



DUAL INDUCTION LOG

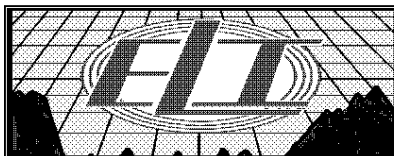
Company	GRIFFIN MANAGEMENT, LLC.	Company	GRIFFIN MANAGEMENT, LLC.
Well	SUMMER #2	Well	SUMMER #2
Field	WILDCAT	Field	WILDCAT
County	PRATT	County	PRATT
State	KANSAS	State	KANSAS
Location:	API # : 15-151-22501-0000 3000' FNL & 1370' FVL SW - NW - NE - SW	Other Services CDL/CNL/PE MEL/SONIC	
Permanent Datum	GROUND LEVEL	Elevation	2004
Log Measured From	KELLY BUSHING 12' A.G.L.		
Drilling Measured From	KELLY BUSHING		
Date	8/27/19		
Run Number	ONE		
Depth Driller	4858		
Depth Logger	4854		
Bottom Logged Interval	4852		
Top Log Interval	00		
Casing Driller	8 5/8"@273'		
Casing Logger	270		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5,000 PPM	
Density / Viscosity	9.5/62		
pH / Fluid Loss	10.5/8.8		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.660@99F		
Rmf @ Meas. Temp	.495@99F		
Rmc @ Meas. Temp	.792@99F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.527@124F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	12:30 P.M.		
Maximum Recorded Temperature	124F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	ELI J. FELTS	CHUCK GRIFFIN	J.R. GRIFFIN

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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 ELI WIRELINE HAYS, KANSAS (785) 628-6395
DIRECTIONS
CROFT, KS., 2S. TO "RD. 110", 1E., 1S. ON TRAIL E. & S. INTO



MAIN SECTION

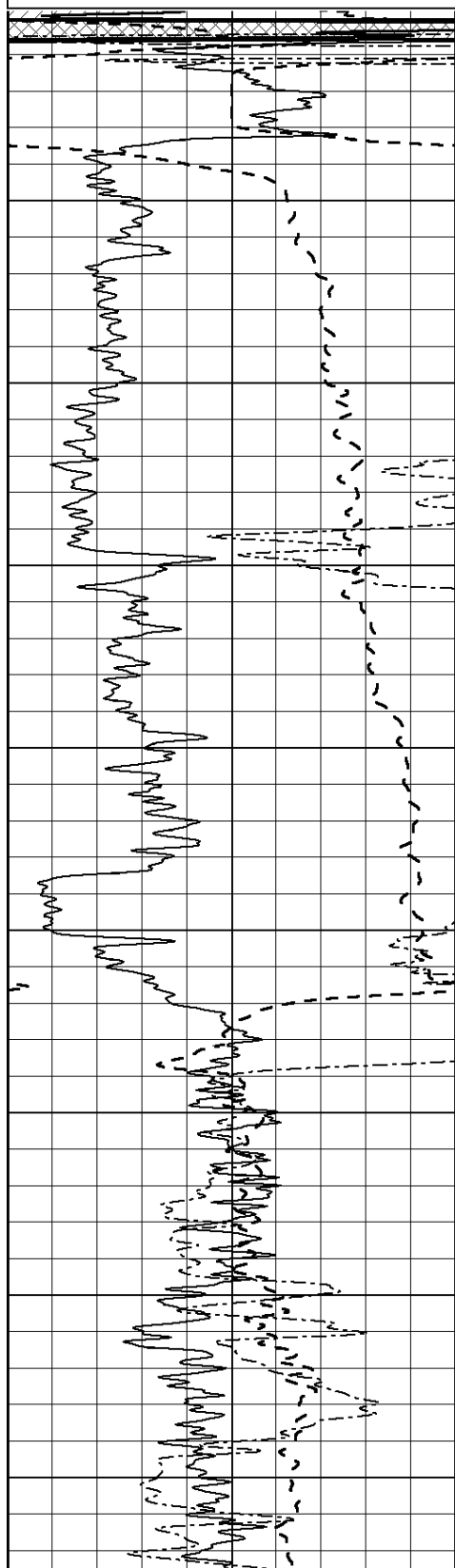
Database File: 3957pe.db
 Dataset Pathname: pass3.7
 Presentation Format: dil2
 Dataset Creation: Tue Aug 27 14:13:35 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

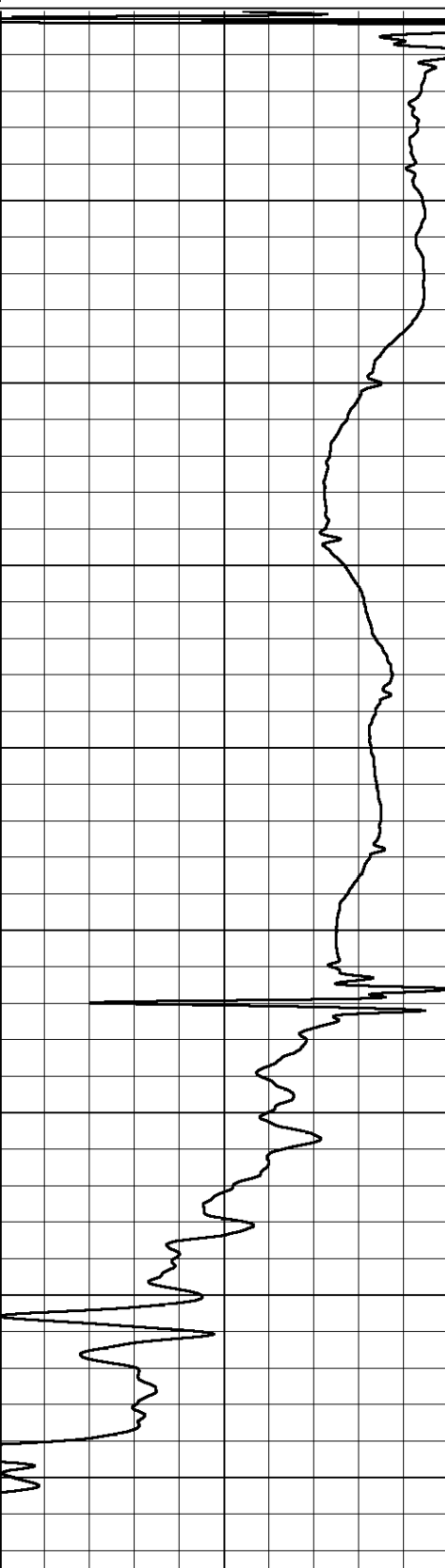
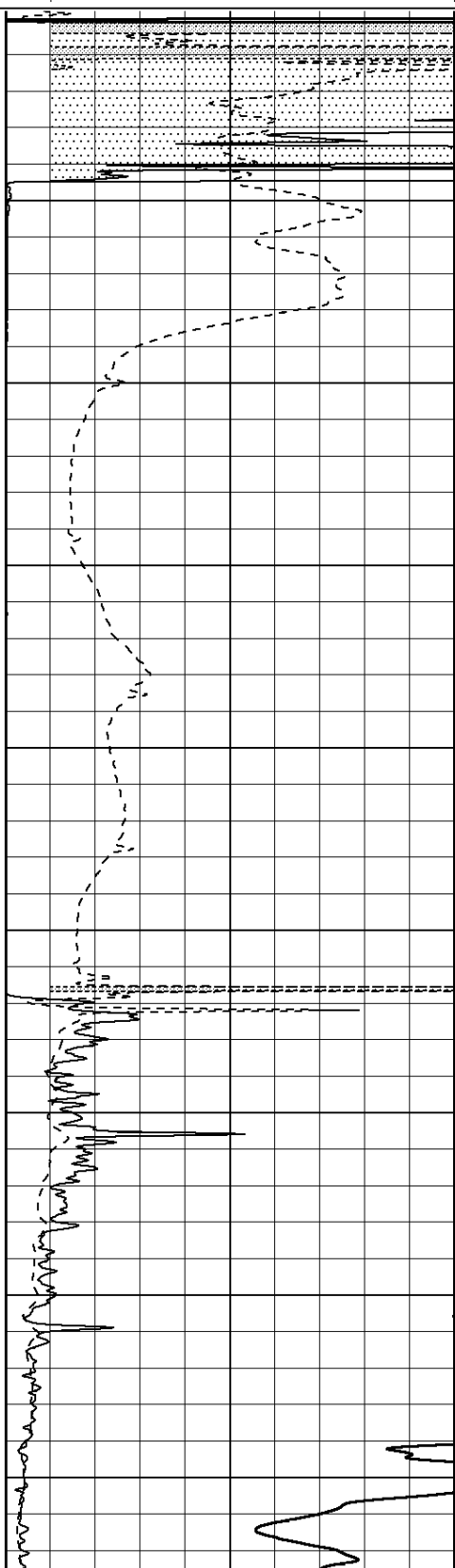
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

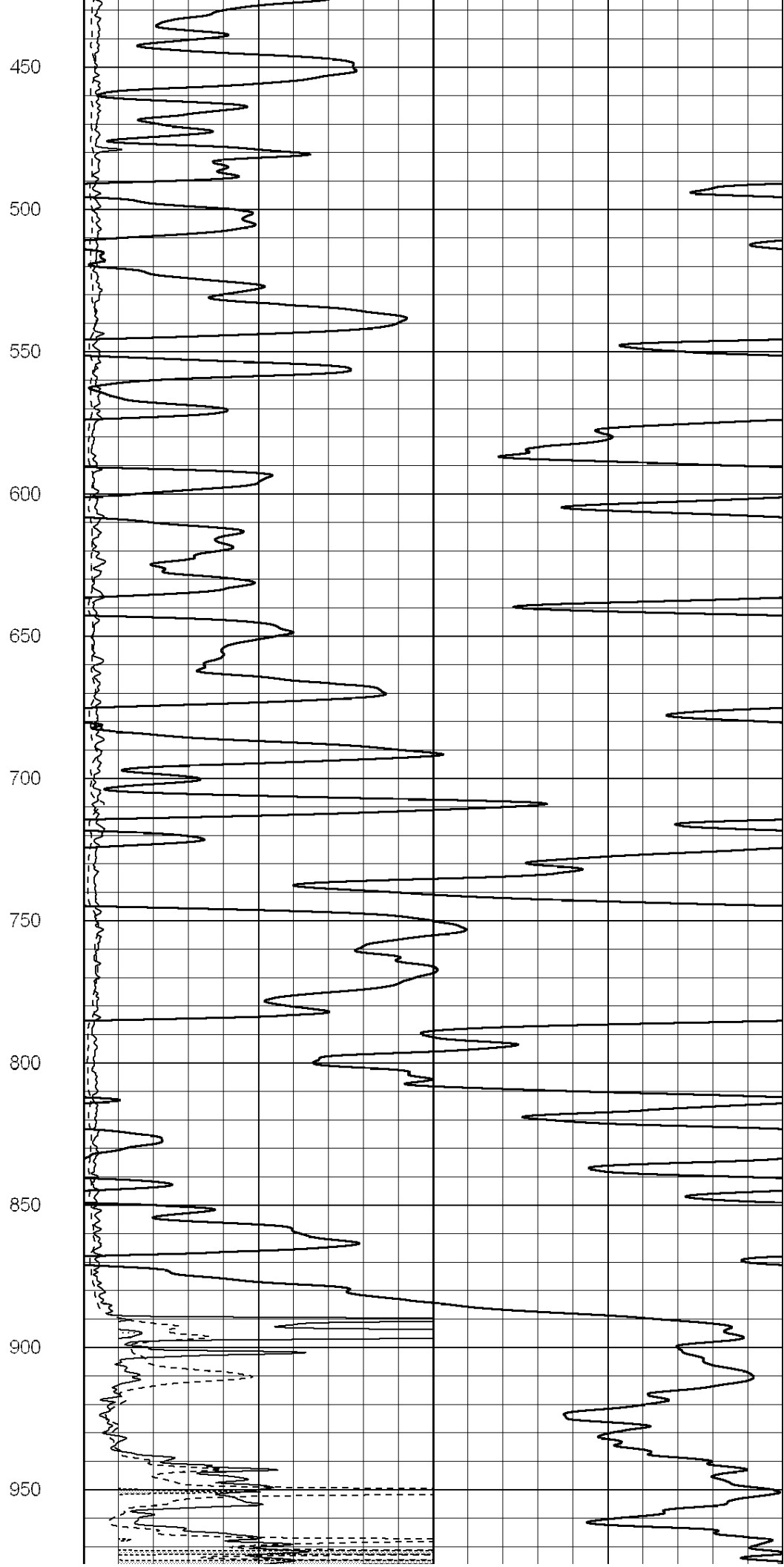
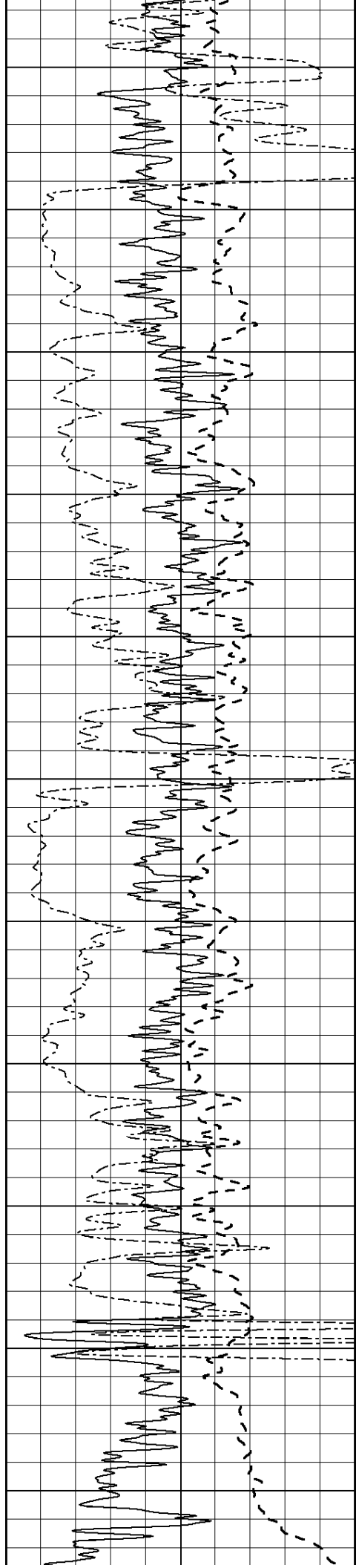
1000	CILD (mmho/m)	0
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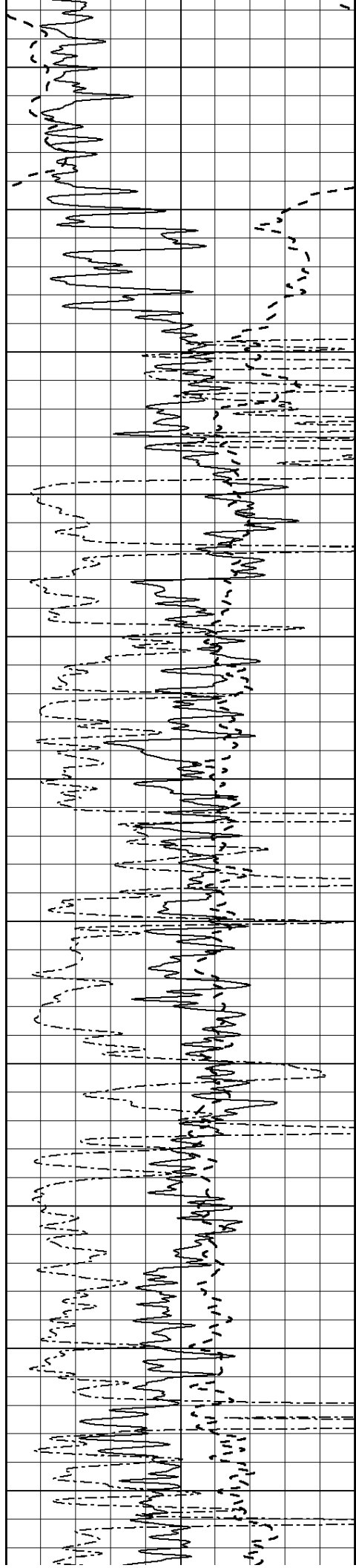
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



