



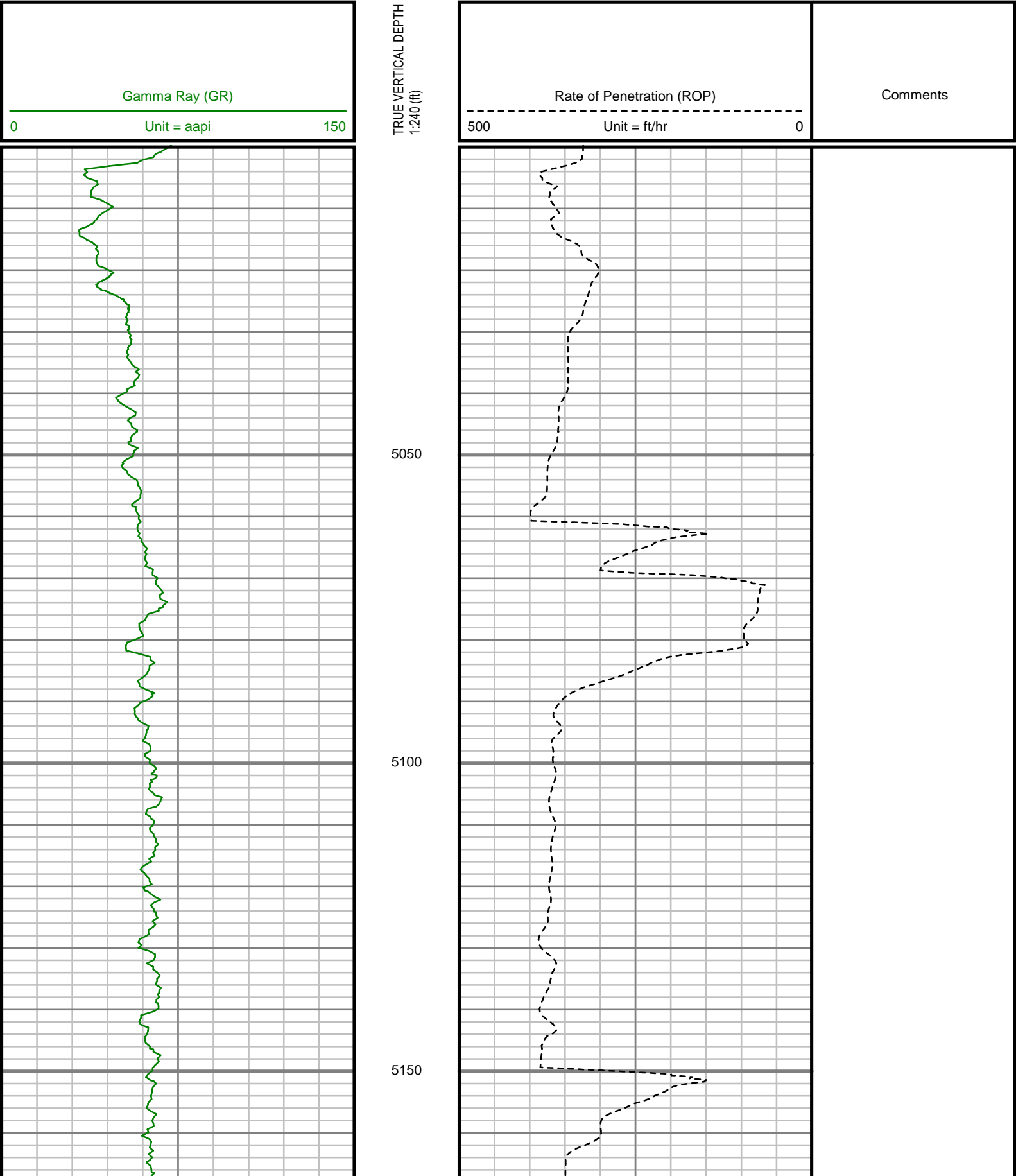
GAMMA RAY

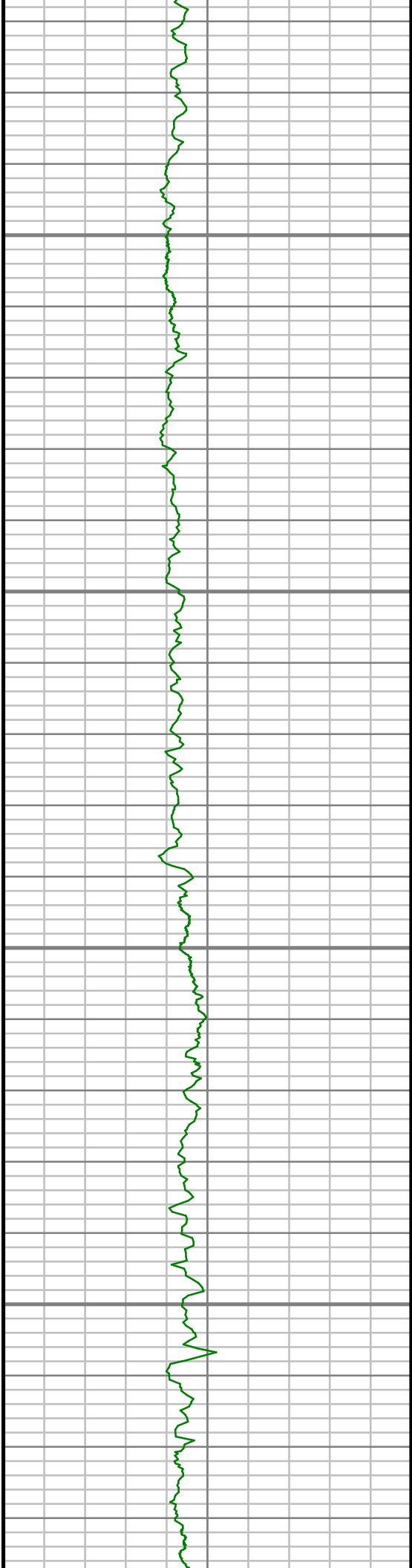
5" = 100' FEET TVD

COMPANY : ENCANA OIL & GAS (U.S.A.) INC WELL : SPRAGUE 3J-9H-N267 PRODUCTION FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-39275						COMPANY : ENCANA OIL & GAS (U.S.A.) INC WELL : SPRAGUE 3J-9H-N267 PRODUCTION FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-39275					
DEPTH REF. : RKB REF. HEIGHT : 28.500 ft GROUND LEVEL : 4982.000 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					
8.75	878	11331	11 - 80	878	8128						
7.875	11331	13210	80 - 95	8128	13210						
CASING RECORD											
CASING SIZE in	FROM ft	TO ft									
9.625	0	865				WELL LOCATION LAT:40°8'49.236"N LONG:104°53'53.916"W N:1296969.79 ft E:3168200.95 ft SEC:9 TWP:2N RANGE:67W DIRECTIONAL ROP					
DRILLING CO.: PATTERSON RLG: 272 LMD UNIT NO.: C70-EM 4#EDISTRICT-CASPER SPUD DATE: 03/21/2015 LMD START DATE: 04/29/2015 LMD END DATE: 05/13/2015 TOTAL DEPTH: 13210 ft											

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.

