



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
PE LOG**

Company	WOOLSEY OPERATING COMPANY, LLC.		
Well	CIRCLE GU A-2		
Field	KOCHIA		
County	BARBER	State	KANSAS
Location:	API # : 15-007-24043-00-00		Other Services
	330' FNL & 900' FWL W2 - NE - NW - NW		DIL
	SEC 5 TWP 34S RGE 10W		
Permanent Datum	GROUND LEVEL	Elevation	1430
Log Measured From	KELLY BUSHING 8' A.G.L.	K.B. 1438 D.F. 1436 G.L. 1430	
Drilling Measured From	KELLY BUSHING		
Date	8 - 8 - 13		
Run Number	ONE		
Depth Driller	5140		
Depth Logger	5134		
Bottom Logged Interval	5110		
Top Log Interval	1700		
Casing Driller	222		
Casing Logger	218		
Bit Size	10.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4.000	
Density / Viscosity	9.1 / 48		
pH / Fluid Loss	9.0 / 9.6		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.85 @ 97F		
Rmf @ Meas. Temp	0.64 @ 97F		
Rmc @ Meas. Temp	1.02 @ 97F		
Source of Rmf / Rmc	MEASURED		
Rim @ BHT	0.65 @ 126F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	126F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	BILL KLAVER		

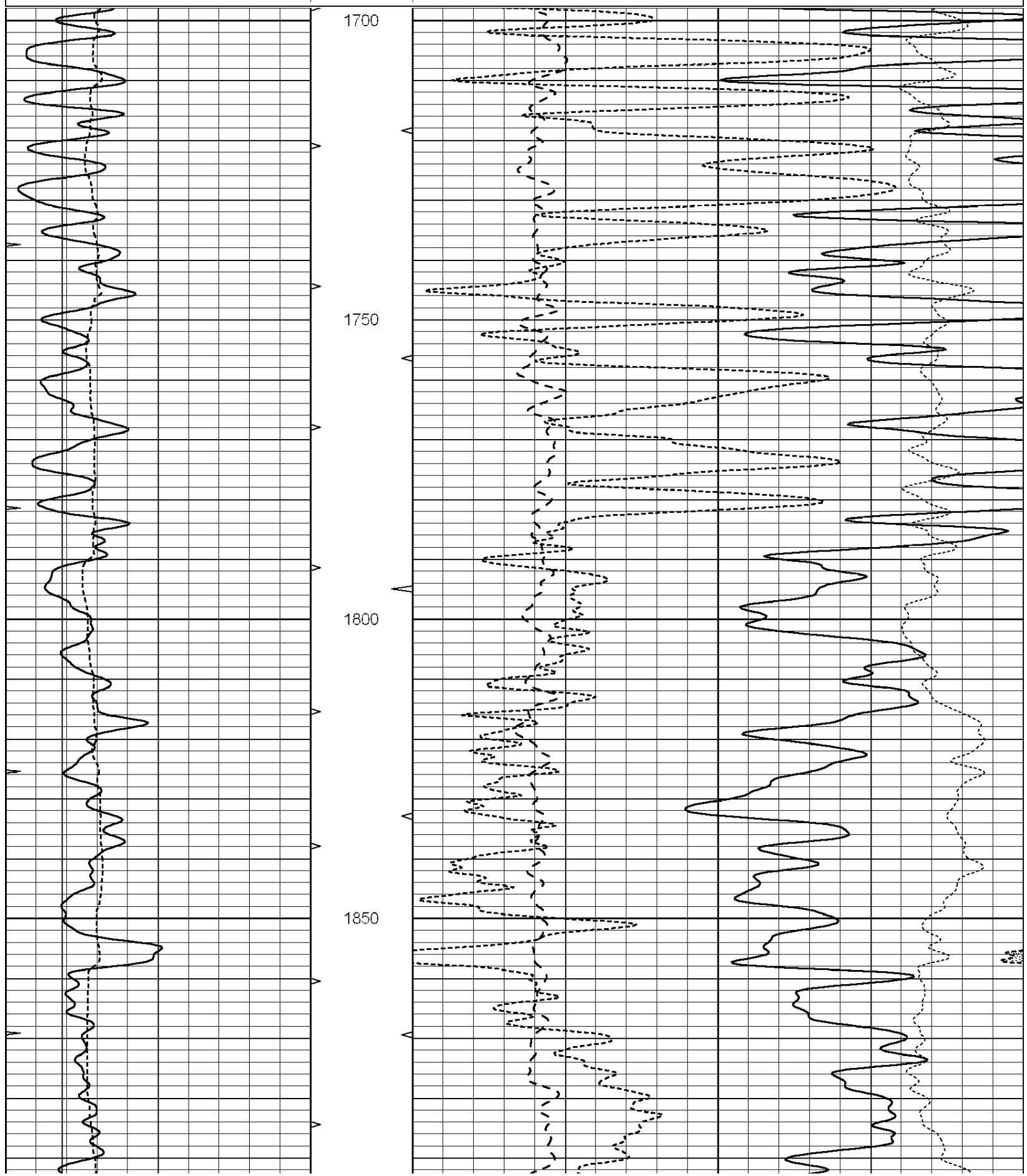
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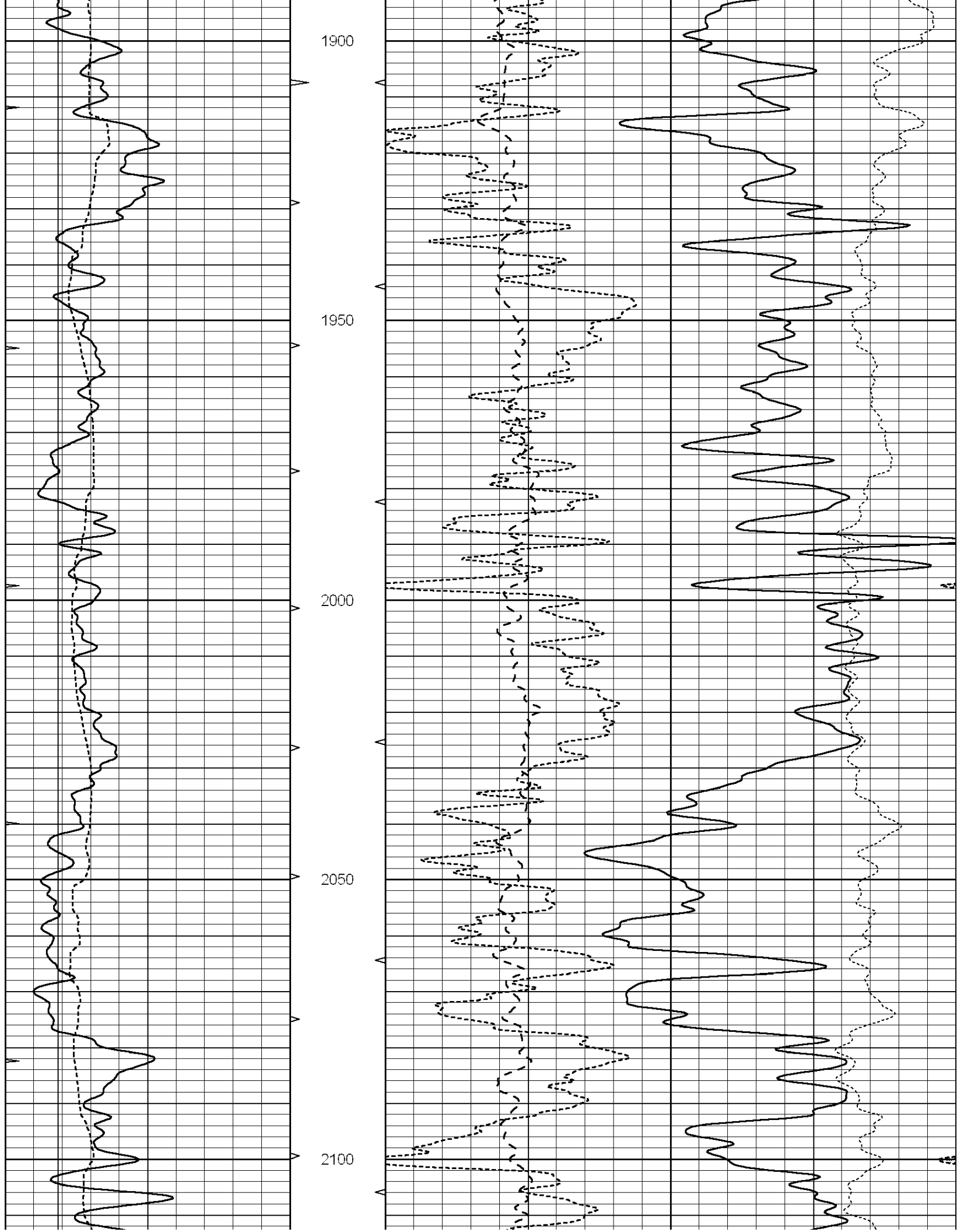
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

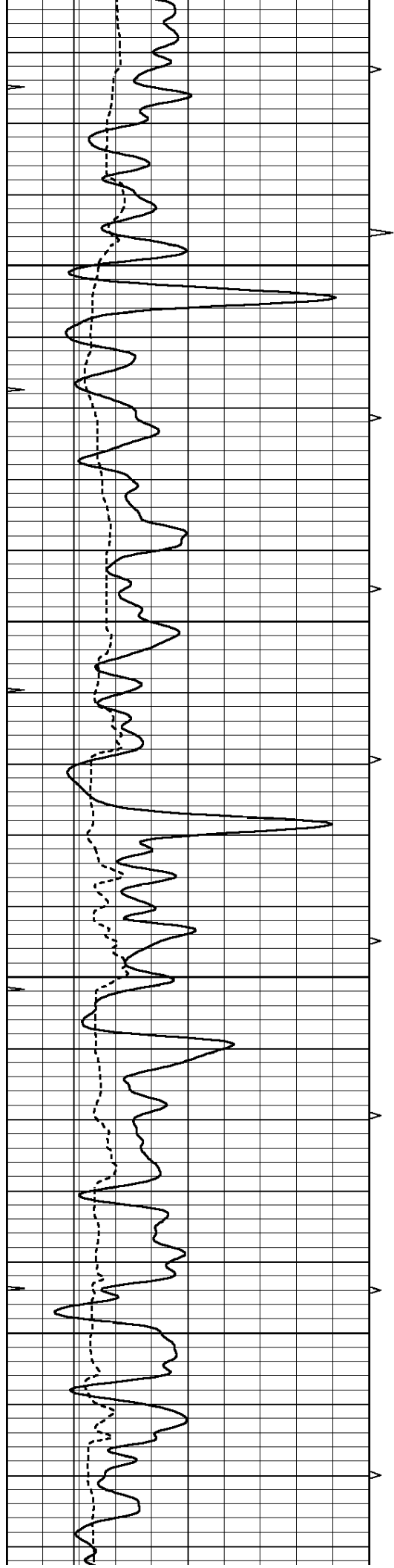
Comments

NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: SHARON, KS. - SOUTH ON TRI-CITY BLACKTOP TO GERLANE RD. - WEST 1.8 MILES SOUTH

