



SUPERIOR
Hays,
Kansas

DUAL
INDUCTION
LOG

Company		MULL DRILLING COMPANY, INC.		
Well		APC-TALLMAN #2-3		
Field				
County		KIOWA		
State		COLORADO		
Company		MULL DRILLING COMPANY, INC.		
Well		APC-TALLMAN #2-3		
Field				
County		KIOWA	State	COLORADO
Location:		API # : 05-061-06356-00		Other Services CDL/CNL/PE MEL/SON
Permanent Datum Log Measured From Drilling Measured From		GROUND LEVEL Elevation 3991 KELLY BUSHING 11' A.G.L. KELLY BUSHING		
SEC 3		TWP 18S	RGE 45W	Elevation K.B. 4002 D.F. 4000 G.L. 3991
Date	3/18/11			
Run Number	ONE			
Depth Driller	5057			
Depth Logger	5057			
Bottom Logged Interval	5055			
Top Log Interval	00			
Casing Driller	8 5/8" @ 326			
Casing Logger	322			
Bit Size	7 7/8"			
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3200 PPM		
Density / Viscosity	9.2/56			
pH / Fluid Loss	10.5/8.0			
Source of Sample	FLOWLINE			
Rim @ Meas. Temp	.95 @ 78F			
Rmf @ Meas. Temp	.71 @ 78F			
Rmc @ Meas. Temp	1.13 @ 78F			
Source of Rmf / Rmc	MEASUREMENT			
Rim @ BHT	.59 @ 125F			
Time Circulation Stopped	2 HOURS			
Time Logger on Bottom				
Maximum Recorded Temperature	125F			
Equipment Number	0836			
Location	HAYS, KANSAS			
Recorded By	JASON CAPPELLUCCI			
Witnessed By	PHIL ASKEY			

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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 HAYS, KANSAS (785) 628-6395
DIRECTIONS
BRANDON CO. - EAST EDGE (MM 186) 5 N. - W. INTO



SUPERIOR
Hays,
Kansas

MAIN SECTION

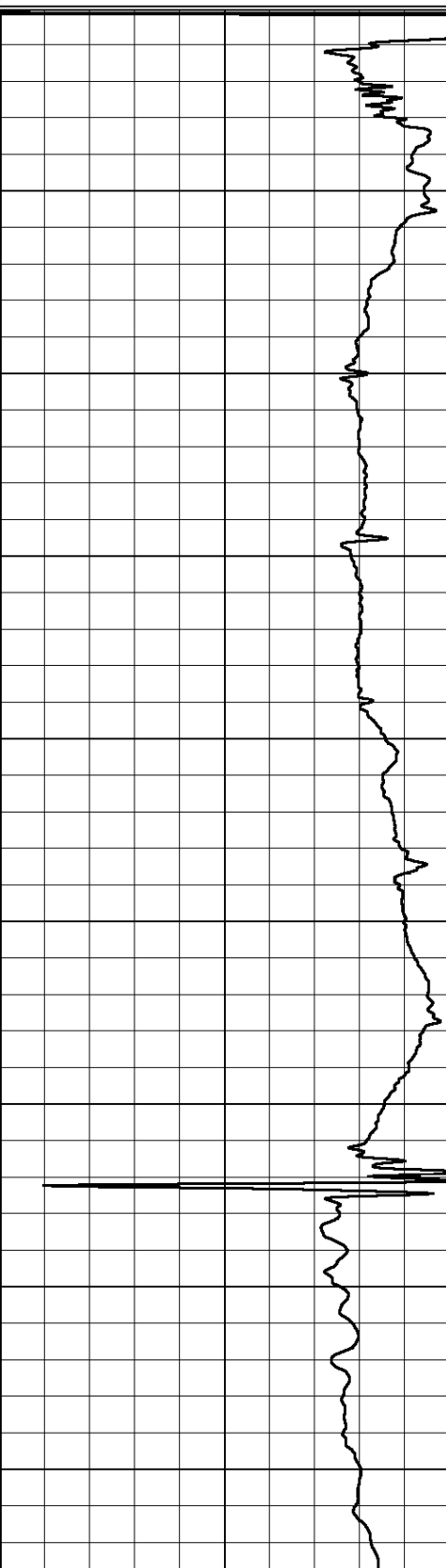
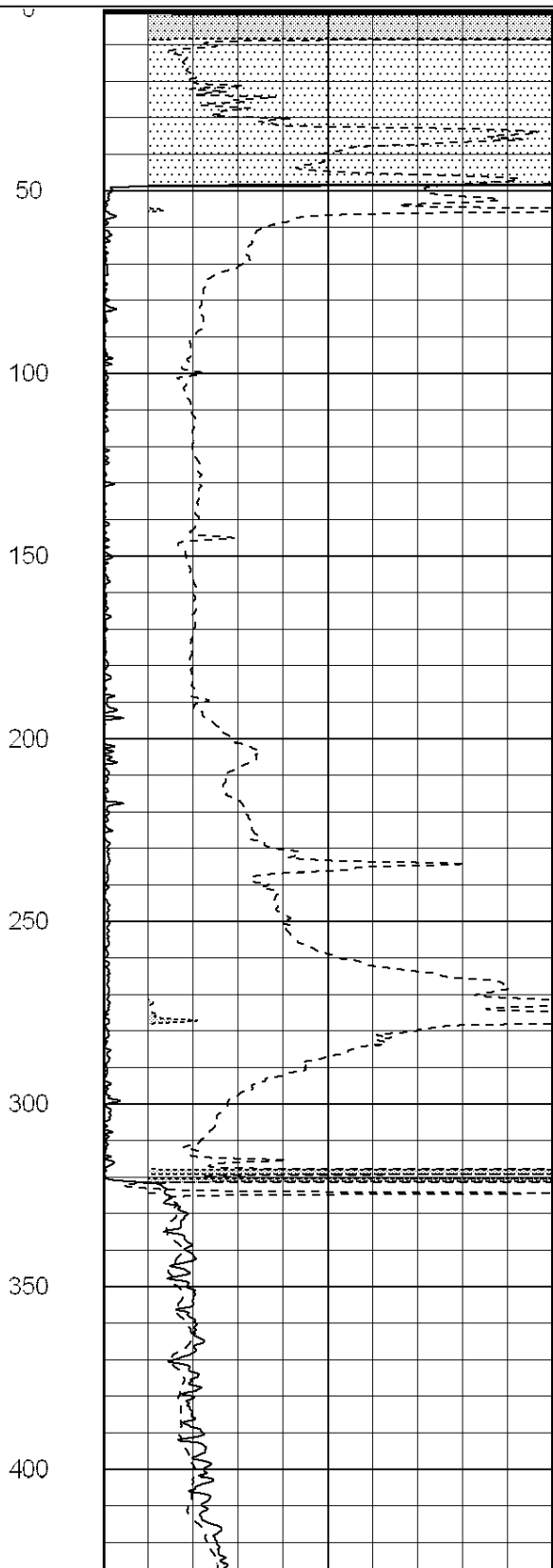
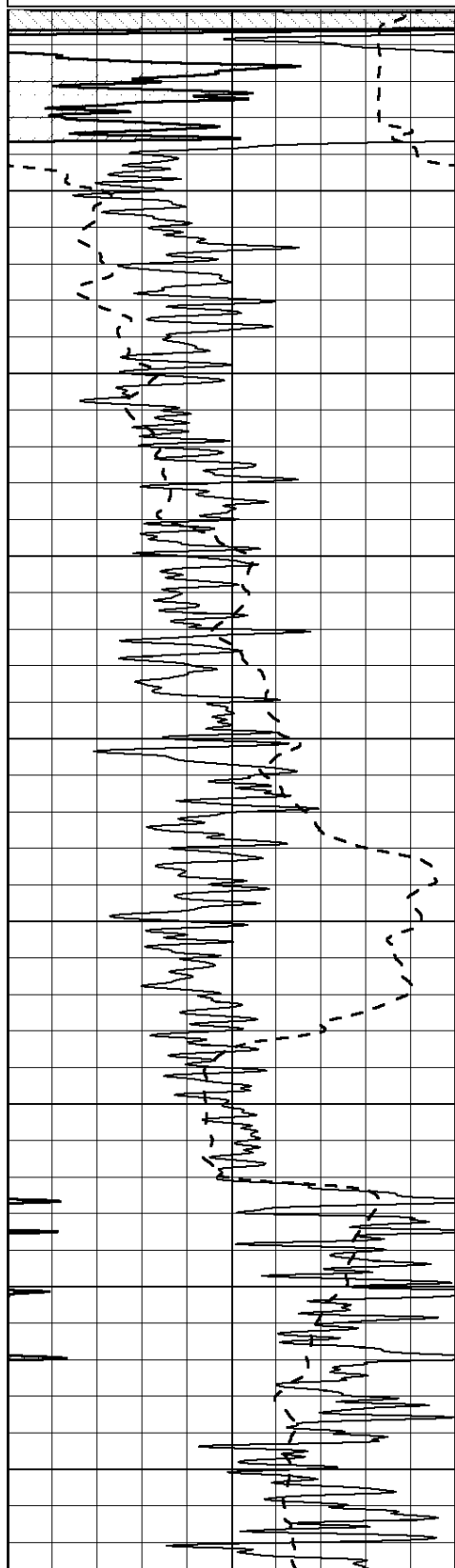
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 Charted by: Depth in Feet scaled 1:600

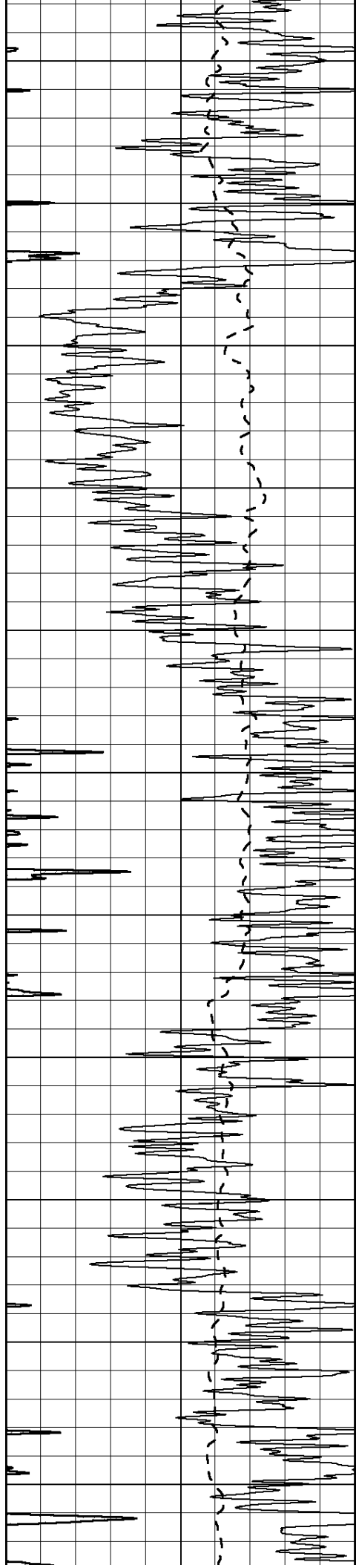
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-100	SP (mV)	100

