



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
LOG**

Company	WOOLSEY OPERATING COMPANY, LLC.		
Well	WARREN FEE #13		
Field	MEDICINE LODGE NORTH		
County	BARBER	State	KANSAS
Location:	API # : 15-007-24192-00-00		Other Services
	1380' FSL & 1000' FWL SE - SE - NW - SW		DIL
	SEC 19 TWP 32S RGE 12W		
Permanent Datum	GROUND LEVEL	Elevation	1637
Log Measured From	KELLY BUSHING 12' A.G.L.		K.B. 1649 D.F. 1647 G.L. 1637
Drilling Measured From	KELLY BUSHING		
Date	8/5/14		
Run Number	ONE		
Depth Driller	4910		
Depth Logger	4908		
Bottom Logged Interval	4884		
Top Log Interval	1900		
Casing Driller	13 3/8 @ 235		
Casing Logger	230'		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.1/63	CHLORIDES 7,000 PPM	
pH / Fluid Loss	10.5/9.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.52 @ 90F		
Rmf @ Meas. Temp	0.39 @ 90F		
Rmc @ Meas. Temp	0.62 @ 90F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.38 @ 124F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	124F		
Equipment Number	3802		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	BILL KLAVER		

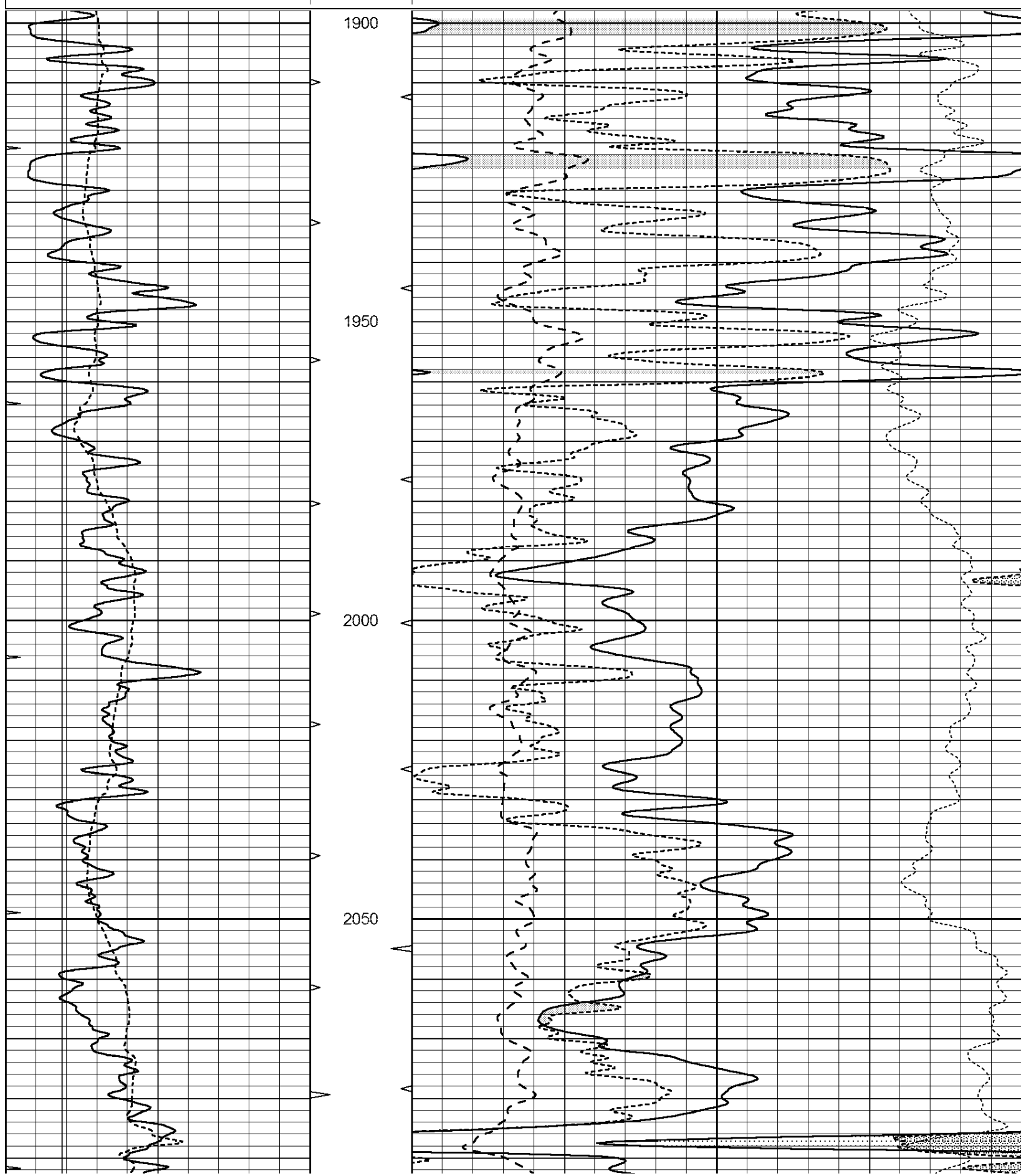
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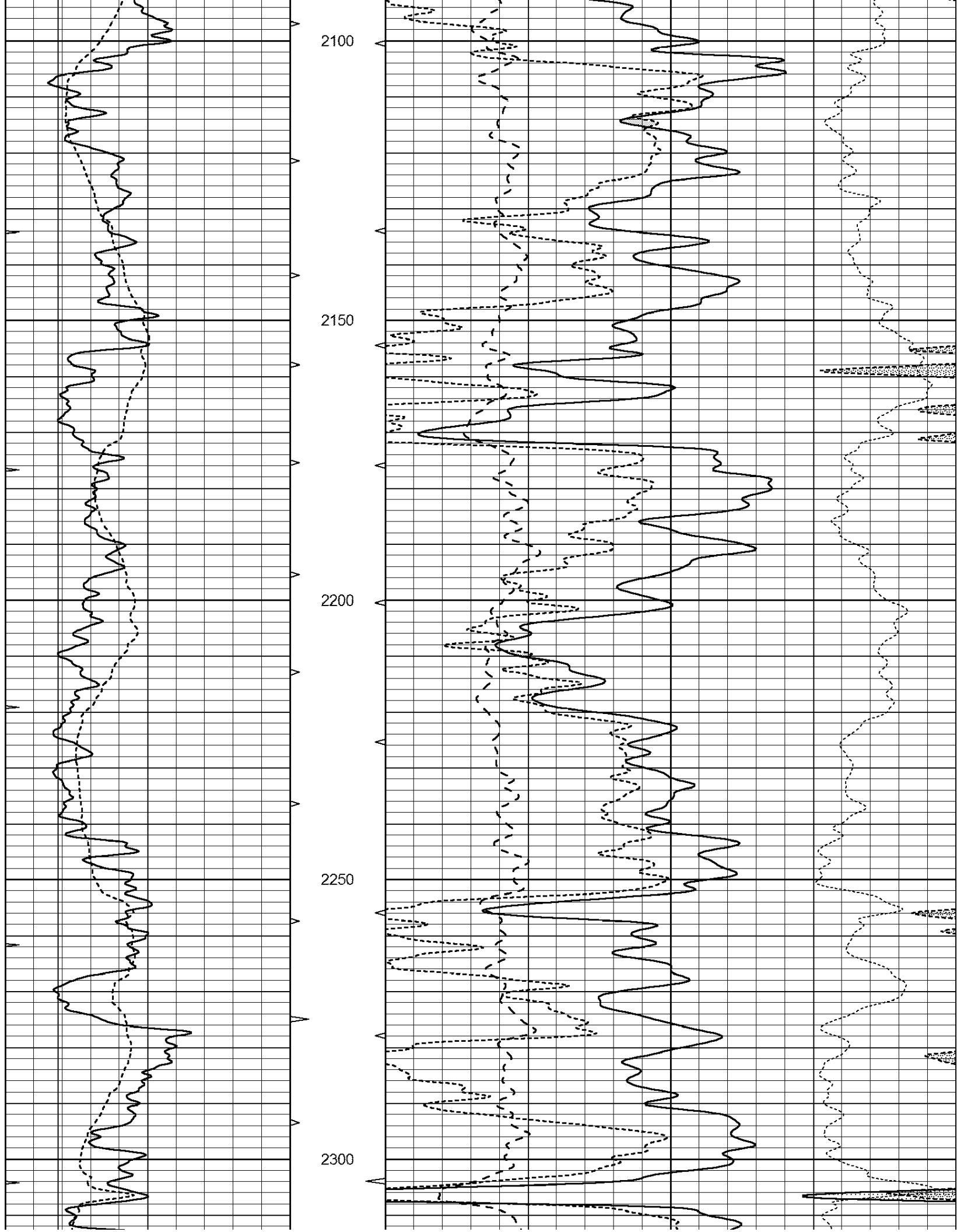
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

