



**SUPERIOR
Hays,
Kansas**

**COMPENSATED
DENSITY/NEUTRON
LOG**

Company		PIONEER EXPLORATION, LLC	
Well		DIRKS #7	
Field			
County		HARPER	
State		KANSAS	
Location:		API # : 15-077-21672-0000	
SEC 28 TWP 31S RGE 9W		990' FSL & 130' FWL W/2 - NW - SW - SW	
		MEL/DIL	
Permanent Datum		GROUND LEVEL	
Log Measured From		KELLY BUSHING 10' A.G.L.	
Drilling Measured From		KELLY BUSHING	
Elevation		K.B. 1649 D.F. 1647 G.L. 1639	
Date		3-22-10	
Run Number		ONE	
Depth Driller		4600	
Depth Logger		4601	
Bottom Logged Interval		4577	
Top Log Interval		2400	
Casing Driller		8 5/8" @ 266	
Casing Logger		266	
Bit Size		7 7/8	
Type Fluid in Hole		CHEMICAL MUD	
Density / Viscosity		9.3 / 52	
pH / Fluid Loss		10.5 / 8.8	
Source of Sample		FLOWLINE	
Rm @ Meas. Temp		0.95 @ 74F	
Rmf @ Meas. Temp		0.71 @ 74F	
Rmc @ Meas. Temp		1.14 @ 74F	
Source of Rmf / Rmc		MEASURED	
Rm @ BHT		0.58 @ 121F	
Time Circulation Stopped		2 HOURS	
Time Logger on Bottom			
Maximum Recorded Temperature		121F	
Equipment Number		680	
Location		HAYS, KANSAS	
Recorded By		JEFF GRONEWEG	
Witnessed By		SEAN DEENIHAN	

<<< Fold Here >>>

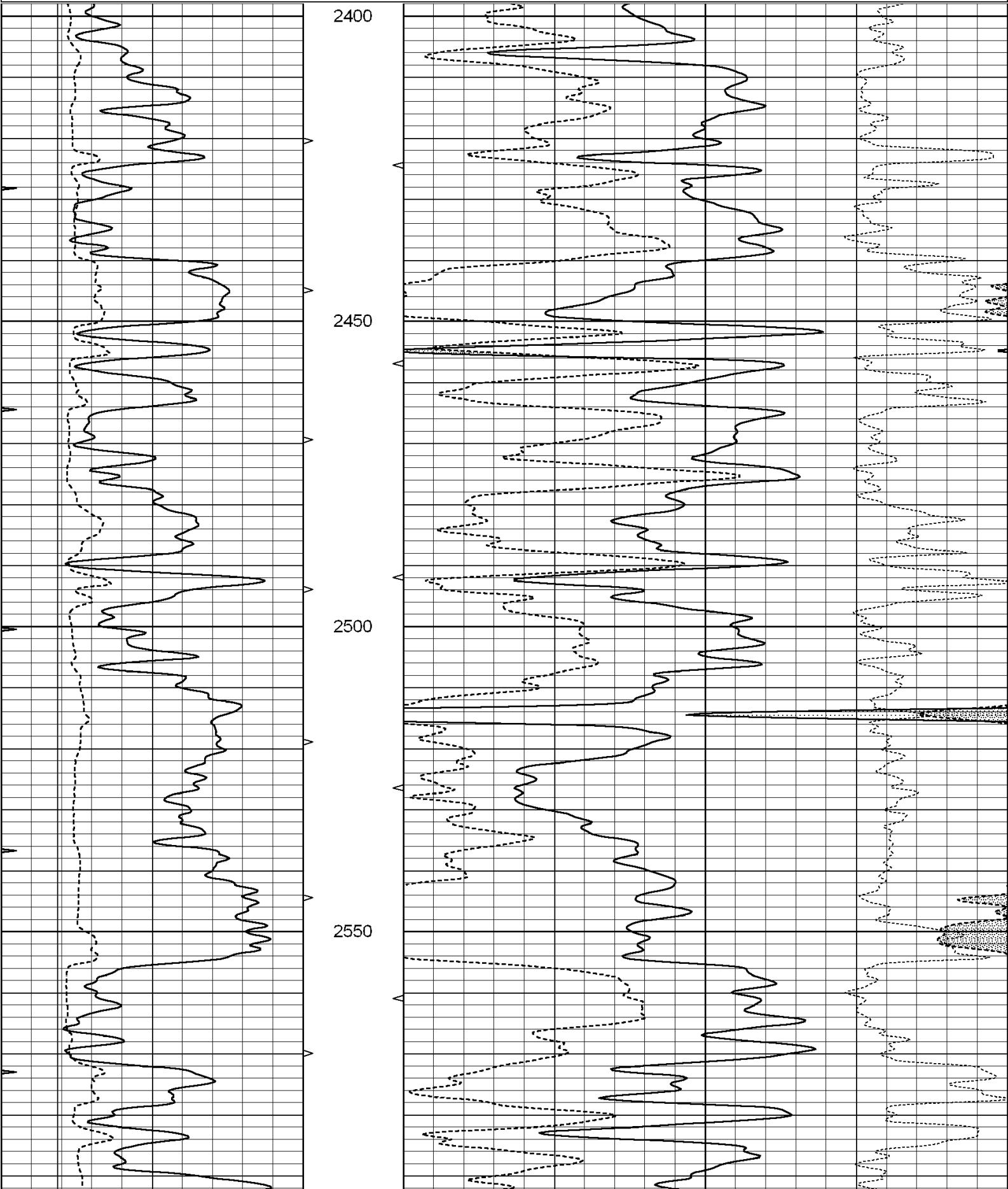
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