0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

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





450

500

550

600

650

700

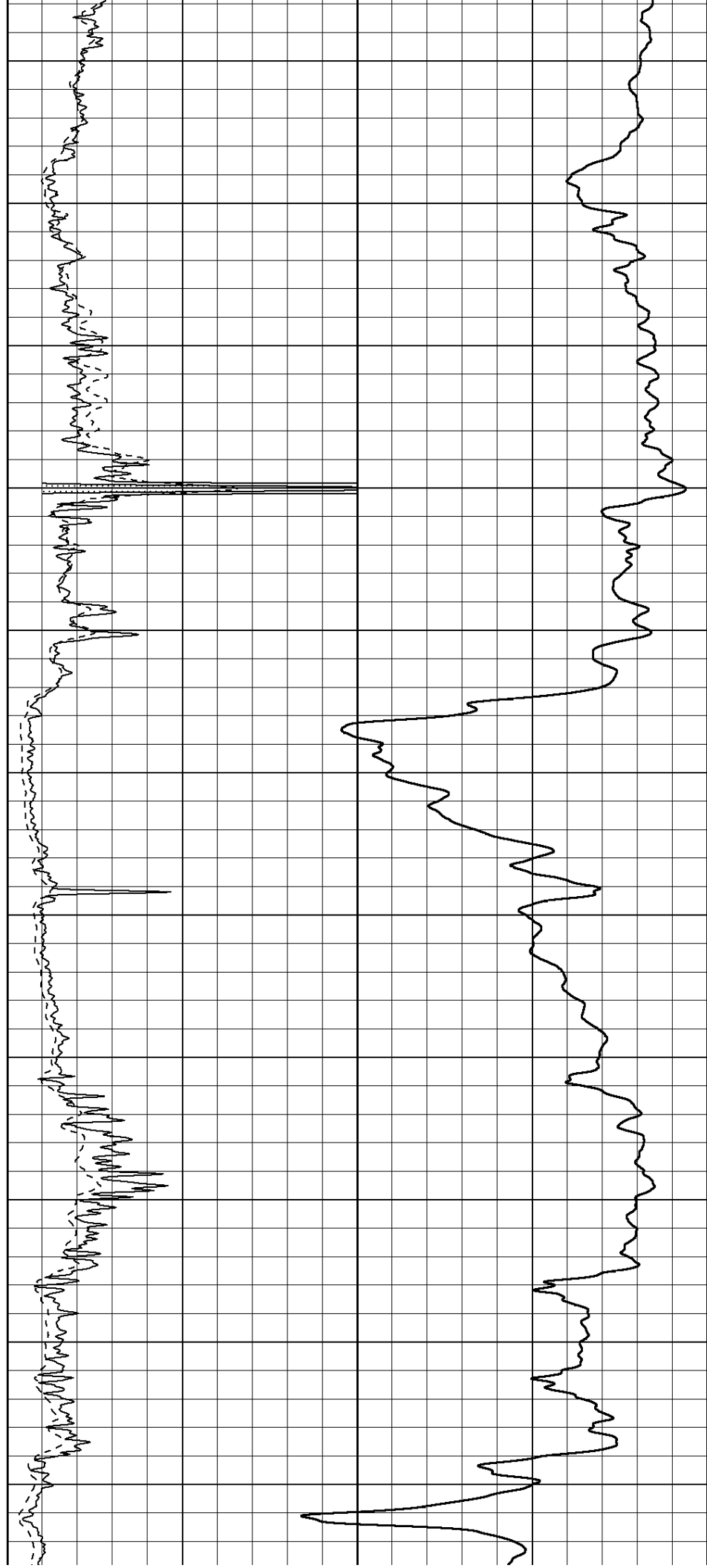
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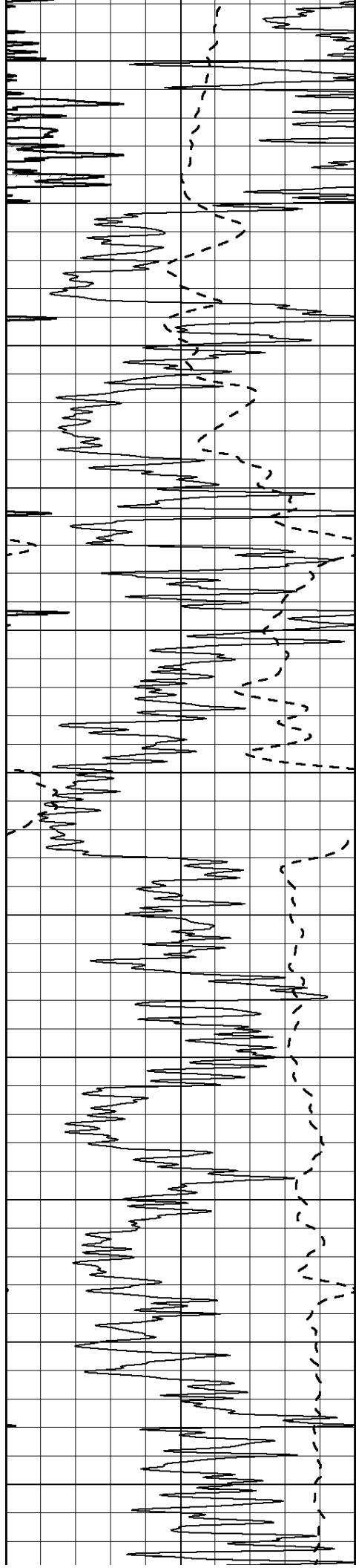
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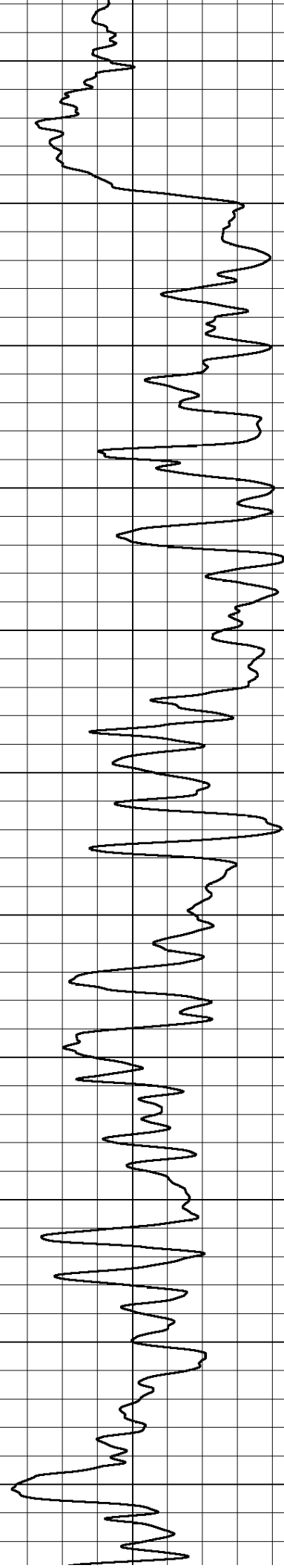
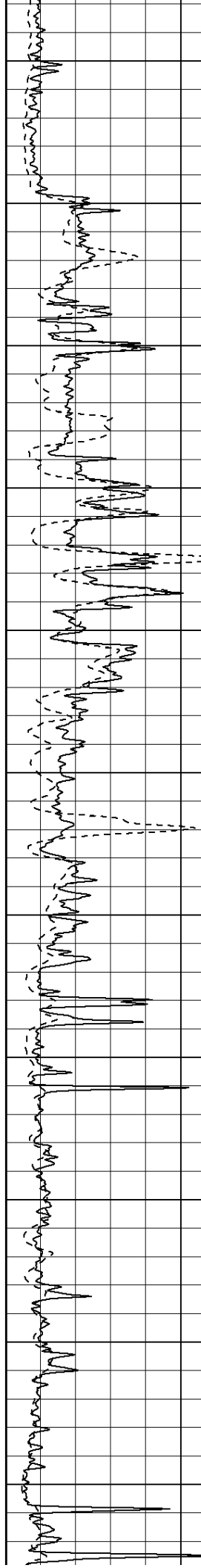
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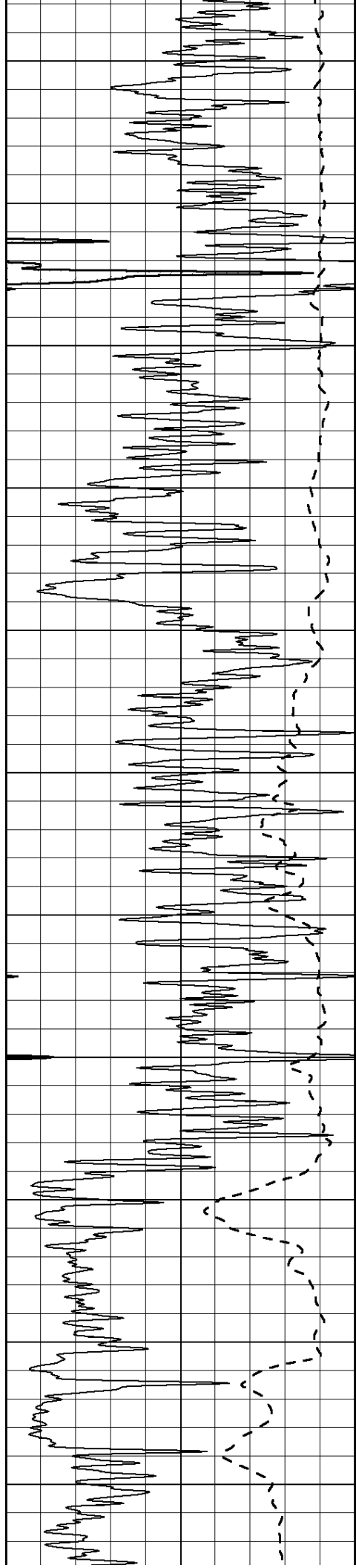
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1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500





1550

1600

1650

1700

1750

1800

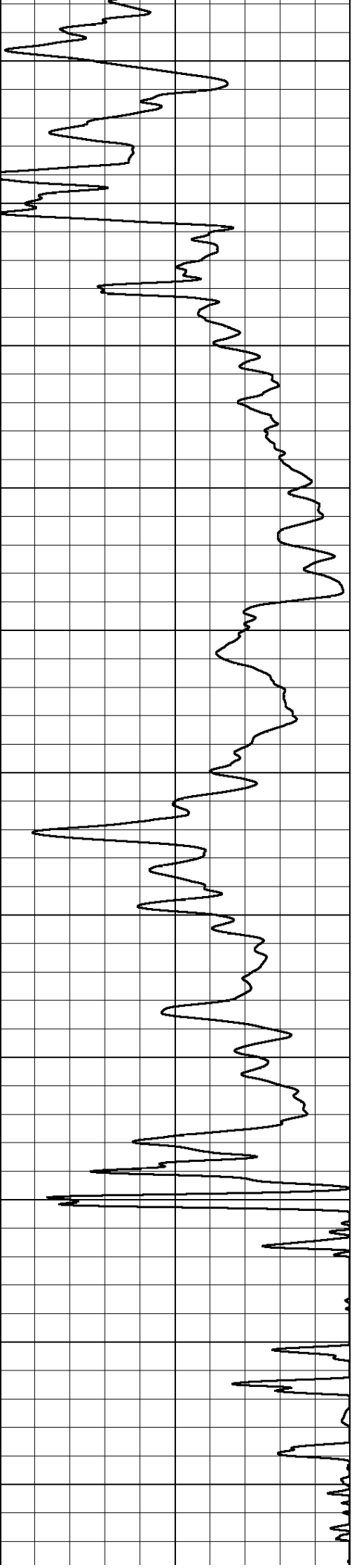
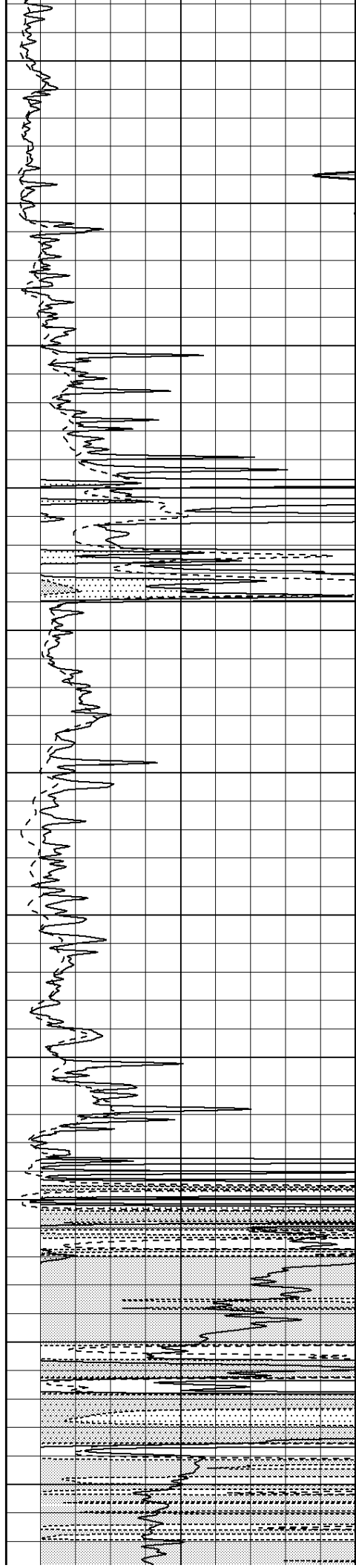
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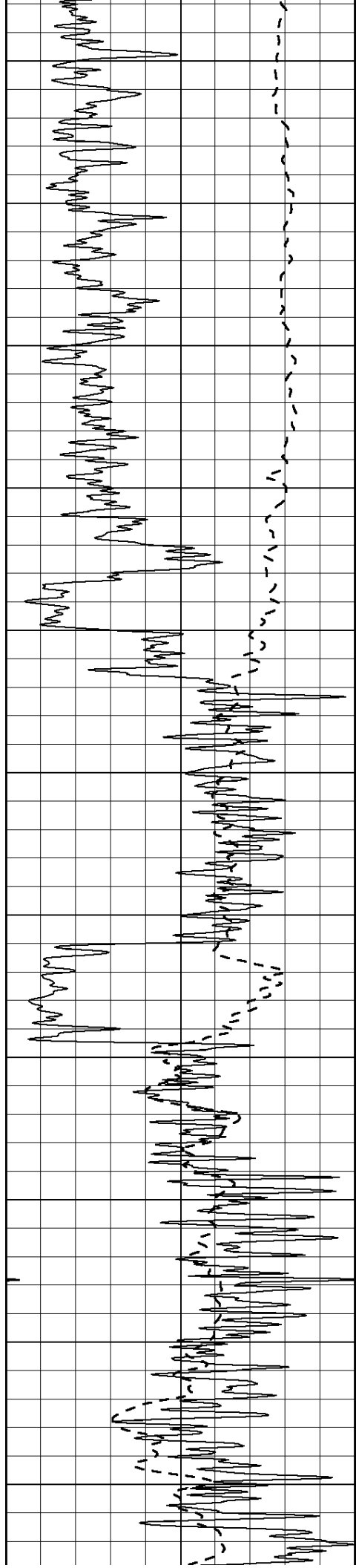
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2150

