



**COMPLETION  
& PRODUCTION  
SERVICES CO.**

**DUAL  
INDUCTION  
LOG**

Company SOURCE ENERGY MIDCON, LLC.  
Well MILLER #5-11-24  
Field WILDCAT  
County SUMNER  
State KANSAS

Company SOURCE ENERGY MIDCON, LLC.  
Well MILLER #5-11-24  
Field WILDCAT  
County SUMNER State KANSAS

Location: API # : 15-191-22769-0000  
958' FNL & 419' FWL  
SEC 5 TWP 32S RGE 1E  
Permanent Datum GROUND LEVEL Elevation 1271  
Log Measured From KELLY BUSHING 10' A.G.L.  
Drilling Measured From KELLY BUSHING  
Other Services  
CDL/CNL/PE  
MEL  
Elevation  
K.B. 1281  
D.F. 1279  
G.L. 1271

Date	1/24/15		
Run Number	ONE		
Depth Driller	4037		
Depth Logger	4035		
Bottom Logged Interval	4033		
Top Log Interval	00		
Casing Driller	8 5/8" @ 305		
Casing Logger	304		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 2000 PPM	
Density / Viscosity	9.4/52		
pH / Fluid Loss	9.5/8.0		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.0 @ 55F		
Rmt @ Meas. Temp	.75 @ 55F		
Rmc @ Meas. Temp	1.20 @ 55F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.48 @ 117F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	117F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	ROGER MARTIN		

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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 NABORS, HAYS, KS. (785) 628-6395  
DIRECTIONS:  
WICHITA, KS. - SOUTH ON TOLLWAY TO WELLINGTON EXIT - 1/2 WEST TO SENECA RD.  
1.8 MILES NORTH - EAST INTO



**MAIN SECTION**

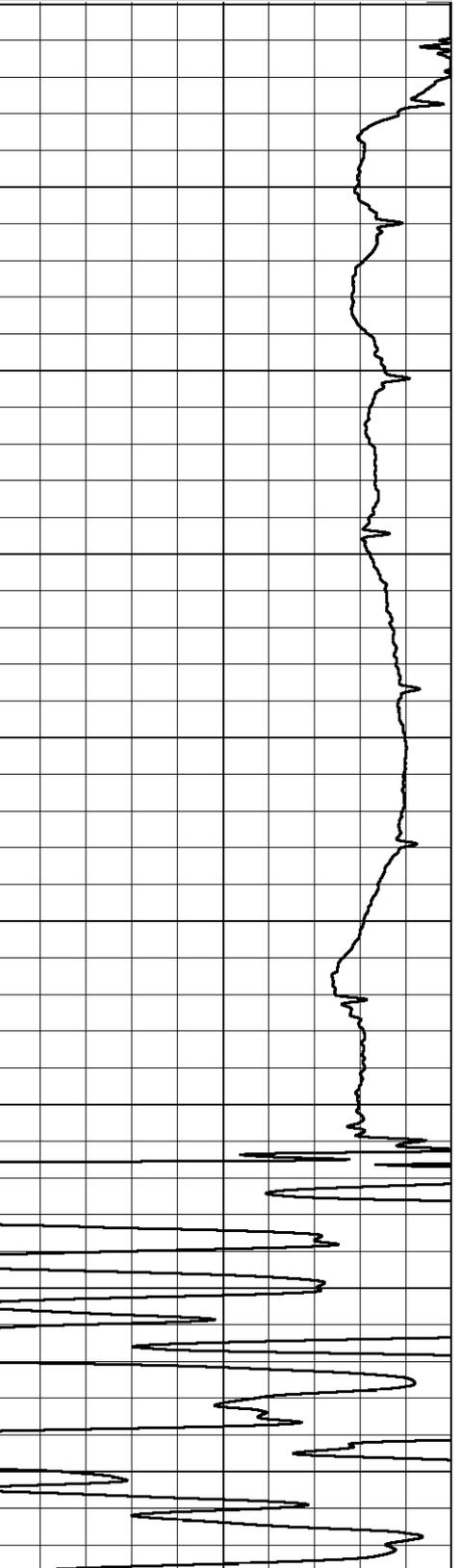
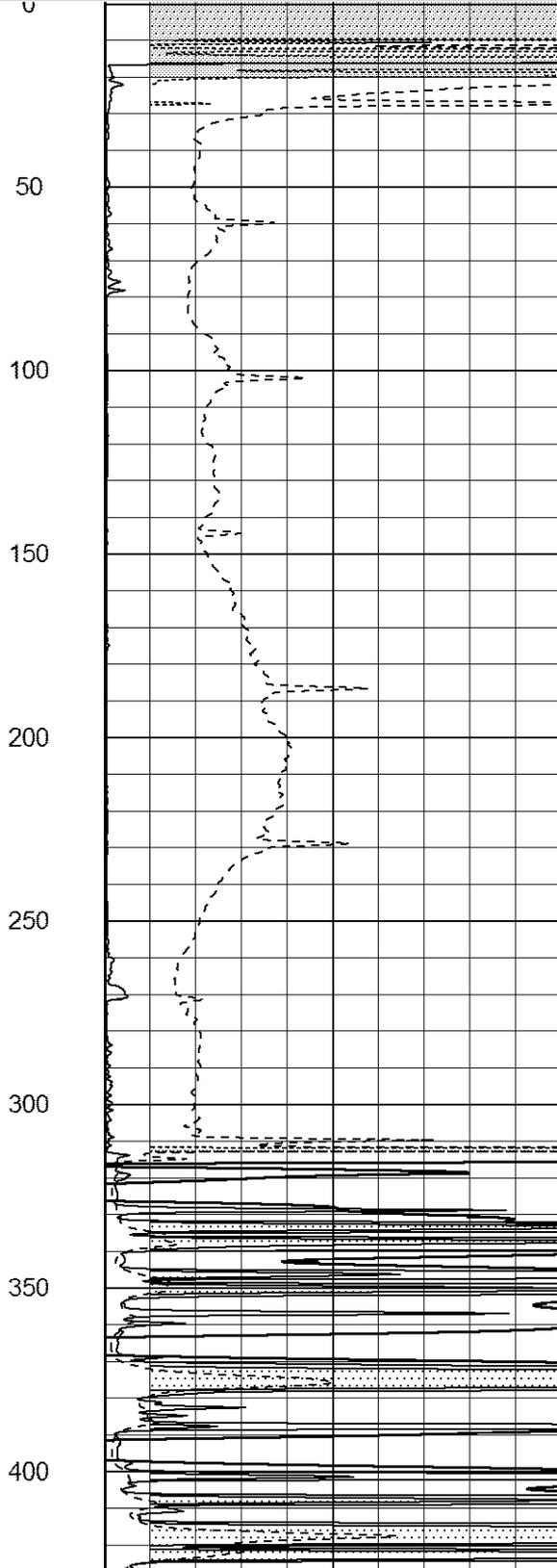
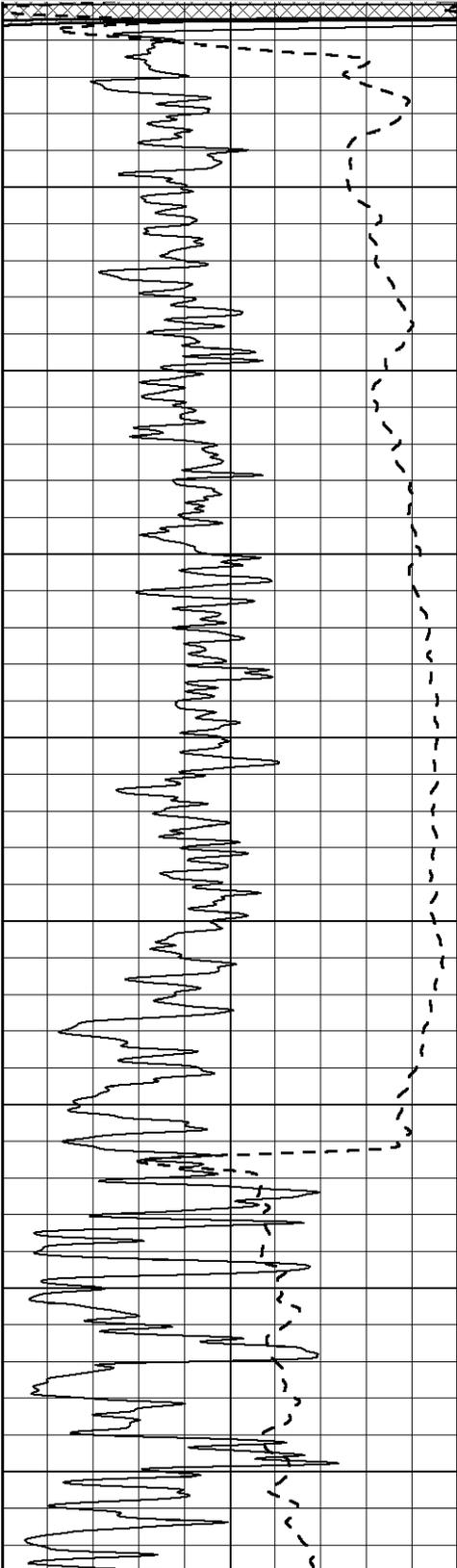
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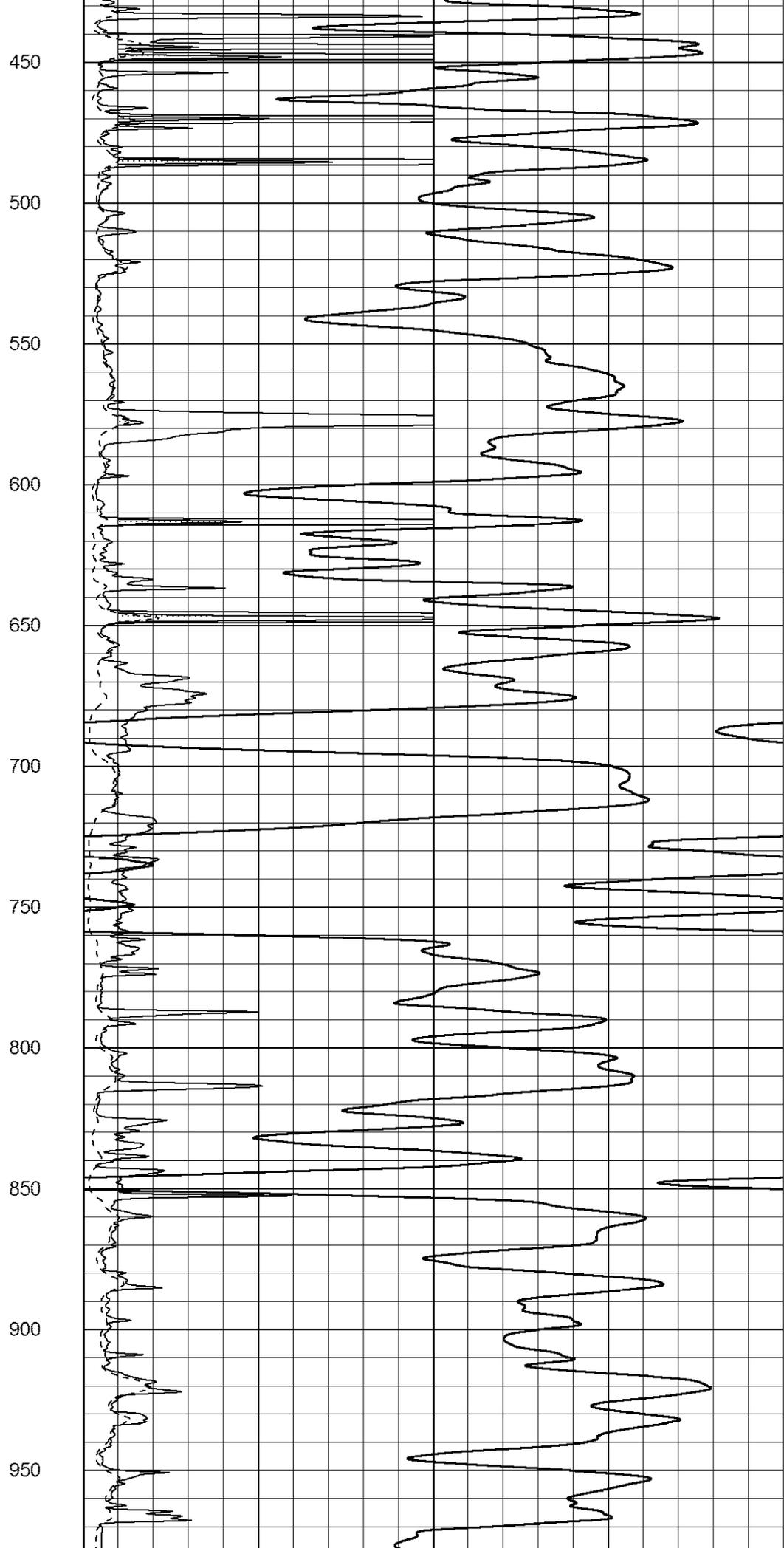
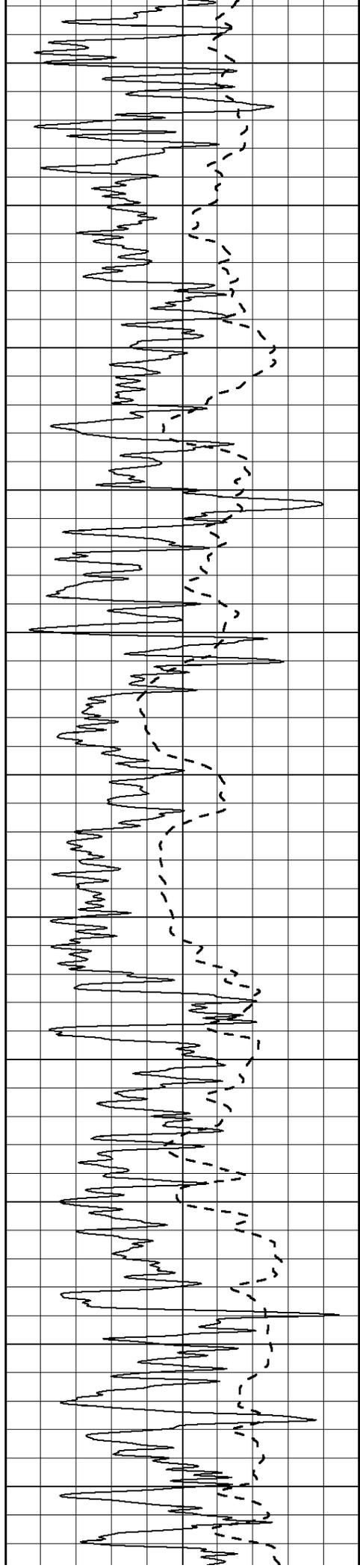
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-100	SP (mV)	100

