

Bit Run Summary

DOWNHOLE EQUIPMENT

6-3/4 in. PowerPulse*
MDC: V875
MEC: 1281
MDI: 1565
MGR: 146-AA
DHS: 8.0C03

D&I
GR
APWD

21.12
20.47
17.83

6-5/8 in. NM Pony DC
S/N:ASQ60506

6-5/8 in. NM Float Sub
S/N: ANA98-007

6-5/8 in. NM Roller Reamer
S/N: GU2298

7 in. PowerPak* Motor
A700GT 7:8
S/N: N7310
1.15 deg. Bent Housing

8-1/2 in. Smith PDC Bit
S616PX
S/N: JW6578A

0.00

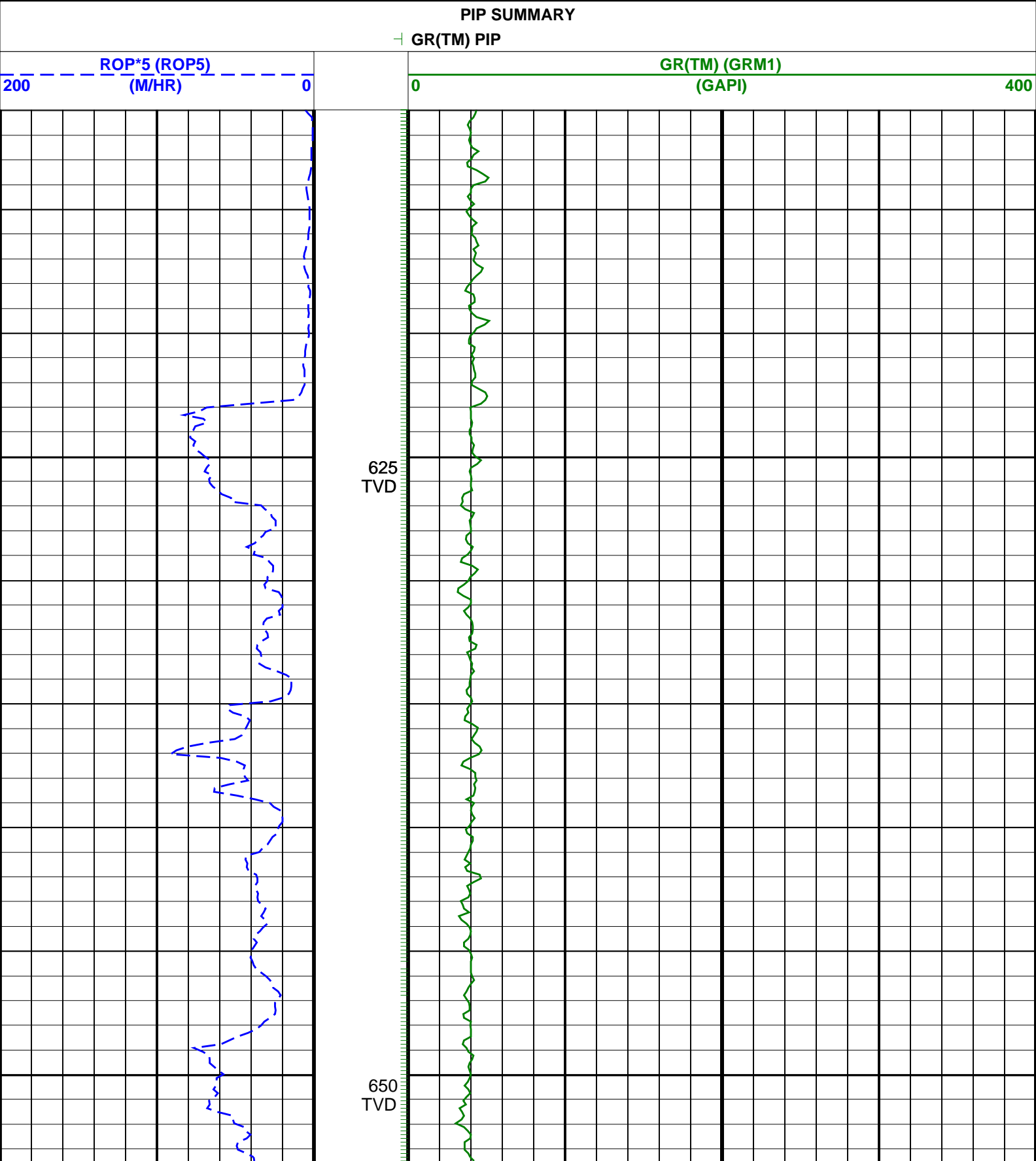
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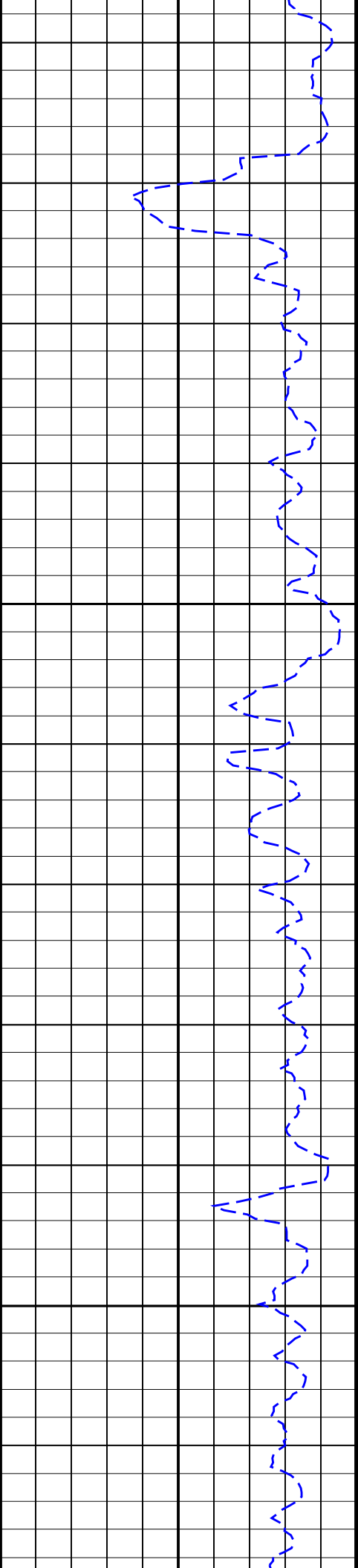
Maximum string diameter 8.50 in.
All lengths in Meters

HLA A2B RT GR 1:200 TVD

IDEAL Version: ID12_OC_01 <TVD> Vertical Scale: 1:200

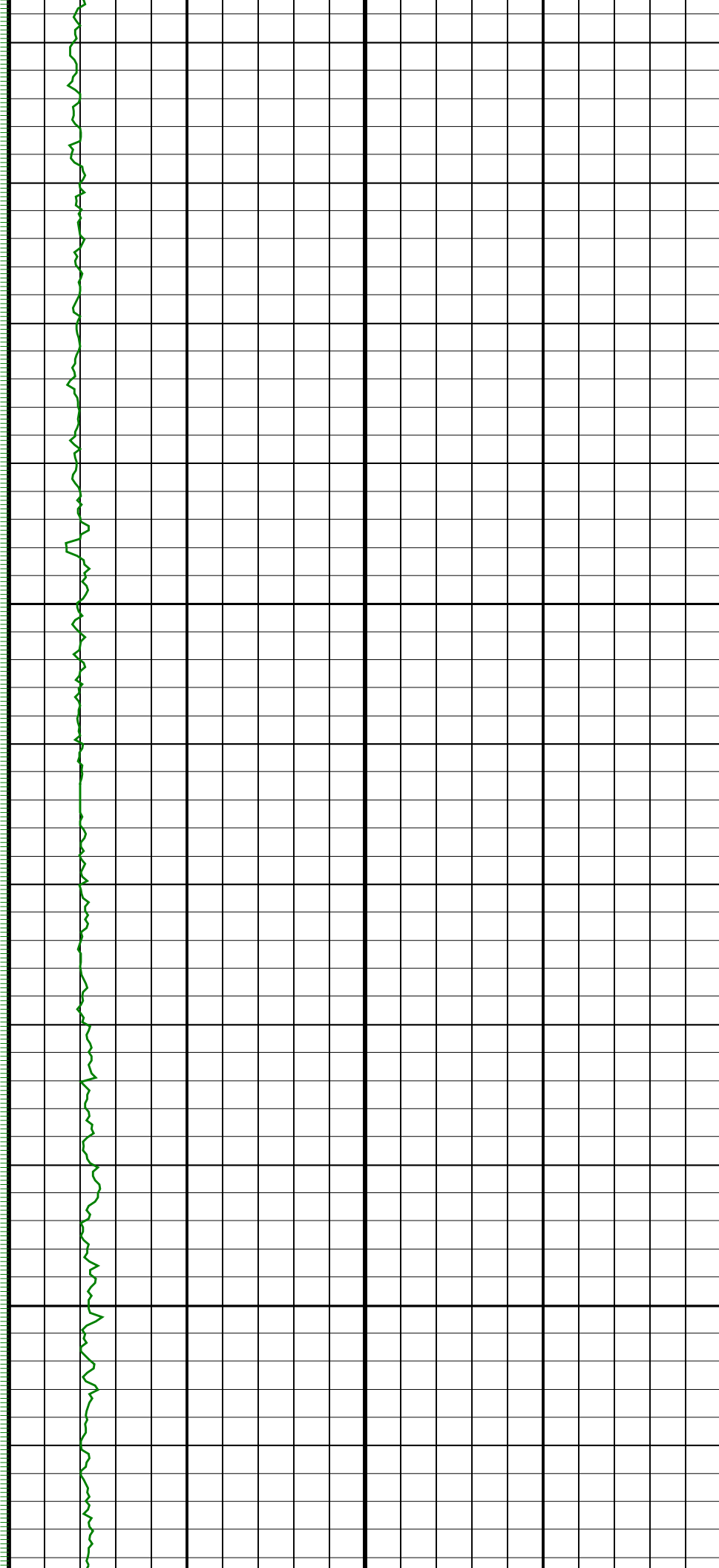
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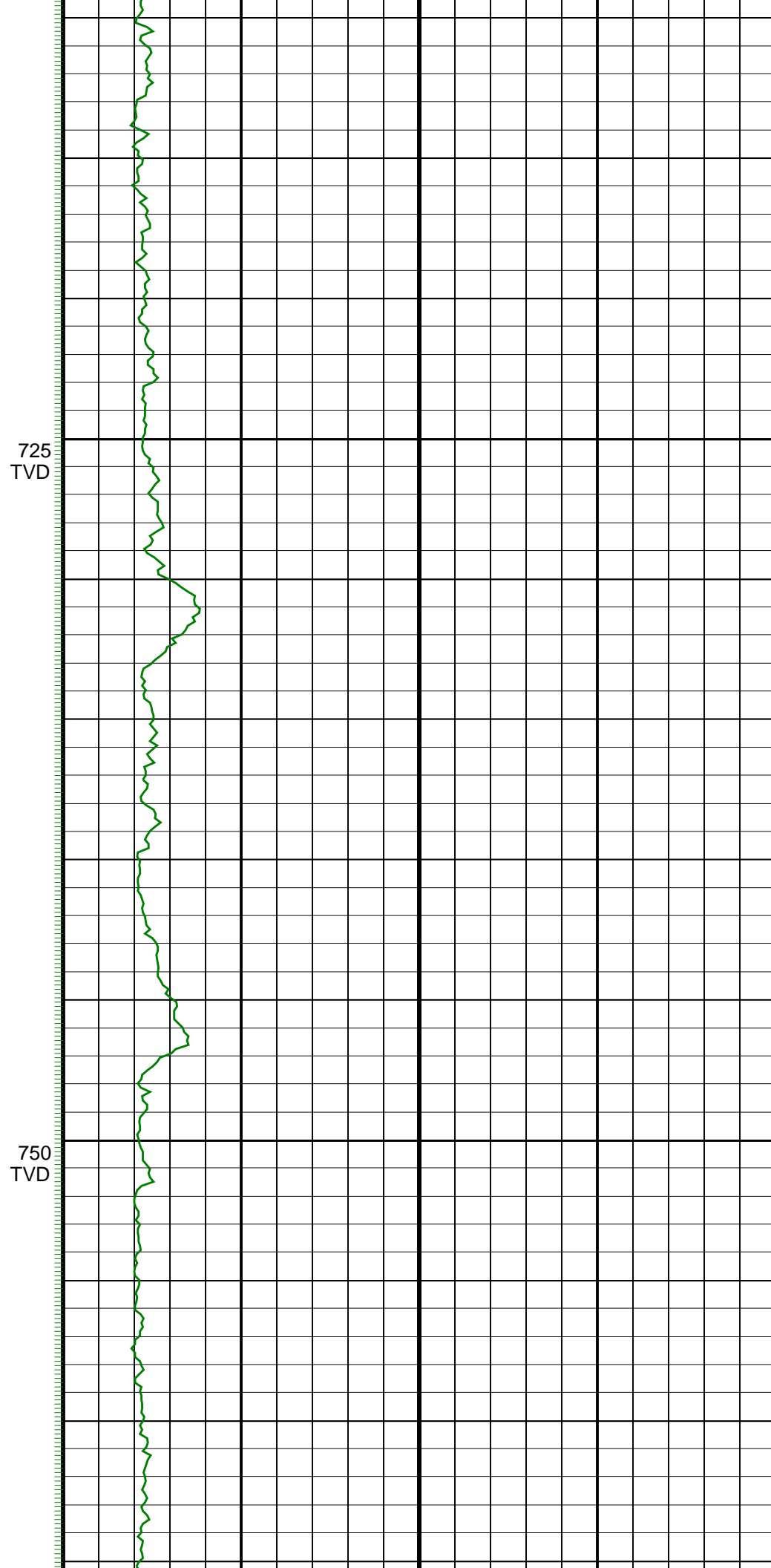
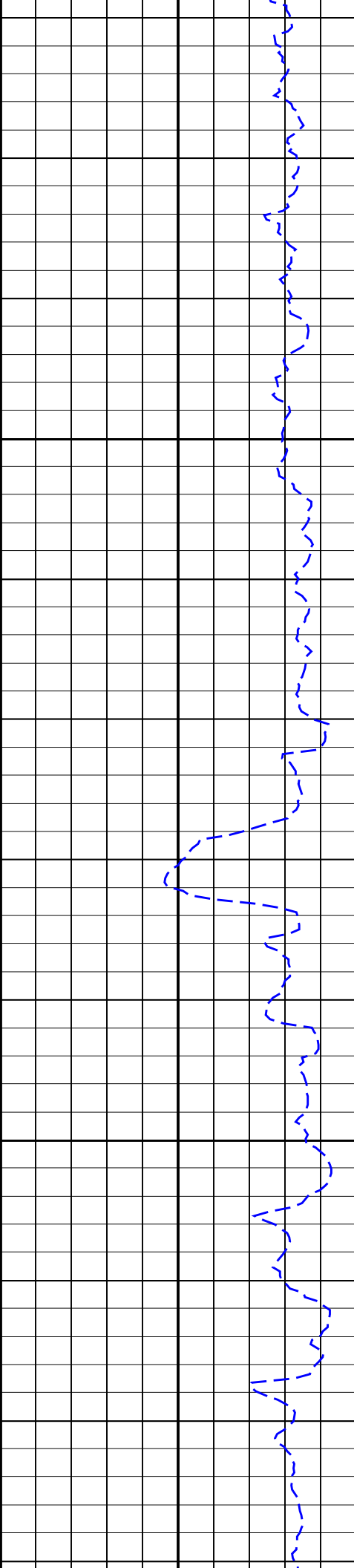


