



**SUPERIOR  
Hays,  
Kansas**

**COMPENSATED  
NEUTRON / DENSITY  
LOG**

Company PIONEER EXPLORATION, IIC.  
Well GREEN #2  
Field SPIVEY-GRABS BASIL  
County HARPER  
State KANSAS

Company PIONEER EXPLORATION, LLC.  
Well GREEN #2  
Field SPIVEY-GRABS BASIL  
County HARPER State KANSAS

Location: API #: 15-077-21678  
890' FSL & 1650' FEL  
SEC 29 TWP 31S RGE 9W  
Permanent Datum GROUND LEVEL Elevation 1660'  
Log Measured From KELLY BUSHING 10' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
DIL  
MICRO  
Elevation  
K.B. 1670  
D.F.  
G.L. 1660

Date	4-5-10
Run Number	ONE
Depth Driller	4600
Depth Logger	4600
Bottom Logged Interval	4576
Top Log Interval	2400
Casing Driller	225
Casing Logger	NA
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4 / 50
pH / Fluid Loss	9.0 / 12.0
Source of Sample	FLOWLINE
Rim @ Meas. Temp	0.65 @ 94F
Rmf @ Meas. Temp	0.49 @ 94F
Rmc @ Meas. Temp	0.78 @ 94F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.500 @ 121F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	8:30 A.M.
Maximum Recorded Temperature	121F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	PAT DEENIHAN

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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

SUPERIOR WELL SERVICES  
785-628-6395  
THANK YOU FOR YOUR BUSINESS  
DIRECTIONS: SHARON, EAST TO C.L., 2E TO RD. #150, 4 1/2N, W INTO.

