

		LWD	N/A		
		MWD	V8.0C03		

Run number		1	2							
Bit size	in.	8.5	8.5							
Bit start depth	m	895.0	2508.0							
Bit end depth	m	2508.0	3095.0							
Top interval logged	m	900.0	2489.4							
Bottom interval logged	m	2489.4	3075.1							
Begin log: time		06:45	14:00							
Begin log: date		18-Jul-06	22-Jul-06							
End log: time		11:00	06:30							
End log: date		21-Jul-06	24-Jul-06							
Mud data										
Depth	m	2508.0	3095.0							
Type		KCl/PHPA/Gly	KCl/PHPA/Gly							
Mud weight	ppg	9.5	9.7							
Solids	%	4.8	6.7							
Chlorides	mg/l	43000	44000							
Rm		N/A	N/A							
Rmf		N/A	N/A							
Rmc		N/A	N/A							

Potassium	%	4.2	4.2								
Environmental data											
GR											
Mud weight	ppg	9.5	9.7								
Bit size	in.	8.5	8.5								
Resistivity											
Neutron porosity											
Hole Size		N/A	N/A								
Mud weight		N/A	N/A								
Temperature		N/A	N/A								
Mud salinity		N/A	N/A								
Formation salinity		N/A	N/A								
Recording rate 1	SEC	4.2	4.2								
Recording rate 2	SEC	N/A	N/A								
Filtering GR		3 pt.	3 pt.								
Filtering density		N/A	N/A								
Filtering Neutron		N/A	N/A								
Company representative		G. Campbell	C. Stead	B. Davis							
Schlumberger D&M Personnel		C. Skiba	S. Xu	C. Cocks	J. Rydell						

<p style="text-align: center;">DISCLAIMER</p> <p>THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.</p>		
OTHER SERVICES FOR RUN1 Directional Drilling Directional Surveys	OTHER SERVICES FOR RUN2 Directional Drilling Directional Surveys	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 1 Depth is referenced to Driller's Depth. All Data presented is from Real Time Transmission. Environmental Corrections:-- Gamma Ray corrected for Mud Weight, Tool Size and Bit Size. Gamma Ray is not corrected for Potassium. 8-1/2 in. was drilled from 895.0 m to 2508m MD. Data logged from Tie In Point @ 900.0m MD. GR data lost between 1184.5m and 1187.5m due to surface computer crashing. POOH due to Standpipe pressure problems. Unable to pump at drilling flow rate.	REMARKS: RUN NUMBER 2 Depth is referenced to Driller's Depth. All Data presented is from Real Time Transmission. Environmental Corrections:-- Gamma Ray corrected for Mud Weight, Tool Size and Bit Size. Gamma Ray is not corrected for Potassium. 8-1/2 in. was drilled from 2508.0 m to 3095.0m MD. POOH at TD.	REMARKS: RUN NUMBER

EQUIPMENT DESCRIPTION		
RUN1	RUN2	RUN
DOWNHOLE EQUIPMENT	DOWNHOLE EQUIPMENT	

DOWNHOLE EQUIPMENT

PowerPulse*
MDC: Z401
MEC: 1533
MDI: 1565
MGR: 565AA
DHS: V8.0C03

D&I
GR



23.67

NM Pony
SN: ASS15700



15.26

NM Roller Reamer
SN: GU2299



13.71

NM Pony
SN: 9612058



11.61

7 in. PowerPak* Motor
A700GT 7:8
SN: N7413
1.5 deg. Bent Housing



9.17

Smith PDC Bit
OD 8-1/2 in.
S616PX SN: JW6578



0.00

0.20

Maximum string diameter 8.50 in.
All lengths in Metres

DOWNHOLE EQUIPMENT

PowerPulse*
MDC: Z401
MEC: 1533
MDI: 1565
MGR: 565AA
DHS: V8.0C03

D&I
GR



24.76

PMDC
SN: ASS15700



16.35

NM Roller Reamer
SN: GU2299



14.80

NM Pony
SN: 9612058



12.70

7 in. PowerPak* Motor
A700GT 7:8
SN: N7310
1.15 deg. Bent Housing



10.26

Smith PDC Bit
OD 8-1/2 in.
S616PX SN: JW6578



0.00

0.20

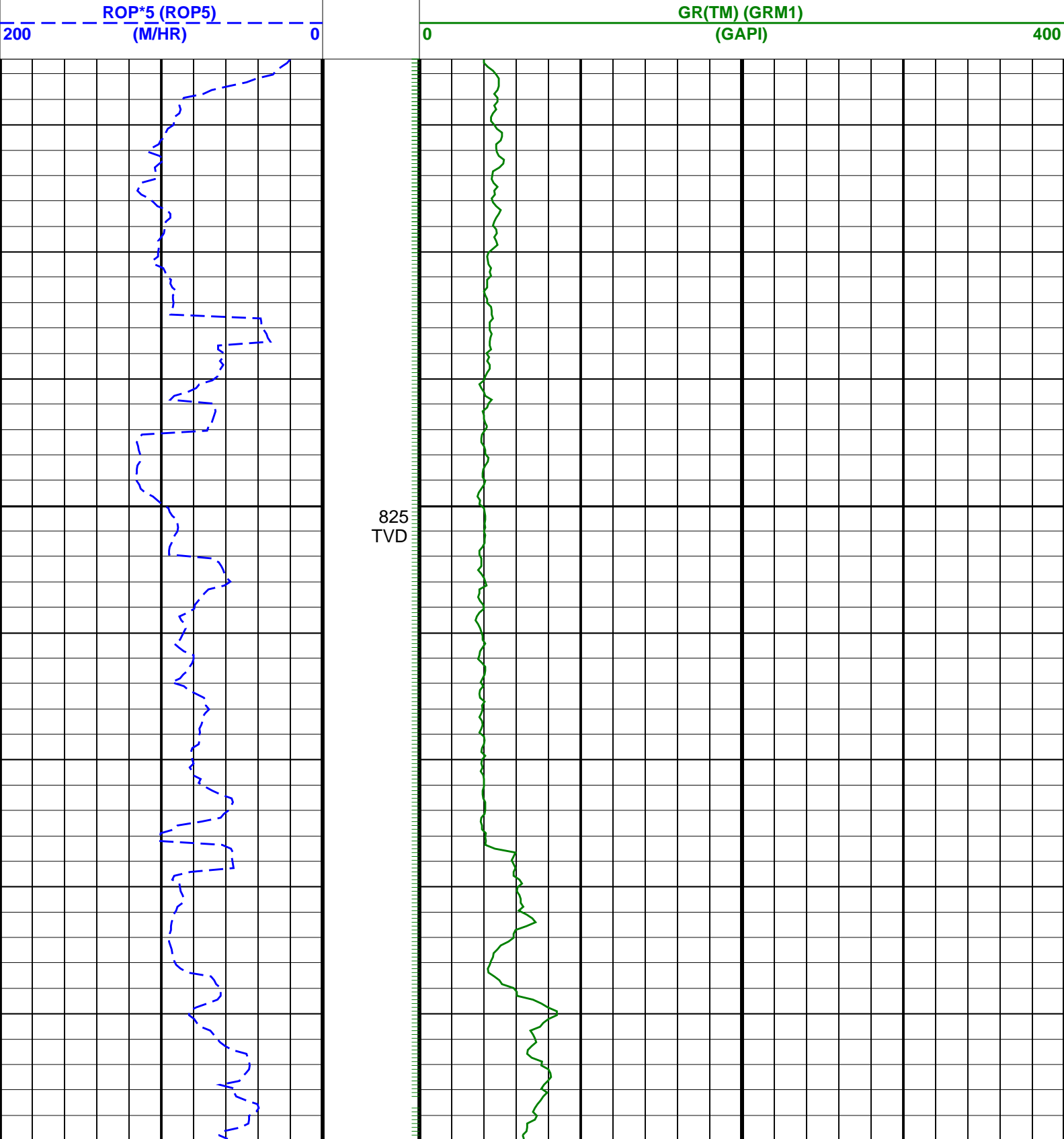
Maximum string diameter 8.50 in.
All lengths in Metres