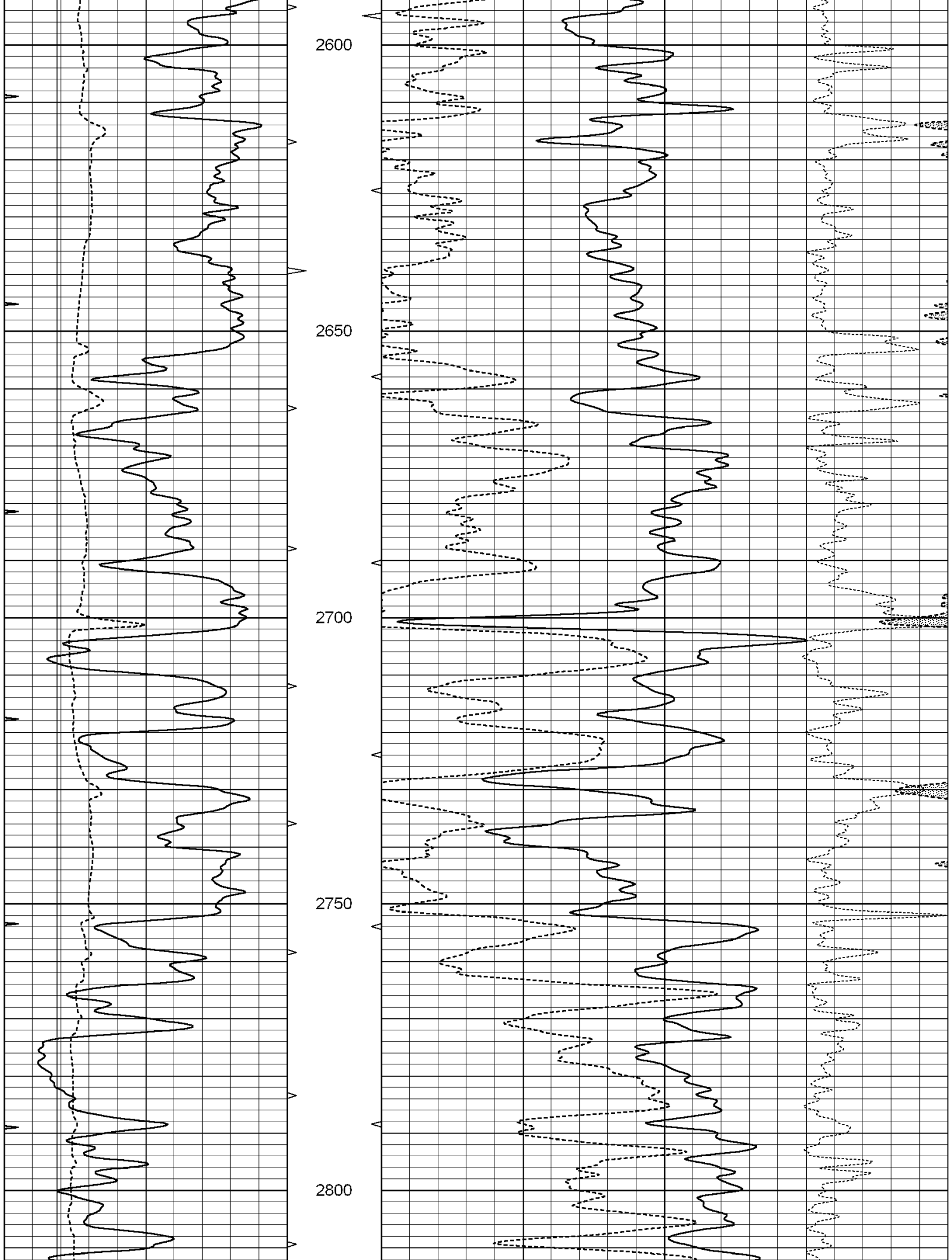
Comments

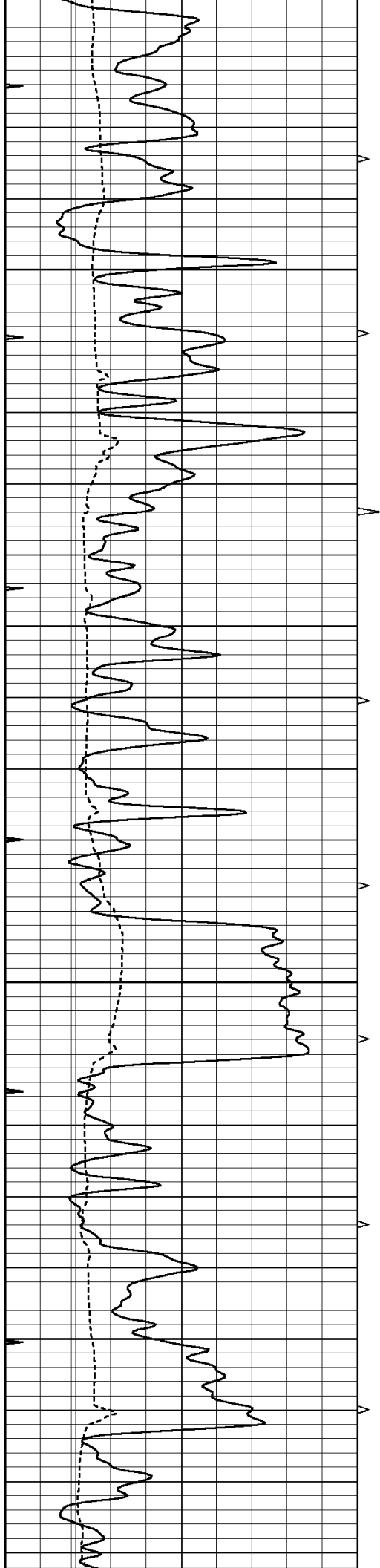
THANK YOU FOR USING SUPERIOR WELL SERVICES HAYS, KANSAS (785)628-6395
DIRECTIONS
ATTICA, KS - 4 1/2 MILES WEST TO RD NW 150 - 4 1/2 MILES NORTH
EAST INTO

Database File: 005104ddn.db
Dataset Pathname: pass3.2
Presentation Format: _den_neu
Dataset Creation: Mon Mar 22 22:10:15 2010 by Calc Open-Cased 090629

