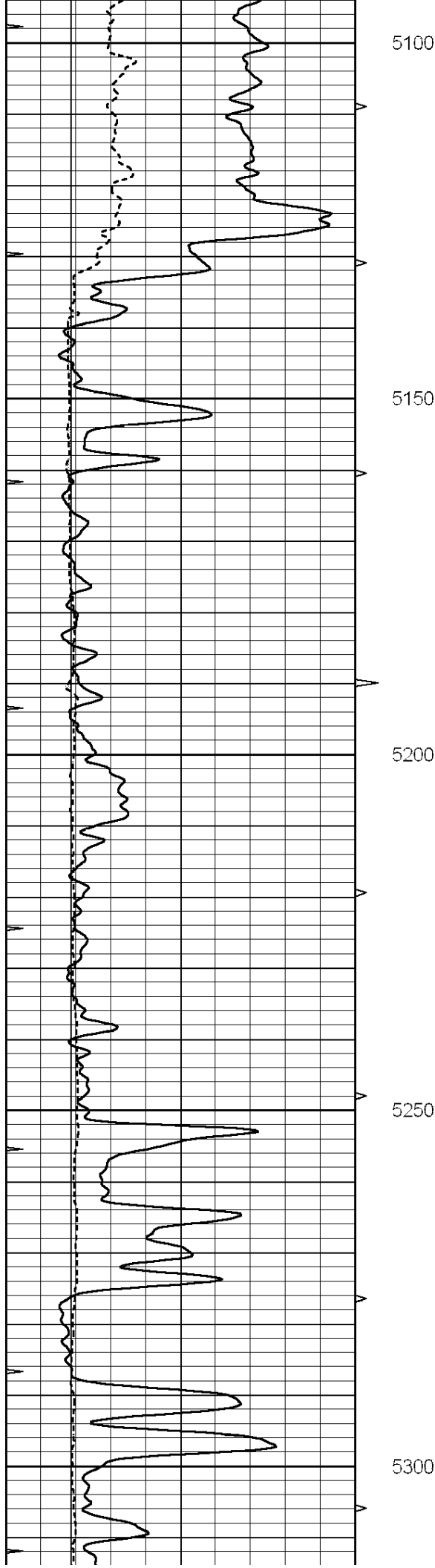
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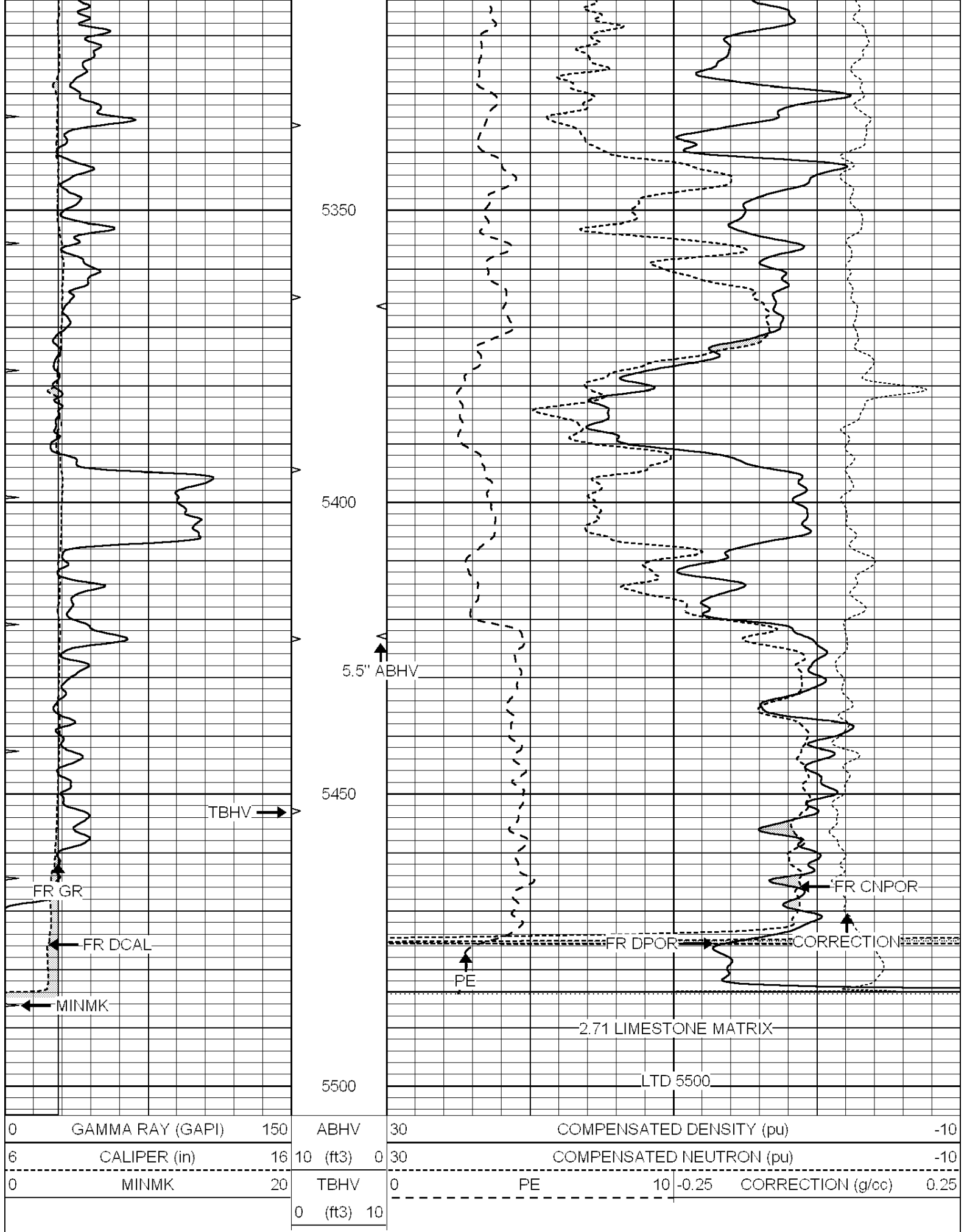
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