



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**DUAL INDUCTION  
LOG**

Company CASTELLI EXPLORATION, INC.  
Well CHARLIE BROWN #2-25  
Field HAM NORTHEAST  
County COMANCHE  
State KANSAS

Company CASTELLI EXPLORATION, INC.  
Well CHARLIE BROWN #2-25  
Field HAM NORTHEAST  
County COMANCHE State KANSAS

Location: API # : 15-033-21739-0000  
2145' FSL & 2195' FWL  
SW - NE - NE - SW  
SEC 25 TWP 33S RGE 16W  
Permanent Datum GROUND LEVEL Elevation 1759  
Log Measured From KELLY BUSHING 12' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
CDL/CNL/PE  
MEL  
Elevation  
K.B. 1771  
D.F. 1769  
G.L. 1759

Date	12/7/13
Run Number	ONE
Depth Driller	5700
Depth Logger	5710
Bottom Logged Interval	5708
Top Log Interval	00
Casing Driller	13 3/8" @ 333'
Casing Logger	333
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	.950 @ .55F
Rmf @ Meas. Temp	.713 @ .55F
Rmc @ Meas. Temp	1.14 @ .55F
Source of Rmf / Rmc	MEASUREMENT
Rim @ BHT	.399 @ 131F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	12:30 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,  
7S. & E. & S. TO OLD BARN, CONTINUE E. PAST MERRILL RANCH SIGN TO "T" 1/2S. ON RD. 31, E. SIDE



**MAIN SECTION**

Database File: 011822pe.db  
 Dataset Pathname: pass3.8  
 Presentation Format: dil2  
 Dataset Creation: Sun Dec 08 02:06:42 2013  
 Charted by: Depth in Feet scaled 1:600

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

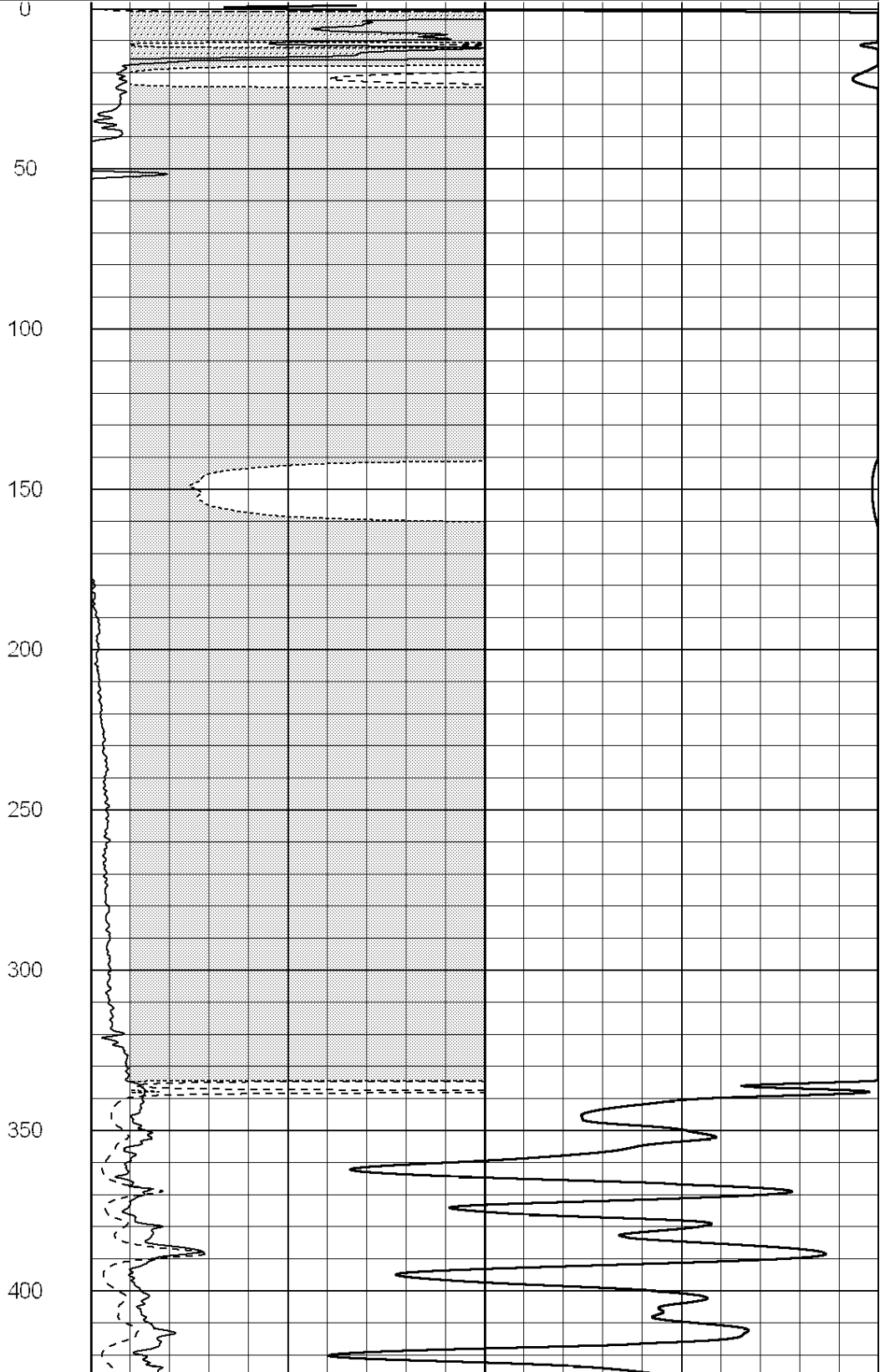
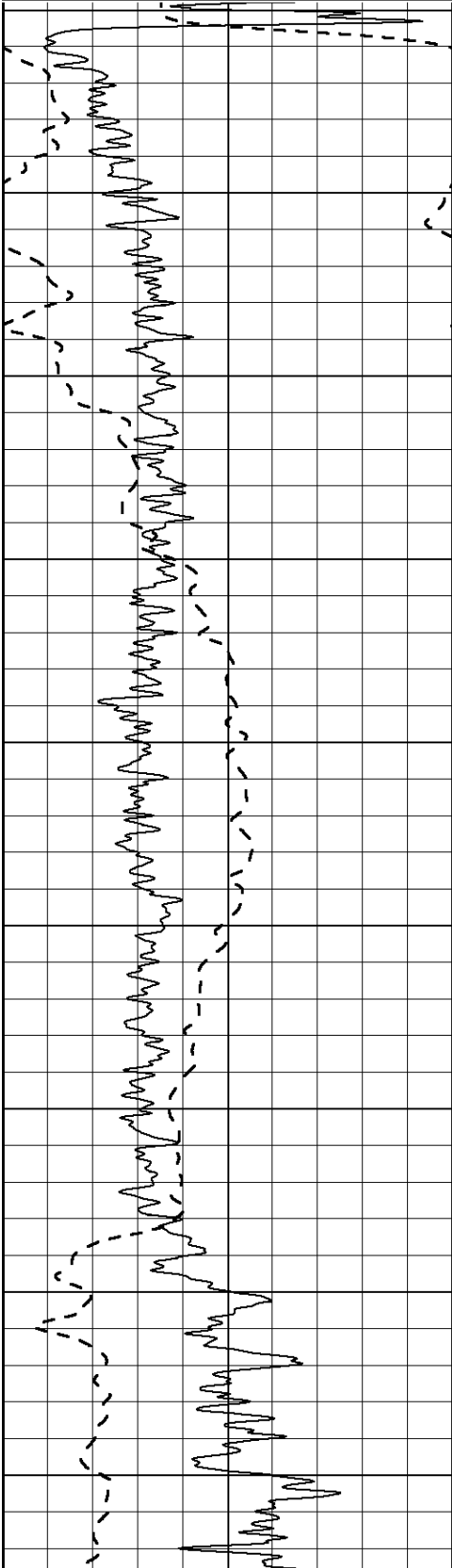
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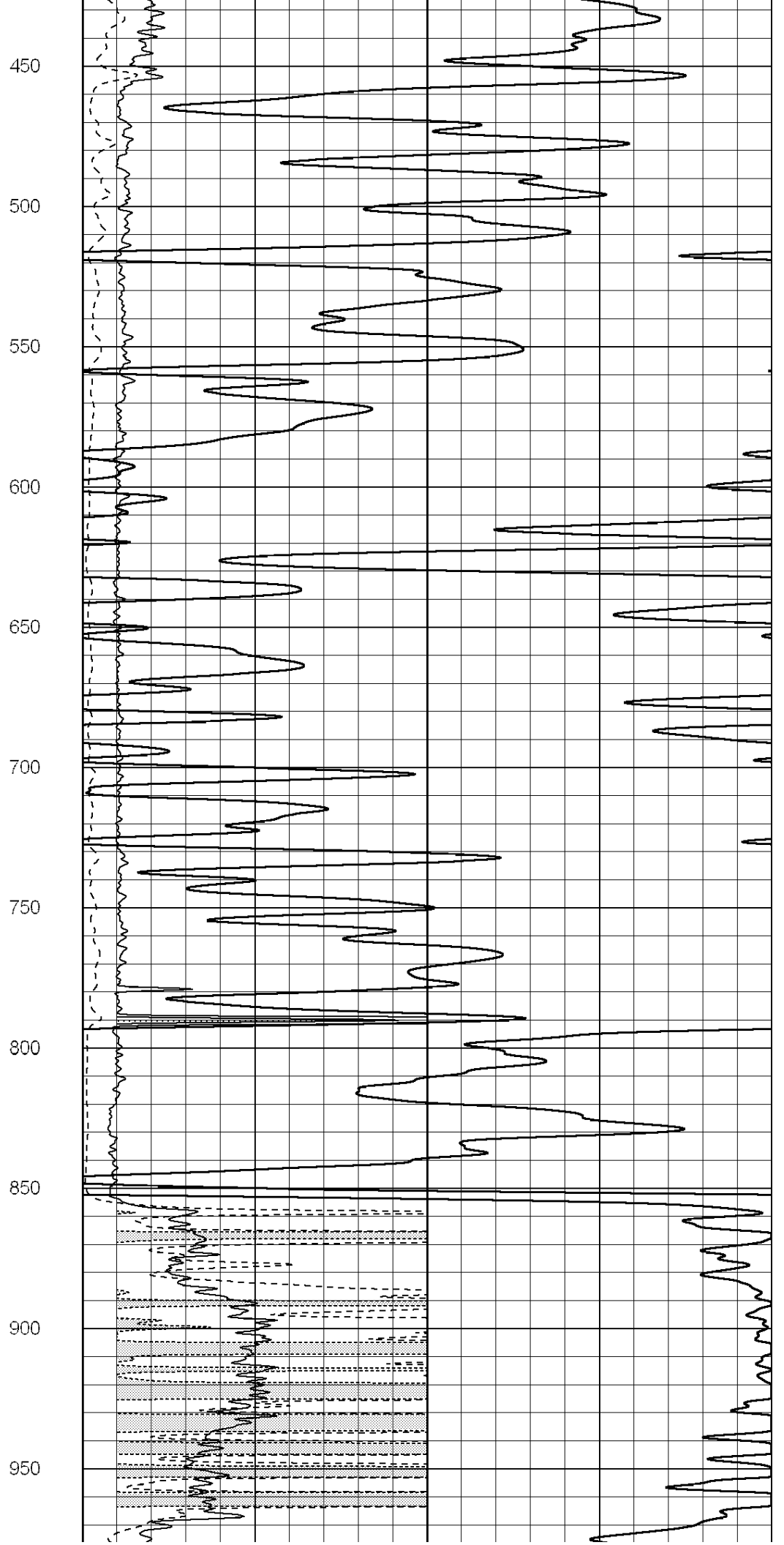
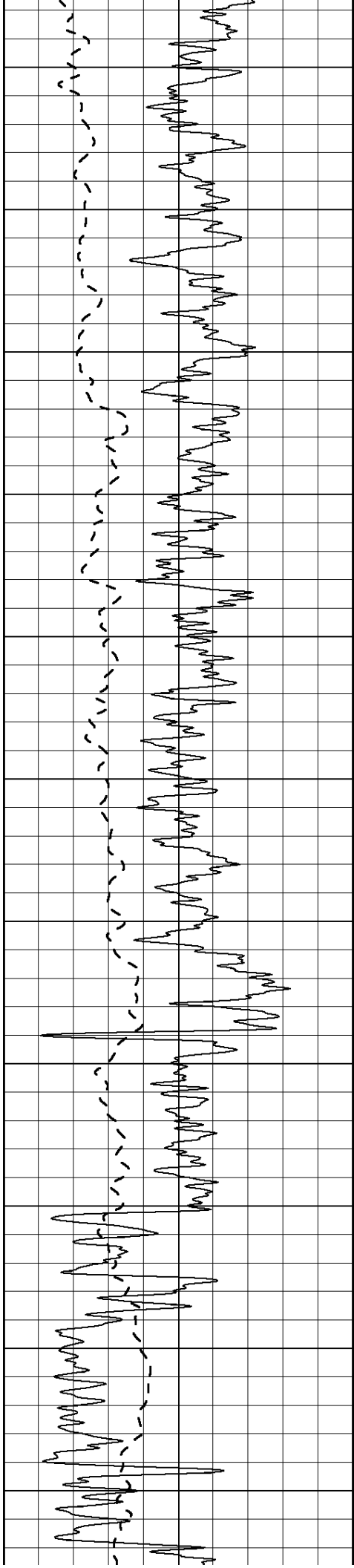
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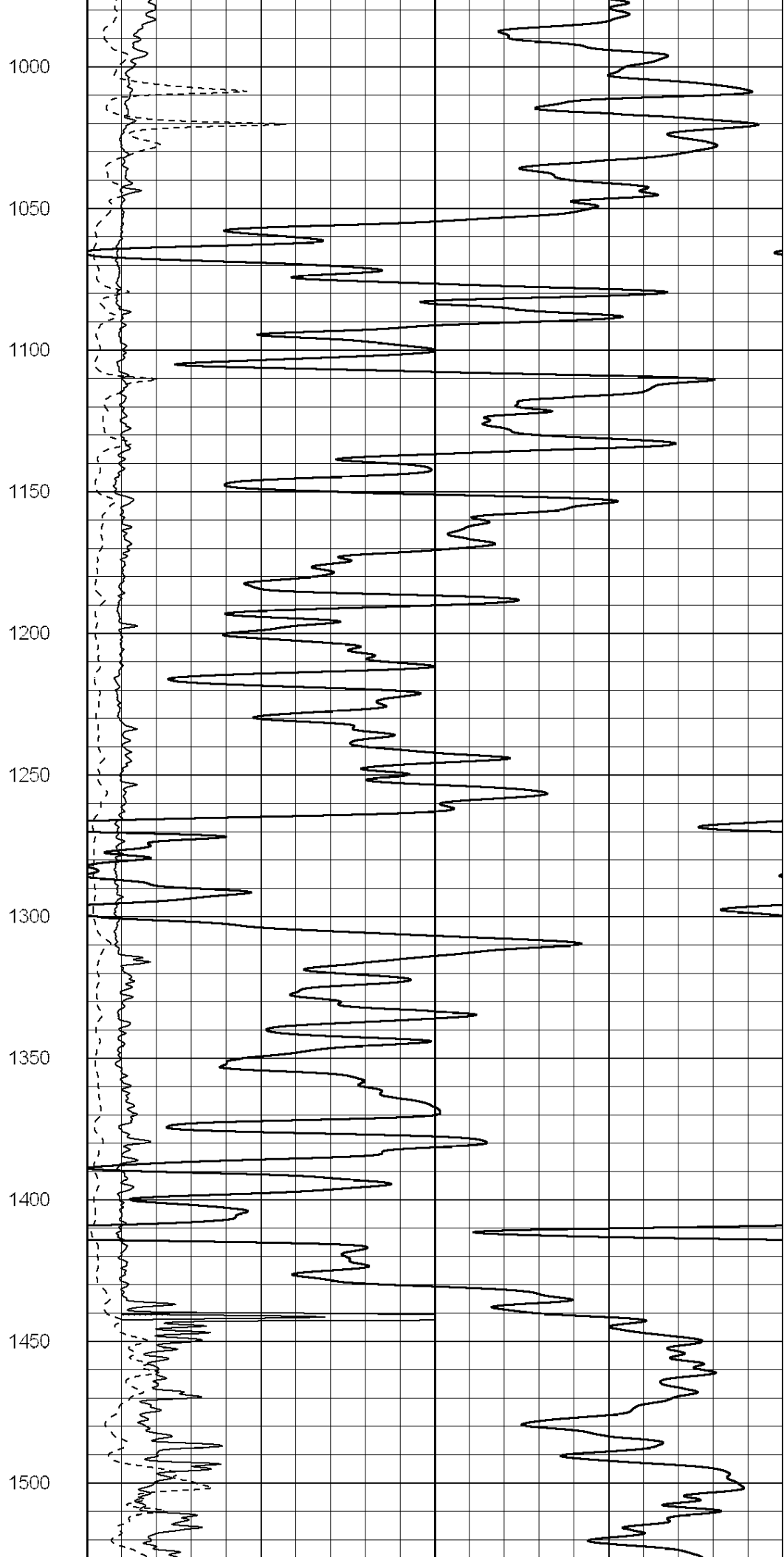
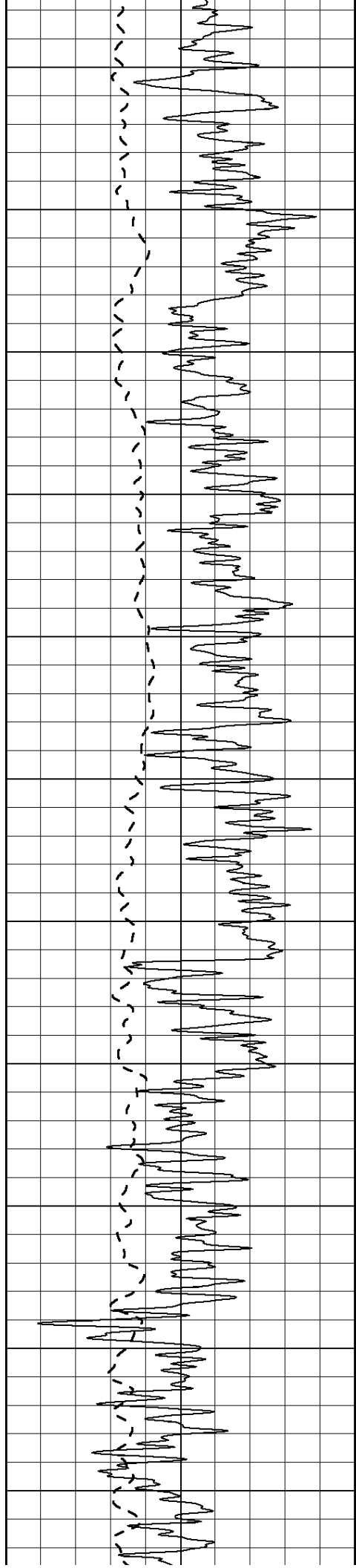
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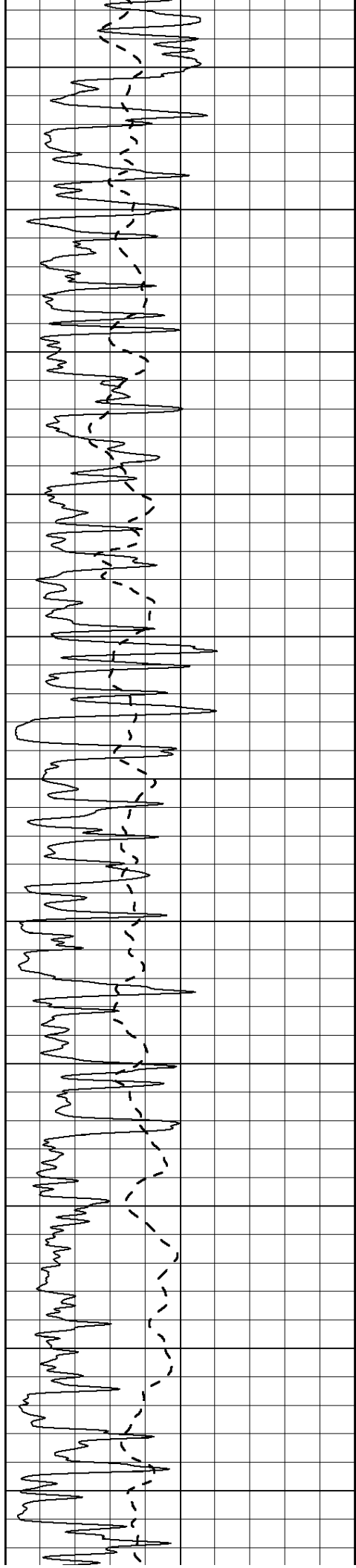
50	RILD X10 (Ohm-m)	500
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50	RLL3 X10 (Ohm-m)	500
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1550

