



**SUPERIOR  
Hays,  
Kansas**

**DUAL  
INDUCTION  
LOG**

Company RITCHIE EXPLORATION, INC.  
Well #2 NUSS FARMS 36B  
Field MAURICE N.E.  
County LOGAN State KANSAS

Company RITCHIE EXPLORATION, INC.  
Well #2 NUSS FARMS 36B  
Field MAURICE N.E.  
County LOGAN  
State KANSAS

Location: API #: 15-109-21082  
825' FNL & 365' FWL  
SEC 36 TWP 13S RGE 32W  
Permanent Datum GROUND LEVEL Elevation 2924  
Log Measured From KELLY BUSHING 10' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
CDL/CNL  
Elevation  
K.B. 2934  
D.F.  
G.L. 2924

Date	3-31-12
Run Number	ONE
Depth Driller	4720
Depth Logger	4721
Bottom Logged Interval	4719
Top Log Interval	00
Casing Driller	213
Casing Logger	213
Bit Size	7.875
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.1 / 69
pH / Fluid Loss	10.5 / 8.0
Source of Sample	FLOWLINE
Rm @ Meas. Temp	0.60 @ 97F
Rmf @ Meas. Temp	0.45 @ 97F
Rmc @ Meas. Temp	0.72 @ 97F
Source of Rmf / Rmc	MEASURED
Rm @ BHT	.480 @ 122F
Time Circulation Stopped	3 HOURS
Time Logger on Bottom	7:30 P.M.
Maximum Recorded Temperature	122F
Equipment Number	860
Location	HAYS, KS.
Recorded By	RUPP
Witnessed By	ADAM ELDANI

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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

SUPERIOR WELL SERVICES  
785-628-6395  
THANK YOU FOR YOUR BUSINESS  
DIRECTIONS: OAKLEY, 16S, 1E, S INTO.

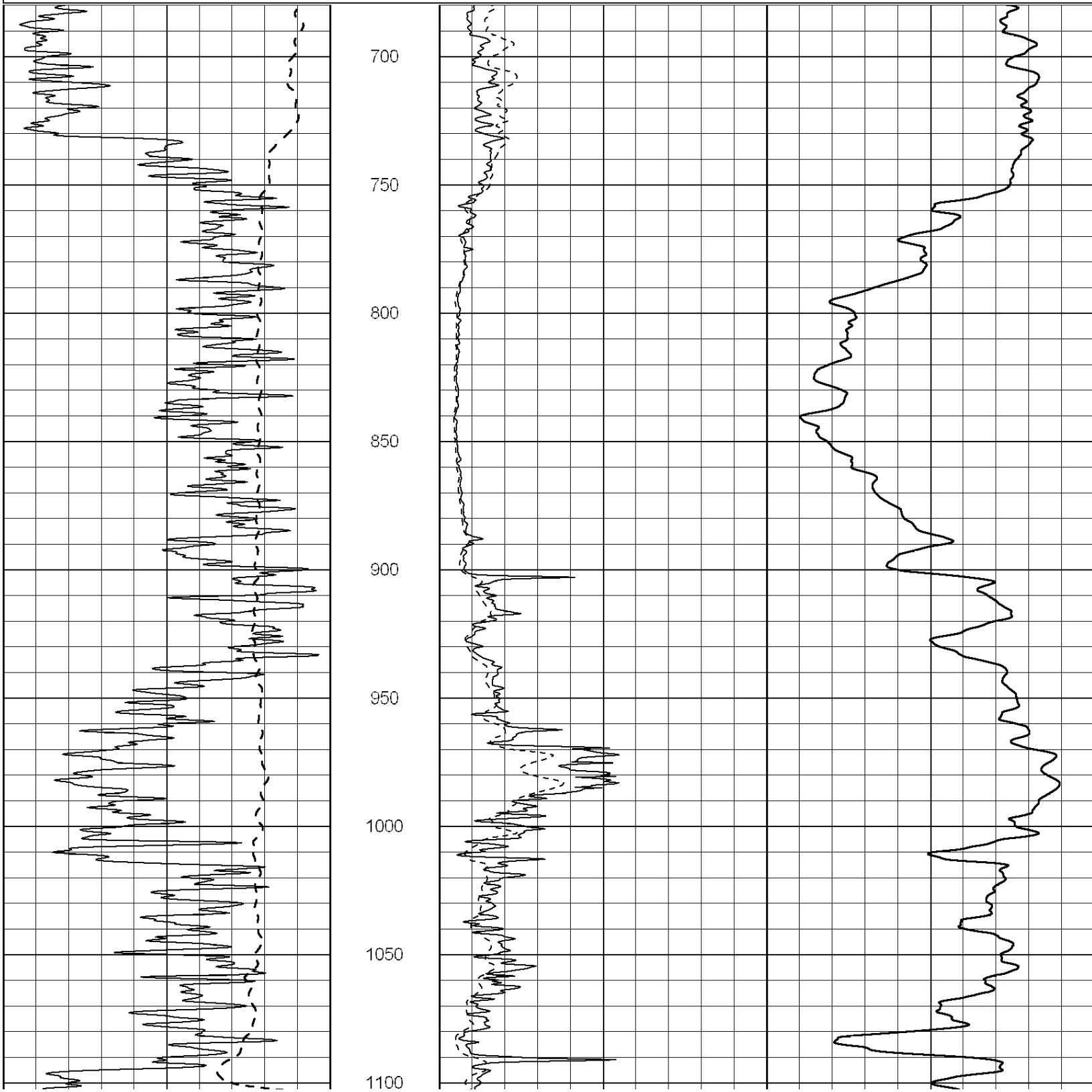


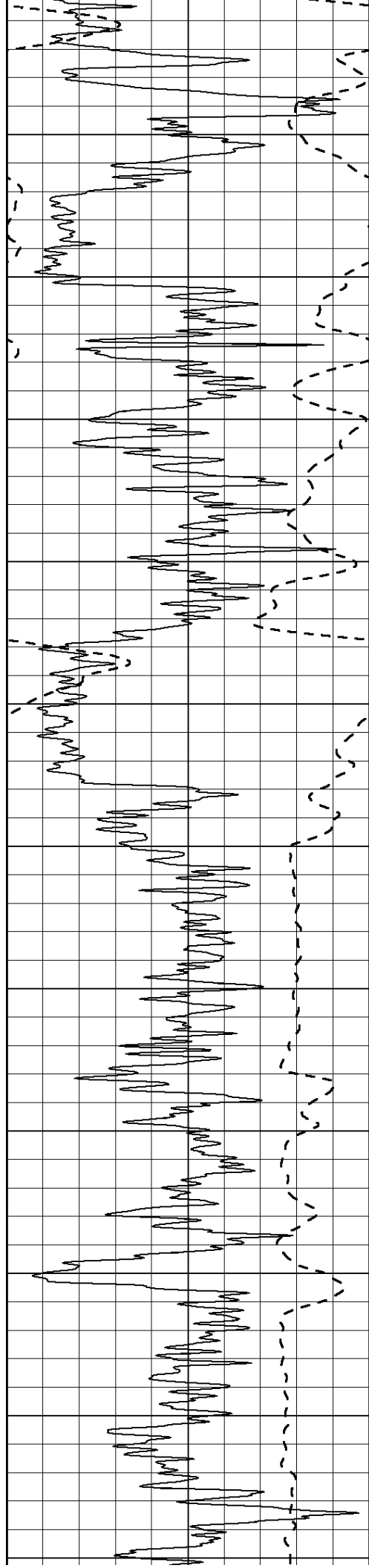
**SUPERIOR  
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**MAIN SECTION**

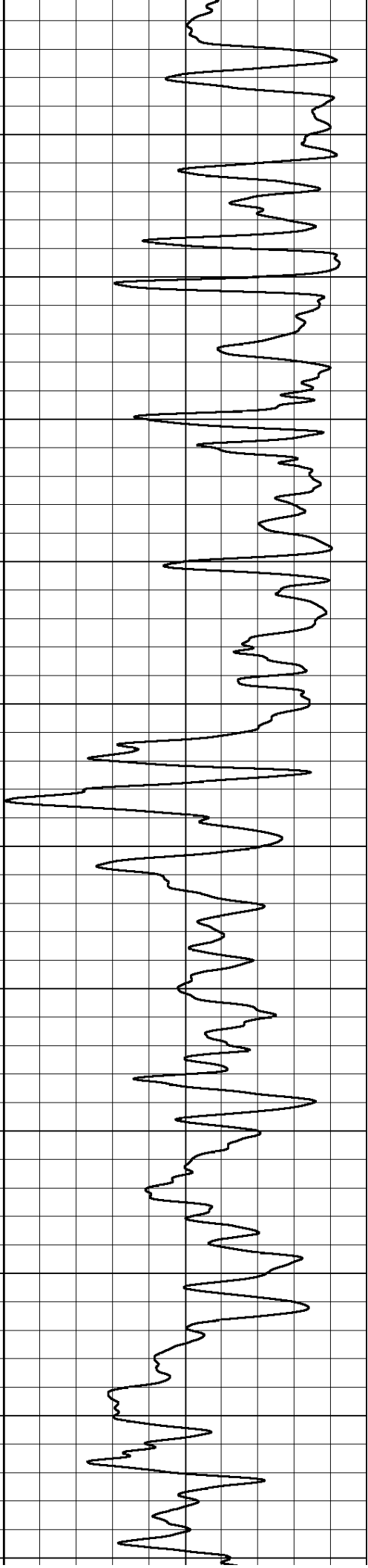
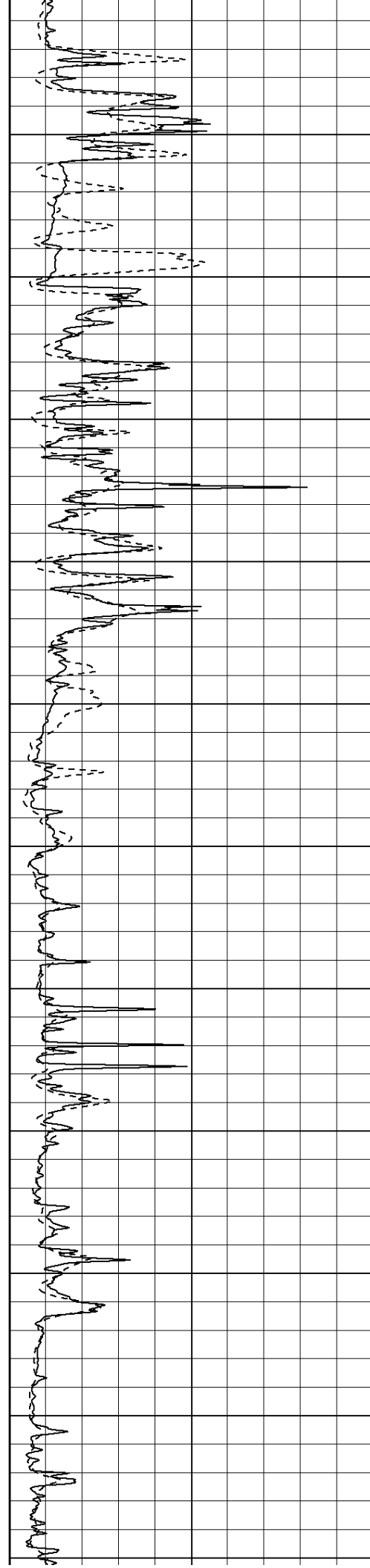
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 Charted by: Depth in Feet scaled 1:600

