

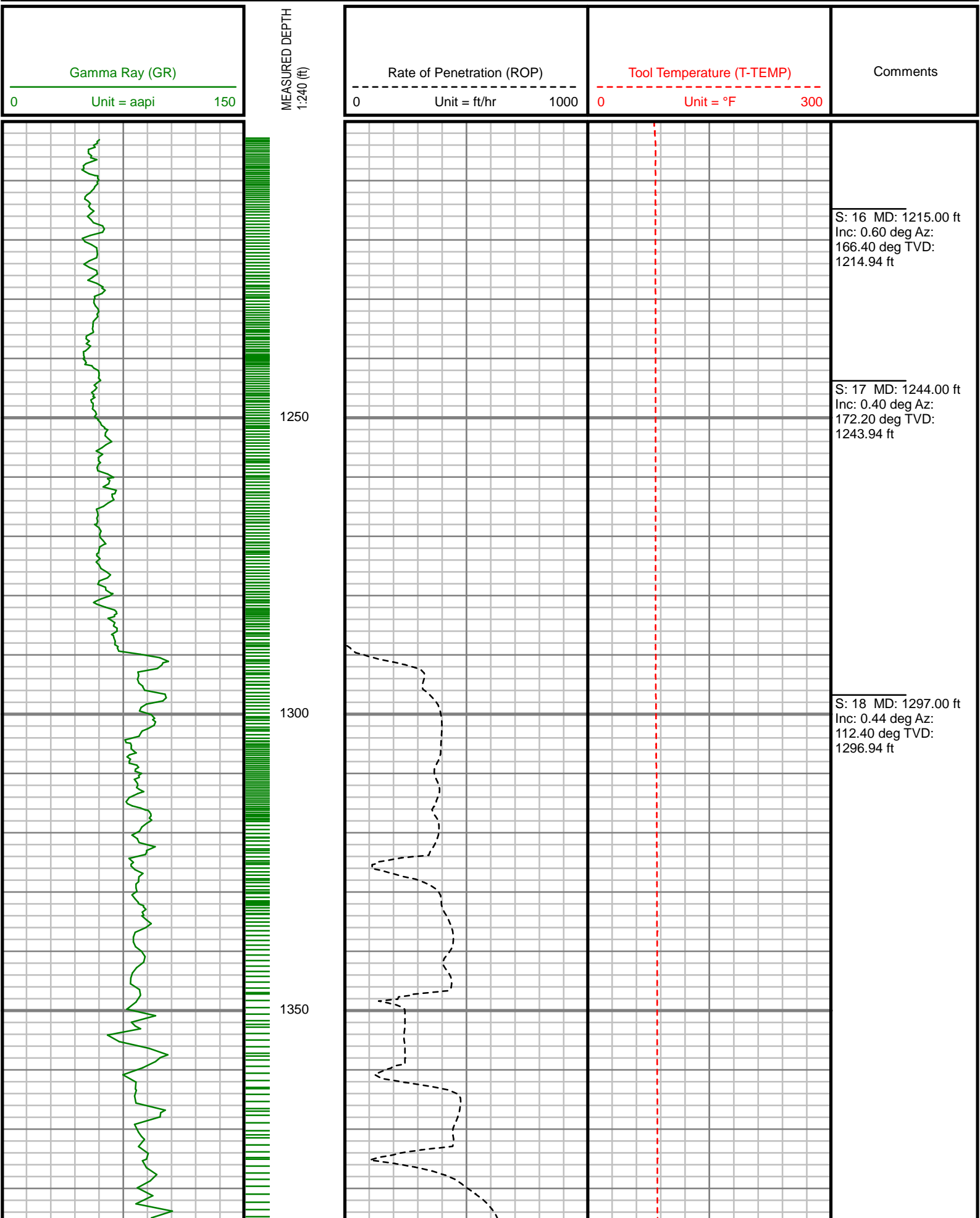
5" = 100' FEET MD

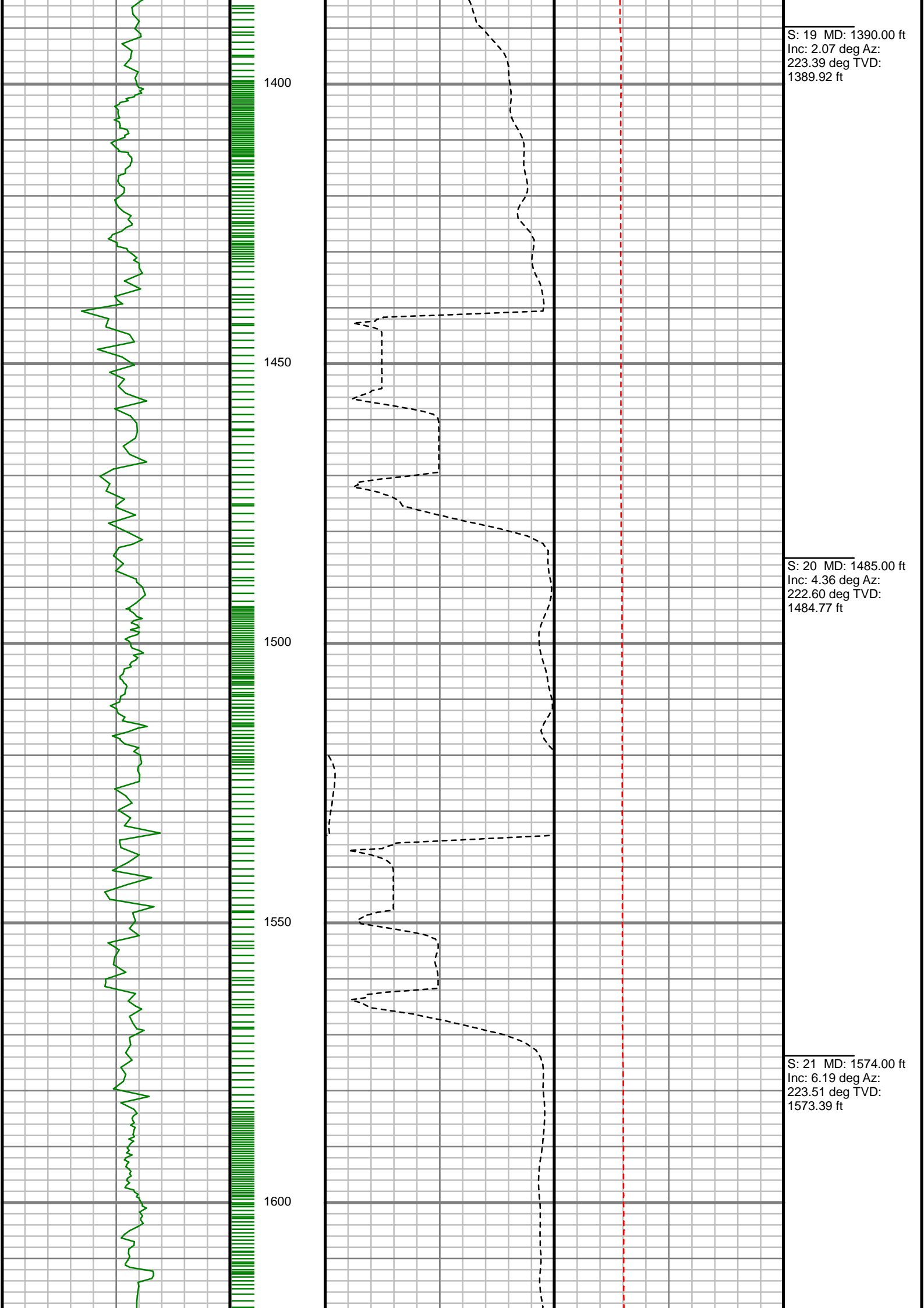
COMPANY : ANADARKO E&P ONSHORE LLC WELL : BADGER STATE 32C-3HZ FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-36463										COMPANY : ANADARKO E&P ONSHORE LLC WELL : BADGER STATE 32C-3HZ FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-36463										WELL LOCATION LAT:40°3'26.389"N LONG:104°59'47.234"W N:1264130.87 ft E:3140950.87 ft SEC:15 TWP:1N RANGE:68W										OTHER SERVICES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
DEPTH REF. : RKB REF. HEIGHT : 20.000 ft GROUND LEVEL : 5141.000 ft										RKB to Ground Level G.L. to MEAN SEA LEVEL										DIRECTIONAL ROP																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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HOLE SIZE in		FROM ft		TO ft		INCLINATION deg		FROM ft		TO ft																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																</	

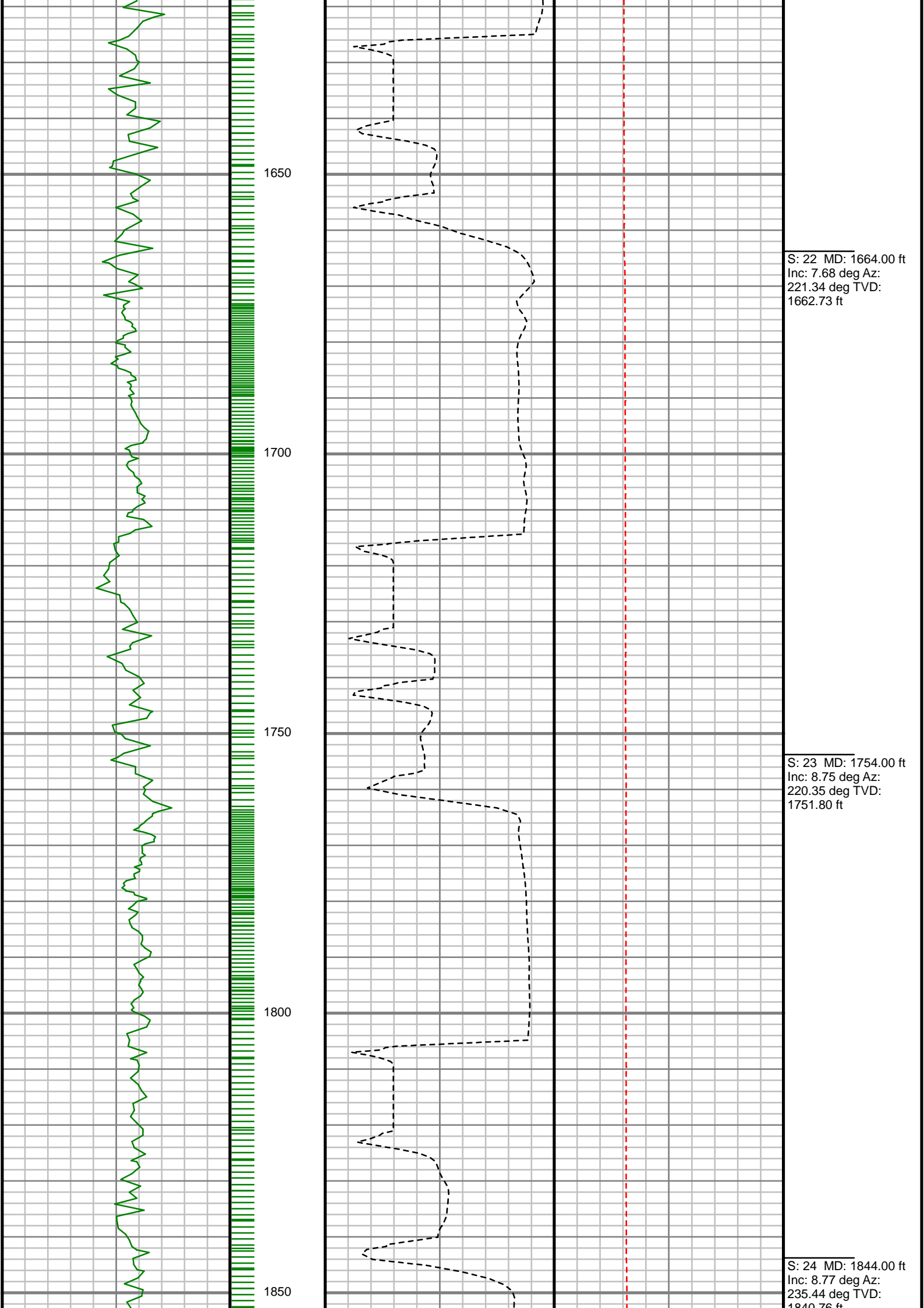
Run Data						
RUN NUMBER	1	2	3	4		
START DATE	05/27/2015	05/30/2015	05/31/2015	06/02/2015		
START TIME	0500	0545	1815	2010		
END DATE	05/29/2015	05/31/2015	06/02/2015	06/04/2015		
END TIME	0900	1715	1930	1815		
DEPTH IN (ft)	1289	8282	11435	14061		
DEPTH OUT (ft)	8282	11435	14061	15953		
LOG TOP (ft)	1226	8240	11387	14013		
LOG BOTTOM (ft)	8240	11387	14013	15905		
HOLE SIZE (in)	8.75	6.125	6.125	6.125		
MUD DATA @ (ft)	3725	8950	11435	14061		
MUD TYPE	WATER-BASED	WATER-BASED	WATER-BASED	WATER-BASED		
DENSITY (lb / gal)	8.7	9.9	9.9	9.9		
VISCOSITY (s / qt)	28	50	54	53		
pH	9.0	10.4	9.6	9.6		
FLUID LOSS (cm3 / 30)	0	6	10	4.8		
SALINITY (ppm)	1200	8000	7500	7500		
Rm (ohmm @ deg F)	-	-	-	-		
Rmf (ohmm @ deg F)	-	-	-	-		
MAX TEMP (deg F)	173	209	222	244		
Rm @ MAX TEMP (ohmm)	-	-	-	-		
LWD ENGINEER #1	C. COLLINS	C. COLLINS	C. COLLINS	C. COLLINS		
LWD ENGINEER #2	S. NEJAD	S. NEJAD	S. NEJAD	H. ORAHOD		
LWD ENGINEER #3	-	-	-	-		
LOG WITNESS #1	J. MORGAN	J. MORGAN	J. MORGAN	J. MORGAN		
LOG WITNESS #2	-	-	-	-		

