



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL INDUCTION
LOG**

Company CASTELLI EXPLORATION, INC.
Well GREGG "A" #2-19
Field SHIMER
County COMANCHE
State KANSAS

Company CASTELLI EXPLORATION, INC.
Well GREGG "A" #2-19
Field SHIMER
County COMANCHE State KANSAS

Location: API # : 15-033-21743-0000
2130' FSL & 3400' FEL
SE - NW - NE - SW
SEC 19 TWP 33S RGE 16W
Permanent Datum GROUND LEVEL Elevation 1836
Log Measured From KELLY BUSHING 13' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
CDL/CNL/PE
MEL
Elevation
K.B. 1849
D.F. 1847
G.L. 1836

Date	1/16/14
Run Number	ONE
Depth Driller	5670
Depth Logger	5674
Bottom Logged Interval	5672
Top Log Interval	00
Casing Driller	13 3/8" @ 323'
Casing Logger	322
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/50
pH / Fluid Loss	8.5/8.8
Source of Sample	FLOWLINE
Rim @ Meas. Temp	.900 @ 79F
Rmf @ Meas. Temp	.675 @ 79F
Rmc @ Meas. Temp	1.08 @ 78F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.538 @ 131F
Time Circulation Stopped	4 HOURS
Time Logger on Bottom	3:30 A.M.
Maximum Recorded Temperature	131F
Equipment Number	4854
Location	HAYS, KANSAS
Recorded By	JEFF LUEBBERS
Witnessed By	TOM CASTELLI
	RICK POPP

<<< Fold Here >>>

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 OPEN RANGE, 4
S. & E. TO WHITE METAL BUILDING, 2S. INTO, VEER WEST



MAIN SECTION

Database File: 22235pe.db
 Dataset Pathname: pass3.5
 Presentation Format: dil2
 Dataset Creation: Thu Jan 16 05:33:54 2014 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:600

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

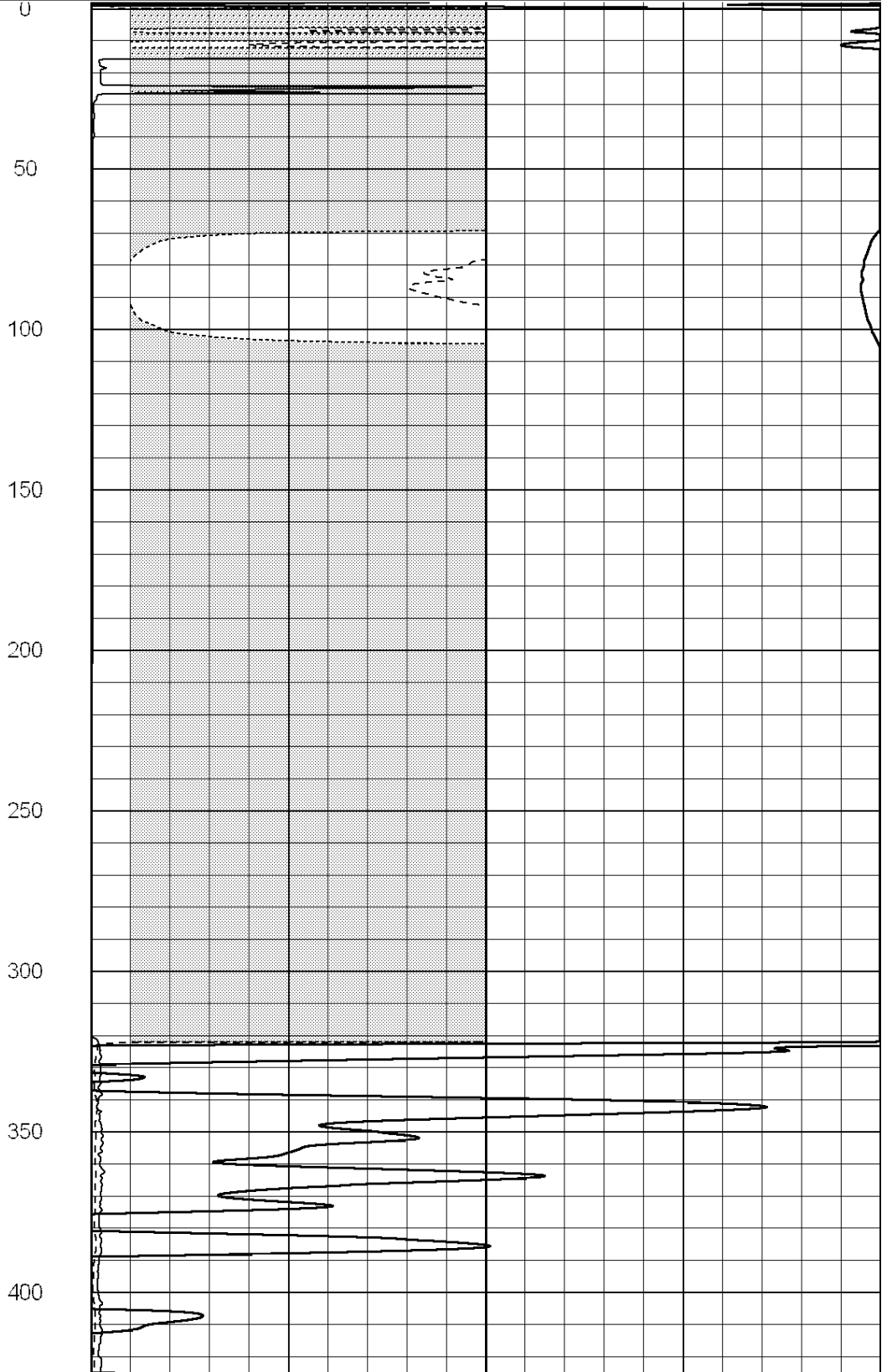
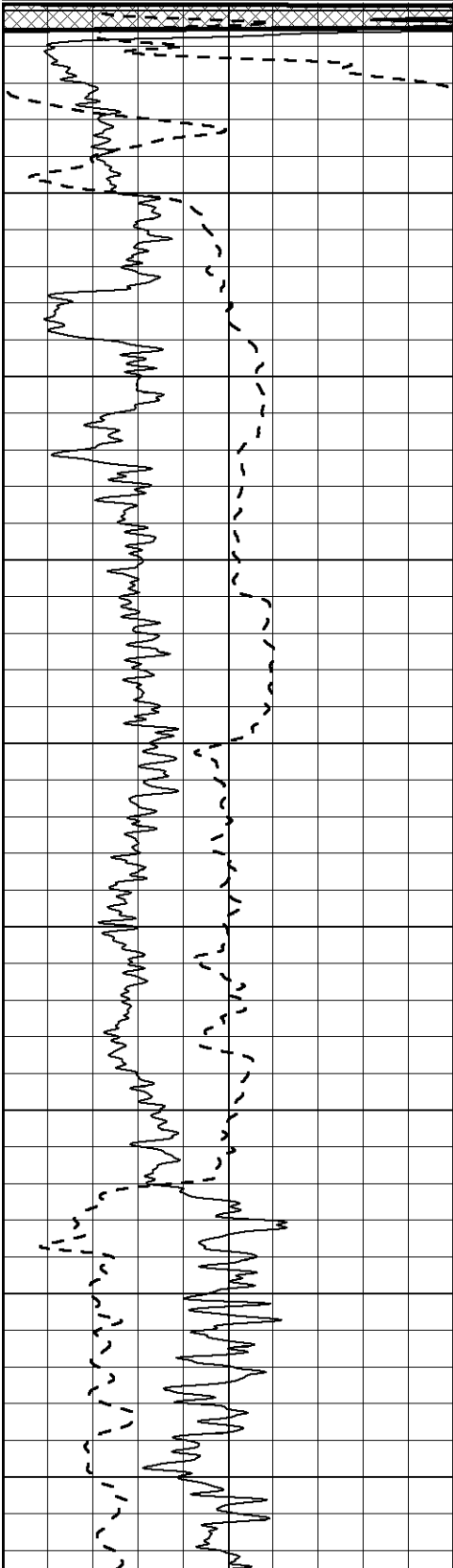
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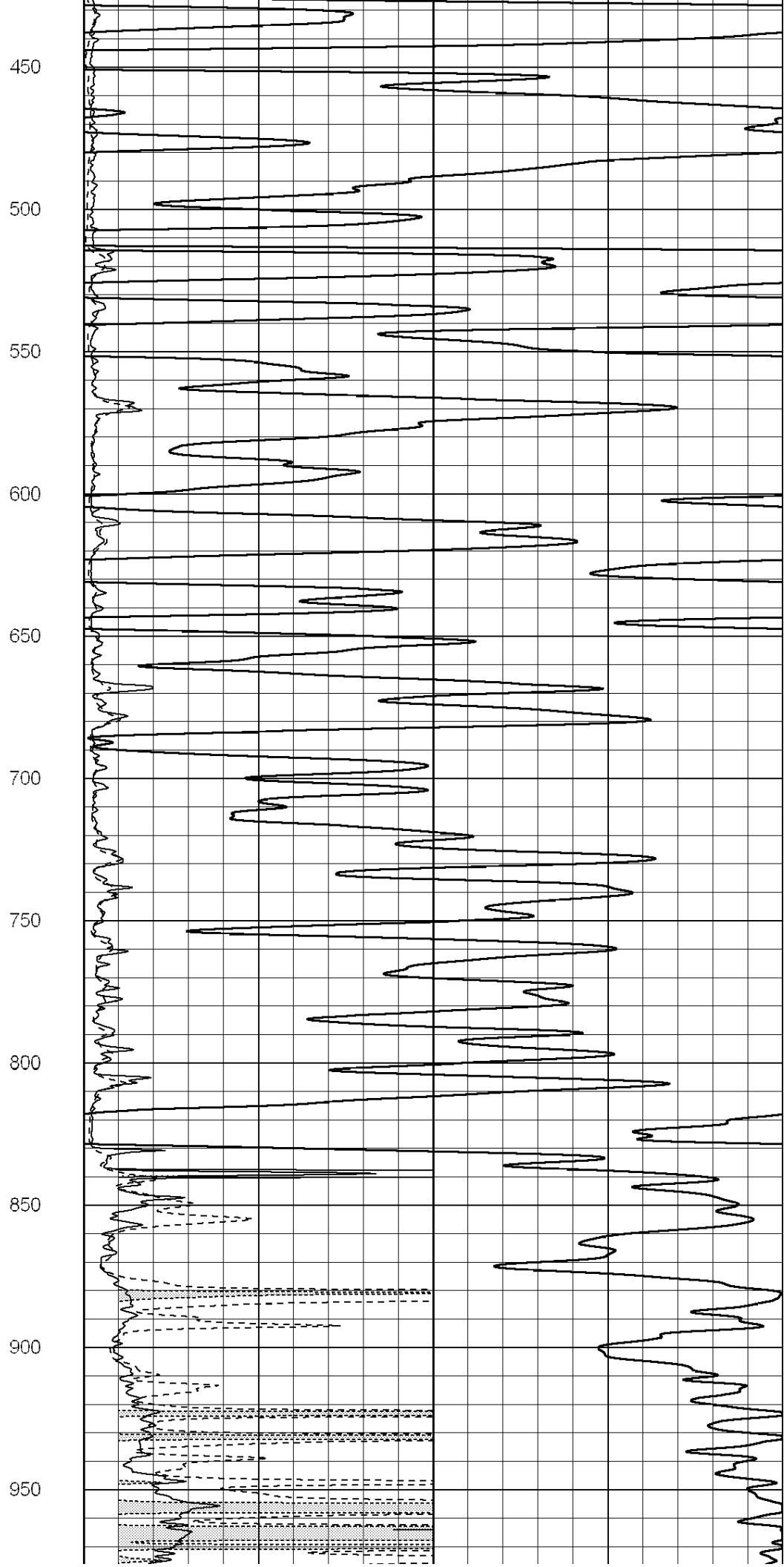
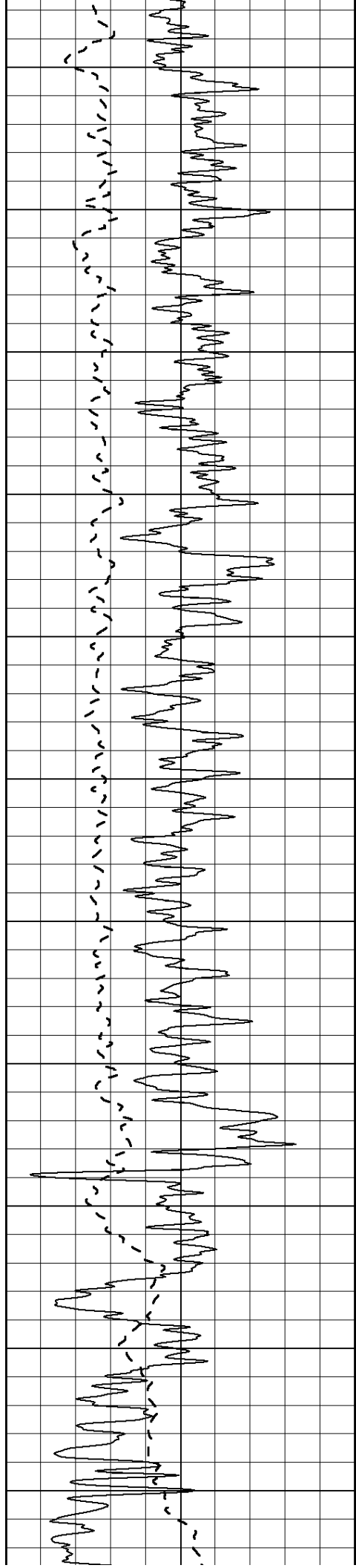
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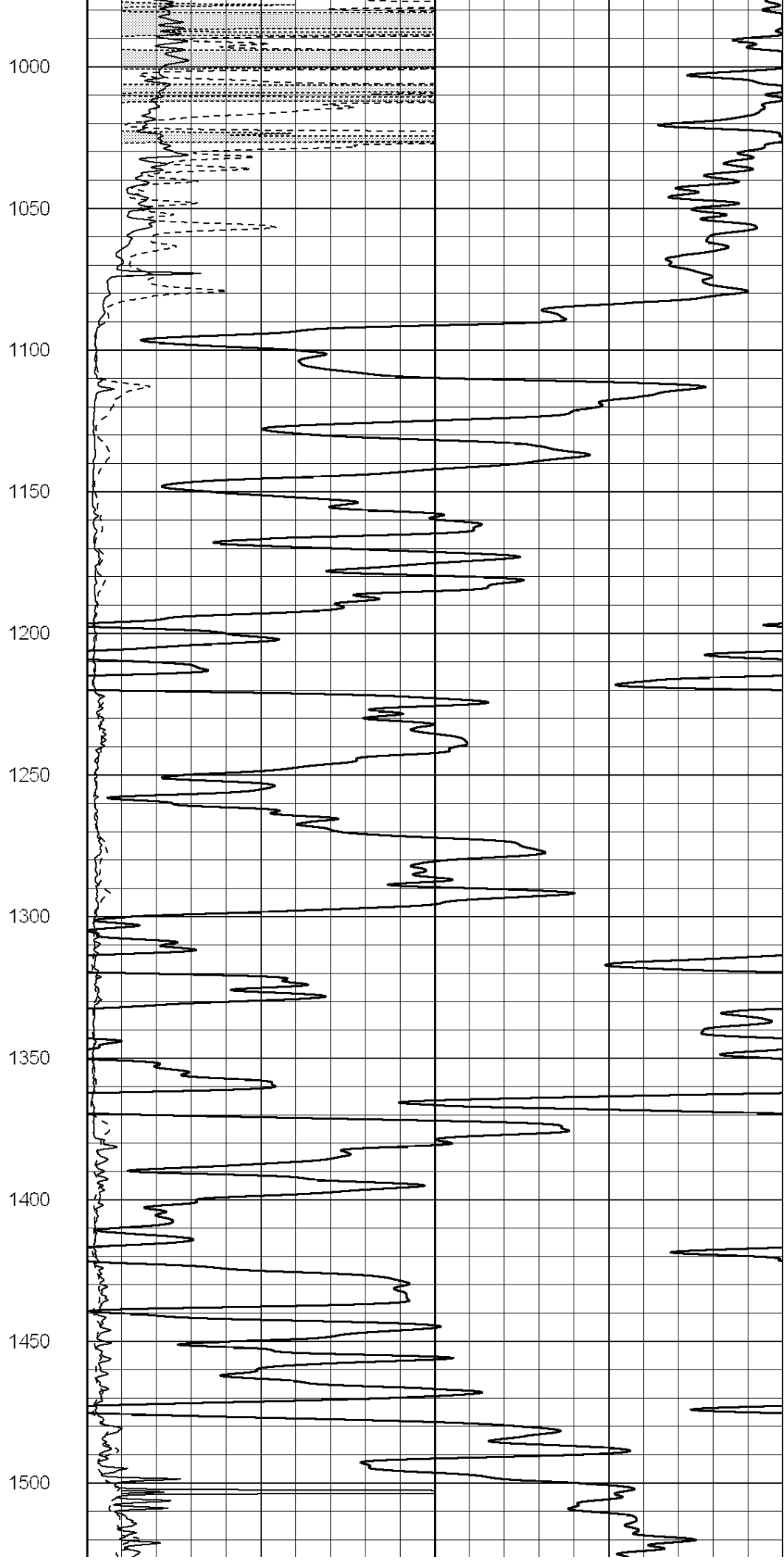
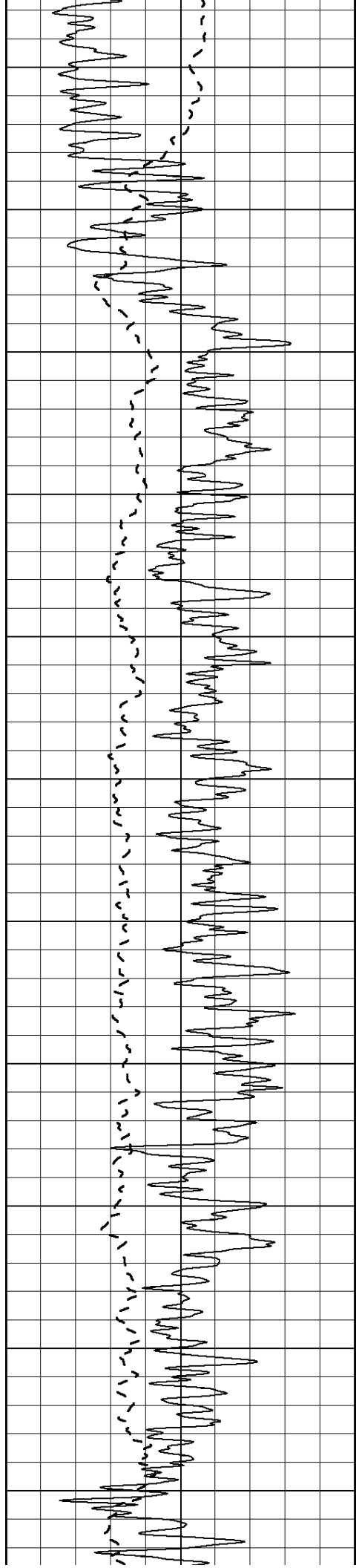
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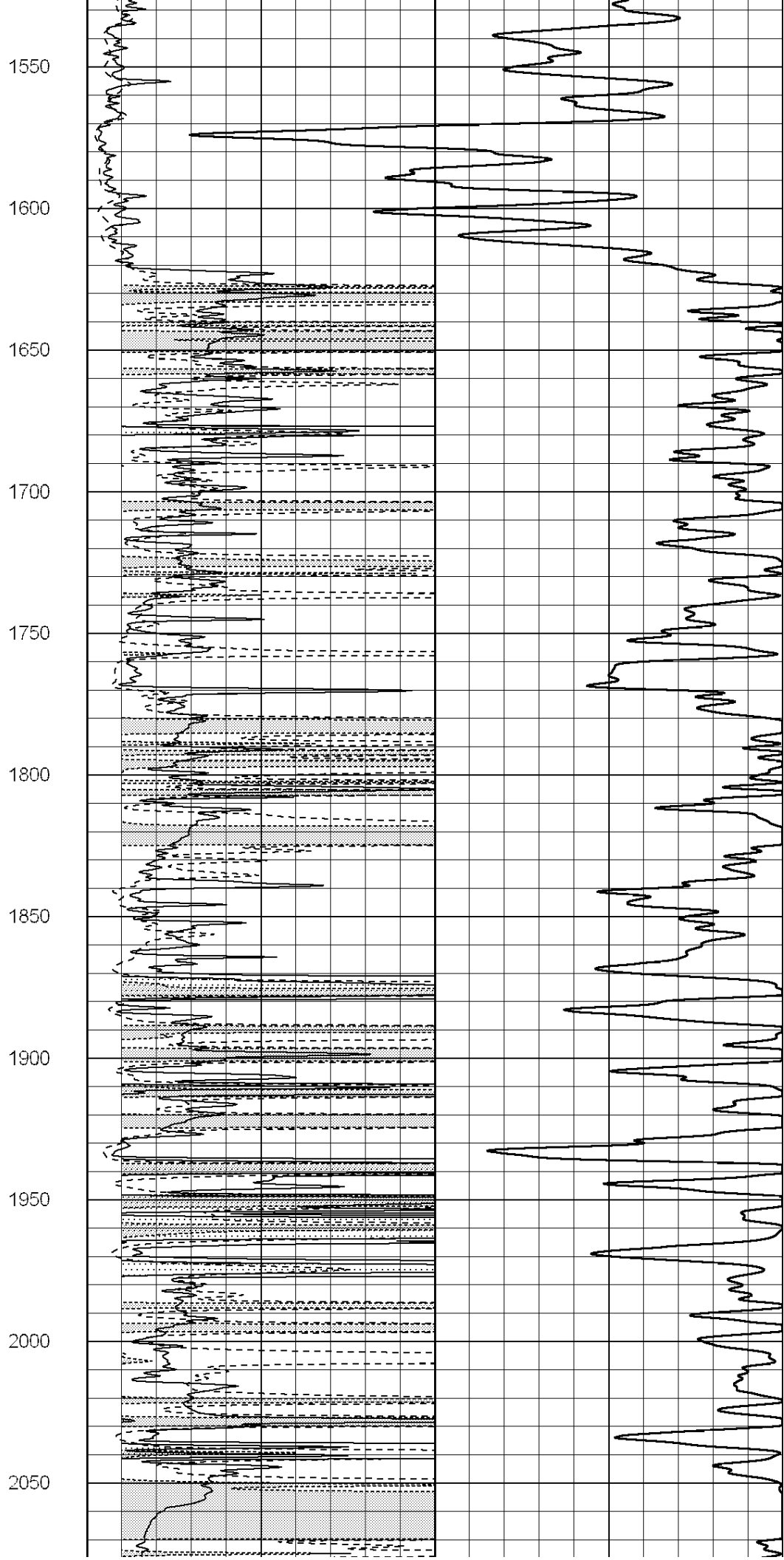
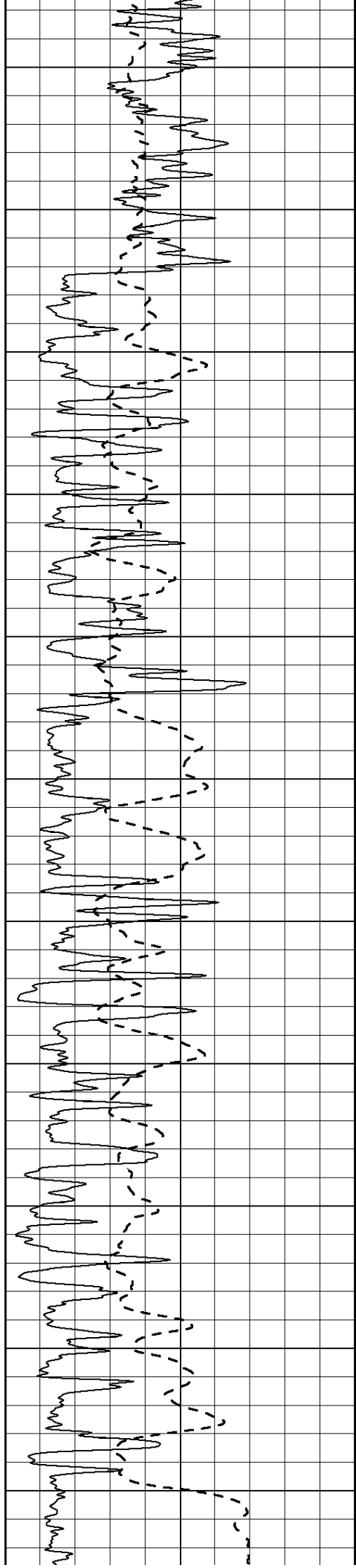
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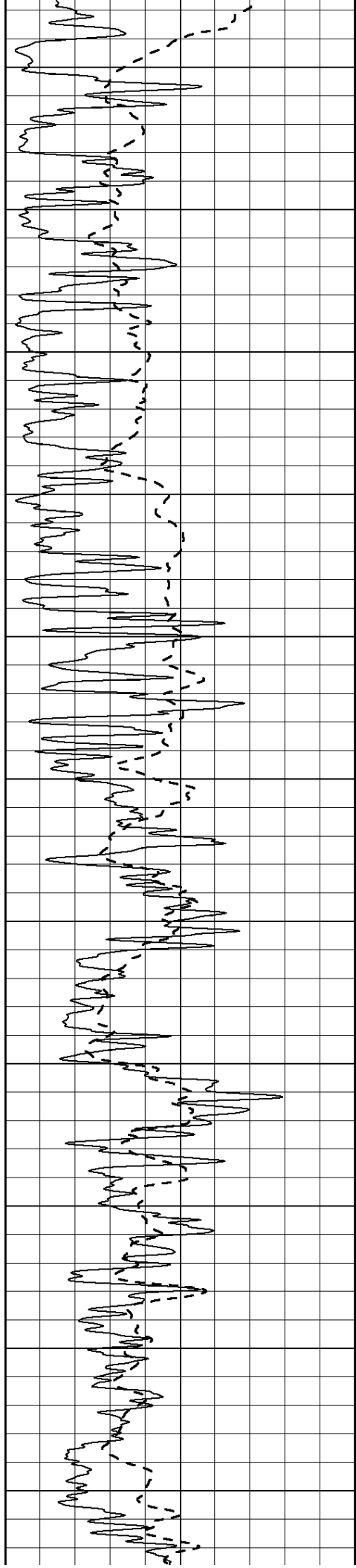
50 RLL3 X10 (Ohm-m) 500