ENCANA OIL & GAS (U.S.A.) INC
SPRAGUE 3J-9H-N267 PRODUCTION
WATTENBERG FIELD
WELD COUNTY, COLORADO
05-123-39275



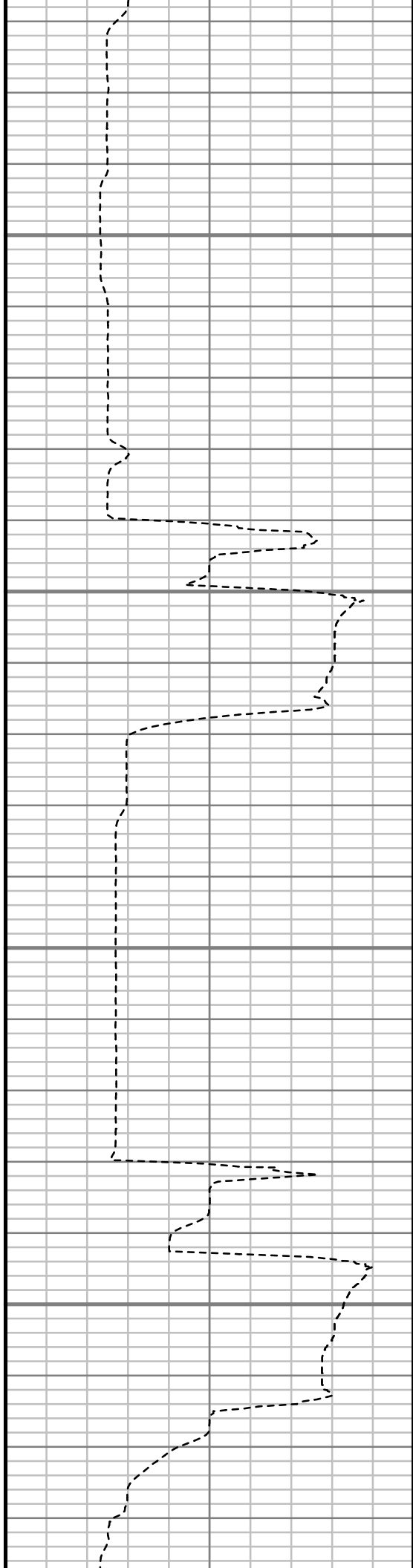


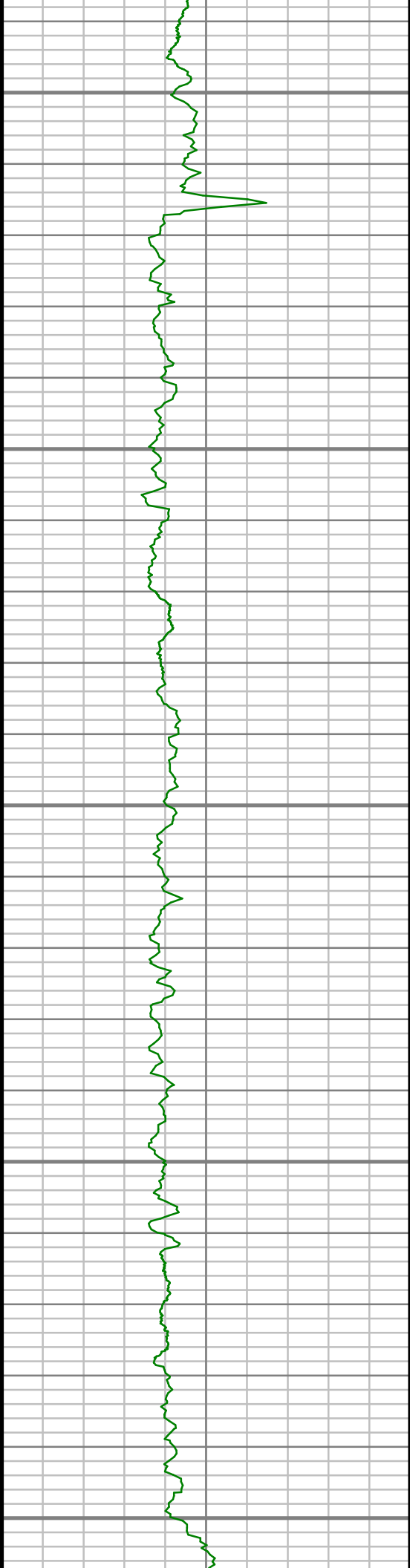
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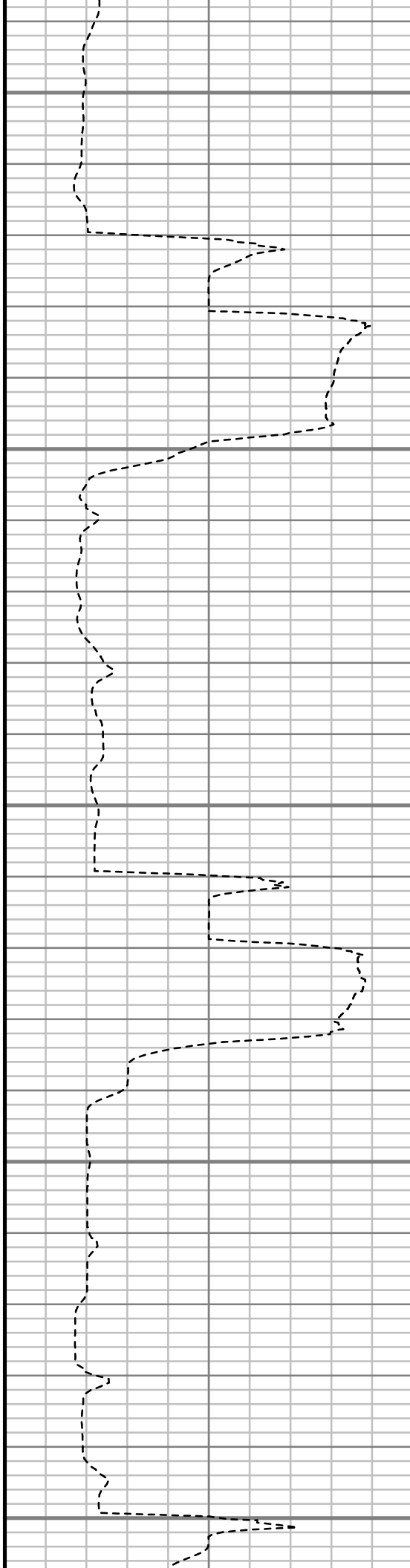
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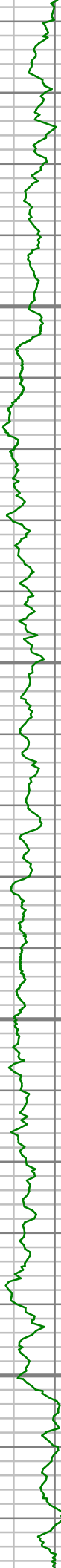
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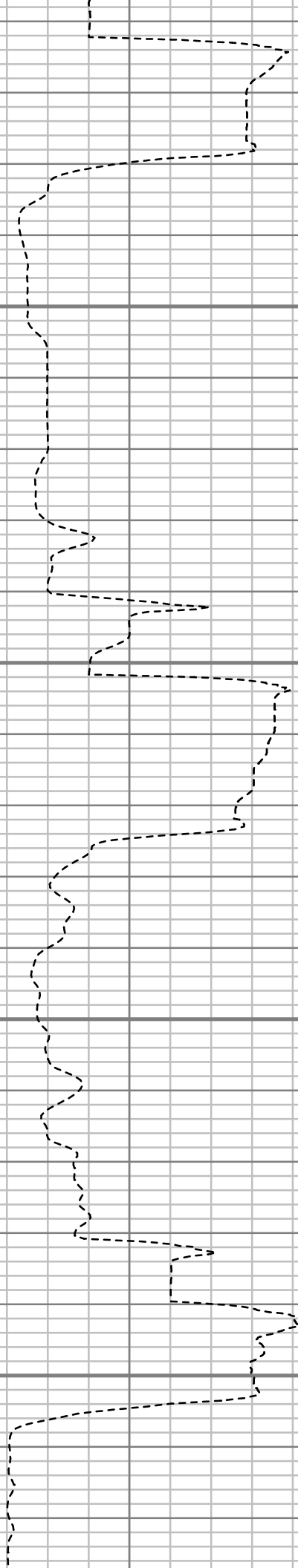


