



**SUPERIOR**  
Hays,  
Kansas

**DUAL  
INDUCTION  
LOG**

Company CASTELLI EXPLORATION, INC.  
Well GREGG #2-29  
Field HAM  
County COMANCHE  
State KANSAS

Company CASTELLI EXPLORATION, INC.  
Well GREGG #2-29  
Field HAM  
County COMANCHE State KANSAS

Location: API # : 15-033-21584-0000  
1380' FNL & 1650' FWL  
N/2 - NW - SE - NW  
SEC 29 TWP 33S RGE 16W  
Permanent Datum GROUND LEVEL Elevation 1778  
Log Measured From KELLY BUSHING & A.G.L.  
Drilling Measured From KELLY BUSHING  
Elevation  
Other Services  
CDL/CNL  
MEL  
K.B. 1786  
D.F. 1784  
G.L. 1778

Date	6/4/12		
Run Number	ONE		
Depth Driller	5170		
Depth Logger	5172		
Bottom Logged Interval	5170		
Top Log Interval	0		
Casing Driller	13 3/8" @ 343		
Casing Logger	342		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 4000 PPM	
Density / Viscosity	9.2/44		
pH / Fluid Loss	9.5/9.6		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	1.50 @ 82F		
Rmf @ Meas. Temp	1.13 @ 82F		
Rmc @ Meas. Temp	1.80 @ 82F		
Source of Rmf / Rmc	MEASURED		
Rin @ BHT	0.97 @ 127F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	127F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JEFF GRONEMEG		
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 SUPERIOR WELL SERVICE (785) 628-6395  
DIRECTIONS  
COLDWATER, KS - EAST ON HWY 160 TO RD 22 - SOUTH TO STOP SIGN  
SOUTH AND EAST THROUGH THREE CATTLEGUARDS TO WHITE SHED  
SOUTH INTO ON WEST SIDE OF SHED - GO EAST AND SOUTH AFTER SECOND  
CATTLE GUARD

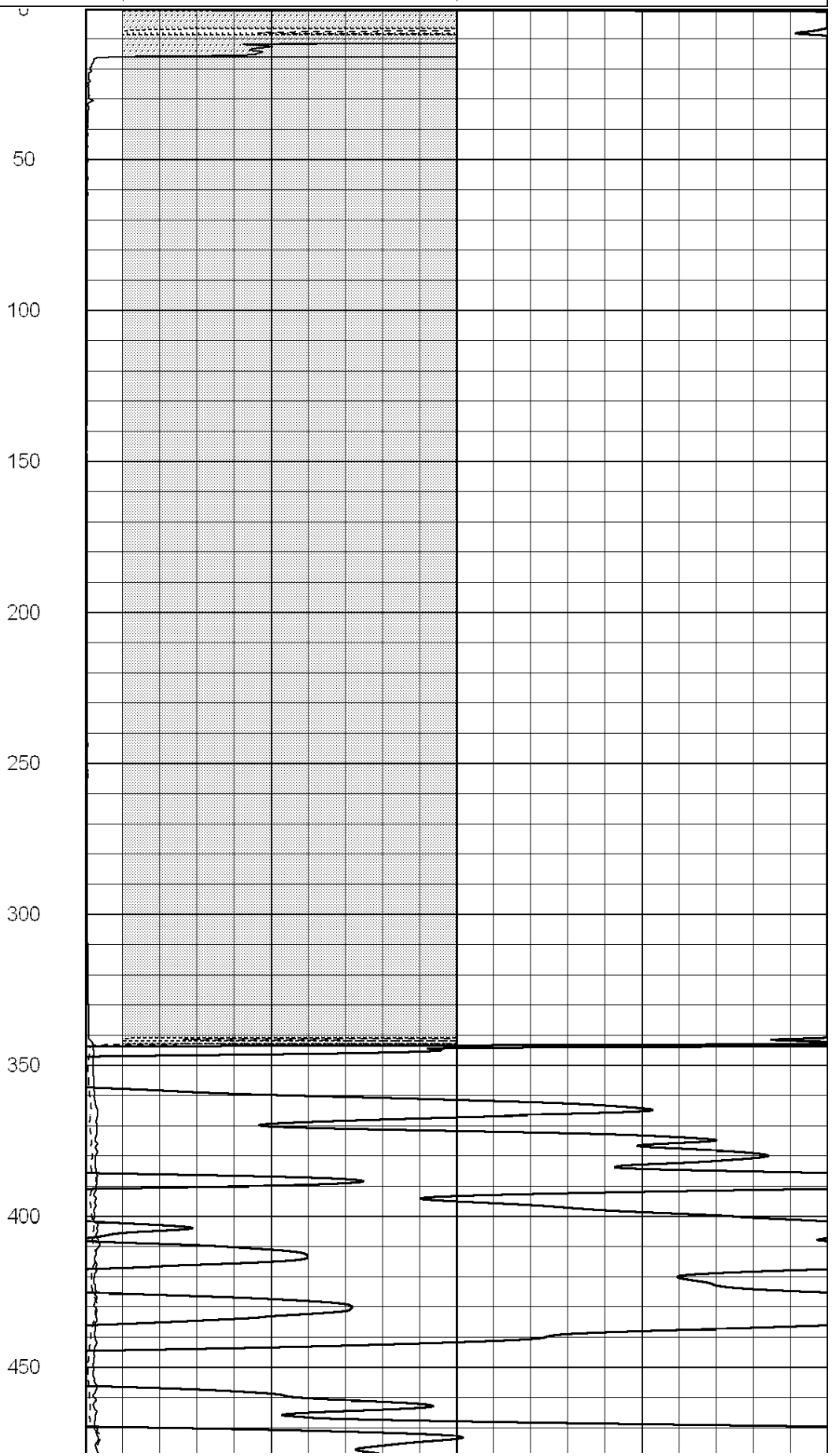
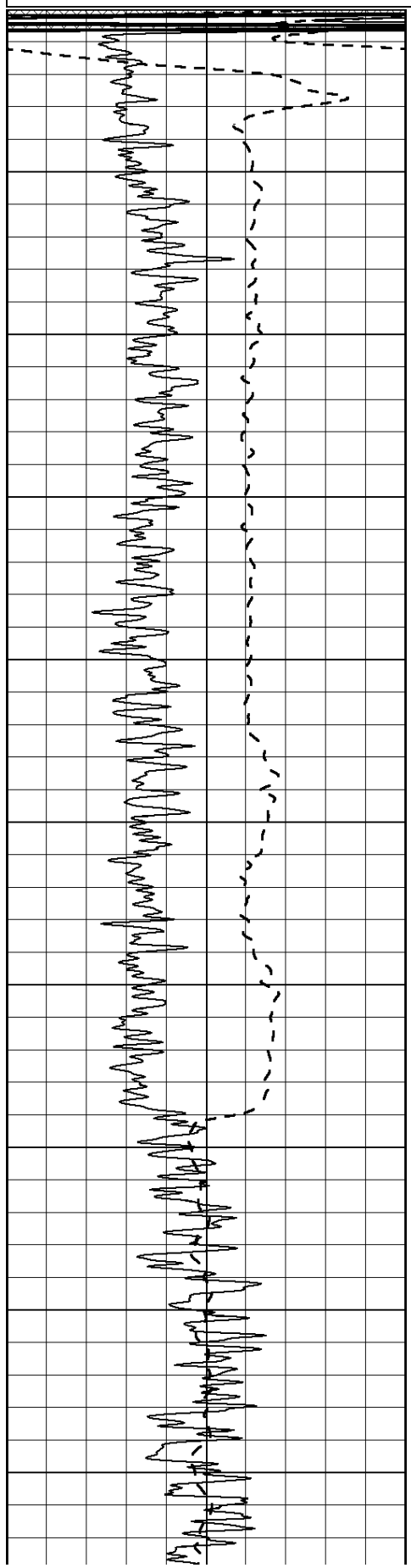
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Charted by: Depth in Feet scaled 1:600

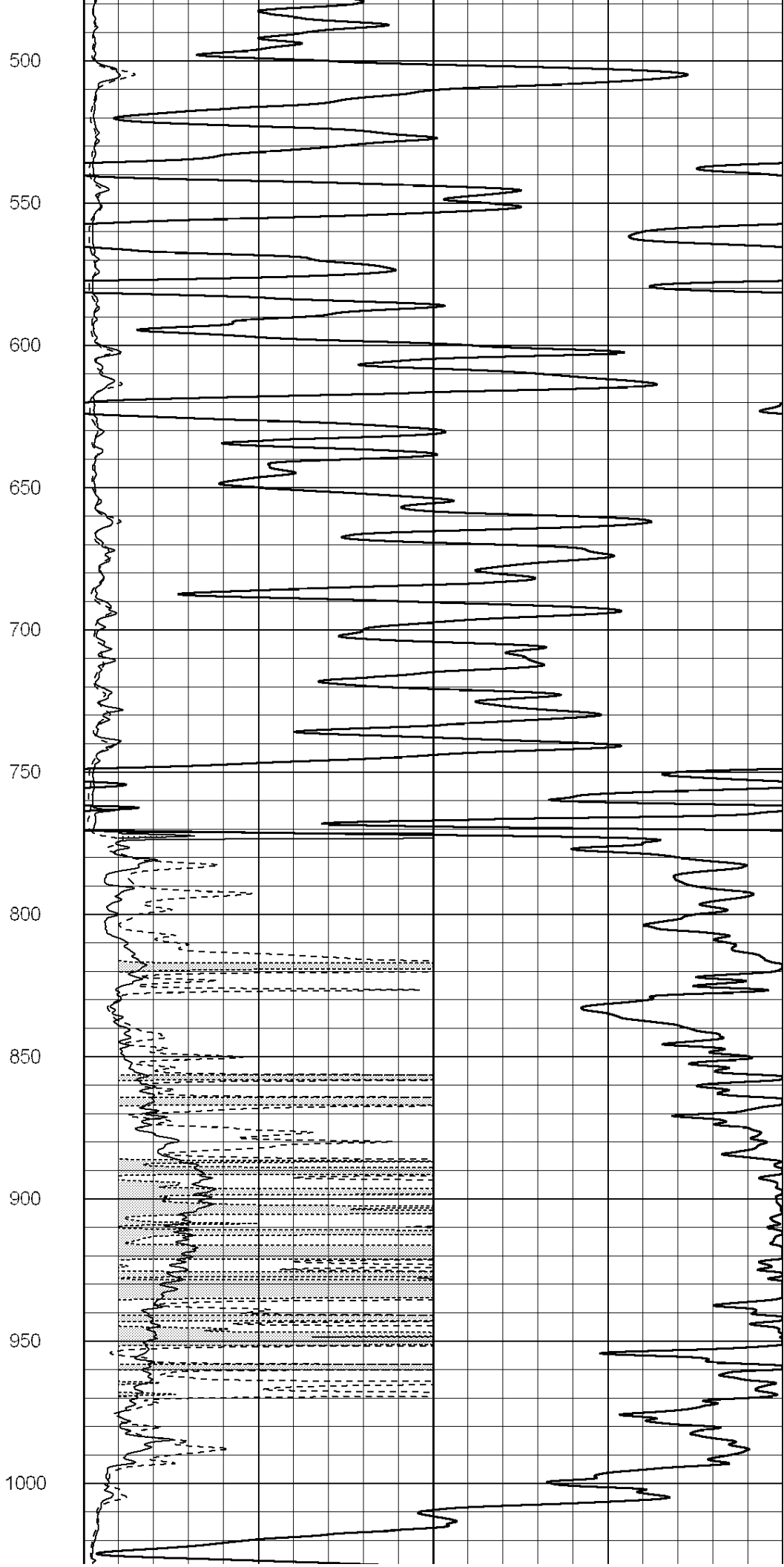
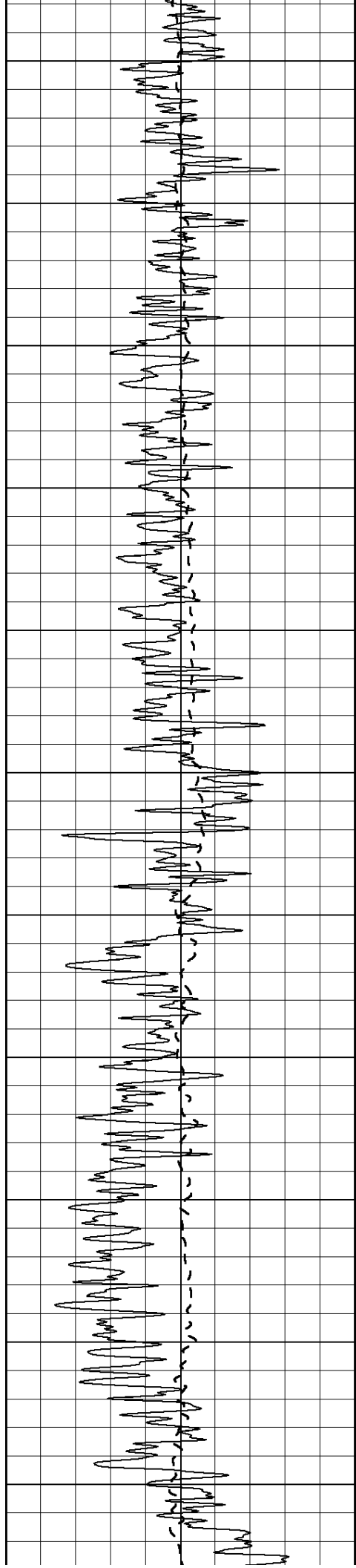
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-100	SP (mV)	100

