

[illegible]

Type		KCl/PHPA/Glycol									
Mud weight	ppg	9.5	9.7	9.6							
Solids	%	5.2	7.0	6.6							
Chlorides	mg/L	41000	38500	37000							
Rm	ohm-m	N/A	N/A	N/A							
Rmf	ohm-m	N/A	N/A	N/A							
Rmc	ohm-m	N/A	N/A	N/A							
Potassium	%	7.5	7.0	6.6							
<b>Environmental data</b>											
<b>GR</b>											
Mud weight	ppg	9.5	9.7	9.6							
Bit size	in	8.5	8.5	8.5							
<b>Resistivity</b>											
<b>Neutron porosity</b>											
Hole Size		N/A	N/A	N/A							
Mud weight		N/A	N/A	N/A							
Temperature		N/A	N/A	N/A							
Mud salinity		N/A	N/A	N/A							
Formation salinity		N/A	N/A	N/A							
Recording rate 1	SEC	N/A	N/A	N/A							
Recording rate 2	SEC	N/A	N/A	N/A							
Filtering GR		N/A	N/A	N/A							
Filtering density		N/A	N/A	N/A							
Filtering Neutron		N/A	N/A	N/A							
Company representative		R. Morris	B. Davis								
Anadrill personnel		J. Dolan	W. Gamlin	C. Soper	B. Manjenic						

#### DISCLAIMER

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.

<b>OTHER SERVICES FOR RUN1</b> Gamma Ray Directional Drilling Directional Surveys			<b>OTHER SERVICES FOR RUN2</b> Gamma Ray Directional Drilling Directional Surveys			<b>OTHER SERVICES FOR RUN3</b> Gamma Ray Directional Drilling Directional Surveys		
<b>REMARKS: RUN NUMBER 1</b> 8 1/2 in. hole section was drilled from 811 m to 2330 m.  Depth is referenced to Driller's Depth.  All data presented is Real Time data.  Gamma Ray is corrected for Tool size, Bit size, Potassium content and Mud weight.  Mud type is water-based KCl/PHPA/Glycol. Barite is present in the mud system.  GR logged in casing to 803.5 m  POOH at 2330 m for a bit change due to poor penetration rate.			<b>REMARKS: RUN NUMBER 2</b> 8 1/2 in. hole section was drilled from 2330 m to 2612 m.  Depth is referenced to Driller's Depth.  All data presented is Real Time data.  Gamma Ray is corrected for Tool size, Bit size, Potassium content and Mud weight.  Mud type is water-based KCl/PHPA/Glycol. Barite is present in the mud system.  POOH at 2612 m for a bit change due to poor penetration rate.			<b>REMARKS: RUN NUMBER 3</b> 8 1/2 in. hole section was drilled from 2612 m to 2789 m.  Depth is referenced to Driller's Depth.  All data presented is Real Time data.  Gamma Ray is corrected for Tool size, Bit size, Potassium content and Mud weight.  Mud type is water-based KCl/PHPA/Glycol. Barite is present in the mud system.  Reached TD of FLA A20a at 2789 m.		

Thank you for using Schlumberger.

RUN3

DOWNHOLE EQ

20.66 3/4 in. Pow  
MDC Z40  
MDI 11  
MEC 11  
MGR AA  
DH software:

D&I	15.2
GR	14.6

12.26 1/8 in. NM  
SN: DOTS  
8 3/8 in. Stab

10.76 3/4 in. NM  
SN: 9612

7.98 PowerPak\* M  
A675XP  
SN: 023  
1.15 deg  
8 1/8 in. moto



GeoDiamond  
8 1/2 in.  
S73PX SN:

Maximum string diam  
All lengths in



Smith Inse  
8 1/2 in.  
20GF SN: M

Maximum string diam  
All lengths in



Smith Inse  
8 1/2 in.  
ER6027RP SN

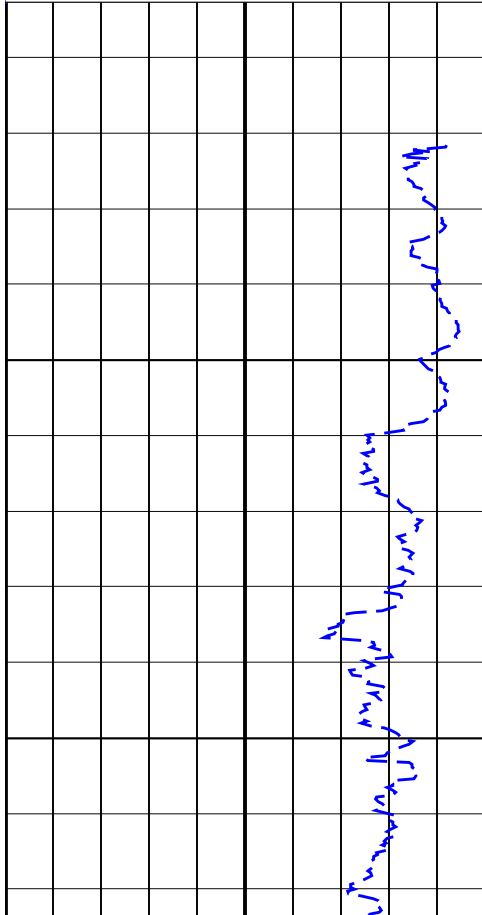
Maximum string diam  
All lengths in

# FLA A20a RT 1:500TVD

IDEAL Version: ID8\_OC\_07 <TVD> Vertical Scale: 1:500

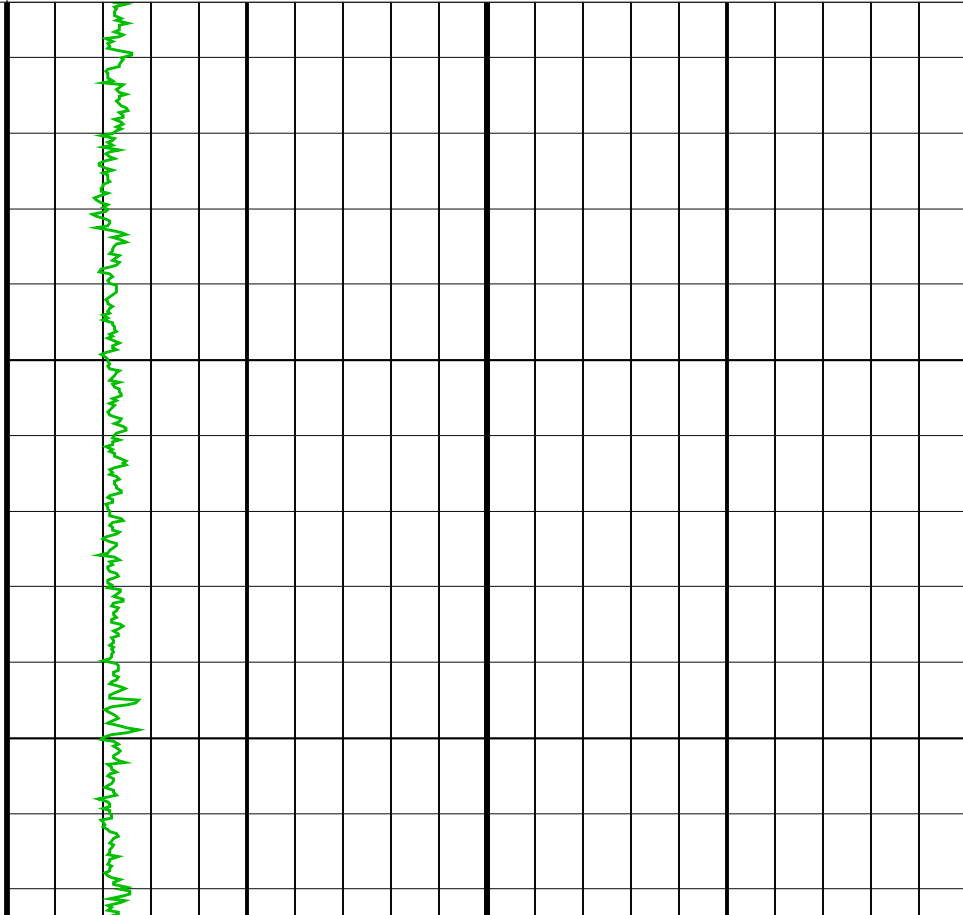
Graphics File Created: 19-Feb-2003 10:38

