



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company		EDISON OPERATING COMPANY, LLC.	
Well	COTTRELL #1-8		
Field	WILDCAT		
County	MEADE	State	KANSAS
Location:	SEC 8 TWP 33S RGE 29W 2310' FNL & 495' FEL W/2 - SE - SE - NE		API # : 15-119-21324-0000 Other Services DIL/MEL SONIC
Permanent Datum	GROUND LEVEL	Elevation	2622
Log Measured From	KELLY BUSHING 13' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	10/2/12		
Run Number	ONE		
Depth Driller	6100		
Depth Logger	6098		
Bottom Logged Interval	6074		
Top Log Interval	4000		
Casing Driller	8 5/8"@1562'		
Casing Logger	1562		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2,800 PPM	
Density / Viscosity	9.2/57		
pH / Fluid Loss	10.0/8.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.850@78F		
Rmt @ Meas. Temp	.636@78F		
Rmc @ Meas. Temp	1.02@78F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.491@135F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	6:15 P.M.		
Maximum Recorded Temperature	135F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	PAUL GERLACH		

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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 "NABORS" HAYS, KANSAS (785) 628-6395
DIRECTIONS

MEADE, KS.(W. EDGE) 7 1/2W. ON HWY 54 TO "RD. 9", 7S., 1E. TO DEAD END, 1N. & W. ON TRAIL



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MAIN SECTION

Database File:

409685pe.db

Dataset Pathname:

pass3.10

Presentation Format:

_ldt_neu

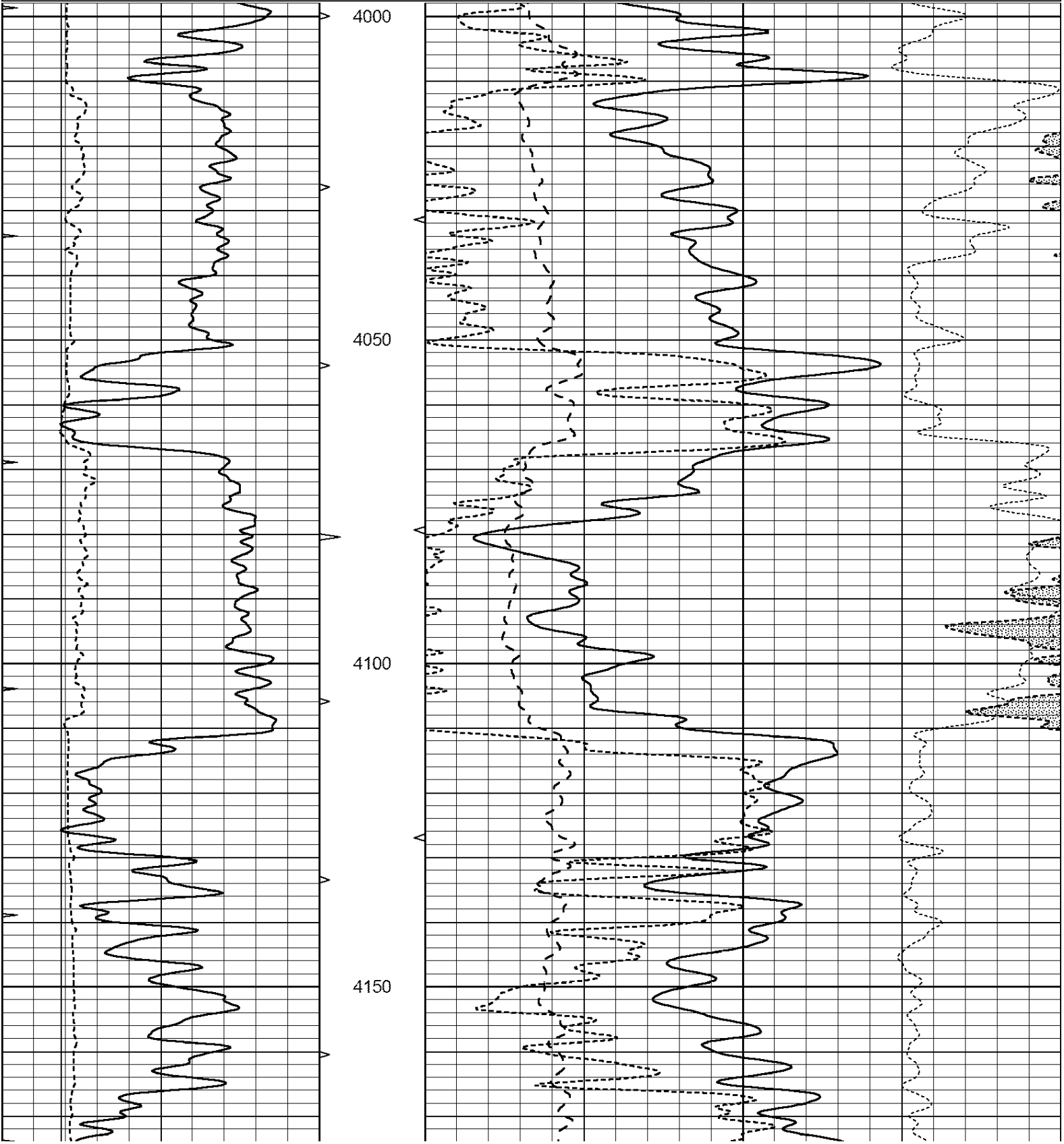
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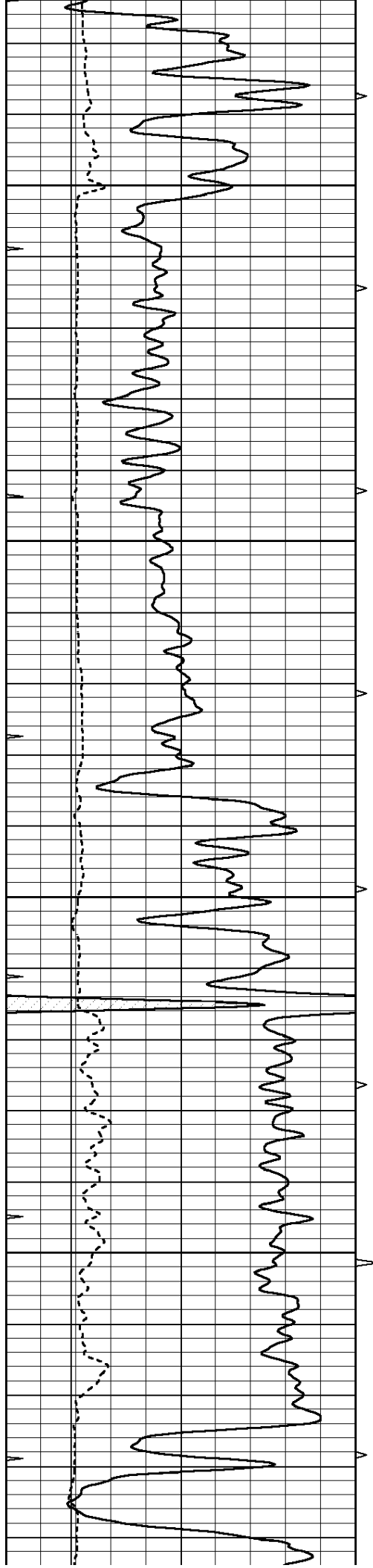
Mon Oct 01 21:17:59 2012

