









Potassium	%	4.4									
Environmental data											
GR											
Mud weight	ppg	9.7									
Bit size	in.	8.5									
Resistivity											
Neutron porosity											
Hole Size	in	8.5									
Mud weight	ppg	9.7									
Temperature	°C	78									
Mud salinity	ppk	N/A									
Formation salinity		N/A									
Recording rate 1	SEC	N/A									
Recording rate 2	SEC	N/A									
Filtering GR		3pt									
Filtering density		N/A									
Filtering Neutron		N/A									
Company representative		G. Doty	C. Stead	B. Davis	M. Turner						
Schlumberger D&M Personnel		B.Pattarakorn	R. Borjas	C.Hibberson	C. Cocks	M. Blacker					

[illegible]

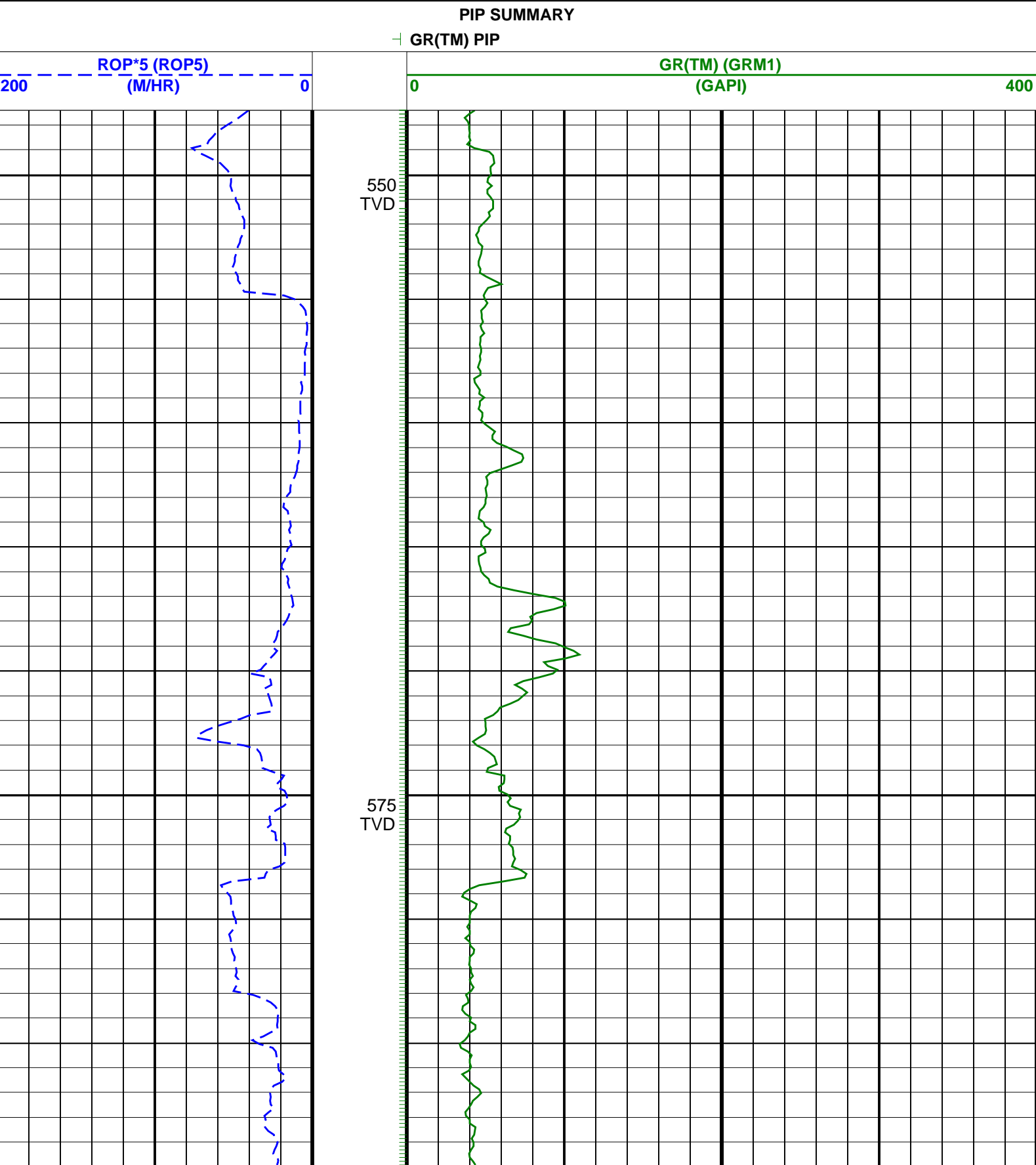
DOWNHOLE EQUIPMENT

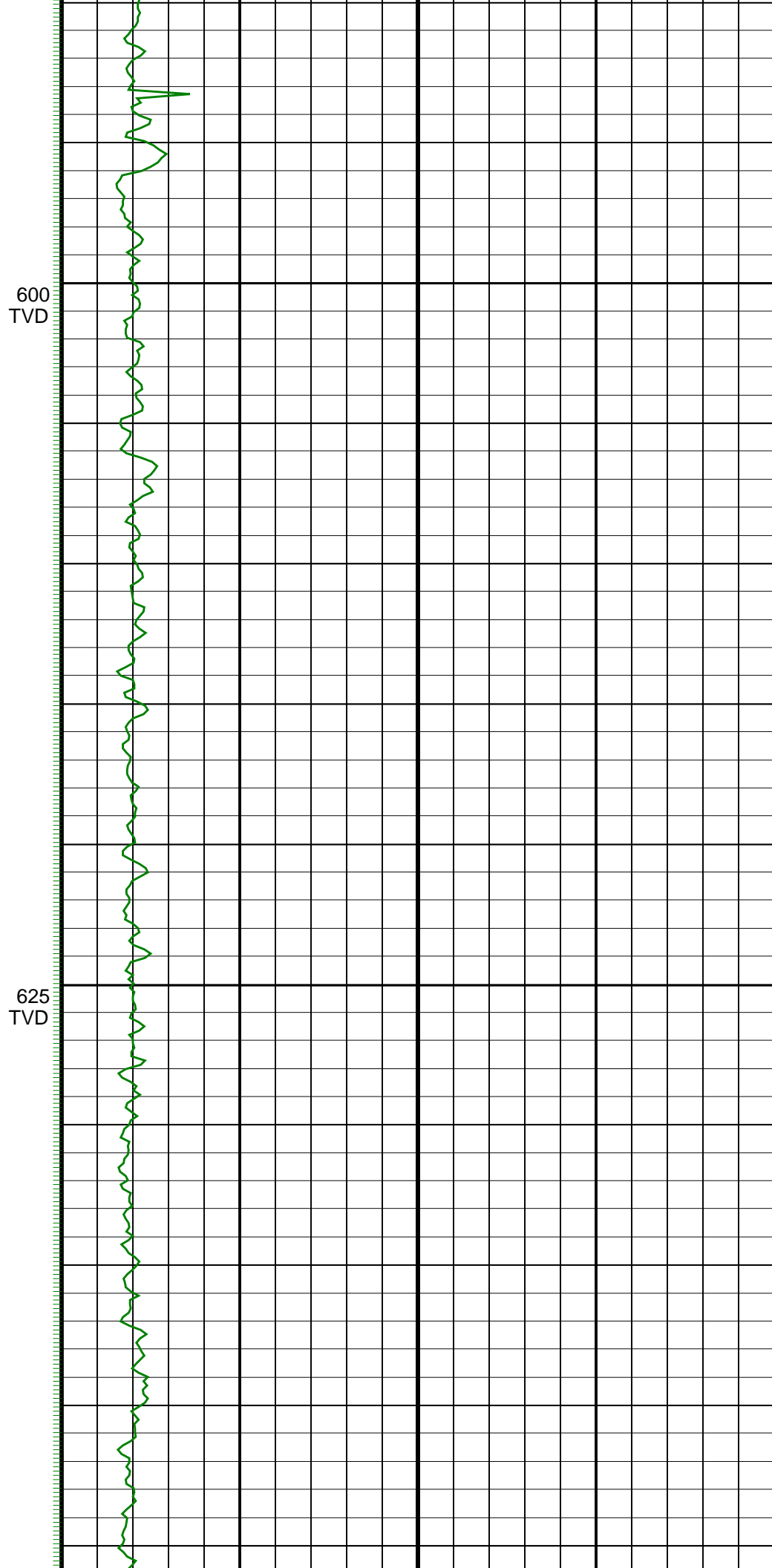
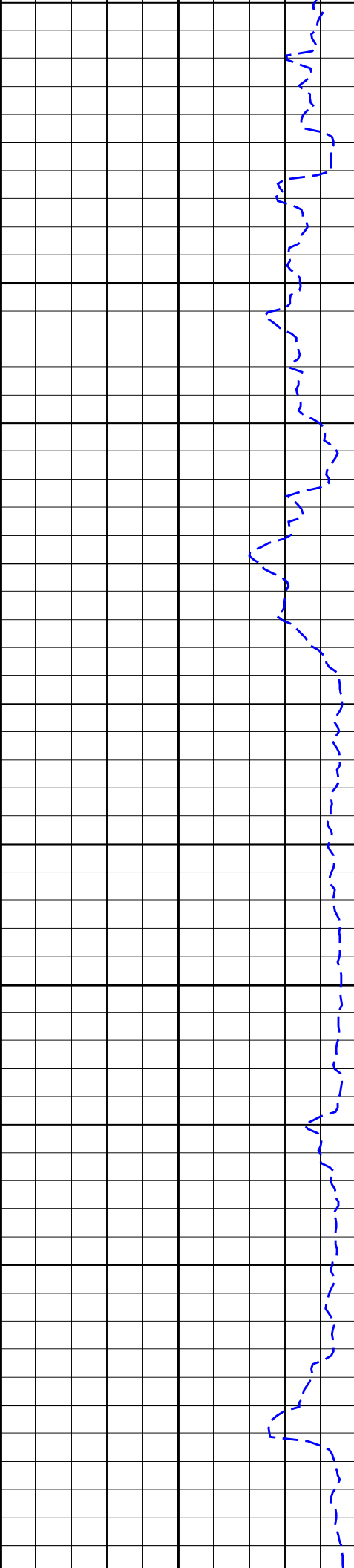
6-3/4 in. PowerPulse		24.34
MDC: VC64		
MEC: BA-212		
MDI: 1096		
MGR: 295		
DHS: 8.0C03		
D&I		19.49
GR		18.84
APWD		16.25
6-5/8 in. NM Pony		14.86
S/N: ANA98-007		
6-5/8 in. NM Stabilizer		12.39
S/N: GU2299		
7 in. PowerPak* Motor		10.28
A700GT 7:8		
S/N: N7311		
1.15 deg. Bent Housing		
8-3/8 in. Motor Sleeve		
Smith PDC Bit		0.00
OD: 8-1/2 in.		0.22
S73PX S/N: JT0016A3		

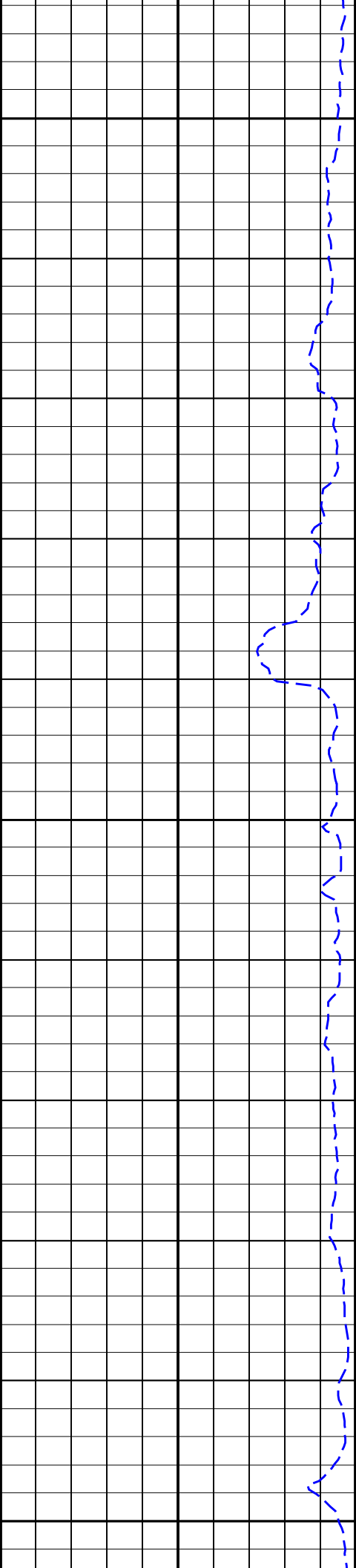
Maximum string dia
All lengths in

HLA A5B RT 1:200 TVD

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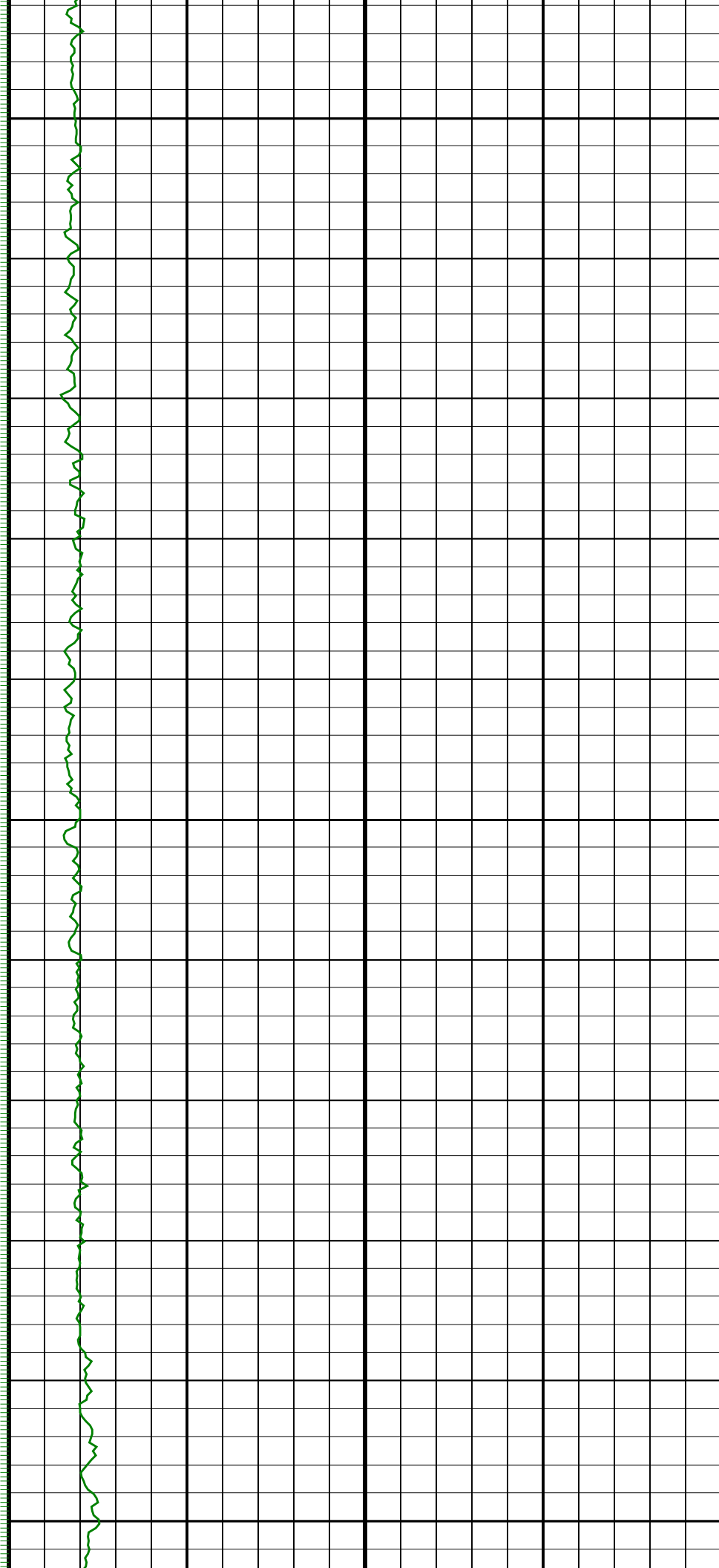


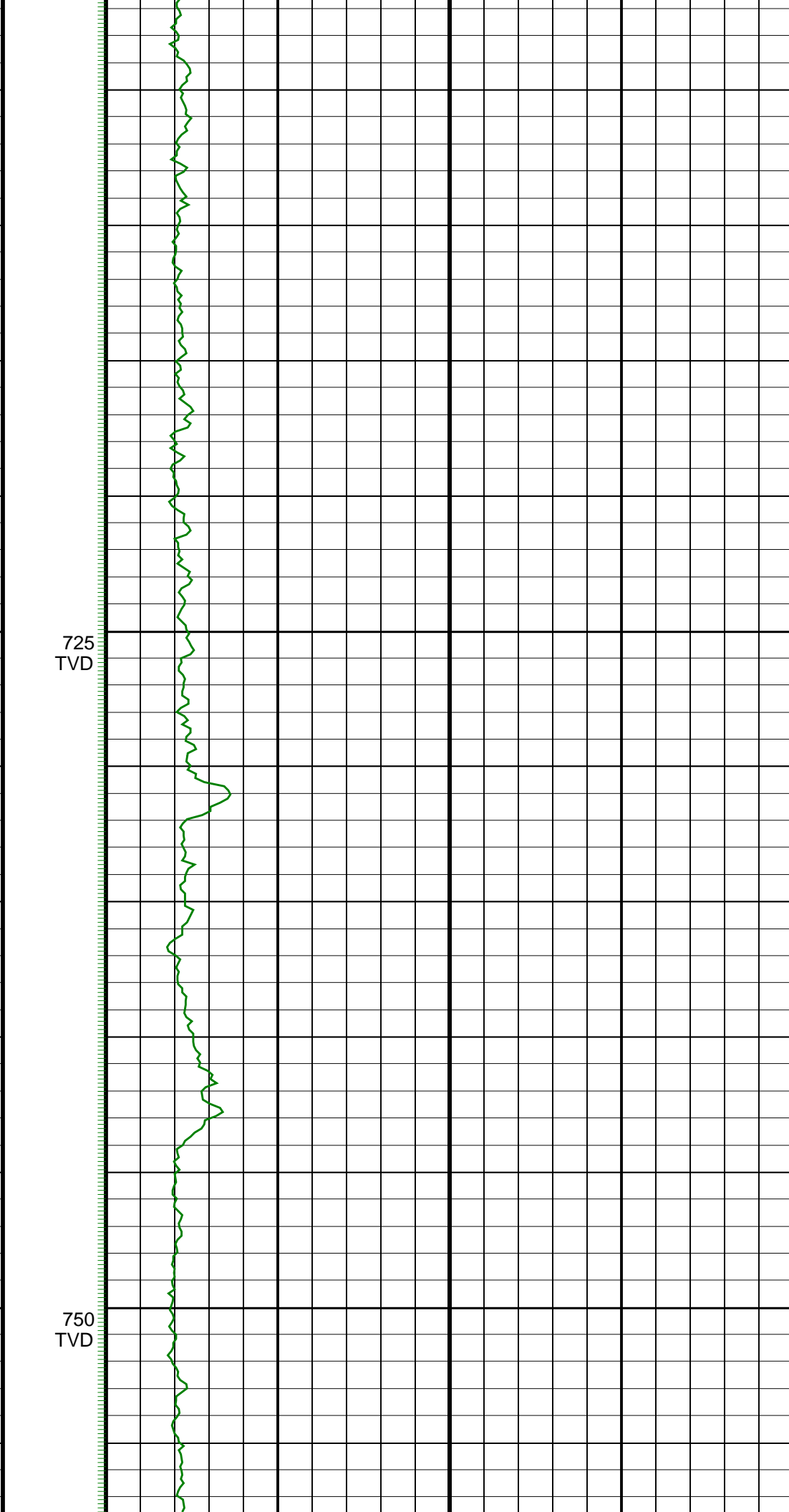
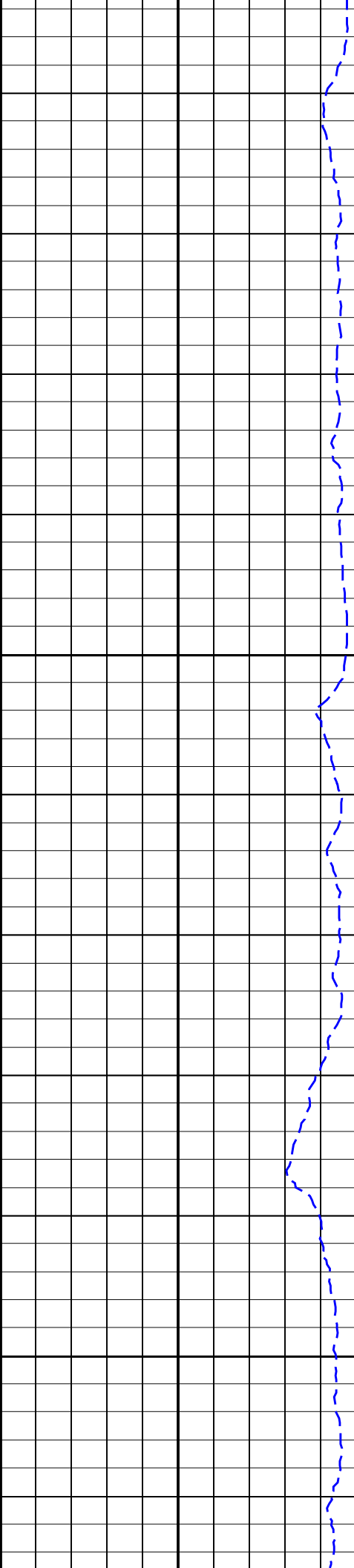