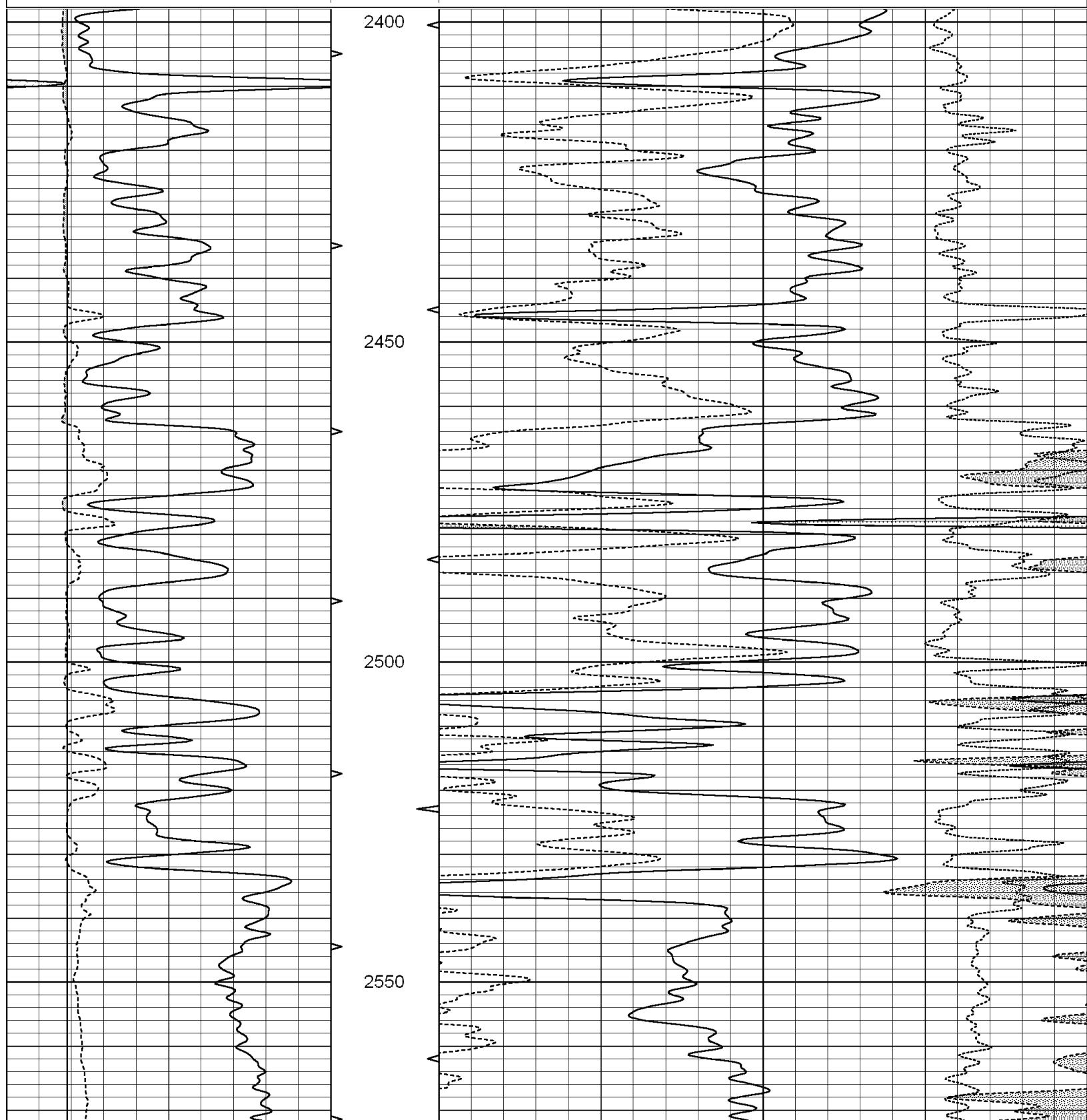


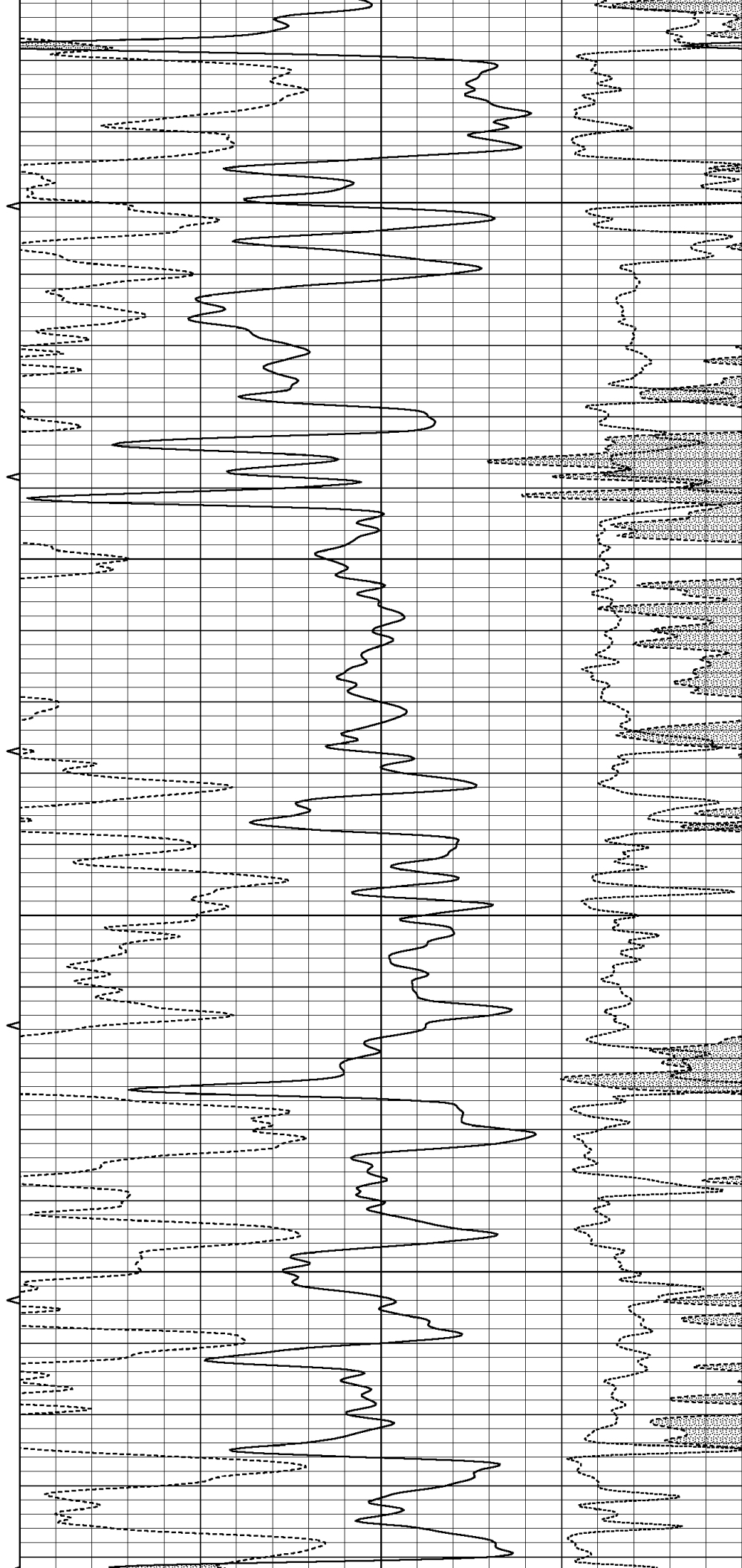
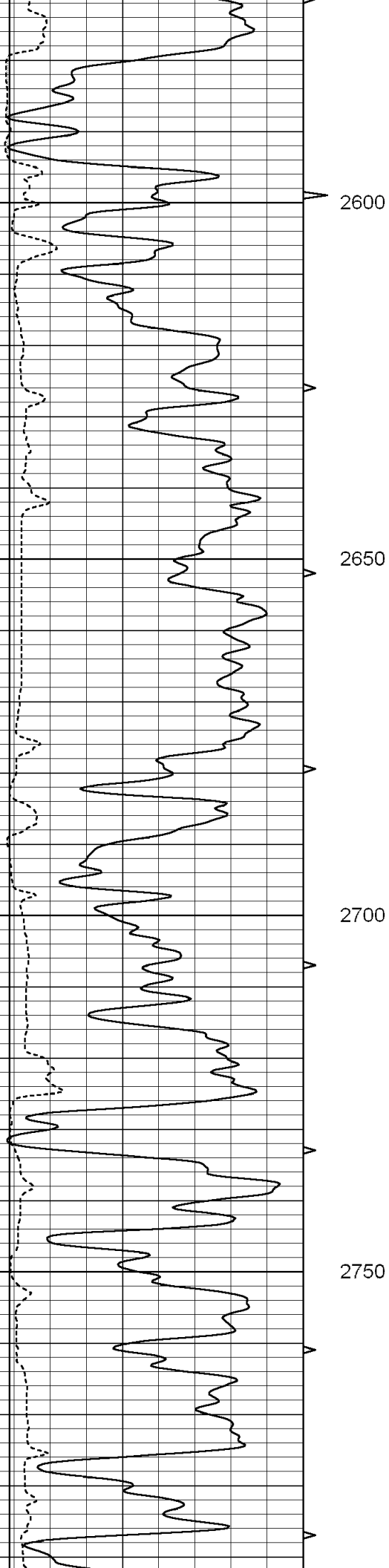
