

DUAL INDUCTION LOG

Company SIROKY OIL MANAGEMENT, INC.
 Well STULL #1
 Field IUKA-CARMI
 County PRATT
 State KANSAS

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 Well STULL #1
 Field IUKA-CARMI
 County PRATT State KANSAS

Location: API # : 15-151-22464-00-00
 330 FNL & 2310' FEL
 SEC 21 TWP 27S RGE 12W
 Permanent Datum GROUND LEVEL Elevation 1842'
 Log Measured From KELLY BUSHING 12' A.G.L.
 Drilling Measured From KELLY BUSHING
 Other Services CDL/CNL/MEL
 Elevation K.B. 1854'
 D.F. 1852
 G.L. 1842

Date	10/16/17
Run Number	ONE
Depth Driller	4555
Depth Logger	4557
Bottom Logged Interval	4555
Top Log Interval	00
Casing Driller	10 3/4" @ 339
Casing Logger	339
Bit Size	7 7/8"
Type Fluid in Hole	CHEMICAL MUD
Density / Viscosity	9.2/57
pH / Fluid Loss	11.0/10.4
Source of Sample	FLOWLINE
Rm @ Meas. Temp	.60@58
Rmt @ Meas. Temp	.45@58
Rmc @ Meas. Temp	.72@58
Source of Rmt / Rmc	MEASURED
Rm @ BHT	28@121
Time Circulation Stopped	2 HOURS
Time Logger on Bottom	///
Maximum Recorded Temperature	121F
Equipment Number	4010
Location	HAYS, KANSAS
Recorded By	GUS PFANENSTIEL
Witnessed By	PATRICK DEENIHAN

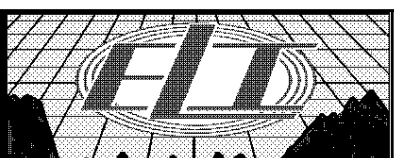
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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on 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

THANK YOU FOR USING ELI WIRELINE, HAYS, KS. (785) 628-6395

DIRECTIONS
 PRATT NORTH ON HIGHWAY 61 TO RD. 20,
 EAST TO THE T. NORTH 1 MILE, EAST 3/4 MILE,
 SOUTH INTO.



MAIN PASS

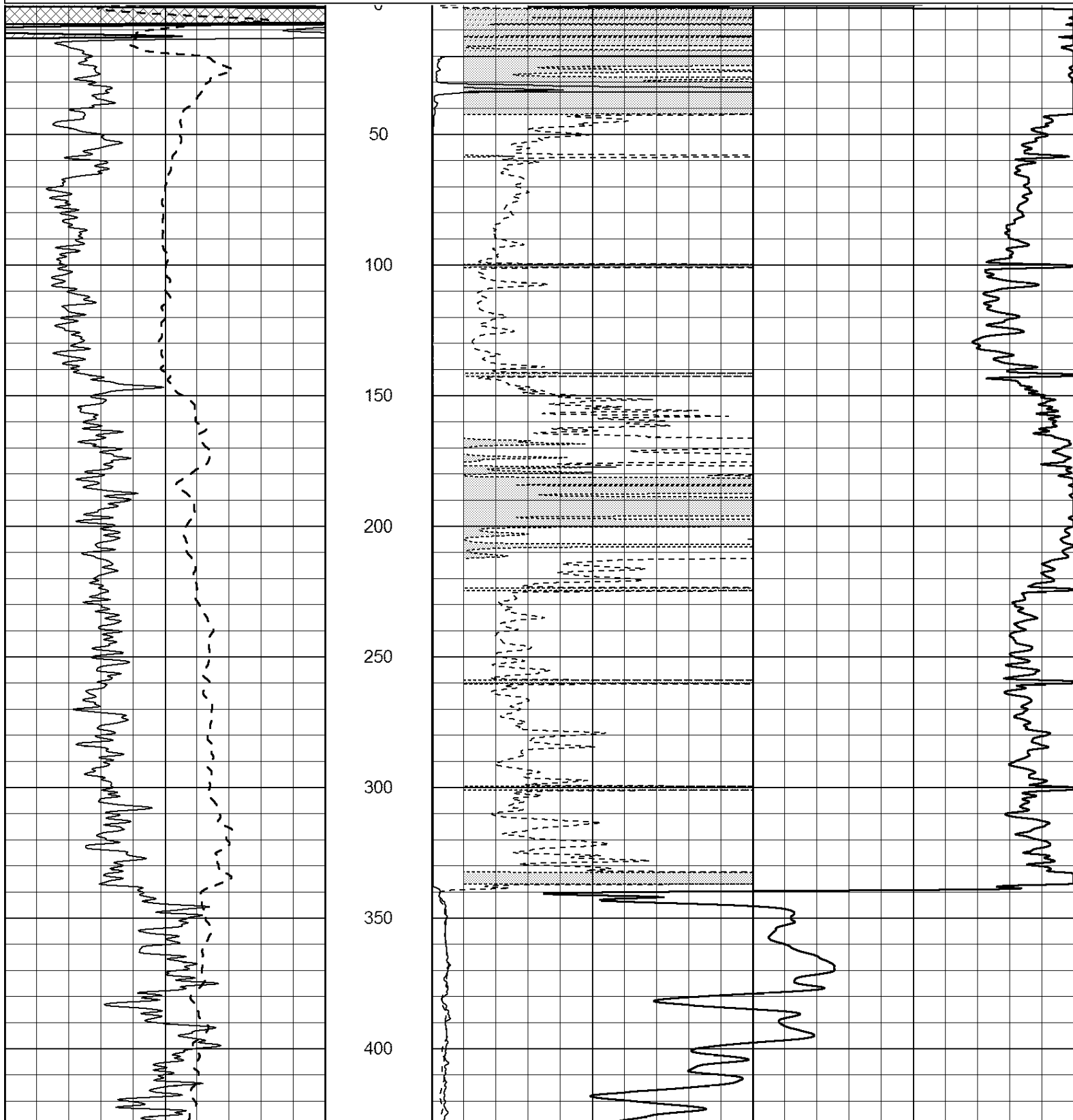
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 Dataset Pathname: pass7.1
 Presentation Format: _dil2
 Dataset Creation: Mon Oct 16 06:24:30 2017 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:600

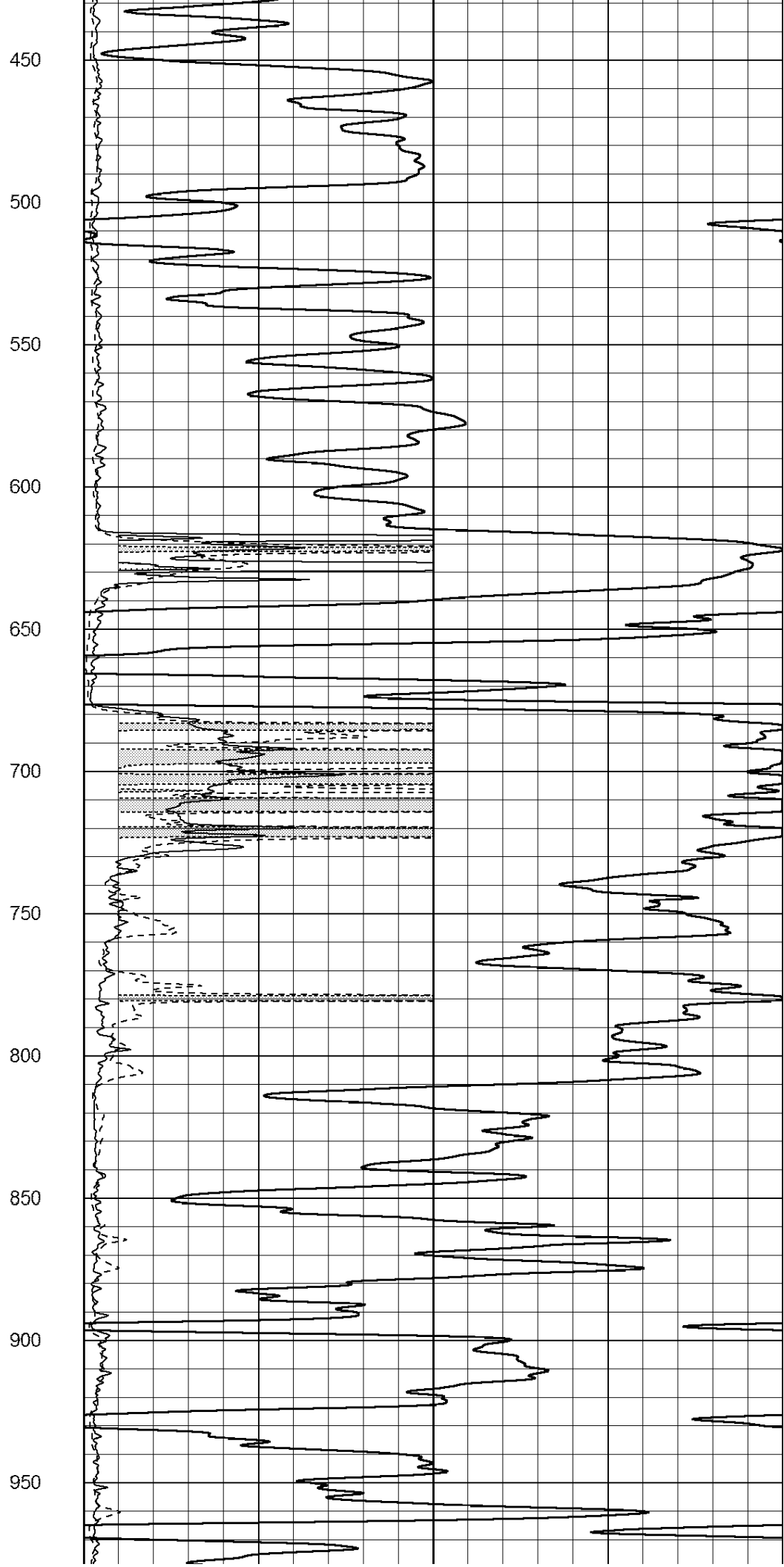
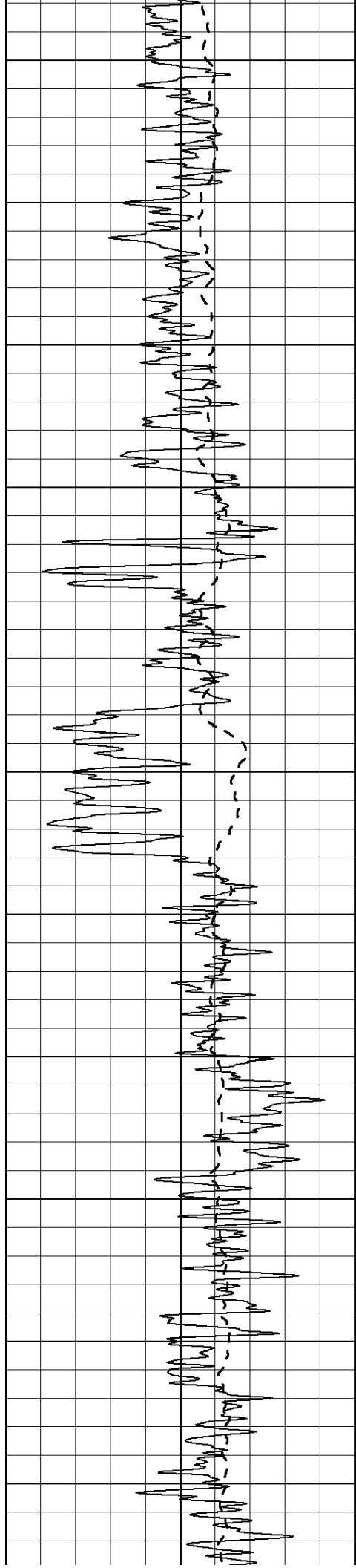
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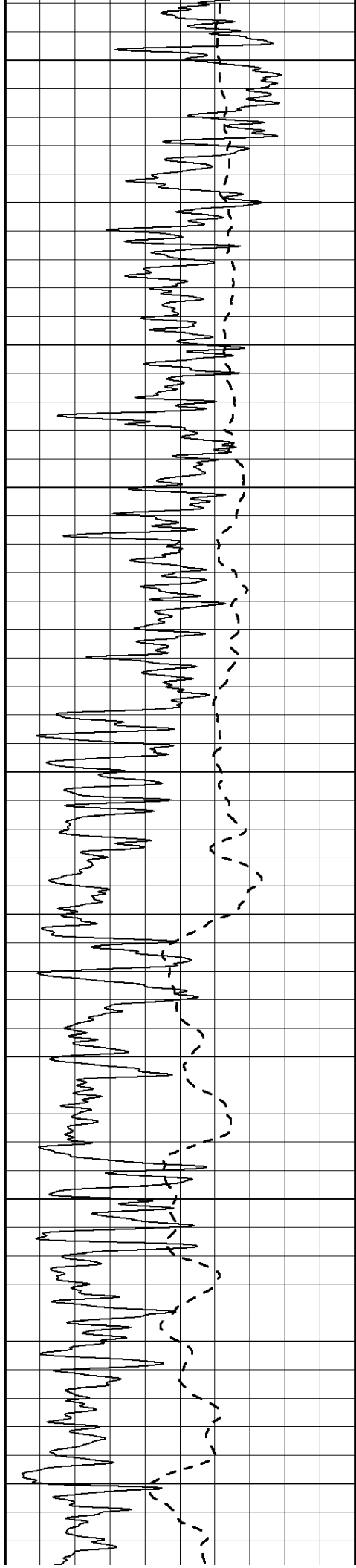
0	RLL3 (Ohm-m)	50
0	RILD (Ohm-m)	50