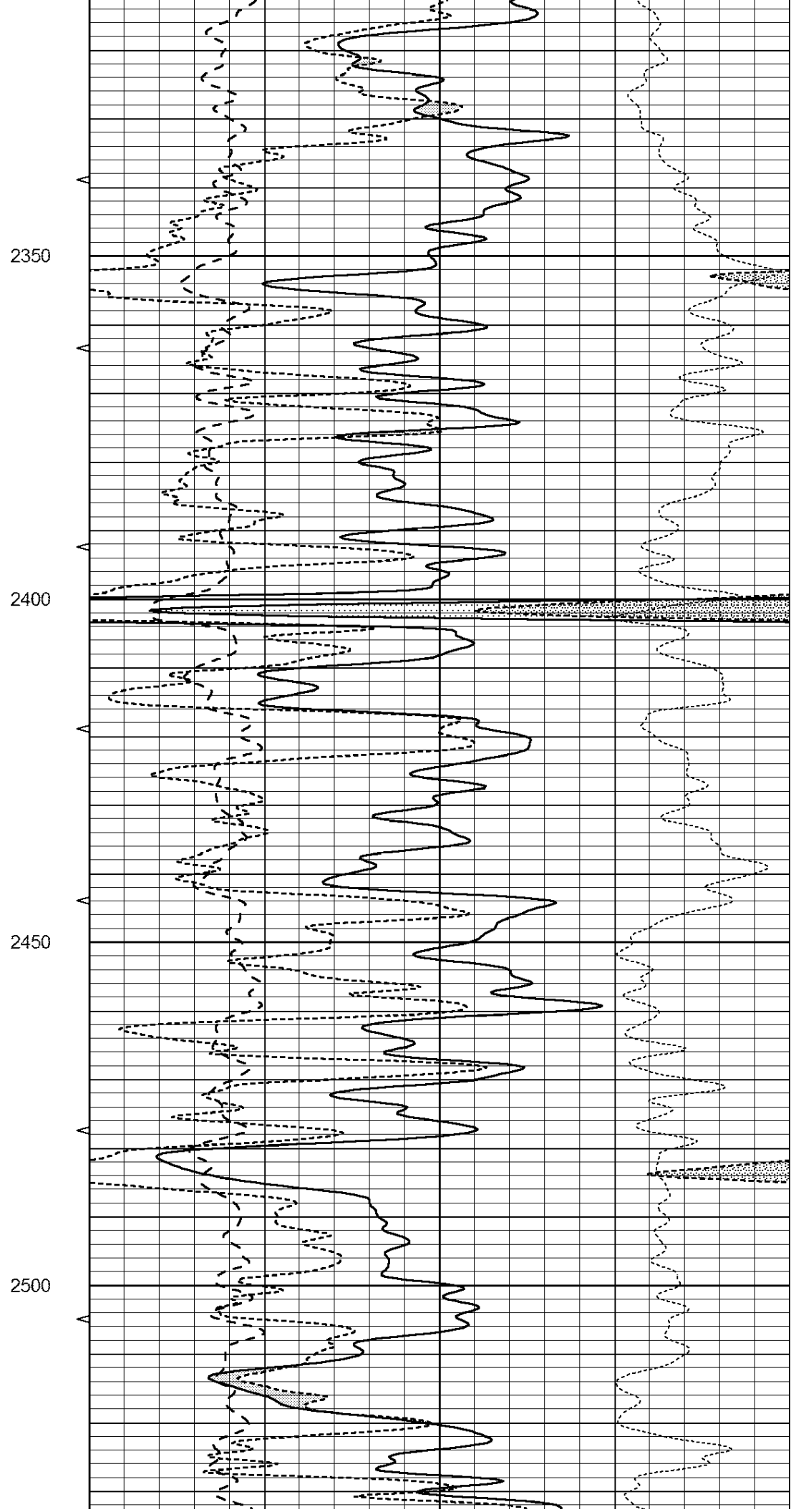
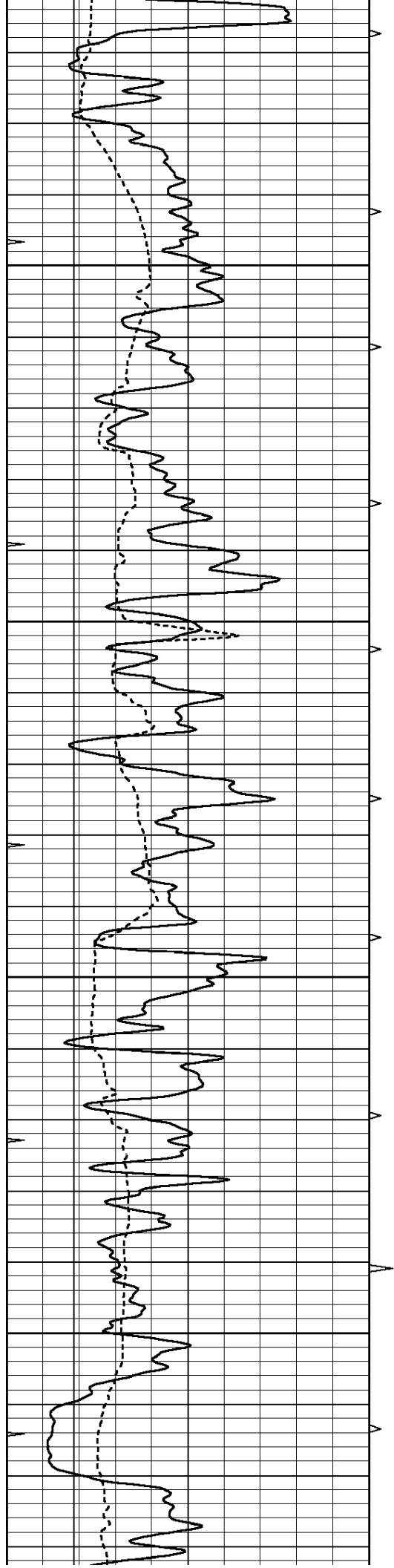
Comments

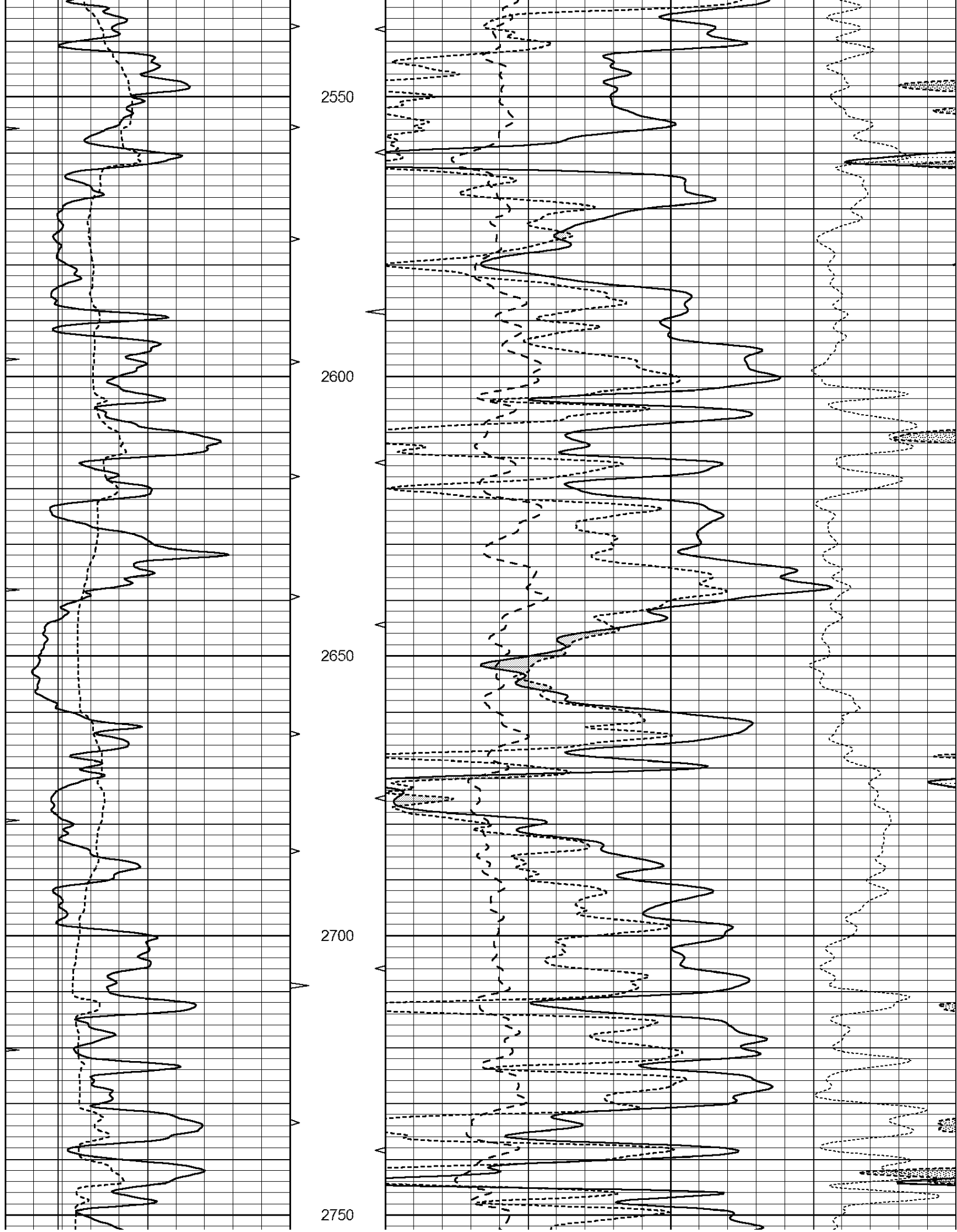
NABORS COMPLETION & PRODUCTION SERVICES CO.
785 (628 - 6395)
THANK YOU FOR YOUR BUSINESS
DIRECTIONS :MEDICINE LODGE, KS. - 3 WEST ON HWY 160 TO GYP HILL RD. - 4 MILES SOUTH TO
CATTLE GUARD WITH OLD RUSTY SKELLY SIGN - WEST INTO ABOUT 1 1/2 MILES N.W. ON WHITE CHALK
LEASE RD.

