



**COMPLETION
& PRODUCTION
SERVICES CO.**

**DUAL
INDUCTION
LOG**

Company RITCHIE EXPLORATION, INC.			
Well #1X BIGGS 21 D			
Field WILDCAT			
County PAWNEE			
State KANSAS			
Location:		API # : 15-145-21759-0000	
SEC 21 TWP 21S RGE 18W		Other Services	
		CDL/CNL SON	
Permanent Datum		GROUND LEVEL Elevation 2090	
Log Measured From		KELLY BUSHING 9' A.G.L.	
Drilling Measured From		KELLY BUSHING	
Date	4/15/14		
Run Number	ONE		
Depth Driller	4550		
Depth Logger	4551		
Bottom Logged Interval	4549		
Top Log Interval	00	2250-1900	
Casing Driller	8 5/8 @ 1175'		
Casing Logger	1175		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 9700	
Density / Viscosity	9.4/49		
pH / Fluid Loss	8.5/7.2		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	.55 @ 82F		
Rmrf @ Meas. Temp	.41 @ 82F		
Rmc @ Meas. Temp	.66 @ 82F		
Source of Rmrf / Rmc	MEASURED		
Rim @ BHT	.37 @ 120F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	120F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
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

NABORS COMPLETION & PRODUCTION SERVICES
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: RUSH CENTER, KS. - SOUTH TO THE 183 & 156 HWY INTERSECTION
1 MILE EAST - 1 1/2 NORTH - WEST INTO

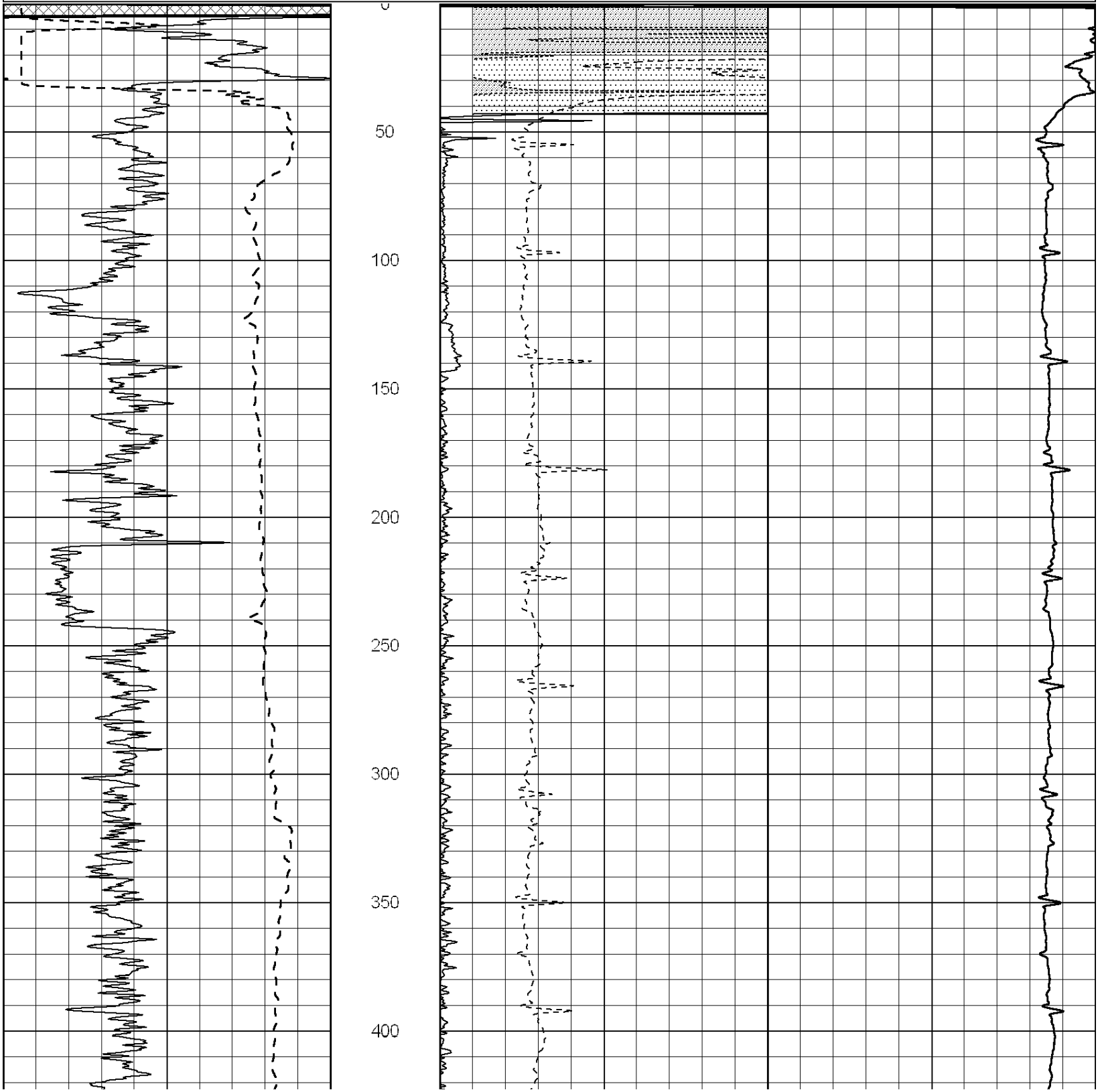


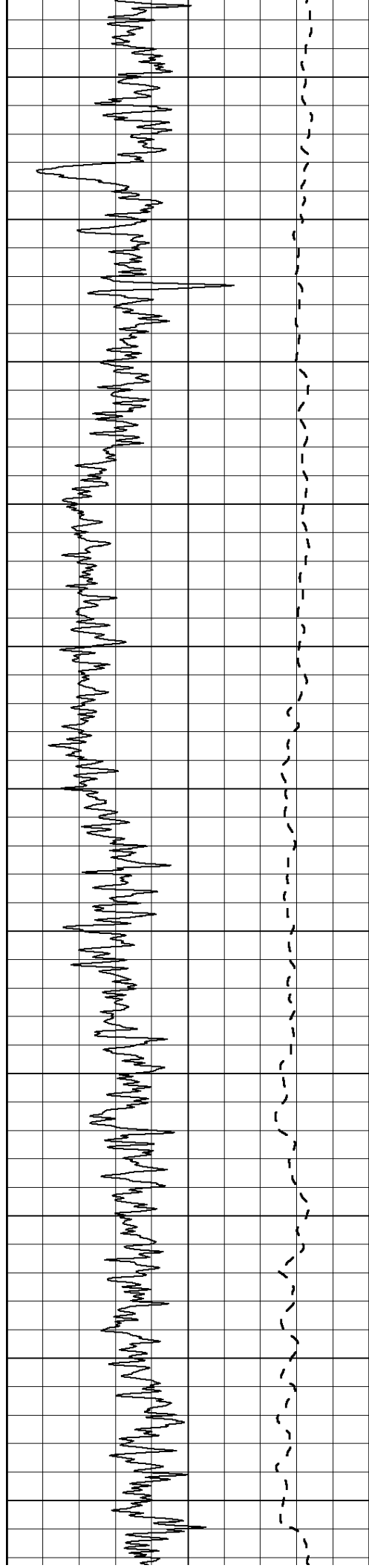
**COMPLETION
& PRODUCTION**

MAIN SECTION

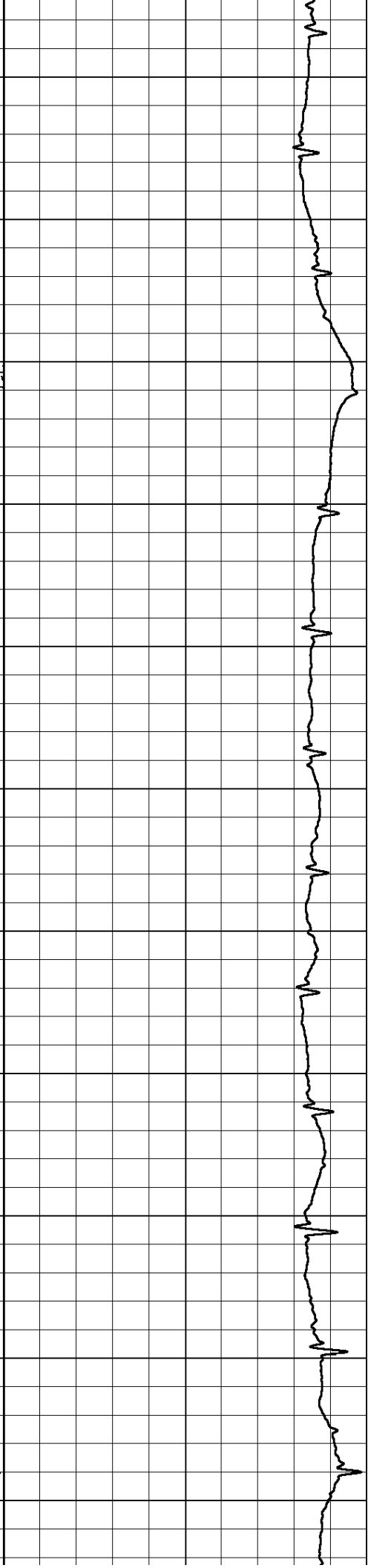
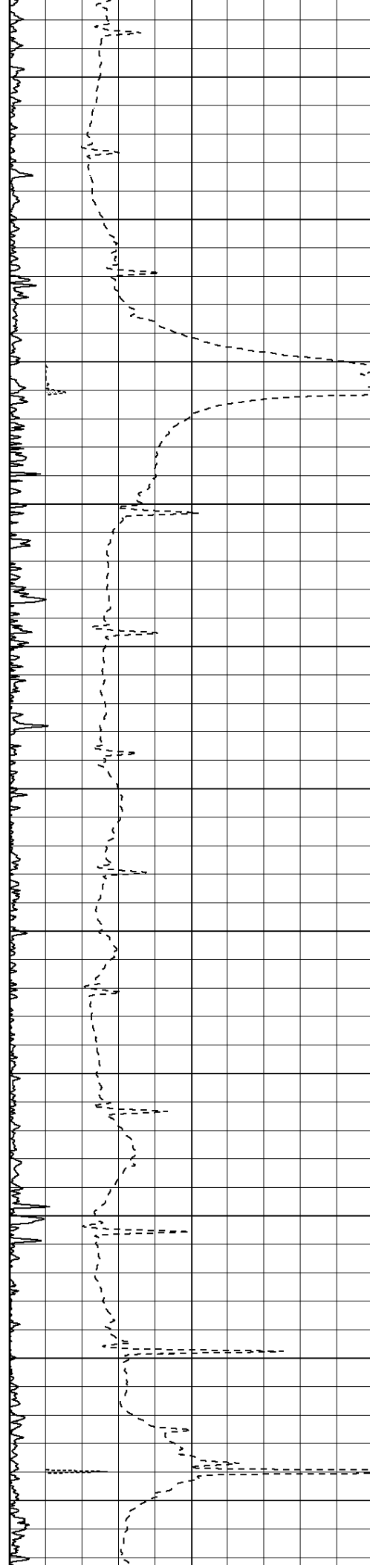
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 Charted by: Depth in Feet scaled 1:600