2100

2150

2200

2250

2300

2350

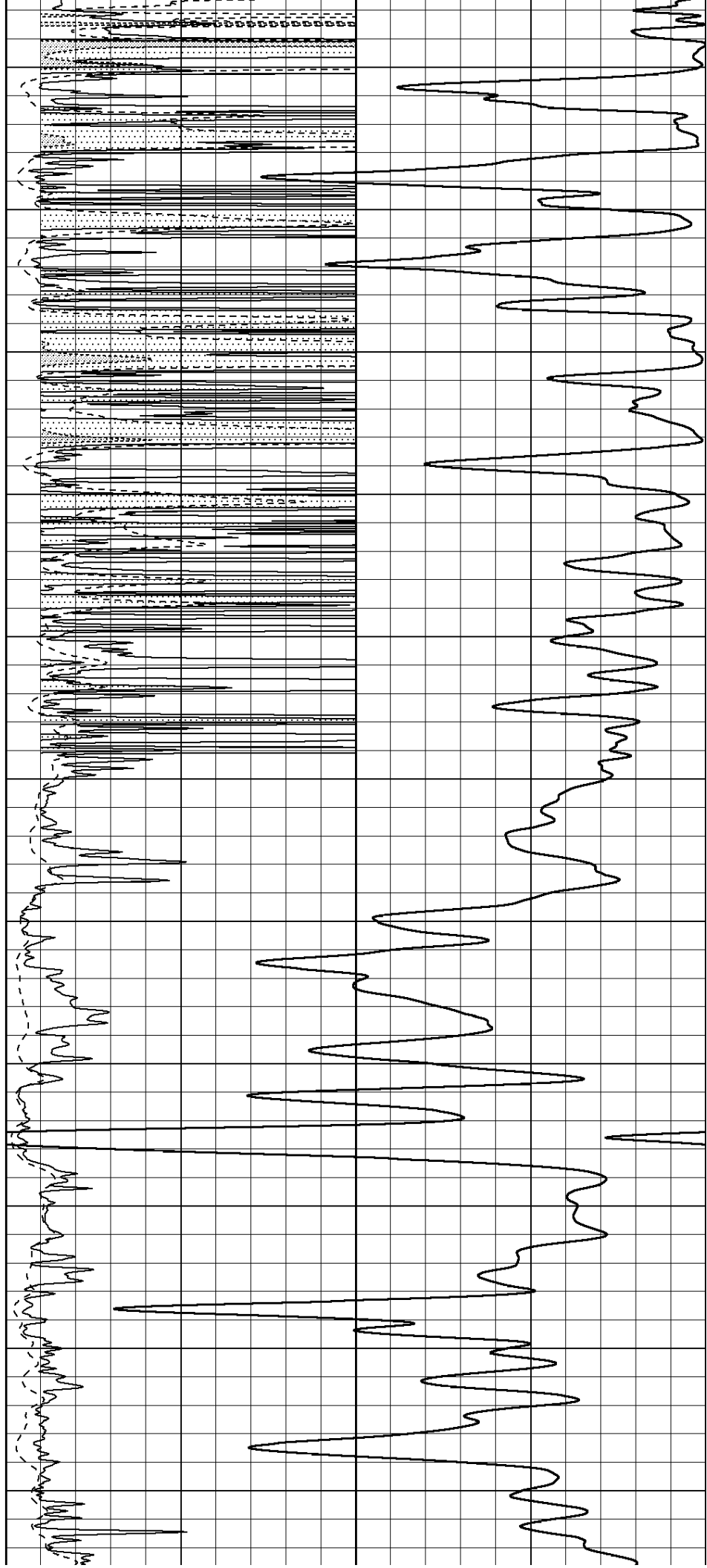
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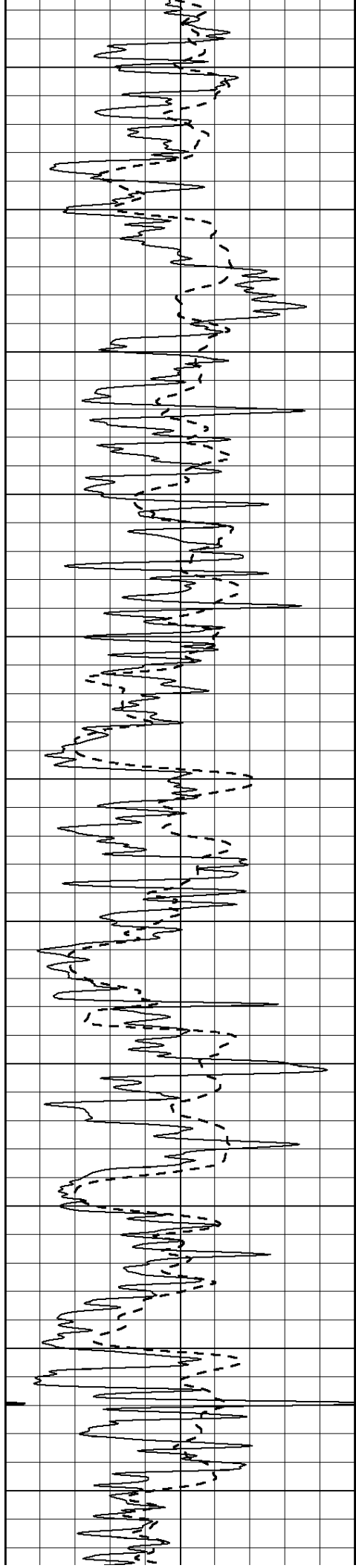
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2550