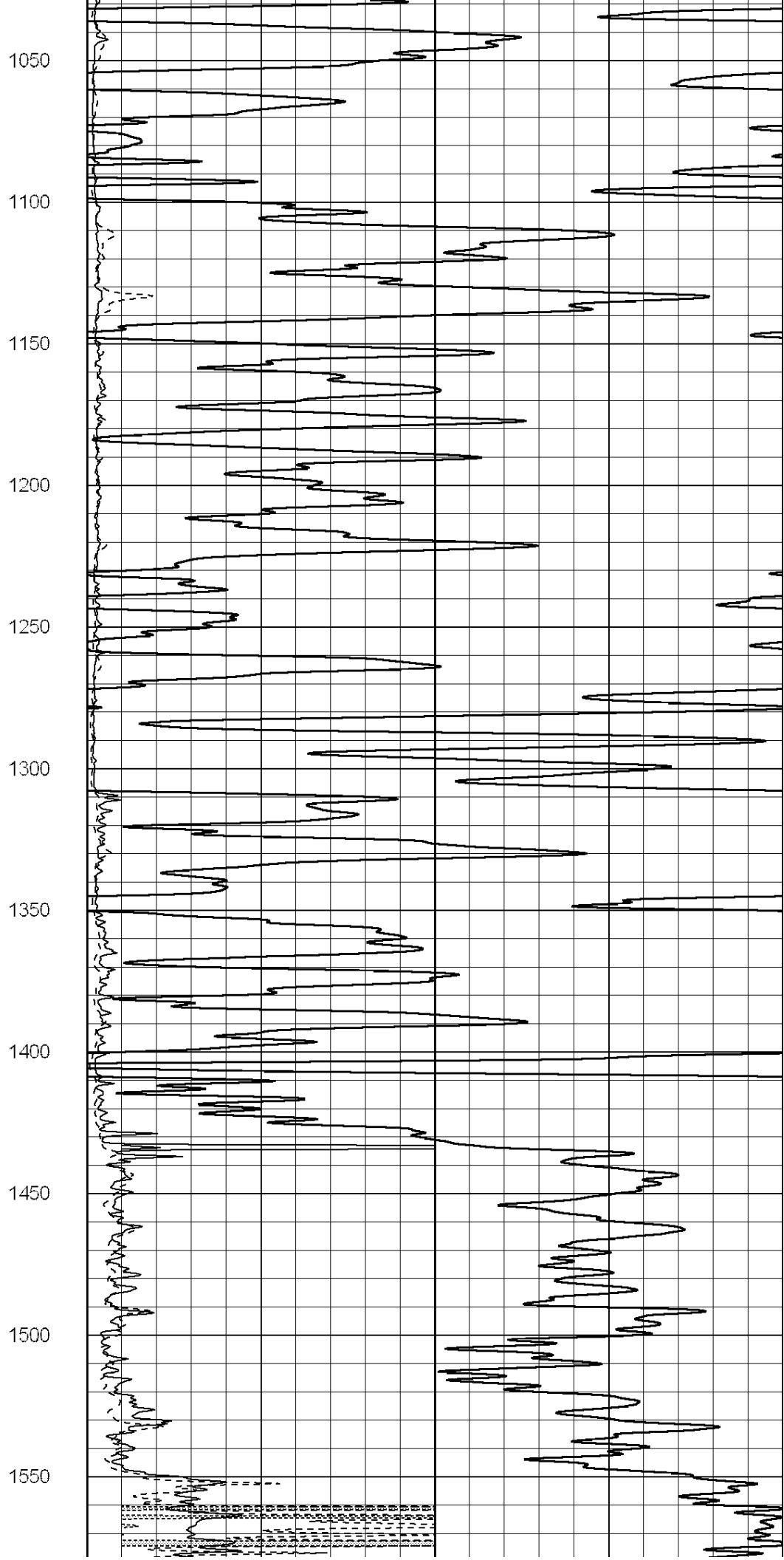
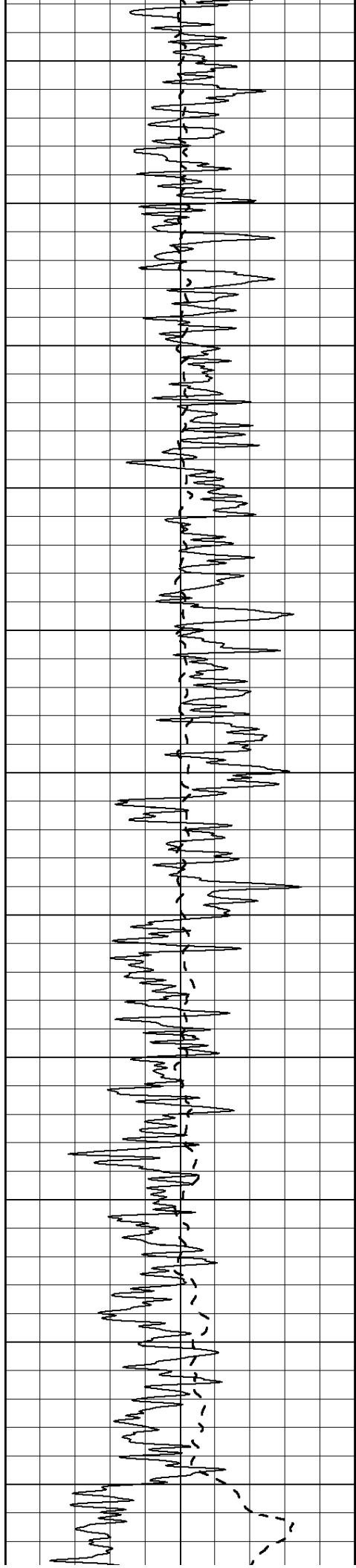
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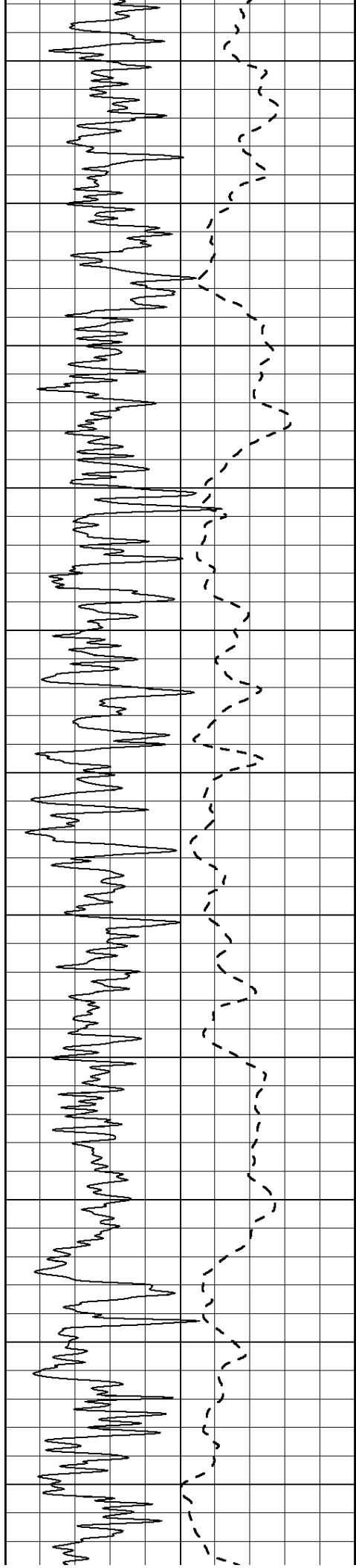
1000	CILD (mmho/m)	0
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50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500









