

DUAL INDUCTION LOG

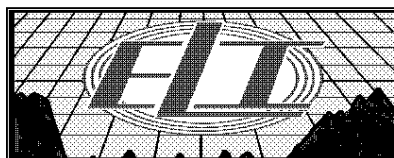
Company	CHARLES N. GRIFFIN
Well	ADDIE #5
Field	CROFT
County	PRATT
State	KANSAS
Company	CHARLES N. GRIFFIN
Well	ADDIE #5
Field	CROFT
County	PRATT
State	KANSAS
Location:	API # : 15-151-22493-0000
Permanent Datum	GROUND LEVEL
Log Measured From	330' FSL & 1370' FWL
Drilling Measured From	W/2 - SW - SE - SW
	SEC 28 TWP 29S RGE 15W
	Other Services
	CDL/CNL
	MEL/SON
	Elevation
	K.B. 1988
	D.F. 1986
	G.L. 1977
Date	5/22/19
Run Number	ONE
Depth Driller	4810
Depth Logger	4811
Bottom Logged Interval	4809
Top Log Interval	00
Casing Driller	8 5/8"@267'
Casing Logger	264
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4/53
pH / Fluid Loss	9.0/8.8
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.850@95F
Rmf @ Meas. Temp	.638@95F
Rmc @ Meas. Temp	1.02@95F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.657@123F
Time Circulation Stopped	2.5 HOURS
Time Logger on Bottom	10:45 A.M.
Maximum Recorded Temperature	123F
Equipment Number	922339
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	BRUCE REED
	CHARLES 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., 1 1/2S. TO "110TH RD.", 1 1/2E., N. INTO



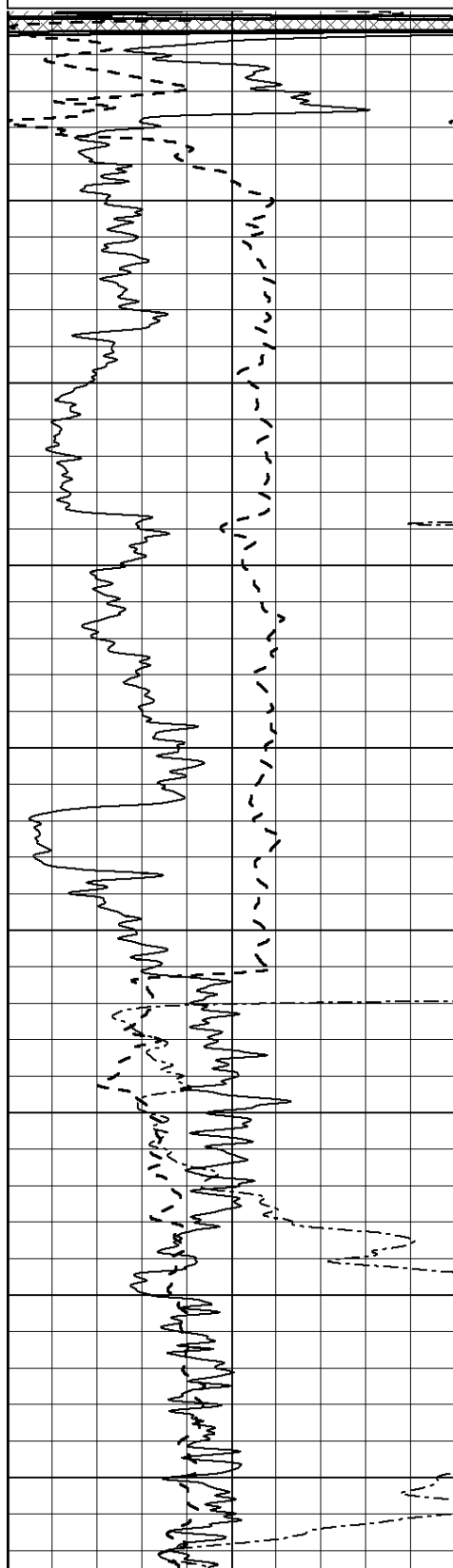
MAIN SECTION

Database File: 3624ddn.db
Dataset Pathname: pass3.7
Presentation Format: dil2
Dataset Creation: Thu May 23 12:23:17 2019 by Calc SOC 120430
Charted by: Depth in Feet scaled 1:600

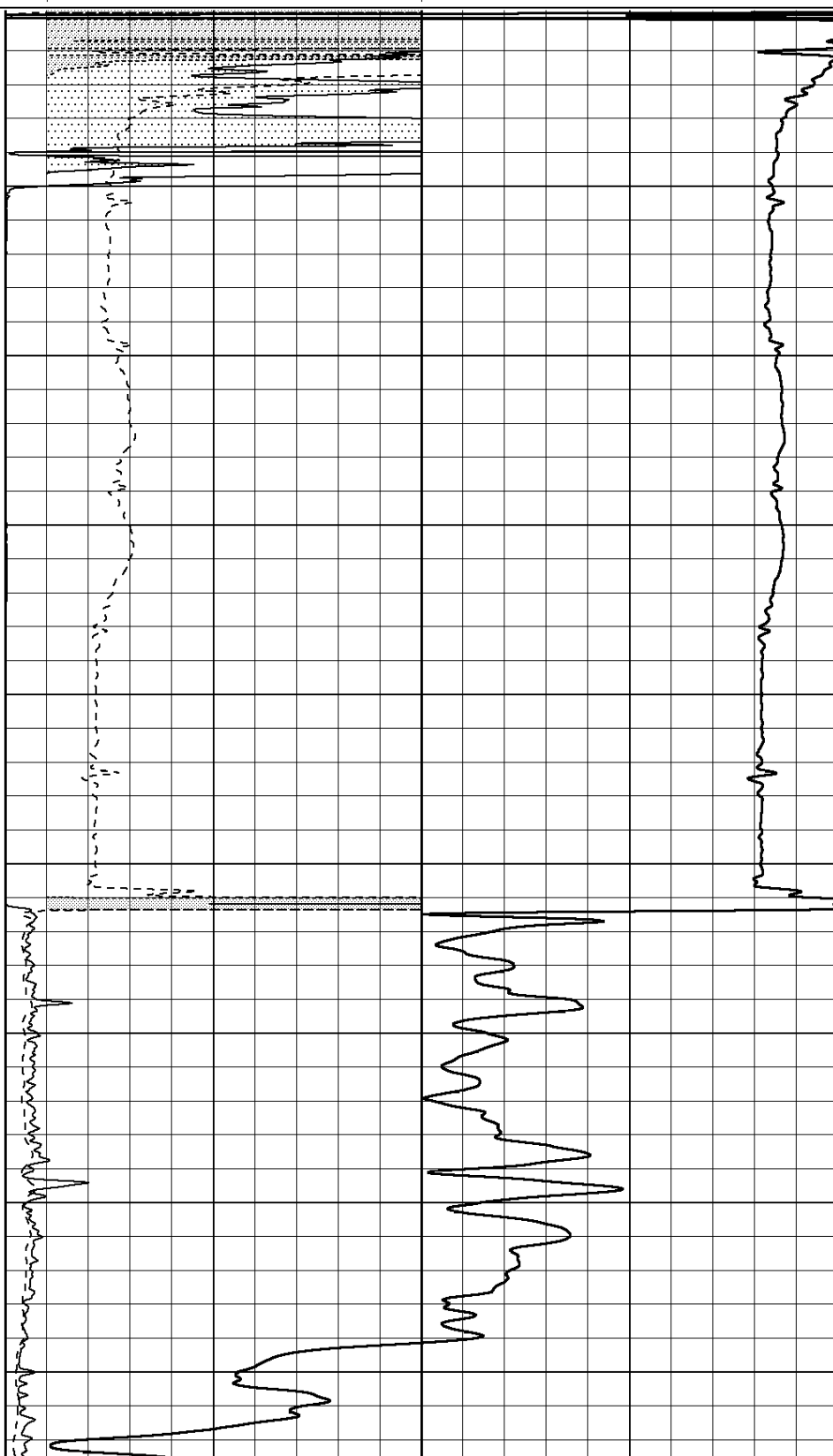
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100
0	RWA (Ohm-m)	1

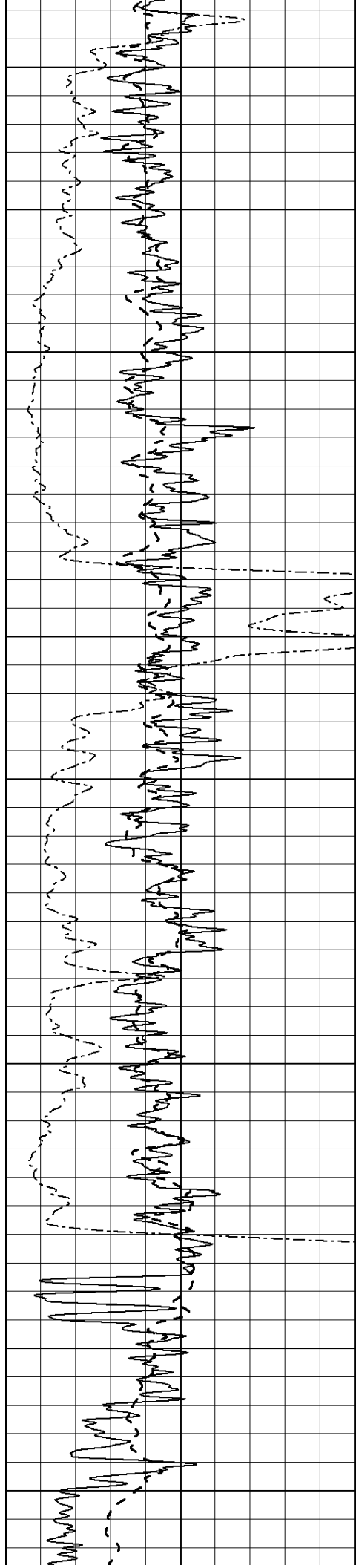
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50
1000	CILD (mmho/m)	0