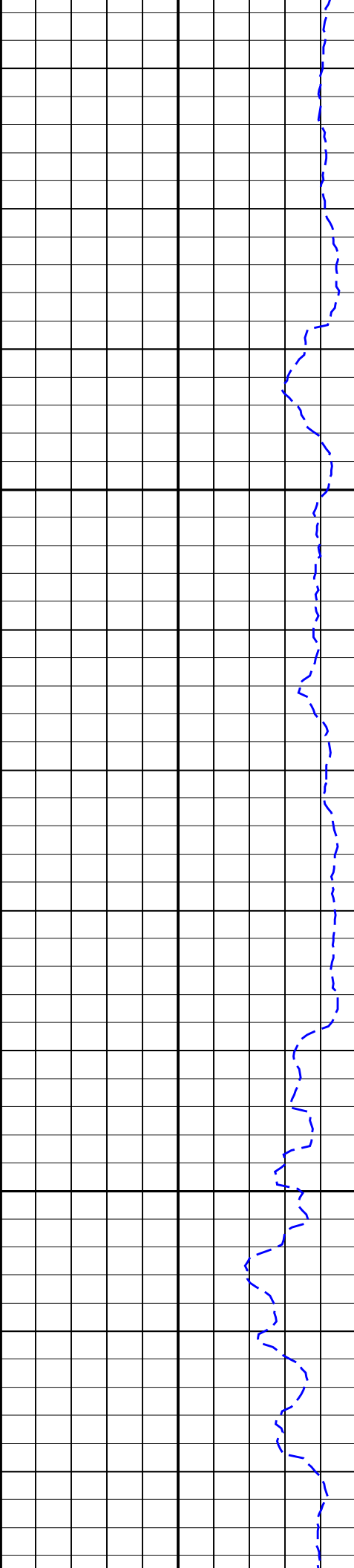
650
TVD

675
TVD

700
TVD

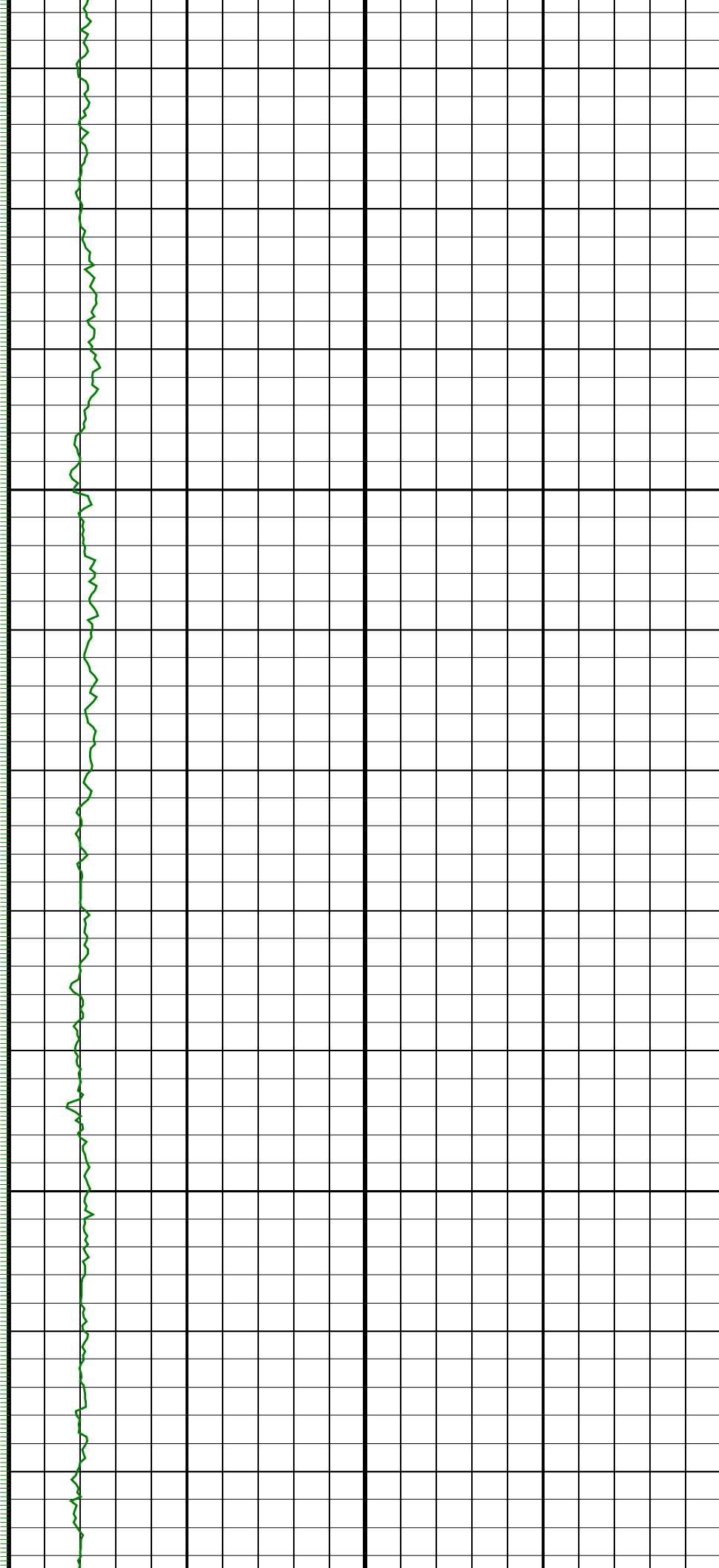


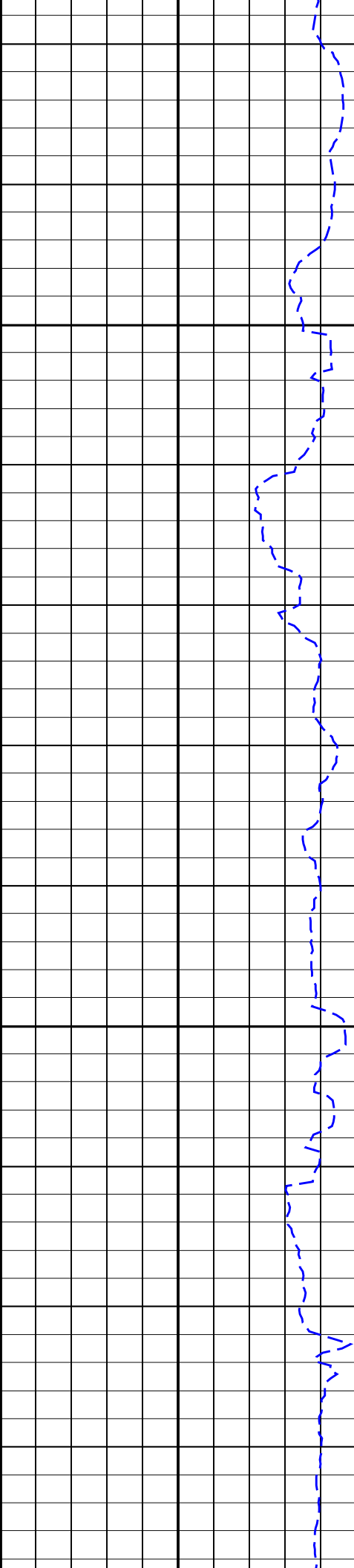




775
TVD

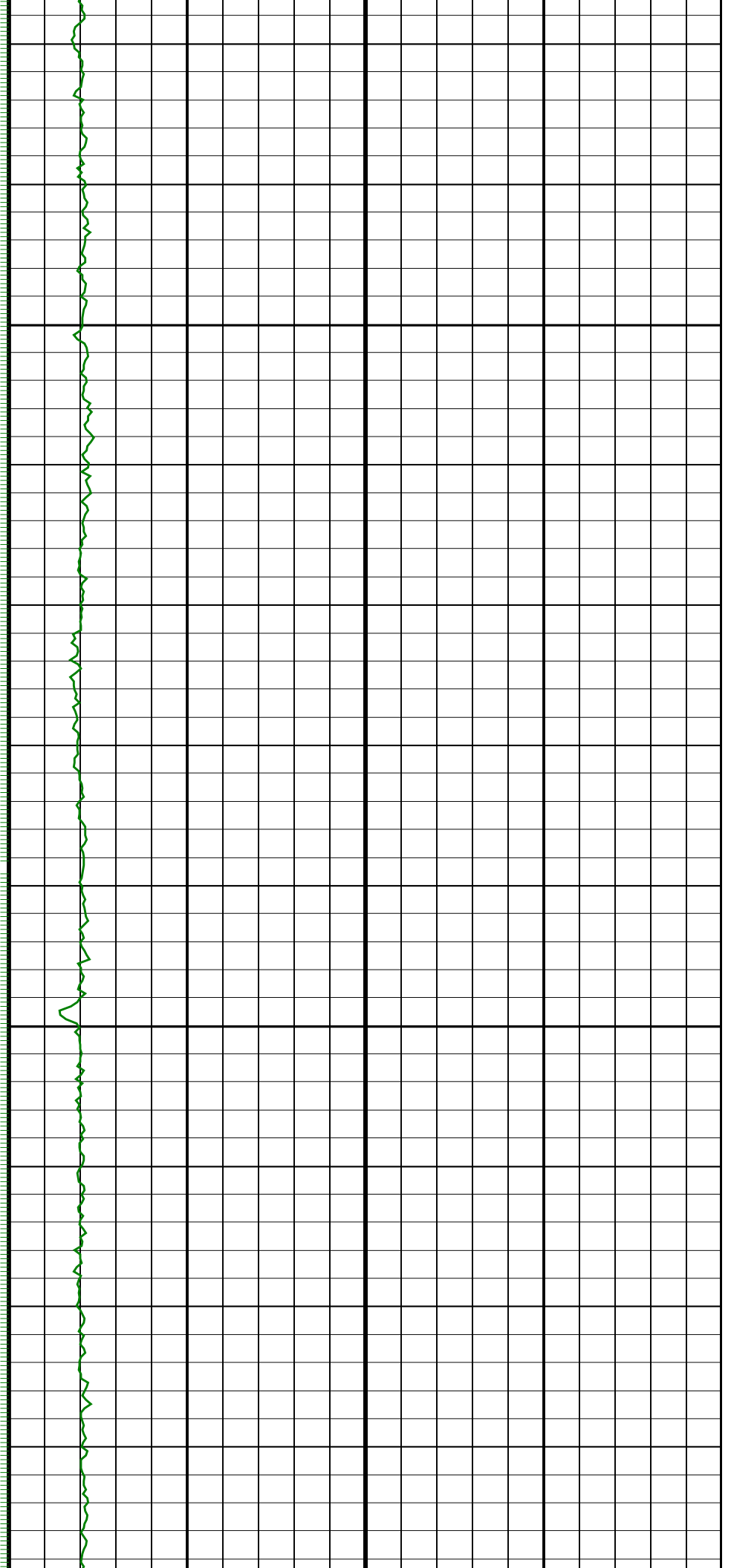
800
TVD

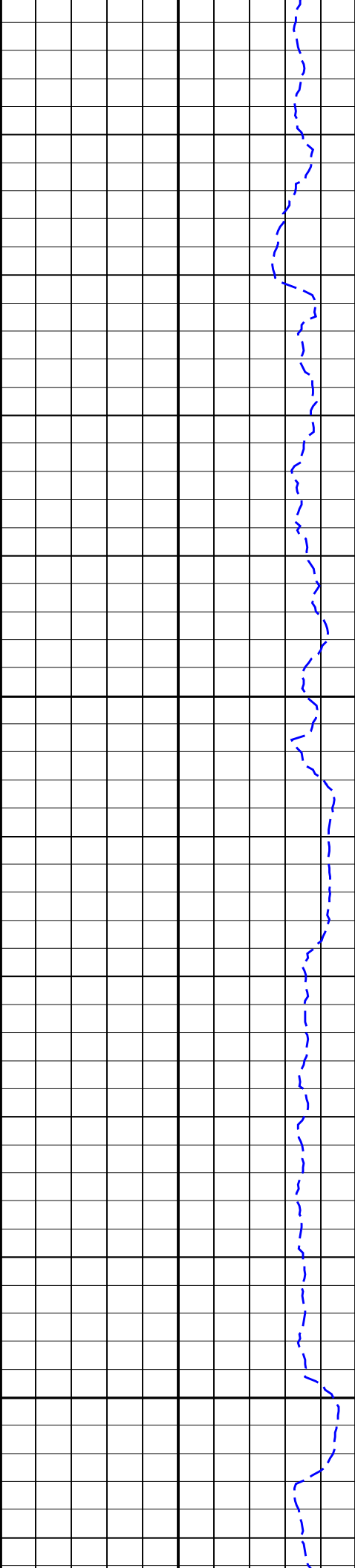




825
TVD

850
TVD

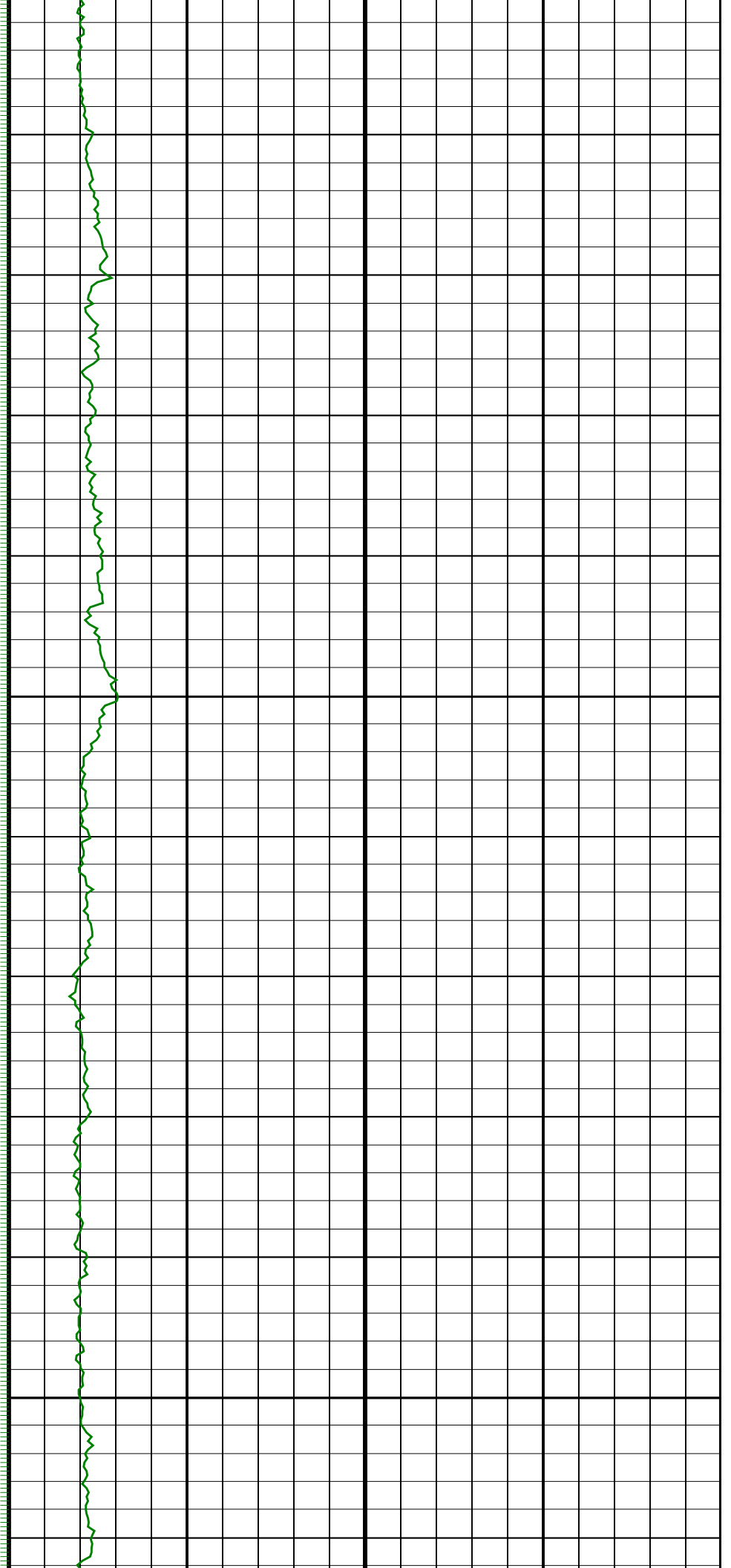


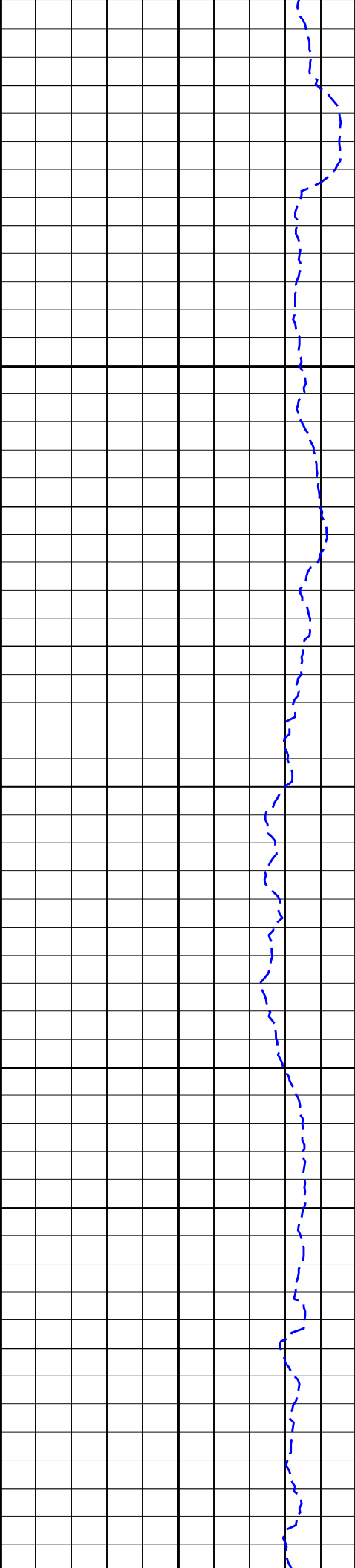


925
TVD

950
TVD

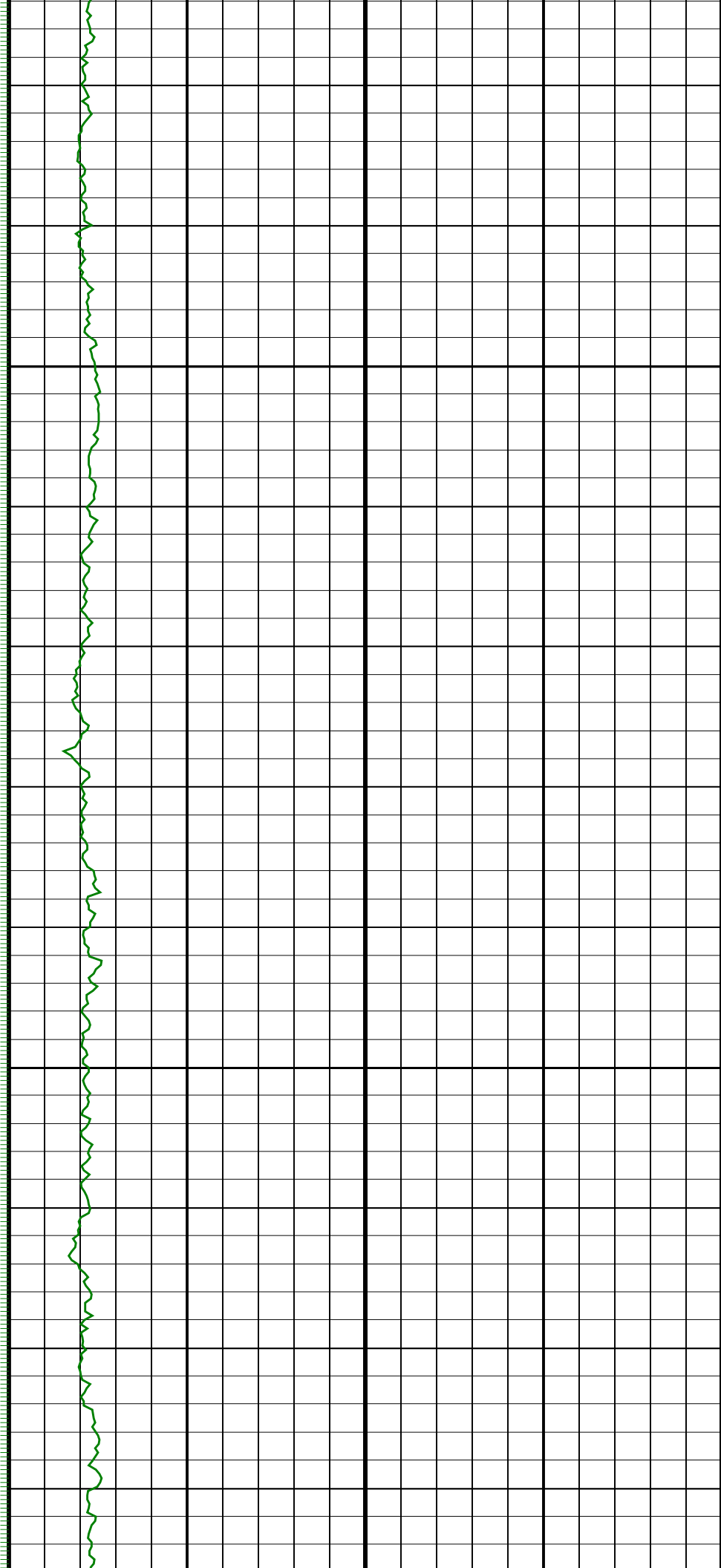
975
TVD

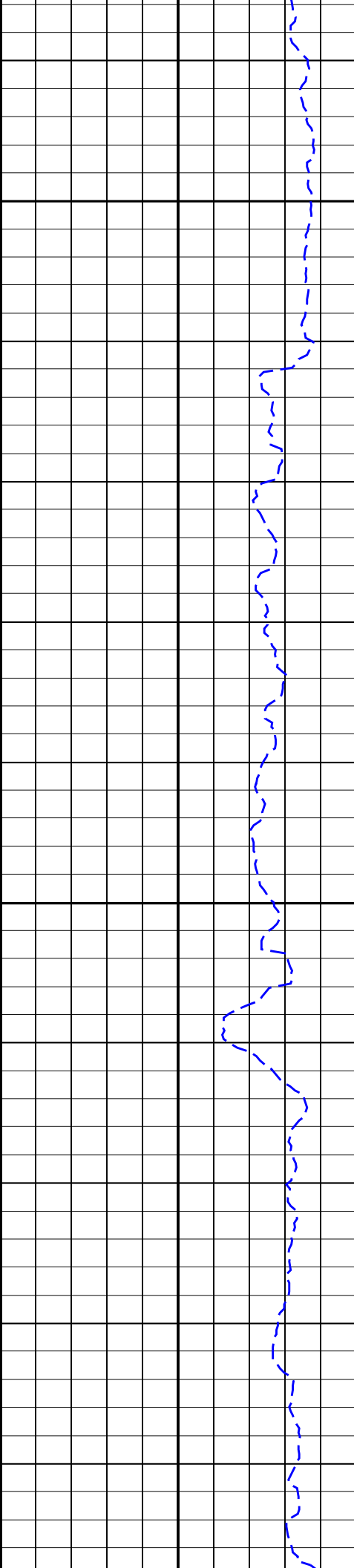




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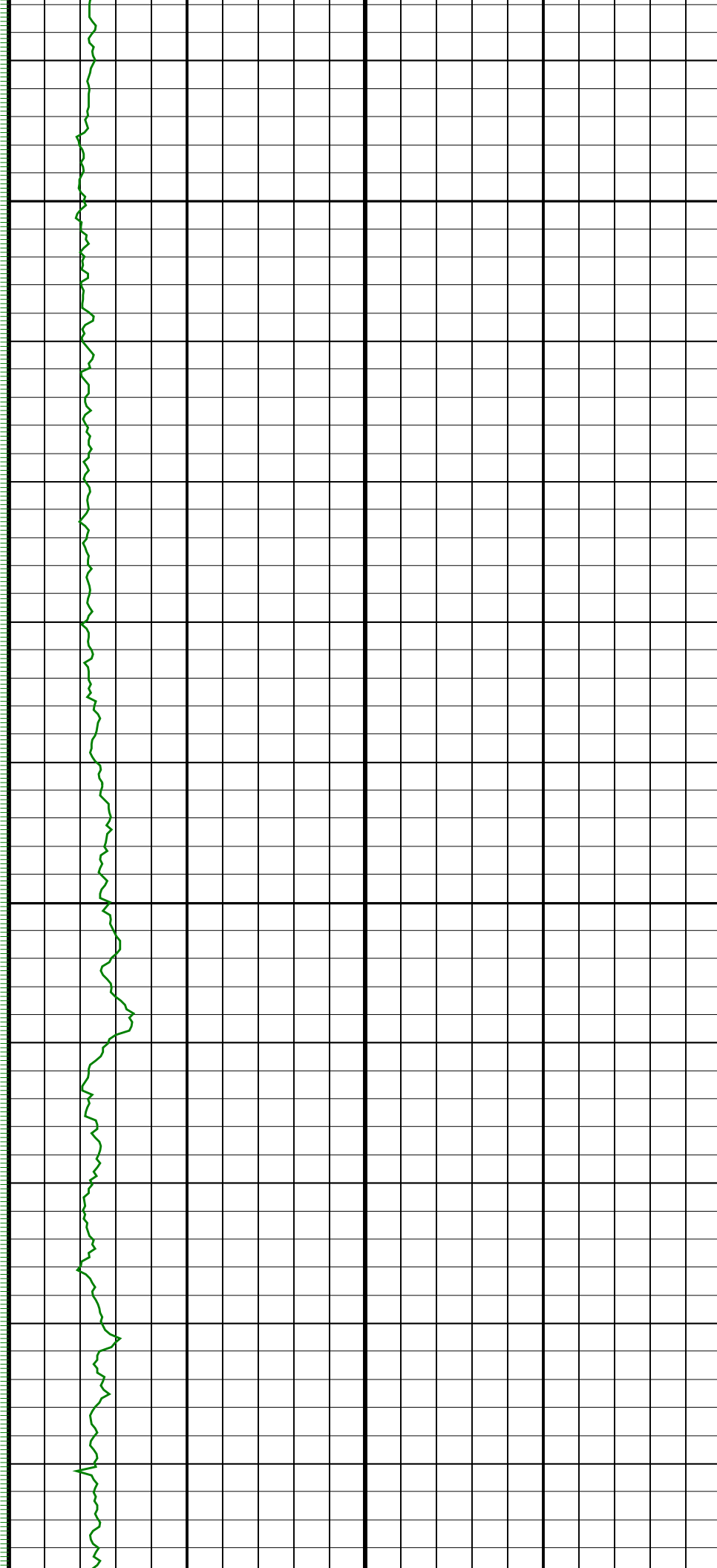
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TVD

