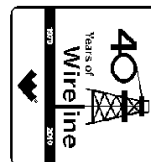




Weatherford

TEMPERATURE LOG

COMPANY **BILL BARRETT CORPORATION**
 WELL **GGU FEDERAL 41A-29-691**
 FIELD **GIBSON GULCH**
 PROVINCE/COUNTY **GARFIELD**
 COUNTRY/STATE **U.S.A. / COLORADO**
 LOCATION **SHL: 1236' FNL & 1279' FEL**
BHL: 1146' FNL & 660' FEL



SEC 29 TWP 6S RGE 91W Other Services
 API Number 05-045-19794
 Permit Number

Permanent Datum G.L., Elevation 6108 feet
 Log Measured From K.B. @ 23 above Permanent Datum
 Drilling Measured From K.B.

Elevations: KB 6141.00
 DF 6140.00
 GL 6108.00

Date	16-JAN-2011	
Run Number	ONE	
Depth Driller	7221.00	feet
Depth Logger		
First Reading	7218.00	feet
Last Reading	200.00	feet
Casing Driller		
Casing Logger		
Bit Size	8.750	inches
Hole Fluid Type	WATER	
Density / Viscosity		
PH / Fluid Loss		
Sample Source		
Rm @ Measured Temp		
Rmf @ Measured Temp		
Rmc @ Measured Temp		
Source Rmf / Rmc	CALC	CALC
Rm @ BHT		
Time Since Circulation		
Max Recorded Temp	167.00	deg F
Equipment Name	COMPACT	
Equipment / Base	13037	RS SPR
Recorded By	J. PAULSON	
Witnessed By	J. BOYD	

BOREHOLE RECORD

Last Edited: 16-JAN-2011 15:04

Bit Size inches	Depth From feet	Depth To feet
8.750	804.00	7221.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	9.625	0.00	804.00	36.00

REMARKS

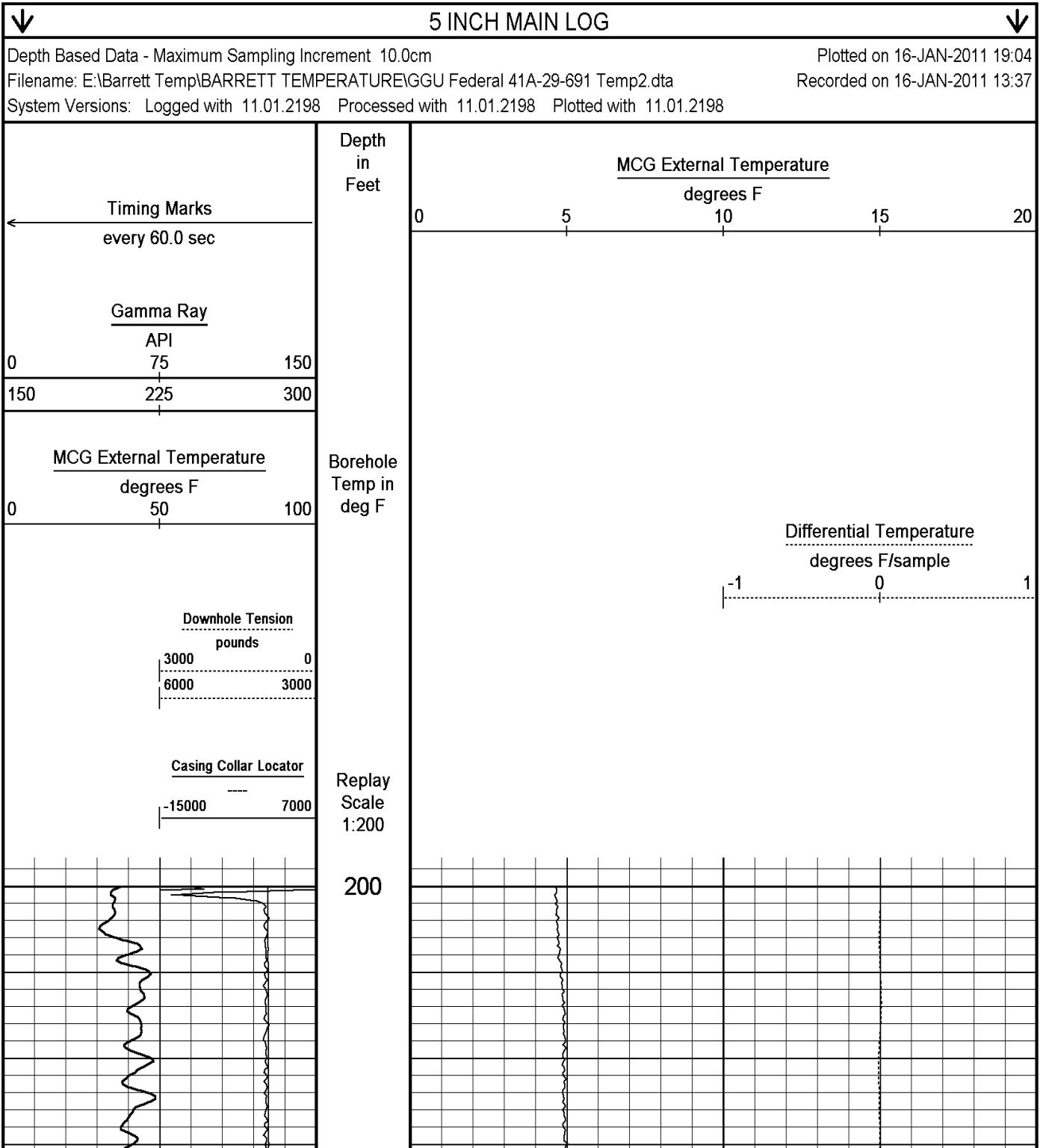
TOP OF CEMENT IS APPROXIMATELY 2360 FEET.
 4.5 INCH PRODUCTION CASING.
 CASED HOLE TEMPERATURE LOG WAS LOGGED WITH SHA, MCG AND MAI.
 ALL INTERVALS LOGGED AND SCALED PER CUSTOMER REQUEST.
 ENGINEER: J. PAULSON
 OPERATORS: B. BECK, C. FINSTAD

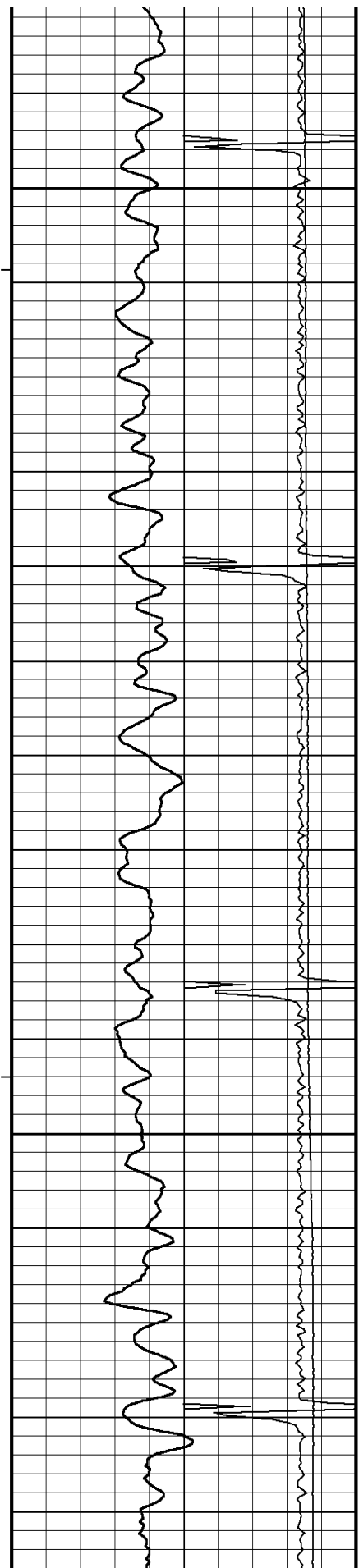
OPERATORS: D. F. LOR, C. F. INSTAD

RIG: PATTERSON 307

SERVICE ORDER #3526689

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 interpretations, and we shall not, except in the case of gross or wilful 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 in our price schedule.





85°

250

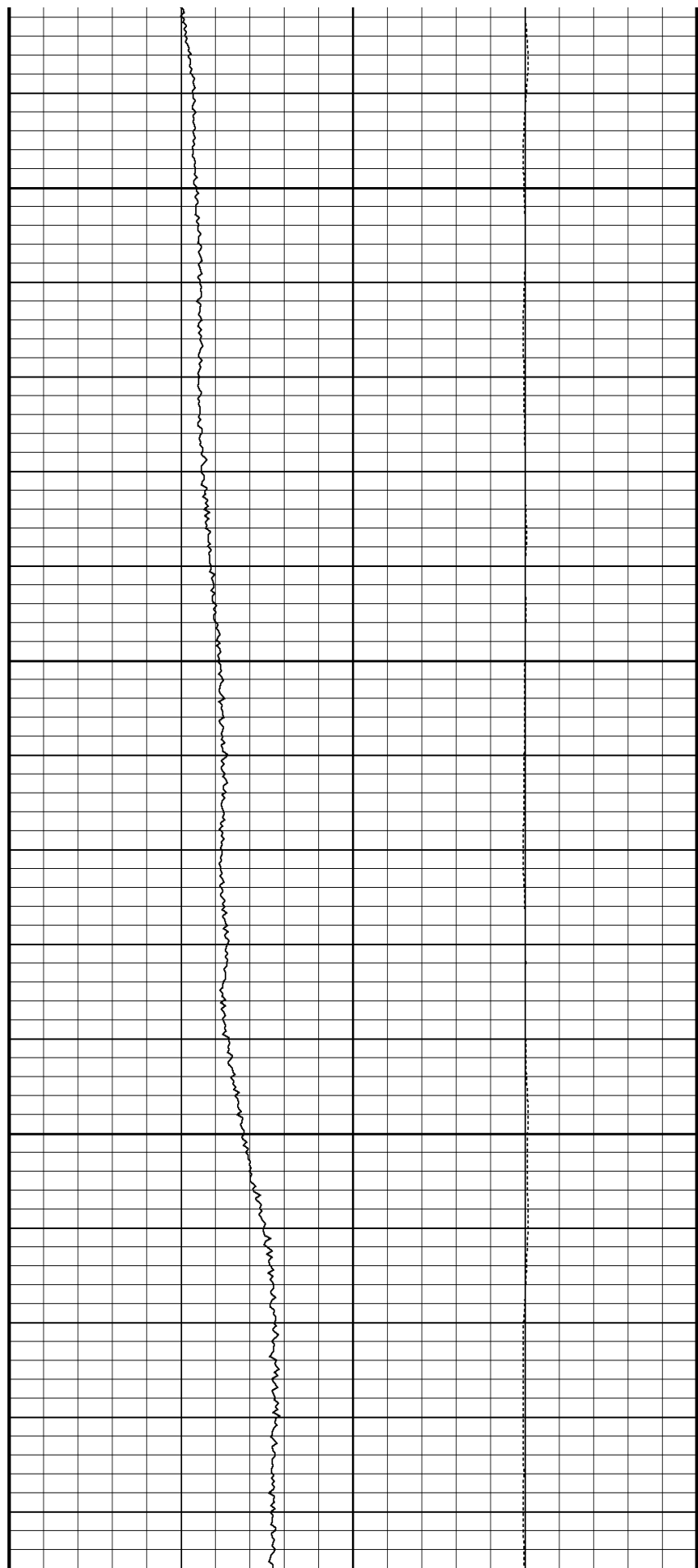
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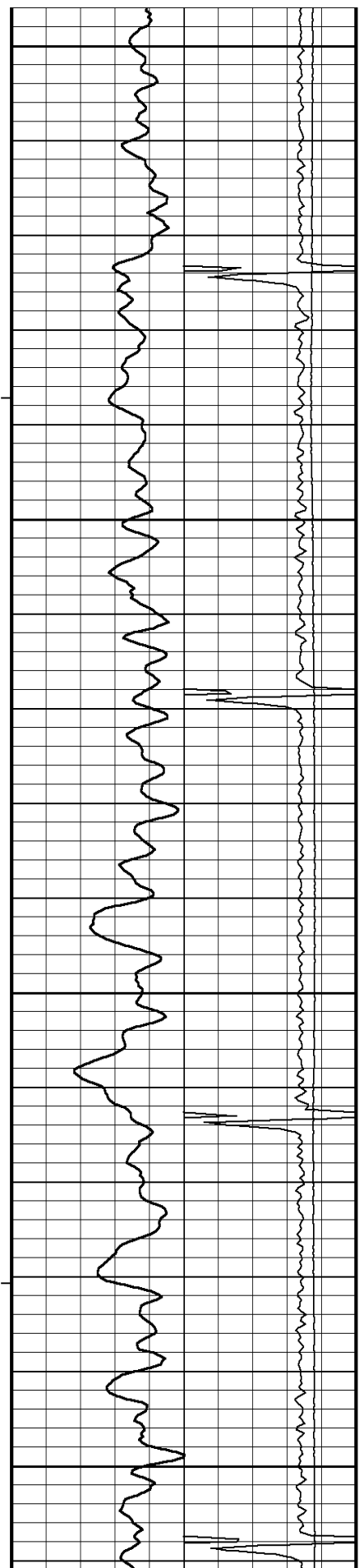
300

86°

350

88°





400

87°

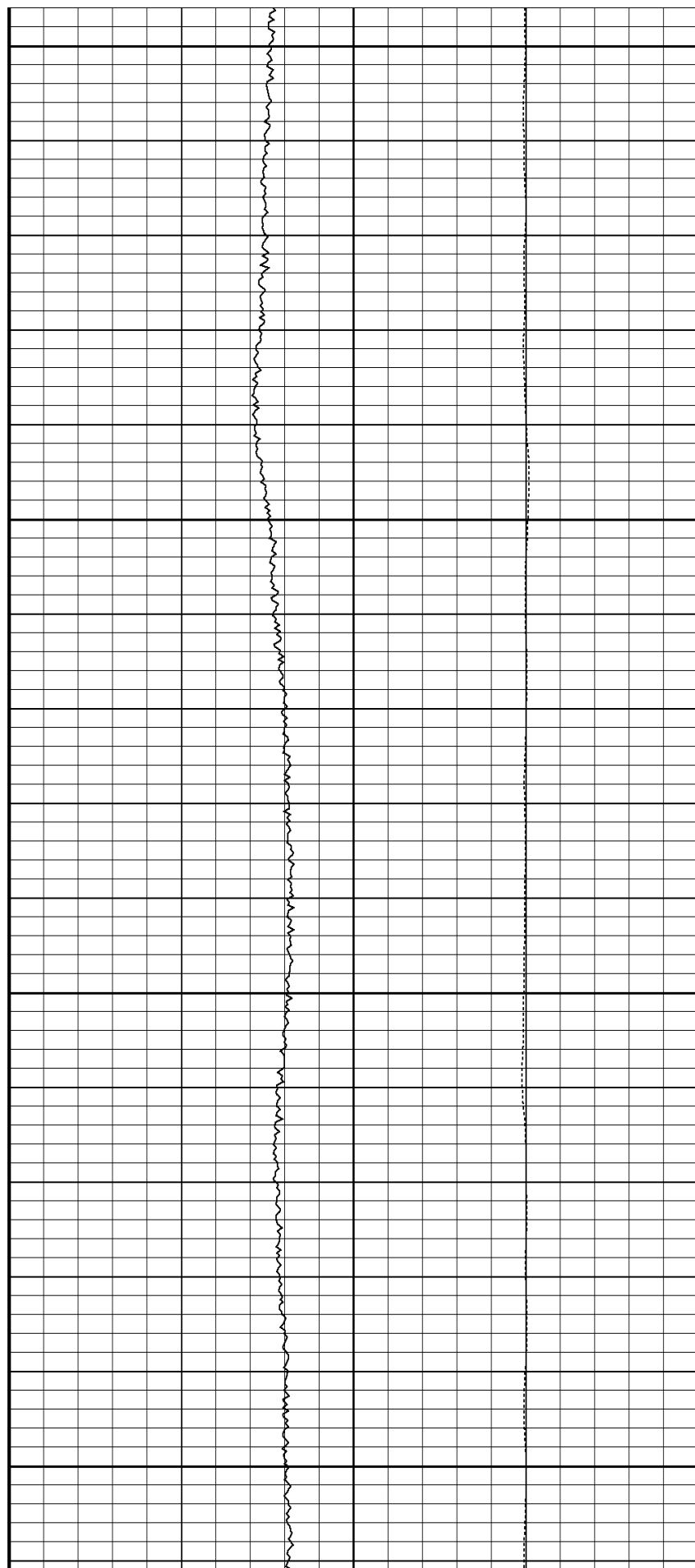
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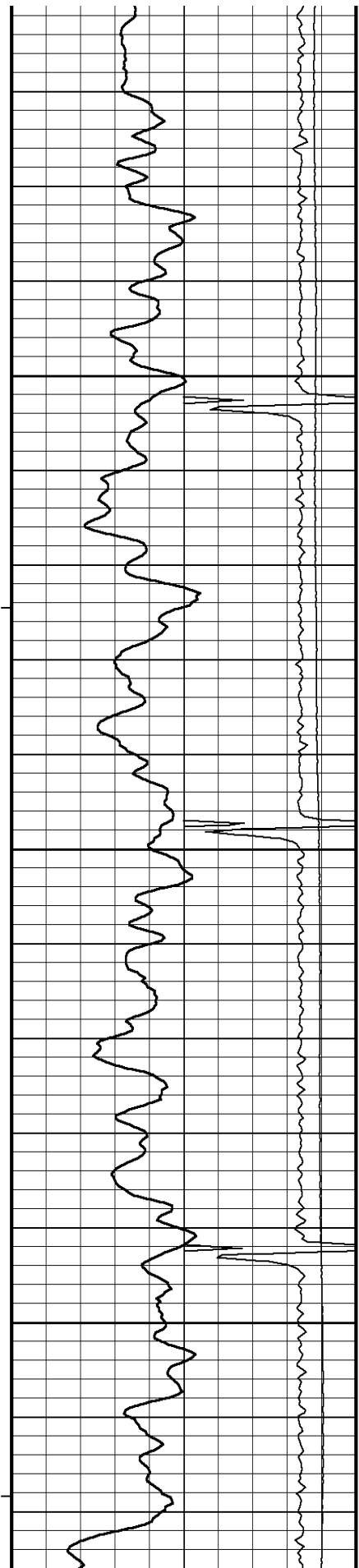
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500

88°

550





88°

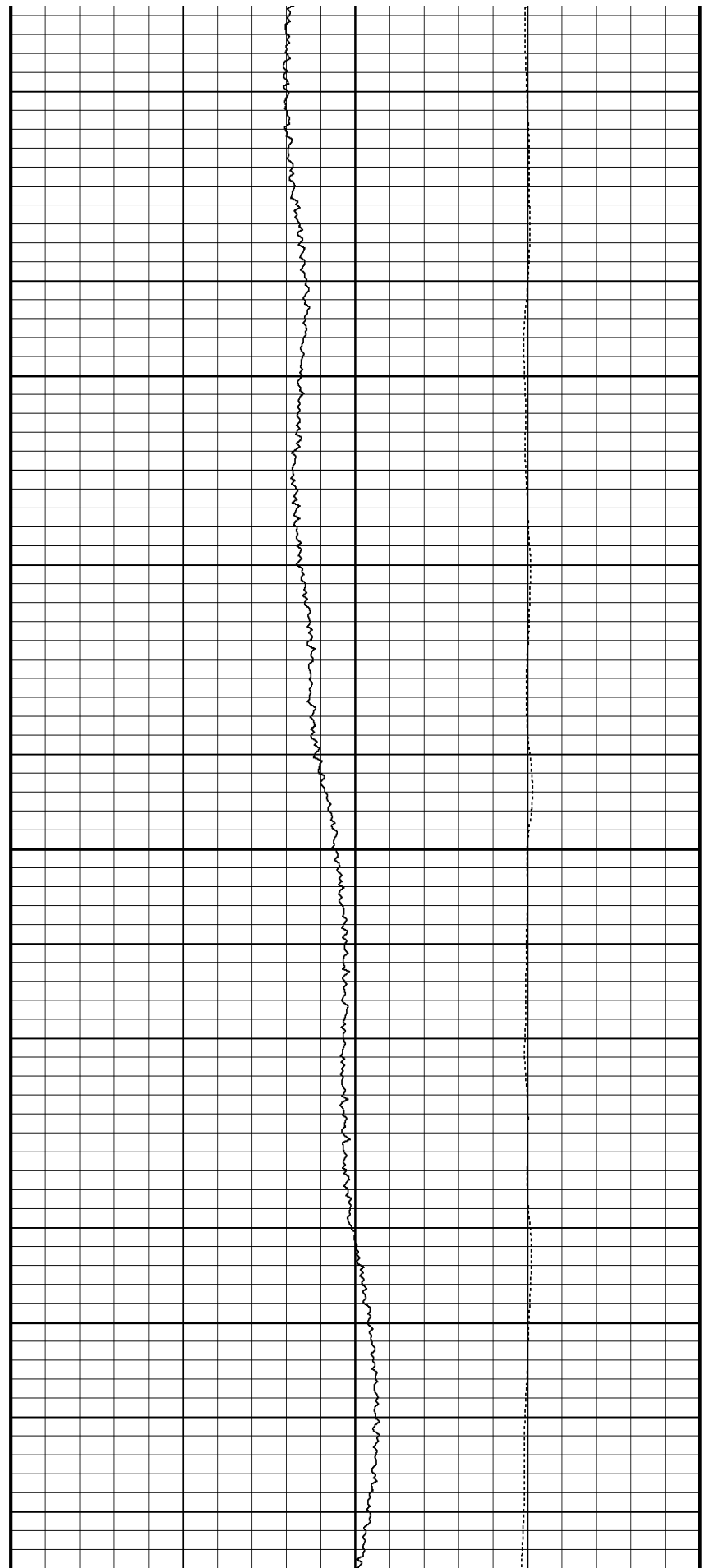
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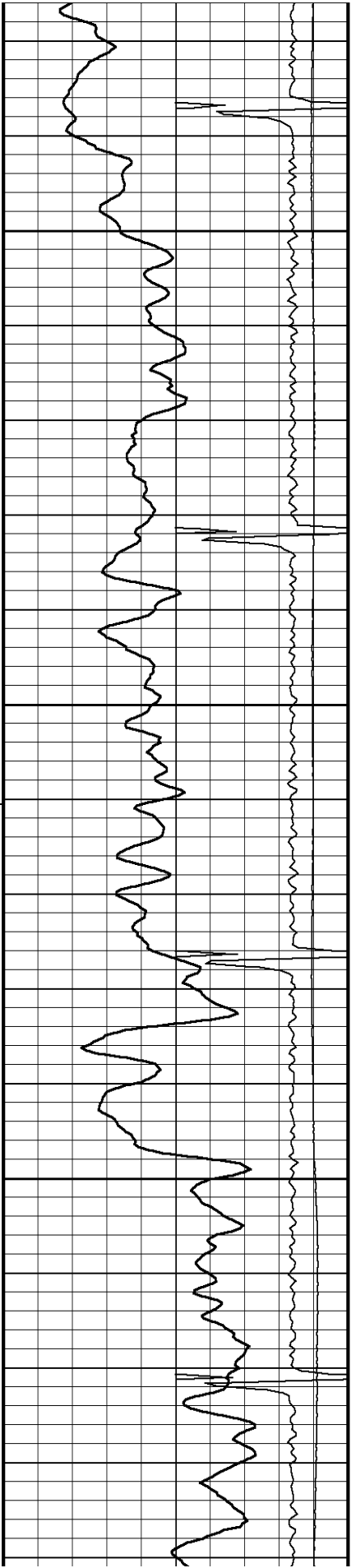
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650

90°

700





90°

750

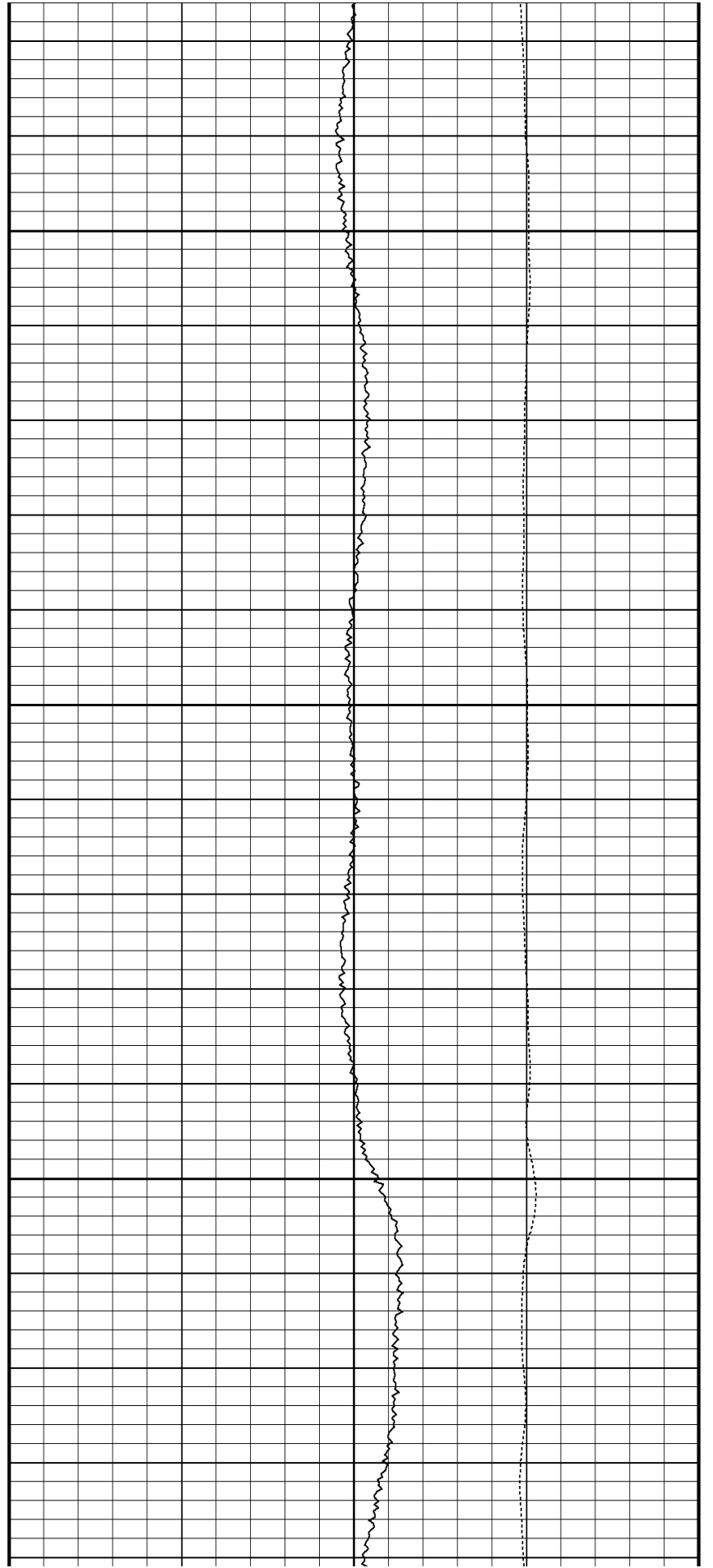
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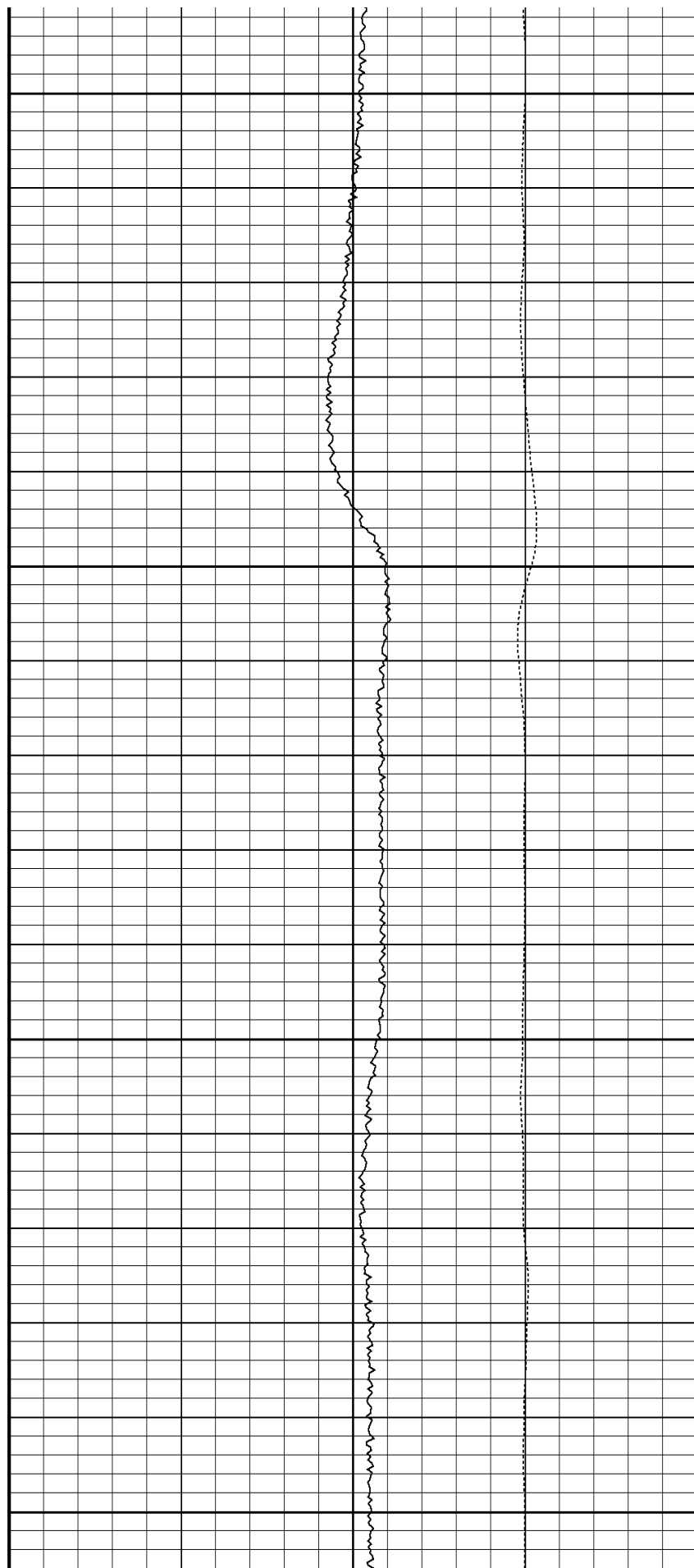
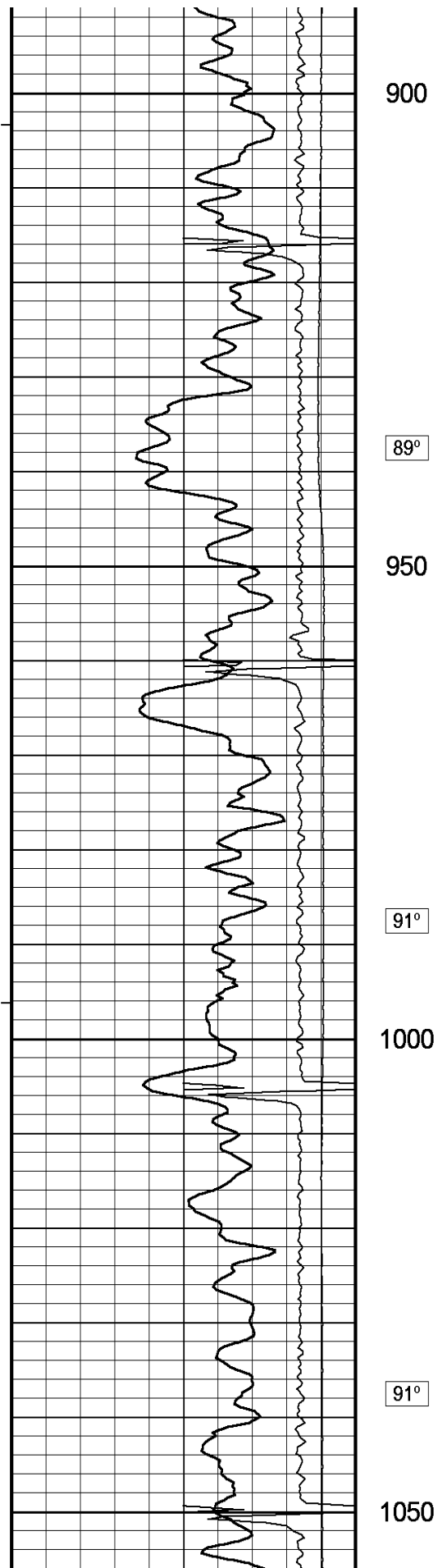
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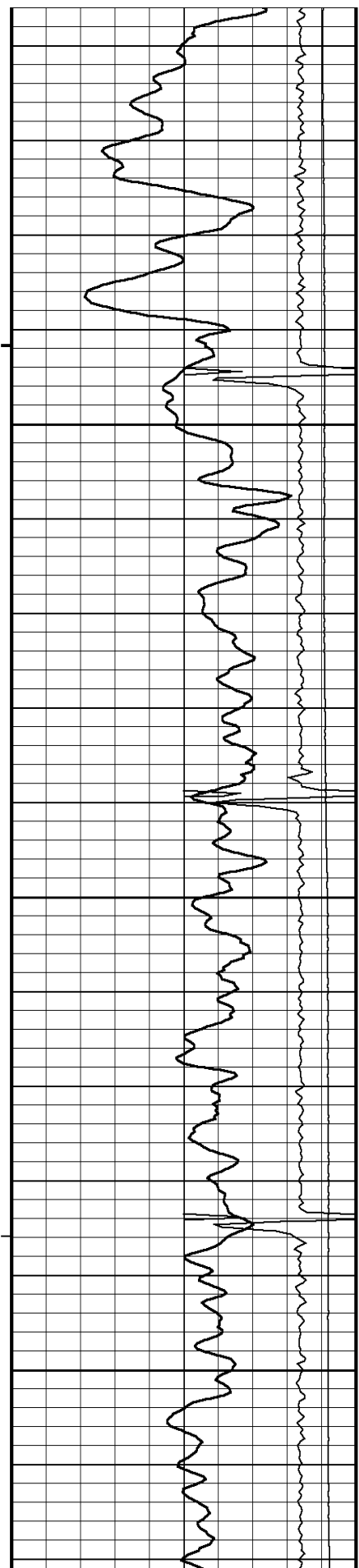
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850

