



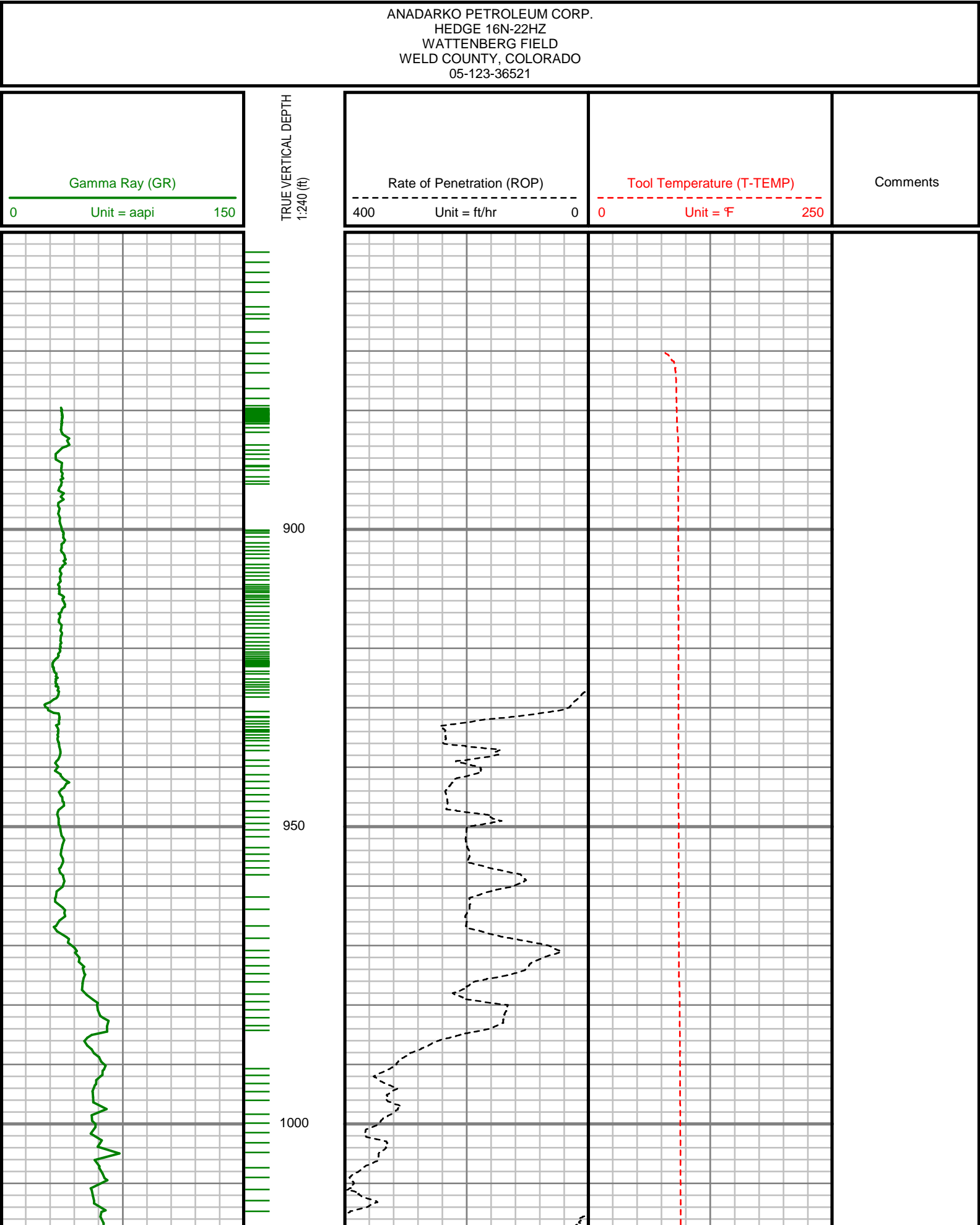
GAMMA RAY LOG

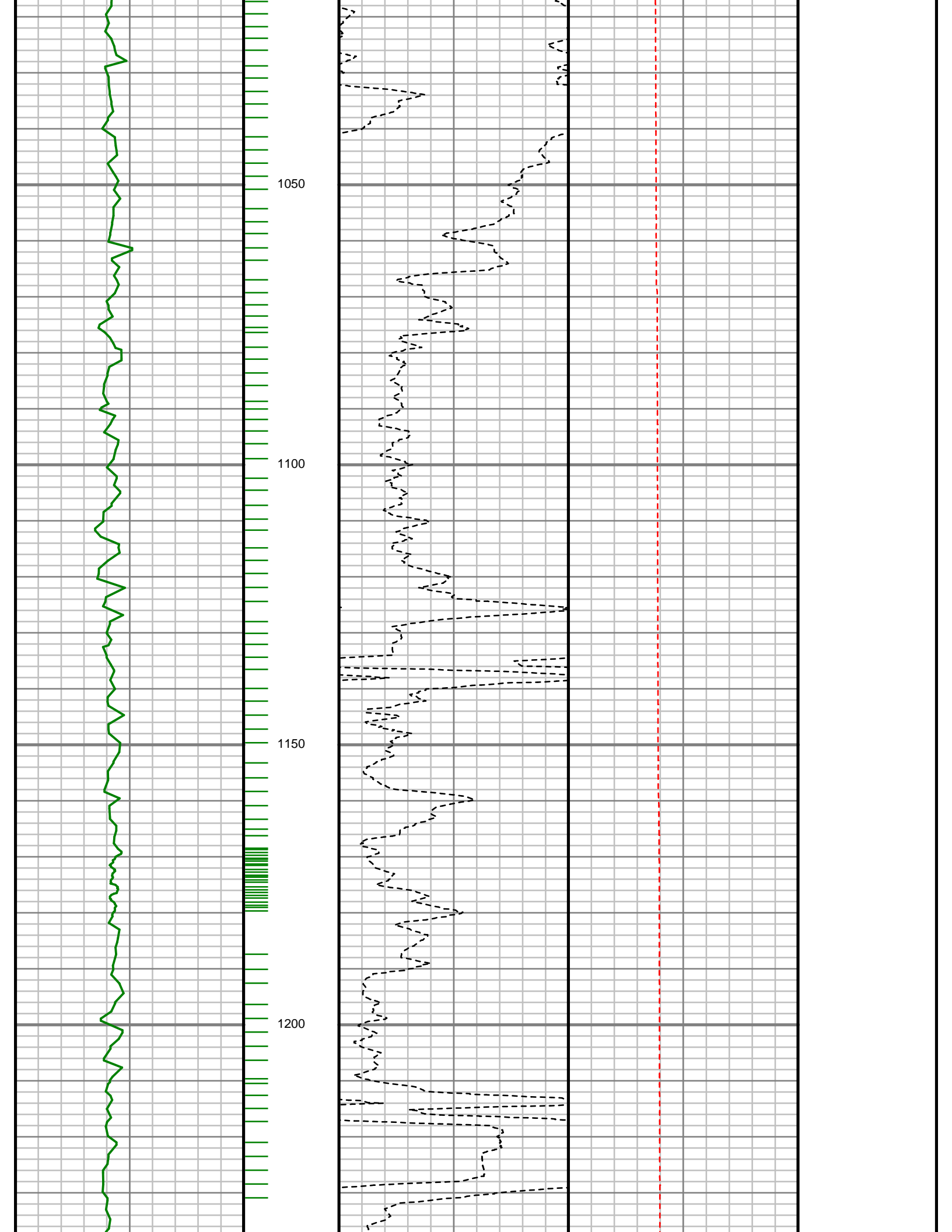
5" = 100' FEET TWD

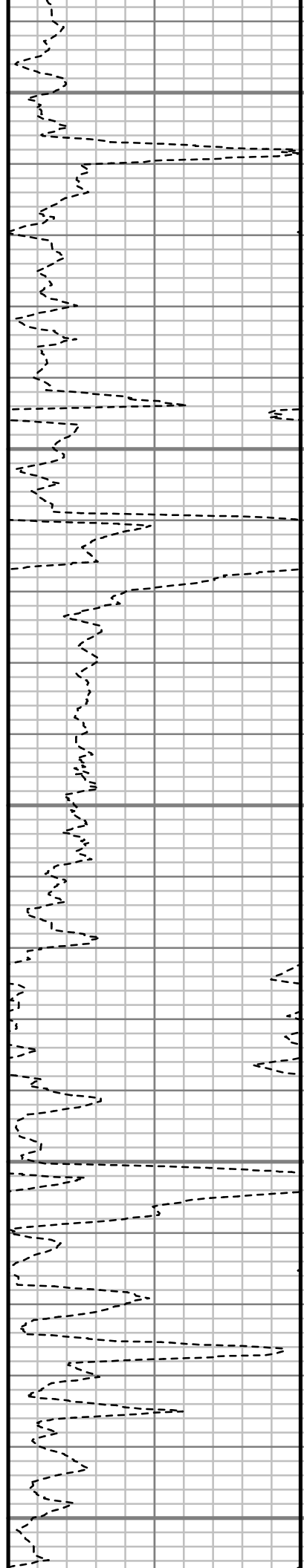
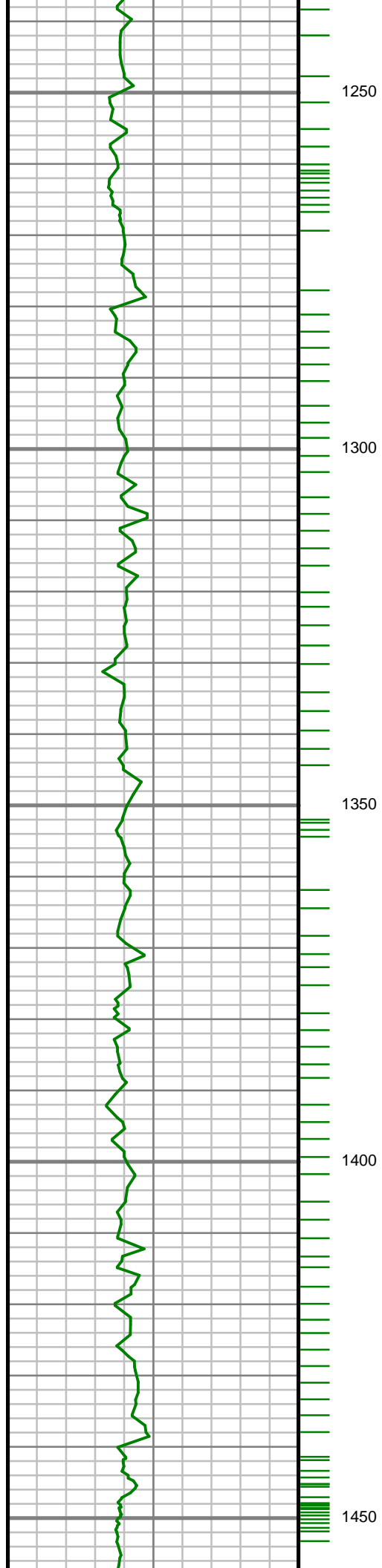
COMPANY : ANADARKO PETROLEUM CORP. WELL : HEDGE 16N-22HZ FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-36521									
COMPANY : ANADARKO PETROLEUM CORP. WELL : HEDGE 16N-22HZ FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-36521									
WELL LOCATION LAT:40°12'57.888"N LONG:104°45'18.122"W N:1322434.03 ft E:3208041.17 ft SEC:22 TWP:3N RANGE:66W									
DEPTH REF. : RKB REF. HEIGHT : 25.000 ft RKB to Ground Level GROUND LEVEL : 4905.000 ft G.L. to MEAN SEA LEVEL									
DIRECTIONAL ROP									
BOREHOLE RECORD					DEVIATION RECORD				
HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft				
12.25	0	978	0 - 10	0	6678				
8.75	978	7621	10 - 90	6678	7621				
6.125	7621	12088	90 - 94	7621	12088				
CASING RECORD									
CASING SIZE in	FROM ft	TO ft							
9.625	0	968							
7	0	7611							
DRILLING CO. : H&P RIG : 311 LMD UNIT NO. : C-46 SPUD DATE : 07/27/2013 LMD START DATE : 08/06/2013 LMD END DATE : 08/12/2013 DISTRICT : CASPER DEPTH : 968 ft DEPTH : 12088 ft TOTAL DEPTH : 12088 ft									

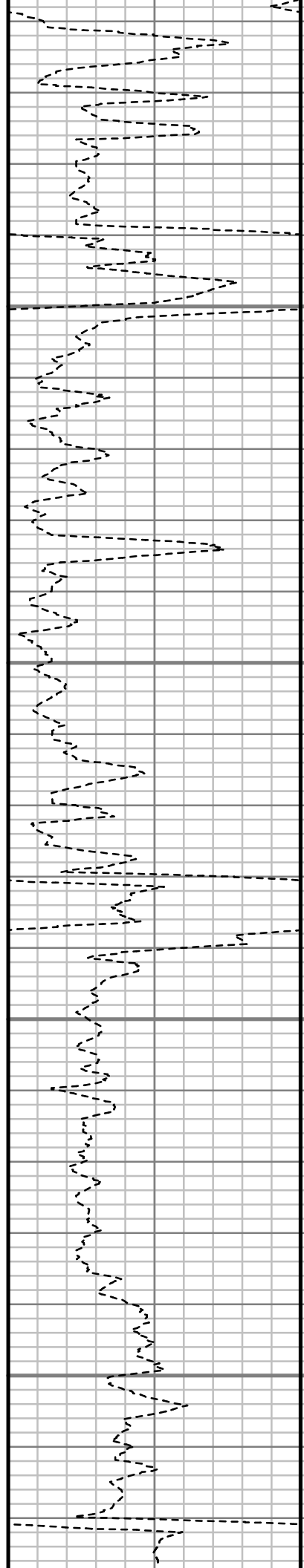
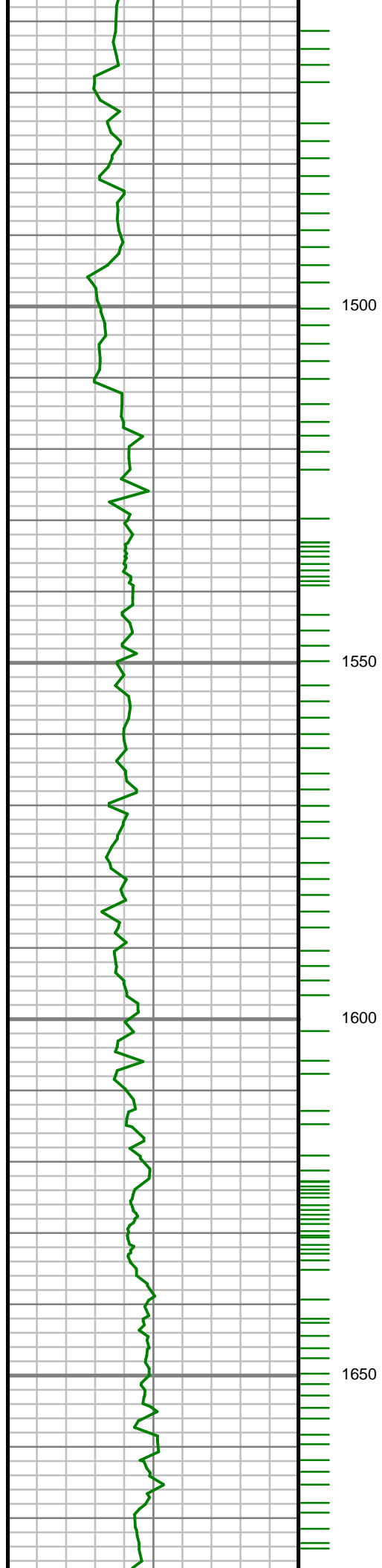
Run Data						
RUN NUMBER	1	2	3			
START DATE	08/06/2013	08/09/2013	08/11/2013			
START TIME	1100	1800	0300			
END DATE	08/09/2013	08/11/2013	08/12/2013			
END TIME	1800	0300	0045			
DEPTH IN (ft)	978	7621	9572			
DEPTH OUT (ft)	7621	9572	12088			
LOG TOP (ft)	968	7574	9515			
LOG BOTTOM (ft)	7574	9515	12019			
HOLE SIZE (in)	8.75	6.125	6.125			
MUD DATA @ (ft)	968	7621	10345			
MUD TYPE	WATER-BASED	WATER-BASED	WATER-BASED			
DENSITY (lb / gal)	8.7	10.3	9.8			
VISCOSITY (s / qt)	28	35	37			
pH	8.3	9.4	9.3			
FLUID LOSS (cm3 / 30)	-	-	-			
SALINITY (ppm)	1100	1300	1300			
Rm (ohmm @ deg F)	-	-	-			
Rmf (ohmm @ deg F)	-	-	-			
MAX TEMP (deg F)	178	218	245			
Rm @ MAX TEMP (ohmm)	-	-	-			
LWD ENGINEER #1	J. DENNING	J. DENNING	J. DENNING			
LWD ENGINEER #2	M. SHARKER	M. SHARKER	M. SHARKER			
LWD ENGINEER #3	-	-	-			
LOG WITNESS #1	J. STUART	J. STUART	J. STUART			
LOG WITNESS #2	-	-	-			