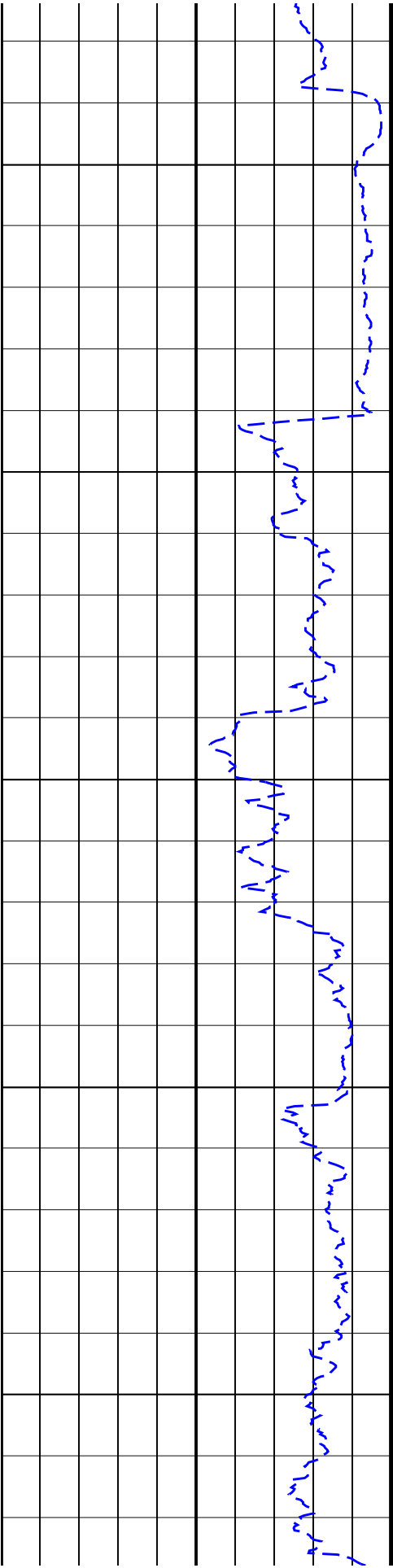
ROP\*5 (ROP5)  
200 (M/HR) 0



750  
TVD

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

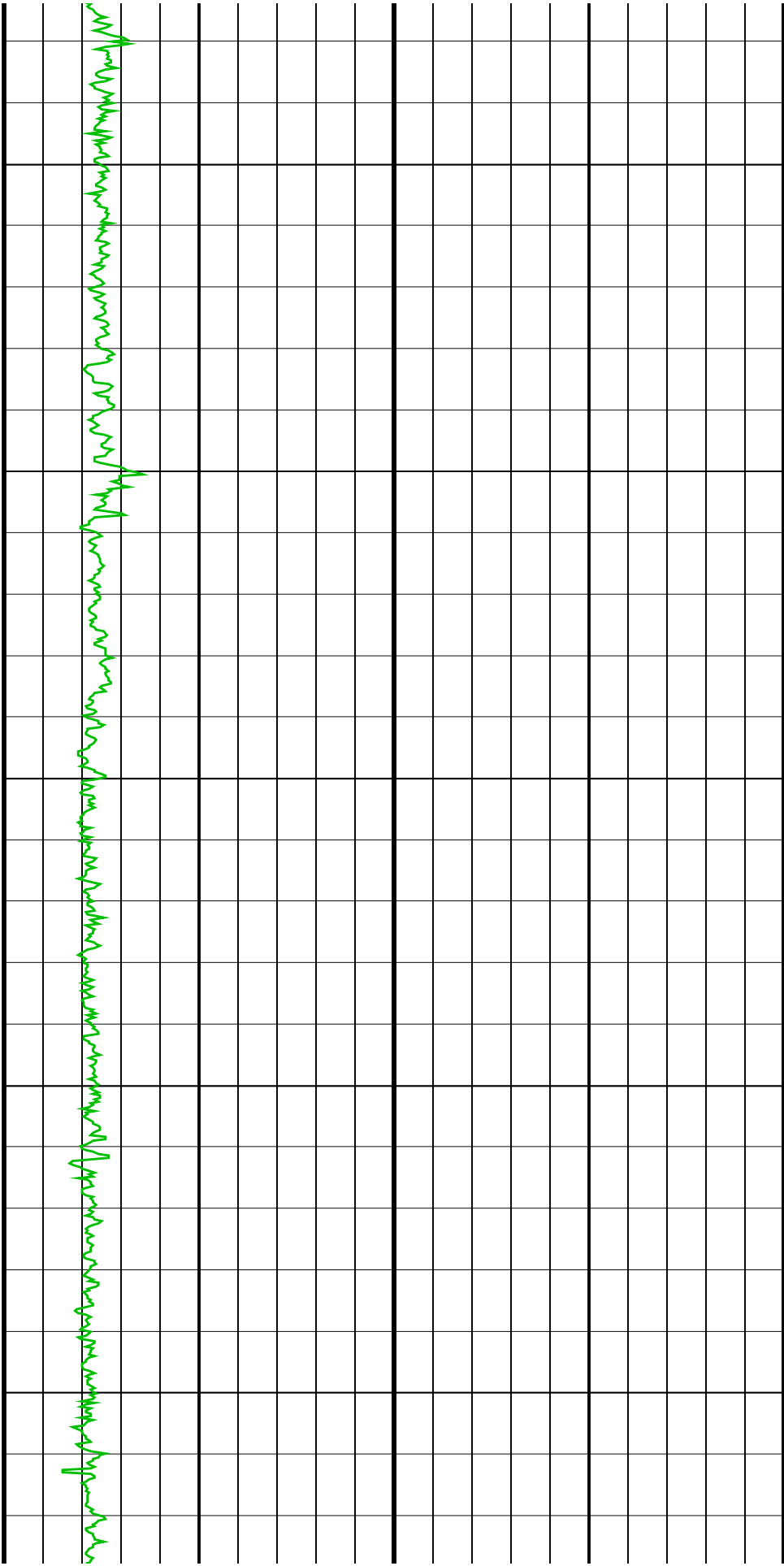


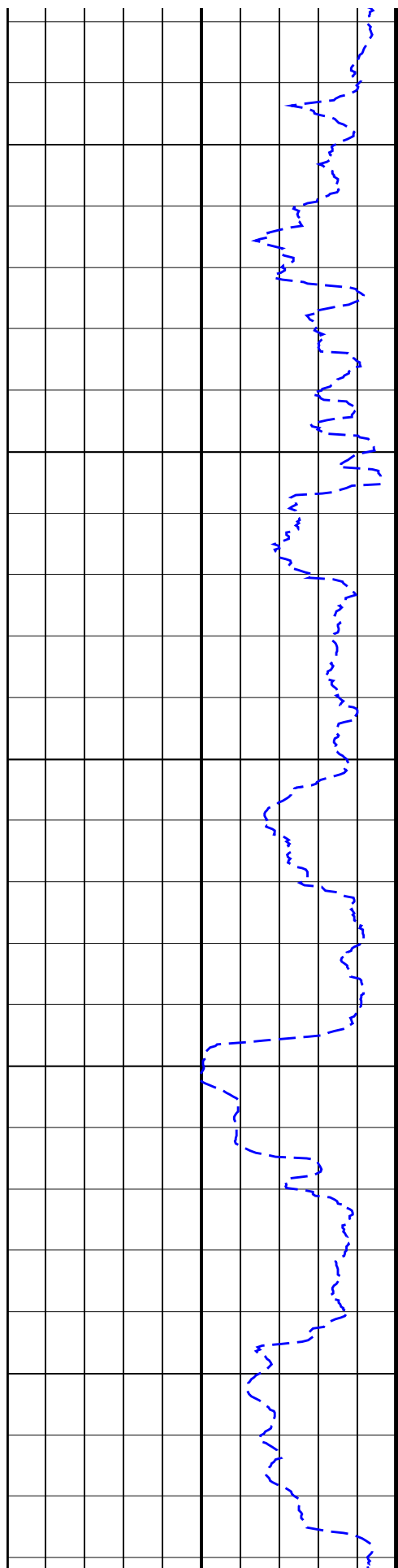


800  
TVD

850  
TVD

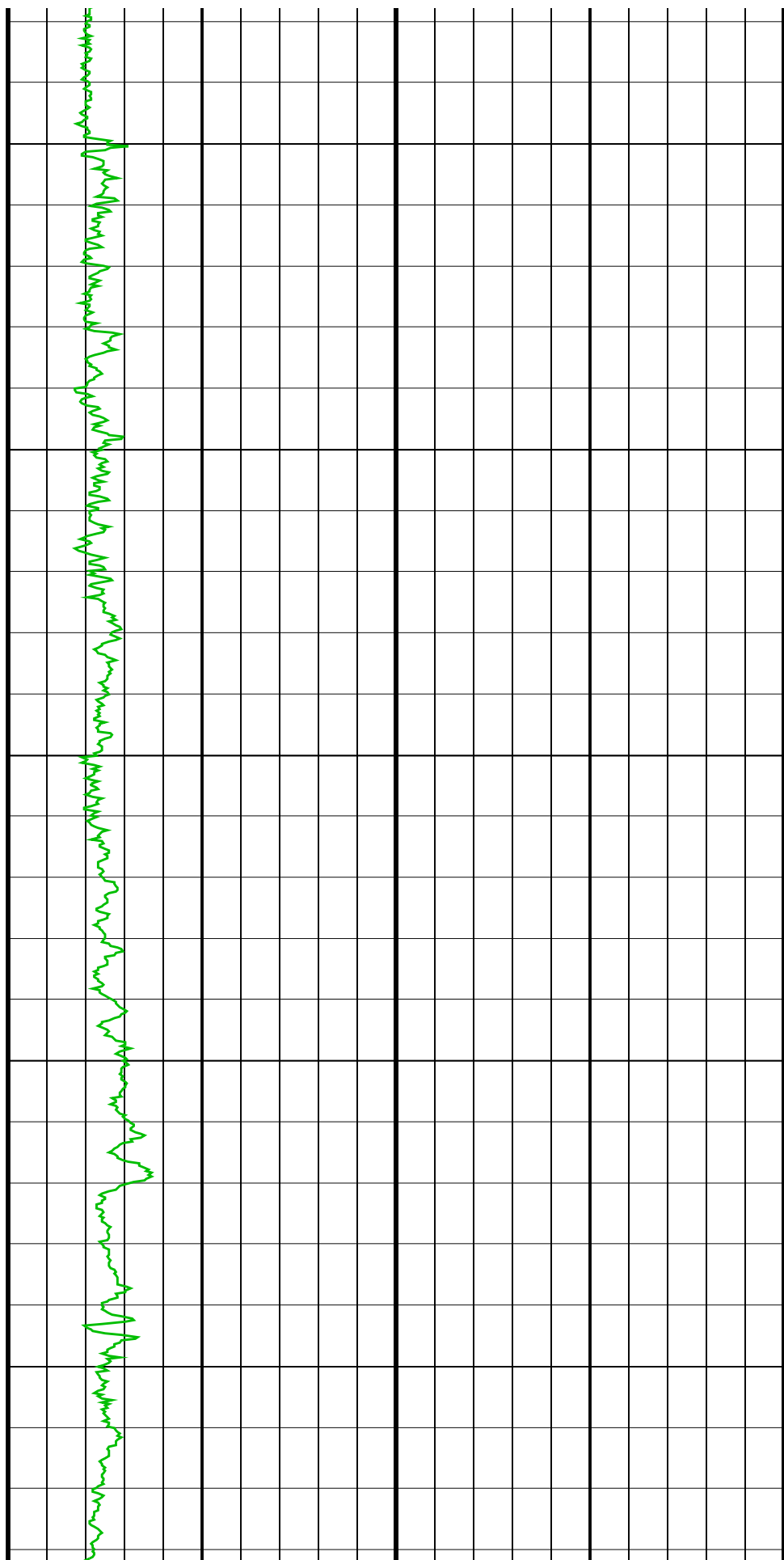
900  
TVD



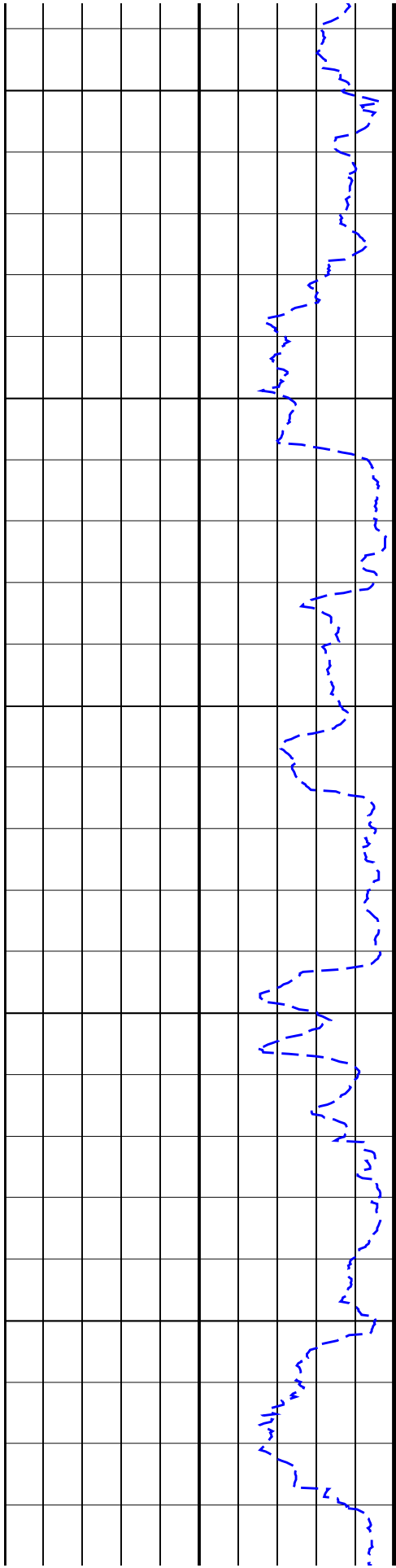


950  
TVD

1000  
TVD

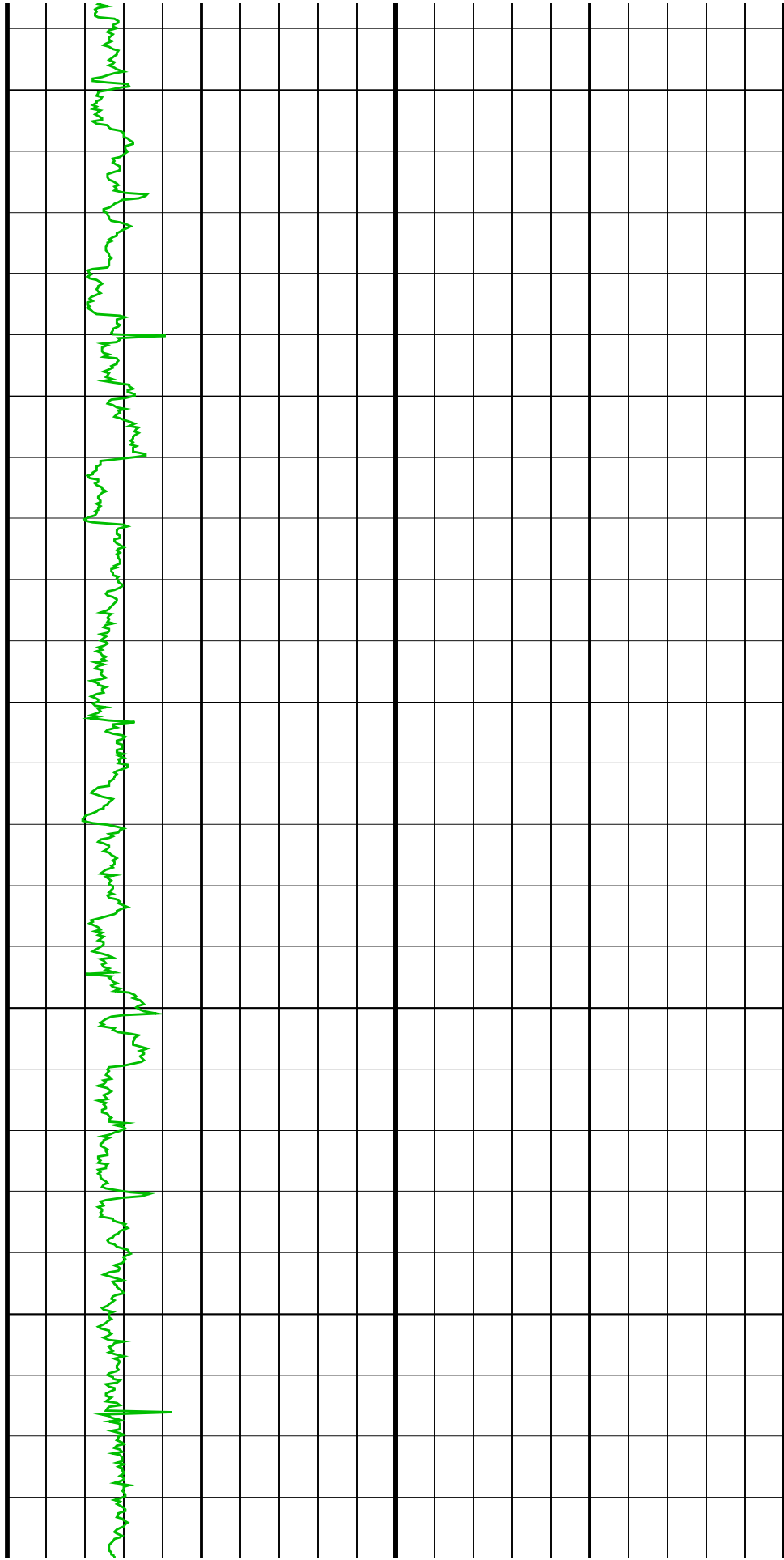




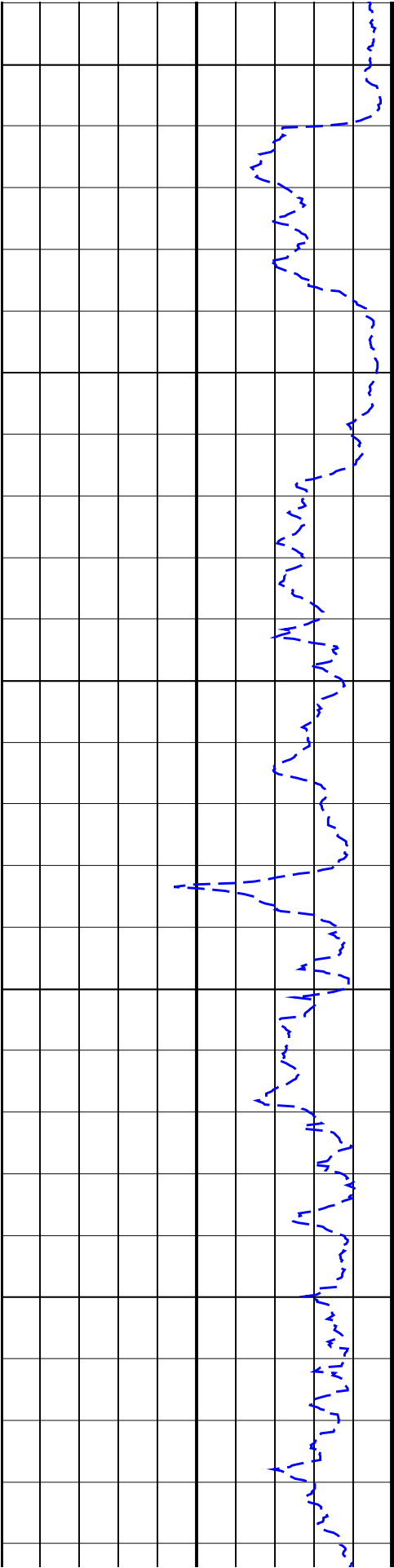


1200  
TVD

1250  
TVD



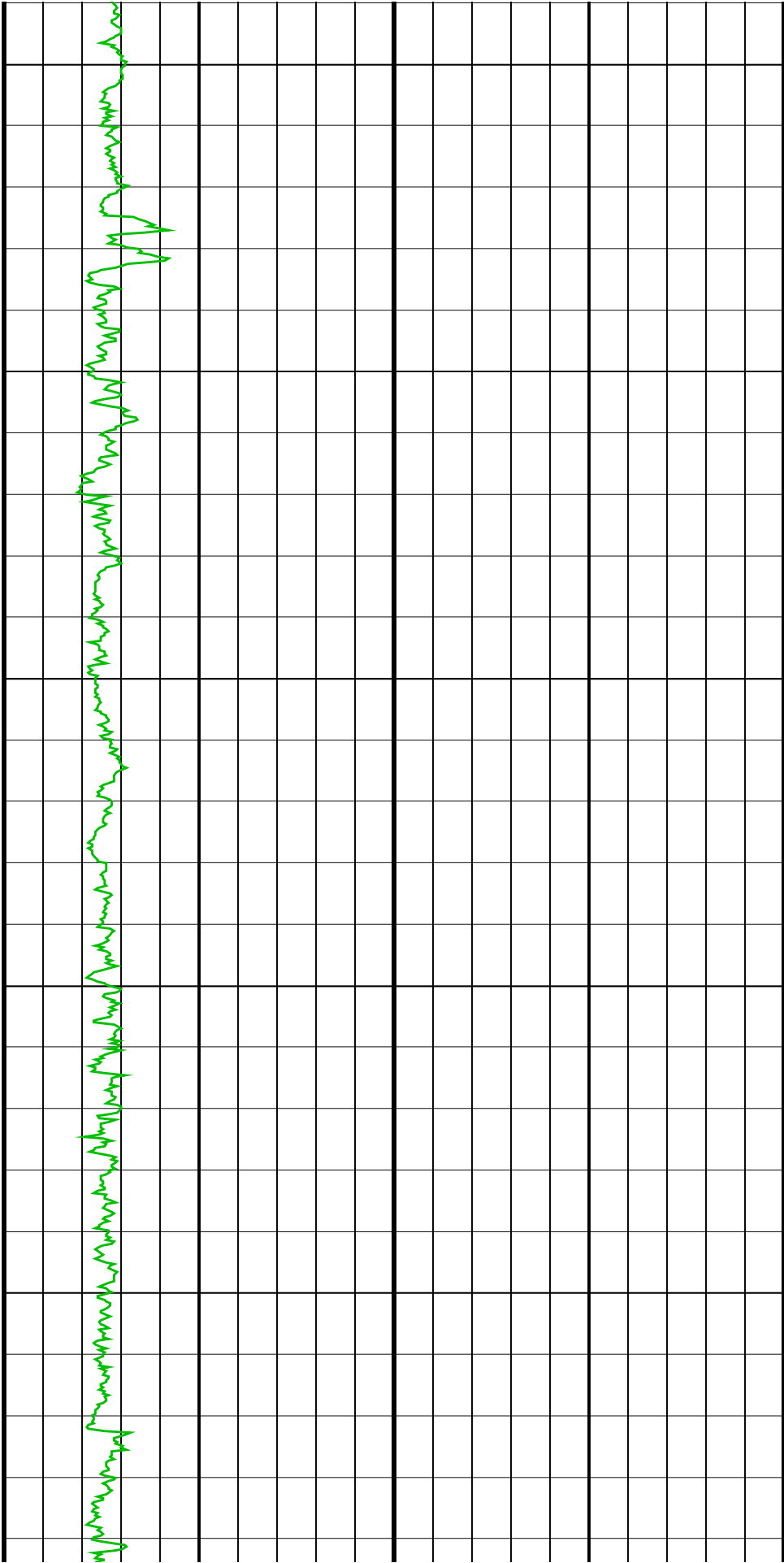