2600





2650

2700

2750

2800

2850

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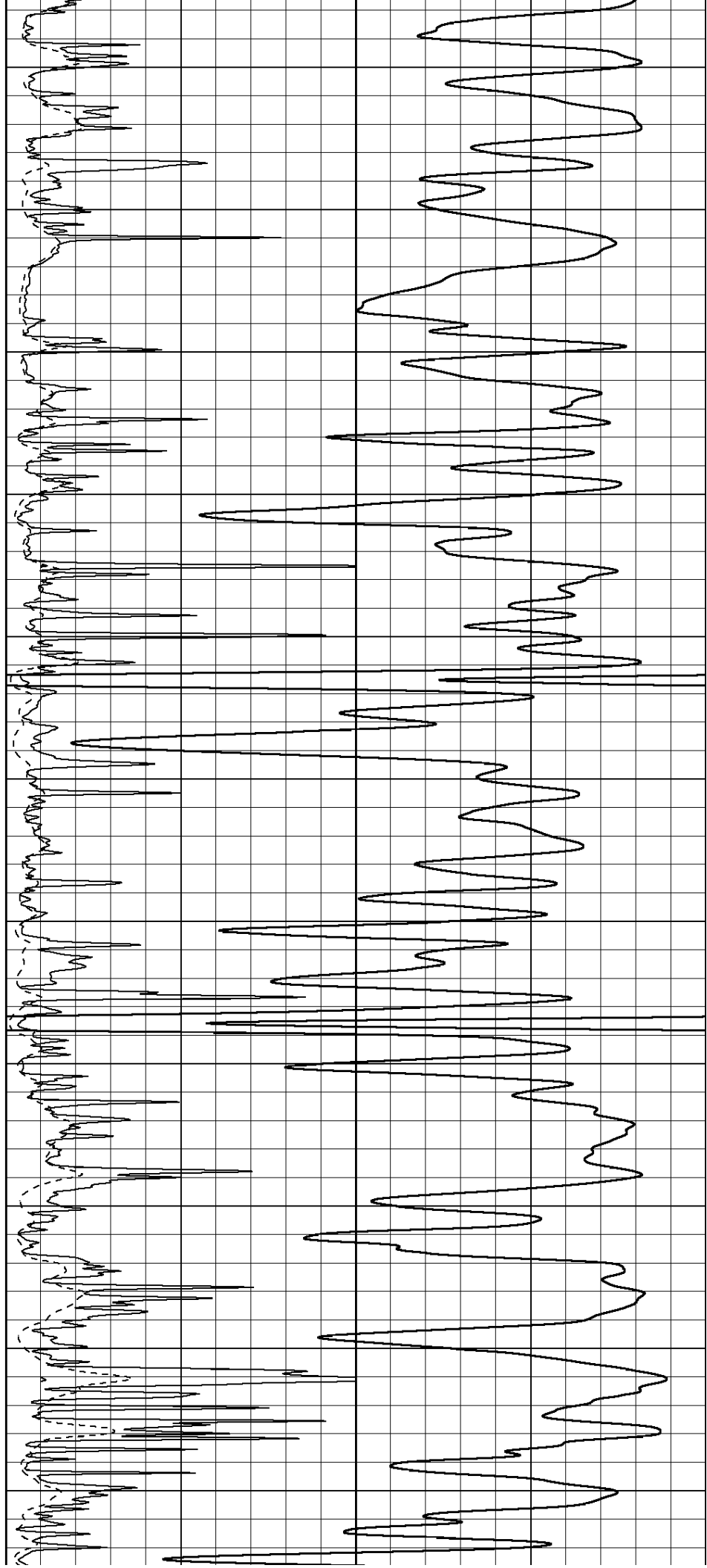
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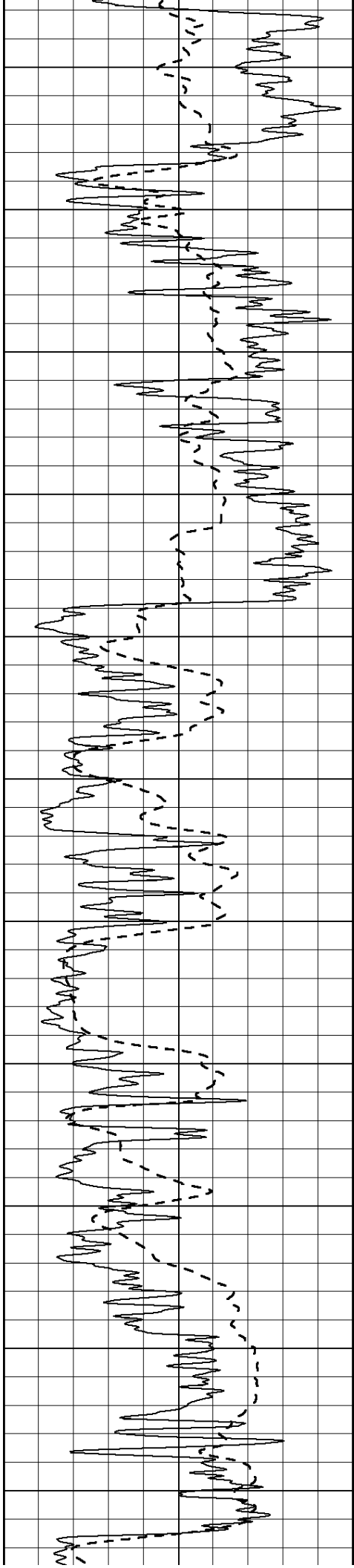
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3100

3150





3200

3250

3300

3350

3400

3450

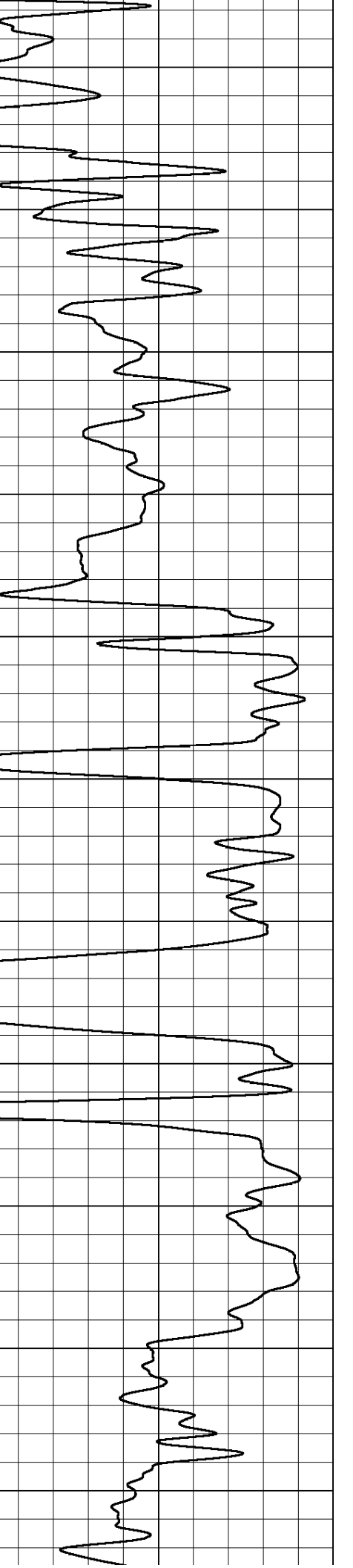
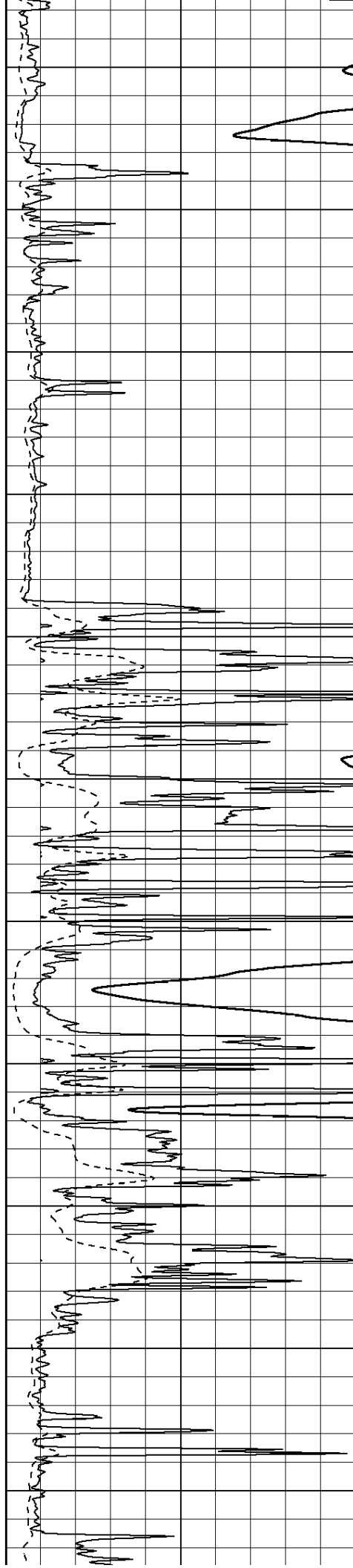
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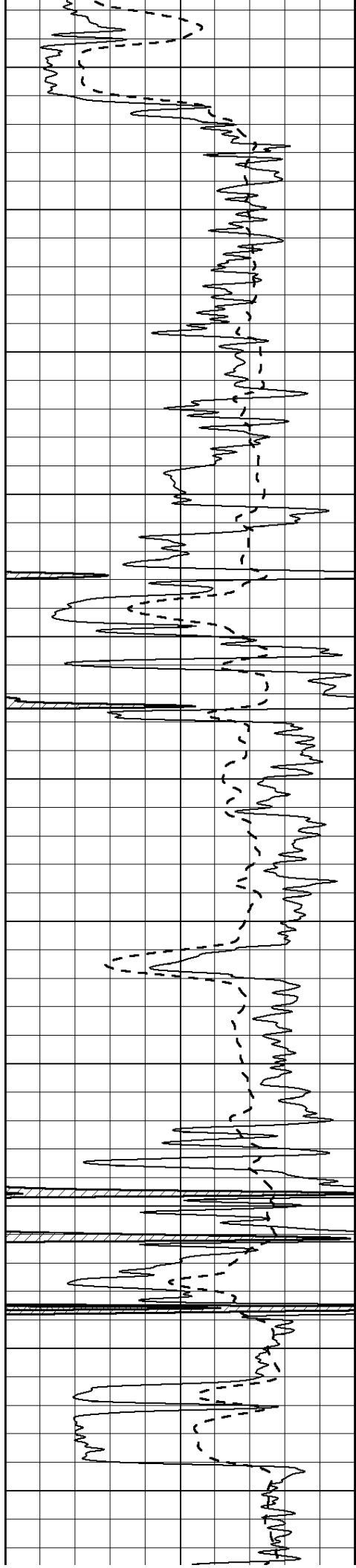
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3700





