

DUAL INDUCTION LOG

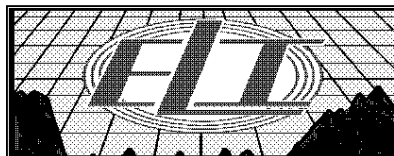
Company	RAYMOND OIL COMPANY, INC.		
Well	#1 HINEMAN RANCH		
Field	WILDCAT		
County	LANE	State	KANSAS
Company	RAYMOND OIL COMPANY, INC.		Location: API # : 15-101-22632-0000 551' FSL & 800' FEL SEC 8 TWP 19S RGE 27W Permanent Datum GROUND LEVEL Elevation 2716 Log Measured From KELLY BUSHING 5' A.G.L. Drilling Measured From KELLY BUSHING Other Services CDL/CNL MEL Elevation K.B. 2721 D.F. 2719 G.L. 2716
Well	#1 HINEMAN RANCH		
Field	WILDCAT		
County	LANE	State	
Date	6/28/19		
Run Number	ONE		
Depth Driller	4750		
Depth Logger	4751		
Bottom Logged Interval	4749		
Top Log Interval	00		
Casing Driller	8 5/8"@261'		
Casing Logger	261		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3,000 PPM	
Density / Viscosity	9.3/65		
pH / Fluid Loss	11.0/9.2		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.880@73F		
Rmf @ Meas. Temp	.660@73F		
Rmc @ Meas. Temp	1.06@73F		
Source of Rmf / Rmc	MEASUREMENT		
Rim @ BHT	.522@123F		
Time Circulation Stopped	3 HOURS		
Time Logger on Bottom	3:00 A.M.		
Maximum Recorded Temperature	123F		
Equipment Number	922339		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	KIM SHOEMAKER		

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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
DIGHTON, KS., 6E. ON HWY 96 TO "QUANTUM RD.", 5S. TO "RD. 100", 2E., N. INTO



MAIN SECTION

Database File: 3734ddn.db
Dataset Pathname: pass3.5
Presentation Format: dil2
Dataset Creation: Fri Jun 28 04:30:28 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

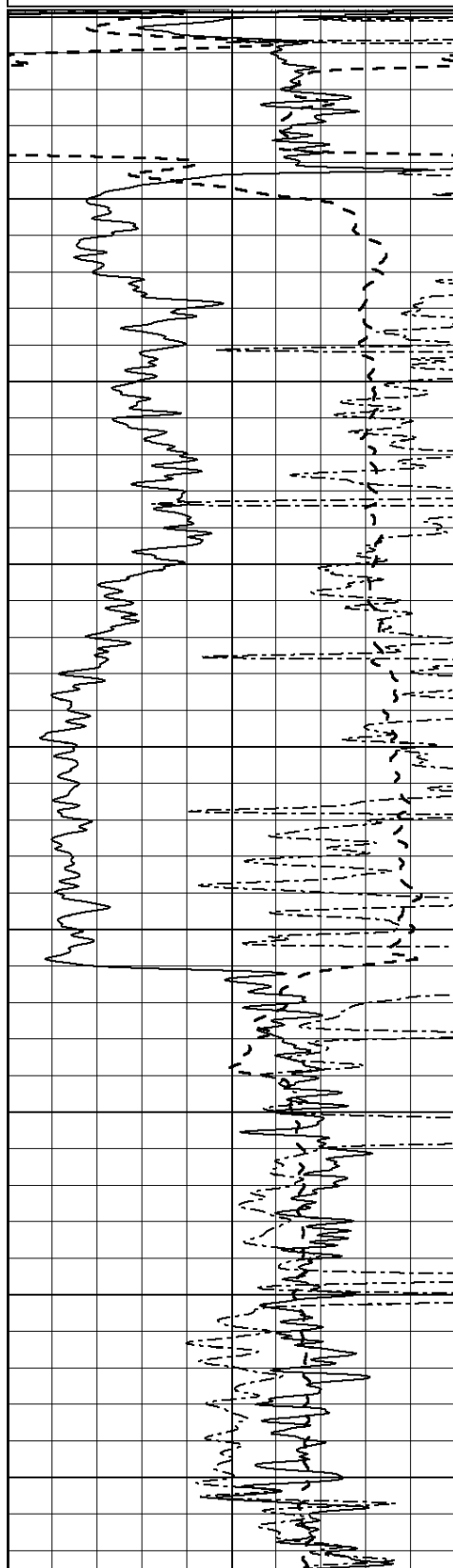
0	RLL3 (Ohm-m)	50
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0	RILD (Ohm-m)	50
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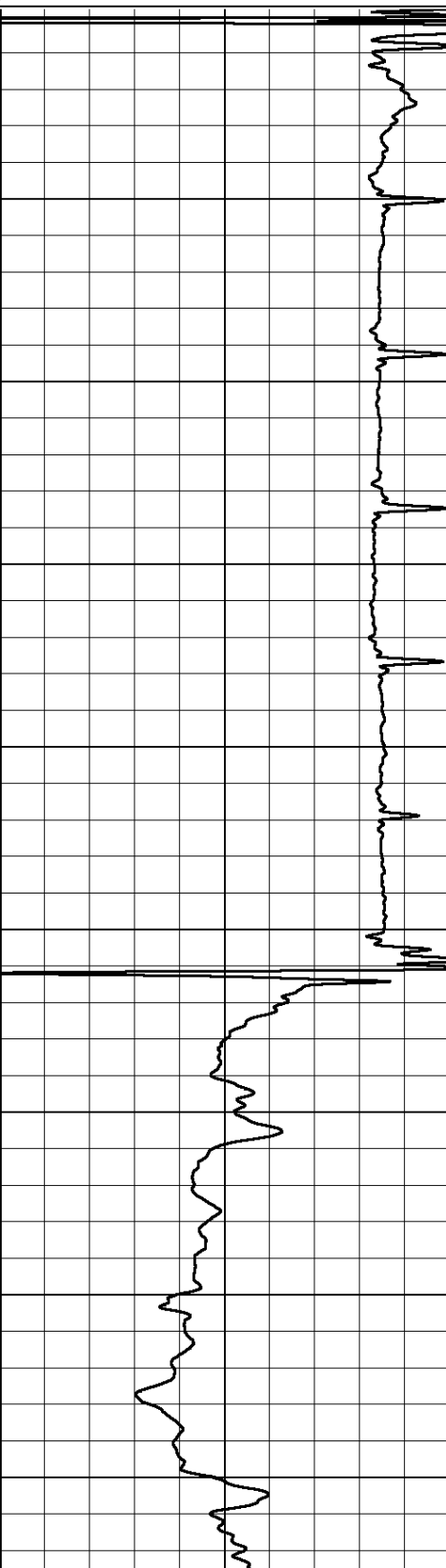
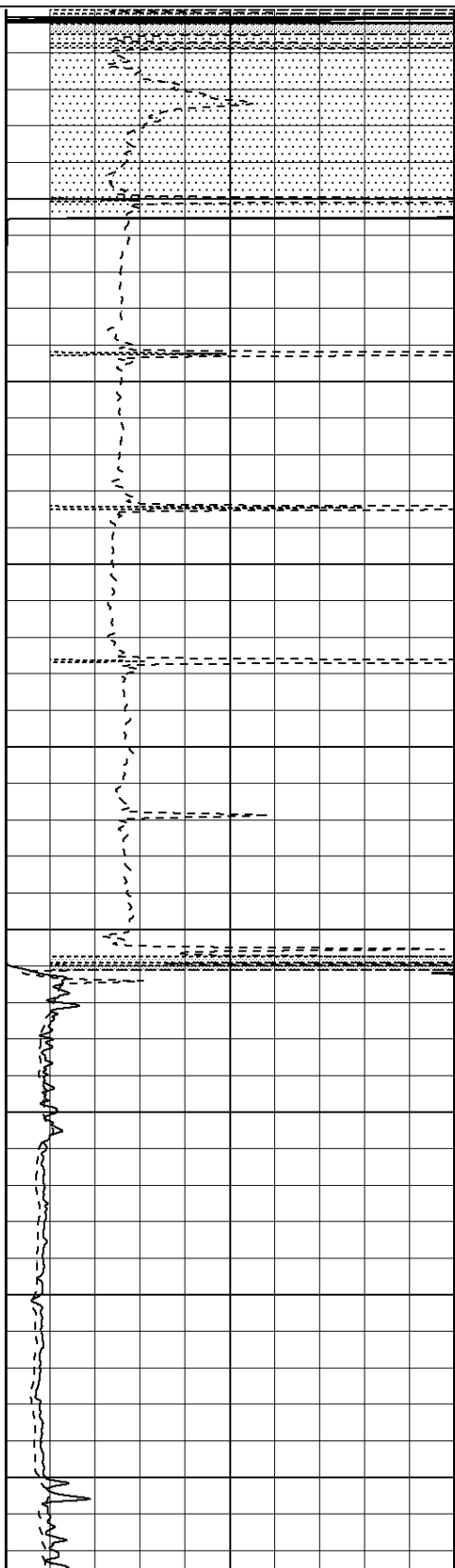
1000	CILD (mmho/m)	0
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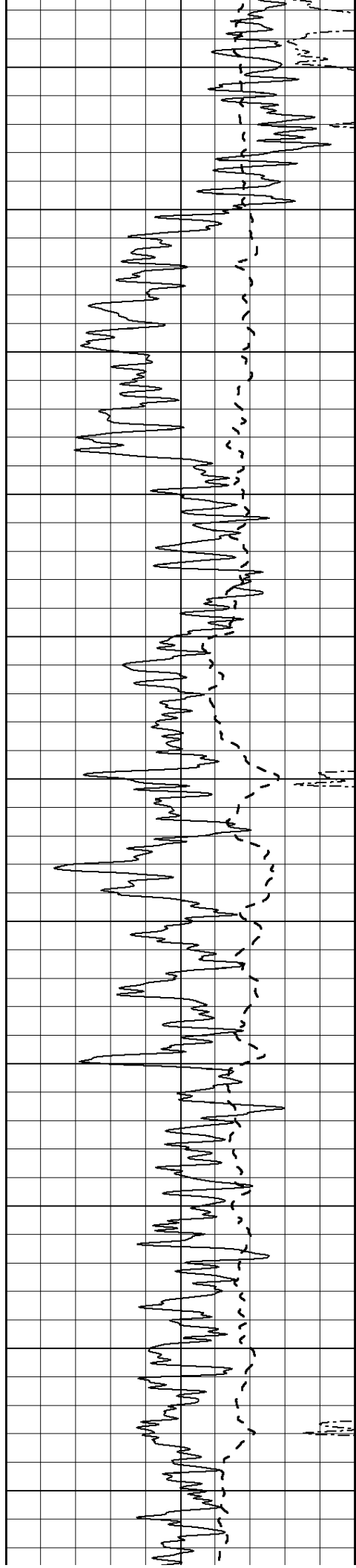
50	RILD X10 (Ohm-m)	500
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50	RLL3 X10 (Ohm-m)	500
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0
50
100
150
200
250
300
350
400





