



**SUPERIOR**  
**Hays,**  
**Kansas**

**COMPENSATED**  
**DENSITY / NEUTRON**  
**PE LOG**

Company	MULL DRILLING COMPANY, INC.		
Well	CHAMPLIN - FIGGINS #3		
Field	SMOKEY CREEK		
County	CHEYENNE		
State	COLORADO		
Company	MULL DRILLING COMPANY, INC.		
Well	CHAMPLIN - FIGGINS #3		
Field	SMOKEY CREEK		
County	CHEYENNE		
State	COLORADO		
Location:	API # : 05-017-07721-0000 1980' FSL & 660' FWL		
Permanent Datum	GROUND LEVEL	Elevation	4280
Log Measured From	KELLY BUSHING 11' A.G.L.		
Drilling Measured From	KELLY BUSHING		
SEC 27	TWP 13S	RGE 44W	
Date	9/5/12		
Run Number	ONE		
Depth Driller	5610		
Depth Logger	5612		
Bottom Logged Interval	5588		
Top Log Interval	3600		
Casing Driller	8 5/8"@1715'	13 3/8"@389'	
Casing Logger	1714		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2,100 PPM	
Density / Viscosity	9.3/56		
pH / Fluid Loss	9.5/8.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.800@80F		
Rmt @ Meas. Temp	.600@80F		
Rmc @ Meas. Temp	.960@80F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	.489@131F		
Time Circulation Stopped	4 HOURS		
Time Logger on Bottom	3:45 A.M.		
Maximum Recorded Temperature	131F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	PHIL ASKEY		

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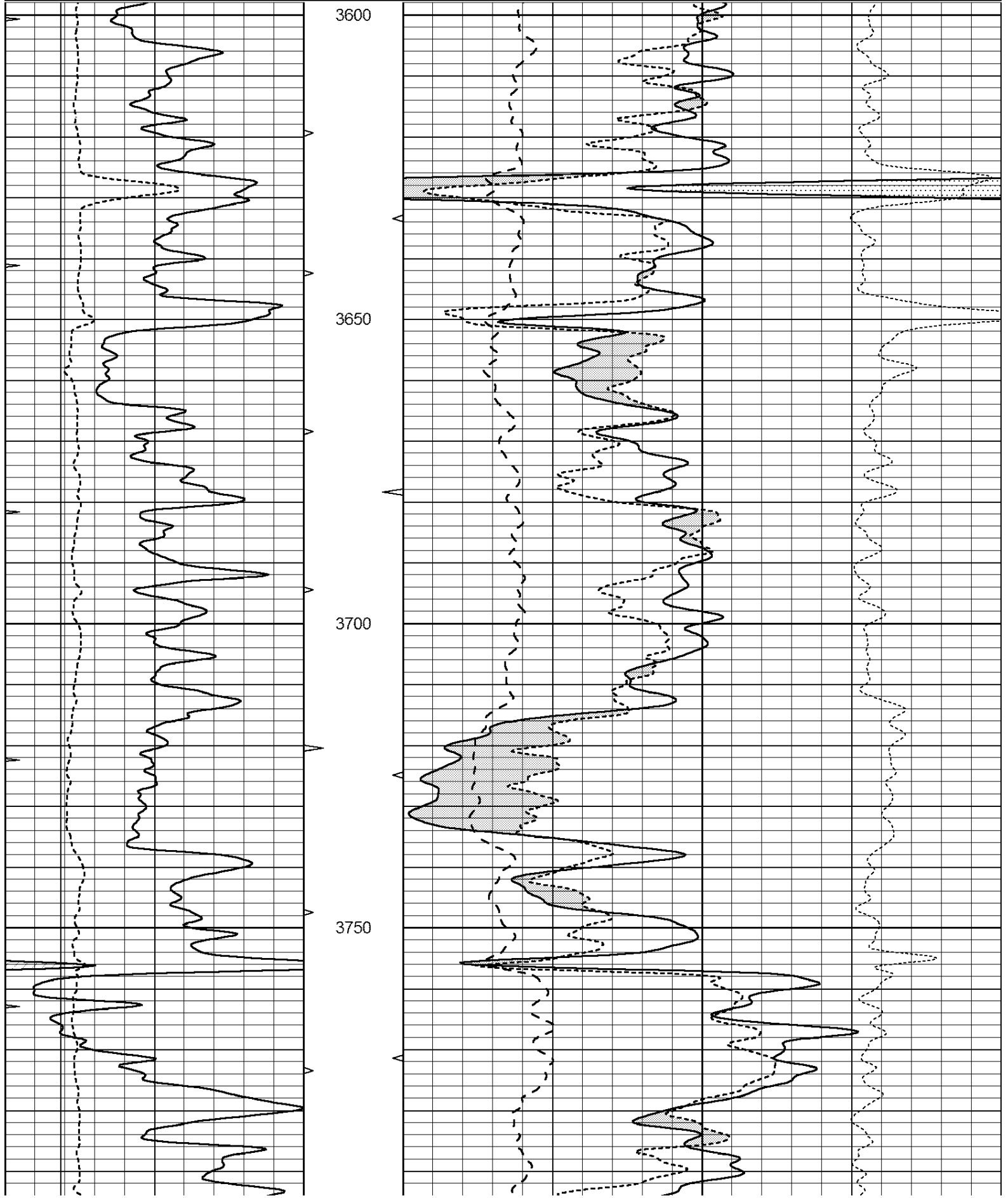
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