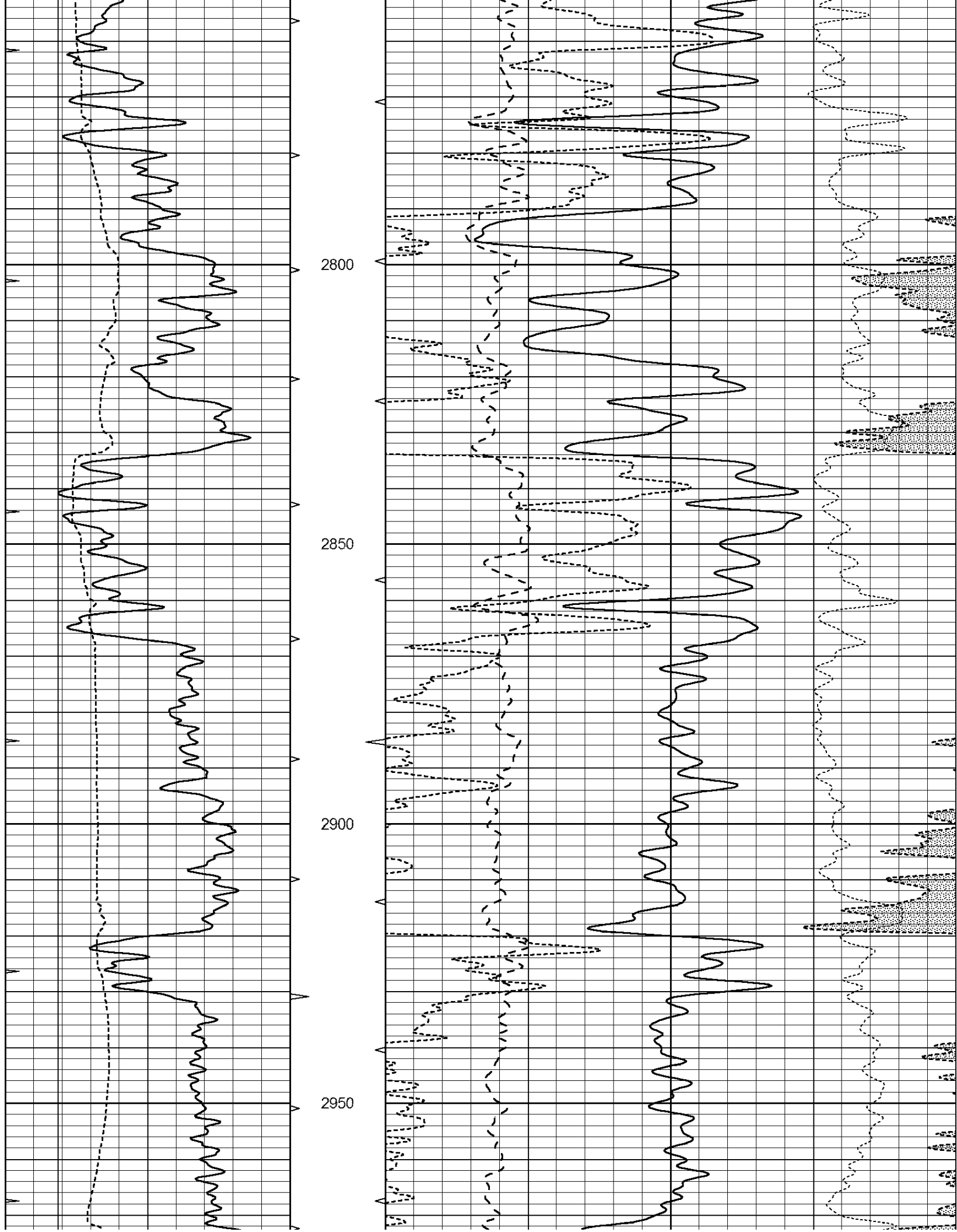
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV	0	PE	10 -0.25 CORRECTION (g/cc) 0.25
			0 (ft3) 10			

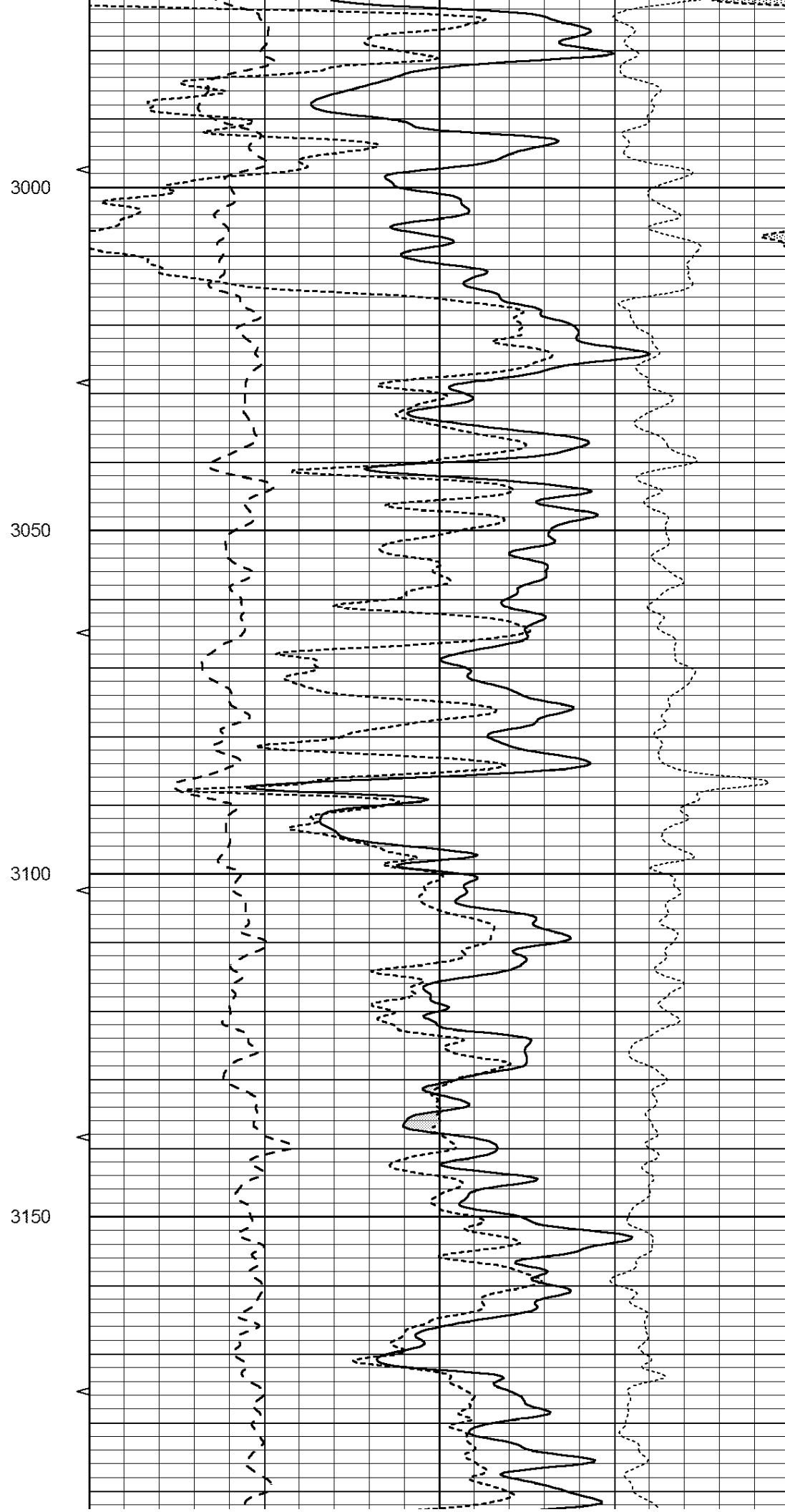
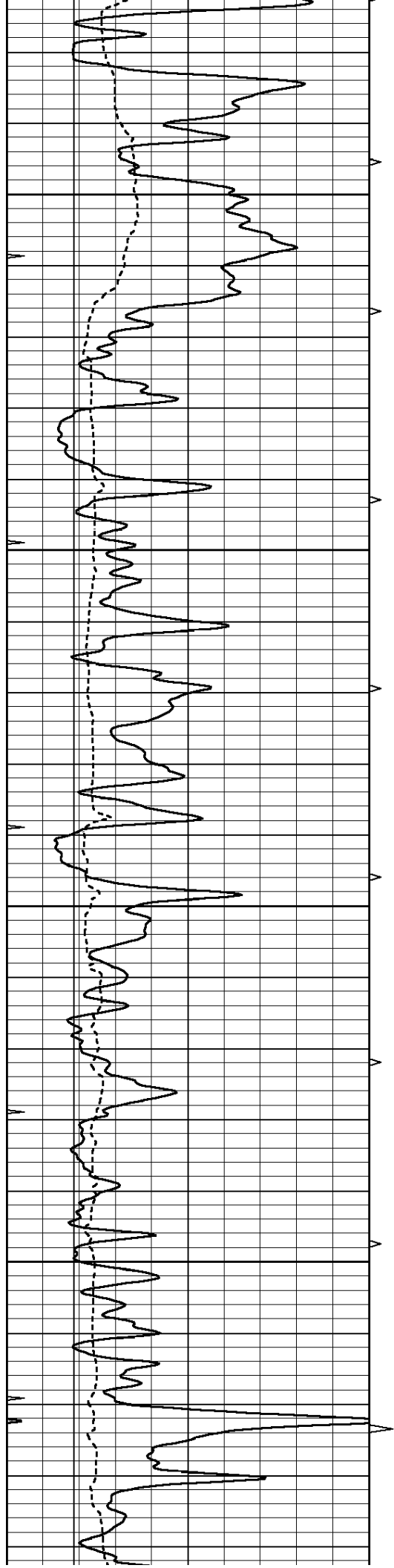