3750

3800

3850

3900

3950

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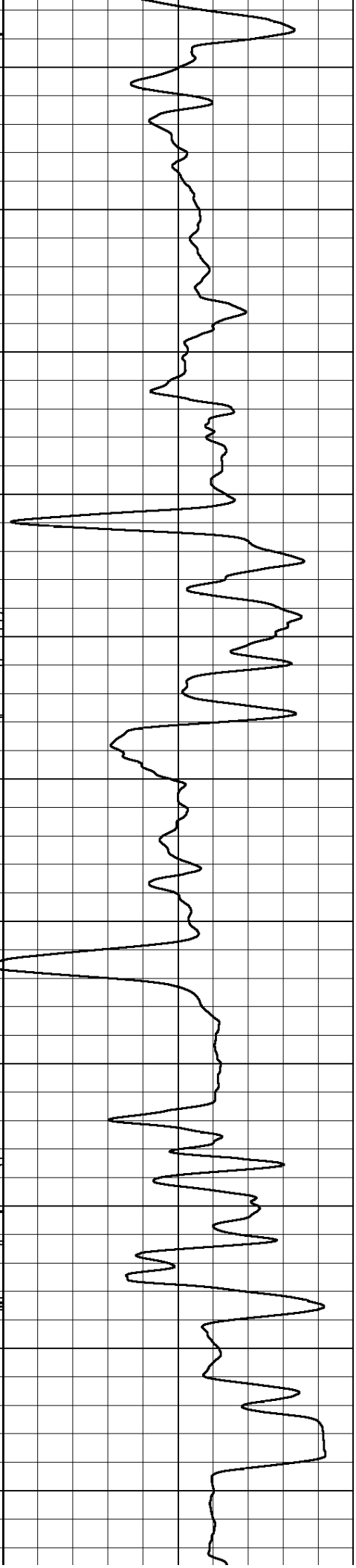
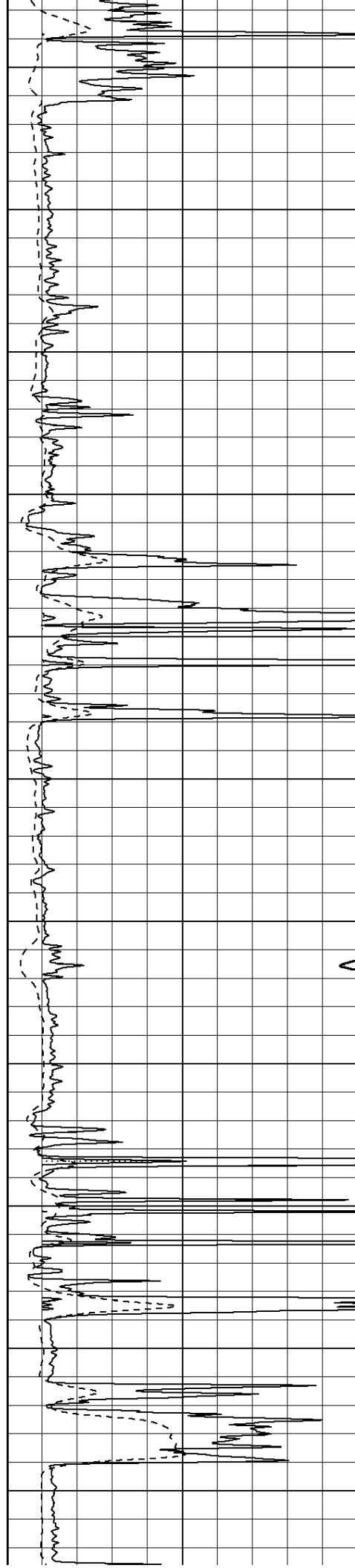
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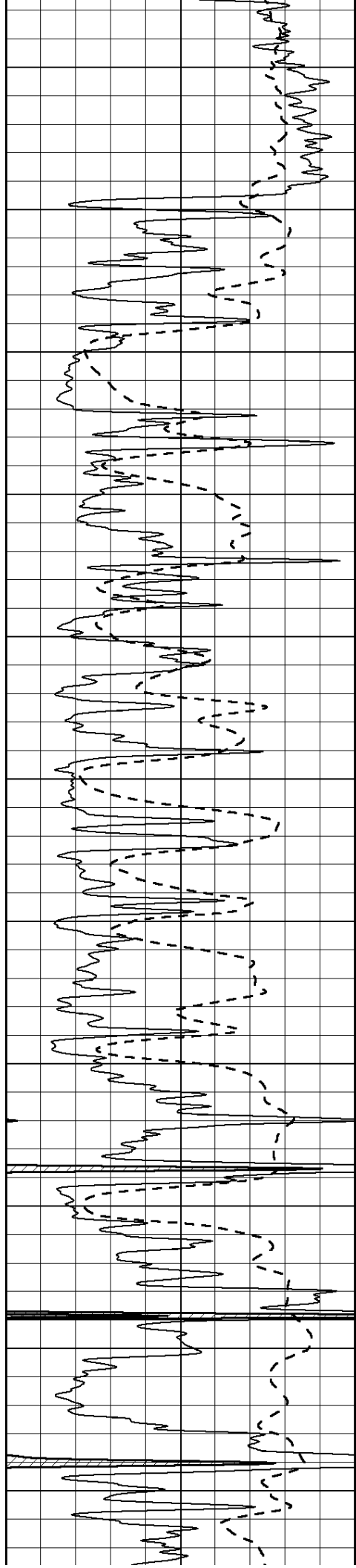
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4150

4200

4250





4300

4350

4400

4450

4500

4550

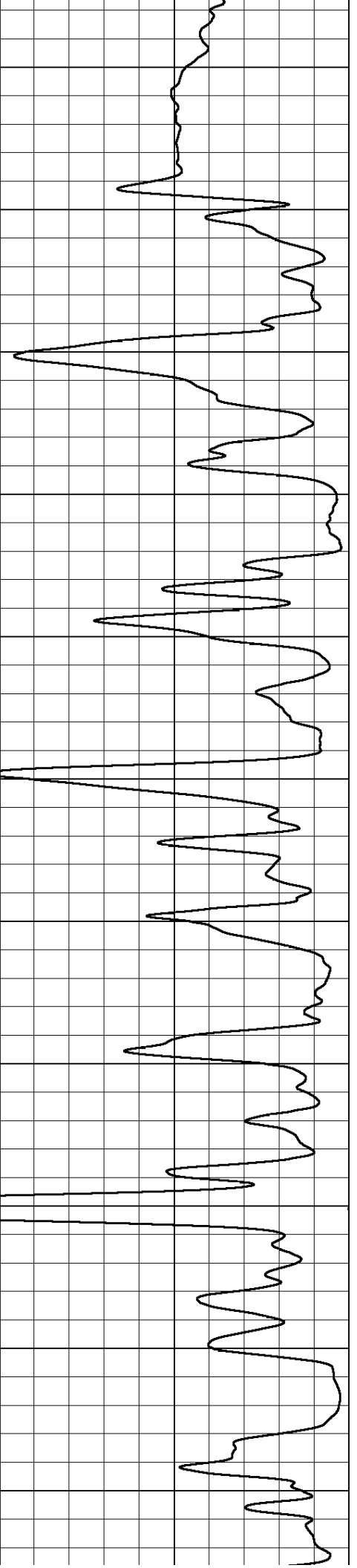
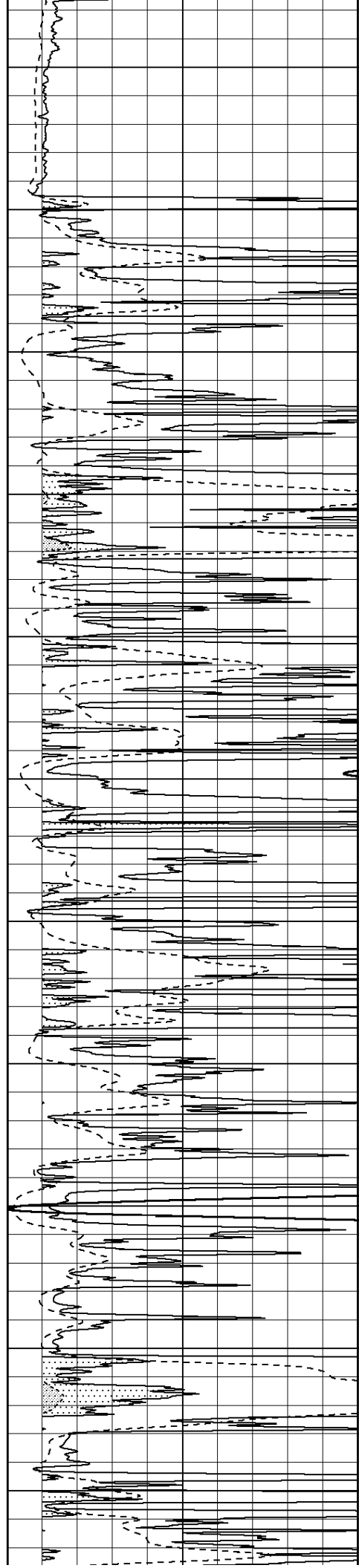
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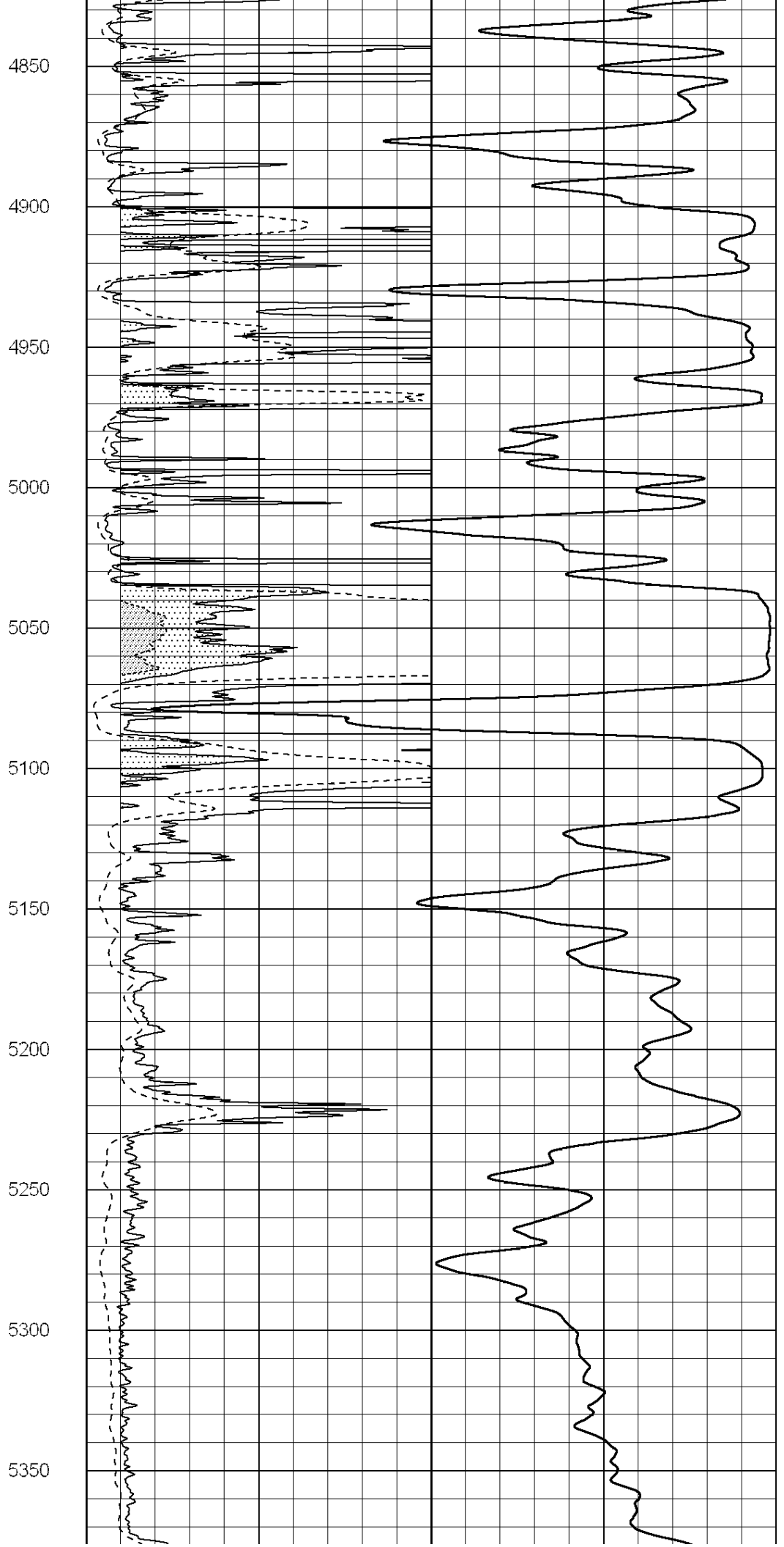
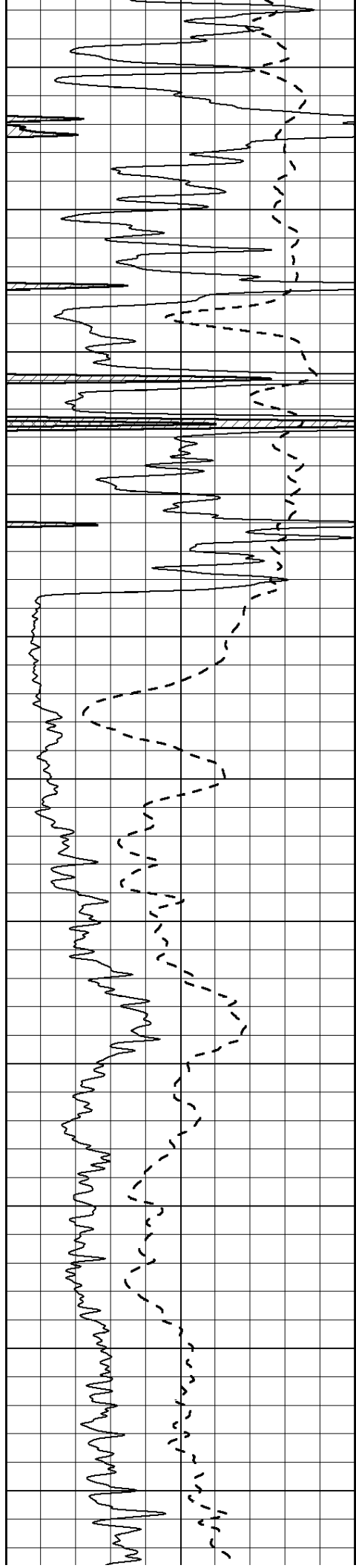
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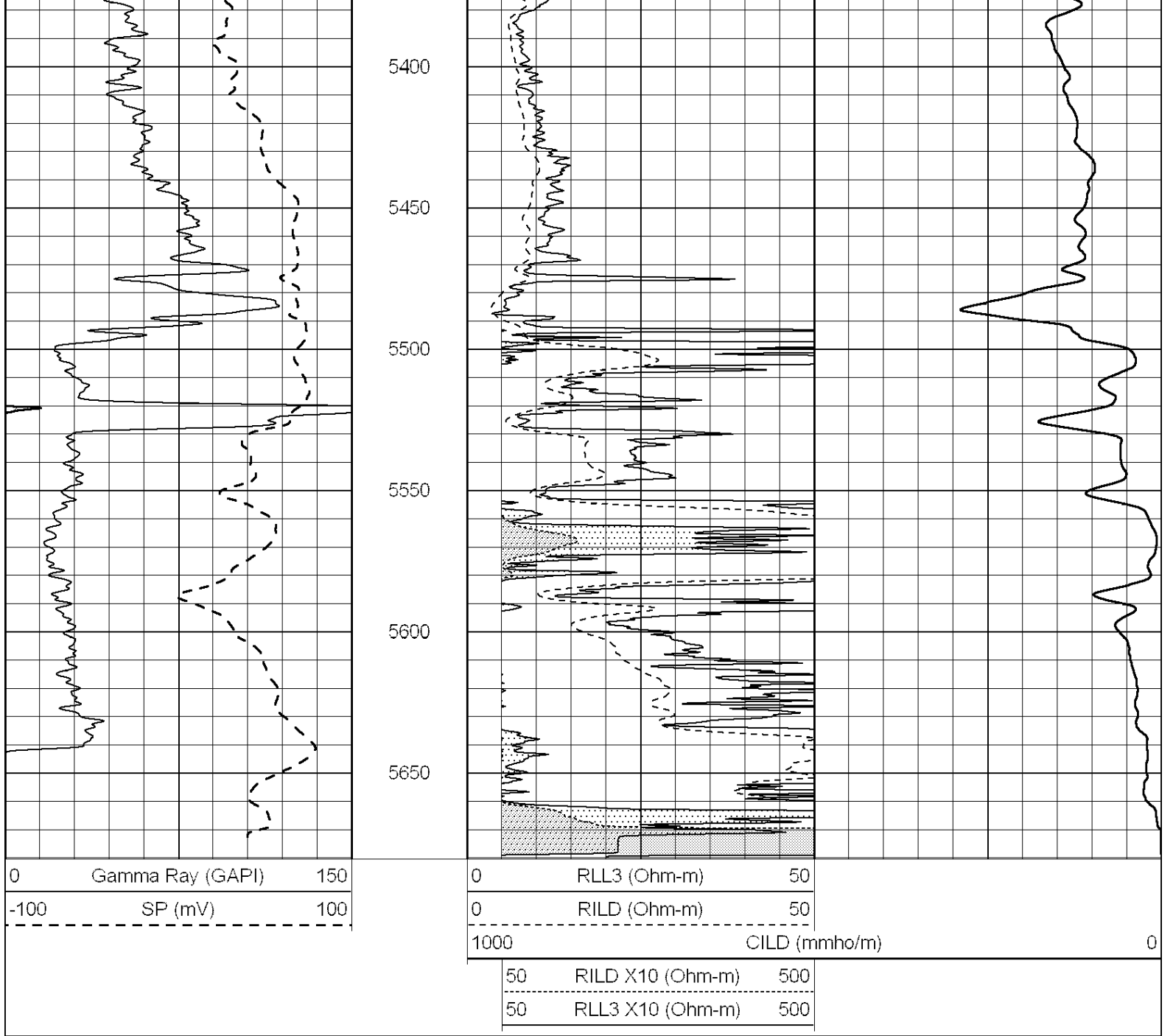
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4800





