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Directional Drilling

Directional Surveys

EMARKS: RUN NUMBER 1
8-1/2 in. hole was drilled from 1217.6m to
2262.0m MD.

Depth is referenced to Driller's Depth.

Gamma Ray corrected for Tool Size,
Bit Size and Mud Weight.

Mud Type is KCl/PHPA/Glycol.

POOH due to TD of TNA A3A

Thank You for Choosing Schlumberger

EQUIPMENT DESCRIPTION

RUN1

RUN

RUN

DOWNHOLE EQUIPMENT

6-3/4 in. PowerPulse*		23.71
MDC: 401-AB		
MEC: 1540-BB		
MDI: 1556-CA		
MGR: 146-AA		
DHS: 7.0C00		
	D&I	19.40
	GR	18.75
6-5/8 in. NM Pony		15.28
S/N: ASS15700		
6-7/16 in. NM Pony		13.72
S/N: 9612058		
8-3/8 in. NM Roller Reamer		11.27
S/N: GU2298		
7 in. PowerPak* Motor		9.19
A700GT 7:8		
S/N: N7268		
1.50 deg. Bent Housing		
8-3/8 in. Motor Sleeve		



— 0.00

0.22

Smith PDC Bit
OD: 8–1/2 in.
S73PX S/N: JT6967–R1

Maximum string diameter 8.50 in.
All lengths in Meters

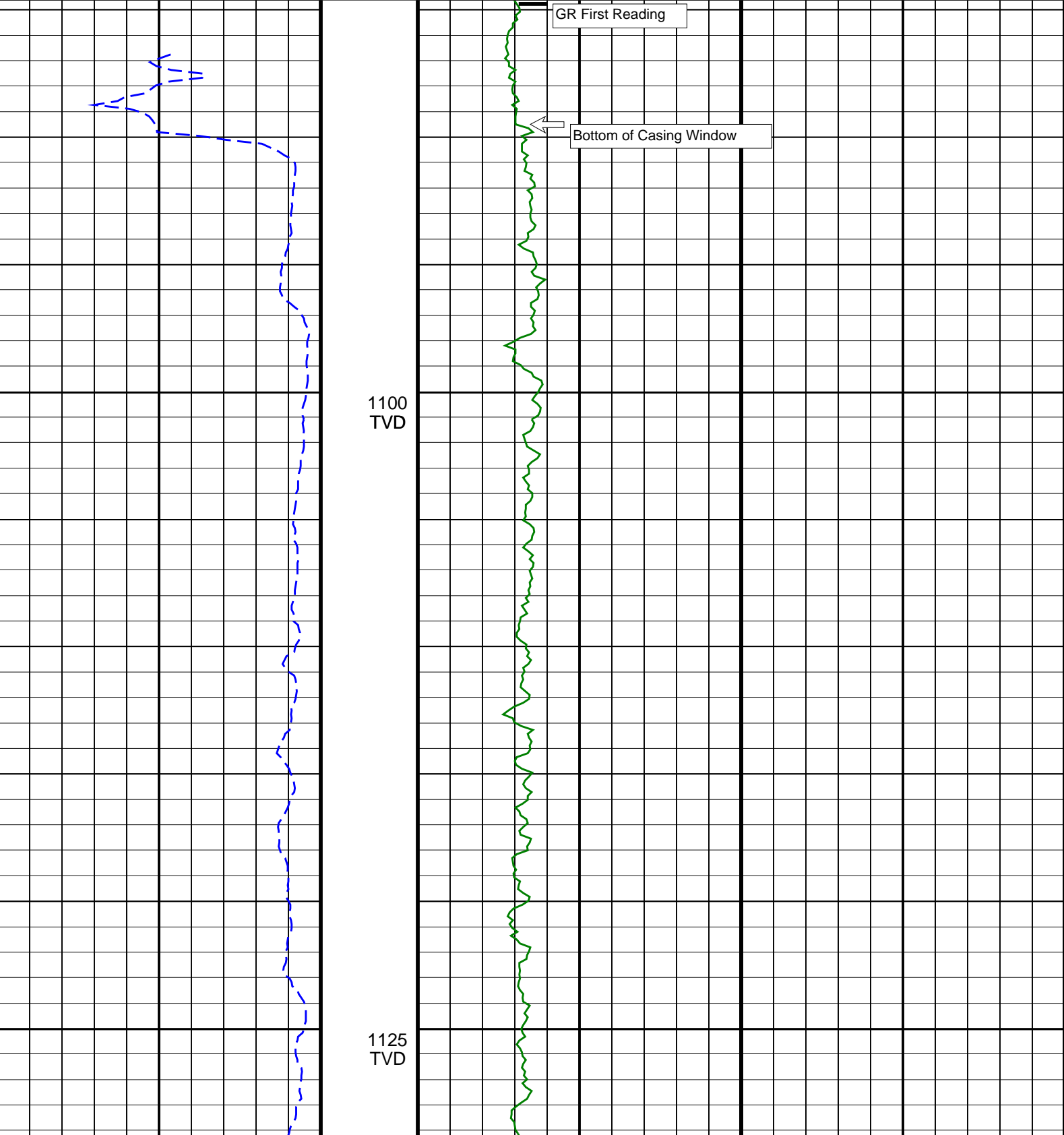
Bit Run Summary

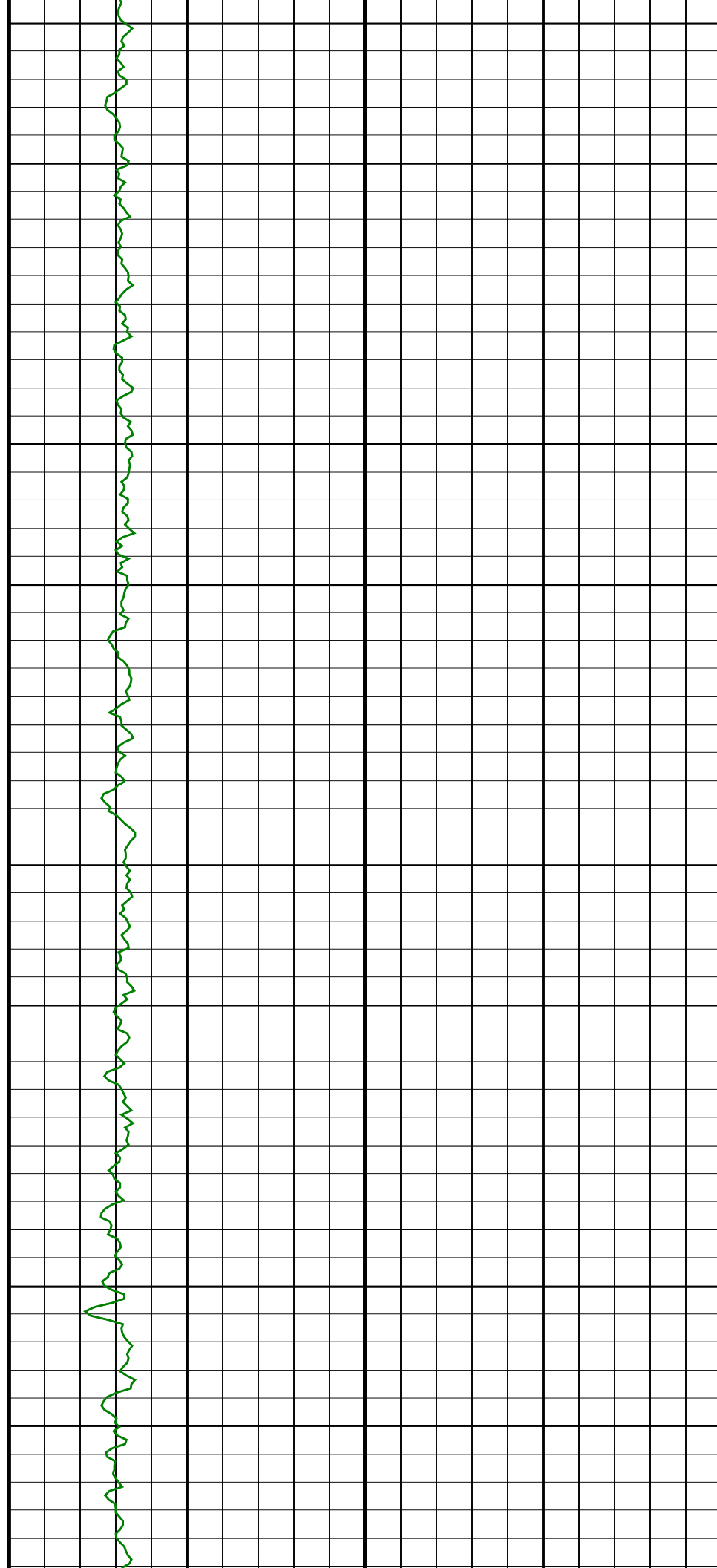
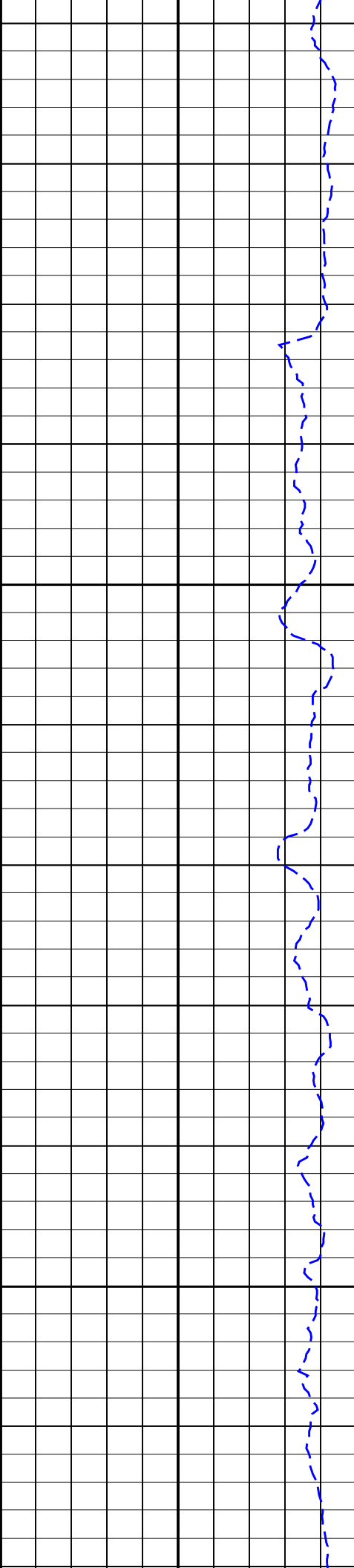
Run number		1									
Bit size	in.	8.5									
Bit start depth	m	1217.6									
Bit end depth	m	2262.0									
Top interval logged	m	1217.6									
Bottom interval logged	m	2243.3									
Begin log: time		14:30									
Begin log: date		07–Feb–05									
End log: time		03:17									
End log: date		11–Feb–05									
Mud data											
Depth	m	2262.0									
Type		KCl/PHPA/Glyc.									
Mud weight	ppg	10.1									
Solids	%	8.2									
Chlorides	mg/L	49,000									
Rm		N/A									
Rmf		N/A									
Rmc		N/A									
Potassium	%	4.2									
Environmental data											
GR											
Mud weight	ppg	10.1									
Bit size	in.	8.5									
Resistivity											
Neutron porosity											
Hole Size											
Mud weight											
Temperature											
Mud salinity											
Formation salinity											
Recording rate 1	SEC	4.14									
Recording rate 2	SEC	N/A									
Filtering GR		3 pt									
Filtering density											
Filtering Neutron											
Company representative		T. Basset	B. Davis								
Anadrill personnel		D. Hastie	R. Borjas	C. Cocks	T. Auger						