2200

2250

2300

2350

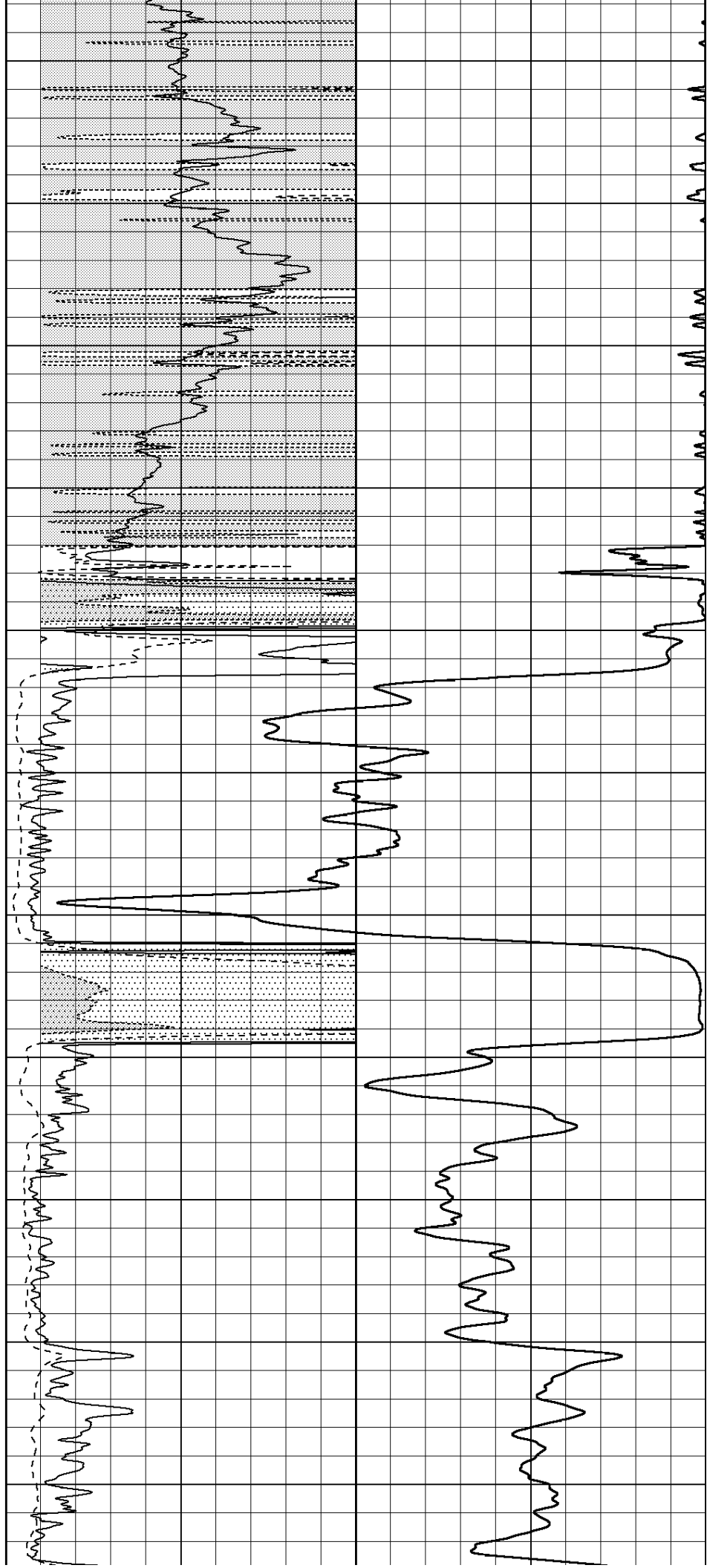
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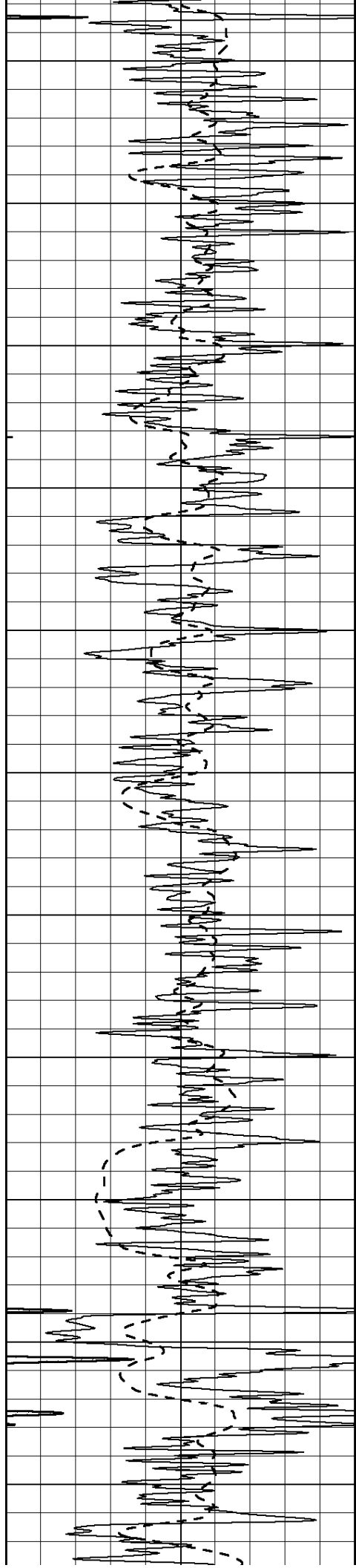
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2500

2550

2600





2650

2700

2750

2800

2850

2900

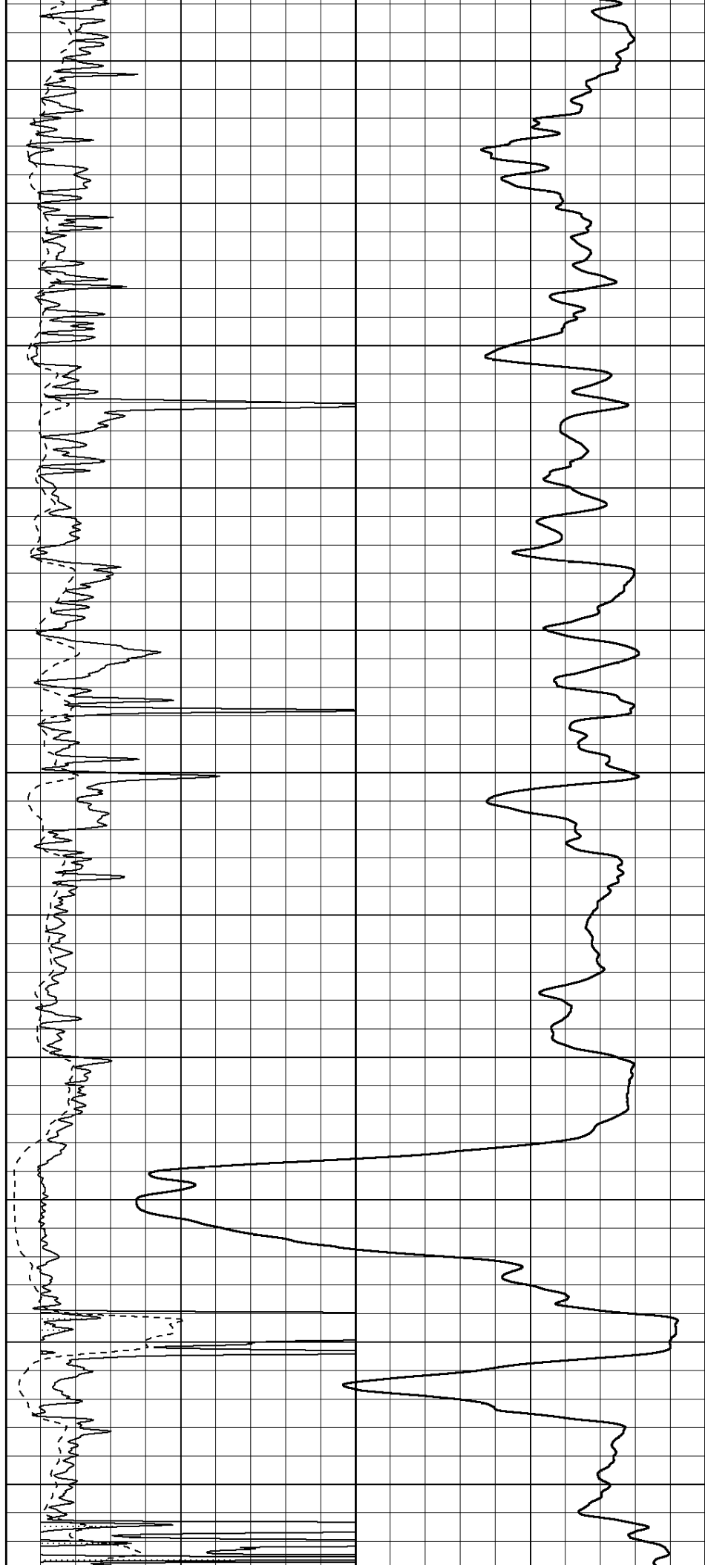
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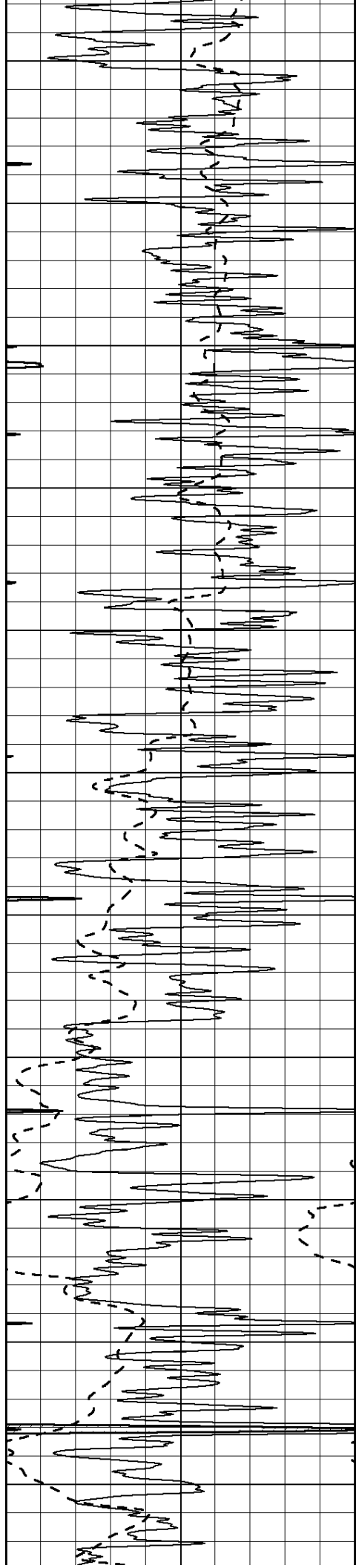
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3050

3100

3150





3200

3250

3300

3350

3400

3450

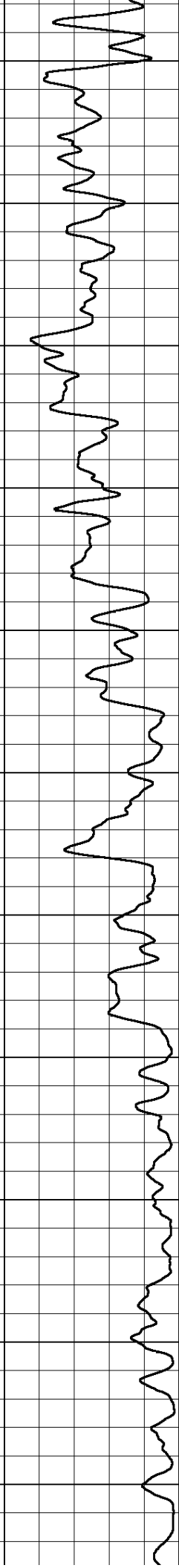
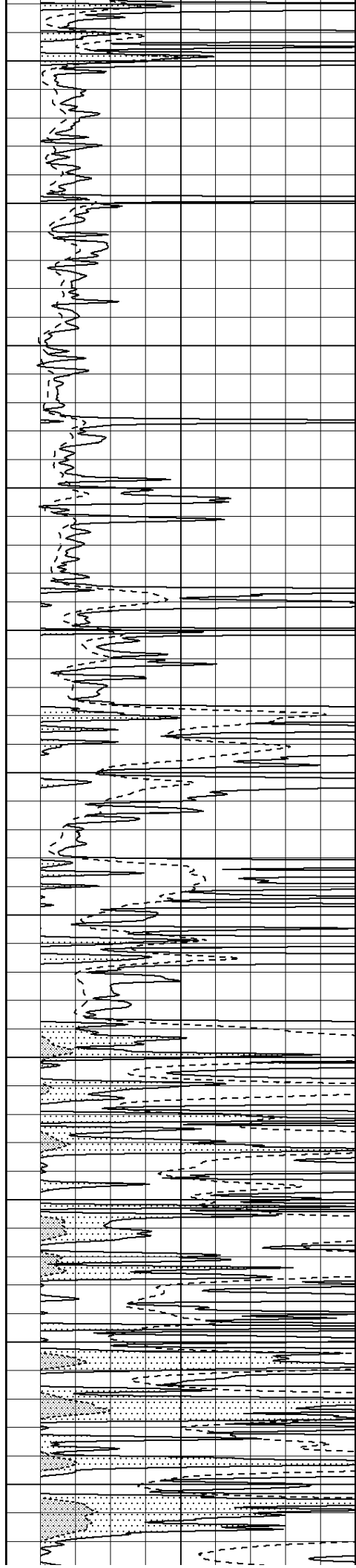
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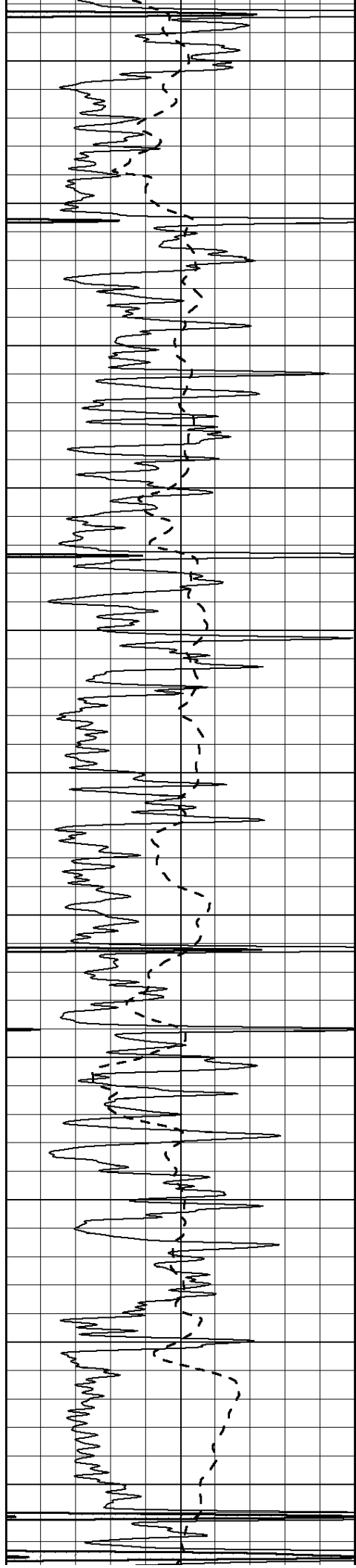
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3700