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			





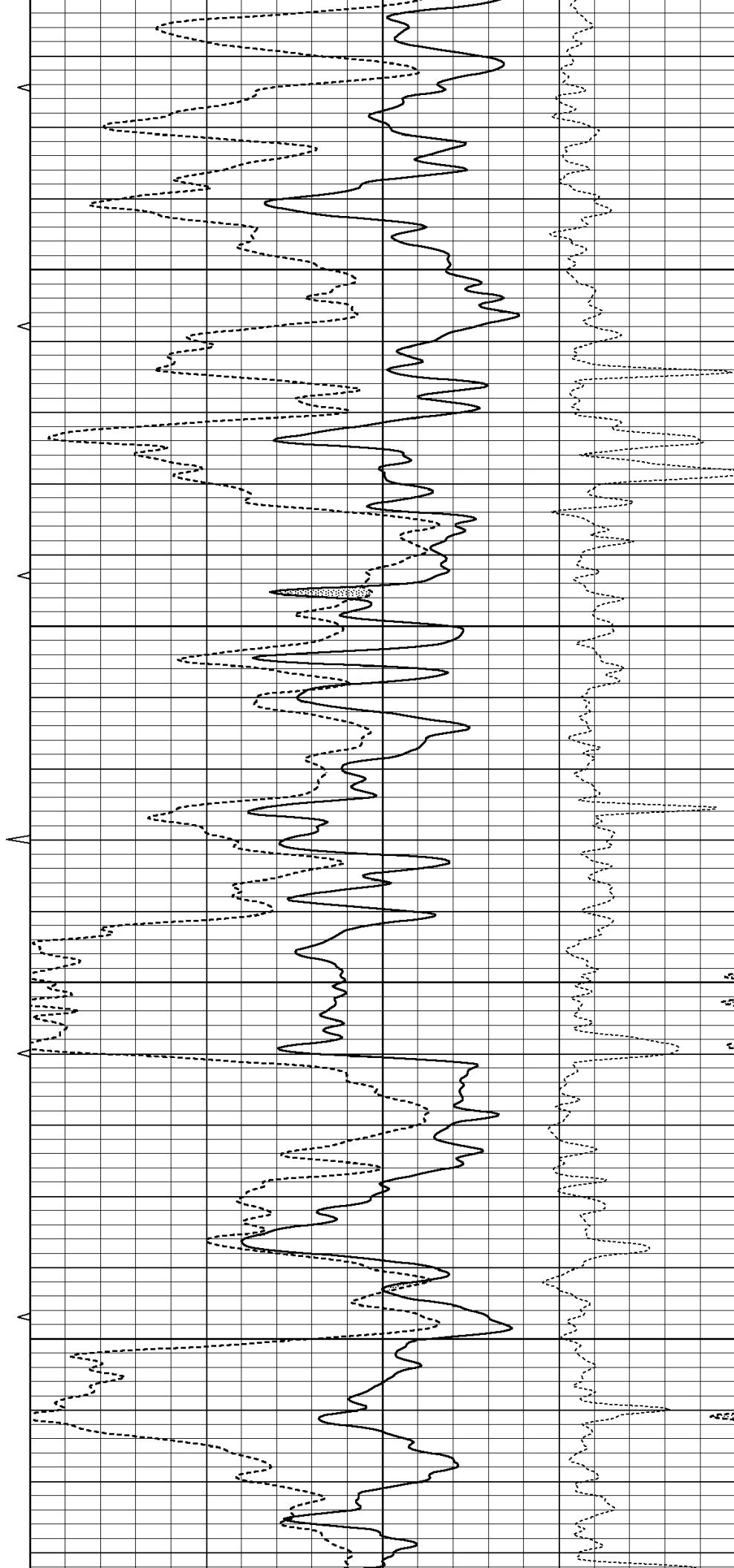


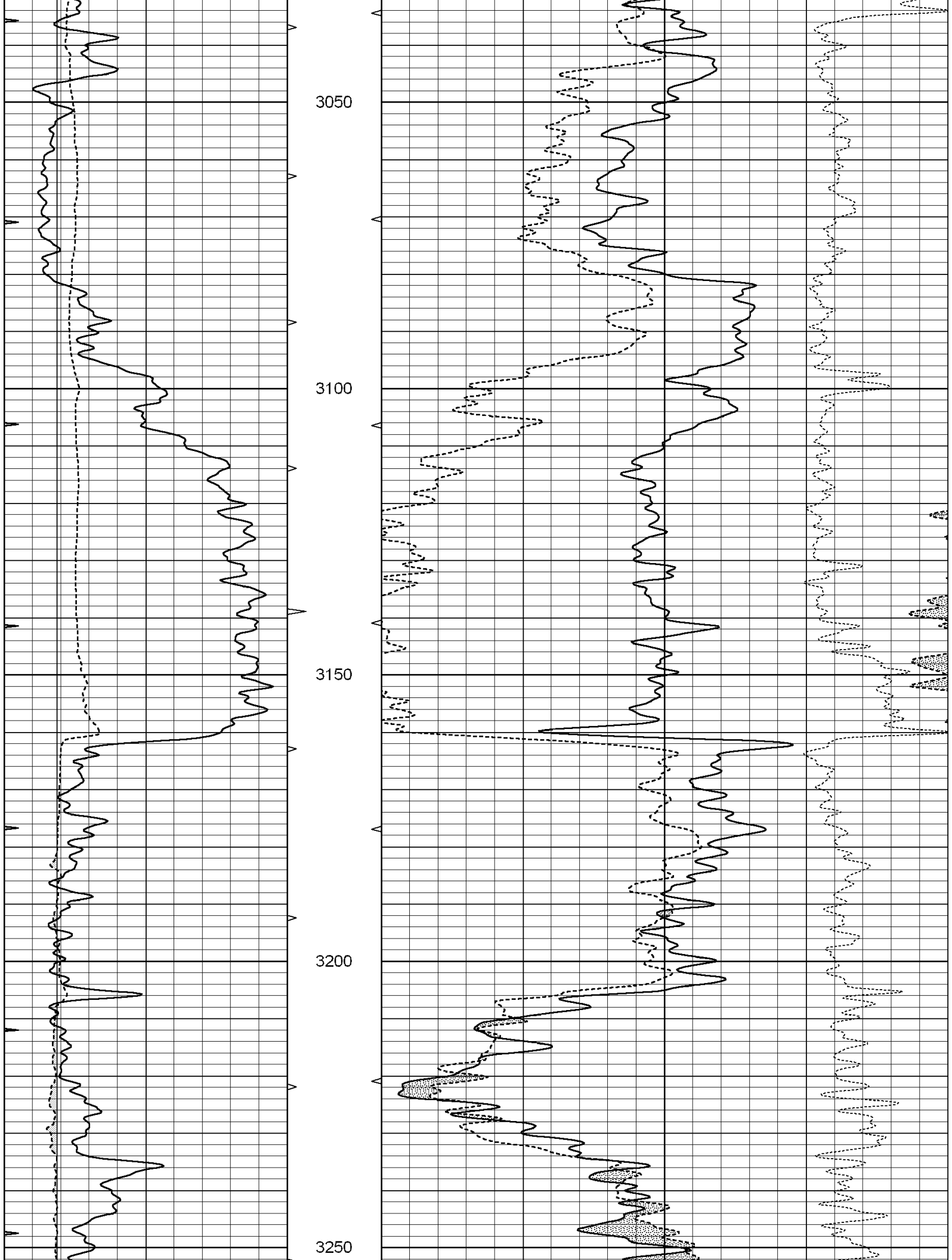
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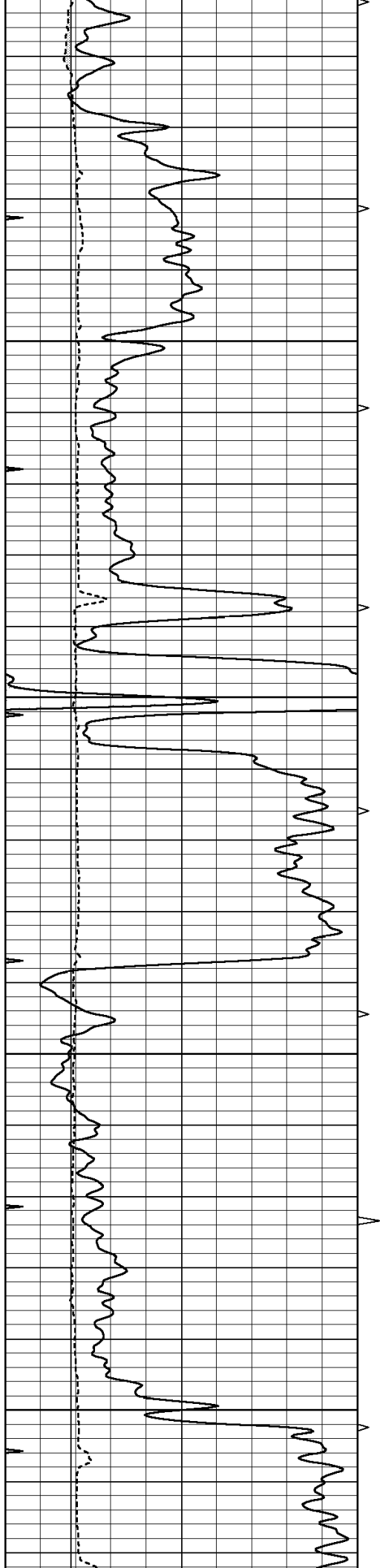
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2950