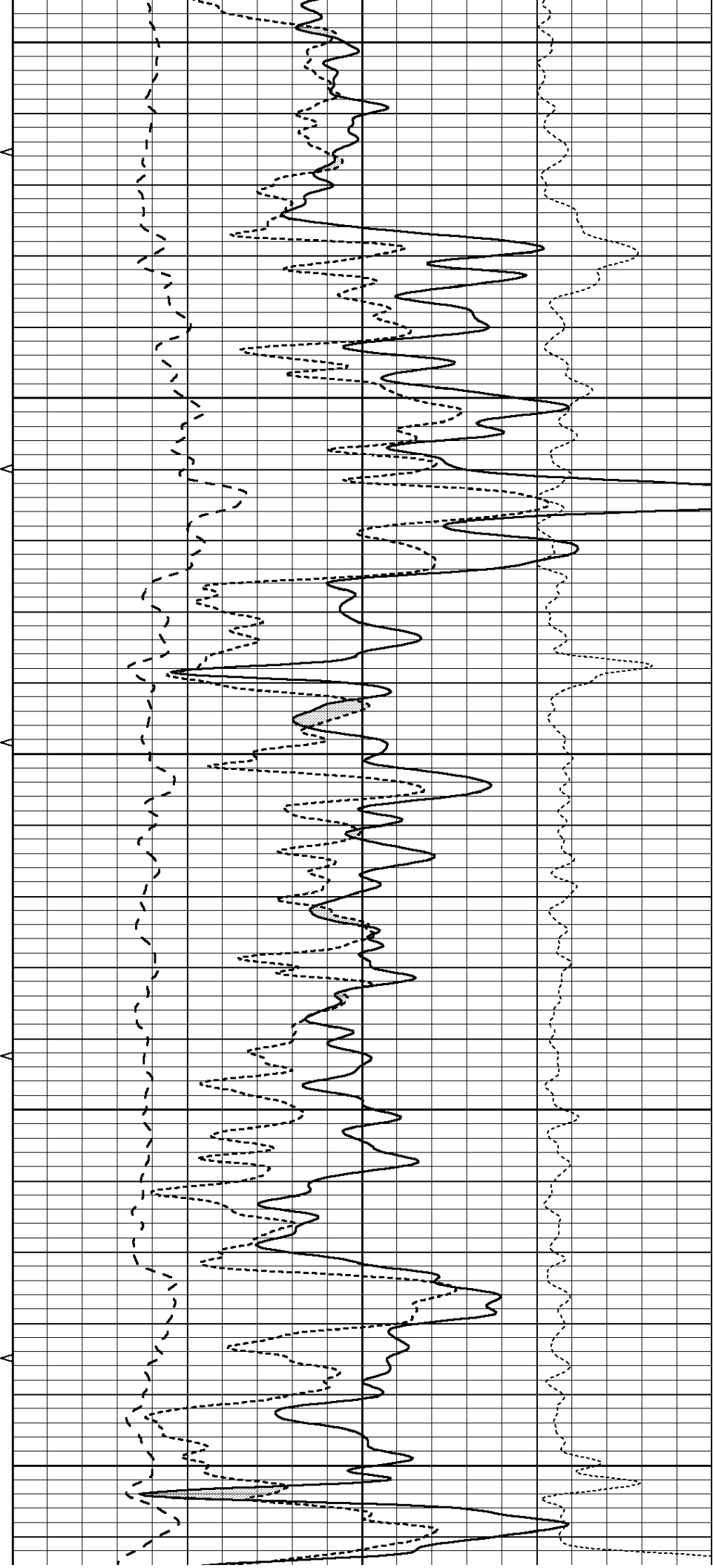
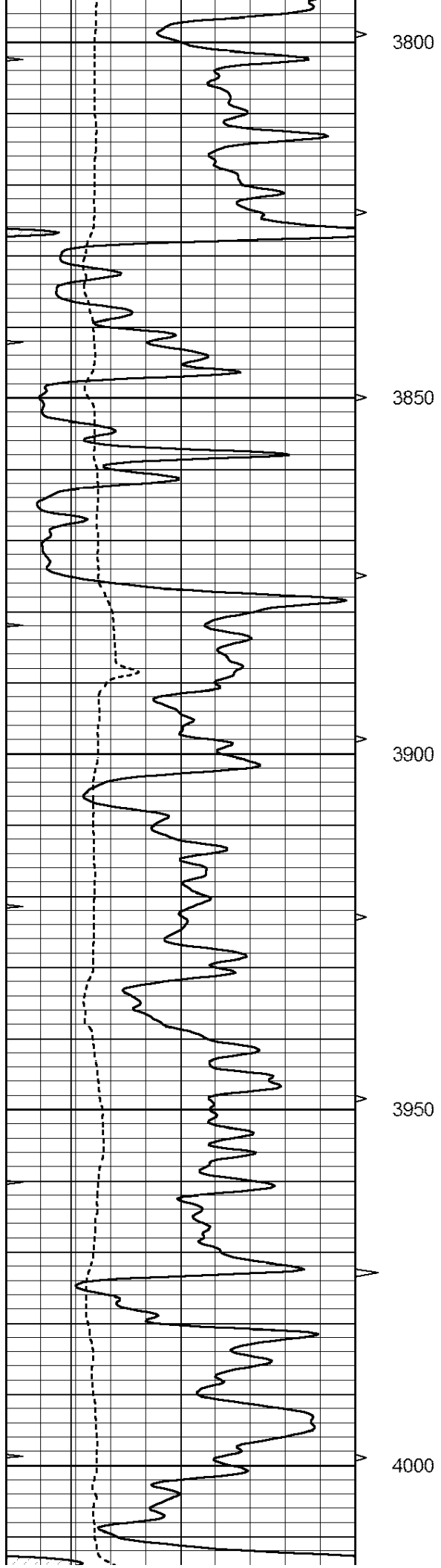
Comments

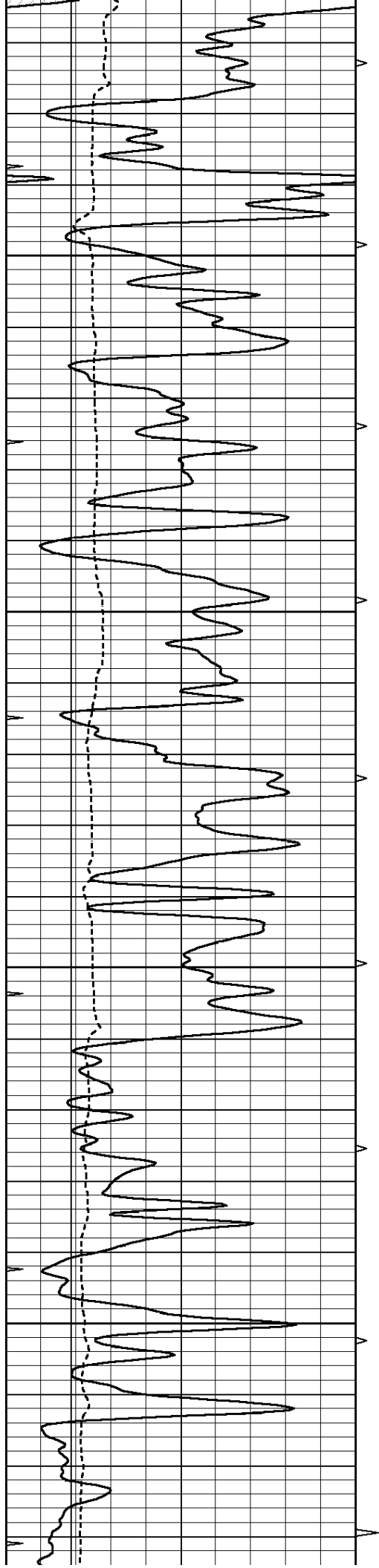
THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395  
DIRECTIONS  
CHEYENNE WELLS, CO., 4N. ON HWY 385 TO "RD. V", 1E., 1/2N., E. INTO

Database File: 409518pe.db  
Dataset Pathname: pass3.14  
Presentation Format: ldt\_neu  
Dataset Creation: Wed Sep 05 06:20:57 2012  
Charted by: Depth in Feet scaled 1:240

Charted by:		Depth in Feet scaled 1:2.10					
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				