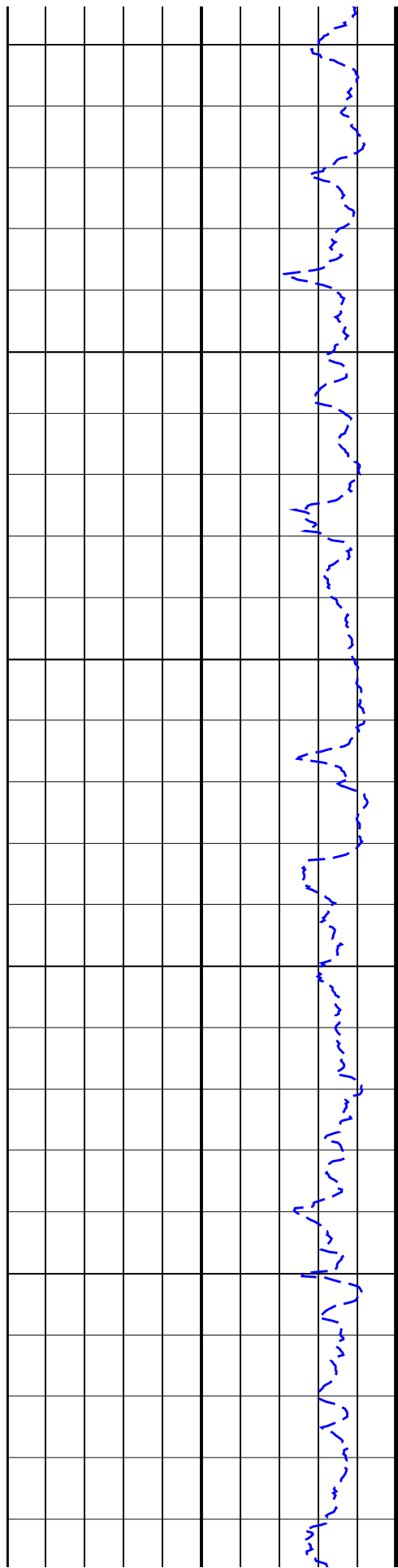


1300  
TVD

1350  
TVD

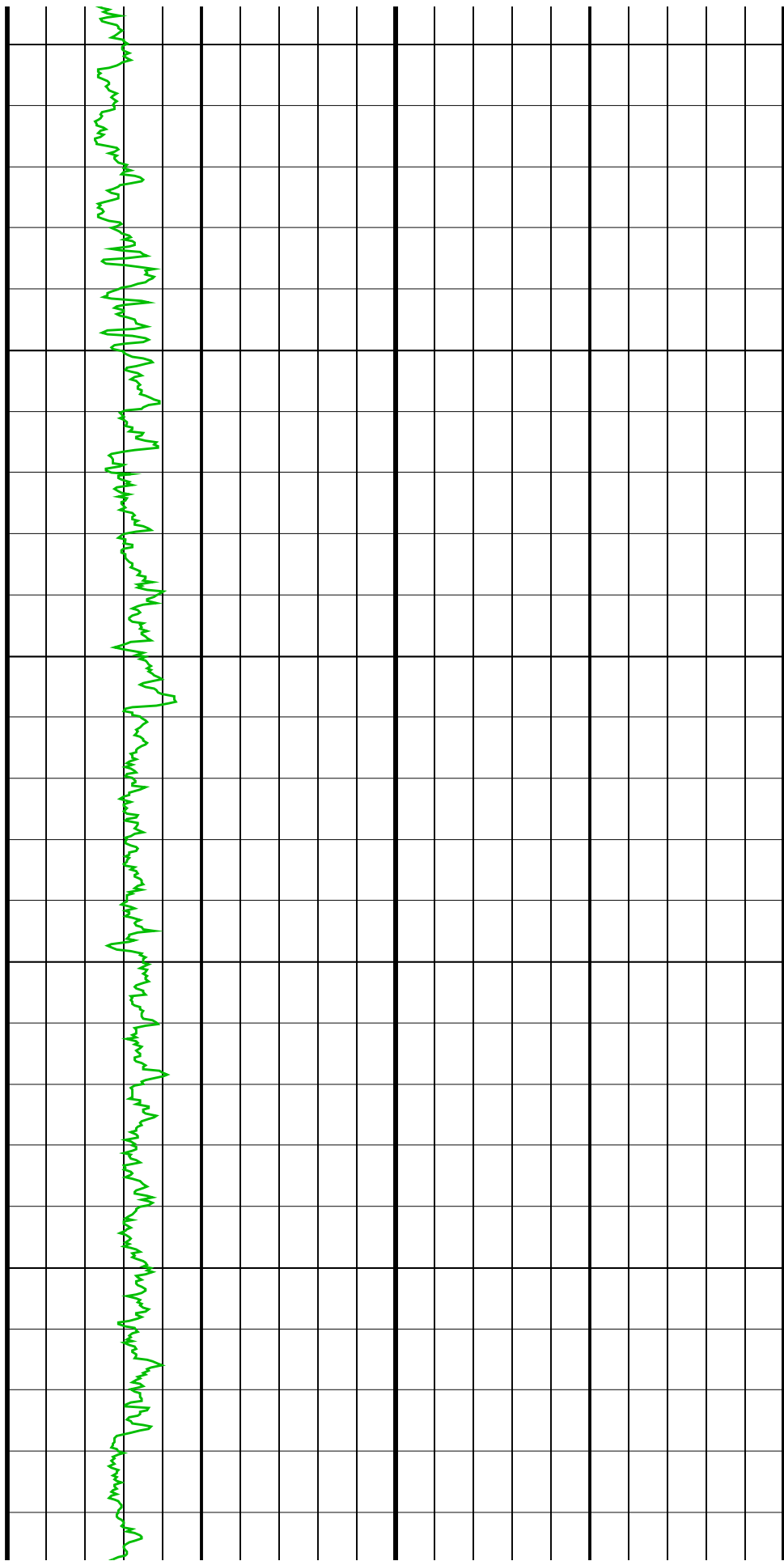
1400  
TVD

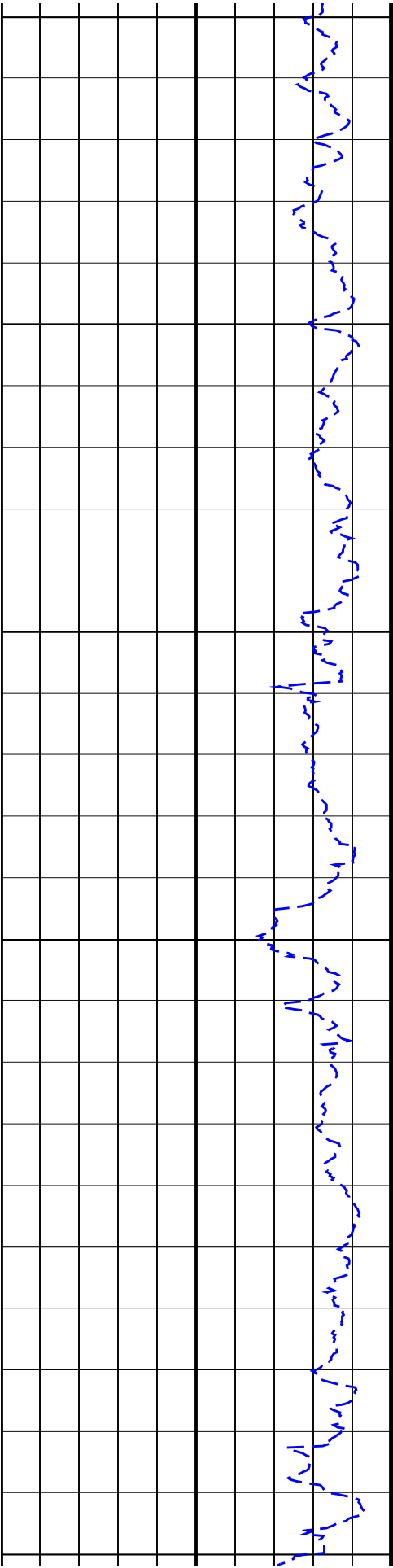




1450  
TVD

1500  
TVD

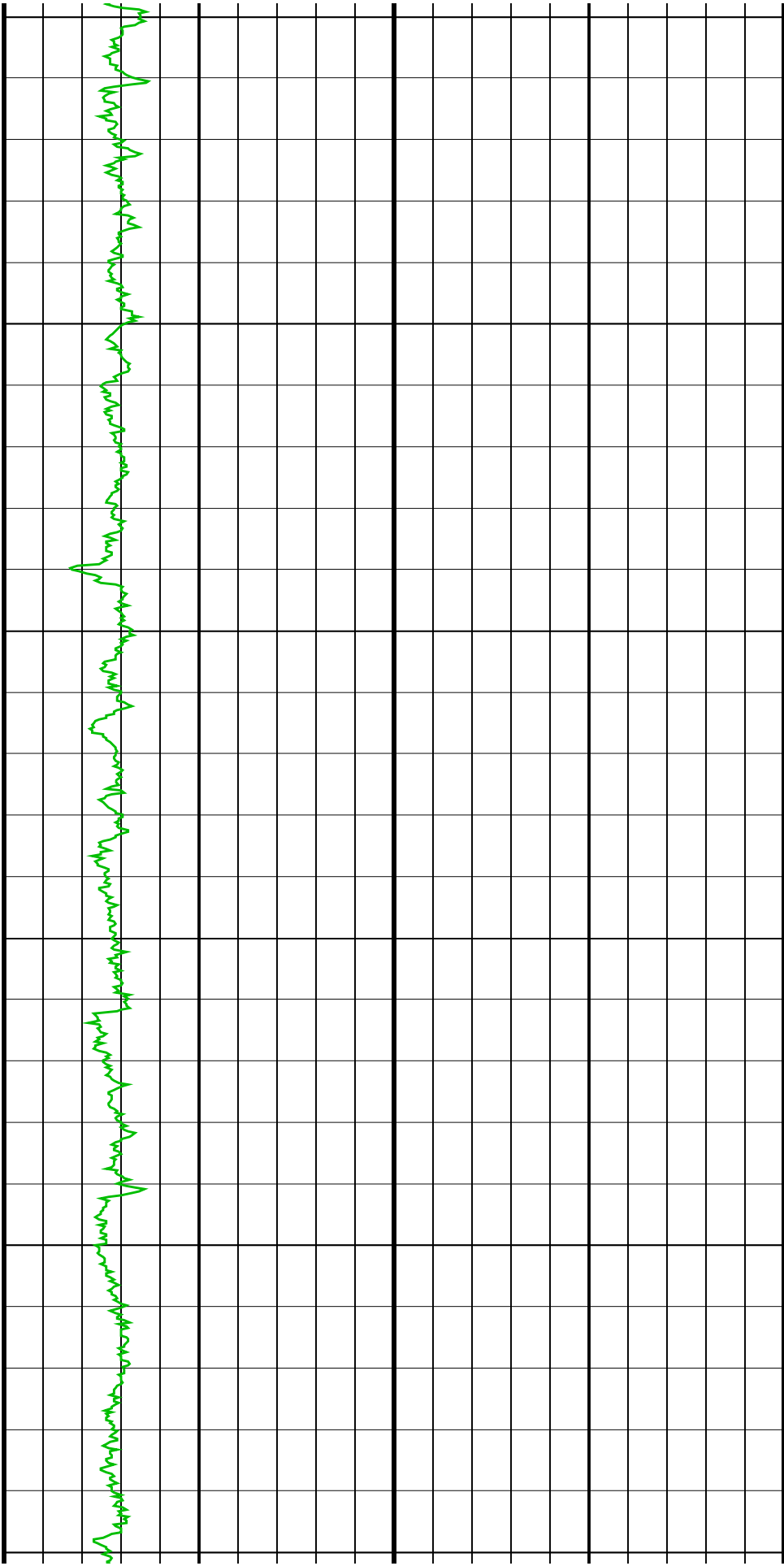


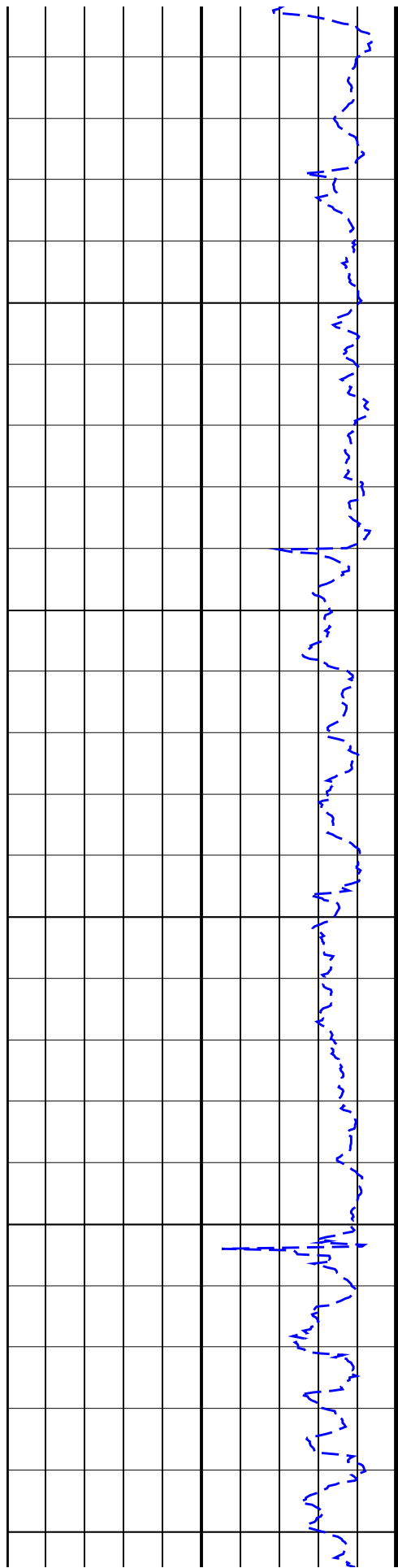


1550  
TVD

1600  
TVD

1650  
TVD

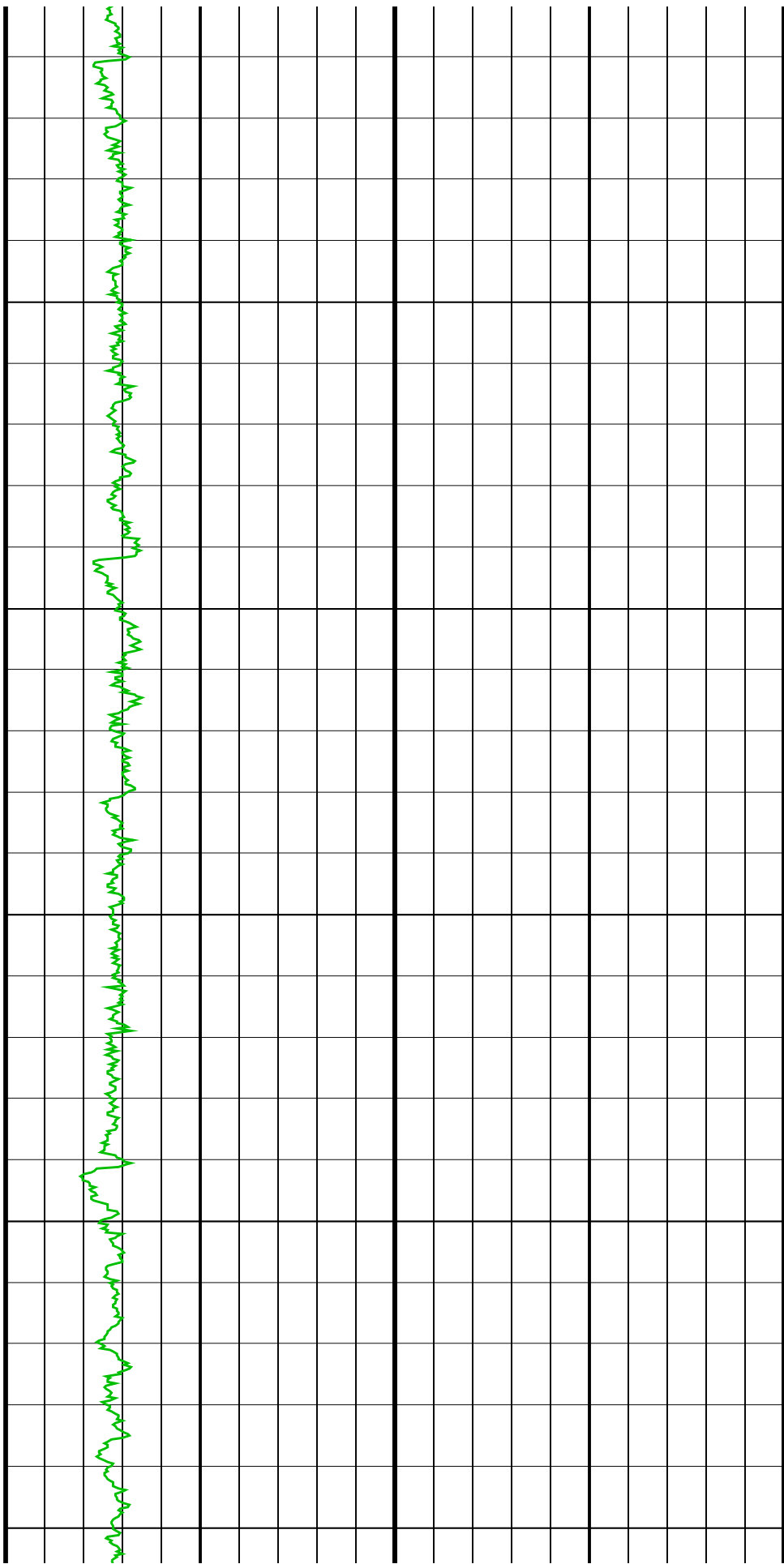


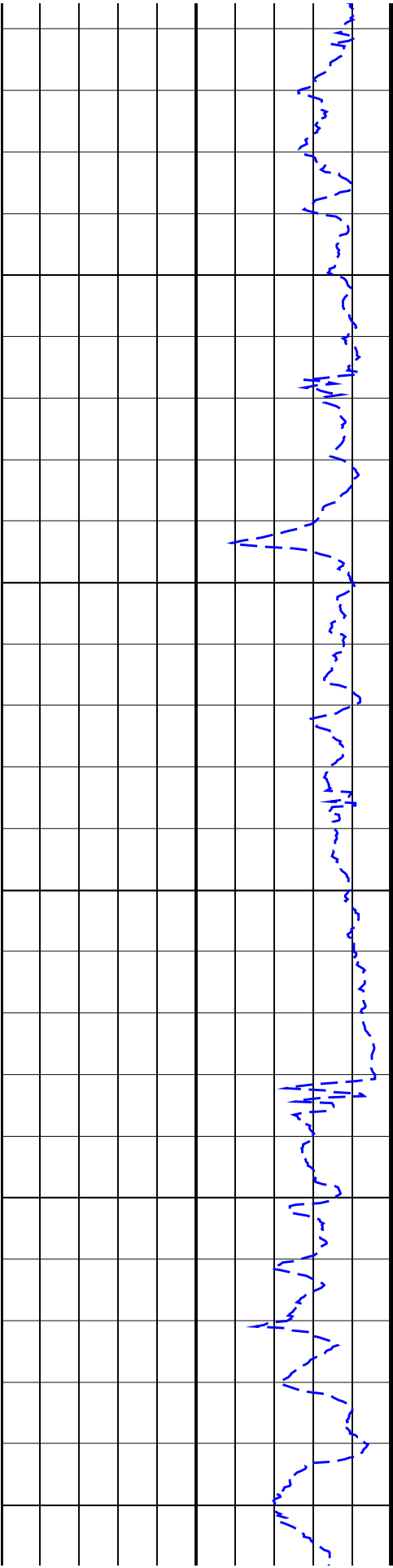


1700  
TVD

1750  
TVD

1800

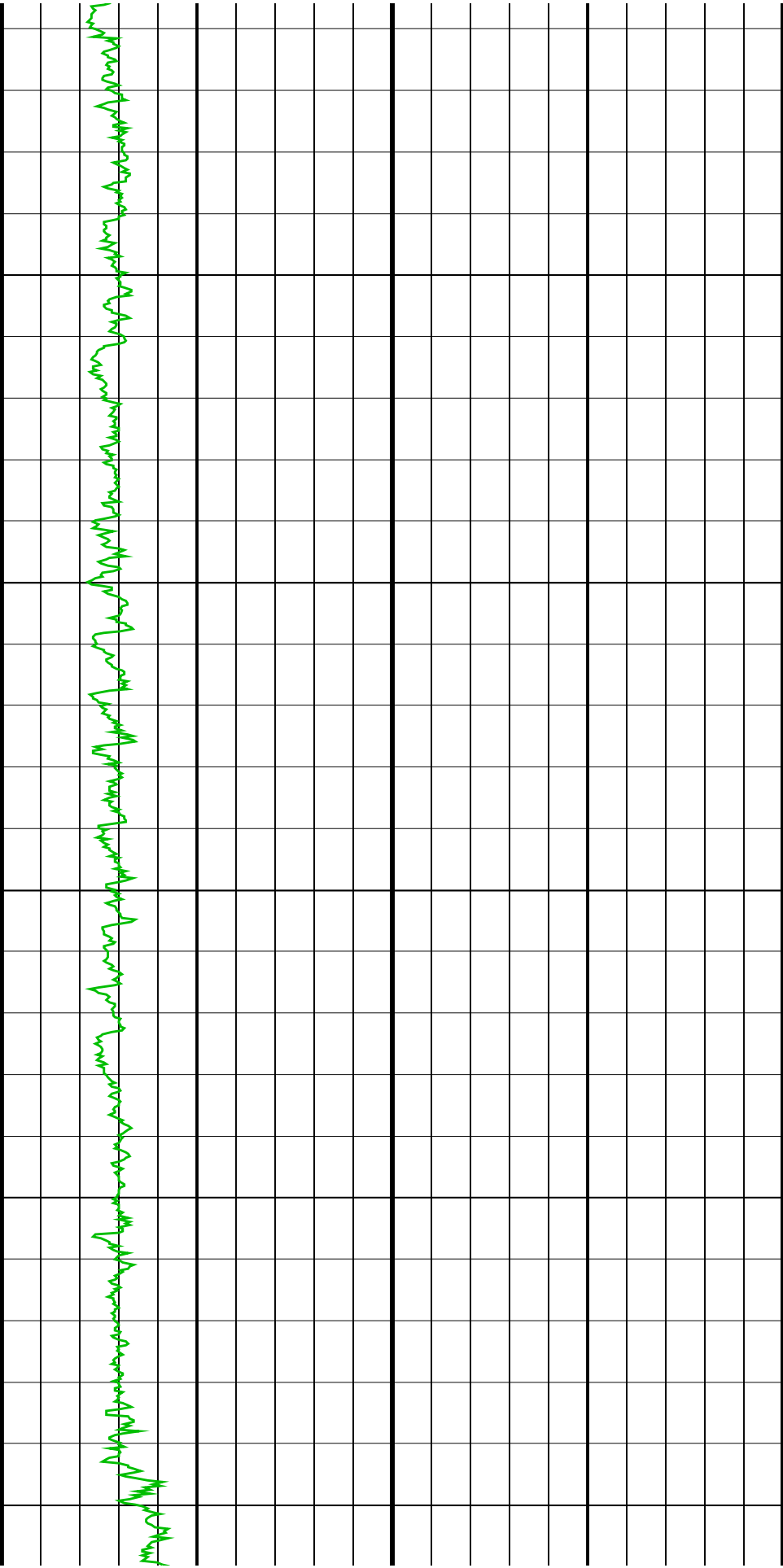


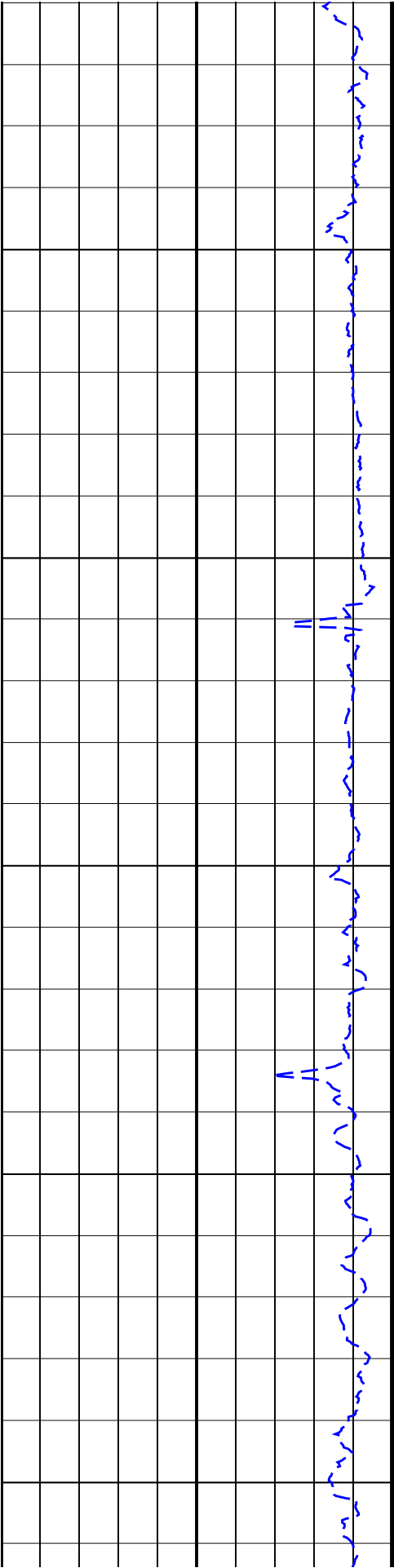


TVD

1850  
TVD

1900  
TVD