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			





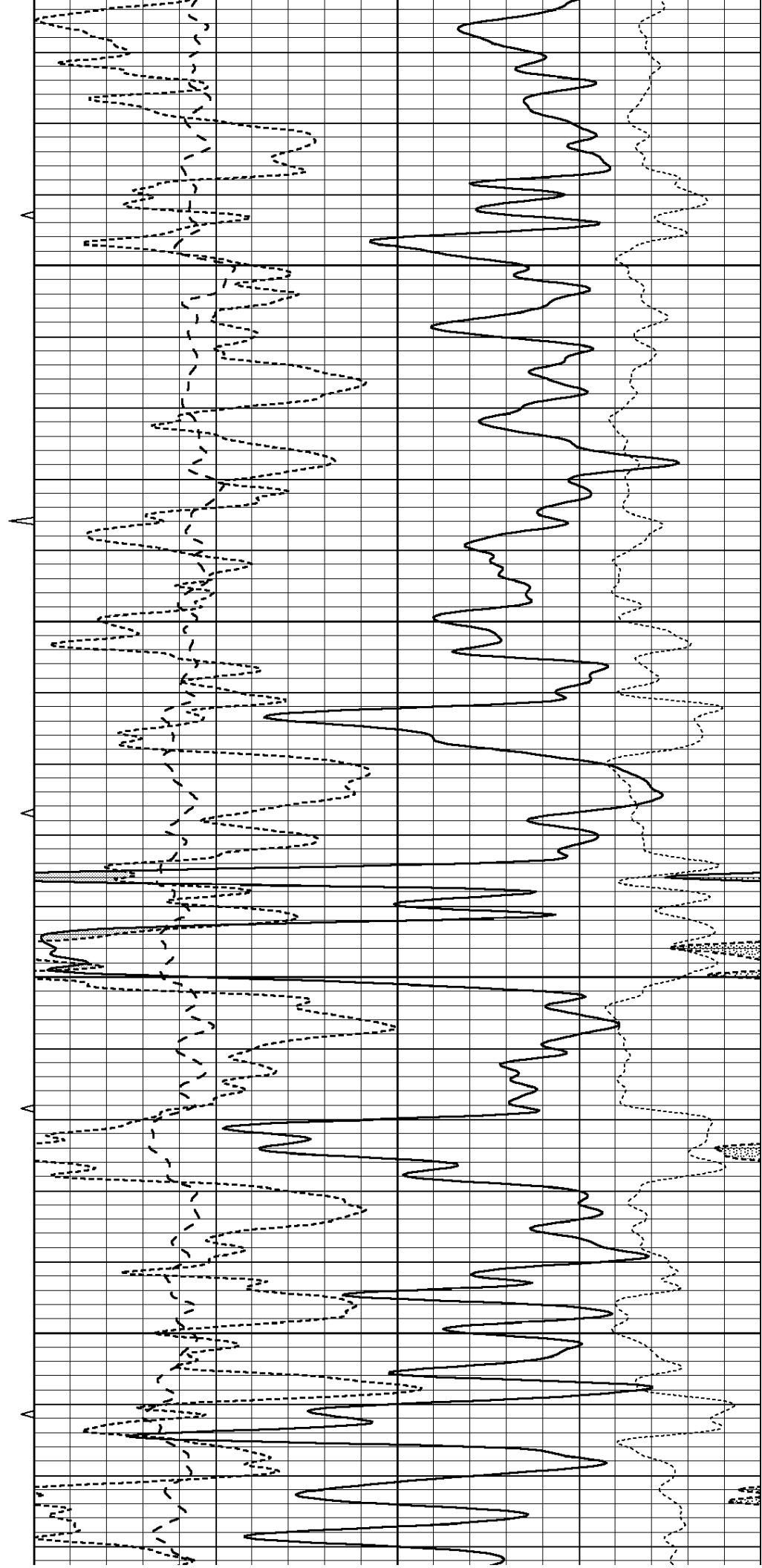


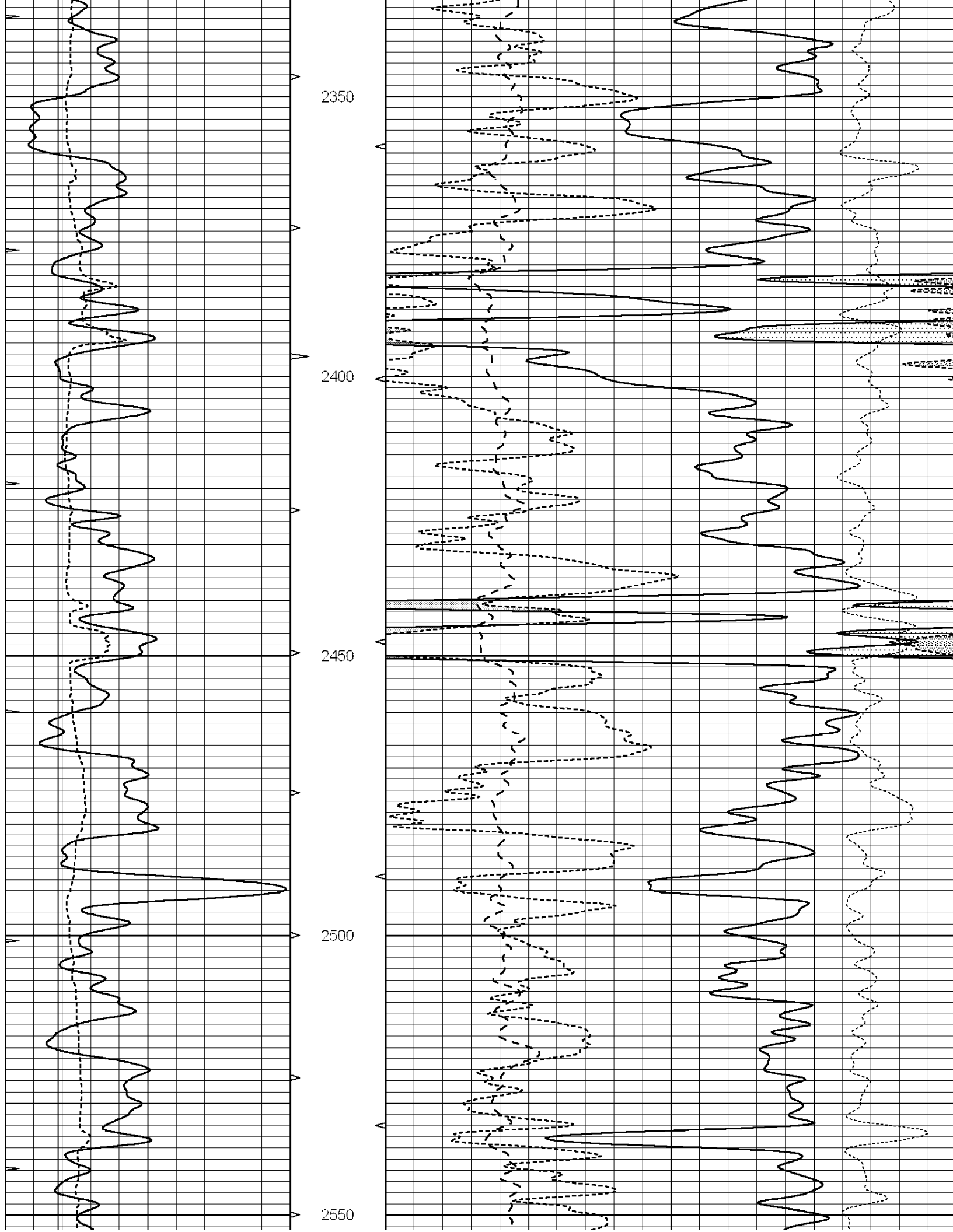
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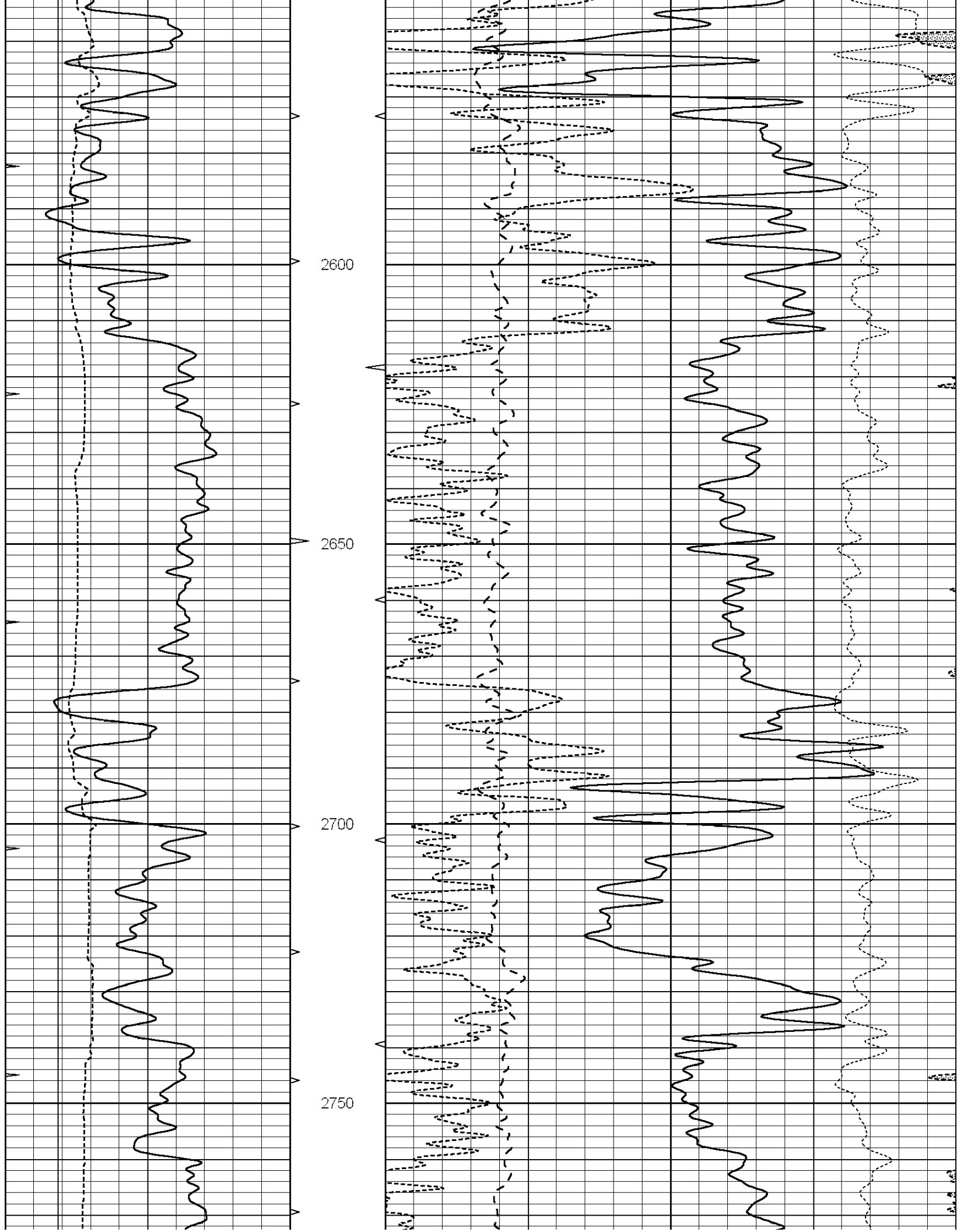
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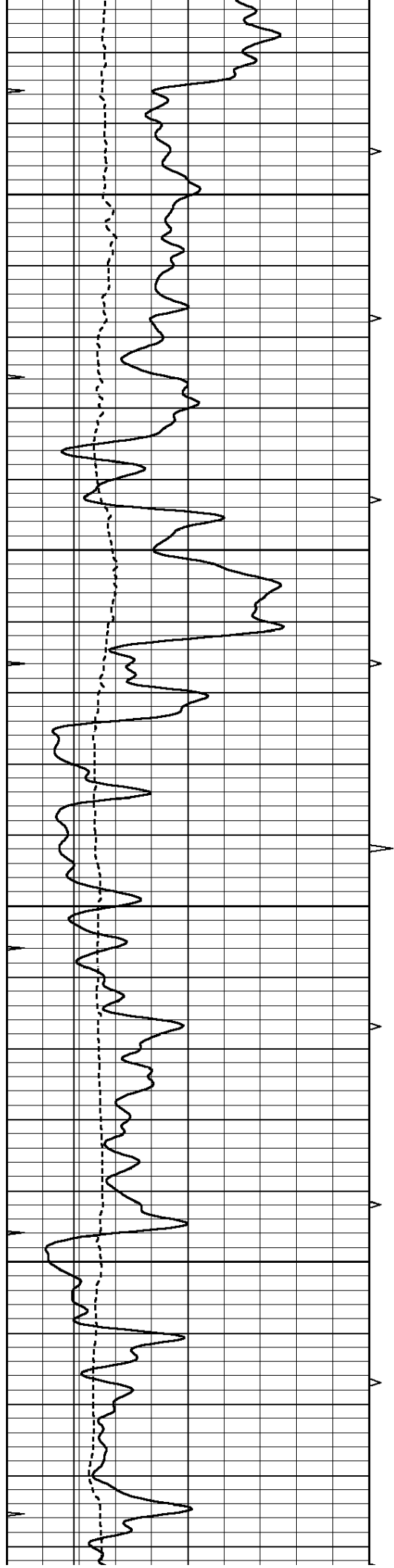
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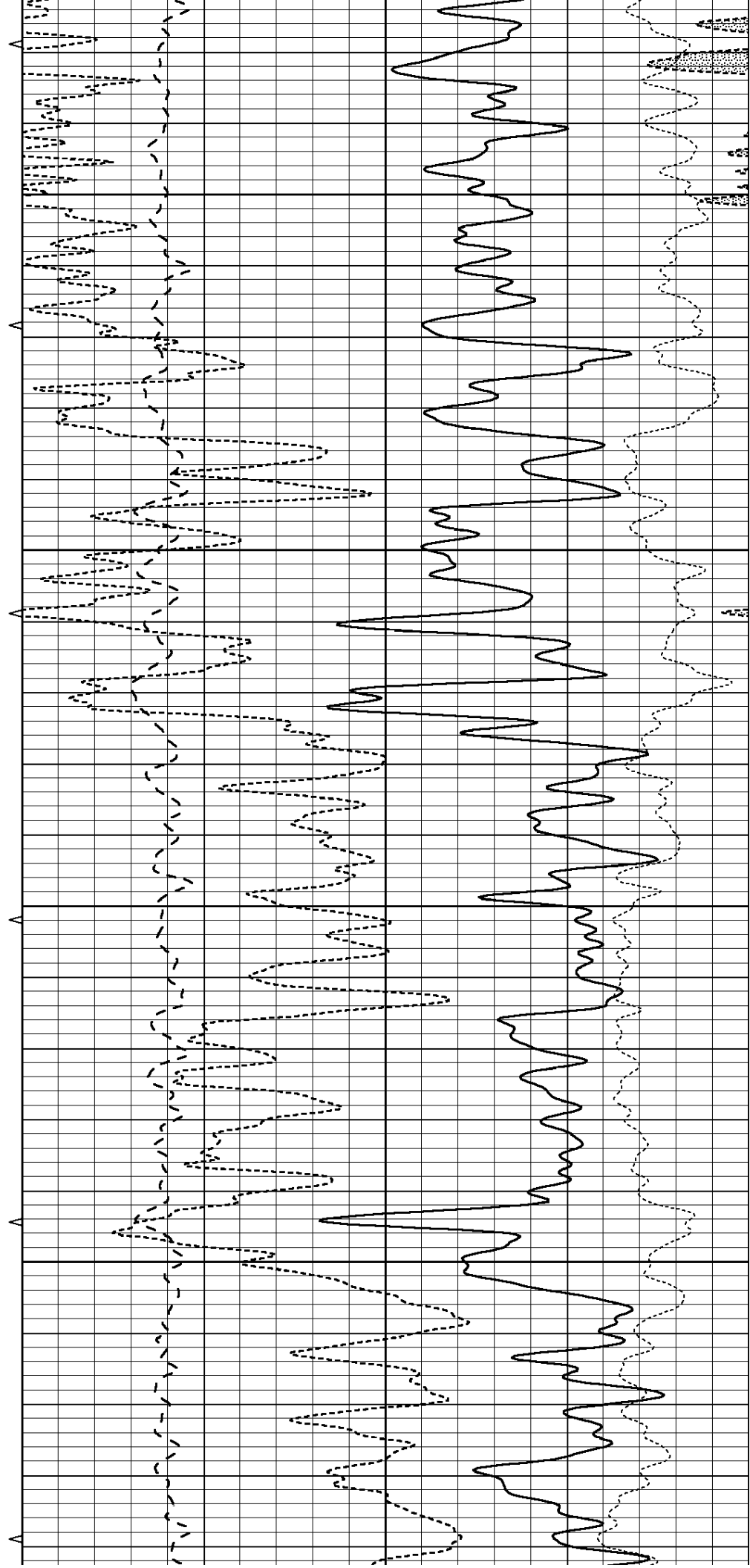