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







1000

1050

1100

1150

1200

1250

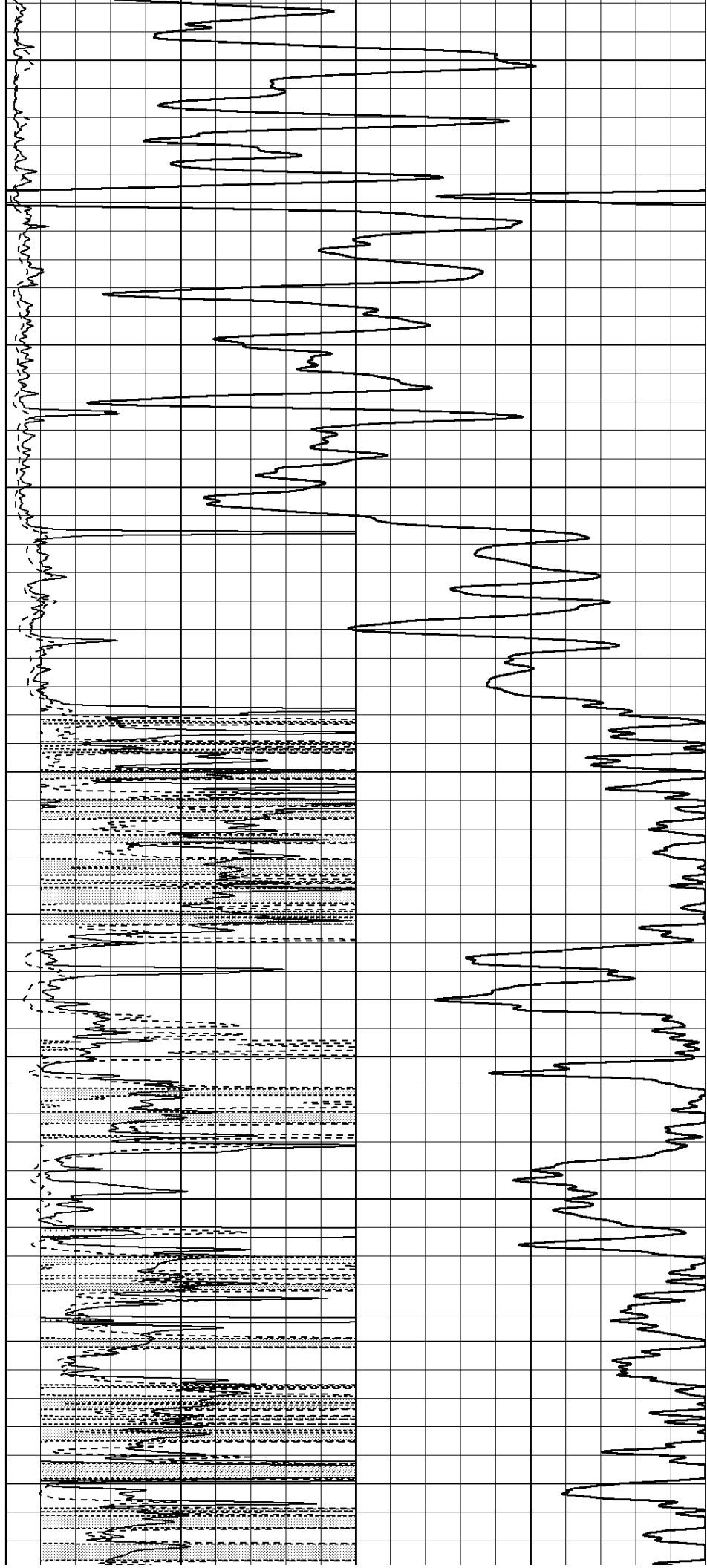
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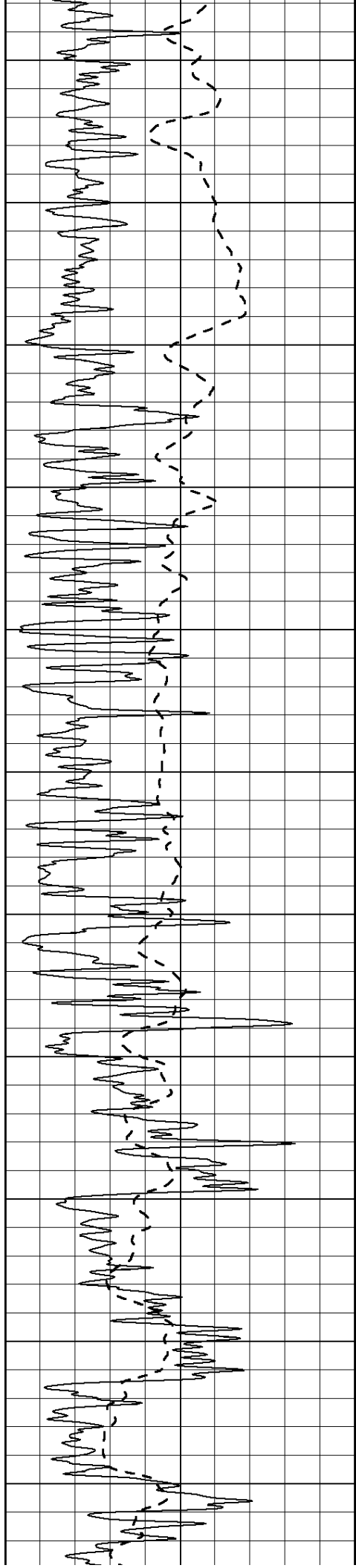
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1400

1450

1500





1550

1600

1650

1700

1750

1800

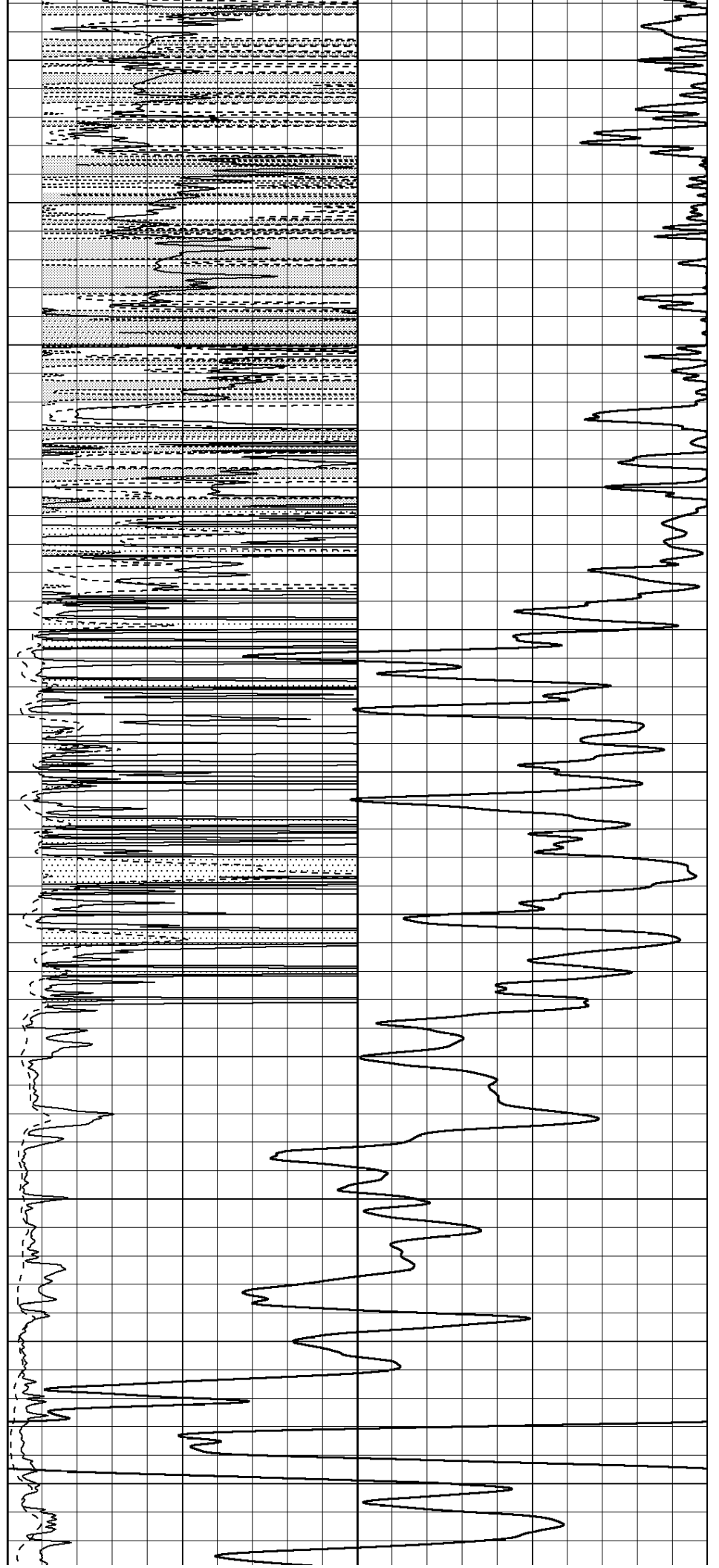