1600

1650

1700

1750

1800

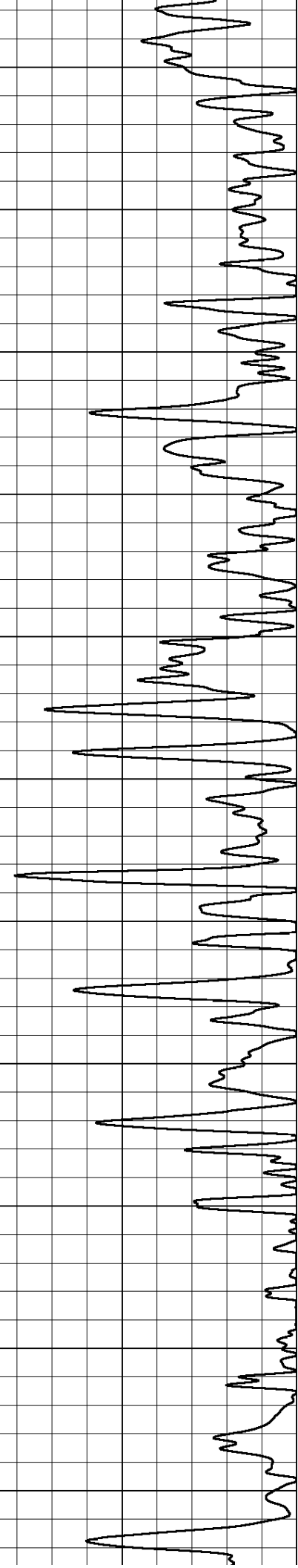
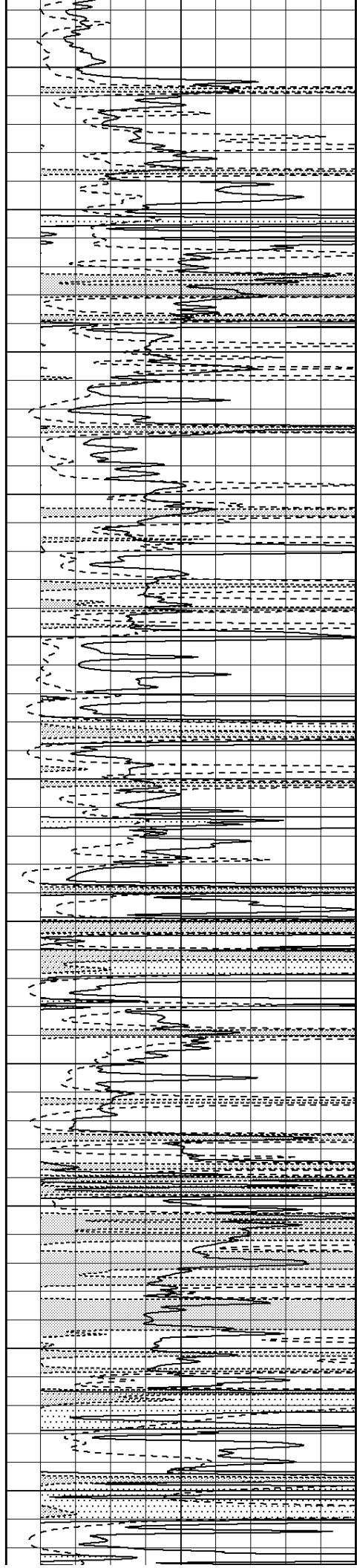
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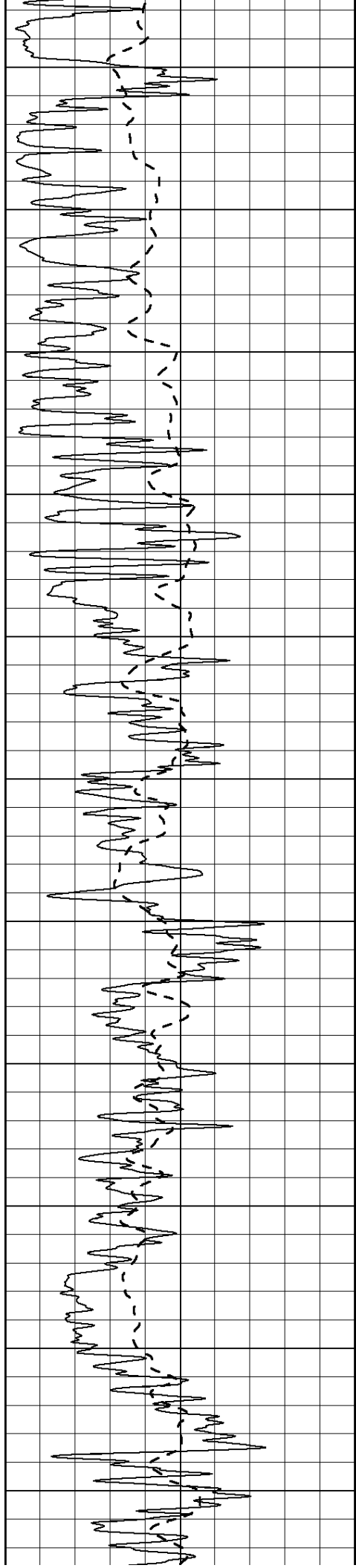
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1950

2000

2050





2100

2150

2200

2250

2300

2350

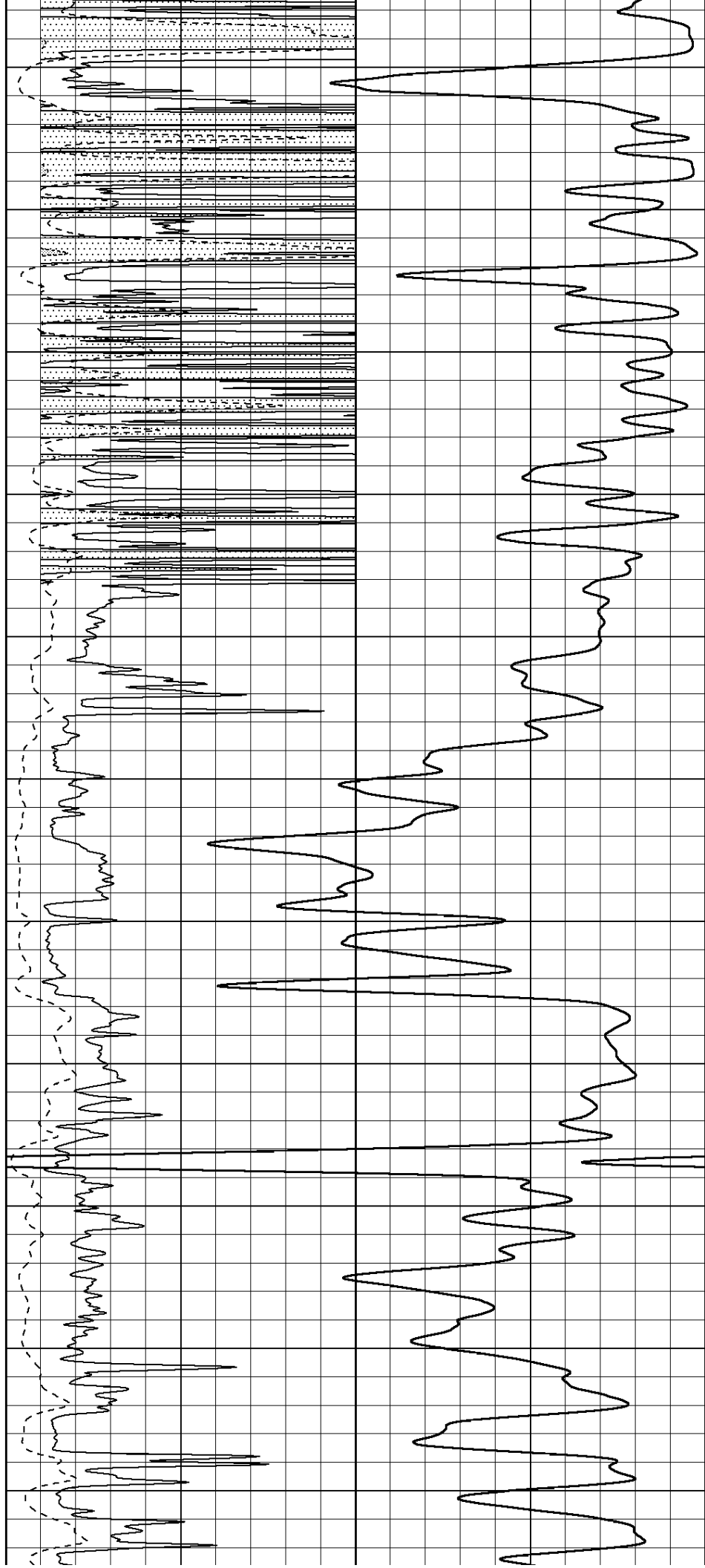
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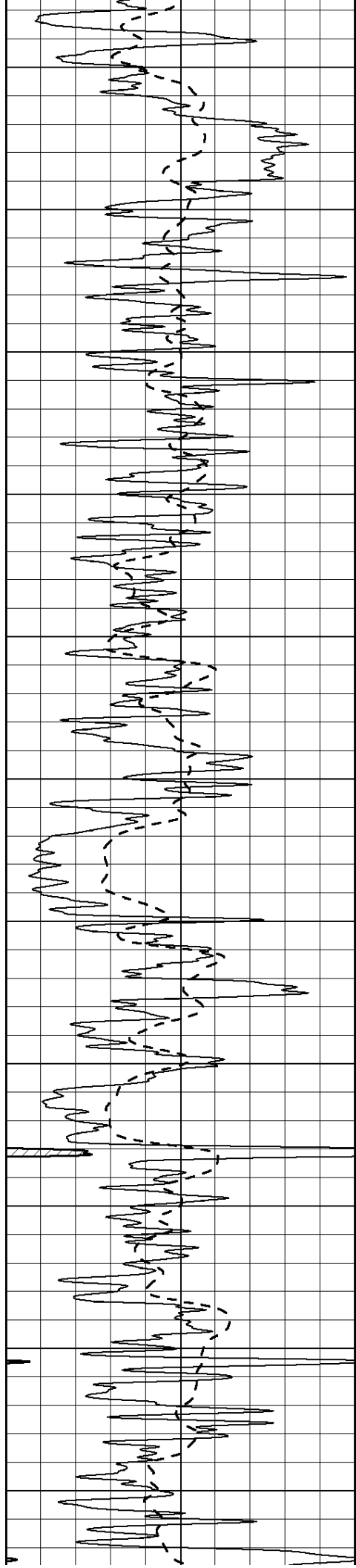
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2500