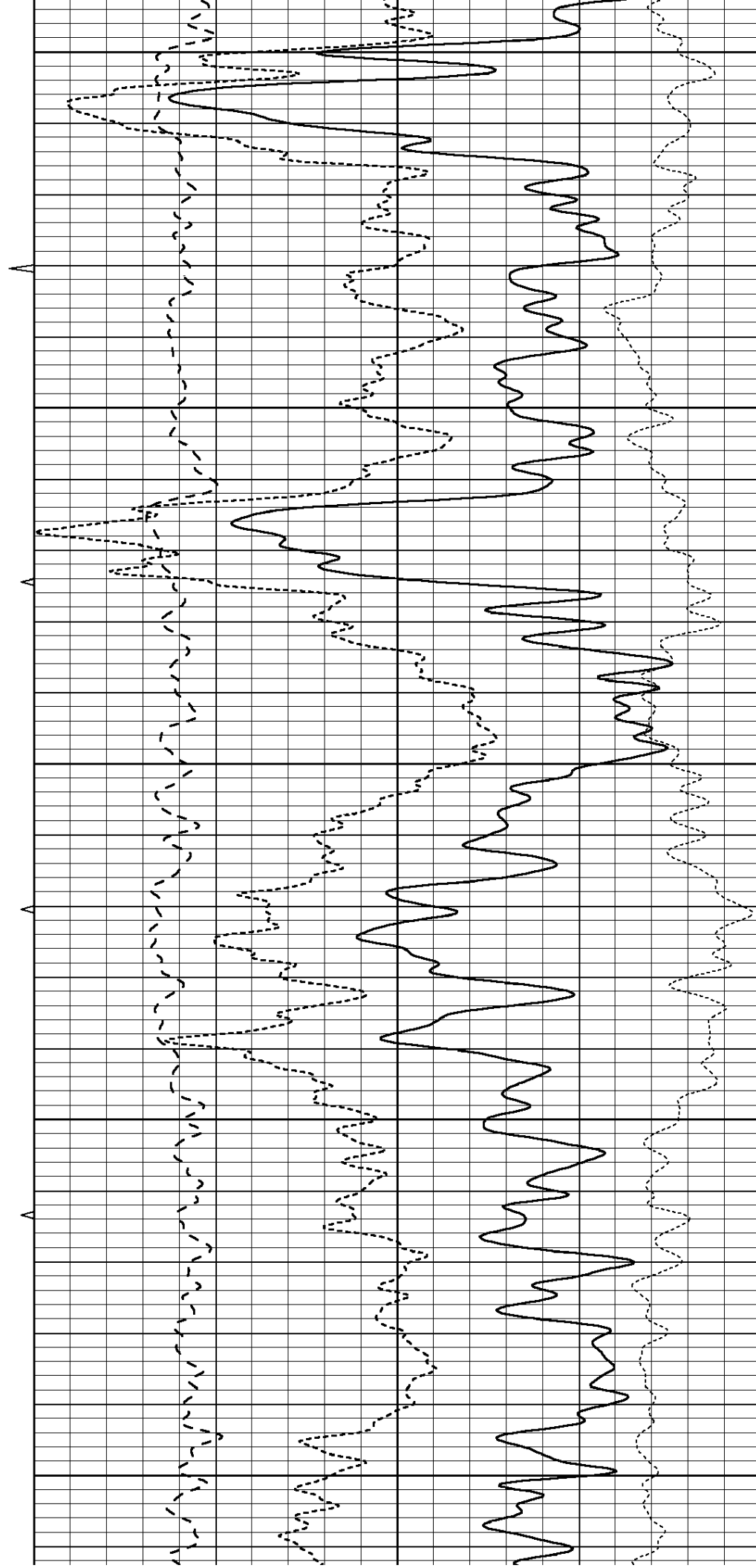
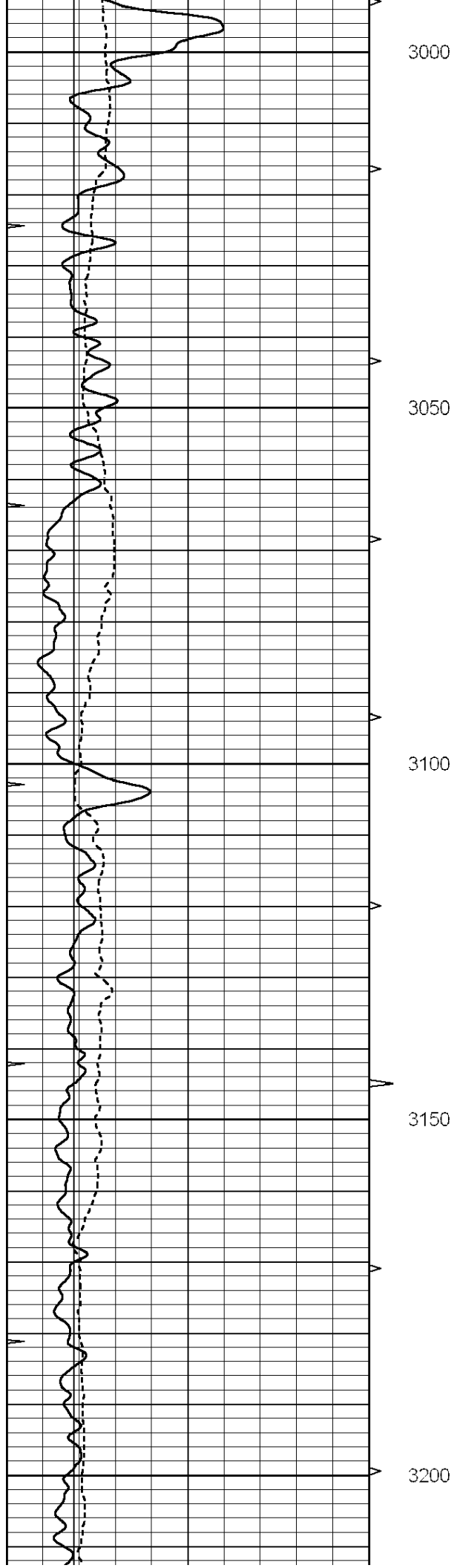
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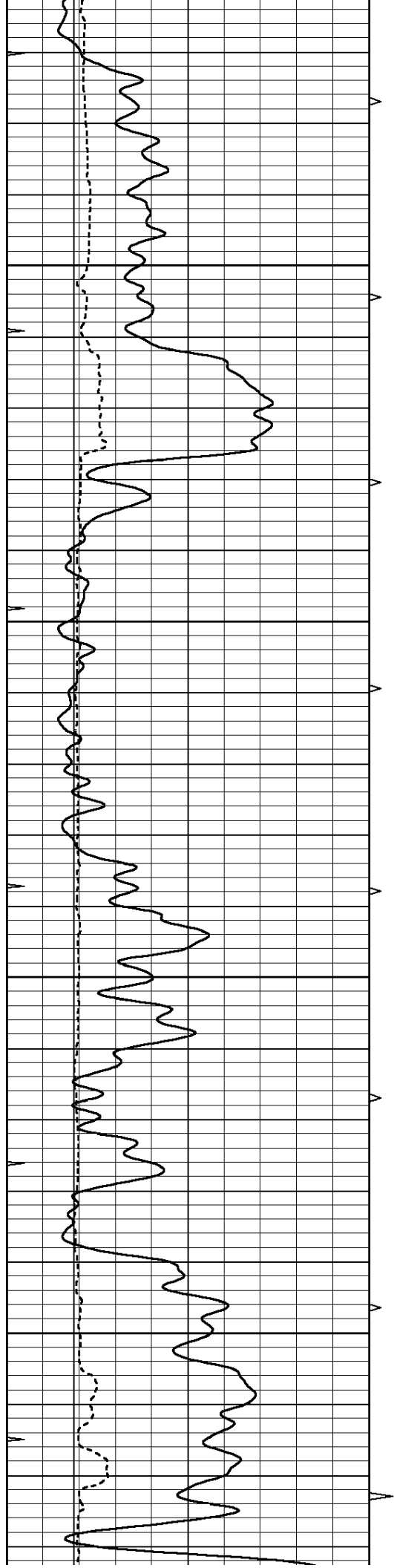
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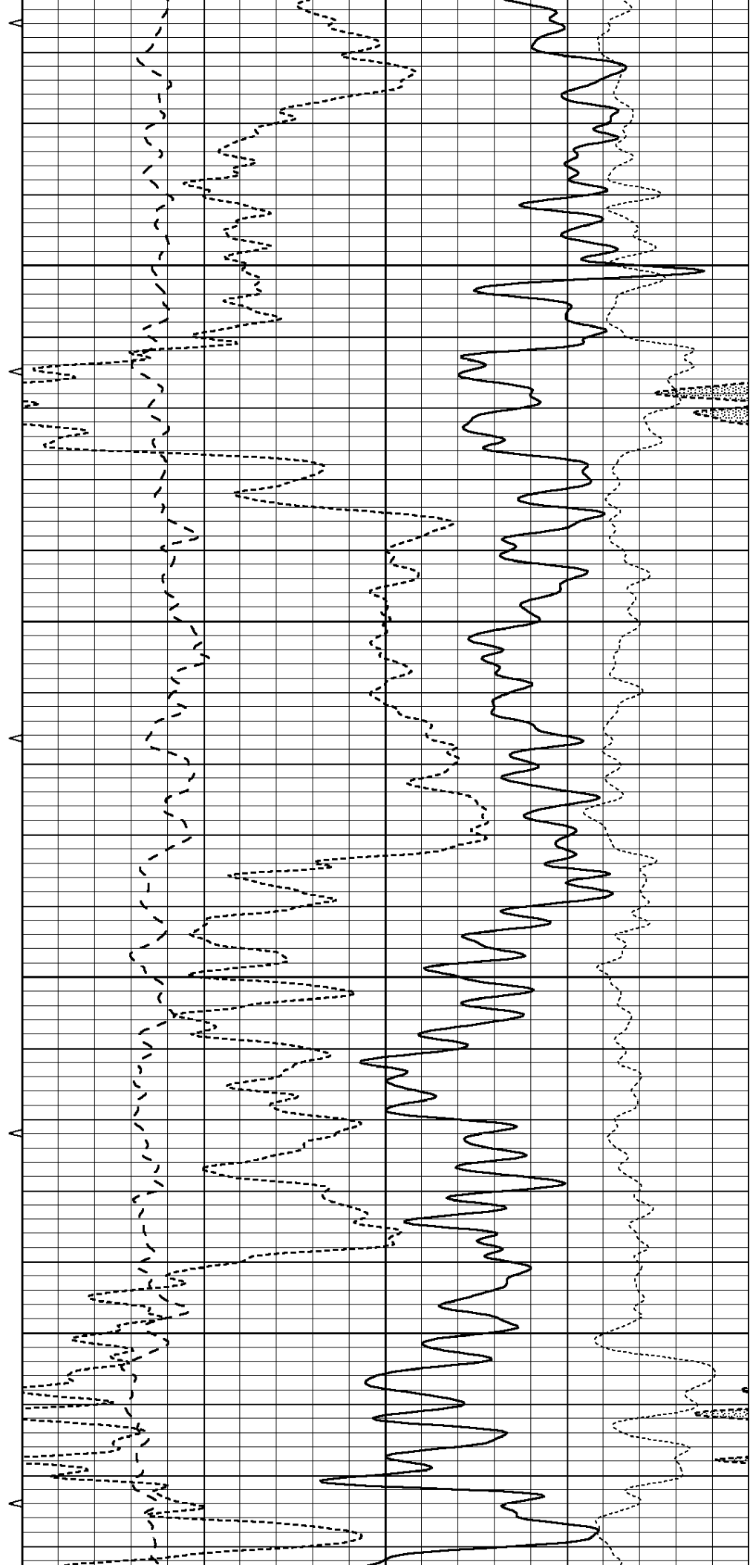