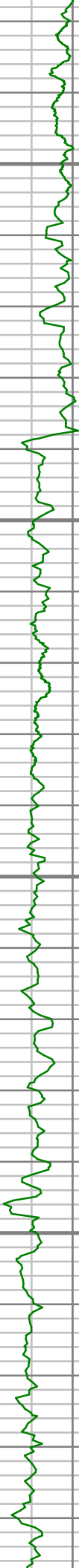
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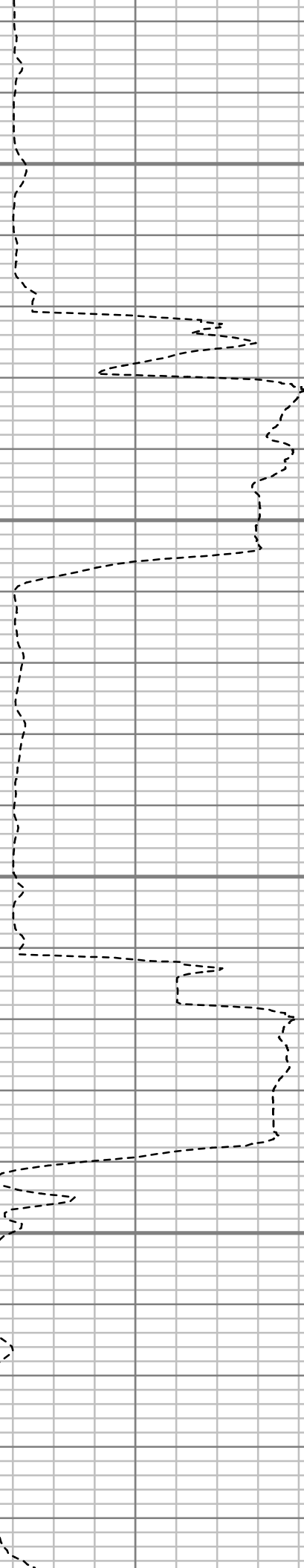


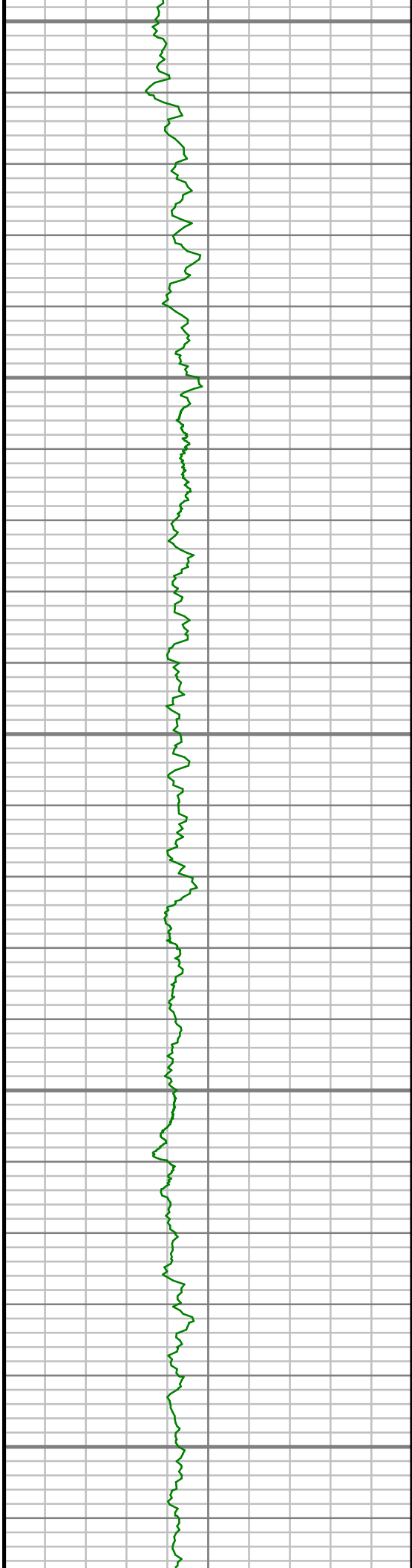
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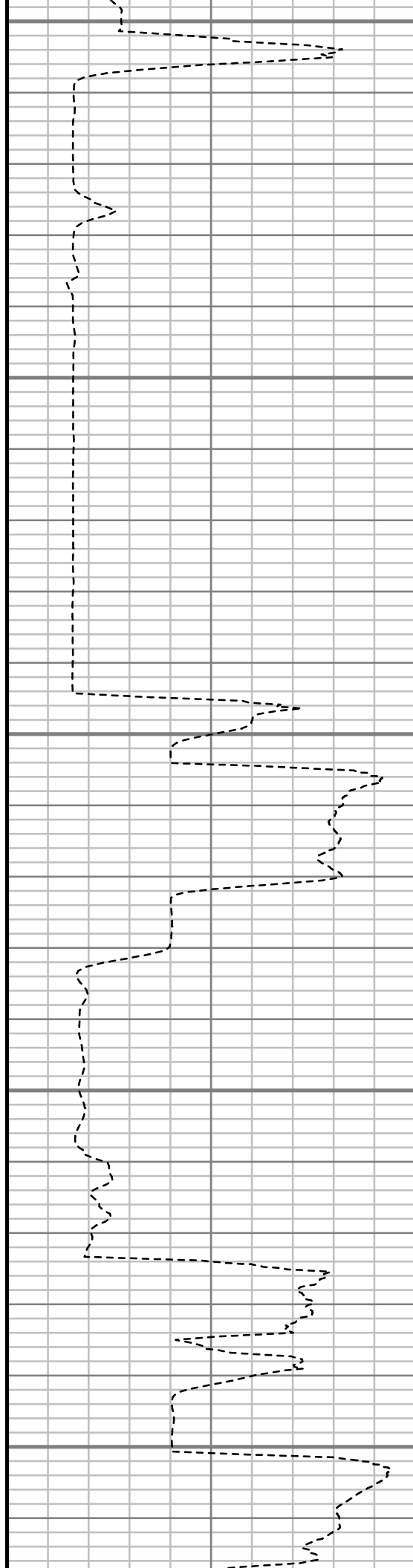
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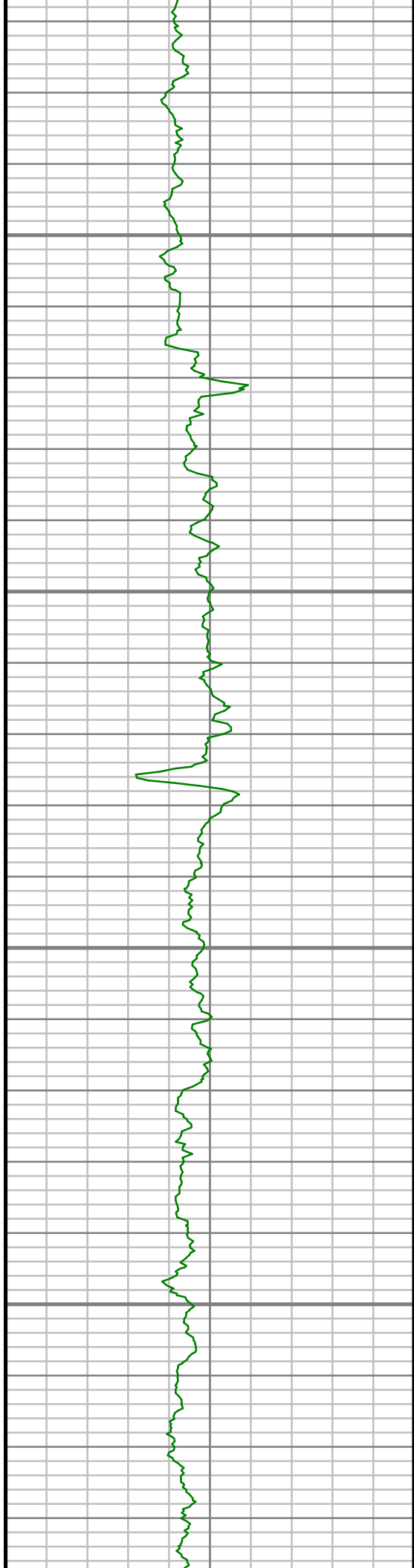
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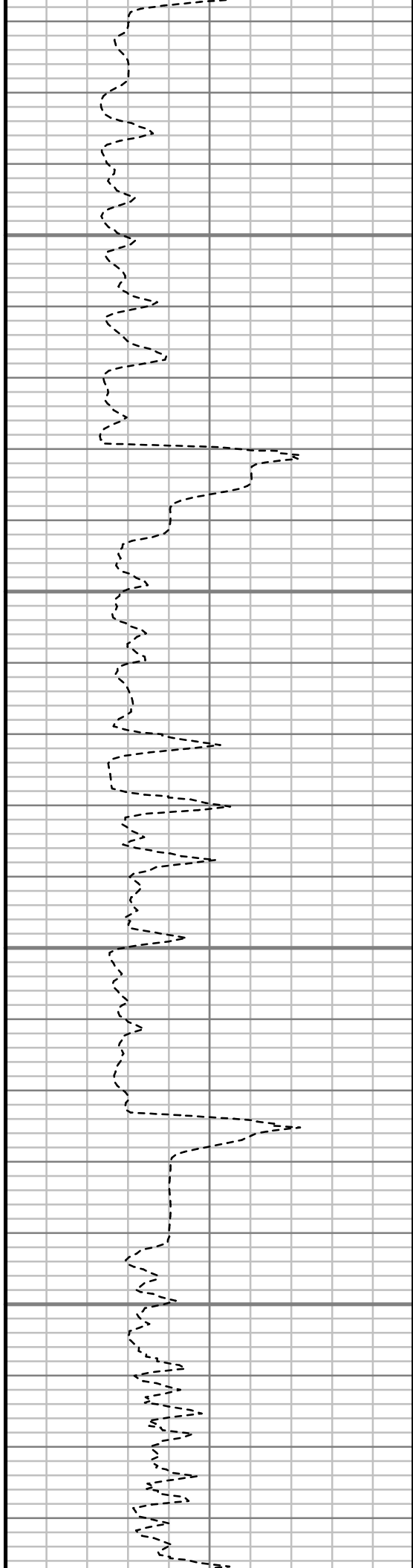