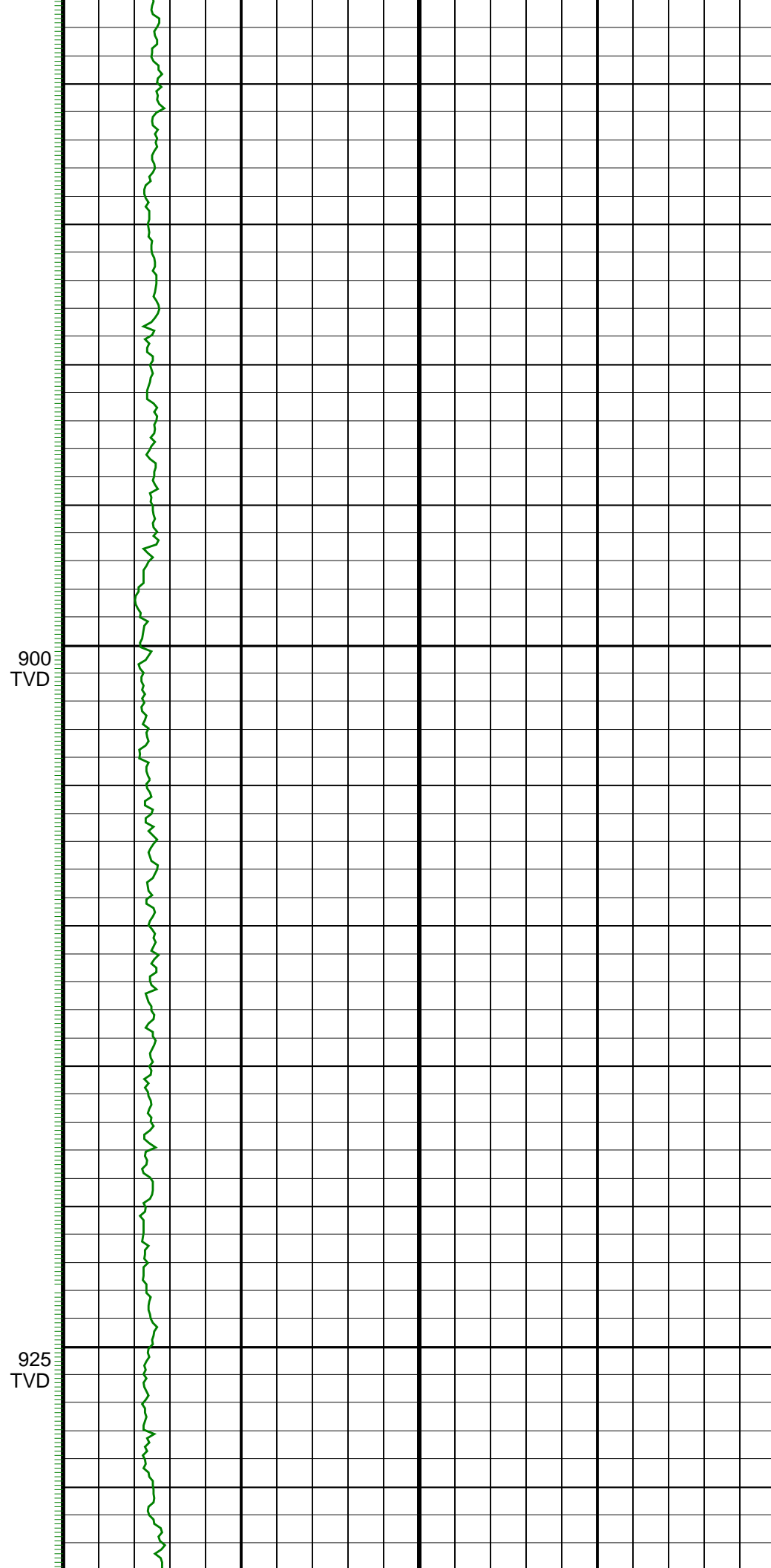
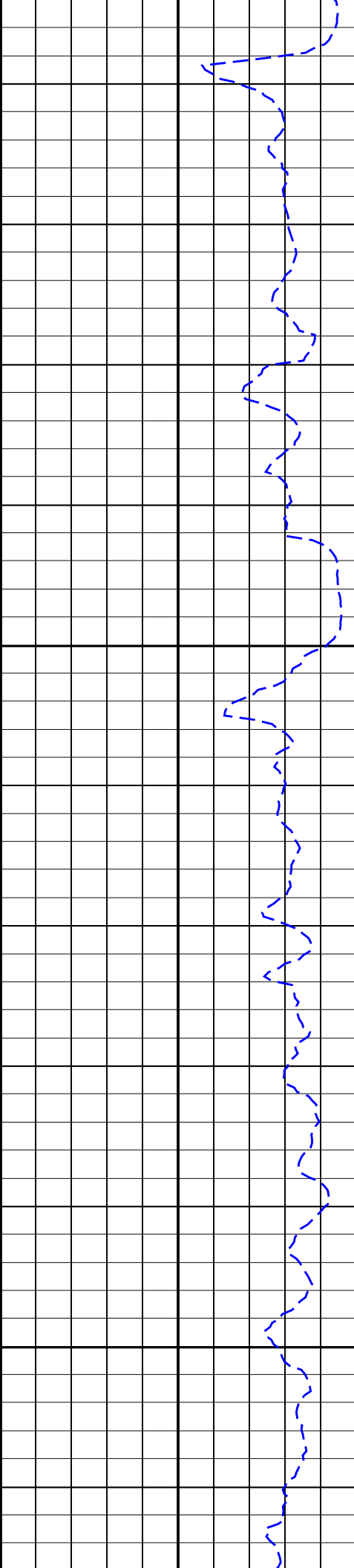


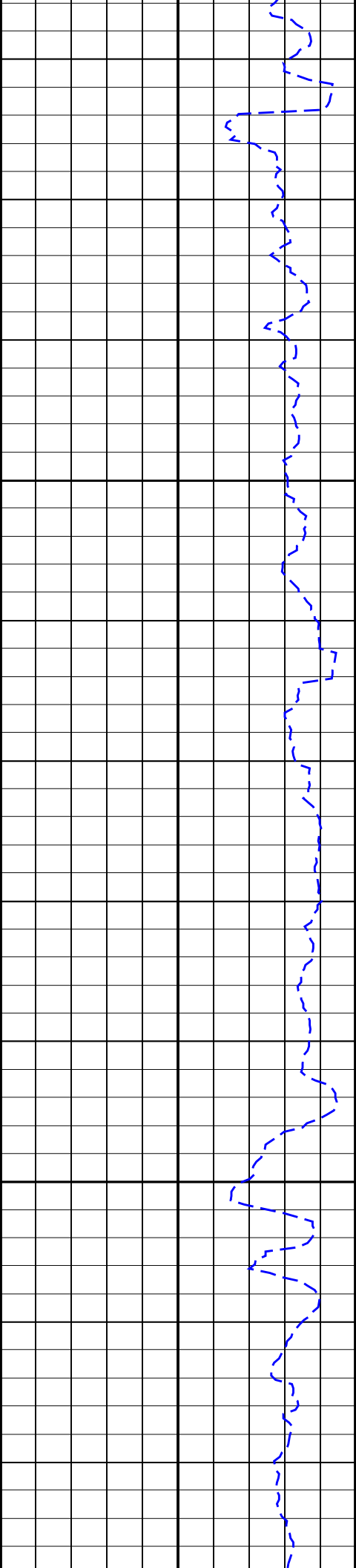
675
TVD

700
TVD



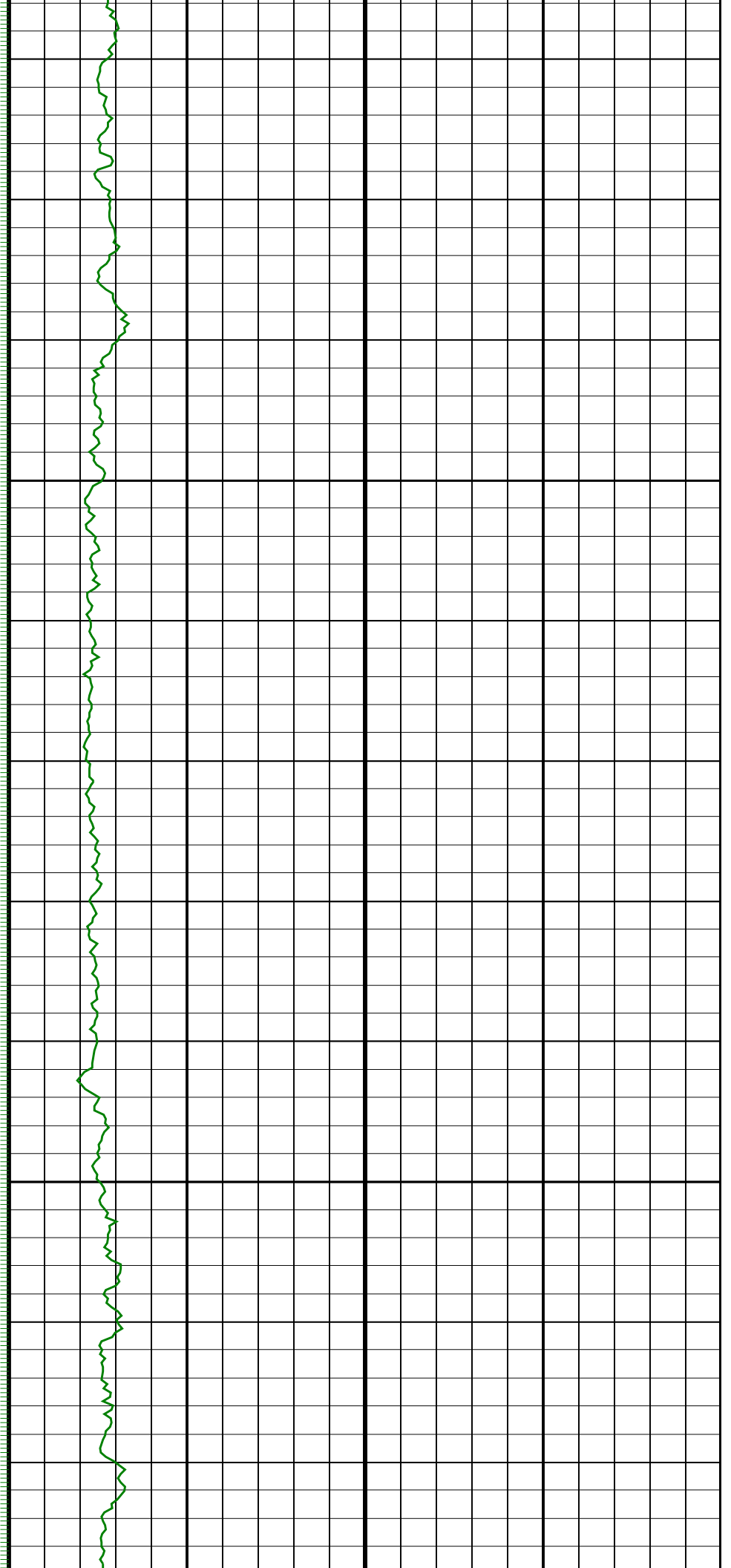


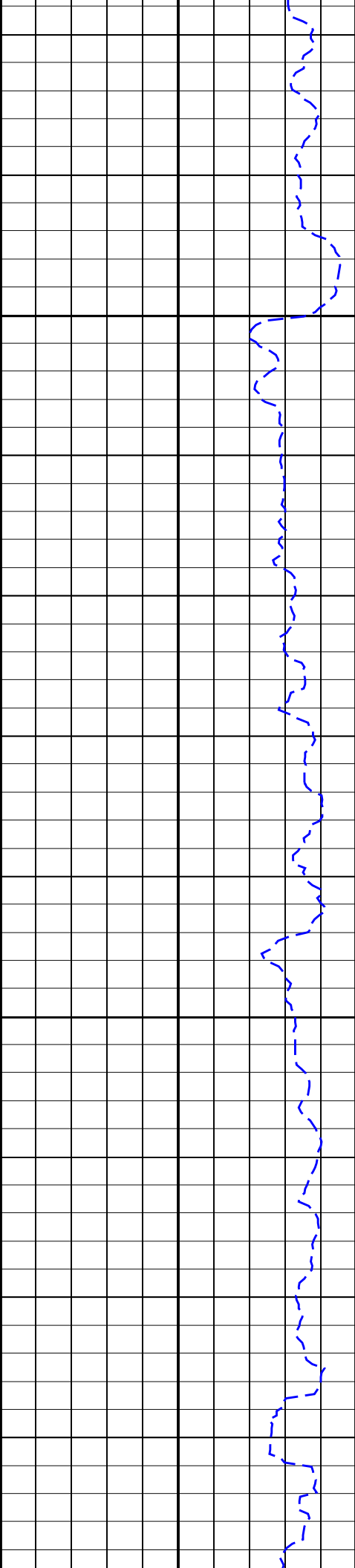




950
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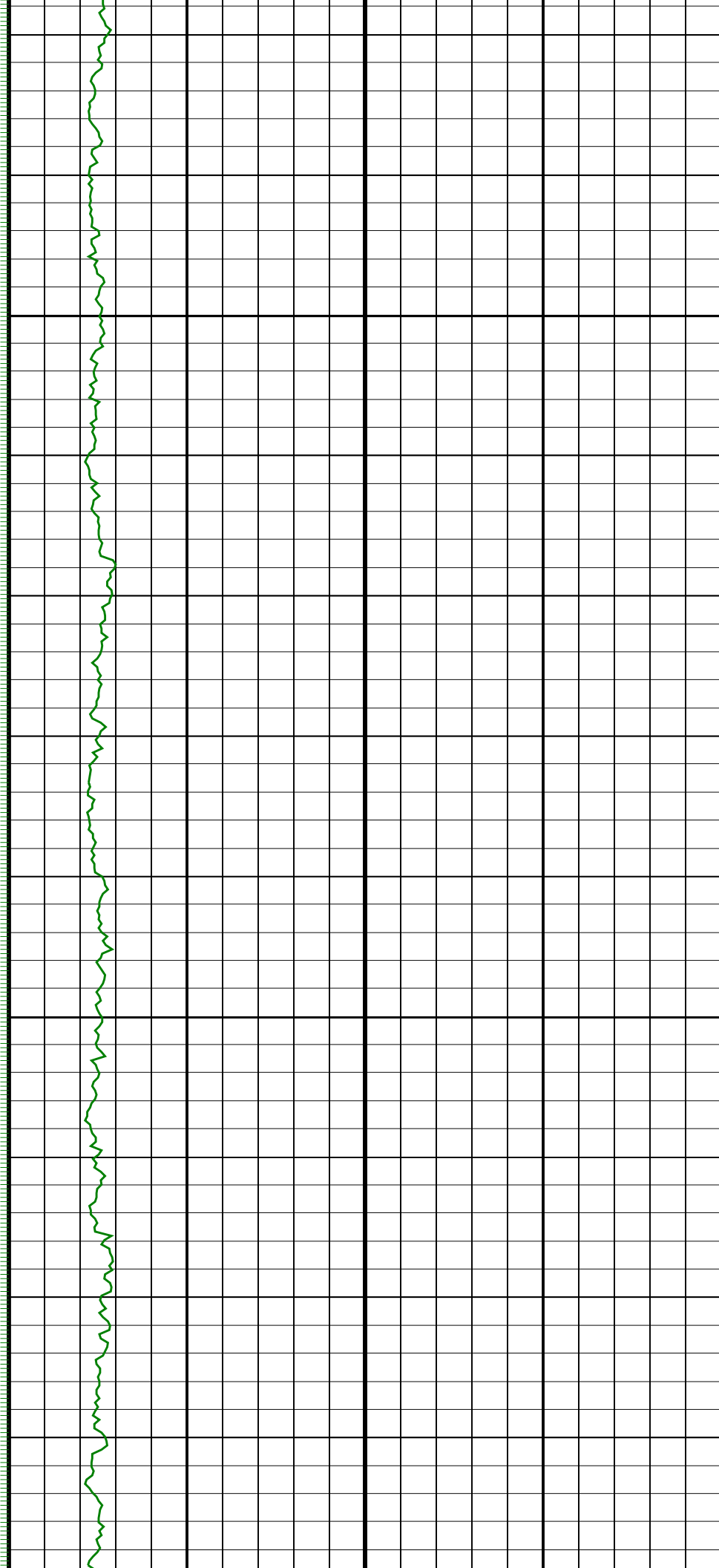
975
TVD