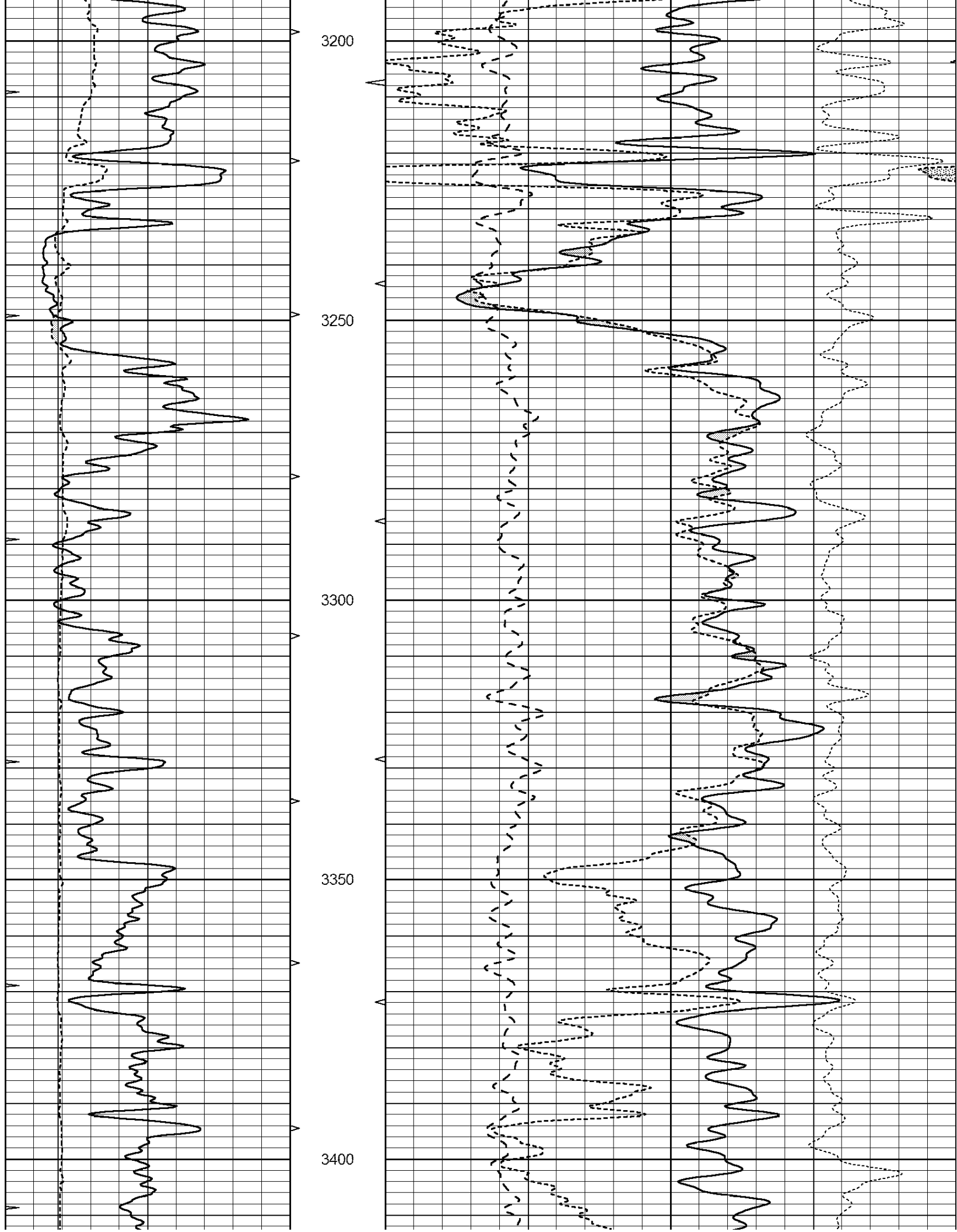


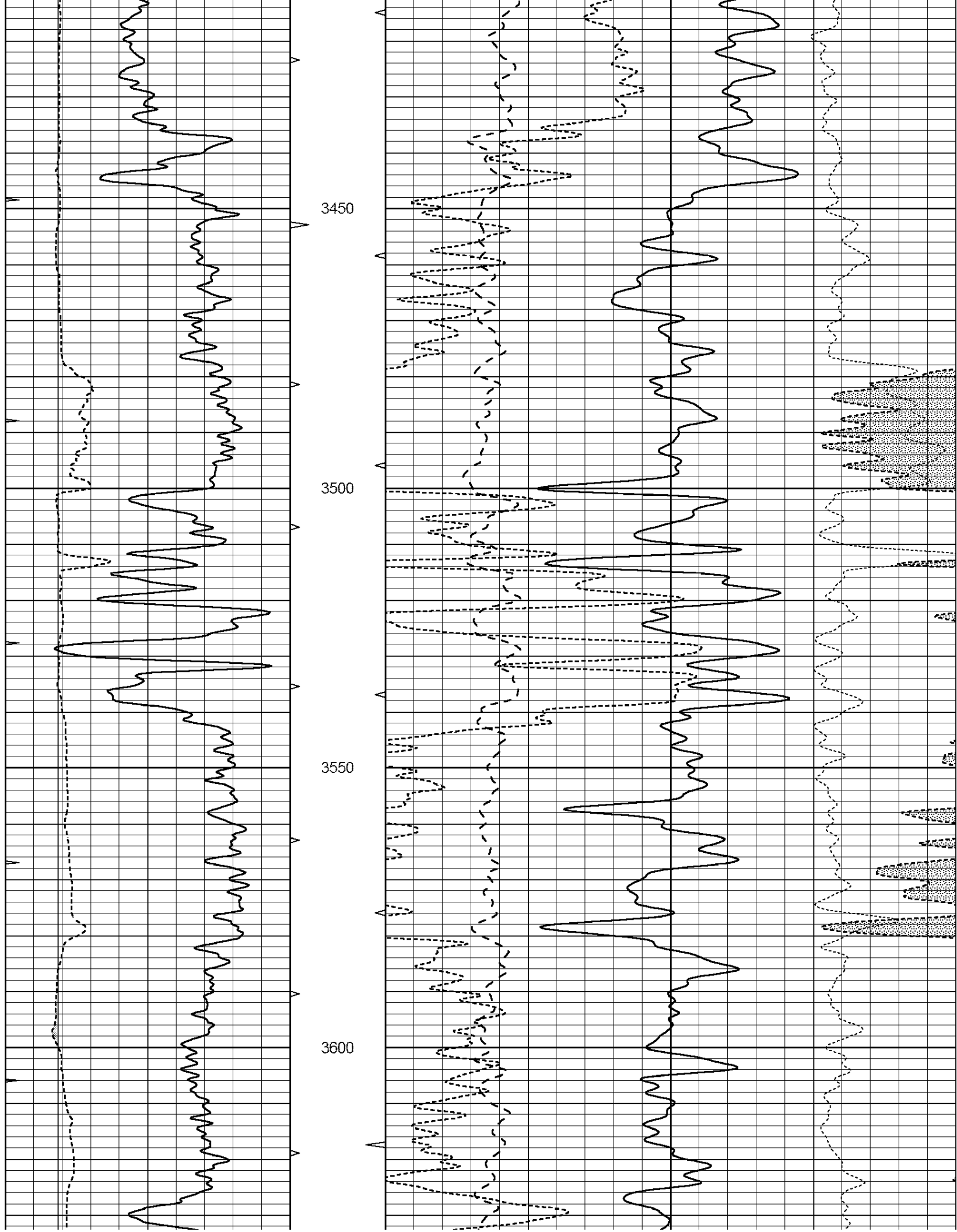


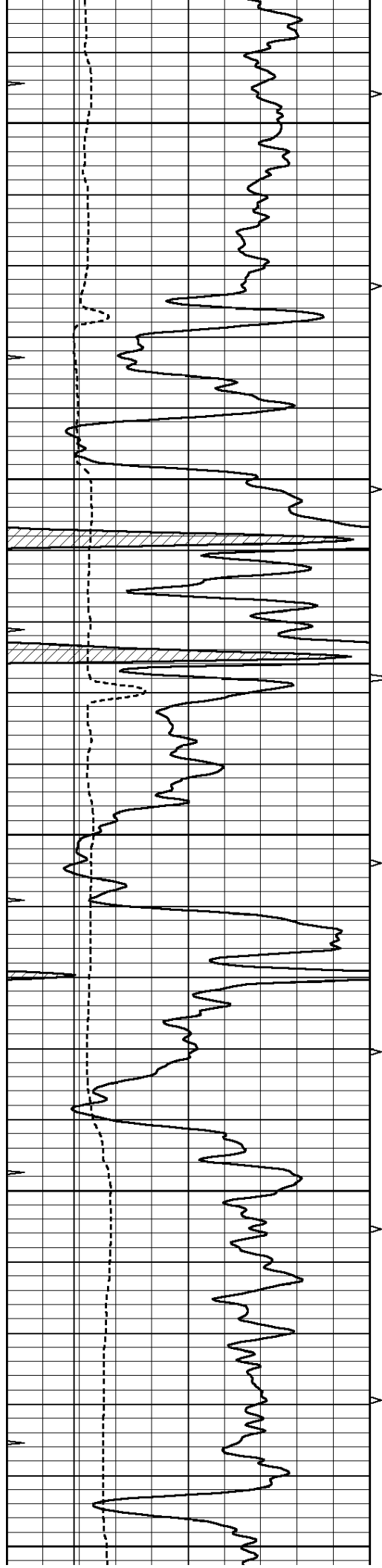












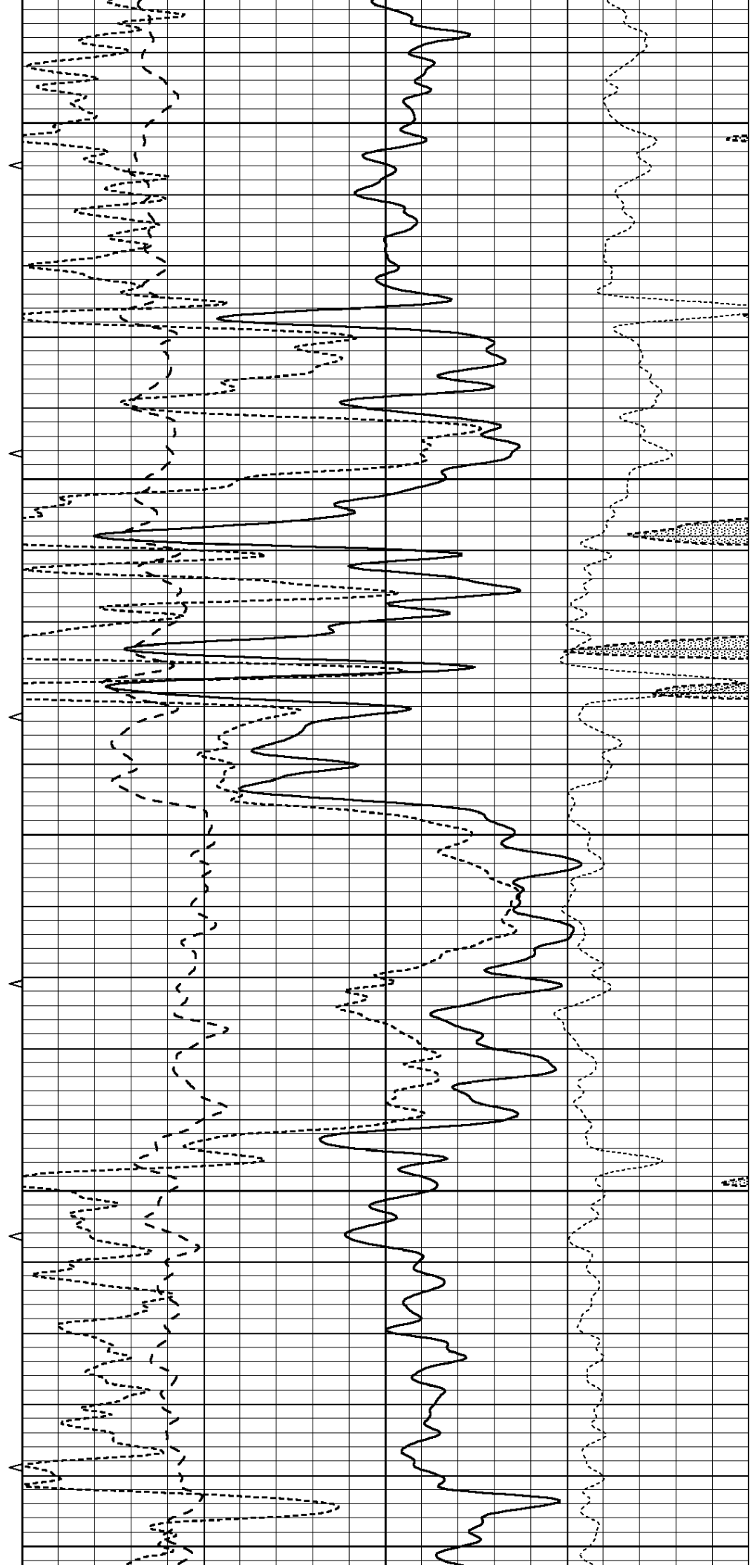
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