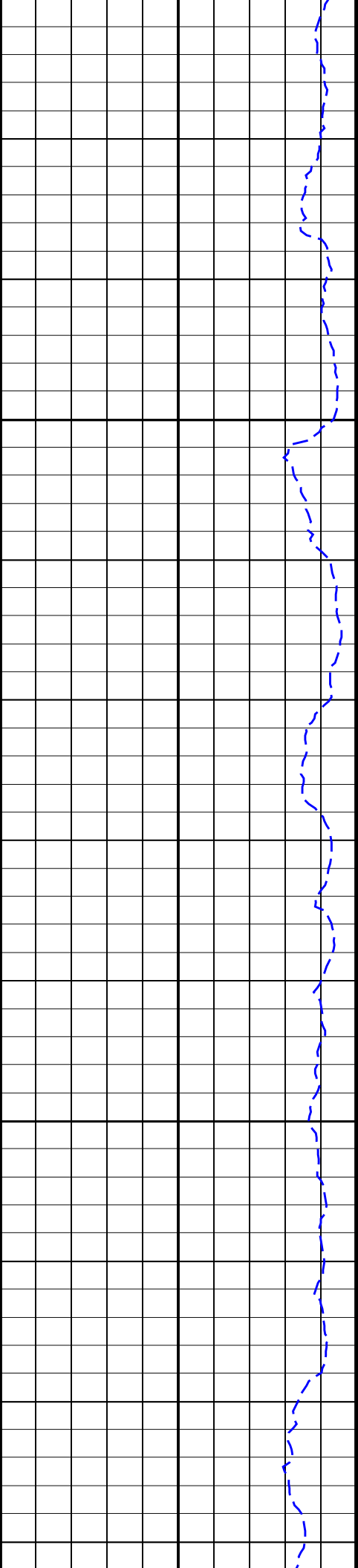
TNA A3A RT 1:200TVD

IDEAL Version: ID9_1C_01 <TVD> Vertical Scale: 1:200 Graphics File Created: 11-Feb-2005 16:13

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

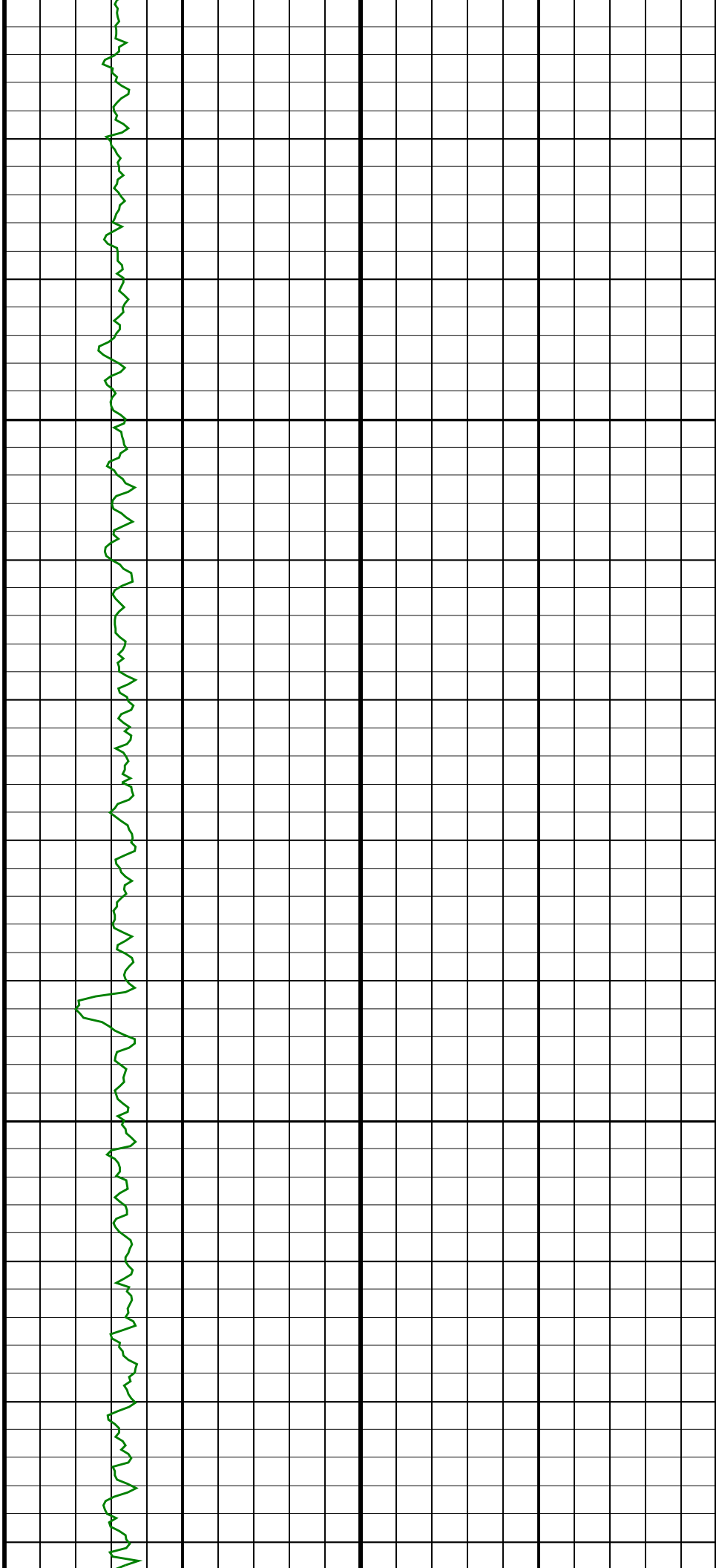


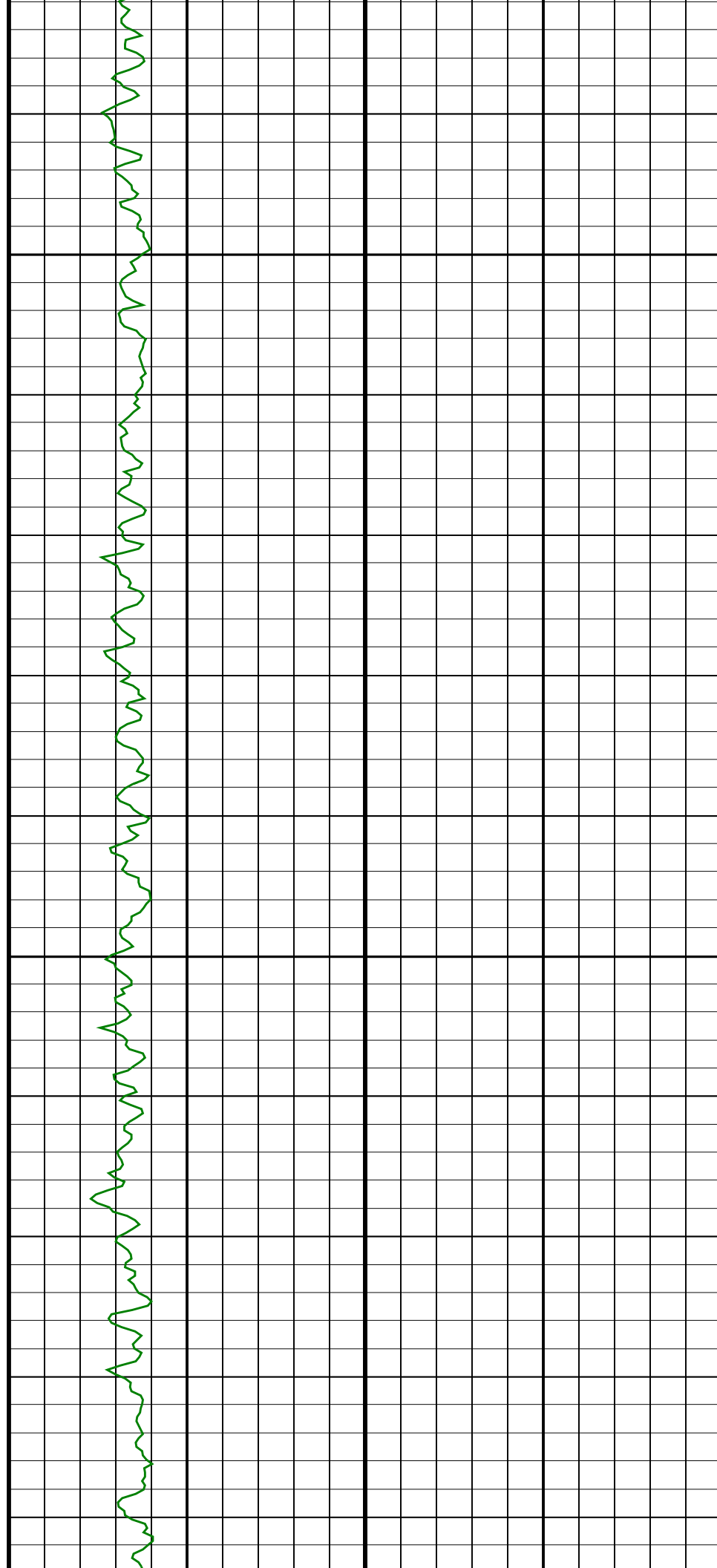
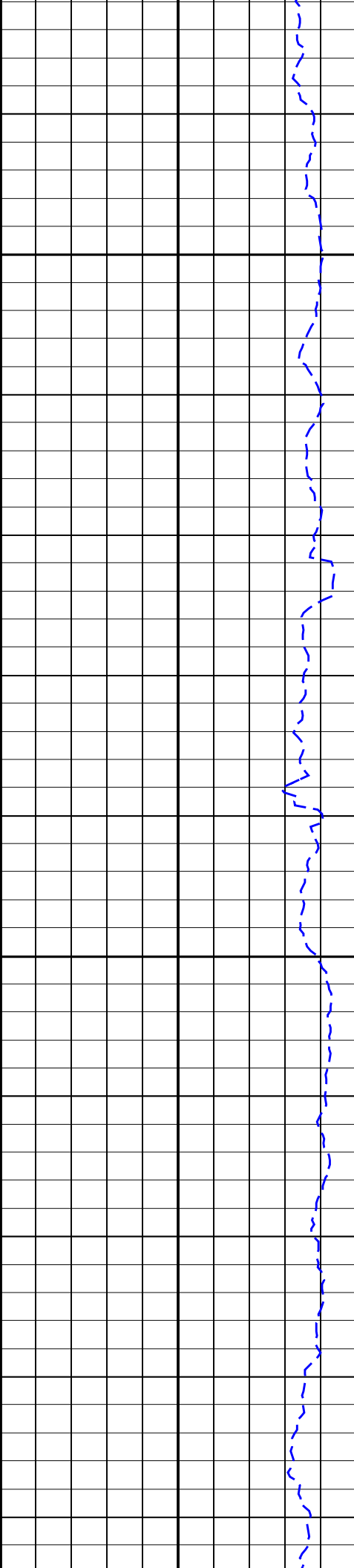