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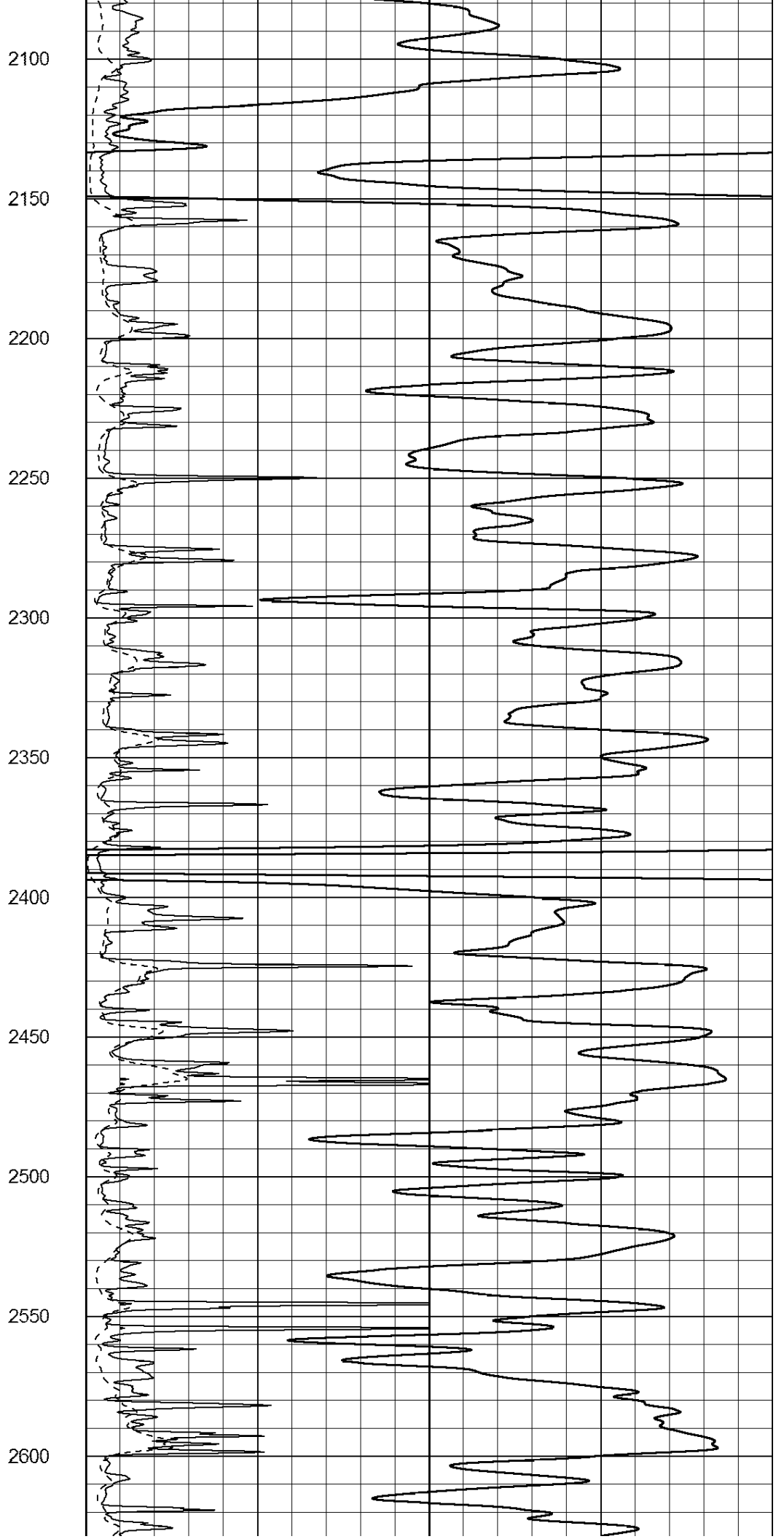
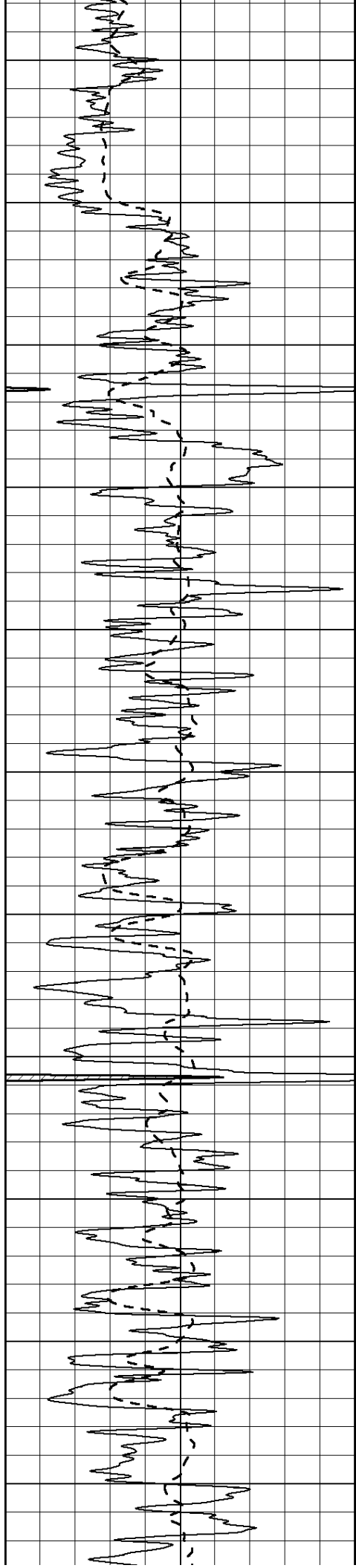
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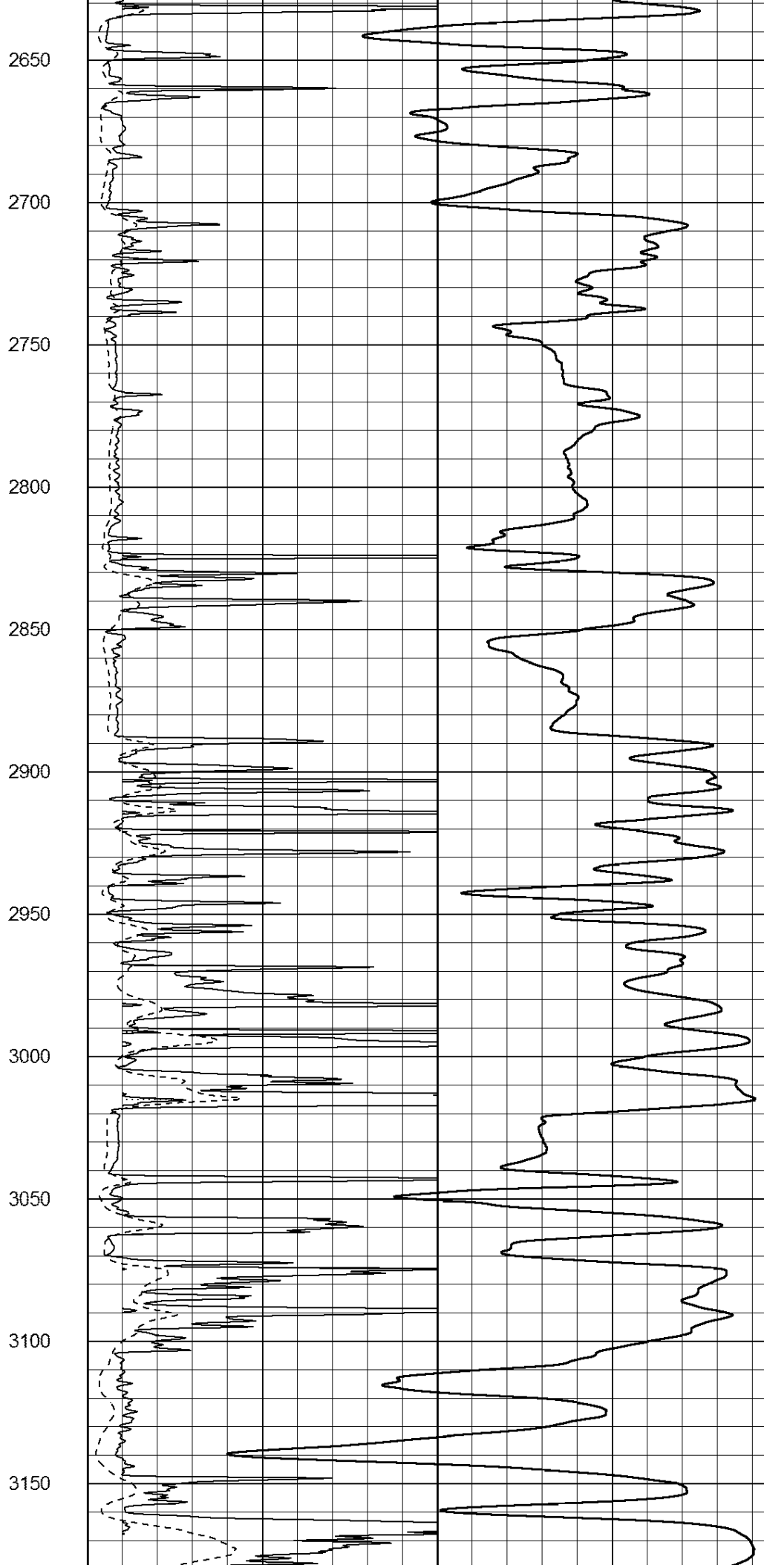
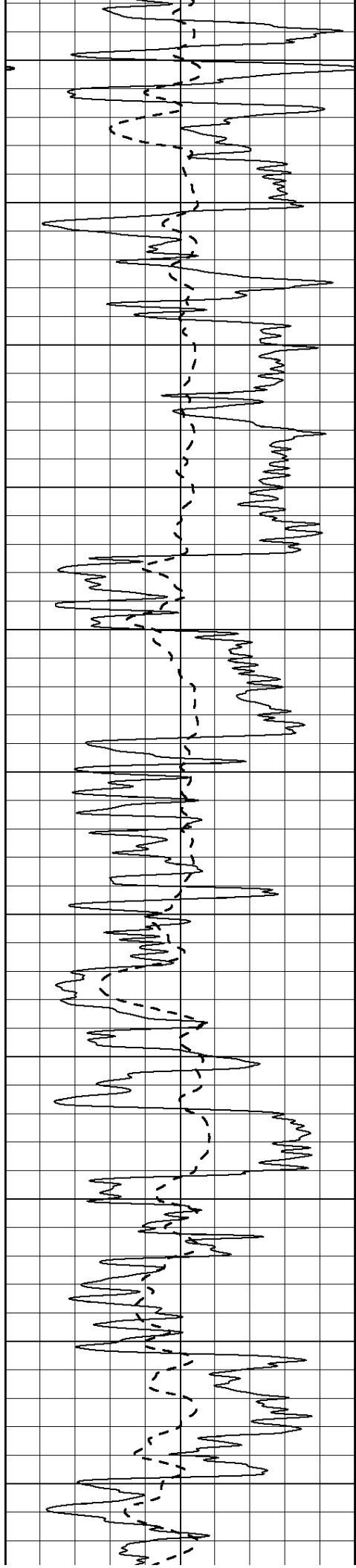
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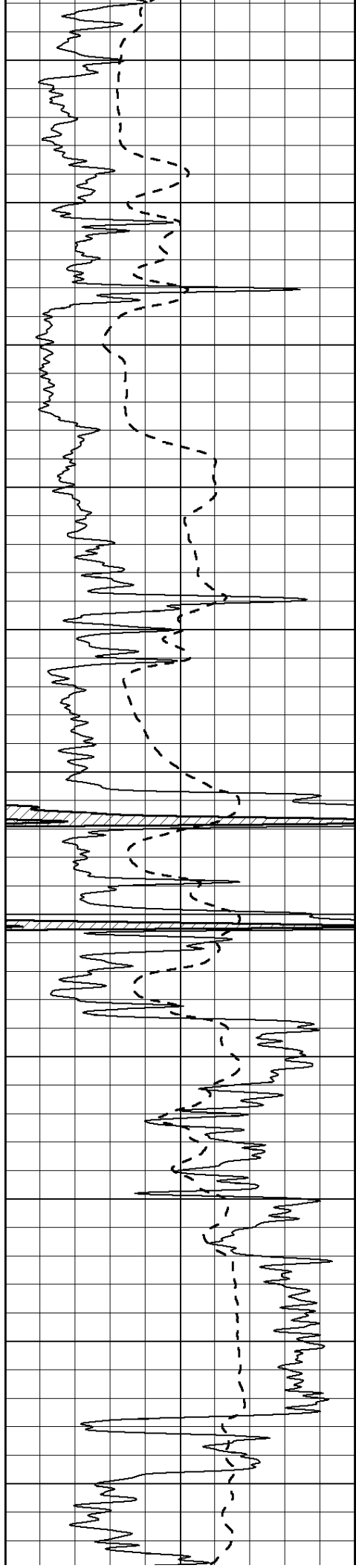
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2050