450

500

550

600

650

700

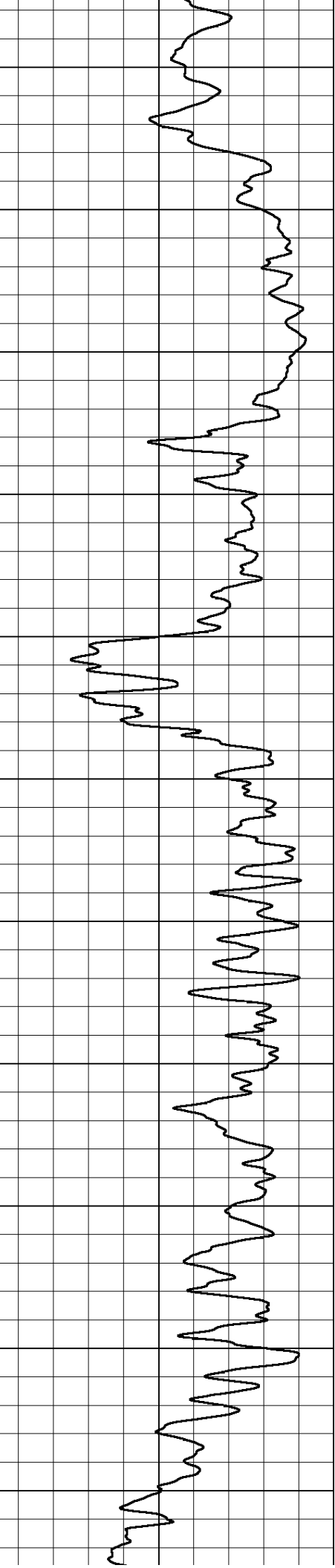
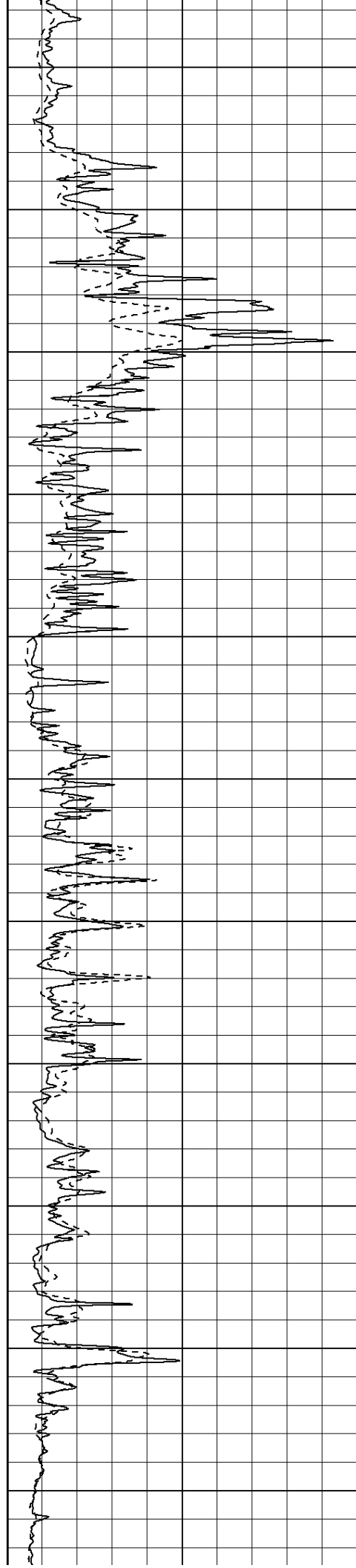
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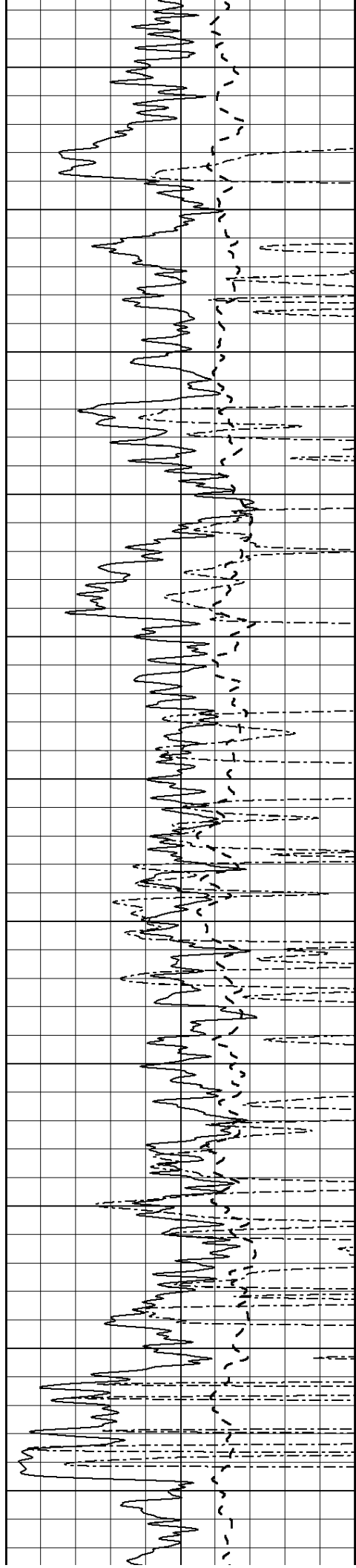
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850

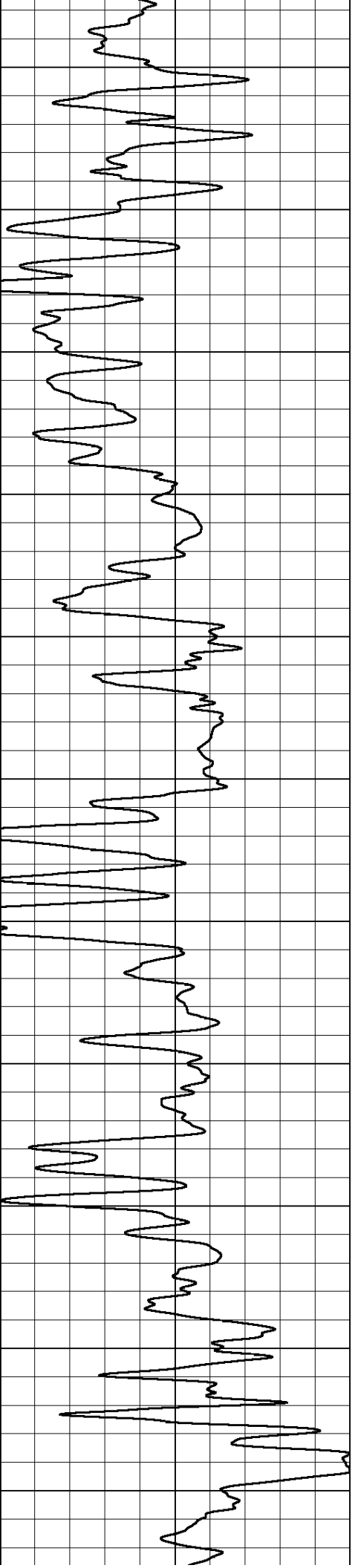
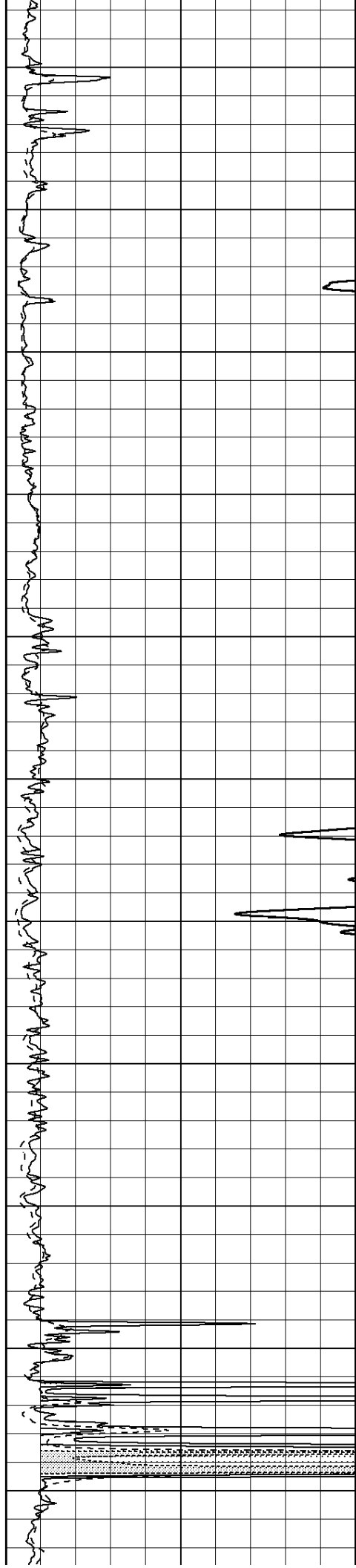
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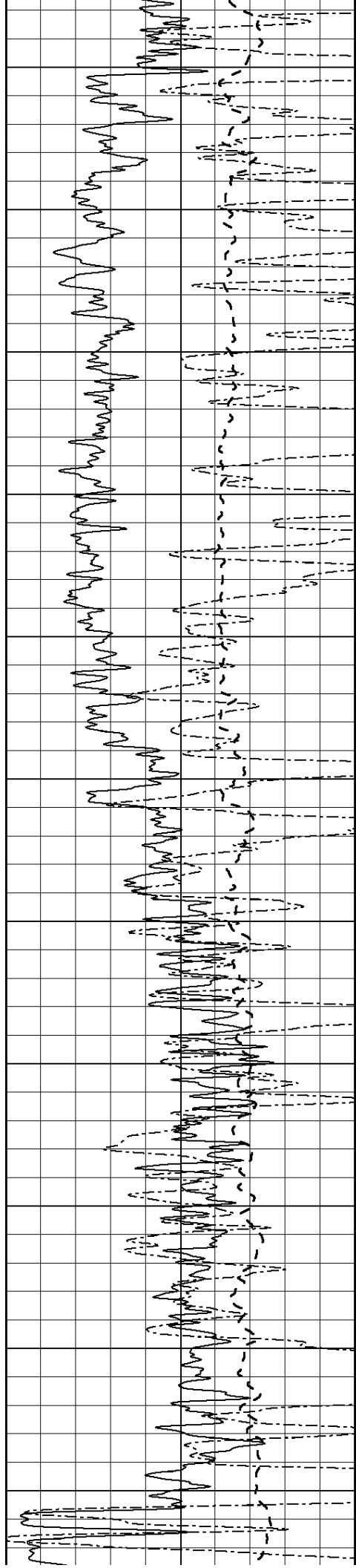
950





1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500





1550

1600

1650

1700

1750

1800

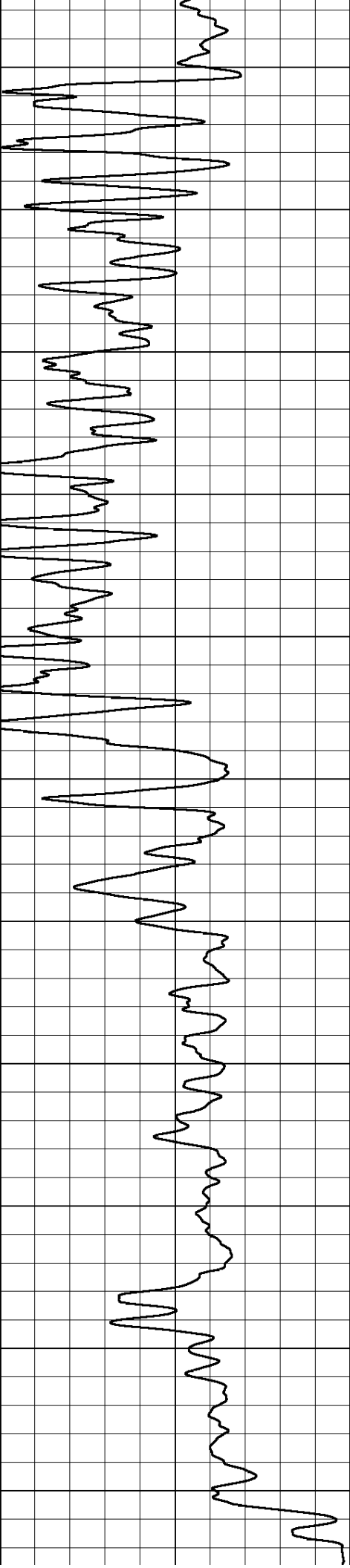
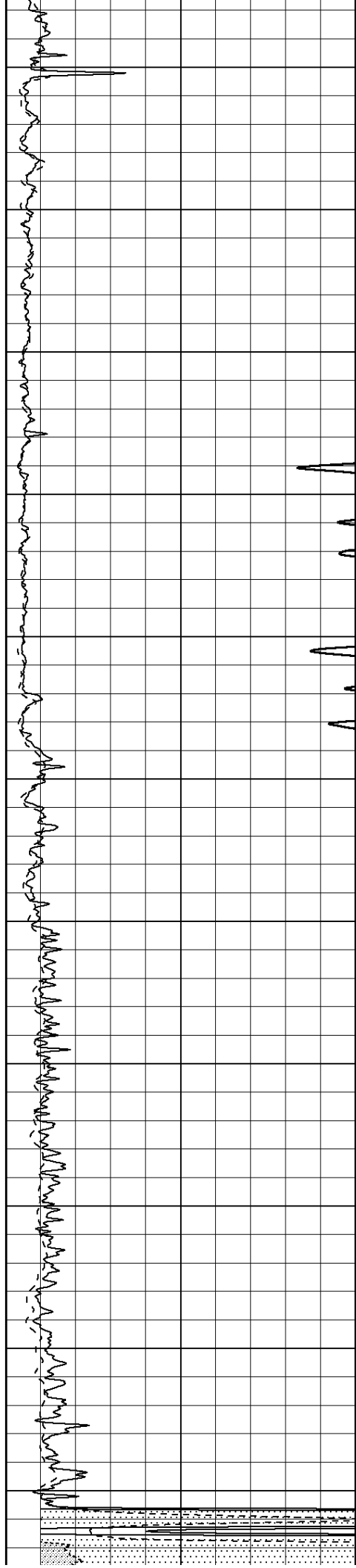
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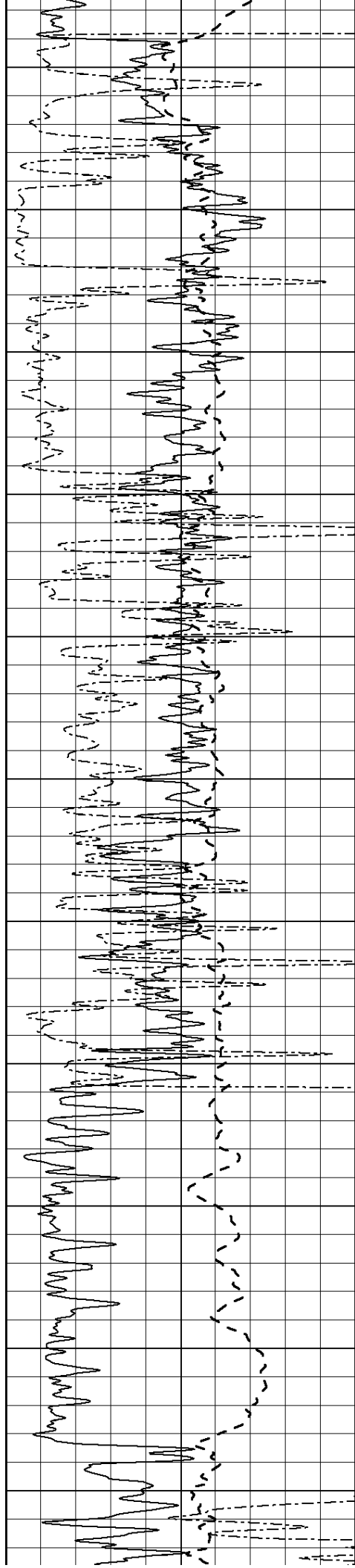
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1950