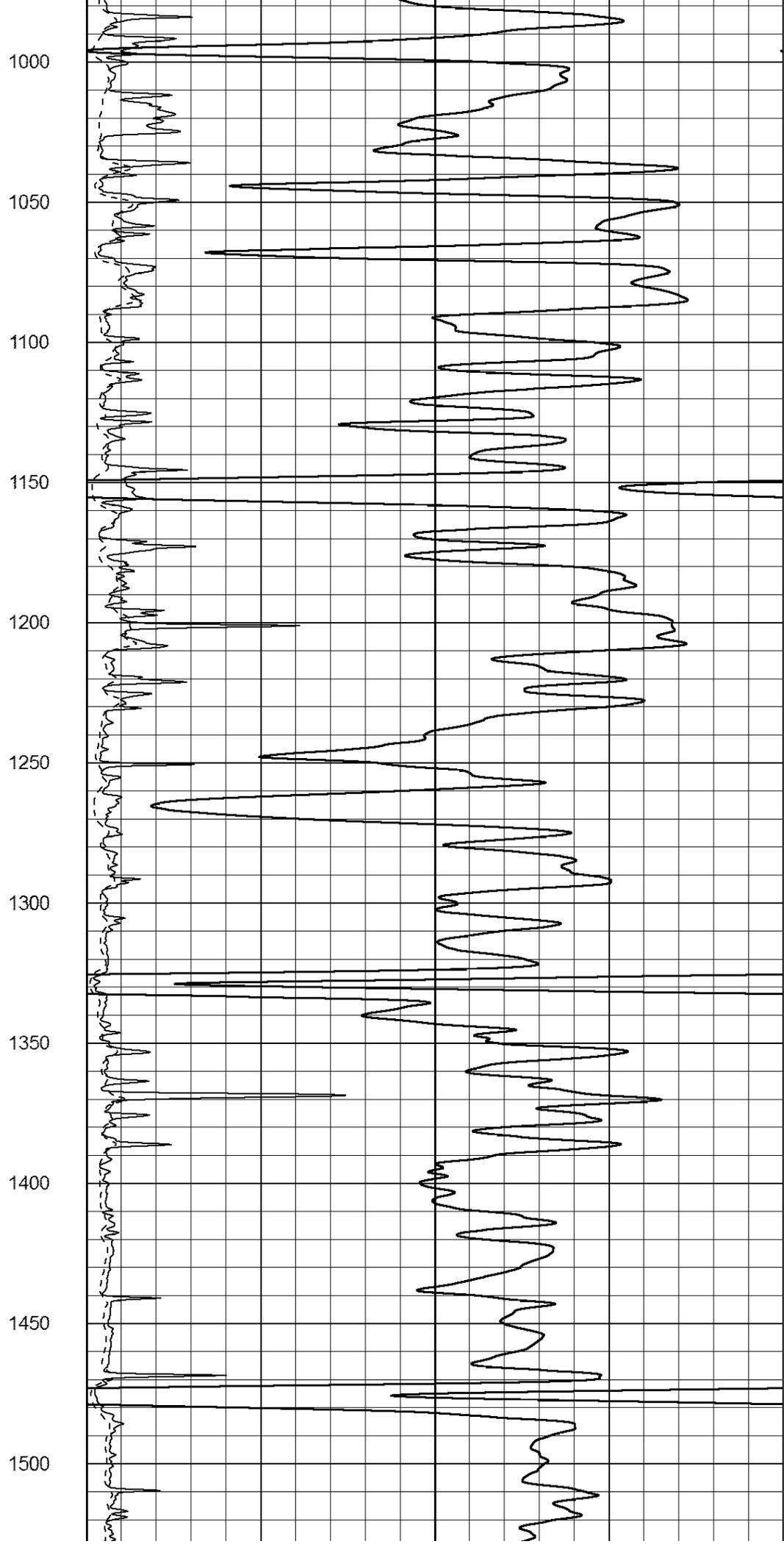
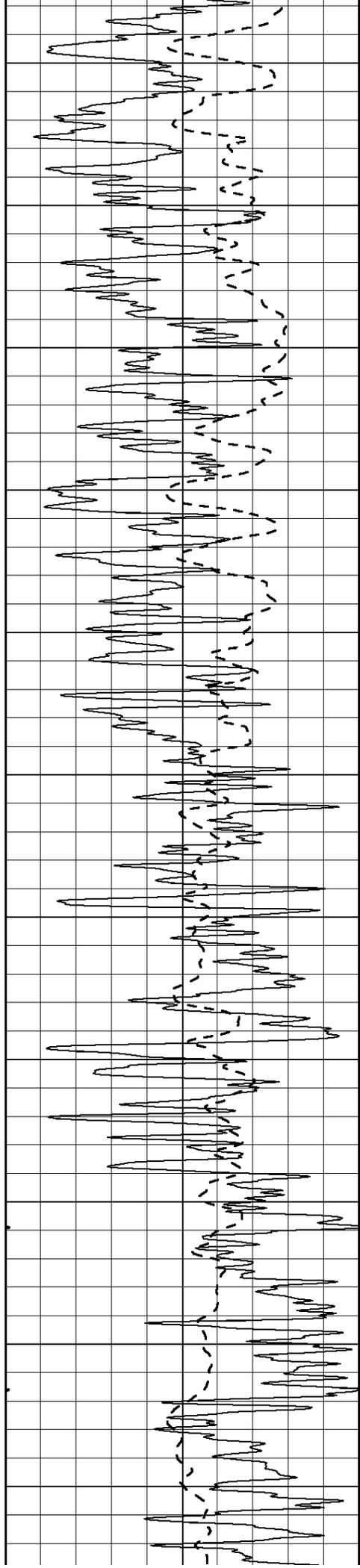
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0	RILD (Ohm-m)	50

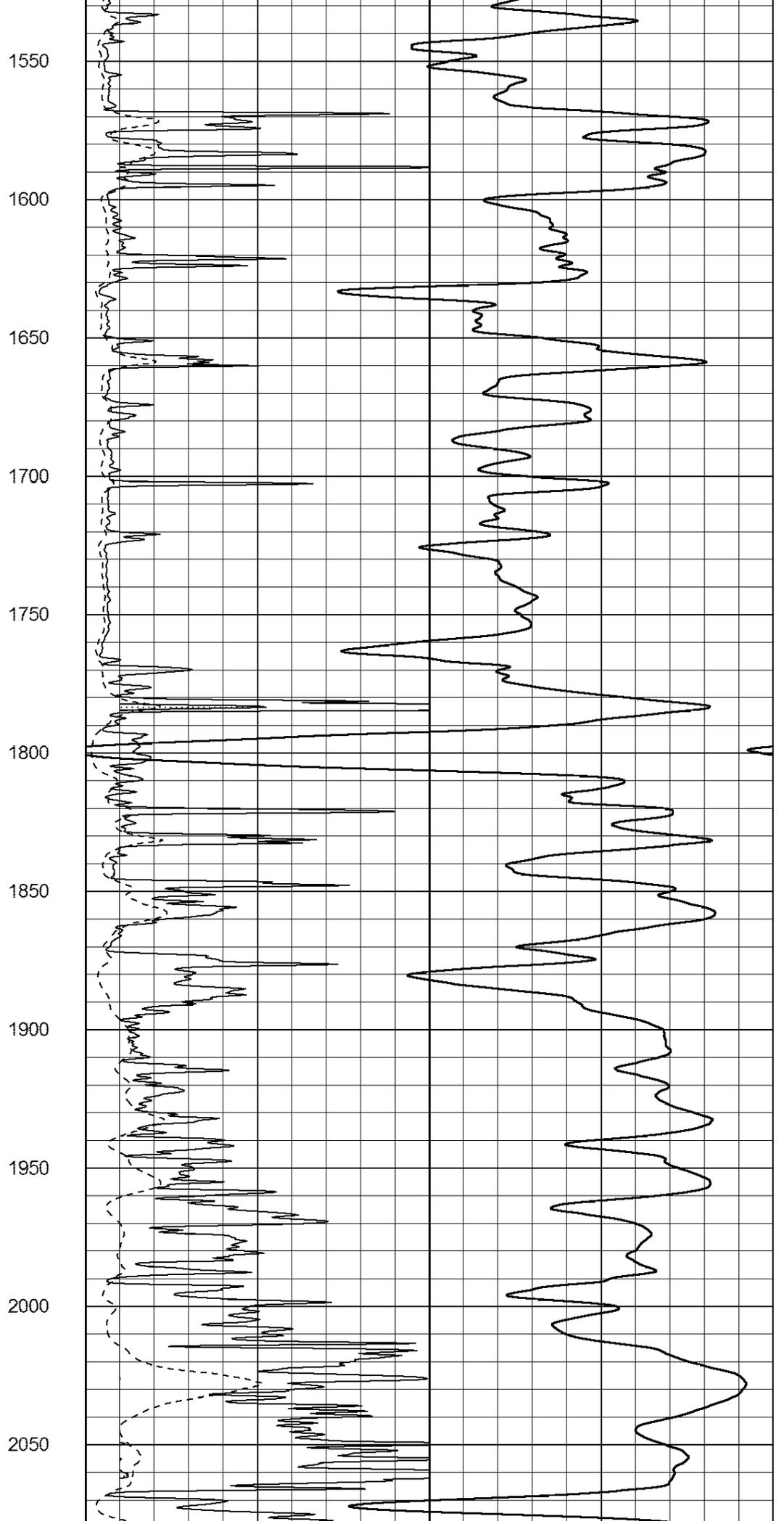
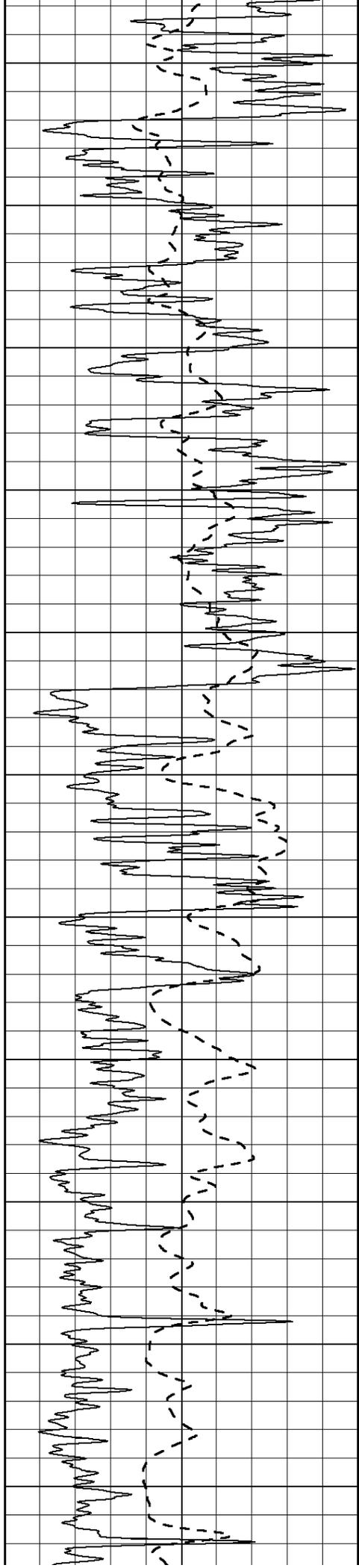
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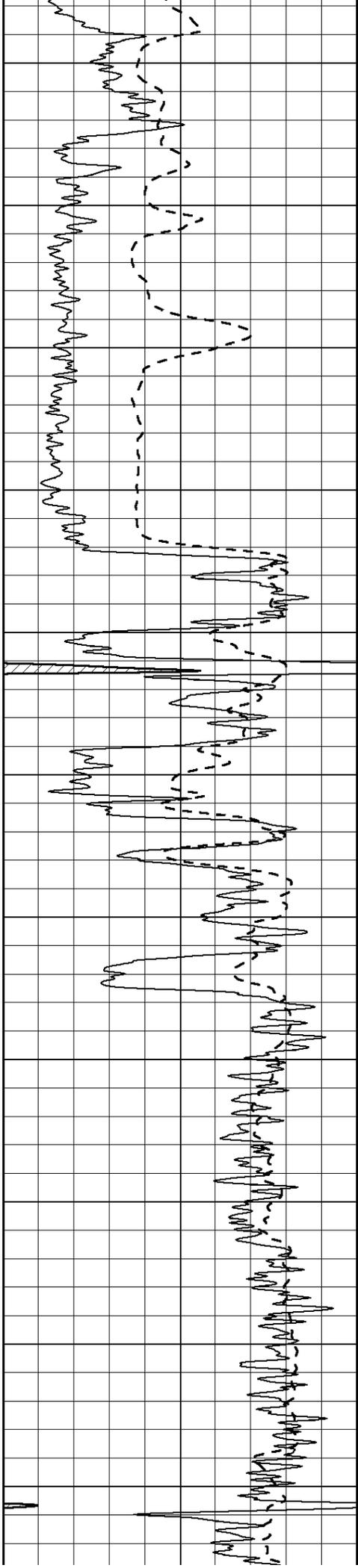
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50	RLL3 X10 (Ohm-m)	500