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



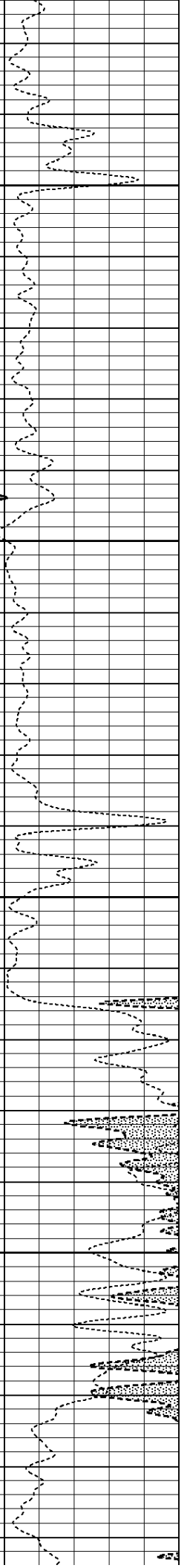
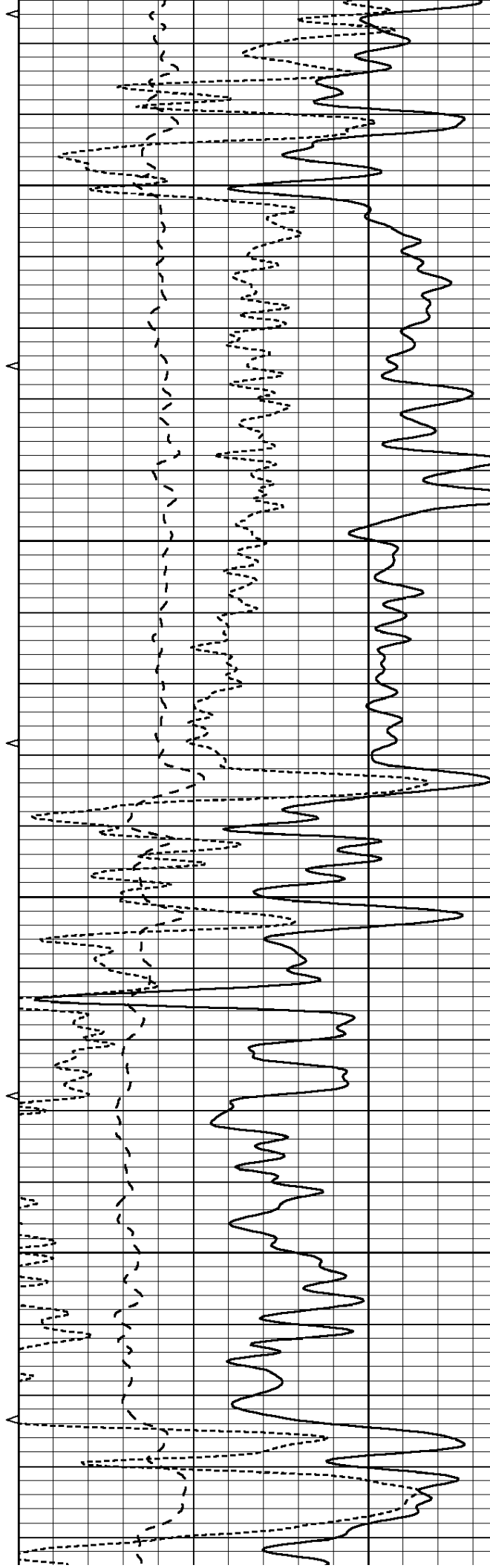