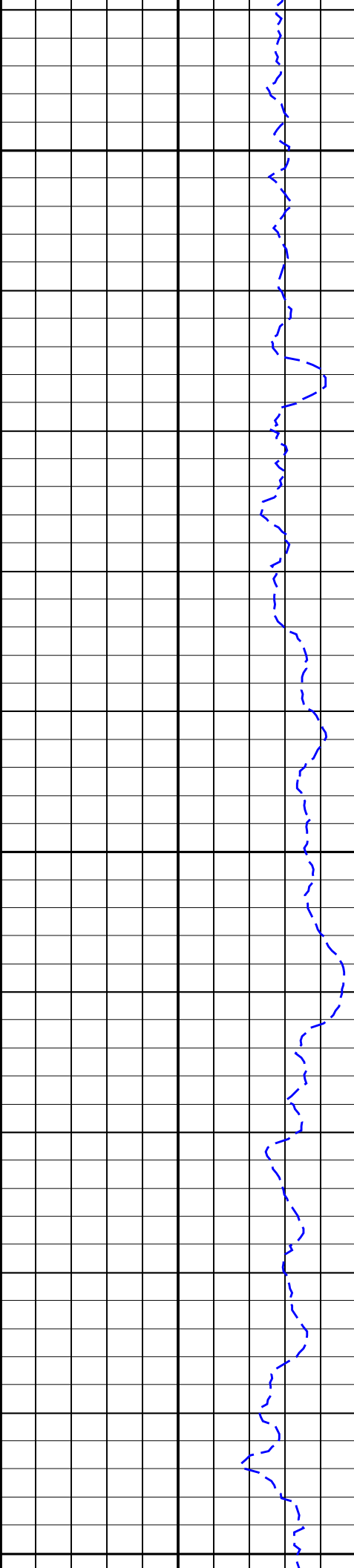




1000
TVD

1025
TVD

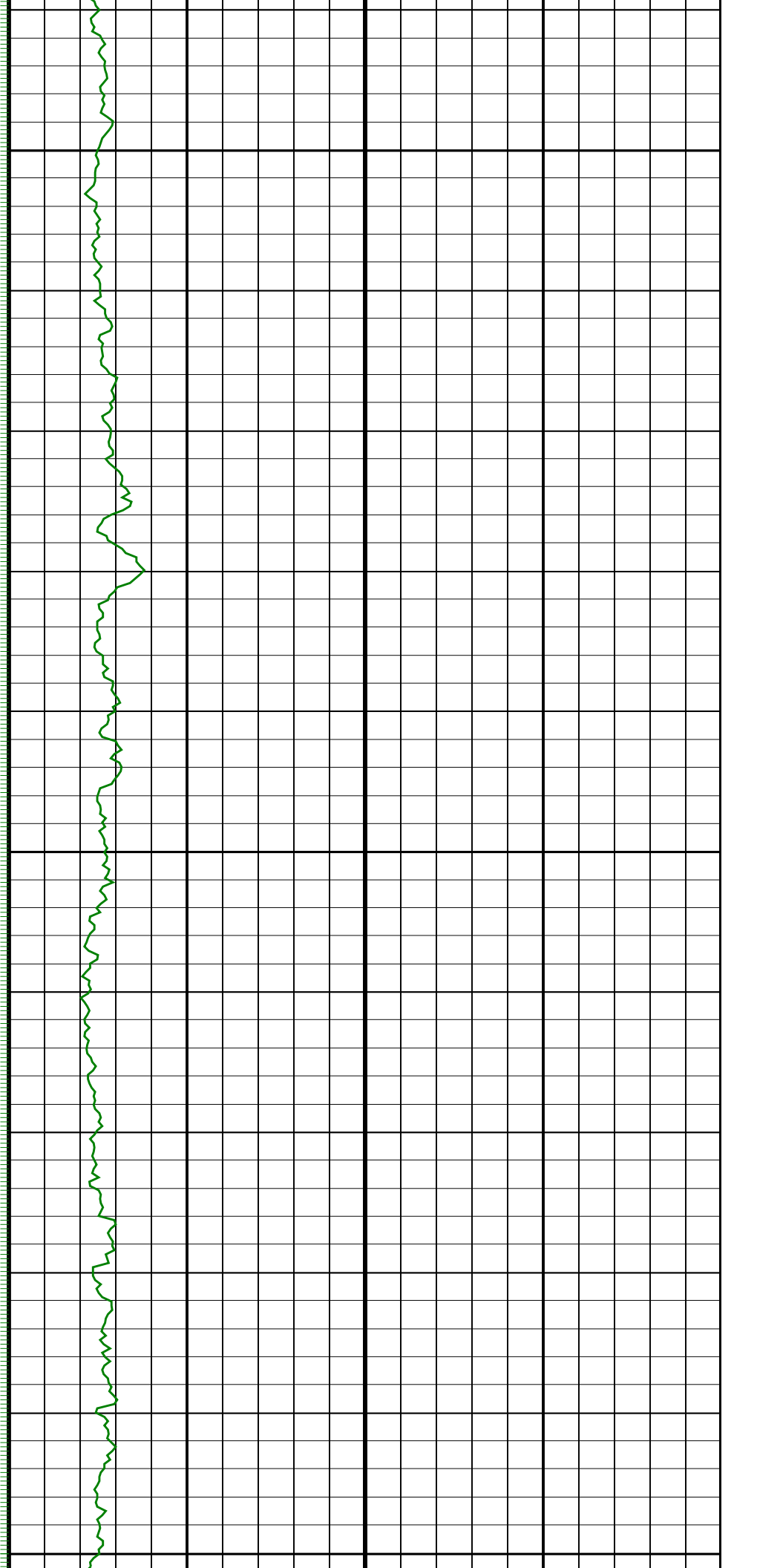


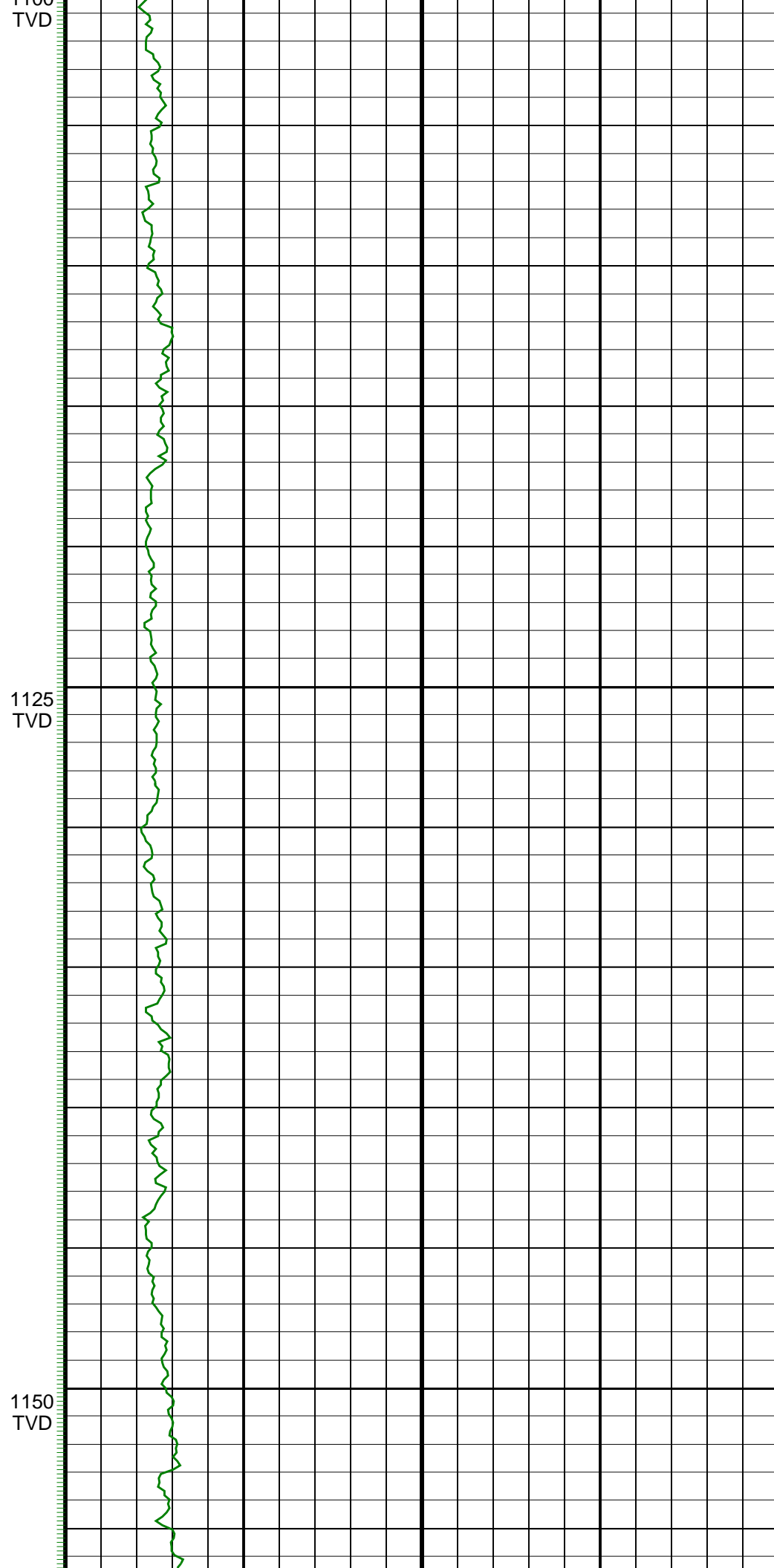
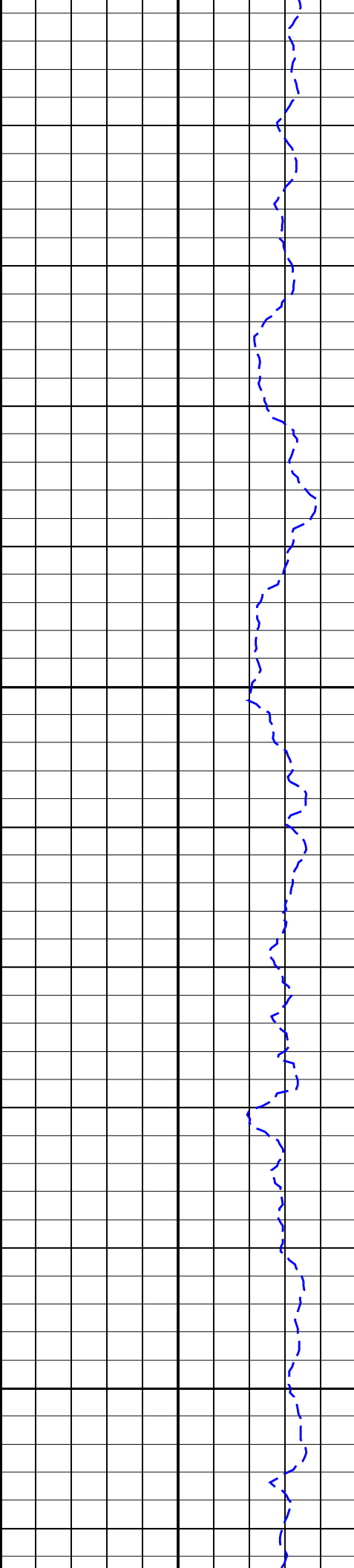


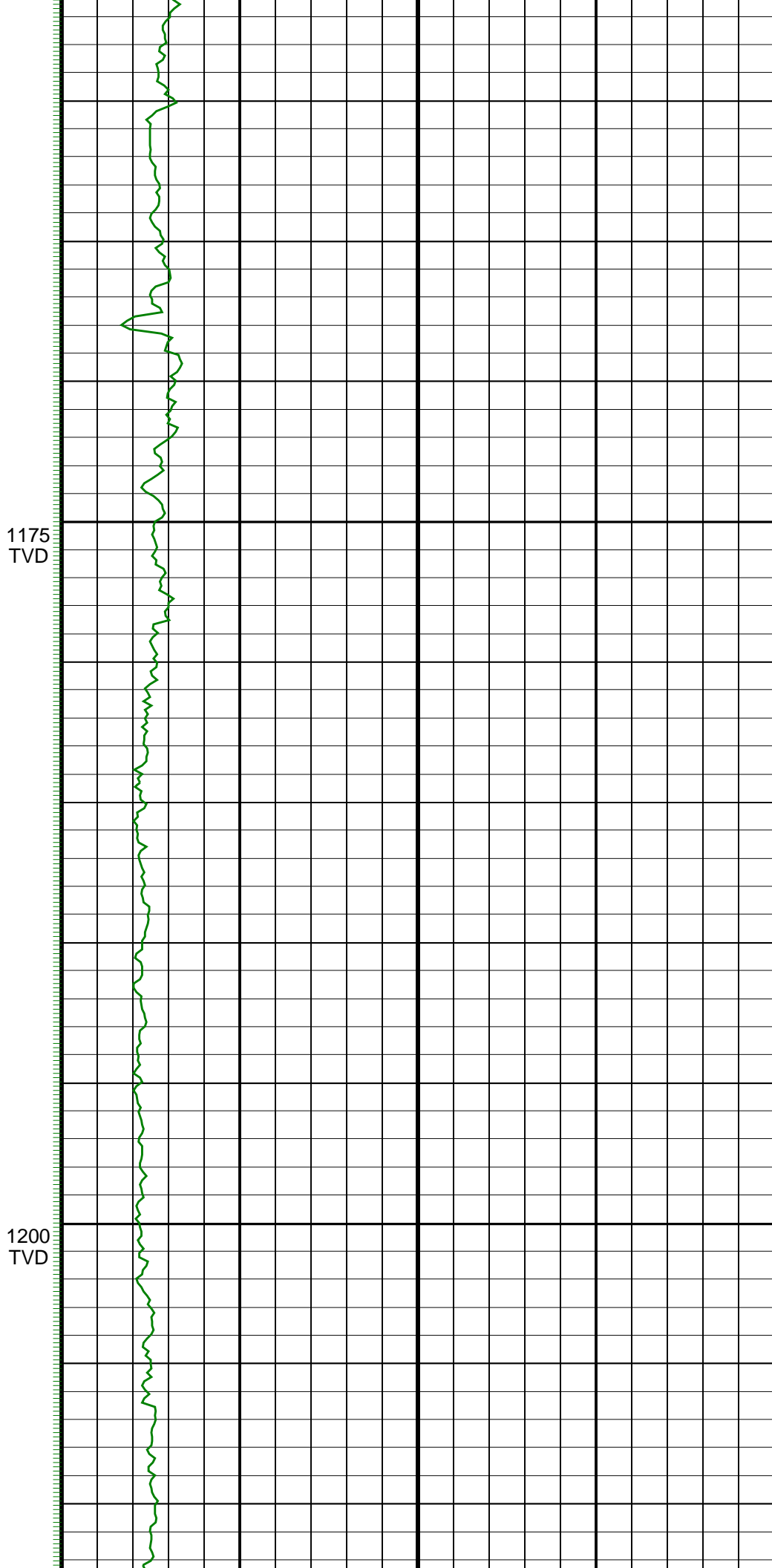
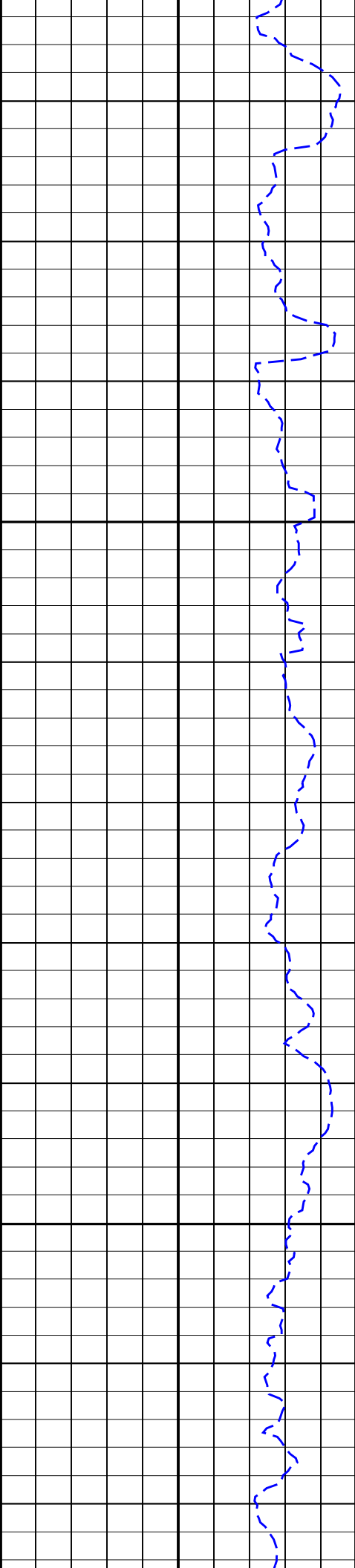
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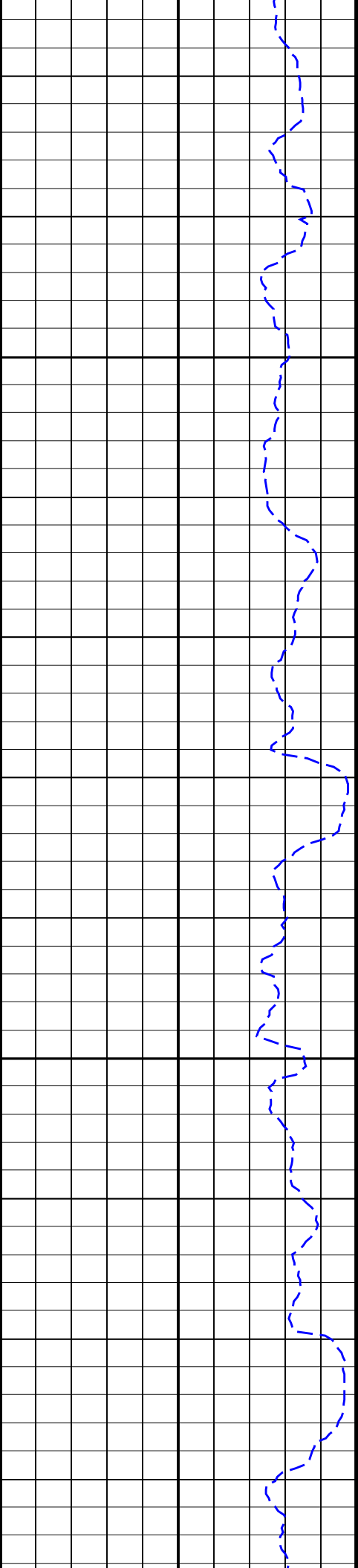
1075
TVD