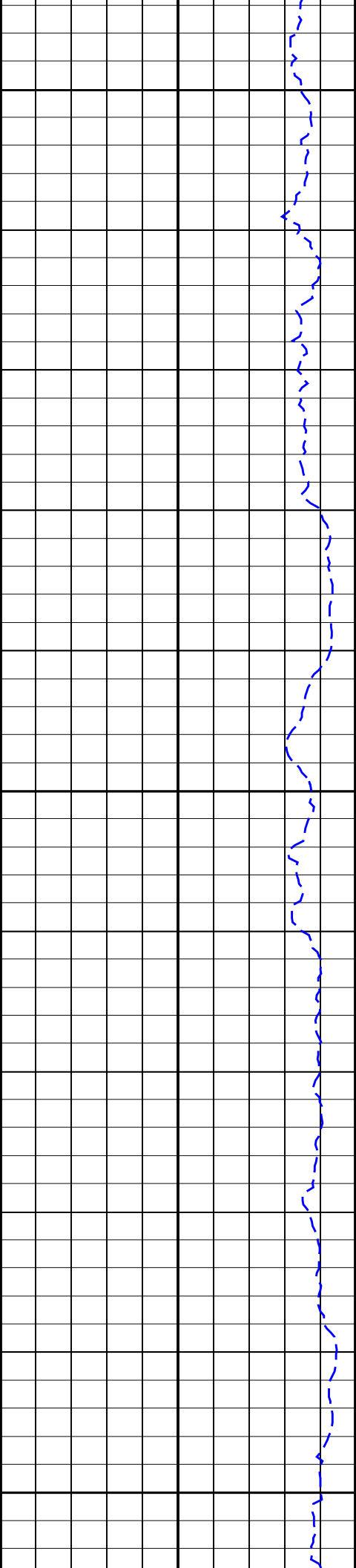


1200
TVD

1225
TVD



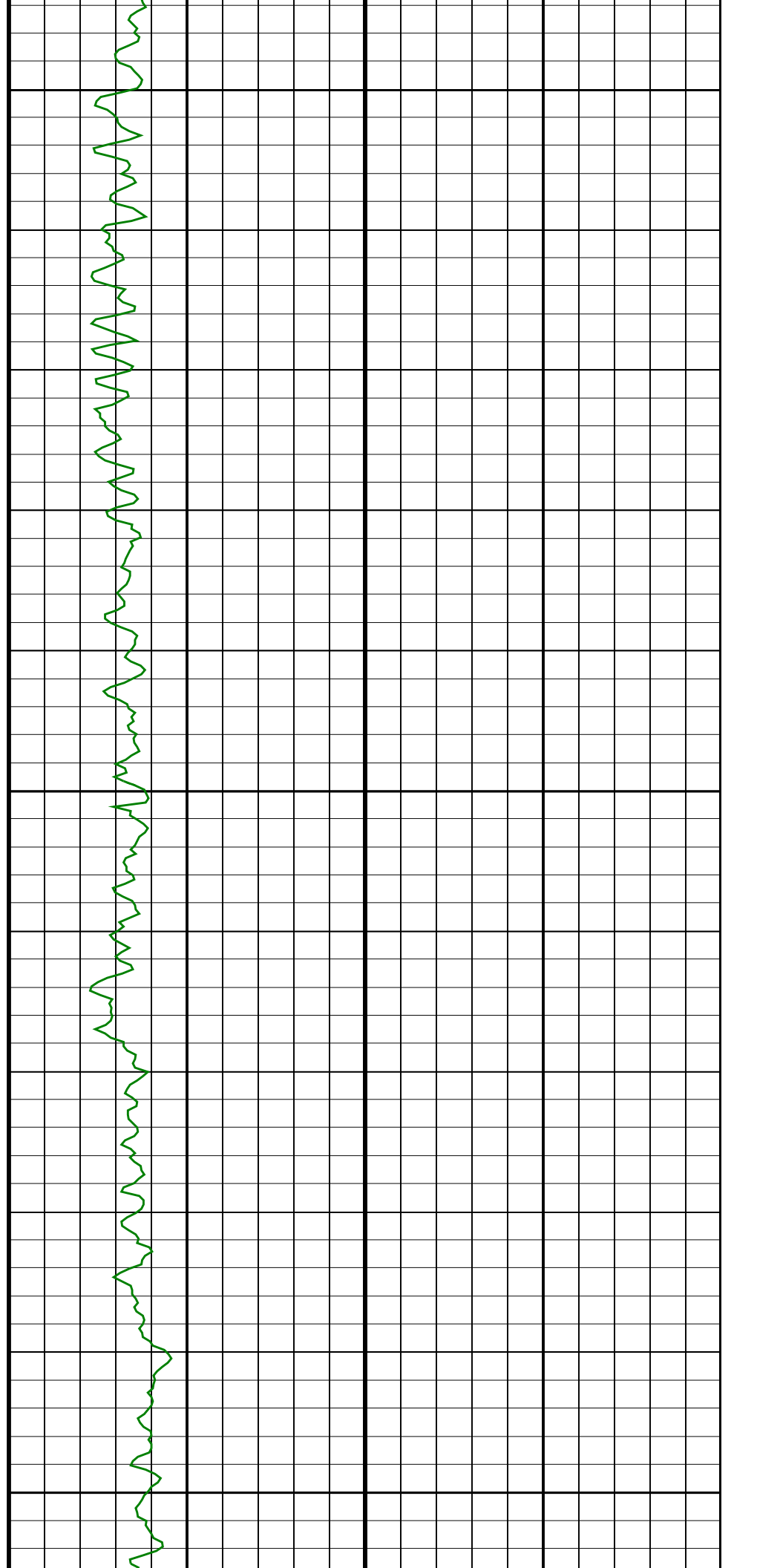


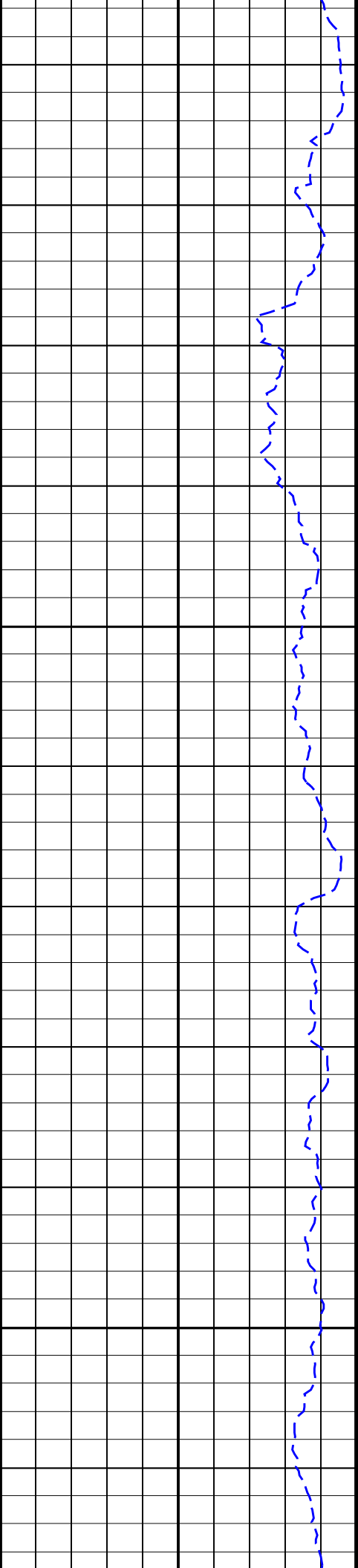


1300
TVD

1325
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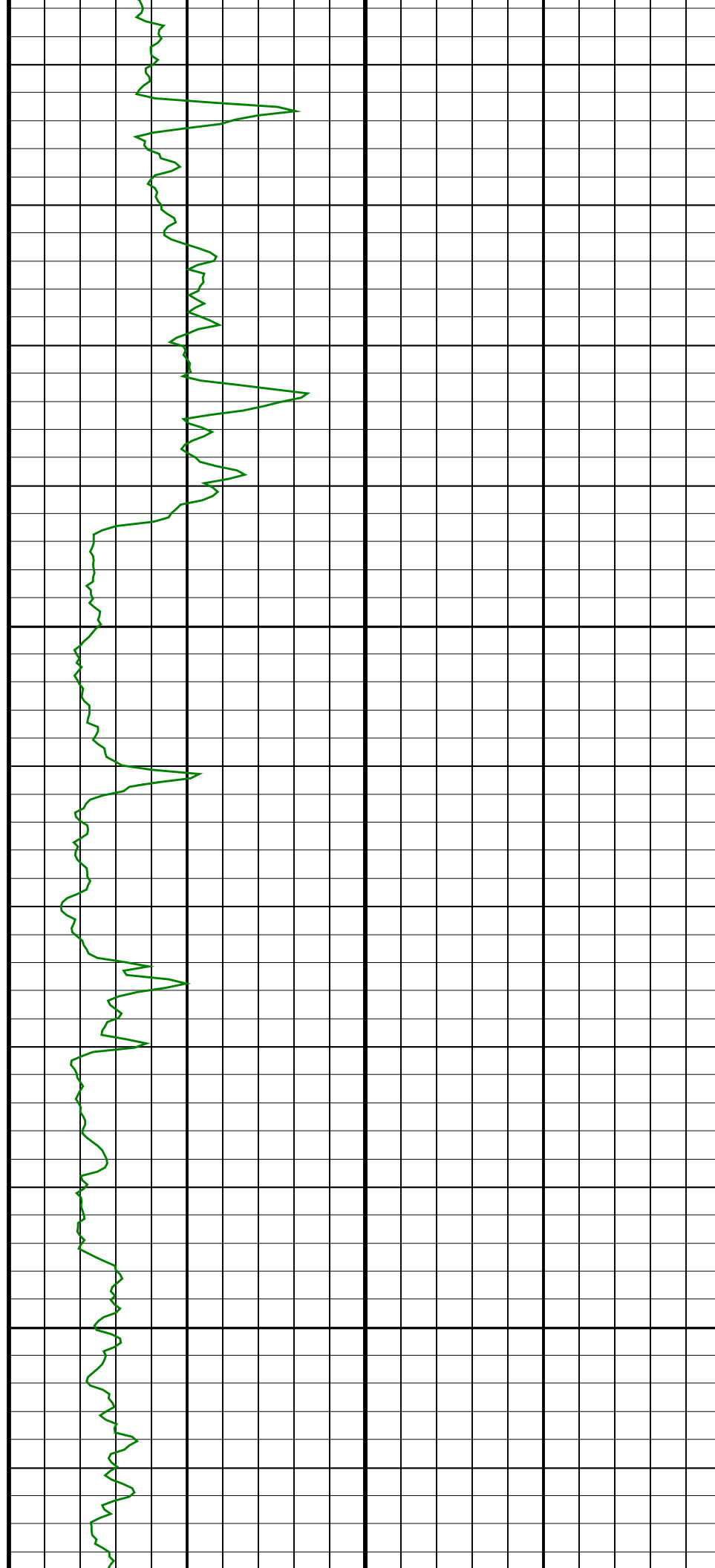
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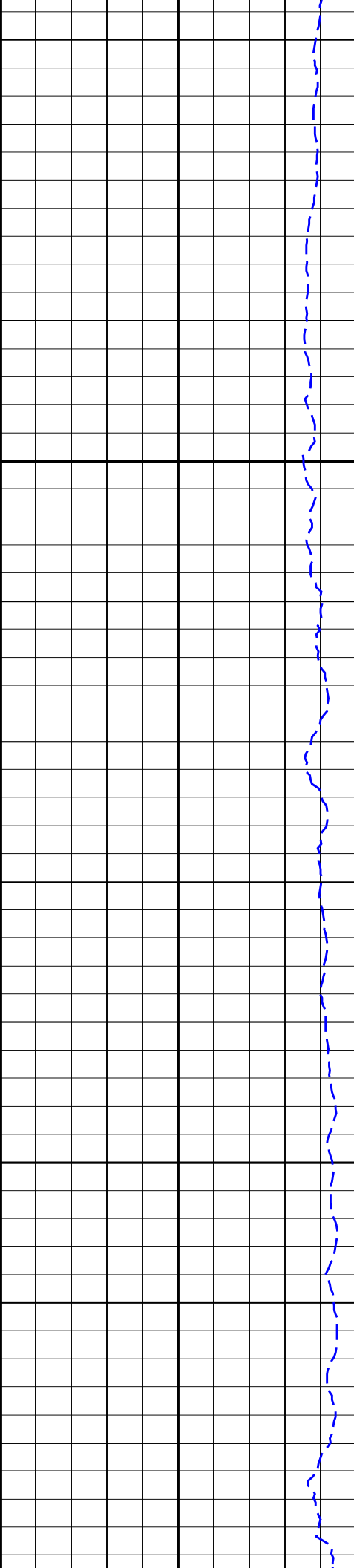




