



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**DUAL INDUCTION  
LOG**

Company CASTELLI EXPLORATION, INC.  
Well GREGG #1-13  
Field SHIMER  
County COMANCHE  
State KANSAS

Company CASTELLI EXPLORATION, INC.  
Well GREGG #1-13  
Field SHIMER  
County COMANCHE State KANSAS

Location: API # : 15-033-21689-0000  
700' FSL & 330' FEL  
SEC 13 TWP 33S RGE 17W  
Permanent Datum GROUND LEVEL Elevation 1841  
Log Measured From KELLY BUSHING 17' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
CDL/CNL/PE  
MEL  
Elevation  
K.B. 1858  
D.F. 1856  
G.L. 1841

Date	1/10/13
Run Number	ONE
Depth Driller	5251
Depth Logger	5252
Bottom Logged Interval	5250
Top Log Interval	00
Casing Driller	13 3/8" @ 353'
Casing Logger	348
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.4/50
pH / Fluid Loss	10.5/9.2
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.650 @ 103F
Rmf @ Meas. Temp	.488 @ 103F
Rmc @ Meas. Temp	.780 @ 103F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.527 @ 127F
Time Circulation Stopped	2.5 HOURS
Time Logger on Bottom	7:15 P.M.
Maximum Recorded Temperature	127F
Equipment Number	4854
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	RICK POPP

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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 "NABORS" HAYS, KANSAS (785) 628-6395  
DIRECTIONS  
COLDWATER, KS., 9E. ON HWY 160 TO (MM #193) "RD. 22", 4S. TO STOP SIGN, 2E. TO CURVE, 3S. TO  
WHITE SHED. GO WEST @ CURVE BEFORE SHED THEN BACK SOUTH



**MAIN SECTION**

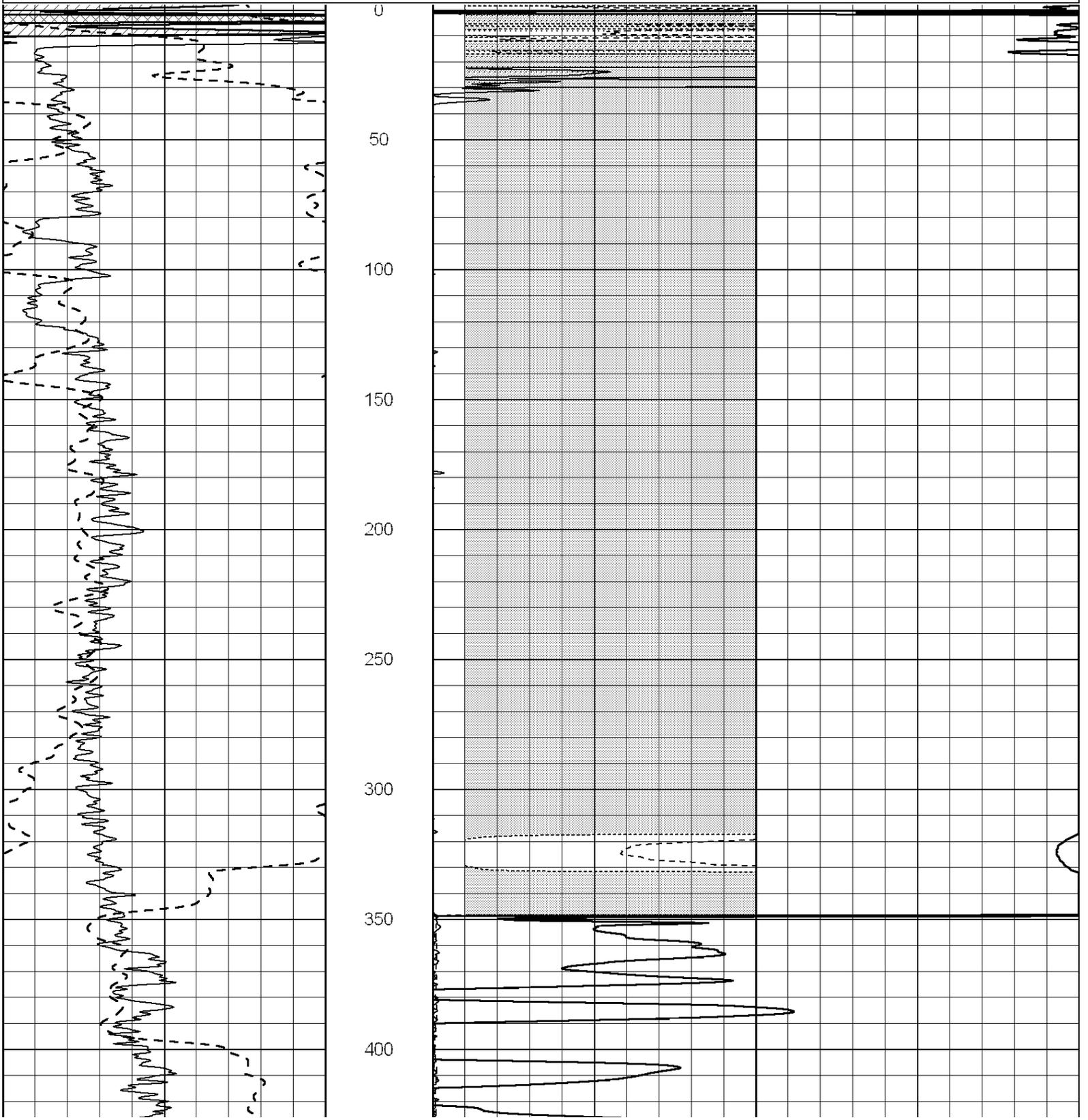
Database File: 010043pe.db  
 Dataset Pathname: pass5.5  
 Presentation Format: dil2  
 Dataset Creation: Thu Jan 10 20:56:37 2013 by Calc SOC 120430  
 Charted by: Depth in Feet scaled 1:600