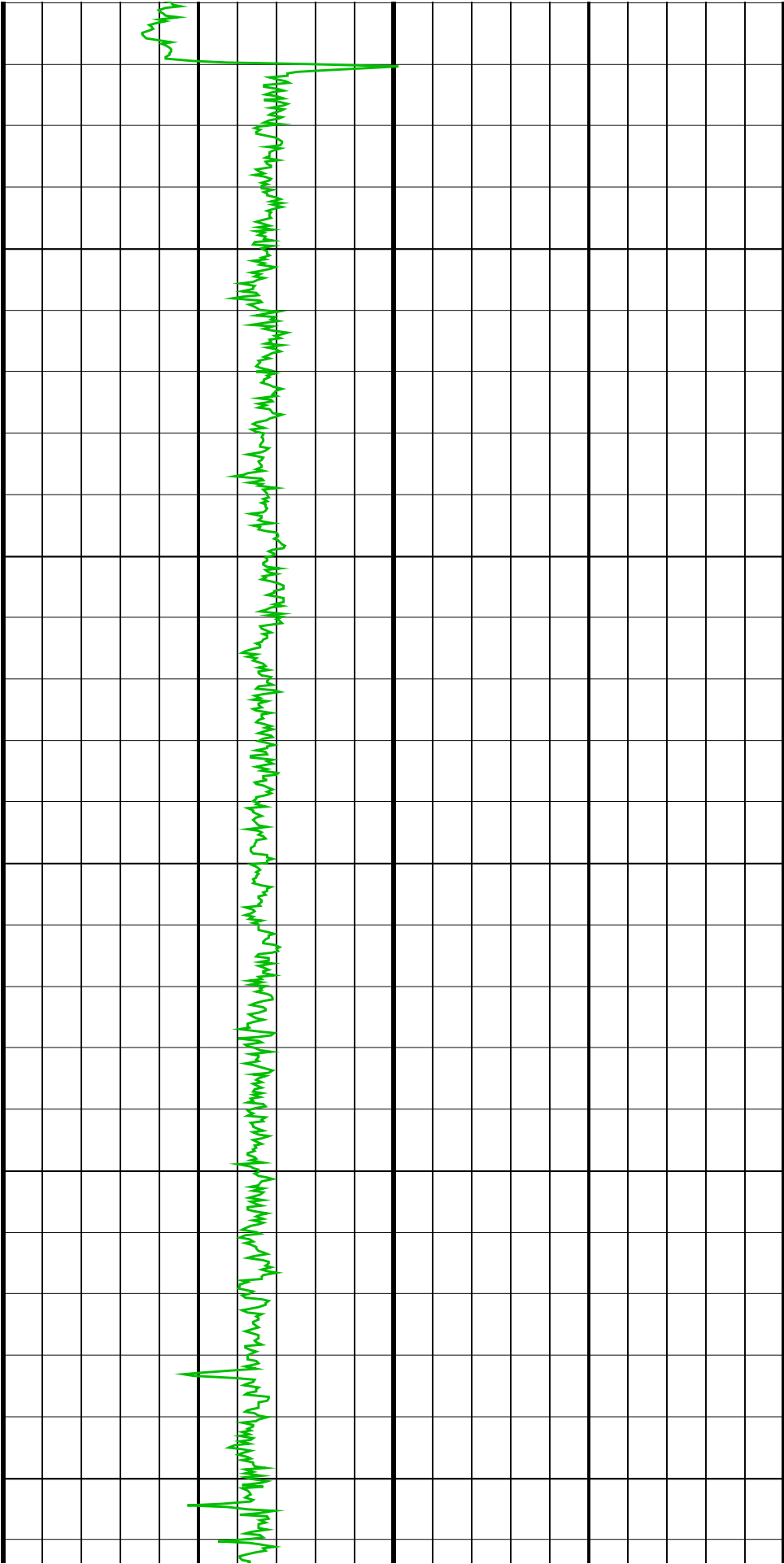


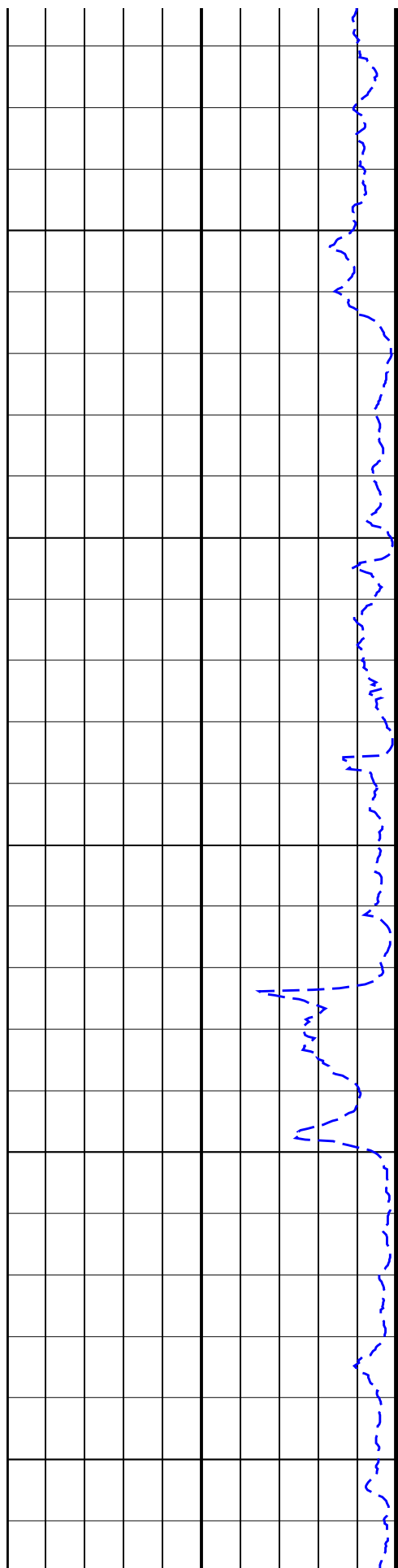


1950  
TVD

2000  
TVD

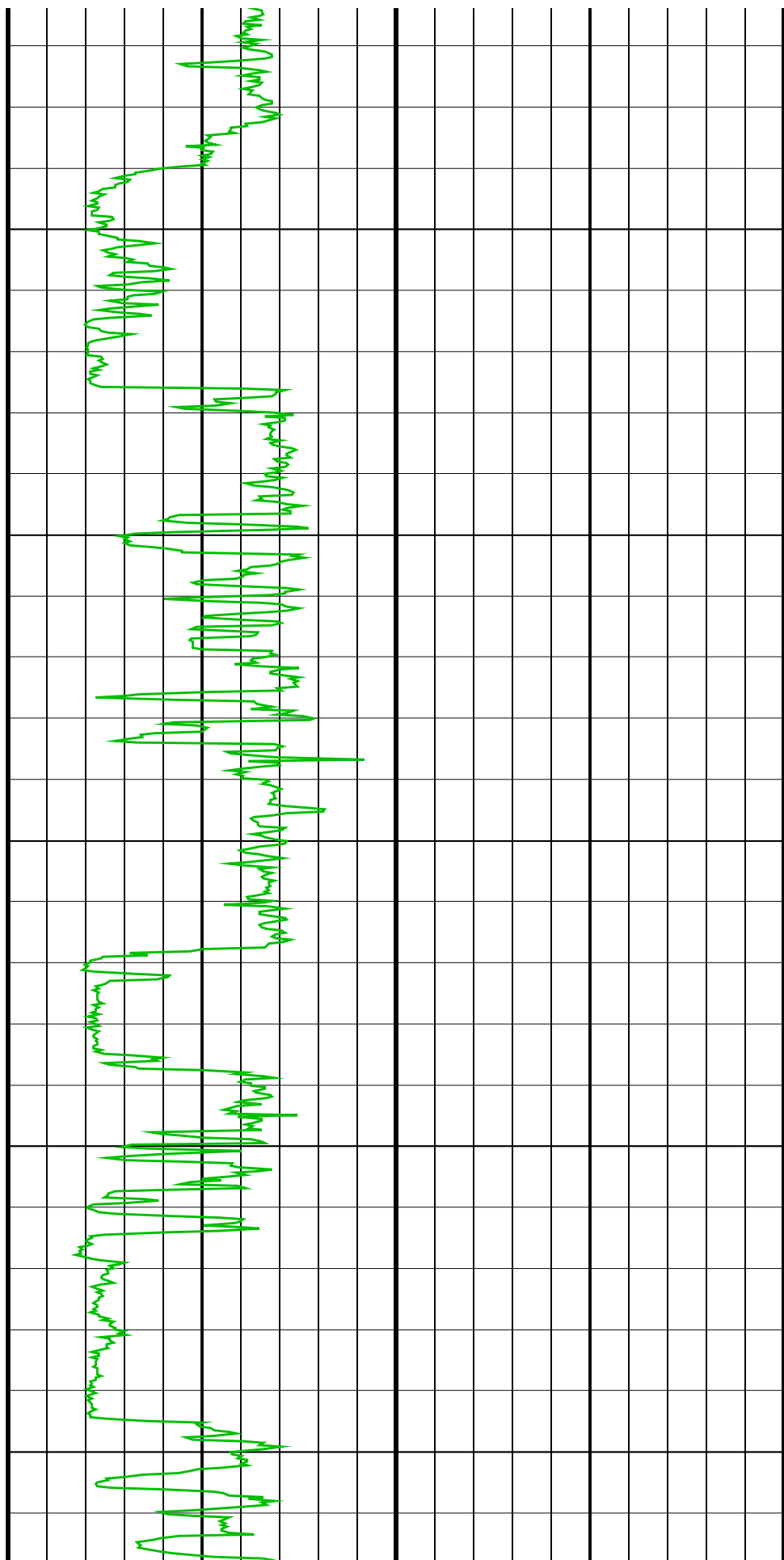
2050  
TVD

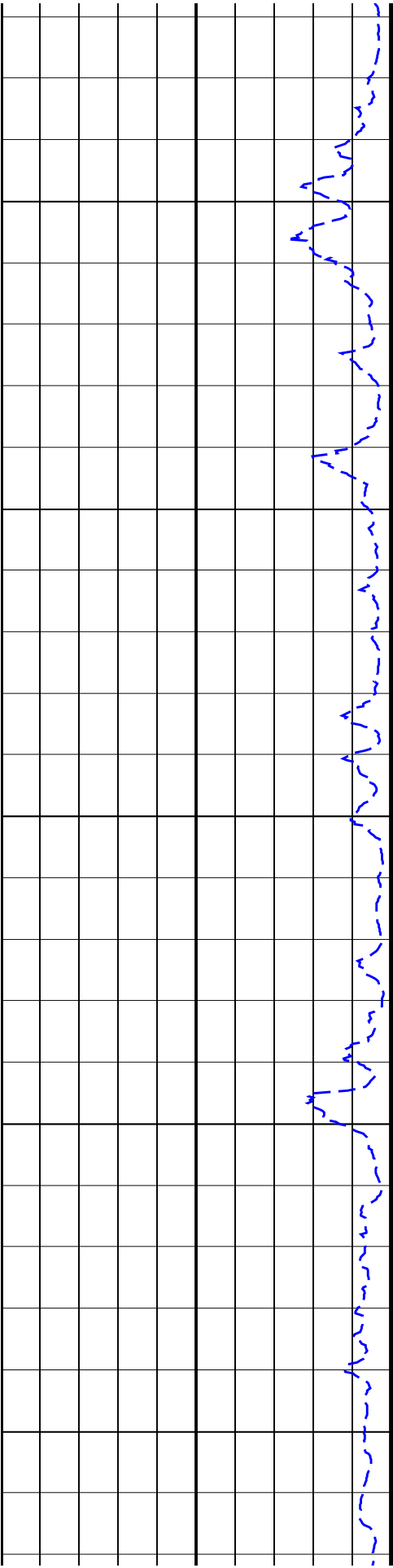




2100  
TVD

2150  
TVD

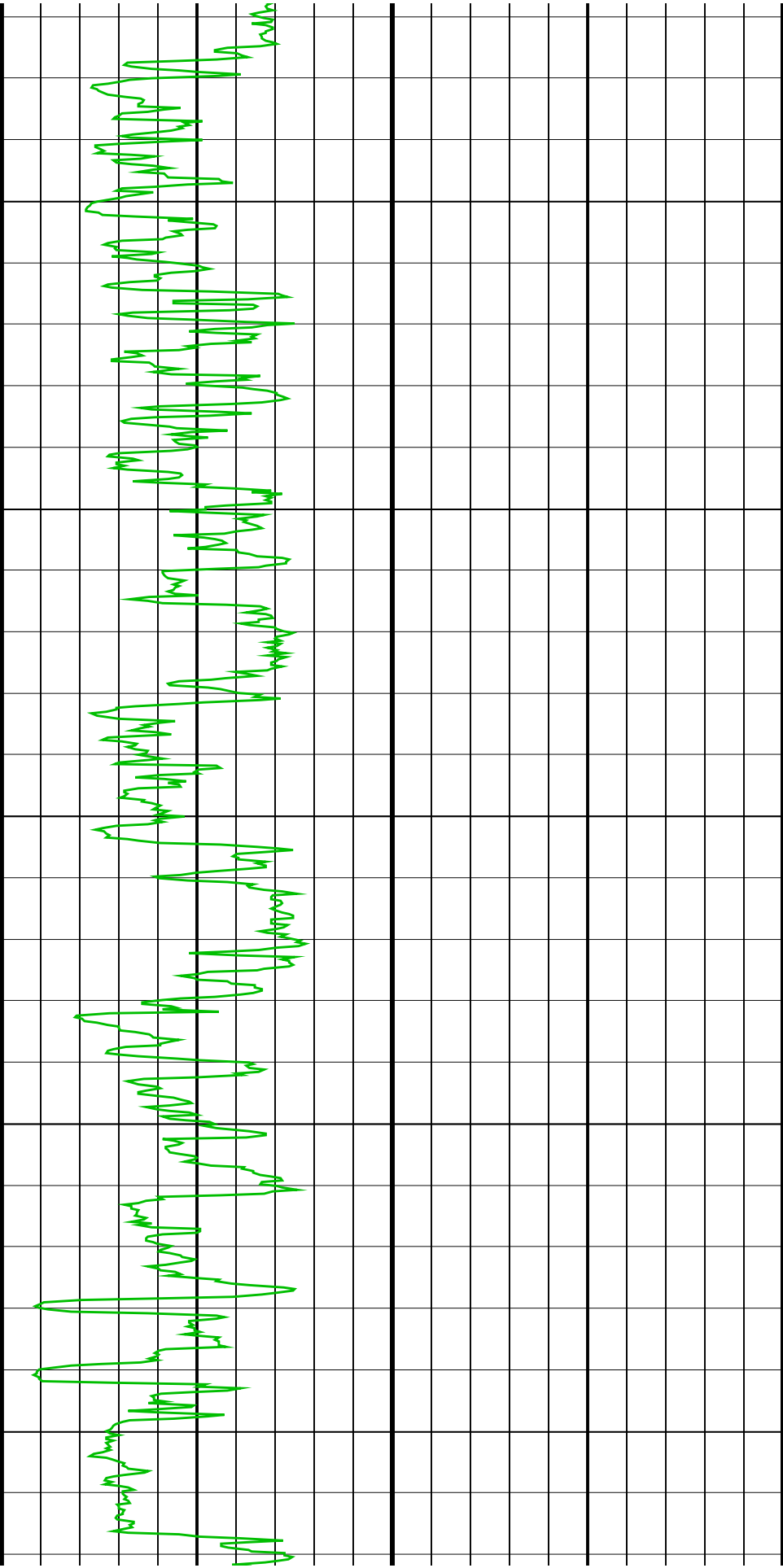




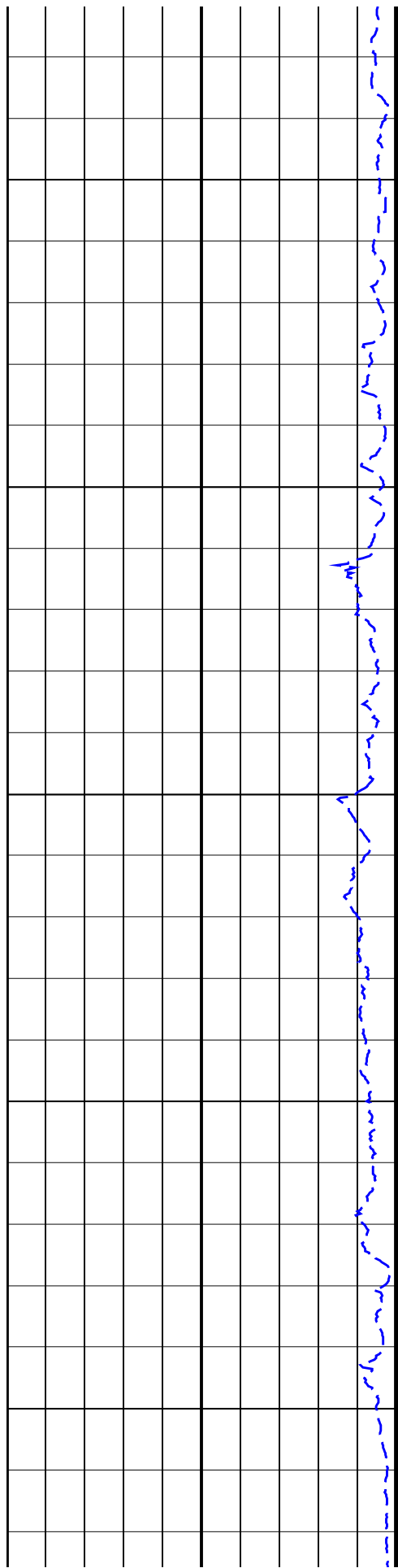
2200  
TVD

2250  
TVD

2300  
TVD

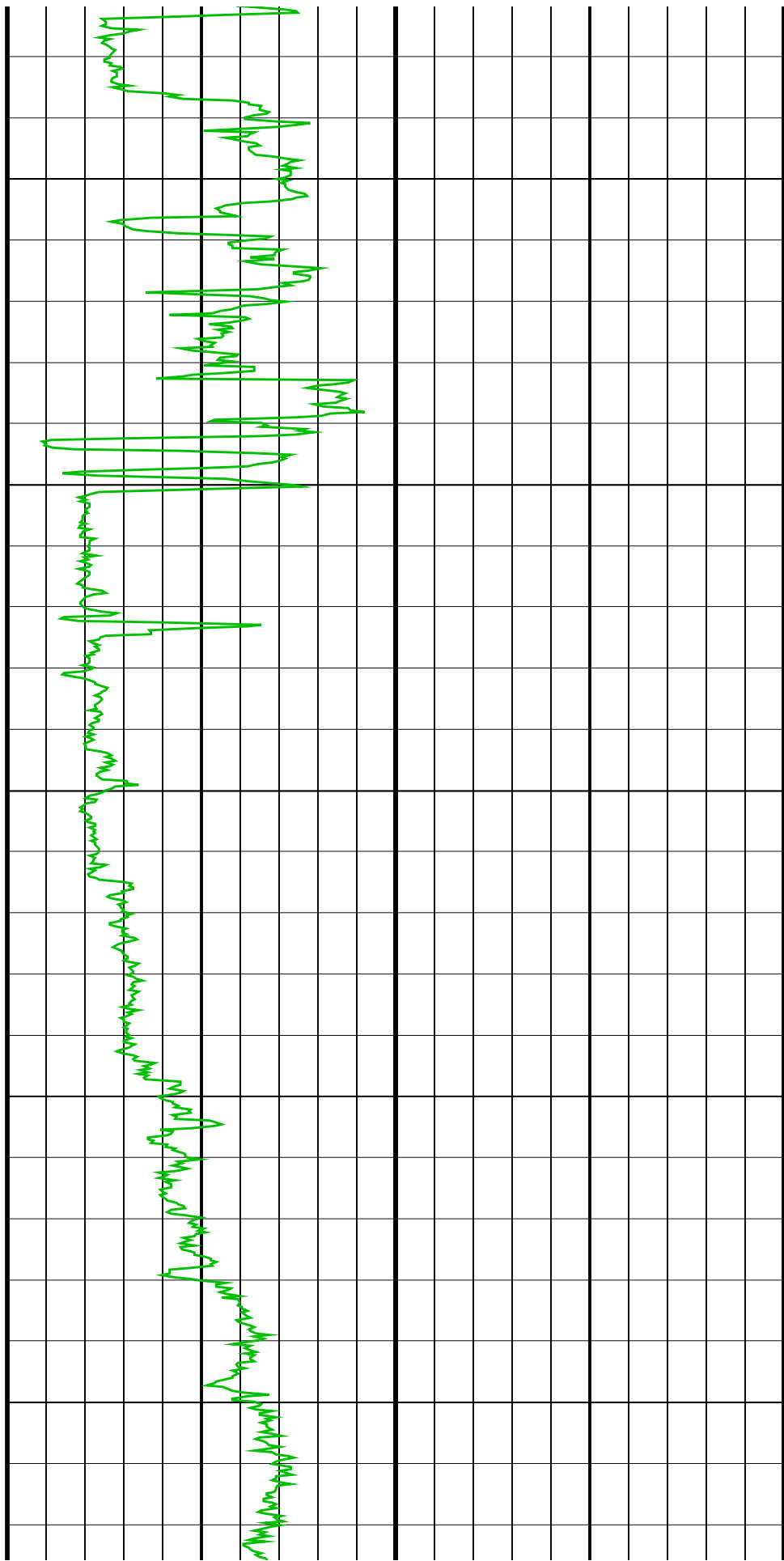


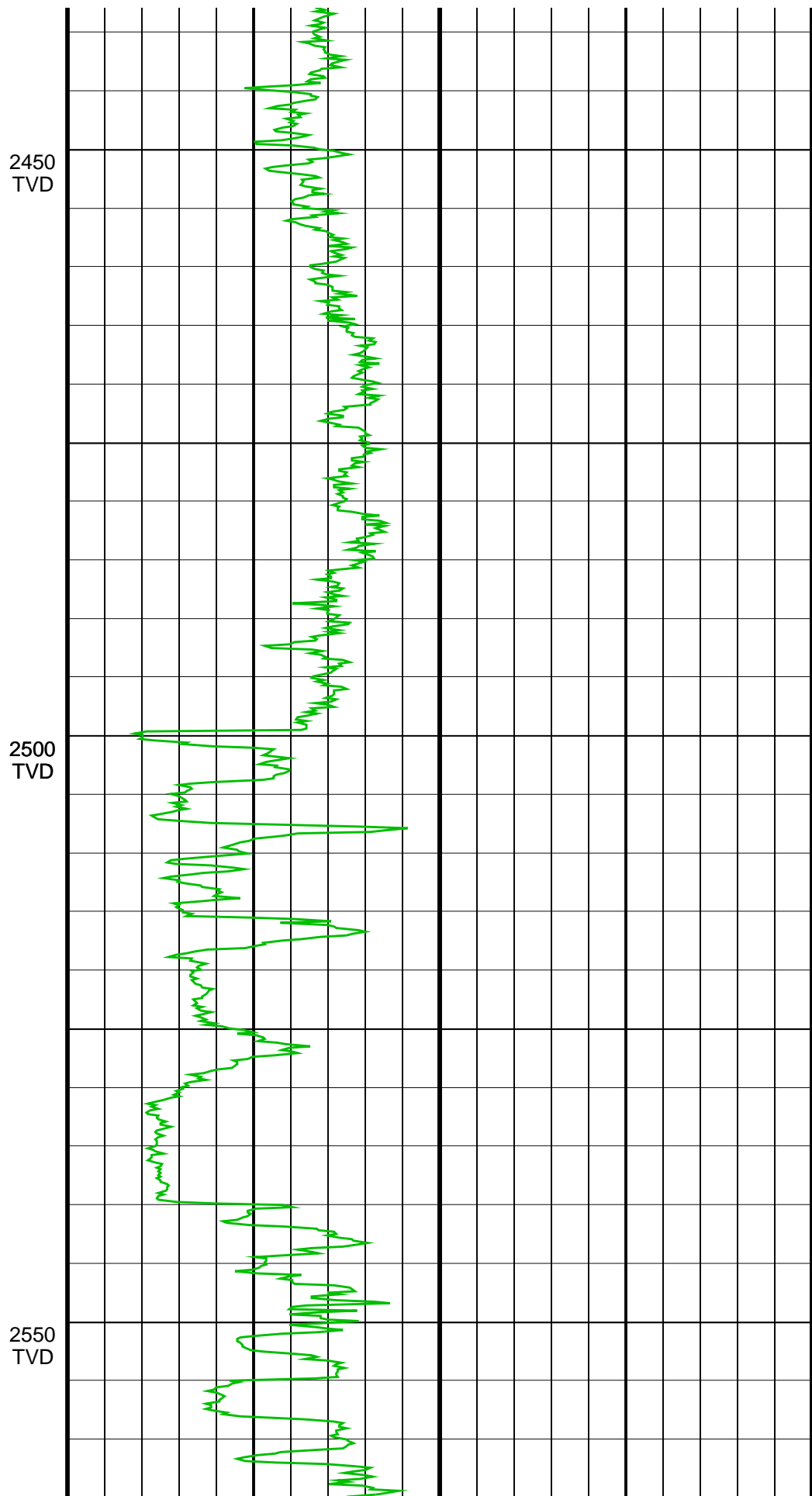
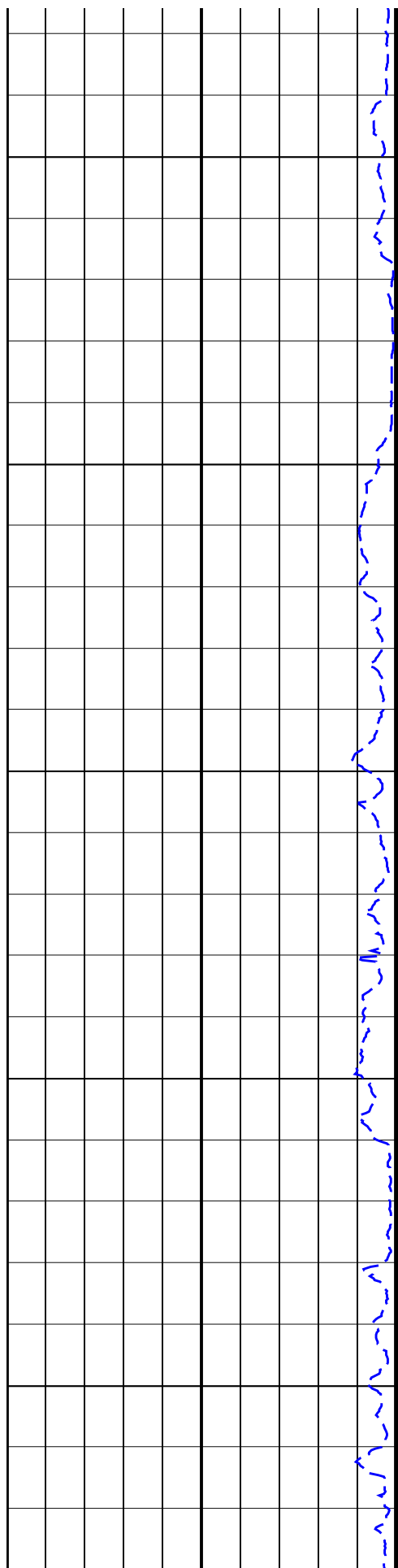


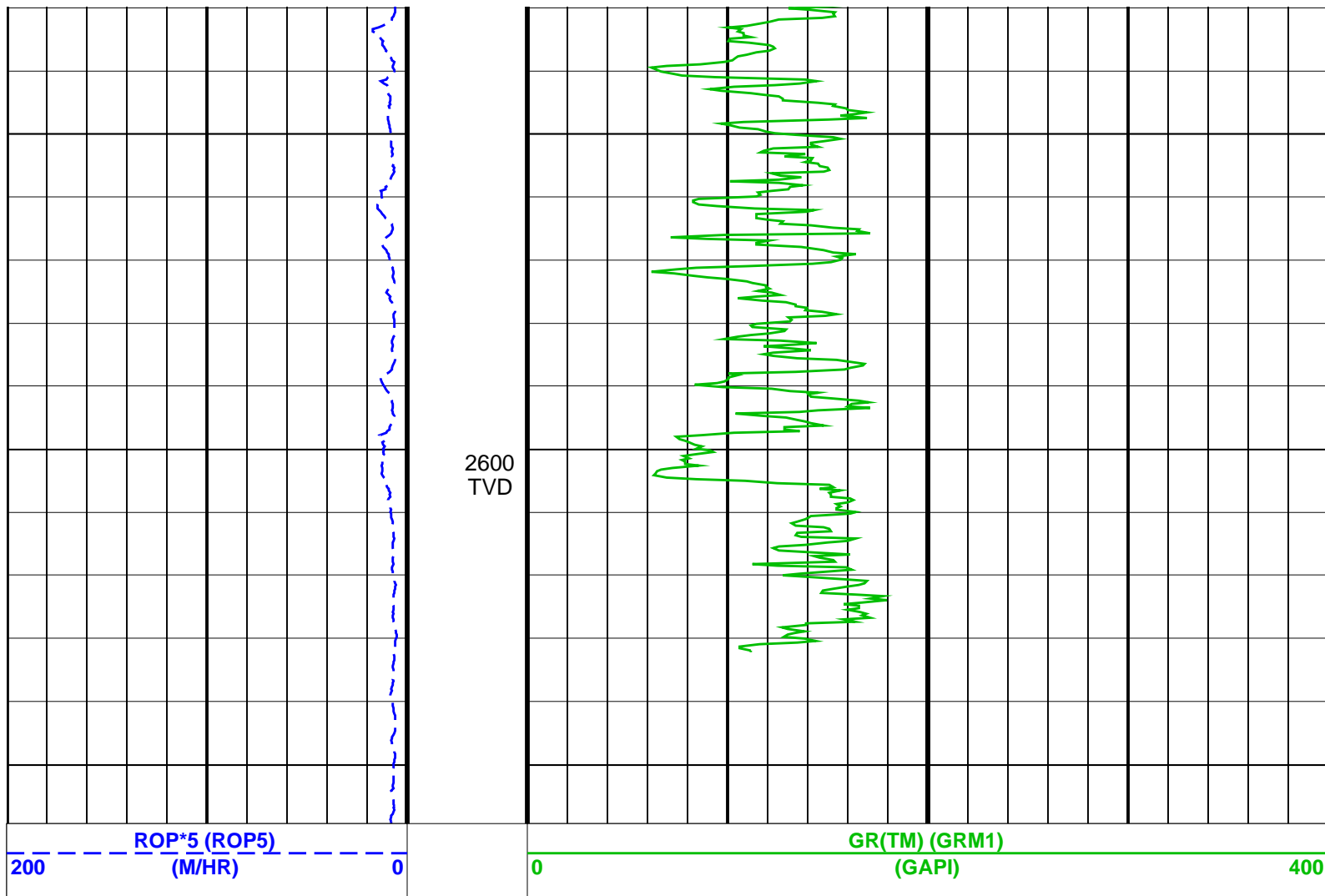


2350  
TVD