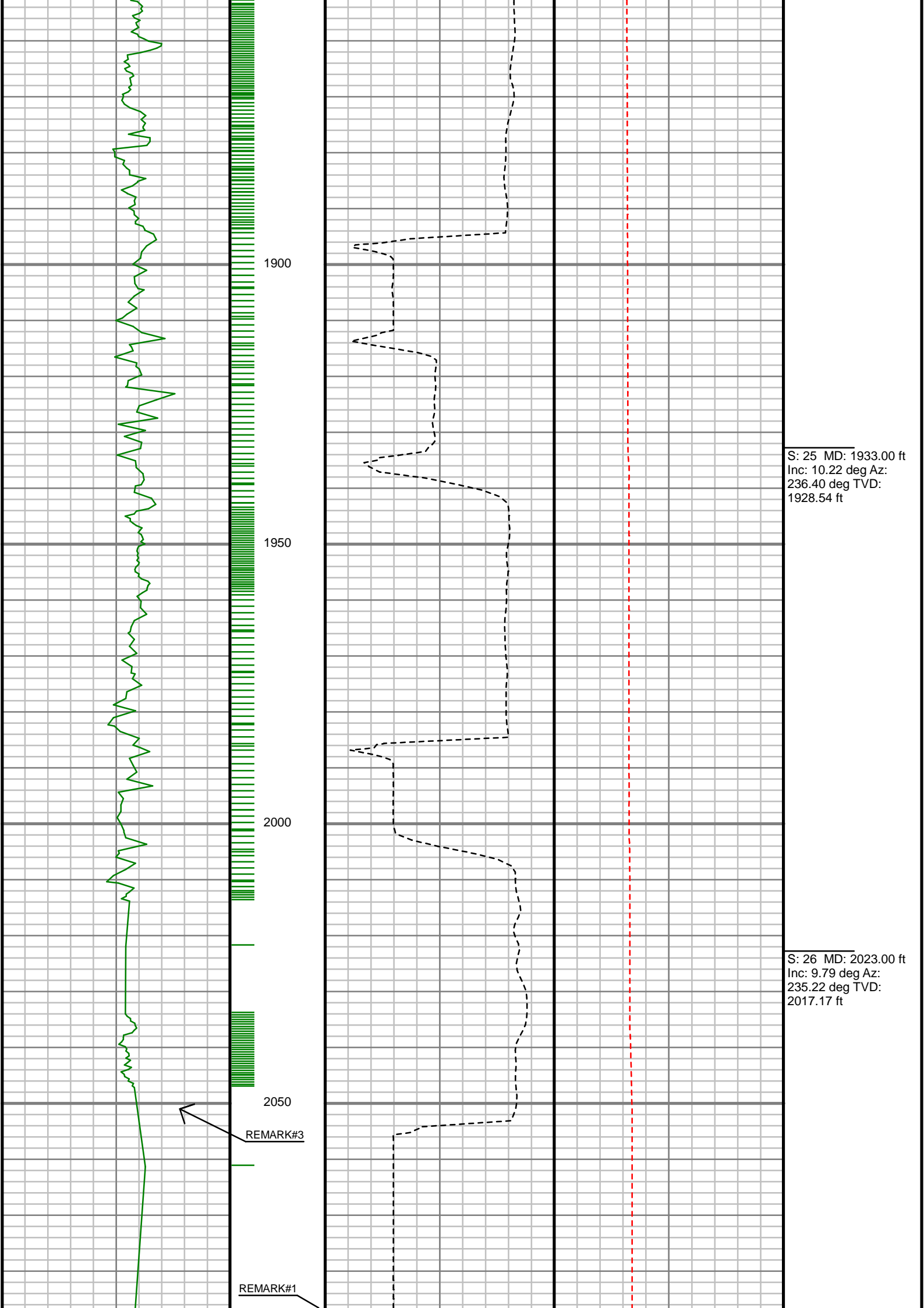
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

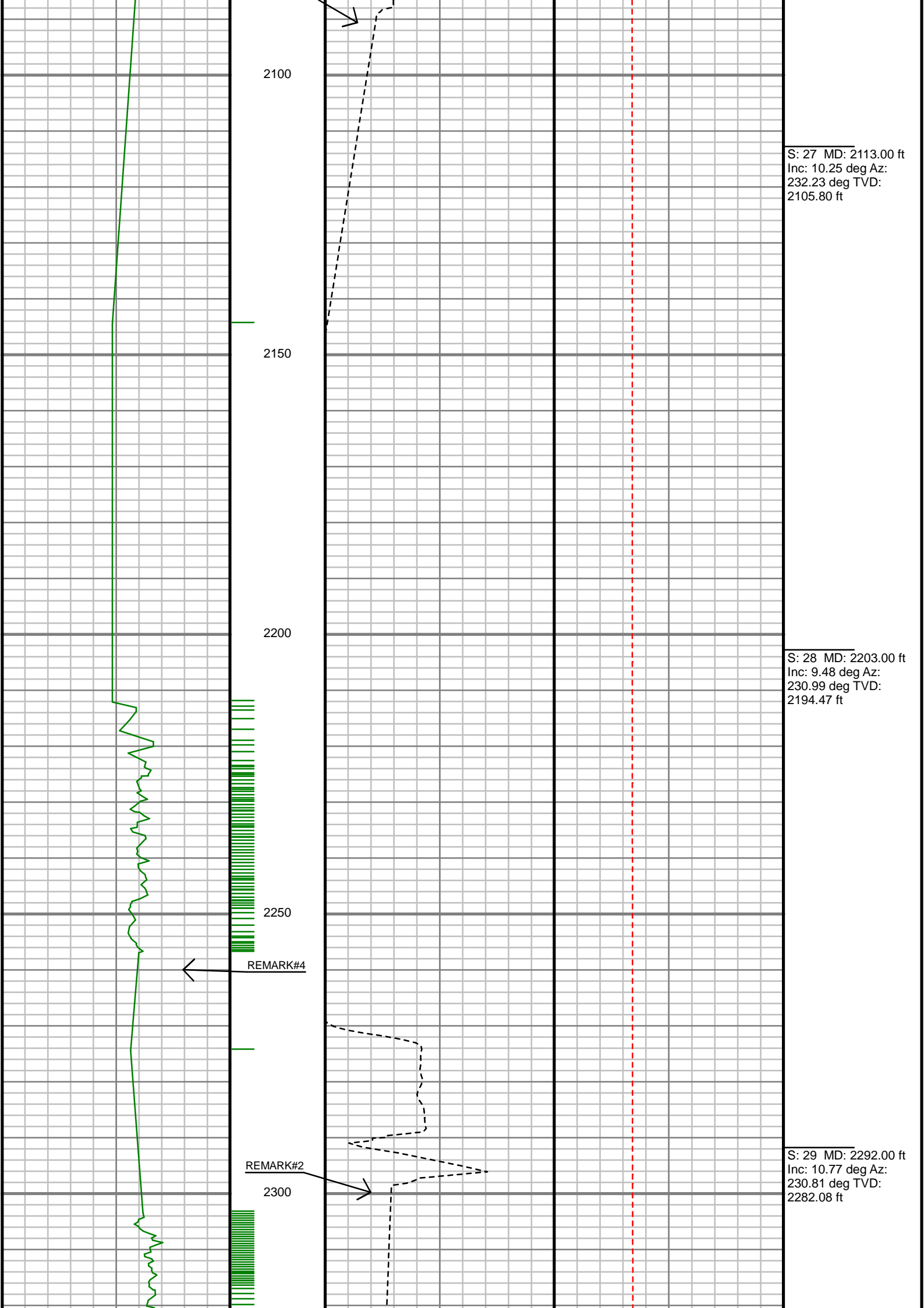
ANADARKO E&P ONSHORE LLC
BADGER STATE 32C-3HZ
WATTENBERG FIELD
WELD COUNTY, COLORADO
05-123-36463