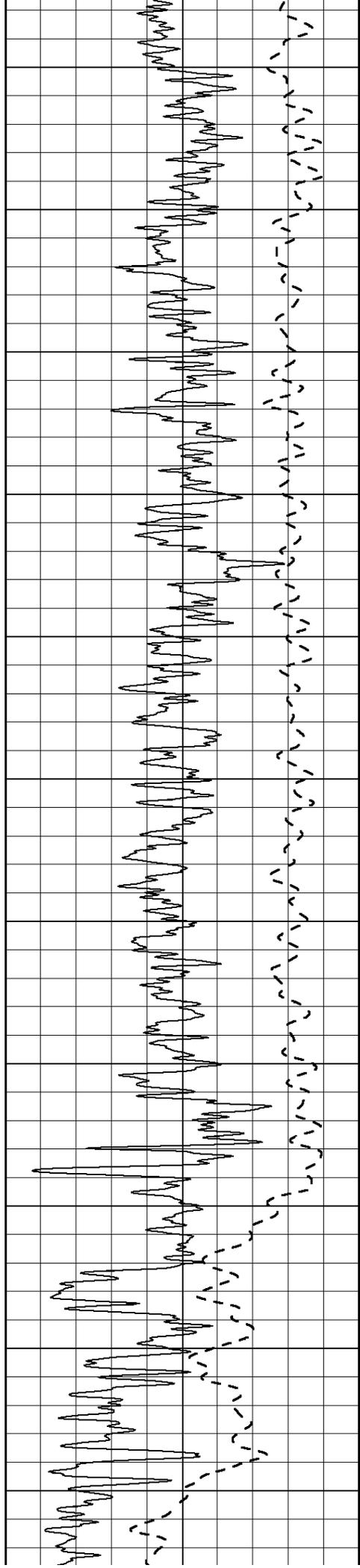
0	Gamma Ray (GAPI)	150
-100	SP (mV)	100

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





450

500

550

600

650

700

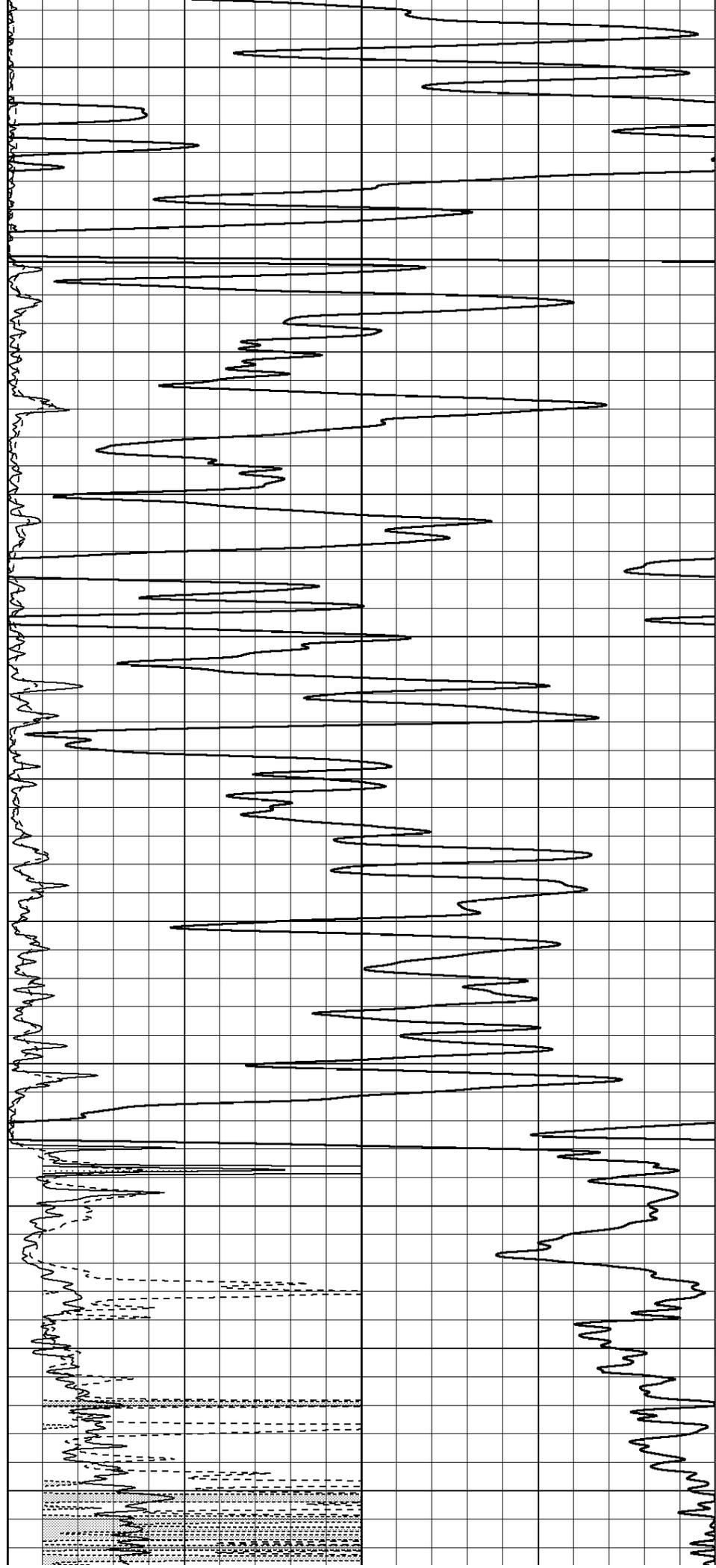
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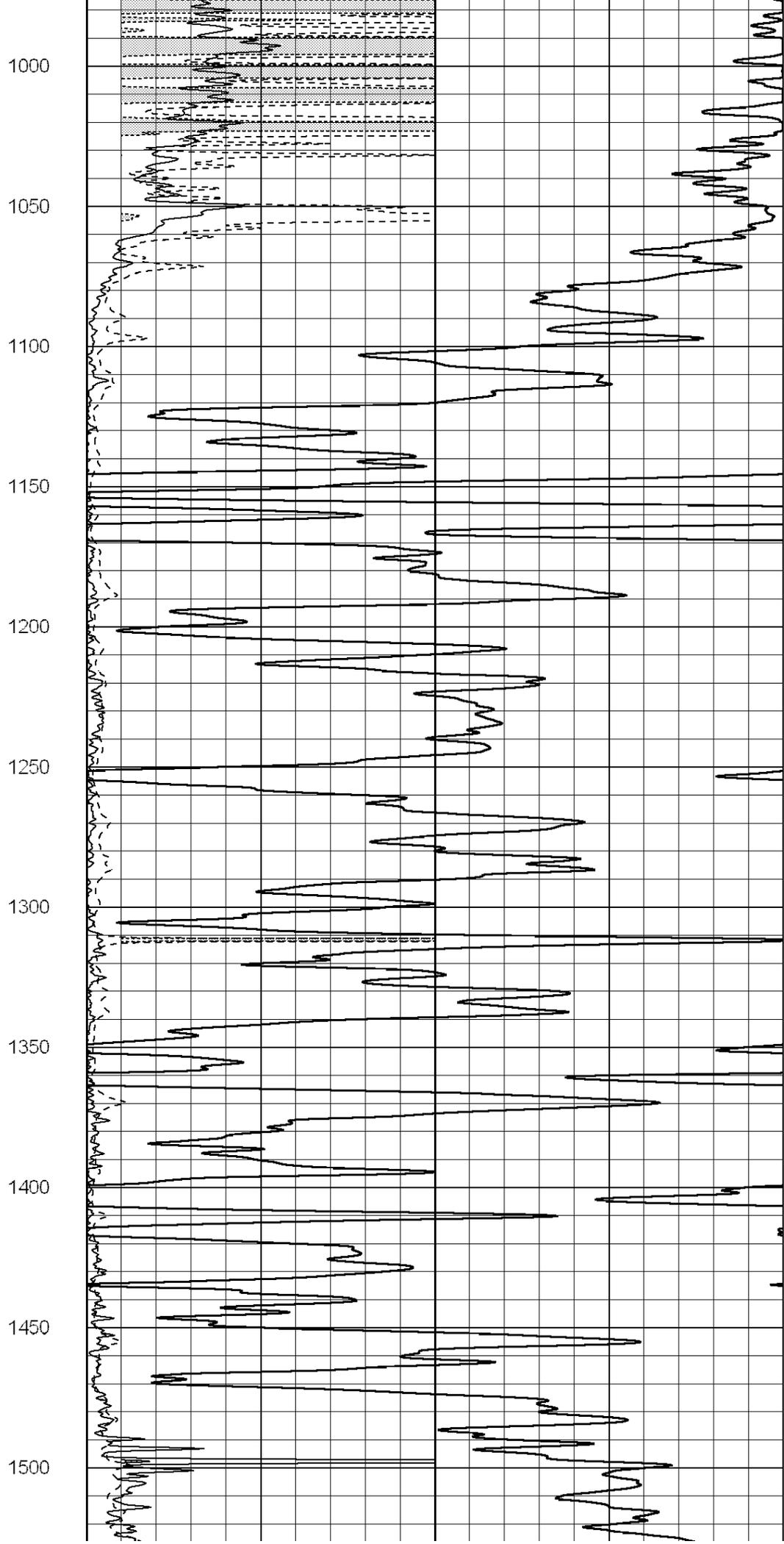
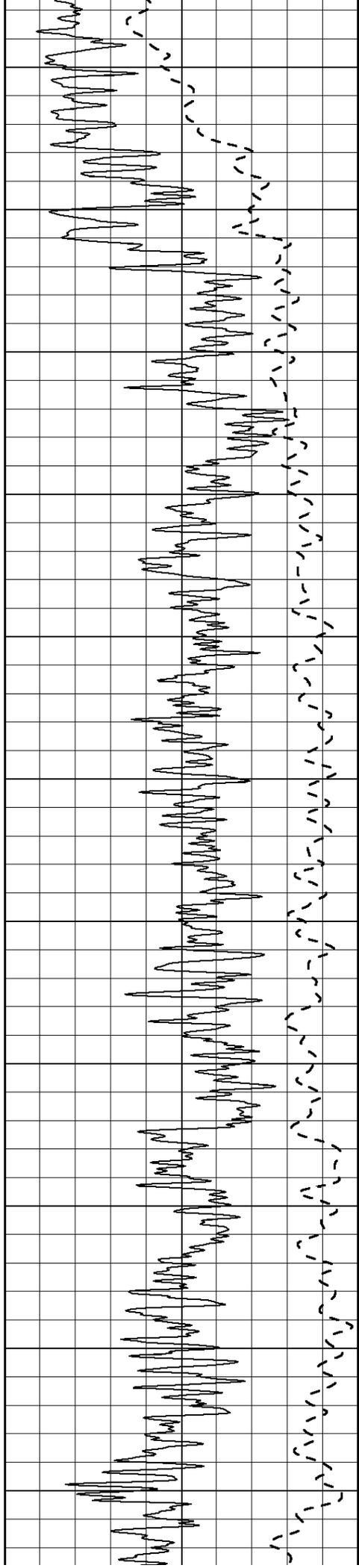
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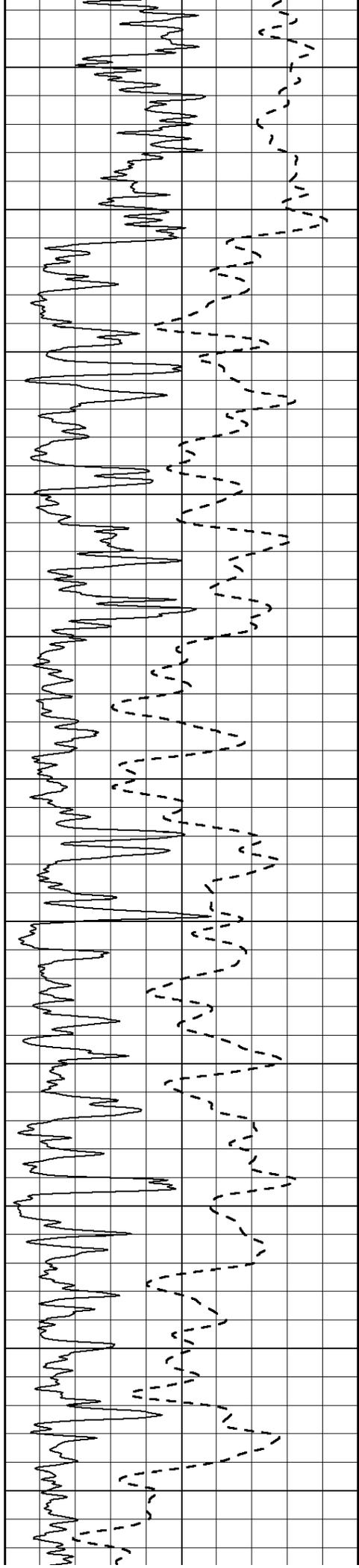
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900

950







1550

1600

1650

1700

1750

1800

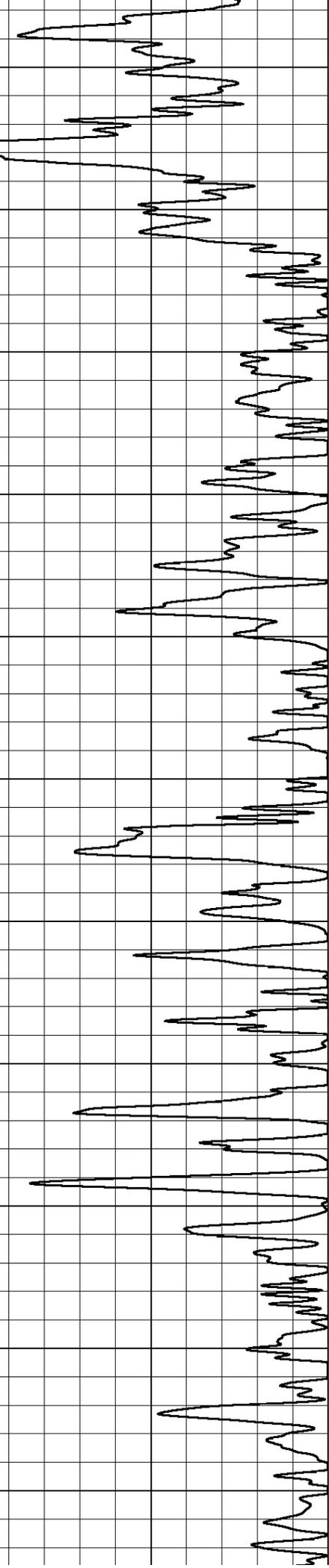
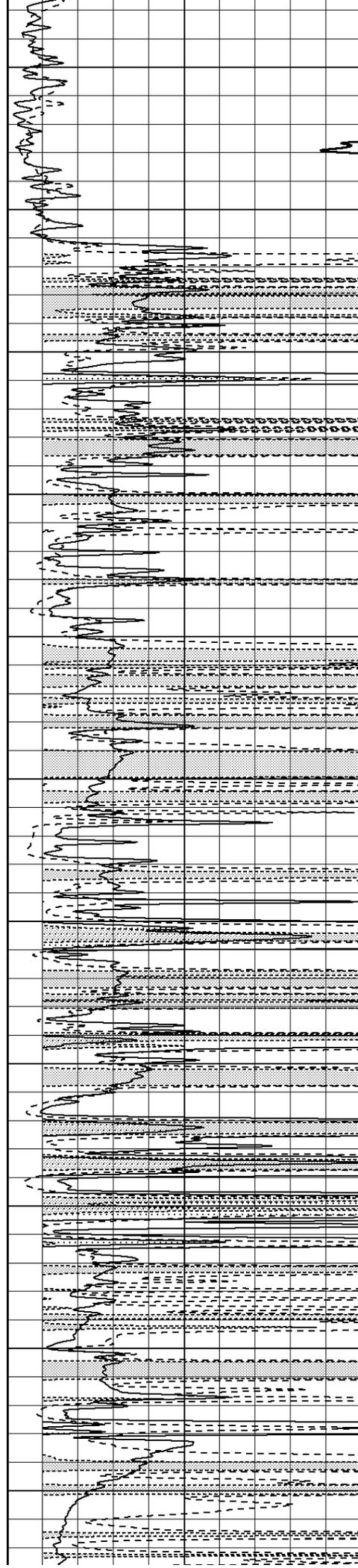
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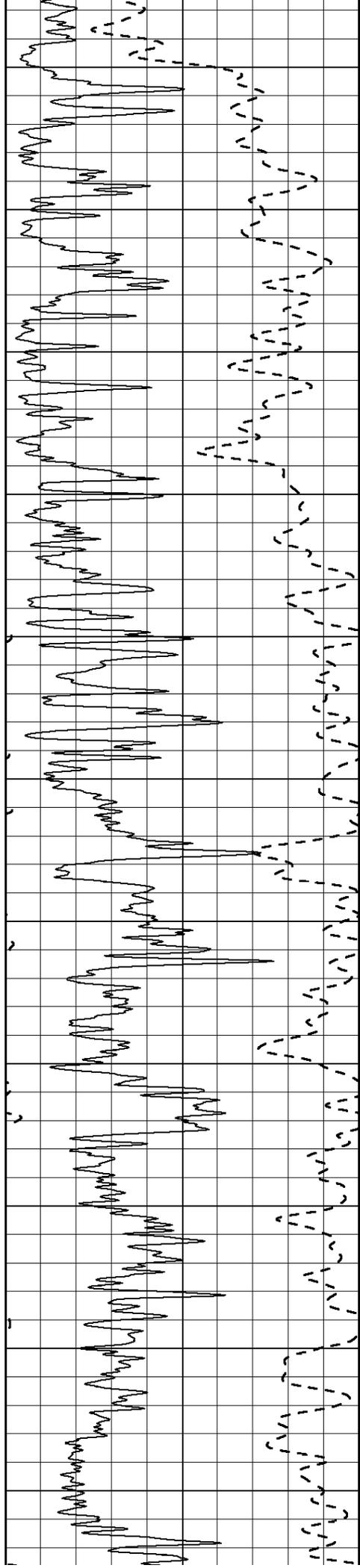
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1950