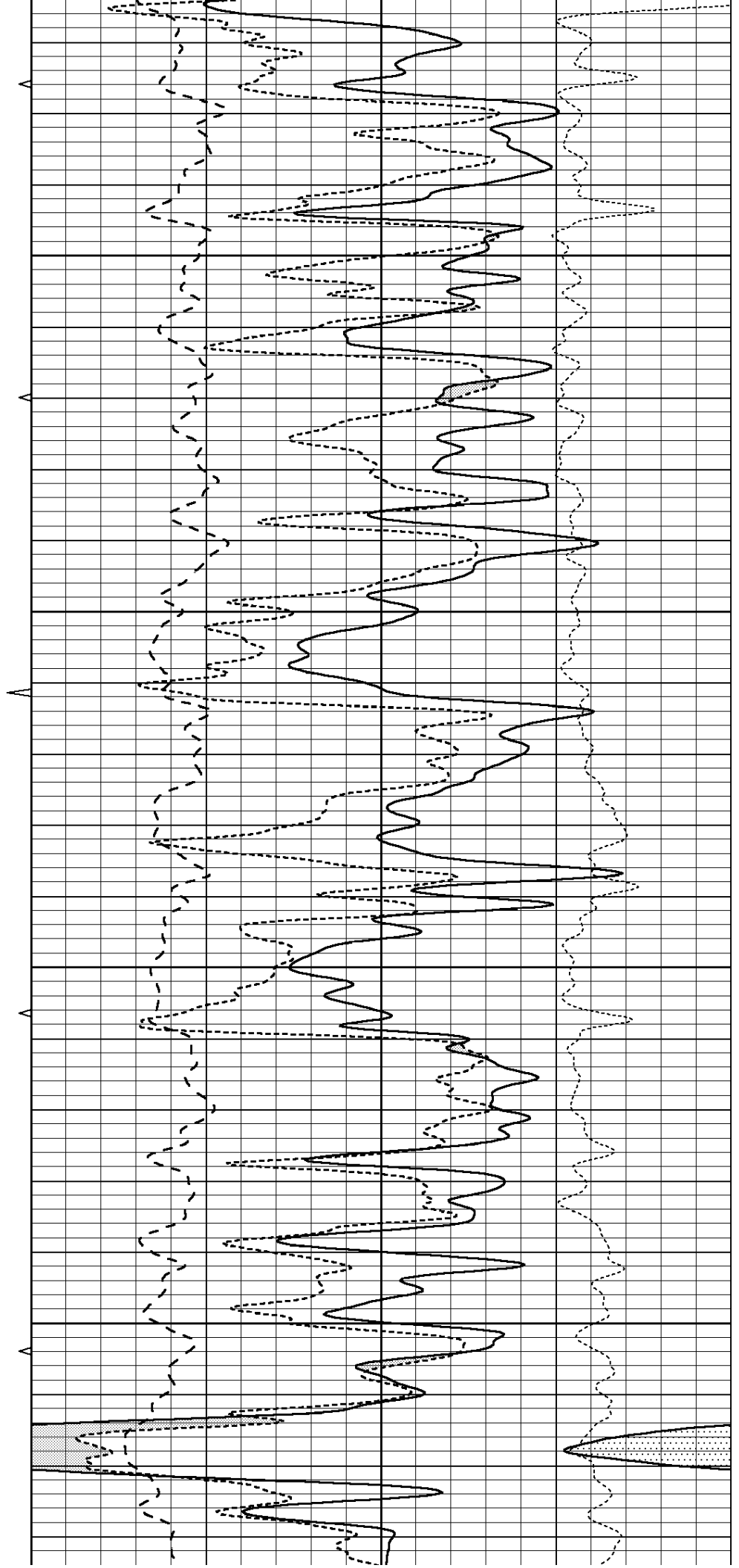


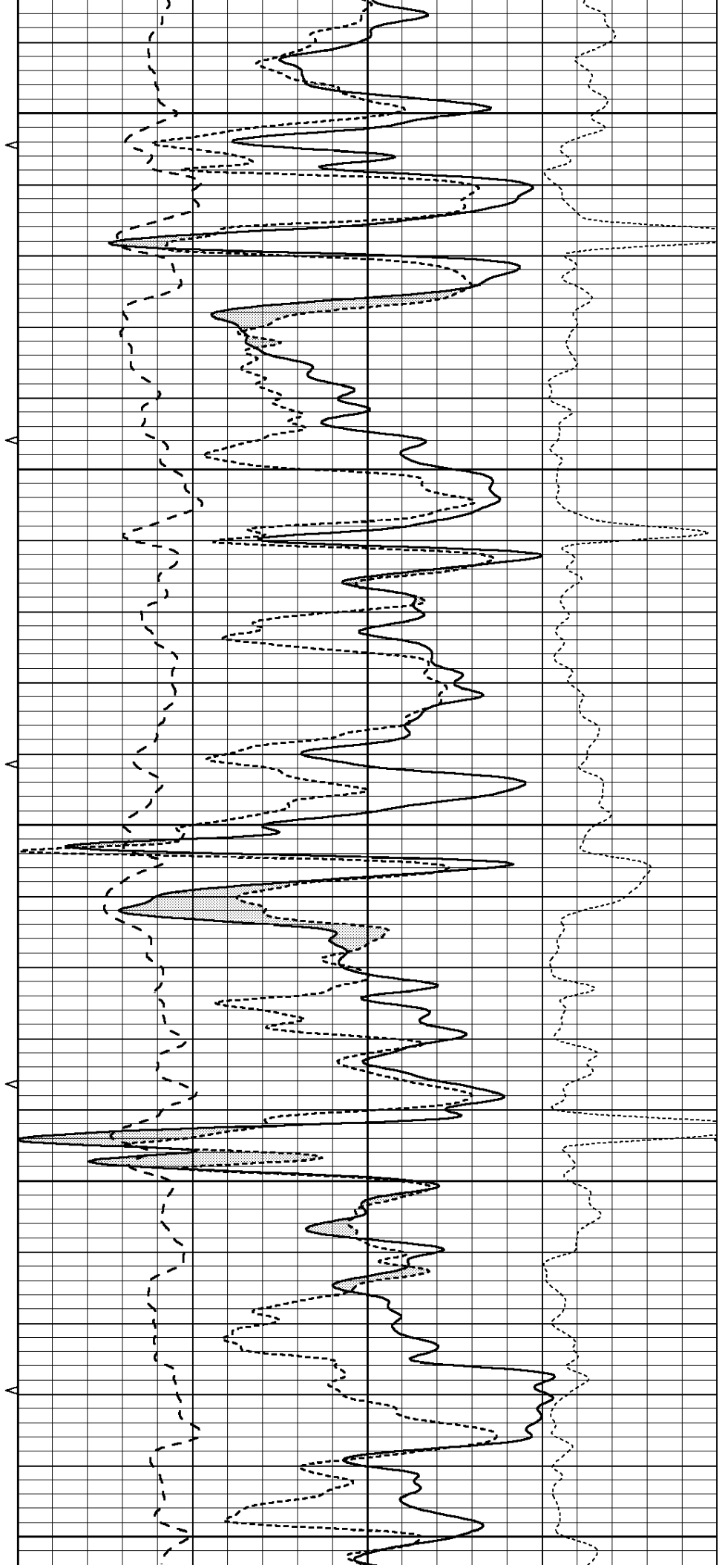
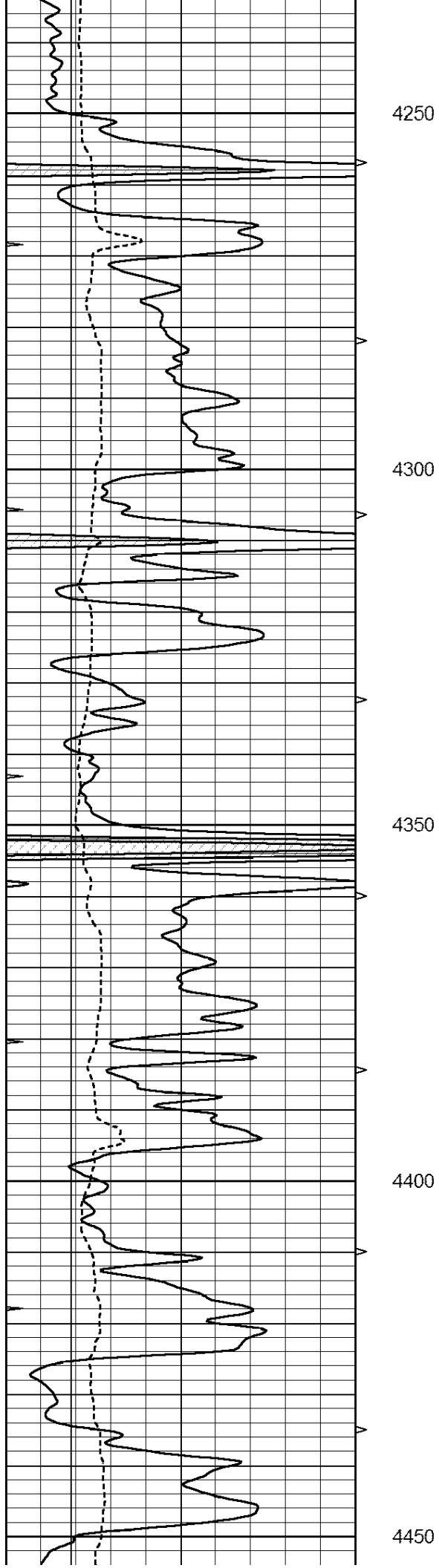
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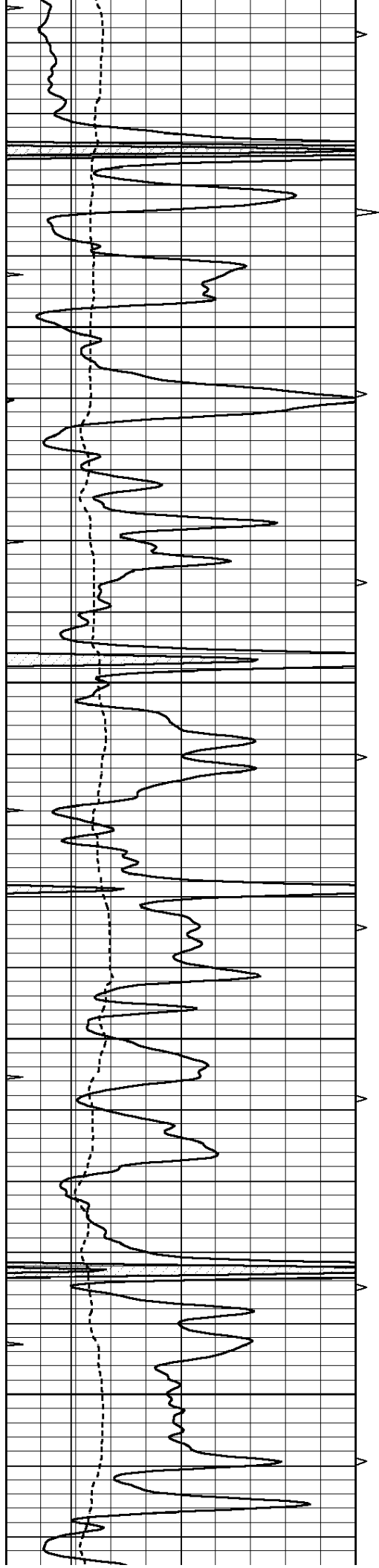
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4150