2000

2050





2100

2150

2200

2250

2300

2350

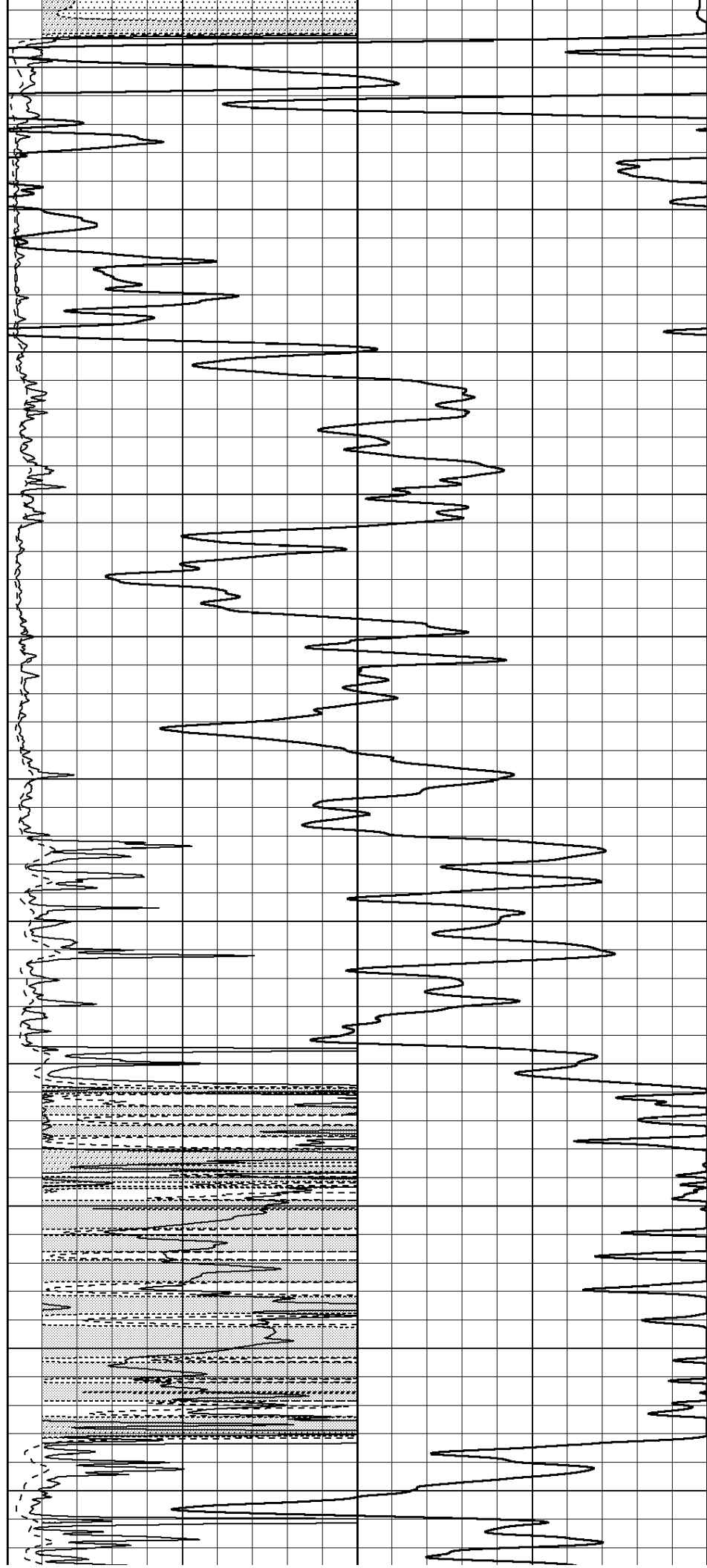
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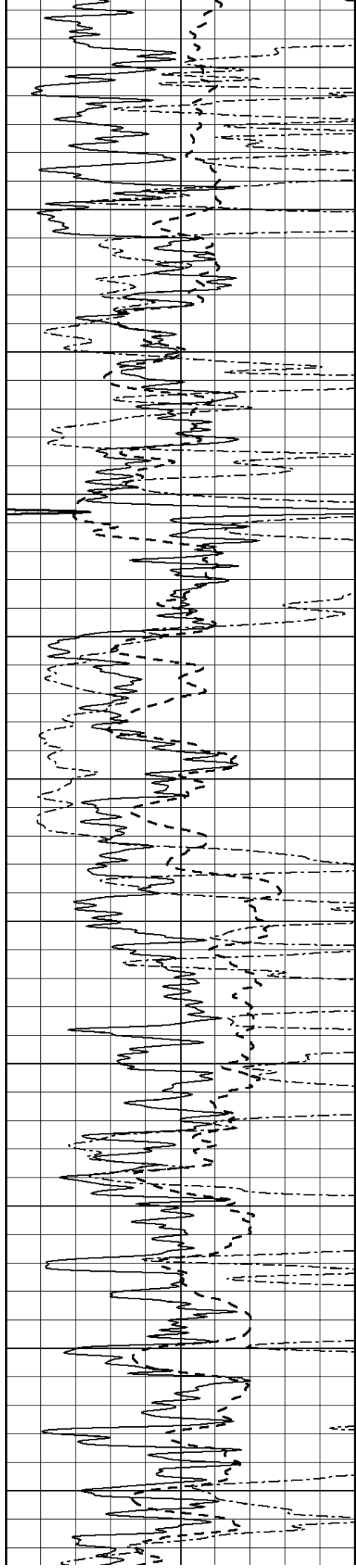
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2500

2550

2600





2650

2700

2750

2800

2850

2900

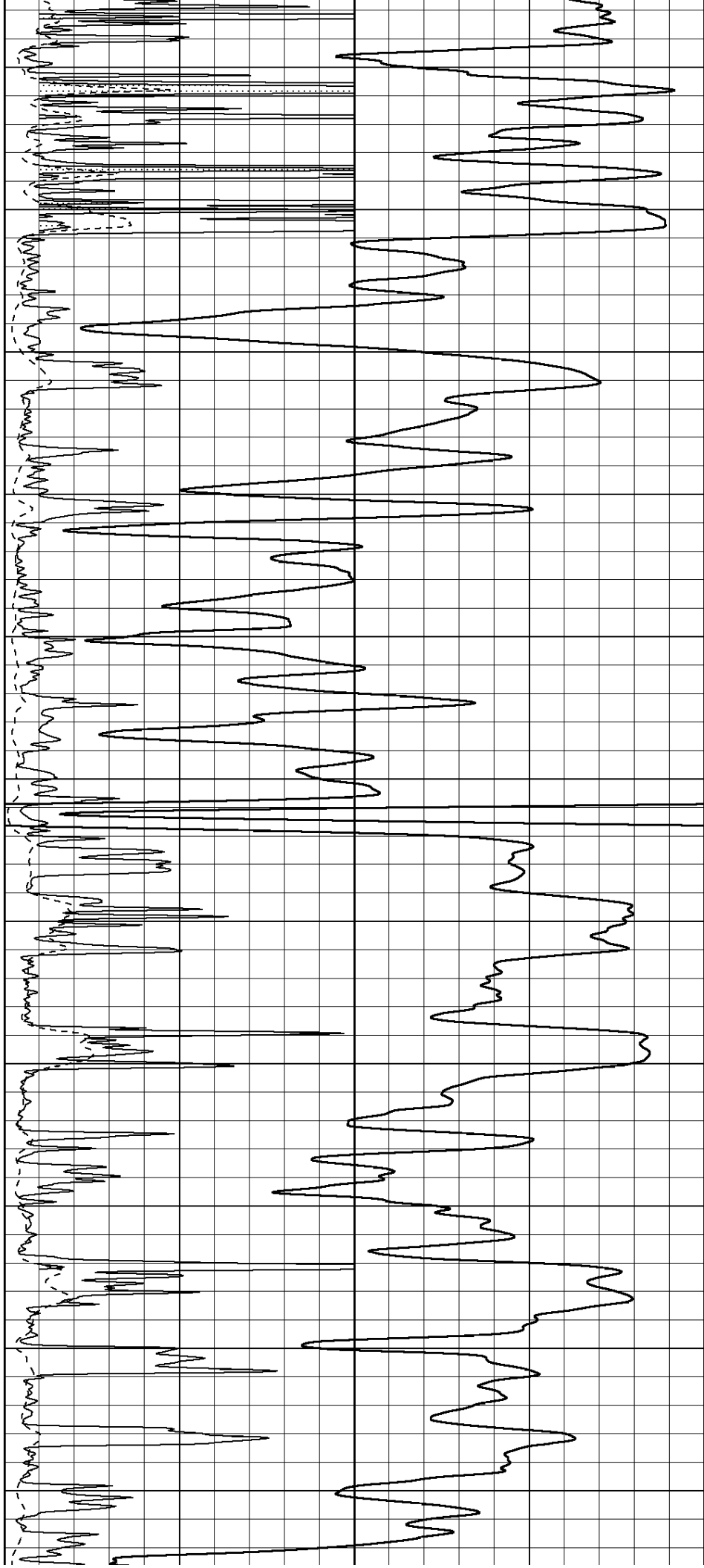
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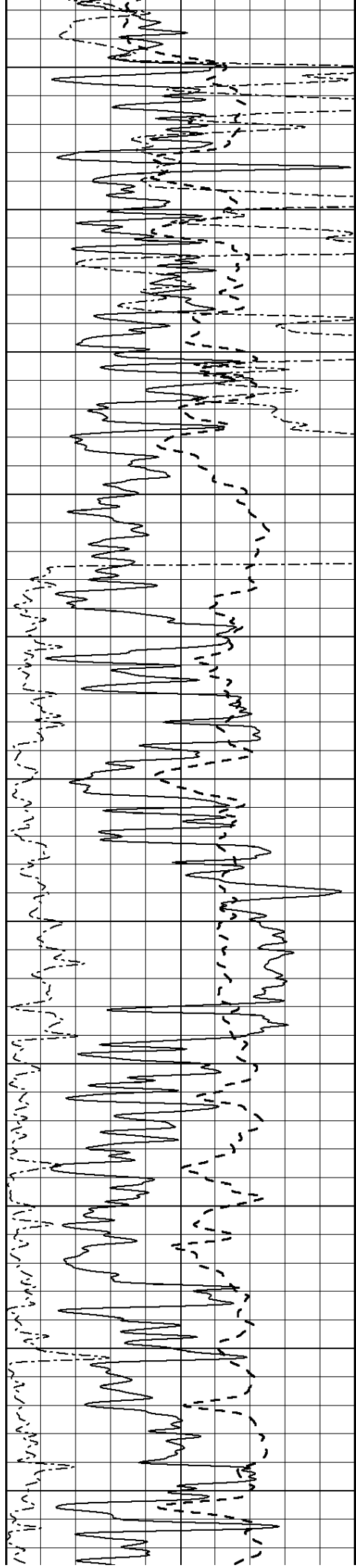
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3050