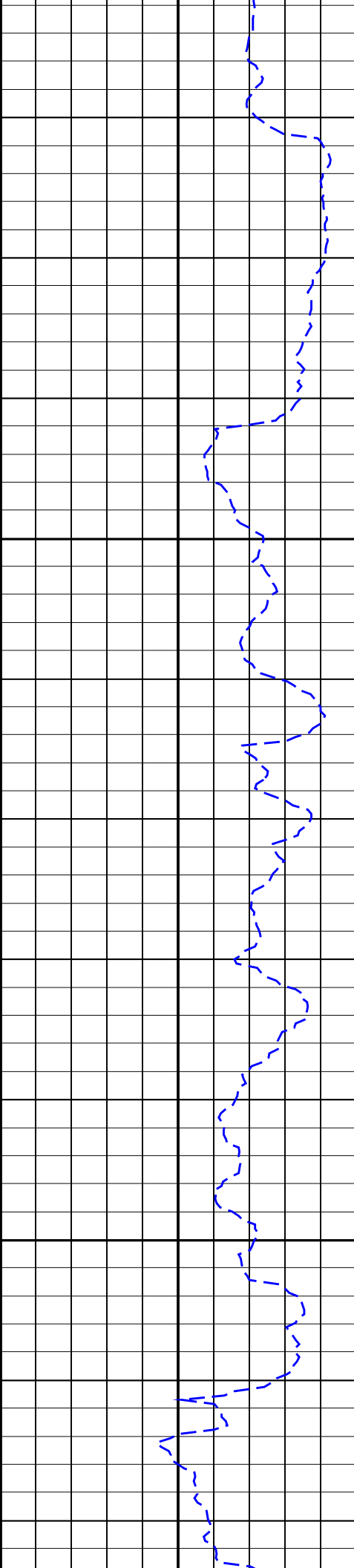
WKF W27A RT 1:200 TVD

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PIP SUMMARY

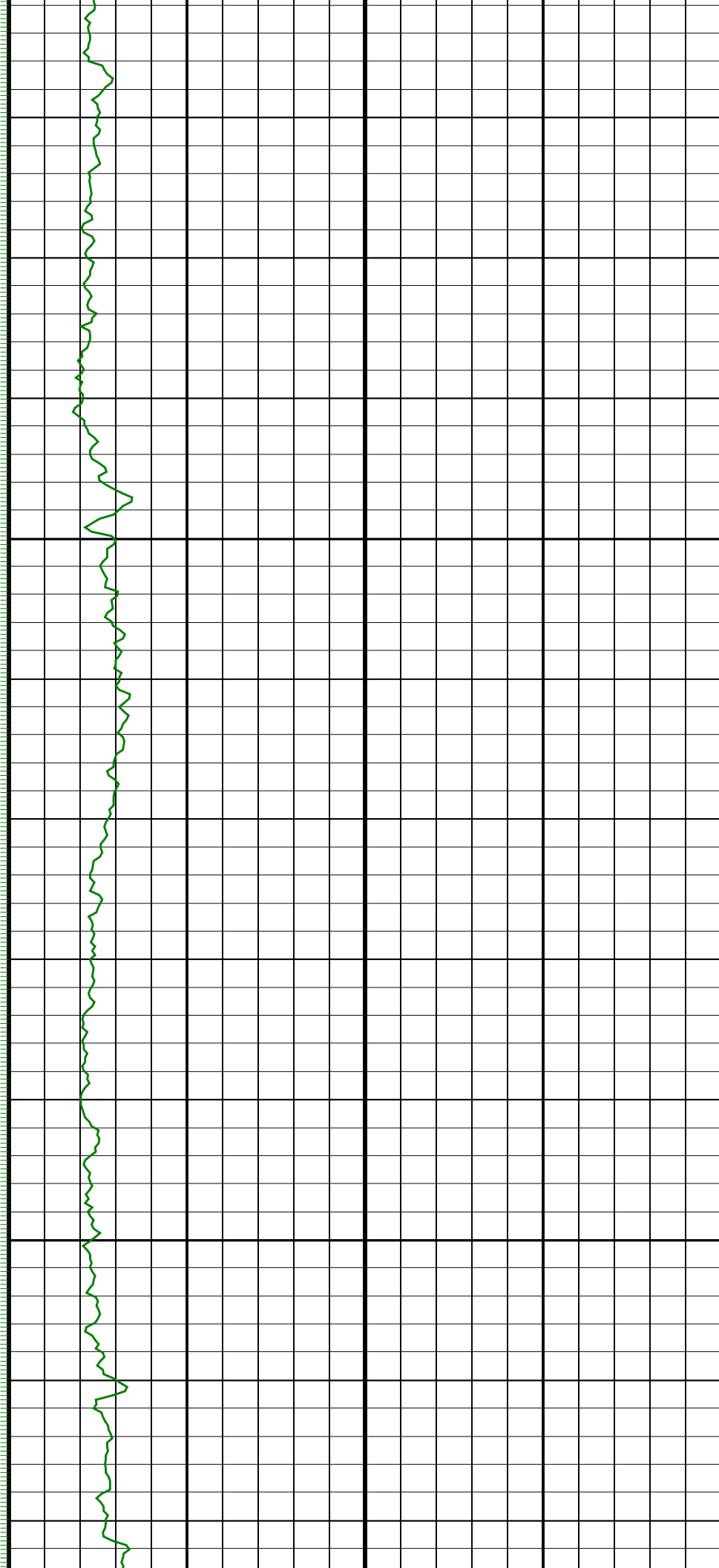
GR(TM) PIP

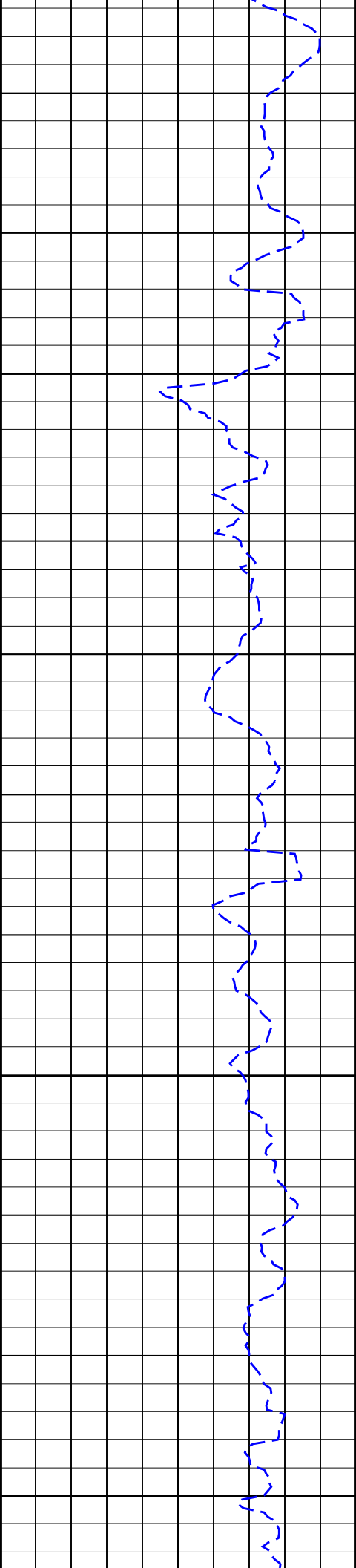




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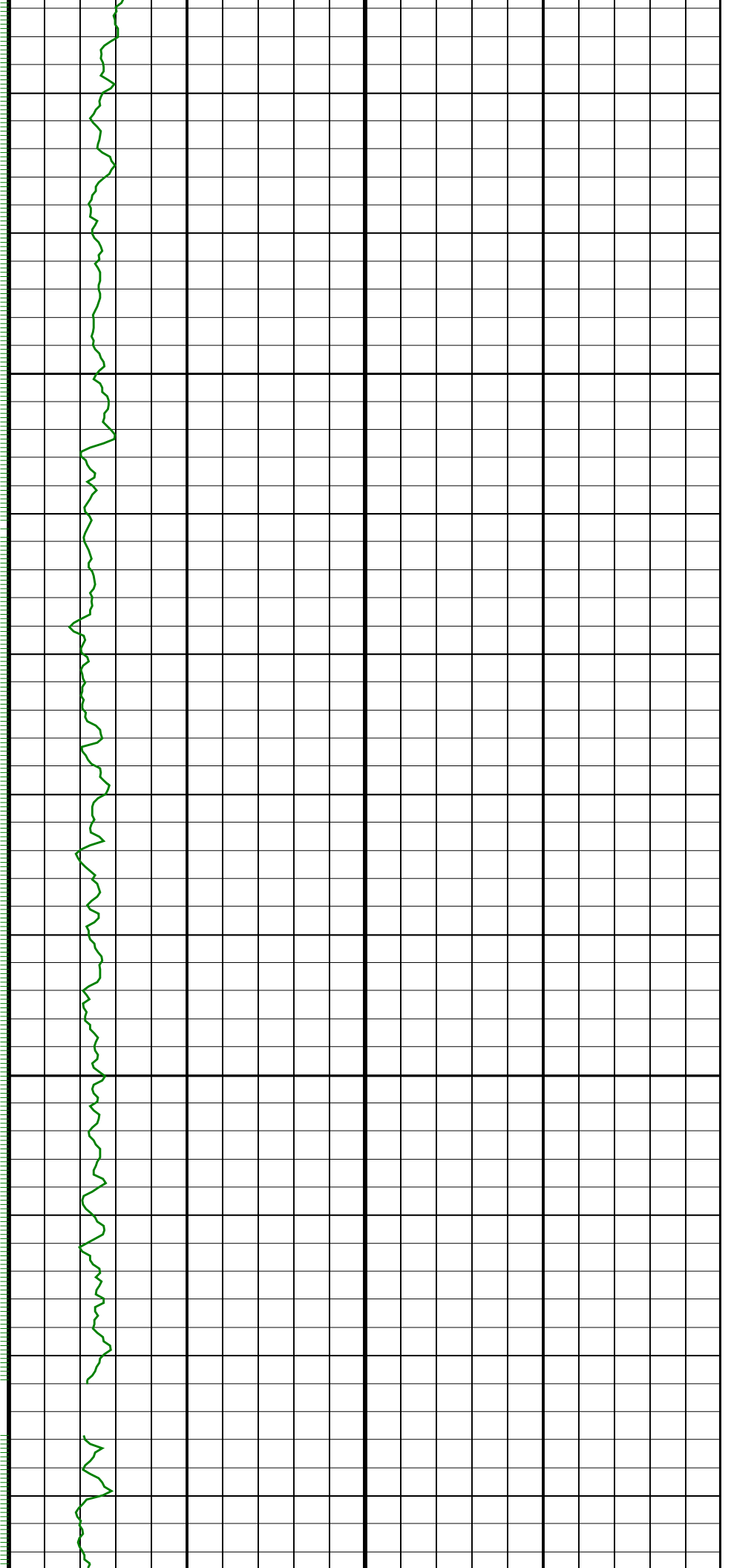
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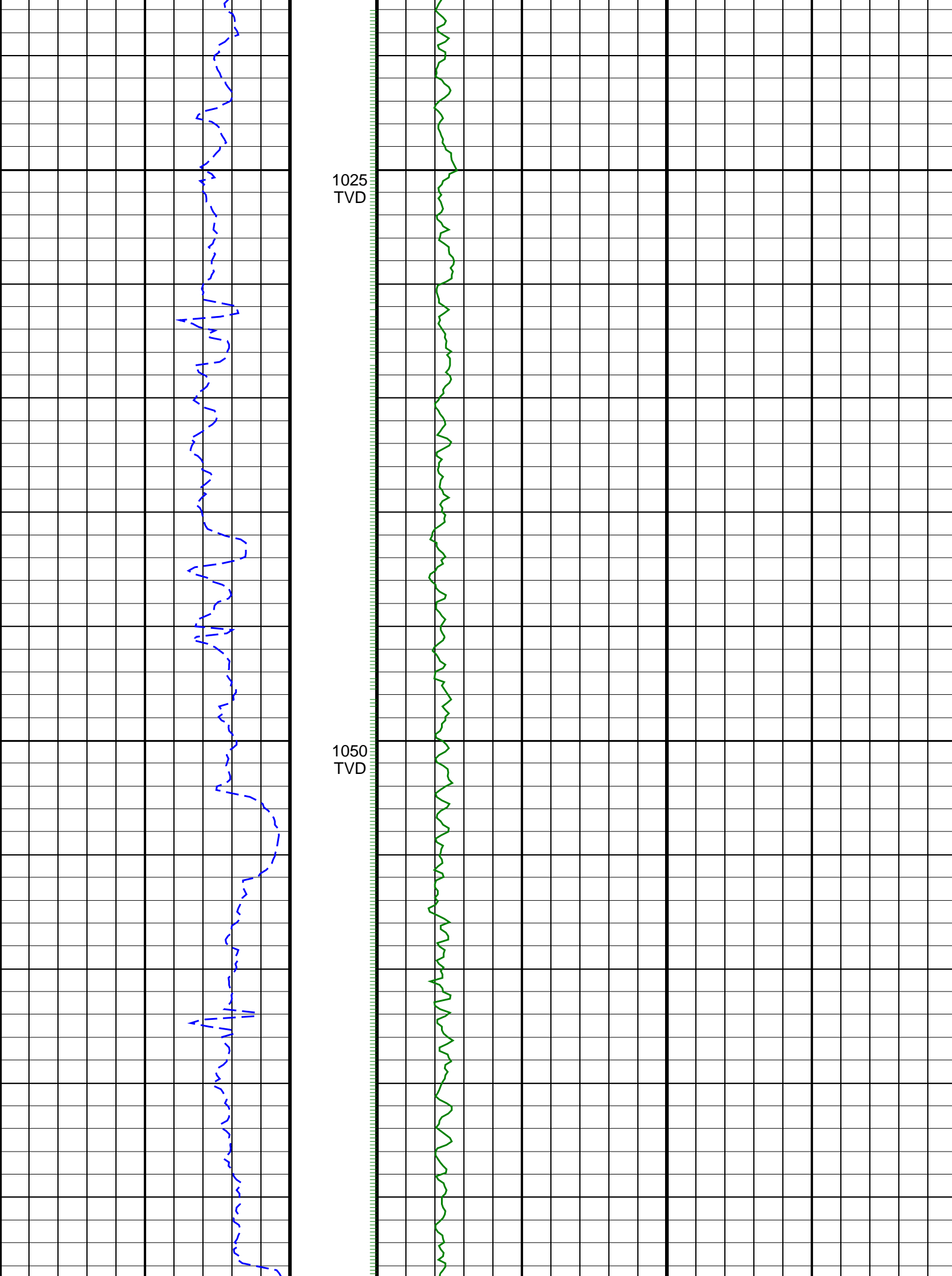


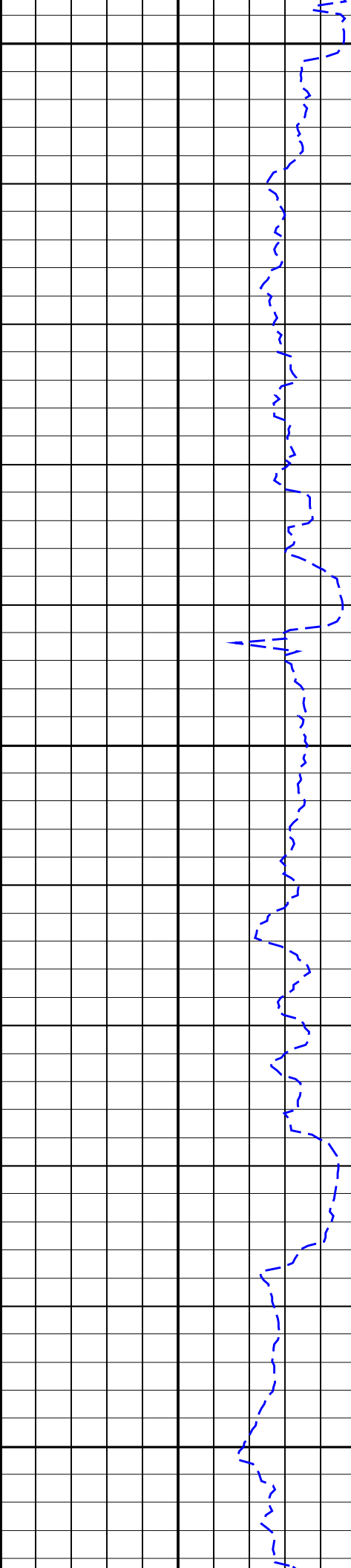


975
TVD

1000
TVD



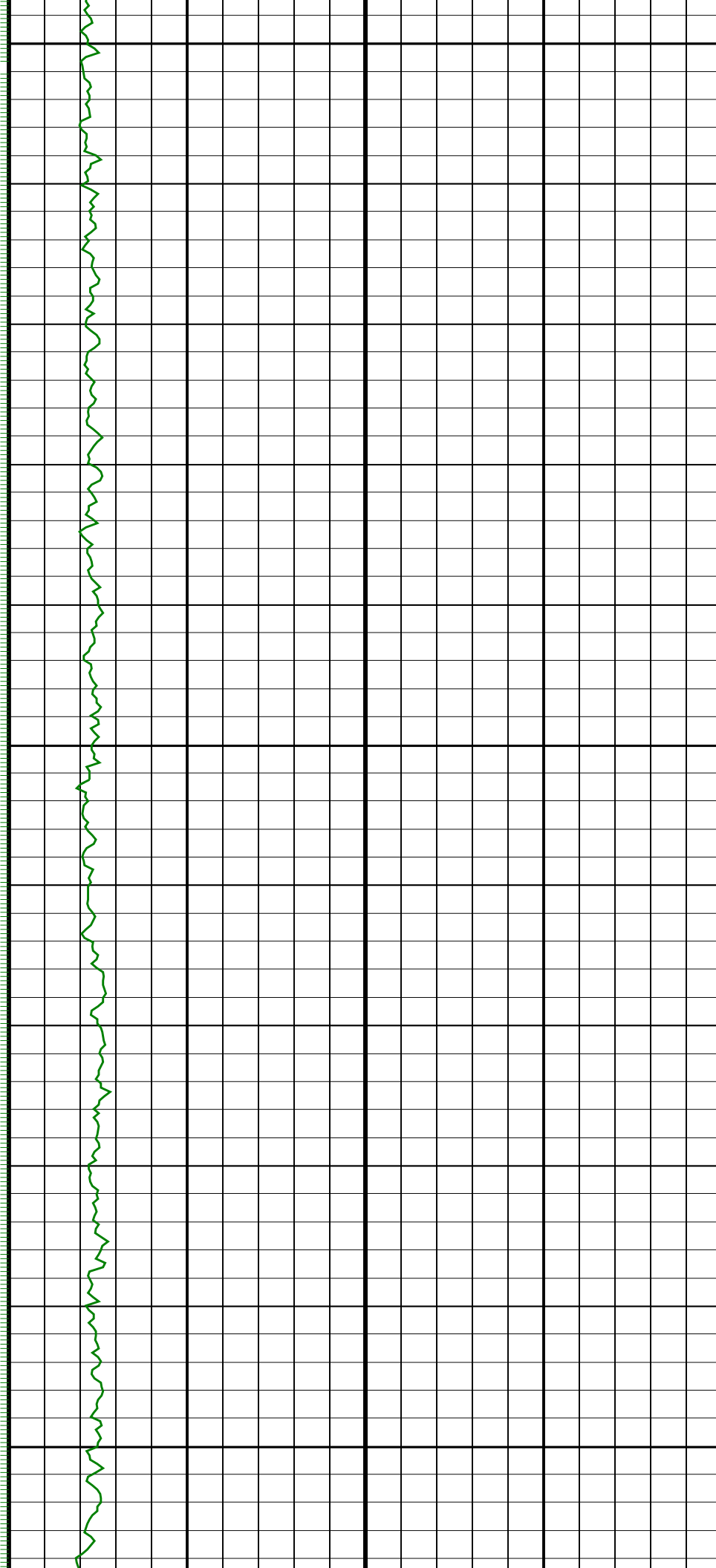


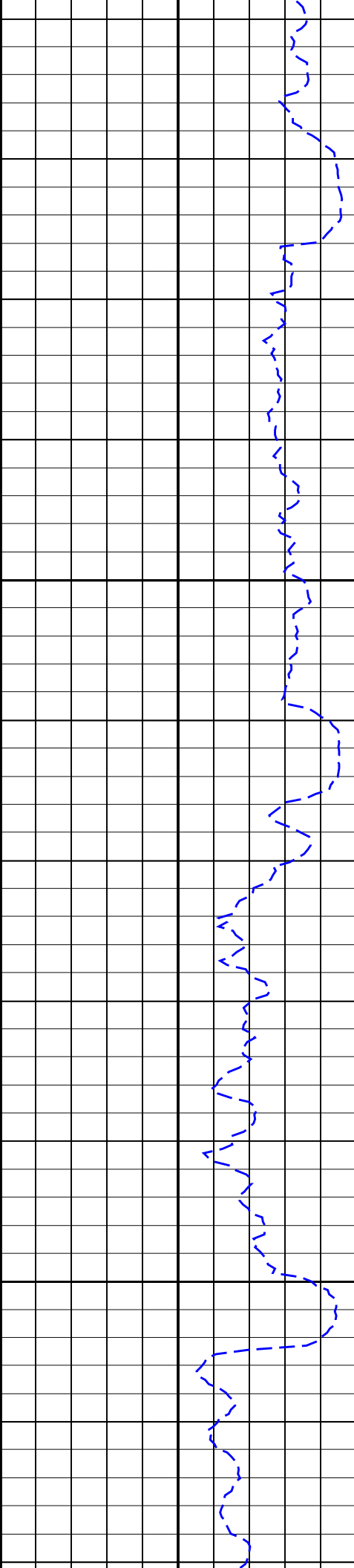


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TVD

1100
TVD

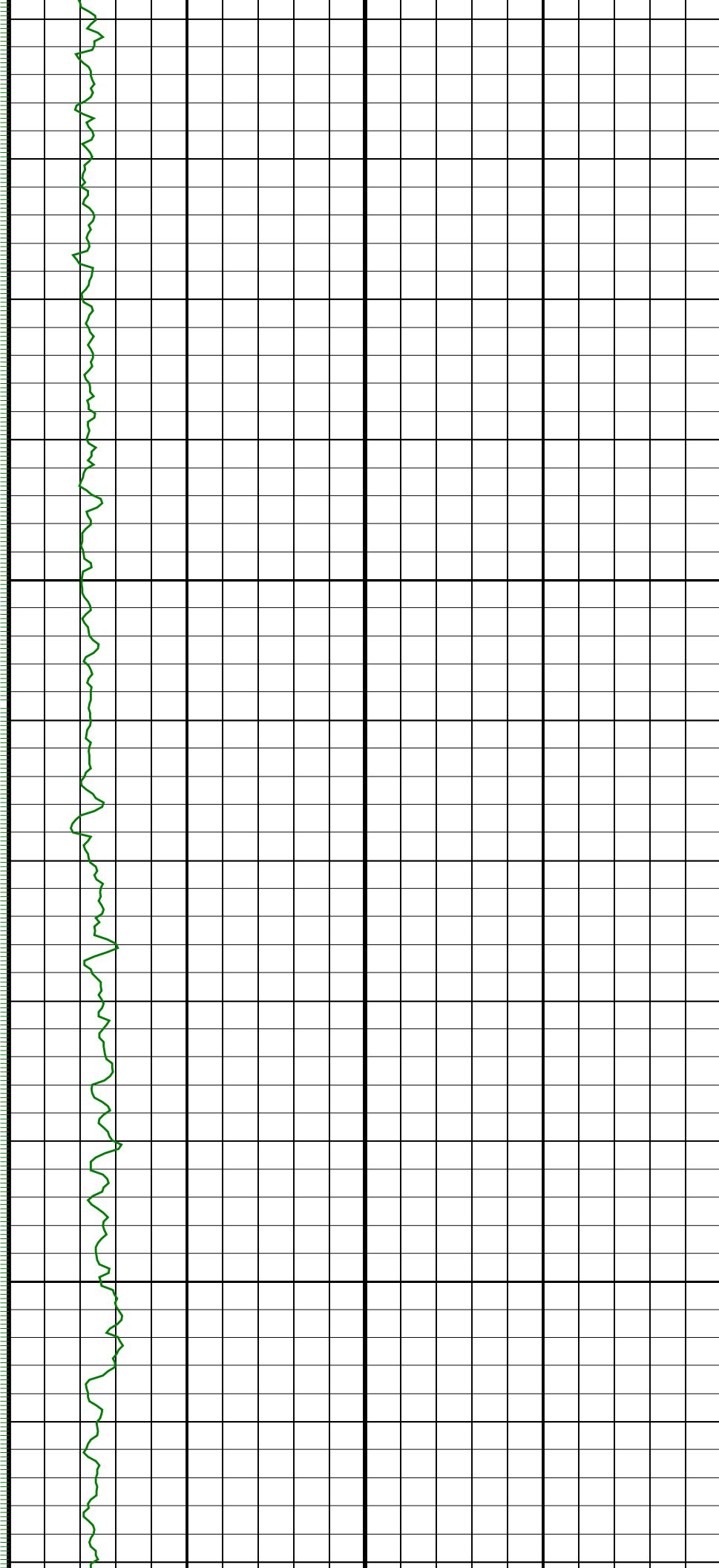
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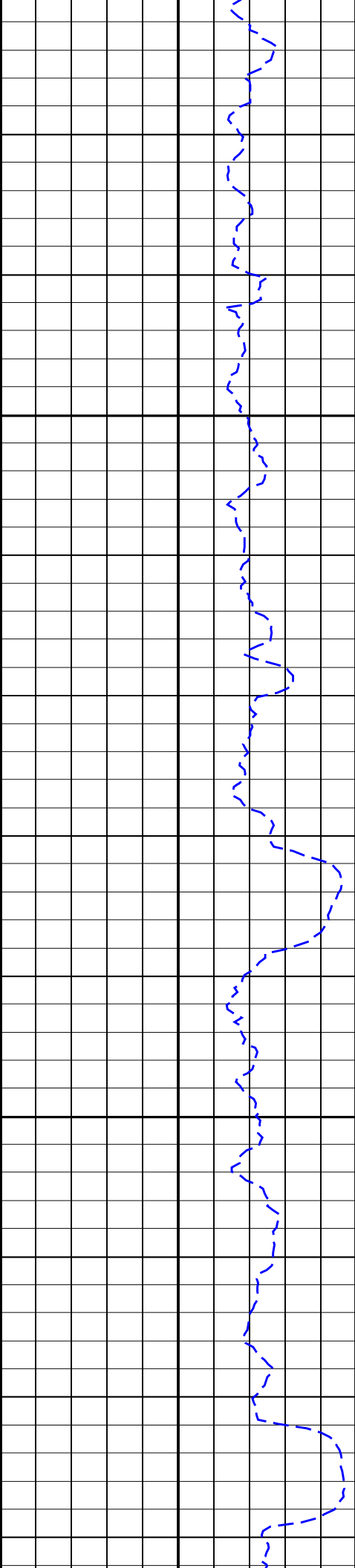