3200

3250

3300

3350

3400

3450

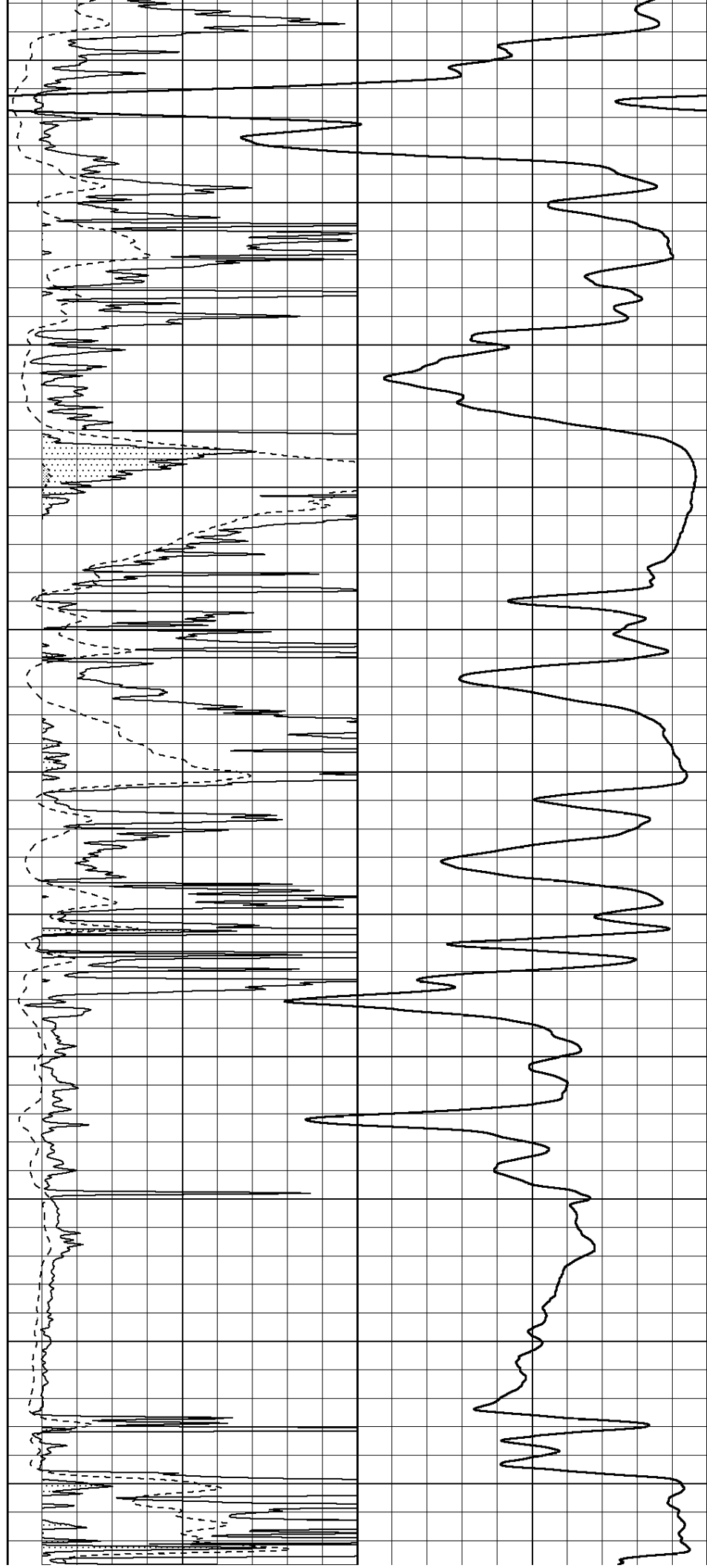
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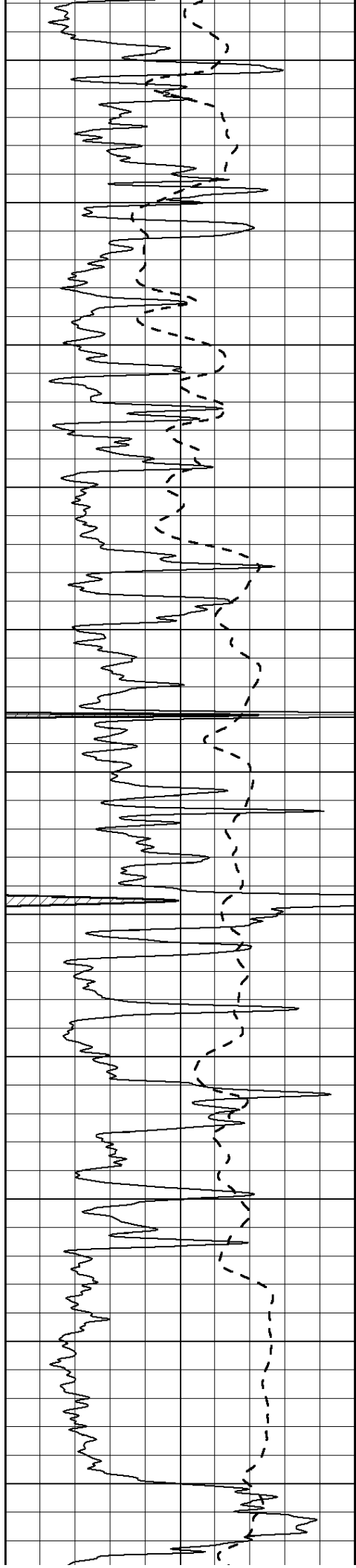
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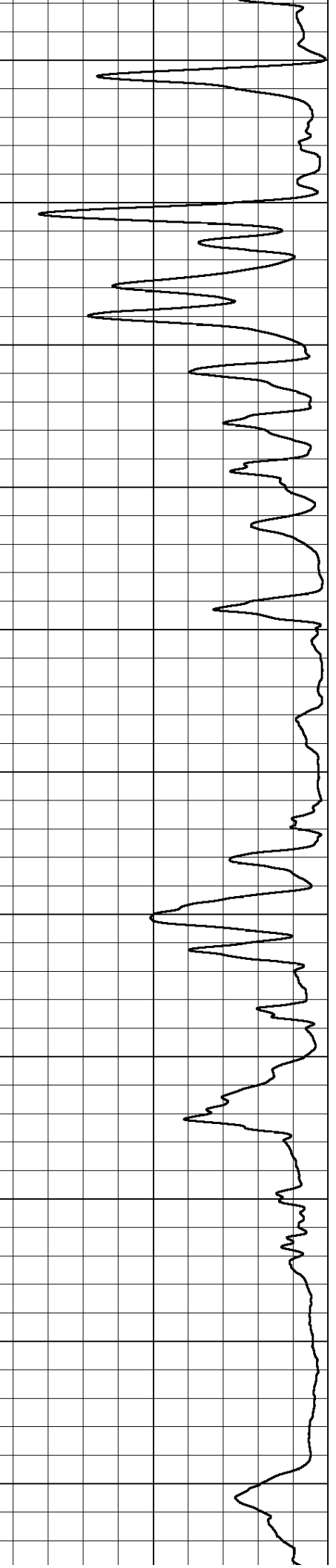
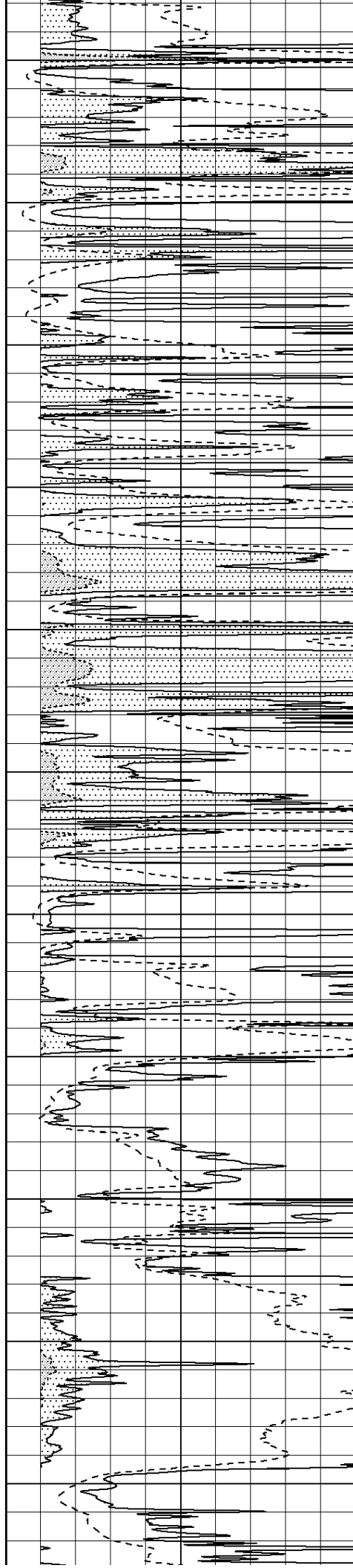
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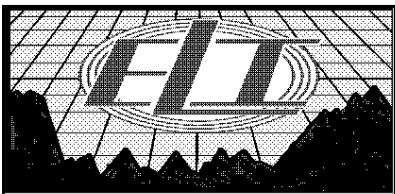
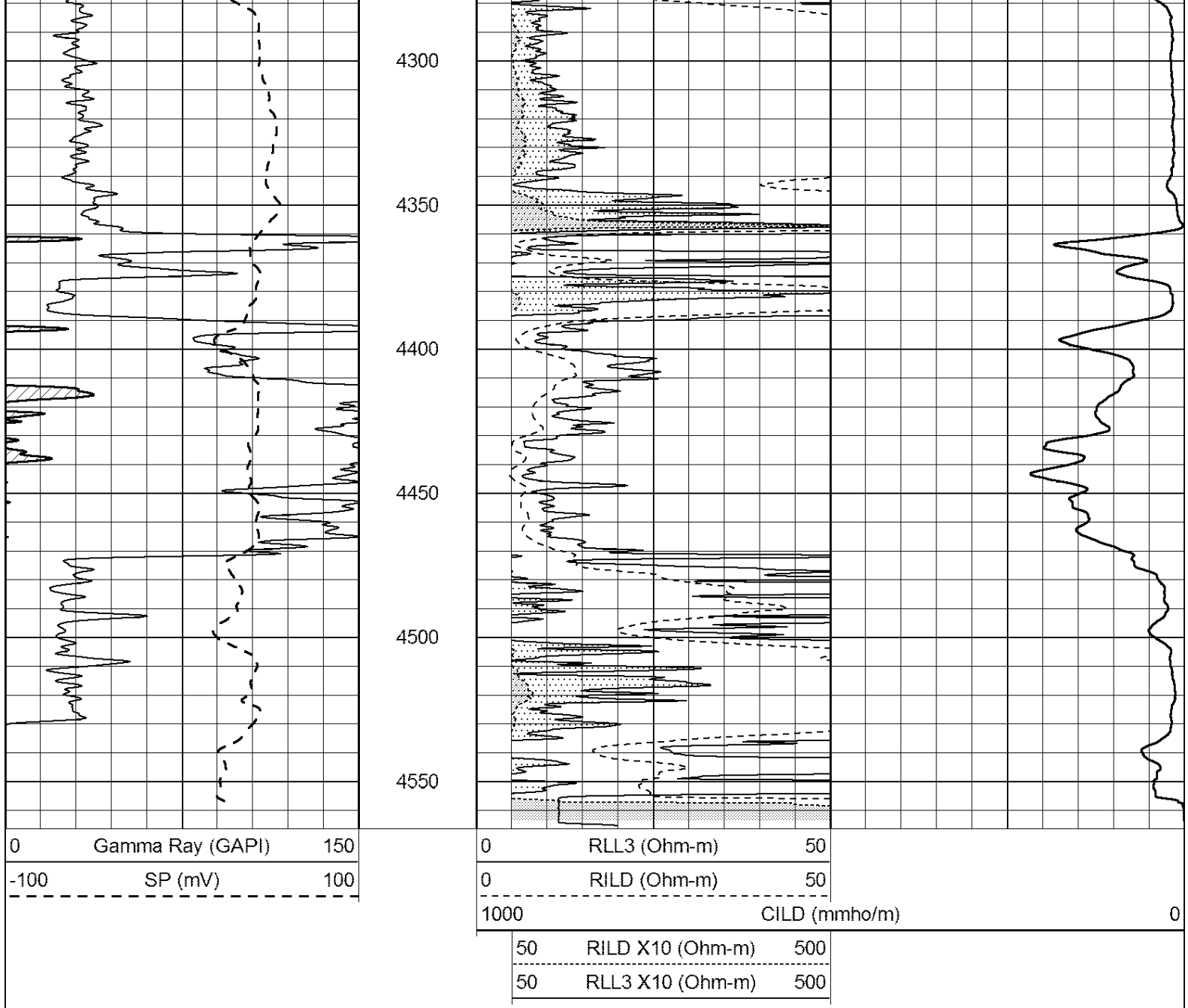
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3750
3800
3850
3900
3950
4000
4050
4100
4150
4200
4250

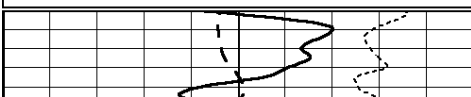




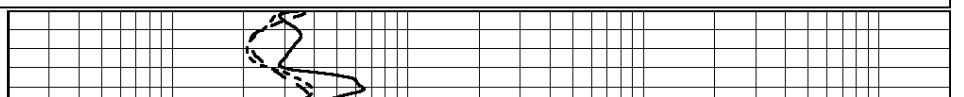
MAIN PASS

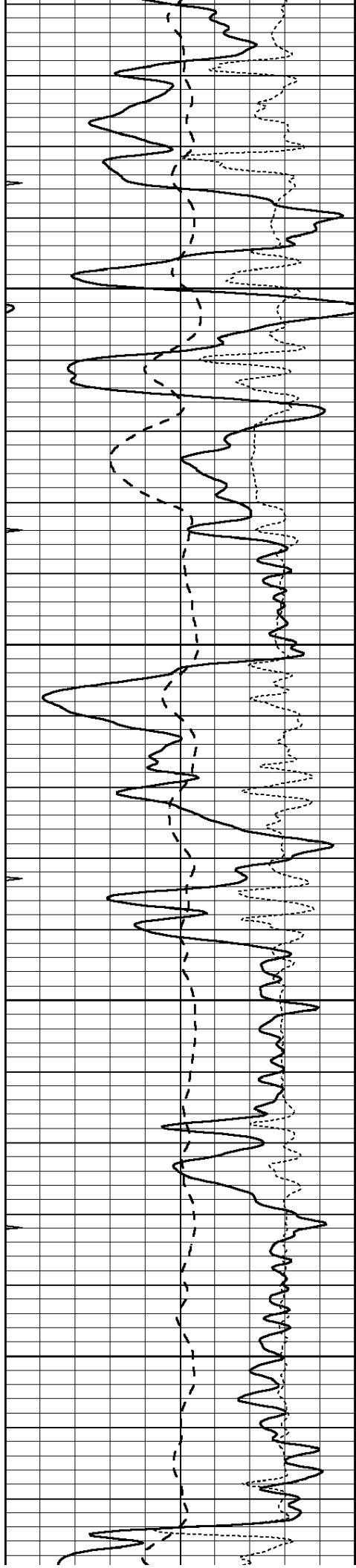
Database File: 2102ddn.db
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 Charted by: Depth in Feet scaled 1:240

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">0</td> <td style="width: 85%;">GAMMA RAY (GAPI)</td> <td style="width: 10%; text-align: right;">150</td> </tr> <tr> <td style="text-align: center;">-100</td> <td>SP (mV)</td> <td style="text-align: right;">100</td> </tr> <tr> <td style="text-align: center;">-250</td> <td>Rxo/Rt</td> <td style="text-align: right;">50</td> </tr> <tr> <td style="text-align: center;">0</td> <td>MINMK</td> <td style="text-align: right;">20</td> </tr> </table>	0	GAMMA RAY (GAPI)	150	-100	SP (mV)	100	-250	Rxo/Rt	50	0	MINMK	20	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">0.2</td> <td style="width: 85%;">SHALLOW GUARD (Ohm-m)</td> <td style="width: 10%; text-align: right;">2000</td> </tr> <tr> <td style="text-align: center;">0.2</td> <td>DEEP INDUCTION (Ohm-m)</td> <td style="text-align: right;">2000</td> </tr> <tr> <td style="text-align: center;">0.2</td> <td>MEDIUM INDUCTION (Ohm-m)</td> <td style="text-align: right;">2000</td> </tr> </table>	0.2	SHALLOW GUARD (Ohm-m)	2000	0.2	DEEP INDUCTION (Ohm-m)	2000	0.2	MEDIUM INDUCTION (Ohm-m)	2000
0	GAMMA RAY (GAPI)	150																				
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0.2	MEDIUM INDUCTION (Ohm-m)	2000																				