90°







91°

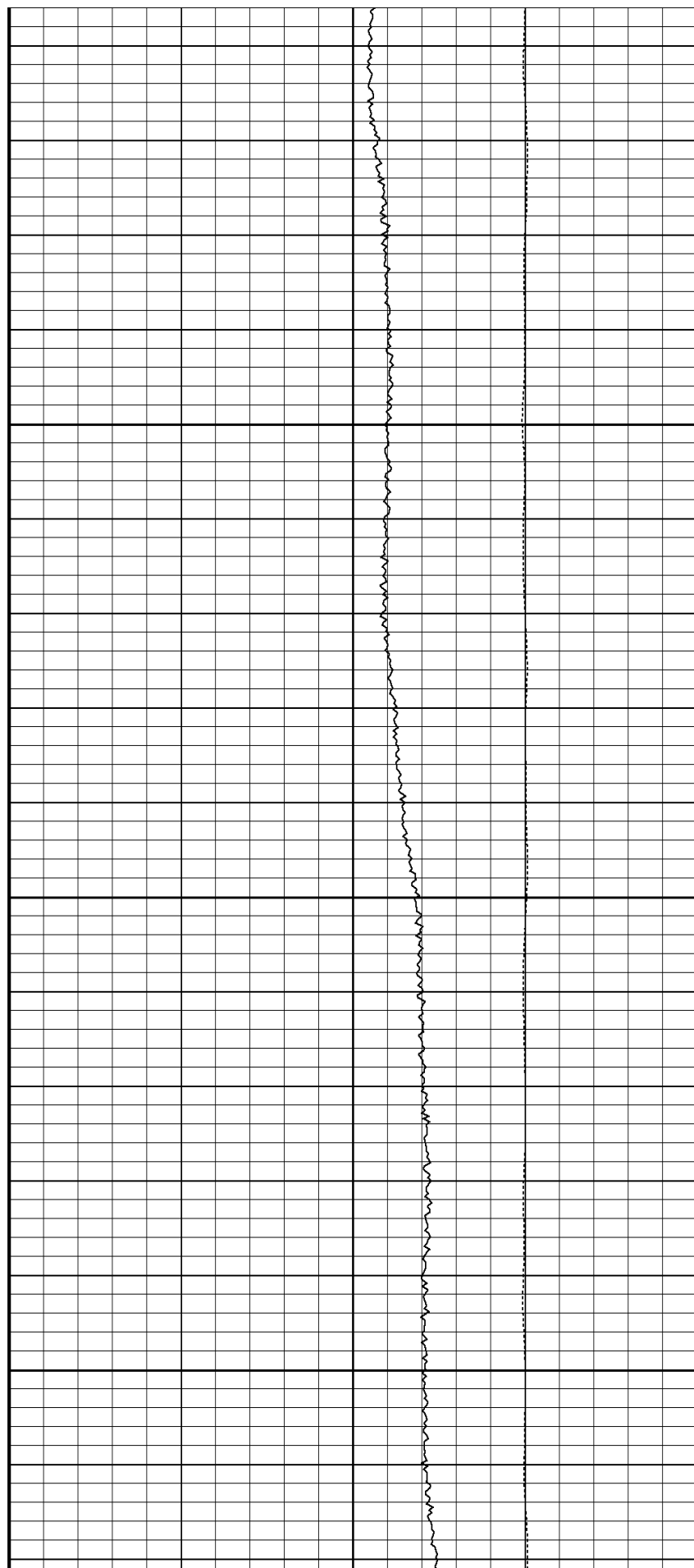
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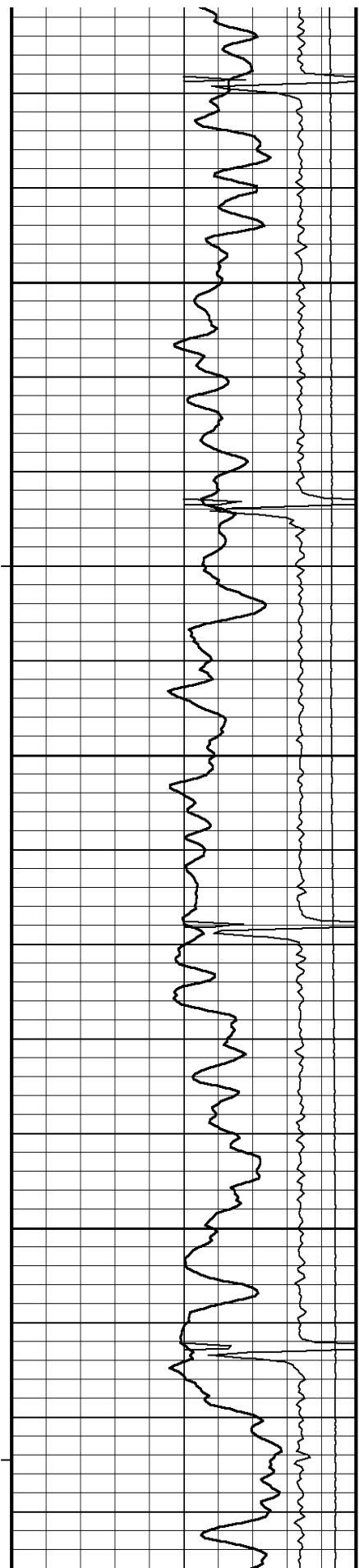
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1150

92°

1200





93°

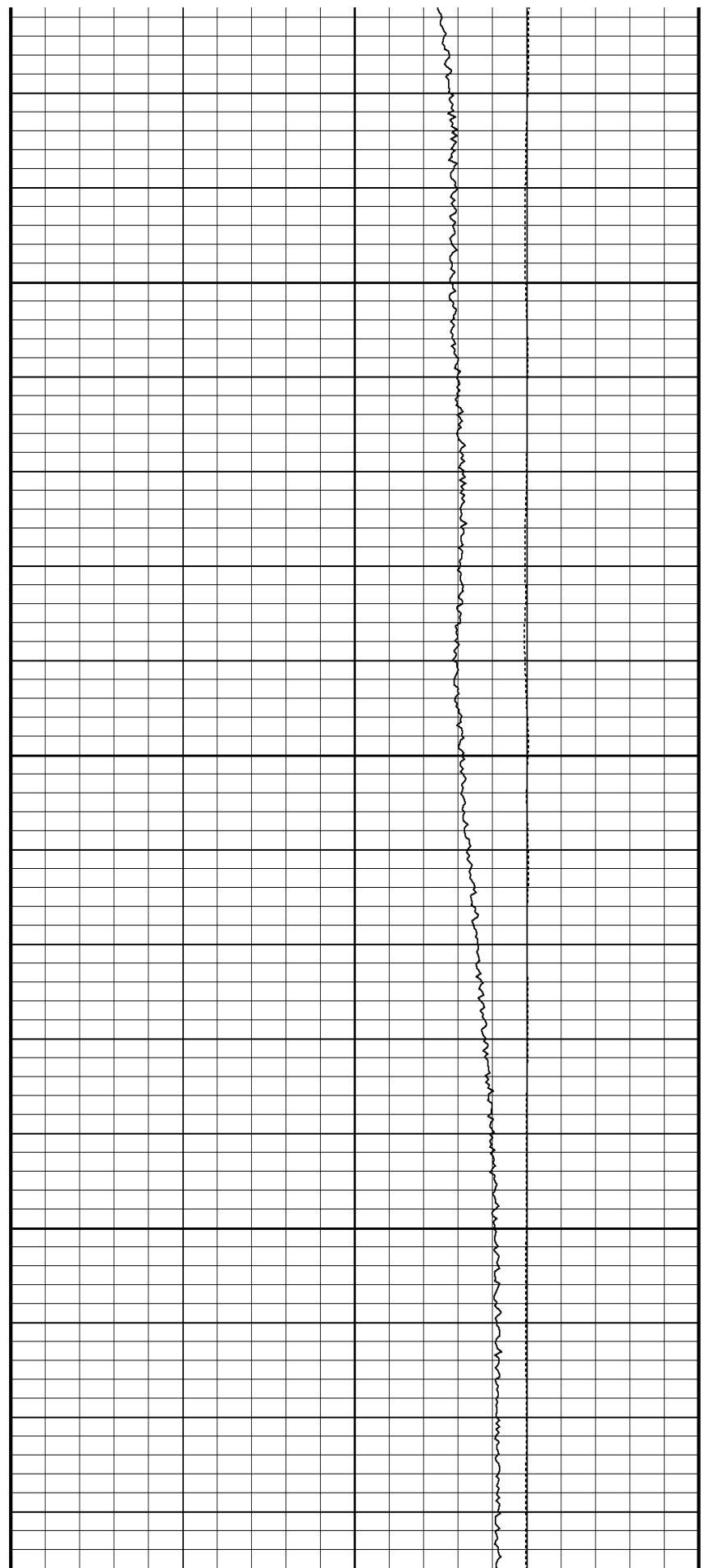
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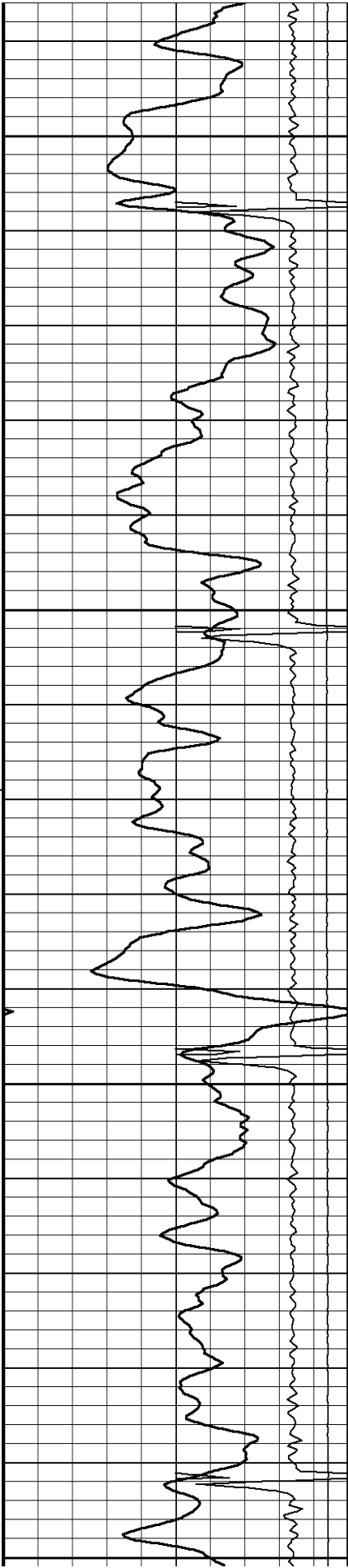
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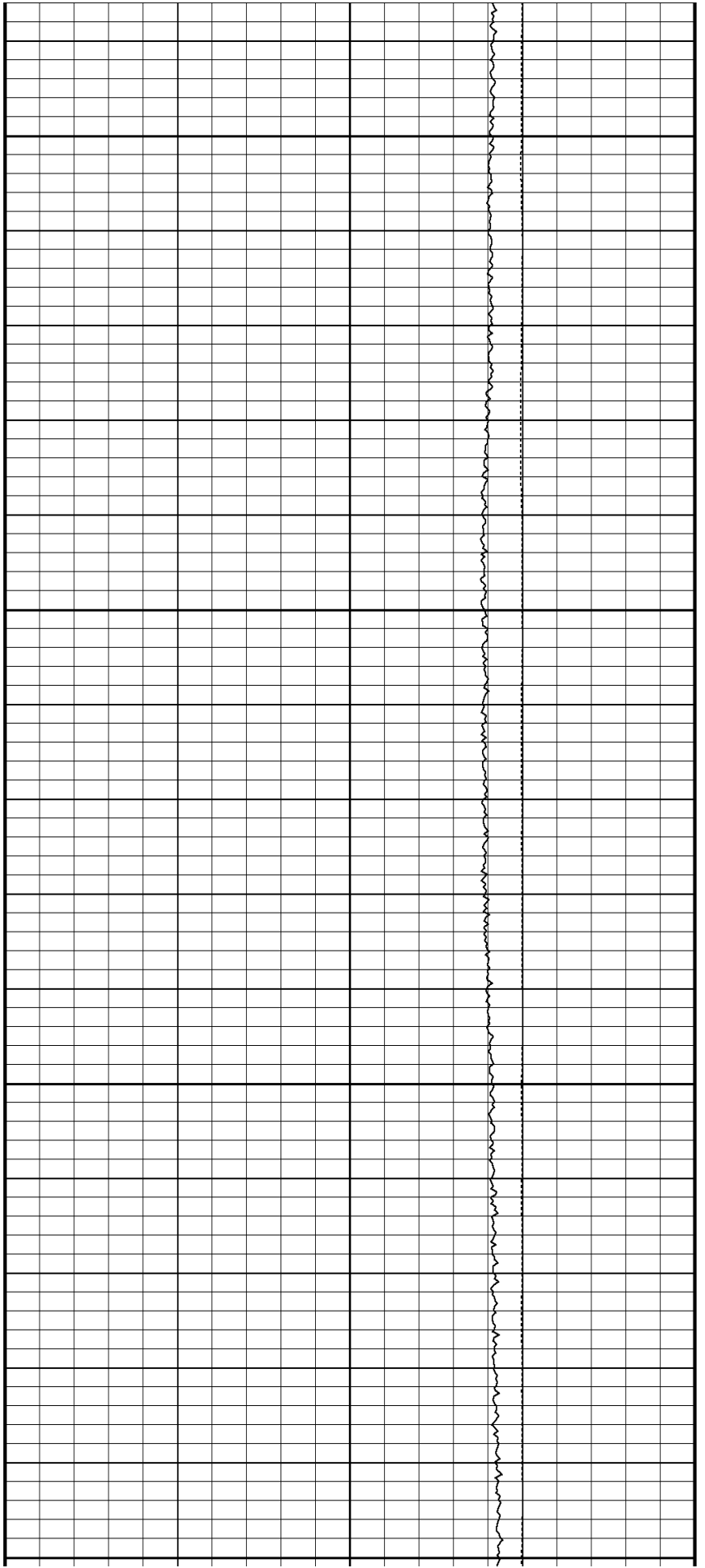
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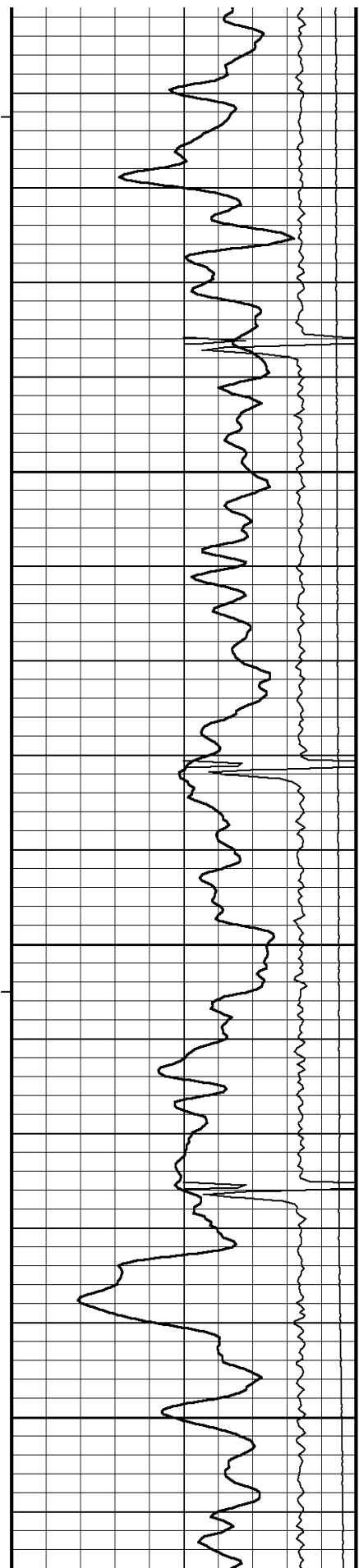
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94°
1400
94°
1450
94°
1500
94°
1550





94°

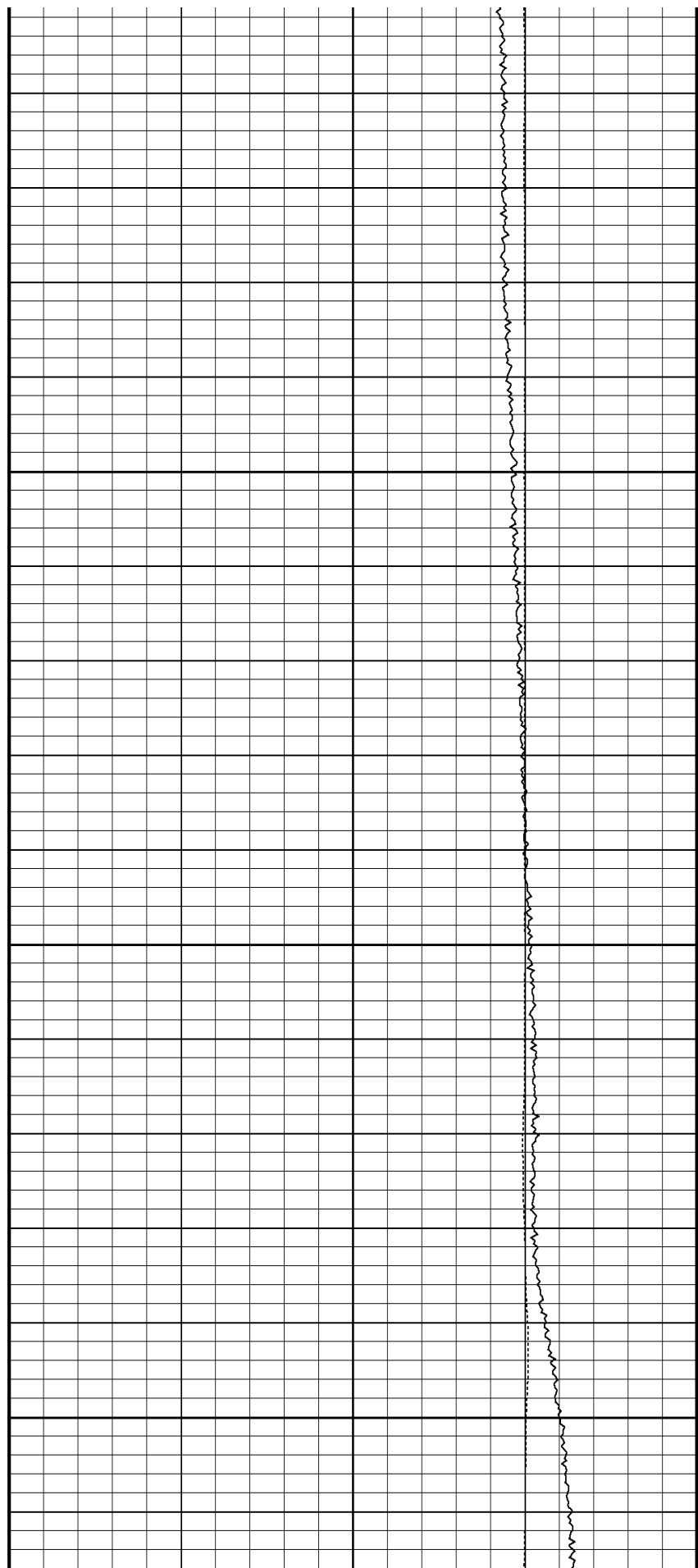
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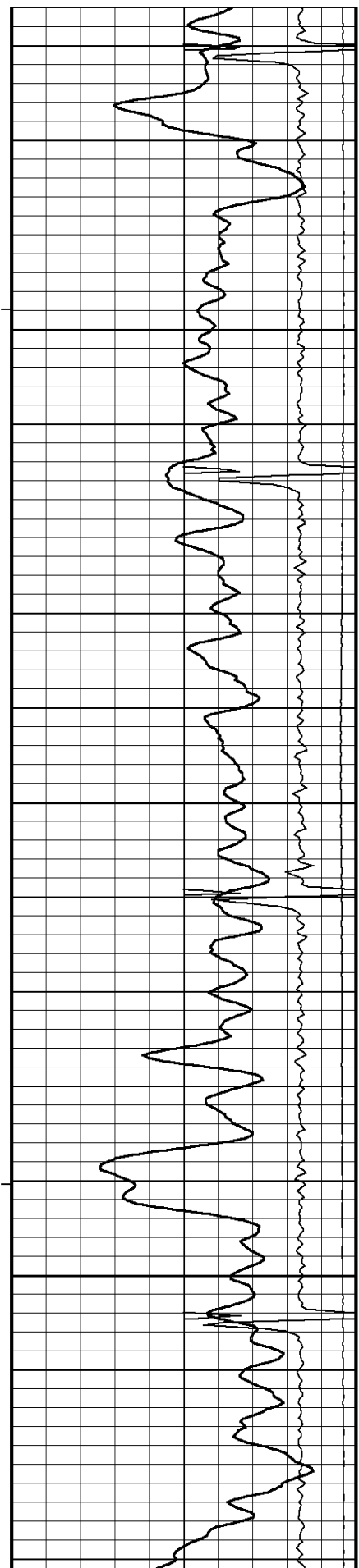
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1650

96°

1700





96°

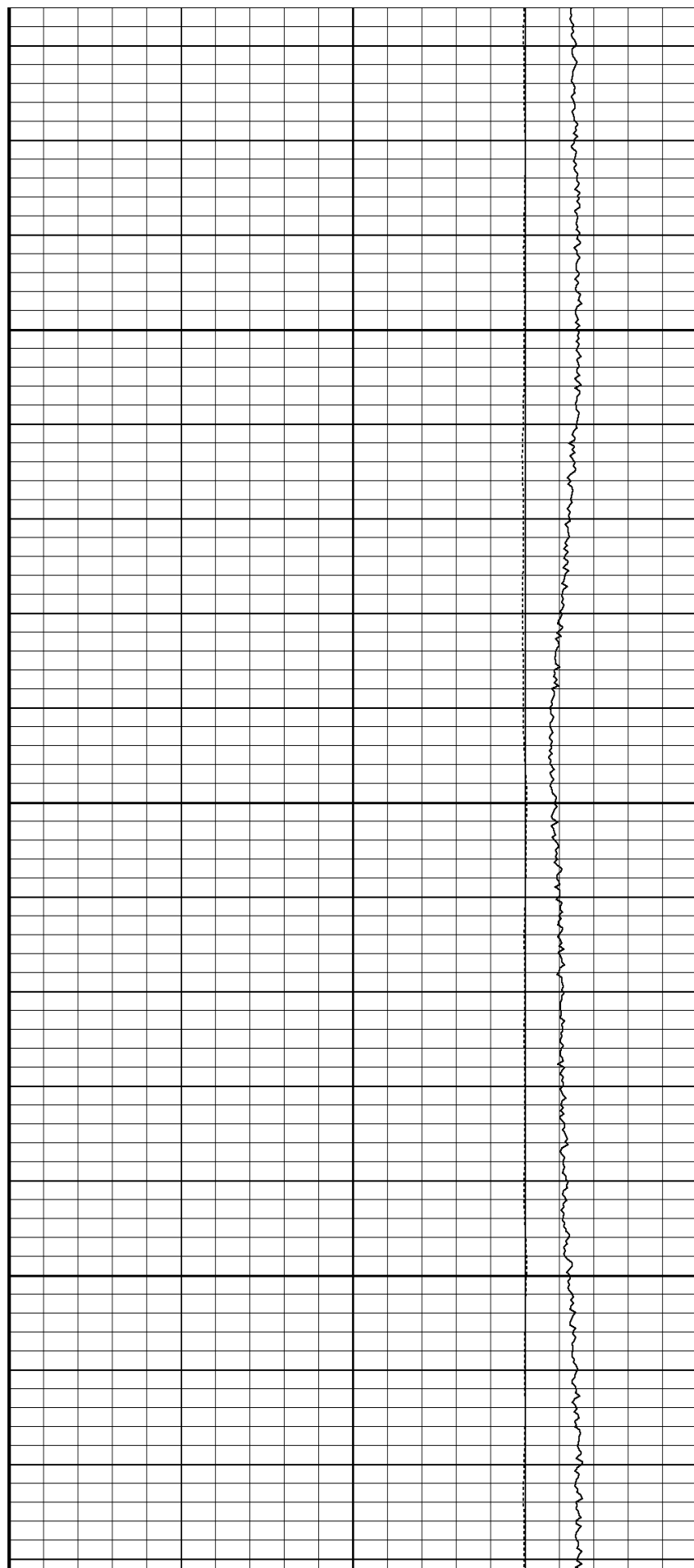
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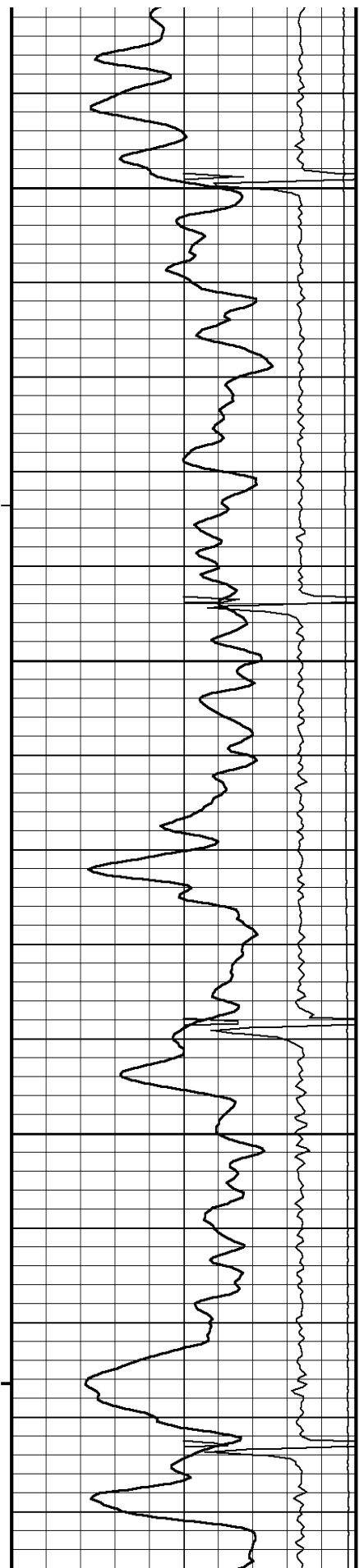
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1800

