



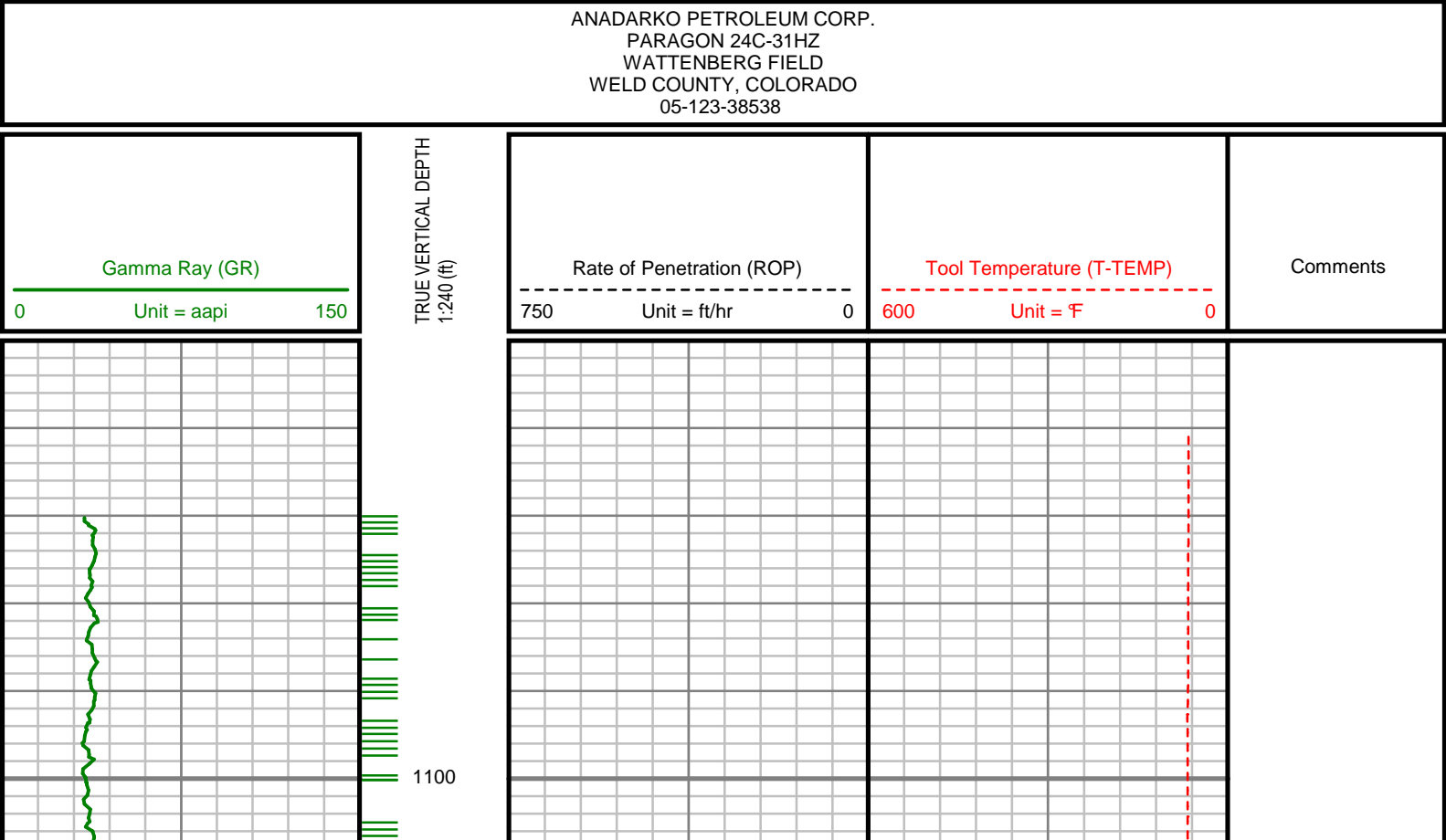
GAMMA RAY

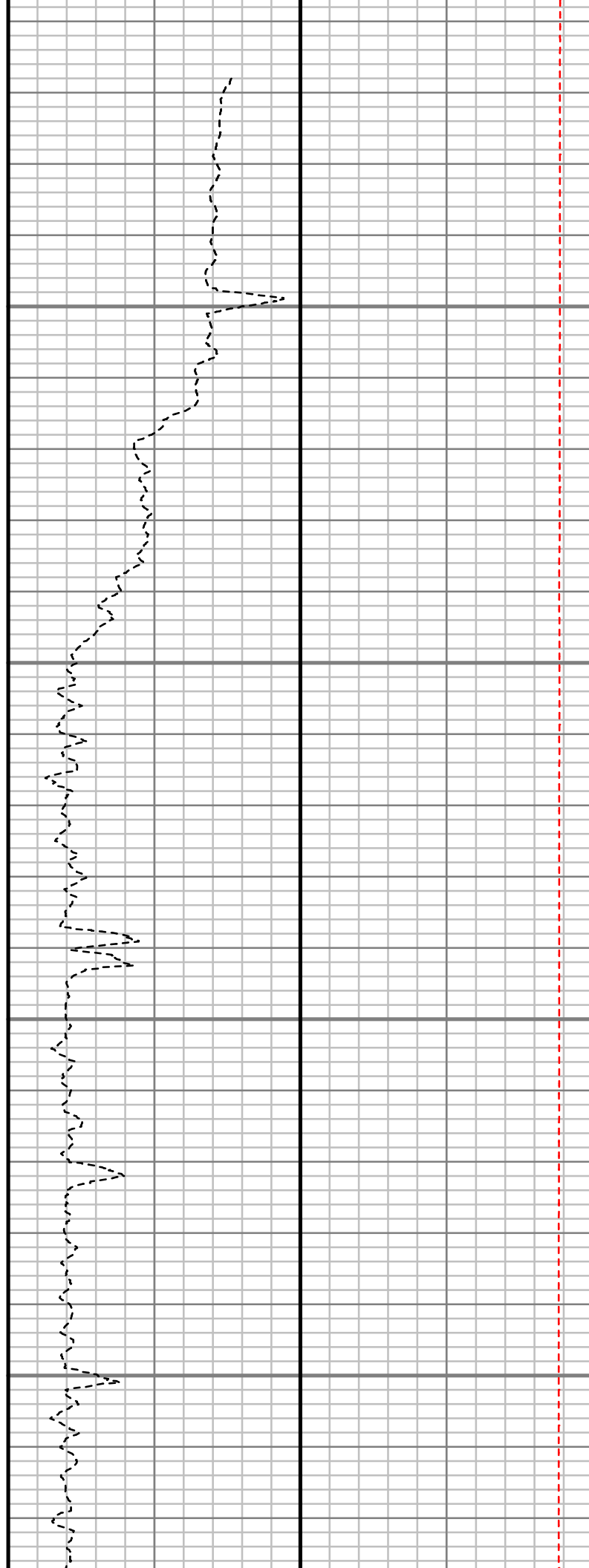
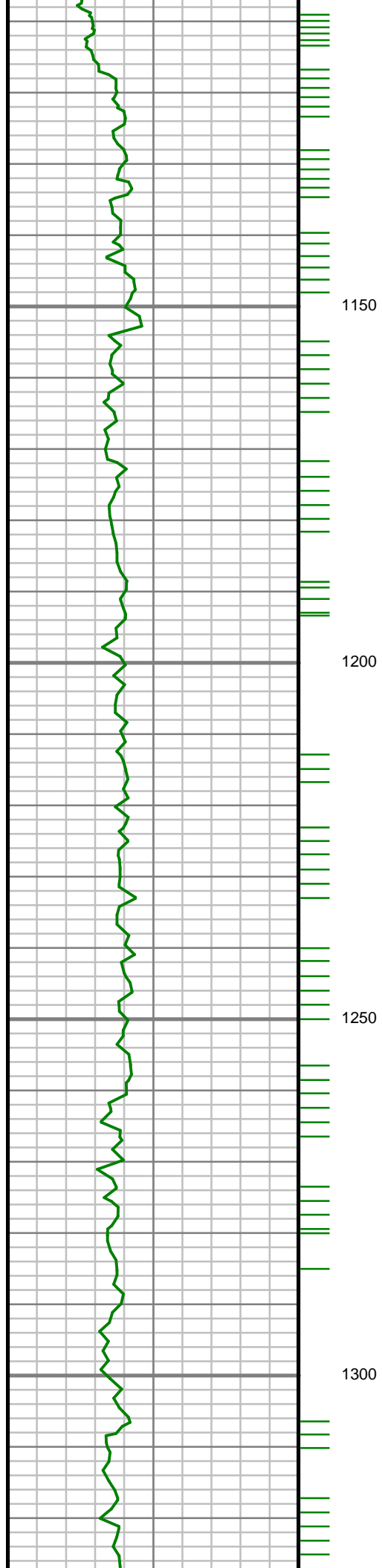
5" = 100' FEET TWD

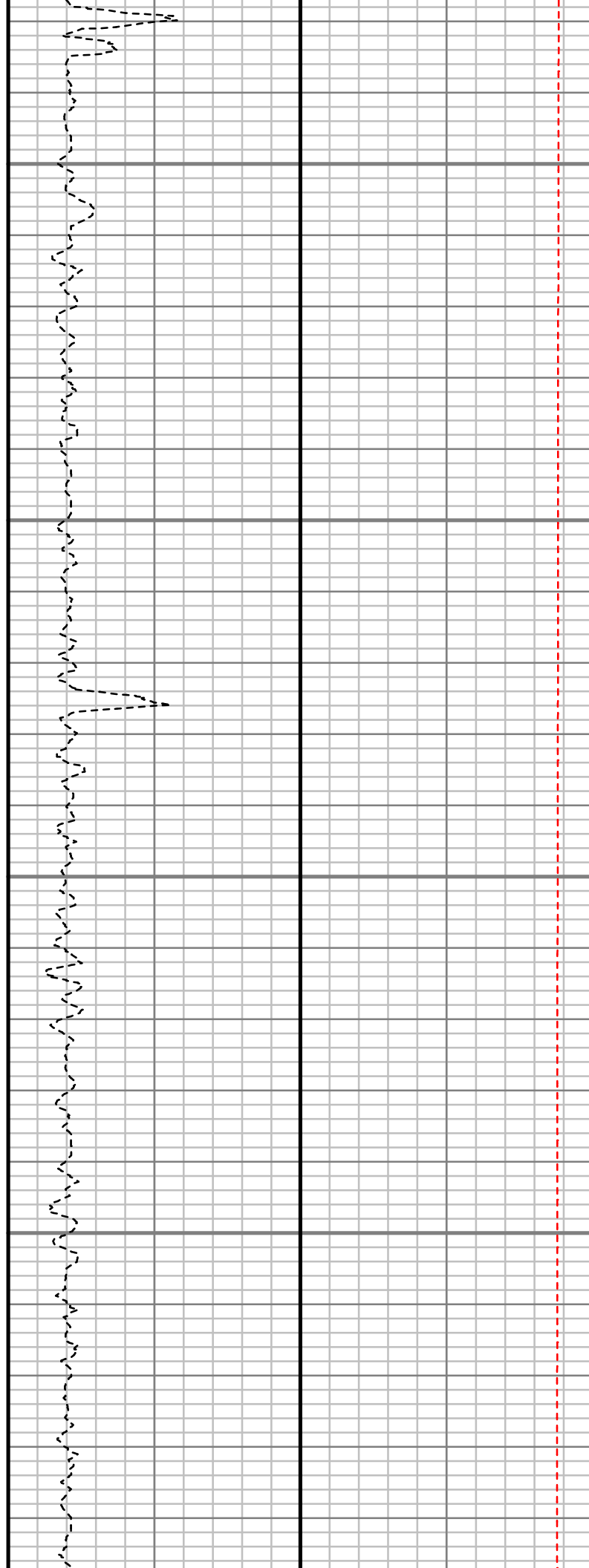
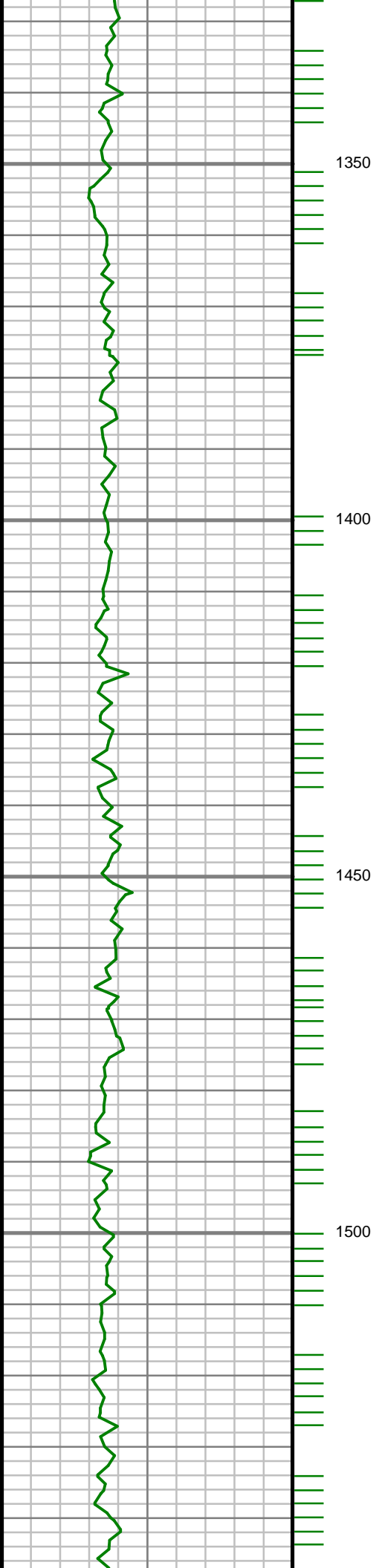
COMPANY : ANADARKO PETROLEUM CORP.					
WELL : PARAGON 24C-31HZ					
FIELD : WATTENBERG					
COUNTY : WELD					
STATE : COLORADO					
COUNTRY : U.S.A.					
UWI : 05-123-38538					
DEPTH REF. : RKB			DIRECTIONAL ROP		
REF. HEIGHT : 25.000 ft			RKB to Ground Level		
GROUND LEVEL : 4975.000 ft			G.L. to MEAN SEA LEVEL		
BOREHOLE RECORD			DEVATION RECORD		
HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft
12.25	0	1118	0 - 10	0	6545
8.75	1118	7832	10 - 90	6545	7832
6.125	7832	14533	90 - 92	7832	14533
CASING RECORD					
CASING SIZE in	FROM ft	TO ft			
9.625	0	1118			
7	0	7832			
DRILLING CO.: H&P			DISTRICT: CASPER		
RG: 311					
LMD UNIT NO.: C-46					
SPUD DATE: 11/28/2013					
LMD START DATE: 01/23/2014			DEPTH: 1181 ft		
LMD END DATE: 02/02/2014			DEPTH: 14533 ft		
			TOTAL DEPTH: 14533 ft		

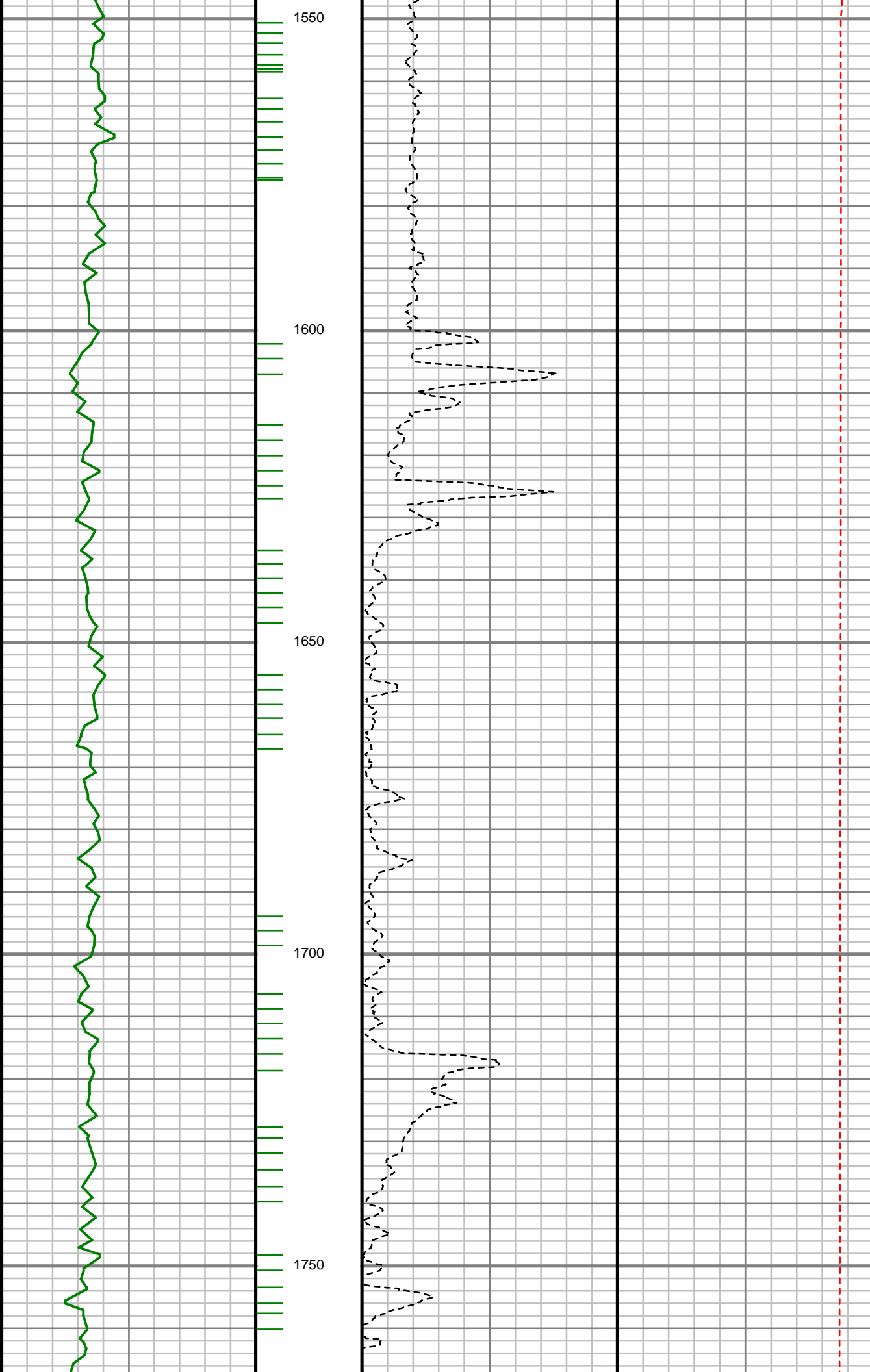
Remarks
ANADARKO PETROLEUM CORP. PRODUCTION AFE# 2088984
SCIENTIFIC DRILLING INTERNATIONAL JOB# 106476
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO GAMMA RAY CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO RATE OF PENETRATION CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO TOOL TEMPERATURE CURVE
RUN # 1: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 128-105 / CONT = 411 / MWD EYE = 0848 / GAMMA RAY =1083
BIT TO SENSOR OFFSETS: SURVEY = 57.06 FT. / GAMMA RAY = 47.81 FT.
RUN # 2: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 128-105 / CONT = 603 / MWD EYE = 0902 / GAMMA RAY =1076
BIT TO SENSOR OFFSETS: SURVEY = 66.96 FT. / GAMMA RAY = 47.21 FT.
SURVEY WELL NOTES:
SURVEYS FROM 0.0 FT. TO 1118 FT. WERE ACQUIRED BY MS GYRO MWD.
SURVEYS FROM 1118 FT. TO 14464 FT. WERE ACQUIRED BY SCIENTIFIC DRILLING INTERNATIONAL MWD.
MNEMONICS LIST:
GR = GAMMA RAY
ROP = RATE OF PENETRATION
T-TEMP = TOOL TEMPERATURE