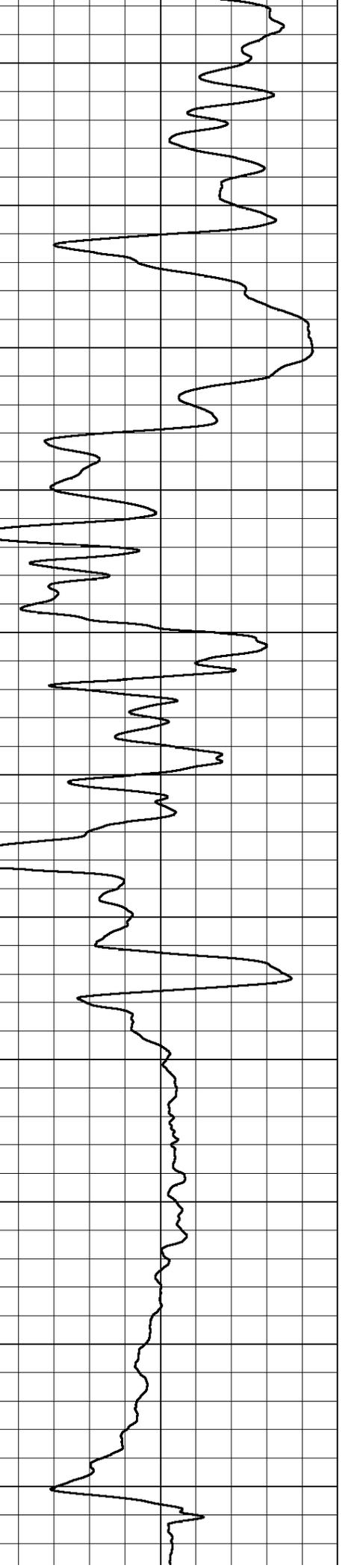
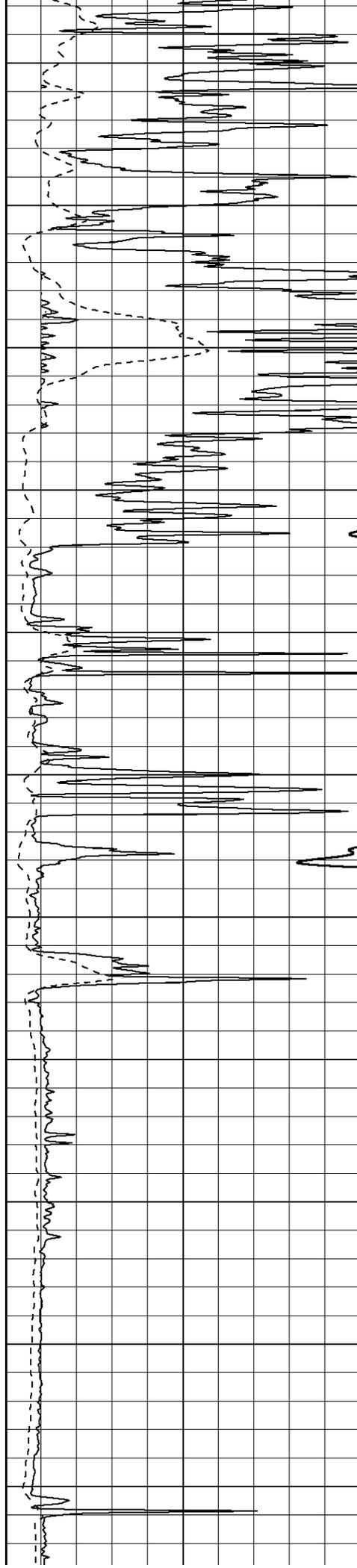


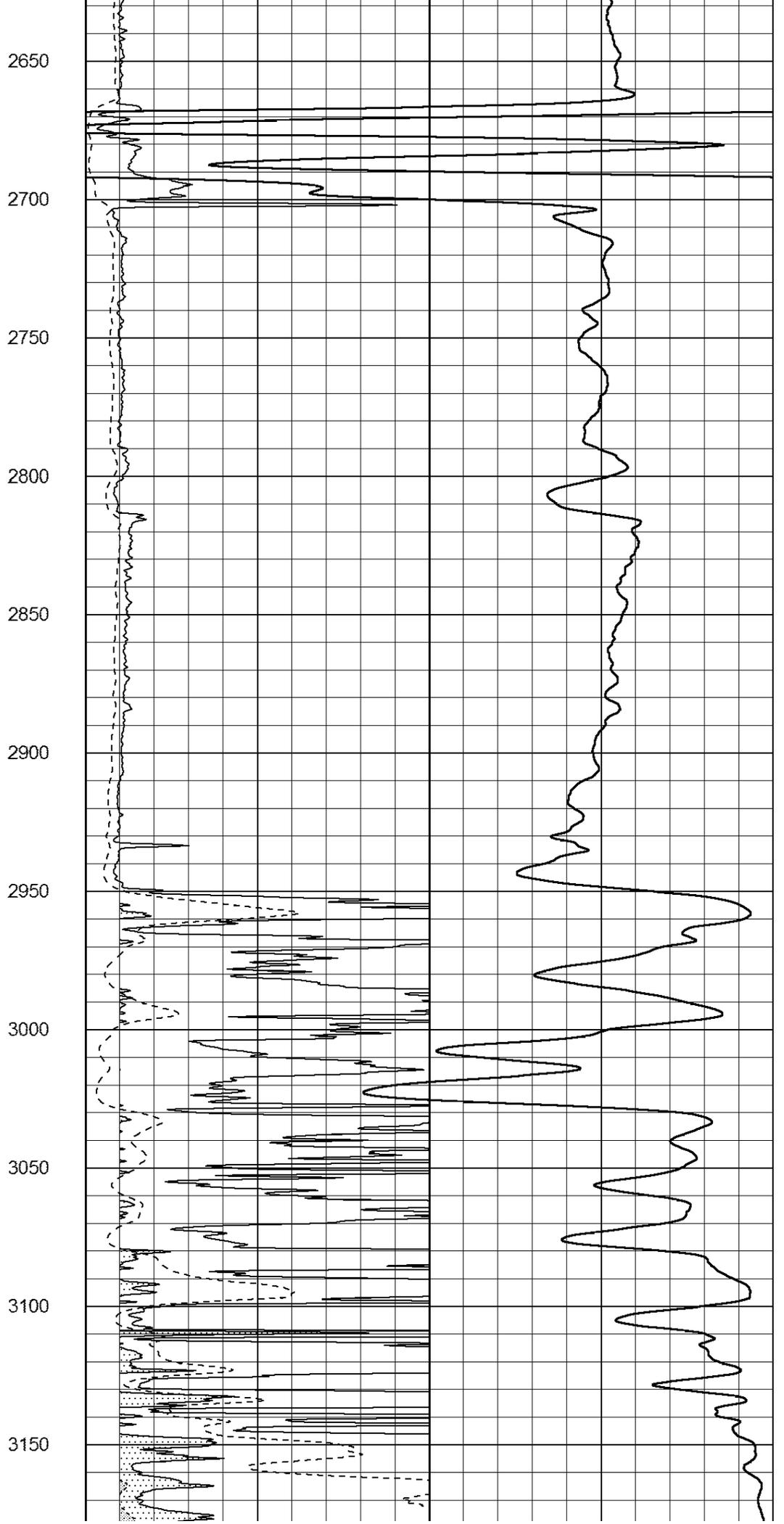
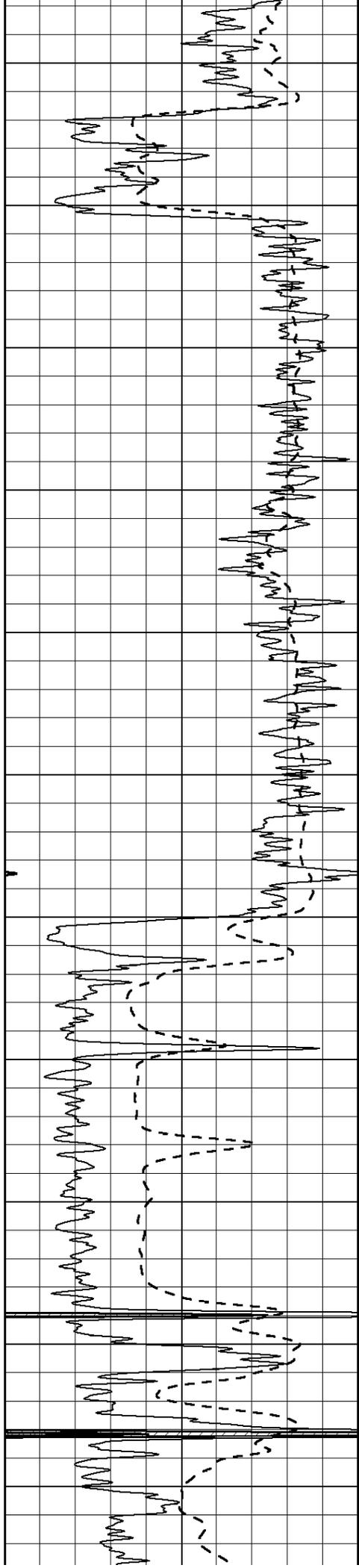