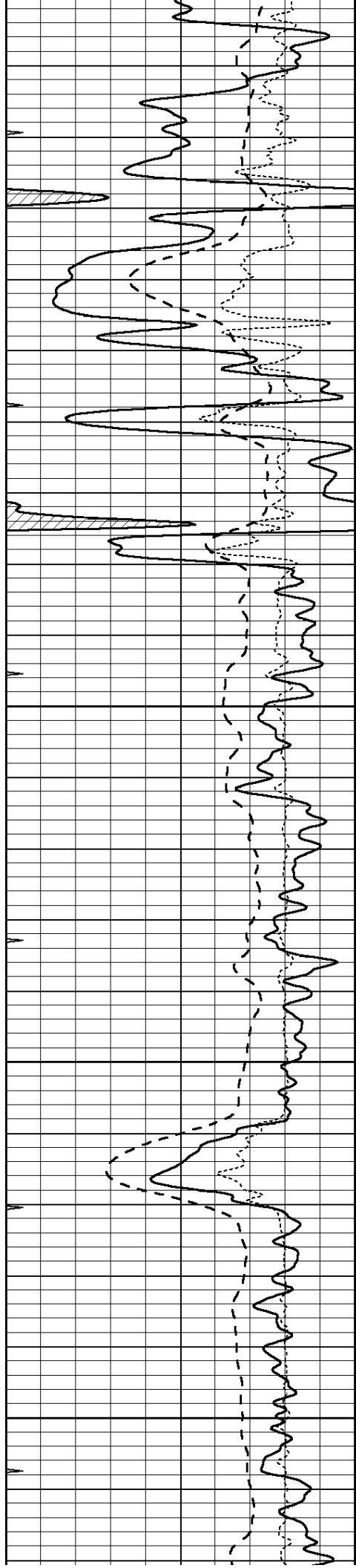


MAIN SECTION

Database File: 22235pe.db
 Dataset Pathname: pass3.5
 Presentation Format: dil
 Dataset Creation: Thu Jan 16 05:33:54 2014 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">0</td> <td style="width: 85%;">GAMMA RAY (GAPI)</td> <td style="width: 10%; text-align: right;">150</td> </tr> <tr> <td style="text-align: center;">-100</td> <td>SP (mV)</td> <td style="text-align: right;">100</td> </tr> <tr> <td style="text-align: center;">-250</td> <td>Rxo/Rt</td> <td style="text-align: right;">50</td> </tr> <tr> <td style="text-align: center;">0</td> <td>MINMK</td> <td style="text-align: right;">20</td> </tr> </table>	0	GAMMA RAY (GAPI)	150	-100	SP (mV)	100	-250	Rxo/Rt	50	0	MINMK	20	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">0.2</td> <td style="width: 85%;">SHALLOW GUARD (Ohm-m)</td> <td style="width: 10%; text-align: right;">2000</td> </tr> <tr> <td style="text-align: center;">0.2</td> <td>DEEP INDUCTION (Ohm-m)</td> <td style="text-align: right;">2000</td> </tr> <tr> <td style="text-align: center;">0.2</td> <td>MEDIUM INDUCTION (Ohm-m)</td> <td style="text-align: right;">2000</td> </tr> </table>	0.2	SHALLOW GUARD (Ohm-m)	2000	0.2	DEEP INDUCTION (Ohm-m)	2000	0.2	MEDIUM INDUCTION (Ohm-m)	2000
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																				



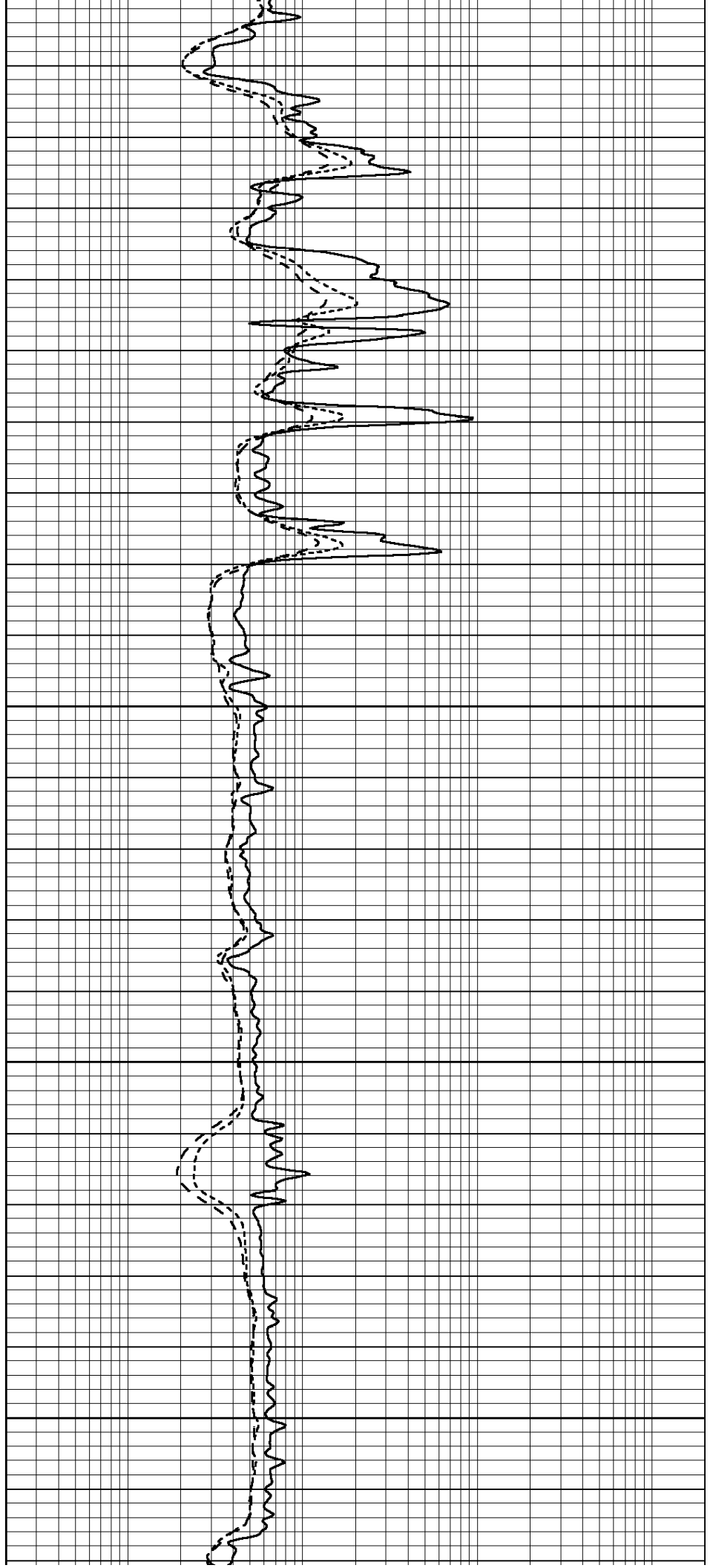


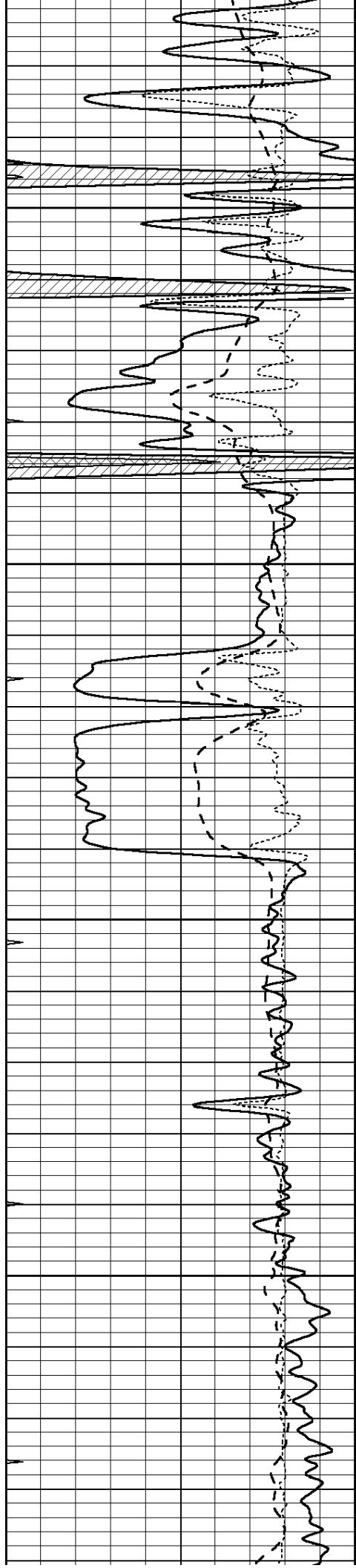
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4050

4100



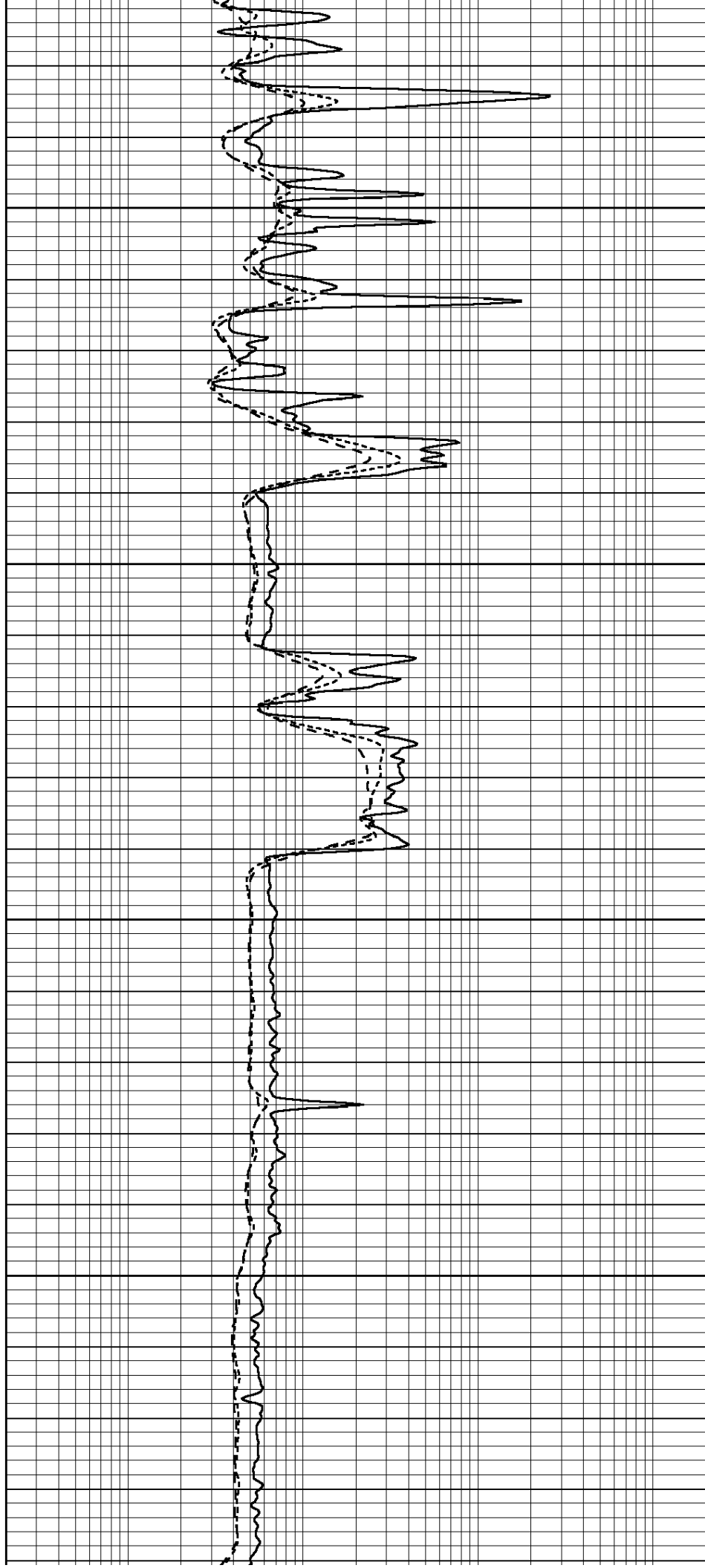


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4200

4250

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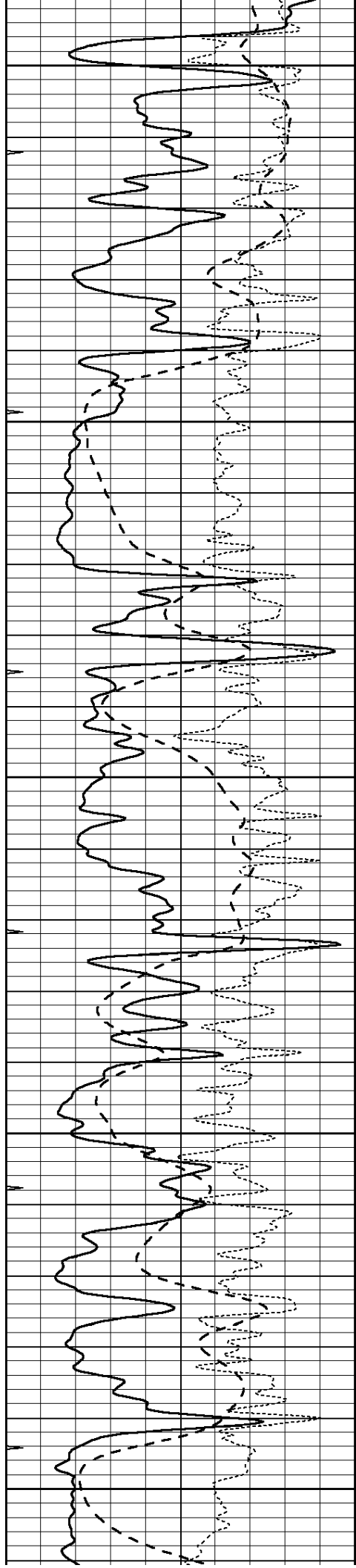