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



0
50
100
150
200
250
300
350
400





450

500

550

600

650

700

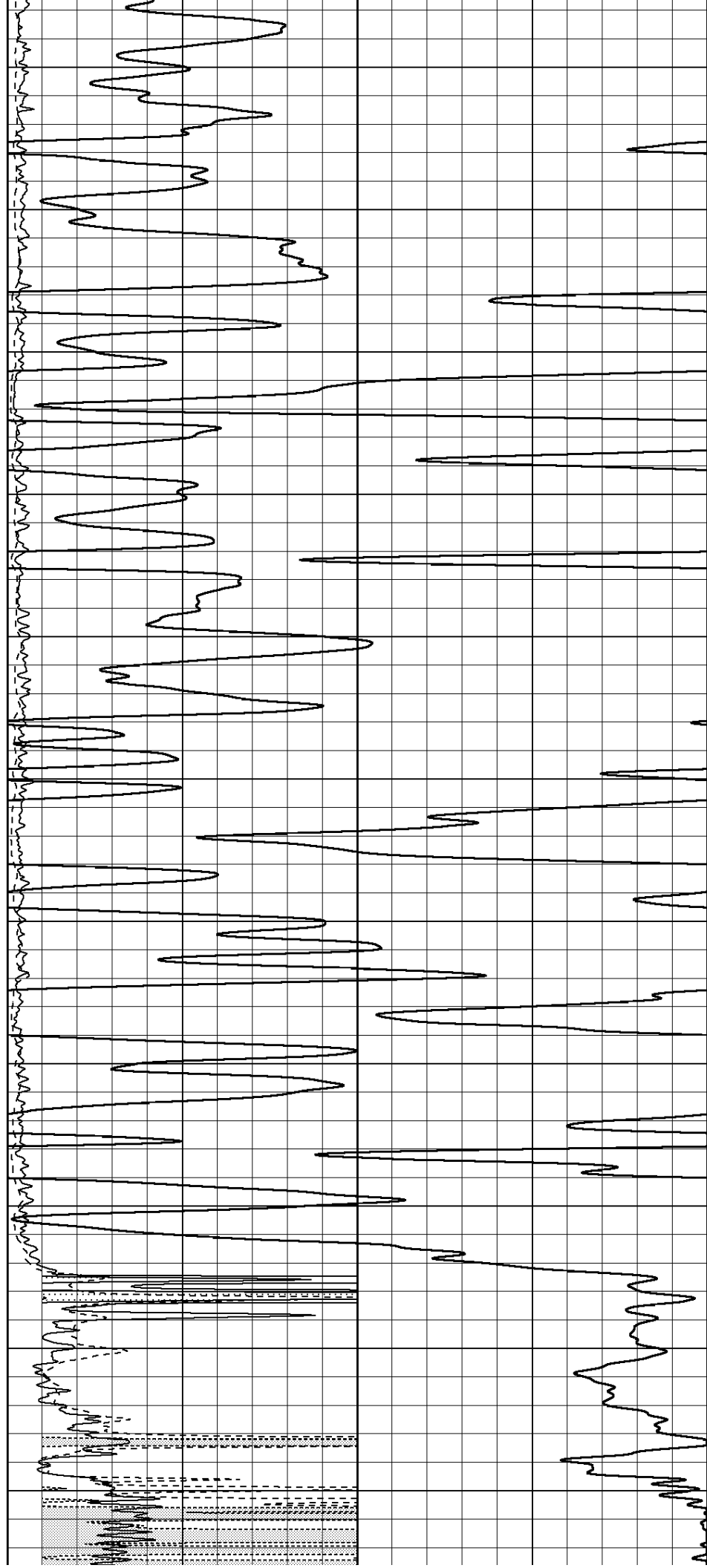
750

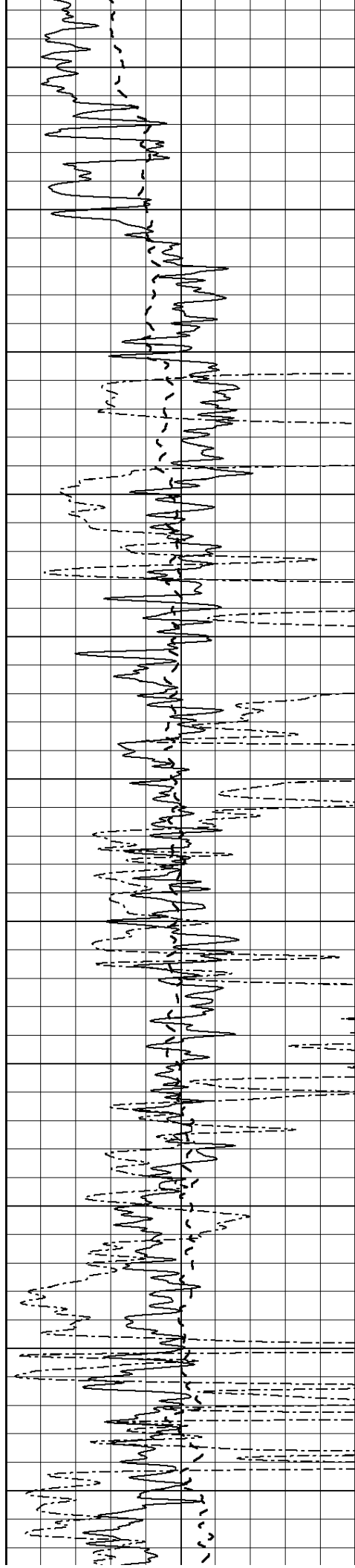
800

850

900

950





1000

1050

1100

1150

1200

1250

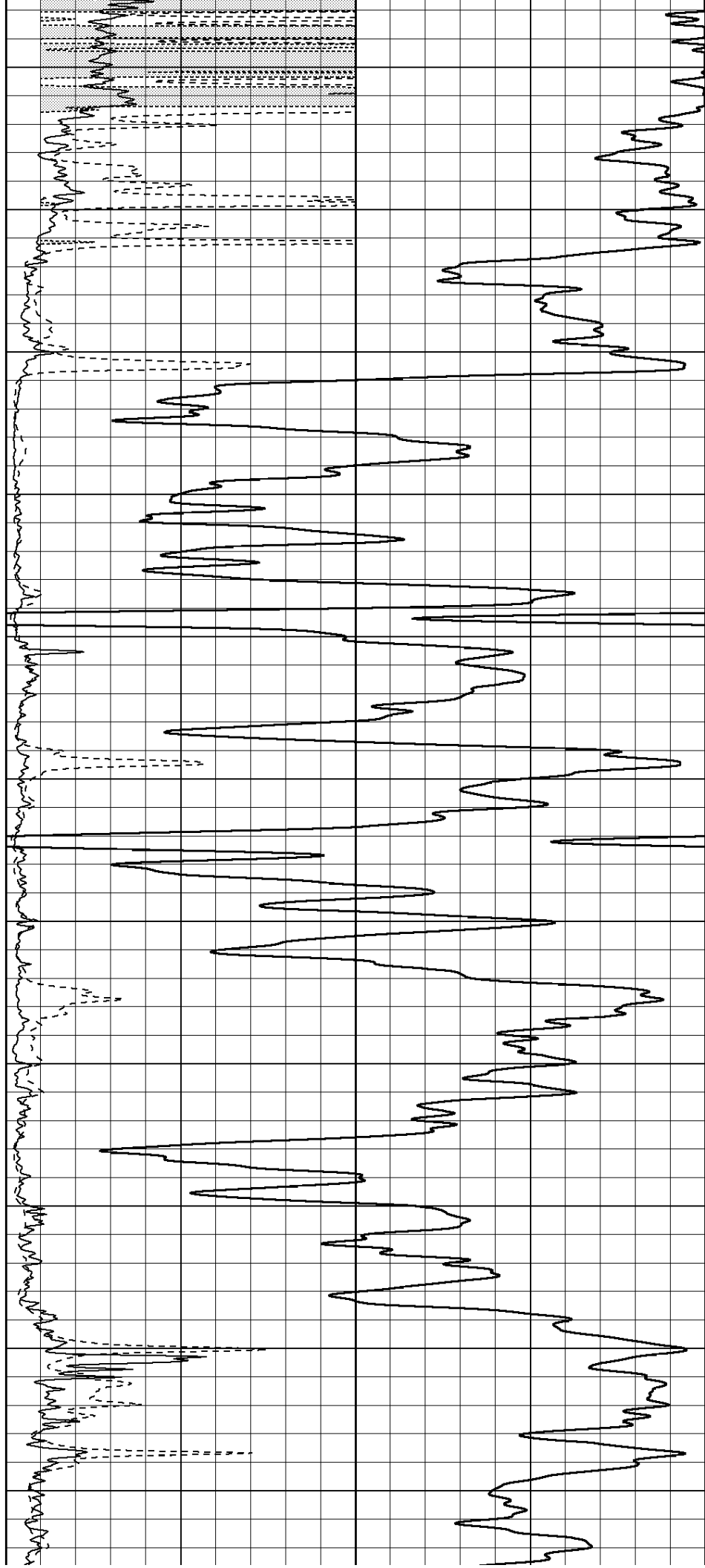
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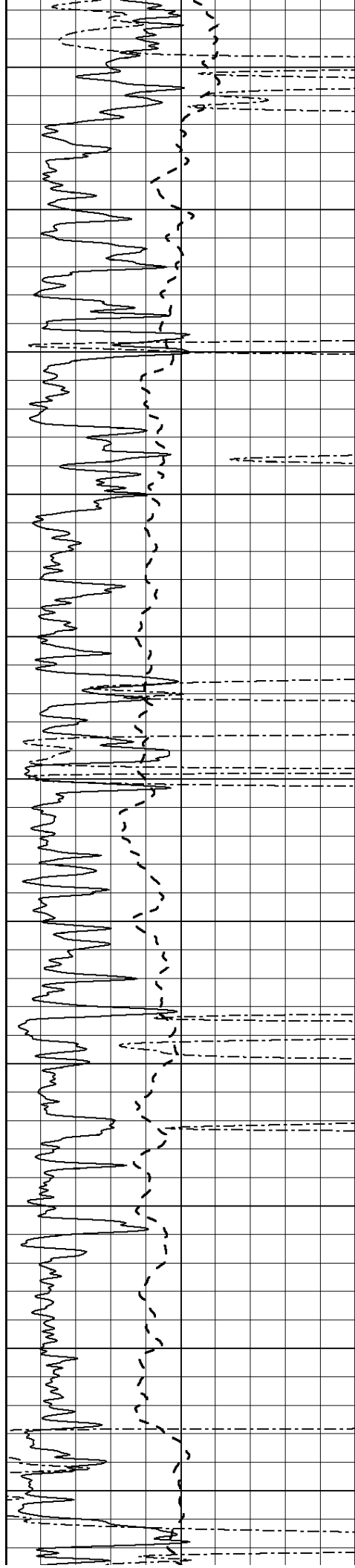
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1400

1450

1500





1550

1600

1650

1700

1750

1800

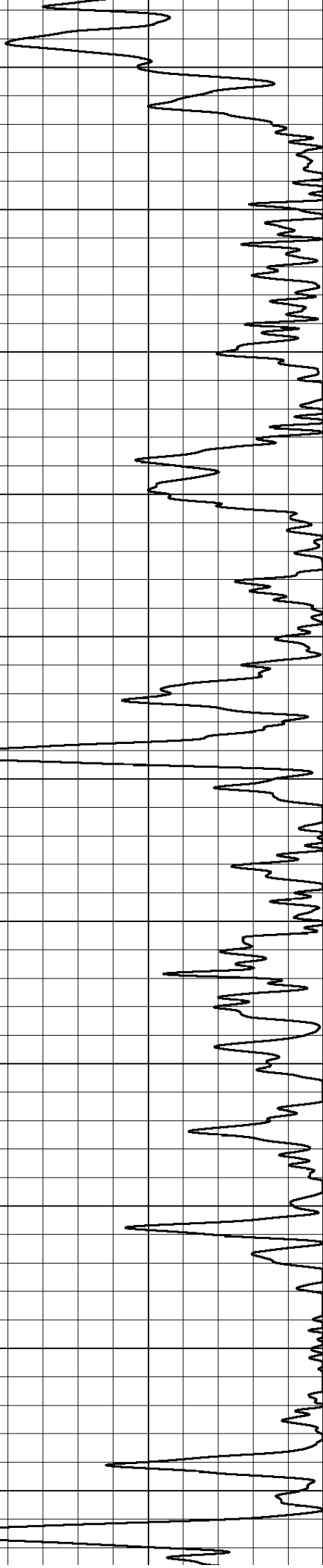
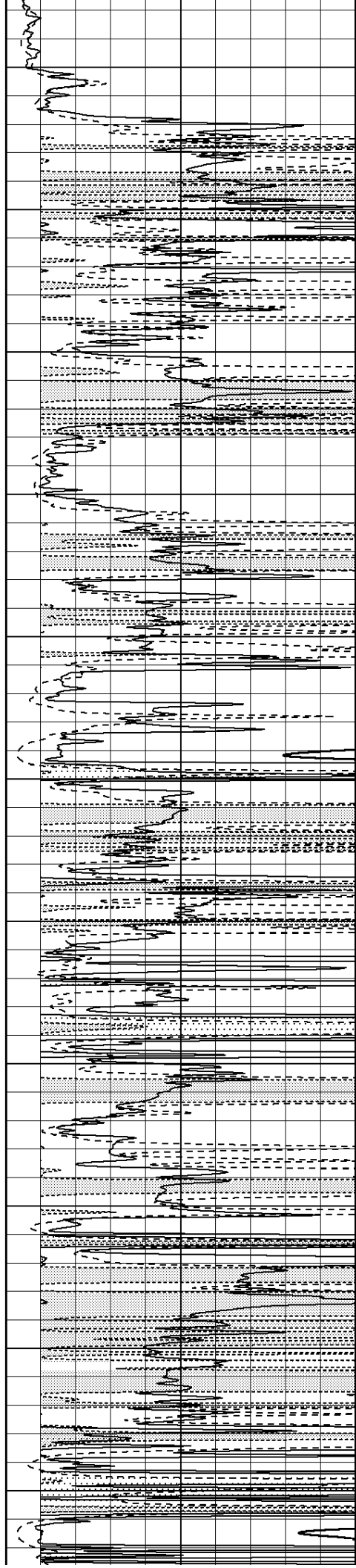
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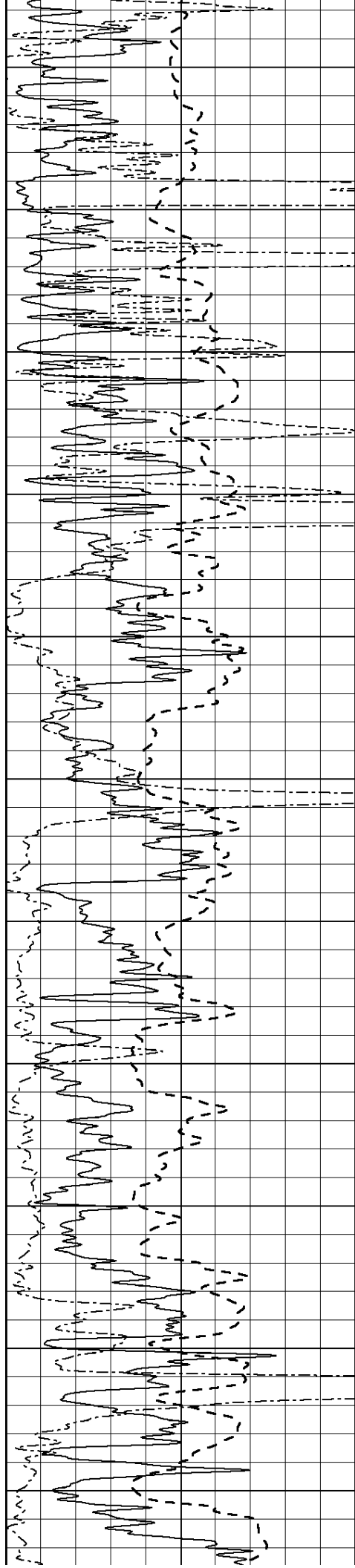
1900