1600

1650

1700

1750

1800

1850

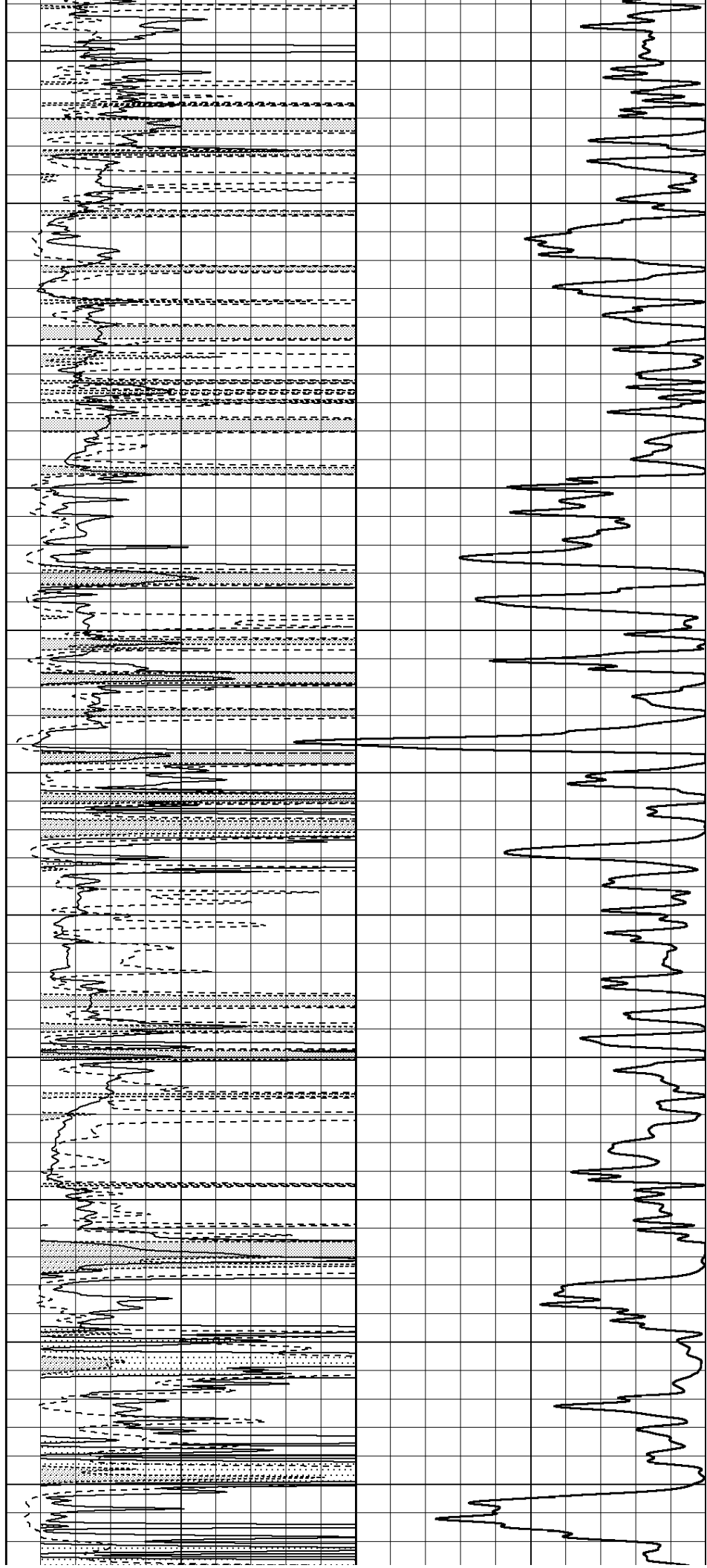
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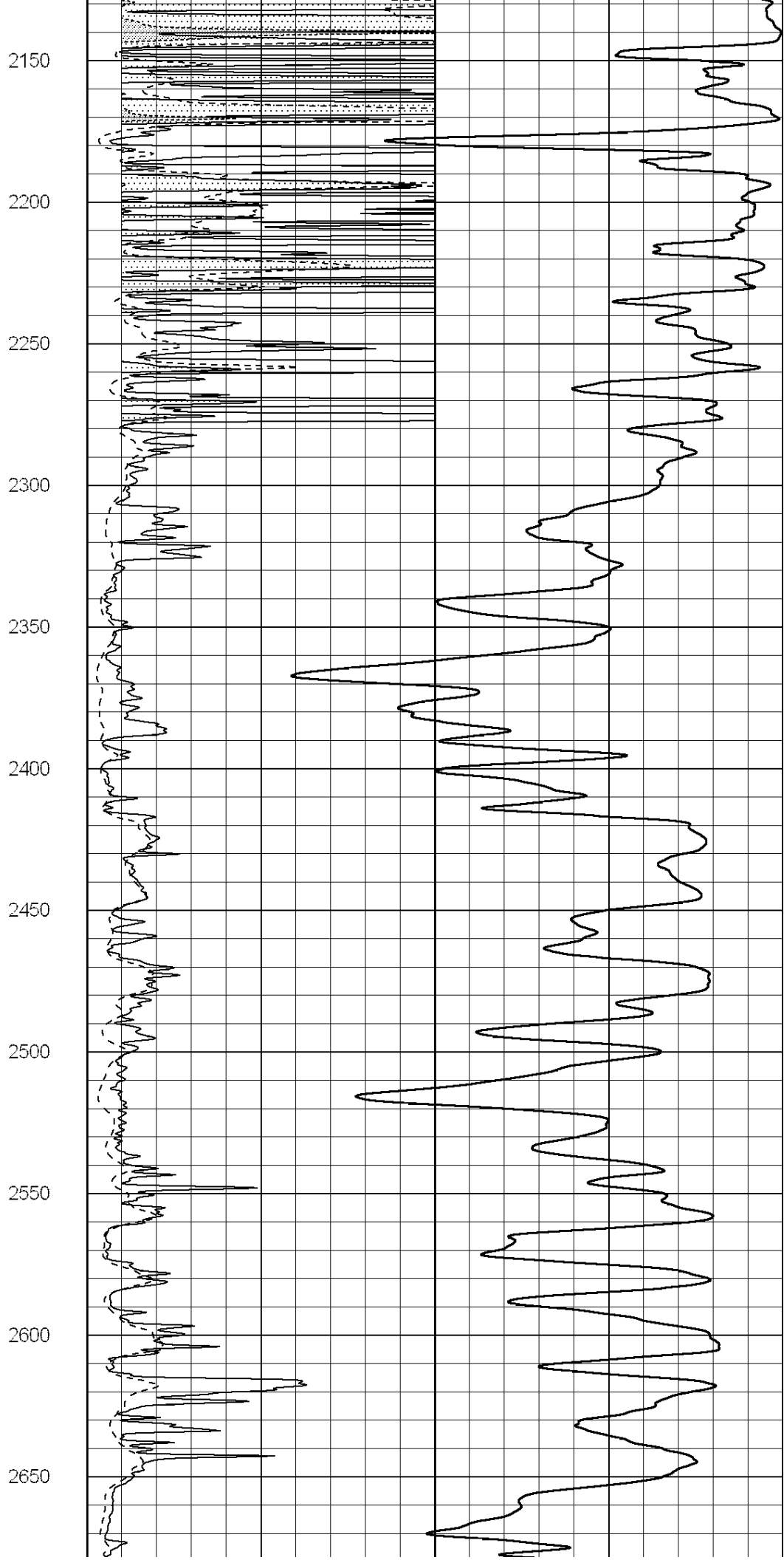
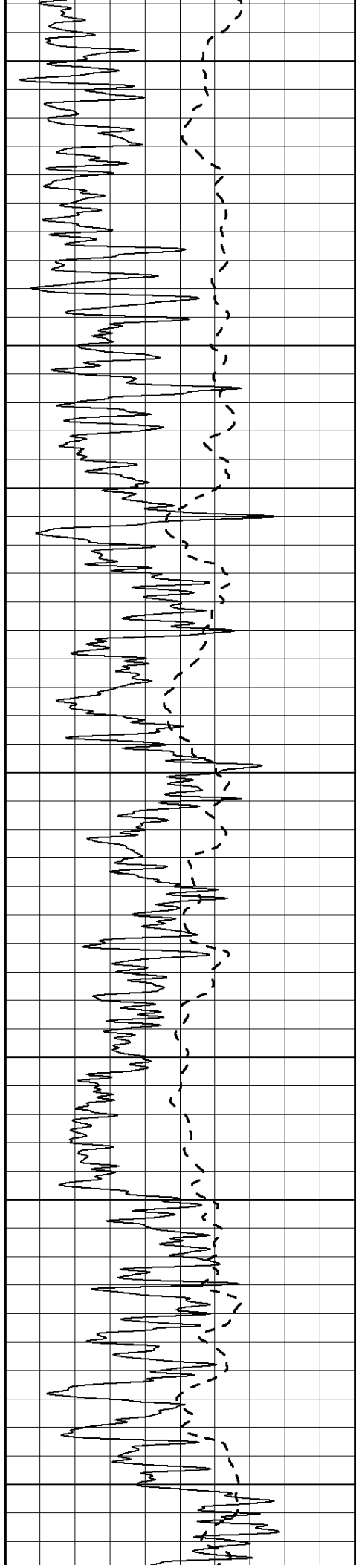
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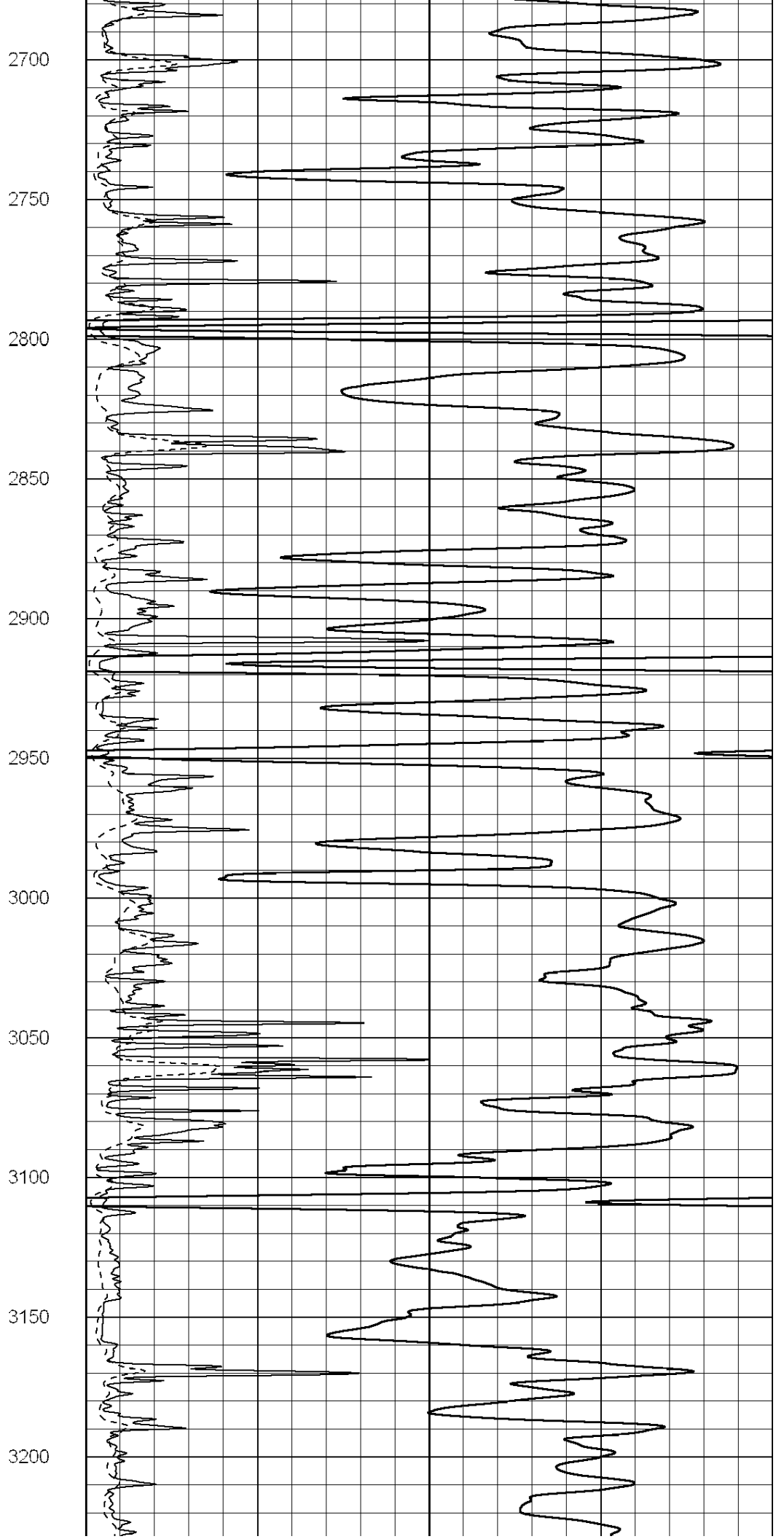
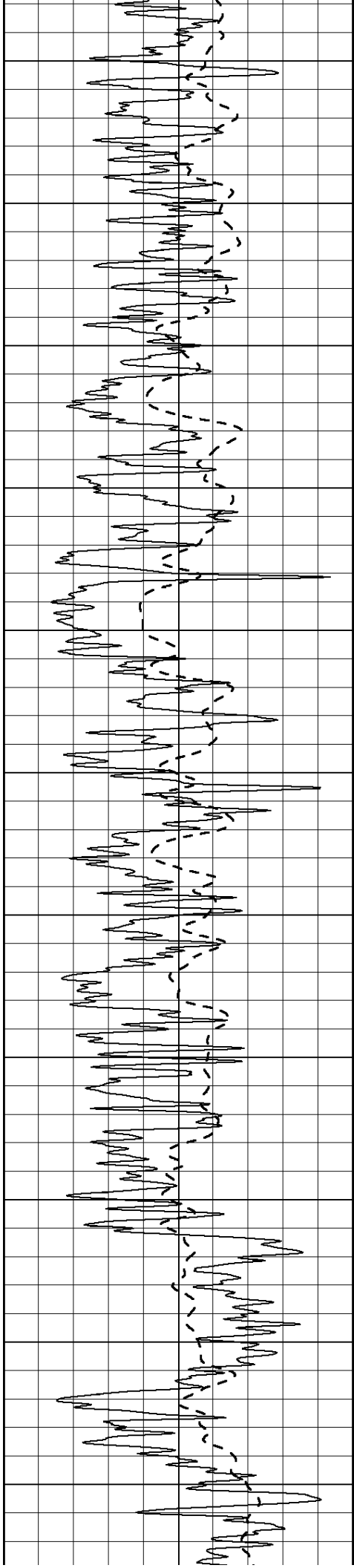
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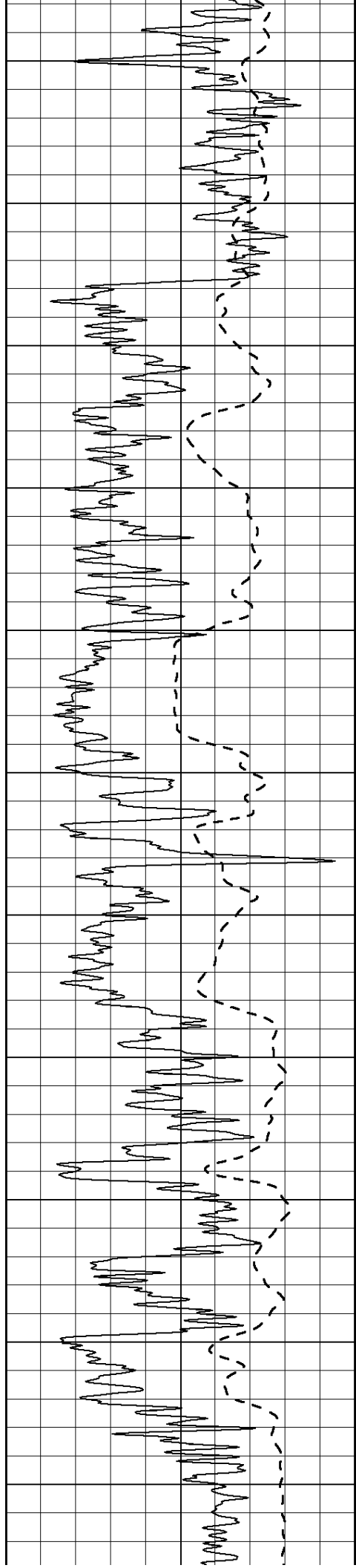
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2100