2400  
TVD







# SCHLUMBERGER

Survey report 19-Feb-2003 07:30:37 Page 1 of 4

Client.....: ESSO Australia  
Field.....: Flounder

Well.....: FLA A20a  
API number.....:  
Engineer.....: J.Dolan

Spud date.....: 03-Feb-03  
Last survey date.....: 19-Feb-03  
Total accepted surveys....: 78  
MD of first survey.....: 769.00 m  
MD of last survey.....: 2789.00 m

COUNTY.....: ISDL 453  
STATE.....: VICTORIA

----- Survey calculation methods -----		----- Geomagnetic data -----	
Method for positions.....: Minimum curvature		Magnetic model.....: BGGM version 2002	
Method for DLS.....: Mason & Taylor		Magnetic date.....: 04-Feb-2003	
Magnetic field strength...: 1201.07 HCNT		Magnetic dec (+E/W-).....: 13.22 degrees	
----- Depth reference -----		Magnetic dip.....: -68.77 degrees	
Permanent datum.....: Mean Sea Level		----- MWD survey Reference Criteria -----	
Depth reference.....: Driller's Depth		Reference G.....: 1000.03 mGal	
GL above permanent.....: -92.98 m		Reference H.....: 1201.07 HCNT	
KB above permanent.....: 126.36 m		Reference Dip.....: -68.77 degrees	
DF above permanent.....: 126.36 m		Tolerance of G.....: (+/-) 2.50 mGal	
----- Vertical section origin -----		Tolerance of H.....: (+/-) 6.00 HCNT	
Latitude (+N/S-).....: -552.34 m		Tolerance of Dip.....: (+/-) 0.45 degrees	
Departure (+E/W-).....: -337.96 m		----- Platform reference point -----	
Latitude (+N/S-).....: 5758713.10 m		Magnetic dec (+E/W-).....: 13.22 degrees	
Departure (+E/W-).....: 625838.70 m		Grid convergence (+E/W-)..: -0.89 degrees	
Total az corr (+E/W-).....: 14.11 degrees		----- Corrections -----	