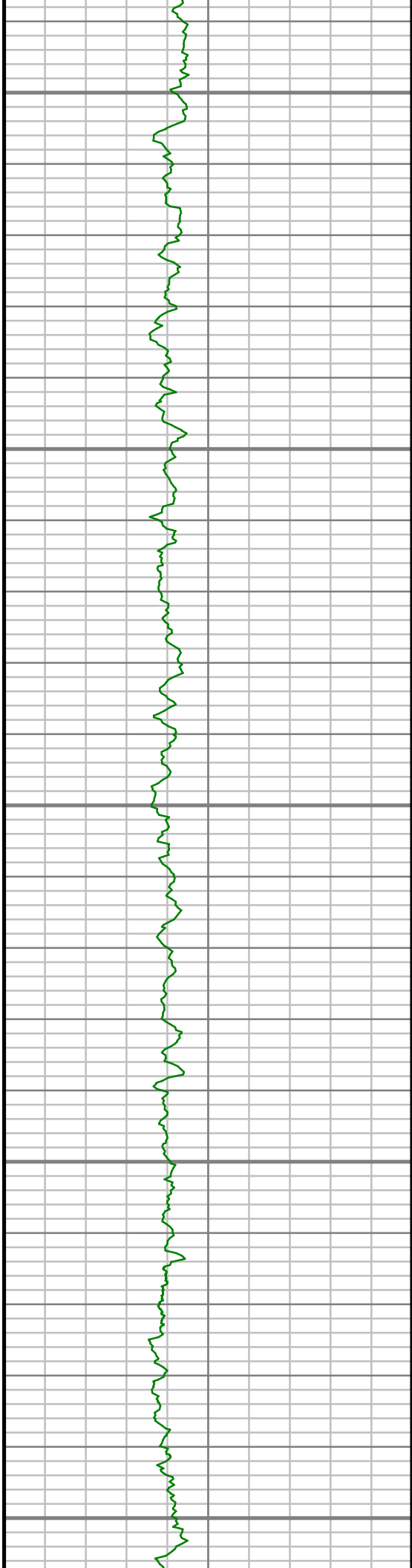
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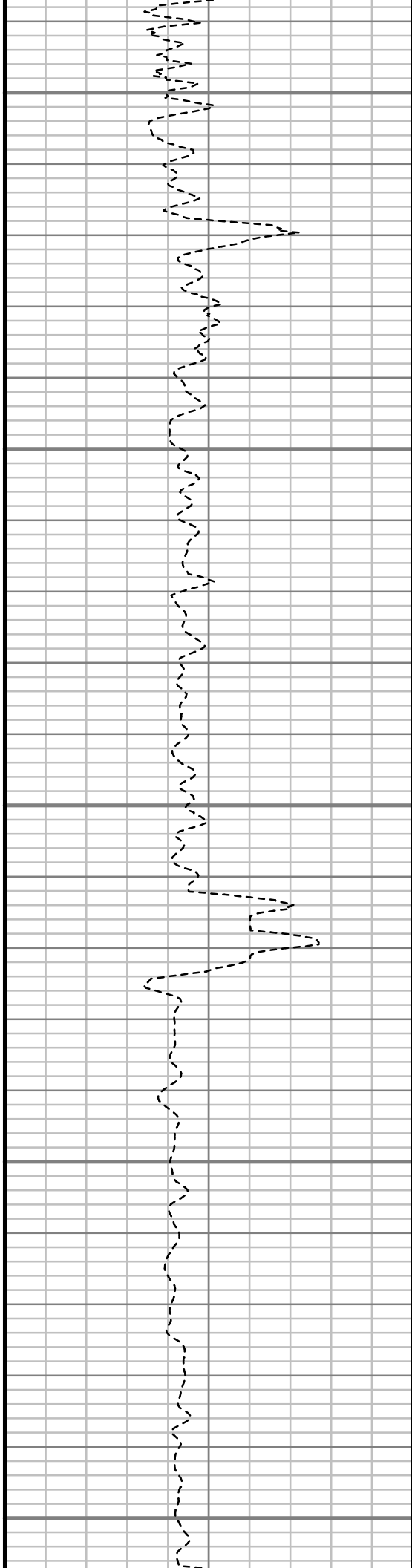
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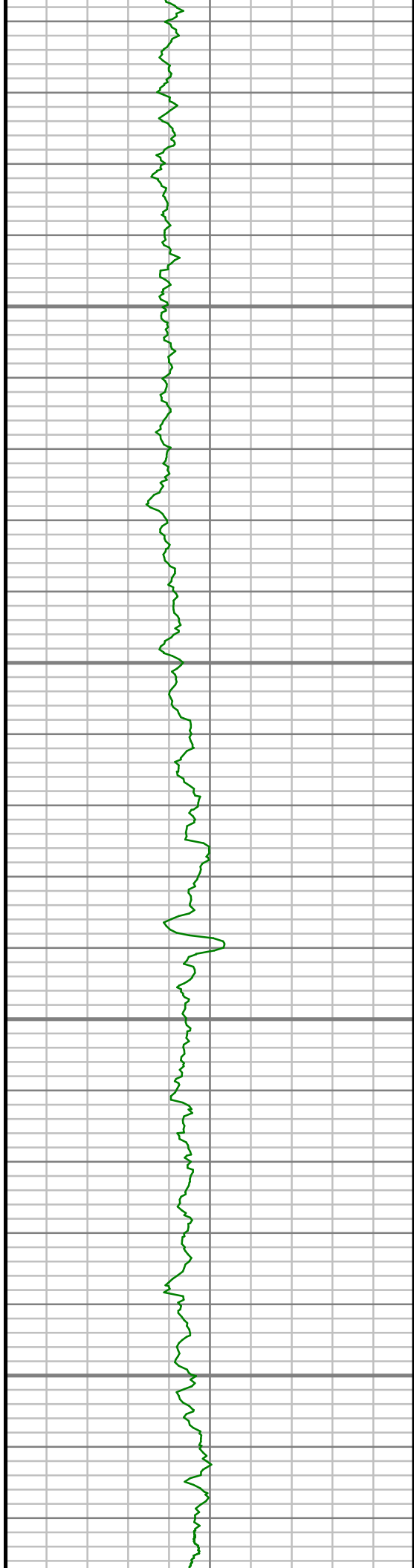
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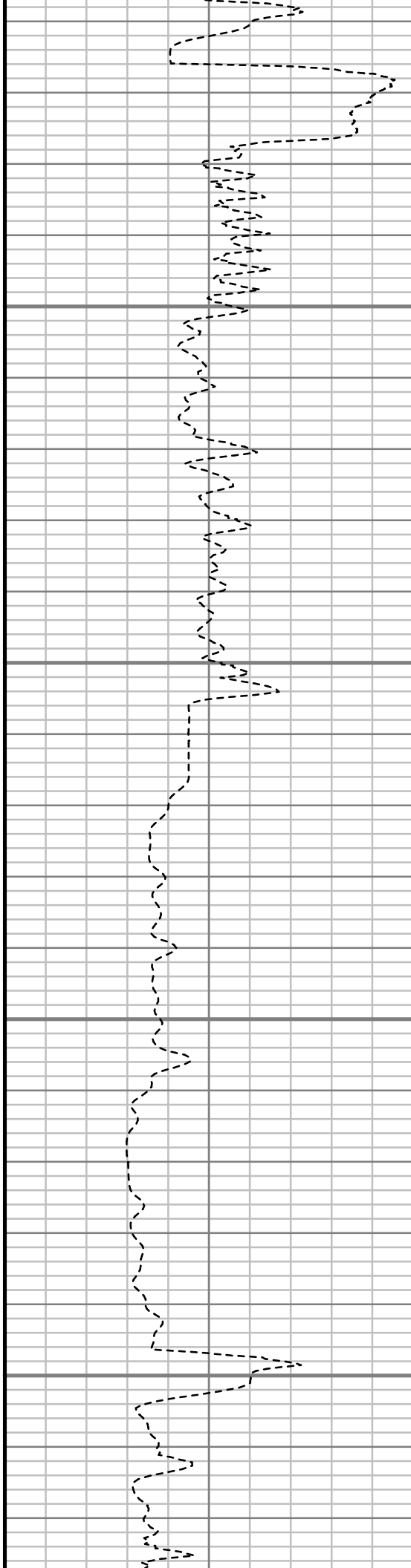