1950

2000

2050





2100

2150

2200

2250

2300

2350

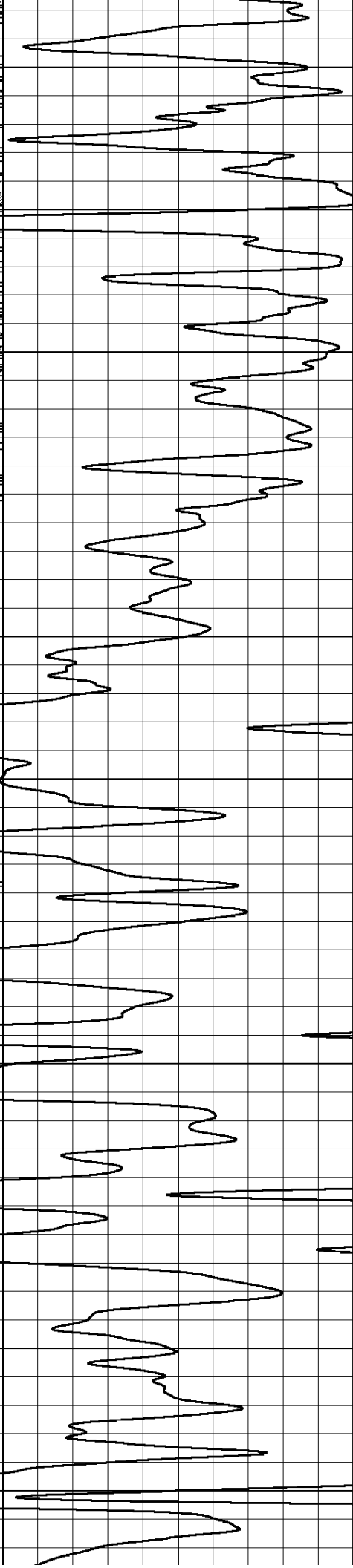
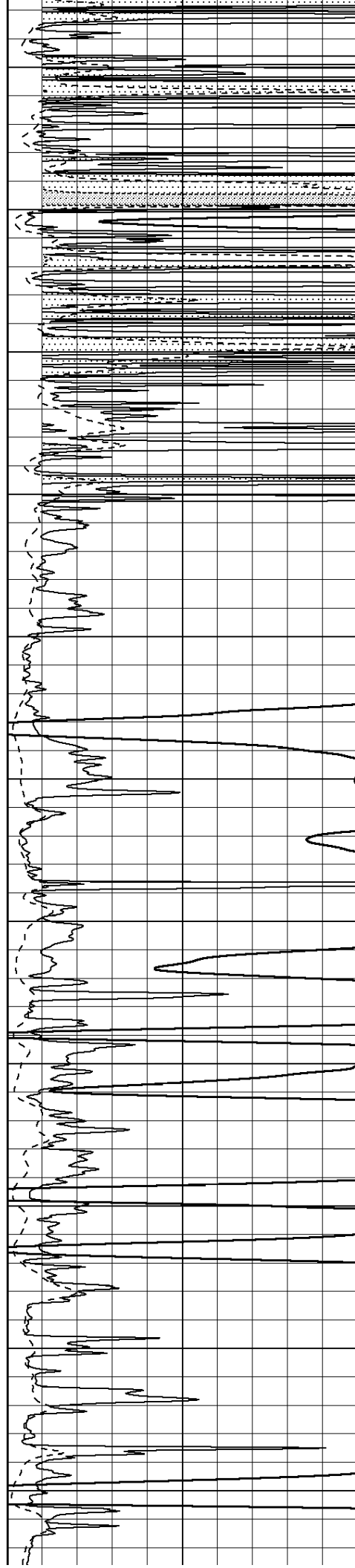
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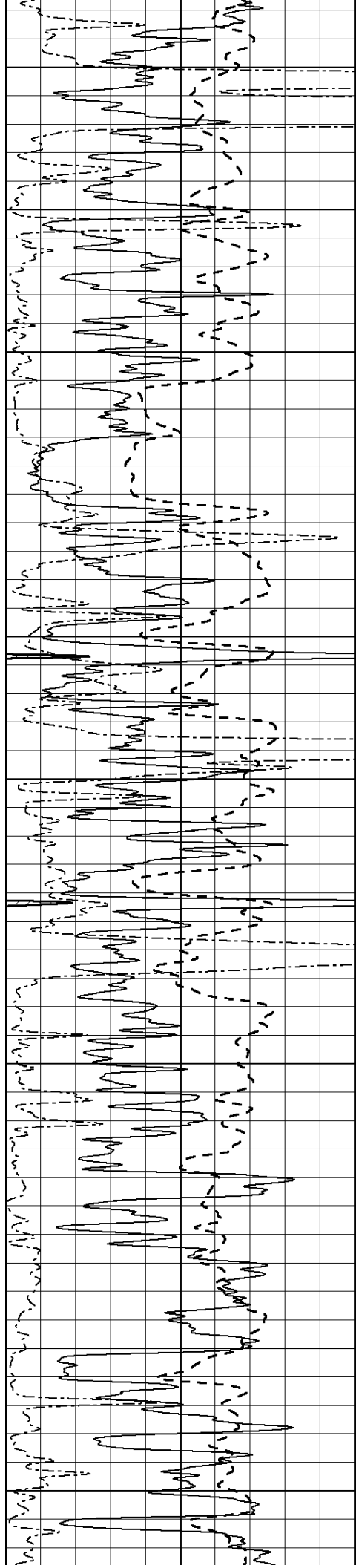
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2500

2550

2600





2650

2700

2750

2800

2850

2900

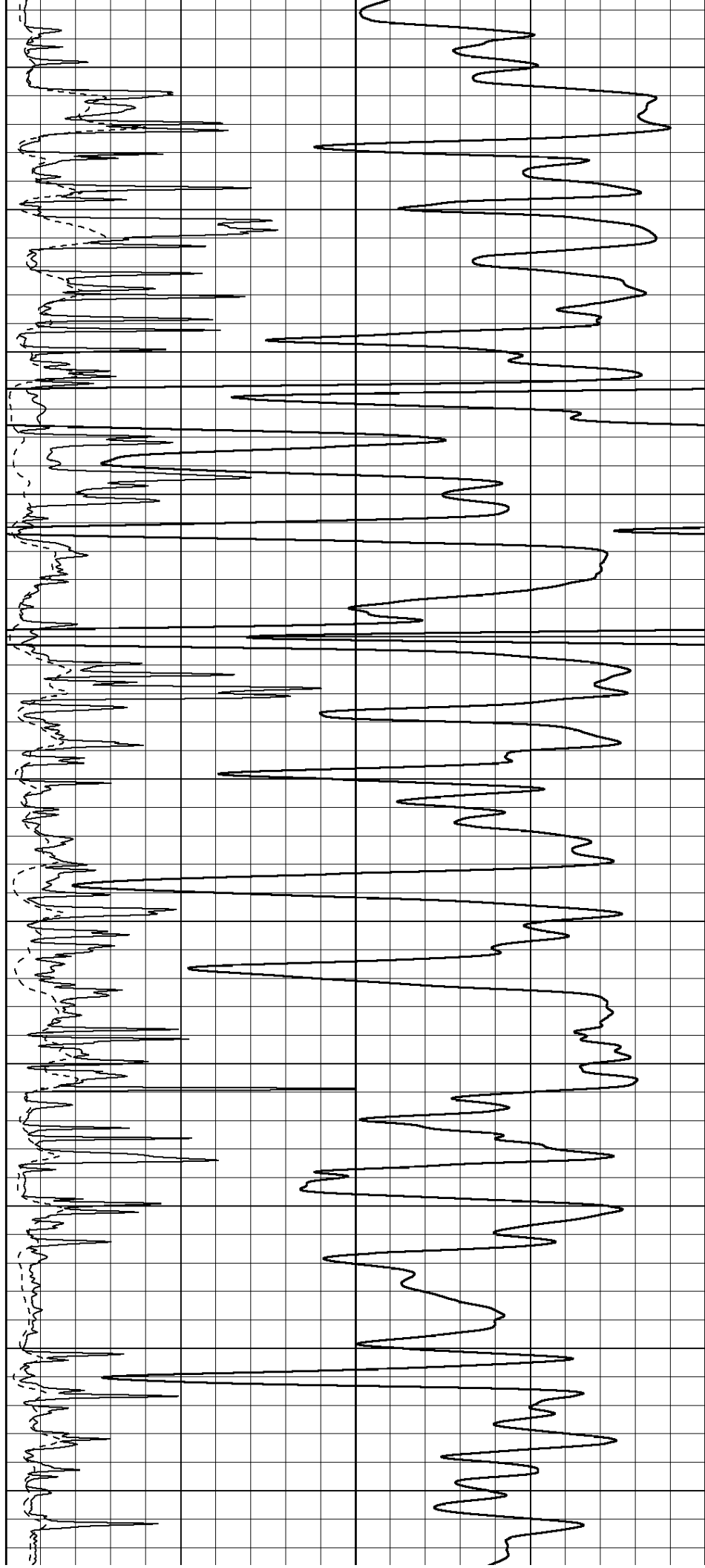
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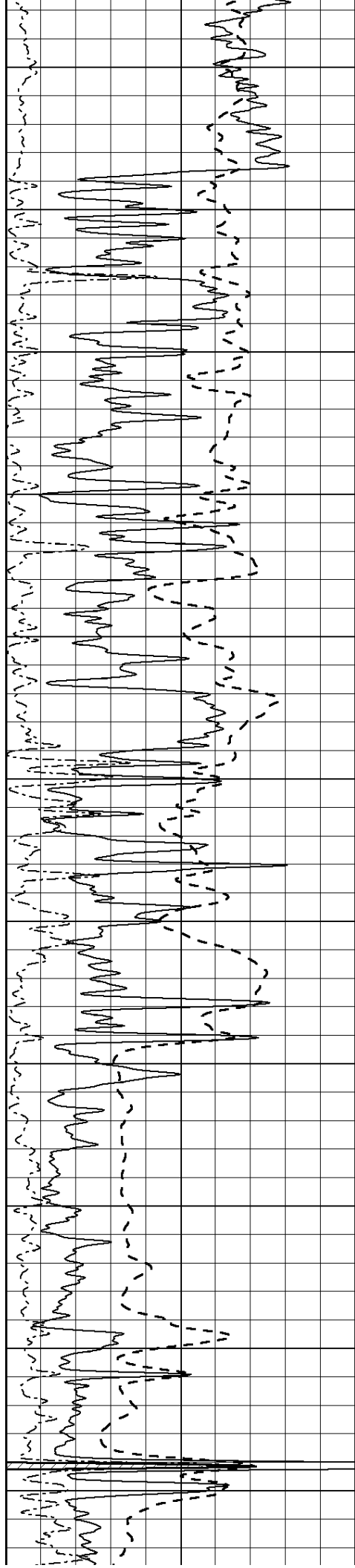
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3050

3100

3150





3200

3250

3300

3350

3400

3450

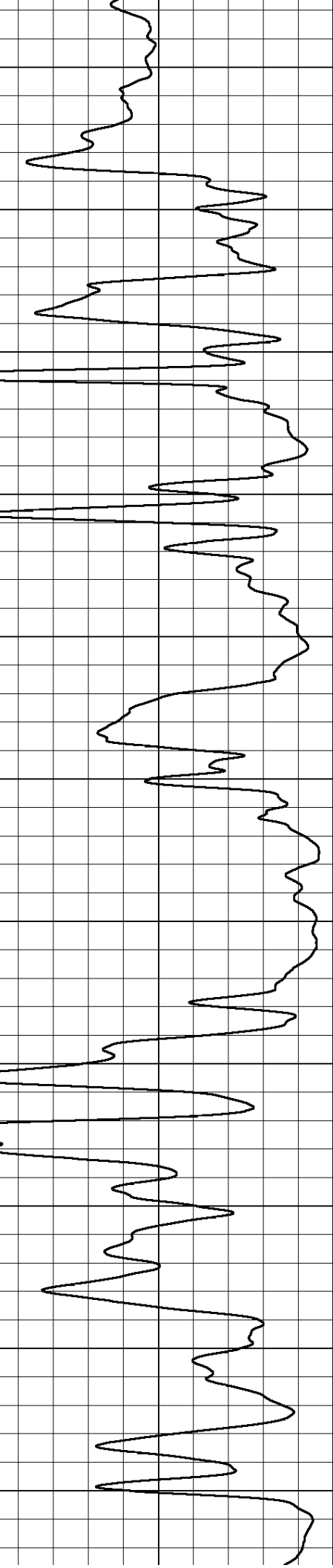
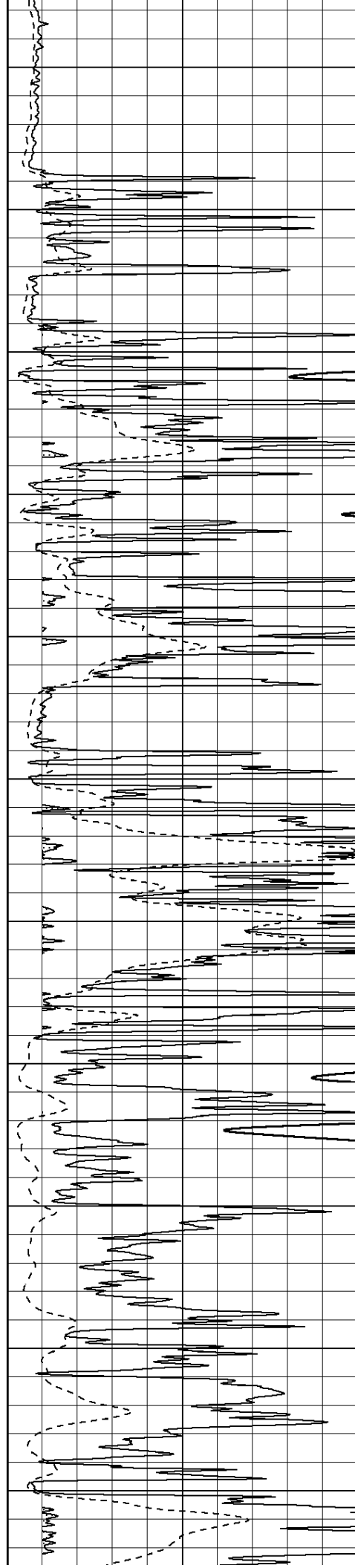
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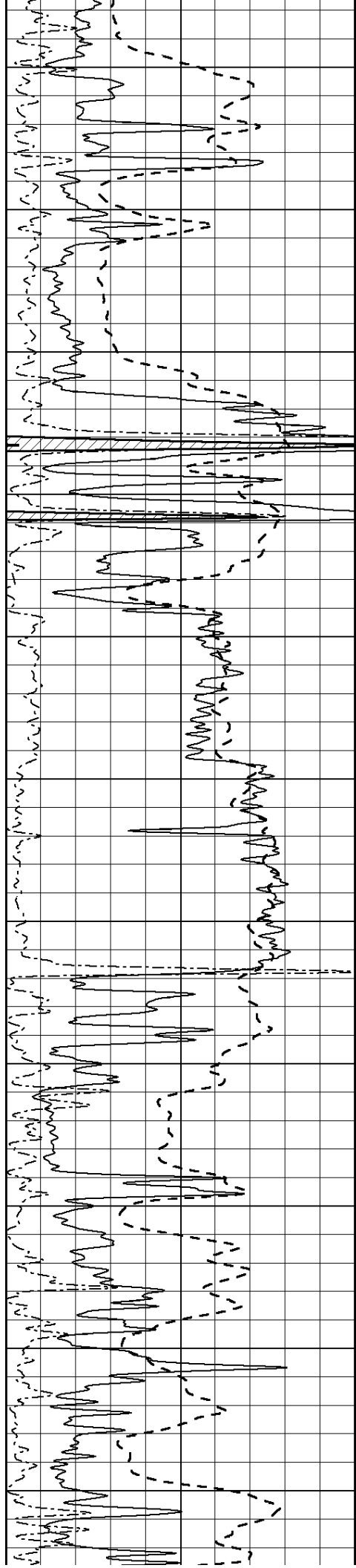
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3600