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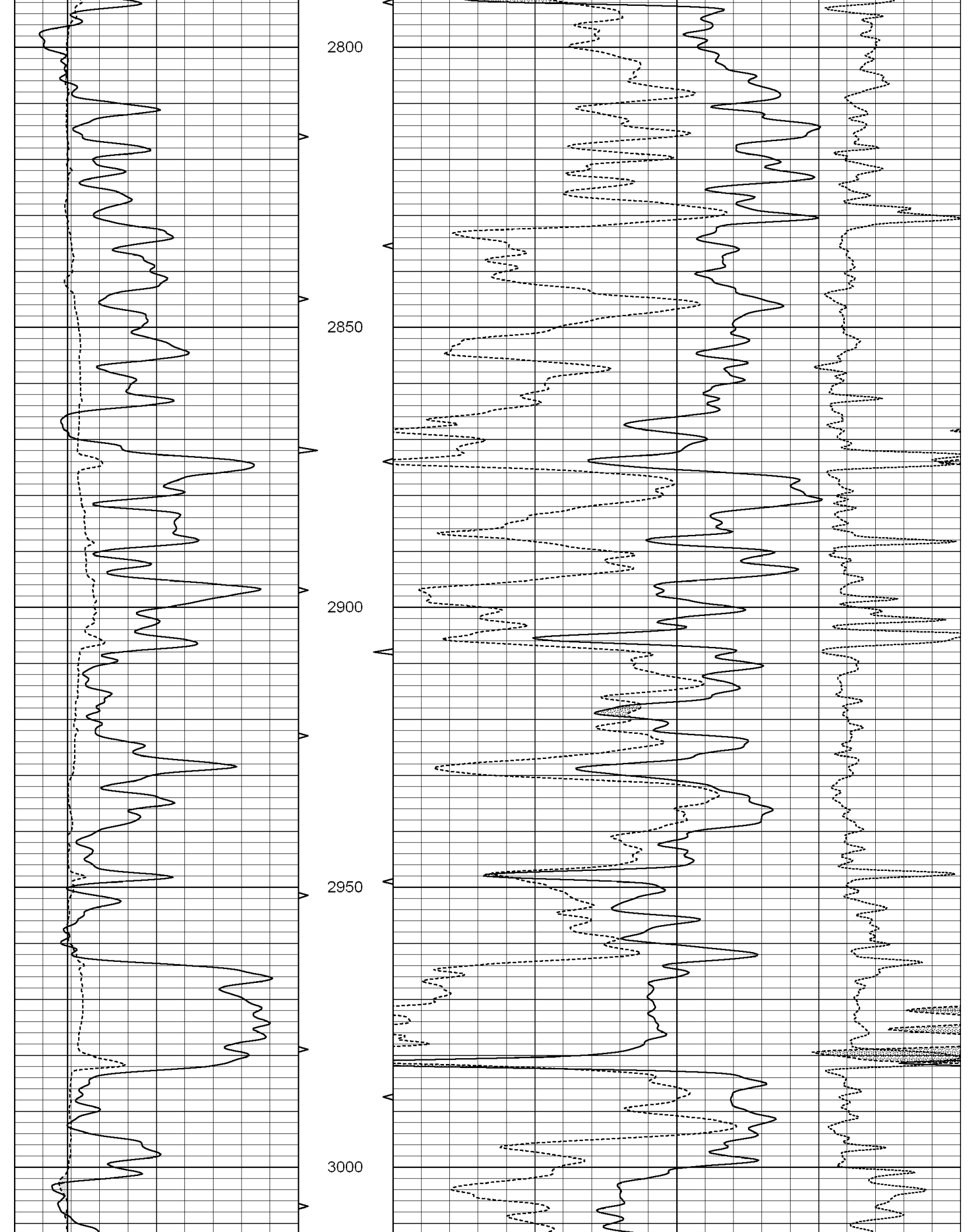
**MAIN SECTION**