Azimuth from rotary table to target: 211.38 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)2003 IDEAL ID8\_OC\_07]  
 SCHLUMBERGER Survey Report

19-Feb-2003 07:30:37

Page 2 of 4

Seq	Measured depth	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 (deg)	At Azim (deg)	DLS (deg)	Srvy Tool
#	(m)	(deg)	(deg)	(m)	(m)	(m)	(m)	(m)	(deg)	10m	type	tool Corr
1	769.00	44.97	212.13	0.00	706.90	244.63	-210.89	-128.64	244.64	211.38	0.00	TIP 17.57G
2	775.00	45.42	212.33	6.00	711.13	248.89	-214.49	-130.91	248.90	211.40	2.36	GYR -19.75G
3	780.00	45.88	212.10	5.00	714.62	252.46	-217.51	-132.81	252.48	211.41	2.93	GYR -35.38G
4	785.00	46.36	211.63	5.00	718.09	256.07	-220.57	-134.71	256.08	211.41	3.53	GYR -26.08G
5	790.00	47.14	211.11	5.00	721.52	259.71	-223.68	-136.61	259.72	211.41	5.20	GYR -25.60G
6	795.00	48.20	210.43	5.00	724.88	263.40	-226.86	-138.50	263.42	211.40	7.04	GYR -20.97G
7	800.00	48.71	210.17	5.00	728.20	267.14	-230.09	-140.39	267.16	211.39	3.28	GYR -97.61G
8	805.00	48.70	210.07	5.00	731.50	270.90	-233.34	-142.27	270.91	211.37	0.45	GYR -108.42G
9	807.00	48.69	210.03	2.00	732.82	272.40	-234.64	-143.03	272.41	211.36	0.48	GYR -164.72G
10	836.80	41.23	206.93	29.80	753.89	293.41	-253.11	-153.09	293.41	211.17	7.83	GYR -168.89G
11	877.02	38.12	205.94	40.22	784.85	318.97	-276.10	-164.53	318.79	210.79	2.37	MWD -112.65G
12	905.52	37.93	205.19	28.50	807.30	336.42	-291.94	-172.10	336.44	210.52	0.53	MWD 95.45G
13	934.75	37.89	205.91	29.23	830.36	354.28	-308.14	-179.85	354.31	210.27	0.46	MWD 180.00G
14	964.06	37.48	205.91	29.31	853.55	372.10	-324.26	-187.68	372.17	210.06	0.42	MWD -165.07G
15	992.37	34.99	204.75	28.31	876.39	388.73	-339.38	-194.84	388.83	209.86	2.74	MWD -134.55G
16	1020.56	34.90	204.59	28.19	899.49	404.7	-354.0	-201.58	404.90	209.66	0.14	MWD 153.73G
17	1048.62	34.14	205.26	28.06	922.61	420.54	-368.47	-208.28	420.73	209.48	0.91	MWD 151.27G
18	1077.47	31.79	207.73	28.85	946.82	436.17	-382.52	-215.27	436.40	209.37	2.81	MWD 141.97G
19	1105.53	28.51	213.29	28.06	971.08	450.24	-394.67	-222.39	450.48	209.40	4.60	MWD 147.97G
20	1134.29	25.49	217.78	28.76	996.71	463.26	-405.30	-229.95	463.46	209.57	3.80	MWD 161.82G
21	1163.00	22.73	220.14	28.71	1022.91	474.89	-414.42	-237.31	475.05	209.80	3.05	MWD 171.92G
22	1191.38	20.51	221.04	28.38	1049.29	485.23	-422.37	-244.11	485.34	210.03	2.37	MWD -180.00G
23	1220.17	17.92	221.01	28.79	1076.48	494.58	-429.51	-250.33	494.66	210.23	2.70	MWD 177.52G
24	1248.30	16.66	221.20	28.13	1103.34	502.83	-435.81	-255.83	502.89	210.41	1.35	MWD -160.06G
25	1276.95	13.94	217.05	28.65	1130.97	510.32	-441.66	-260.61	510.36	210.54	3.07	MWD -140.25G
26	1306.13	12.90	213.06	29.18	1159.35	517.07	-447.20	-264.51	517.11	210.60	1.43	MWD 129.19G
27	1335.52	11.50	222.68	29.39	1188.08	523.23	-452.10	-268.29	523.26	210.69	2.51	MWD 158.09G
28	1363.42	9.82	226.70	27.90	1215.50	528.26	-455.78	-271.90	528.28	210.82	1.97	MWD 162.35G
29	1392.66	7.72	231.75	29.24	1244.40	532.52	-458.70	-275.26	532.53	210.97	2.29	MWD 157.22G
30	1421.94	6.11	238.27	29.28	1273.46	535.76	-460.74	-278.13	535.76	211.12	1.83	MWD 177.97G

[(c)2003 IDEAL ID8\_OC\_07]  
 SCHLUMBERGER Survey Report

19-Feb-2003 07:30:37

Page 3 of 4

Seq	Measured depth	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 (deg)	At Azim (deg)	DLS (deg)	Srvy Tool
#	(m)	(deg)	(deg)	(m)	(m)	(m)	(m)	(m)	(deg)	10m	type	tool Corr
31	1451.21	3.41	239.88	29.27	1302.63	537.92	-462.00	-280.21	537.92	211.24	2.77	MWD -121.59M
32	1479.71	1.29	238.41	28.50	1331.10	538.96	-462.59	-281.21	538.96	211.30	2.23	MWD -128.69M
33	1508.40	0.64	231.31	28.69	1359.79	539.39	-462.86	-281.61	539.39	211.32	0.69	MWD -134.86M
34	1536.69	0.61	225.14	28.29	1388.08	539.69	-463.06	-281.84	539.69	211.33	0.08	MWD -116.80M
35	1565.06	0.63	243.20	28.37	1416.45	539.97	-463.24	-282.09	539.97	211.34	0.21	MWD -123.98M
36	1593.67	0.63	236.02	28.61	1445.05	540.25	-463.40	-282.36	540.25	211.36	0.08	MWD -110.37M
37	1621.98	0.66	249.63	28.31	1473.36	540.52	-463.54	-282.64	540.52	211.37	0.17	MWD -123.41M
38	1650.74	0.83	236.59	28.76	1502.12	540.84	-463.72	-282.97	540.84	211.39	0.25	MWD -118.49M
39	1679.24	0.70	241.51	28.50	1530.62	541.18	-463.91	-283.30	541.18	211.41	0.15	MWD -120.95M
40	1707.69	0.59	239.05	28.45	1559.06	541.46	-464.07	-283.58	541.46	211.43	0.12	MWD -143.85M
41	1736.30	0.51	216.15	28.61	1587.67	541.72	-464.25	-283.78	541.72	211.44	0.24	MWD -141.09M
42	1765.27	0.47	218.91	28.97	1616.64	541.96	-464.45	-283.93	541.96	211.44	0.05	MWD -150.01M
43	1794.11	0.34	209.99	28.84	1645.48	542.16	-464.61	-284.05	542.17	211.44	0.15	MWD -107.41M
44	1822.56	0.20	252.59	28.45	1673.93	542.29	-464.70	-284.14	542.29	211.44	0.25	MWD -94.06M
45	1850.75	0.06	265.94	28.19	1702.12	542.33	-464.72	-284.20	542.33	211.45	0.15	MWD -125.94M
46	1879.57	0.06	232.06	28.82	1730.94	542.36	-464.72	-284.22	542.36	211.45	0.03	MWD -123.49M
47	1908.27	0.34	236.51	28.70	1759.64	542.45	-464.78	-284.31	542.45	211.45	0.29	MWD -112.76M
48	1937.11	0.41	247.24	28.84	1788.48	542.61	-464.87	-284.47	542.61	211.46	0.10	MWD -144.17M

49	1965.92	0.37	215.83	28.81	1817.29	542.79	-464.98	-284.62	542.79	211.47	0.22	MWD	-151.75M
50	1994.24	0.51	208.25	28.32	1845.61	543.00	-465.17	-284.74	543.00	211.47	0.16	MWD	-153.61M
51	2023.18	0.50	206.39	28.94	1874.55	543.26	-465.39	-284.85	543.26	211.47	0.02	MWD	-151.41M
52	2052.60	0.49	208.59	28.96	1903.97	543.51	-465.62	-284.97	543.51	211.47	0.02	MWD	-143.35M
53	2081.51	0.60	216.65	28.91	1932.88	543.78	-465.85	-285.12	543.79	211.47	0.14	MWD	-150.49M
54	2119.16	0.59	209.51	37.65	1970.52	544.17	-466.18	-285.33	544.18	211.47	0.06	MWD	-157.25M
55	2167.19	0.56	202.75	48.03	2018.55	544.65	-466.61	-285.55	544.65	211.47	0.05	MWD	-160.27M
56	2195.89	0.66	199.73	28.70	2047.25	544.95	-466.89	-285.66	544.95	211.46	0.11	MWD	177.62M
57	2223.99	0.73	177.62	28.10	2075.35	545.26	-467.22	-285.70	545.26	211.45	0.29	MWD	161.99M
58	2252.93	1.26	161.99	28.94	2104.28	545.62	-467.71	-285.60	545.62	211.41	0.61	MWD	169.50M

[(c)2003 IDEAL ID8\_OC\_07]

SCHLUMBERGER Survey Report

19-Feb-2003 07:30:37

Page 4 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 (deg)	At Azim (deg)	DLS (deg)	Srvy tool	Tool Corr
59	2281.95	2.44	169.50	23.02	2133.29	546.28	-468.62	-285.39	546.28	211.34	1.24	MWD	176.28M
60	2310.40	3.31	176.28	28.45	2161.70	547.40	-470.04	-285.22	547.40	211.25	0.98	MWD	-156.99M
61	2338.37	4.76	203.01	27.97	2189.60	549.20	-471.91	-285.62	549.20	211.18	2.51	MWD	-143.56M
62	2366.94	8.31	216.44	28.57	2217.98	552.43	-474.66	-287.31	552.44	211.19	4.03	MWD	6.86G
63	2396.06	10.57	217.92	29.11	2246.70	557.19	-478.47	-290.21	557.19	211.24	2.34	MWD	-2.58G
64	2425.11	12.16	217.58	29.06	2275.19	562.88	-482.99	-293.71	562.88	211.30	1.64	MWD	-39.34G
65	2454.01	12.97	214.68	28.90	2303.40	569.15	-488.07	-297.41	569.15	211.36	1.07	MWD	-159.12G
66	2482.80	12.43	213.72	28.79	2331.48	575.47	-493.31	-300.97	575.47	211.39	0.60	MWD	-25.62G
67	2510.32	13.06	212.39	27.52	2358.32	581.54	-498.39	-304.28	581.54	211.40	0.76	MWD	-76.45G
68	2539.20	13.20	210.04	28.88	2386.45	588.10	-504.00	-307.68	588.10	211.40	0.57	MWD	43.36G
69	2568.25	13.32	210.53	29.05	2414.72	594.76	-509.76	-311.04	594.76	211.39	0.17	MWD	53.58G
70	2596.81	13.53	211.73	28.56	2442.50	601.39	-515.43	-314.47	601.39	211.39	0.37	MWD	-30.75G
71	2625.84	13.73	211.23	29.03	2470.72	608.23	-521.27	-318.04	608.23	211.39	0.24	MWD	131.28G
72	2655.11	13.67	211.52	29.27	2499.15	615.16	-527.19	-321.65	615.16	211.39	0.09	MWD	124.26G
73	2682.30	13.63	211.77	27.19	2525.58	621.58	-532.65	-325.01	621.58	211.39	0.08	MWD	10.75G
74	2711.21	13.73	211.85	28.91	2553.67	628.42	-538.46	-328.62	628.42	211.40	0.11	MWD	154.32G
75	2740.15	12.71	214.10	28.94	2581.84	635.03	-544.01	-332.22	635.03	211.41	1.18	MWD	170.63G
76	2768.93	11.84	214.80	28.78	2609.96	641.14	-549.06	-335.68	641.14	211.44	0.92	MWD	-175.50G
77	2773.49	11.61	214.71	4.56	2614.43	642.07	-549.82	-336.20	642.07	211.44	1.52	MWD	174.12G
78	2789.00	11.25	214.90	15.51	2629.63	645.14	-552.34	-337.96	645.14	211.46	0.70	Projected to TD	

[(c)2003 IDEAL ID8\_OC\_07]

Company: **ESSO Australia Ltd.**

**Schlumberger**

Well: **FLA A20a**

Field: **Flounder**

Rig: **ISDL 453**

State: **VICTORIA**

**Gamma Ray Service  
1:500 True Vertical Depth  
Real Time Log**

