


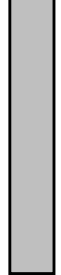
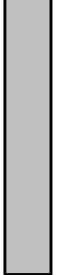
Rig:	ISDL 453
Field:	Turrum
Location:	Bass Strait
Well:	MLA-A10AST
Company:	ESSO Australia Pty. Ltd.

Gamma Ray Service			
1:500 Measured Depth			
Real Time Log			
Total depth:		3491.0 m	K.B. Top Drive
Spud date:		03-Sep-2004	G.L. -59.00 m
Runs:		1 To 5	D.F. 27.91 m
Permanent datum:		Mean Sea Level	Elev.: 0 m
Log measured from:		Drill Floor	27.91 m above Perm. datum
Depth reference:		Driller's Depth	
API serial no.	Y = 5767920.06m N	Longitude	Latitude
	X = 606868.96m E	E48°13'15.712"	S38°13'49.320"

<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>		
<p>OTHER SERVICES FOR RUN1</p> <p>Directional Drilling</p> <p>Directional Surveys</p>	<p>OTHER SERVICES FOR RUN2</p> <p>Directional Drilling</p> <p>Directional Surveys</p>	<p>OTHER SERVICES FOR RUN3</p> <p>Directional Drilling</p> <p>Directional Surveys</p>
<p>REMARKS: RUN NUMBER 1</p> <p>8-1/2 in. hole was drilled from 2331.7m to 2362.0m MD</p> <p>Depth is referenced to Driller's Depth</p> <p>Gamma Ray corrected for Tool Size, Bit Size and Mud Weight</p> <p>Mud type is KCI/PHPA/Glycol</p> <p>POOH for bit change</p>	<p>REMARKS: RUN NUMBER 2</p> <p>8-1/2 in. hole was drilled from 2362.0m to 2662.0m MD</p> <p>Depth is referenced to Driller's Depth</p> <p>Gamma Ray corrected for Tool Size, Bit Size and Mud Weight</p> <p>Mud type is KCI/PHPA/Glycol</p> <p>POOH for bit change</p>	<p>REMARKS: RUN NUMBER 3</p> <p>8-1/2 in. hole was drilled from 2662.0m to 3040.0m MD</p> <p>Depth is referenced to Driller's Depth</p> <p>Gamma Ray corrected for Tool Size, Bit Size and Mud Weight</p> <p>Mud type is KCI/PHPA/Glycol</p> <p>POOH for bit change</p>

EQUIPMENT DESCRIPTION

RUN1	RUN2	RUN3
<div>DOWNHOLE E</div> <div>6-3/4 in. Pow MDC: Z4(MEC: 61 MDI: 62(MGR: 29 DHS: 7.(</div> <div>24.3</div> <div>D&I GR</div> <div>— 20.1 — 19.4</div> <div>6-1/2 in. N S/N: L</div> <div>16.0</div> <div>8-3/8 in. NM Rc S/N: GU</div> <div>14.4</div> <div>6-1/2 in. N S/N: ANA</div> <div>12.3</div> <div>6-11/16 in. F S/N: CMF</div> <div>9.6</div> <div>7 in. PowerPa A700G1 S/N: 7(1.5 deg. Bent 8-3/8 in. Mot</div> <div>9.1</div>	<div>DOWNHOLE E</div> <div>6-3/4 in. Pow MDC: Z4(MEC: 61 MDI: 62(MGR: 29 DHS: 7.(</div> <div>24.3</div> <div>D&I GR</div> <div>— 20.1 — 19.4</div> <div>6-1/2 in. N S/N: L</div> <div>16.0</div> <div>8-3/8 in. NM Rc S/N: GU</div> <div>14.4</div> <div>6-1/2 in. N S/N: ANA</div> <div>12.3</div> <div>6-11/16 in. F S/N: CMF</div> <div>9.6</div> <div>7 in. PowerPa A700G1 S/N: 7(1.15 deg. Bent 8-3/8 in. Mot</div> <div>9.1</div>	<div>DOWNHOLE E</div> <div>6-3/4 in. Pow MDC: Z4(MEC: 61 MDI: 62(MGR: 29 DHS: 7.(</div> <div>24.3</div> <div>D&I GR</div> <div>— 20.1 — 19.4</div> <div>6-1/2 in. N S/N: L</div> <div>16.0</div> <div>8-3/8 in. NM Rc S/N: GU</div> <div>14.5</div> <div>6-1/2 in. N S/N: ANA</div> <div>12.4</div> <div>6-11/16 in. F S/N: CMF</div> <div>9.6</div> <div>7 in. PowerPa A700G1 S/N: 7(1.15 deg. Bent 8-3/8 in. Mot</div> <div>9.1</div>

 REED Hycalog OD: 8-1 RSX163 S/N Maximum string diameter All lengths in	 REED Hycalog OD: 8-1 TD51 S/N: Maximum string diameter All lengths in	 Smith Ins OD: 8-1 GFI11 S/N: I Maximum string diameter All lengths in
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OTHER SERVICES FOR RUN4 Directional Drilling Directional Surveys	OTHER SERVICES FOR RUN5 Directional Drilling Directional Surveys	OTHER SERVICES FOR RUN
REMARKS: RUN NUMBER 4 8-1/2 in. hole was drilled from 3040.0m to 3393.0m 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 for bit change Thank You for Choosing Schlumberger	REMARKS: RUN NUMBER 5 8-1/2 in. hole was drilled from 3393.0m to 3491.0m Depth is referenced to Driller's Depth Gamma Ray corrected for Tool Size, Bit size and Mud Weight Mud type is KCL/PHPA/Glycol Reduced data quality between 3375m to 3396m due to Downhole and Pump Noise POOH due to reaching TD Thank You for Choosing Schlumberger	REMARKS: RUN NUMBER