1375
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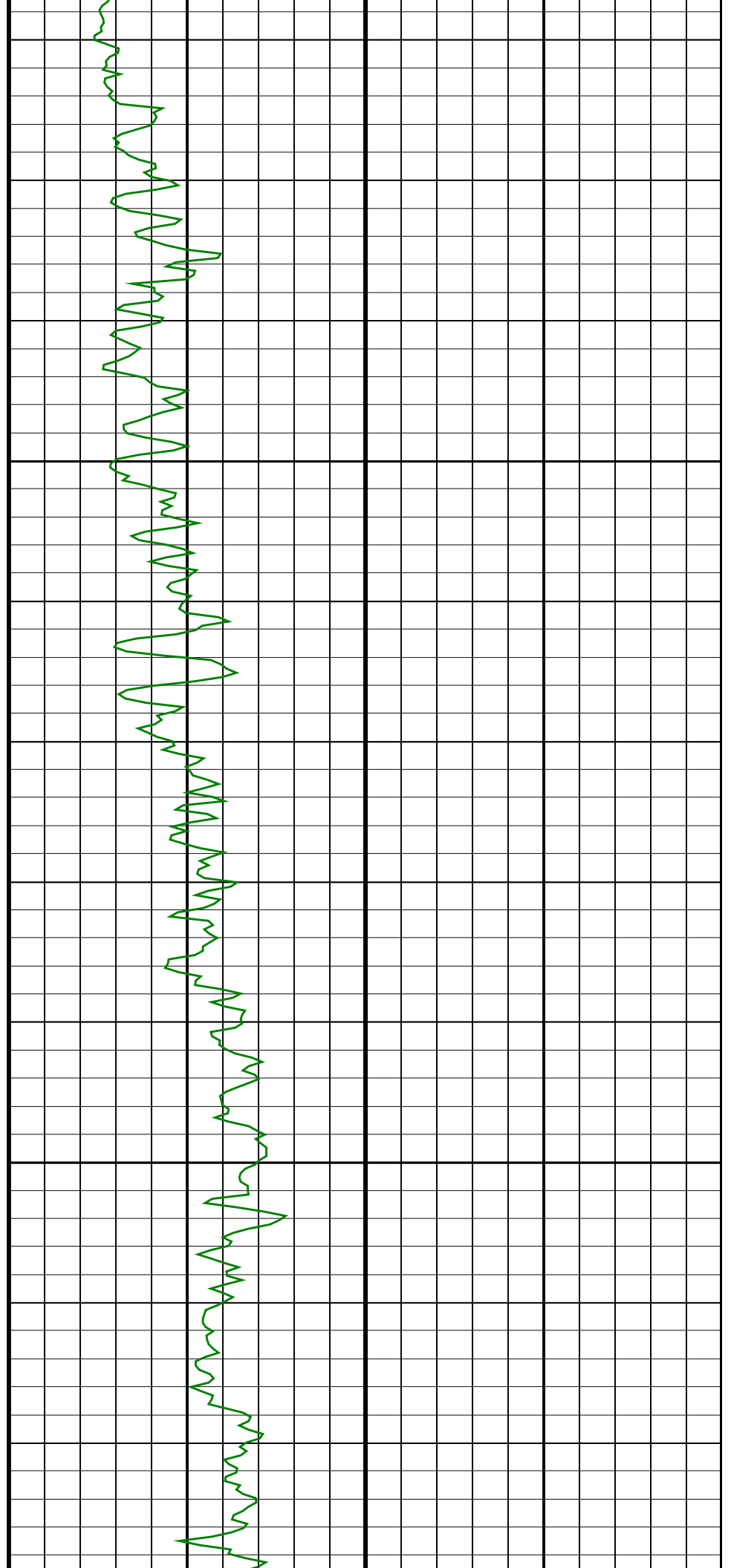
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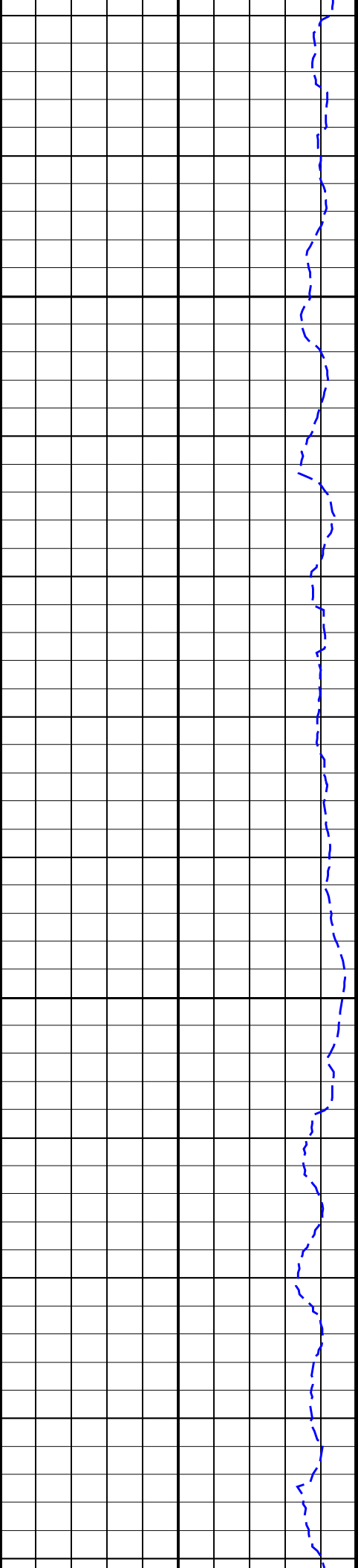




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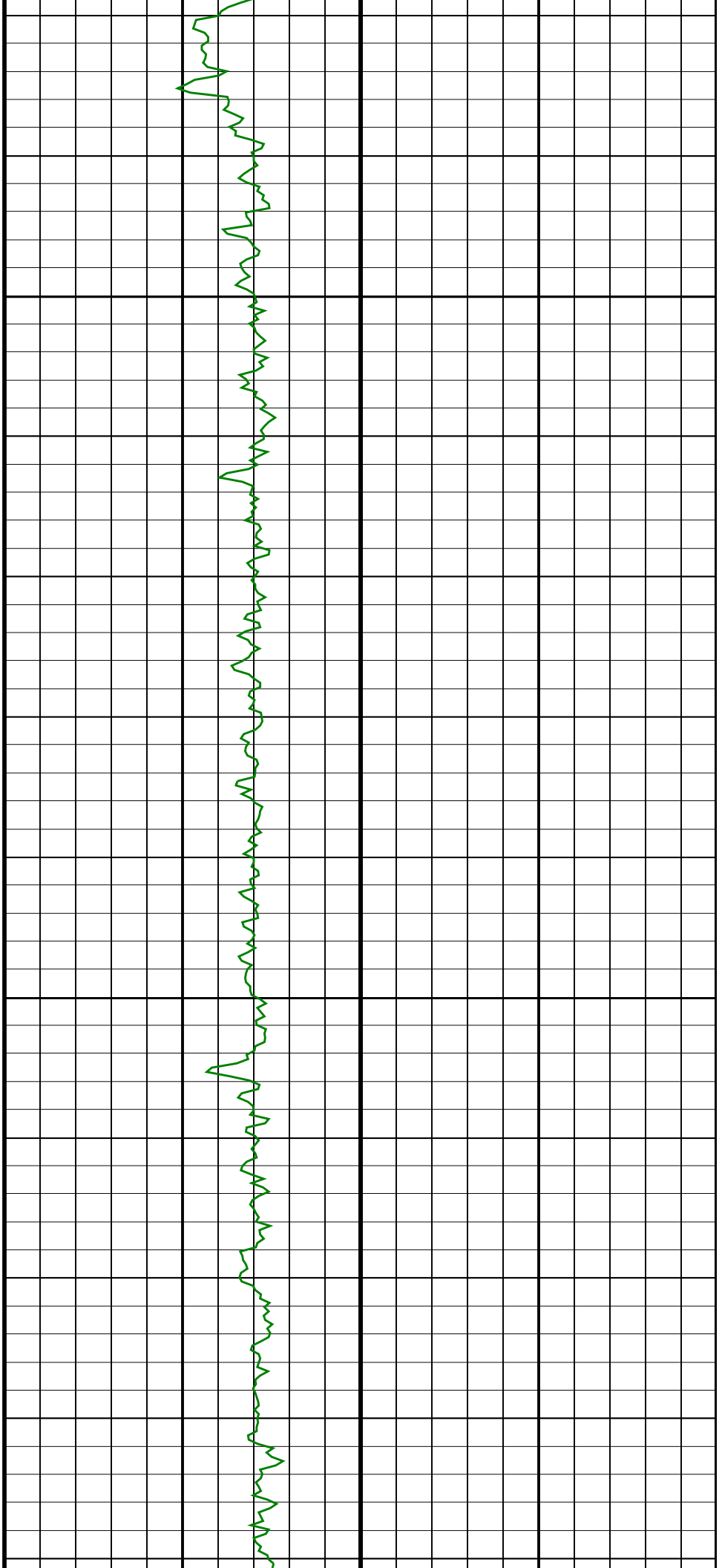
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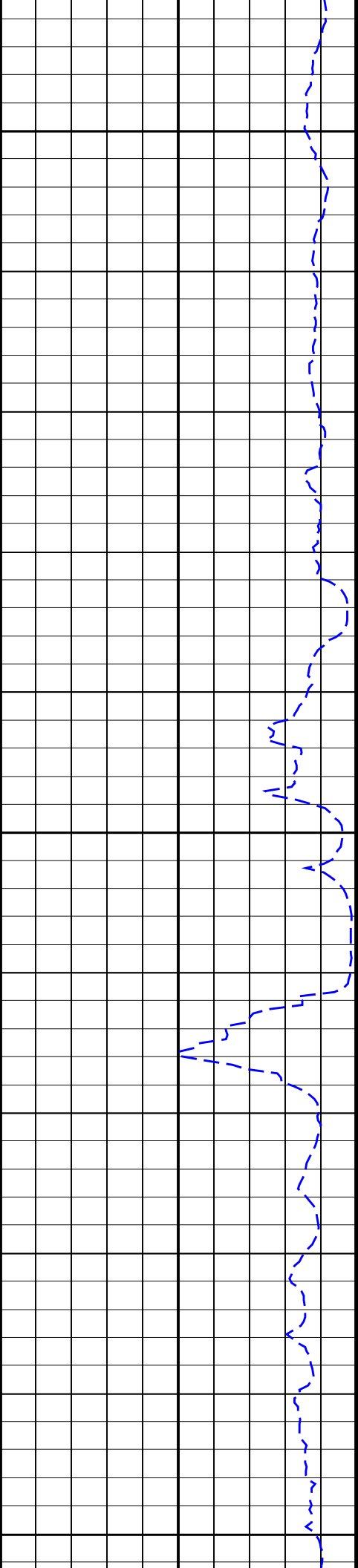