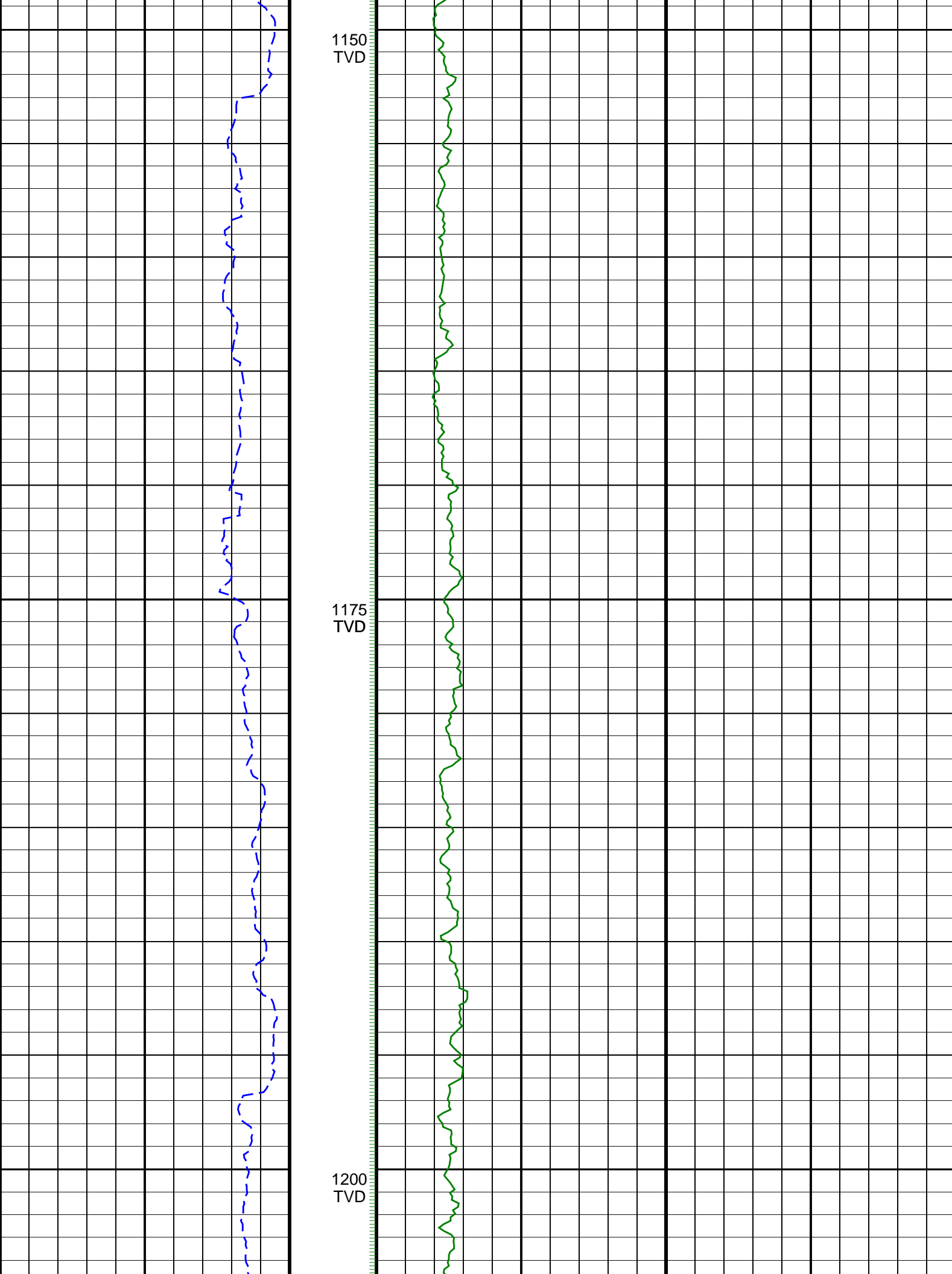


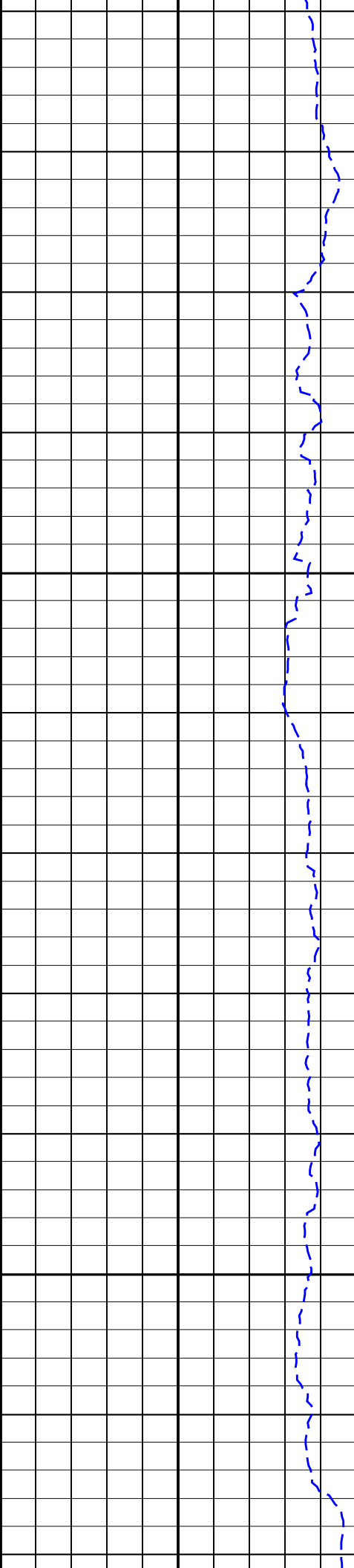


1100
TVD

1125
TVD

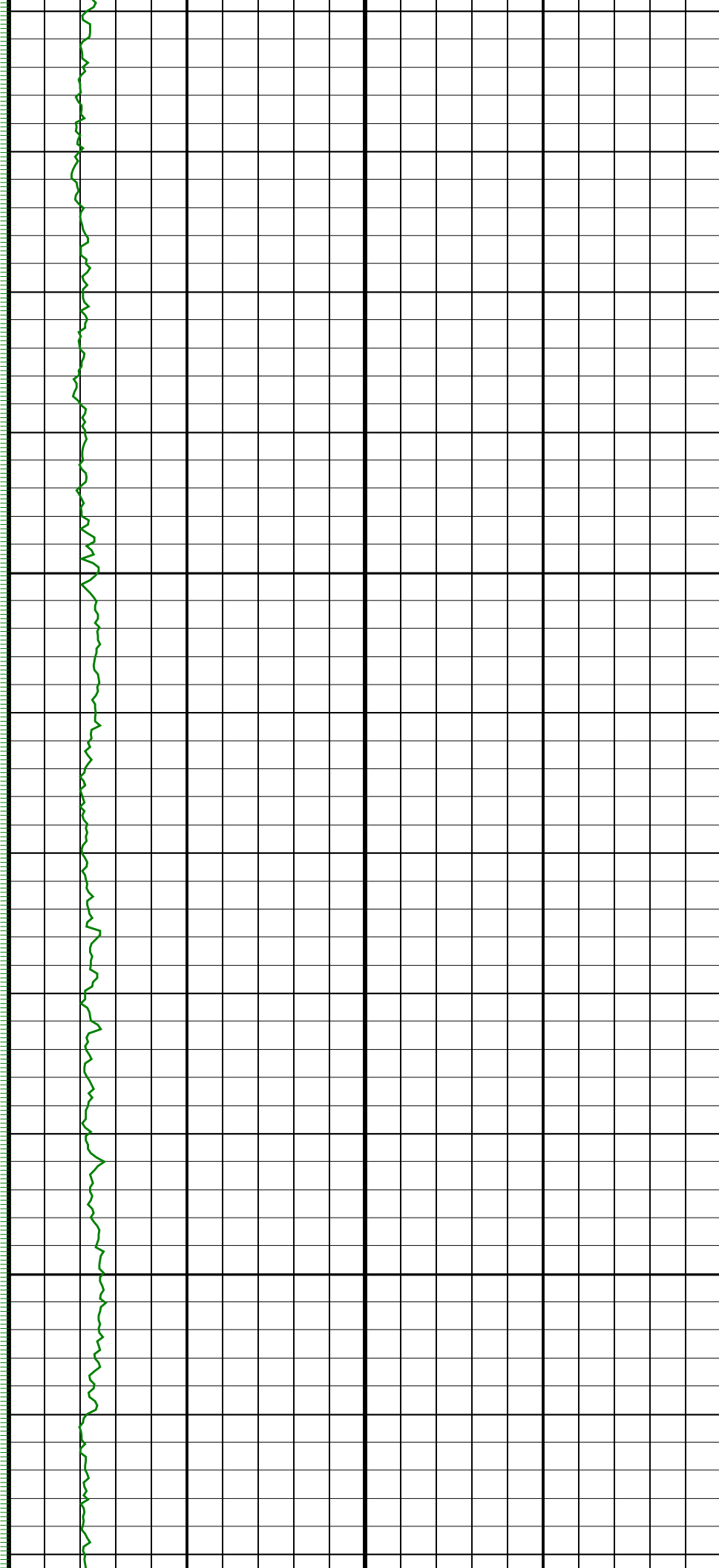


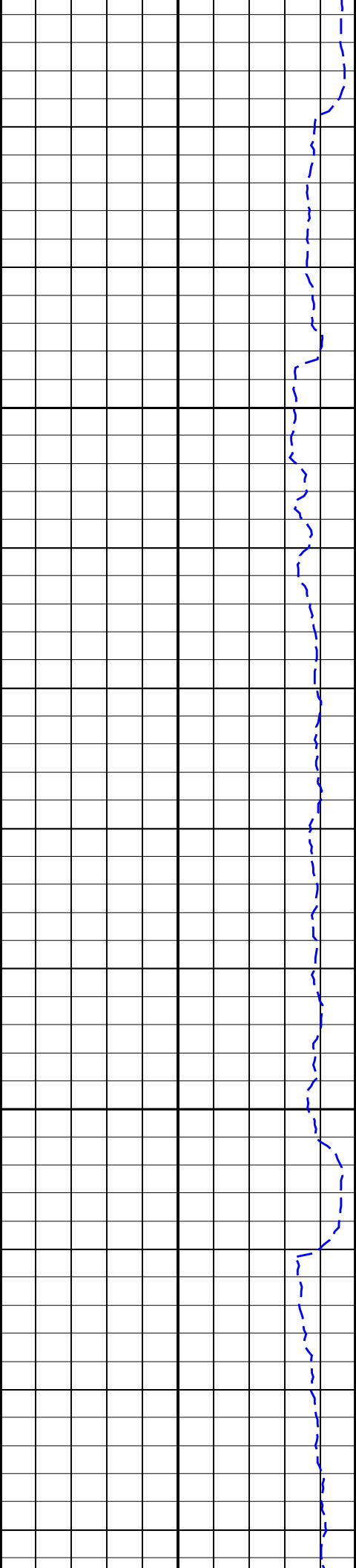




1225
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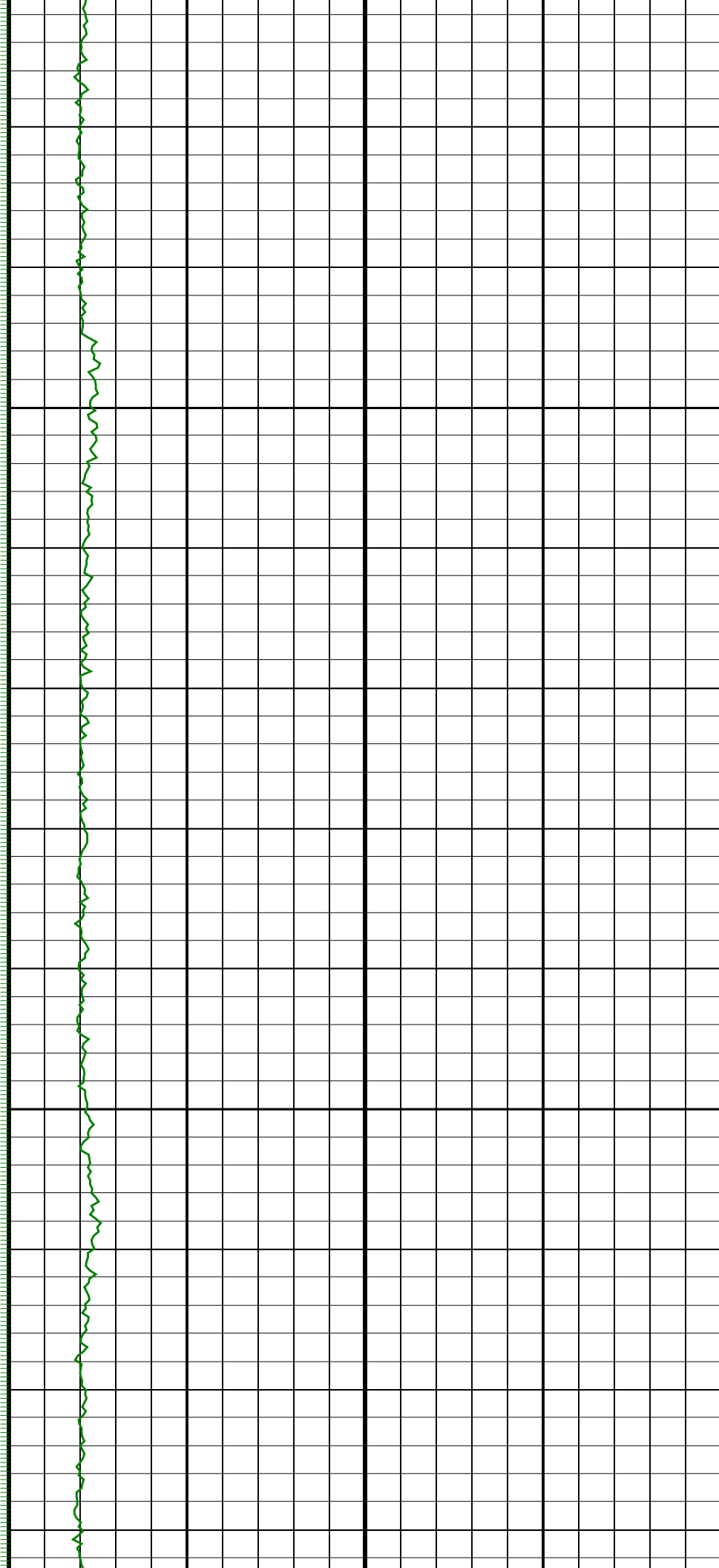
1250
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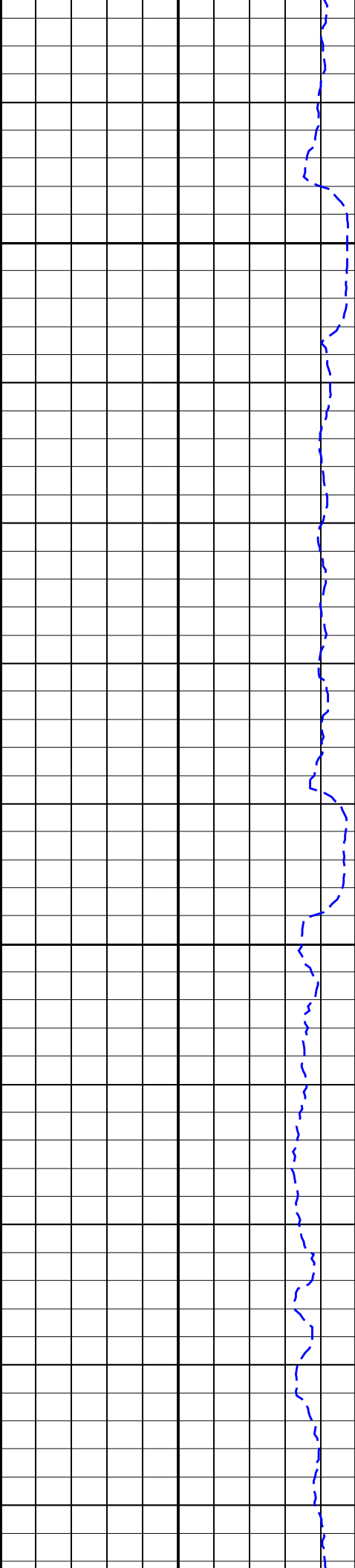




