

TEMPERATURE LOG  
CCL

Company	WPX ENERGY			
Well	RU 21 - 8			
Field	RULISON			
County	GARFIELD		State	COLORADO
Location:	APL #: 05 - 045 - 22783			Other Services
SEC 8		TWP 7s	RGE 93w	Elevation K.B. D.F. G.L.
Permanent Datum Log Measured From Drilling Measured From		G.L. K.B. K.B.		
Date	11 - 26 - 2015			
Run Number	ONE			
Depth Driller	10000'			
Present Depth Driller	N/A			
Depth Logger	9983'			
Bottom Logged Interval	9982'			
Top Log Interval	SURFACE			
Fluid Level	SURFACE			
Type Fluid	WATER			
Max. Recorded Temp.	184.9 Deg. F			
Estimated Cement Top	4100'			
Equipment Number	216			
Location	GRAND JCT.			
Recorded By	INGRAM		FERNANDEZ	
Witnessed By	MR. BEAUDE			
Borehole Record				
Run Number	Bit	From	To	Size
				Weight
				From
				To

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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.

WARRIOR 7.0 SOFTWARE - Comments

NOTE: LOG WAS DEPTH CORRELATED USING KB OF 24'

SHORT JOINT: 6127' TO 6149'

MAIN PASS 5" = 100'

CSG PSI = STATIC

Calibration Report

Database File: 112615\_wpxenergy\_ru\_21\_8.db  
Dataset Pathname: main/pass1  
Dataset Creation: Thu Nov 26 09:32:39 2015 by Log SCH 120430

# Temperature Calibration Report

Serial Number: 16-53  
 Tool Model: APPLIED  
 Performed: Tue Jan 31 10:43:33 2012

	Reference	Reading
Low Reference:	0.00 degF	0.00 cps
High Reference:	1.00 degF	1.00 cps
Gain:	0.10	
Offset:	0.00	
Delta Spacing	2	

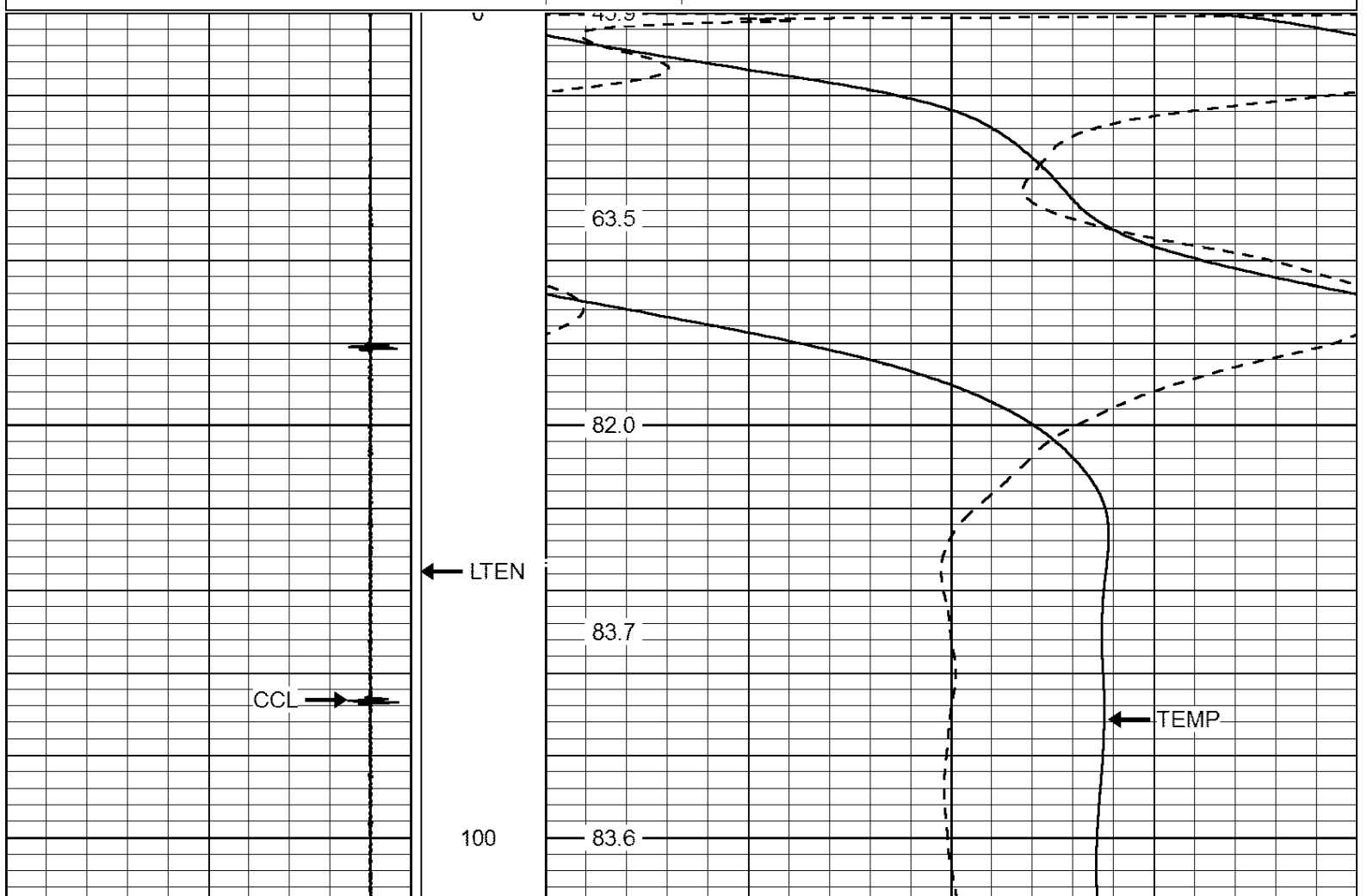


## MAIN PASS

Database File: 112615\_wpxenergy\_ru\_21\_8.db  
 Dataset Pathname: main/pass1  
 Presentation Format: rmws\_temp  
 Dataset Creation: Thu Nov 26 09:32:39 2015 by Log SCH 120430  
 Charted by: Depth in Feet scaled 1:240

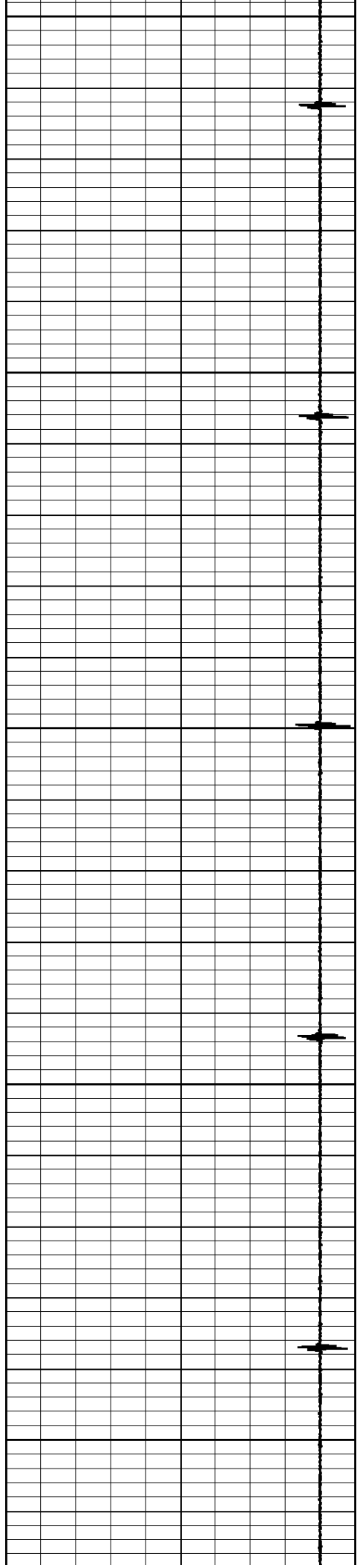
-27	CCL	3	LTEN	70	TEMP (degF)	90
		0	(lb)2000	-1	DTMP (degF)	1

TEMP	
(degF)	



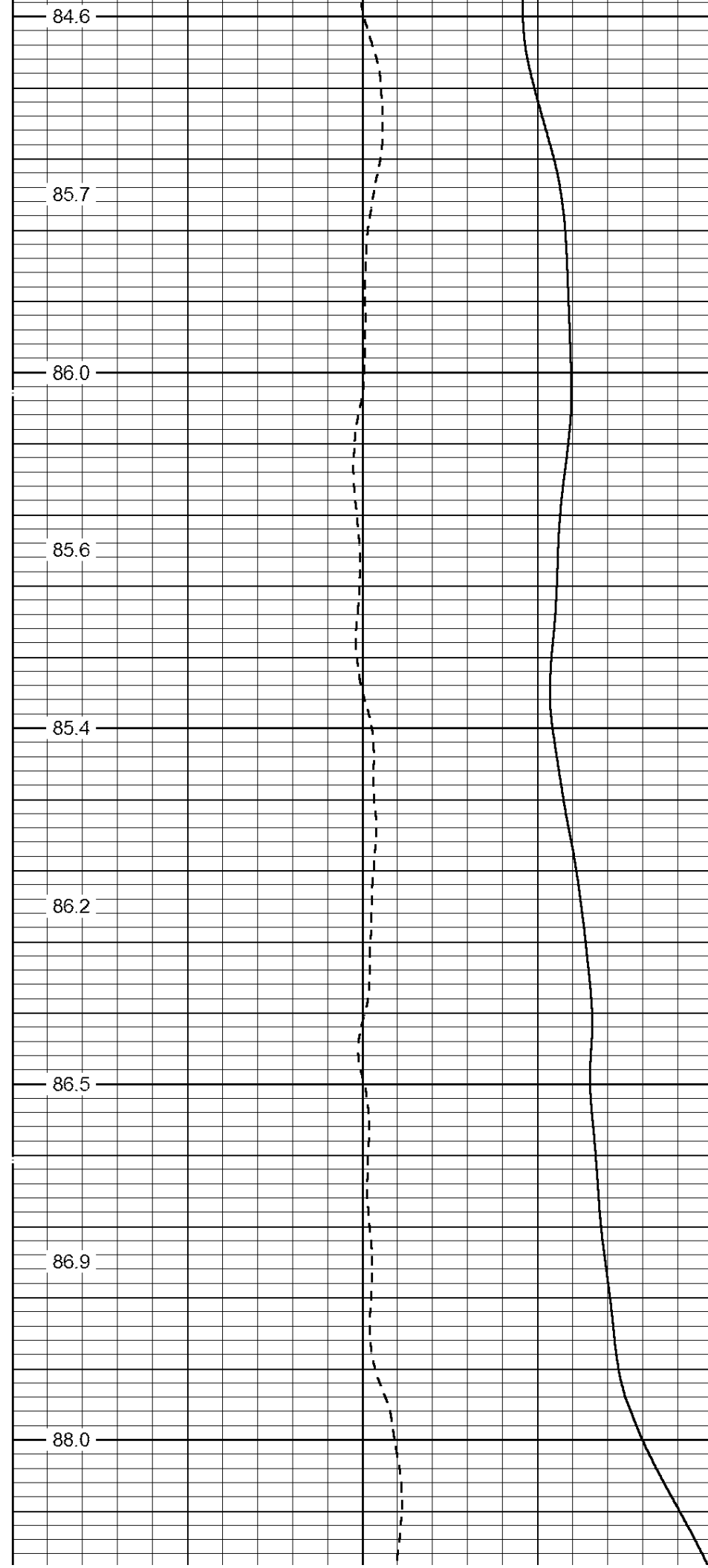


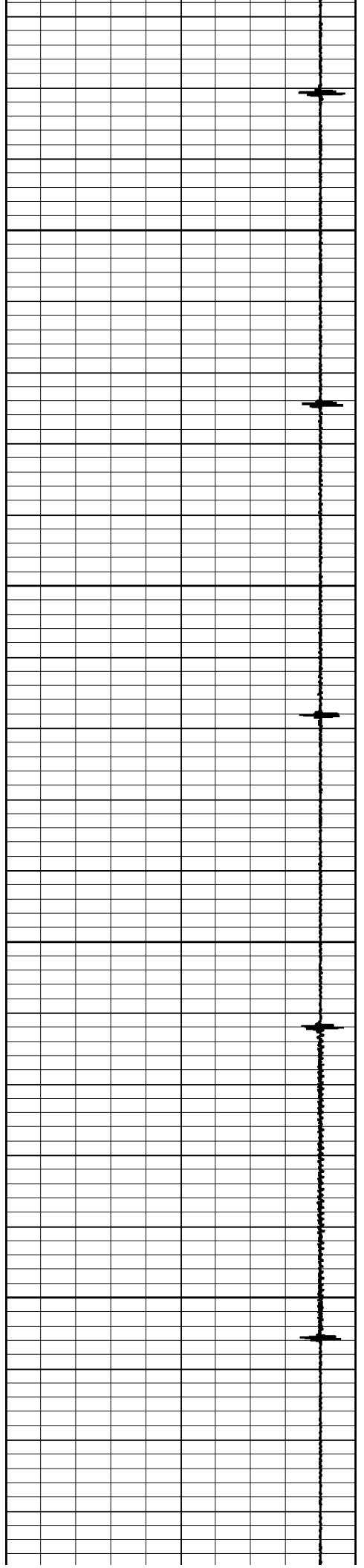




600

700





800

900

90.5

90.1

87.7

87.0

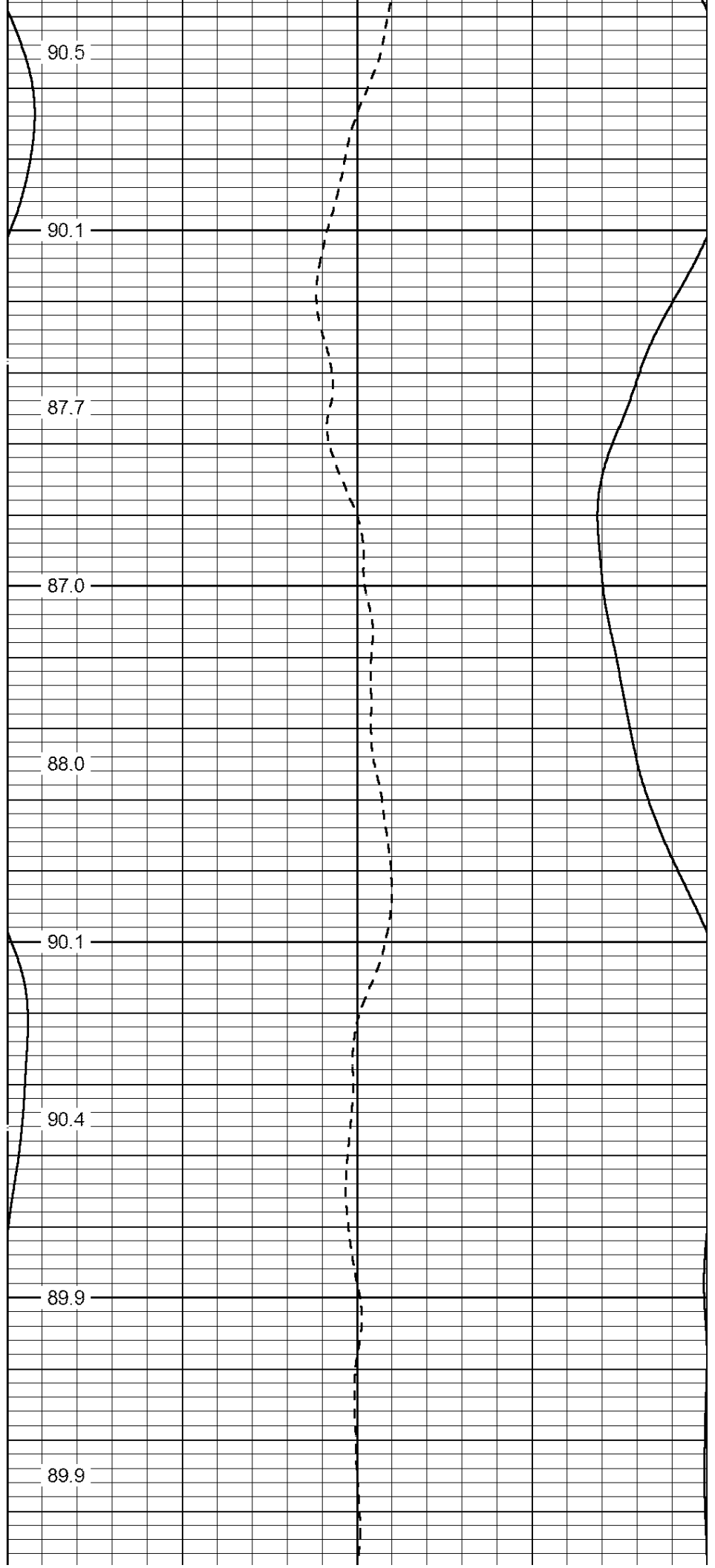
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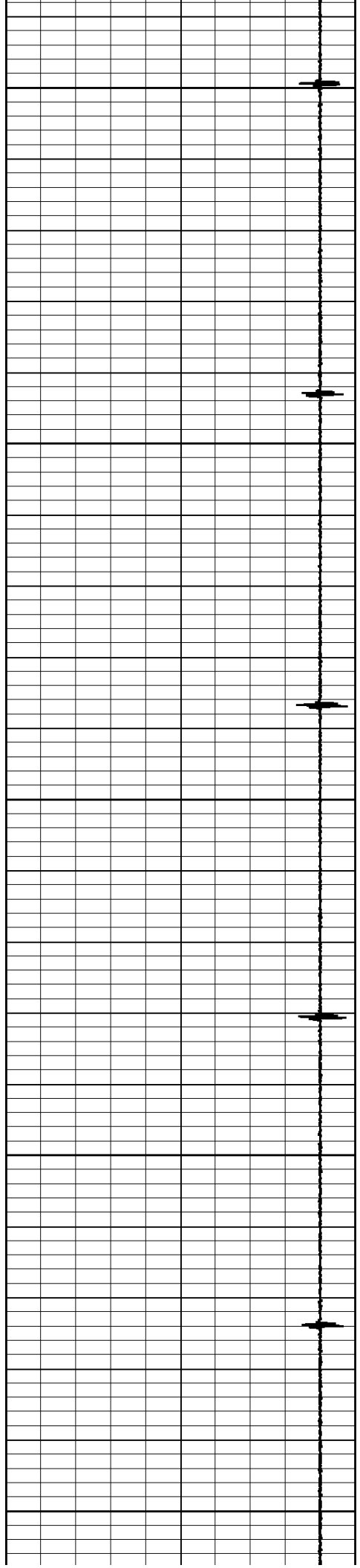
90.1

90.4

89.9

89.9





1000

1100

1200

89.9

91.1

93.7

92.1

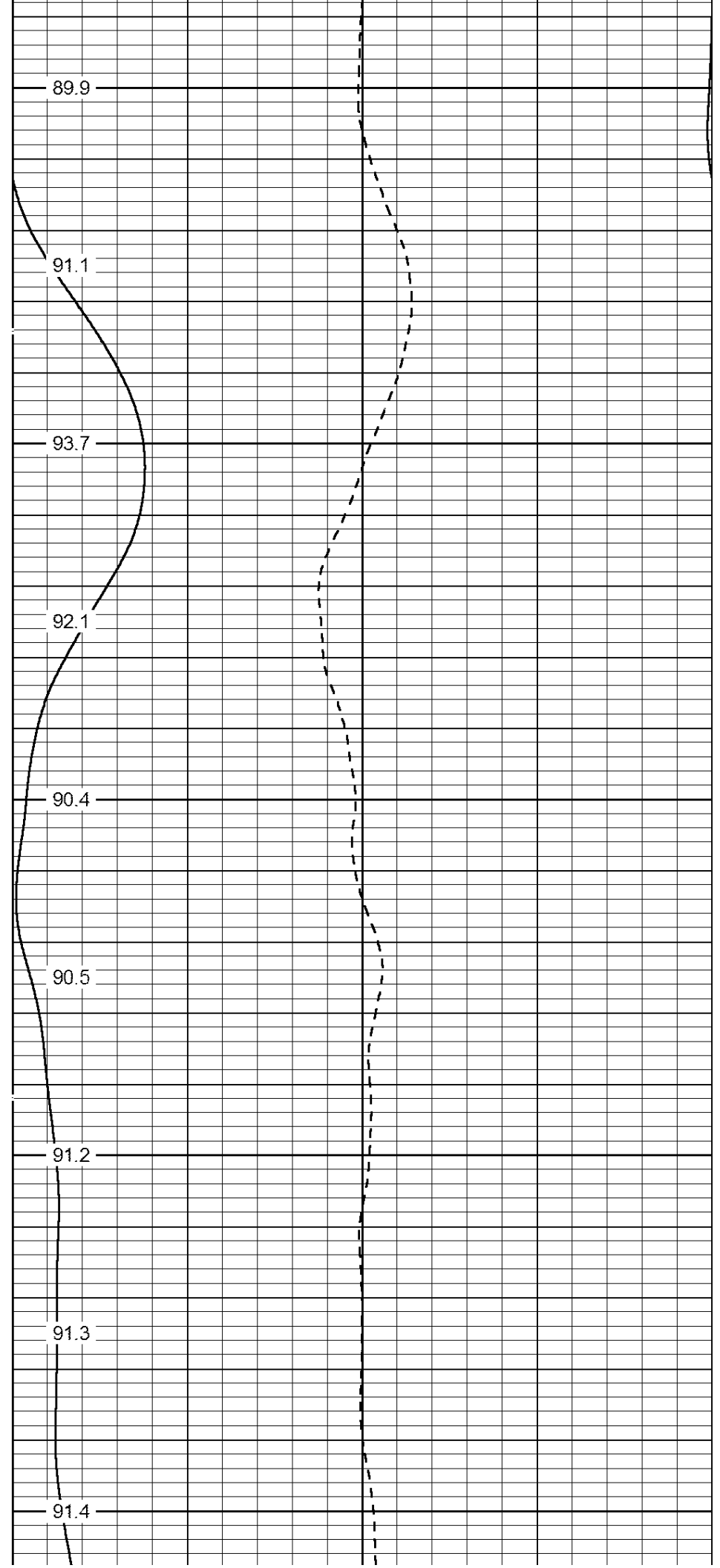
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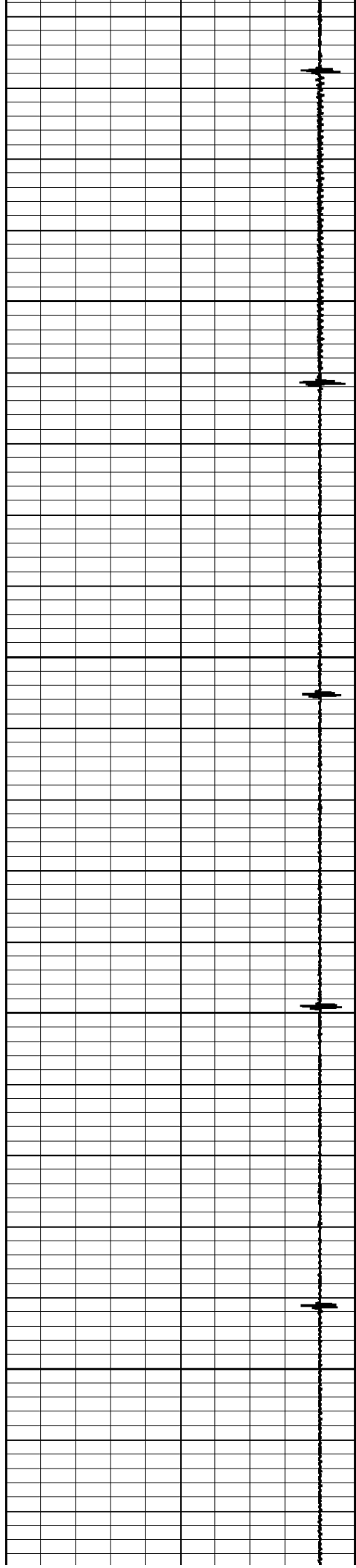
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91.2

91.3

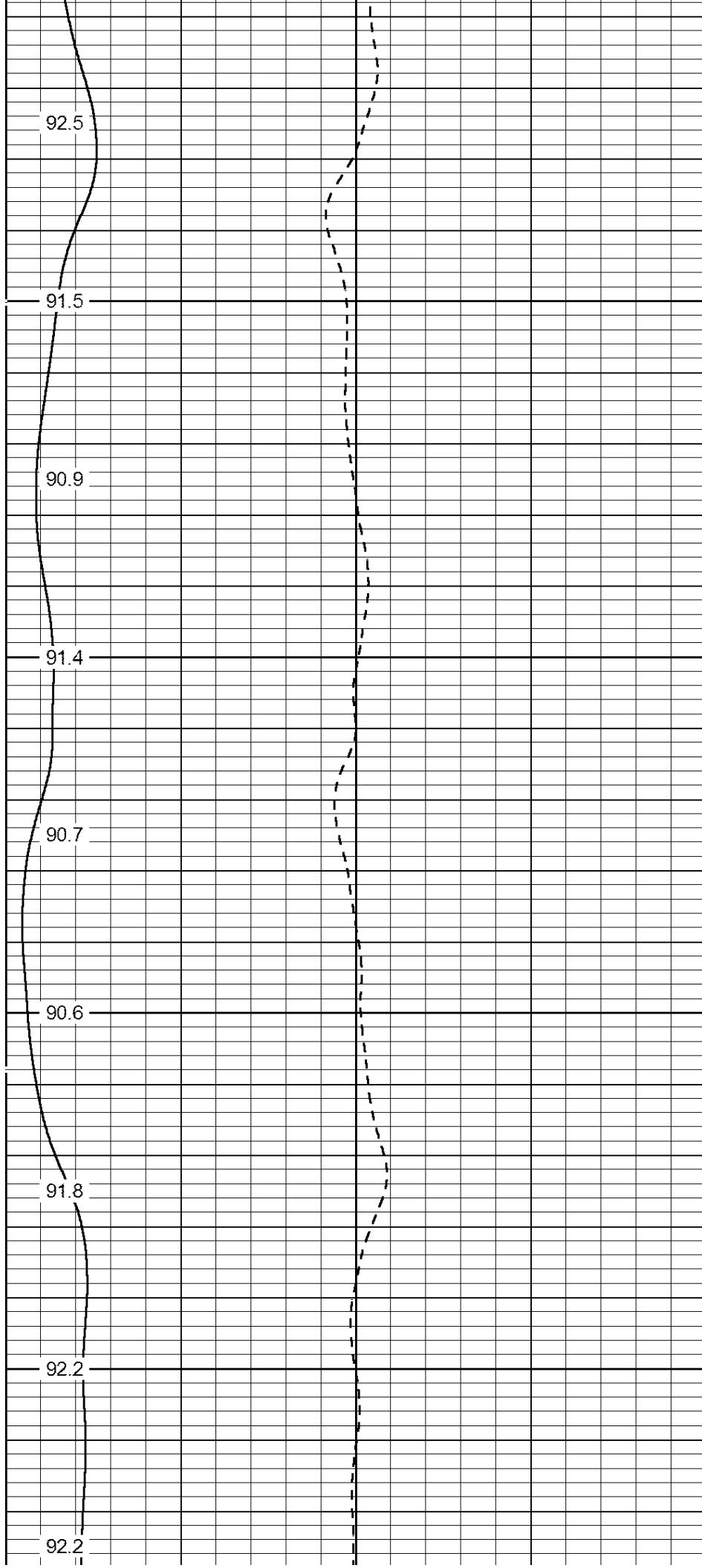
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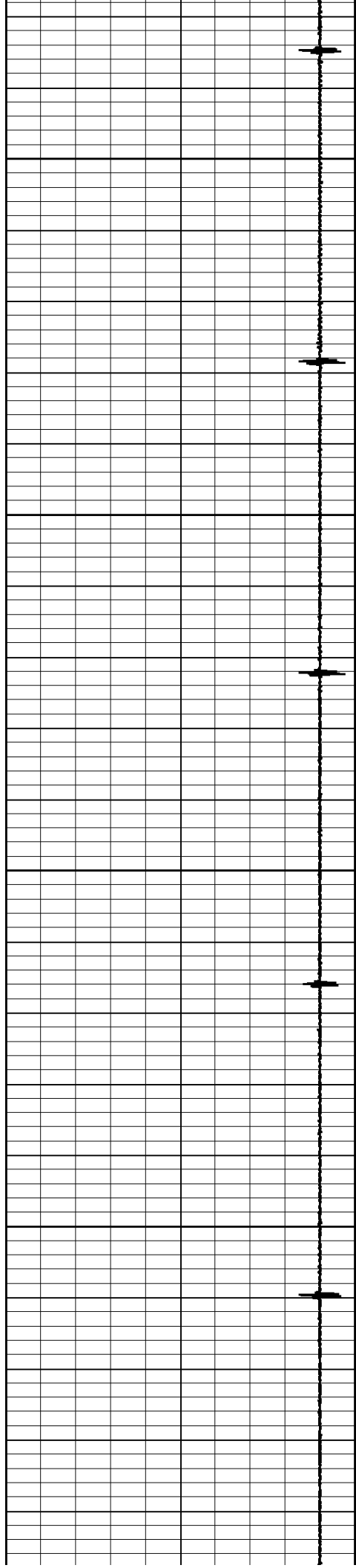