2550

2600





2650

2700

2750

2800

2850

2900

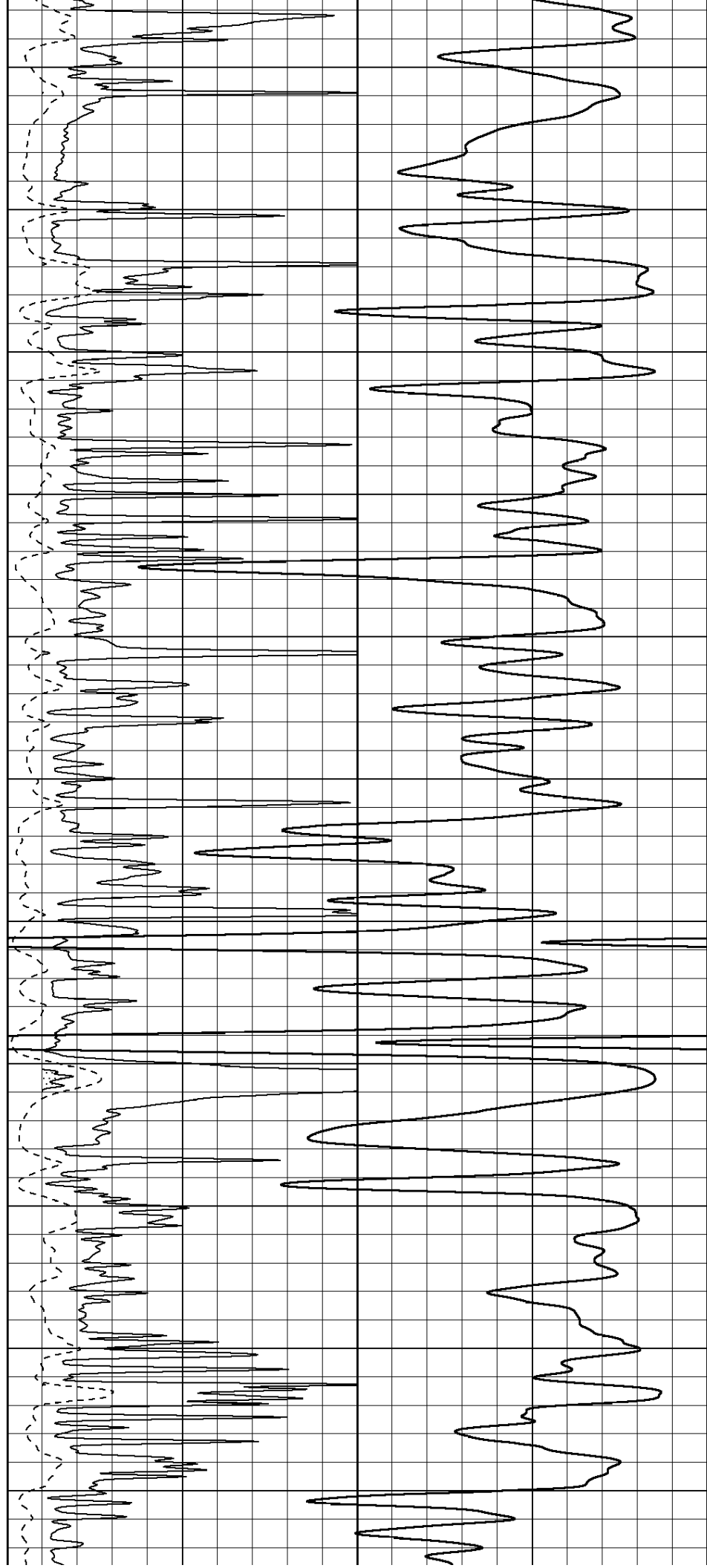
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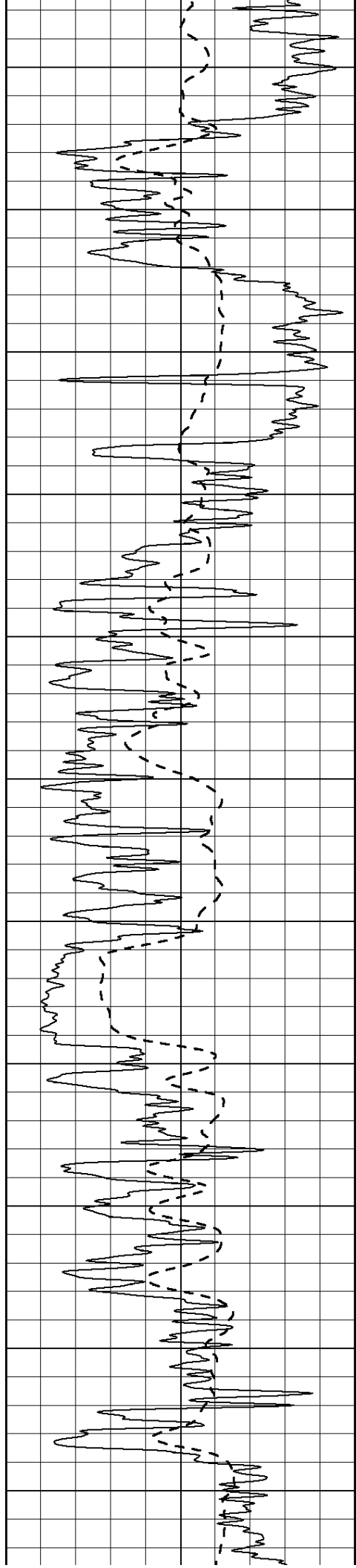
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3100

3150





3200

3250

3300

3350

3400

3450

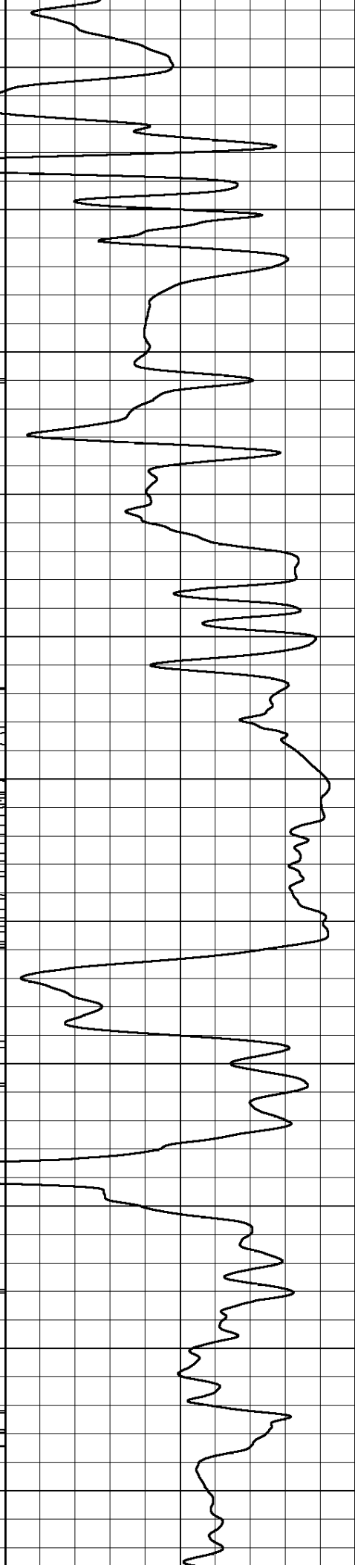
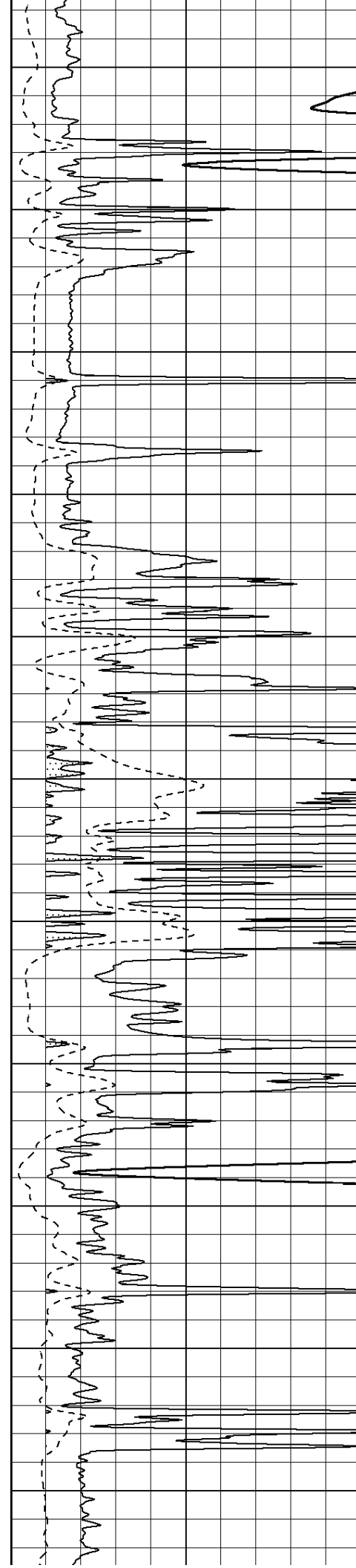
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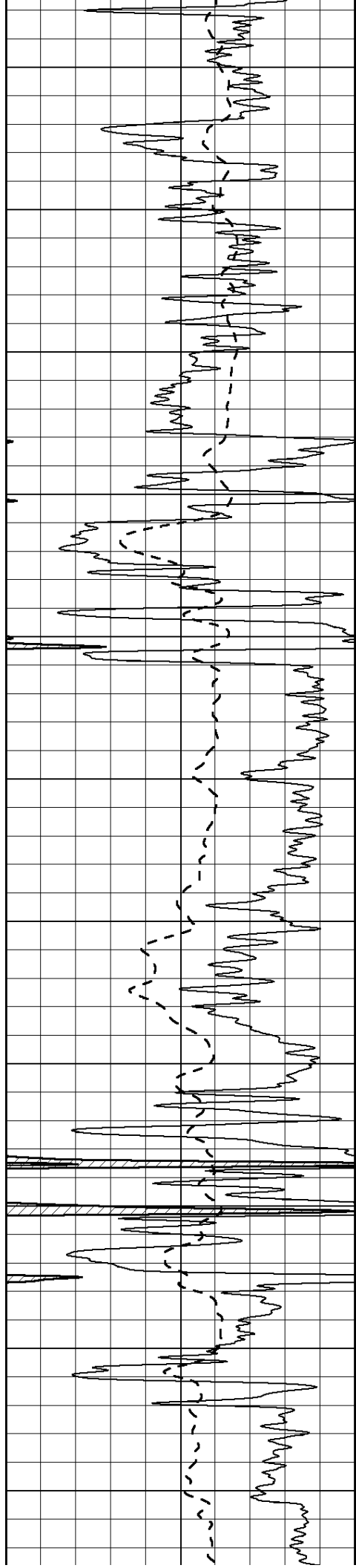
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3600