0
50
100
150
200
250
300
350
400







1000

1050

1100

1150

1200

1250

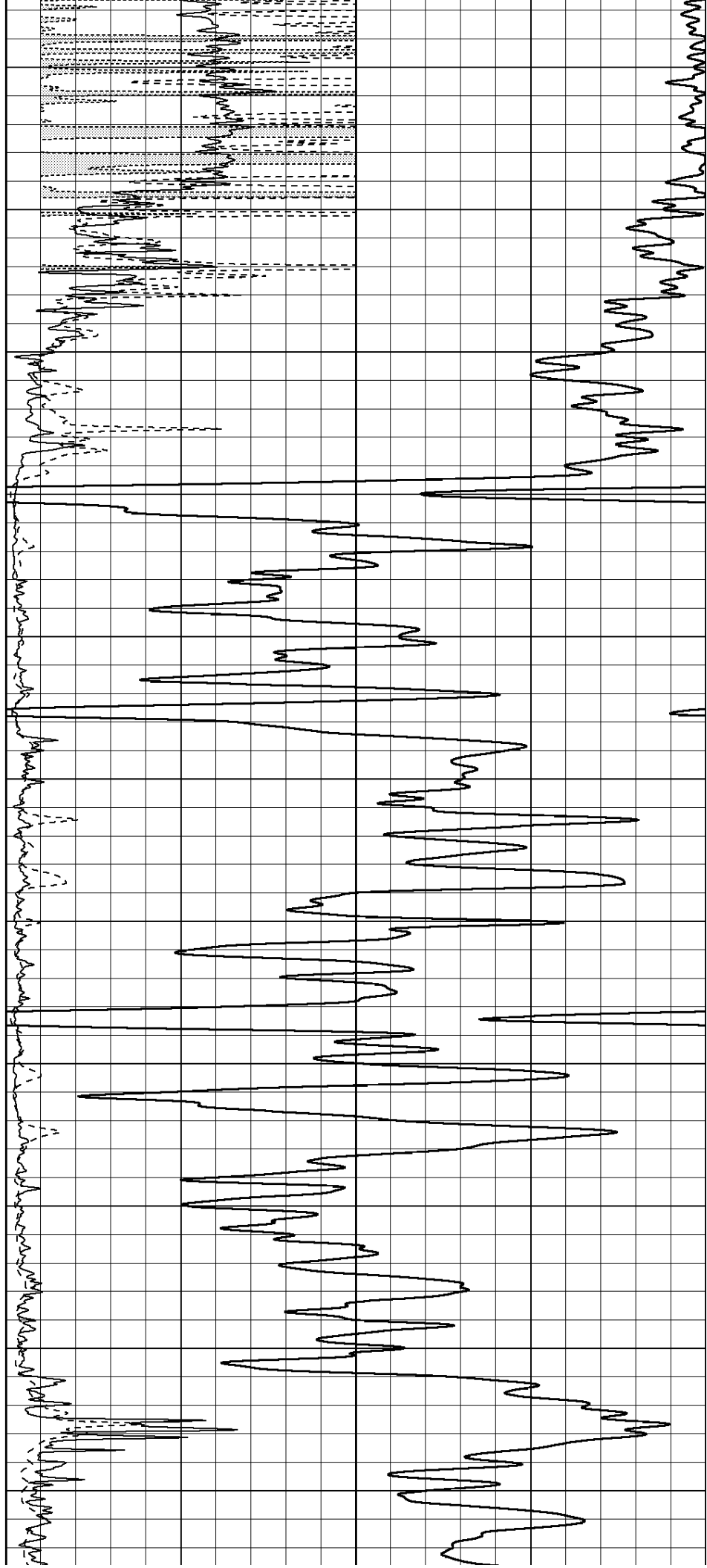
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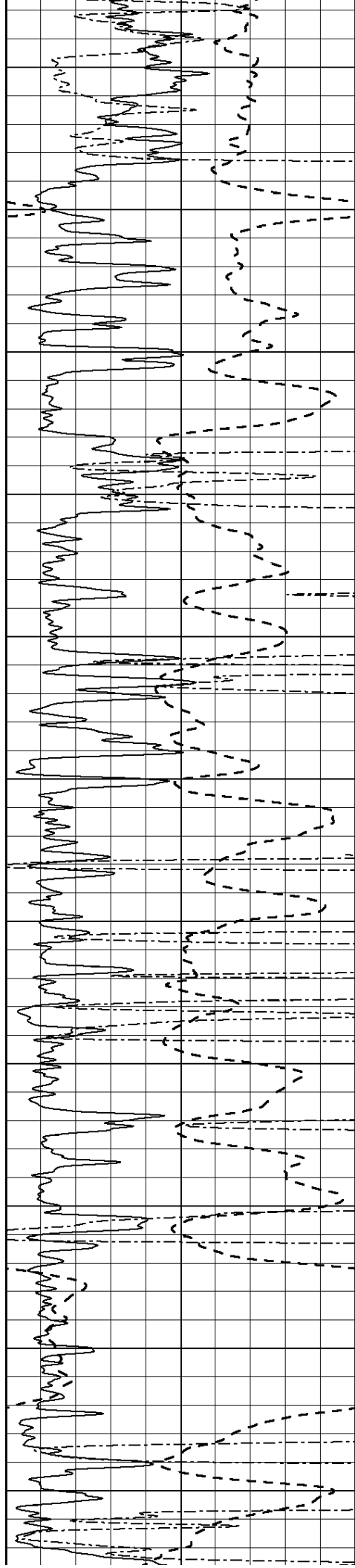
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1500





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1800

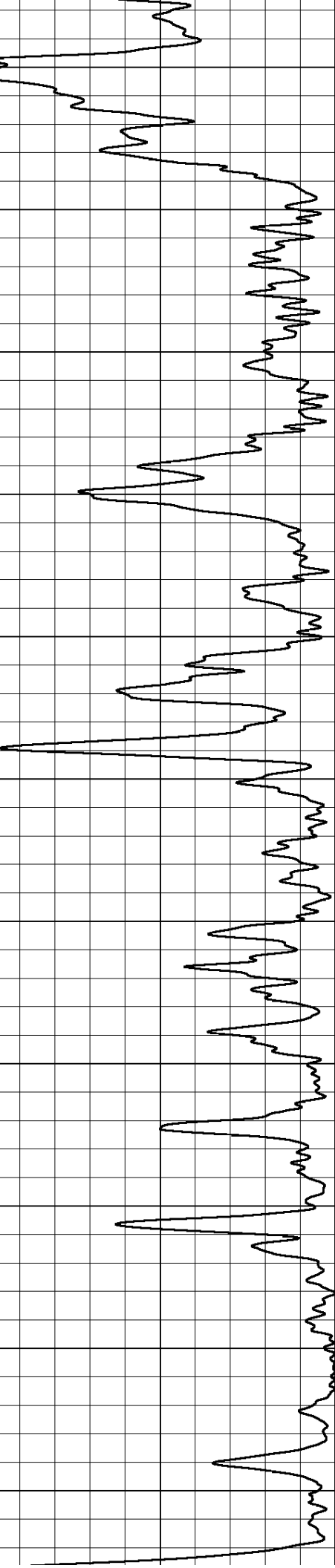
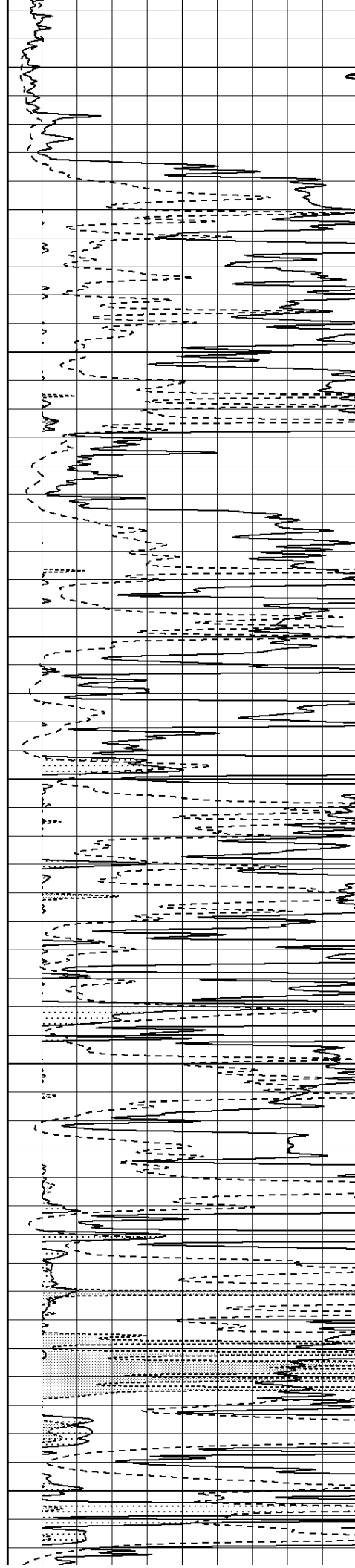
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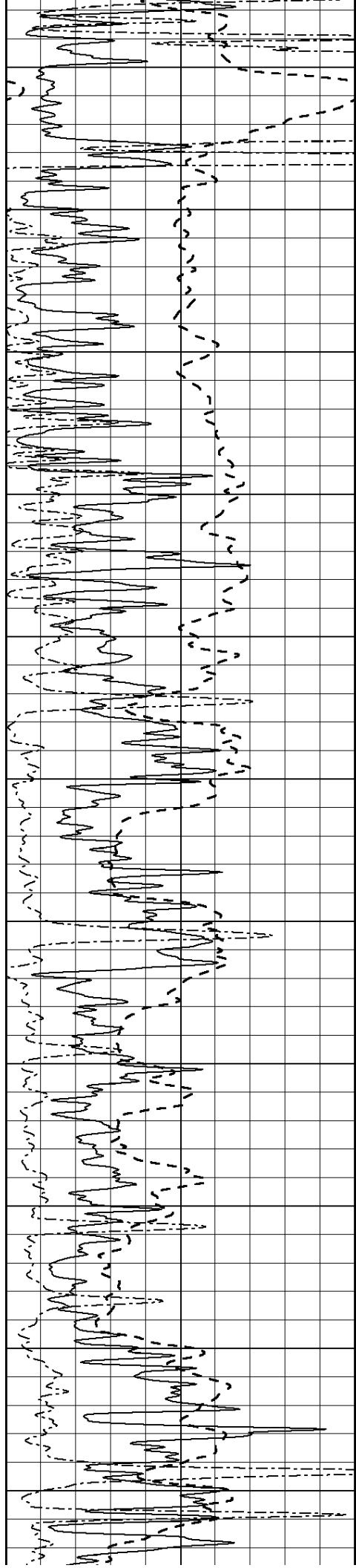
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2000