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1400

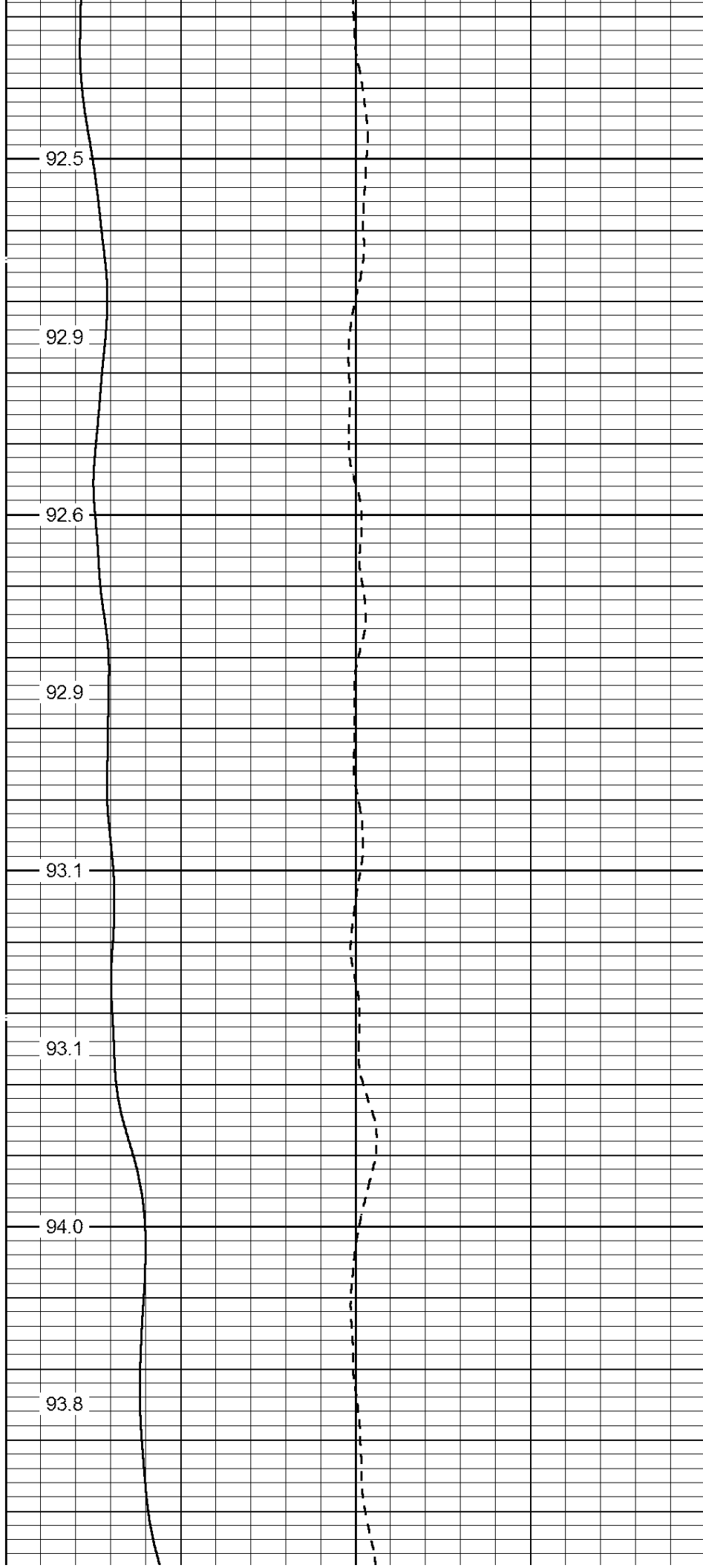


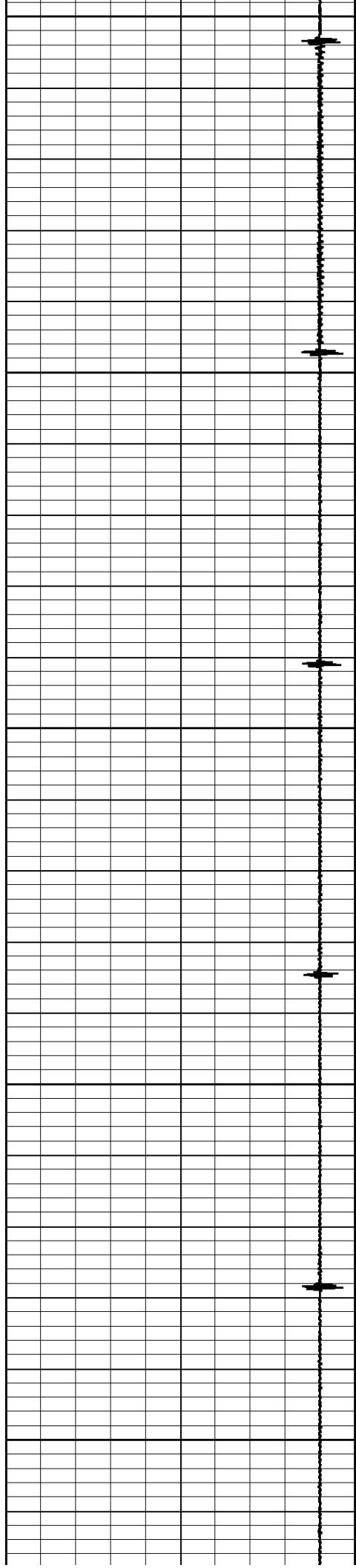




1500

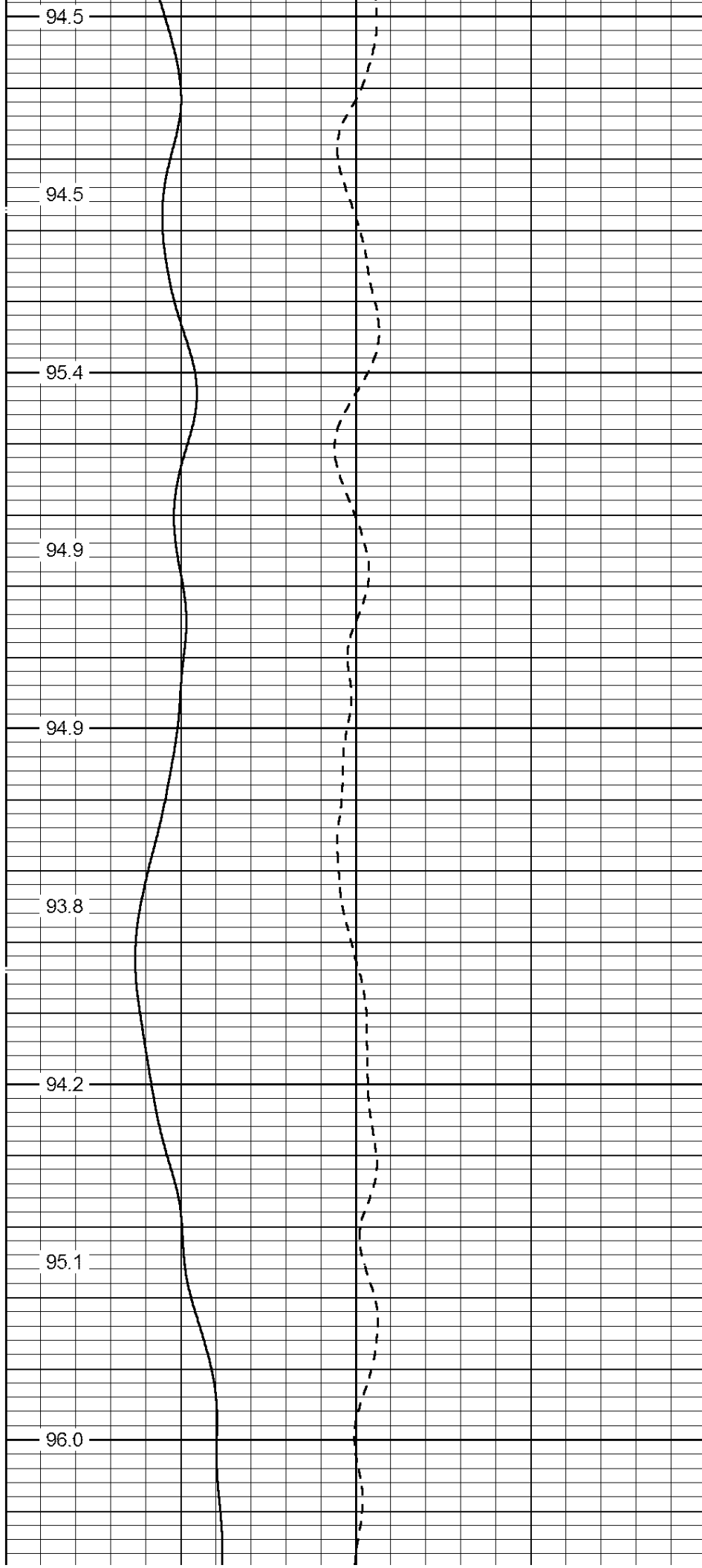
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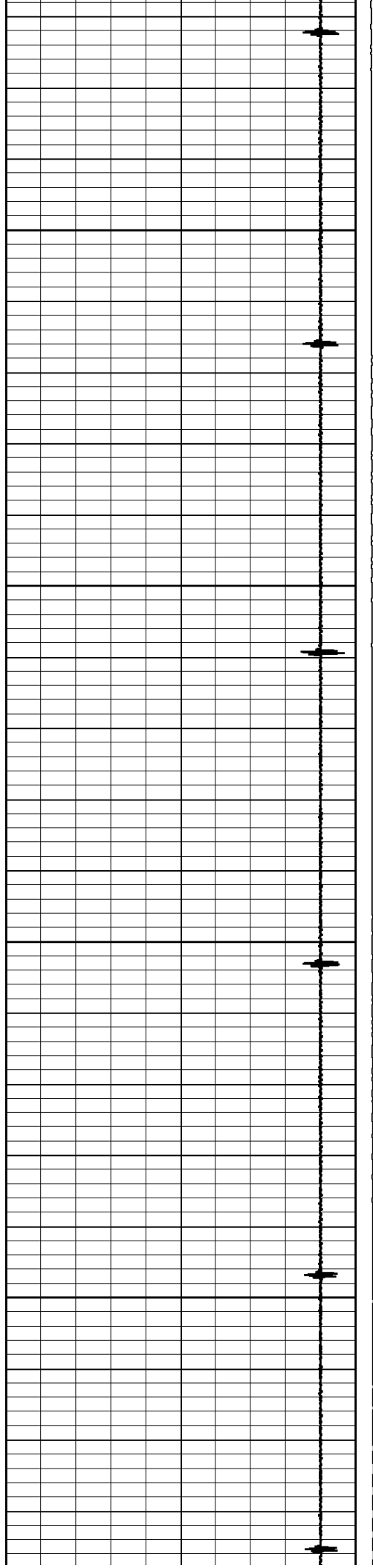




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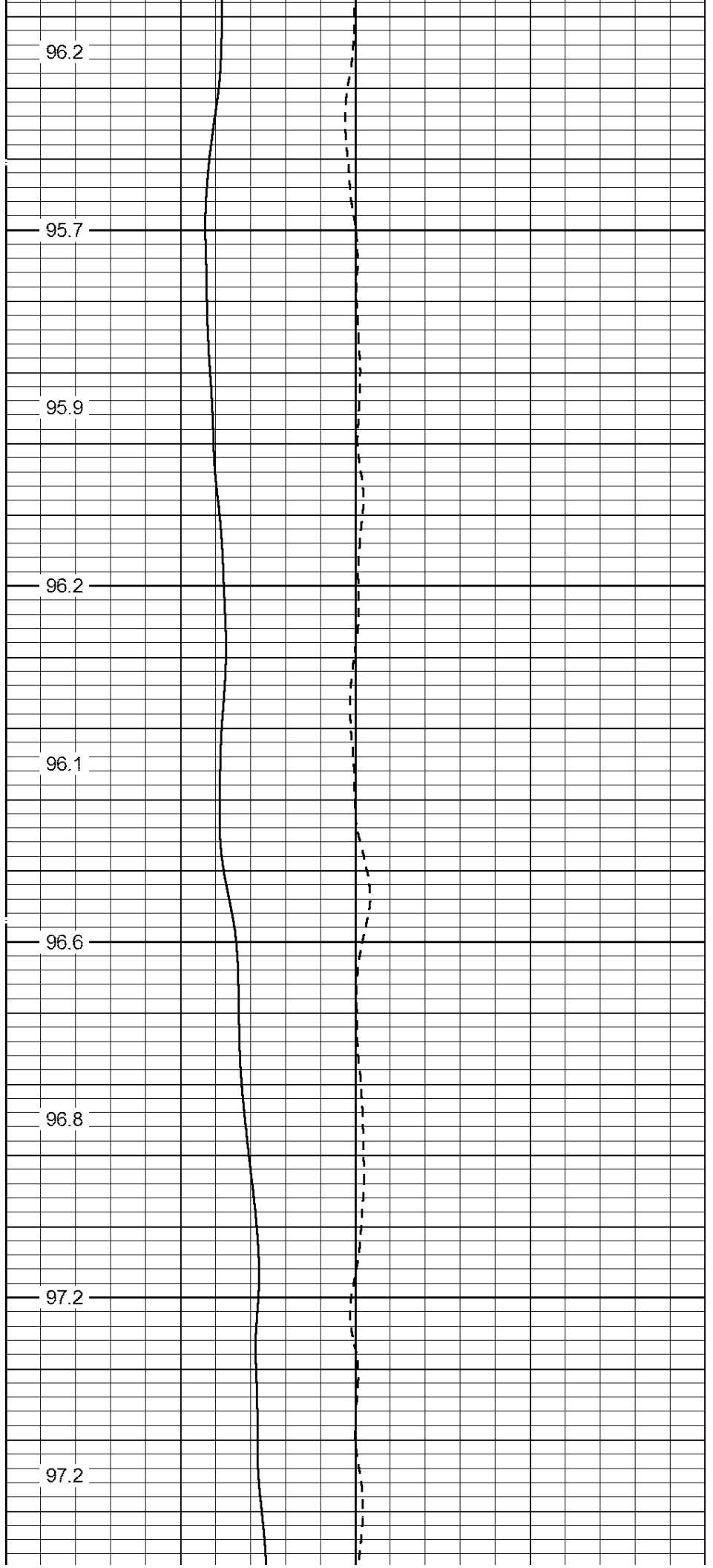
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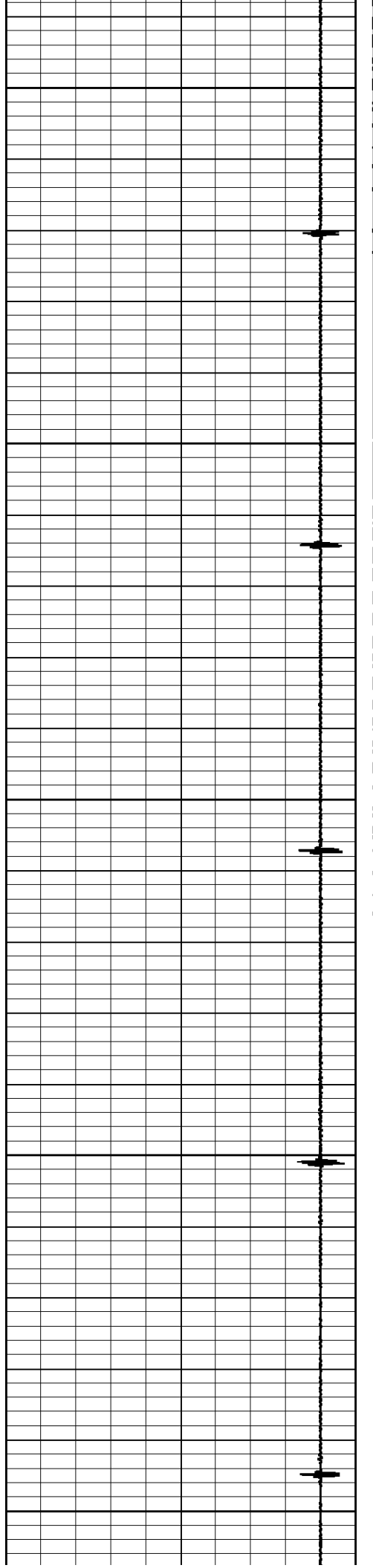




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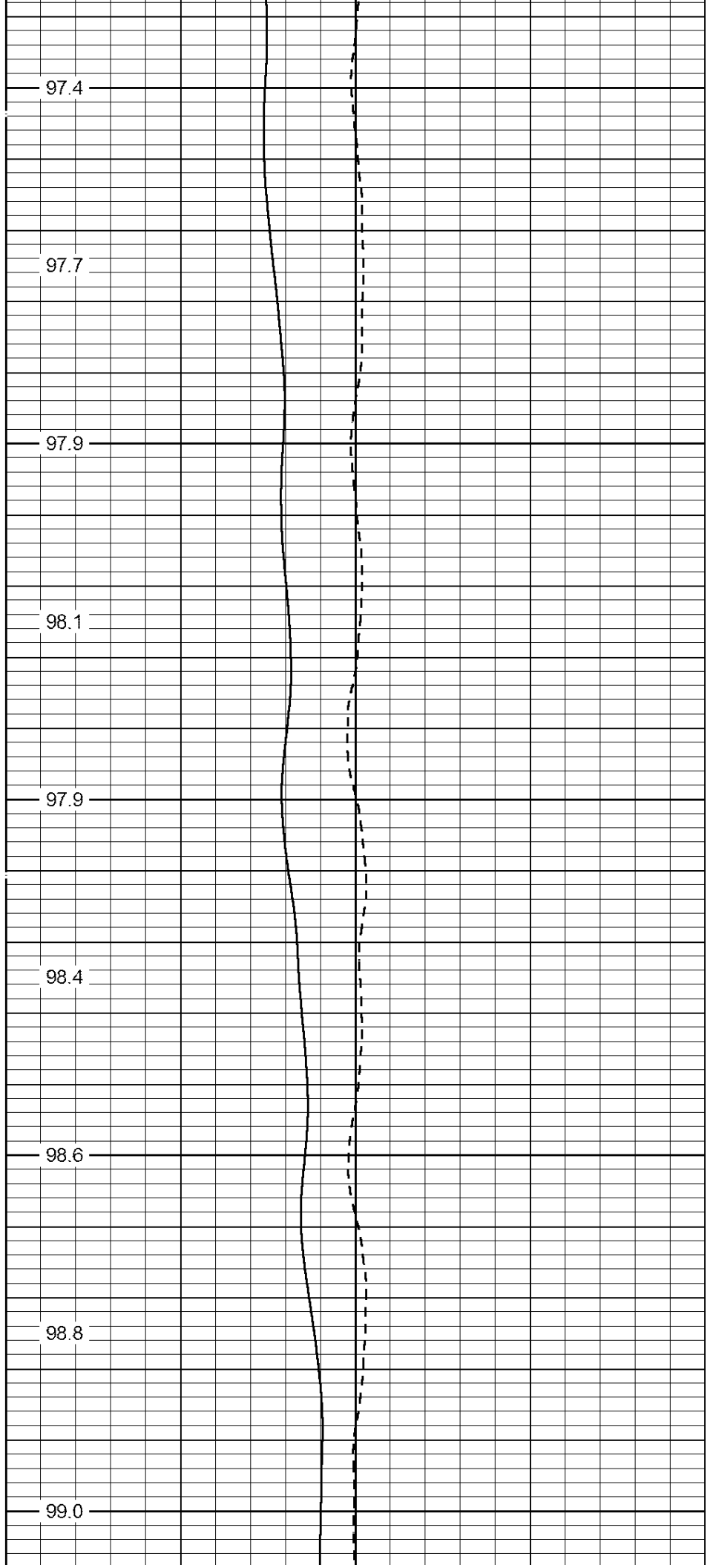


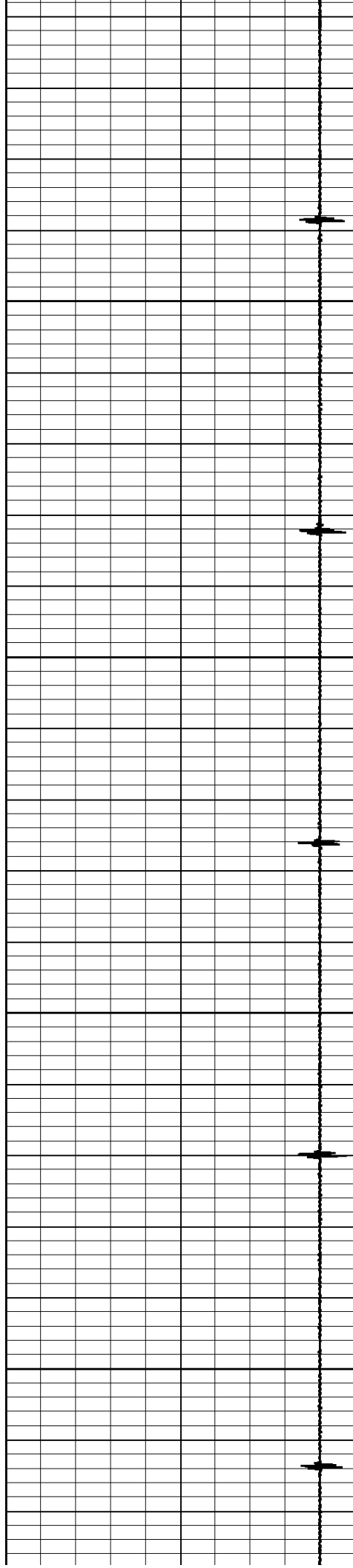


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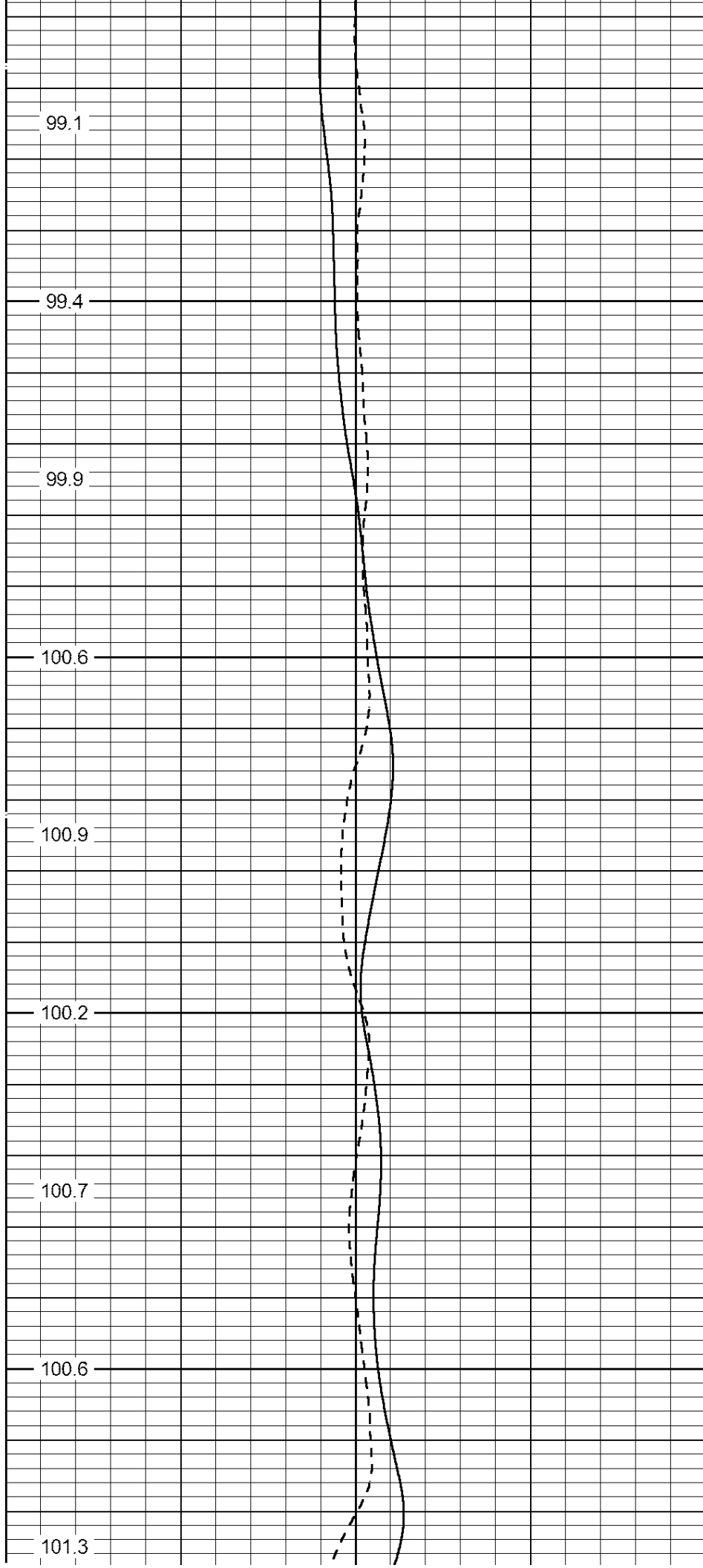
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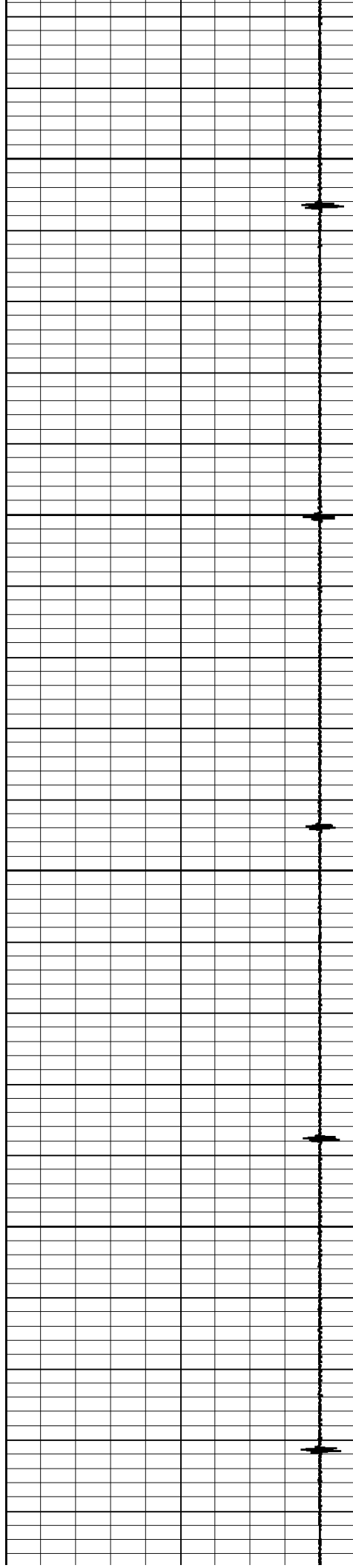