3650

3700





3750

3800

3850

3900

3950

4000

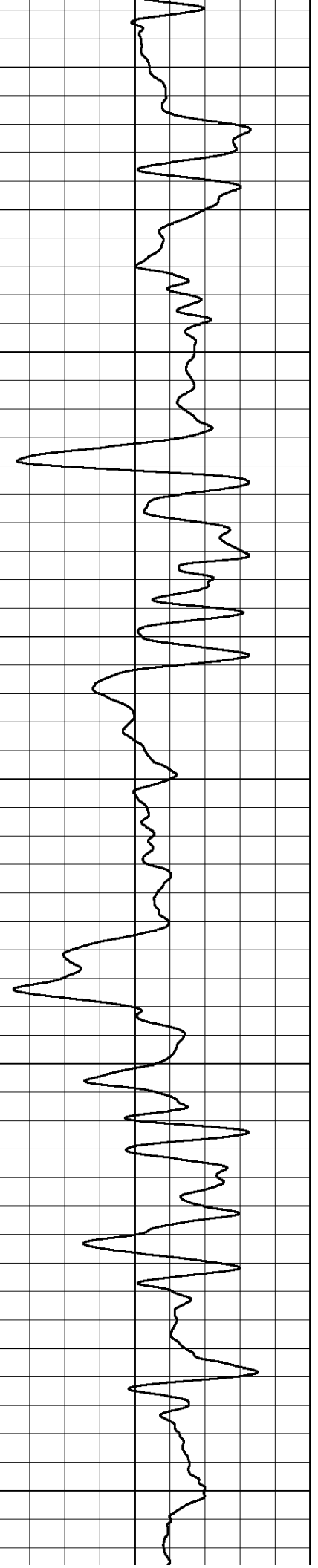
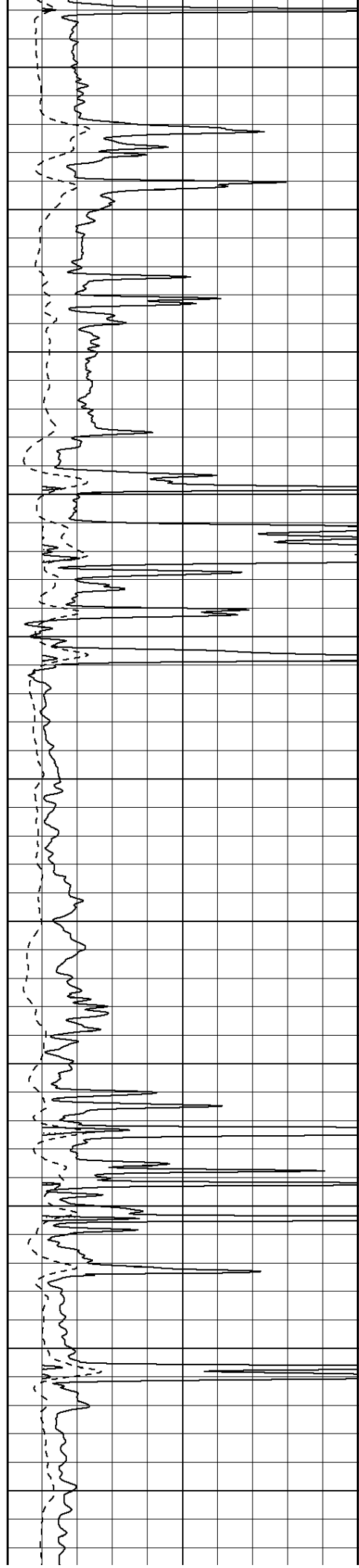
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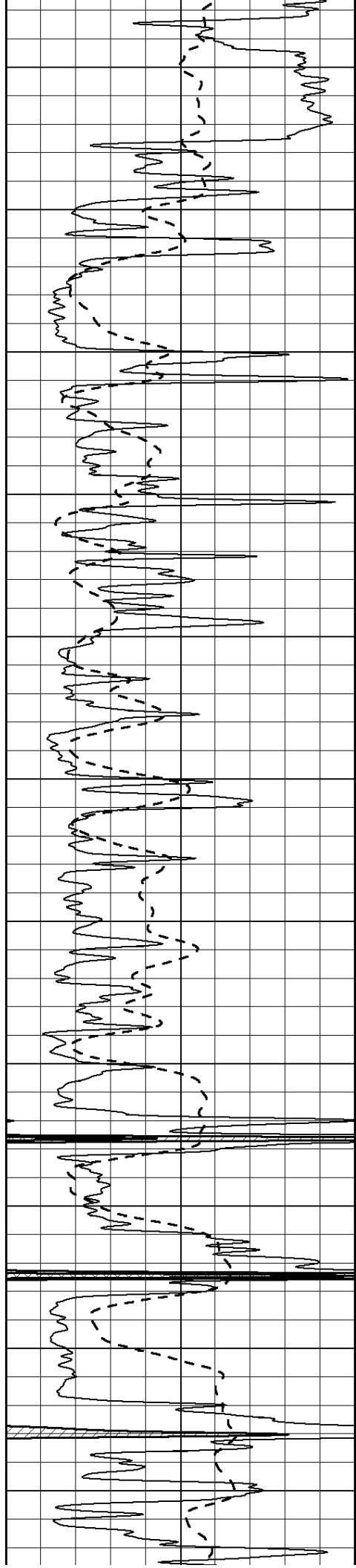
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4250





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4350

4400

4450

4500

4550

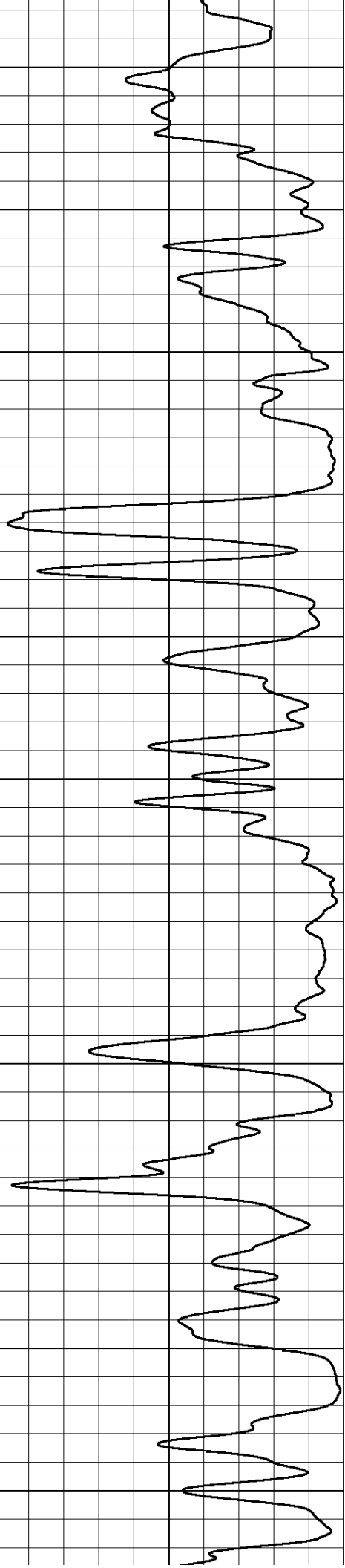
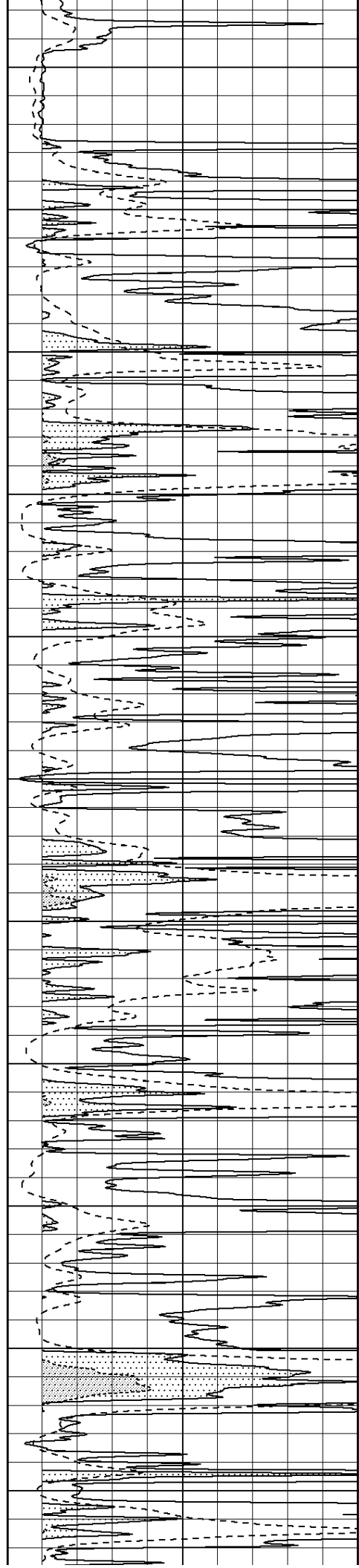
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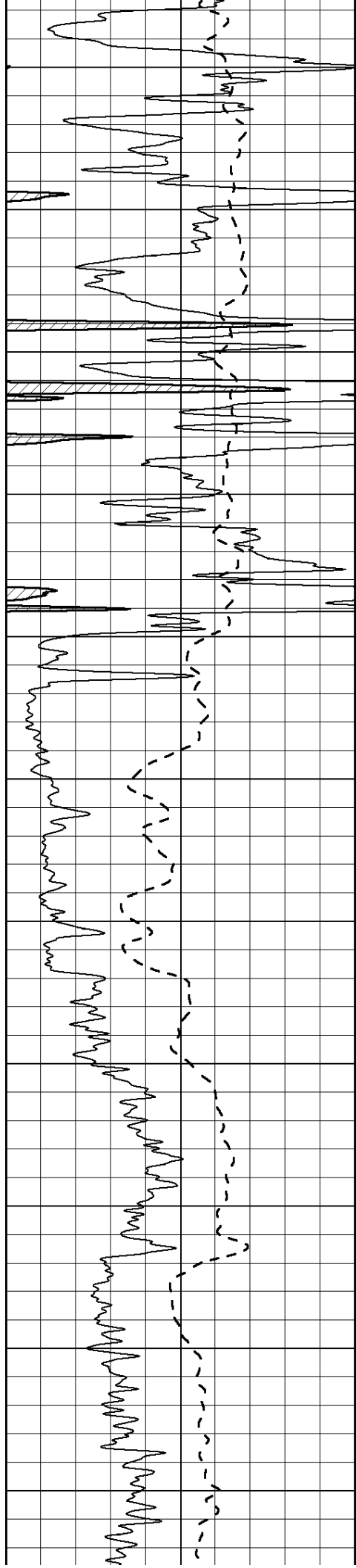
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4800





4850

4900

4950

5000

5050

5100

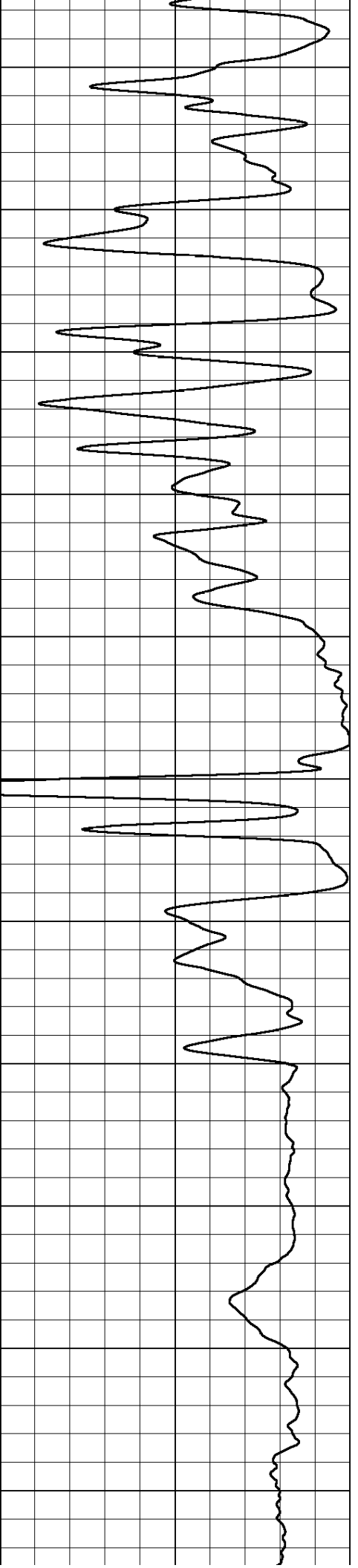
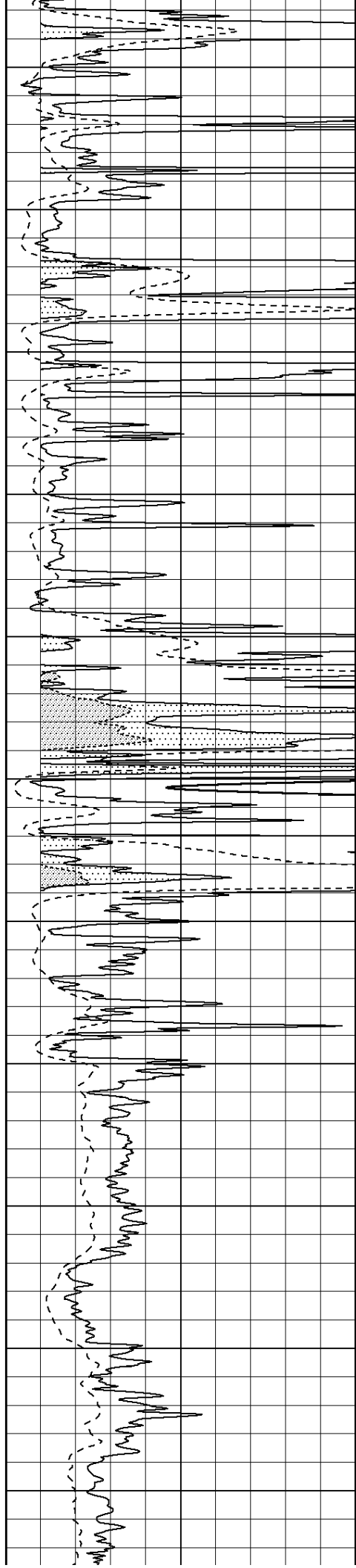
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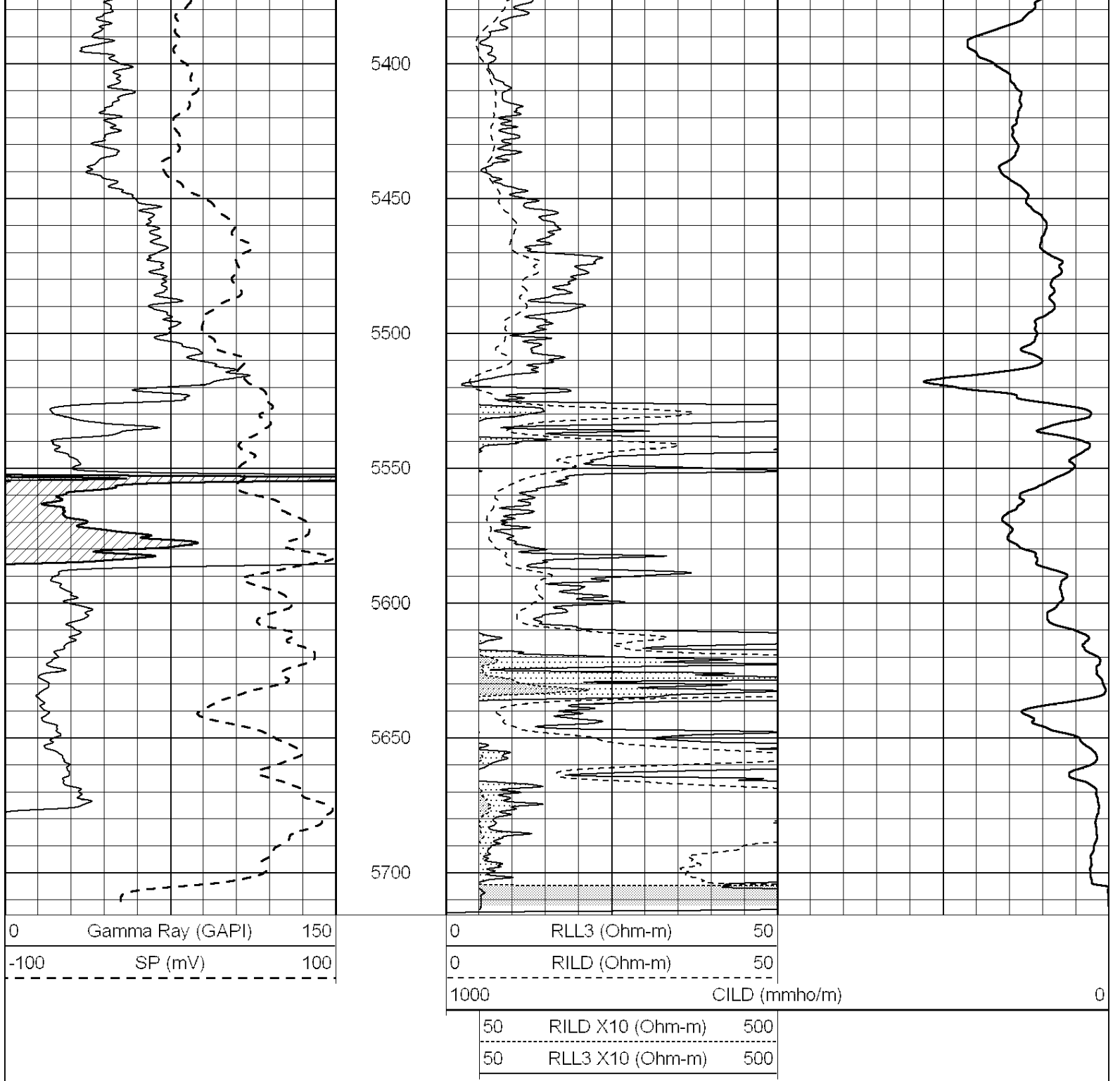
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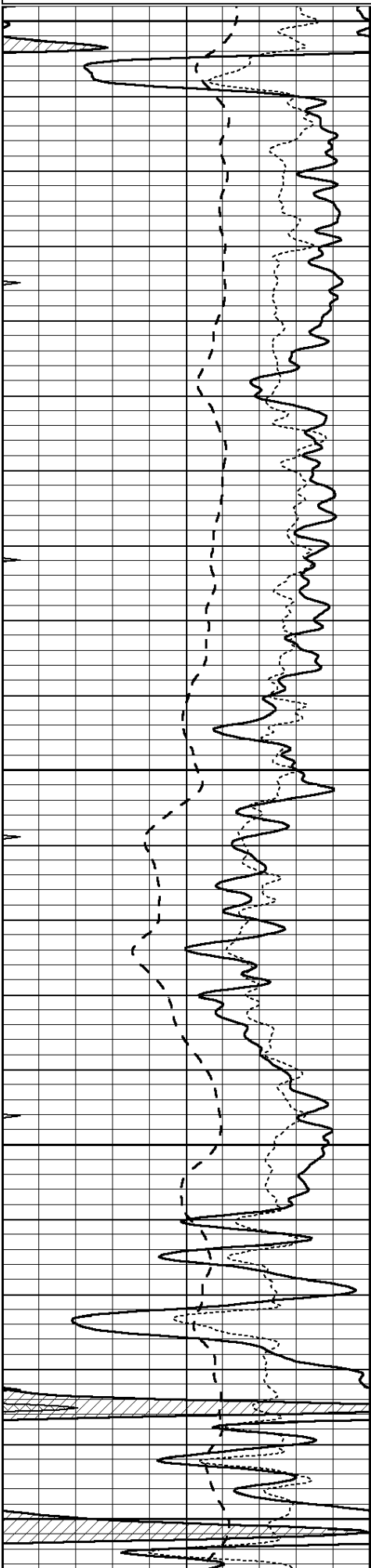
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# MAIN SECTION