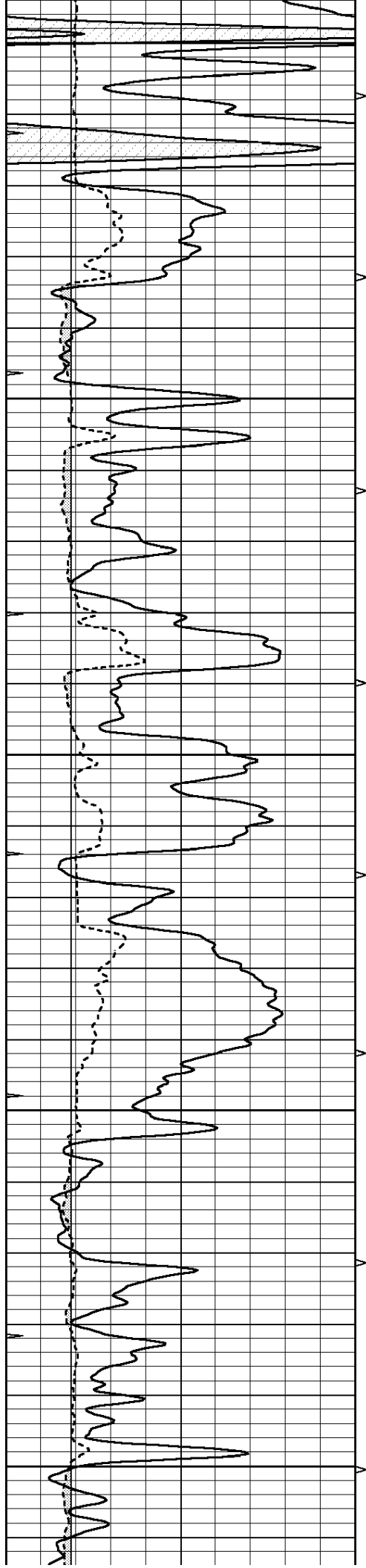
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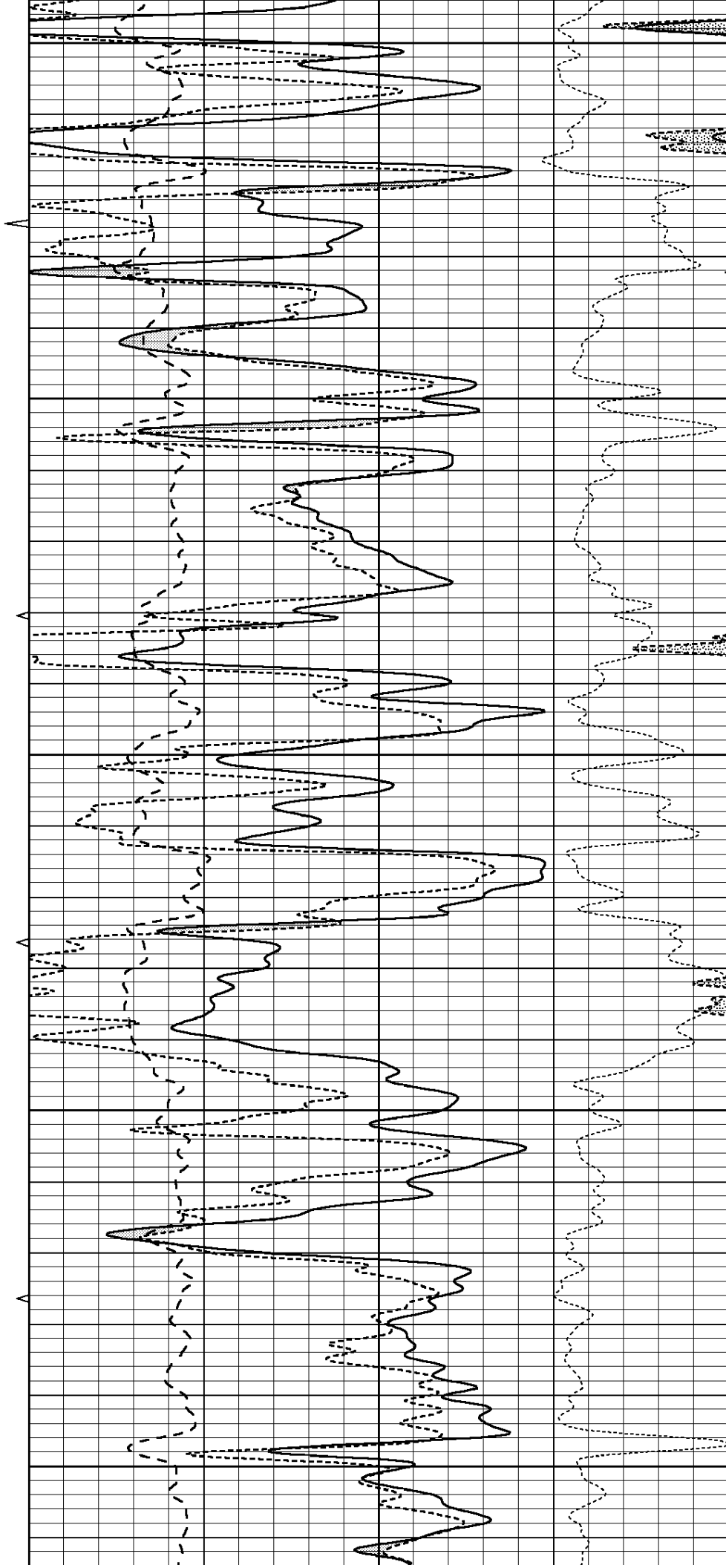
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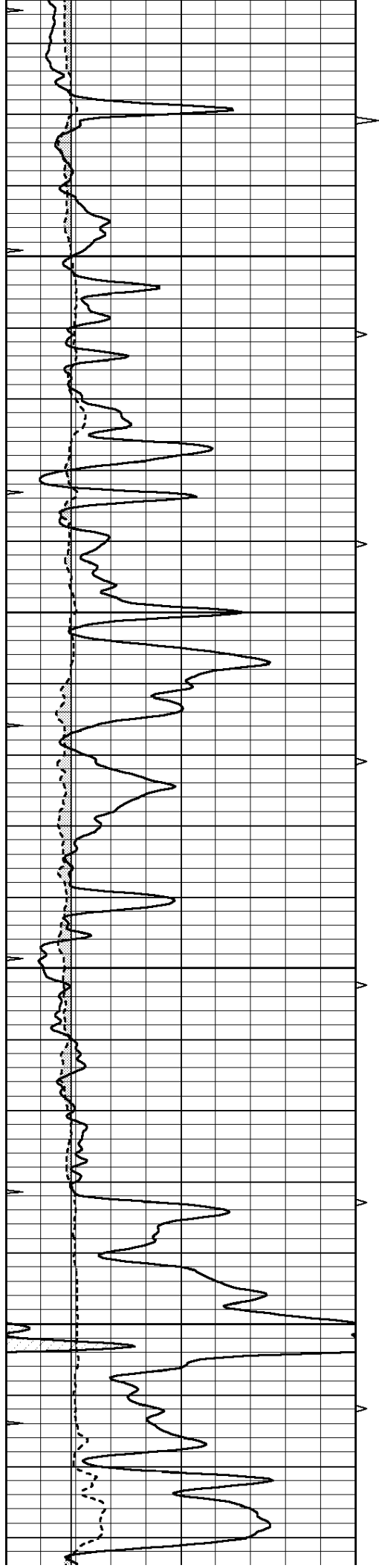
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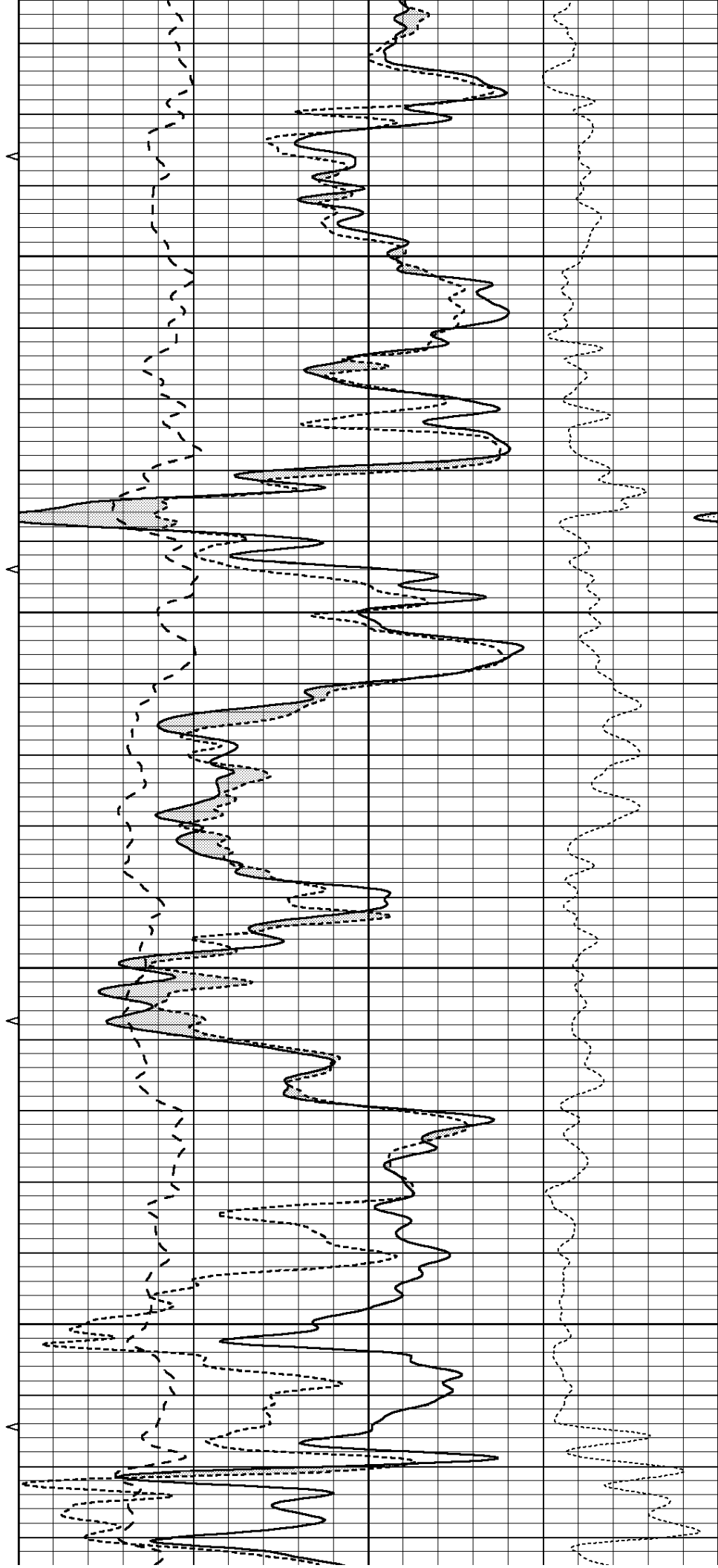