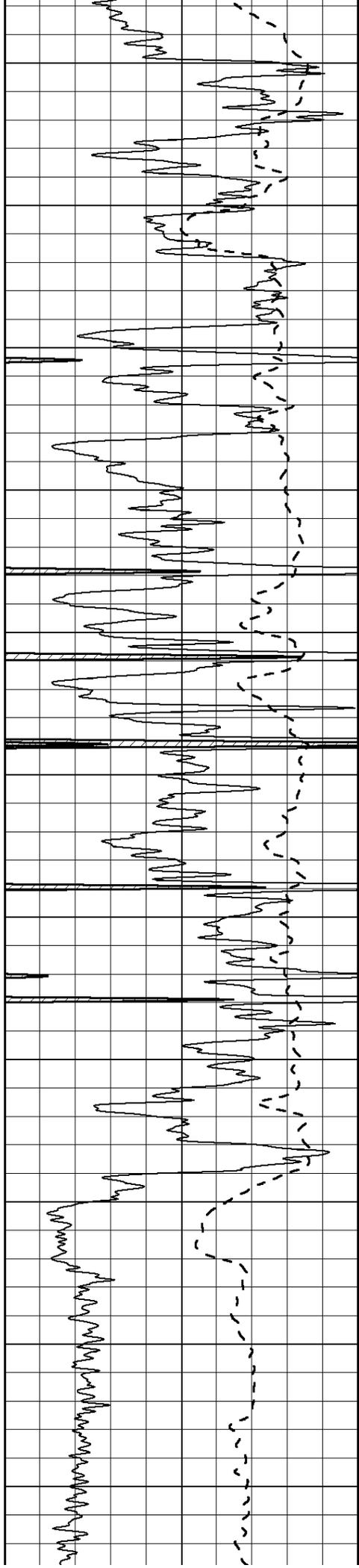




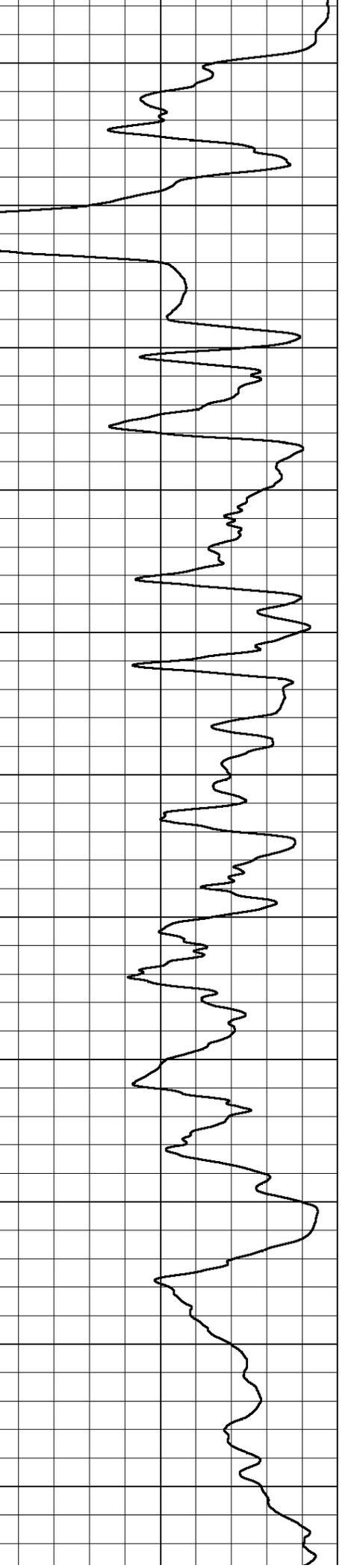
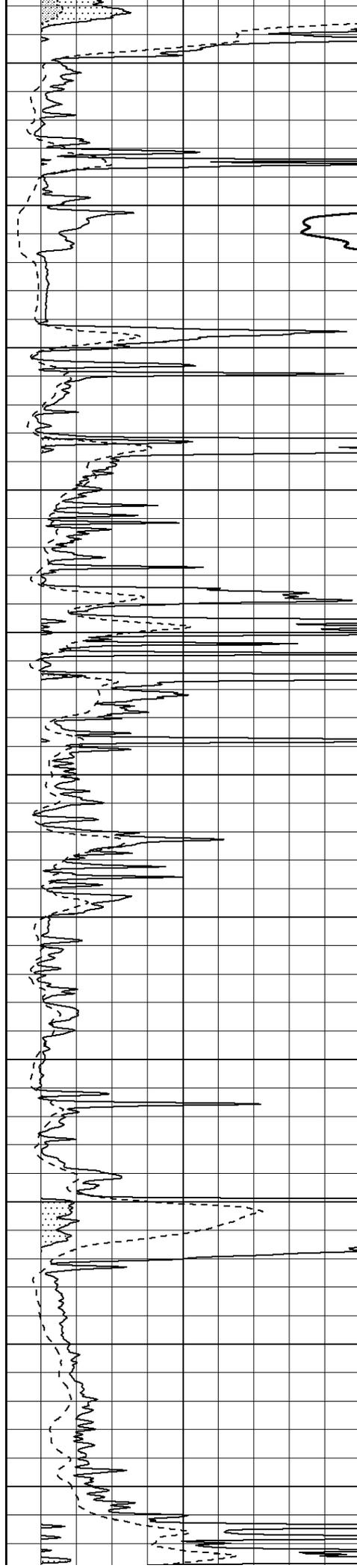
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2250  
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2350  
2400  
2450  
2500  
2550  
2600

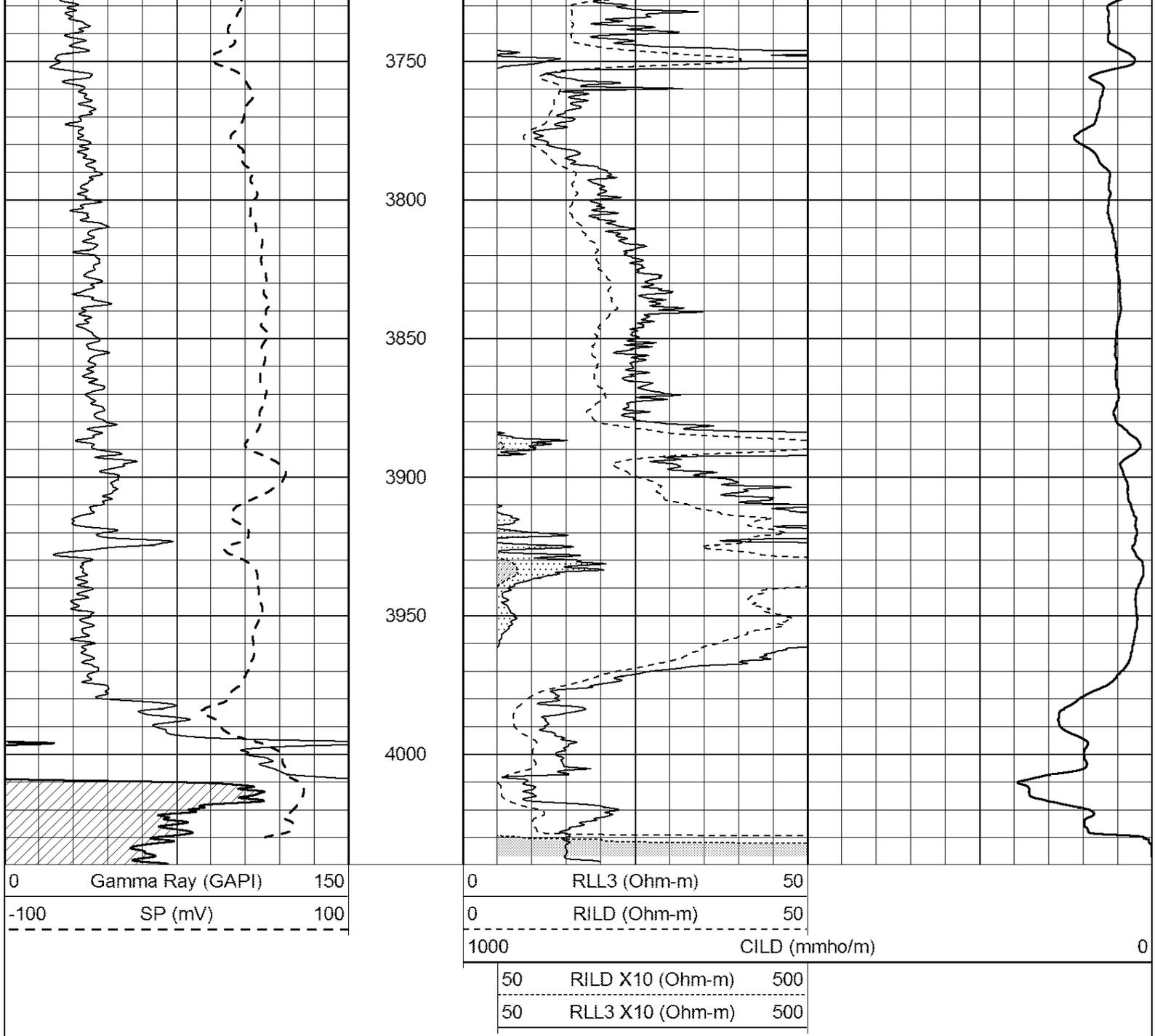






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3500  
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3600  
3650  
3700



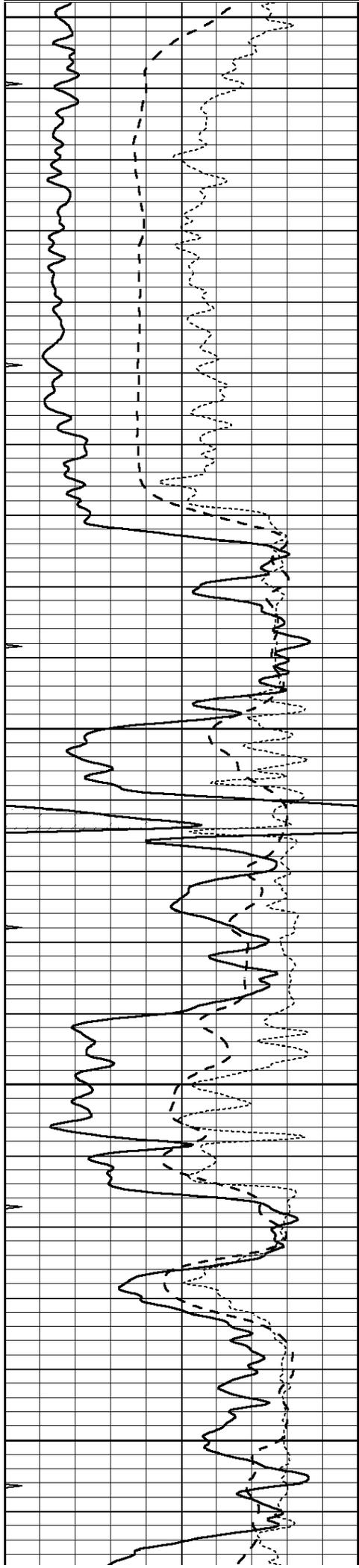


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 Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



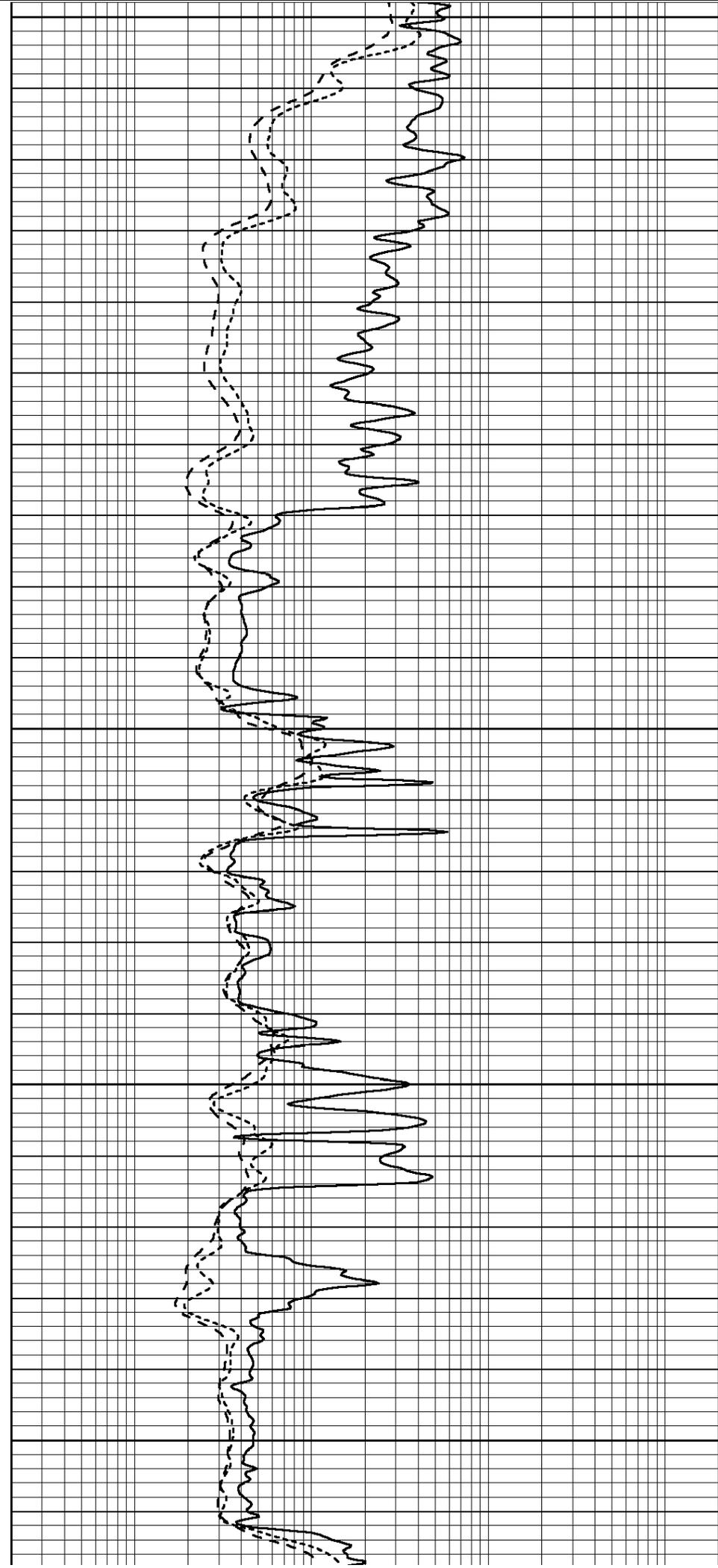
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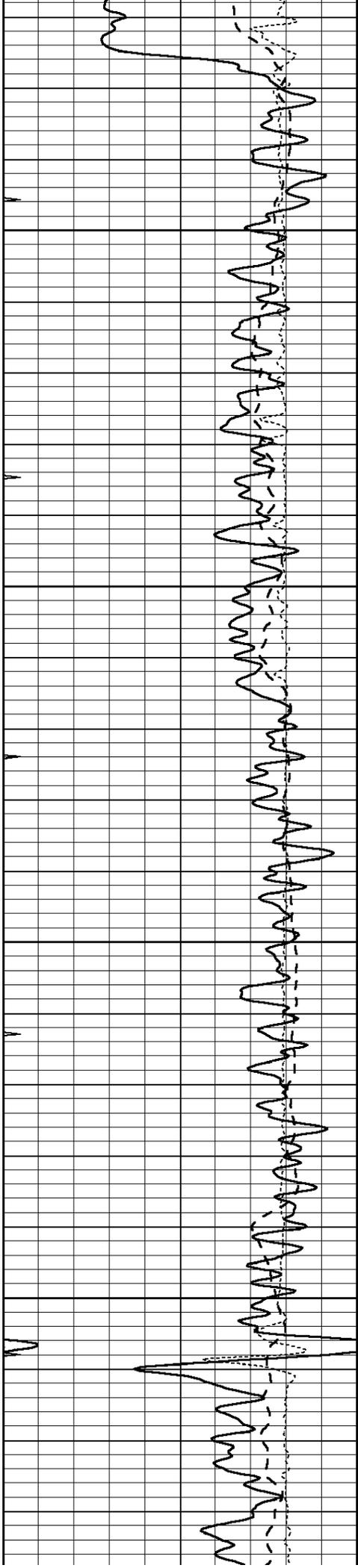
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2300