96°

1850





97°

1900

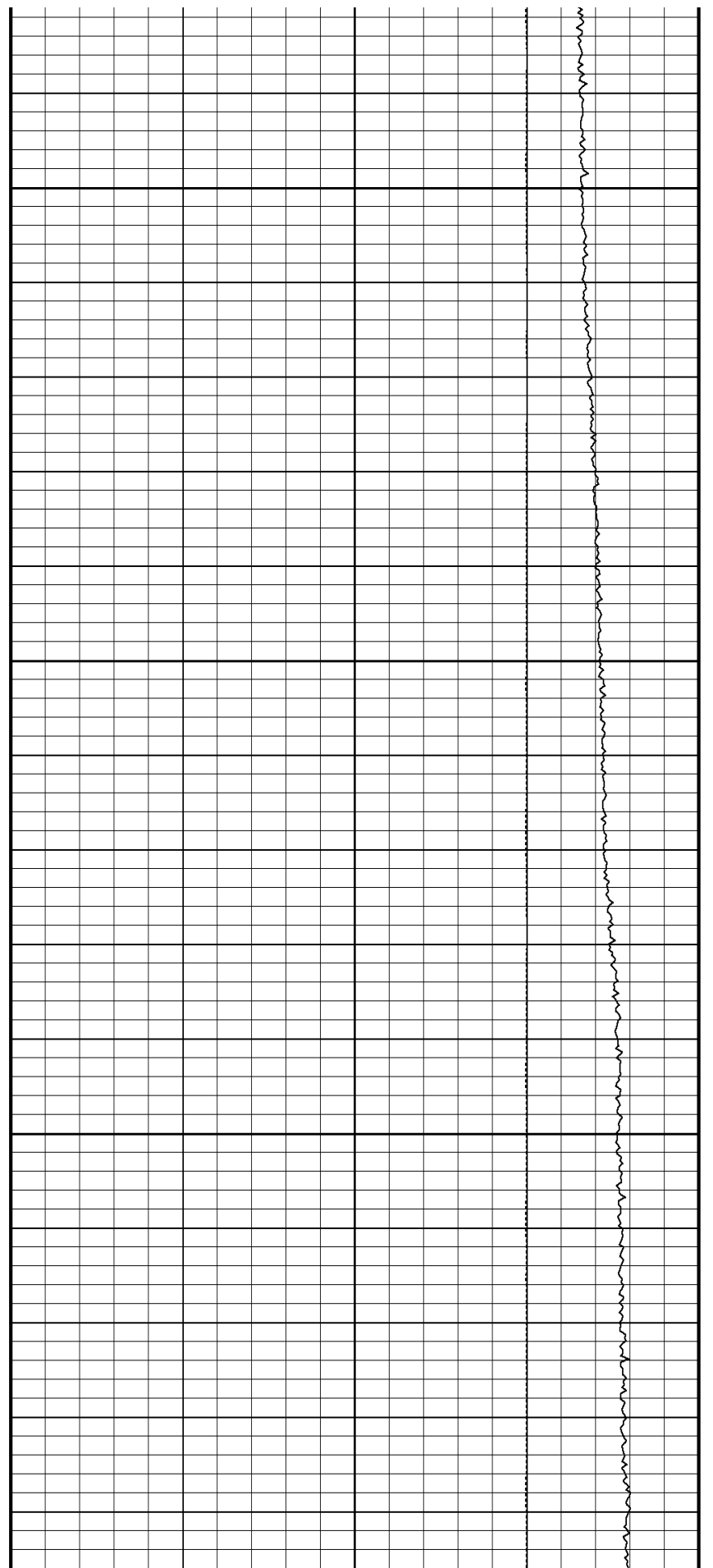
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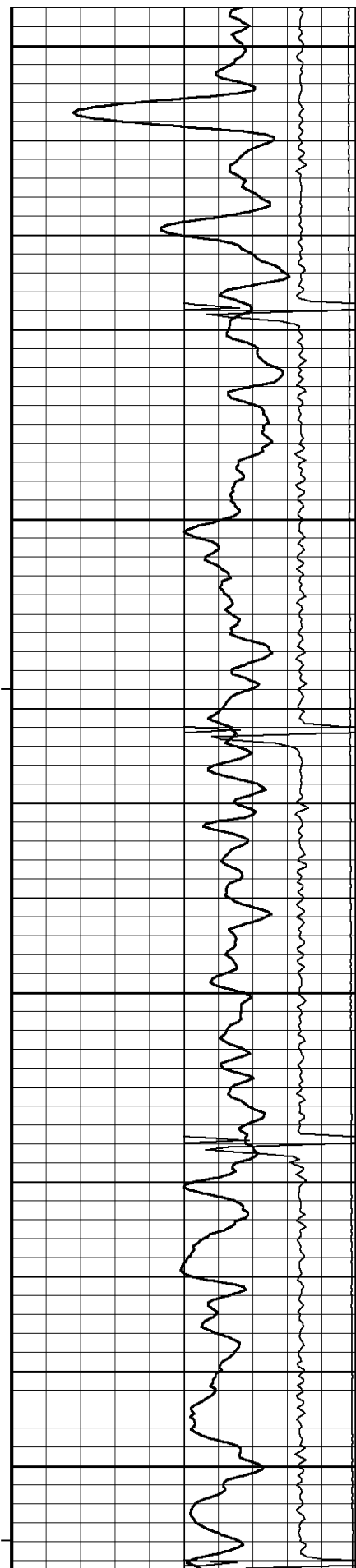
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98°

2000

98°





2050

98°

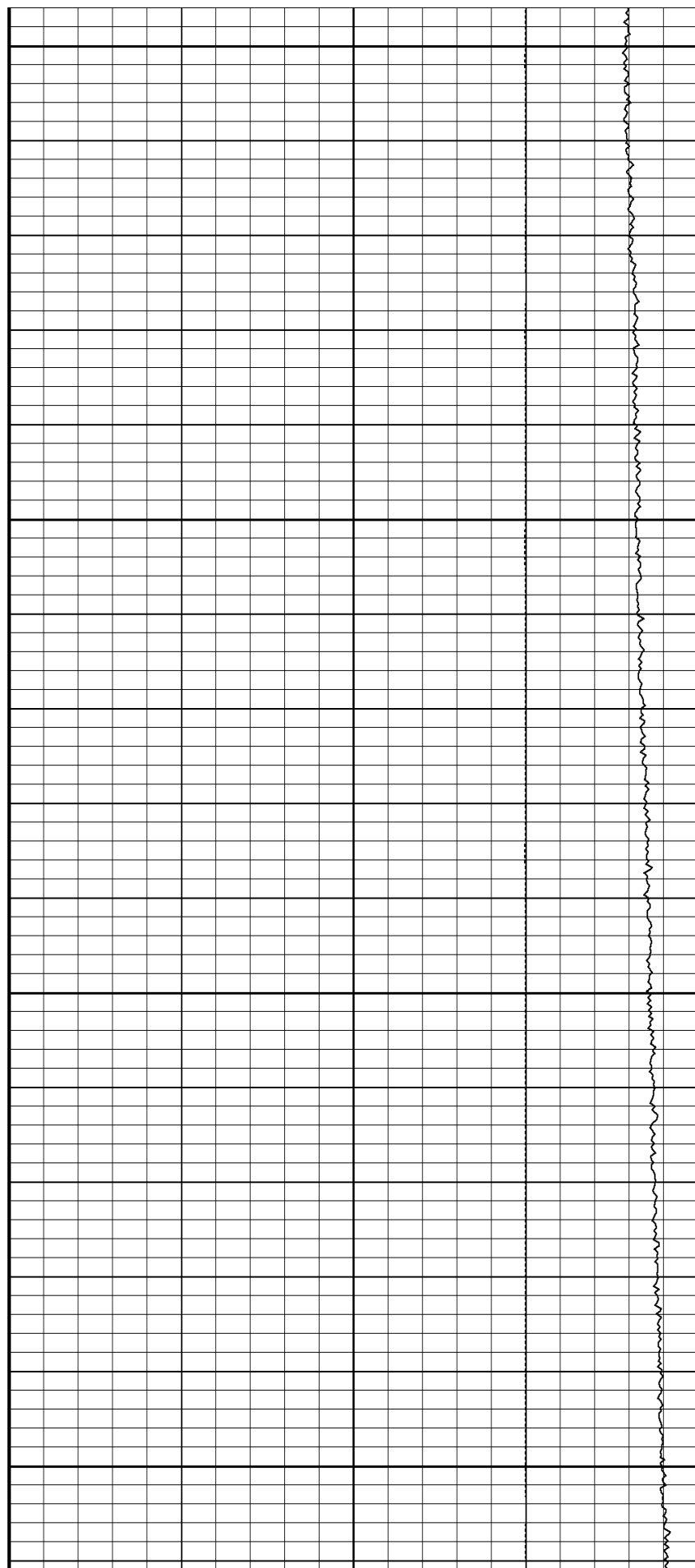
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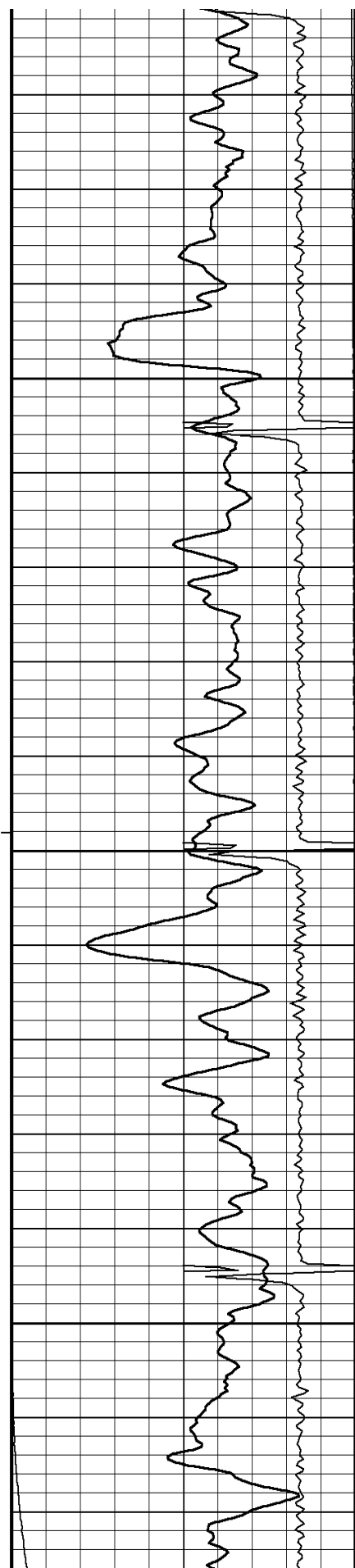
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2150

99°

2200





100°

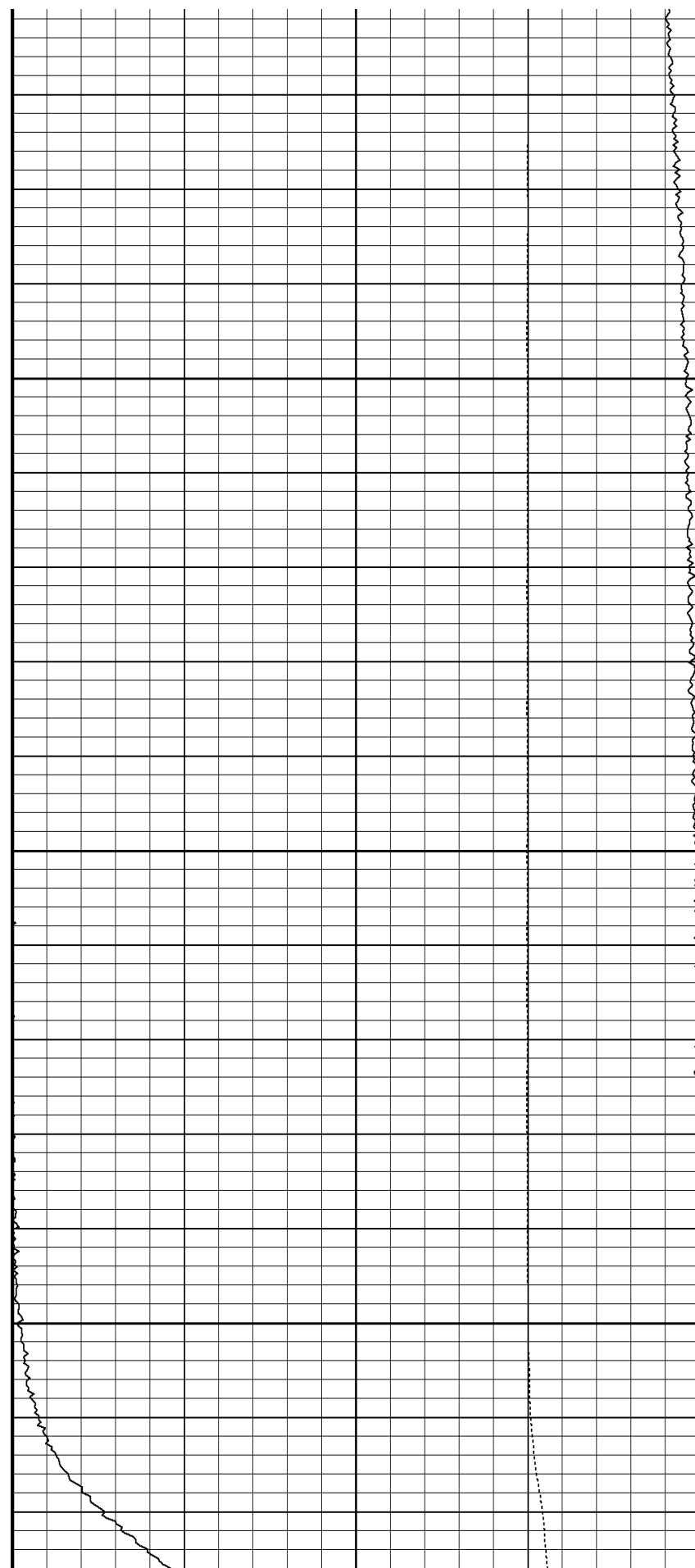
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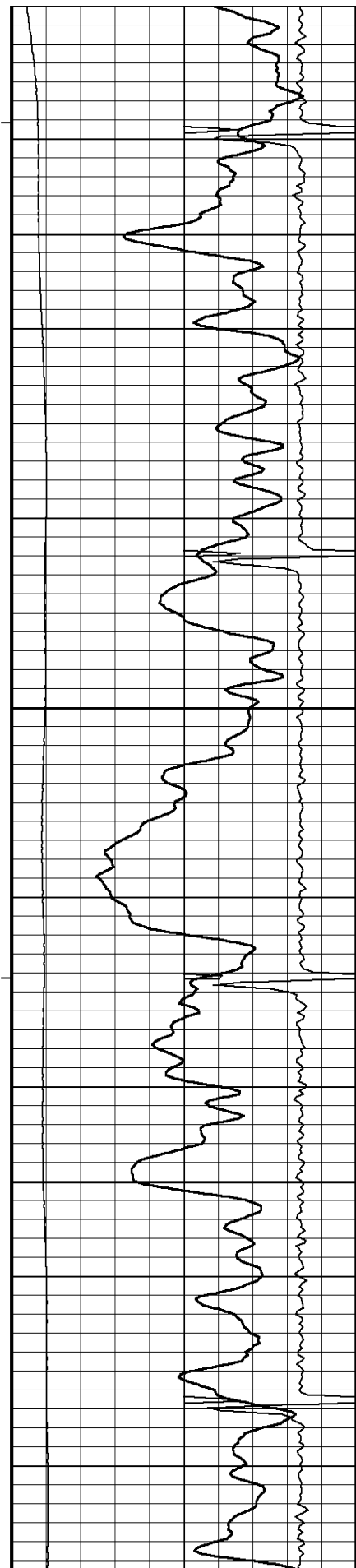
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2300

100°

2350





108°

2400

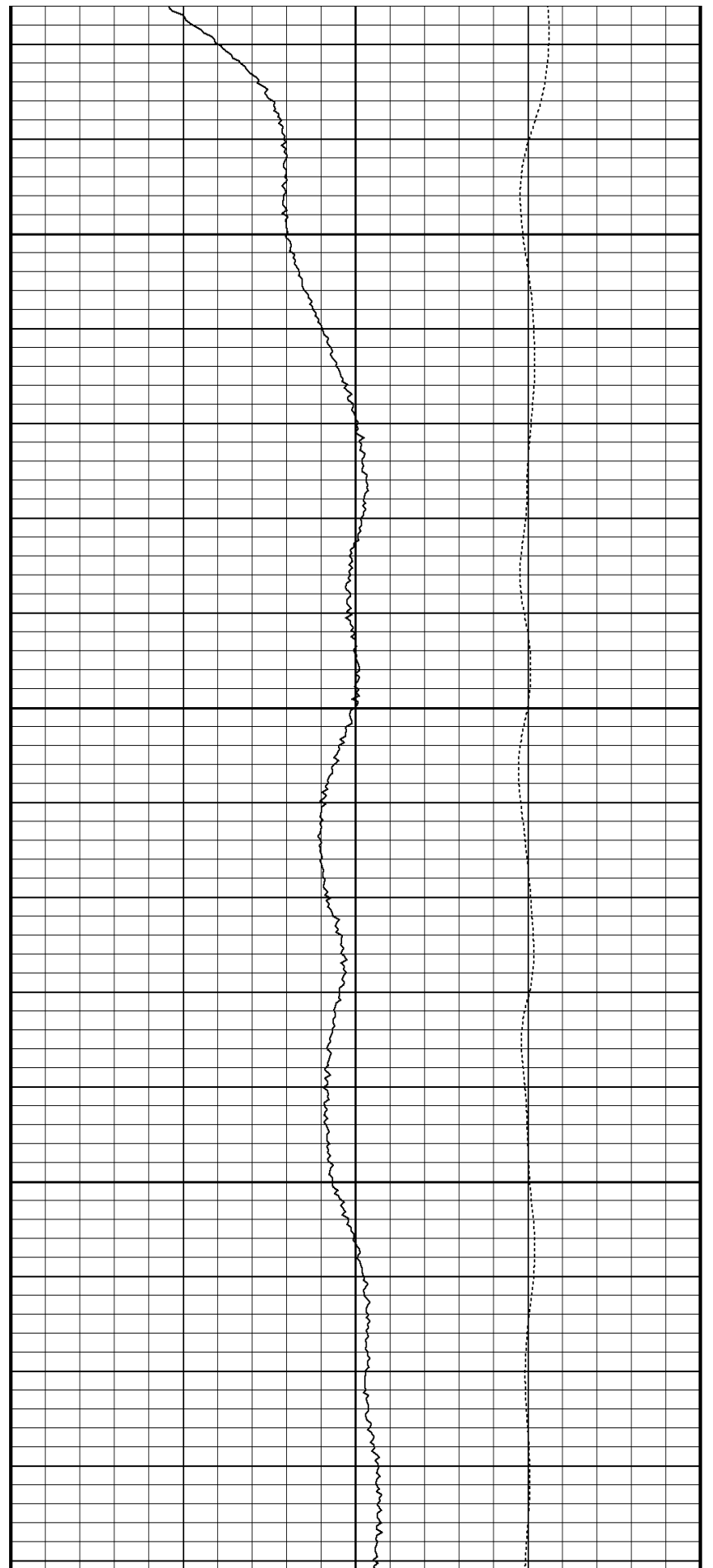
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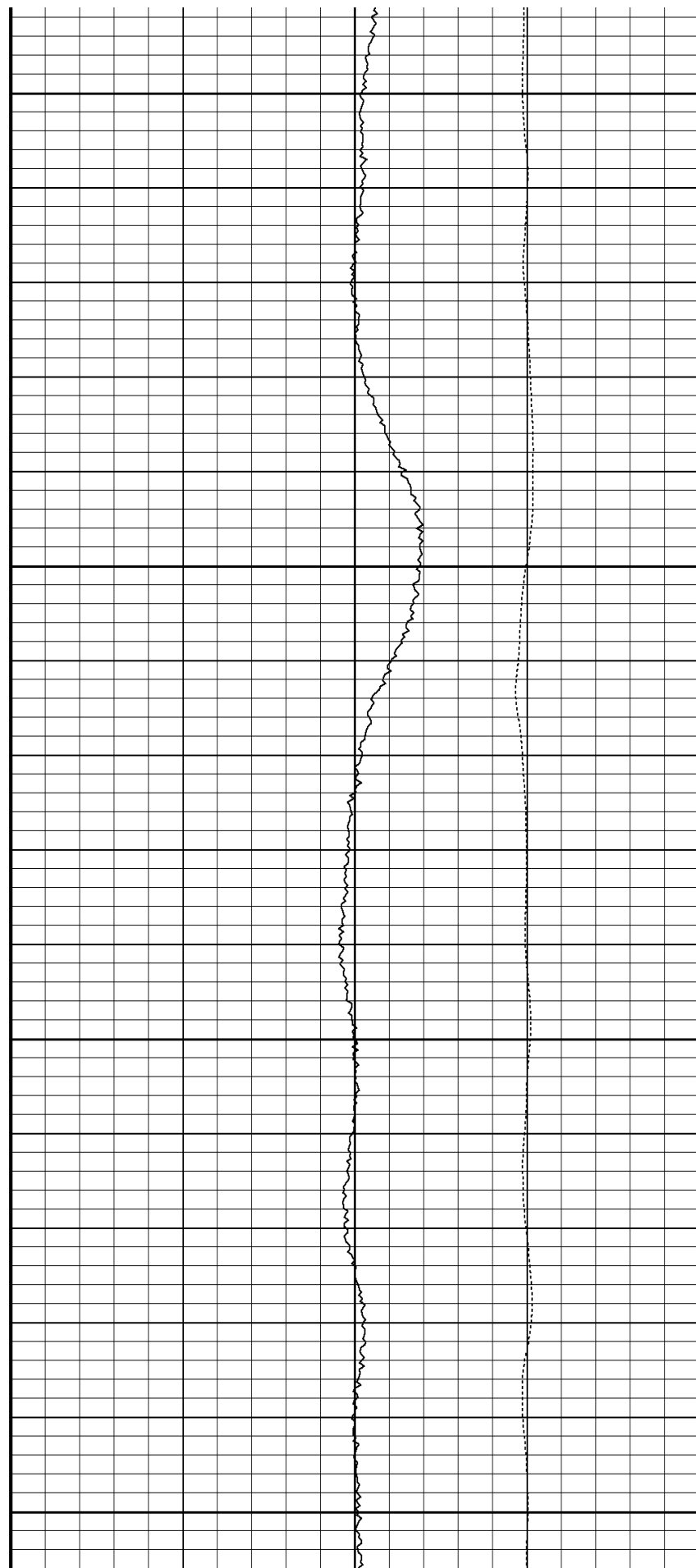
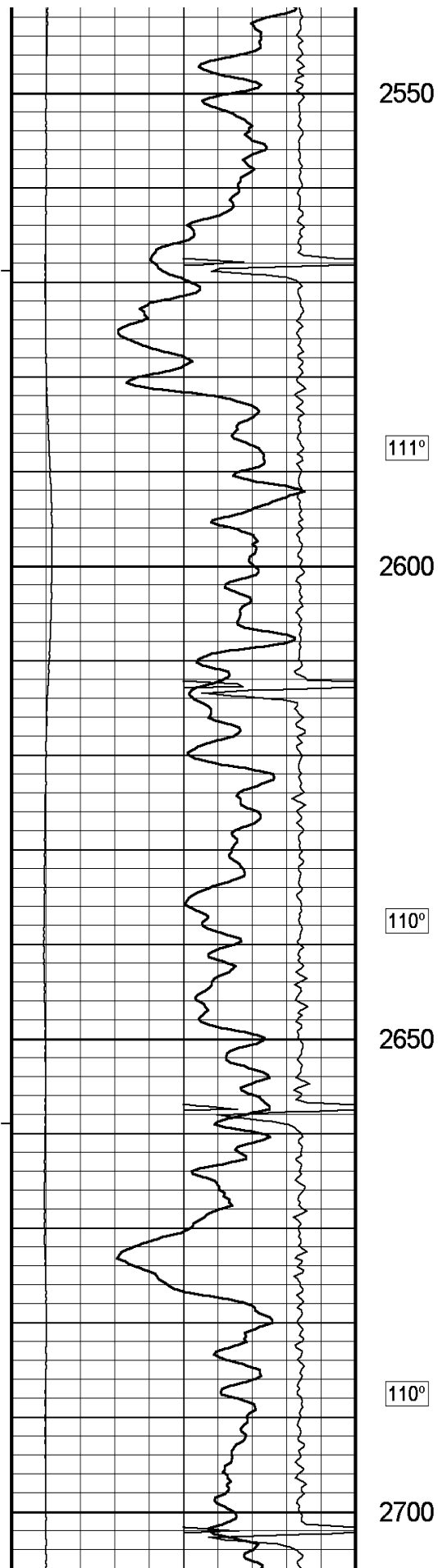
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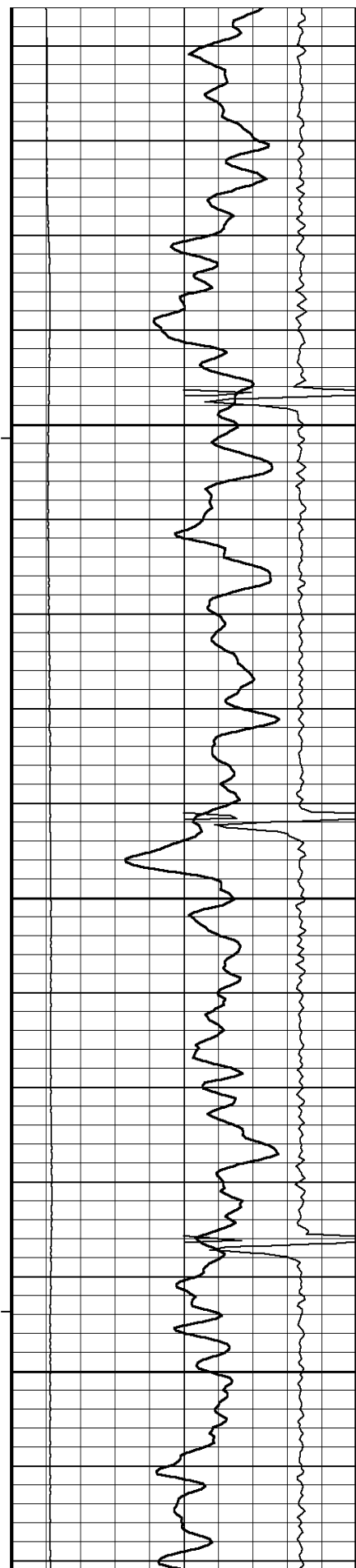
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2500