3000





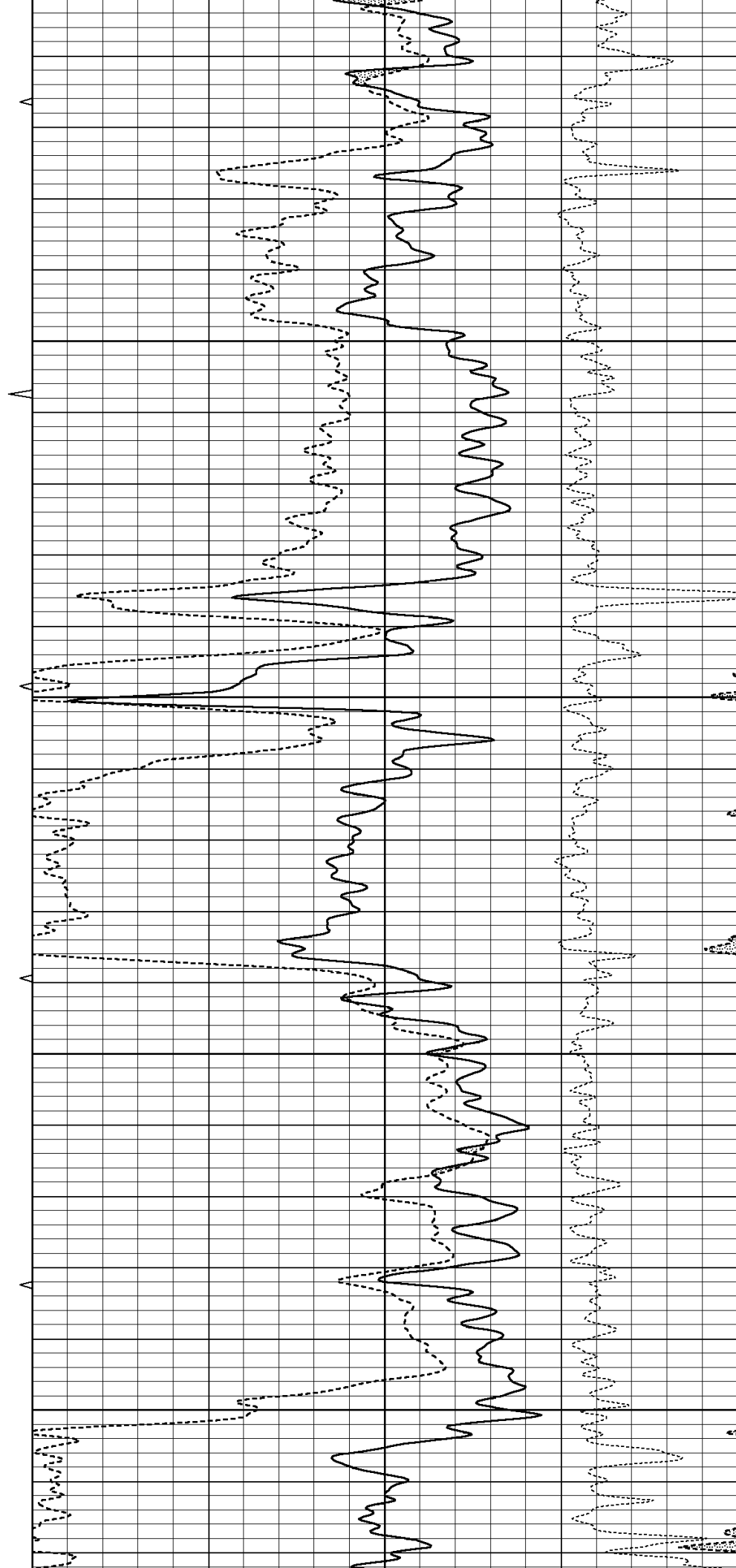


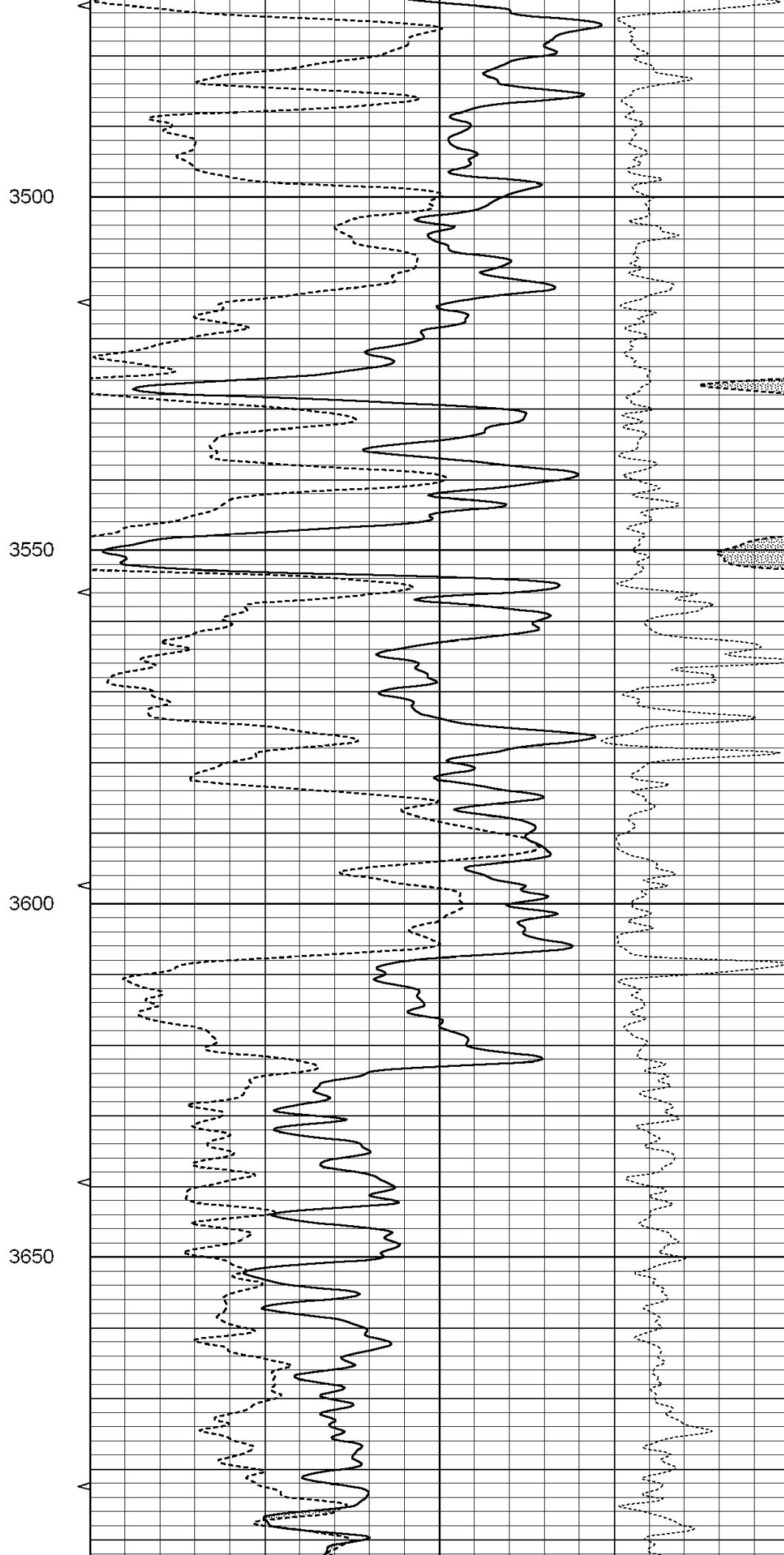
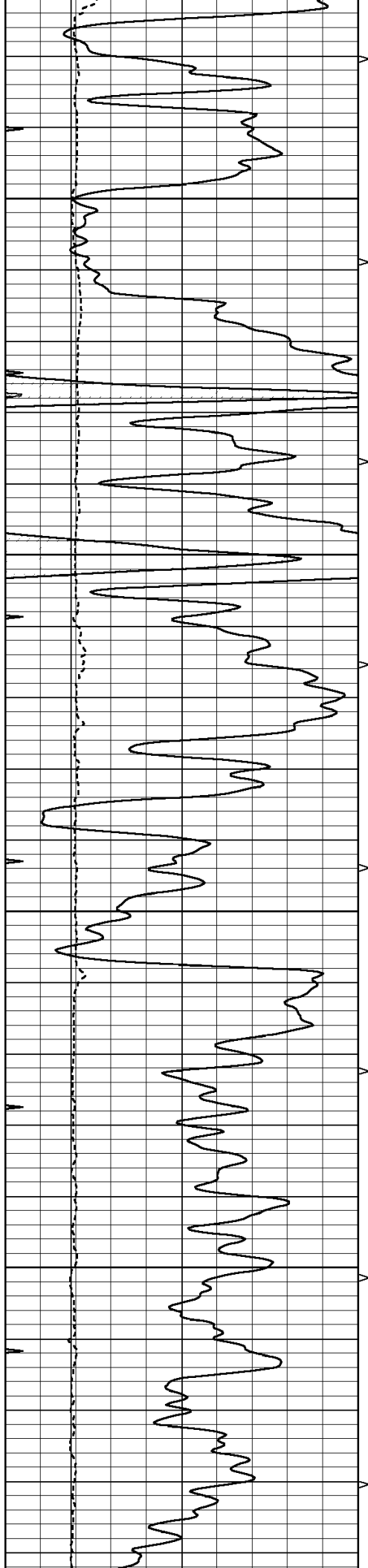
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