1275
TVD

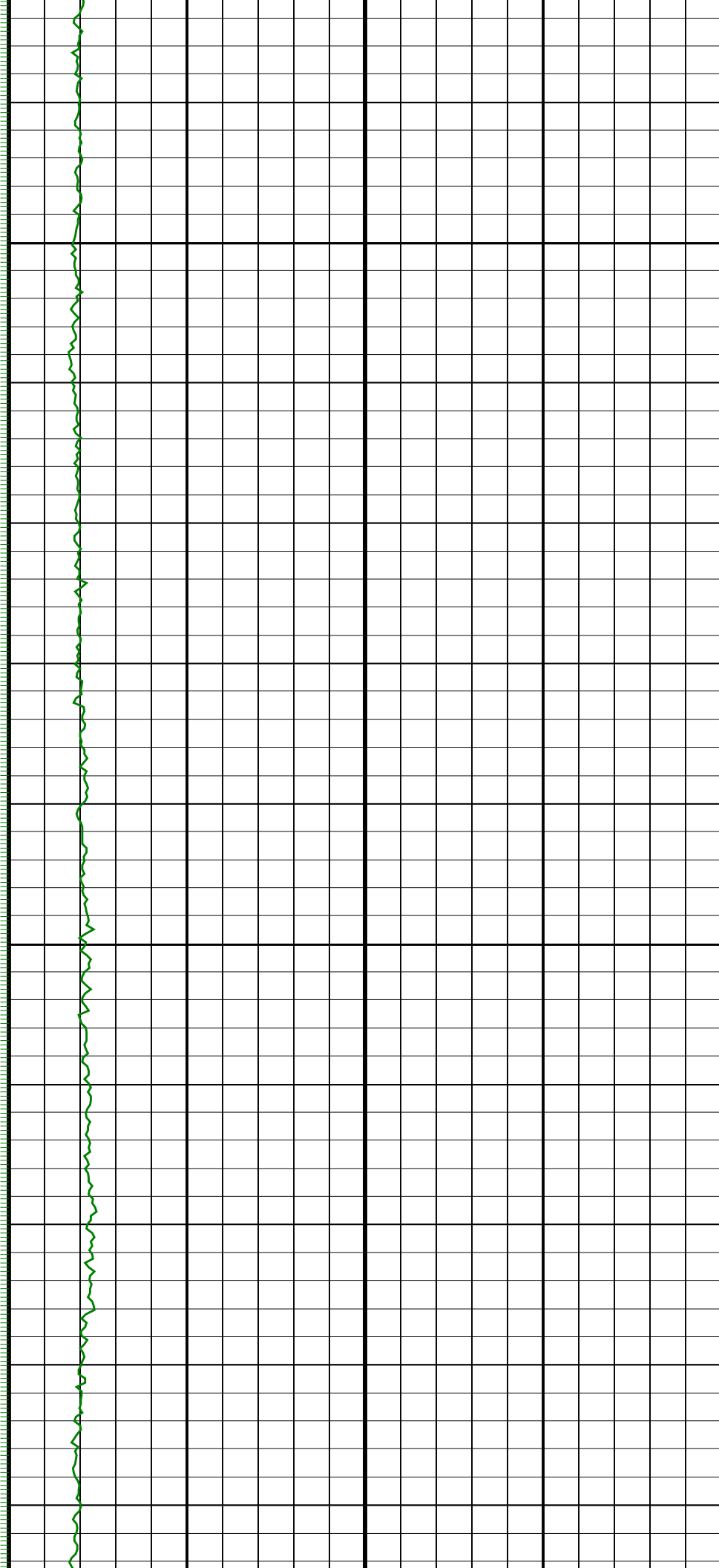
1300
TVD

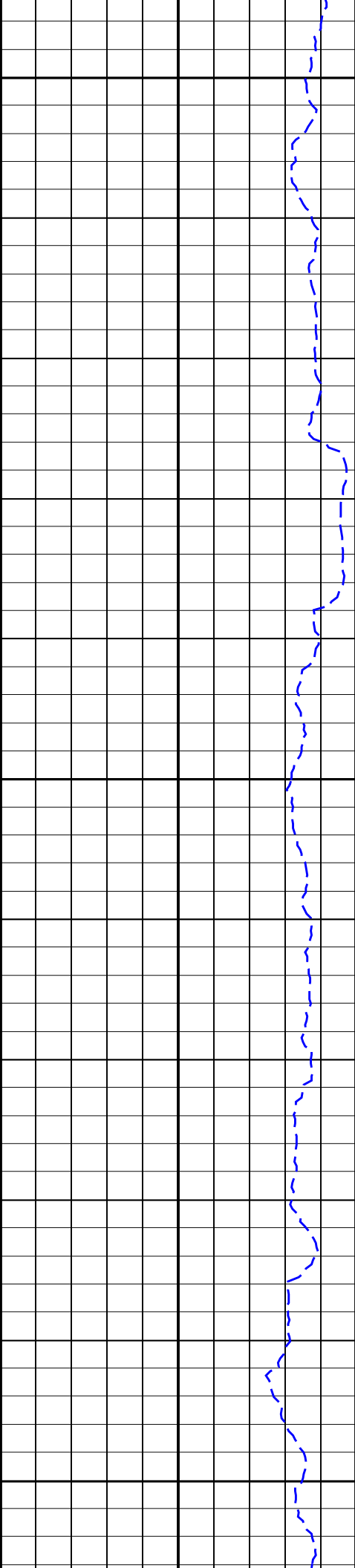




1325
TVD

1350
TVD

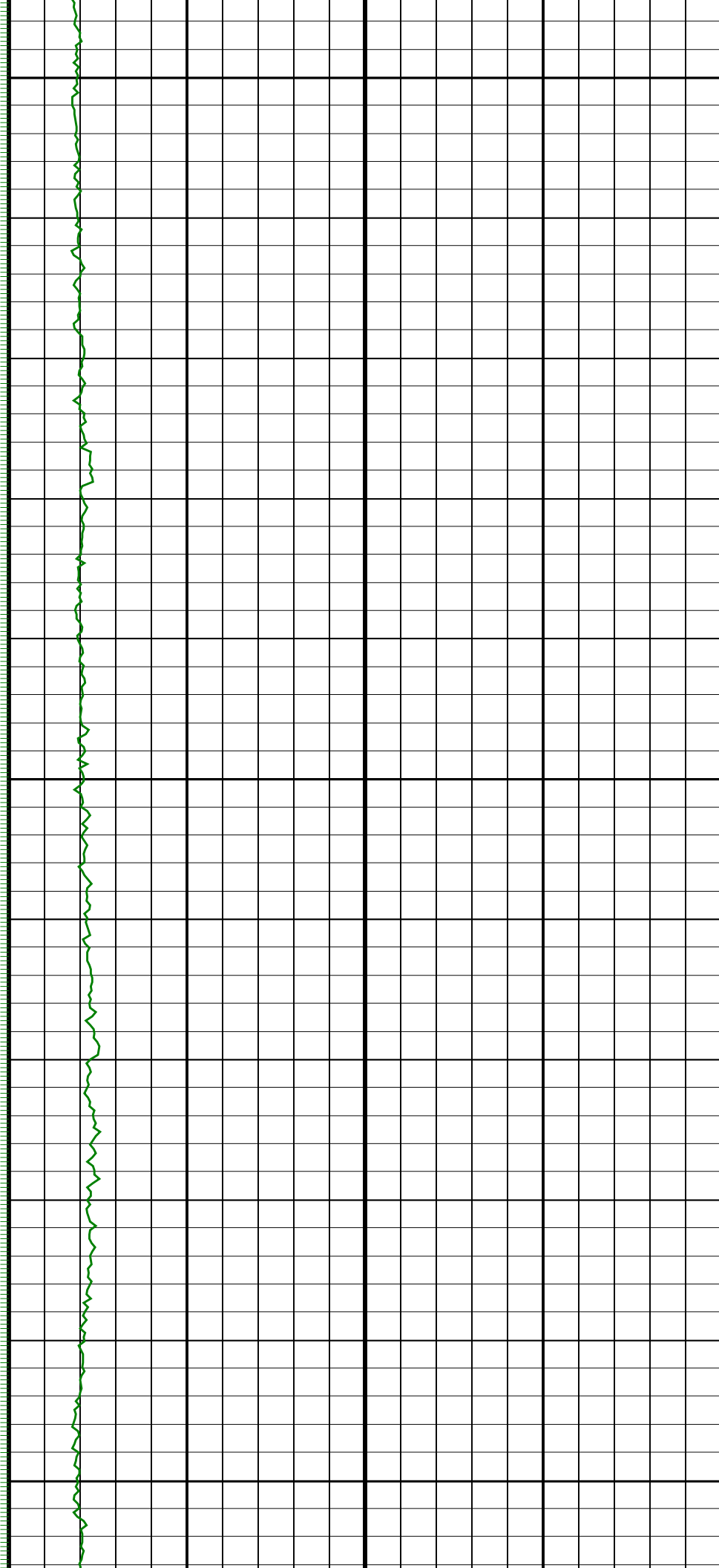


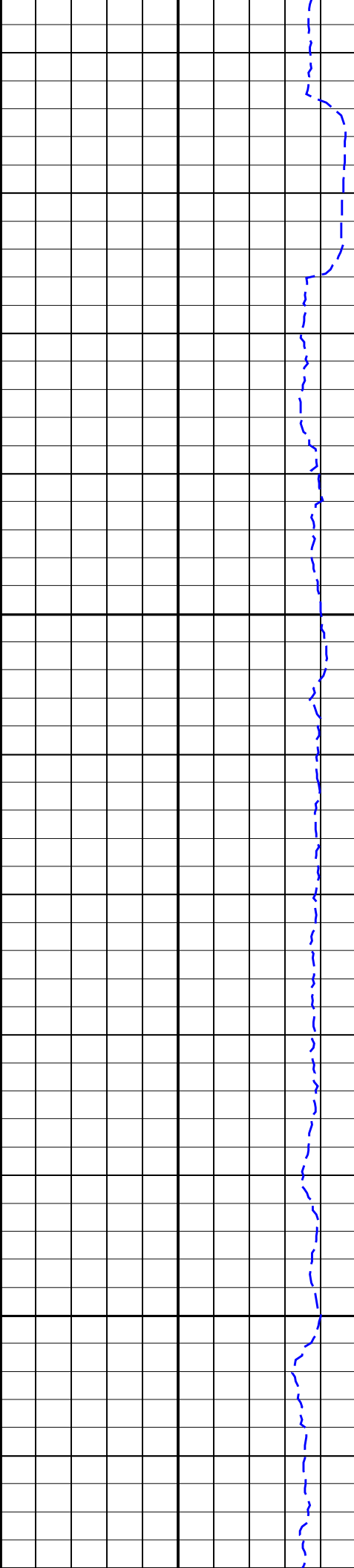


1375
TVD

1400
TVD

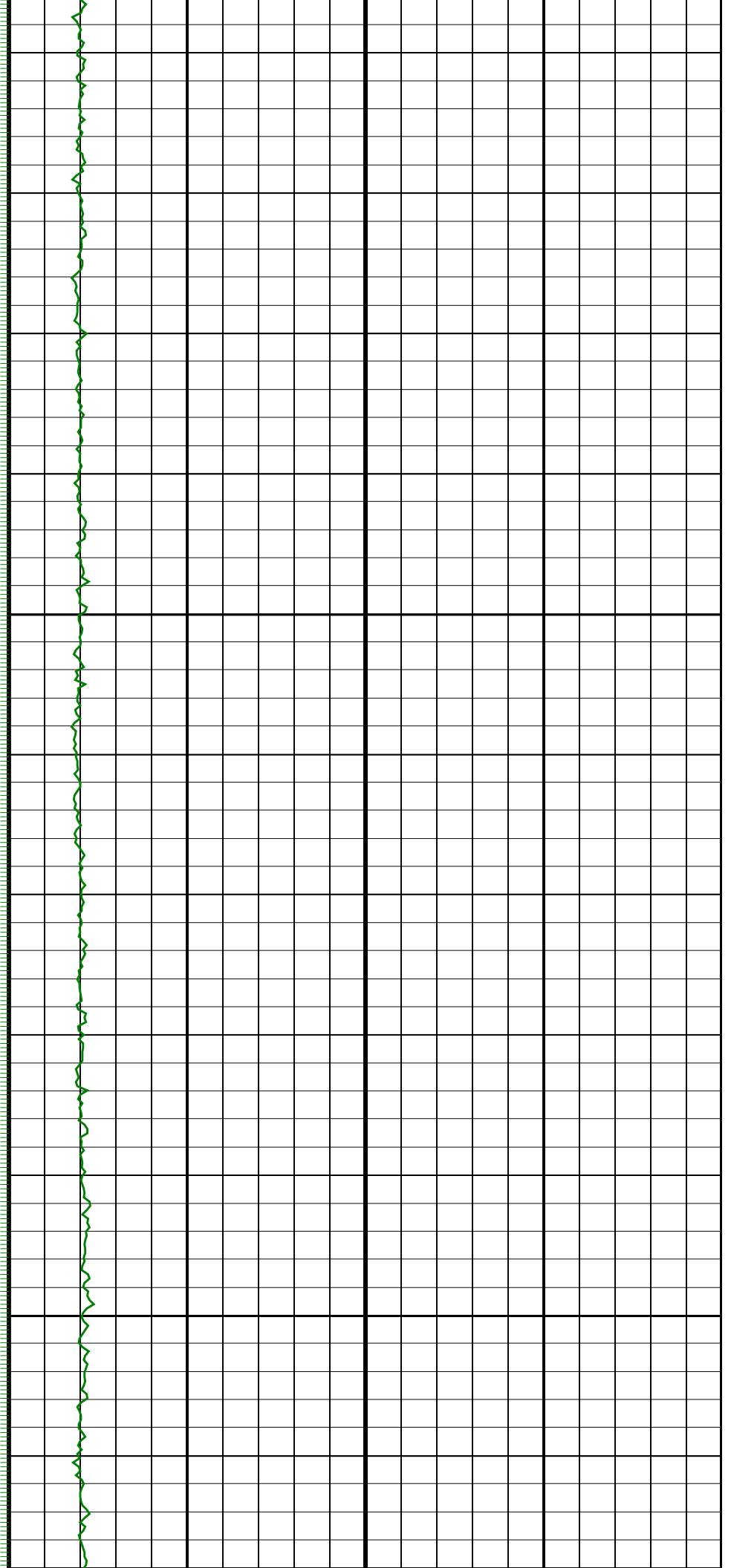
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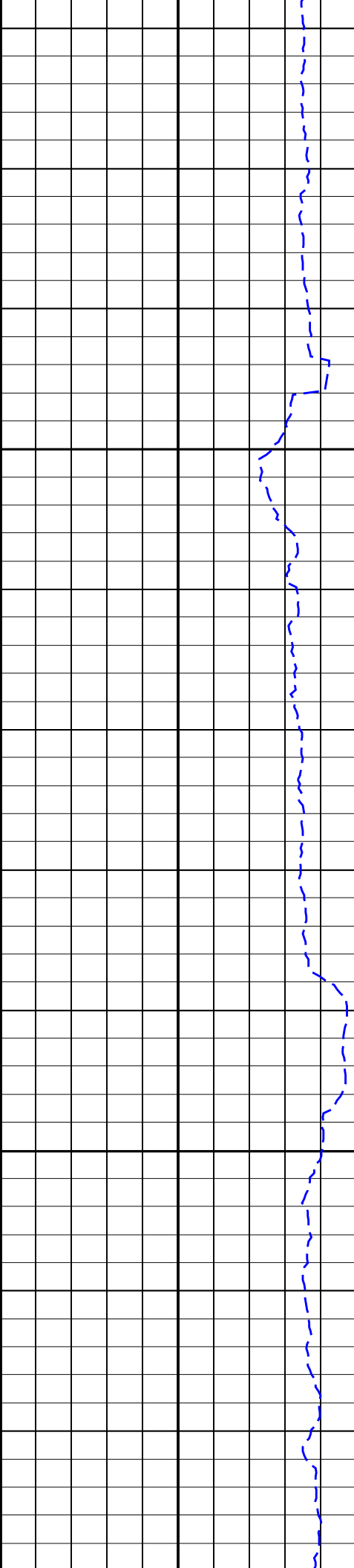




1450
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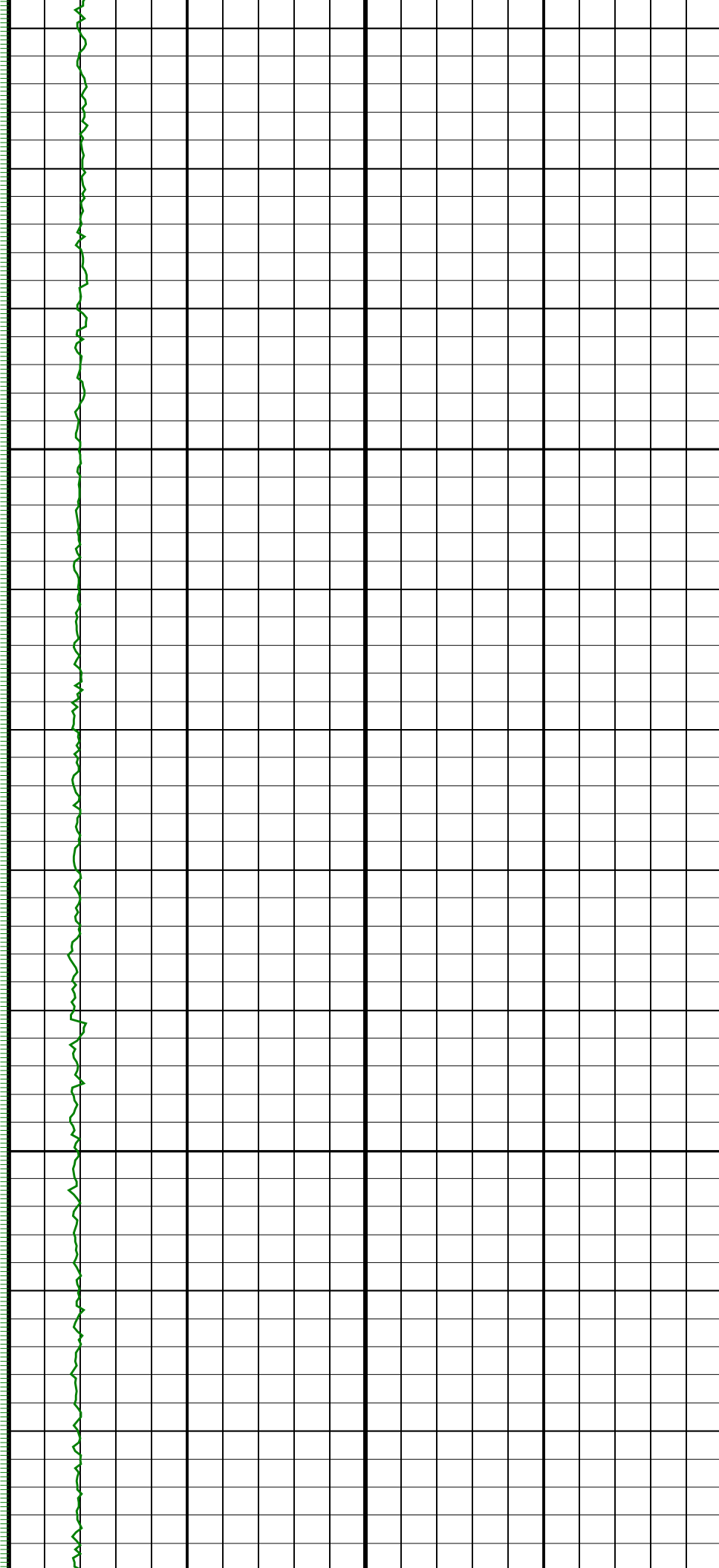
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TVD