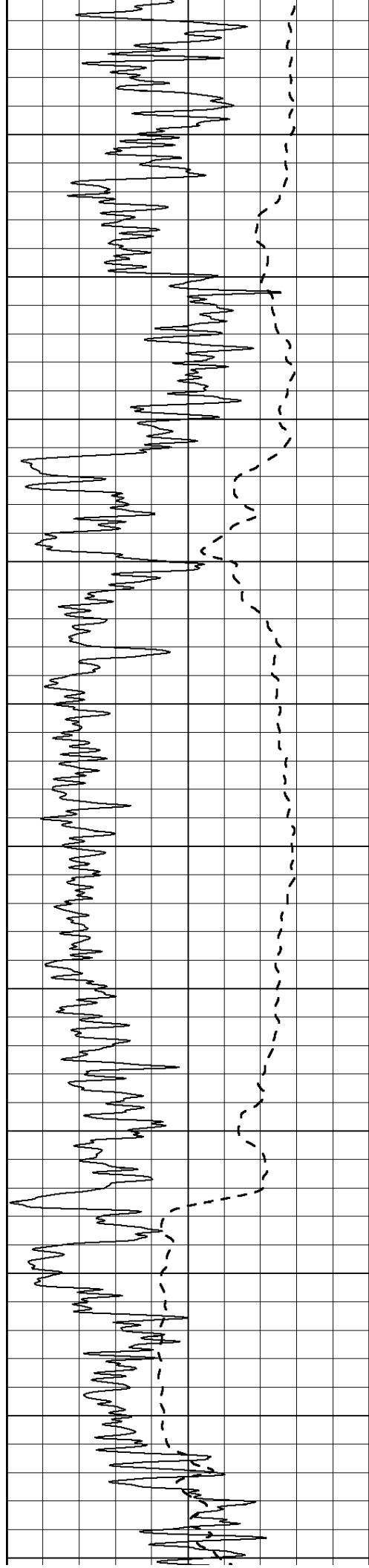
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			0	Deep Induction (Ohm-m)	50
			1000	CILD (mmho/m)	0
			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500





1150  
1200  
1250  
1300  
1350  
1400  
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1500  
1550  
1600  
1650





1700

1750

1800

1850

1900

1950

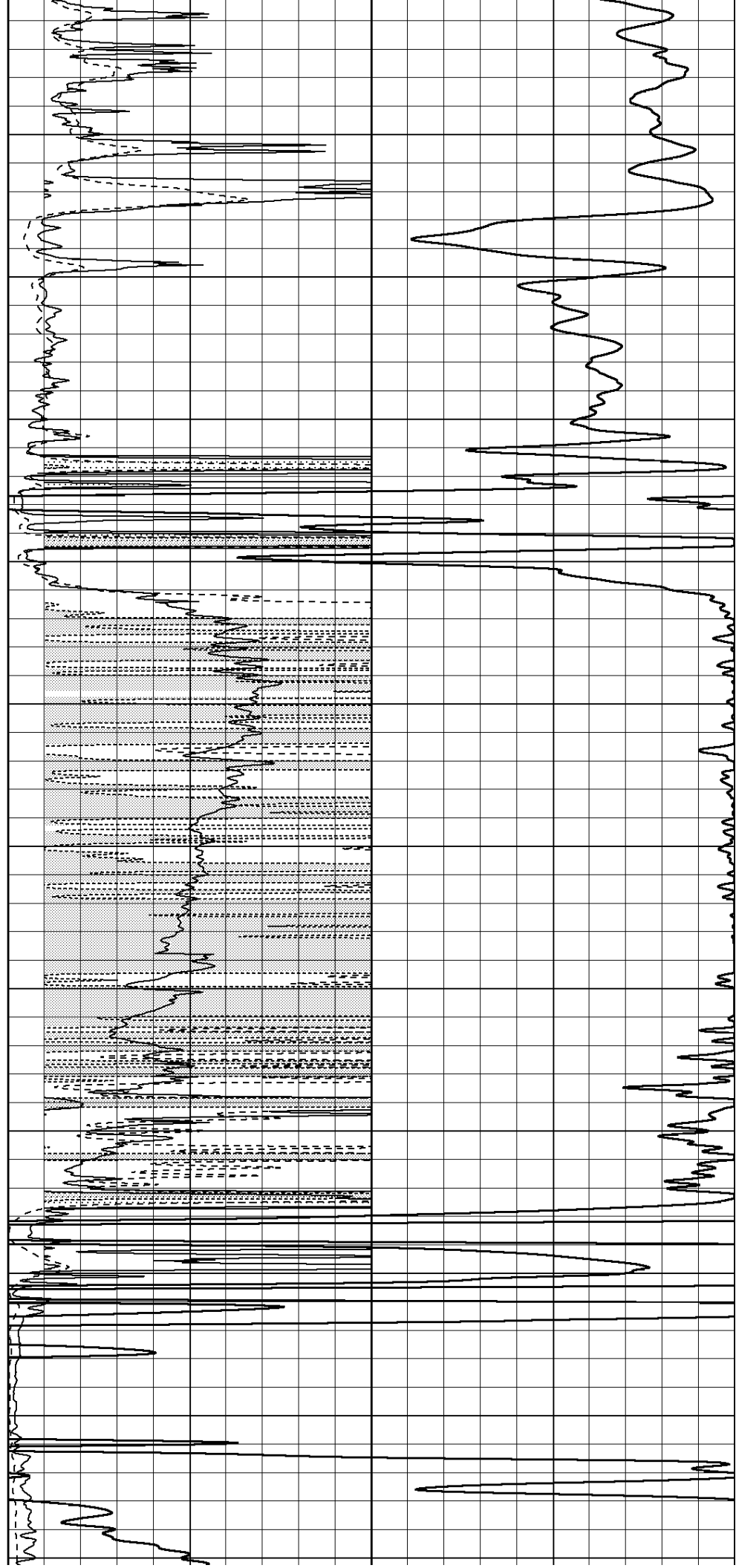
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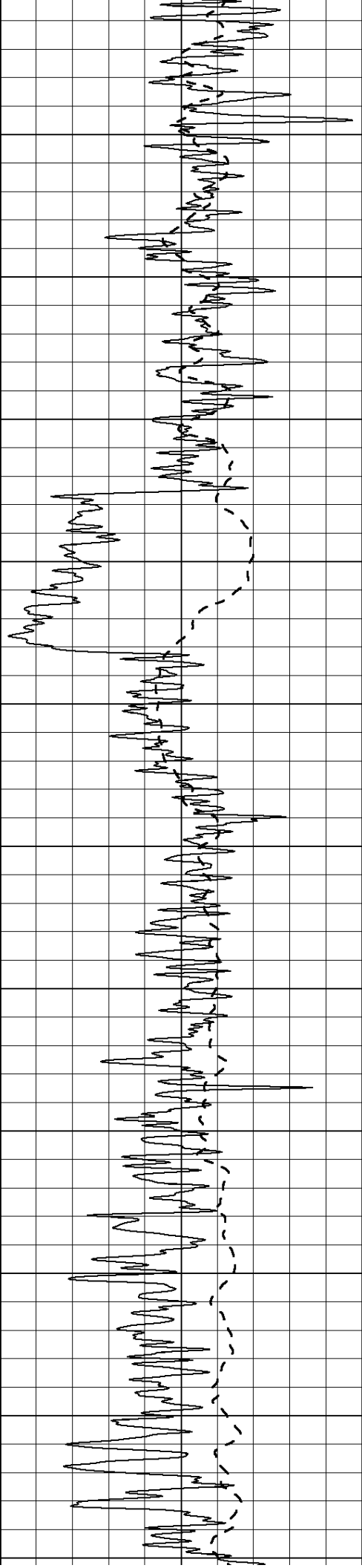
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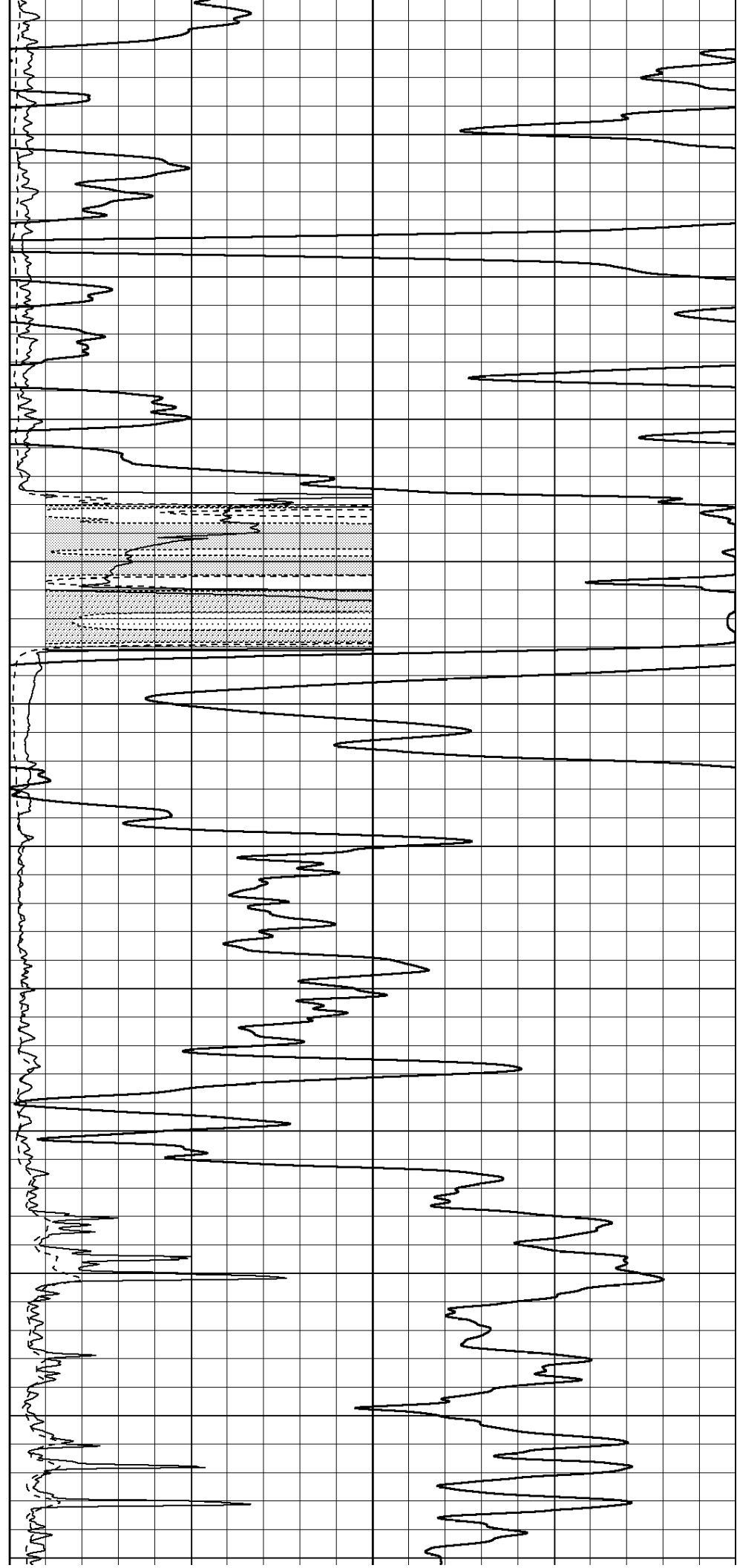
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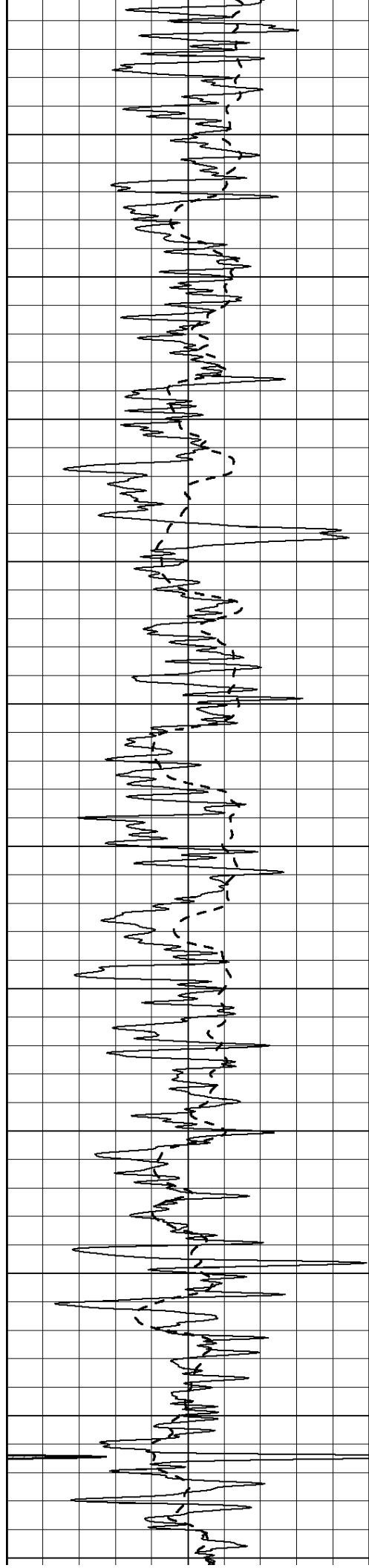
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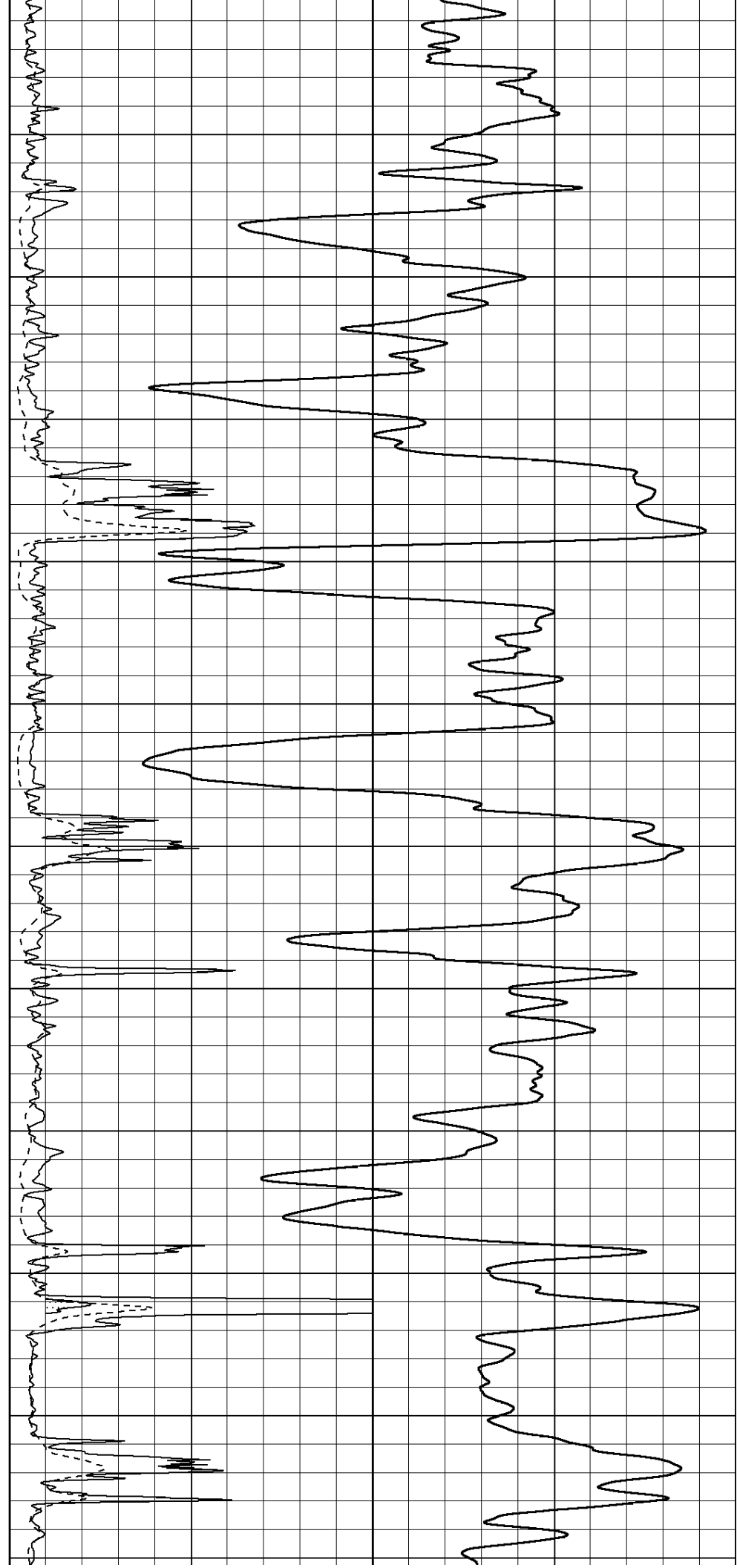