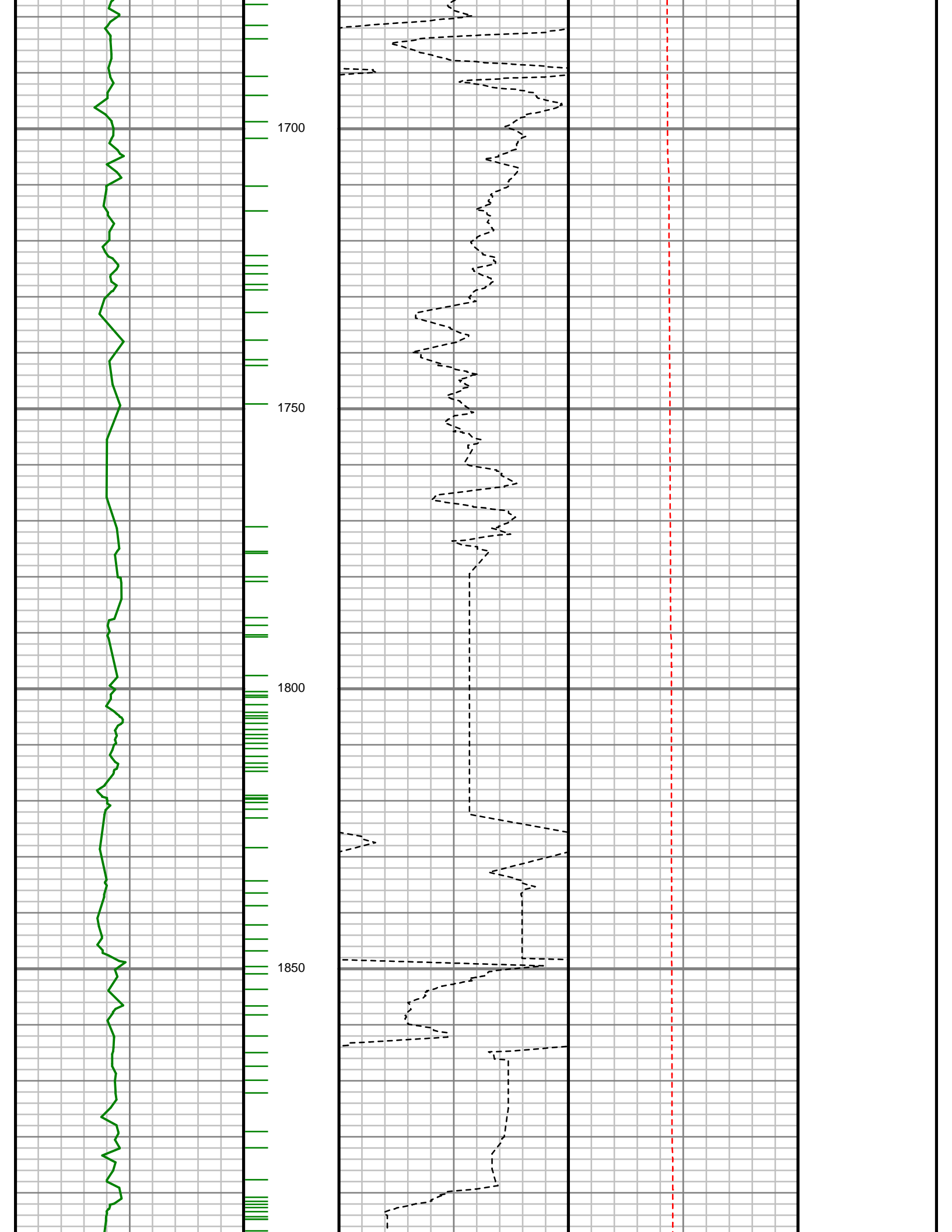
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