2000



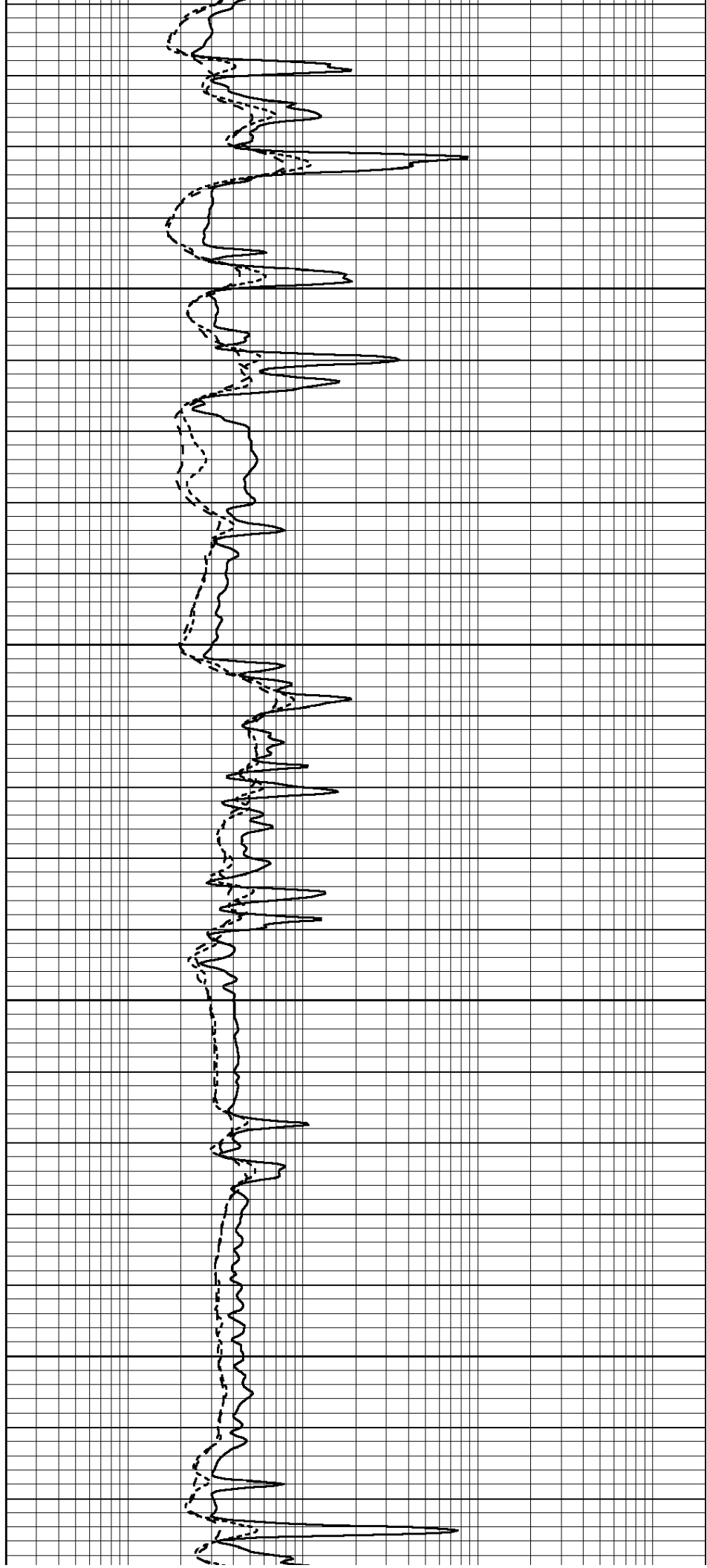


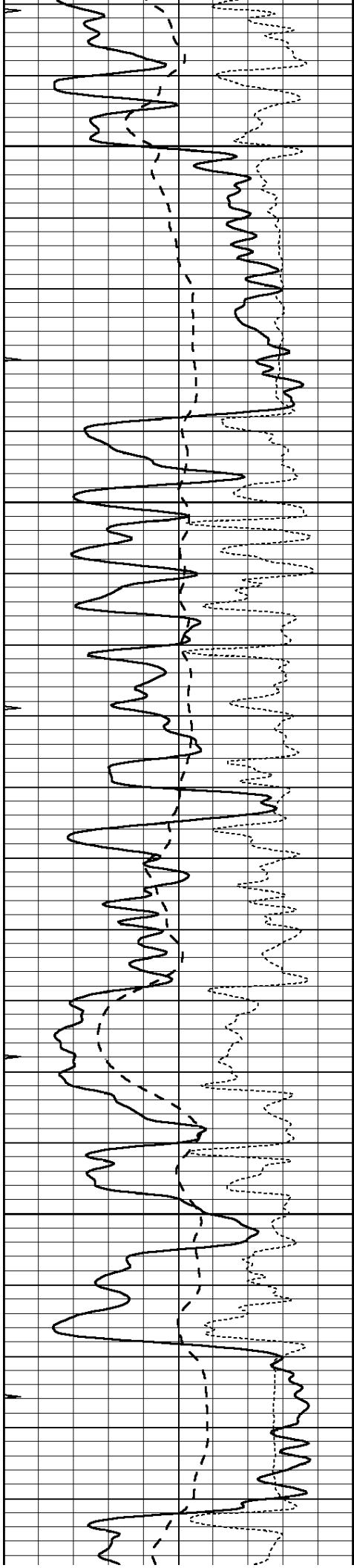
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2700

2750

2800





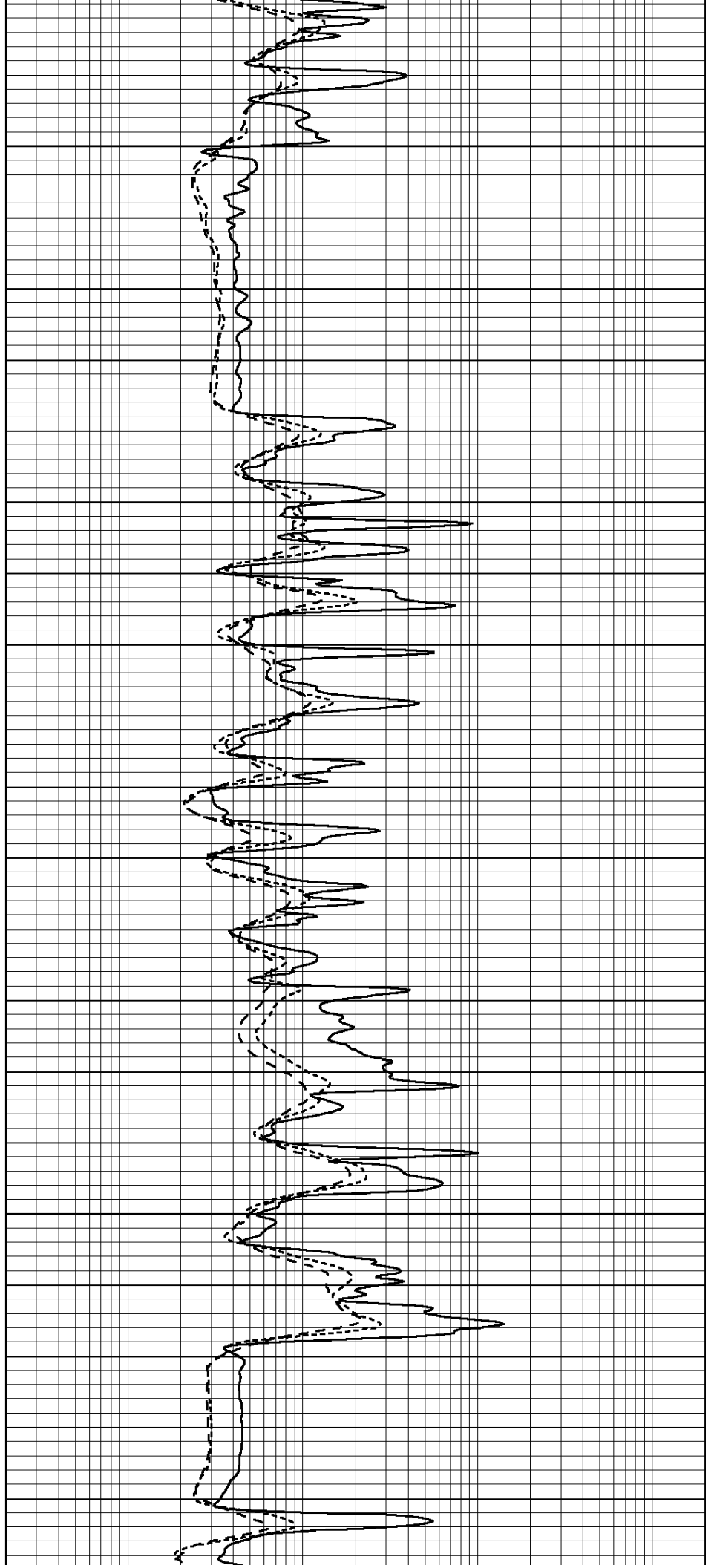
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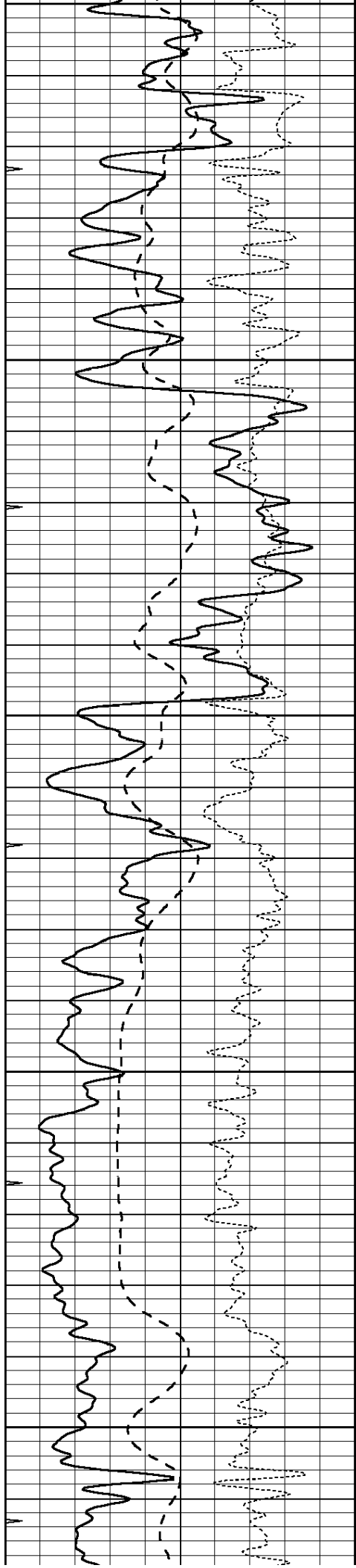
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2950

3000

3050





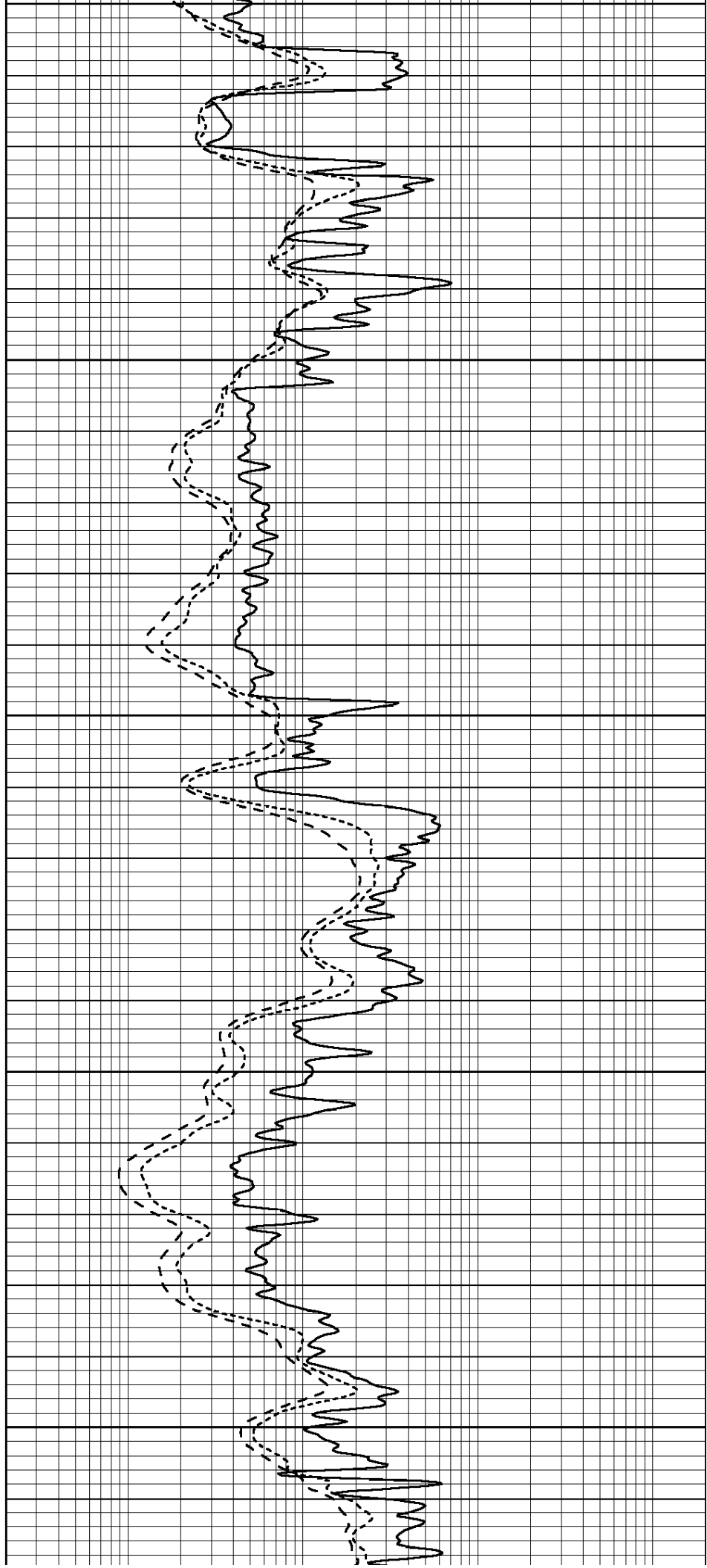
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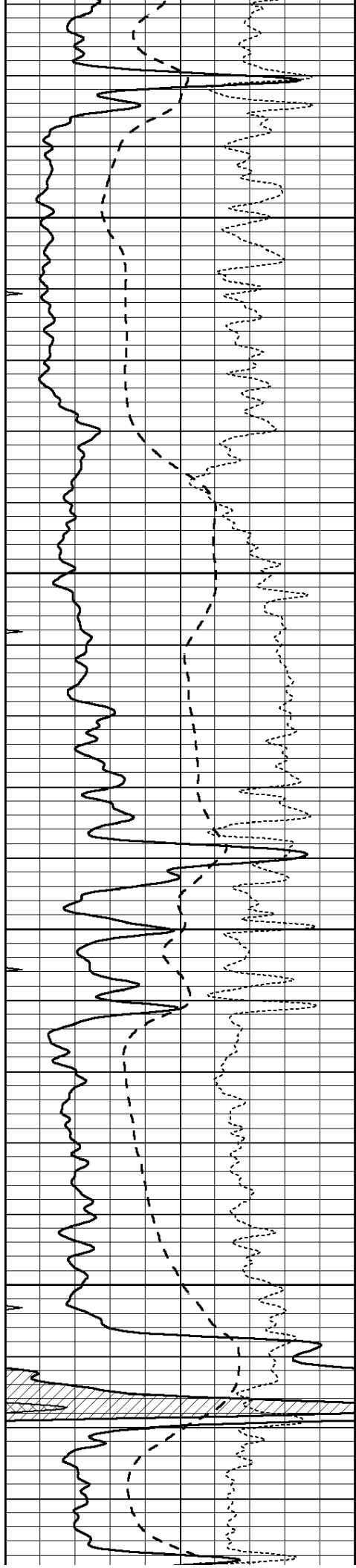
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3150