1100



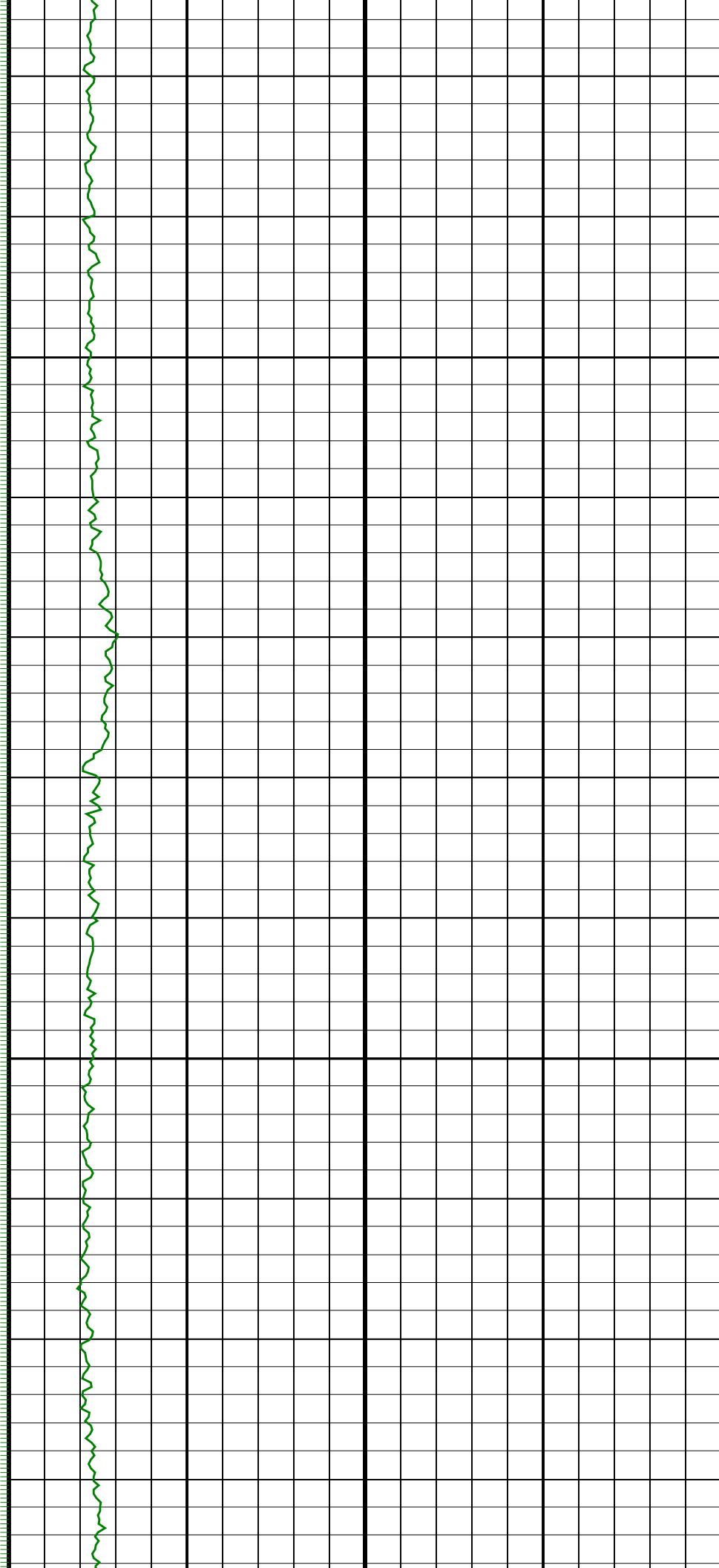


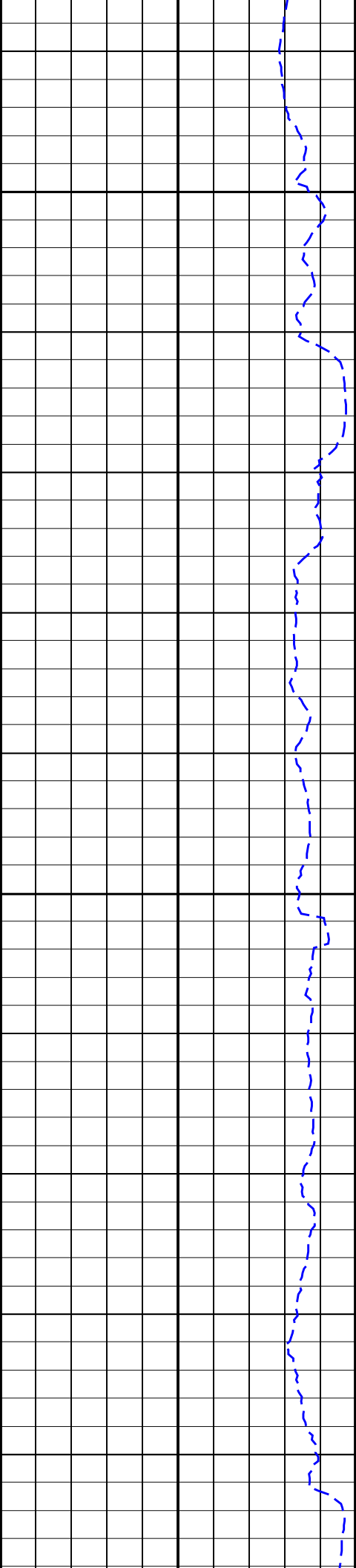




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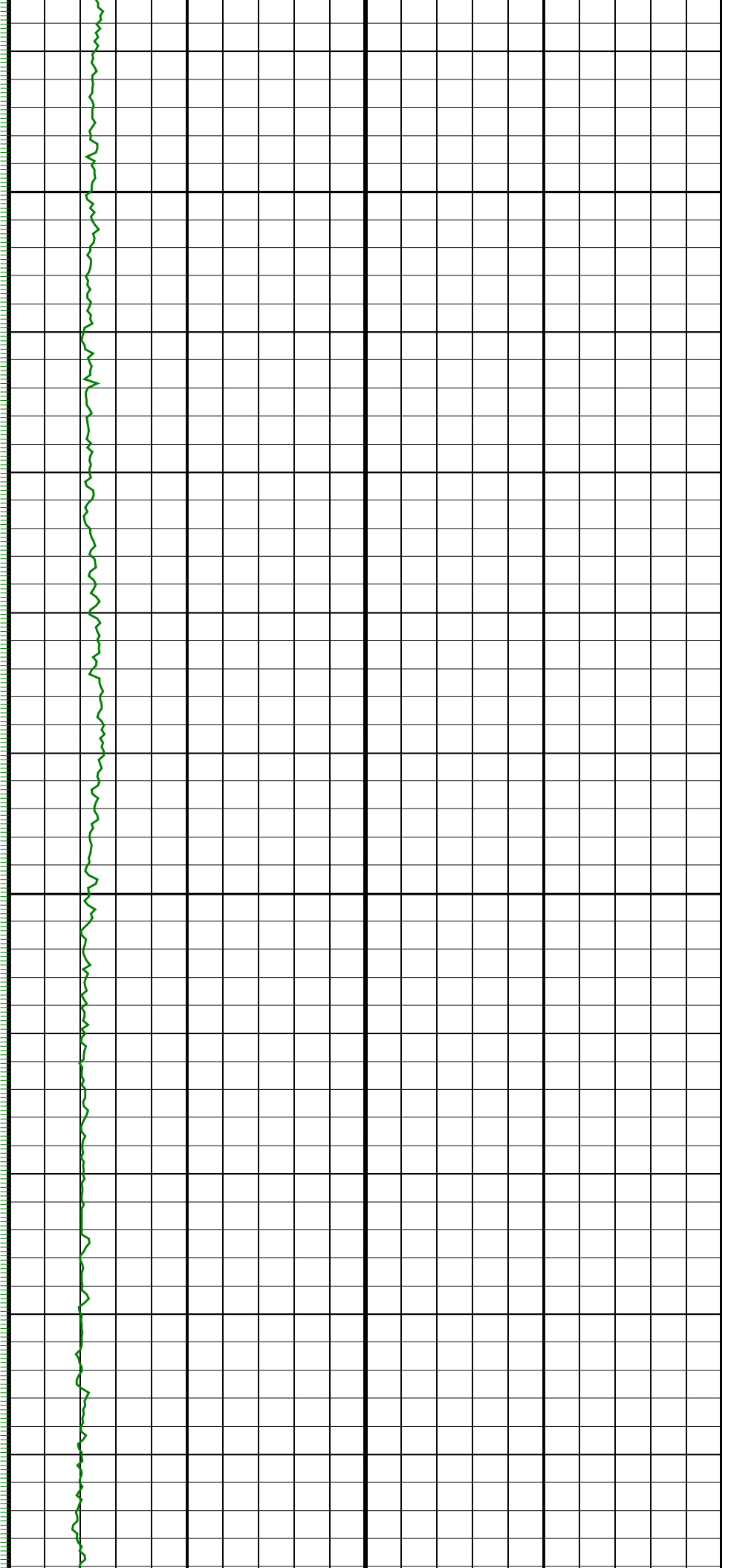
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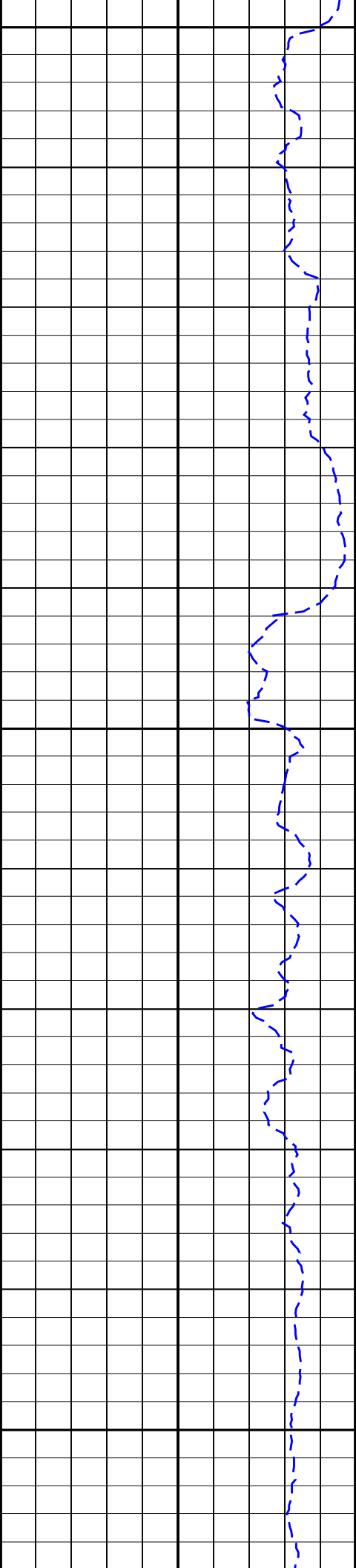