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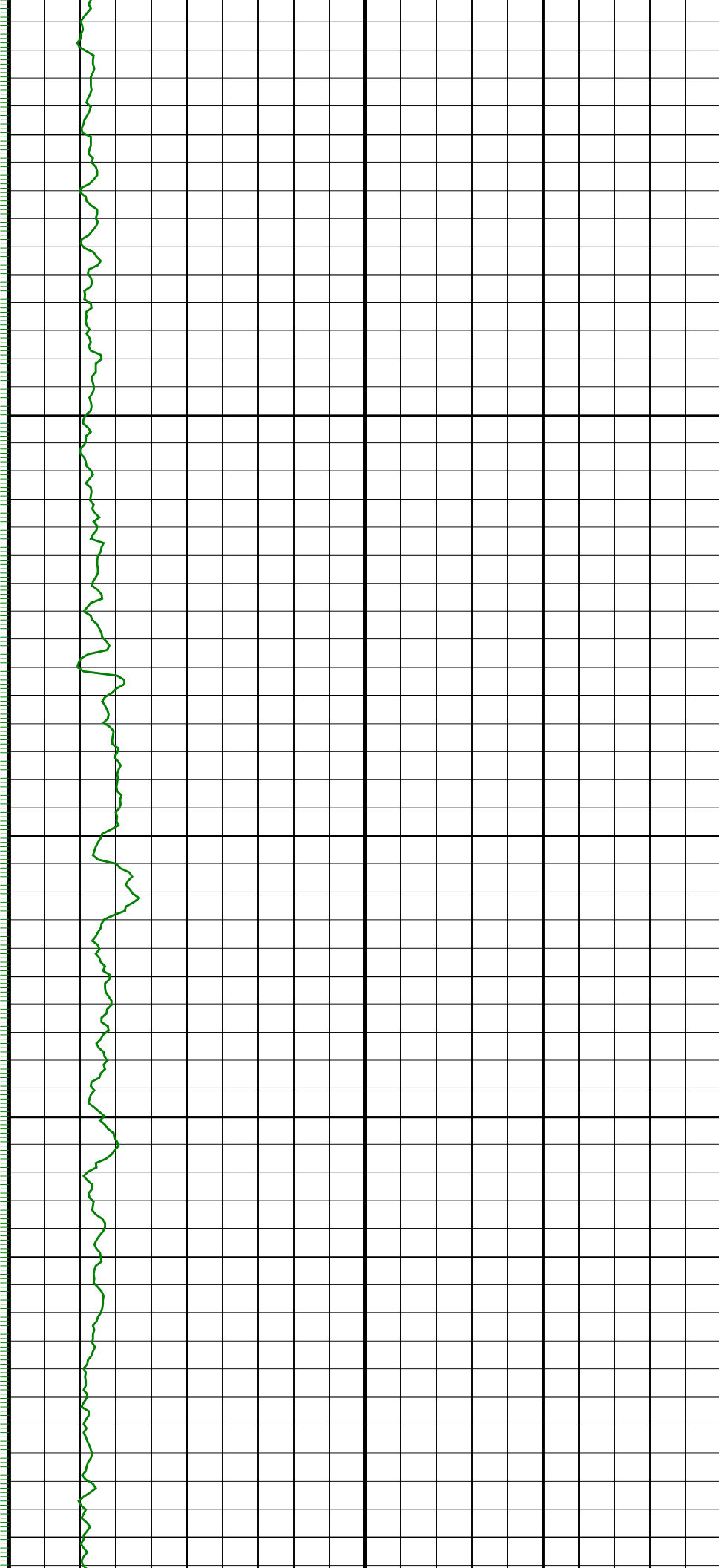
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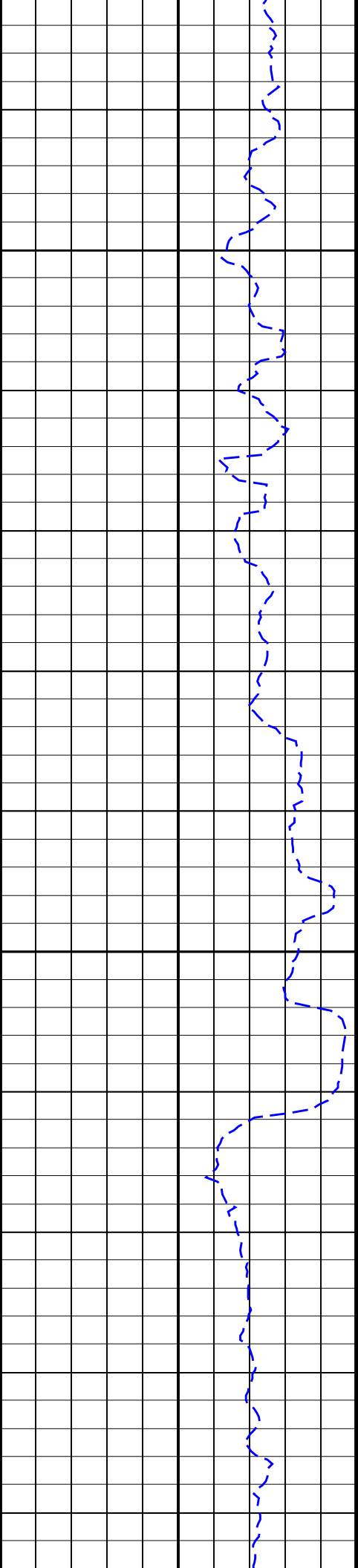




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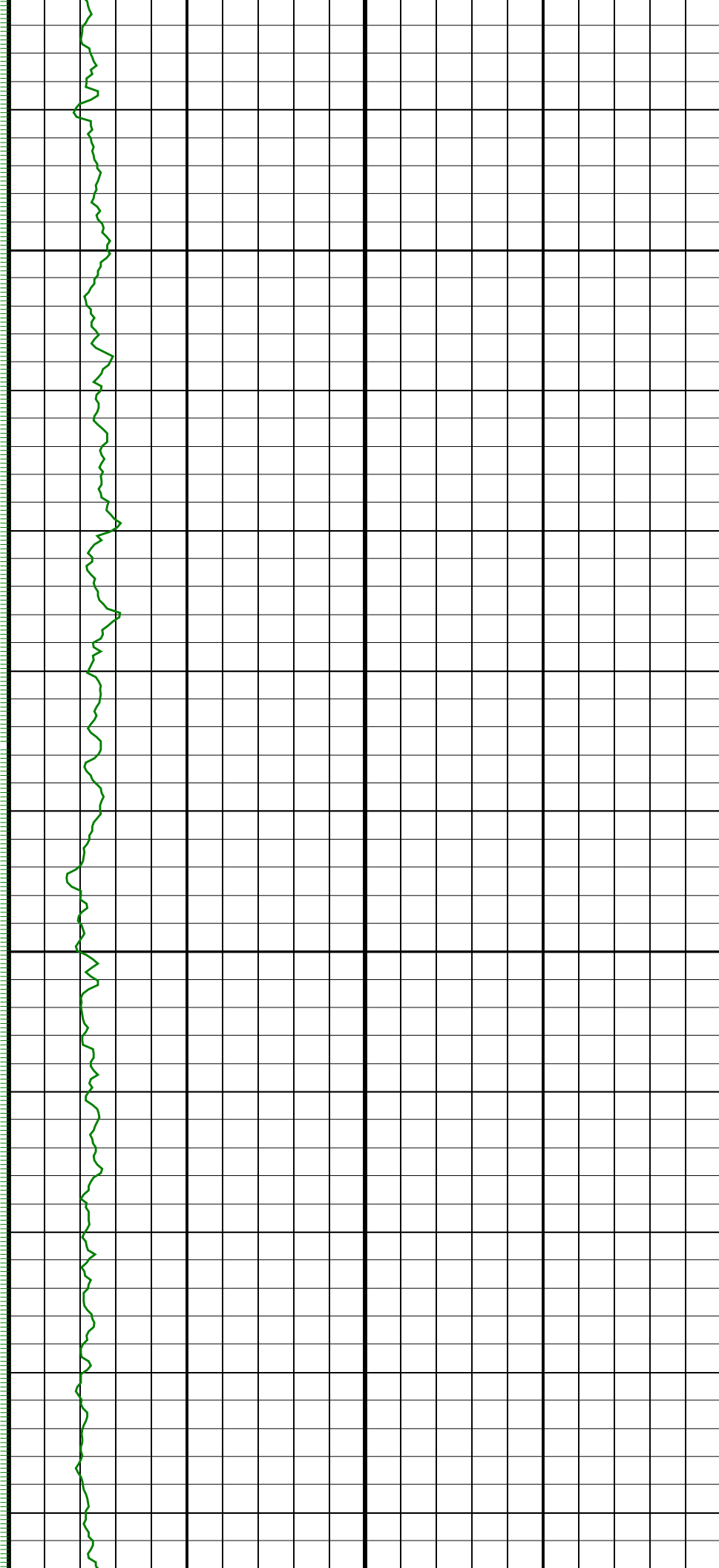
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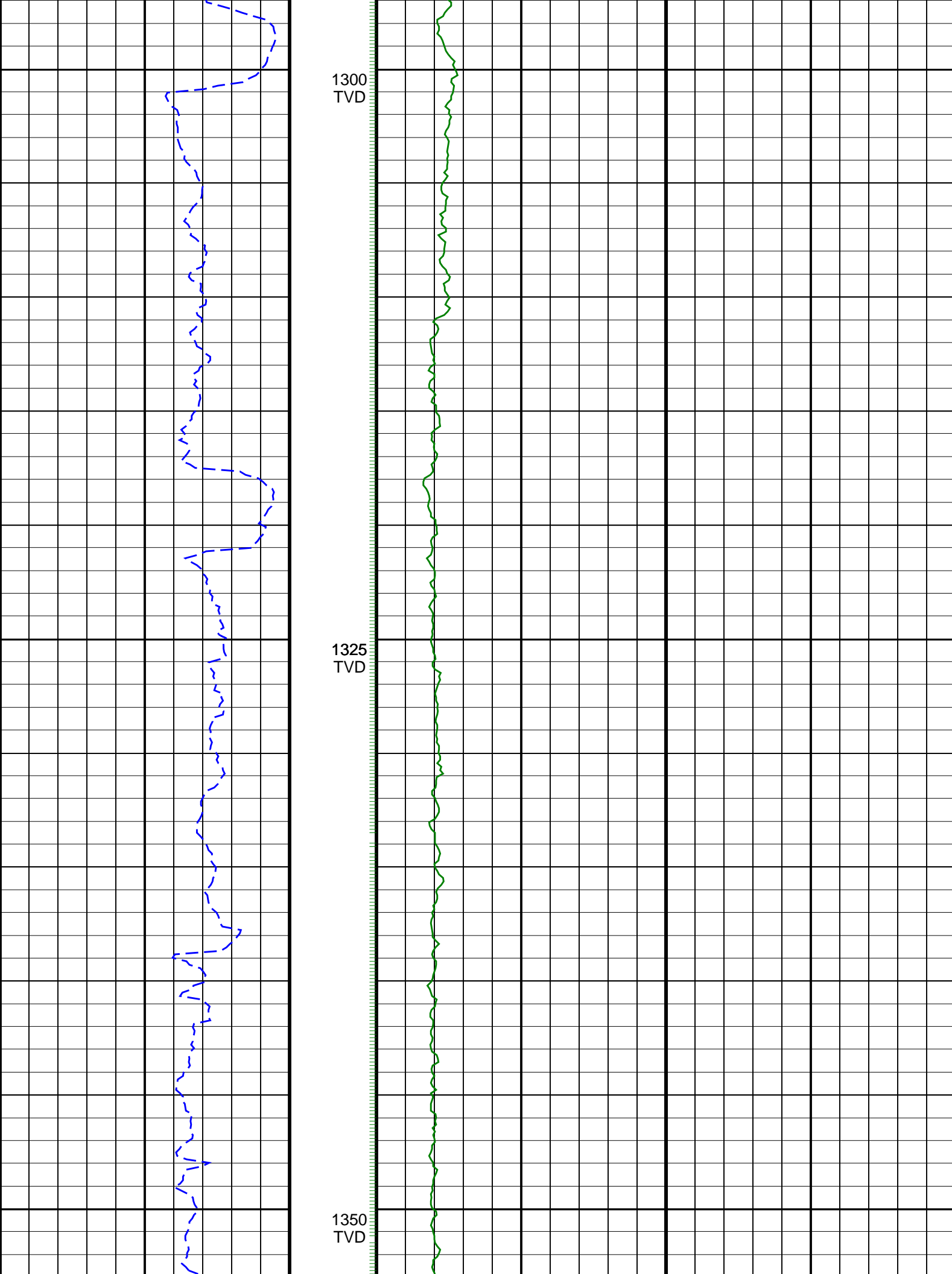