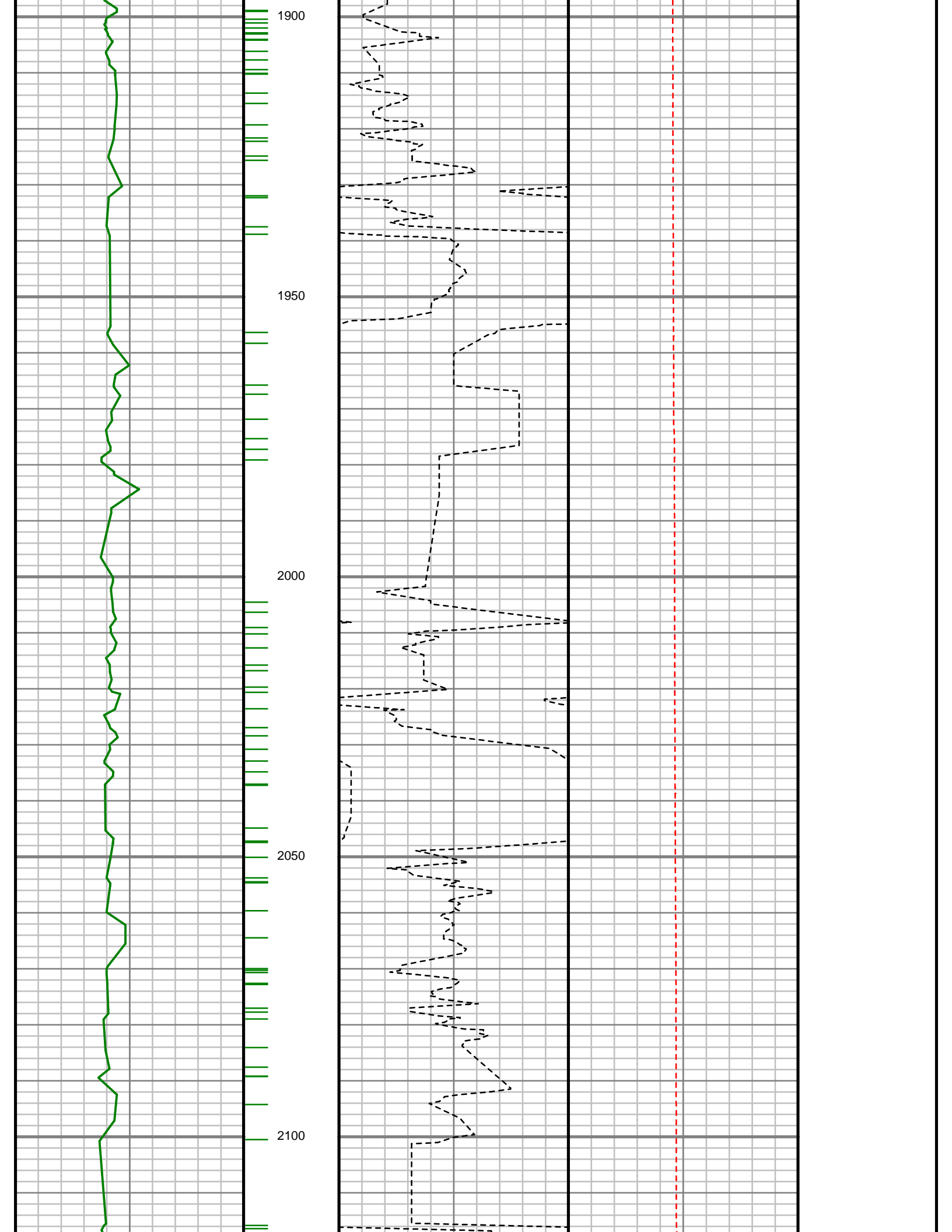


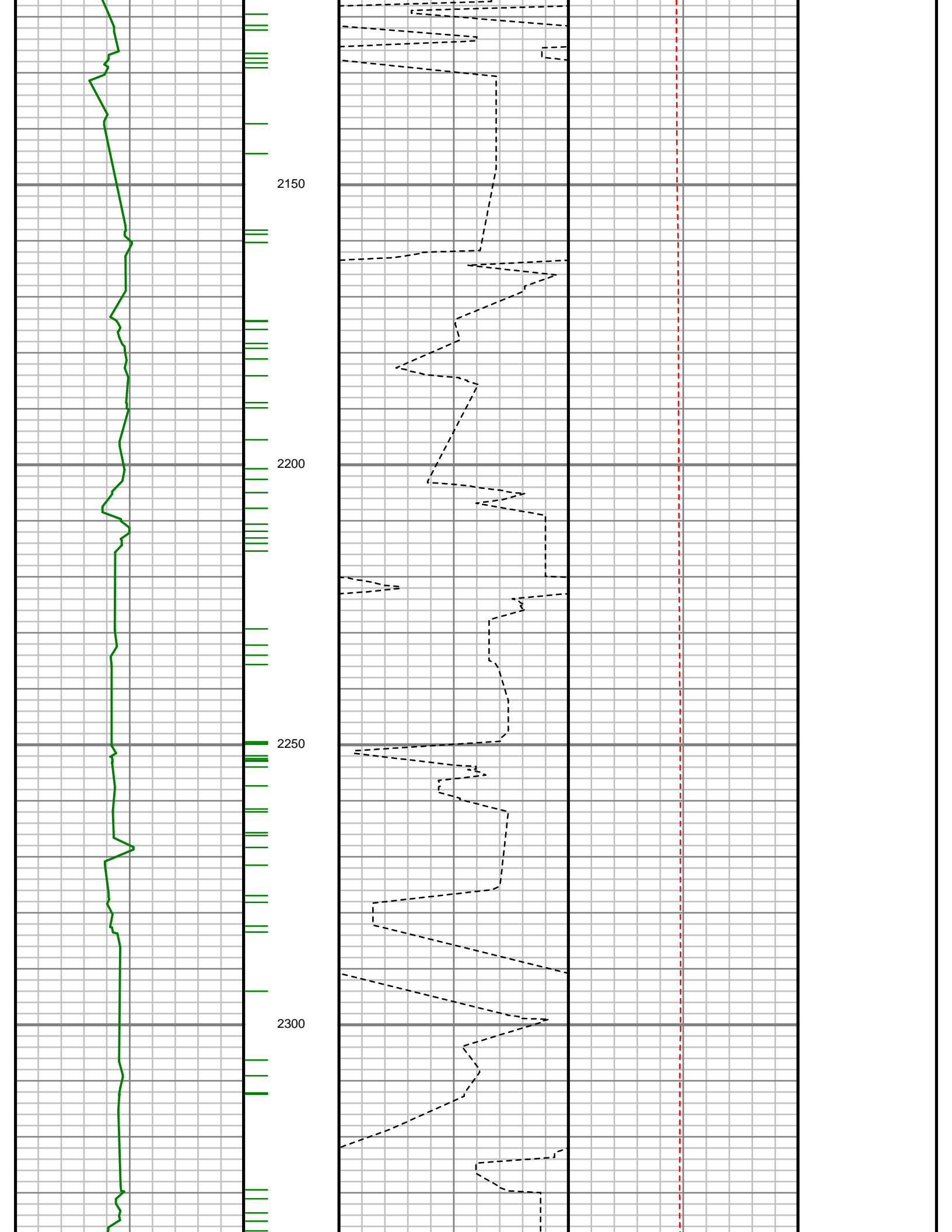


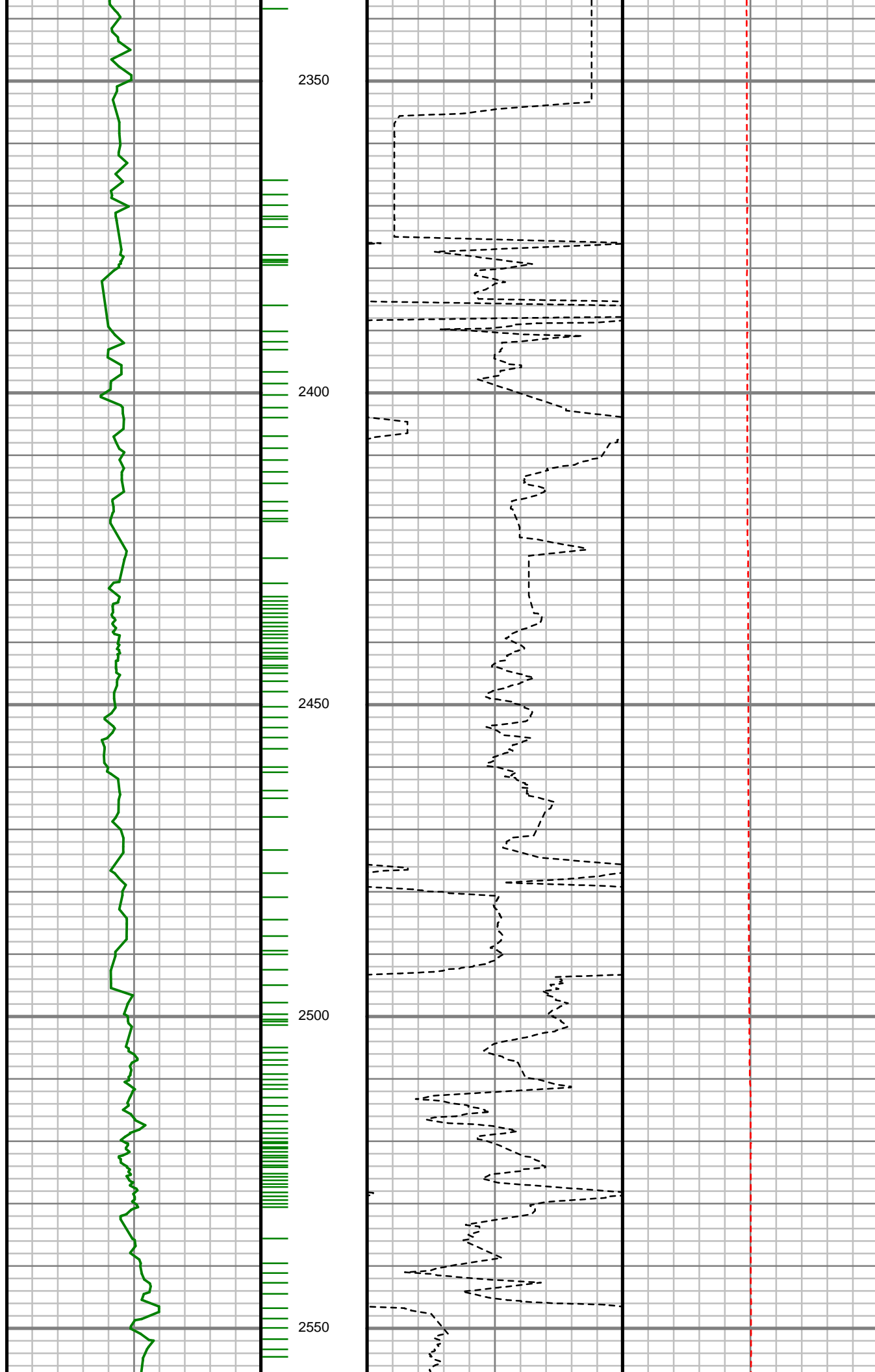


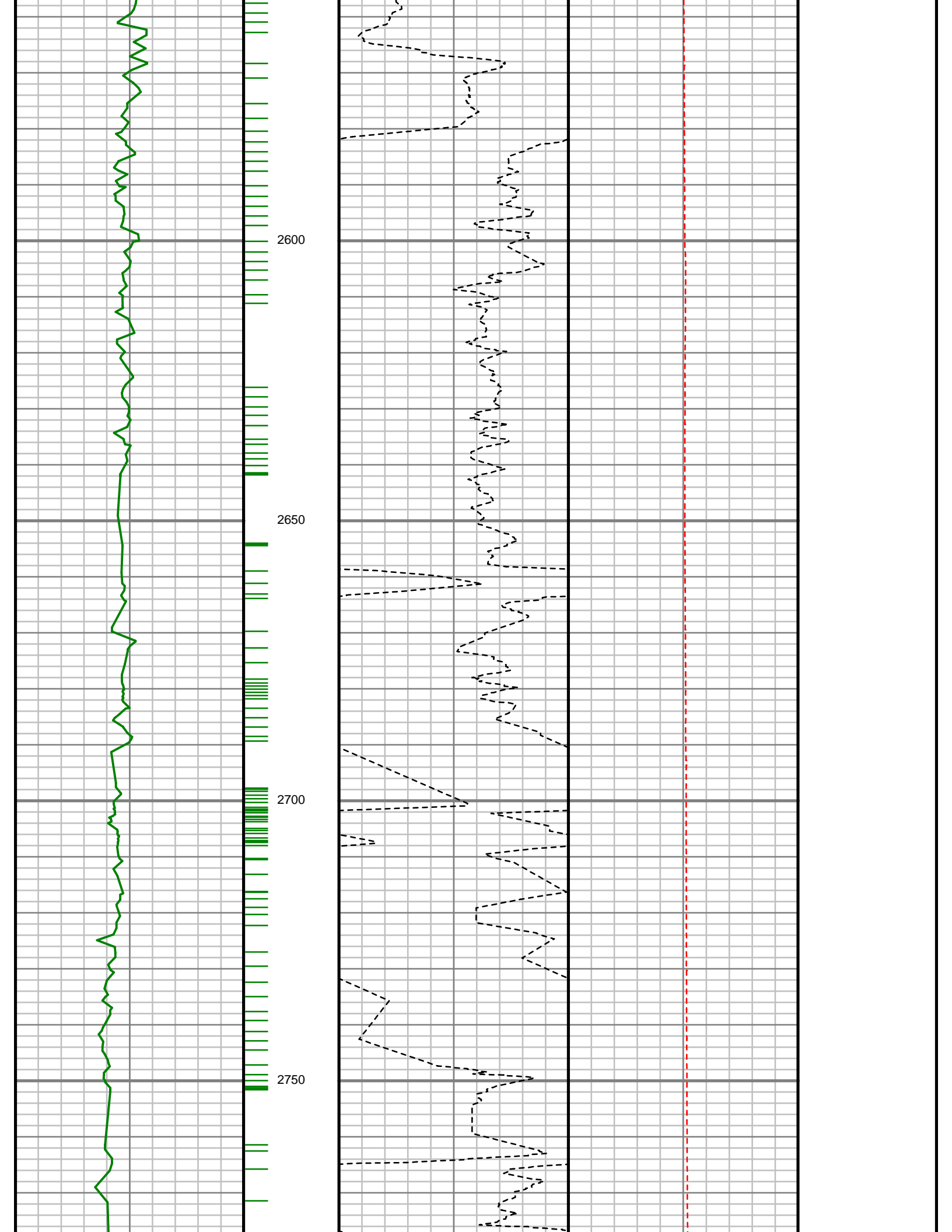


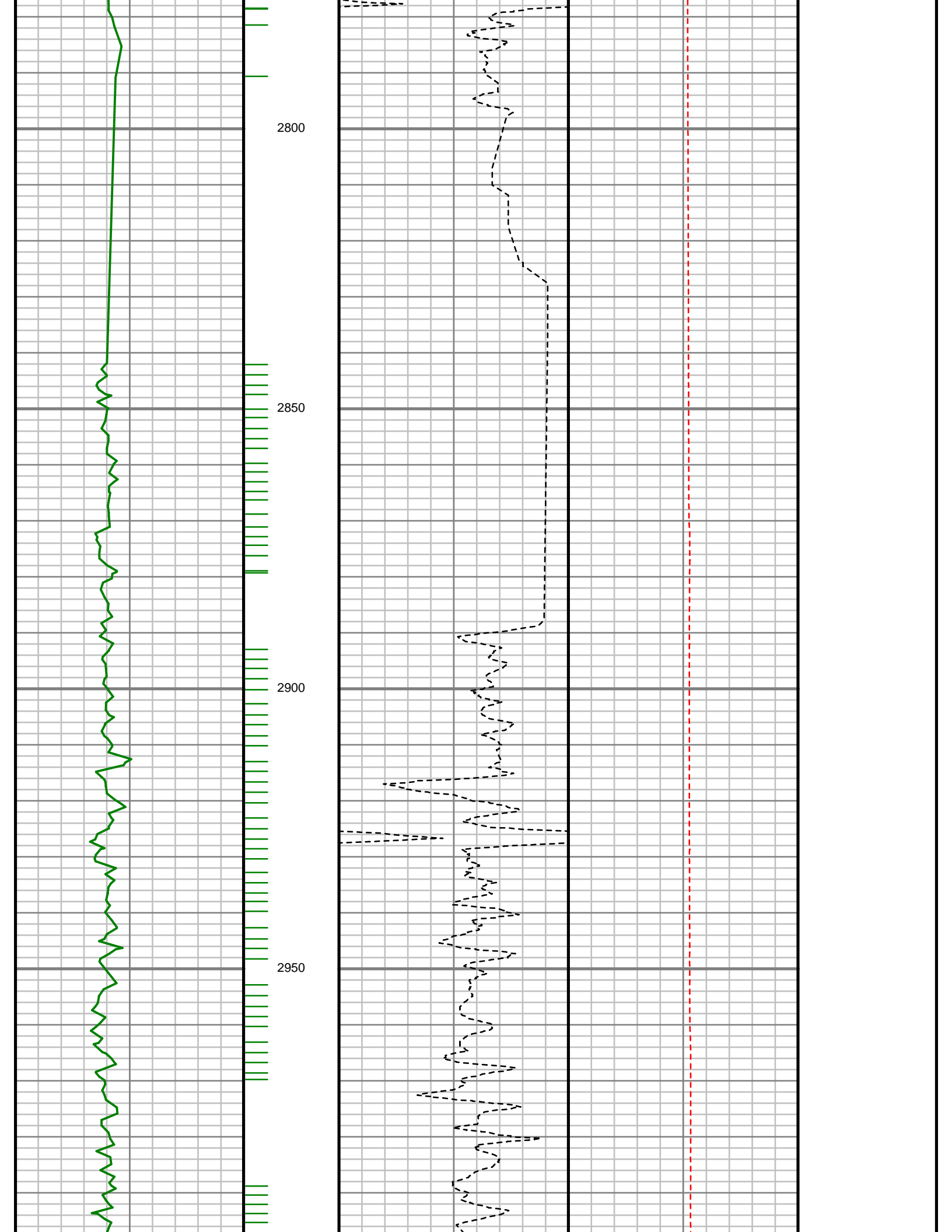


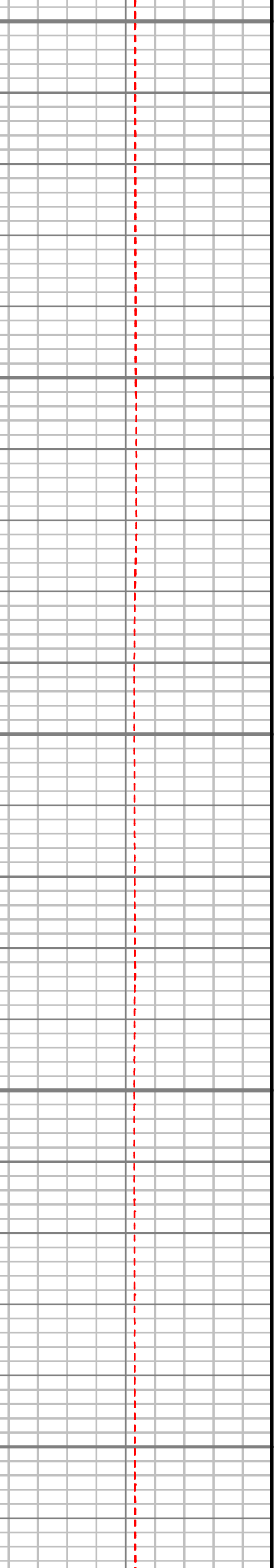
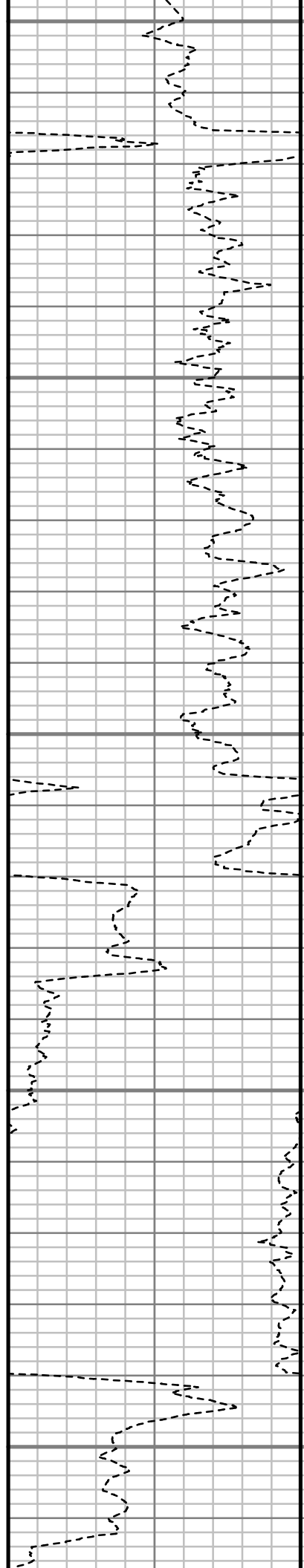
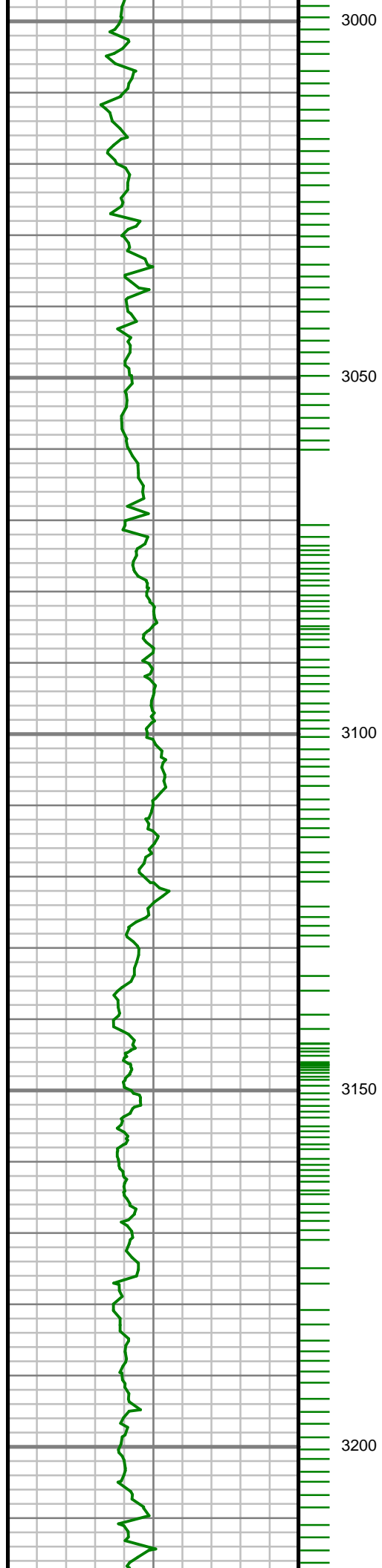