2350

2400



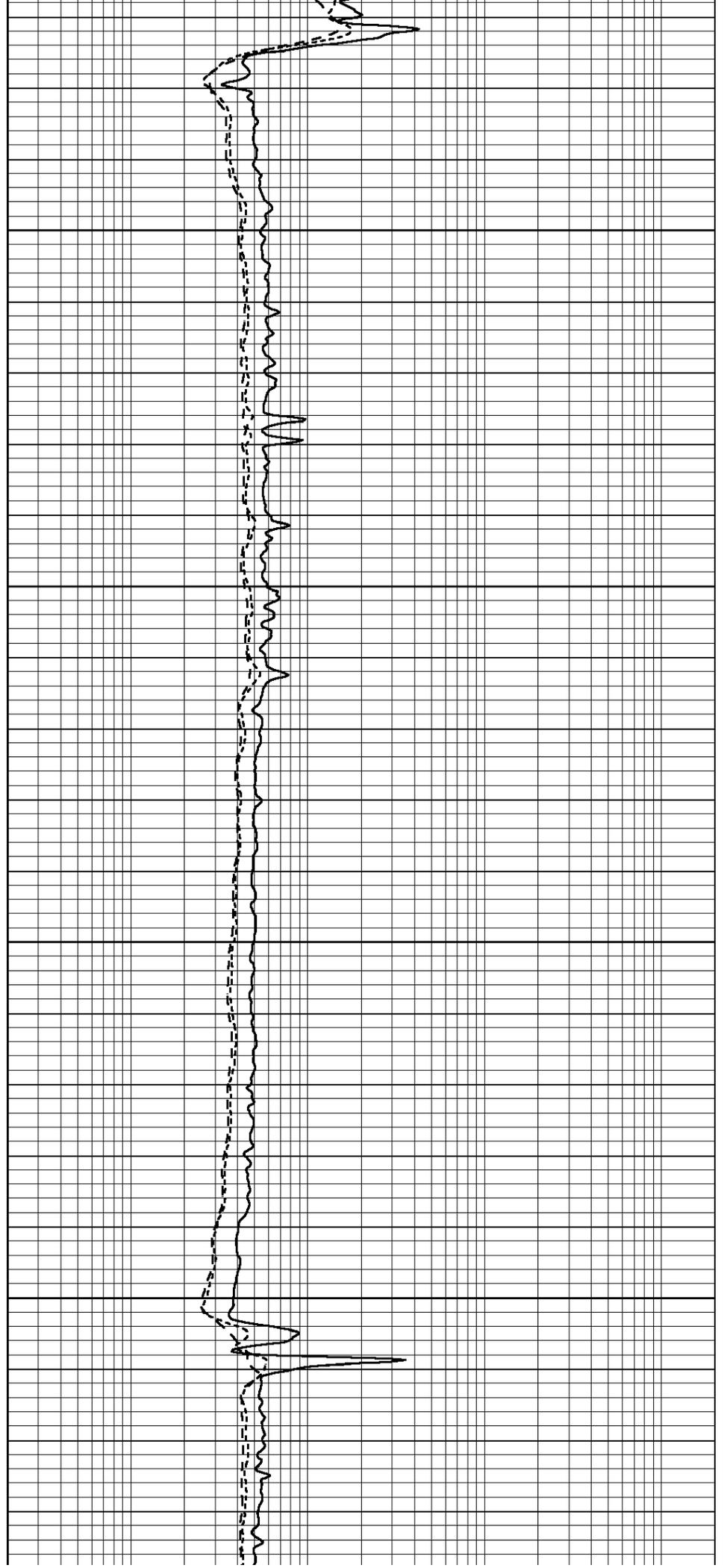


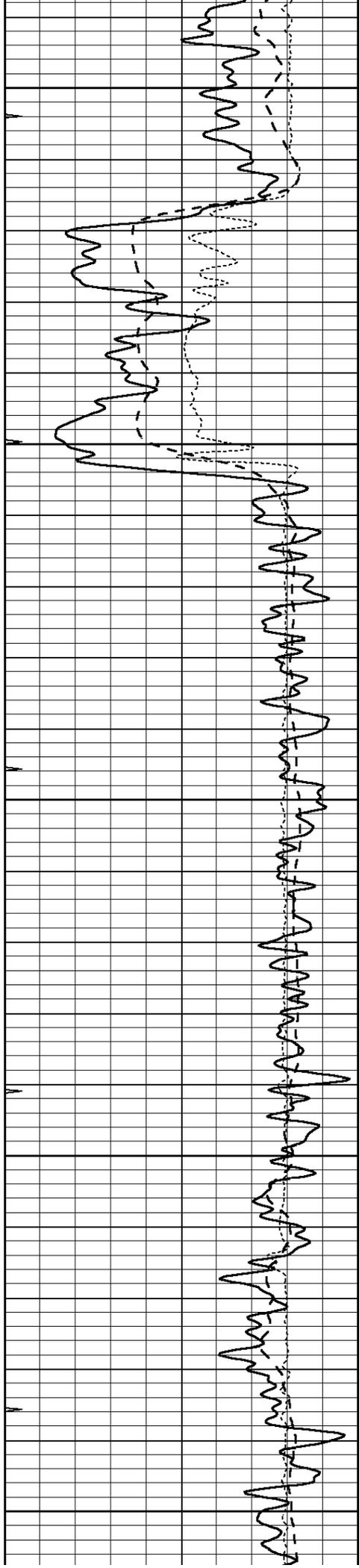
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2600





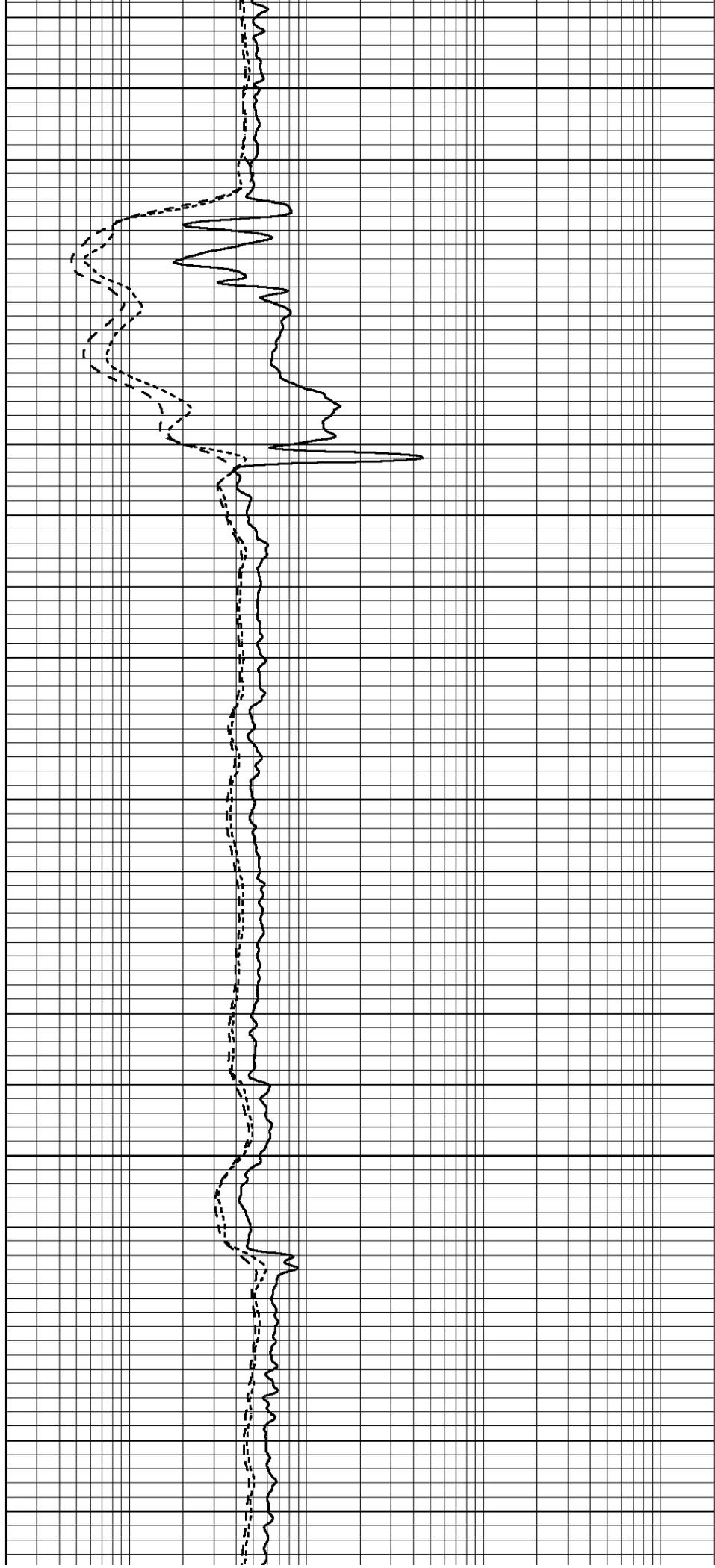
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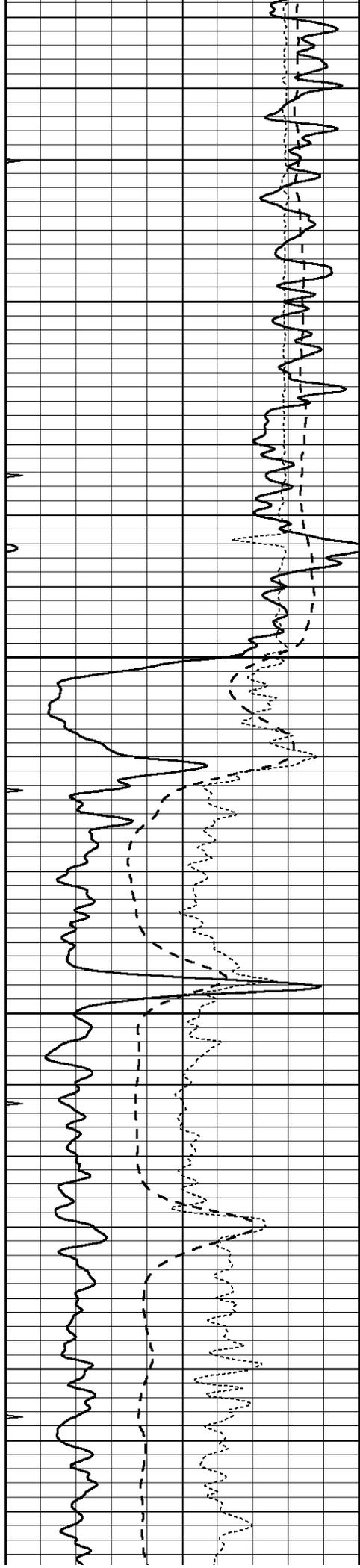
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2800