4200





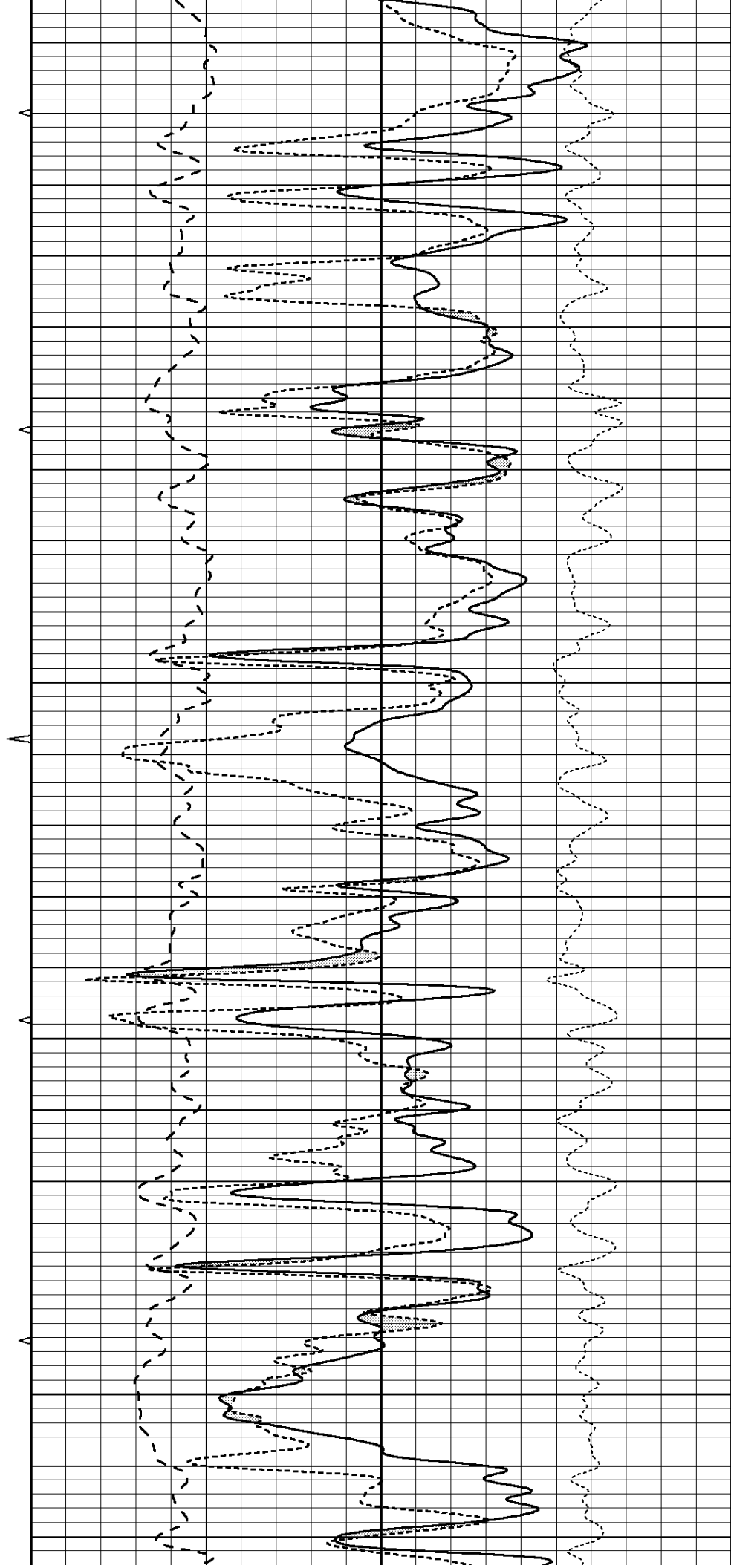


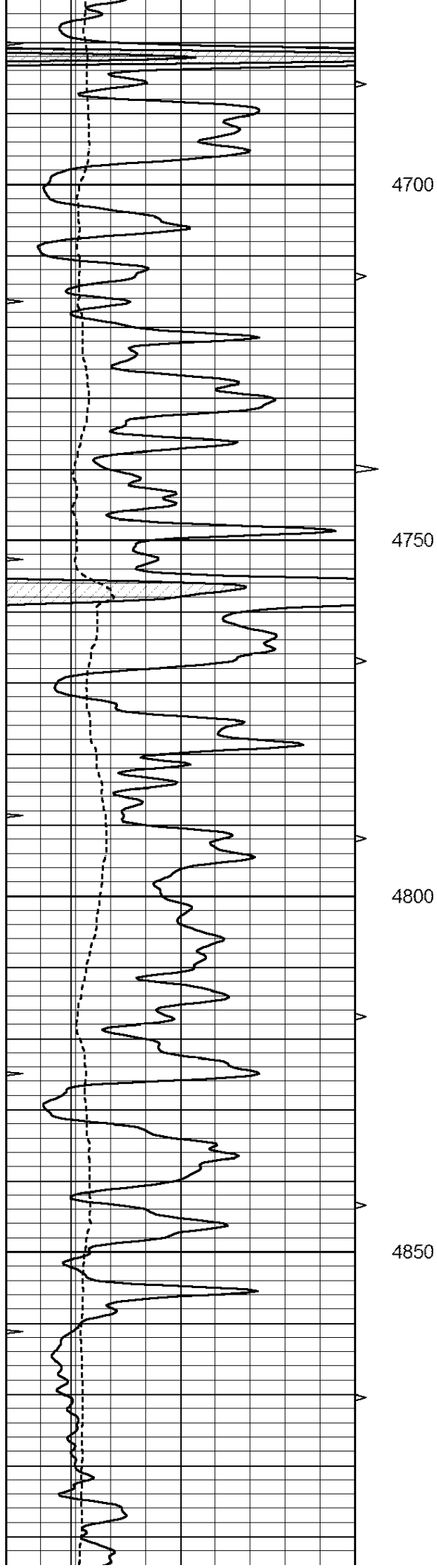
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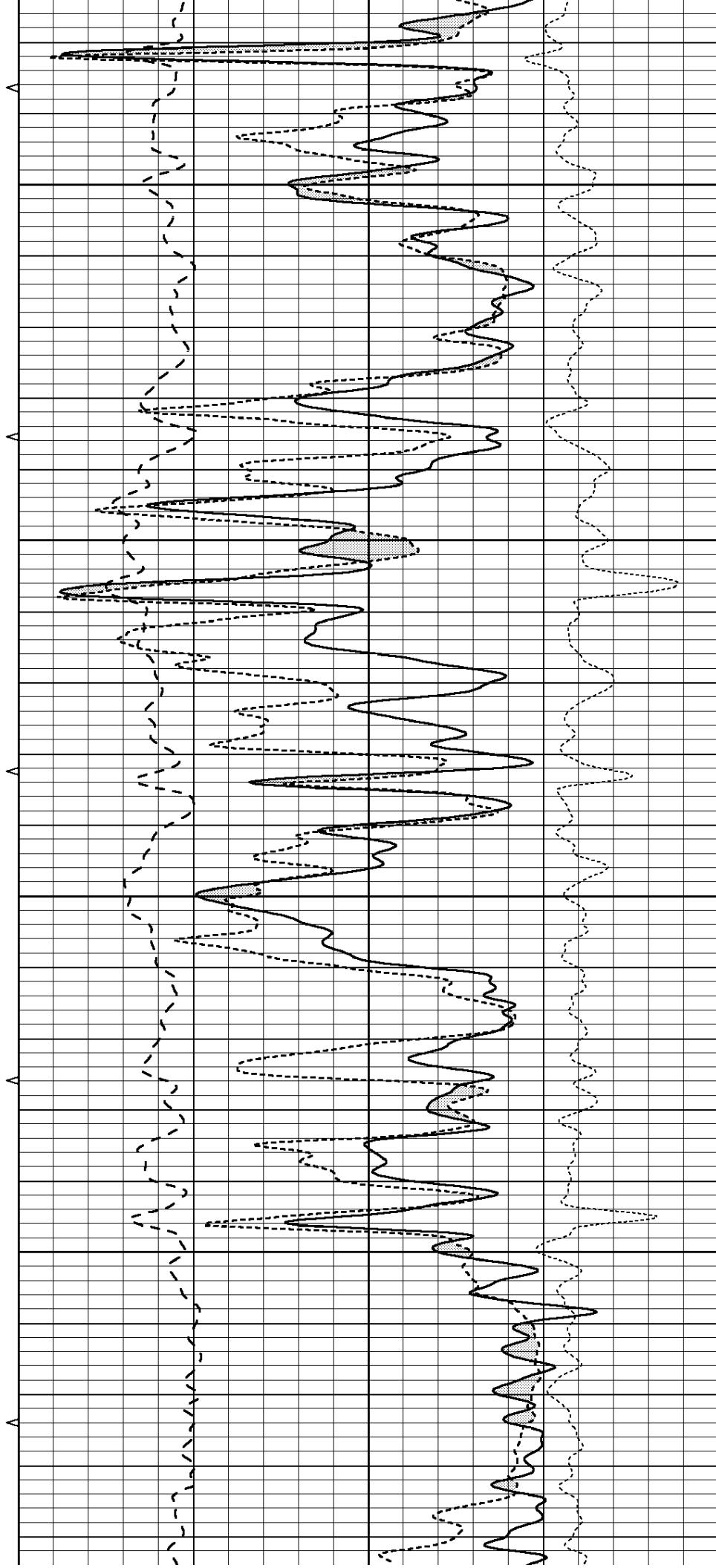