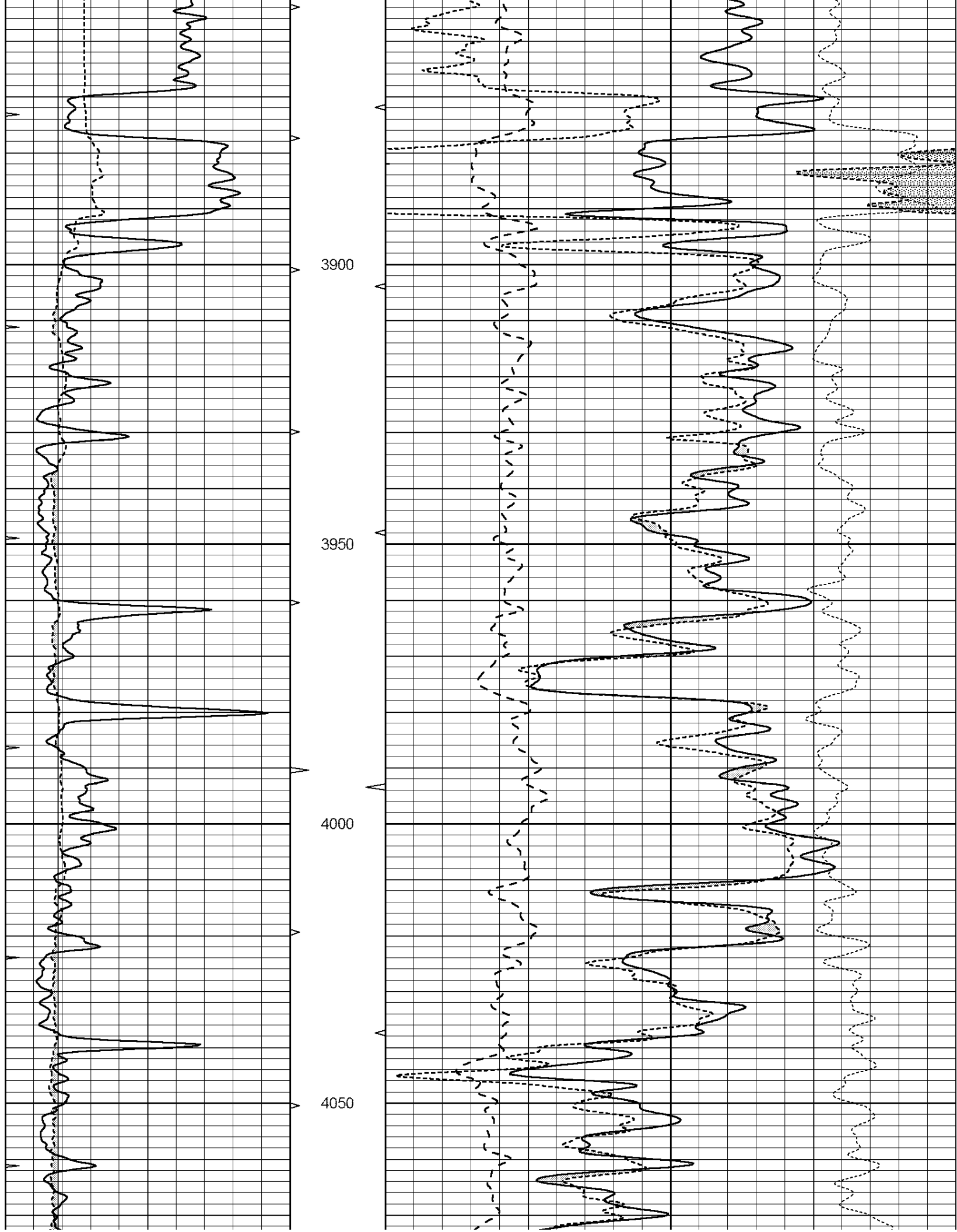
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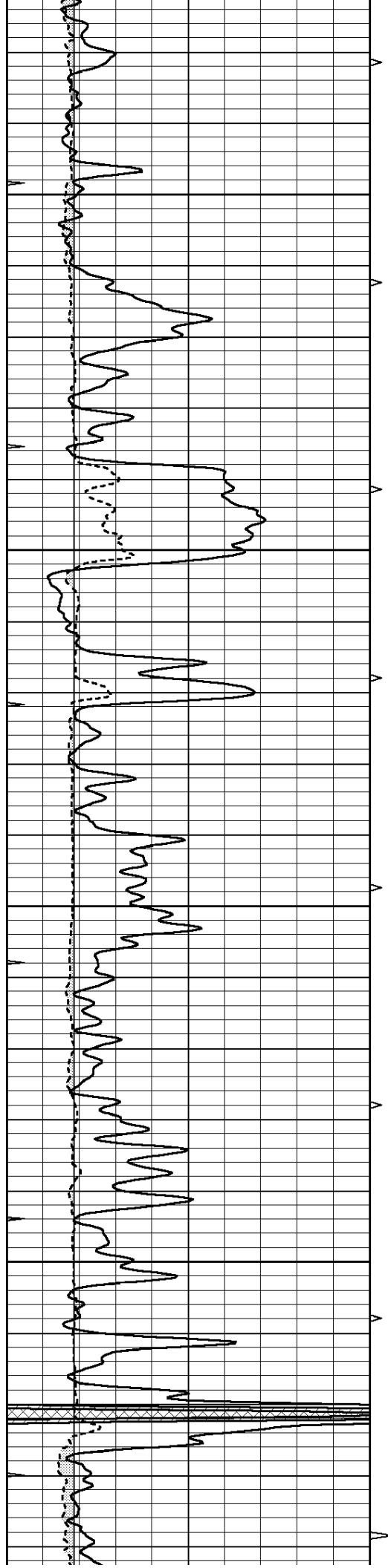
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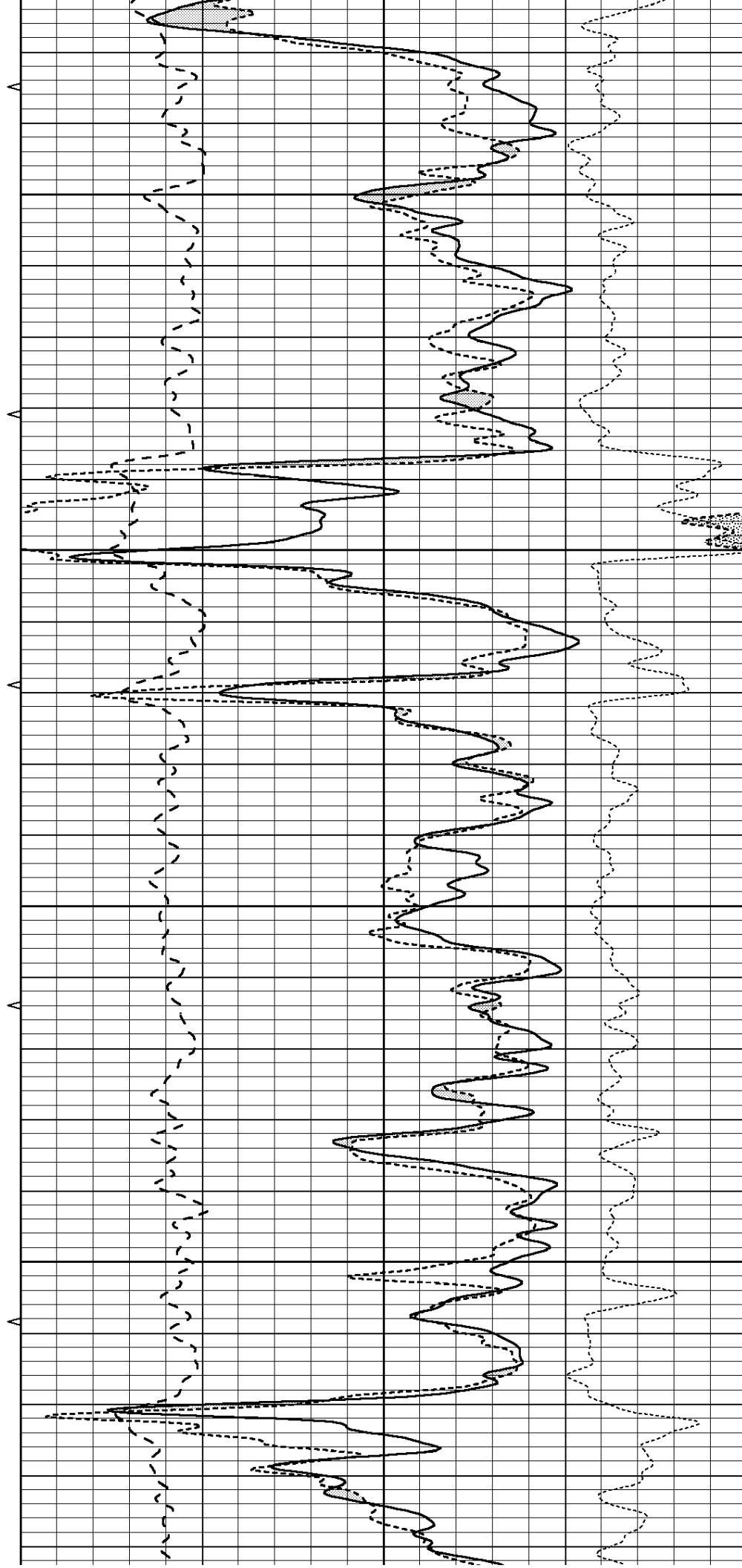