2850



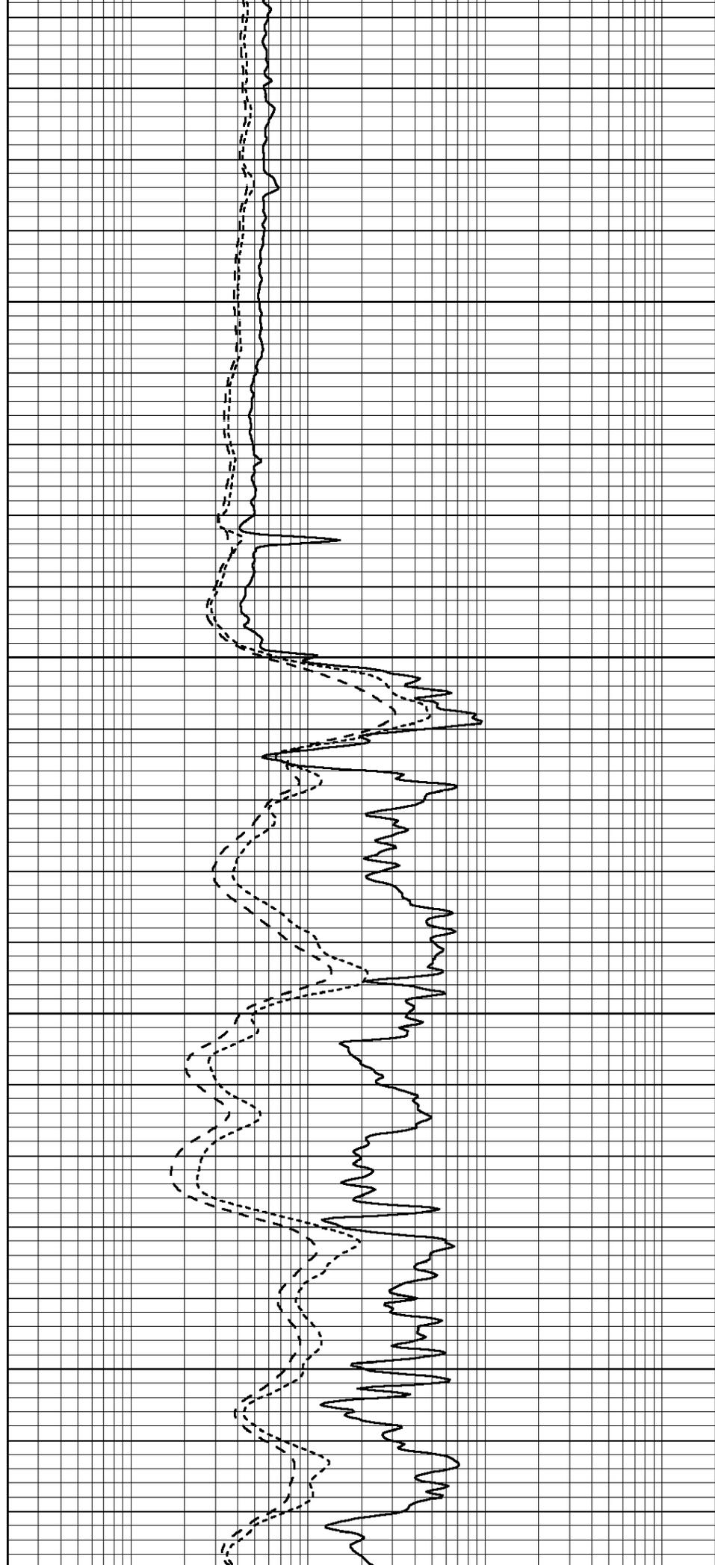


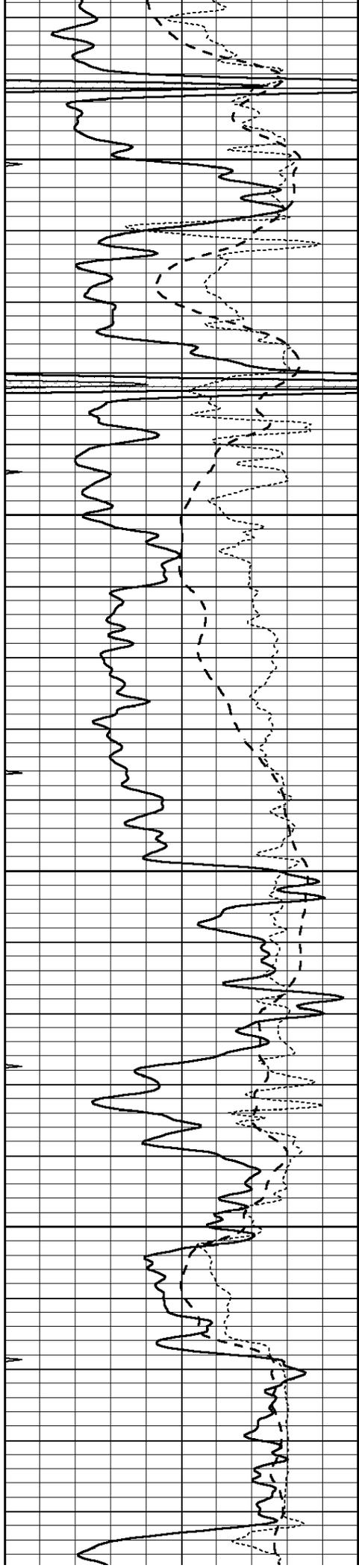
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3000

3050



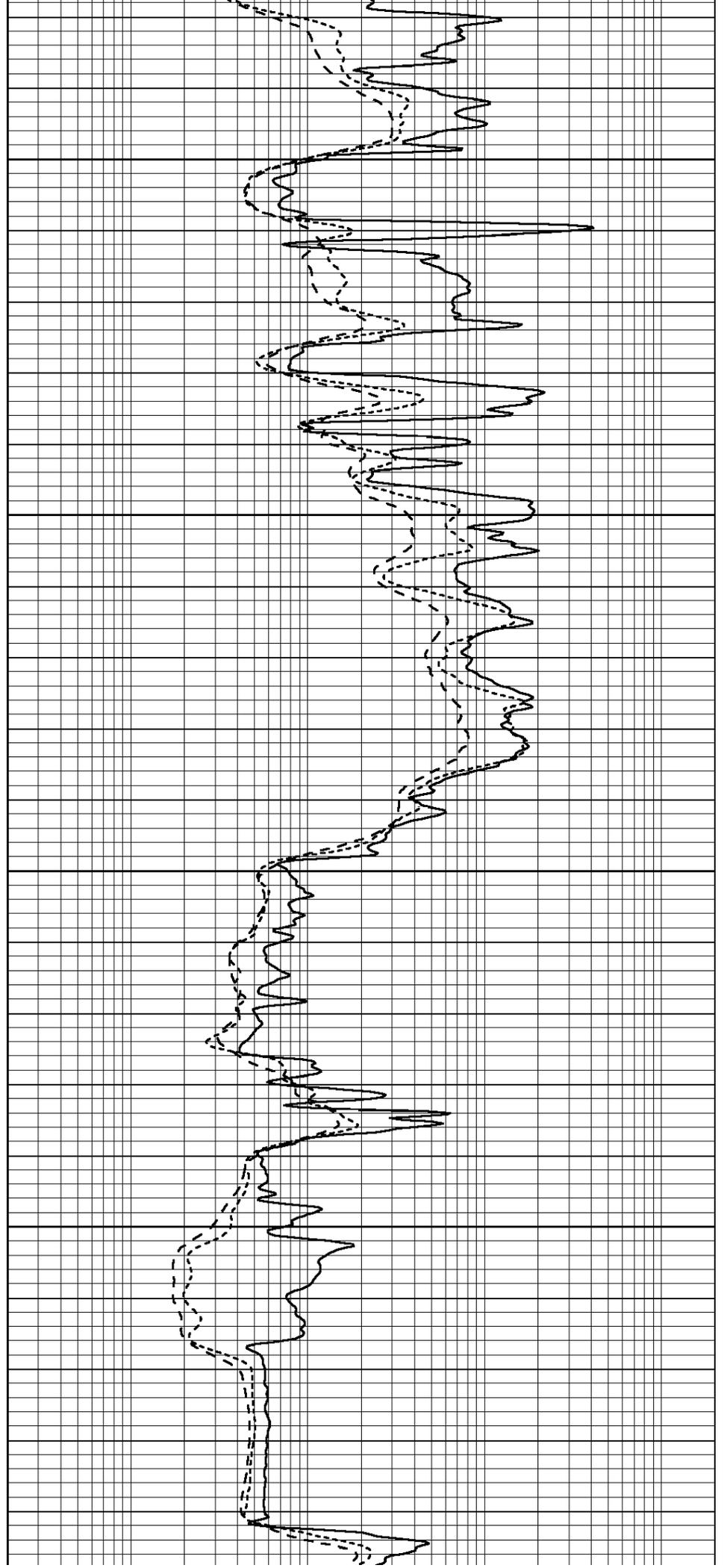


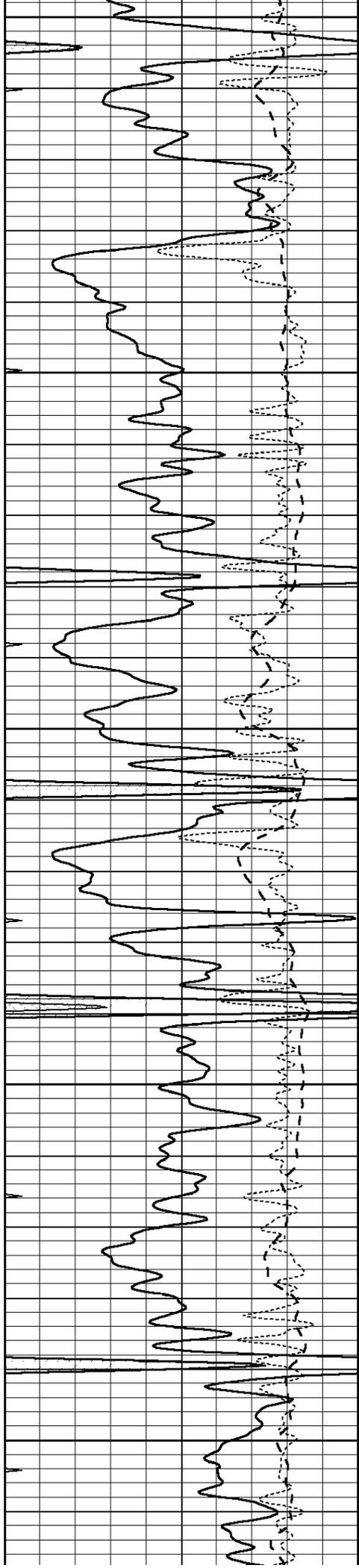
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3150

3200

3250





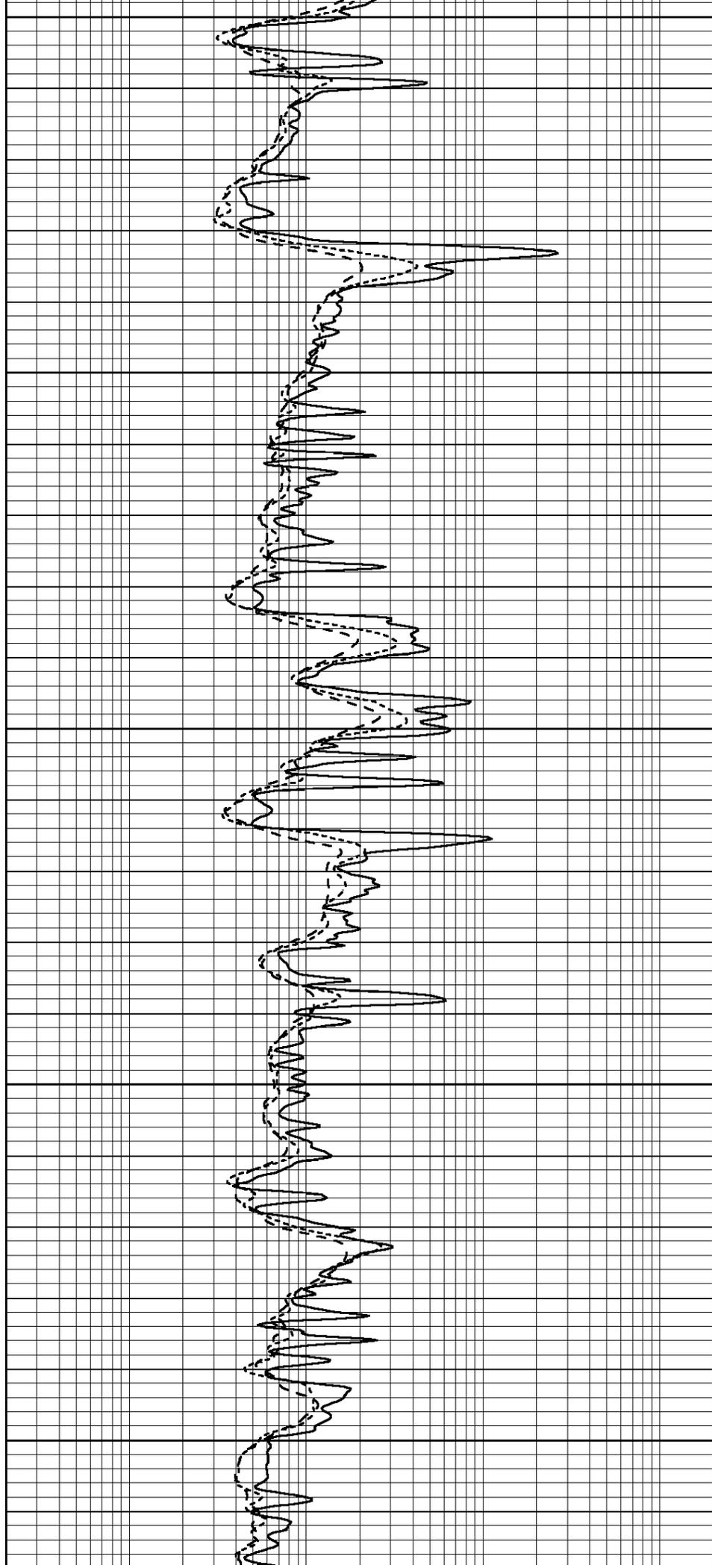
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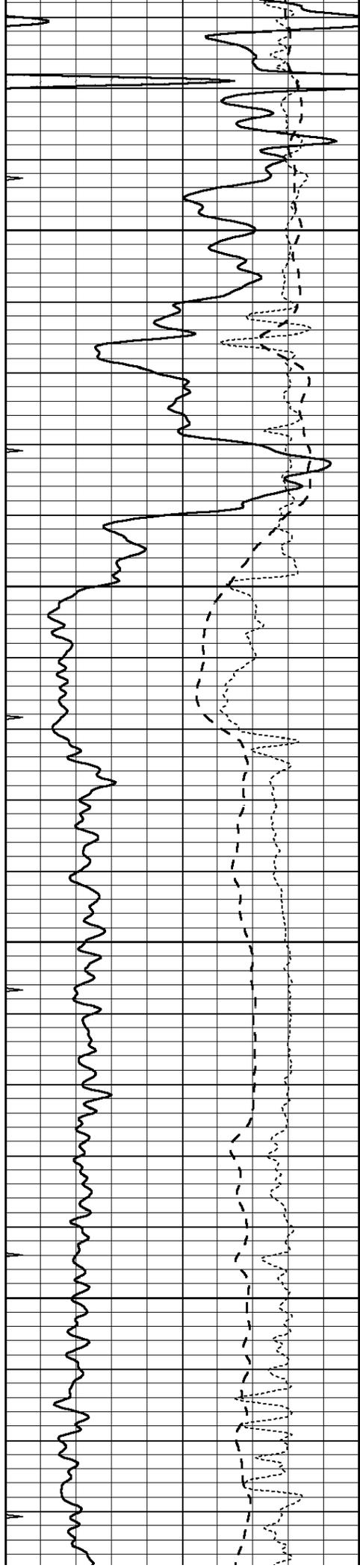
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3500