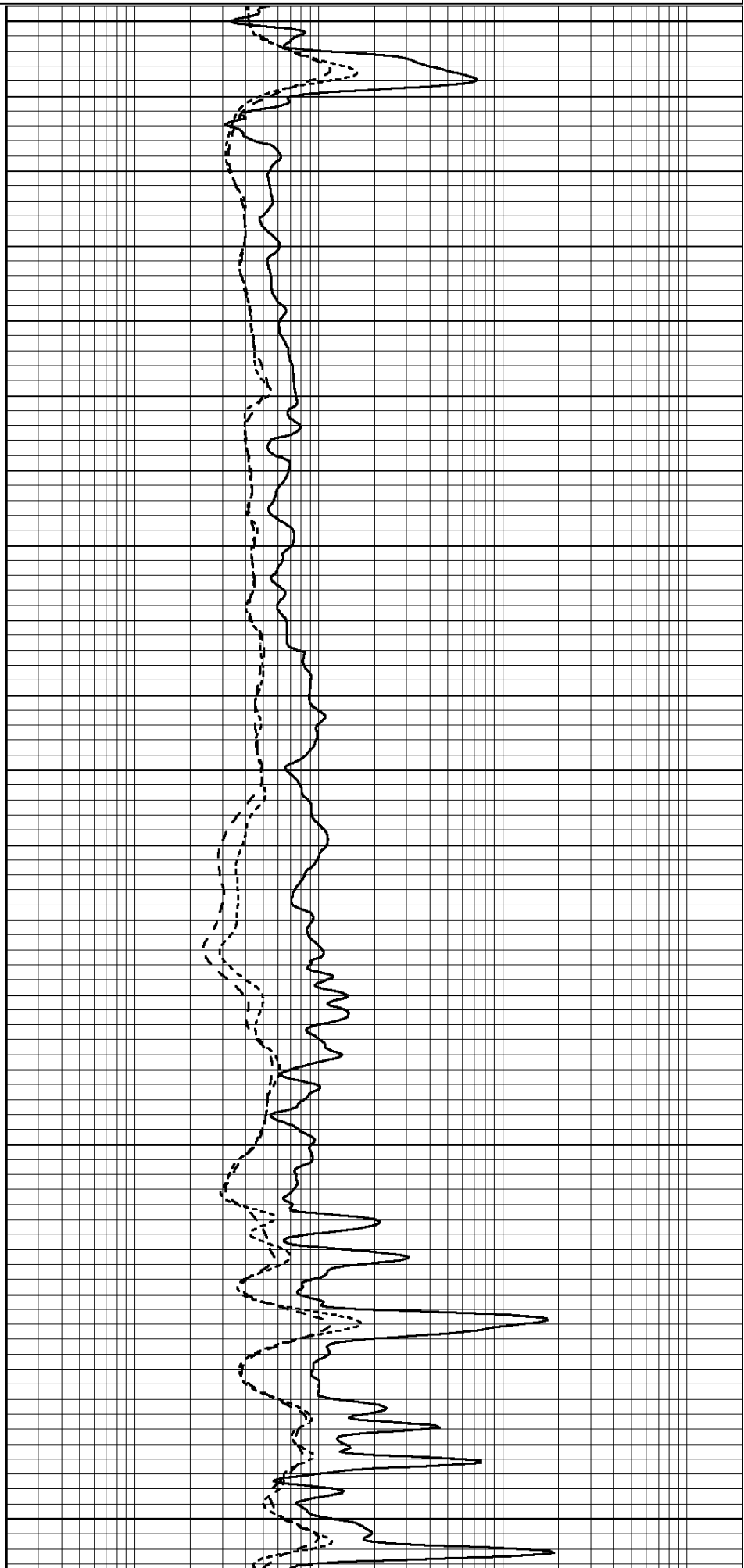
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 Dataset Pathname: pass3.8  
 Presentation Format: dil  
 Dataset Creation: Sun Dec 08 02:06:42 2013  
 Charted by: Depth in Feet scaled 1:240

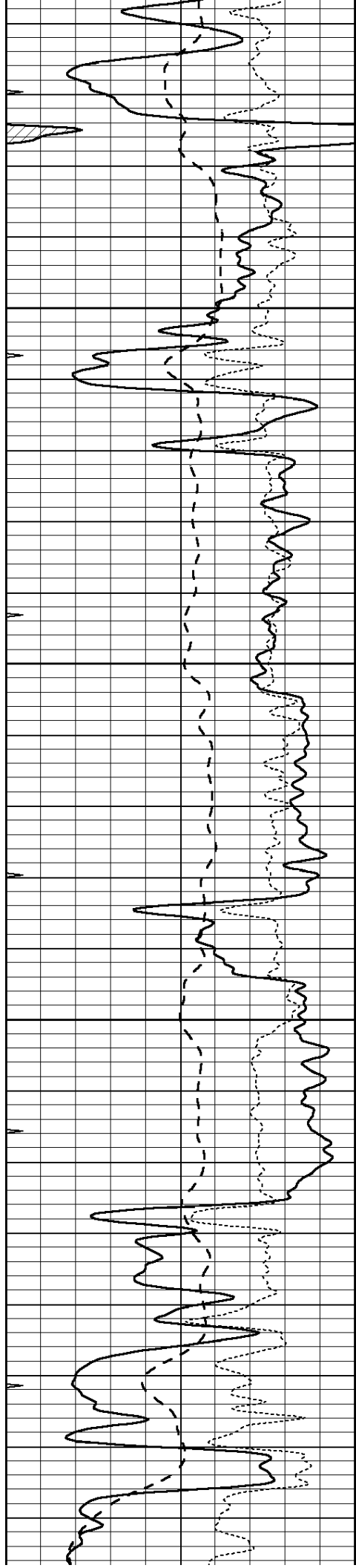
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50

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



3950  
4000  
4050  
4100  
4150



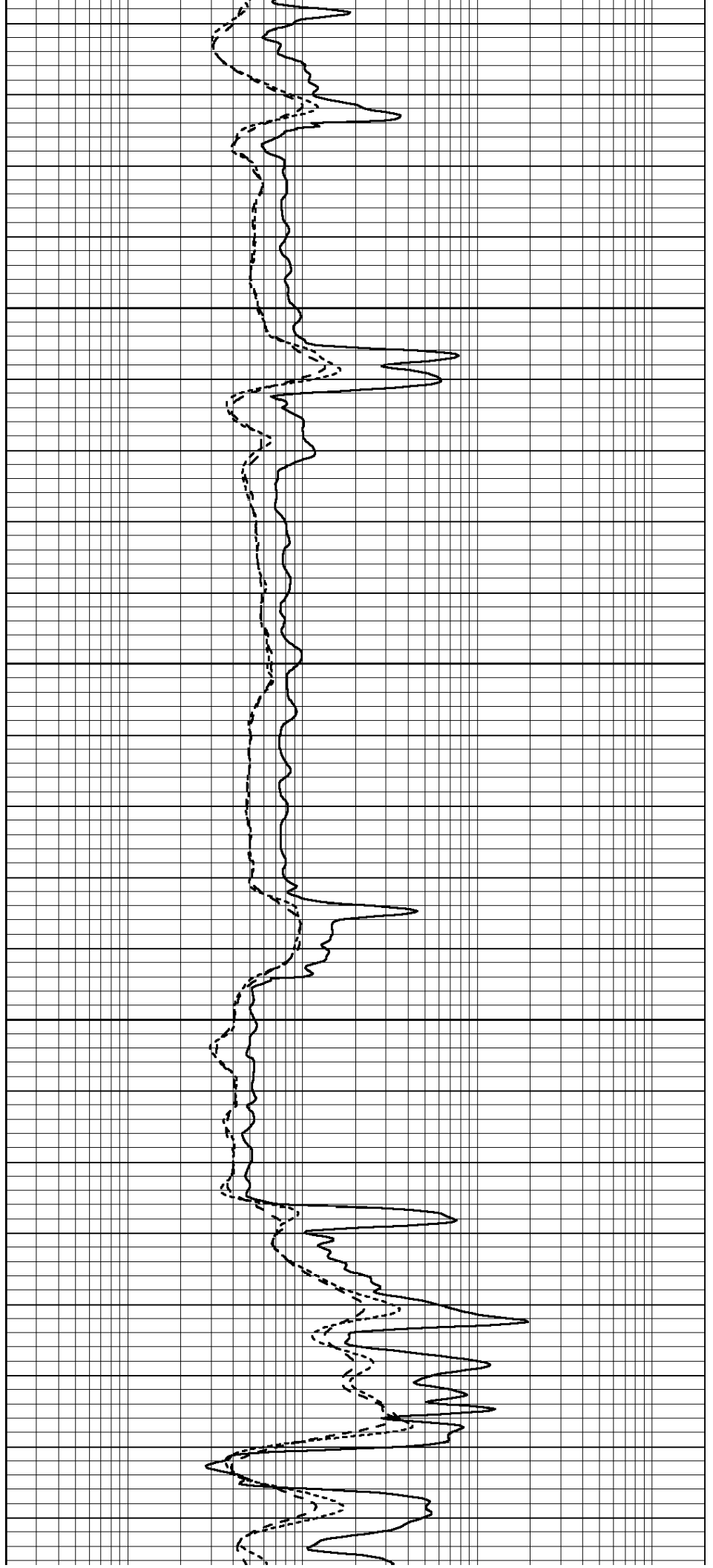


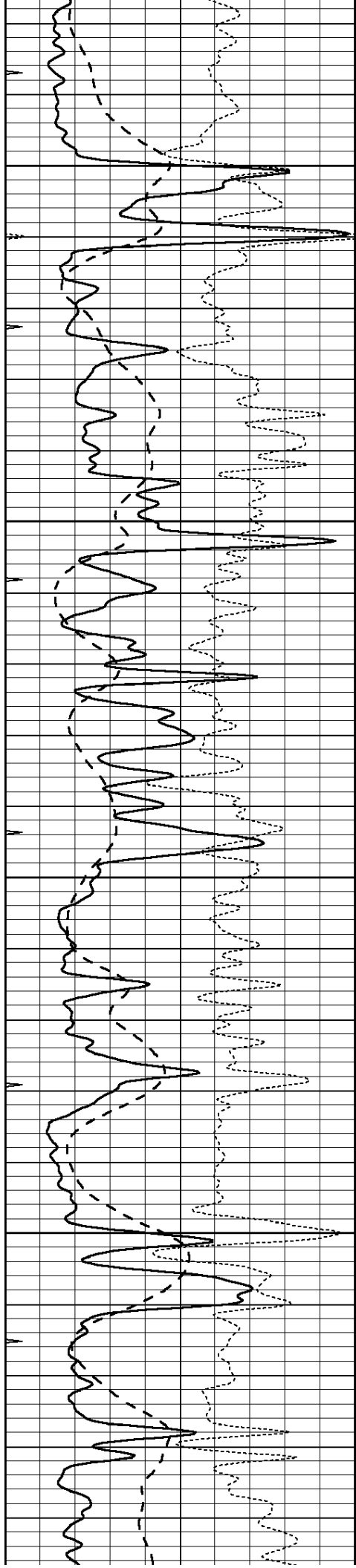
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4250