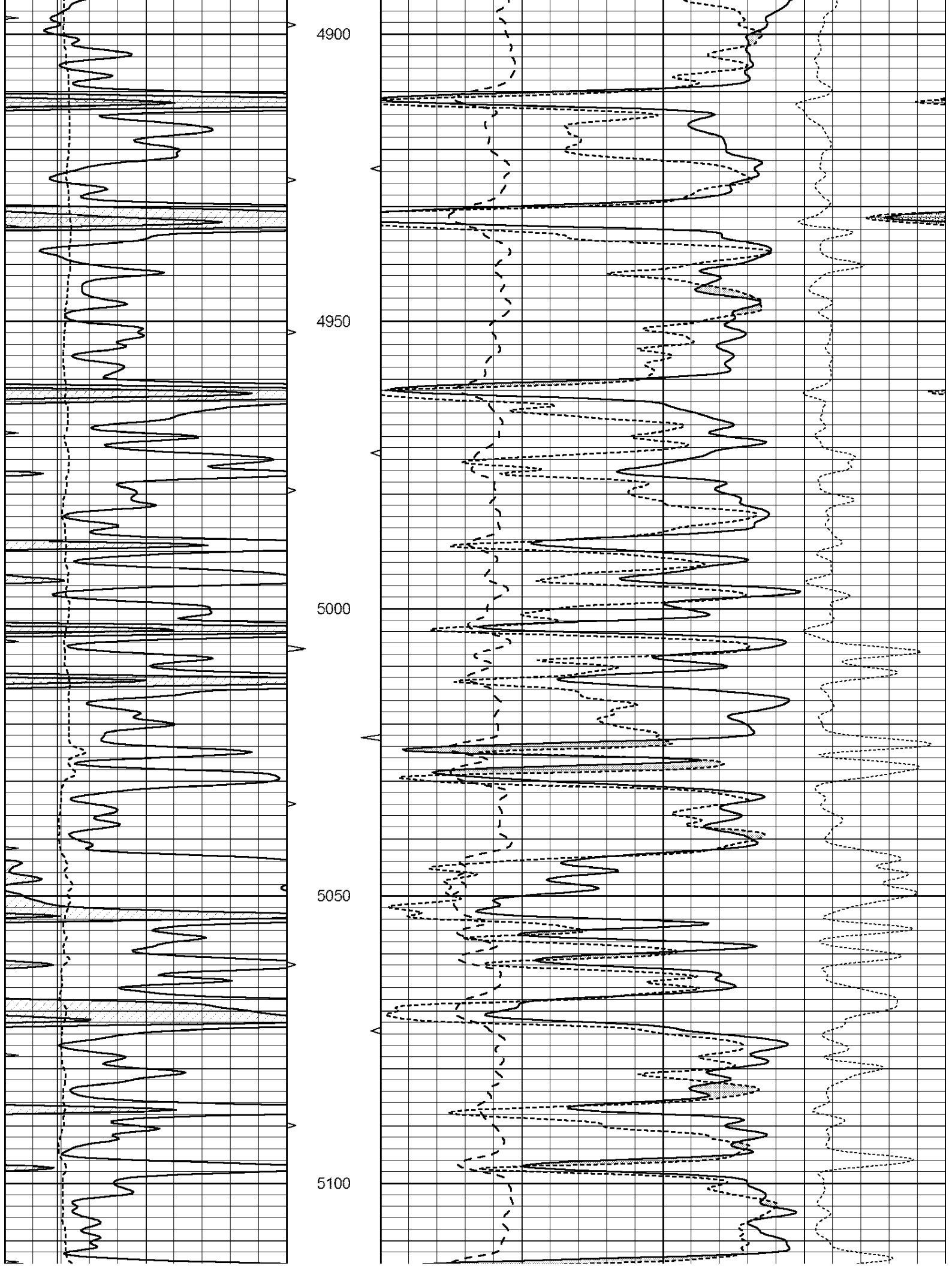
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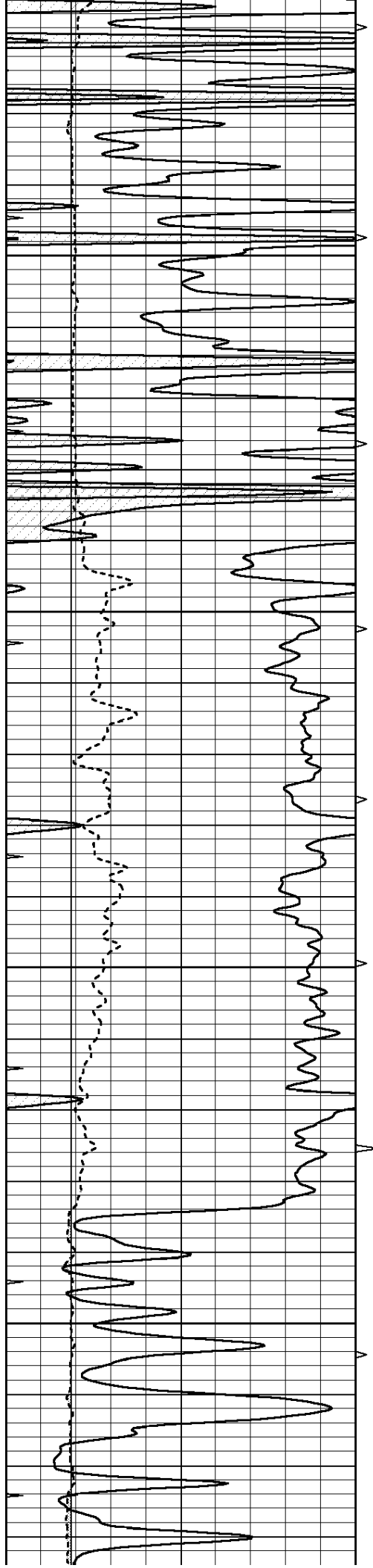
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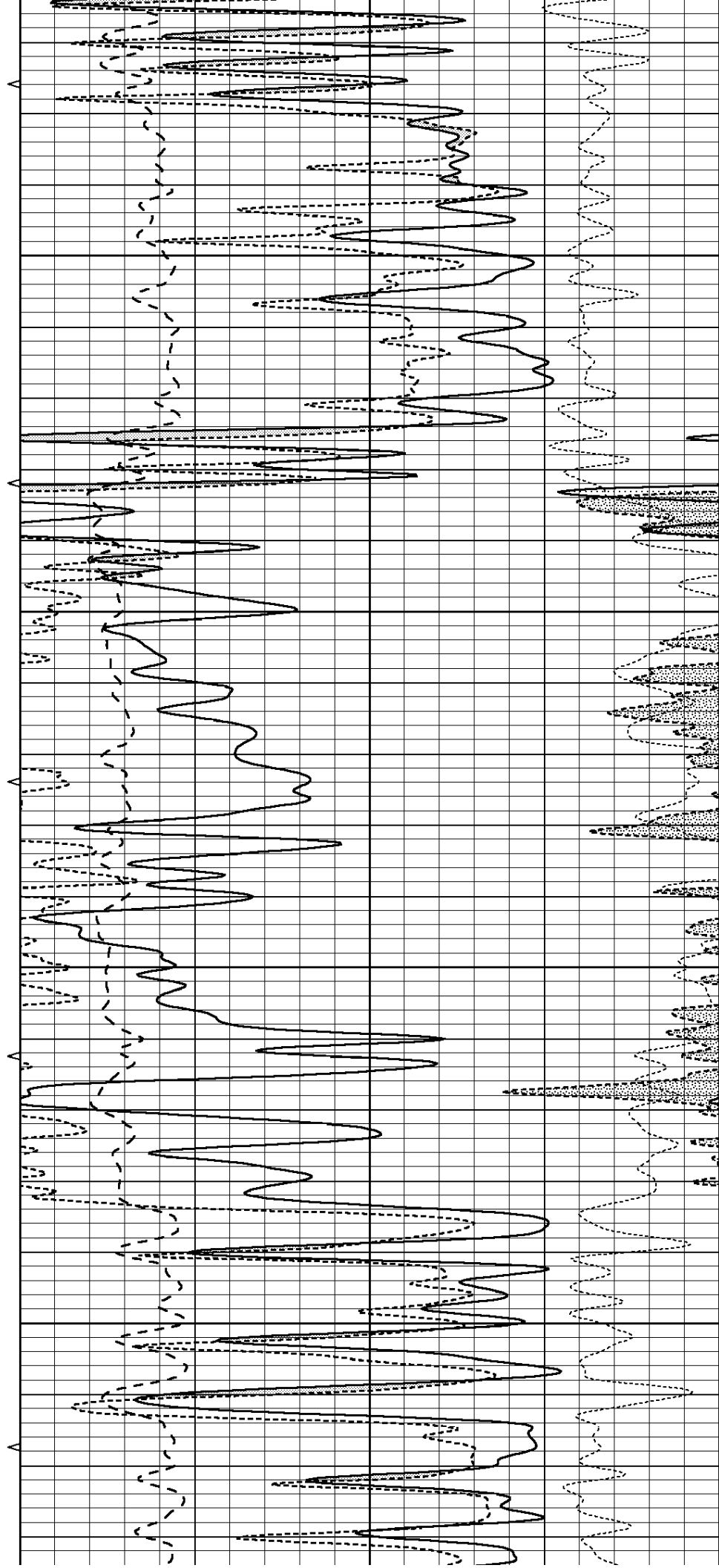