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4200

4250

4300



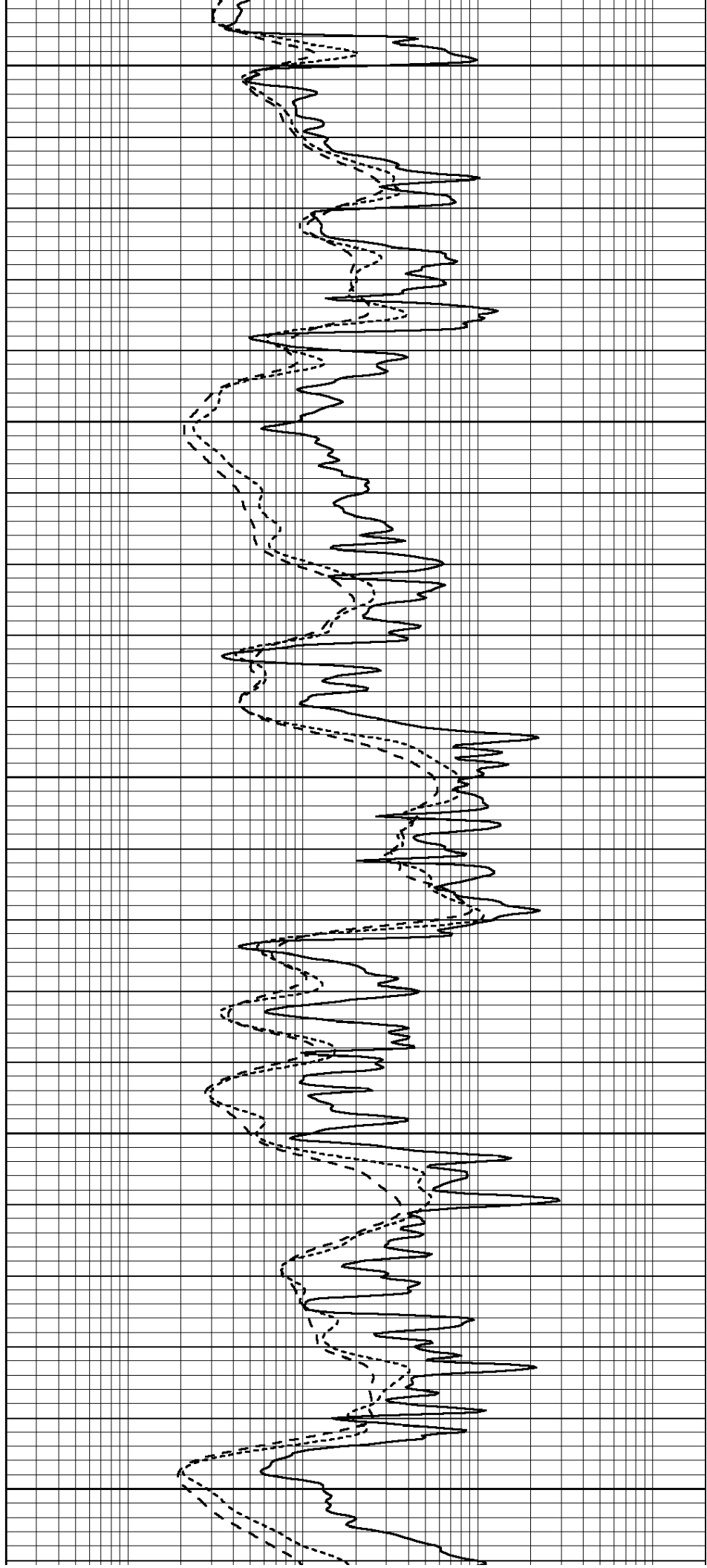
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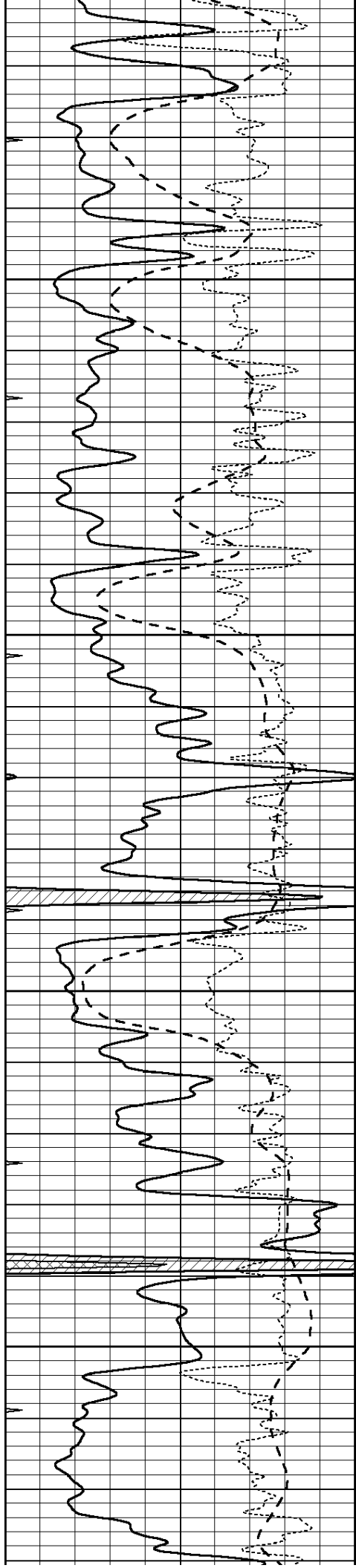
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4550



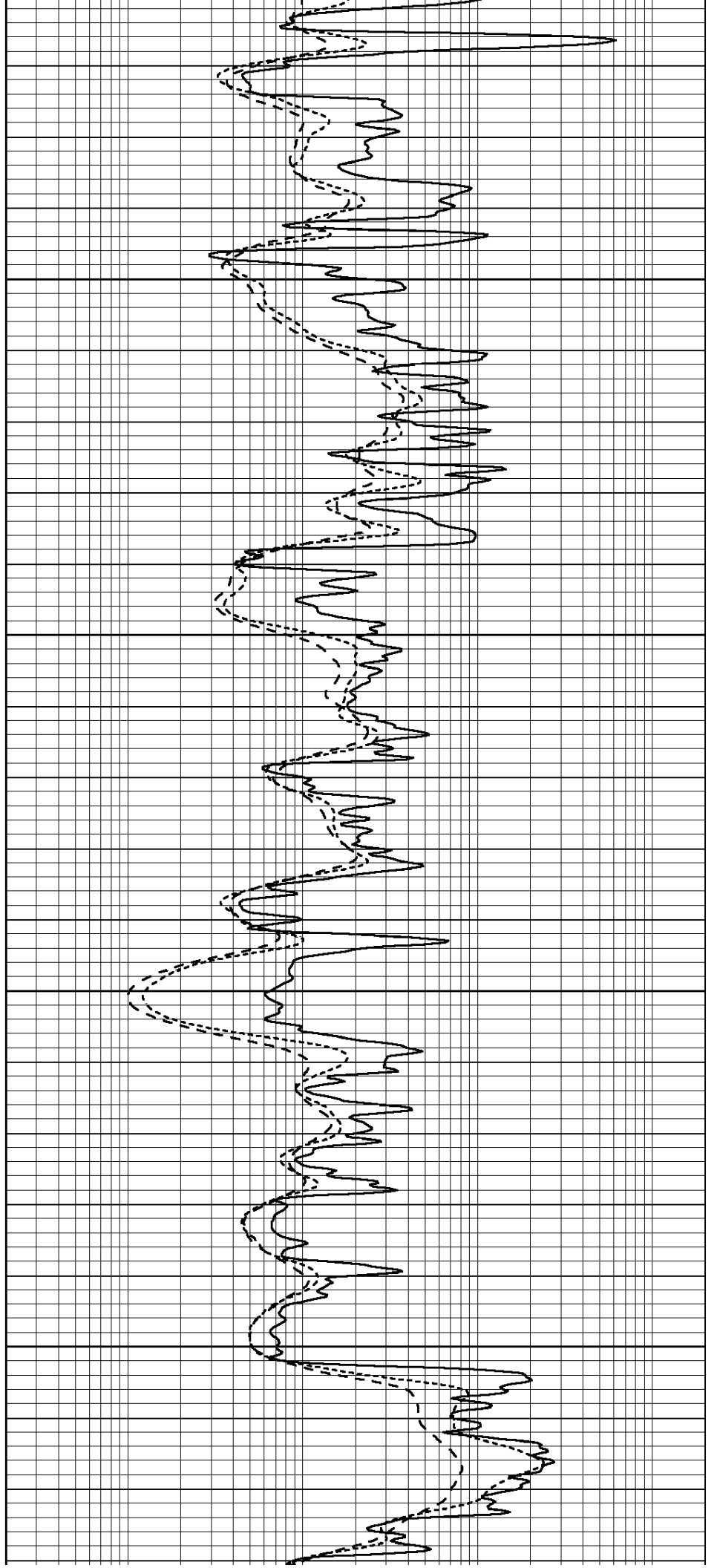


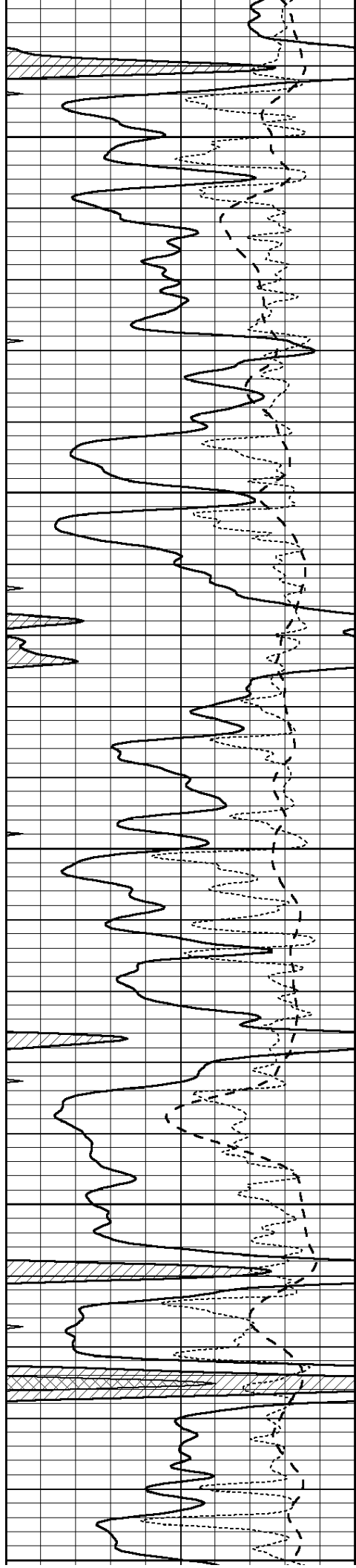
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4650

4700

4750





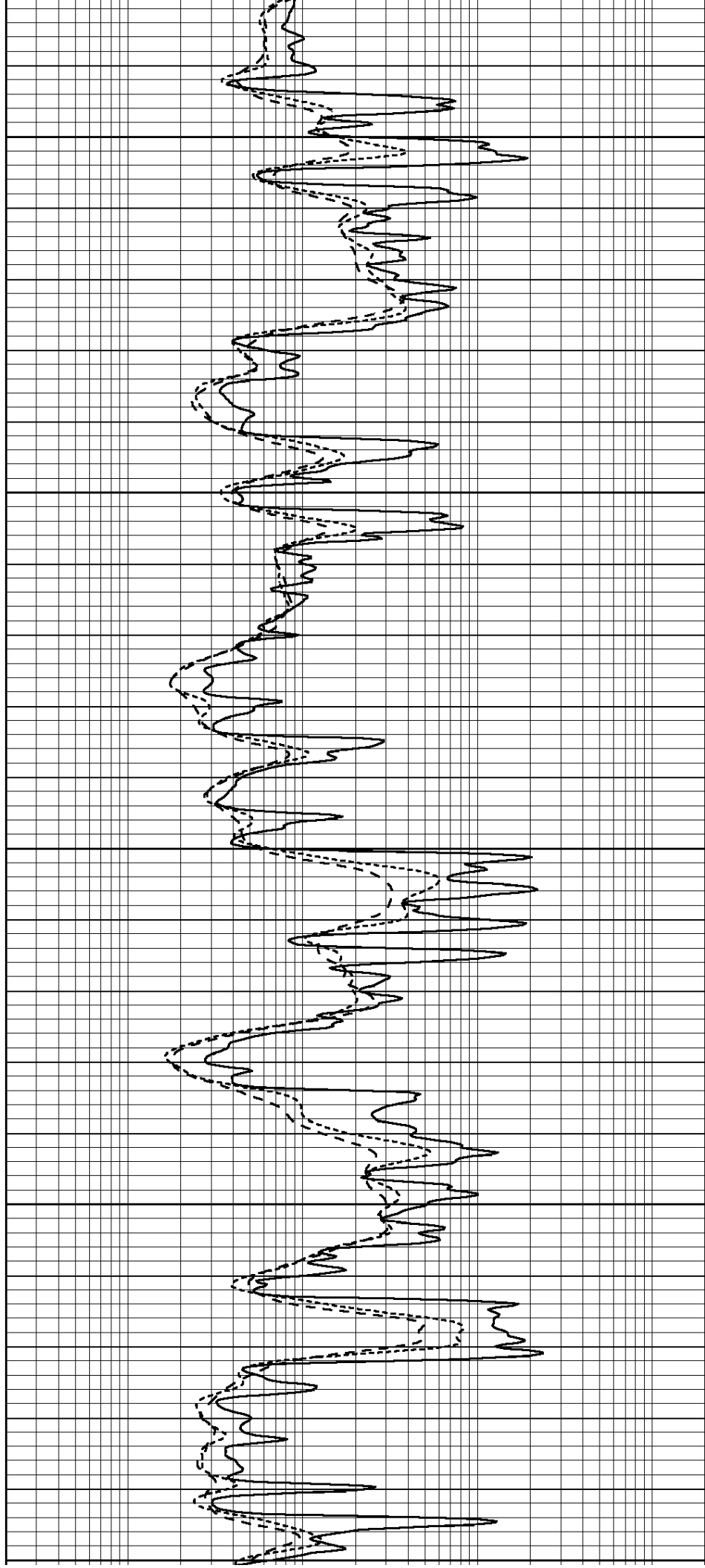
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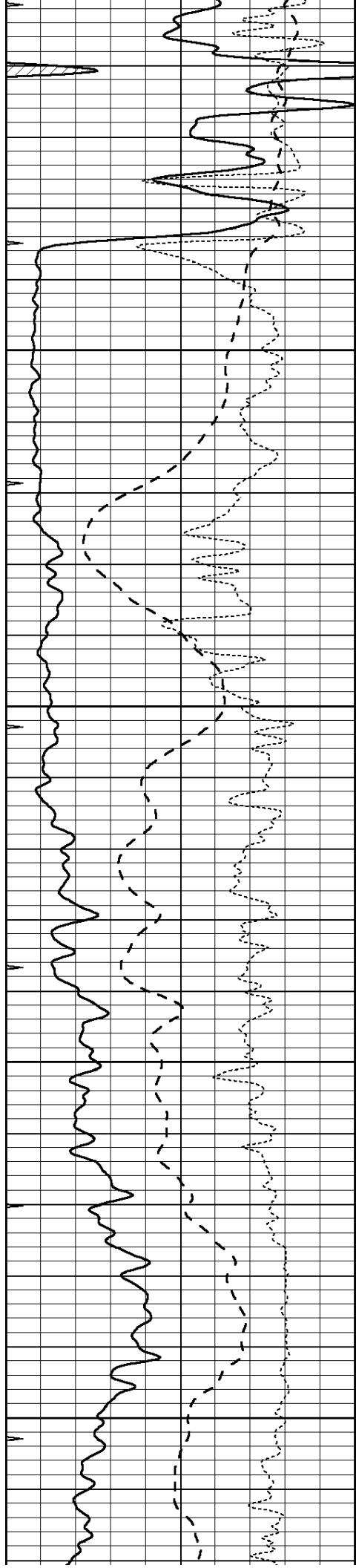
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4900