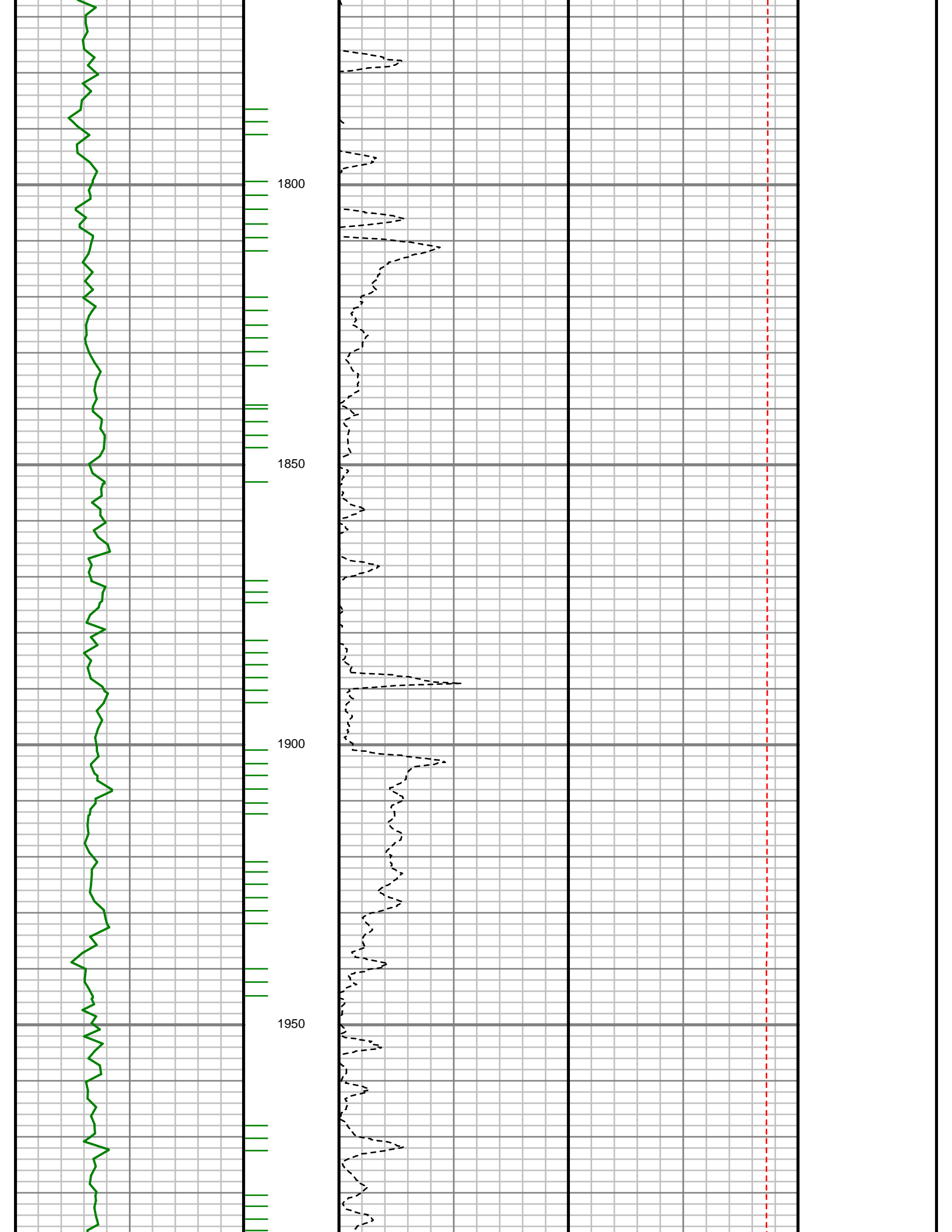
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

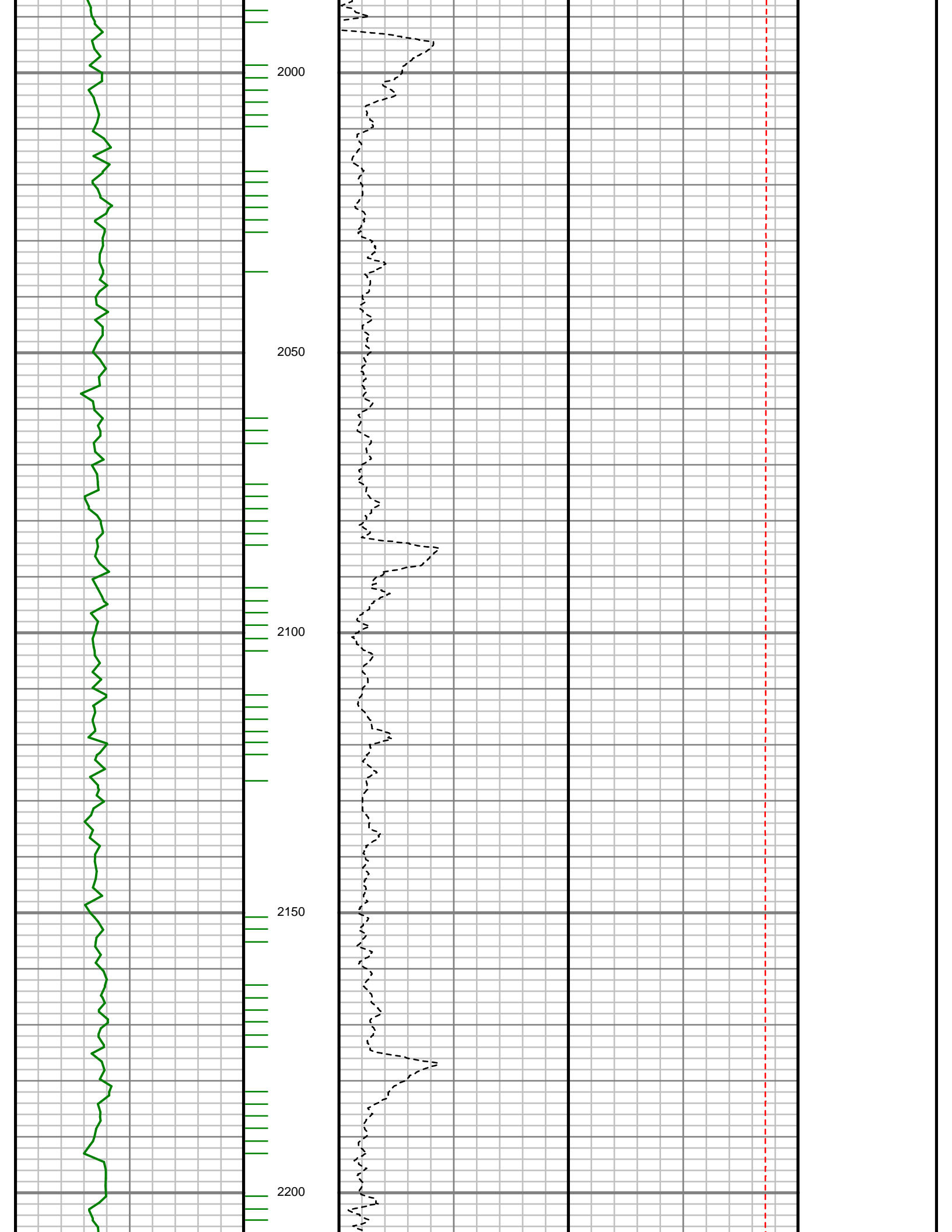


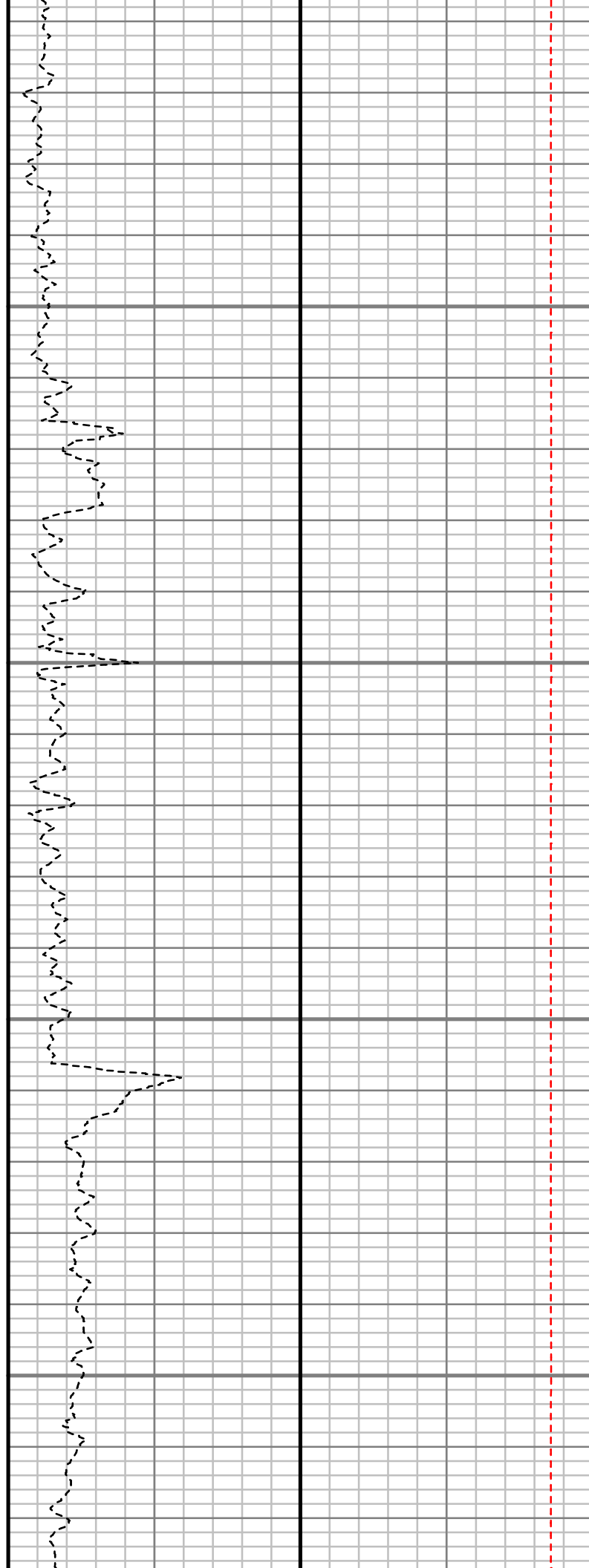
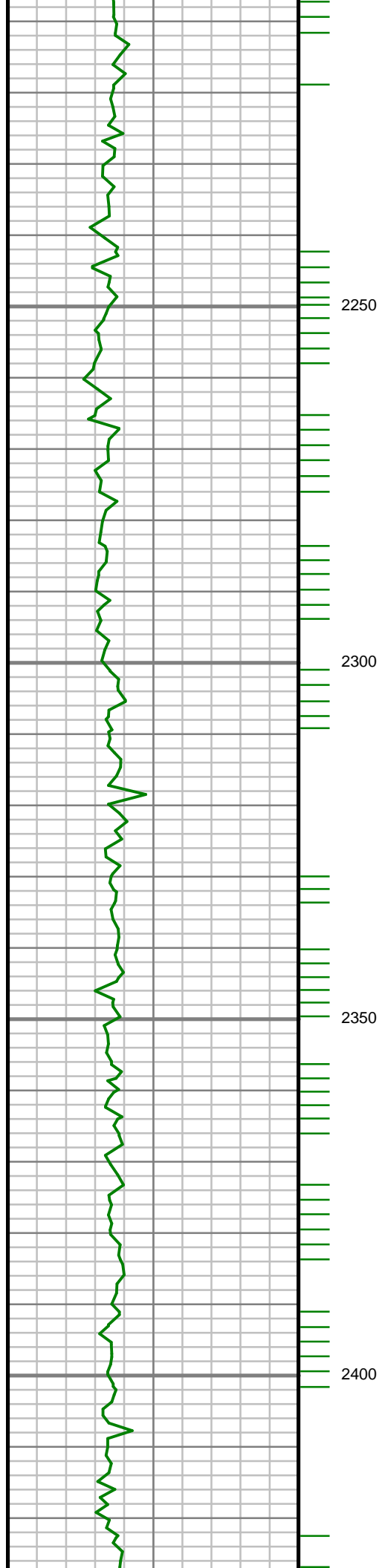