3200

3250



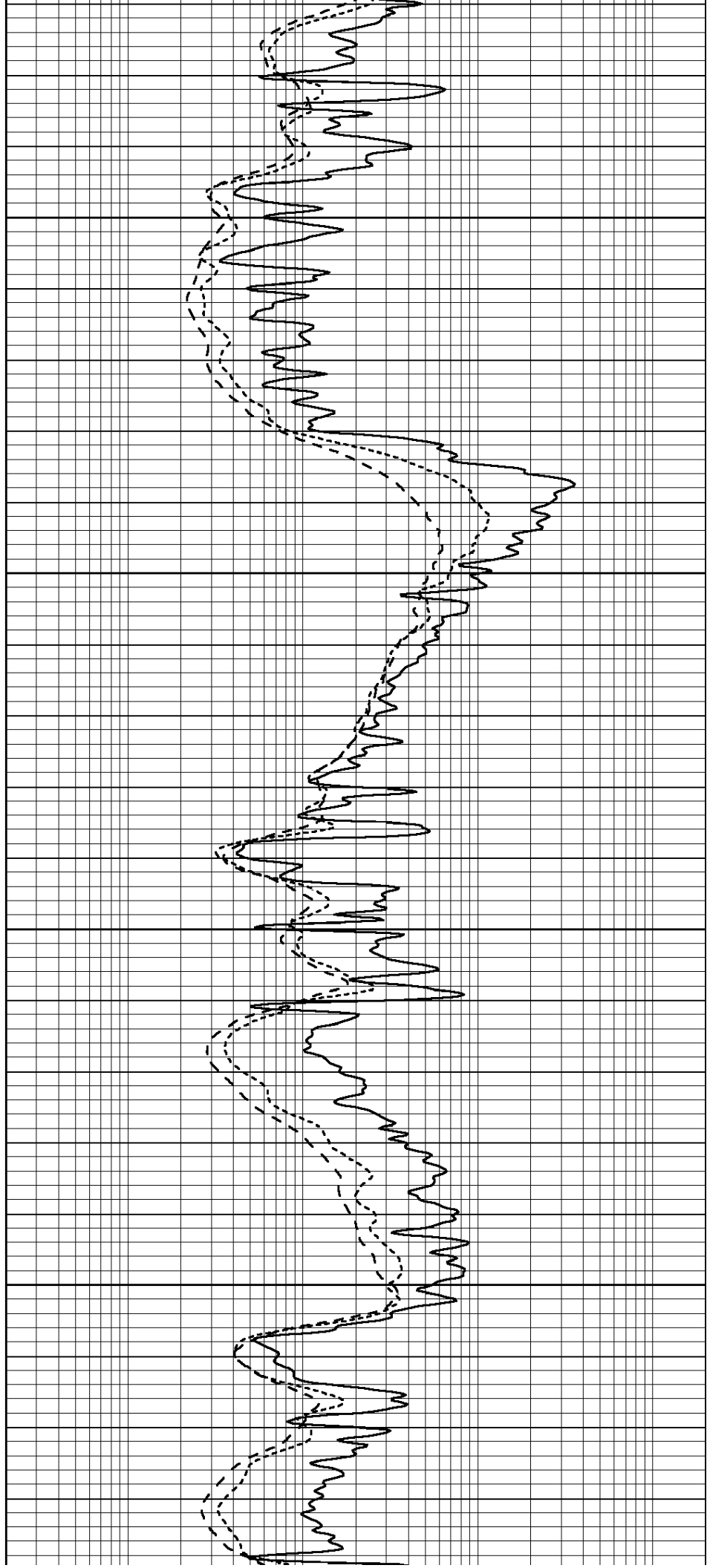


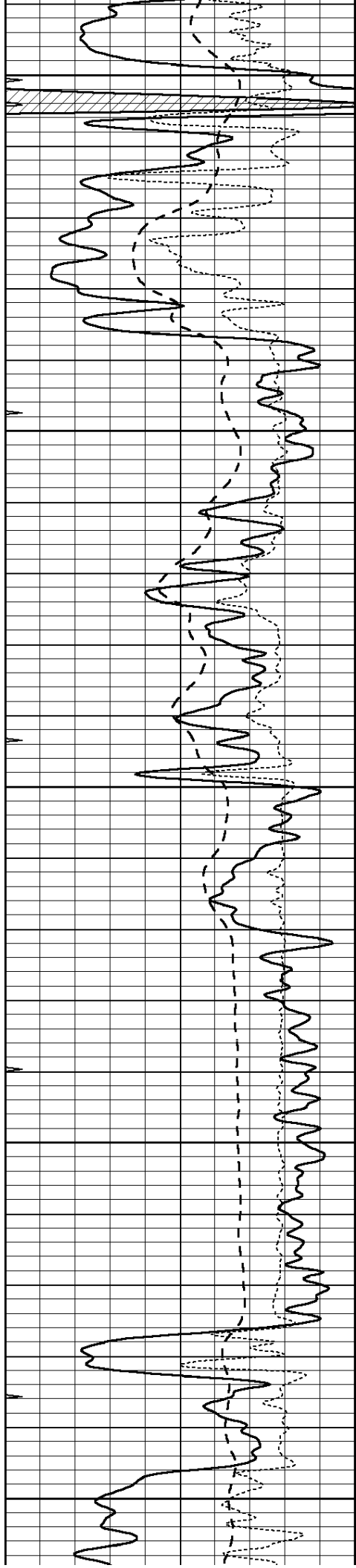
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3400

3450





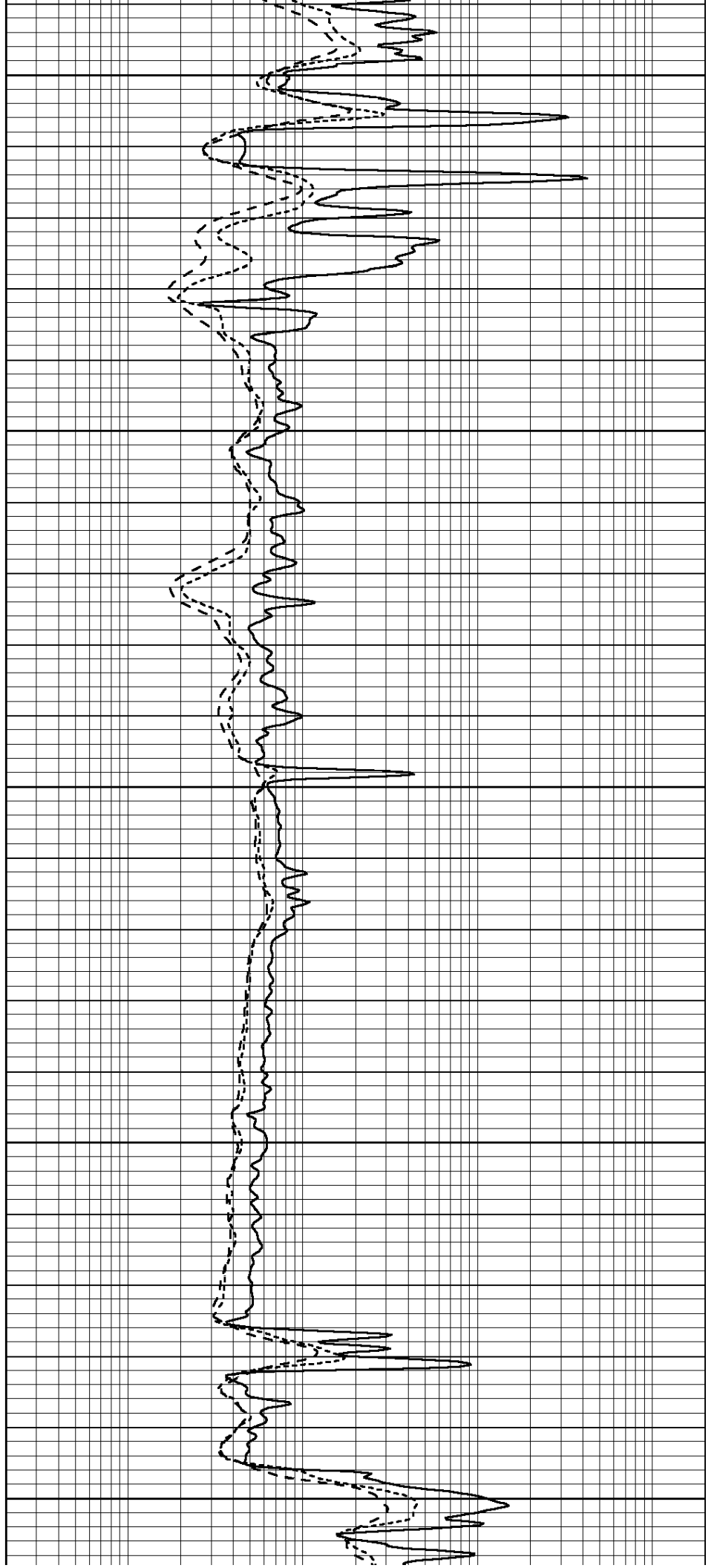
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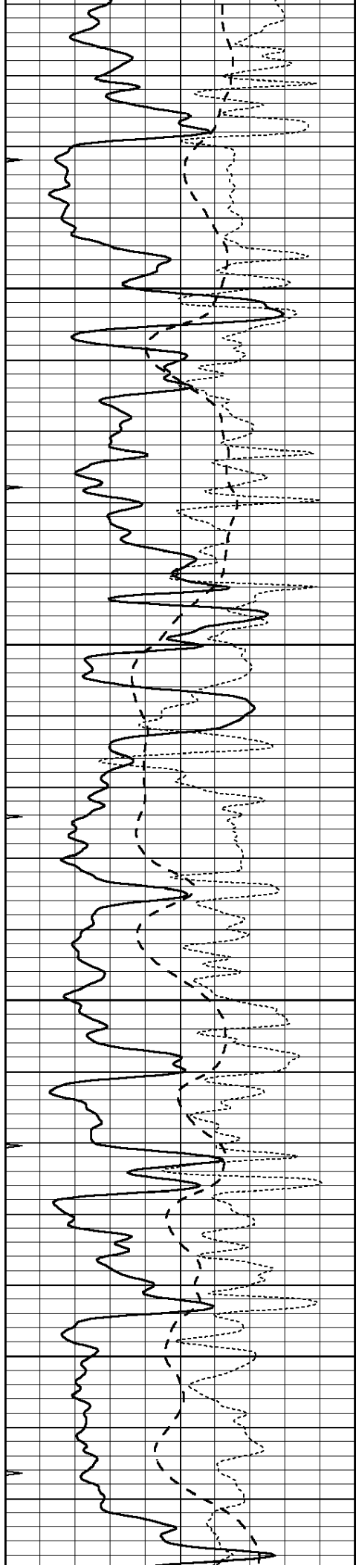
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3700



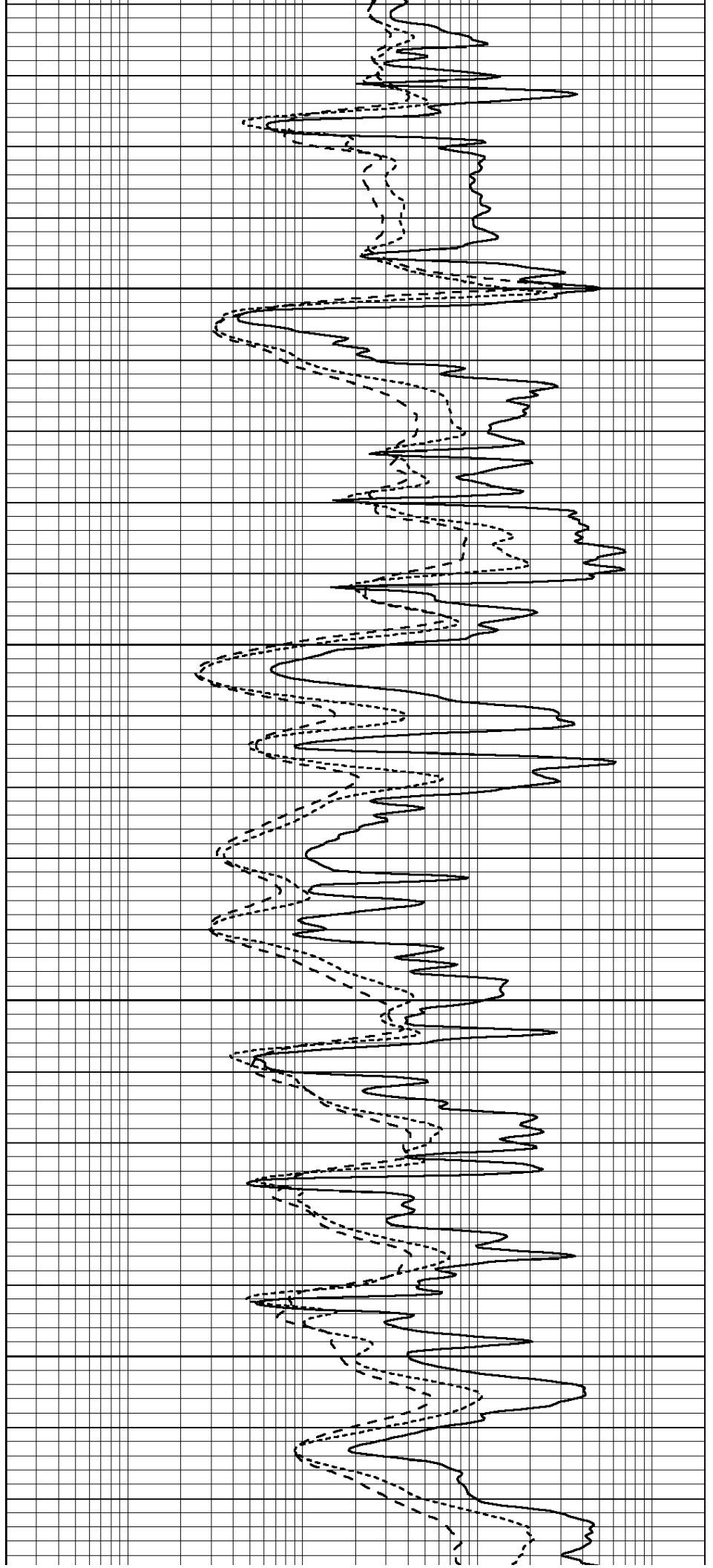


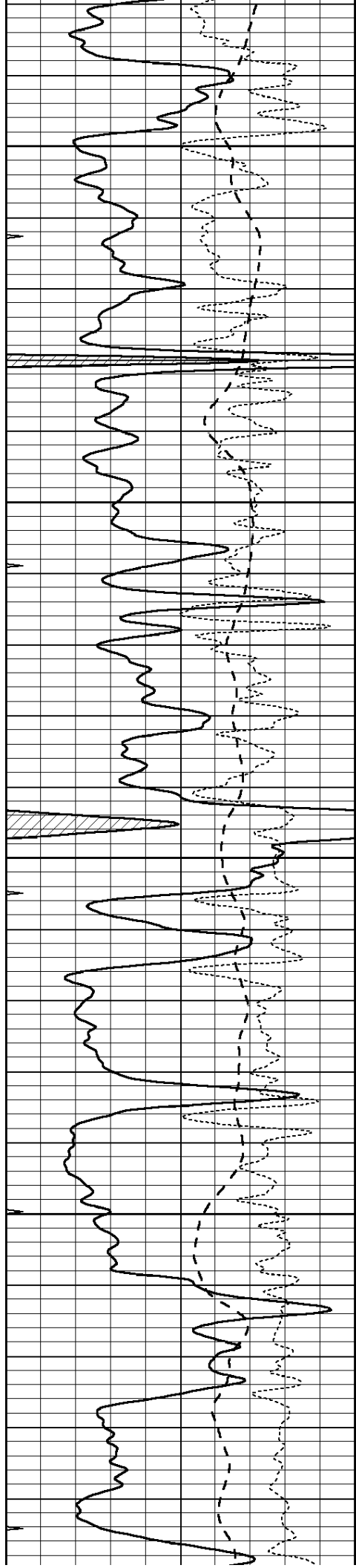
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3900