3100

3150





3200

3250

3300

3350

3400

3450

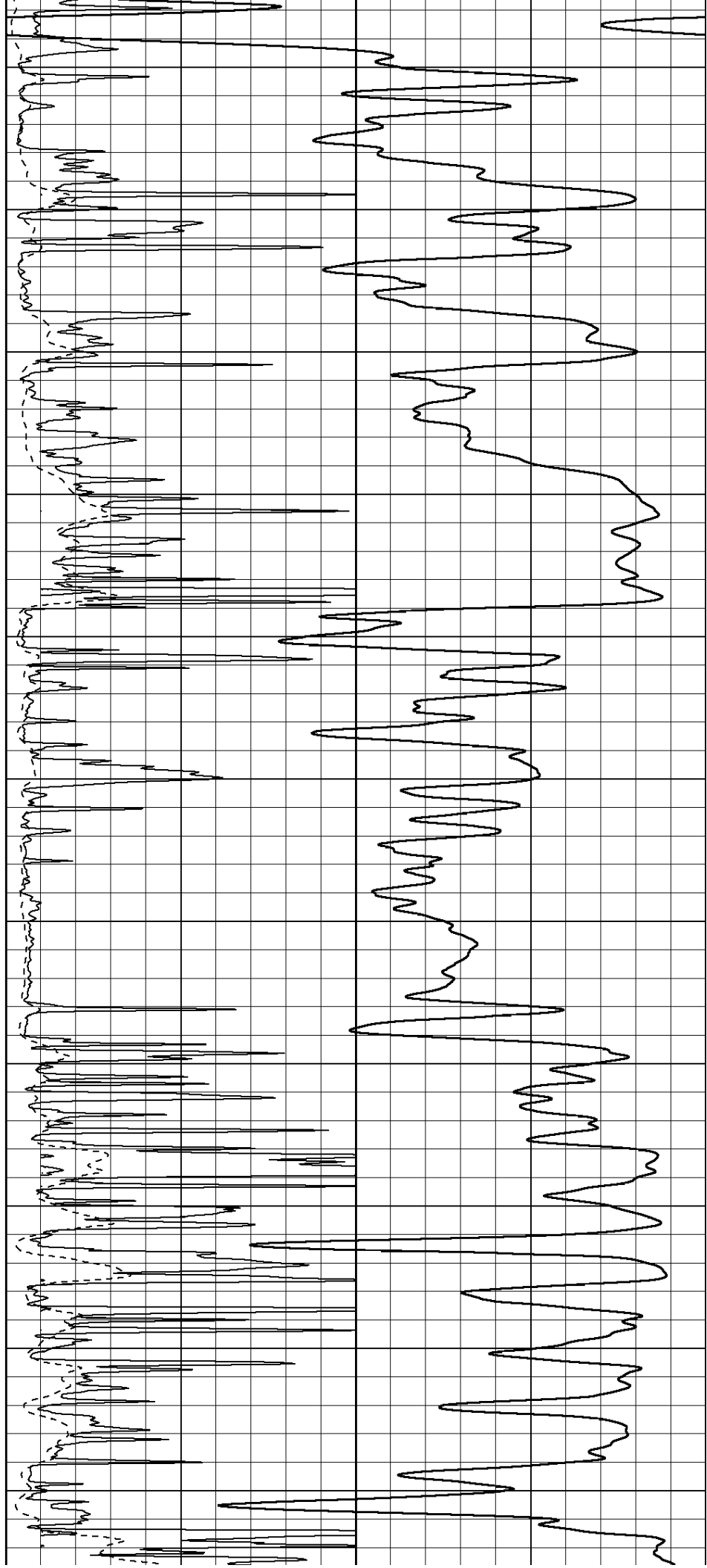
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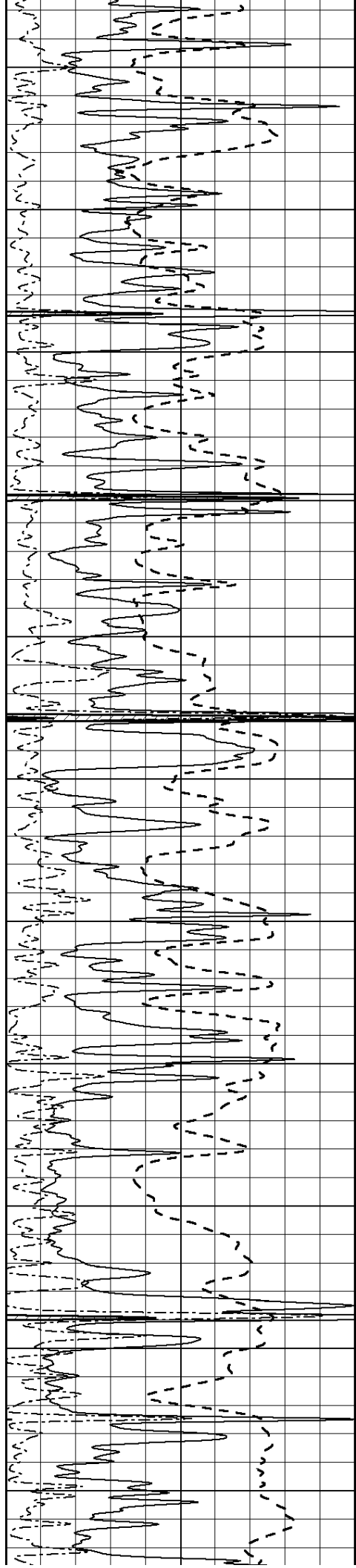
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3600

3650

3700





3750

3800

3850

3900

3950

4000

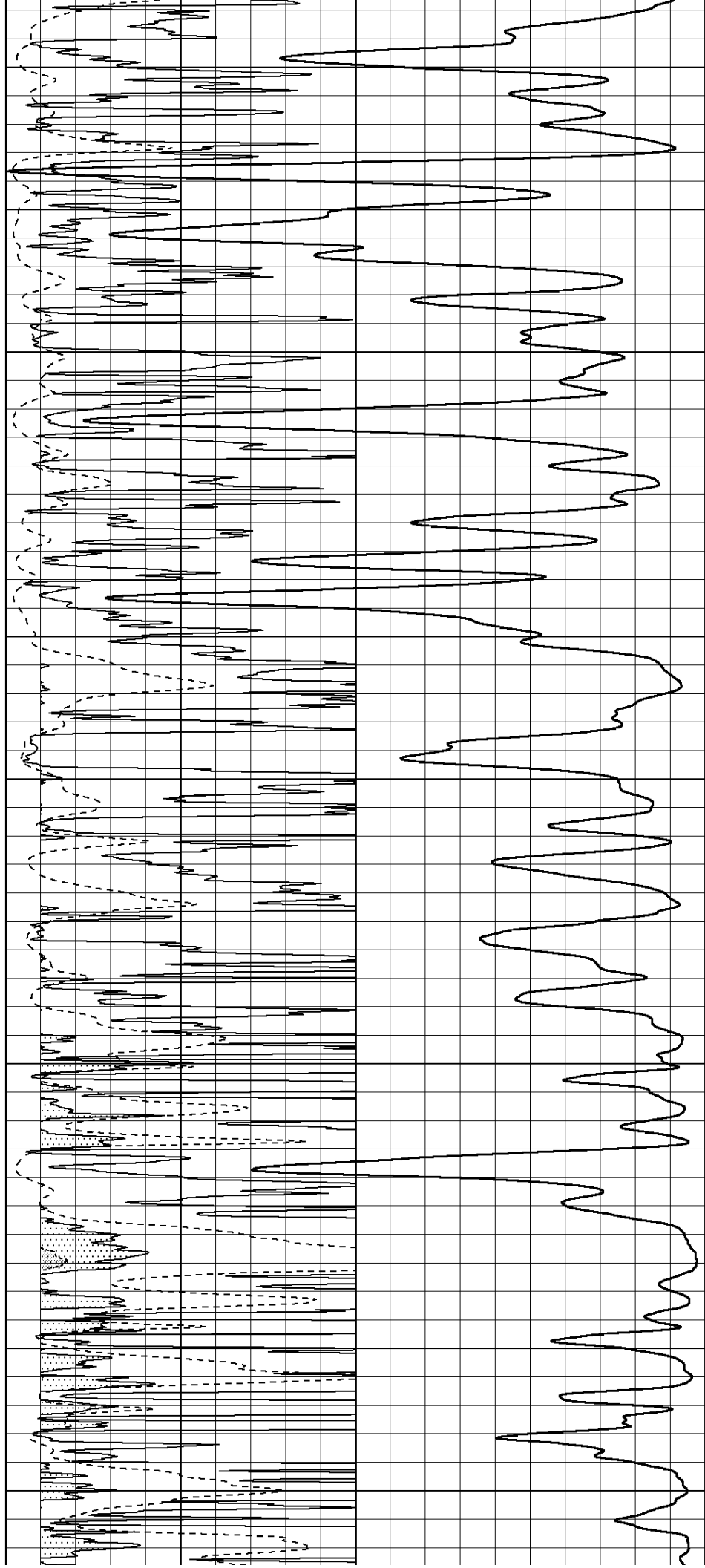
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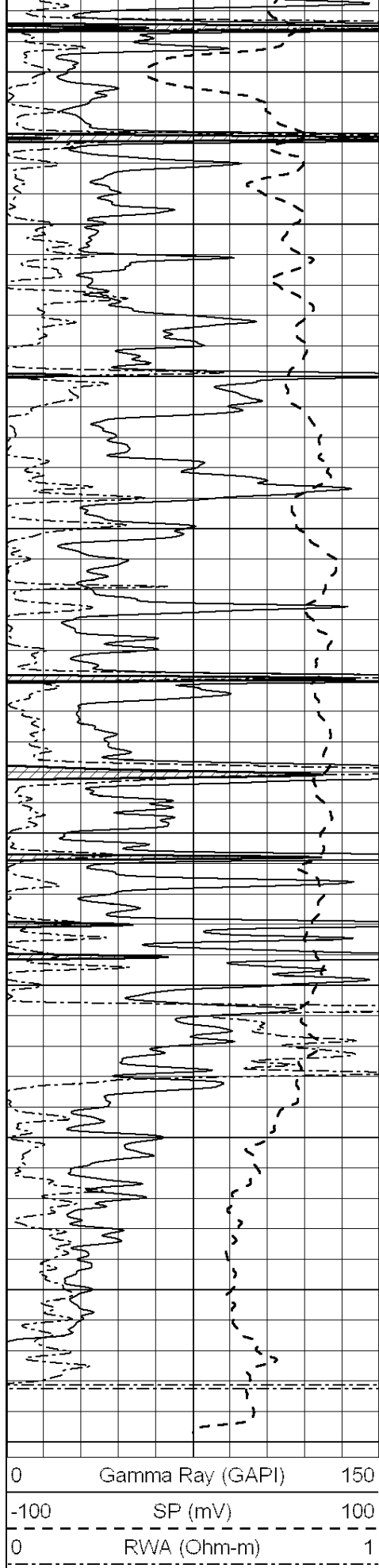
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4150

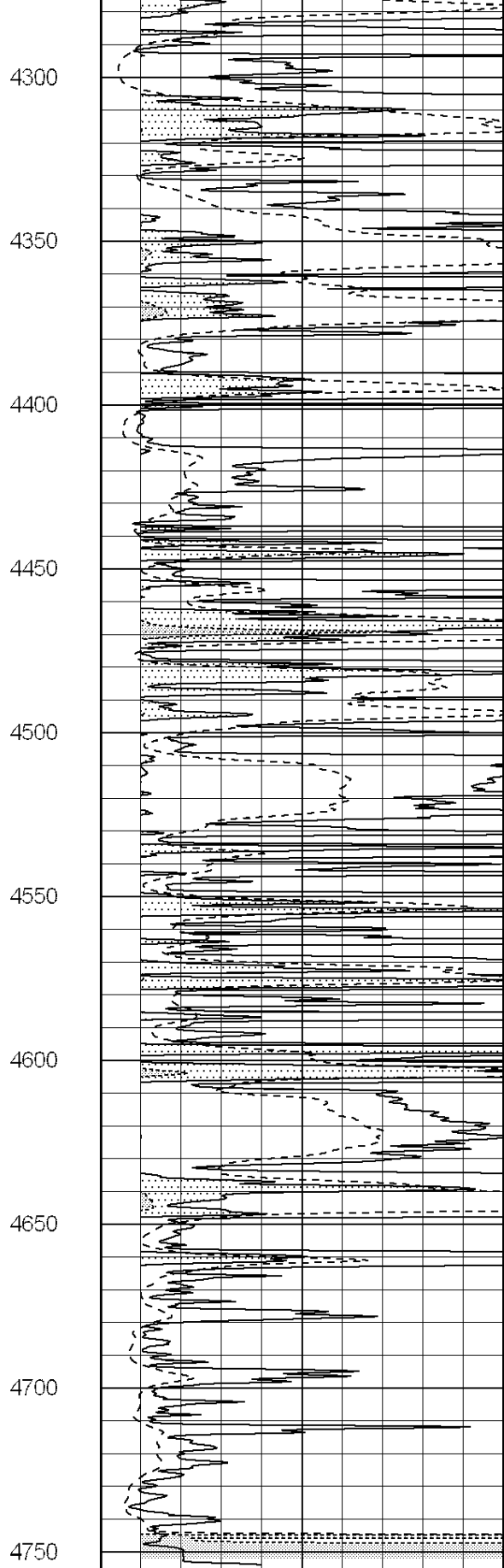
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4250