S: 27 MD: 2113.00 ft
Inc: 10.25 deg Az:
232.23 deg TVD:
2105.80 ft

S: 28 MD: 2203.00 ft
Inc: 9.48 deg Az:
230.99 deg TVD:
2194.47 ft

S: 29 MD: 2292.00 ft
Inc: 10.77 deg Az:
230.81 deg TVD:
2282.08 ft

REMARK#4

REMARK#2

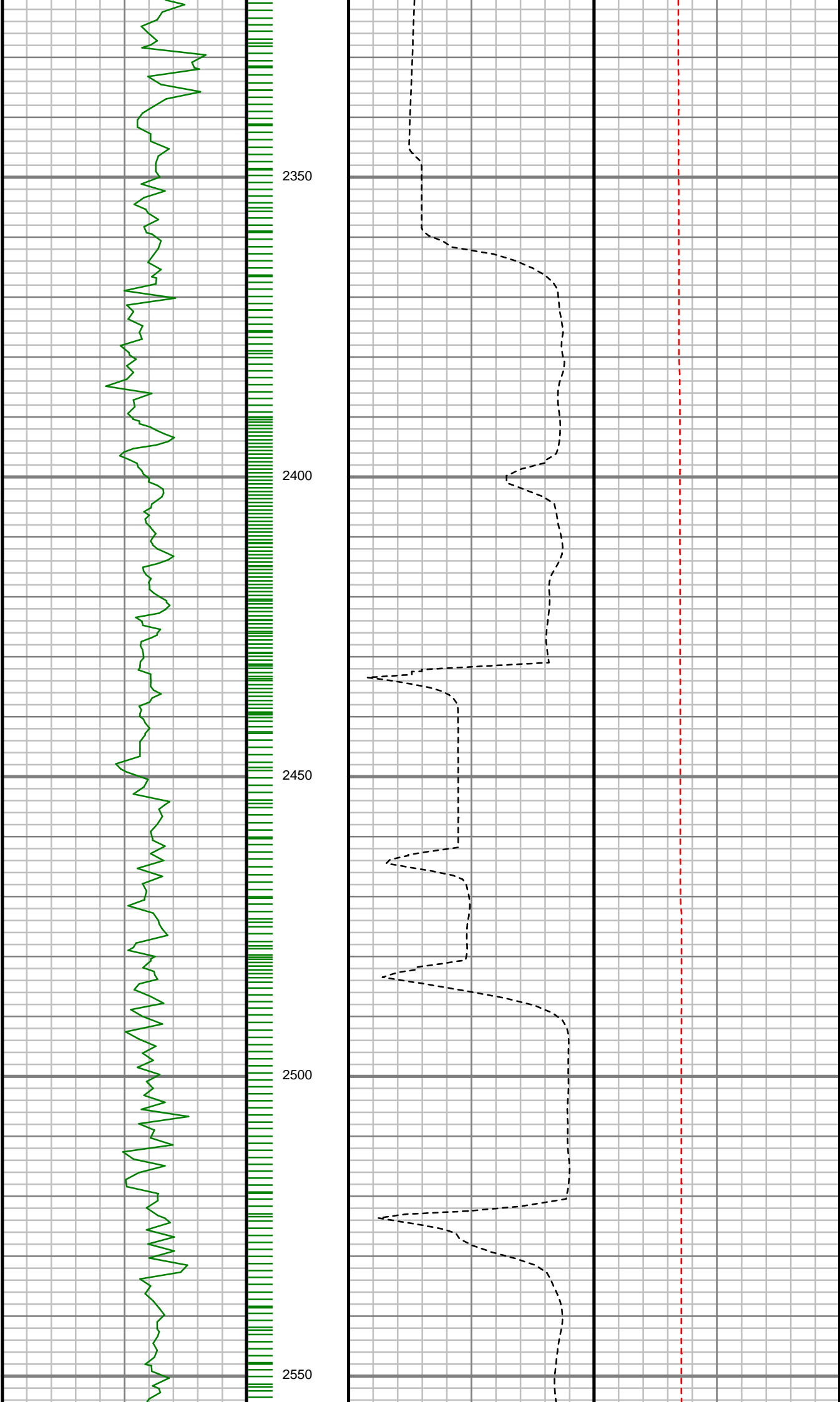
2300

2100

2150

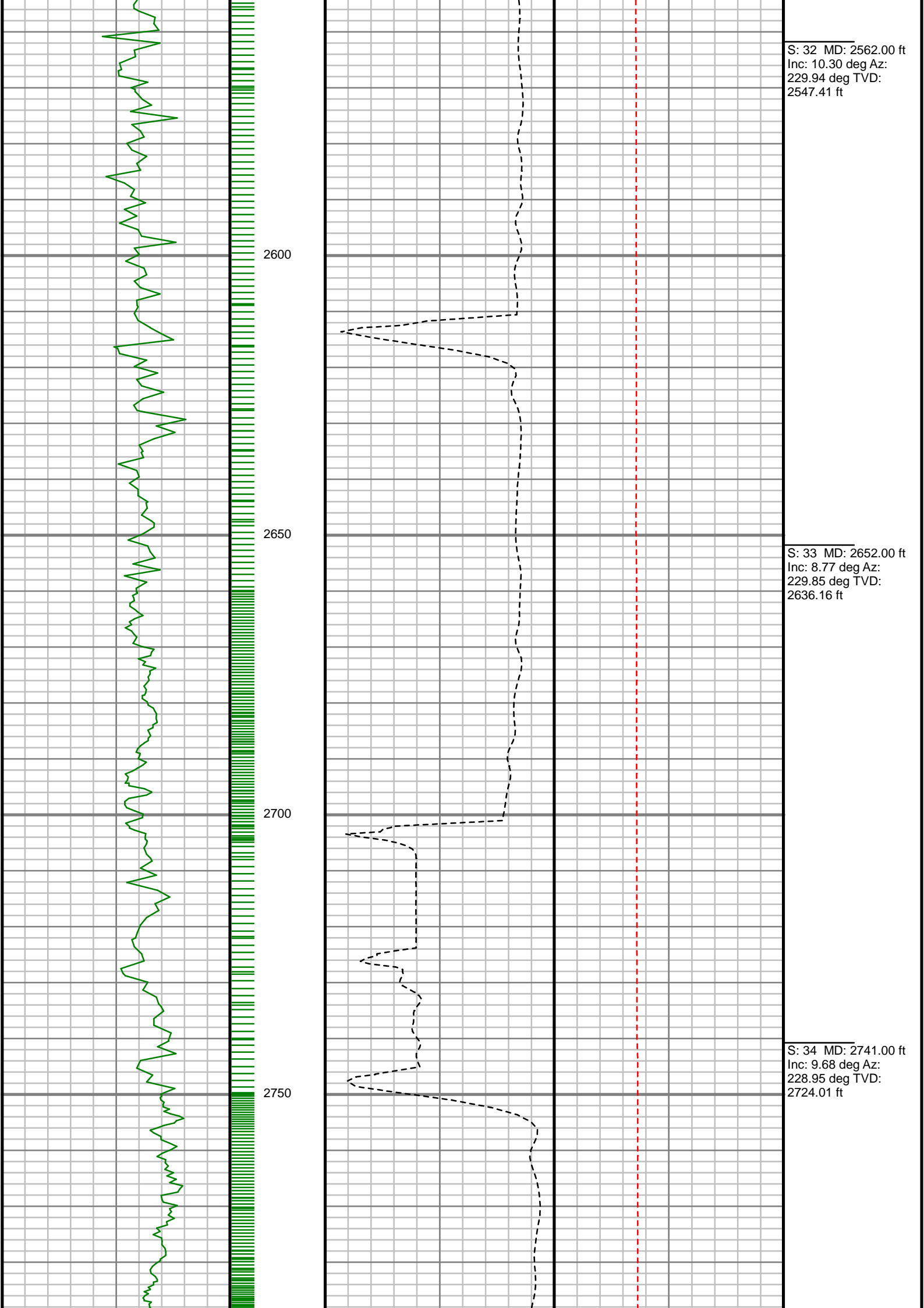
2200

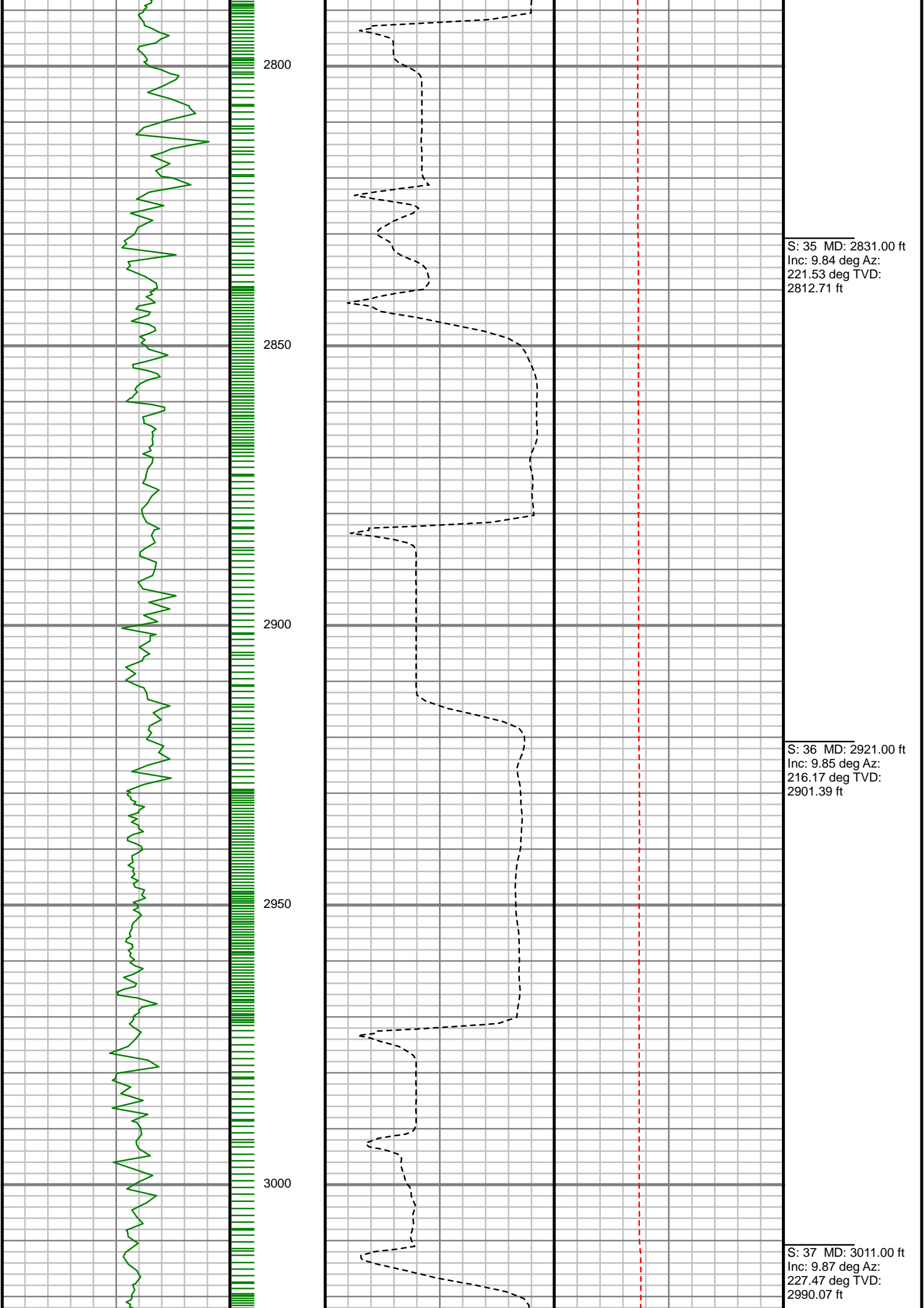
2250

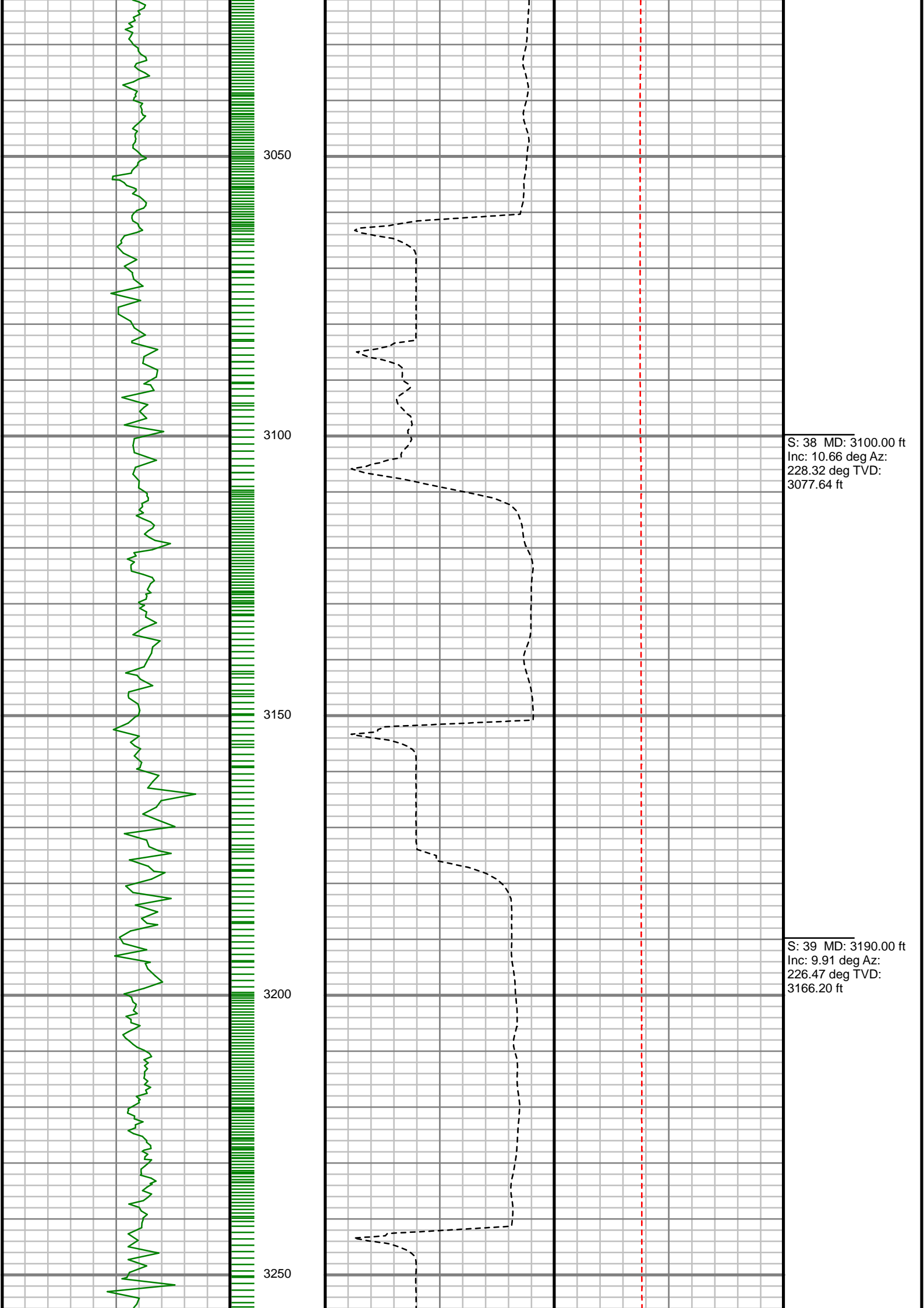


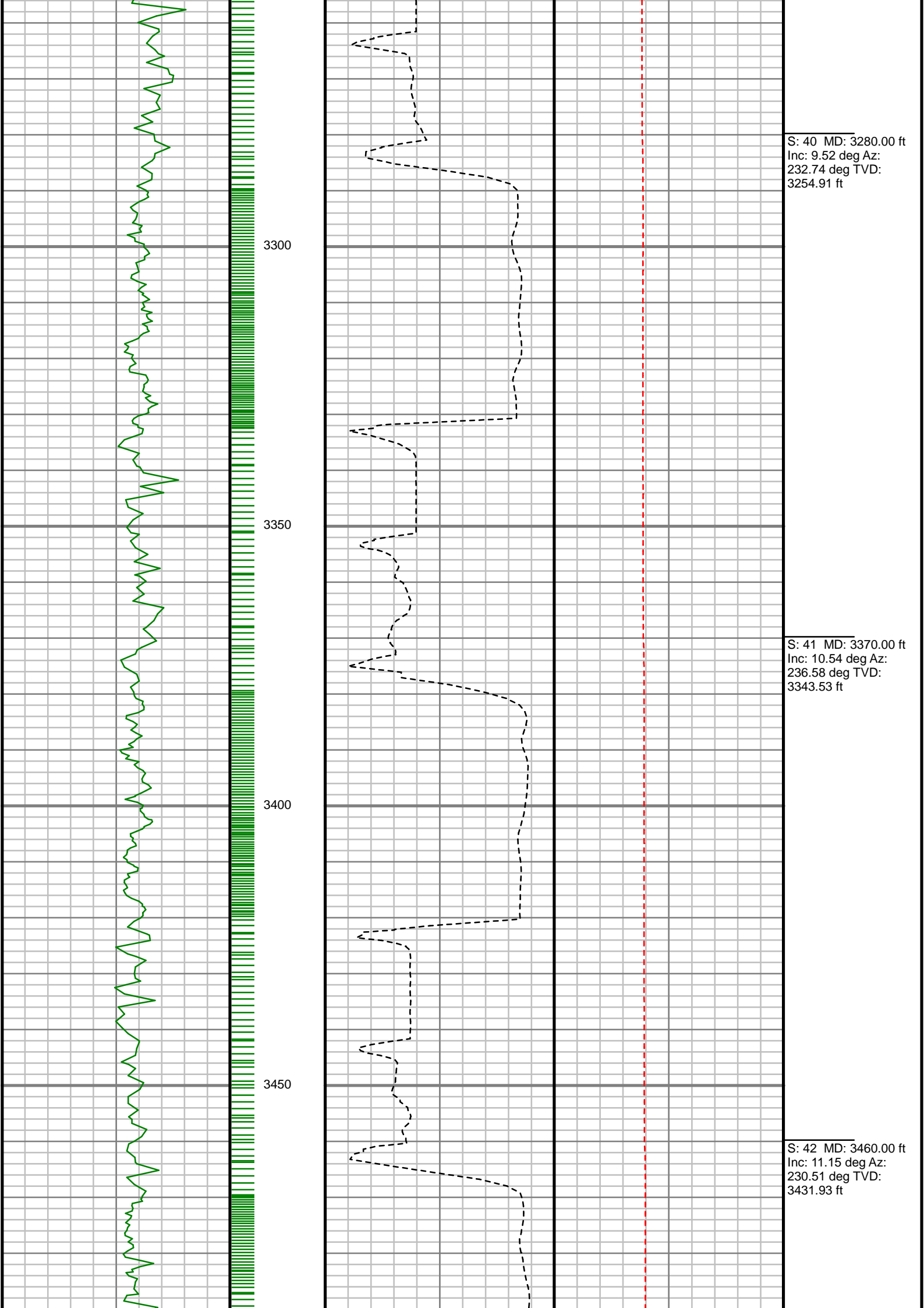
S: 30 MD: 2382.00 ft
Inc: 10.27 deg Az:
226.77 deg TVD:
2370.57 ft