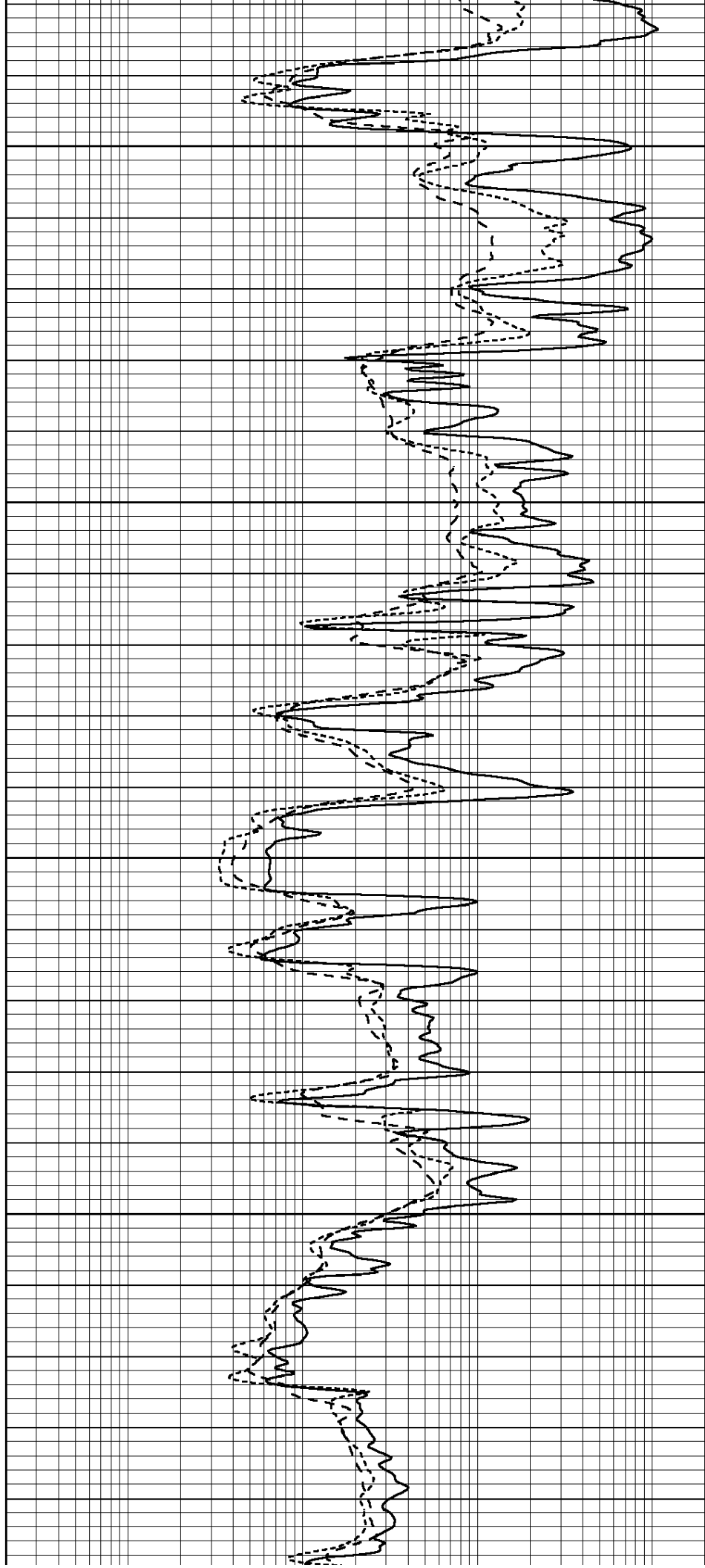
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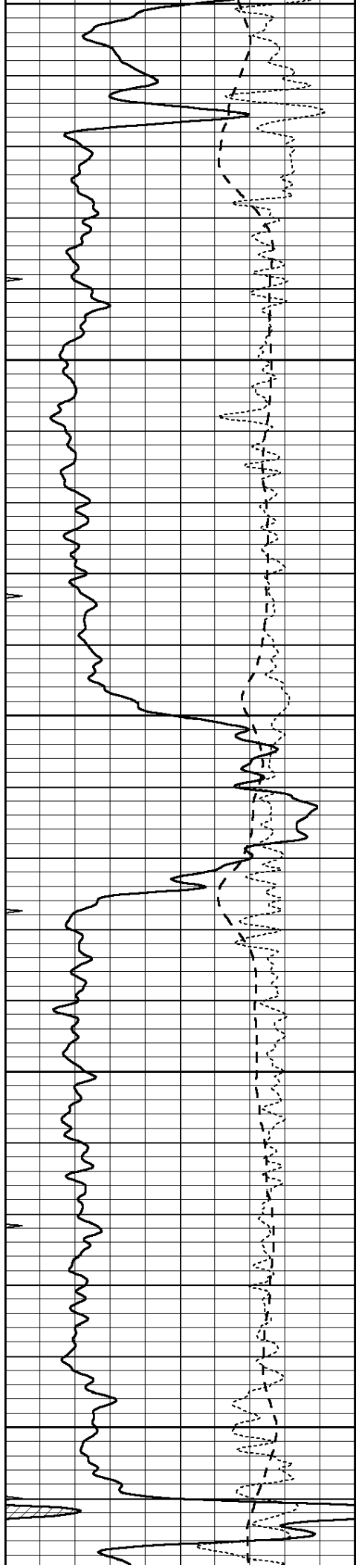
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4050

4100

4150





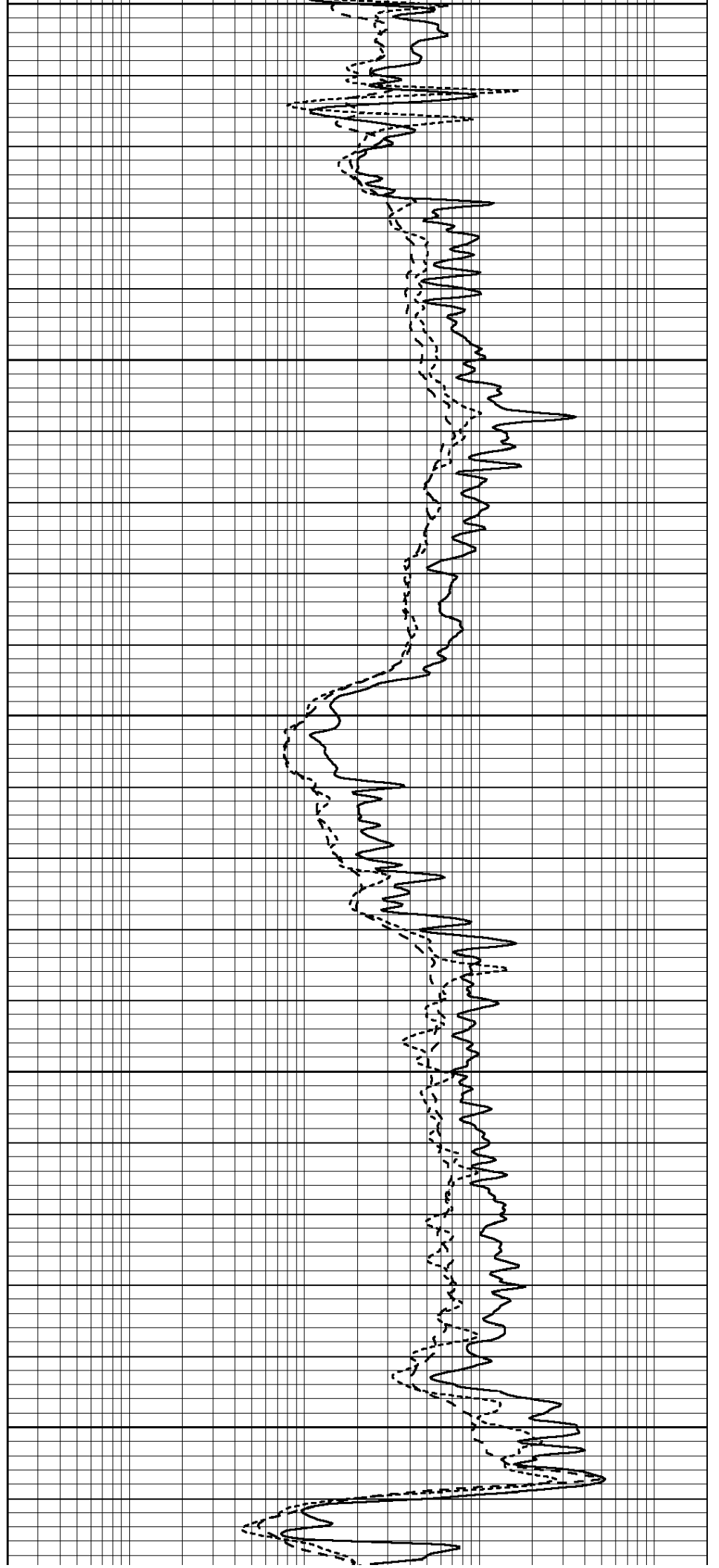
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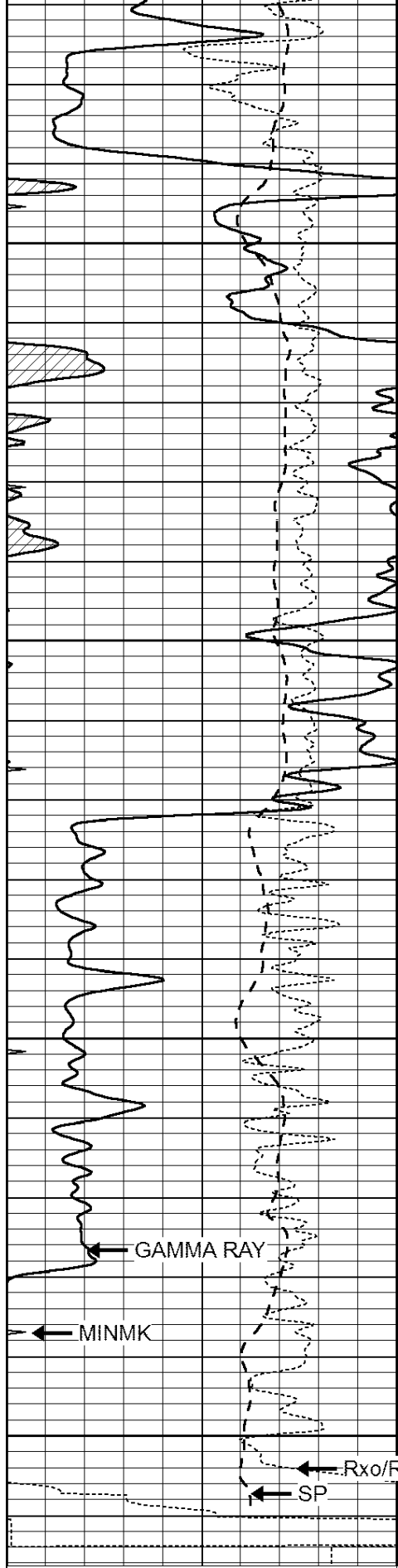
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4250