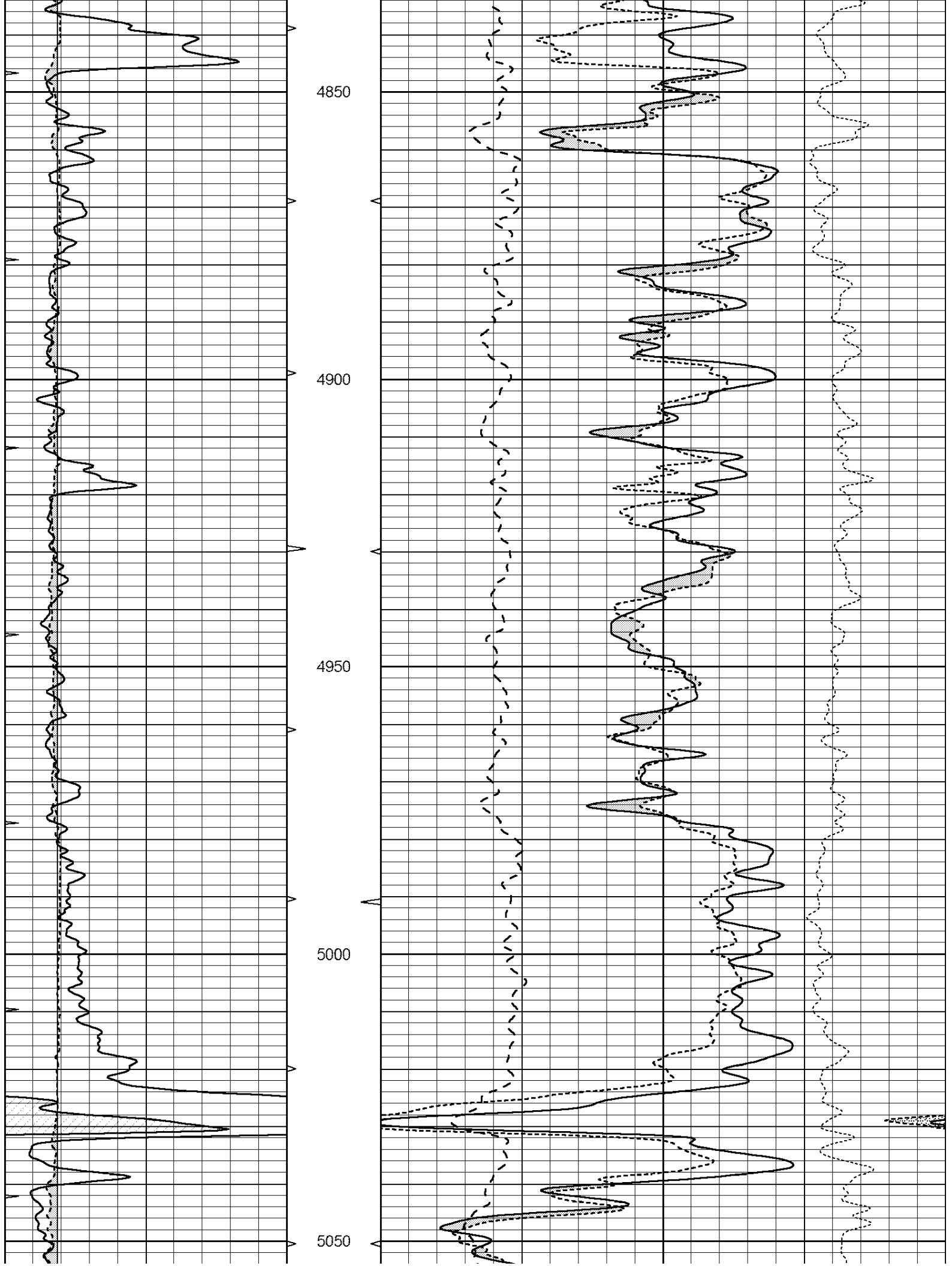
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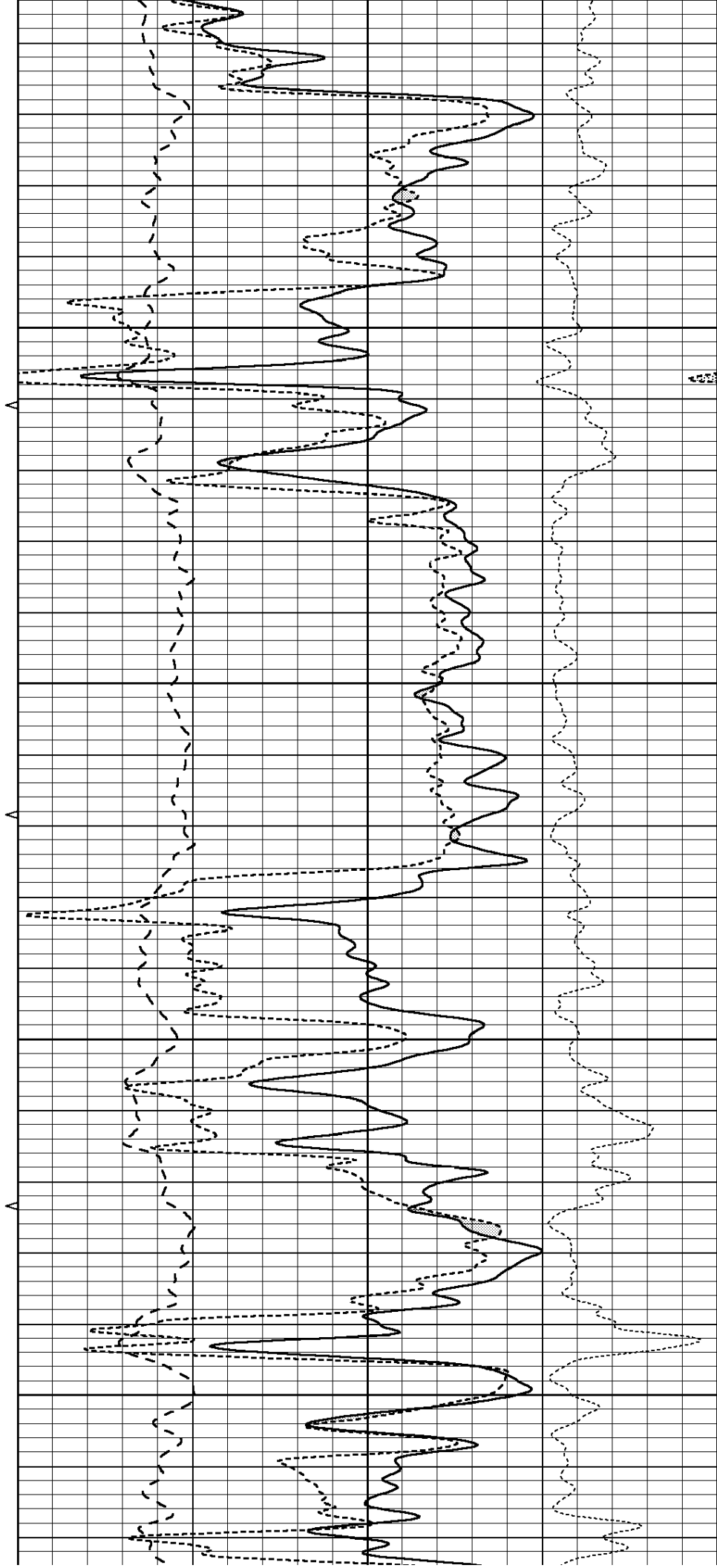
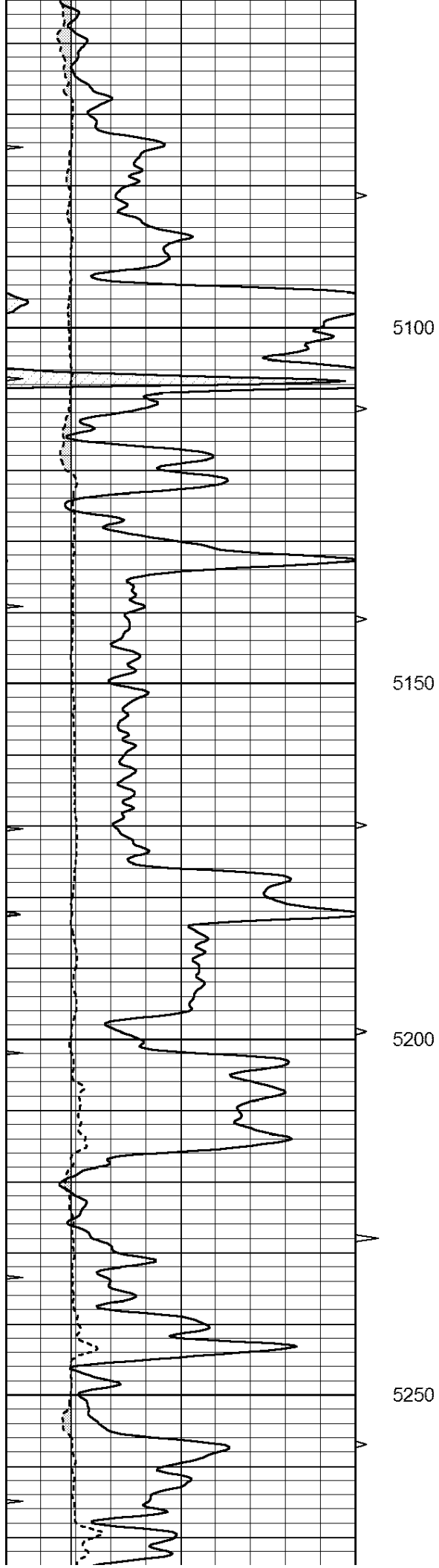