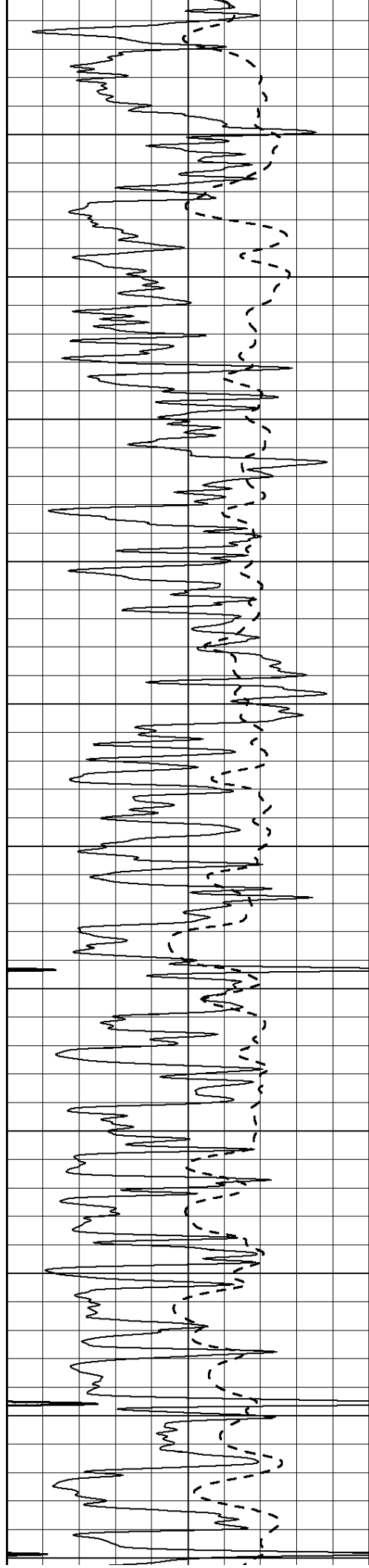
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2750



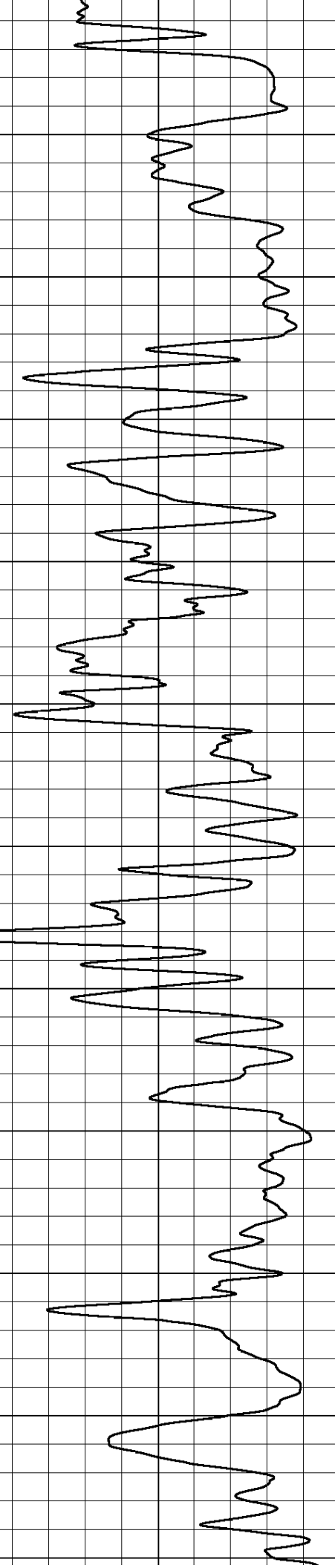
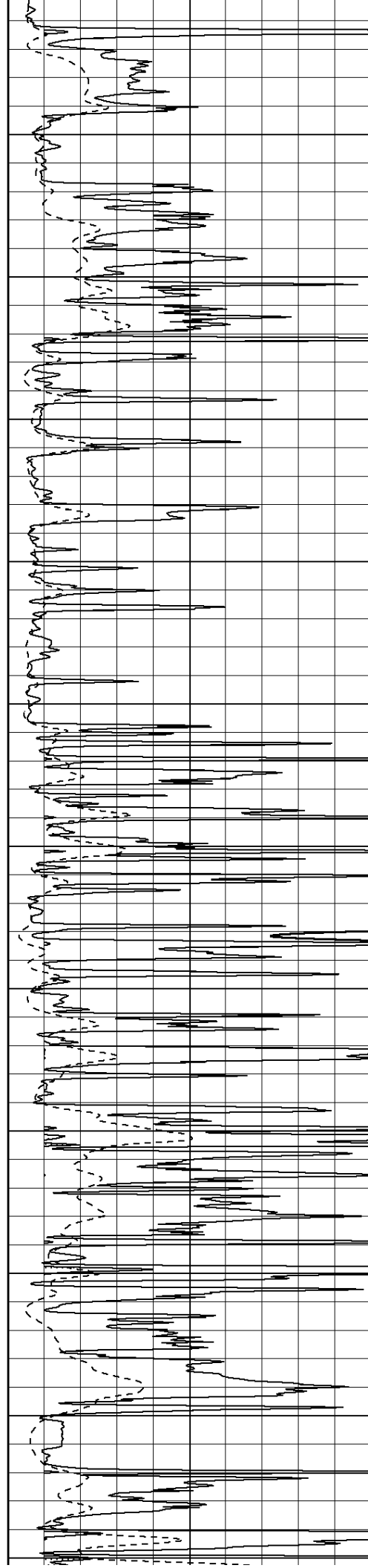