3650

3700





3750

3800

3850

3900

3950

4000

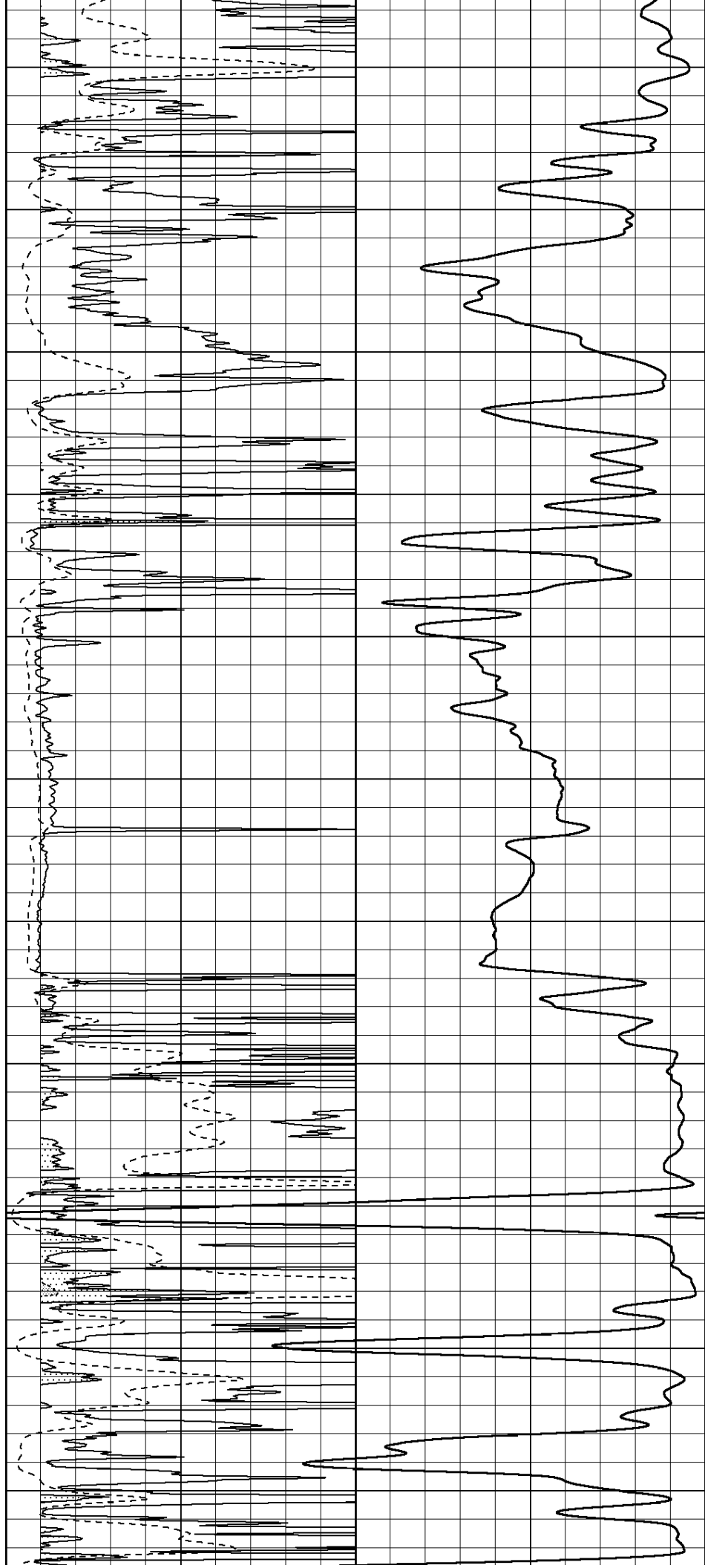
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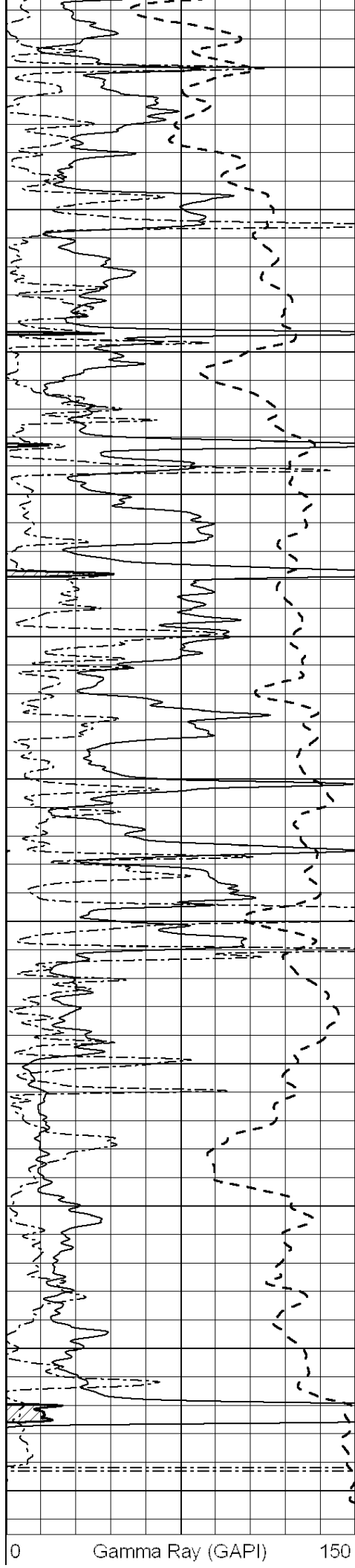
4100

4150

4200

4250





4300

4350

4400

4450

4500

4550

4600

4650

4700

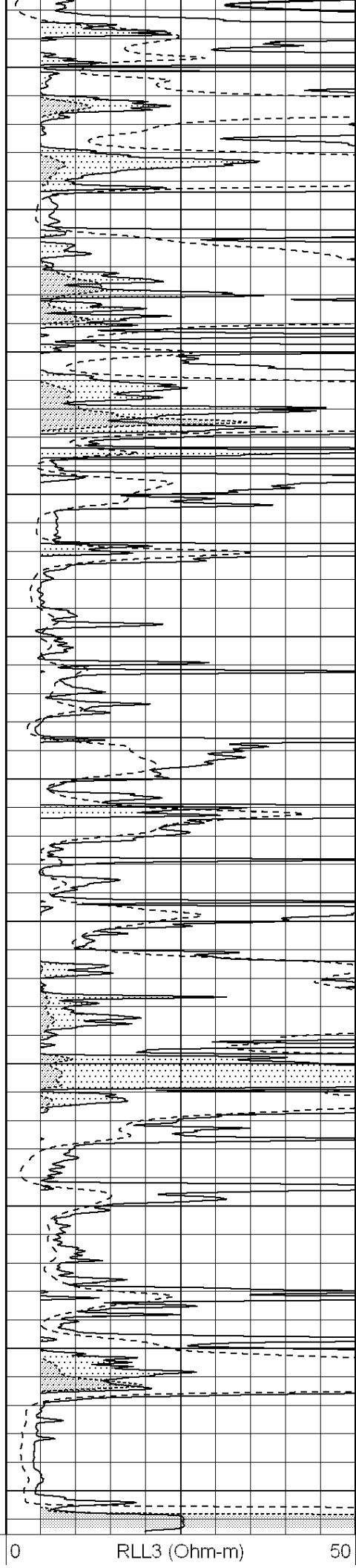
4750

4800

0

Gamma Ray (GAPI)

150



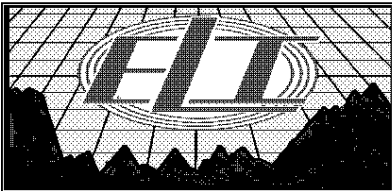
0

RLL3 (Ohm-m)

50

-100	SP (mV)	100
0	RWA (Ohm-m)	1

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

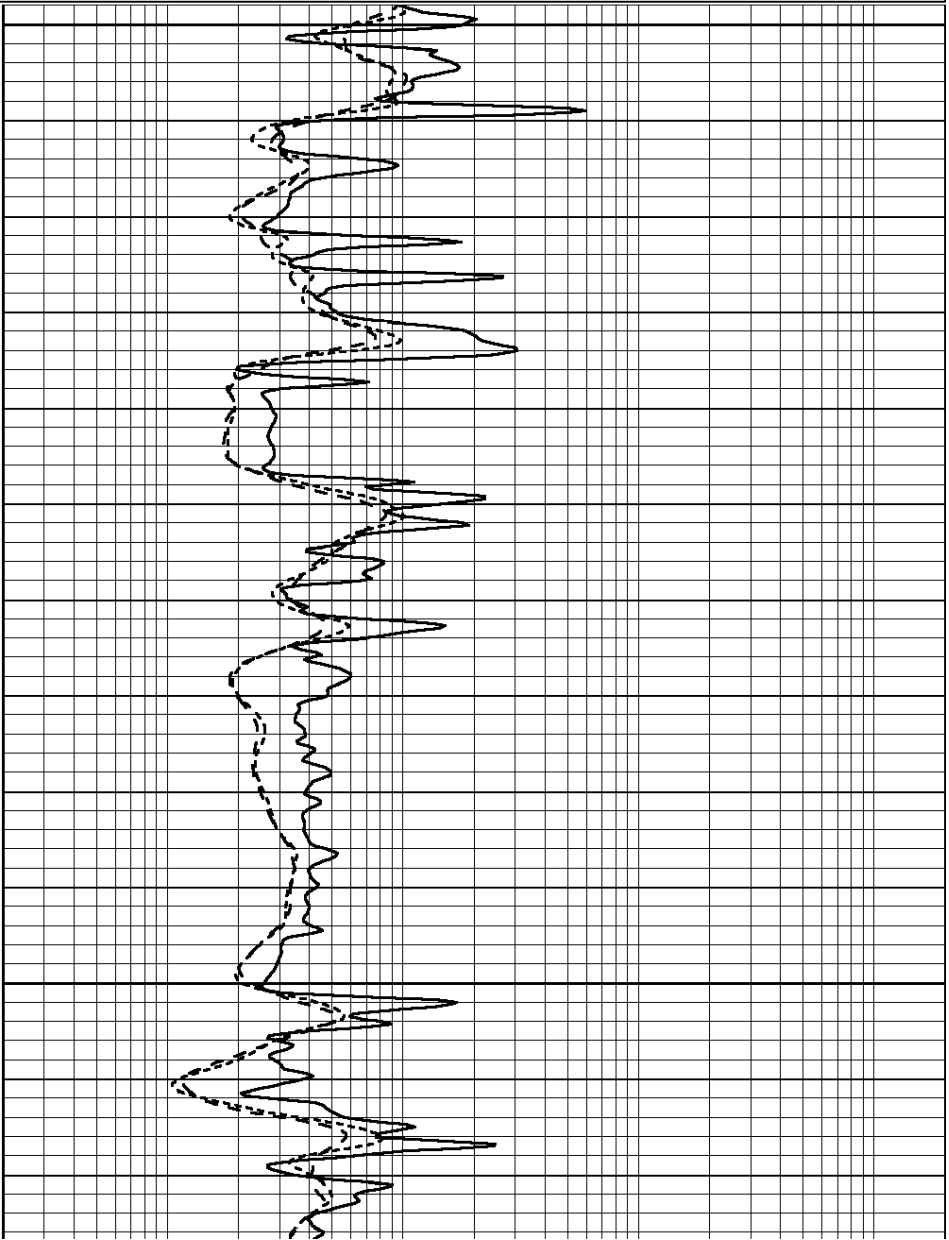
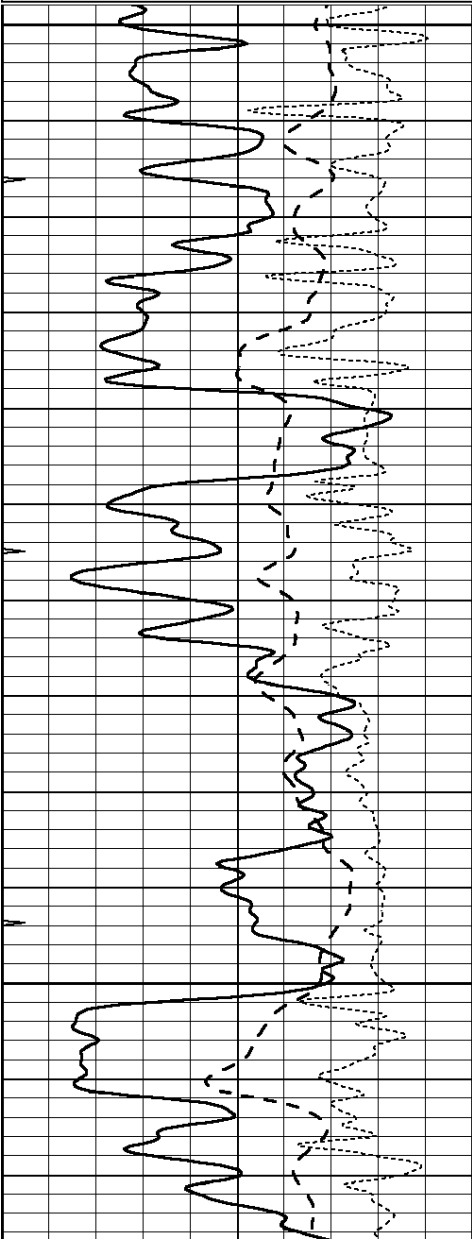