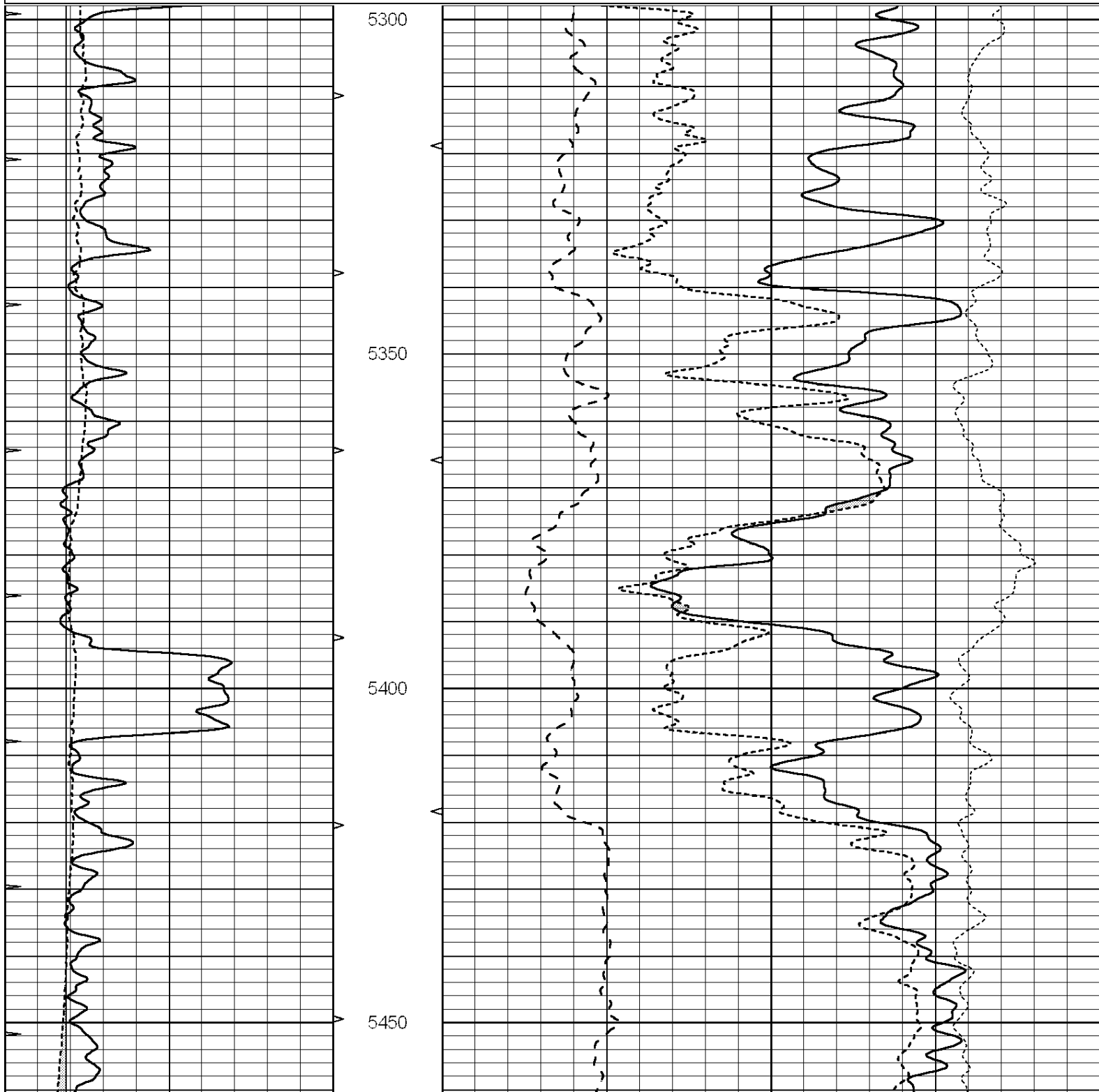
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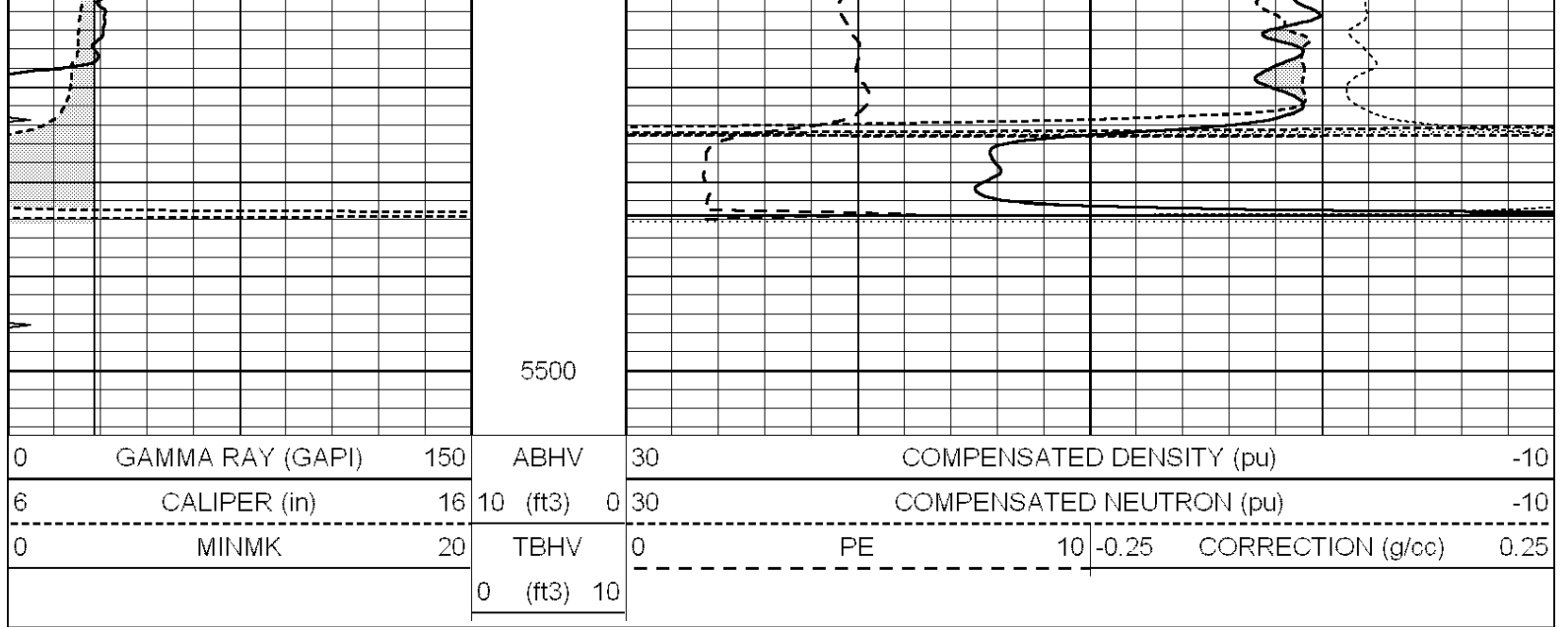
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REPEAT SECTION