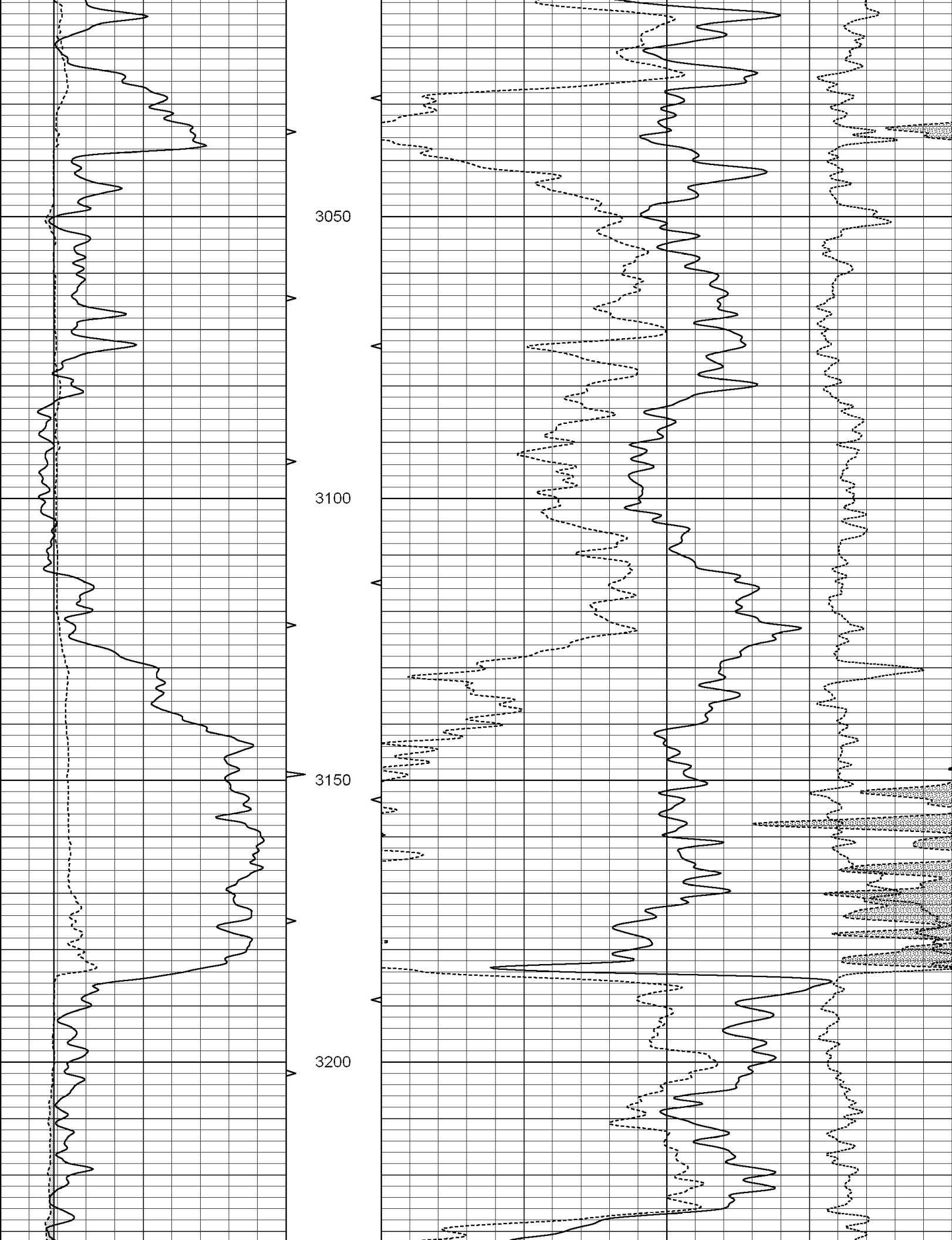
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 Presentation Format: den\_neu  
 Dataset Creation: Mon Apr 05 10:30:47 2010  
 Charted by: Depth in Feet scaled 1:240

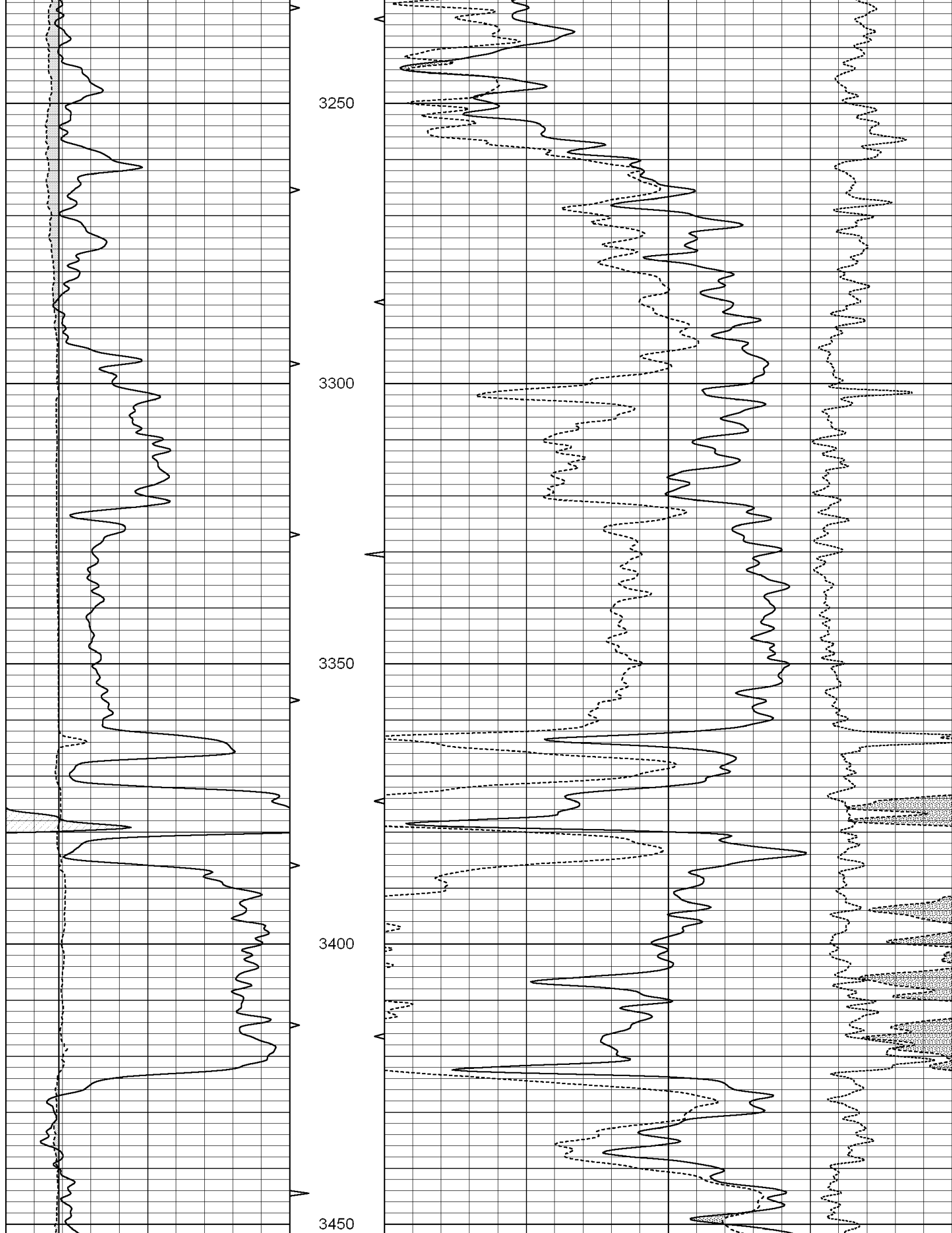
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6	CALIPER (in)	16	10 (ft3)	0	COMPENSATED NEUTRON (pu)	-10
			TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		