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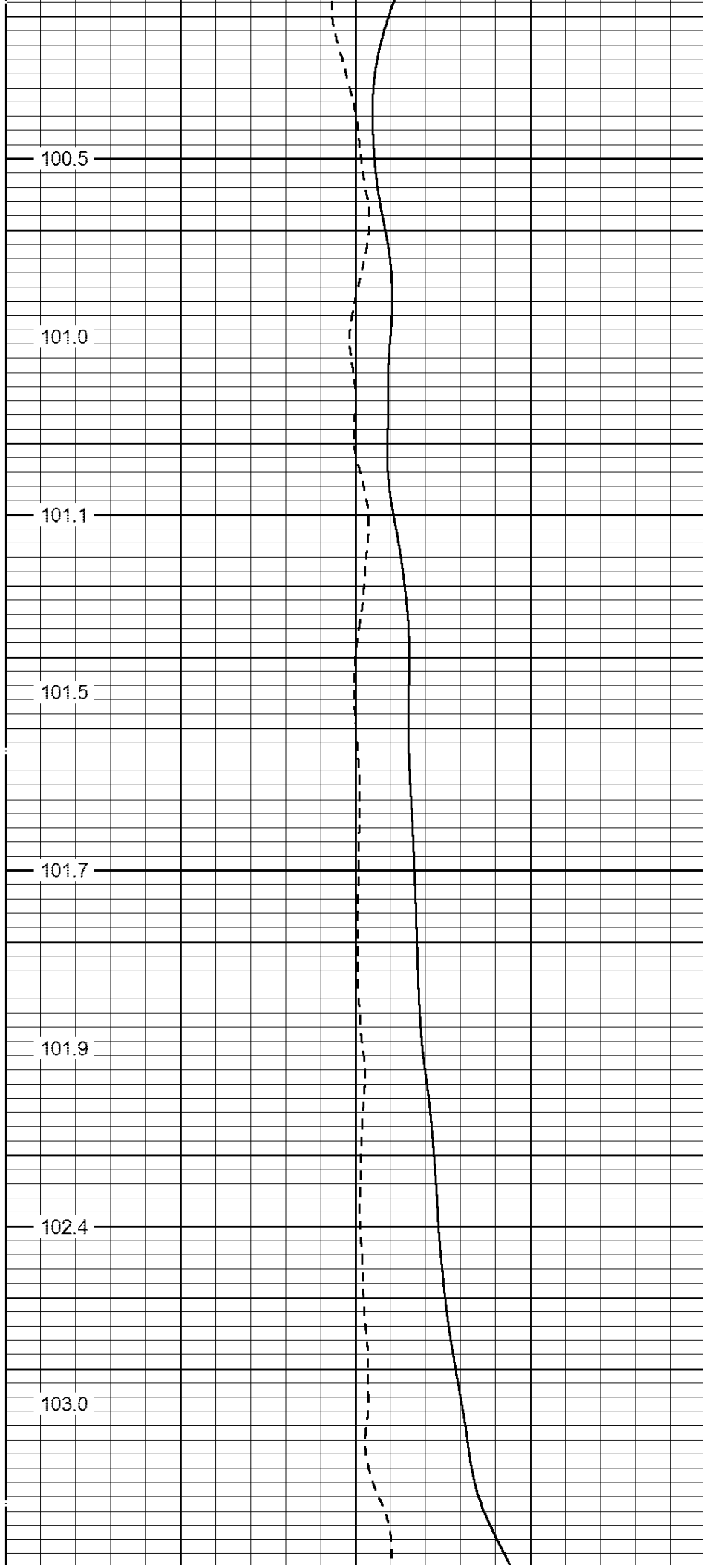
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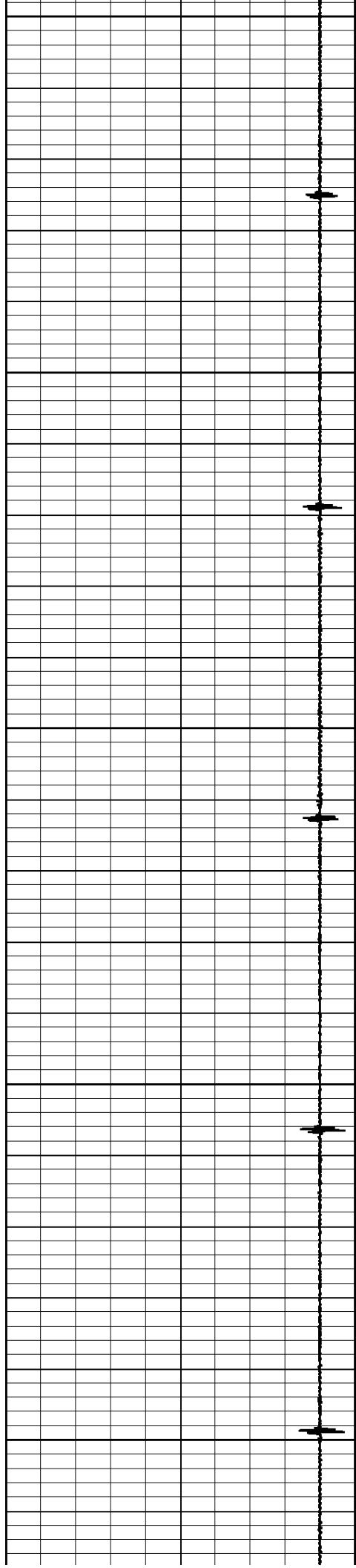




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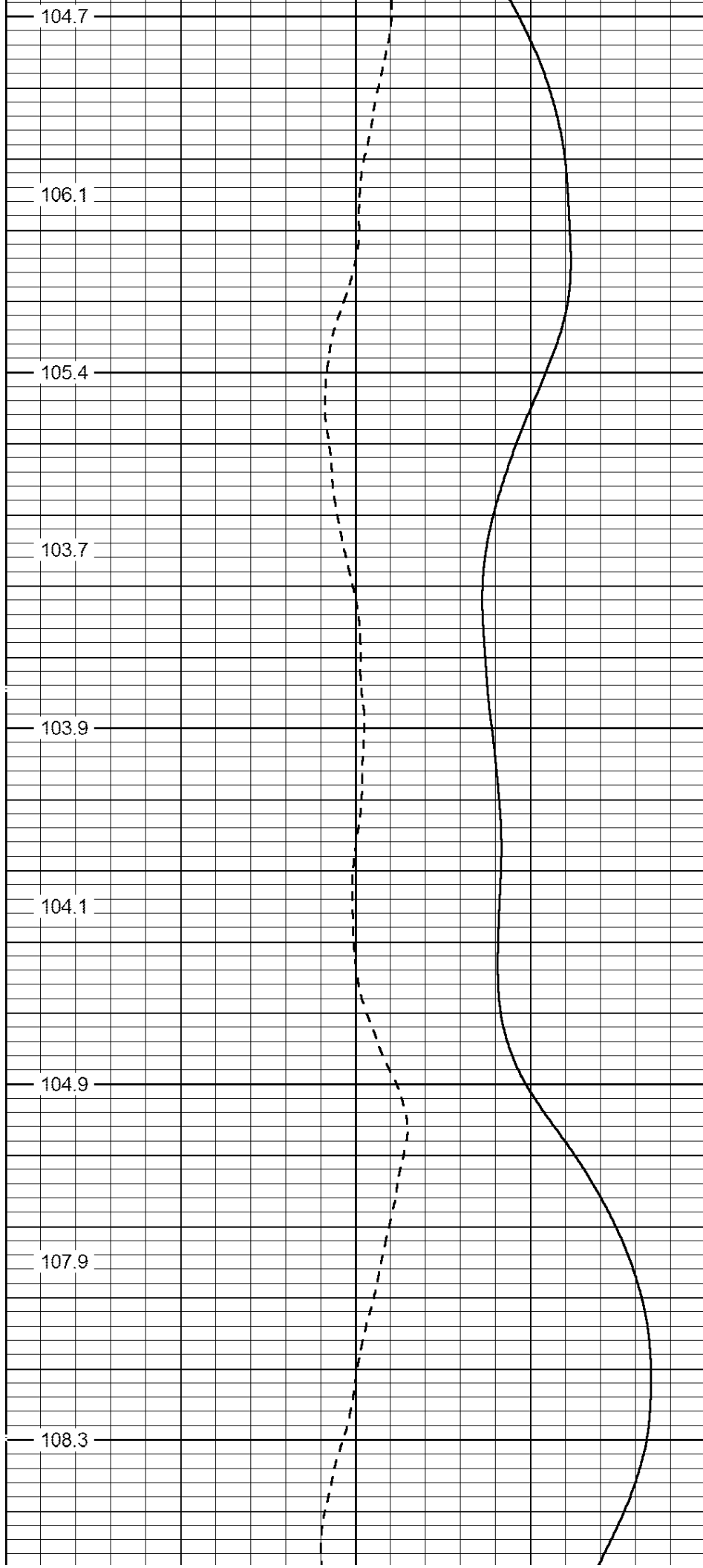
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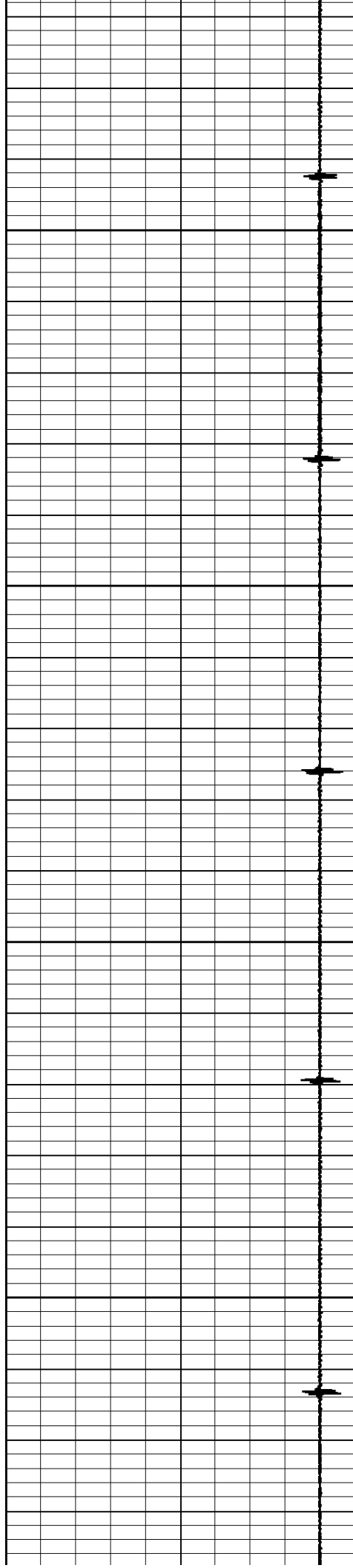




2800

2900





3000

3100

106.3

105.4

105.2

105.4

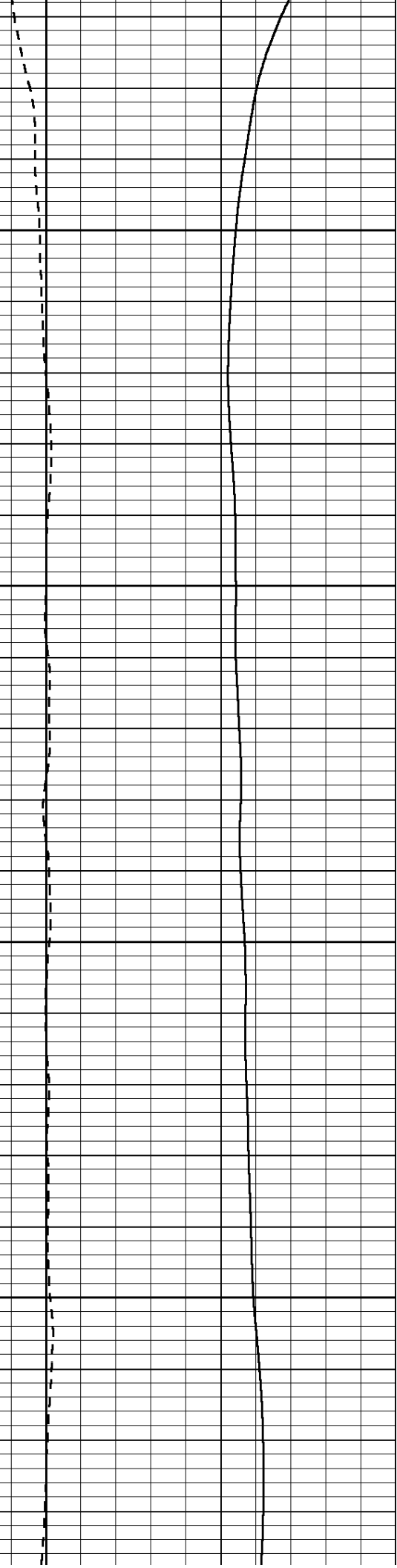
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105.7

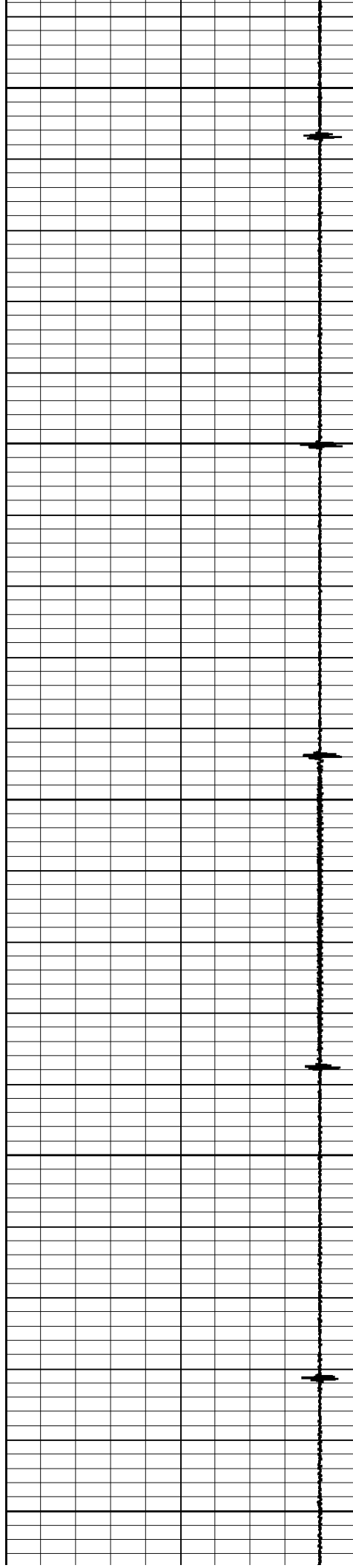
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105.9

106.2







3200

106.1

106.4

106.7

106.6

3300

106.9

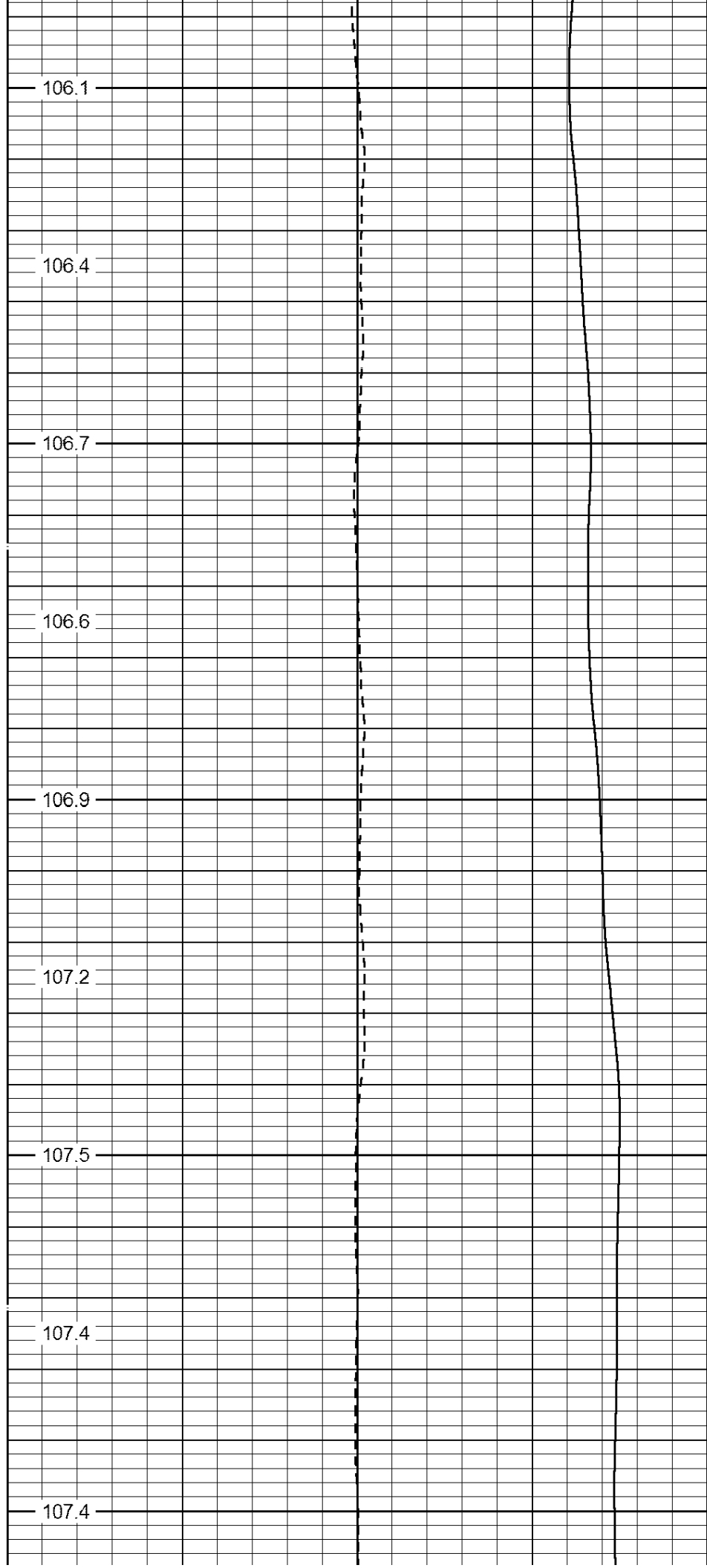
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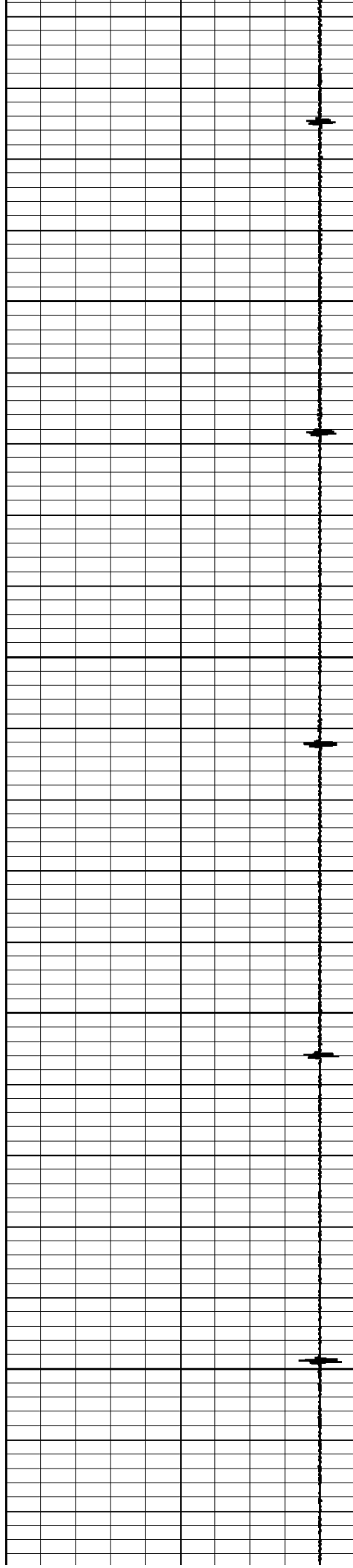
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107.4

3400

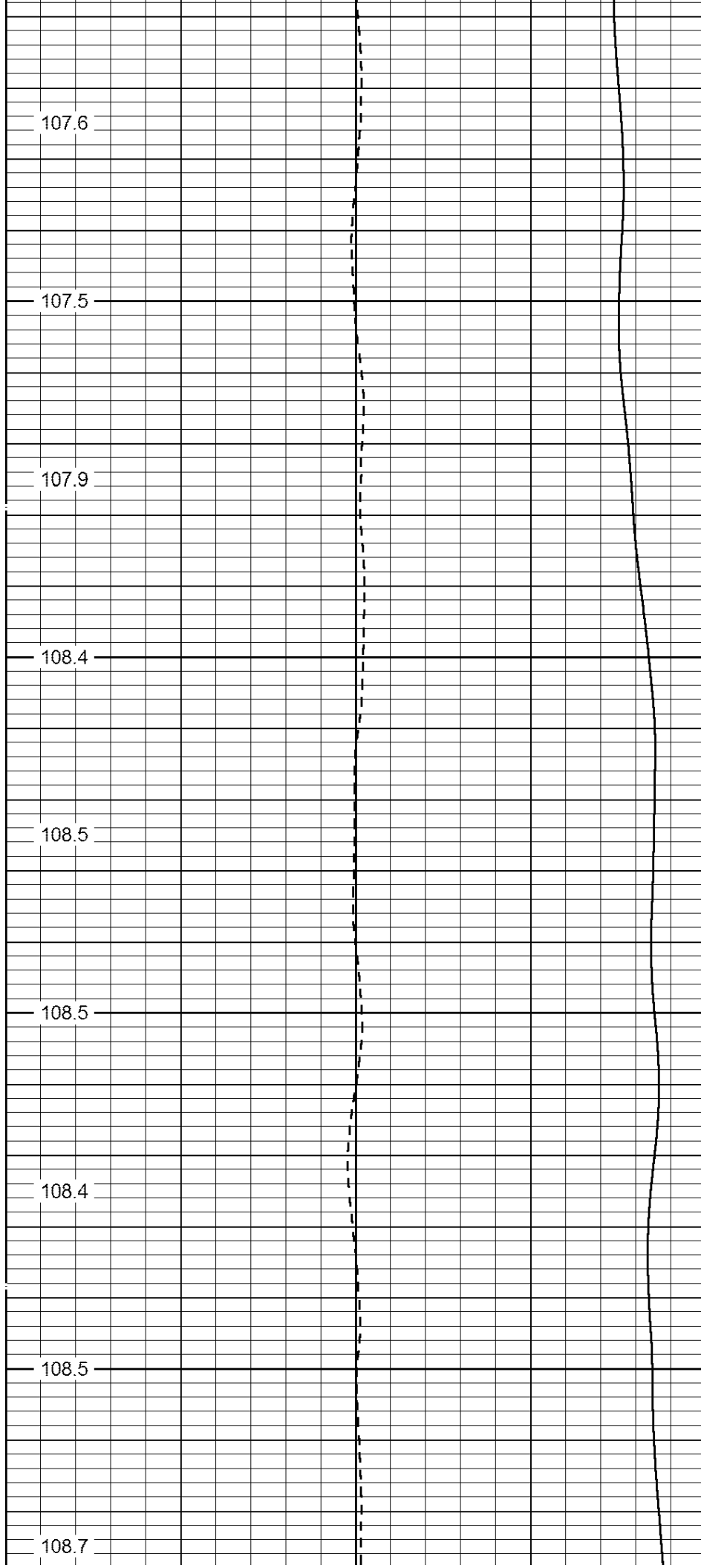
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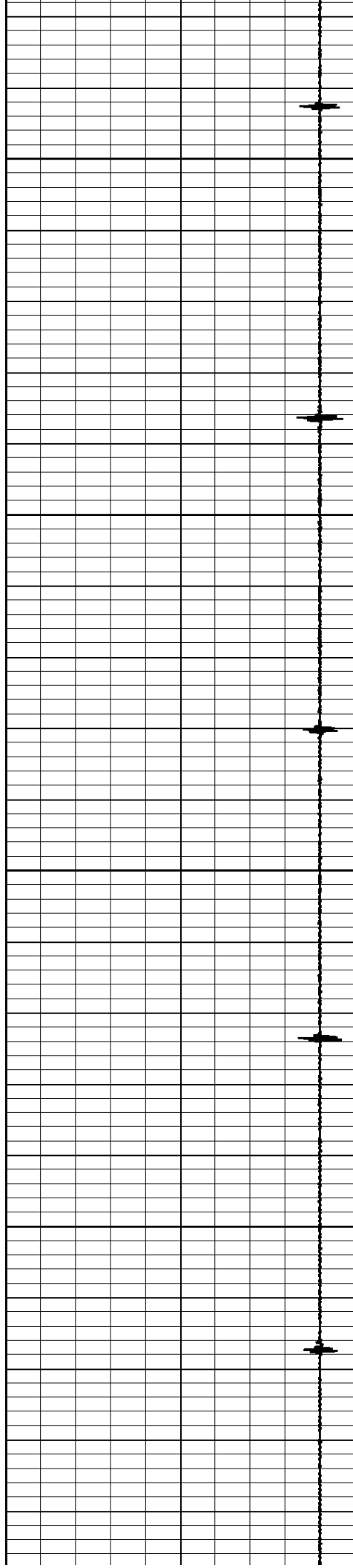




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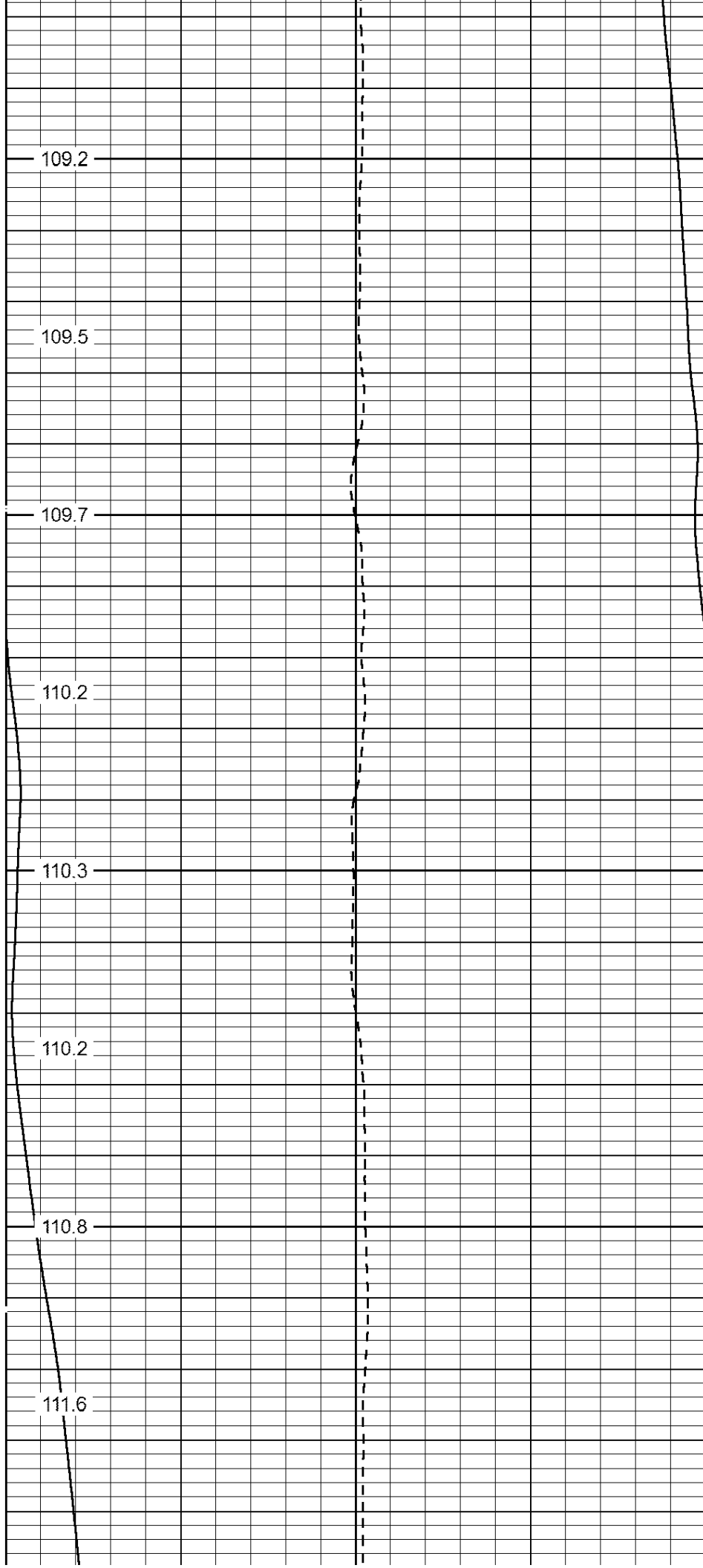
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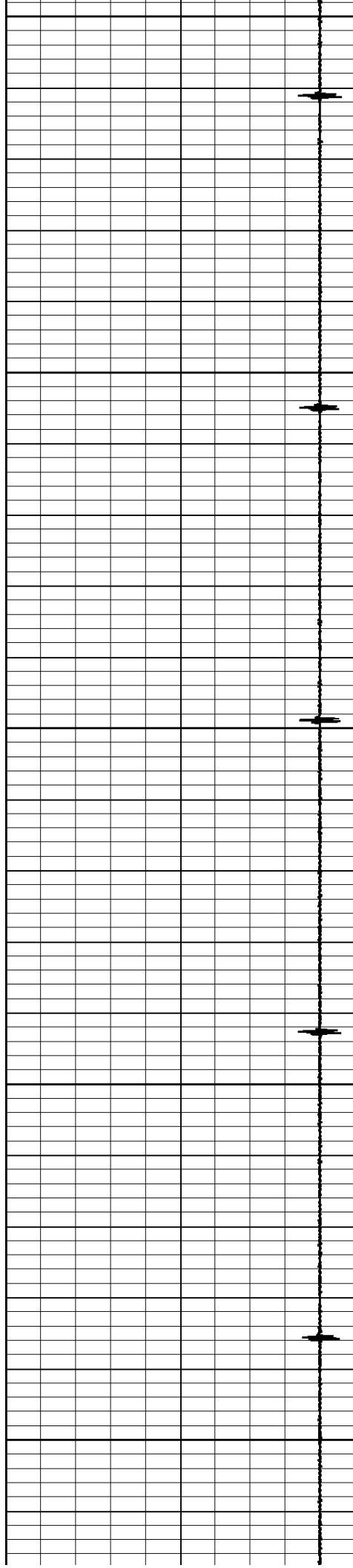