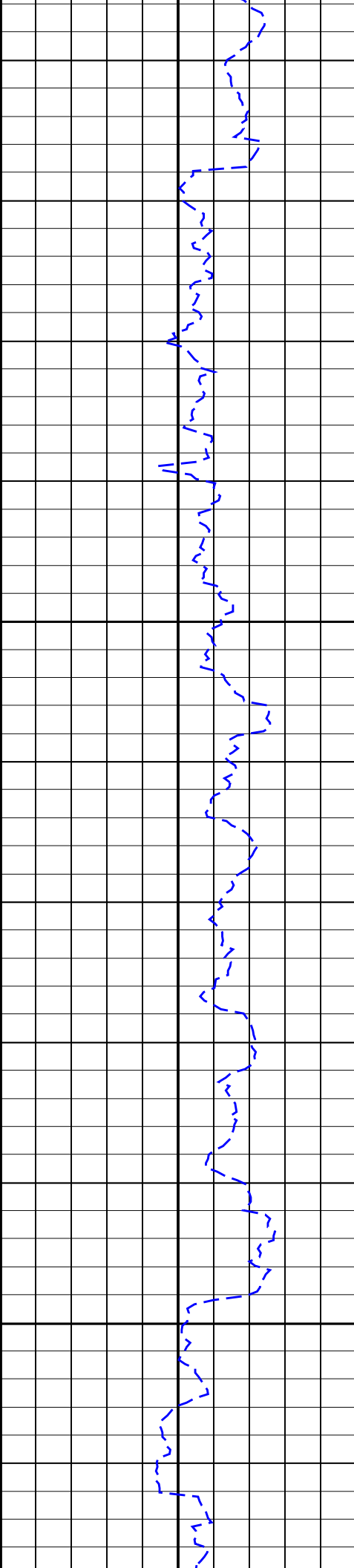


1250
TVD

1275
TVD

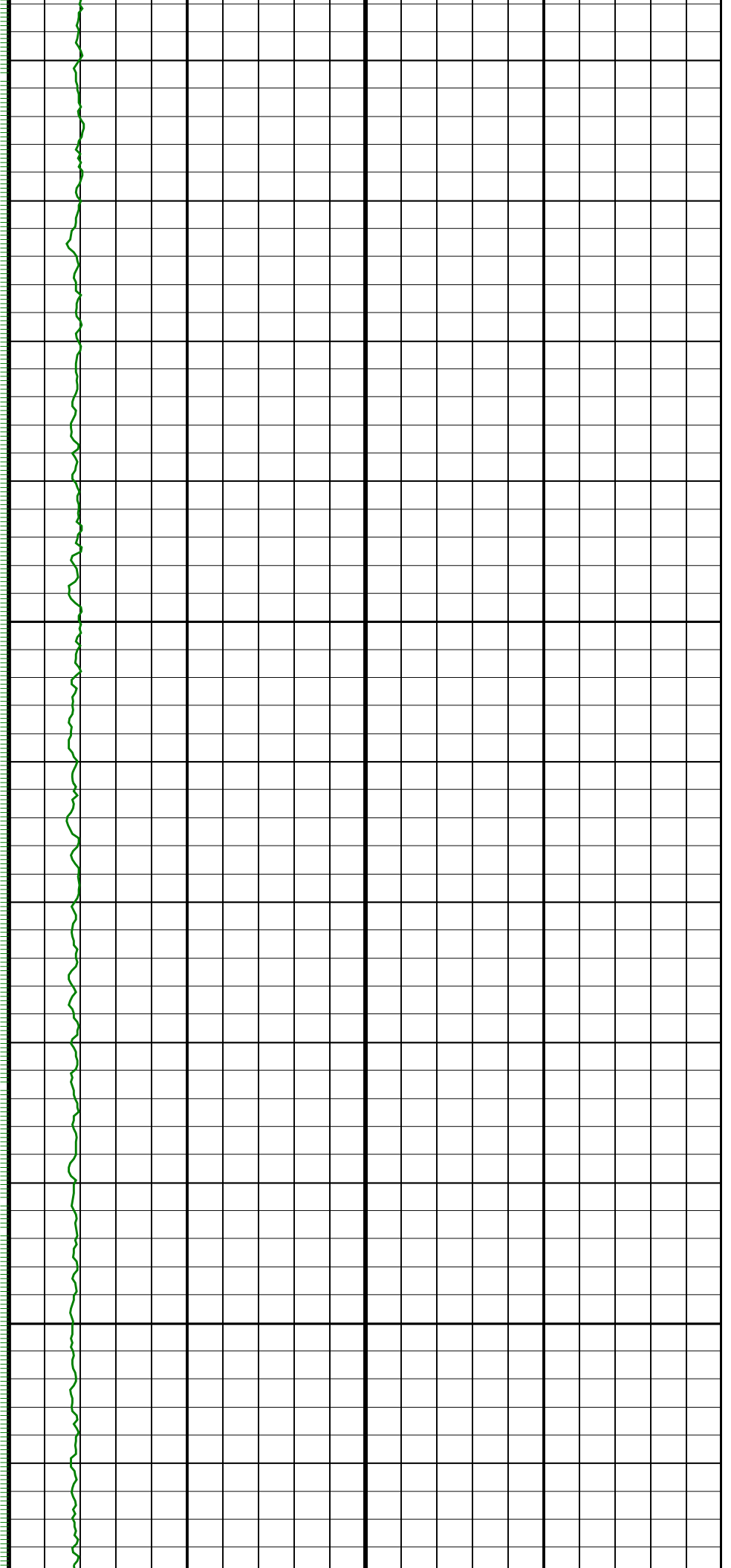


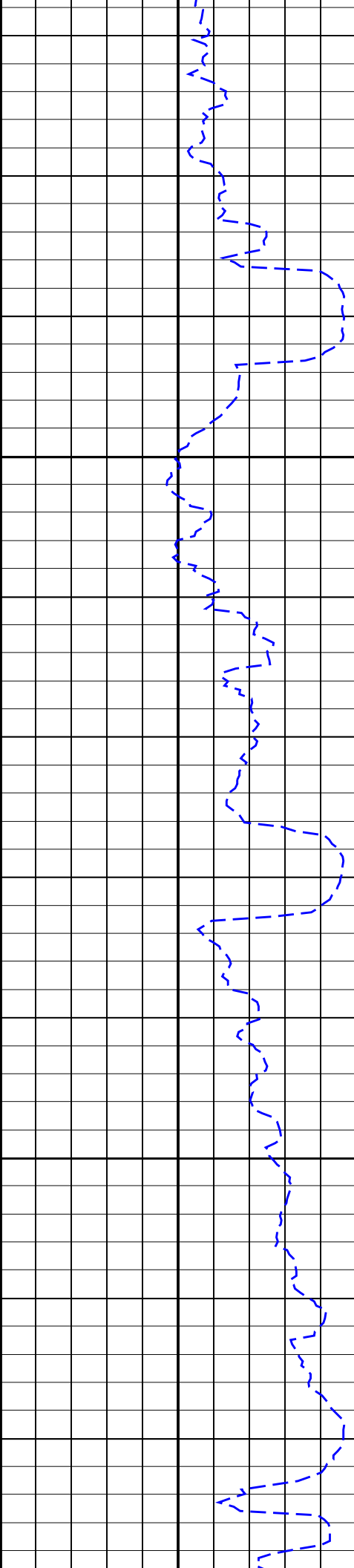




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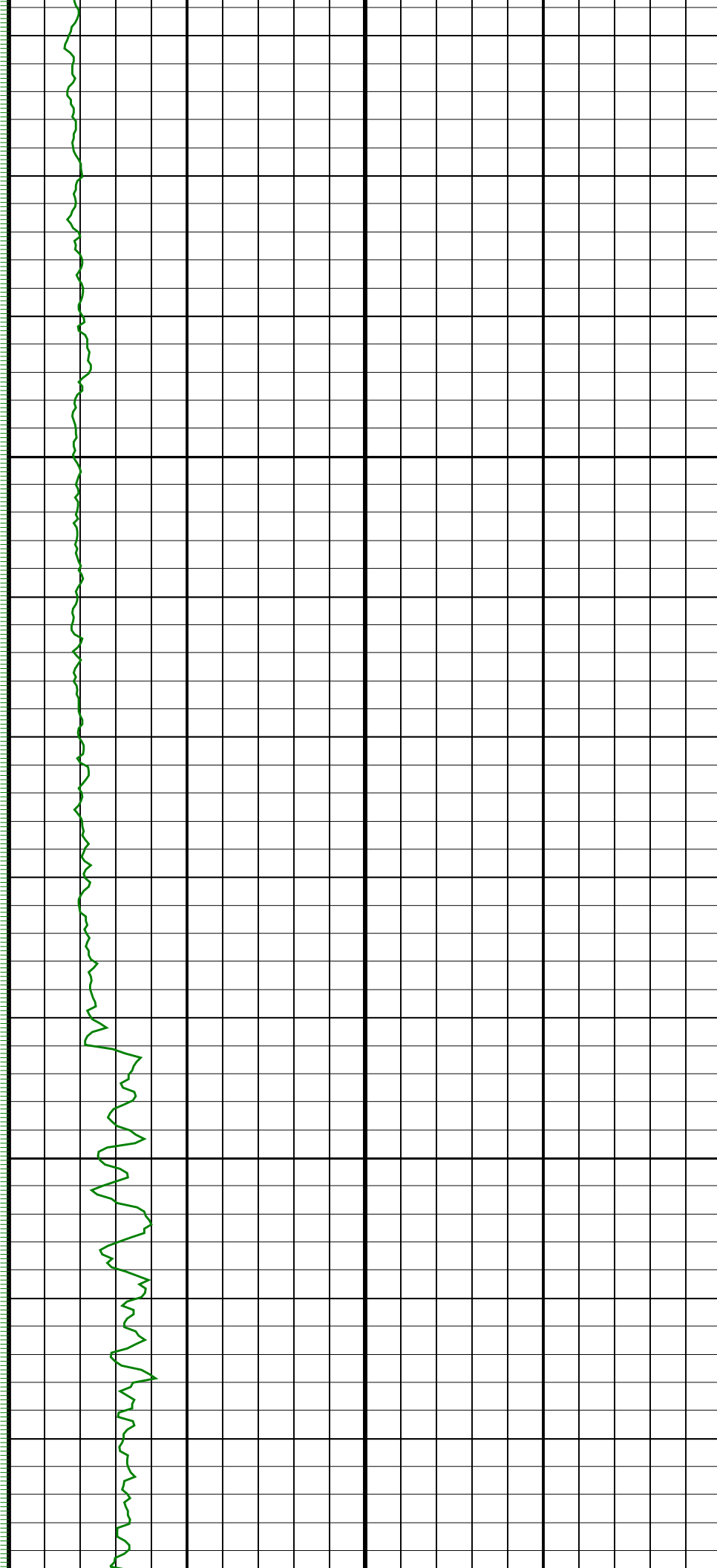
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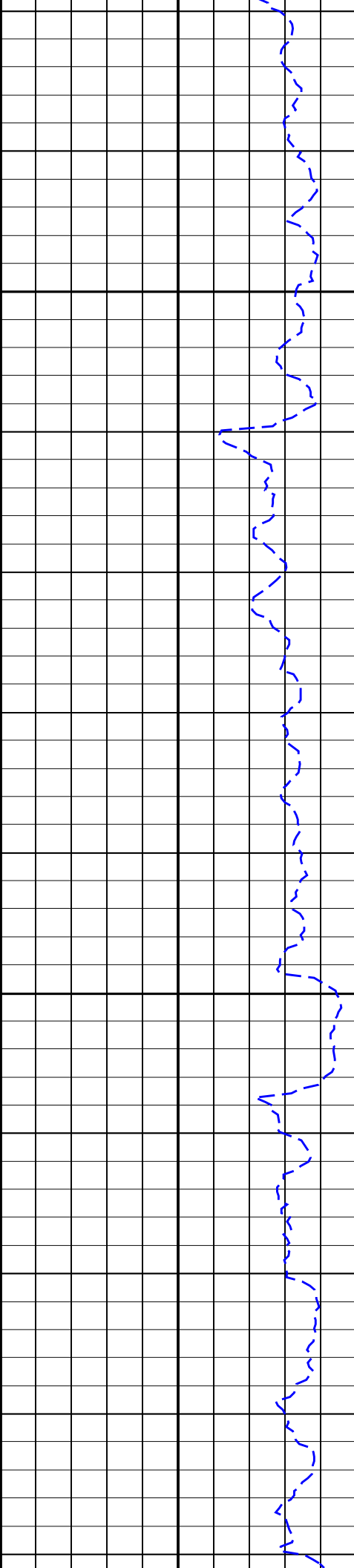




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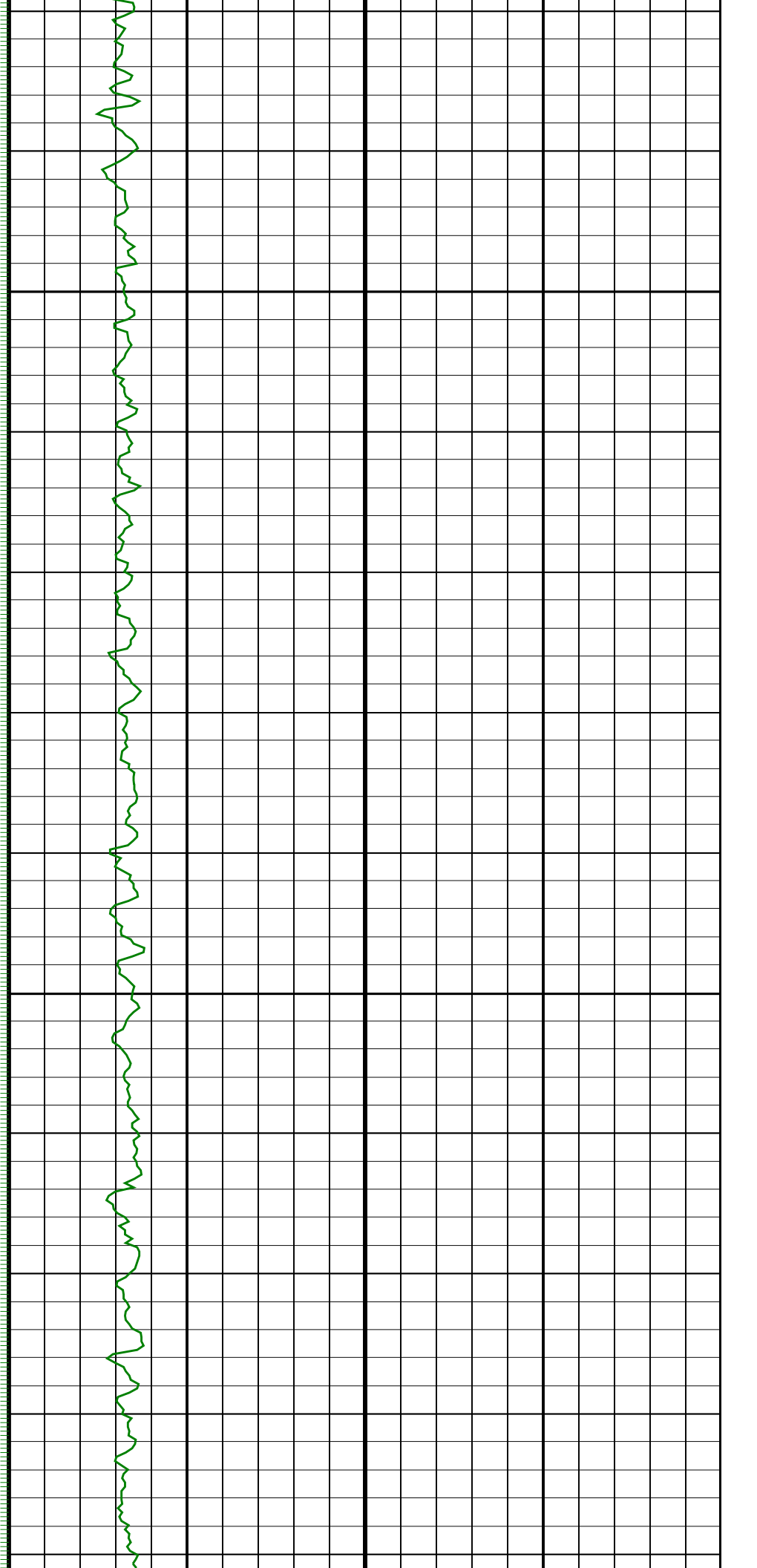
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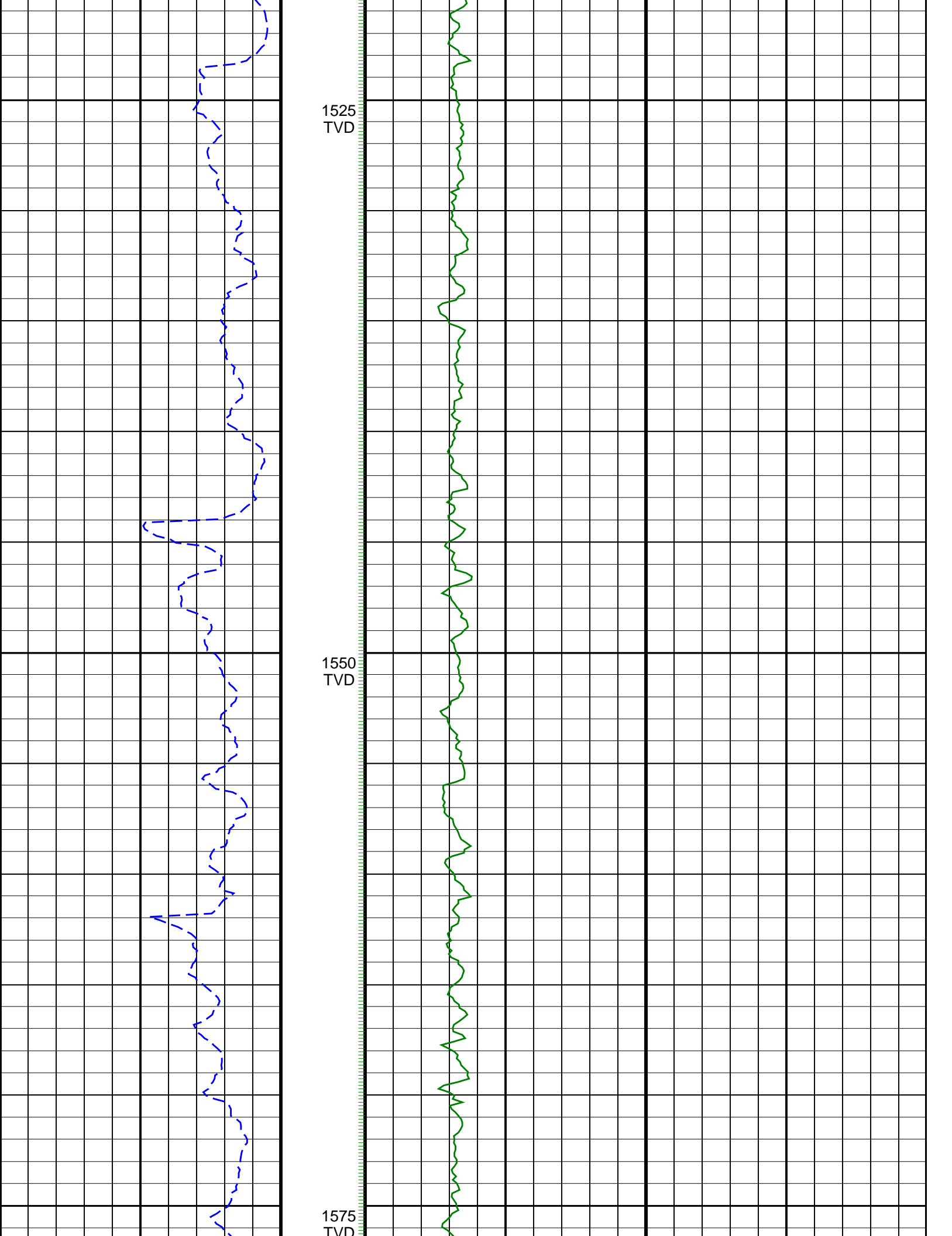


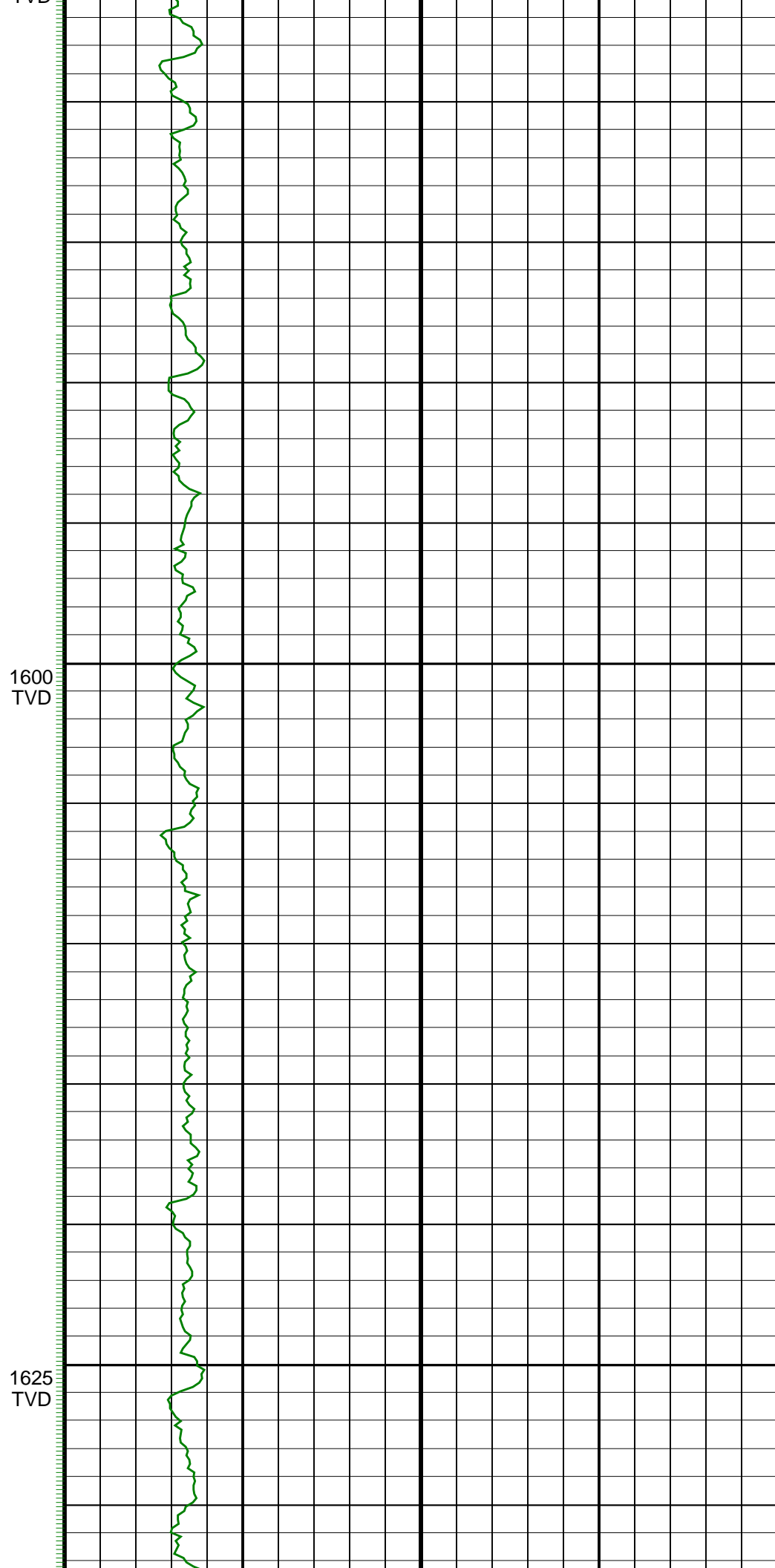
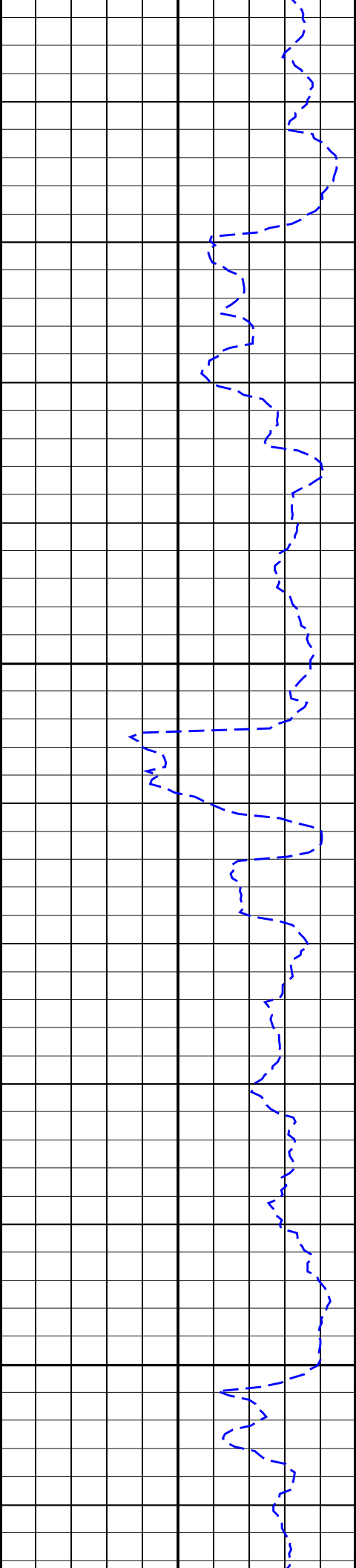