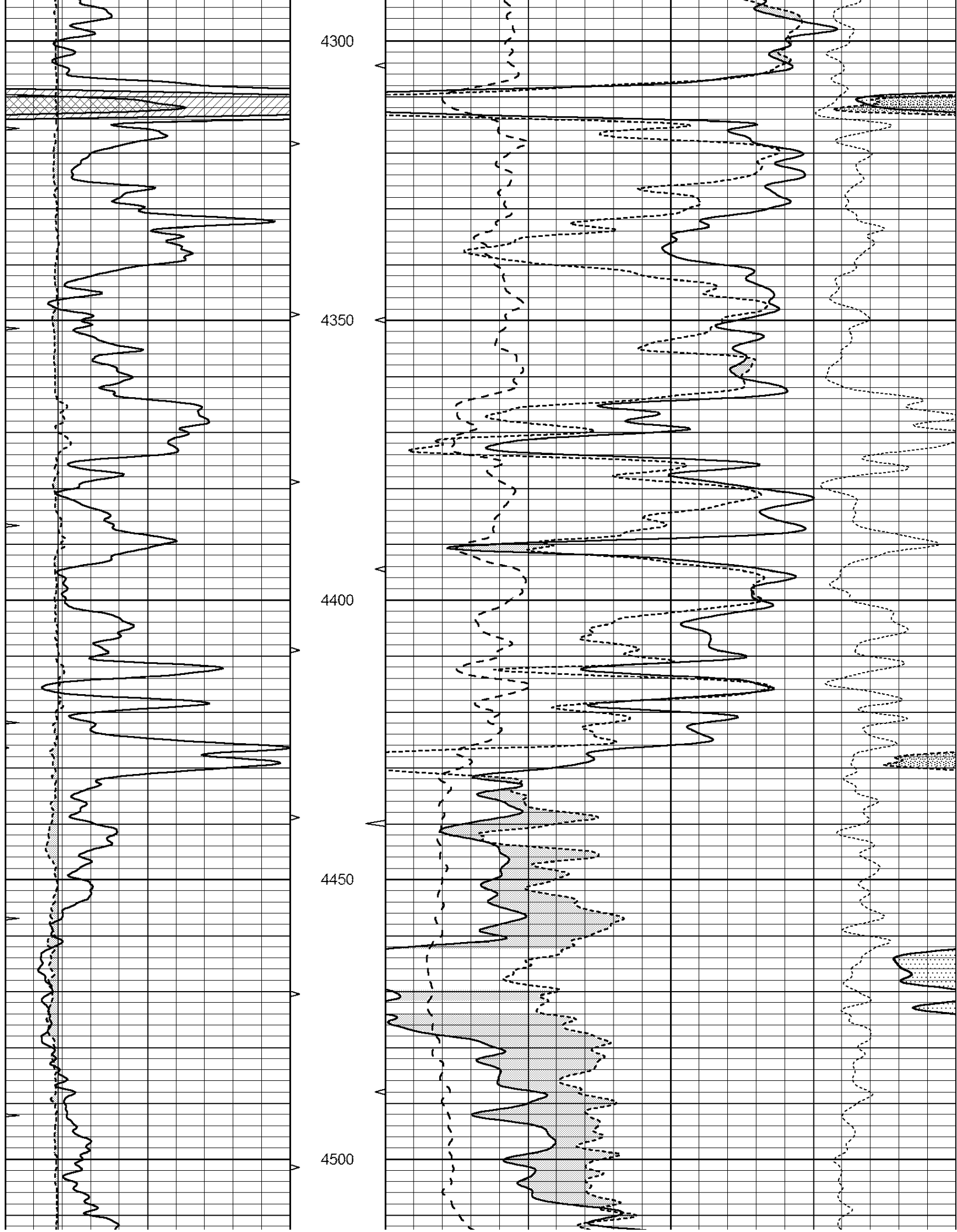
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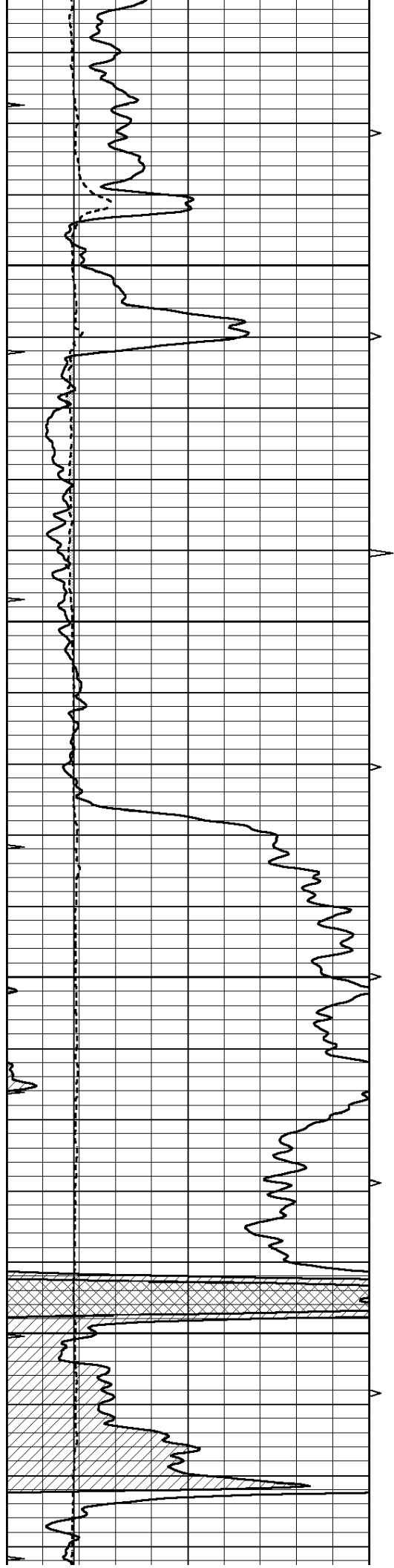
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4200