1475
TVD

1500
TVD

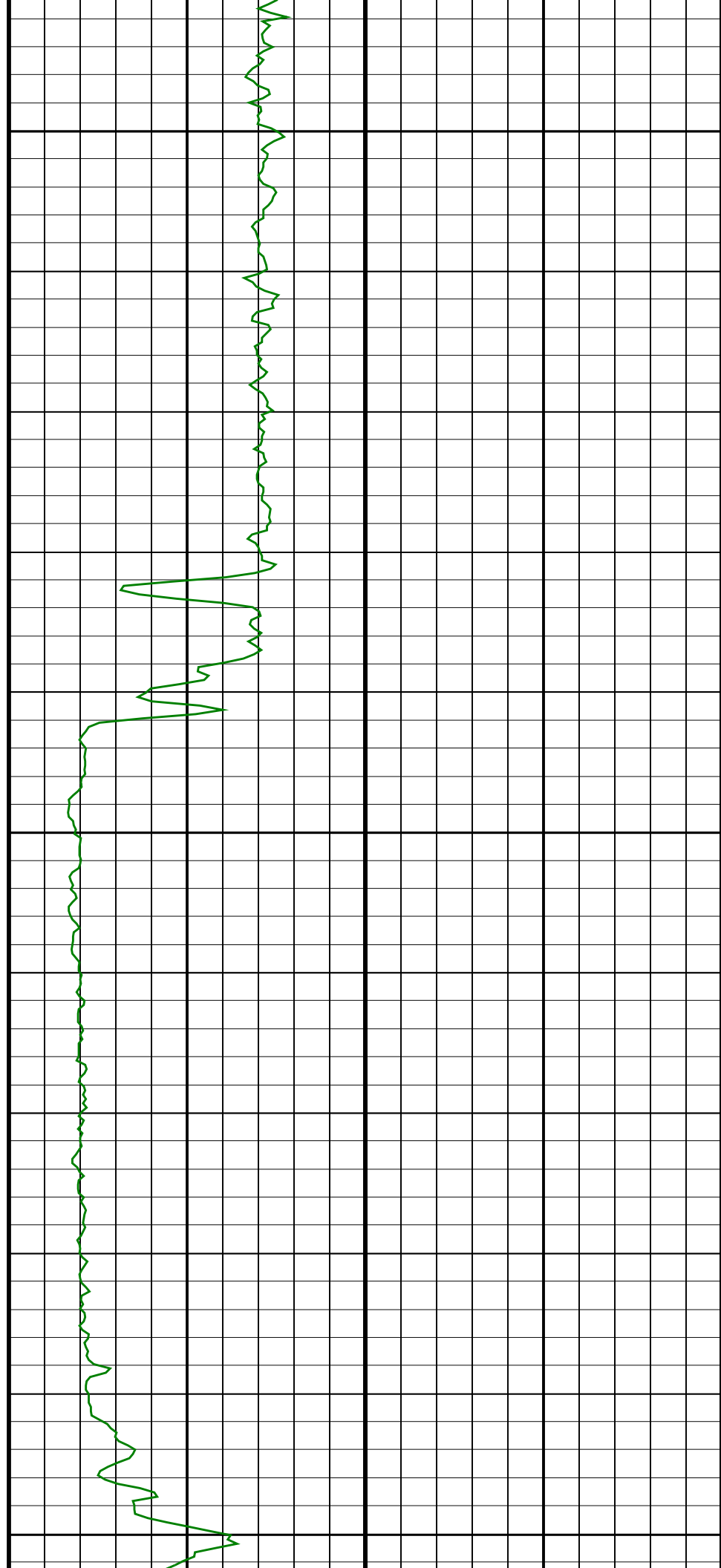


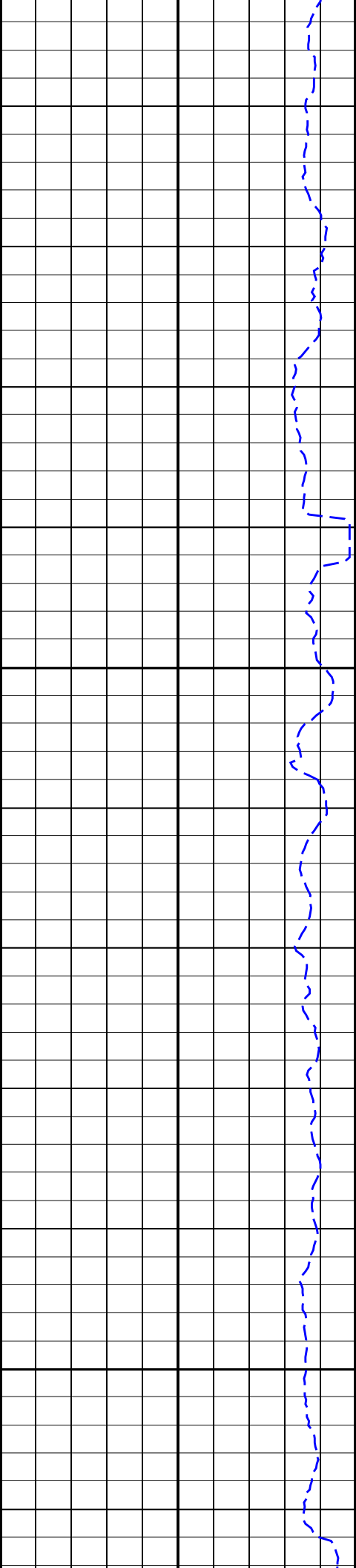


1525
TVD

1550
TVD

1575
TVD

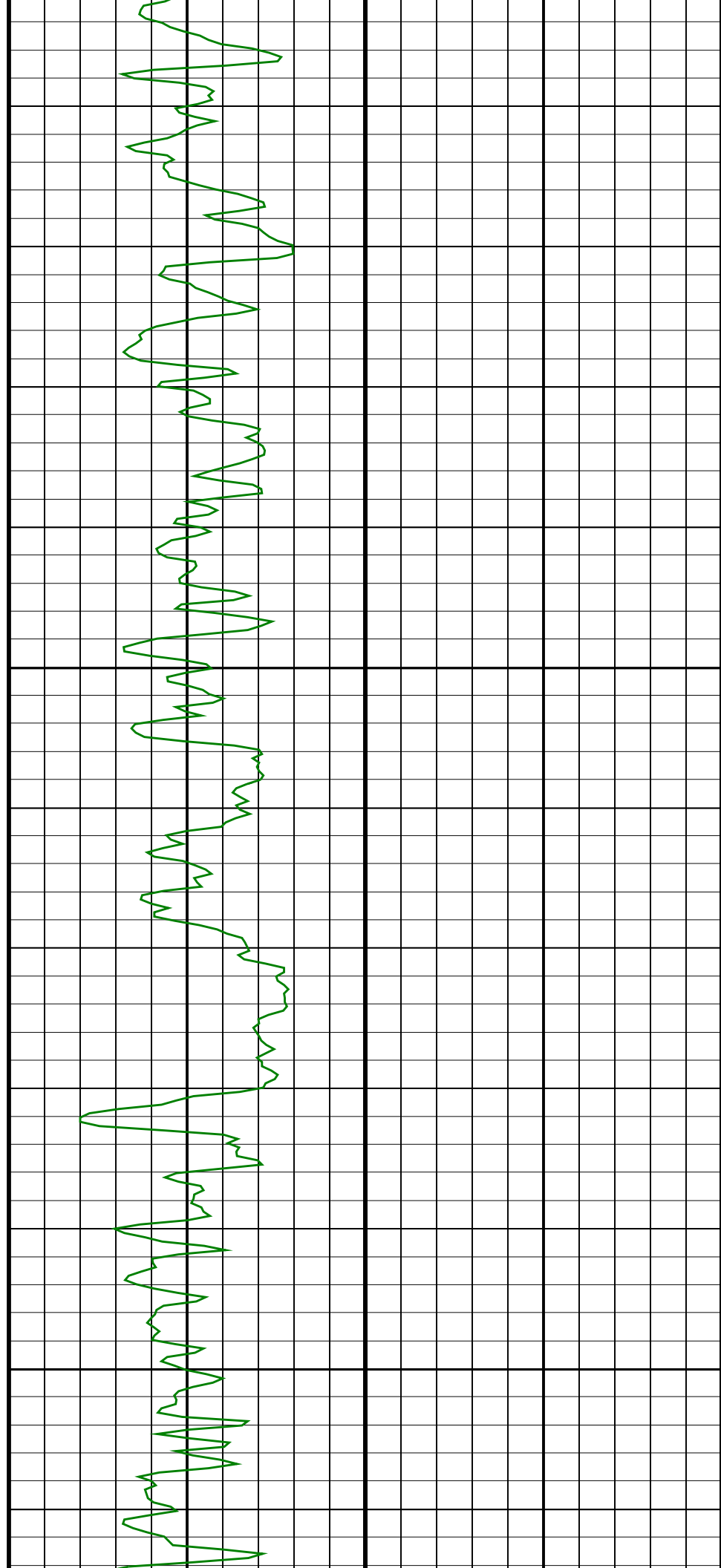


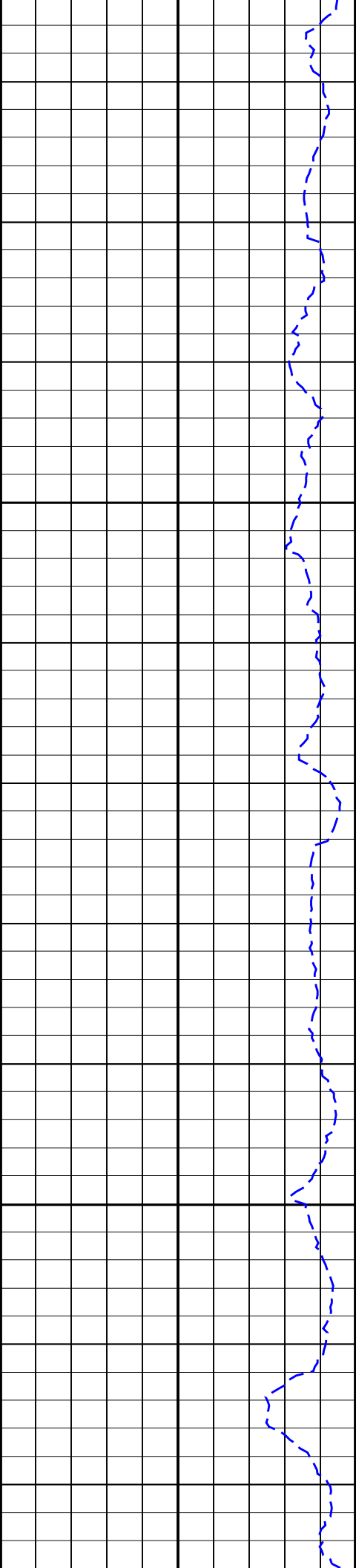


TVD

1600
TVD

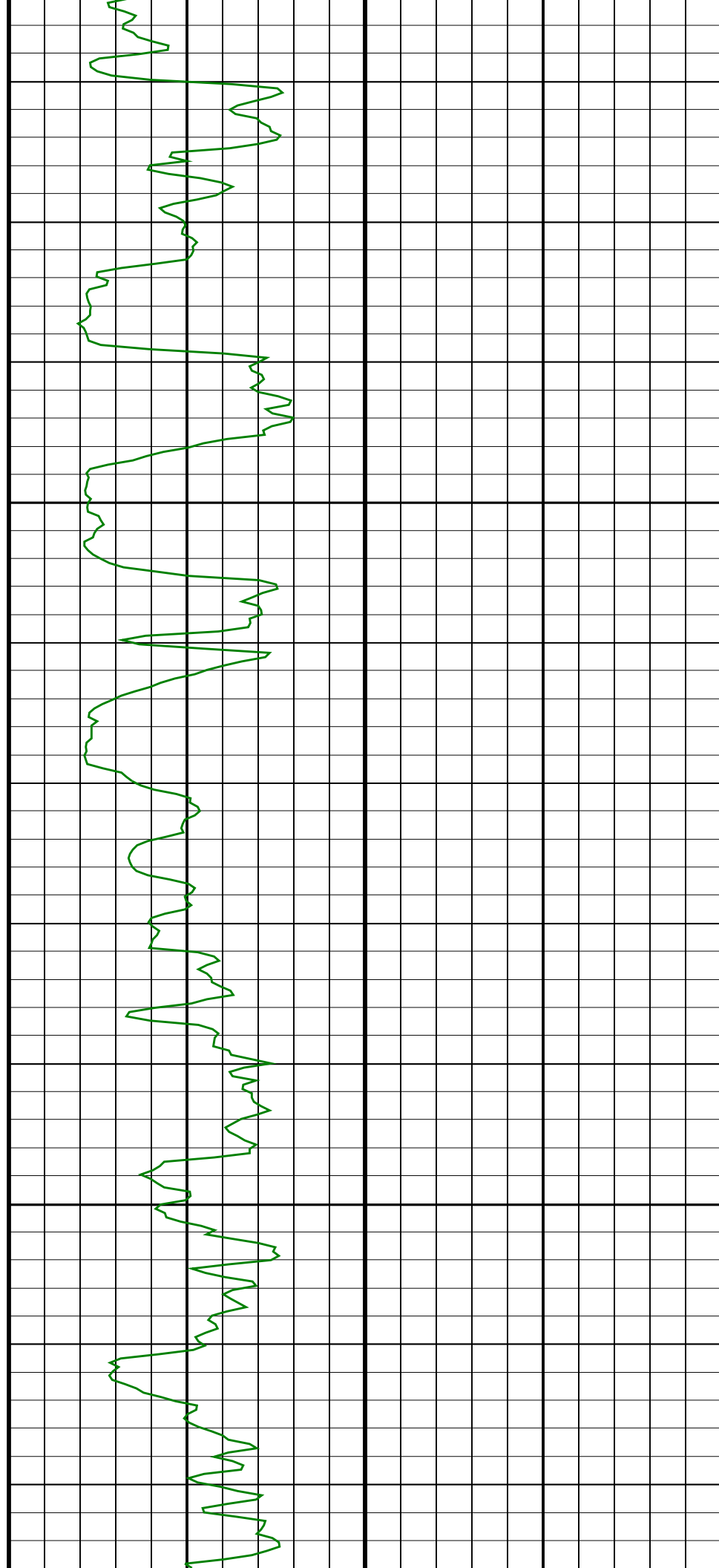
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TVD