3750

3800

3850

3900

3950

4000

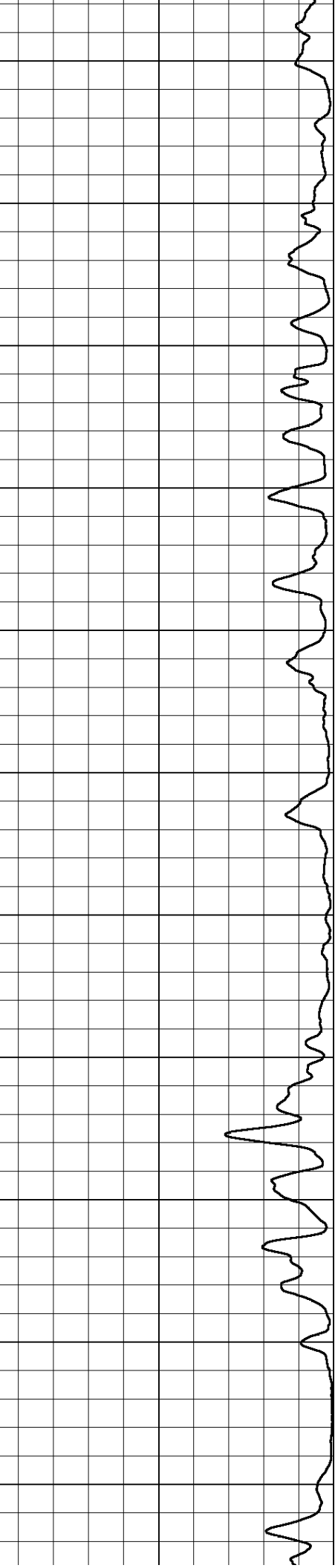
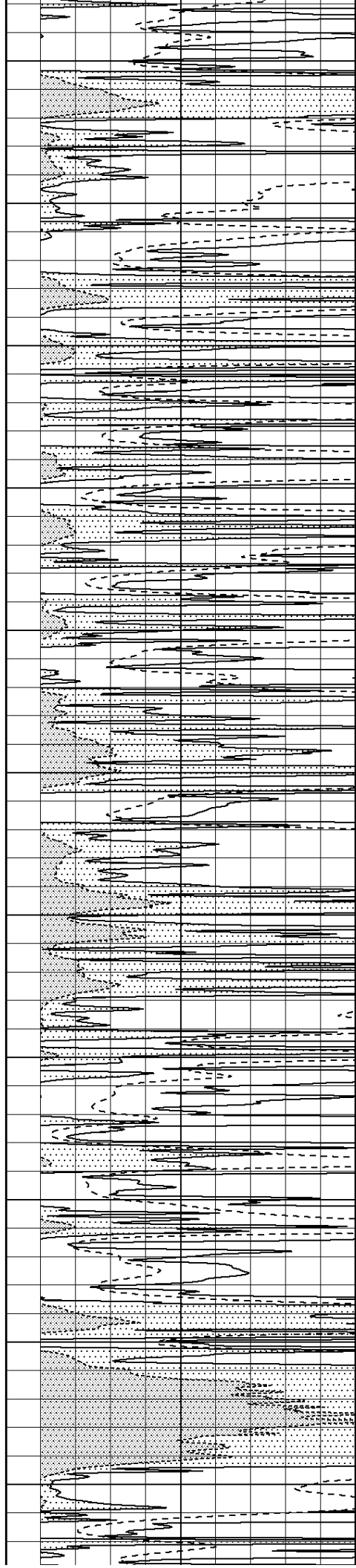
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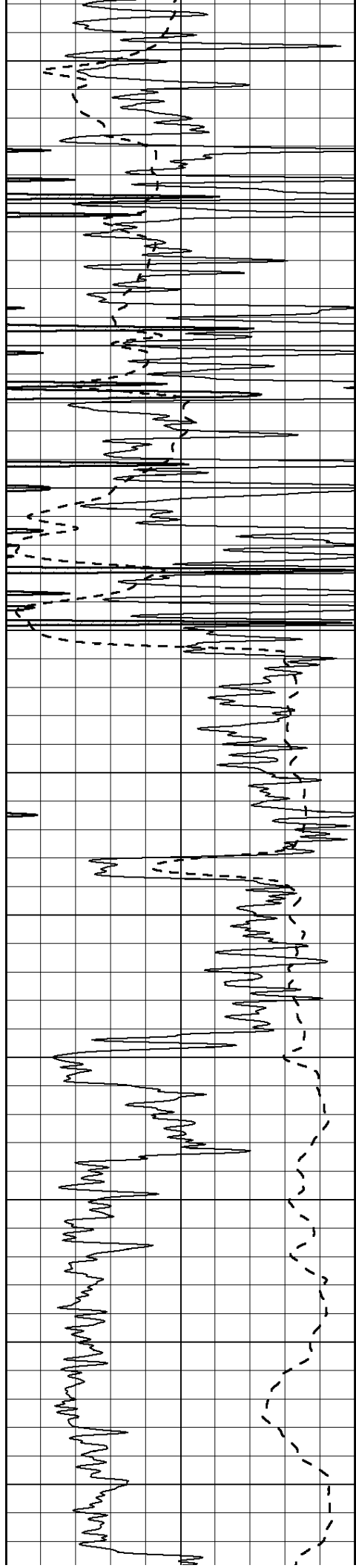
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4150

4200

4250





4300

4350

4400

4450

4500

4550

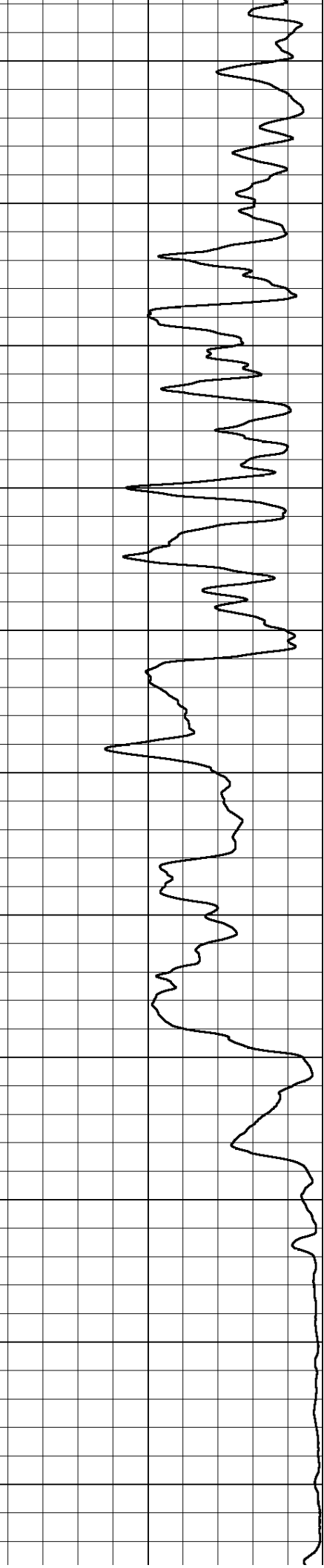
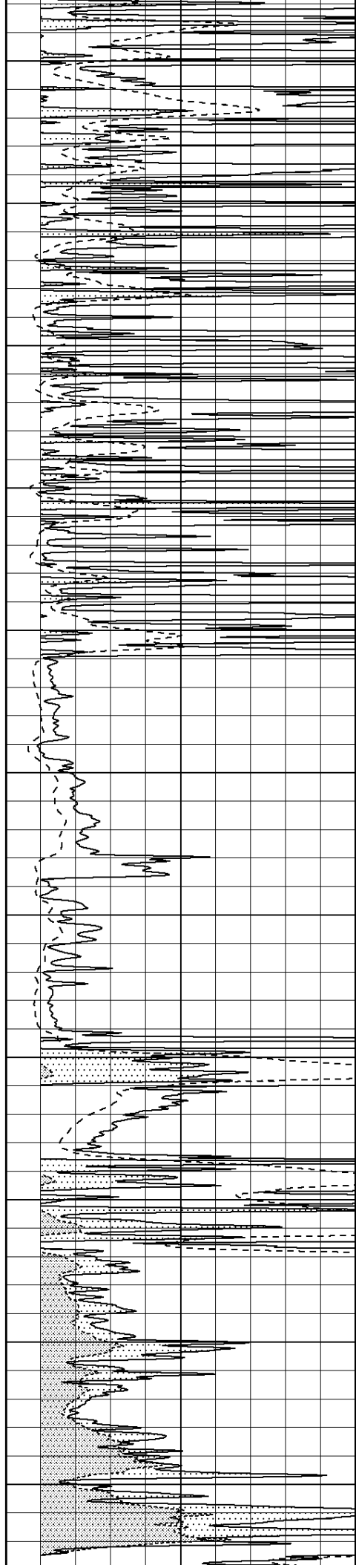
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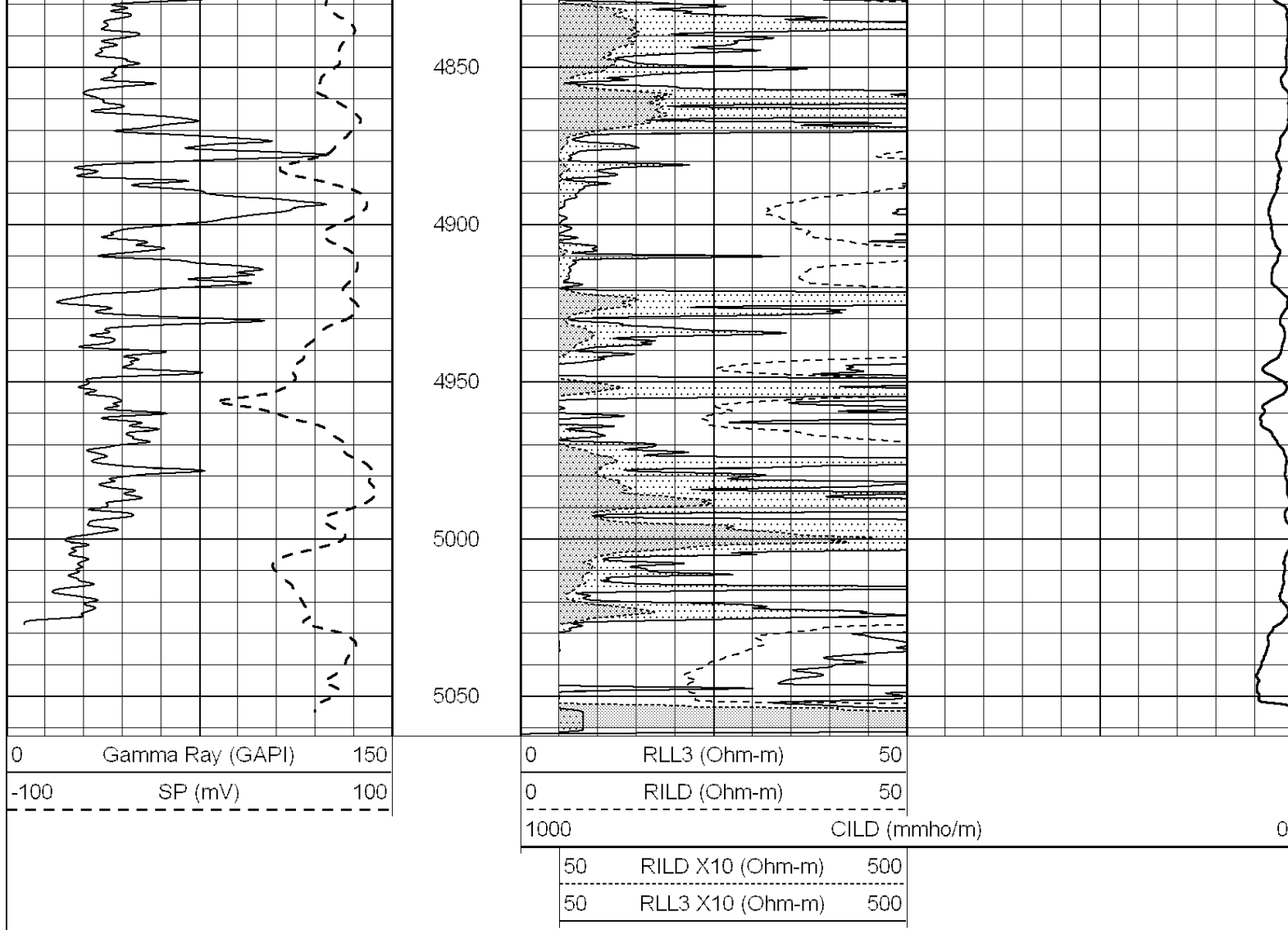
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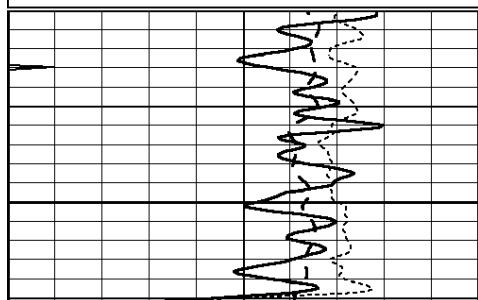
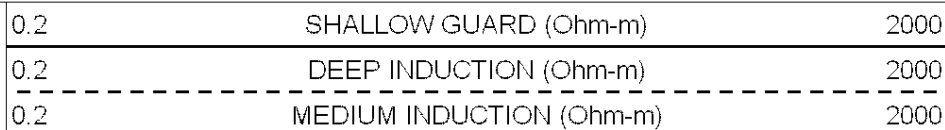
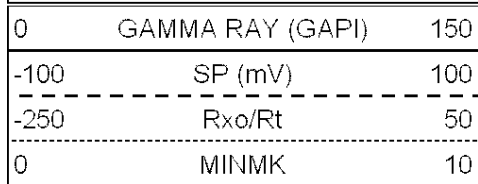