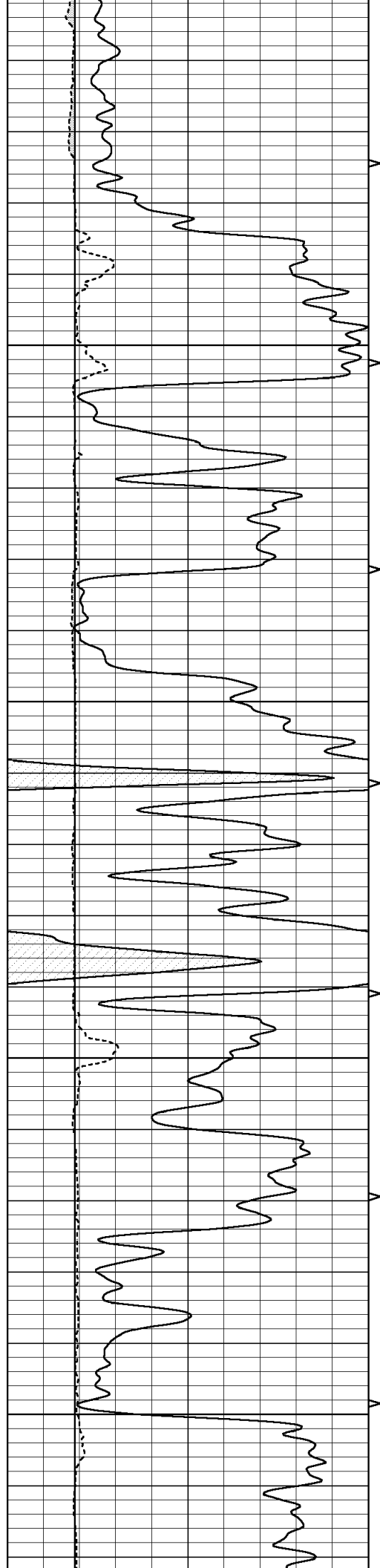










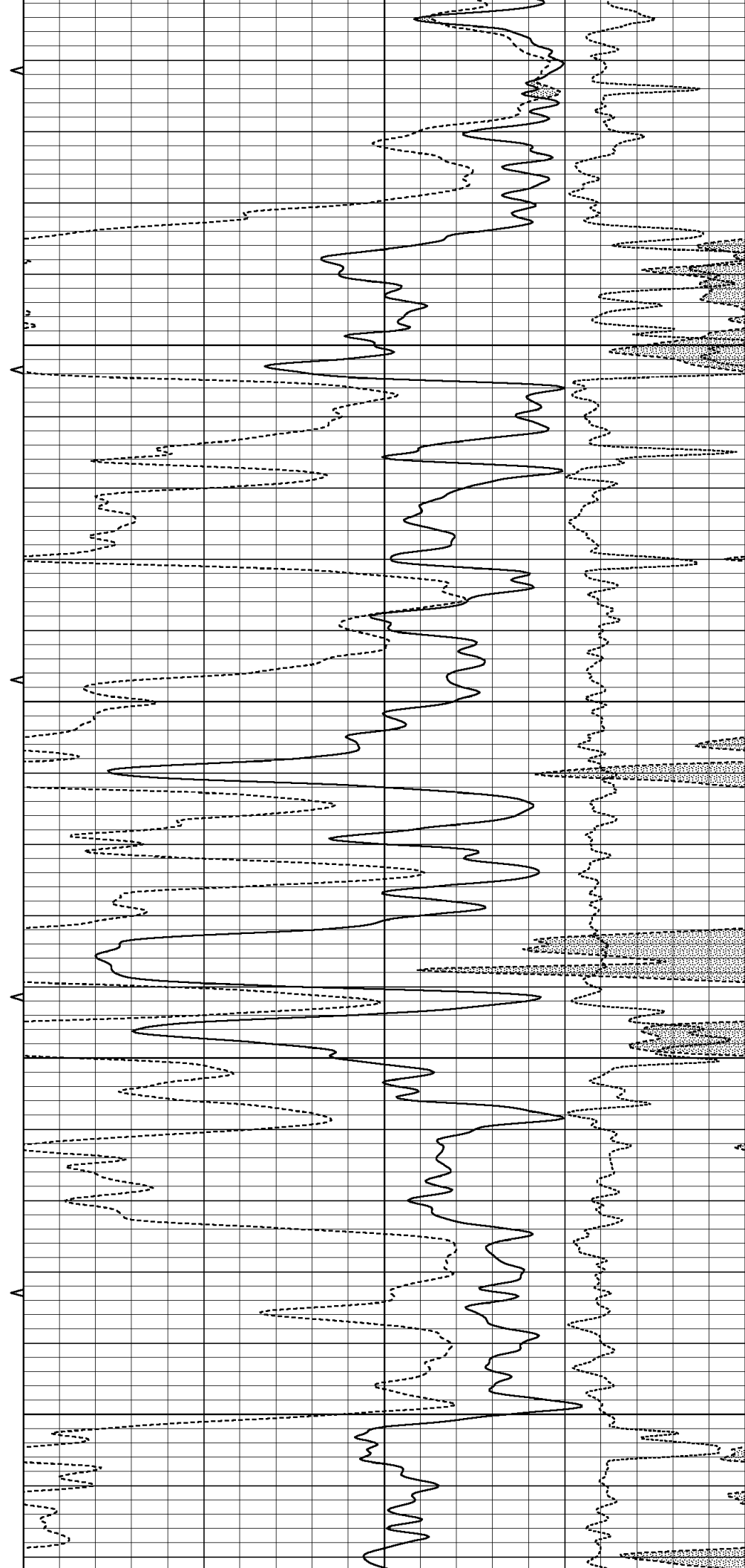


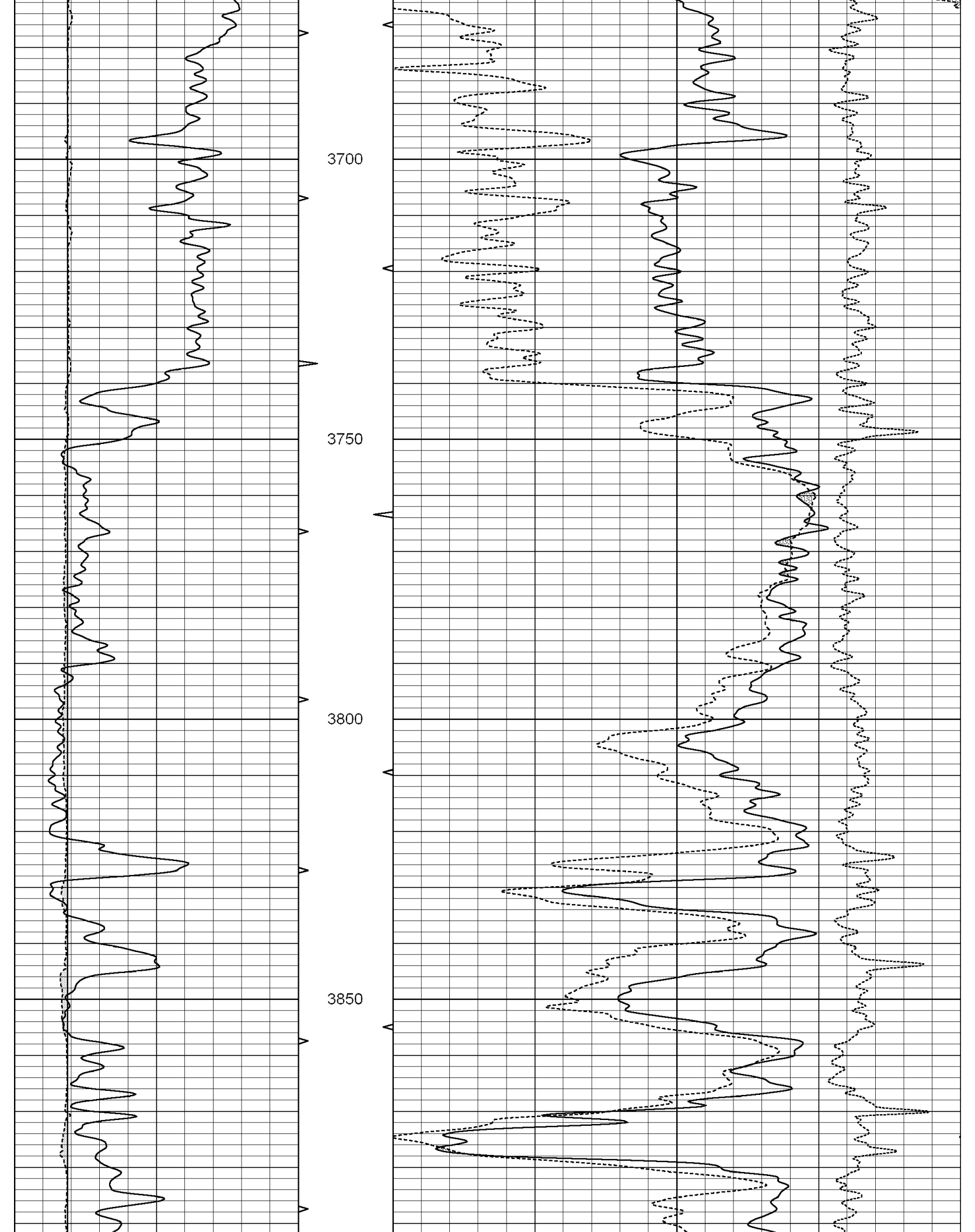
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