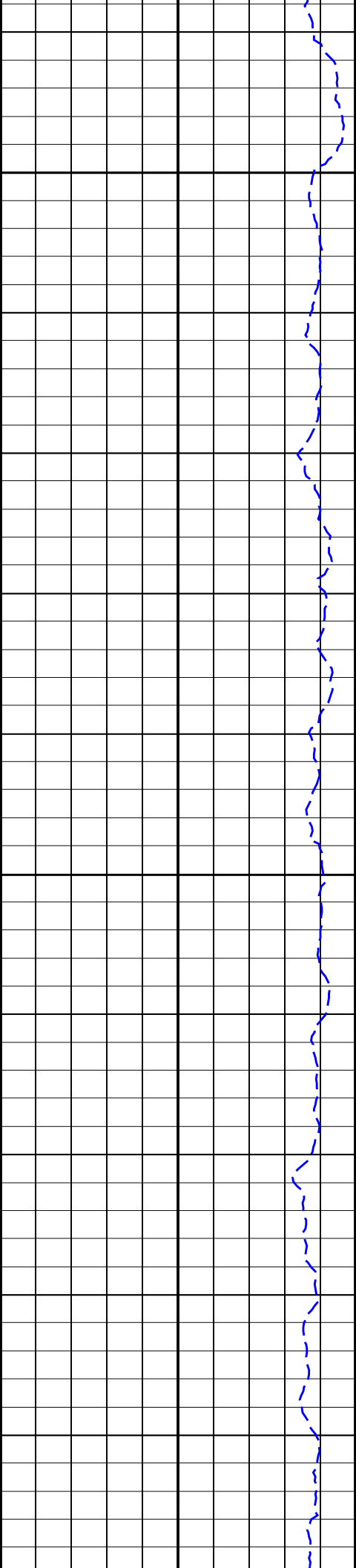




1650
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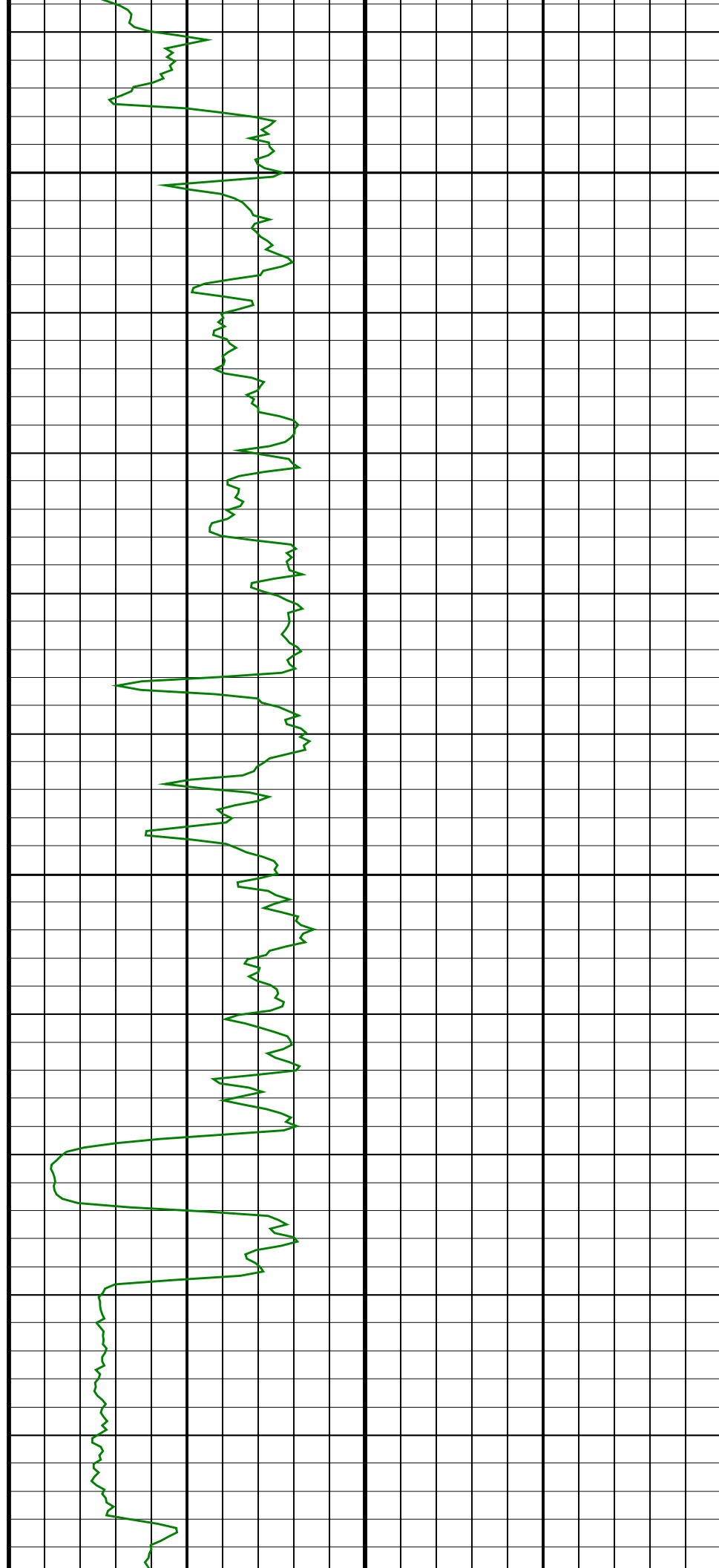
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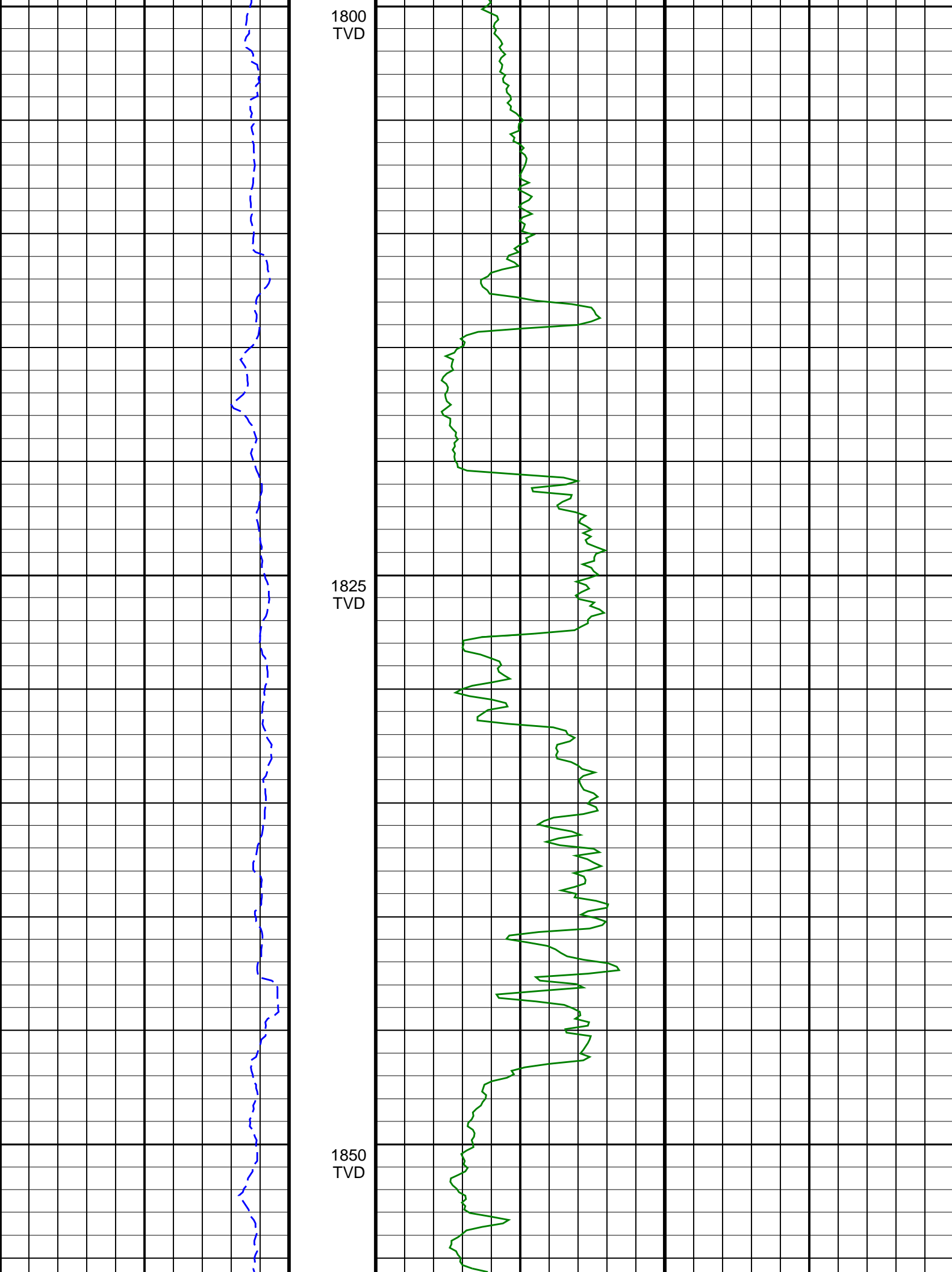