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2150

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2250

2300

2350

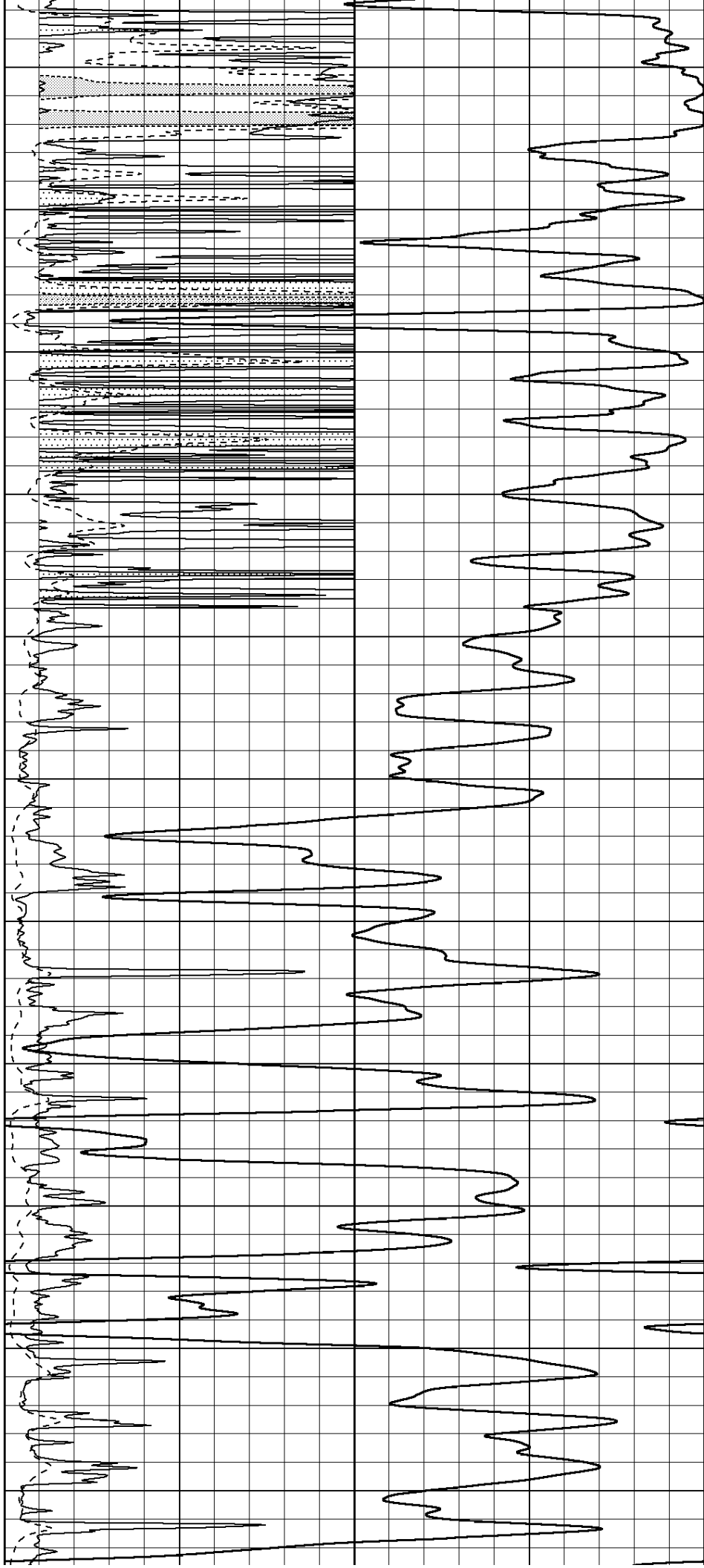
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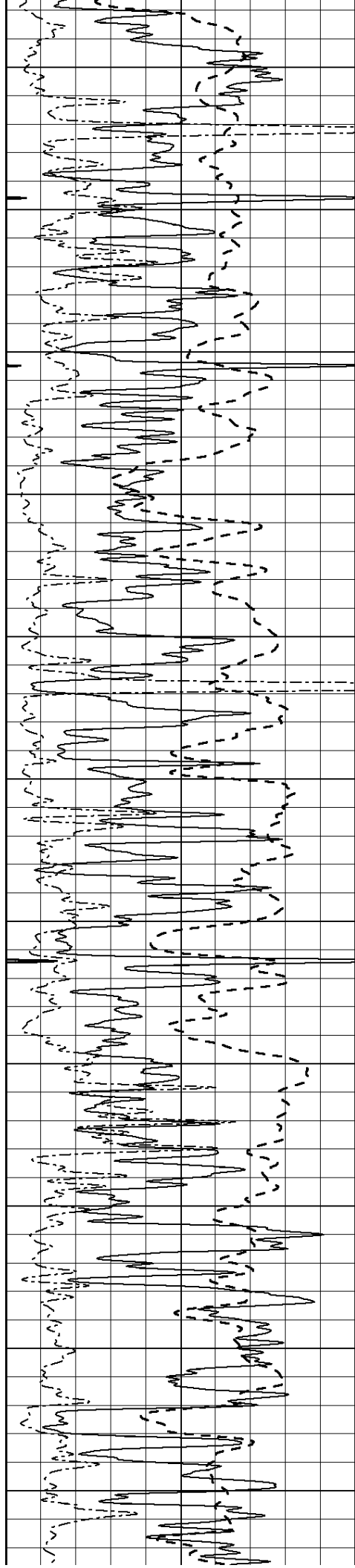
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2600





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2700

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2800

2850

2900

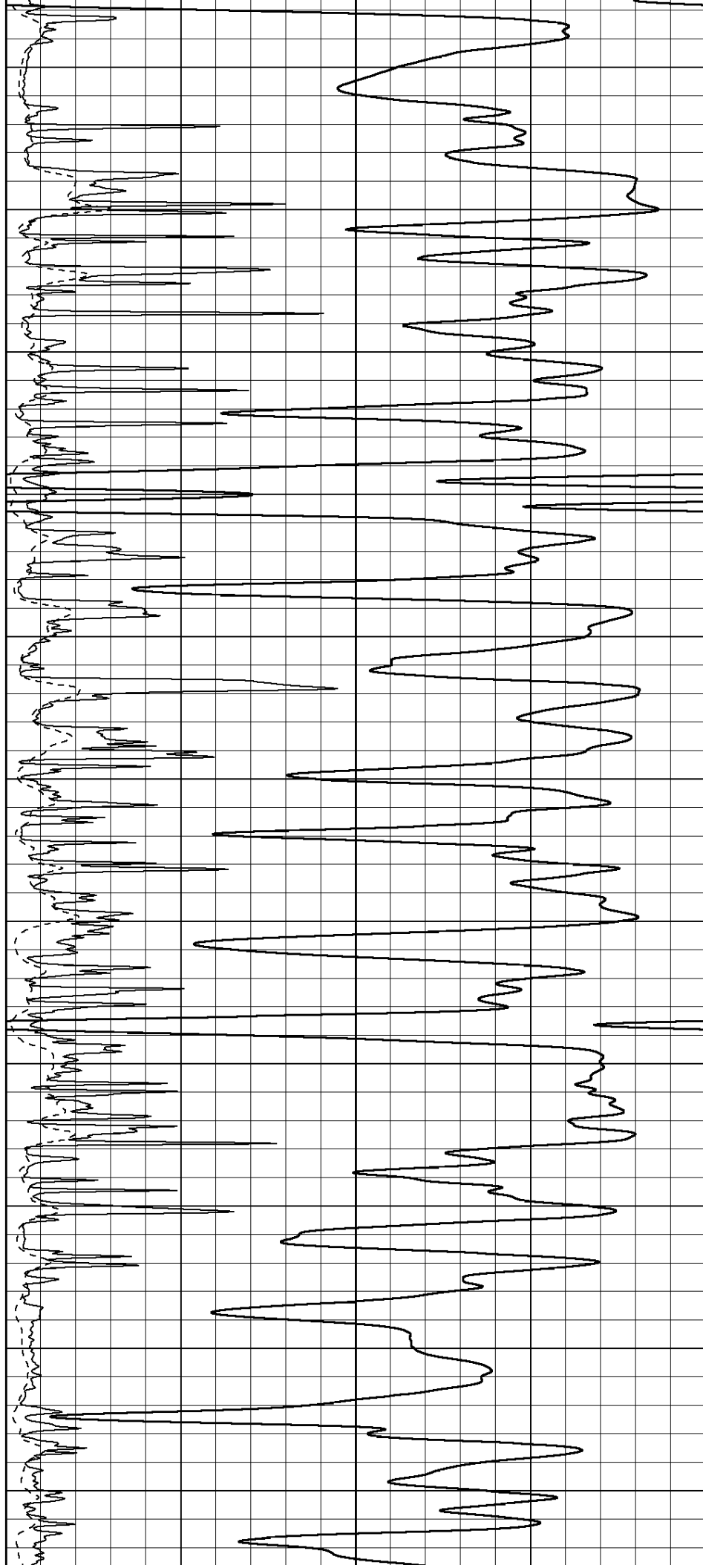
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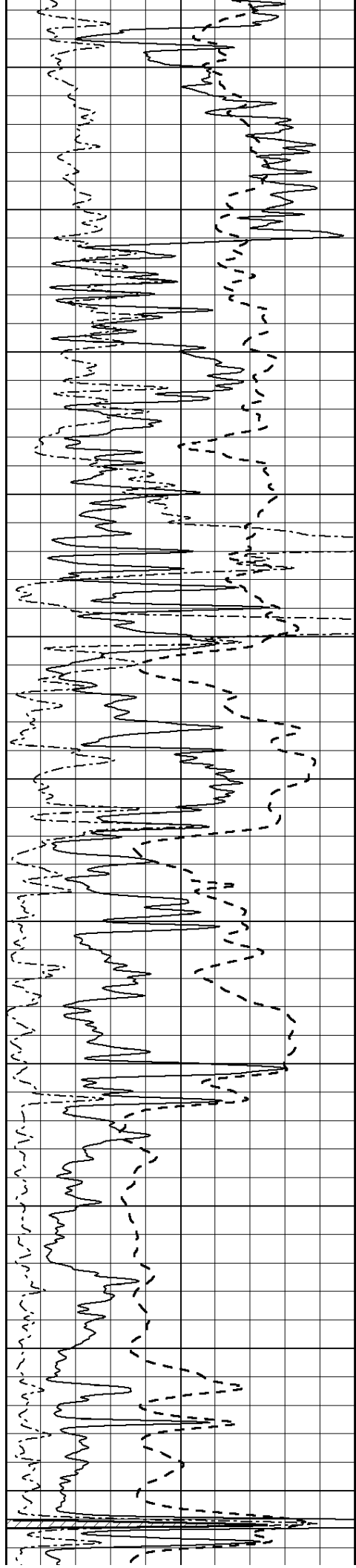
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3050