1275
TVD

1300
TVD

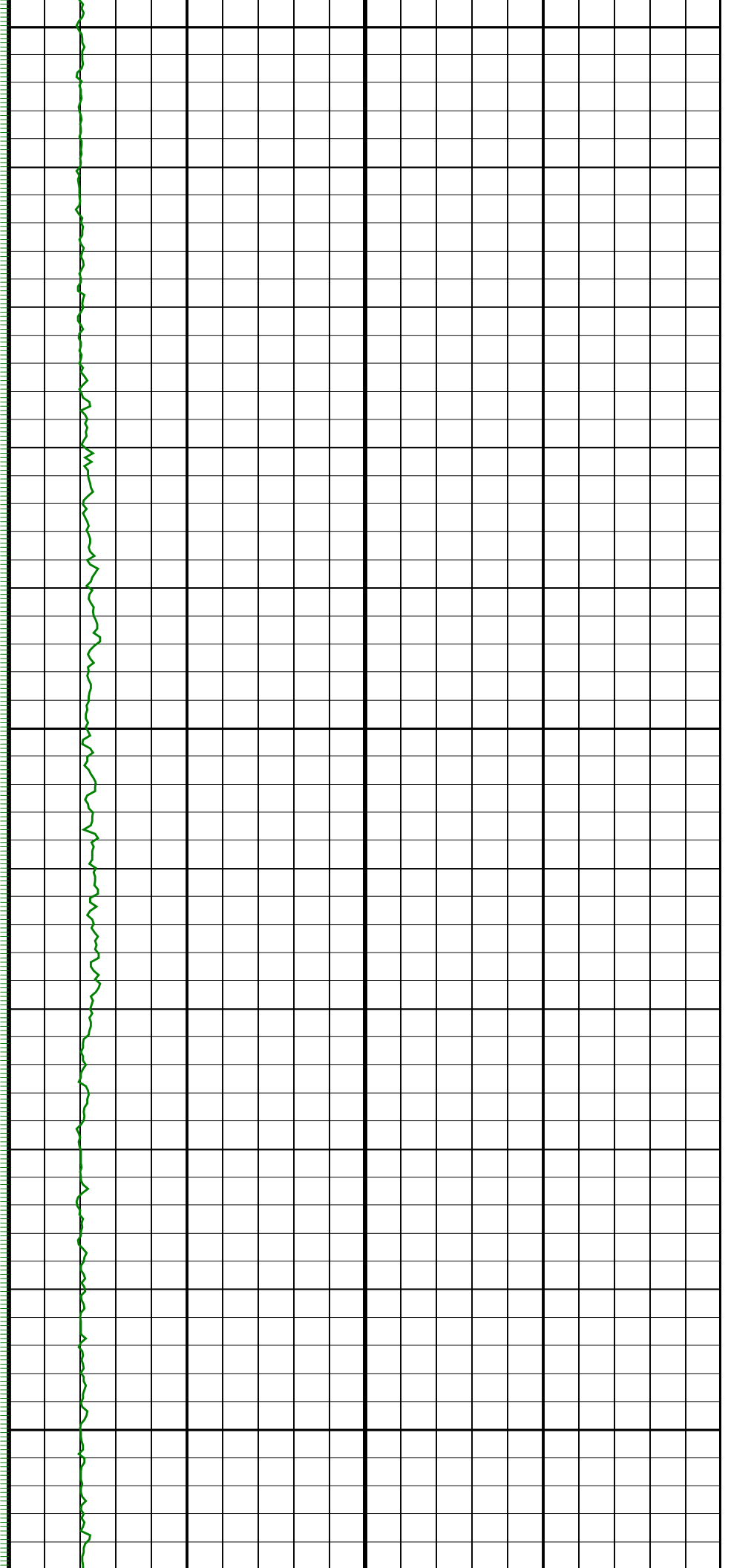


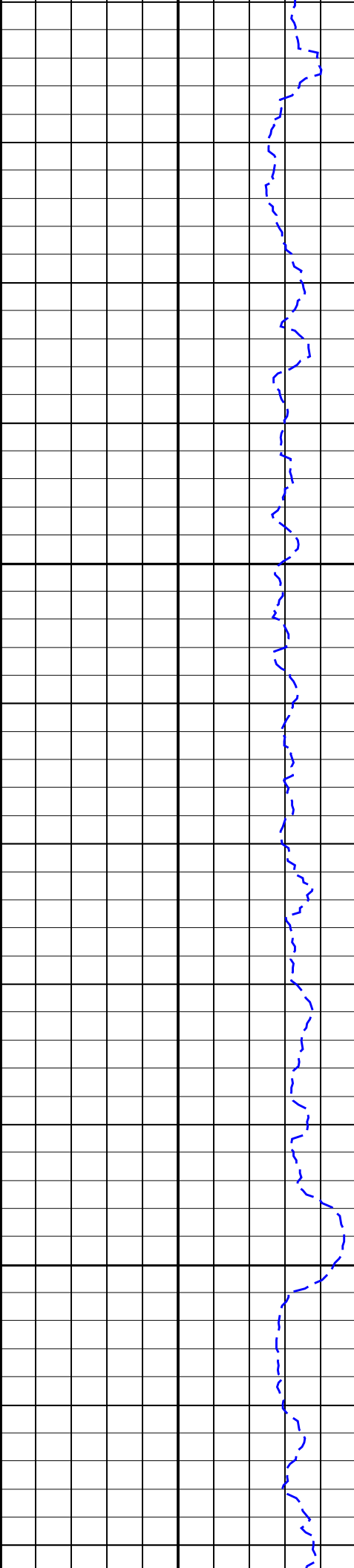


1325
TVD

1350
TVD

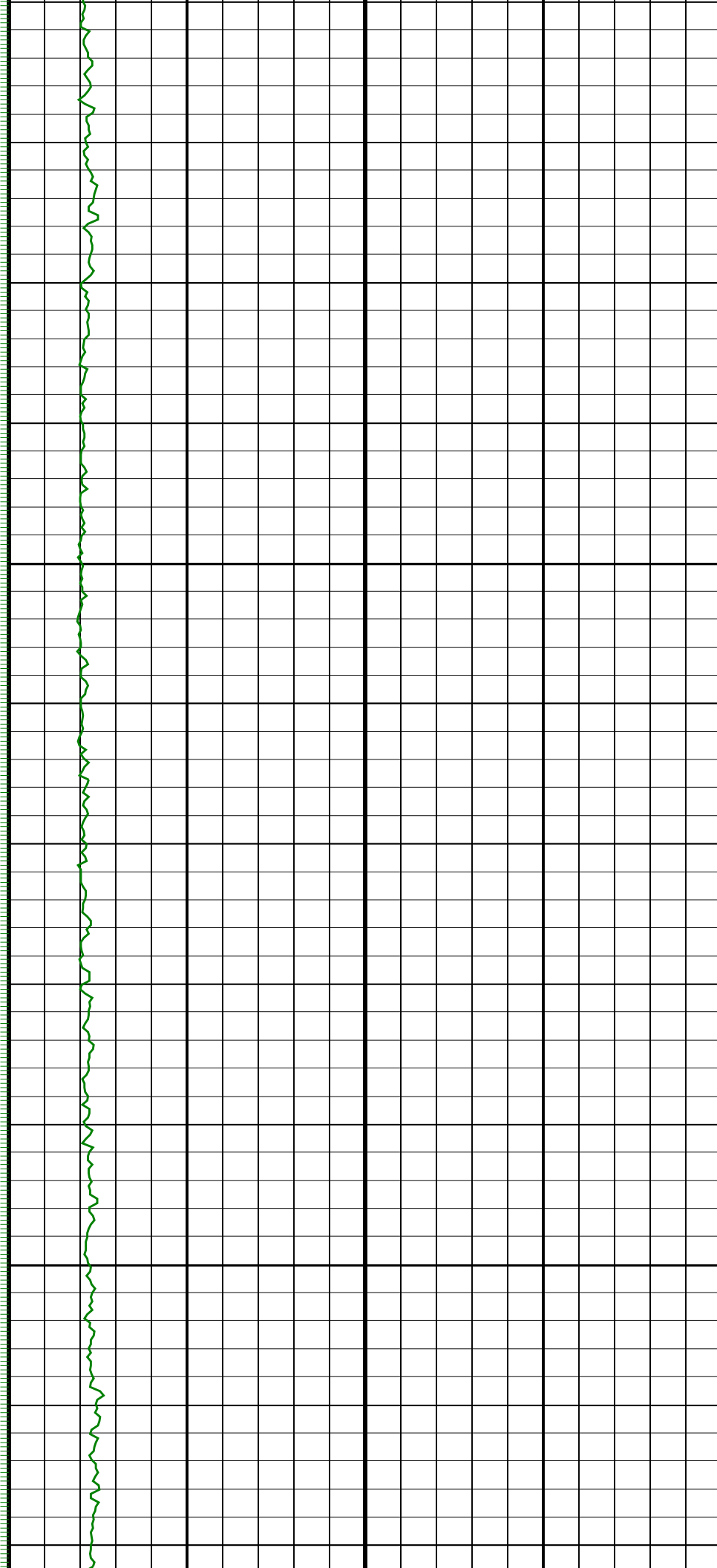
1375
TVD

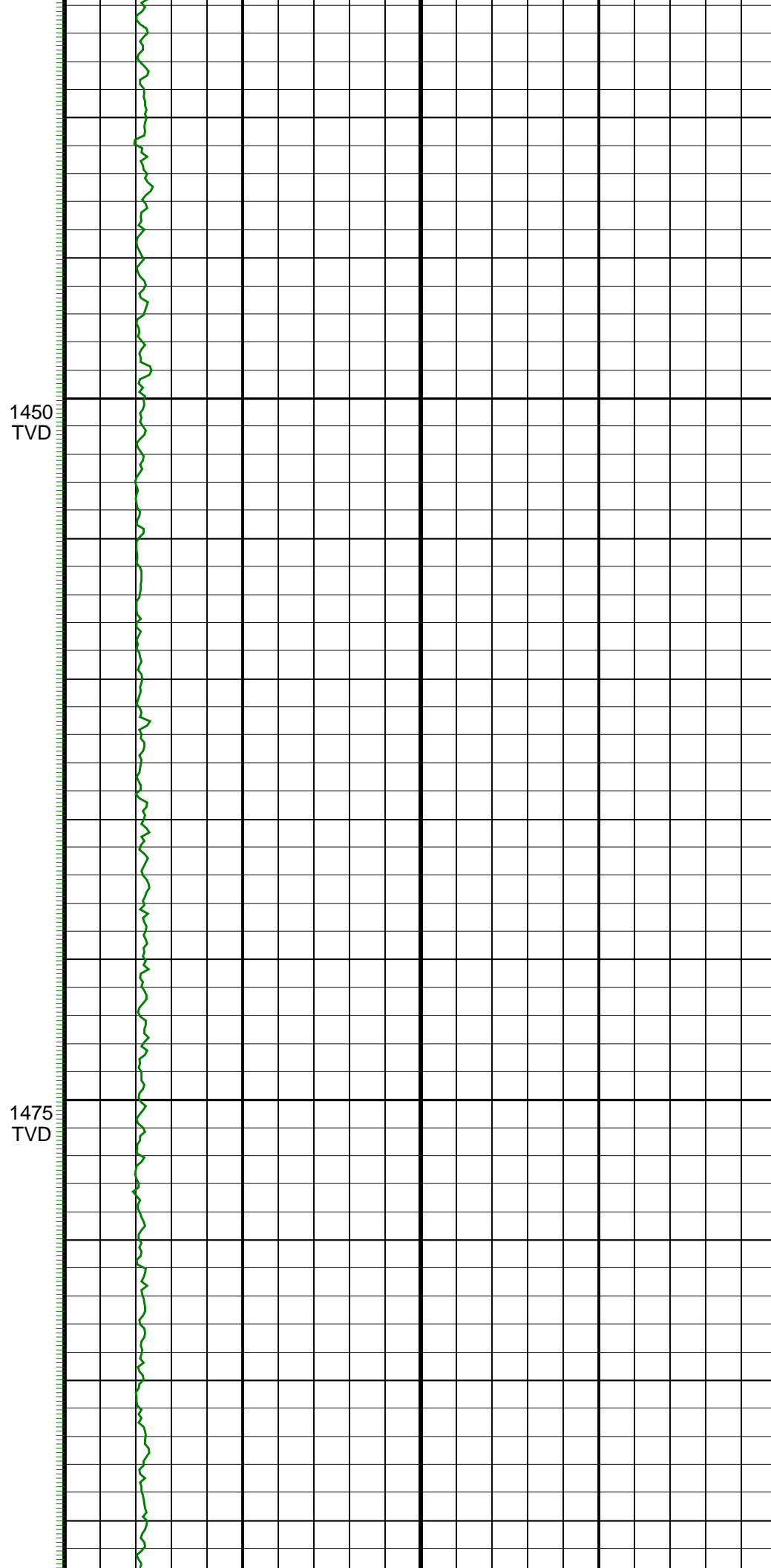
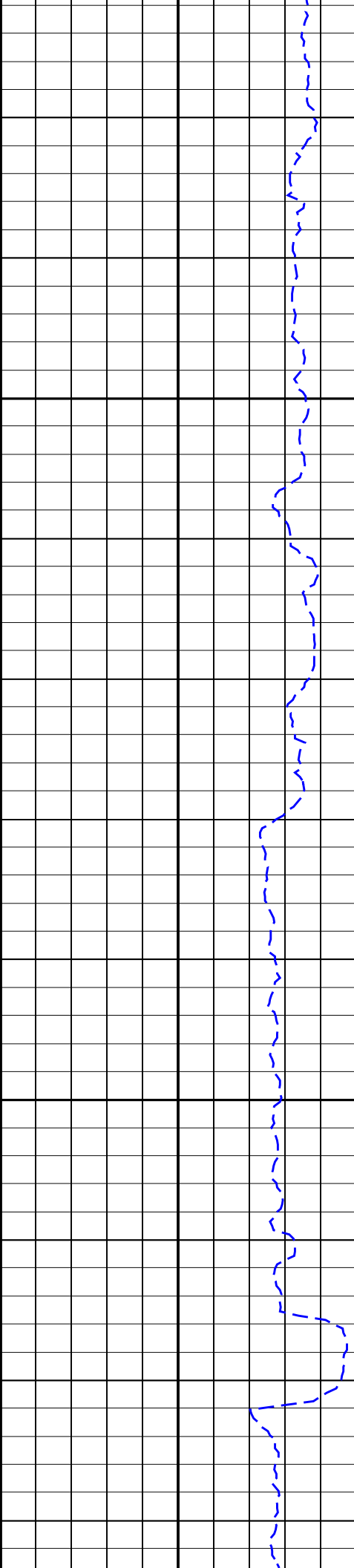