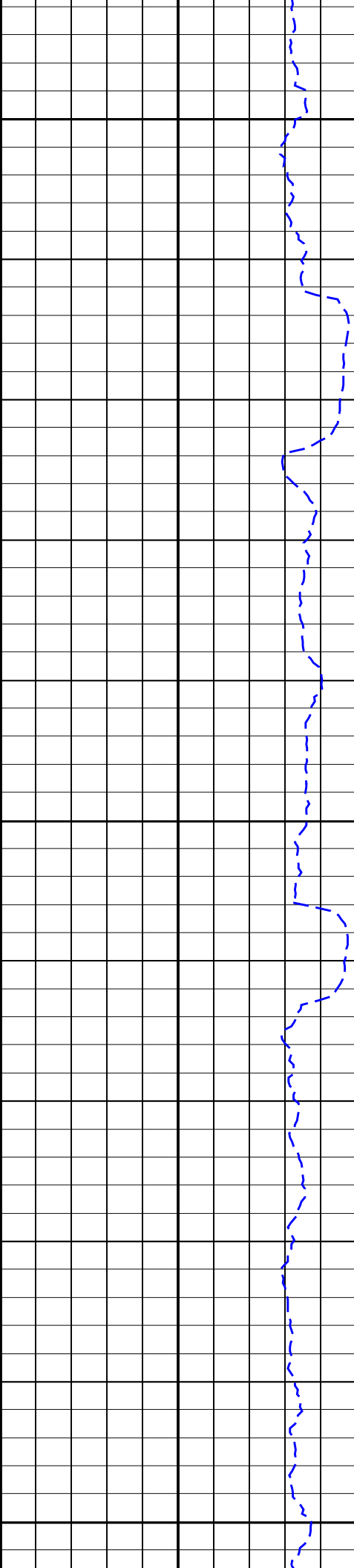




1500
TVD

1525
TVD

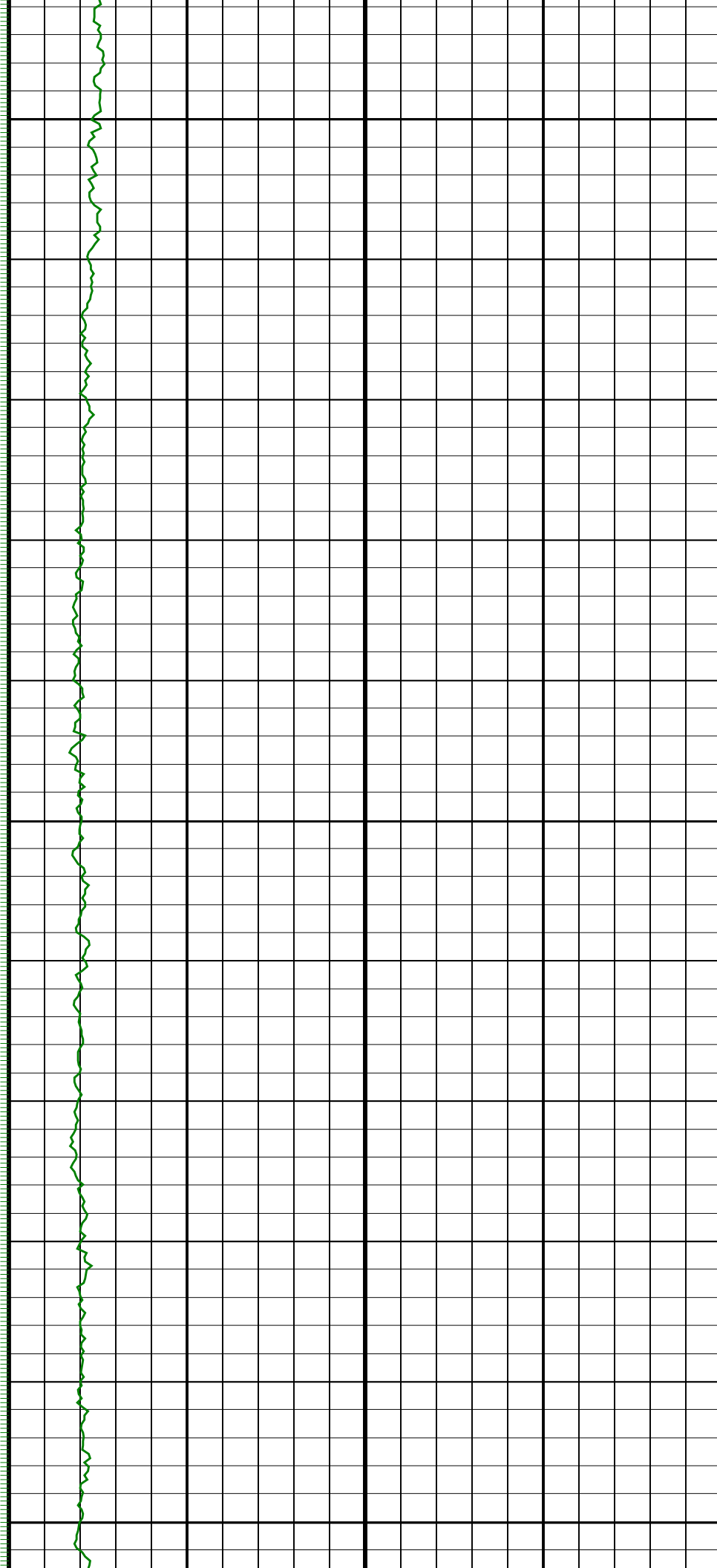


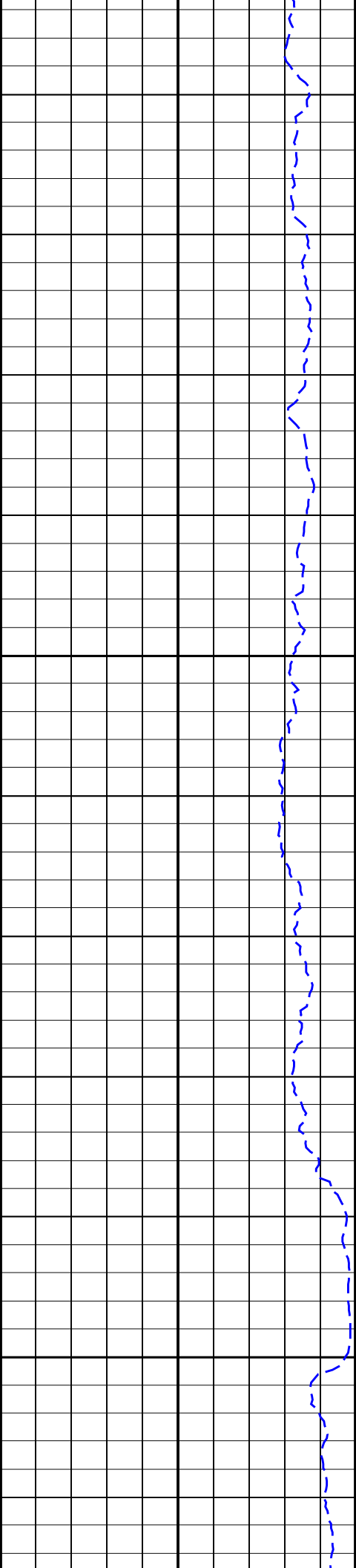


1600
TVD

1625
TVD

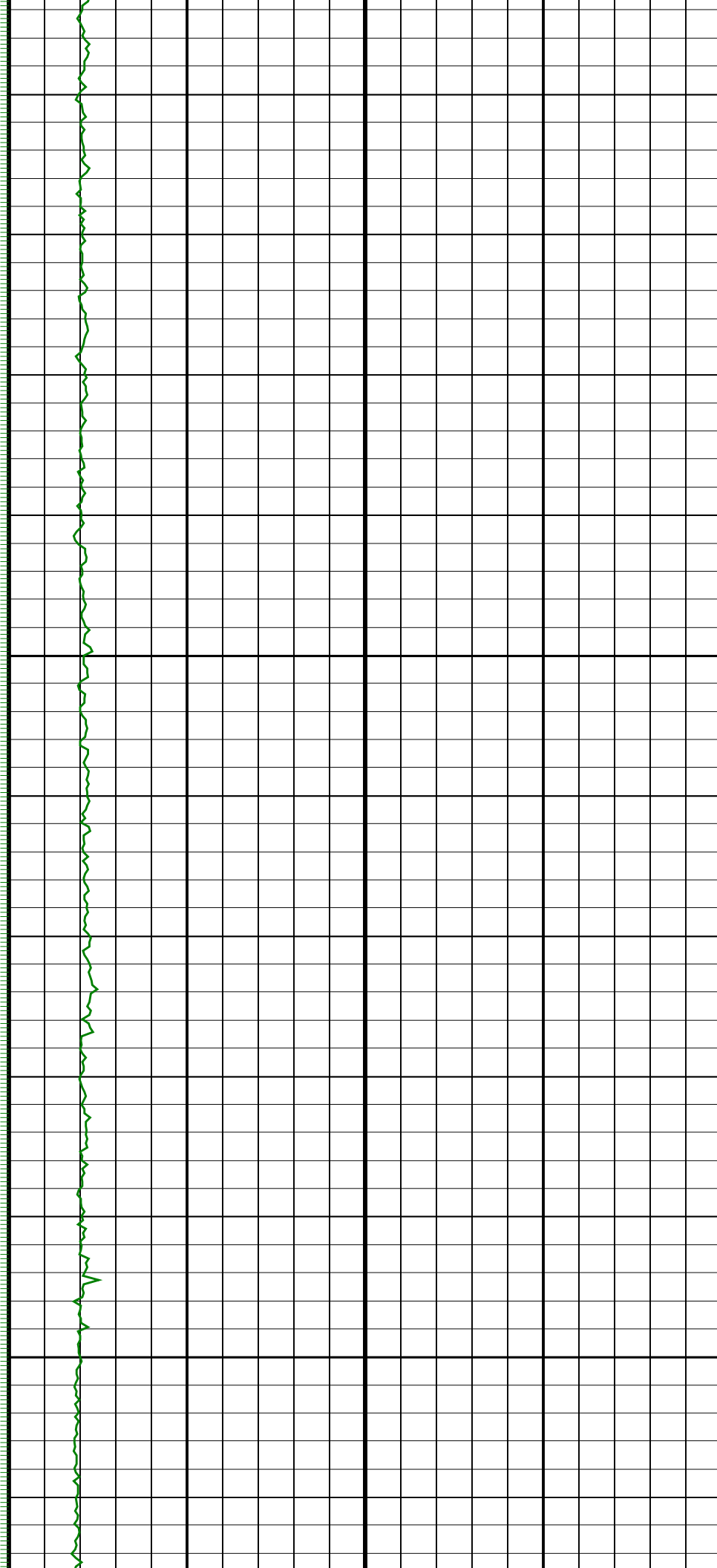
1650
TVD

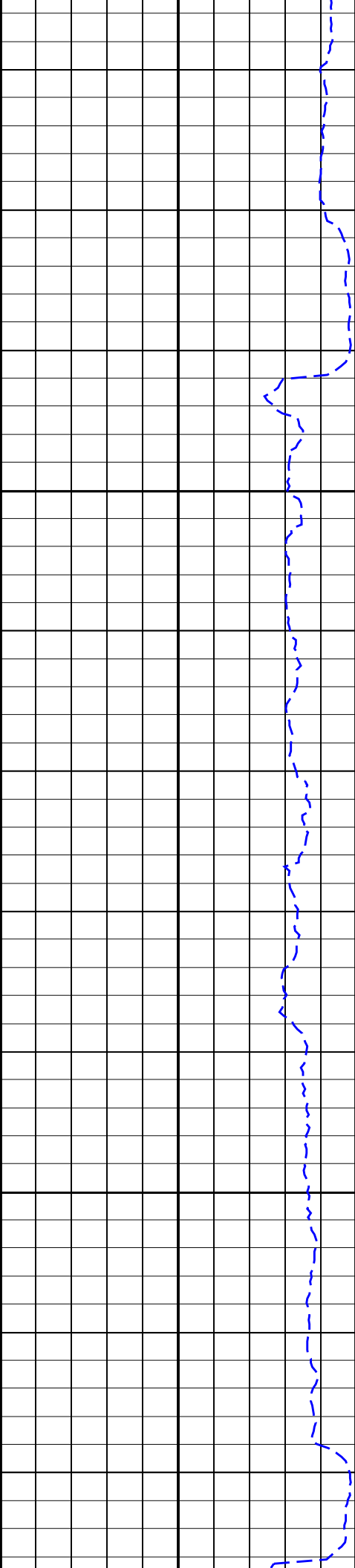




1675
TVD

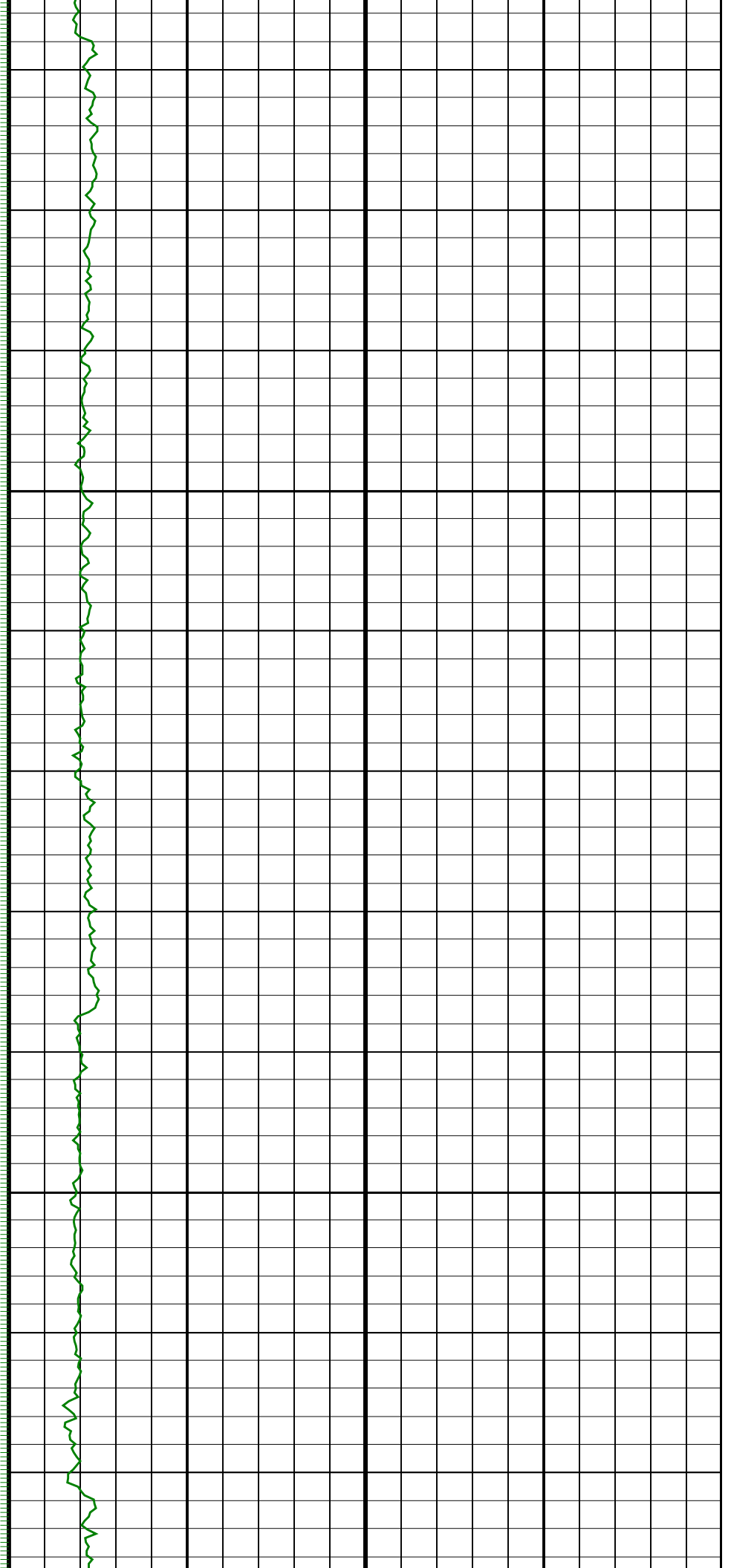
1700
TVD

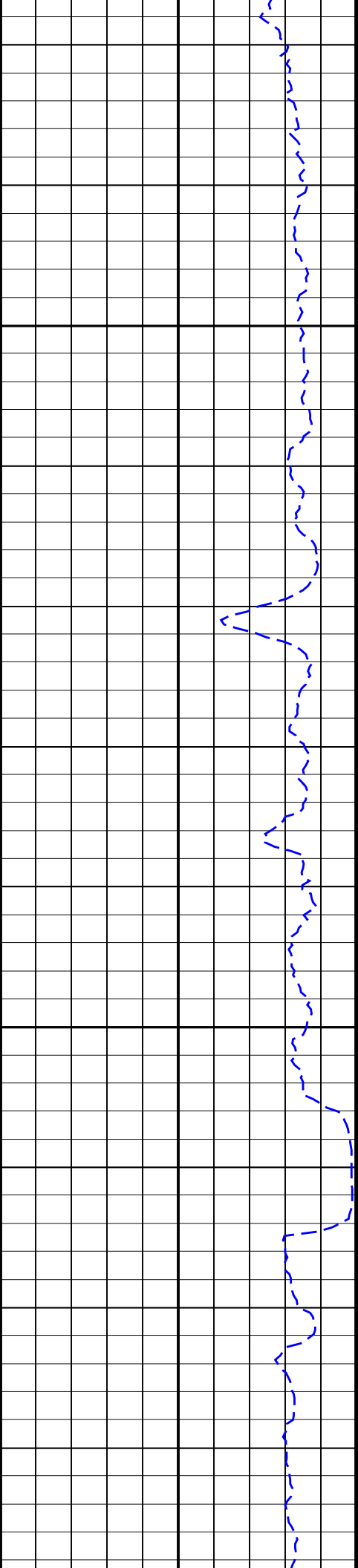




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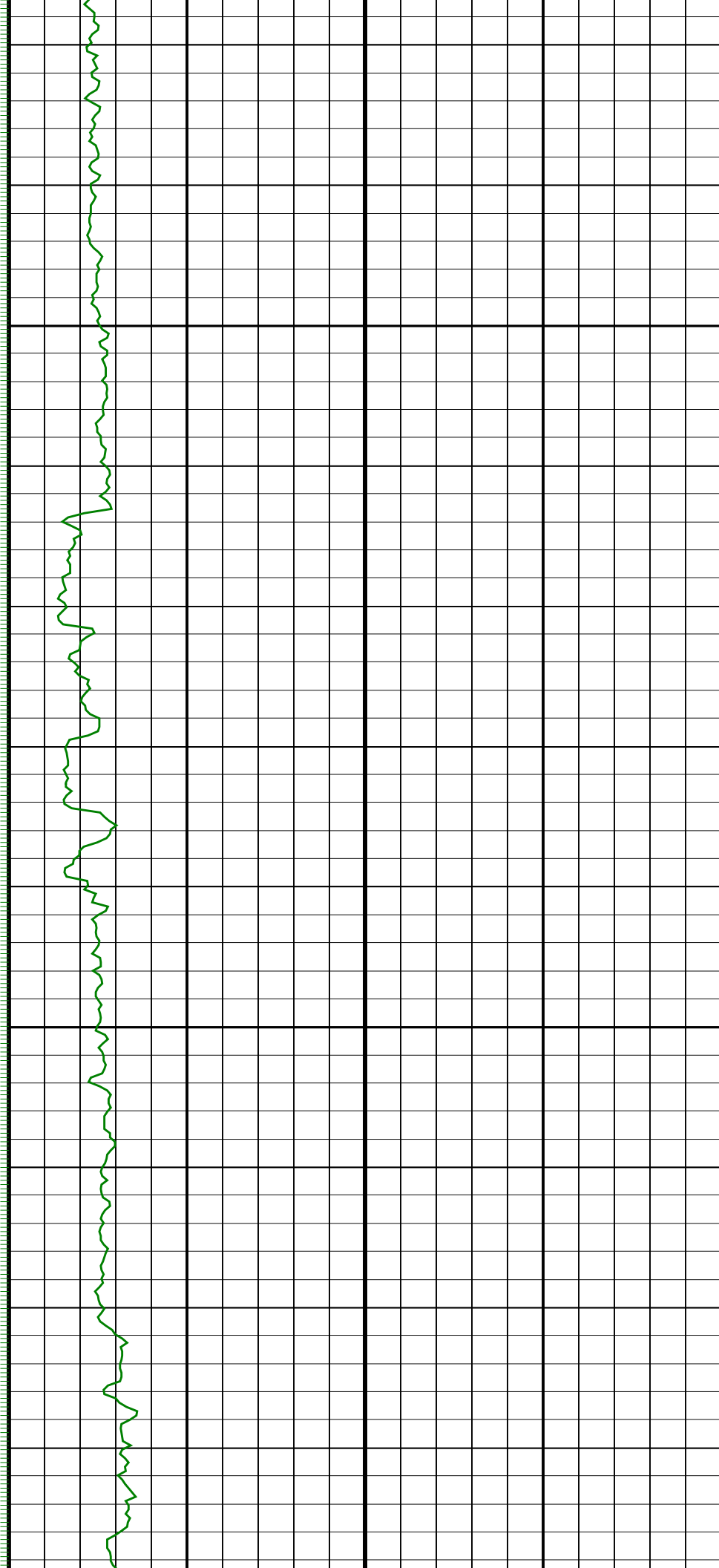
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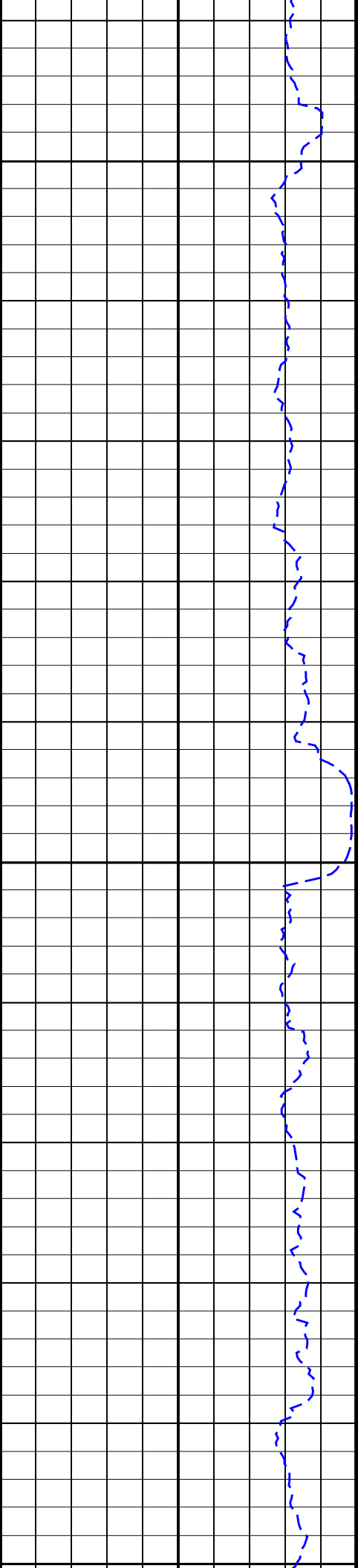




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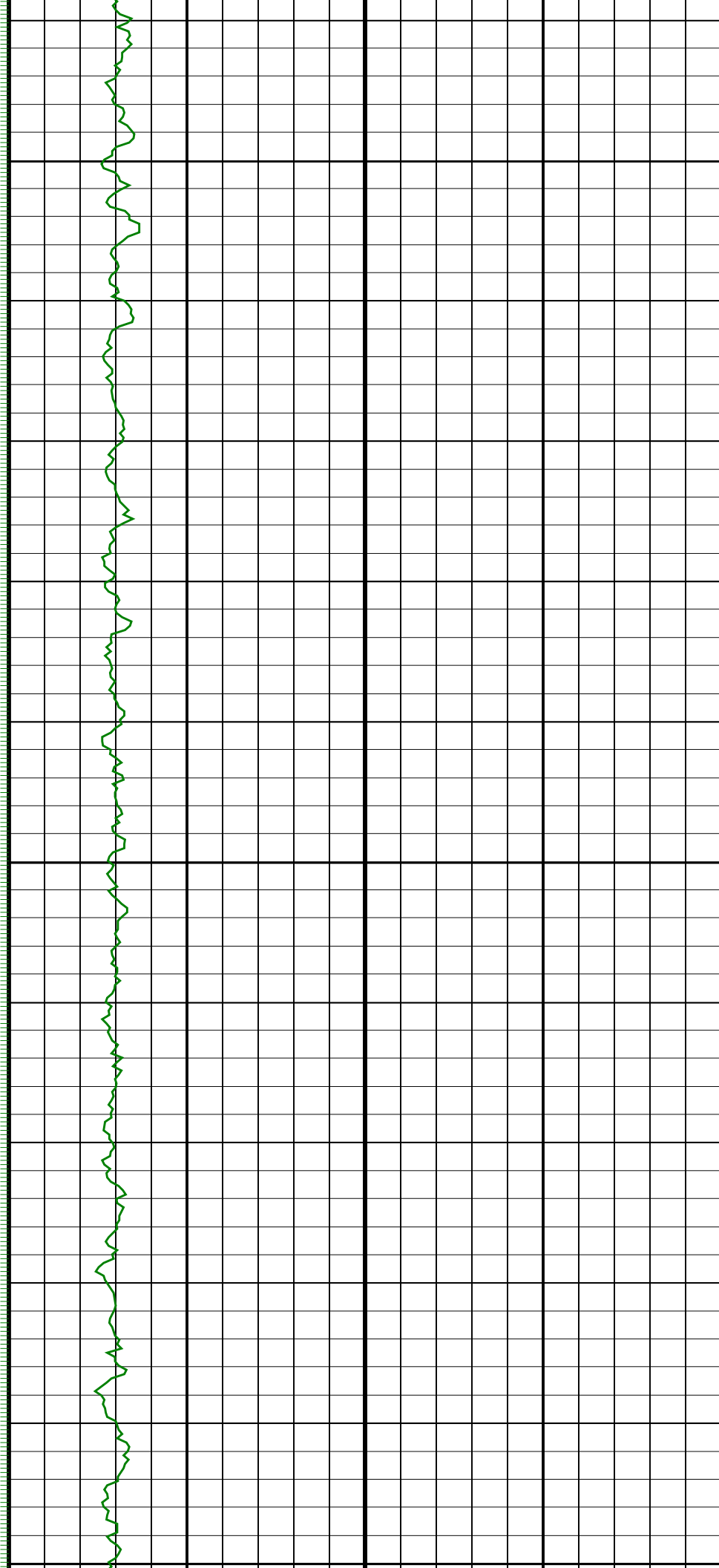
1800
TVD