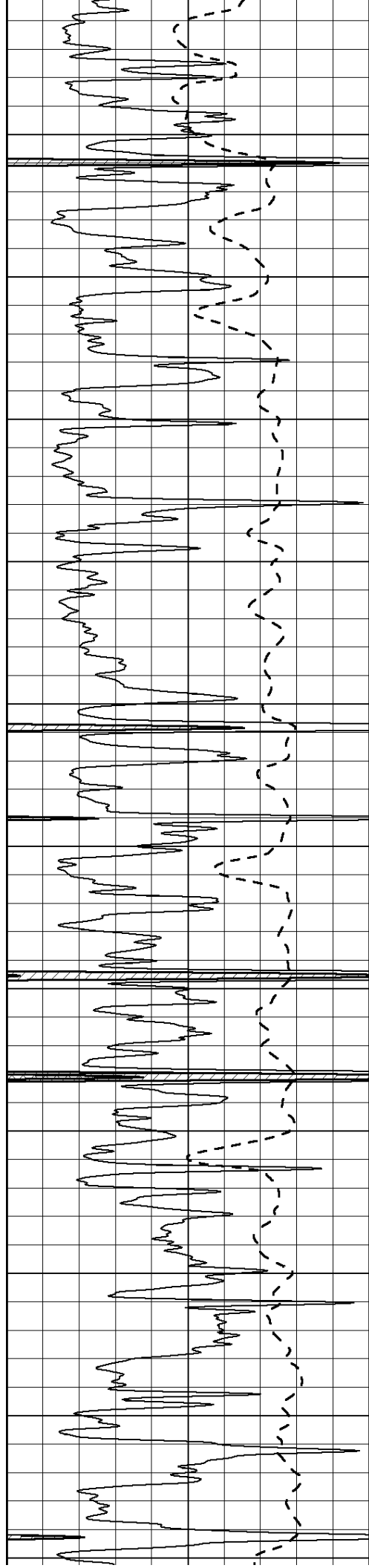
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3200  
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3300



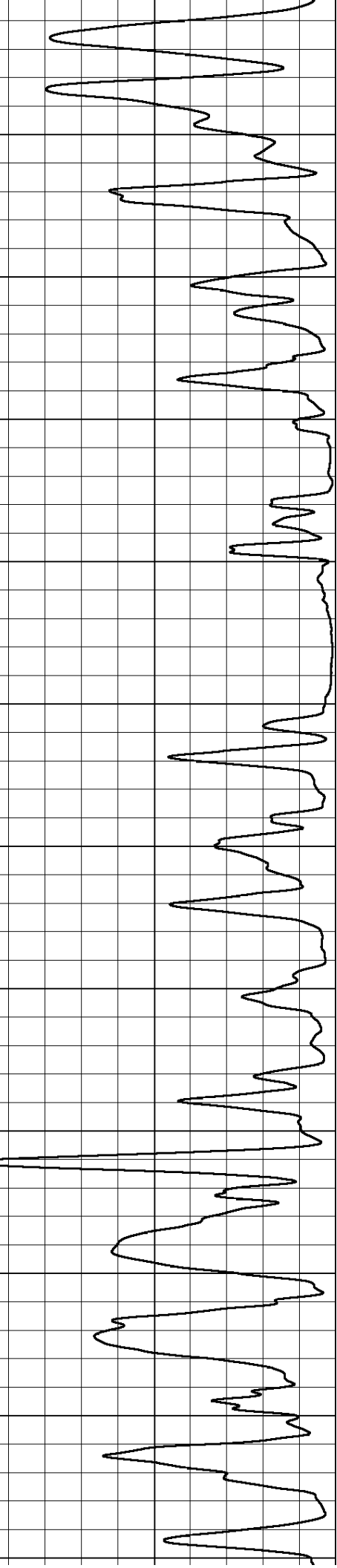
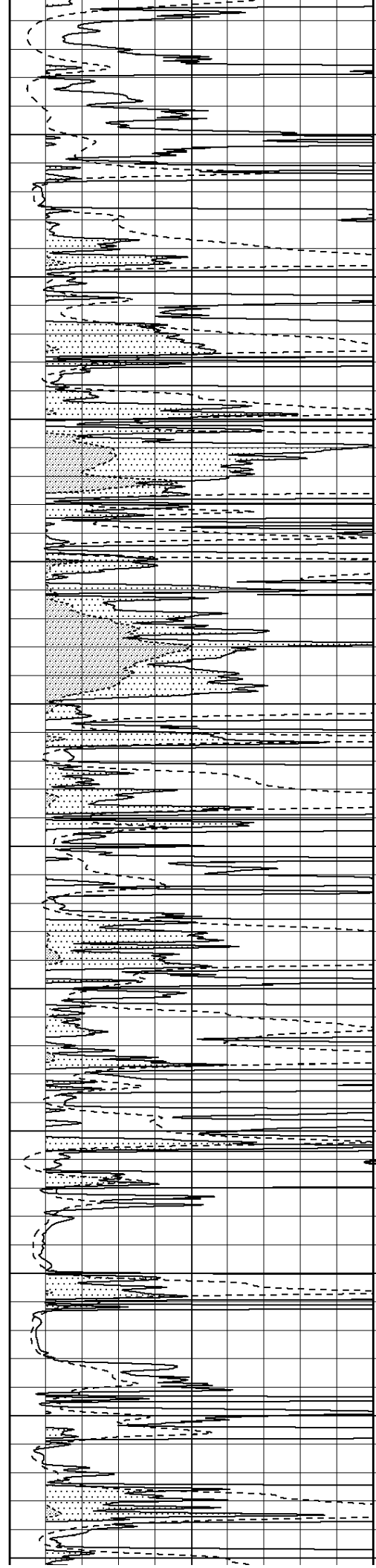


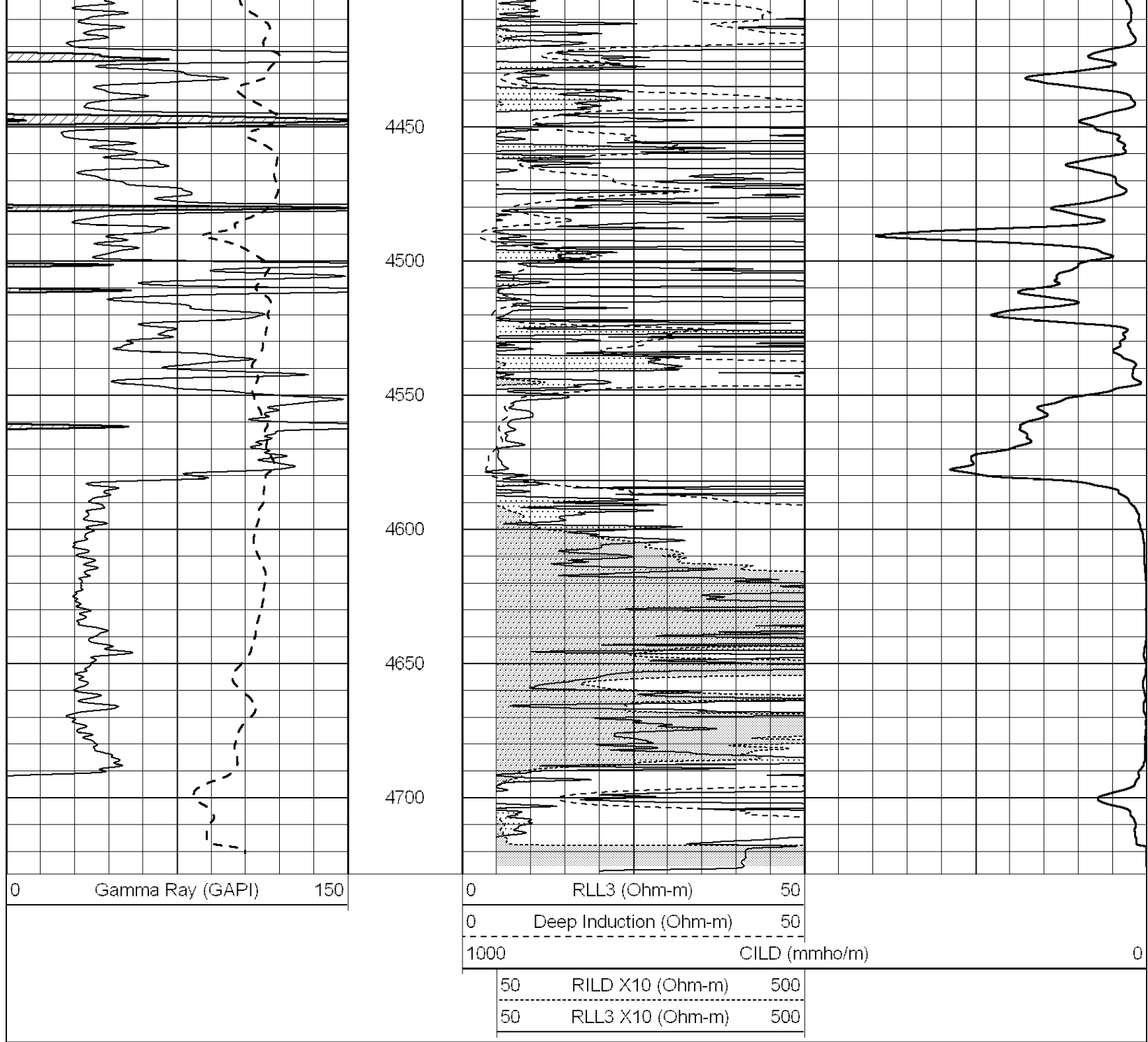
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3650  
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3750  
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3850





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3950  
4000  
4050  
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4150  
4200  
4250  
4300  
4350  
4400