111°







111°

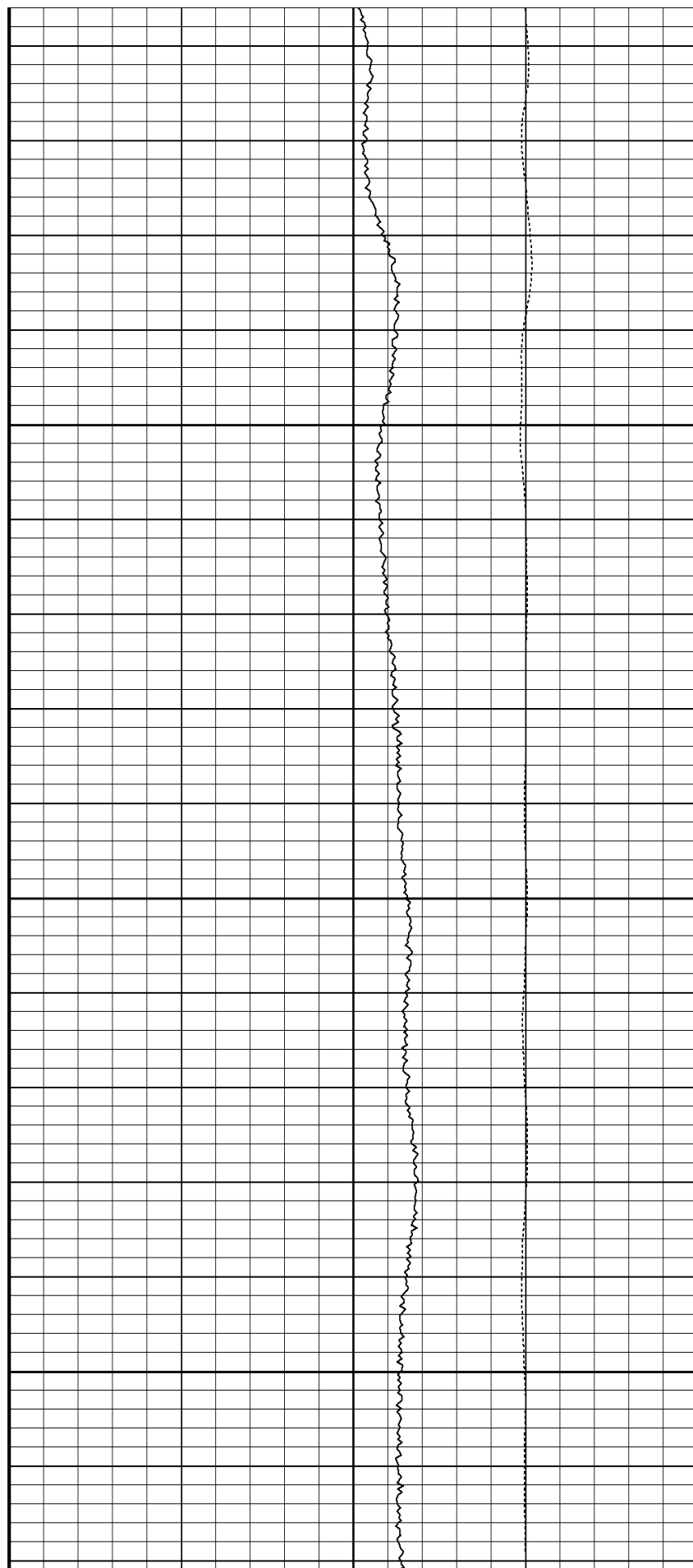
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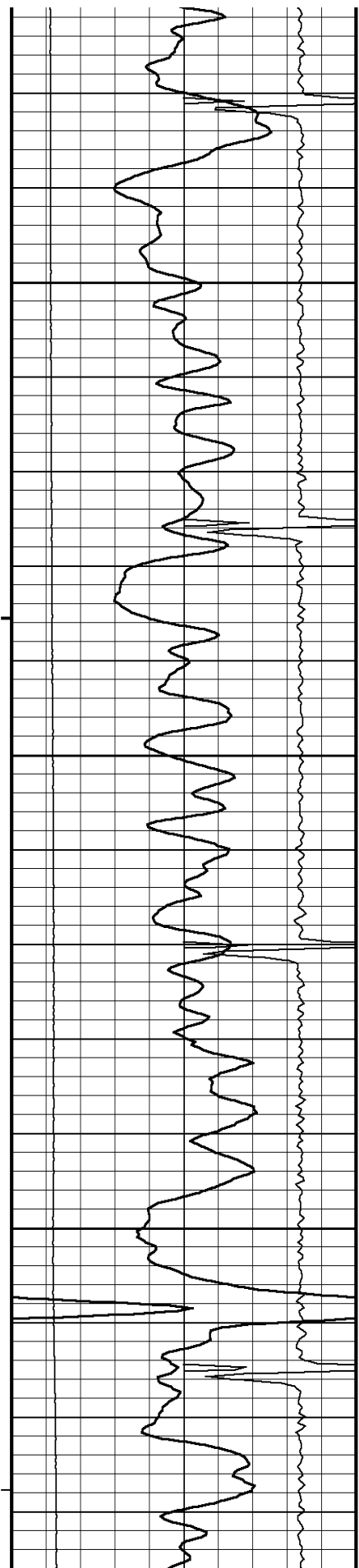
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112°

2850





112°

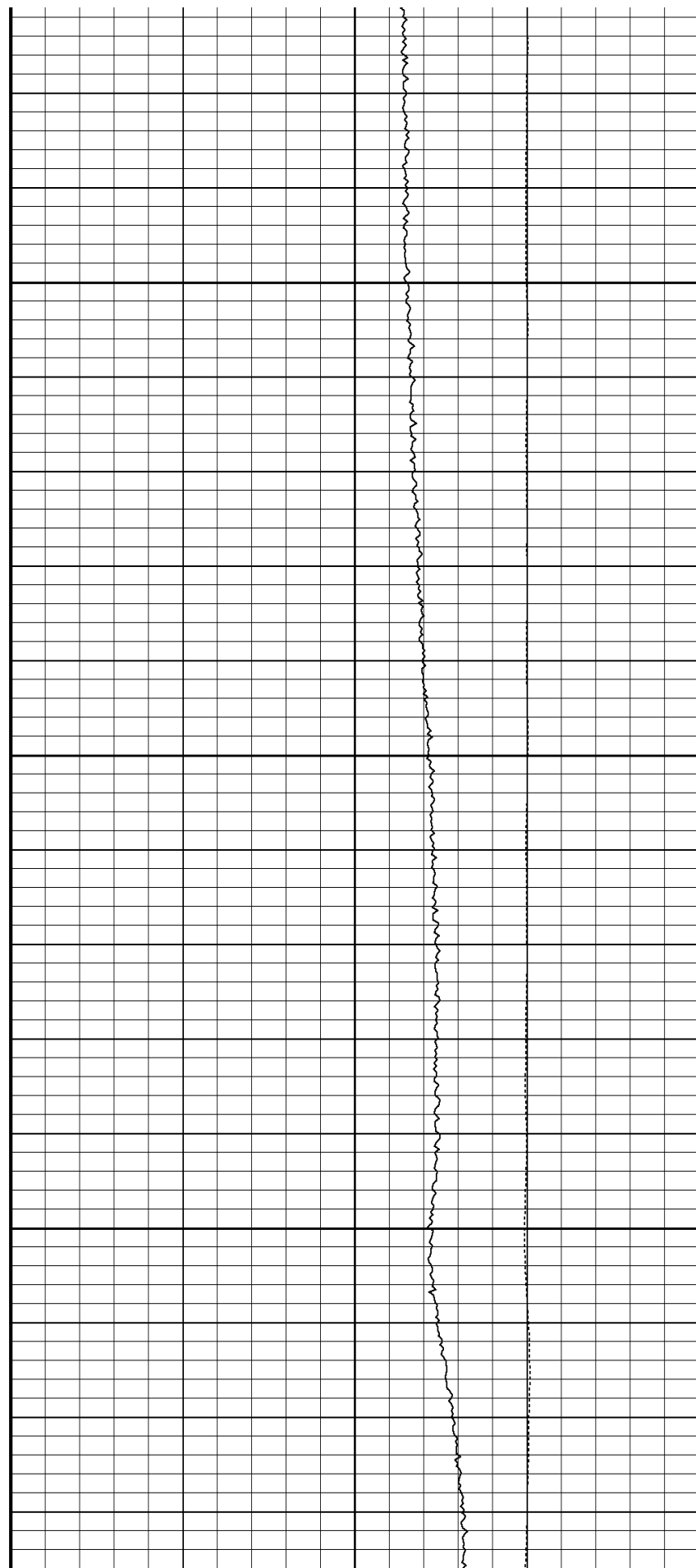
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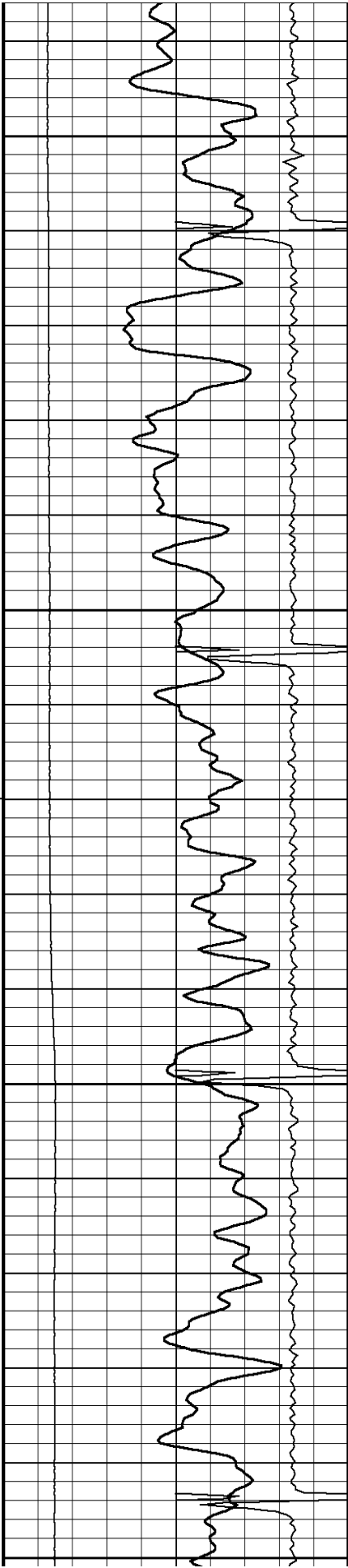
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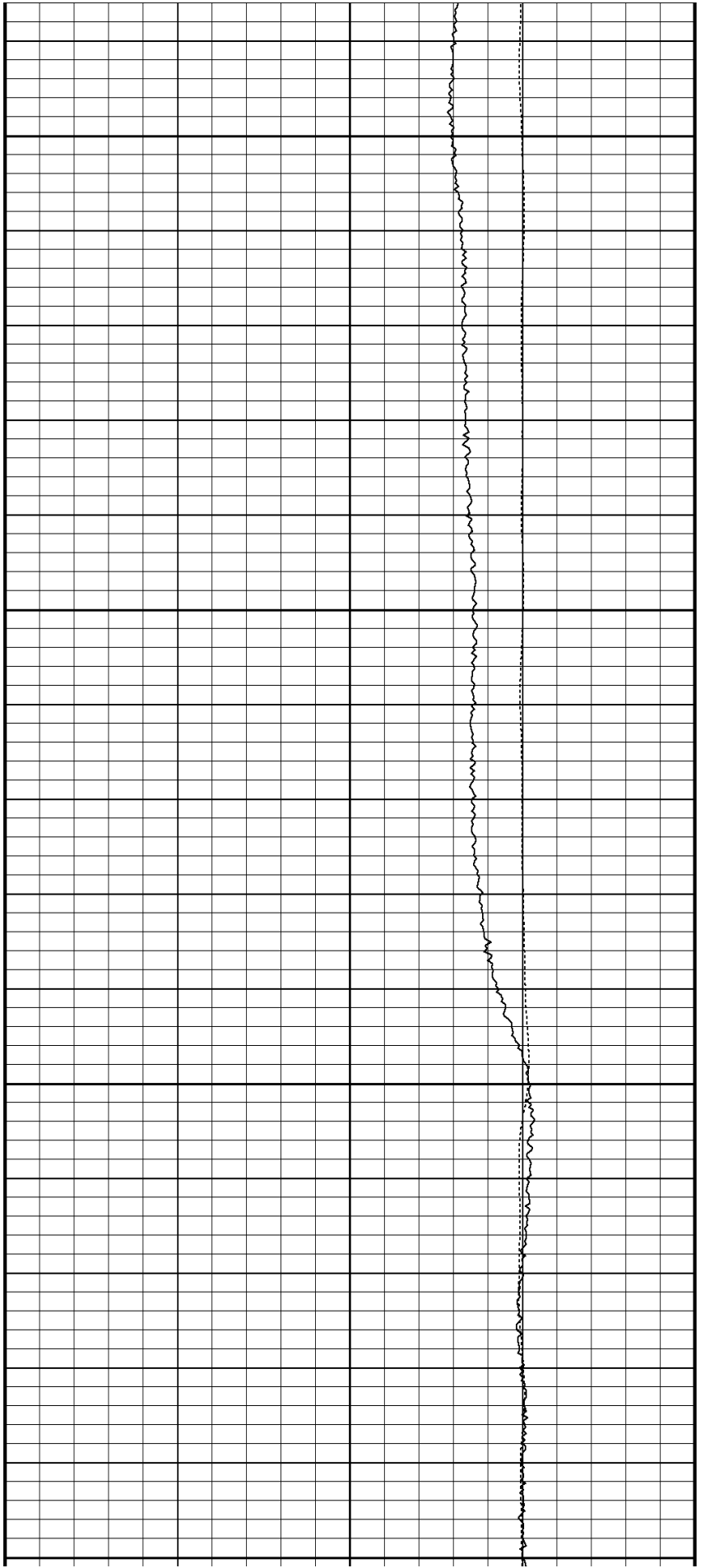
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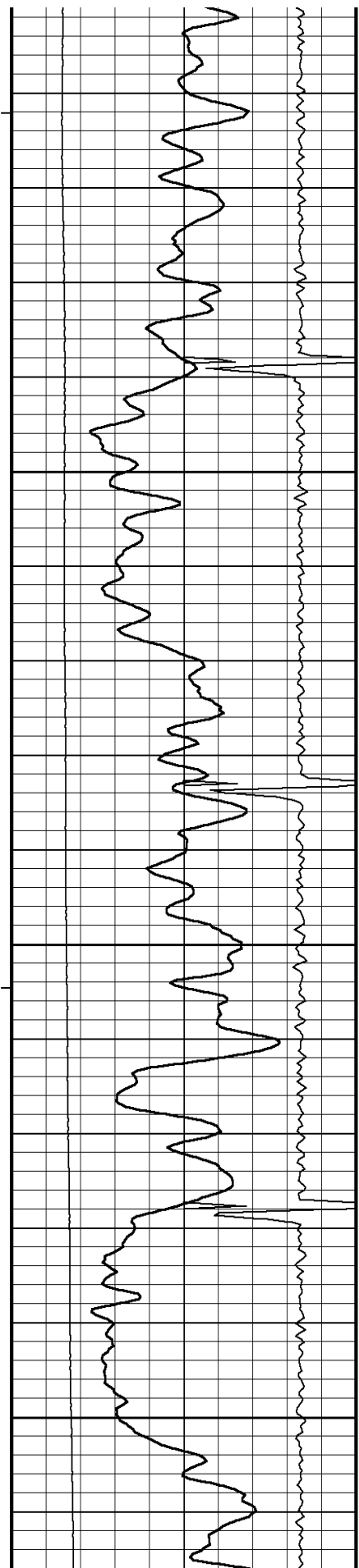
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113°
3050
113°
3100
114°
3150
115°
3200





116°

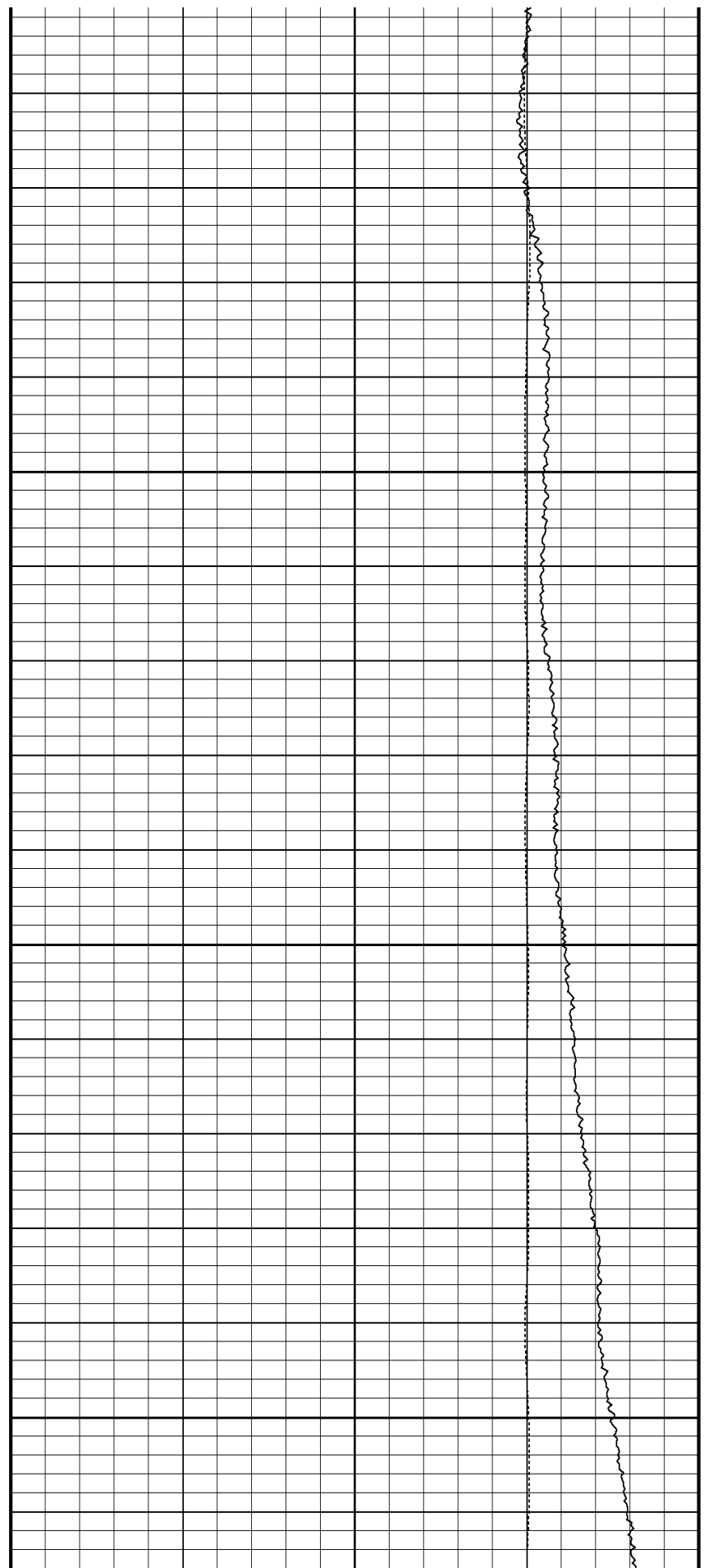
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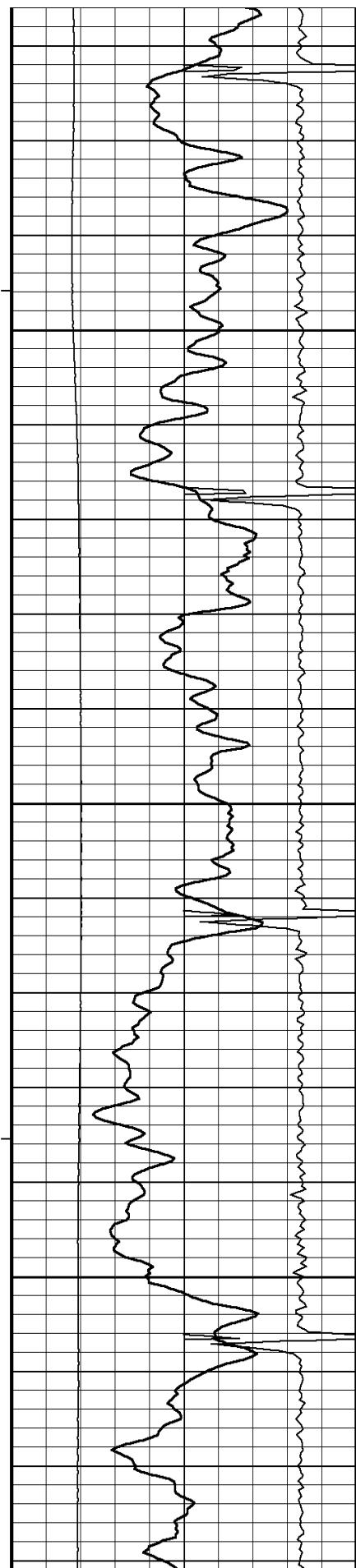
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117°

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118°

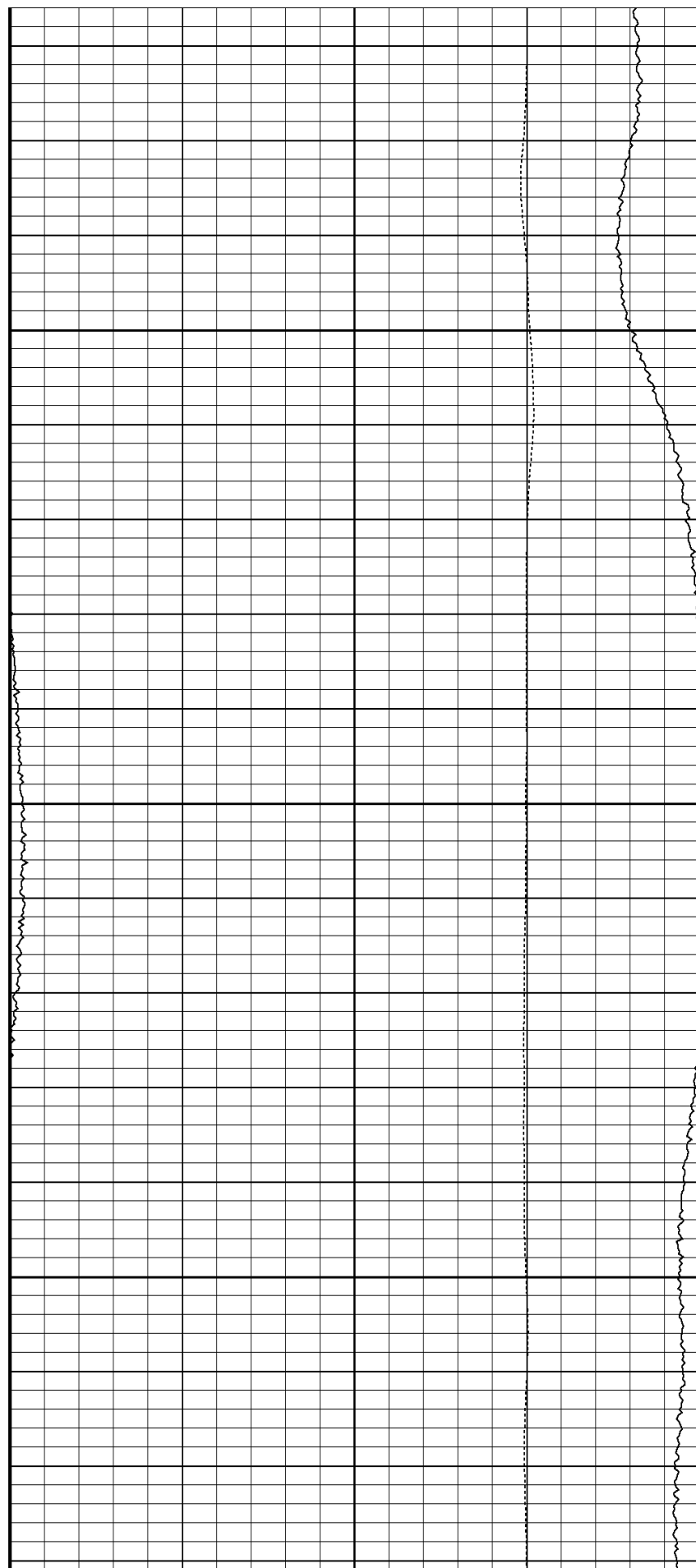
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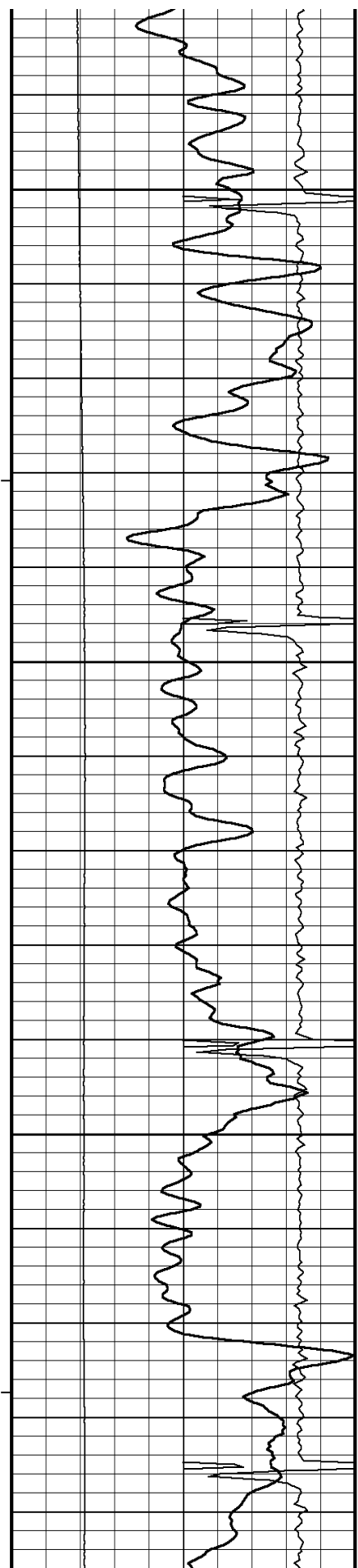
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3450

120°

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120°

3550

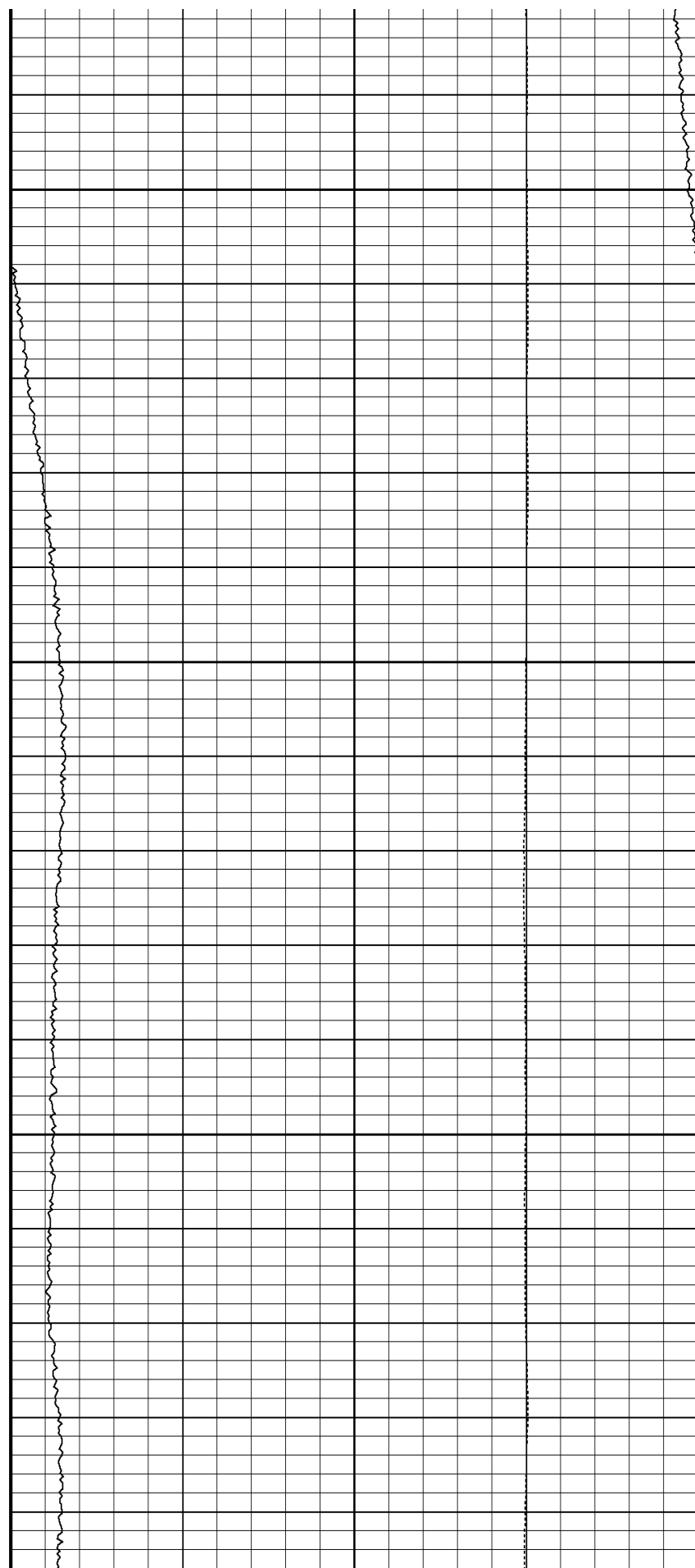
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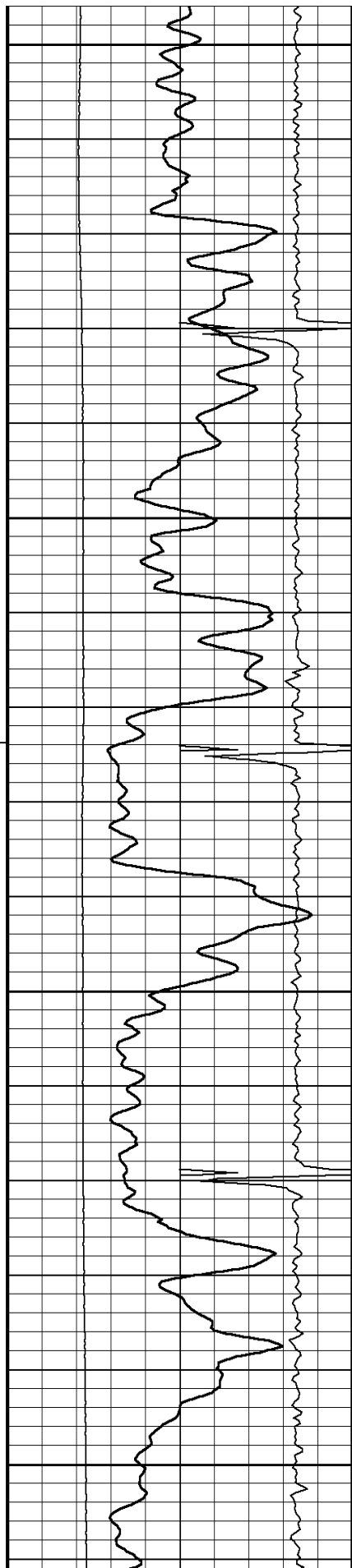
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122°