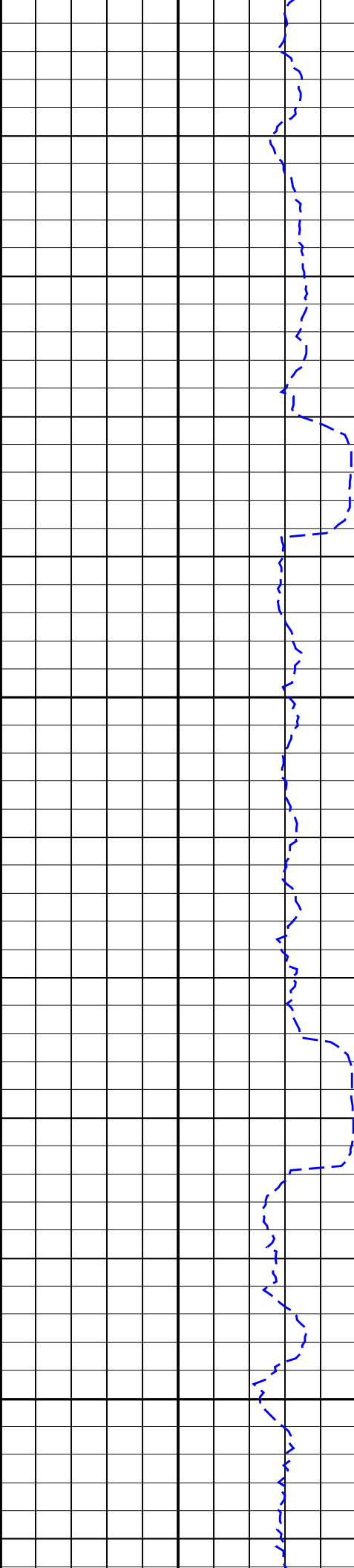




1825
TVD

1850
TVD

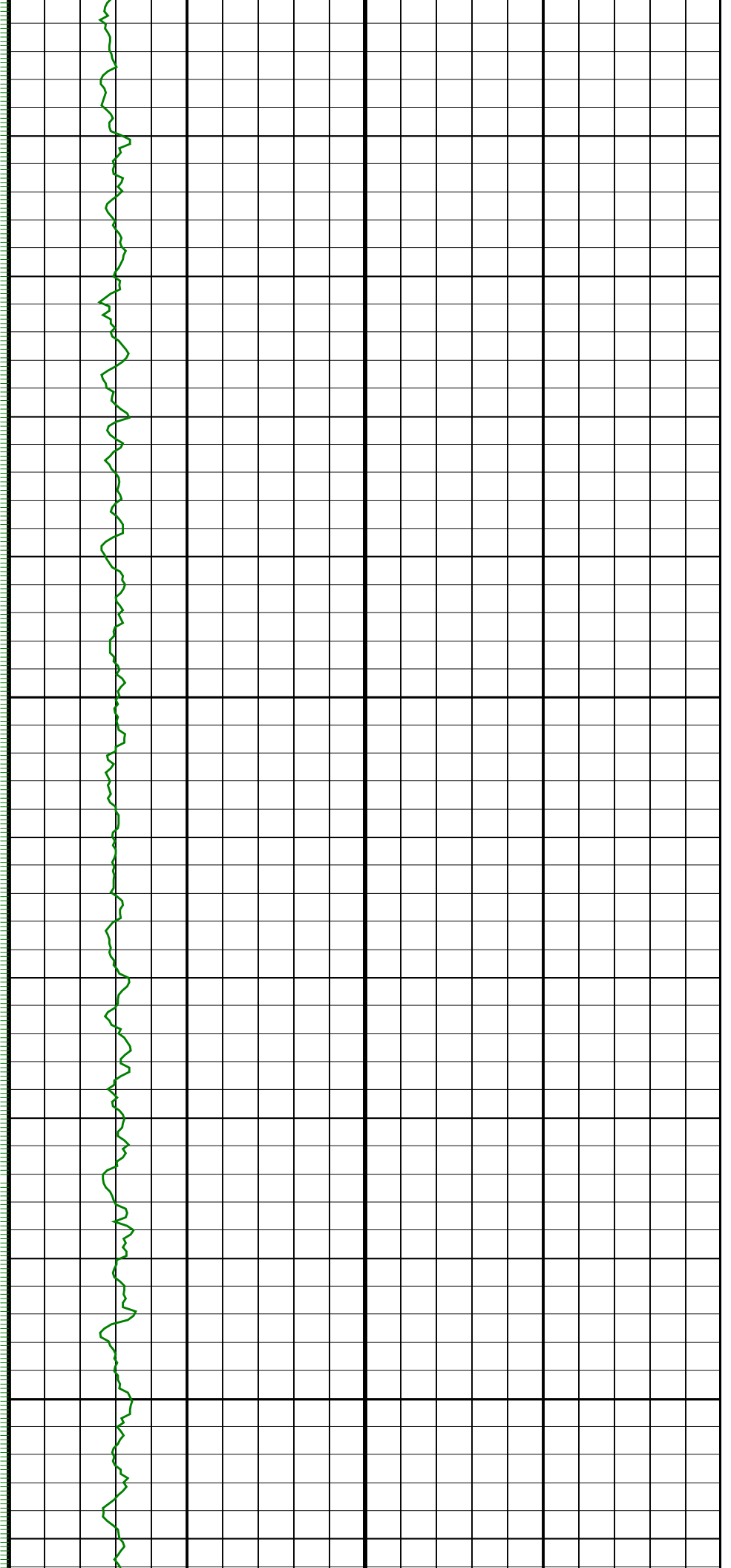


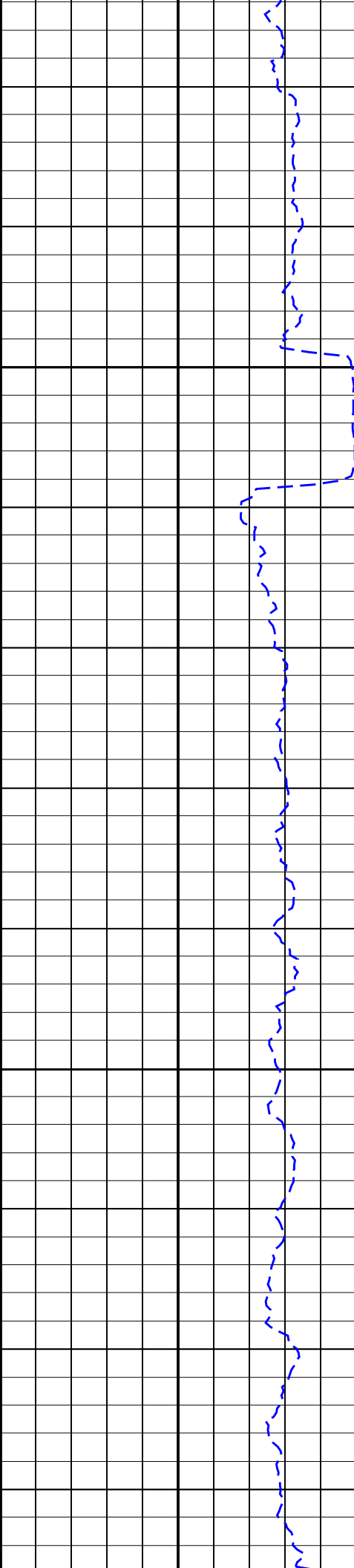


1875
TVD

1900
TVD

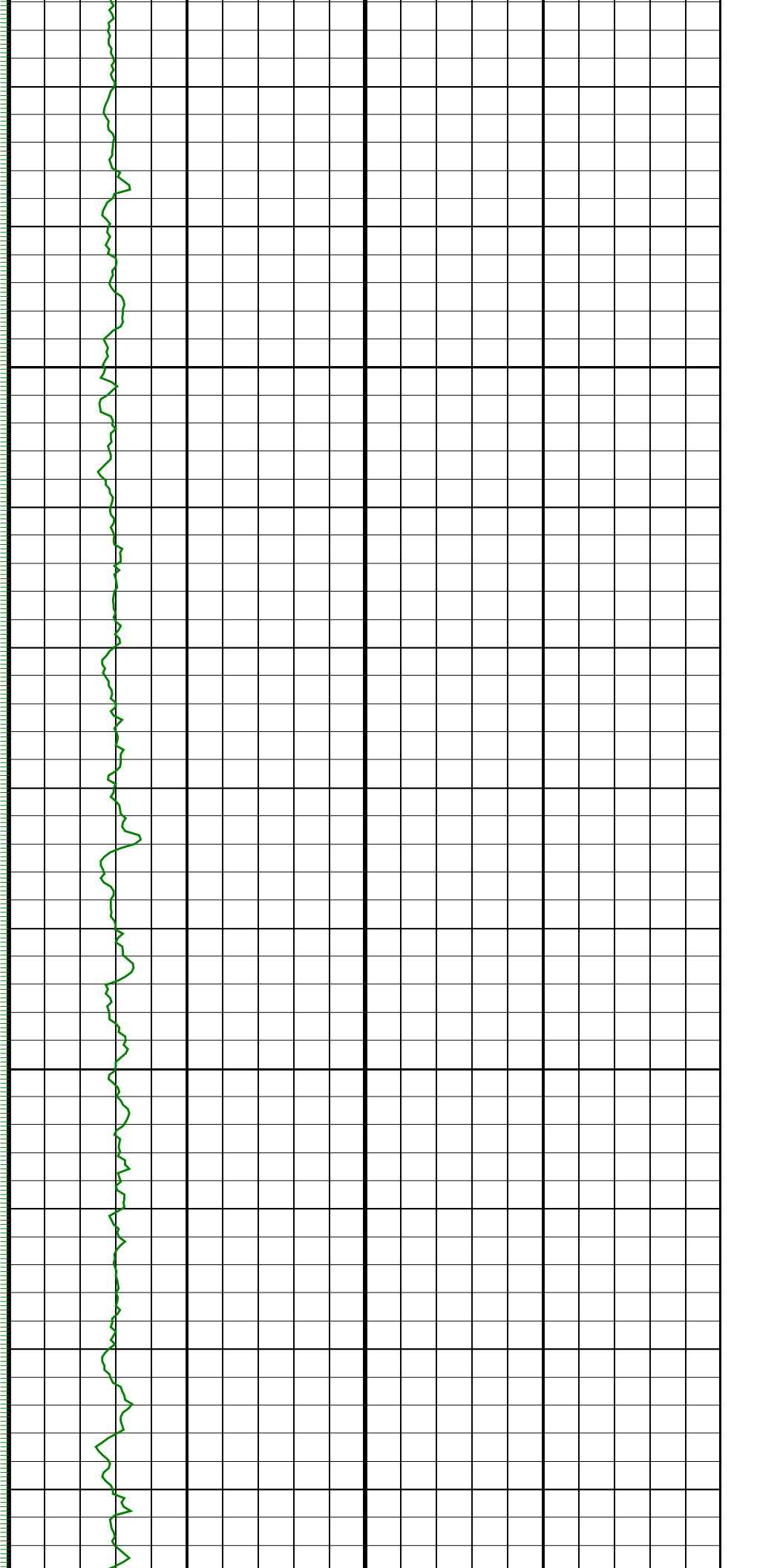
1925
TVD

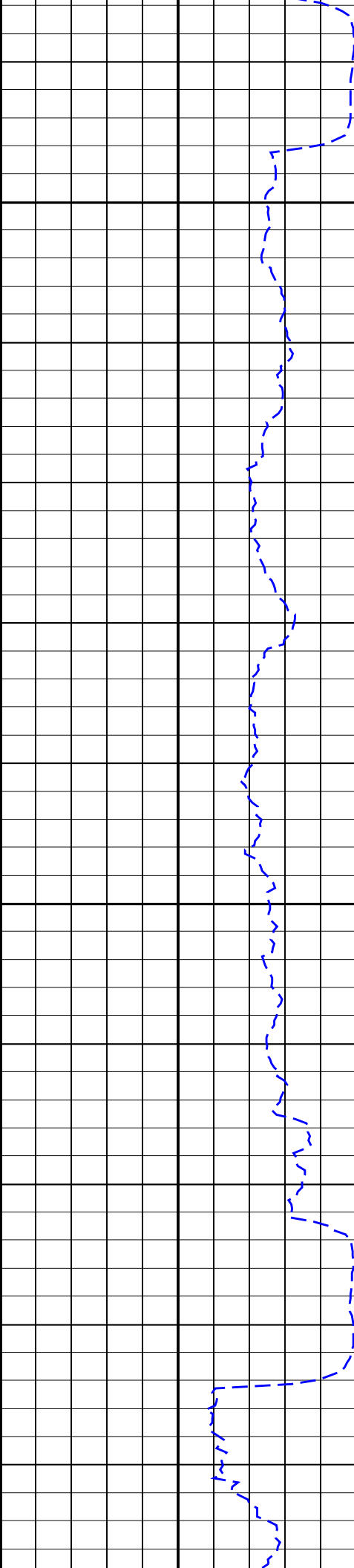




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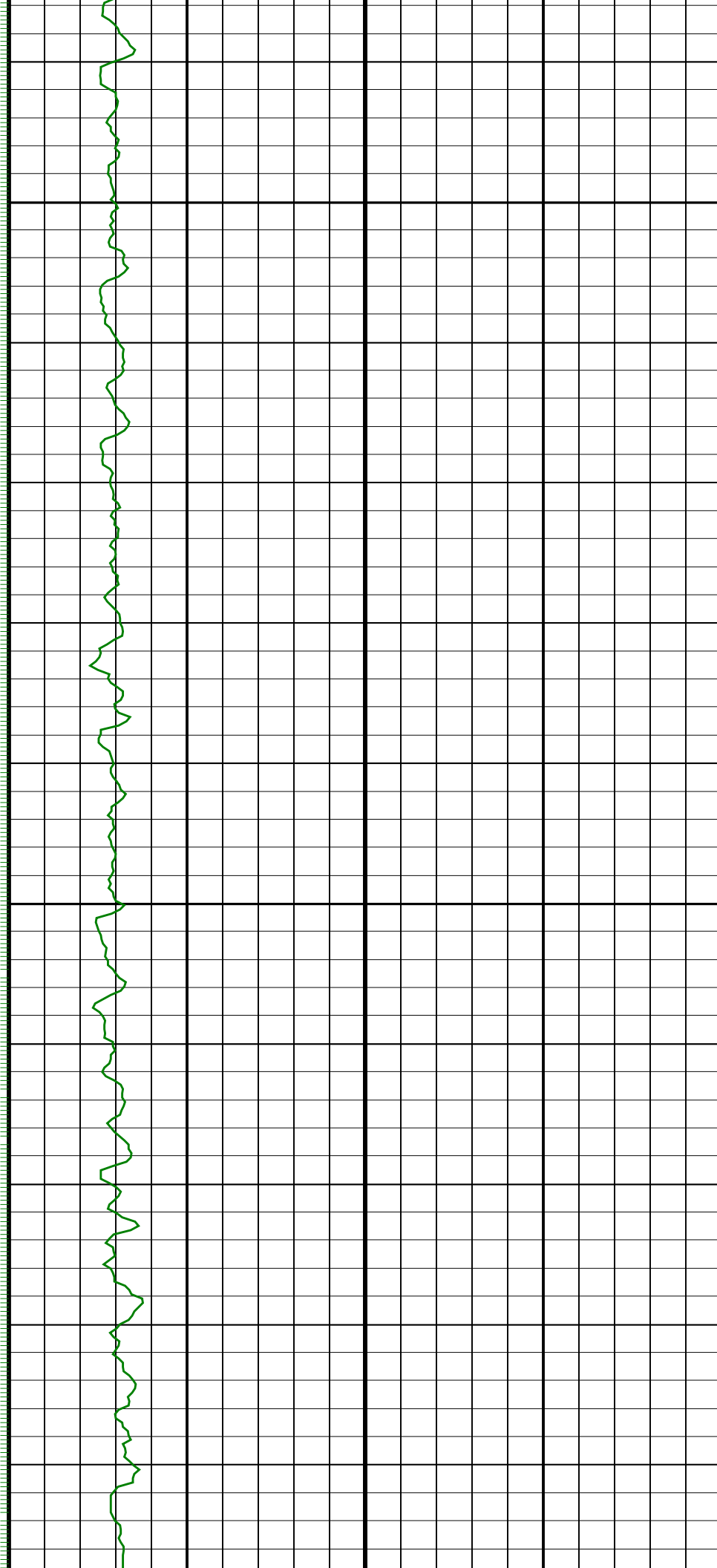
2025
TVD