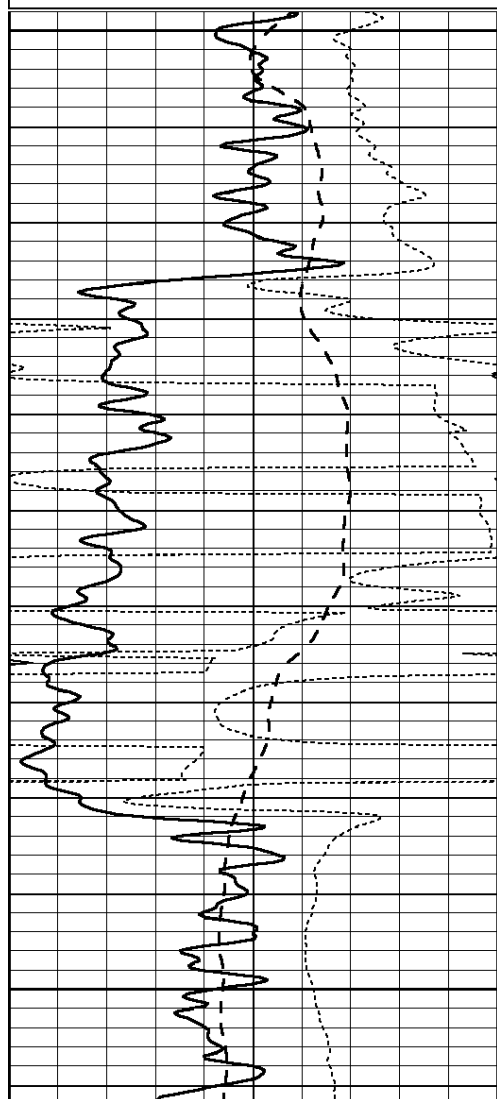


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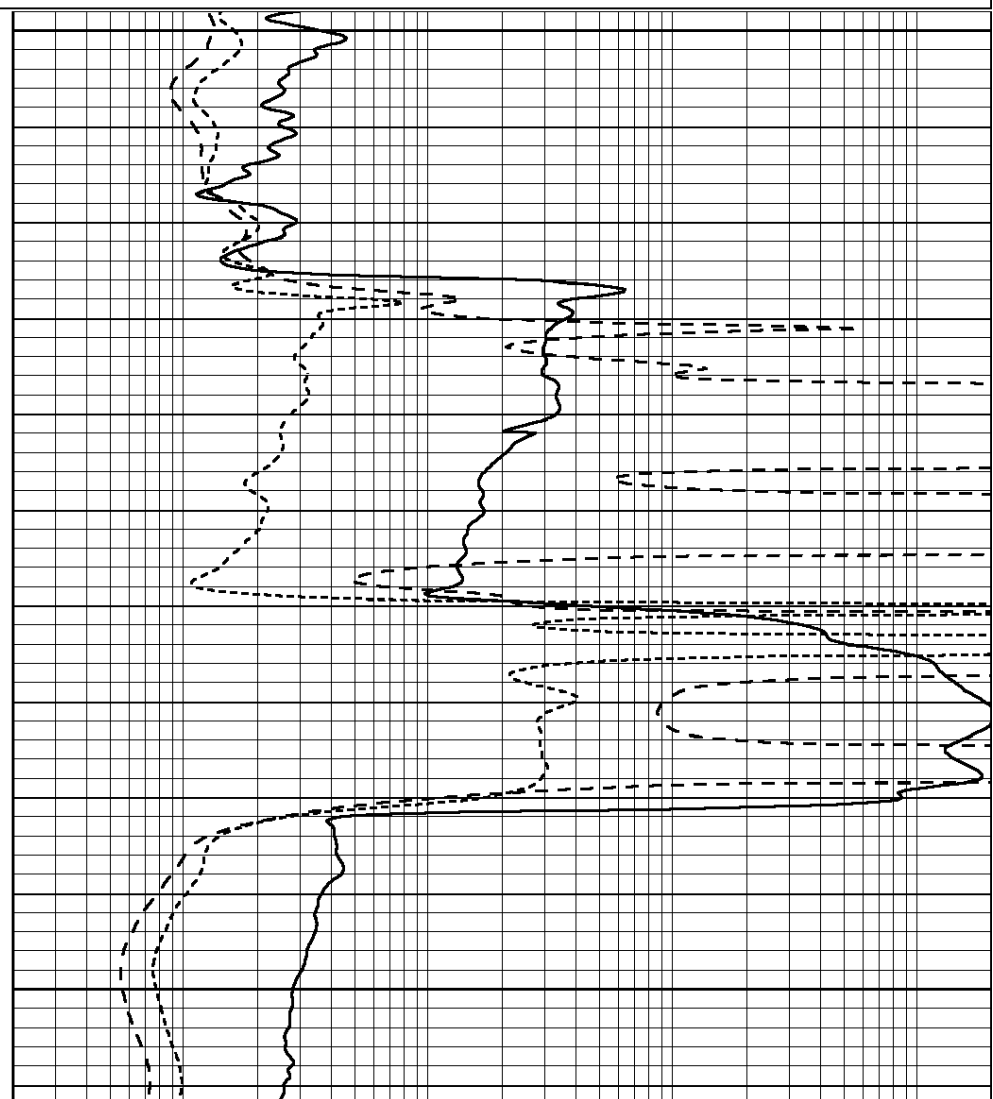
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Database File: 008709ddn.db  
 Dataset Pathname: pass3.1  
 Presentation Format: dil  
 Dataset Creation: Sat Mar 31 21:48:54 2012 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	0.2	RLL3 (Ohm-m)	2000
-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			



2350  
2400  
2450



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



**SUPERIOR**  
WELL SERVICES  
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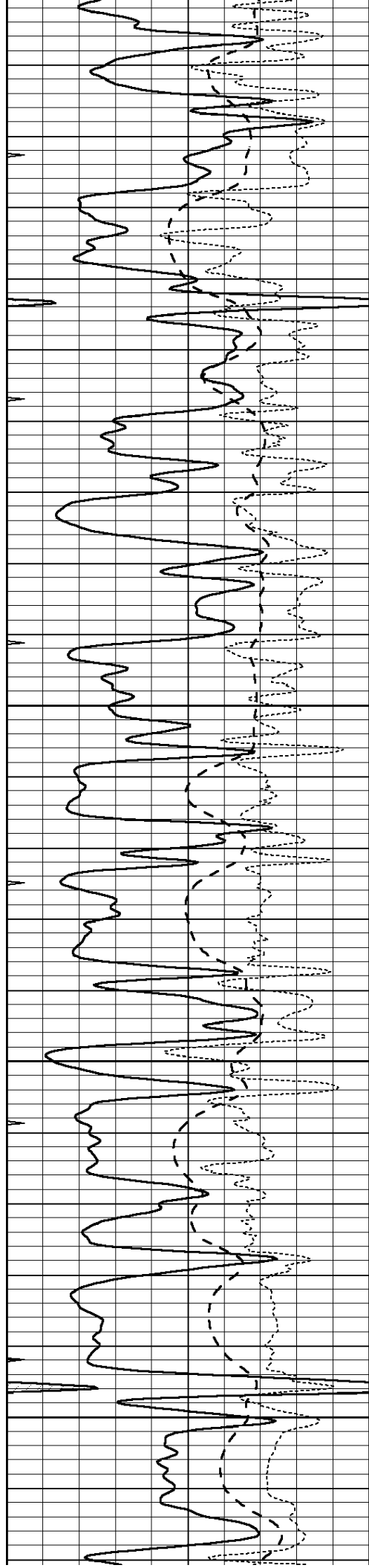
# MAIN SECTION

Database File: 008709ddn.db  
 Dataset Pathname: pass3.1  
 Presentation Format: dil  
 Dataset Creation: Sat Mar 31 21:48:54 2012 by Calc Open-Cased 090629  
 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

3600

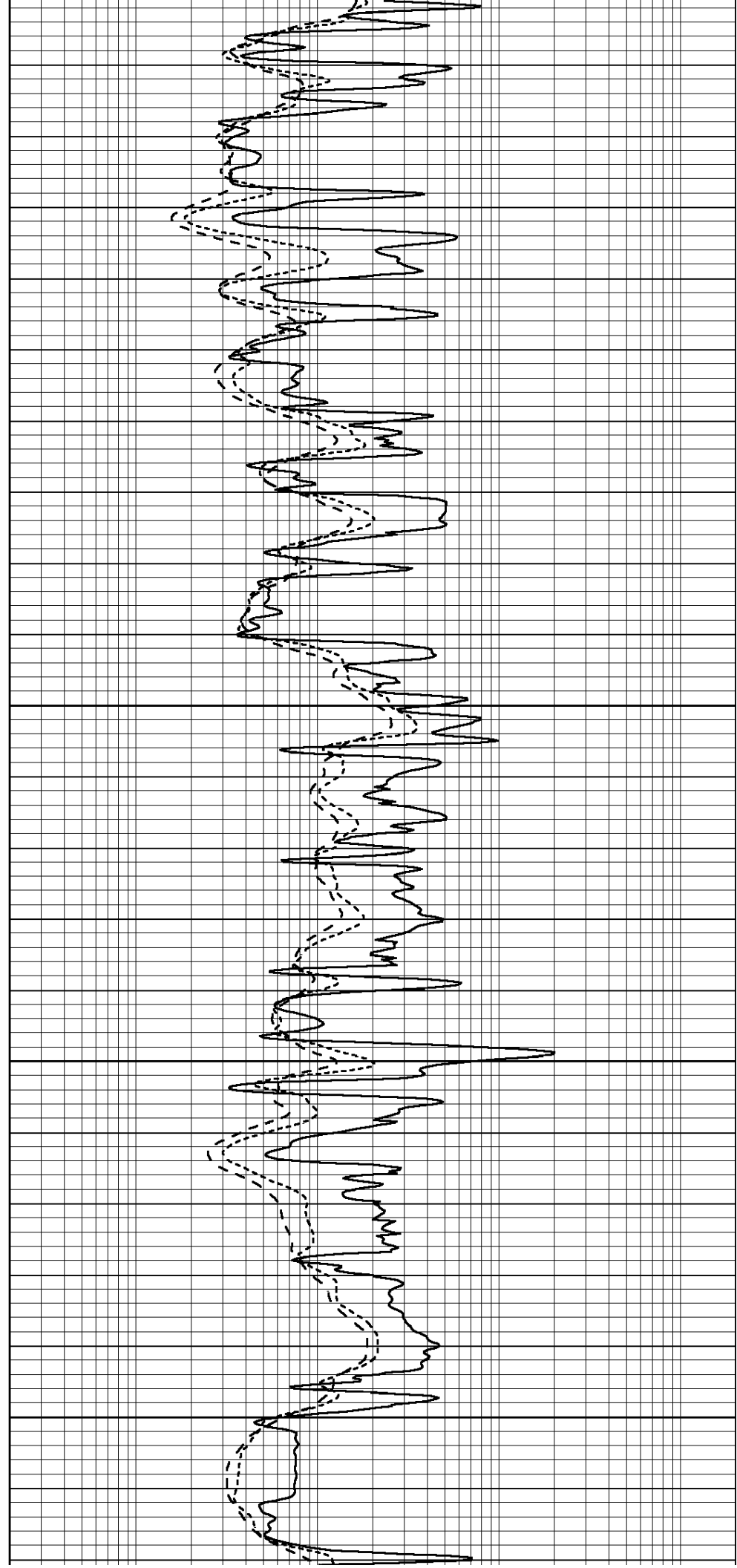


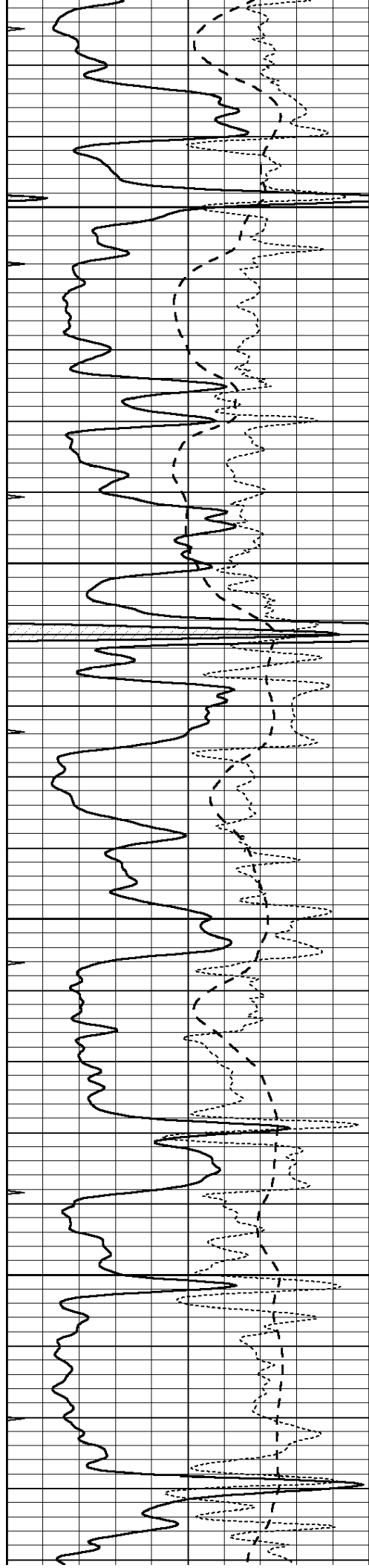
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3750