4300

4350



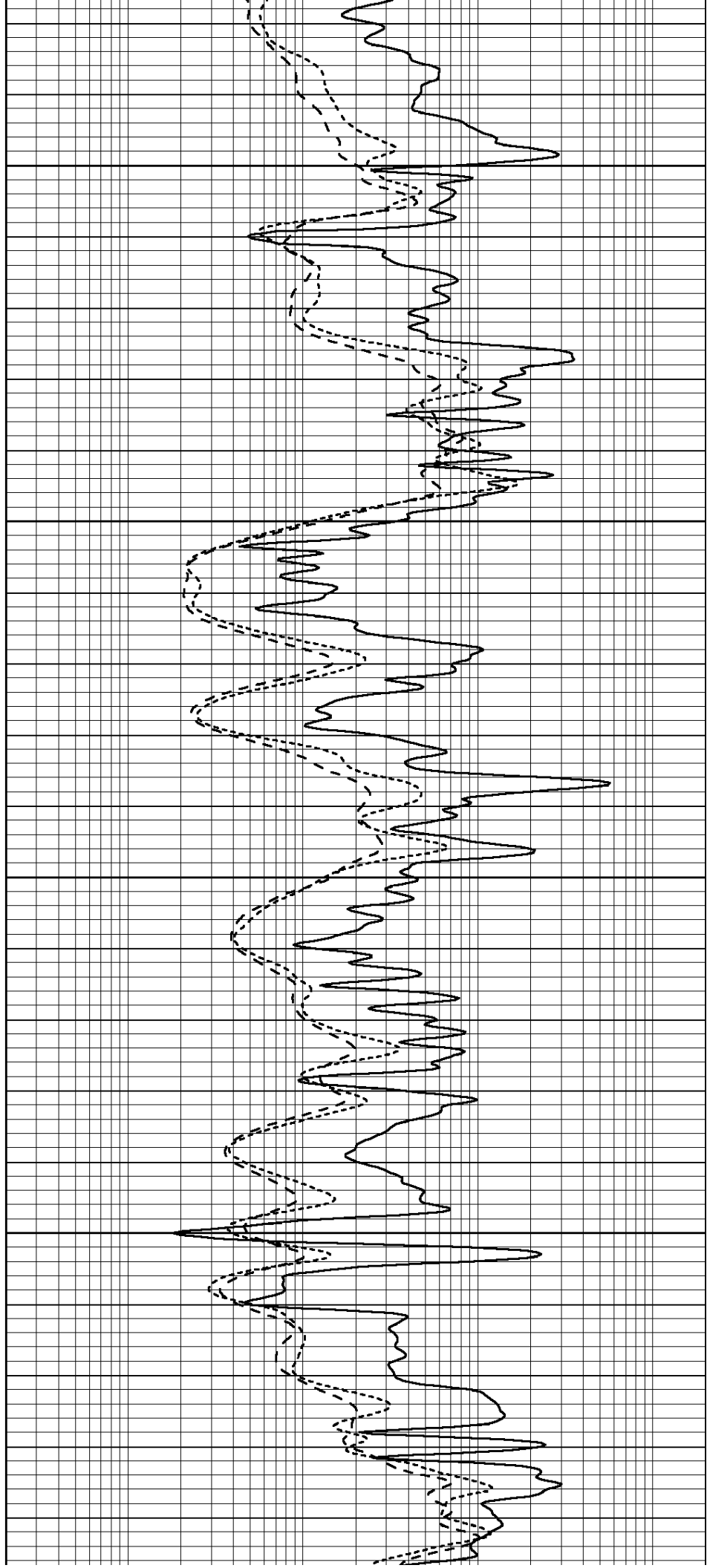


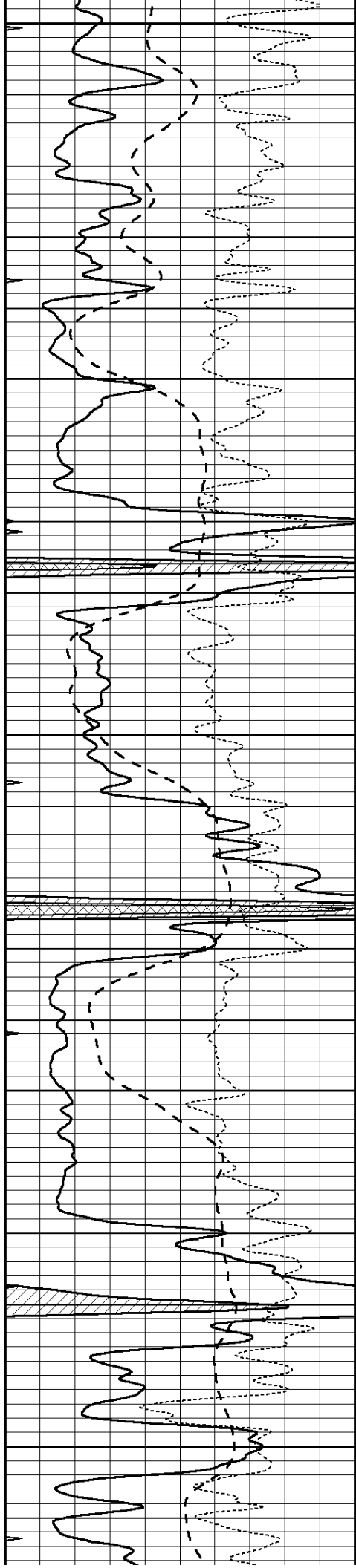
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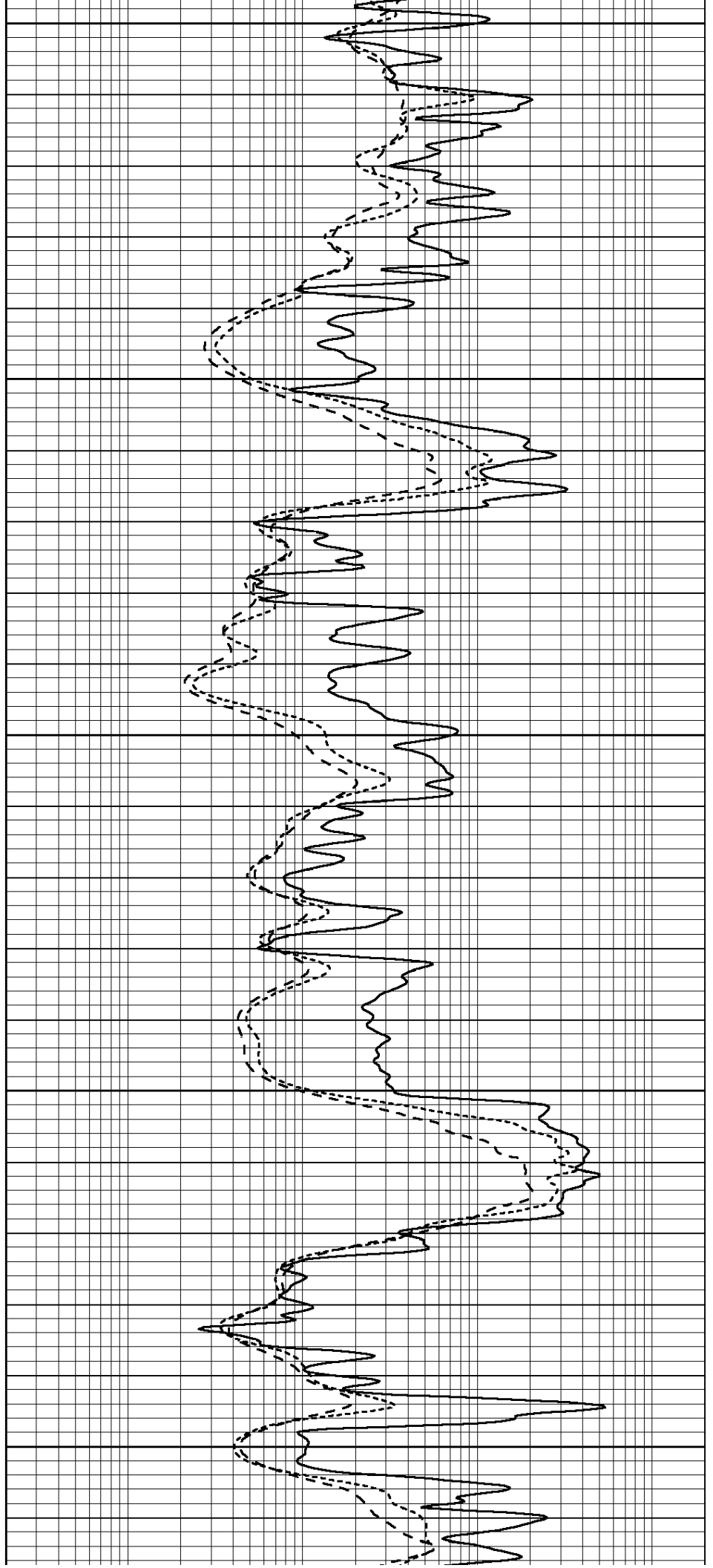
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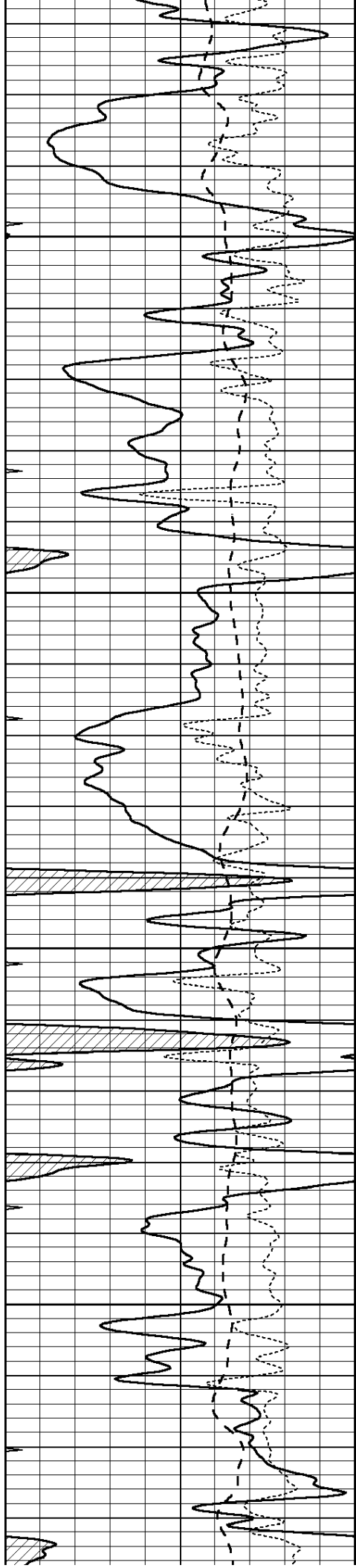
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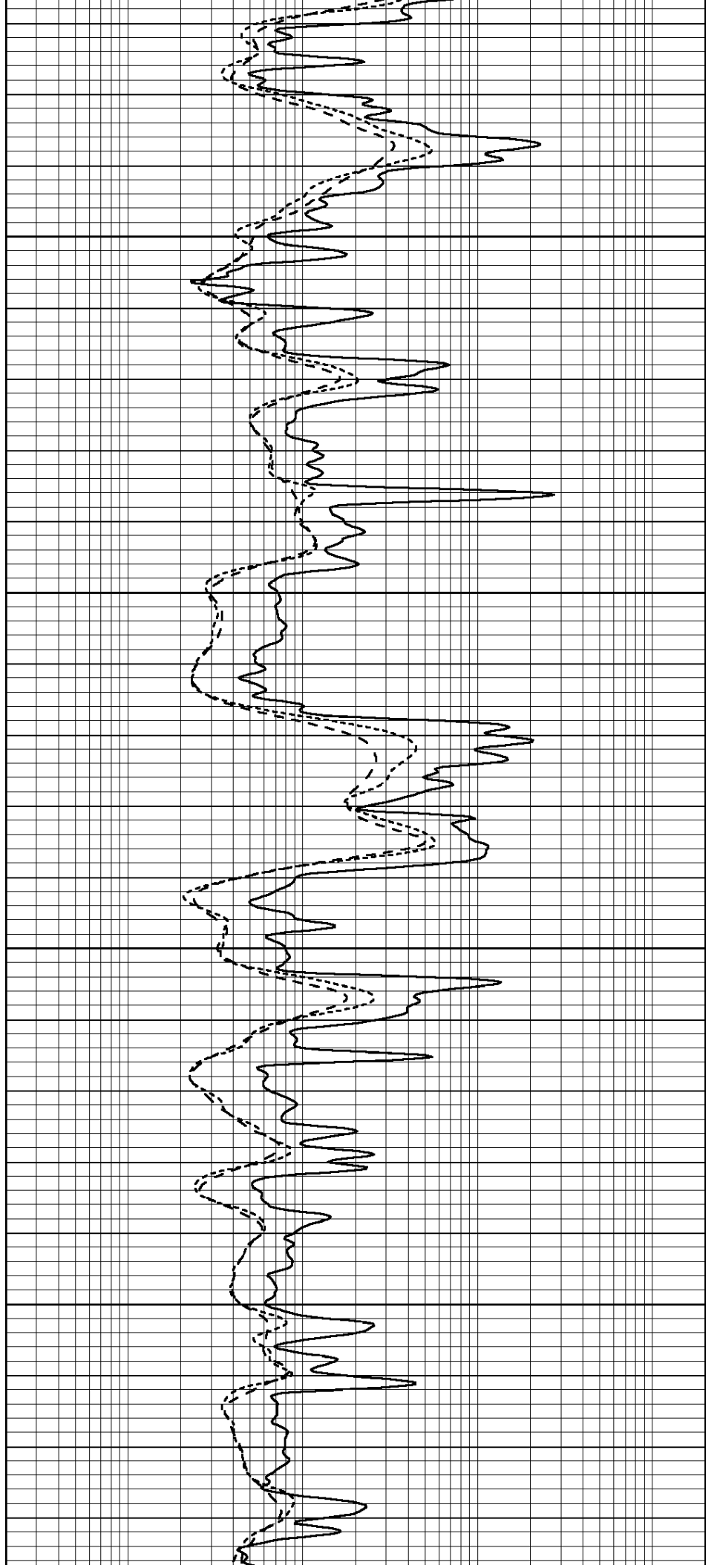