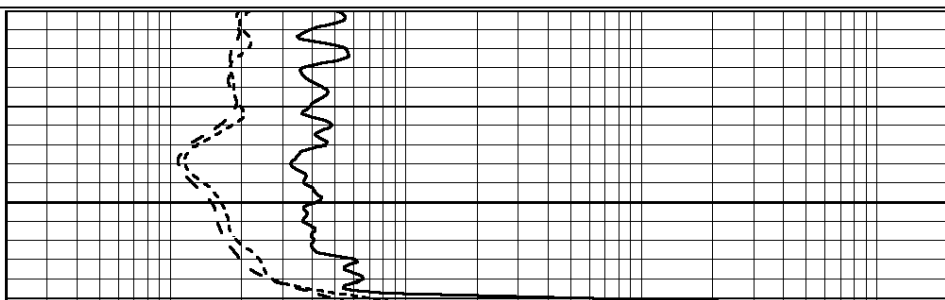
SUPERIOR
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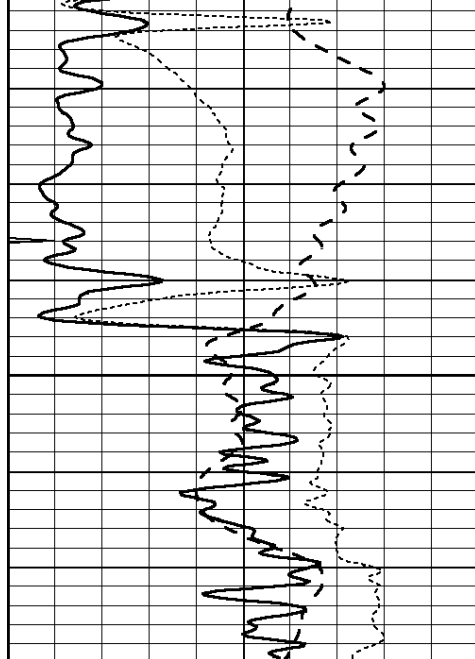
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 Dataset Creation: Fri Mar 18 18:33:22 2011 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240



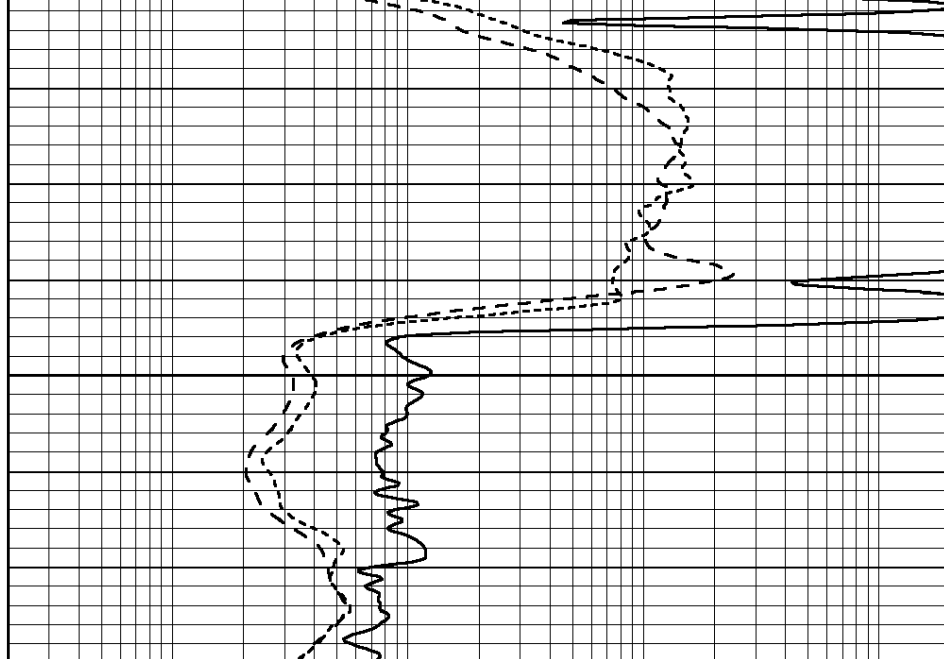
2400





0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10

2450



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



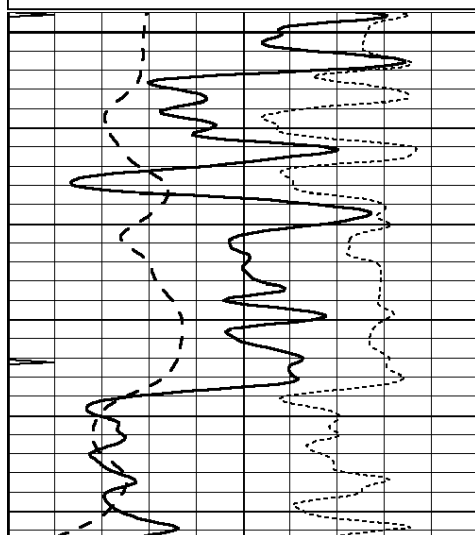
SUPERIOR
Hays,
Kansas

MAIN SECTION

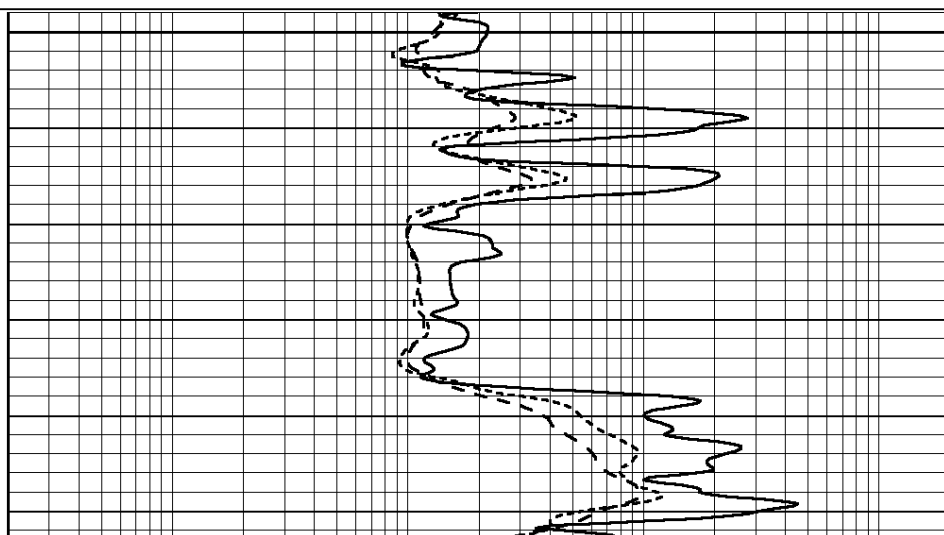
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 Presentation Format: dil
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 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10

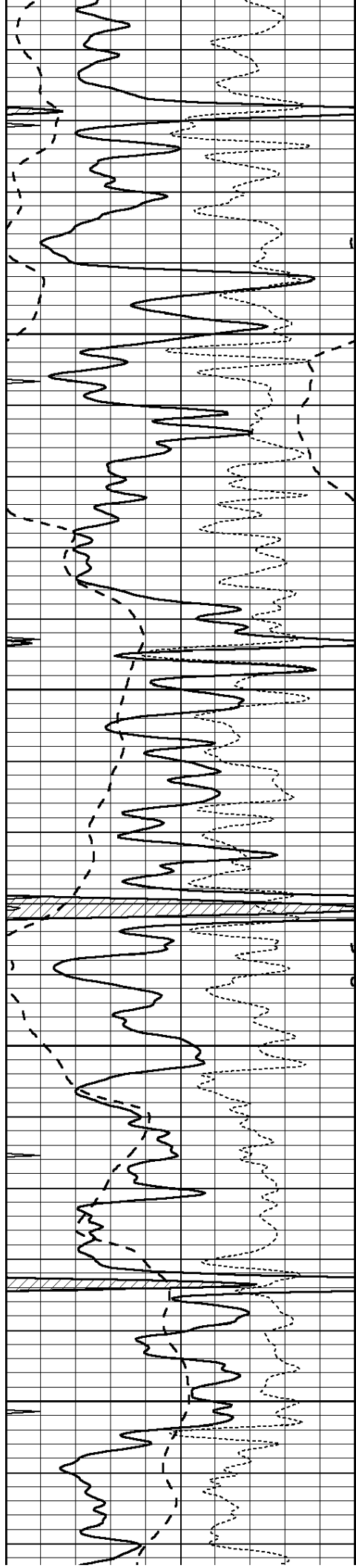
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



3500



3550

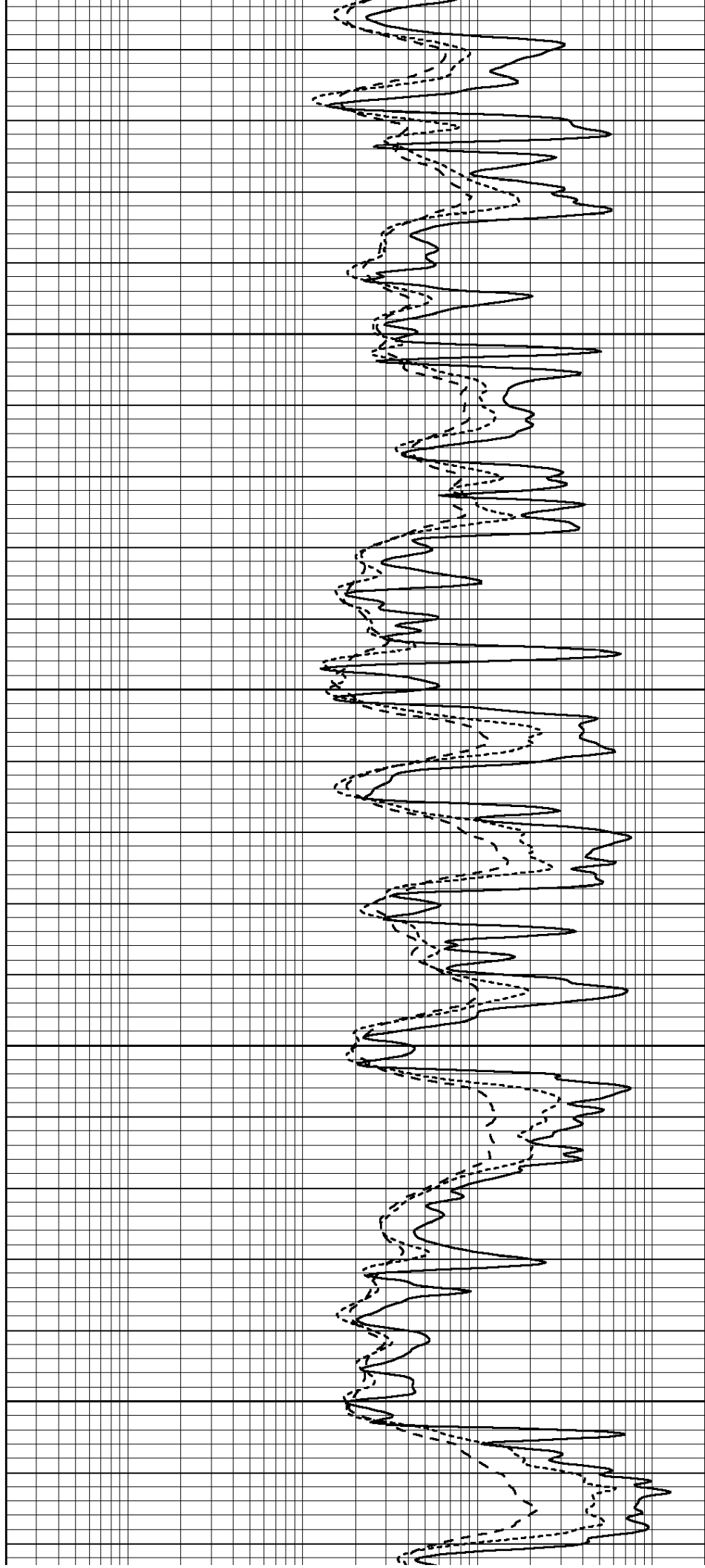


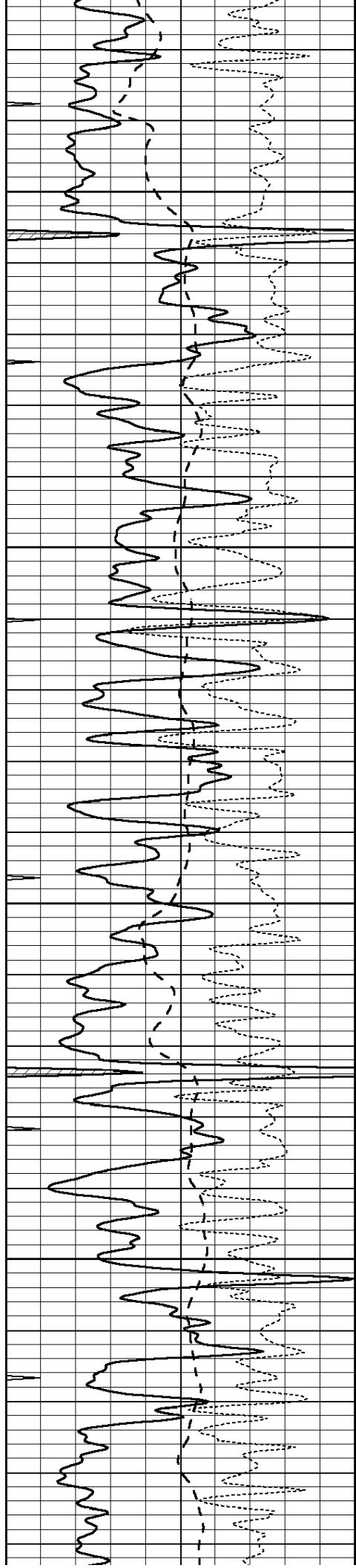
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3700