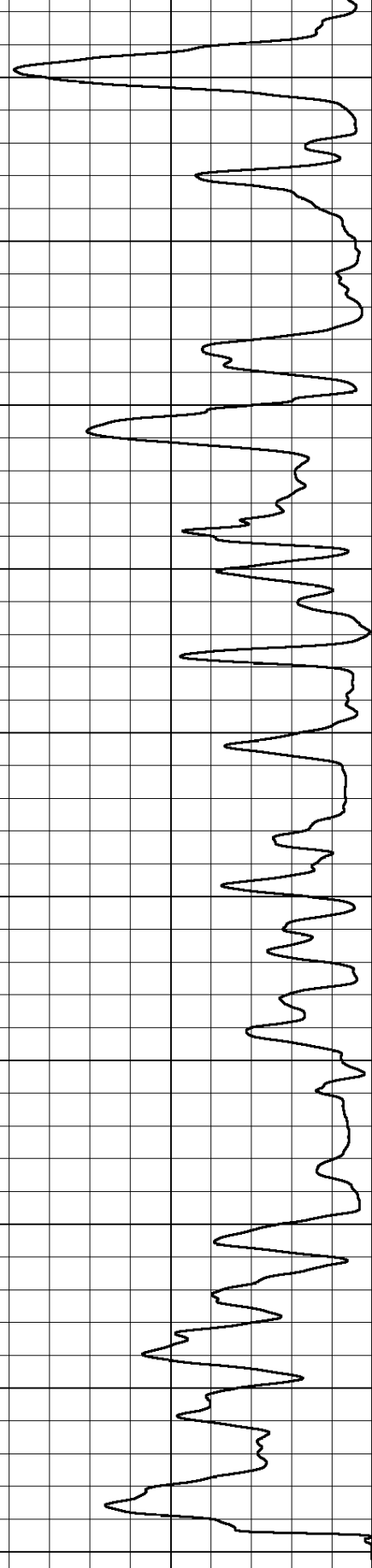


0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

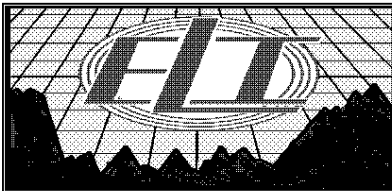


0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0

50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500



0

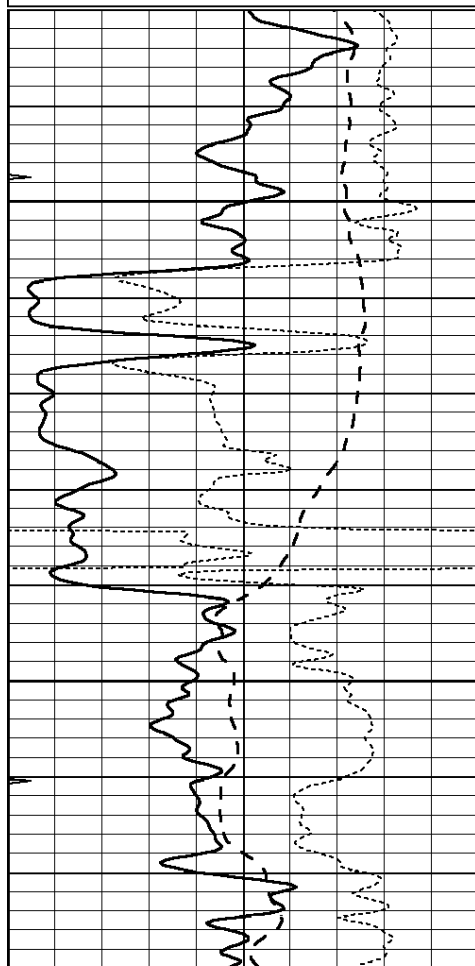


ANHYDRITE

Database File: 3734ddn.db
Dataset Pathname: pass3.6
Presentation Format: _dil
Dataset Creation: Fri Jun 28 04:36:03 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

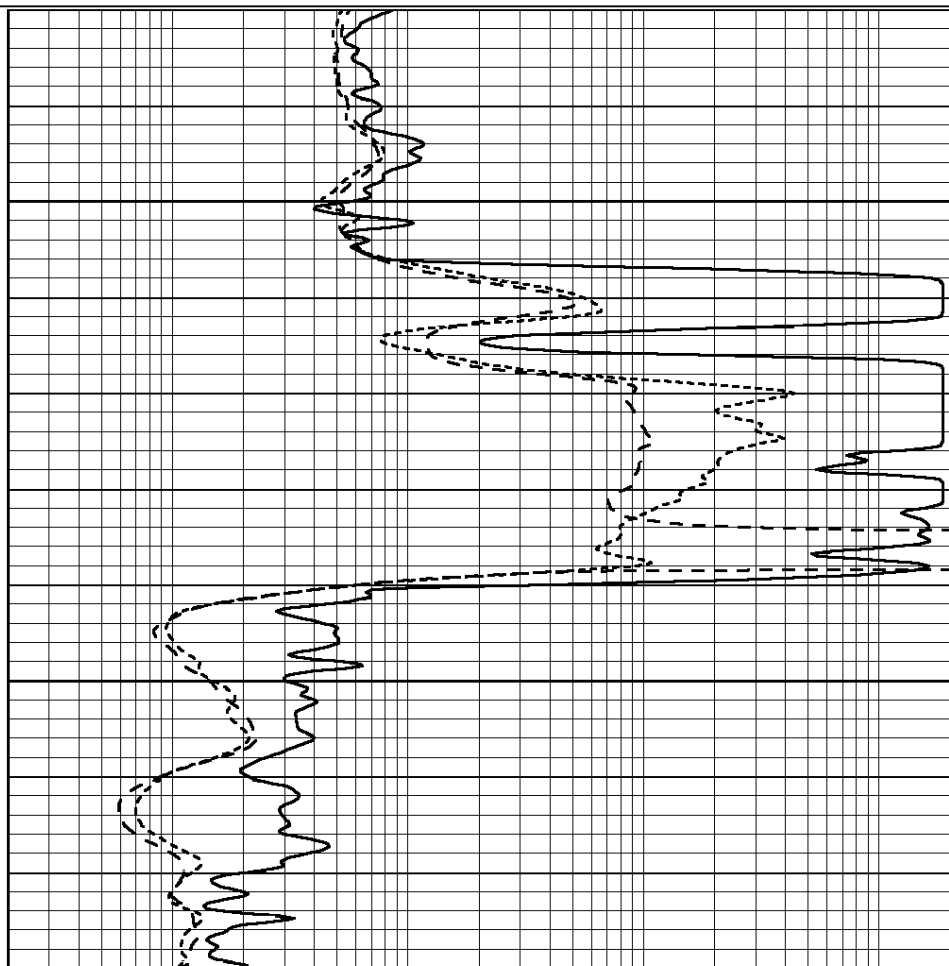
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



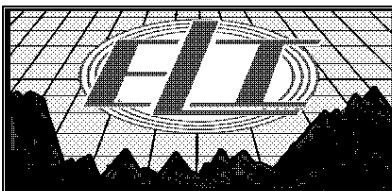
2050

2100

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



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

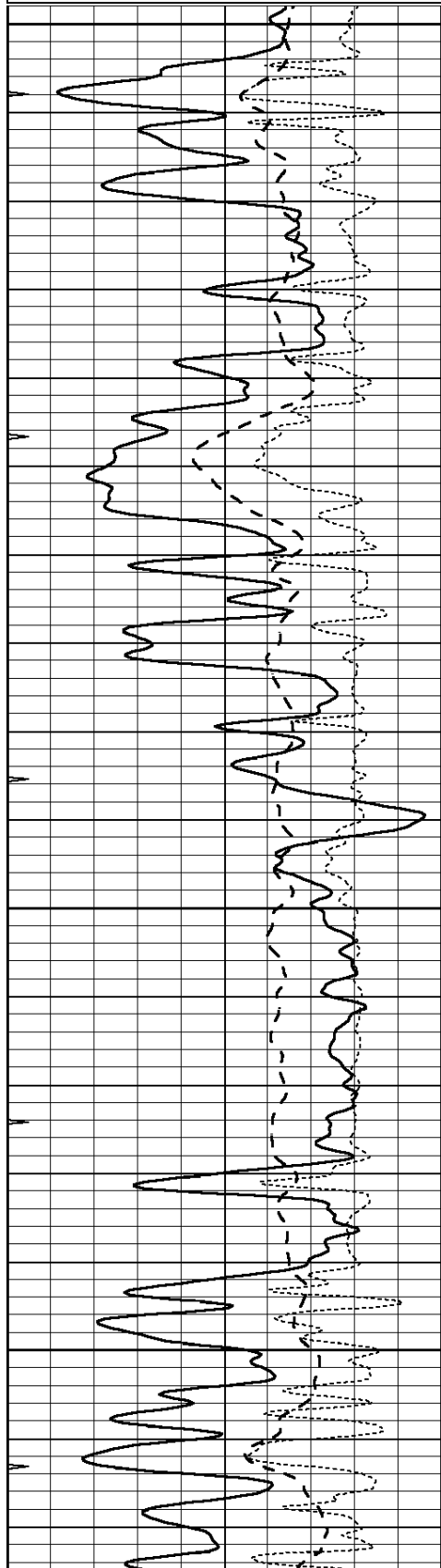


MAIN SECTION

Database File: 3734ddn.db
Dataset Pathname: pass3.5
Presentation Format: _dil
Dataset Creation: Fri Jun 28 04:30:28 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

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

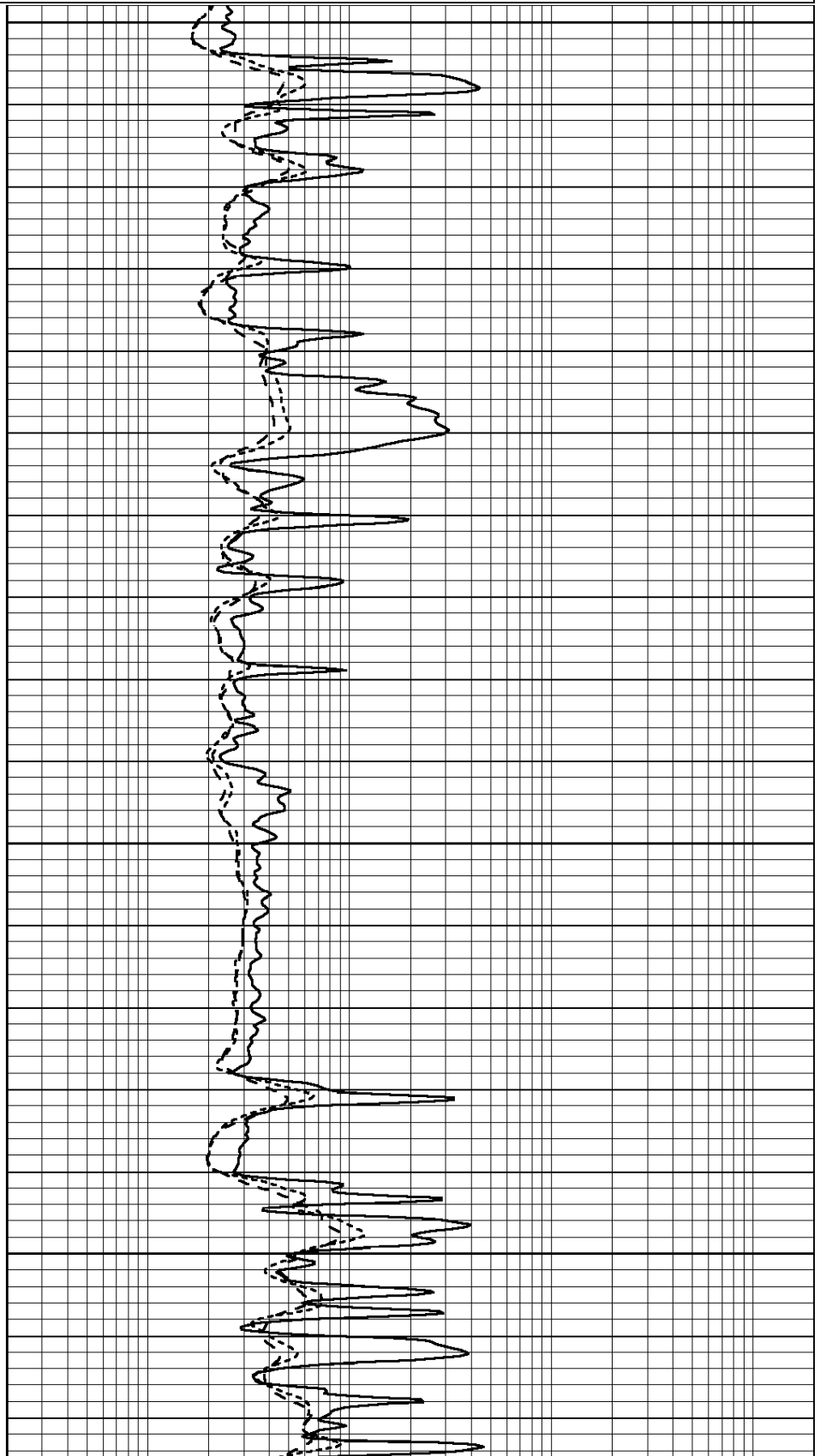


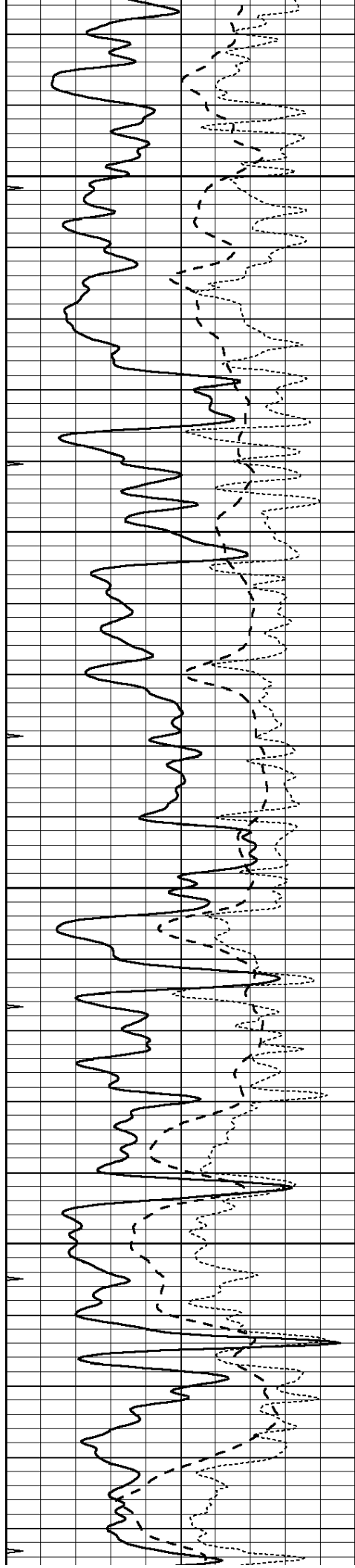
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3450

