

| | | |
|---|---|---|
| <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 KCl/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 KCl/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 KCl/PHPA/Glycol</p> <p>POOH for bit change</p> |

EQUIPMENT DESCRIPTION

RUN1

RUN2

RUN3

DOWNHOLE E

DOWNHOLE E

DOWNHOLE E

| | | | | | |
|---|------------------|---|------------------|---|------------------|
| 6-3/4 in. Pow MDC: Z4(MEC: 61 MDI: 62(MGR: 29 DHS: 7.0 | 24.3 | 6-3/4 in. Pow MDC: Z4(MEC: 61 MDI: 62(MGR: 29 DHS: 7.0 | 24.3 | 6-3/4 in. Pow MDC: Z4(MEC: 61 MDI: 62(MGR: 29 DHS: 7.0 | 24.3 |
| D&I GR | — 20.1 — 19.4 | D&I GR | — 20.1 — 19.4 | D&I GR | — 20.1 — 19.4 |
| 6-1/2 in. N S/N: L7 | 16.0 | 6-1/2 in. N S/N: L7 | 16.0 | 6-1/2 in. N S/N: L7 | 16.0 |
| 8-3/8 in. NM Rc S/N: GU7 | 14.4 | 8-3/8 in. NM Rc S/N: GU7 | 14.5 | 8-3/8 in. NM Rc S/N: GU7 | 14.5 |
| 6-1/2 in. N S/N: ANA5 | 12.3 | 6-1/2 in. N S/N: ANA5 | 12.4 | 6-1/2 in. N S/N: ANA5 | 12.4 |
| 6-11/16 in. F S/N: CMF | 9.6 | 6-11/16 in. F S/N: CMF | 9.6 | 6-11/16 in. F S/N: CMF | 9.6 |
| 7 in. PowerPa A700G1 S/N: 7(1.5 deg. Bent 8-3/8 in. Mot | 9.1 | 7 in. PowerPa A700G1 S/N: 7(1.15 deg. Bent 8-3/8 in. Mot | 9.1 | 7 in. PowerPa A700G1 S/N: 7(1.15 deg. Bent 8-3/8 in. Mot | 9.1 |

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. Roller
S/N: GU1



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



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



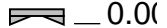
6-11/16 in. F
S/N: CMF



7 in. PowerPac
A700G1
S/N: 70
1.15 deg. Bent
8-3/8 in. Motor



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. Roller
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. Motor



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



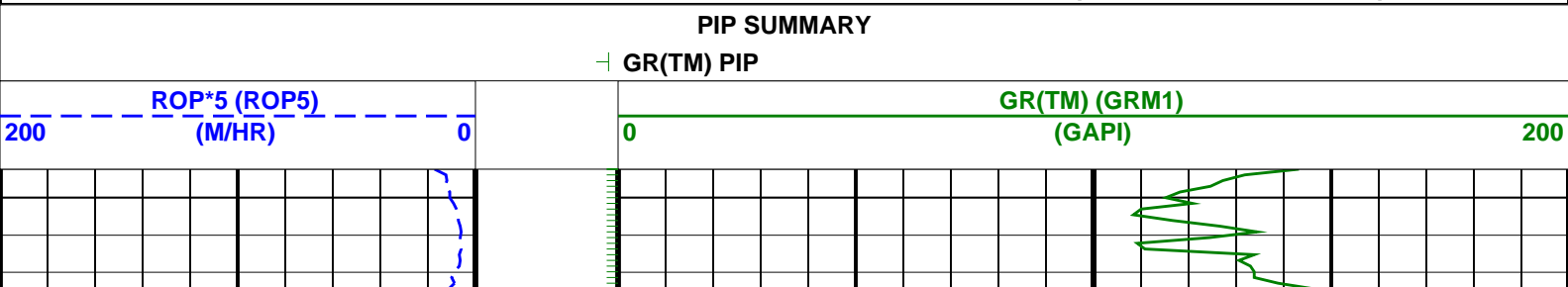
Maximum string dia
All lengths in

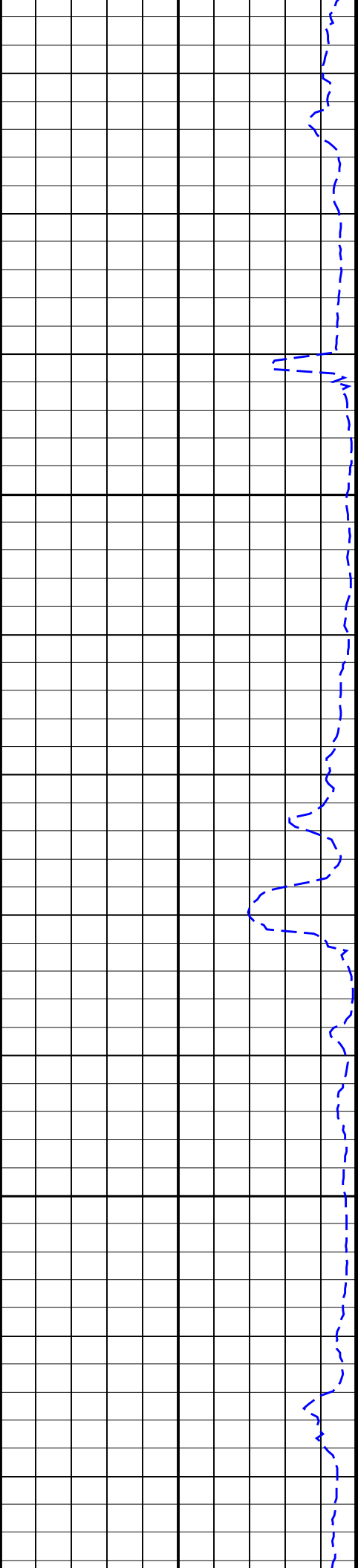
Bit Run Summary

| 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 1:200 TVD

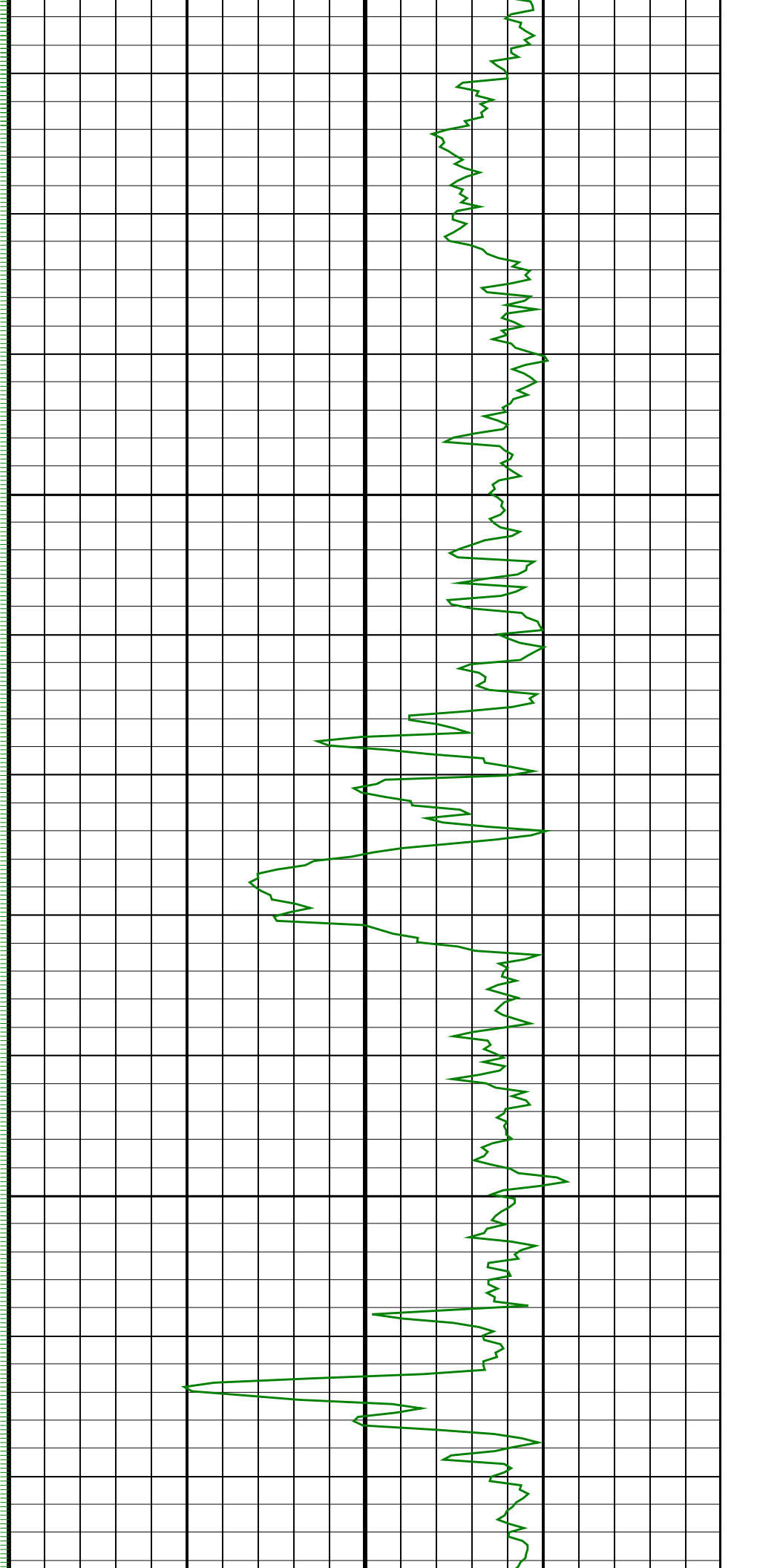
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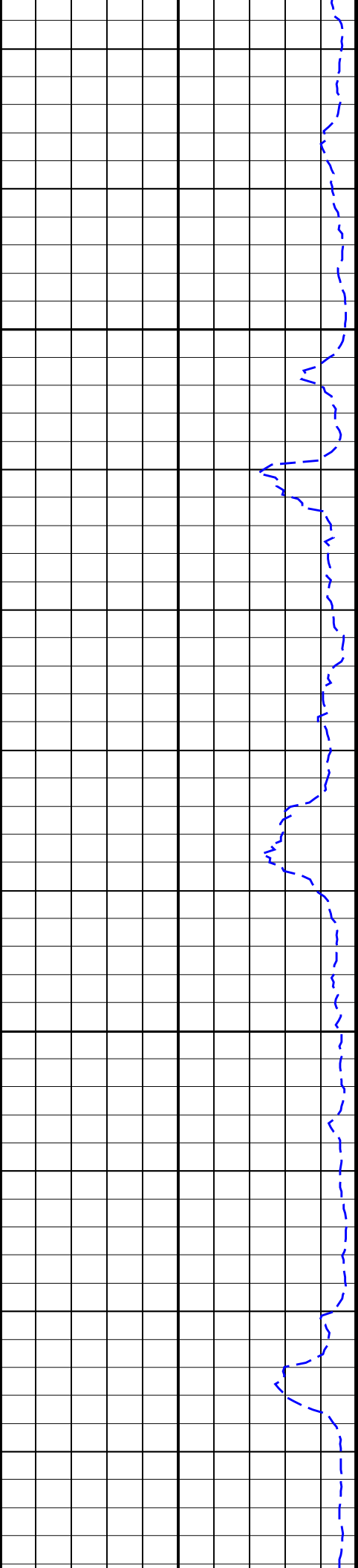




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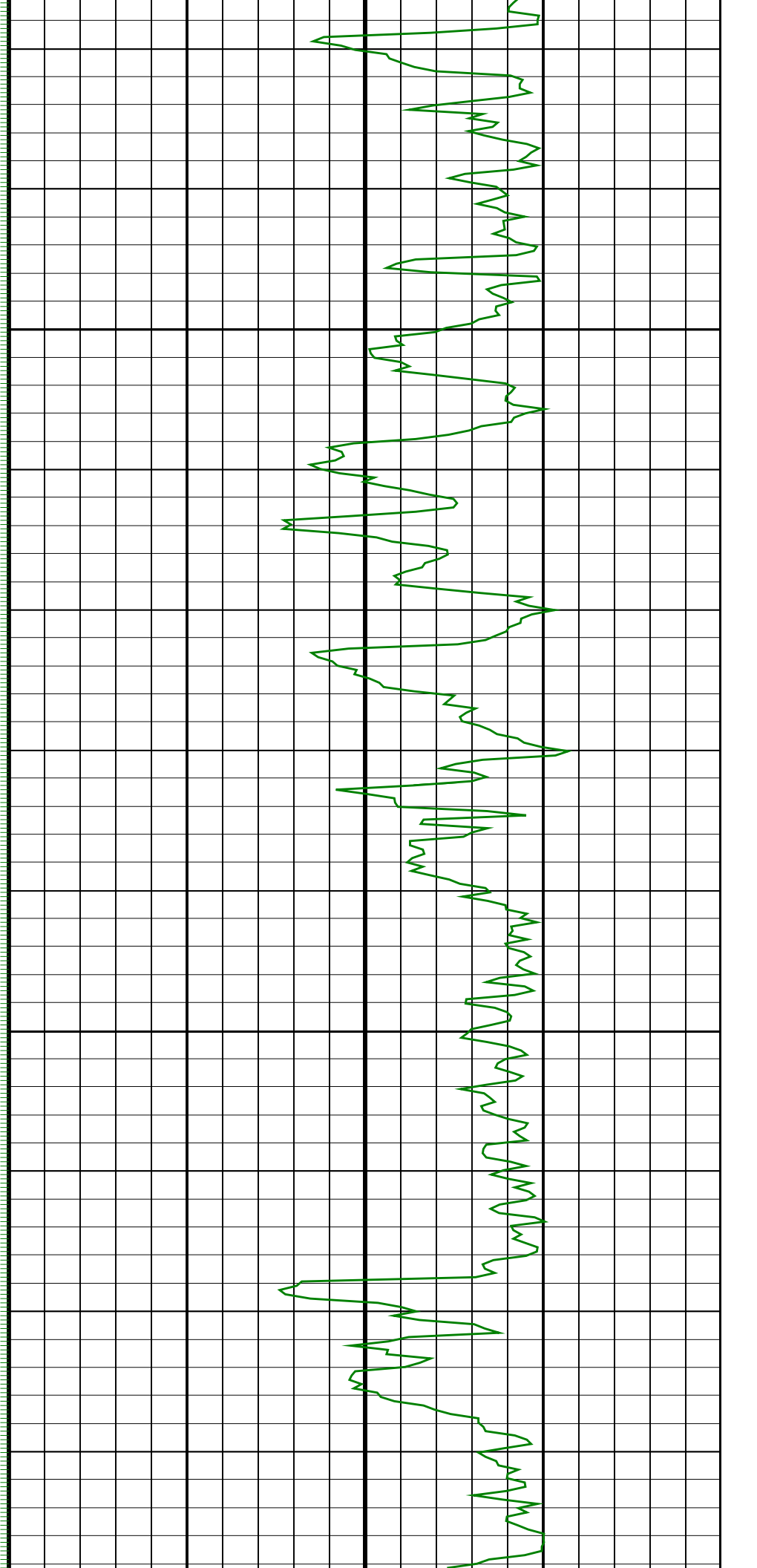
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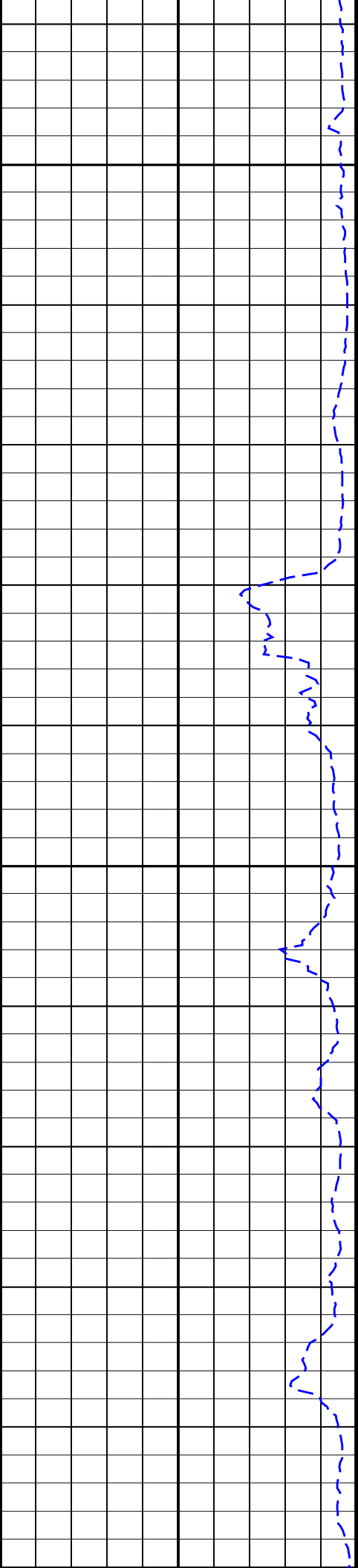




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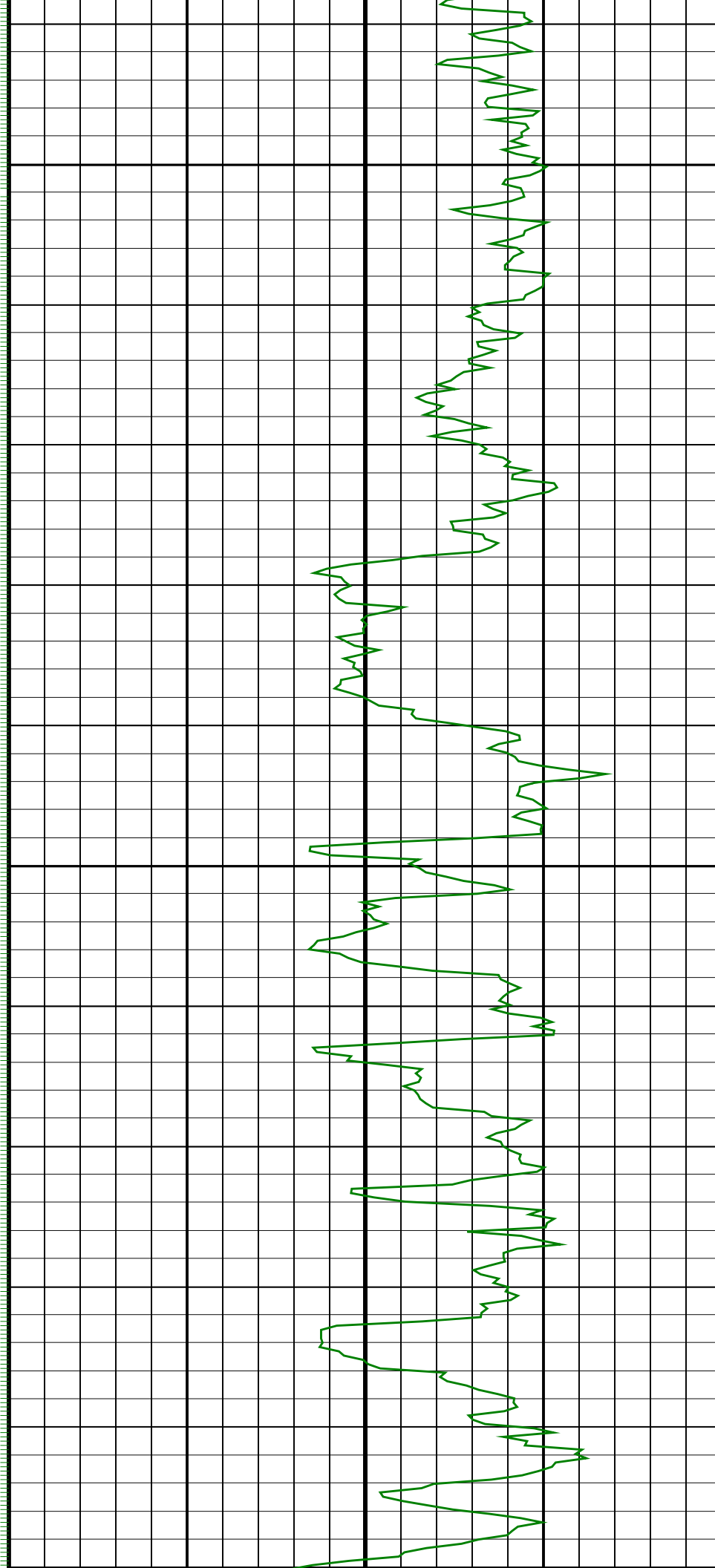
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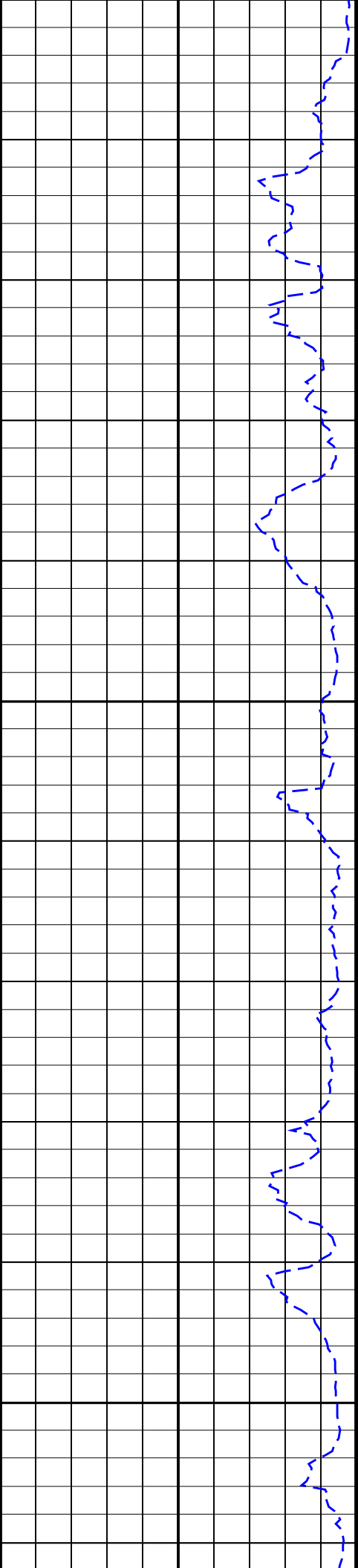




1975
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2000
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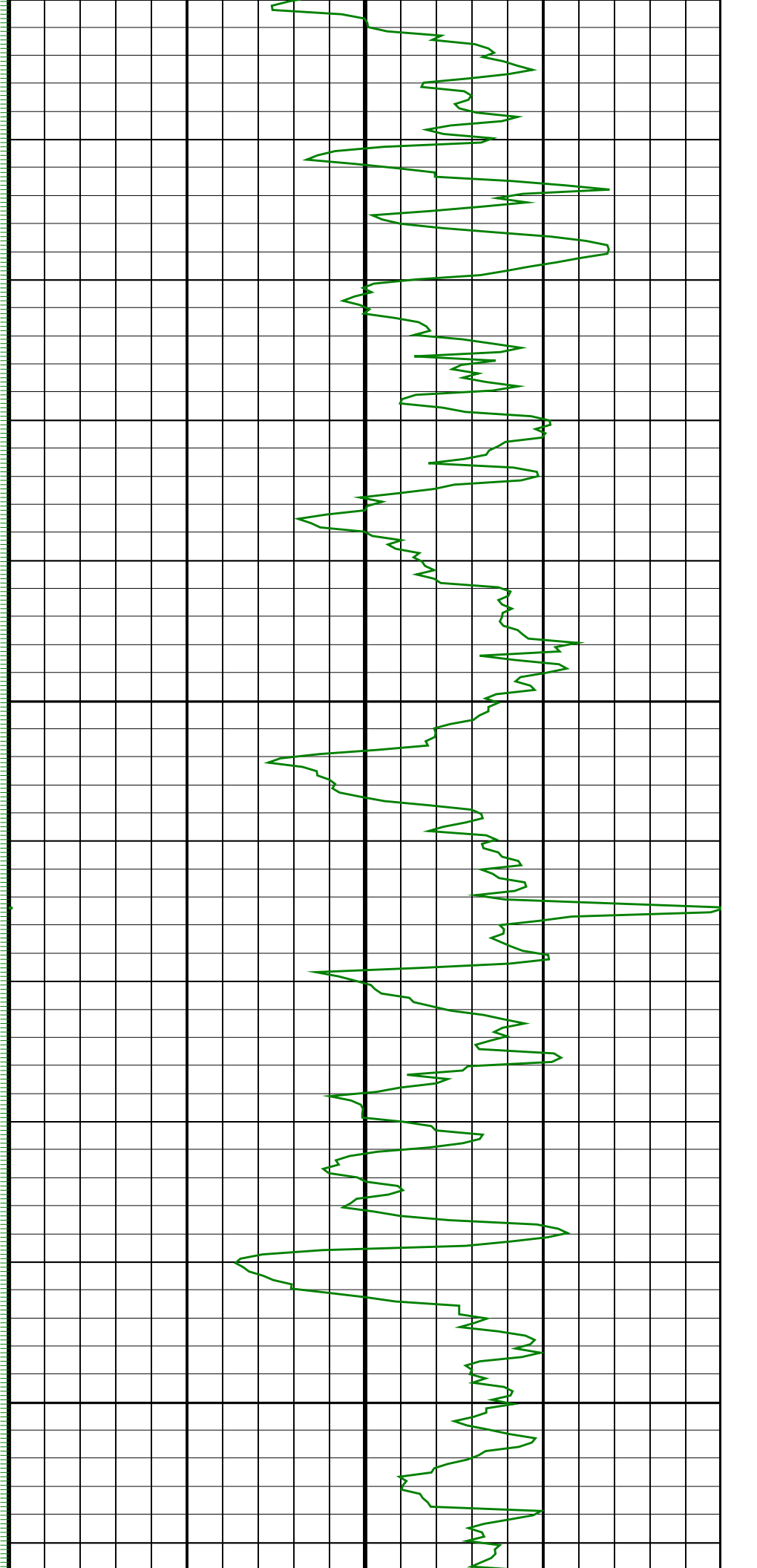


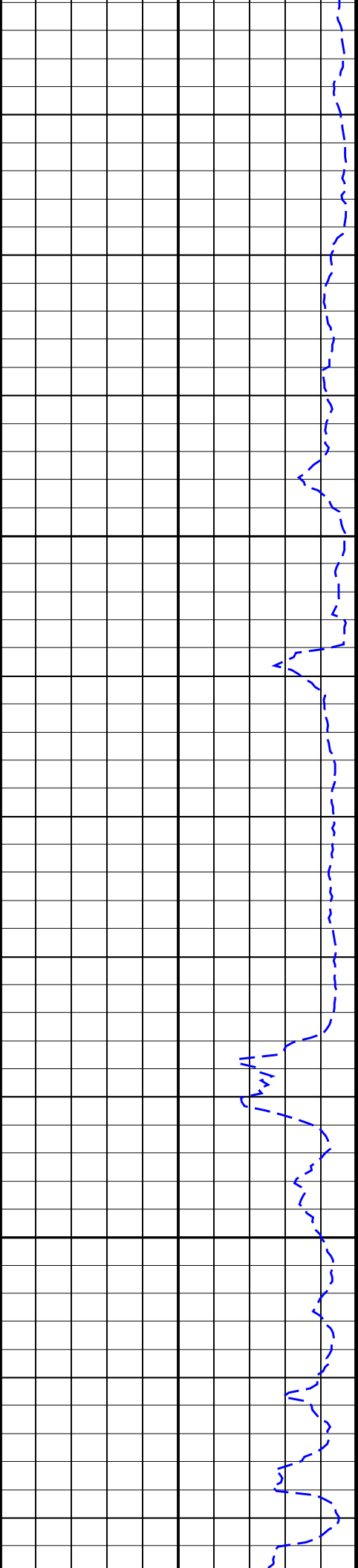


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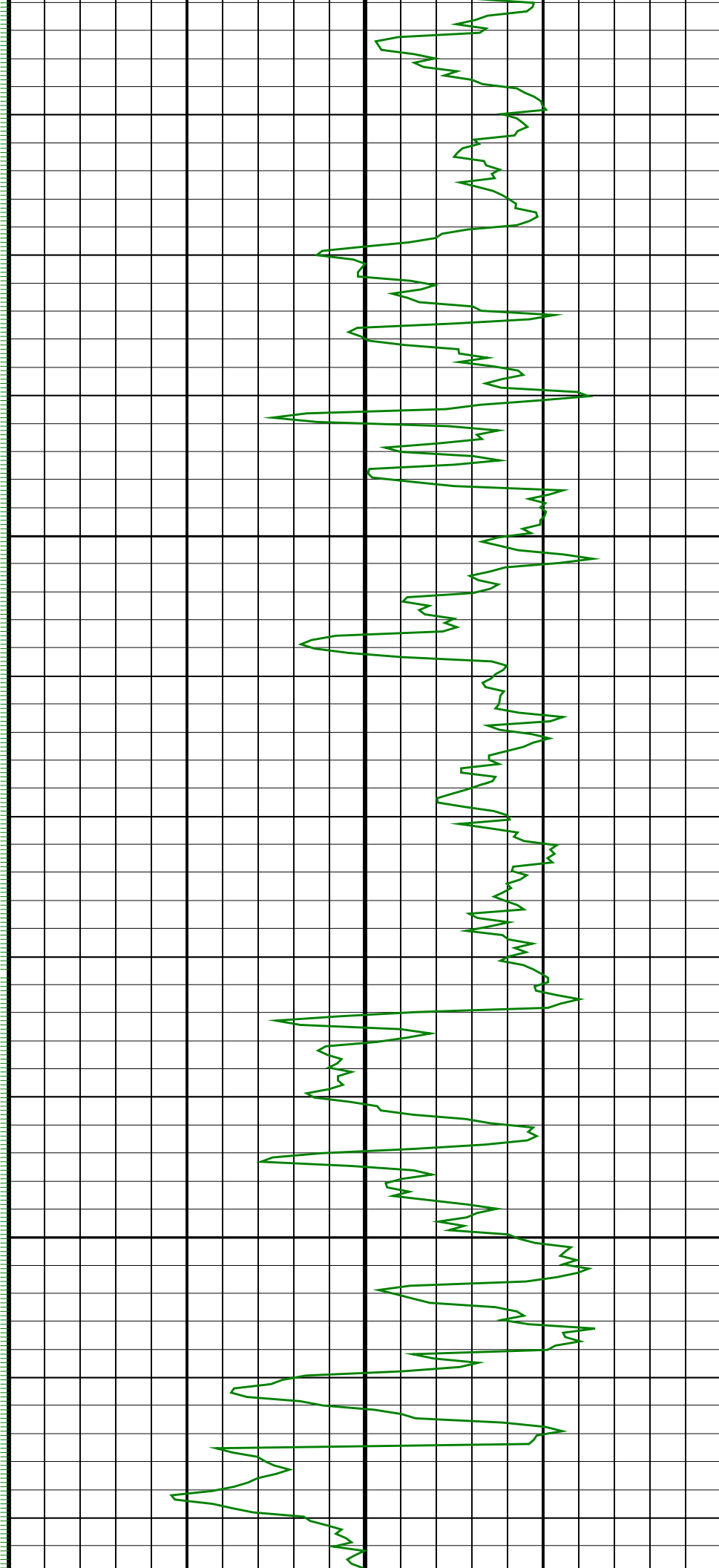
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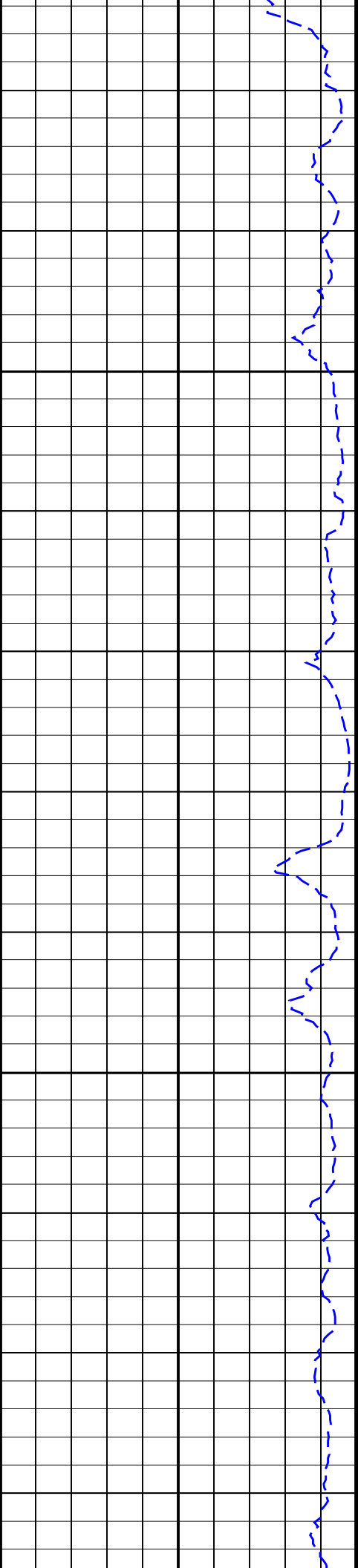




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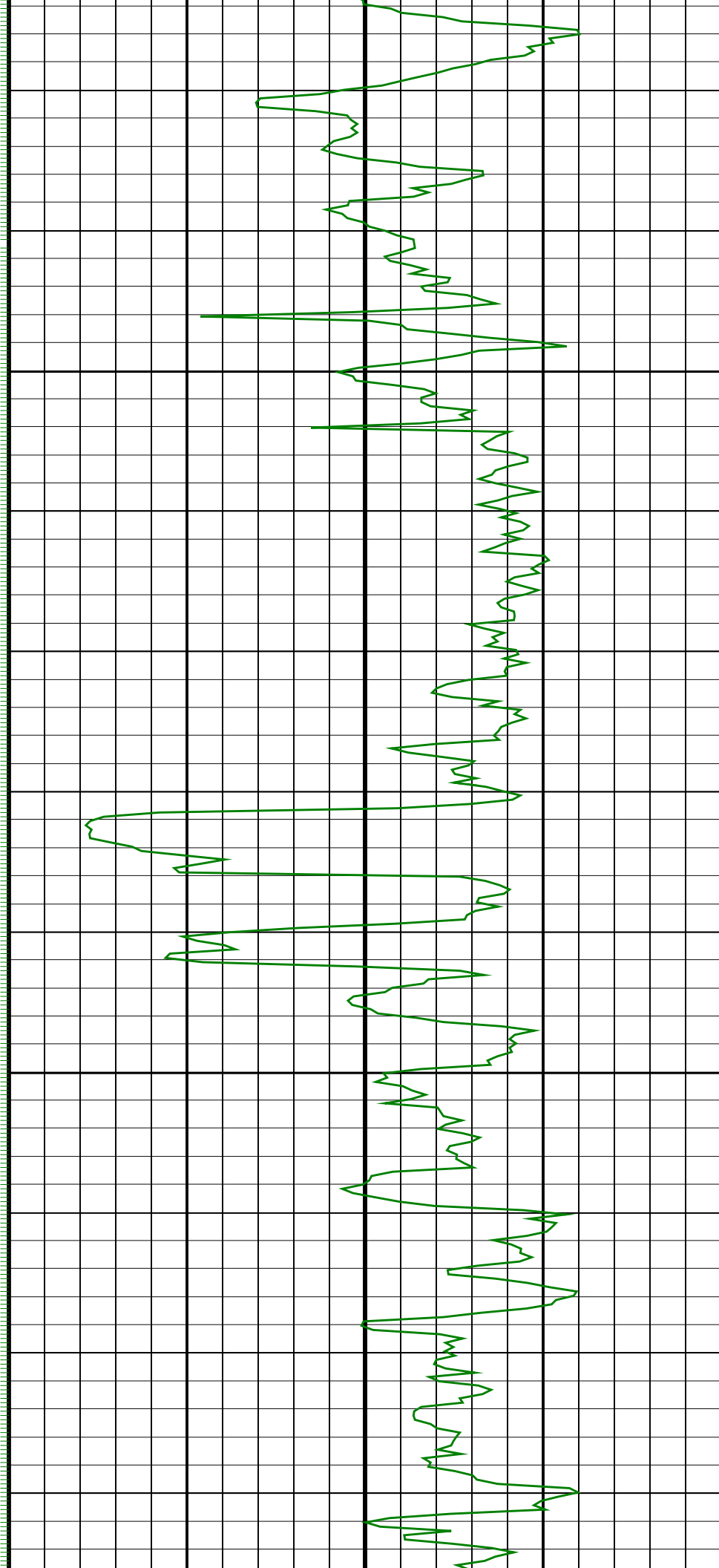
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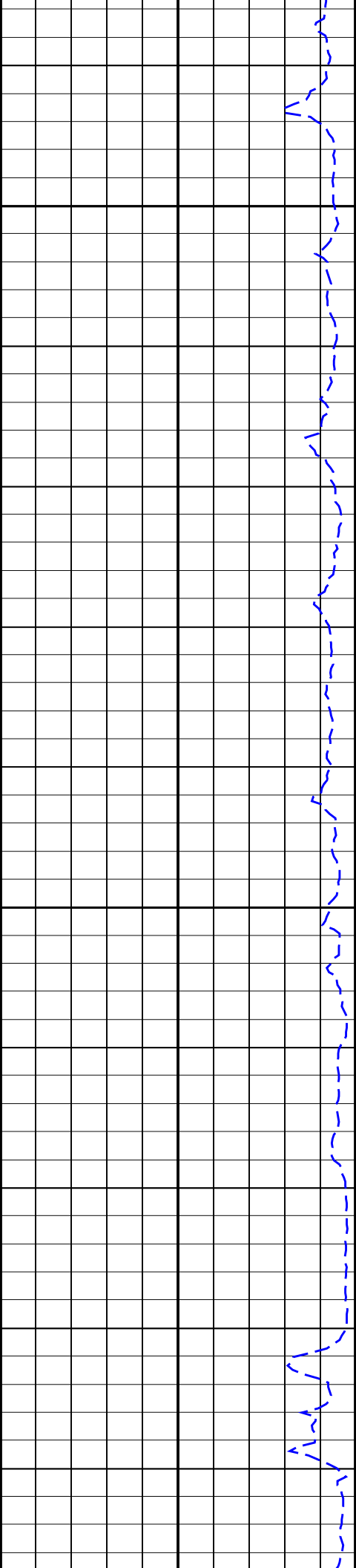




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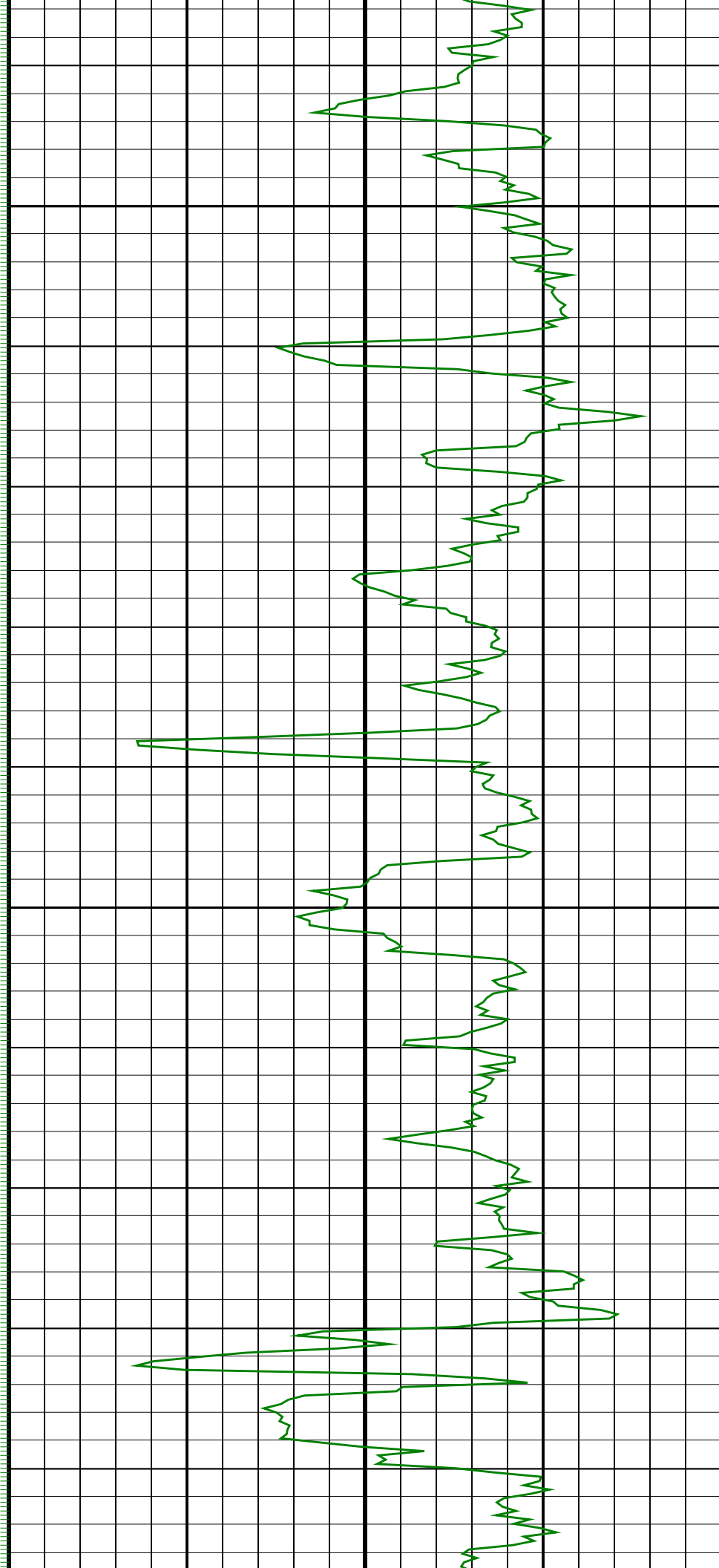
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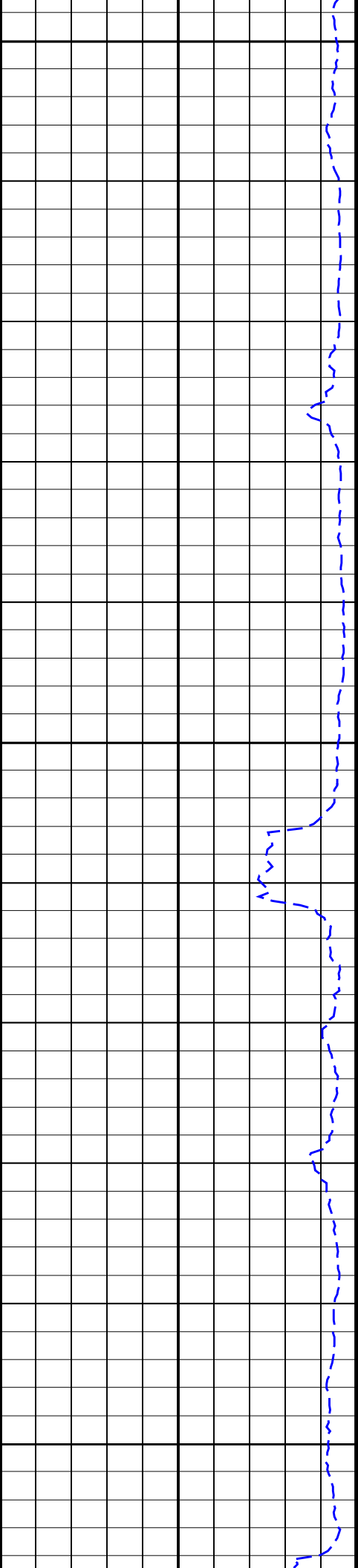




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2225
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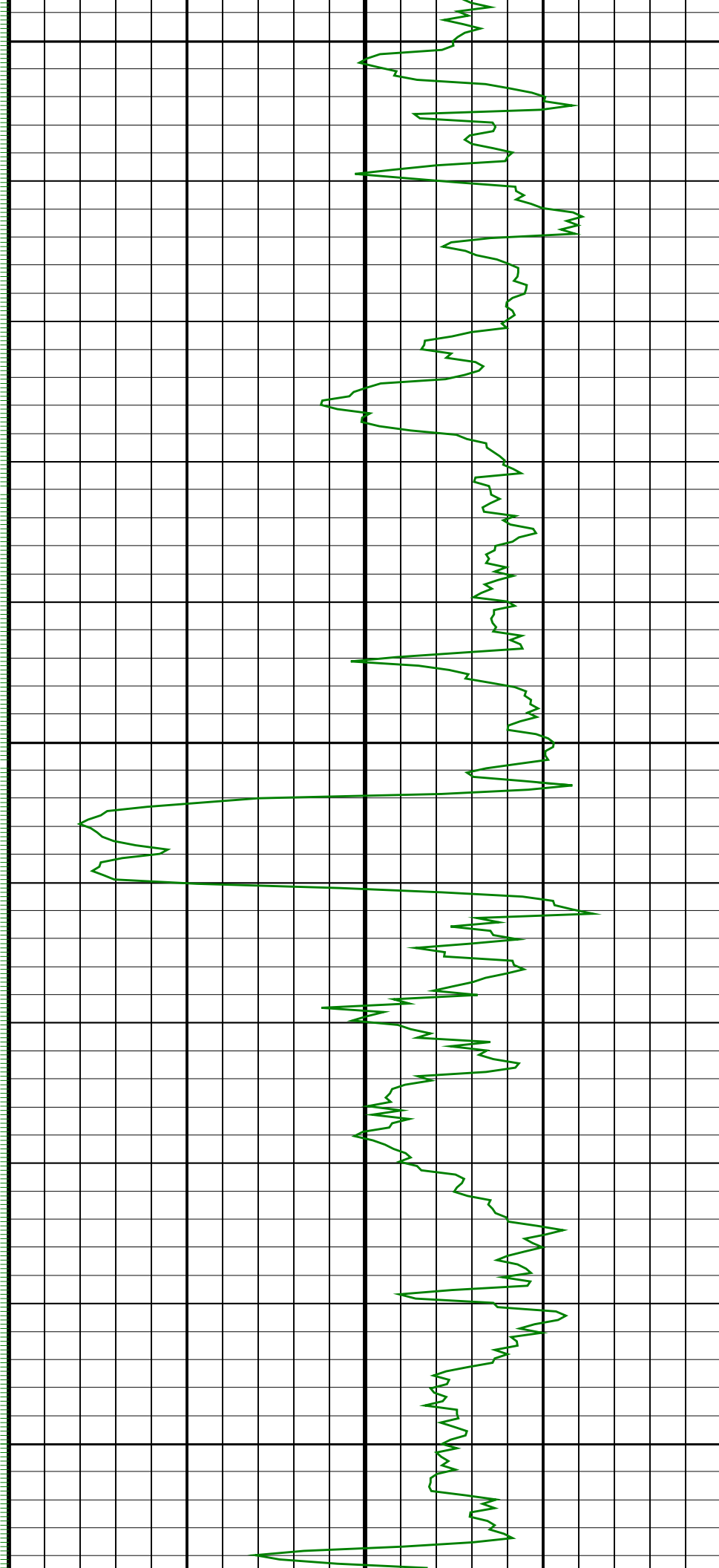


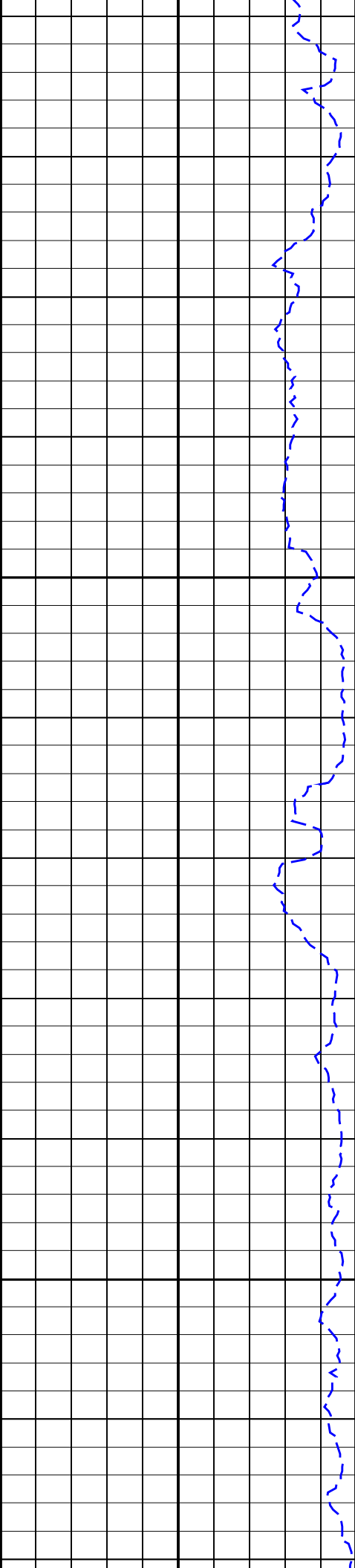


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2275
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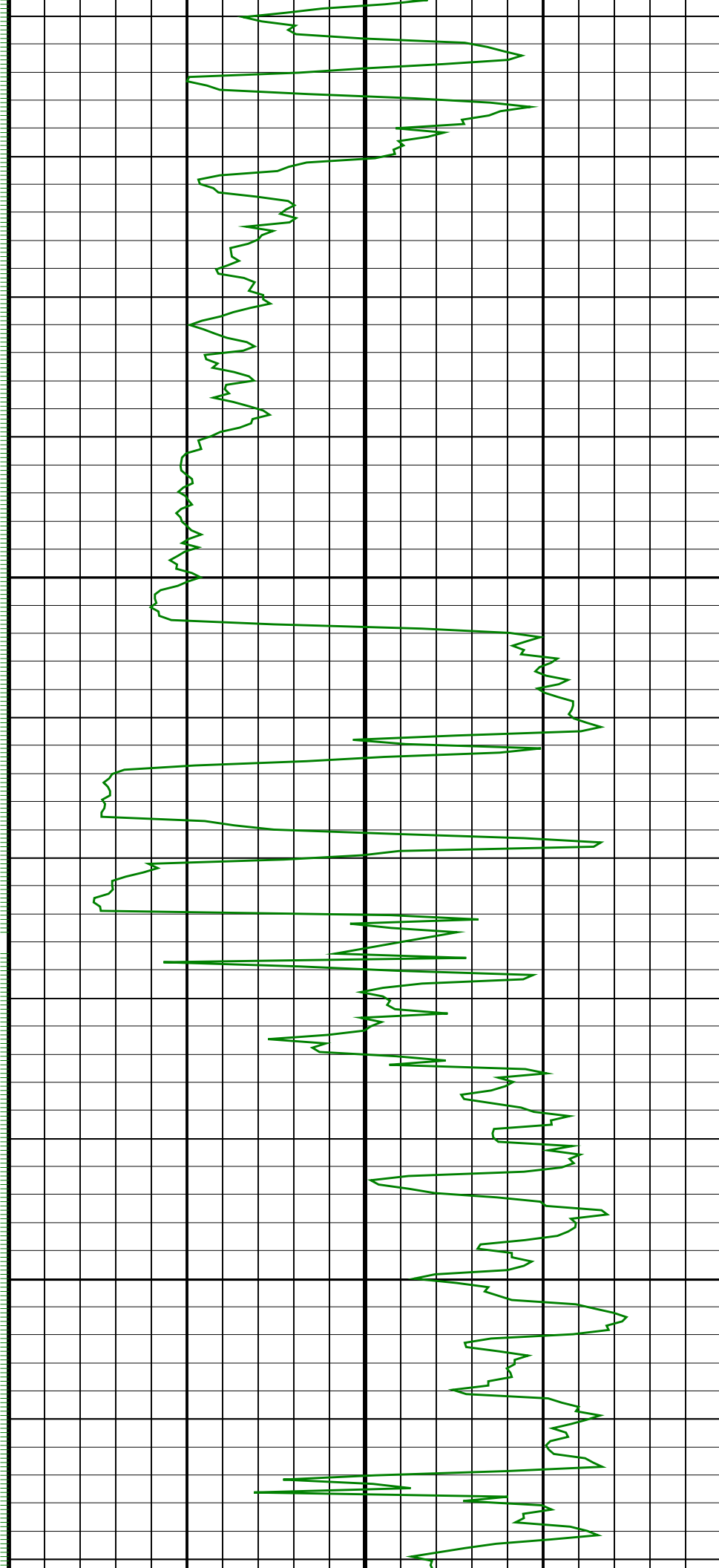
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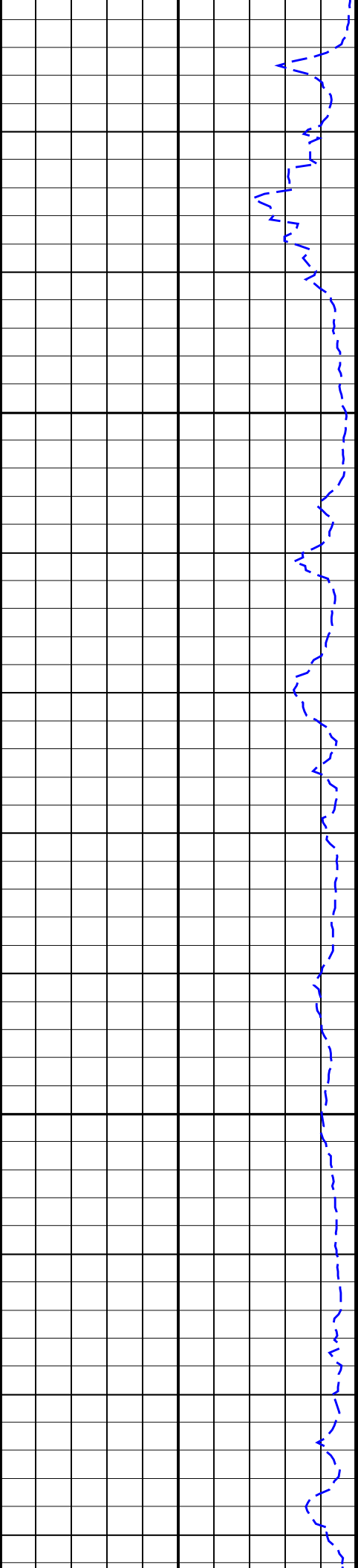




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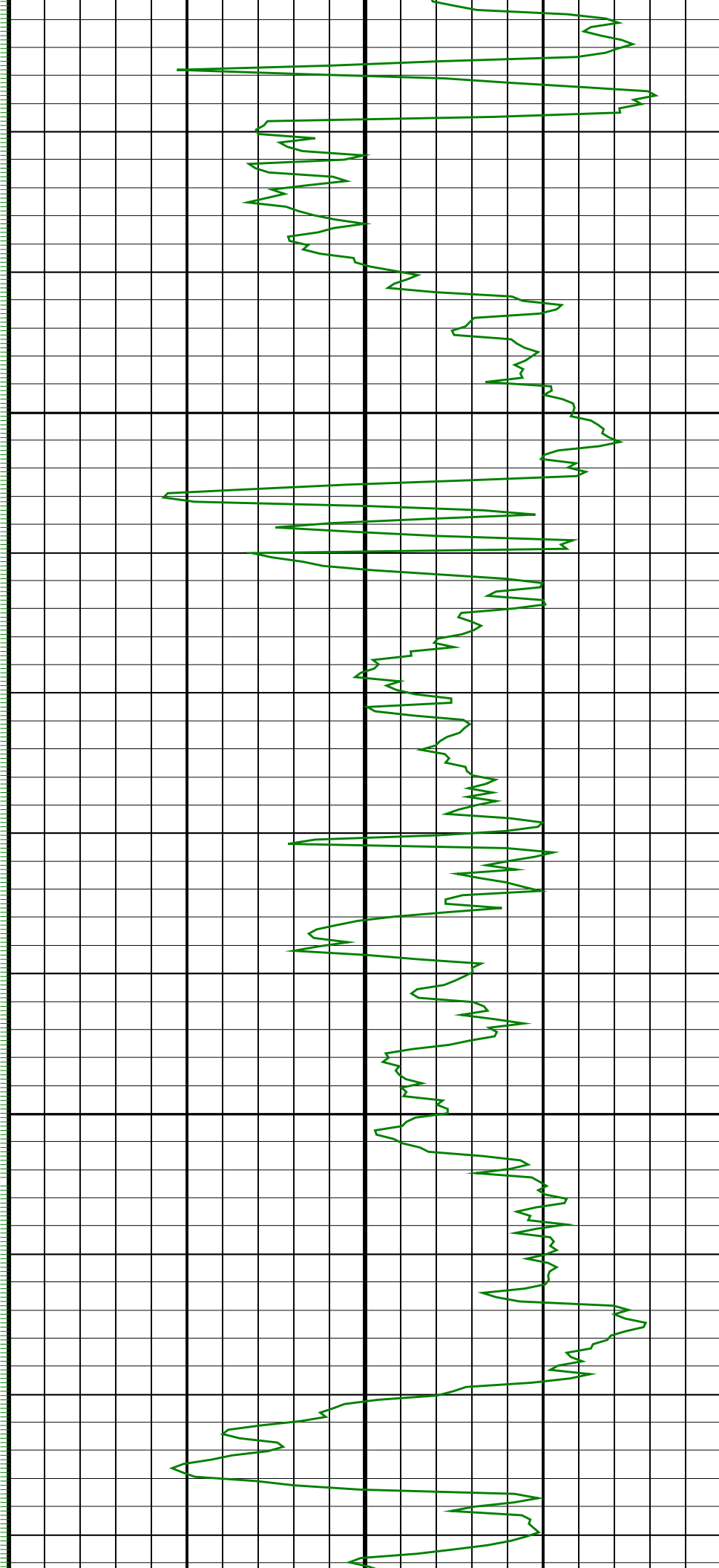
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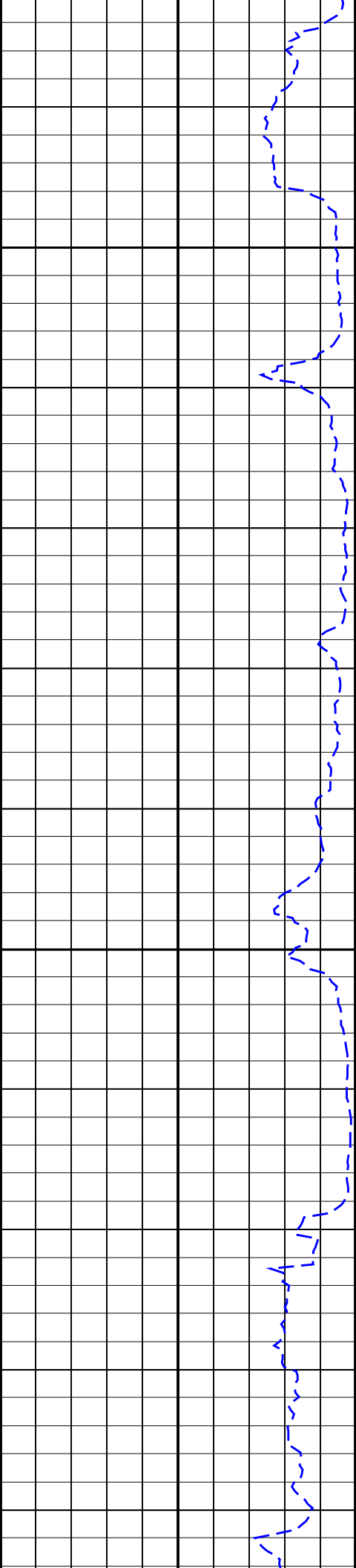




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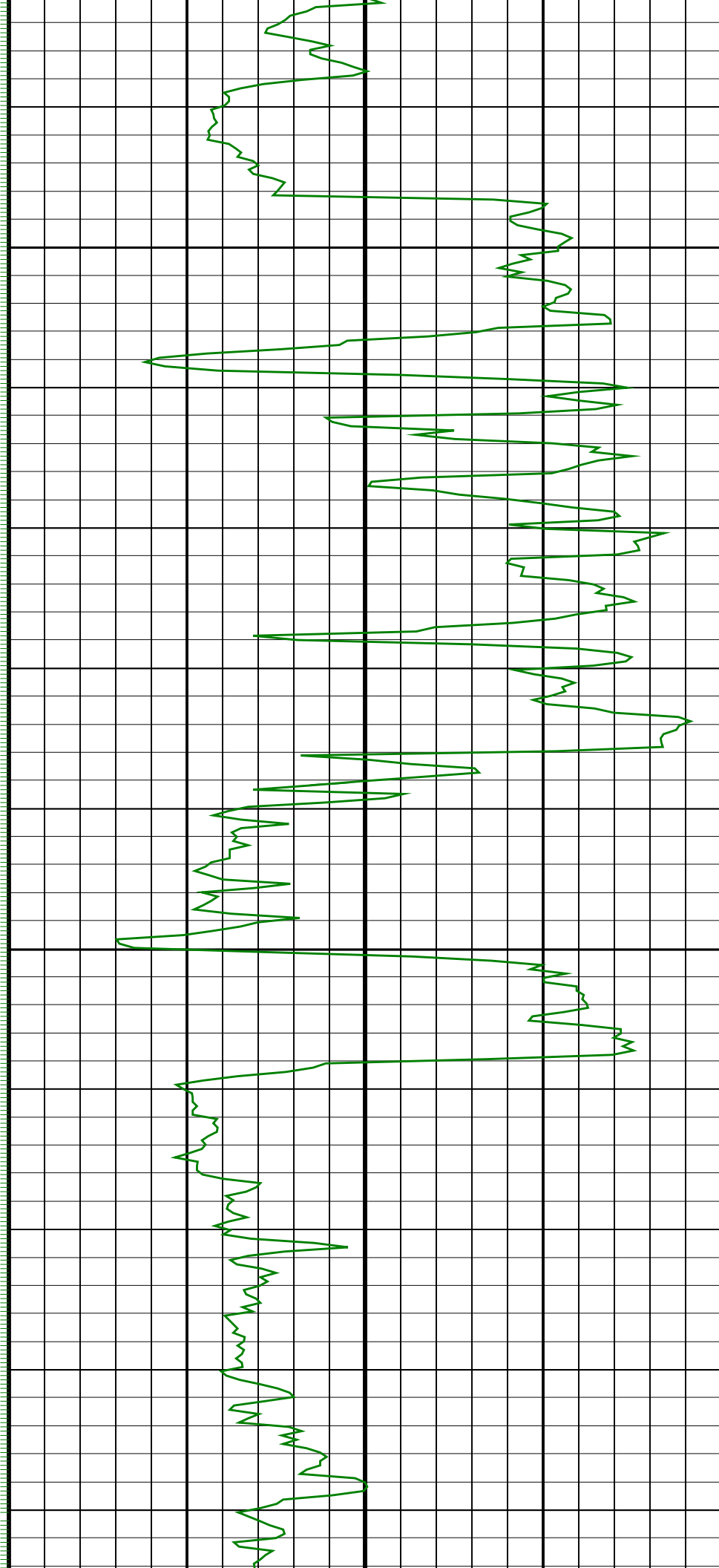
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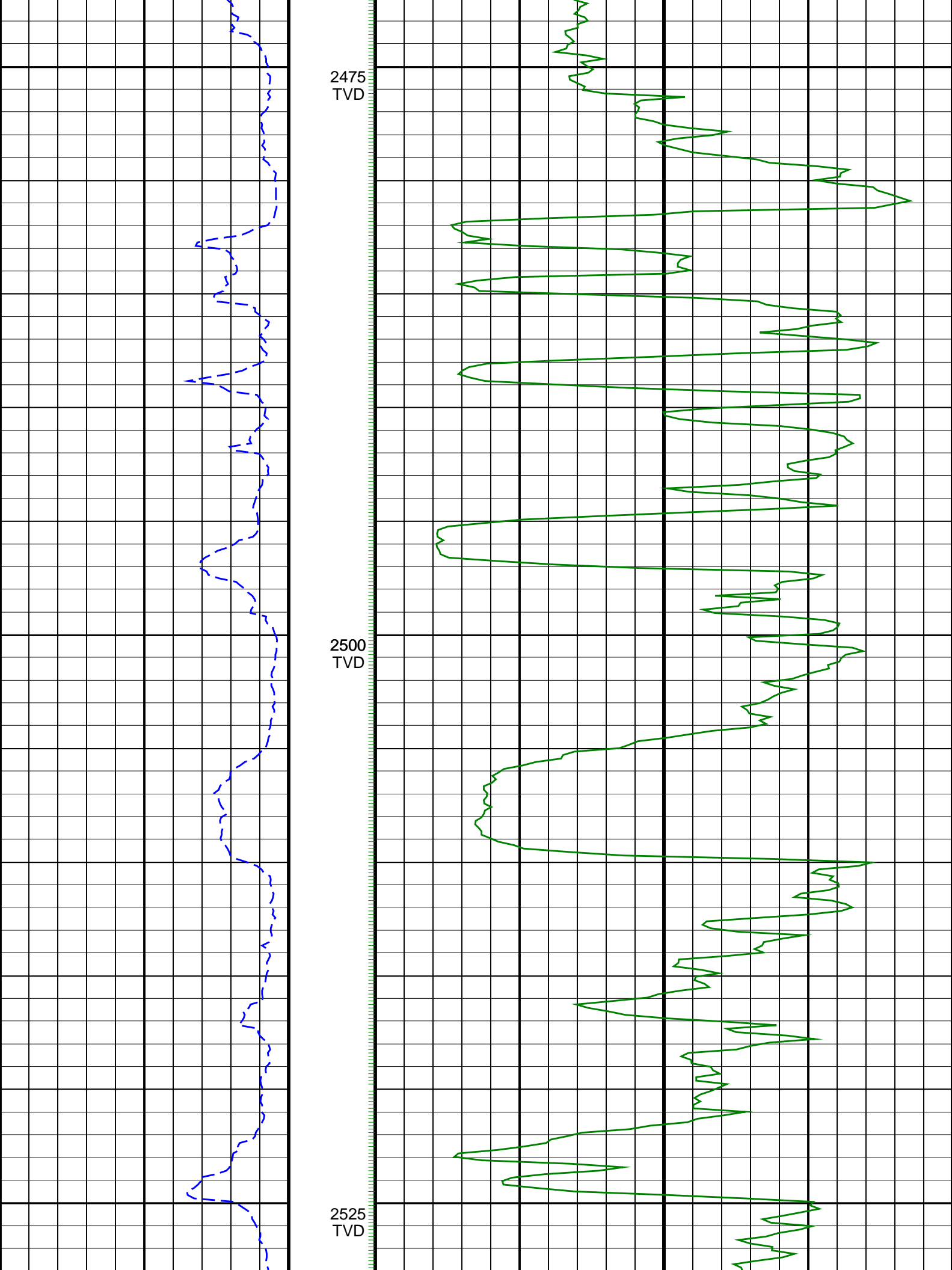


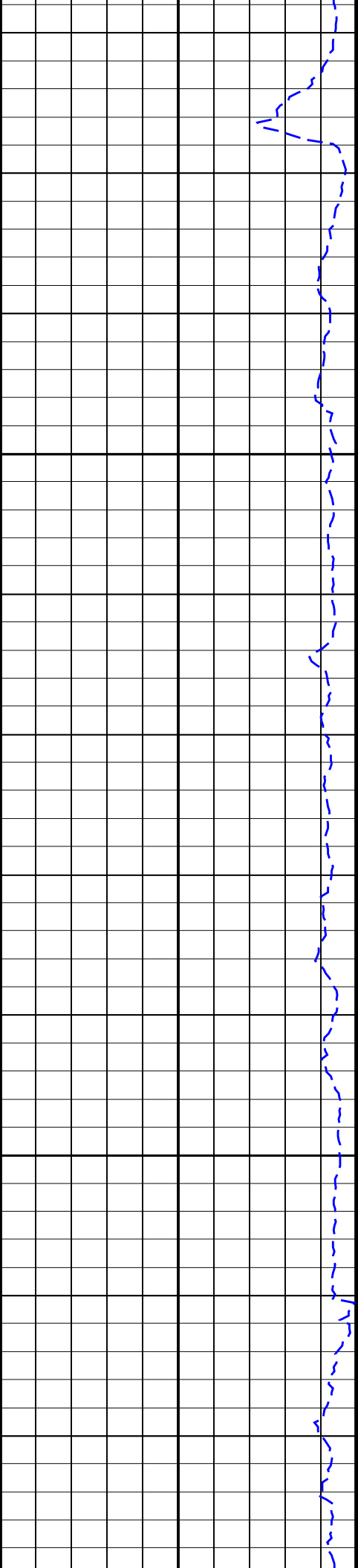


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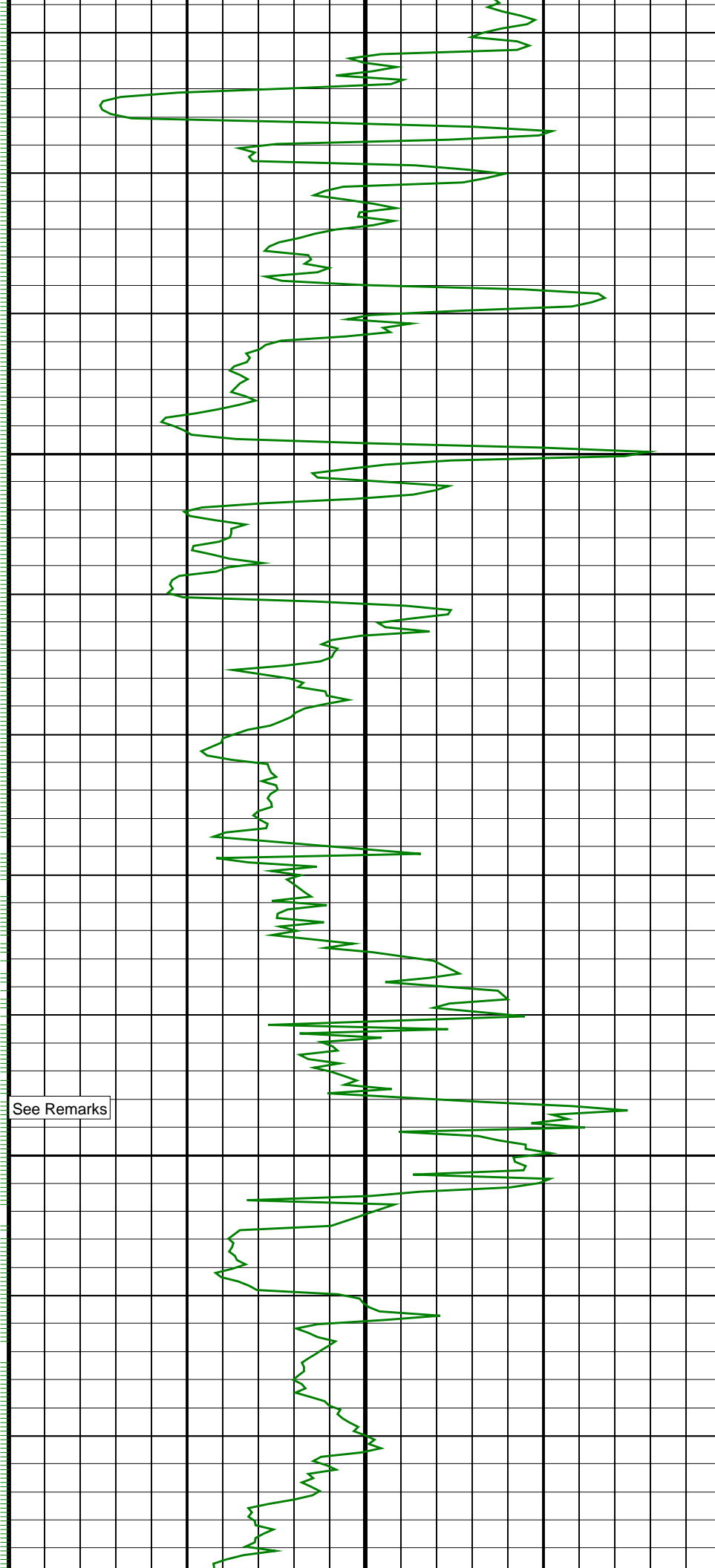
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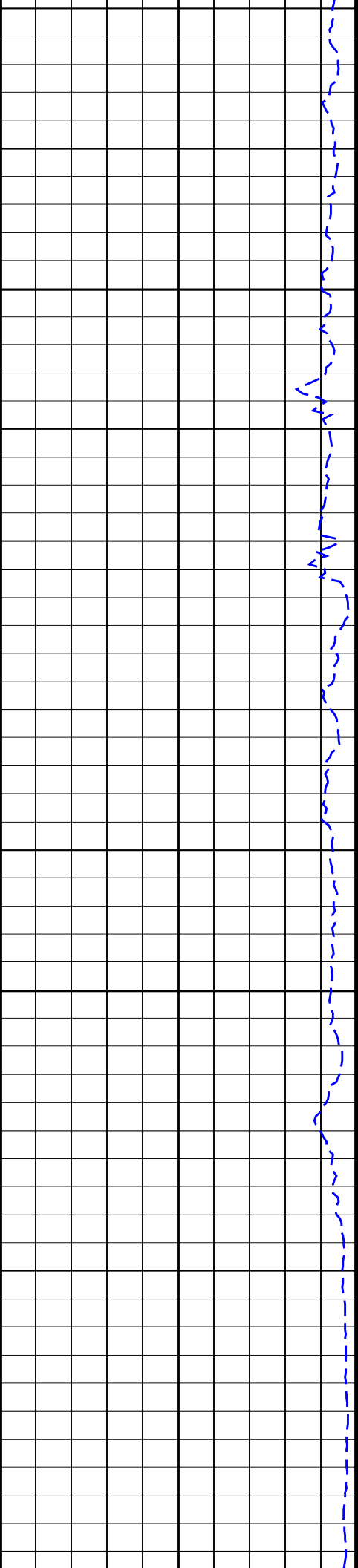


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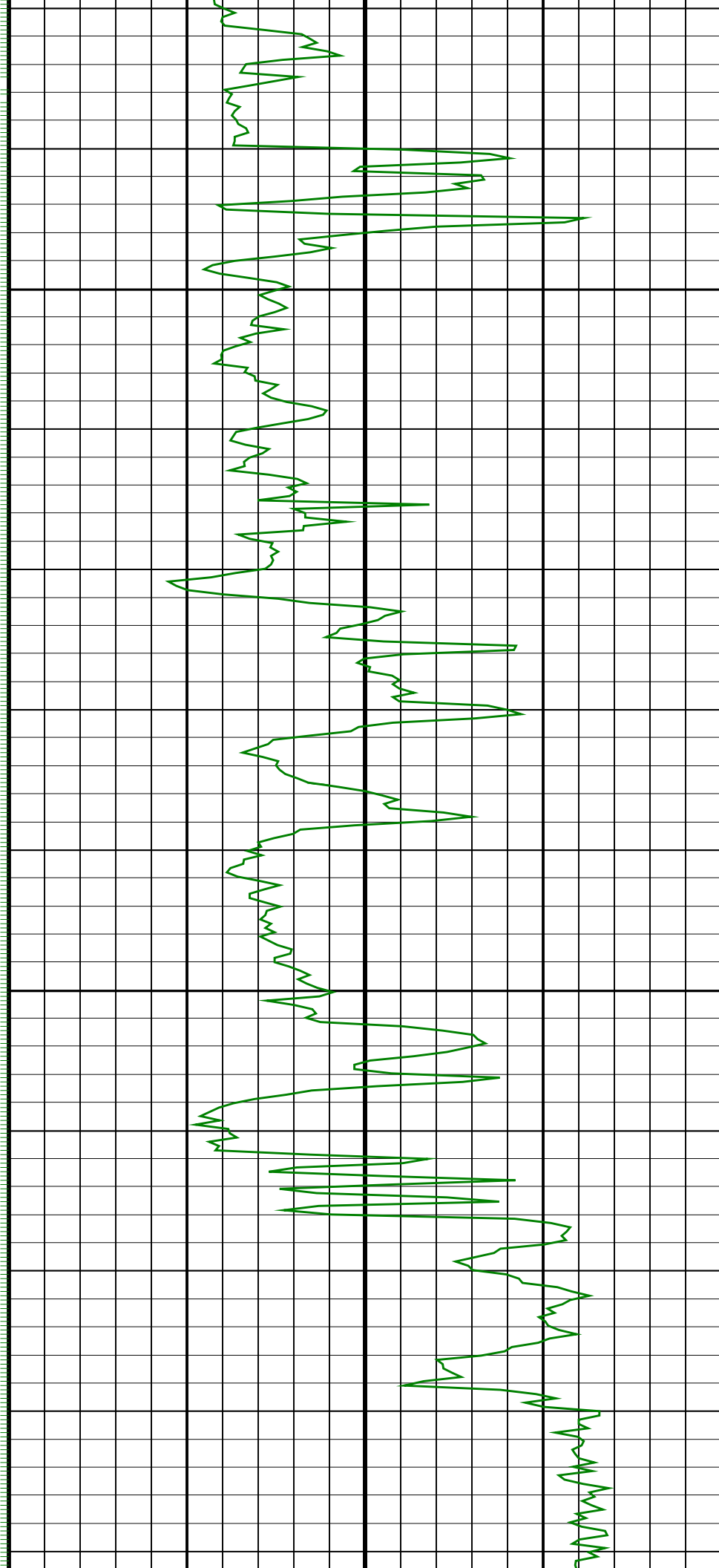
See Remarks

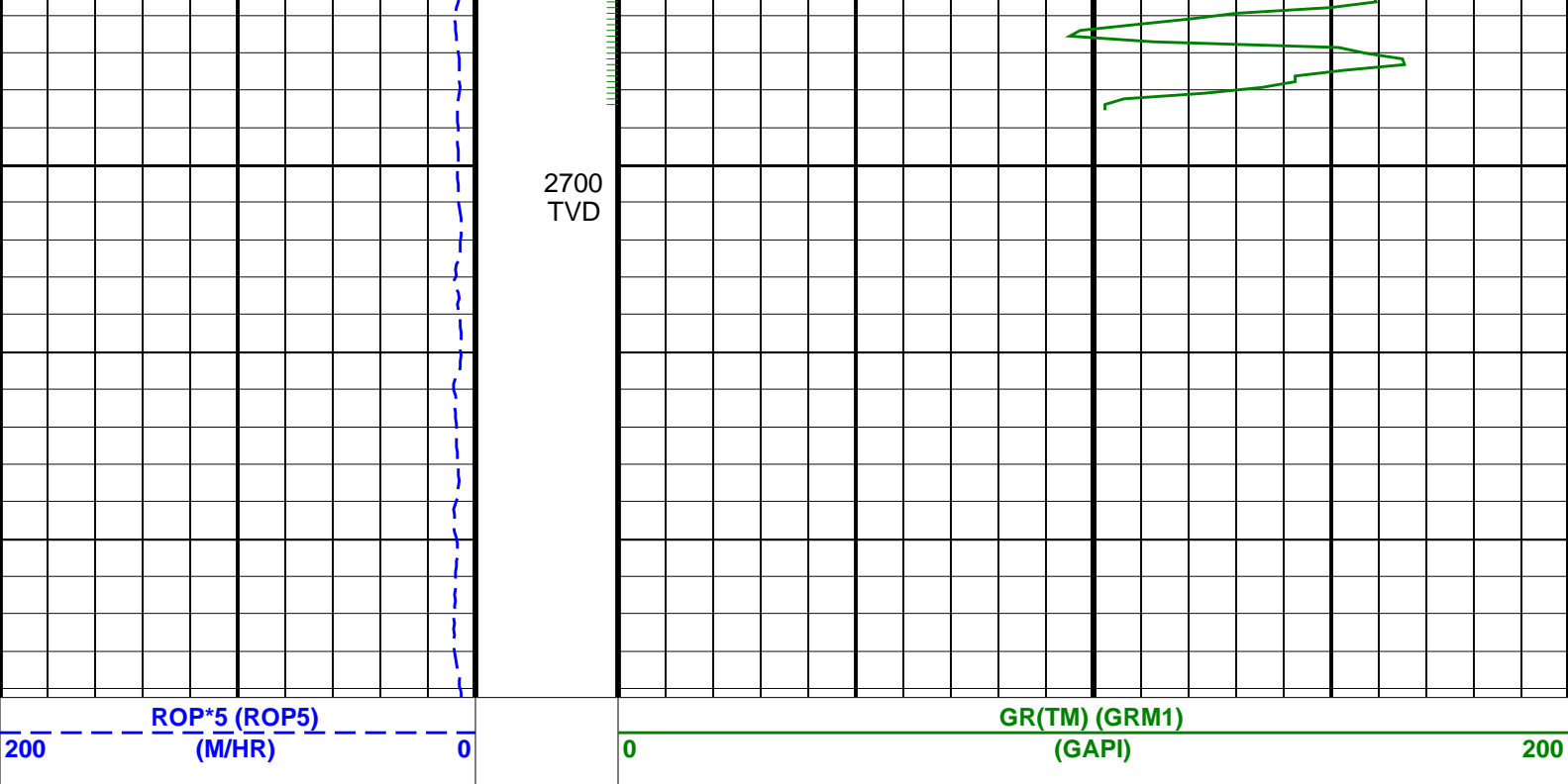
2625
TVD



2650
TVD

2675
TVD





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

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| 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
1:200 Total Vertical Depth
Real Time Log