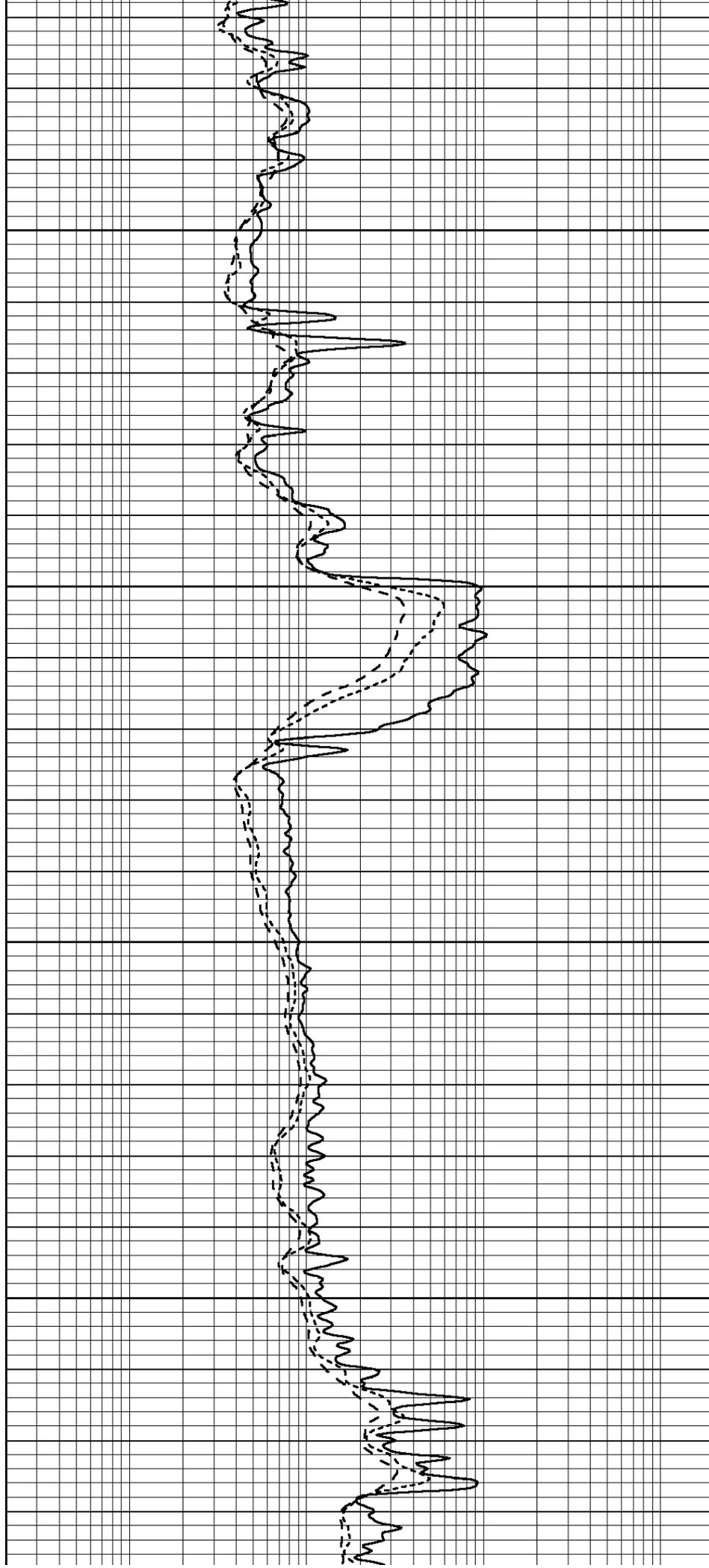


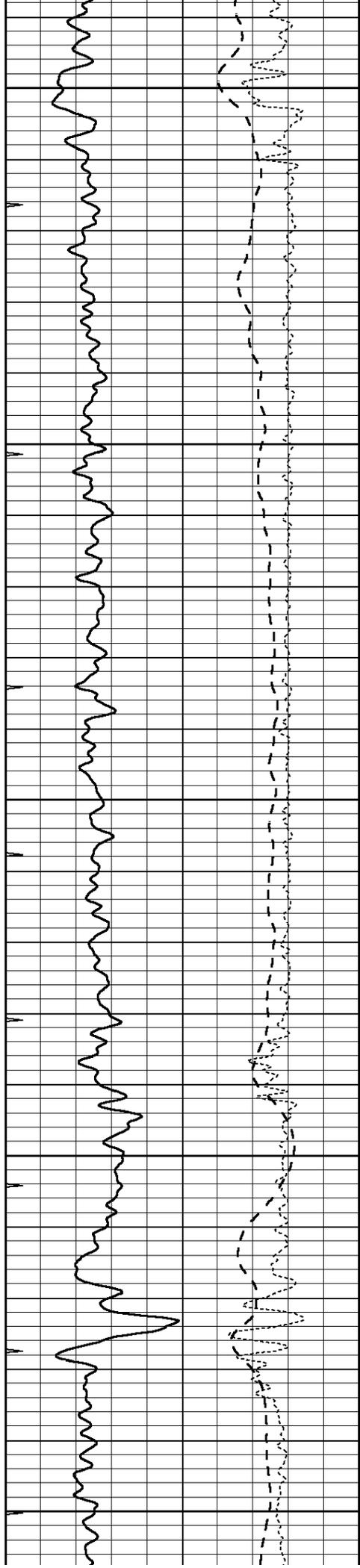
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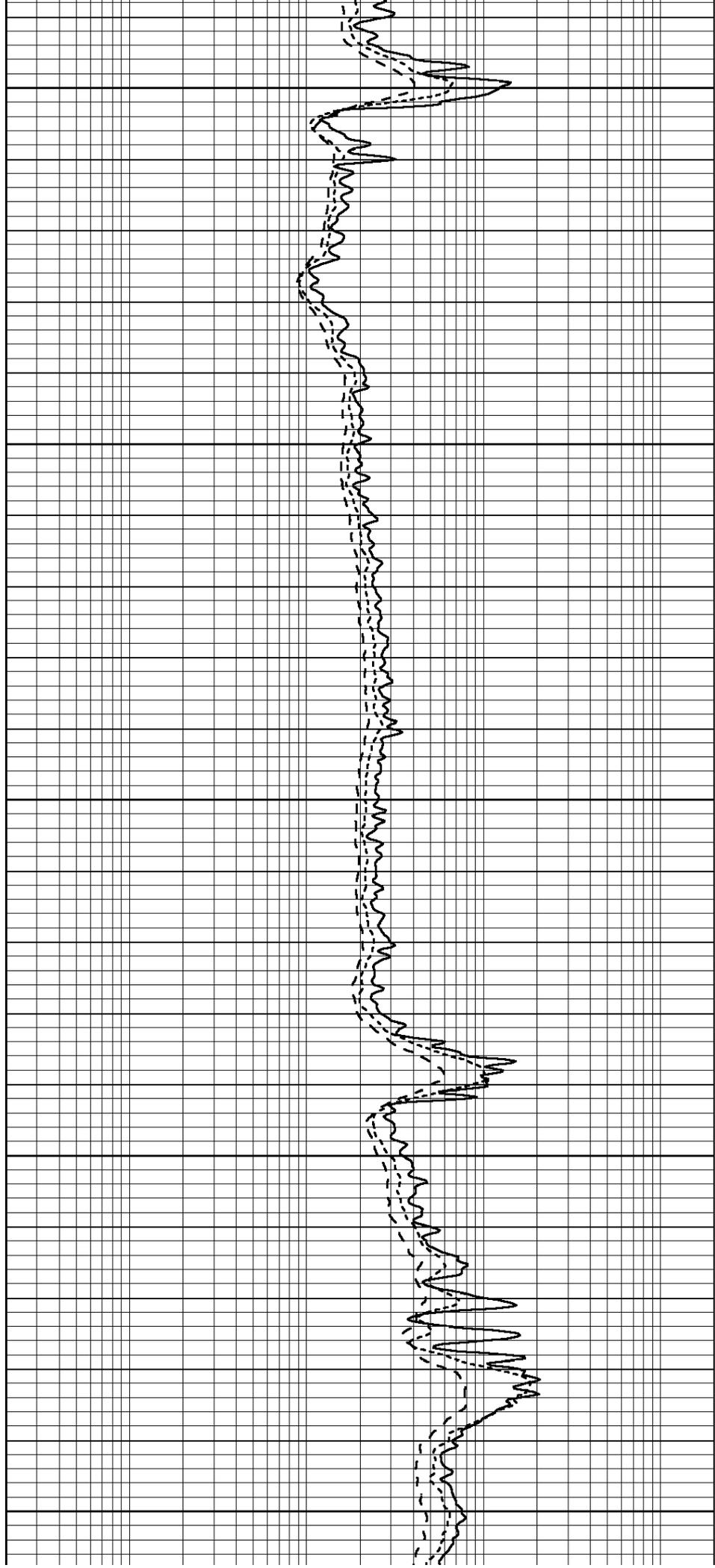
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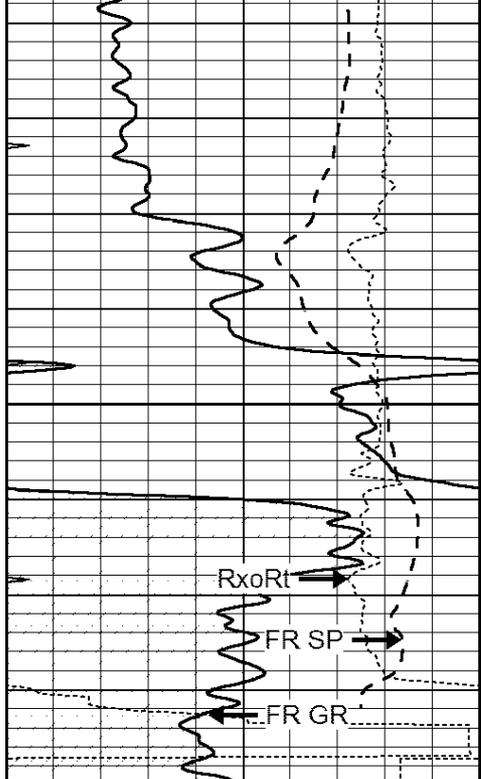
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3950