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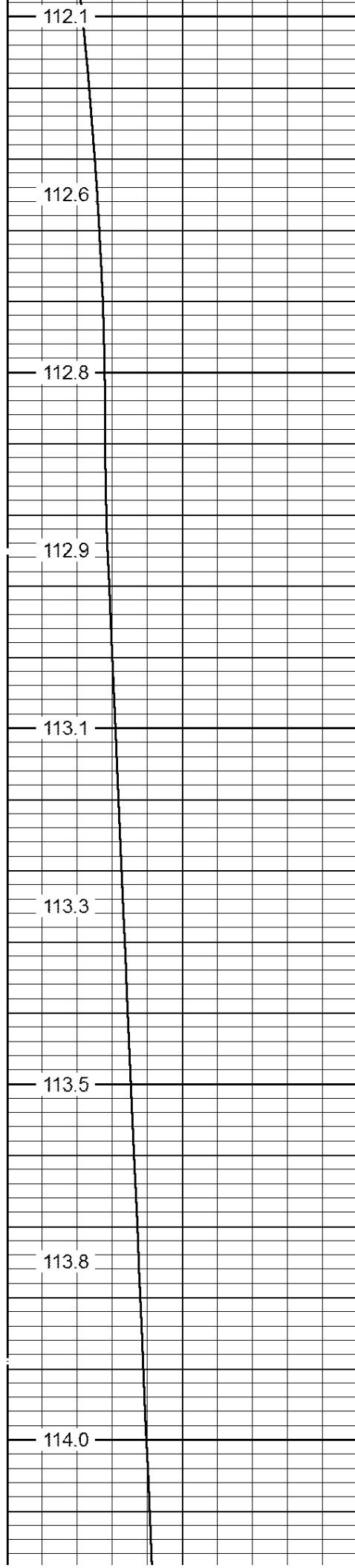
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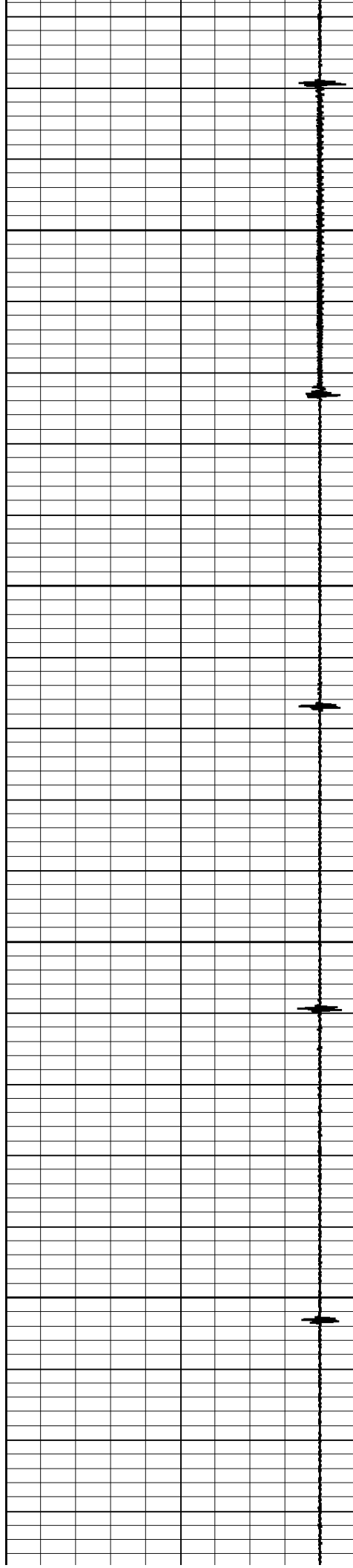




3900

4000





4100

4200

114.2

114.6

115.7

116.8

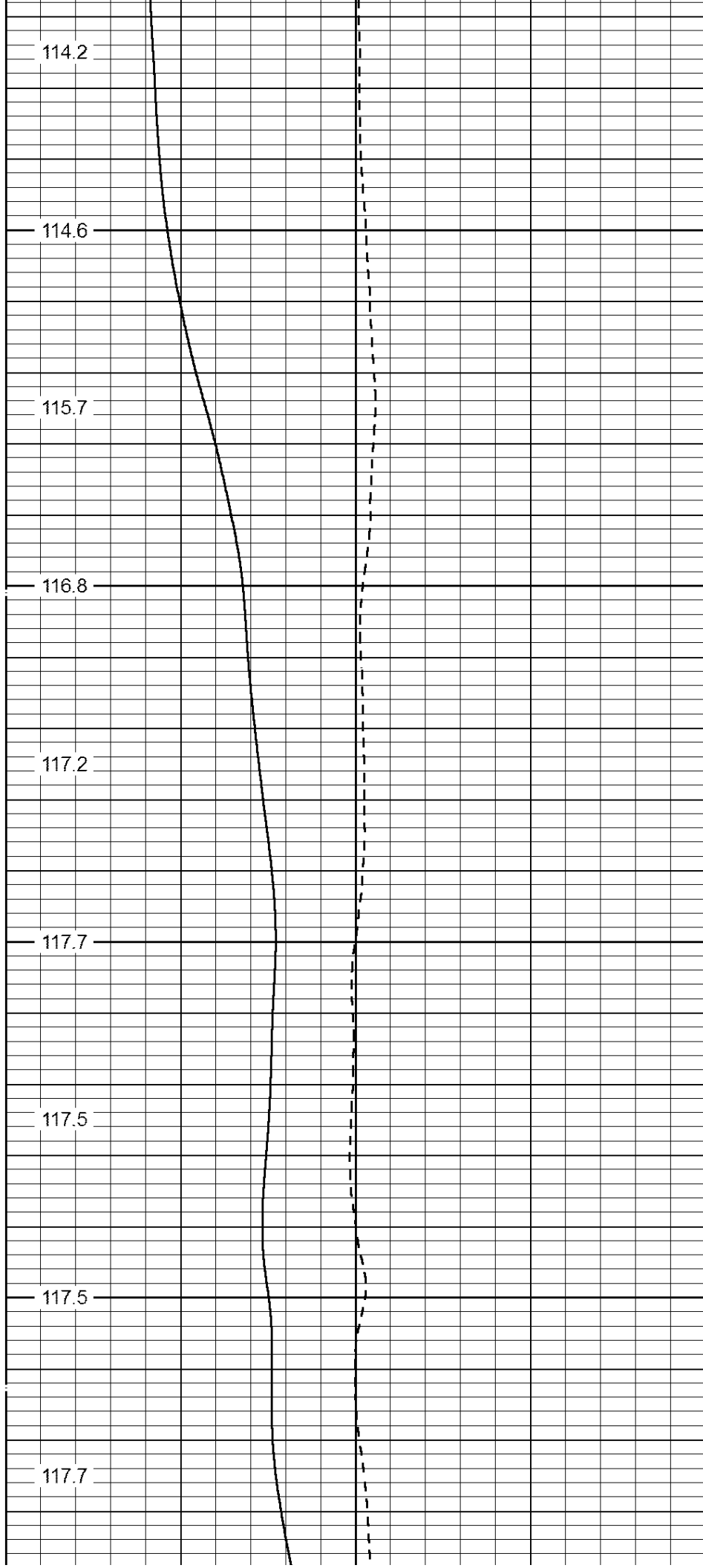
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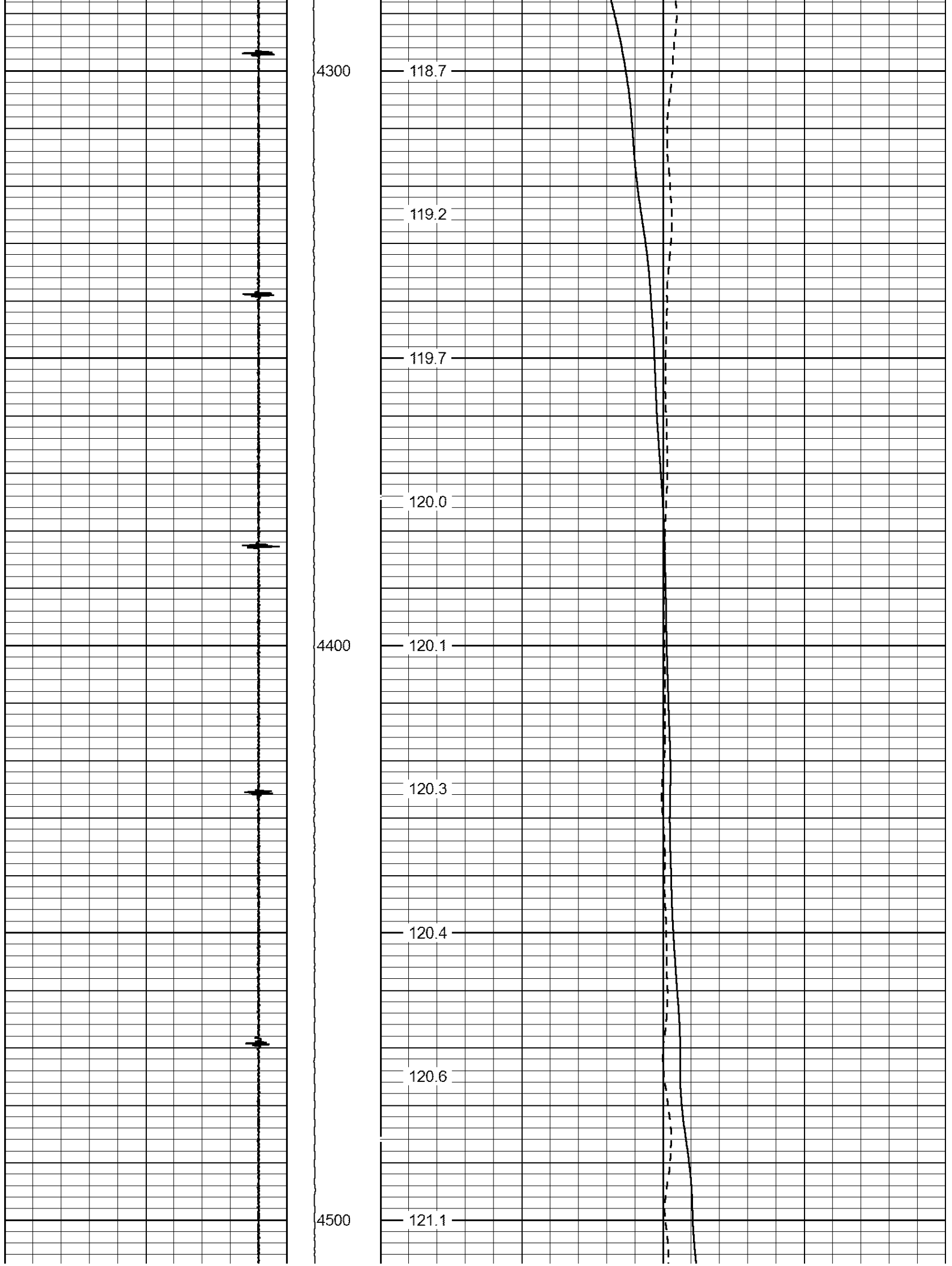
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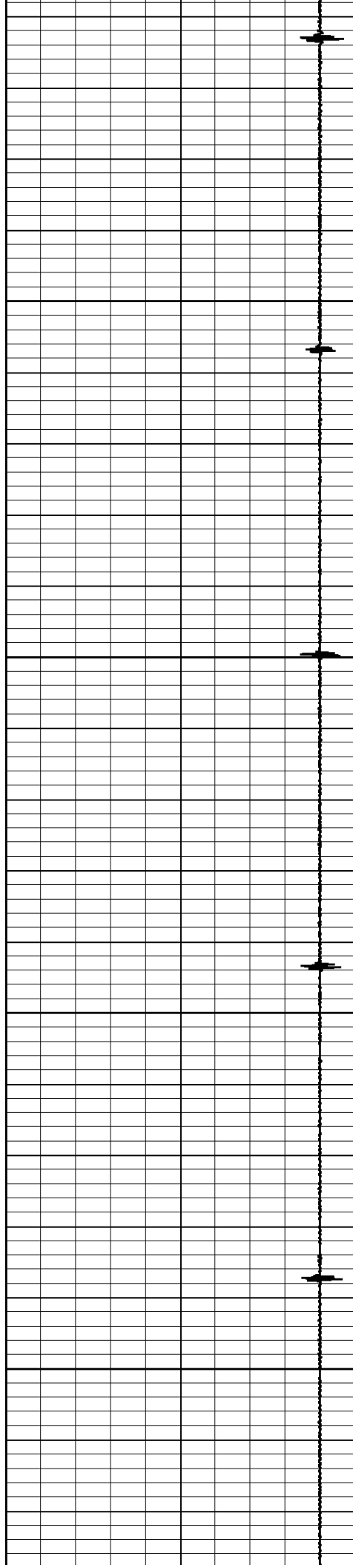
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117.5

117.7







4600

4700

121.5

122.2

122.9

123.1

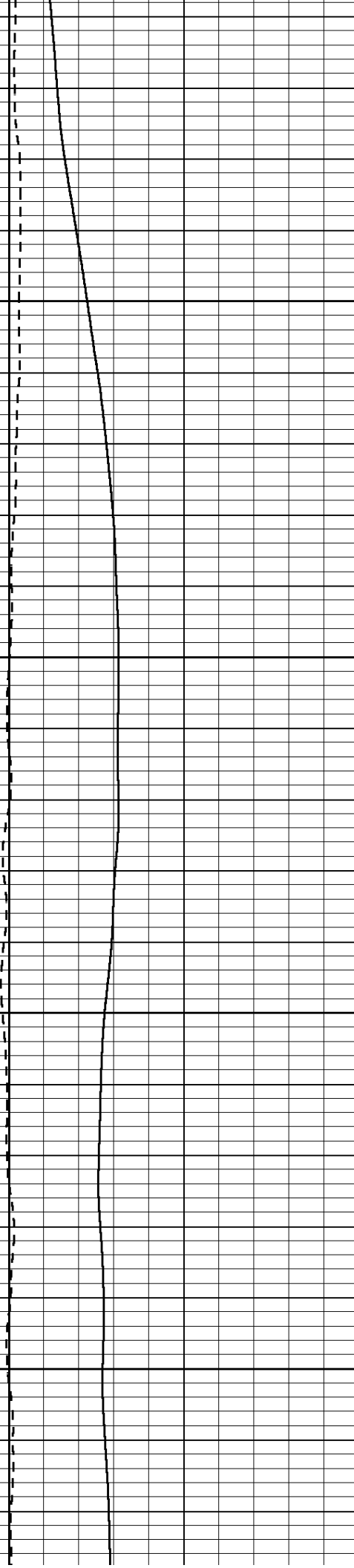
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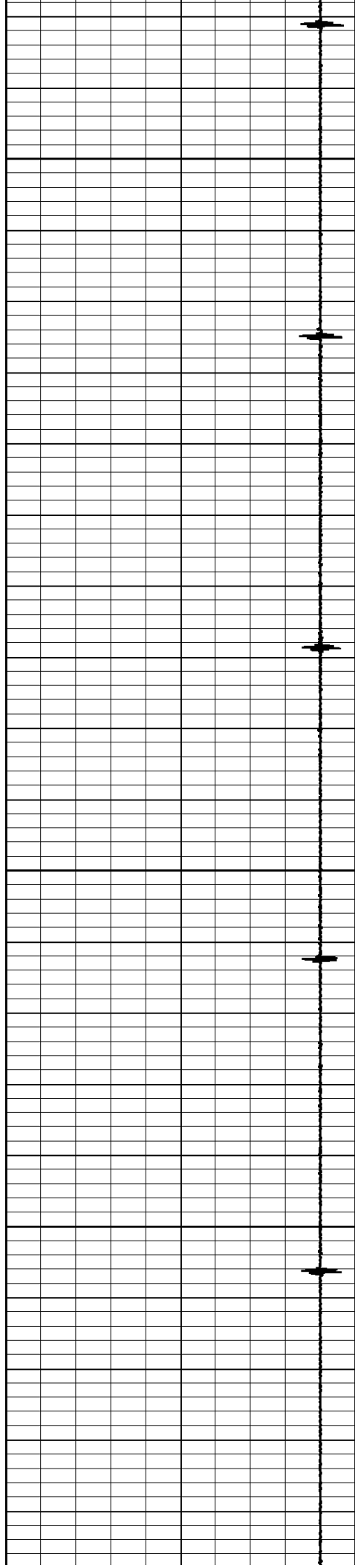
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122.6

122.7

122.9





4800

4900

123.2

123.4

123.4

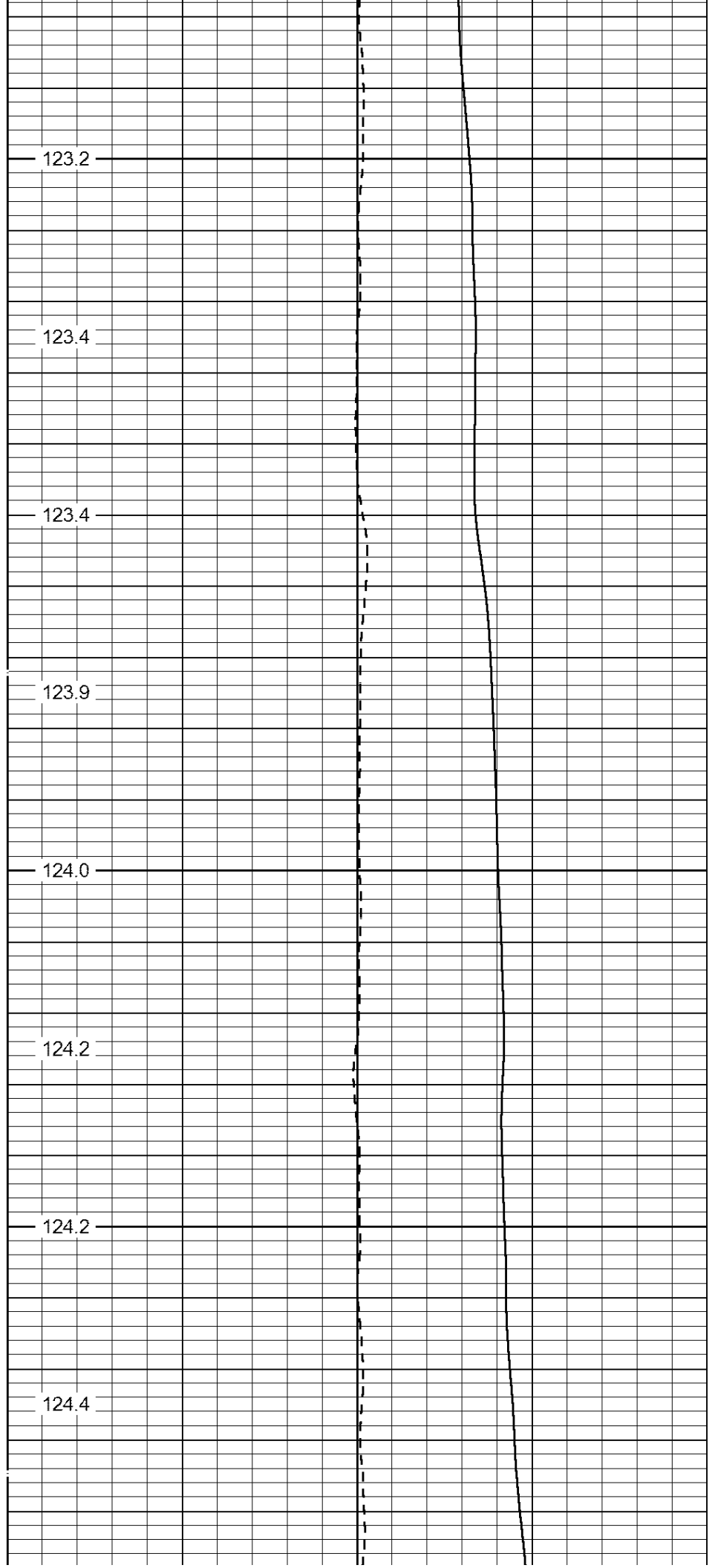
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124.0

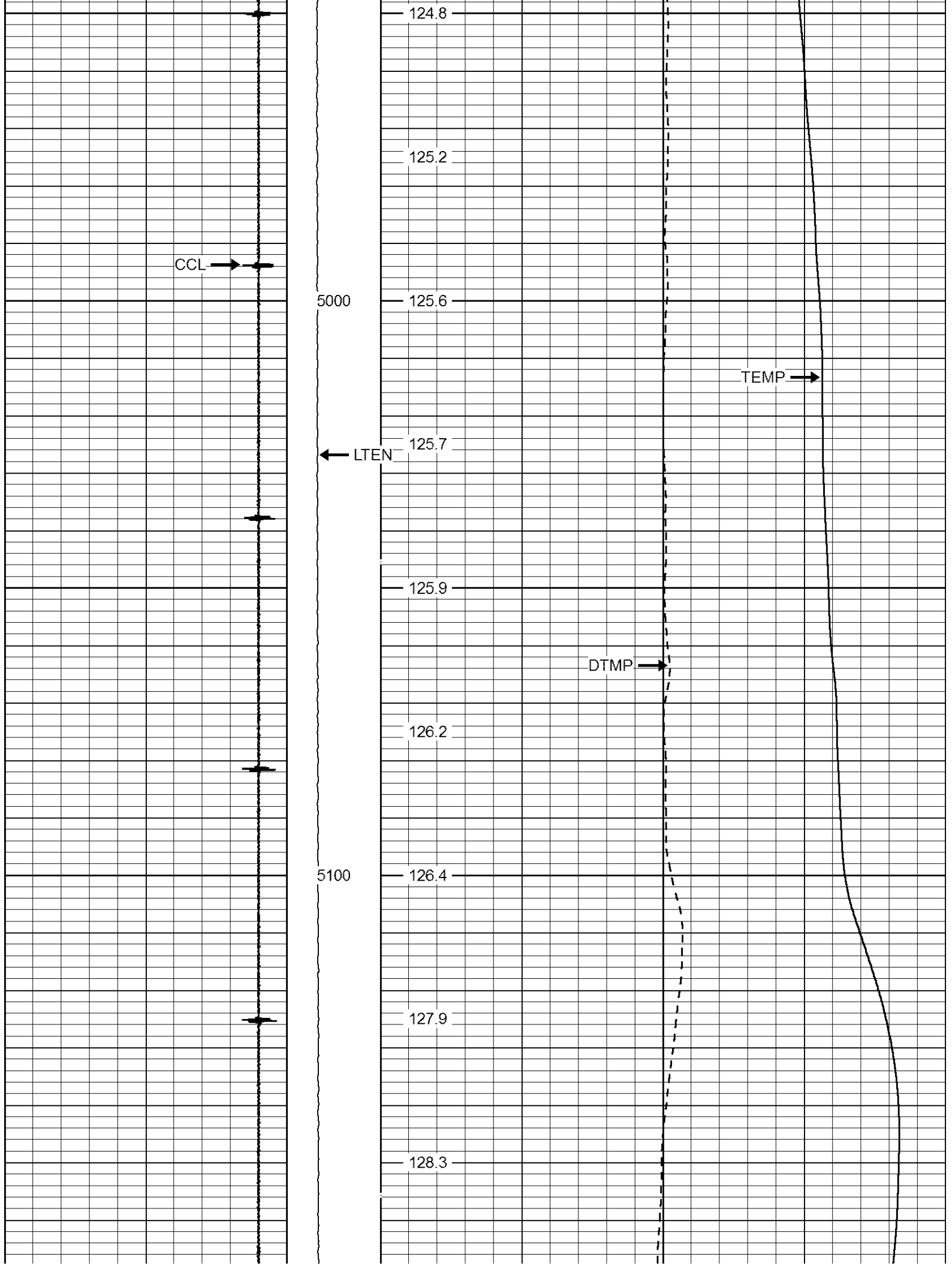
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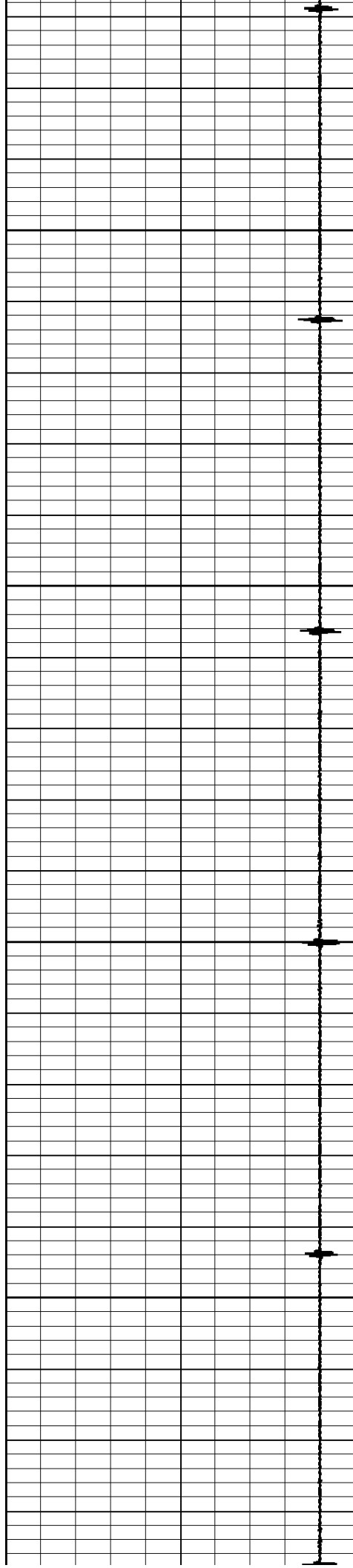
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124.4