3250

3300

3350

3400

3450

3500

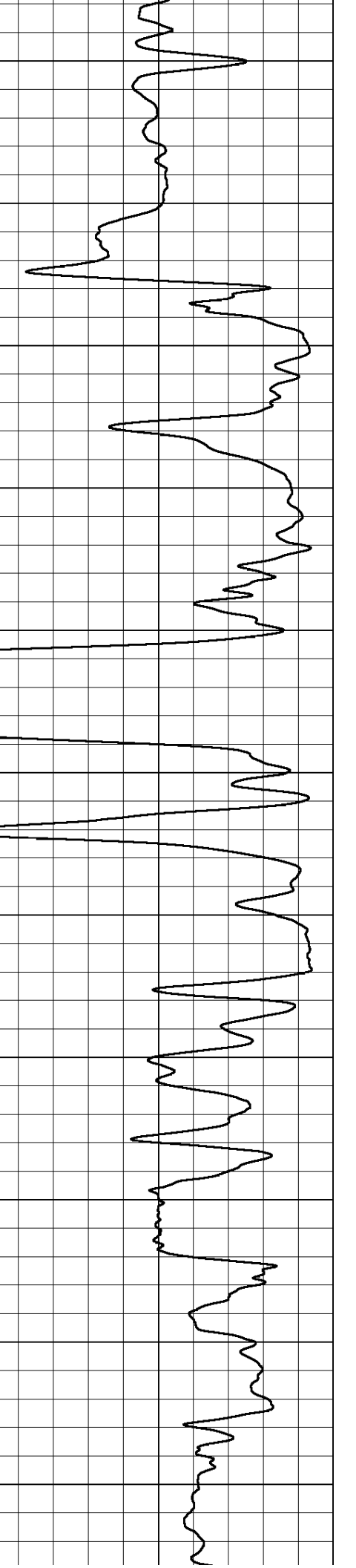
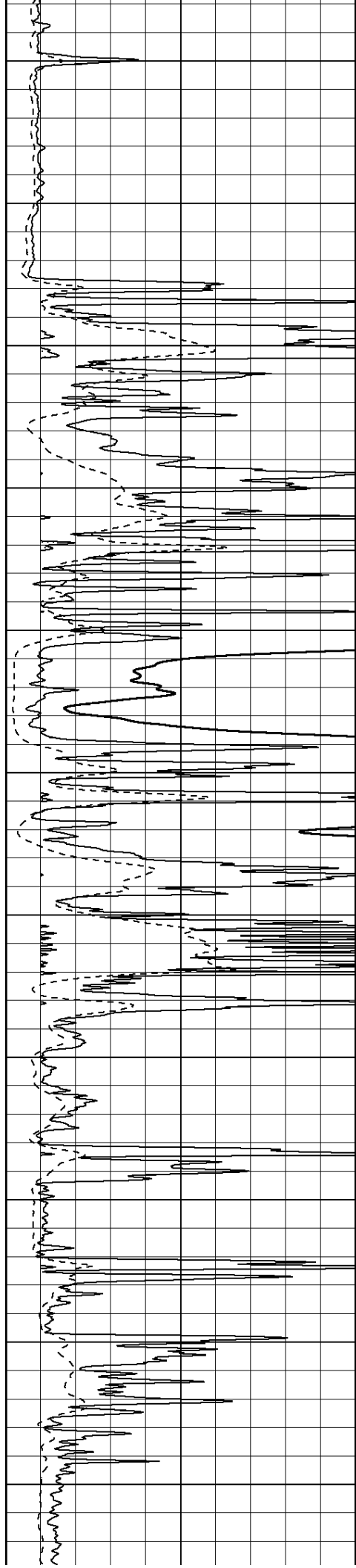
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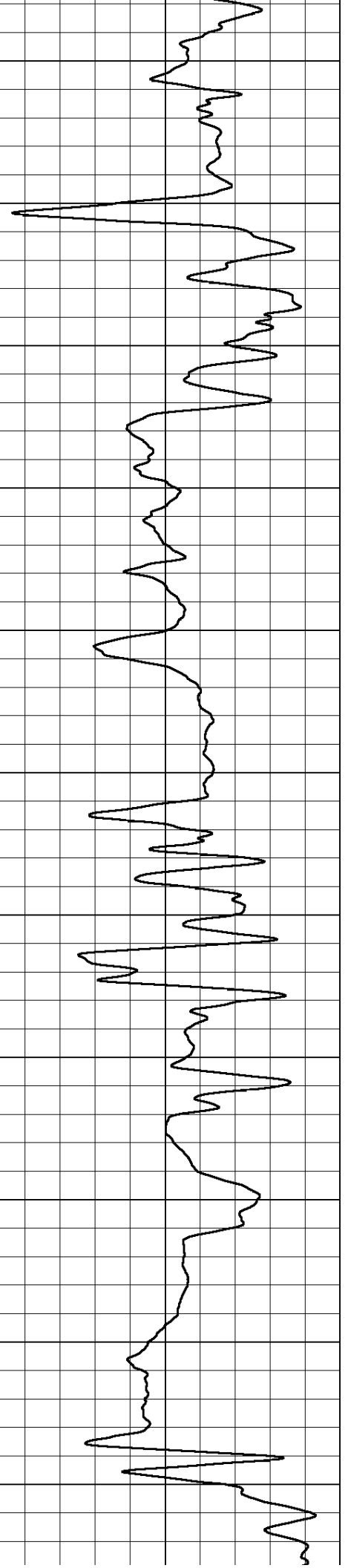
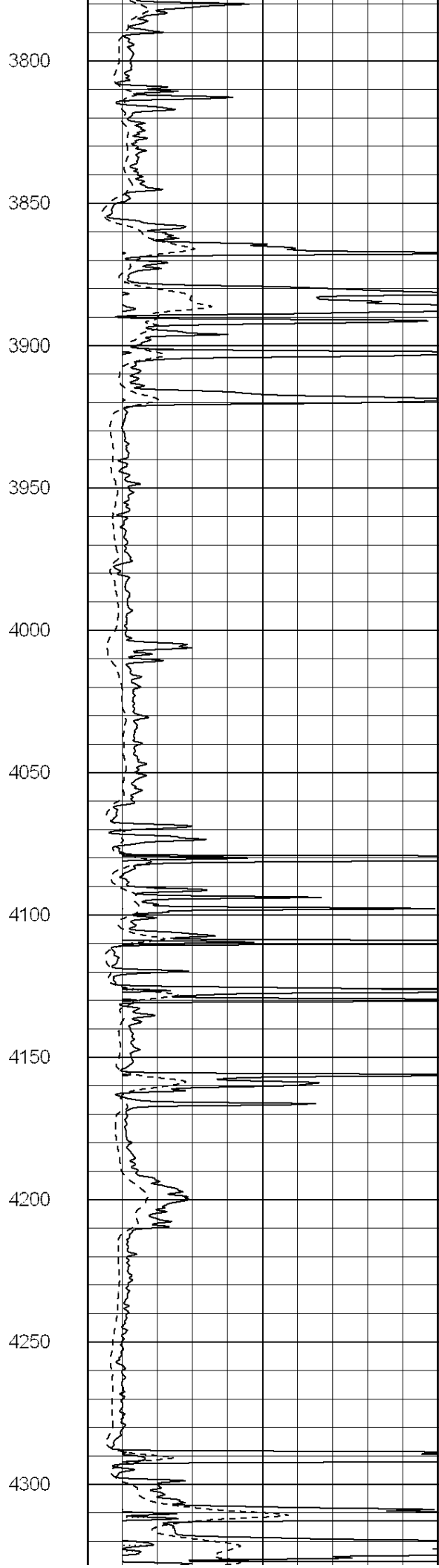
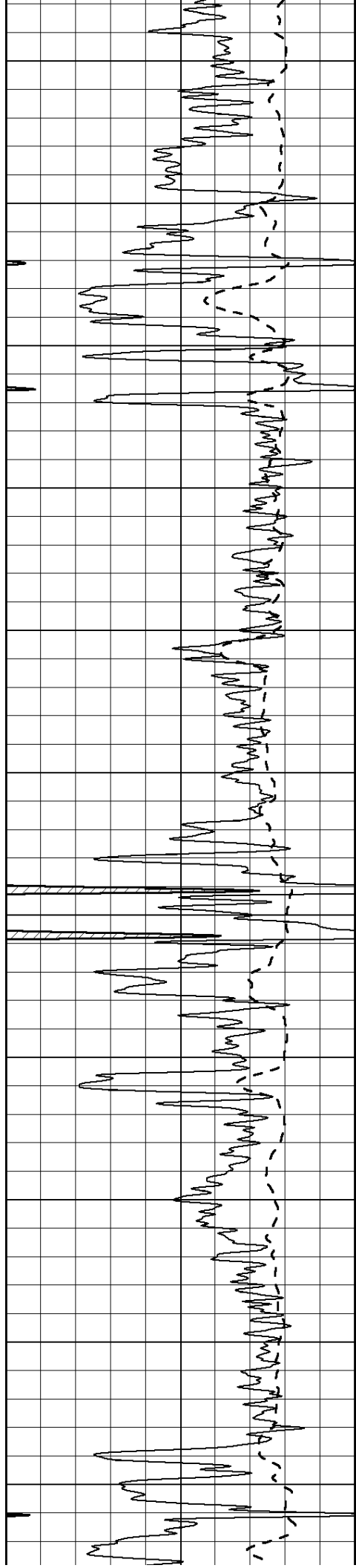
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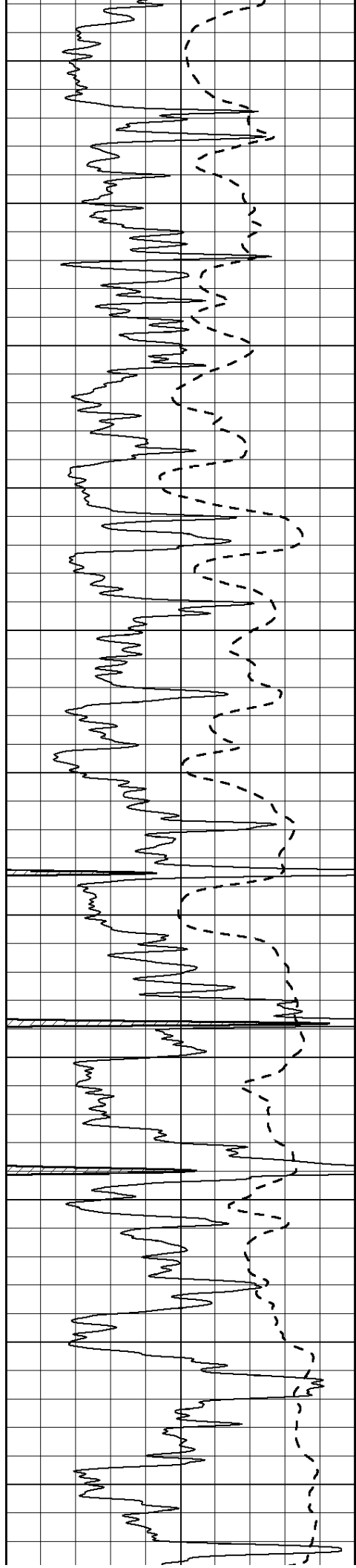
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3750