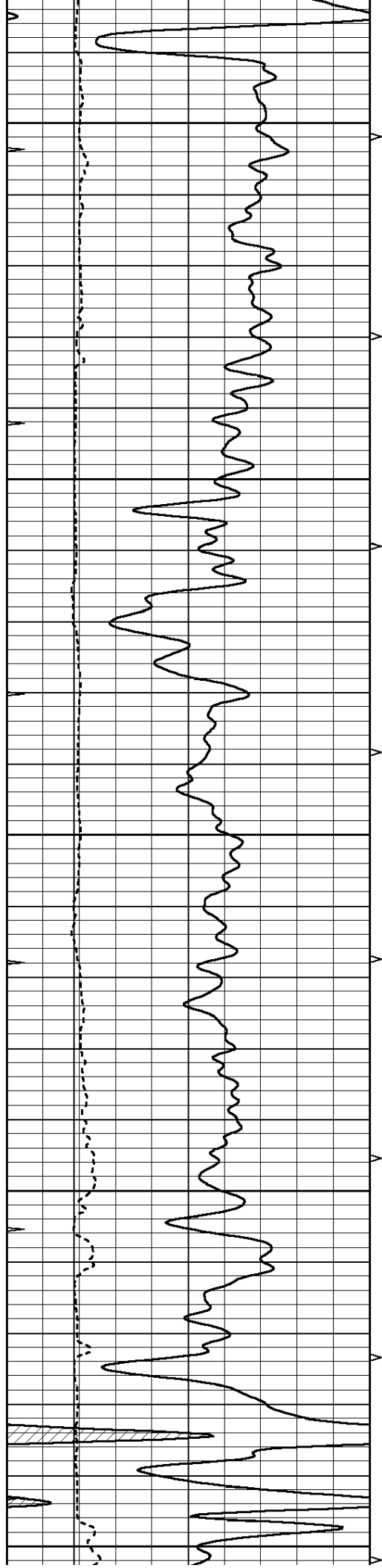
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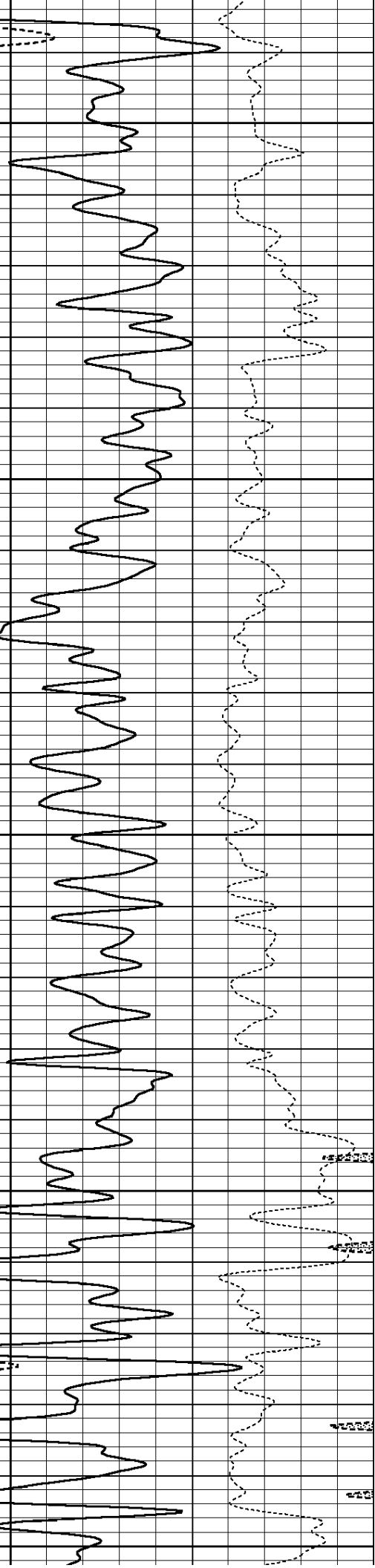
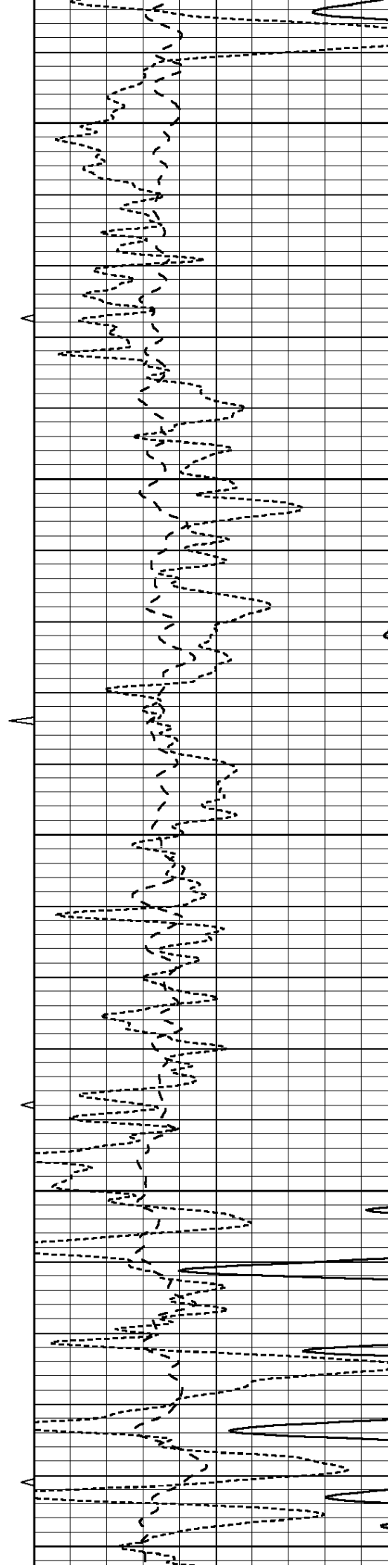
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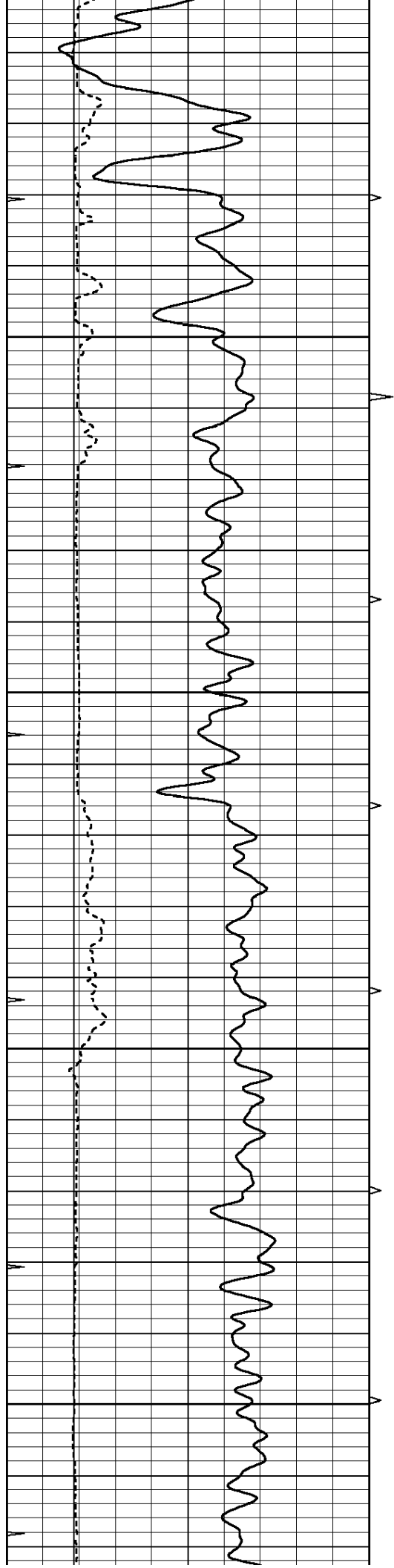
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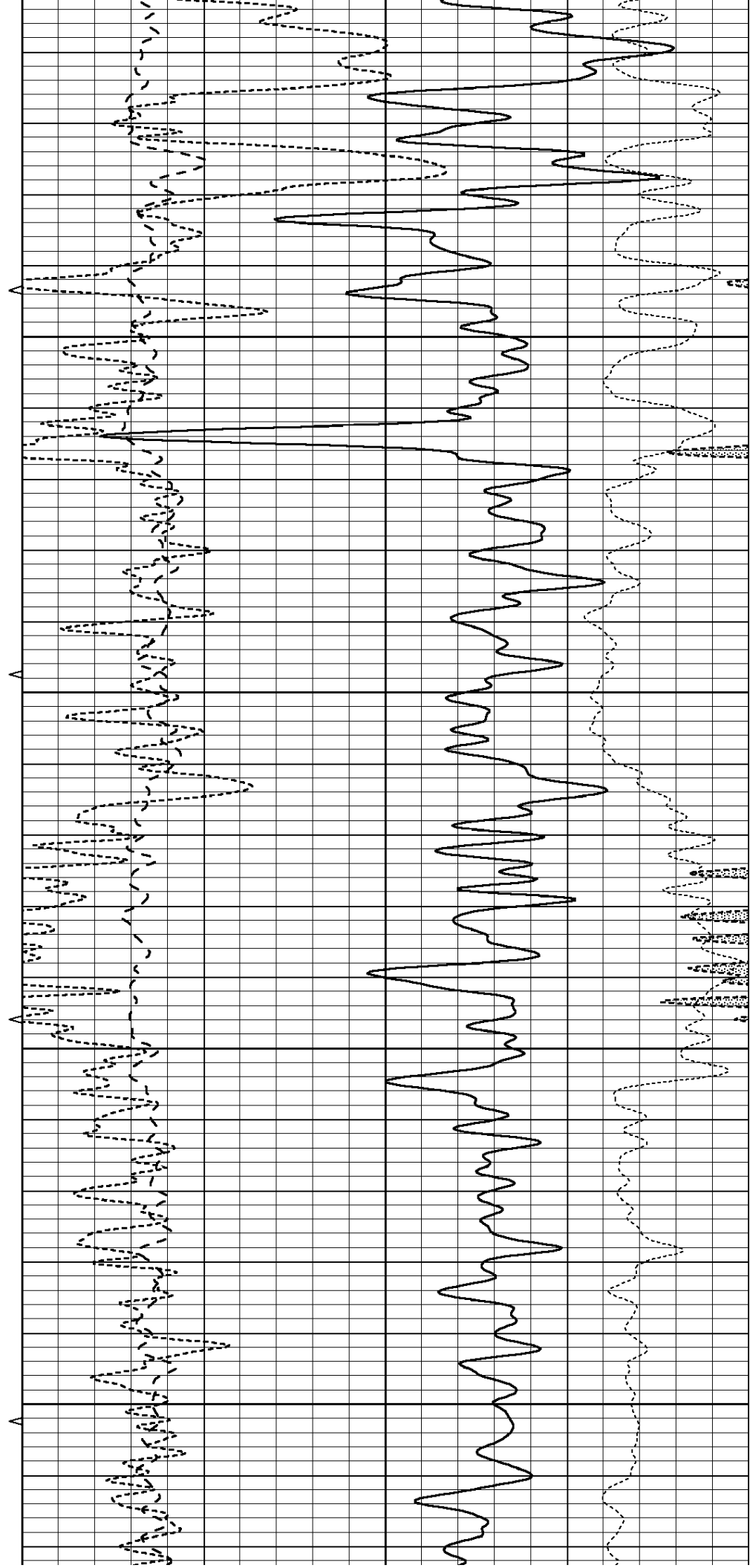
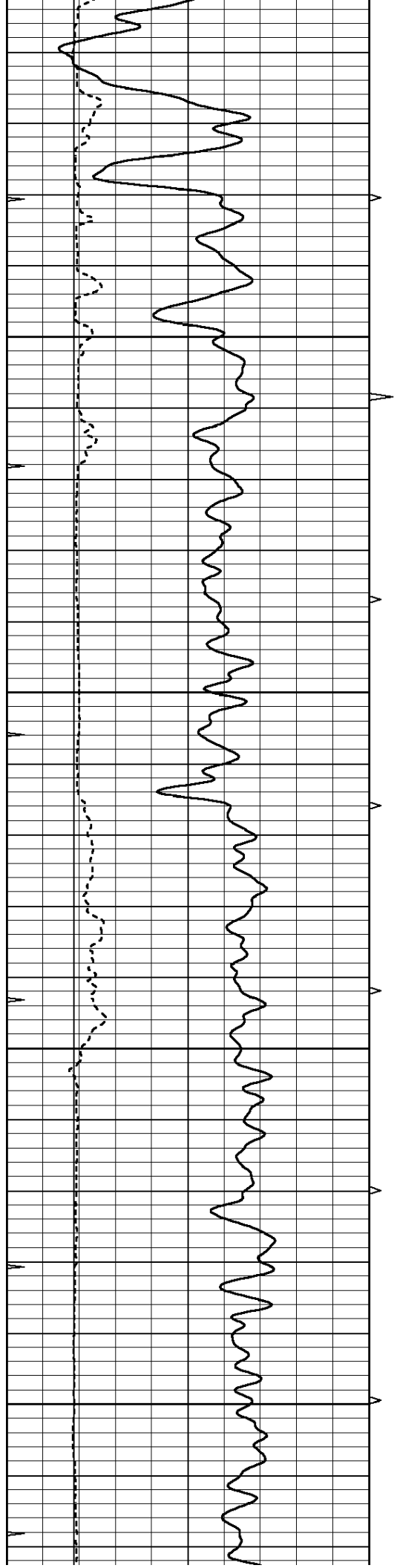
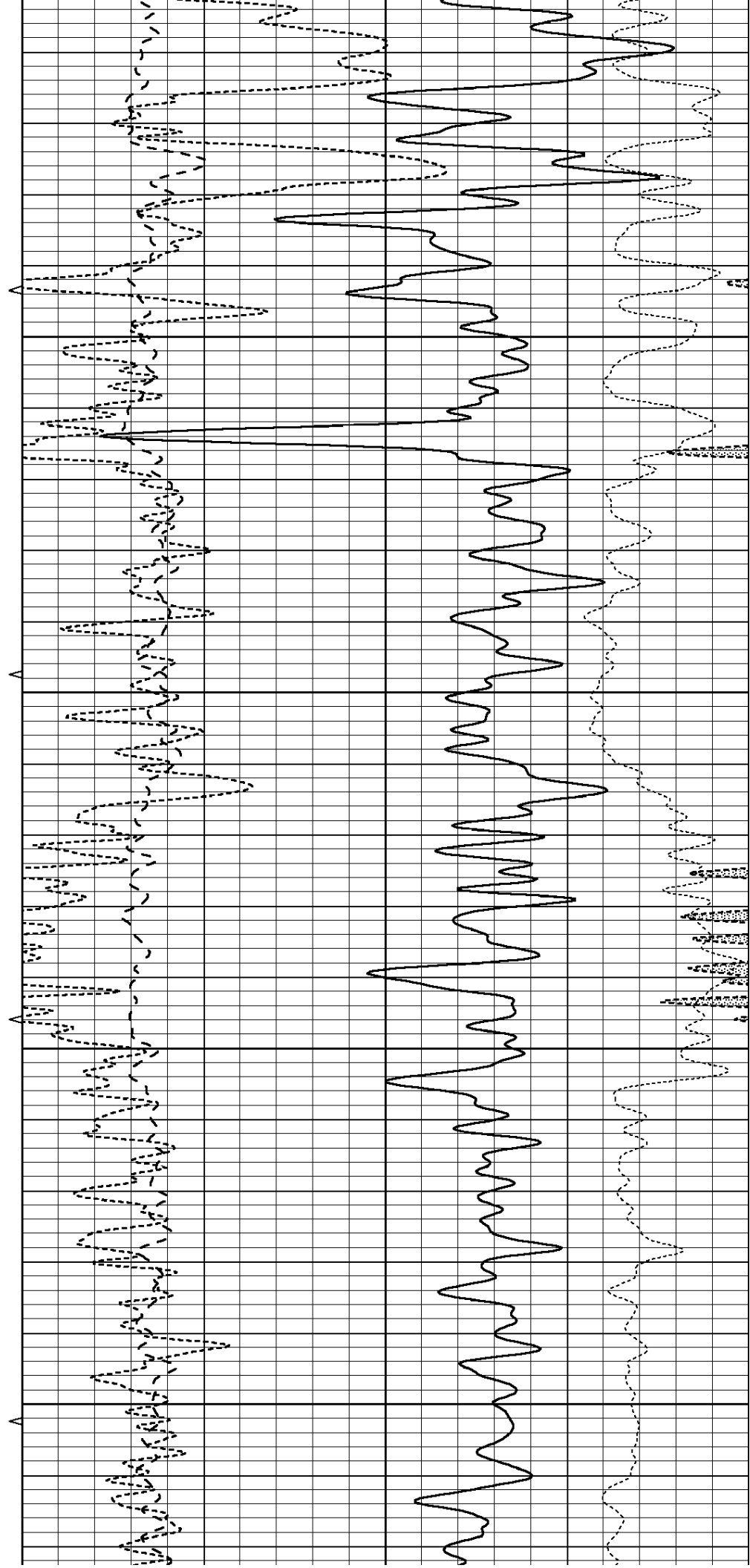