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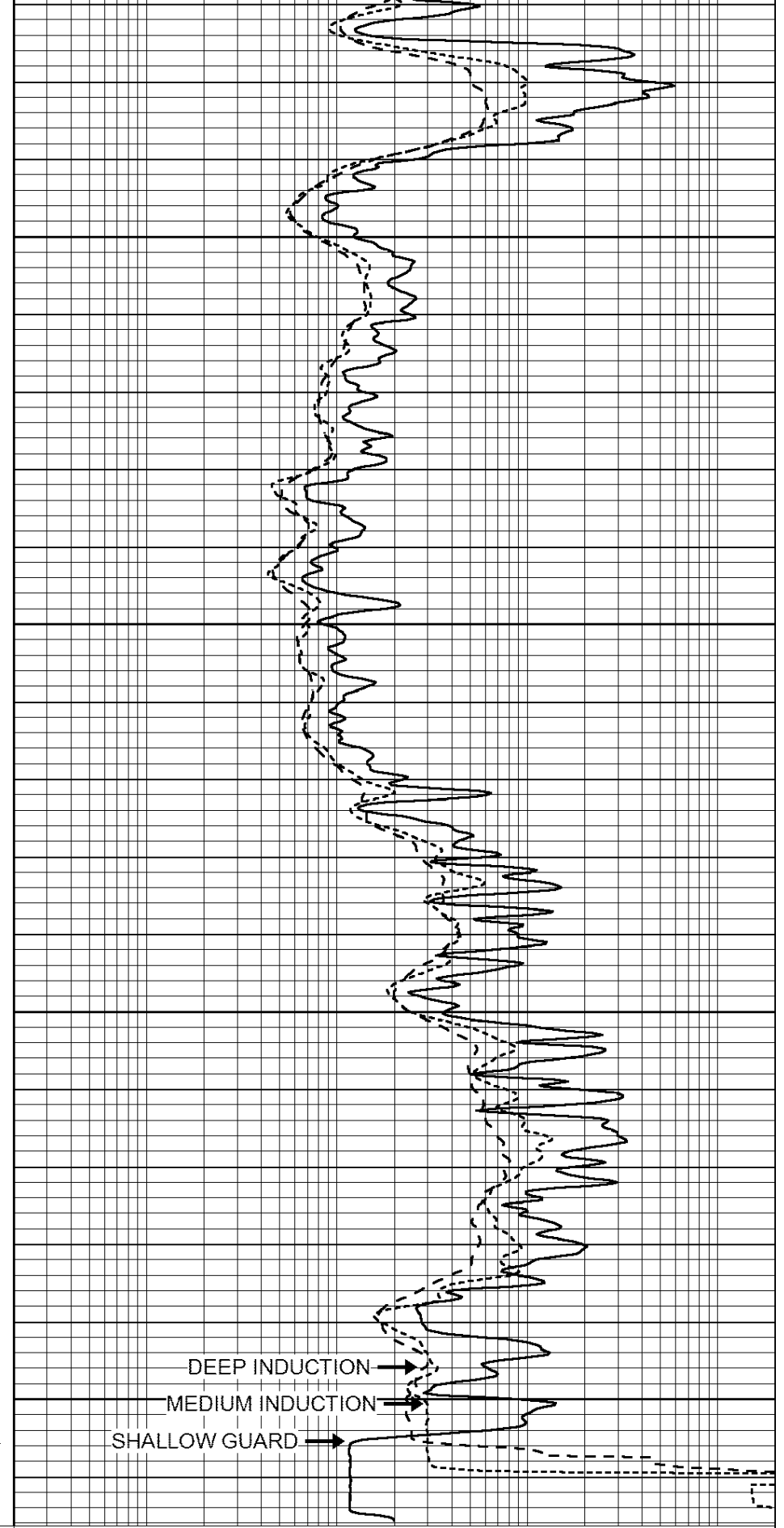
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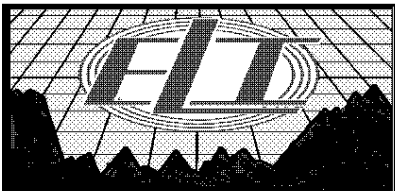


0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

4400
 4450
 4500
 4550
 LTD 4557



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

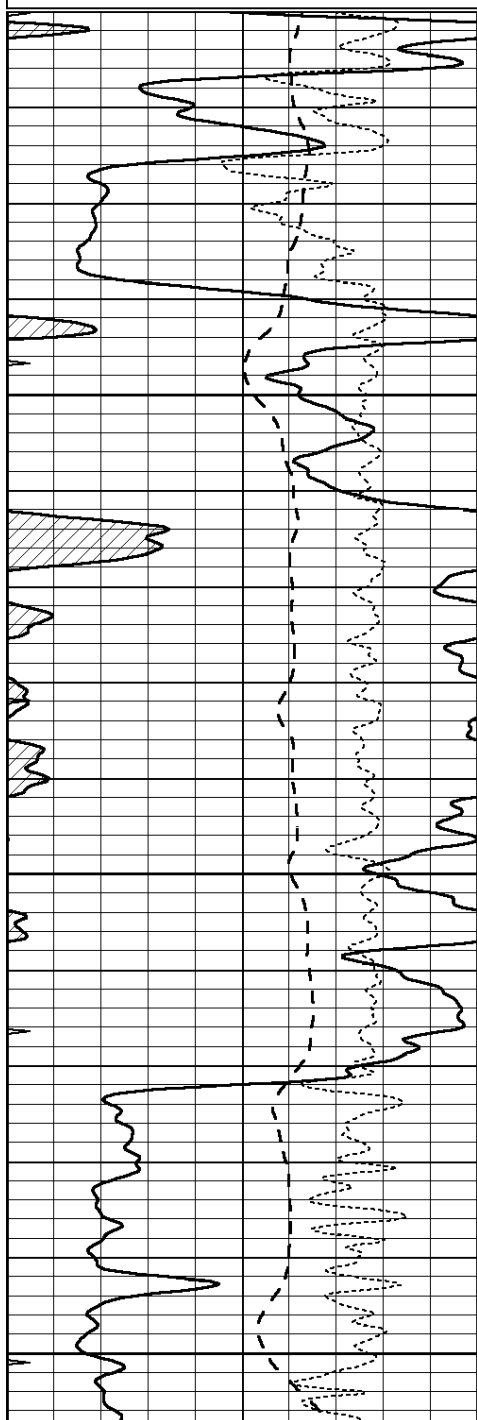


REPEAT SECTION

Database File: 2102ddn.db
Dataset Pathname: pass4.1
Presentation Format: _dil
Dataset Creation: Mon Oct 16 06:29:26 2017 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

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-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

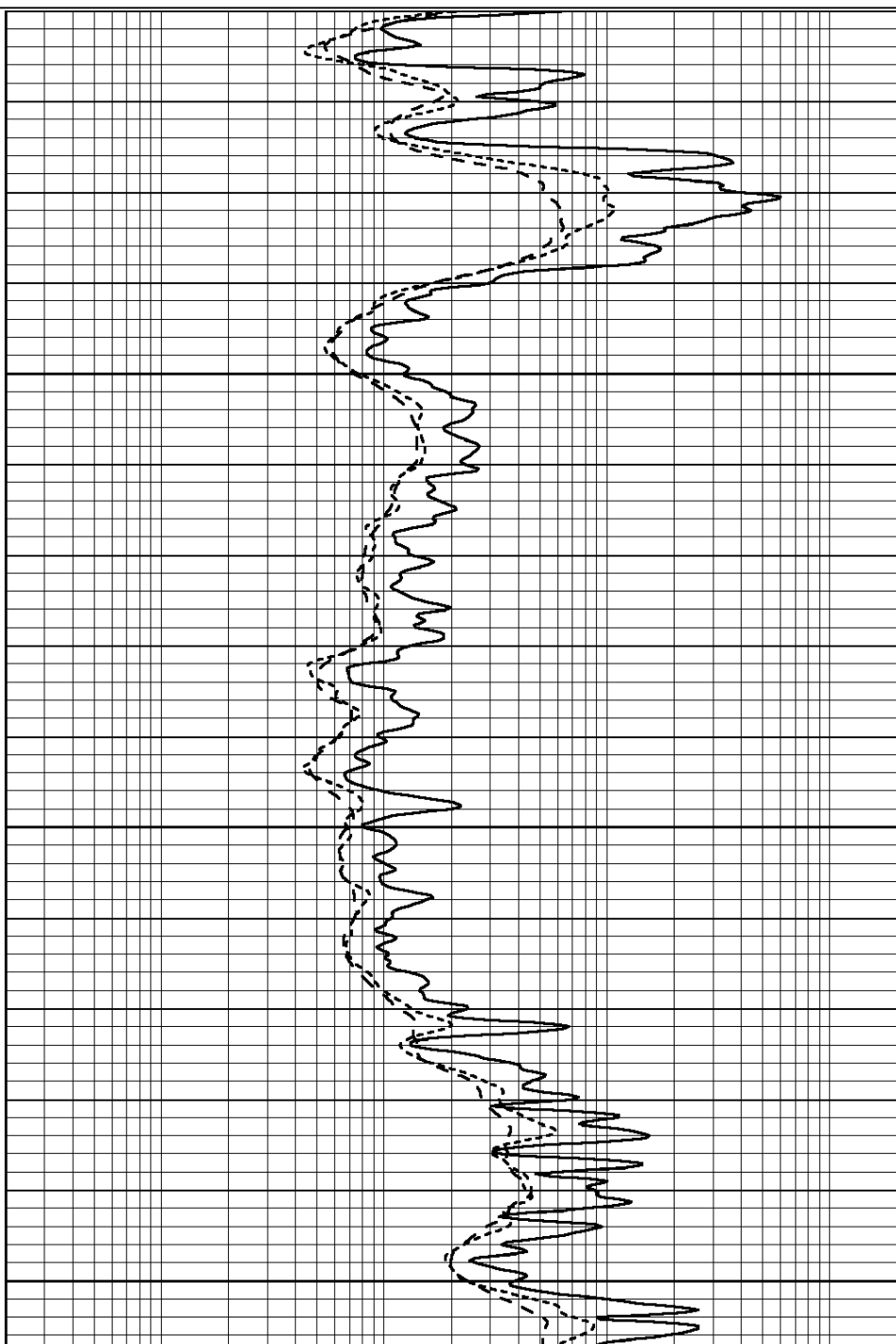
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0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

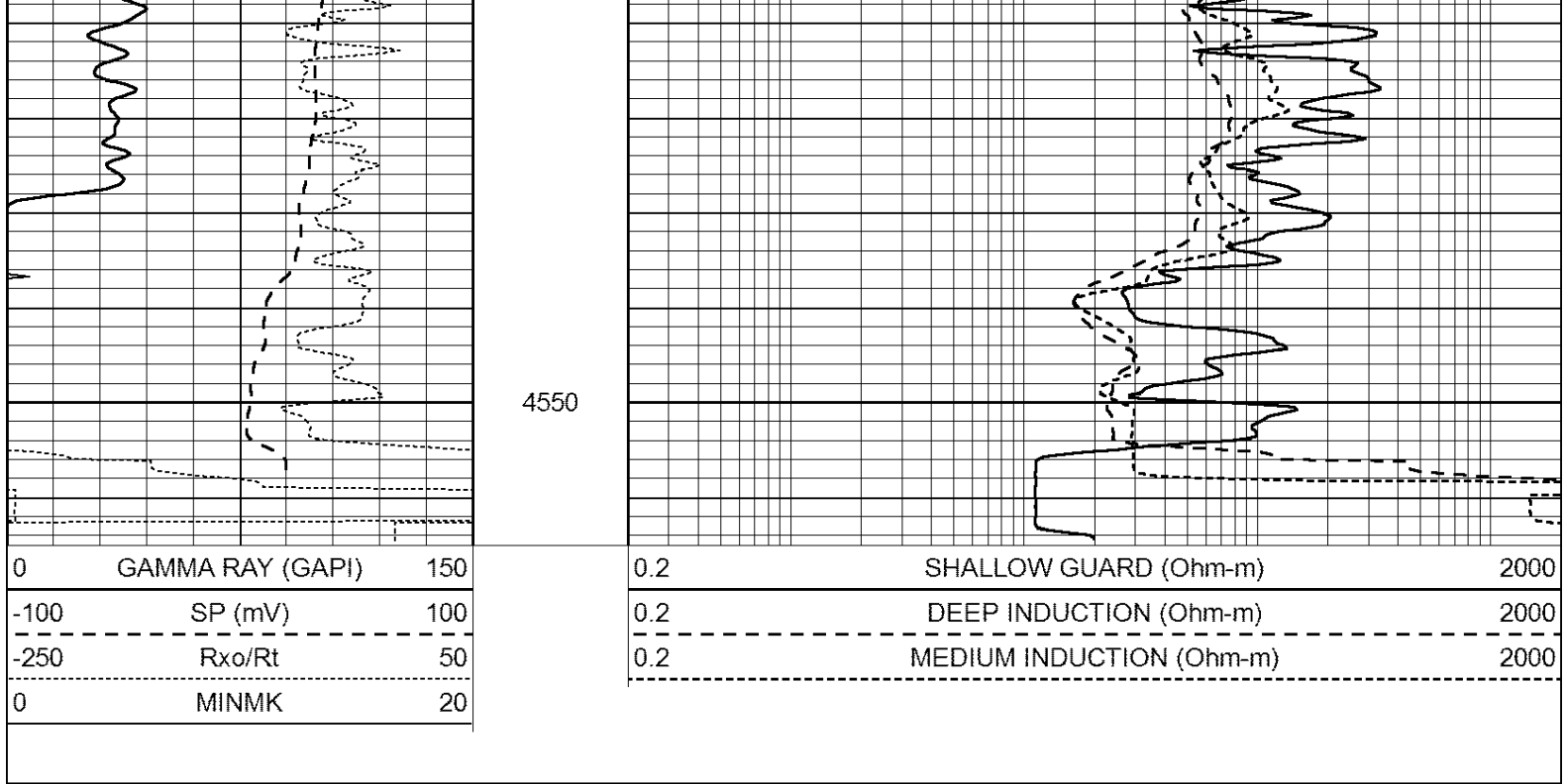


4400

4450

4500





Calibration Report

Database File: 2102ddn.db
 Dataset Pathname: pass4.1
 Dataset Creation: Mon Oct 16 06:29:26 2017 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
 Surface Cal Performed: Mon Aug 21 11:58:18 2017
 Downhole Cal Performed: Mon Aug 21 11:58:21 2017
 After Survey Verification Performed: Mon Aug 21 11:58:23 2017

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	0.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-12.000
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'
	0.000	0.000		0.000	0.000		0.000	0.000

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:	GEAR2-GEARHART
Source / Verifier:	147 / 147
Master Calibration Performed:	Mon Feb 27 11:48:36 2017
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration

	Density		Far Detector	Near Detector	
Magnesium	1.710	g/cc	883.65	277.53	cps
Aluminum	2.590	g/cc	194.33	190.52	cps
Spine Angle = 76.05			Density/Spine Ratio = 0.564		
	Size		Reading		
Small Ring	7.00	in	3.51	V	
Large Ring	14.00	in	6.84	V	

Before Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

After Survey Verification

Target	Measured
g/cc	g/cc
g/cc	g/cc
g/cc	g/cc

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 Long Space	cps cps	pu	pu
2)	Short Space Long Space	cps cps	pu	pu
3)	Short Space Long Space	cps cps	pu	pu

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Mon Aug 21 11:59:01 2017	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.5500	GAPI/cps