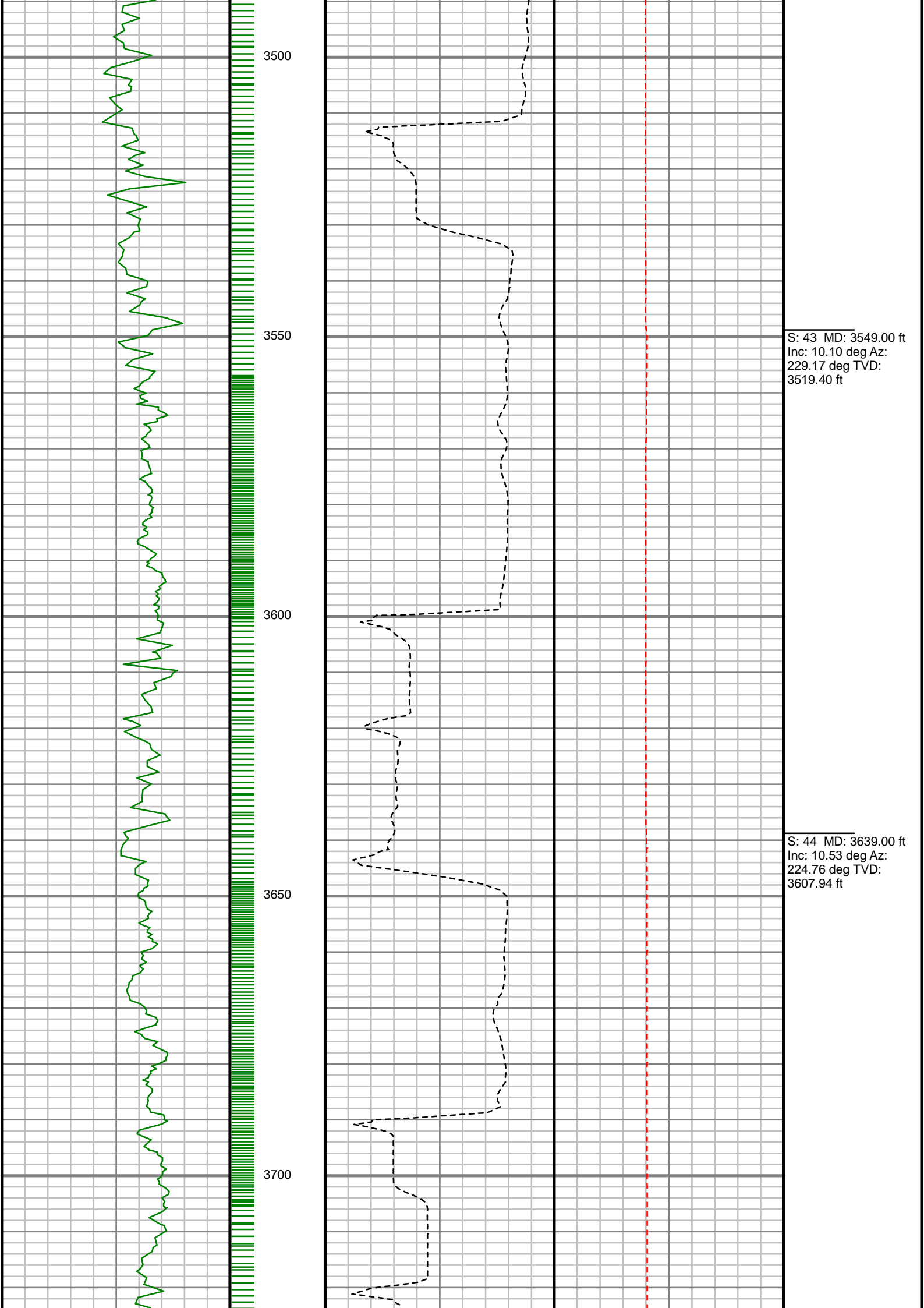
S: 31 MD: 2472.00 ft
Inc: 11.22 deg Az:
228.78 deg TVD:
2458.99 ft