Database File: 007982pe.db
Dataset Pathname: pass2.12
Presentation Format: ldt_neu
Dataset Creation: Tue Nov 08 01:00:22 2011 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: 007982pe.db
 Dataset Pathname: pass4.10
 Dataset Creation: Tue Nov 08 00:00:49 2011 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Mon Nov 07 21:56:36 2011

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	4.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-9.500
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report

Serial: 003N Model: PRB
 Performed Tue Sep 08 14:14:44 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2042.6	12312.8	4225.8	13758.4	cps
Window 2	1855.8	10134.7	3624.2	11113.1	cps
Window 3	1639.4	6760.2	2716.3	7260.3	cps
Window 4	466.4	469.2	466.1	476.5	cps
Long Space	0.0	8278.9	1768.4	9257.4	cps
Short Space	2.2	2377.3	1544.1	2574.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 44.4	Rib Slope	: 0.979	Density/Spine Ratio	: 0.549
Spine Angle	: 74.4	Spine Slope	: 3.577	Spine Intercept	: -18.8

Caliper

	Readings	Reference
Low Ref	1.9	7.0
High Ref	1.0	11.0

High Res	4.0	14.0	Offset: 0.7
Gain: 3.3			
Compensated Neutron Calibration Report			
Serial Number:		070808	
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:	070558		
Tool Model:	OPEN_GR		
Performed:	Mon Nov 07 22:12:29 2011		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.2500	GAPI/cps	