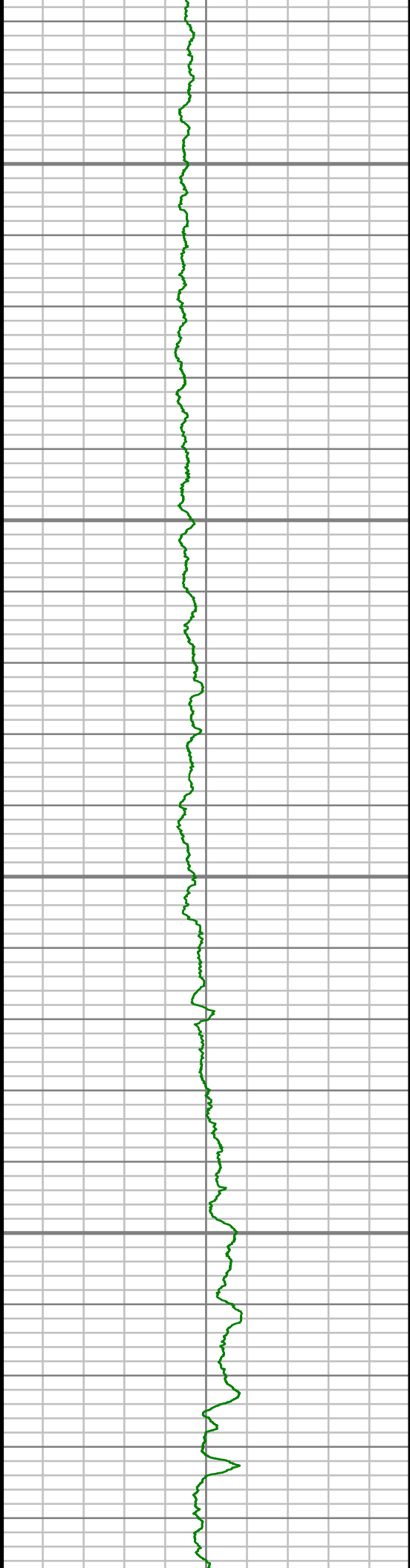
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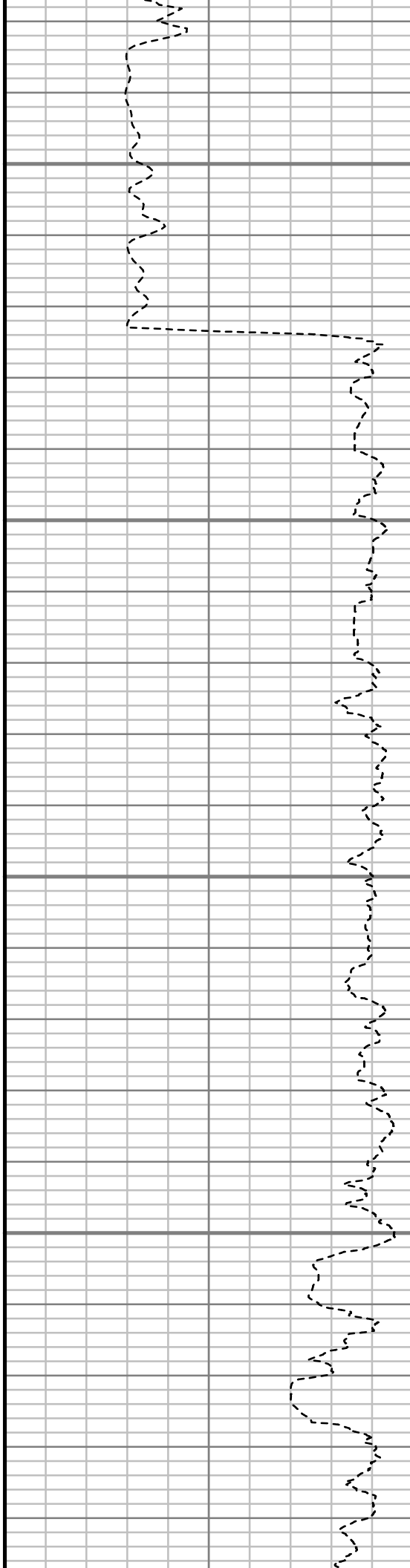


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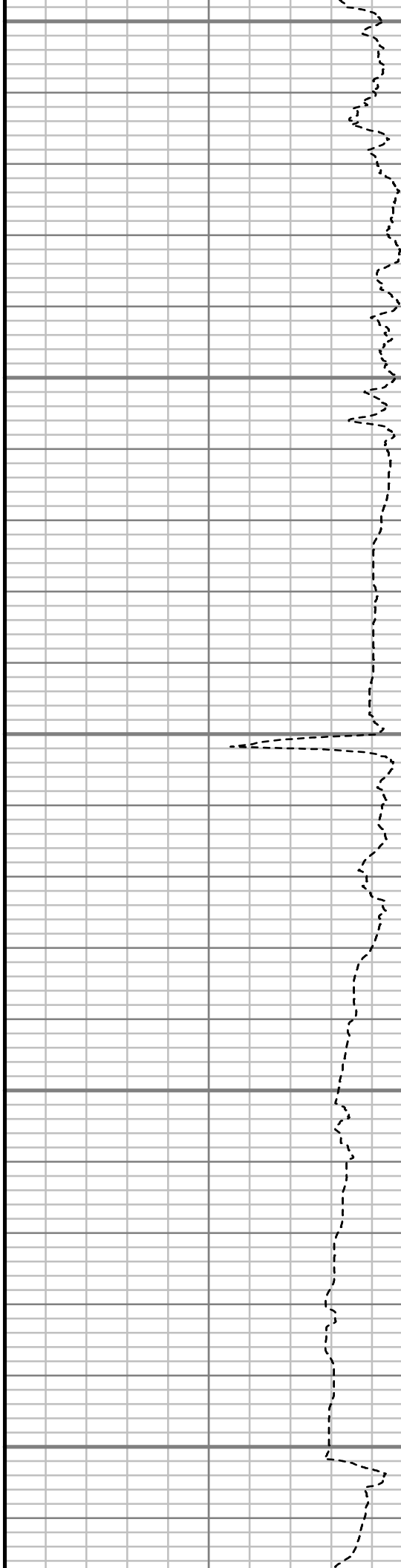
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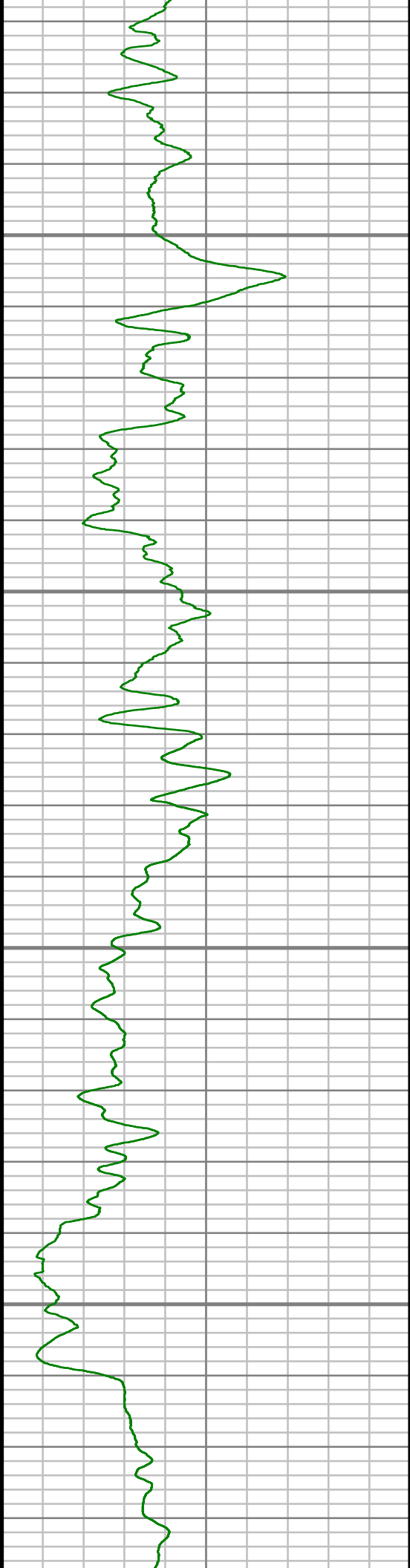
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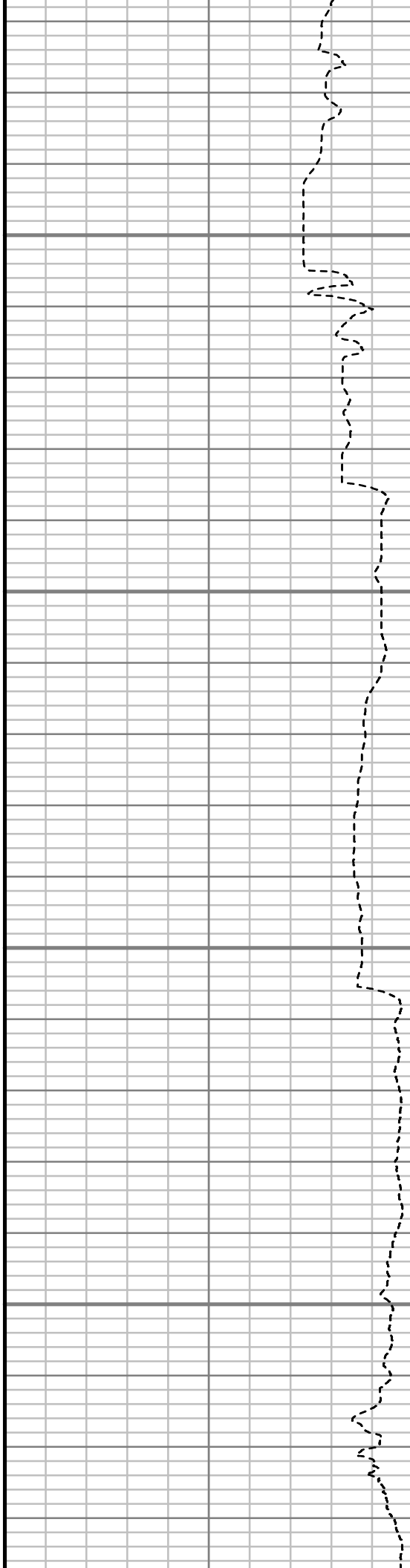


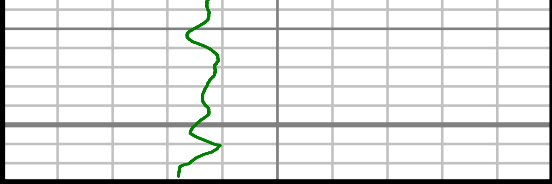
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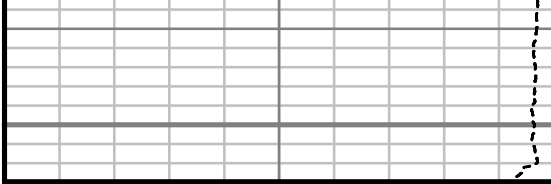




Gamma Ray (GR)		
0	Unit = aapi	150

7600

TRUE VERTICAL DEPTH
1:240 (ft)



Rate of Penetration (ROP)		
500	Unit = ft/hr	0

Comments



MWD Survey Report

Well Location	SPRAGUE
Well Name	SPRAGUE 3J-9H-N267 PRODUCTION
Survey Date	4/26/2015
Latitude	40°8'49.236"N
Longitude	104°53'53.916"W
Btotal	52453 nT
Dip	66.68 deg
Magnetic Declination	8.51 deg
North Reference	True North
Grid Correction	None
Depth Reference	RKB (28.50 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 18.28Azim (deg)
Operator(s)	J. GREGORY, J. PARISEE, M. SMITH