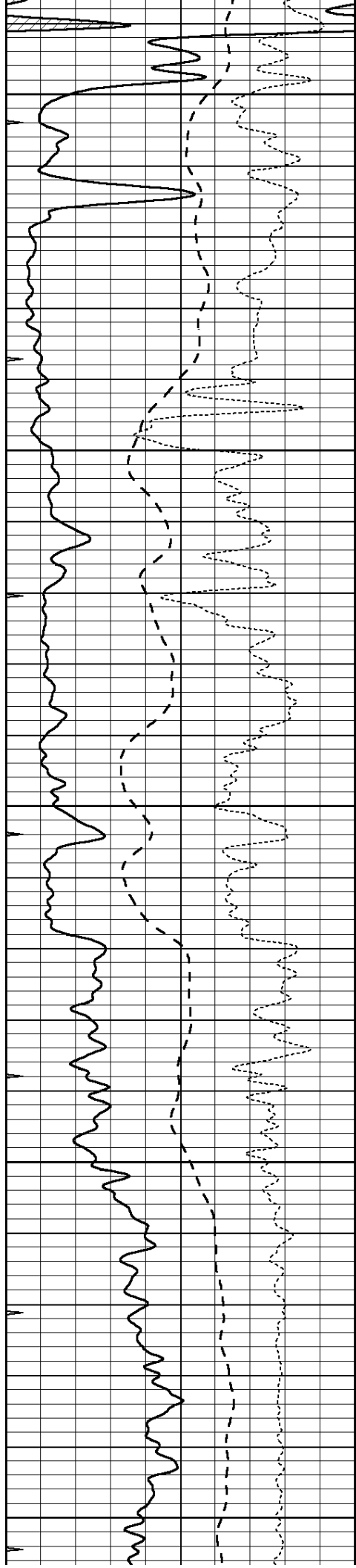
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4900

4950

5000





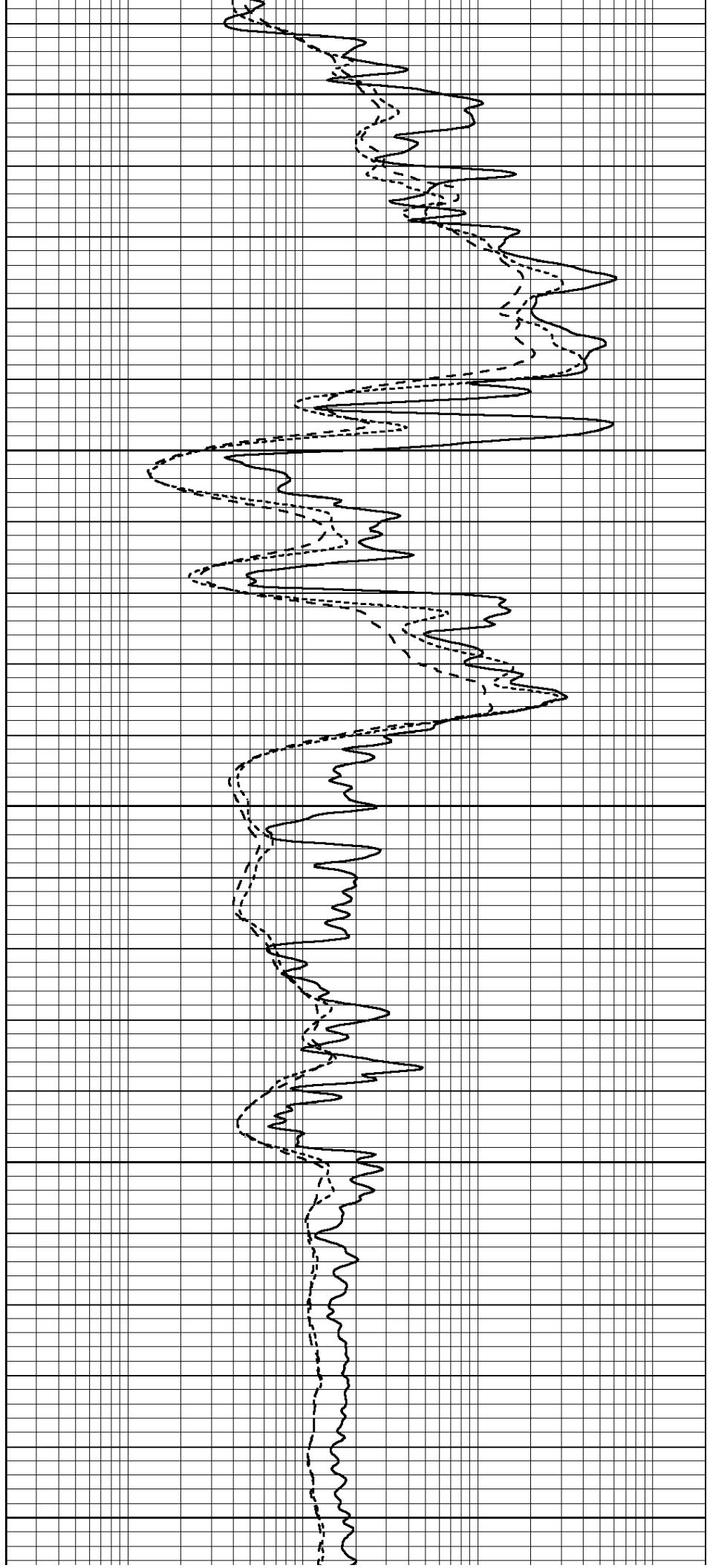
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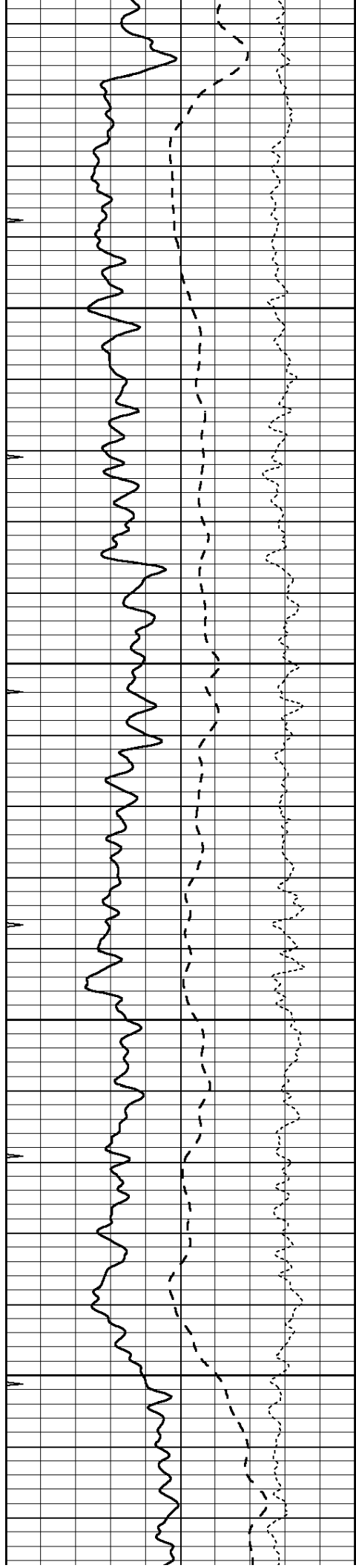
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5150

5200

5250



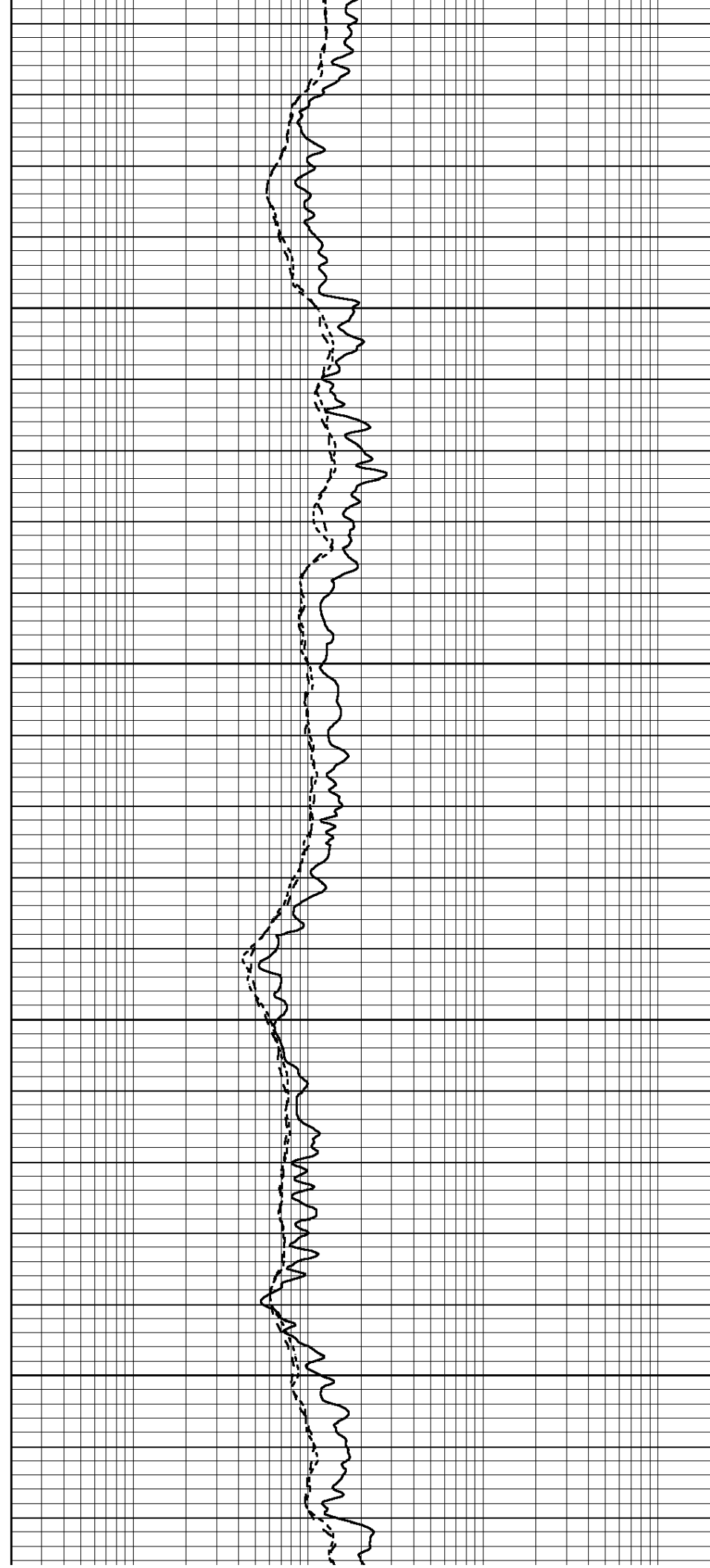


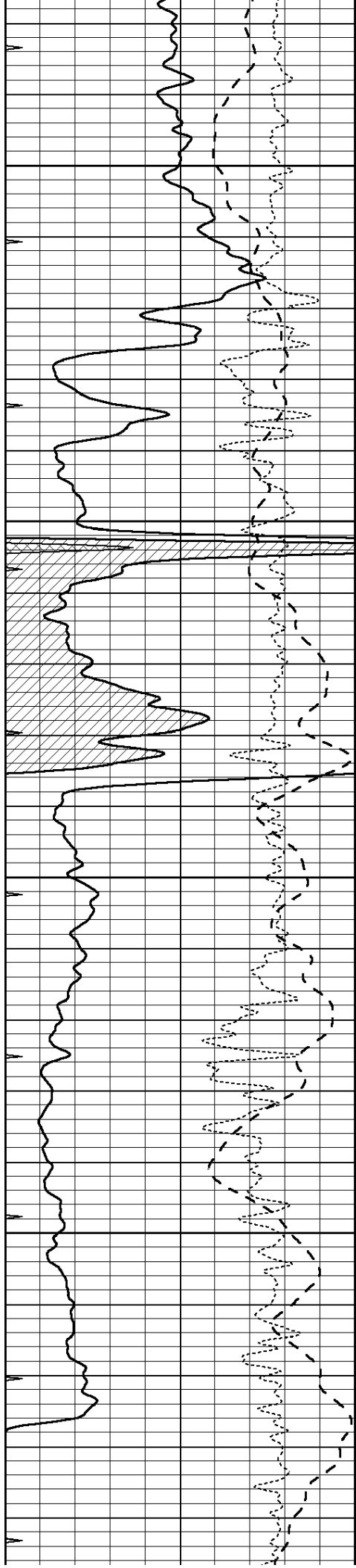
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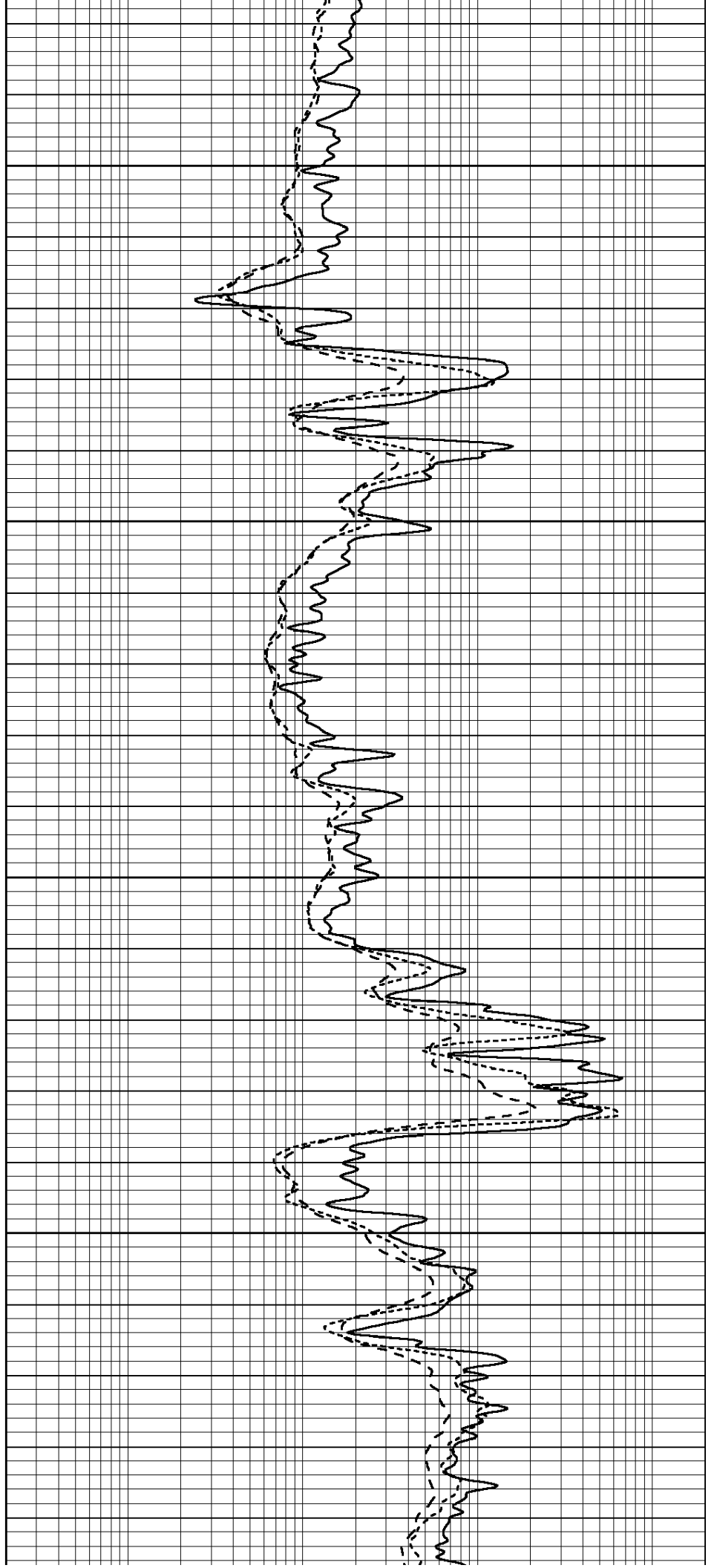