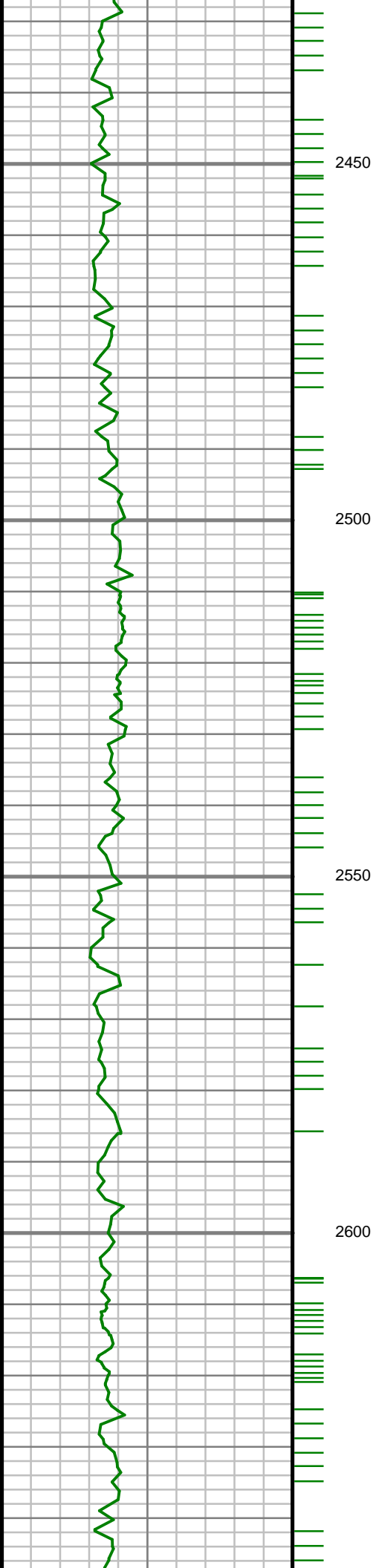


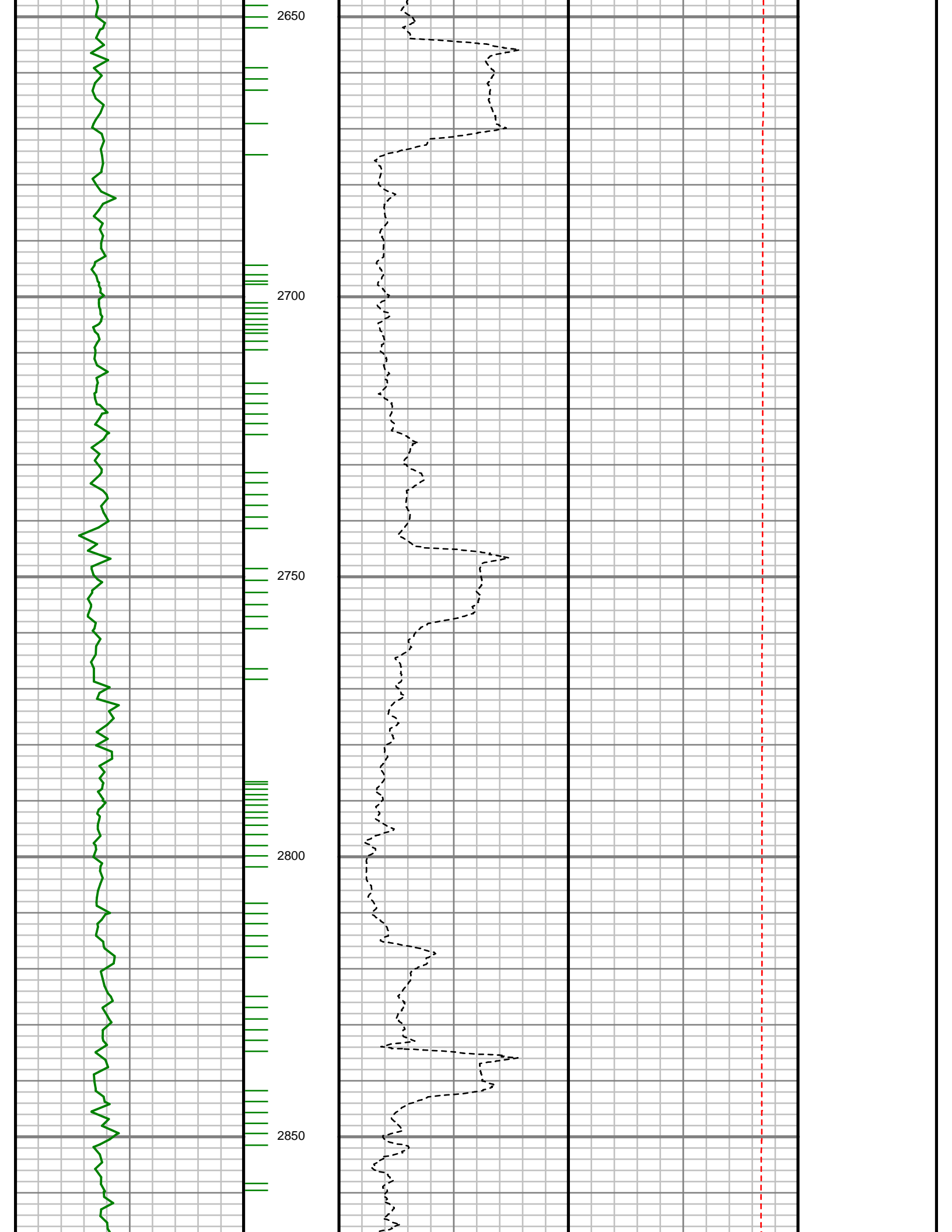


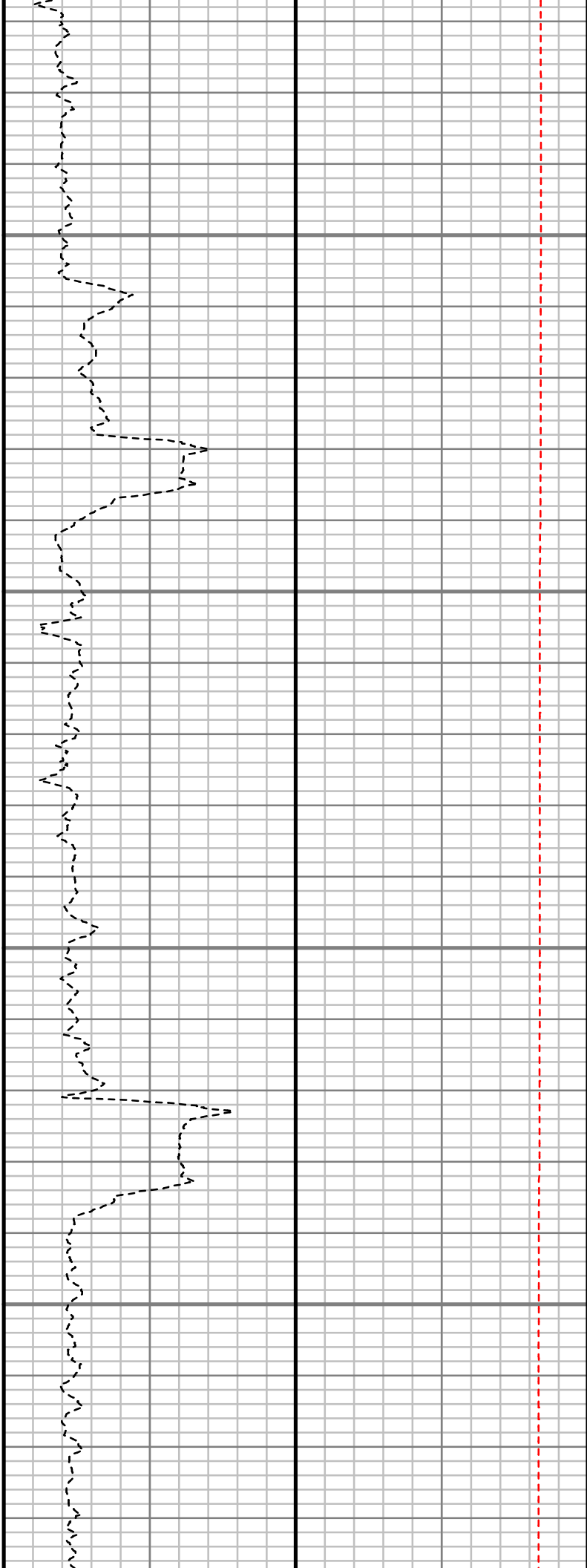
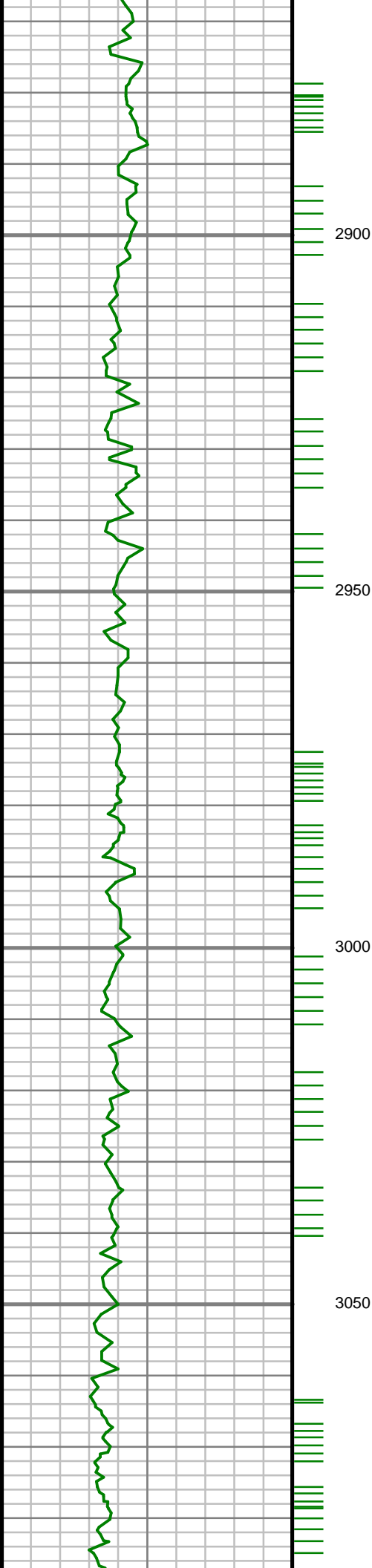


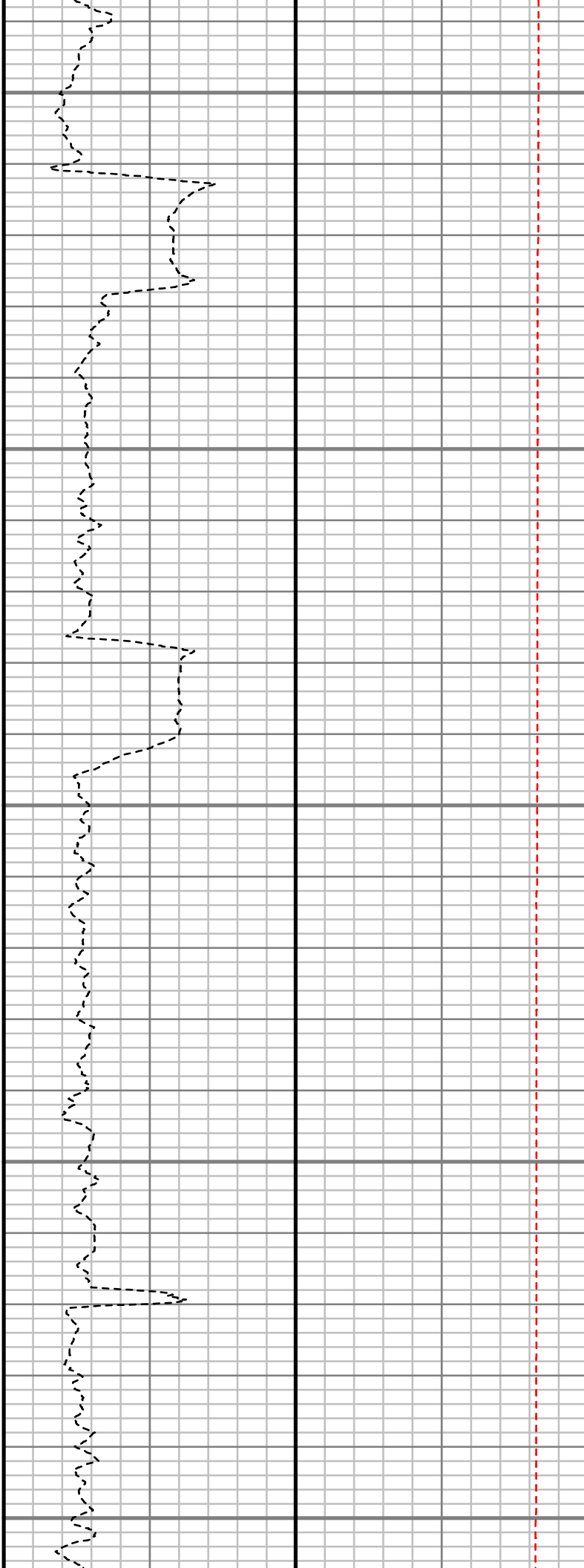
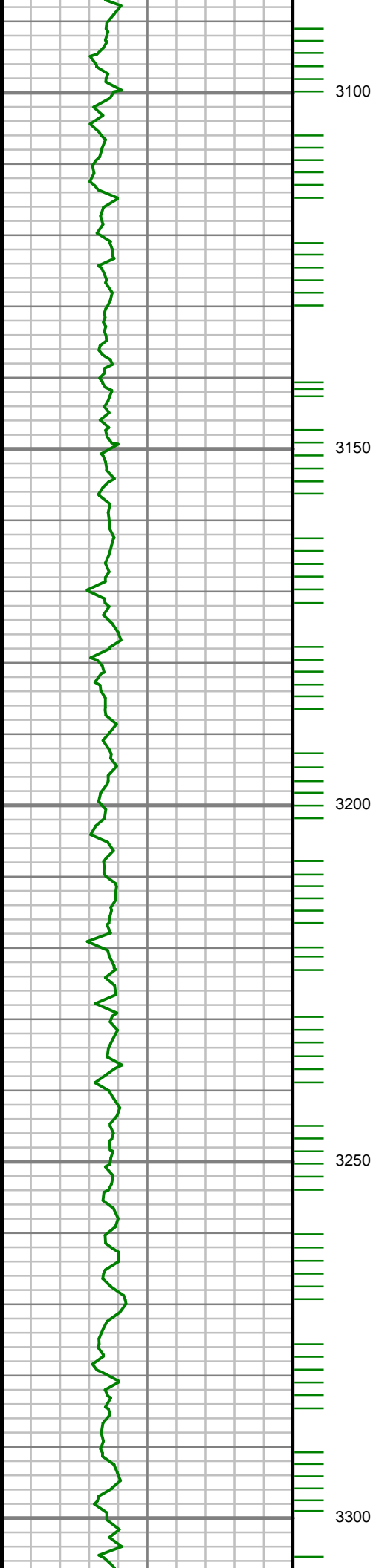