5200

5300

128.0

127.7

127.3

127.8

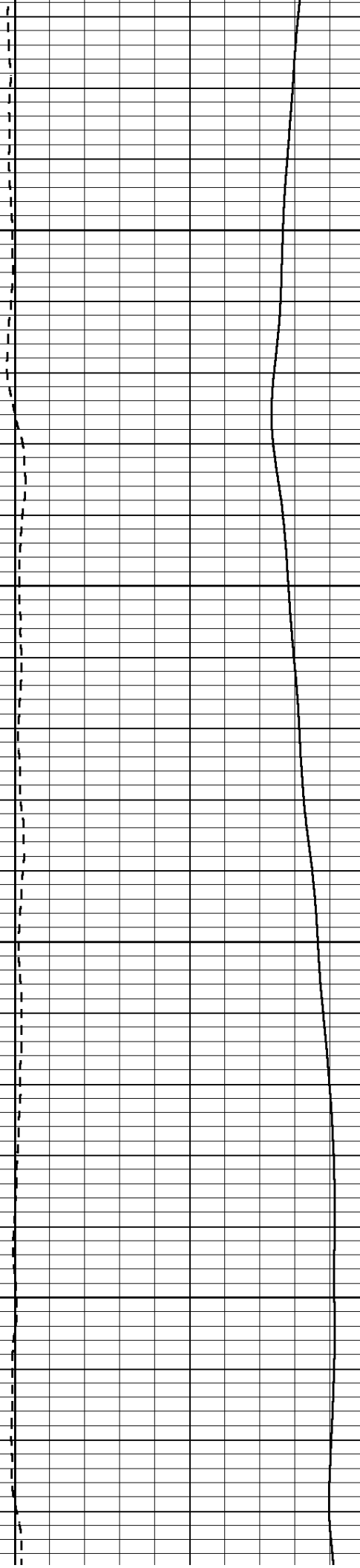
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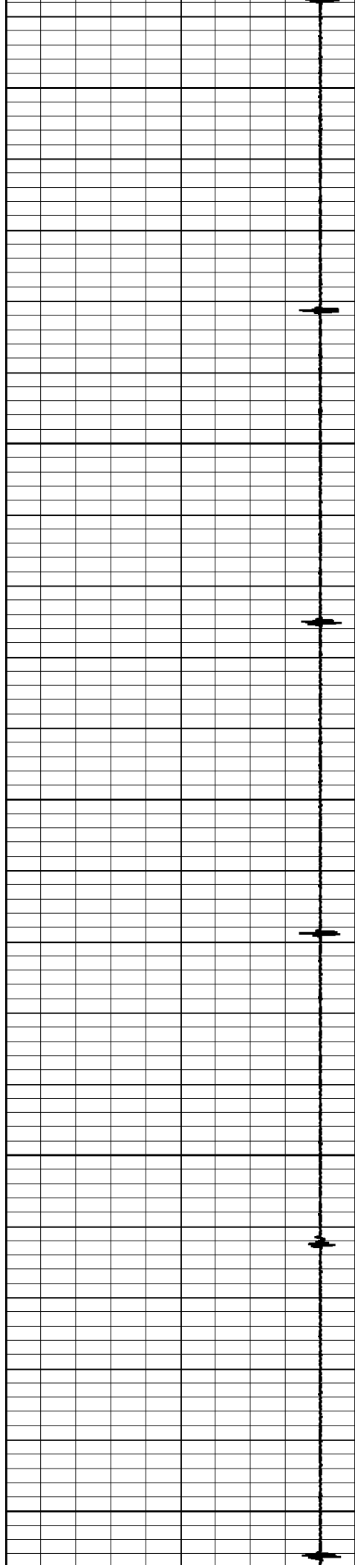
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129.1

129.1

129.0





5400

129.3

129.9

130.6

131.2

5500

131.4

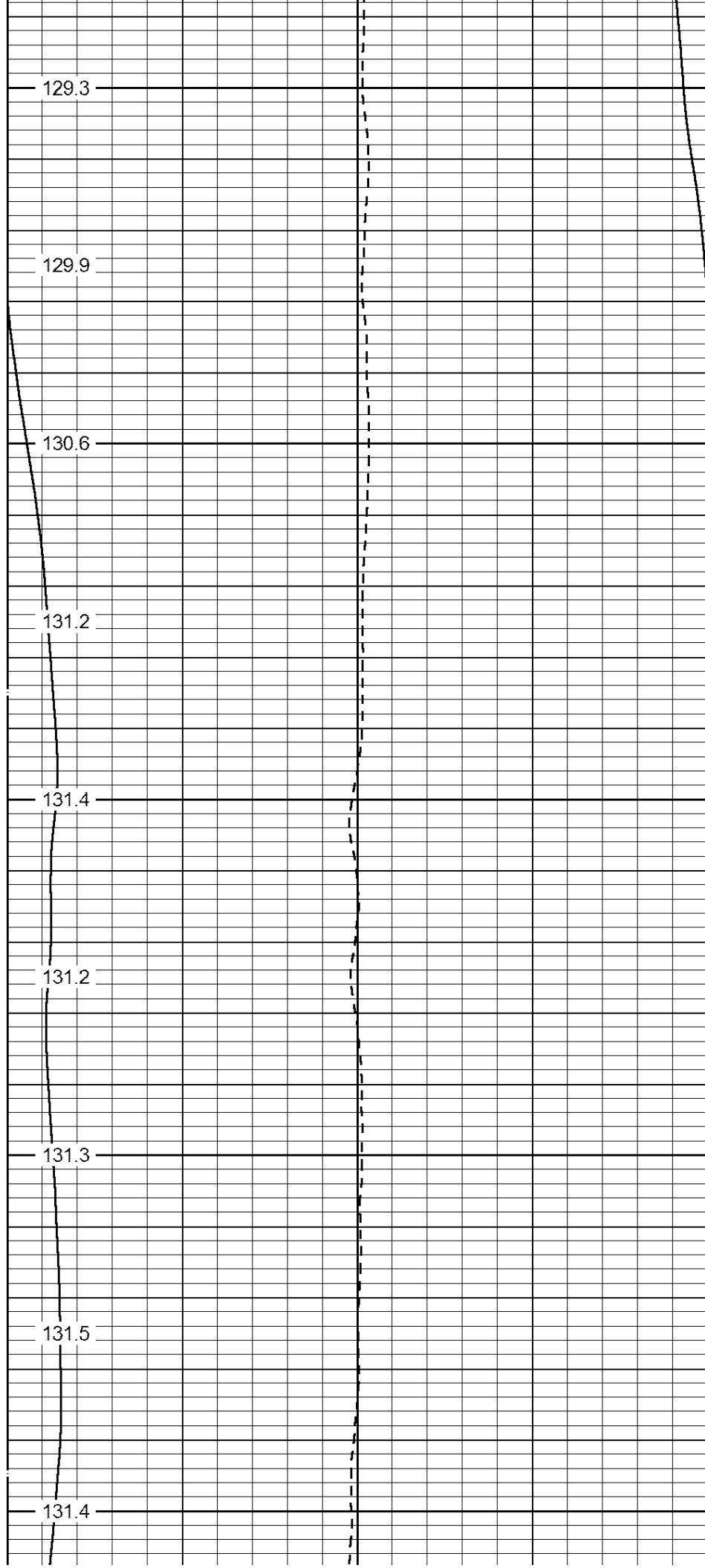
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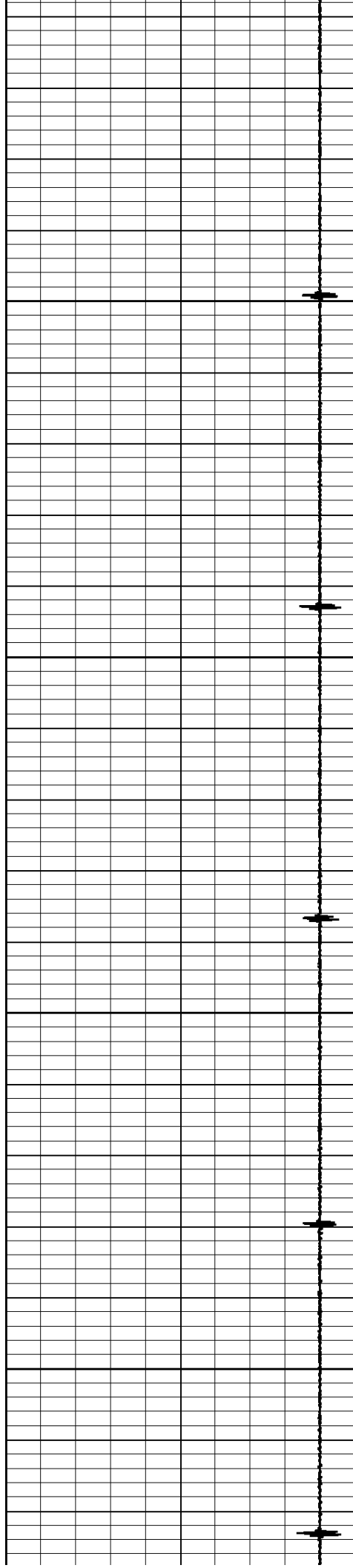
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131.5

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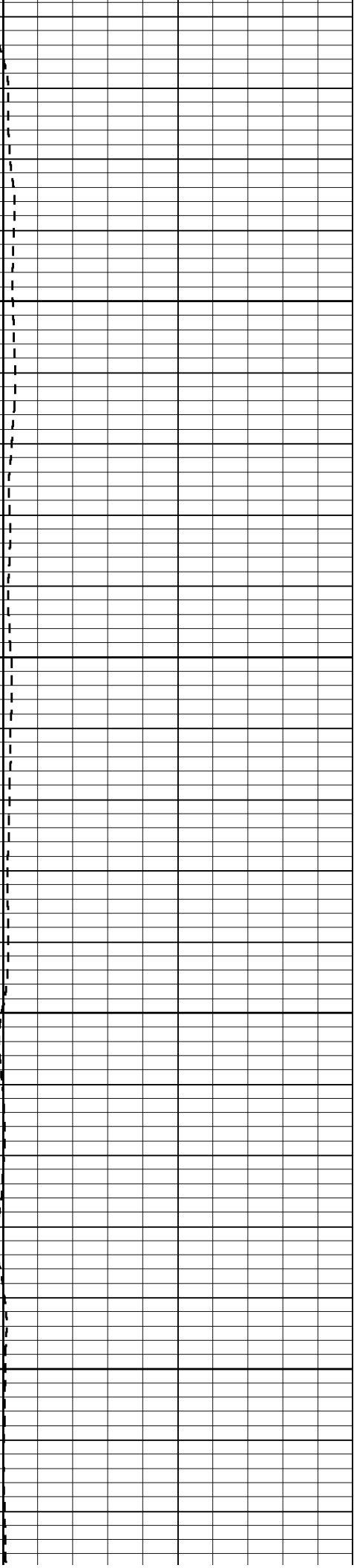
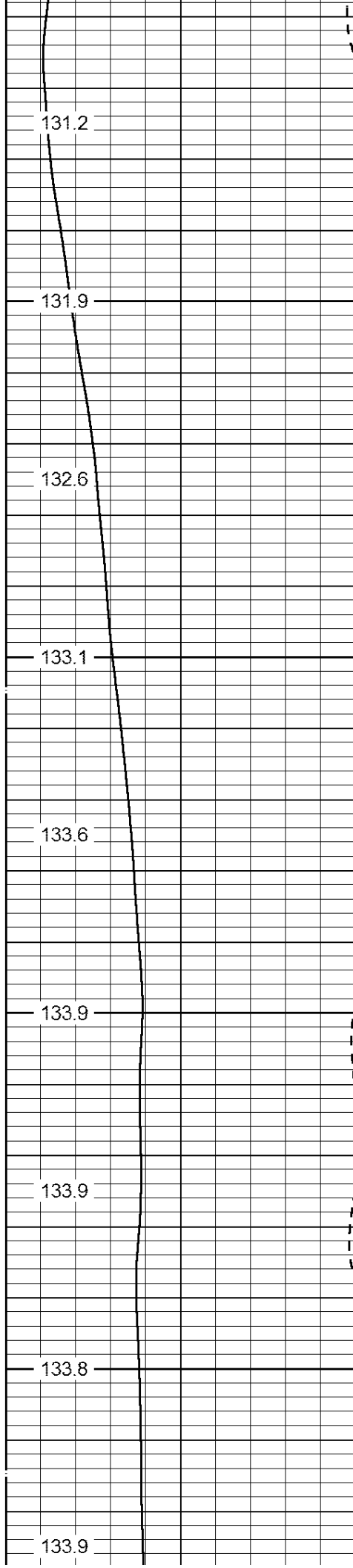
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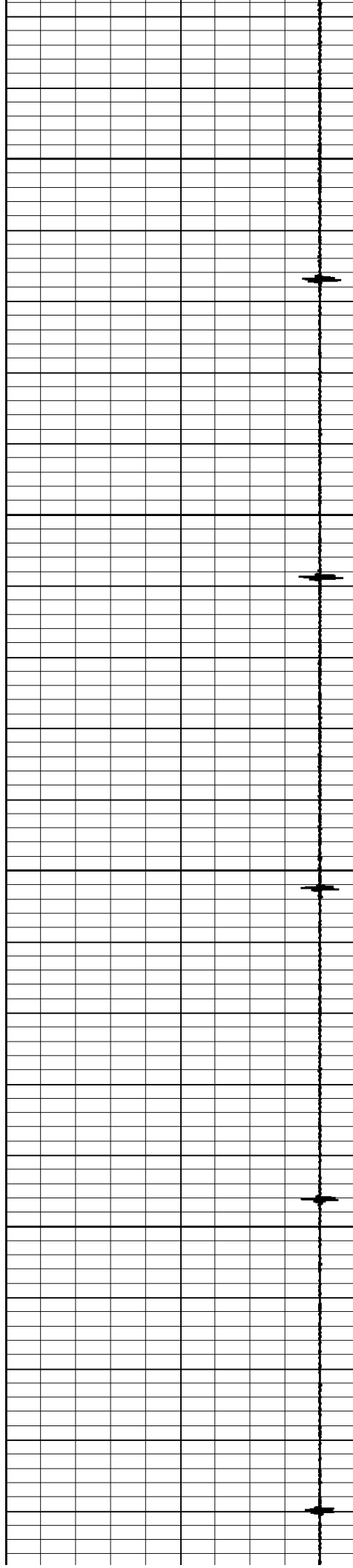




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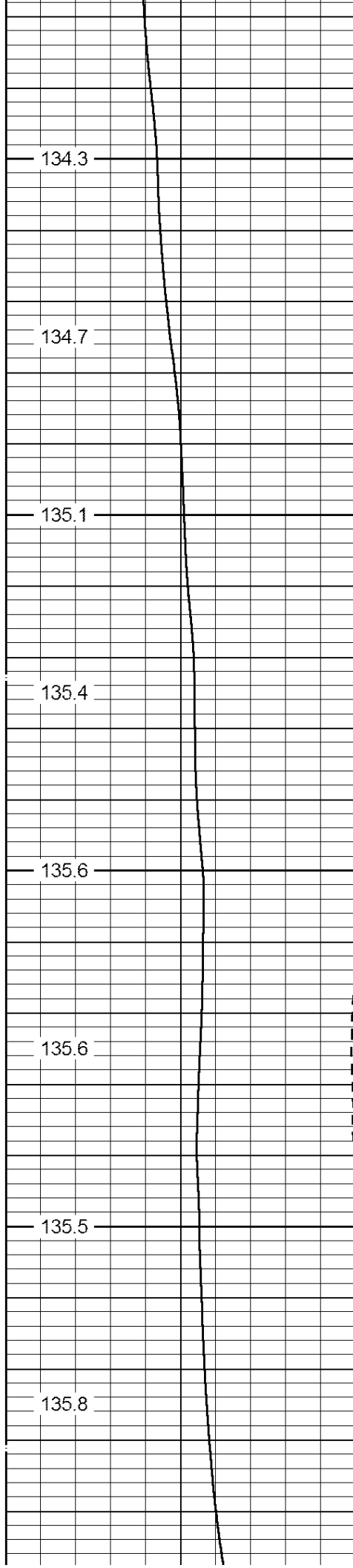
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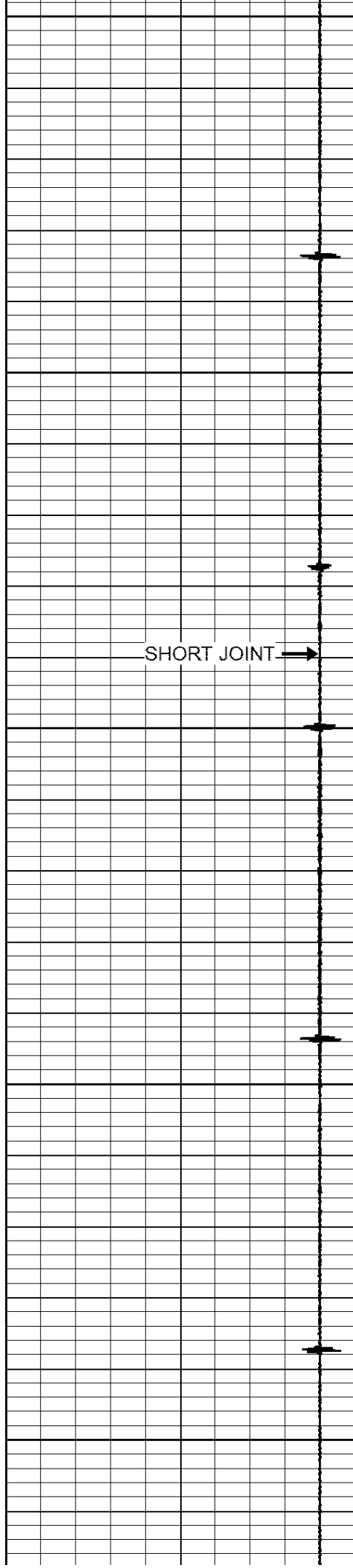




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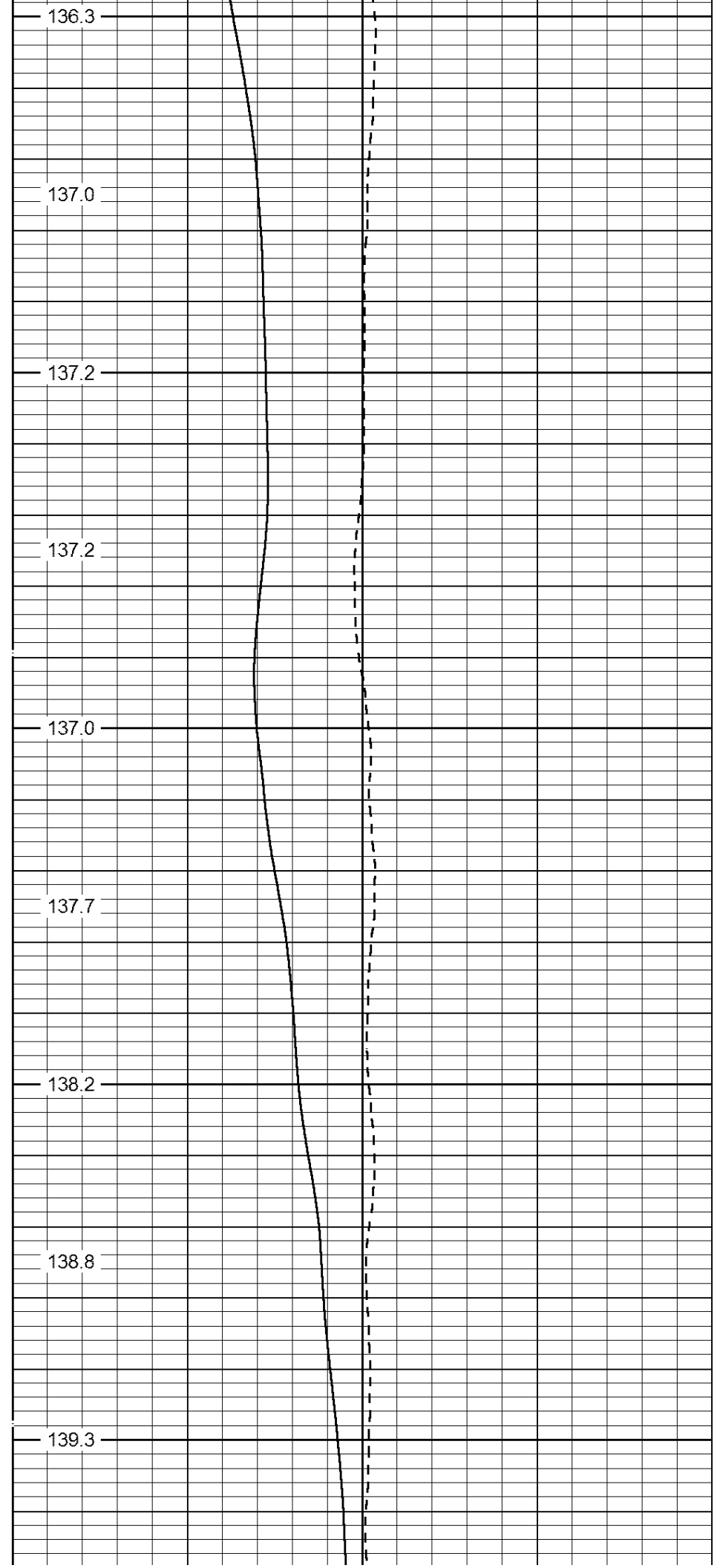


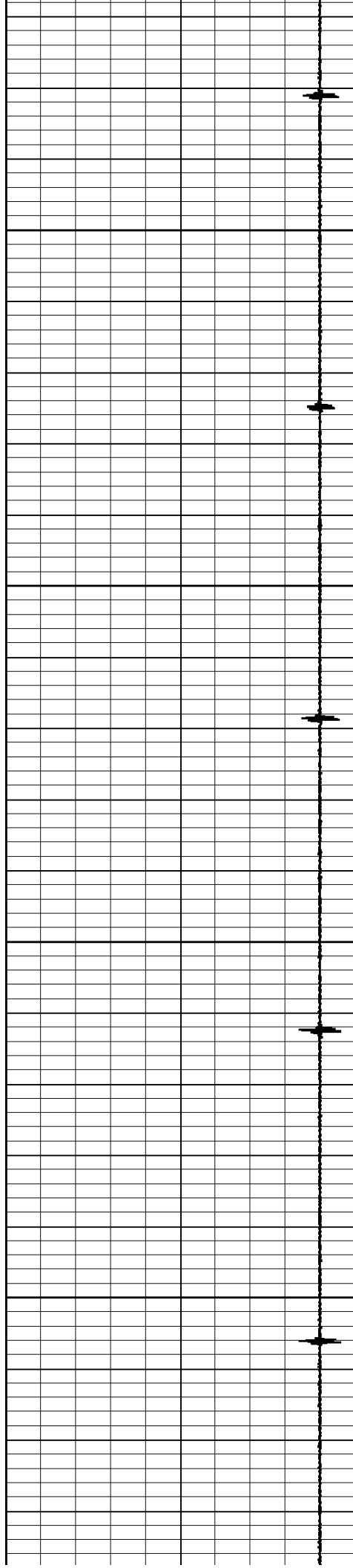


6100

6200

SHORT JOINT →





6300

6400

139.6

139.6

140.3

140.4

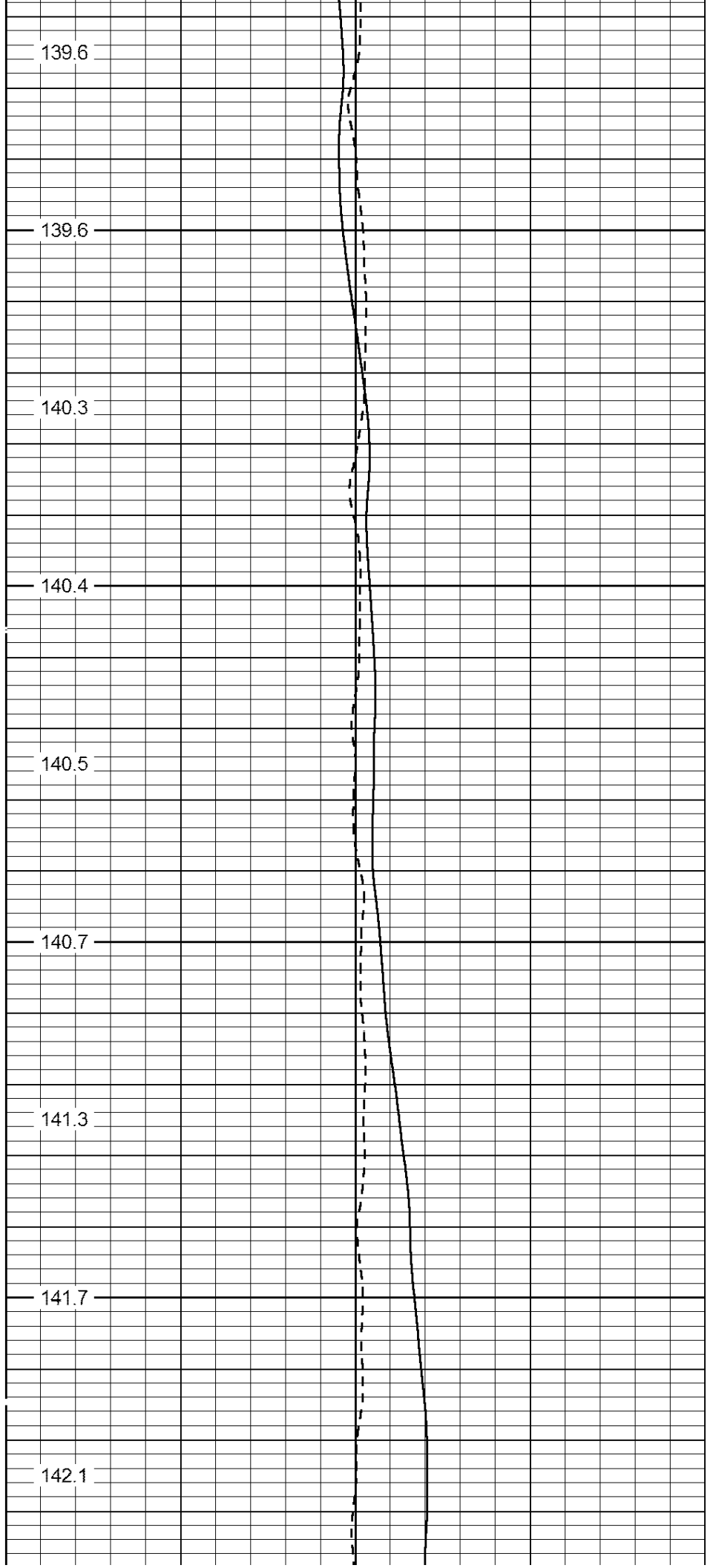
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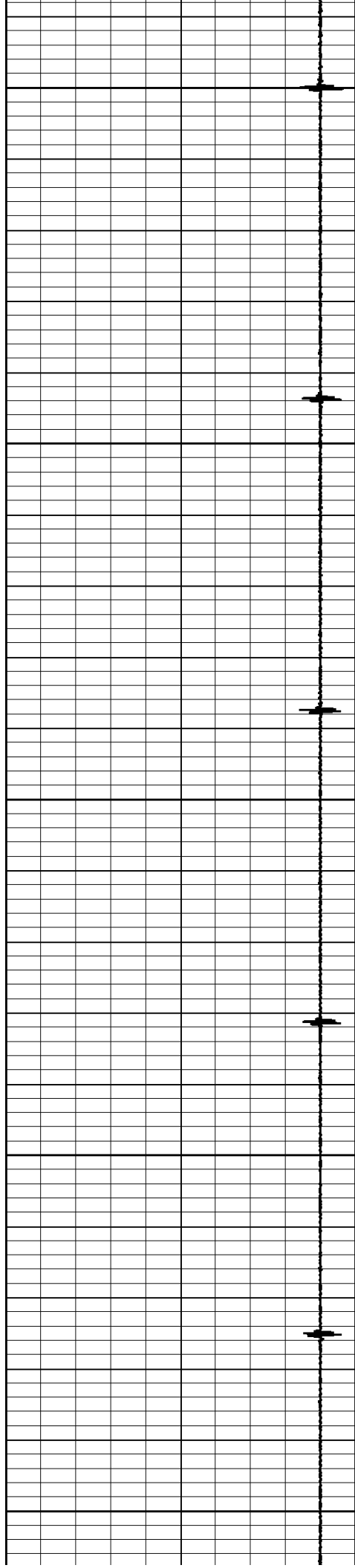
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141.3