2000

2050





2100

2150

2200

2250

2300

2350

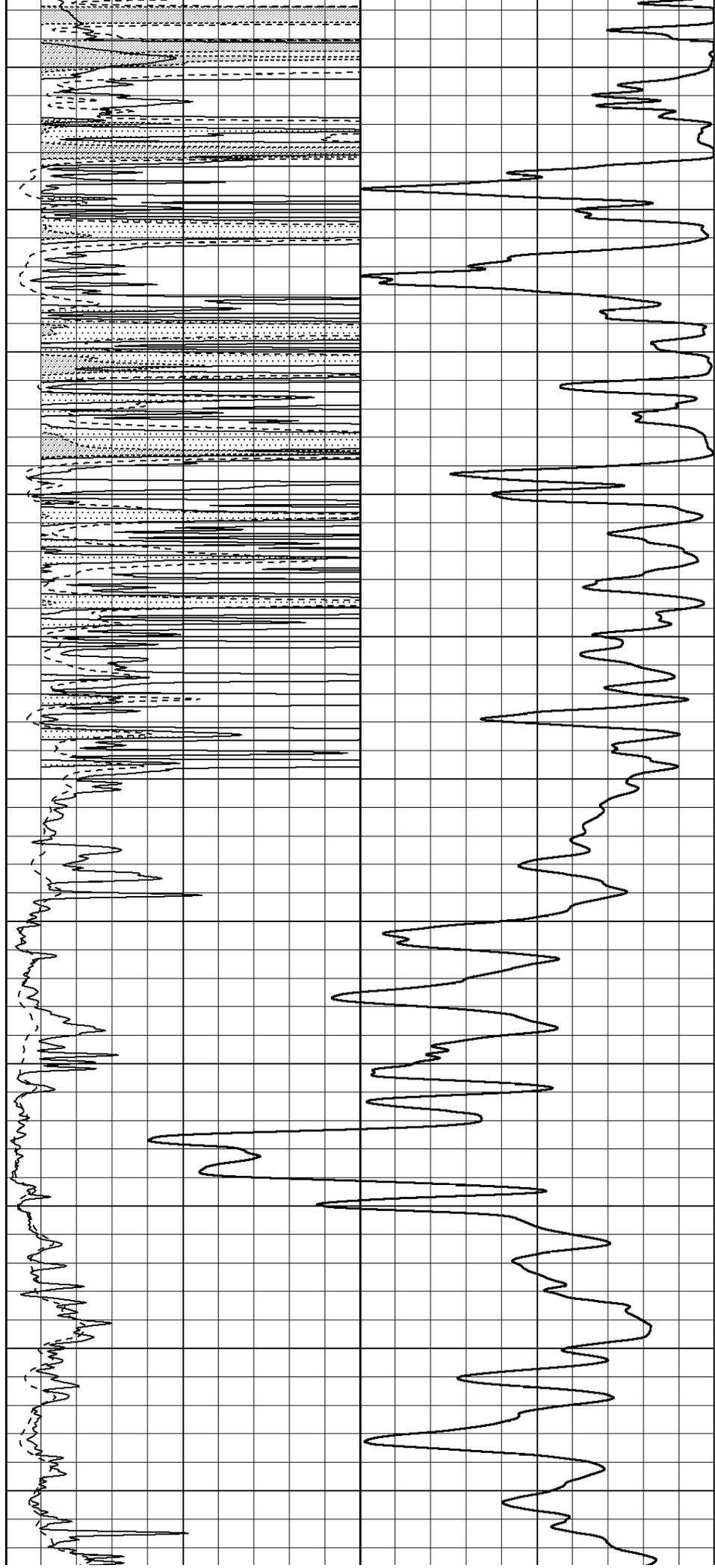
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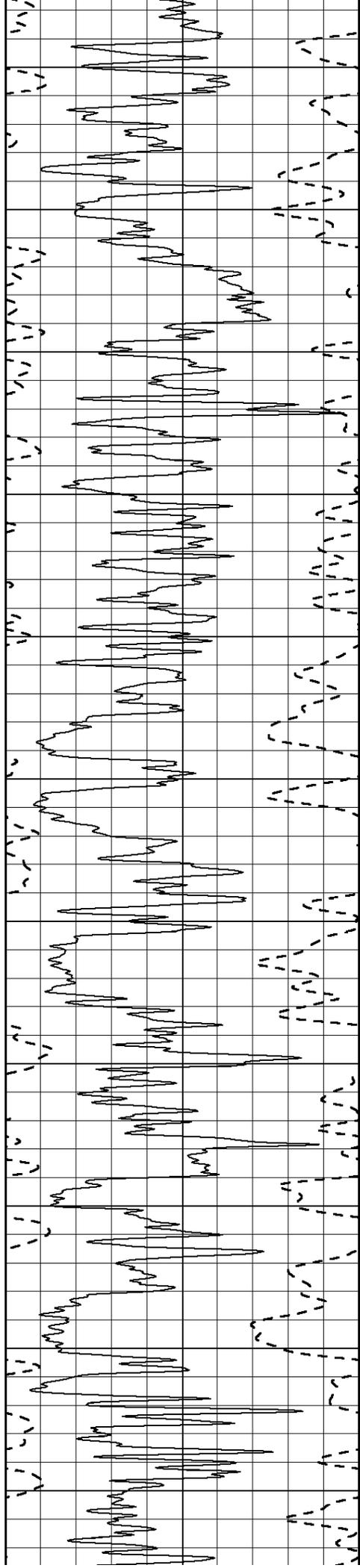
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2500

2550

2600





2650

2700

2750

2800

2850

2900

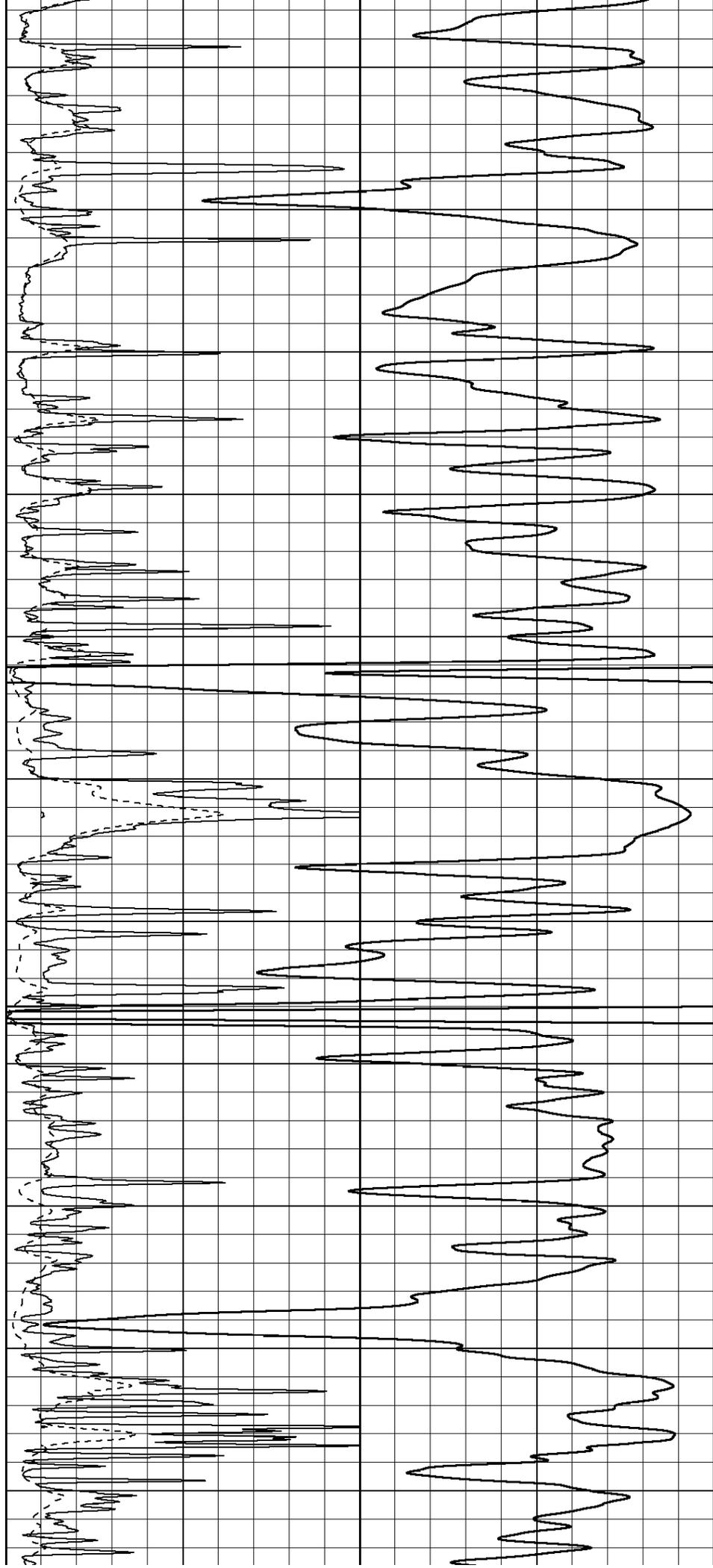
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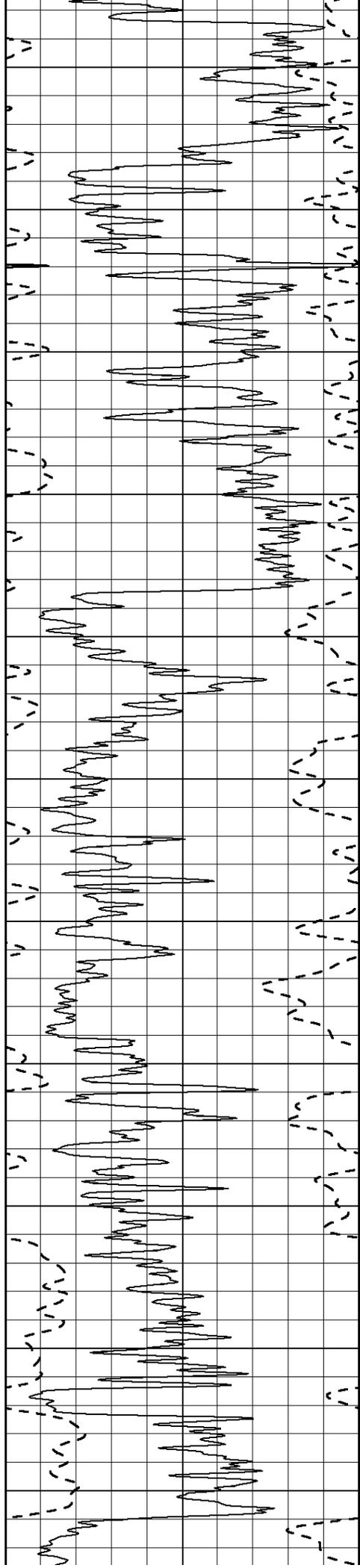
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3050

3100

3150





3200

3250

3300

3350

3400

3450

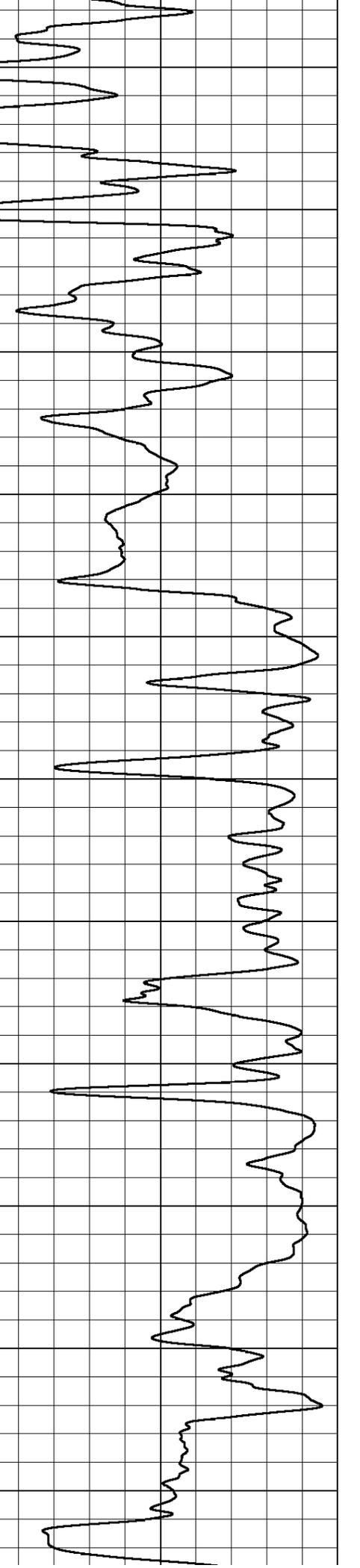
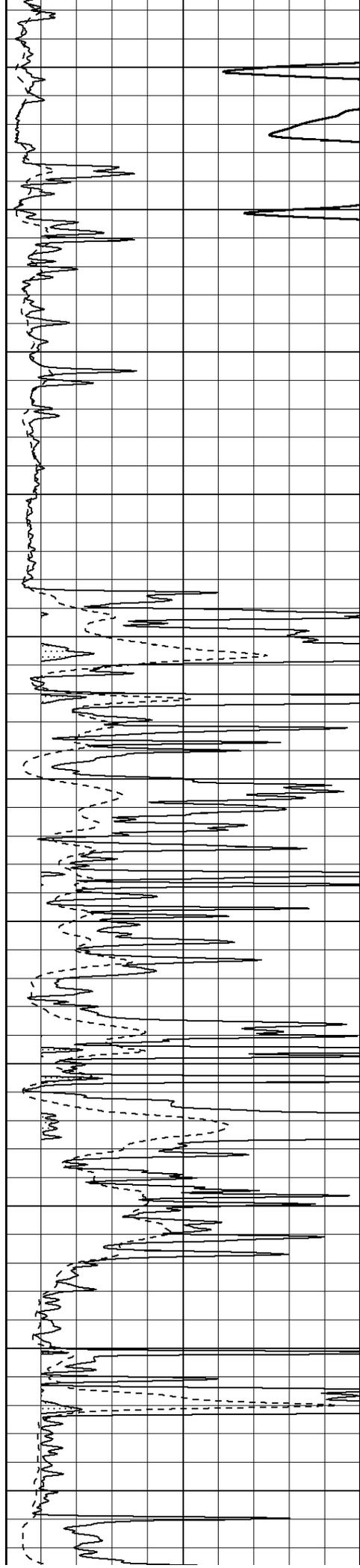
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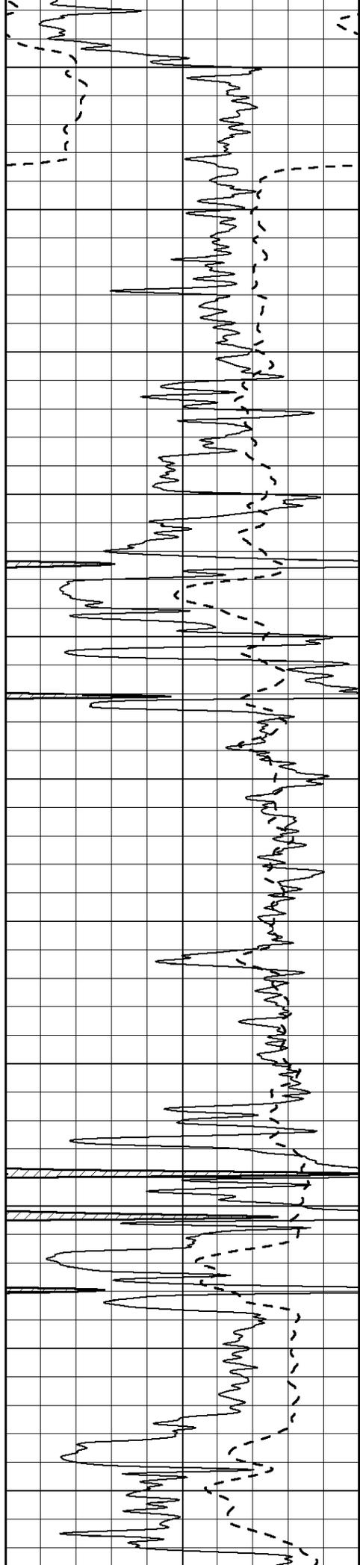
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3600