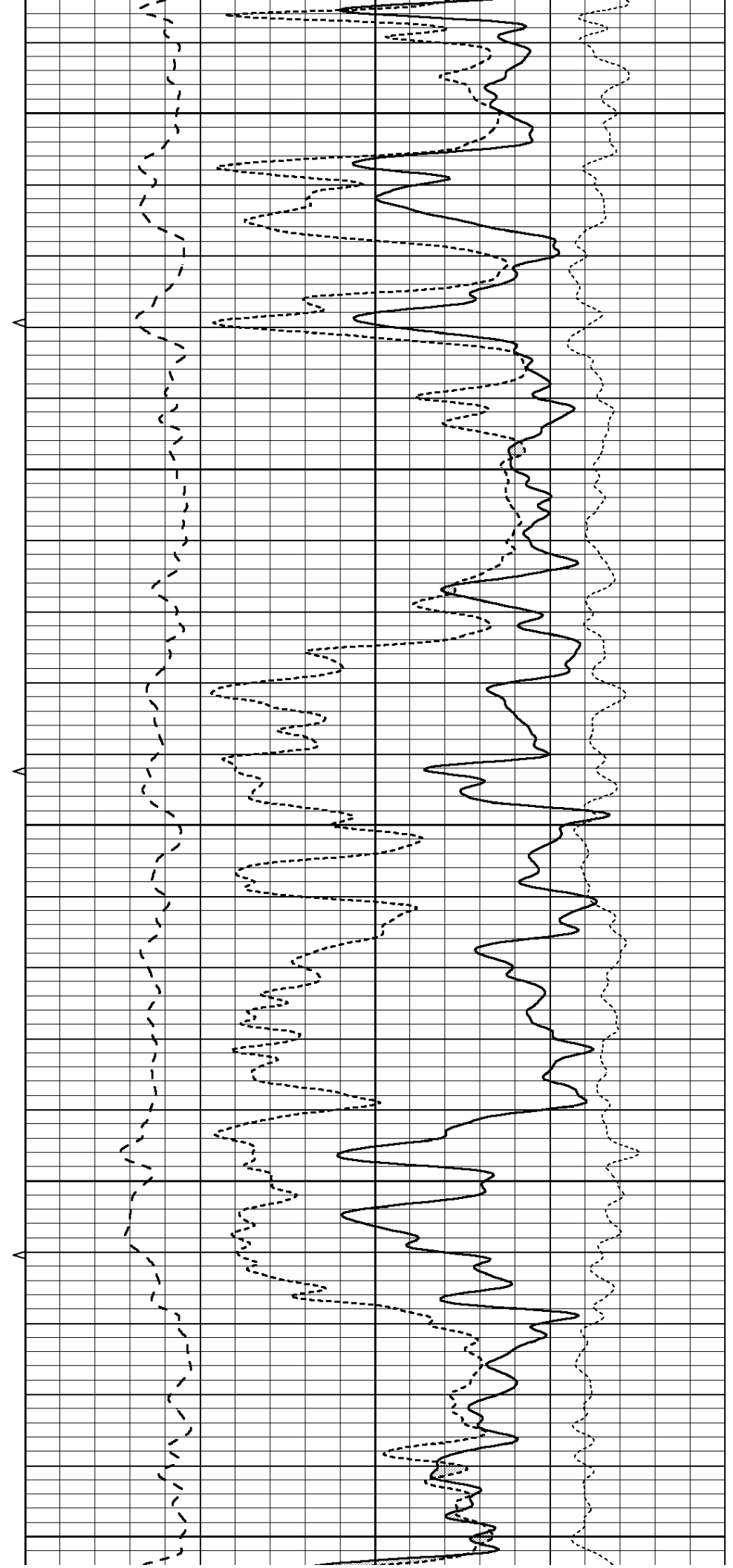
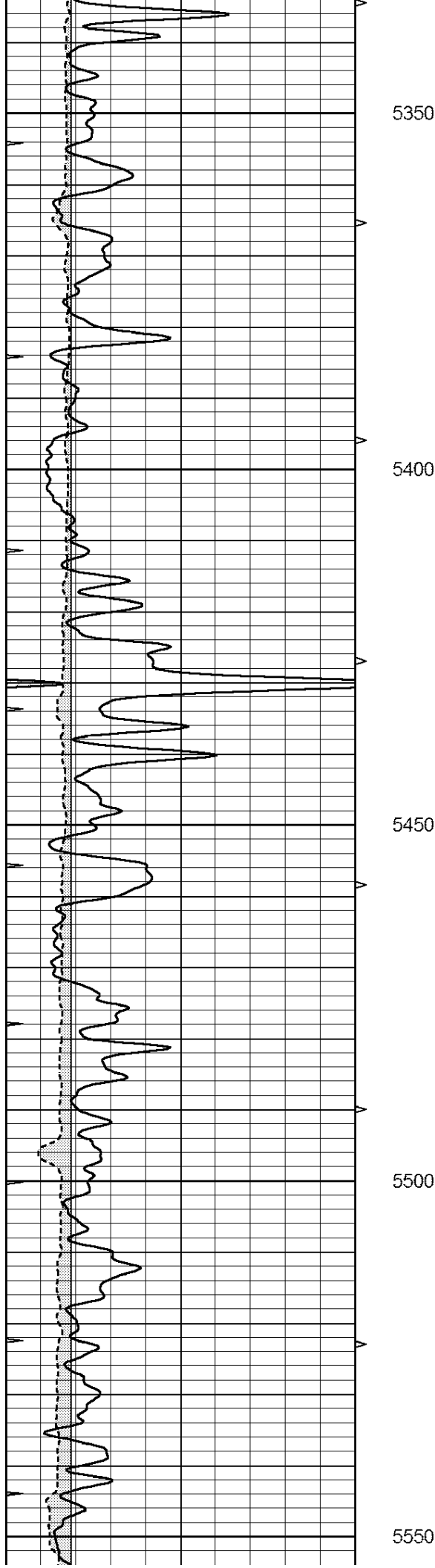
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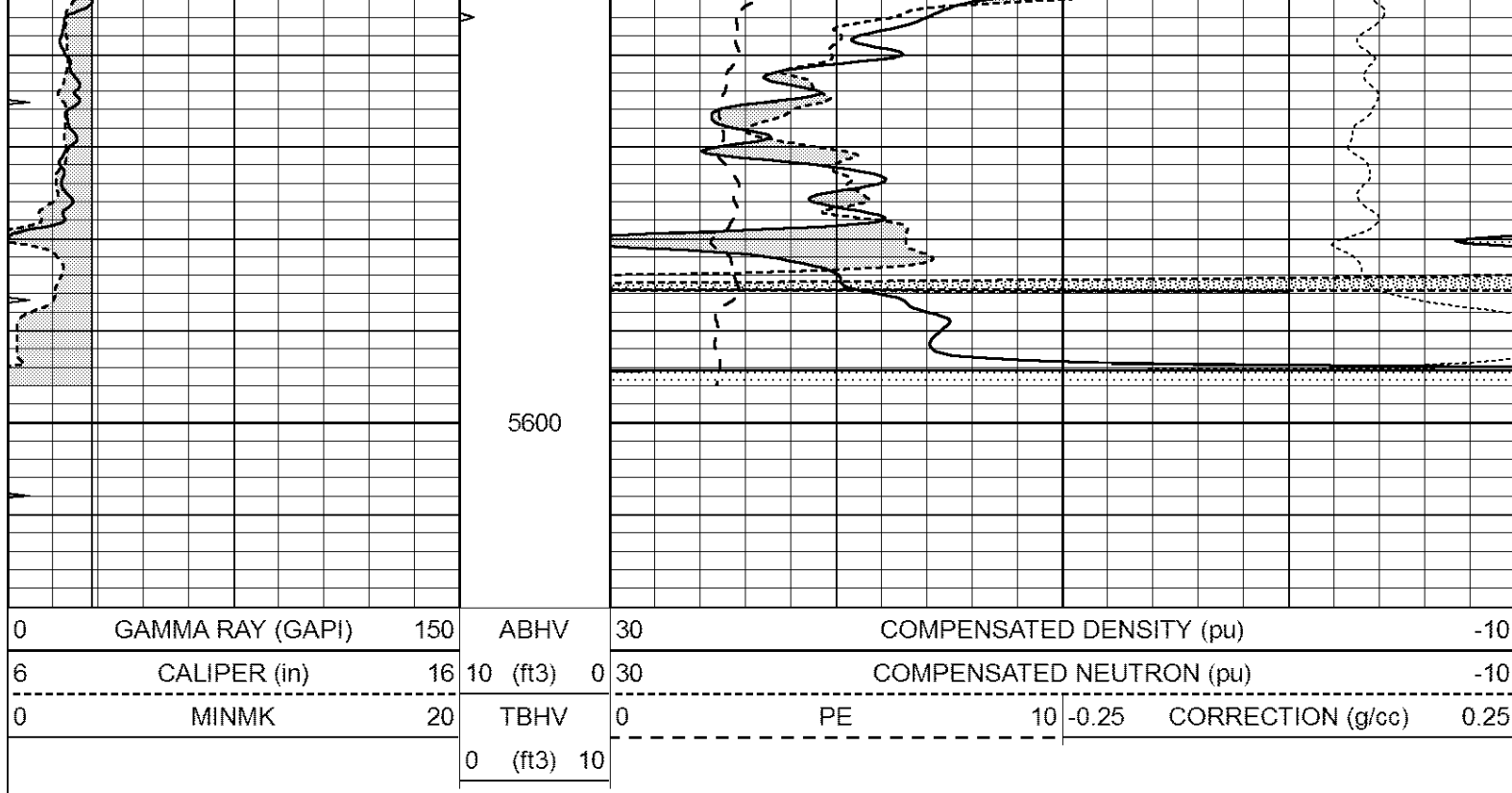
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5300