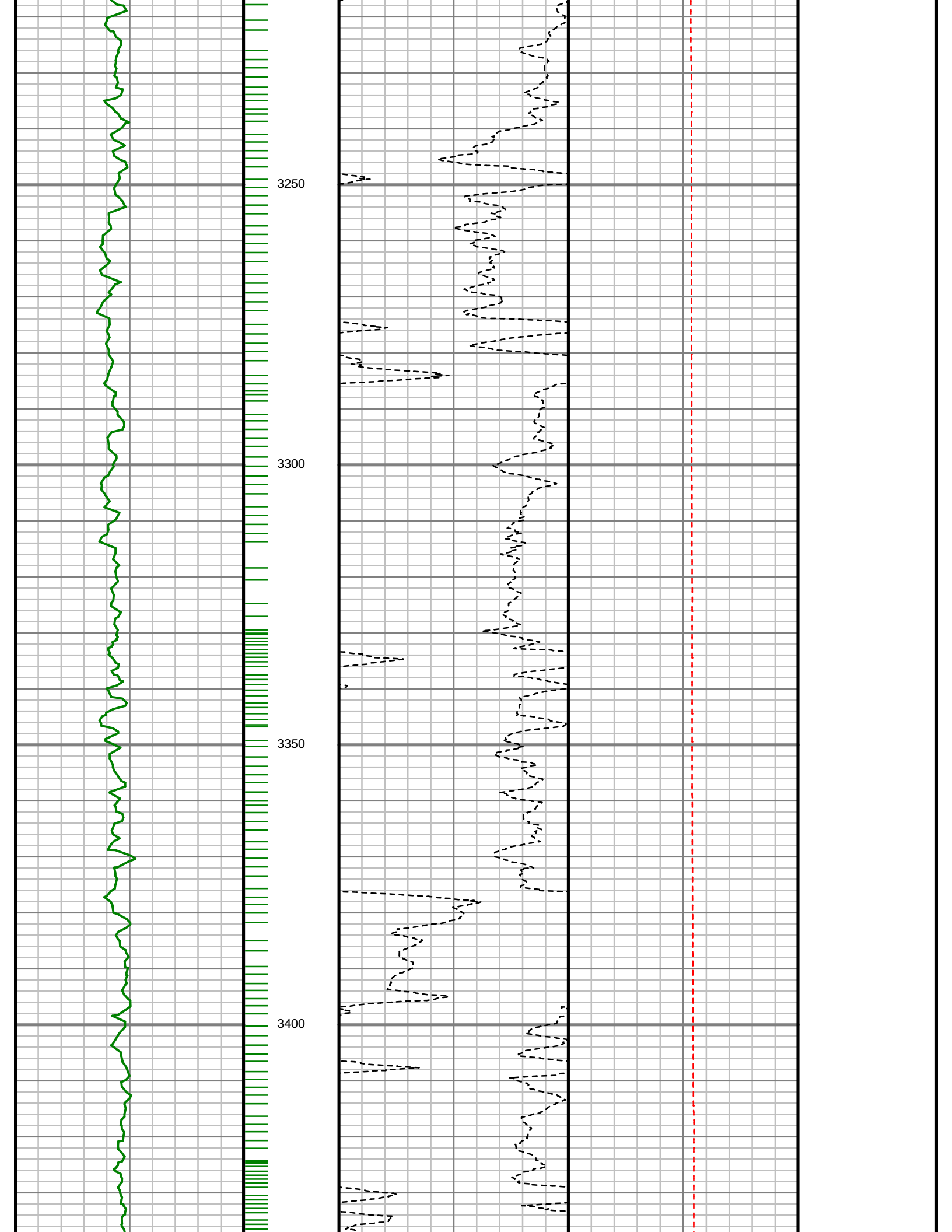


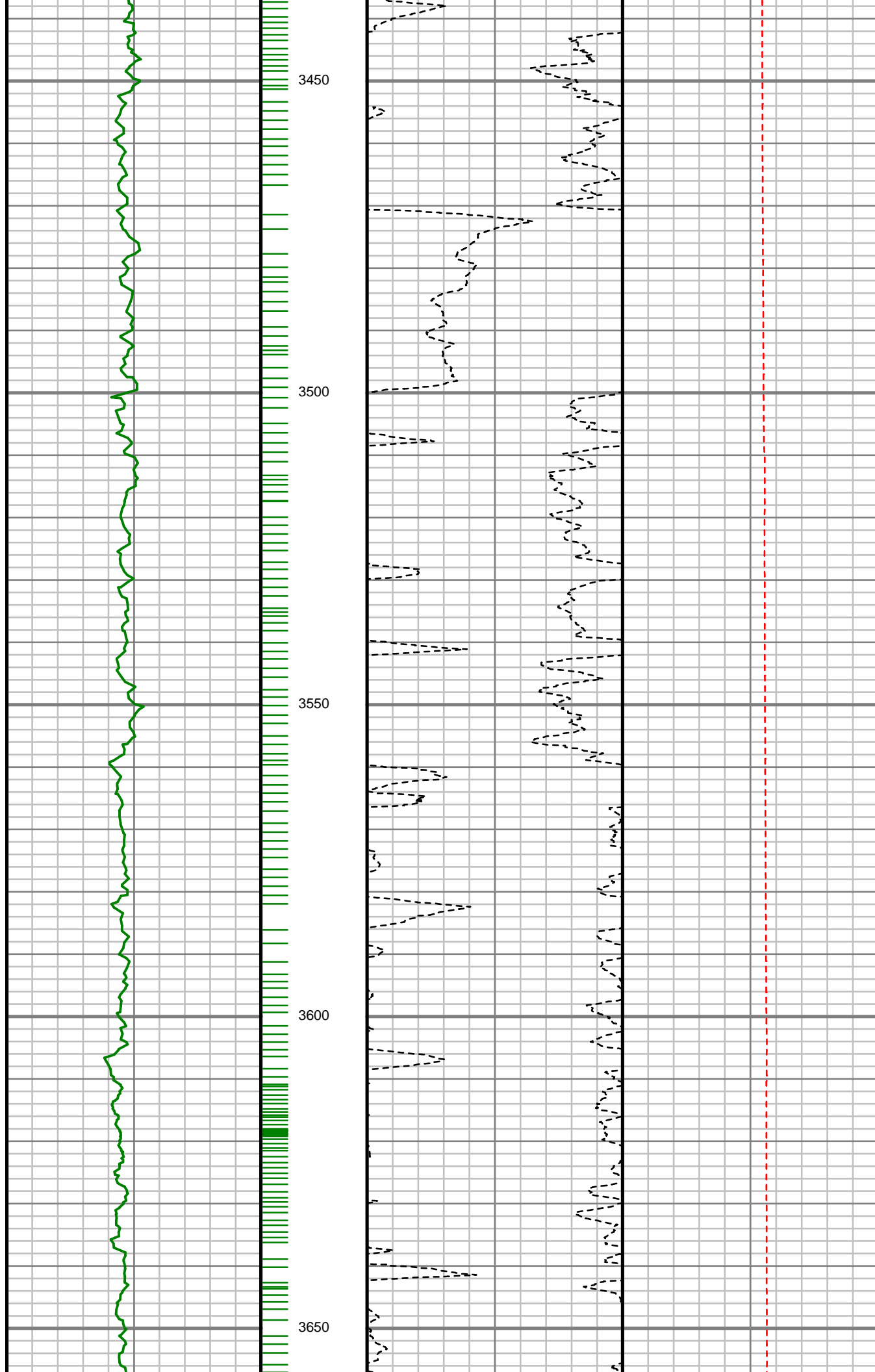


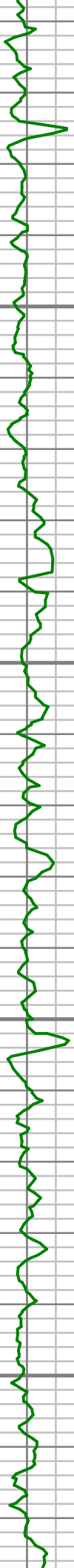










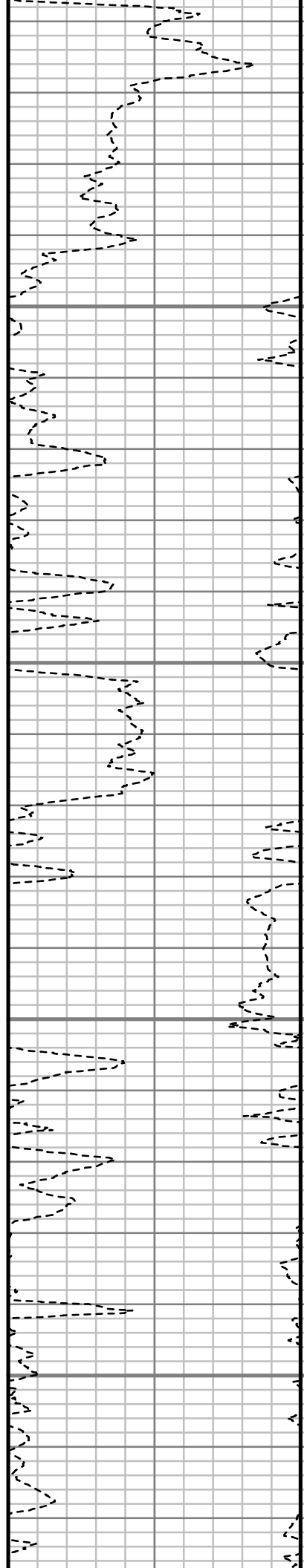


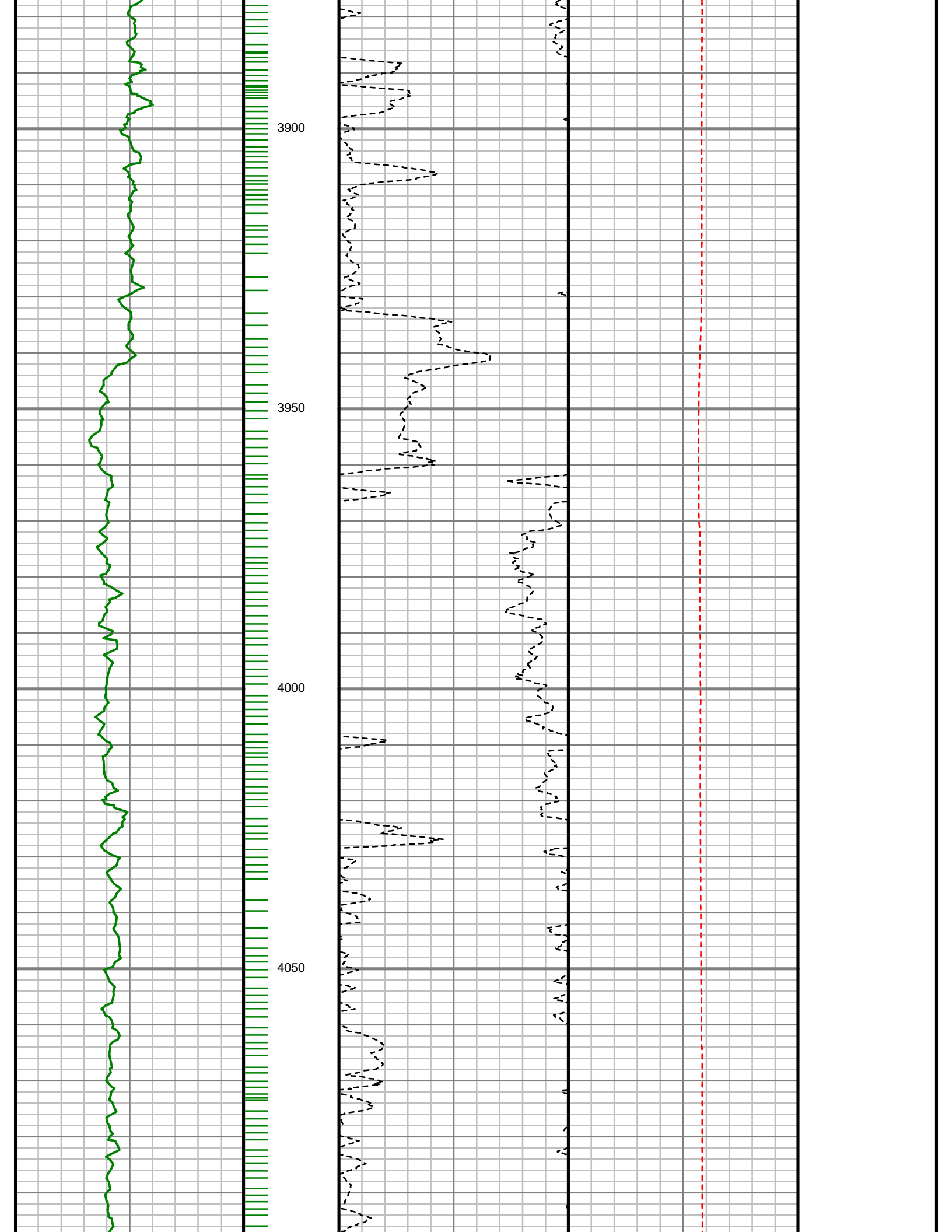
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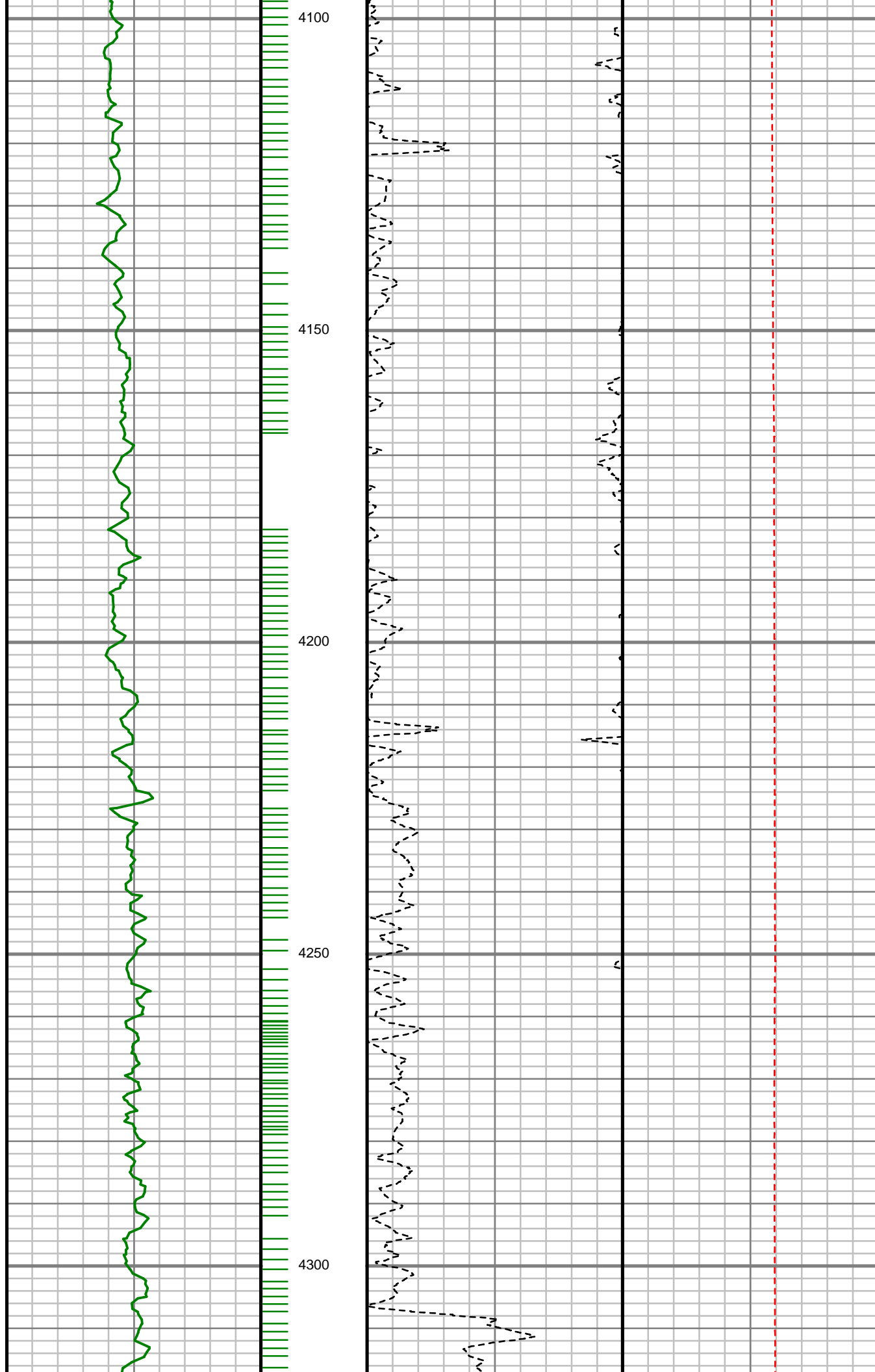
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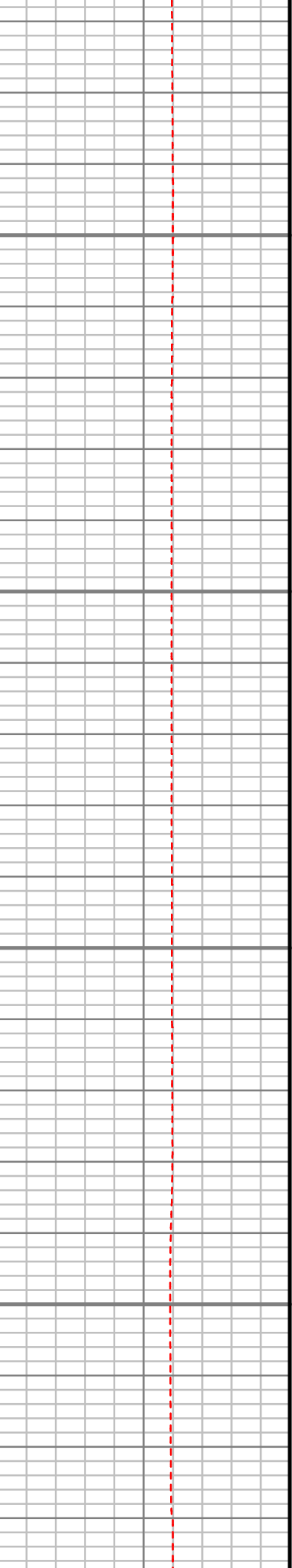
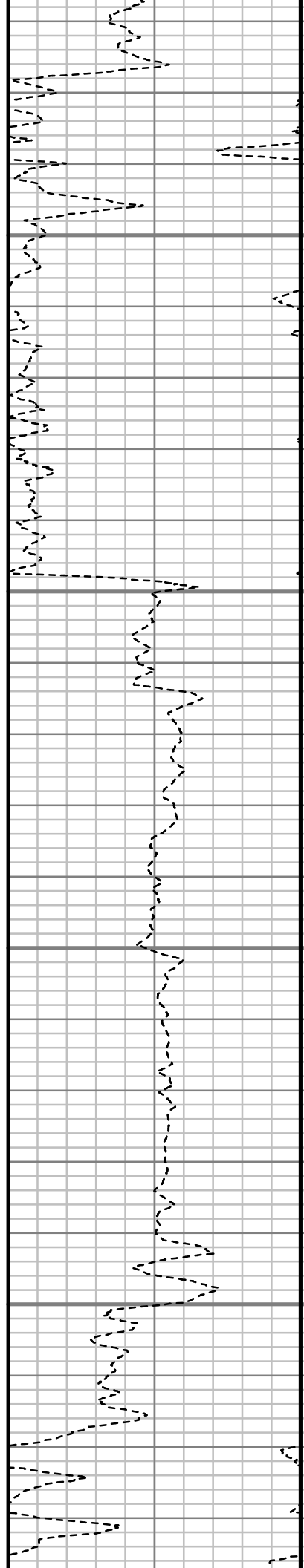
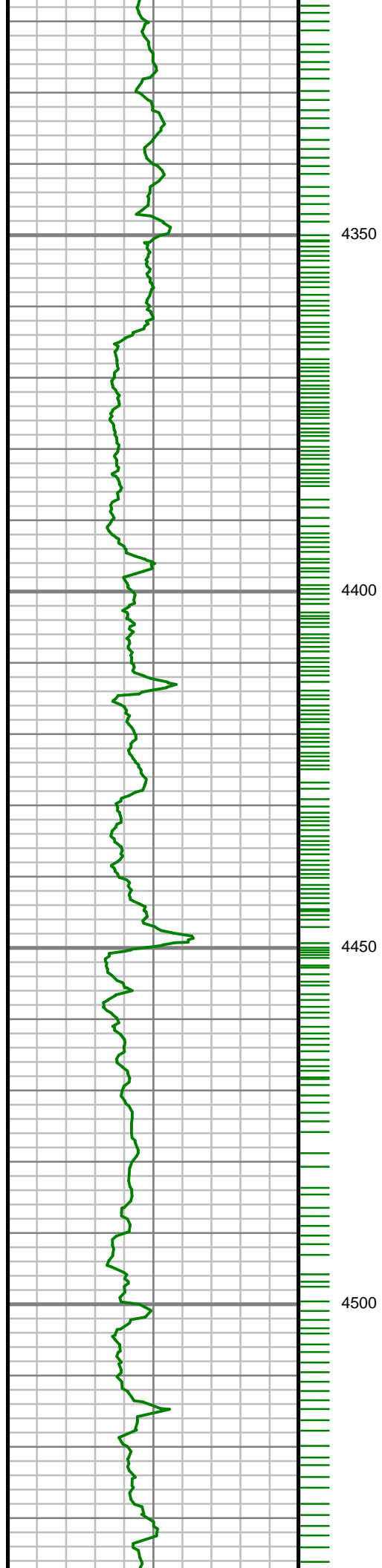
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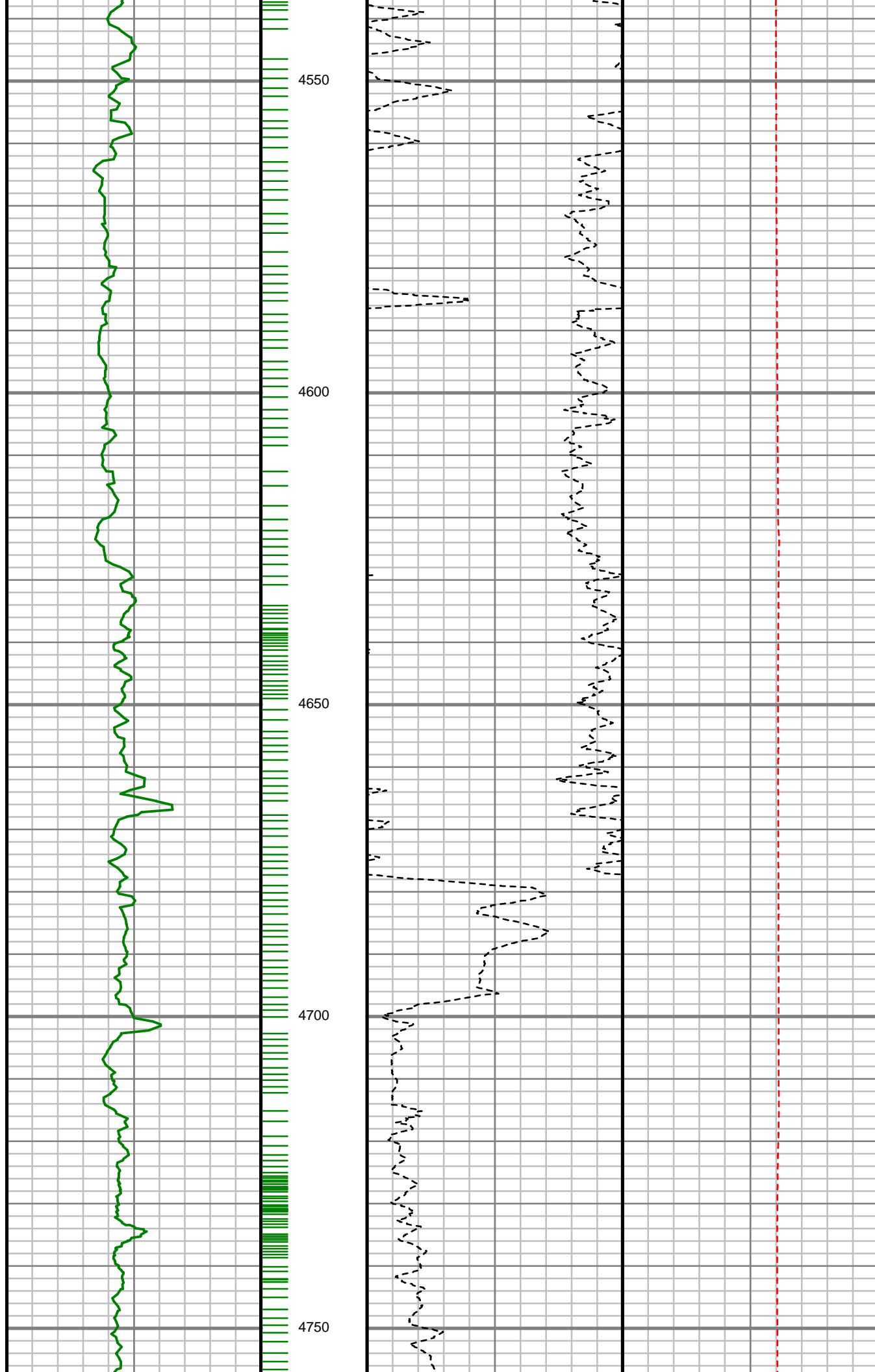
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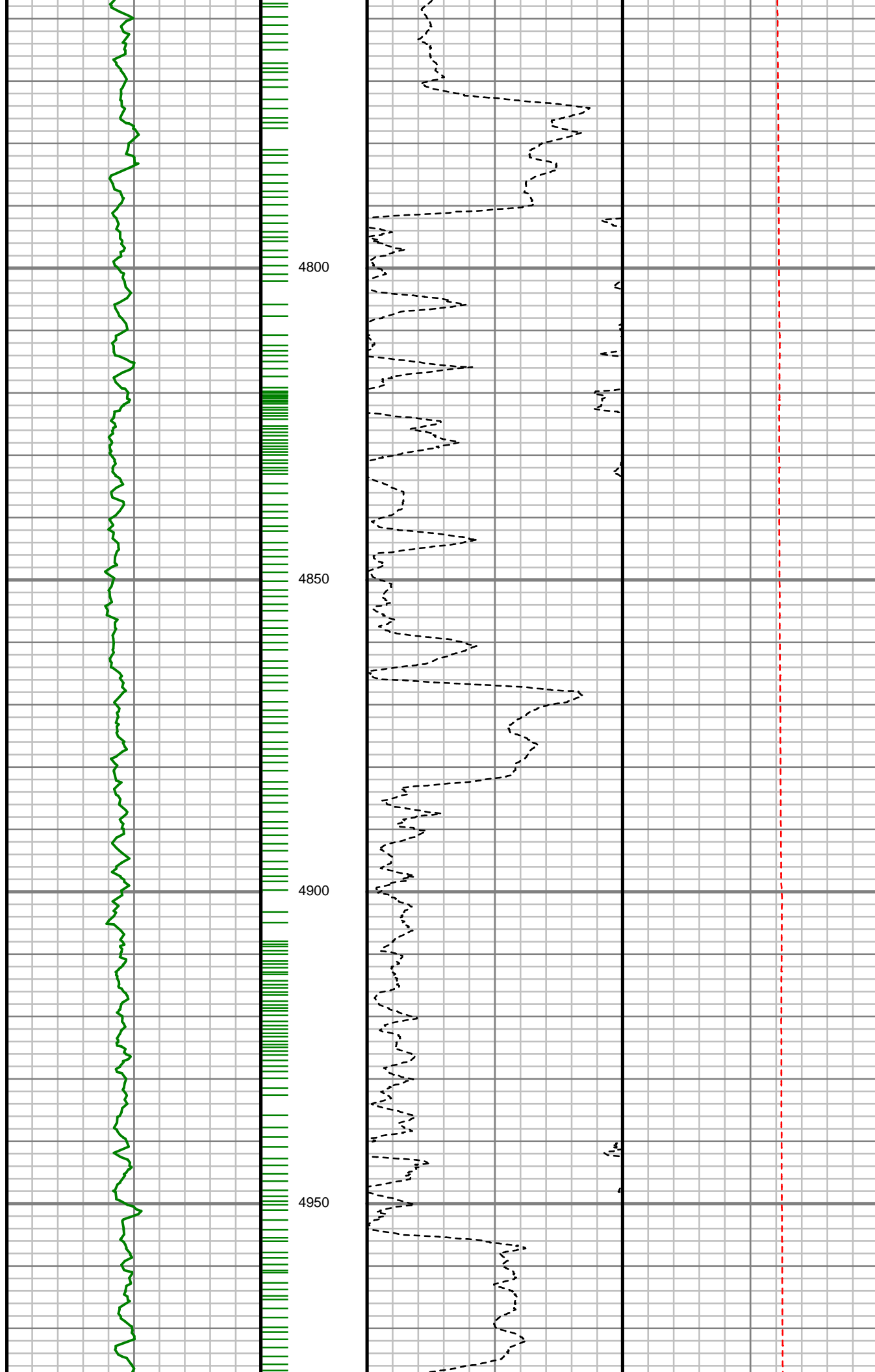