3700

122°

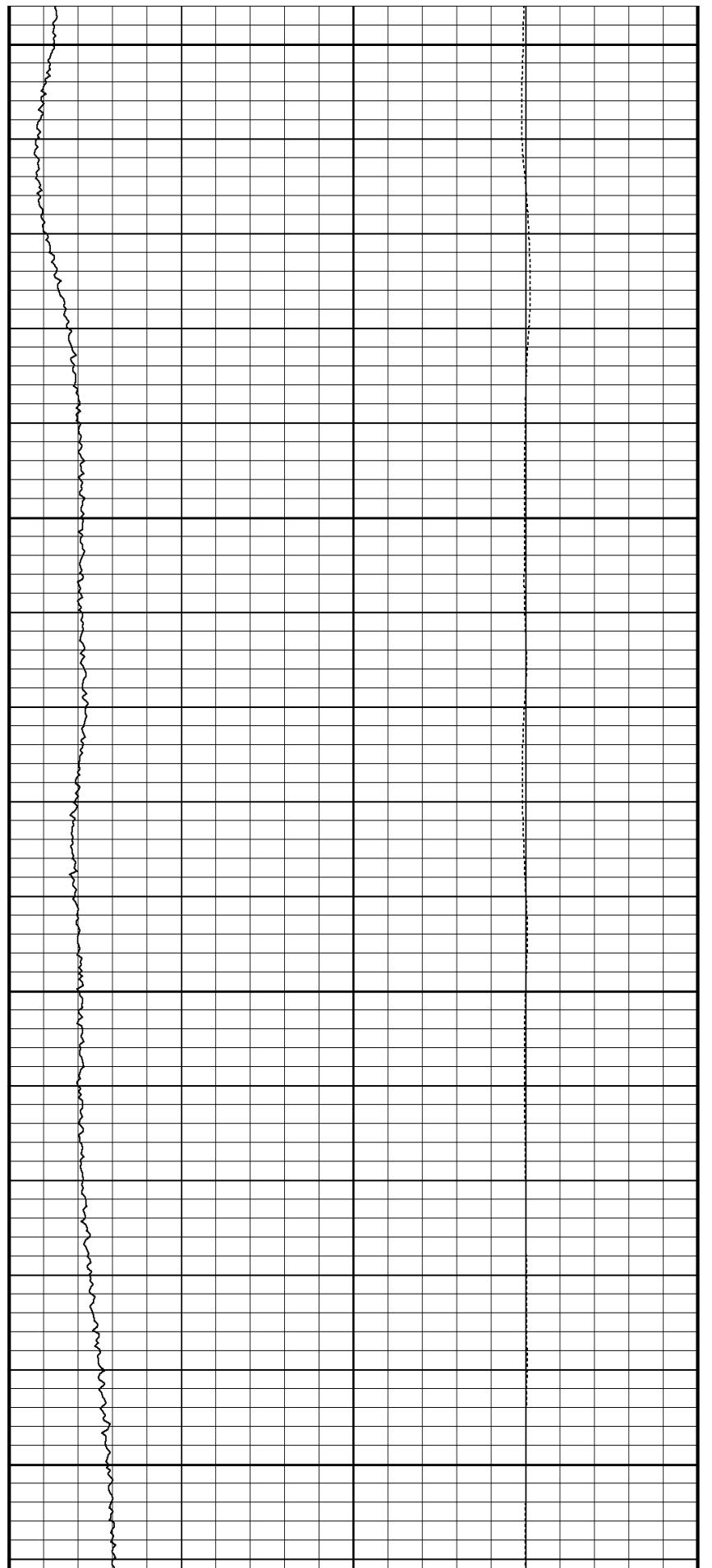
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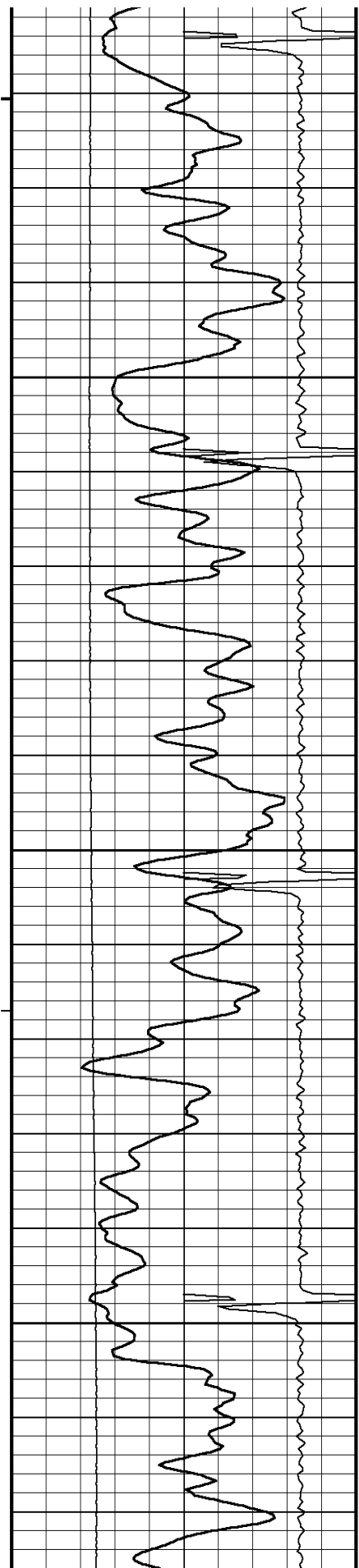
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123°

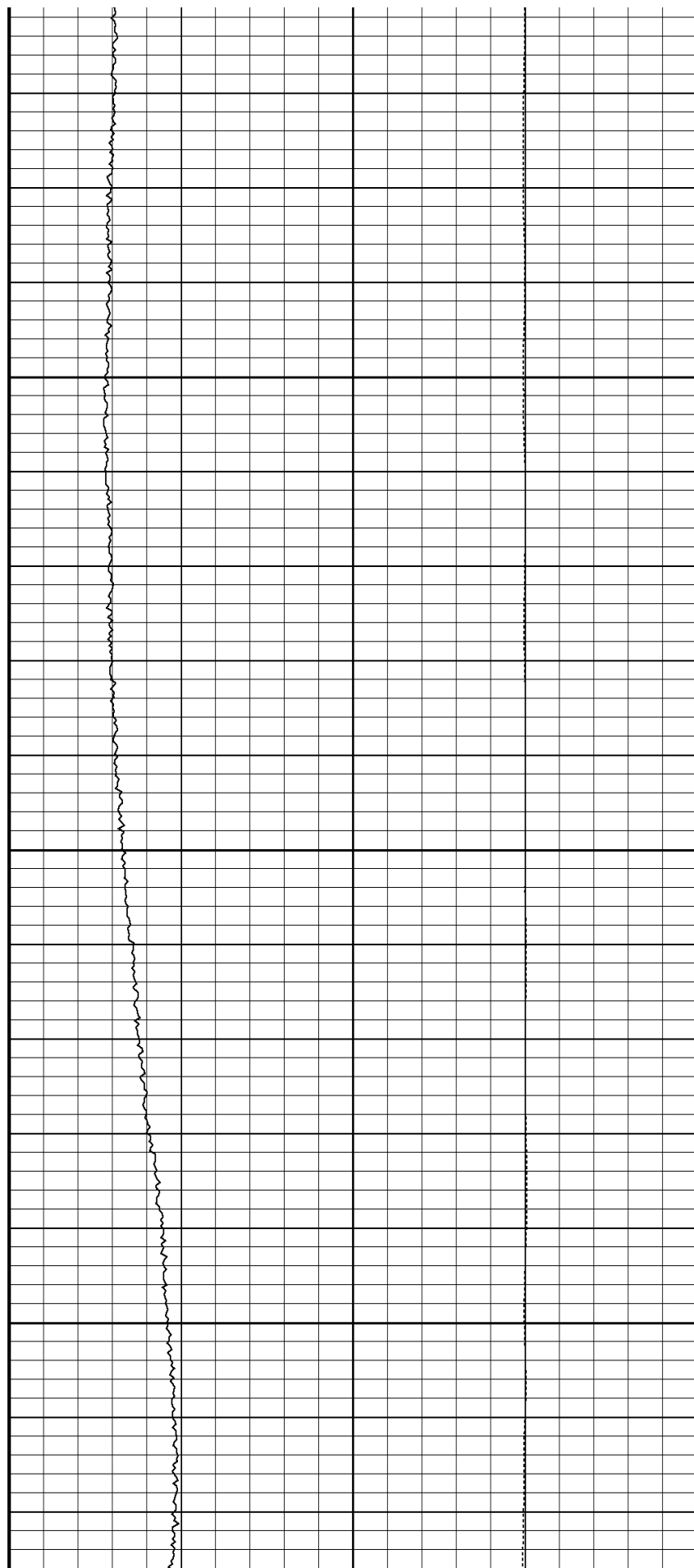
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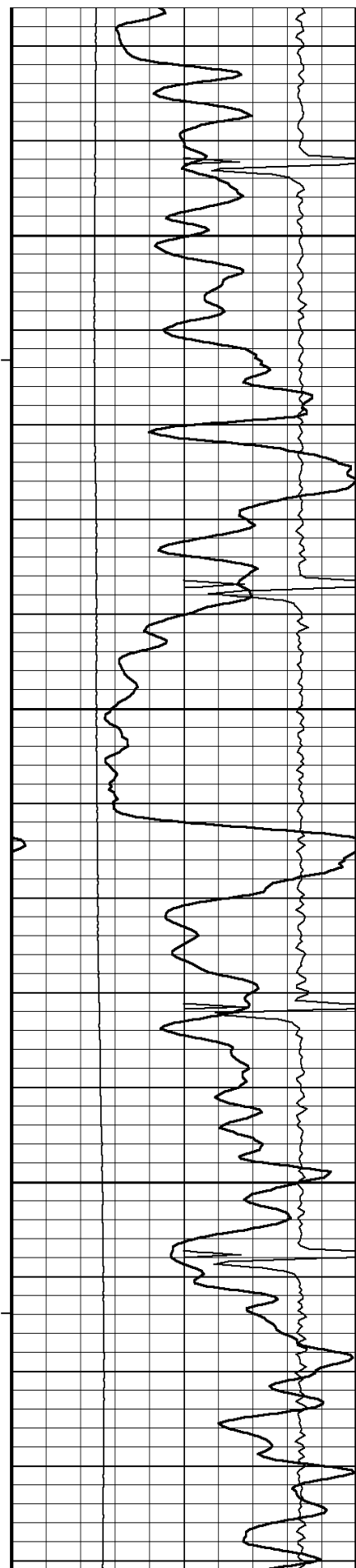
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124°

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125°

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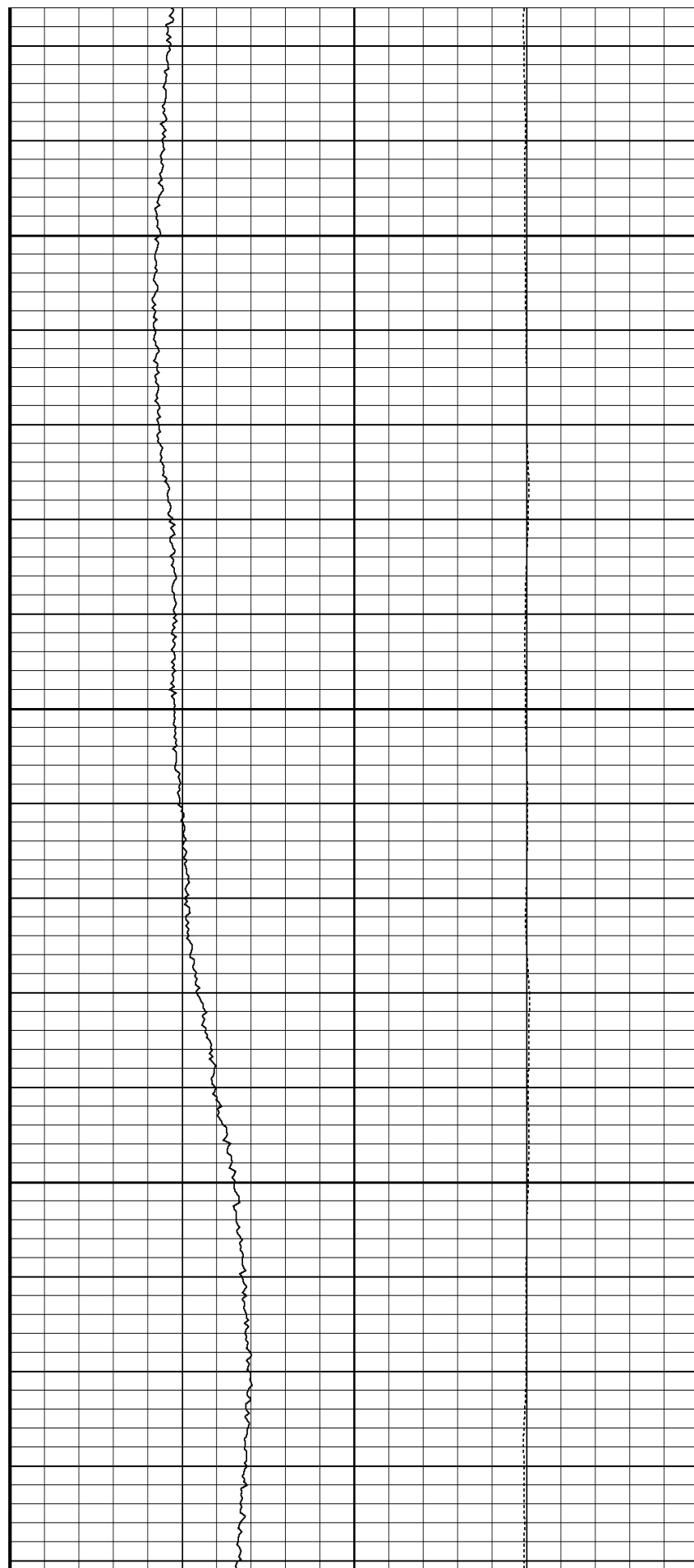
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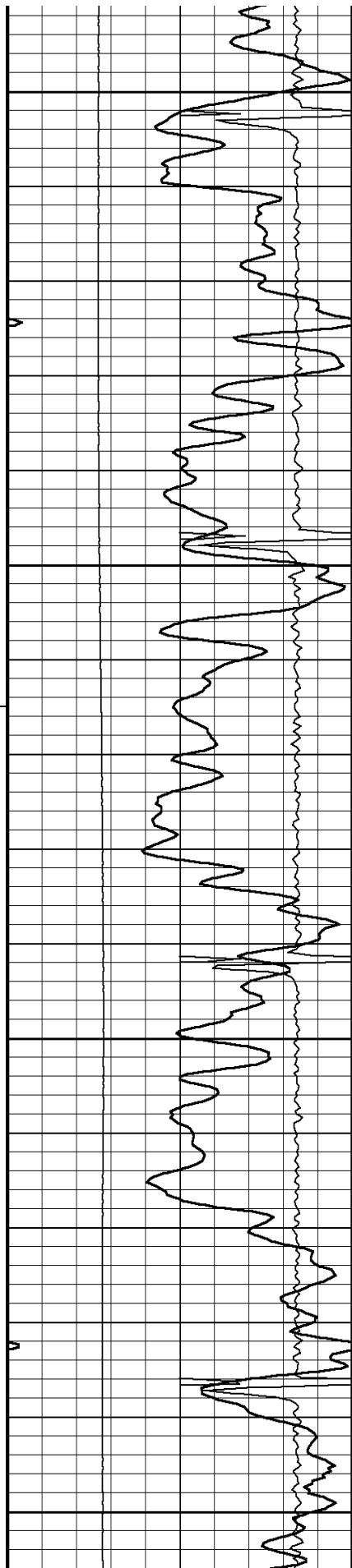
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126°

4150

127°





4200

127°

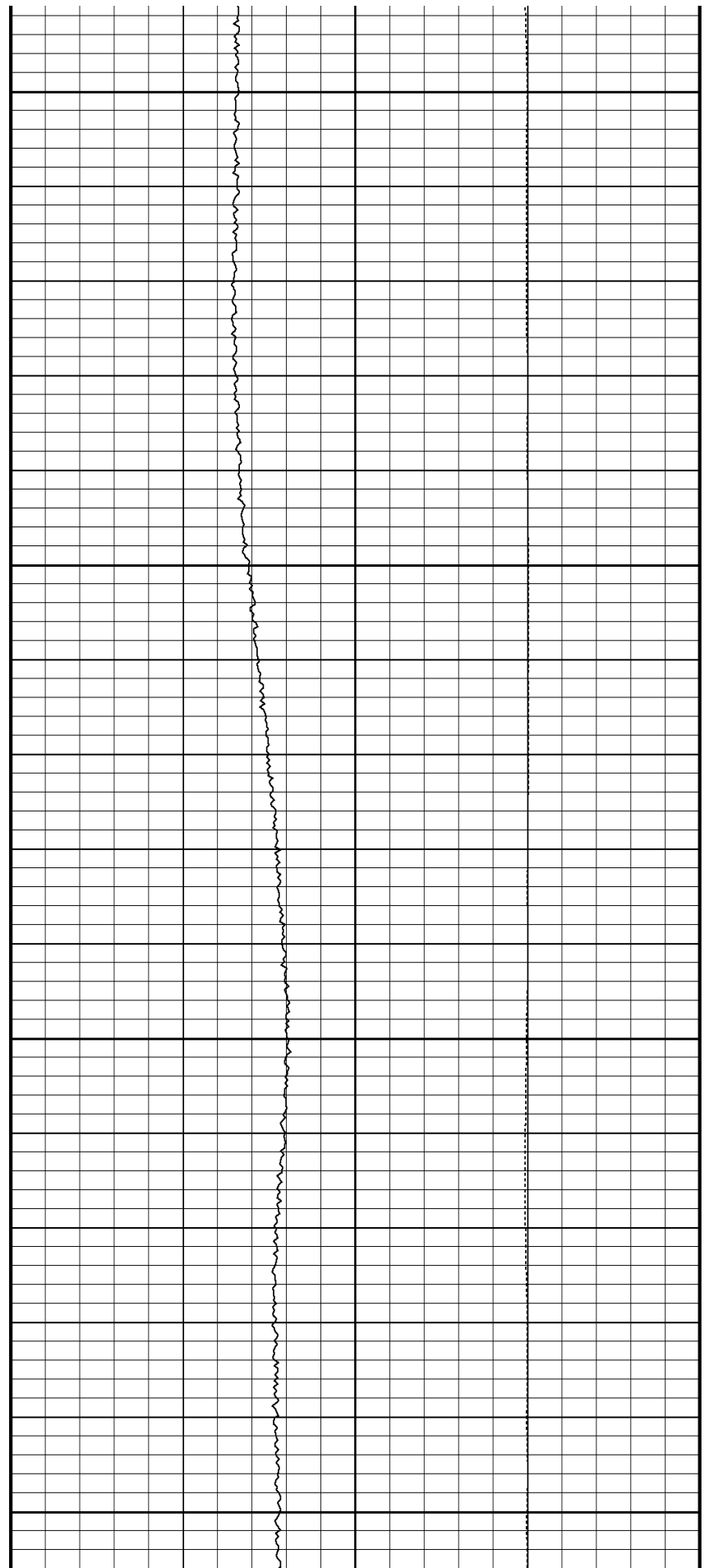
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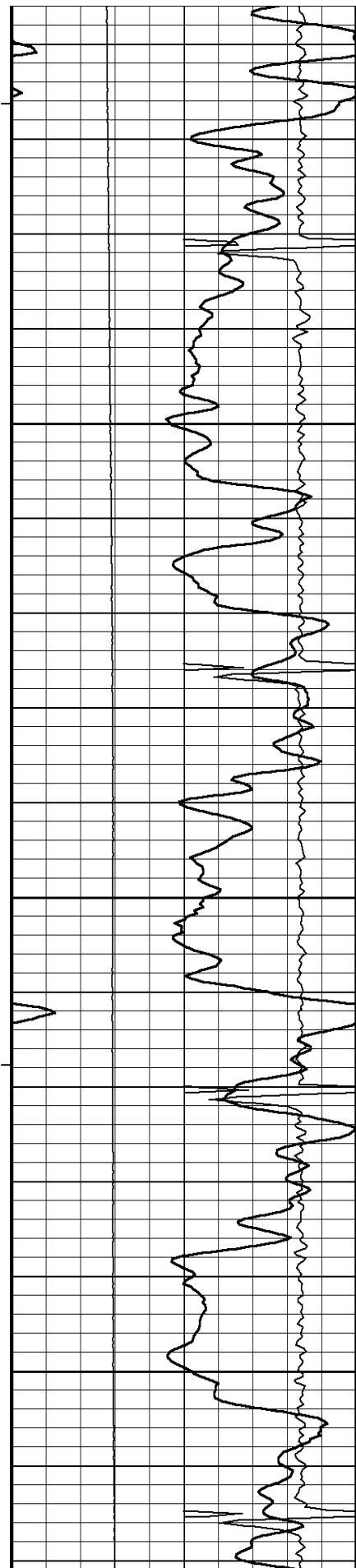
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4300

128°

4350





129°

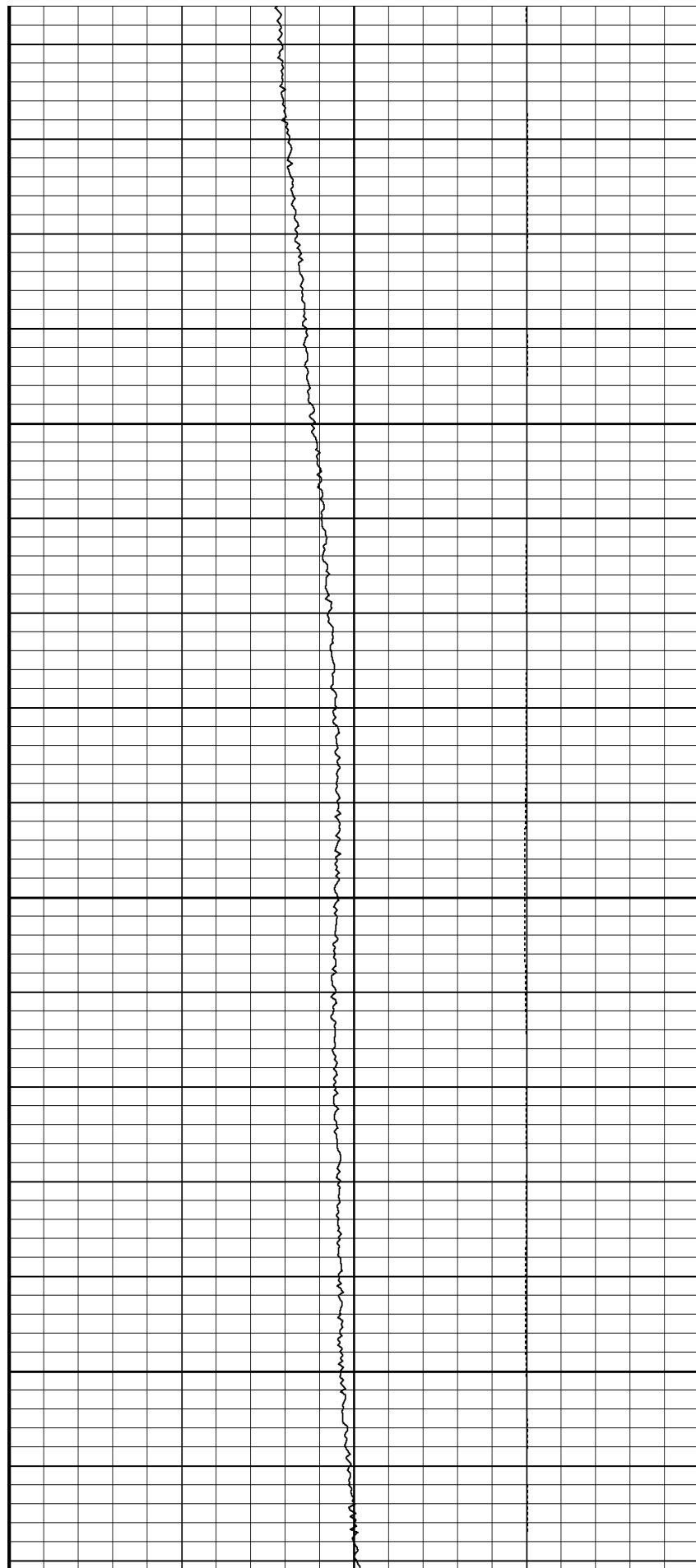
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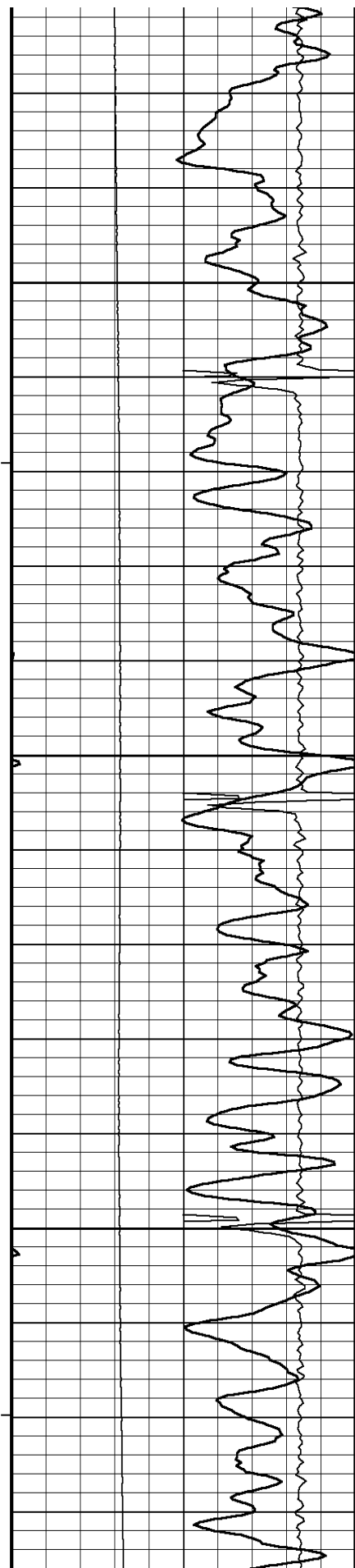
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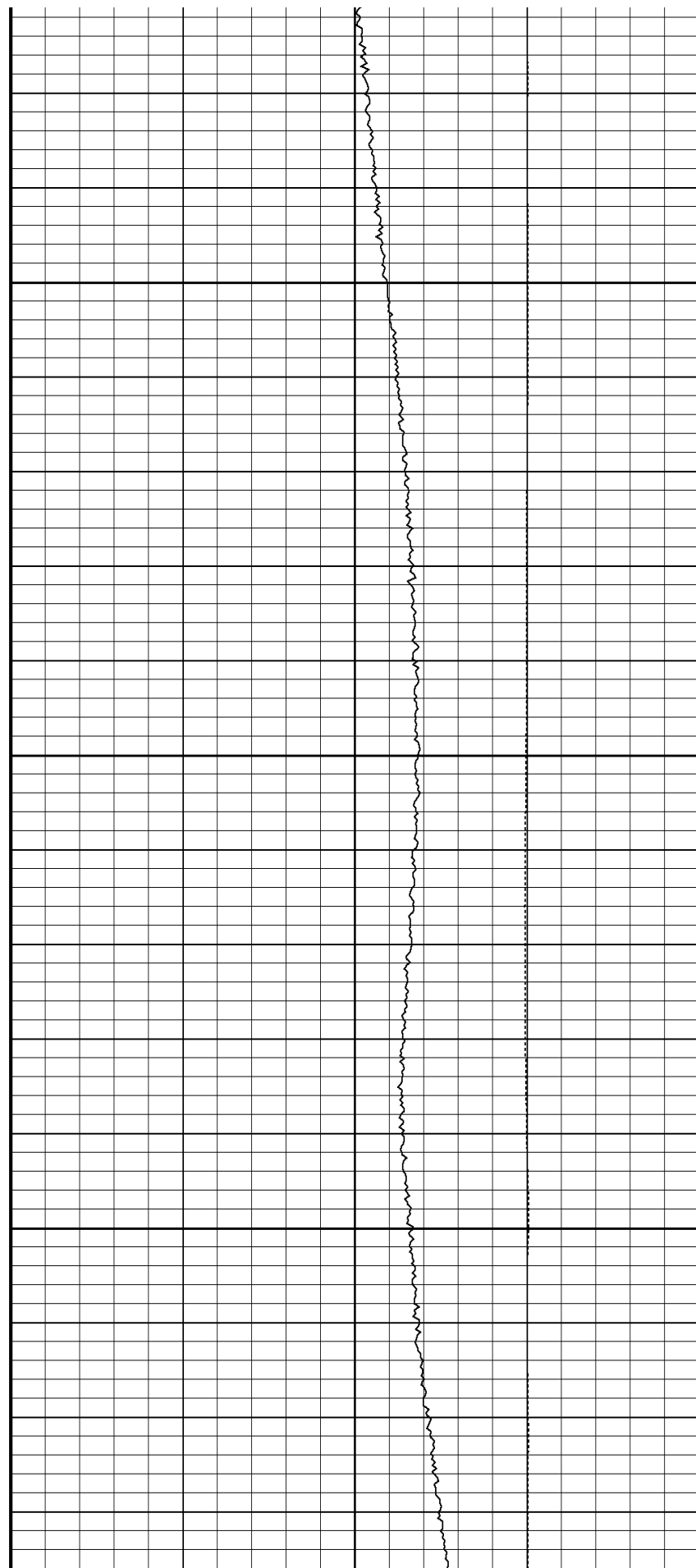
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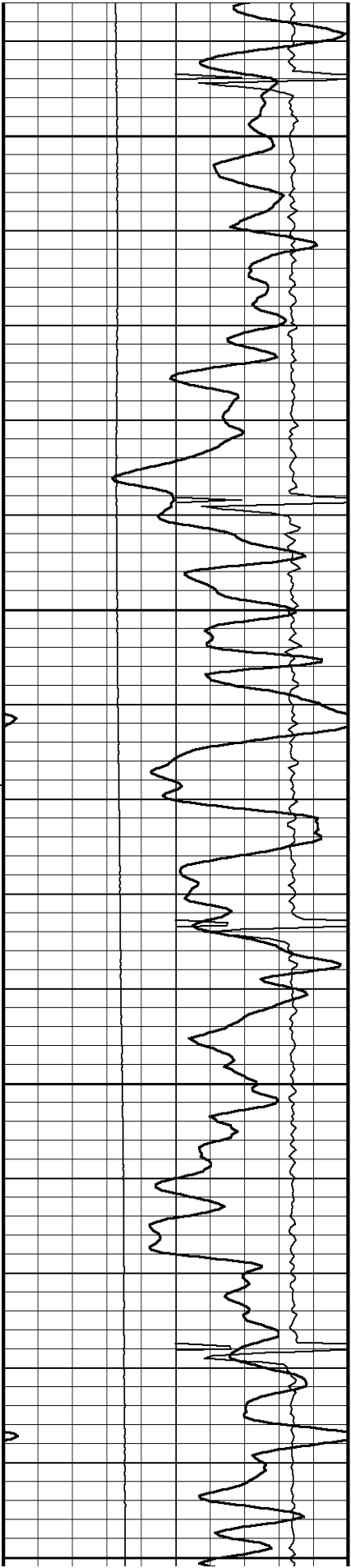
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133°