3100

3150





3200

3250

3300

3350

3400

3450

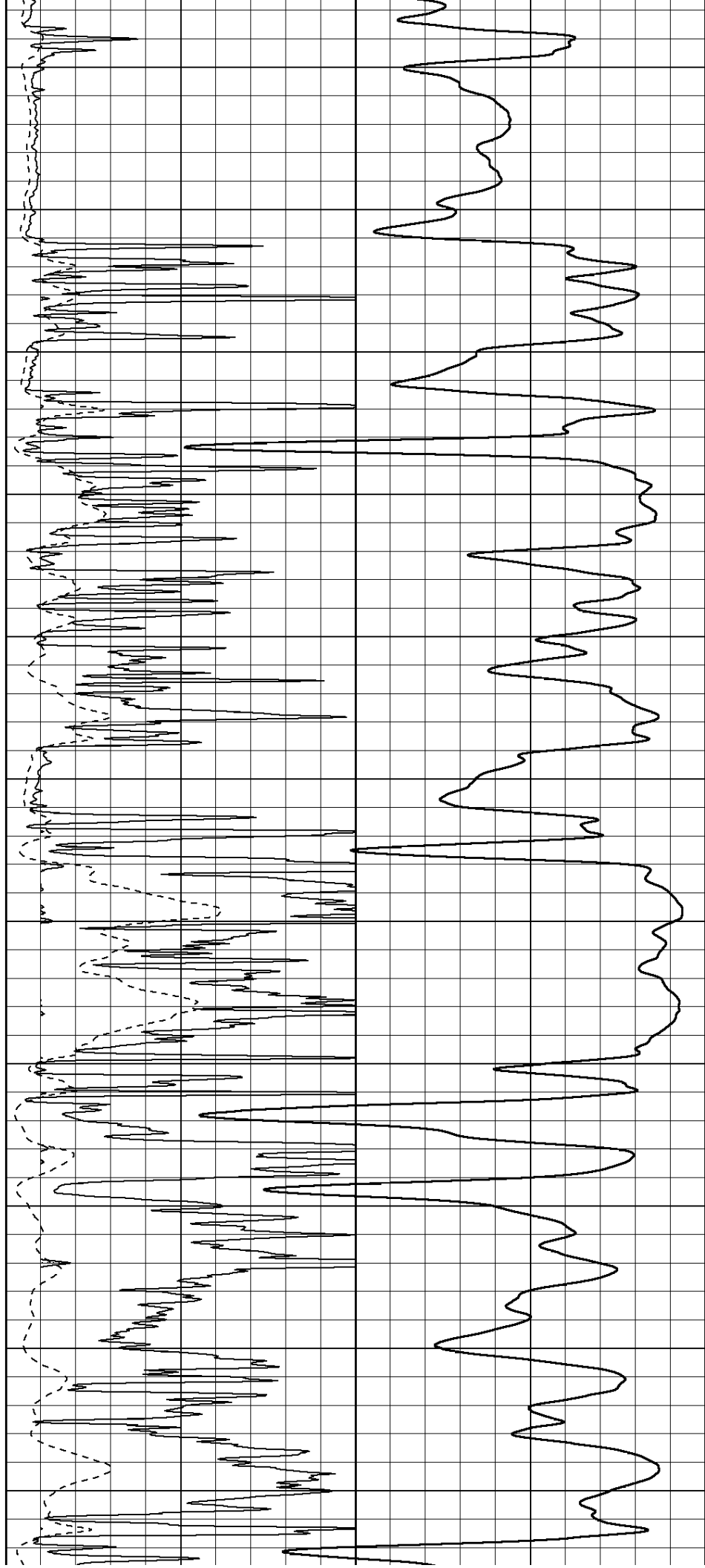
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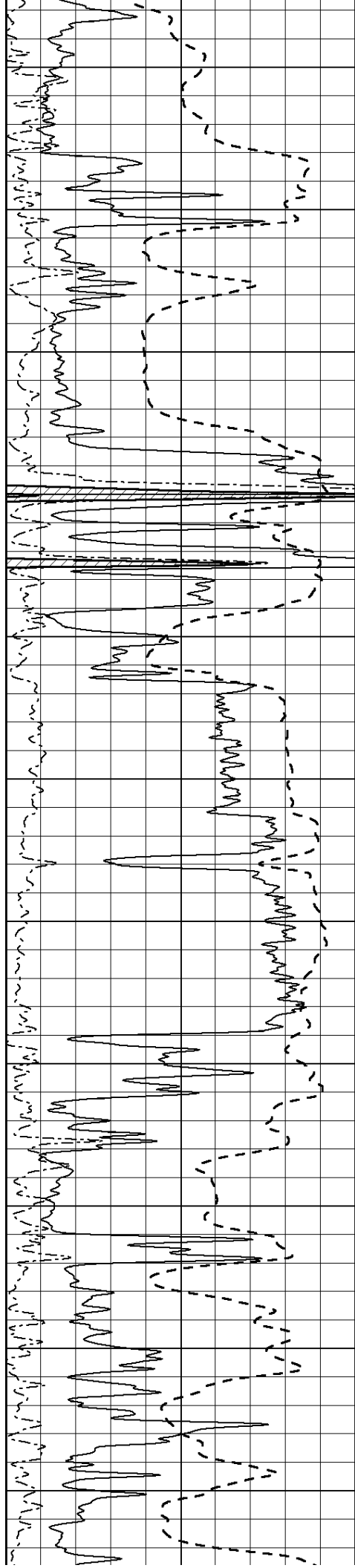
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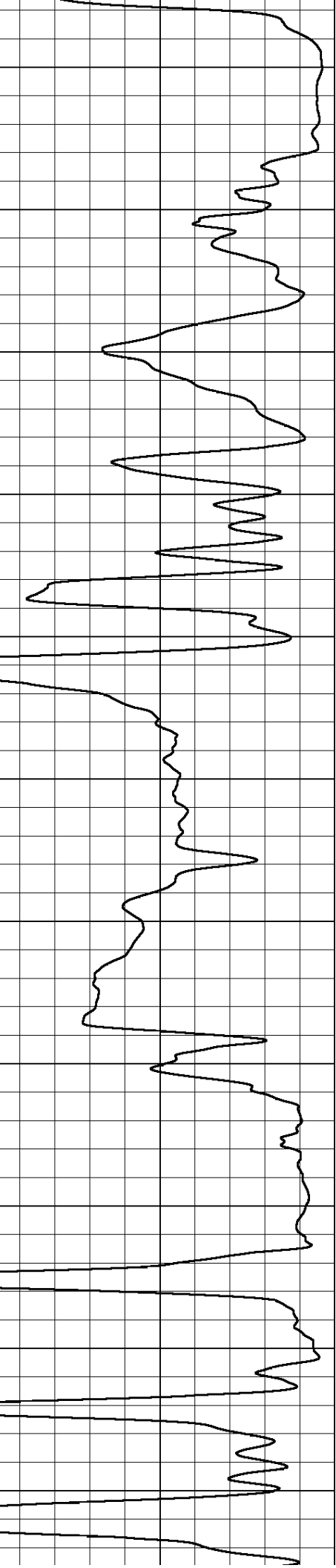
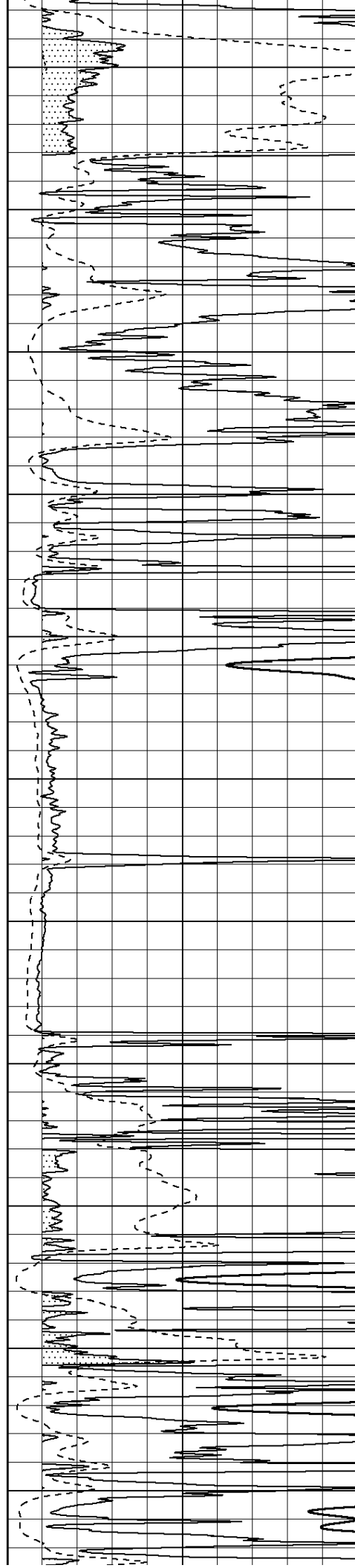
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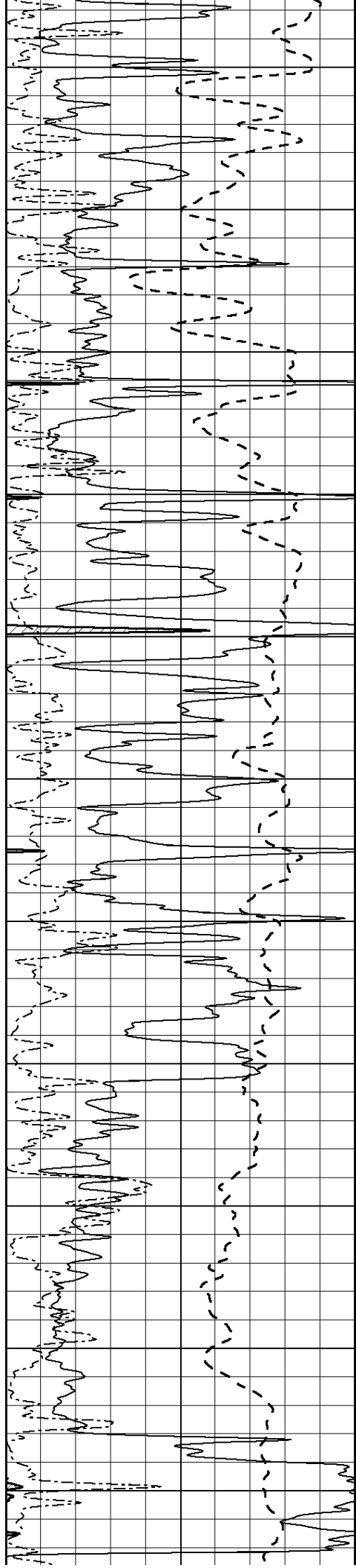
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4150