Well Notes

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
316.00	3.90	108.44	315.76	-0.03	-3.40	10.20	108.44	10.75	1.23
409.00	5.99	105.20	408.40	0.22	-5.67	17.88	107.60	18.76	2.27
503.00	7.74	101.58	501.73	1.22	-8.23	28.82	105.94	29.97	1.92
596.00	9.53	105.44	593.67	2.34	-11.54	42.37	105.23	43.92	2.02
690.00	10.80	106.01	686.19	3.07	-16.04	58.34	105.37	60.51	1.36
783.00	11.11	102.40	777.50	4.33	-20.37	75.47	105.10	78.17	0.81
818.00	11.17	101.54	811.84	5.08	-21.77	82.08	104.85	84.92	0.50
903.00	12.10	99.23	895.09	7.44	-24.84	98.94	104.10	102.01	1.22
996.00	12.97	95.85	985.88	11.22	-27.47	118.94	103.01	122.07	1.22
1090.00	13.88	94.02	1077.31	16.27	-29.34	140.68	101.78	143.70	1.07
1183.00	16.91	96.70	1166.96	21.73	-31.70	165.24	100.86	168.26	3.35
1277.00	19.96	98.90	1256.13	27.09	-35.77	194.68	100.41	197.94	3.32
1370.00	19.76	101.44	1343.60	31.55	-41.35	225.77	100.38	229.53	0.95
1464.00	19.80	105.44	1432.06	34.23	-48.74	256.69	100.75	261.28	1.44
1558.00	19.72	103.86	1520.53	36.24	-56.78	287.43	101.17	292.98	0.57
1654.00	19.16	105.79	1611.06	38.18	-64.94	318.31	101.53	324.87	0.88
1748.00	18.95	102.87	1699.91	40.29	-72.54	348.03	101.77	355.51	1.04
1843.00	19.42	102.57	1789.63	43.31	-79.41	378.48	101.85	386.72	0.51

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
1937.00	19.07	108.75	1878.39	44.74	-87.75	408.28	102.13	417.60	2.20
2032.00	18.69	107.72	1968.28	44.76	-97.37	437.47	102.55	448.18	0.54
2127.00	19.59	108.87	2058.03	44.74	-107.16	467.04	102.92	479.18	1.03
2221.00	18.91	107.00	2146.77	44.92	-116.71	496.52	103.23	510.05	0.98
2316.00	19.60	107.97	2236.46	45.35	-126.12	526.39	103.47	541.29	0.80
2410.00	19.71	108.39	2324.98	45.41	-135.99	556.43	103.73	572.81	0.19
2505.00	18.75	106.38	2414.68	45.89	-145.34	586.29	103.92	604.03	1.23
2601.00	18.87	108.70	2505.55	46.28	-154.67	615.80	104.10	634.93	0.79
2695.00	20.33	111.82	2594.10	45.16	-165.62	645.36	104.39	666.28	1.91
2789.00	20.77	108.39	2682.12	44.12	-176.95	676.35	104.66	699.11	1.36
2885.00	20.79	109.46	2771.88	43.74	-188.00	708.56	104.86	733.08	0.40
2979.00	19.80	107.23	2860.04	43.69	-198.27	739.50	105.01	765.62	1.34
3074.00	19.09	105.94	2949.63	44.62	-207.30	769.81	105.07	797.23	0.87
3168.00	18.84	105.65	3038.52	45.94	-215.62	799.20	105.10	827.78	0.28
3262.00	17.56	105.15	3127.82	47.41	-223.42	827.51	105.11	857.14	1.37
3357.00	19.45	105.15	3217.90	49.06	-231.30	856.62	105.11	887.29	1.99
3451.00	19.92	106.95	3306.41	50.29	-240.06	887.04	105.14	918.95	0.81
3547.00	18.63	105.97	3397.02	51.29	-249.05	917.43	105.19	950.64	1.38

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
3642.00	18.24	103.42	3487.15	53.16	-256.67	946.49	105.17	980.68	0.94
3737.00	18.56	104.37	3577.29	55.45	-263.87	975.60	105.13	1010.66	0.46
3831.00	19.05	104.99	3666.27	57.35	-271.56	1004.92	105.12	1040.96	0.56
3926.00	19.18	108.90	3756.03	58.07	-280.62	1034.66	105.17	1072.04	1.35
4021.00	19.70	108.92	3845.61	57.73	-290.87	1064.58	105.28	1103.60	0.54
4115.00	18.82	108.23	3934.35	57.57	-300.75	1093.97	105.37	1134.56	0.97
4210.00	18.49	106.65	4024.36	58.01	-309.85	1122.96	105.43	1164.92	0.63
4304.00	19.89	104.85	4113.14	59.39	-318.22	1152.70	105.43	1195.81	1.61
4398.00	19.63	105.45	4201.60	61.13	-326.53	1183.37	105.43	1227.59	0.35
4493.00	20.06	105.47	4290.96	62.72	-335.12	1214.45	105.43	1259.84	0.45
4588.00	19.20	104.83	4380.44	64.45	-343.47	1245.25	105.42	1291.75	0.93
4682.00	19.38	103.87	4469.16	66.58	-351.16	1275.34	105.39	1322.80	0.39
4776.00	19.94	104.81	4557.68	68.75	-359.00	1305.98	105.37	1354.42	0.68
4871.00	21.24	103.72	4646.61	71.11	-367.22	1338.36	105.34	1387.83	1.43
4965.00	20.29	103.26	4734.50	73.89	-374.99	1370.77	105.30	1421.14	1.03
5060.00	18.20	102.01	4824.19	76.95	-381.86	1401.32	105.24	1452.41	2.24
5154.00	18.56	103.33	4913.40	79.85	-388.36	1430.23	105.19	1482.02	0.59
5249.00	18.94	103.31	5003.35	82.49	-395.39	1459.94	105.15	1512.54	0.40

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
5344.00	20.14	106.47	5092.88	84.34	-403.58	1490.63	105.15	1544.30	1.69
5439.00	18.27	105.49	5182.59	85.58	-412.20	1520.67	105.17	1575.55	1.99
5533.00	17.40	109.47	5272.08	86.00	-420.82	1548.13	105.21	1604.30	1.60
5627.00	17.29	108.79	5361.80	85.59	-430.00	1574.60	105.27	1632.26	0.25
5722.00	18.40	106.12	5452.23	86.02	-438.72	1602.37	105.31	1661.34	1.45
5817.00	18.19	105.25	5542.43	87.37	-446.78	1631.07	105.32	1691.16	0.36
5912.00	17.25	101.60	5632.93	89.79	-453.51	1659.17	105.29	1720.04	1.53
6006.00	17.32	106.55	5722.69	91.84	-460.30	1686.24	105.27	1747.93	1.56
6101.00	16.95	107.55	5813.47	92.44	-468.50	1713.00	105.30	1775.91	0.49
6195.00	17.73	107.17	5903.20	92.90	-476.86	1739.74	105.33	1803.91	0.83
6290.00	18.02	107.77	5993.61	93.31	-485.61	1767.56	105.36	1833.05	0.36
6387.00	14.52	104.61	6086.71	94.22	-493.26	1793.62	105.38	1860.21	3.72
6482.00	13.72	102.46	6178.84	96.13	-498.70	1816.15	105.35	1883.37	1.00
6577.00	12.08	105.30	6271.44	97.78	-503.75	1836.74	105.34	1904.57	1.86
6672.00	9.99	103.51	6364.68	98.99	-508.30	1854.34	105.33	1922.74	2.22
6767.00	8.06	97.74	6458.50	100.89	-511.12	1868.95	105.30	1937.59	2.24
6862.00	6.34	94.09	6552.75	103.39	-512.40	1880.79	105.24	1949.34	1.87
6957.00	4.90	89.89	6647.29	105.96	-512.76	1890.08	105.18	1958.40	1.58