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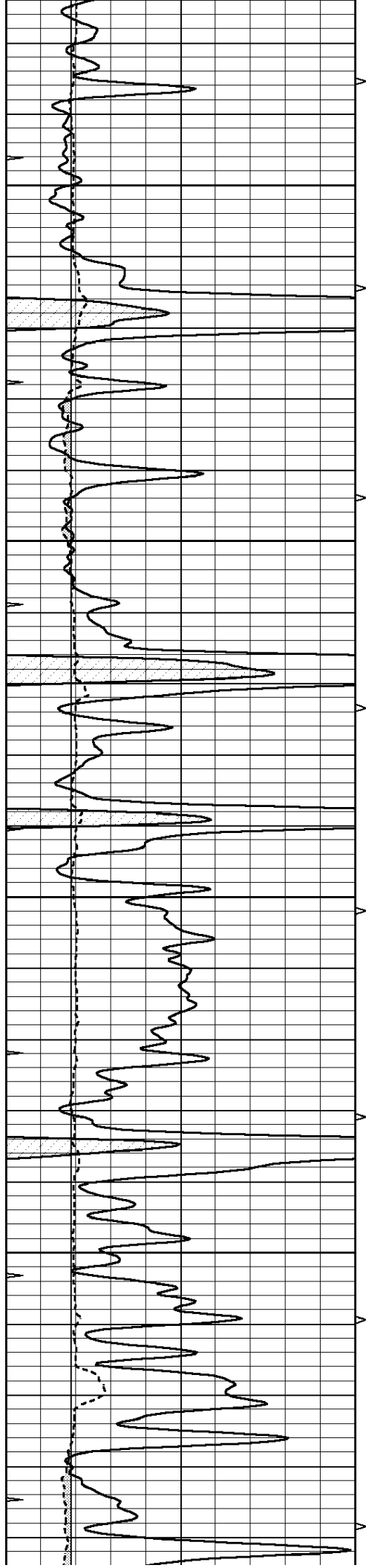
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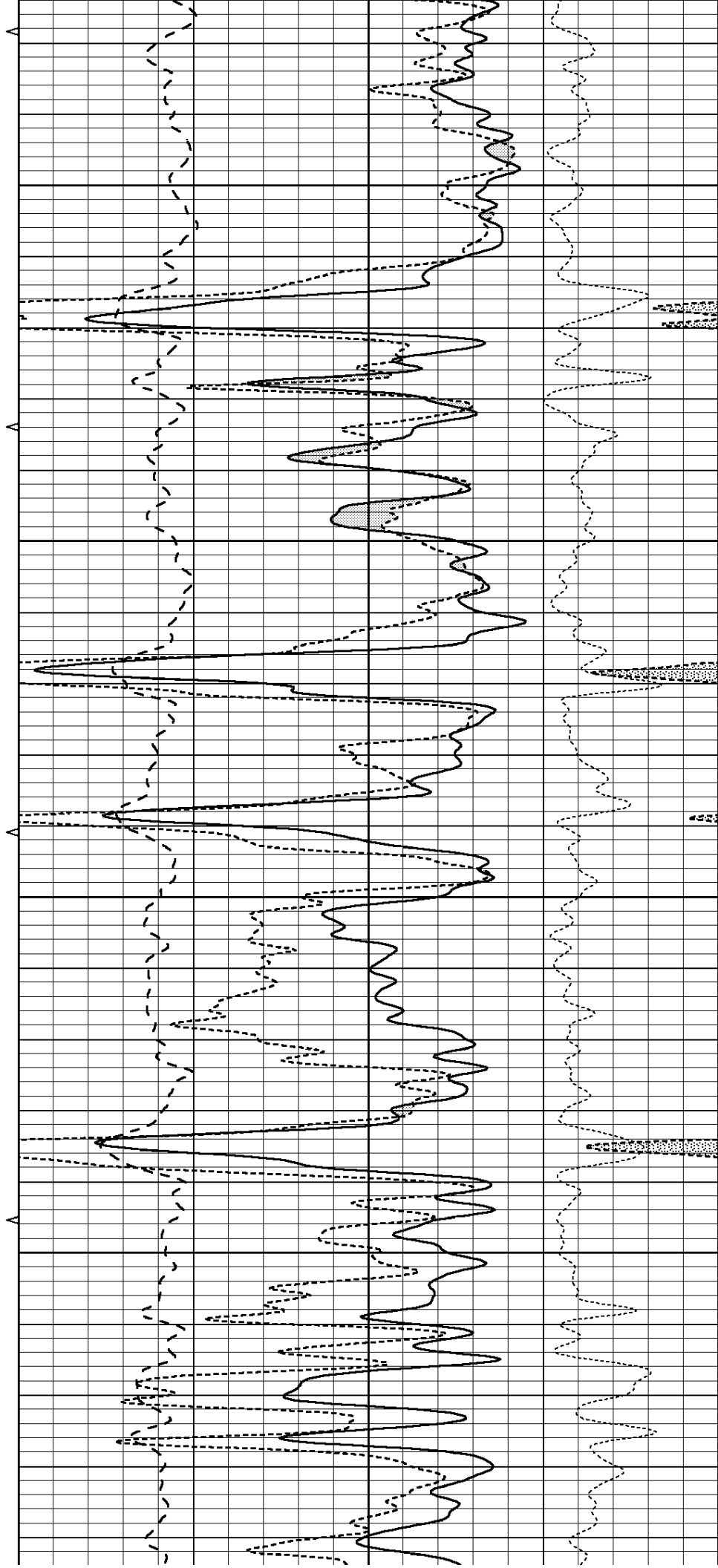