4200

4250





4300

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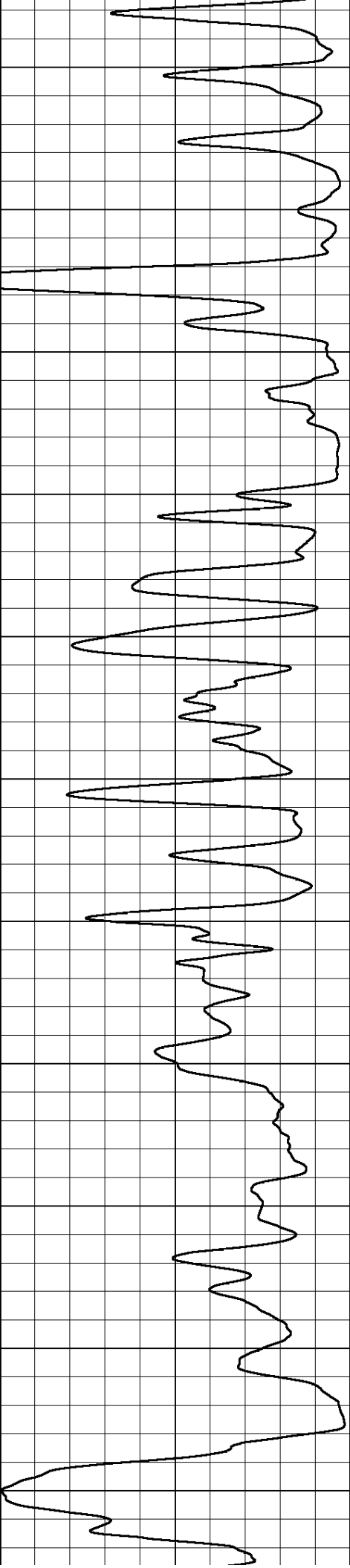
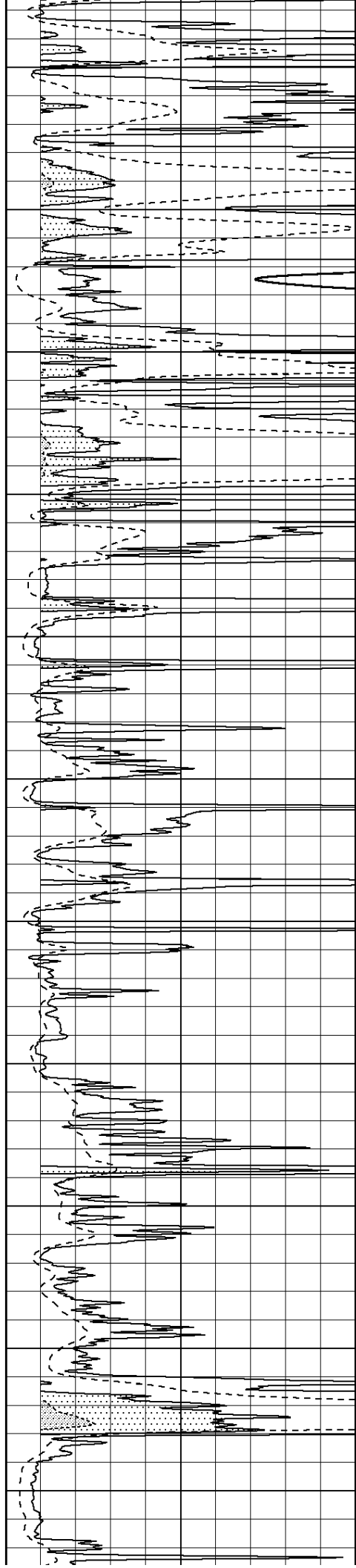
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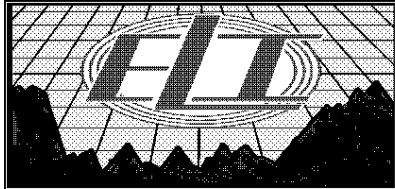
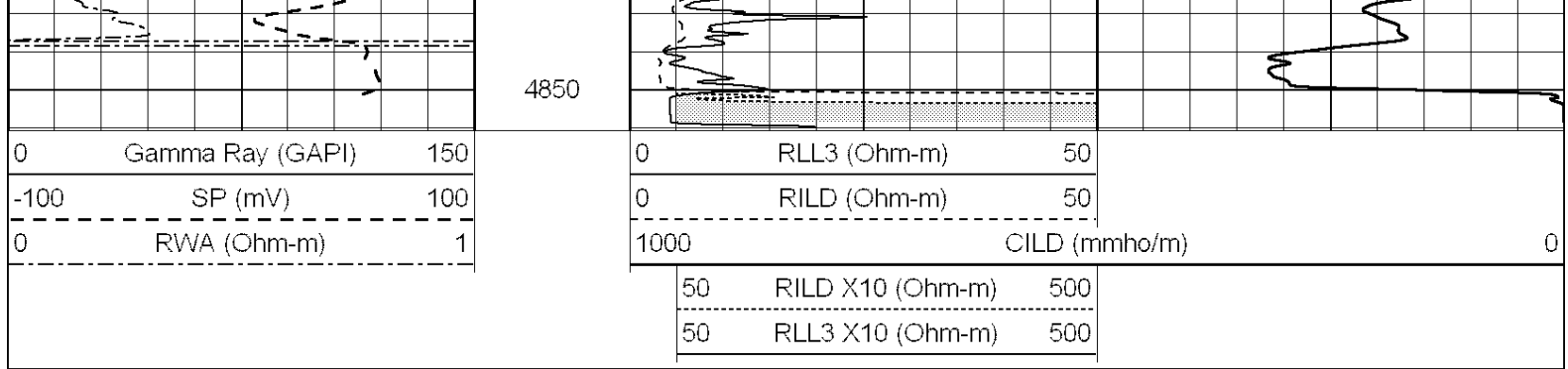
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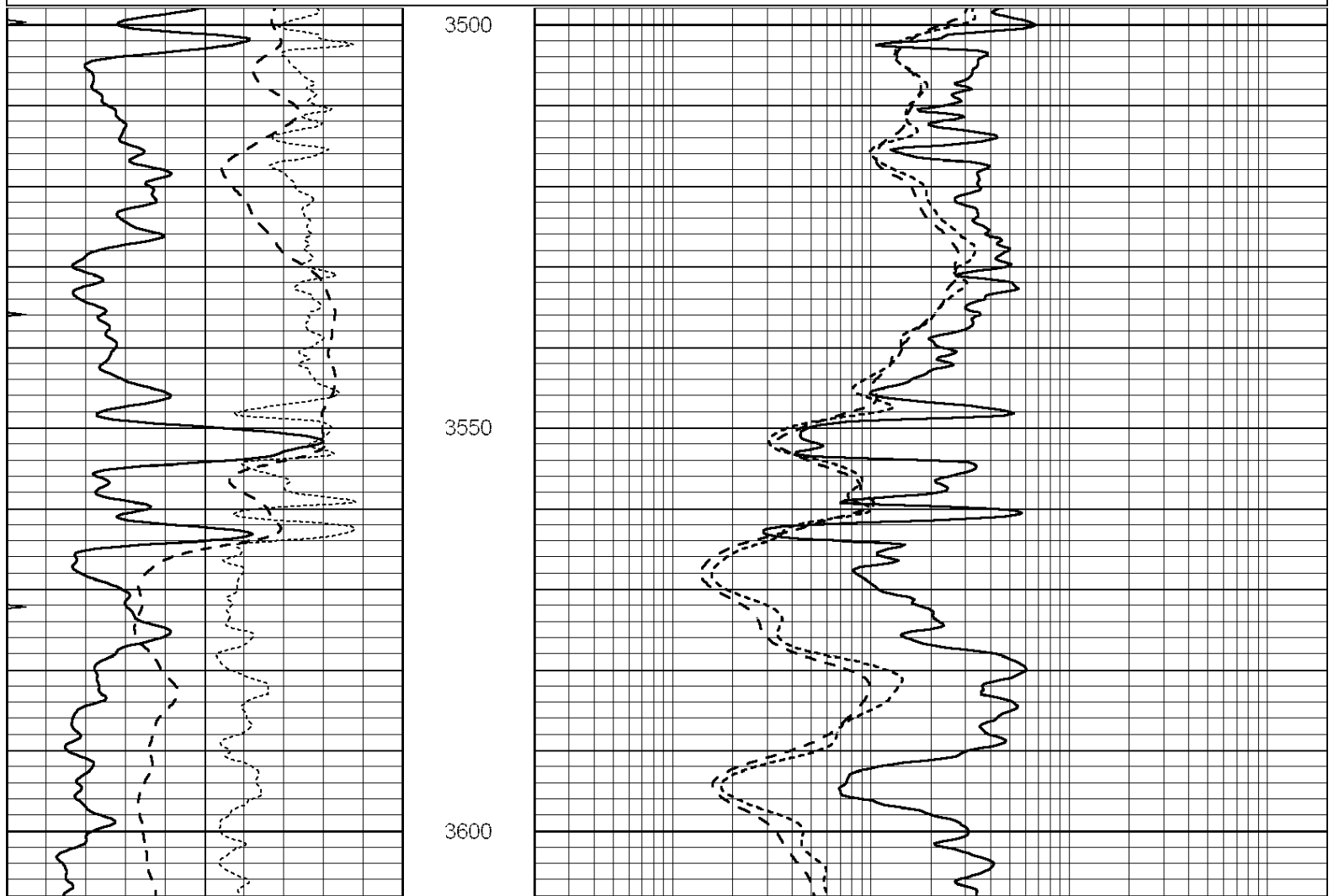


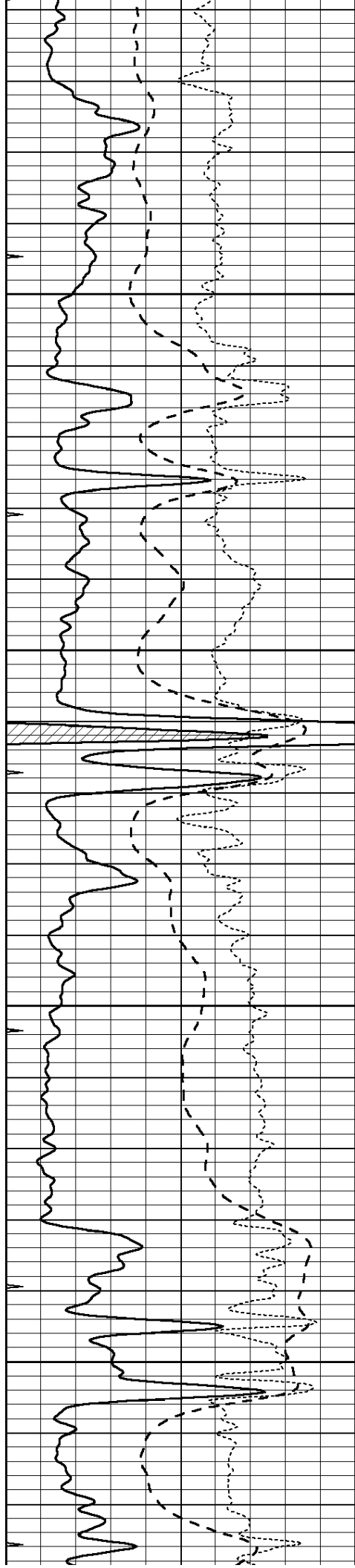


MAIN SECTION

Database File: 3957pe.db
 Dataset Pathname: pass3.7
 Presentation Format: _dil
 Dataset Creation: Tue Aug 27 14:13:35 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	SHALLOW GUARD (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	Rxo/Rt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



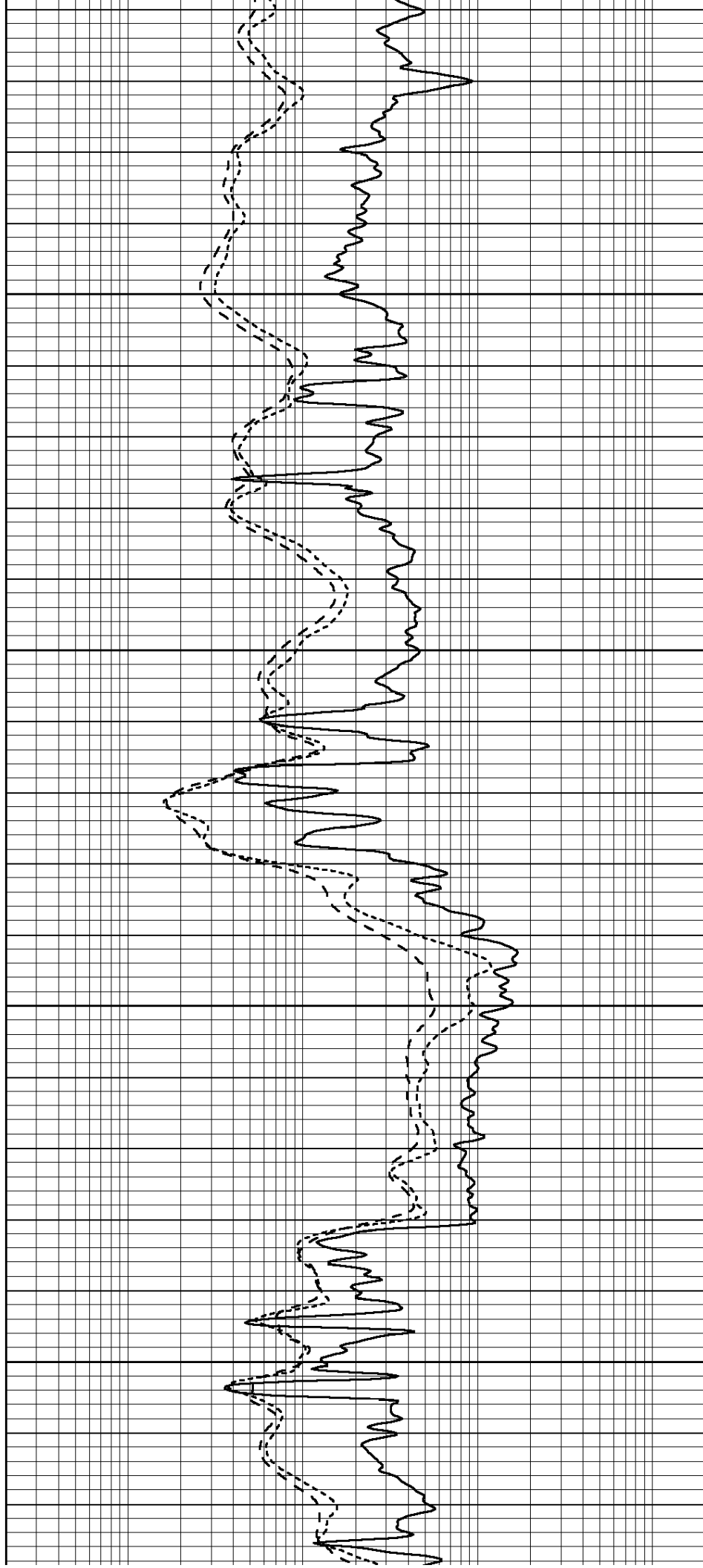


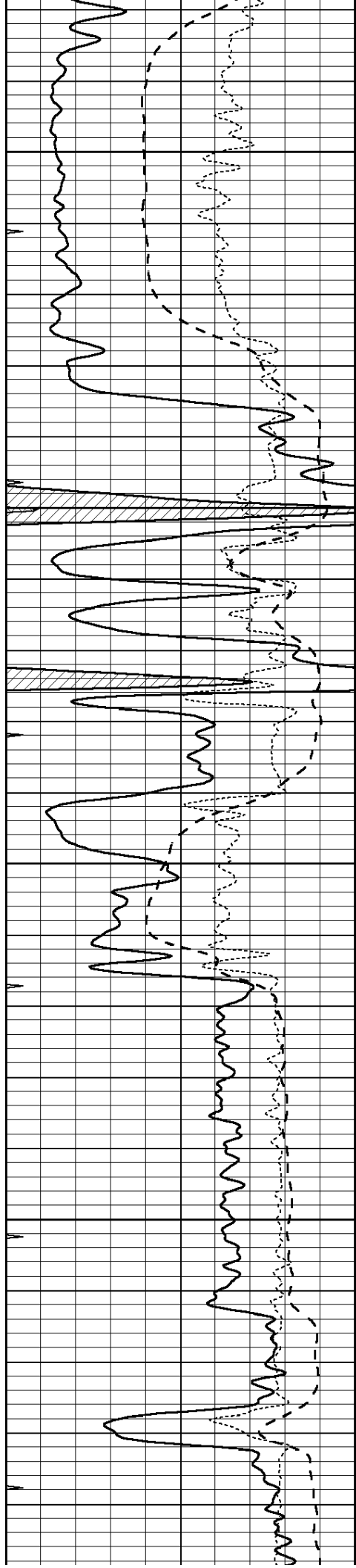
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3700