3500

3550



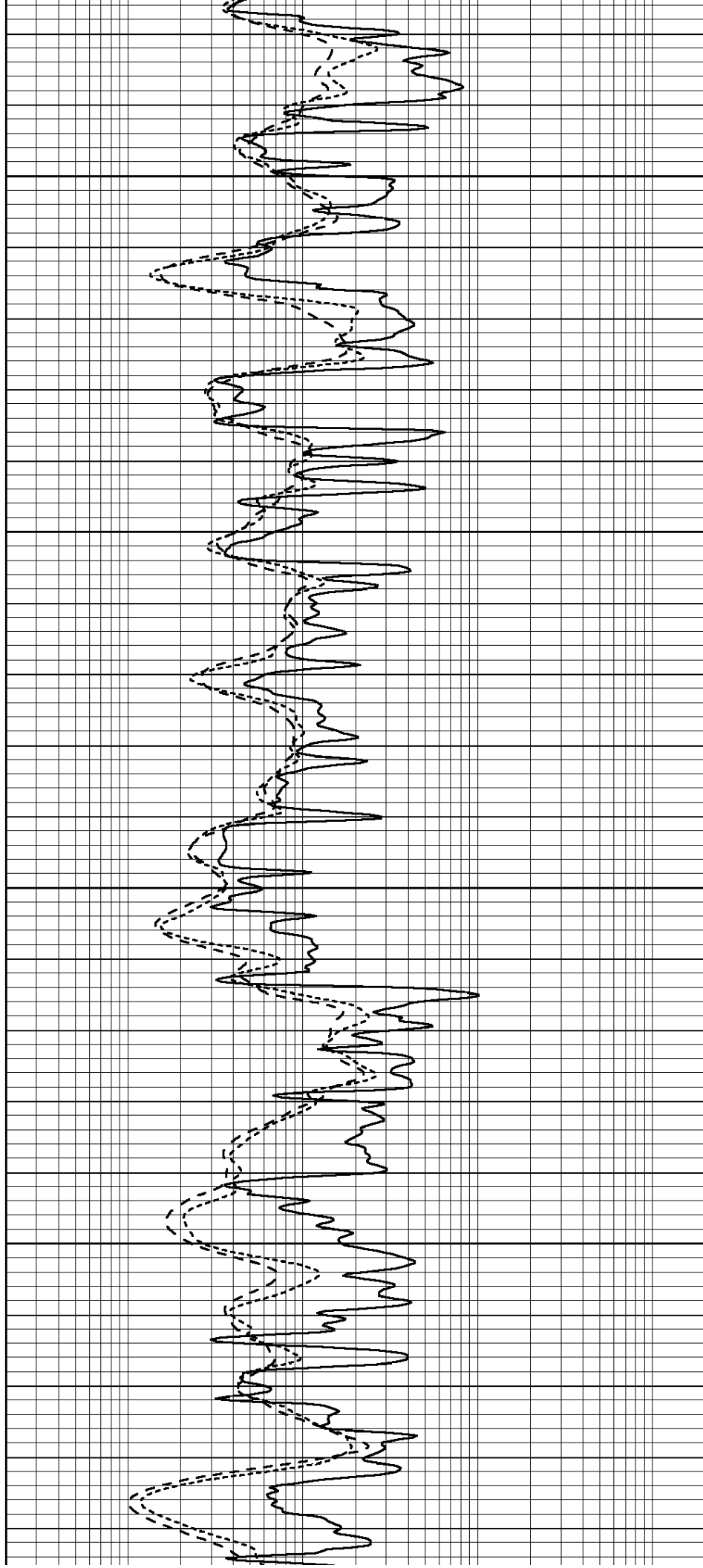


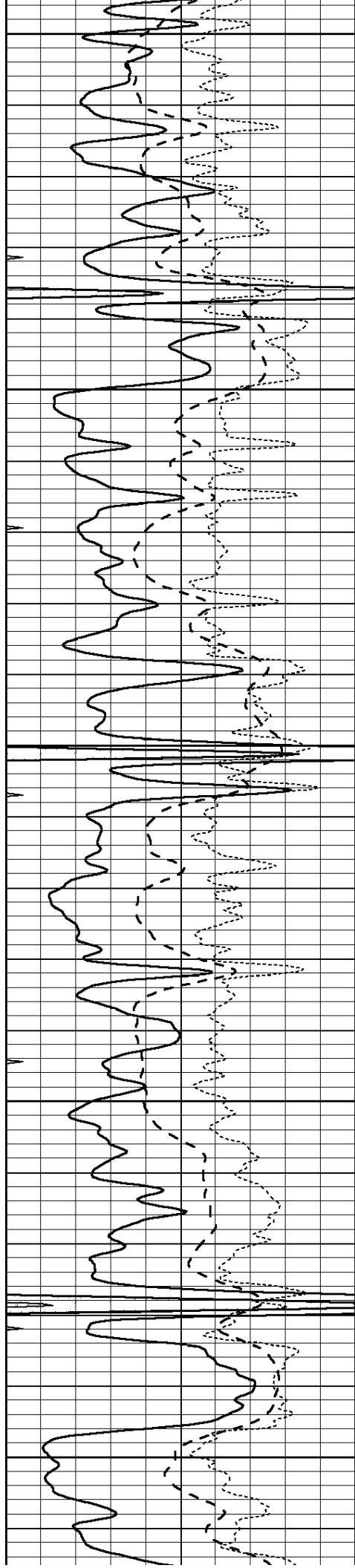
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3650