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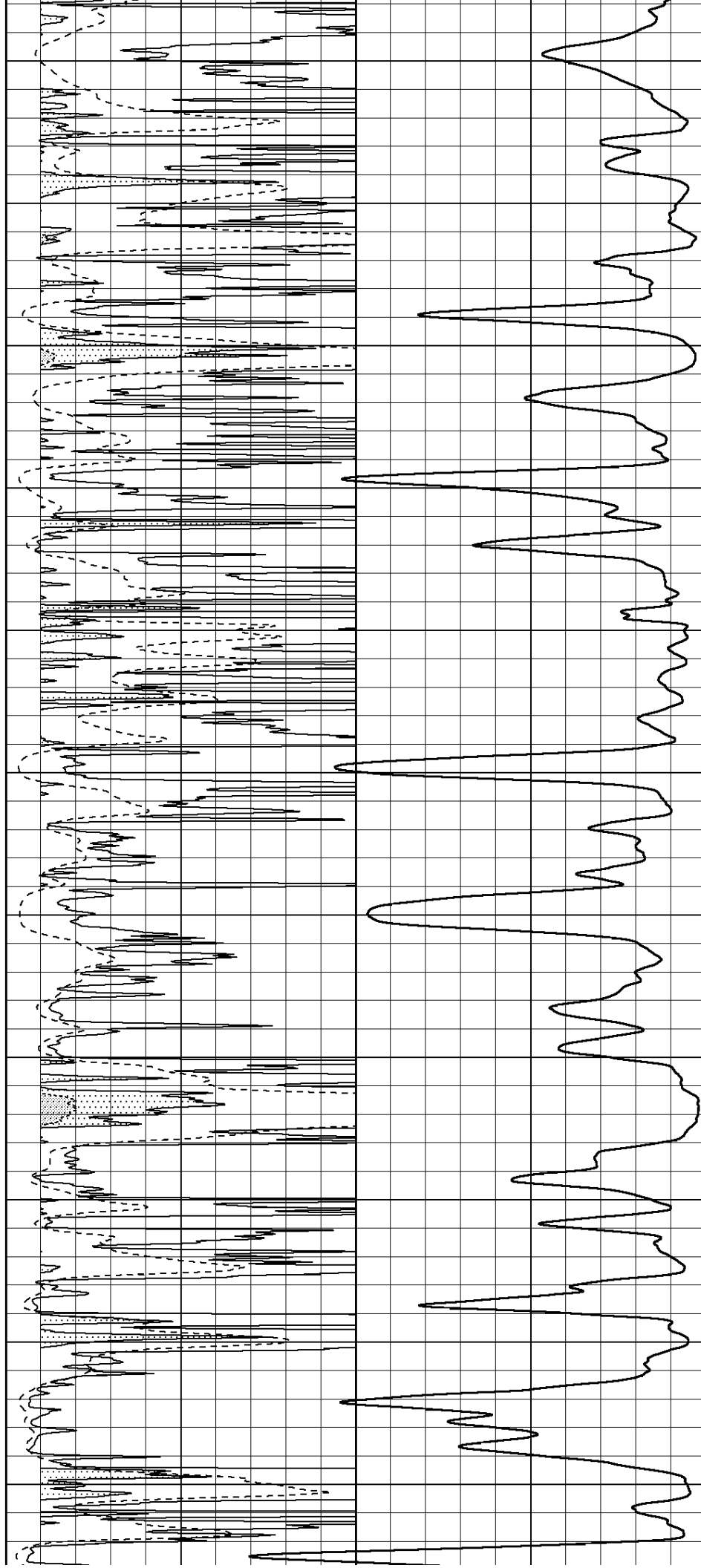
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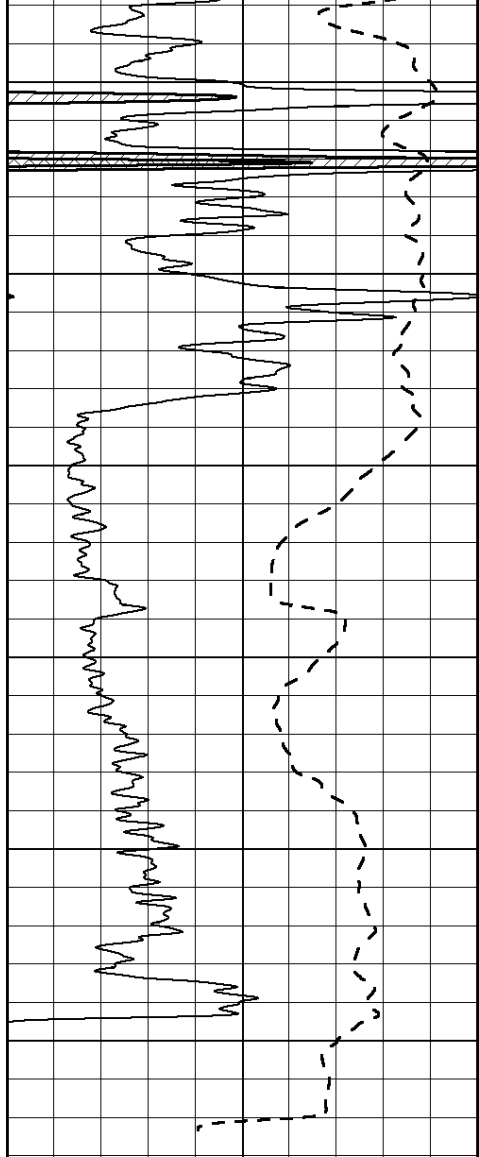
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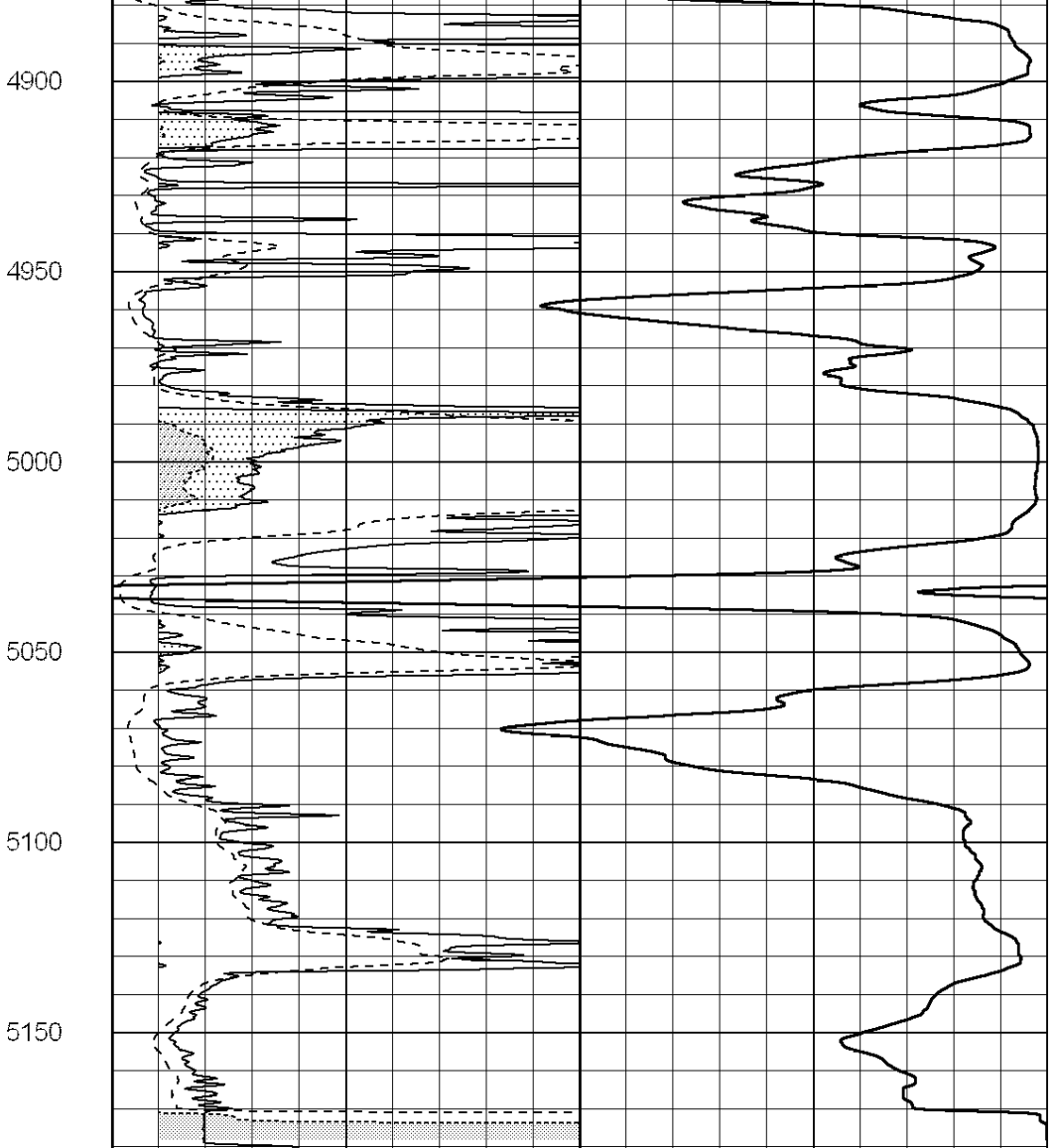
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4850





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

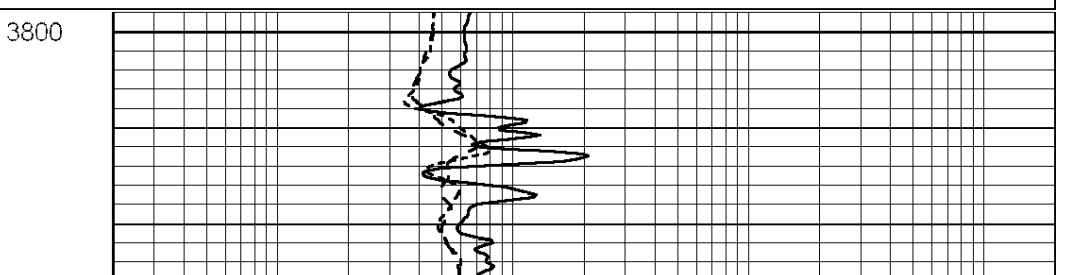
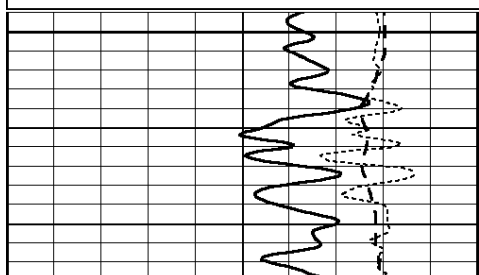


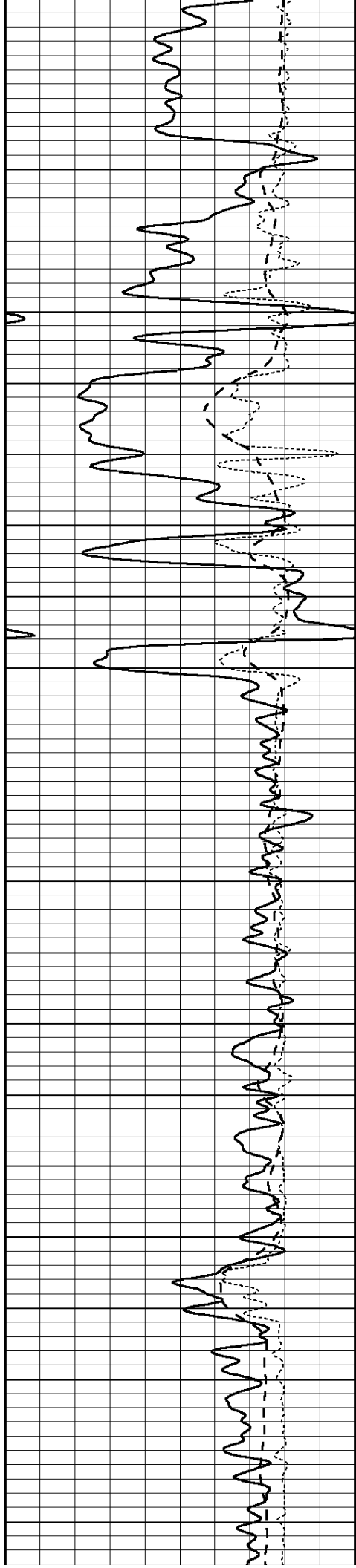
0	RLL3 (Ohm-m)	50
0	Deep Induction (Ohm-m)	50
1000	CILD (mmho/m)	0
50	RILD X10 (Ohm-m)	500
50	RLL3 X10 (Ohm-m)	500

Database File: 009213ddn.db  
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 Presentation Format: \_dil  
 Dataset Creation: Mon Jun 04 09:35:31 2012 by Calc Open-Cased 090629  
 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	MEDIUM INDUCTION (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000



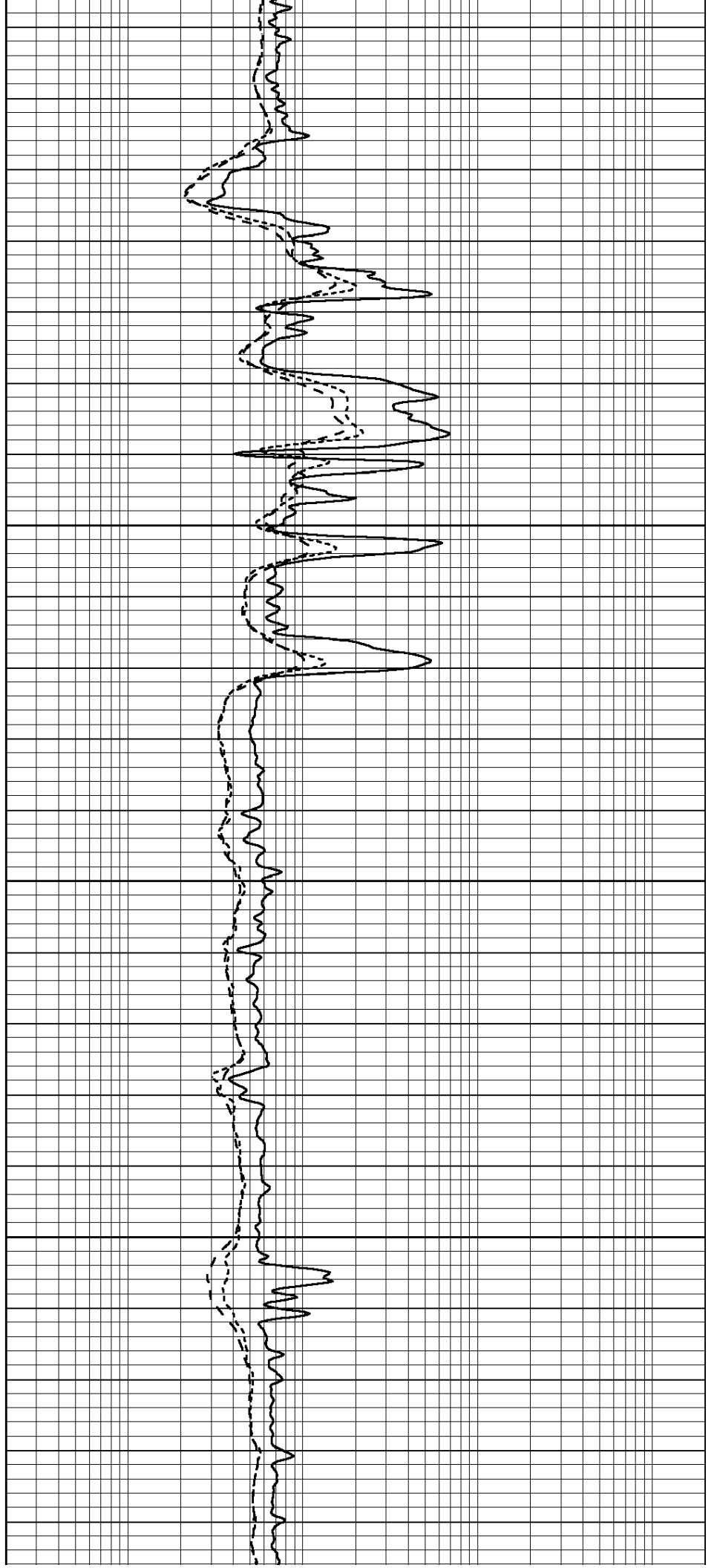


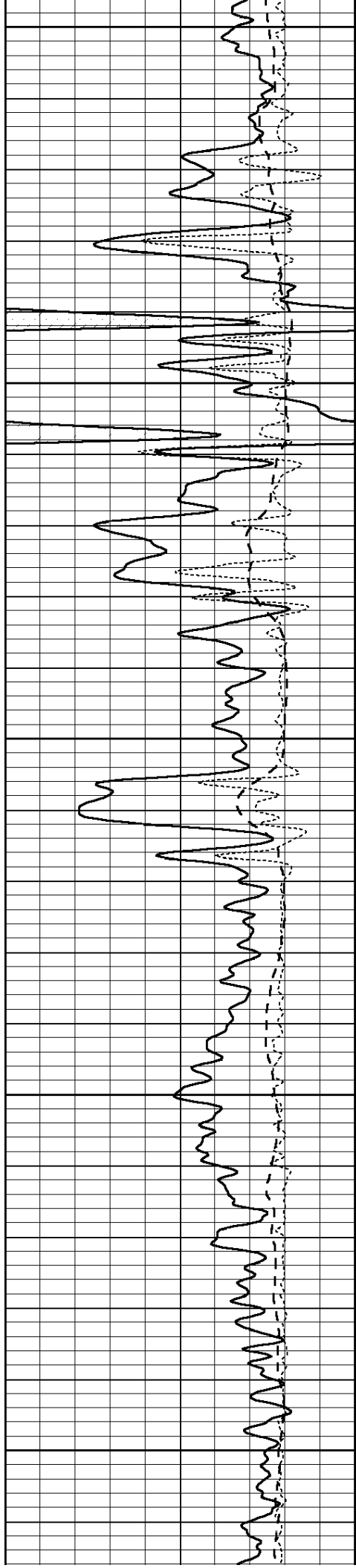
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3900