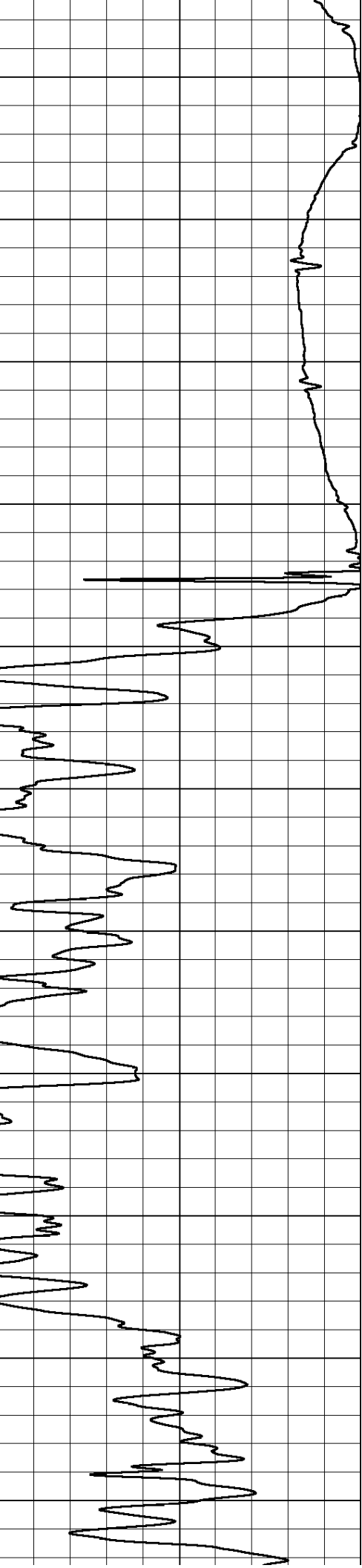
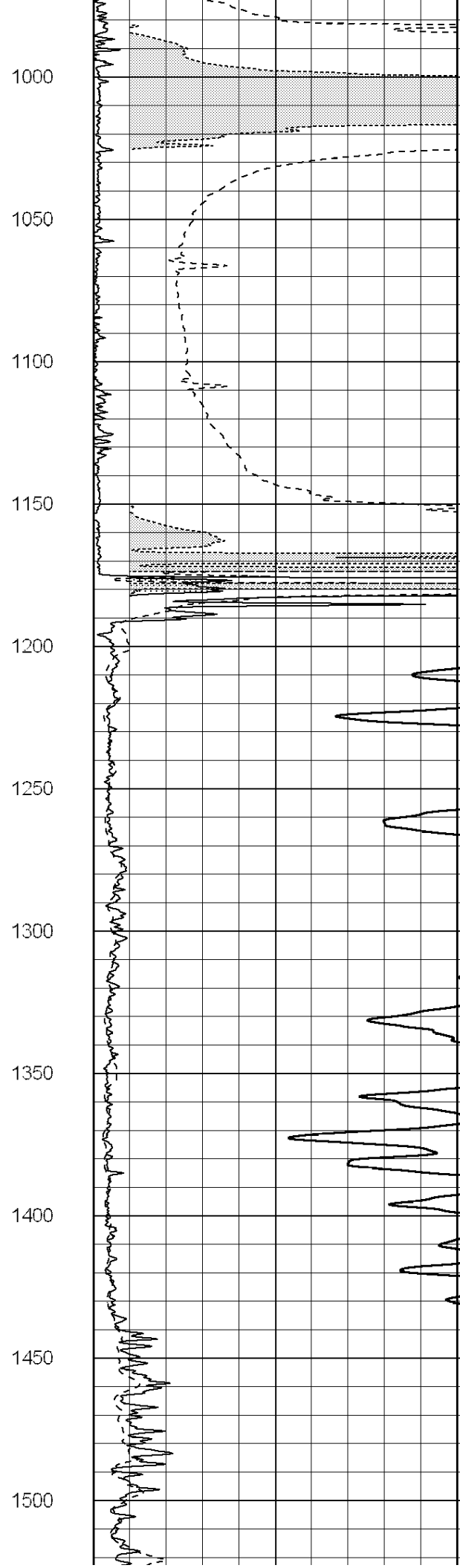
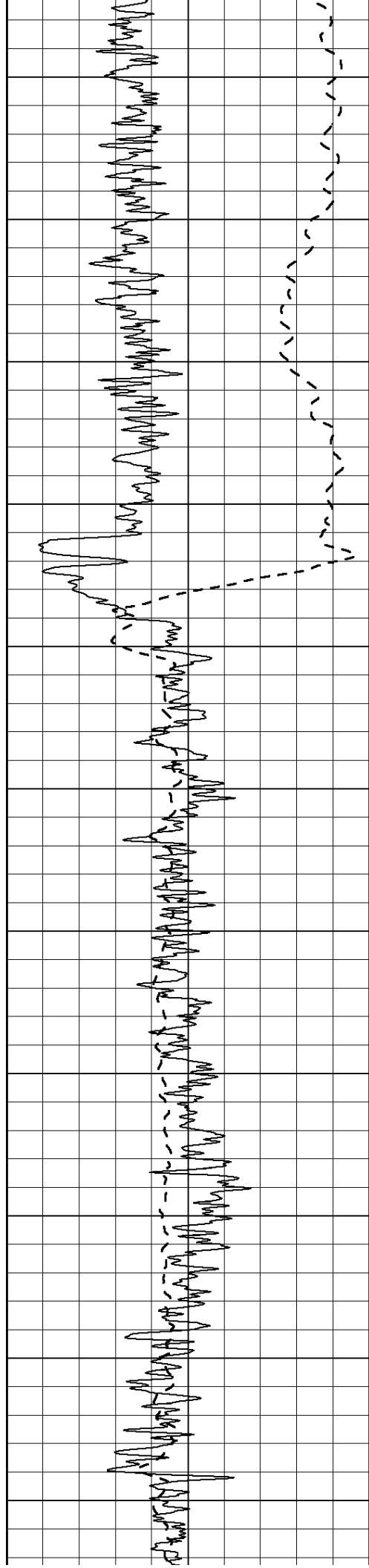
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			0	Deep Induction (Ohm-m)	50
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			50	RILD X10 (Ohm-m)	500
			50	RLL3 X10 (Ohm-m)	500