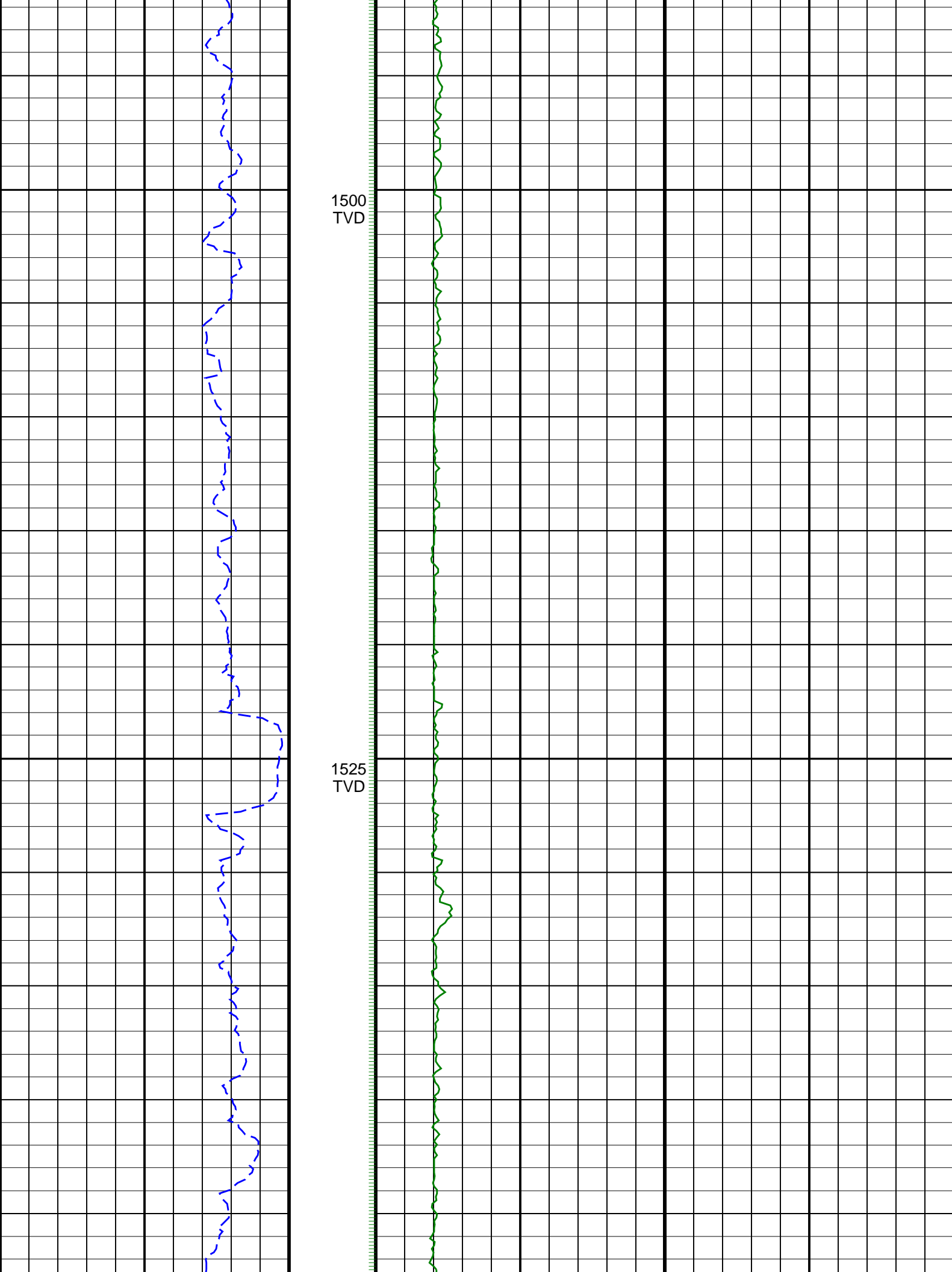


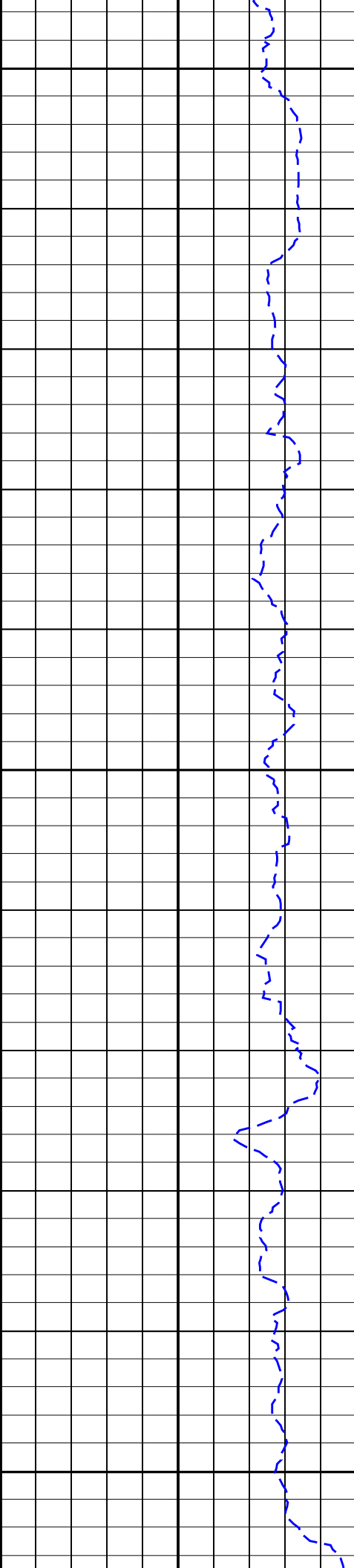
1400
TVD

1425
TVD





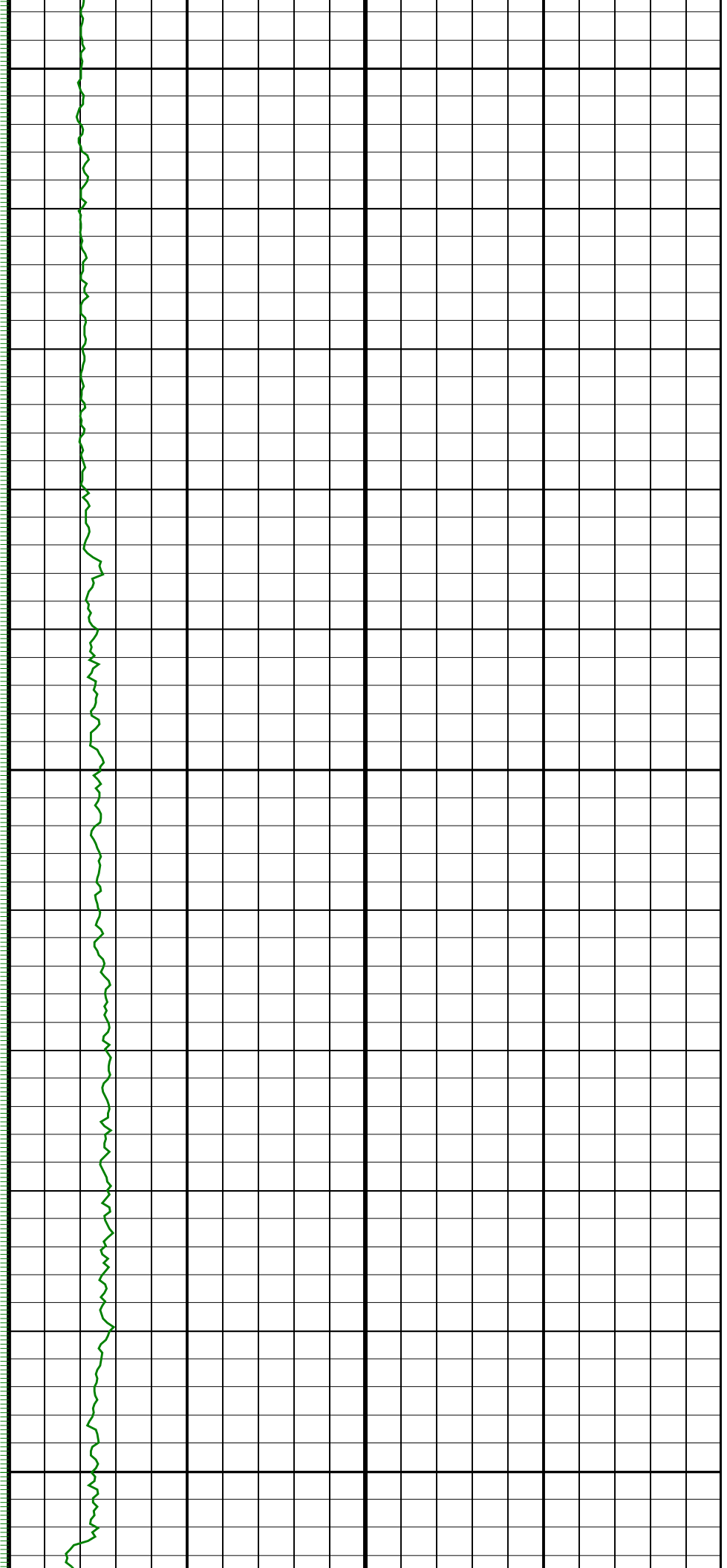


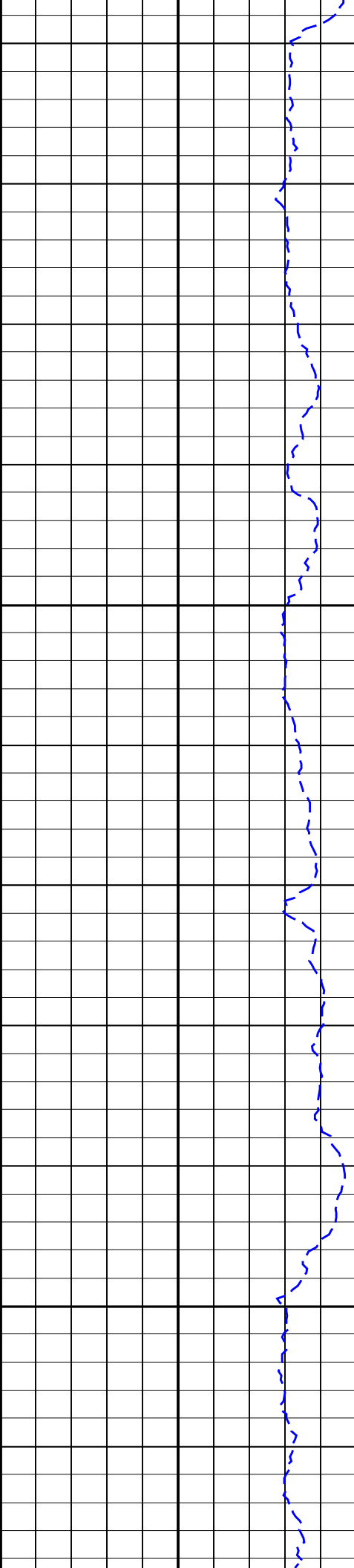


1550
TVD

1575
TVD

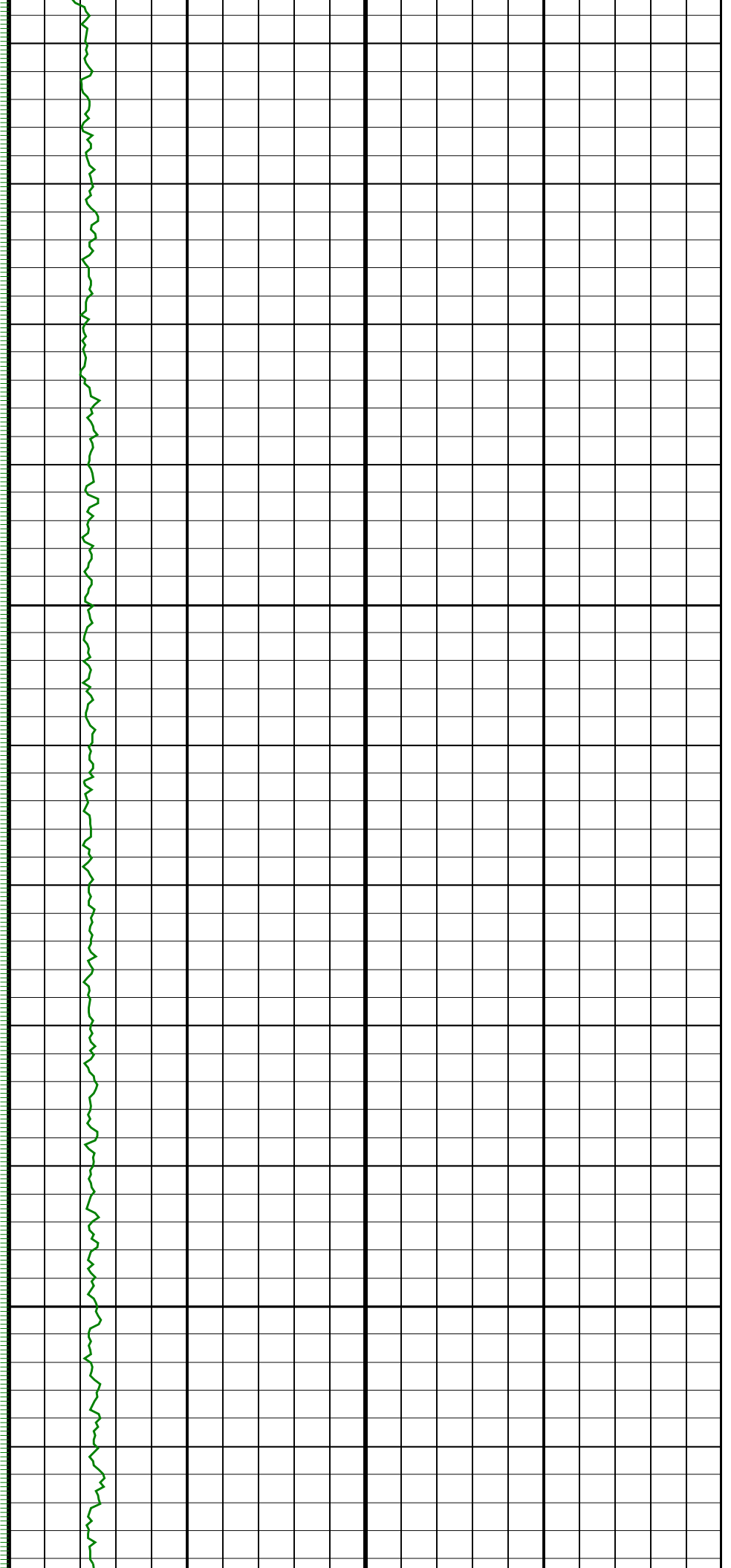
1600
TVD

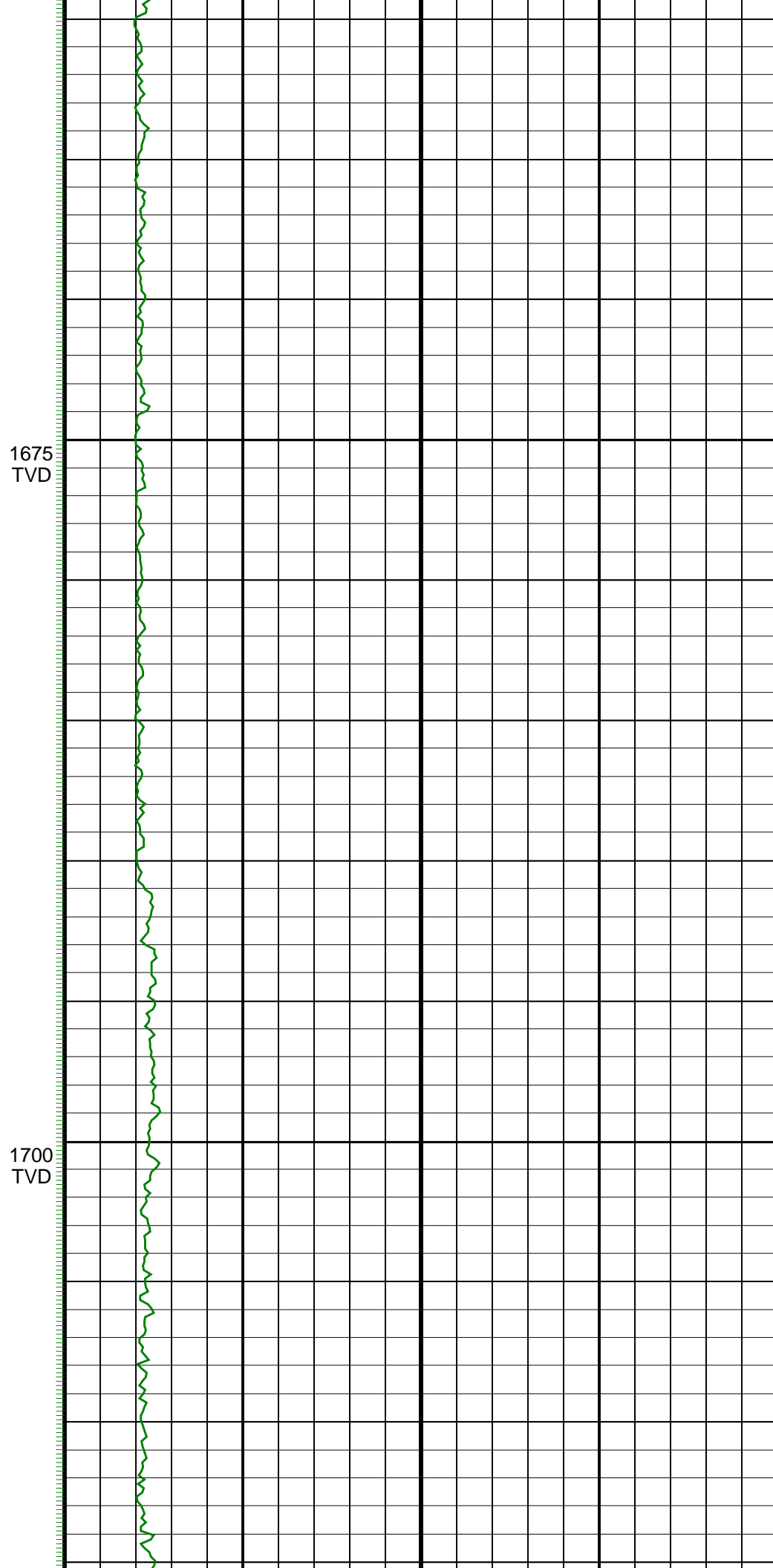
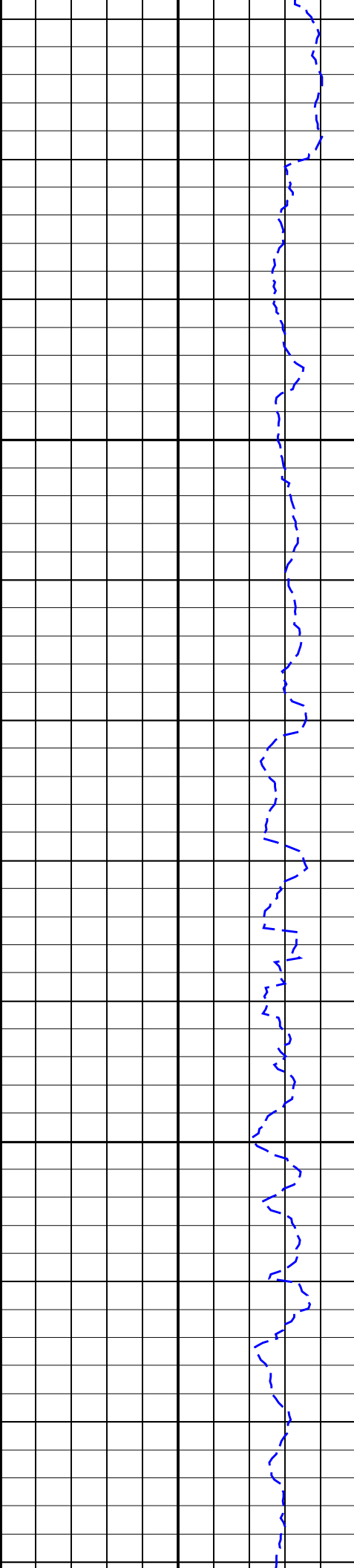