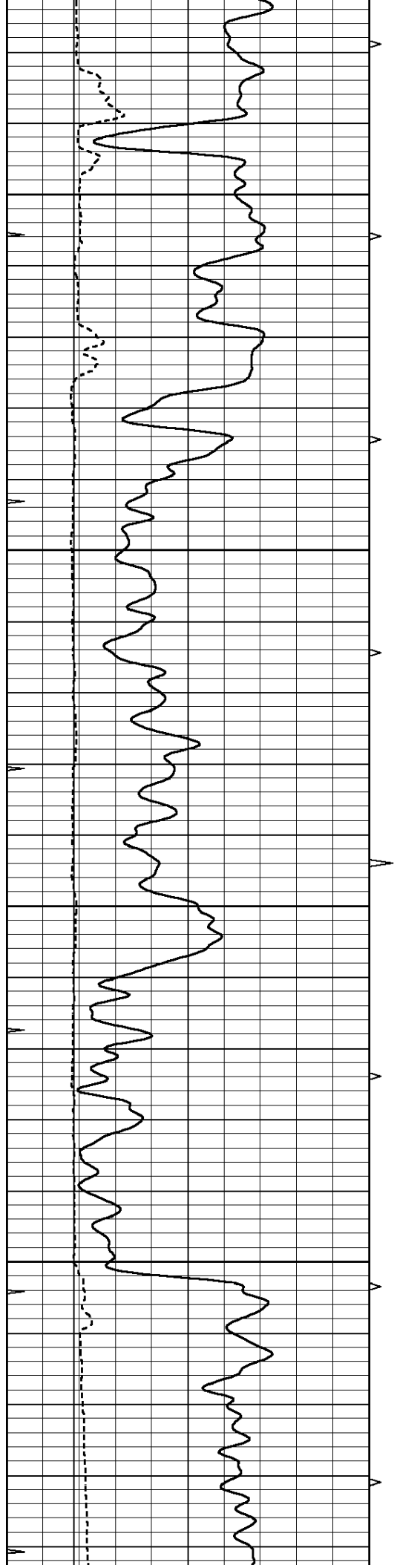
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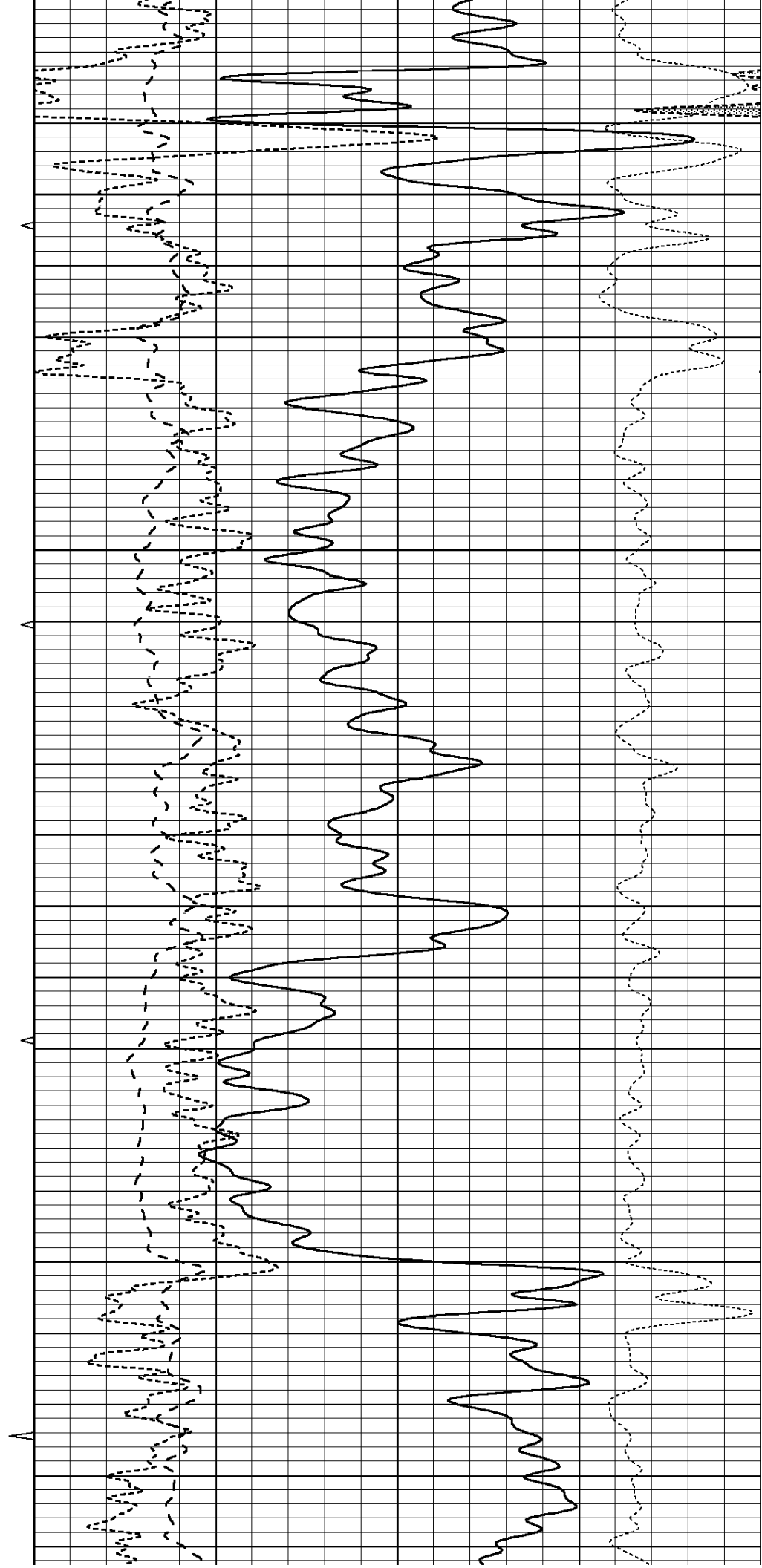