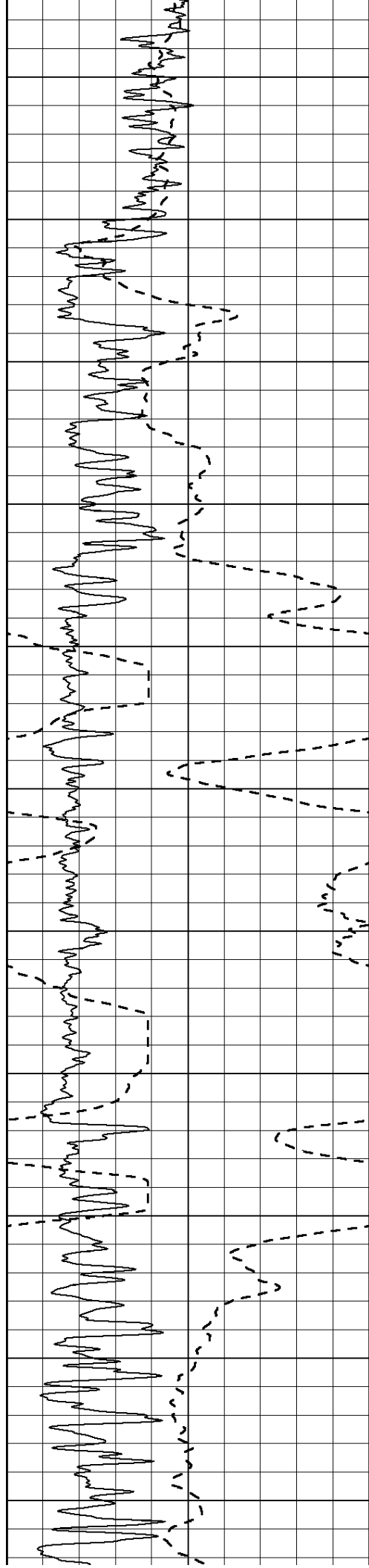




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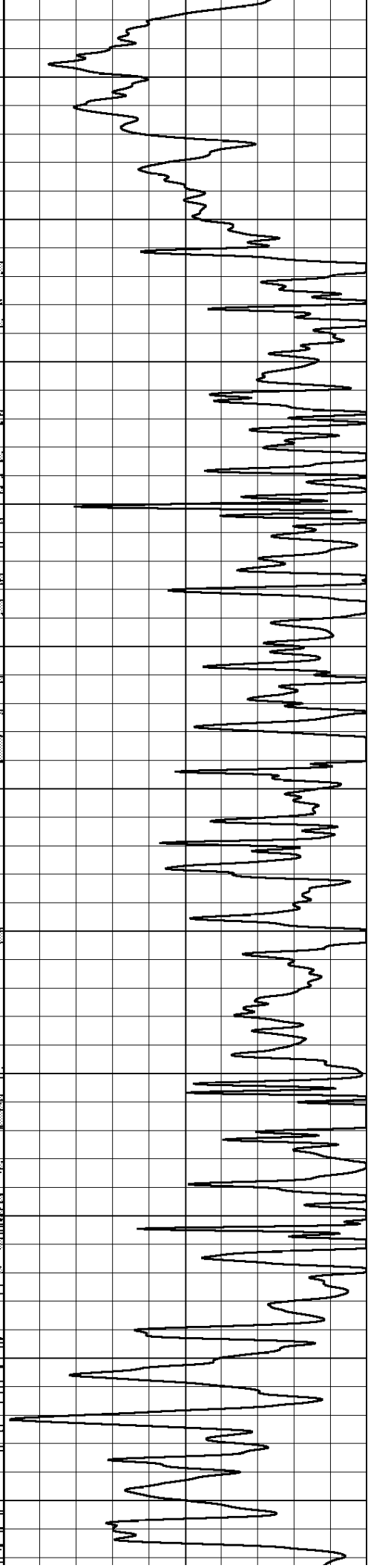
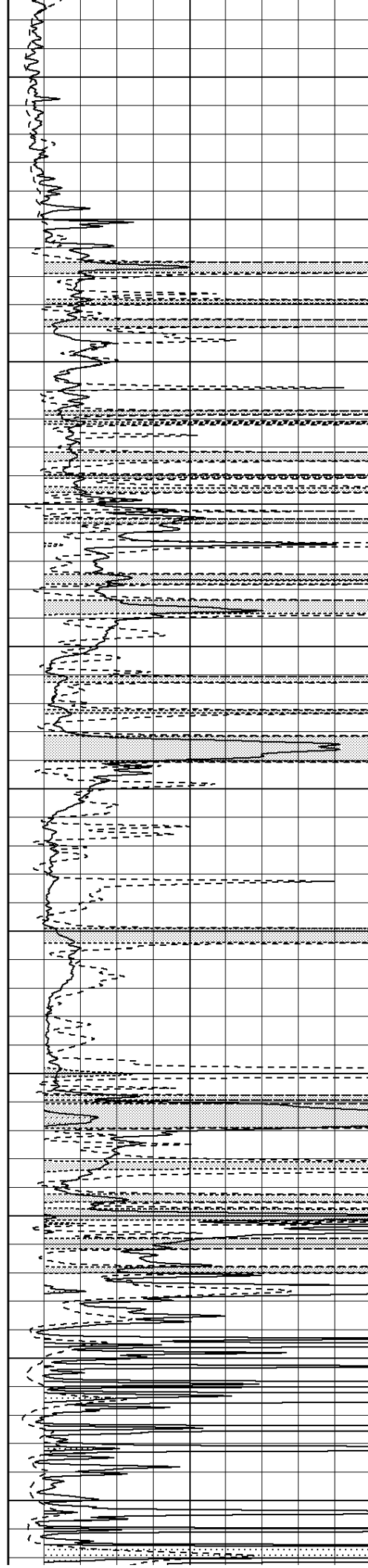
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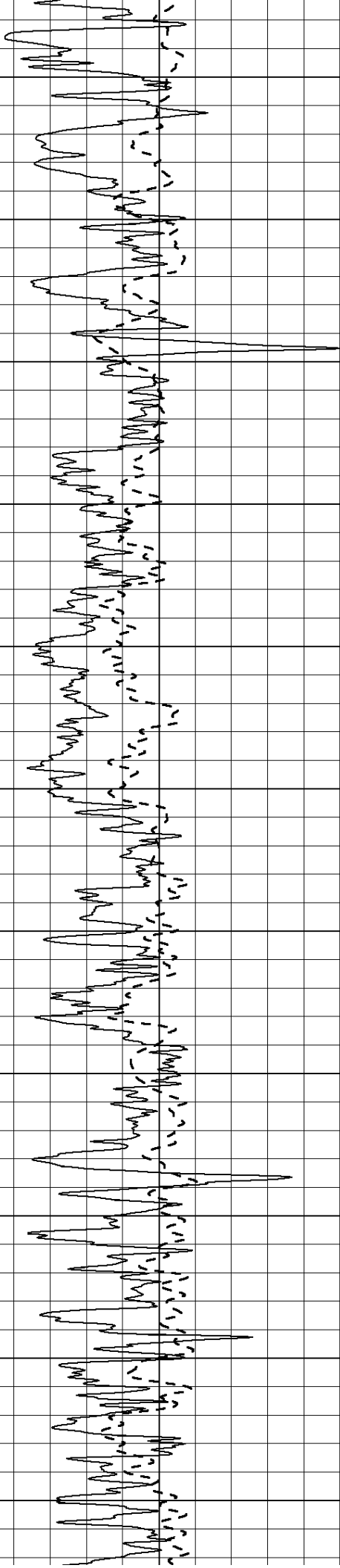
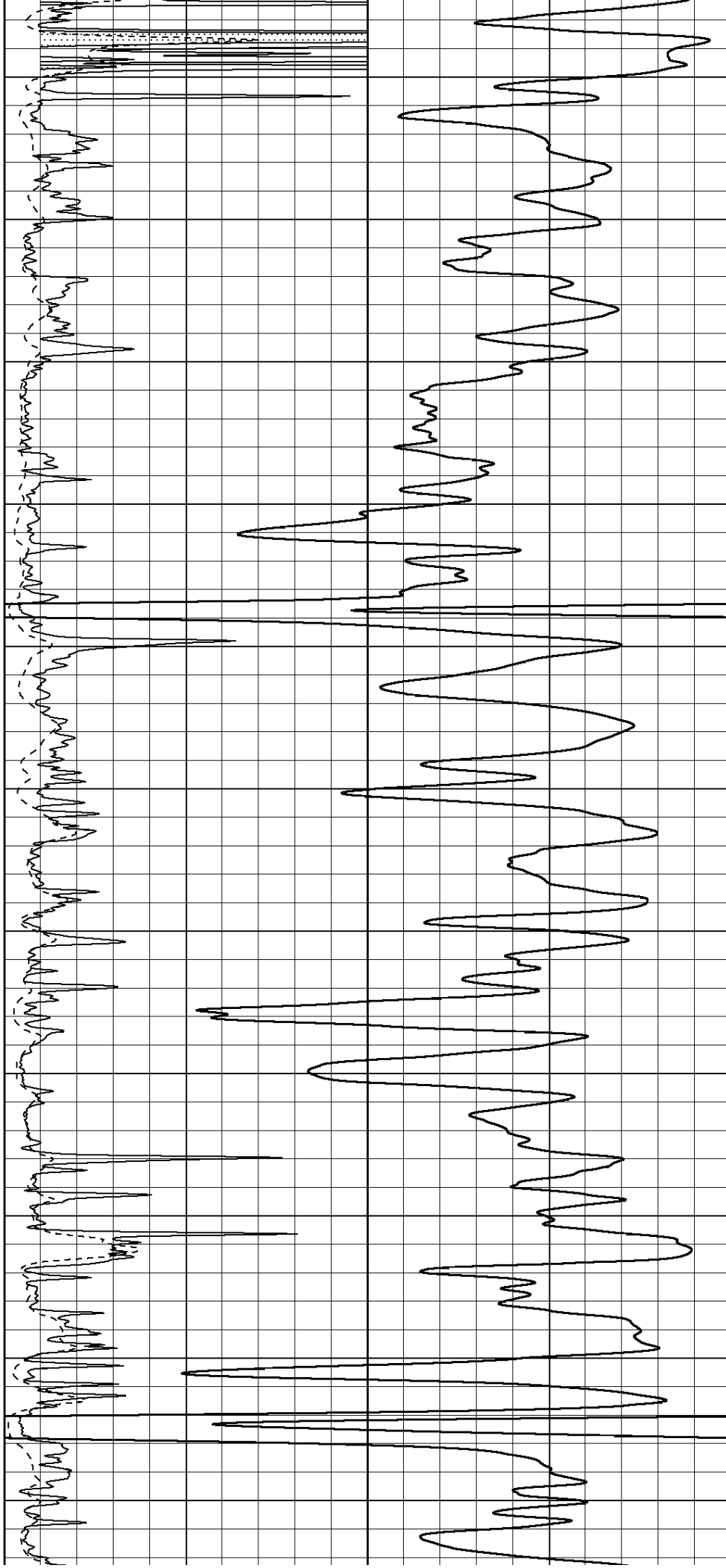
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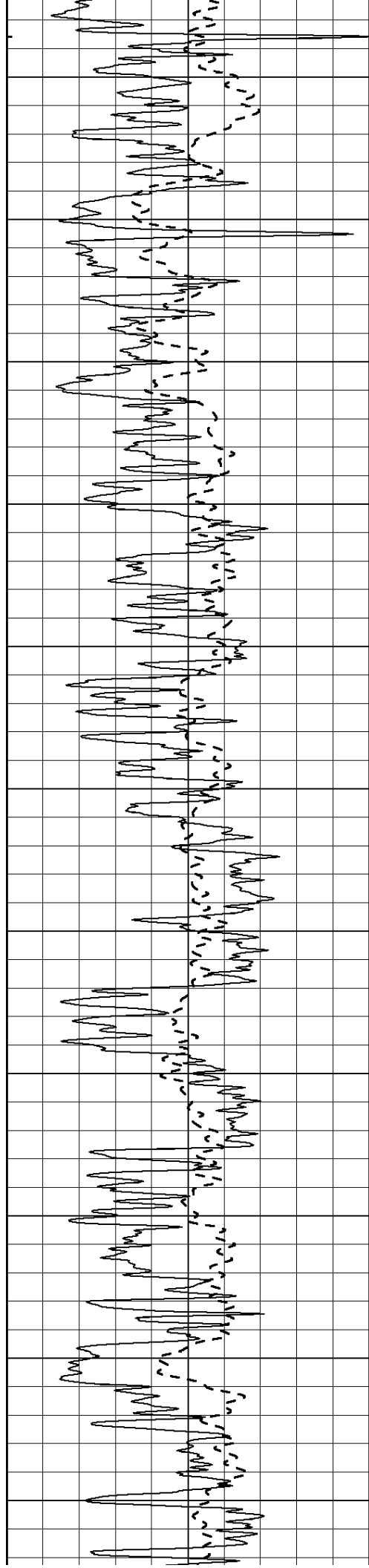
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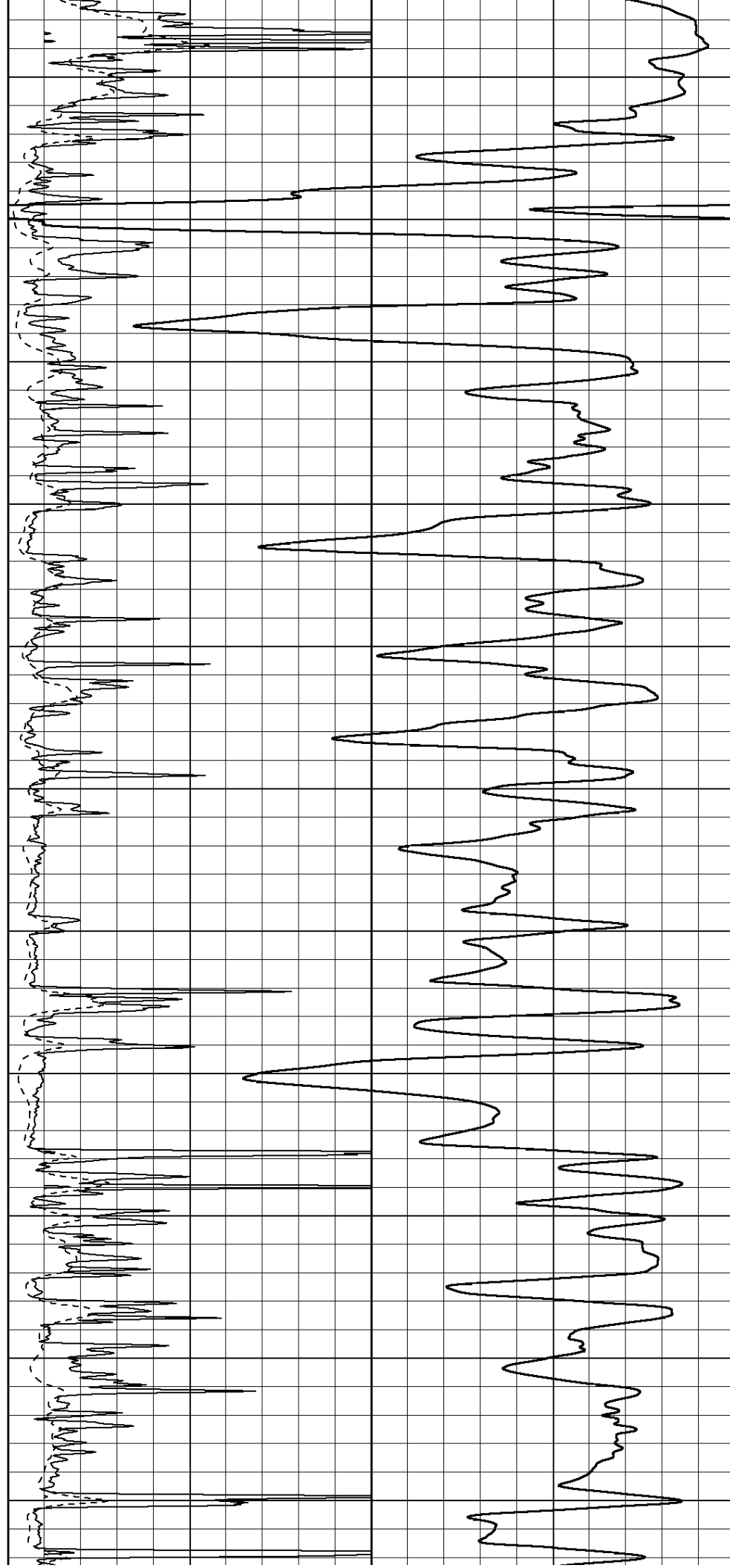
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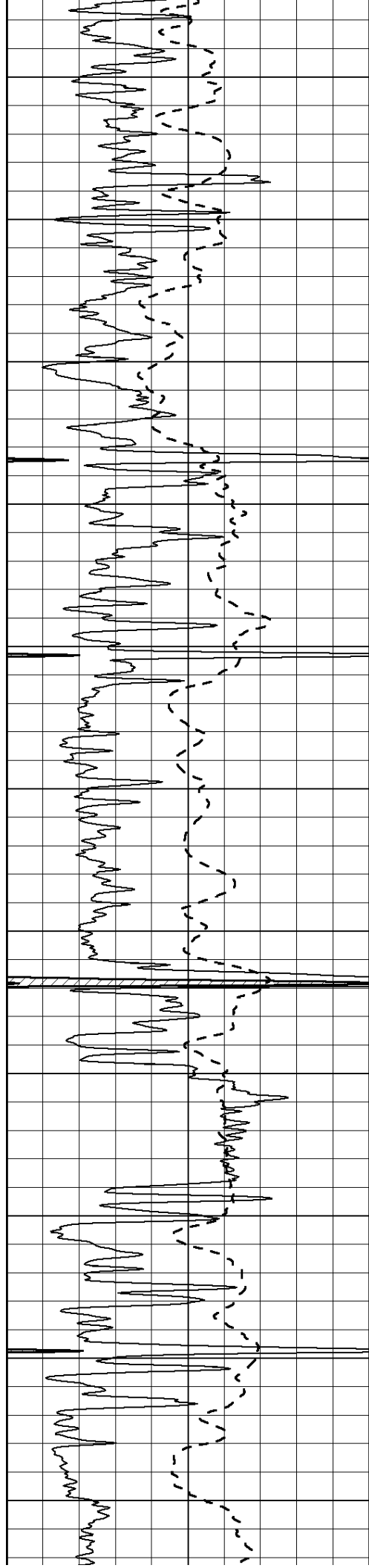
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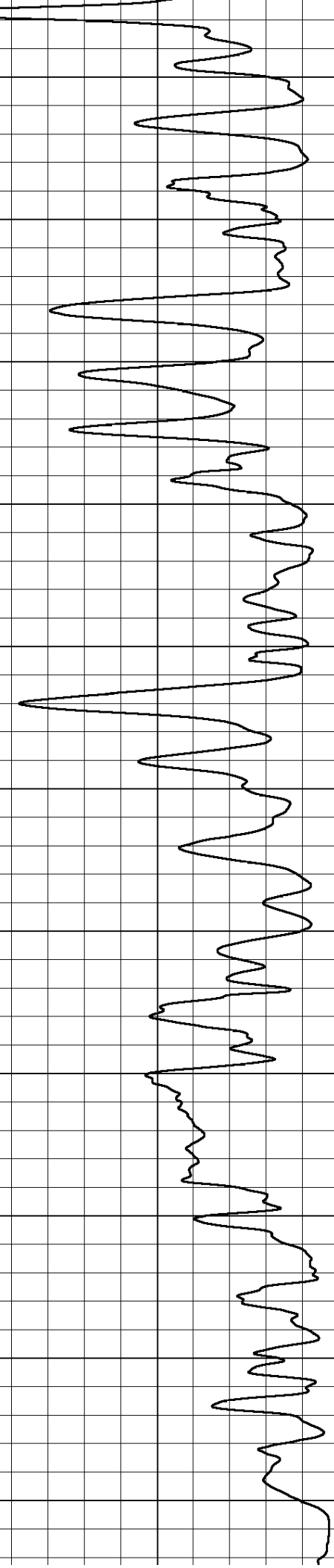
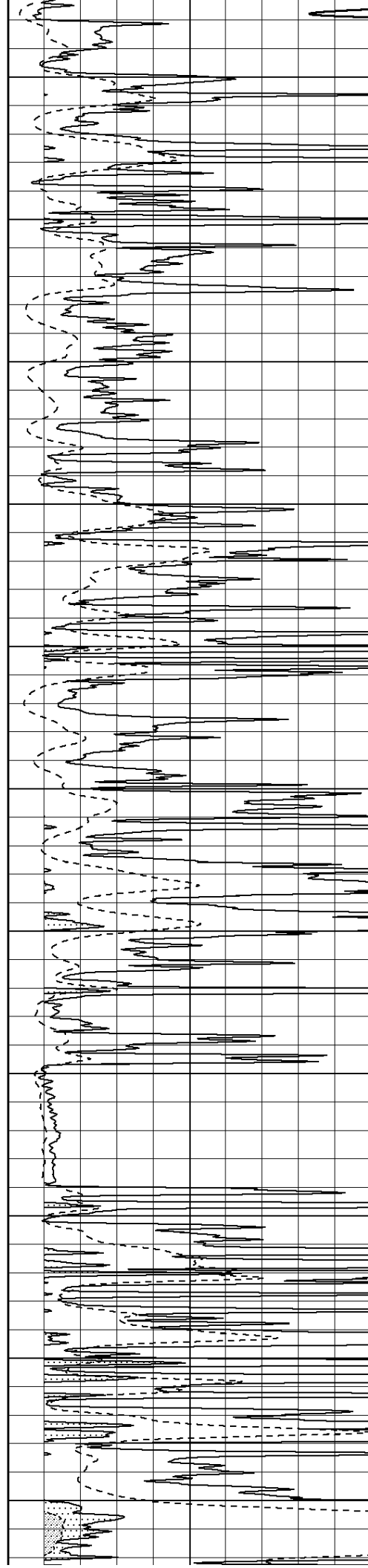
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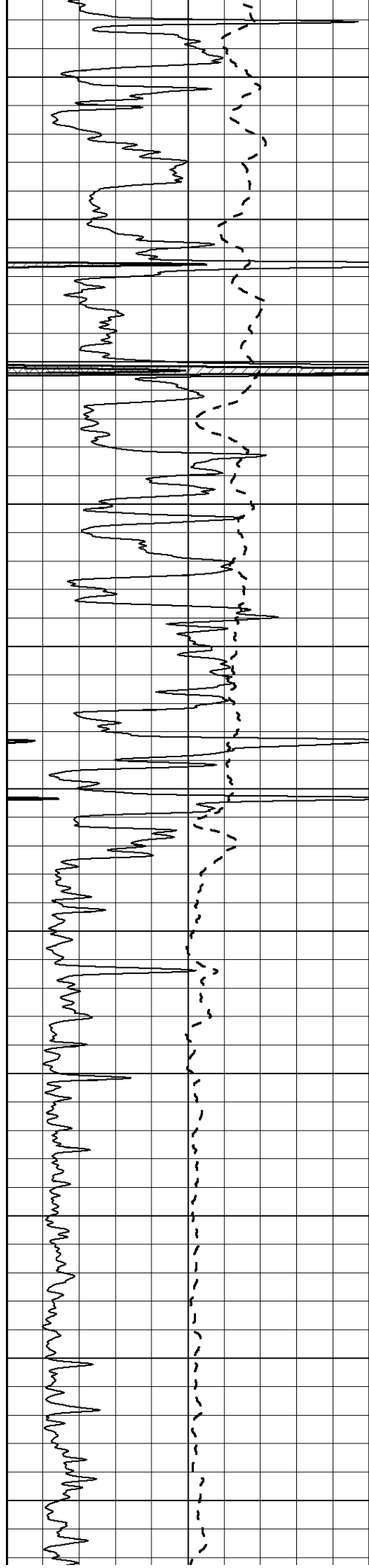
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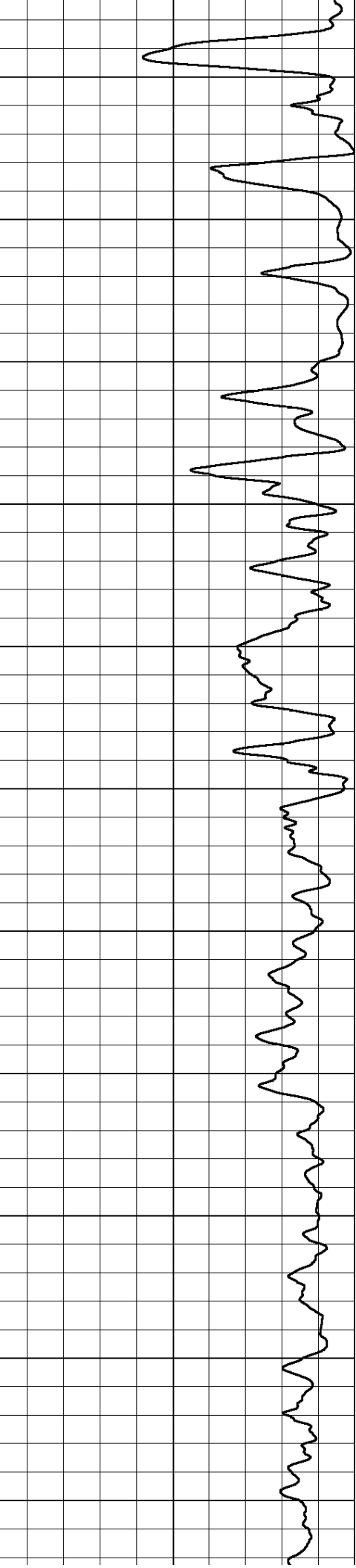
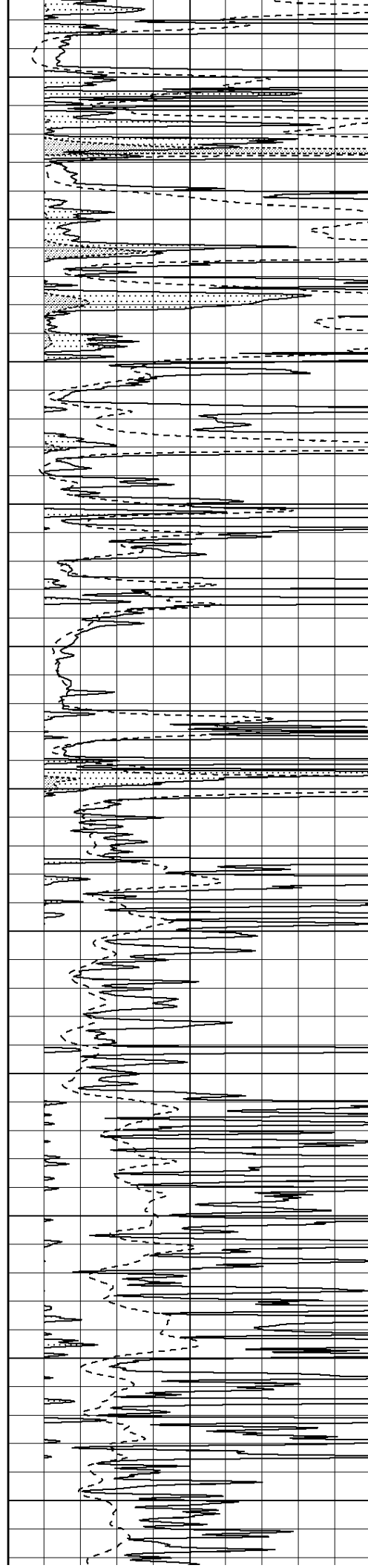
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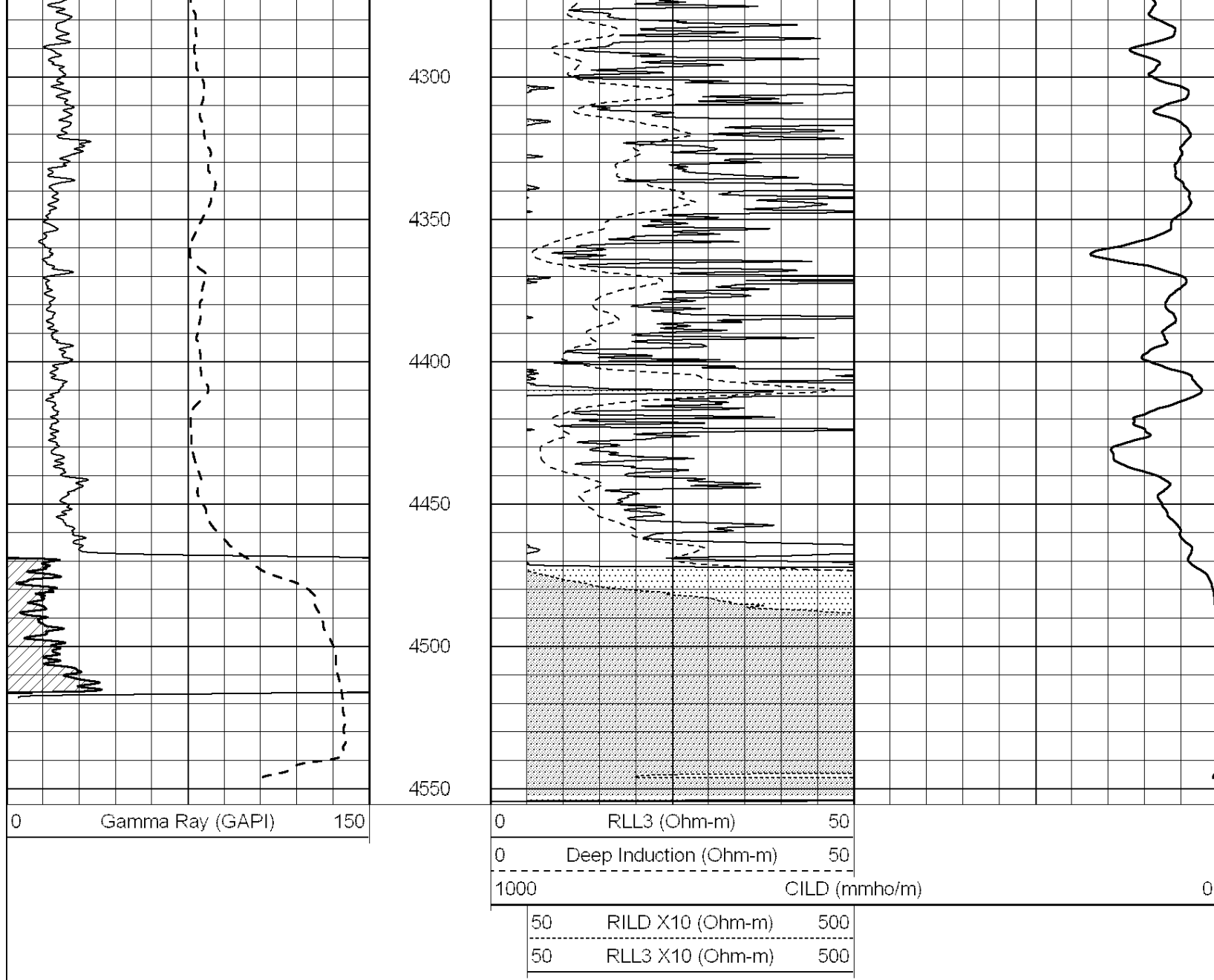
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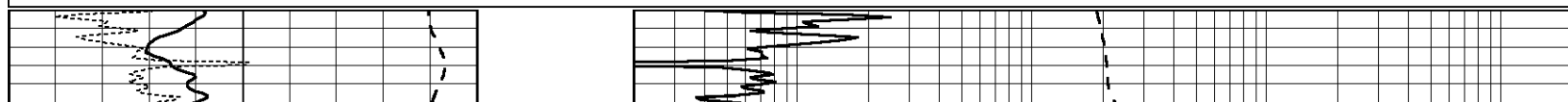


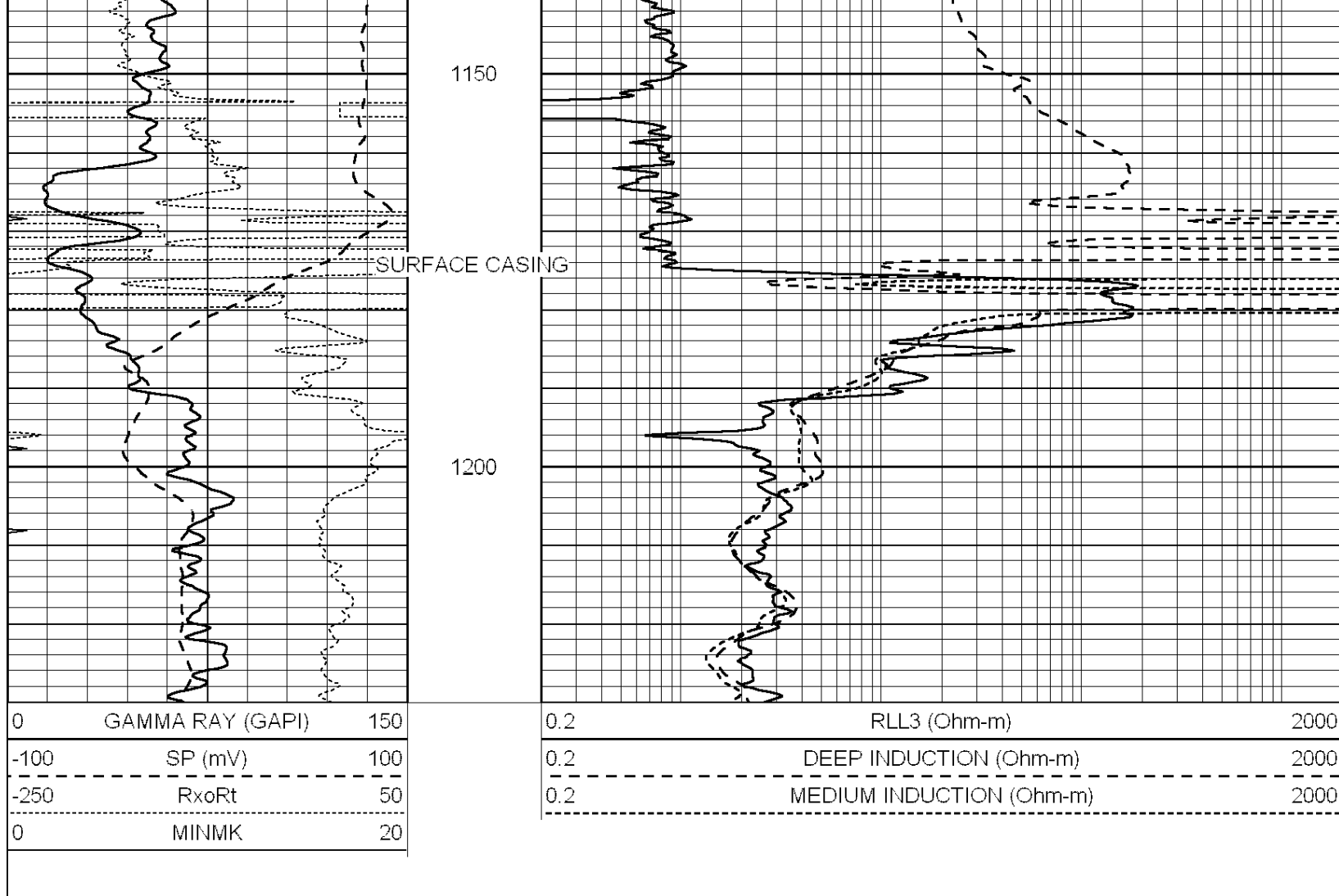
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ANHYDRITE

Database File: 24137ddn.db
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 Presentation Format: _dil
 Dataset Creation: Tue Apr 15 22:58:14 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

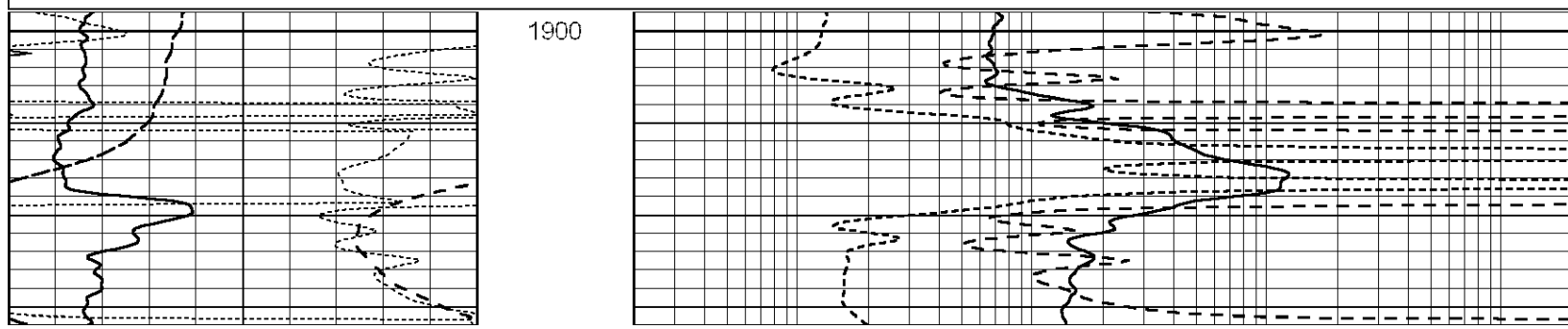
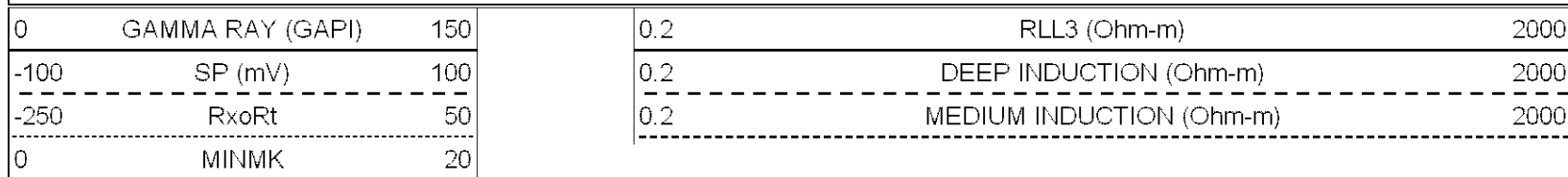
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-100	SP (mV)	100	0.2	DEEP INDUCTION (Ohm-m)	2000
-250	RxoRt	50	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	MINMK	20			

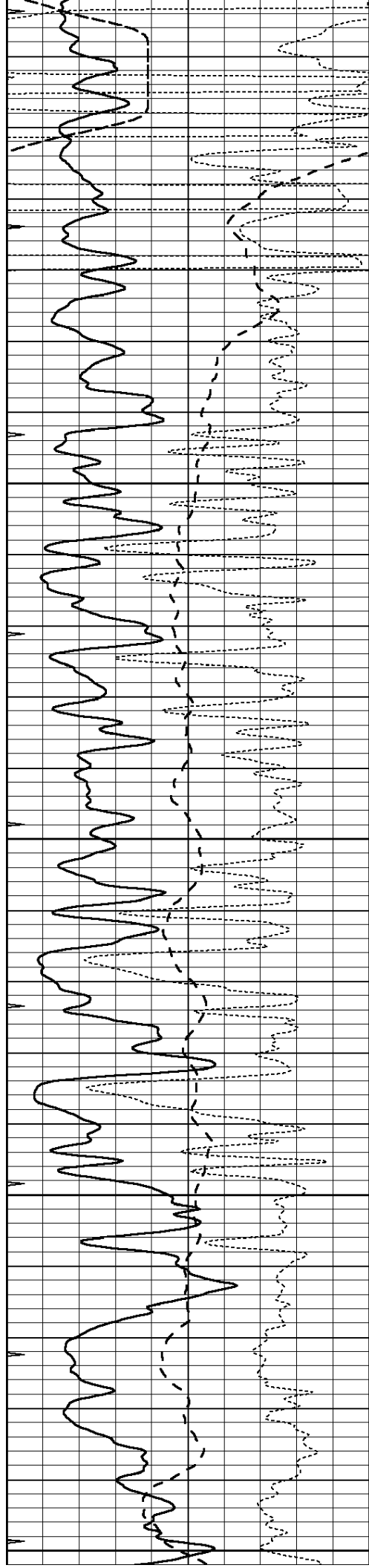




UPPER SECTION

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





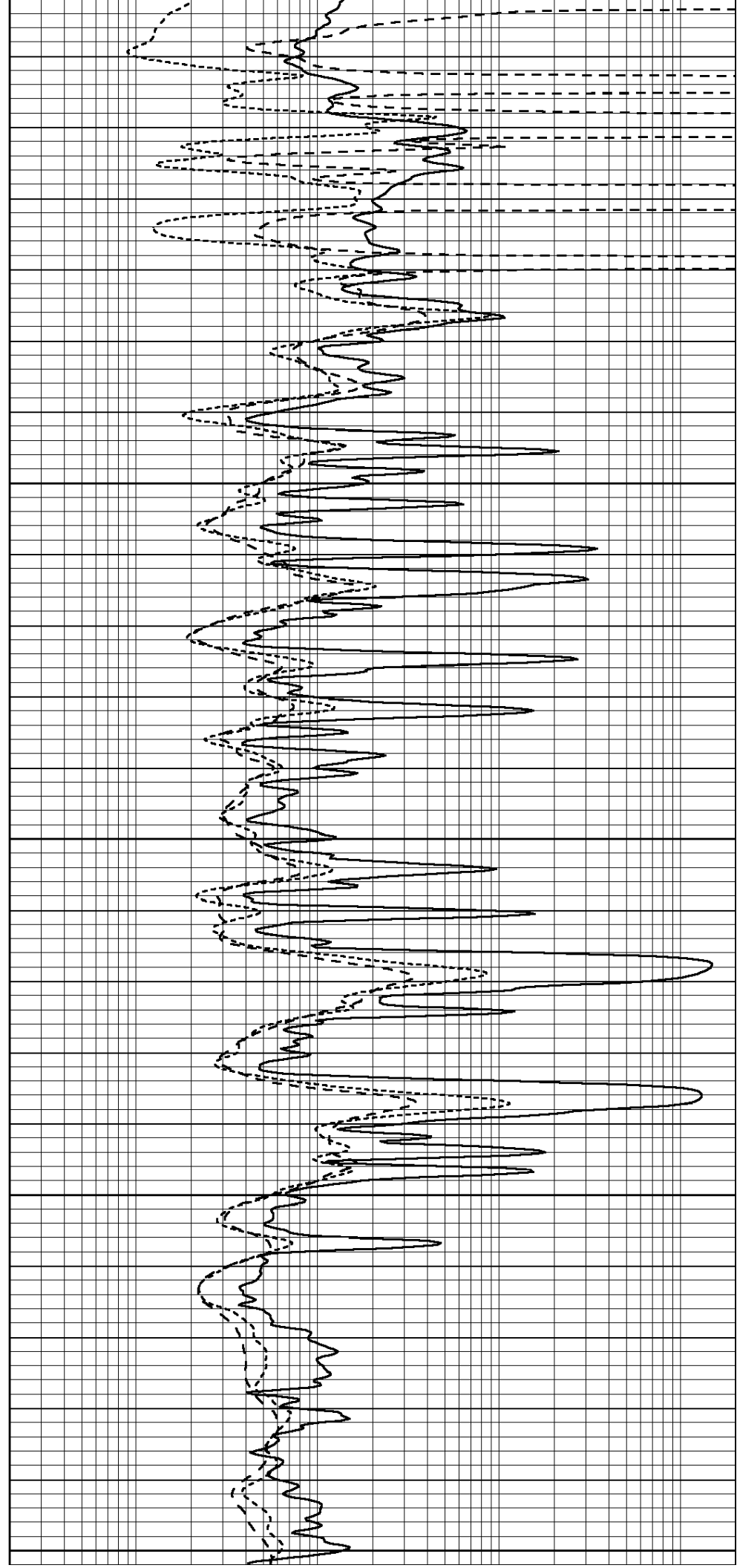
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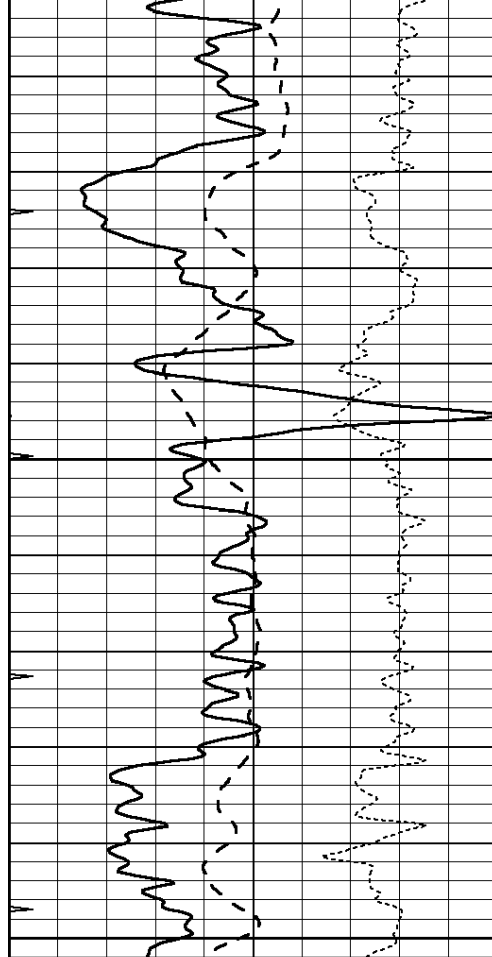
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2050

2100

2150

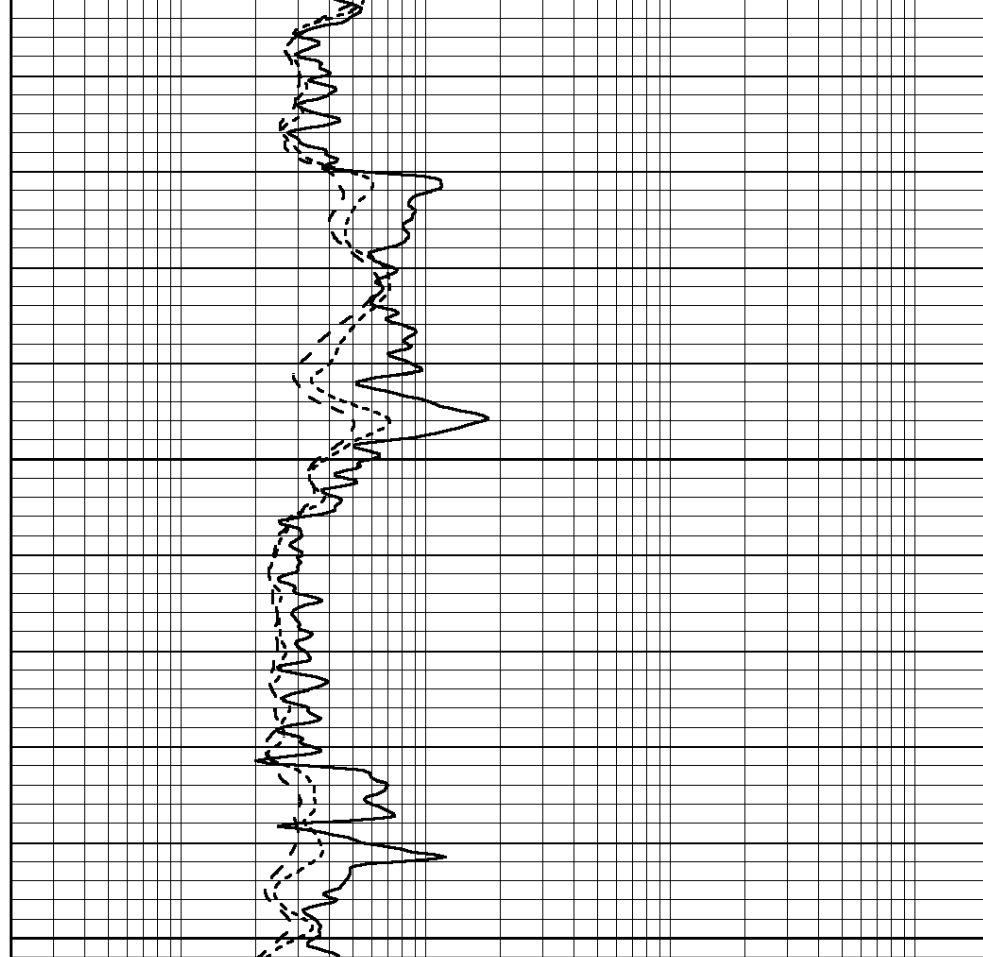




2200

2250

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



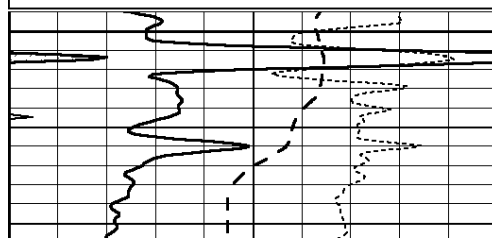
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MAIN SECTION

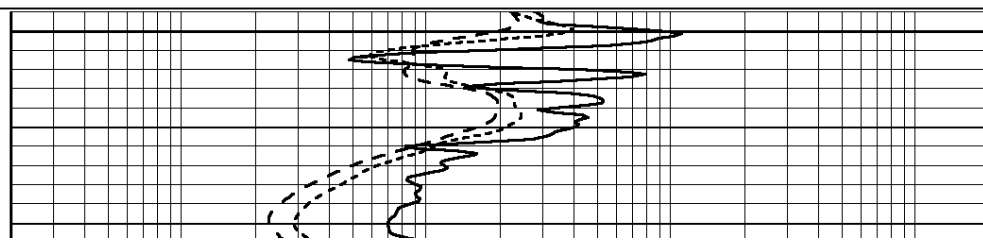
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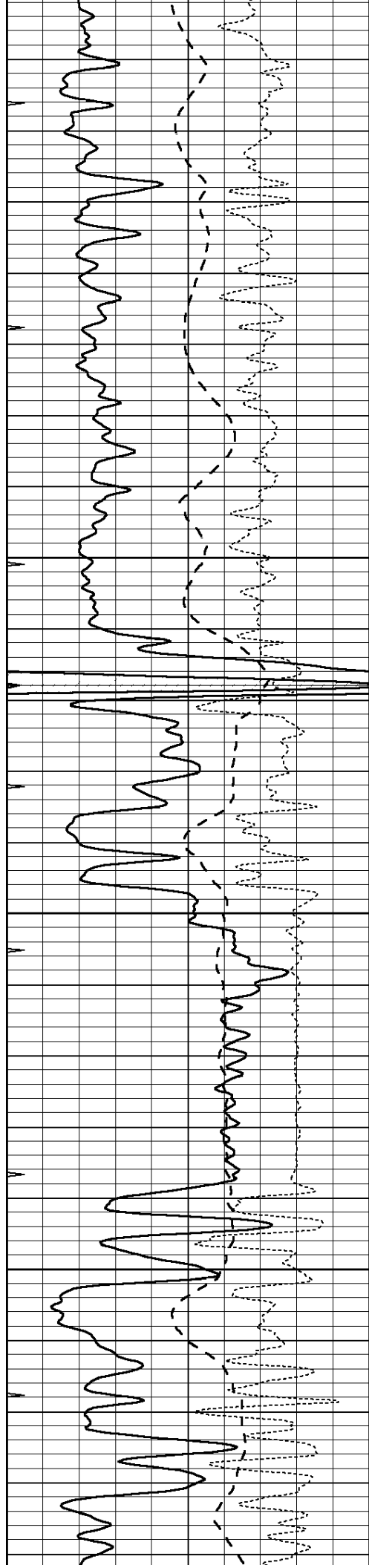
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

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



3400



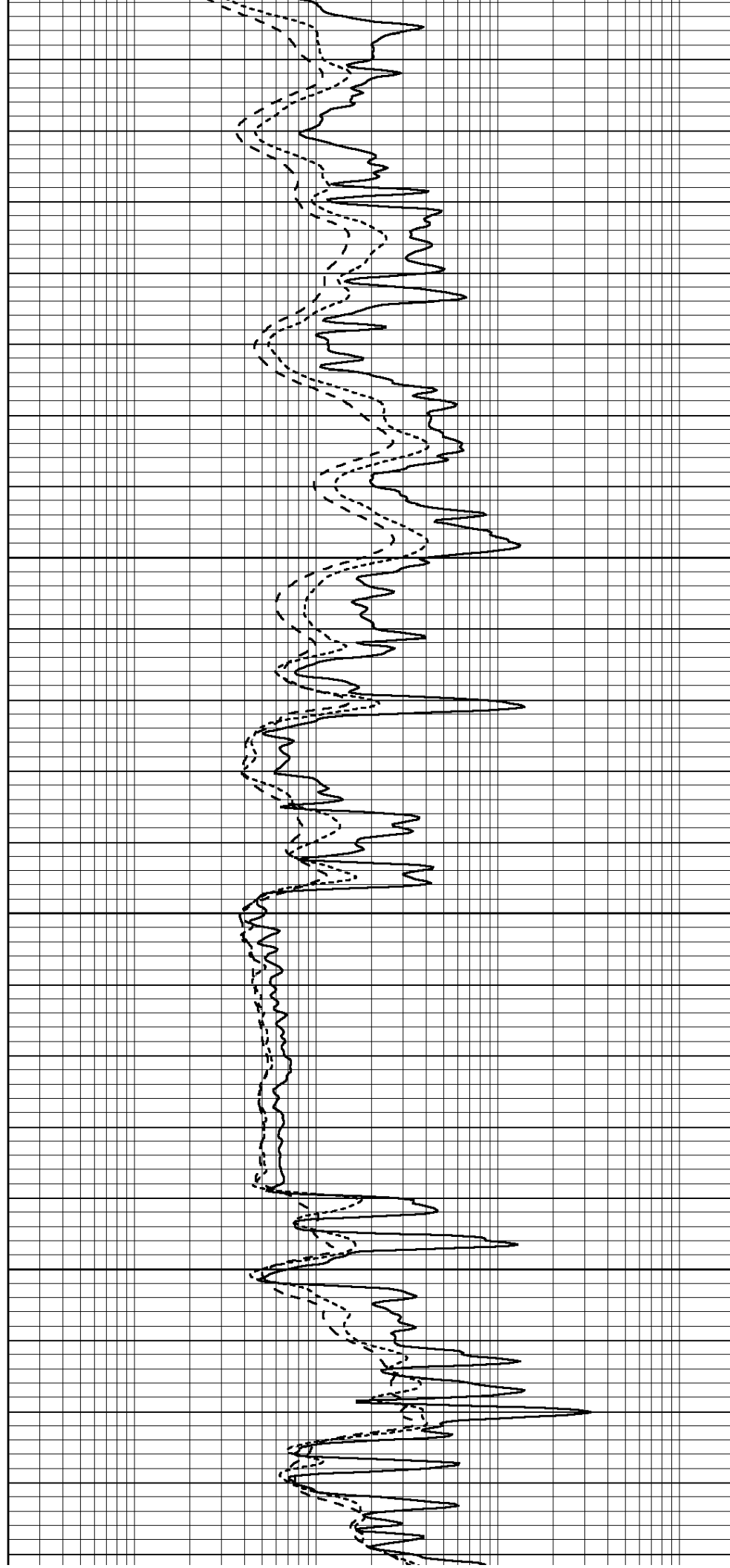


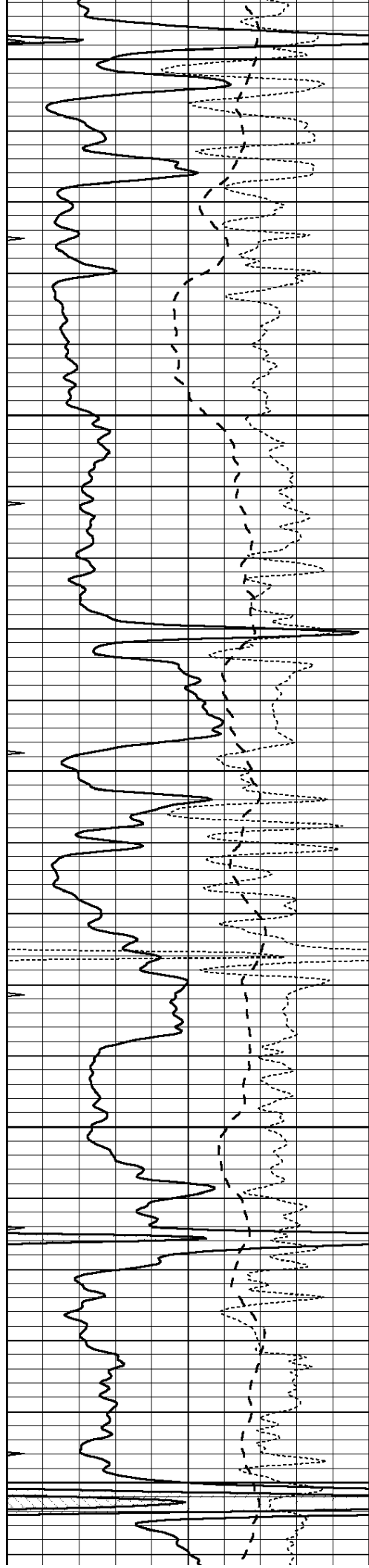
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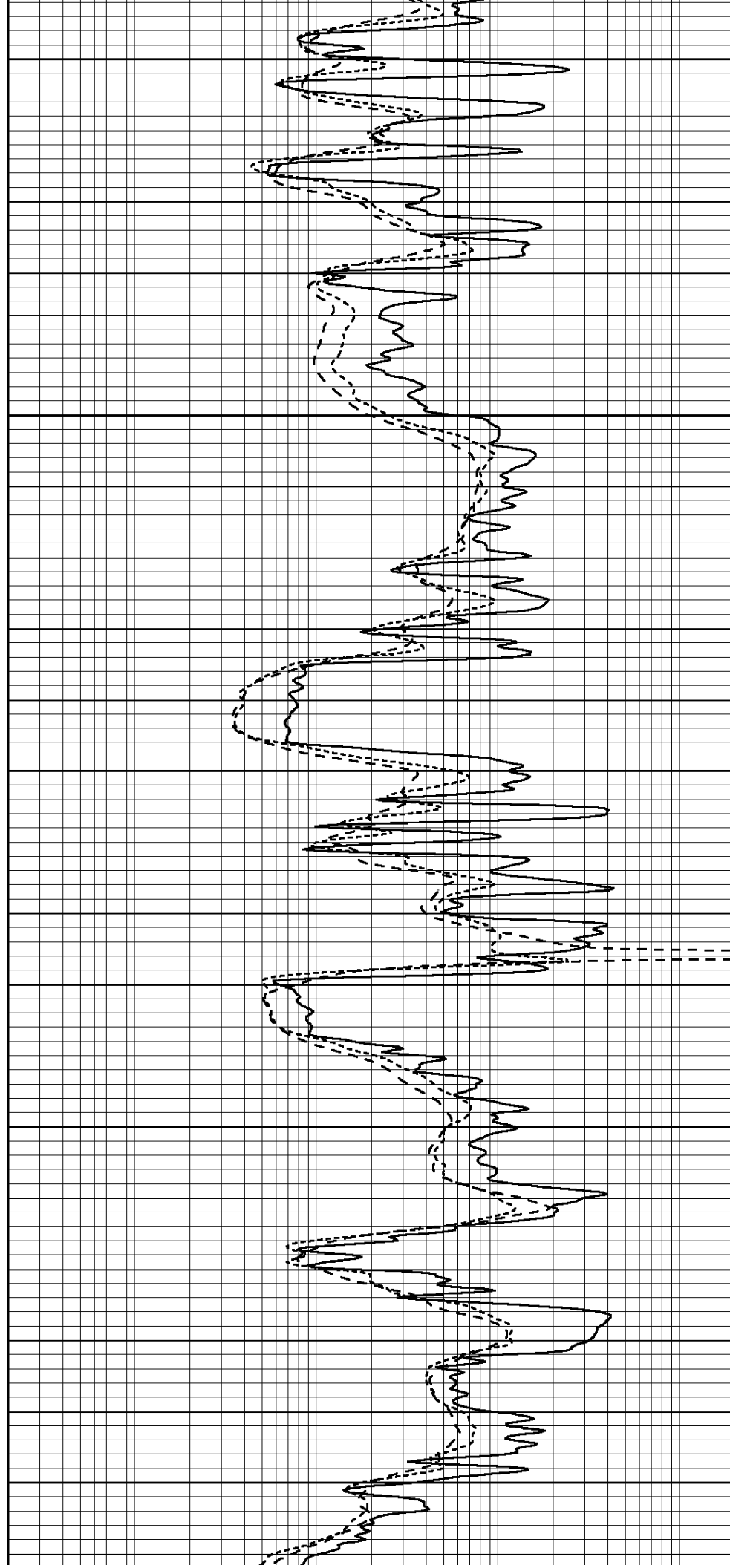
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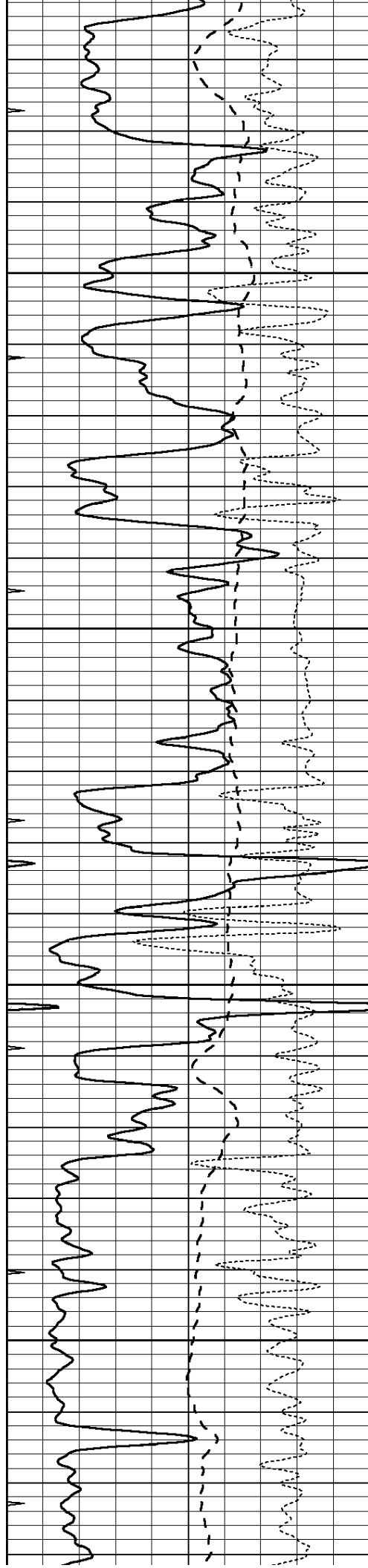
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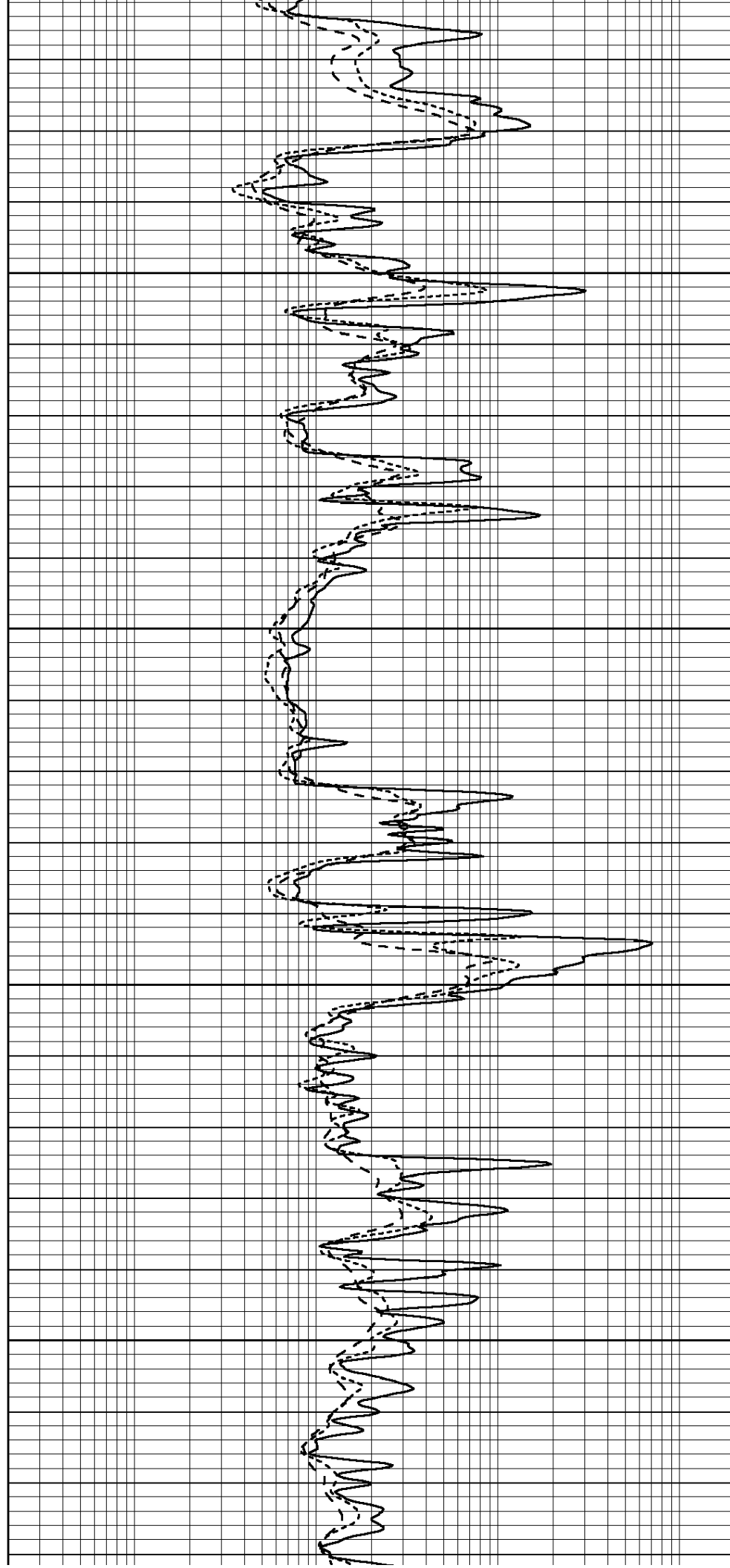


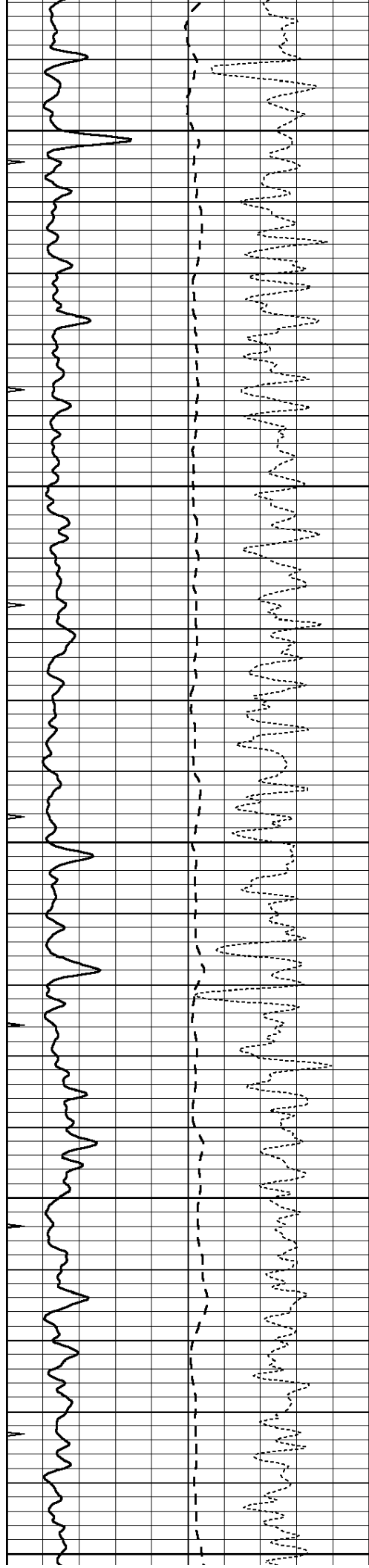
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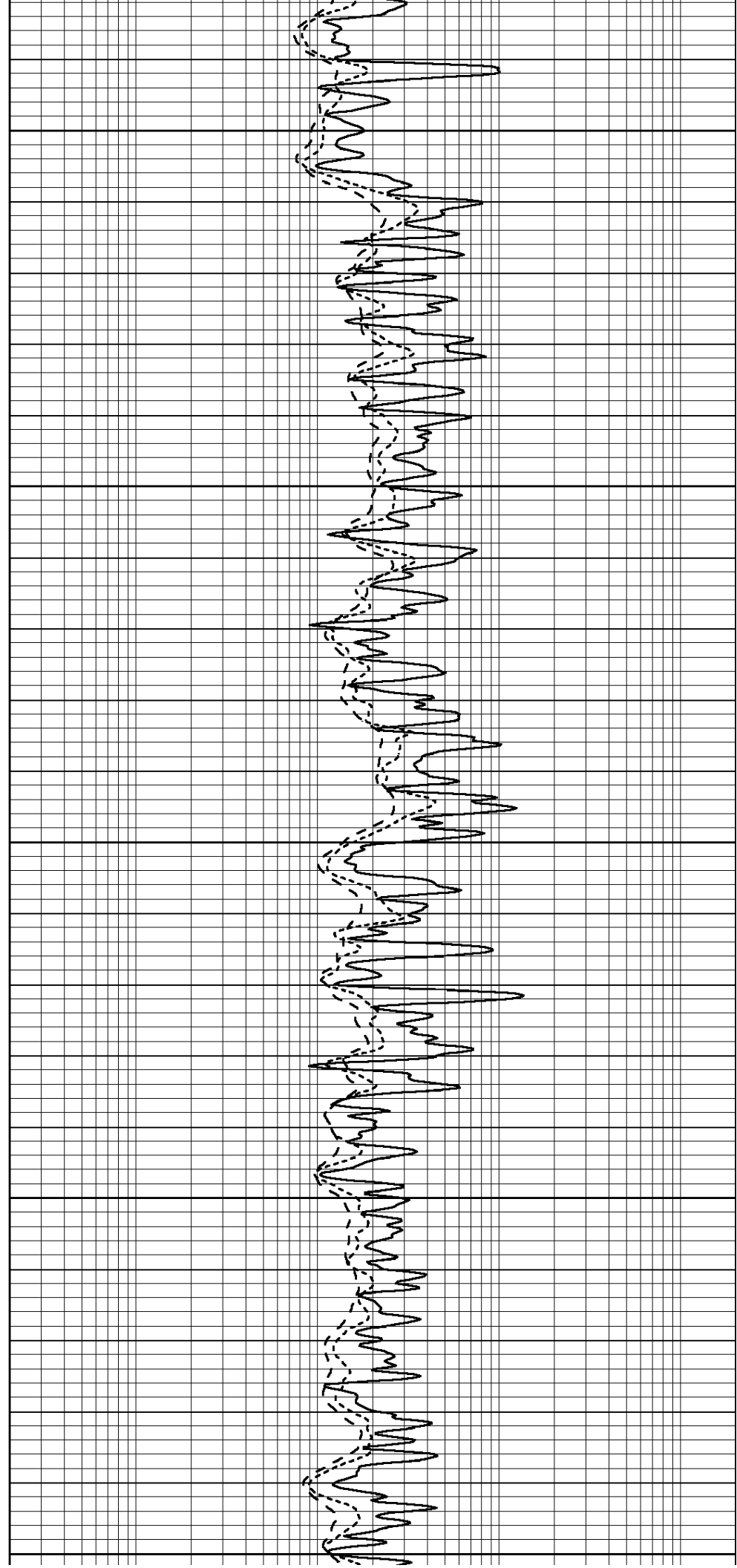
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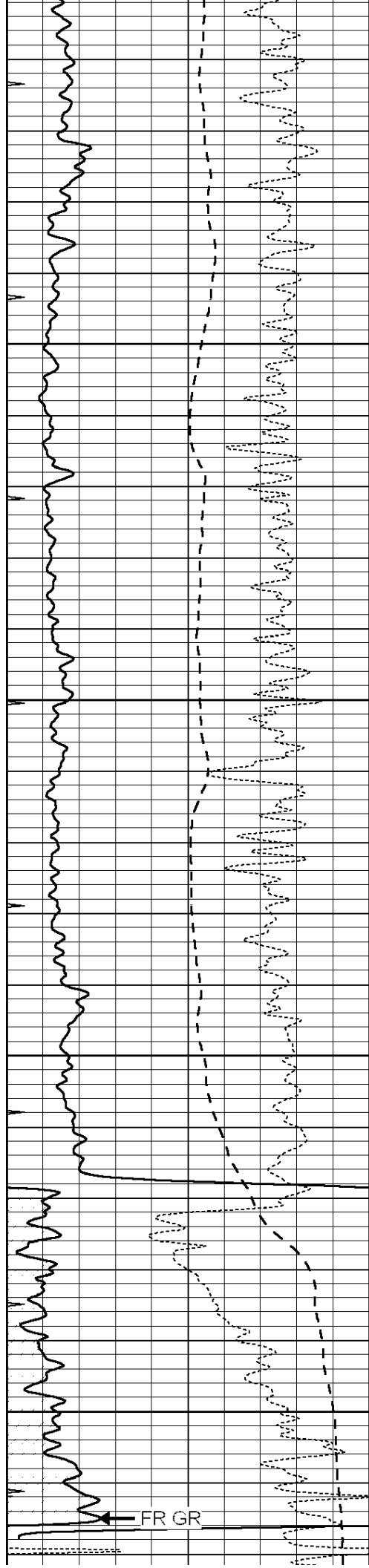
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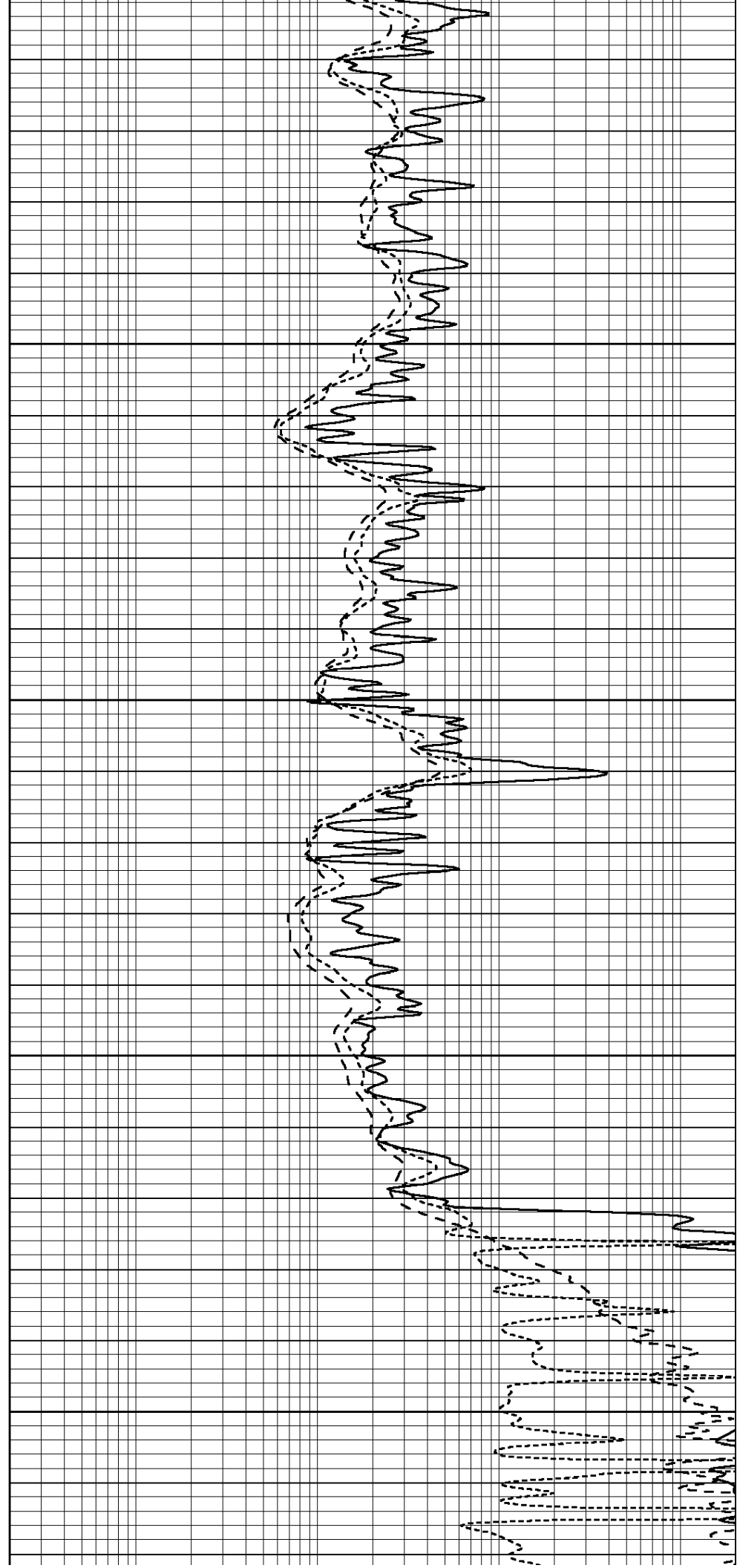
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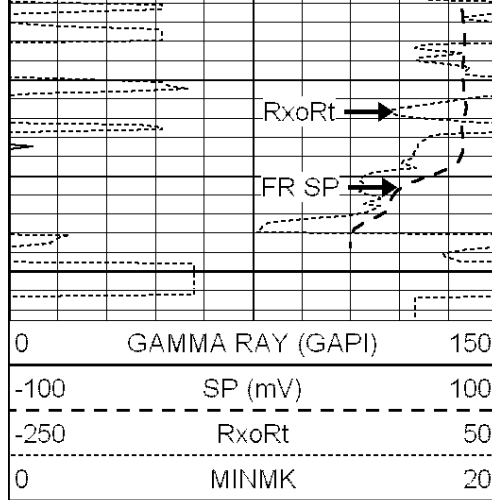
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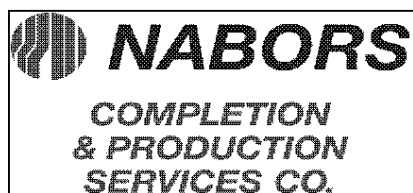
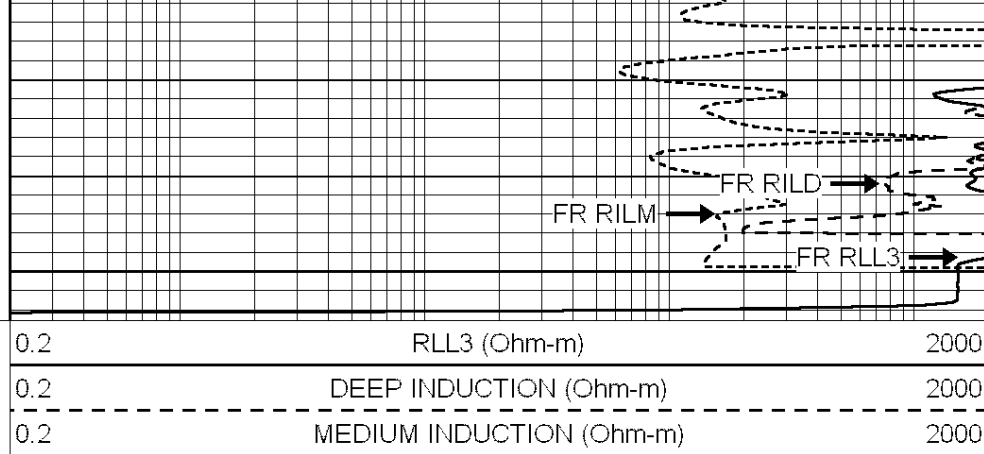
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FR GR



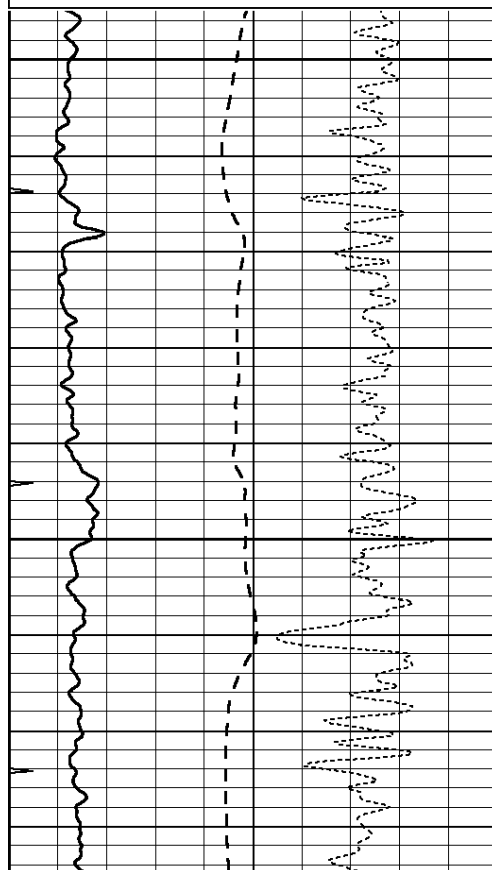
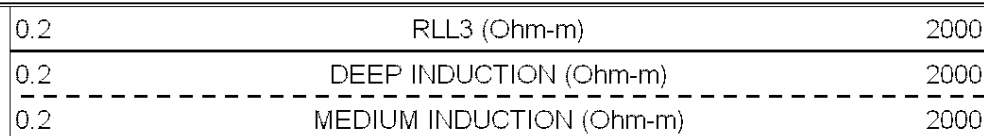
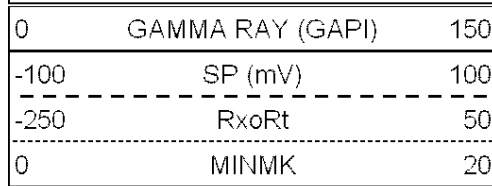


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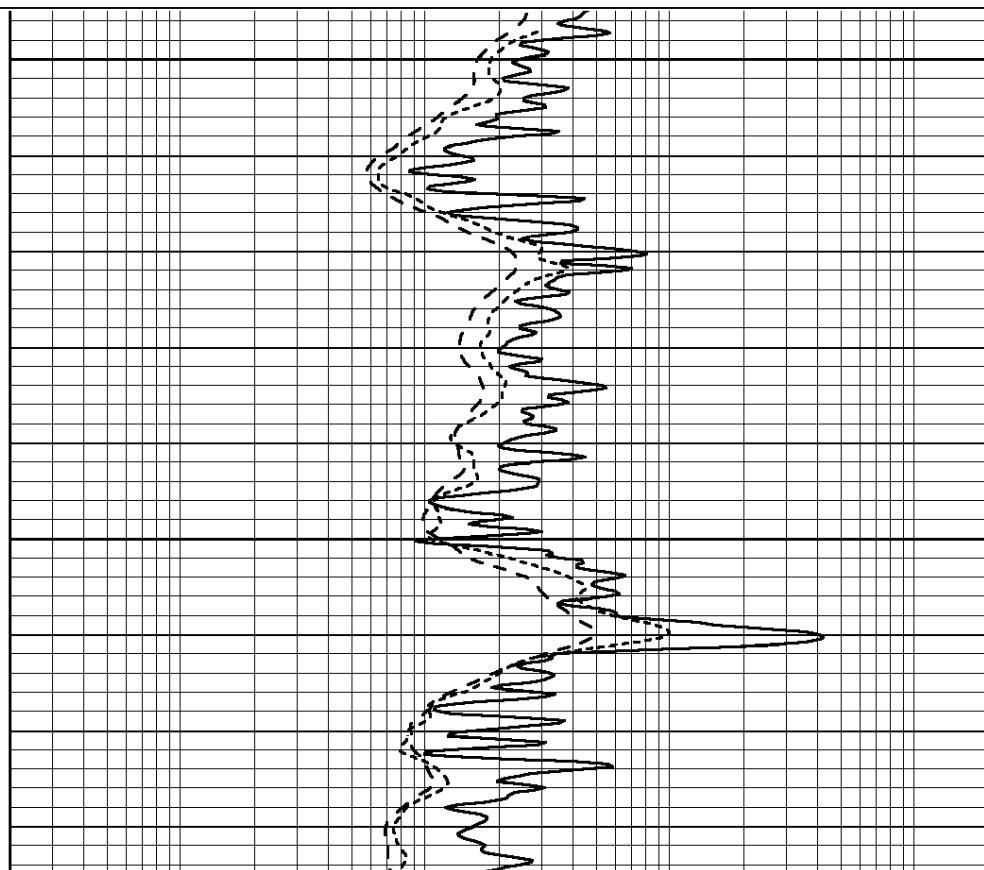
REPEAT SECTION

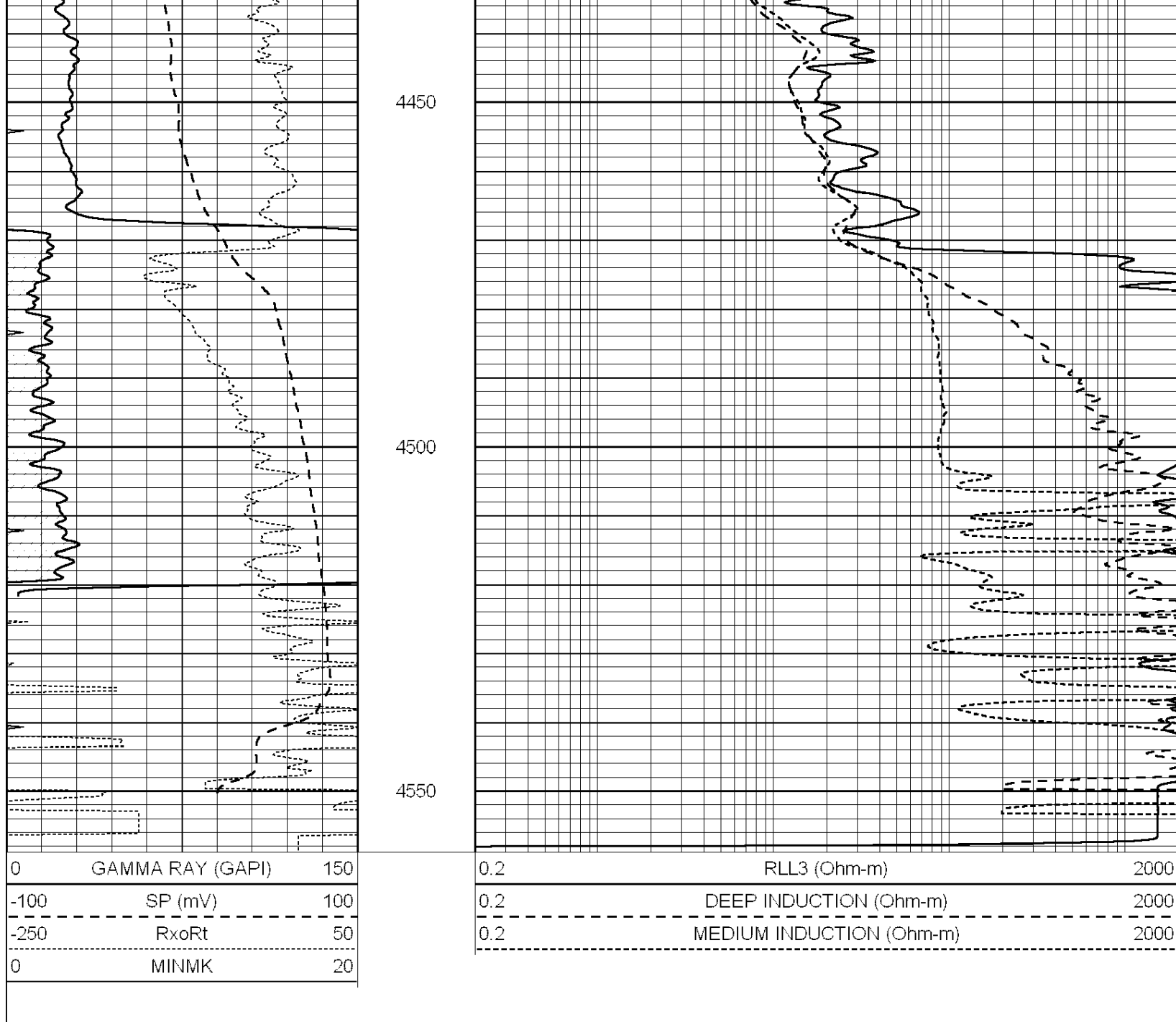
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 Presentation Format: _dil
 Dataset Creation: Tue Apr 15 22:07:57 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240



4350

4400





Calibration Report								
Database File:		24137ddn.db						
Dataset Pathname:		pass2.1						
Dataset Creation:		Tue Apr 15 22:07:57 2014 by Calc Open-Cased 090629						
Dual Induction Calibration Report								
Serial-Model:			DIL3-GEAR					
Performed:			Tue Apr 01 19:32:51 2014					
Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	500.000	5.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	540.000	-2.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	560.000	-1.071
Medium	0.005	0.712	V	0.000	462.500	mmho/m	510.000	4.000

Medium 0.007 0.740 V 0.000 462.500 mmho/m 540.000 -4.000

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
Source / Verifier: 147 / 147
Master Calibration Performed: Tue Apr 01 19:31:33 2014

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1211.27	625.92	cps
Aluminum	2.590	g/cc	267.11	413.26	cps
Spine Angle = 74.64			Density/Spine Ratio = 0.561		
	Size		Reading		
Small Ring	8.20	in	5.18	V	
Large Ring	14.00	in	8.18	V	

Compensated Neutron Calibration Report

Serial Number: 080620
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: 7
Tool Model: Probe1
Performed: Tue Apr 01 19:11:08 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.4500 GAPI/cps