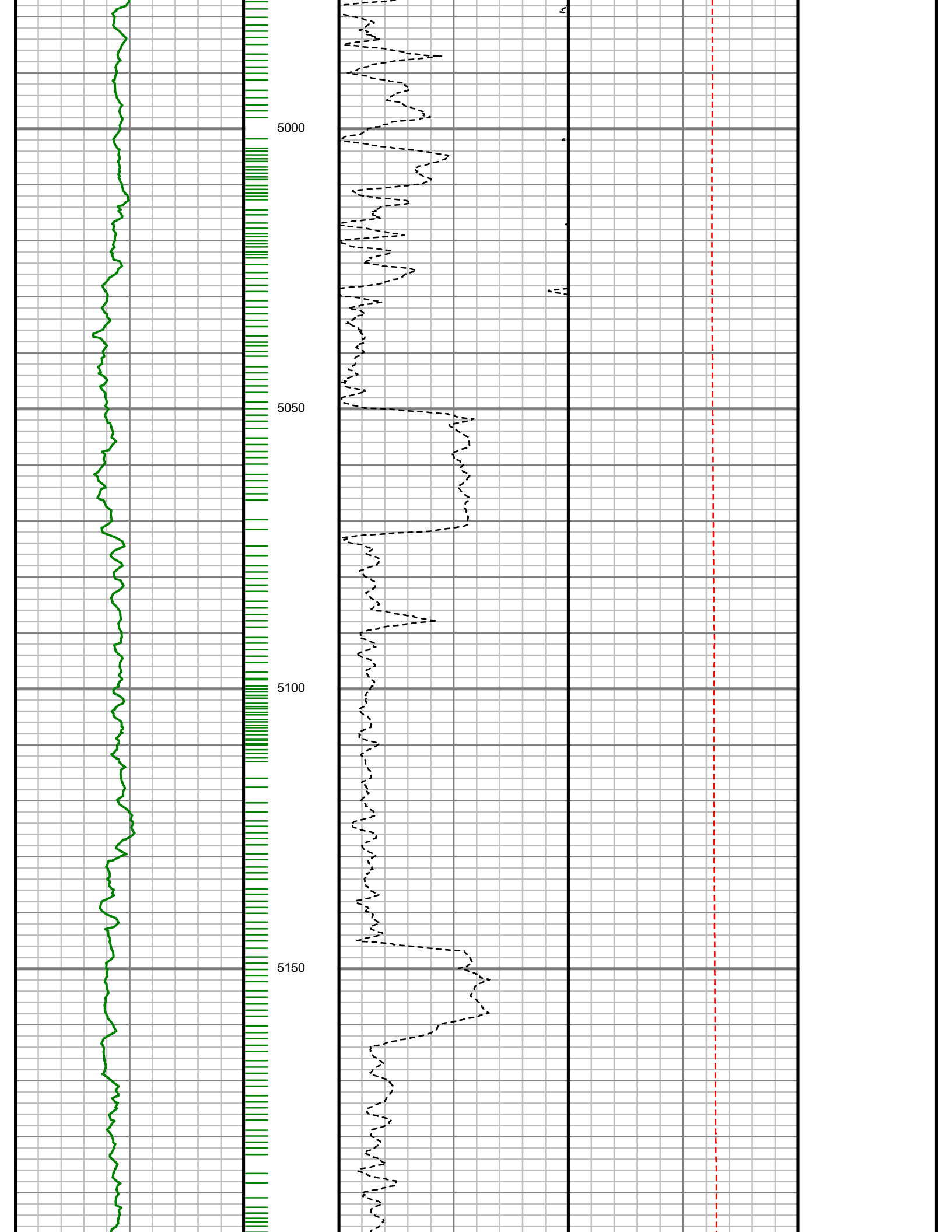


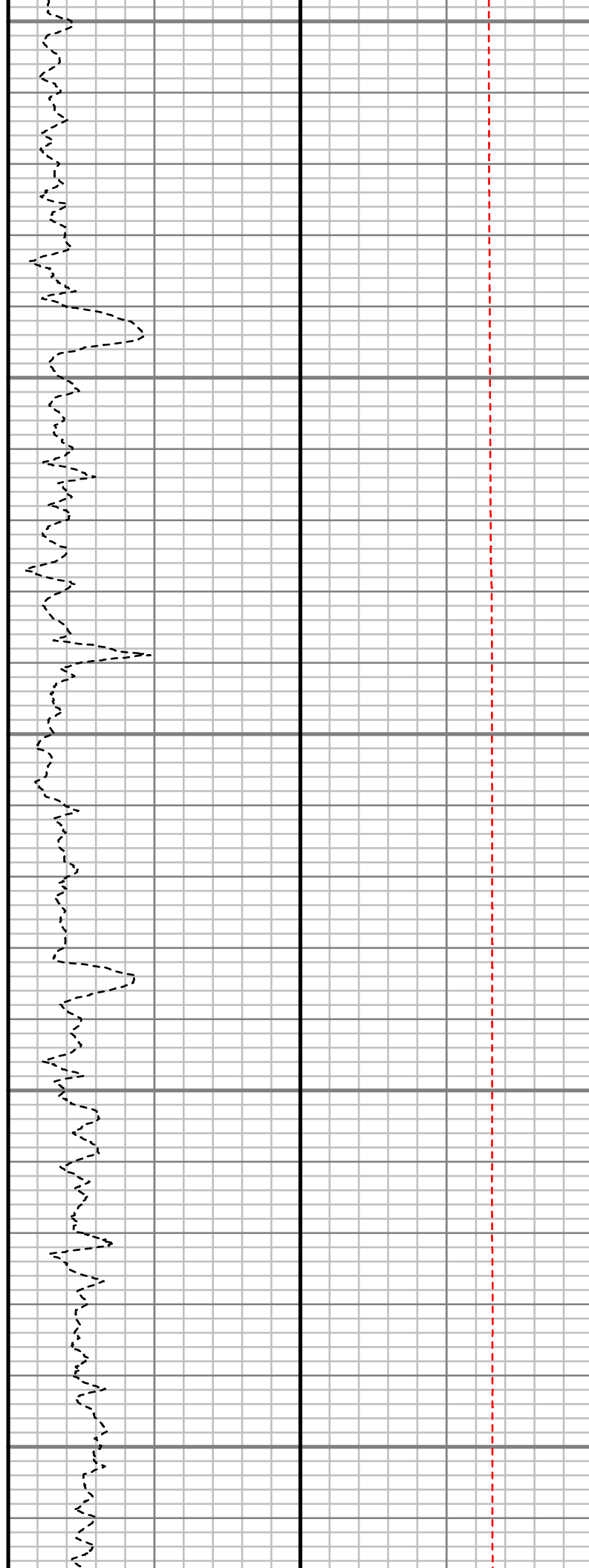
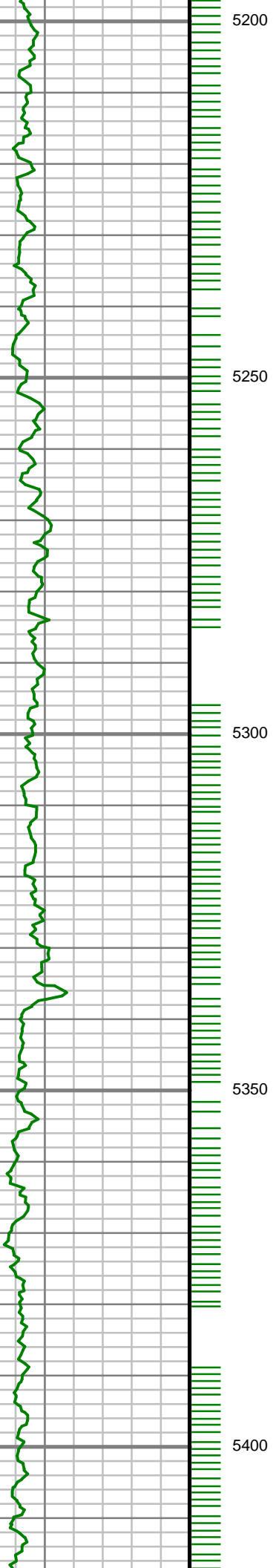