3750



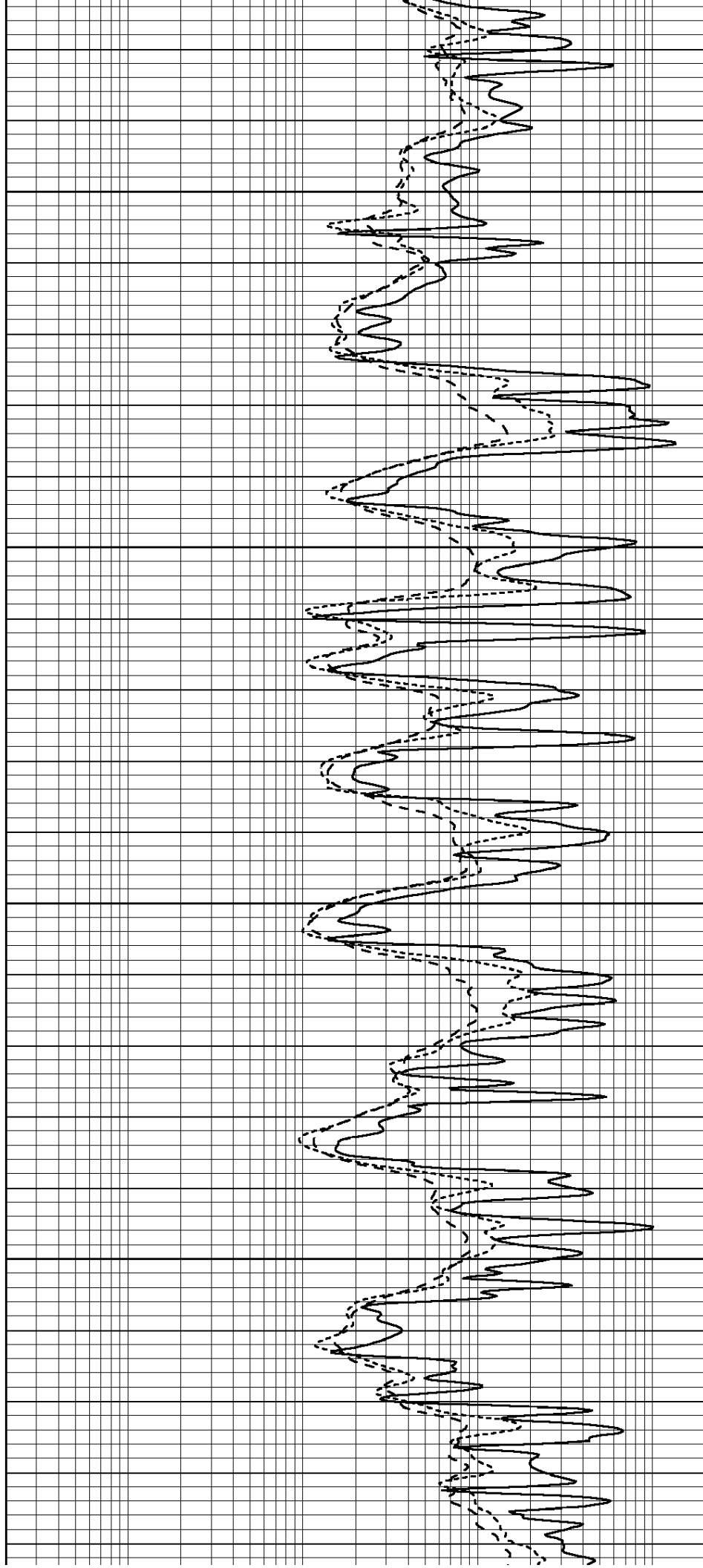


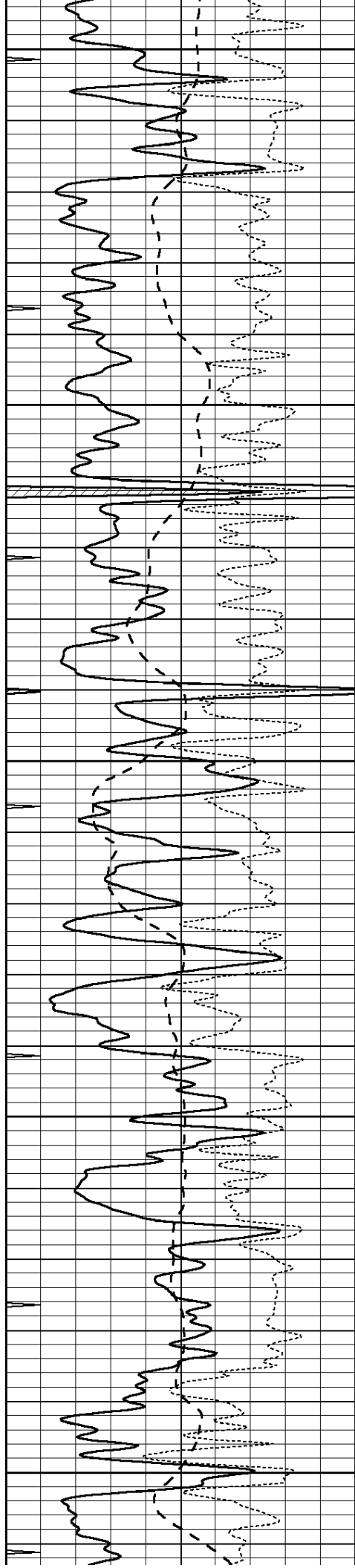
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3850

3900

3950





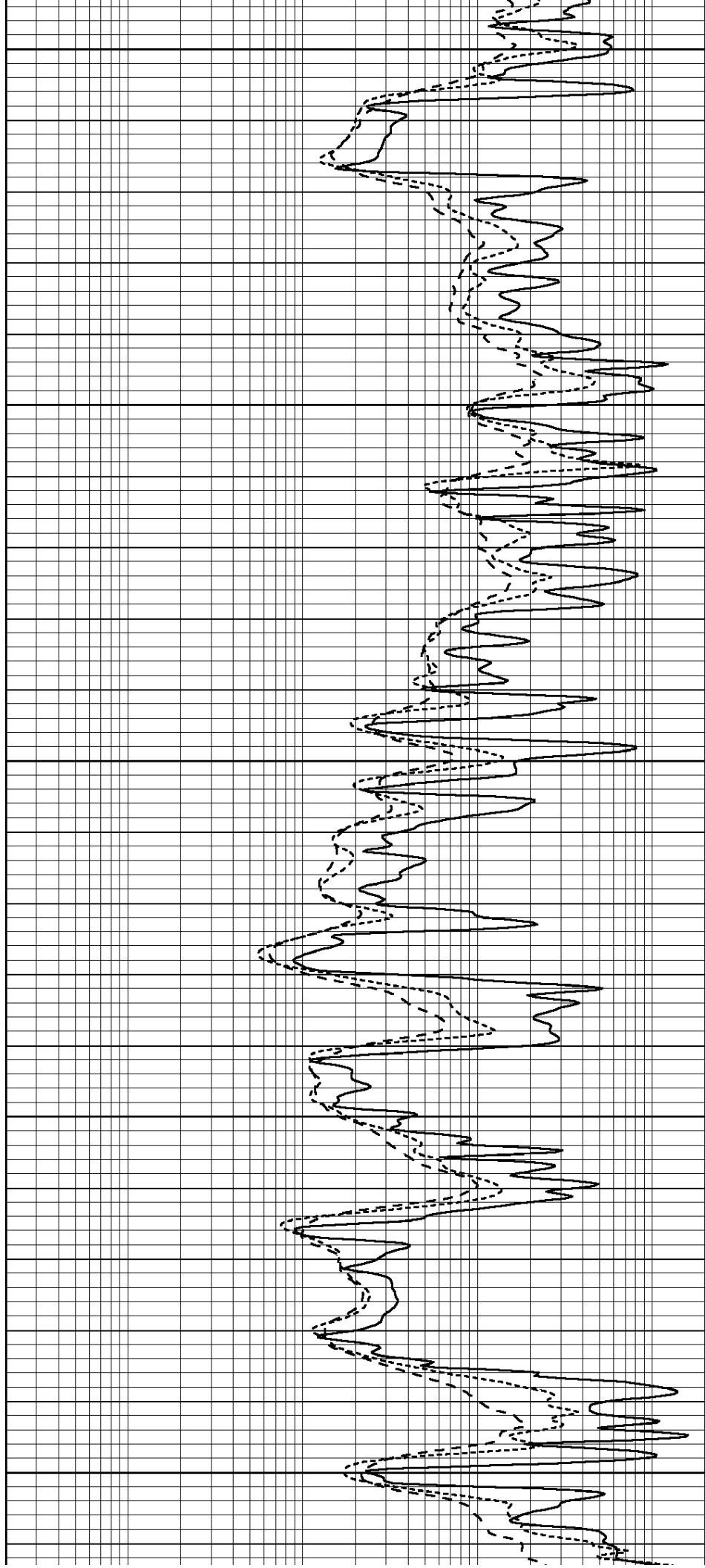
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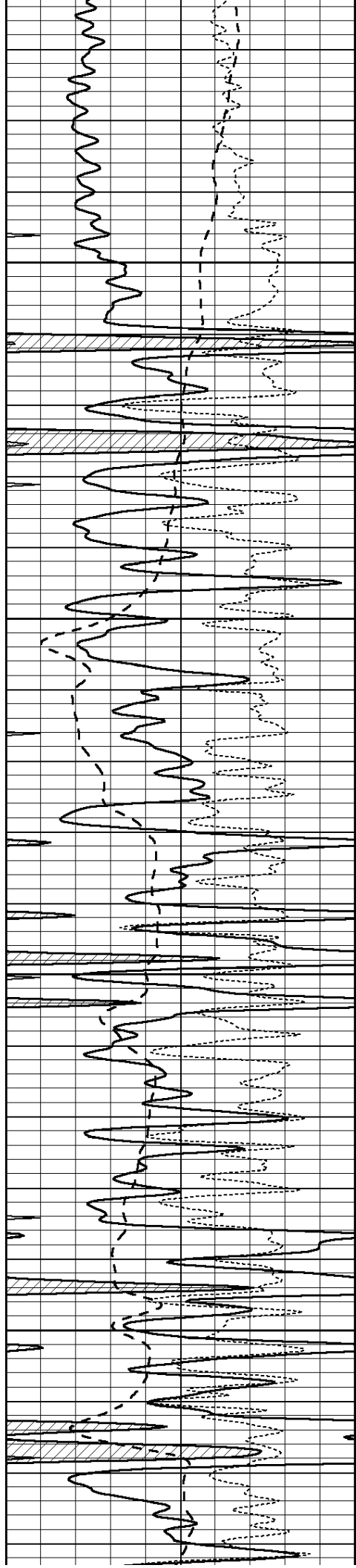
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4100

4150

4200



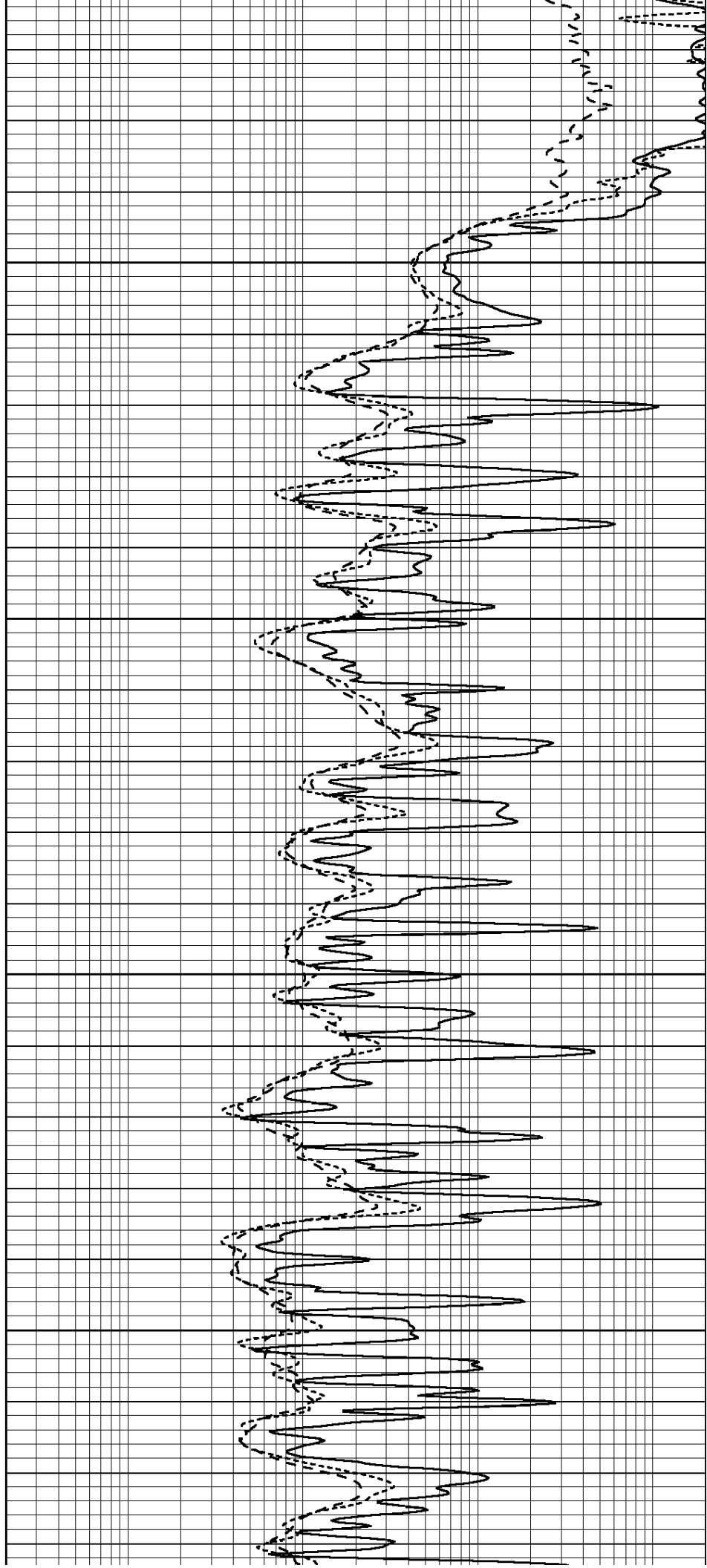


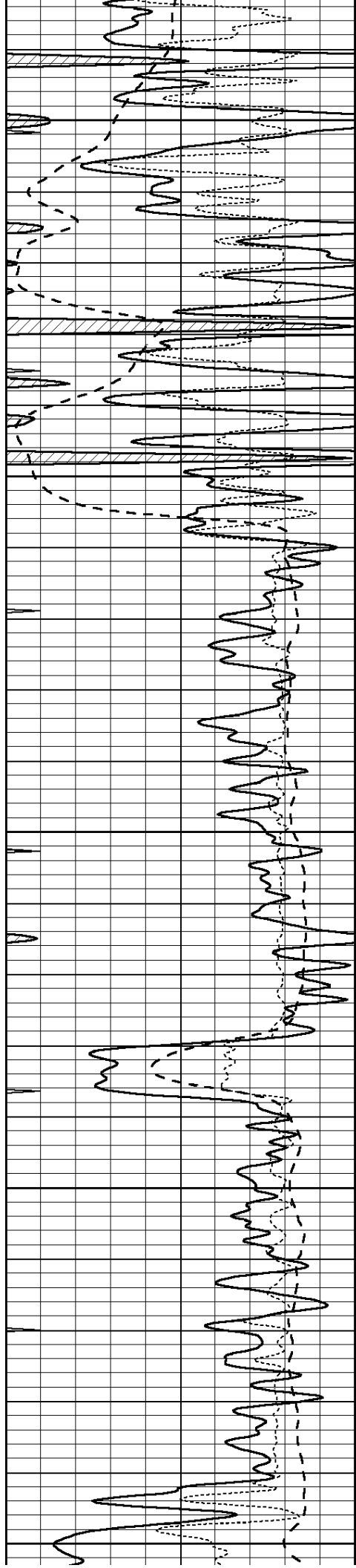
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4300