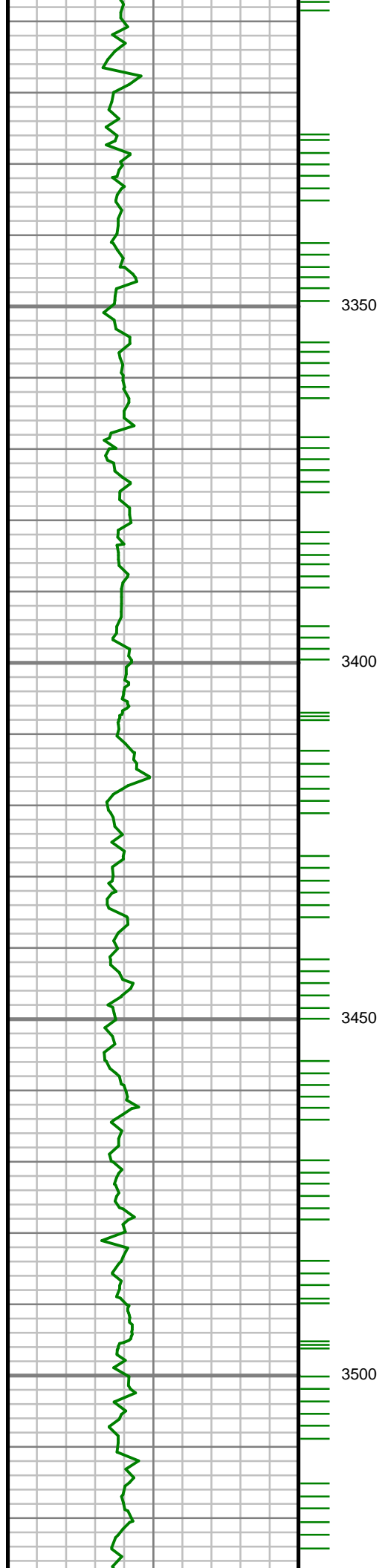










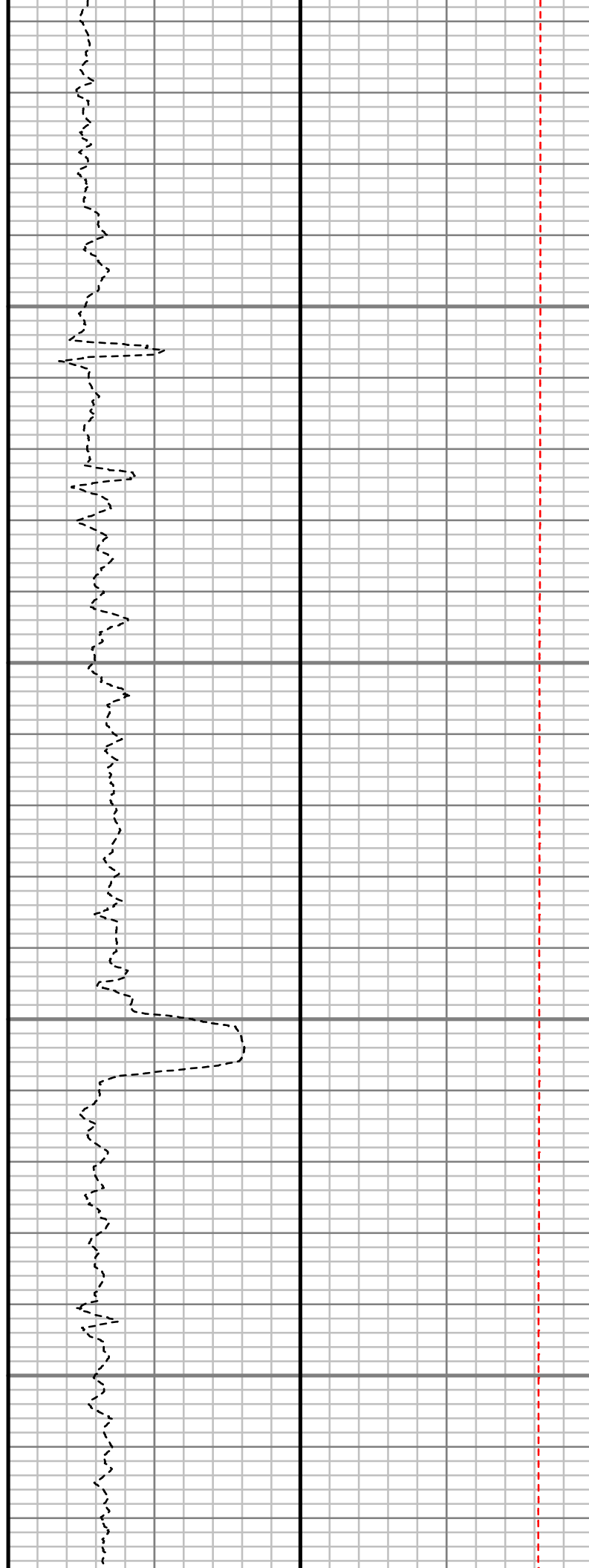


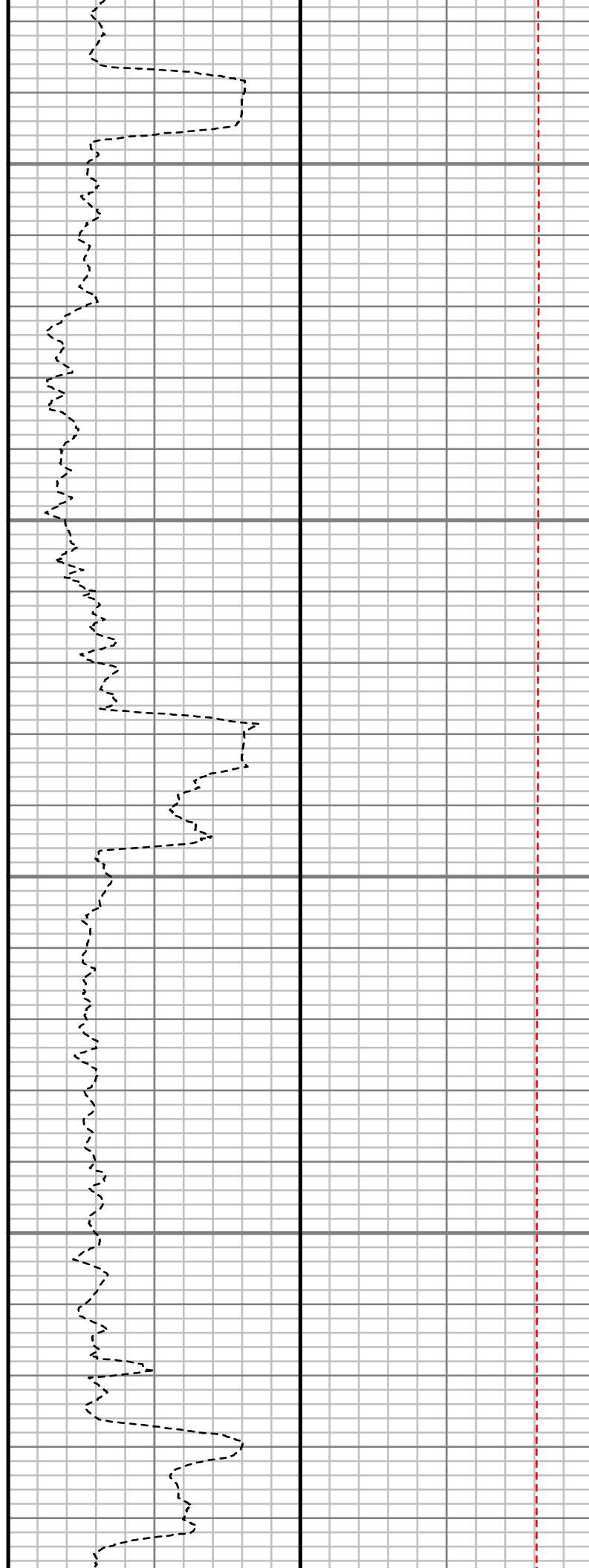
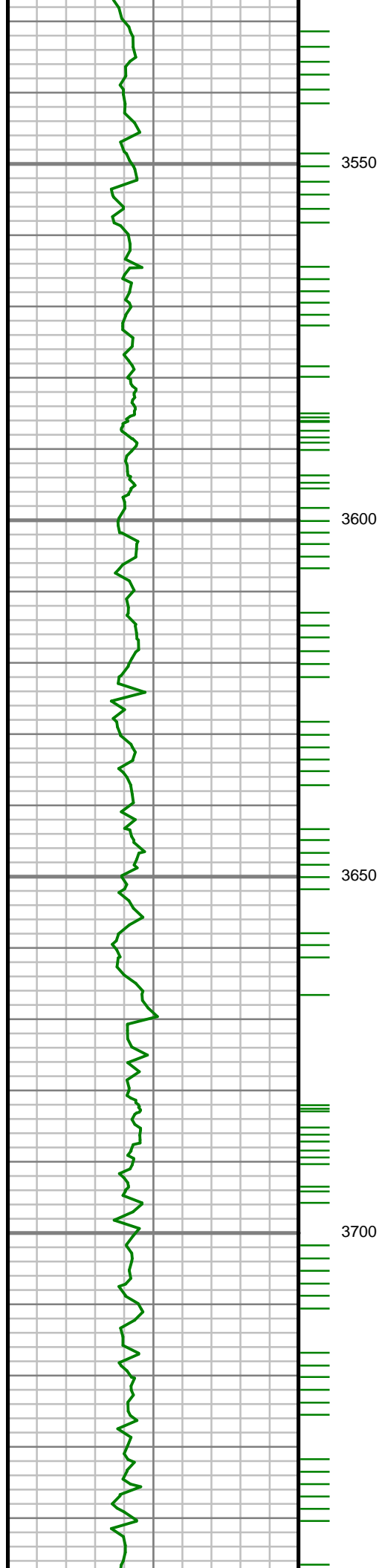
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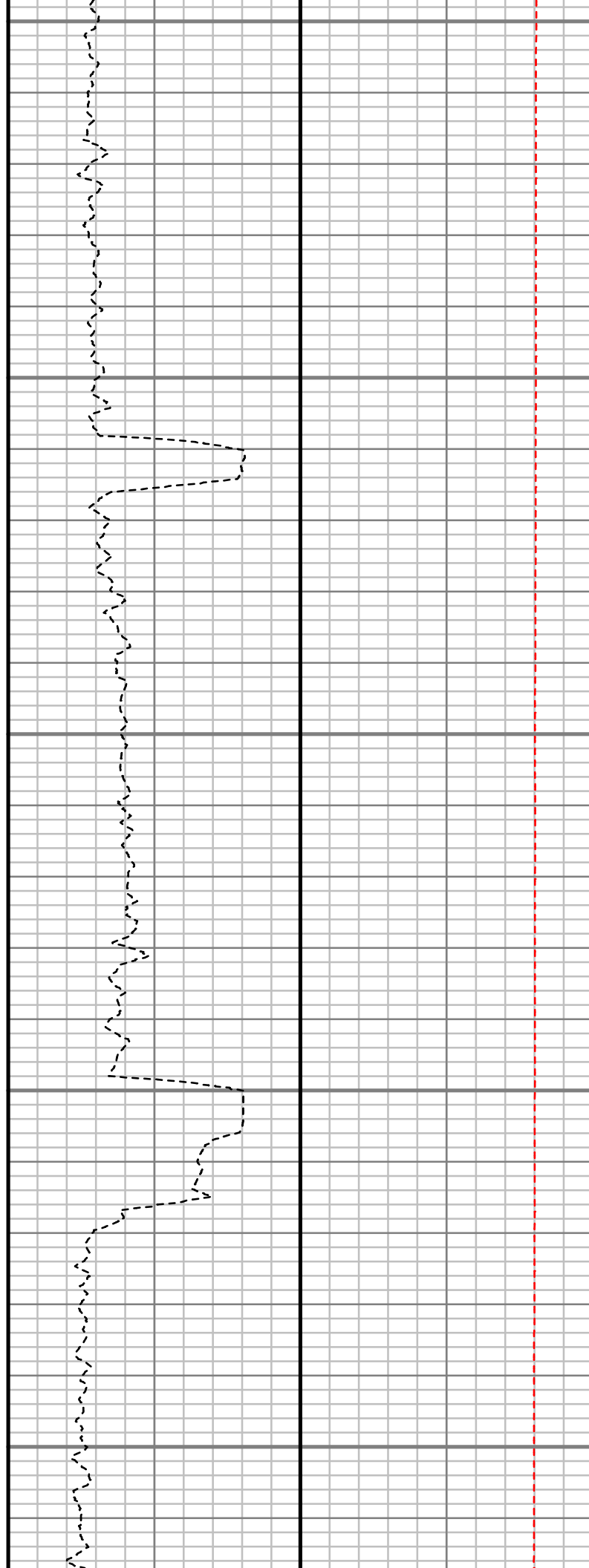
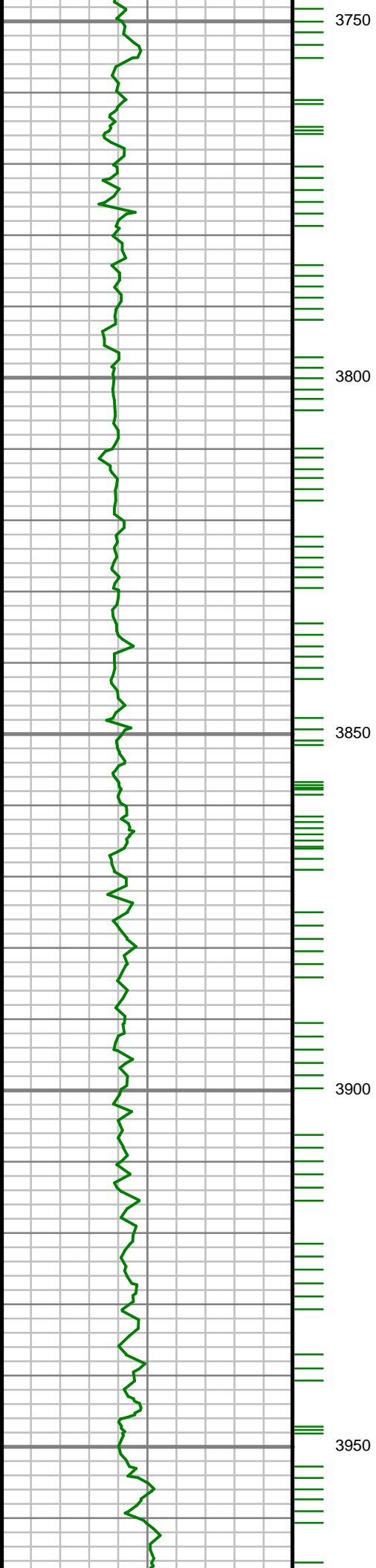
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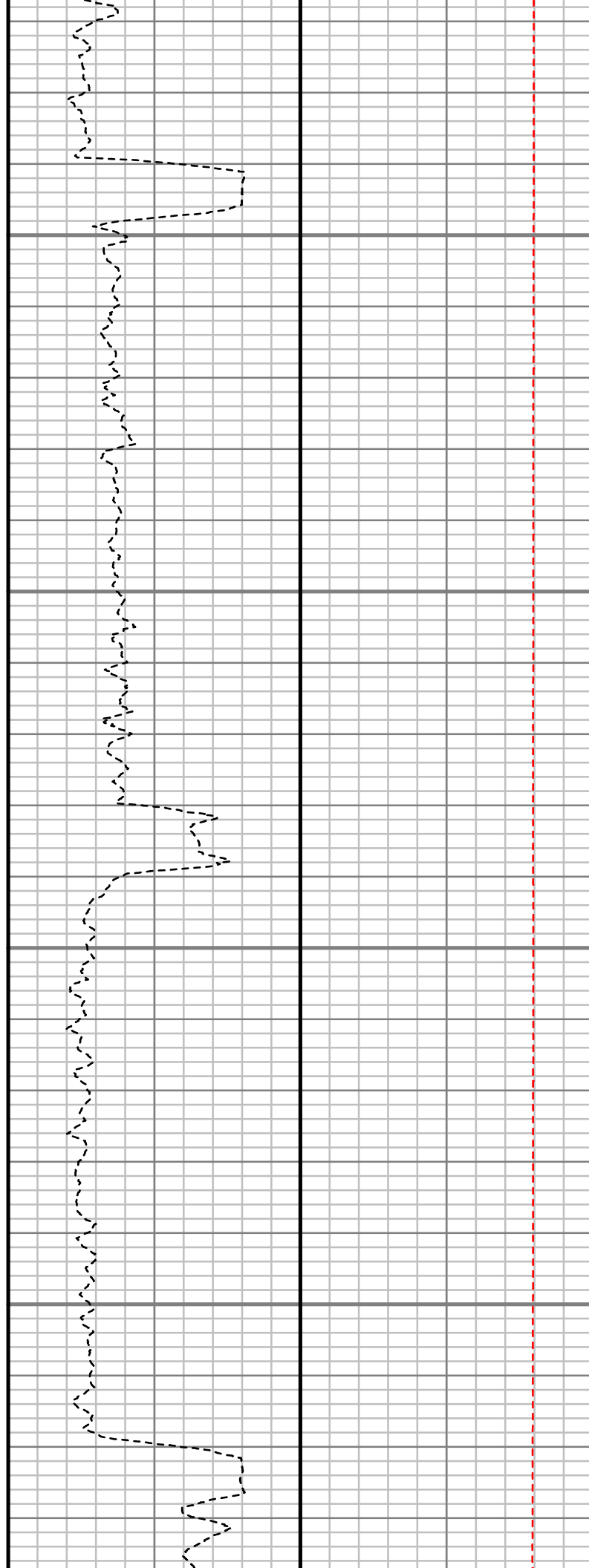
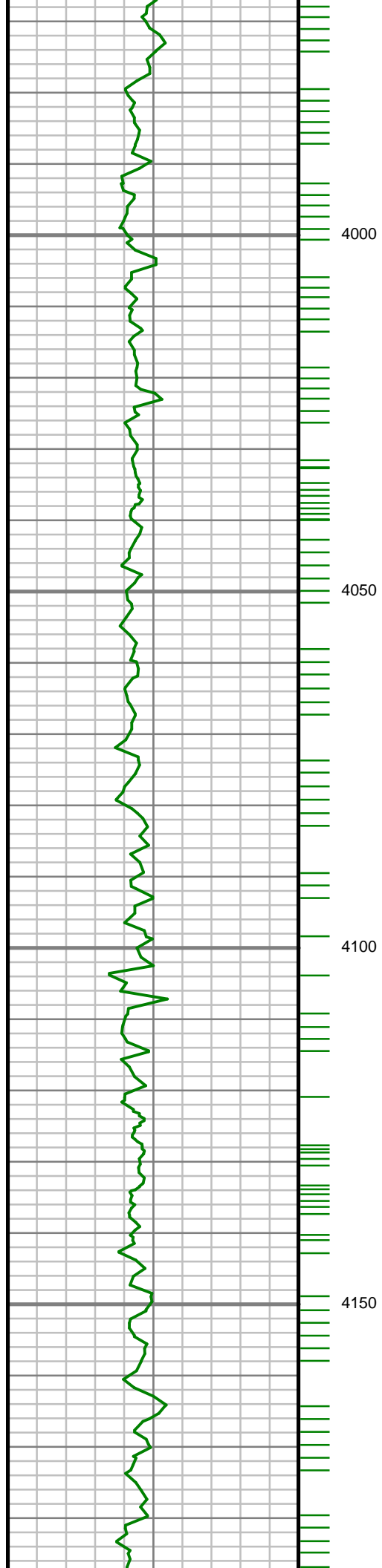
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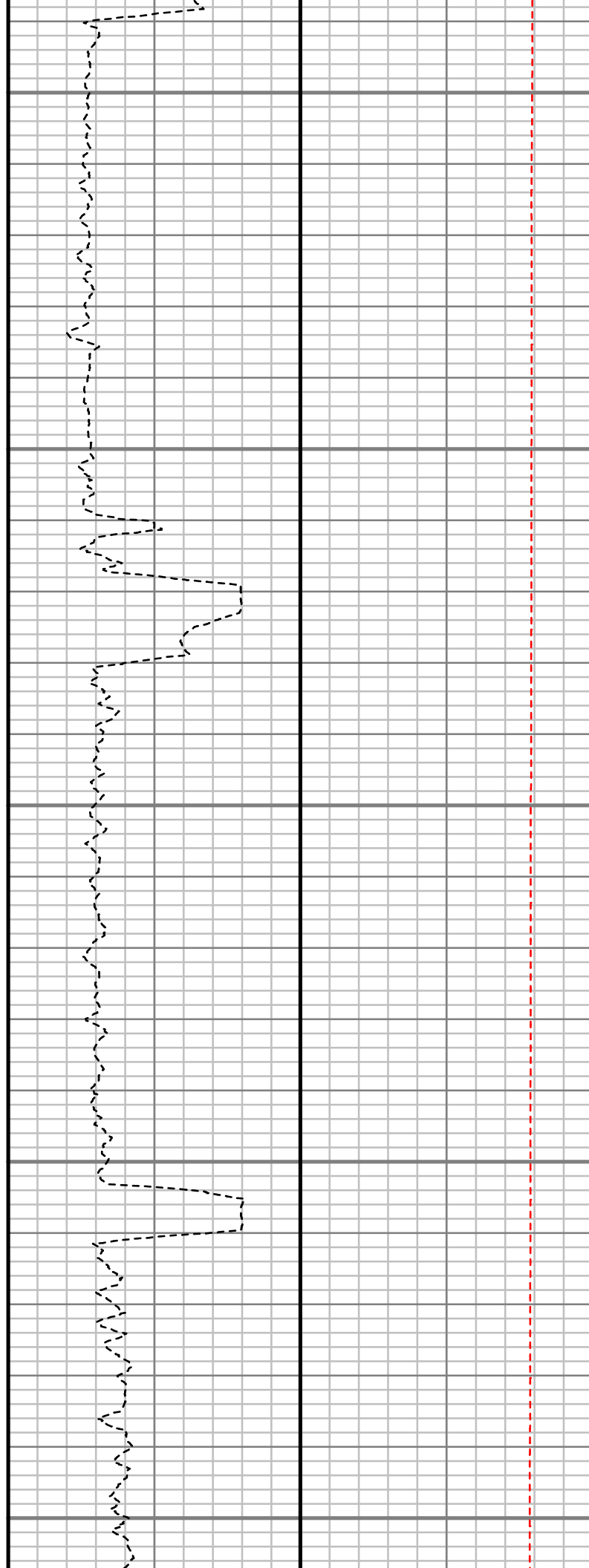
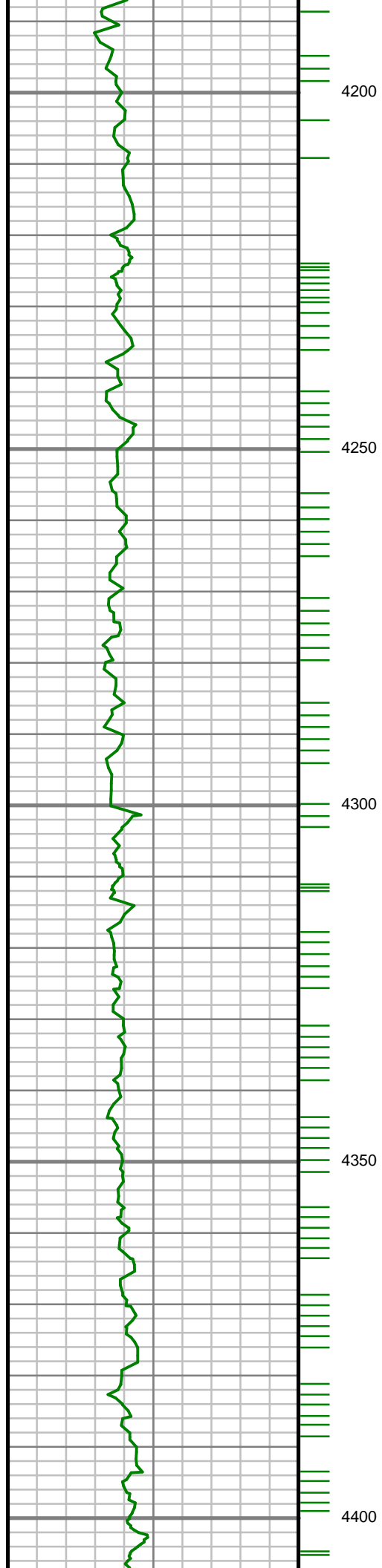
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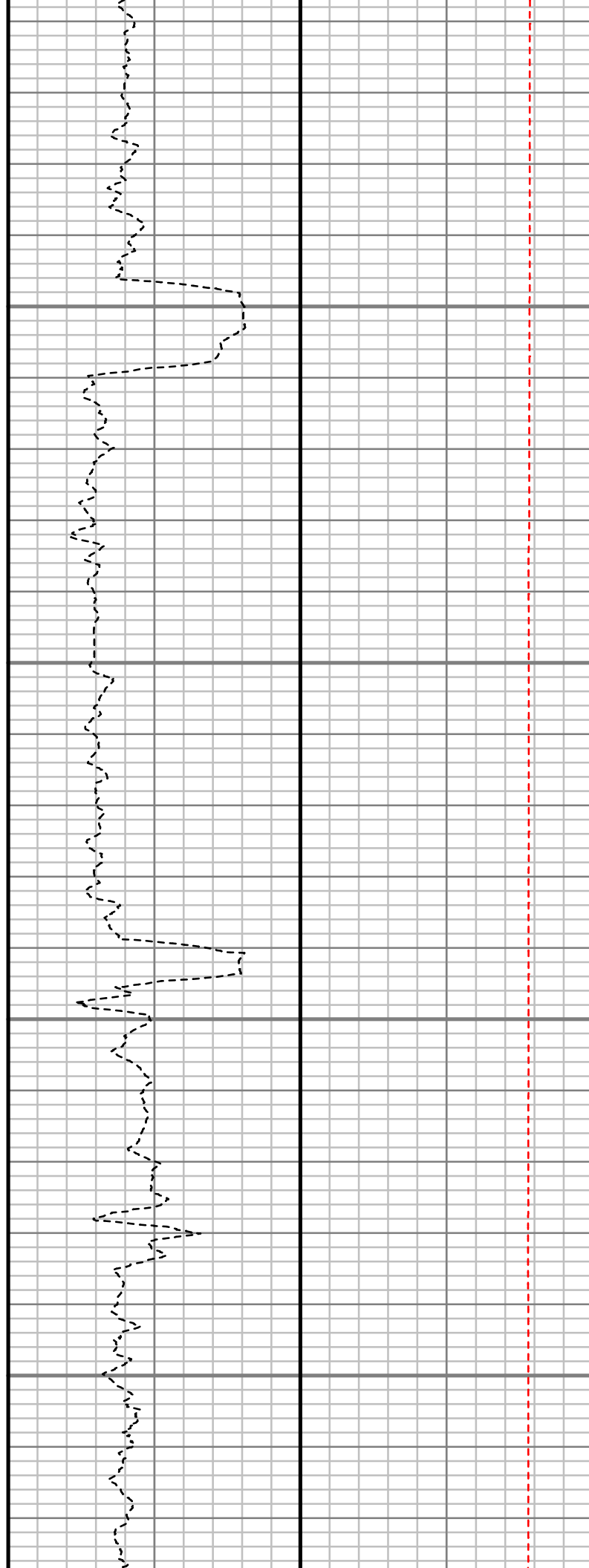
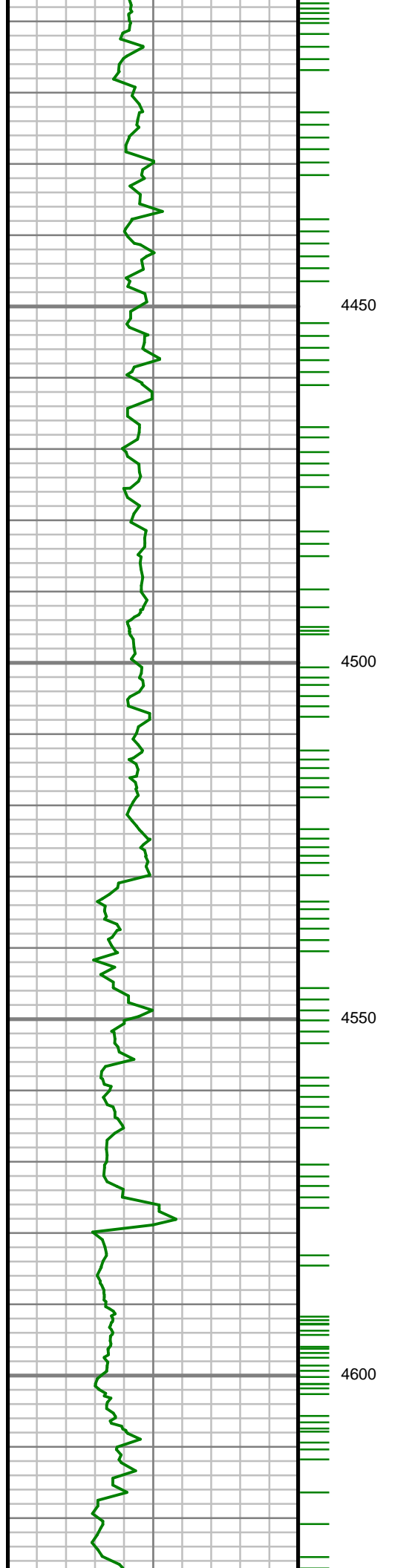