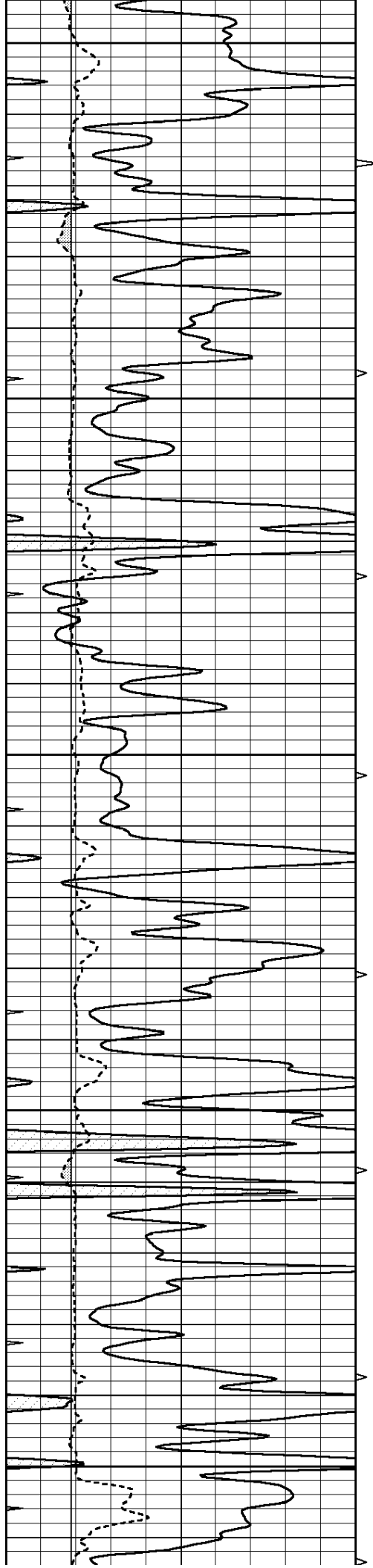
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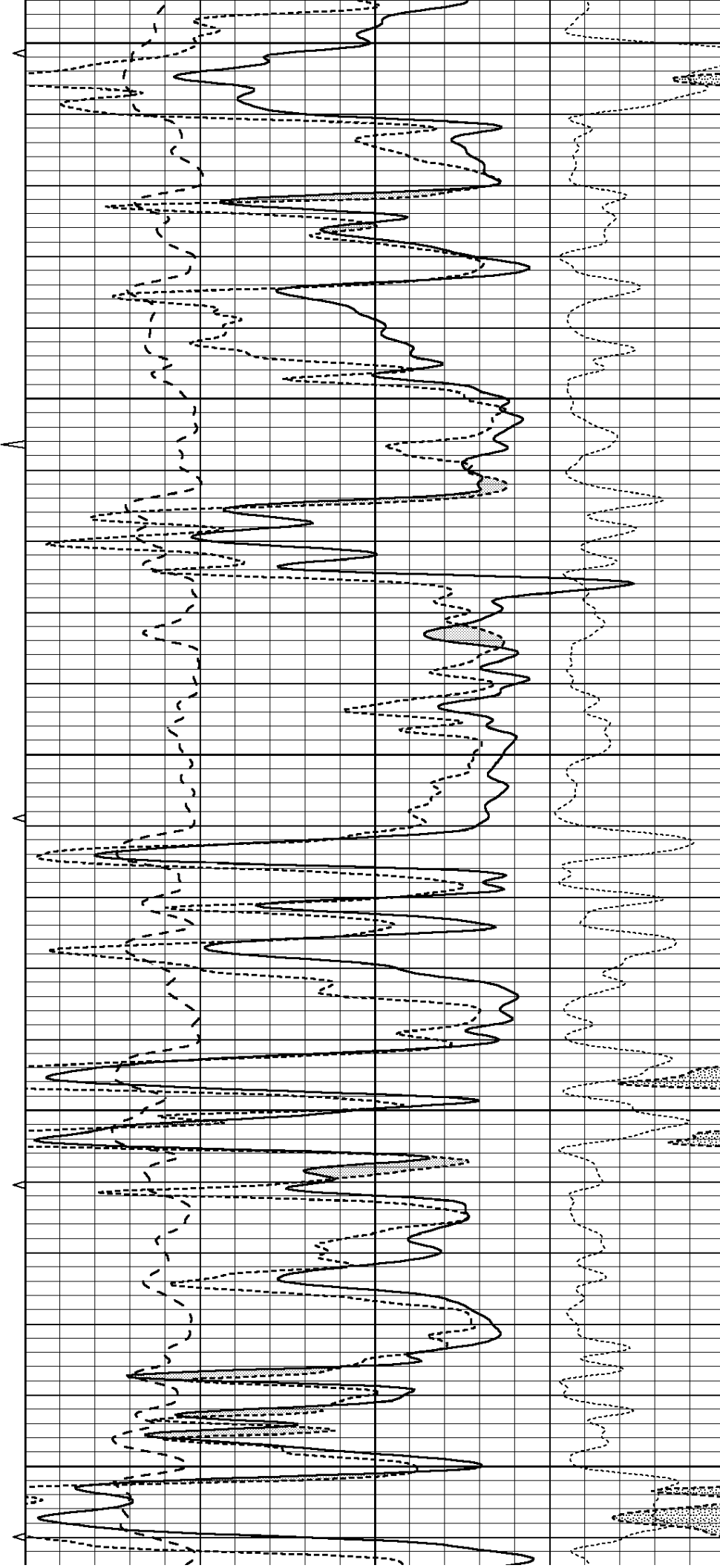
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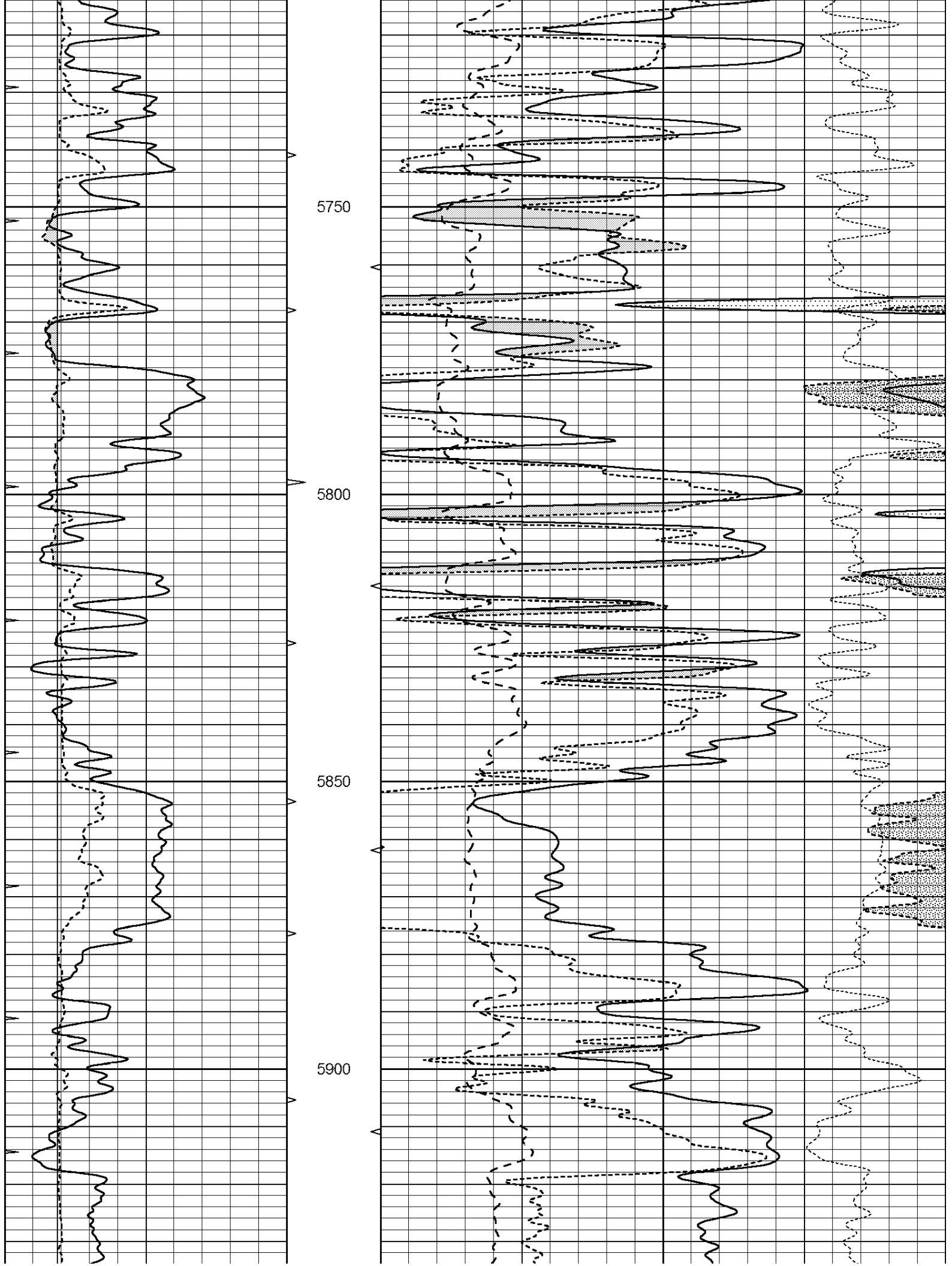