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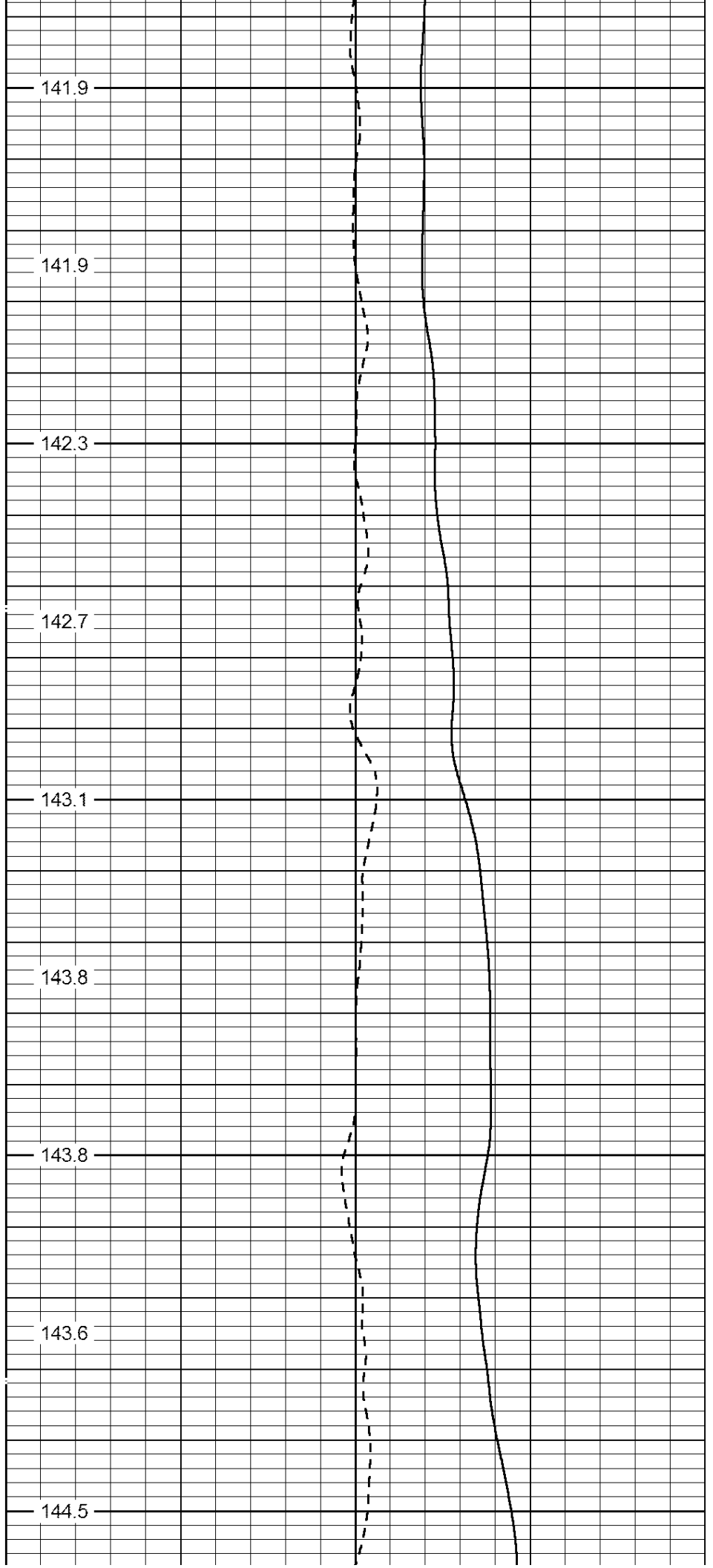




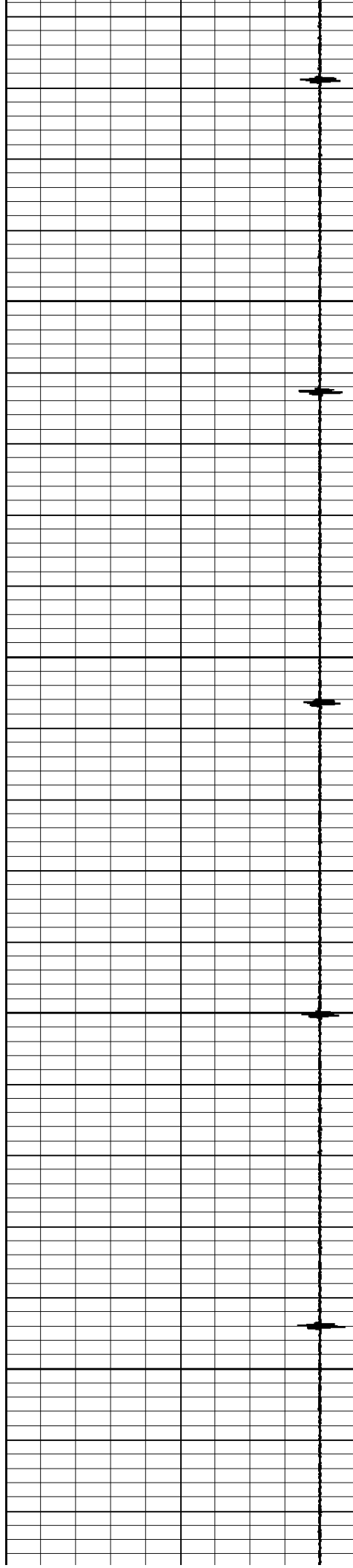
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6600

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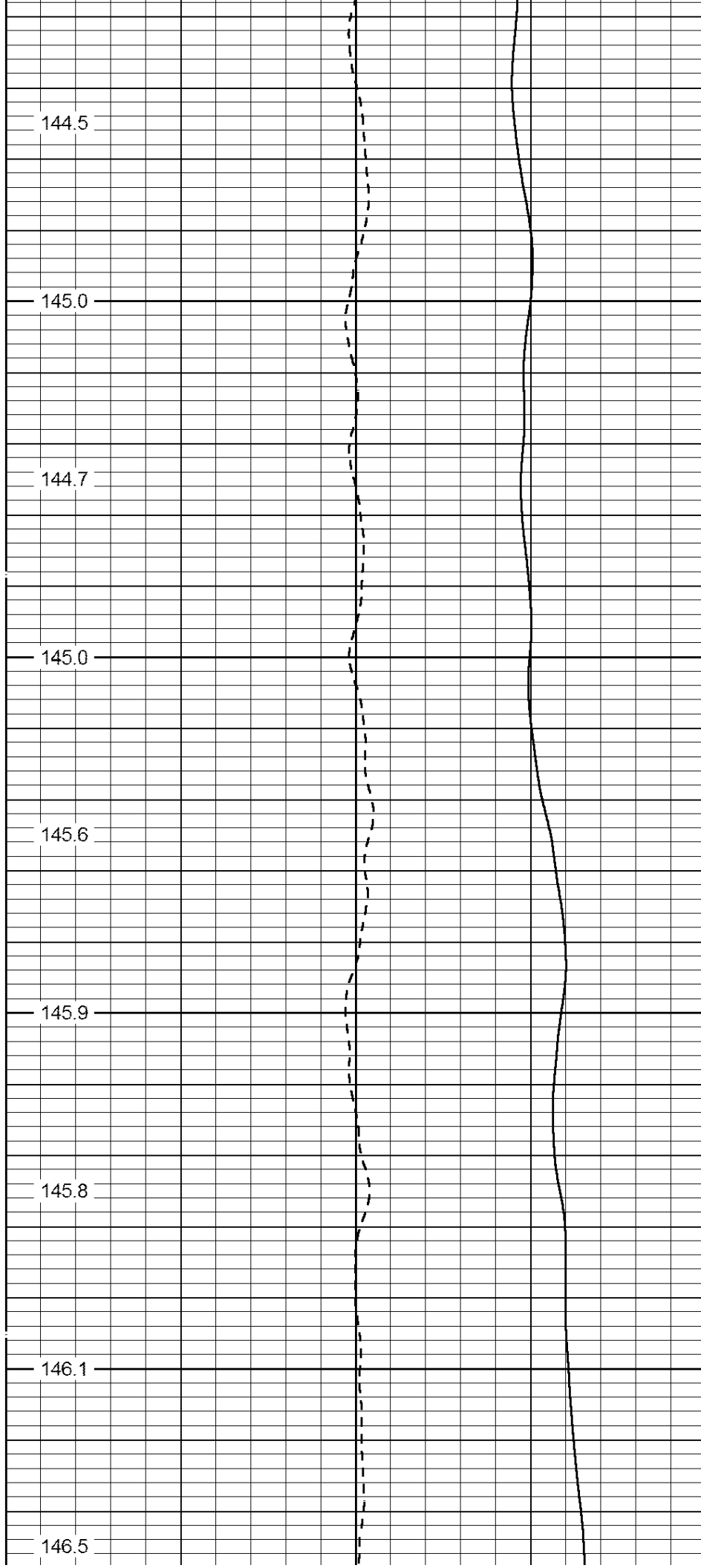


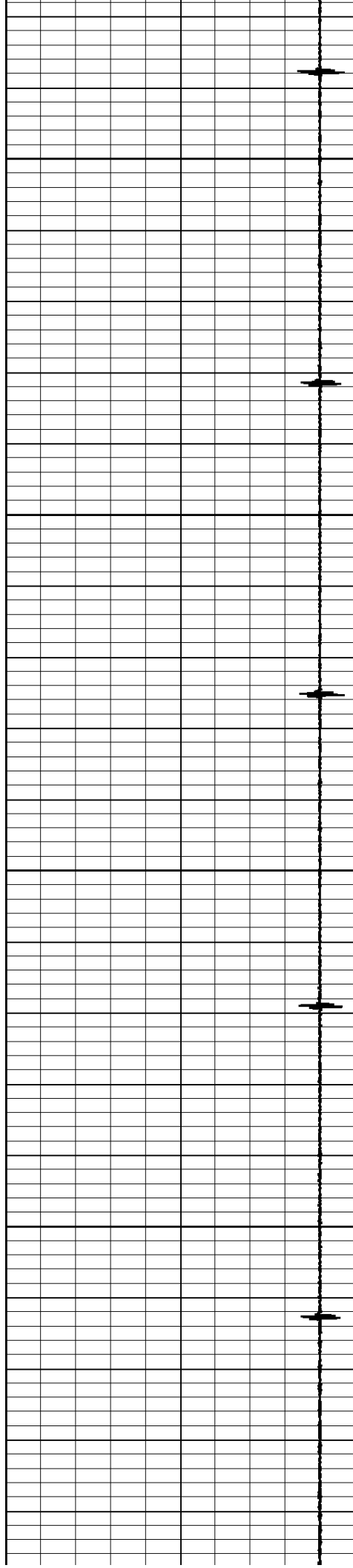




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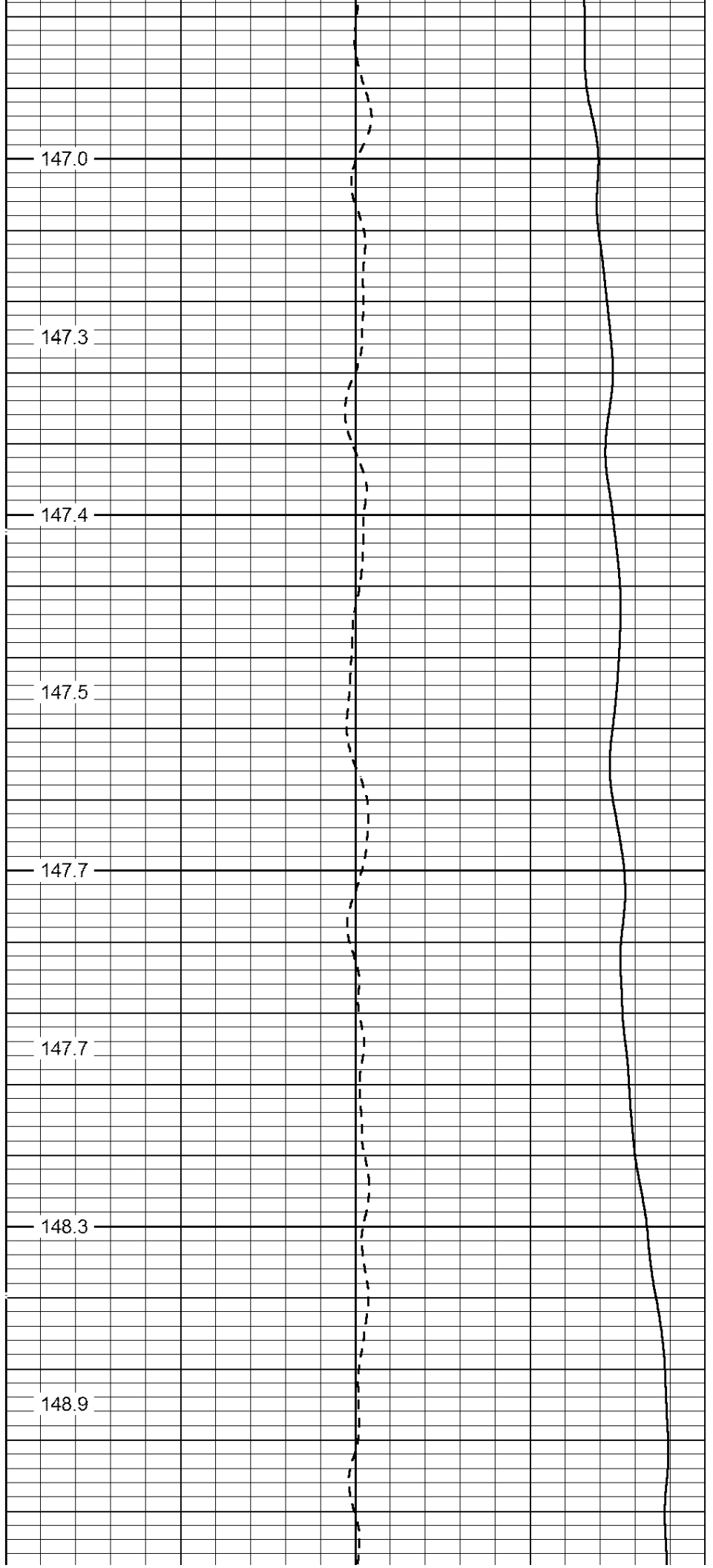
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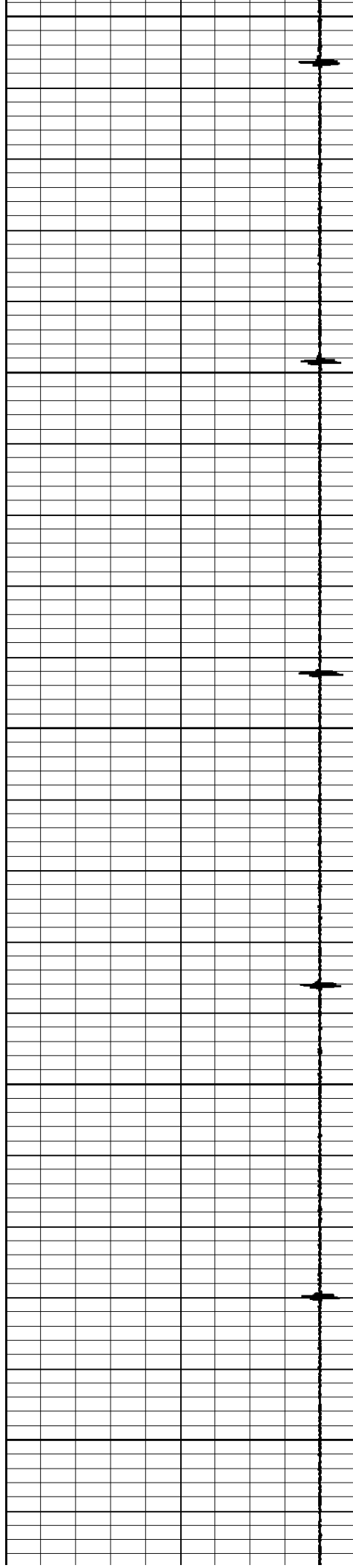




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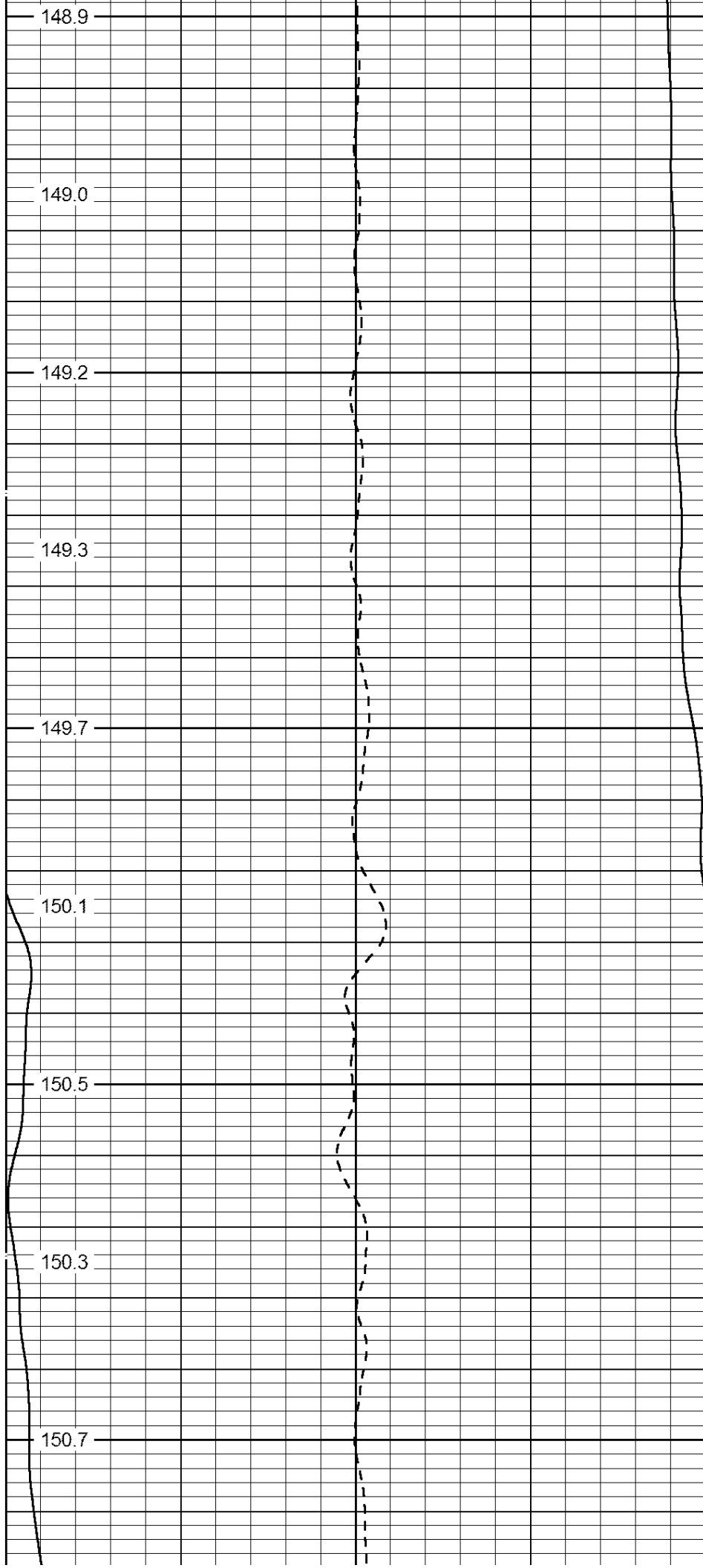
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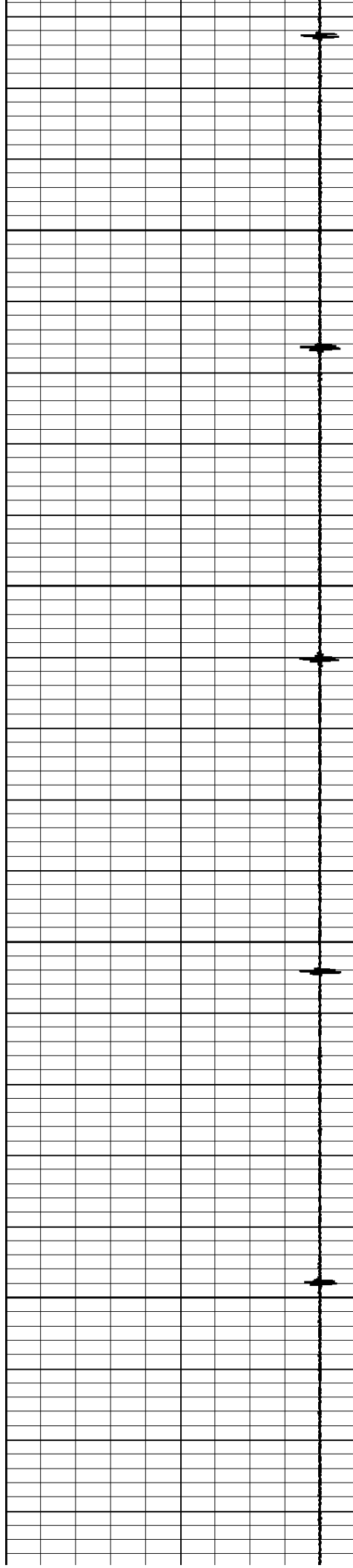




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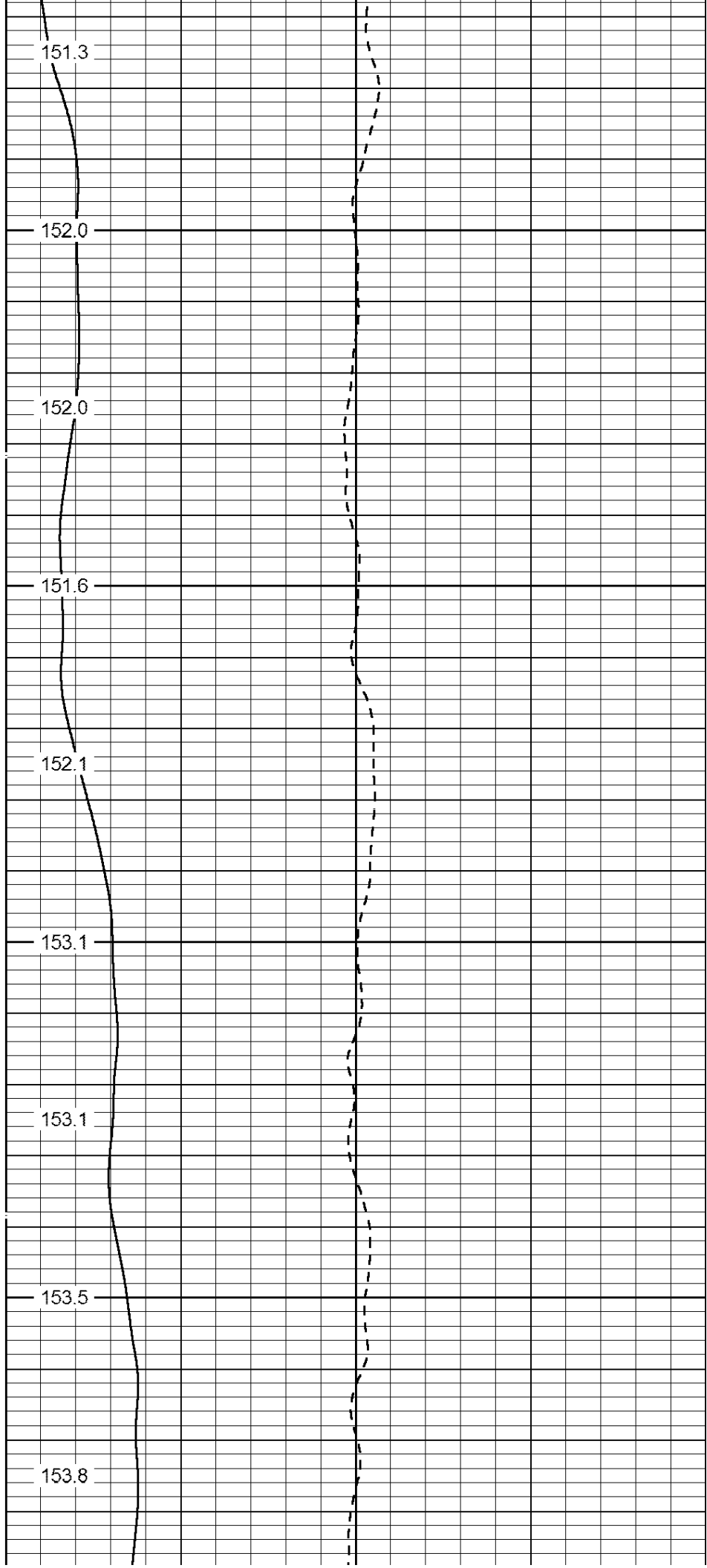
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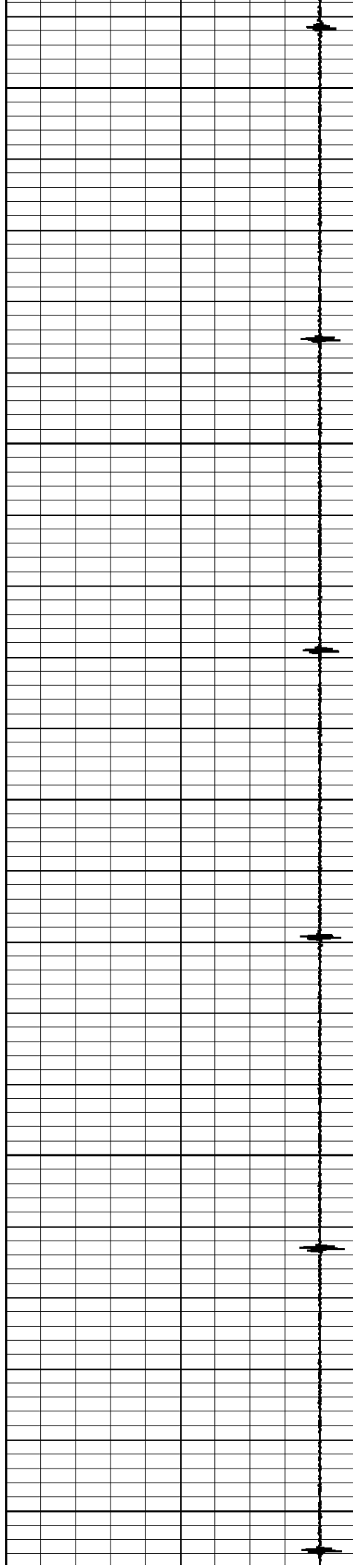