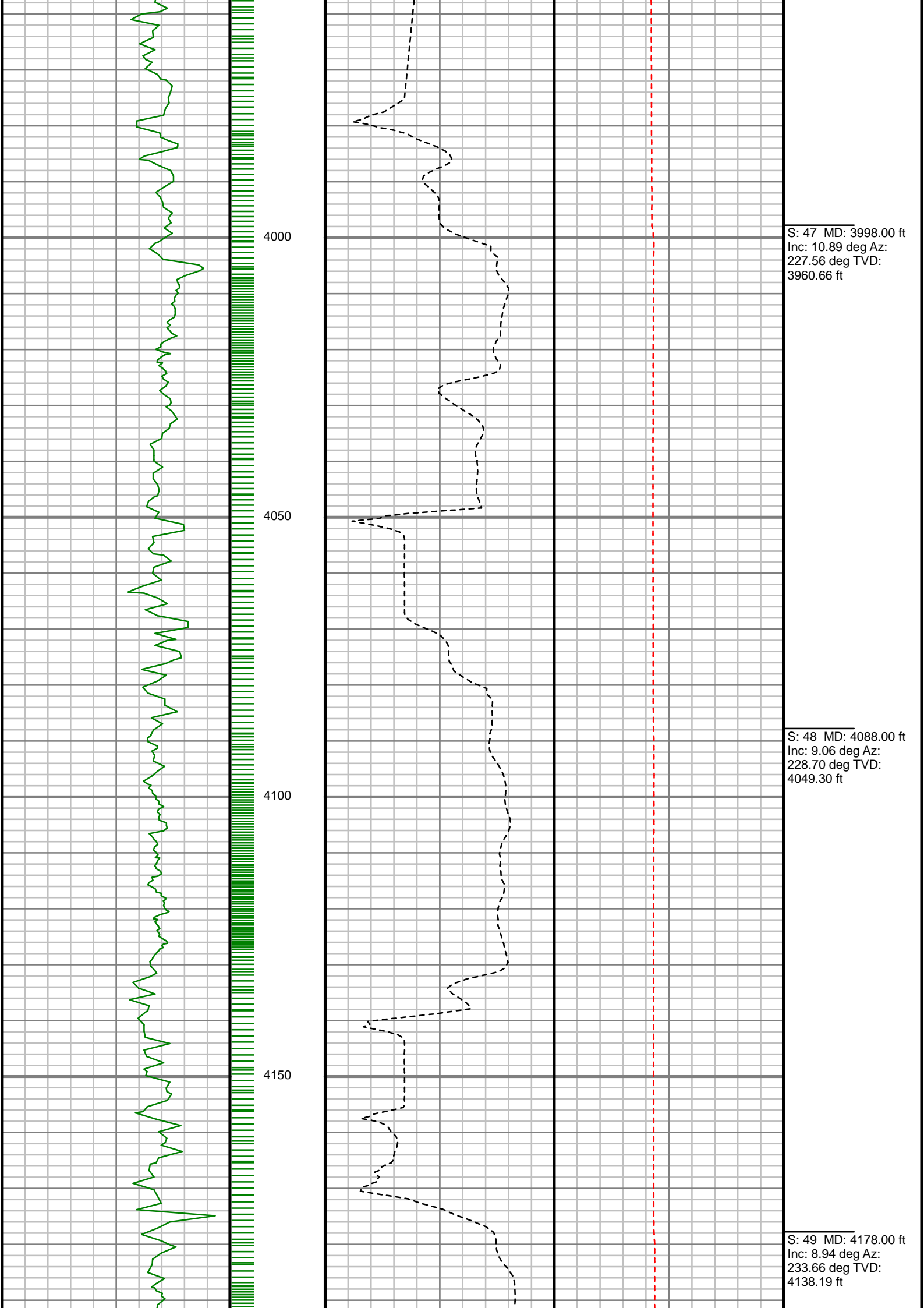


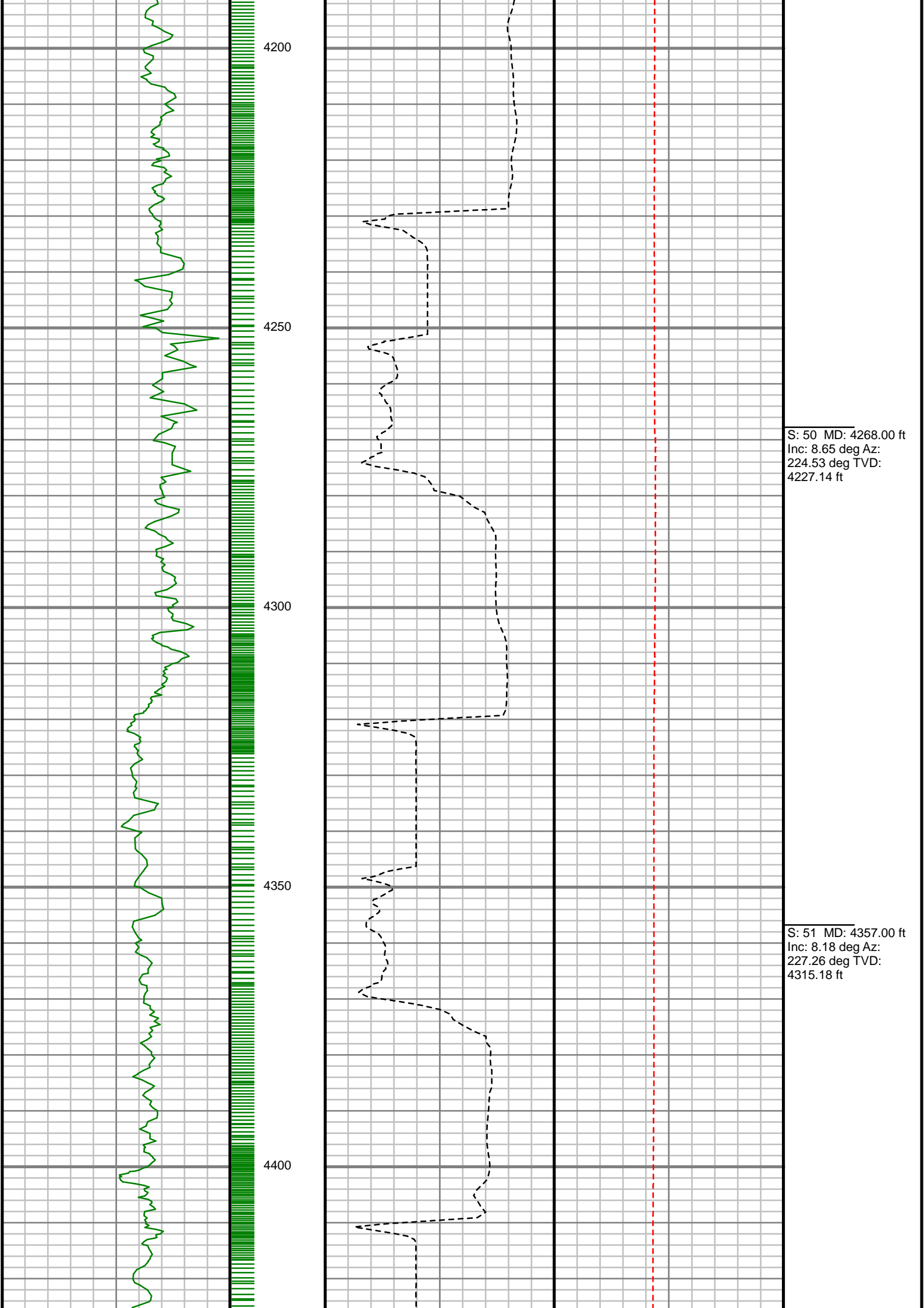


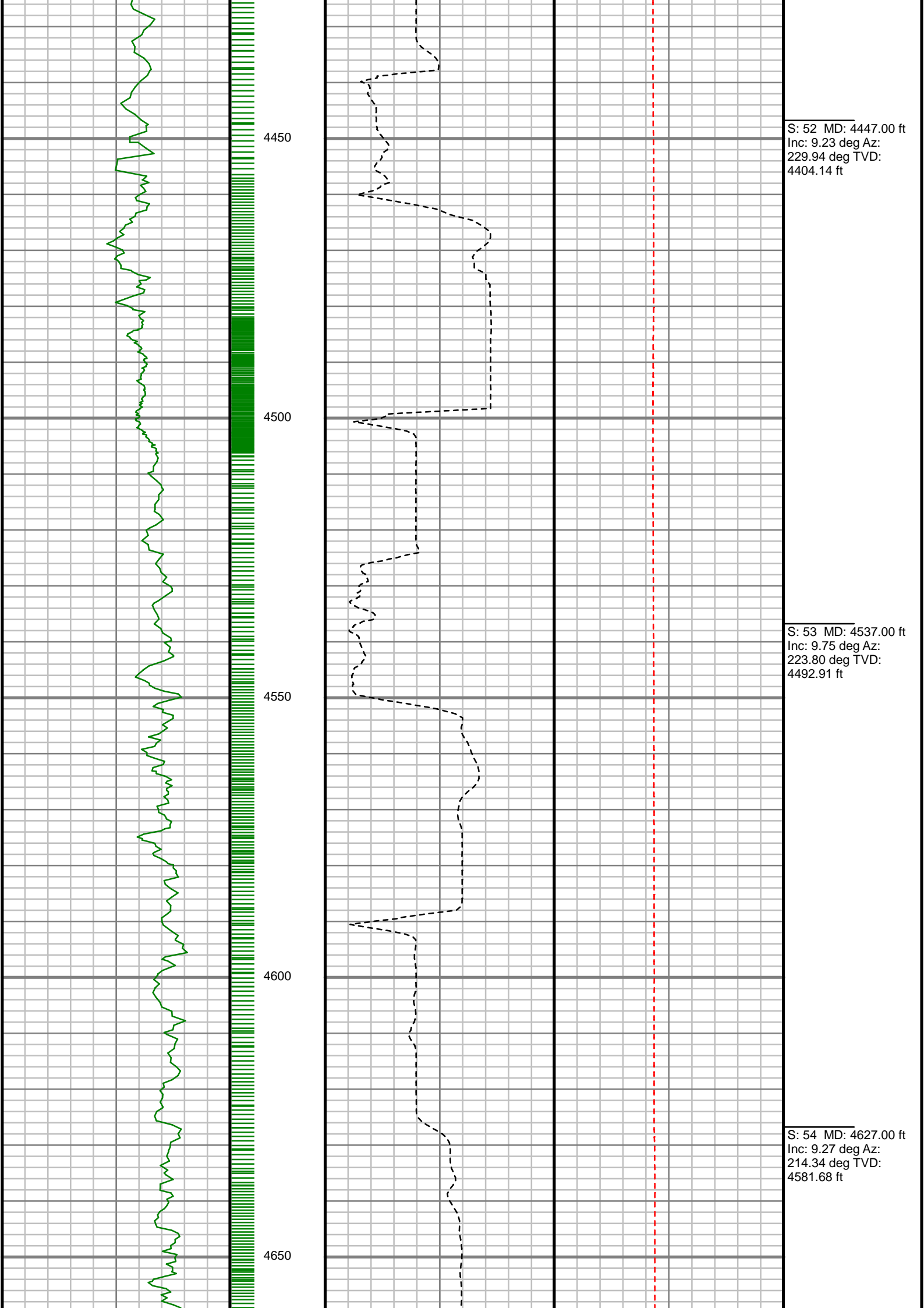


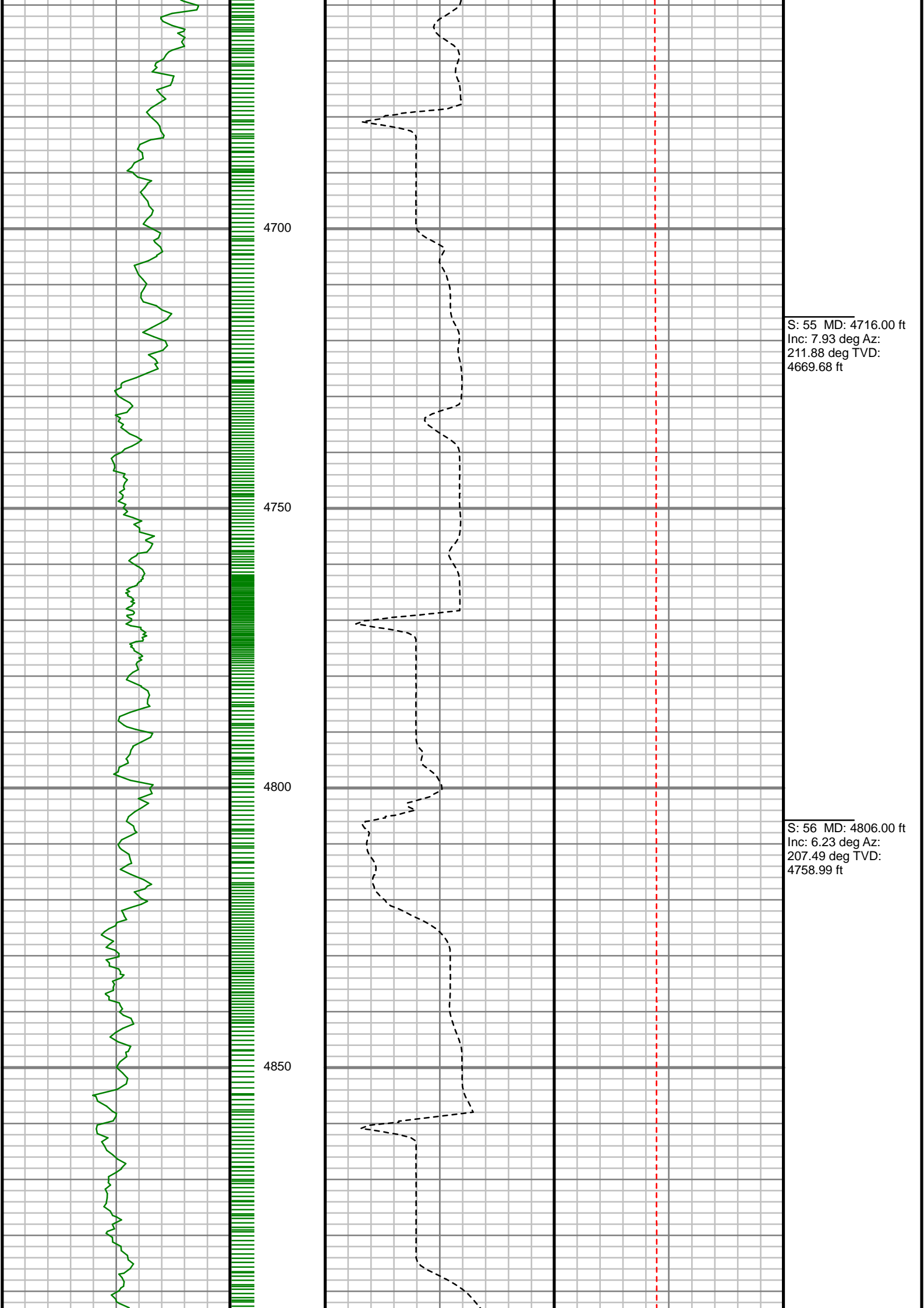


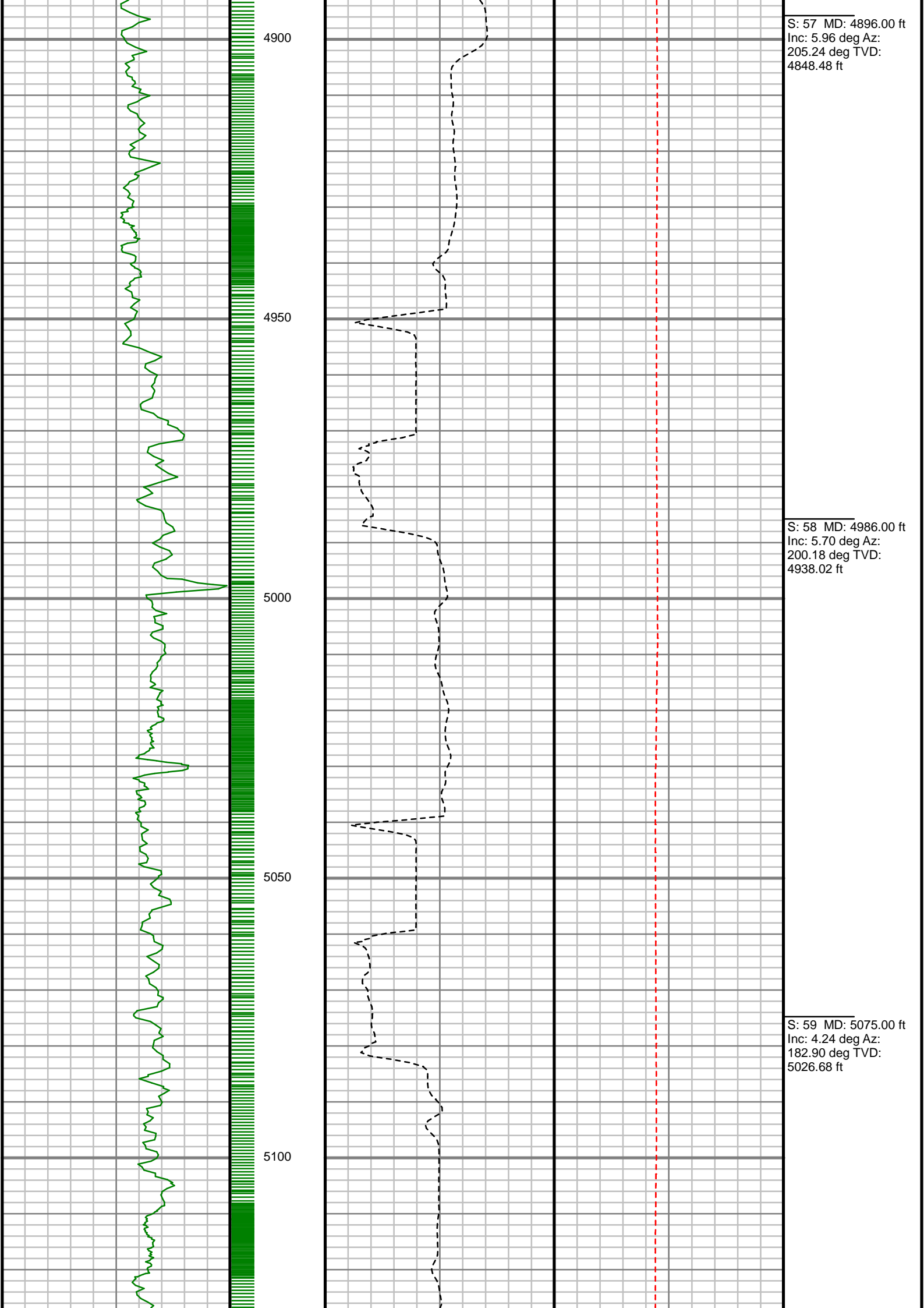








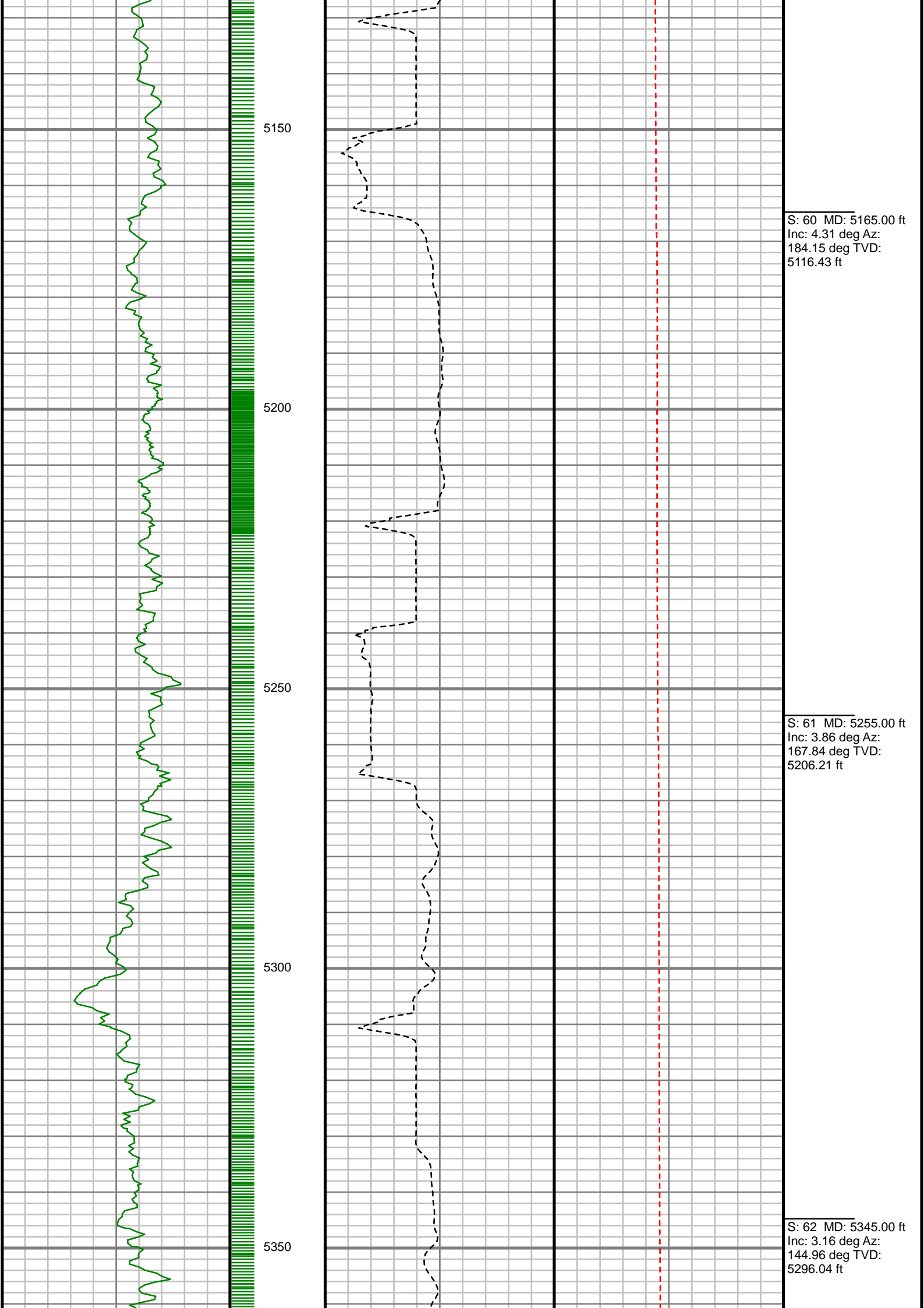


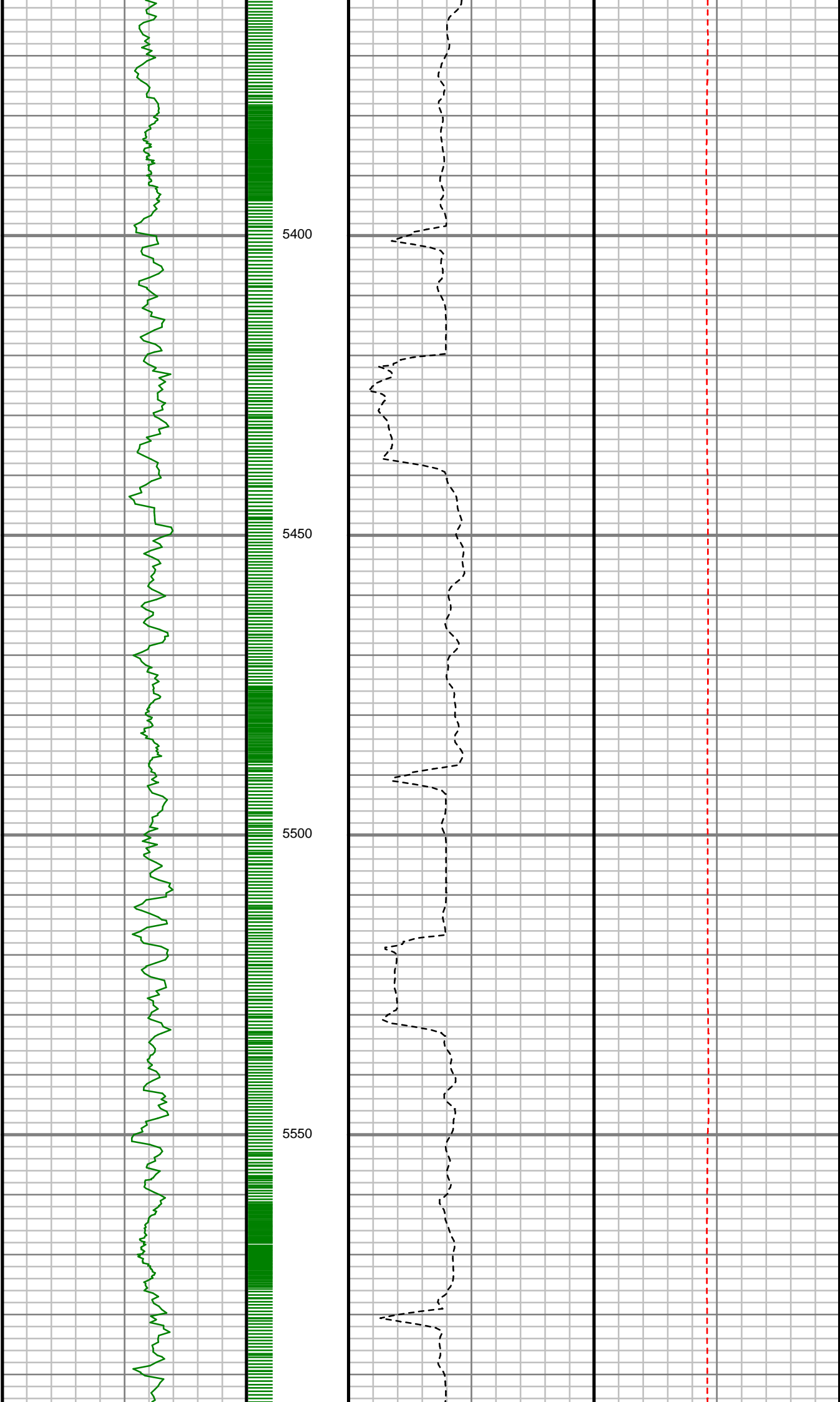


S: 57 MD: 4896.00 ft
Inc: 5.96 deg Az:
205.24 deg TVD:
4848.48 ft

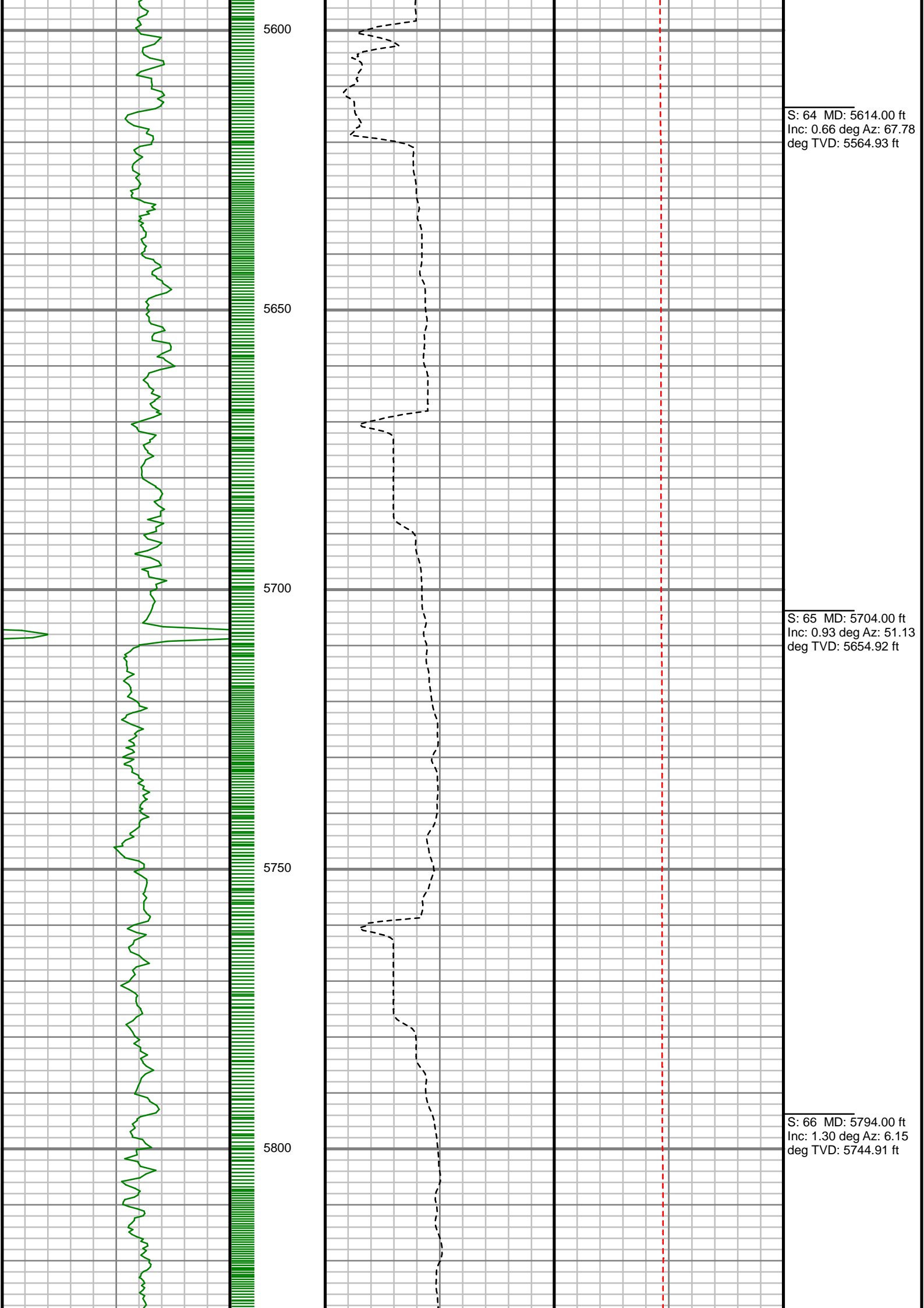
S: 58 MD: 4986.00 ft
Inc: 5.70 deg Az:
200.18 deg TVD:
4938.02 ft

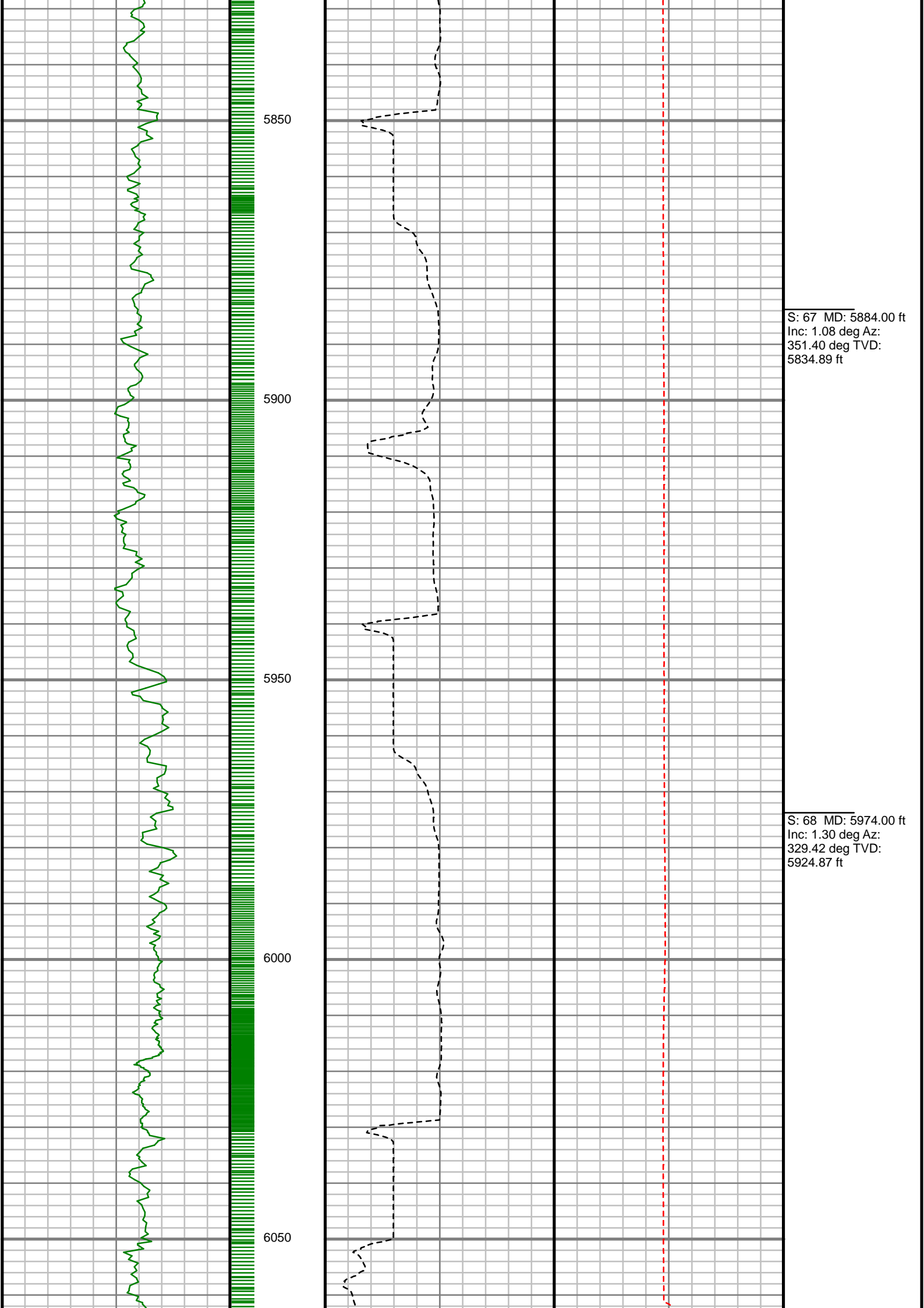
S: 59 MD: 5075.00 ft
Inc: 4.24 deg Az:
182.90 deg TVD:
5026.68 ft





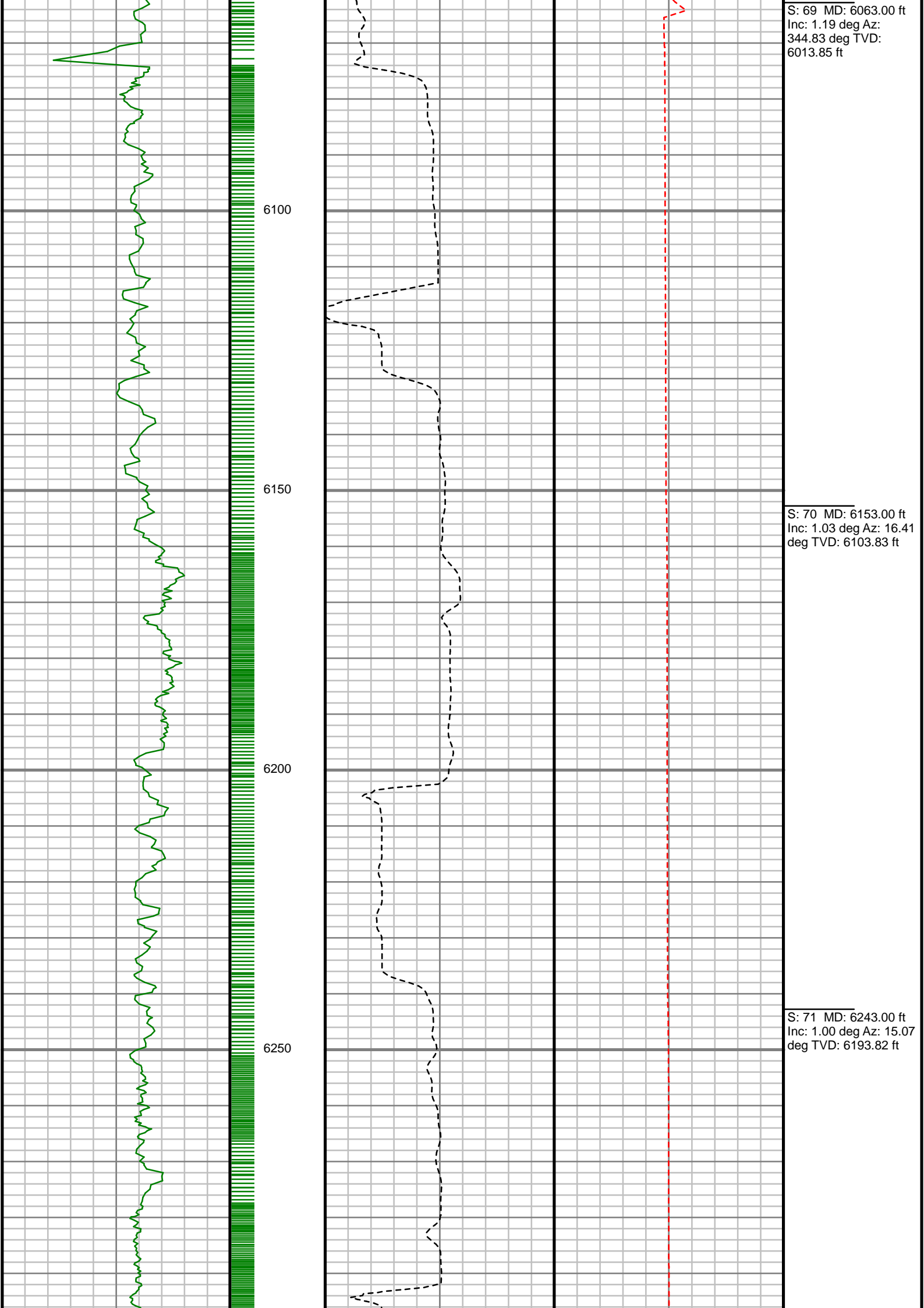
S: 63 MD: 5524.00 ft
Inc: 0.55 deg Az:
135.42 deg TVD:
5474.93 ft