3800



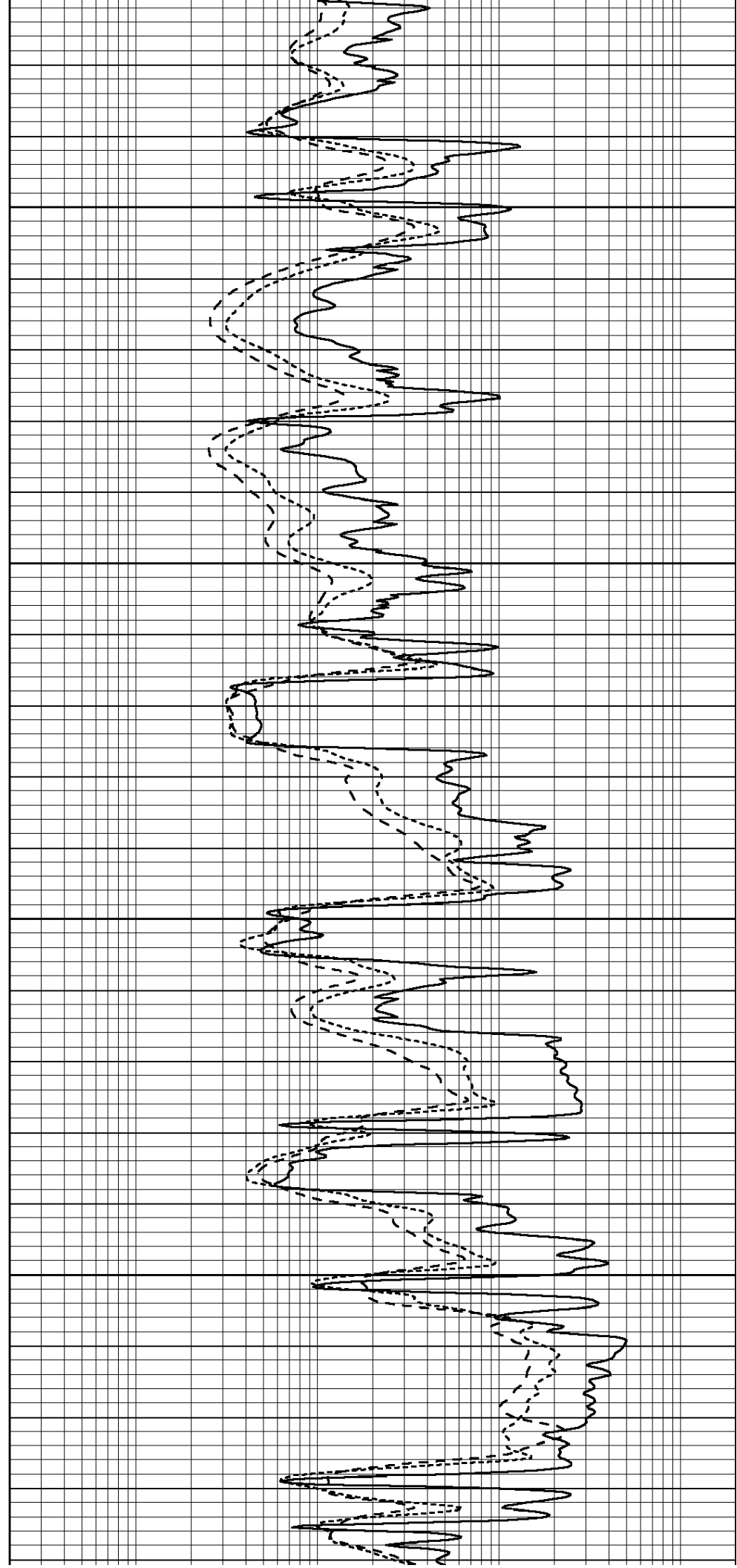


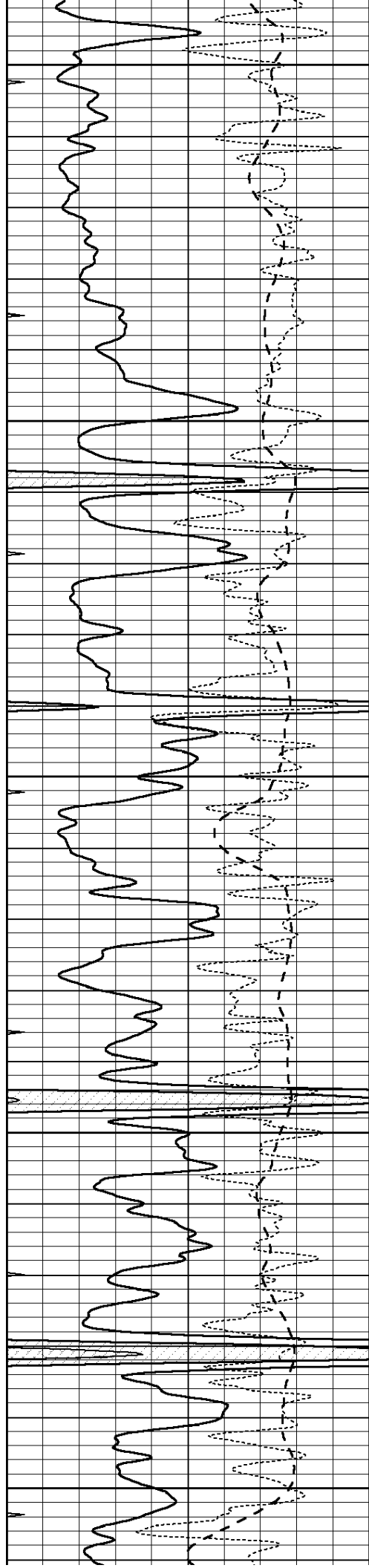
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3900

3950

4000





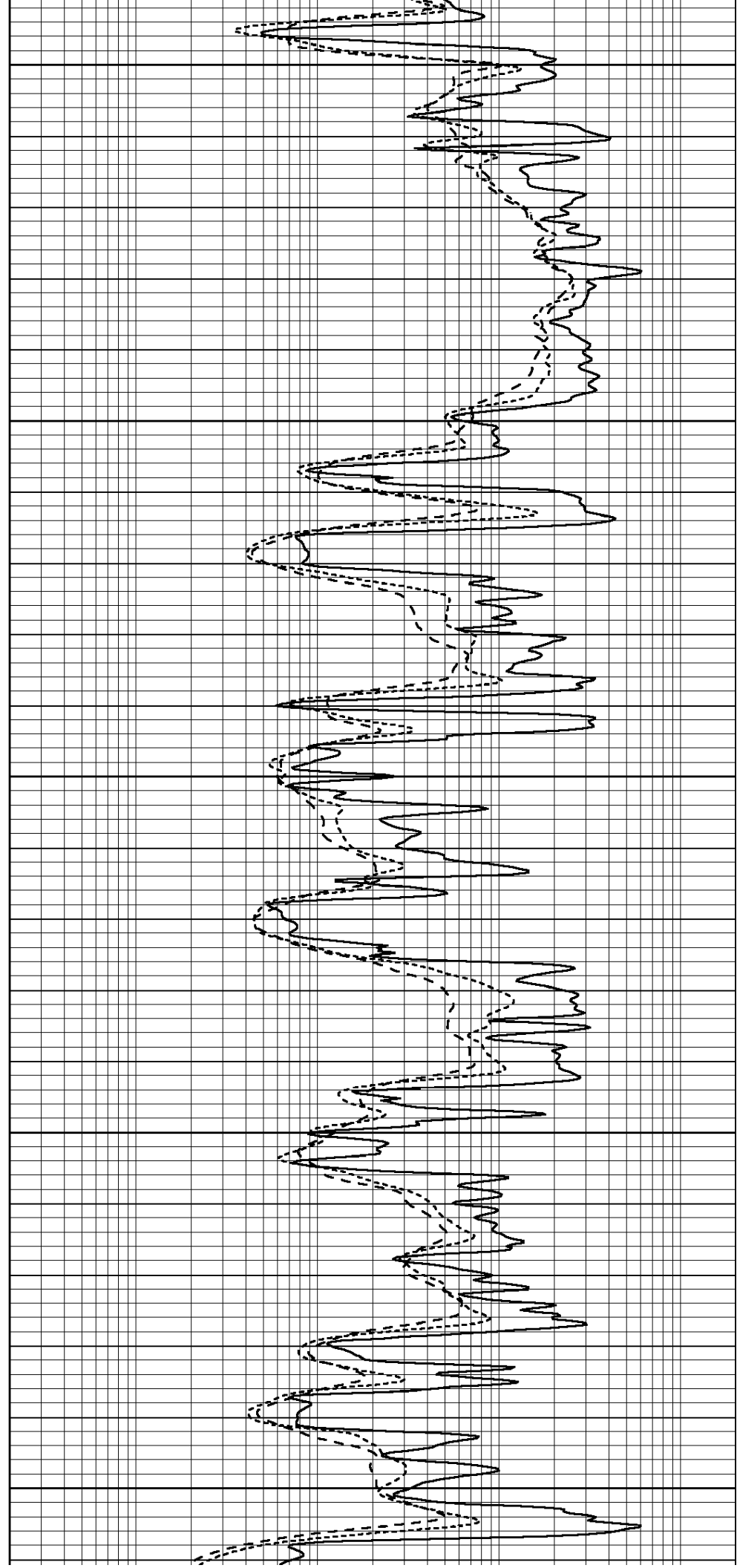
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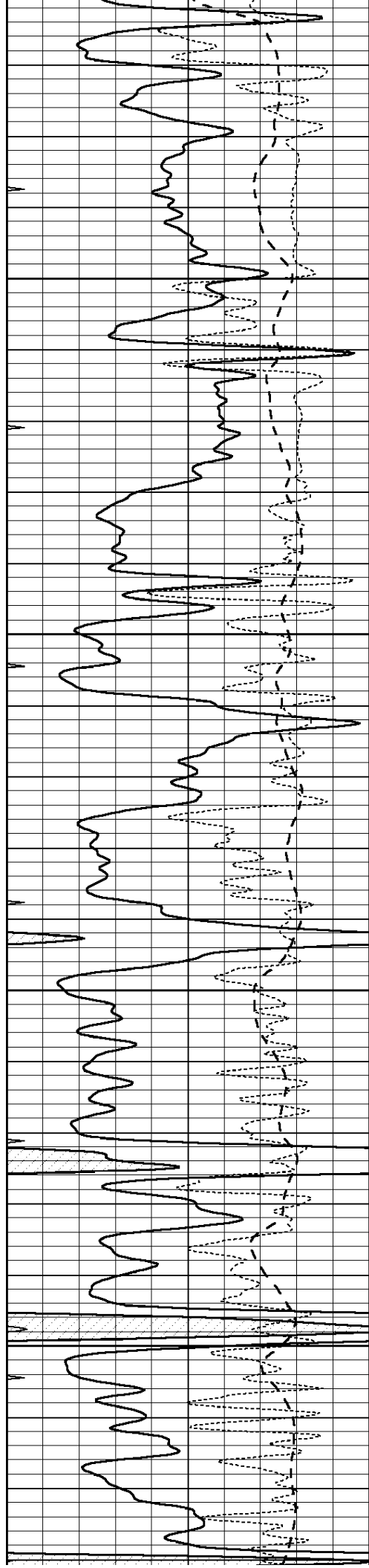
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4150