3650

3700





3750

3800

3850

3900

3950

4000

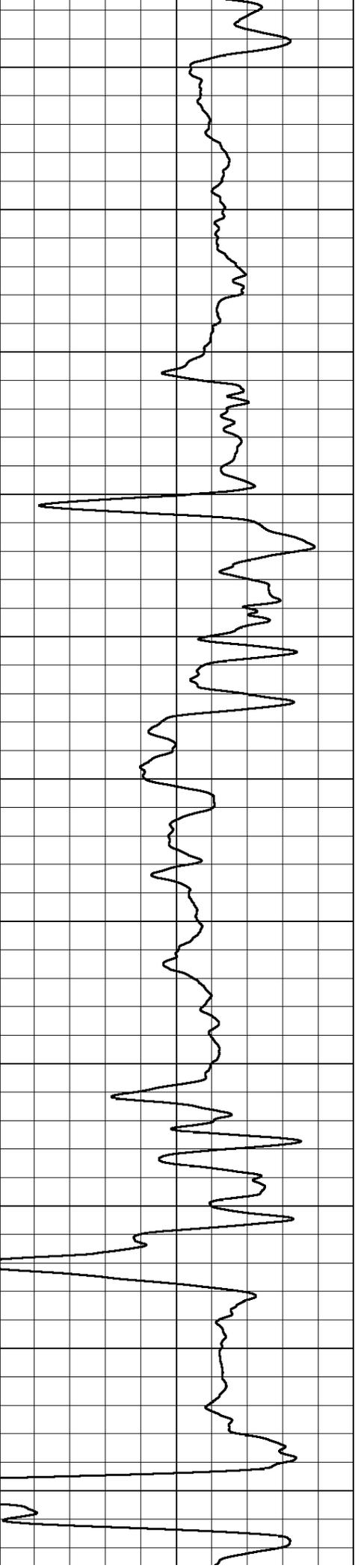
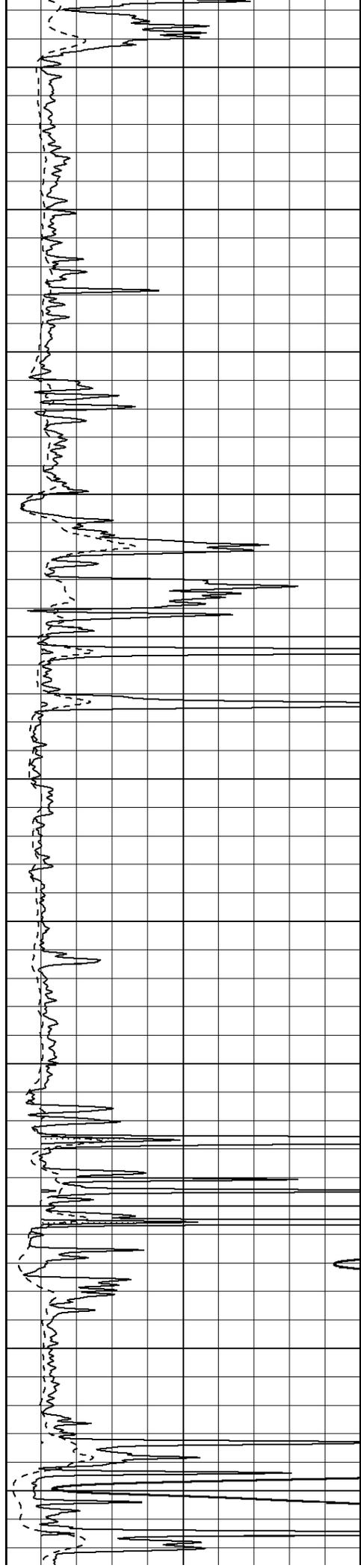
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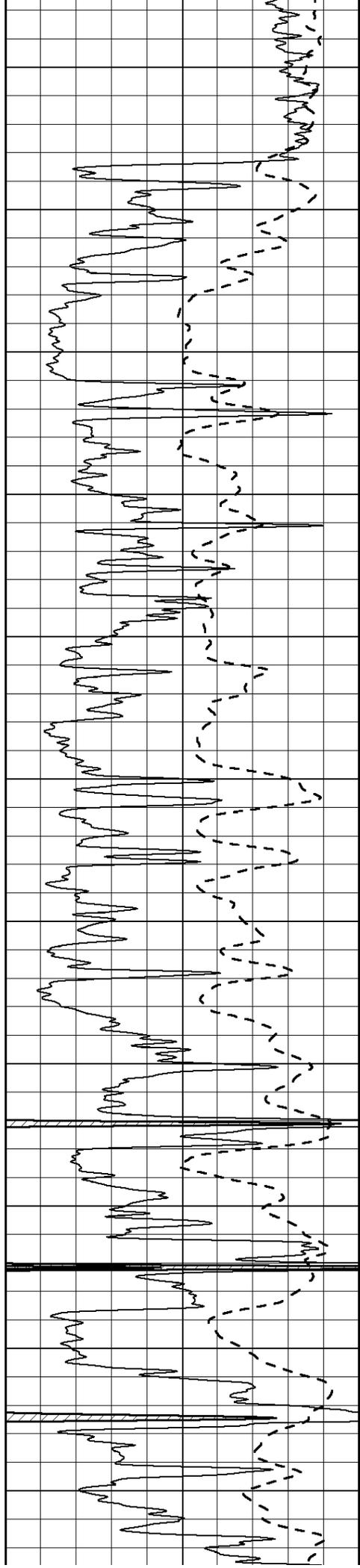
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4150

4200

4250





4300

4350

4400

4450

4500

4550

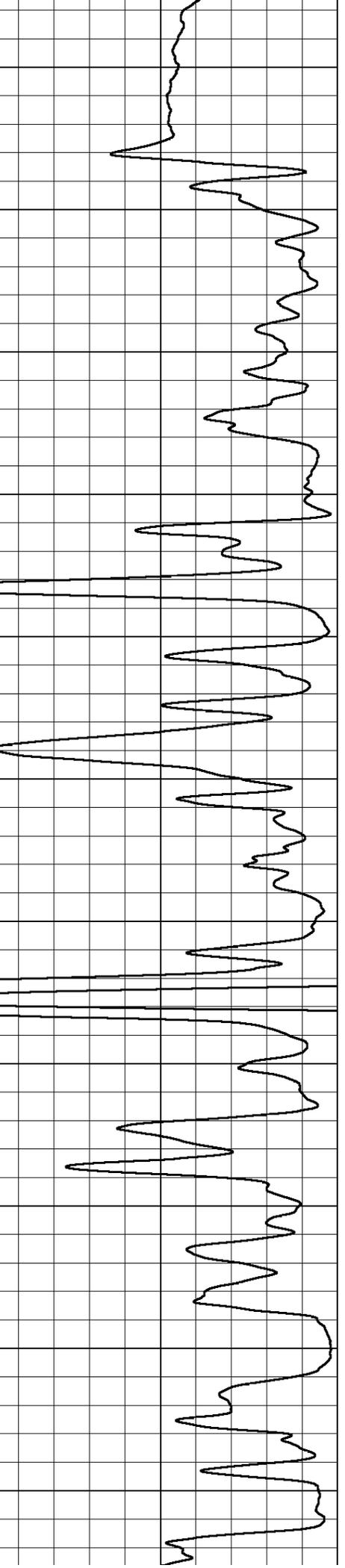
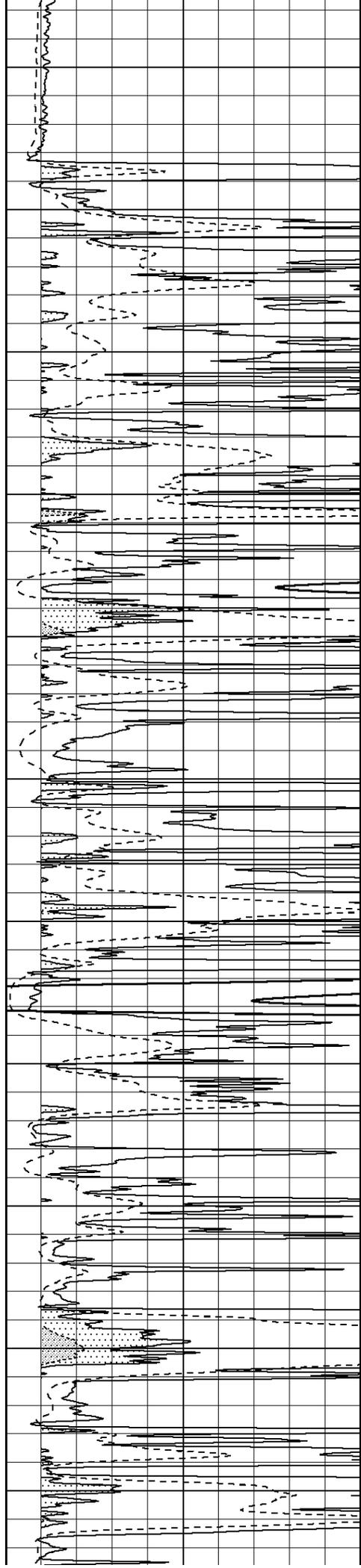
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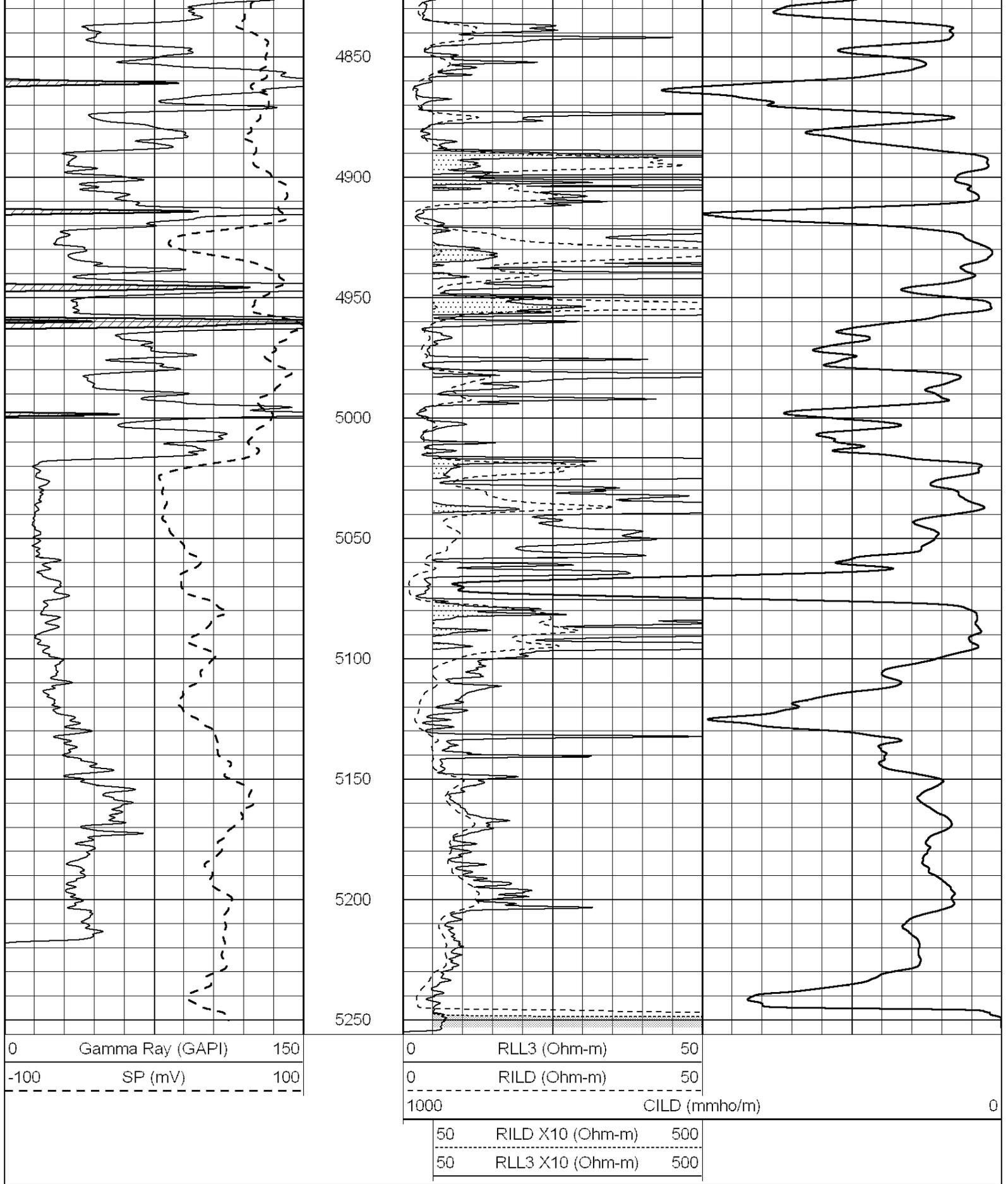
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4700