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7500





7600

7700

7800

153.3

154.0

154.6

153.9

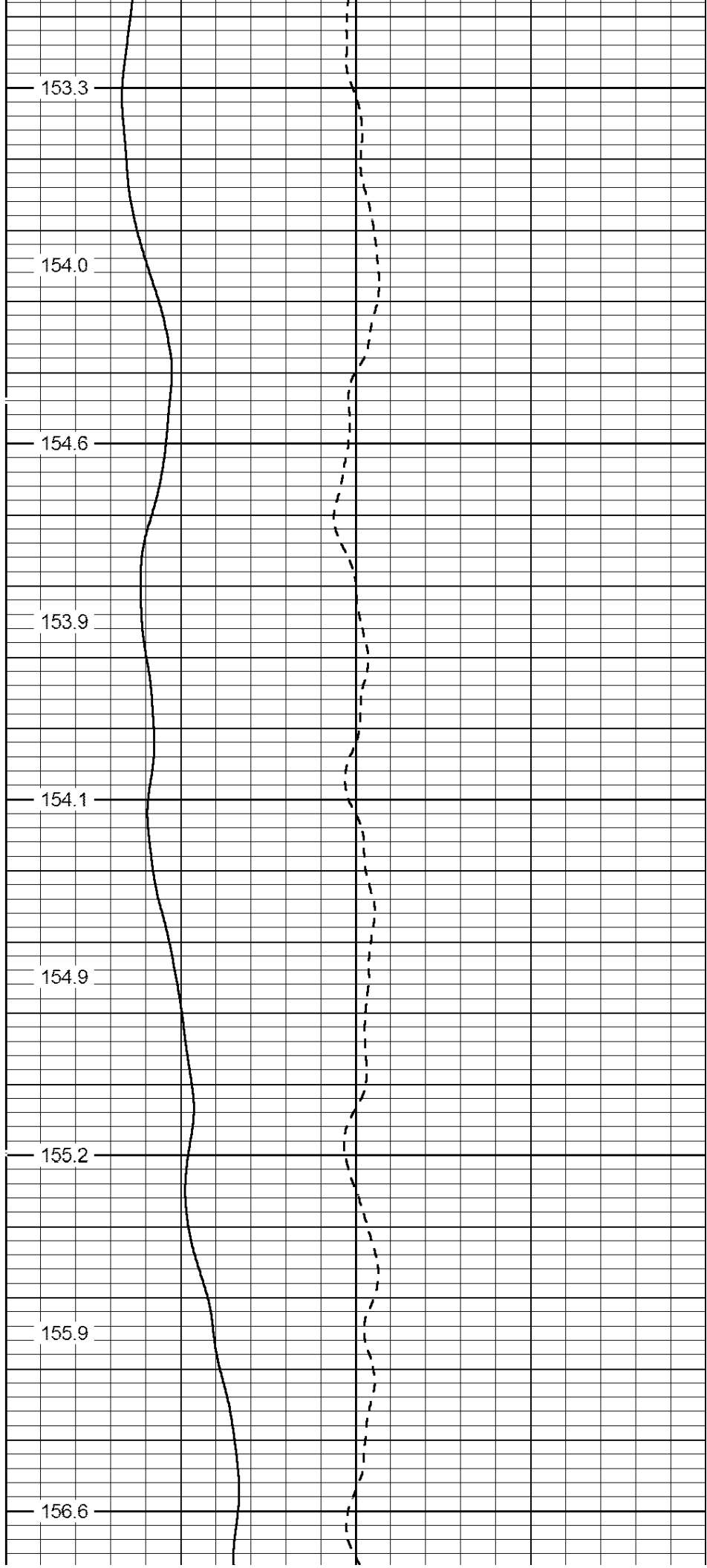
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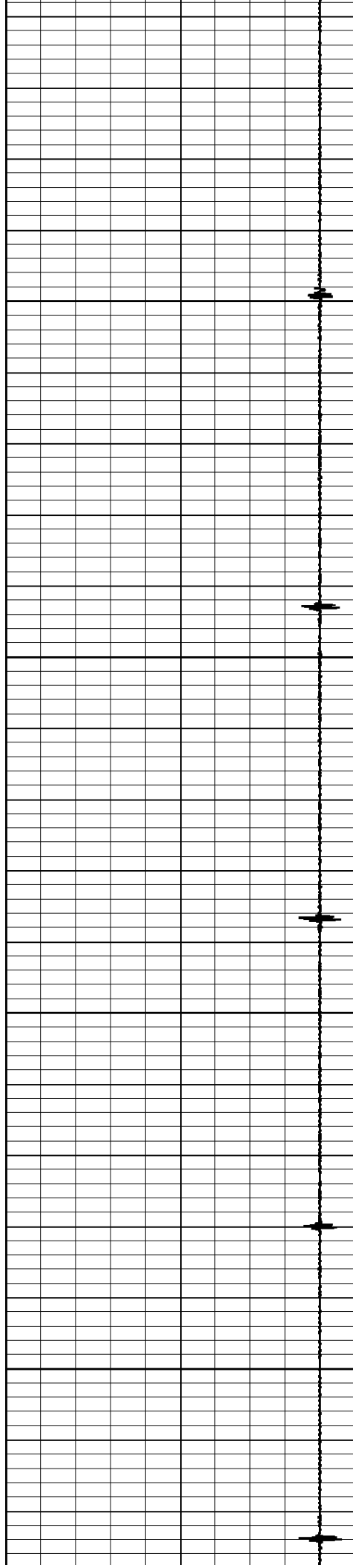
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155.9

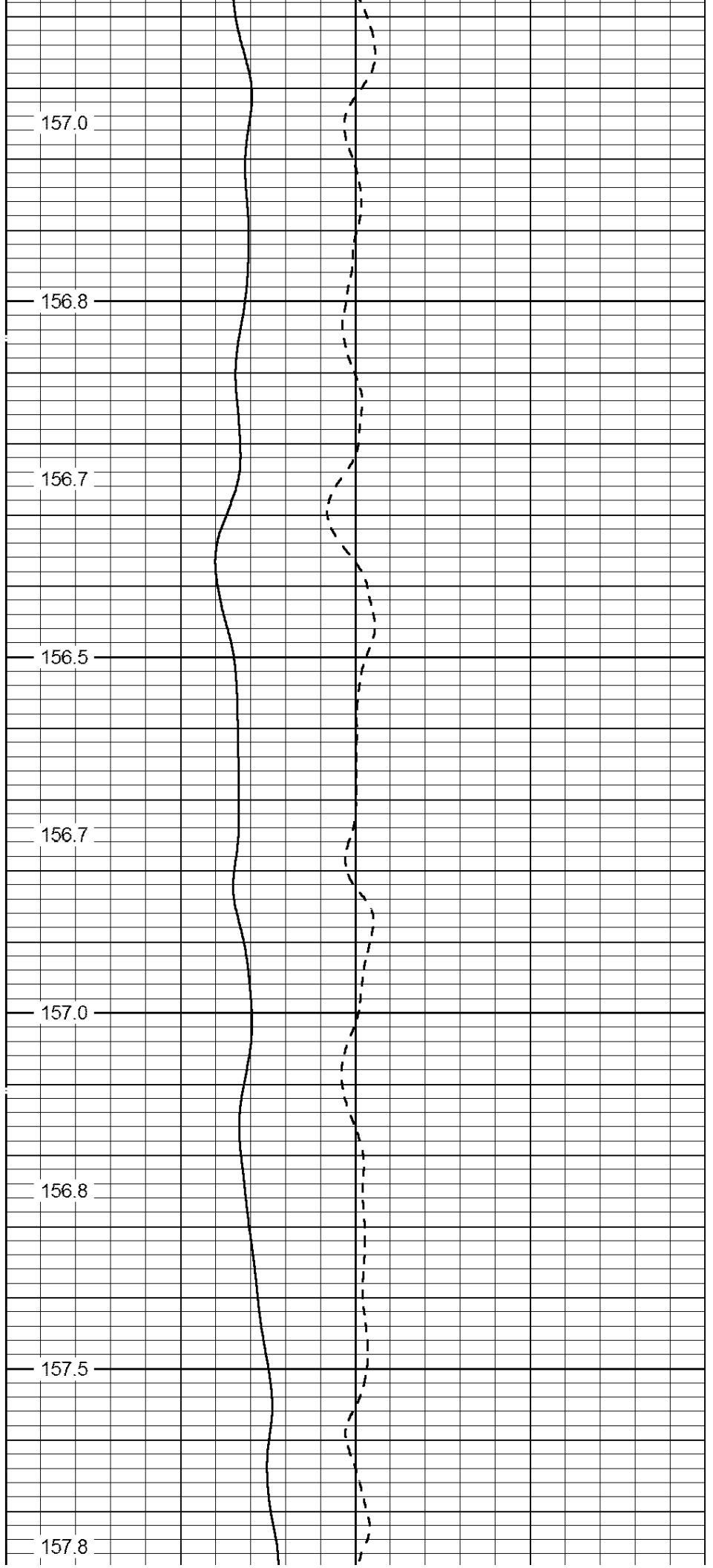
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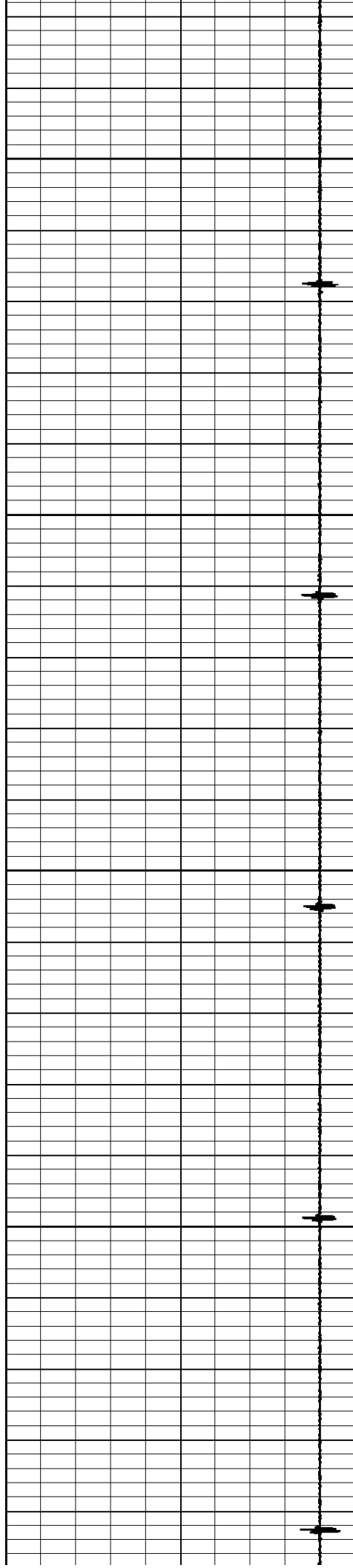




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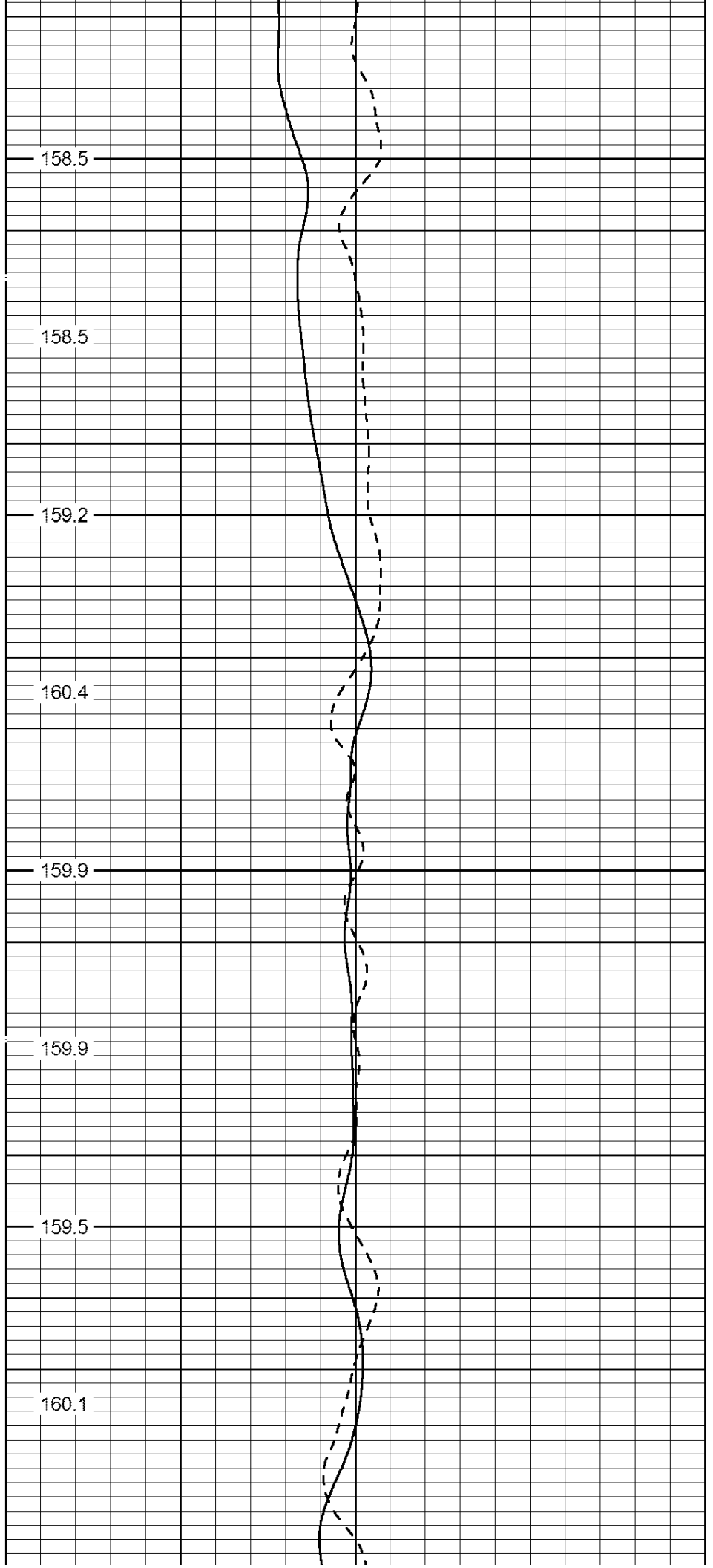
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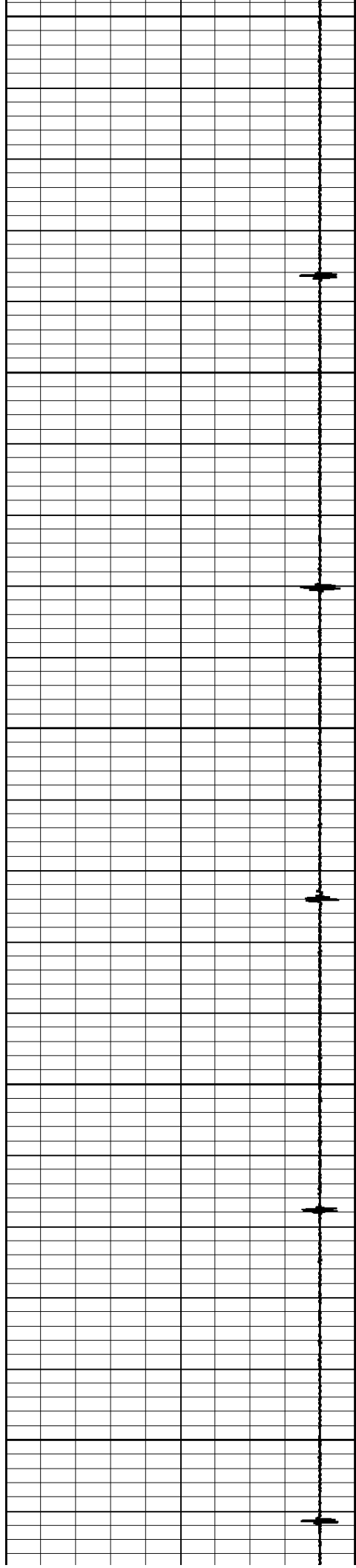




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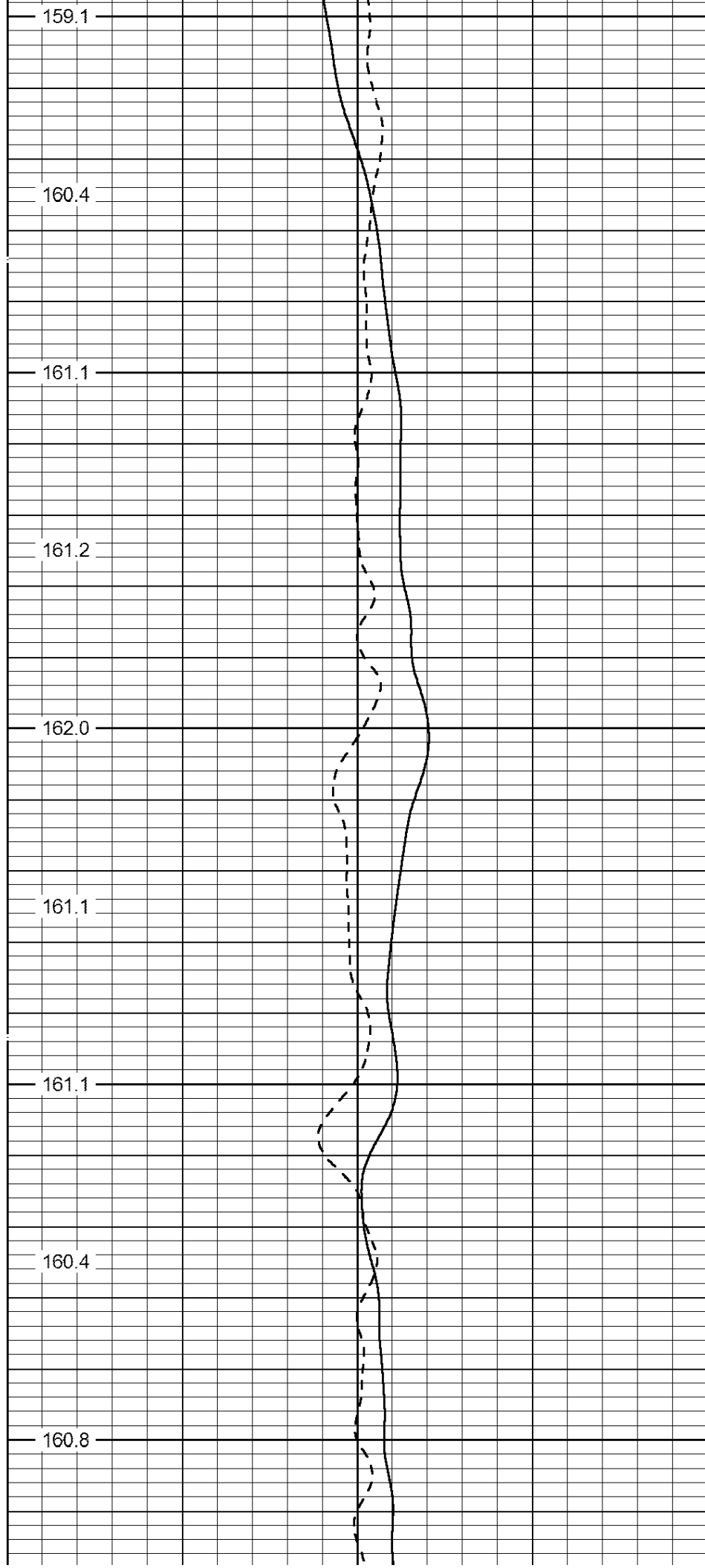
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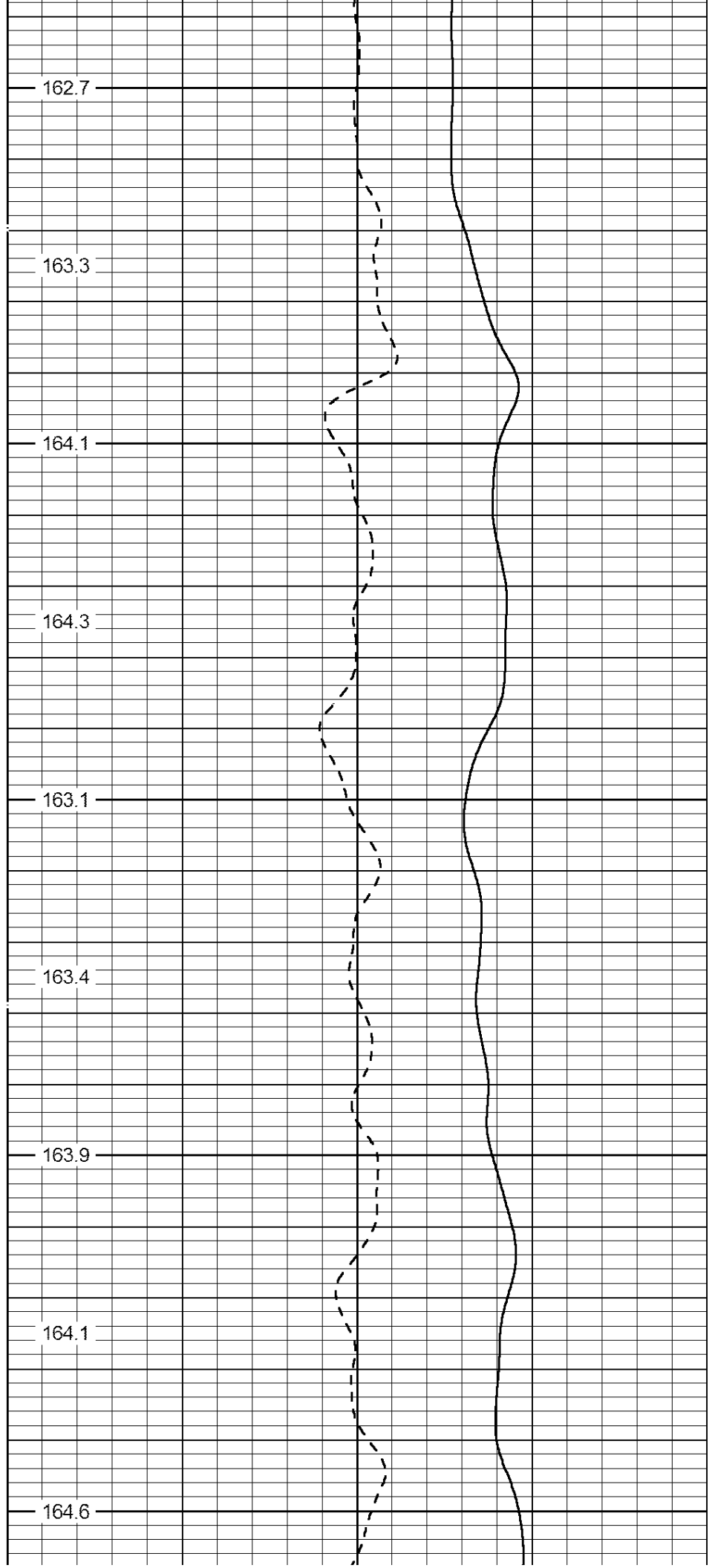
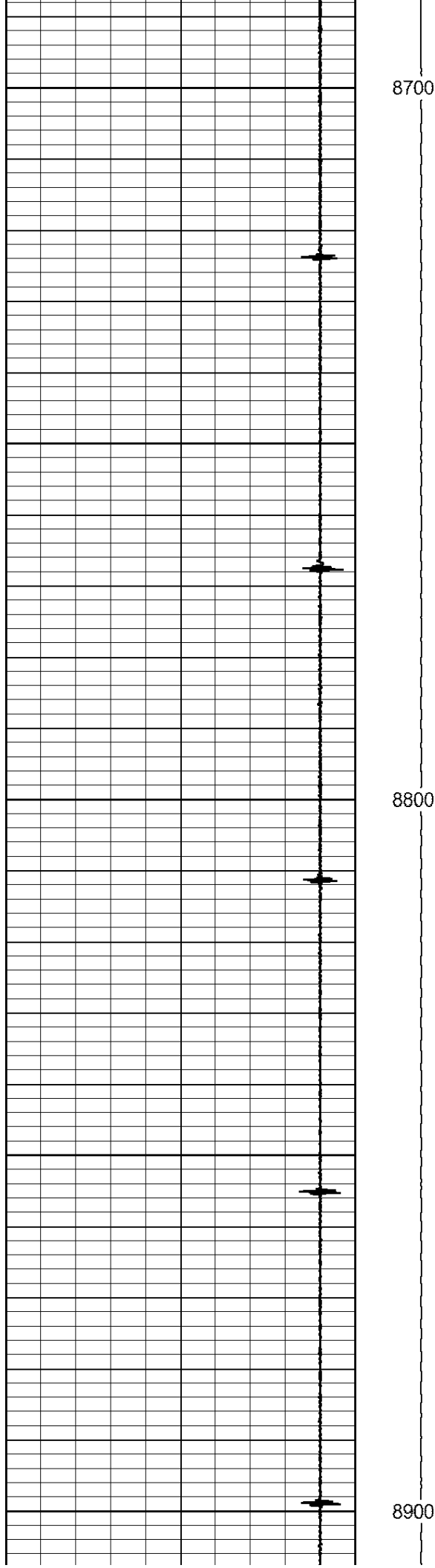
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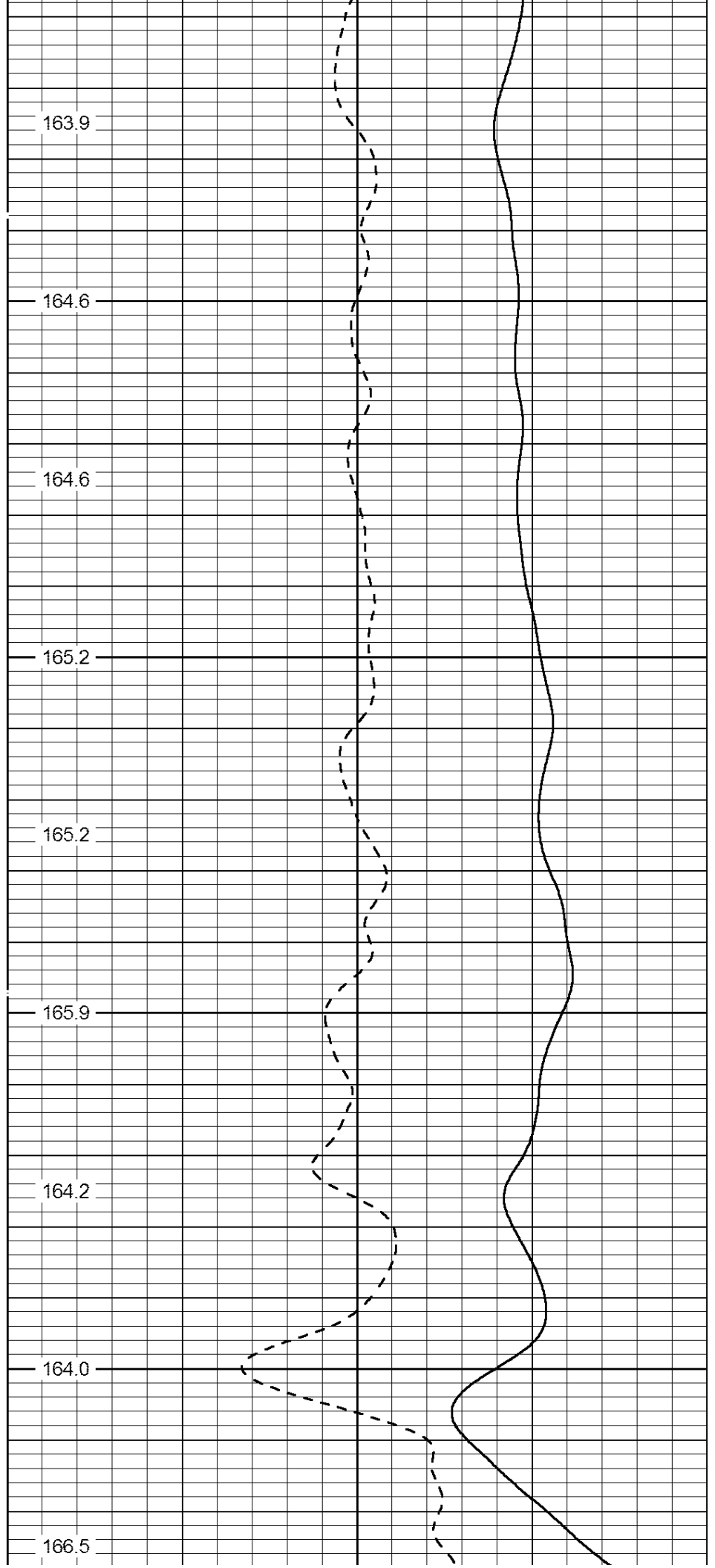
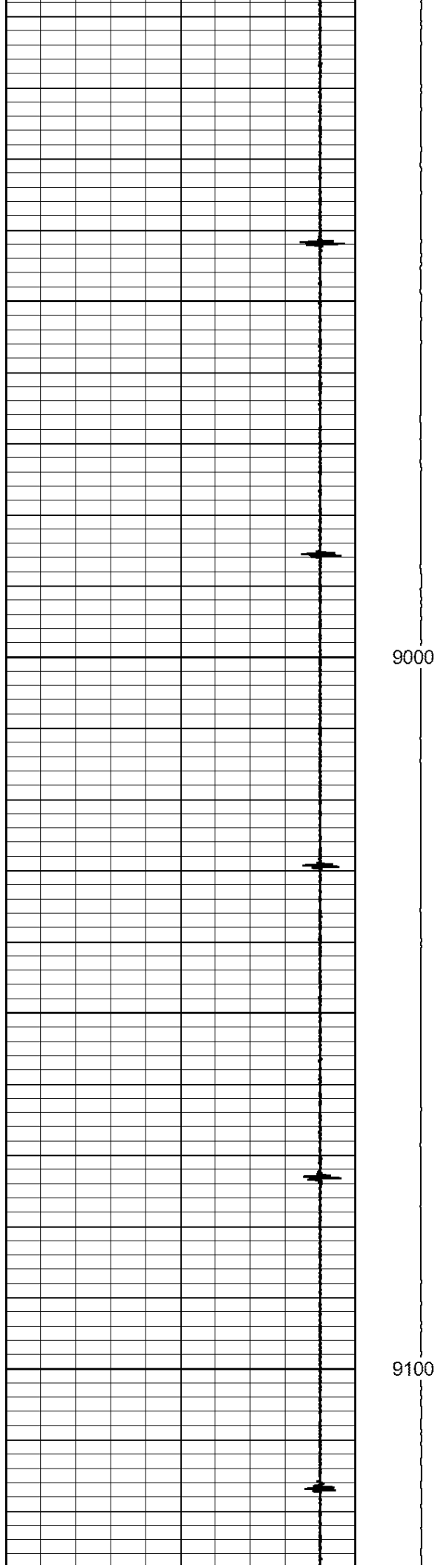
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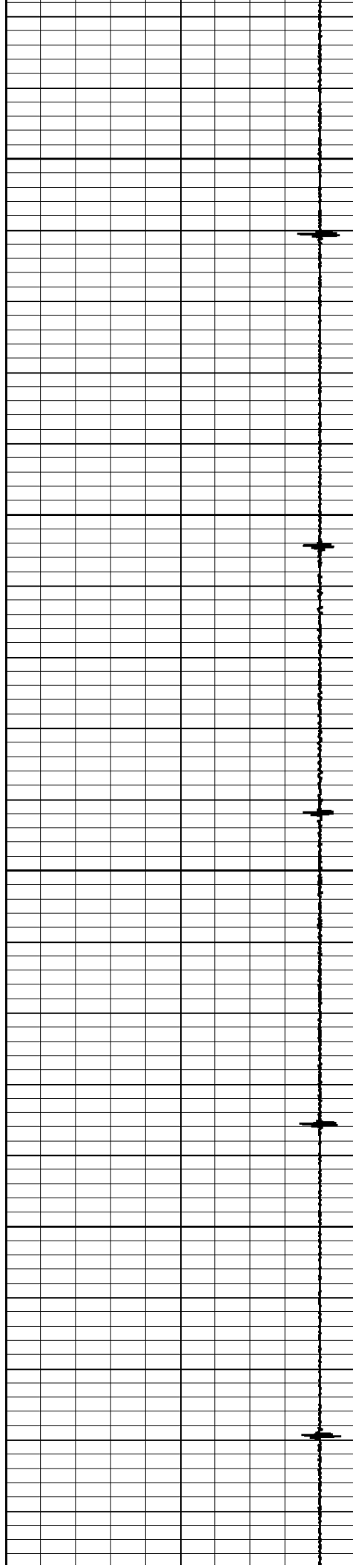