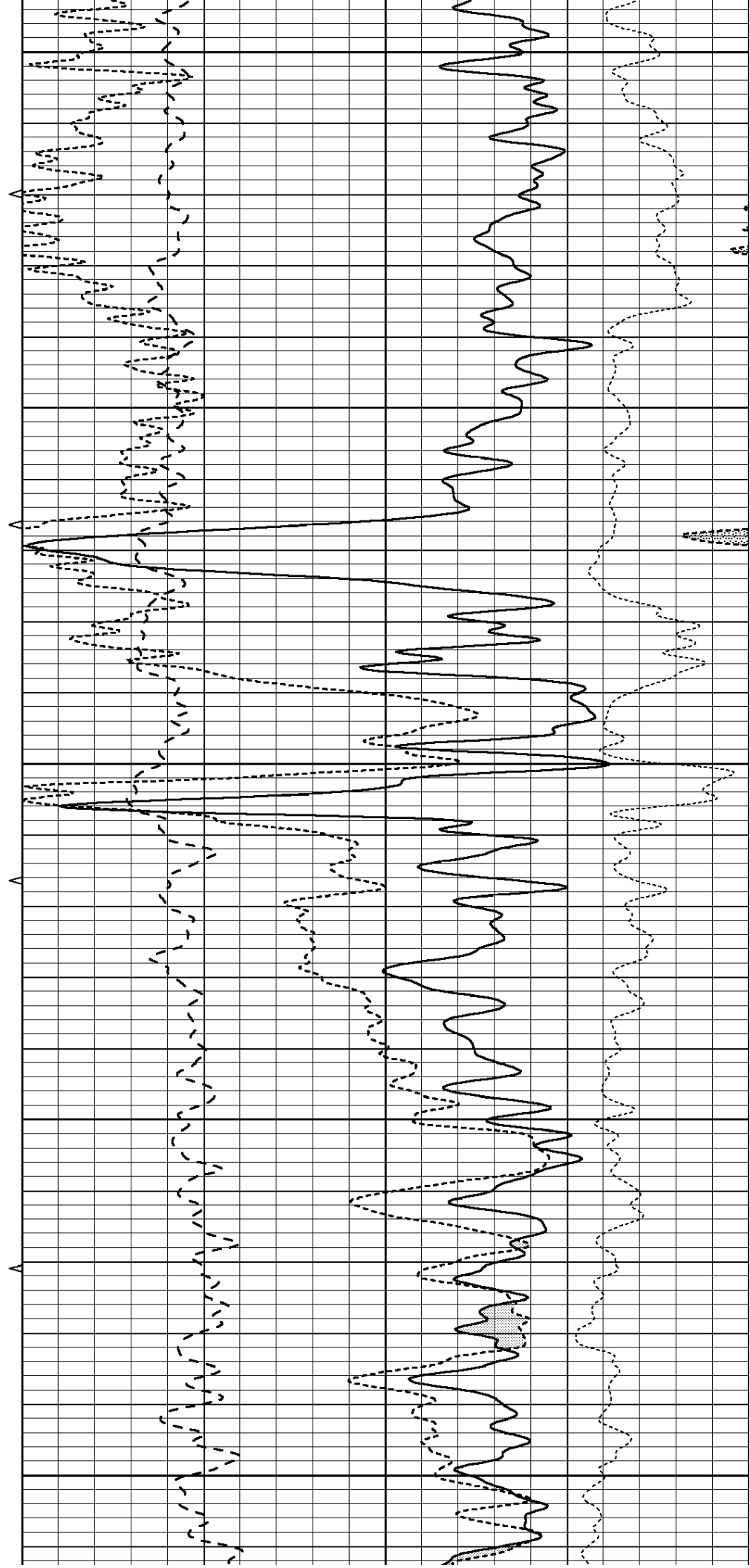
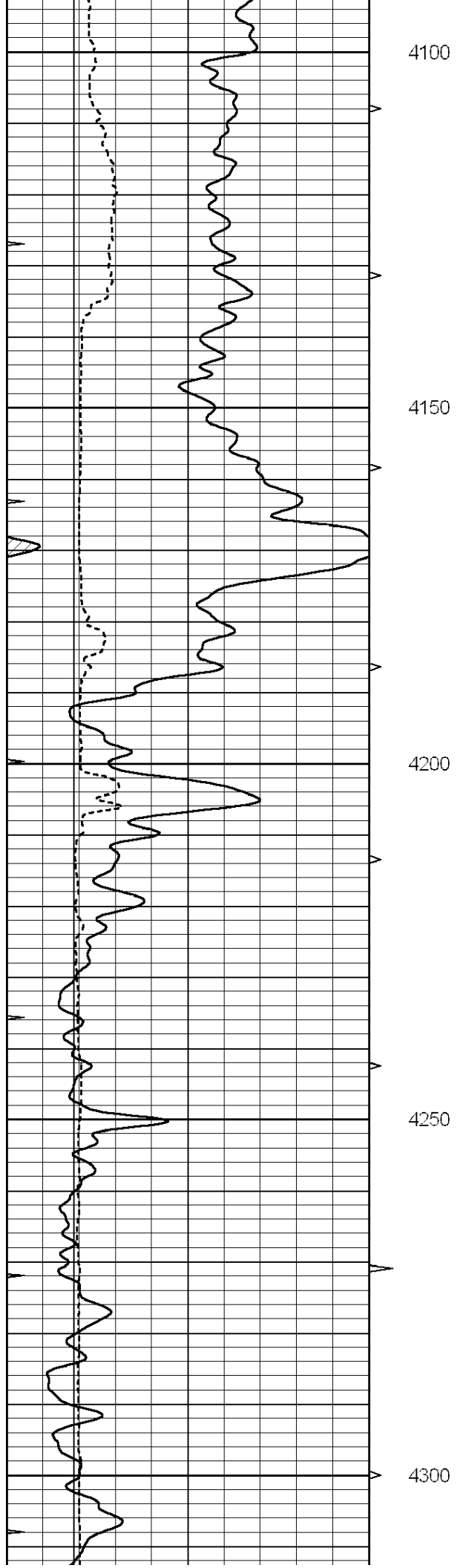
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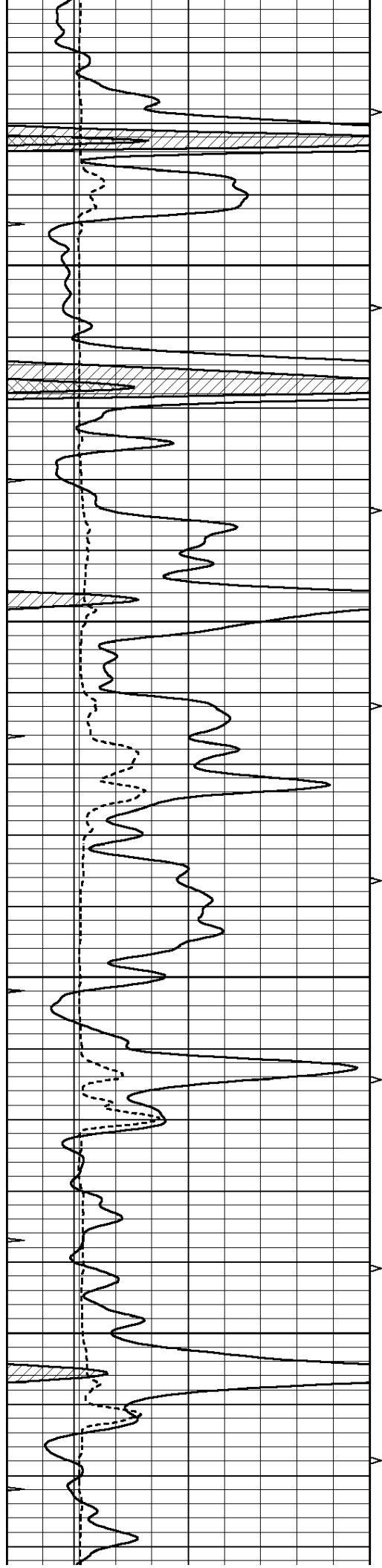
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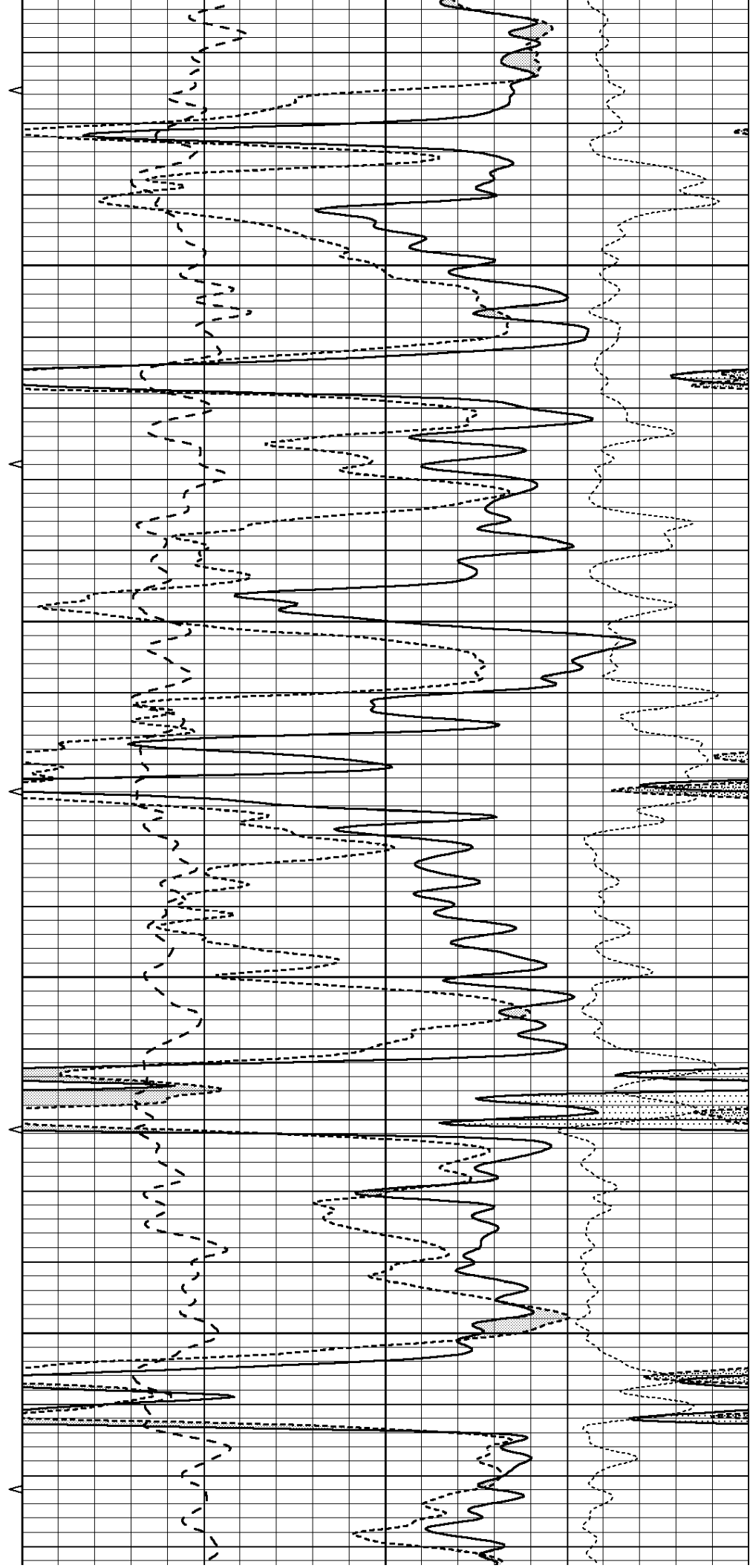