EQUIPMENT DESCRIPTION		
RUN4	RUN5	RUN
DOWNHOLE E	DOWNHOLE E	

6-3/4 in. Pov
MDC: Z40
MEC: 61
MDI: 620
MGR: 29
DHS: 7.0

D&I
GR — 20.1
— 19.4



8-3/8 in. Rolle
S/N: GU1



6-1/2 in. N
S/N: L1



6-1/2 in. N
S/N: ANA5



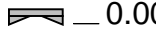
6-11/16 in. F
S/N: CMF



7 in. PowerPa
A700G1
S/N: 70
1.15 deg. Bent
8-3/8 in. Mot



Smith Ins
OD: 8-1
GFI11 S/N: I



Maximum string dia
All lengths in

24.36-3/4 in. Pov
MDC: Z40
MEC: 61
MDI: 620
MGR: 29
DHS: 7.0

D&I
GR — 18.9
— 18.3



6-1/2 in. N
S/N: ANA5



8-3/8 in. Rolle
S/N: GU2



6-1/2 in. N
S/N: L1



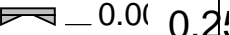
6-11/16 in. F
S/N: CMF



6-3/4 in. Power
AC675X
S/N: 30
0 deg. Bent
8-3/8 in. Mot



Smith Ins
OD: 8-1
GFI11 S/N: I



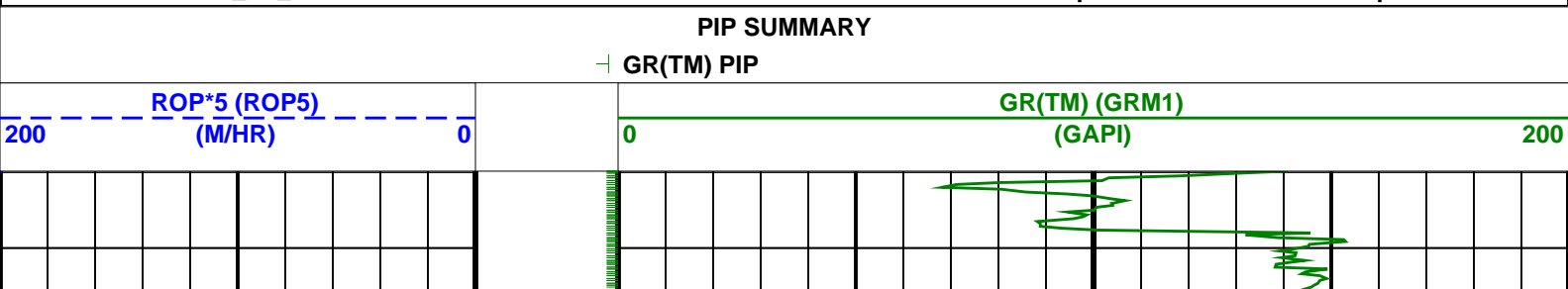
Maximum string dia
All lengths in

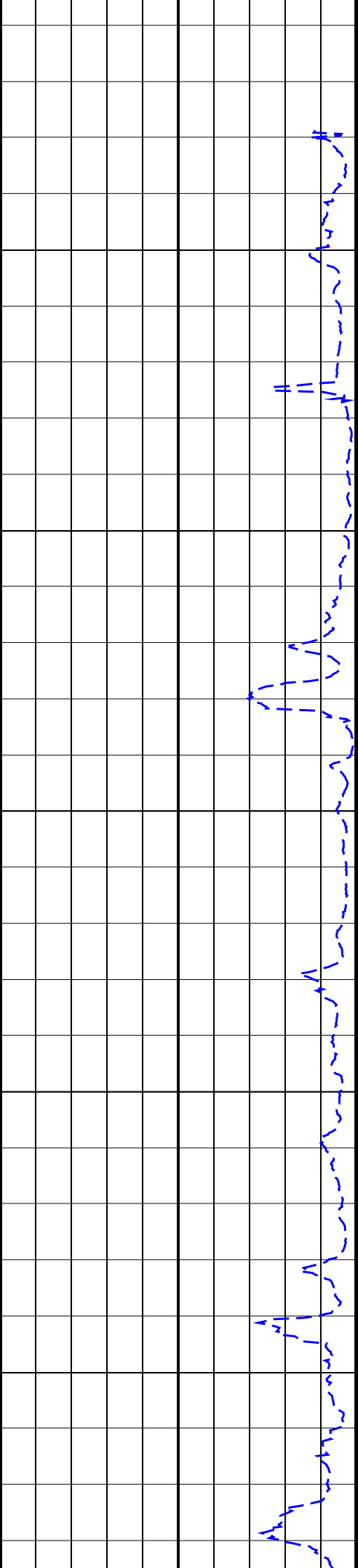
Bit Run Summary

Run number		1	2	3	4	5					
Bit size	in.	8.5	8.5	8.5	8.5	8.5					
Bit start depth	m	2331.7	2362.0	2662.0	3040.0	3393.0					
Bit end depth	m	2362.0	2662.0	3040.0	3393.0	3491.0					
Top interval logged	m	2319.0	2342.5	2642.4	3020.5	3373.5					
Bottom interval logged	m	2342.5	2642.4	3020.5	3373.5	3472.7					
Begin log: time		04:25	23:52	06:25	06:15	12:52					
Begin log: date		04-Sep-04	04-Sep-04	07-Sep-04	09-Sep-04	13-Sep-04					
End log: time		09:22	13:40	08:20	00:13	02:10					
End log: date		04-Sep-04	06-Sep-04	09-Sep-04	12-Sep-04	14-Sep-04					
Mud data											
Depth	m	2361.0	2661.0	3040.0	3365.0	3470.0					
Type		KCI/PHPA/Glycol	KCI/PHPA/Glycol	KCI/PHPA/Glycol	KCI/PHPA/Glycol	KCI/PHPA/Glycol					
Mud weight	ppg	10.2	10.1	10.0	9.9	9.95					
Solids	%	8.7	9.4	8.8	7.4	8.3					
Chlorides	mg/L	48,000	48,000	42,000	45,000	43,000					
Rm											
Rmf											
Rmc											
Potassium	%	6.9	8	7.2	7.4	7.4					
Environmental data											
GR											
Mud weight	ppg	10.2	10.1	10.0	9.9	9.95					
Bit size	in.	8.5	8.5	8.5	8.5	8.5					
Resistivity											
Neutron porosity											
Hole Size											
Mud weight											
Temperature											
Mud salinity											
Formation salinity											
Recording rate 1	SEC	9.04	9.04	9.04	9.04	9.04					
Recording rate 2	SEC										
Filtering GR		3 pt.	3 pt.	3 pt.	3 pt.	3 pt.					
Filtering density											
Filtering Neutron											
Company representative		R. Morris	B. Steel								
Anadrill personnel		J. Dolan	R. Borjas	C. Soper	T. Auger	L. Johnston					

MLA-A10AST RT 1:500 MD

IDEAL Version: ID8_1C_01 <MD > Vertical Scale: 1:500 Graphics File Created: 16-Sep-2004 10:34