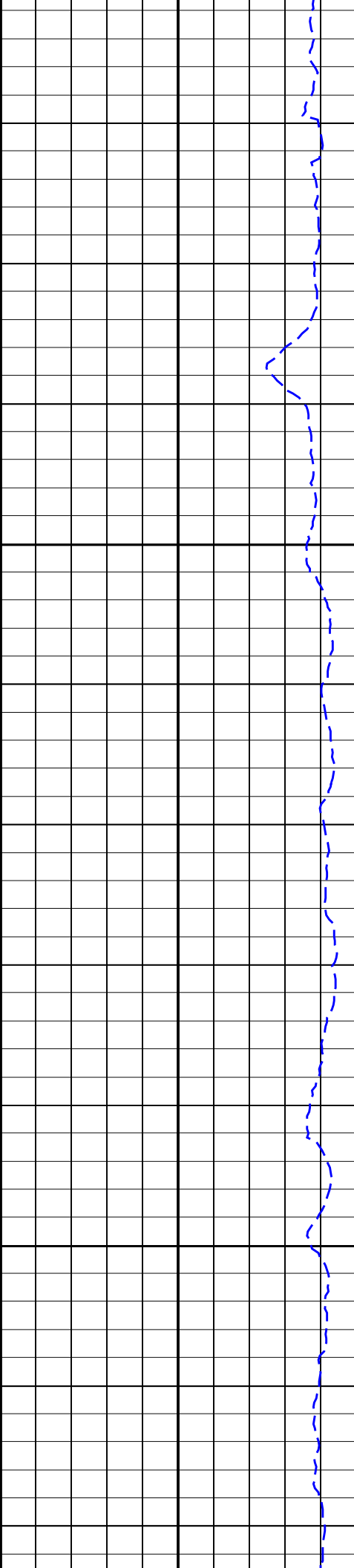


1750
TVD

1775
TVD

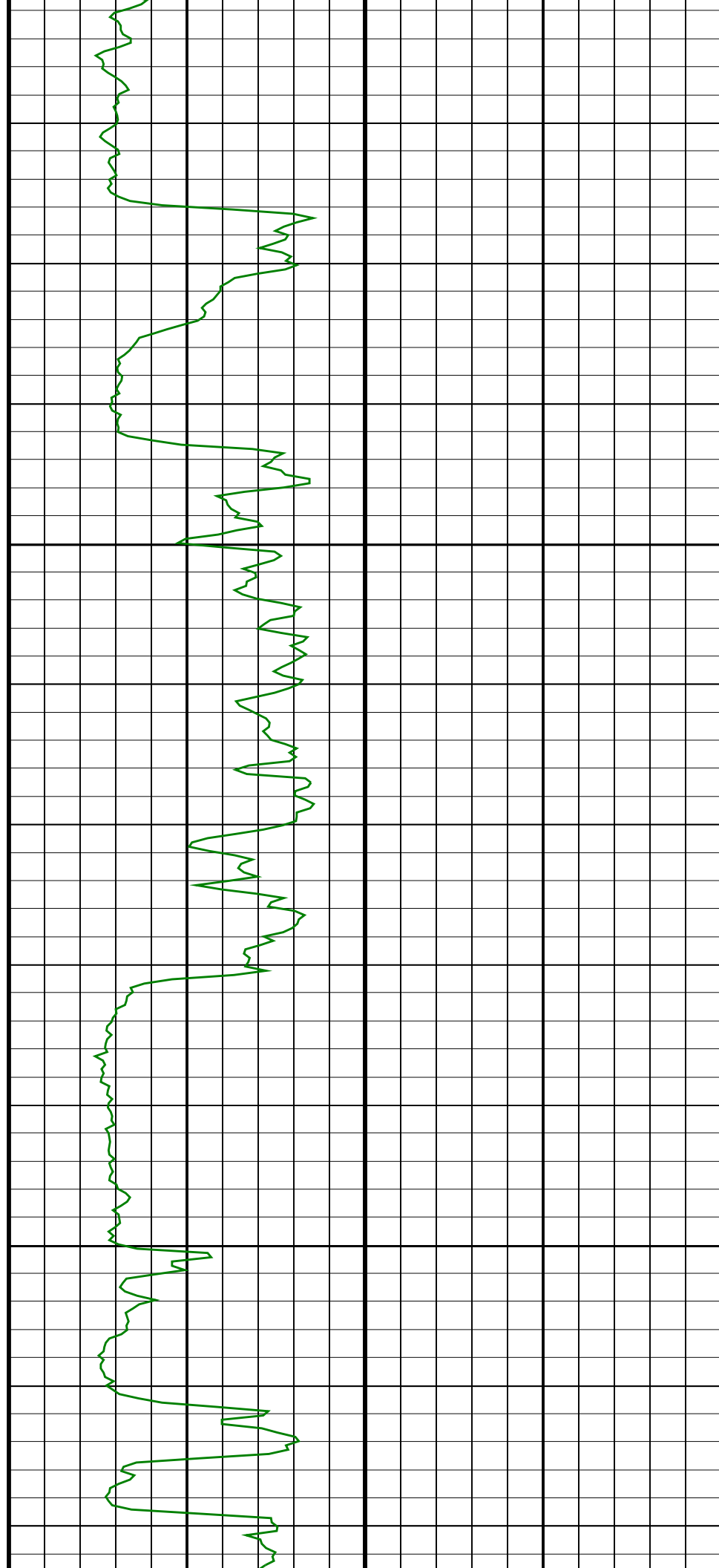


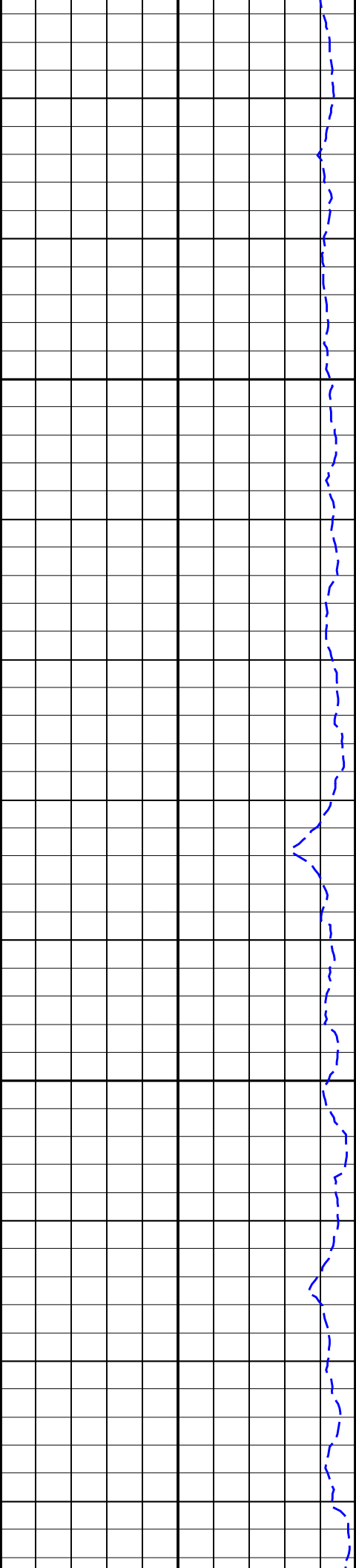




1875
TVD

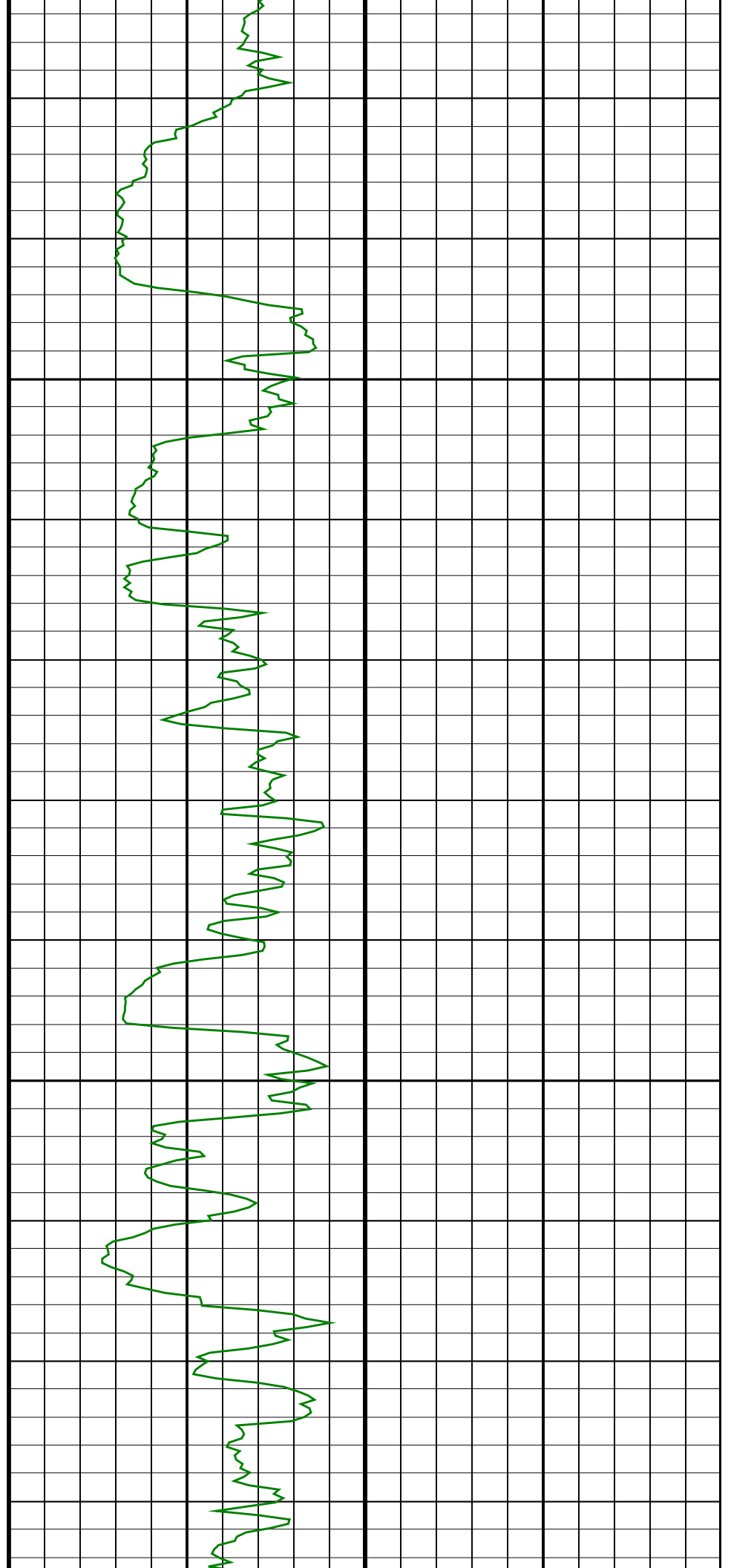
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TVD

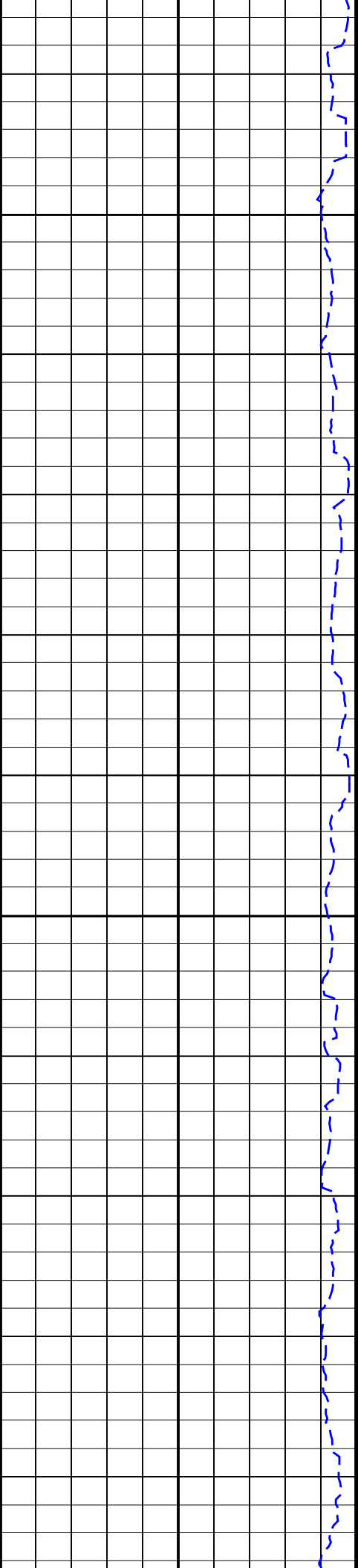




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TVD

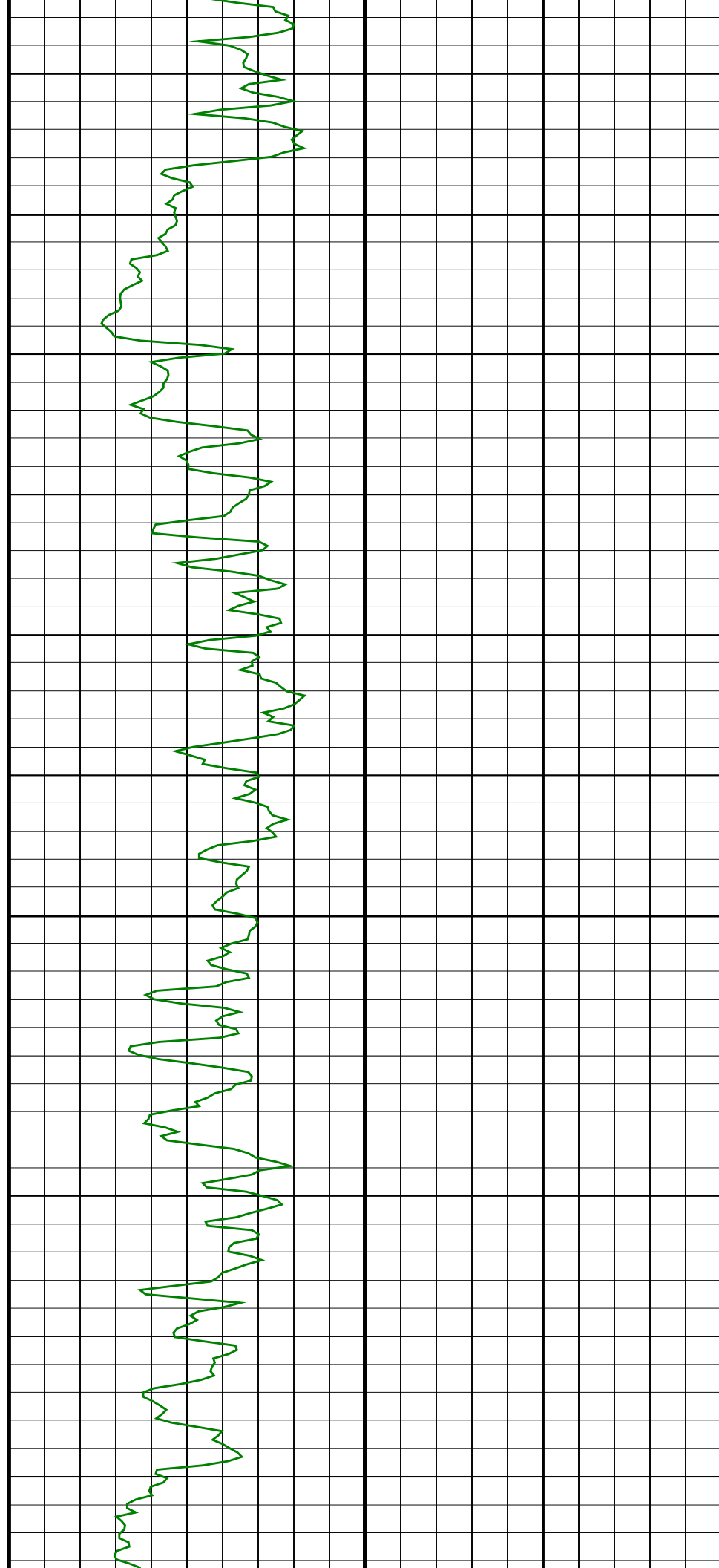
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TVD