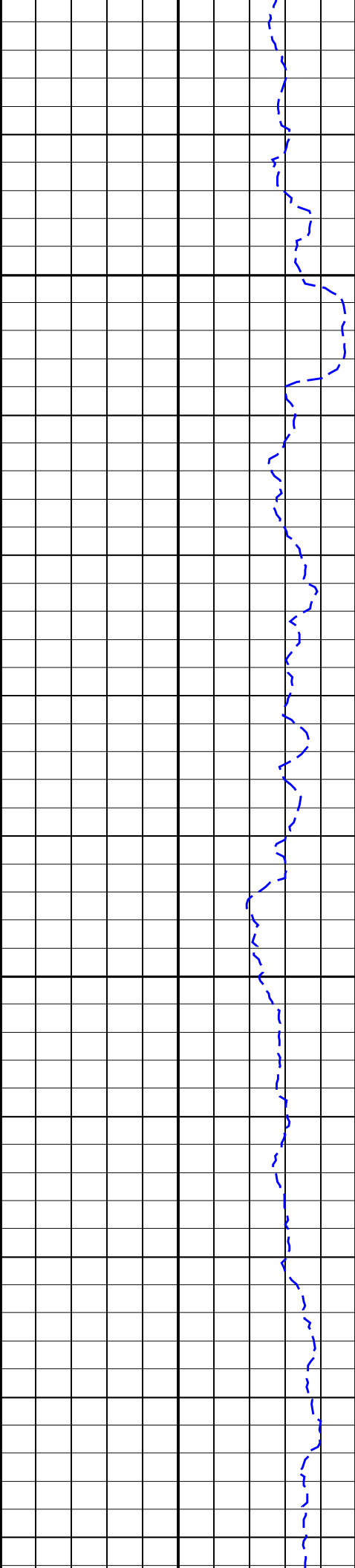


1625
TVD

1650
TVD

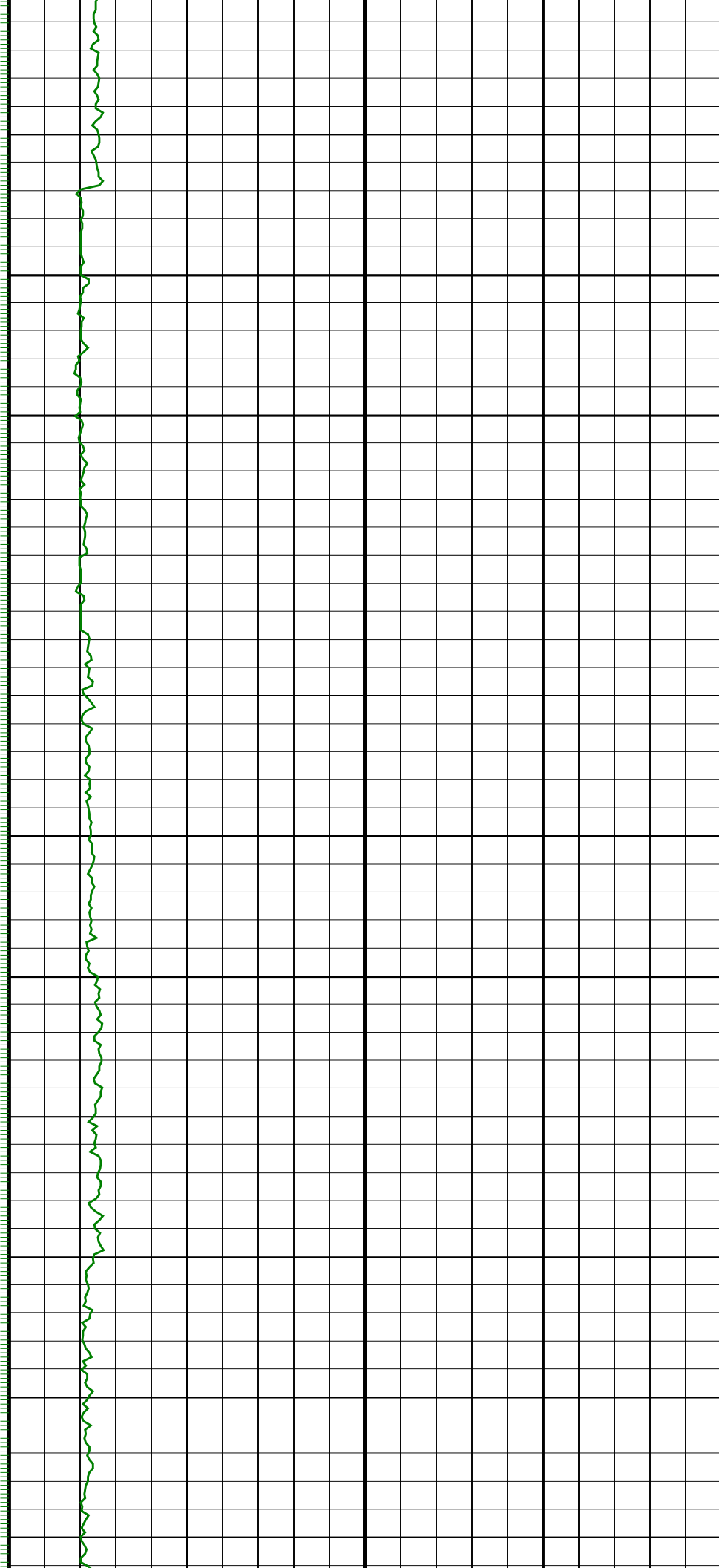


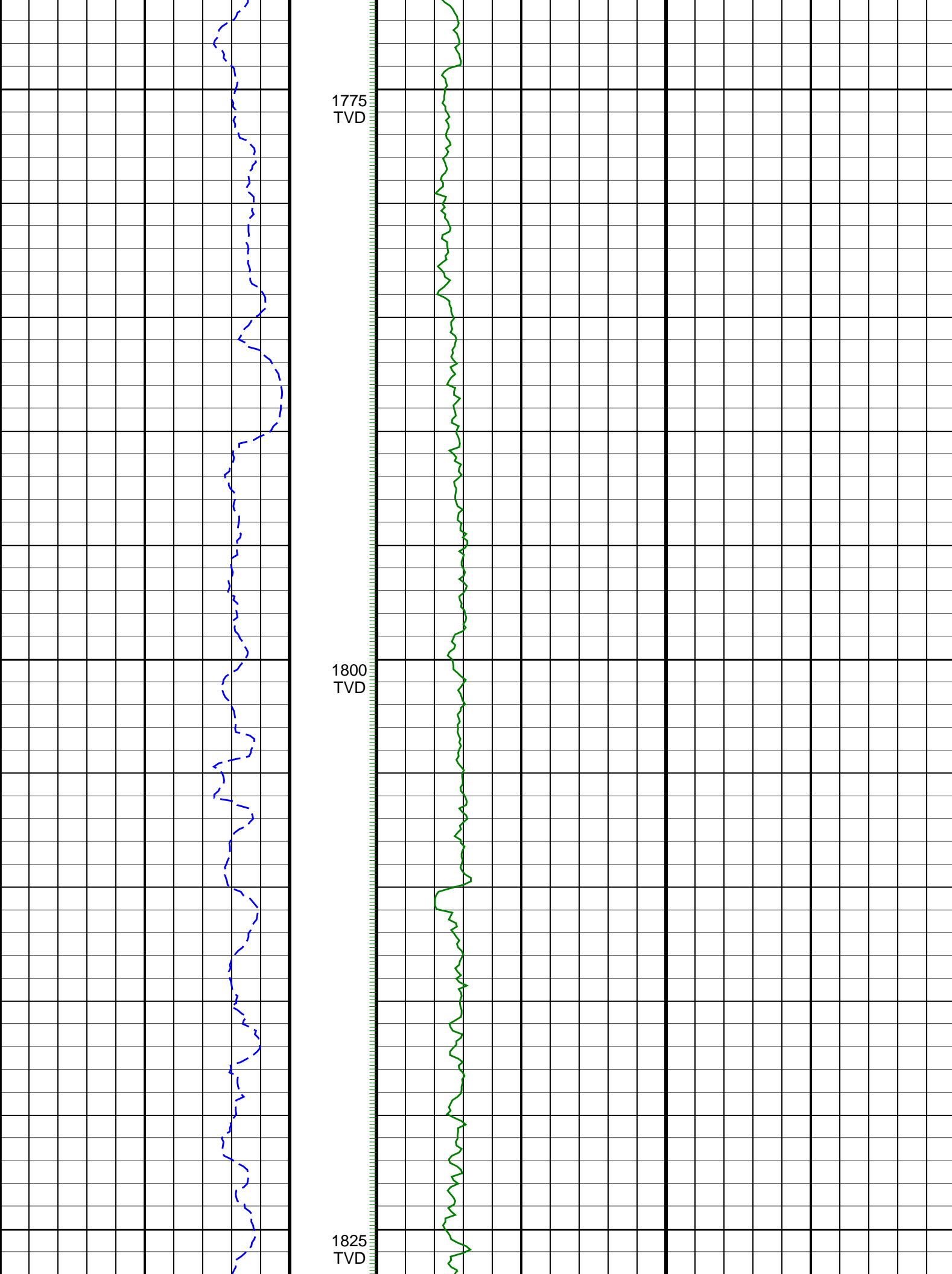


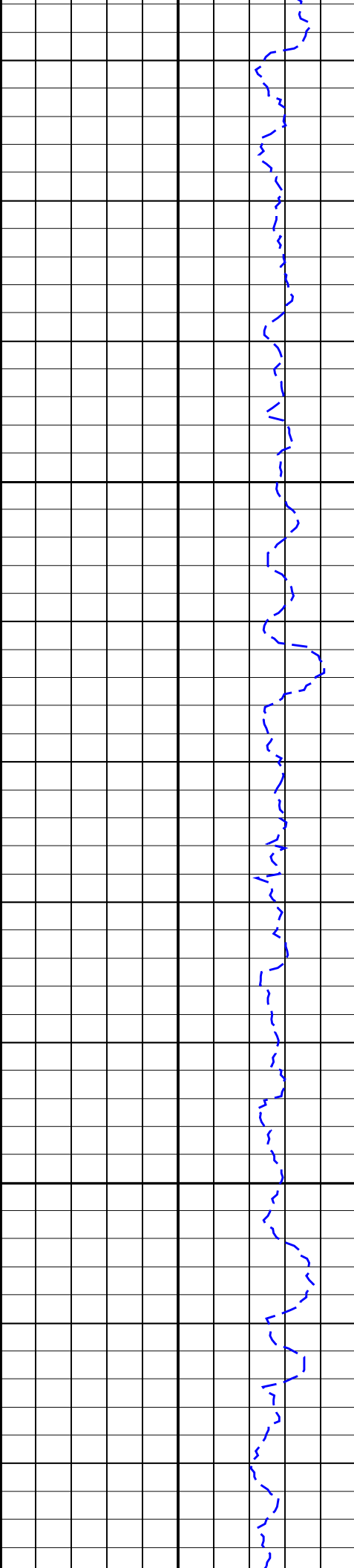


1725
TVD

1750
TVD

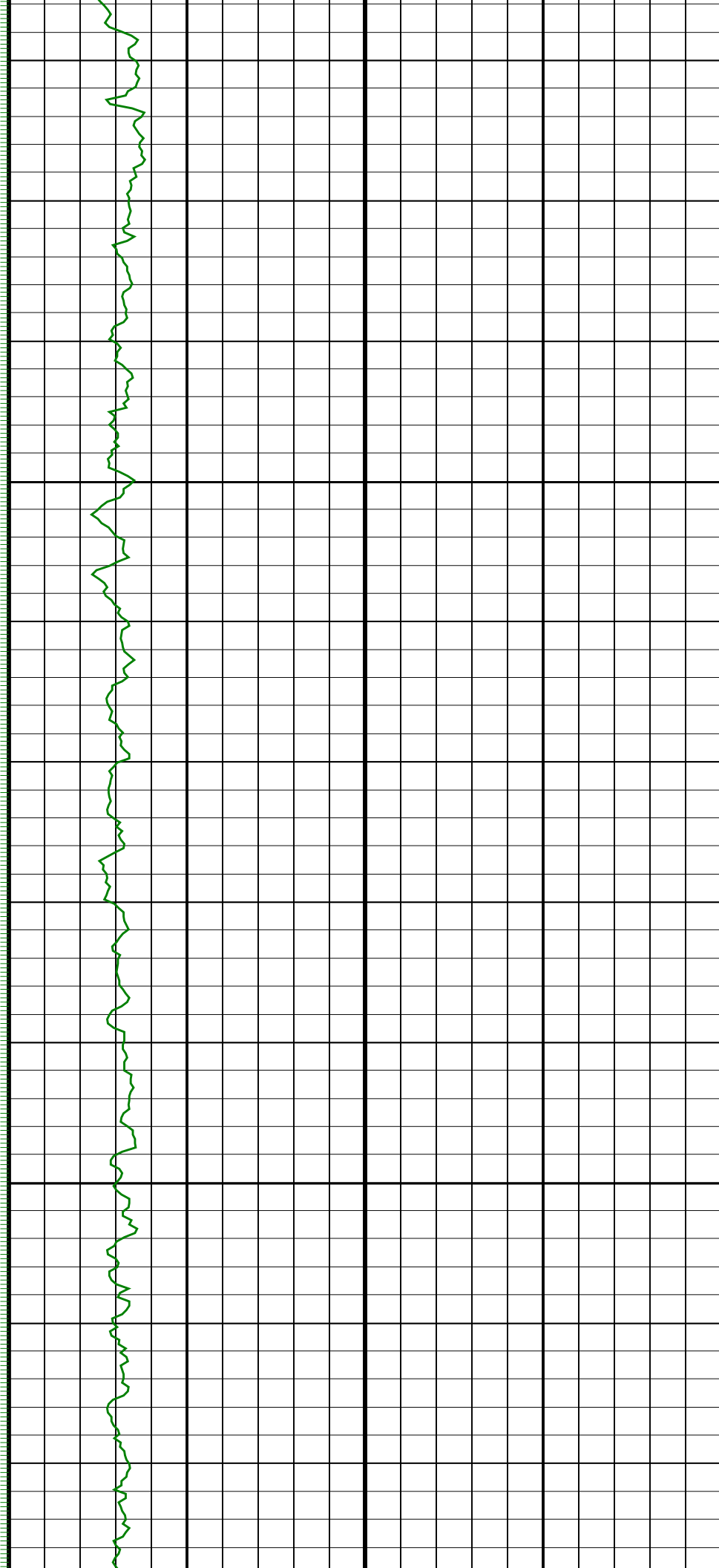


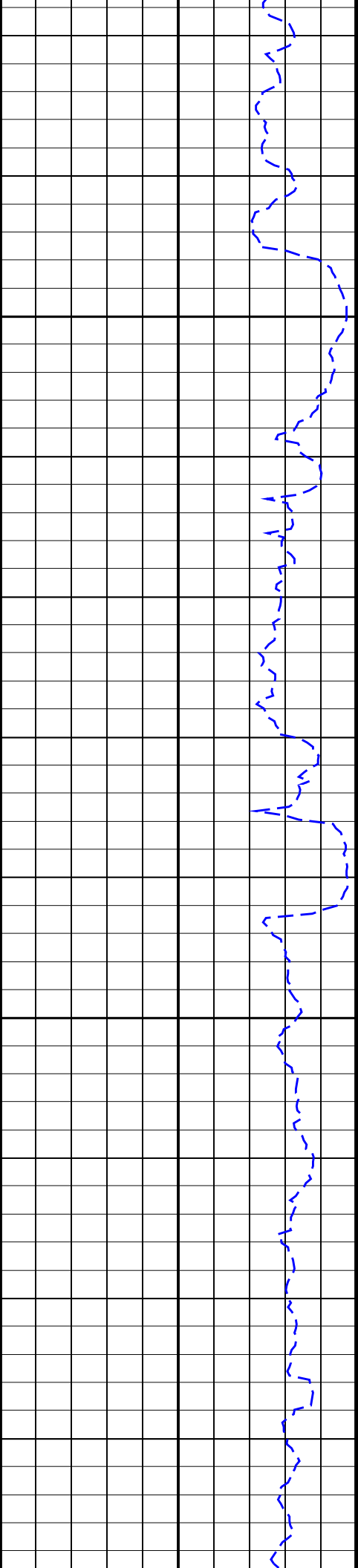




1900
TVD

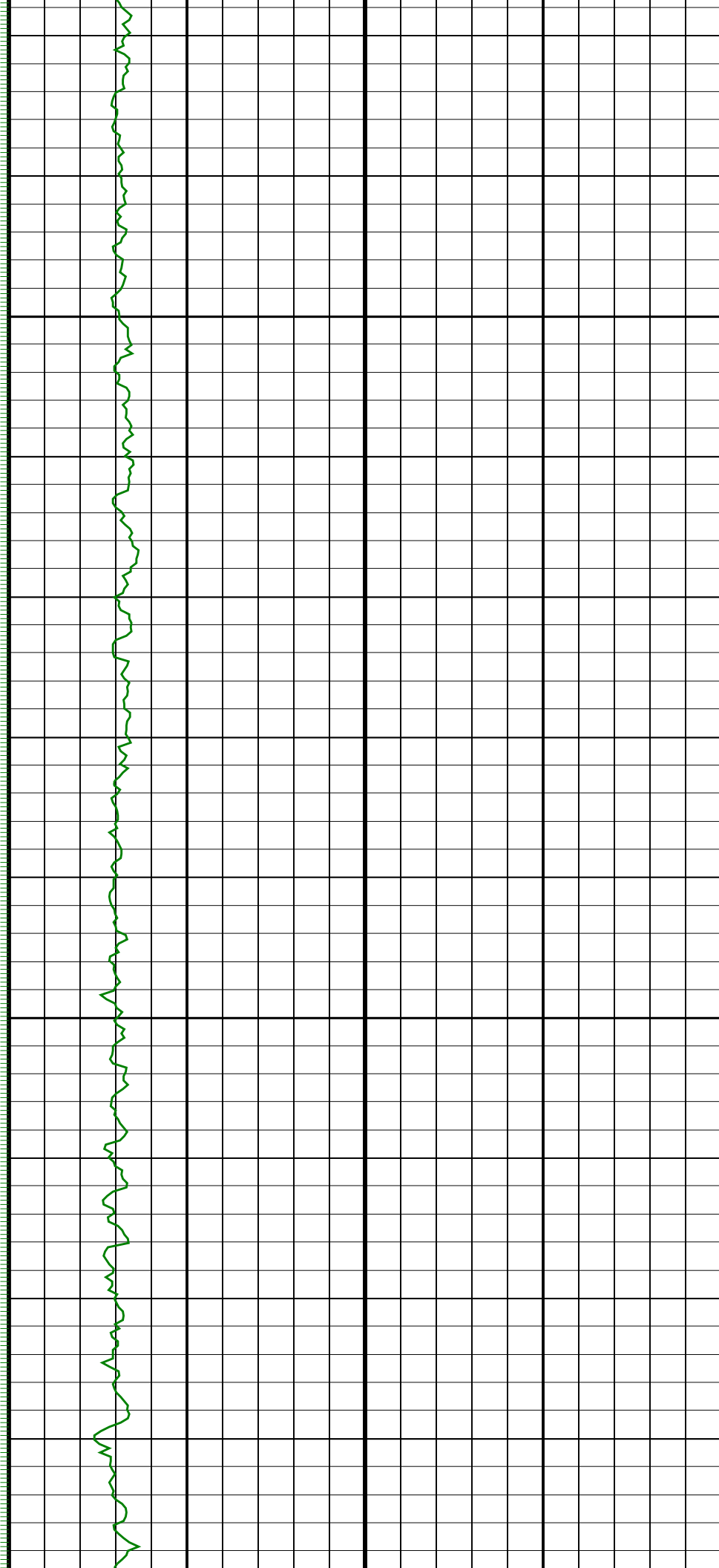
1925
TVD

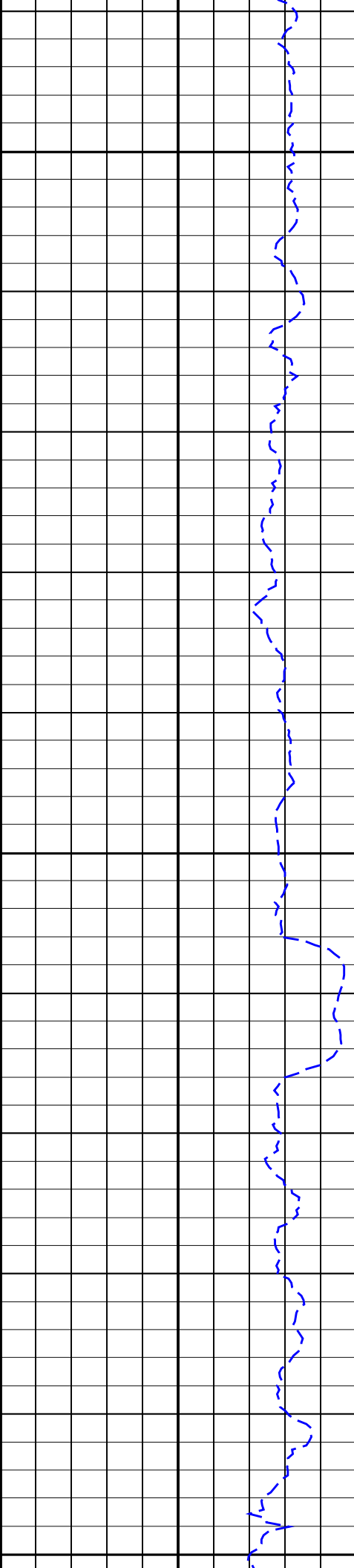




1950
TVD

1975
TVD

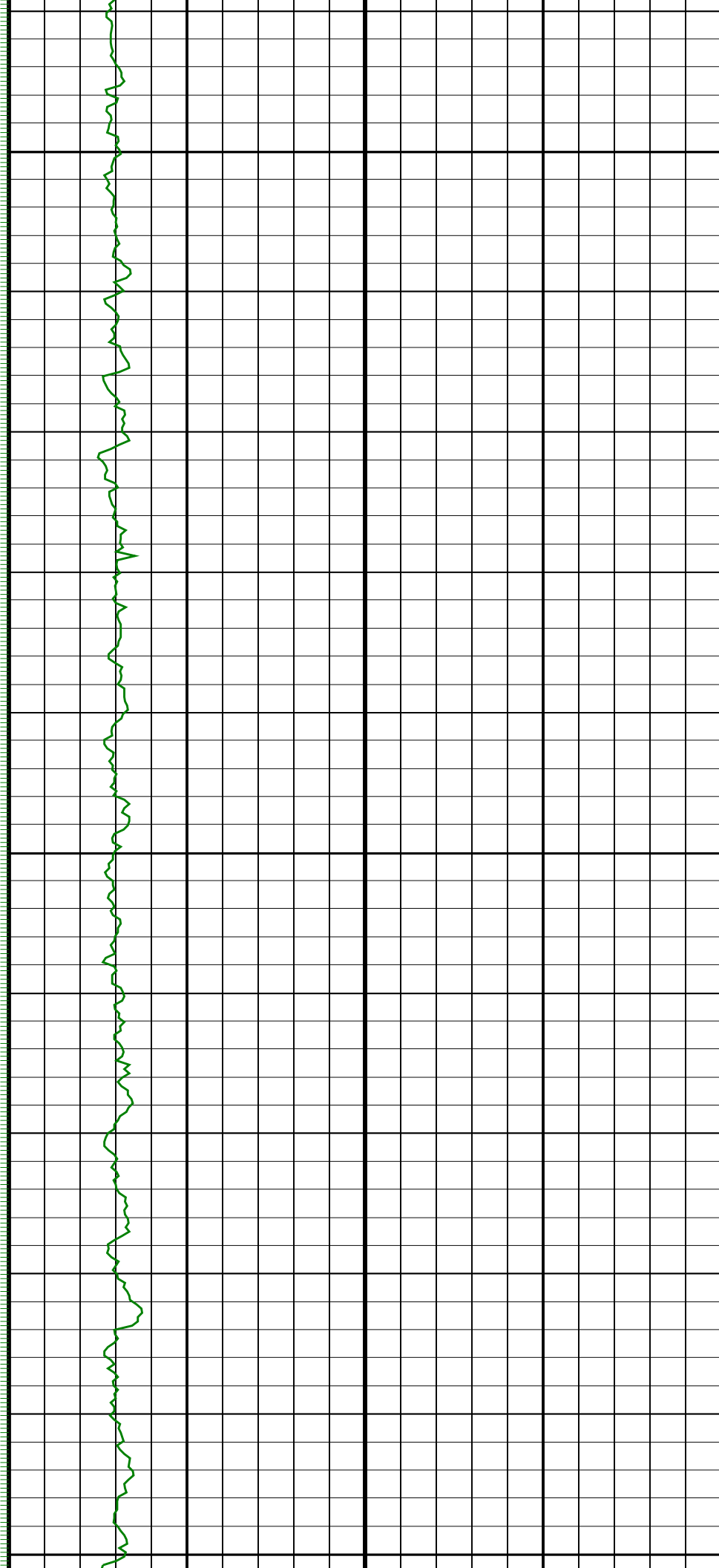


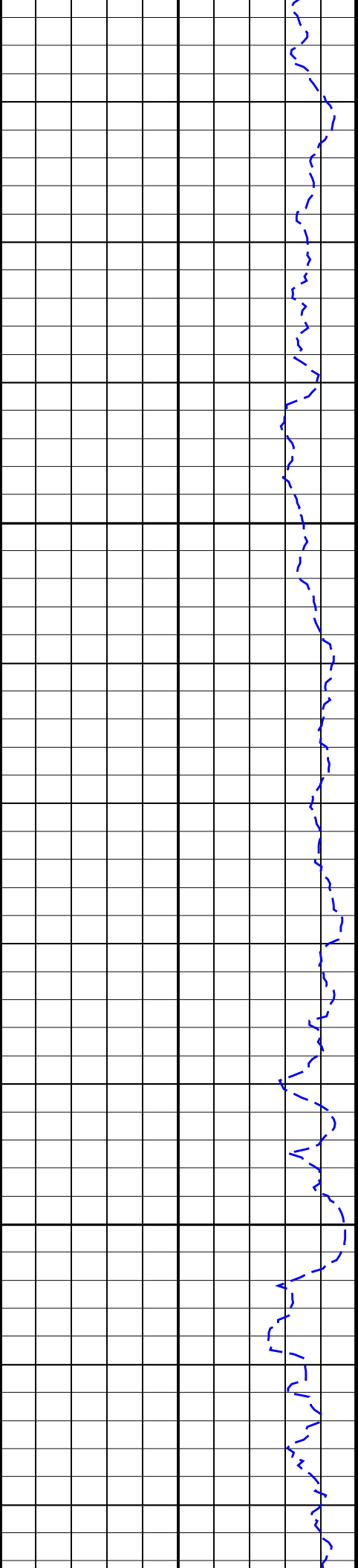


2000
TVD

2025
TVD

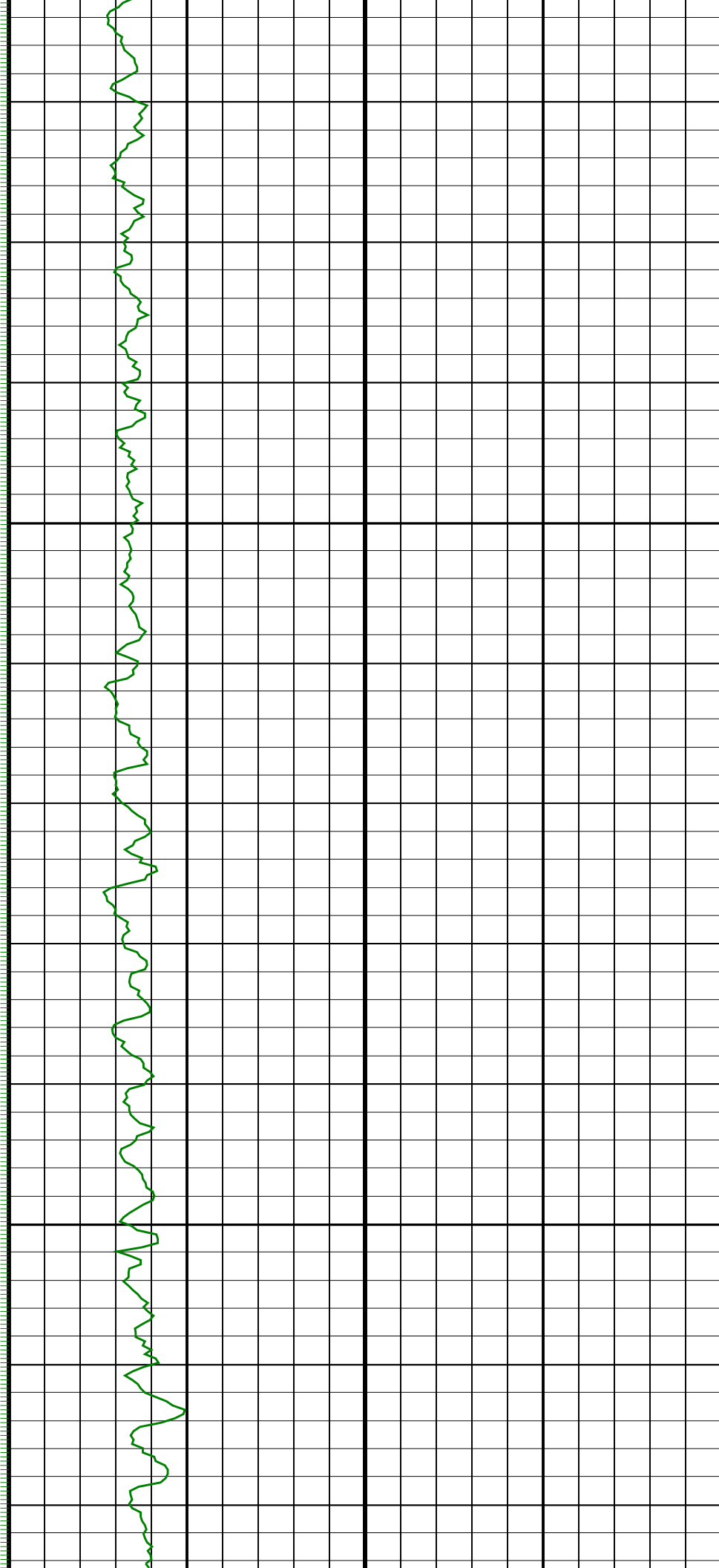
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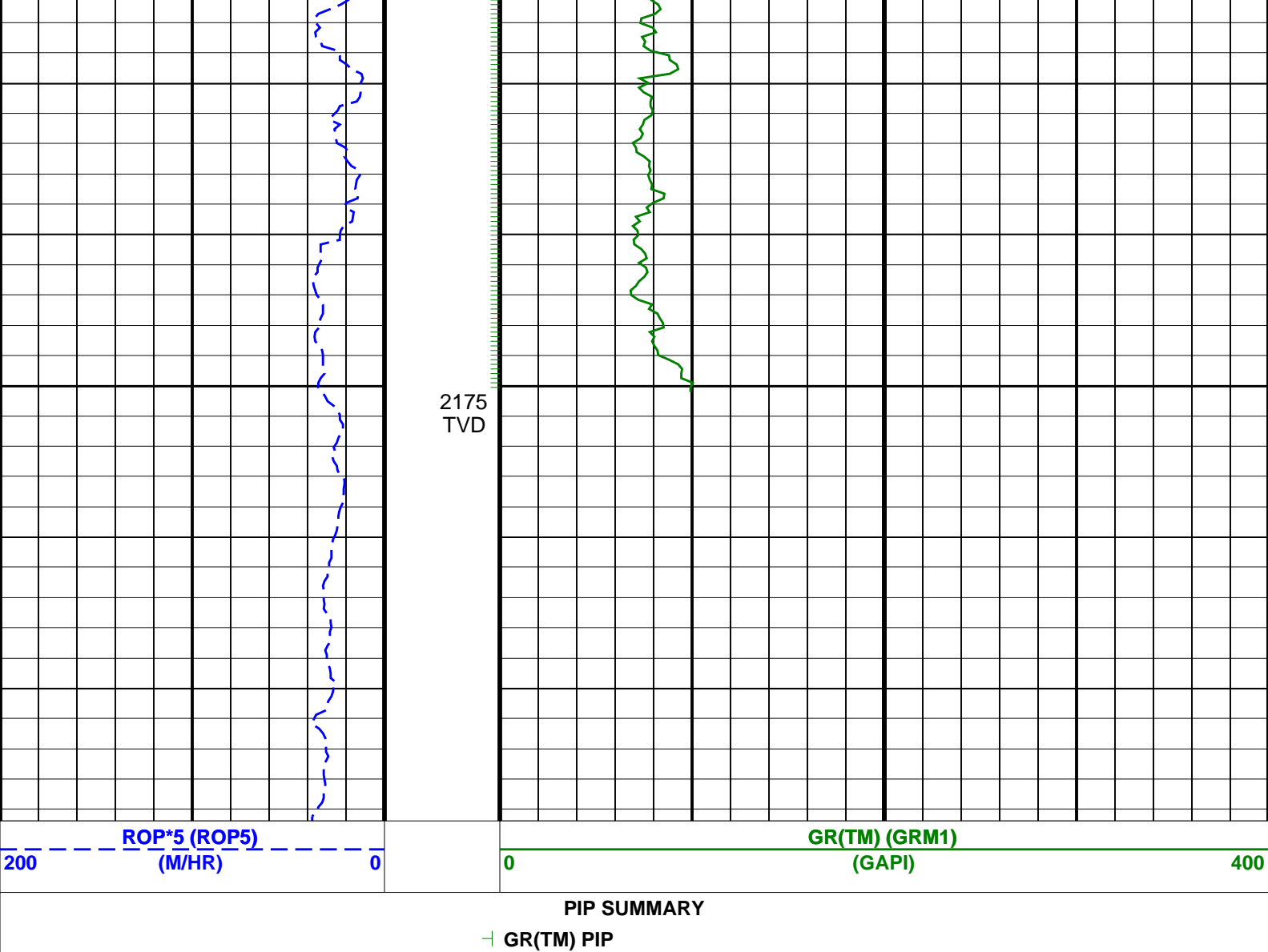




2125
TVD

2150
TVD





SCHLUMBERGER

Survey report

16-Jan-2007 13:33:50

Page 1 of 5

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

Well.....: HLA A2B
API number.....: N/A
Engineer.....: RB, MA, CS

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

----- 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.....: -73.00 m
KB above permanent.....: Top Drive
DF above permanent.....: 29.45 m

----- Vertical section origin -----
Latitude (+N/S-).....: -7.44 m
Departure (+E/W-).....: 19.72 m

Spud date.....: 01-Jan-07
Last survey date.....: 16-Jan-07
Total accepted surveys...: 95
MD of first survey.....: 650.00 m
MD of last survey.....: 3347.00 m

----- Geomagnetic data -----
Magnetic model.....: BGM version 2006
Magnetic date.....: 31-Dec-2006
Magnetic field strength..: 1199.38 HCNT
Magnetic dec (+E/W-).....: 13.23 degrees
Magnetic dip.....: -68.86 degrees

----- MWD survey Reference Criteria -----
Reference G.....: 1000.04 mGal
Reference H.....: 1199.38 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 ...:
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

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	650.00	44.36	93.34	0.00	610.86	151.86	-52.68	166.06	174.22	107.60	0.00	TIP	None
2	660.87	45.55	97.43	10.87	618.55	159.51	-53.40	173.70	181.73	107.09	8.76	MWD	None
3	690.39	45.60	98.48	29.52	639.22	180.58	-56.32	194.58	202.57	106.14	0.78	MWD	None
4	732.17	46.07	99.66	41.78	668.33	210.55	-61.05	224.18	232.34	105.23	0.71	MWD	None
5	748.47	46.57	99.46	16.30	679.58	222.34	-63.00	235.80	244.07	104.96	0.97	MWD	None
6	777.68	46.49	99.54	29.21	699.68	243.54	-66.50	256.71	265.18	104.52	0.10	MWD	None
7	806.91	46.40	99.58	29.23	719.82	264.72	-70.02	277.60	286.29	104.16	0.10	MWD	None
8	836.00	45.84	99.58	29.09	739.98	285.69	-73.51	298.27	307.20	103.84	0.59	MWD	None
9	865.64	46.02	98.77	29.64	760.60	306.98	-76.91	319.30	328.43	103.54	0.63	MWD	None
10	894.65	45.53	98.59	29.01	780.83	327.77	-80.04	339.85	349.15	103.25	0.53	MWD	None
11	923.87	46.01	97.74	29.22	801.22	348.70	-83.02	360.57	370.00	102.97	0.81	MWD	None
12	952.87	46.90	97.08	29.00	821.20	369.70	-85.73	381.42	390.93	102.67	1.06	MWD	None
13	982.43	46.53	97.04	29.56	841.46	391.20	-88.37	402.77	412.35	102.38	0.38	MWD	None
14	1011.59	47.03	96.95	29.16	861.43	412.43	-90.96	423.86	433.51	102.11	0.53	MWD	None
15	1040.54	47.09	98.00	28.95	881.15	433.60	-93.72	444.88	454.64	101.90	0.81	MWD	None
16	1069.56	46.95	99.63	29.02	900.94	454.83	-96.97	465.85	475.84	101.76	1.26	MWD	None
17	1098.60	46.55	99.63	29.04	920.84	475.98	-100.51	486.71	496.98	101.67	0.42	MWD	None
18	1127.85	46.31	99.70	29.25	941.00	497.18	-104.07	507.60	518.16	101.59	0.26	MWD	None
19	1156.97	45.95	99.54	29.12	961.18	518.17	-107.57	528.30	539.14	101.51	0.40	MWD	None
20	1186.26	45.49	99.30	29.29	981.63	539.14	-111.01	548.98	560.09	101.43	0.51	MWD	None
21	1215.54	46.11	100.03	29.28	1002.04	560.13	-114.53	569.68	581.08	101.37	0.84	MWD	None
22	1244.64	46.11	100.01	29.10	1022.21	581.10	-118.18	590.33	602.04	101.32	0.02	MWD	None
23	1273.79	46.02	99.60	29.15	1042.44	602.09	-121.75	611.01	623.03	101.27	0.32	MWD	None
24	1302.98	45.78	99.87	29.19	1062.75	623.05	-125.30	631.67	643.98	101.22	0.32	MWD	None
25	1332.25	46.49	100.02	29.27	1083.04	644.16	-128.94	652.46	665.08	101.18	0.75	MWD	None
26	1361.43	46.60	99.96	29.18	1103.11	665.34	-132.62	673.32	686.26	101.14	0.12	MWD	None
27	1390.66	46.57	99.61	29.23	1123.19	686.57	-136.23	694.24	707.48	101.10	0.27	MWD	None
28	1419.85	46.24	99.68	29.19	1143.32	707.71	-139.77	715.09	728.62	101.06	0.35	MWD	None
29	1449.14	46.83	99.06	29.29	1163.47	728.97	-143.23	736.06	749.87	101.01	0.77	MWD	None
30	1478.24	46.59	98.73	29.10	1183.43	750.15	-146.50	756.99	771.03	100.95	0.36	MWD	None

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	1507.45	45.96	98.69	29.21	1203.61	771.25	-149.70	777.85	792.13	100.89	0.66	MWD	None
32	1536.68	45.31	98.22	29.23	1224.05	792.15	-152.77	798.52	813.00	100.83	0.76	MWD	None
33	1565.94	45.25	98.54	29.26	1244.64	812.93	-155.80	819.09	833.78	100.77	0.24	MWD	None
34	1595.14	45.45	98.03	29.20	1265.16	833.70	-158.80	839.65	854.53	100.71	0.43	MWD	None
35	1624.31	45.86	98.57	29.17	1285.55	854.55	-161.81	860.29	875.37	100.65	0.59	MWD	None
36	1653.37	45.43	98.47	29.06	1305.87	875.33	-164.89	880.84	896.14	100.60	0.46	MWD	None
37	1682.74	45.98	98.23	29.37	1326.38	896.34	-167.94	901.64	917.14	100.55	0.60	MWD	None
38	1711.90	46.74	99.29	29.16	1346.50	917.44	-171.15	922.49	938.24	100.51	1.13	MWD	None
39	1741.22	46.42	99.68	29.32	1366.66	938.74	-174.66	943.50	959.53	100.49	0.44	MWD	None
40	1770.47	46.21	99.68	29.25	1386.86	959.89	-178.22	964.35	980.68	100.47	0.22	MWD	None