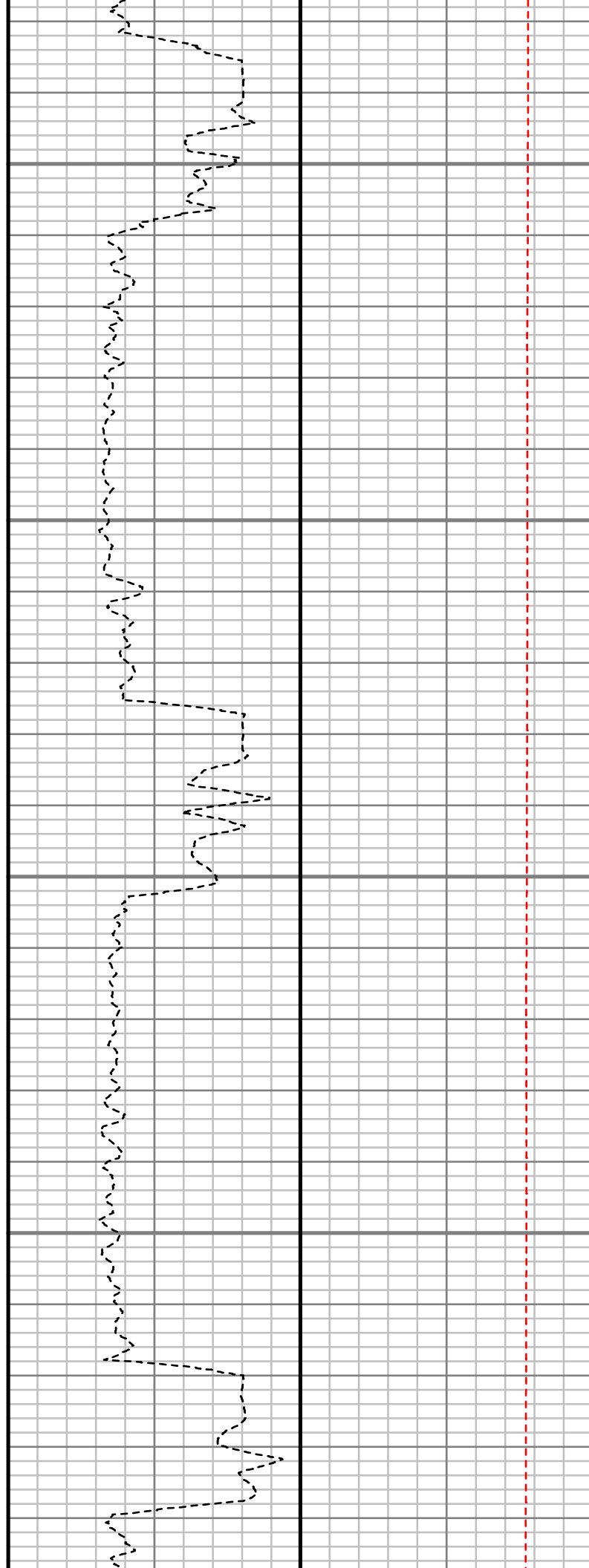
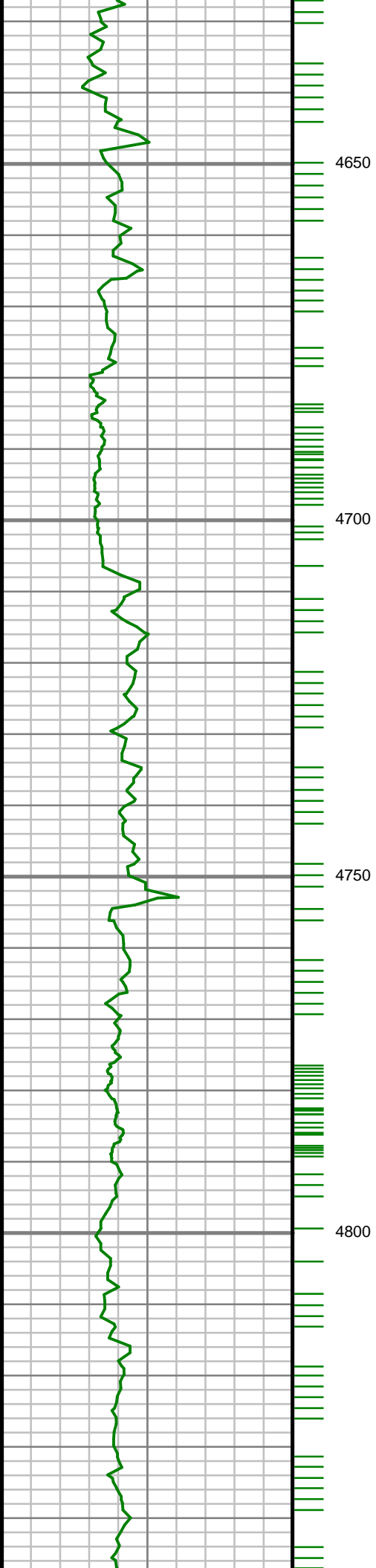


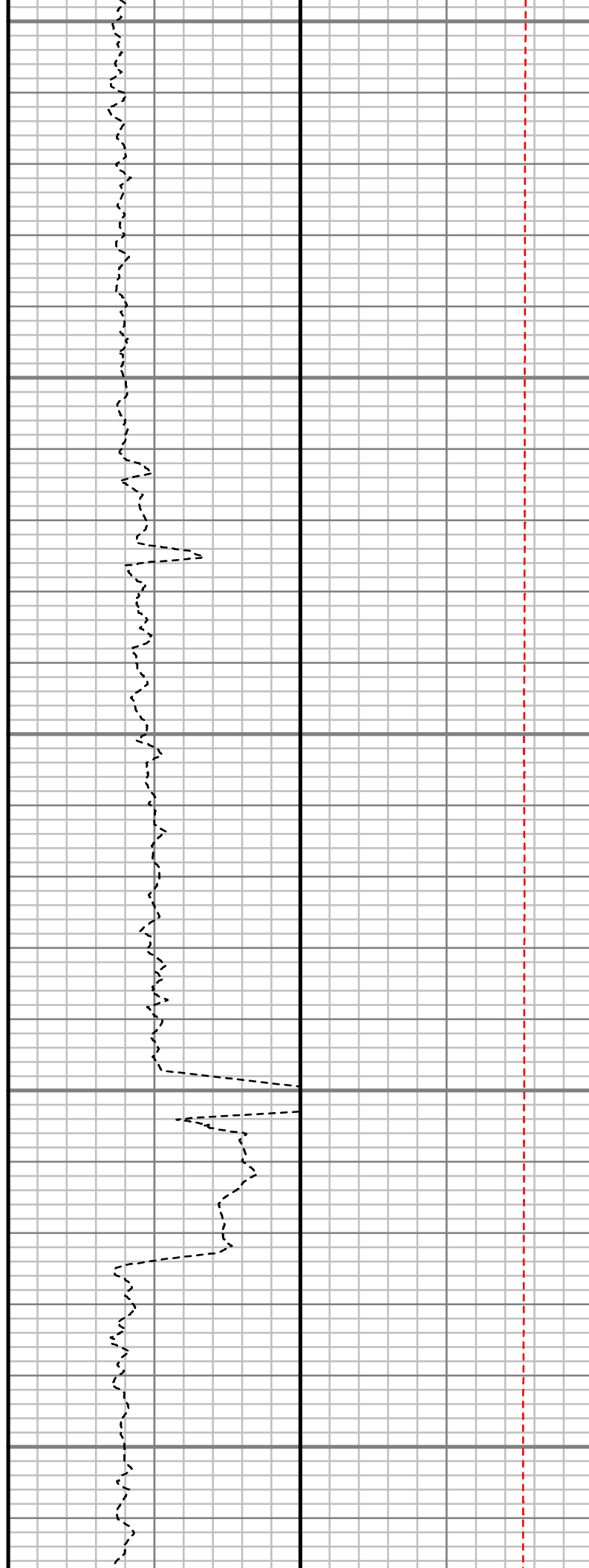
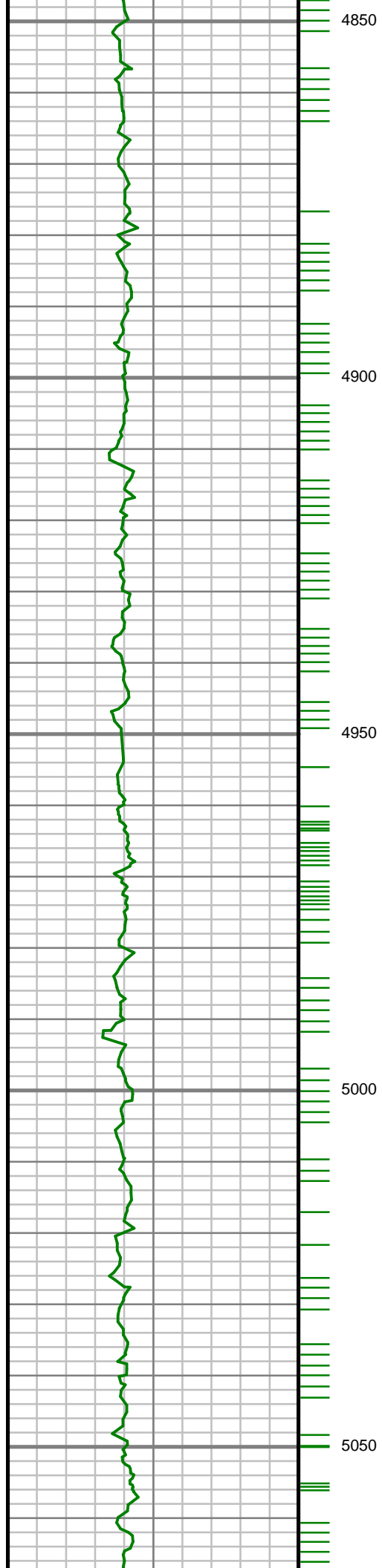


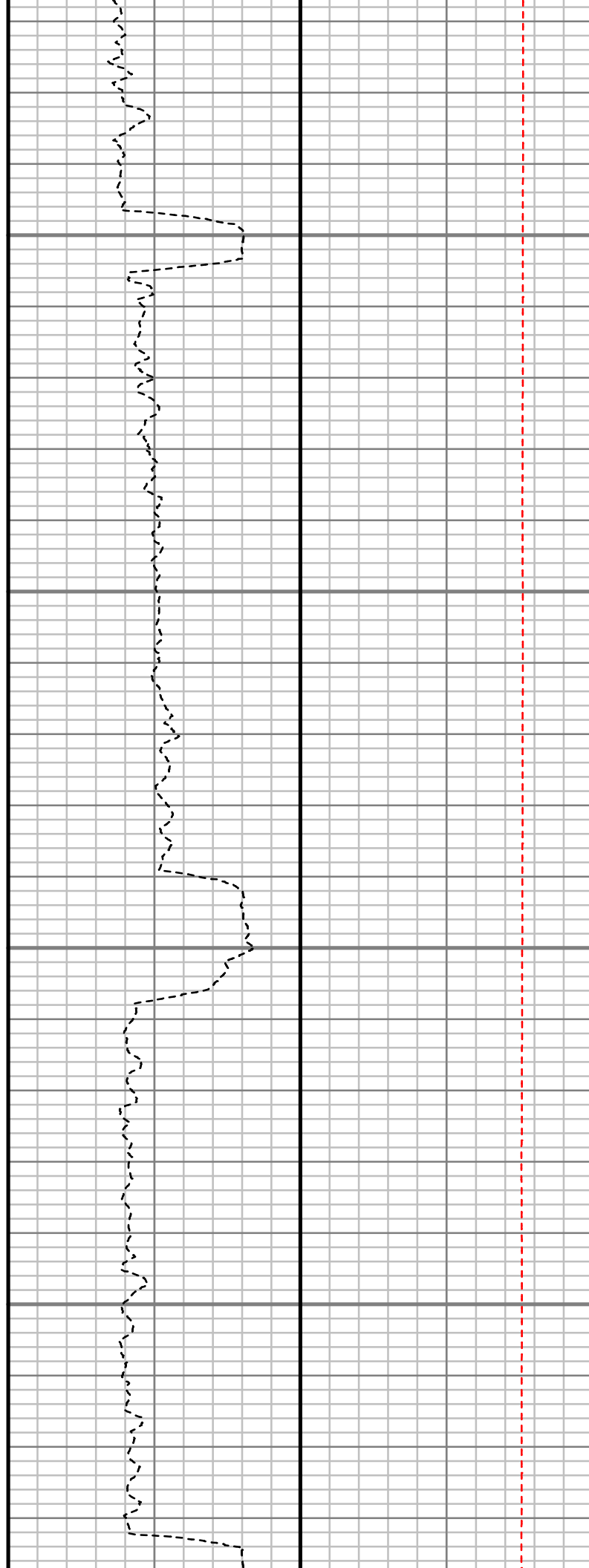
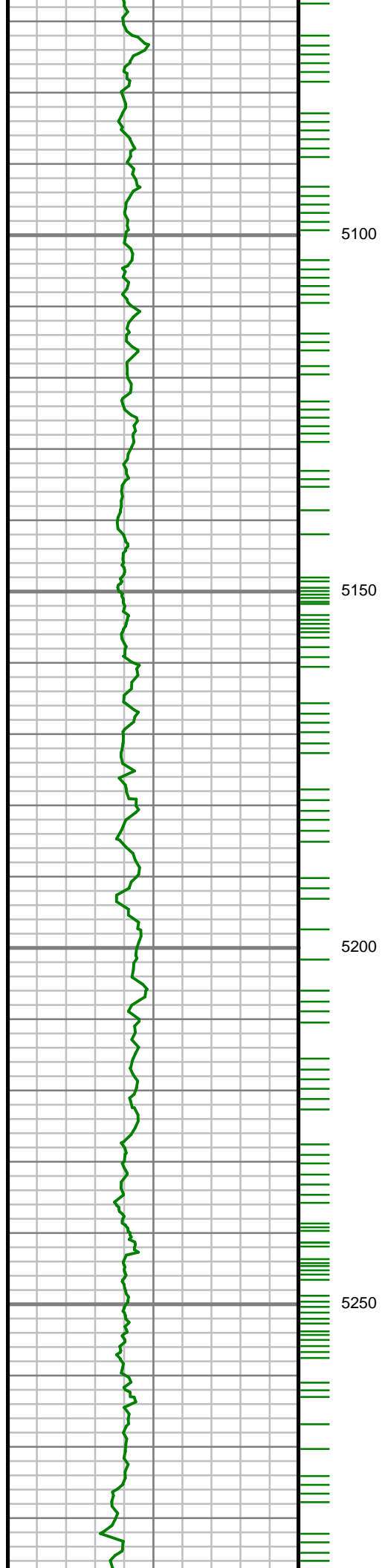


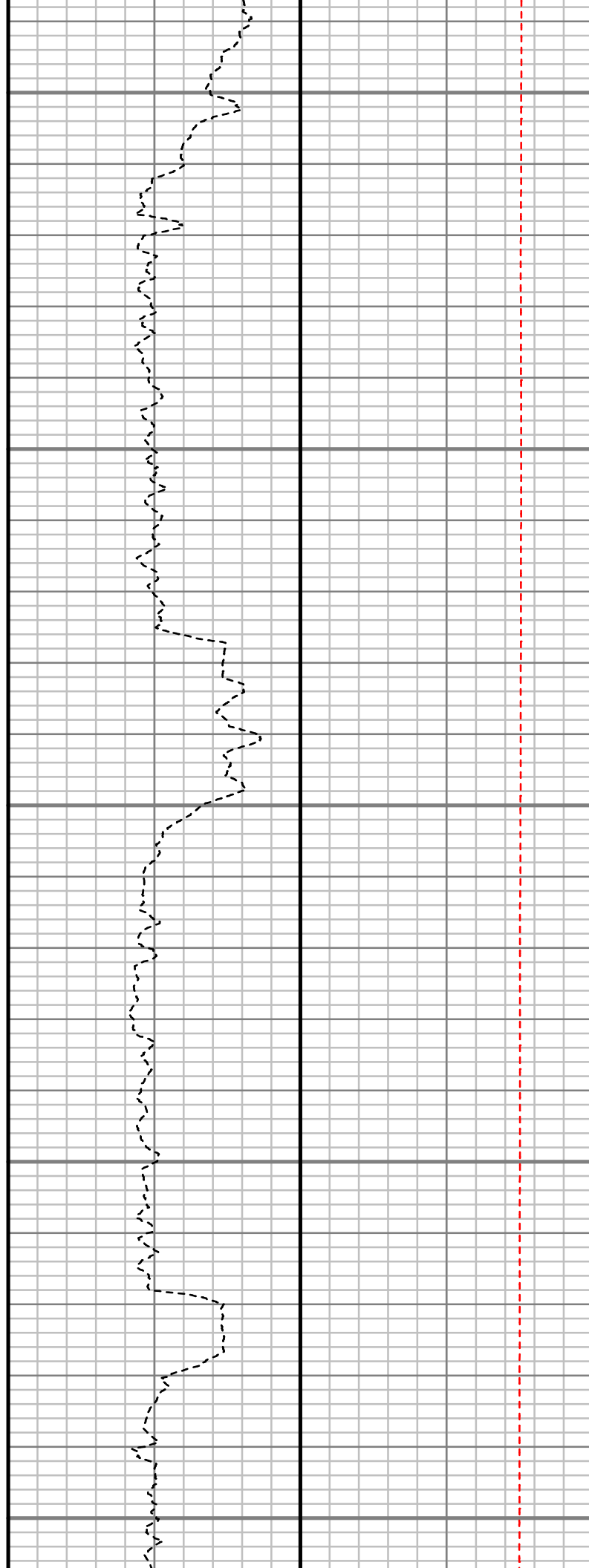
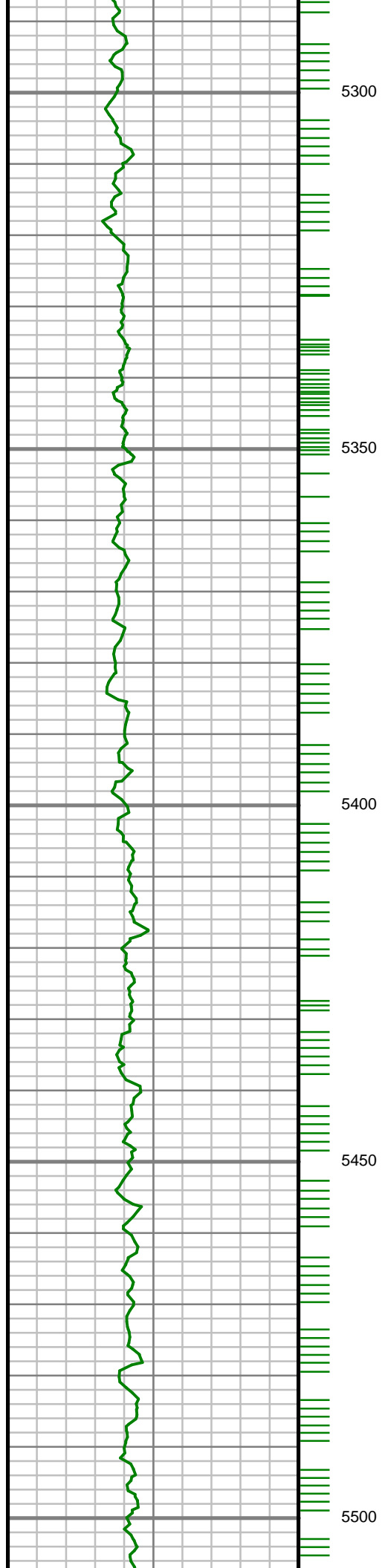