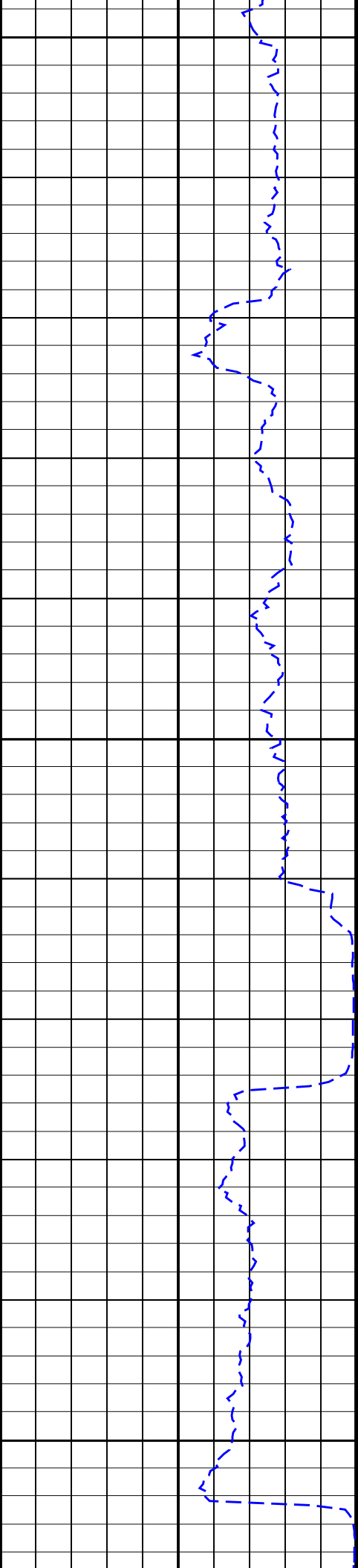




2050
TVD

2075
TVD

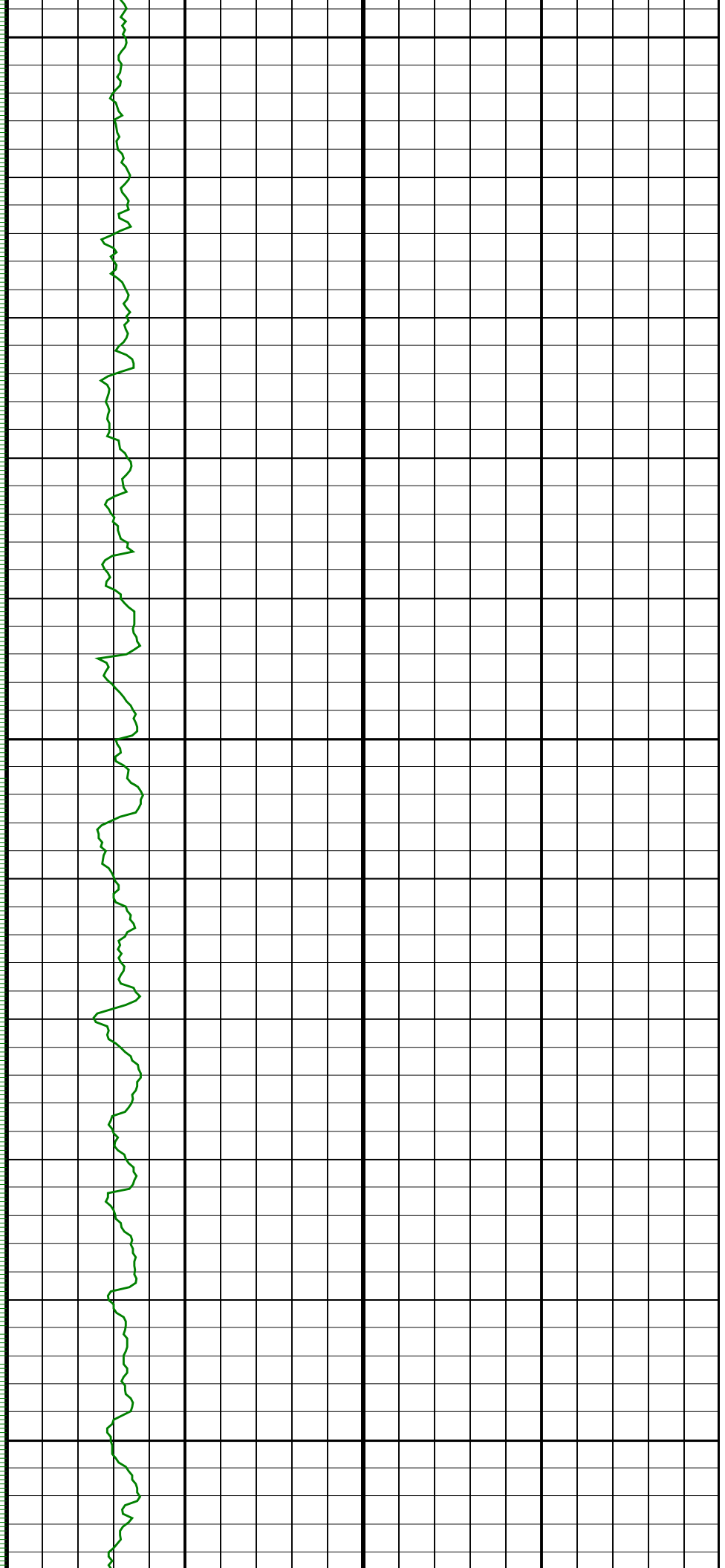


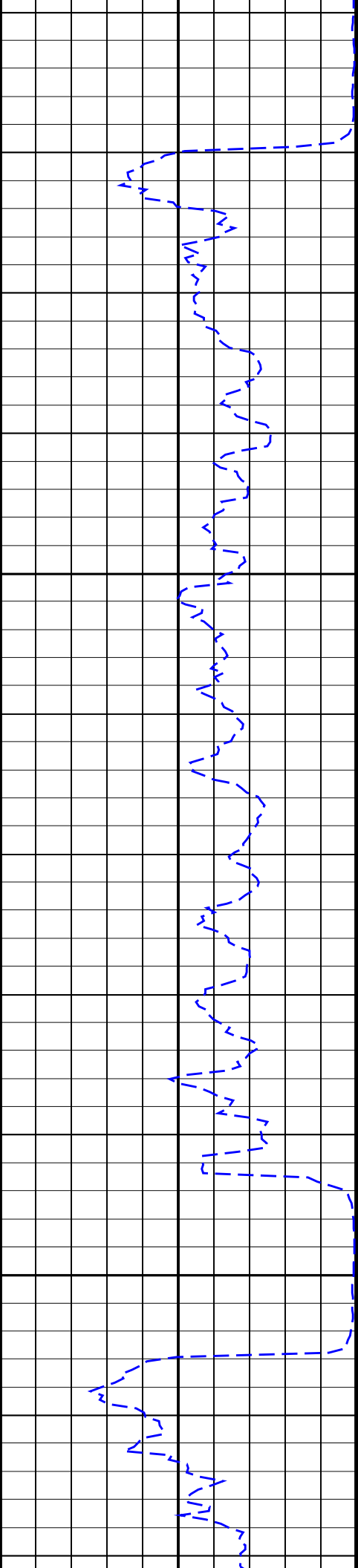


2100
TVD

2125
TVD

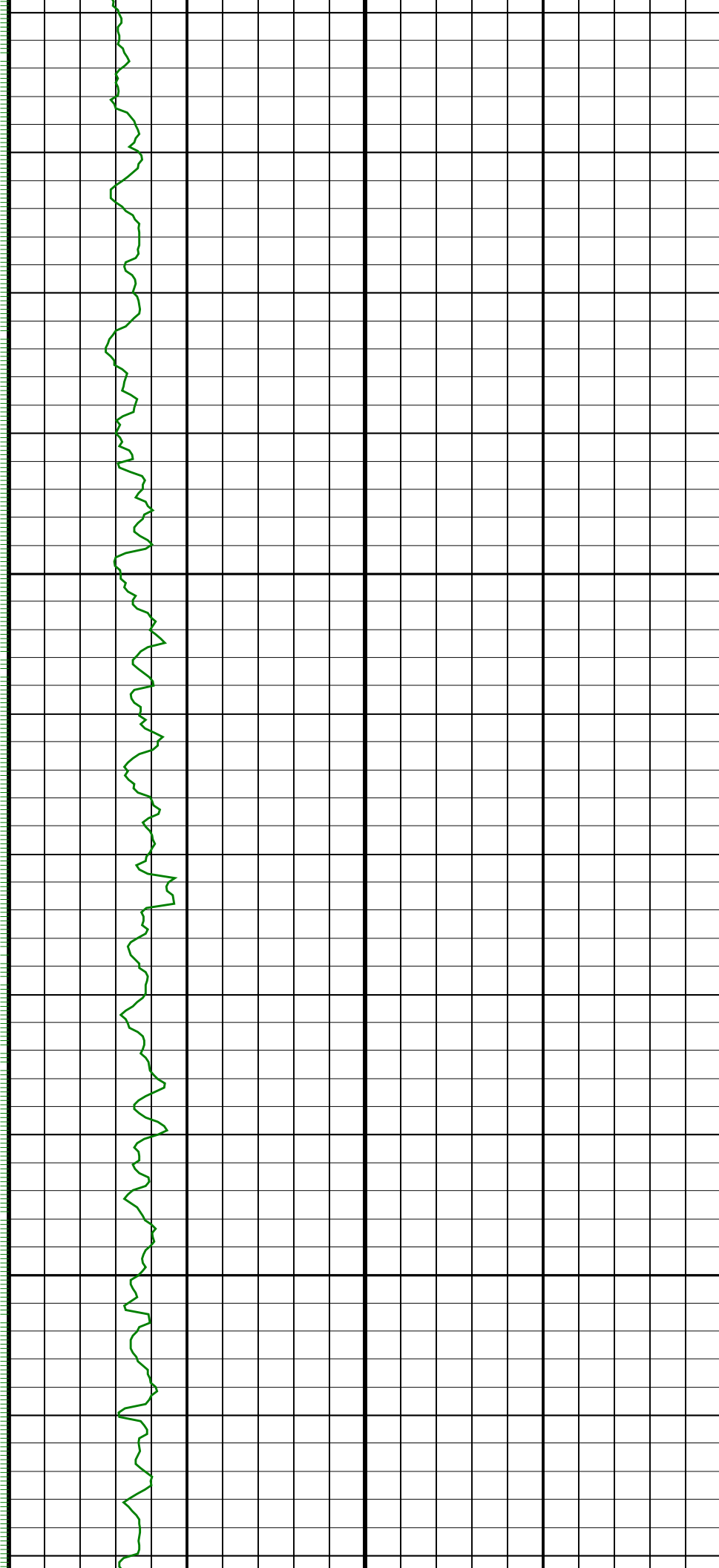
2150
TVD

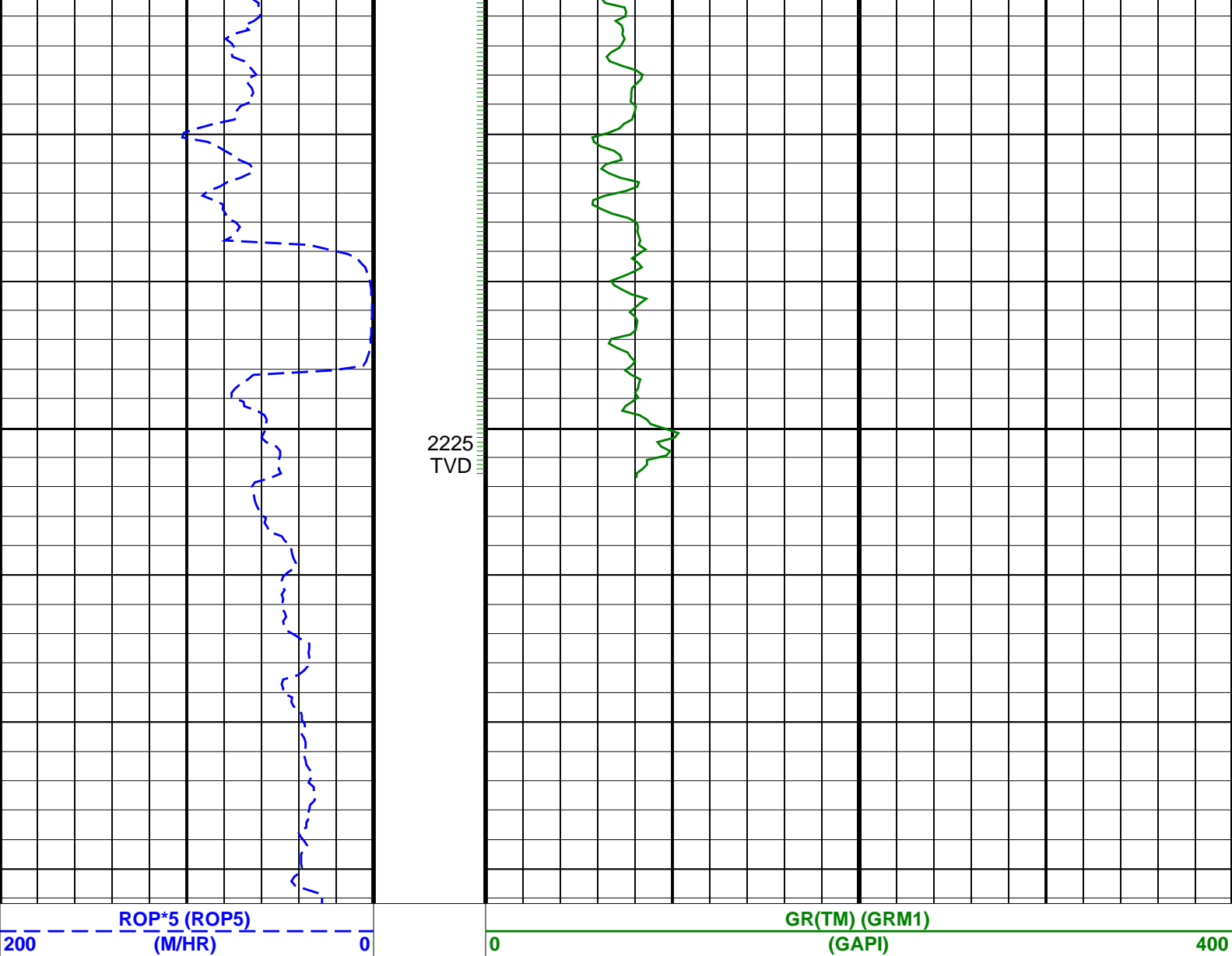




2175
TVD

2200
TVD





2225
TVD

200 --- ROP*5 (ROP5) --- 0
(M/HR)

0 --- GR(TM) (GRM1) --- 400
(GAPI)

PIP SUMMARY

GR(TM) PIP

SCHLUMBERGER

Survey report

9-May-2007 00:09:33

Page 1 of 4

Client..... ESSO Australia Pty. Ltd.
Field..... Halibut

Well..... HLA A5B
API number..... N/A
Engineer..... R. Borjas/B. Pattarakorn

RIG..... ISDL 453
STATE..... Victoria

Spud date..... 25-April-2007
Last survey date..... 08-May-07
Total accepted surveys.... 83
MD of first survey..... 548.00 m
MD of last survey..... 3004.00 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..... -73.46 m
KB above permanent..... 29.45 m
DF above permanent..... 29.45 m

----- Vertical section origin-----
Latitude (+N/S-)..... -4.33 m
Departure (+E/W-)..... 5.59 m

----- Geomagnetic data -----
Magnetic model..... BGGM version 2006
Magnetic date..... 23-Apr-2007
Magnetic field strength... 1199.17 HCNT
Magnetic dec (+E/W-)..... 13.23 degrees
Magnetic dip..... -68.86 degrees

----- MWD survey Reference Criteria -----
Reference G..... 1000.04 mGal
Reference H..... 1199.17 HCNT
Reference Dip..... -68.86 degrees
Tolerance of G..... (+/-) 2.50 mGal
Tolerance of H..... (+/-) 6.00 HCNT
Tolerance of Dip..... (+/-) 0.45 degrees

----- Corrections -----
Magnetic dec (+E/W-)..... 13.23 degrees
Grid convergence (+E/W-).. -0.82 degrees
Total az corr (+E/W-)..... 14.05 degrees
(Total az corr = magnetic dec - grid conv)
Survey Correction Type

Azimuth from Vsect Origin to target: 351.32 degrees

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

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SCHLUMBERGER Survey Report

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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/ 10m)	Srvy tool type	Tool Corr (deg)
1	548.00	8.75	195.17	0.00	547.38	-13.00	-17.79	3.56	18.14	168.68	0.00	TIP	None
2	651.70	7.93	306.64	103.70	650.48	-15.14	-21.15	-4.28	21.58	191.44	1.33	MWD	None
3	680.35	8.05	339.26	28.65	678.86	-11.77	-18.09	-6.58	19.25	199.98	1.56	MWD	None
4	709.93	11.77	358.35	29.58	708.01	-6.75	-13.14	-7.40	15.08	209.39	1.66	MWD	None
5	738.63	17.15	359.20	28.70	735.79	0.36	-5.97	-7.54	9.62	231.62	1.88	MWD	None
6	768.09	20.23	353.89	29.46	763.69	9.75	3.44	-8.15	8.84	292.87	1.19	MWD	None
7	797.35	21.80	347.64	29.26	791.01	20.23	13.77	-9.85	16.93	324.44	0.93	MWD	None
8	826.60	25.20	345.64	29.25	817.83	31.85	25.12	-12.56	28.08	333.44	1.19	MWD	None
9	855.72	29.34	347.65	29.12	843.71	45.14	38.10	-15.62	41.18	337.71	1.46	MWD	None
10	885.13	33.49	350.64	29.41	868.80	60.45	53.15	-18.48	56.27	340.82	1.51	MWD	None
11	914.28	37.33	351.99	29.15	892.56	77.34	69.84	-21.02	72.94	343.25	1.34	MWD	None
12	943.48	40.84	352.19	29.20	915.22	95.75	88.08	-23.56	91.17	345.03	1.20	MWD	None
13	972.57	40.38	351.68	29.09	937.30	114.68	106.82	-26.21	109.99	346.21	0.20	MWD	None
14	1001.73	41.31	351.44	29.16	959.36	133.75	125.69	-29.01	128.99	347.00	0.32	MWD	None
15	1031.06	41.73	351.38	29.33	981.32	153.19	144.91	-31.91	148.38	347.58	0.14	MWD	None
16	1059.93	41.08	351.40	28.87	1002.97	172.29	163.79	-34.77	167.44	348.01	0.23	MWD	None
17	1089.24	41.93	351.64	29.31	1024.92	191.71	183.00	-37.64	186.83	348.38	0.30	MWD	None
18	1118.59	42.38	351.44	29.35	1046.68	211.41	202.48	-40.54	206.50	348.68	0.16	MWD	None
19	1147.69	42.10	351.25	29.10	1068.23	230.97	221.82	-43.48	226.04	348.91	0.11	MWD	None
20	1177.02	41.90	351.99	29.33	1090.02	250.59	241.24	-46.34	245.65	349.13	0.18	MWD	None
21	1206.23	41.78	351.05	29.21	1111.78	270.08	260.51	-49.21	265.12	349.30	0.22	MWD	None
22	1235.35	41.41	350.63	29.12	1133.56	289.41	279.60	-52.29	284.44	349.41	0.16	MWD	None
23	1264.67	41.90	351.67	29.32	1155.47	308.89	298.85	-55.29	303.92	349.52	0.29	MWD	None
24	1293.84	41.73	351.34	29.17	1177.21	328.34	318.08	-58.16	323.36	349.64	0.10	MWD	None
25	1323.03	42.11	352.14	29.19	1198.93	347.84	337.38	-60.96	342.85	349.76	0.22	MWD	None
26	1352.02	41.79	352.53	28.99	1220.49	367.22	356.59	-63.55	362.21	349.90	0.14	MWD	None
27	1381.54	41.15	353.05	29.52	1242.61	386.76	375.98	-66.00	381.73	350.04	0.25	MWD	None
28	1410.60	42.02	353.24	29.06	1264.35	406.04	395.13	-68.30	400.99	350.19	0.30	MWD	None
29	1439.58	41.62	353.34	28.98	1285.94	425.35	414.33	-70.56	420.29	350.34	0.14	MWD	None
30	1468.99	41.78	353.37	29.41	1307.90	444.90	433.76	-72.82	439.83	350.47	0.05	MWD	None

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SCHLUMBERGER Survey Report

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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/ 10m)	Srvy tool type	Tool Corr (deg)
31	1498.23	42.02	352.84	29.24	1329.66	464.42	453.14	-75.17	459.34	350.58	0.15	MWD	None
32	1527.49	42.06	351.80	29.26	1351.40	484.01	472.56	-77.79	478.92	350.65	0.24	MWD	None