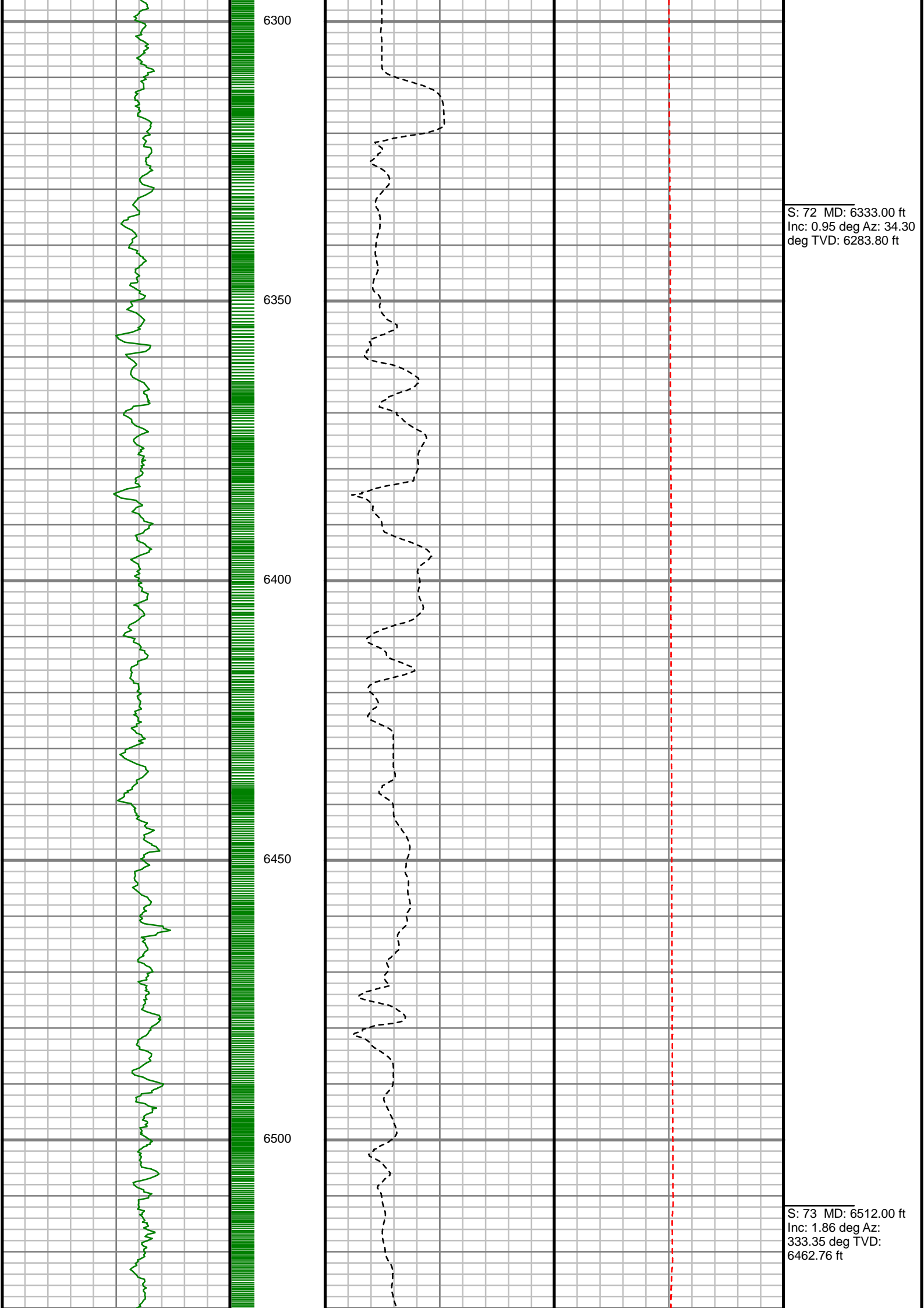


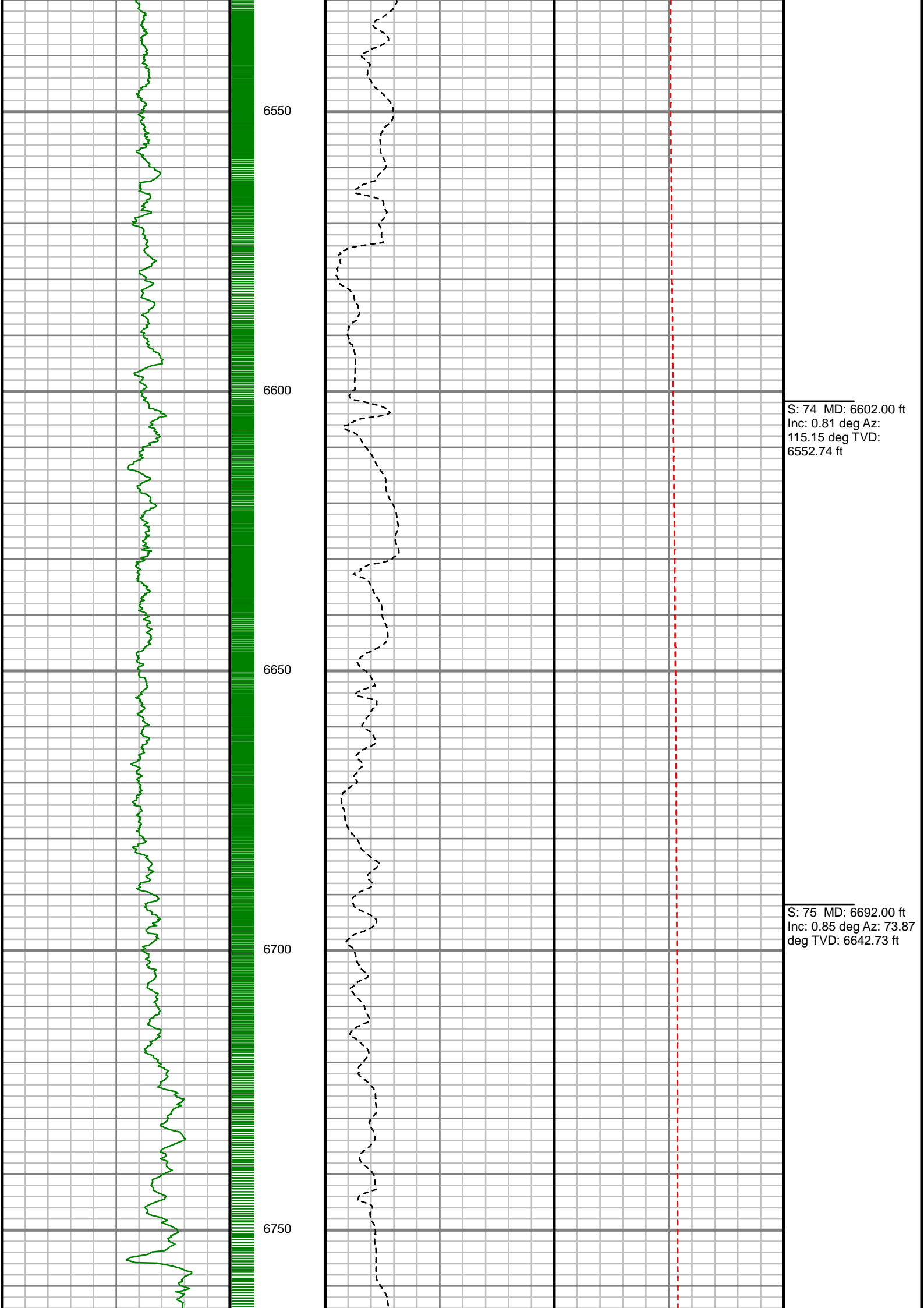


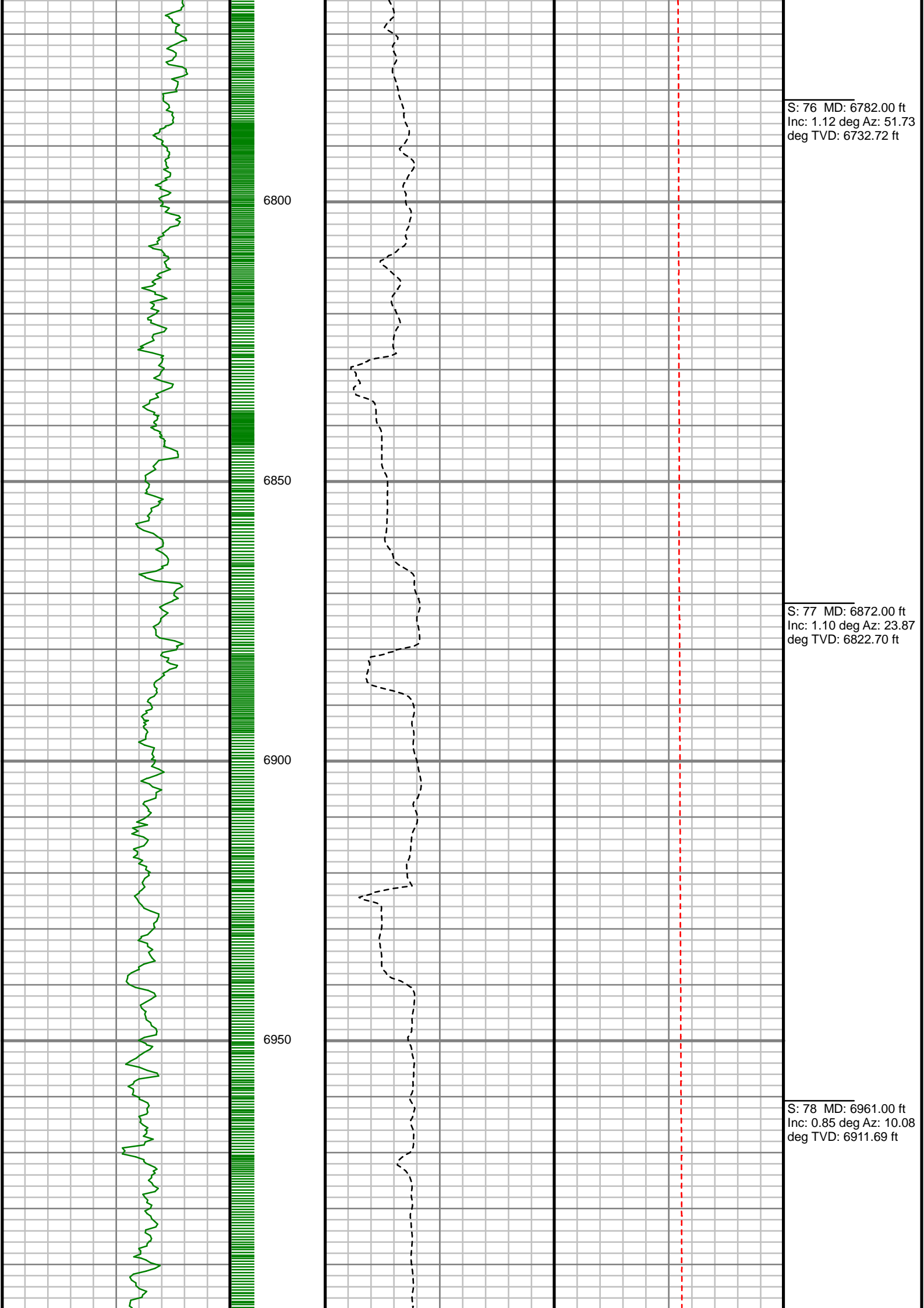
S: 67 MD: 5884.00 ft
Inc: 1.08 deg Az:
351.40 deg TVD:
5834.89 ft

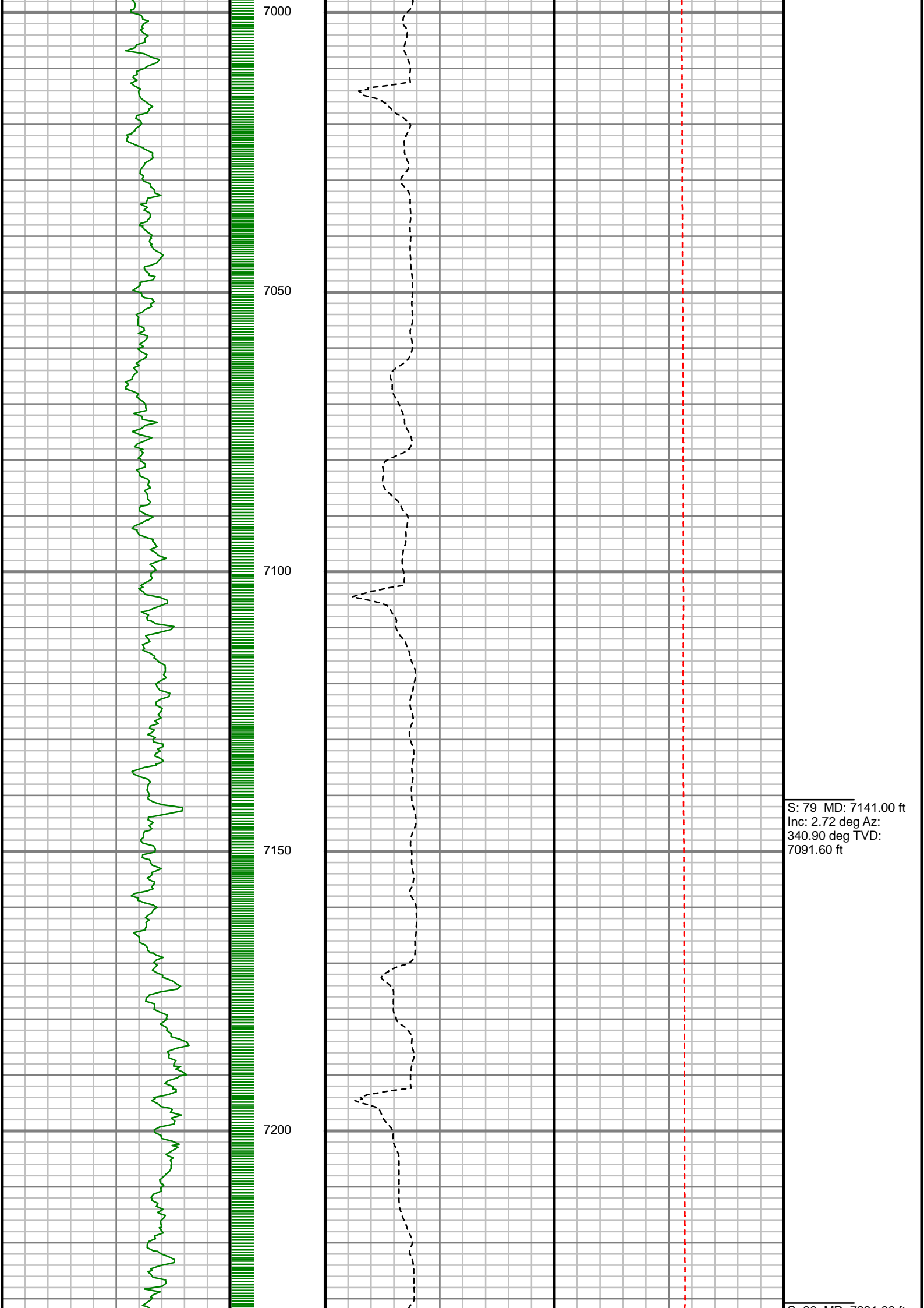
S: 68 MD: 5974.00 ft
Inc: 1.30 deg Az:
329.42 deg TVD:
5924.87 ft