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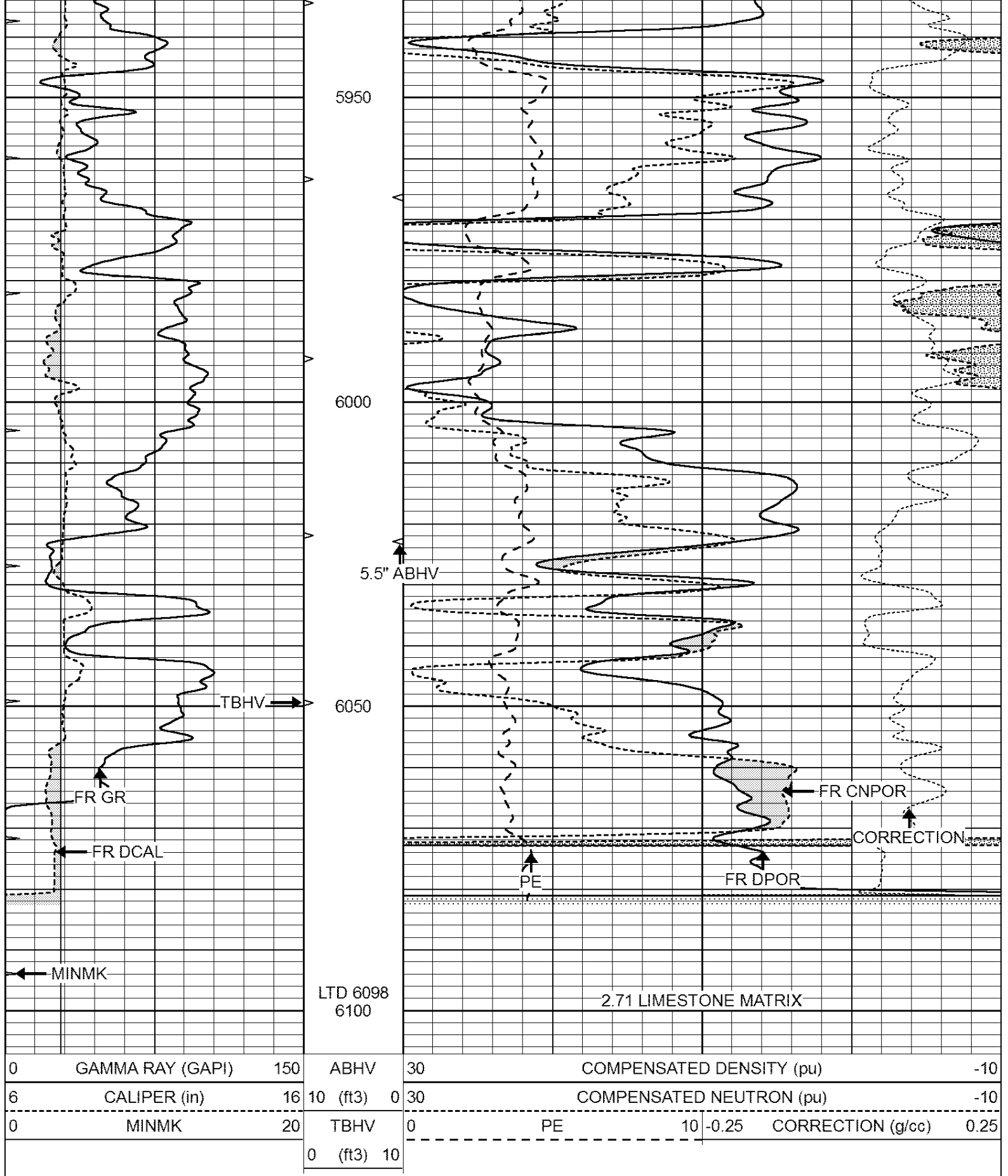
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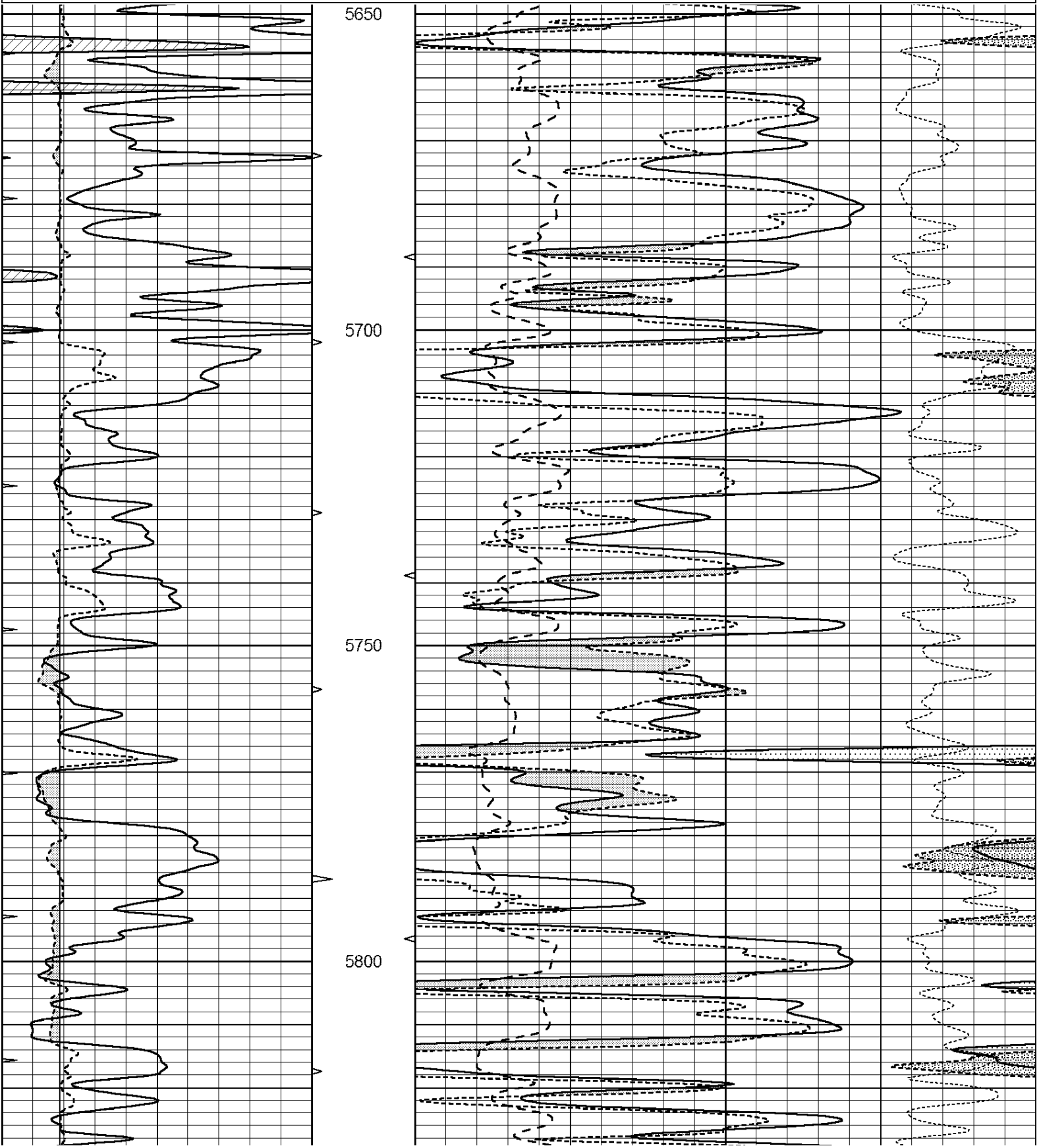