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3800



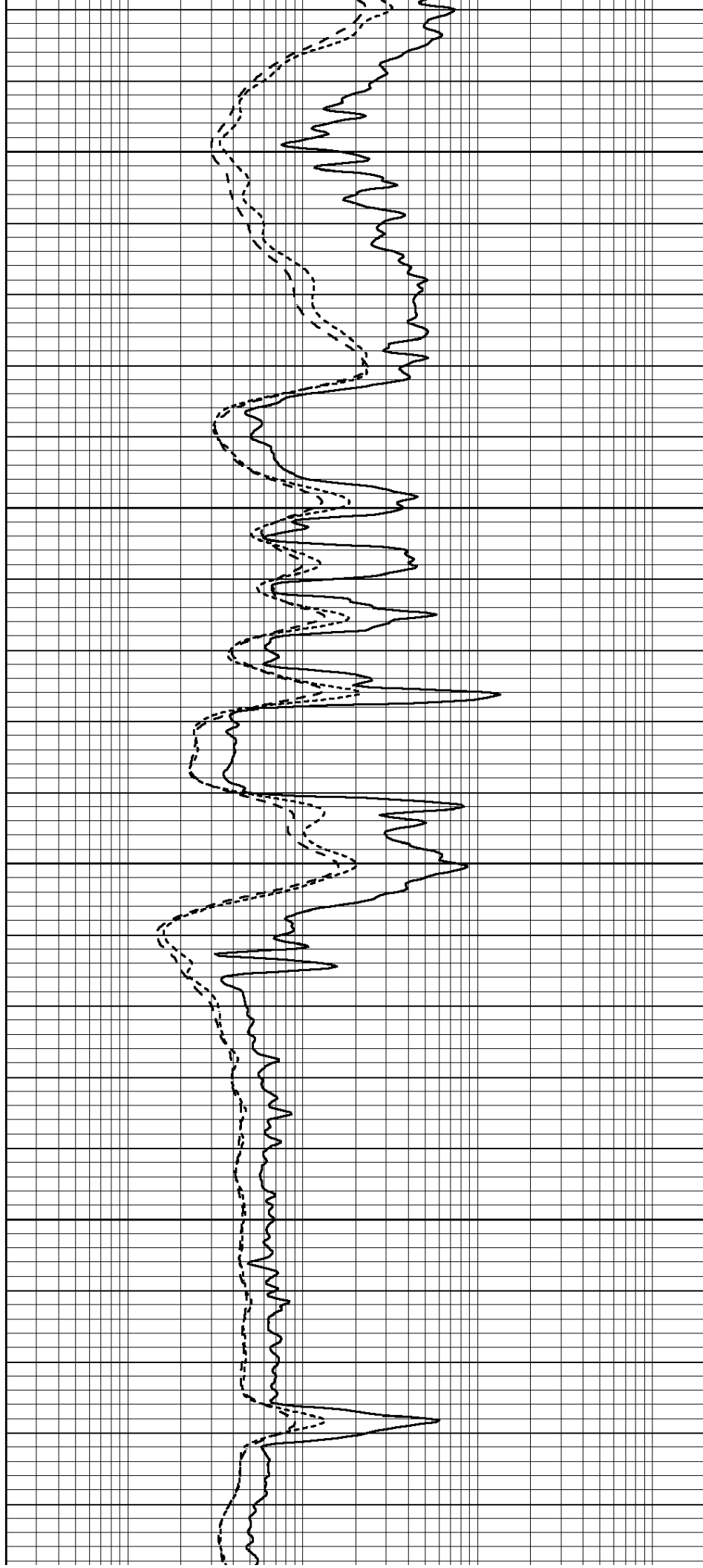


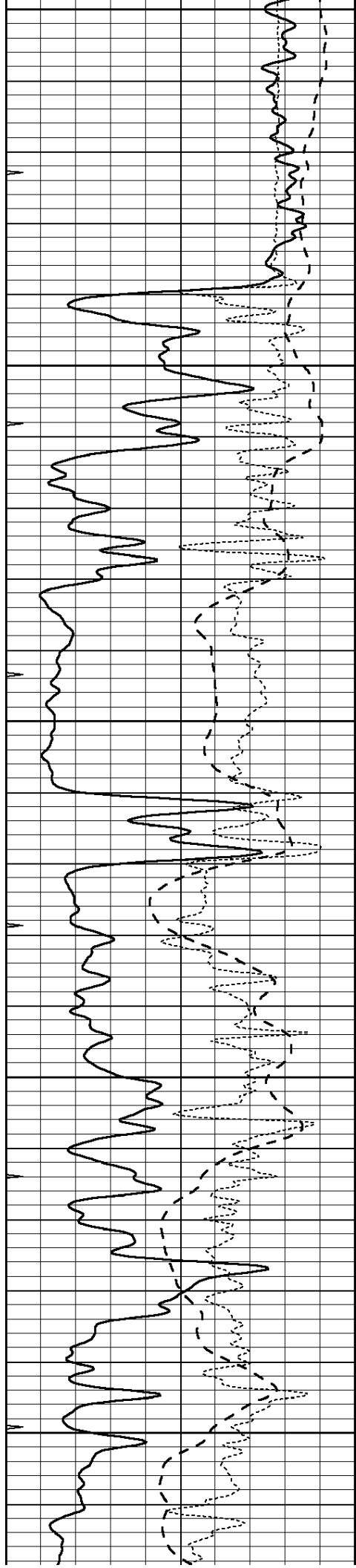
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3900

3950

4000





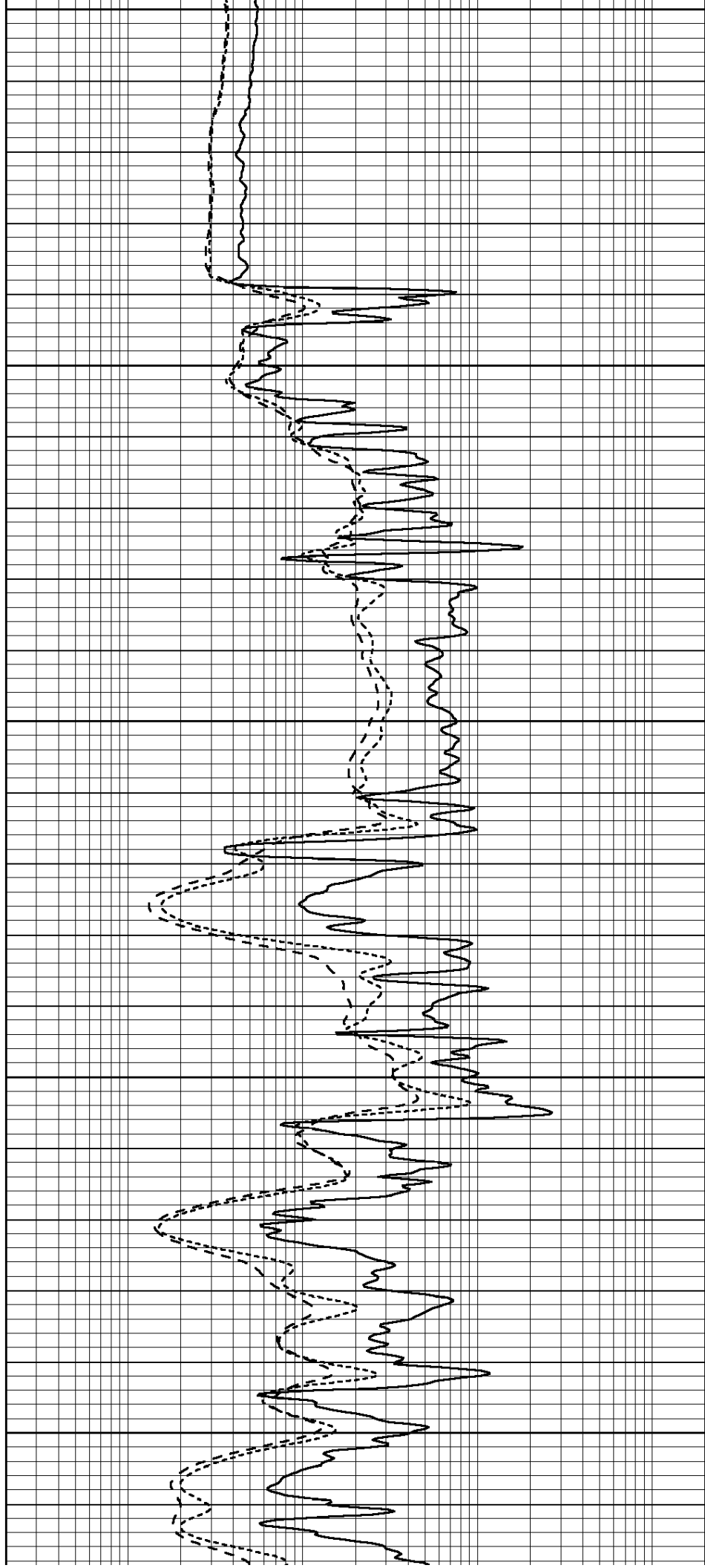
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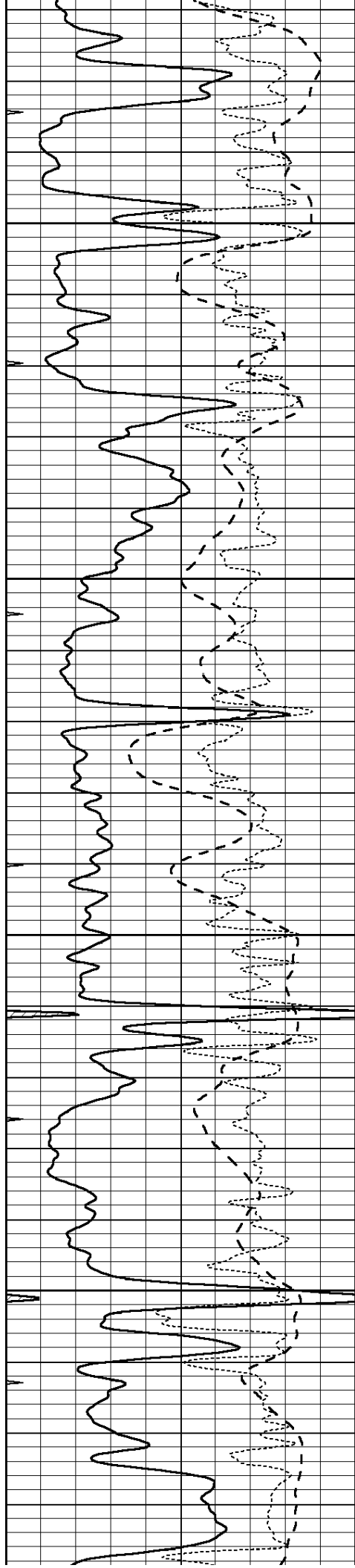
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4150