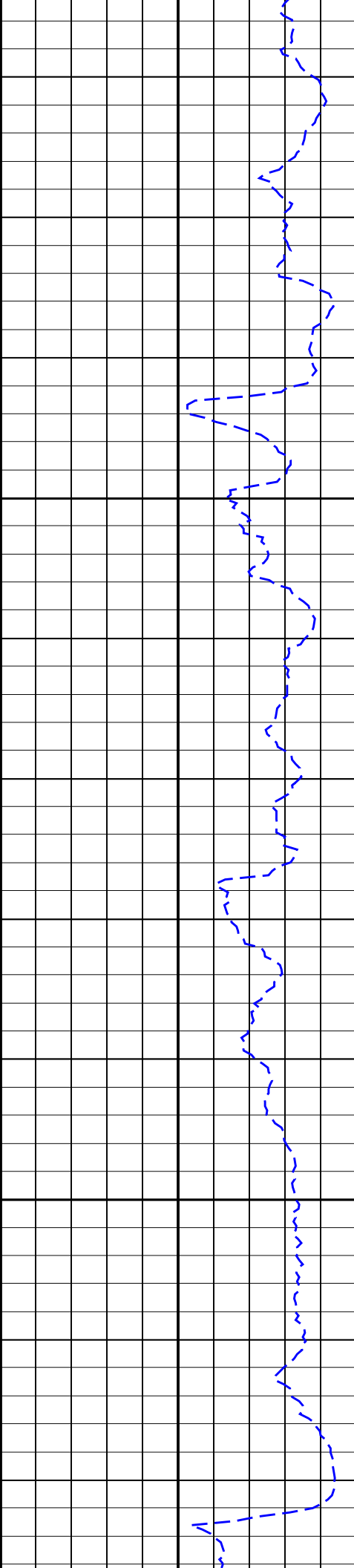
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1500
TVD



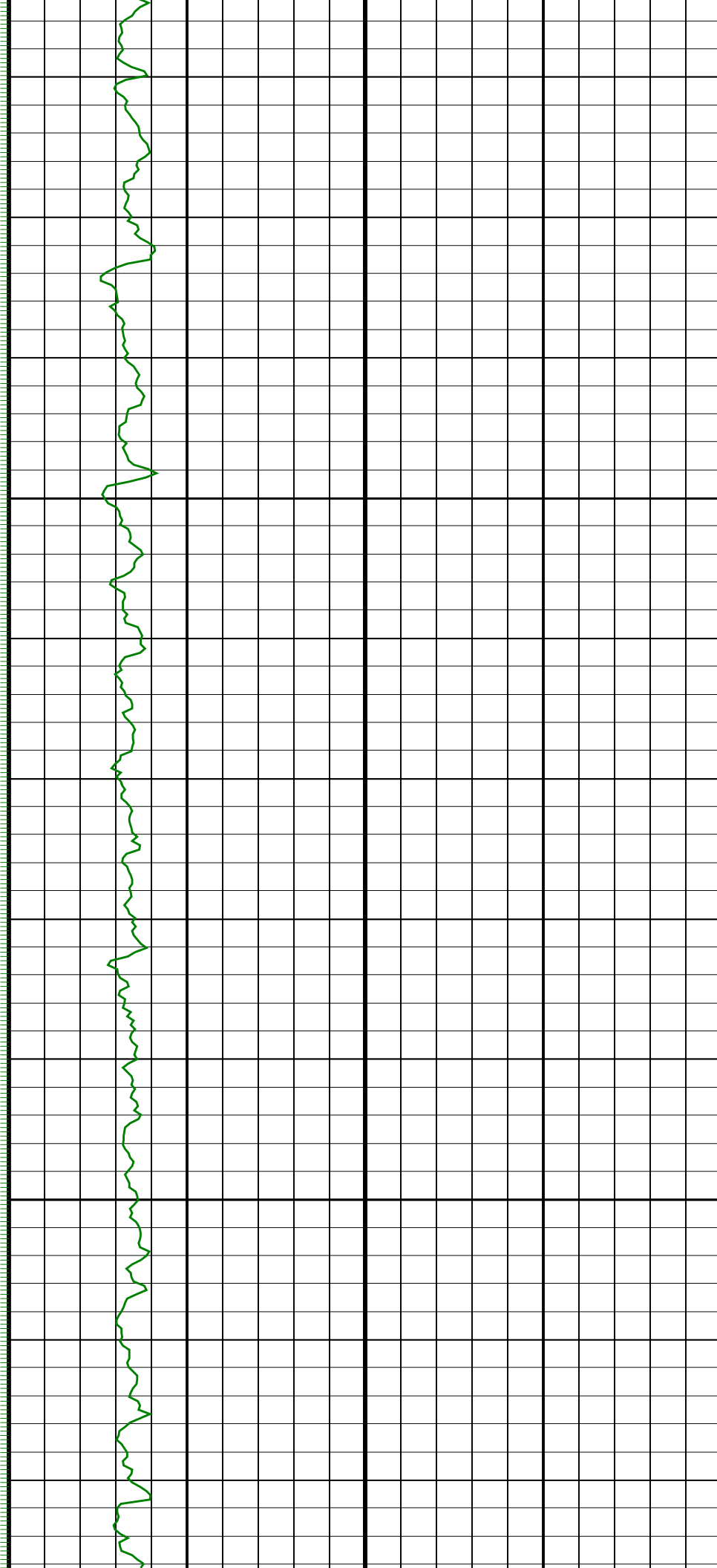


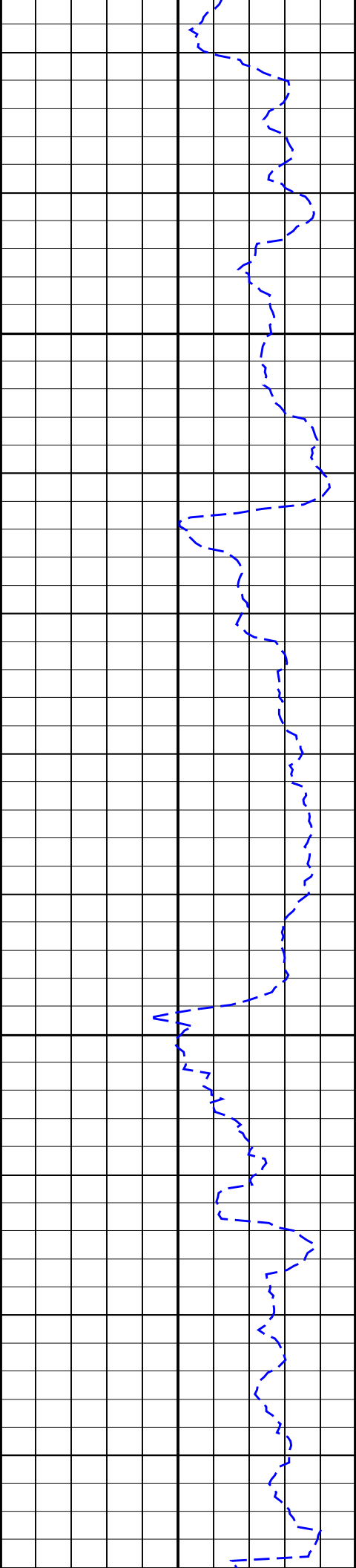




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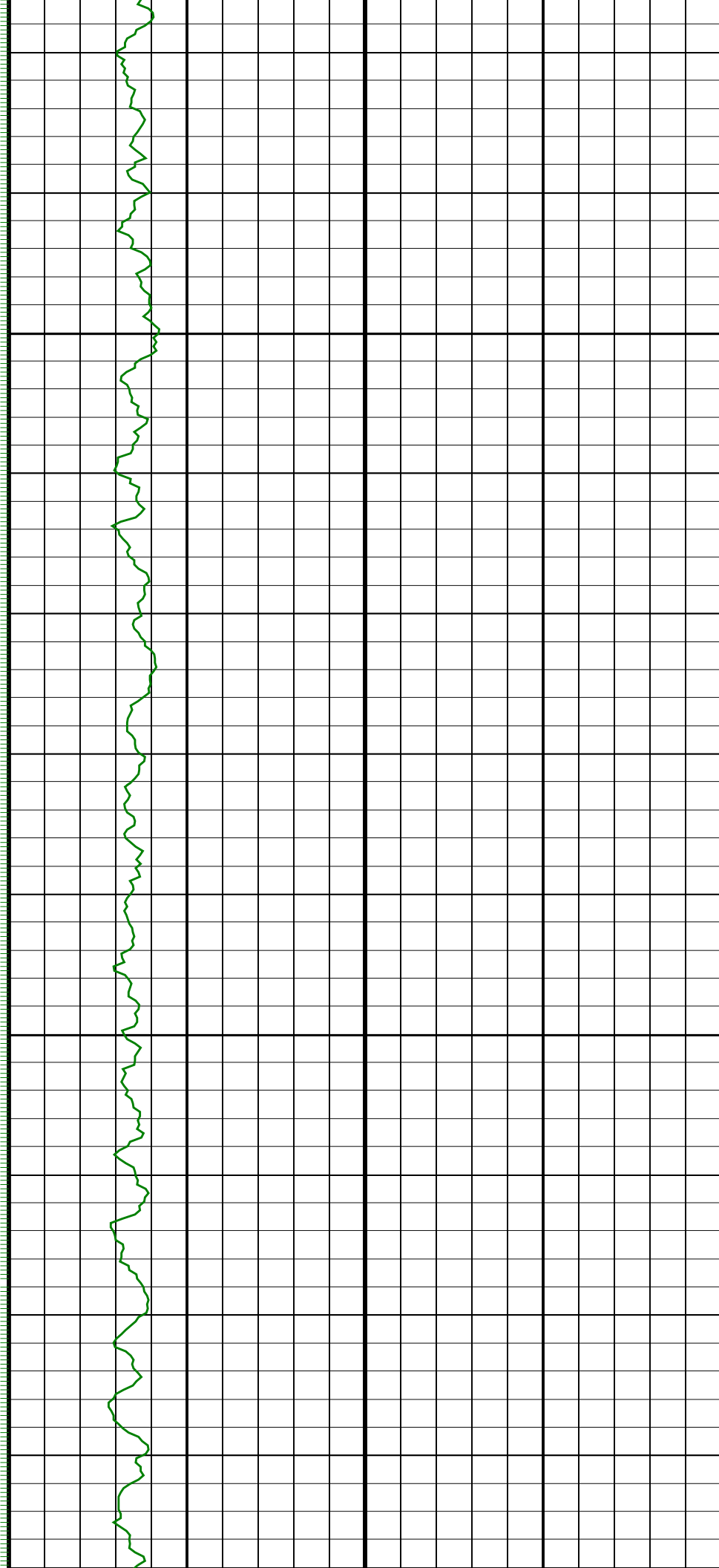
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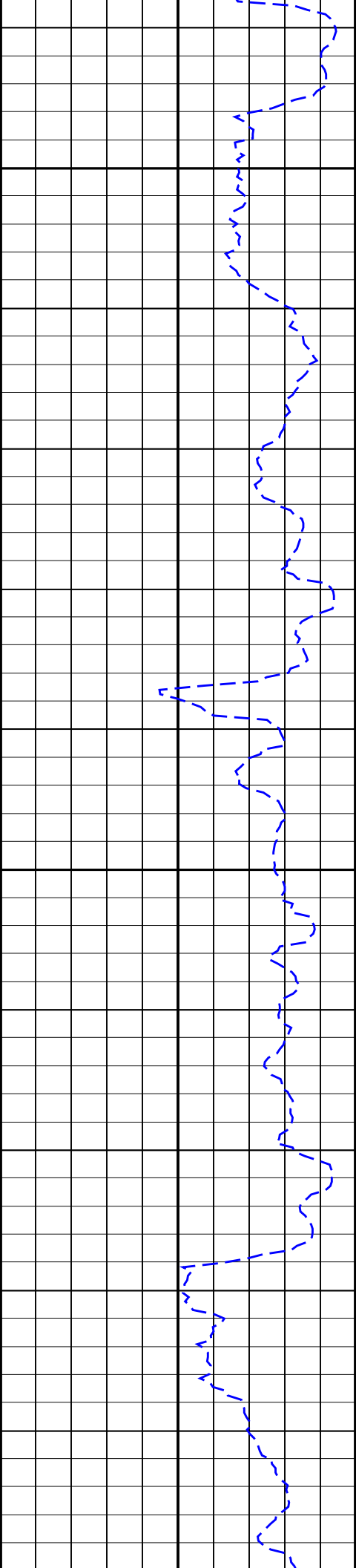




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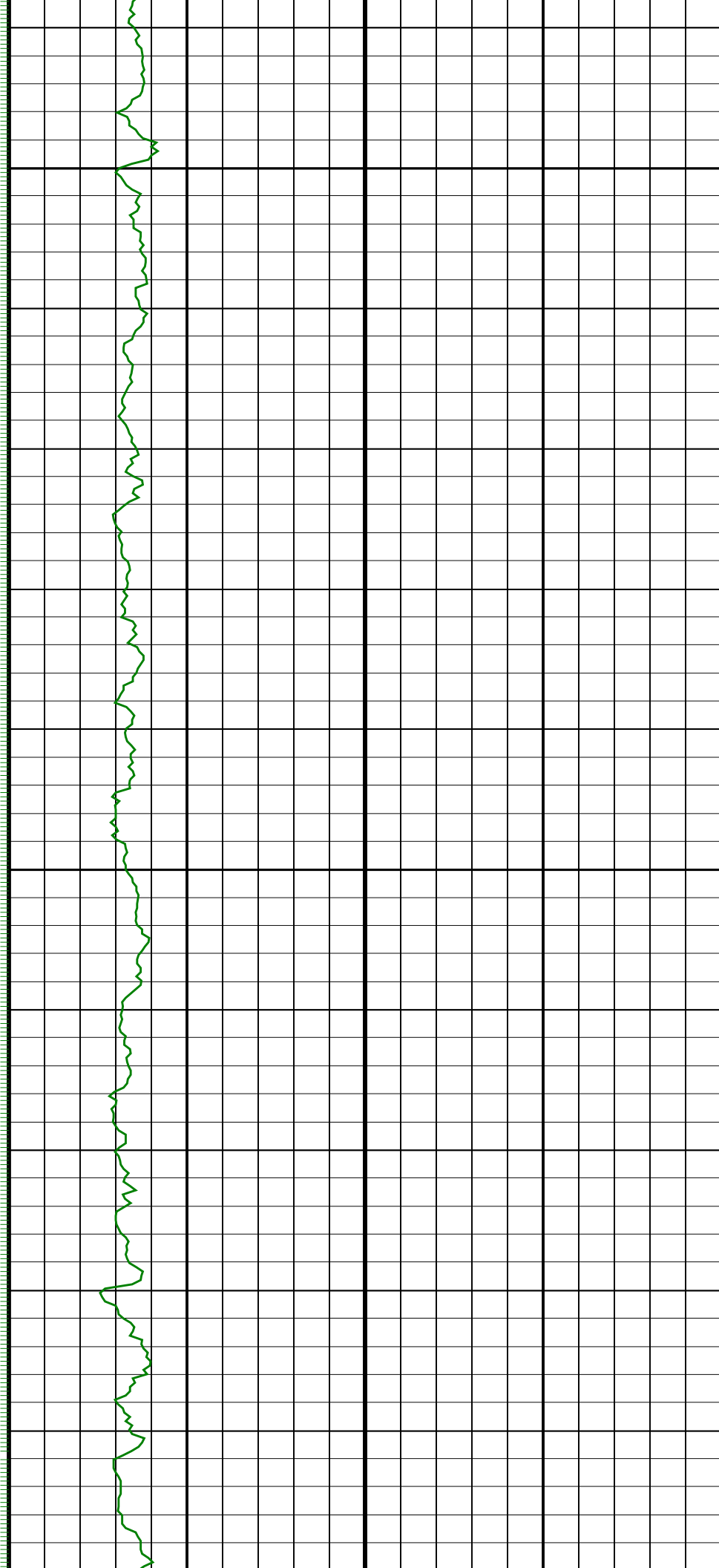
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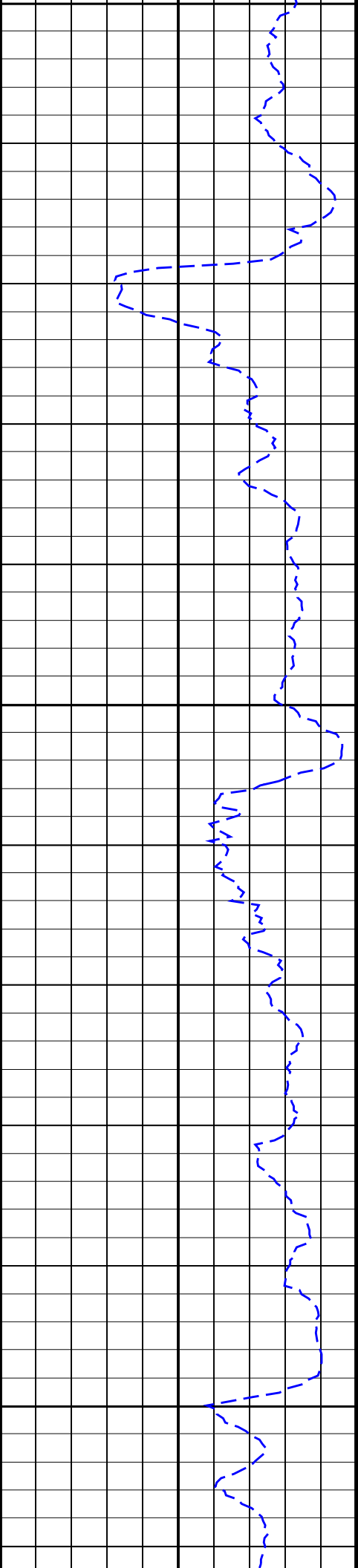