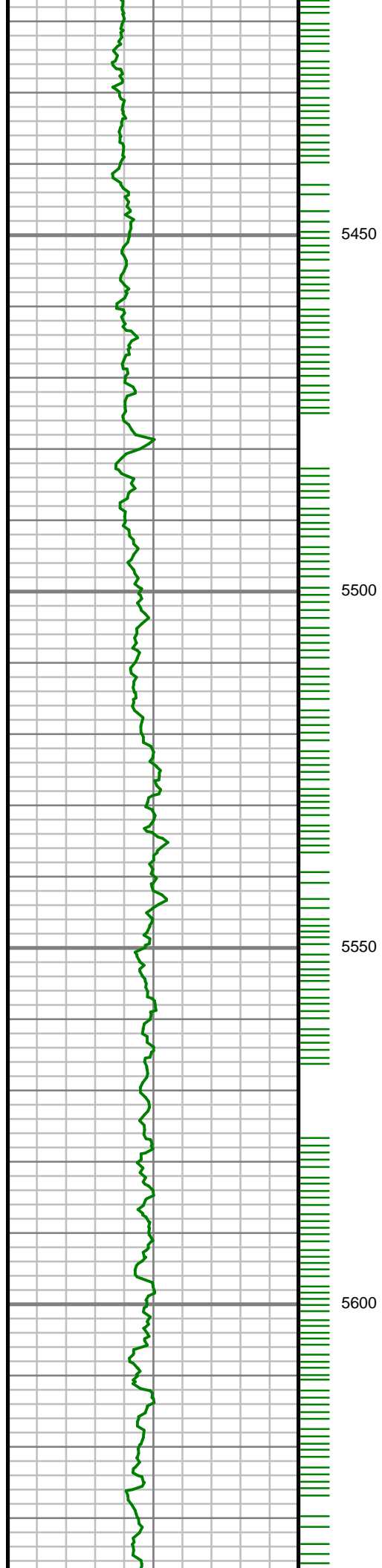


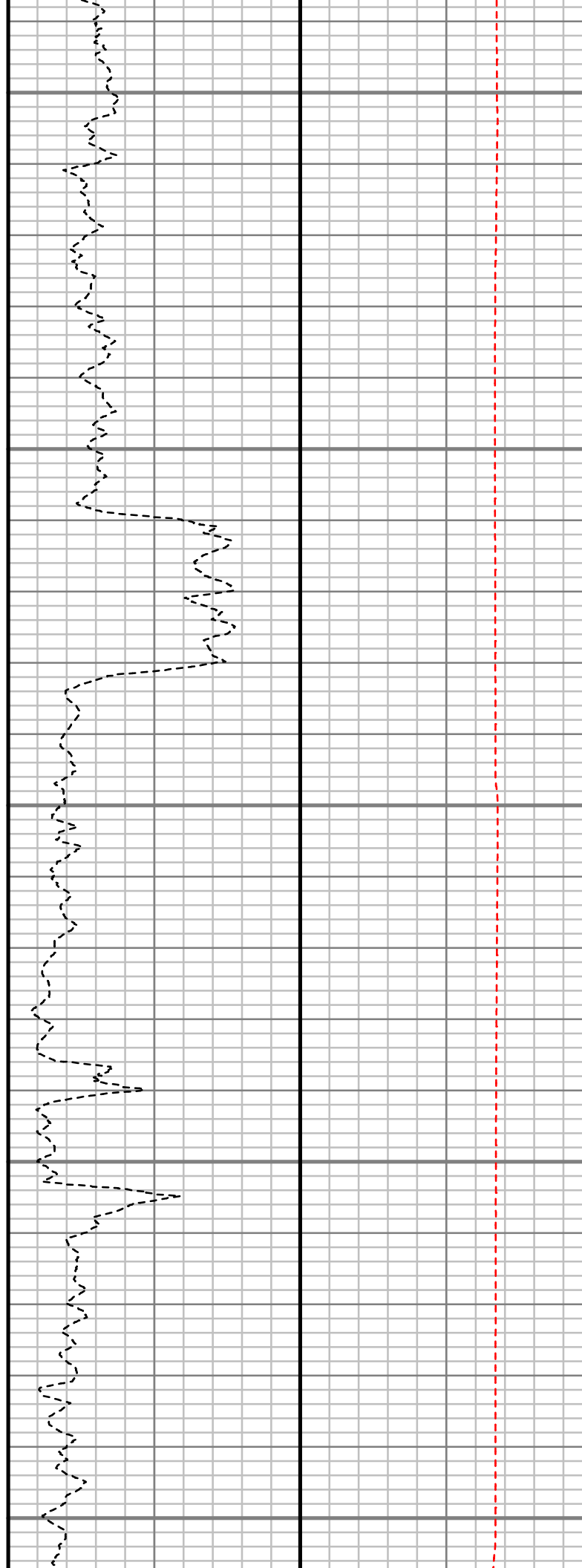
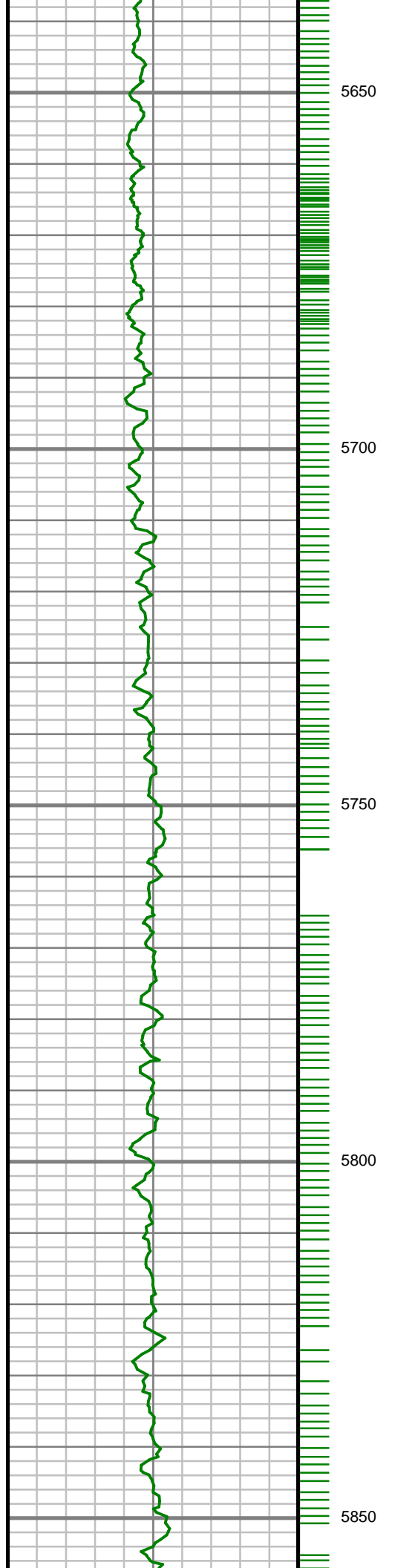


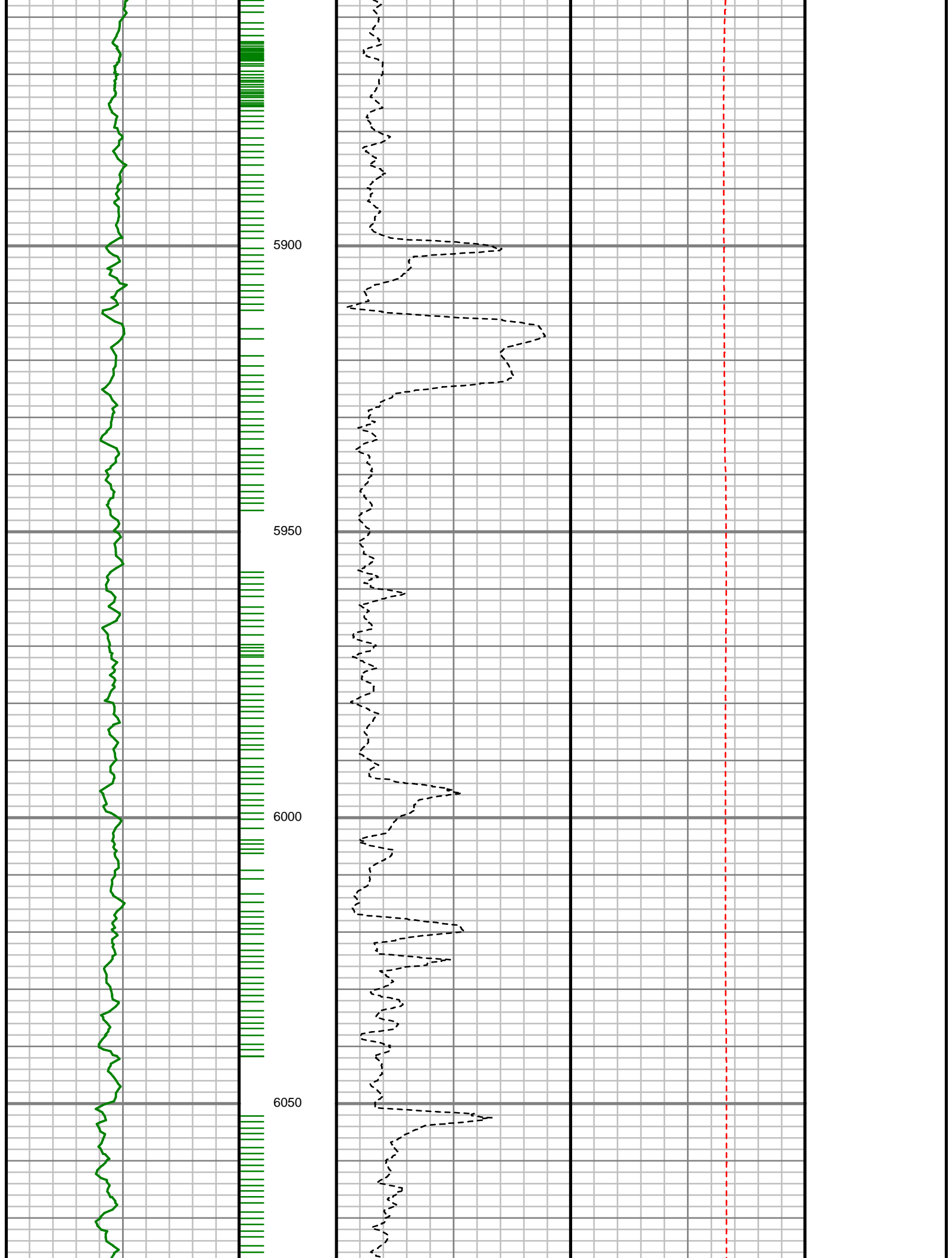


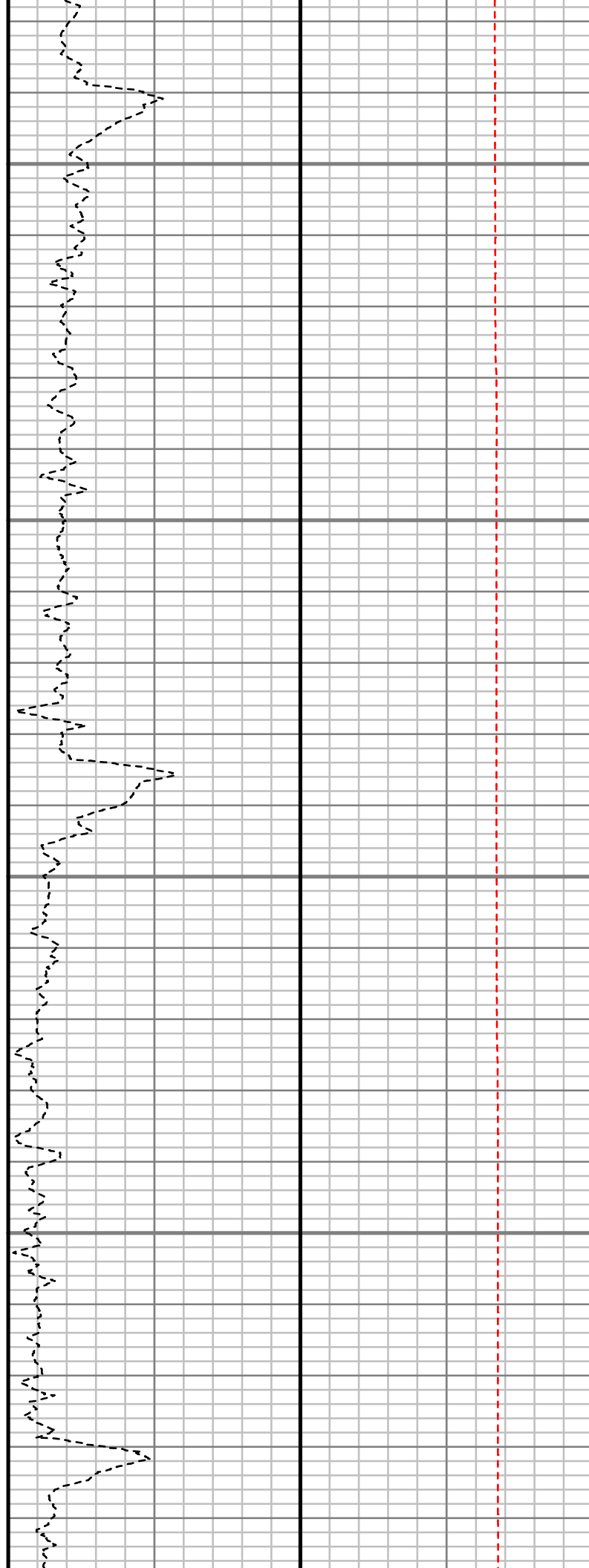
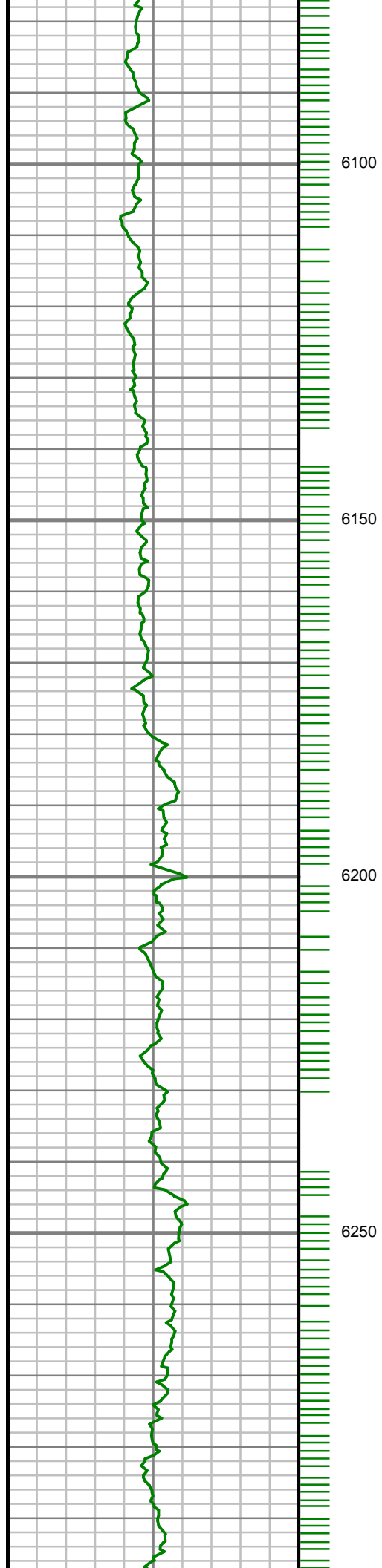