4200

4250



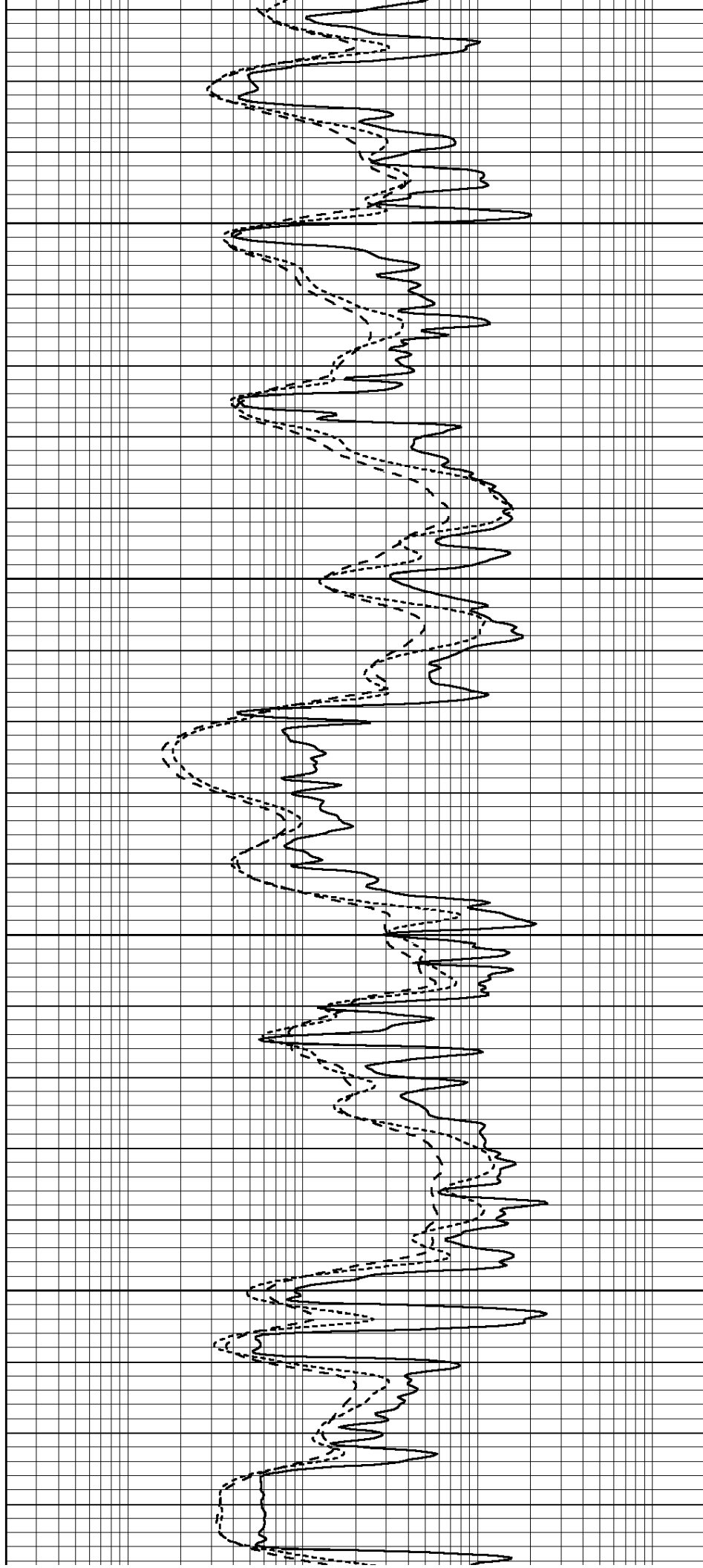


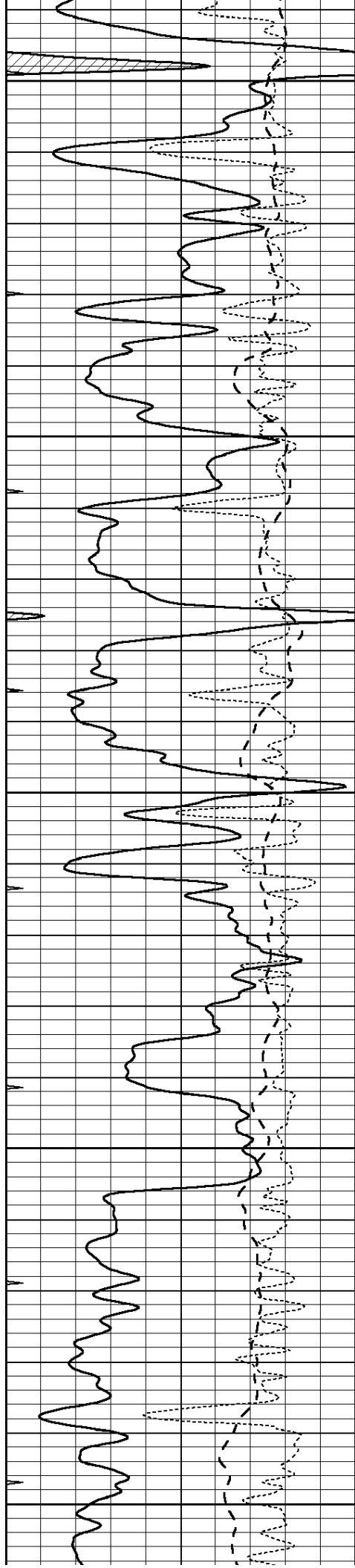
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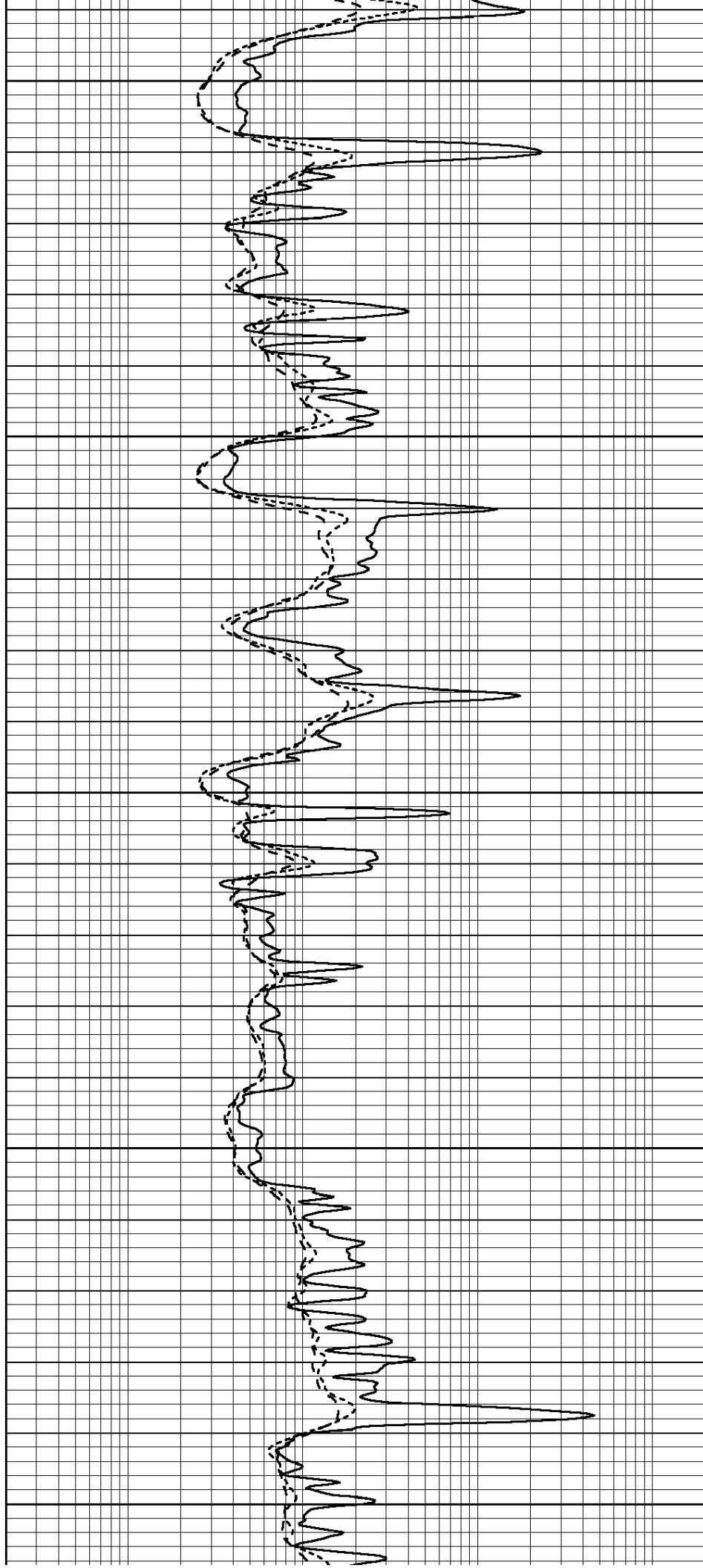
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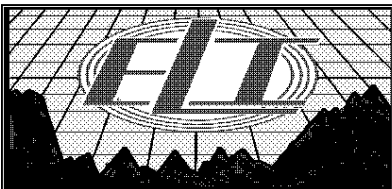
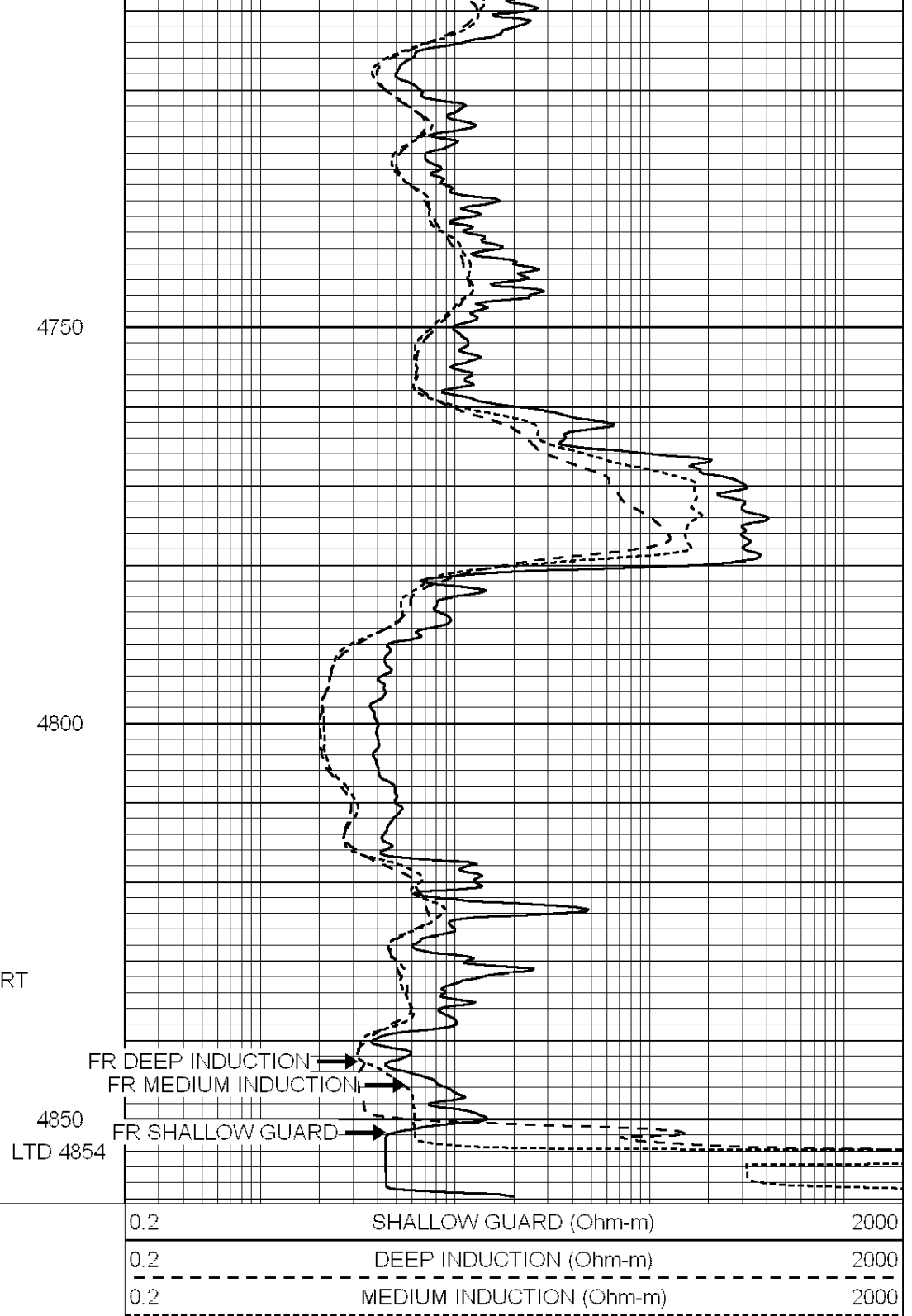
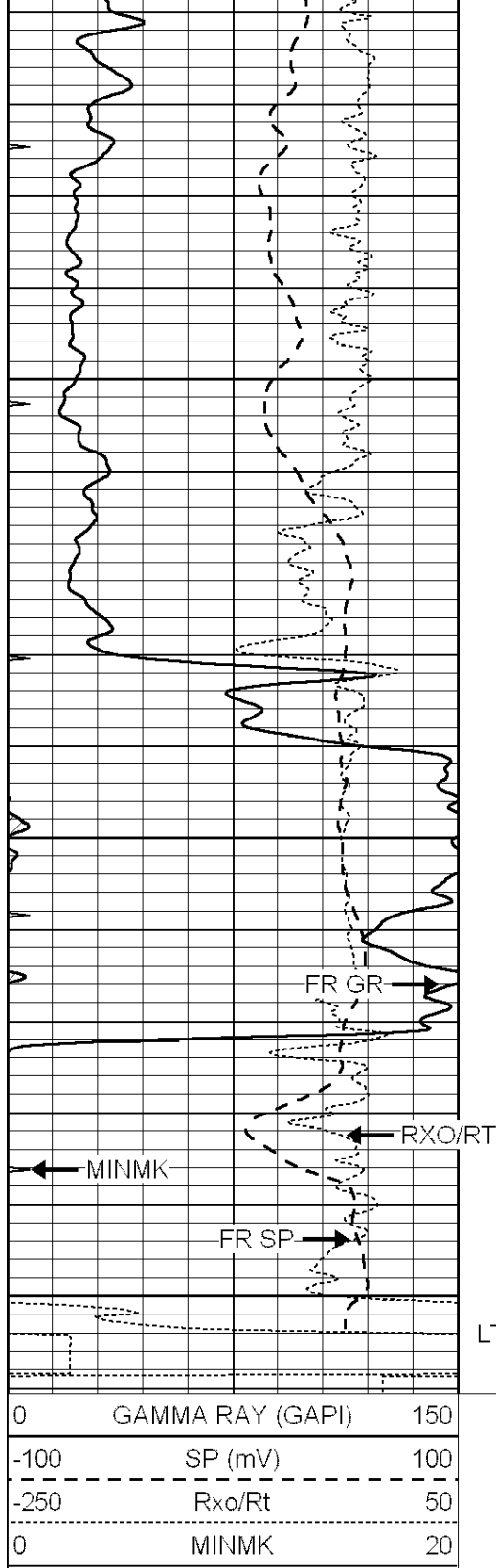
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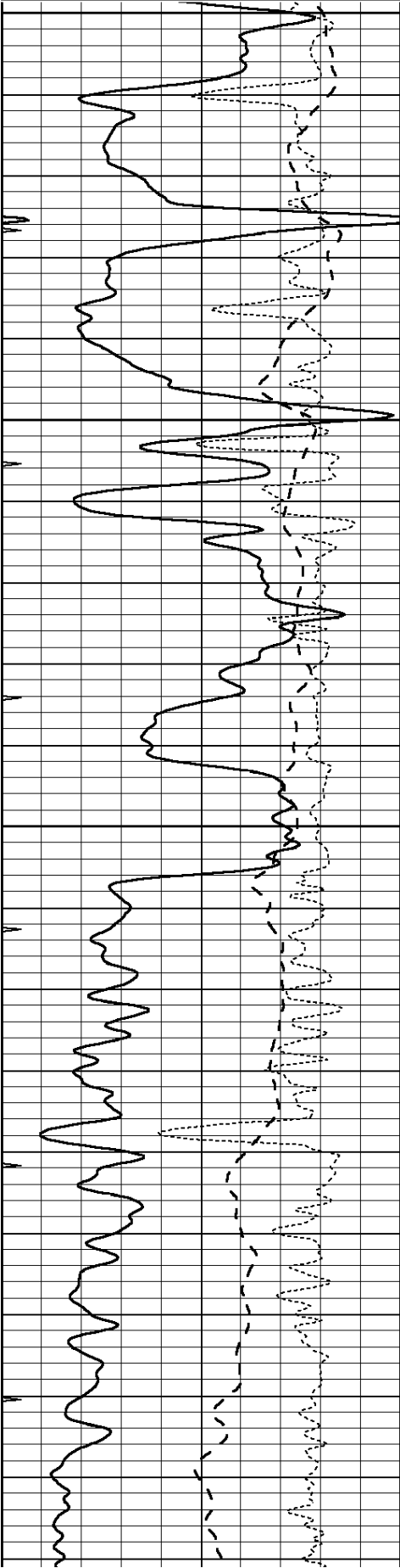