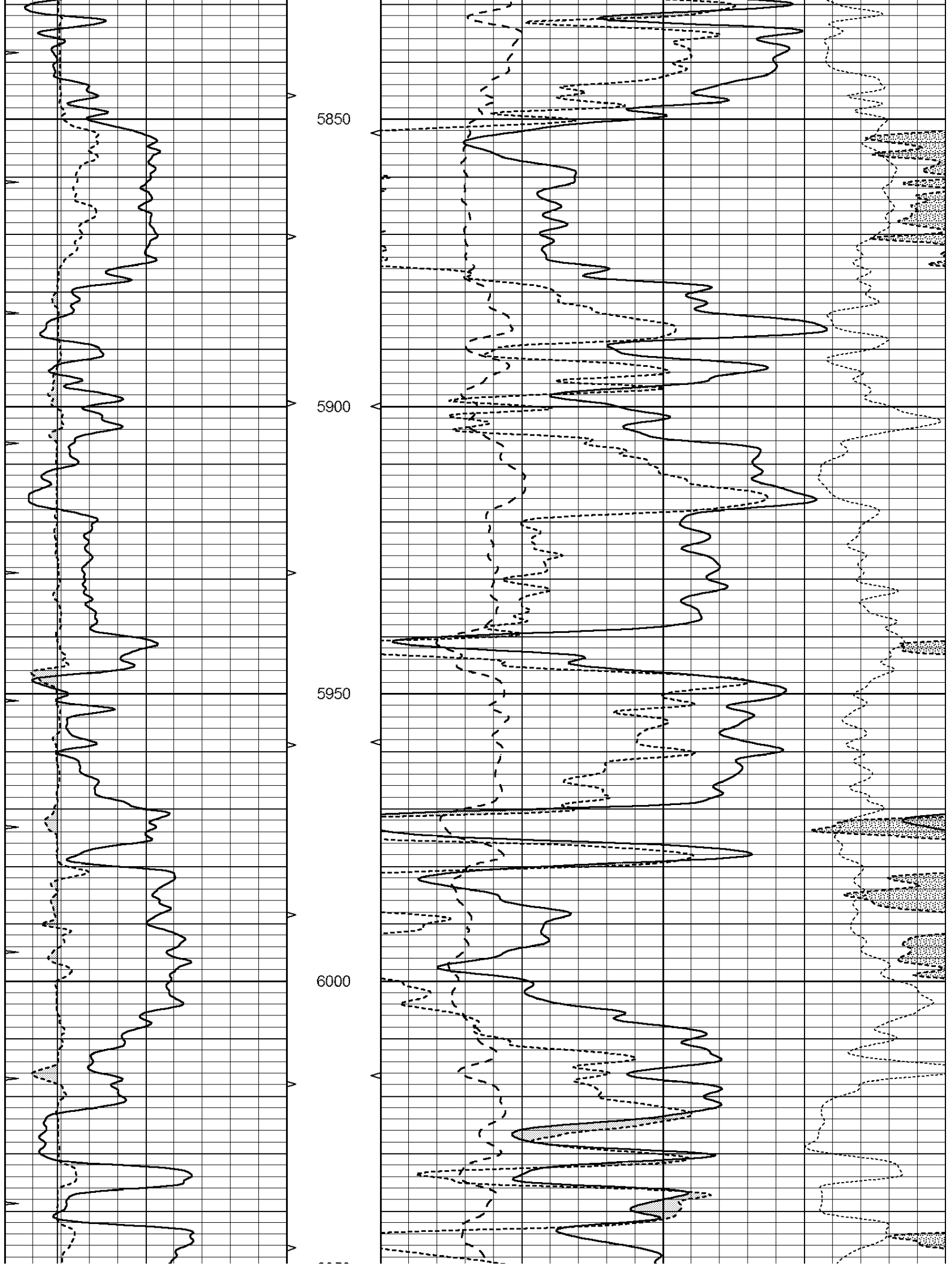


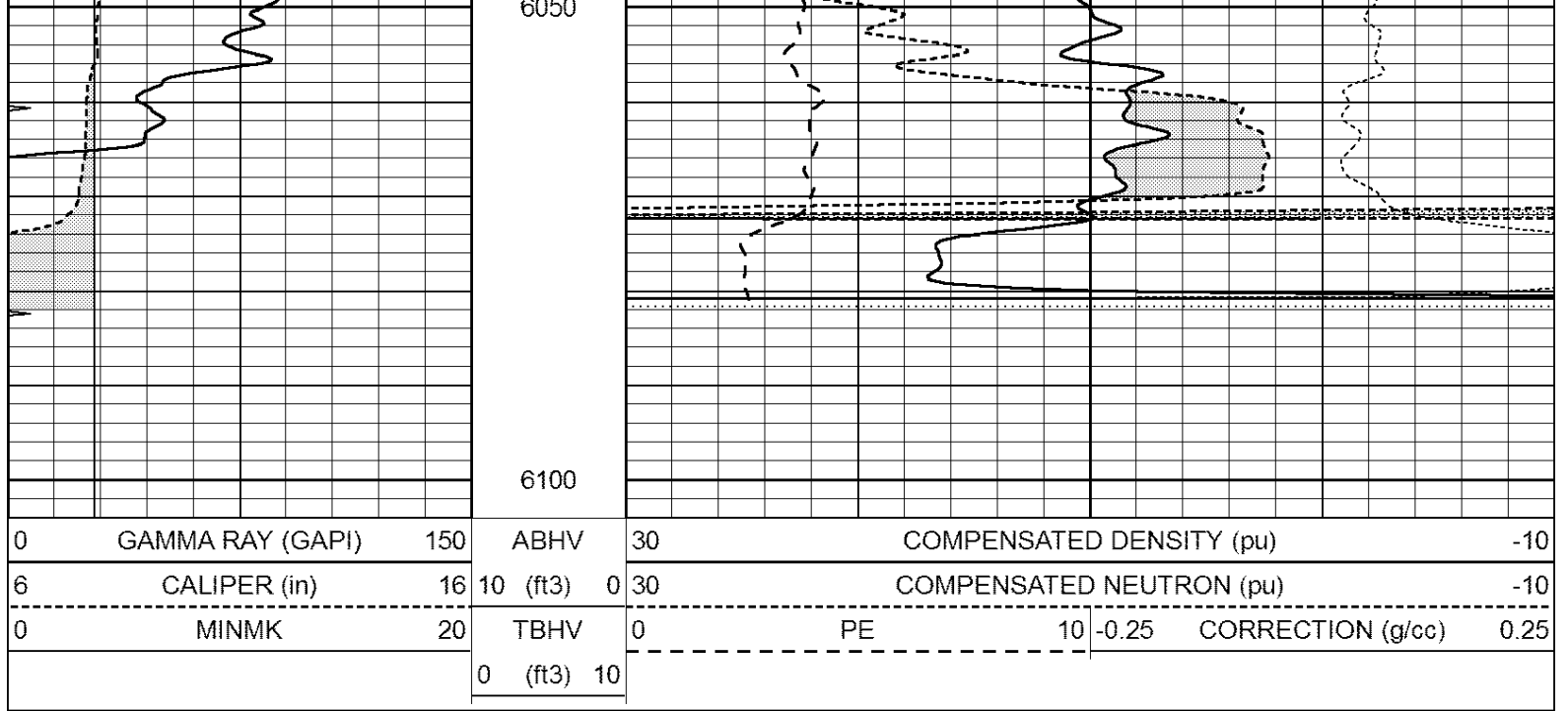
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REPEAT SECTION

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: 409685pe.db
 Dataset Pathname: pass3.10
 Dataset Creation: Mon Oct 01 21:17:59 2012

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Mon Oct 01 18:43:03 2012

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	10.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-8.000
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: 006 Model: PRB
 Performed Sun Aug 15 09:48:41 2010

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps
Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	
Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

Caliper	Readings	Reference		
Low Ref	3.5	6.7		
High Ref	5.5	15.0		
	Gain: 4.3		Offset: -8.5	
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:		070559		
Tool Model:		OPEN_GR		
Performed:		Wed Sep 19 15:58:00 2012		
Calibrator Value:		1.0	GAPI	
Background Reading:		0.0	cps	
Calibrator Reading:		1.0	cps	
Sensitivity:		0.3000	GAPI/cps	