3700

3750





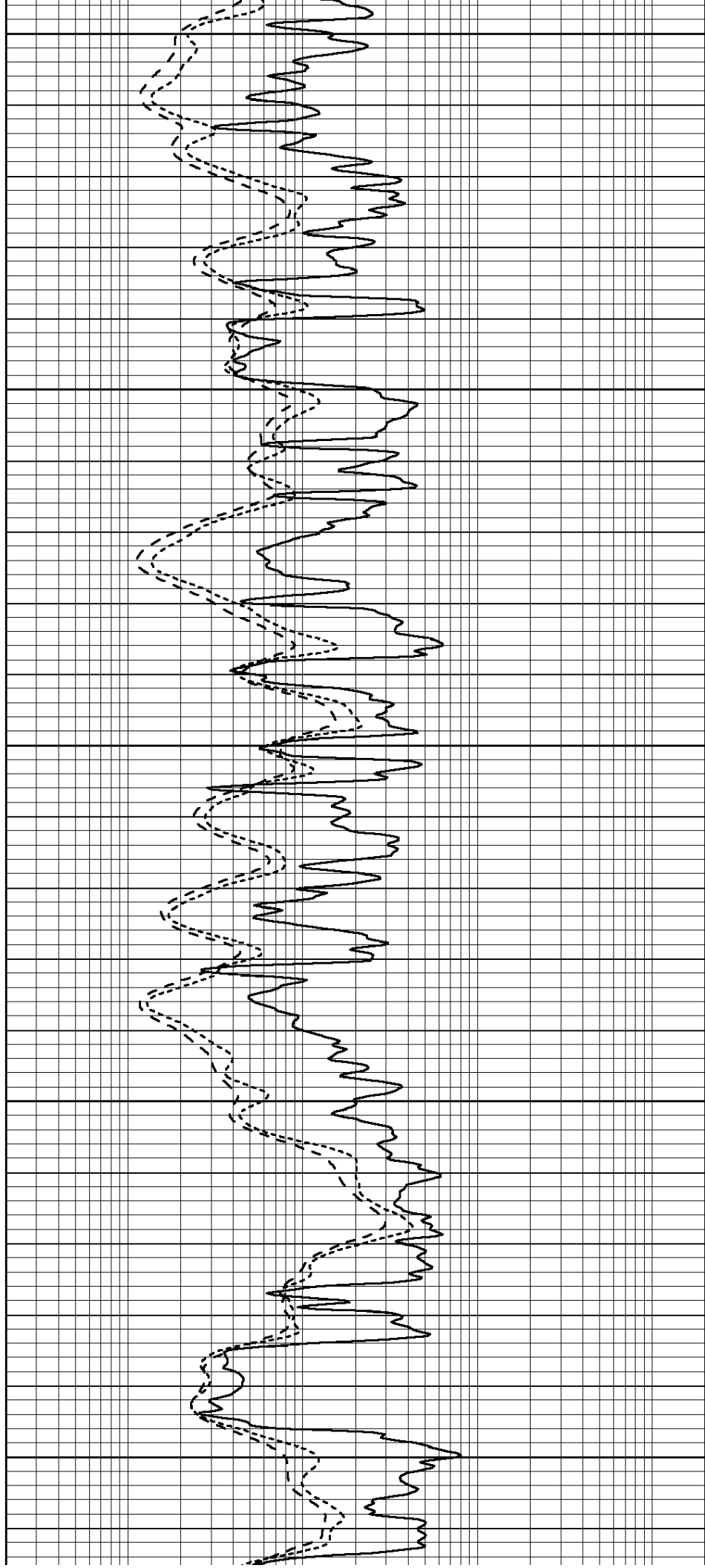
3800

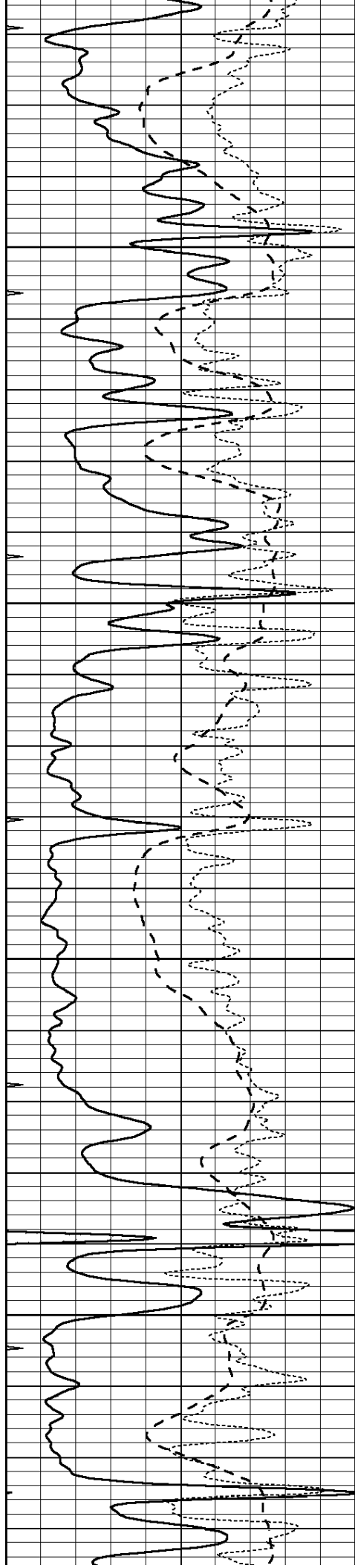
3850

3900

3950

4000



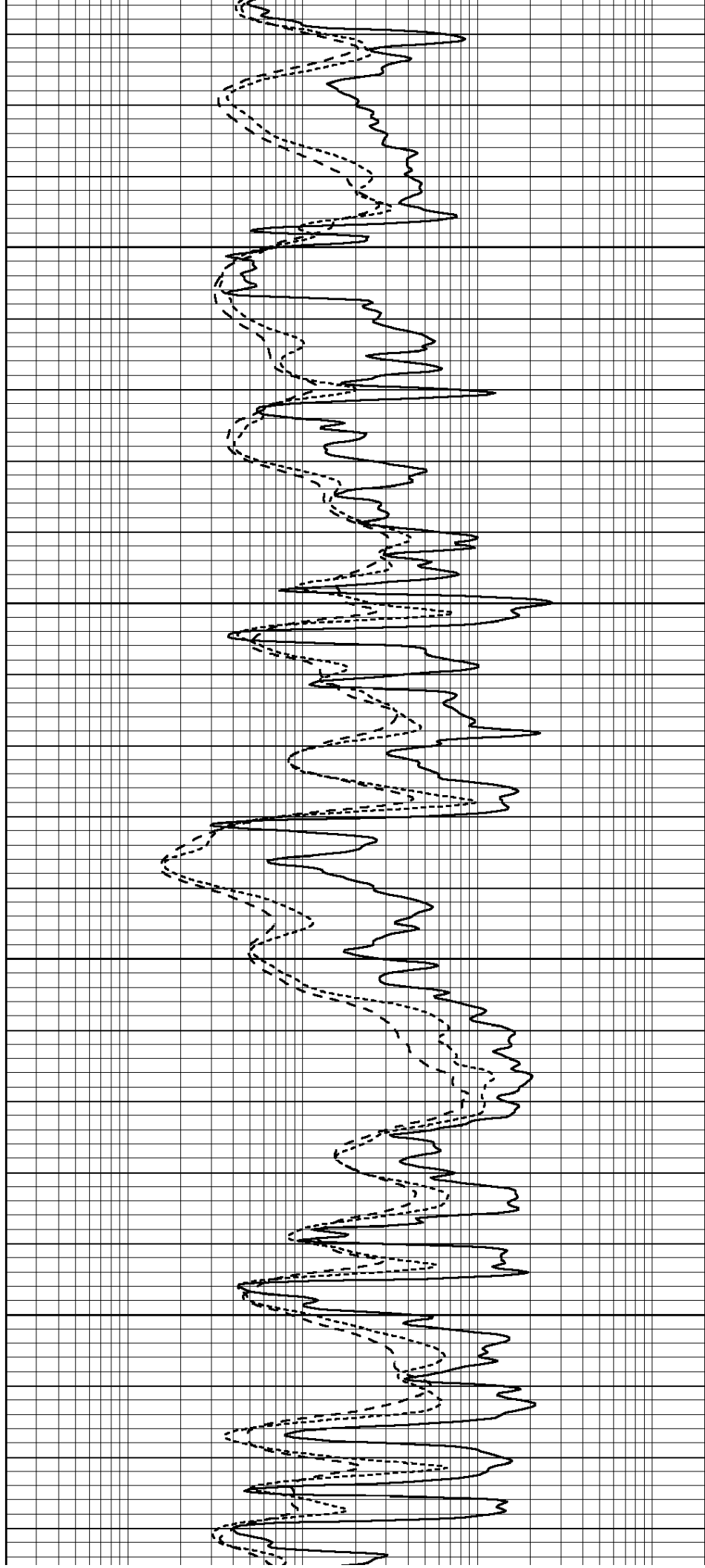


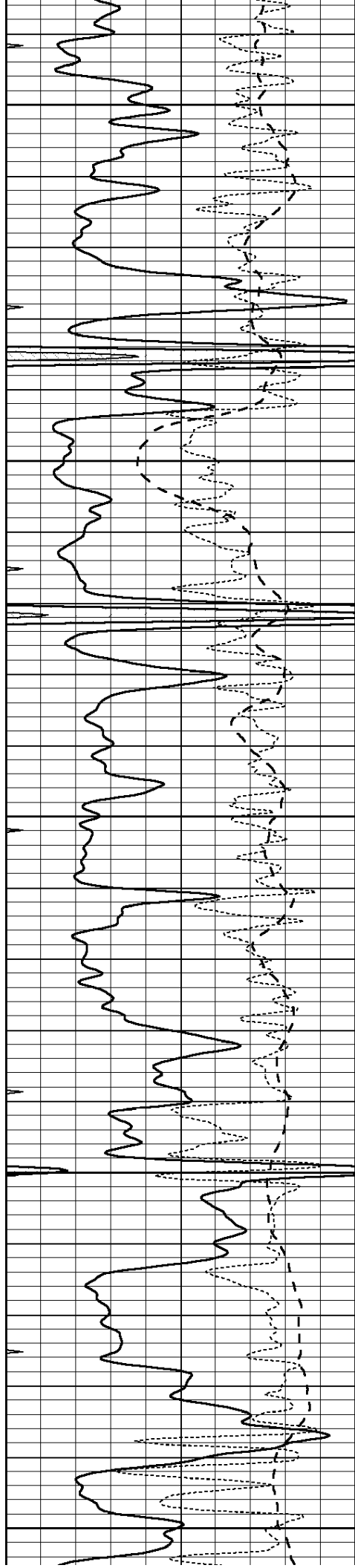
4050

4100

4150

4200





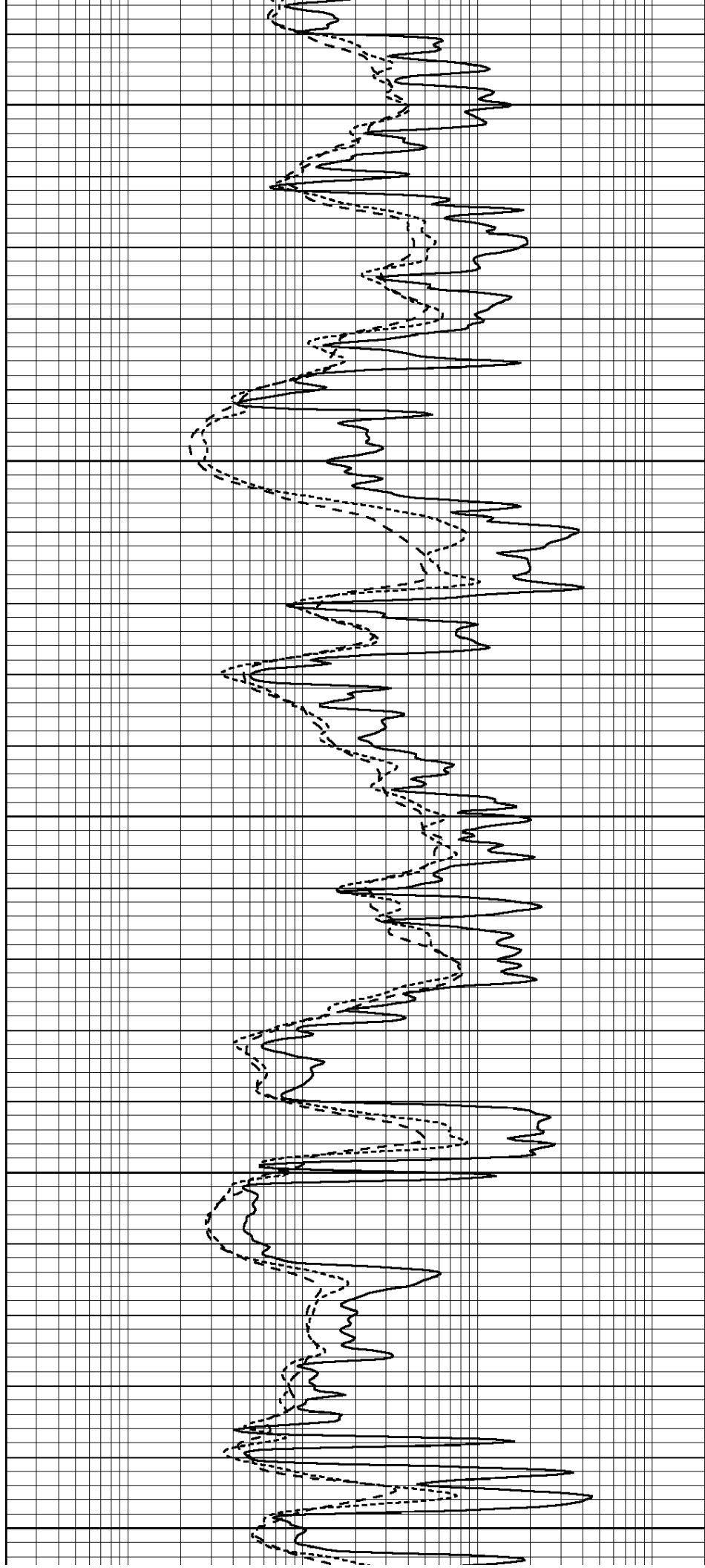
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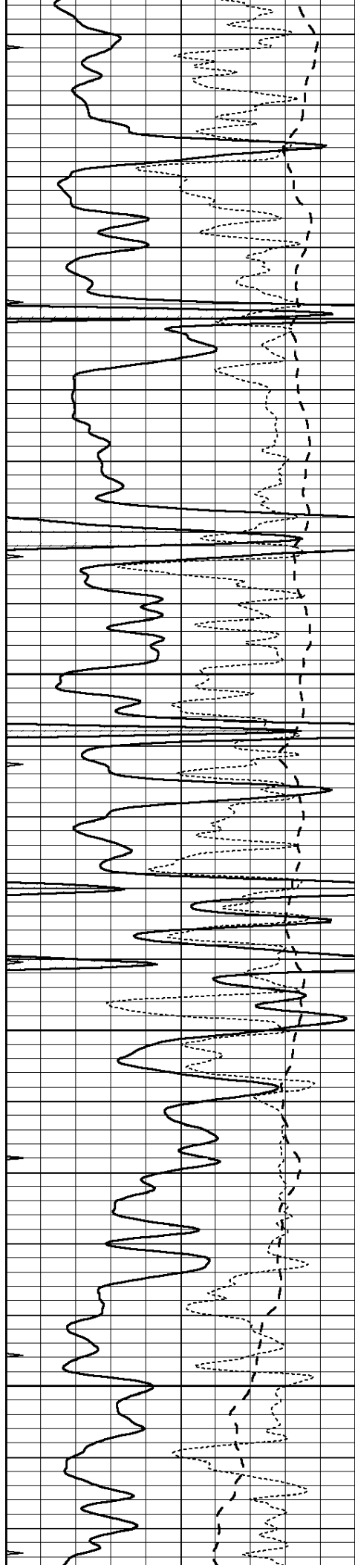
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4350