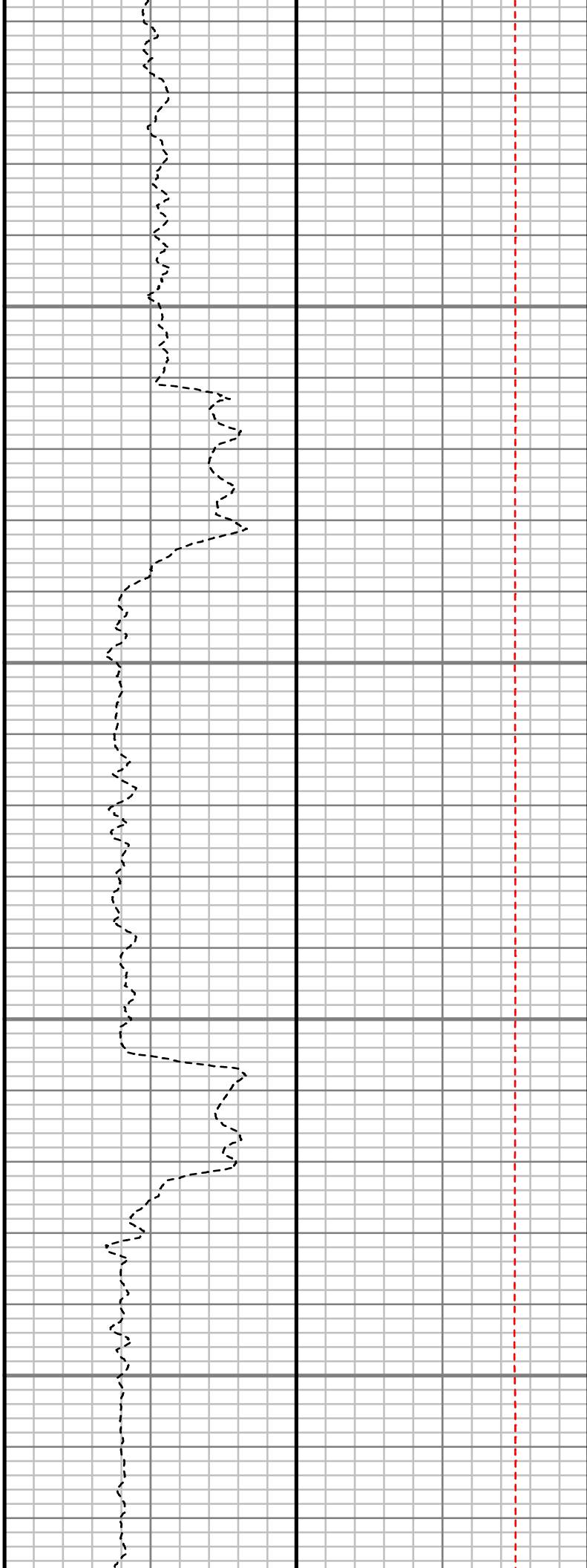
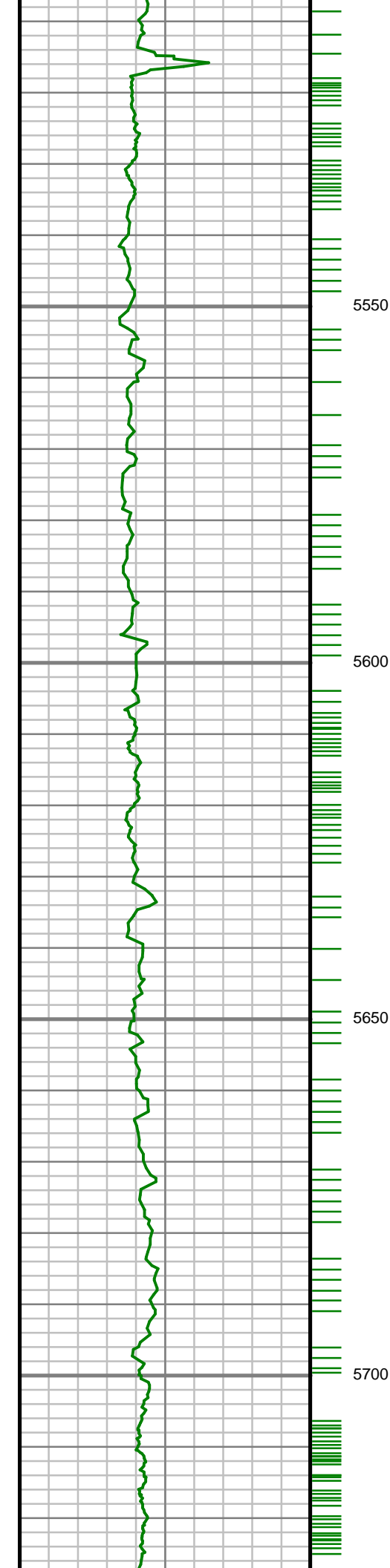


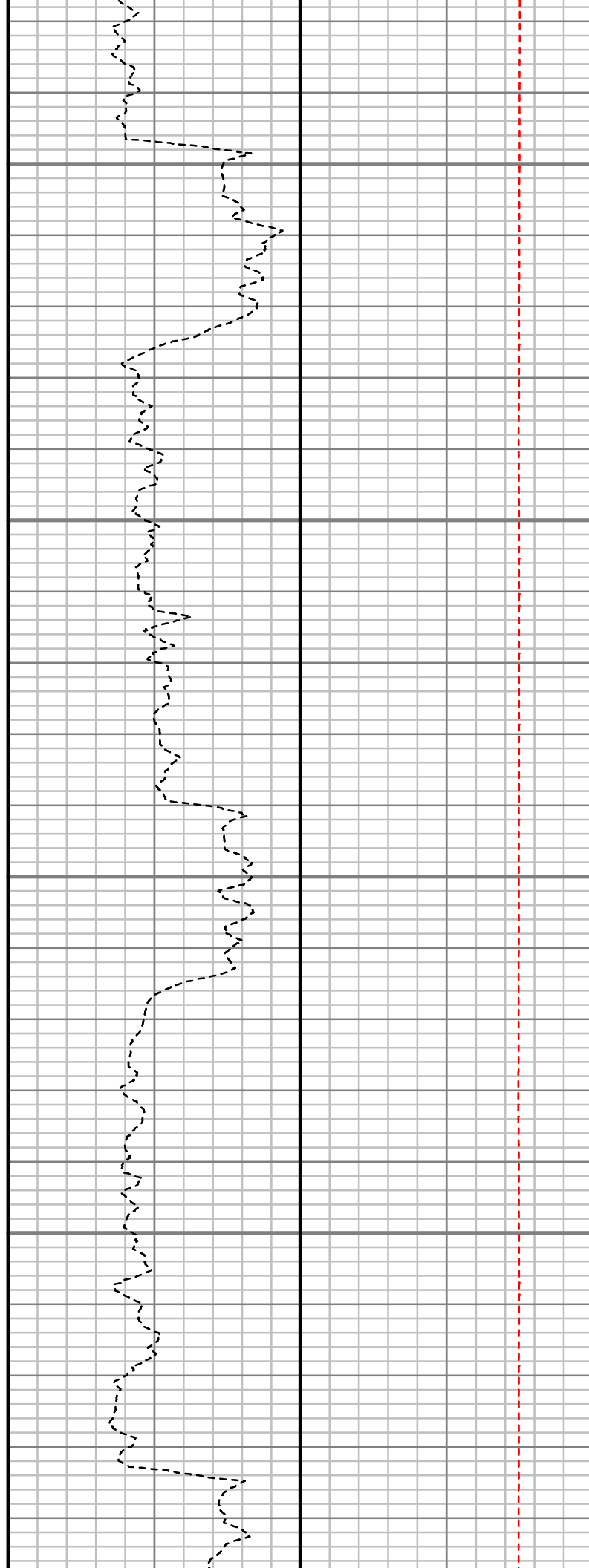
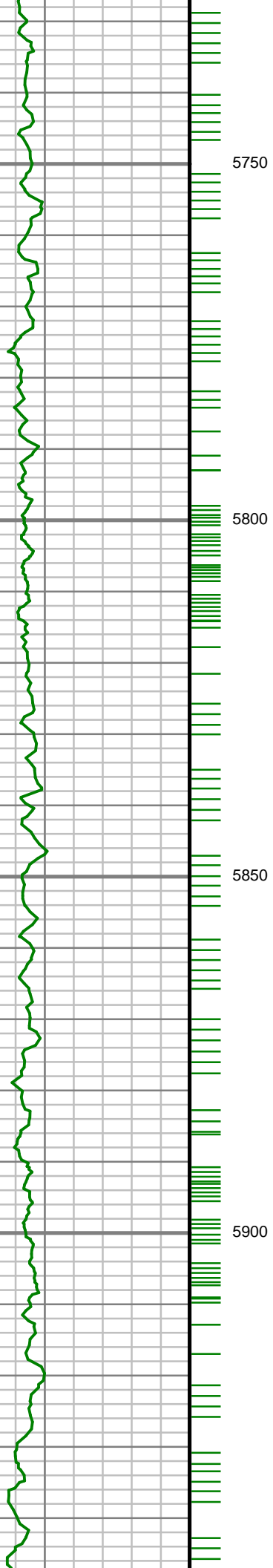


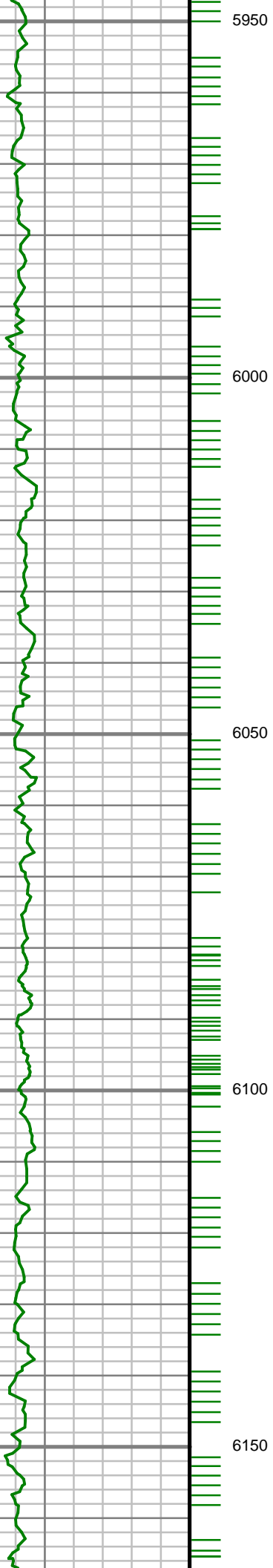




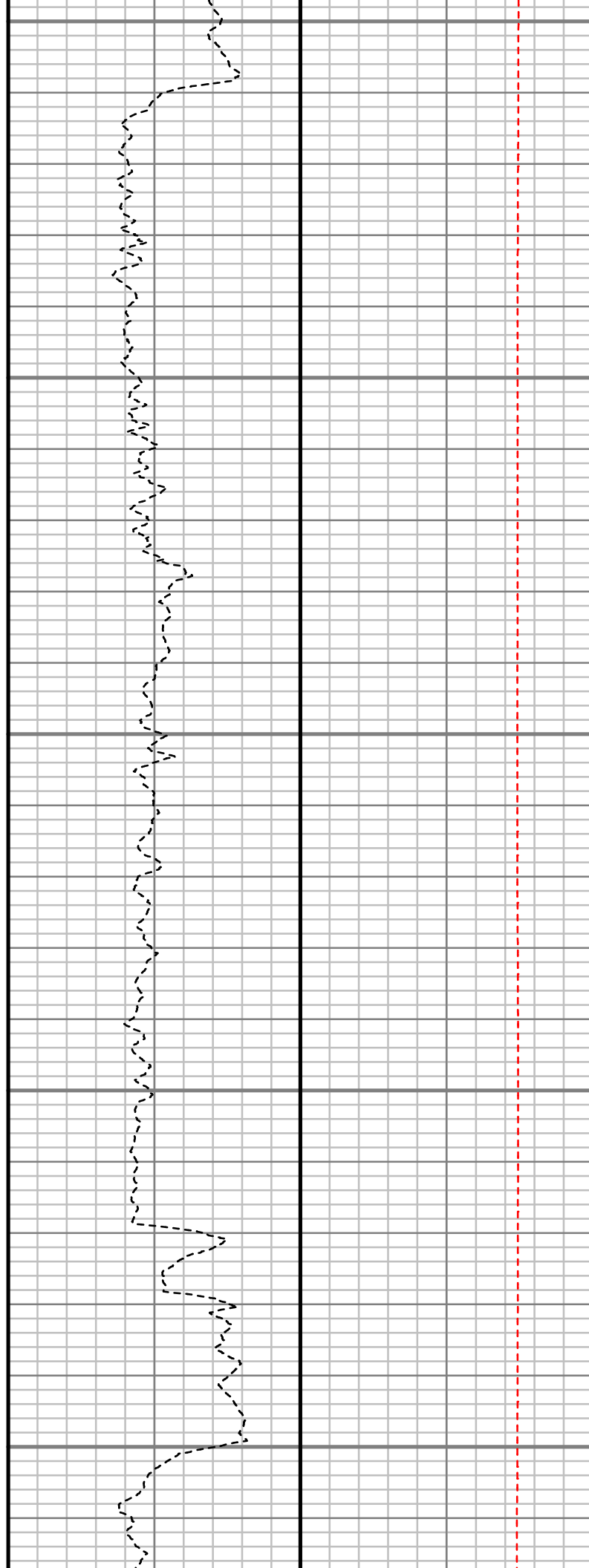


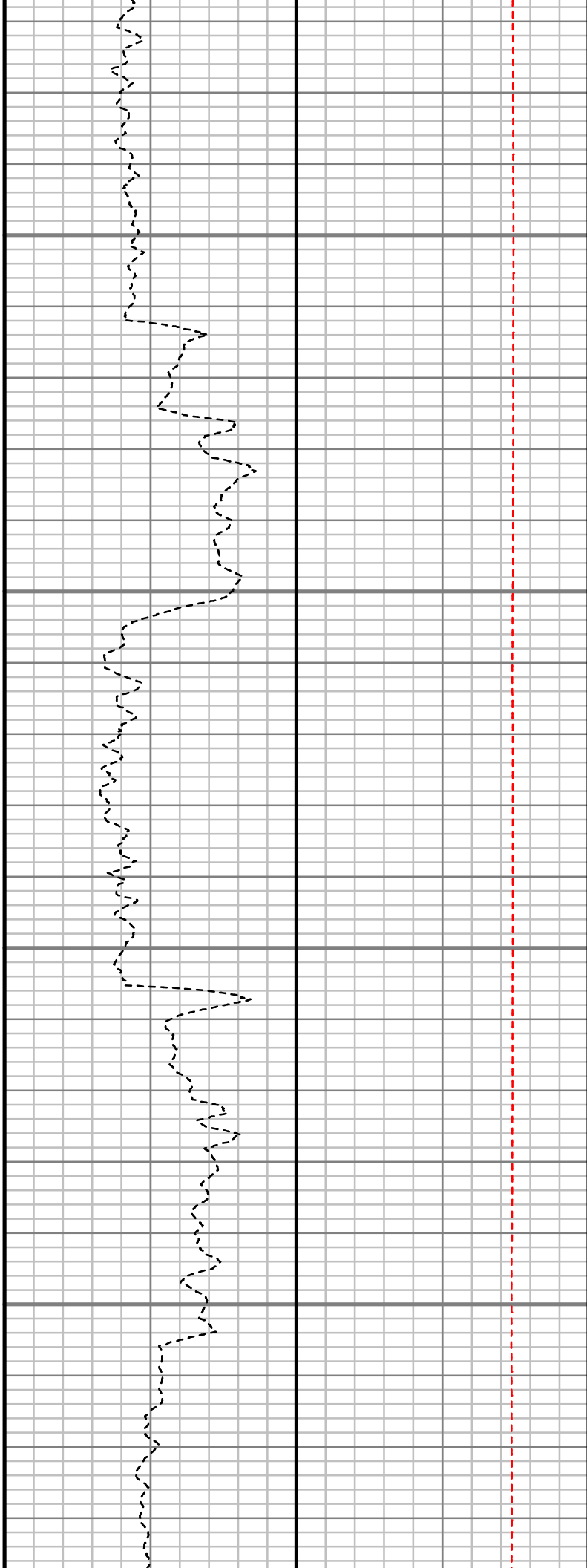
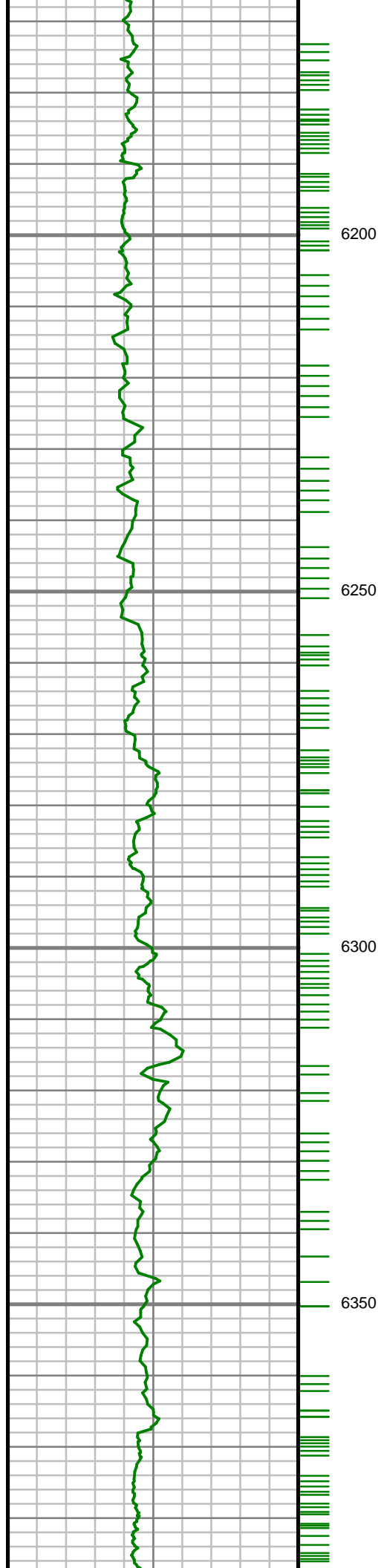