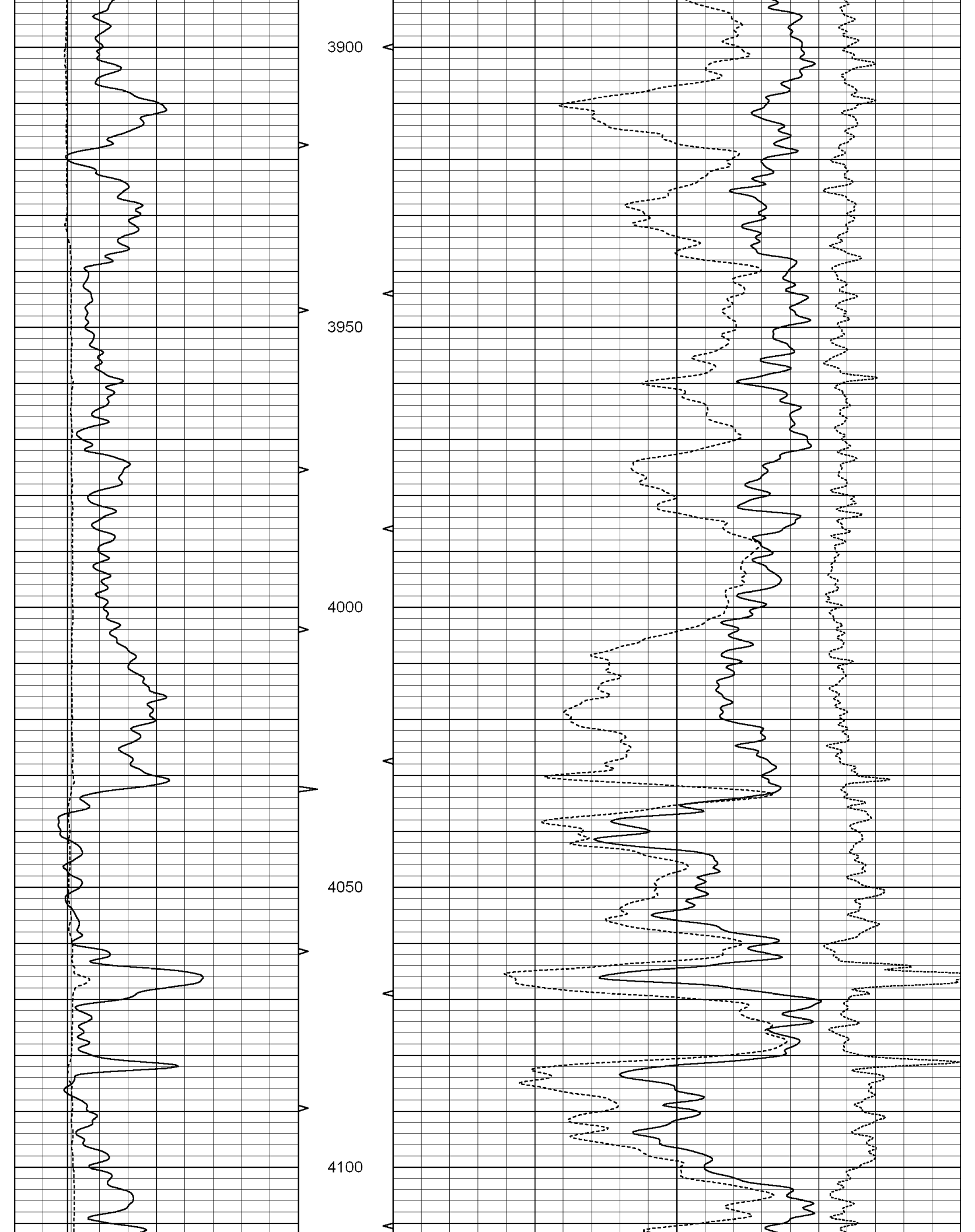
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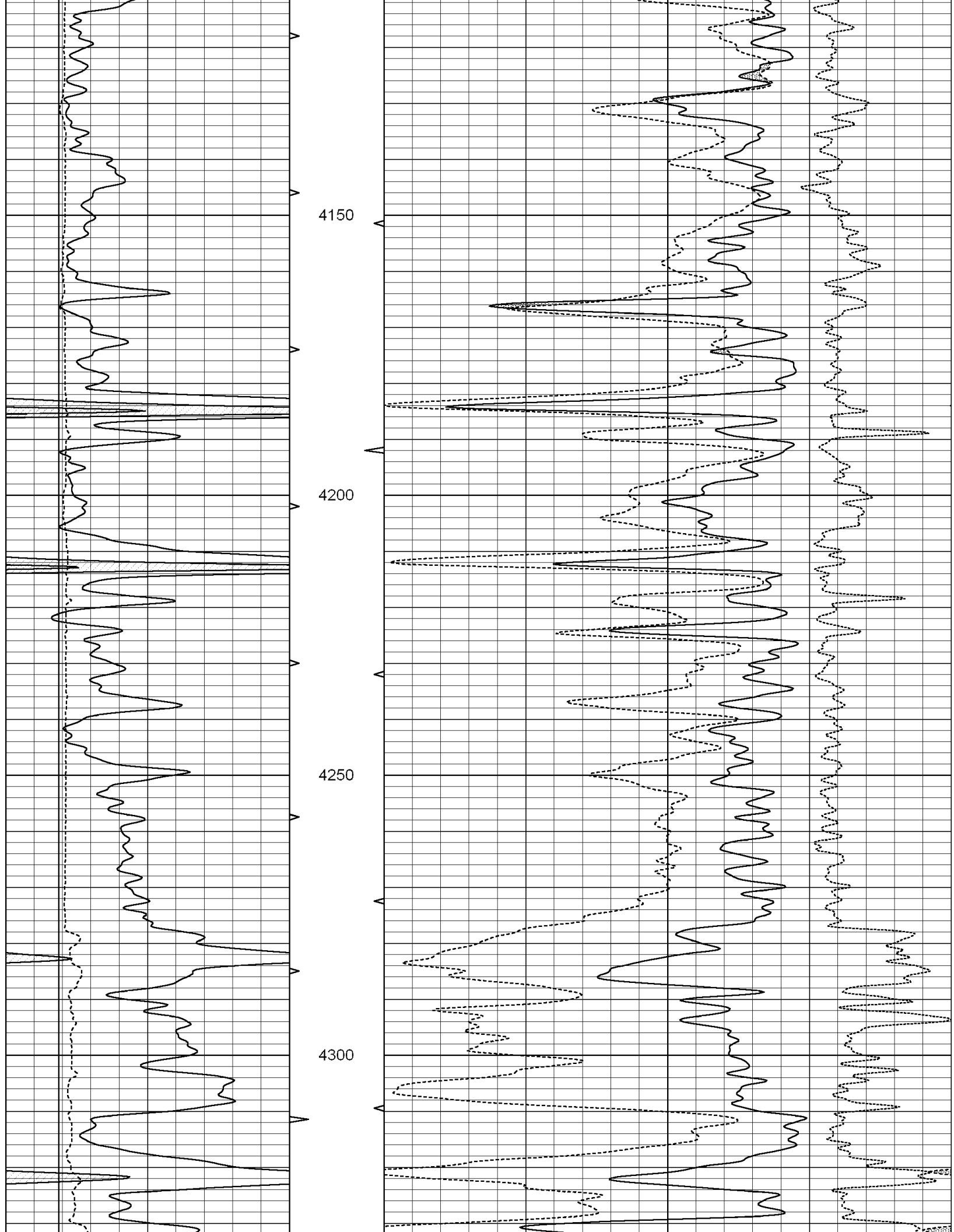