4750

4800





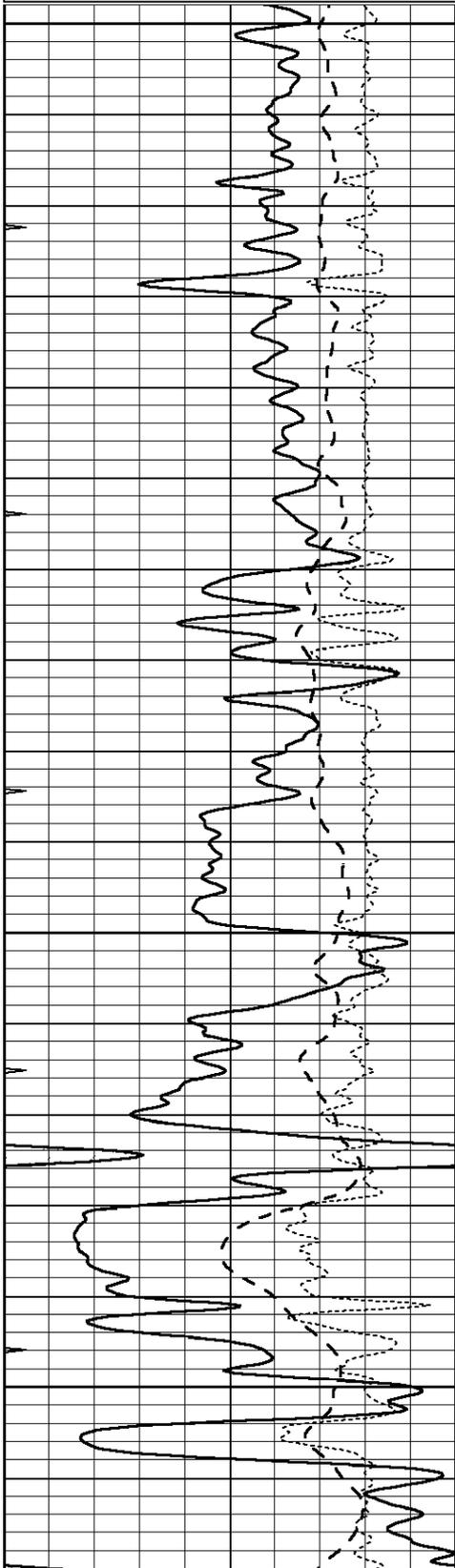
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# MAIN SECTION

Database File: 010043pe.db  
 Dataset Pathname: pass5.5  
 Presentation Format: \_dil  
 Dataset Creation: Thu Jan 10 20:56:37 2013 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

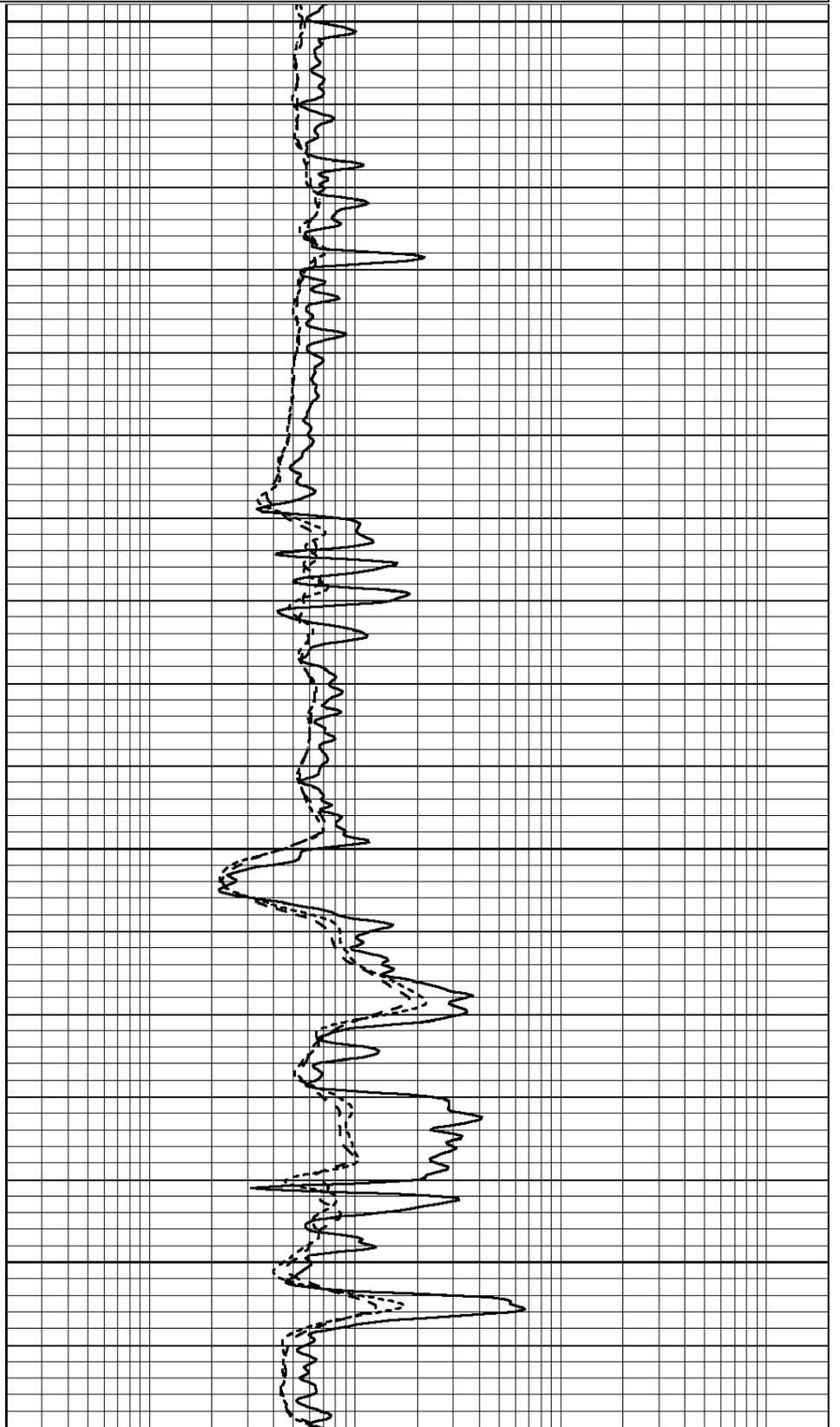


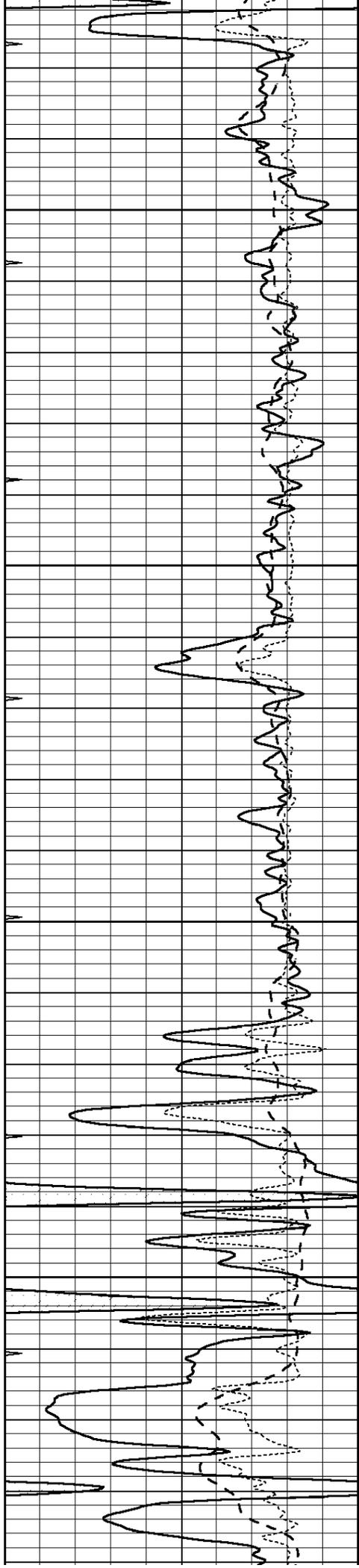
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3850

3900

3950



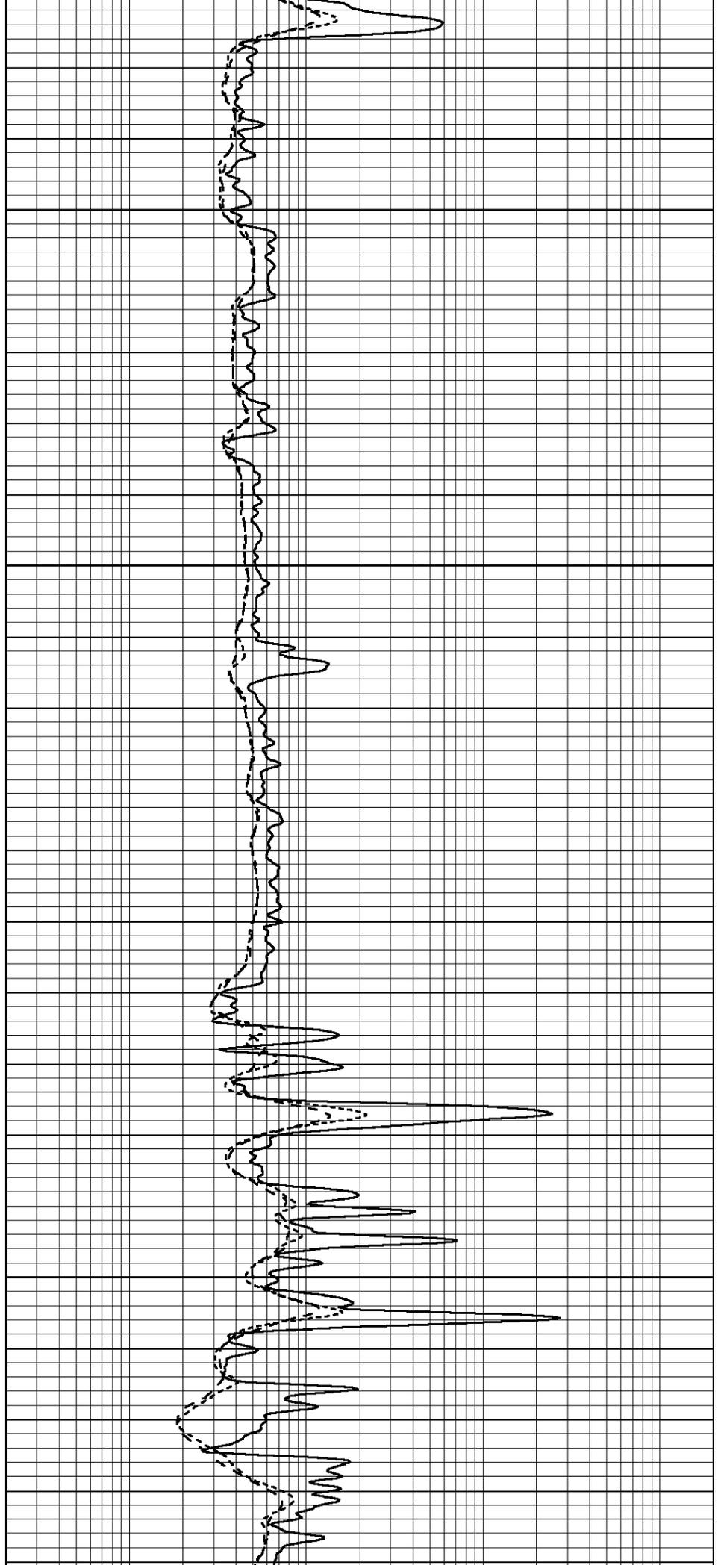


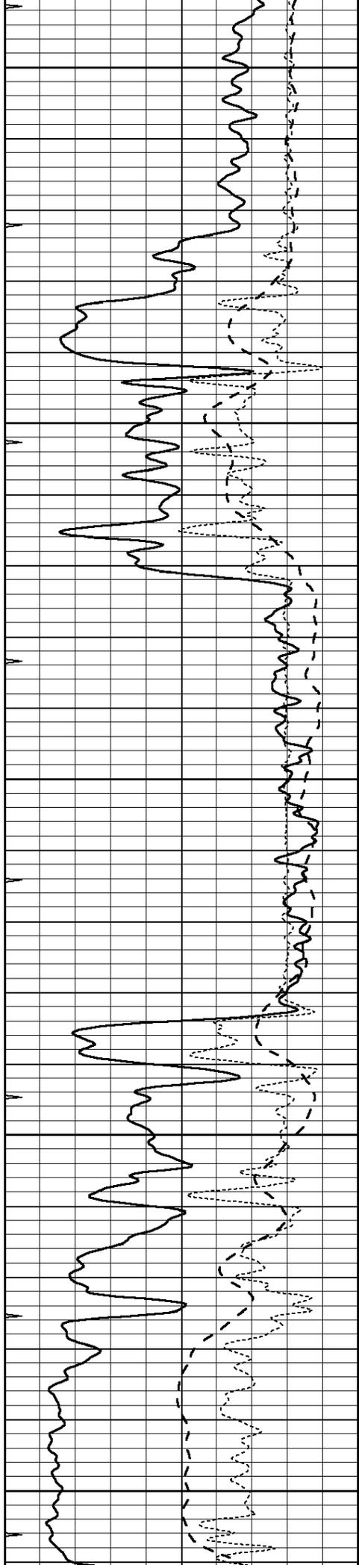
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4050