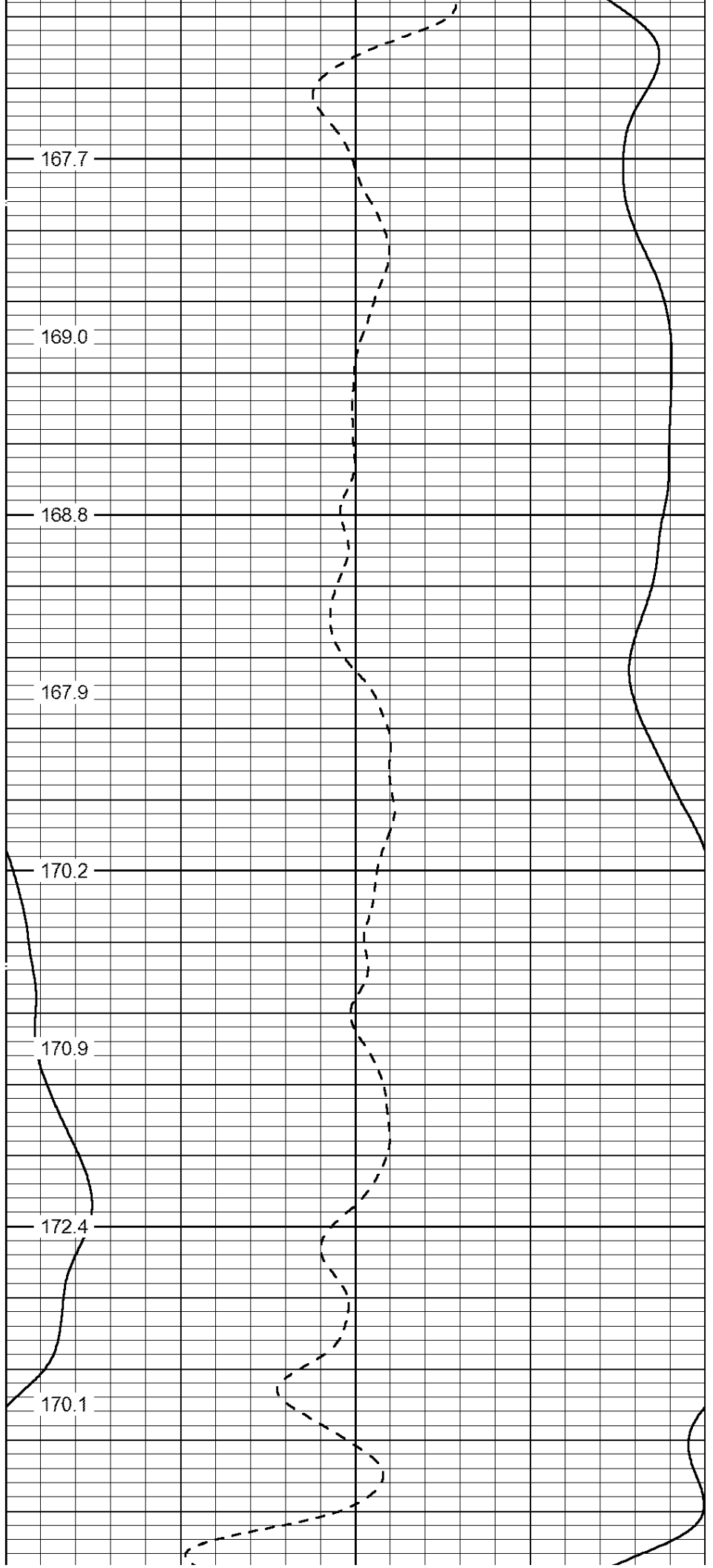


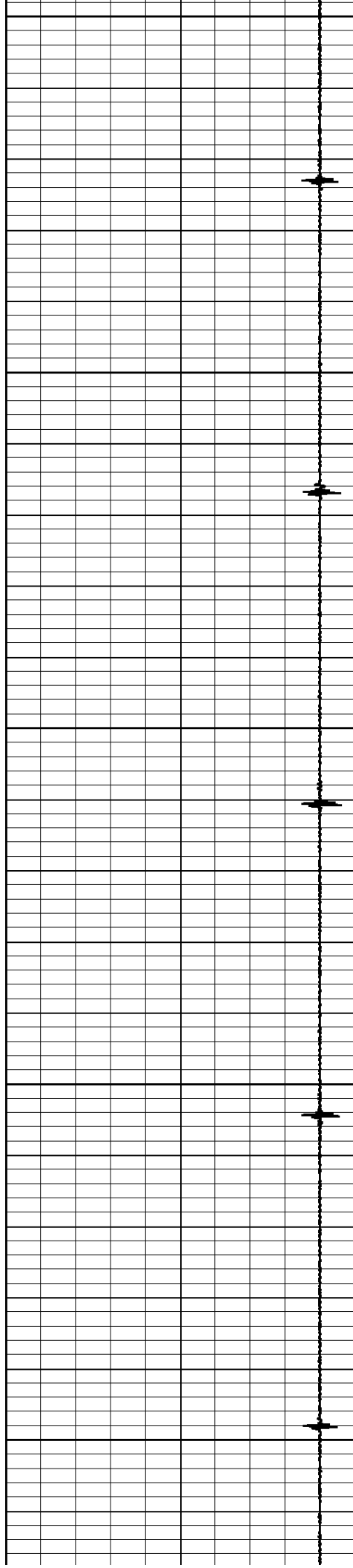




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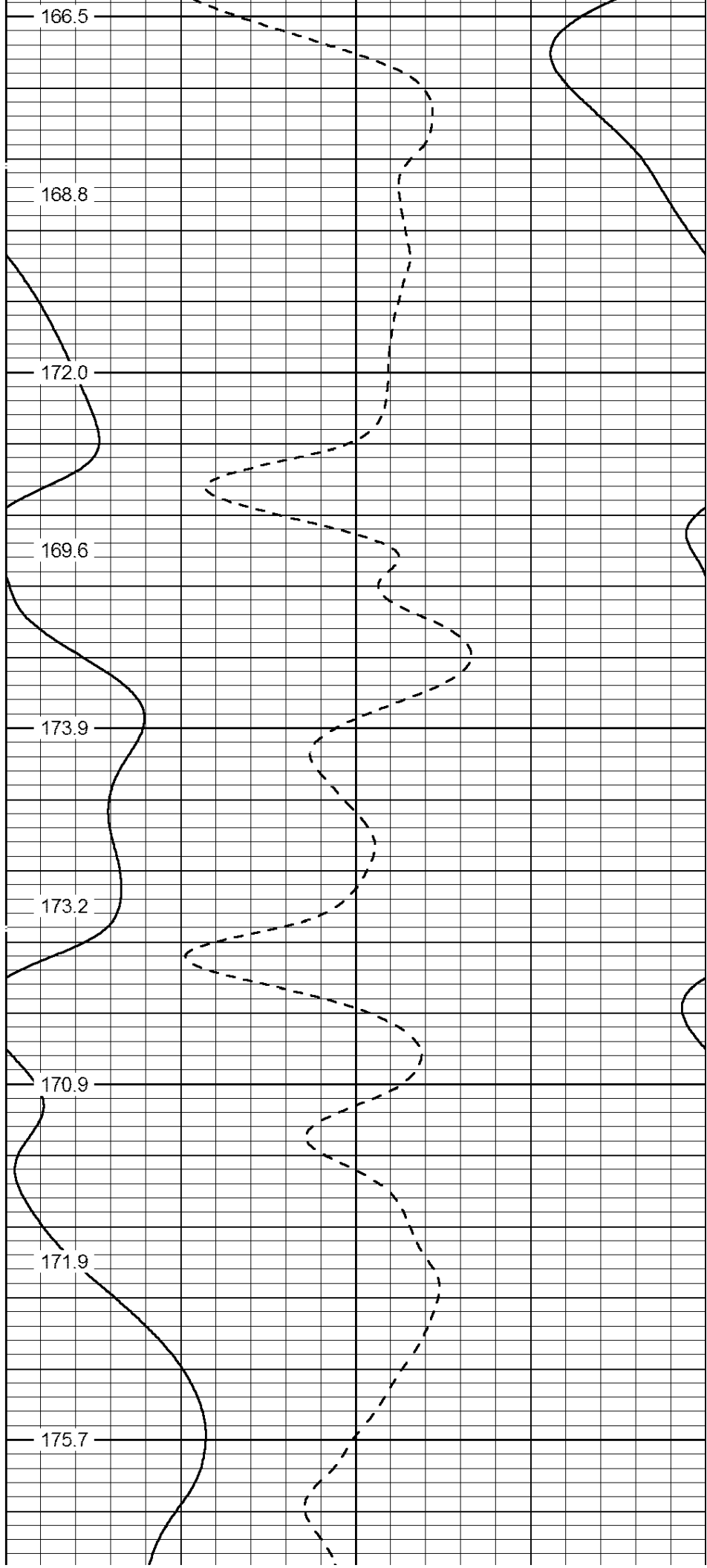
9300

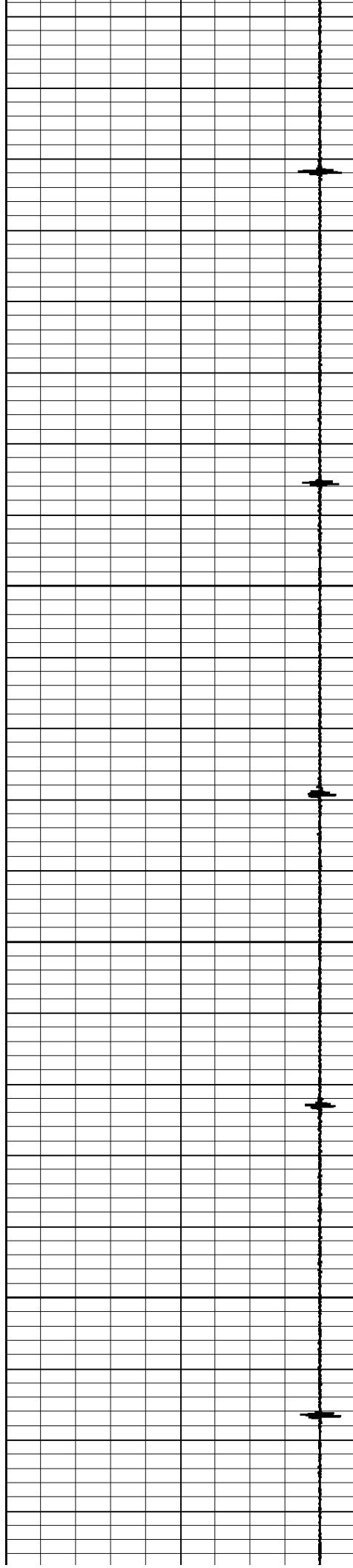




9400

9500





9600

9700

173.8

174.0

174.5

167.1

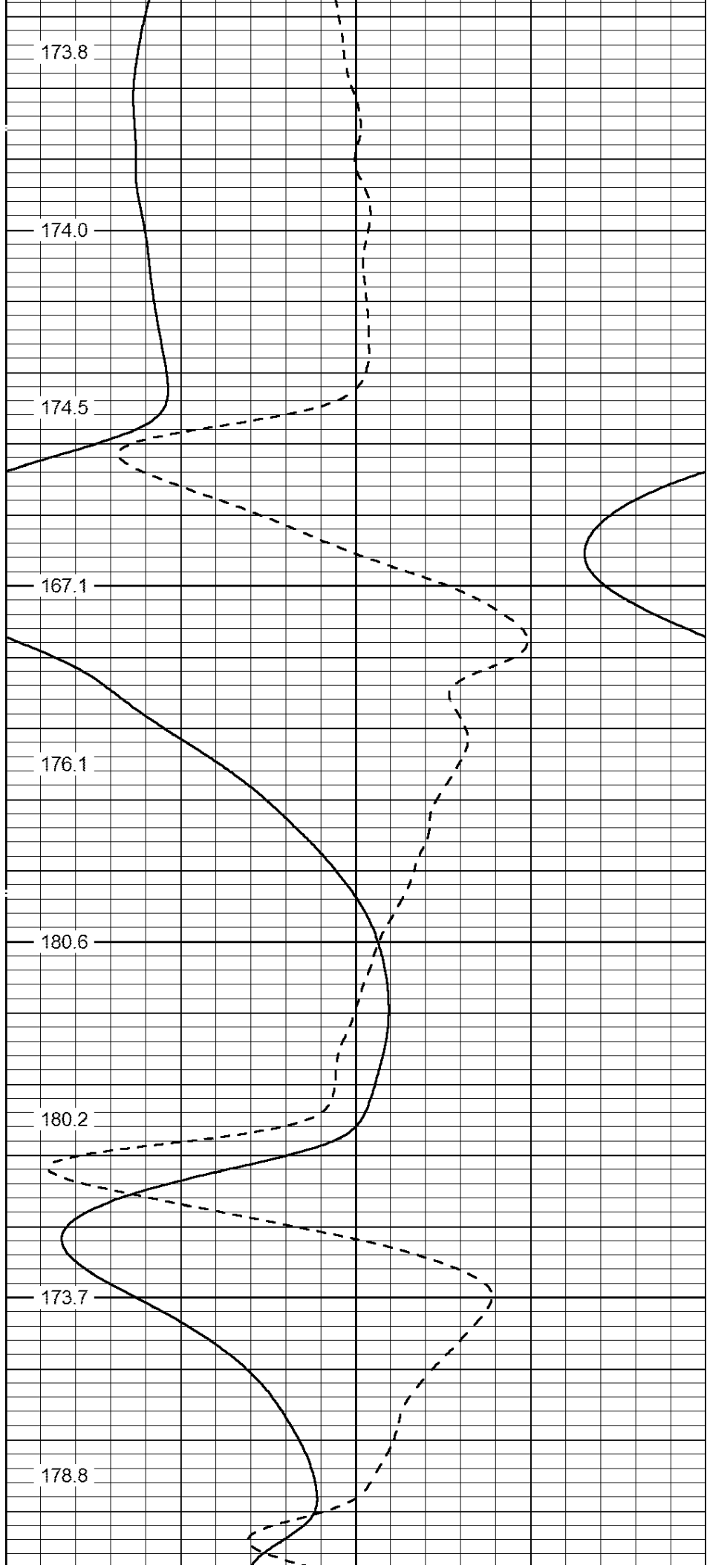
176.1

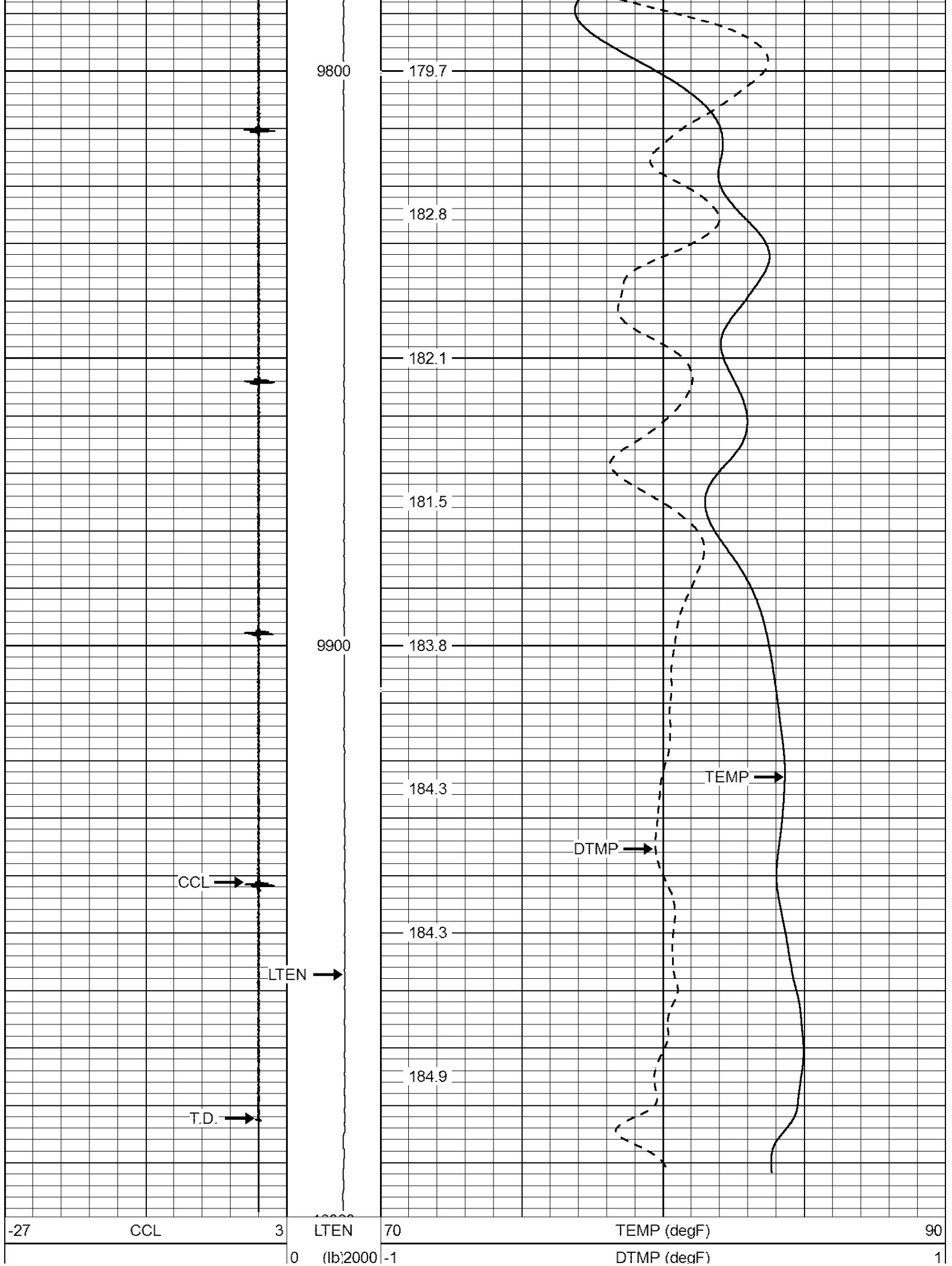
180.6

180.2

173.7

178.8





TEMP  
(degF)

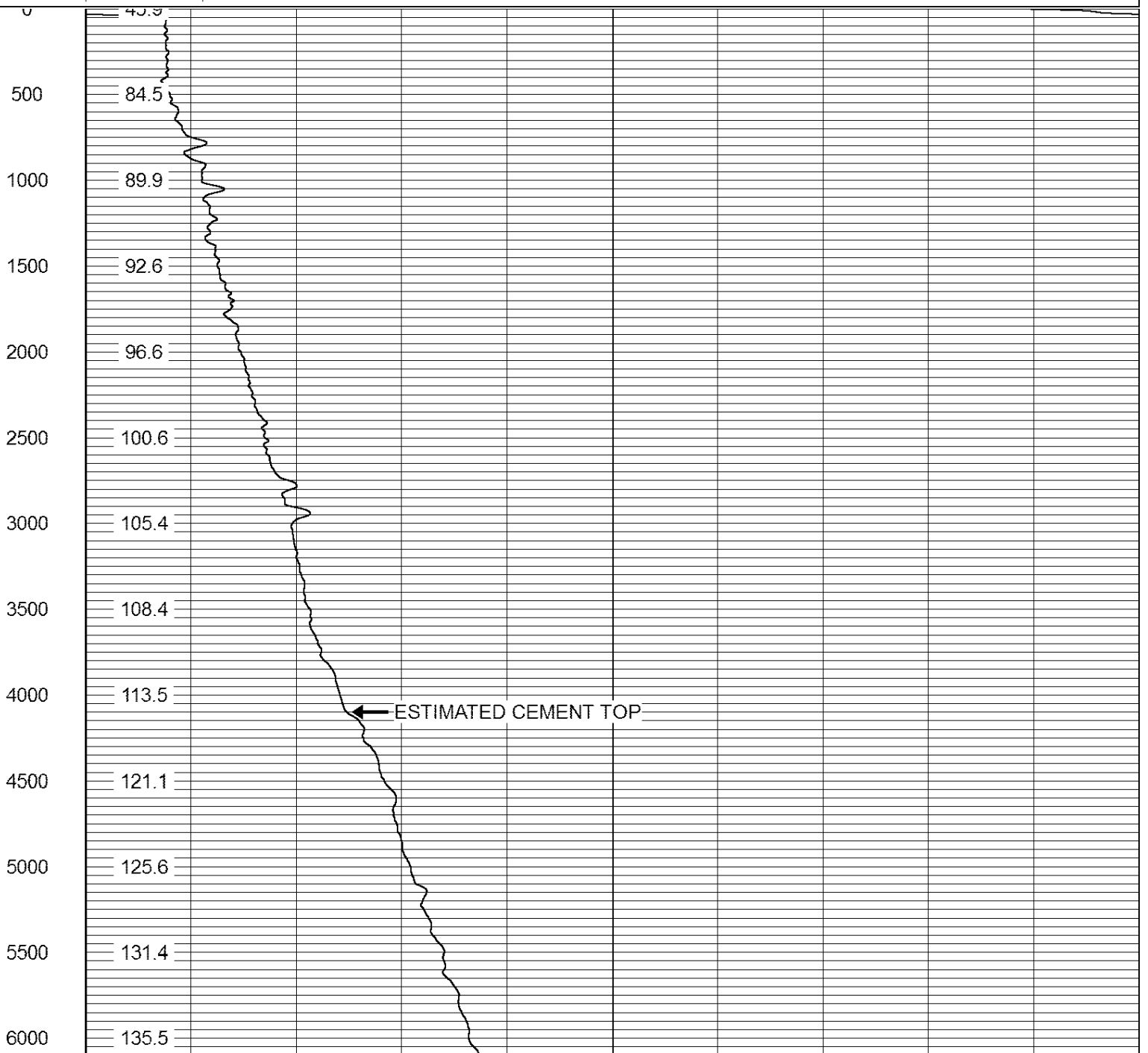


# MAIN PASS QUICK LOOK

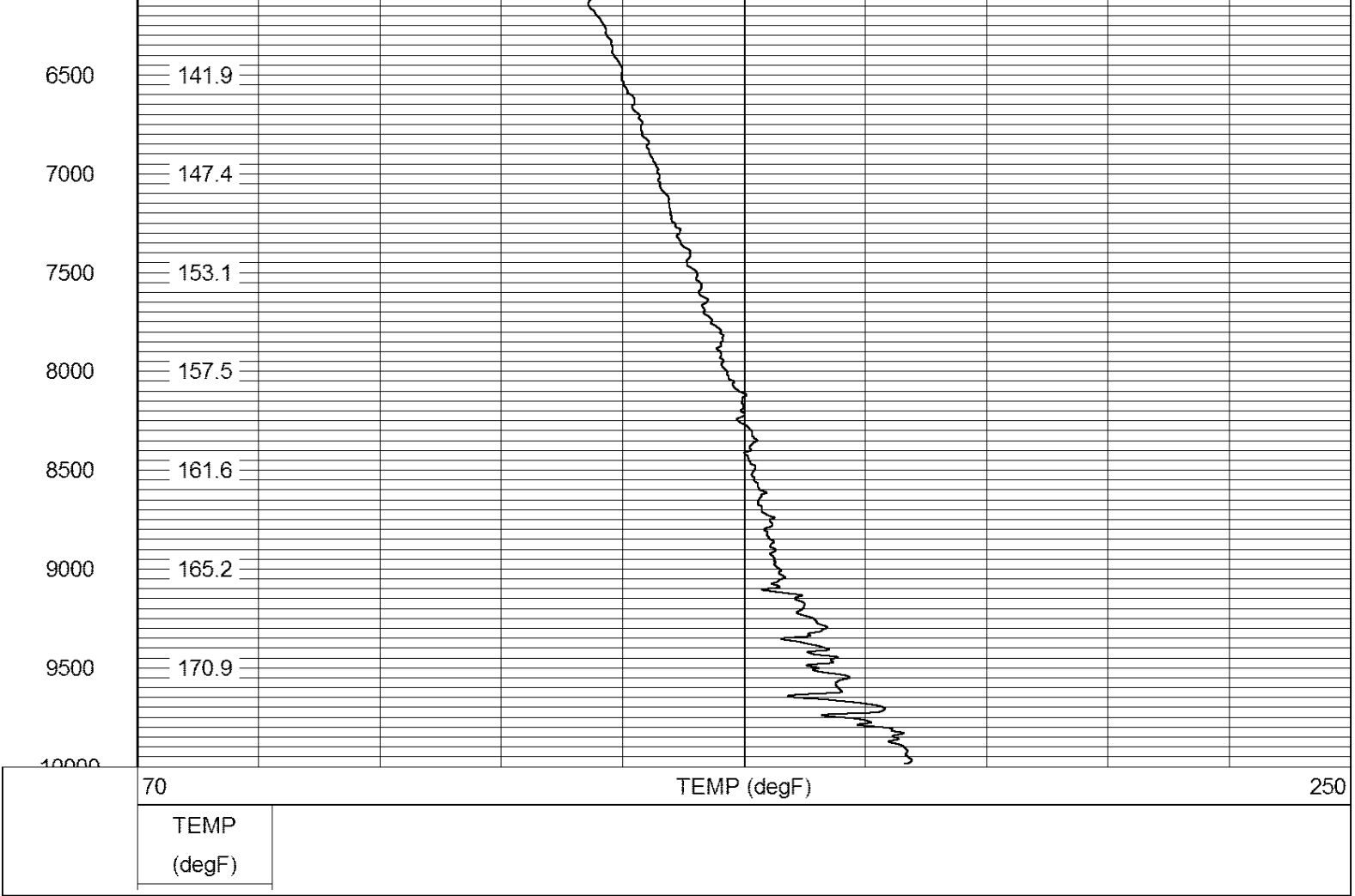
Database File: 112615\_wpxenergy\_ru\_21\_8.db  
Dataset Pathname: main/pass1.1  
Presentation Format: rmttemp\_q  
Dataset Creation: Thu Nov 26 11:07:42 2015 by Calc SCH 120430  
Charted by: Depth in Feet scaled 1:10000


70 TEMP (degF) 250

TEMP  
(degF)







Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
TEMP	2.44		TEMP-APPLIED (16-53)	2.67	1.38	11.00
CCL	0.81		CCL-APPLIED (Applied_2.75) positive or negative voltage logging ccl	2.02	2.75	34.00

Dataset:	112615_wpxenergy_ru_21_8.db: field/well/main/pass1
Total Length:	4.69 ft
Total Weight:	45.00 lb
O.D.	2.75 in



Company	WPX ENERGY
Well	RU 21 - 8
Field	RULISON
County	GARFIELD
State	COLORADO