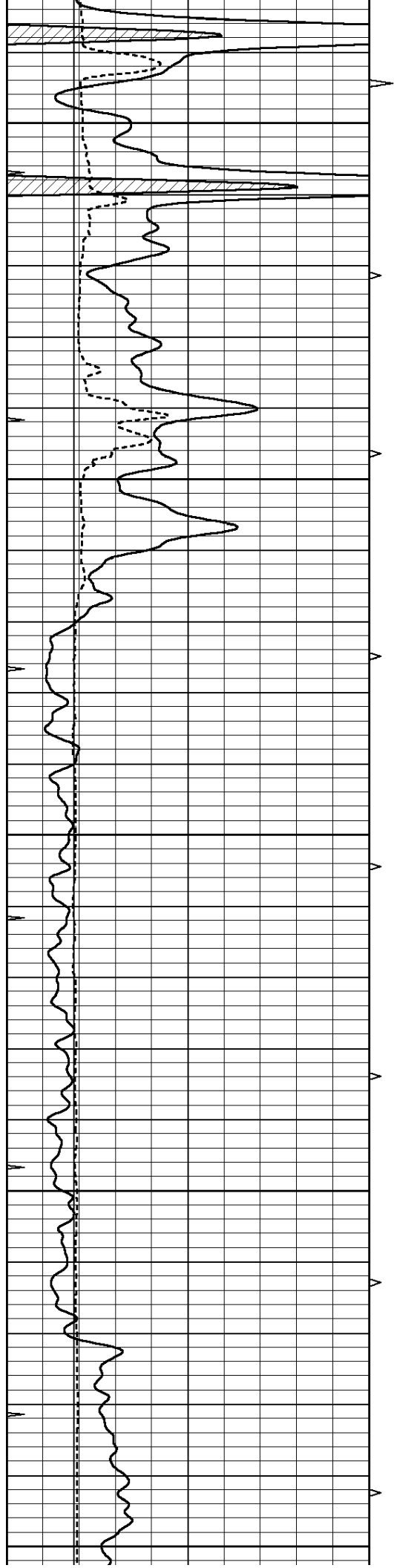
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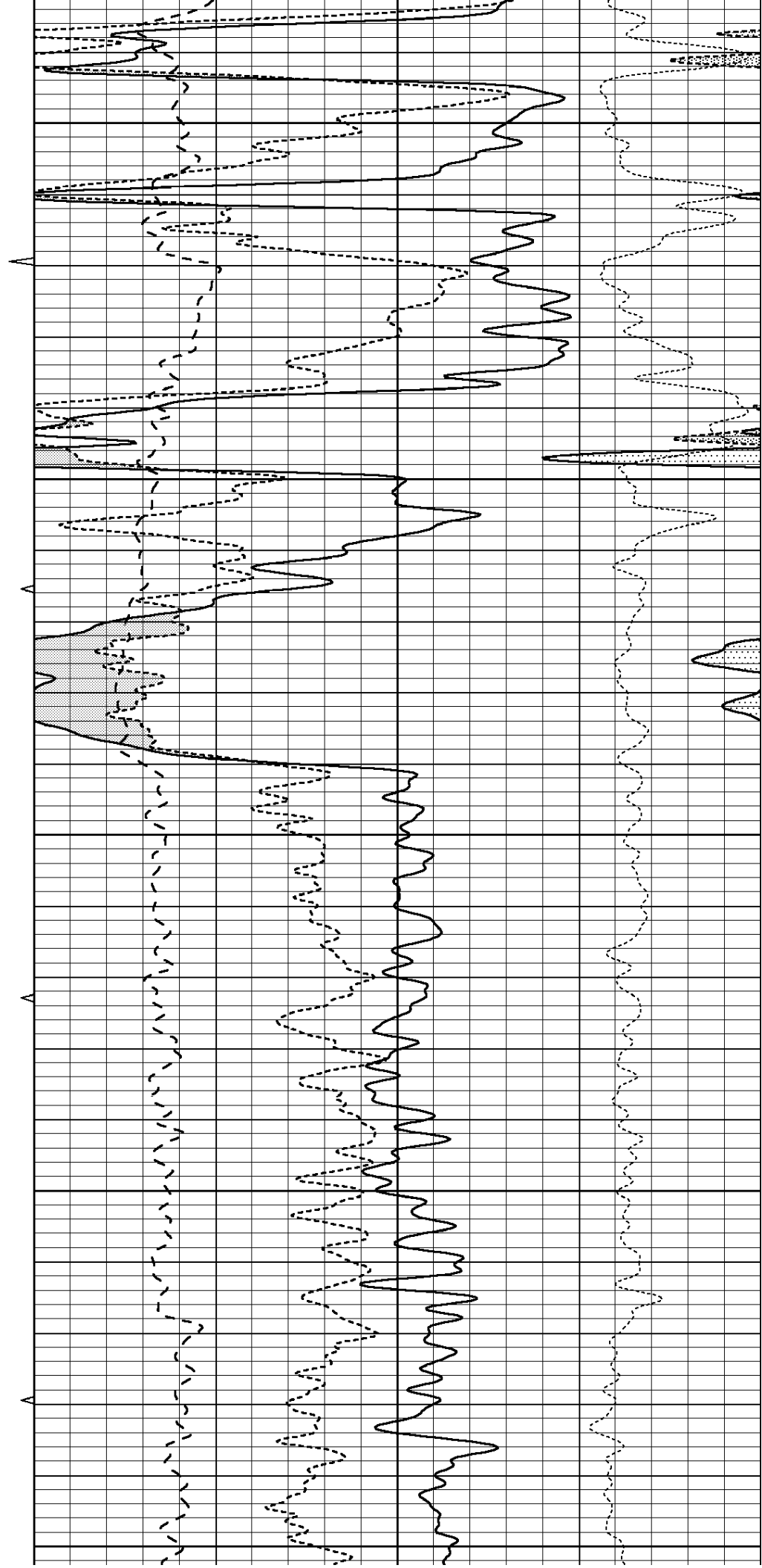
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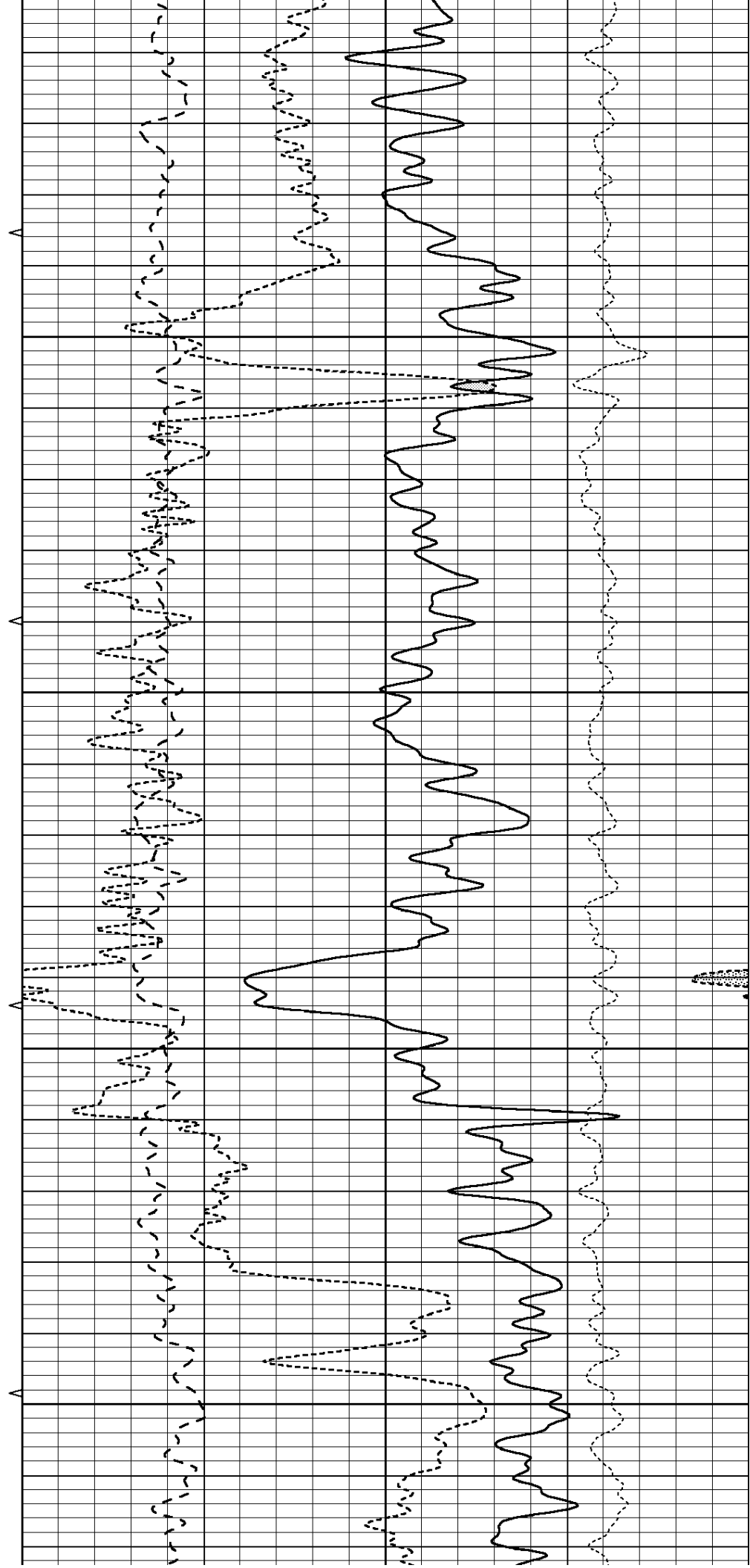
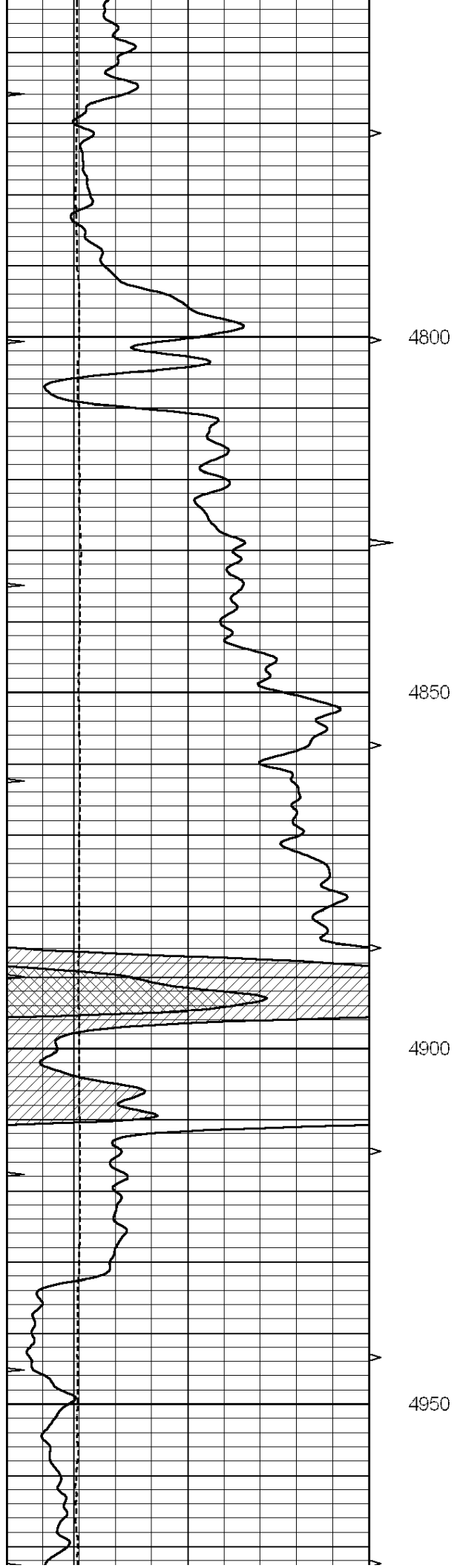
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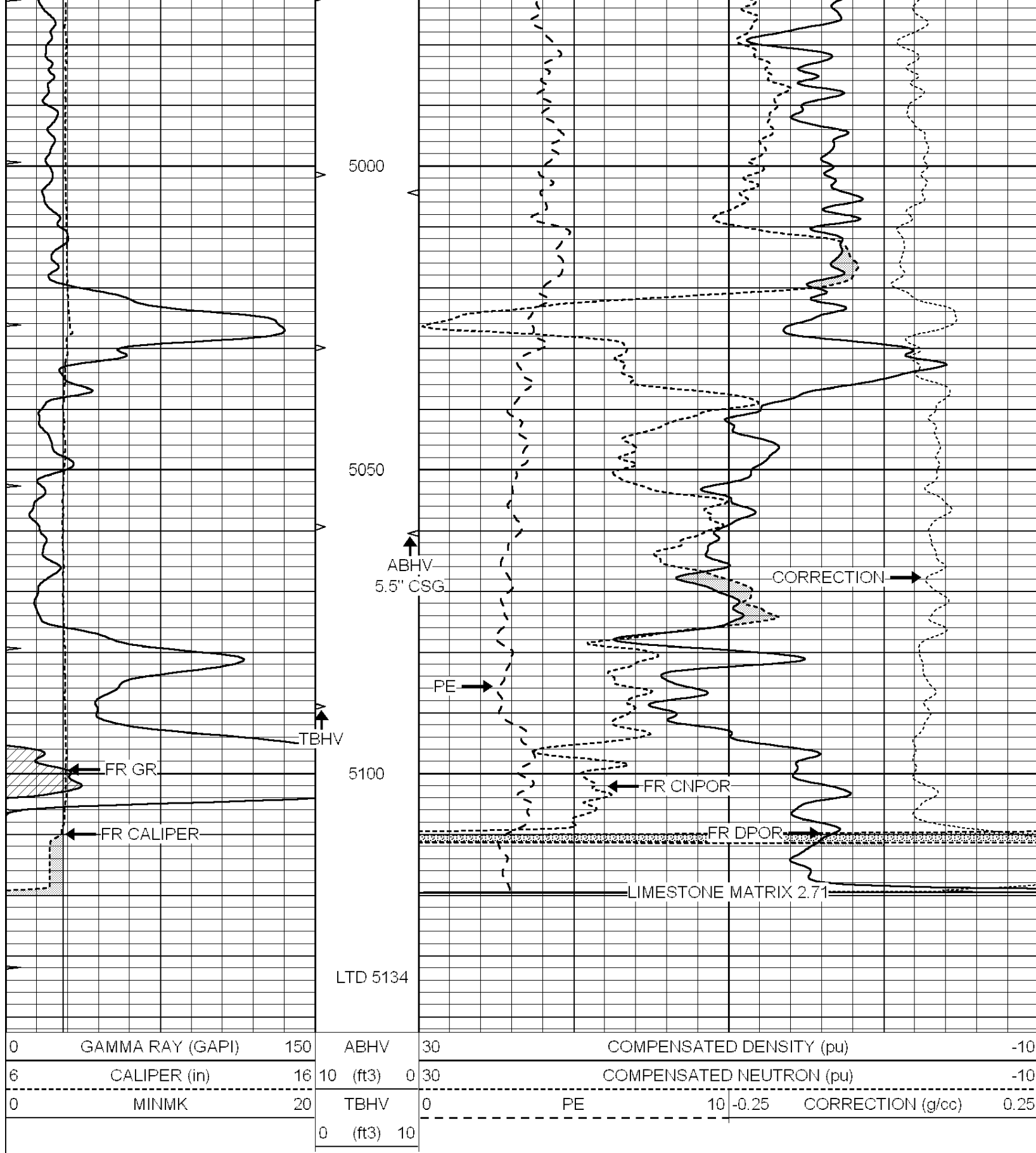
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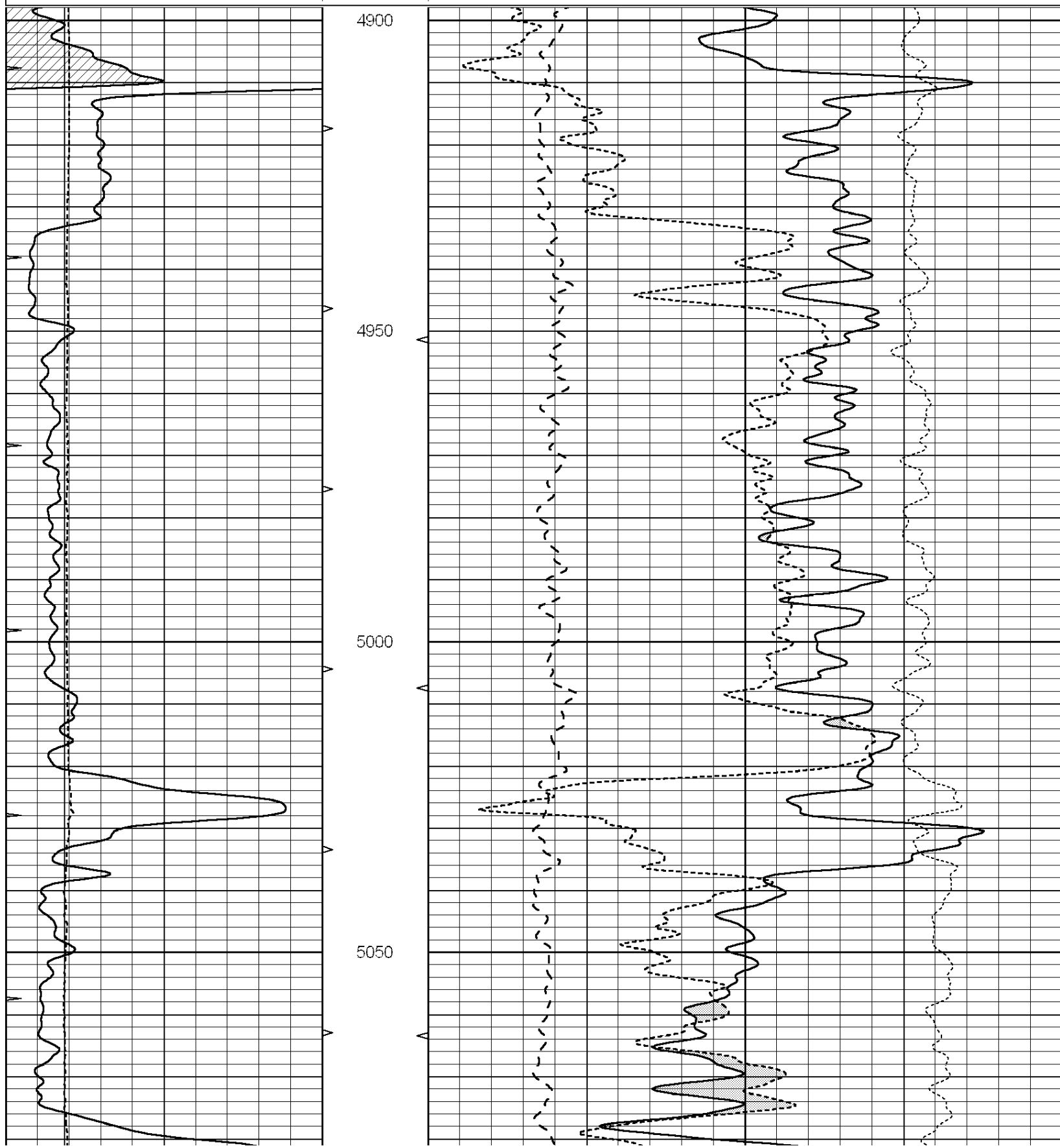