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
7052.00	3.12	86.67	6742.06	108.19	-512.60	1896.71	105.12	1964.76	1.88
7147.00	2.24	85.95	6836.95	109.85	-512.32	1901.15	105.08	1968.97	0.92
7241.00	1.63	86.40	6930.90	111.04	-512.11	1904.31	105.05	1971.97	0.65
7336.00	2.93	347.12	7025.85	113.63	-509.65	1905.12	104.98	1972.11	3.77
7431.00	5.58	17.01	7120.59	120.32	-502.87	1905.93	104.78	1971.15	3.54
7517.00	8.40	19.33	7205.94	130.78	-492.95	1909.23	104.48	1971.84	3.30
7611.00	18.38	3.44	7297.30	152.03	-471.62	1912.40	103.85	1969.69	11.22
7706.00	26.95	356.91	7384.89	186.62	-435.10	1912.13	102.82	1961.01	9.39
7797.00	37.45	354.17	7461.79	231.21	-386.84	1908.20	101.46	1947.02	11.64
7894.00	51.88	350.44	7530.61	292.20	-319.51	1898.82	99.55	1925.52	15.12
7989.00	67.46	349.37	7578.44	364.10	-239.04	1884.44	97.23	1899.54	16.43
8065.00	80.94	351.73	7599.09	428.70	-167.07	1872.52	95.10	1879.95	17.98
8127.00	88.35	355.22	7604.87	484.69	-105.79	1865.52	93.25	1868.51	13.21
8222.00	92.89	355.88	7603.84	572.28	-11.11	1858.14	90.34	1858.17	4.82
8317.00	94.57	358.03	7597.66	660.58	83.55	1853.10	87.42	1854.98	2.87
8412.00	95.17	358.52	7589.59	749.52	178.16	1850.25	84.50	1858.81	0.82
8508.00	93.22	0.10	7582.56	840.06	273.89	1849.10	81.57	1869.27	2.61
8603.00	92.85	0.29	7577.53	930.24	368.75	1849.42	78.72	1885.83	0.44

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
8698.00	91.01	1.04	7574.33	1020.73	463.69	1850.52	75.93	1907.73	2.10
8793.00	92.18	0.83	7571.68	1111.37	558.64	1852.08	73.22	1934.49	1.25
8888.00	91.14	1.33	7568.93	1202.08	653.58	1853.87	70.58	1965.70	1.21
8983.00	88.32	1.77	7569.38	1293.05	748.53	1856.44	68.04	2001.67	3.01
9079.00	90.94	0.78	7569.99	1384.84	844.50	1858.58	65.56	2041.44	2.92
9174.00	90.77	1.11	7568.57	1475.52	939.47	1860.14	63.20	2083.92	0.40
9269.00	88.76	1.17	7568.96	1566.29	1034.45	1862.03	60.95	2130.08	2.12
9364.00	88.56	1.67	7571.19	1657.19	1129.39	1864.39	58.79	2179.79	0.57
9459.00	89.66	2.94	7572.66	1748.50	1224.30	1868.21	56.76	2233.64	1.77
9554.00	90.13	2.59	7572.83	1840.04	1319.19	1872.80	54.84	2290.77	0.62
9649.00	90.64	2.85	7572.19	1931.56	1414.08	1877.30	53.01	2350.30	0.60
9744.00	90.94	1.88	7570.88	2022.90	1508.99	1881.22	51.27	2411.65	1.07
9839.00	91.11	1.82	7569.18	2114.01	1603.93	1884.29	49.60	2474.49	0.19
9934.00	91.14	0.92	7567.32	2204.88	1698.88	1886.56	48.00	2538.76	0.94
10030.00	91.01	0.45	7565.51	2296.38	1794.85	1887.70	46.44	2604.79	0.52
10125.00	90.64	359.56	7564.15	2386.57	1889.84	1887.70	44.97	2671.13	1.01
10220.00	89.53	359.78	7564.01	2476.60	1984.84	1887.15	43.55	2738.79	1.19
10315.00	89.73	359.37	7564.62	2566.58	2079.84	1886.45	42.21	2807.92	0.48

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
10410.00	89.70	358.15	7565.10	2656.12	2174.81	1884.40	40.91	2877.63	1.28
10505.00	91.11	358.19	7564.43	2745.33	2269.76	1881.37	39.65	2948.11	1.49
10600.00	88.52	357.99	7564.73	2834.48	2364.70	1878.21	38.46	3019.84	2.73
10696.00	88.32	358.05	7567.38	2924.51	2460.60	1874.90	37.31	3093.51	0.22
10791.00	89.13	357.71	7569.50	3013.53	2555.51	1871.39	36.22	3167.45	0.92
10886.00	89.87	357.26	7570.33	3102.34	2650.42	1867.22	35.16	3242.10	0.91
10981.00	90.44	357.01	7570.08	3190.94	2745.30	1862.47	34.15	3317.45	0.65
11076.00	90.40	358.50	7569.39	3279.91	2840.22	1858.76	33.20	3394.38	1.56
11171.00	90.30	358.22	7568.80	3369.22	2935.18	1856.04	32.31	3472.77	0.31
11266.00	91.48	358.64	7567.33	3458.56	3030.13	1853.43	31.45	3552.03	1.31
11356.00	90.87	359.84	7565.48	3543.62	3120.10	1852.24	30.70	3628.47	1.50
11451.00	89.83	359.79	7564.90	3633.73	3215.10	1851.94	29.94	3710.33	1.10
11546.00	90.17	359.85	7564.90	3723.84	3310.10	1851.64	29.22	3792.80	0.36
11641.00	89.29	359.55	7565.34	3813.89	3405.09	1851.14	28.53	3875.74	0.97
11736.00	89.53	359.15	7566.32	3903.74	3500.08	1850.05	27.86	3958.95	0.49
11831.00	89.83	358.54	7566.85	3993.32	3595.06	1848.14	27.21	4042.29	0.71
11926.00	90.44	357.43	7566.63	4082.43	3690.00	1844.80	26.56	4125.45	1.33
12021.00	90.27	355.69	7566.04	4170.68	3784.82	1839.10	25.92	4207.99	1.84

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
12116.00	90.57	355.31	7565.35	4258.26	3879.53	1831.65	25.27	4290.18	0.52
12211.00	90.67	354.64	7564.32	4345.51	3974.16	1823.32	24.65	4372.46	0.71
12307.00	91.04	353.75	7562.88	4433.14	4069.65	1813.62	24.02	4455.48	1.00
12402.00	89.90	353.75	7562.10	4519.56	4164.08	1803.28	23.42	4537.77	1.20
12497.00	90.03	352.77	7562.16	4605.64	4258.43	1792.13	22.82	4620.16	1.04
12592.00	90.23	352.66	7561.94	4691.34	4352.66	1780.08	22.24	4702.58	0.24
12687.00	90.40	351.73	7561.41	4776.66	4446.77	1767.17	21.67	4785.05	0.99
12782.00	90.74	350.56	7560.46	4861.19	4540.63	1752.54	21.10	4867.11	1.28
12878.00	90.37	351.71	7559.53	4946.61	4635.48	1737.75	20.55	4950.50	1.27
12973.00	90.97	351.81	7558.42	5031.61	4729.49	1724.13	20.03	5033.96	0.64
13068.00	91.31	350.49	7556.53	5116.14	4823.34	1709.52	19.52	5117.33	1.43
13145.00	91.68	350.54	7554.52	5184.25	4899.26	1696.84	19.10	5184.79	0.48

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft

5" = 100' FEET TVD