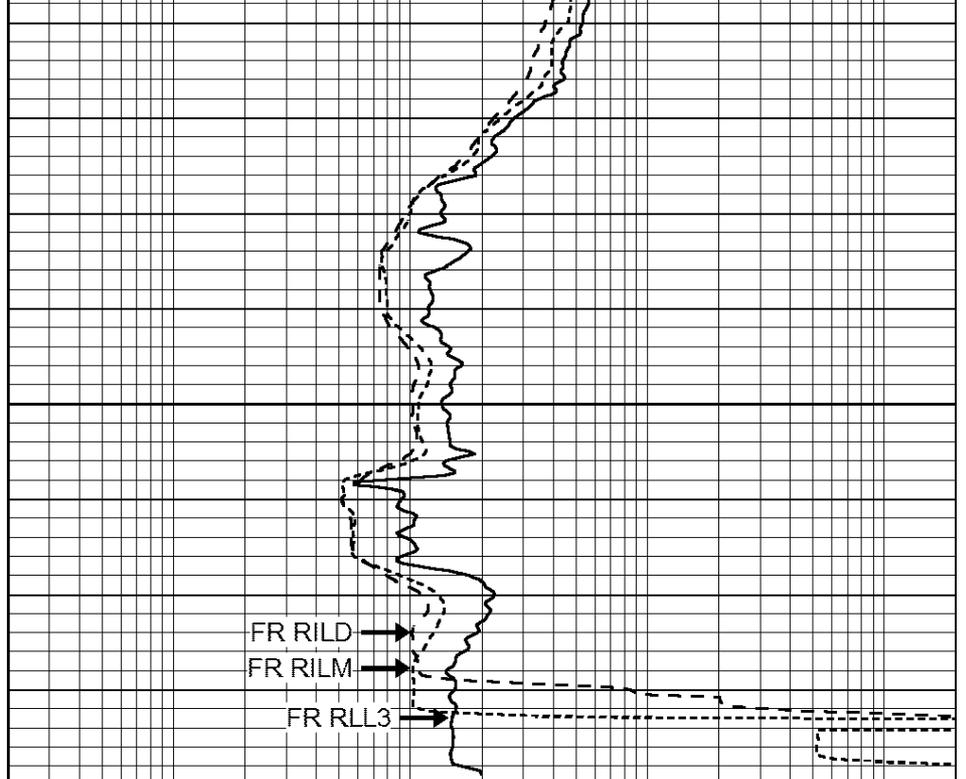




4000

LTD 4035

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



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

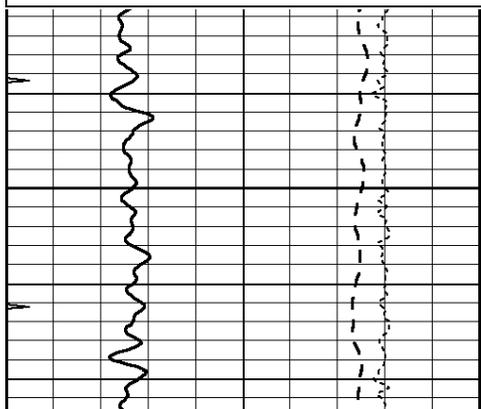


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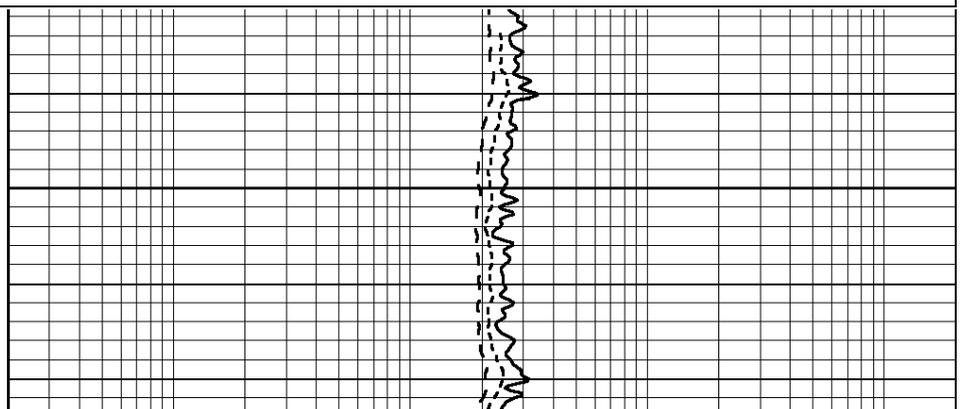
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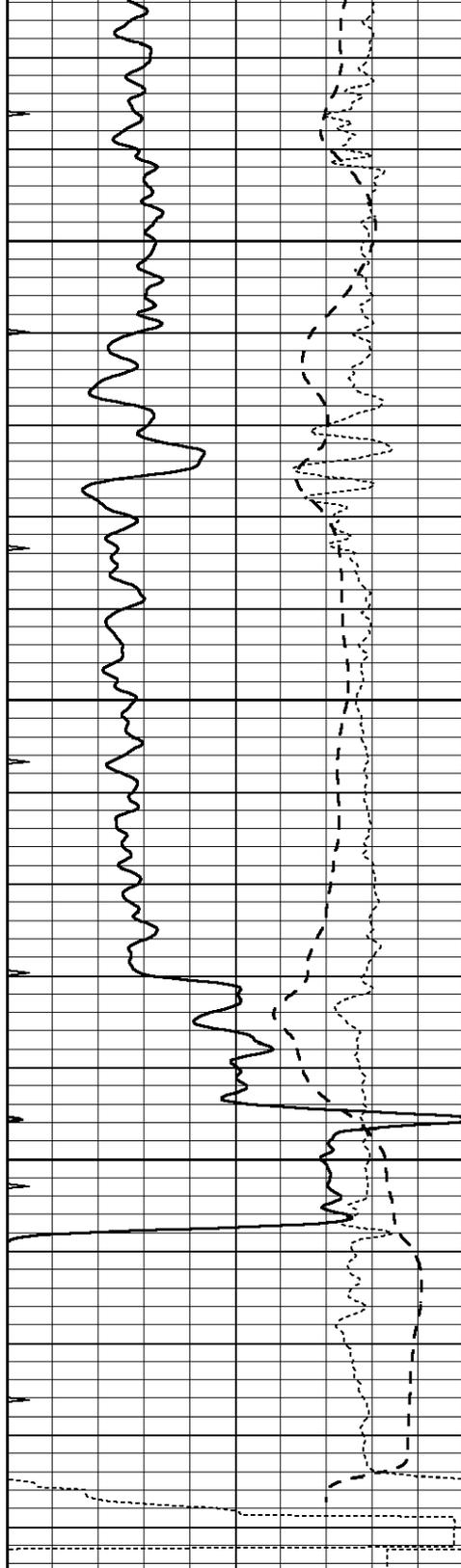
0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

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



3850



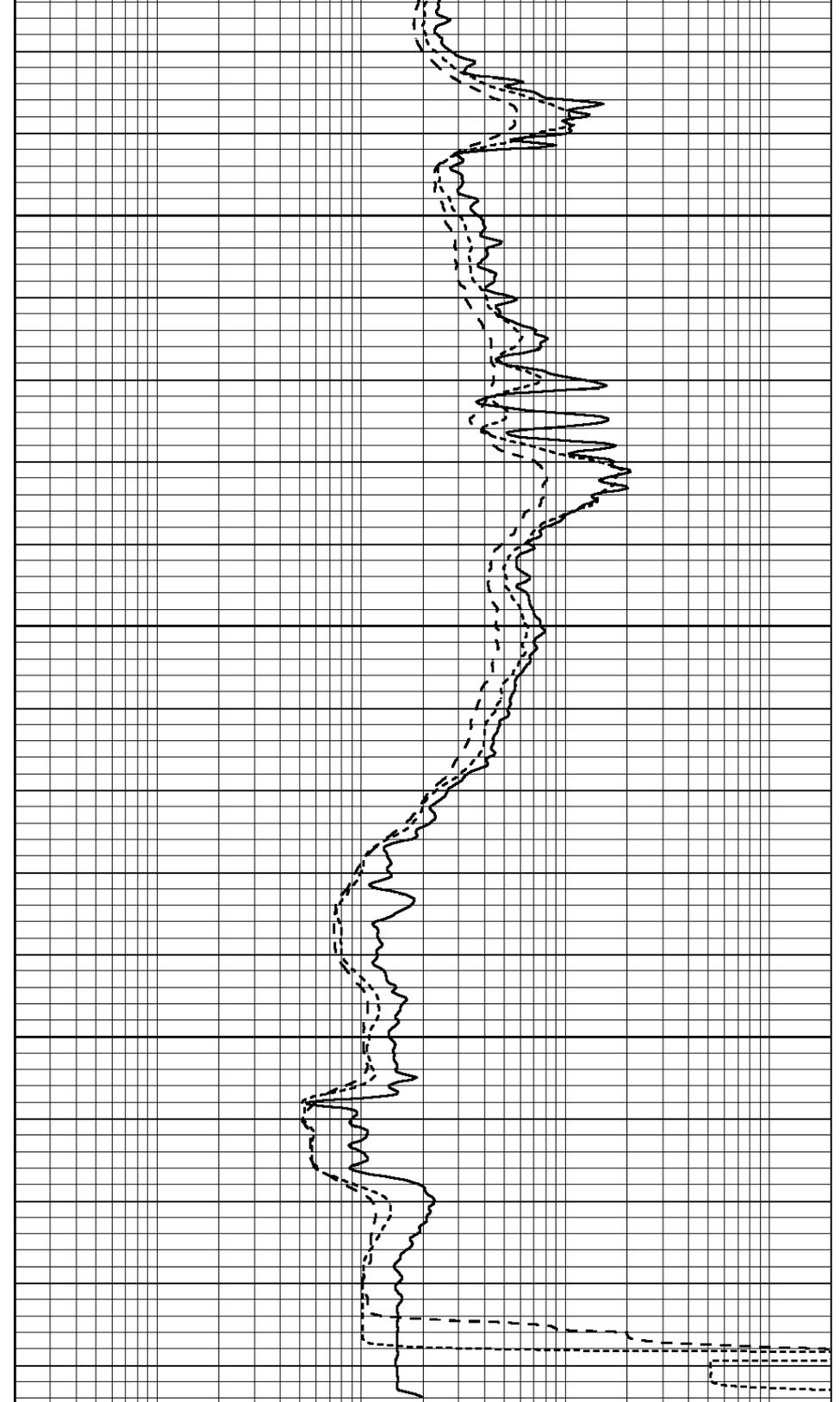


3900

3950

4000

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20



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

Calibration Report

Database File: 26530pe.db  
 Dataset Pathname: pass3.1  
 Dataset Creation: Sat Jan 24 13:31:41 2015 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model:	PROBE8-DILG
Surface Cal Performed:	Sun Aug 17 08:09:53 2014
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	620.000	-2.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-16.000
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		

Litho Density Calibration Report  
Serial: 006 Model: PRB

Master Calibration

Performed Wed Mar 12 14:26:38 2014

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1296.6	7199.0	2625.4	7833.2	cps
Window 2	1218.8	5956.6	2257.8	6372.0	cps
Window 3	926.7	2990.0	1318.7	3107.7	cps
Window 4	314.3	319.6	320.3	326.2	cps
Long Space	0.0	4737.9	1039.0	5153.3	cps
Short Space	1.3	1655.6	1074.2	1728.4	cps
Rho		1.7100	2.5960	1.3800	g/cc
Pe		0.0000	2.5700	1.5500	
Rib Angle	: 44.1	Rib Slope	: 0.969	Density/Spine Ratio	: 0.562
Spine Angle	: 74.1	Spine Slope	: 3.507	Spine Intercept	: -17.5

Before Survey Verification

Performed Wed Dec 31 18:00:00 1969

Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps

Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

After Survey Verification		Performed Wed Dec 31 18:00:00 1969			
Window 1	0.0	0.0	0.0	0.0	cps
Window 2	0.0	0.0	0.0	0.0	cps
Window 3	0.0	0.0	0.0	0.0	cps
Window 4	0.0	0.0	0.0	0.0	cps
Long Space	0.0	0.0	0.0	0.0	cps
Short Space	0.0	0.0	0.0	0.0	cps
Measured Rho		0.0000	0.0000	0.0000	g/cc
Measured Correction		0.0000	0.0000	0.0000	g/cc
Measured Pe			0.0000	0.0000	

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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

PRE-SURVEY VERIFICATION					
	Detector	Readings		Measured	Target
1)	Short Space	cps			
	Long Space	cps		pu	pu
2)	Short Space	cps			
	Long Space	cps		pu	
3)	Short Space	cps			
	Long Space	cps		pu	

POST-SURVEY VERIFICATION					
	Detector	Readings		Measured	Target
1)	Short Space	cps			
	Long Space	cps		pu	pu
2)	Short Space	cps			
	Long Space	cps		pu	pu
3)	Short Space	cps			
	Long Space	cps		pu	pu

Gamma Ray Calibration Report

Serial Number:	GR6
Tool Model:	OPEN
Performed:	Wed Dec 10 11:09:24 2014
Calibrator Value:	150.0
Background Reading:	0.0

Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.8000	GAPI/cps