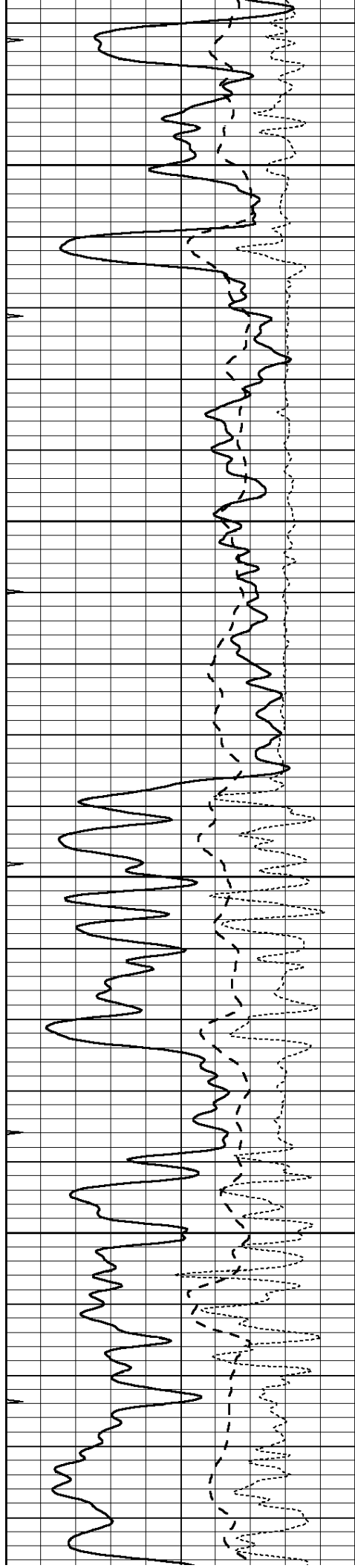
MAIN SECTION

Database File: 3624ddn.db
 Dataset Pathname: pass3.7
 Presentation Format: _dil
 Dataset Creation: Thu May 23 12:23:17 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



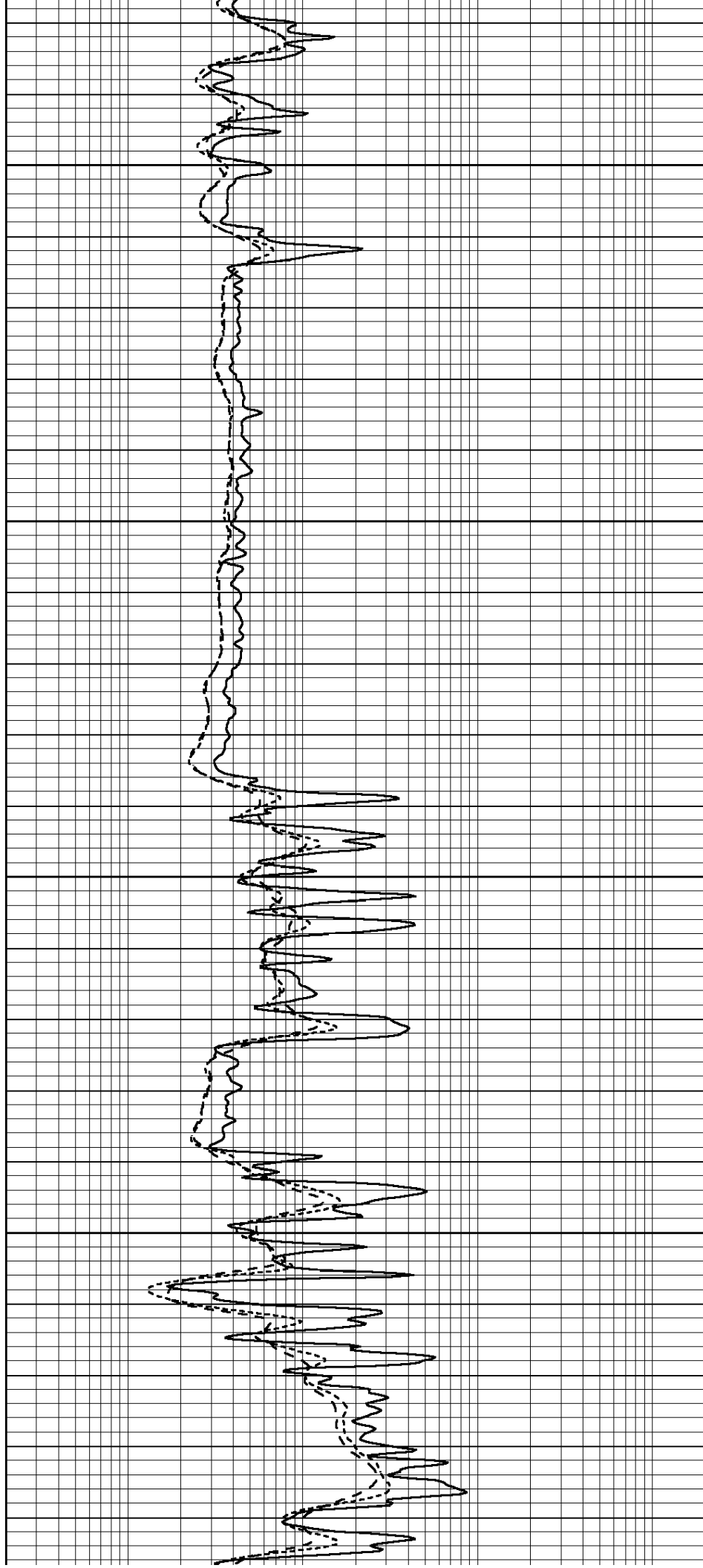


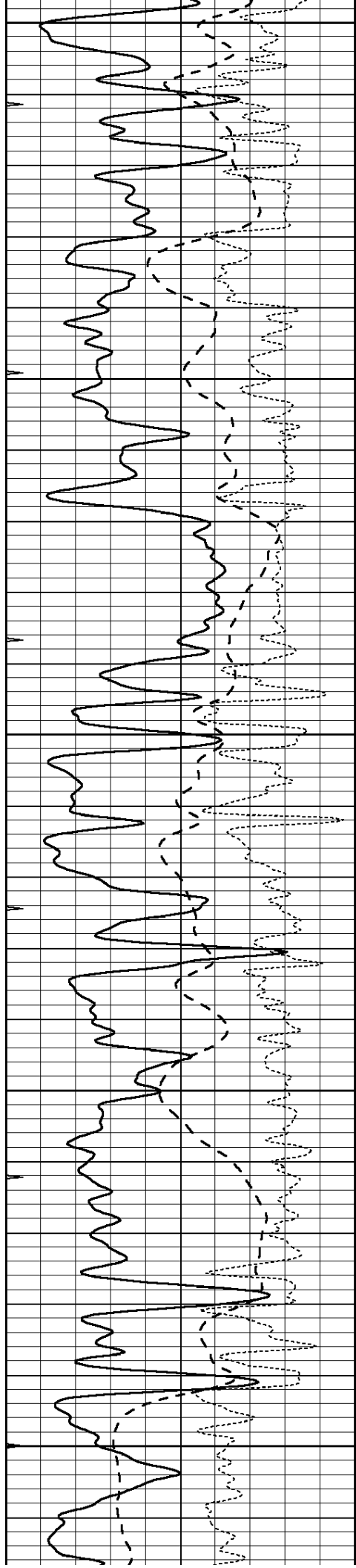
3150

3200

3250

3300





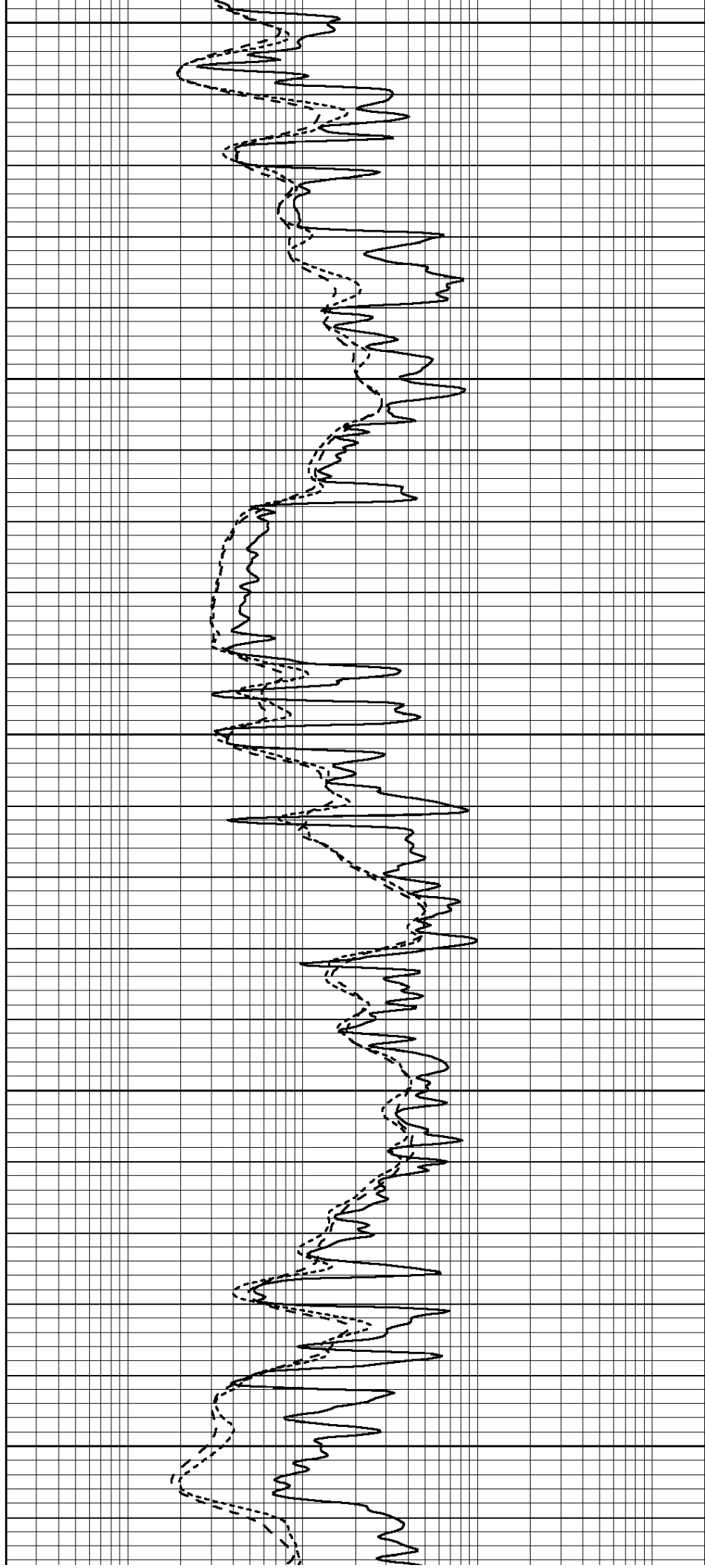
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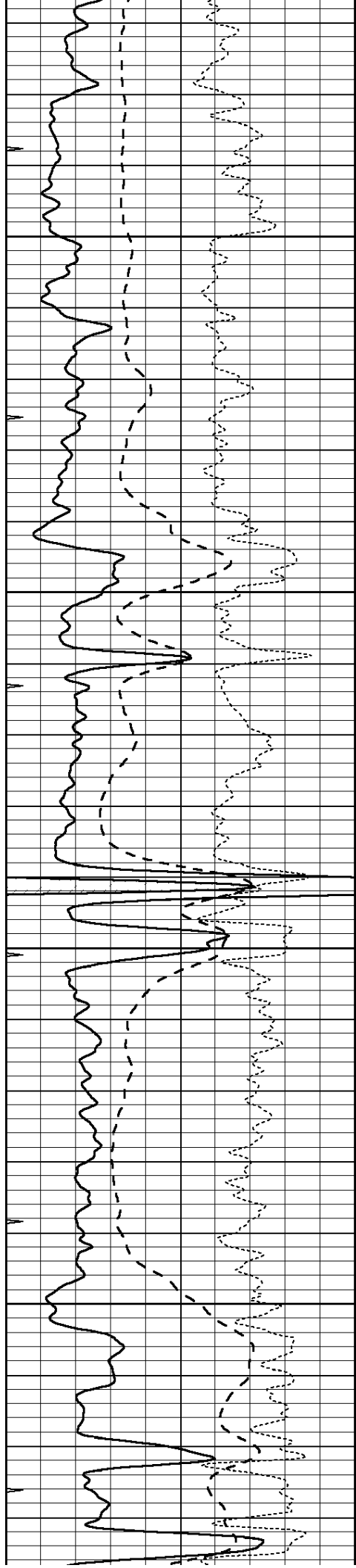
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3450

3500

3550



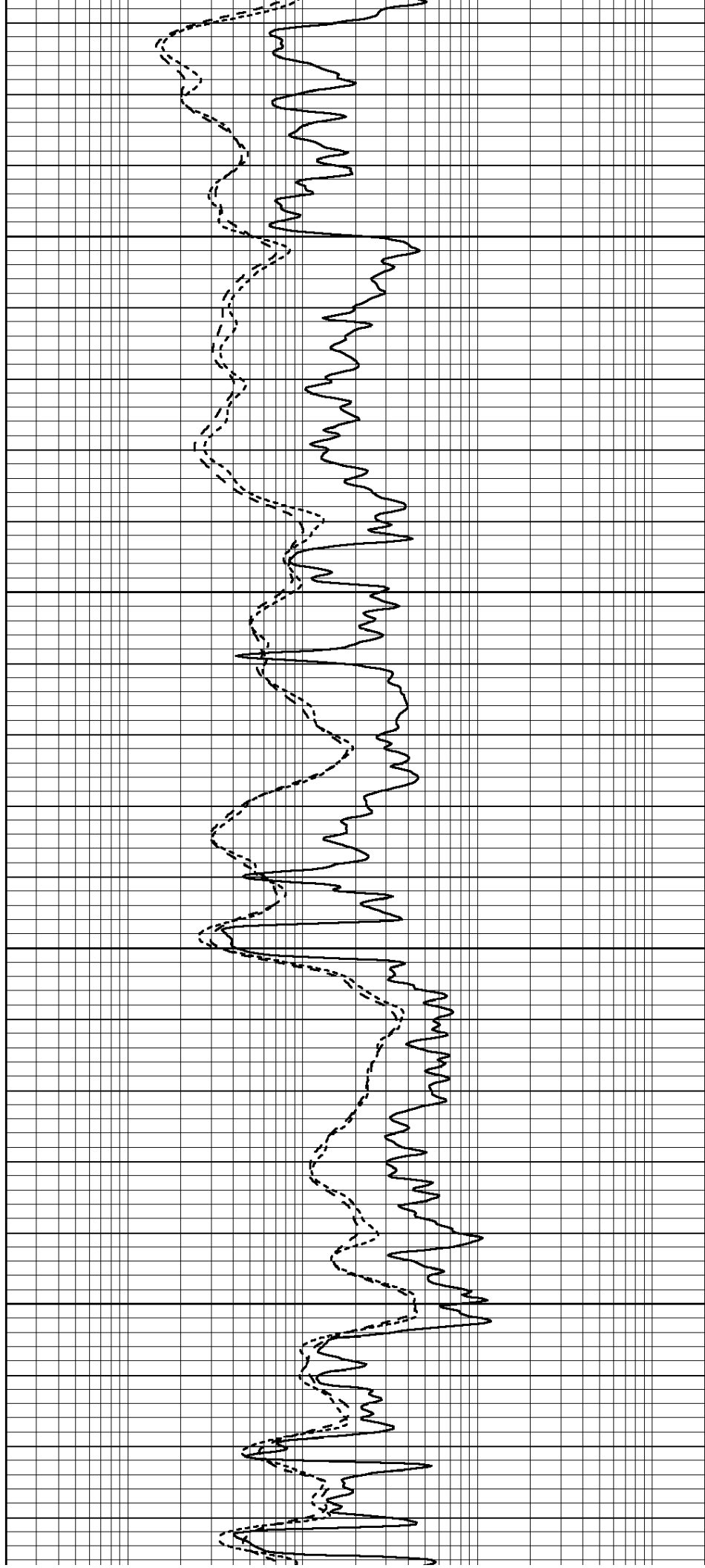


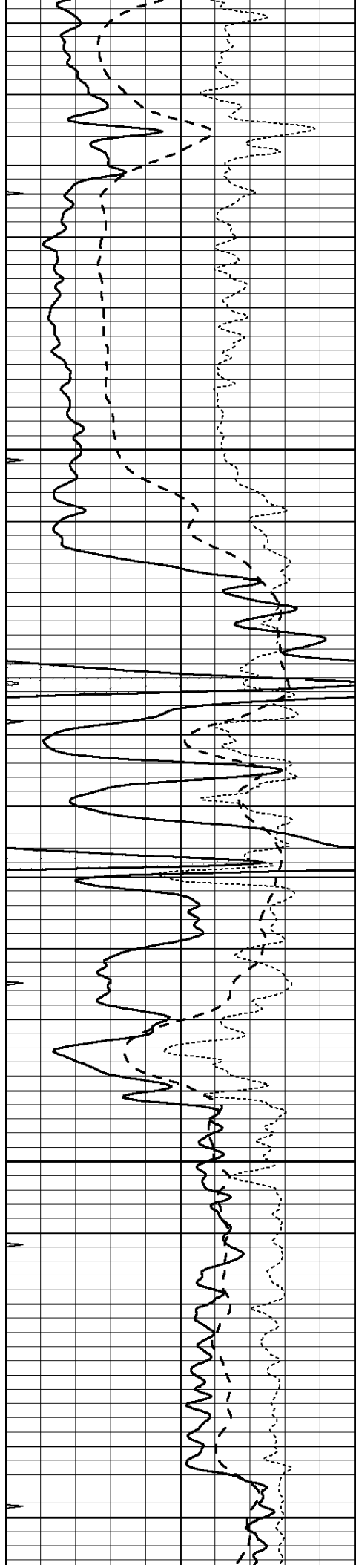
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3650

3700

3750





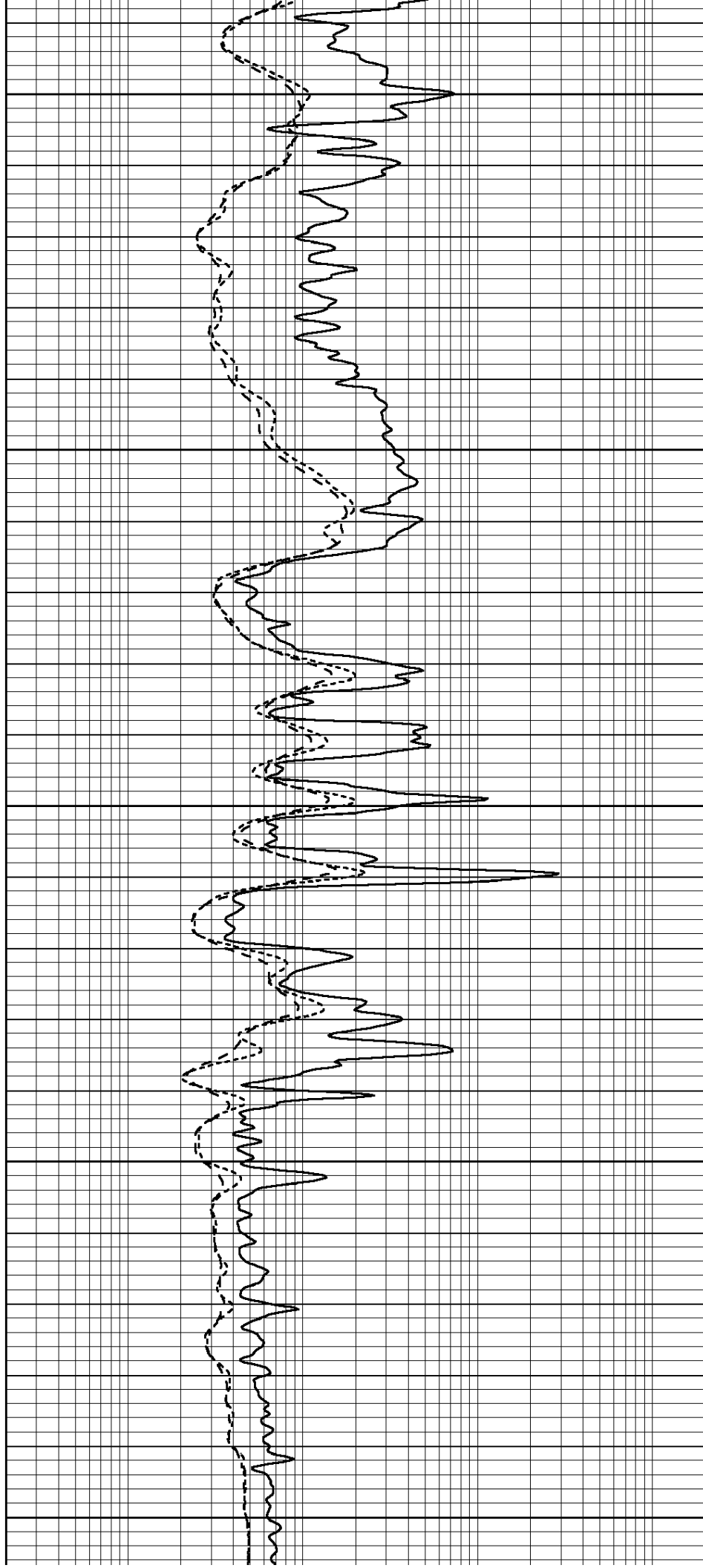
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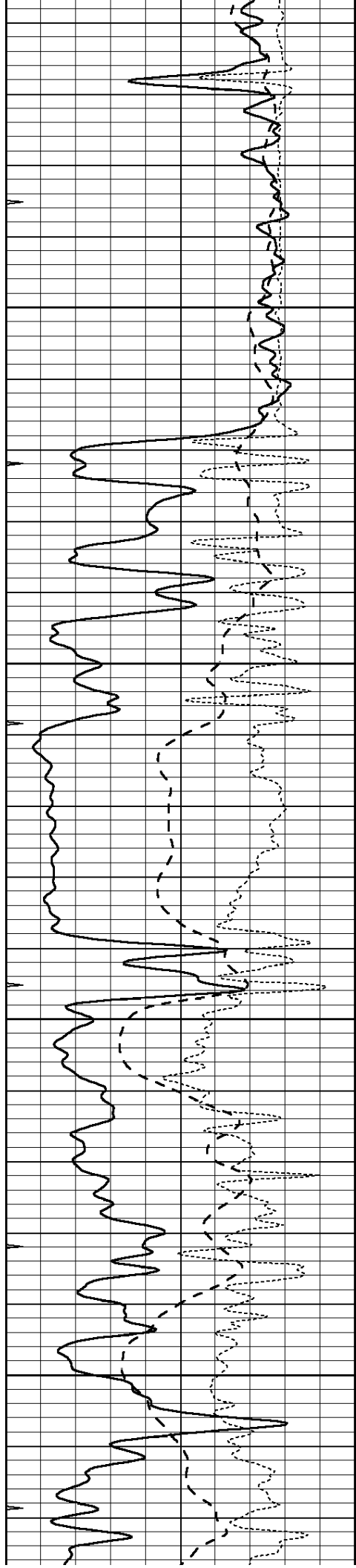
3850

3900

3950

4000



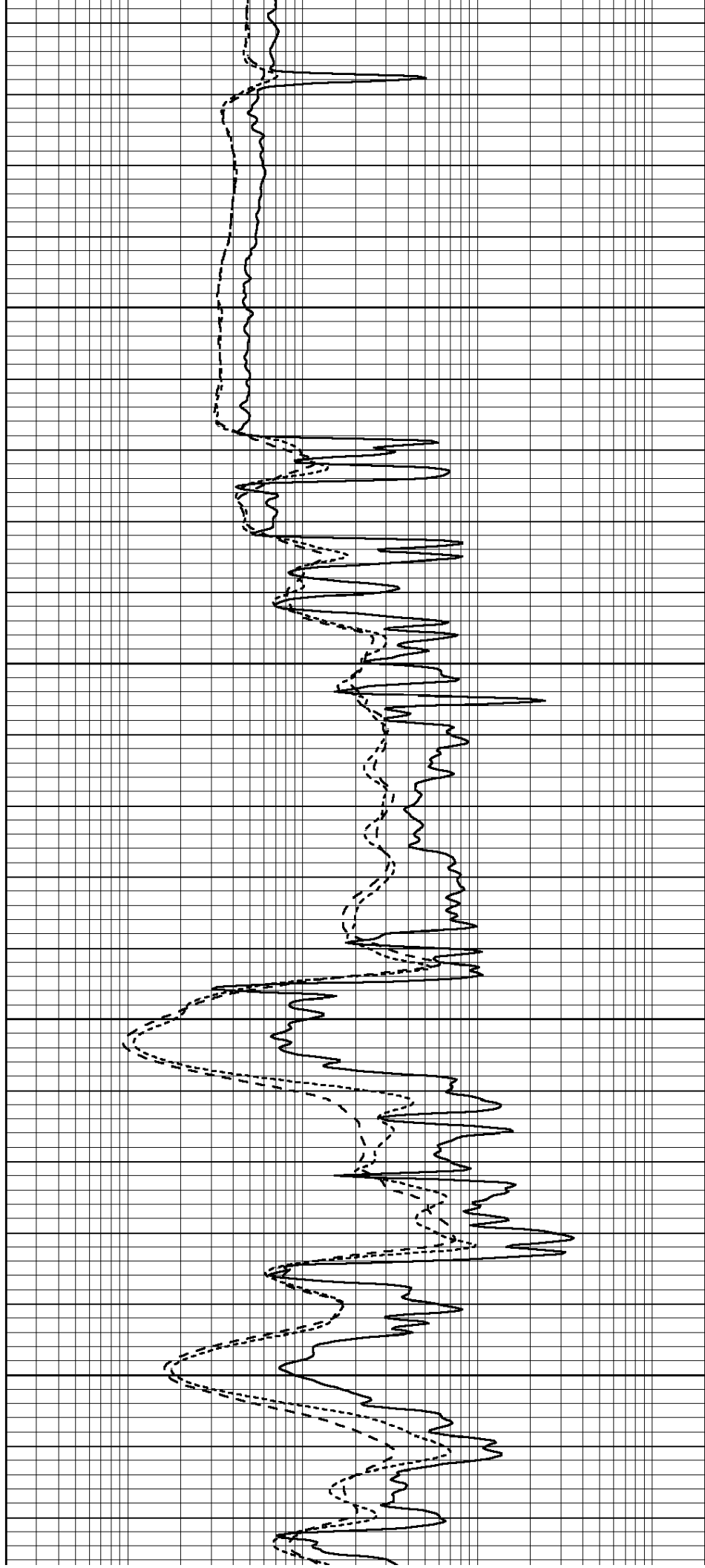


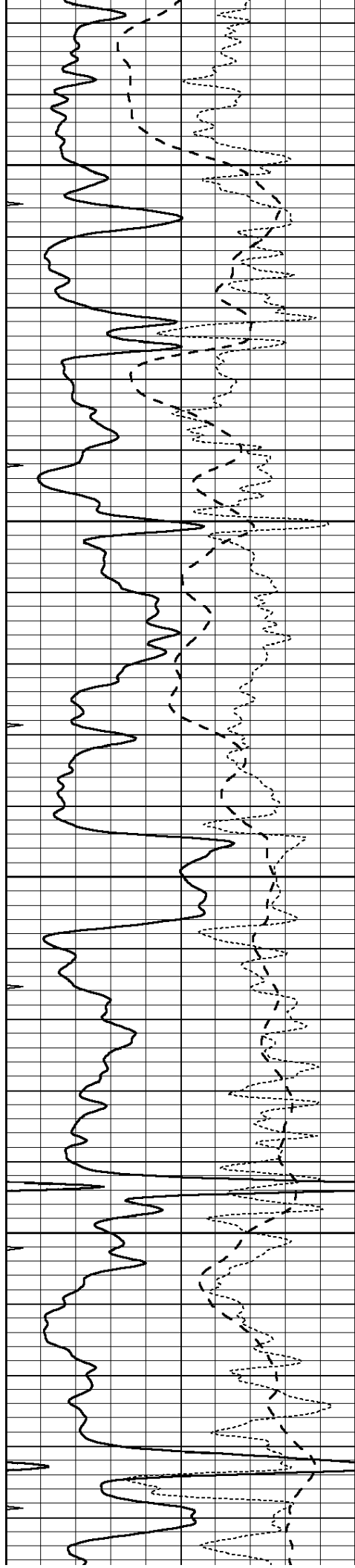
4050

4100

4150

4200



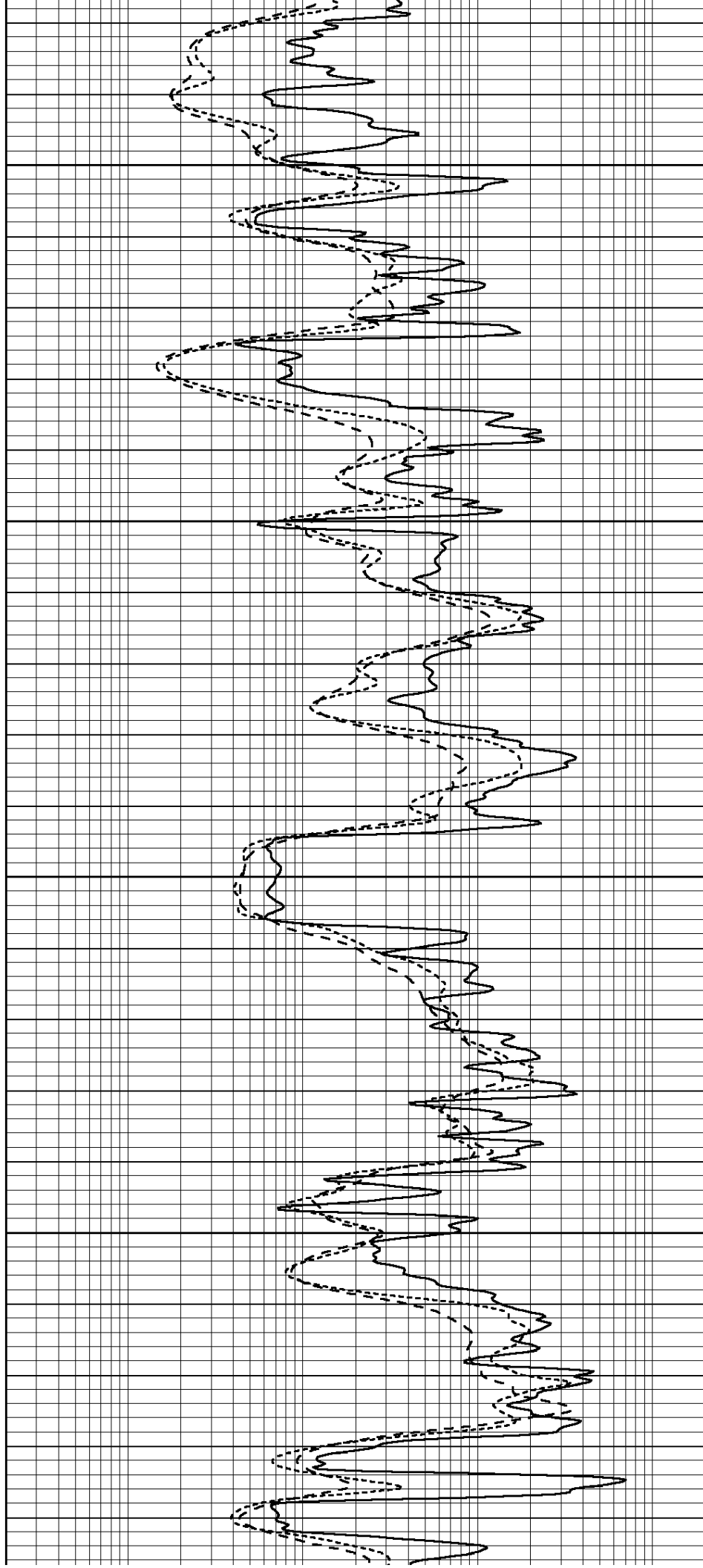


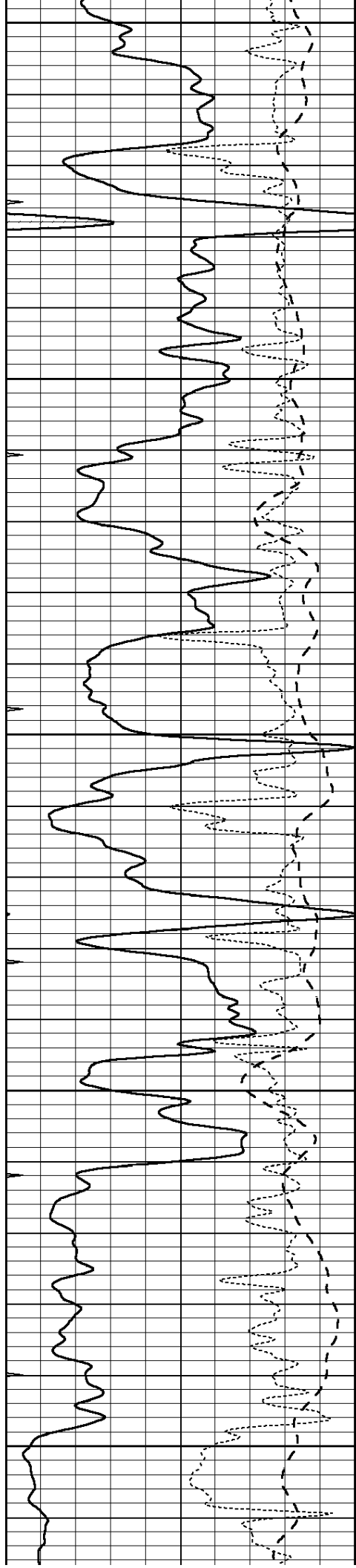
4250

4300

4350

4400





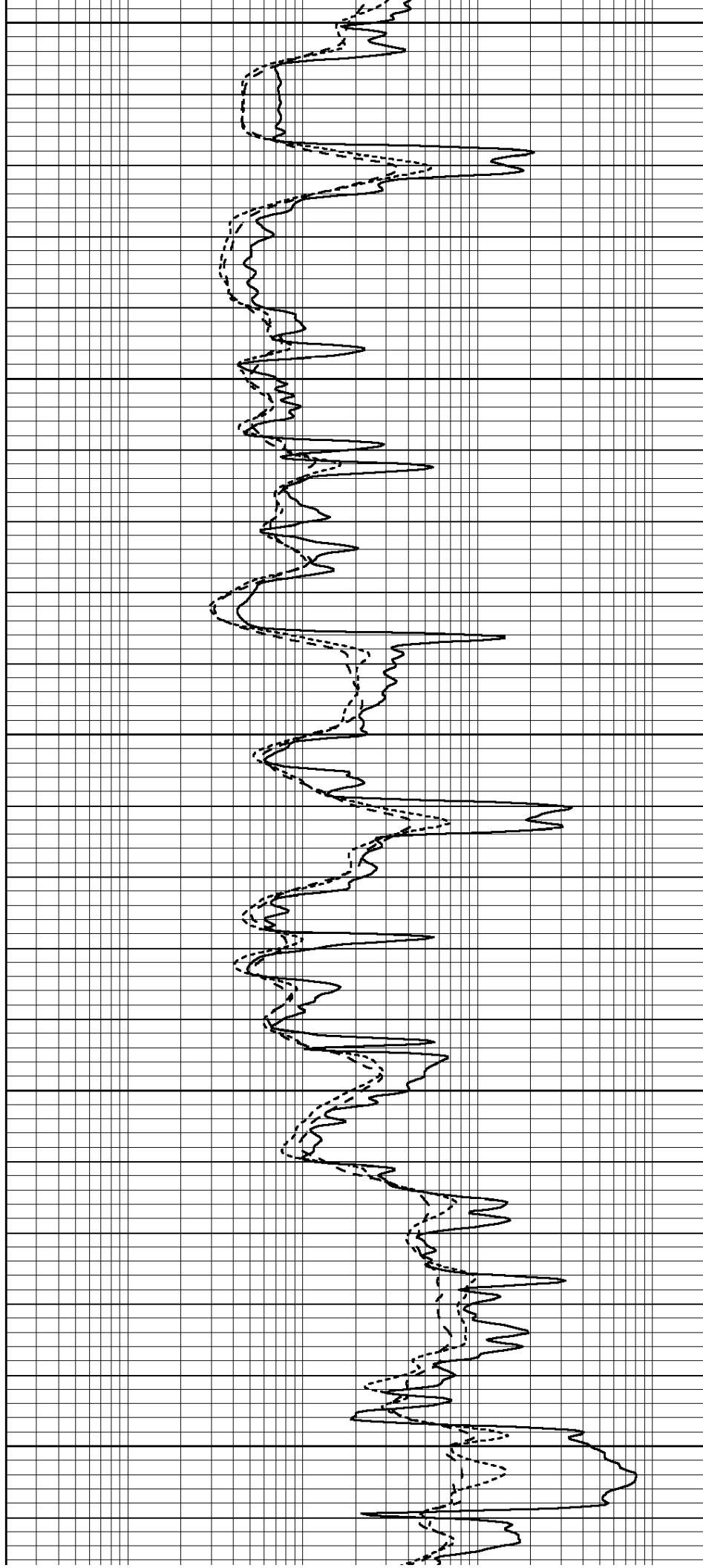
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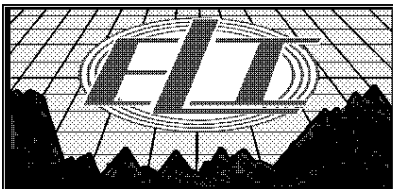
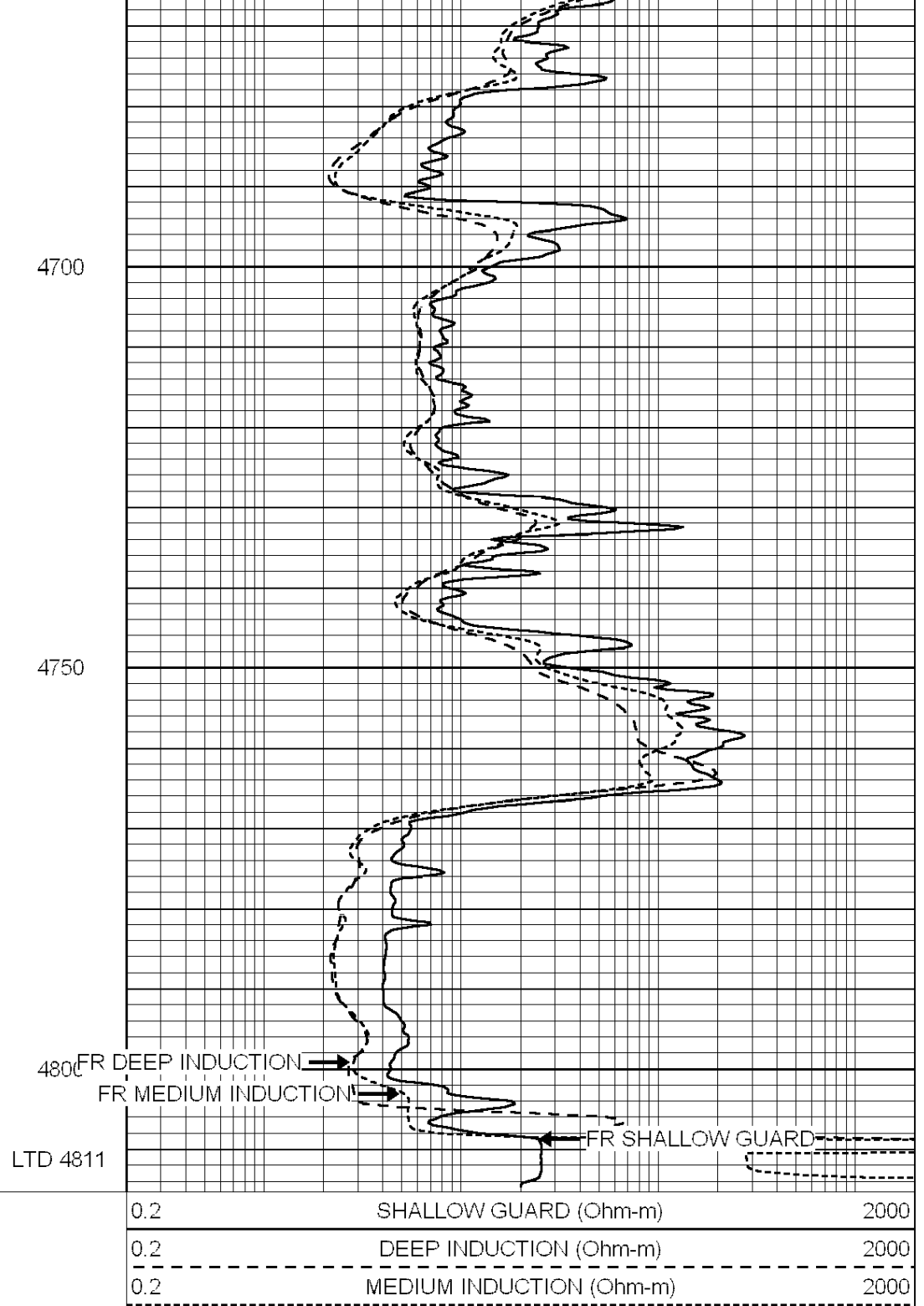
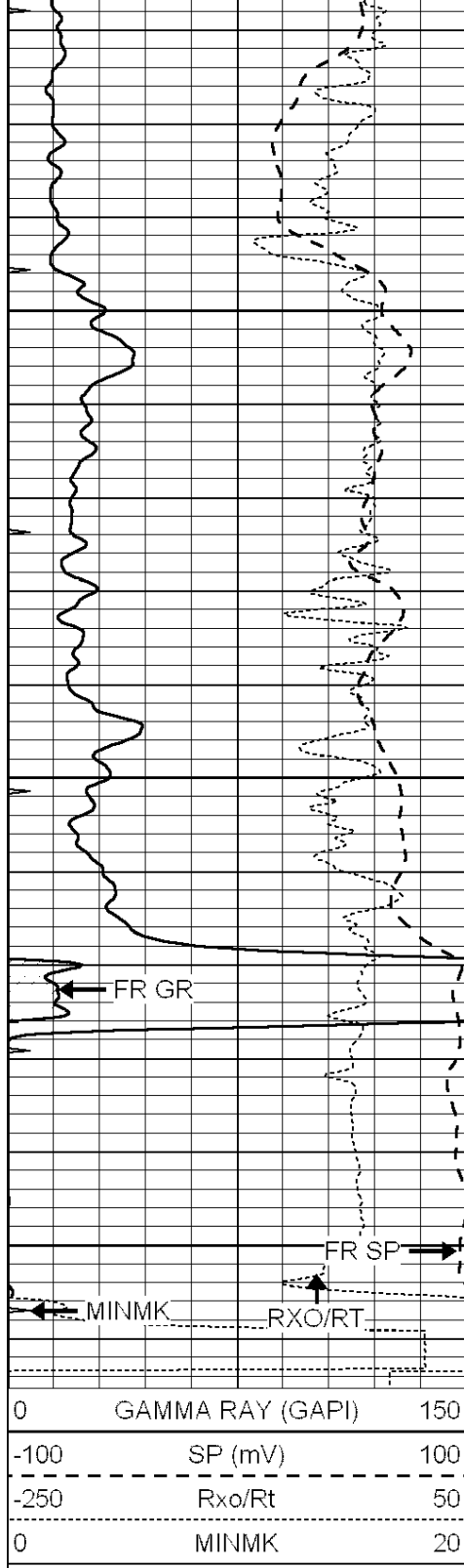
4500