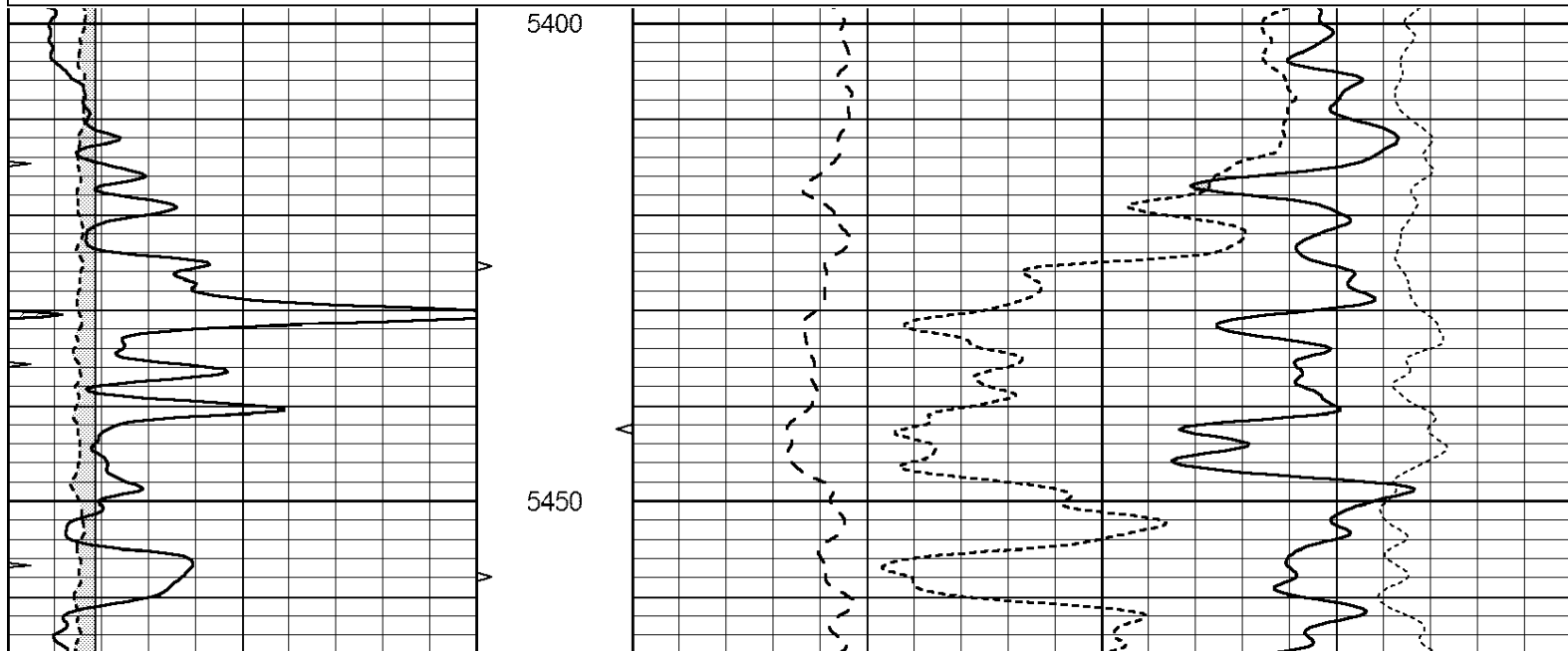
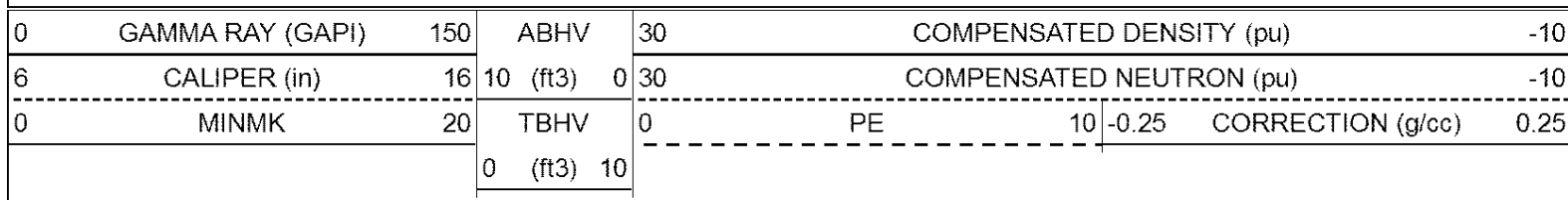