3950

4000





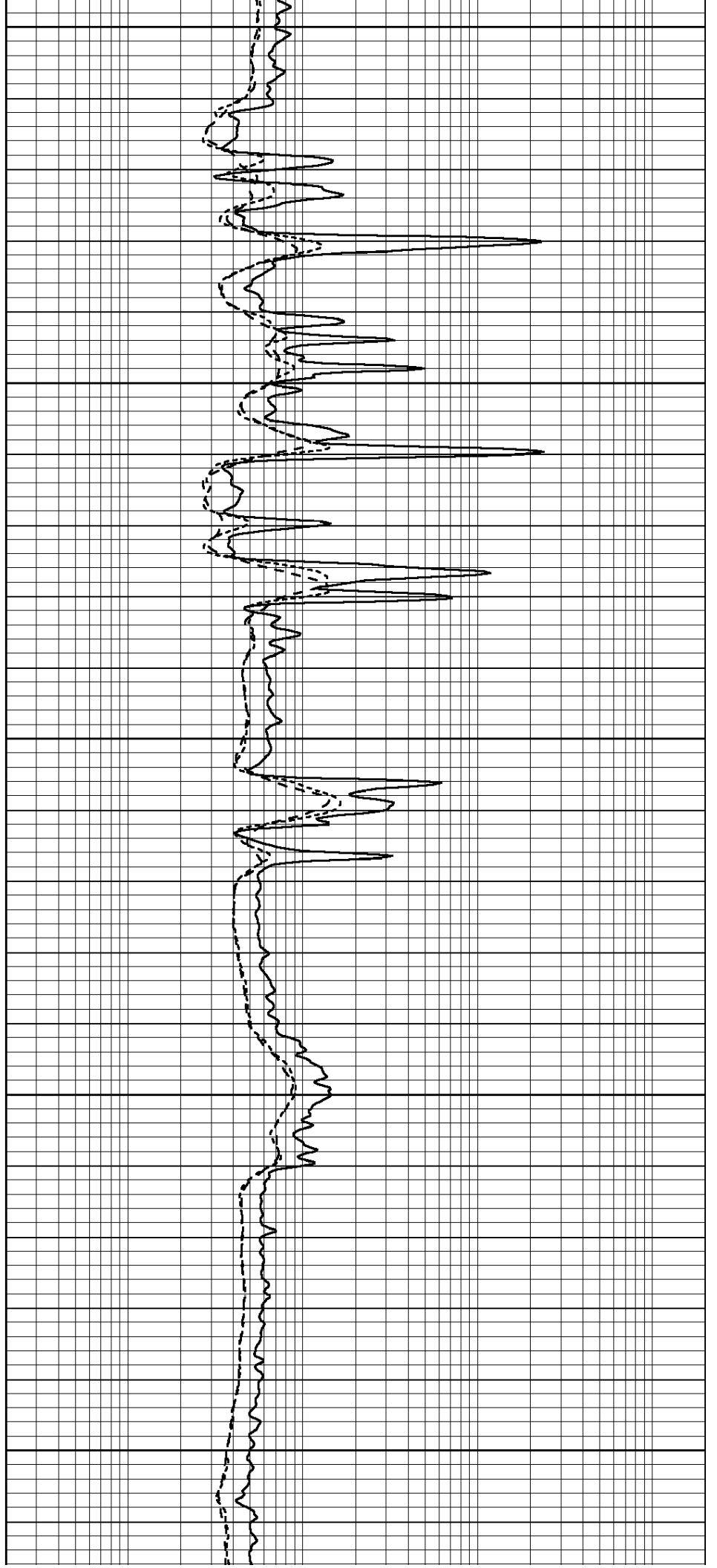
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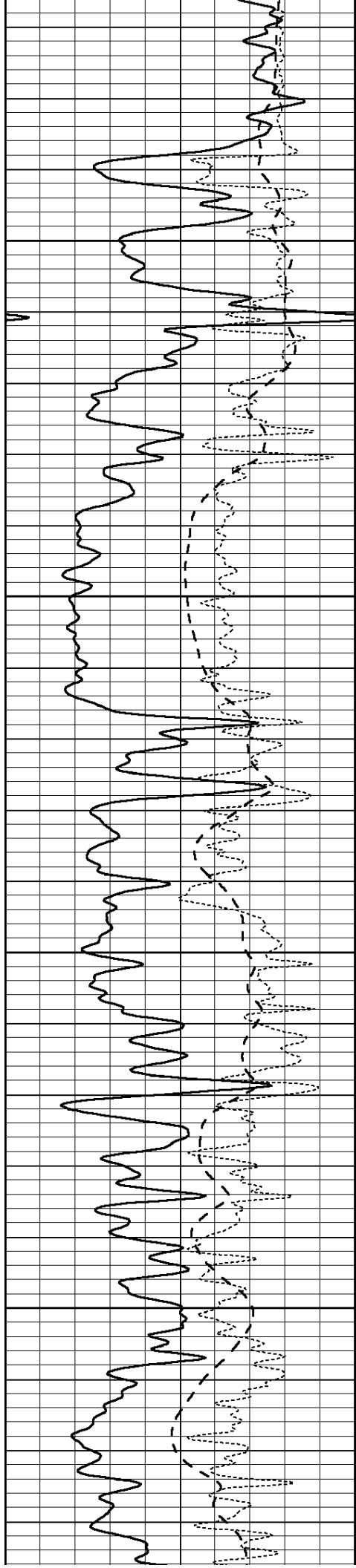
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4150