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133°

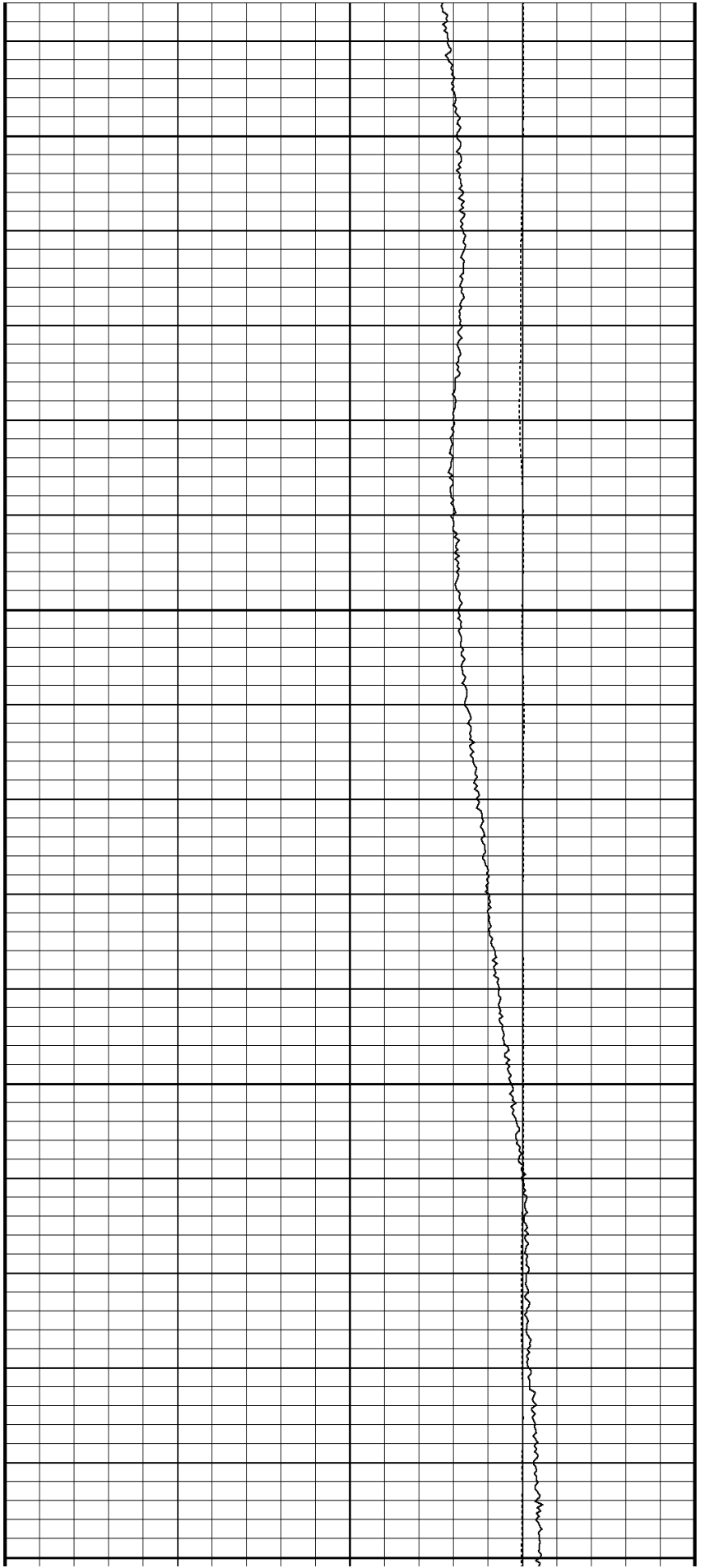
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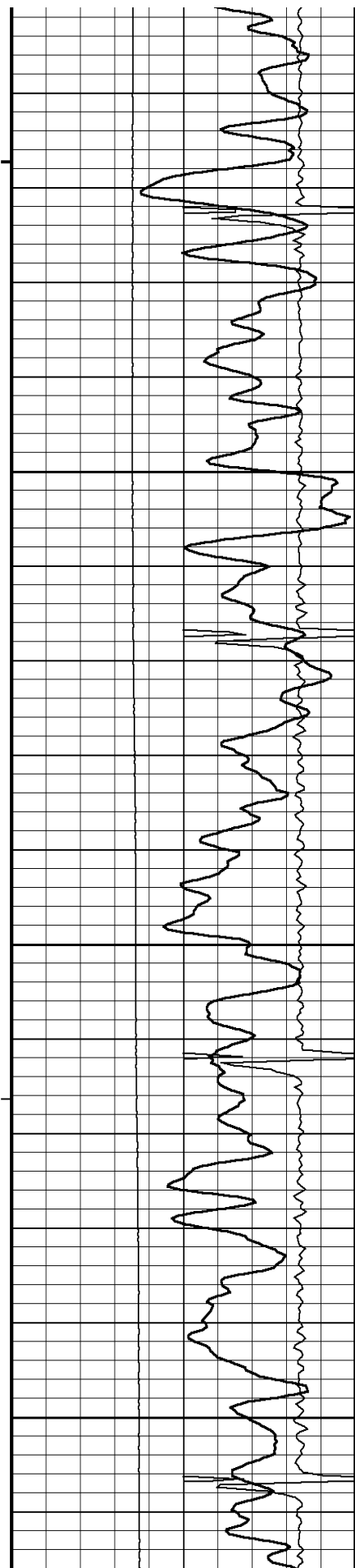
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135°

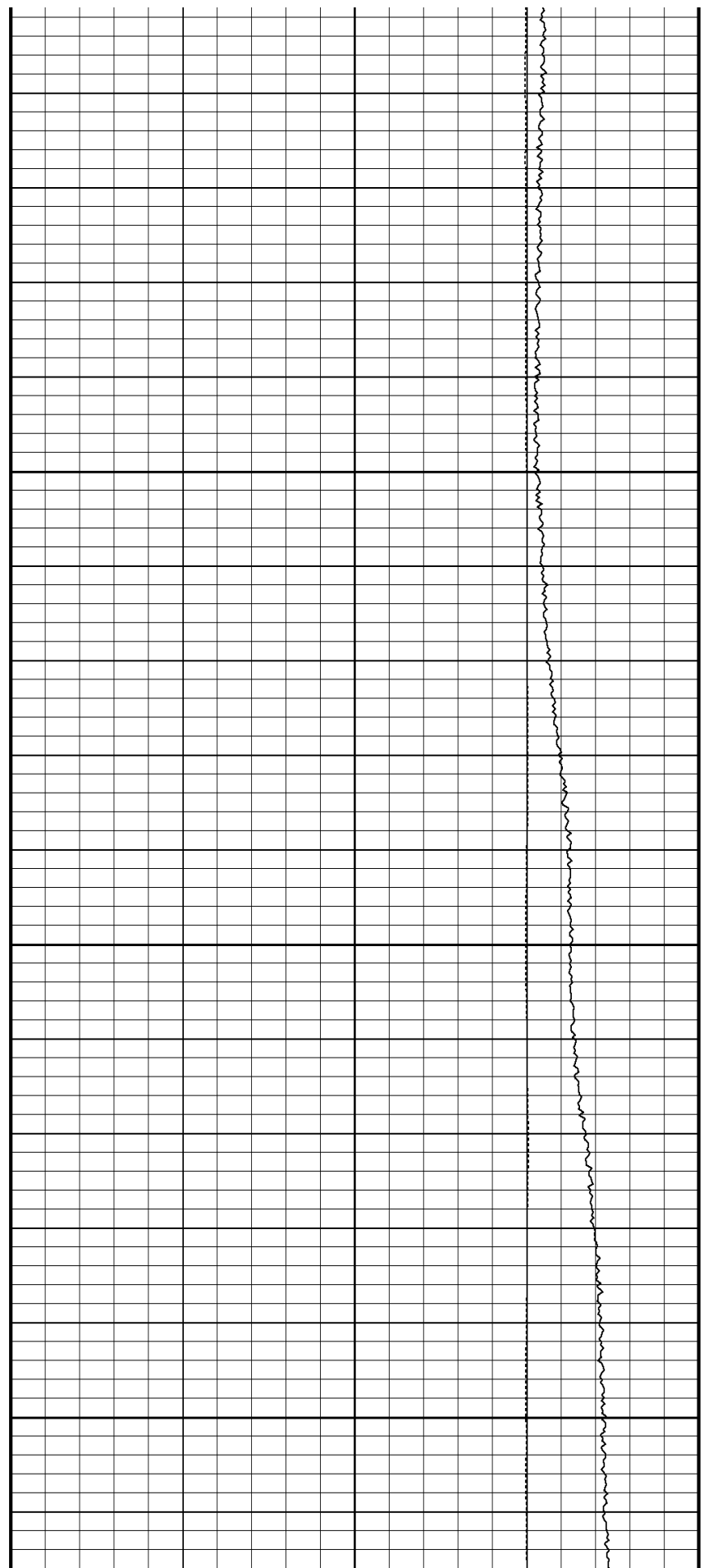
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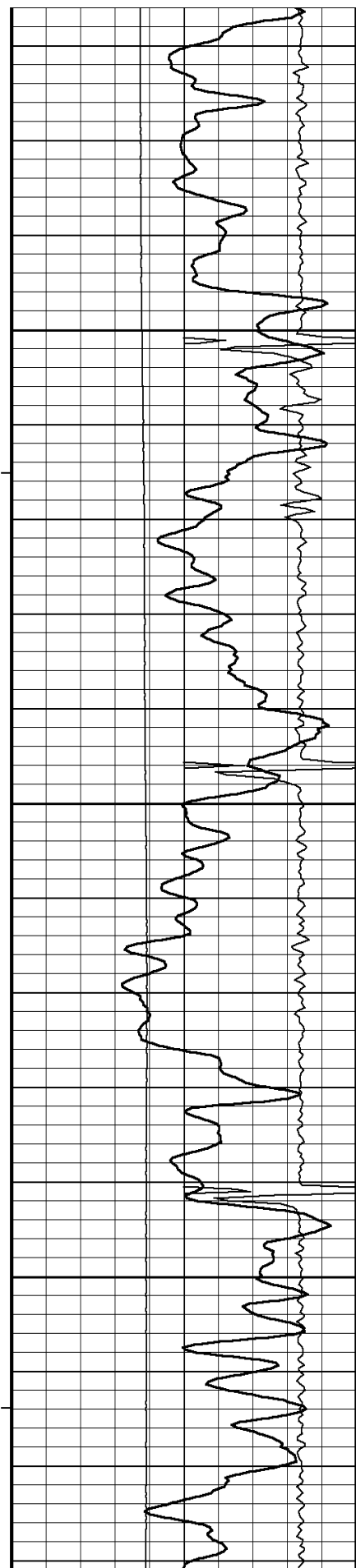
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138°

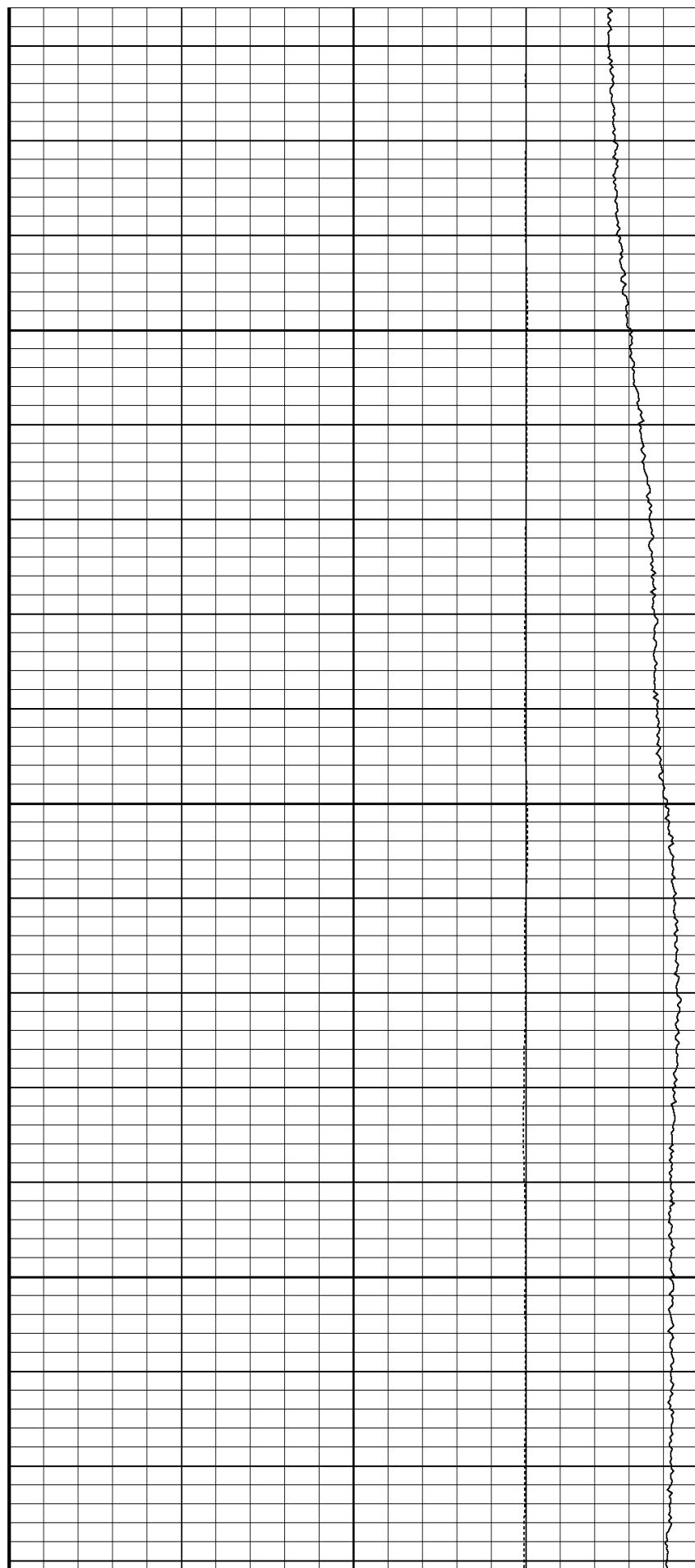
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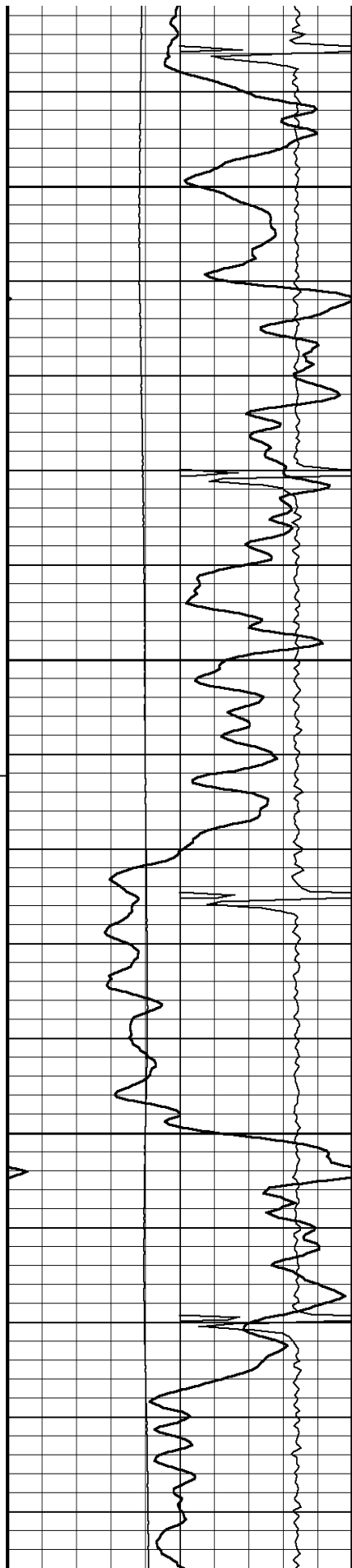
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5100

139°

5150





139°

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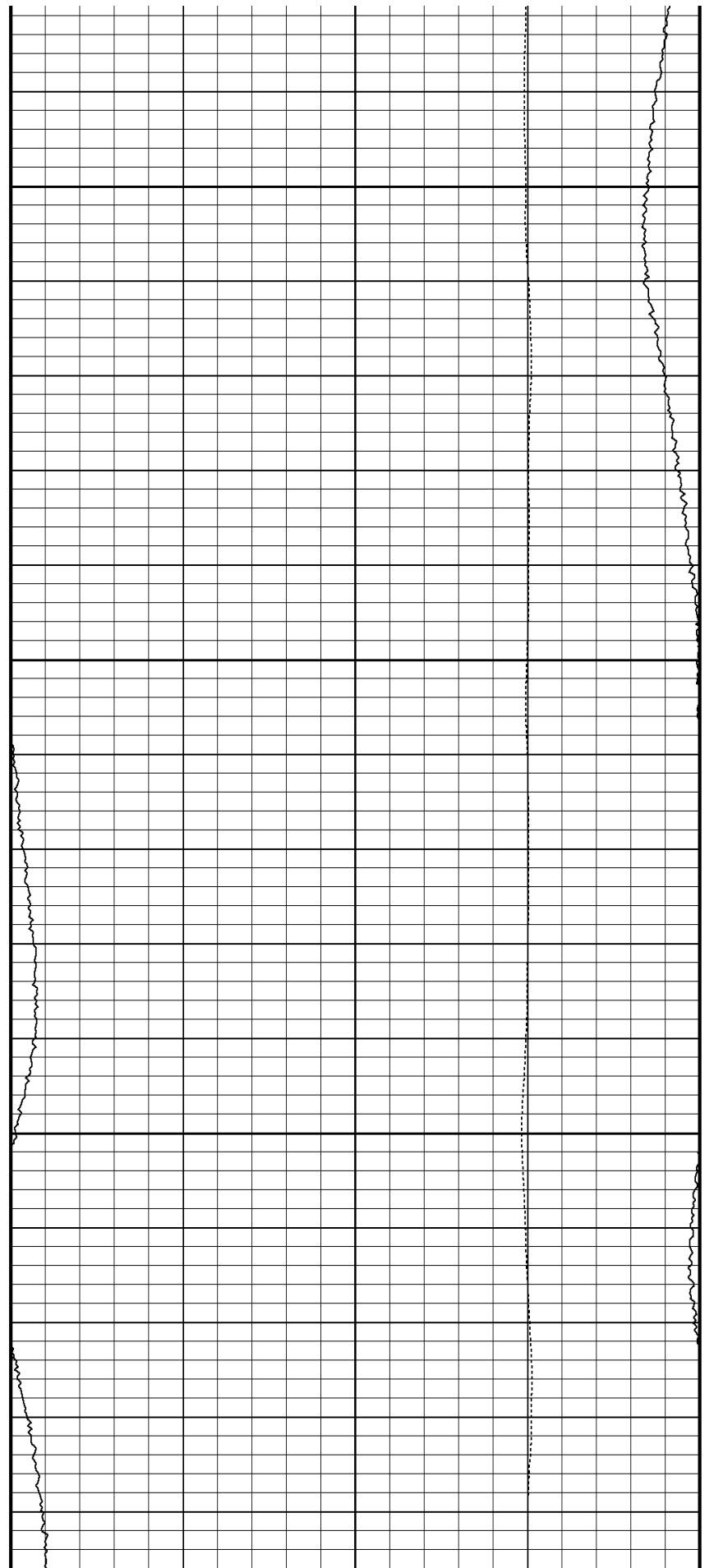
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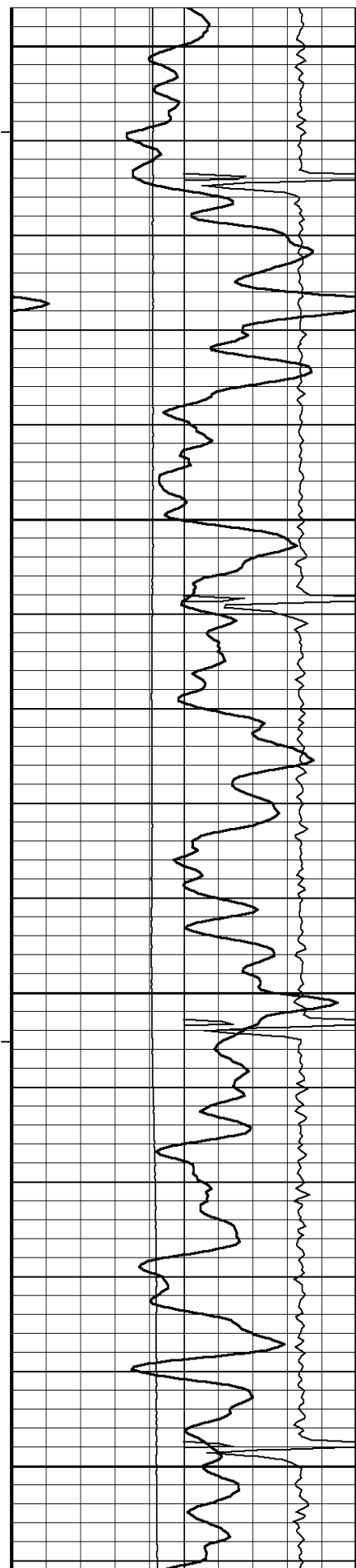
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141°





5350

141°

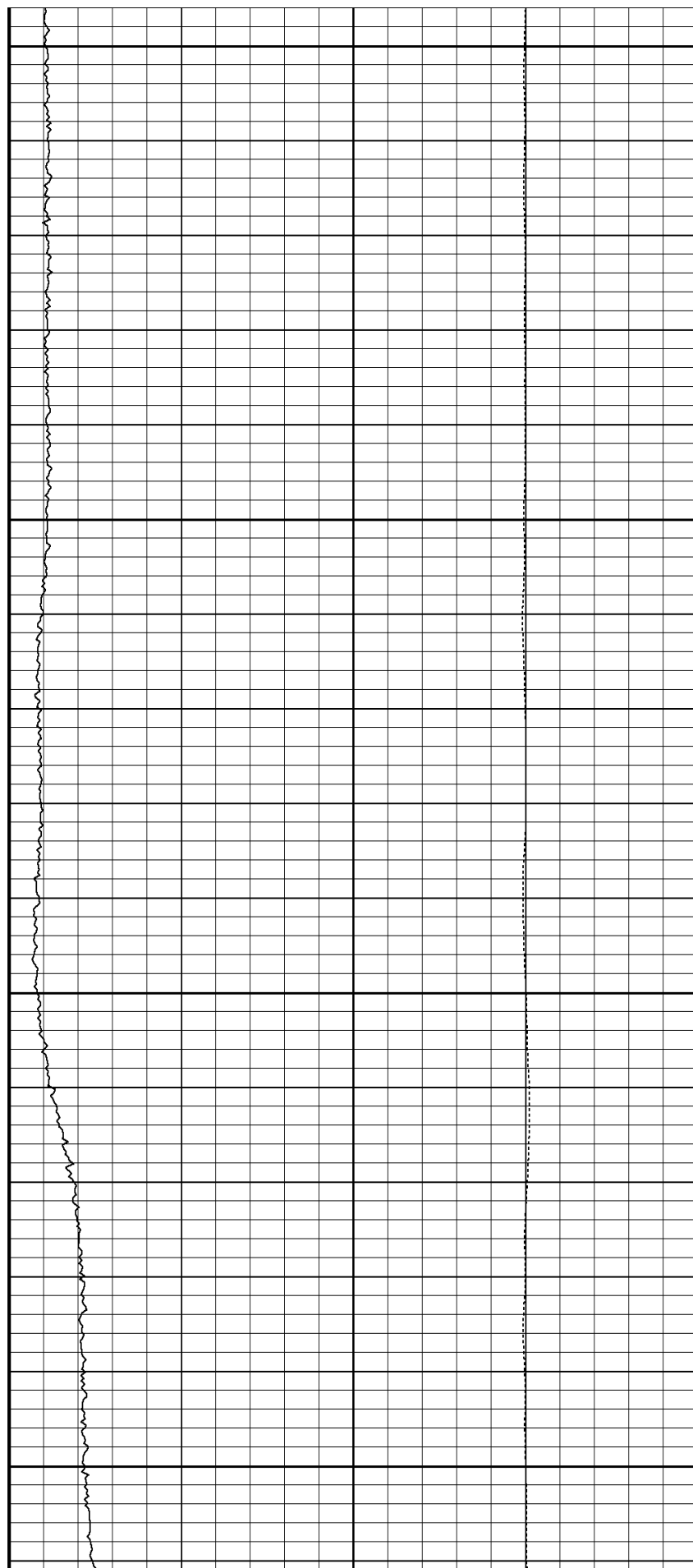
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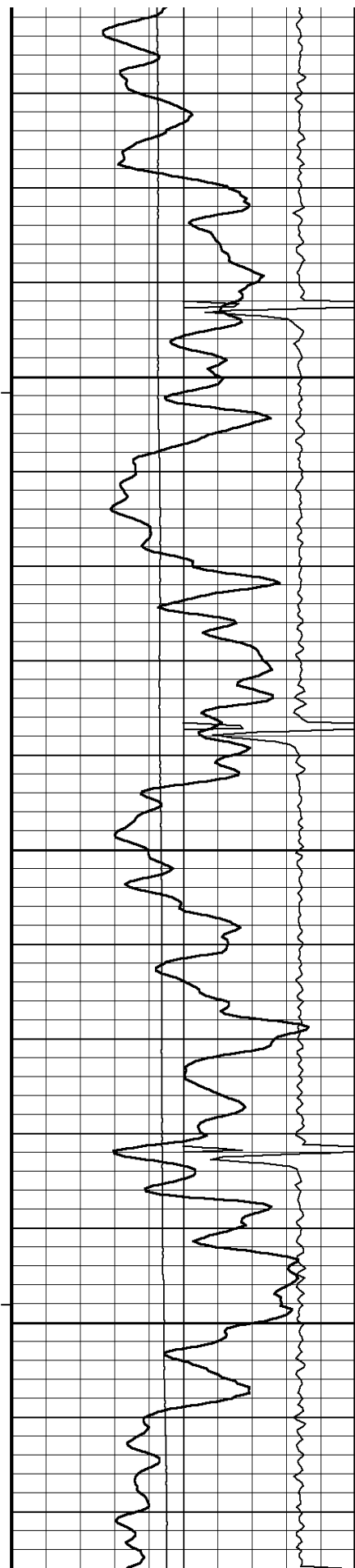
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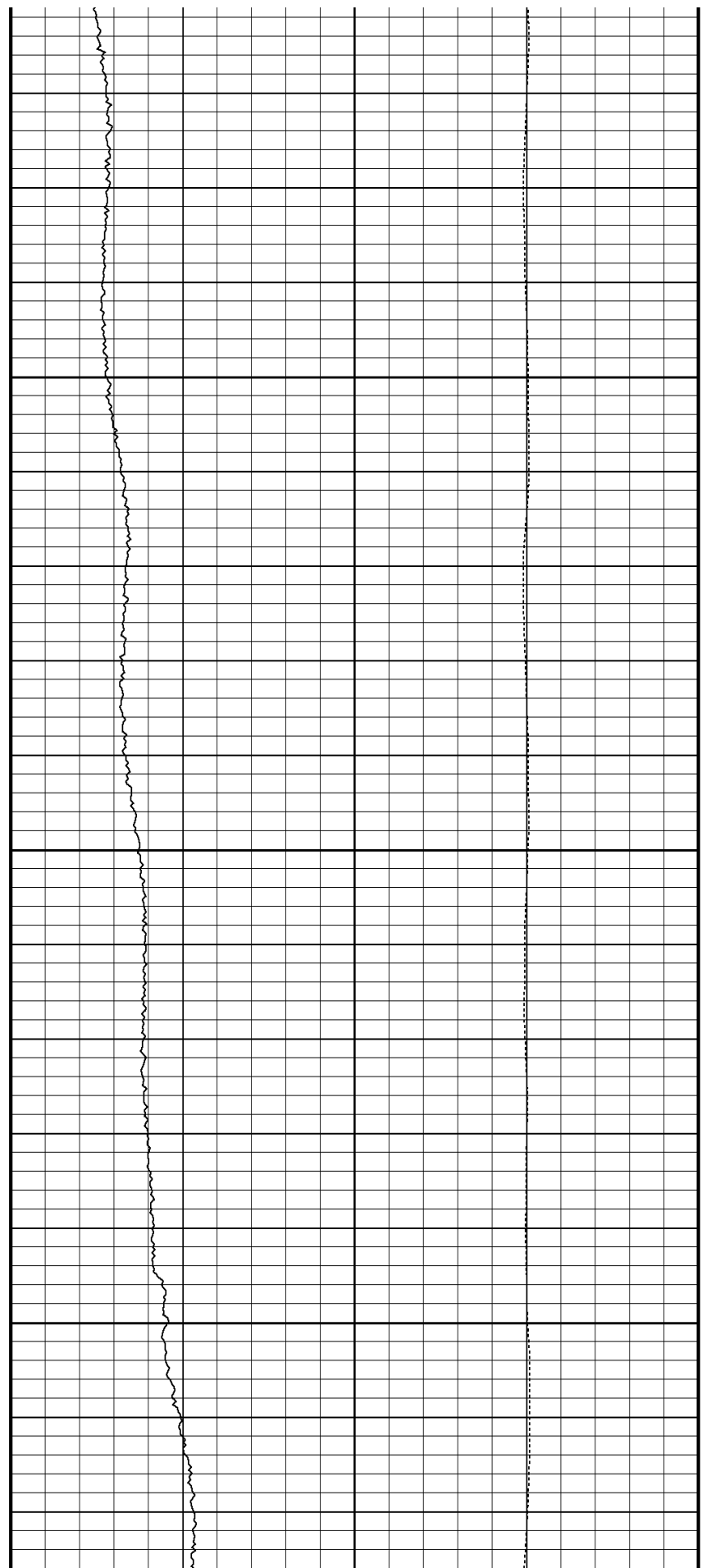
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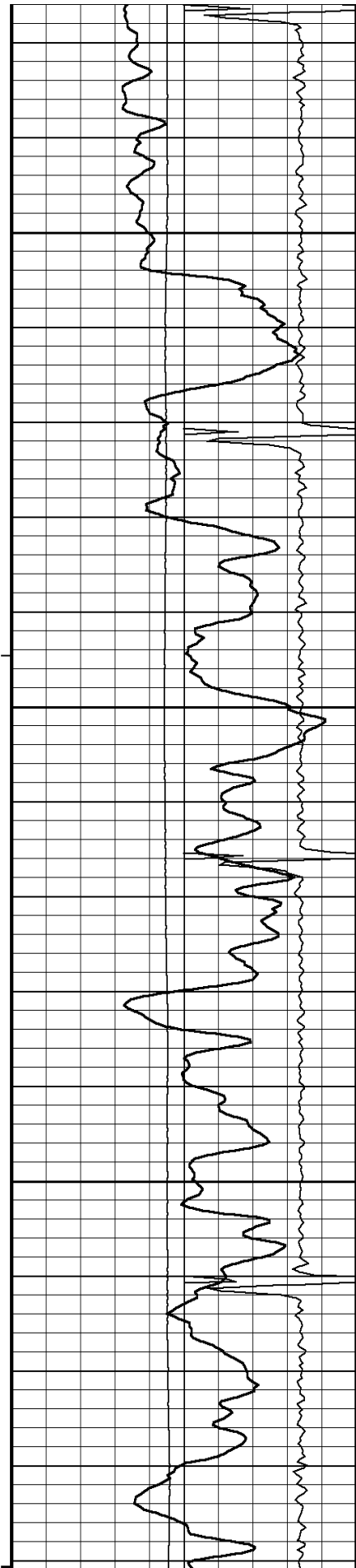
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144°