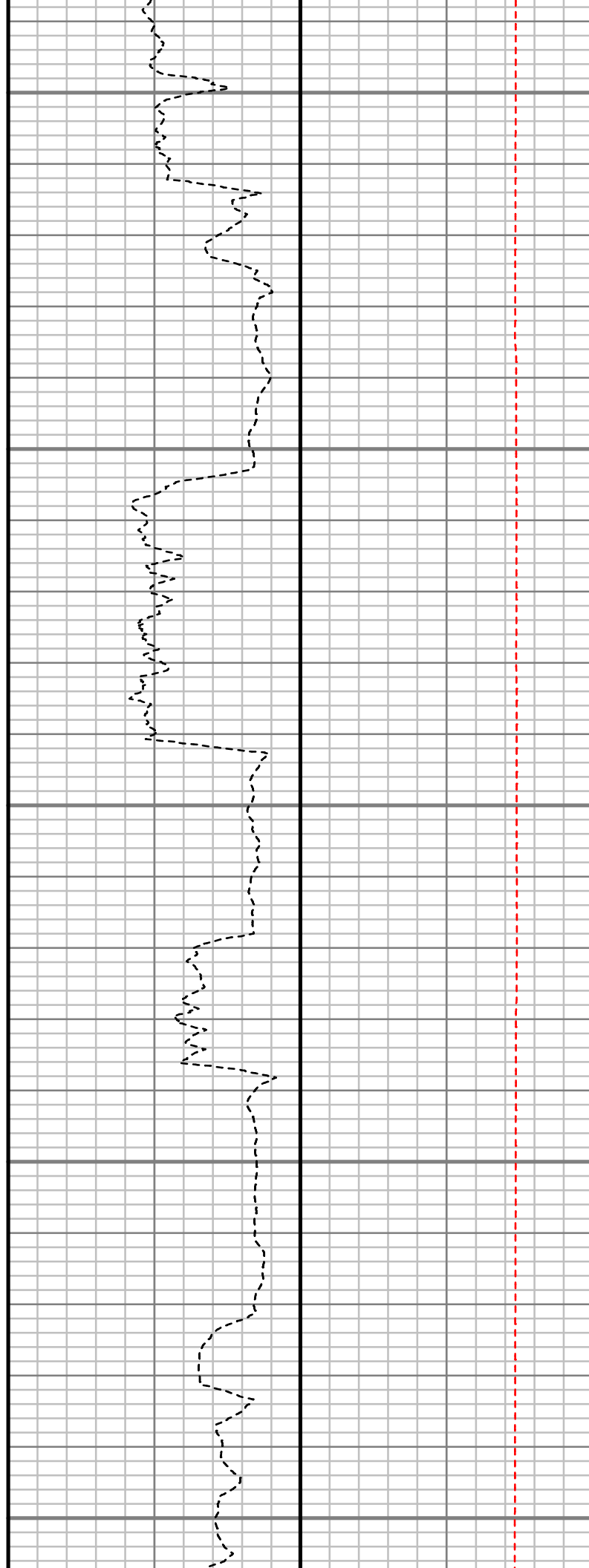
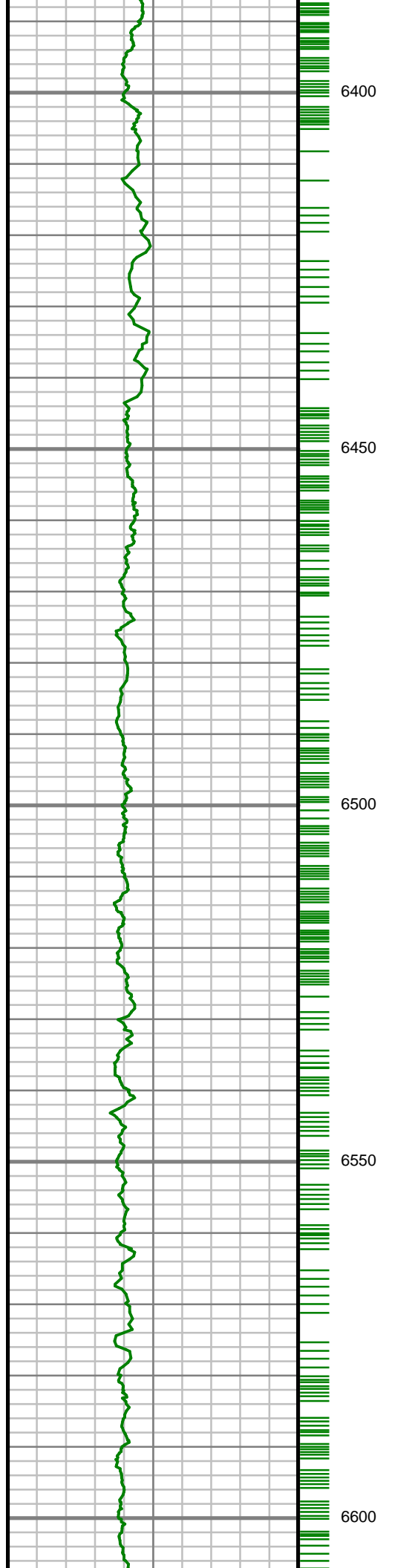


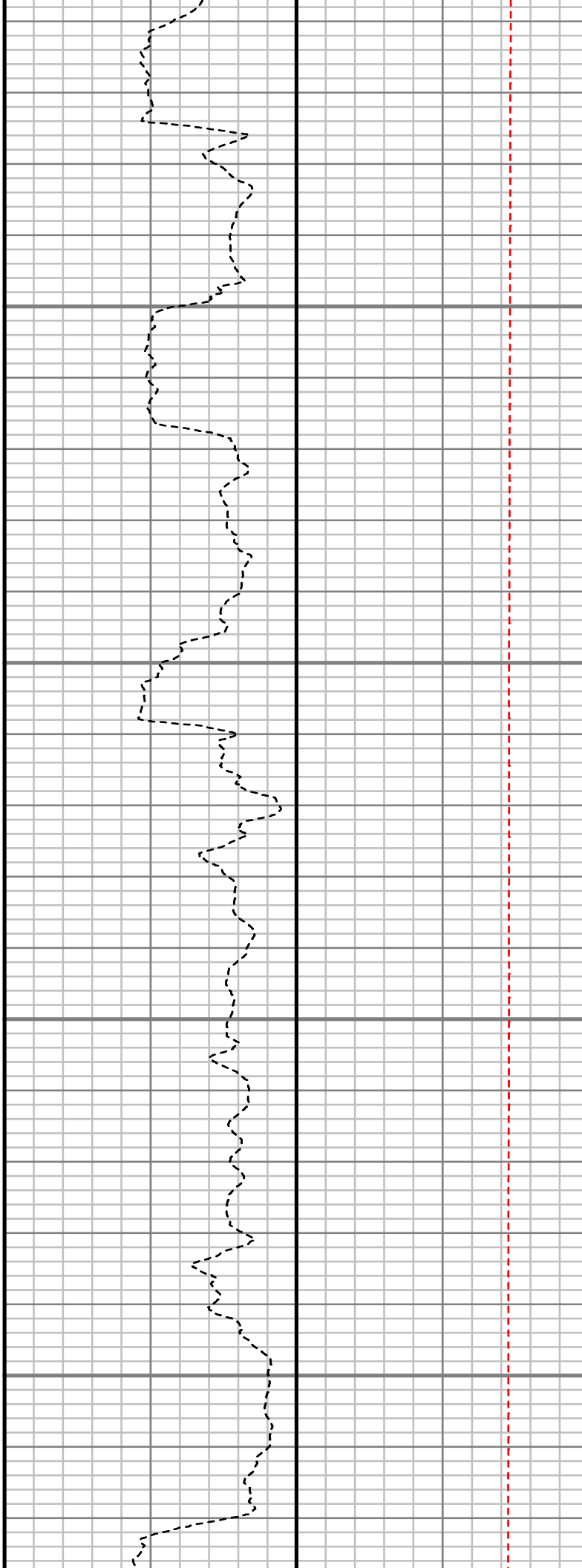
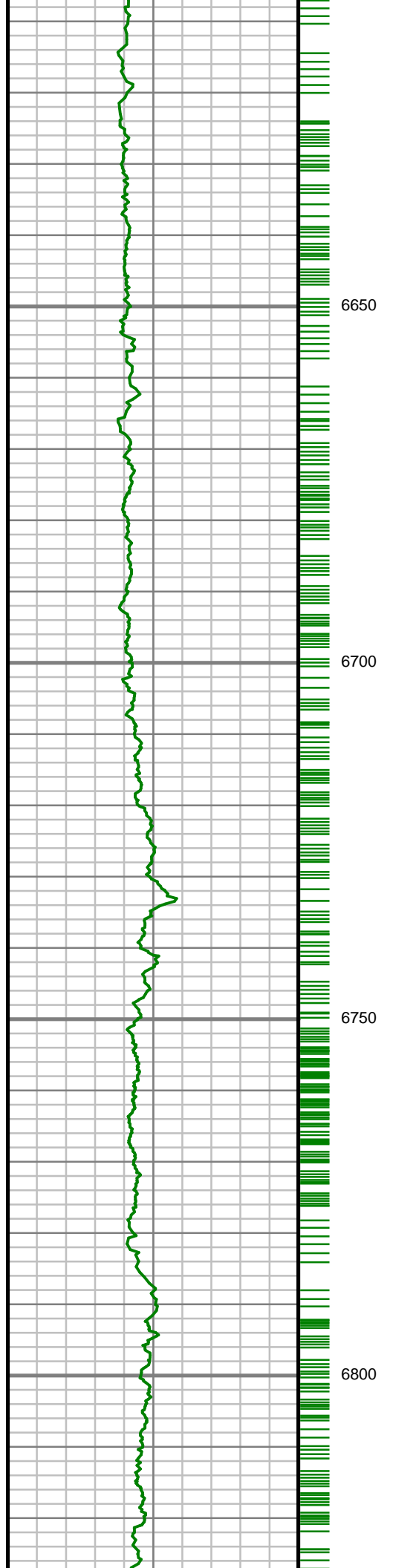


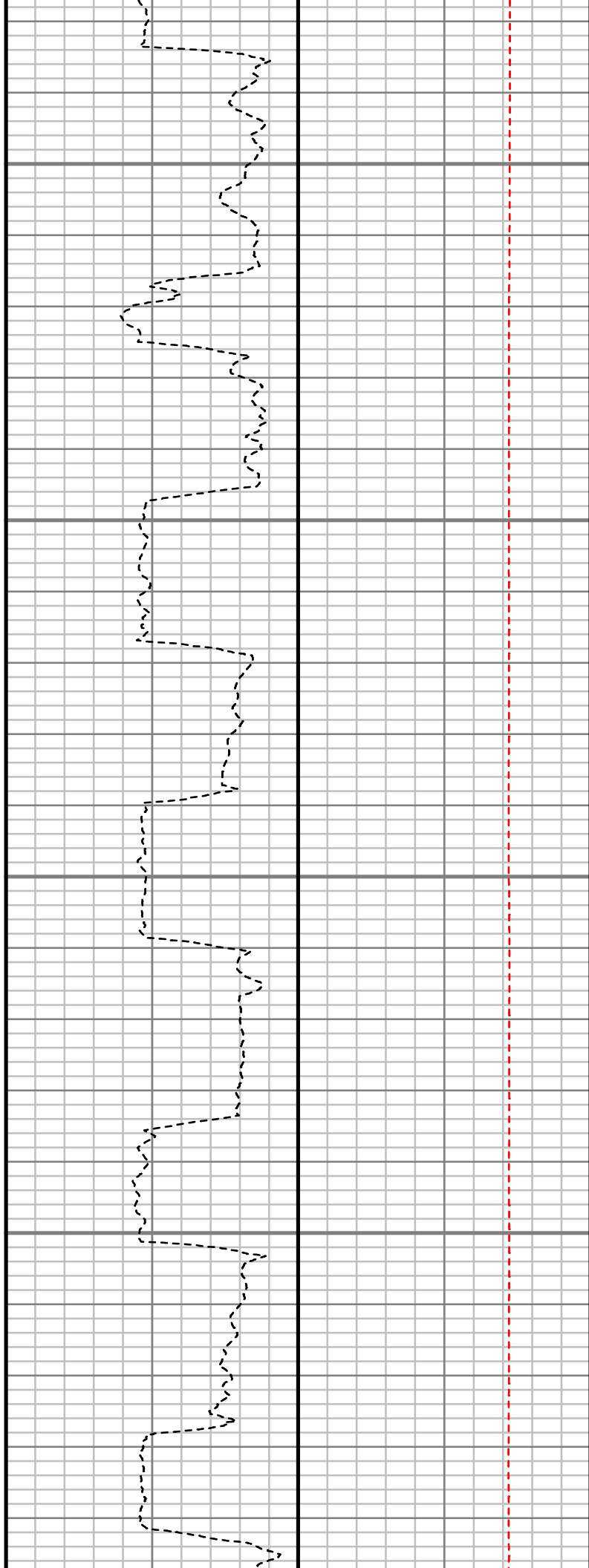
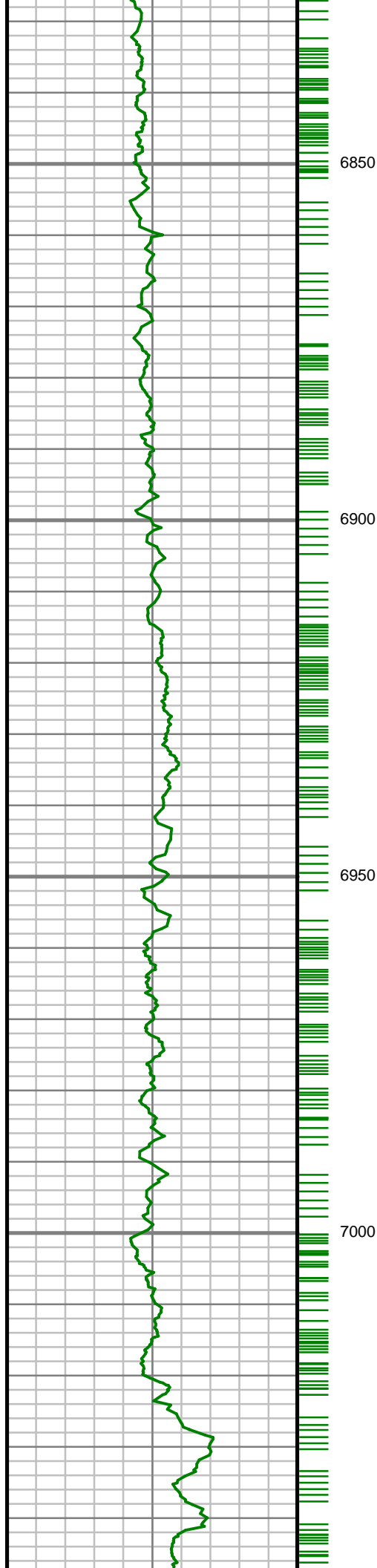
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6050
6100
6150

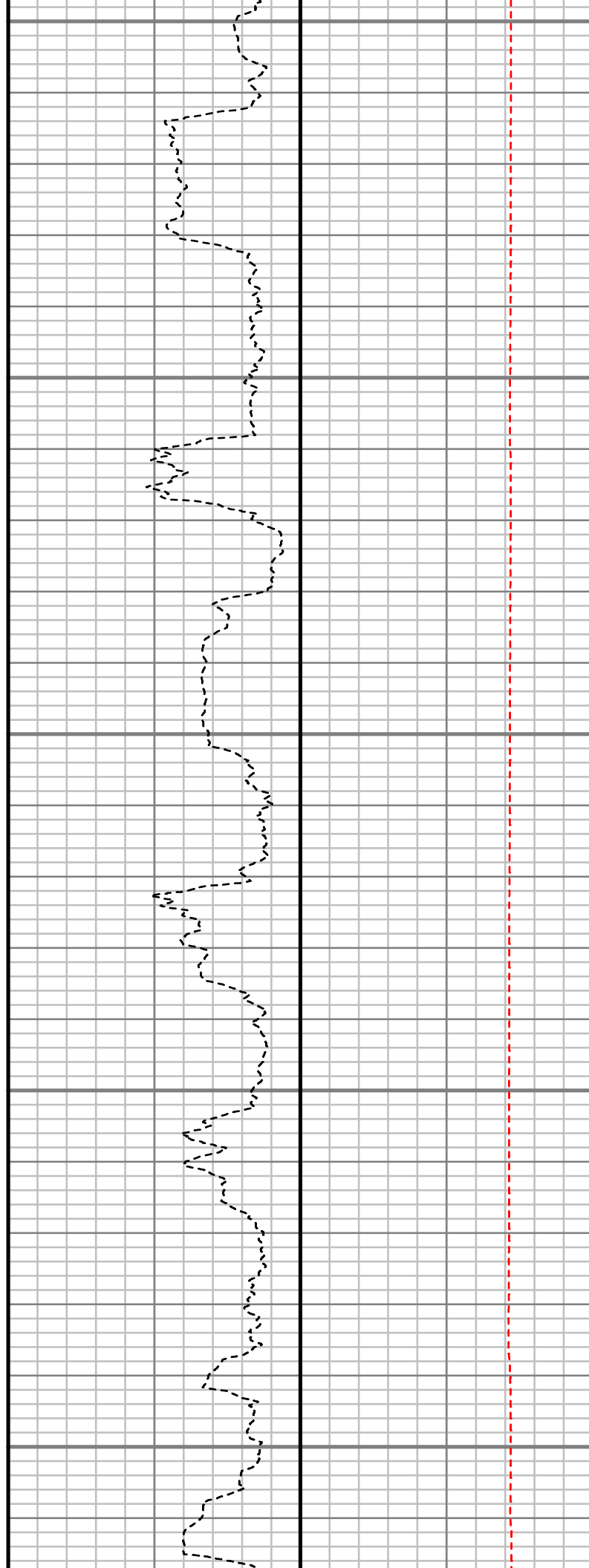
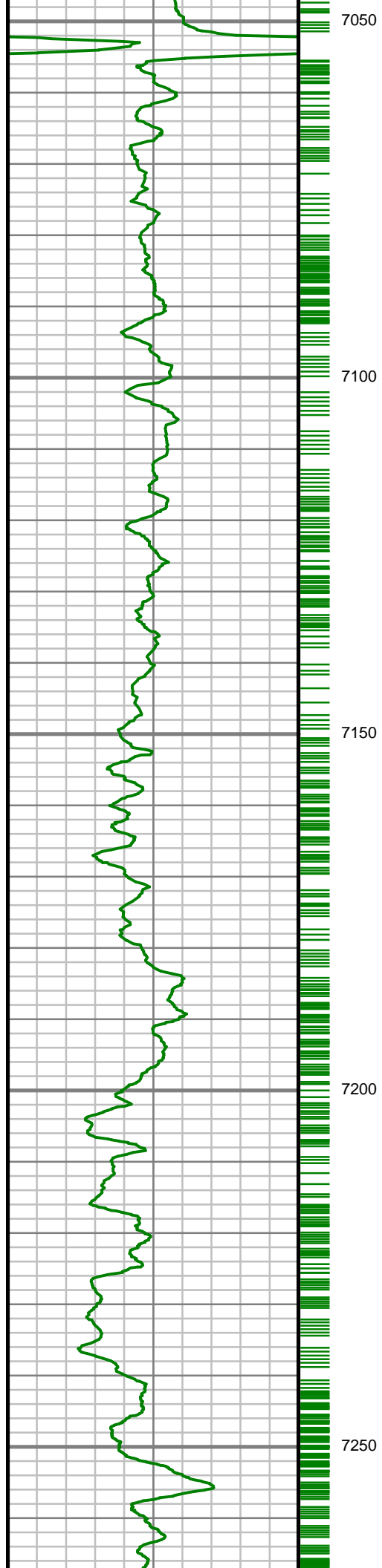