4400

4450



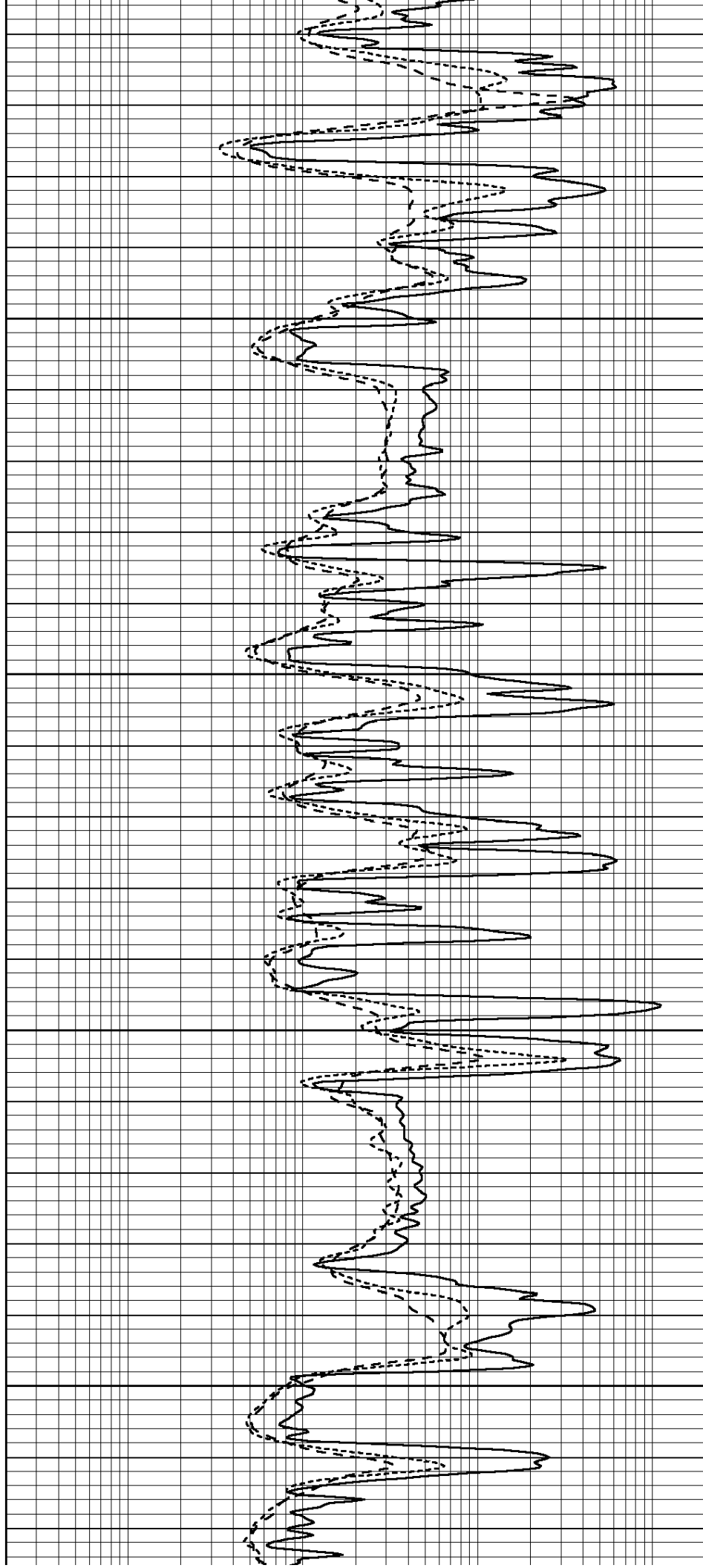


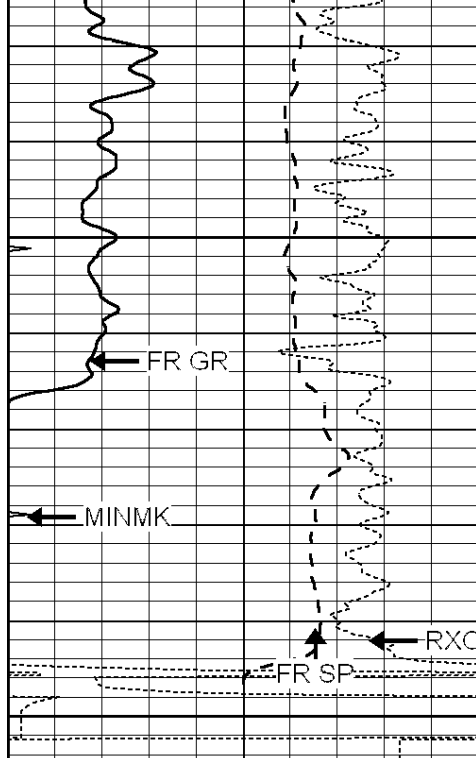
4500

4550

4600

4650

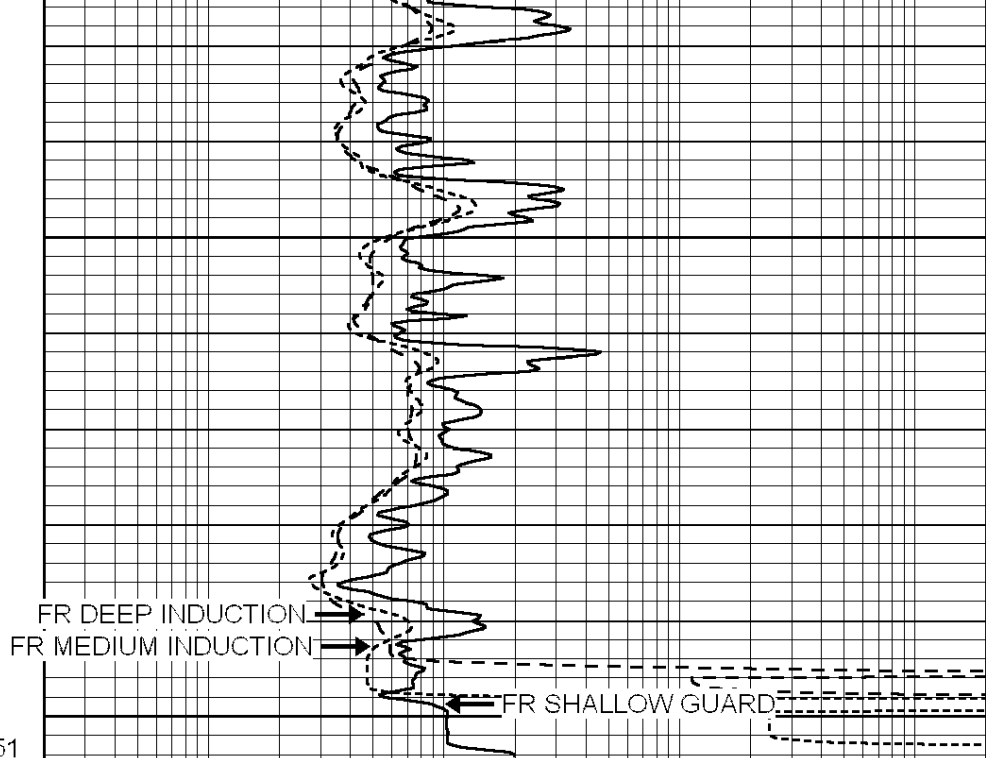




4700

4750
LTD 4751

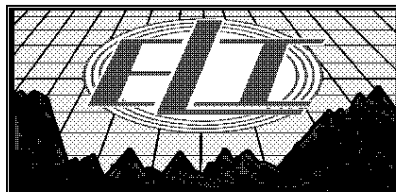
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



FR DEEP INDUCTION
FR MEDIUM INDUCTION

FR SHALLOW GUARD

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

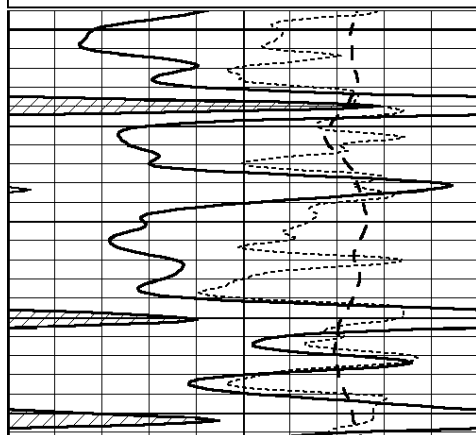


REPEAT SECTION

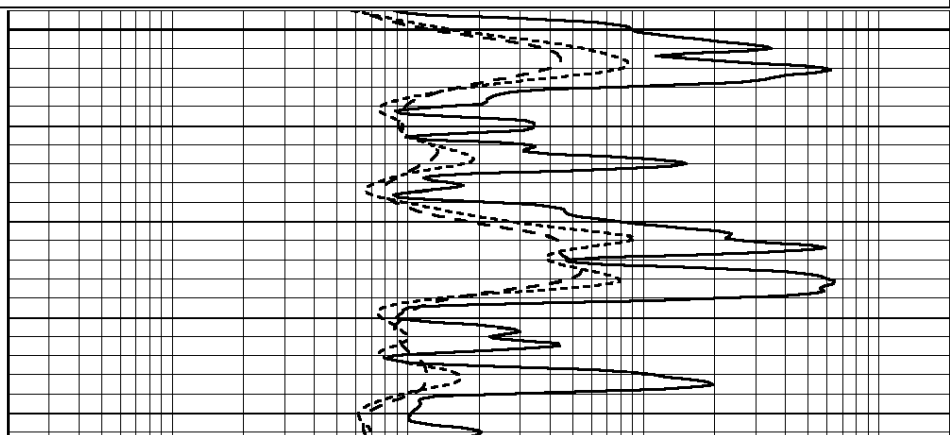
Database File: 3734ddn.db
Dataset Pathname: pass2.16
Presentation Format: _dil
Dataset Creation: Fri Jun 28 04:09:05 2019 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:240

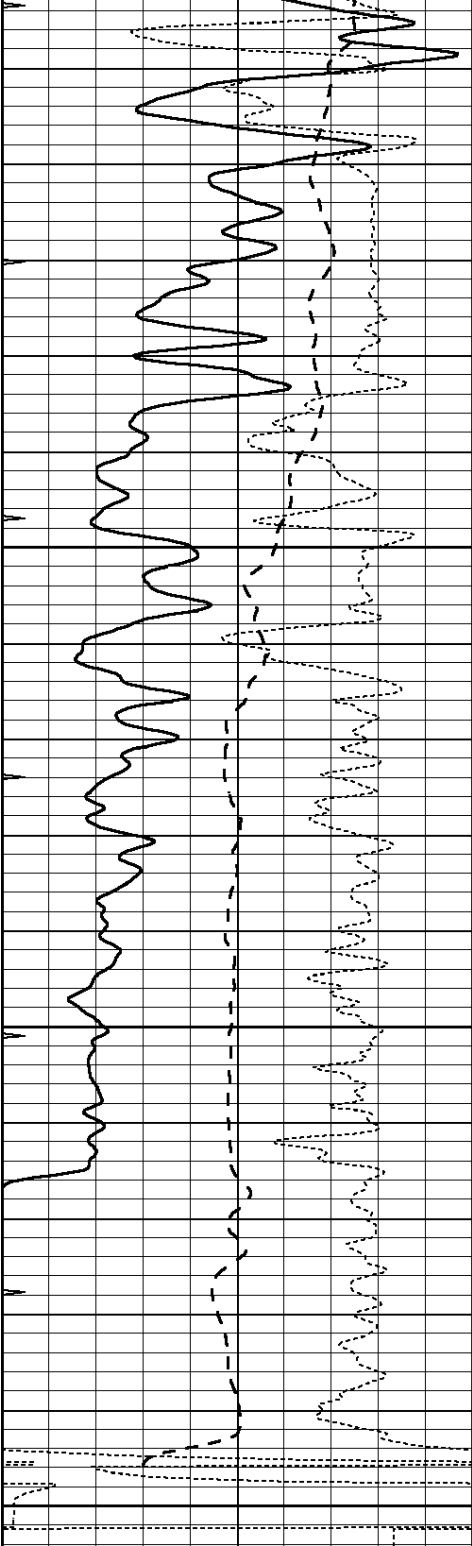
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



4550





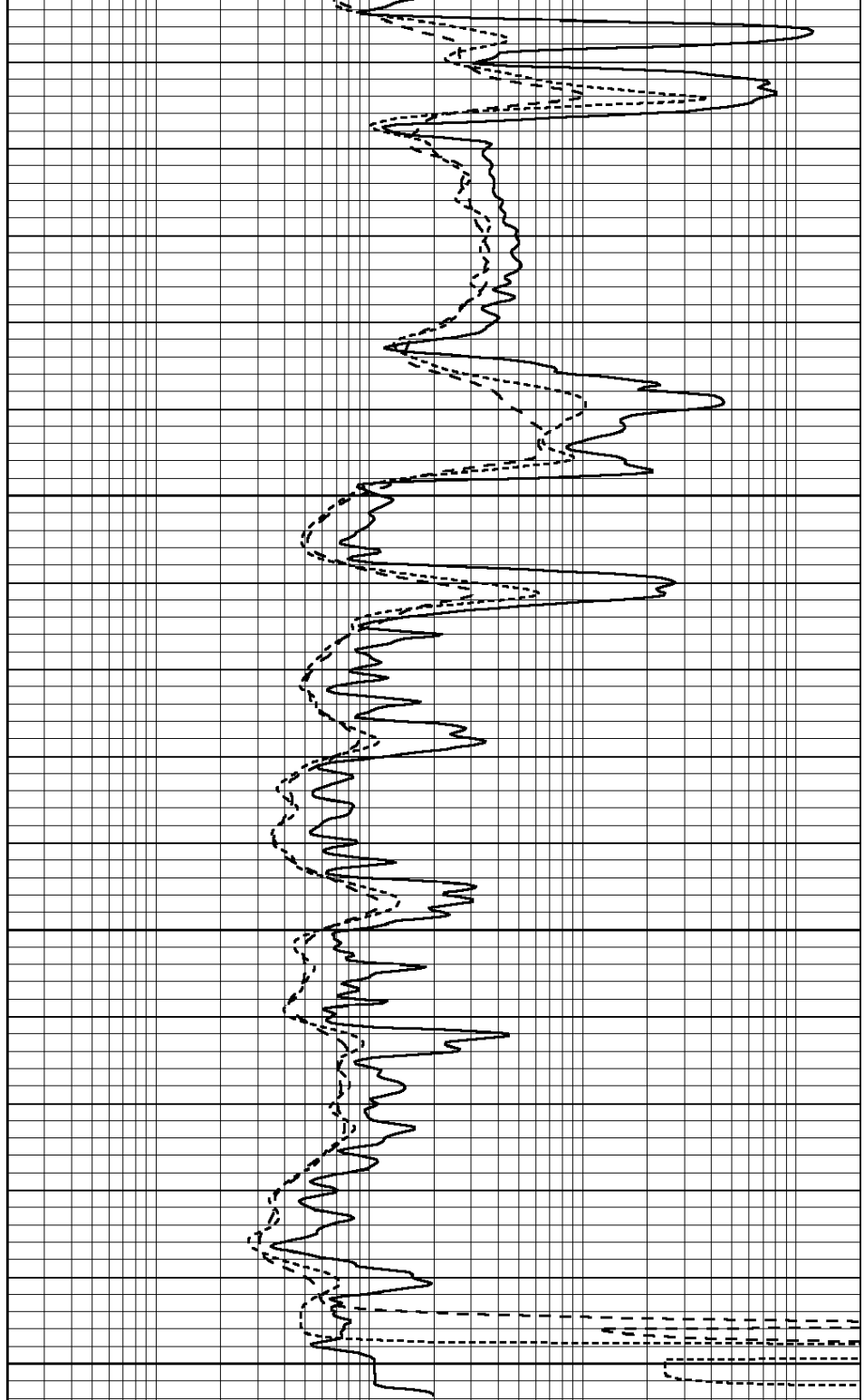
4600

4650

4700

4750

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



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 Calibration								
Readings			References				Results	
Loop:	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
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	
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			