41	1799.73	45.84	99.63	29.26	1407.17	980.95	-181.75	985.11	1001.73	100.45	0.39	MWD	None
42	1828.90	46.20	99.44	29.17	1427.43	1001.94	-185.23	1005.81	1022.72	100.43	0.40	MWD	None
43	1857.65	46.30	99.56	28.75	1447.31	1022.71	-188.66	1026.29	1043.49	100.42	0.14	MWD	None
44	1886.83	46.11	99.49	29.18	1467.51	1043.77	-192.14	1047.06	1064.55	100.40	0.21	MWD	None
45	1915.82	46.47	99.22	28.99	1487.54	1064.72	-195.55	1067.74	1085.50	100.38	0.43	MWD	None
46	1945.32	46.09	99.02	29.50	1507.93	1086.04	-198.93	1088.79	1106.81	100.35	0.42	MWD	None
47	1974.30	46.92	98.99	28.98	1527.87	1107.06	-202.22	1109.55	1127.83	100.33	0.87	MWD	None
48	2003.63	46.86	99.37	29.33	1547.92	1128.48	-205.63	1130.69	1149.24	100.31	0.29	MWD	None
49	2033.24	46.55	99.17	29.61	1568.22	1150.03	-209.11	1151.96	1170.79	100.29	0.35	MWD	None
50	2061.83	46.22	99.16	28.59	1587.94	1170.72	-212.40	1172.40	1191.48	100.27	0.35	MWD	None
51	2091.25	45.91	98.66	29.42	1608.36	1191.91	-215.68	1193.33	1212.66	100.25	0.49	MWD	None
52	2120.20	45.73	98.89	28.95	1628.53	1212.67	-218.85	1213.84	1233.42	100.22	0.26	MWD	None
53	2149.33	46.24	99.33	29.13	1648.77	1233.62	-222.17	1234.53	1254.36	100.20	0.63	MWD	None
54	2178.65	46.11	99.39	29.32	1669.08	1254.77	-225.61	1255.40	1275.51	100.19	0.14	MWD	None
55	2208.26	45.89	99.57	29.61	1689.65	1276.07	-229.12	1276.41	1296.81	100.18	0.26	MWD	None
56	2237.48	45.67	99.37	29.22	1710.02	1297.01	-232.56	1297.06	1317.75	100.17	0.27	MWD	None
57	2266.81	46.26	99.32	29.33	1730.41	1318.09	-235.99	1317.87	1338.83	100.15	0.61	MWD	None
58	2295.72	46.06	99.20	28.91	1750.44	1338.95	-239.34	1338.45	1359.68	100.14	0.23	MWD	None
59	2324.98	45.86	98.95	29.26	1770.78	1359.98	-242.66	1359.22	1380.71	100.12	0.28	MWD	None
60	2354.24	46.61	99.17	29.26	1791.02	1381.11	-245.99	1380.09	1401.84	100.11	0.80	MWD	None

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	2383.14	46.76	99.04	28.90	1810.84	1402.13	-249.31	1400.85	1422.86	100.09	0.19	MWD	None
62	2412.46	46.38	98.87	29.32	1831.00	1423.43	-252.63	1421.88	1444.15	100.07	0.42	MWD	None
63	2441.90	46.19	98.96	29.44	1851.34	1444.70	-255.93	1442.91	1465.43	100.06	0.21	MWD	None
64	2471.01	46.19	99.05	29.11	1871.49	1465.71	-259.21	1463.65	1486.43	100.04	0.07	MWD	None
65	2500.16	46.00	98.99	29.15	1891.71	1486.71	-262.51	1484.40	1507.43	100.03	0.20	MWD	None

66	2529.32	45.79	98.47	29.18	1912.00	1507.64	-285.89	1505.09	1528.38	100.01	0.45	MWD	None
67	2558.52	45.49	98.45	29.20	1932.42	1528.52	-268.76	1525.74	1549.23	99.99	0.31	MWD	None
68	2586.28	46.03	98.46	27.76	1951.79	1548.40	-271.68	1545.41	1569.11	99.97	0.59	MWD	None
69	2616.58	46.66	98.87	30.30	1972.70	1570.32	-274.98	1567.09	1591.03	99.95	0.70	MWD	None
70	2645.77	46.32	98.80	29.19	1992.80	1591.49	-278.24	1588.00	1612.20	99.94	0.36	MWD	None
71	2675.07	46.18	98.36	29.30	2013.06	1612.65	-281.39	1608.93	1633.35	99.92	0.36	MWD	None
72	2704.46	46.81	98.75	29.39	2033.29	1633.96	-284.57	1630.01	1654.67	99.90	0.72	MWD	None
73	2733.62	46.61	98.49	29.16	2053.29	1655.18	-287.75	1651.00	1675.89	99.89	0.29	MWD	None
74	2762.48	46.75	99.41	28.86	2073.09	1676.18	-291.01	1671.74	1696.88	99.88	0.72	MWD	None
75	2791.83	46.58	99.52	29.35	2093.23	1697.53	-294.52	1692.80	1718.23	99.87	0.20	MWD	None
76	2820.99	46.35	99.39	29.16	2113.32	1718.67	-298.00	1713.65	1739.37	99.86	0.26	MWD	None
77	2850.67	46.03	99.24	29.68	2133.86	1740.08	-301.46	1734.78	1760.78	99.86	0.35	MWD	None
78	2879.50	46.15	99.40	28.83	2153.86	1760.85	-304.83	1755.28	1781.55	99.85	0.18	MWD	None
79	2905.21	45.91	99.45	25.71	2171.71	1779.36	-307.86	1773.53	1800.05	99.85	0.29	MWD	None
80	2935.38	45.91	98.61	30.17	2192.70	1801.02	-311.26	1794.93	1821.72	99.84	0.61	MWD	None
81	2964.47	45.88	98.78	29.09	2212.94	1821.91	-314.42	1815.58	1842.61	99.82	0.13	MWD	None
82	2993.32	46.28	98.29	28.85	2232.96	1842.69	-317.50	1836.13	1863.38	99.81	0.56	MWD	None
83	3022.29	46.99	98.42	28.97	2252.85	1863.74	-320.56	1856.97	1884.44	99.79	0.75	MWD	None
84	3051.27	47.44	97.96	28.98	2272.53	1885.00	-323.59	1878.02	1905.70	99.78	0.59	MWD	None
85	3079.59	48.42	97.93	28.32	2291.51	1906.02	-326.50	1898.84	1926.71	99.76	1.06	MWD	None
86	3108.69	49.40	97.56	29.10	2310.63	1927.94	-329.45	1920.57	1948.63	99.73	1.07	MWD	None
87	3137.70	51.16	97.25	29.01	2329.17	1950.23	-332.33	1942.70	1970.92	99.71	1.87	MWD	None
88	3166.46	53.04	97.34	28.76	2346.84	1972.90	-335.21	1965.21	1993.59	99.68	1.99	MWD	None
89	3195.74	53.89	97.23	29.28	2364.27	1996.41	-338.19	1988.55	2017.10	99.65	0.89	MWD	None
90	3224.78	53.92	97.10	29.04	2381.38	2019.85	-341.12	2011.83	2040.54	99.62	0.11	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)
91	3253.44	54.42	97.03	28.66	2398.15	2043.07	-343.97	2034.89	2063.76	99.59	0.54	MWD	None
92	3282.73	55.34	97.31	29.29	2415.00	2067.00	-346.97	2058.66	2087.69	99.57	0.99	MWD	None
93	3311.71	56.13	96.82	28.98	2431.32	2090.93	-349.91	2082.43	2111.62	99.54	0.93	MWD	None
94	3325.71	56.72	97.11	14.00	2439.06	2102.58	-351.33	2094.01	2123.27	99.52	1.39	MWD	None
95	3347.00	57.20	97.11	21.29	2450.67	2120.41	-353.53	2111.72	2141.10	99.50	0.68	Proj.TD	

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Company:
Esso Australia Pty. Ltd.

Well:
HLA A-2B

Field:
Halibut

Rig:
ISDL 453

State:
Victoria

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