4250





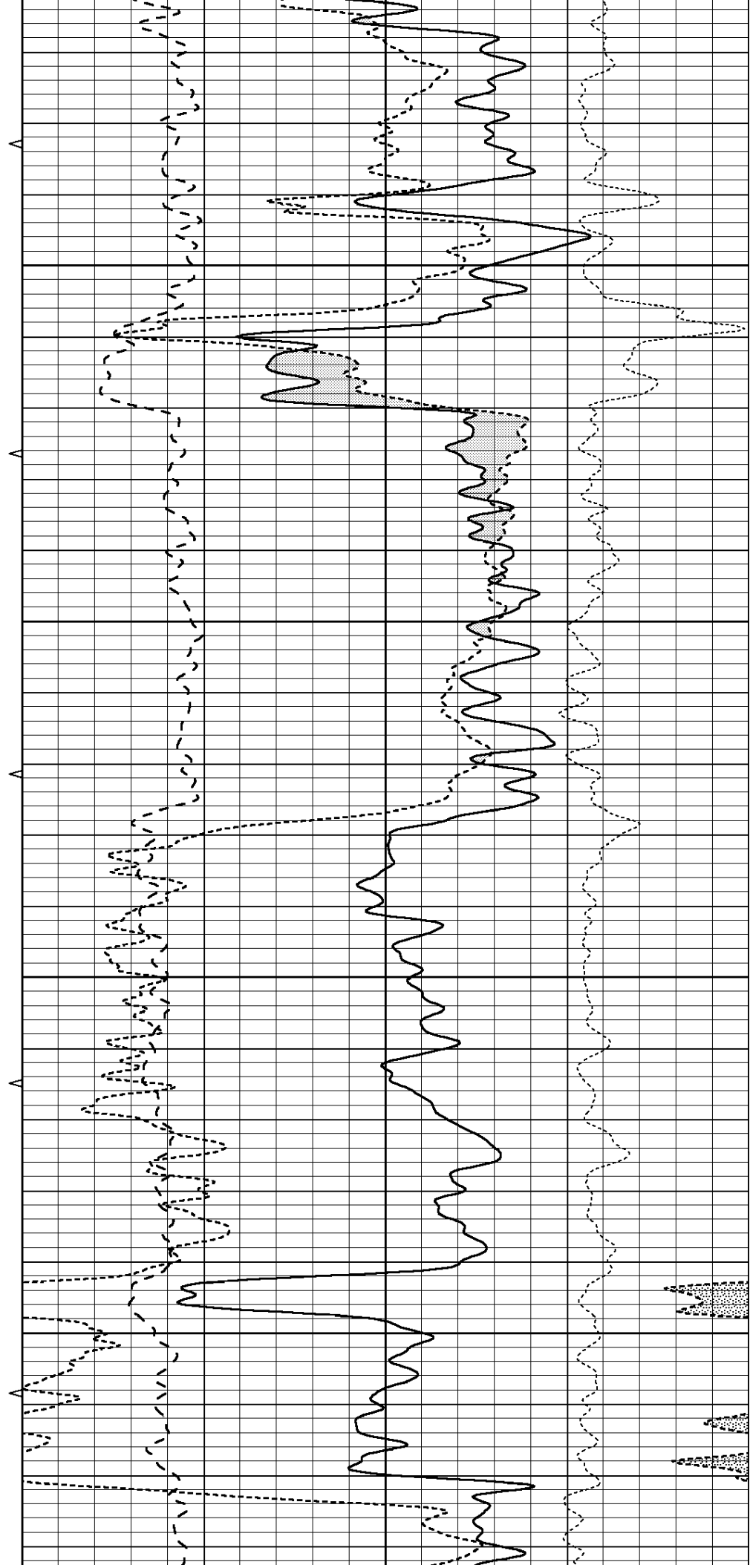


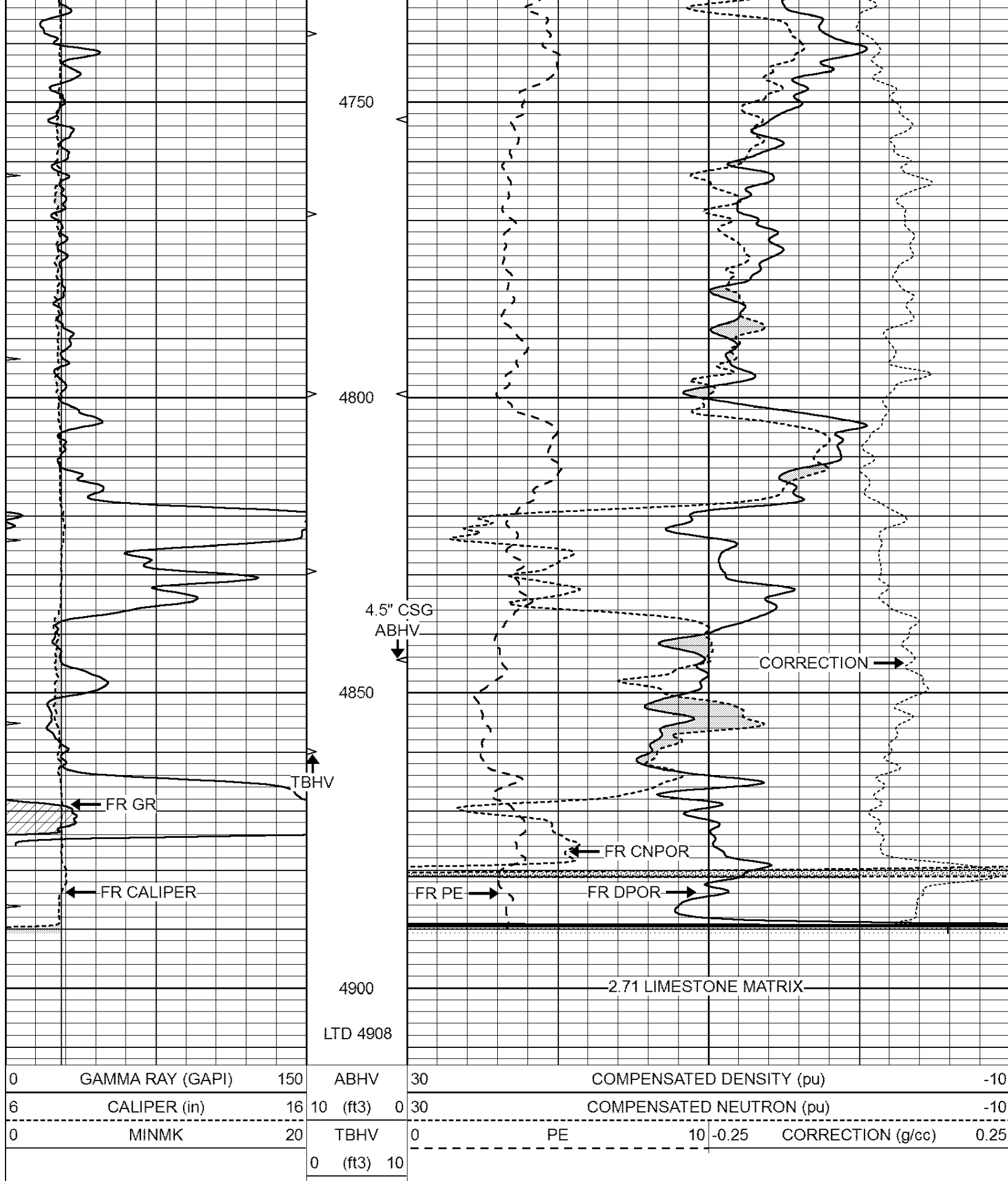
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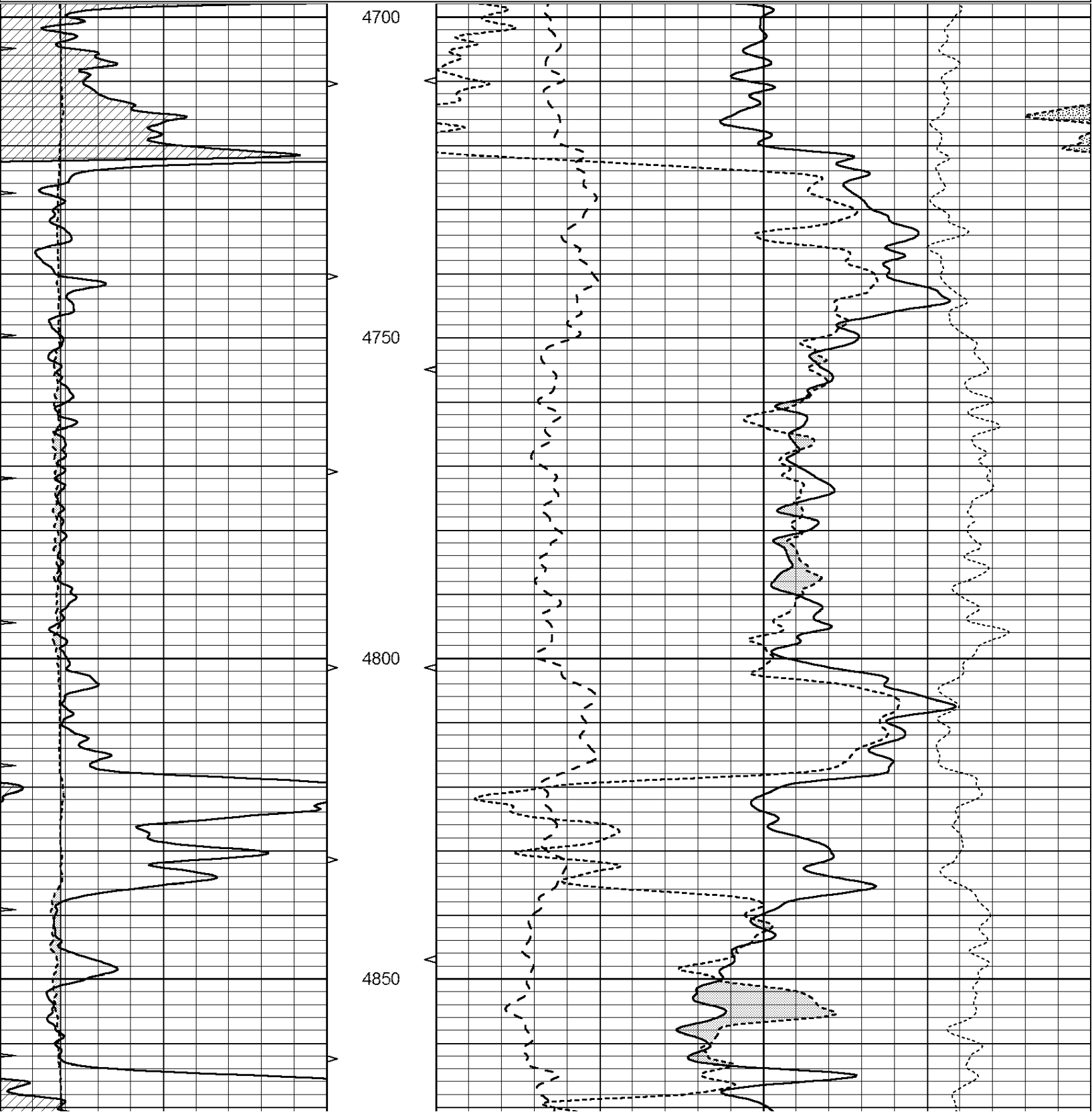
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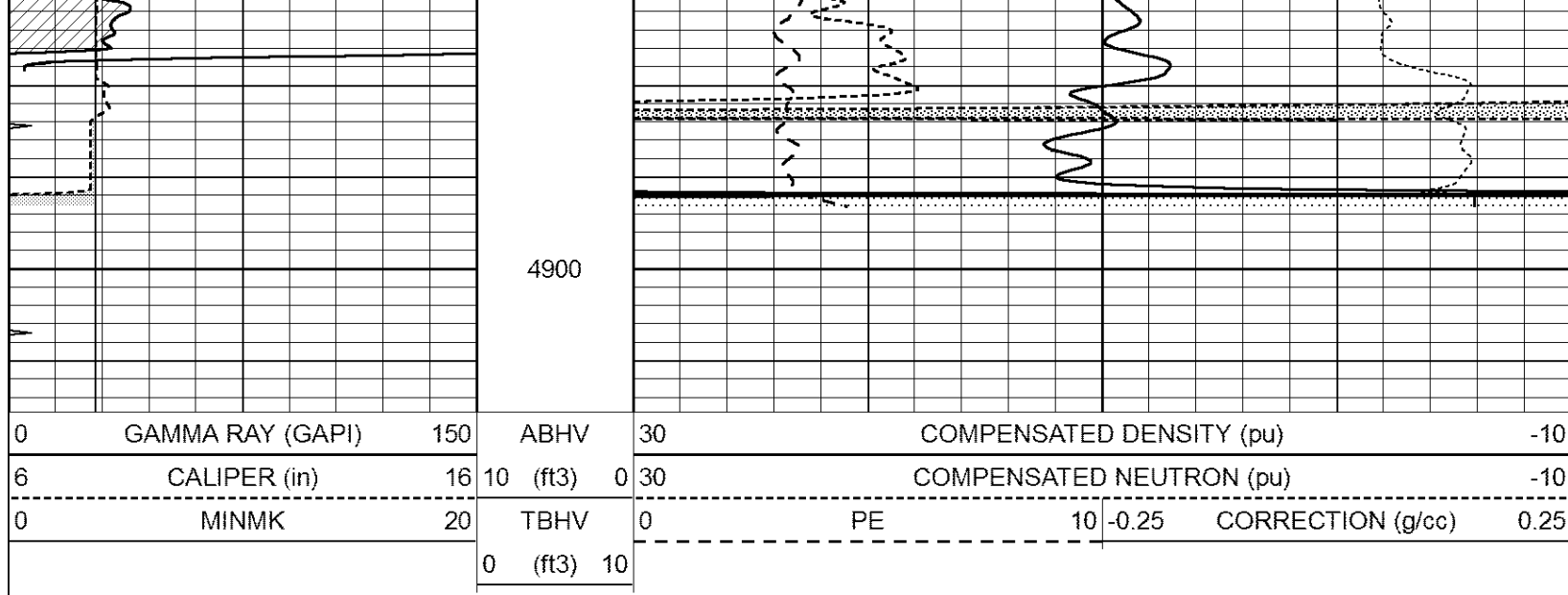




Database File: 24720pe.db
Dataset Pathname: pass2.1.5
Presentation Format: _ldt_neu
Dataset Creation: Tue Aug 05 14:08:21 2014 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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: 24720pe.db
 Dataset Pathname: pass3.2
 Dataset Creation: Tue Aug 05 15:26:26 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Sat Aug 02 01:54:49 2014
 Downhole Cal Performed: Sat Jan 19 19:51:38 2013
 After Survey Verification Performed: Sat Jan 19 19:51:38 2013

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	550.000	14.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	580.000	-32.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367

Downhole Calibration

Readings				References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	135384.000	27094.500	mmho/m	135400.000	27082.400	mmho/m	1.000	-19.259
Medium	-47330.100	-9381.740	mmho/m	-47327.100	-9389.280	mmho/m	1.000	-10.154
LL3		7.322	V		1400.000	Ohm-m		
		0.038	V		20.000	Ohm-m		
		-7.273	V		4000.000	mmho-m		

After Survey Verification

Readings				Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	135384.000	27094.500	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-47330.100	-9381.740	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1400.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		4000.000	mmho-m		

Master Calibration

Performed Mon Jun 09 14:46:25 2014

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1833.3	8239.1	3179.3	9365.4	cps
Window 2	1708.4	7189.1	2862.8	8058.6	cps
Window 3	1391.6	4030.0	1937.3	4384.2	cps
Window 4	414.3	417.6	417.2	416.2	cps
Long Space	0.0	5480.6	1154.3	6350.2	cps
Short Space	3.1	1831.8	1190.6	2030.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 44.5	Rib Slope	: 0.984	Density/Spine Ratio	: 0.544
Spine Angle	: 74.5	Spine Slope	: 3.615	Spine Intercept	: -18.6

Before Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

Compensated Neutron Calibration Report

Serial Number: 080620
 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:	46001	
Tool Model:	Probe1	
Performed:	Sat Aug 02 01:56:52 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2600	GAPI/cps