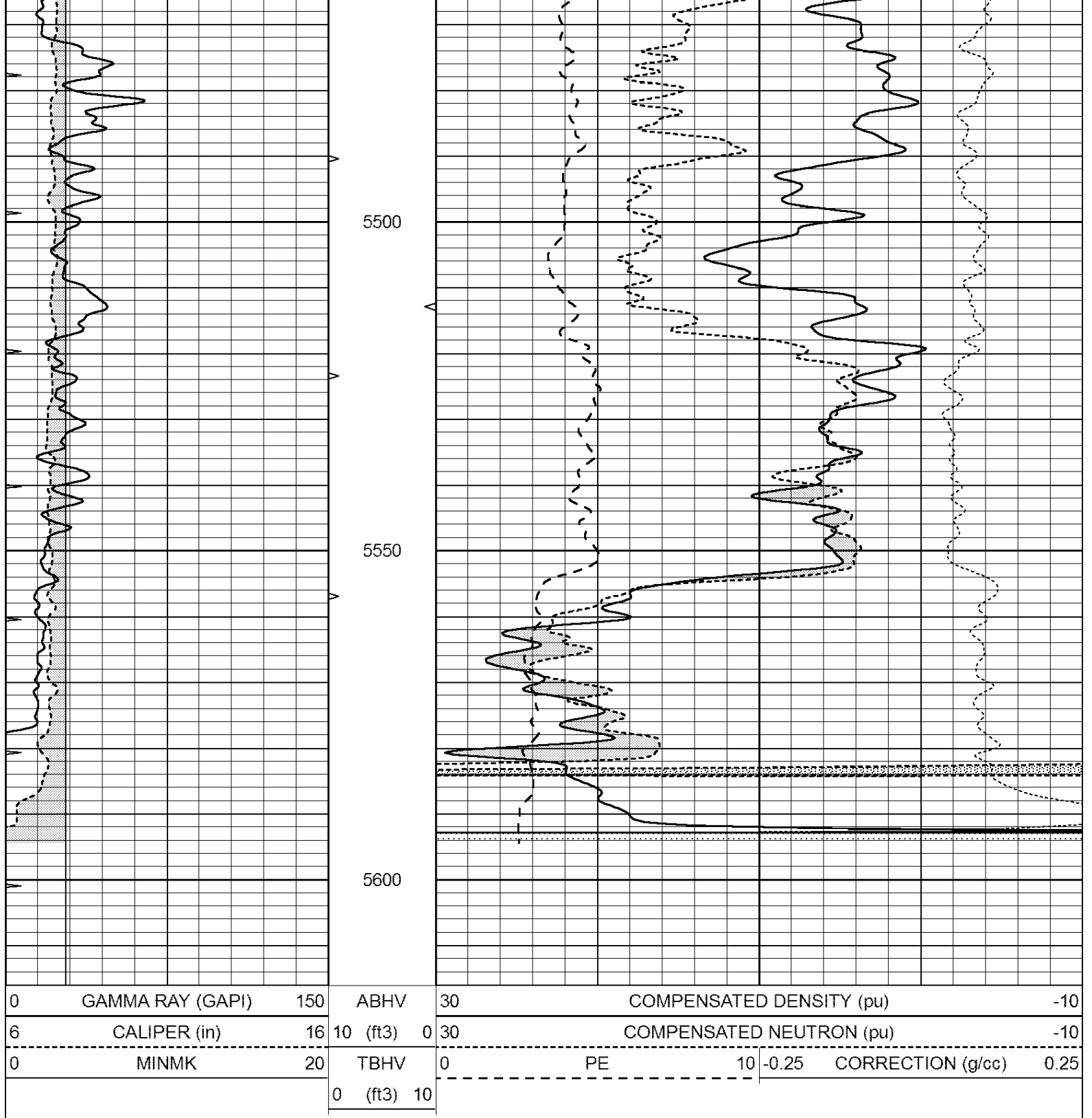


SUPERIOR  
Hays,  
Kansas

# REPEAT SECTION

Database File: 409518pe.db  
 Dataset Pathname: pass2.7  
 Presentation Format: ldt\_neu  
 Dataset Creation: Wed Sep 05 06:15:21 2012 by Calc Open-Cased 110302  
 Charted by: Depth in Feet scaled 1:240





### Calibration Report

Database File: 409518pe.db  
 Dataset Pathname: pass3.14  
 Dataset Creation: Wed Sep 05 06:20:57 2012

### Dual Induction Calibration Report

Serial-Model: DIL3-GEAR  
 Performed: Wed Sep 05 04:06:52 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	13.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-3.000
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	7.7	
High Ref	5.5	15.0	
	Gain: 3.8		Offset: -5.7

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: Tue Sep 04 17:31:06 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.3000 GAPI/cps