4200

4250



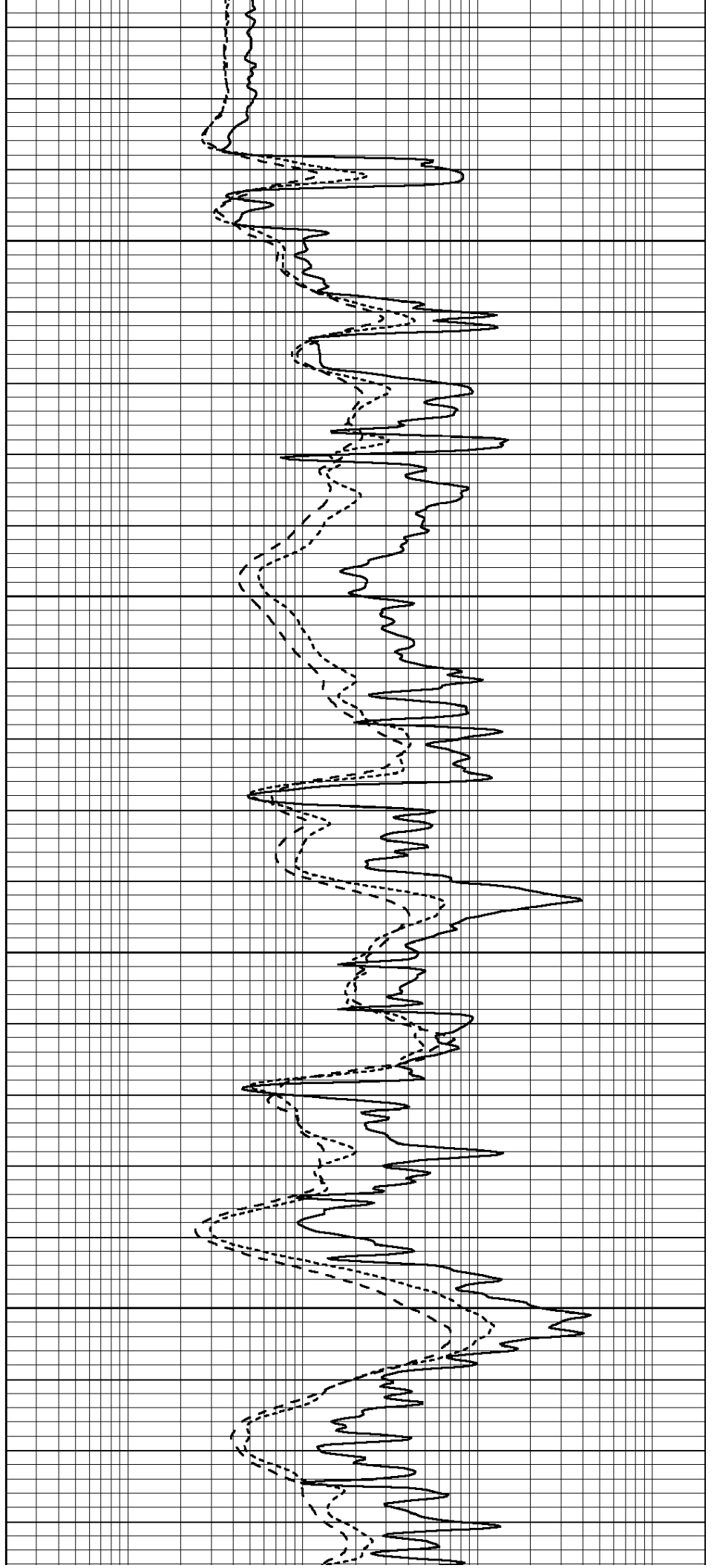


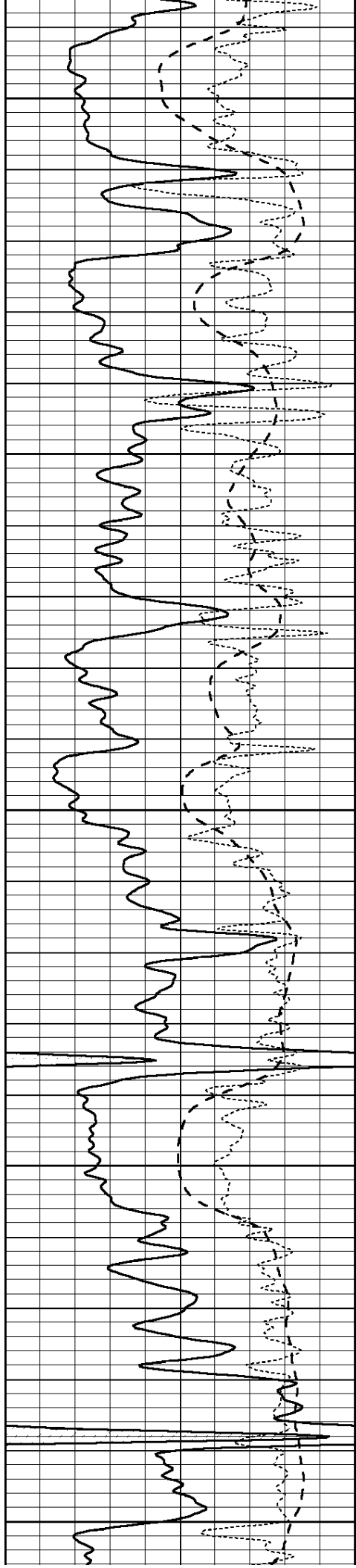
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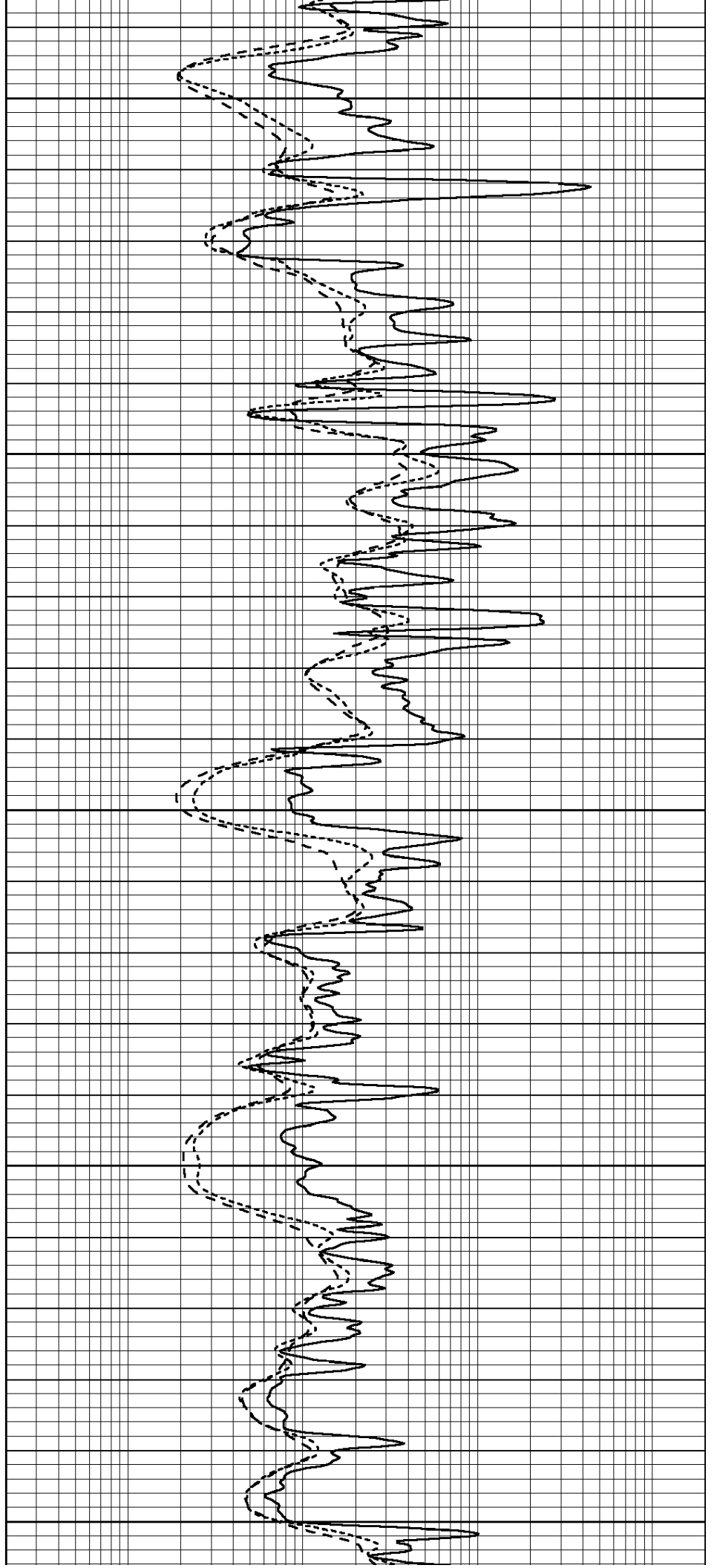
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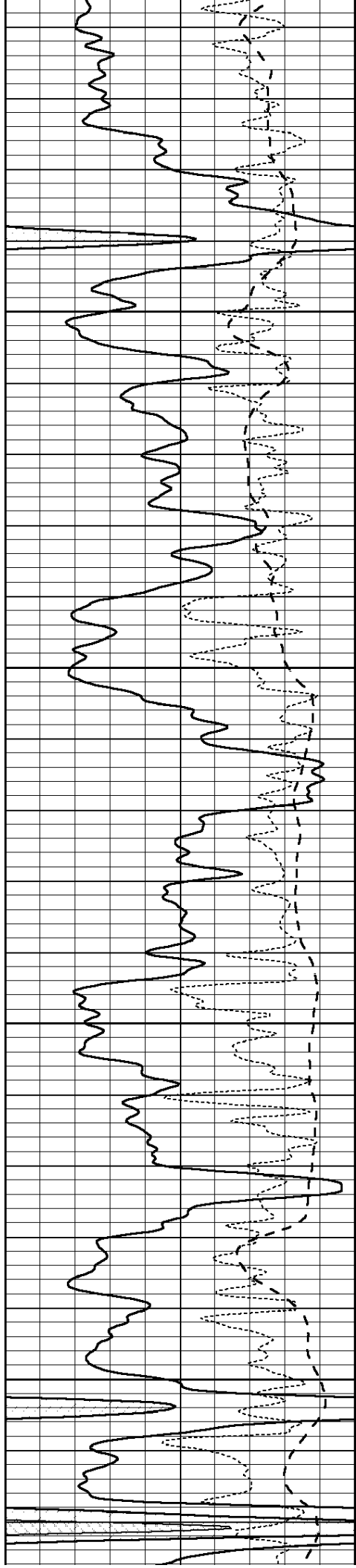
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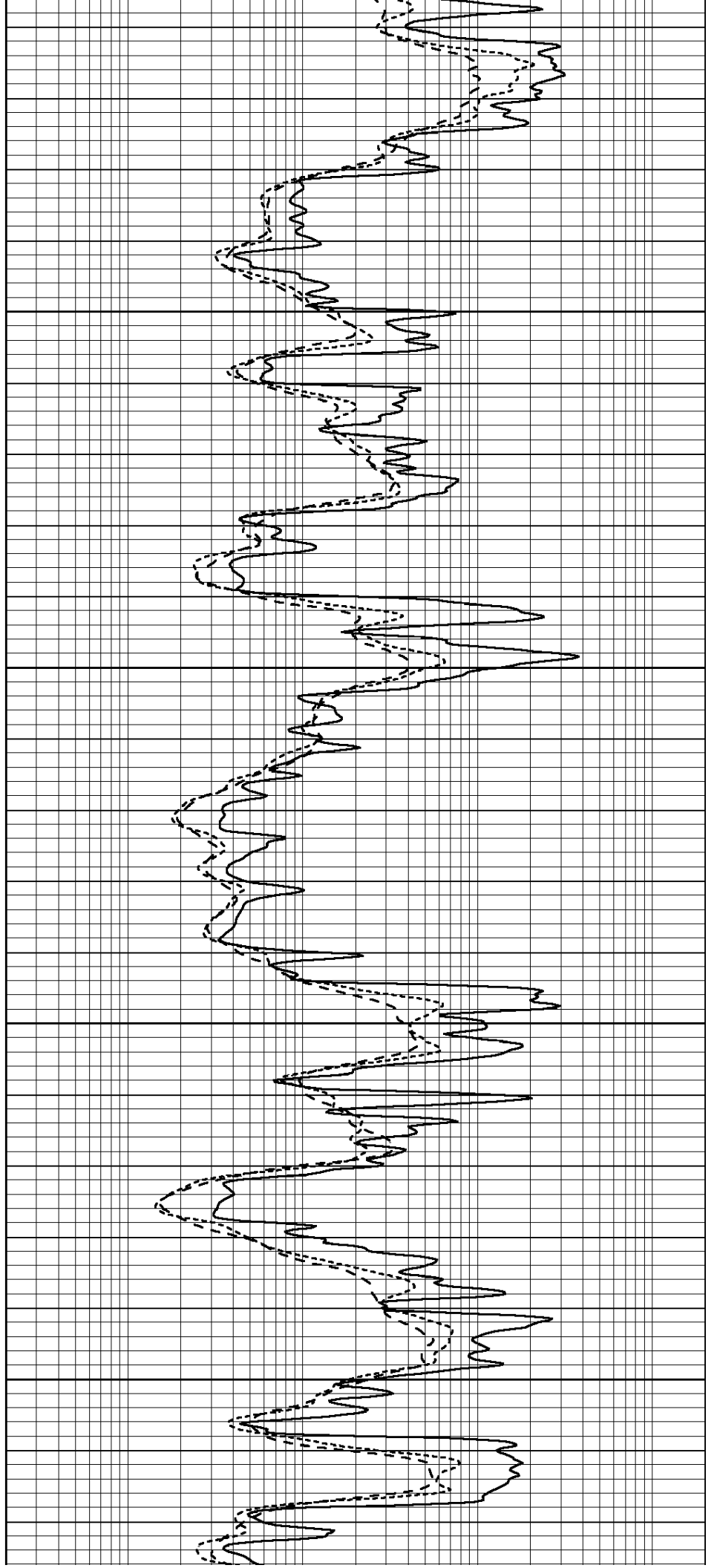


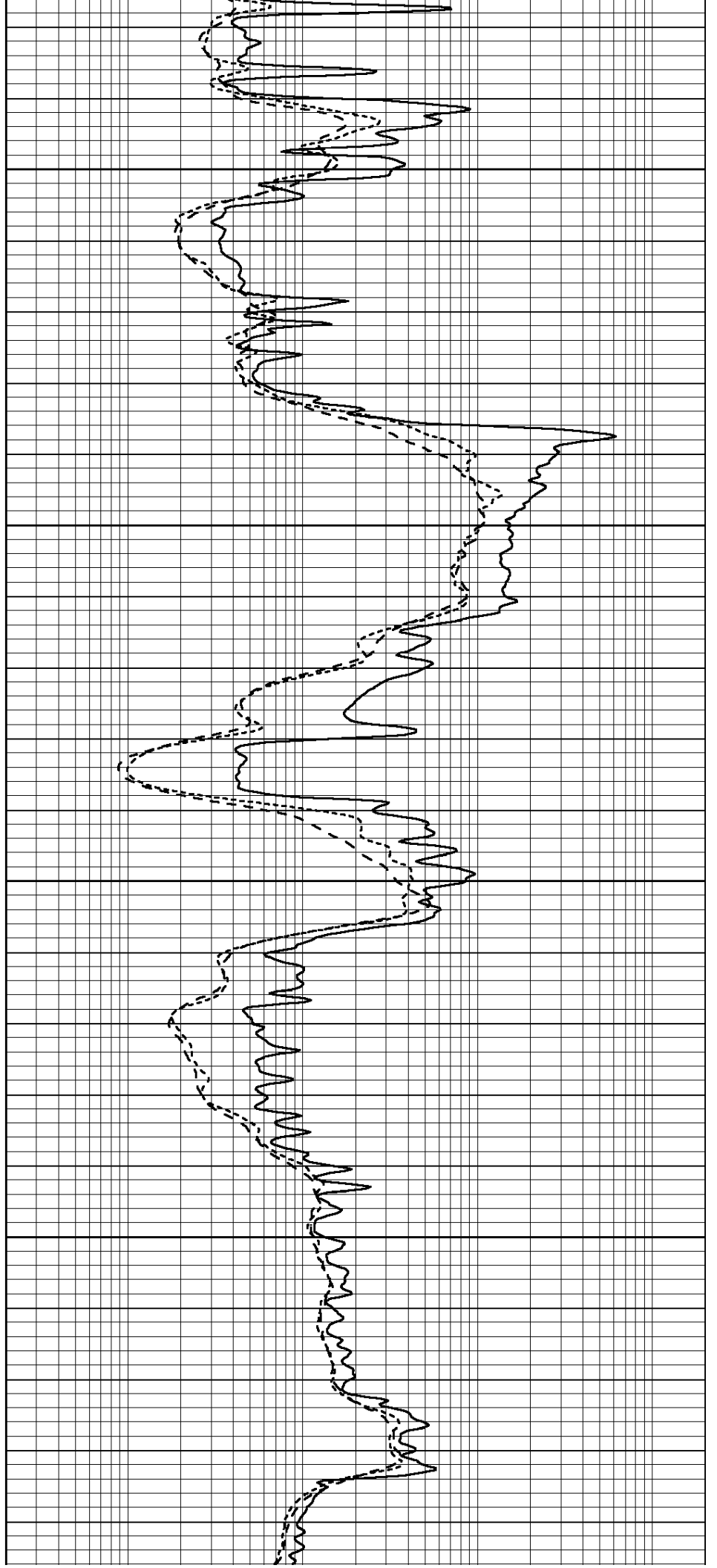
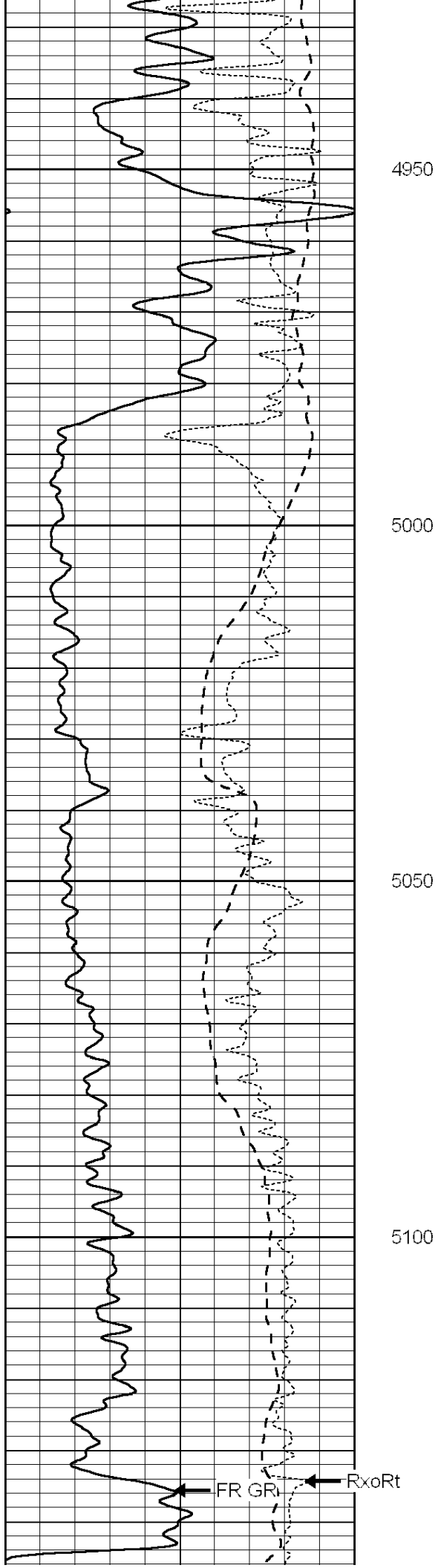
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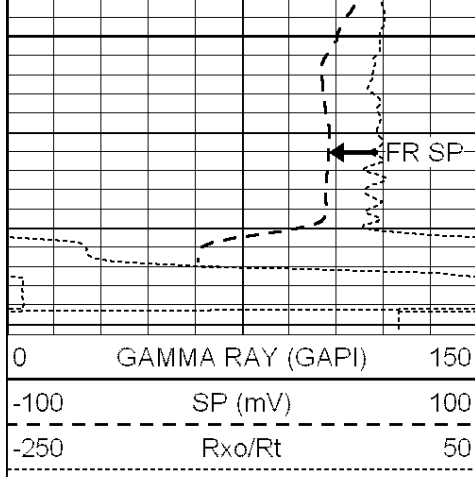
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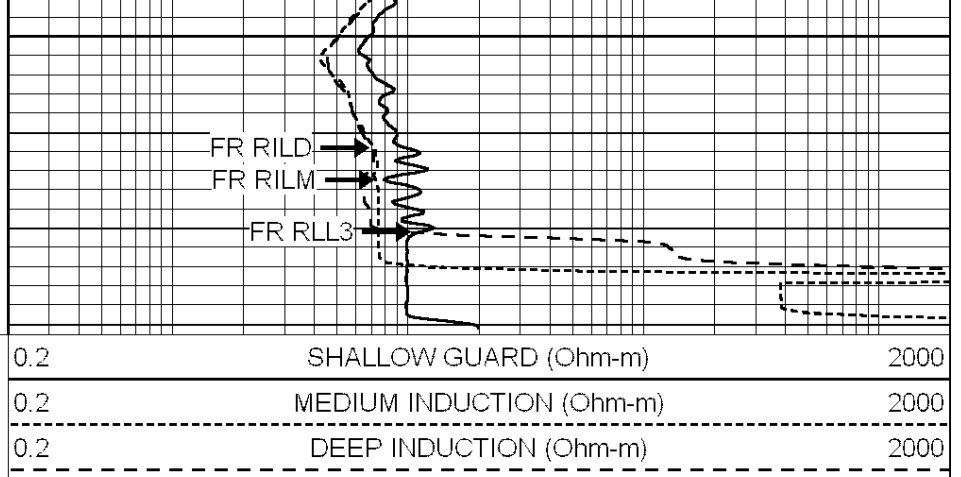
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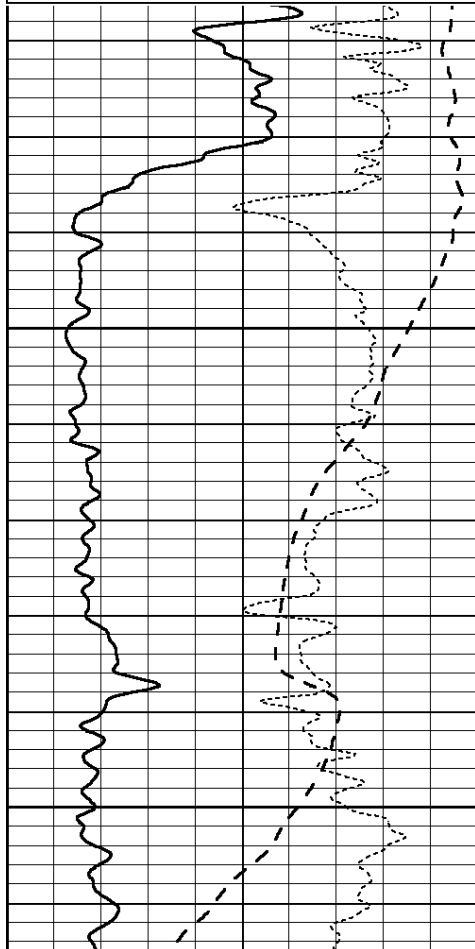
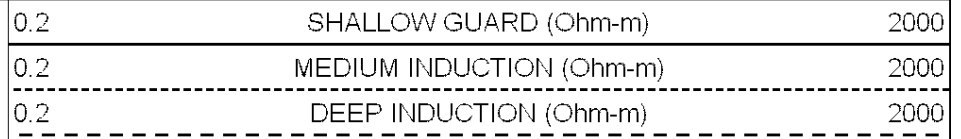
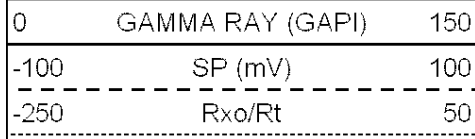
5150  
LTD 5172