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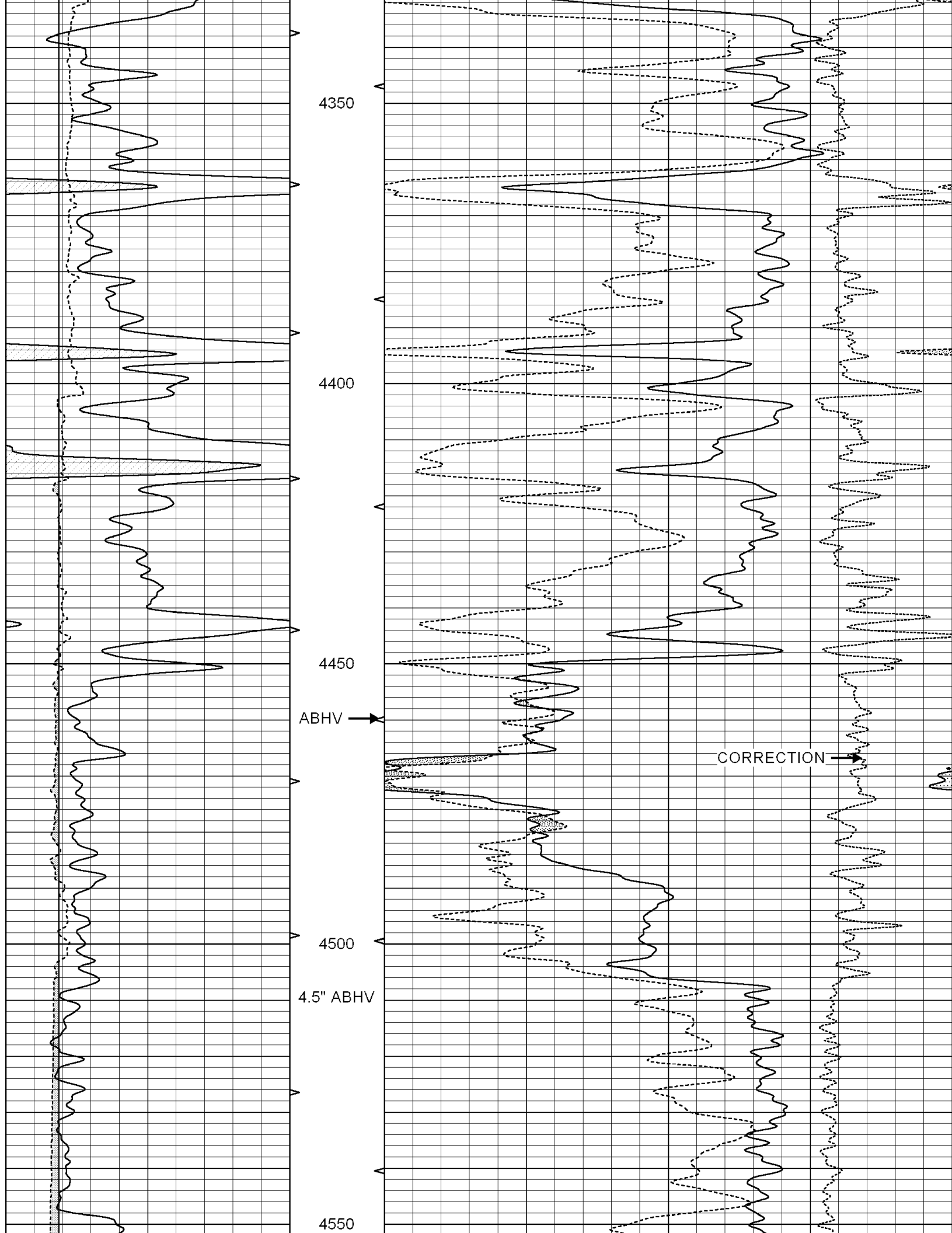
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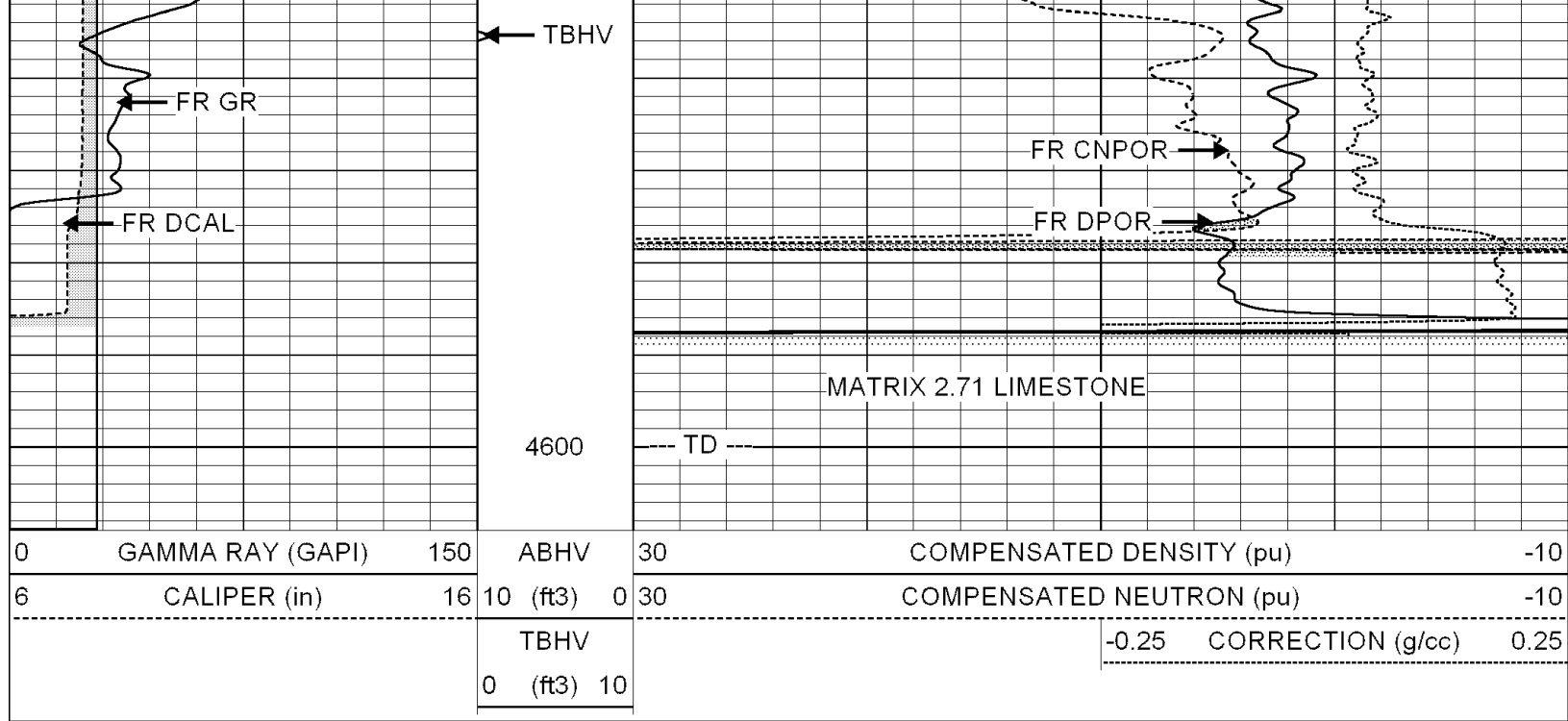