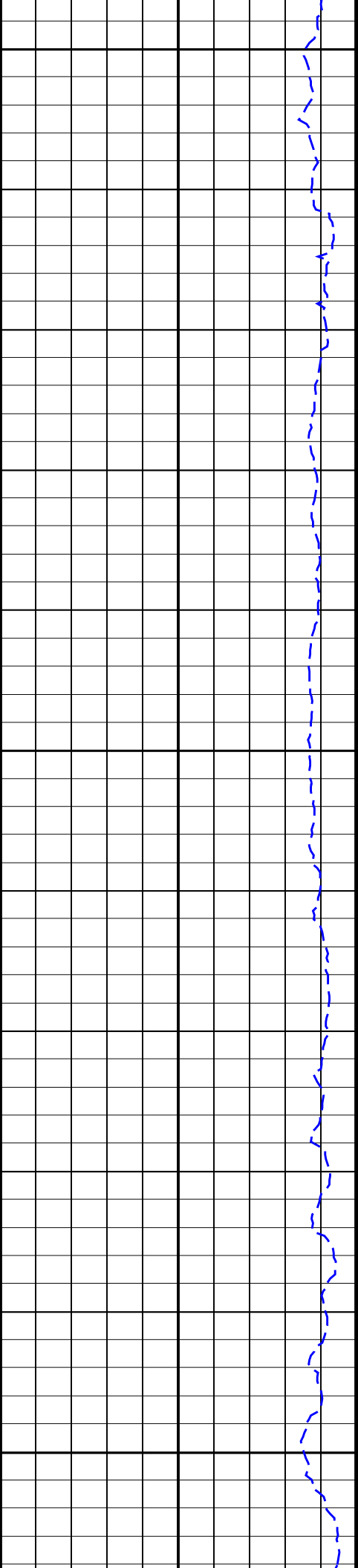




1975
TVD

2000
TVD

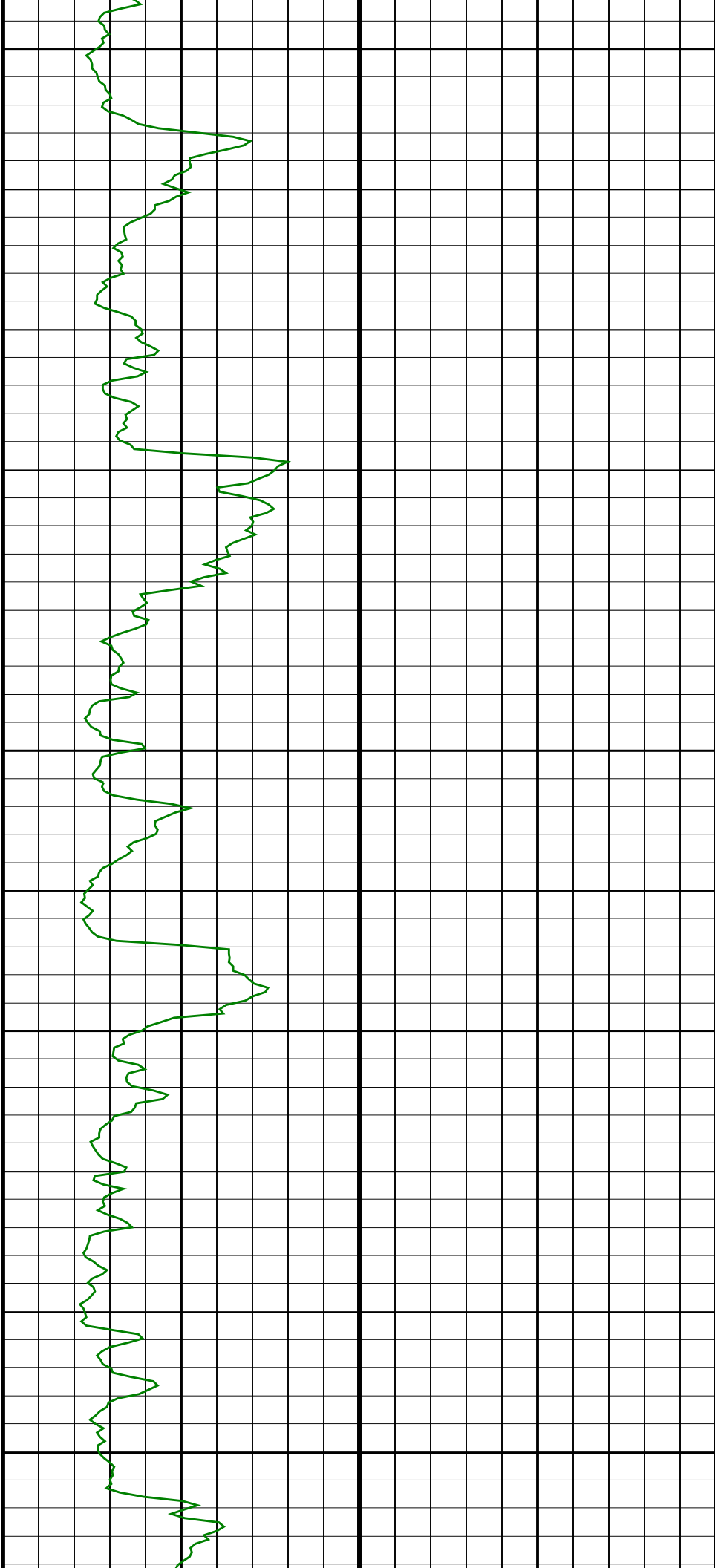




2025
TVD

2050
TVD

2075
TVD



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	1213.42	38.83	284.98	0.00	1081.26	451.28	114.42	-435.14	449.93	284.73	0.00	TIP	None
2	1296.11	26.92	289.04	82.69	1150.59	495.95	127.28	-478.04	494.69	284.91	4.46	MWD	None
3	1306.49	25.31	291.01	10.39	1159.92	500.52	128.84	-482.33	499.25	284.96	5.36	MWD	None
4	1335.11	24.76	289.29	28.61	1185.84	512.62	133.01	-493.70	511.30	285.08	0.97	MWD	None
5	1363.48	20.38	290.09	28.37	1212.03	523.51	136.67	-503.95	522.15	285.17	4.72	MWD	None
6	1392.54	16.76	290.56	29.06	1239.58	532.76	139.88	-512.63	531.37	285.26	3.80	MWD	None
7	1421.10	13.52	295.99	28.56	1267.14	540.20	142.79	-519.49	538.75	285.37	3.77	MWD	None
8	1449.53	10.68	305.99	28.43	1294.94	546.06	145.80	-524.61	544.49	285.53	3.77	MWD	None
9	1478.28	8.01	319.79	28.75	1323.31	550.39	148.89	-528.06	548.65	285.75	3.68	MWD	None
10	1507.58	6.58	349.37	29.30	1352.38	553.05	152.10	-529.69	551.09	286.02	4.12	MWD	None
11	1535.84	6.15	21.45	28.26	1380.48	553.88	155.10	-529.43	551.68	286.33	3.81	MWD	None
12	1564.96	5.02	32.54	29.12	1409.46	553.61	157.63	-528.17	551.20	286.62	1.63	MWD	None
13	1593.82	3.66	19.66	28.86	1438.24	553.37	159.56	-527.19	550.80	286.84	1.76	MWD	None
14	1622.40	3.12	11.43	28.58	1466.77	553.52	161.18	-526.72	550.83	287.01	0.77	MWD	None
15	1651.14	2.95	5.66	28.74	1495.47	553.84	162.69	-526.50	551.06	287.17	0.37	MWD	None
16	1680.28	2.88	9.33	29.14	1524.57	554.19	164.16	-526.30	551.31	287.32	0.21	MWD	None
17	1708.79	2.95	6.24	28.51	1553.04	554.52	165.59	-526.11	551.55	287.47	0.18	MWD	None
18	1737.82	3.03	7.55	29.03	1582.03	554.88	167.09	-525.93	551.83	287.63	0.11	MWD	None
19	1766.11	2.90	8.01	28.29	1610.28	555.21	168.54	-525.73	552.08	287.78	0.14	MWD	None
20	1795.09	2.99	4.82	28.98	1639.23	555.59	170.02	-525.56	552.38	287.93	0.20	MWD	None
21	1823.68	3.04	4.99	28.59	1667.78	556.00	171.52	-525.43	552.72	288.08	0.05	MWD	None
22	1852.18	3.64	7.05	28.44	1696.23	556.42	173.17	-525.26	553.07	288.25	0.66	MWD	None
23	1881.10	3.62	7.87	28.98	1725.09	556.85	174.99	-525.02	553.41	288.43	0.06	MWD	None
24	1909.68	3.98	11.26	28.58	1753.61	557.22	176.85	-524.70	553.71	288.63	0.45	MWD	None
25	1938.49	3.85	16.31	28.81	1782.35	557.46	178.76	-524.24	553.88	288.83	0.39	MWD	None
26	1967.45	3.90	16.65	28.96	1811.24	557.61	180.64	-523.68	553.96	289.03	0.06	MWD	None
27	1996.03	3.86	20.05	28.58	1839.76	557.70	182.47	-523.07	553.99	289.23	0.26	MWD	None
28	2024.62	3.69	17.48	28.59	1868.29	557.76	184.26	-522.46	554.00	289.43	0.26	MWD	None
29	2053.61	3.66	18.34	28.99	1897.22	557.86	186.02	-521.89	554.05	289.62	0.07	MWD	None
30	2082.14	3.77	17.32	28.53	1925.69	557.96	187.78	-521.33	554.11	289.81	0.14	MWD	None

[(c)2005 IDEAL ID9_1C_01]
SCHLUMBERGER Survey Report

11-Feb-2005 13:13:21

Page 3 of 3

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	2111.10	3.67	16.78	28.96	1954.59	558.08	189.58	-520.77	554.21	290.00	0.11	MWD	None
32	2139.54	3.42	16.22	28.44	1982.97	558.22	191.27	-520.27	554.32	290.18	0.27	MWD	None
33	2167.93	3.33	21.67	28.39	2011.31	558.27	192.85	-519.73	554.36	290.36	0.36	MWD	None
34	2196.39	3.19	26.00	28.46	2039.73	558.19	194.33	-519.08	554.26	290.52	0.30	MWD	None
35	2224.95	3.16	25.76	28.56	2068.24	558.05	195.75	-518.39	554.12	290.69	0.04	MWD	None
36	2241.93	3.10	23.43	16.98	2085.20	557.99	196.59	-518.00	554.05	290.78	0.25	MWD	None
37	2262.00	3.10	23.43	20.07	2105.24	557.95	197.59	-517.57	554.01	290.89	0.00	Projection to TD	

[(c)2005 IDEAL ID9_1C_01]

Company: ESSO Australia Pty. Ltd.



Well: TNA A3A
Field: Tuna
Rig: ISDL 453
State: Victoria

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