4100

4150





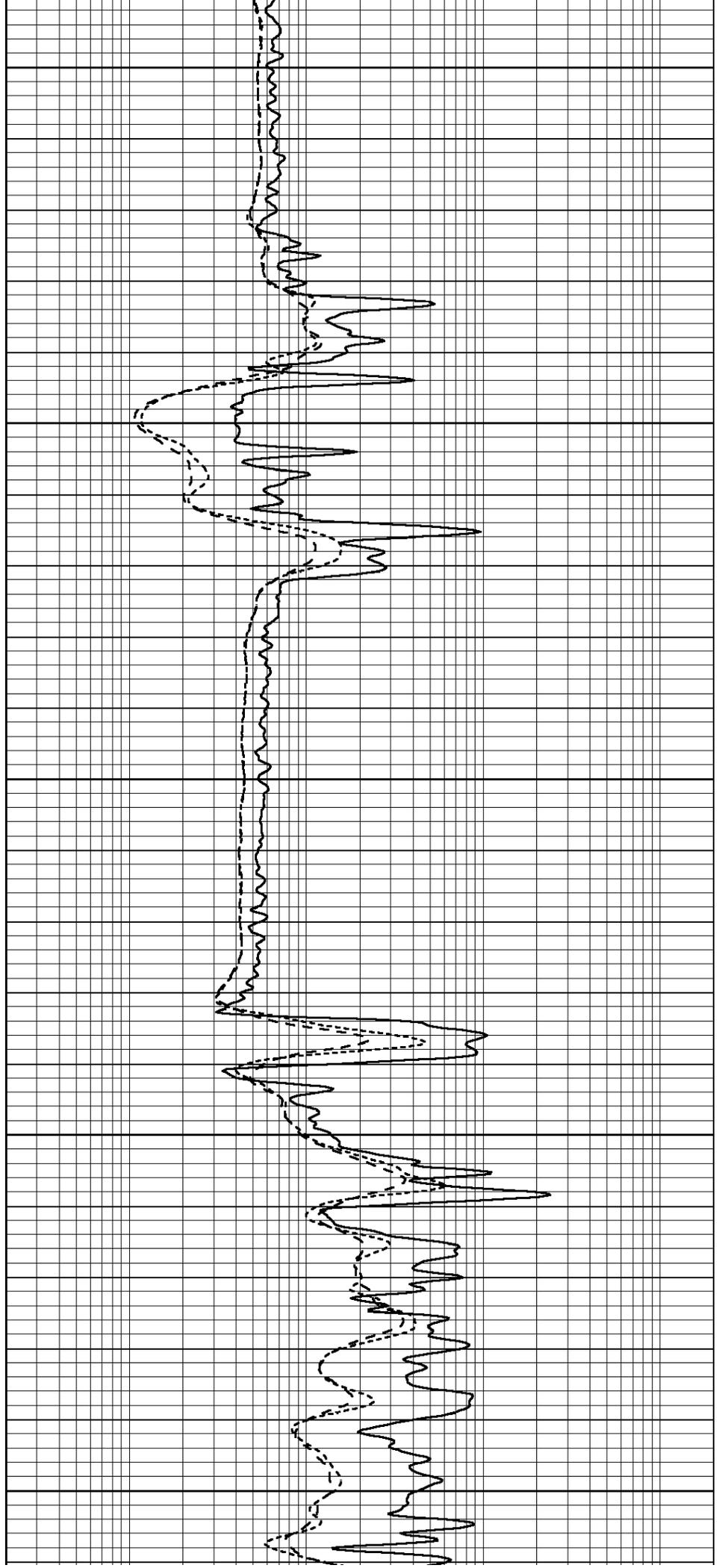
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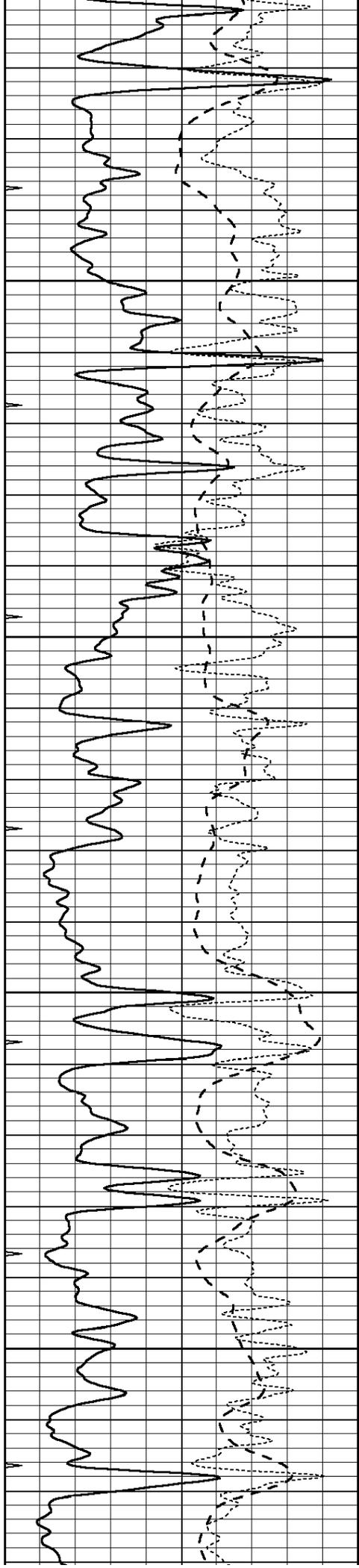
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4300

4350

4400



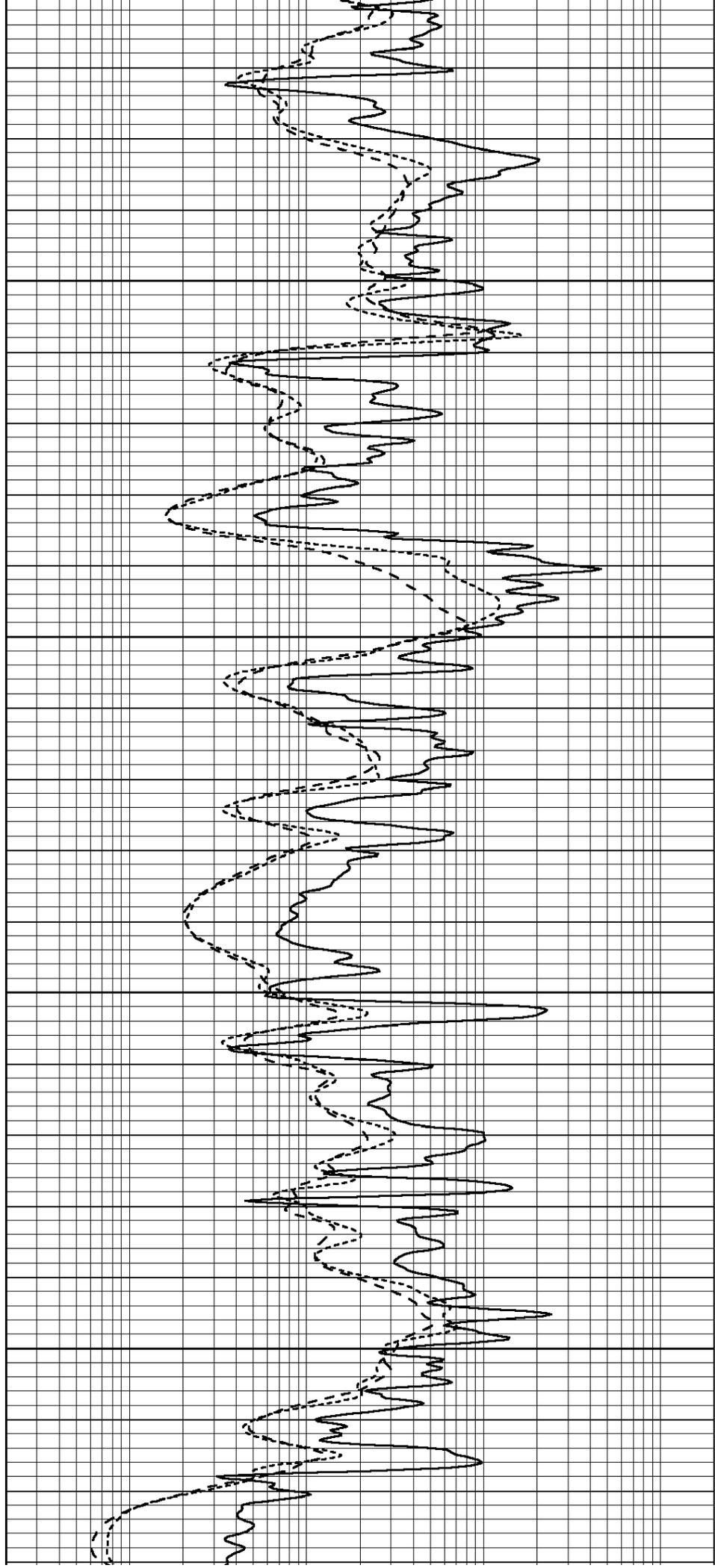


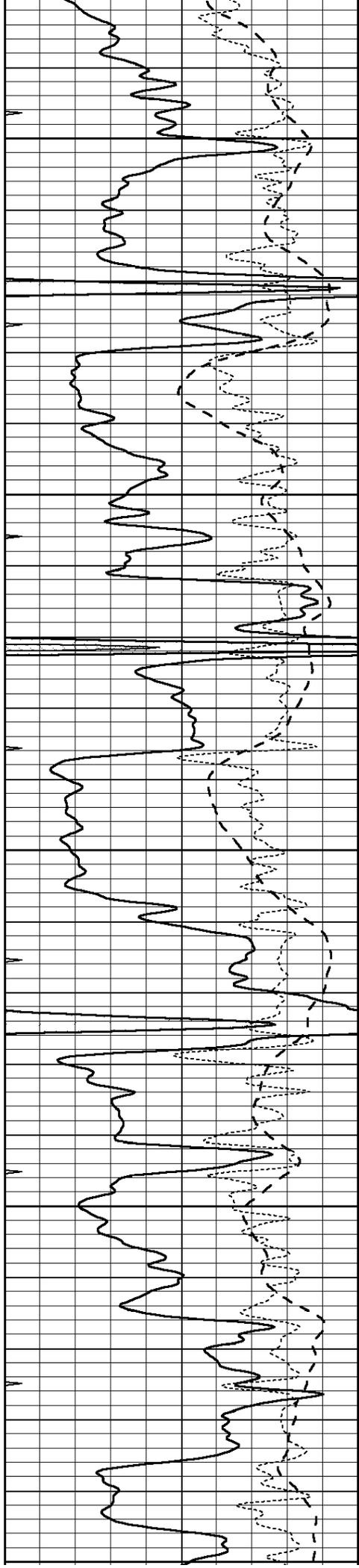
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4600