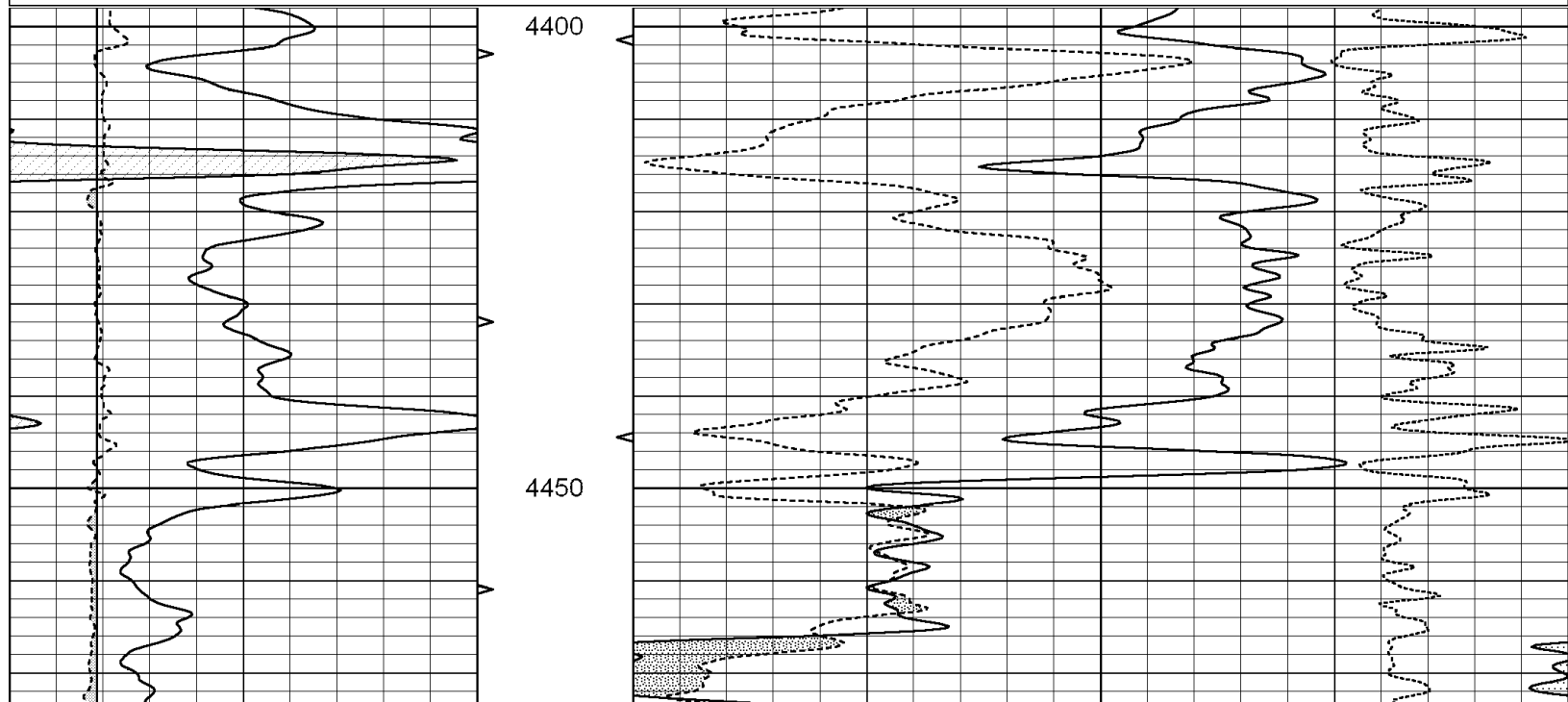


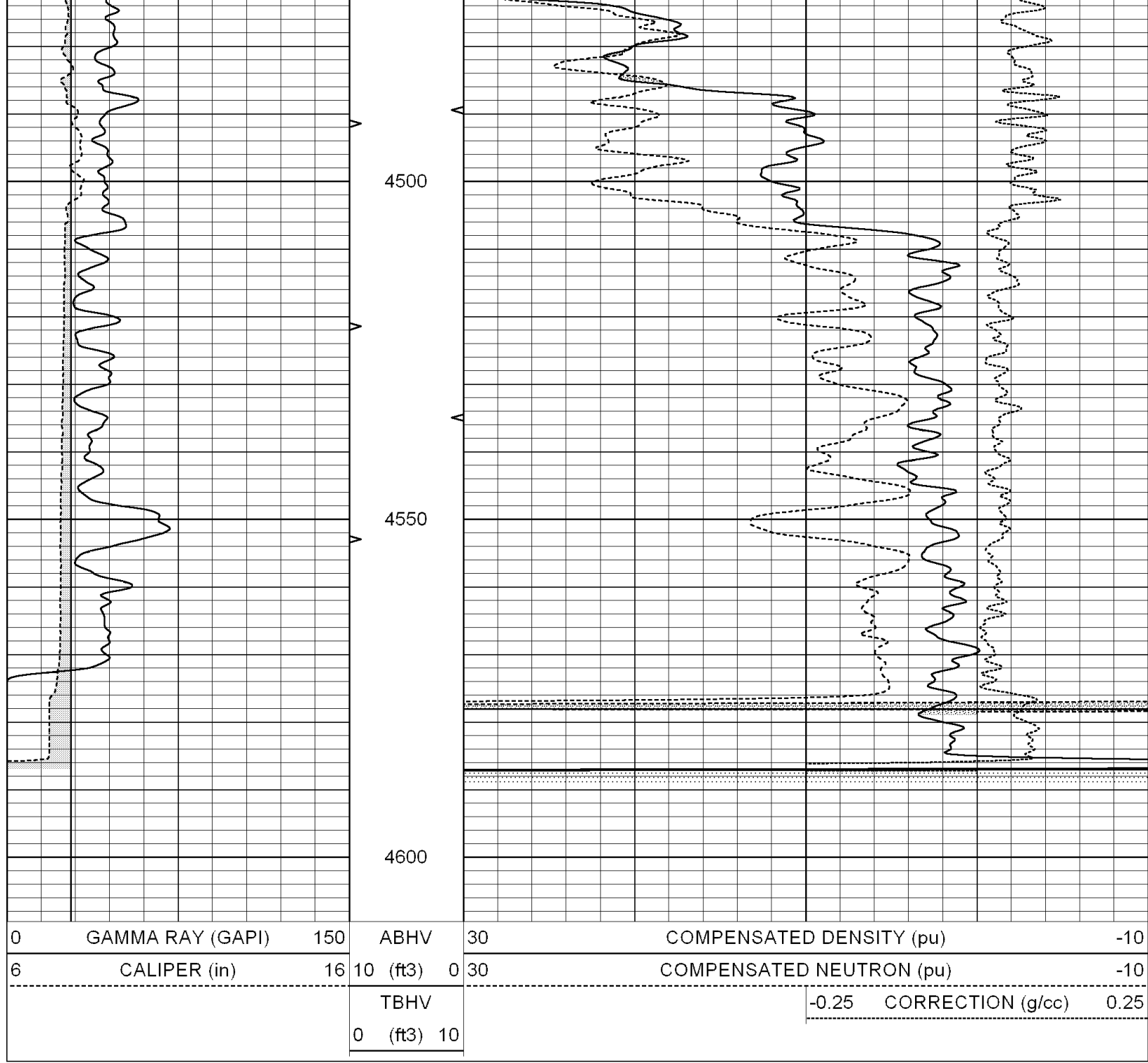
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# REPEAT SECTION

Database File: 004624ddn.db  
 Dataset Pathname: pass2.1  
 Presentation Format: den\_neu  
 Dataset Creation: Mon Apr 05 08:36:17 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 30	COMPENSATED NEUTRON (pu)	-10
			TBHV		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		





**Calibration Report**

Database File: 004624ddn.db  
 Dataset Pathname: pass3.1A  
 Dataset Creation: Mon Apr 05 10:30:47 2010

**Dual Induction Calibration Report**

Serial-Model: DIL5-GEAR  
 Performed: Mon Apr 05 08:22:13 2010

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	0.004	0.654	V	0.000	400.000	mmho/m	550.000	-10.000
Medium	-0.005	0.737	V	0.000	462.500	mmho/m	520.000	-14.000
Internal:	Zero	Cal		Zero	Cal		m	b

Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.006	0.655	V	0.000	400.000	mmho/m	615.668	-3.483
Medium	0.010	0.747	V	0.000	462.500	mmho/m	627.607	-6.064

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART  
Source / Verifier: 147 / 147  
Master Calibration Performed: Mon Apr 05 08:09:25 2010

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1243.76	629.14	cps
Aluminum	2.580	g/cc	282.16	435.01	cps
Spine Angle = 76.03			Density/Spine Ratio = 0.569		
	Size		Reading		
Small Ring	8.50	in	3.68	V	
Large Ring	14.00	in	6.06	V	

Compensated Neutron Calibration Report

Serial Number: NEU\_11  
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: GR5  
Tool Model: OPEN  
Performed: Mon Apr 05 09:12:31 2010

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps