



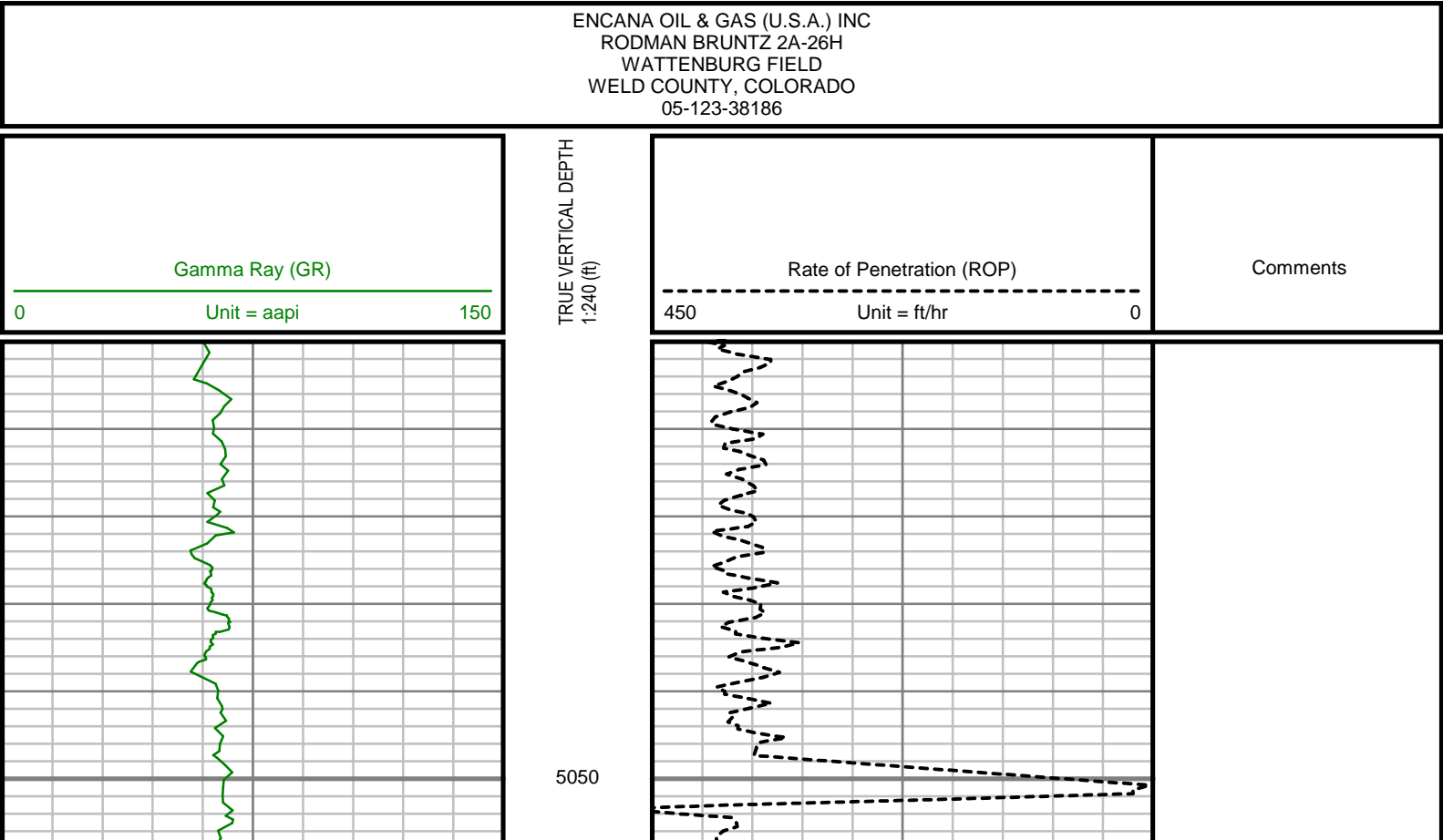
GAMMA RAY

5" = 100' FEET TWD

COMPANY : ENCANA OIL & GAS (U.S.A.) INC WELL : RODMAN BRUNTZ 2A-26H FIELD : WATTENBURG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-38186						COMPANY : ENCANA OIL & GAS (U.S.A.) INC WELL : RODMAN BRUNTZ 2A-26H FIELD : WATTENBURG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-38186					
DEPTH REF. : RKB REF. HEIGHT : 13.000 ft GROUND LEVEL : 5079.000 ft						RKB to Ground Level G.L. to MEAN SEA LEVEL					
BOREHOLE RECORD						DEVIATION RECORD					
HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft	OTHER SERVICES					
12.25	0	1220	0 - 11	0	6750						
8.75	1220	7725	11 - 84	6750	7725						
6.125	7725	14475	84 - 92	7725	14475						
CASING RECORD											
CASING SIZE in	FROM ft	TO ft									
9.625	0	1210									
7	0	7715									
						DRILLING CO.: ENSIGN RTG: 124					
						LMD UNIT NO.: C-70      DISTRICT: CASPER SPUD DATE: 12/18/2013 LMD START DATE: 12/21/2013      DEPTH: 5000 ft LMD END DATE: 12/29/2013      DEPTH: 14475 ft TOTAL DEPTH: 14475 ft					

Remarks
ENCANA OIL AND GAS (U.S.A.) INC PRODUCTION AFE# 13175436
SCIENTIFIC DRILLING INTERNATIONAL JOB# 92890
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO GAMMA RAY CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO RATE OF PENETRATION CURVE
RUN #1: MWD / DIRECTIONAL RUN
SENSORS S/N: CONT = 1011 / MWD EYE = 0120
BIT TO SENSOR OFFSET: SURVEY = 55.38 FT.
RUN #2: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 128-062 / CONT = 786 / MWD EYE = 0380 / GAMMA RAY = 1057
BIT TO SENSOR OFFSET: SURVEY = 56.17 FT. / GAMMA RAY = 46.92 FT.
RUN #3: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 78-077 / CONT = 761 / MWD EYE = 0120 / GAMMA RAY = 1021
BIT TO SENSOR OFFSET: SURVEY = 60.62 FT. / GAMMA RAY = 51.35 FT.
MNEMONICS LIST:
GR = GAMMA RAY
ROP = RATE OF PENETRATION

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions as set out in our current price schedule.



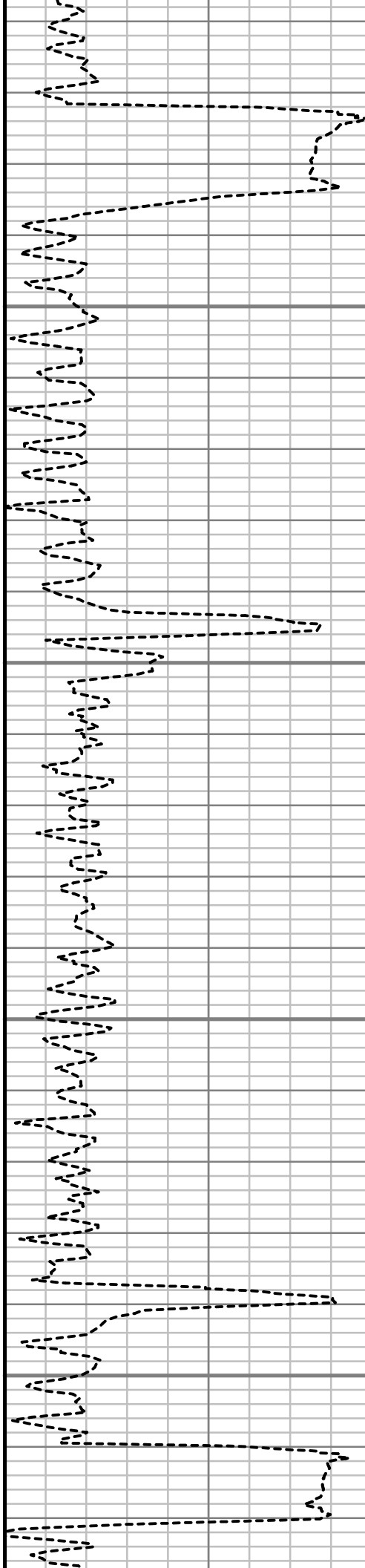


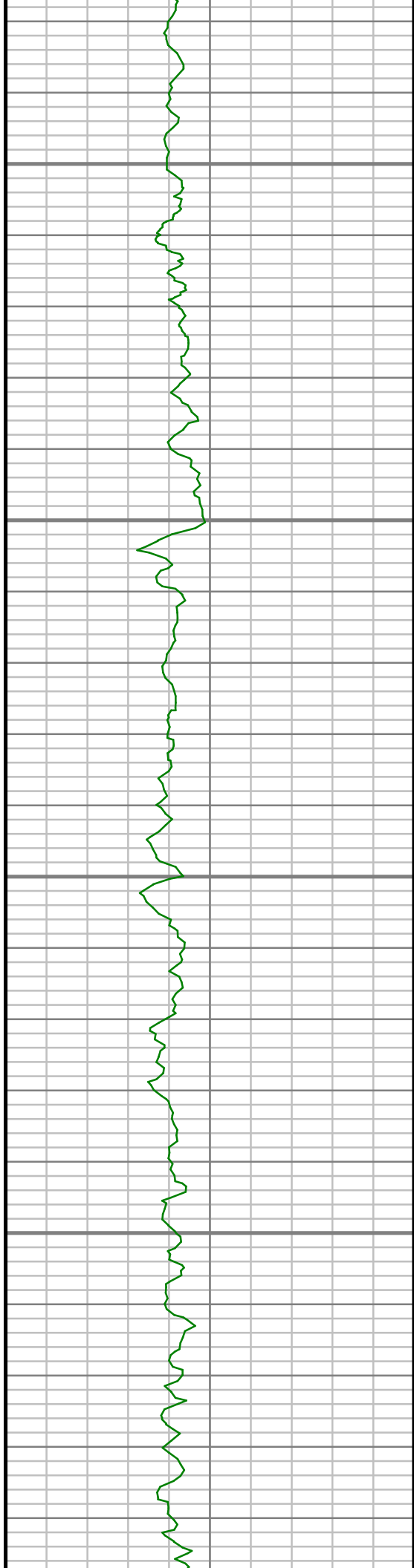
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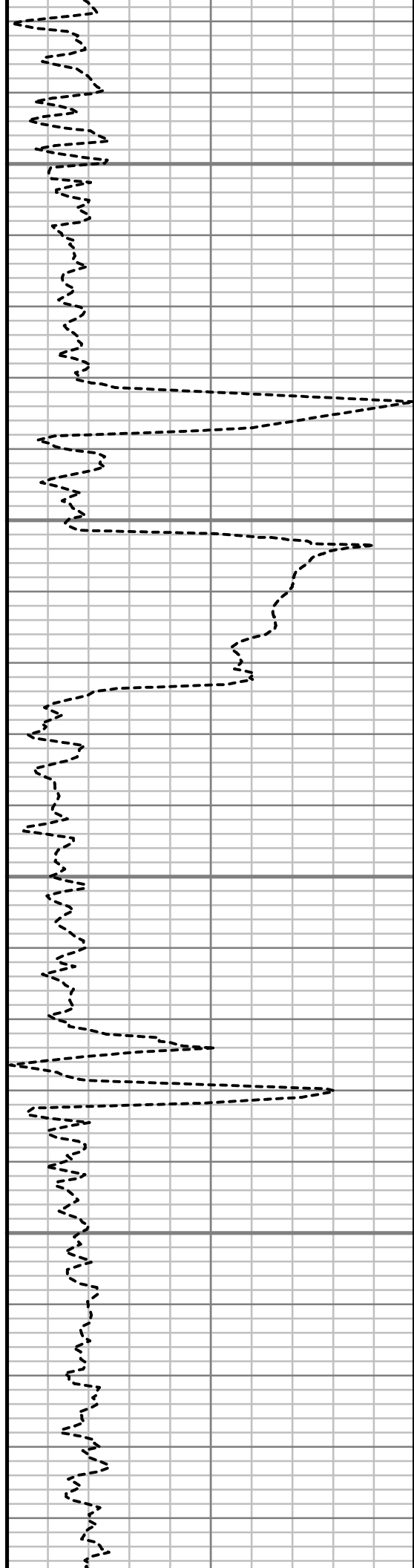


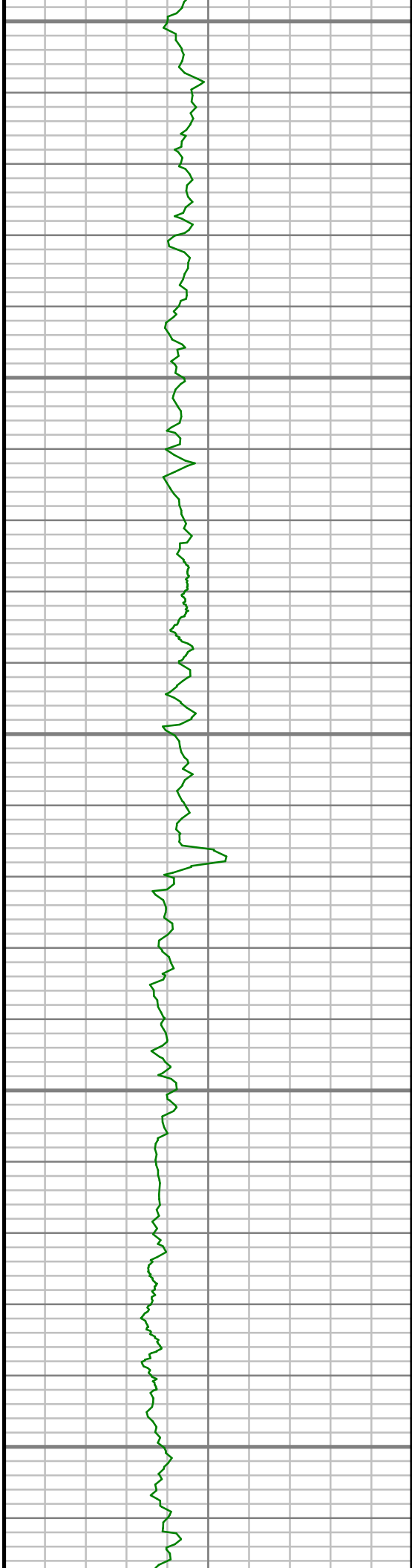
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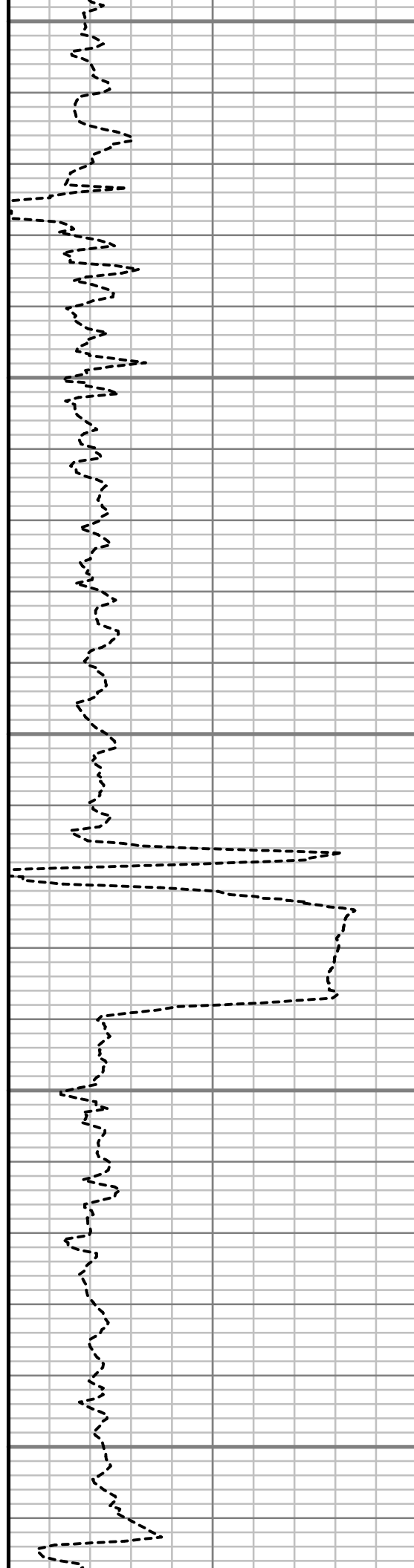
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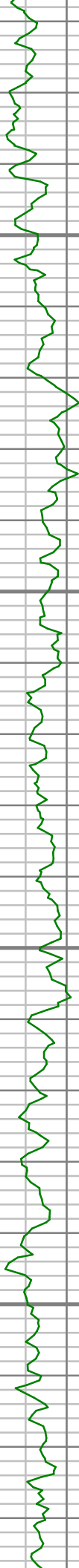
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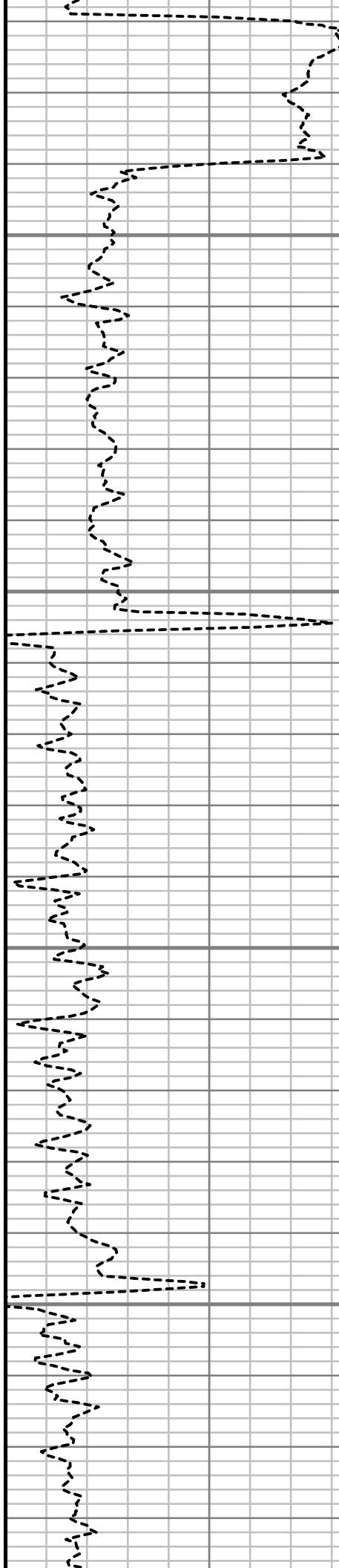


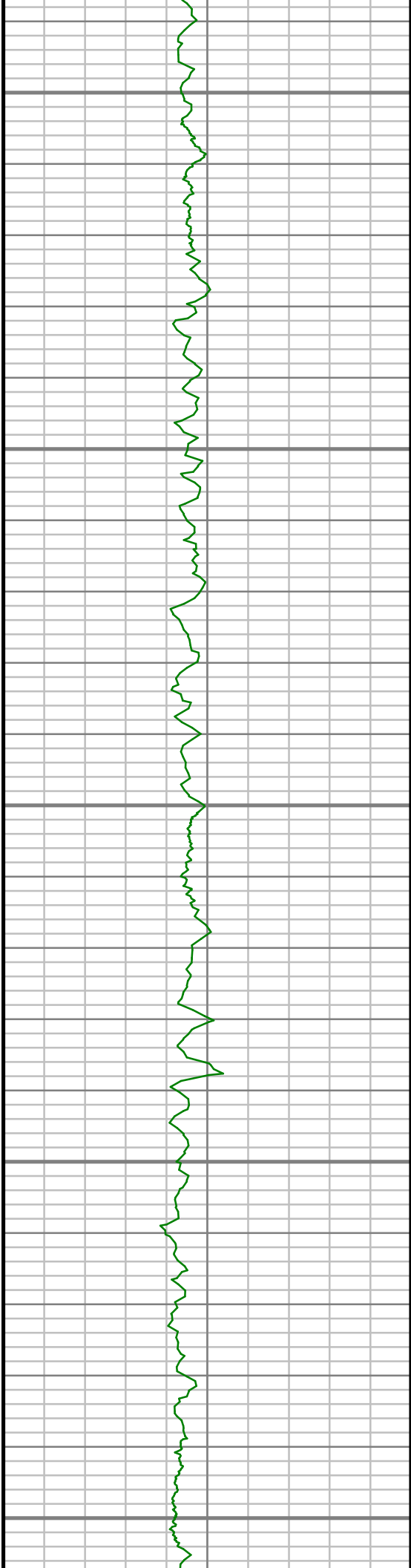
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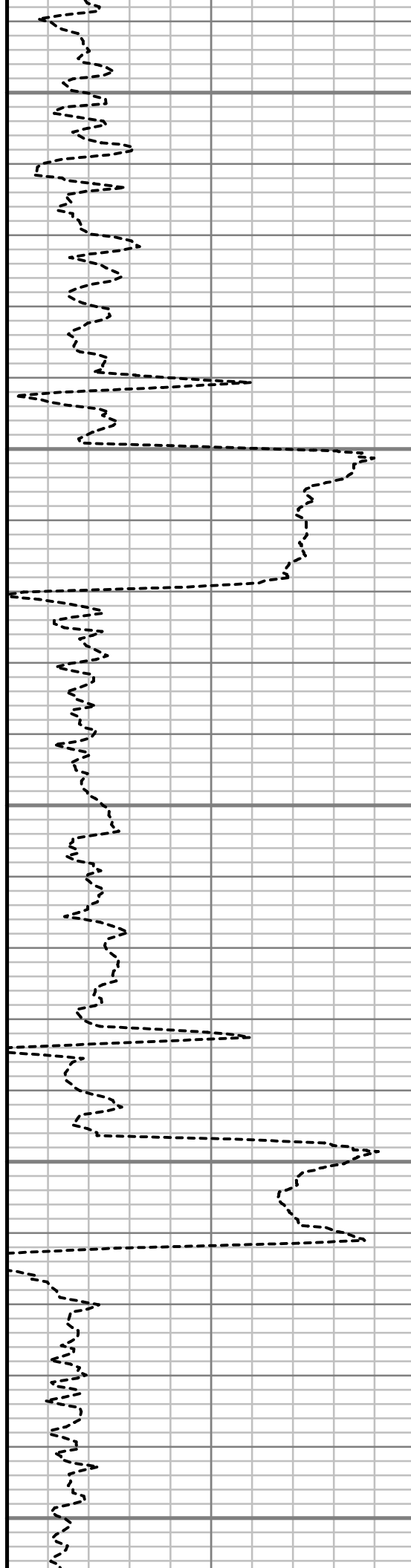
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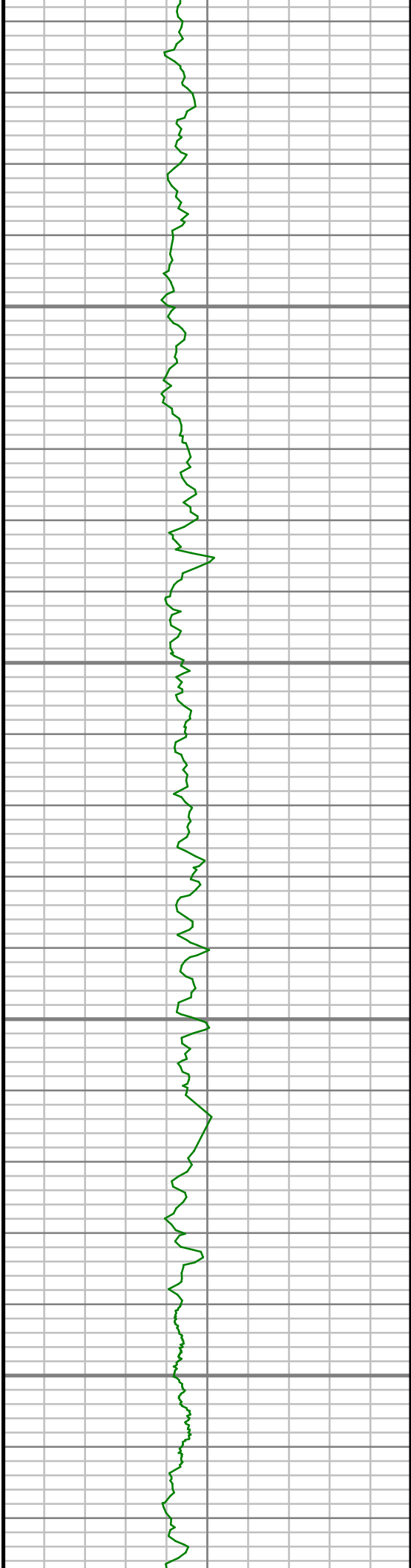
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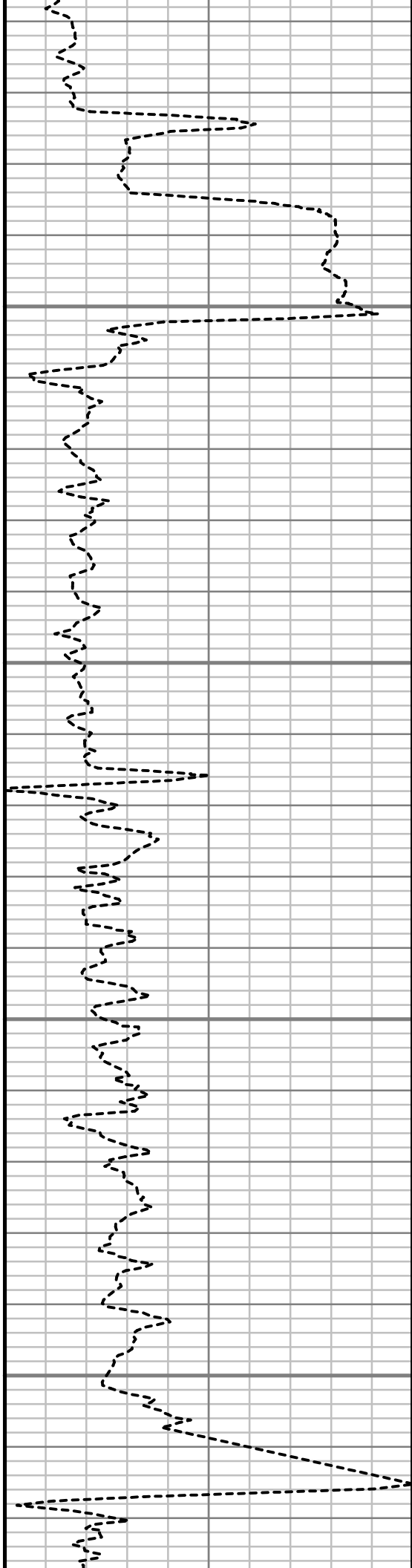


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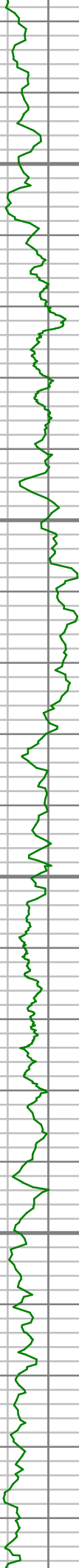
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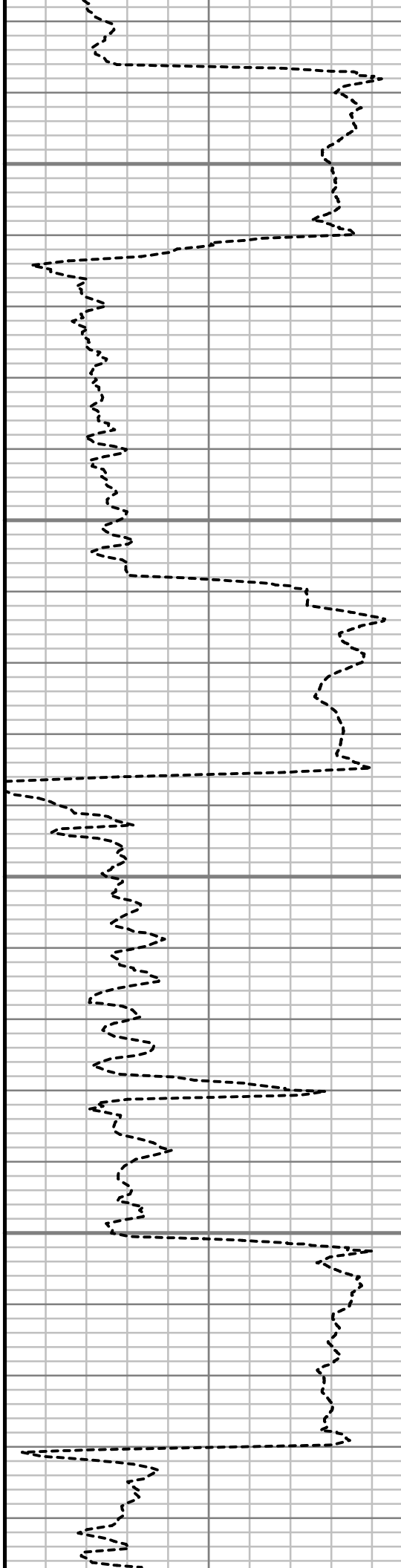


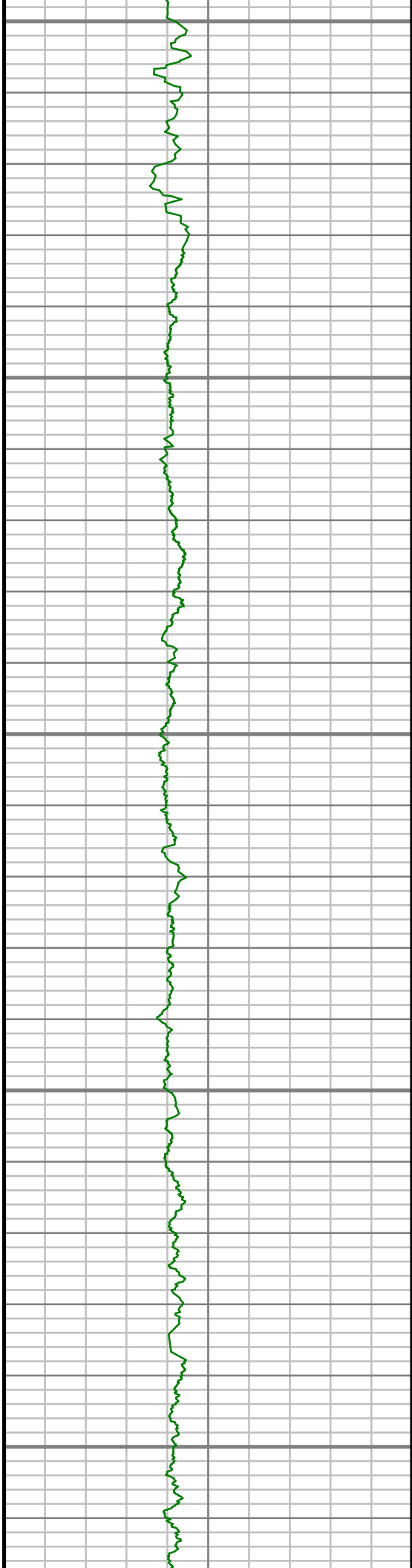
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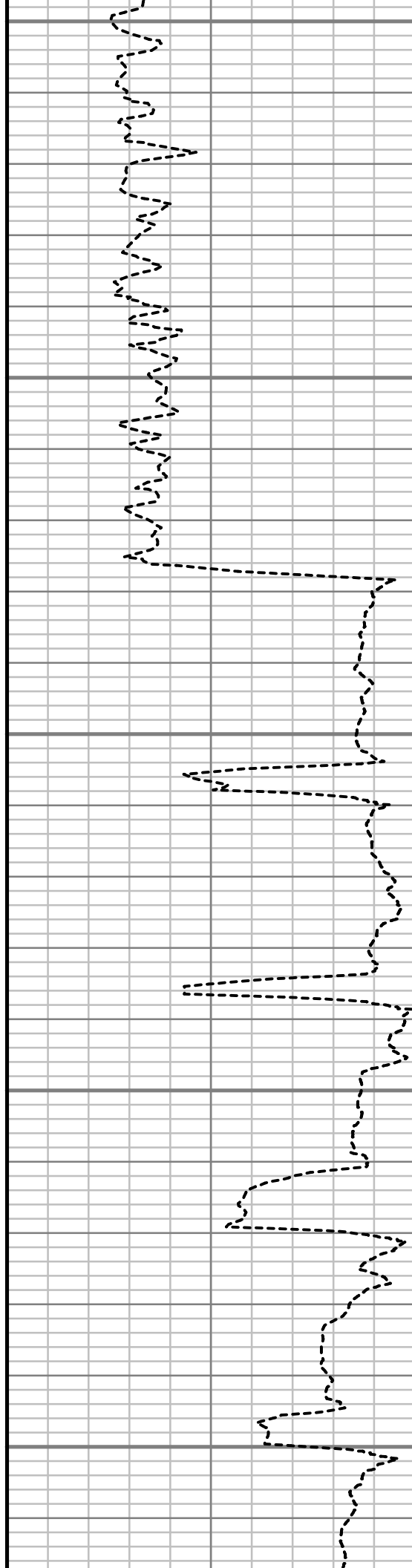
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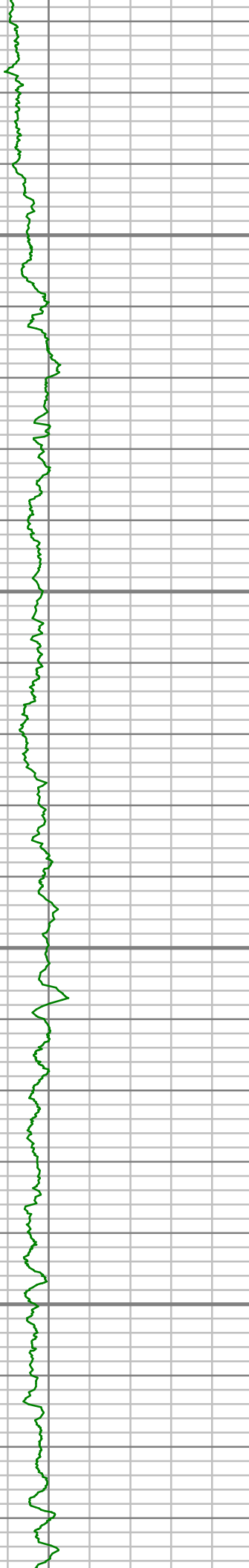
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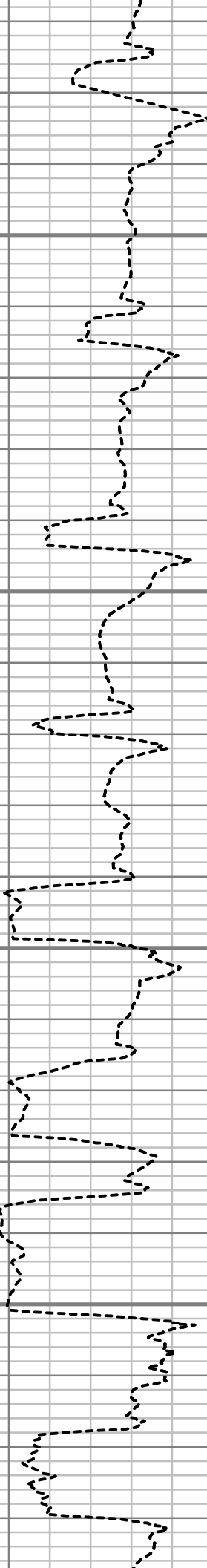


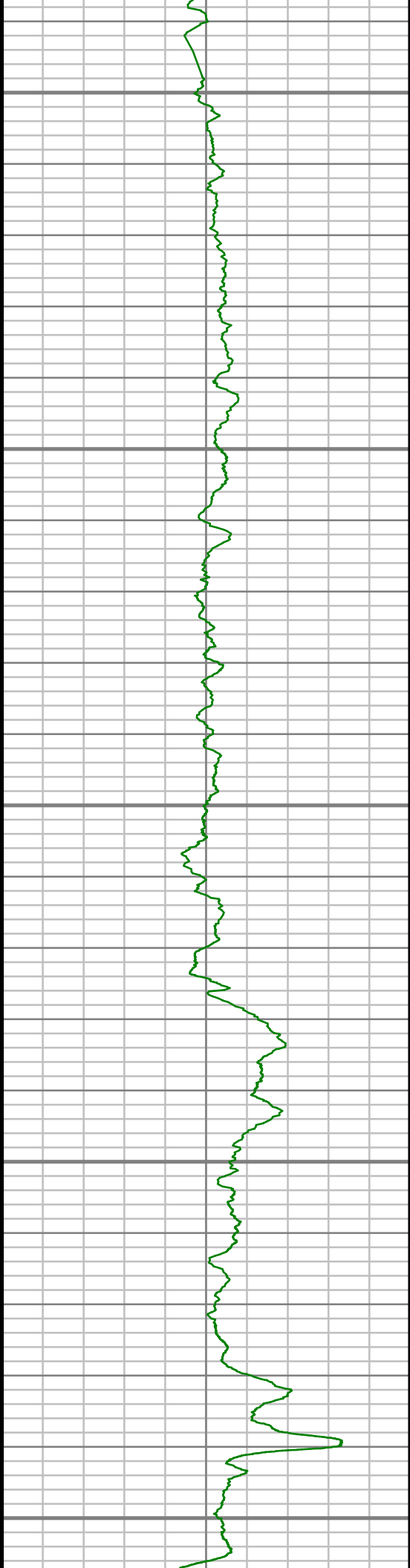
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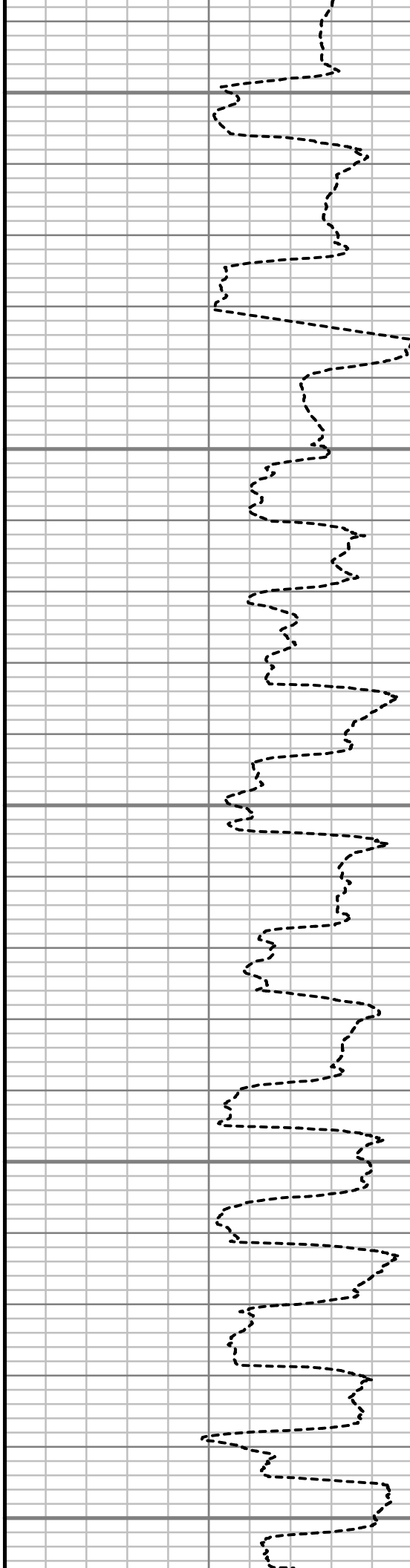
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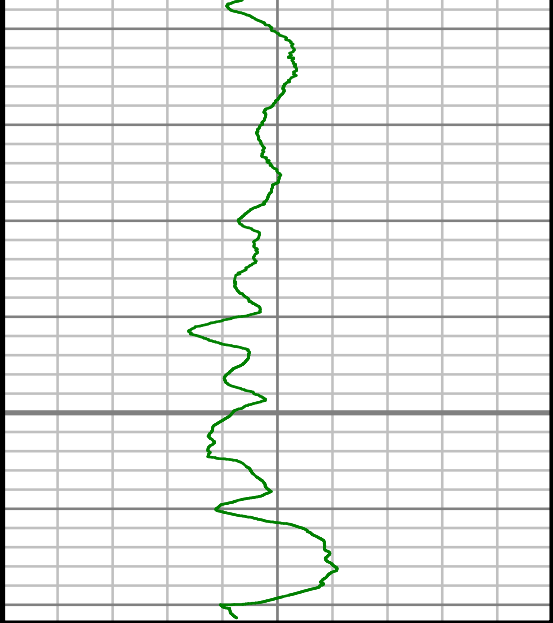
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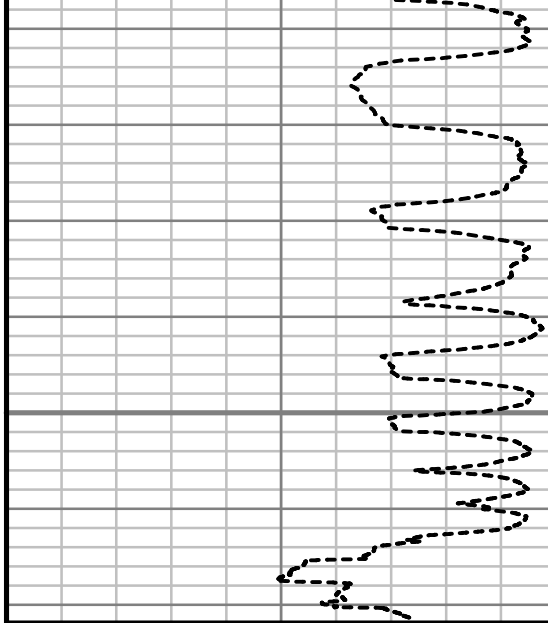


Gamma Ray (GR)

0 Unit = aapi 150

7300

TRUE VERTICAL DEPTH  
1:240 (ft)



Rate of Penetration (ROP)

450 Unit = ft/hr 0

Comments

# Survey Report

<b>Customer Name:</b>	ENCANA OIL & GAS (U.S.A.) INC						
<b>Site Name:</b>	RODMAN BRUNTZ						
<b>Well Name:</b>	RODMAN BRUNTZ 2A-26H						
<b>Survey:</b>	RODMAN BRUNTZ 2A-26H						
<b>Survey Date:</b>	12/16/2013						
<b>Magnetic Declination:</b>	8.53 deg						
<b>North Reference:</b>	True North						
<b>Calculation Method:</b>	Minimum Curvature						
<b>Section (VS) Ref:</b>	0.00N (ft), 0.00E (ft), 180.00Azim (deg)						
<b>MD</b> ft	<b>Inc</b> deg	<b>Azim</b> deg	<b>TVD</b> ft	<b>VS</b> ft	<b>+N/-S</b> ft	<b>+E/-W</b> ft	<b>DLS</b> 7100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
238.00	0.44	137.47	238.00	0.68	-0.68	0.62	0.19
331.00	0.38	135.03	331.00	1.16	-1.16	1.08	0.07
424.00	0.46	121.58	423.99	1.57	-1.57	1.62	0.13
517.00	1.19	306.42	516.99	1.20	-1.20	1.16	1.77
610.00	2.72	307.20	609.93	-0.71	0.71	-1.38	1.65
703.00	4.30	314.90	702.75	-4.51	4.51	-5.60	1.77
796.00	5.18	309.23	795.44	-9.62	9.62	-11.33	1.07
889.00	6.23	299.41	887.97	-14.76	14.76	-18.98	1.54

<b>MD</b> ft	<b>Inc</b> deg	<b>Azim</b> deg	<b>TVD</b> ft	<b>VS</b> ft	<b>+N/-S</b> ft	<b>+E/-W</b> ft	<b>DLS</b> 7100ft
982.00	7.43	292.30	980.31	-19.52	19.52	-28.94	1.57
1075.00	7.45	286.66	1072.53	-23.53	23.53	-40.28	0.79
1163.00	7.64	290.61	1159.77	-27.23	27.23	-51.22	0.62
1267.00	7.49	291.84	1262.87	-32.18	32.18	-63.98	0.21
1453.00	7.04	290.68	1447.38	-40.71	40.71	-85.88	0.26
1638.00	6.80	292.70	1631.03	-48.94	48.94	-106.59	0.18
1824.00	9.81	303.62	1815.07	-61.96	61.96	-129.95	1.82
2012.00	11.01	295.32	1999.98	-78.50	78.50	-159.51	1.02
2202.00	11.55	285.25	2186.33	-91.26	91.26	-194.25	1.07
2391.00	9.80	283.08	2372.06	-99.88	99.88	-228.18	0.95
2581.00	9.60	285.66	2559.34	-107.82	107.82	-259.18	0.25
2770.00	8.73	284.75	2745.93	-115.72	115.72	-288.22	0.47
2960.00	8.77	281.94	2933.72	-122.39	122.39	-316.32	0.23
3149.00	8.95	289.86	3120.47	-130.36	130.36	-344.24	0.65
3339.00	9.42	298.85	3308.05	-142.88	142.88	-371.74	0.79
3528.00	9.25	297.72	3494.54	-157.40	157.40	-398.74	0.13
3717.00	8.37	287.48	3681.32	-168.61	168.61	-425.32	0.95
3907.00	8.80	294.88	3869.20	-178.88	178.88	-451.71	0.62
4097.00	7.55	291.84	4057.26	-189.64	189.64	-476.48	0.70
4286.00	9.13	279.69	4244.27	-196.78	196.78	-502.79	1.25

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
4476.00	11.19	290.84	4431.30	-205.88	205.88	-534.88	1.49
4666.00	7.90	288.98	4618.65	-216.68	216.68	-564.46	1.74
4855.00	9.09	289.51	4805.57	-225.90	225.90	-590.82	0.63
5045.00	8.64	286.90	4993.30	-235.06	235.06	-618.63	0.32
5235.00	6.64	296.98	5181.61	-244.20	244.20	-642.09	1.26
5425.00	8.53	282.13	5369.96	-252.14	252.14	-665.66	1.42
5614.00	6.96	283.74	5557.23	-257.81	257.81	-690.48	0.84
5803.00	10.78	301.64	5743.97	-269.81	269.81	-716.67	2.47
5993.00	6.80	302.09	5931.70	-285.12	285.12	-741.34	2.10
6182.00	8.11	280.48	6119.13	-293.49	293.49	-763.94	1.62
6372.00	6.71	269.43	6307.55	-295.82	295.82	-788.21	1.05
6561.00	4.53	293.86	6495.66	-298.73	298.73	-806.09	1.69
6687.00	9.53	300.58	6620.67	-306.06	306.06	-819.64	4.01
6750.00	8.15	292.32	6682.92	-310.41	310.41	-828.26	2.98
6781.00	7.63	272.62	6713.64	-311.33	311.33	-832.35	8.83
6813.00	8.61	258.93	6745.32	-310.97	310.97	-836.82	6.76
6844.00	10.15	244.23	6775.91	-309.34	309.34	-841.56	9.14
6876.00	12.03	229.05	6807.31	-305.93	305.93	-846.62	10.80
6908.00	14.58	217.27	6838.46	-300.53	300.53	-851.58	11.60

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
6939.00	18.06	211.16	6868.21	-293.31	293.31	-856.43	12.51
6971.00	21.63	206.39	6898.30	-283.78	283.78	-861.62	12.23
7003.00	25.19	203.71	6927.67	-272.26	272.26	-866.98	11.61
7034.00	27.81	199.48	6955.41	-259.40	259.40	-872.05	10.42
7066.00	29.55	196.29	6983.48	-244.79	244.79	-876.75	7.22
7097.00	29.73	192.41	7010.43	-229.94	229.94	-880.54	6.21
7129.00	32.00	189.09	7037.90	-213.82	213.82	-883.59	8.87
7161.00	35.28	184.66	7064.54	-196.23	196.23	-885.68	12.77
7192.00	38.78	184.93	7089.28	-177.62	177.62	-887.24	11.33
7224.00	41.57	185.23	7113.73	-157.06	157.06	-889.07	8.74
7256.00	43.66	185.36	7137.28	-135.49	135.49	-891.07	6.54
7287.00	46.96	184.23	7159.08	-113.53	113.53	-892.91	10.94
7319.00	50.95	184.20	7180.08	-89.47	89.47	-894.68	12.47
7350.00	54.41	184.23	7198.88	-64.88	64.88	-896.49	11.16
7382.00	57.51	183.62	7216.79	-38.43	38.43	-898.31	9.83
7413.00	60.60	182.97	7232.72	-11.89	11.89	-899.83	10.13
7445.00	64.02	184.24	7247.59	16.39	-16.39	-901.62	11.24
7477.00	66.44	184.53	7260.99	45.35	-45.35	-903.84	7.60
7508.00	68.97	184.44	7272.75	73.95	-73.95	-906.09	8.15
7540.00	72.85	183.53	7283.22	104.11	-104.11	-908.19	12.45

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
7571.00	76.28	182.12	7291.46	133.95	-133.95	-909.66	11.88
7603.00	78.73	181.22	7298.39	165.18	-165.18	-910.57	8.15
7635.00	81.18	180.42	7303.97	196.68	-196.68	-911.02	8.03
7667.00	84.09	180.44	7308.07	228.41	-228.41	-911.26	9.10
7753.00	89.16	180.39	7313.13	314.23	-314.23	-911.88	5.90
7846.00	88.92	181.31	7314.68	407.21	-407.21	-913.25	1.02
7939.00	88.09	180.47	7317.11	500.16	-500.16	-914.70	1.27
8032.00	89.73	181.93	7318.88	593.12	-593.12	-916.65	2.36
8125.00	90.47	182.12	7318.72	686.06	-686.06	-919.93	0.82
8218.00	90.64	181.51	7317.82	779.01	-779.01	-922.88	0.68
8311.00	90.50	180.99	7316.90	871.98	-871.98	-924.91	0.58
8404.00	90.44	180.86	7316.13	964.97	-964.97	-926.41	0.16
8497.00	90.34	180.35	7315.51	1057.96	-1057.96	-927.39	0.56
8590.00	90.13	179.87	7315.13	1150.96	-1150.96	-927.57	0.56
8683.00	90.77	180.39	7314.39	1243.95	-1243.95	-927.78	0.89
8776.00	91.11	181.62	7312.86	1336.92	-1336.92	-929.41	1.37
8869.00	91.21	182.55	7310.98	1429.84	-1429.84	-932.79	1.01
8962.00	90.20	182.94	7309.84	1522.73	-1522.73	-937.24	1.16
9055.00	89.36	183.24	7310.19	1615.59	-1615.59	-942.25	0.96

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
9147.00	89.40	183.08	7311.19	1707.45	-1707.45	-947.32	0.18
9240.00	89.13	182.45	7312.38	1800.33	-1800.33	-951.81	0.73
9333.00	89.56	182.42	7313.45	1893.24	-1893.24	-955.76	0.47
9426.00	89.40	181.38	7314.29	1986.18	-1986.18	-958.84	1.13
9519.00	88.63	180.12	7315.90	2079.16	-2079.16	-960.06	1.59
9613.00	89.06	179.91	7317.79	2173.14	-2173.14	-960.08	0.52
9708.00	89.33	179.74	7319.13	2268.13	-2268.13	-959.79	0.33
9803.00	89.10	178.90	7320.43	2363.11	-2363.11	-958.67	0.92
9898.00	89.83	178.60	7321.32	2458.09	-2458.09	-956.60	0.84
9993.00	91.24	179.80	7320.43	2553.07	-2553.07	-955.28	1.94
10087.00	91.65	178.93	7318.07	2647.03	-2647.03	-954.24	1.02
10182.00	91.77	179.72	7315.23	2741.98	-2741.98	-953.12	0.84
10277.00	90.81	181.05	7313.09	2836.95	-2836.95	-953.75	1.73
10372.00	89.00	180.98	7313.26	2931.93	-2931.93	-955.44	1.91
10466.00	87.31	178.77	7316.29	3025.88	-3025.88	-955.24	2.95
10561.00	88.92	178.04	7319.41	3120.78	-3120.78	-952.60	1.87
10656.00	91.07	178.05	7319.42	3215.72	-3215.72	-949.36	2.26
10751.00	92.02	179.39	7316.85	3310.66	-3310.66	-947.24	1.72
10845.00	92.08	180.54	7313.49	3404.60	-3404.60	-947.18	1.23
10940.00	90.94	180.72	7310.98	3499.56	-3499.56	-948.23	1.22



MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
11035.00	90.10	180.78	7310.12	3594.55	-3594.55	-949.48	0.88
11130.00	88.66	181.69	7311.15	3689.51	-3689.51	-951.53	1.80
11224.00	87.72	180.56	7314.12	3783.45	-3783.45	-953.38	1.57
11319.00	89.19	180.22	7316.68	3878.41	-3878.41	-954.02	1.59
11414.00	90.50	179.49	7316.93	3973.40	-3973.40	-953.78	1.58
11509.00	89.97	180.41	7316.54	4068.40	-4068.40	-953.71	1.12
11604.00	90.70	179.70	7315.98	4163.40	-4163.40	-953.80	1.08
11699.00	89.66	179.80	7315.68	4258.40	-4258.40	-953.38	1.10
11794.00	90.57	179.31	7315.48	4353.39	-4353.39	-952.64	1.08
11889.00	90.13	180.91	7314.90	4448.39	-4448.39	-952.82	1.75
11984.00	90.50	179.61	7314.37	4543.38	-4543.38	-953.25	1.42
12078.00	89.43	180.94	7314.43	4637.38	-4637.38	-953.70	1.82
12173.00	89.20	180.35	7315.57	4732.36	-4732.36	-954.77	0.66
12268.00	90.50	180.41	7315.82	4827.36	-4827.36	-955.40	1.38
12363.00	91.01	179.32	7314.57	4922.35	-4922.35	-955.18	1.27
12457.00	90.74	180.91	7313.14	5016.34	-5016.34	-955.36	1.71
12552.00	89.03	181.80	7313.33	5111.30	-5111.30	-957.61	2.03
12647.00	88.96	180.82	7315.00	5206.26	-5206.26	-959.77	1.03
12742.00	89.43	180.45	7316.33	5301.25	-5301.25	-960.83	0.62

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
12836.00	90.94	180.81	7316.03	5395.24	-5395.24	-961.86	1.65
12931.00	88.86	179.89	7316.20	5490.23	-5490.23	-962.44	2.40
13026.00	89.23	179.68	7317.78	5585.22	-5585.22	-962.08	0.44
13120.00	90.07	179.58	7318.36	5679.21	-5679.21	-961.47	0.90
13215.00	90.81	179.64	7317.64	5774.21	-5774.21	-960.82	0.78
13310.00	90.61	179.09	7316.47	5869.19	-5869.19	-959.77	0.62
13404.00	90.91	178.73	7315.23	5963.17	-5963.17	-957.97	0.50
13499.00	89.97	179.23	7314.50	6058.15	-6058.15	-956.28	1.12
13593.00	90.30	179.40	7314.28	6152.14	-6152.14	-955.16	0.40
13688.00	89.09	179.85	7314.78	6247.14	-6247.14	-954.53	1.36
13783.00	89.33	179.87	7316.09	6342.13	-6342.13	-954.29	0.25
13878.00	90.00	179.87	7316.65	6437.12	-6437.12	-954.07	0.71
13972.00	90.84	179.82	7315.96	6531.12	-6531.12	-953.81	0.89
14067.00	89.90	179.45	7315.35	6626.12	-6626.12	-953.21	1.06
14162.00	90.24	178.84	7315.24	6721.10	-6721.10	-951.79	0.74
14257.00	89.87	177.98	7315.15	6816.07	-6816.07	-949.15	0.98
14352.00	89.70	177.28	7315.51	6910.98	-6910.98	-945.22	0.76
14412.00	90.17	177.32	7315.58	6970.92	-6970.92	-942.39	0.79

5" = 100' FEET TVD