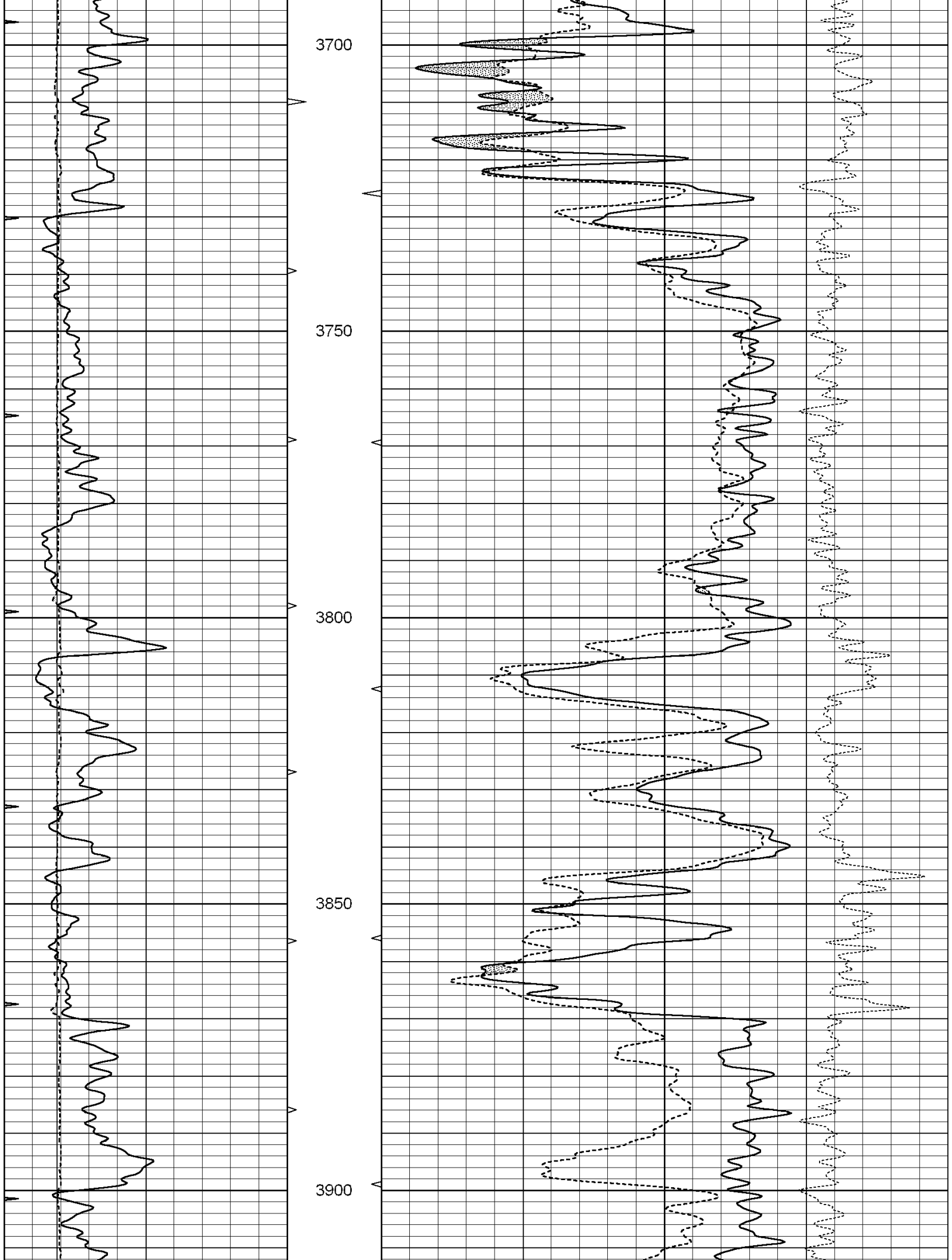
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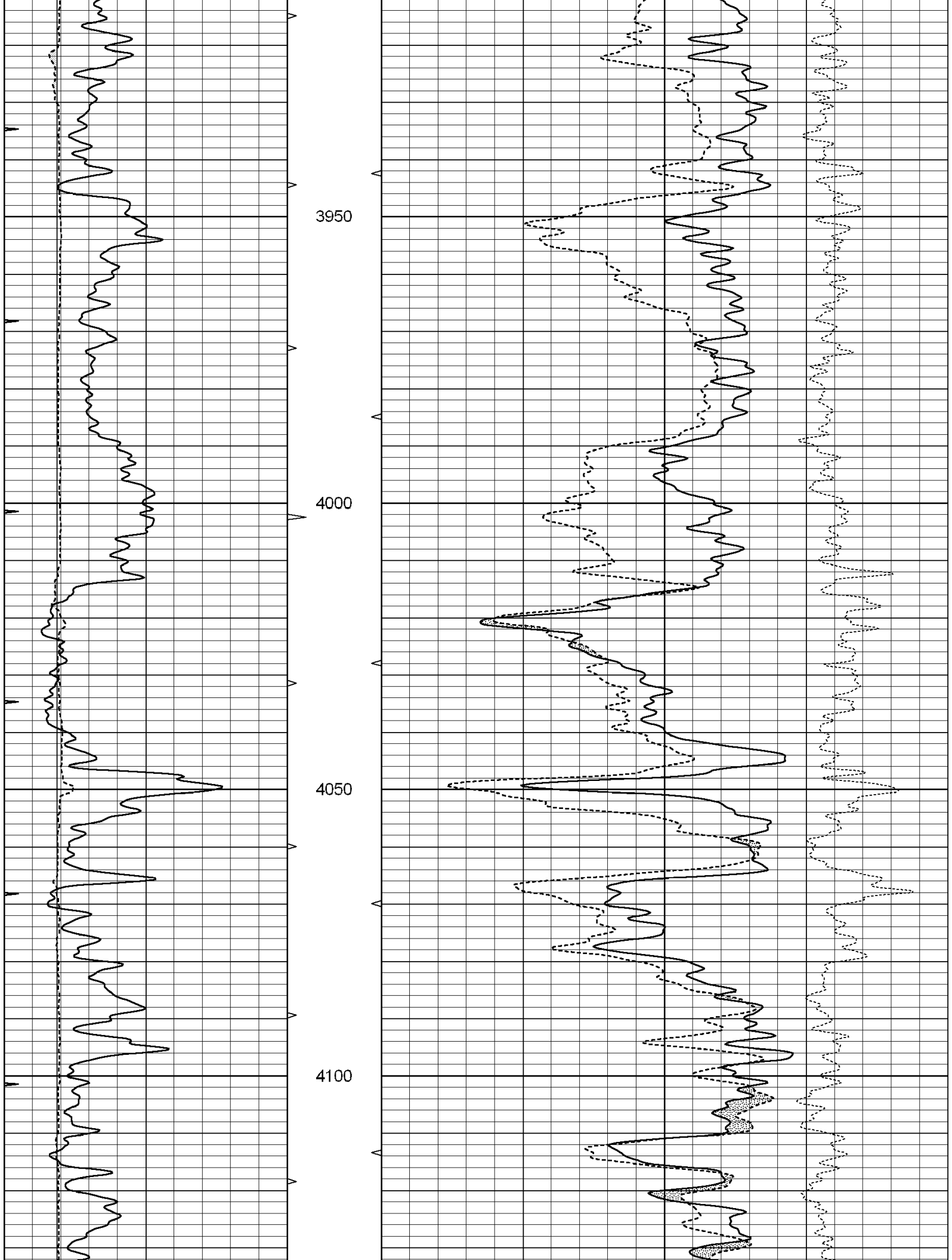