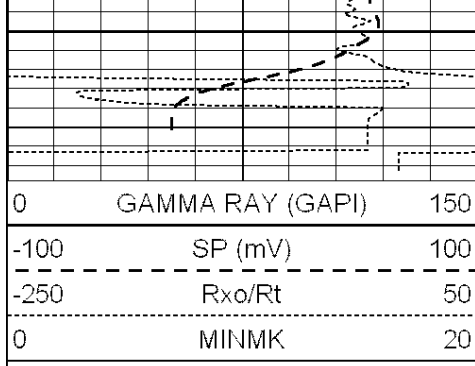
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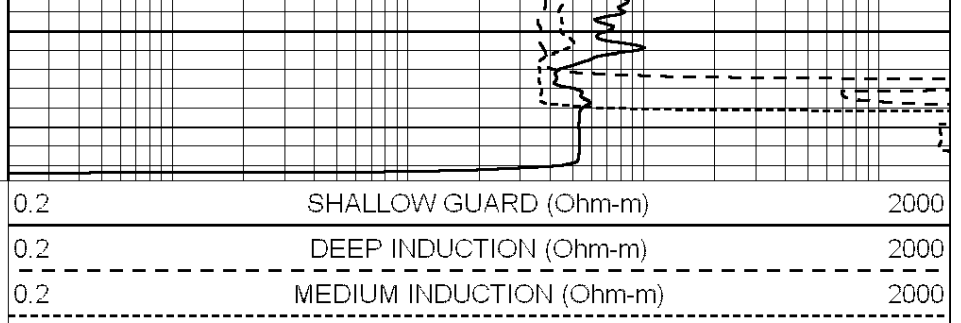
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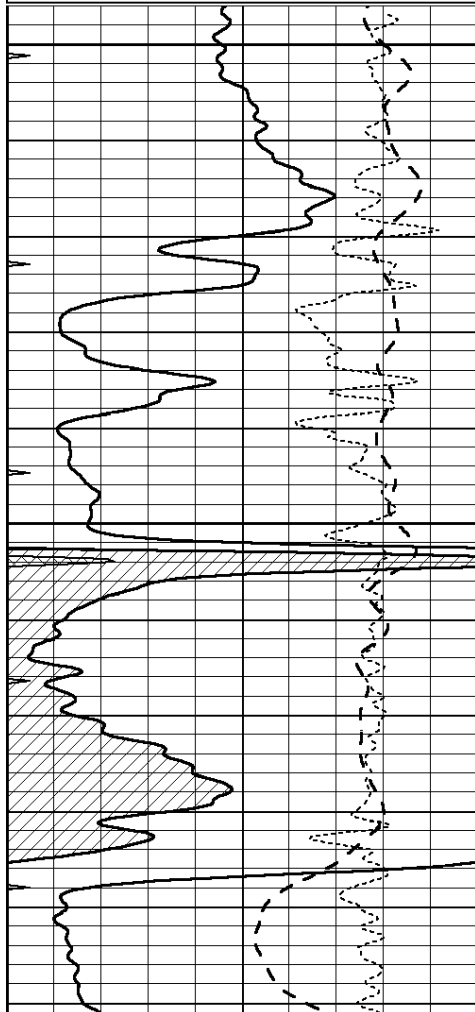
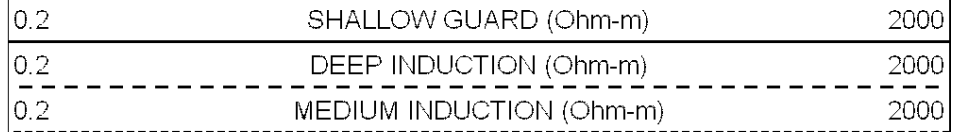
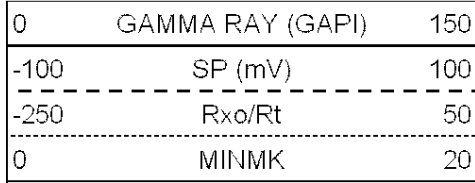


5700



# REPEAT SECTION

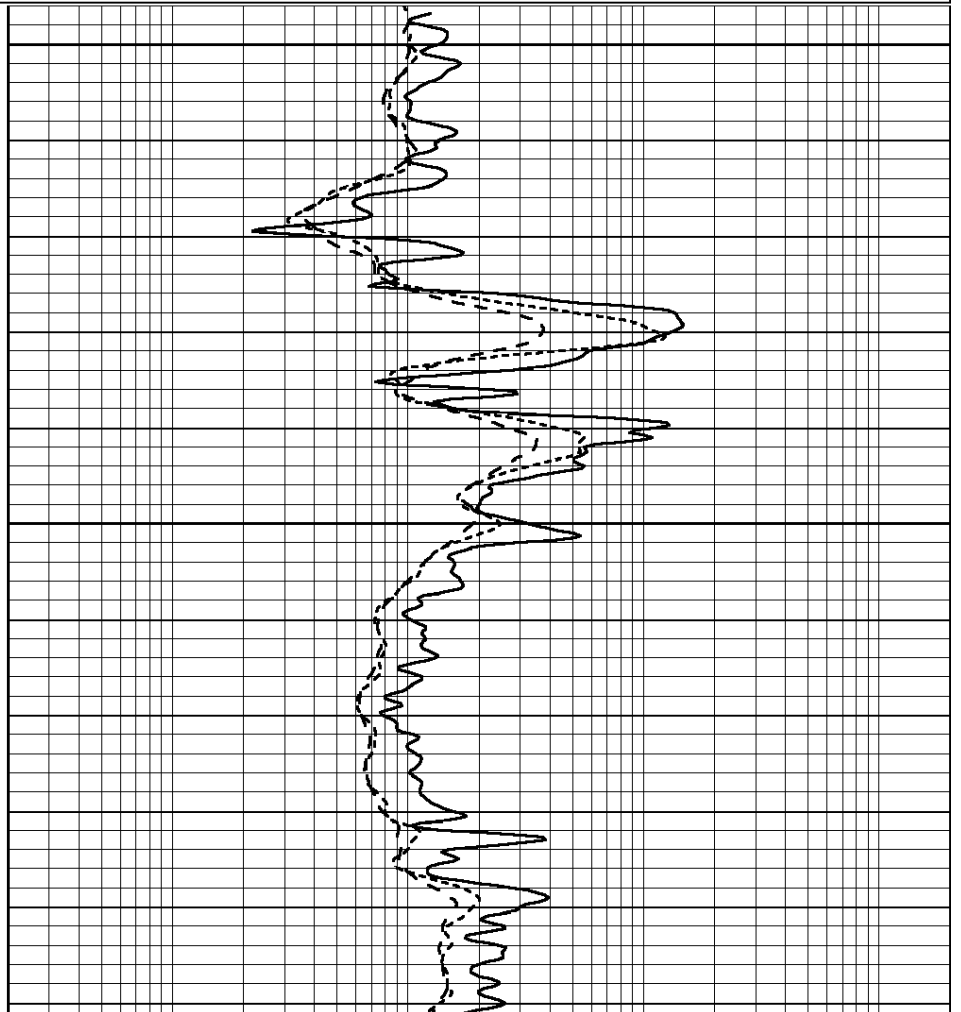
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 Charted by: Depth in Feet scaled 1:240

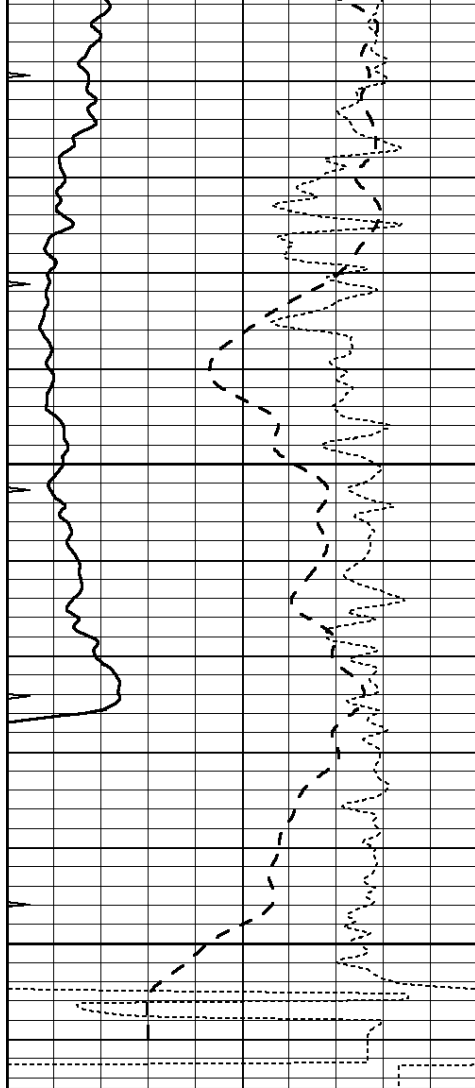


5500

5550

5600

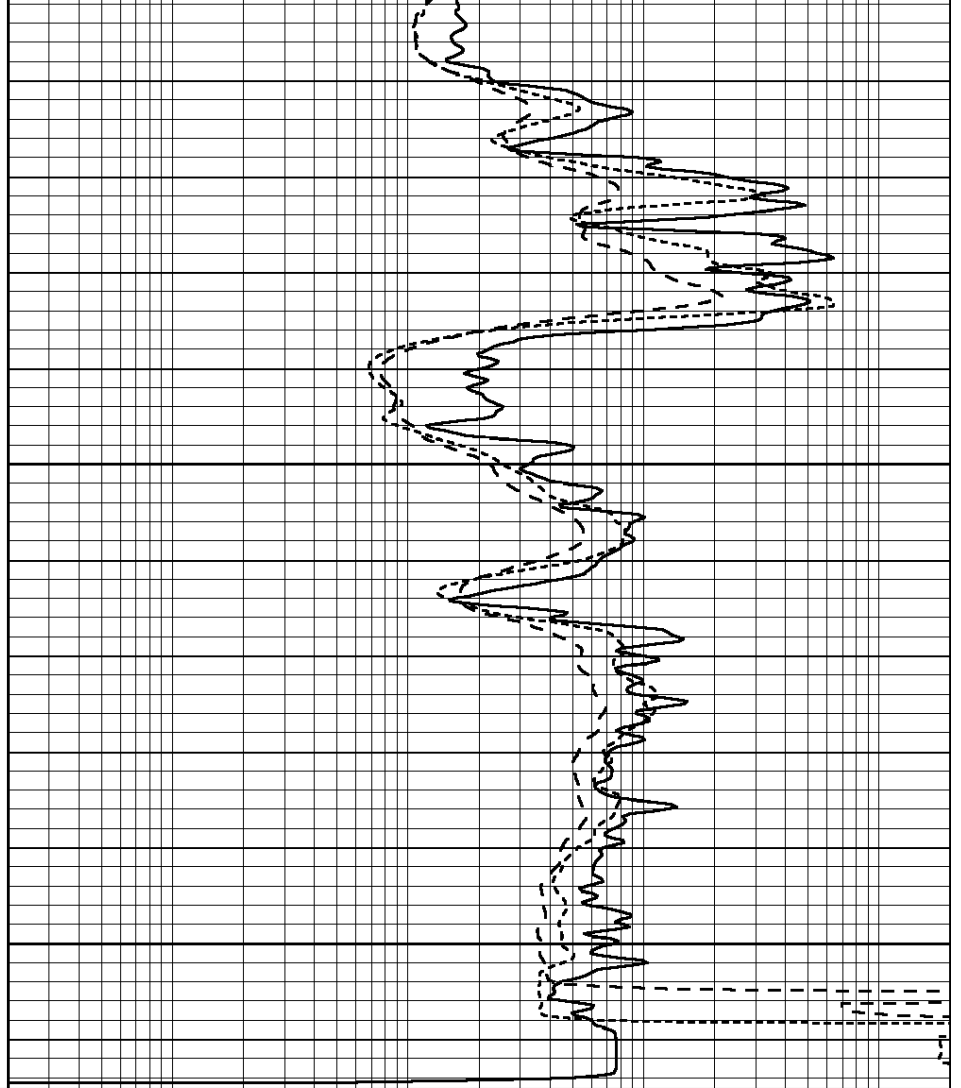




0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

5650

5700



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: 011822pe.db  
 Dataset Pathname: pass3.8  
 Dataset Creation: Sun Dec 08 02:06:42 2013

### Dual Induction Calibration Report

Serial-Model: DIL4-GEAR  
 Surface Cal Performed: Sun Dec 08 00:08:09 2013  
 Downhole Cal Performed: Tue Sep 25 17:01:29 2001  
 After Survey Verification Performed: Sat Jun 11 16:07:12 2005

### Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.008	0.666	V	0.000	400.000	mmho/m	570.000	-2.000
Medium	-0.003	0.769	V	0.000	462.500	mmho/m	560.000	-1.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.013	0.651	V	0.000	400.000	mmho/m	627.541	8.365

Deep	0.013	0.031	V	0.000	400.000	mmho/m	627.341	-0.363
Medium	0.020	0.754	V	0.000	462.500	mmho/m	630.311	-12.549

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	2.525	0.026	V	500.000	2.000	Ohm-m	250.000	-2.500

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: 004N    Model: PRB

Master Calibration						Performed Mon Jun 03 09:36:56 2013		
	Background	Magnesium	Aluminum	Sandstone				
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		
	Background	Magnesium	Aluminum	Sandstone				
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		
	Background	Magnesium	Aluminum	Sandstone				
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: Sun Nov 03 21:08:13 2013

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 0.2800 GAPI/cps