4200

4250



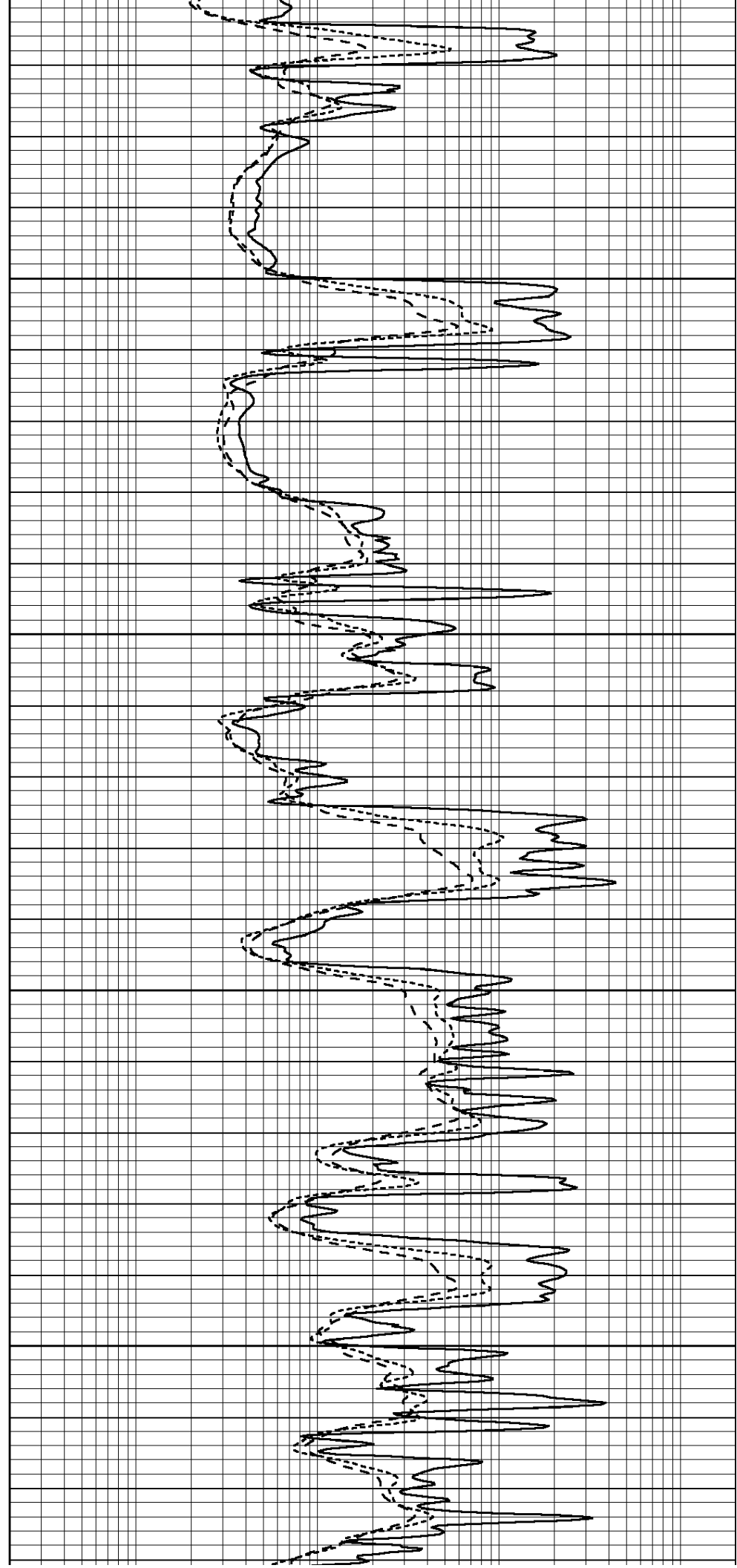


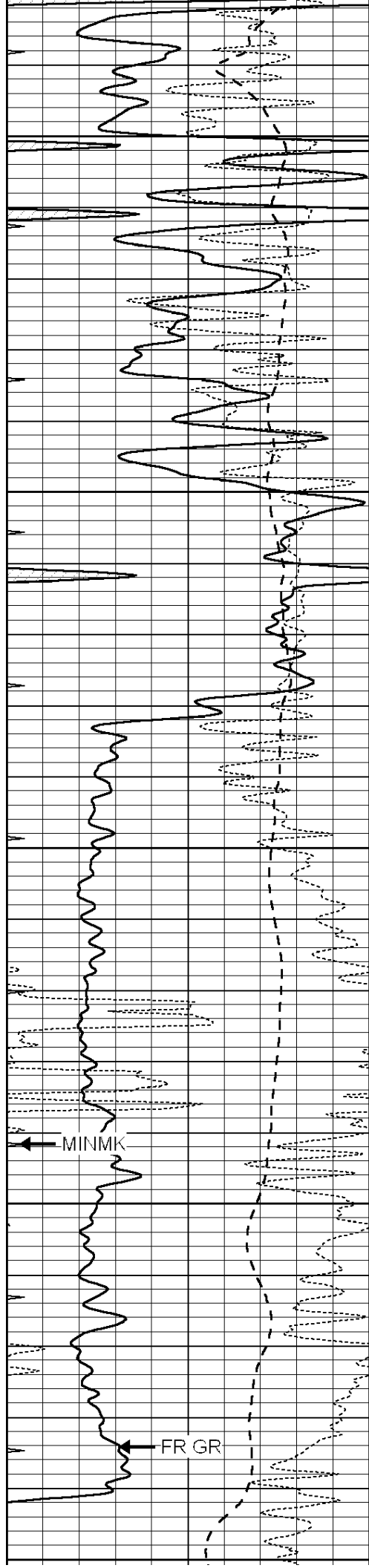
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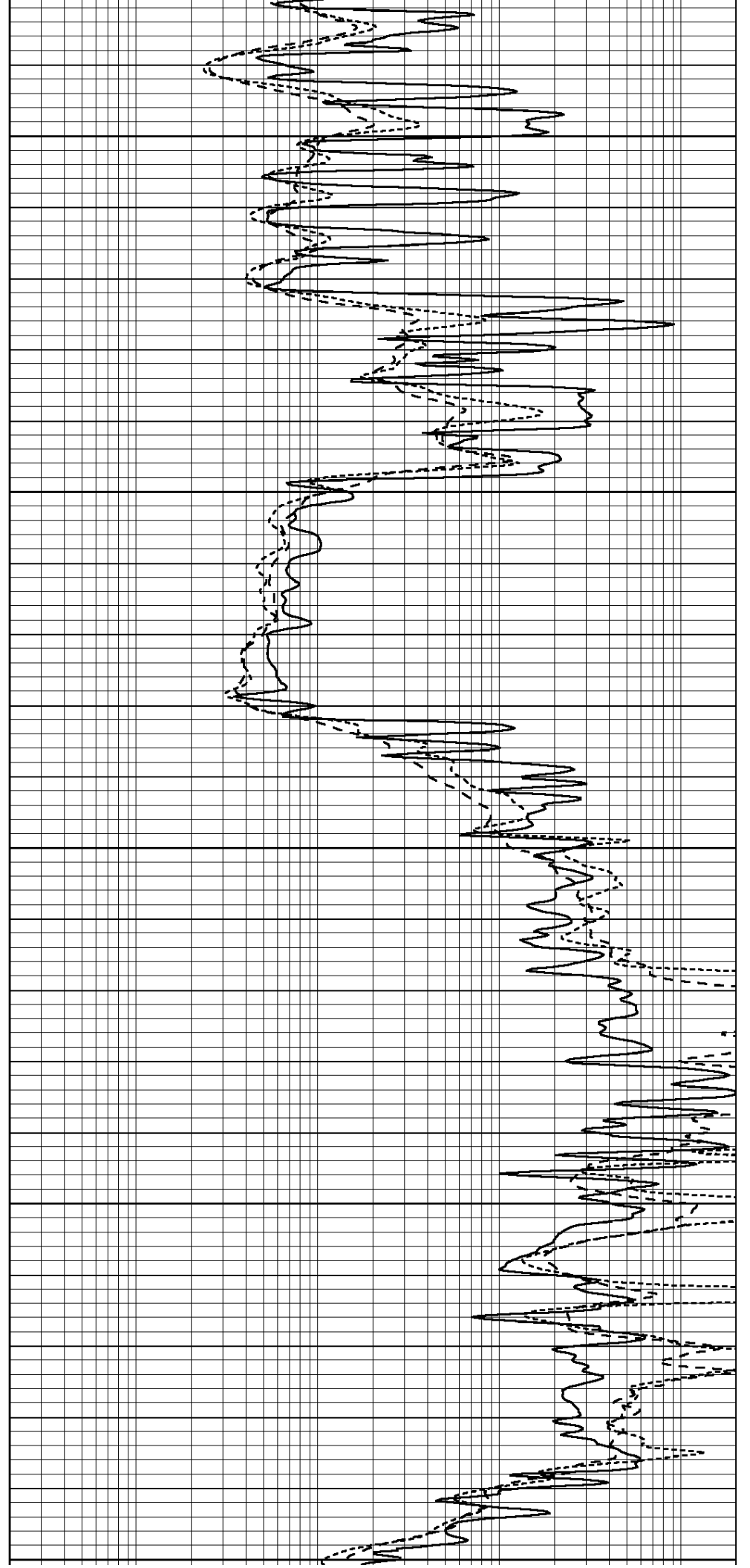
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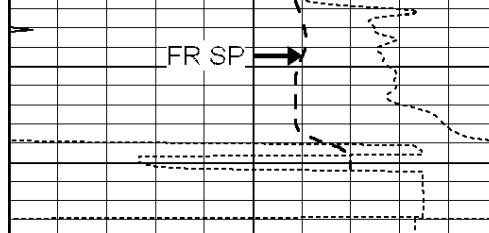