5650





145°

5700

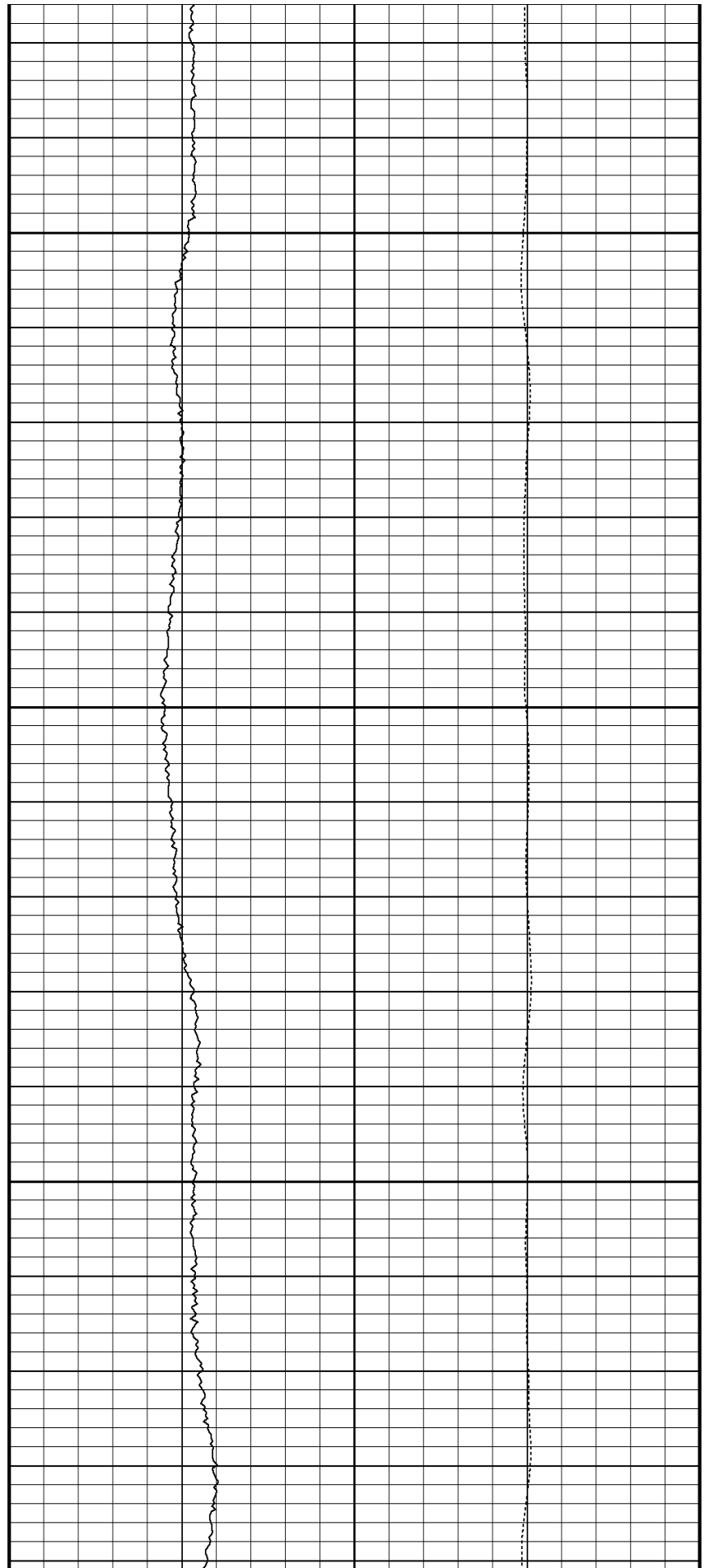
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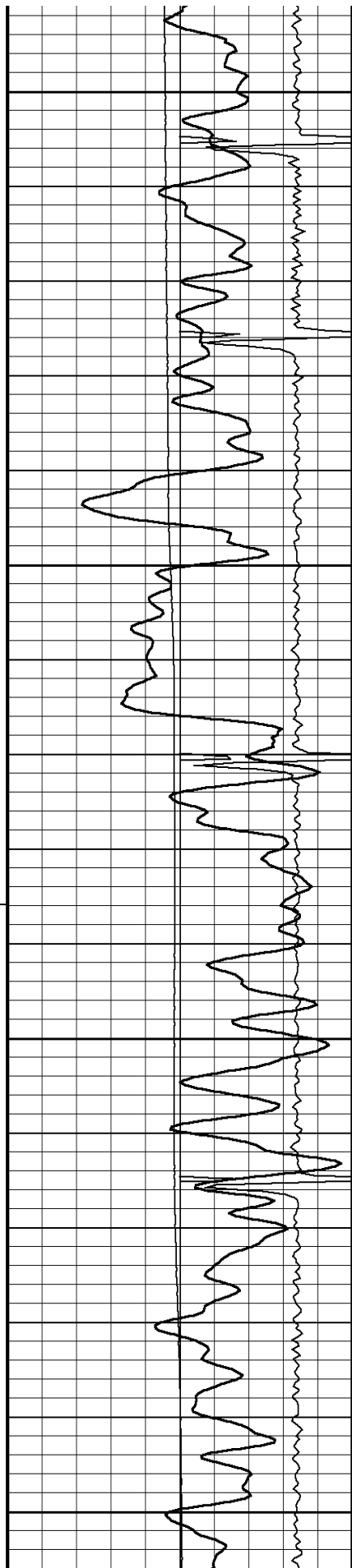
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145°

5800

146°





5850

147°

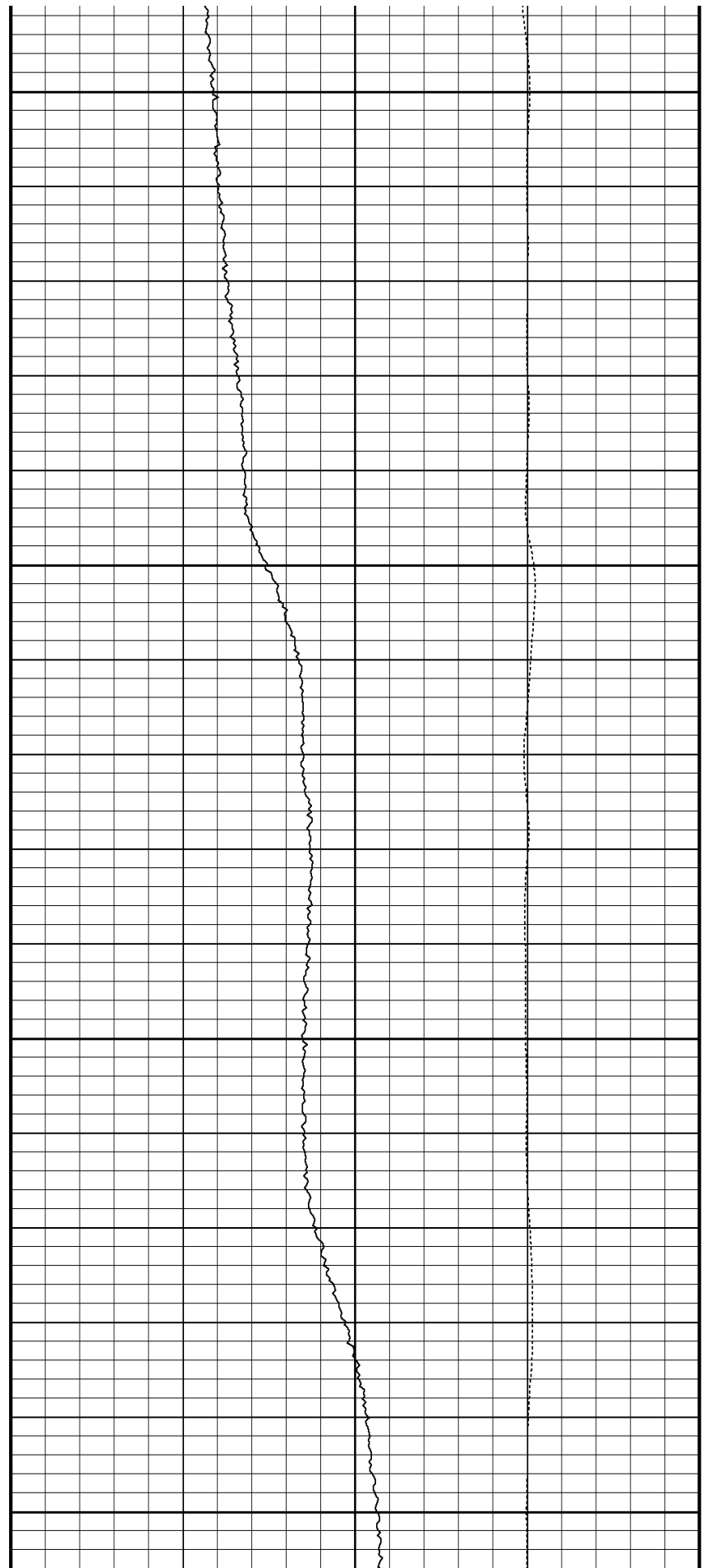
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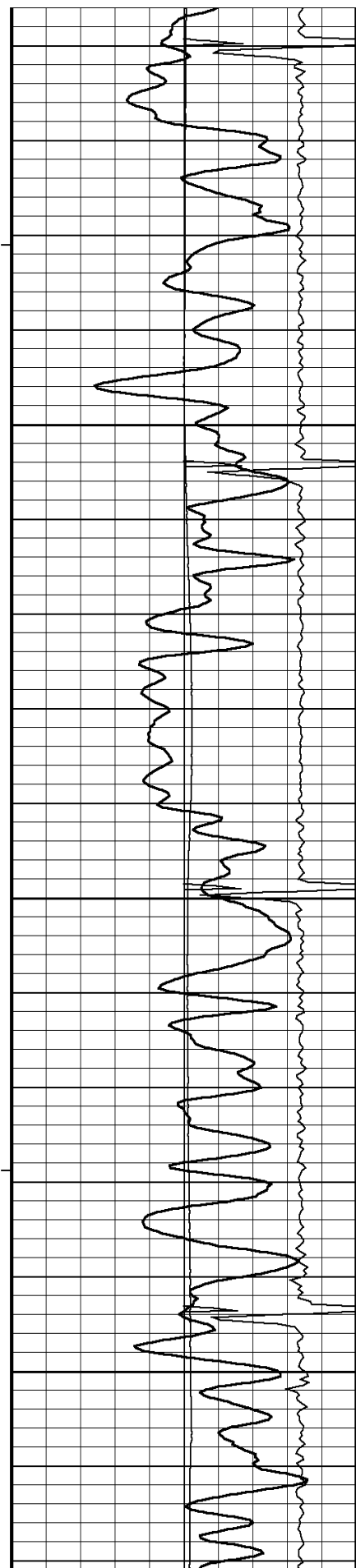
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5950

150°

6000





150°

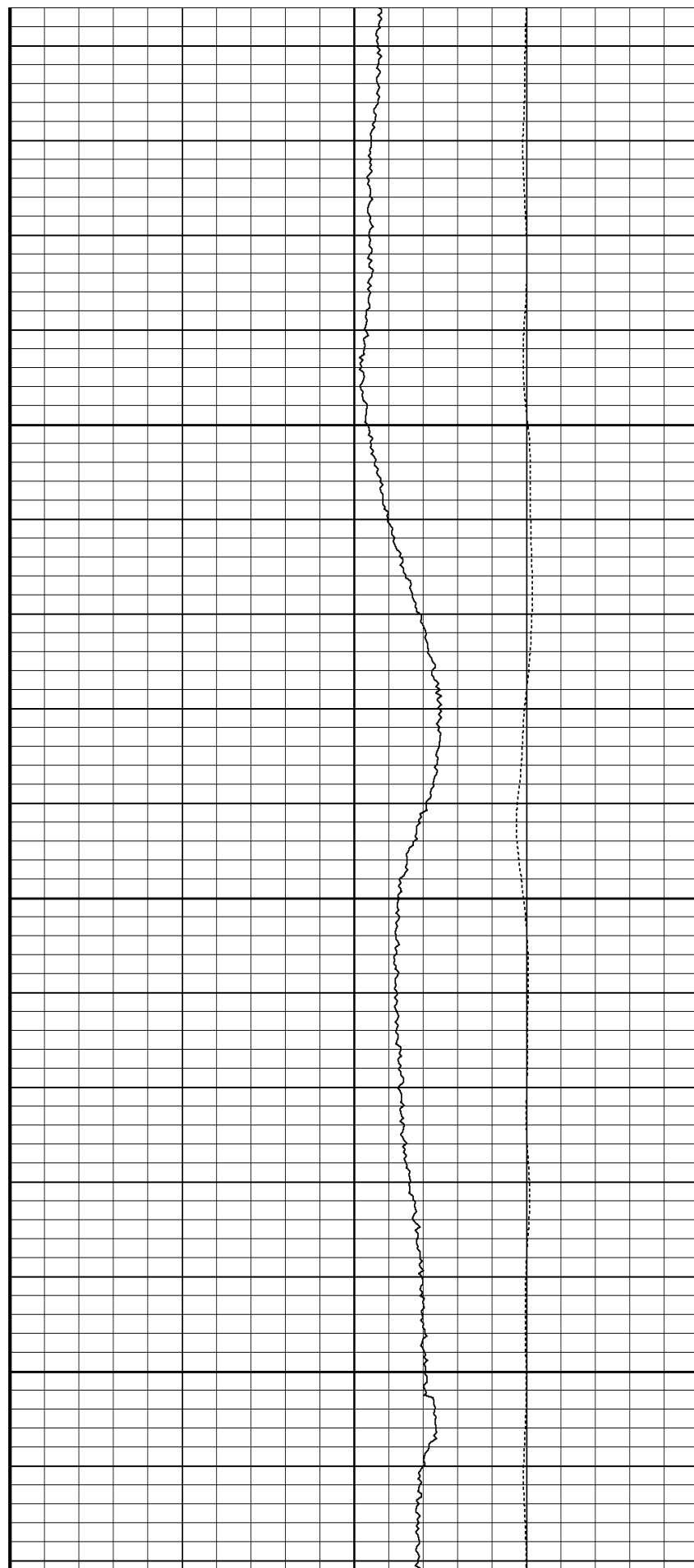
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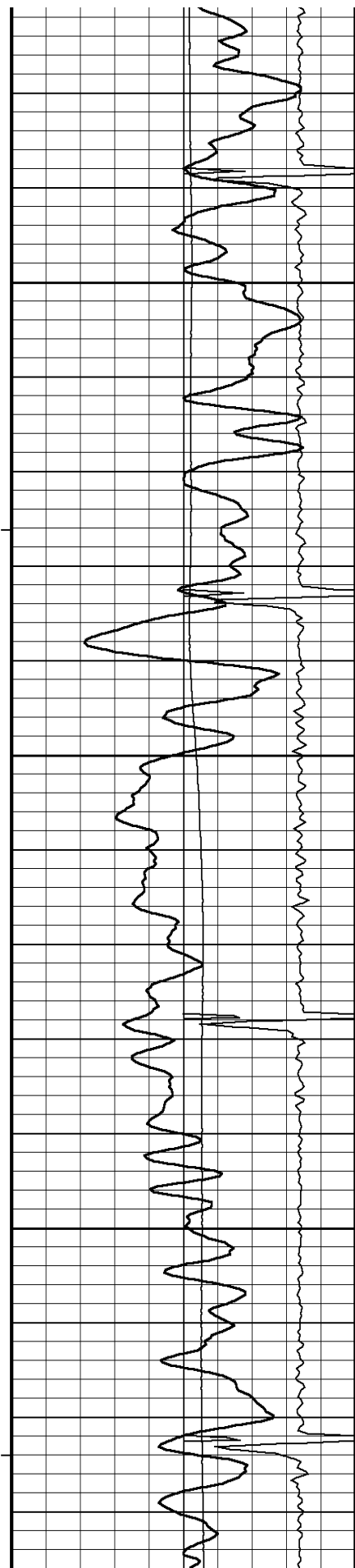
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6100