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TVD

1775
TVD

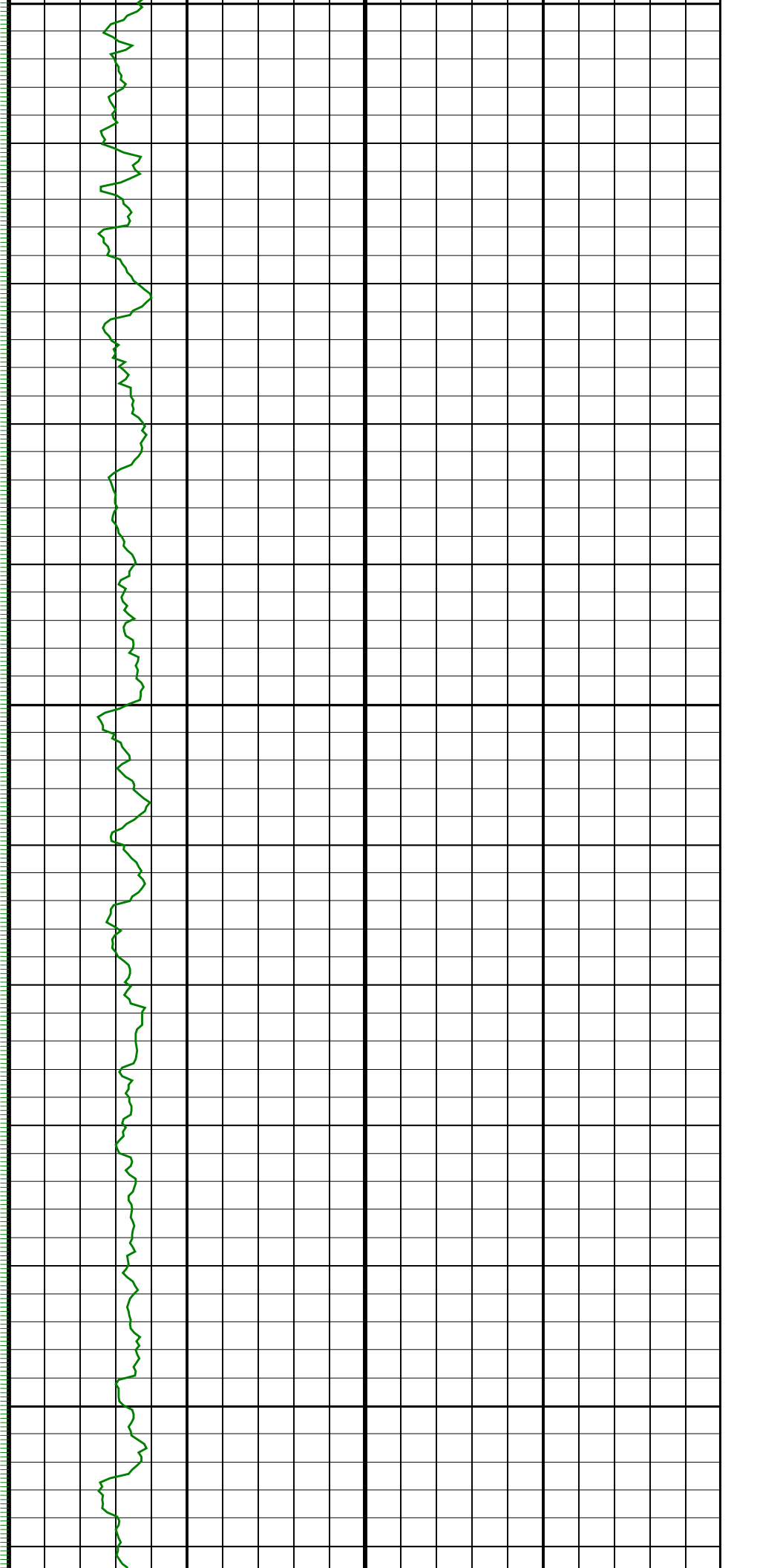


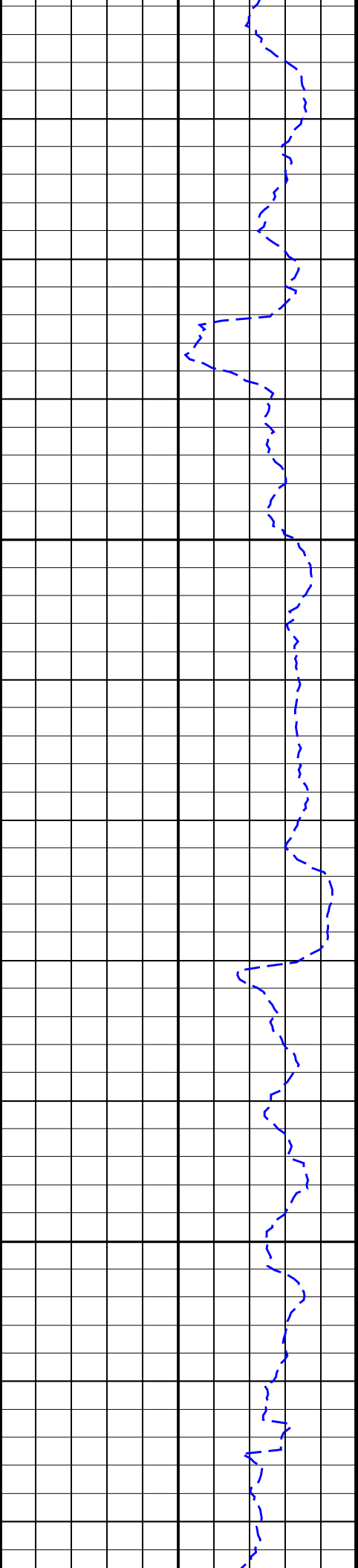


1800
TVD

1825
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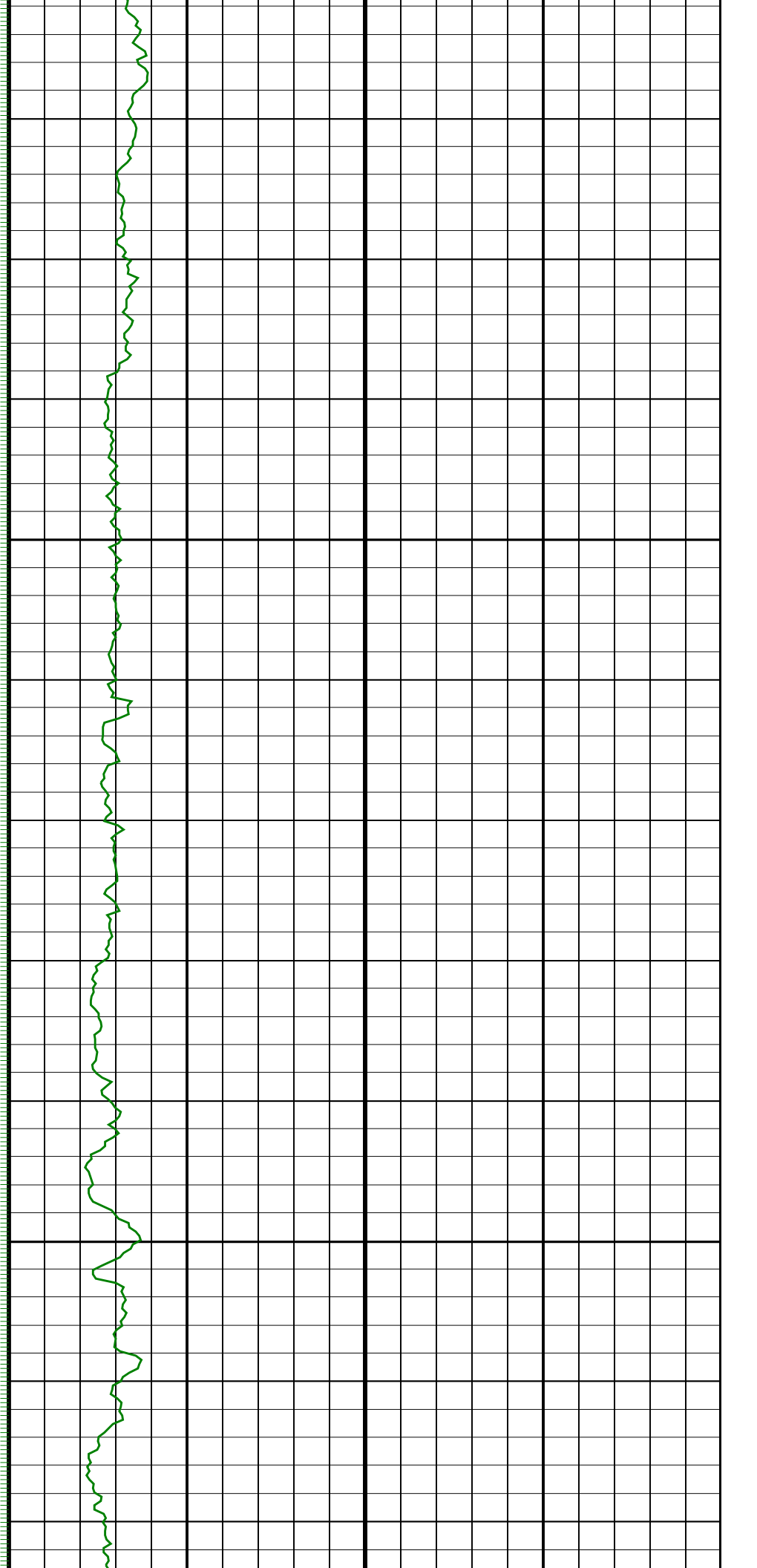
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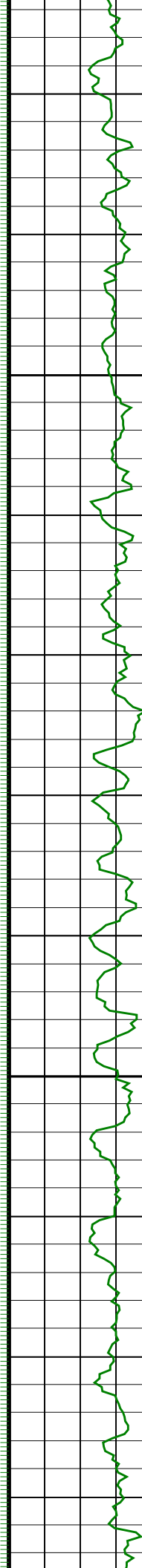
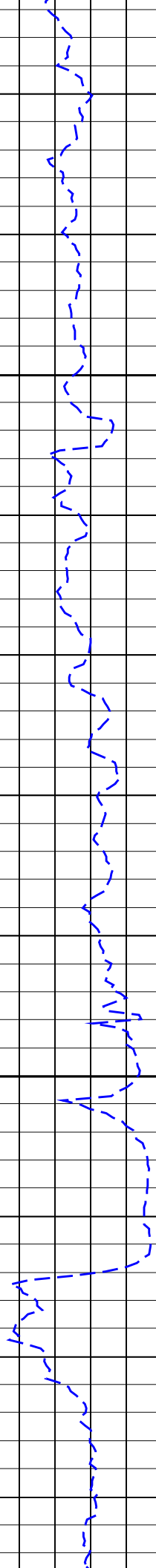


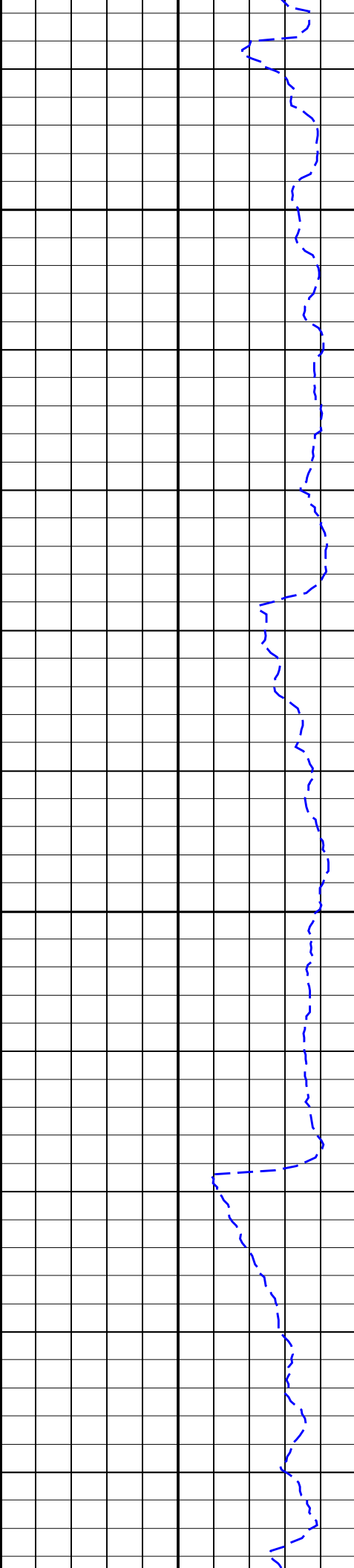


1875
TVD

1900
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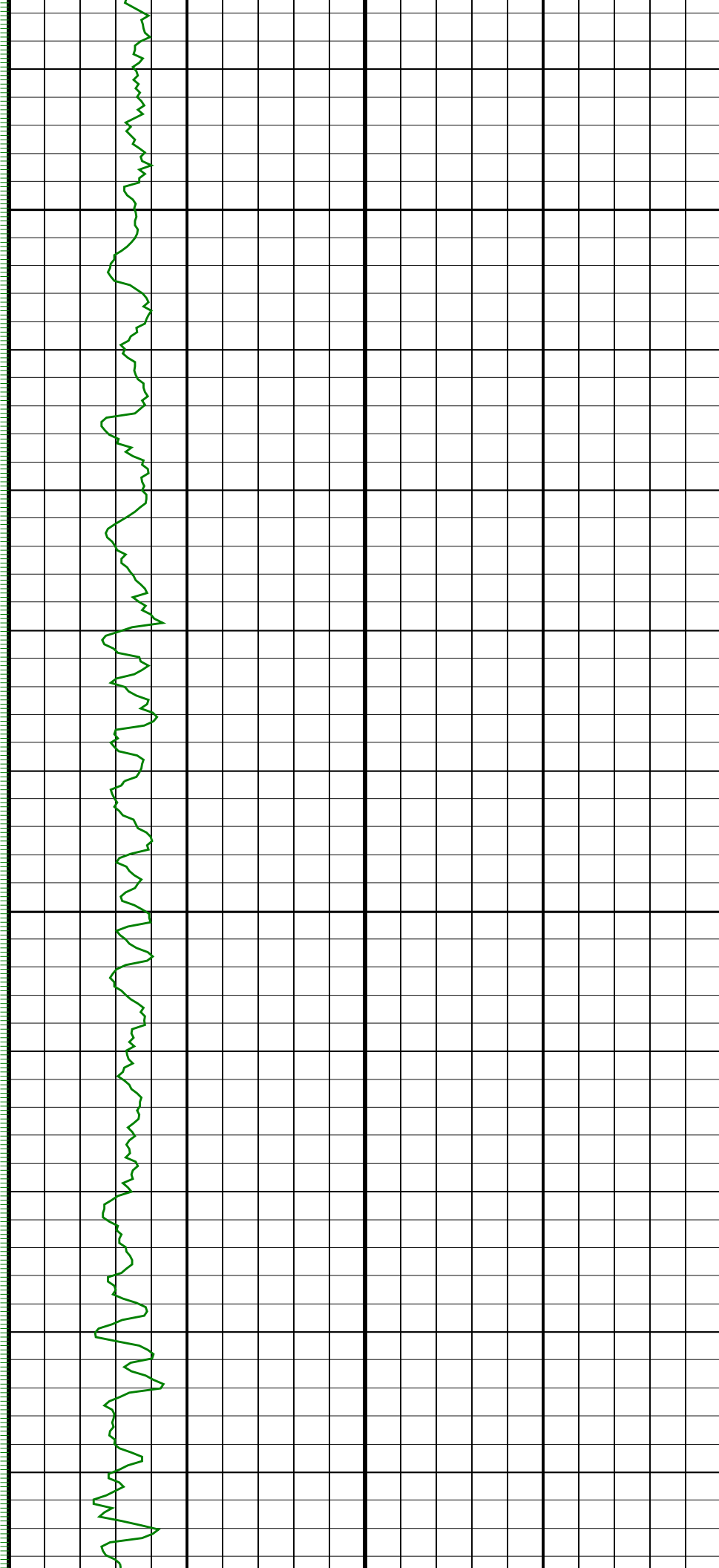