4500  
4550  
4600  
4650  
4700



FR SP

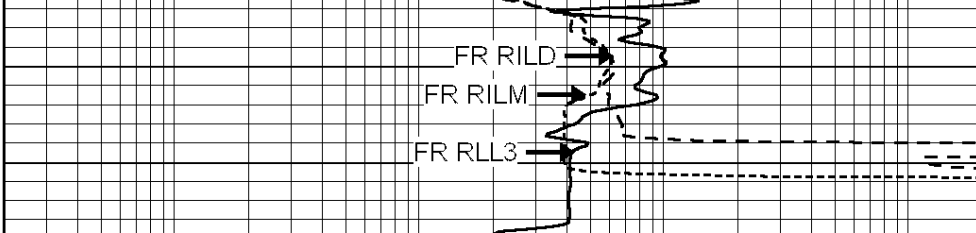


--- TD ---

FR RILD

FR RILM

FR RLL3



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



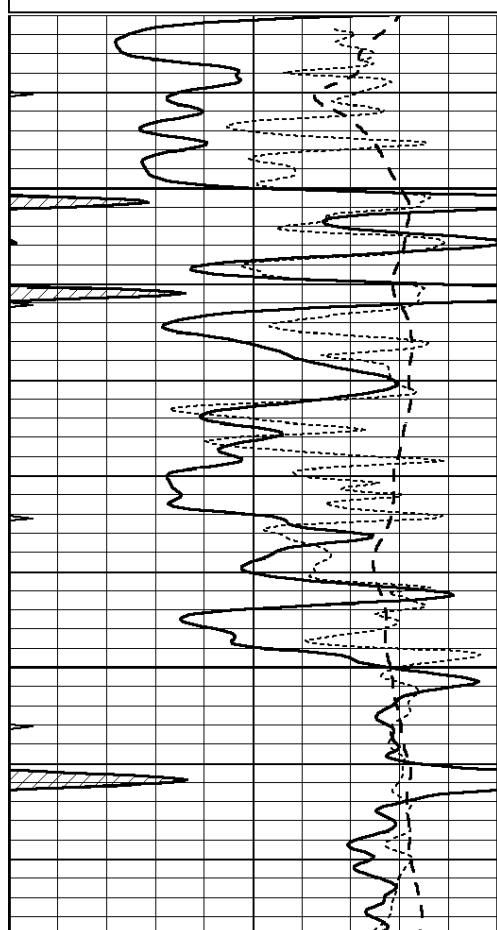
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# REPEAT SECTION

Database File: 008709ddn.db  
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 Charted by: Depth in Feet scaled 1:240

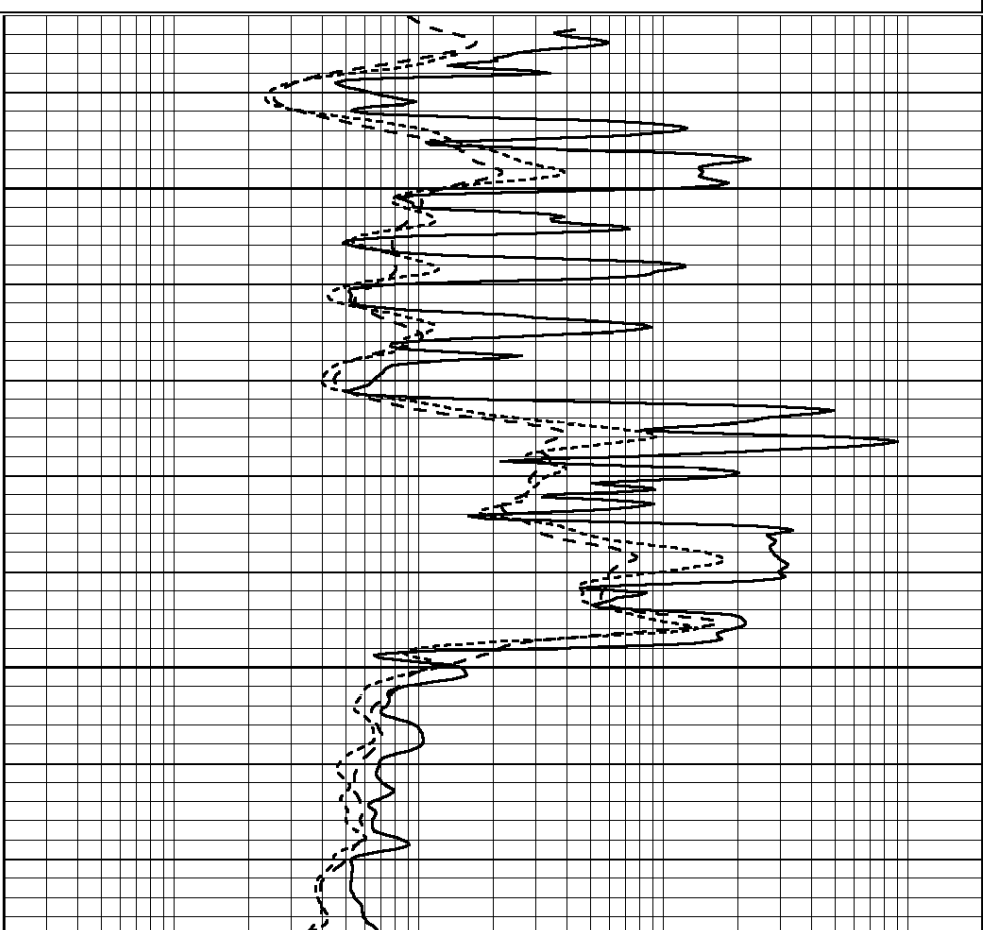
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-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

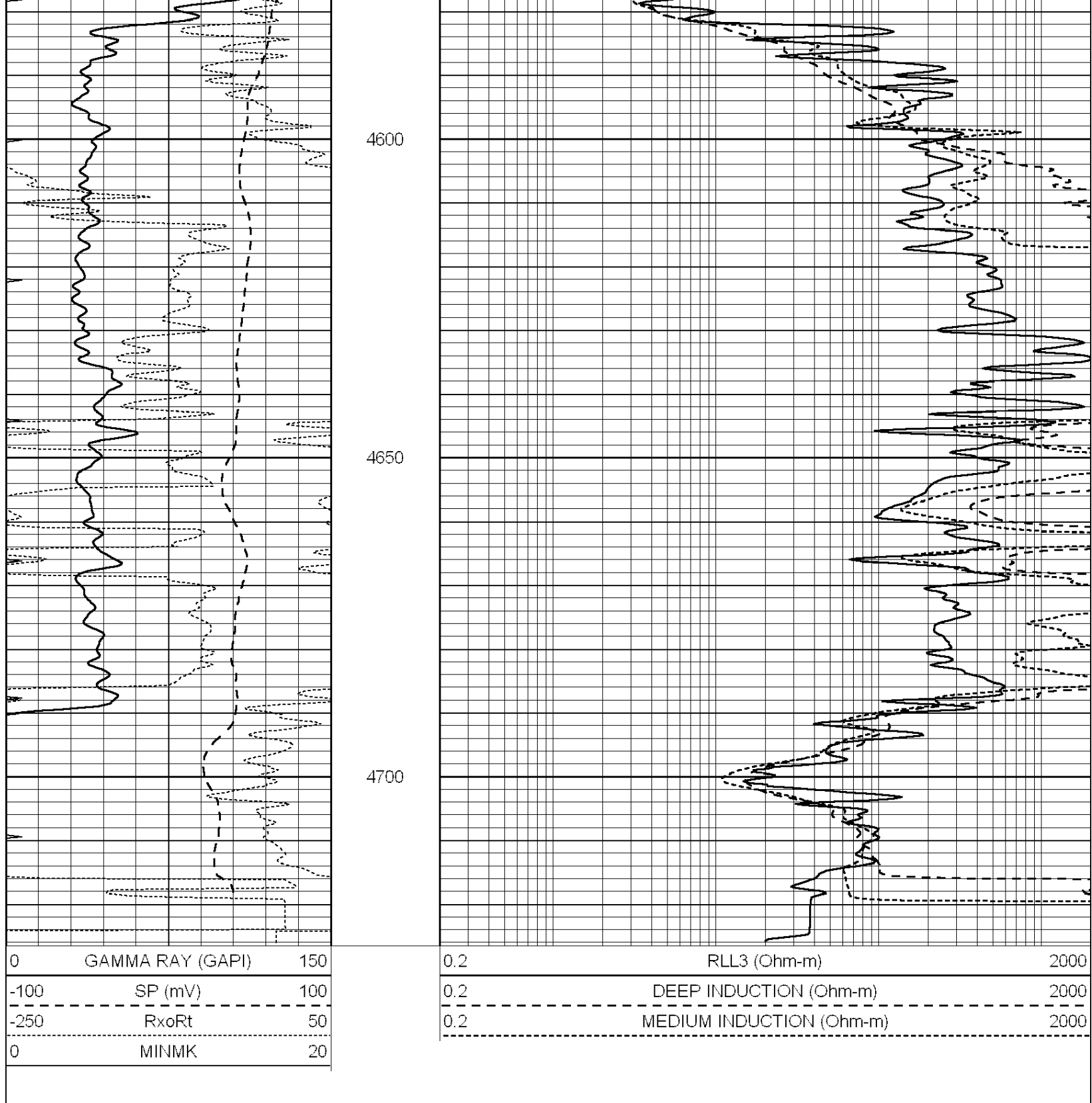
0.2	RLL3 (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



4500

4550





Calibration Report

Database File: 008709ddn.db  
 Dataset Pathname: pass3.1  
 Dataset Creation: Sat Mar 31 21:48:54 2012 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE9-DILG  
 Surface Cal Performed: Sat Mar 31 19:59:40 2012  
 Downhole Cal Performed: Mon Jul 28 12:02:56 2008  
 After Survey Verification Performed: Mon Jul 28 12:02:56 2008

Surface Calibration

Surface Calibration			Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b		
Deep	-0.014	0.629	V	0.000	400.000	mmho/m	550.000	-8.000		
Medium	0.039	0.728	V	0.000	464.000	mmho/m	540.000	-10.000		
Internal:	Zero	Cal		Zero	Cal		m	b		
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	
	Zero	Cal		Zero	Cal		m'	b'		
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		3970.000	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:	GEAR1-GEARHART
Source / Verifier:	147 / 147
Master Calibration Performed:	Sat Mar 31 19:39:14 2012

Master Calibration			Density		Far Detector		Near Detector	
Magnesium	1.710	g/cc	1243.76	629.14	cps			
Aluminum	2.590	g/cc	282.16	435.01	cps			
Spine Angle = 76.03			Density/Spine Ratio = 0.576					
	Size		Reading					
Small Ring	8.80	in	3.50	V				
Large Ring	14.00	in	5.30	V				

**Compensated Neutron Calibration Report**

Serial Number:	NUE_2I
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:	GR5
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Tool Model: OPEN  
Performed: Sat Mar 31 19:25:22 2012

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps

Calibrator Reading: 1.0 cps

Sensitivity: 0.6500 GAPI/cps