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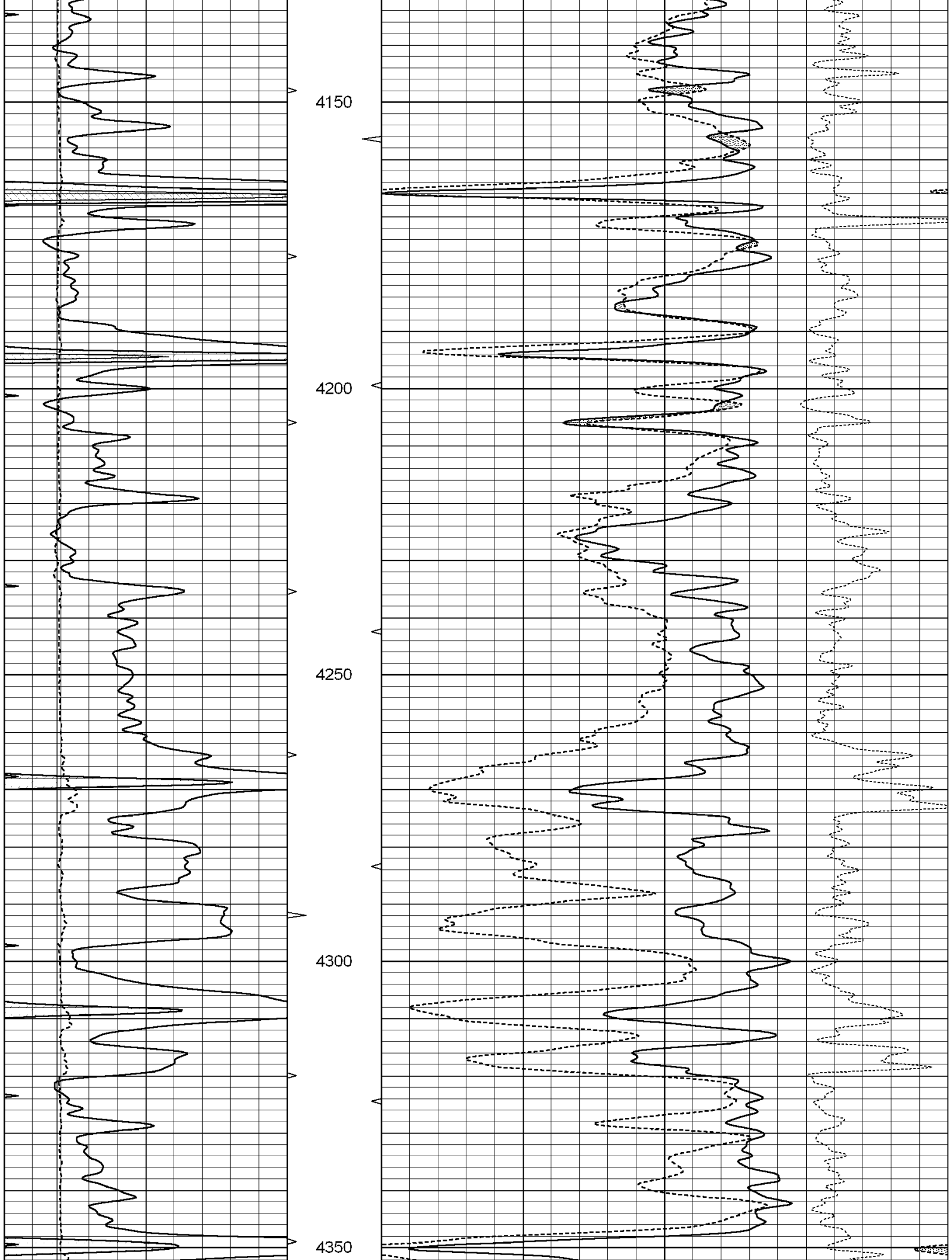
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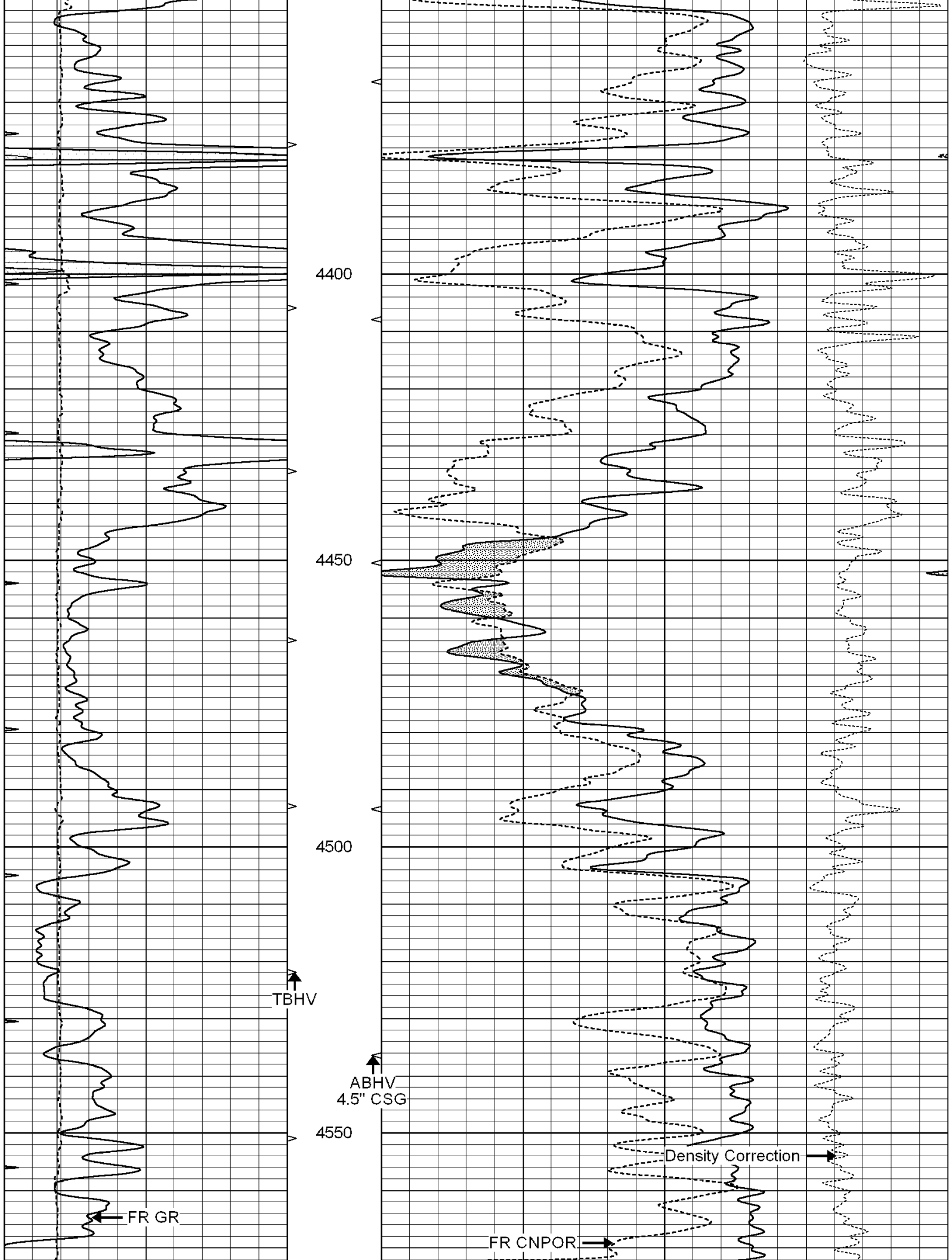