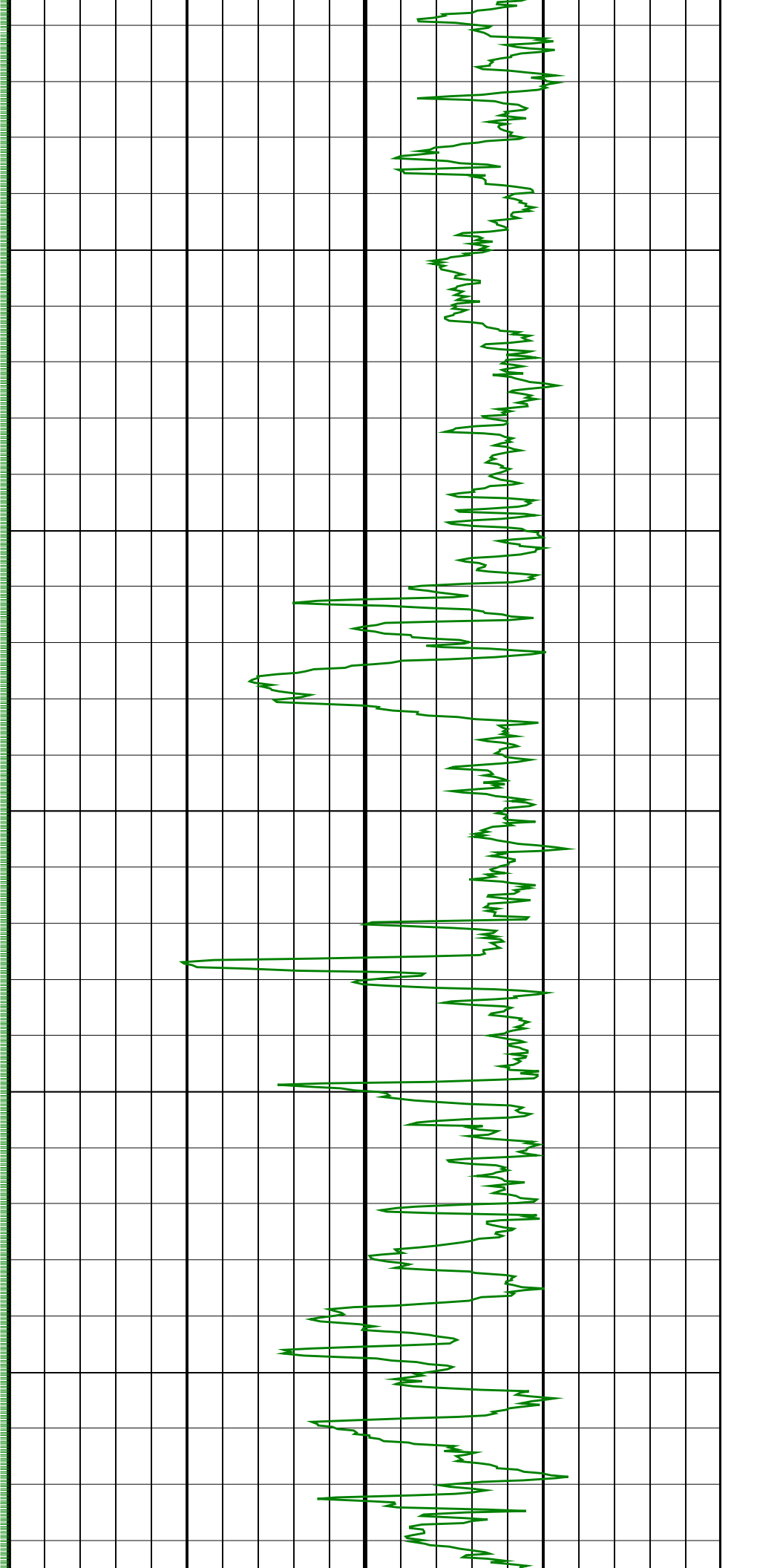


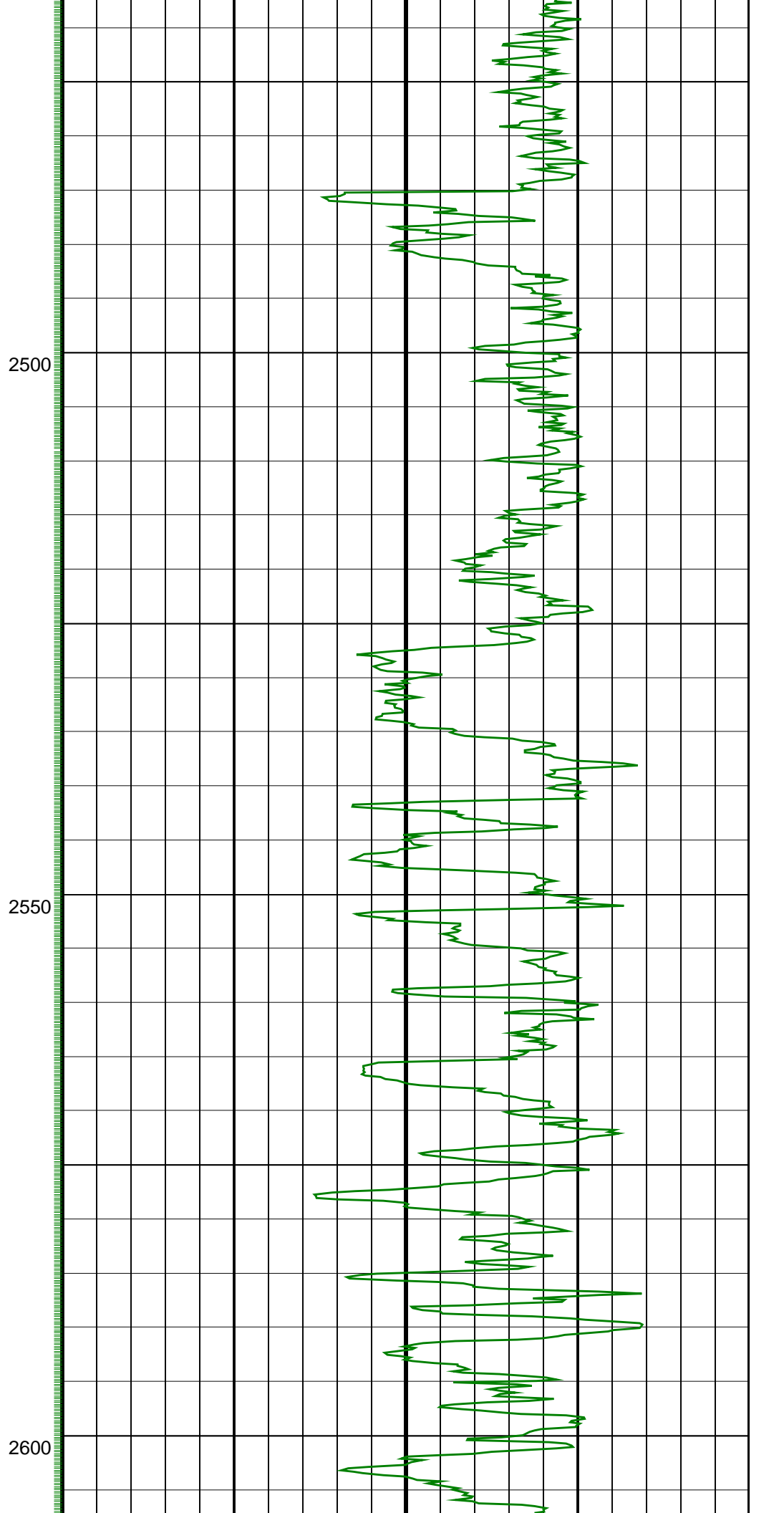
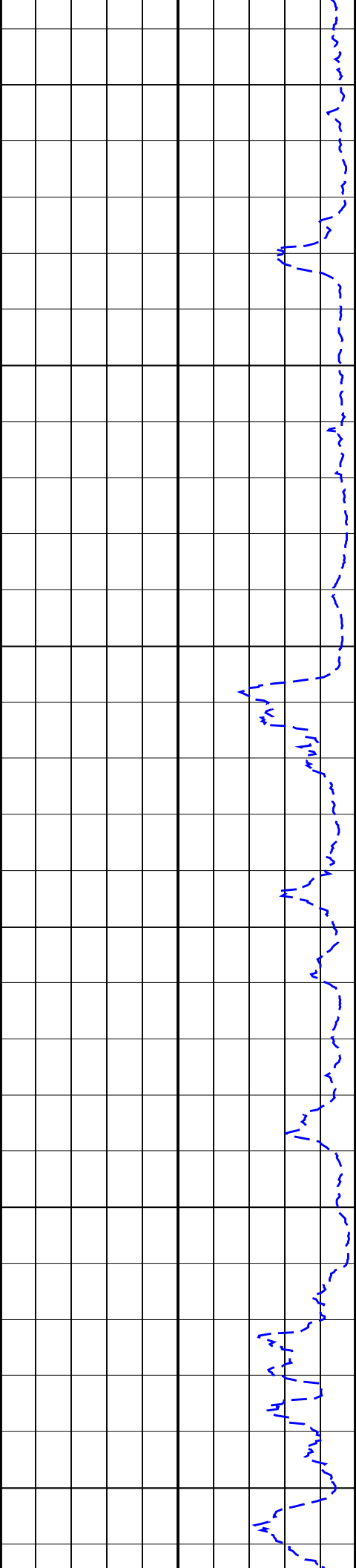


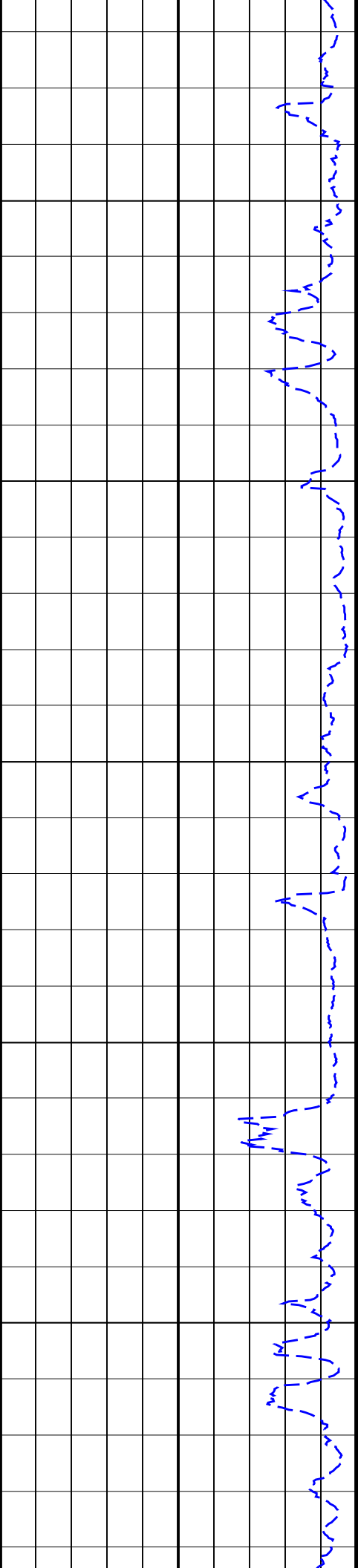
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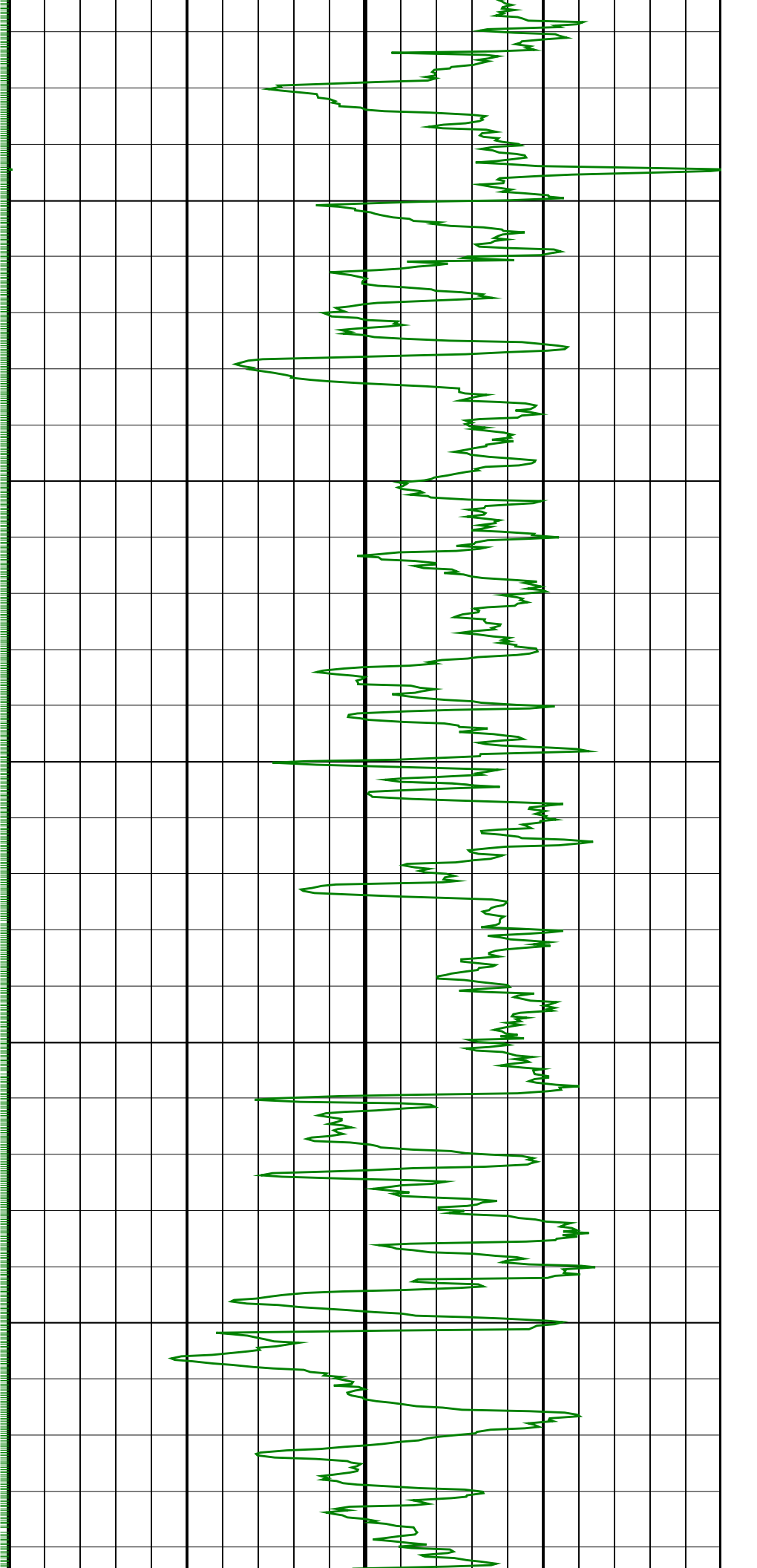


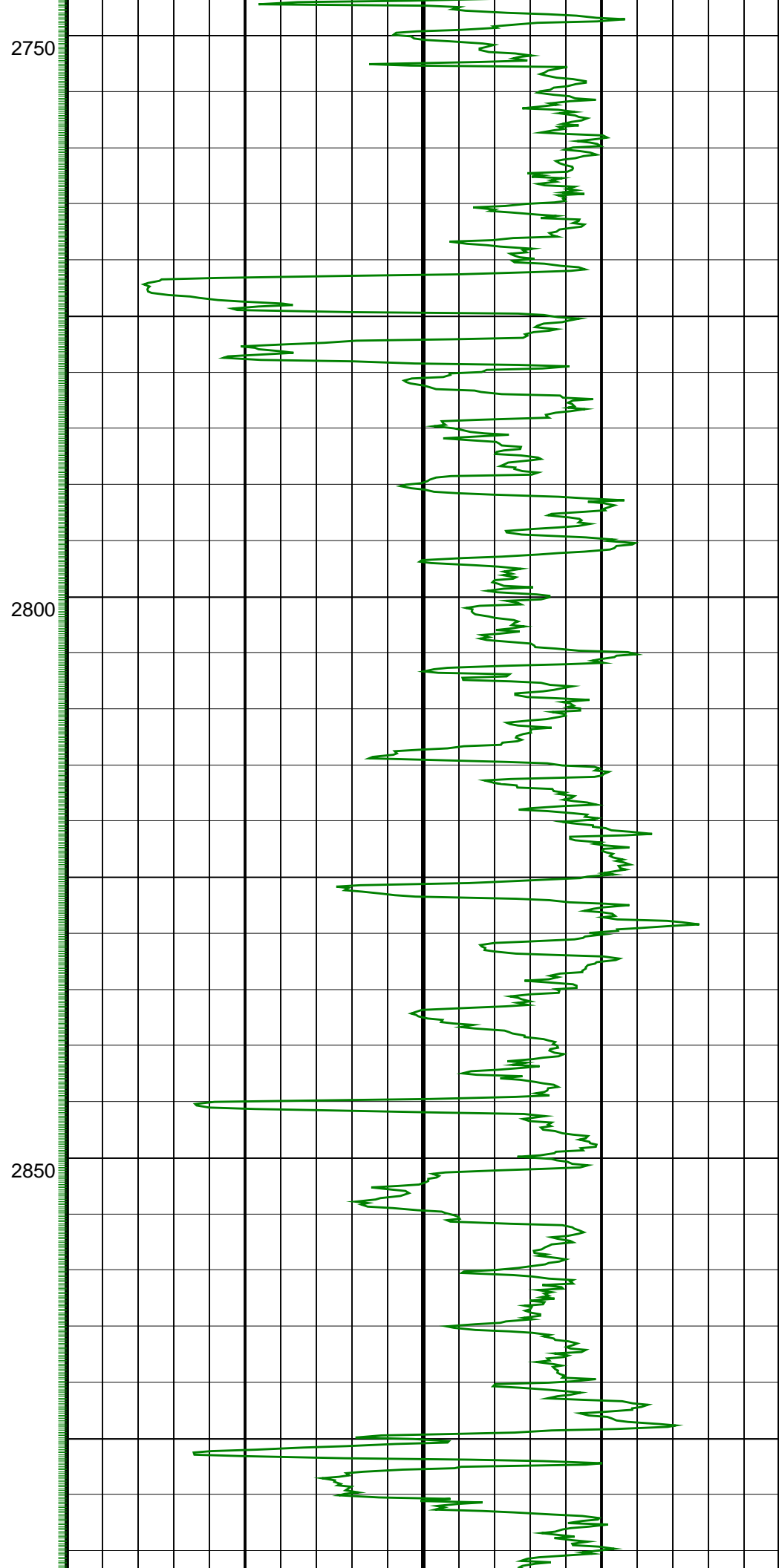
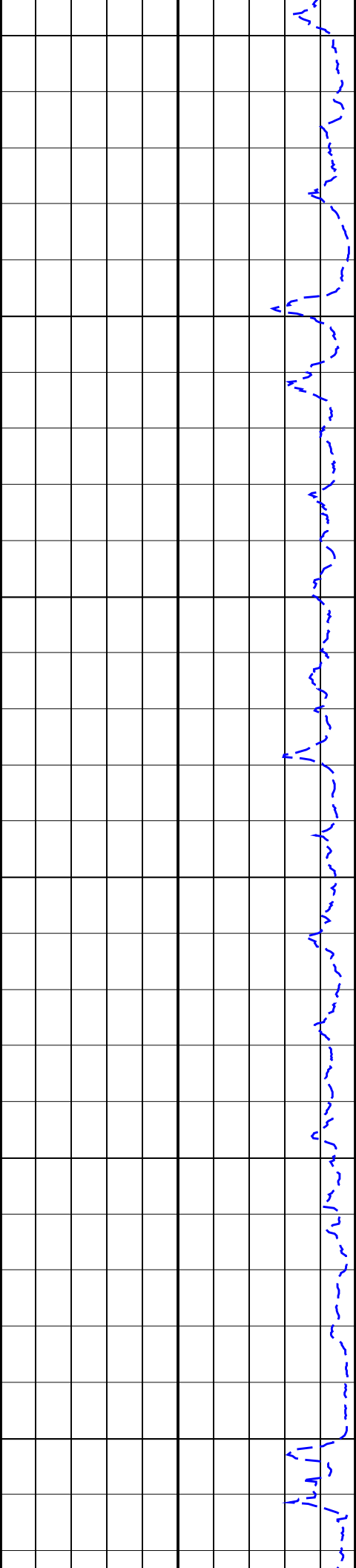


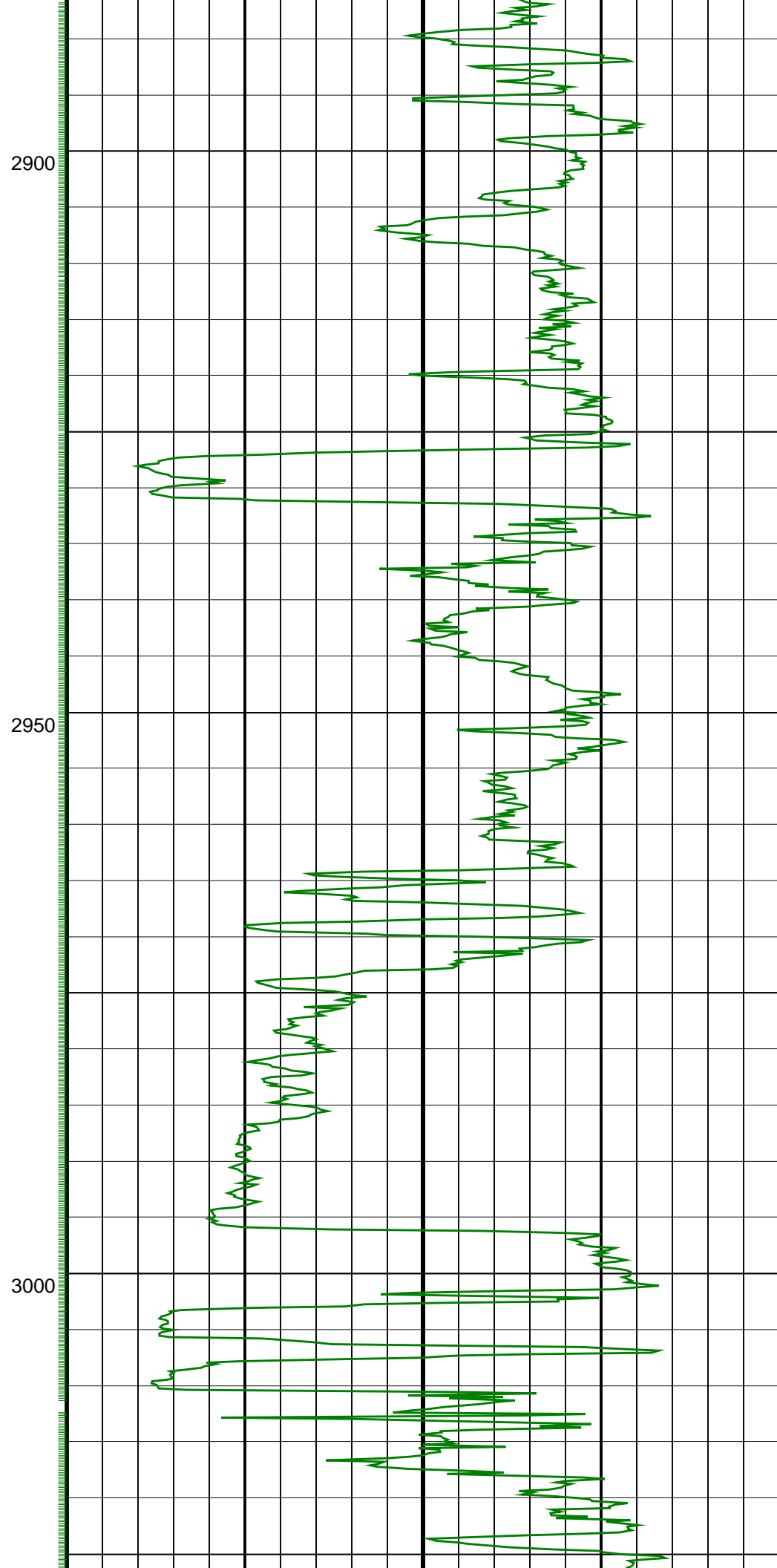
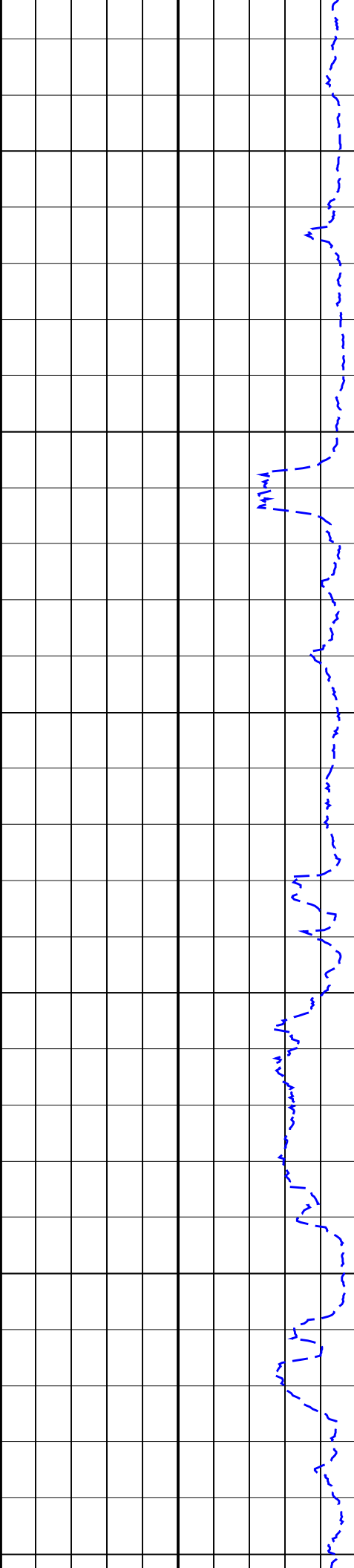


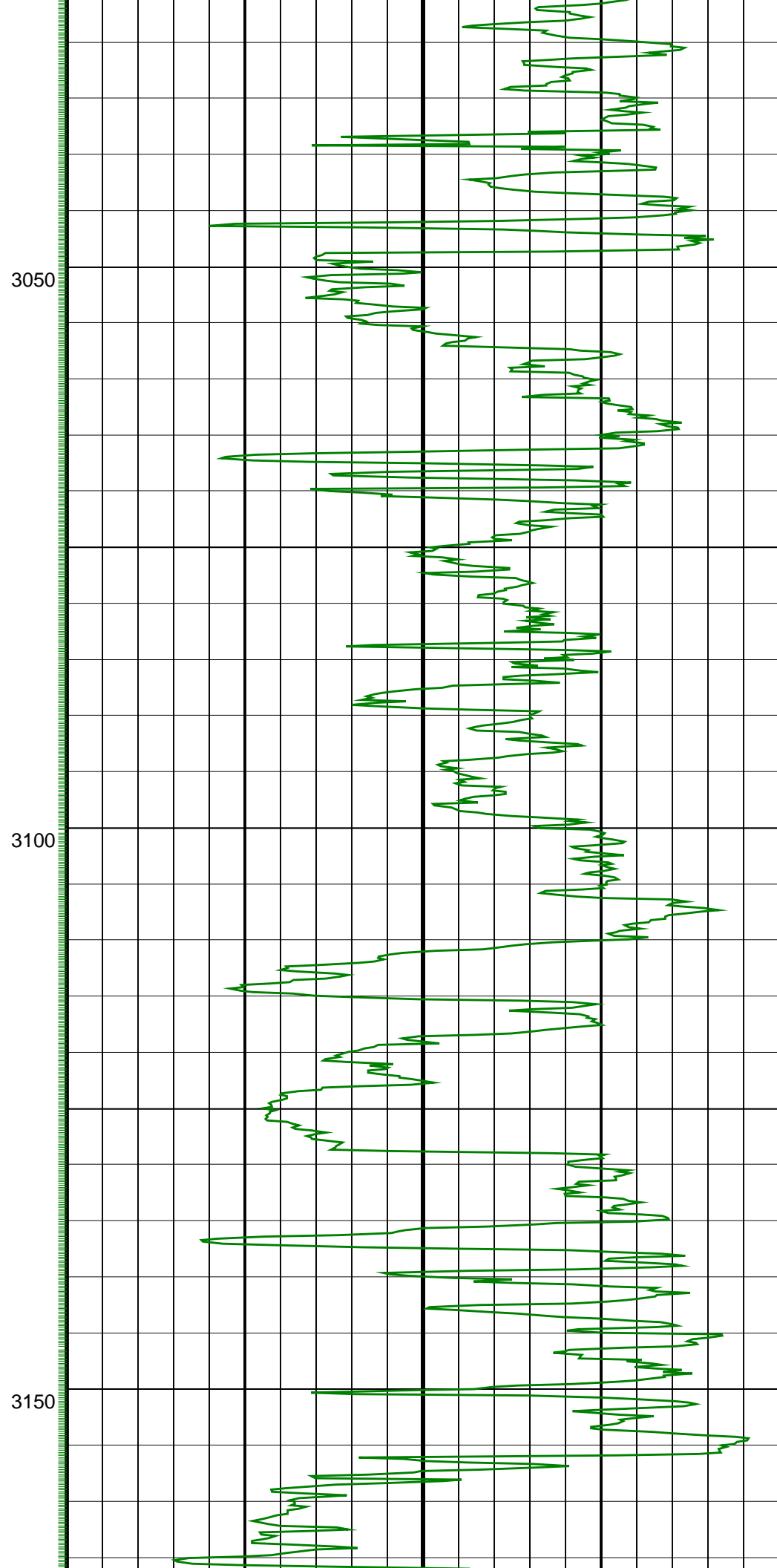
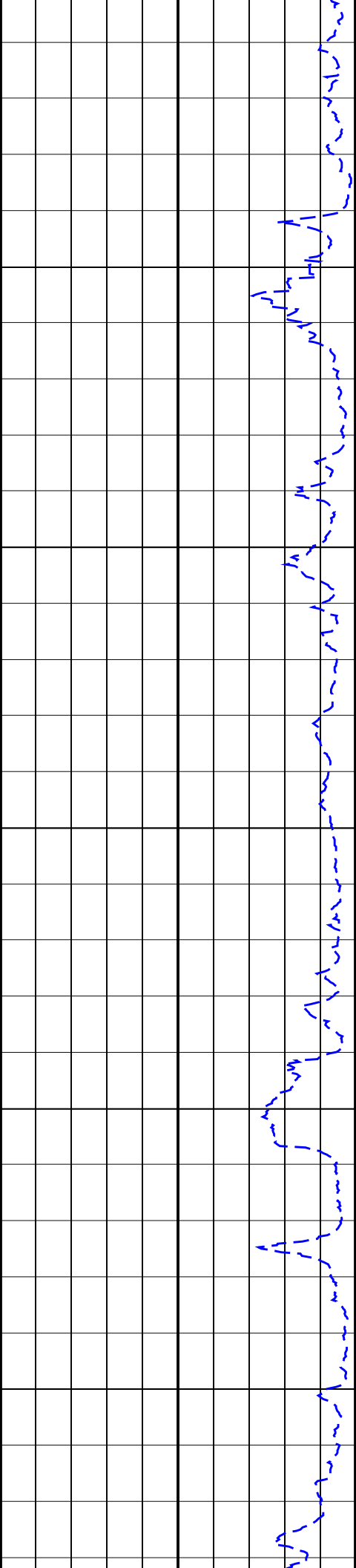
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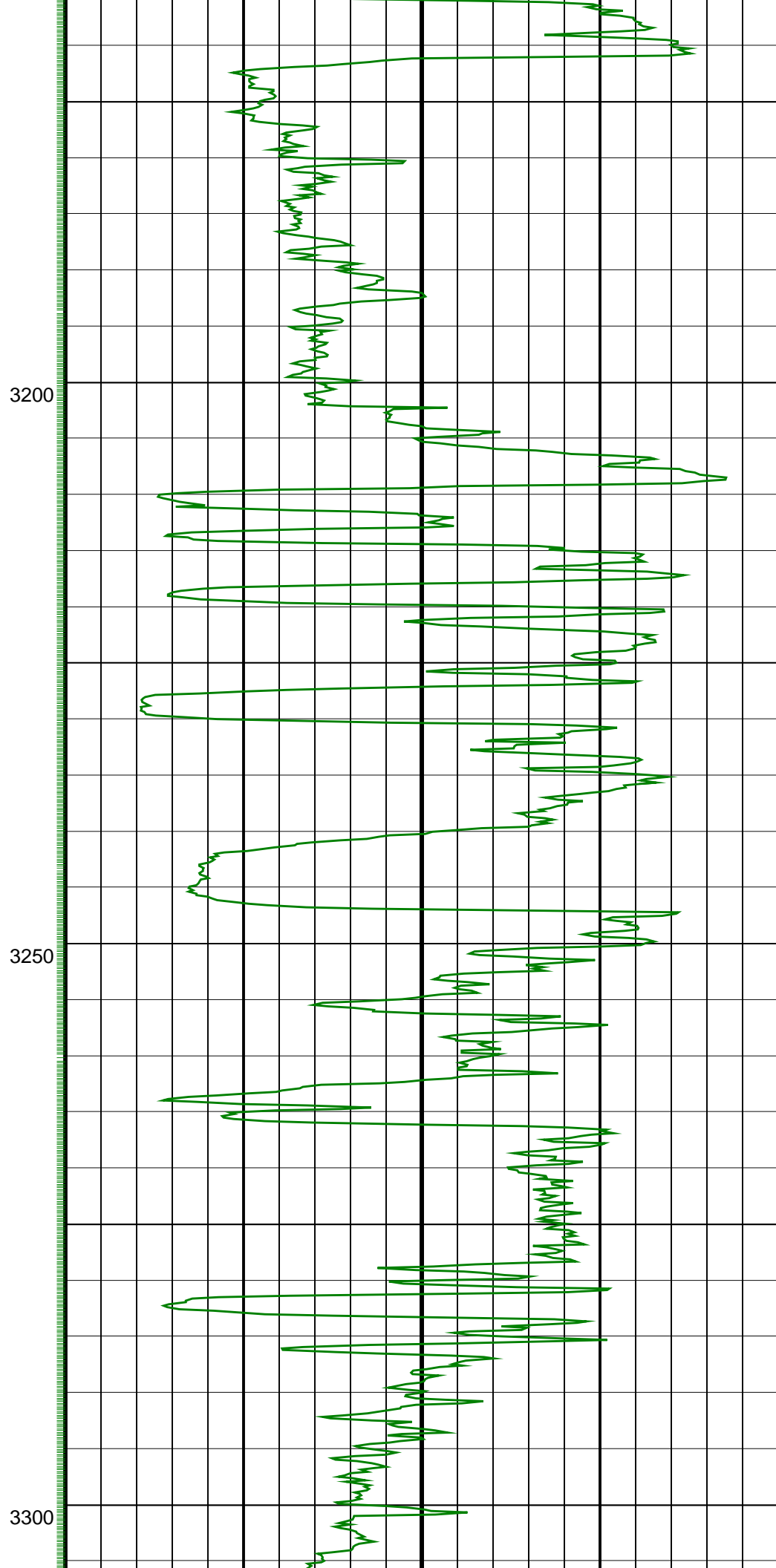
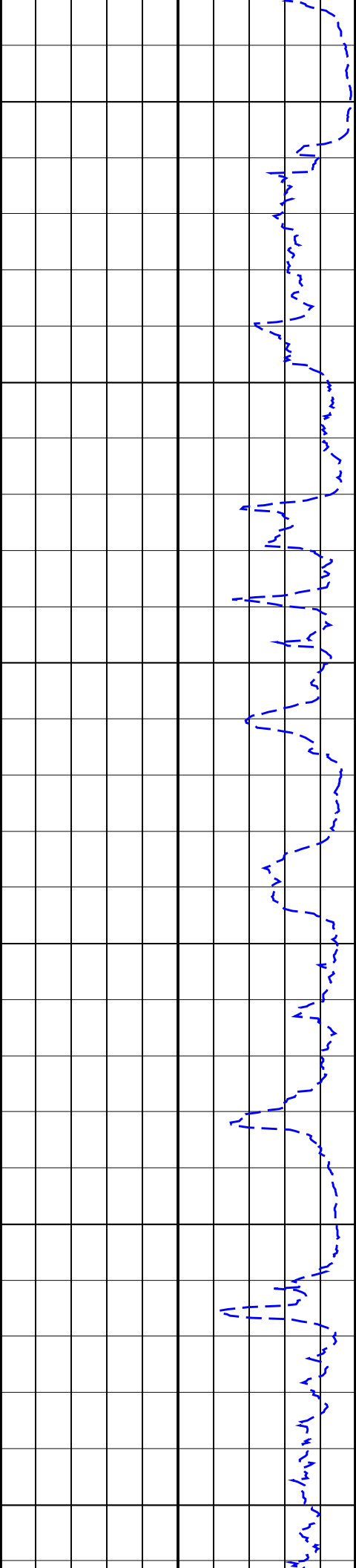
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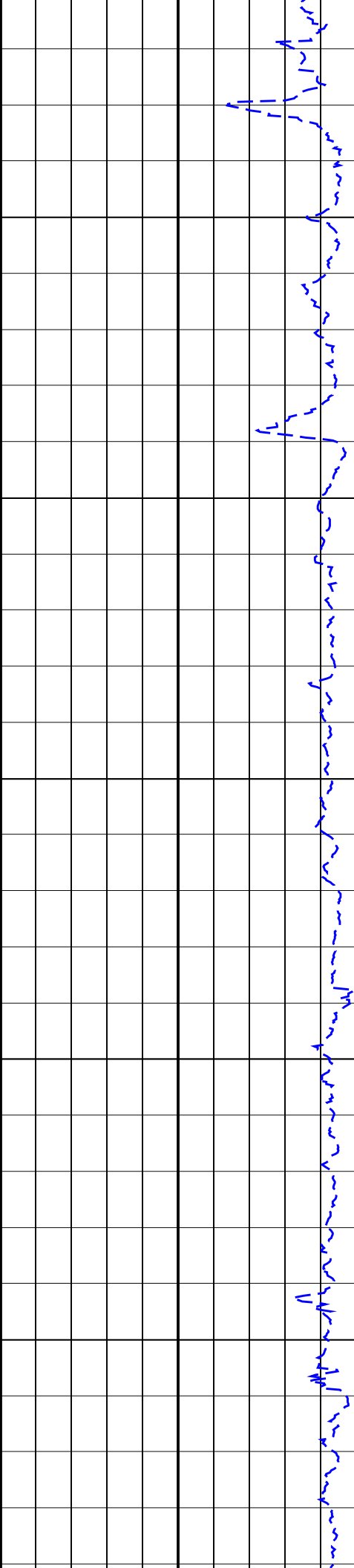








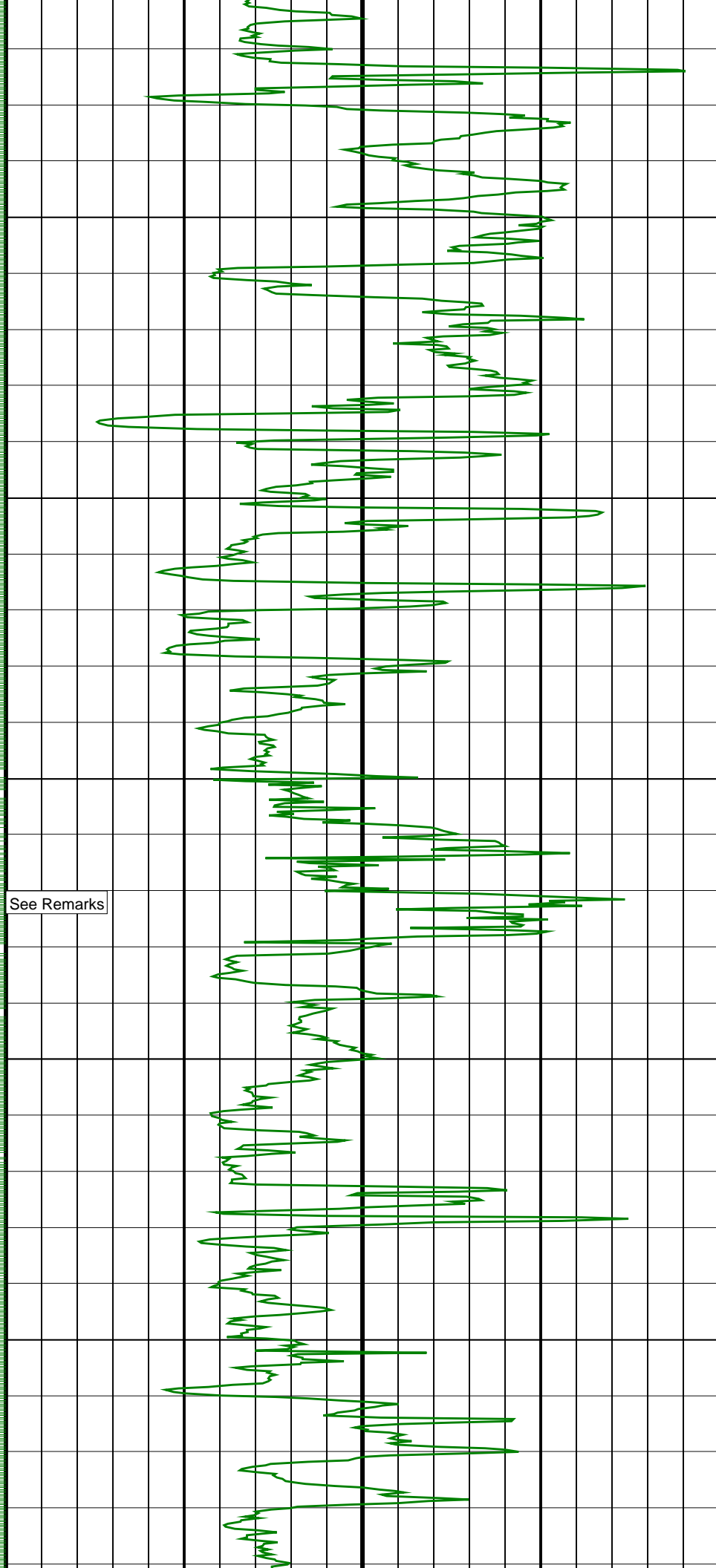


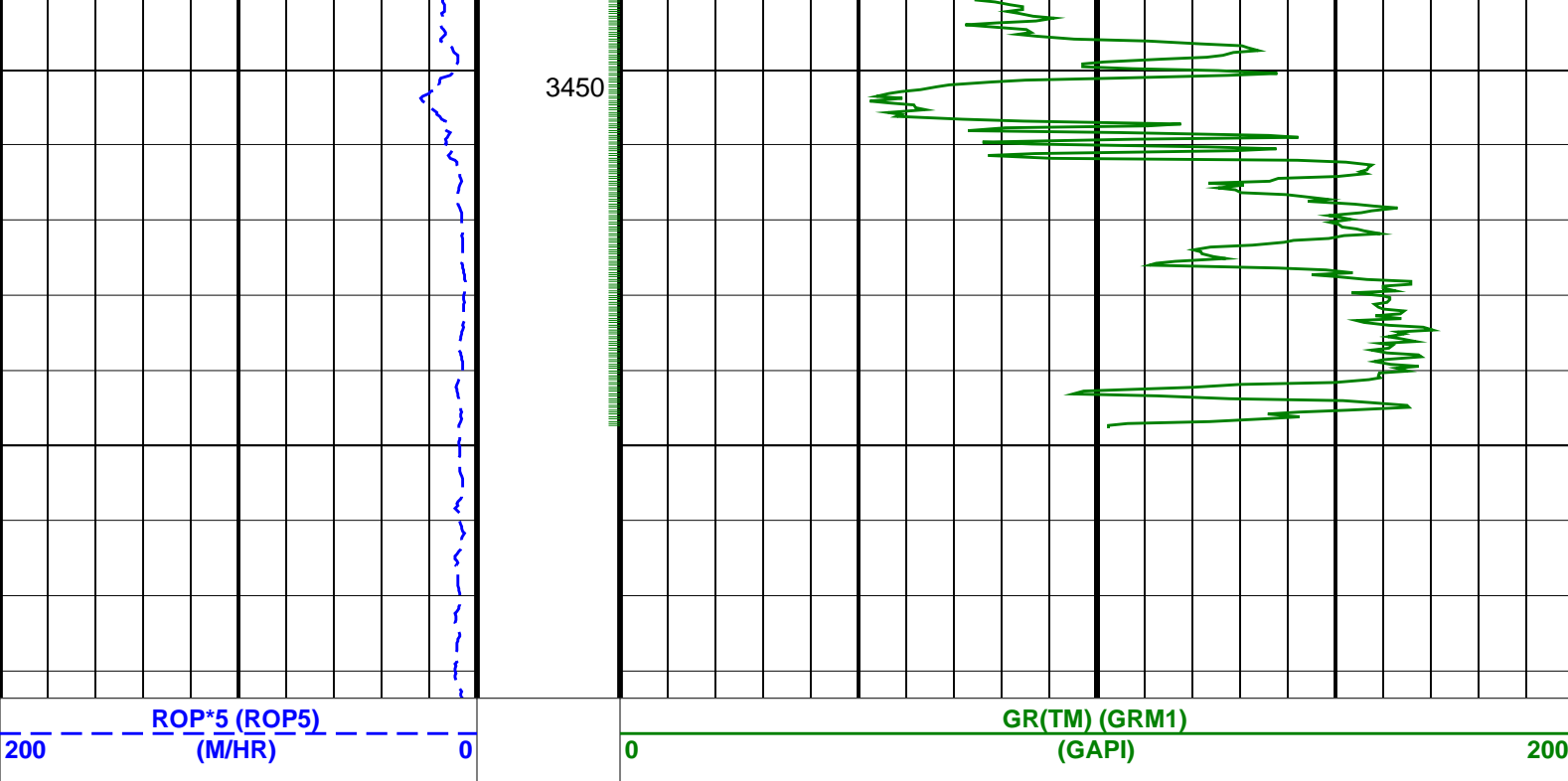


3350

See Remarks

3400





PIP SUMMARY

GR(TM) PIP

SCHLUMBERGER

Survey report 14-Sep-2004 12:53:44 Page 1 of 3

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

Well.....: MLA-A10AST Spud date.....: 03-Sep-04
API number.....: Last survey date.....: 14-Sep-04
Engineer.....: J. Dolan, R. Borjas, L. Johnston Total accepted surveys...: 42
MD of first survey.....: 2339.70 m
RIG.....: ISDL 453 MD of last survey.....: 3491.00 m
STATE.....: Victoria

----- Survey calculation methods-----
Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor
----- Geomagnetic data -----
Magnetic model.....: BGGM version 2003
Magnetic date.....: 29-Aug-2004
Magnetic field strength...: 1199.58 HCNT

----- Depth reference -----
Permanent datum.....: Mean Sea Level
Depth reference.....: Driller's Depth
GL above permanent.....: -59.00 m
KB above permanent.....: 27.91 m
DF above permanent.....: 27.91 m
Magnetic dec (+E/W-).....: 13.14 degrees
Magnetic dip.....: -68.73 degrees

----- MWD survey Reference Criteria -----
Reference G.....: 1000.03 mGal
Reference H.....: 1199.58 HCNT
Reference Dip.....: -68.73 degrees

----- Vertical section origin-----
Latitude (+N/S-).....: 0.00 m
Departure (+E/W-).....: 0.00 m
Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H.....: (+/-) 6.00 HCNT
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Platform reference point-----
Latitude (+N/S-).....: -304.57 m
Departure (+E/W-).....: -304.57 m
----- Corrections -----
Magnetic dec (+E/W-).....: 13.14 degrees
Grid convergence (+E/W-).....: -0.76 degrees
Total az corr (+E/W-).....: 13.90 degrees
Azimuth from rotary table to target: 120.20 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 Incl Azimuth Course TVD Vertical Displ Displ Total At DLS Srvy Tool
depth angle angle length depth section +N/S- +E/W- displ Azim (deg/ tool Corr
- (m) (deg) (deg) (m) (m) (m) (m) (m) (deg) 100f) type (deg)
=====

1	2339.70	42.24	122.92	0.00	1853.98	1285.32	-789.18	1027.85	1295.87	127.52	0.00	TIP	None
2	2370.23	45.12	126.14	30.53	1876.06	1306.33	-801.14	1045.21	1316.92	127.47	3.63	MWD	None
3	2398.02	44.56	126.06	27.79	1895.77	1325.83	-812.69	1061.04	1336.51	127.45	0.62	MWD	None
4	2426.51	43.32	124.70	28.49	1916.28	1345.51	-824.13	1077.15	1356.27	127.42	1.67	MWD	None
5	2454.92	43.29	123.12	28.41	1936.95	1364.96	-835.00	1093.32	1375.71	127.37	1.16	MWD	None
6	2483.86	43.60	121.48	28.94	1957.97	1384.84	-845.64	1110.15	1395.54	127.30	1.23	MWD	None
7	2512.25	44.18	121.58	28.39	1978.43	1404.52	-855.93	1126.92	1415.12	127.22	0.63	MWD	None
8	2540.84	44.92	121.38	28.59	1998.80	1424.57	-866.40	1144.03	1435.08	127.14	0.80	MWD	None
9	2569.37	43.81	120.98	28.53	2019.20	1444.52	-876.73	1161.09	1454.92	127.06	1.22	MWD	None
10	2598.21	43.61	120.70	28.84	2040.04	1464.44	-886.95	1178.20	1474.73	126.97	0.29	MWD	None
11	2627.02	43.24	121.07	28.81	2060.97	1484.25	-897.11	1195.20	1494.43	126.89	0.48	MWD	None
12	2655.51	43.25	122.24	28.49	2081.72	1503.76	-907.36	1211.81	1513.87	126.82	0.86	MWD	None
13	2684.17	44.65	124.22	28.66	2102.36	1523.62	-918.26	1228.45	1533.72	126.78	2.09	MWD	None
14	2712.97	42.72	125.62	28.80	2123.18	1543.44	-929.64	1244.76	1553.60	126.75	2.28	MWD	None
15	2741.46	43.19	125.14	28.49	2144.03	1562.78	-940.88	1260.59	1573.00	126.74	0.61	MWD	None
16	2770.13	43.95	124.26	28.67	2164.81	1582.48	-952.13	1276.83	1592.75	126.71	1.03	MWD	None
17	2798.78	43.58	123.35	28.65	2185.50	1602.25	-963.15	1293.30	1612.54	126.68	0.78	MWD	None
18	2827.53	43.12	122.43	28.75	2206.40	1621.97	-973.87	1309.87	1632.23	126.63	0.83	MWD	None
19	2856.18	44.61	122.49	28.65	2227.06	1641.80	-984.53	1326.62	1652.04	126.58	1.59	MWD	None
20	2884.87	45.10	122.55	28.69	2247.40	1662.02	-995.41	1343.69	1672.22	126.53	0.52	MWD	None
21	2908.51	44.95	122.76	23.64	2264.10	1678.73	-1004.43	1357.77	1688.91	126.49	0.27	MWD	None
22	2942.16	44.39	123.16	33.65	2288.04	1702.36	-1017.30	1377.61	1712.52	126.44	0.57	MWD	None
23	2971.42	43.63	123.67	29.26	2309.08	1722.66	-1028.49	1394.58	1732.82	126.41	0.87	MWD	None
24	3000.29	44.39	123.68	28.87	2329.84	1742.68	-1039.62	1411.28	1752.86	126.38	0.80	MWD	None
25	3028.64	44.11	124.48	28.35	2350.15	1762.41	-1050.70	1427.66	1772.62	126.35	0.67	MWD	None
26	3058.04	42.79	125.21	29.40	2371.49	1782.57	-1062.25	1444.25	1792.83	126.33	1.46	MWD	None
27	3085.69	42.75	124.69	27.65	2391.79	1801.28	-1073.01	1459.64	1811.60	126.32	0.39	MWD	None
28	3114.46	43.08	124.17	28.77	2412.86	1820.81	-1084.08	1475.80	1831.18	126.30	0.51	MWD	None
29	3143.15	43.27	124.07	28.69	2433.78	1840.40	-1095.09	1492.05	1850.80	126.28	0.21	MWD	None
30	3171.75	43.81	123.71	28.60	2454.52	1860.06	-1106.08	1508.41	1870.48	126.25	0.63	MWD	None

[(c)2004 IDEAL ID8_1C_01]

SCHLUMBERGER Survey Report

14-Sep-2004 12:53:44

Page 3 of 3

Seq	Measured	Incl	Azimuth	Course	TVD	Vertical	Displ	Displ	Total	At	DLS	Srvy	Tool
#	depth	angle	angle	length	depth	section	+N/S-	+E/W-	displ	Azim	(deg/	tool	Corr
-	(m)	(deg)	(deg)	(m)	(m)	(m)	(m)	(m)	(deg)	100f)	type	(deg)	
31	3200.60	44.41	123.68	28.85	2475.23	1880.10	-1117.22	1525.12	1890.54	126.22	0.63	MWD	None
32	3229.06	40.75	126.43	28.46	2496.19	1899.28	-1128.26	1540.88	1909.79	126.21	4.40	MWD	None
33	3257.94	39.00	127.27	28.88	2518.35	1917.67	-1139.36	1555.70	1928.30	126.22	1.93	MWD	None
34	3286.60	36.20	129.73	28.66	2541.05	1934.97	-1150.24	1569.39	1945.77	126.24	3.38	MWD	None
35	3315.17	34.57	131.07	28.57	2564.35	1951.26	-1160.96	1581.99	1962.27	126.27	1.93	MWD	None
36	3343.58	32.76	132.73	28.41	2587.99	1966.68	-1171.47	1593.71	1977.94	126.32	2.18	MWD	None
37	3371.90	32.44	133.37	28.32	2611.85	1981.55	-1181.88	1604.86	1993.10	126.37	0.51	MWD	None
38	3401.06	32.24	134.16	29.16	2636.49	1996.72	-1192.67	1616.13	2008.57	126.43	0.49	MWD	None
39	3427.39	31.81	135.26	26.33	2658.81	2010.23	-1202.49	1626.05	2022.38	126.48	0.84	MWD	None
40	3458.35	30.98	136.77	30.96	2685.24	2025.75	-1214.10	1637.25	2038.29	126.56	1.13	MWD	None
41	3470.52	30.00	137.67	12.17	2695.72	2031.65	-1218.63	1641.45	2044.36	126.59	2.71	MWD	None
42	3491.00	30.00	137.67	20.48	2713.46	2041.42	-1226.20	1648.34	2054.41	126.65	0.00	Projection to TD	

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

Schlumberger

Well: **MLA-A10AST**

Field: **Turrum**

Rig: **ISDL 453**

State: **Victoria**

Gamma Ray Service
1:500 Measured Depth
Real Time Log