4950

5000



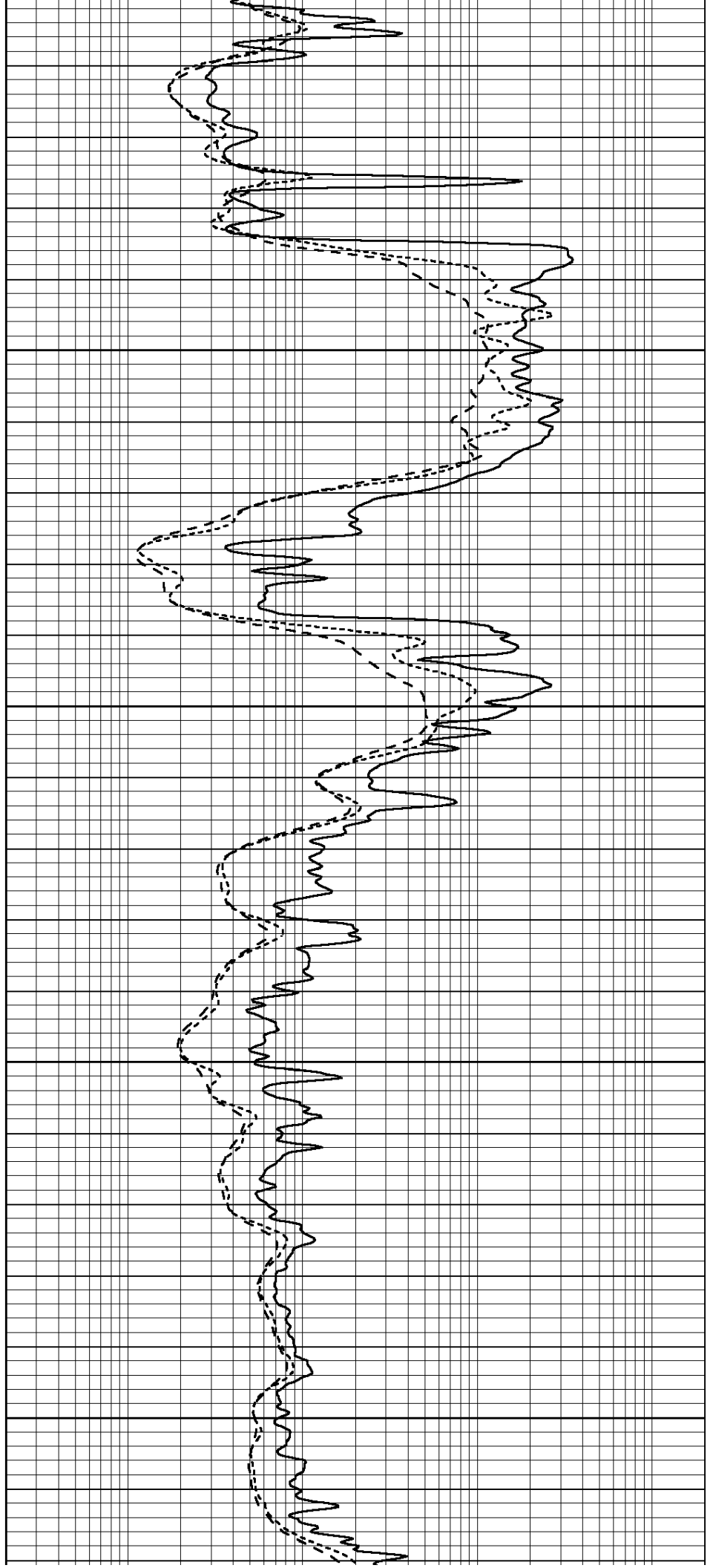


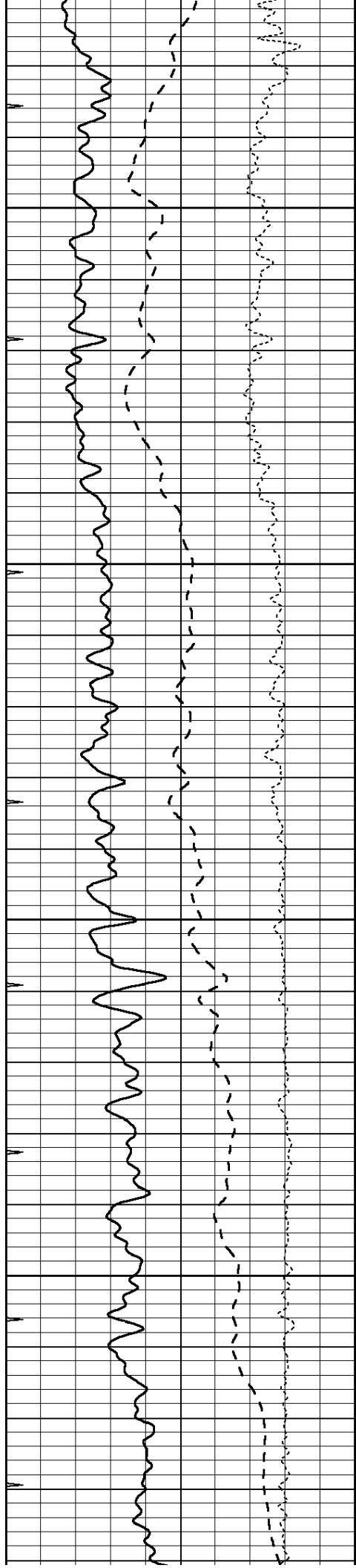
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5100

5150

5200



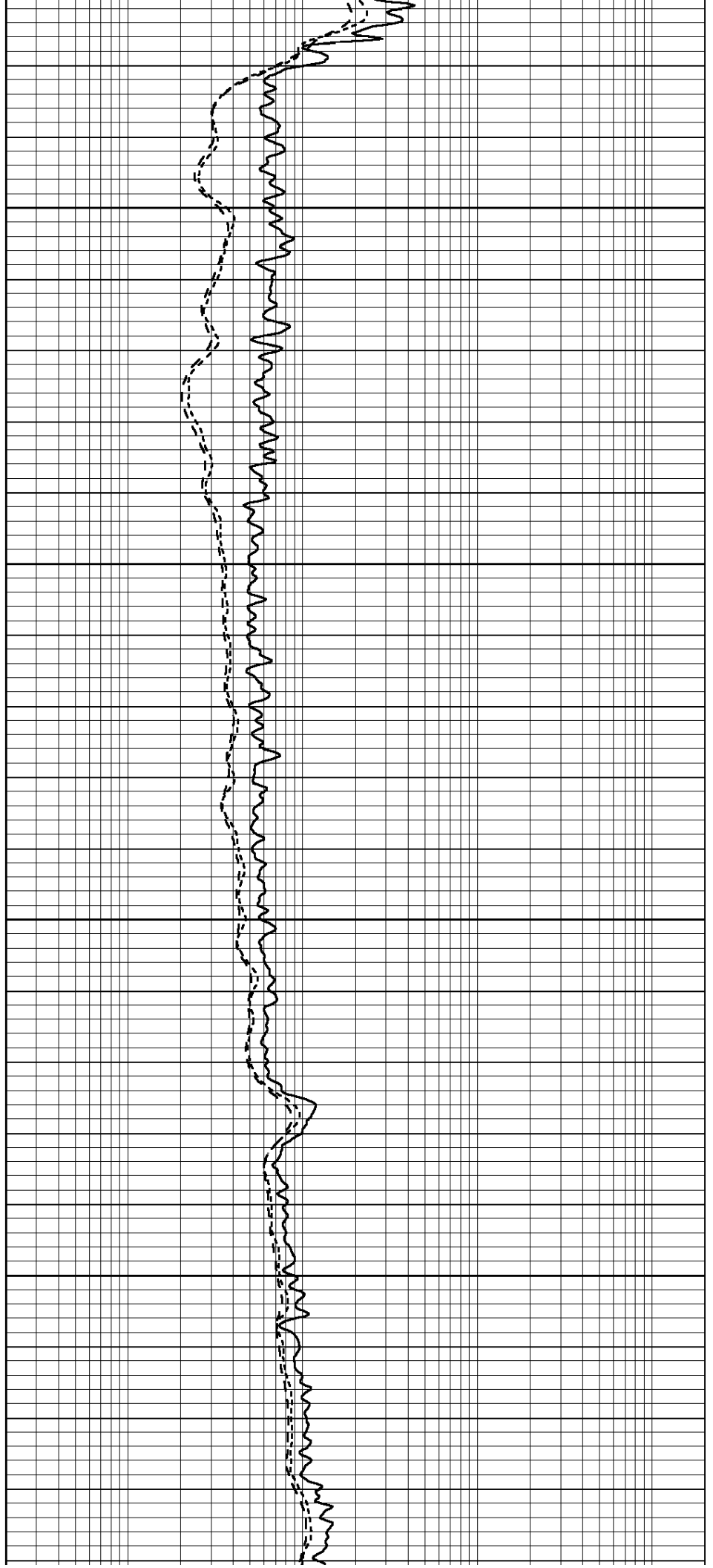


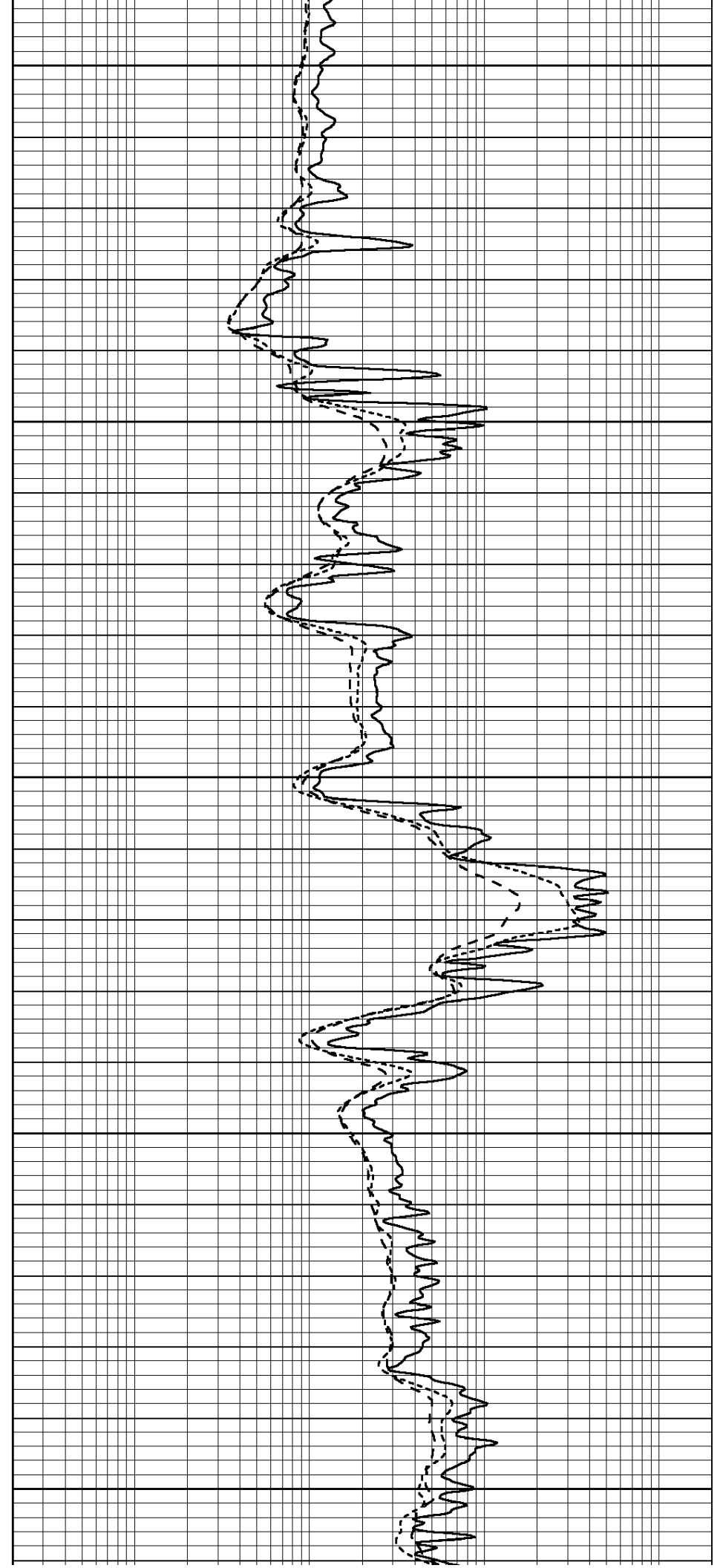
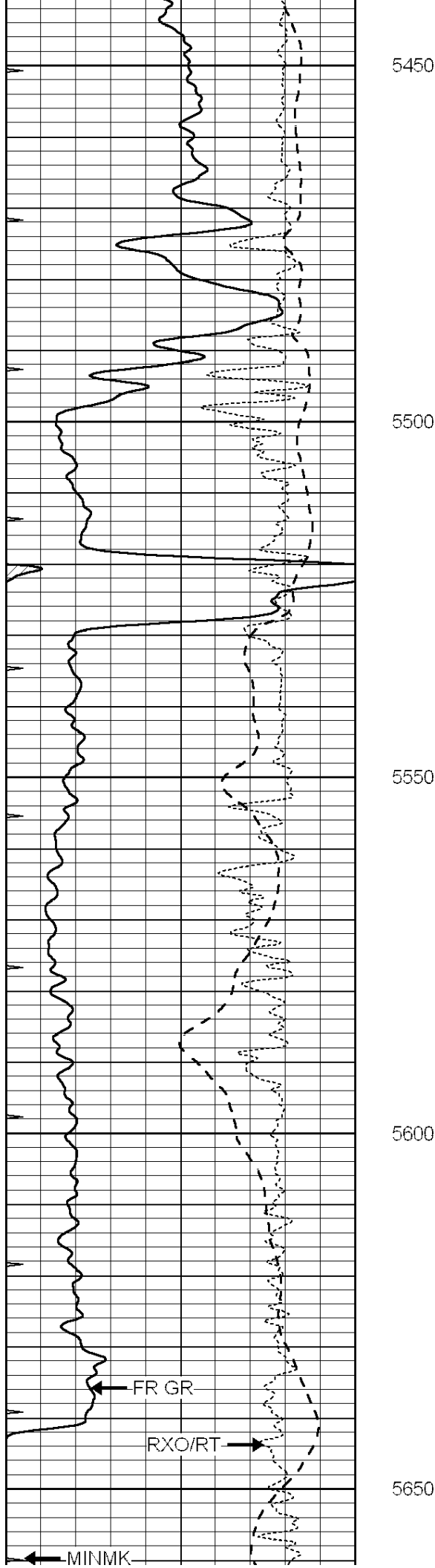
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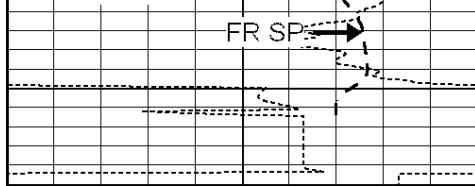
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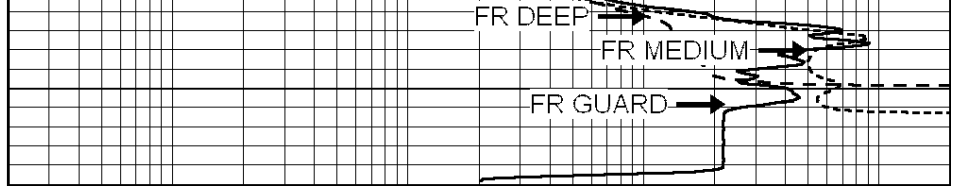
5400