4550

4600

4650

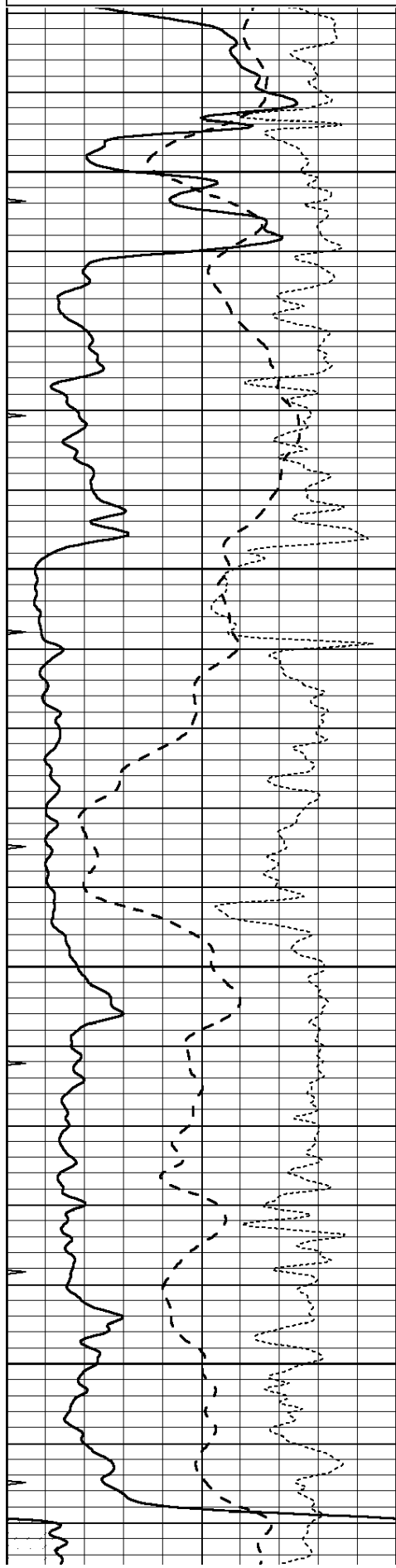




REPEAT SECTION

Database File: 3624ddn.db
 Dataset Pathname: pass2.2
 Presentation Format: _dil
 Dataset Creation: Thu May 23 11:56:05 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



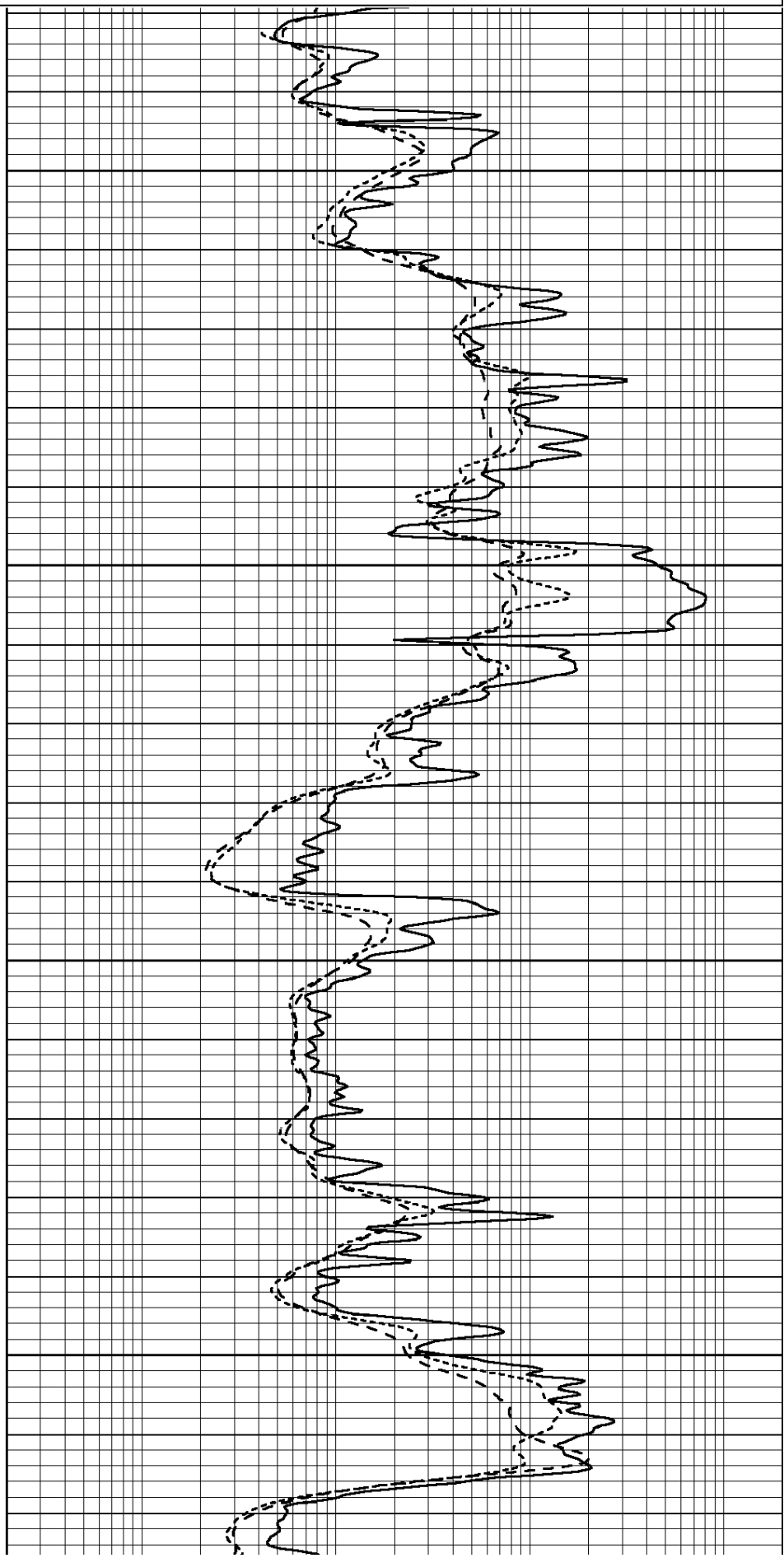
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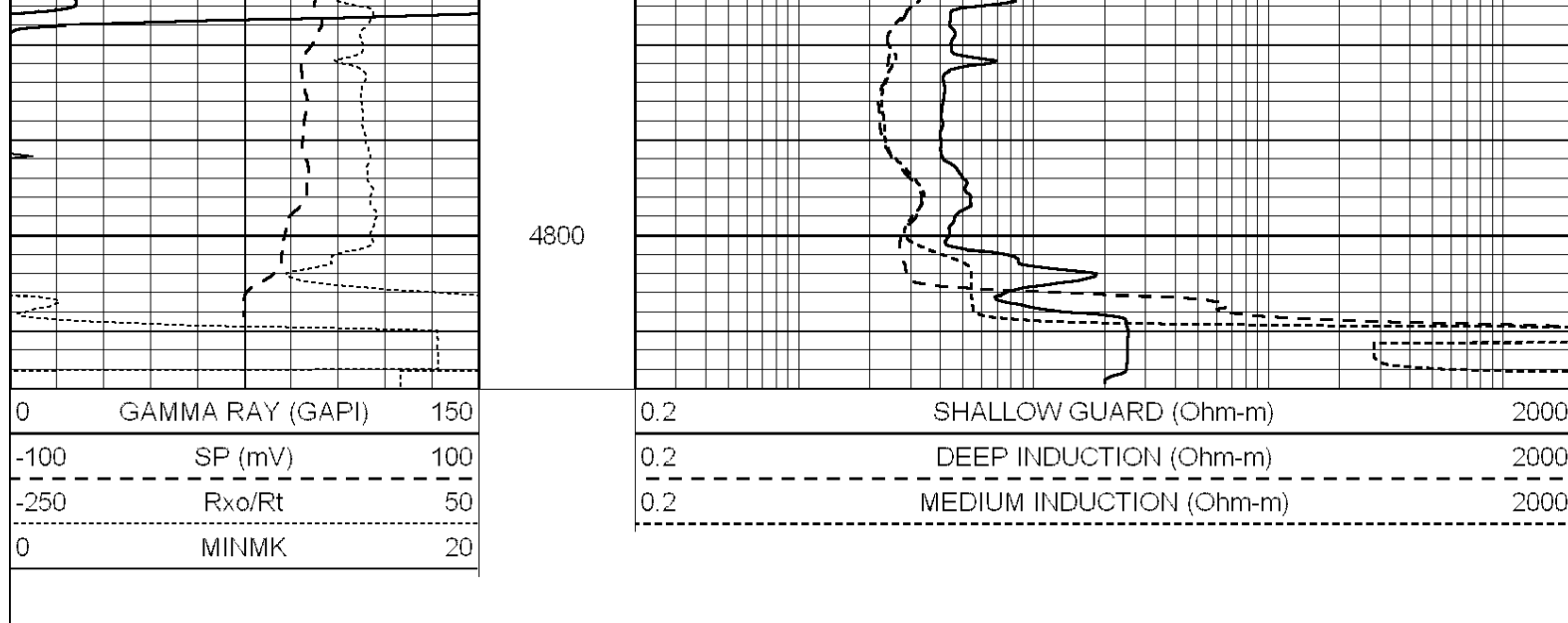
4650

4700

4750

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								
		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