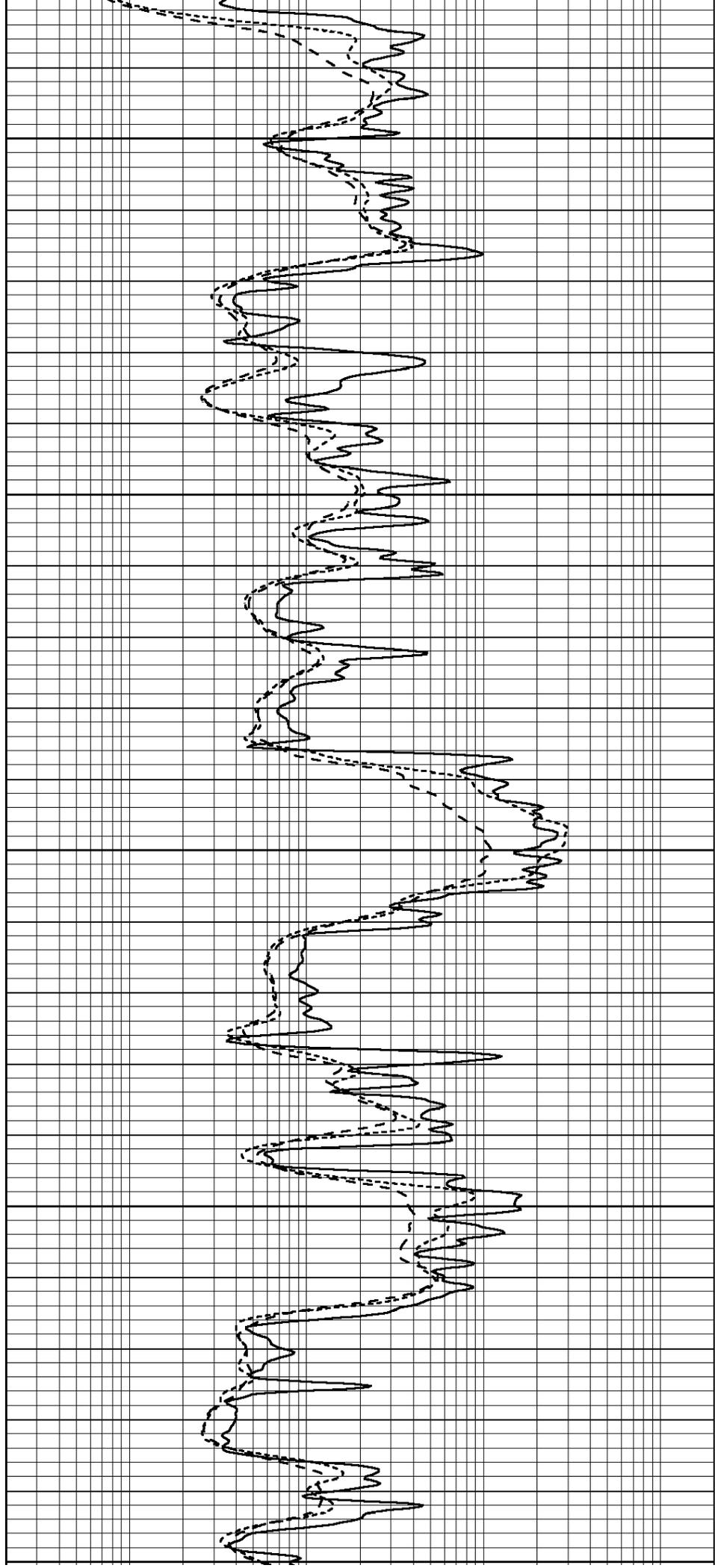
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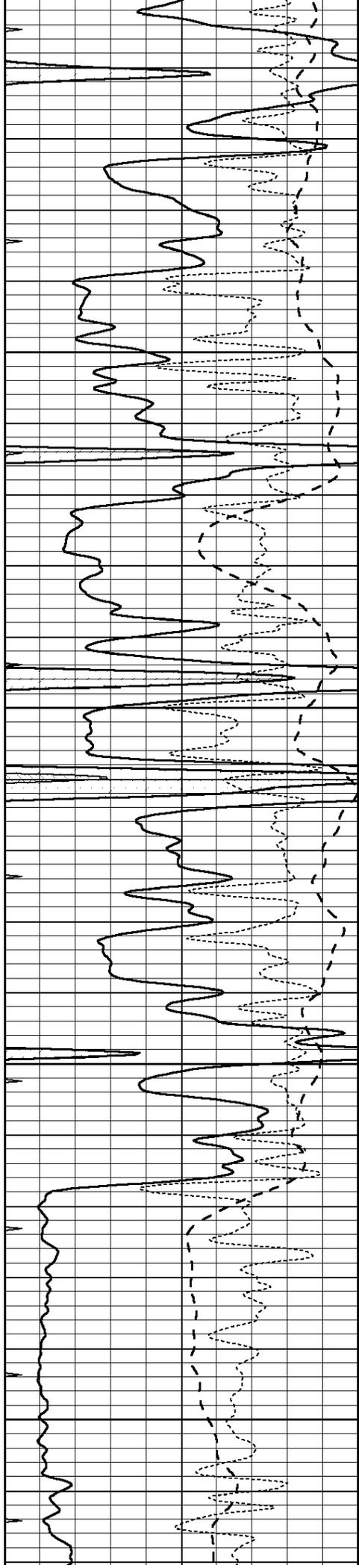
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4750

4800

4850



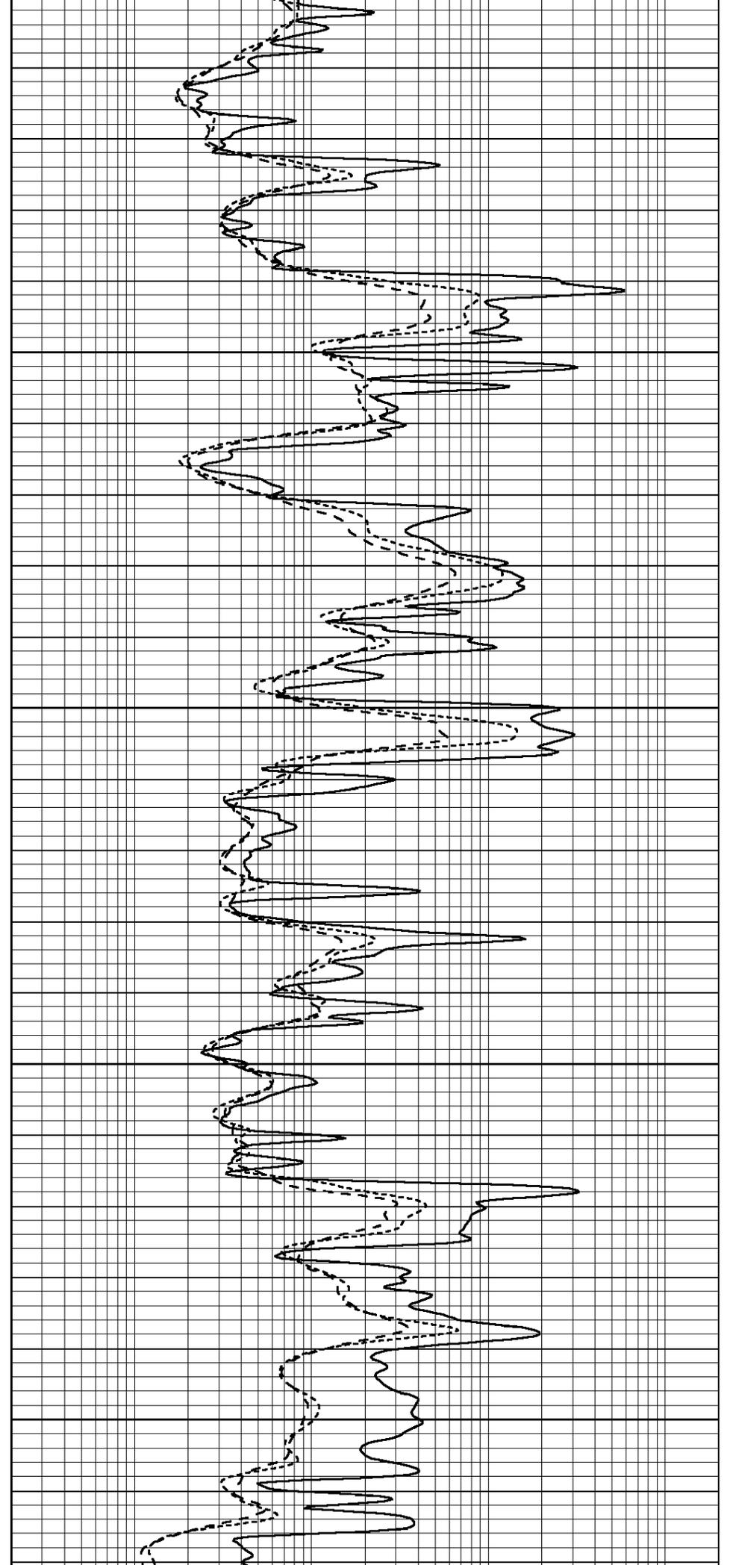


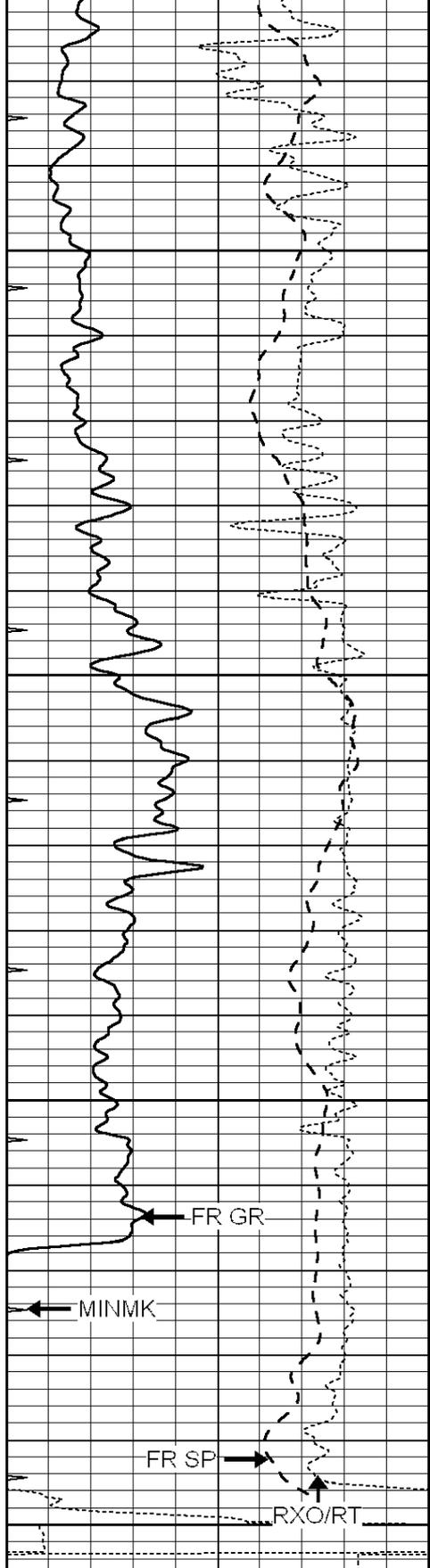
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4950