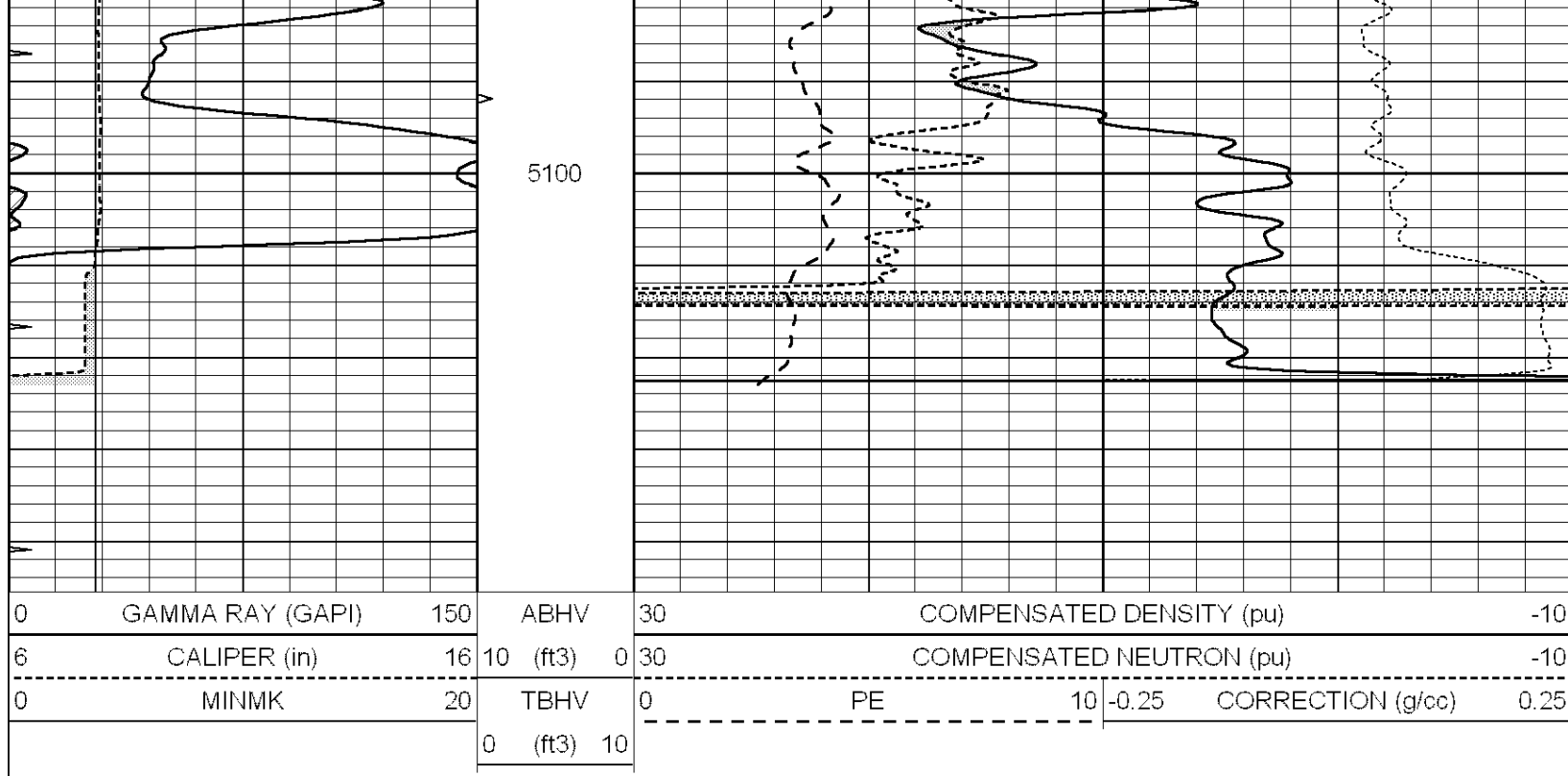




Database File: C:\MSI\Spec\up
Dataset Pathname: pass2.4
Presentation Format: _ldt_neu
Dataset Creation: Thu Aug 08 11:36:51 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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: 011375pe.db
 Dataset Pathname: pass3.10
 Dataset Creation: Thu Aug 08 12:18:21 2013 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Sun Jul 21 21:02:02 2013
 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	500.000	-2.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	560.000	-48.000
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		
Litho Density Calibration Report Serial: 002 Model: PRB Performed Mon Apr 02 17:56:53 2012								
Litho Density Calibration								
	Background		Magnesium		Aluminum		Sandstone	
Window 1	872.3		7266.3		2292.6		7931.5	cps
Window 2	822.9		5957.5		1958.0		6389.6	cps
Window 3	670.4		3219.9		1211.9		3388.2	cps
Window 4	201.6		201.1		202.3		204.6	cps
Long Space	0.0		5134.6		1135.0		5566.6	cps
Short Space	1.1		994.2		674.4		1059.2	cps
Rho			1.7100		2.5960		1.3800	g/cc
Pe					2.5700		1.5500	
Rib Angle	: 45.6		Rib Slope	: 1.020	Density/Spine Ratio		: 0.569	
Spine Angle	: 75.6		Spine Slope	: 3.888	Spine Intercept		: -18.3	
Caliper								
	Readings		Reference					
Low Ref	1.8		8.4					
High Ref	6.1		14.0					
	Gain: 1.3				Offset: 2.9			
Compensated Neutron Calibration Report								
			Serial Number:		NEU_4I			
			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:		Sun Jul 21 23:02:12 2013					
	Calibrator Value:		1.0		GAPI			
	Background Reading:		0.0		cps			
	Calibrator Reading:		1.0		cps			
	Sensitivity:		0.8700		GAPI/cps			