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4400





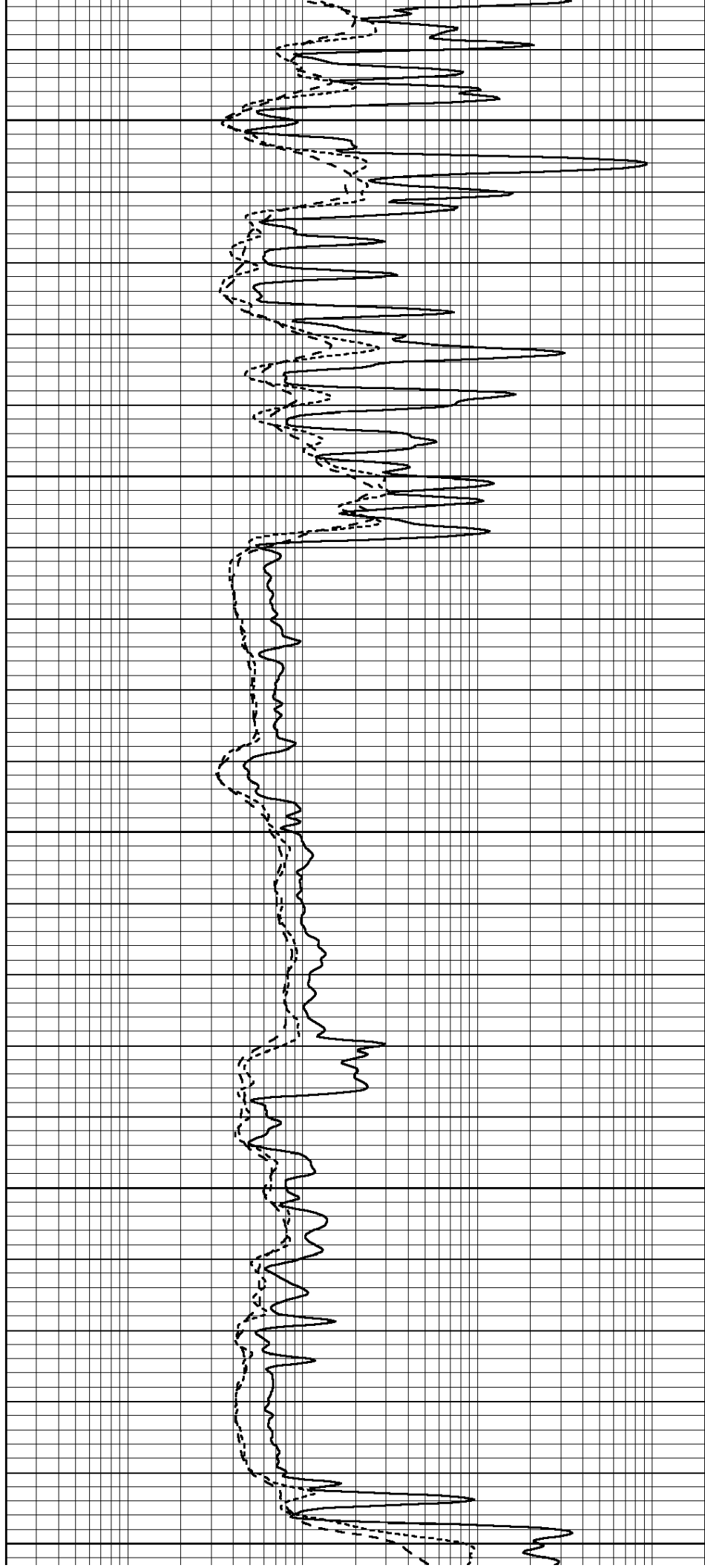
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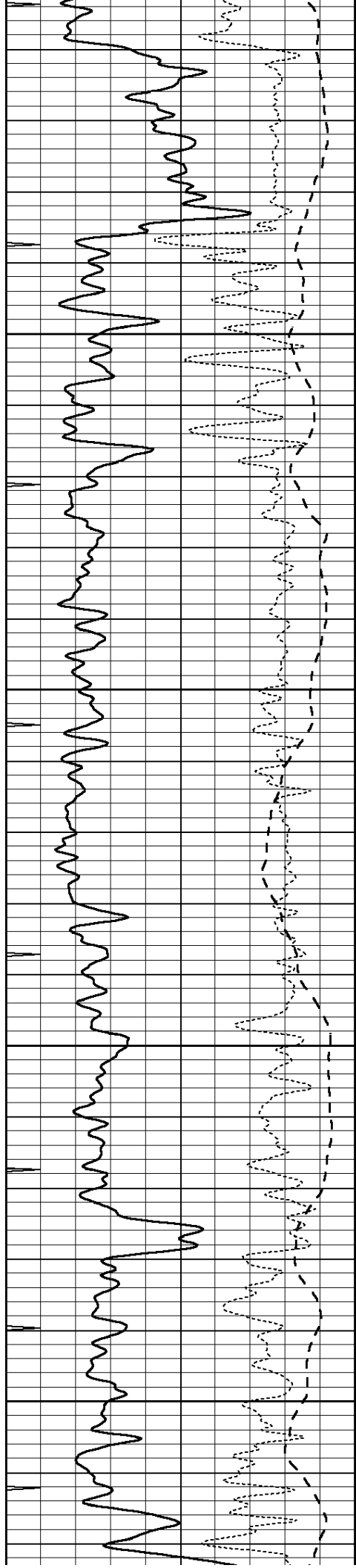
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4650



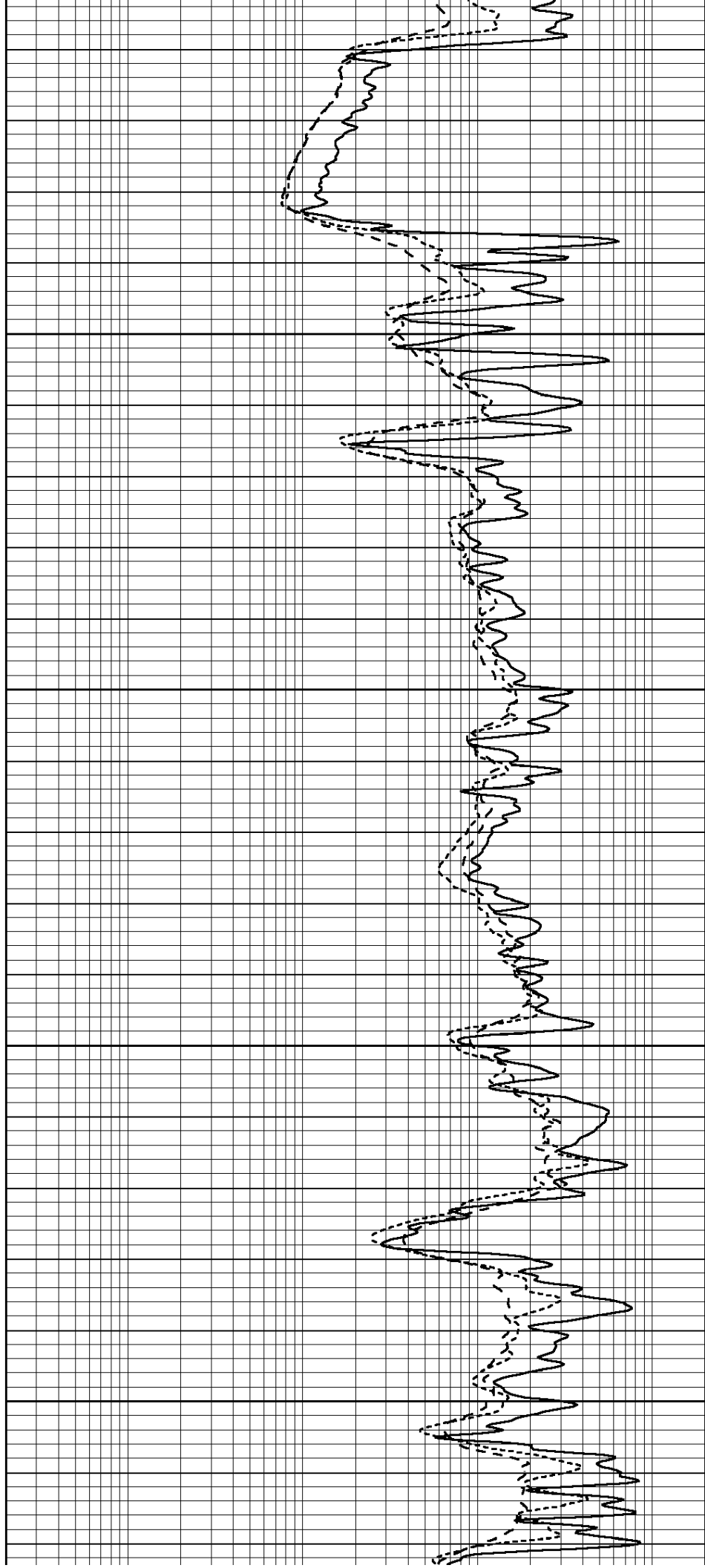


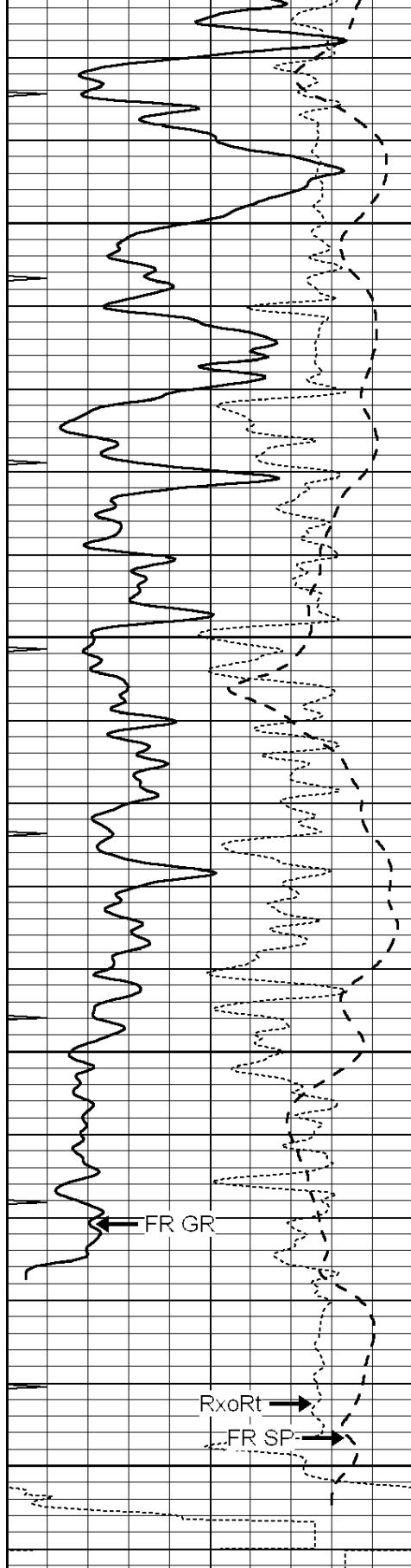
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4750