SUPERIOR  
Hays,  
Kansas

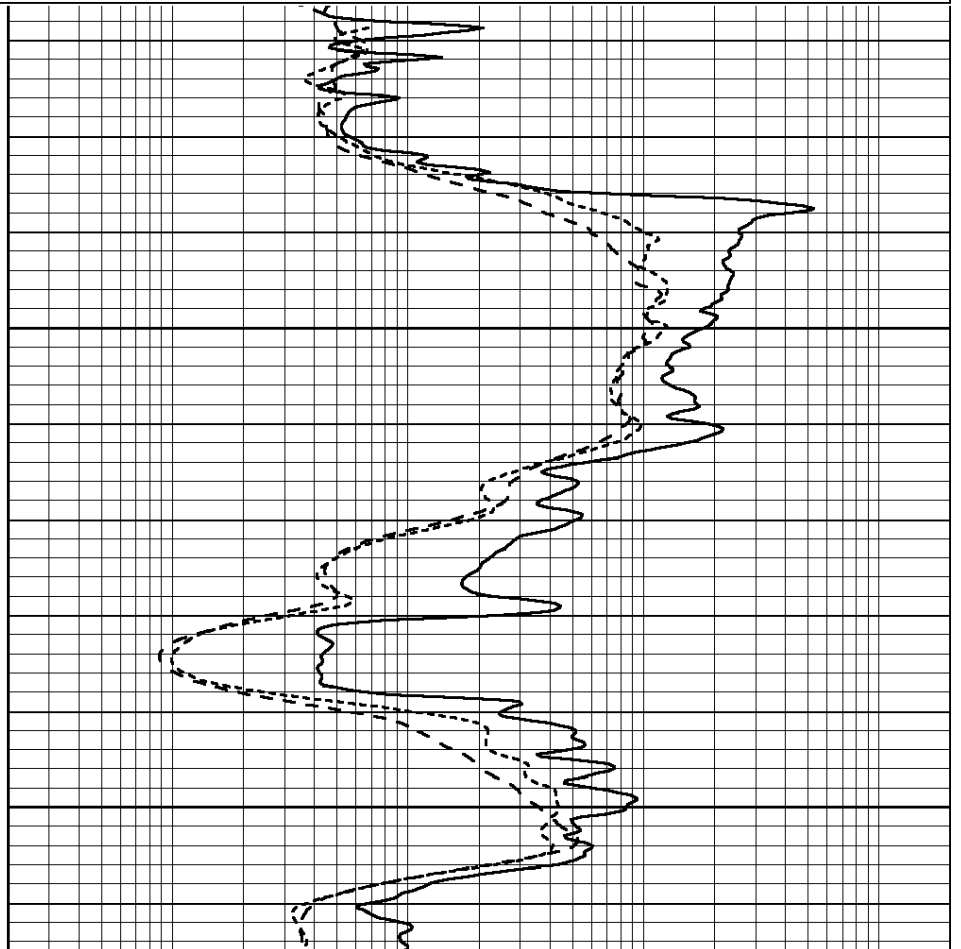
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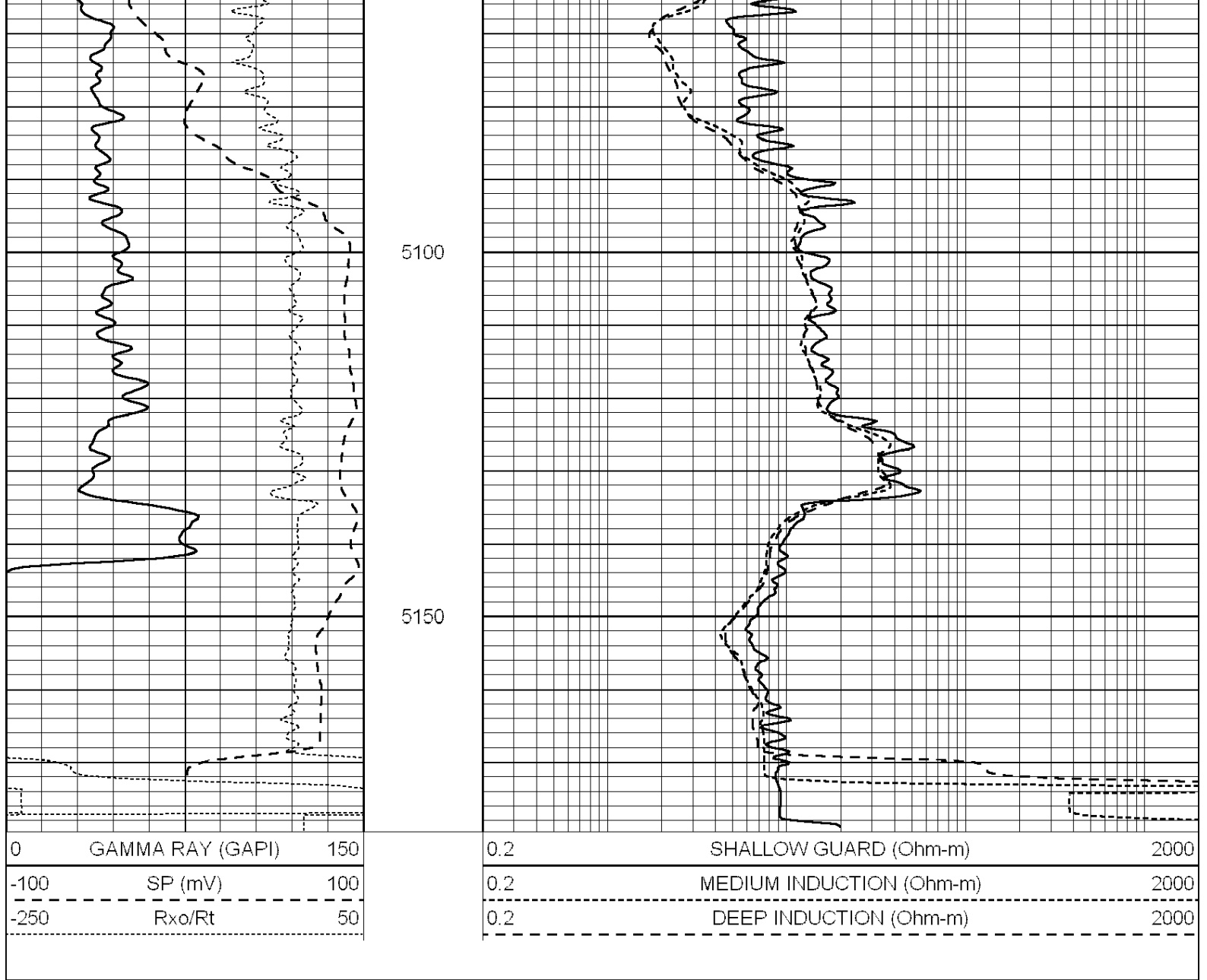
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 Charted by: Depth in Feet scaled 1:240



5000

5050





### Calibration Report

Database File: 009213ddn.db  
 Dataset Pathname: pass3.4  
 Dataset Creation: Mon Jun 04 11:00:39 2012 by Calc Open-Cased 090629

### Dual Induction Calibration Report

Serial-Model: PROBE8-DILG  
 Surface Cal Performed: Fri Aug 01 06:33:19 2008  
 Downhole Cal Performed: Mon Jul 28 11:08:27 2008  
 After Survey Verification Performed: Mon Jul 28 11:08:27 2008

#### Surface Calibration

Loop:	Readings				References		Results	
	Air	Loop			Air	Loop	m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration			Readings		References		Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	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		

### Compensated Density Calibration Report

Serial-Model: GEAR4-GEARHART  
Source / Verifier: 143 / 143  
Master Calibration Performed: Mon Mar 19 19:07:19 2012

Master Calibration			Density		Far Detector		Near Detector	
Magnesium	1.710	g/cc	1015.91	497.51	cps			
Aluminum	2.600	g/cc	227.67	350.20	cps			
Spine Angle = 76.79			Density/Spine Ratio = 0.579					
	Size		Reading					
Small Ring	8.00	in	2.25	V				
Large Ring	14.00	in	4.37	V				

### Compensated Neutron Calibration Report

Serial Number: 6I  
Tool Model: G

### CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

### Gamma Ray Calibration Report

Serial Number: #8  
Tool Model: OPEN  
Performed: Mon Jun 13 16:56:43 2011

Calibrator Value: 150.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 175.0 cps

Sensitivity: 0.8371 GAPI/cps