LTD 5674



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

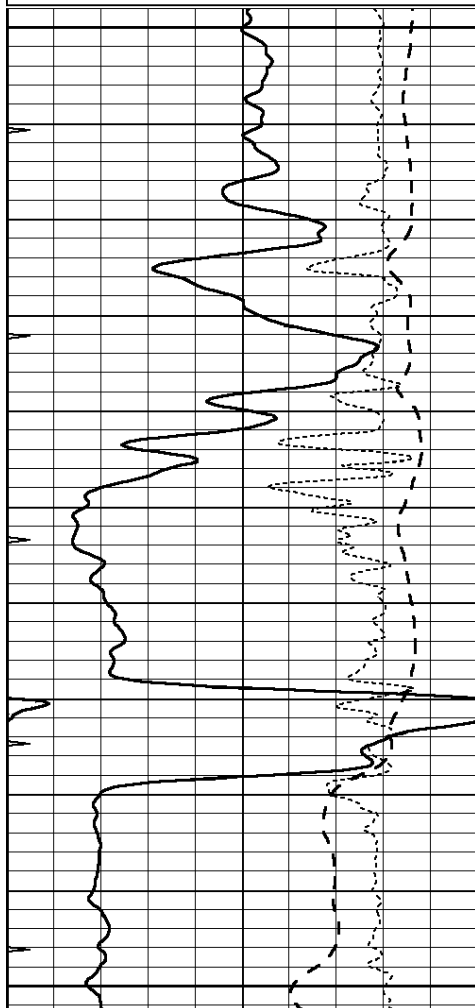


REPEAT SECTION

Database File: 22235pe.db
 Dataset Pathname: pass2.4
 Presentation Format: _dil
 Dataset Creation: Thu Jan 16 05:46:34 2014 by Calc SOC 120430
 Charted by: Depth in Feet scaled 1:240

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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

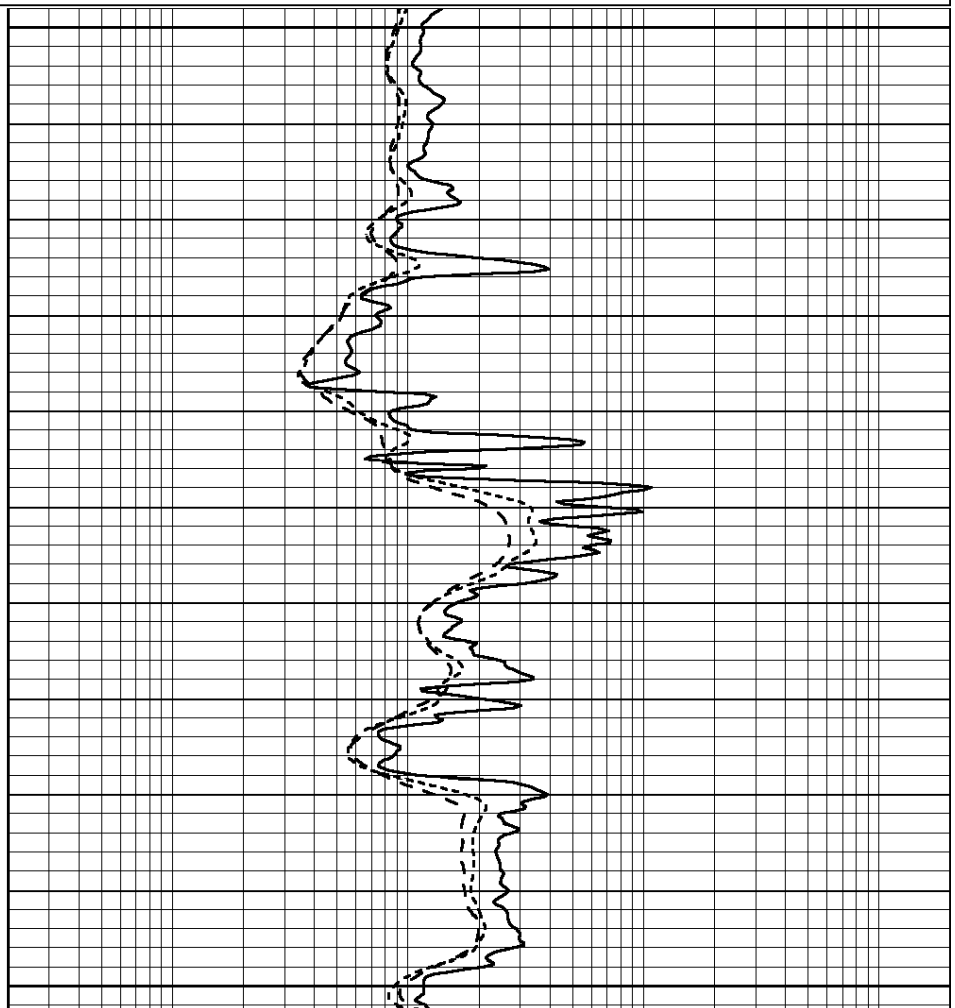
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

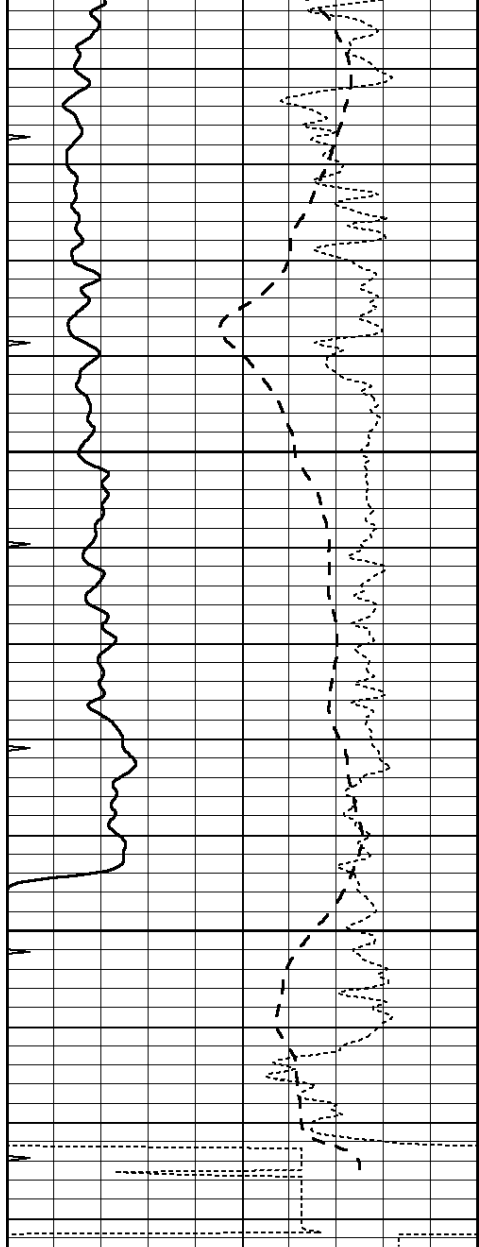


5450

5500

5550

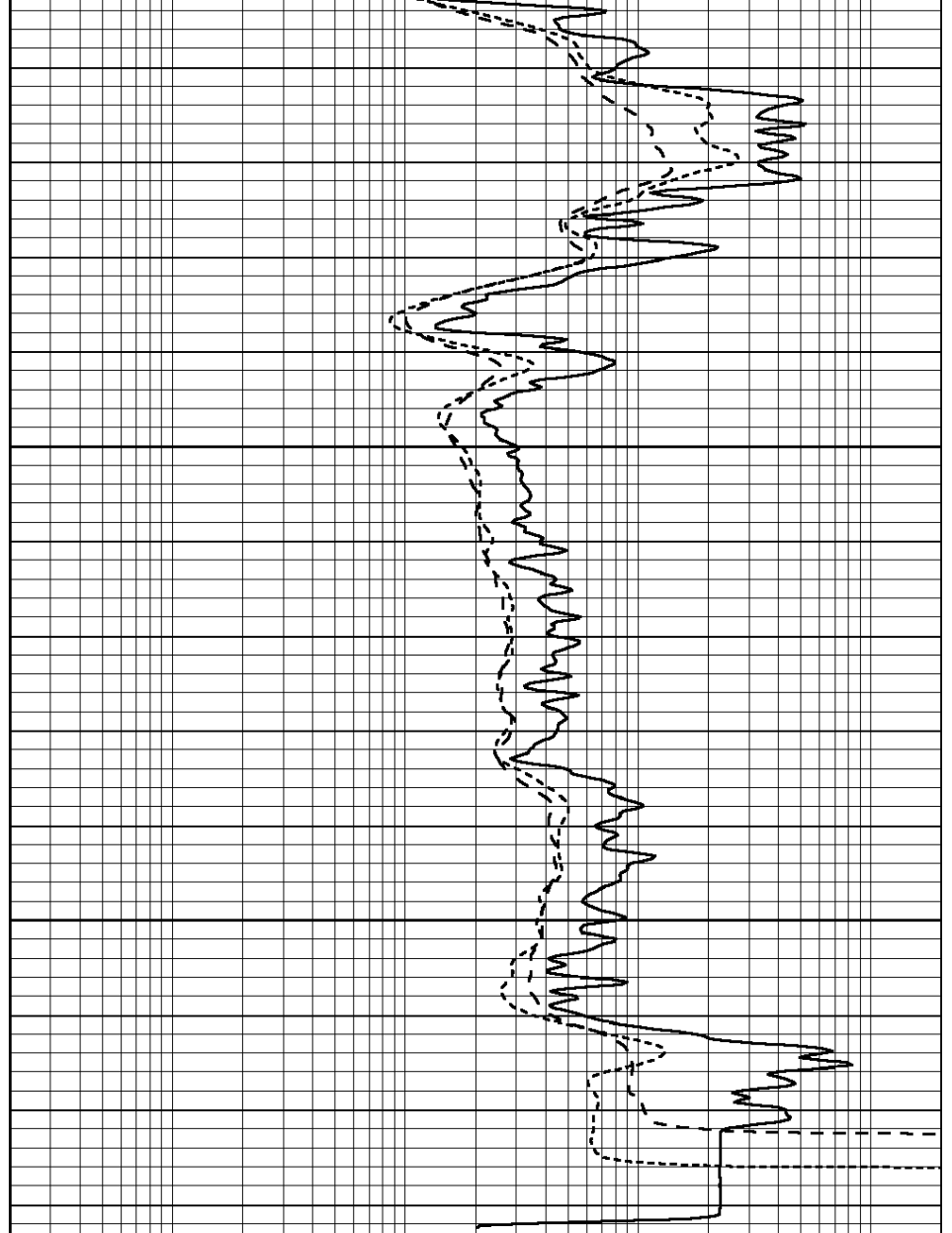




5600

5650

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: 22235pe.db
 Dataset Pathname: pass3.5
 Dataset Creation: Thu Jan 16 05:33:54 2014 by Calc SOC 120430

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG
 Surface Cal Performed: Thu Jan 16 03:06:48 2014
 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		m	b		
Deep	-0.014	0.629	0.000	400.000	mmho/m	650.000	-6.000

Medium	0.039	0.728	V	0.000	464.000	mmho/m	640.000	-8.000
Internal:	<u>Zero</u>	<u>Cal</u>		<u>Zero</u>	<u>Cal</u>		<u>m</u>	<u>b</u>
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	
	<u>Zero</u>	<u>Cal</u>		<u>Zero</u>	<u>Cal</u>		<u>m'</u>	<u>b'</u>
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	
	<u>Zero</u>	<u>Cal</u>		<u>Zero</u>	<u>Cal</u>		<u>m'</u>	<u>b'</u>
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: 004N Model: PRB

Master Calibration		Performed Mon Jun 03 09:36:56 2013						
	<u>Background</u>	<u>Magnesium</u>	<u>Aluminum</u>	<u>Sandstone</u>				
Window 1	1417.6	10391.4	3464.6	11537.5				cps
Window 2	1295.0	8959.7	3050.1	9816.4				cps
Window 3	1105.1	5464.2	2051.0	5838.8				cps
Window 4	315.0	317.7	312.9	319.8				cps
Long Space	0.0	7664.6	1755.0	8521.3				cps
Short Space	1.8	1582.4	1040.8	1699.4				cps
Rho		1.7100	2.5900	1.3800				g/cc
Pe		0.0000	2.5700	1.5500				
Rib Angle	: 44.1	Rib Slope	: 0.970	Density/Spine Ratio				: 0.574
Spine Angle	: 74.1	Spine Slope	: 3.519	Spine Intercept				: -17.0

Before Survey Verification		Performed Wed Dec 31 18:00:00 1969						
	<u>Background</u>	<u>Magnesium</u>	<u>Aluminum</u>	<u>Sandstone</u>				
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						
	<u>Background</u>	<u>Magnesium</u>	<u>Aluminum</u>	<u>Sandstone</u>				
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: Thu Dec 19 09:01:02 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps