



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

DUAL INDUCTION LOG

Company	RITCHIE EXPLORATION, INC.		
Well	FARMER 25 A #1		
Field	WILDCAT		
County	SEDGWICK	State	KANSAS
Location:	API # : 15-173-21016-00-00 N2 - NE - NE 460' FNL & 700' FEL		Other Services CNL/CDL
	SEC 25 TWP 29S RGE 4W		Elevation K.B. 1361 D.F. 1359 G.L. 1352
Permanent Datum Log Measured From Drilling Measured From	GROUND LEVEL Elevation 1352 KELLY BUSHING 9' A.G.L. KELLY BUSHING		
Date	2/8/13		
Run Number	ONE		
Depth Driller	4466		
Depth Logger	4469		
Bottom Logged Interval	4467		
Top Log Interval	00		
Casing Driller	264		
Casing Logger	264		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2.000	
Density / Viscosity	9.4 / 51		
pH / Fluid Loss	10.0 / 9.0		
Source of Sample	FLOWLINE		
Rim @ Meas. Temp	0.80 @ 83F		
Rinf @ Meas. Temp	0.60 @ 83F		
Rinc @ Meas. Temp	0.96 @ 83F		
Source of Rinf / Rinc	MEASURED		
Rim @ BHT	0.55 @ 120F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	120F		
Equipment Number	860		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	PAT DEENIHAN		

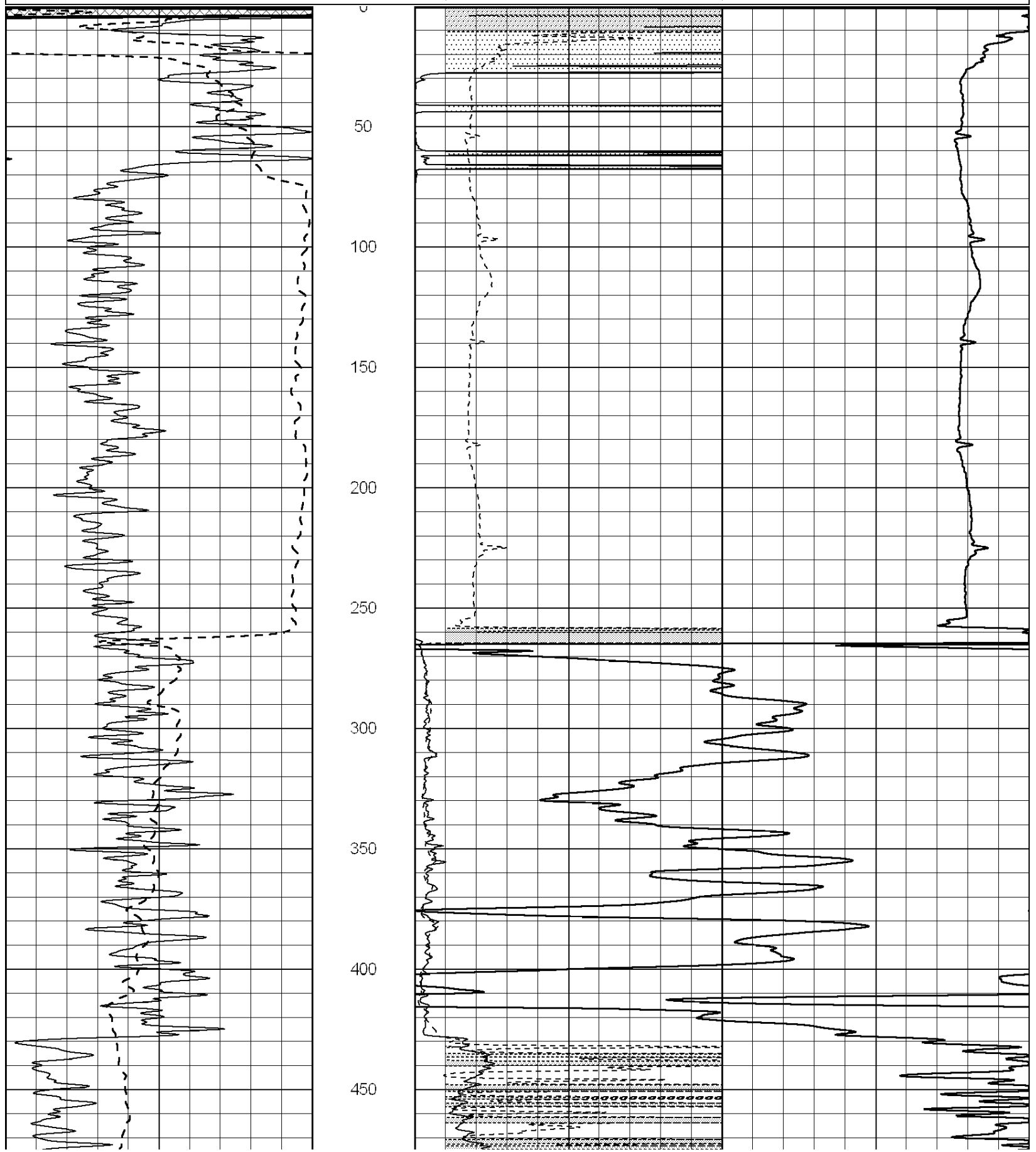
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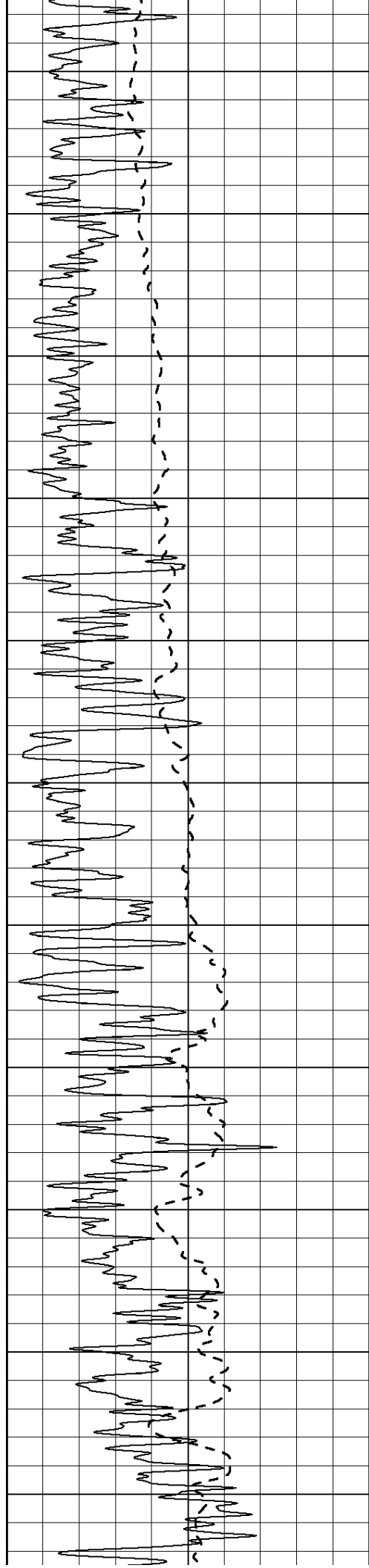
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 CO.
785-628-6395
THANK YOU FOR YOUR BUSINESS
DIRECTIONS: VIOLA, KS. - 3 WEST ON 111 ST. - 1 NORTH WEST INTO

0	Gamma Ray (GAPI)	150	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	





500

550

600

650

700

750

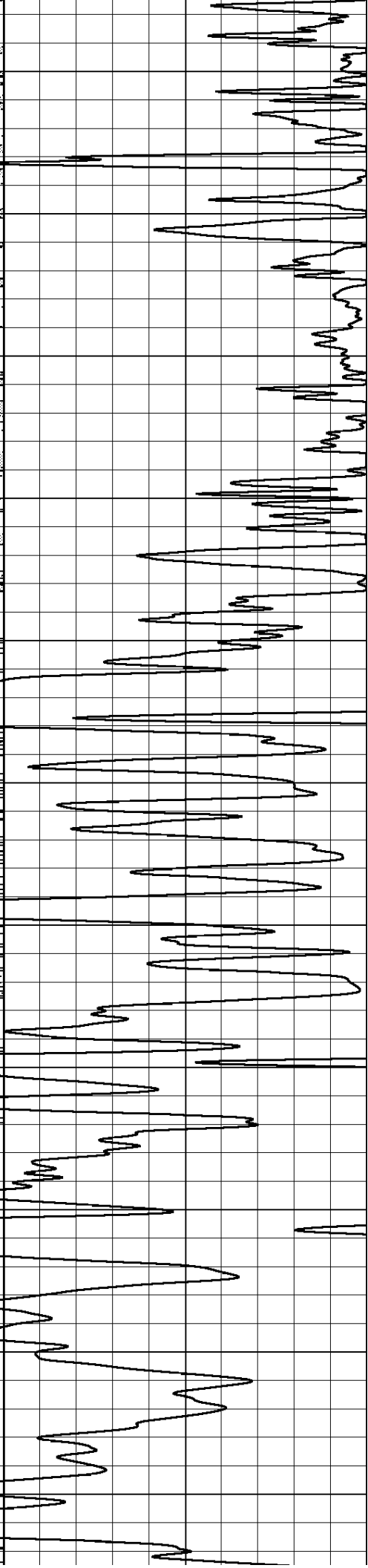
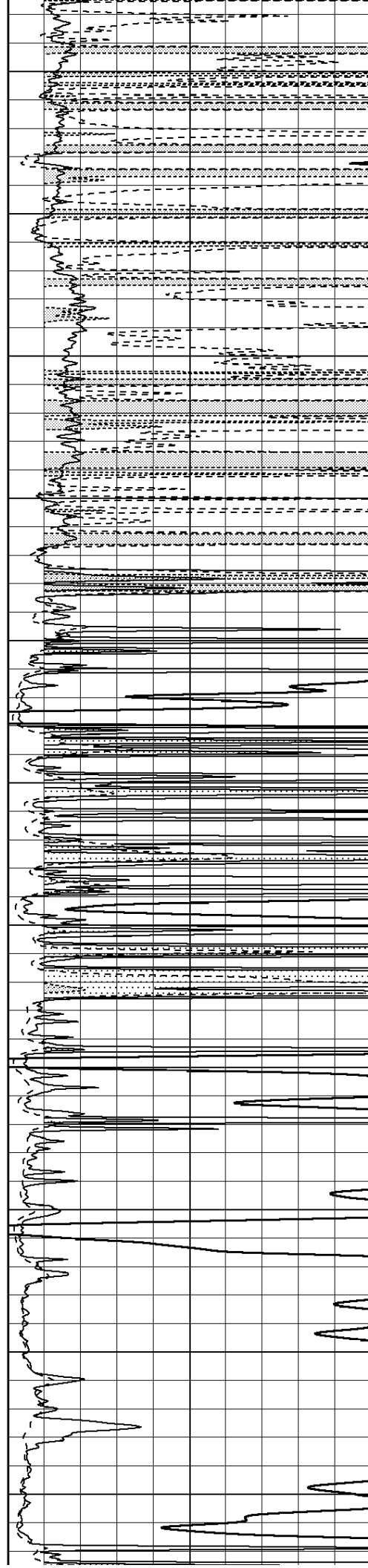
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850

900

950

1000



1050

1100

1150

1200

1250

1300

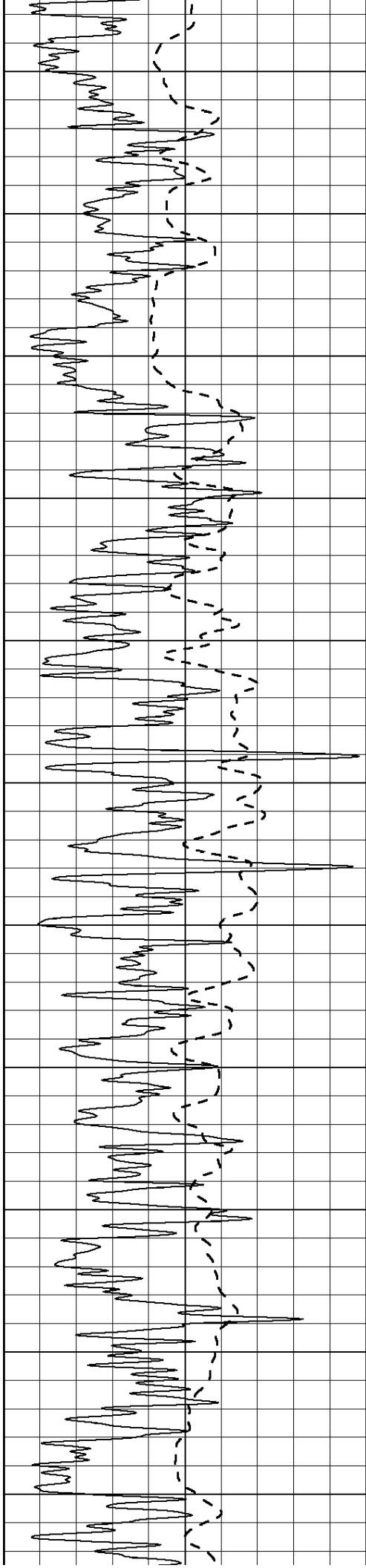
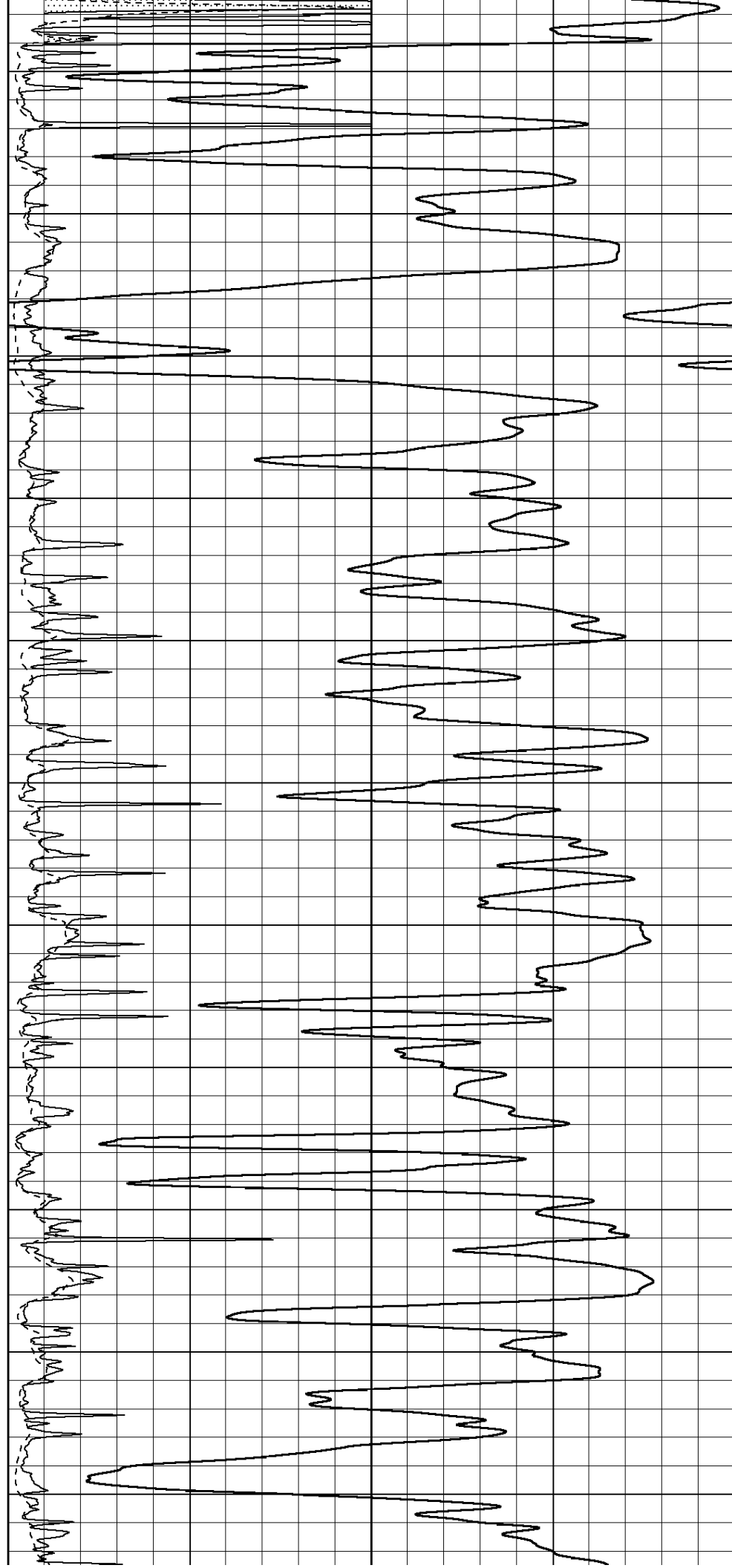
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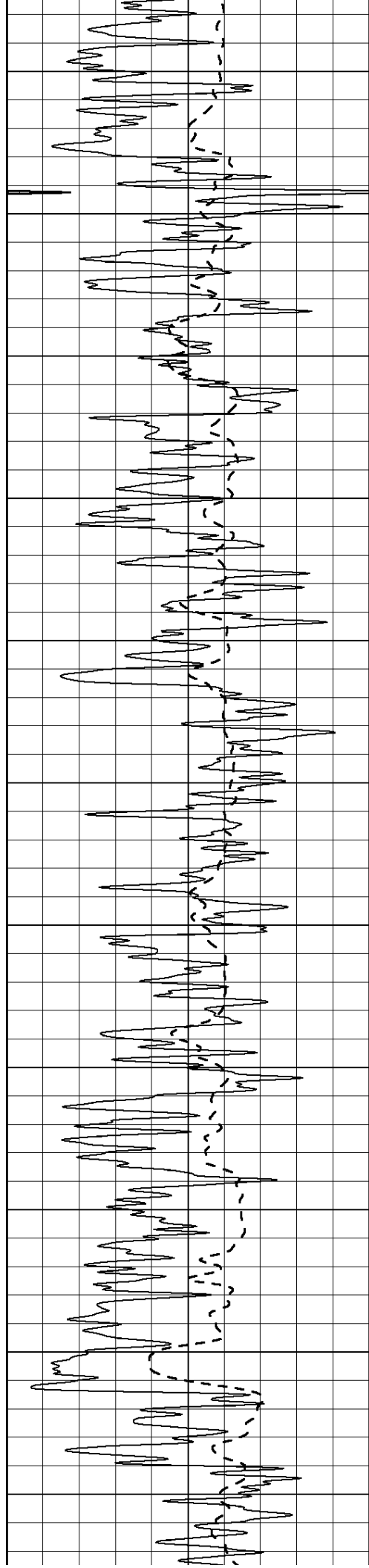
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1500

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1600

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1700

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1800

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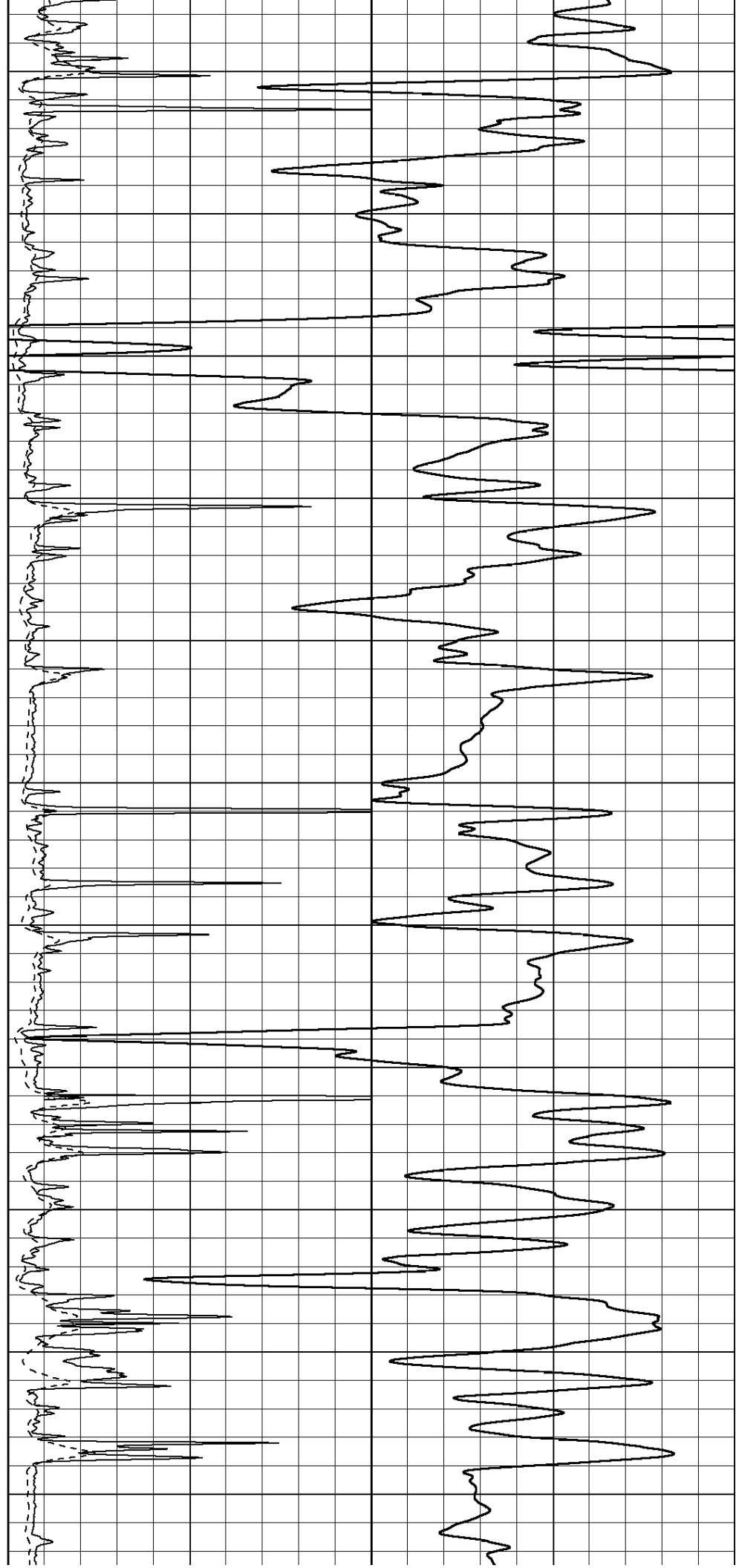
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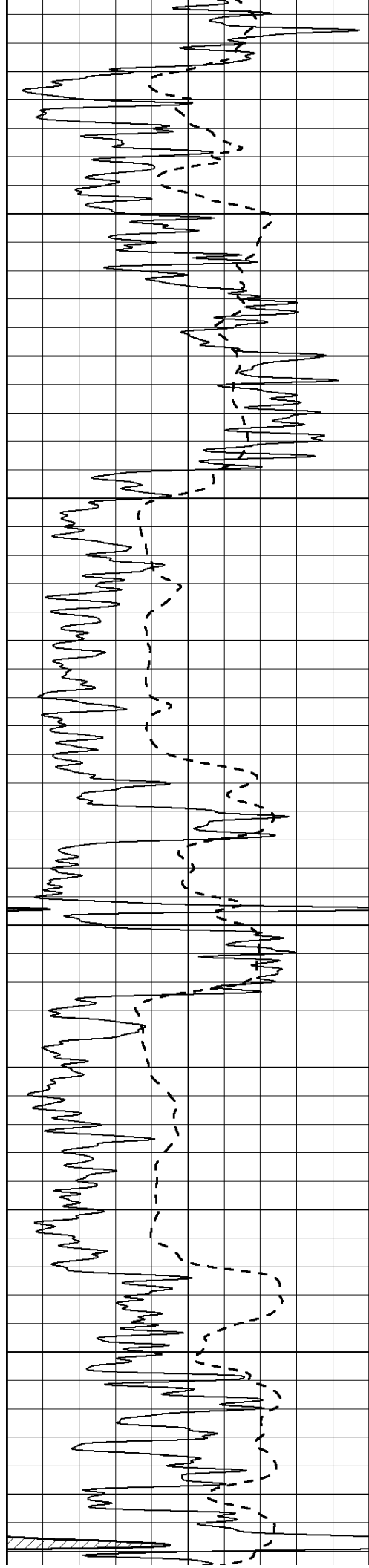
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2000

2050

2100





2150

2200

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2400

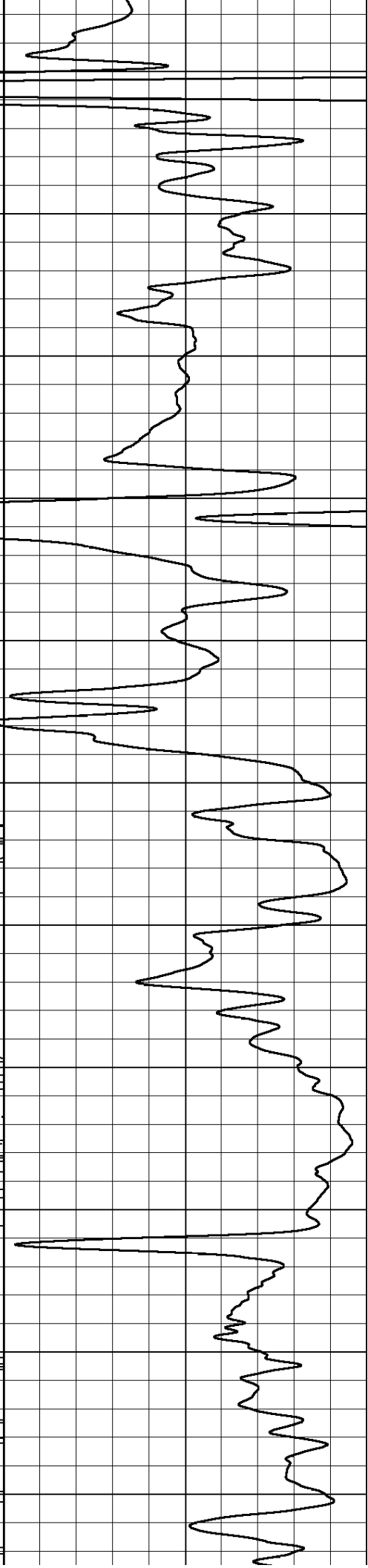
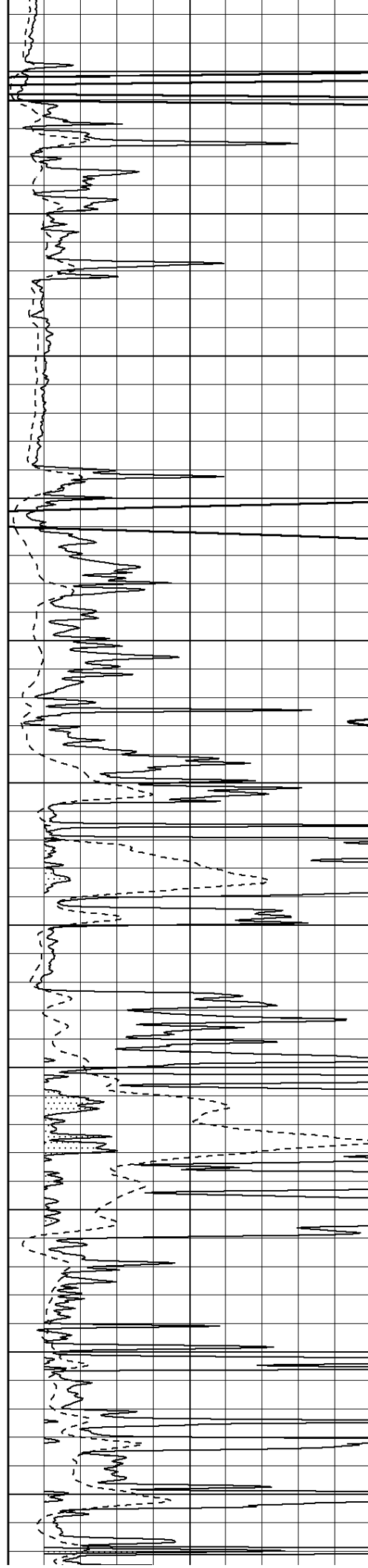
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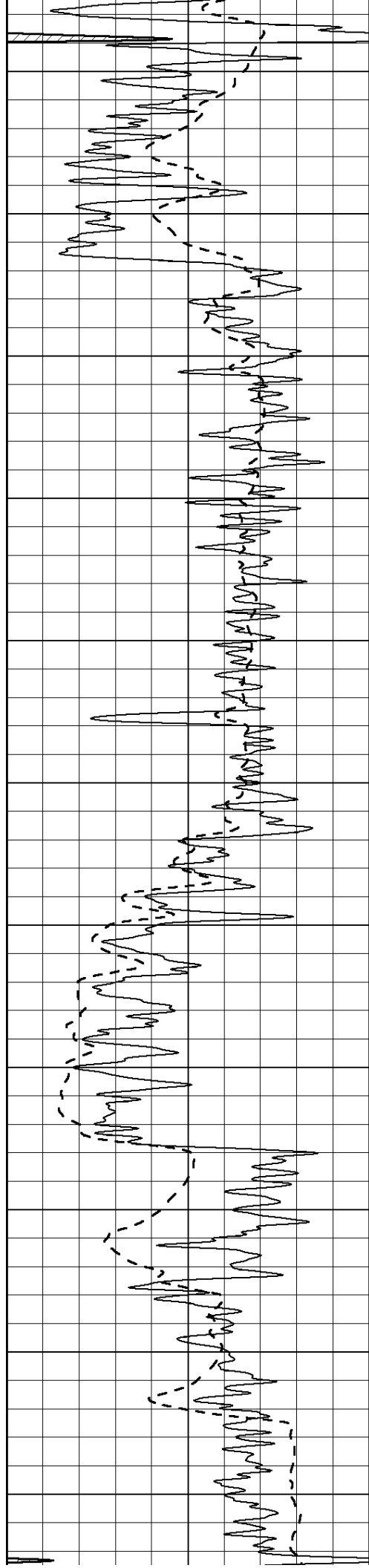
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2550

2600

2650





2700

2750

2800

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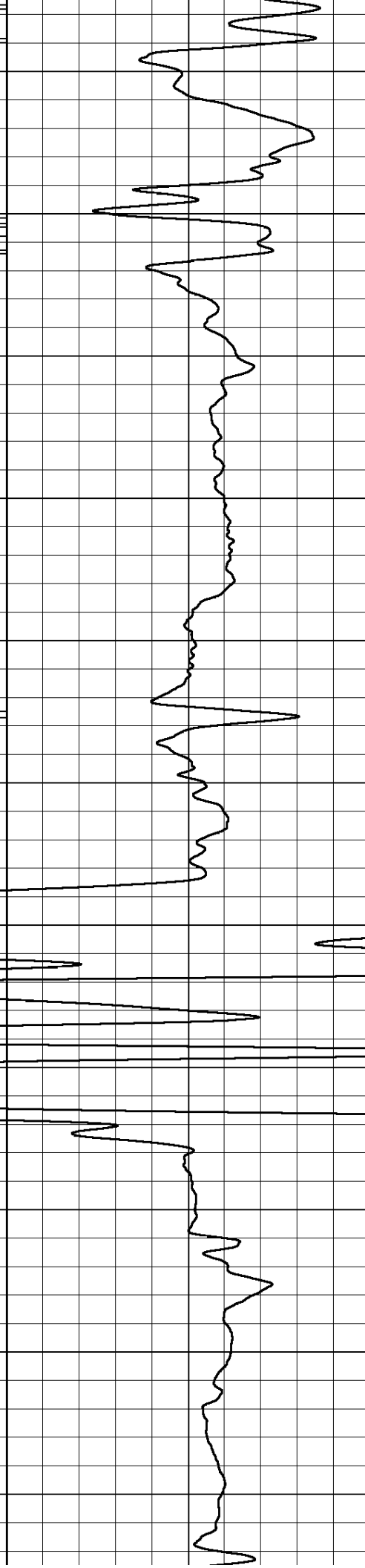
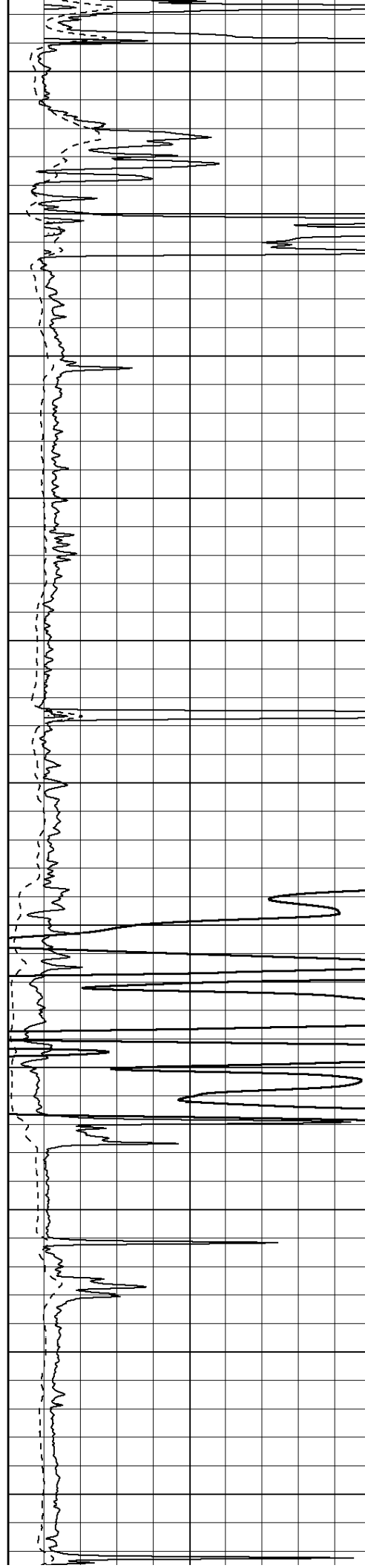
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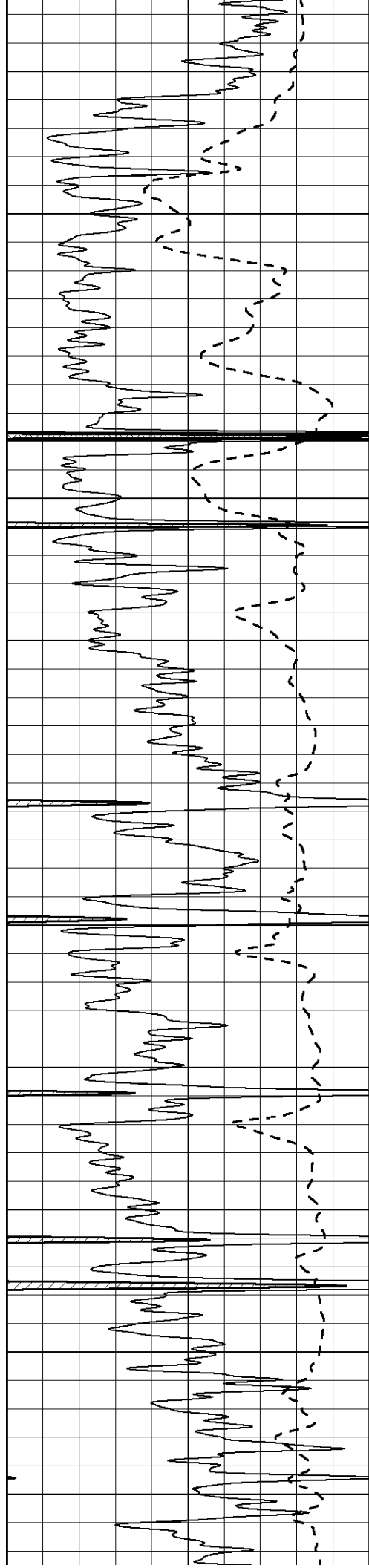
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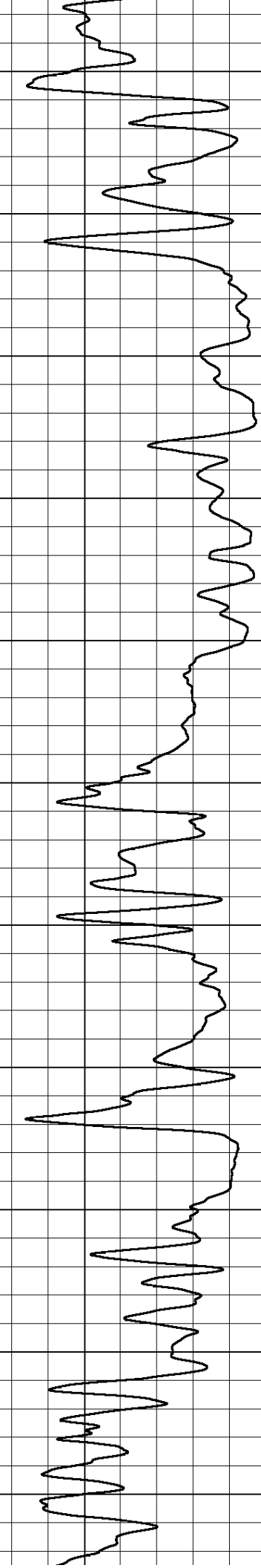
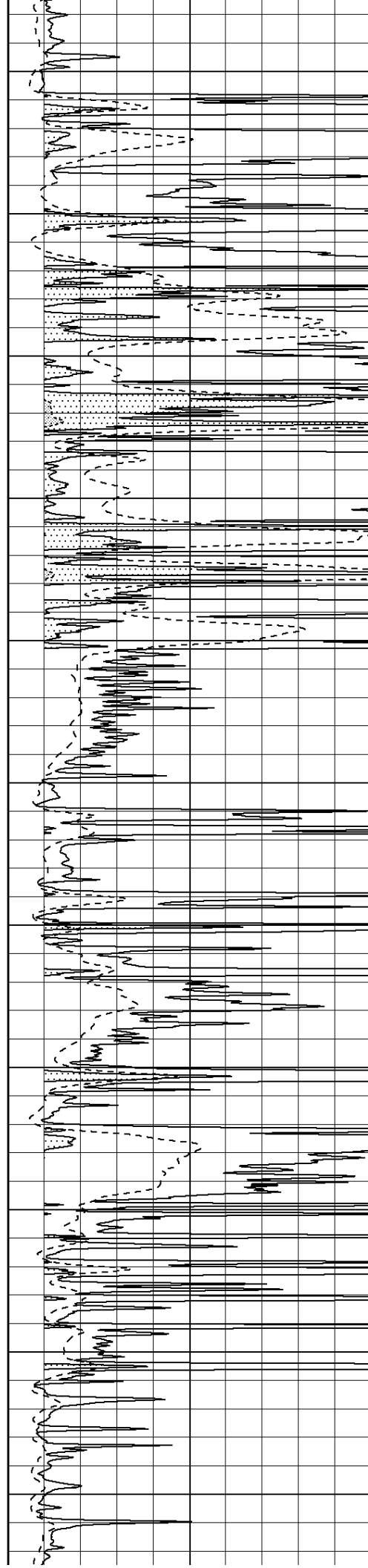
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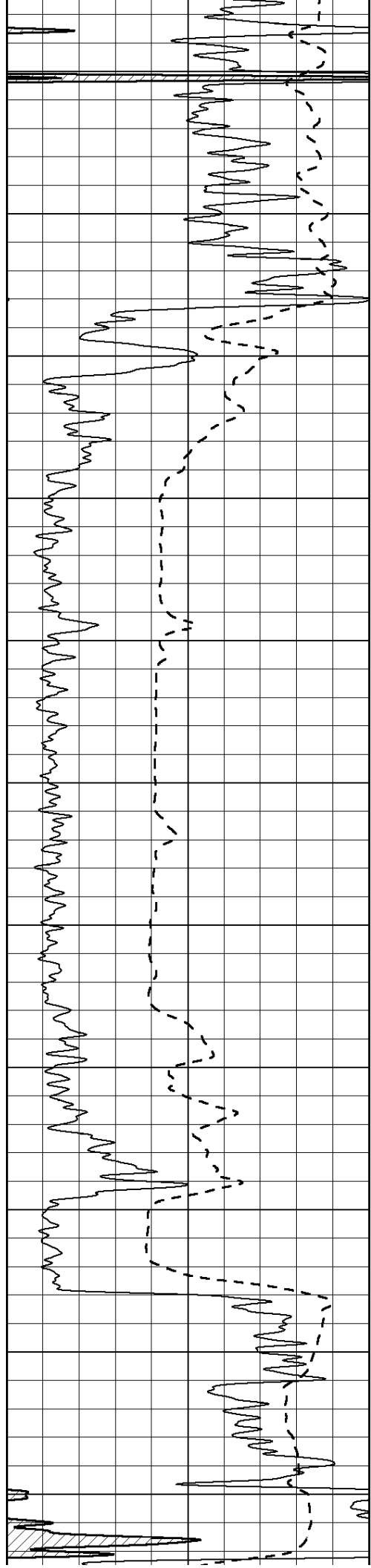
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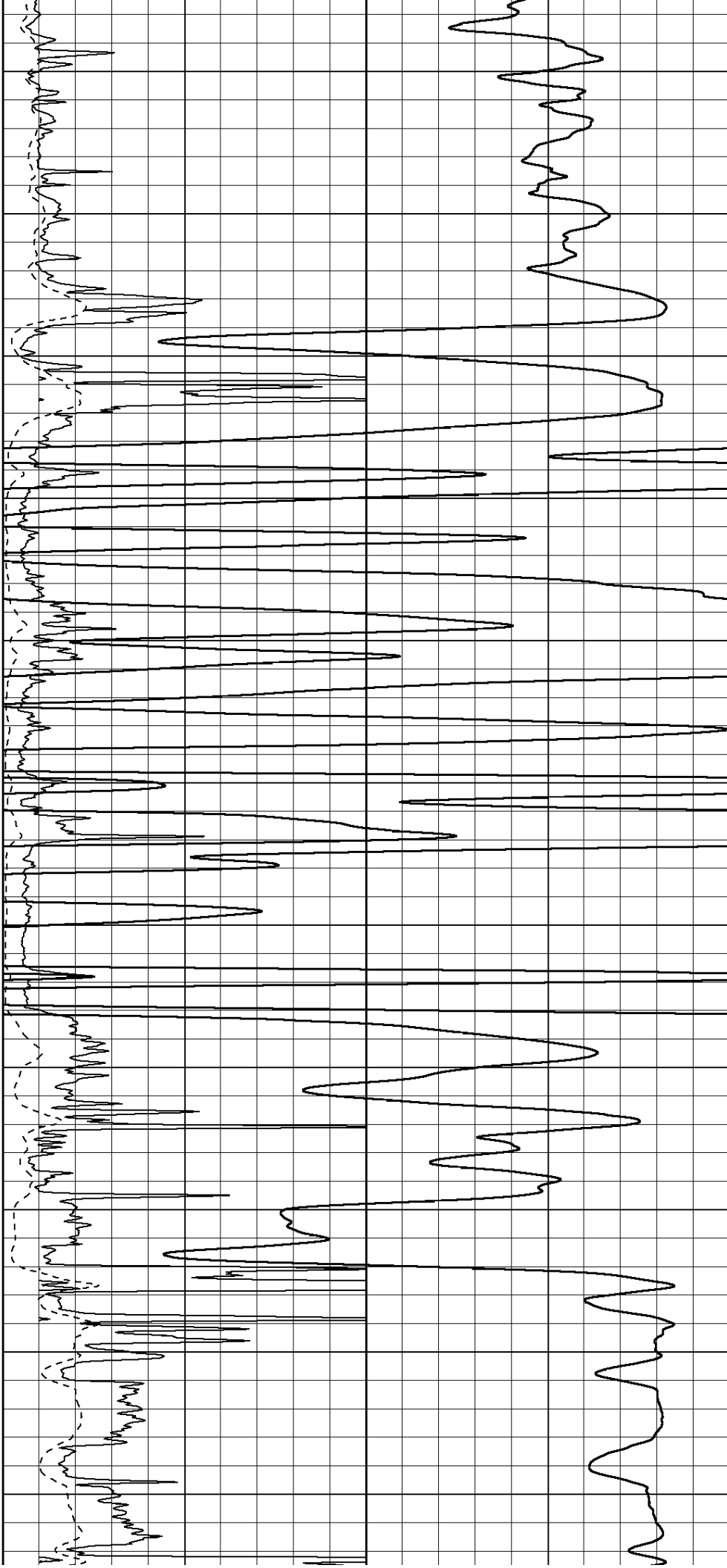
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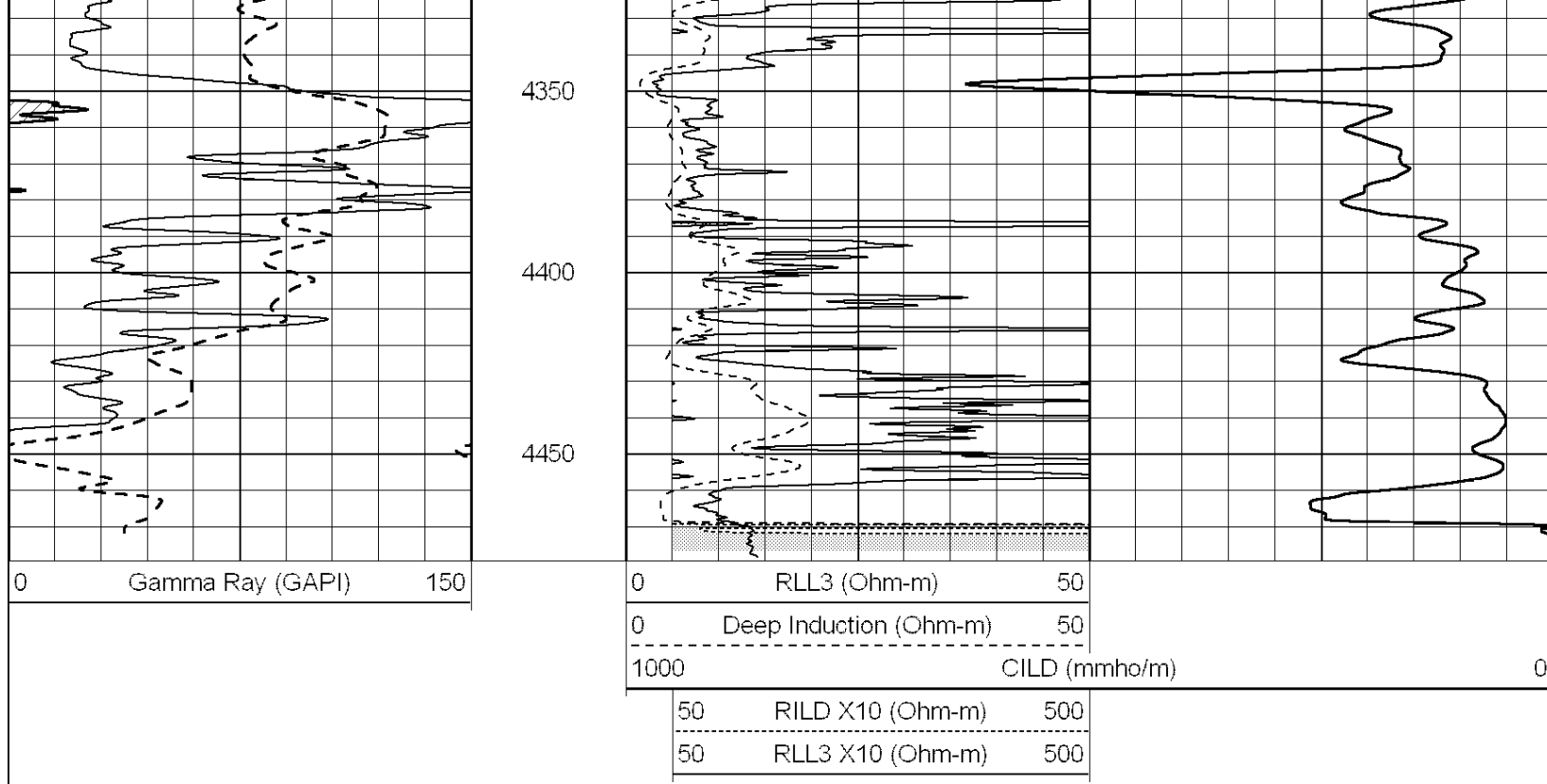
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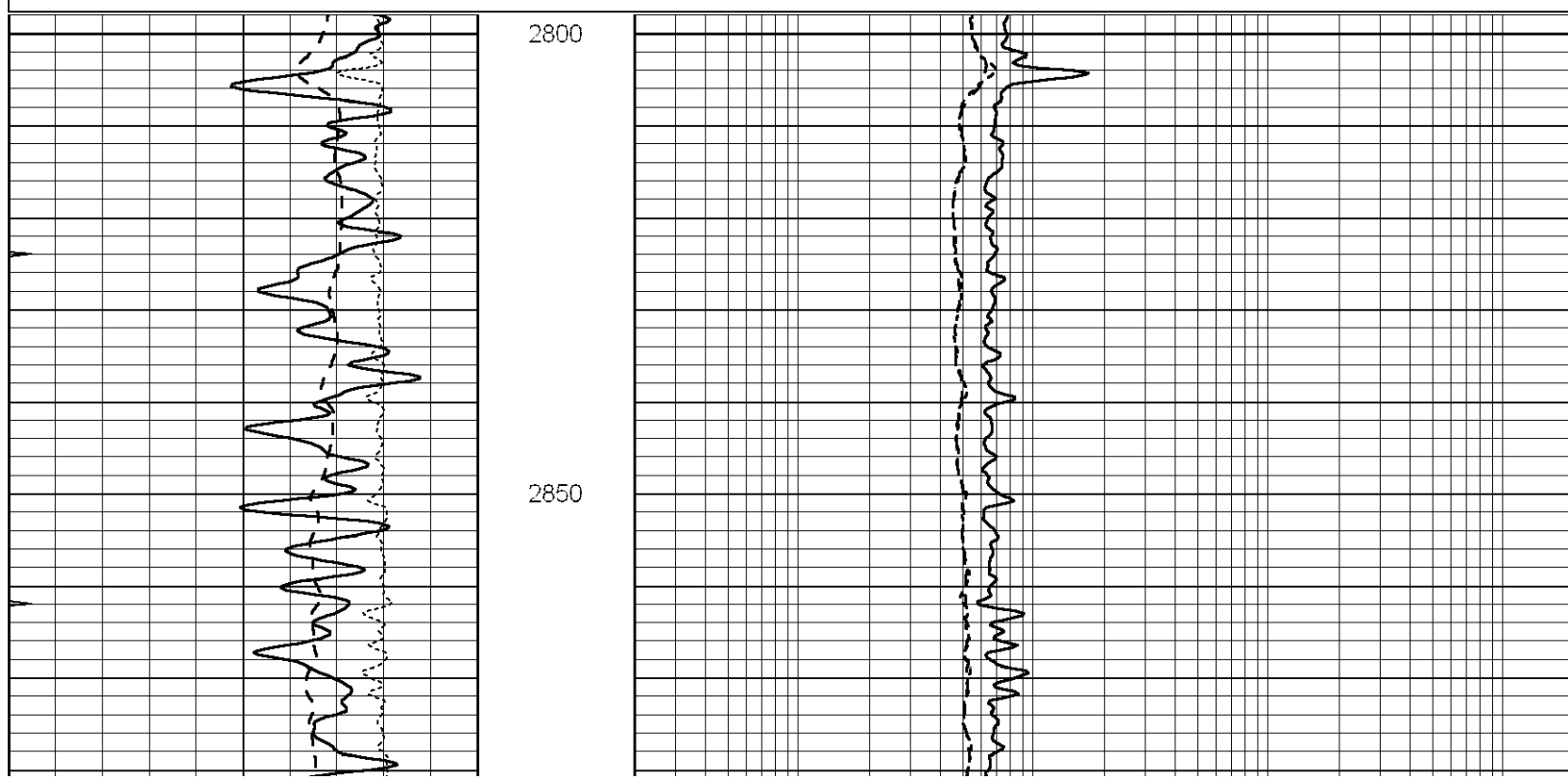
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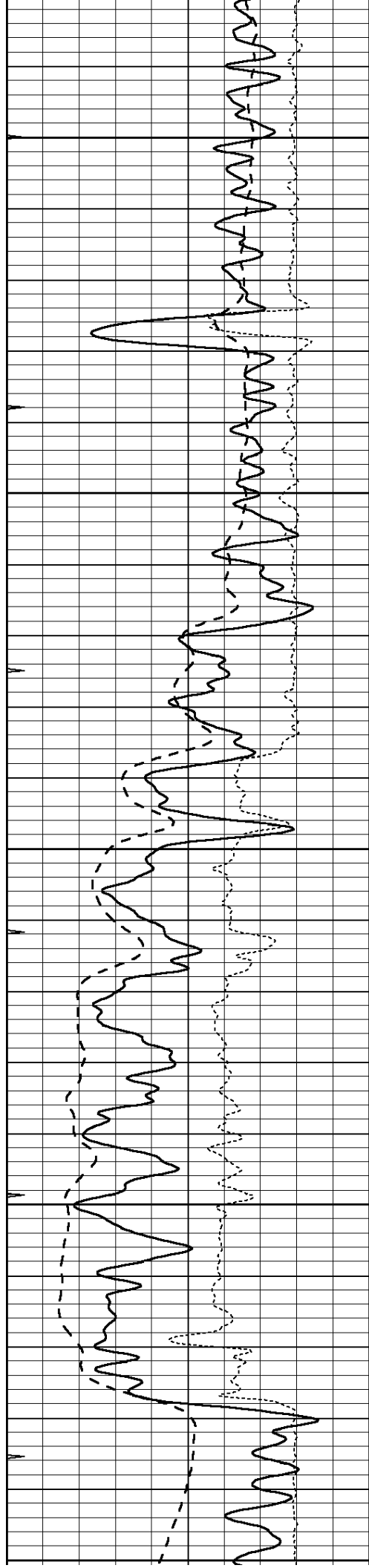




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 Charted by: Depth in Feet scaled 1:240

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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			





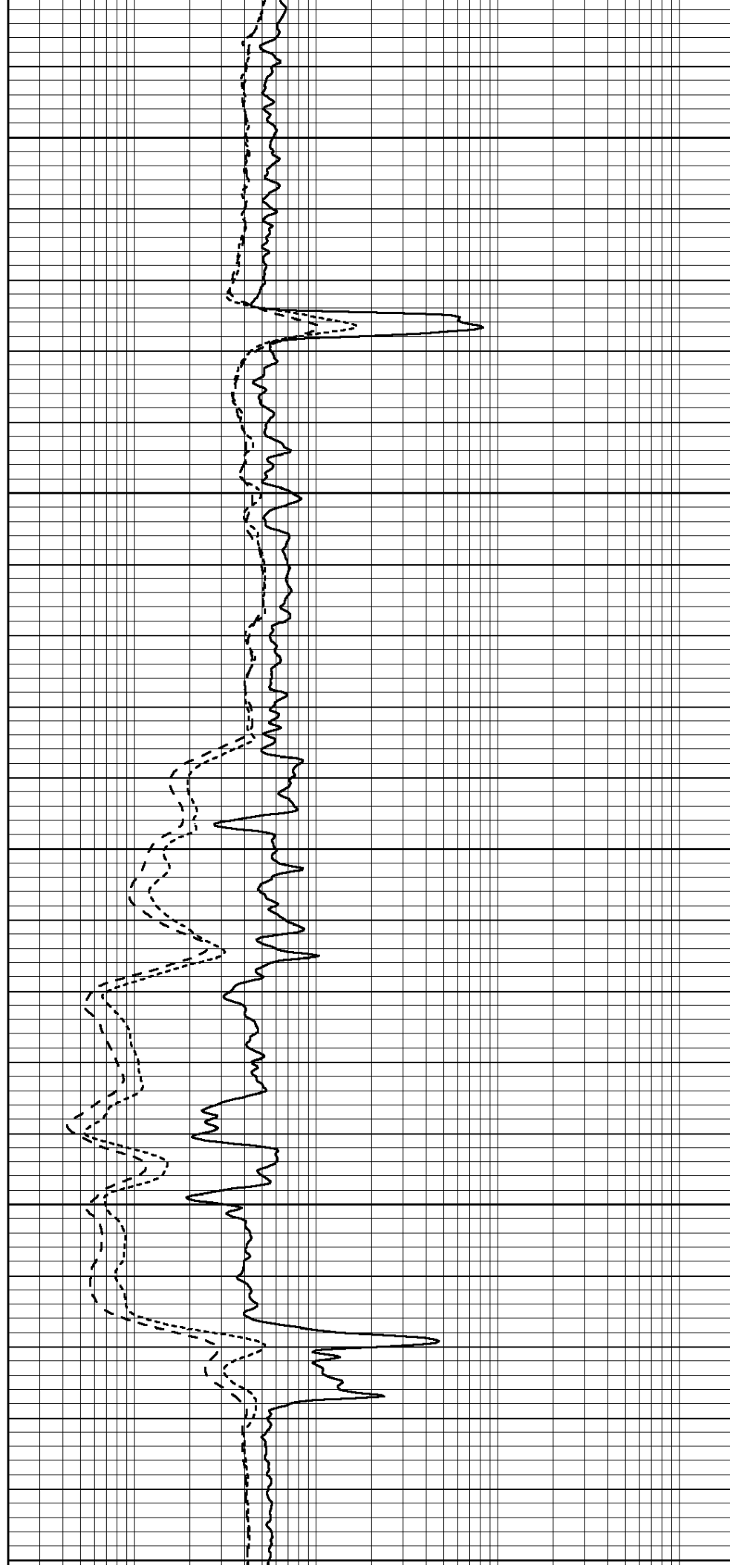
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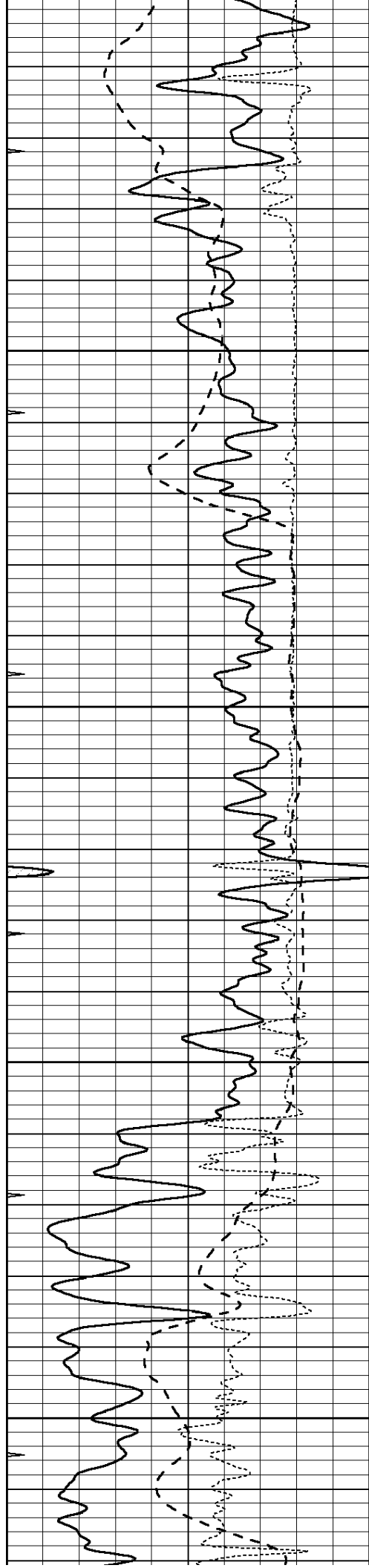
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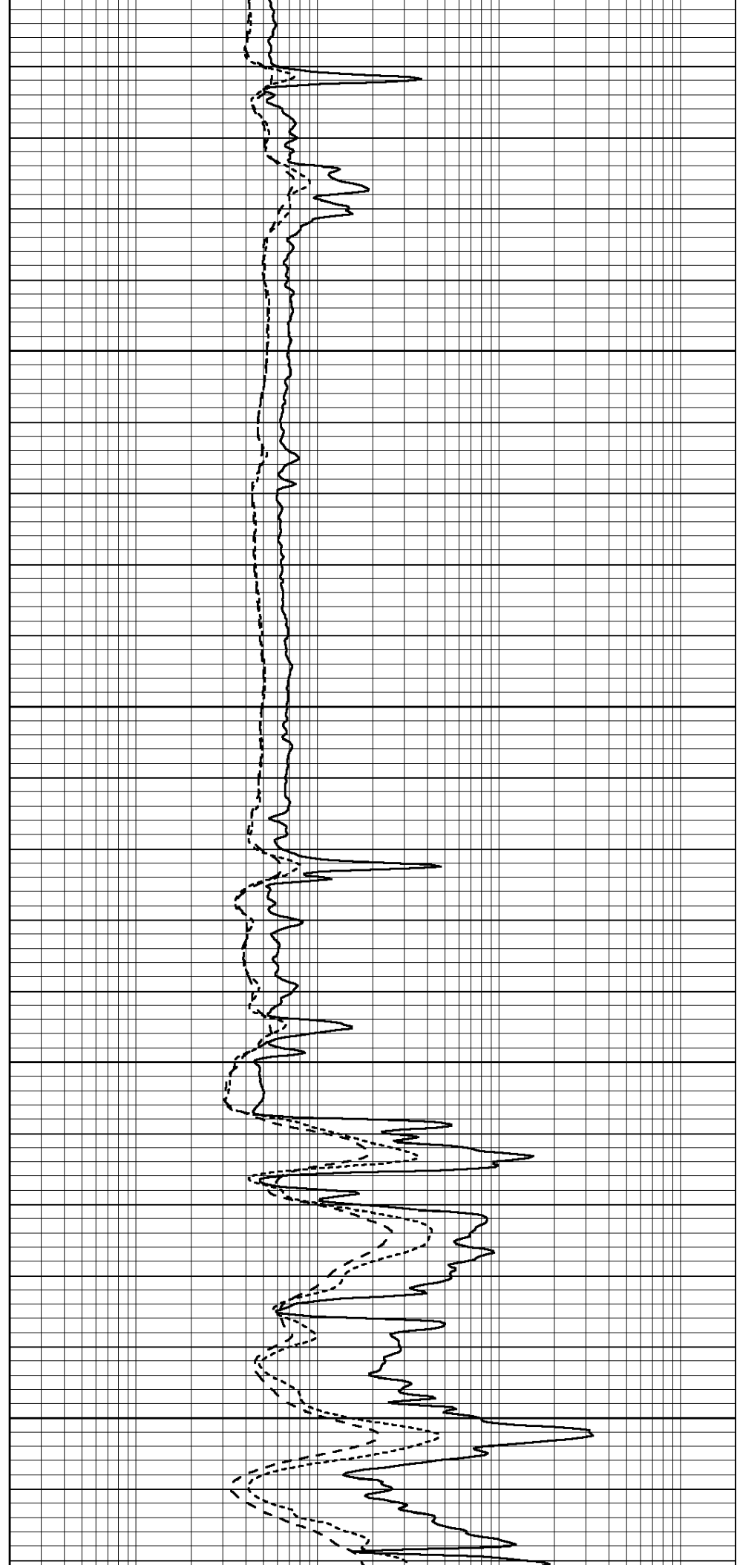
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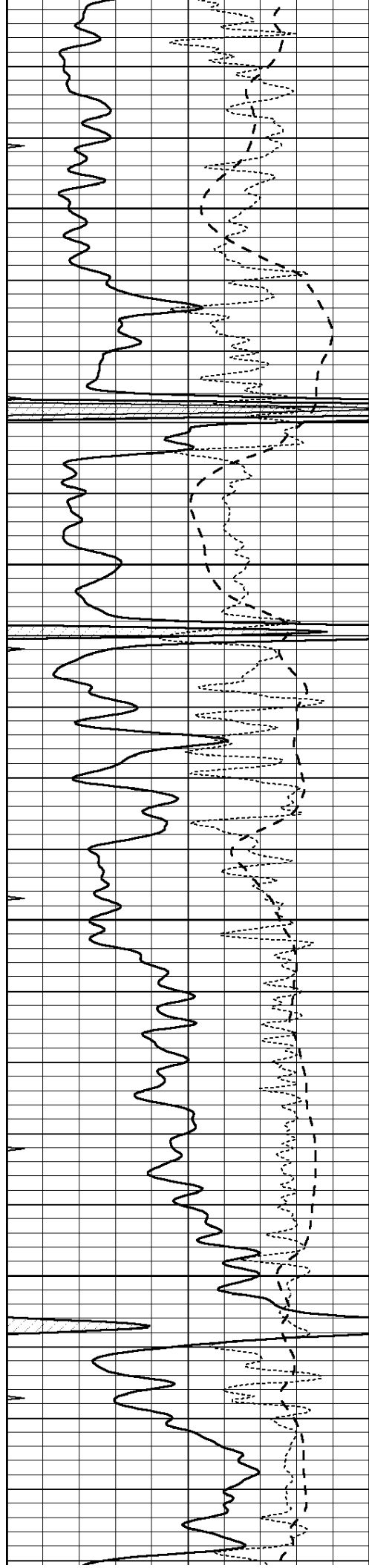
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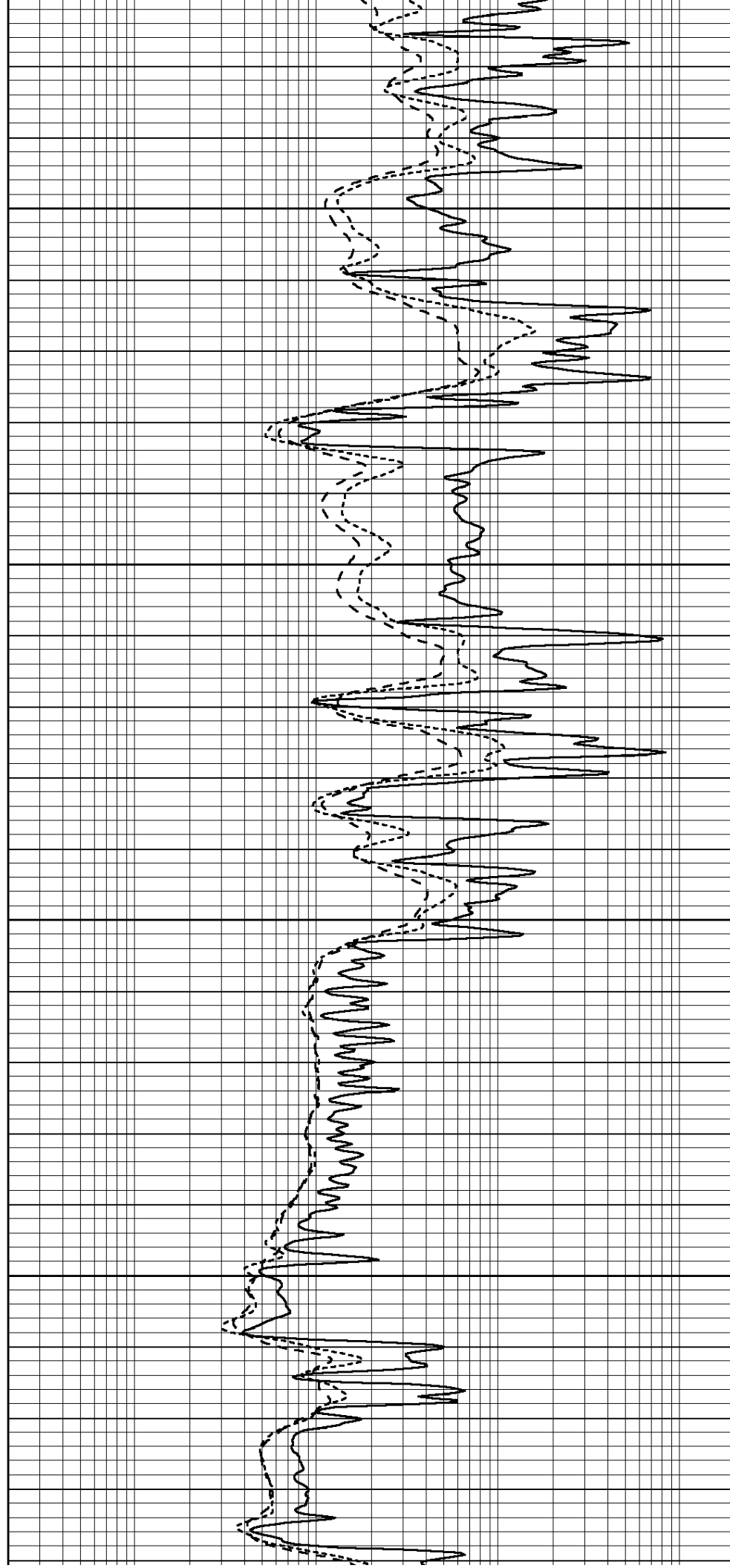


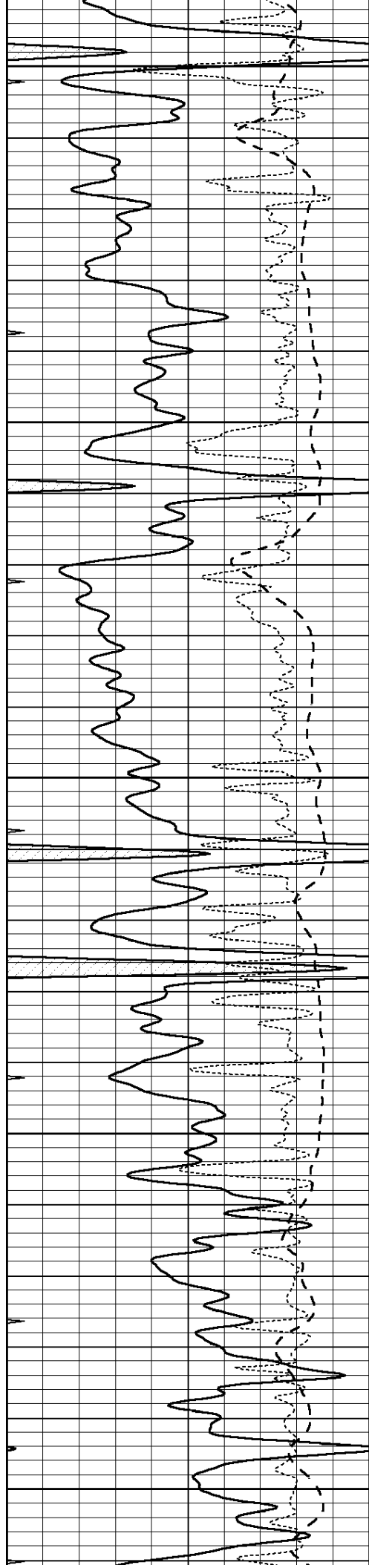
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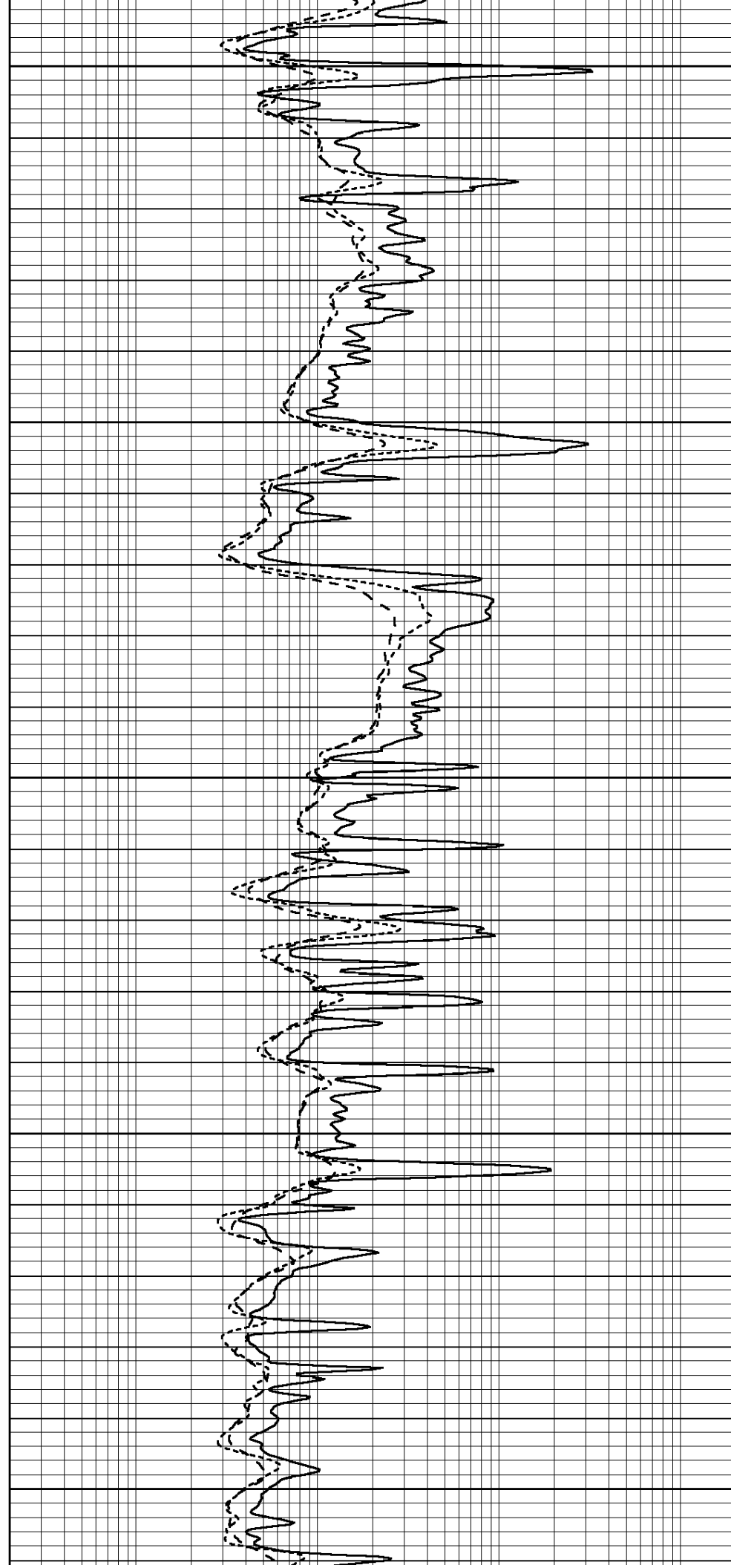
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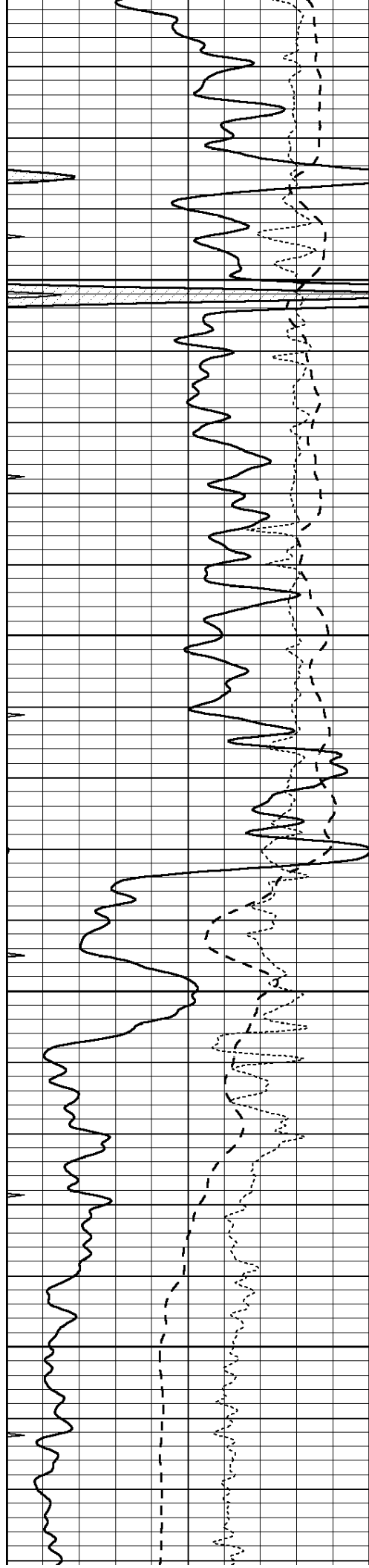
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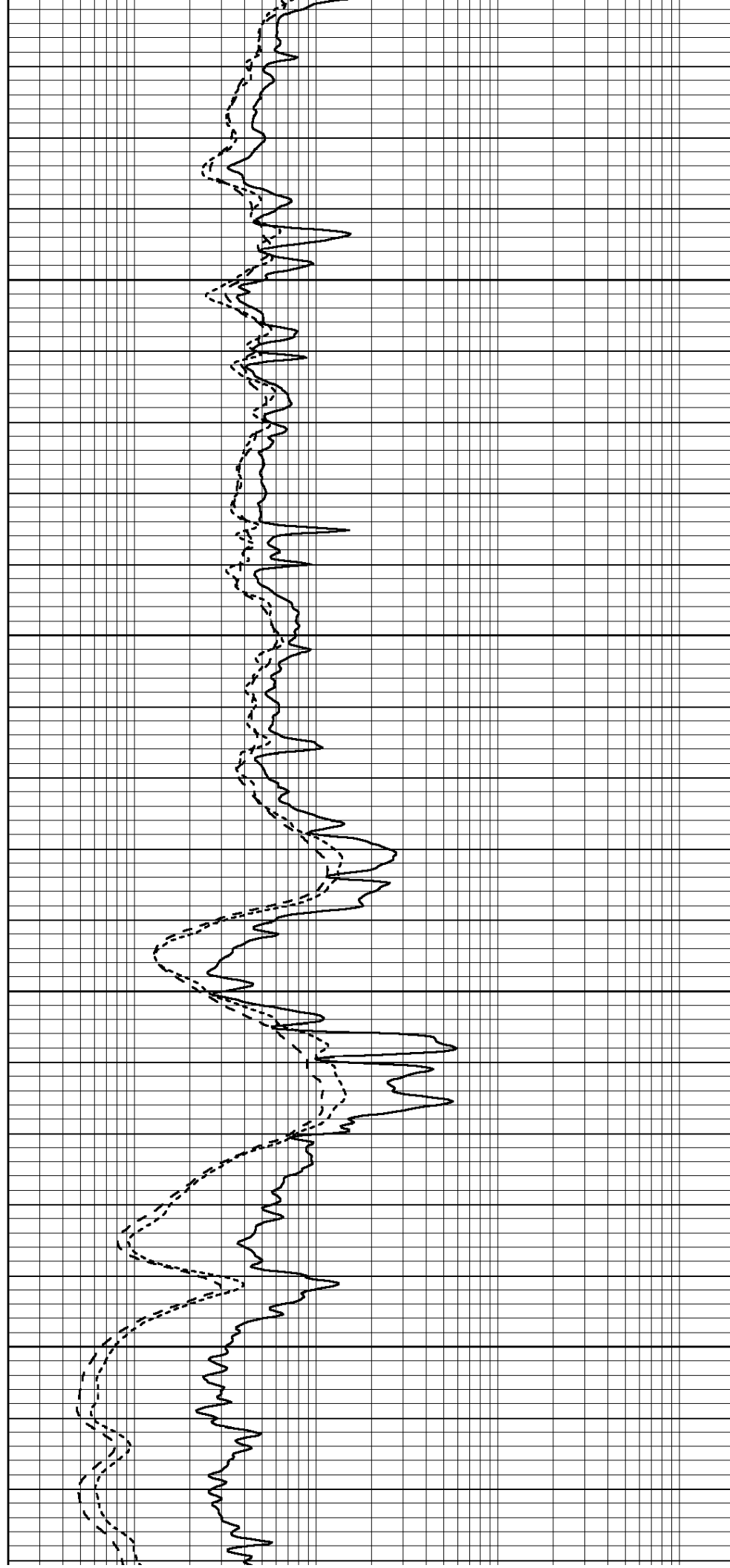


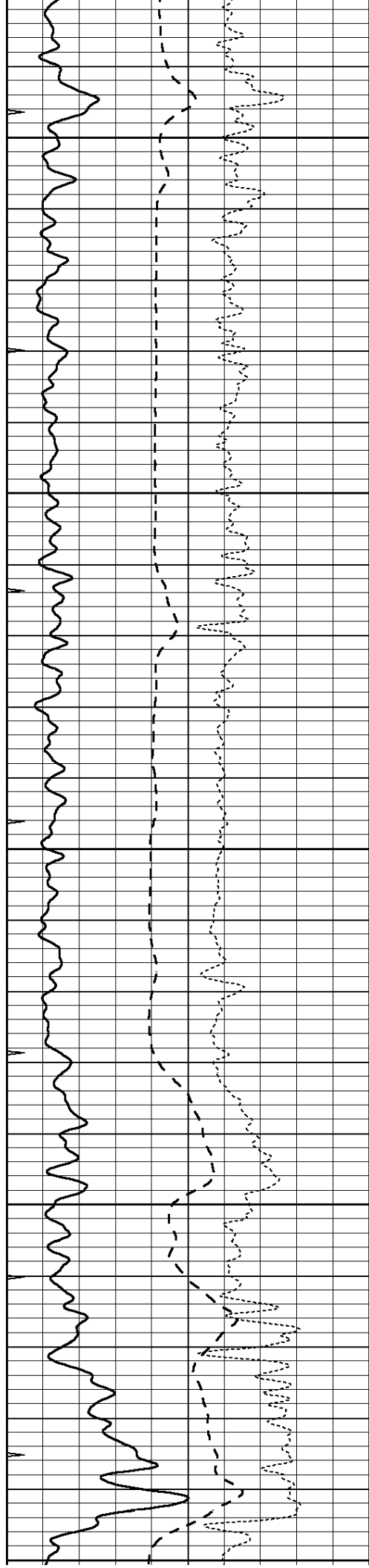
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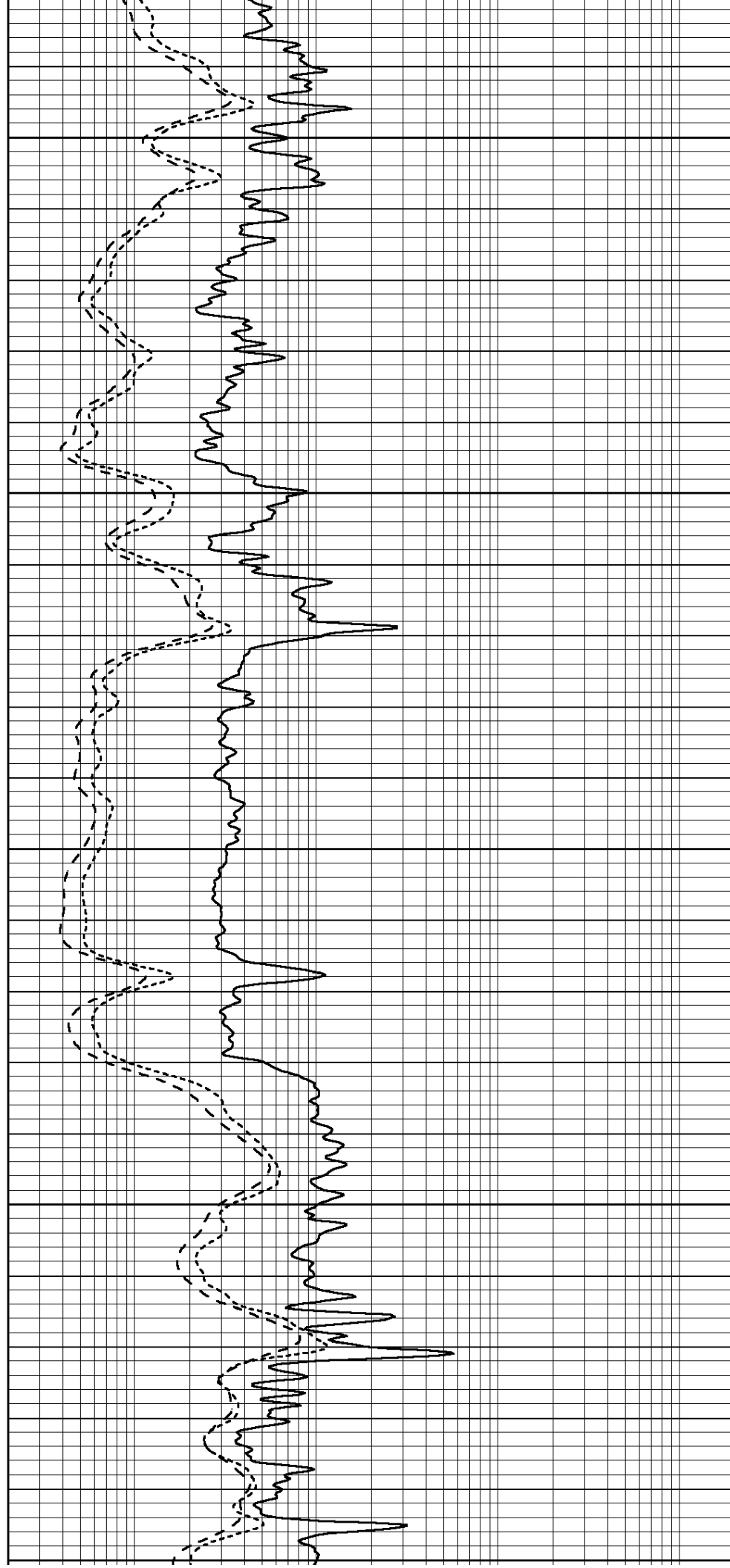
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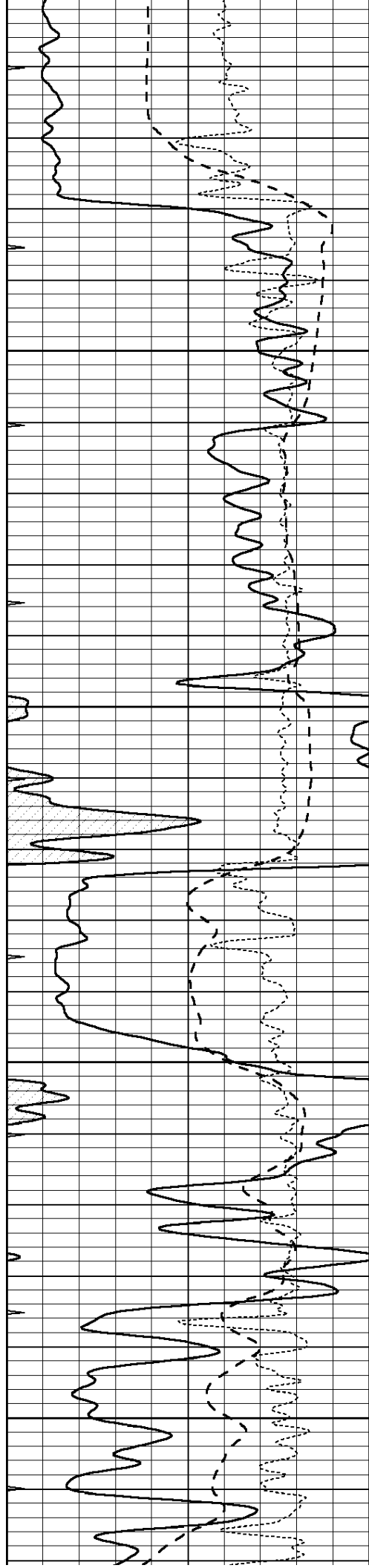
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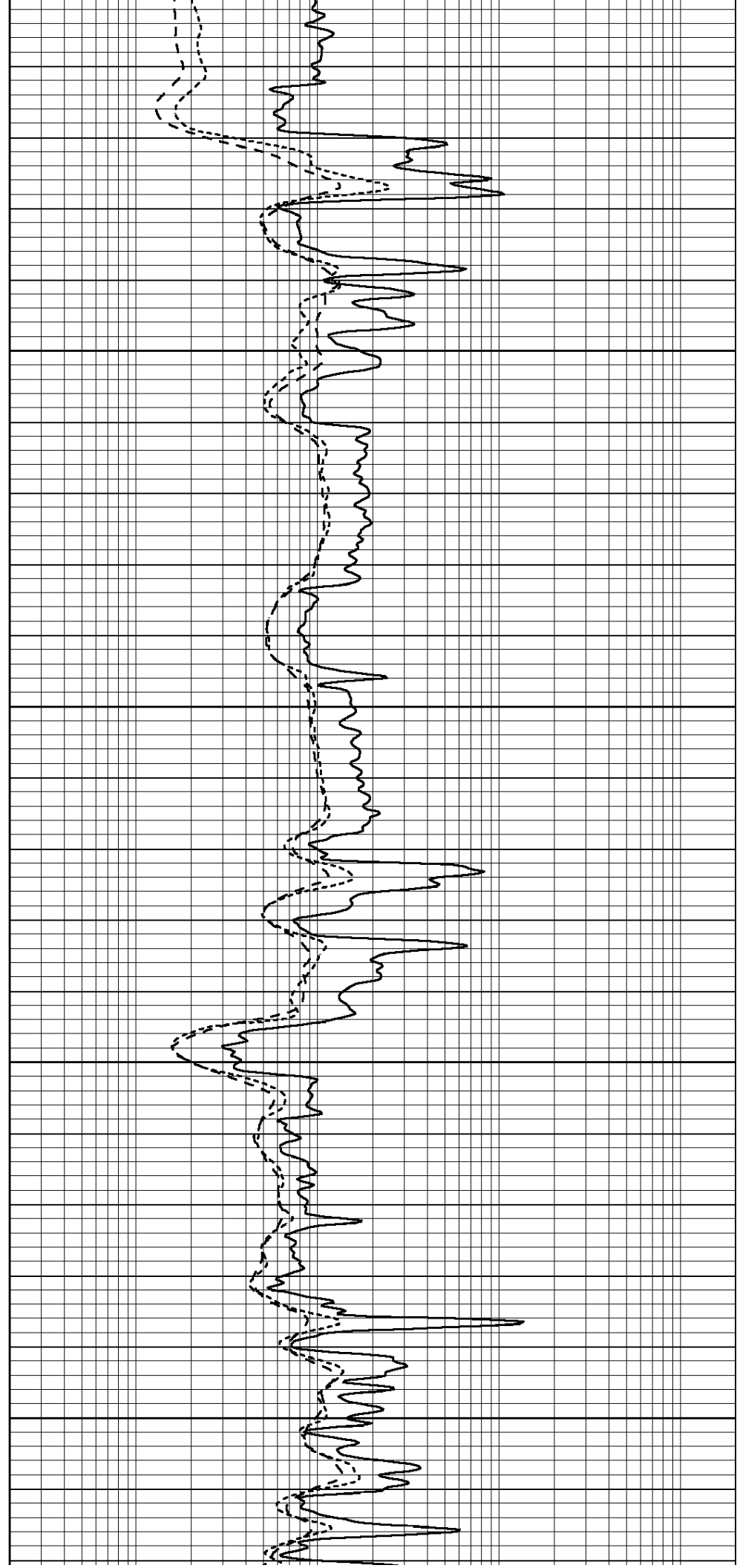


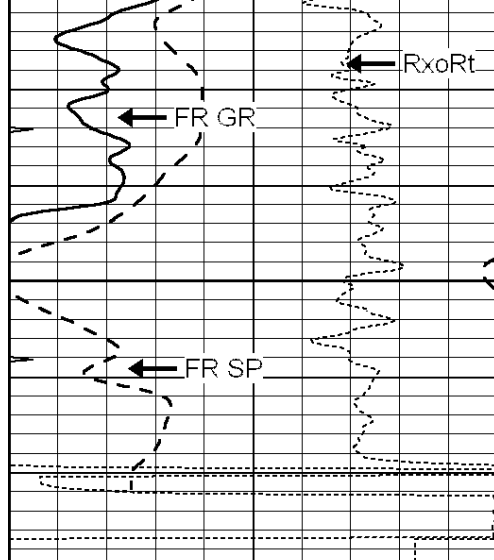
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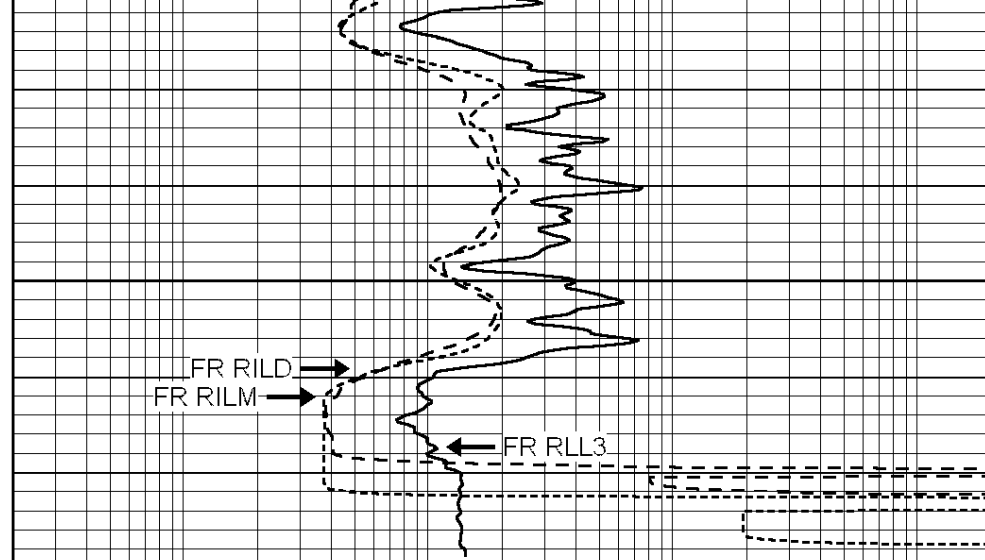
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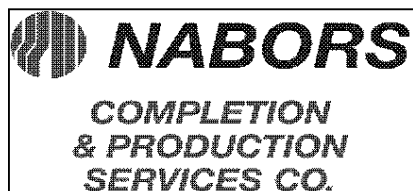


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

4450
LTD 4469



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

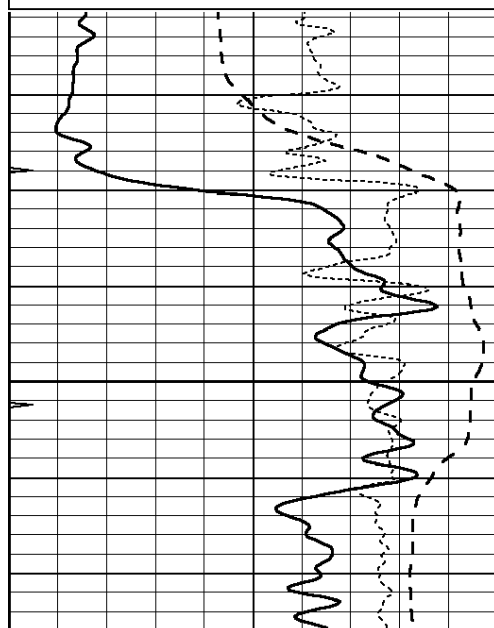


REPEAT SECTION

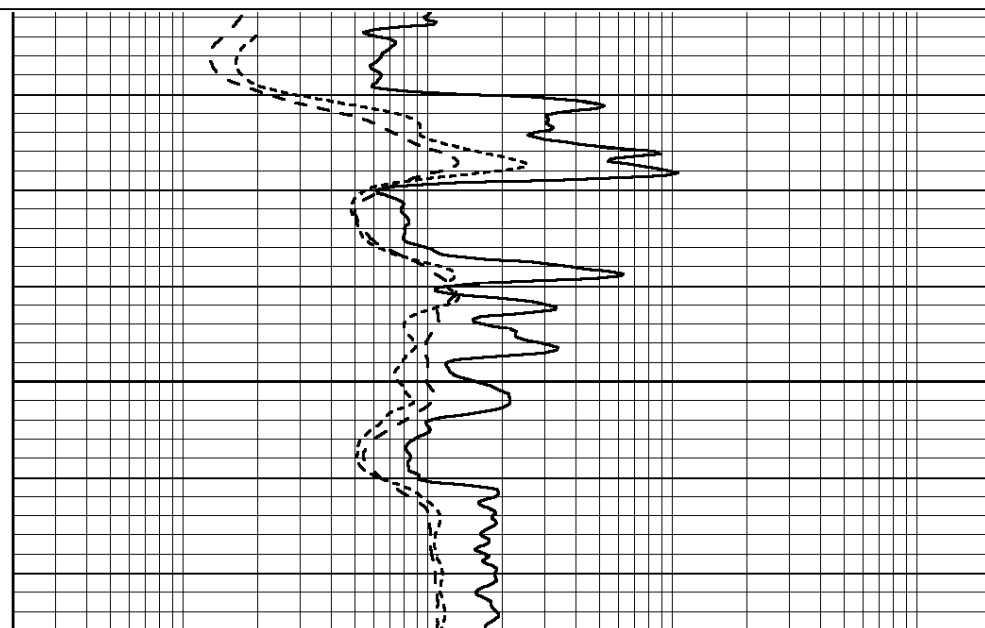
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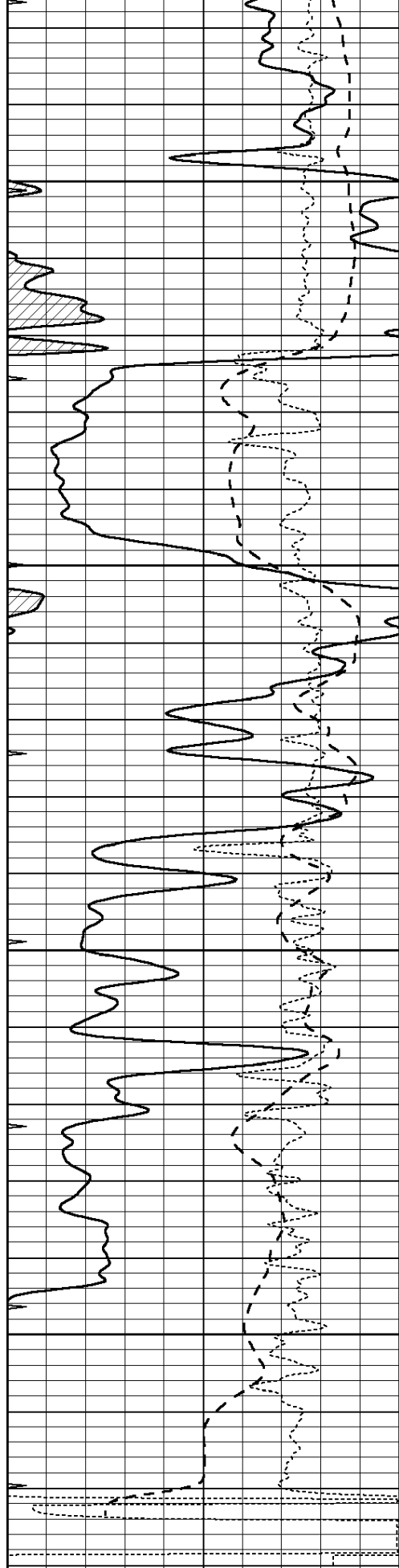
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	RxoRt	50
0	MINMK	20

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



4250





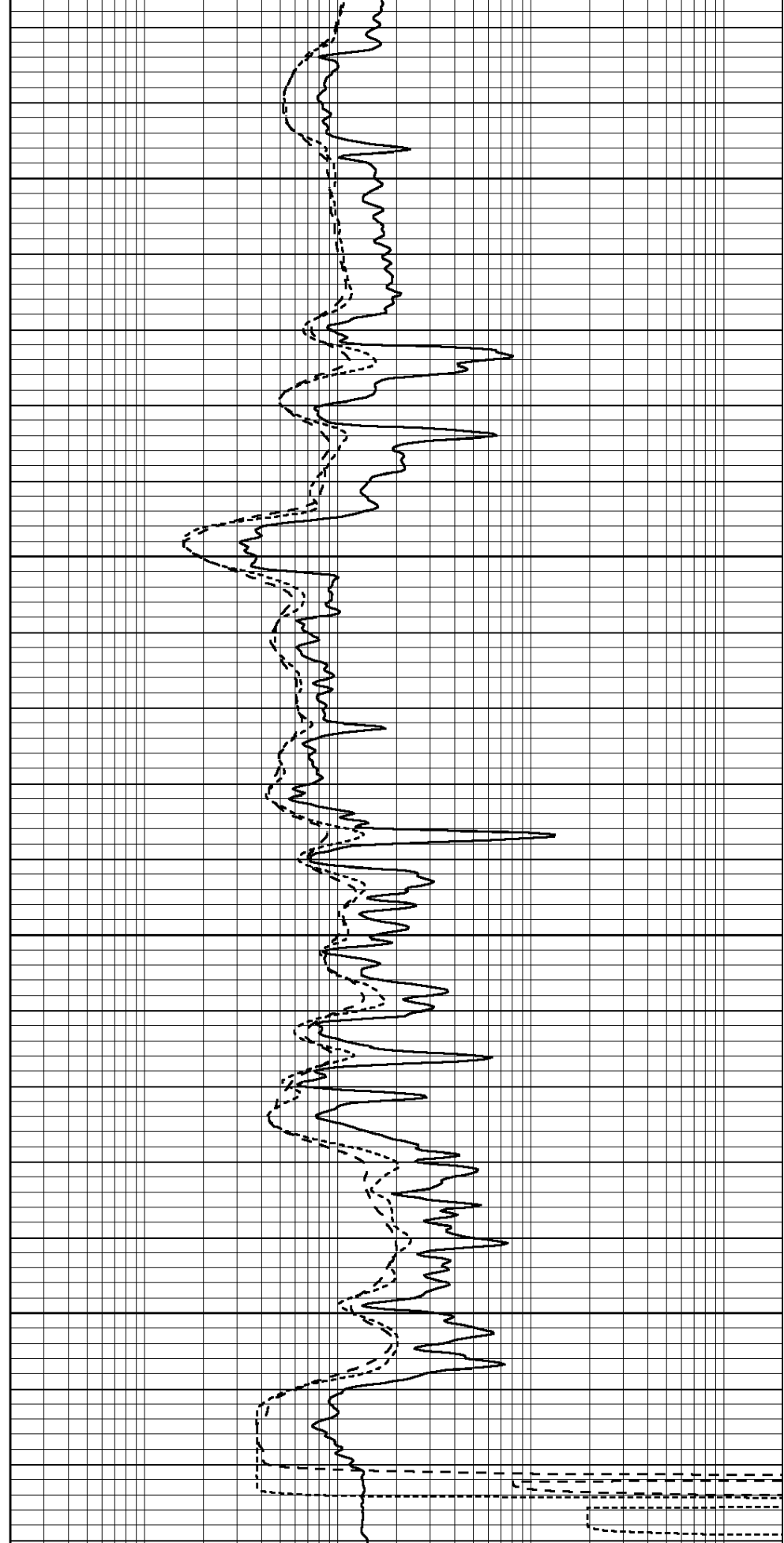
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4400

4450

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



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

Calibration Report

Database File: 010668ddn.db
 Dataset Pathname: pass4.4
 Dataset Creation: Fri Feb 08 11:38:09 2013 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Sat Feb 02 01:31:14 2013
 Downhole Cal Performed: Sat Jan 19 19:51:38 2013
 After Survey Verification Performed: Sat Jan 19 19:51:38 2013

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	630.000	0.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	700.000	-49.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367

Downhole Calibration

Readings				References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	135384.000	27094.500	mmho/m	135400.000	27082.400	mmho/m	1.000	-19.259
Medium	-47330.100	-9381.740	mmho/m	-47327.100	-9389.280	mmho/m	1.000	-10.154
LL3		7.322	V		1400.000	Ohm-m		
		0.038	V		20.000	Ohm-m		
		-7.273	V		4000.000	mmho-m		

After Survey Verification

Readings				Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	135384.000	27094.500	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-47330.100	-9381.740	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1400.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		4000.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: GEAR1-GEARHART
 Source / Verifier: 147 / 147
 Master Calibration Performed: Fri Feb 01 23:17:10 2013

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	1205.77	610.74	cps
Aluminum	2.590	g/cc	271.21	419.72	cps

Spine Angle = 75.89

Density/Spine Ratio = 0.572

Size

Reading

Small Ring	6.90	in	4.69	V	
Large Ring	14.00	in	6.52	V	
Compensated Neutron Calibration Report					
Serial Number:		NEU_4I			
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			
Tool Model:		OPEN			
Performed:		Fri Feb 08 10:03:25 2013			
Calibrator Value:		1.0	GAPI		
Background Reading:		0.0	cps		
Calibrator Reading:		1.0	cps		
Sensitivity:		1.9000	GAPI/cps		