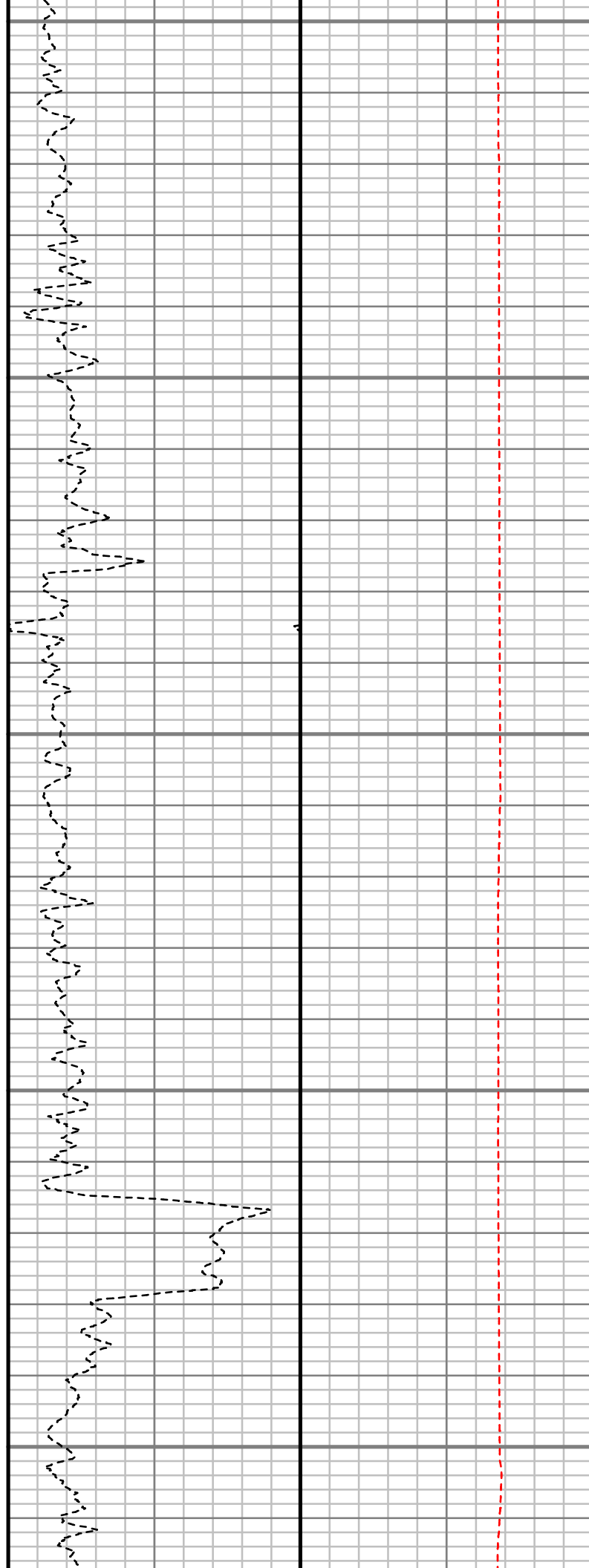
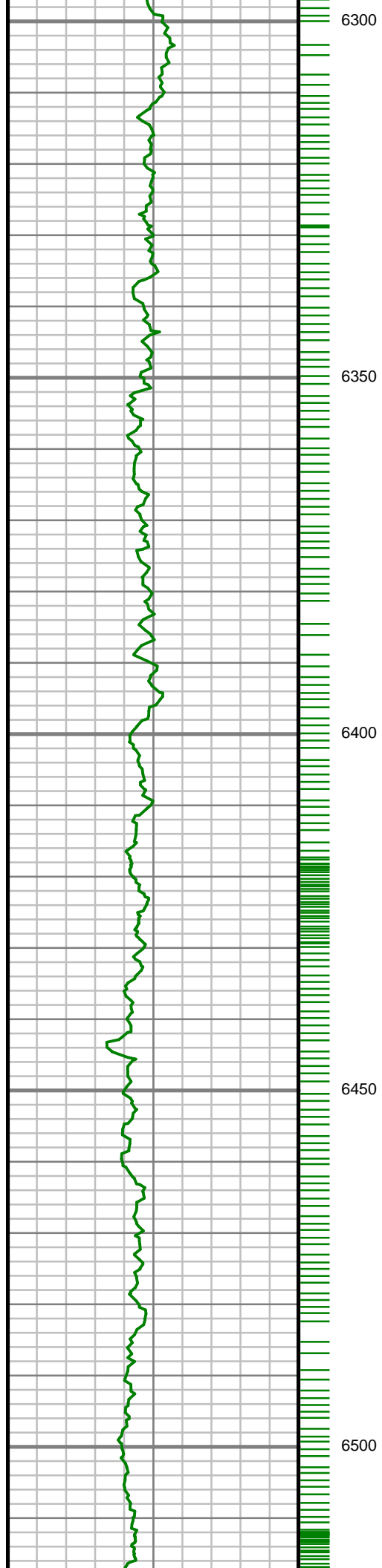


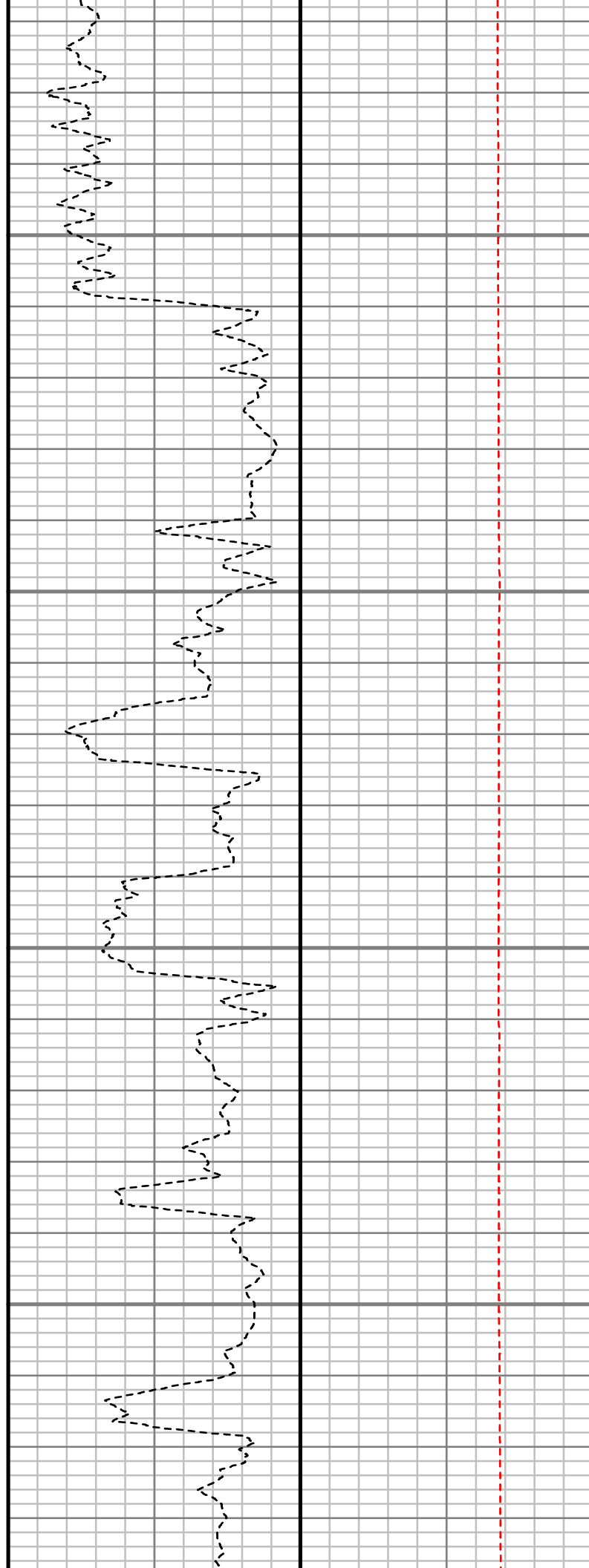
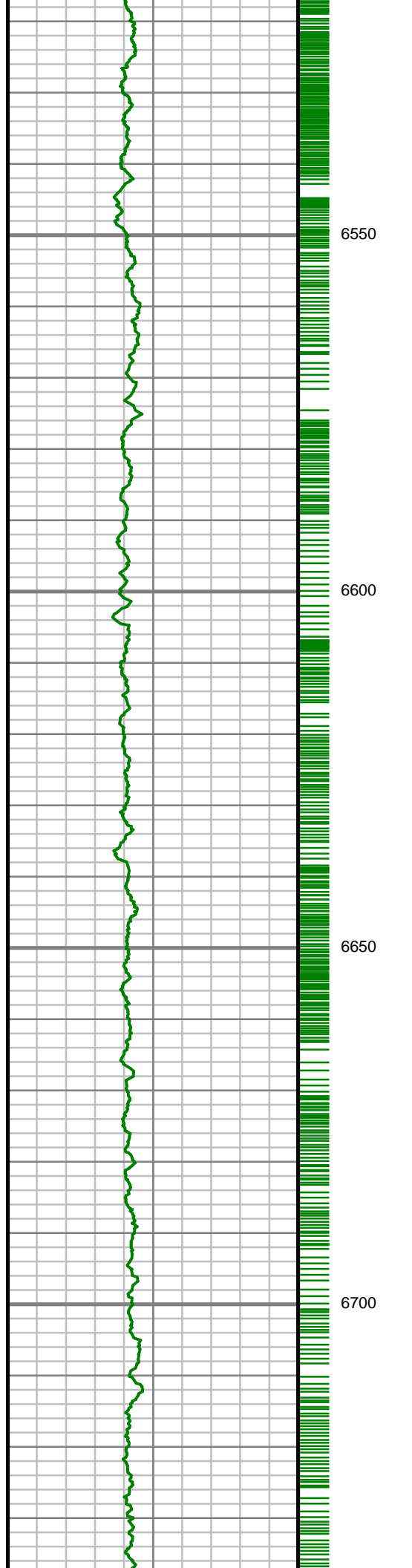


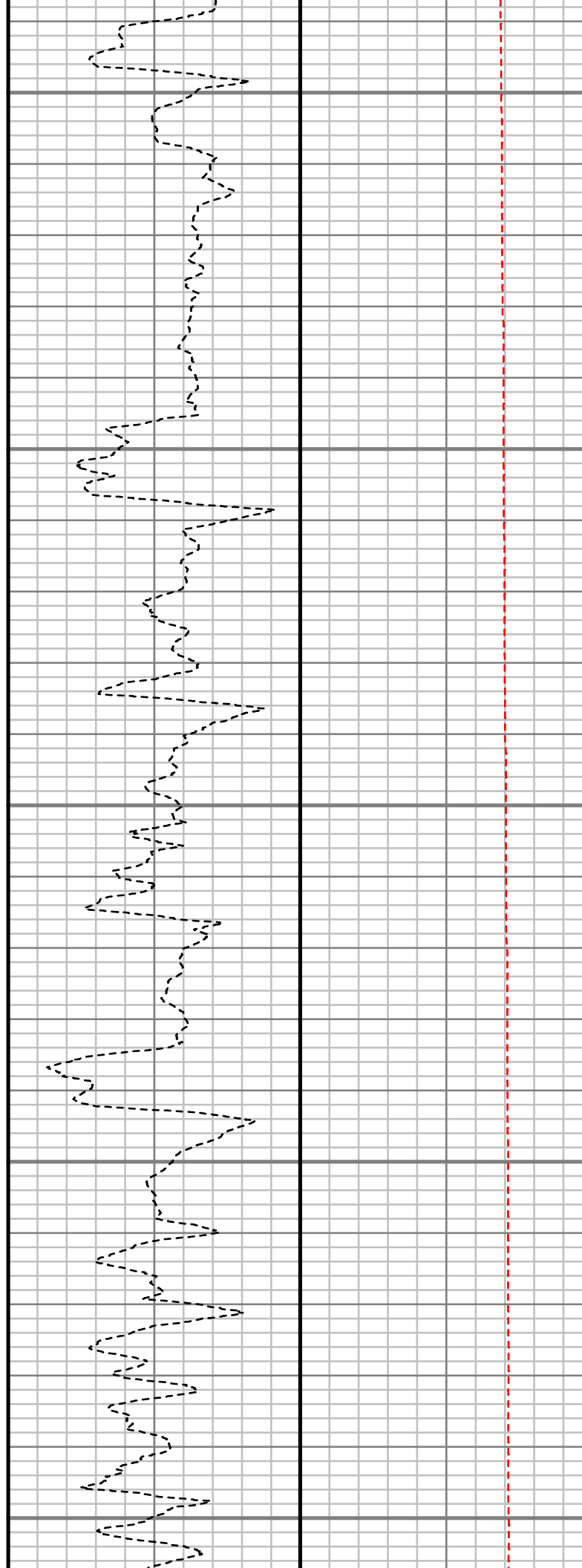
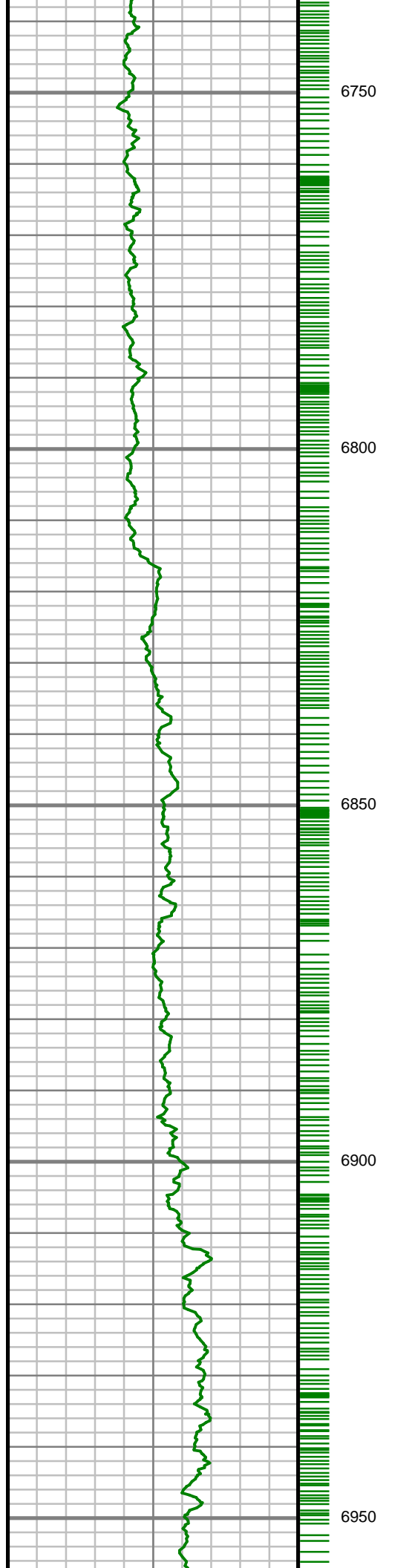