33	1556.47	41.64	351.89	28.98	1372.98	503.35	491.70	-80.53	498.25	350.70	0.15	MWD	None
34	1586.04	41.90	351.25	29.57	1395.04	523.04	511.19	-83.42	517.95	350.73	0.17	MWD	None
35	1614.92	41.43	351.18	28.88	1416.61	542.24	530.16	-86.35	537.15	350.75	0.16	MWD	None
36	1644.13	42.18	351.82	29.21	1438.39	561.71	549.42	-89.23	556.61	350.78	0.30	MWD	None
37	1673.24	42.04	351.55	29.11	1459.98	581.23	568.73	-92.05	576.13	350.81	0.08	MWD	None
38	1702.36	41.72	352.02	29.12	1481.66	600.67	587.97	-94.83	595.57	350.84	0.15	MWD	None
39	1731.55	41.17	352.37	29.19	1503.54	619.99	607.11	-97.45	614.88	350.88	0.20	MWD	None
40	1760.90	41.62	351.78	29.35	1525.56	639.40	626.33	-100.13	634.29	350.92	0.20	MWD	None
41	1789.87	41.78	352.23	28.97	1547.19	658.67	645.42	-102.81	653.56	350.95	0.12	MWD	None
42	1819.29	41.61	352.45	29.42	1569.16	678.23	664.81	-105.42	673.12	350.99	0.08	MWD	None
43	1848.21	41.08	352.86	28.92	1590.87	697.33	683.76	-107.86	692.22	351.04	0.21	MWD	None
44	1877.70	41.39	351.79	29.49	1613.05	716.77	703.02	-110.46	711.65	351.07	0.26	MWD	None
45	1906.85	41.76	351.61	29.15	1634.85	736.11	722.17	-113.25	730.99	351.09	0.13	MWD	None
46	1935.97	41.58	351.78	29.12	1656.60	755.47	741.32	-116.04	750.35	351.10	0.07	MWD	None
47	1965.34	40.91	352.22	29.37	1678.69	774.83	760.50	-118.74	769.71	351.13	0.25	MWD	None
48	1994.29	41.54	352.19	28.95	1700.46	793.91	779.40	-121.33	788.79	351.15	0.22	MWD	None
49	2023.49	42.02	351.60	29.20	1722.24	813.36	798.66	-124.07	808.24	351.17	0.21	MWD	None
50	2052.61	41.57	351.98	29.12	1743.95	832.77	817.87	-126.84	827.65	351.18	0.18	MWD	None
51	2081.95	41.81	352.14	29.34	1765.86	852.28	837.20	-129.54	847.16	351.20	0.09	MWD	None
52	2111.16	41.38	352.09	29.21	1787.70	871.67	856.40	-132.20	866.55	351.22	0.15	MWD	None
53	2140.02	41.84	352.03	28.86	1809.28	890.83	875.38	-134.85	885.71	351.24	0.16	MWD	None
54	2169.57	41.34	351.75	29.55	1831.38	910.45	894.80	-137.61	905.32	351.26	0.18	MWD	None
55	2198.71	41.48	351.23	29.14	1853.23	929.72	913.87	-140.47	924.60	351.26	0.13	MWD	None
56	2227.83	41.17	351.03	29.12	1875.10	948.95	932.86	-143.43	943.83	351.26	0.12	MWD	None
57	2257.05	41.35	350.94	29.22	1897.07	968.22	951.90	-146.45	963.10	351.25	0.06	MWD	None
58	2286.21	41.33	351.01	29.16	1918.96	987.48	970.92	-149.47	982.36	351.25	0.02	MWD	None
59	2315.40	41.55	352.01	29.19	1940.84	1006.80	990.03	-152.32	1001.67	351.25	0.24	MWD	None
60	2344.68	41.66	352.76	29.28	1962.74	1026.24	1009.30	-154.90	1021.11	351.27	0.17	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/ 10m)	Srvy tool type	Tool Corr (deg)
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61	2373.83	41.90	353.18	29.15	1984.48	1045.65	1028.57	-157.28	1040.53	351.31	0.13	MWD	None
62	2403.04	42.18	353.28	29.21	2006.17	1065.20	1047.99	-159.58	1060.08	351.34	0.10	MWD	None
63	2432.37	41.77	353.27	29.33	2027.97	1084.80	1067.48	-161.88	1079.68	351.38	0.14	MWD	None
64	2461.47	41.96	352.77	29.10	2049.65	1104.22	1086.75	-164.24	1099.09	351.41	0.13	MWD	None
65	2490.75	41.60	352.63	29.28	2071.48	1123.72	1106.10	-166.72	1118.60	351.43	0.13	MWD	None
66	2519.73	41.70	352.30	28.98	2093.13	1142.97	1125.20	-169.24	1137.85	351.45	0.08	MWD	None
67	2549.00	40.97	352.26	29.27	2115.11	1162.30	1144.35	-171.84	1157.18	351.46	0.25	MWD	None
68	2578.41	41.17	352.18	29.41	2137.28	1181.62	1163.50	-174.46	1176.50	351.47	0.07	MWD	None
69	2606.81	41.60	351.94	28.40	2158.59	1200.40	1182.09	-177.05	1195.28	351.48	0.16	MWD	None
70	2635.81	40.53	351.69	29.00	2180.46	1219.45	1200.95	-179.76	1214.33	351.49	0.37	MWD	None
71	2662.49	40.46	352.00	26.68	2200.75	1236.77	1218.10	-182.22	1231.65	351.49	0.08	MWD	None
72	2692.17	39.95	352.08	29.68	2223.41	1255.93	1237.07	-184.87	1250.81	351.50	0.17	MWD	None
73	2723.76	39.43	352.12	31.59	2247.72	1276.10	1257.06	-187.64	1270.98	351.51	0.16	MWD	None
74	2752.53	39.45	352.15	28.77	2269.94	1294.38	1275.16	-190.15	1289.26	351.52	0.01	MWD	None
75	2781.34	39.49	352.41	28.81	2292.18	1312.69	1293.31	-192.61	1307.57	351.53	0.06	MWD	None
76	2811.42	39.19	352.09	30.08	2315.45	1331.75	1312.20	-195.18	1326.64	351.54	0.12	MWD	None
77	2840.55	39.35	352.30	29.13	2338.00	1350.19	1330.47	-197.68	1345.08	351.55	0.07	MWD	None
78	2868.98	40.12	352.26	28.43	2359.86	1368.36	1348.48	-200.12	1363.25	351.56	0.27	MWD	None
79	2898.20	39.96	351.99	29.22	2382.23	1387.16	1367.10	-202.70	1382.04	351.57	0.08	MWD	None
80	2926.43	39.87	352.13	28.23	2403.88	1405.27	1385.04	-205.20	1400.16	351.57	0.05	MWD	None
81	2956.44	39.81	351.79	30.01	2426.93	1424.49	1404.08	-207.89	1419.38	351.58	0.08	MWD	None
82	2984.55	40.07	351.65	28.11	2448.48	1442.54	1421.93	-210.49	1437.43	351.58	0.10	MWD	None
83	3004.00	40.20	351.60	19.45	2463.35	1455.07	1434.34	-212.31	1449.97	351.58	0.07	Proj.	to TD

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

Schlumberger

Well: **HLA A5B**

Field: **Halibut**

Rig: **ISDL 453**

State: **Victoria**

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