152°

6150





152°

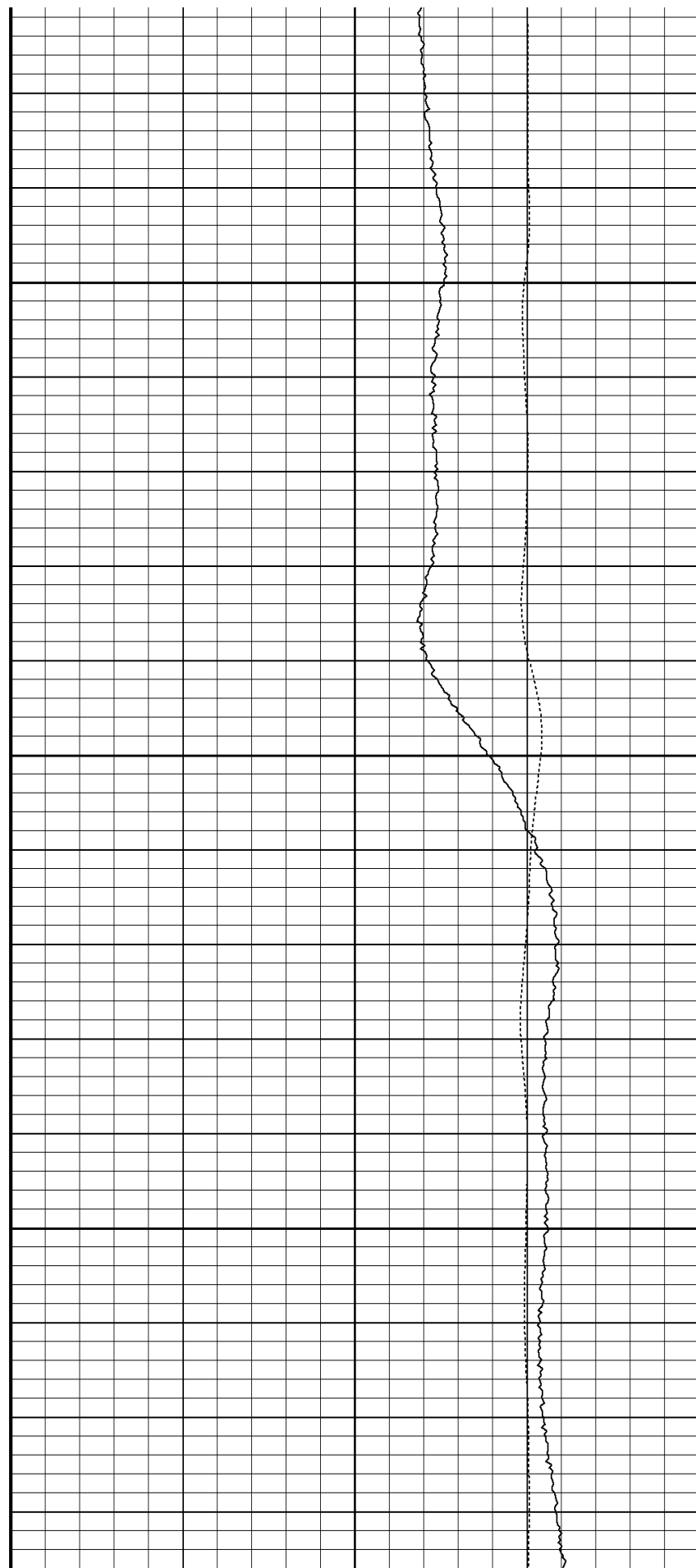
6200

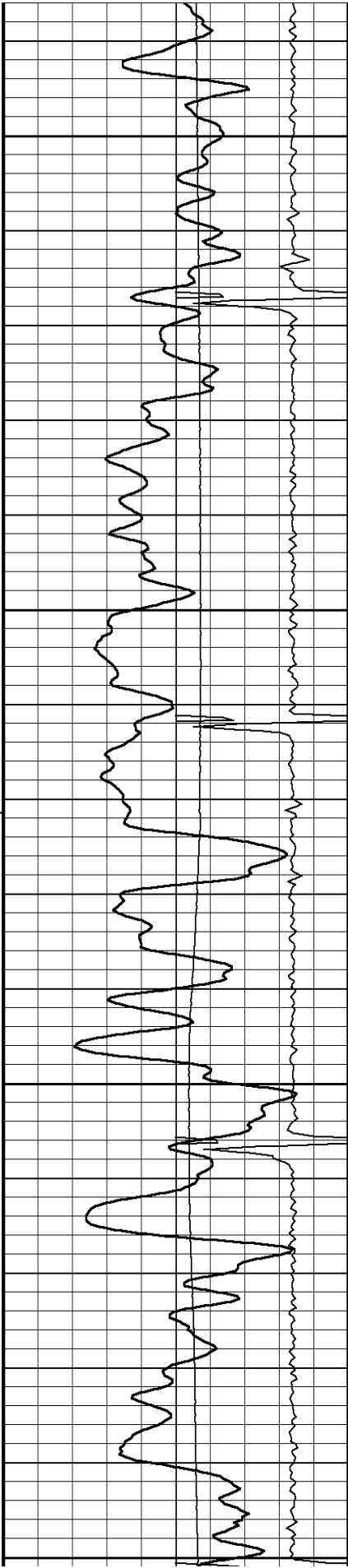
152°

6250

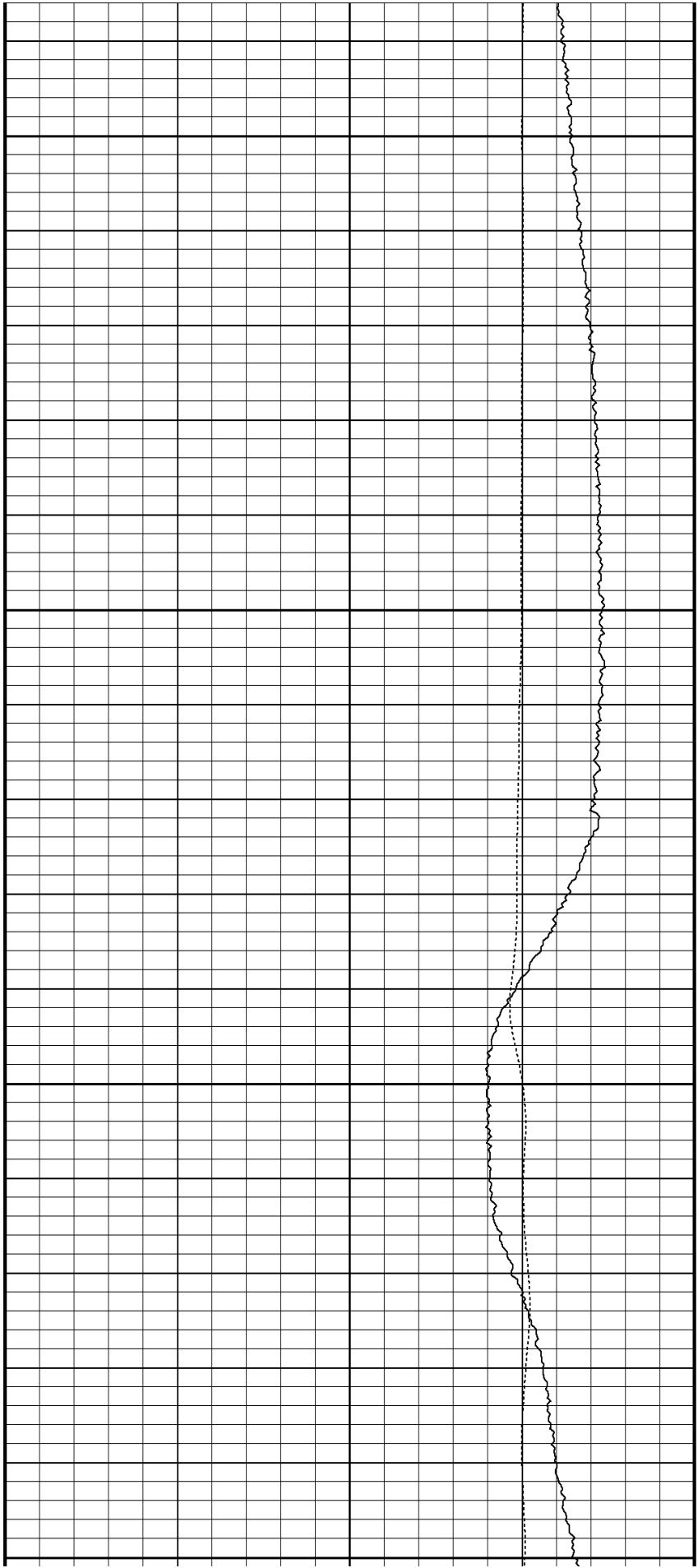
155°

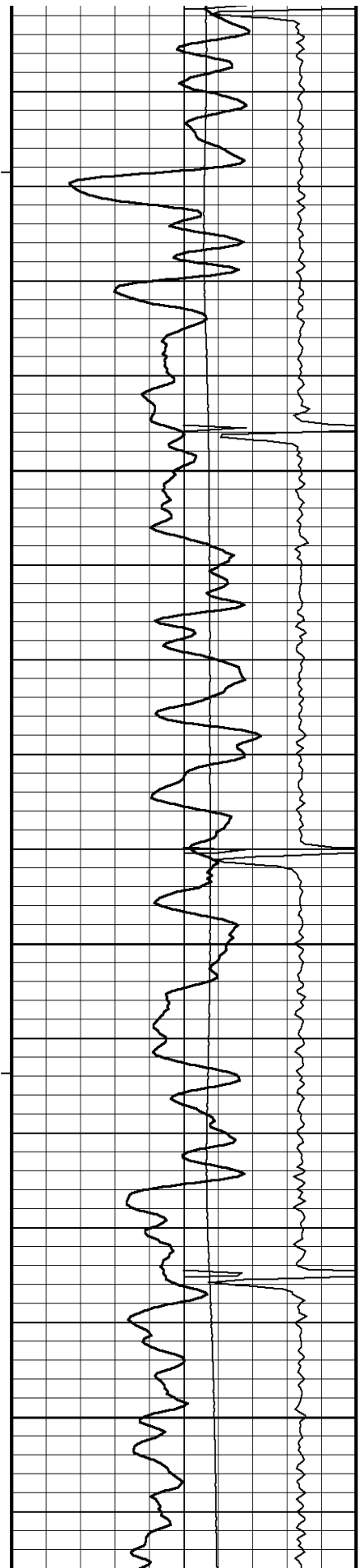
6300





156°
6350
157°
6400
155°
6450
156°
6500





157°

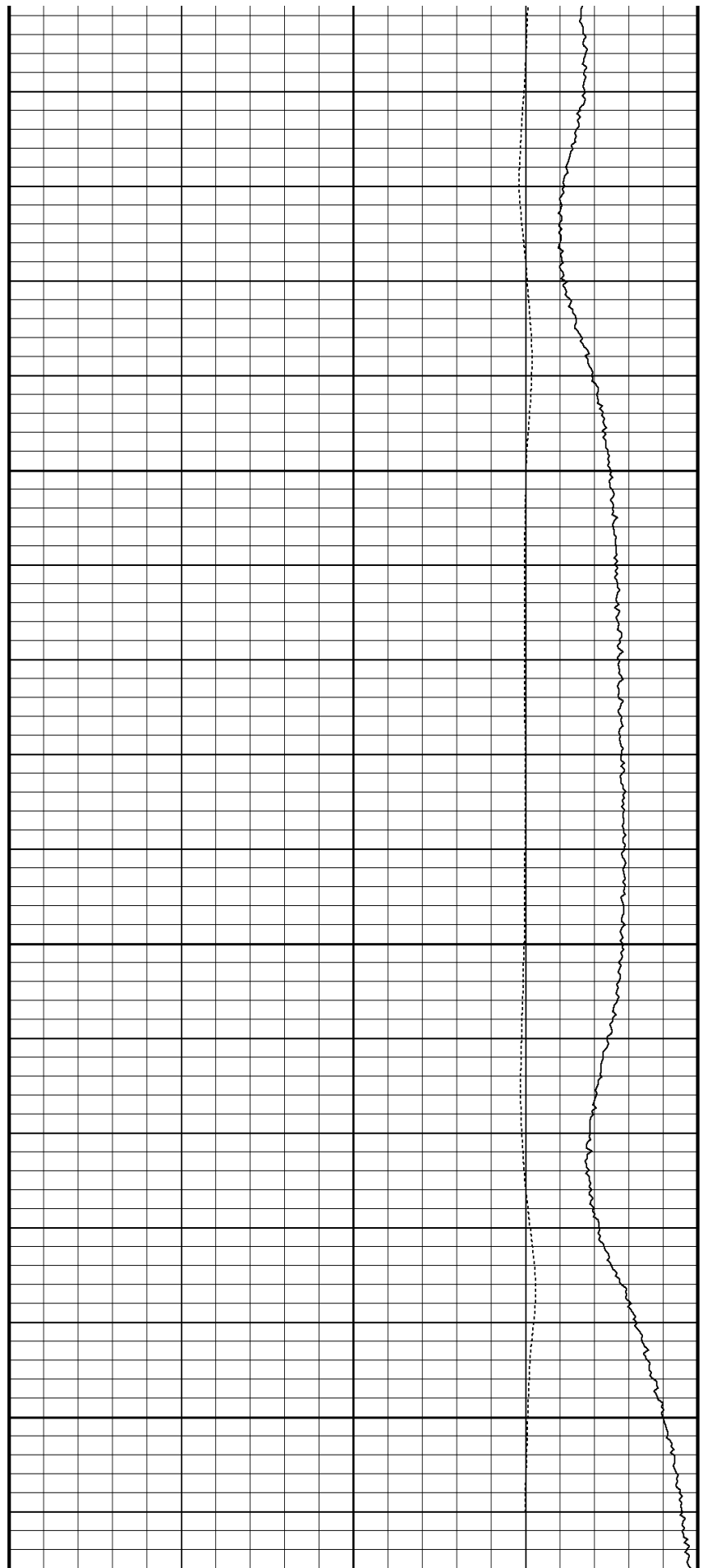
6550

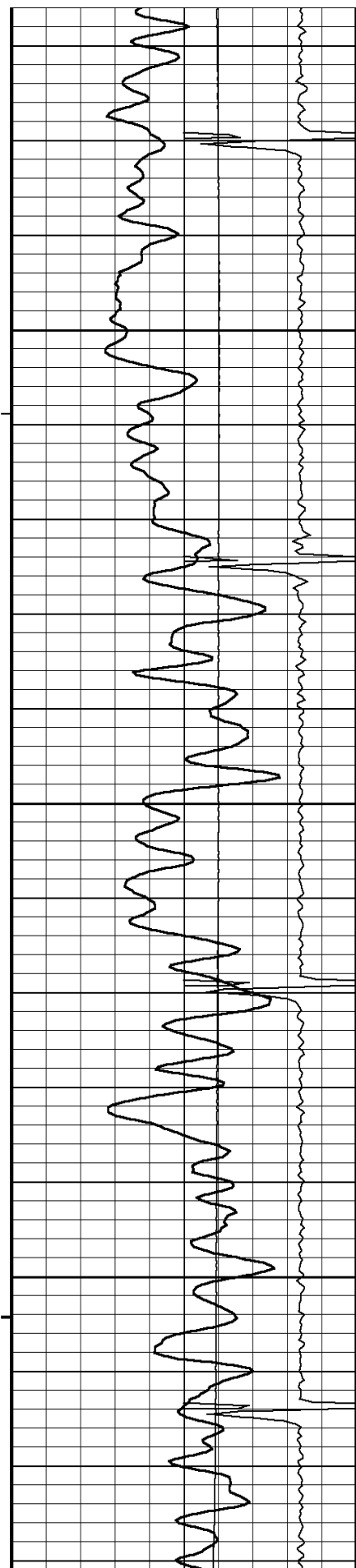
158°

6600

158°

6650





160°

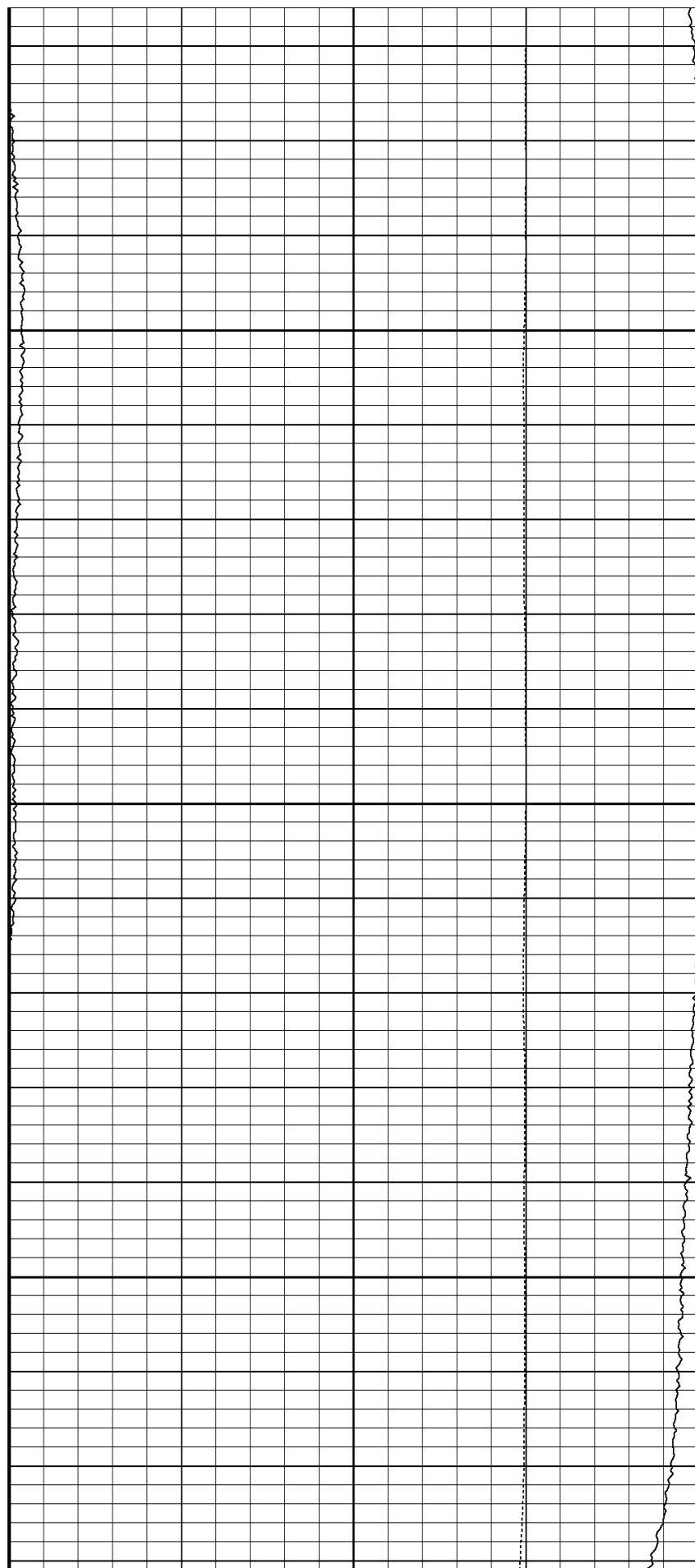
6700

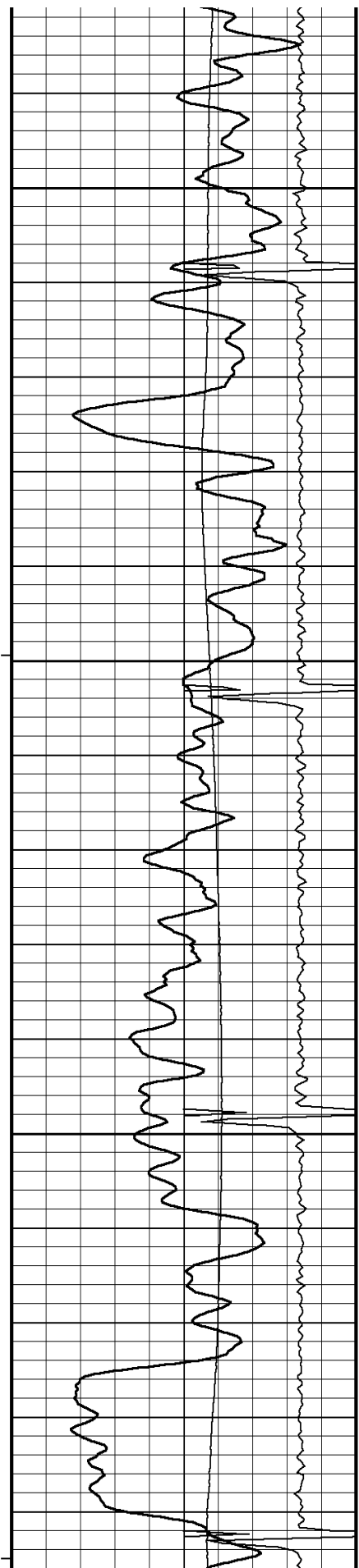
160°

6750

160°

6800





158°

6850

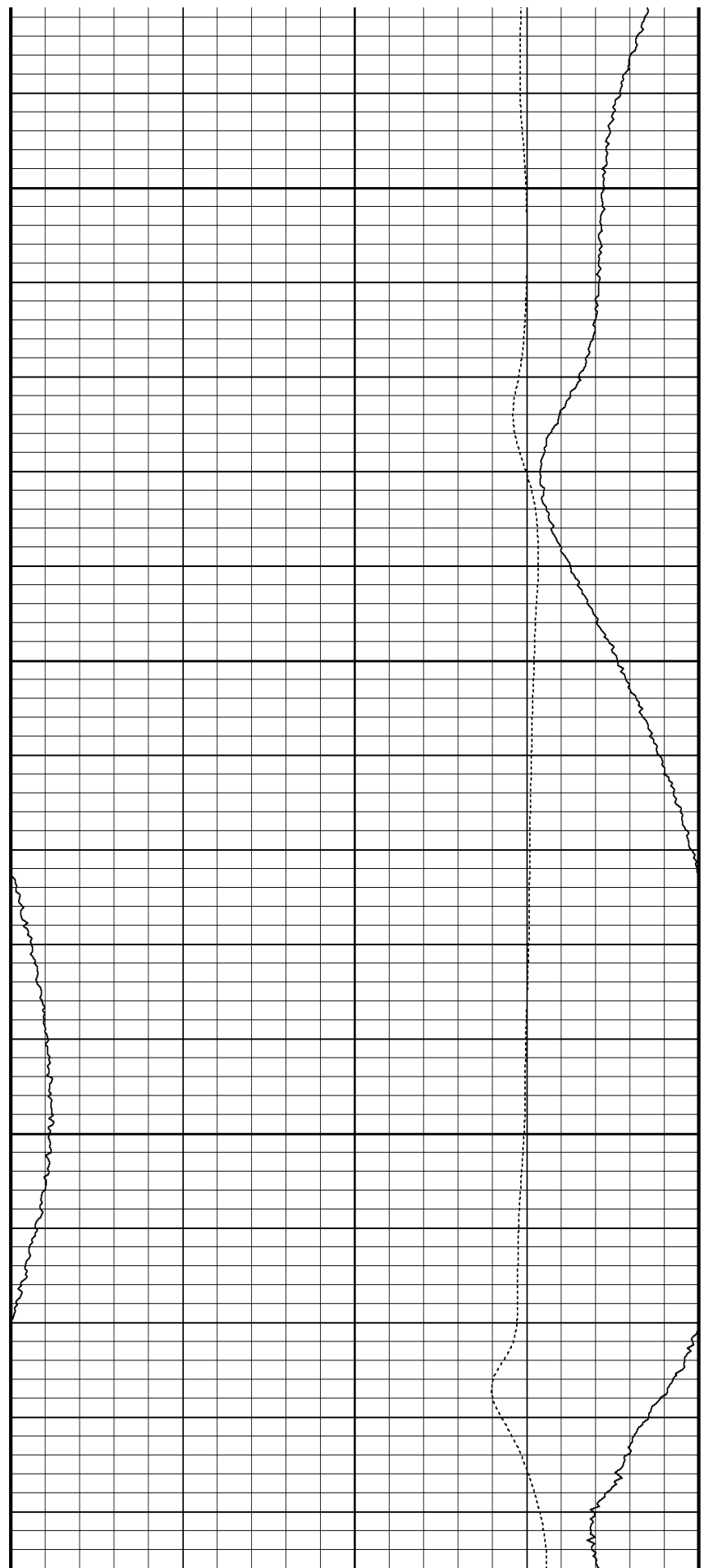
156°

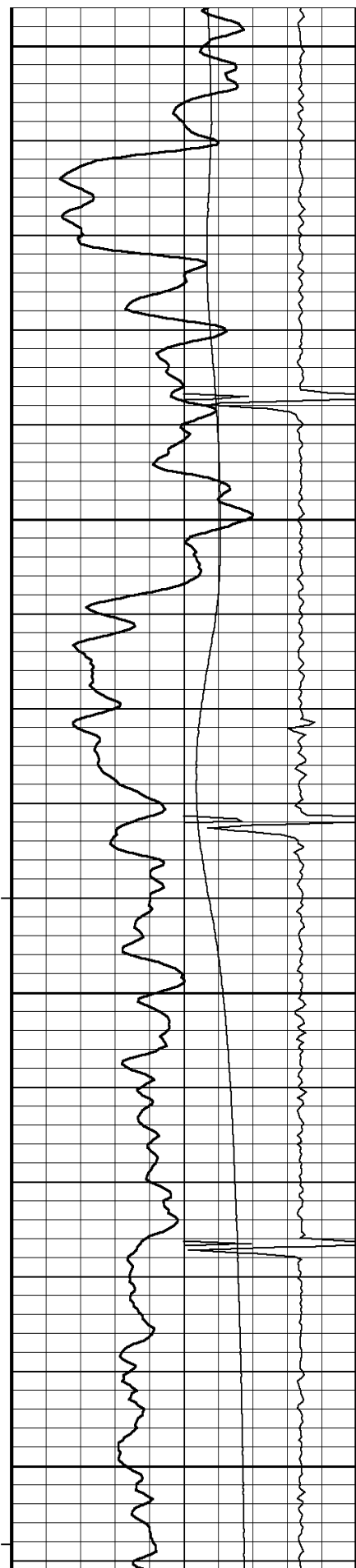
6900

161°

6950

157°





7000

160°

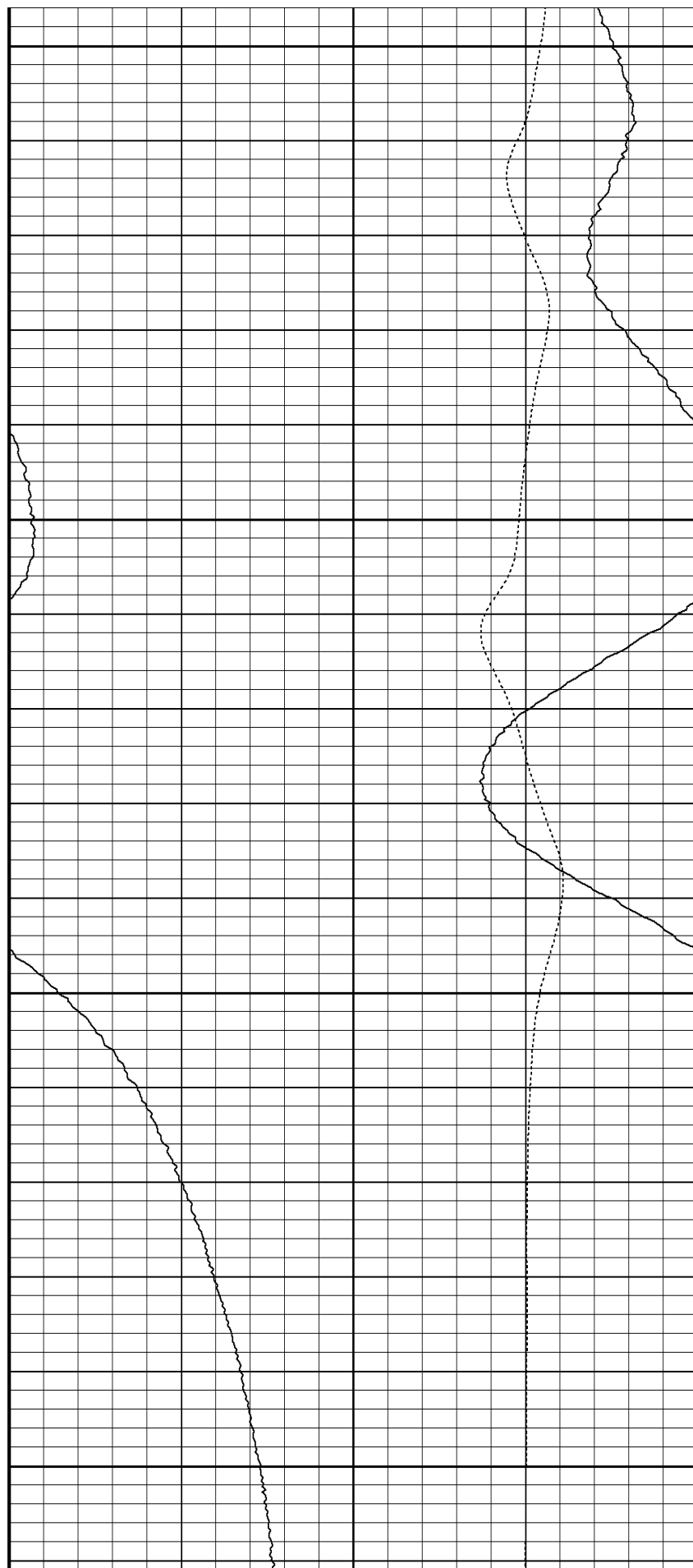
7050

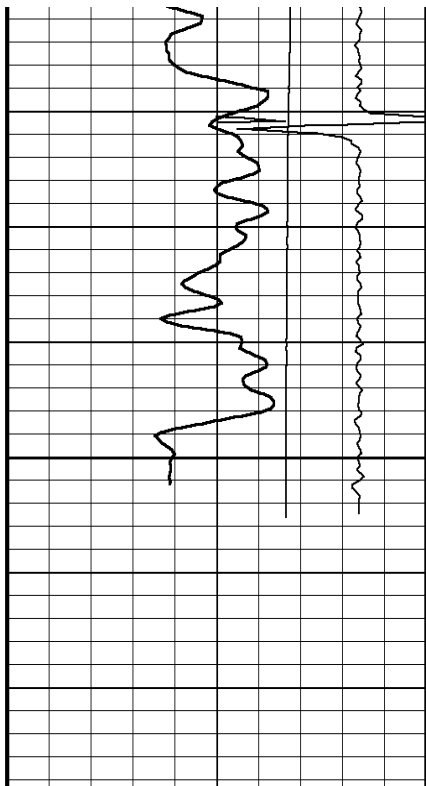
156°

7100

167°

7150





167°

7200

7226

Depth
in
Feet

← Timing Marks
every 60.0 sec

Gamma Ray

API

0	75	150
150	225	300

MCG External Temperature
degrees F

0	50	100
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Borehole
Temp in
deg F

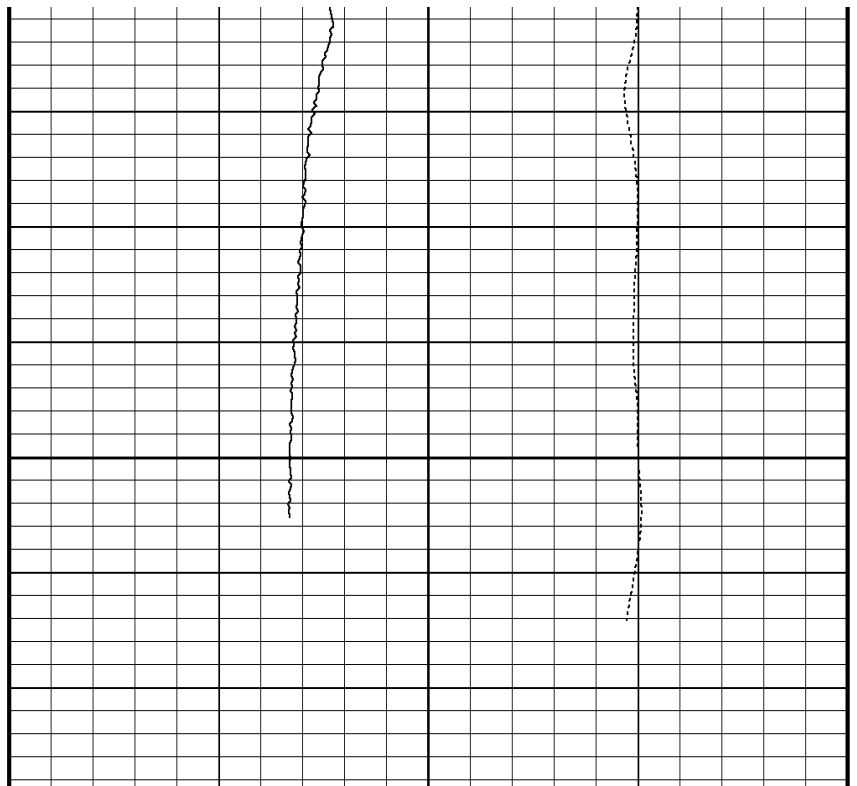
Downhole Tension
pounds

3000	0
6000	3000

Casing Collar Locator

-15000	7000
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Replay
Scale
1:200



MCG External Temperature
degrees F

0	5	10	15	20
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Differential Temperature
degrees F/sample

-1	0	1
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Depth Based Data - Maximum Sampling Increment 10.0cm

Filename: E:\Barrett Temp\BARRETT TEMPERATURE\GGU Federal 41A-29-691 Temp2.dta

System Versions: Logged with 11.01.2198 Processed with 11.01.2198 Plotted with 11.01.2198

Plotted on 16-JAN-2011 19:04

Recorded on 16-JAN-2011 13:37

BEFORE SURVEY CALIBRATION

E:\Barrett Temp\BARRETT TEMPERATURE\GGU Federal 41A-29-691 Temp.dta

General Constants All 000

Last Edited on 16-JAN-2011,09:42

General Parameters

Mud Resistivity	2.730	ohm-metres
Mud Resistivity Temperature	65.000	degrees F
Water Level	0.000	feet
Density/Neutron Processing	Wet Hole	

Hole/Annular Volume and Differential Caliper Parameters

HVOL Method	Single Caliper	
HVOL Caliper 1	None	
HVOL Caliper 2	N/A	
Annular Volume Diameter	4.500	inches
Caliper for Differential Caliper	None	

Rwa Parameters

Porosity used	N/A
Resistivity used	N/A
RWA Constant A	N/A
RWA Constant M	N/A

Down-hole Tension Calibration SMS 0

Field Calibration on 15-JAN-2011 12:18

Reading No	Measured	Calibrated (lbs)
1	14531.91	0.00
2	16112.13	370.00

High Resolution Temperature Calibration MCG-C 145

Field Calibration on 17-NOV-2010,12:09

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MCG-C 145

Last Edited on 24-NOV-2009,08:49

Pre-filter Length	11
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SP Calibration MCG-C 145

Field Calibration on 27-DEC-2010 14:53

	Measured	Calibrated (mV)
Reference 1	103.2	100.1
Reference 2	-96.7	-100.1

Gamma Calibration MCG-C 145

Field Calibration on 12-JAN-2011 11:33

	Measured	Calibrated (API)
Background	81	58
Calibrator (Gross)	753	538
Calibrator (Net)	672	480

Gamma Constants MCG-C 145

Last Edited on 15-JAN-2011,08:50

Gamma Calibrator Number	GRCC 112	
Mud Density	1.00	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

Induction Calibration MAI-B.J 362

Base Calibration on 27-DEC-2010,15:17

Field Check on 12-JAN-2011 11:25

Base Calibration

Base Calibration

Test Loop Calibration Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	16.0	468.7	9.3	966.2
2	6.2	374.5	7.6	821.4
3	3.6	258.3	5.2	566.0
4	1.8	133.1	2.6	279.2

Array Temperature 74.8 Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	14.0	3874.1	14.6	3875.2
2	30.3	3606.6	30.4	3606.9
3	28.3	3070.1	28.4	3070.1
4	19.7	2079.7	19.7	2079.7
Deep	17.4	1954.7	17.4	1954.7
Medium	41.1	4078.2	41.1	4078.1
Shallow	45.3	5402.0	45.3	5402.4

Array Temperature 46.1 56.4 Deg F

Induction Constants MAI-B.J 362

Last Edited on 15-JAN-2011,08:47

Induction Model	RtAP-WBM		
Caliper for Borehole Corr.	Density Caliper		
Hole Size for Borehole Correction	N/A	inches	
Tool Centred	No		
Stand-off Type	Fins		
Stand-off	1.00	inches	
Number of Fins on Stand-off	6.0000		
Stand-off Fin Angle	60.00	degrees	
Stand-off Fin Width	0.5000	inches	
Borehole Corr. Rm Source	Temperature Corr		
Temp. for Rm Corr.	MCG External Temperature		
Squasher Start	0.0020	mhos/metre	
Squasher Offset	N/A	mhos/metre	

Borehole Normalisation

DRM1	0.0000	DRC1	0.0000
DRM2	0.0000	DRC2	0.0000
MRM1	0.0000	MRC1	0.0000
MRM2	0.0000	MRC2	0.0000
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000

Calibration Site Corrections

Channel 1	0.00	mmhos/metre
Channel 2	0.00	mmhos/metre
Channel 3	0.00	mmhos/metre
Channel 4	0.00	mmhos/metre

Apparent Porosity and Water Saturation Constants

Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	100.00	percent
Resistivity of Water for Apor and Sw	0.05	ohm-m
Resistivity of Mud Filtrate for Sw	0.00	ohm-m
Source for Rt	0.00	
Source for Rxo	0.00	

High Resolution Temperature Calibration MAI-B.J 362

Field Calibration on 17-NOV-2010,12:11

Measured Calibrated(Deg F)

Lower	10.00	50.00
Upper	100.00	212.00
High Resolution Temperature Constants MAI-B.J 362		Last Edited on
Pre-filter Length	11	

DOWNHOLE EQUIPMENT
E:\Barrett Temp\BARRETT TEMPERATURE\GGU Federal 41A-29-691 Temp.dta

<p>MCB-A.A 11B Tension Cablehead MCB-A.A 102 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in</p> <p>Compact Comms Gamma MCG-C 145 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in</p> <p>Compact Induction MAI-B.J 362 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in</p> <p>Total Length: 21.90 ft Weight: 132.3 lb</p>		<p>Tool Zero (0.13ft from bottom) All measurements relative to tool zero.</p>
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COMPANY	BILL BARRETT CORPORATION				
WELL	GGU FEDERAL 41A-29-691				
FIELD	GIBSON GULCH				
PROVINCE/COUNTY	GARFIELD				
COUNTRY/STATE	U.S.A. / COLORADO				
Elevation Kelly Bushing	6141.00	feet	First Reading	7218.00	feet
Elevation Drill Floor	6140.00	feet	Depth Driller	7221.00	feet
Elevation Ground Level	6108.00	feet	Depth Logger		feet



TEMPERATURE LOG