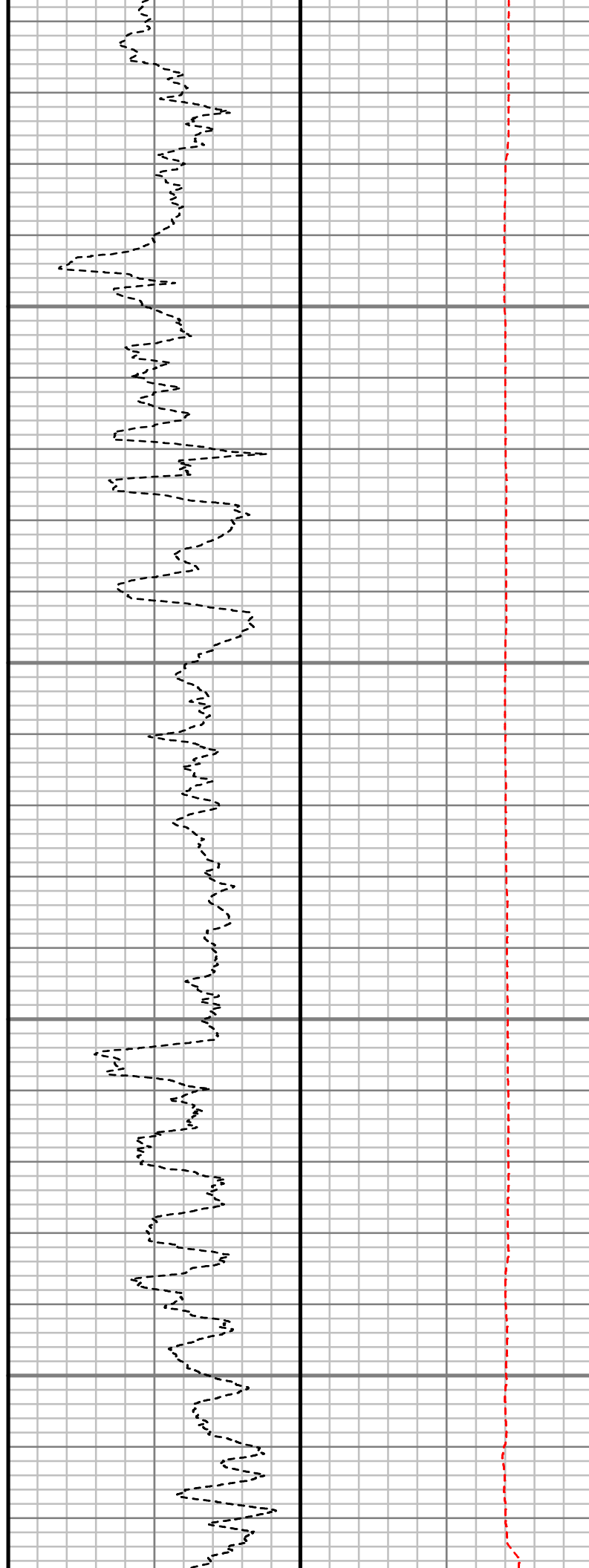
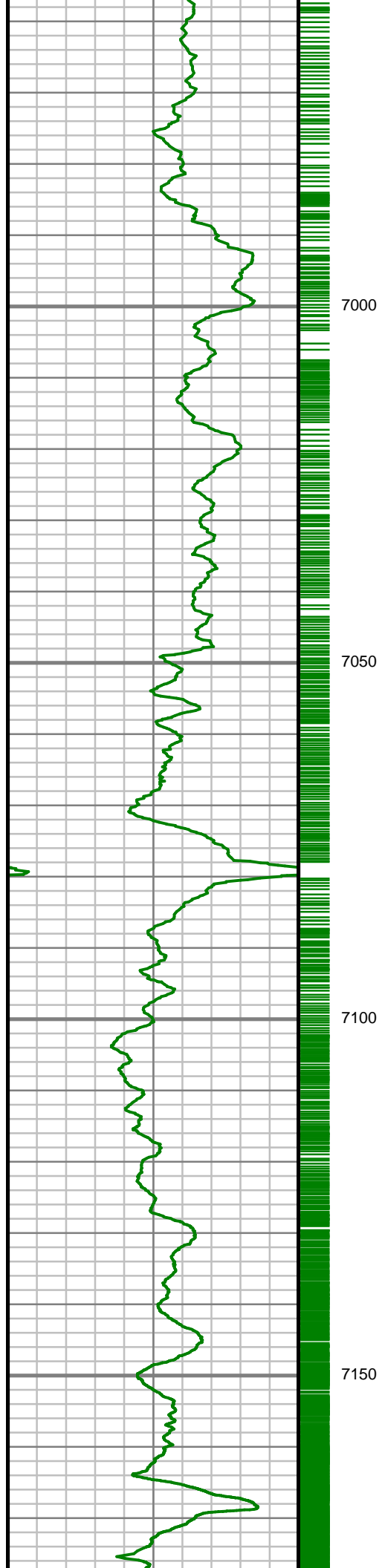














Gamma Ray (GR)		
0	Unit = aapi	150

TRUE VERTICAL DEPTH
1:240 (ft)



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



Tool Temperature (T-TEMP)		
0	Unit = °F	250

Comments

Survey Report

Customer Name:	ANADARKO PETROLEUM CORP.						
Site Name:	HEDGE 1N-22HZ						
Well Name:	HEDGE 16N-22HZ						
Survey:	HEDGE 16N-22HZ						
Survey Date:	8/6/2013						
Magnetic Declination:	8.59 deg						
North Reference:	True North						
Calculation Method:	Minimum Curvature						
Section (VS) Ref:	0.00N (ft), 0.00E (ft), 180.00Azim (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	0.14	208.31	125.00	0.11	-0.11	-0.06	0.14
225.00	0.26	147.37	225.00	0.41	-0.41	0.01	0.23
325.00	0.33	162.61	325.00	0.87	-0.87	0.21	0.10
425.00	0.41	195.18	425.00	1.49	-1.49	0.21	0.22
525.00	0.23	187.24	524.99	2.04	-2.04	0.09	0.18
625.00	0.15	203.24	624.99	2.36	-2.36	0.01	0.10
725.00	0.20	254.34	724.99	2.52	-2.52	-0.21	0.16

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
825.00	0.21	203.55	824.99	2.74	-2.74	-0.45	0.18
875.00	0.05	306.08	874.99	2.81	-2.81	-0.50	0.45
1065.00	0.24	323.72	1064.99	2.44	-2.44	-0.80	0.10
1157.00	0.21	339.15	1156.99	2.13	-2.13	-0.98	0.07
1248.00	3.46	342.58	1247.93	-0.65	0.65	-1.86	3.57
1340.00	5.65	336.17	1339.64	-7.44	7.44	-4.52	2.45
1431.00	6.84	327.44	1430.10	-16.11	16.11	-9.25	1.66
1522.00	9.07	325.37	1520.22	-26.58	26.58	-16.24	2.48
1614.00	10.26	322.08	1610.91	-39.01	39.01	-25.40	1.42
1795.00	9.93	315.78	1789.11	-62.90	62.90	-46.18	0.64
1887.00	10.66	327.29	1879.64	-75.75	75.75	-56.31	2.37
2068.00	10.41	330.68	2057.60	-104.08	104.08	-73.36	0.37
2251.00	10.53	325.03	2237.56	-132.19	132.19	-91.03	0.57
2433.00	10.94	327.69	2416.37	-160.40	160.40	-109.79	0.35
2524.00	12.03	334.62	2505.56	-176.27	176.27	-118.47	1.93
2709.00	11.09	335.95	2686.80	-209.93	209.93	-133.98	0.53
2801.00	13.35	336.50	2776.71	-227.75	227.75	-141.82	2.46
2892.00	13.22	331.89	2865.28	-246.56	246.56	-150.92	1.17
2983.00	12.43	328.18	2954.01	-264.06	264.06	-160.98	1.25
3076.00	12.01	323.84	3044.90	-280.38	280.38	-171.97	1.08

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
3261.00	12.29	330.23	3225.77	-313.02	313.02	-193.11	0.74
3355.00	10.07	326.60	3317.98	-328.58	328.58	-202.60	2.47
3450.00	9.98	321.62	3411.53	-341.96	341.96	-212.28	0.92
3544.00	11.44	328.51	3503.89	-356.30	356.30	-222.21	2.07
3733.00	9.65	334.32	3689.70	-386.57	386.57	-238.87	1.10
3827.00	10.88	341.55	3782.19	-402.09	402.09	-245.09	1.90
4016.00	10.66	333.23	3967.87	-434.63	434.63	-258.62	0.83
4110.00	10.94	330.35	4060.21	-450.14	450.14	-266.95	0.64
4204.00	10.45	327.62	4152.58	-465.10	465.10	-275.93	0.75
4393.00	8.48	319.53	4339.00	-490.19	490.19	-294.16	1.26
4487.00	9.51	321.63	4431.84	-501.55	501.55	-303.48	1.14
4581.00	11.64	314.76	4524.24	-514.32	514.32	-315.03	2.63
4676.00	10.38	310.84	4617.50	-526.66	526.66	-328.31	1.55
4770.00	9.45	321.30	4710.10	-538.22	538.22	-339.55	2.15
4864.00	7.99	337.03	4803.02	-550.27	550.27	-346.93	2.96
4958.00	5.84	347.17	4896.34	-560.94	560.94	-350.54	2.63
5052.00	3.83	6.09	4990.00	-568.72	568.72	-351.27	2.70
5146.00	2.37	84.14	5083.90	-572.04	572.04	-349.00	4.32
5241.00	0.55	132.87	5178.86	-571.94	571.94	-346.71	2.16

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
5430.00	0.58	119.65	5367.86	-570.85	570.85	-345.21	0.07
5713.00	0.75	69.77	5650.84	-570.77	570.77	-342.23	0.21
5902.00	0.83	222.46	5839.83	-570.19	570.19	-341.99	0.81
5996.00	1.75	289.18	5933.81	-570.16	570.16	-343.81	1.72
6091.00	1.05	292.42	6028.78	-570.97	570.97	-345.99	0.74
6186.00	0.87	281.66	6123.77	-571.44	571.44	-347.50	0.27
6375.00	1.45	232.08	6312.73	-570.27	570.27	-350.79	0.58
6564.00	0.81	192.62	6501.70	-567.50	567.50	-352.96	0.51
6595.00	0.90	196.32	6532.70	-567.05	567.05	-353.07	0.34
6627.00	1.57	203.30	6564.69	-566.41	566.41	-353.32	2.14
6658.00	3.37	172.19	6595.66	-565.12	565.12	-353.36	7.05
6690.00	5.76	175.48	6627.55	-562.58	562.58	-353.11	7.50
6721.00	7.65	177.71	6658.34	-558.97	558.97	-352.90	6.15
6753.00	10.21	179.92	6689.95	-554.00	554.00	-352.81	8.07
6784.00	13.34	182.32	6720.30	-547.68	547.68	-352.95	10.22
6815.00	15.03	184.91	6750.35	-540.10	540.10	-353.44	5.83
6847.00	17.71	183.30	6781.05	-531.11	531.11	-354.08	8.49
6878.00	20.35	179.54	6810.35	-521.01	521.01	-354.31	9.37
6910.00	23.12	178.04	6840.08	-509.16	509.16	-354.05	8.84
6941.00	26.16	177.79	6868.25	-496.25	496.25	-353.57	9.80

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
6973.00	28.43	177.27	6896.69	-481.59	481.59	-352.94	7.16
7004.00	30.32	178.26	6923.70	-466.40	466.40	-352.35	6.28
7036.00	33.92	178.63	6950.80	-449.39	449.39	-351.89	11.28
7067.00	38.41	177.63	6975.82	-431.11	431.11	-351.29	14.59
7099.00	42.38	178.25	7000.18	-410.39	410.39	-350.55	12.49
7130.00	45.05	178.86	7022.59	-388.98	388.98	-350.01	8.70
7162.00	47.95	179.61	7044.61	-365.77	365.77	-349.70	9.24
7193.00	52.78	180.27	7064.38	-341.90	341.90	-349.68	15.66
7225.00	58.41	180.07	7082.45	-315.51	315.51	-349.76	17.58
7256.00	63.92	180.31	7097.40	-288.37	288.37	-349.85	17.80
7288.00	66.88	180.05	7110.72	-259.27	259.27	-349.94	9.28
7319.00	68.94	179.84	7122.38	-230.55	230.55	-349.92	6.68
7351.00	71.12	179.07	7133.31	-200.48	200.48	-349.63	7.17
7382.00	74.21	179.47	7142.55	-170.90	170.90	-349.25	10.04
7414.00	76.45	179.39	7150.65	-139.94	139.94	-348.94	7.03
7445.00	77.90	178.95	7157.53	-109.72	109.72	-348.51	4.87
7477.00	80.37	179.04	7163.56	-78.30	78.30	-347.95	7.71
7508.00	82.26	179.25	7168.24	-47.66	47.66	-347.50	6.14
7540.00	84.86	179.45	7171.83	-15.87	15.87	-347.14	8.16

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
7563.00	87.02	180.14	7173.46	7.07	-7.07	-347.05	9.84
7733.00	88.79	179.84	7179.69	176.95	-176.95	-347.03	1.06
7827.00	89.53	181.31	7181.06	270.93	-270.93	-347.97	1.75
7921.00	89.46	180.40	7181.89	364.92	-364.92	-349.37	0.97
8016.00	89.97	180.62	7182.36	459.91	-459.91	-350.21	0.58
8110.00	91.94	180.02	7180.80	553.89	-553.89	-350.73	2.20
8204.00	91.88	180.30	7177.66	647.84	-647.84	-350.99	0.30
8299.00	91.75	179.68	7174.65	742.79	-742.79	-350.98	0.66
8393.00	90.70	179.02	7172.65	836.76	-836.76	-349.92	1.31
8487.00	92.06	179.13	7170.38	930.72	-930.72	-348.41	1.44
8582.00	91.88	180.58	7167.12	1025.66	-1025.66	-348.17	1.53
8676.00	91.48	180.65	7164.37	1119.62	-1119.62	-349.18	0.44
8770.00	92.12	181.16	7161.41	1213.56	-1213.56	-350.66	0.87
8864.00	92.12	179.91	7157.94	1307.49	-1307.49	-351.54	1.32
8959.00	91.34	180.82	7155.07	1402.44	-1402.44	-352.15	1.25
9053.00	92.09	180.01	7152.26	1496.40	-1496.40	-352.82	1.17
9147.00	91.75	180.15	7149.11	1590.34	-1590.34	-352.95	0.39
9241.00	90.81	180.22	7147.01	1684.32	-1684.32	-353.25	1.01
9335.00	91.88	179.50	7144.81	1778.29	-1778.29	-353.02	1.37
9430.00	90.77	178.98	7142.61	1873.25	-1873.25	-351.75	1.29

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
9523.00	89.13	177.52	7142.69	1966.20	-1966.20	-348.91	2.37
9617.00	92.08	179.17	7141.70	2060.15	-2060.15	-346.20	3.60
9711.00	92.08	177.81	7138.28	2154.05	-2154.05	-343.73	1.44
9806.00	93.23	178.62	7133.88	2248.90	-2248.90	-340.77	1.47
9900.00	92.79	178.42	7128.94	2342.74	-2342.74	-338.34	0.51
9995.00	92.18	176.42	7124.82	2437.55	-2437.55	-334.07	2.21
10089.00	90.27	177.17	7122.81	2531.37	-2531.37	-328.81	2.18
10184.00	89.56	177.58	7122.95	2626.27	-2626.27	-324.46	0.86
10278.00	89.60	178.95	7123.63	2720.22	-2720.22	-321.62	1.46
10372.00	88.39	179.99	7125.29	2814.20	-2814.20	-320.74	1.69
10467.00	89.26	180.53	7127.24	2909.18	-2909.18	-321.18	1.08
10561.00	89.16	184.10	7128.54	3003.08	-3003.08	-324.97	3.79
10656.00	88.69	183.65	7130.31	3097.85	-3097.85	-331.39	0.68
10751.00	89.06	182.63	7132.18	3192.68	-3192.68	-336.60	1.14
10846.00	89.29	182.03	7133.54	3287.59	-3287.59	-340.46	0.68
10940.00	89.43	181.21	7134.59	3381.55	-3381.55	-343.12	0.88
11034.00	89.80	177.15	7135.22	3475.52	-3475.52	-341.77	4.33
11129.00	88.75	177.67	7136.42	3570.41	-3570.41	-337.49	1.23
11223.00	88.19	180.72	7138.93	3664.36	-3664.36	-336.17	3.30

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS 7100ft
11317.00	90.34	182.43	7140.14	3758.31	-3758.31	-338.76	2.92
11412.00	91.31	184.18	7138.77	3853.13	-3853.13	-344.24	2.11
11506.00	91.81	183.61	7136.21	3946.88	-3946.88	-350.63	0.81
11601.00	90.64	184.85	7134.17	4041.60	-4041.60	-357.63	1.80
11695.00	90.80	184.72	7132.99	4135.26	-4135.26	-365.47	0.22
11789.00	91.01	184.19	7131.51	4228.96	-4228.96	-372.77	0.61
11884.00	91.31	181.10	7129.58	4323.83	-4323.83	-377.15	3.27
11979.00	90.94	179.56	7127.71	4418.81	-4418.81	-377.70	1.67
12019.00	91.14	178.89	7126.99	4458.80	-4458.80	-377.15	1.75



GAMMA RAY LOG

5" = 100' FEET TVD