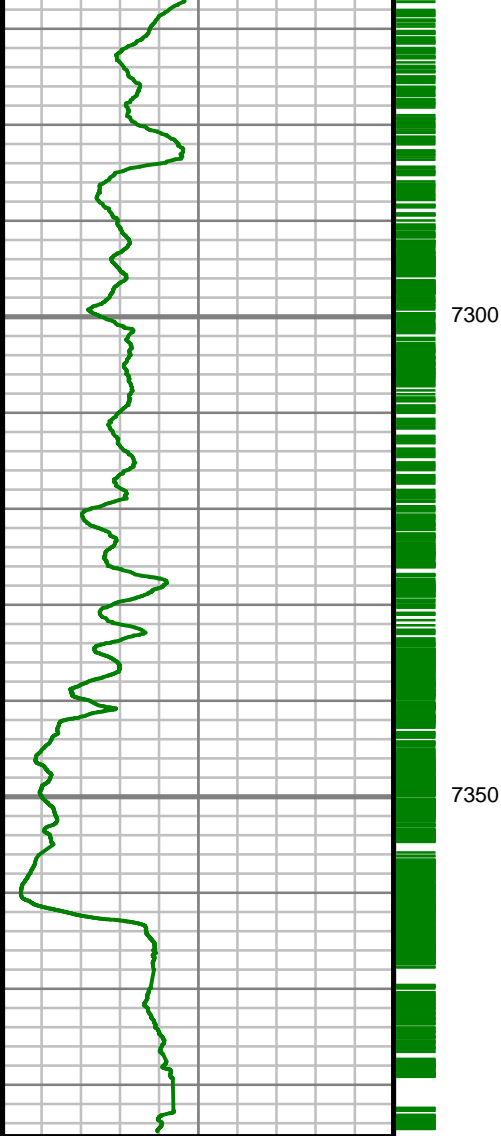






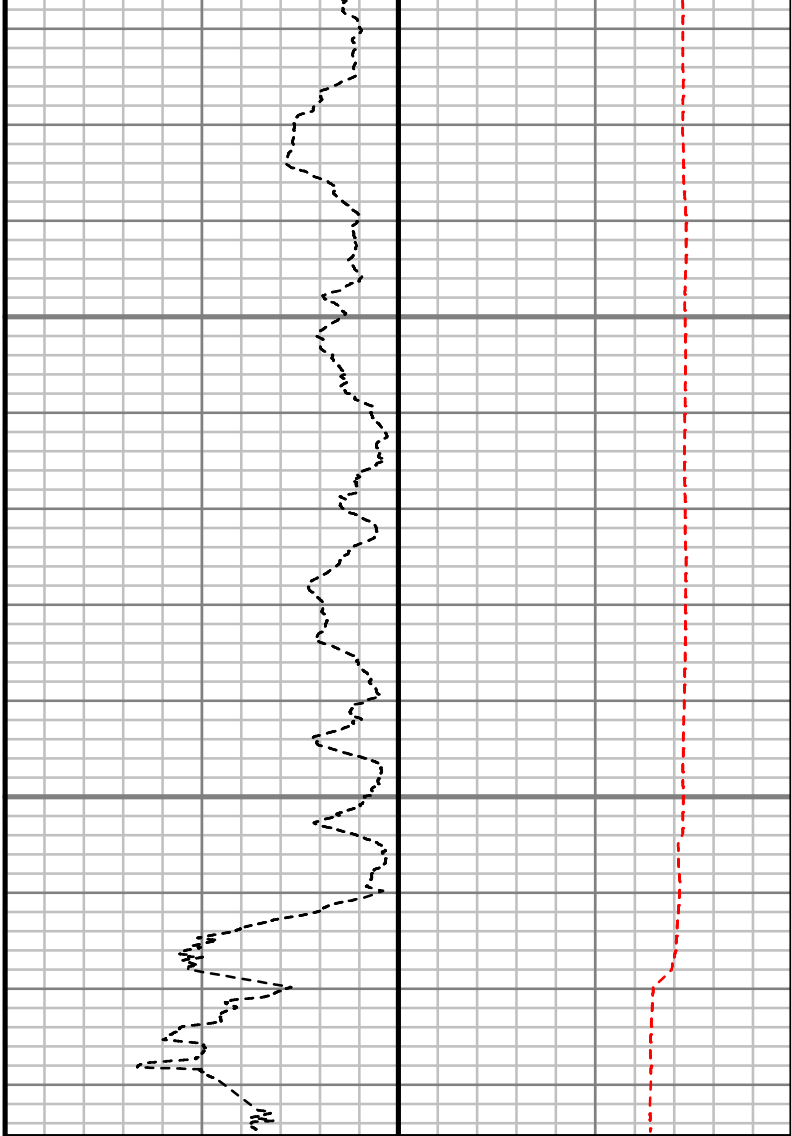






Gamma Ray (GR)		
0	Unit = aapi	150

TRUE VERTICAL DEPTH
1:240 (ft)



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

Tool Temperature (T-TEMP)		
600	Unit = °F	0

Comments

Survey Report

Customer Name:	ANADARKO PETROLEUM CORP.						
Site Name:	PARAGON 16-6HZ						
Well Name:	PARAGON 24C-31HZ						
Survey:	PARAGON 24C-31HZ						
Survey Date:	1/23/2014						
Magnetic Declination:	8.23 deg						
North Reference:	True North						
Calculation Method:	Minimum Curvature						
Section (VS) Ref:	0.00N (ft), 0.00E (ft), 0.00Azim (deg)						
MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00
125.00	0.50	226.26	125.00	-0.30	-0.30	-0.32	0.50
225.00	0.35	197.38	225.00	-0.89	-0.89	-0.72	0.26
325.00	0.26	158.33	324.99	-1.40	-1.40	-0.73	0.22
425.00	0.36	136.85	424.99	-1.84	-1.84	-0.43	0.15
525.00	0.25	123.08	524.99	-2.19	-2.19	-0.03	0.13
625.00	0.22	134.04	624.99	-2.44	-2.44	0.29	0.05
725.00	0.28	132.52	724.99	-2.74	-2.74	0.61	0.06

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
825.00	0.50	20.46	824.99	-2.49	-2.49	0.94	0.66
925.00	0.42	349.82	924.99	-1.72	-1.72	1.03	0.26
1017.00	0.52	352.23	1016.98	-0.98	-0.98	0.91	0.11
1181.00	0.26	2.62	1180.98	0.13	0.13	0.83	0.17
1272.00	0.36	4.15	1271.98	0.62	0.62	0.86	0.12
1364.00	0.17	339.15	1363.98	1.03	1.03	0.83	0.24
1456.00	0.24	306.22	1455.98	1.27	1.27	0.63	0.15
1547.00	0.32	312.78	1546.97	1.56	1.56	0.29	0.09
1566.00	0.34	319.85	1565.97	1.64	1.64	0.21	0.25
1658.00	0.13	335.46	1657.97	1.95	1.95	-0.01	0.23
1750.00	0.23	12.58	1749.97	2.22	2.22	-0.02	0.16
1841.00	0.23	3.94	1840.97	2.57	2.57	0.03	0.04
1932.00	0.24	336.29	1931.97	2.92	2.92	-0.03	0.12
2024.00	0.14	342.30	2023.97	3.21	3.21	-0.14	0.11
2115.00	0.07	350.06	2114.97	3.37	3.37	-0.18	0.08
2207.00	0.14	332.86	2206.97	3.52	3.52	-0.24	0.08
2298.00	0.21	34.28	2297.97	3.76	3.76	-0.20	0.21
2390.00	0.33	34.17	2389.97	4.12	4.12	0.05	0.13
2482.00	0.39	27.48	2481.97	4.62	4.62	0.34	0.08
2574.00	1.32	228.97	2573.96	4.20	4.20	-0.31	1.84

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
2665.00	3.94	236.49	2664.86	1.79	1.79	-3.71	2.89
2757.00	6.29	242.93	2756.49	-2.25	-2.25	-10.83	2.63
2848.00	7.52	243.95	2846.82	-7.13	-7.13	-20.62	1.36
2940.00	8.09	242.29	2937.97	-12.79	-12.79	-31.77	0.66
3031.00	8.79	239.63	3027.98	-19.28	-19.28	-43.44	0.87
3123.00	11.15	241.99	3118.59	-27.01	-27.01	-57.35	2.60
3215.00	11.94	242.82	3208.73	-35.53	-35.53	-73.67	0.88
3306.00	11.46	242.65	3297.84	-43.99	-43.99	-90.07	0.53
3398.00	10.66	241.85	3388.13	-52.20	-52.20	-105.69	0.89
3489.00	9.95	240.05	3477.66	-60.10	-60.10	-119.92	0.85
3581.00	8.92	238.04	3568.41	-67.84	-67.84	-132.87	1.18
3673.00	9.33	236.90	3659.25	-75.69	-75.69	-145.17	0.48
3764.00	9.62	245.74	3749.01	-82.84	-82.84	-158.28	1.63
3856.00	8.95	246.99	3839.81	-88.80	-88.80	-171.87	0.76
3948.00	9.83	243.89	3930.57	-95.05	-95.05	-185.51	1.10
4039.00	8.76	239.28	4020.38	-102.01	-102.01	-198.44	1.43
4131.00	8.83	238.42	4111.30	-109.29	-109.29	-210.48	0.16
4223.00	9.74	232.93	4202.09	-117.68	-117.68	-222.71	1.38
4317.00	10.62	235.74	4294.61	-127.34	-127.34	-236.21	1.08

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
4411.00	10.28	234.96	4387.06	-137.03	-137.03	-250.23	0.39
4506.00	9.90	243.14	4480.59	-145.59	-145.59	-264.46	1.56
4600.00	9.41	247.05	4573.26	-152.24	-152.24	-278.74	0.87
4694.00	9.25	246.94	4666.02	-158.20	-158.20	-292.77	0.17
4789.00	9.49	238.90	4759.75	-165.23	-165.23	-306.51	1.40
4883.00	10.21	238.18	4852.37	-173.63	-173.63	-320.22	0.77
4977.00	9.50	234.54	4944.98	-182.52	-182.52	-333.62	1.00
5071.00	10.91	234.01	5037.49	-192.26	-192.26	-347.14	1.50
5166.00	9.84	230.33	5130.93	-202.72	-202.72	-360.66	1.33
5260.00	9.87	234.12	5223.55	-212.57	-212.57	-373.37	0.69
5355.00	10.31	239.82	5317.08	-221.61	-221.61	-387.31	1.15
5449.00	10.19	241.00	5409.58	-229.87	-229.87	-401.85	0.26
5543.00	9.02	237.16	5502.27	-237.90	-237.90	-415.31	1.42
5638.00	9.89	240.40	5595.98	-245.96	-245.96	-428.66	1.08
5732.00	10.24	239.72	5688.53	-254.17	-254.17	-442.90	0.39
5826.00	9.94	236.90	5781.07	-262.81	-262.81	-456.92	0.61
5921.00	9.82	226.84	5874.67	-272.83	-272.83	-469.70	1.82
6015.00	10.21	236.68	5967.25	-282.89	-282.89	-482.50	1.87
6109.00	8.08	235.85	6060.05	-291.18	-291.18	-494.93	2.27
6203.00	8.63	229.27	6153.05	-299.49	-299.49	-505.75	1.17

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
6298.00	8.74	225.96	6246.96	-309.16	-309.16	-516.34	0.54
6392.00	7.84	231.08	6339.98	-318.16	-318.16	-526.47	1.24
6486.00	10.01	230.71	6432.83	-327.36	-327.36	-537.78	2.30
6533.00	11.59	234.08	6479.00	-332.72	-332.72	-544.77	3.63
6581.00	15.54	236.99	6525.65	-339.06	-339.06	-554.07	8.35
6628.00	21.41	241.51	6570.21	-346.59	-346.59	-566.90	12.83
6675.00	25.68	249.69	6613.30	-354.22	-354.22	-584.00	11.42
6722.00	26.66	258.17	6655.50	-359.91	-359.91	-603.88	8.22
6769.00	27.09	266.09	6697.43	-362.81	-362.81	-624.89	7.66
6816.00	27.56	273.40	6739.20	-362.89	-362.89	-646.42	7.20
6864.00	28.34	287.61	6781.65	-358.78	-358.78	-668.39	13.94
6911.00	28.39	298.18	6823.04	-350.13	-350.13	-688.89	10.67
6958.00	28.17	303.71	6864.43	-338.69	-338.69	-707.97	5.60
7005.00	27.97	308.58	6905.91	-325.66	-325.66	-725.81	4.89
7053.00	25.83	318.20	6948.73	-310.84	-310.84	-741.59	10.09
7100.00	27.34	329.38	6990.79	-293.90	-293.90	-753.93	11.10
7147.00	32.46	332.32	7031.52	-273.43	-273.43	-765.29	11.32
7194.00	36.28	328.89	7070.31	-250.34	-250.34	-778.34	9.12
7241.00	39.74	330.03	7107.34	-225.42	-225.42	-793.03	7.52

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
7288.00	42.38	329.49	7142.77	-198.75	-198.75	-808.58	5.66
7335.00	45.82	328.88	7176.52	-170.67	-170.67	-825.34	7.36
7382.00	50.82	331.04	7207.77	-140.28	-140.28	-842.88	11.18
7430.00	56.70	333.88	7236.14	-105.96	-105.96	-860.74	13.16
7477.00	62.08	335.42	7260.06	-69.41	-69.41	-878.04	11.78
7524.00	66.69	338.68	7280.38	-30.39	-30.39	-894.54	11.63
7571.00	68.67	344.79	7298.24	10.87	10.87	-908.14	12.74
7618.00	69.80	348.90	7314.91	53.66	53.66	-918.13	8.53
7665.00	71.65	352.11	7330.43	97.41	97.41	-925.44	7.56
7713.00	77.65	352.80	7343.13	143.27	143.27	-931.51	12.57
7760.00	81.34	353.06	7351.70	189.13	189.13	-937.20	7.87
7773.00	82.42	353.22	7353.53	201.90	201.90	-938.74	8.43
7881.00	89.13	357.12	7361.49	309.15	309.15	-947.79	7.18
7973.00	88.79	357.12	7363.16	401.01	401.01	-952.42	0.36
8064.00	89.16	357.23	7364.78	491.89	491.89	-956.90	0.42
8156.00	89.50	358.89	7365.86	583.83	583.83	-960.03	1.84
8247.00	89.43	1.12	7366.71	674.82	674.82	-960.02	2.45
8339.00	89.60	2.96	7367.49	766.75	766.75	-956.75	2.01
8431.00	90.44	2.49	7367.47	858.65	858.65	-952.38	1.04
8522.00	90.94	1.83	7366.37	949.57	949.57	-948.95	0.91

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
8614.00	89.83	0.97	7365.75	1041.54	1041.54	-946.70	1.53
8705.00	89.16	1.53	7366.55	1132.52	1132.52	-944.71	0.96
8797.00	89.66	1.25	7367.50	1224.48	1224.48	-942.47	0.63
8889.00	89.80	2.09	7367.93	1316.44	1316.44	-939.79	0.93
8980.00	90.30	1.56	7367.85	1407.40	1407.40	-936.89	0.80
9072.00	90.37	0.75	7367.31	1499.37	1499.37	-935.02	0.88
9164.00	90.17	1.76	7366.88	1591.35	1591.35	-933.00	1.12
9255.00	90.74	1.90	7366.16	1682.30	1682.30	-930.09	0.65
9347.00	90.07	1.06	7365.51	1774.27	1774.27	-927.71	1.17
9439.00	90.77	2.04	7364.84	1866.23	1866.23	-925.23	1.31
9533.00	88.56	1.65	7365.39	1960.17	1960.17	-922.20	2.39
9627.00	90.70	2.65	7366.00	2054.10	2054.10	-918.67	2.52
9722.00	91.11	1.76	7364.50	2149.01	2149.01	-915.01	1.03
9816.00	89.20	1.03	7364.25	2242.98	2242.98	-912.73	2.18
9910.00	90.84	1.34	7364.22	2336.96	2336.96	-910.78	1.78
10005.00	90.81	1.45	7362.86	2431.92	2431.92	-908.48	0.12
10099.00	88.32	0.02	7363.58	2525.90	2525.90	-907.28	3.05
10194.00	89.16	0.79	7365.66	2620.87	2620.87	-906.62	1.20
10288.00	88.89	0.32	7367.25	2714.85	2714.85	-905.71	0.57

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
10382.00	87.99	0.41	7369.81	2808.82	2808.82	-905.11	0.97
10477.00	87.65	359.55	7373.42	2903.75	2903.75	-905.14	0.97
10571.00	87.69	359.82	7377.24	2997.67	2997.67	-905.65	0.29
10665.00	89.73	358.99	7379.36	3091.63	3091.63	-906.62	2.35
10760.00	91.24	359.85	7378.55	3186.62	3186.62	-907.58	1.82
10854.00	91.64	359.75	7376.18	3280.59	3280.59	-907.91	0.44
10948.00	90.37	359.32	7374.53	3374.57	3374.57	-908.67	1.43
11042.00	85.88	357.69	7377.61	3468.46	3468.46	-911.12	5.08
11137.00	88.05	357.18	7382.63	3563.23	3563.23	-915.36	2.35
11231.00	89.56	356.81	7384.58	3657.07	3657.07	-920.29	1.65
11325.00	90.23	358.65	7384.75	3751.00	3751.00	-924.01	2.08
11420.00	91.78	359.88	7383.08	3845.97	3845.97	-925.24	2.08
11514.00	91.31	1.33	7380.55	3939.93	3939.93	-924.25	1.62
11608.00	90.34	1.95	7379.20	4033.88	4033.88	-921.56	1.23
11702.00	90.40	1.24	7378.60	4127.84	4127.84	-918.95	0.76
11797.00	90.37	2.51	7377.96	4222.78	4222.78	-915.83	1.34
11891.00	90.10	2.11	7377.57	4316.71	4316.71	-912.05	0.52
11986.00	89.83	0.38	7377.63	4411.68	4411.68	-909.98	1.84
12080.00	91.21	1.85	7376.77	4505.65	4505.65	-908.16	2.14
12174.00	90.87	2.36	7375.07	4599.57	4599.57	-904.70	0.65

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
12269.00	87.85	359.70	7376.12	4694.53	4694.53	-902.99	4.24
12363.00	88.59	359.06	7379.04	4788.48	4788.48	-904.00	1.04
12457.00	89.73	358.22	7380.42	4882.44	4882.44	-906.23	1.51
12552.00	90.27	357.14	7380.42	4977.36	4977.36	-910.08	1.27
12646.00	89.06	357.50	7380.97	5071.26	5071.26	-914.48	1.34
12741.00	90.34	357.81	7381.47	5166.17	5166.17	-918.36	1.38
12835.00	90.77	359.12	7380.56	5260.13	5260.13	-920.88	1.47
12930.00	90.13	1.03	7379.81	5355.12	5355.12	-920.75	2.12
13024.00	86.91	356.57	7382.23	5449.04	5449.04	-922.71	5.85
13118.00	91.74	358.76	7383.34	5542.92	5542.92	-926.54	5.64
13213.00	91.58	359.65	7380.58	5637.87	5637.87	-927.85	0.95
13307.00	90.84	0.26	7378.60	5731.85	5731.85	-927.92	1.02
13401.00	91.48	2.06	7376.70	5825.80	5825.80	-926.02	2.03
13496.00	91.34	2.64	7374.37	5920.69	5920.69	-922.12	0.63
13590.00	89.09	2.38	7374.01	6014.60	6014.60	-918.00	2.41
13684.00	89.70	2.31	7375.00	6108.51	6108.51	-914.16	0.65
13779.00	90.64	3.06	7374.72	6203.41	6203.41	-909.70	1.27
13873.00	88.25	2.30	7375.63	6297.29	6297.29	-905.31	2.66
13967.00	89.36	0.49	7377.59	6391.24	6391.24	-903.02	2.26

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
14062.00	90.17	0.40	7377.97	6486.23	6486.23	-902.29	0.85
14156.00	88.96	1.65	7378.69	6580.21	6580.21	-900.61	1.85
14250.00	90.20	2.05	7379.38	6674.16	6674.16	-897.58	1.39
14345.00	87.69	1.03	7381.13	6769.10	6769.10	-895.02	2.86
14439.00	89.73	359.11	7383.25	6863.07	6863.07	-894.90	2.98
14464.00	89.83	358.45	7383.34	6888.06	6888.06	-895.44	2.68



GAMMA RAY

5" = 100' FEET TVD