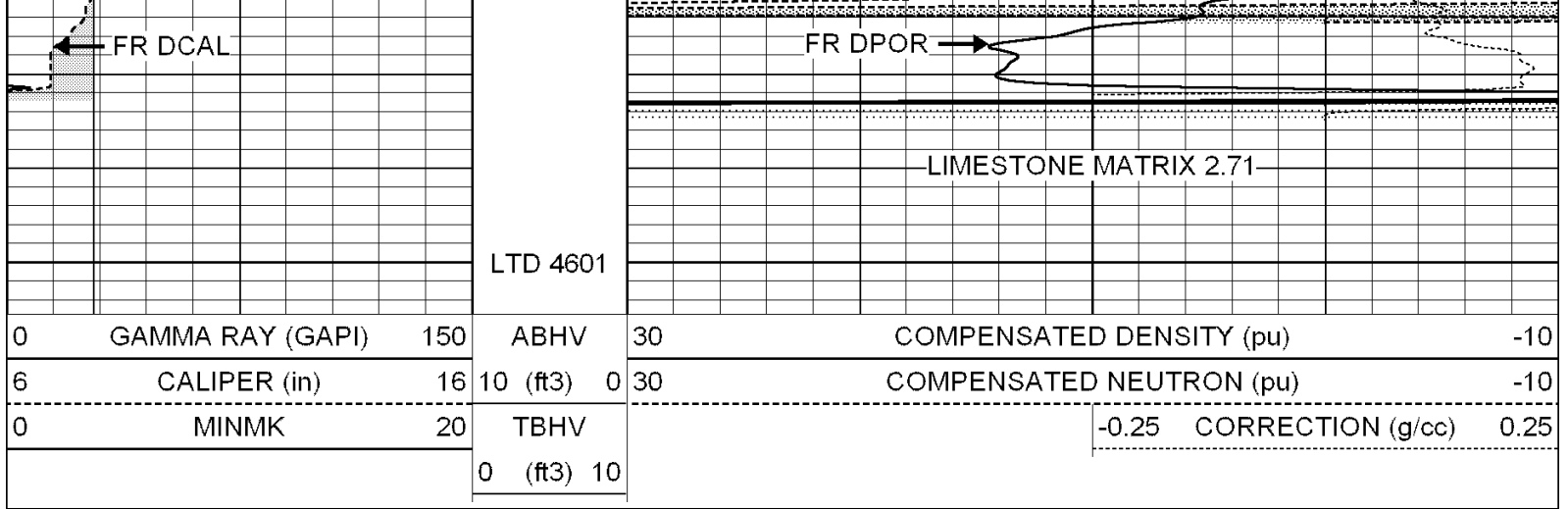










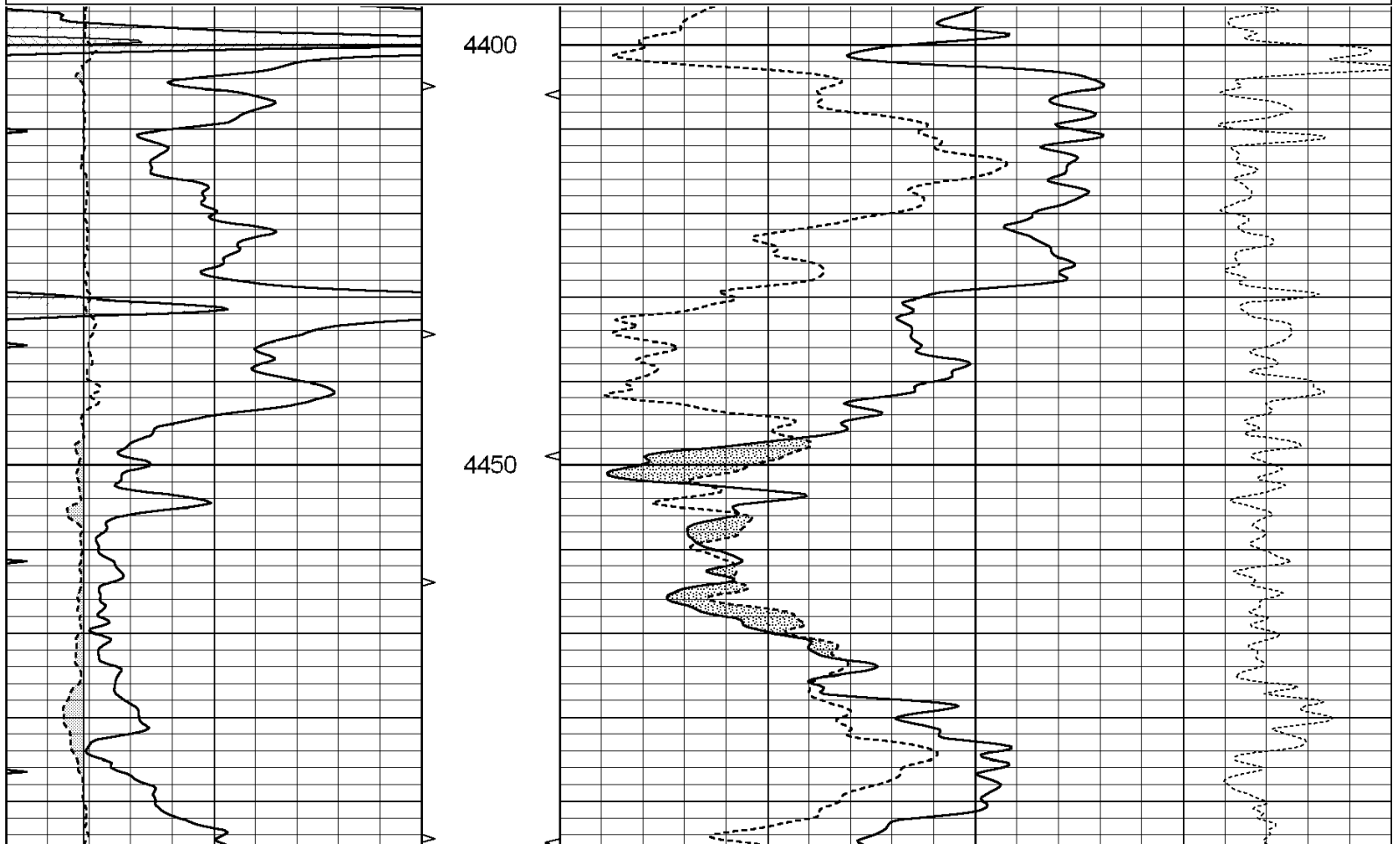


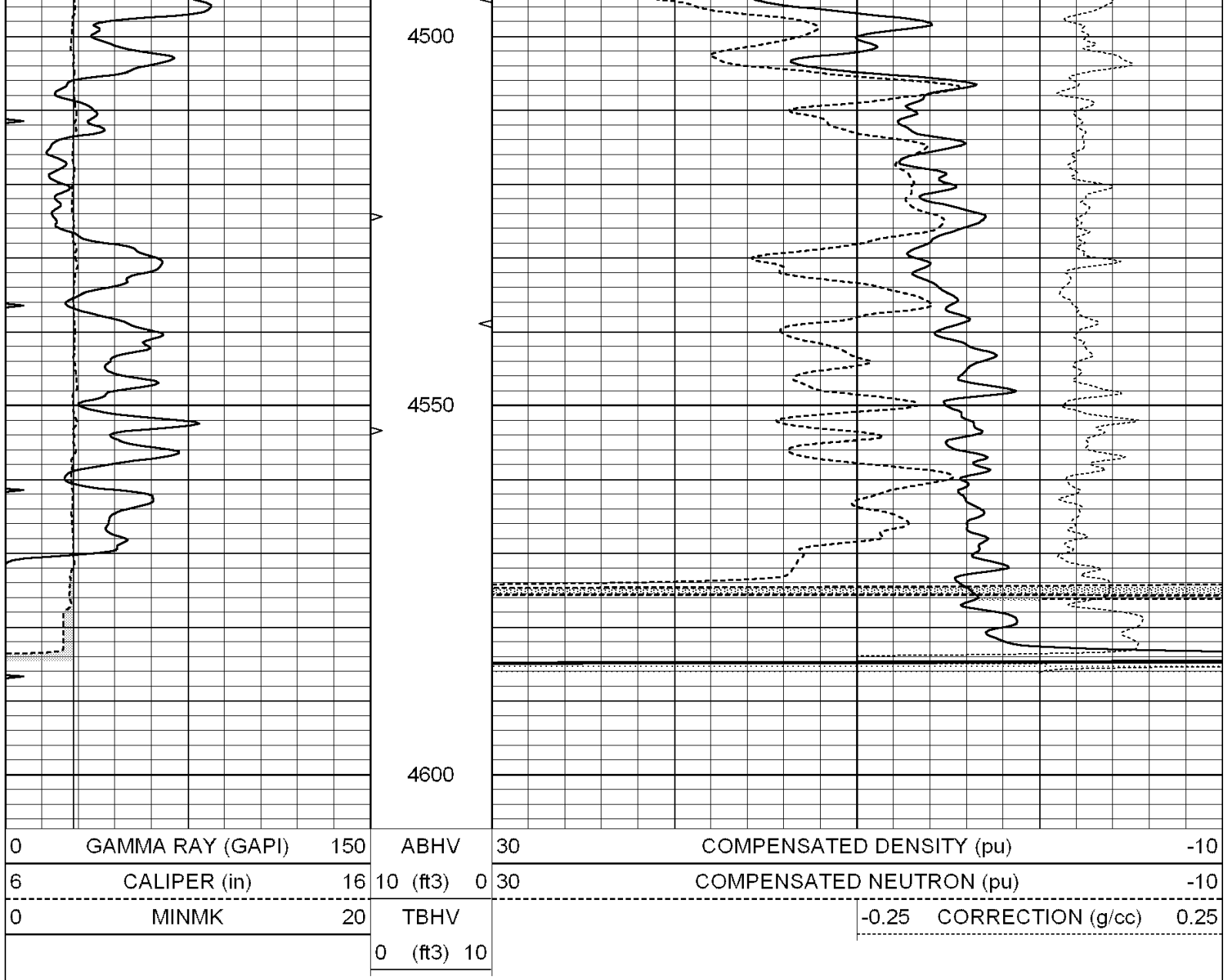
SUPERIOR
Hays,
Kansas

REPEAT SECTION

Database File: 005104ddn.db
 Dataset Pathname: pass2.1
 Presentation Format: _den_neu
 Dataset Creation: Mon Mar 22 20:58:01 2010 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	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		





Calibration Report

Database File: 005104ddn.db
Dataset Pathname: pass3.2
Dataset Creation: Mon Mar 22 22:10:15 2010 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
Surface Cal Performed: Fri Aug 01 06:33:19 2008
Downhole Cal Performed: Mon Jul 28 11:08:27 2008
After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration			Readings		References		Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-6.500	V		3800.000	mmho-m		

After Survey Verification								
	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Compensated Density Calibration Report								
Serial-Model:				GEAR4-GEARHART				
Source / Verifier:				143 / 143				
Master Calibration Performed:				Mon Mar 22 11:13:58 2010				

Master Calibration						
	Density			Far Detector		Near Detector
Magnesium	1.710	g/cc		861.09	413.41	cps
Aluminum	2.580	g/cc		196.82	293.14	cps
Spine Angle = 76.89			Density/Spine Ratio = 0.574			
	Size			Reading		
Small Ring	8.00	in		1.66	V	
Large Ring	14.00	in		2.72	V	

Compensated Neutron Calibration Report						
Serial Number:			5I			
Tool Model:			G			

CALIBRATION						
Detector		Readings		Target		Normalization
Short Space		1.00	cps	1.00	cps	1.0000
Long Space		1.00	cps	1.00	cps	1.0000

Gamma Ray Calibration Report						
Serial Number:		GR6				
Tool Model:		OPEN				
Performed:		Tue Nov 10 08:32:36 2009				
Calibrator Value:		150.0	GAPI			
Background Reading:		0.0	cps			
Calibrator Reading:		276.0	cps			
Sensitivity:		0.5535	GAPI/cps			