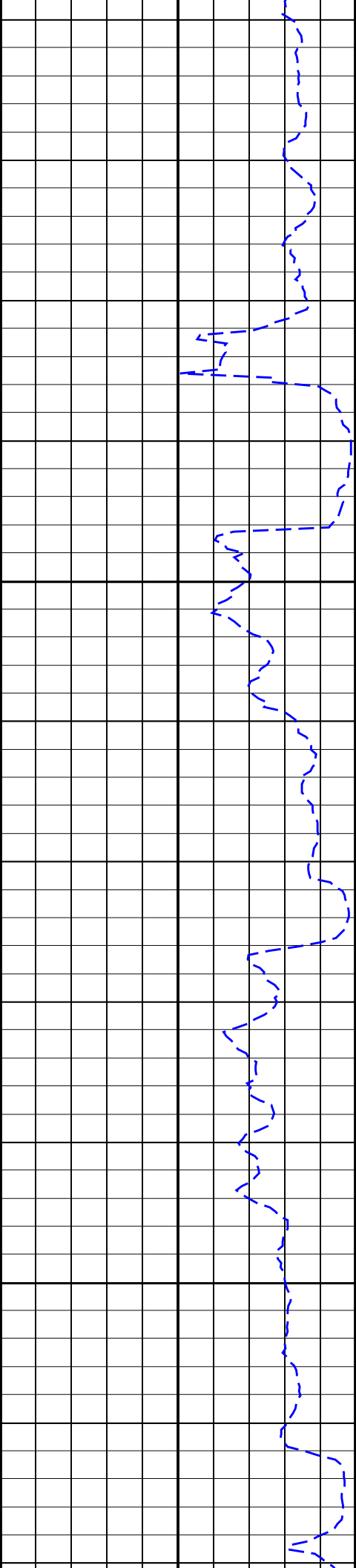




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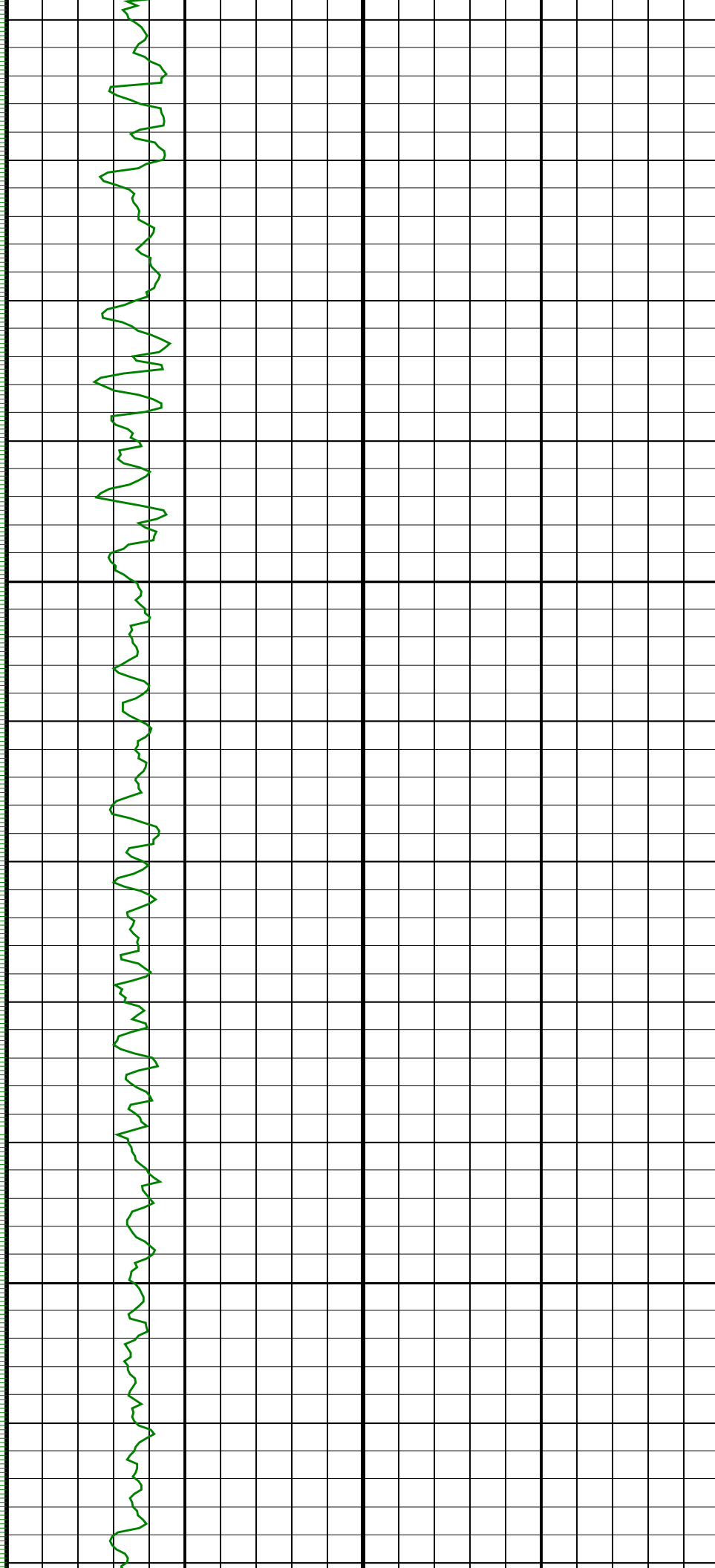
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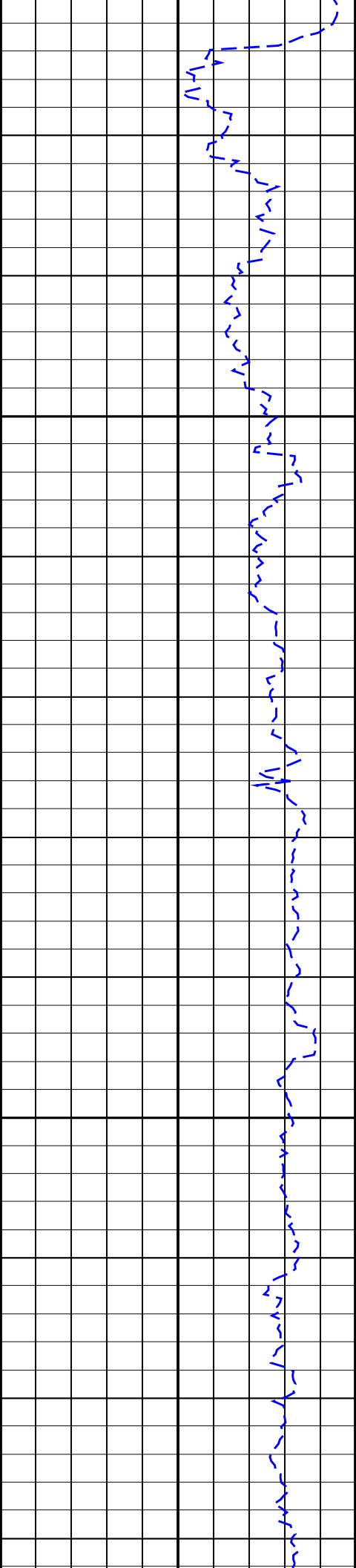




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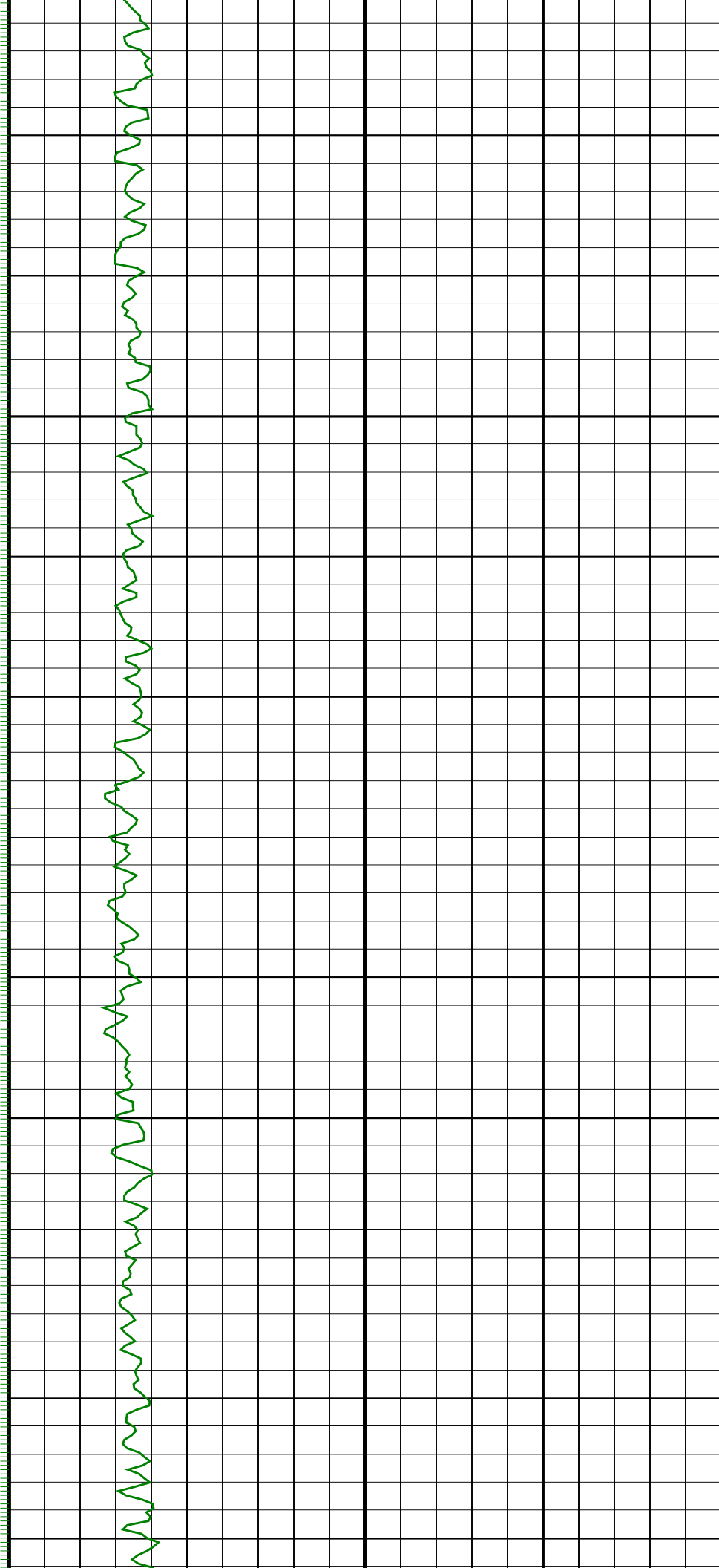
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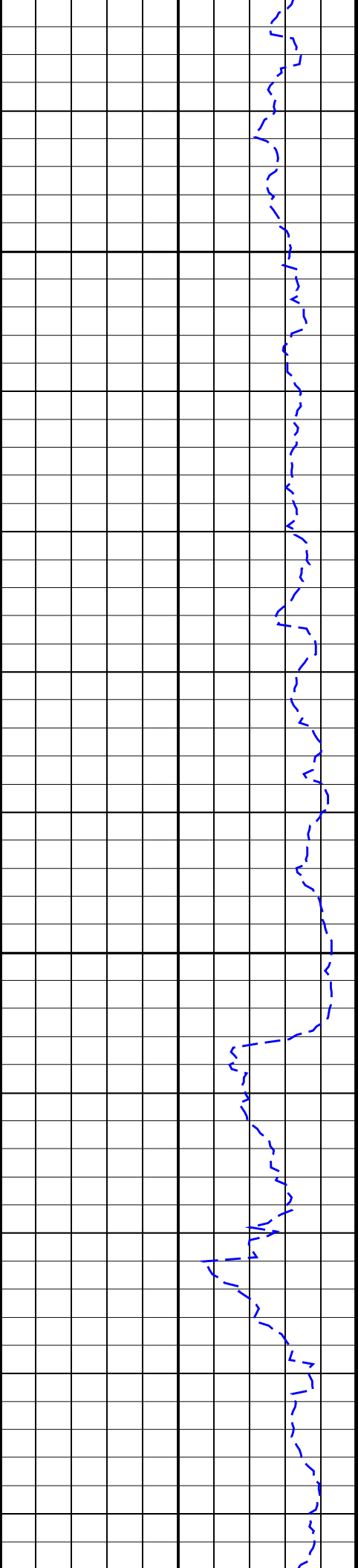




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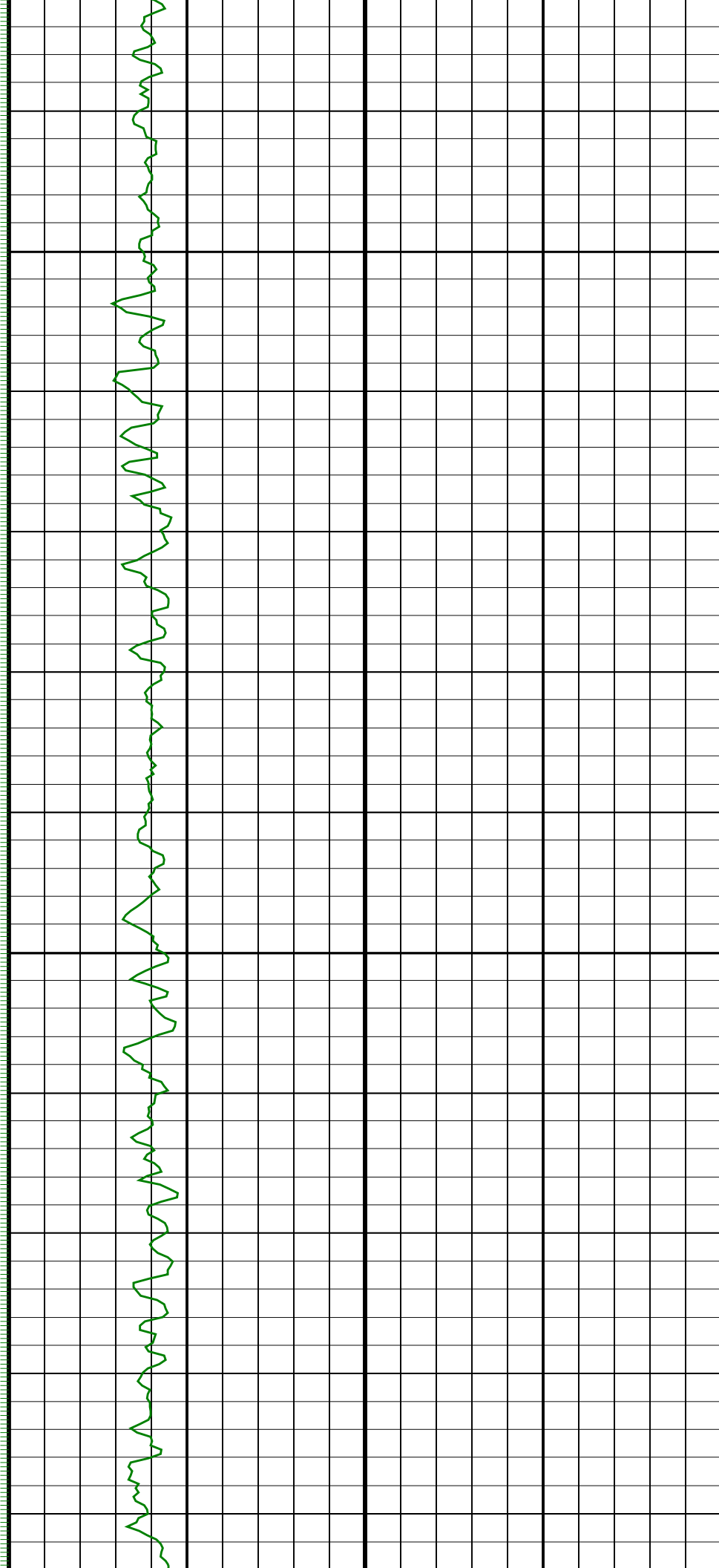
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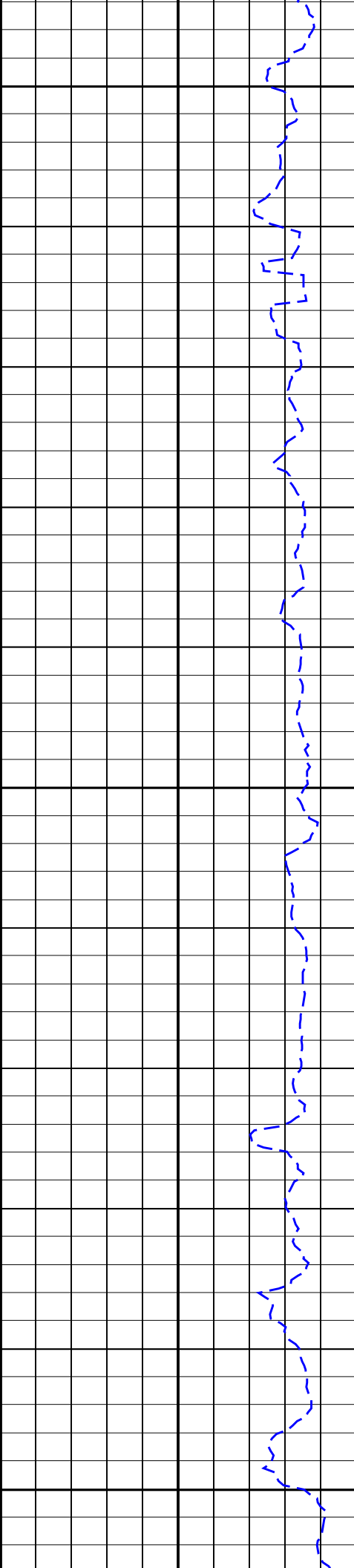