4800

4850





4900

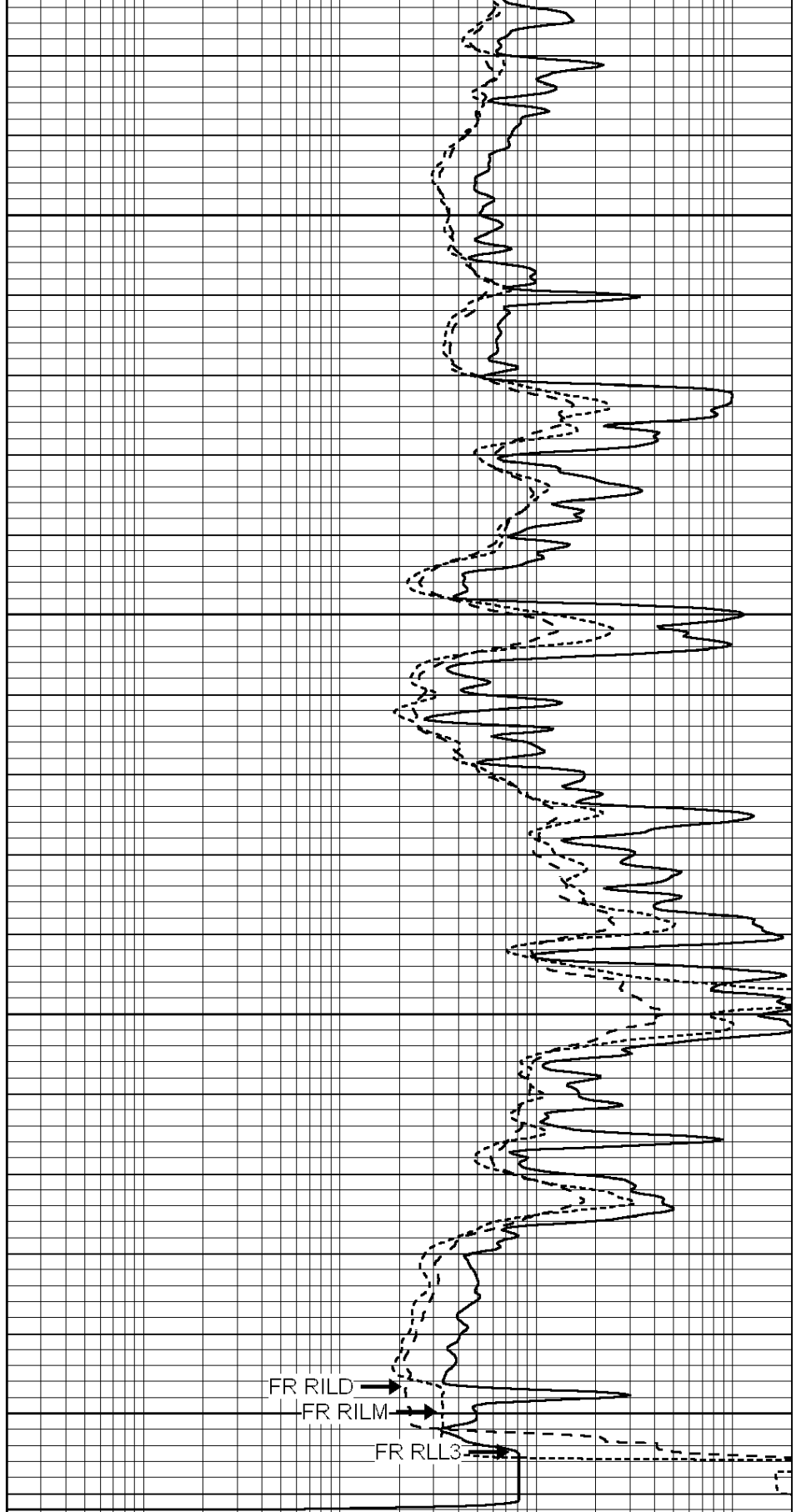
4950

5000

5050

LTD 5057

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	10



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



SUPERIOR

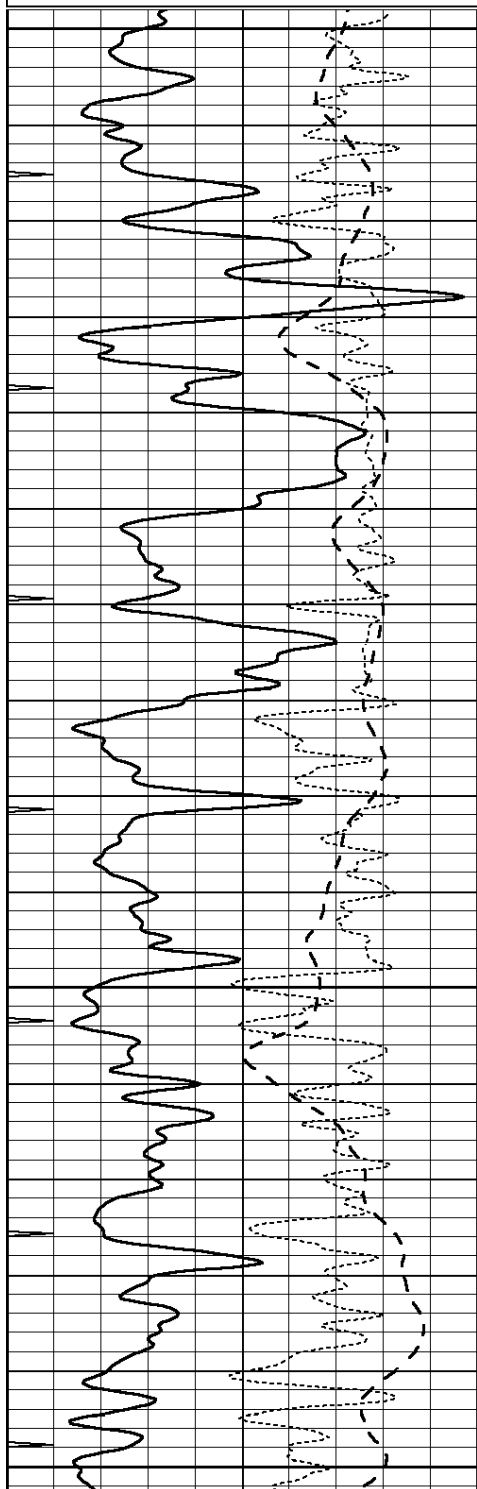
Hays,
Kansas

REPEAT SECTION

Database File: 006616ddn.db
Dataset Pathname: pass2.1
Presentation Format: dil
Dataset Creation: Fri Mar 18 17:49:02 2011 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	MINMK	10

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

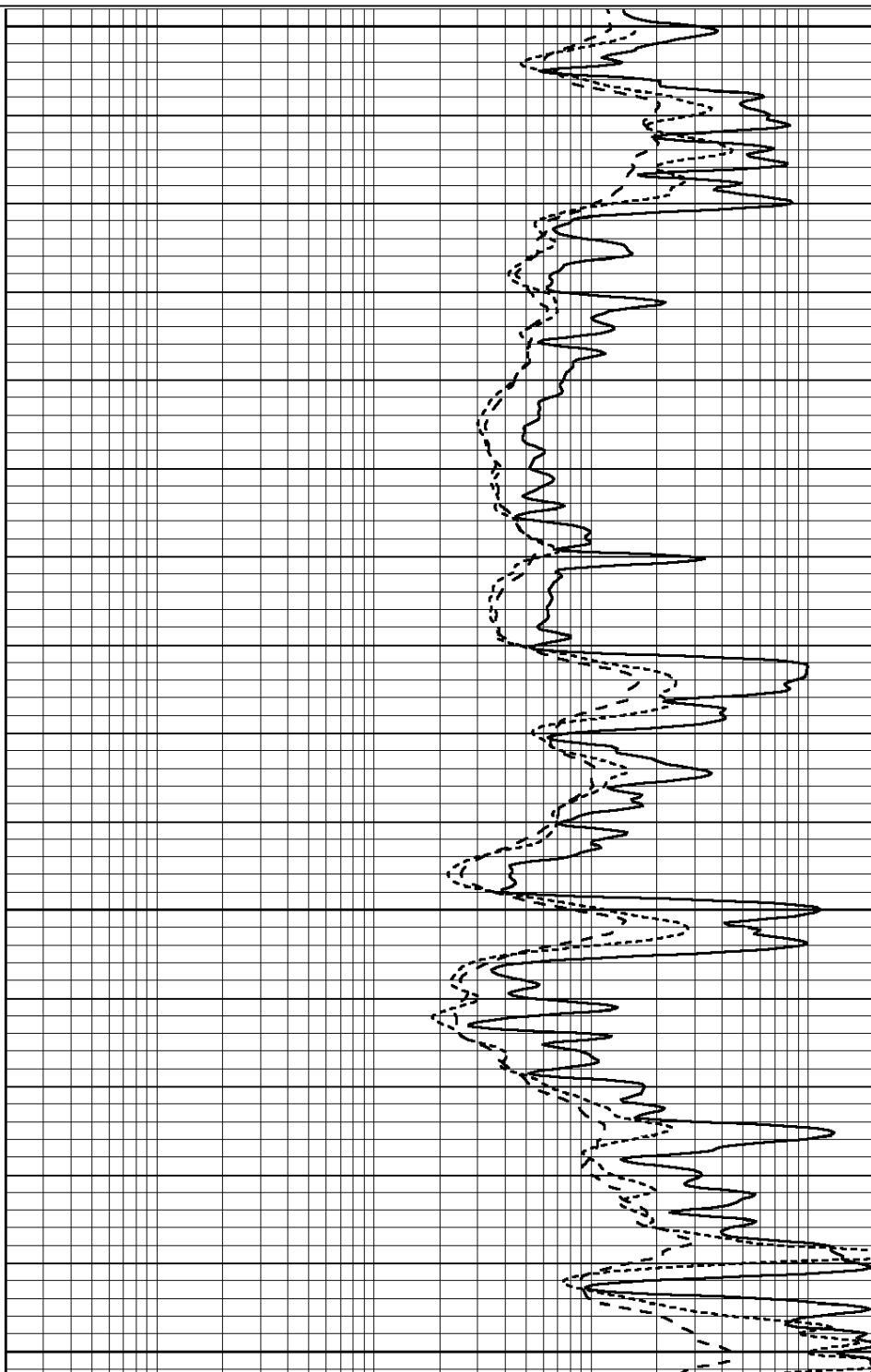


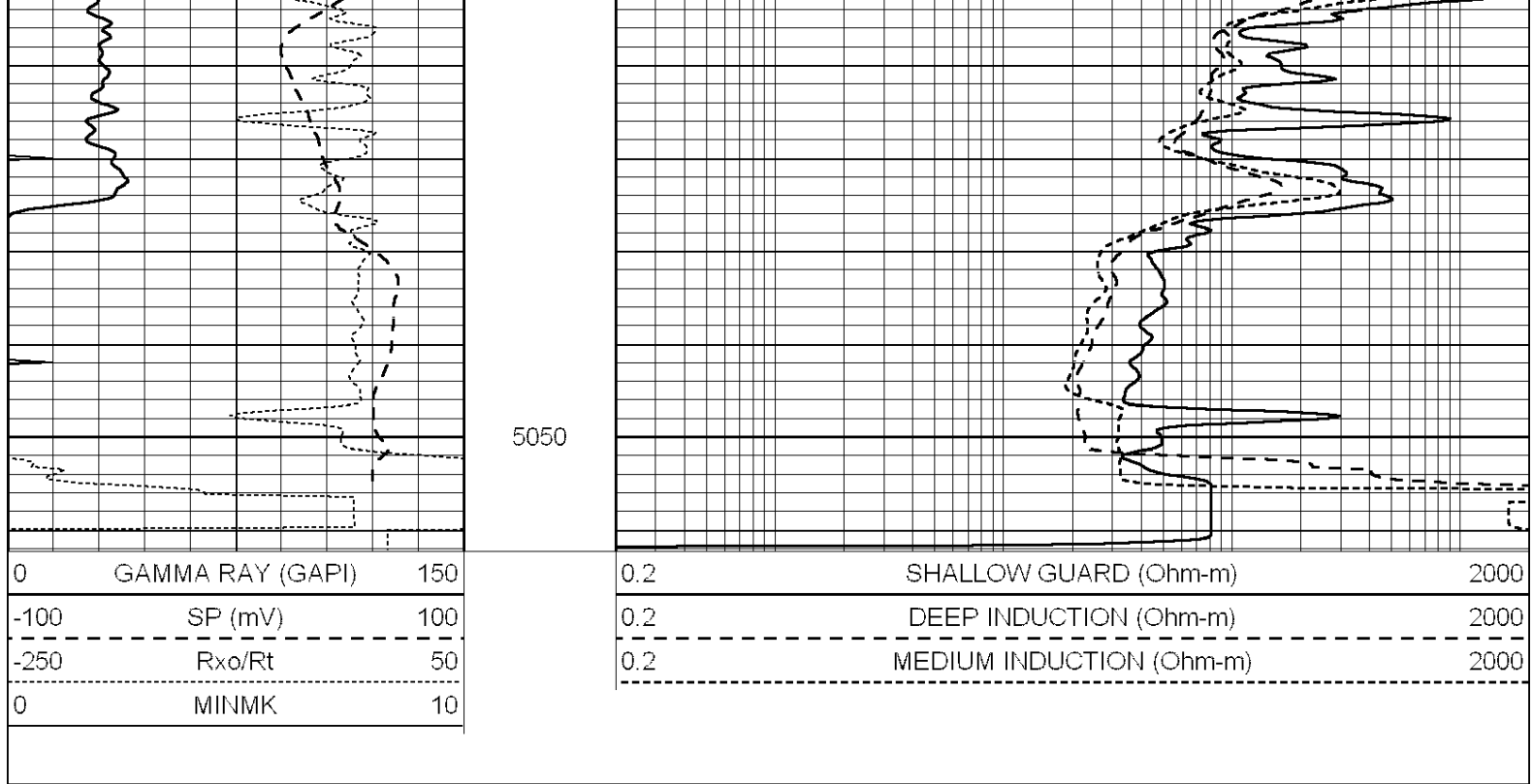
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4900

4950

5000





Calibration Report

Database File: 006616ddn.db
 Dataset Pathname: pass2.1
 Dataset Creation: Fri Mar 18 17:49:02 2011 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
 Performed: Mon Mar 14 21:45:37 2011

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	0.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-13.000
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

Litho Density Calibration Report

Serial: 003N Model: PRB
 Performed Tue Sep 08 14:14:44 2009

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	2042.6	12312.8	4225.8	13758.4	cps
Window 2	1855.8	10134.7	3624.2	11113.1	cps
Window 3	1639.4	6760.2	2716.3	7260.3	cps
Window 4	466.4	469.2	466.1	476.5	cps
Long Space	0.0	8278.9	1768.4	9257.4	cps
Short Space	2.2	2377.3	1544.1	2574.2	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle : 44.4 Rib Slope : 0.979 Density/Spine Ratio : 0.549
 Spine Angle : 71.1 Spine Slope : 3.577 Spine Intercept : -18.8

Caliper		Readings	Reference		
Low Ref	1.8		5.5		
High Ref	4.6		14.0		
		Gain: 3.0		Offset: 0.2	
Compensated Neutron Calibration Report					
		Serial Number:	NEU_4I		
		Tool Model:	G		
CALIBRATION					
Detector		Readings	Target		Normalization
Short Space		996.00 cps	1000.00 cps		1.0000
Long Space		977.00 cps	1000.00 cps		1.0000
Gamma Ray Calibration Report					
Serial Number:		GR4			
Tool Model:		OPEN			
Performed:		Wed Mar 16 12:55:45 2011			
Calibrator Value:		200.0	GAPI		
Background Reading:		0.0	cps		
Calibrator Reading:		189.0	cps		
Sensitivity:		2.2000	GAPI/cps		