REPEAT SECTION

Database File: 3957pe.db
 Dataset Pathname: pass2.7
 Presentation Format: _dil
 Dataset Creation: Tue Aug 27 14:14:47 2019 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



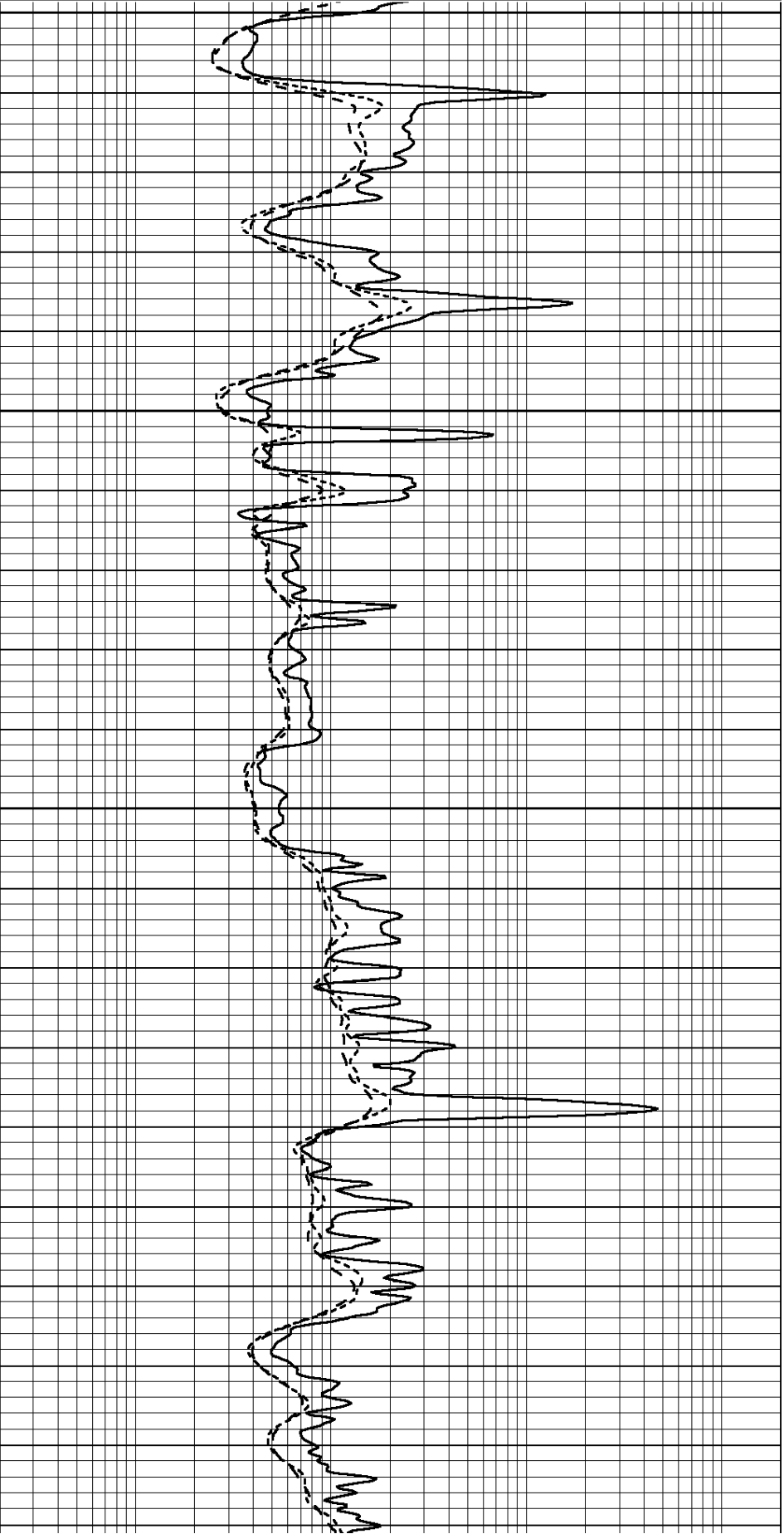
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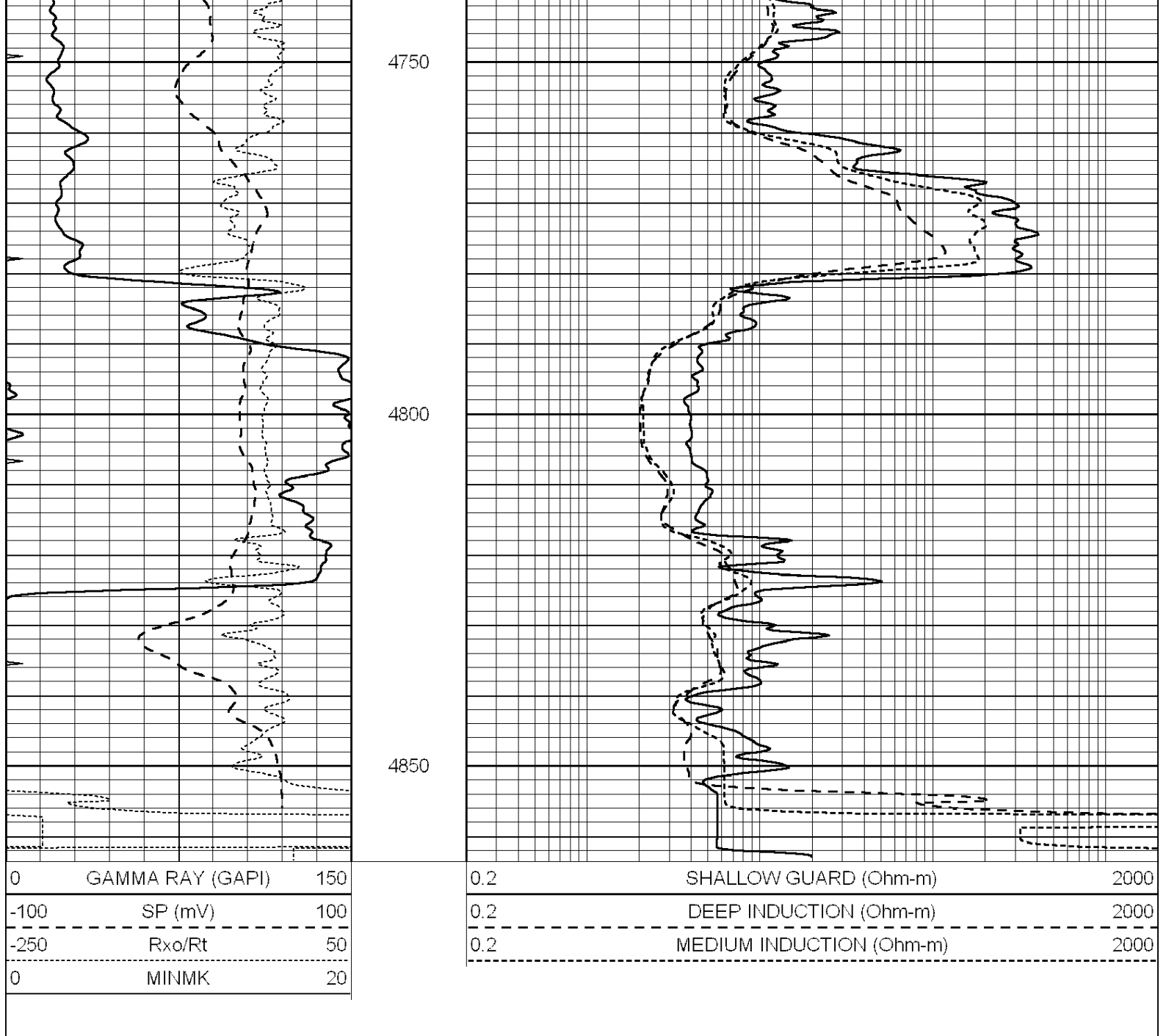
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4650

4700

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000





Calibration Report								
Database File:		1598ddn.db						
Dataset Pathname:		pass4						
Dataset Creation:		Wed Aug 30 02:13:00 2017 by Log SOC 120430						
Dual Induction Calibration Report								
Serial-Model:		PROBE7-DILG						
Surface Cal Performed:		Wed Aug 30 00:06:33 2017						
Downhole Cal Performed:		Mon Jul 28 12:02:56 2008						
After Survey Verification Performed:		Mon Jul 28 12:02:56 2008						
Surface Calibration								
Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	620.000	0.000
Medium	0.039	0.728	V	0.000	464.000	mmho/m	675.000	-44.000
Internal:	Zero	Cal		Zero	Cal		m	b

Intermittent	Zero	Cal		Zero	Cal		m'	b'
Deep	0.011	0.610	V	0.000	400.000	mmho/m	667.135	-7.256
Medium	0.005	0.712	V	0.000	464.000	mmho/m	655.677	-3.102

Downhole Calibration								
Readings			References			Results		
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	14.508	388.384	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	166.367	504.400	mmho/m	1.000	0.000
LL3		7.500	V		1400.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		4000.000	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		

Litho Density Calibration Report								
Serial: 002			Model: PRB					

Master Calibration					Performed Mon Aug 21 11:27:42 2017			
	Background	Magnesium	Aluminum	Sandstone				
Window 1	837.1	10632.5	2945.1	12110.1				cps
Window 2	772.0	9117.4	2570.1	10197.3				cps
Window 3	631.7	4669.0	1481.9	5042.9				cps
Window 4	187.0	187.5	185.9	189.9				cps
Long Space	0.0	8345.4	1798.1	9425.3				cps
Short Space	1.1	1927.9	1285.9	2050.2				cps
Rho		1.7100	2.5960	1.3800				g/cc
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 45.2	Rib Slope	: 1.008	Density/Spine Ratio			: 0.558	
Spine Angle	: 75.2	Spine Slope	: 3.790	Spine Intercept			: -19.6	

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				

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:	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:	070558	
Tool Model:	OPEN_GR	
Performed:	Wed May 31 00:09:32 2017	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2800	GAPI/cps