2200
TVD

2225
TVD

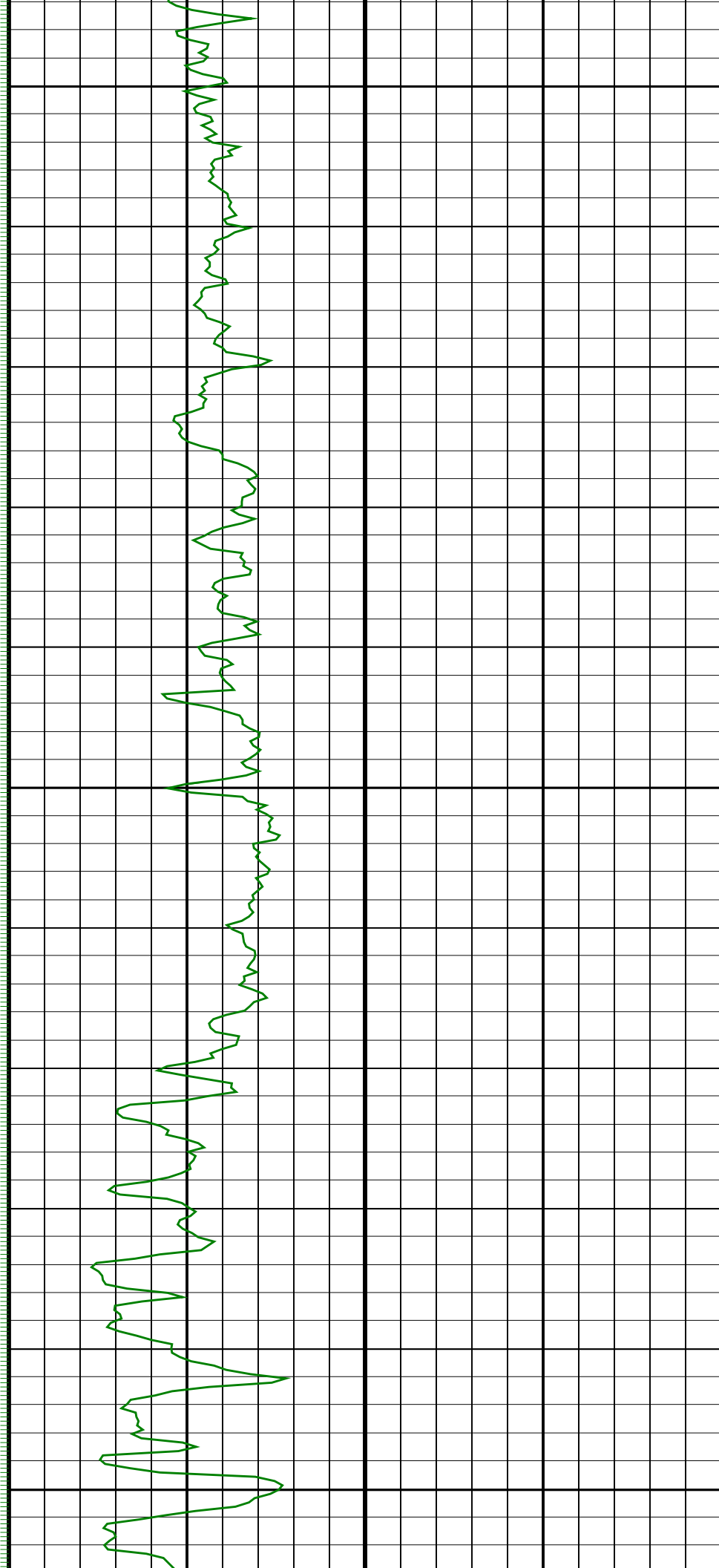


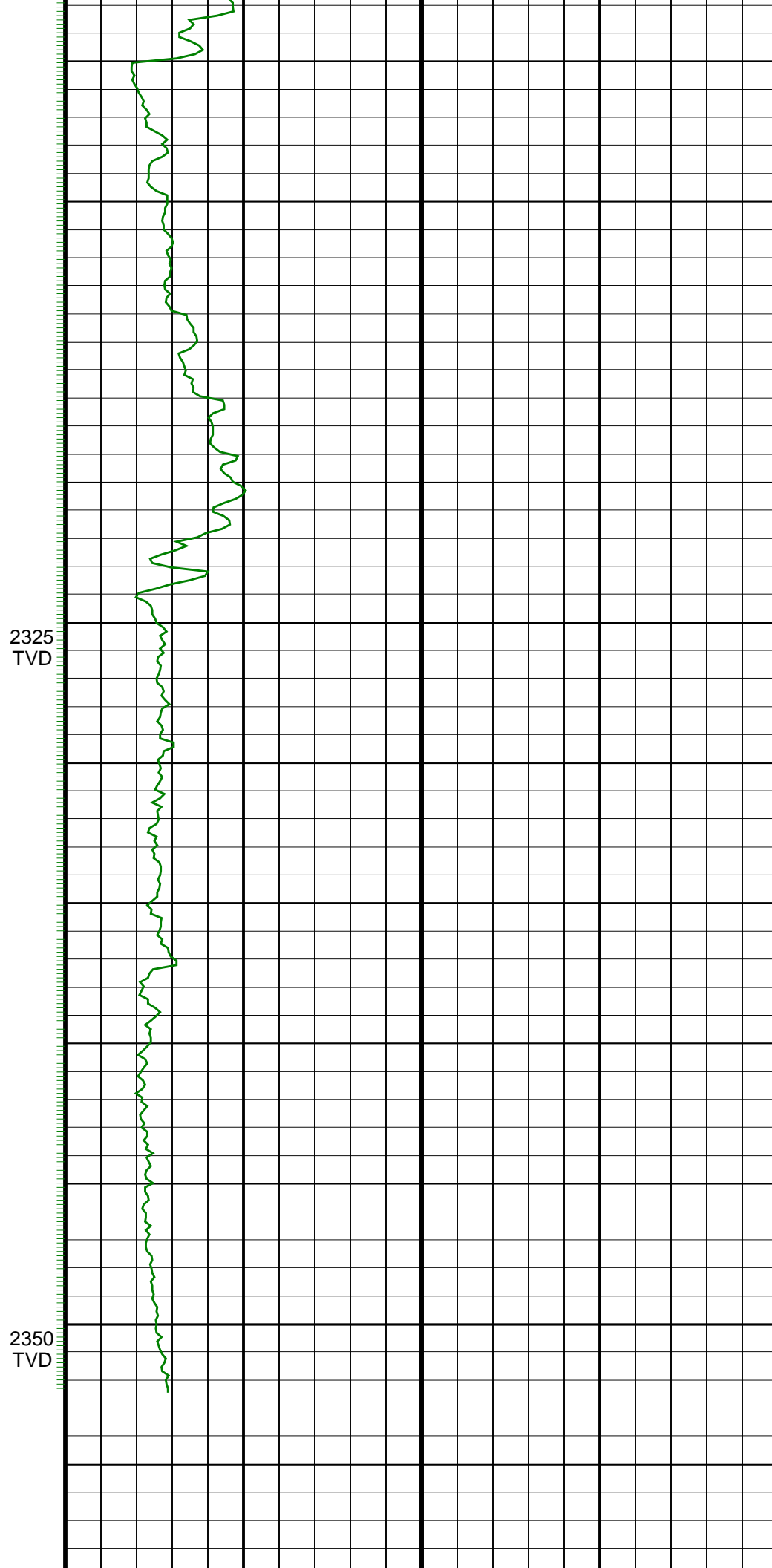
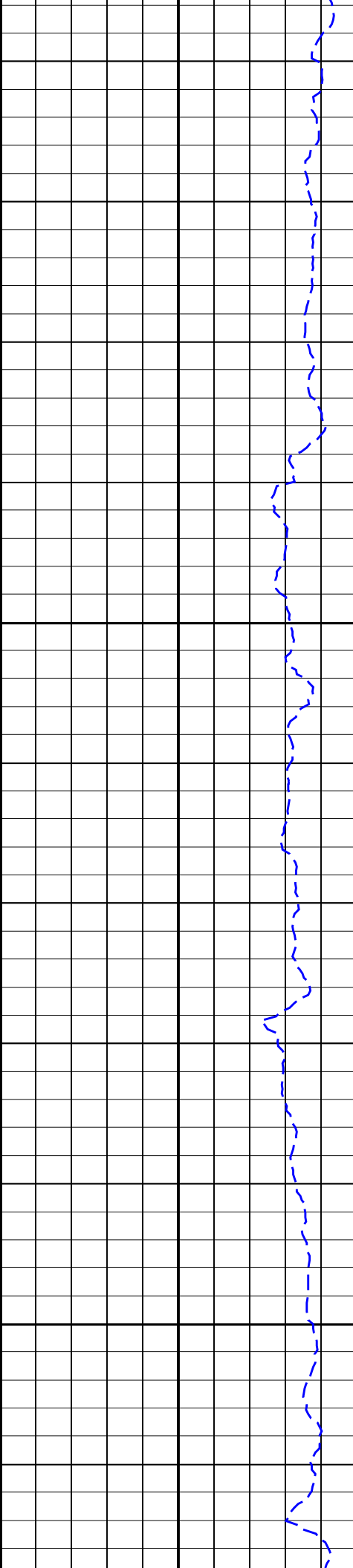


2250
TVD

2275
TVD

2300
TVD





200	ROP*5 (ROP5) (M/HR)	0	0	GR(TM) (GRM1) (GAPI)	400
-----	------------------------	---	---	-------------------------	-----

PIP SUMMARY

GR(TM) PIP

SCHLUMBERGER

Survey report

24-Jul-2006 08:31:34

Page 1 of 4

```
Client.....: ESSO Australia
Field.....: West Kingfish
```

```
Well.....: WKF W27A
Service number.....: 06ASQ0012
Engineer.....: C. Skiba, S. Xu
```

```
RIG.....: ISDL 453
STATE:.....: Victoria
```

```

Spud date.....: 18-Jul-06
Last survey date.....: 24-Jul-06
Total accepted surveys...: 78
MD of first survey.....: 900.00 m
MD of last survey.....: 3095.00 m

```

```
----- Survey calculation methods-----
Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor
```

```

----- Depth reference -----
Permanent datum.....: Mean Sea Level
Depth reference.....: Driller's Depth
GL above permanent.....: -76.13 m
KB above permanent.....: Top Drive
DF above permanent.....: 33.43 m

```

```

----- Vertical section origin-----
Latitude (+N/S-).....:      -5.03 m
Departure (+E/W-).....:      16.84 m

```

```

----- Platform reference point-----
Latitude (+N/S-).....: 5727806.021 m
Departure (+E/W-).....: 596279.875 m

```

Azimuth from Vsect Origin to target: 111.39 degrees

```

----- Geomagnetic data -----
Magnetic model.....: BGGM version 2005
Magnetic date.....: 17-Jul-2006
Magnetic field strength..: 1202.40 HCNT
Magnetic dec (+E/W-).....: 13.25 degrees
Magnetic dip.....: -69.06 degrees

```

```

----- MWD survey Reference Criteria -----
Reference G.....:      1000.06 mGal
Reference H.....:      1202.40 HCNT
Reference Dip.....:      -69.06 degrees
Tolerance of G.....:      (+/-) 2.50 mGal
Tolerance of H.....:      (+/-) 6.00 HCNT
Tolerance of Dip.....:      (+/-) 0.45 degrees

```

```

----- Corrections -----
Magnetic dec (+E/W-)..... 13.25 degrees
Grid convergence (+E/W-).. -0.69 degrees
Total az corr (+E/W-)..... 13.94 degrees
  (Total az corr = magnetic dec - grid conv)
Survey Correction Type ...
  I=Sag Corrected Inclination
  M=Schlumberger Magnetic Correction
  S=Shell Magnetic Correction
  F=Failed Axis Correction
  R=Magnetic Resonance Tool Correction
  D=Dmag Magnetic Correction

```

[(c)2006 IDEAL ID11_0C_01]
SCHLUMBERGER Survey Report

24-Jul-2006 08:31:34

Page 2 of 4

Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool Corr (deg)
1	900.00	43.65	134.77	0.00	807.21	279.02	-225.64	230.09	322.27	134.44	0.00	TIP	None
2	935.65	43.18	126.30	35.65	833.13	302.12	-241.54	248.67	346.67	134.17	4.99	MWD	None
3	977.13	42.94	120.10	41.48	863.45	329.81	-257.03	272.34	374.48	133.34	3.11	MWD	None
4	993.08	43.43	116.26	15.95	875.08	340.65	-262.19	281.96	385.02	132.92	5.11	MWD	None
5	1022.31	43.90	111.82	29.23	896.23	360.80	-270.40	300.39	404.16	131.99	3.23	MWD	None
6	1051.14	44.91	106.63	28.83	916.83	380.94	-277.03	319.42	422.82	130.93	3.98	MWD	None
7	1079.65	44.55	106.10	28.51	937.09	400.93	-282.68	338.67	441.15	129.85	0.55	MWD	None
8	1108.20	44.87	104.59	28.55	957.38	420.90	-288.00	358.04	459.50	128.81	1.18	MWD	None
9	1137.22	45.84	105.39	29.02	977.77	441.42	-293.34	377.99	478.46	127.81	1.18	MWD	None
10	1166.04	45.56	105.71	28.82	997.90	461.94	-298.87	397.86	497.61	126.91	0.38	MWD	None
11	1194.54	45.09	106.12	28.50	1017.94	482.11	-304.43	417.35	516.58	126.11	0.59	MWD	None
12	1222.94	44.42	106.83	28.40	1038.10	502.04	-310.10	436.52	535.45	125.39	0.90	MWD	None
13	1251.31	44.42	106.51	28.37	1058.37	521.82	-315.79	455.54	554.30	124.73	0.24	MWD	None
14	1280.15	44.56	107.46	28.84	1078.94	541.97	-321.70	474.87	573.58	124.12	0.72	MWD	None
15	1308.50	44.38	107.04	28.35	1099.17	561.78	-327.59	493.84	592.61	123.56	0.37	MWD	None
16	1337.25	44.58	106.44	28.75	1119.69	581.86	-333.39	513.13	611.92	123.01	0.49	MWD	None
17	1365.92	44.50	105.72	28.67	1140.12	601.88	-338.96	532.45	631.19	122.48	0.54	MWD	None
18	1394.59	44.88	105.73	28.67	1160.50	621.95	-344.42	551.86	650.52	121.97	0.40	MWD	None
19	1423.33	45.36	106.61	28.74	1180.78	642.23	-350.09	571.42	670.14	121.49	0.83	MWD	None
20	1452.03	44.83	107.21	28.70	1201.04	662.49	-356.01	590.87	689.83	121.07	0.72	MWD	None
21	1480.78	45.03	106.17	28.75	1221.40	682.73	-361.84	610.32	709.51	120.66	0.81	MWD	None
22	1509.44	45.00	104.92	28.66	1241.66	702.89	-367.27	629.84	729.10	120.25	0.94	MWD	None
23	1538.47	44.10	104.57	29.03	1262.35	723.12	-372.45	649.54	748.75	119.83	0.98	MWD	None
24	1567.06	44.72	103.87	28.59	1282.77	742.97	-377.37	668.93	768.03	119.43	0.84	MWD	None
25	1595.92	45.22	103.49	28.86	1303.19	763.18	-382.19	688.75	787.68	119.03	0.60	MWD	None

26	1624.77	45.89	104.40	28.86	1323.40	783.61	-387.16	708.75	807.59	118.65	0.99	MWD	None
27	1653.29	45.64	104.77	28.51	1343.28	803.90	-392.30	728.51	827.42	118.30	0.39	MWD	None
28	1682.00	45.36	105.39	28.71	1363.41	824.25	-397.63	748.29	847.37	117.99	0.56	MWD	None
29	1711.17	45.32	105.79	29.17	1383.91	844.89	-403.20	768.27	867.65	117.69	0.30	MWD	None
30	1739.65	45.30	106.16	28.48	1403.94	865.05	-408.77	787.74	887.48	117.43	0.28	MWD	None

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool Corr (deg)
31	1768.76	45.59	105.91	29.11	1424.36	885.70	-414.50	807.67	907.83	117.17	0.36	MWD	None
32	1797.00	46.07	105.96	28.24	1444.04	905.86	-420.07	827.15	927.70	116.92	0.52	MWD	None
33	1825.92	44.61	104.59	28.92	1464.37	926.32	-425.49	846.99	947.86	116.67	1.85	MWD	None
34	1854.46	43.86	104.73	28.54	1484.82	946.09	-430.53	866.25	967.34	116.43	0.81	MWD	None
35	1883.36	44.38	105.45	28.90	1505.56	966.09	-435.76	885.68	987.07	116.20	0.76	MWD	None
36	1911.83	44.80	105.59	28.47	1525.84	985.97	-441.11	904.94	1006.72	115.99	0.46	MWD	None
37	1940.60	45.03	104.70	28.77	1546.21	1006.16	-446.42	924.54	1026.68	115.77	0.71	MWD	None
38	1969.38	44.47	104.79	28.78	1566.65	1026.29	-451.58	944.14	1046.57	115.56	0.60	MWD	None
39	1998.10	45.19	104.75	28.72	1587.02	1046.40	-456.74	963.72	1066.47	115.36	0.76	MWD	None
40	2026.84	44.39	104.73	28.74	1607.42	1066.51	-461.89	983.30	1086.38	115.16	0.85	MWD	None
41	2055.41	44.86	104.74	28.57	1627.75	1086.44	-466.99	1002.71	1106.12	114.97	0.50	MWD	None
42	2084.35	45.47	105.47	28.94	1648.15	1106.84	-472.34	1022.52	1126.34	114.79	0.84	MWD	None
43	2113.09	44.64	105.30	28.74	1668.46	1127.07	-477.74	1042.13	1146.42	114.63	0.89	MWD	None
44	2141.70	45.04	105.46	28.61	1688.74	1147.14	-483.09	1061.58	1166.33	114.47	0.44	MWD	None
45	2171.00	45.20	106.14	29.30	1709.42	1167.80	-488.74	1081.56	1186.86	114.32	0.53	MWD	None
46	2199.61	44.32	106.04	28.61	1729.73	1187.86	-494.33	1100.92	1206.80	114.18	0.94	MWD	None
47	2228.55	44.65	105.62	28.94	1750.38	1208.04	-499.86	1120.43	1226.87	114.04	0.47	MWD	None
48	2257.29	44.90	106.03	28.74	1770.78	1228.19	-505.38	1139.90	1246.91	113.91	0.41	MWD	None
49	2286.22	45.12	106.37	28.93	1791.23	1248.56	-511.09	1159.55	1267.19	113.79	0.34	MWD	None
50	2315.06	45.44	106.34	28.84	1811.53	1268.98	-516.86	1179.21	1287.51	113.67	0.34	MWD	None
51	2343.92	45.19	106.18	28.86	1831.82	1289.41	-522.60	1198.91	1307.86	113.55	0.29	MWD	None
52	2372.57	45.74	106.04	28.65	1851.92	1309.75	-528.27	1218.53	1328.11	113.44	0.59	MWD	None
53	2401.20	44.95	105.75	28.63	1872.04	1330.02	-533.85	1238.12	1348.30	113.32	0.87	MWD	None
54	2429.64	45.68	105.96	28.44	1892.04	1350.15	-539.37	1257.57	1368.36	113.21	0.80	MWD	None
55	2458.41	45.25	105.79	28.77	1912.21	1370.56	-544.98	1277.29	1388.70	113.11	0.47	MWD	None
56	2486.82	44.77	105.57	28.41	1932.30	1390.55	-550.41	1296.64	1408.62	113.00	0.54	MWD	None
57	2516.41	46.01	105.95	29.59	1953.08	1411.52	-556.13	1316.91	1429.52	112.89	1.31	MWD	None
58	2545.20	45.89	106.93	28.79	1973.10	1432.13	-561.99	1336.76	1450.09	112.80	0.76	MWD	None
59	2573.91	45.15	106.45	28.71	1993.21	1452.55	-567.87	1356.38	1470.46	112.72	0.87	MWD	None
60	2602.63	44.75	106.43	28.72	2013.54	1472.76	-573.62	1375.84	1490.63	112.63	0.42	MWD	None

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Seq #	Measured depth (m)	Incl angle (deg)	Azimuth angle (deg)	Course length (m)	TVD depth (m)	Vertical section (m)	Displ +N/S- (m)	Displ +E/W- (m)	Total displ (m)	At Azim (deg)	DLS (deg/100f)	Srvy tool type	Tool Corr (deg)
61	2631.30	44.15	106.49	28.67	2034.01	1492.76	-579.30	1395.09	1510.59	112.55	0.64	MWD	None
62	2659.74	44.65	105.89	28.44	2054.33	1512.58	-584.85	1414.20	1530.37	112.47	0.70	MWD	None
63	2688.70	44.18	105.85	28.96	2075.01	1532.75	-590.39	1433.70	1550.50	112.38	0.50	MWD	None
64	2717.07	44.74	105.74	28.37	2095.26	1552.53	-595.80	1452.82	1570.24	112.30	0.61	MWD	None
65	2746.30	44.53	106.17	29.23	2116.06	1572.97	-601.45	1472.56	1590.65	112.22	0.38	MWD	None
66	2774.74	44.90	106.39	28.44	2136.27	1592.90	-607.06	1491.77	1610.56	112.14	0.43	MWD	None
67	2802.92	44.63	106.63	28.18	2156.28	1612.68	-612.70	1510.80	1630.31	112.07	0.34	MWD	None
68	2832.64	44.36	106.43	29.72	2177.48	1633.43	-618.62	1530.76	1651.04	112.00	0.31	MWD	None
69	2861.25	43.93	106.36	28.61	2198.01	1653.28	-624.25	1549.88	1670.87	111.94	0.46	MWD	None
70	2890.01	43.57	106.33	28.76	2218.78	1673.09	-629.84	1568.96	1690.67	111.87	0.38	MWD	None
71	2918.76	43.12	106.34	28.75	2239.69	1692.75	-635.39	1587.90	1710.31	111.81	0.48	MWD	None
72	2947.39	43.00	106.22	28.63	2260.61	1712.22	-640.87	1606.66	1729.77	111.75	0.15	MWD	None
73	2975.93	43.25	106.36	28.54	2281.44	1731.65	-646.35	1625.39	1749.19	111.69	0.29	MWD	None
74	3004.95	43.86	106.51	29.02	2302.47	1751.57	-652.00	1644.57	1769.10	111.63	0.65	MWD	None
75	3033.71	44.54	107.09	28.76	2323.09	1771.56	-657.80	1663.76	1789.08	111.57	0.84	MWD	None
76	3061.86	45.24	106.91	28.15	2343.03	1791.37	-663.61	1682.76	1808.89	111.52	0.77	MWD	None
77	3073.71	45.55	107.10	11.85	2351.35	1799.78	-666.08	1690.83	1817.30	111.50	0.87	MWD	None
78	3095.00	46.10	107.10	21.29	2366.19	1815.01	-670.57	1705.43	1832.52	111.46	0.79	Proj.	to TD

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Company: **ESSO Australia Pty. Ltd.**

Well: **WKF W27A**
Field: **West Kingfish**
Rig: **ISDL 453**
State: **Victoria**



Field Print

Gamma Ray Service
1:200 True Vertical Depth
Real Time Log