5000

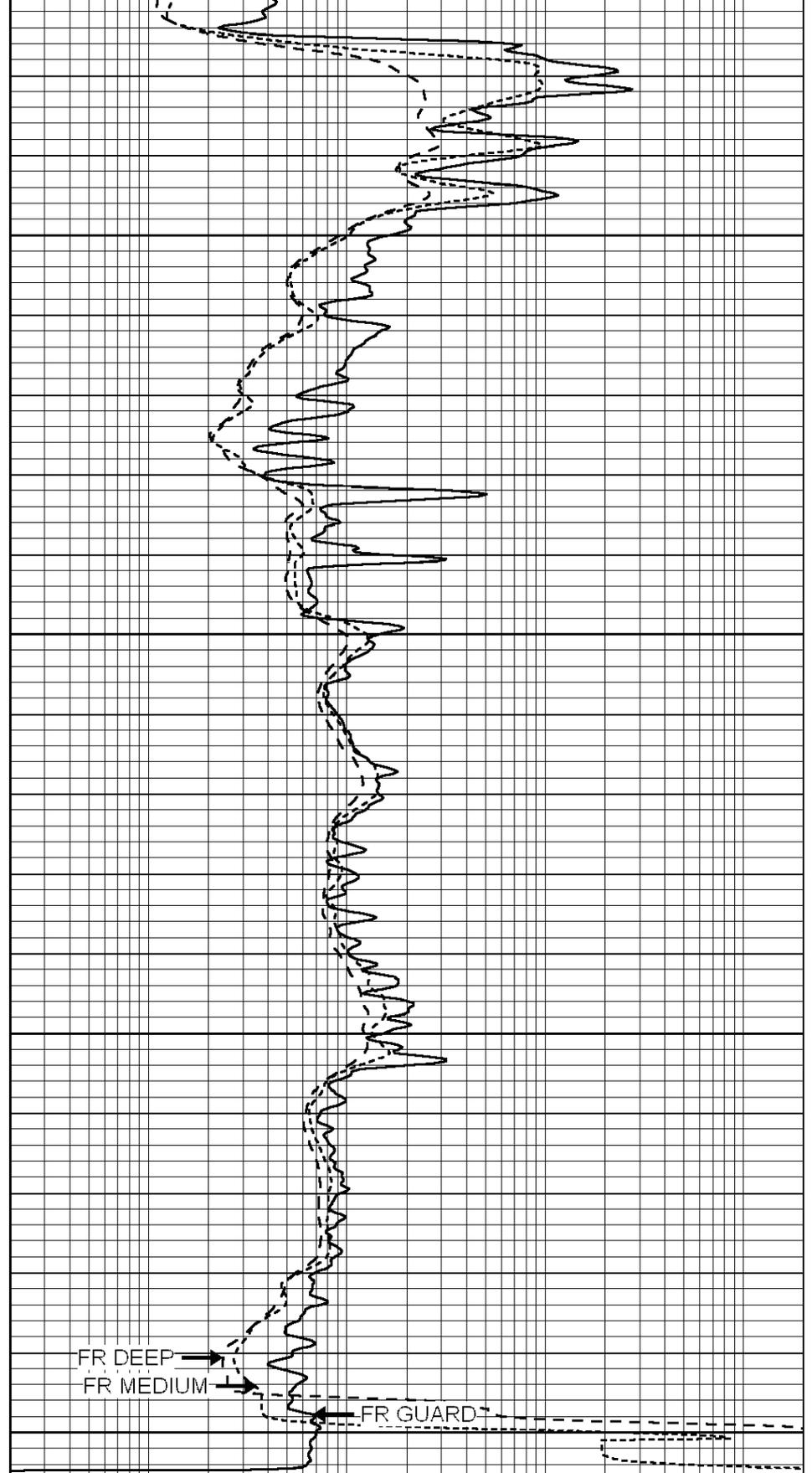
5050





5250  
LTD 5252

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

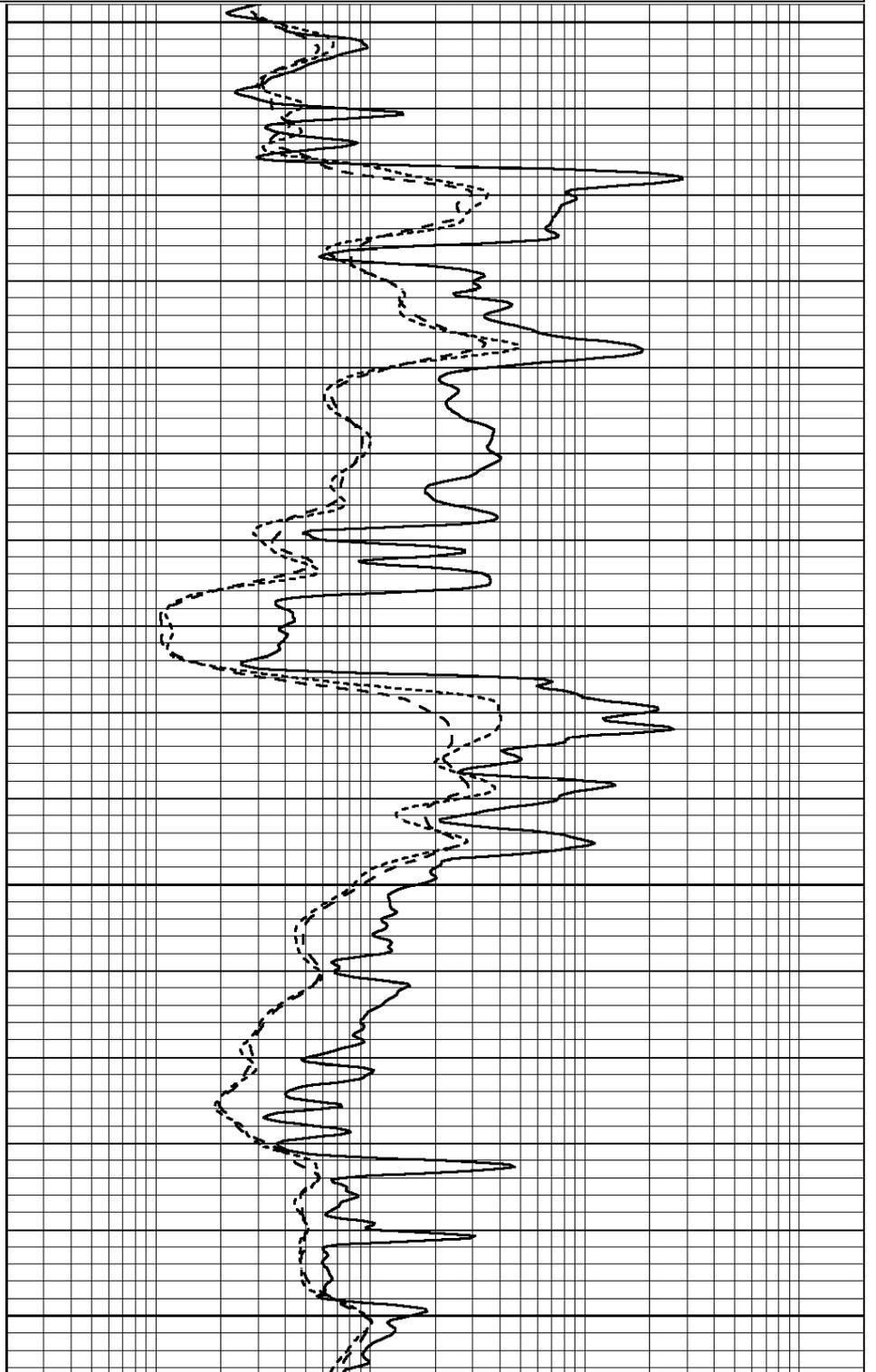
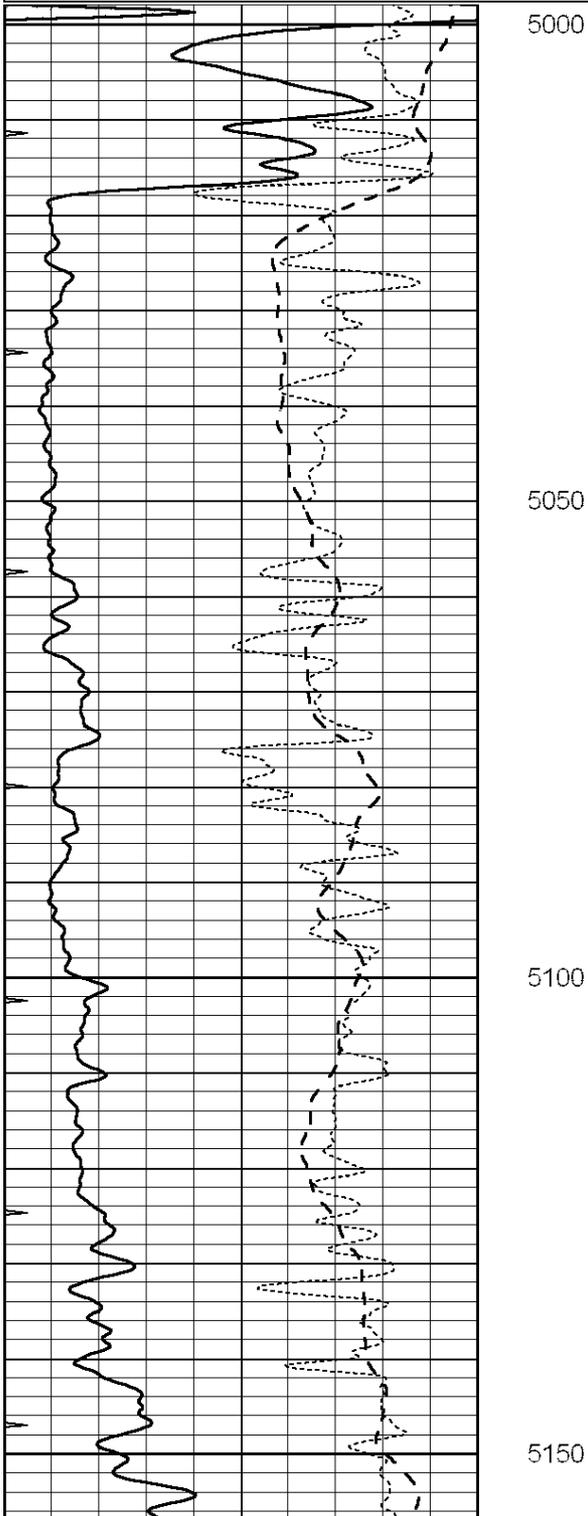
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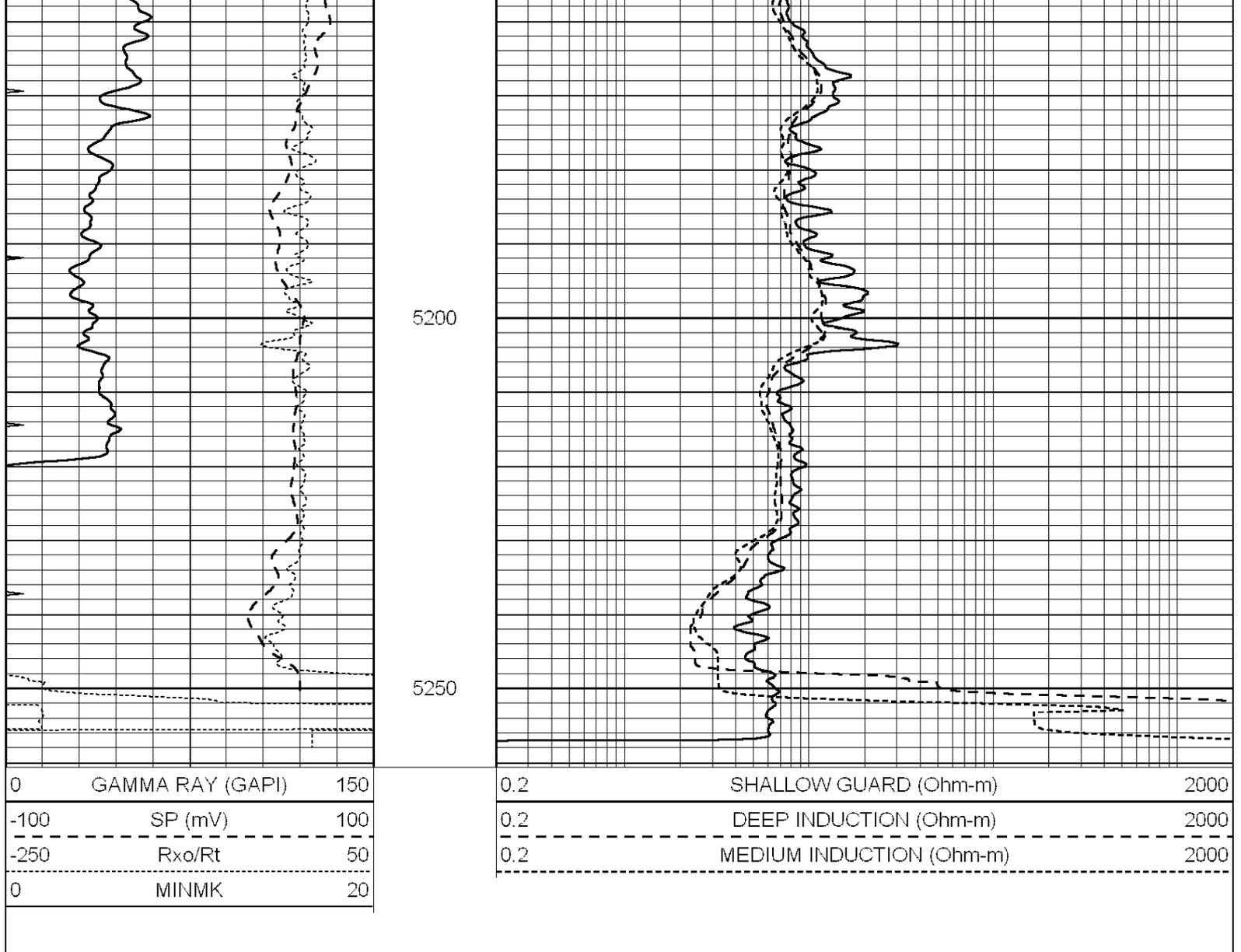
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Database File: 010043pe.db  
Dataset Pathname: pass4.3  
Presentation Format: \_dil  
Dataset Creation: Thu Jan 10 20:12:55 2013  
Charted by: Depth in Feet scaled 1:240

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





### Calibration Report

Database File: 010043pe.db  
 Dataset Pathname: pass5.5  
 Dataset Creation: Thu Jan 10 20:56:37 2013 by Calc SOC 120430

### Dual Induction Calibration Report

Serial-Model: DIL3-GEAR  
 Surface Cal Performed: Thu Jan 10 17:24:01 2013  
 Downhole Cal Performed: Fri Mar 21 02:34:00 2003  
 After Survey Verification Performed: Tue Apr 13 17:49:23 2010

#### Surface Calibration

Loop:	Readings			V	References			Results	
	Air	Loop			Air	Loop		m	b
Deep	0.011	0.656		0.000	400.000	mmho/m	620.000	8.000	
Medium	0.013	0.740		0.000	462.500	mmho/m	720.000	-4.000	
Internal:	Zero	Cal		Zero	Cal		m	b	
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071	
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555	

#### Downhole Calibration

Downhole Calibration

Internal:	Readings			References			Results	
	Zero	Cal		Zero	Cal		m	b
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	2.503	0.050	V	500.000	2.000	Ohm-m	250.000	-4.000

After Survey Verification

Internal:	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Medium	0.000	1.000	mmho/m	0.000	1.000	mmho/m	1.000	0.000
Shallow	0.000	0.000	Ohm-m	500.000	2.000	Ohm-m	1.000	0.000

Litho Density Calibration Report  
Serial: 006 Model: PRB

Master Calibration

Performed Sun Aug 15 09:48:41 2010

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps
Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

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:	070559	
Tool Model:	OPEN_GR	
Performed:	Wed Jan 09 12:24:50 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.3000	GAPI/cps