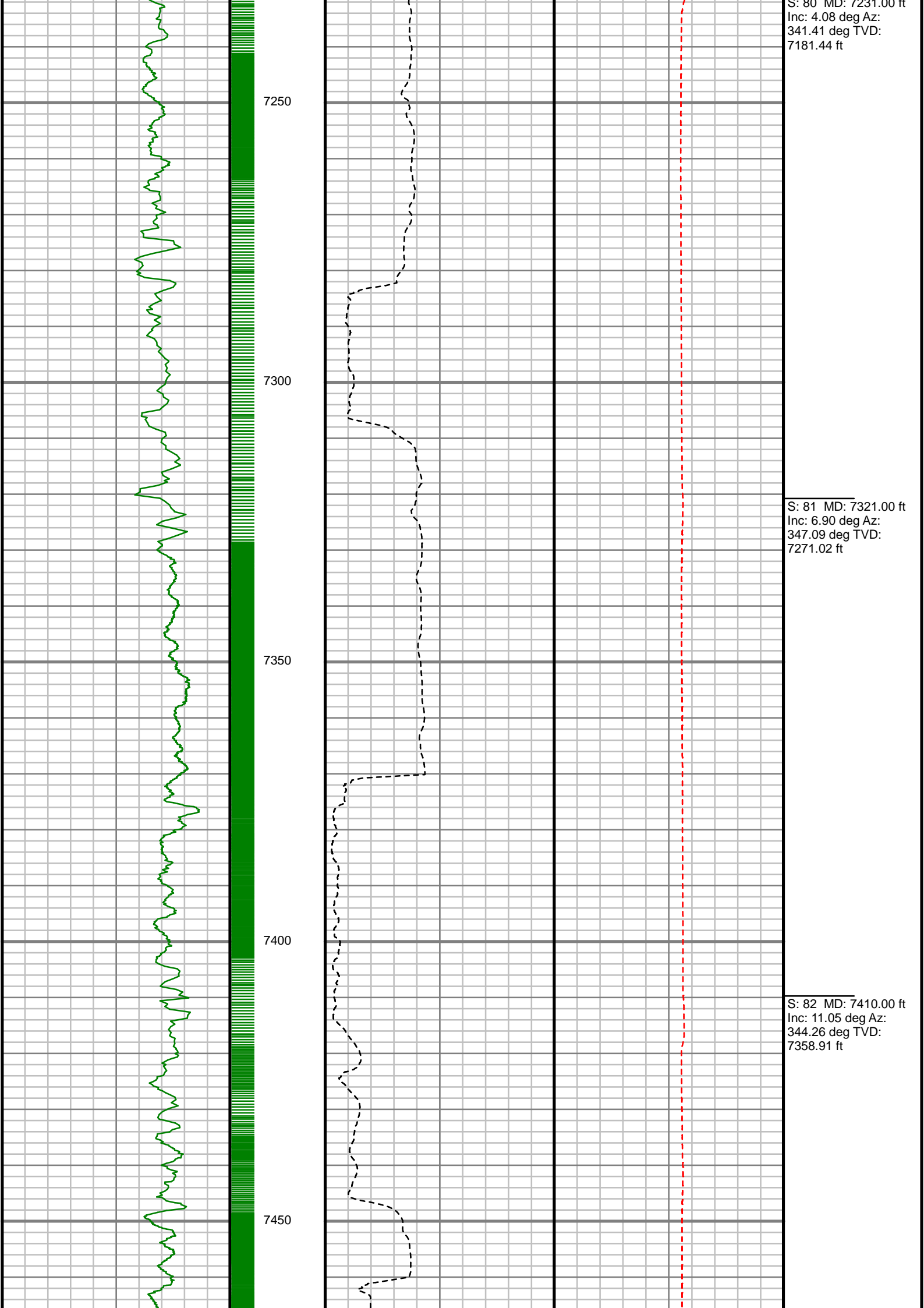


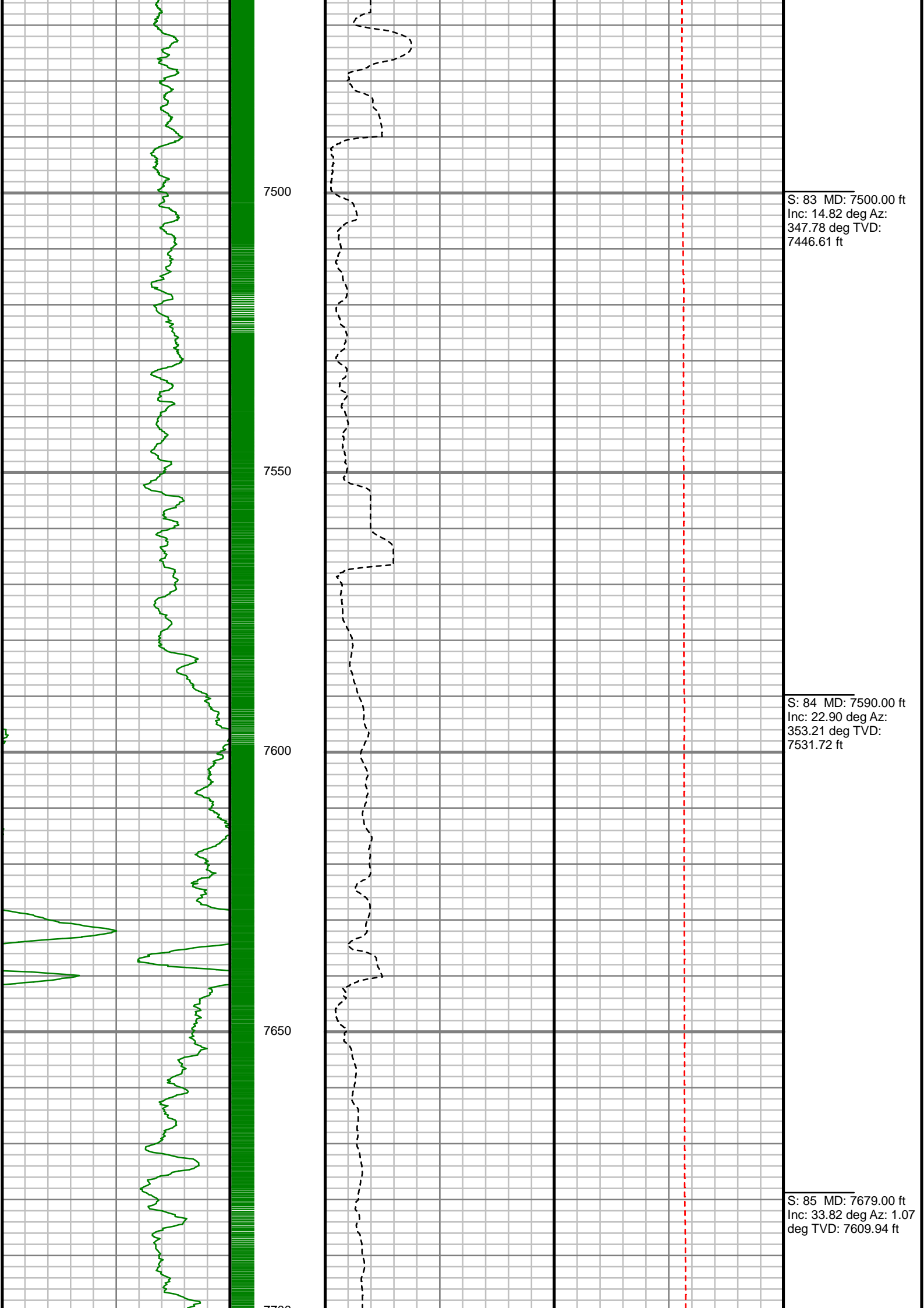


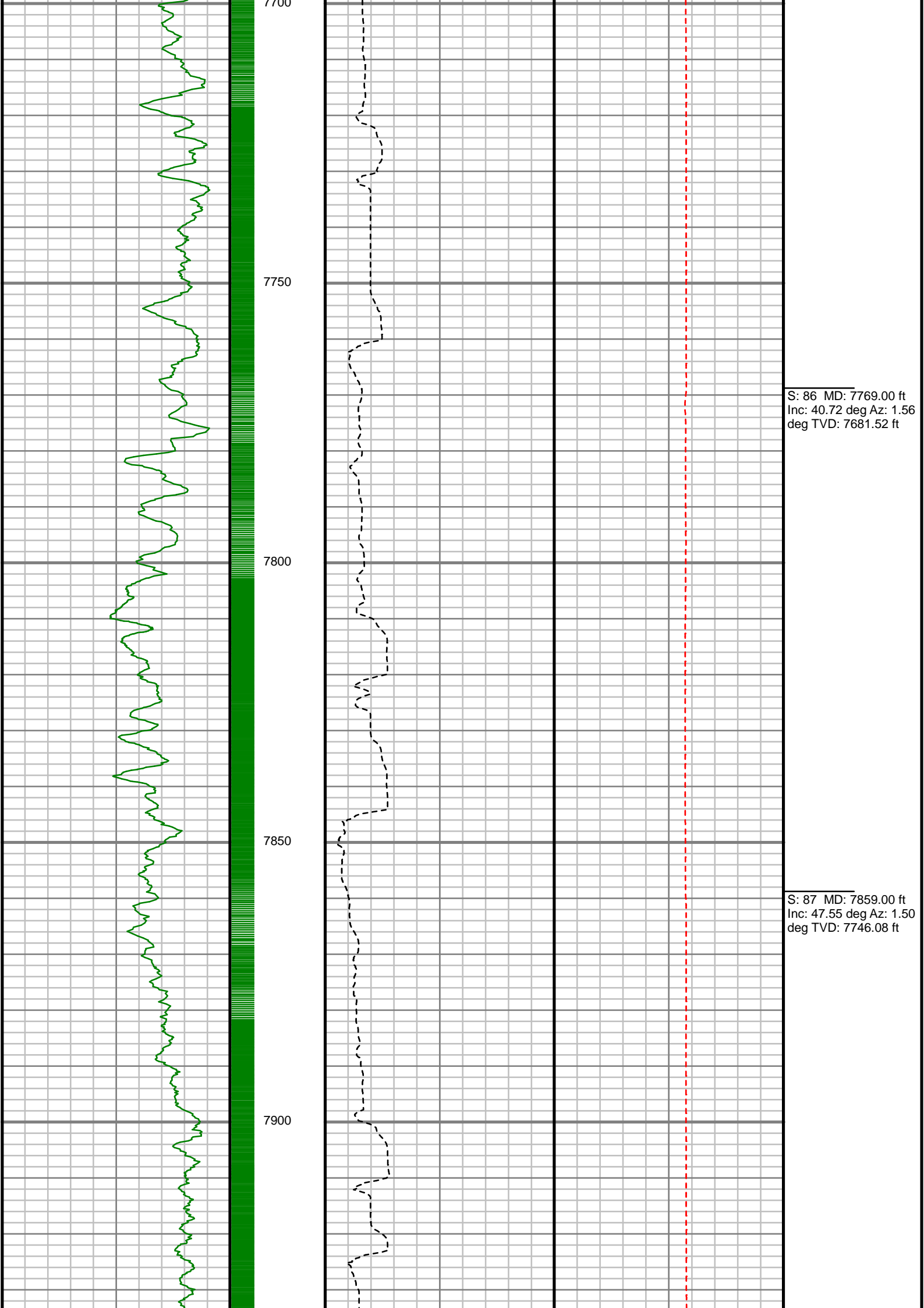


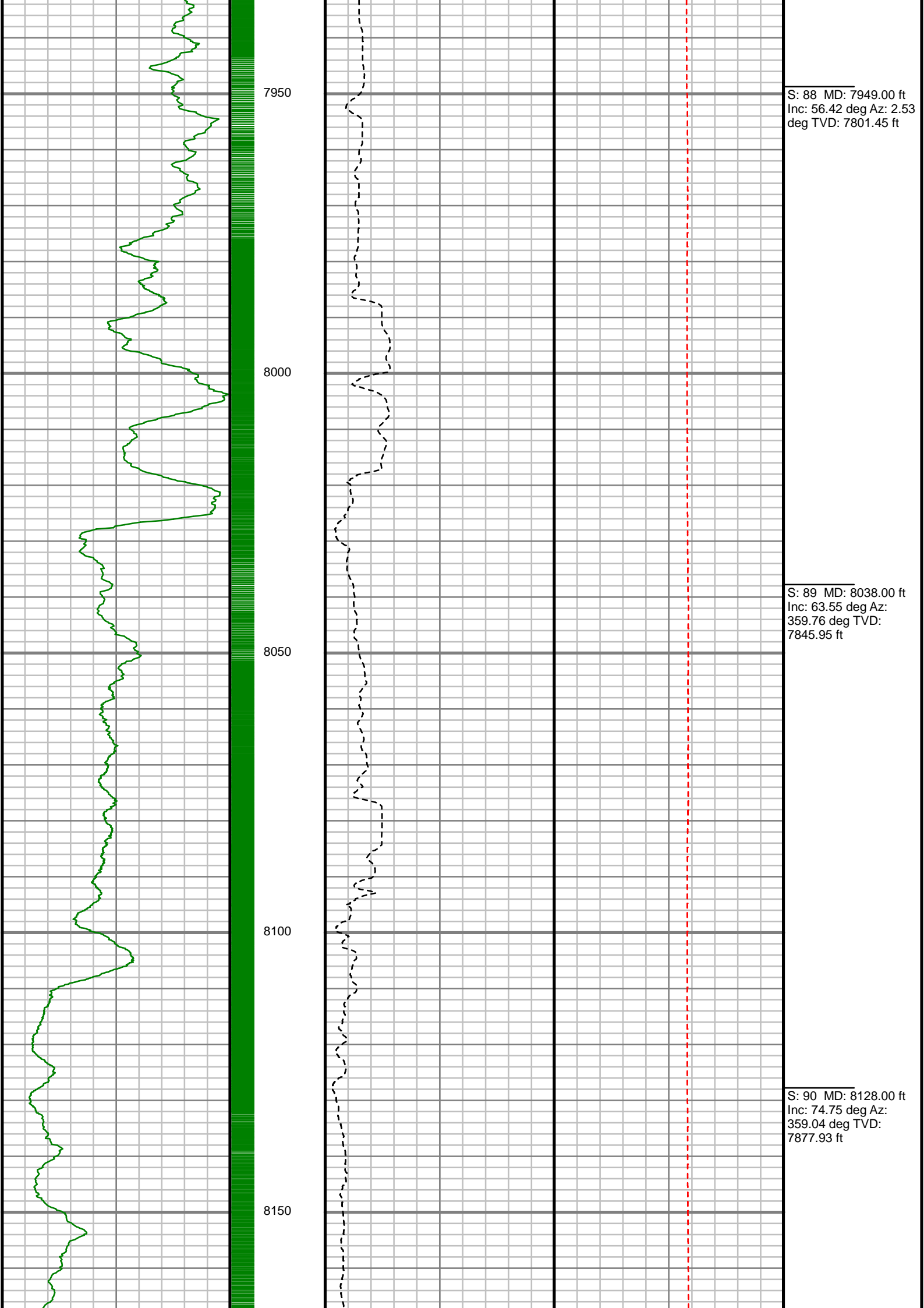








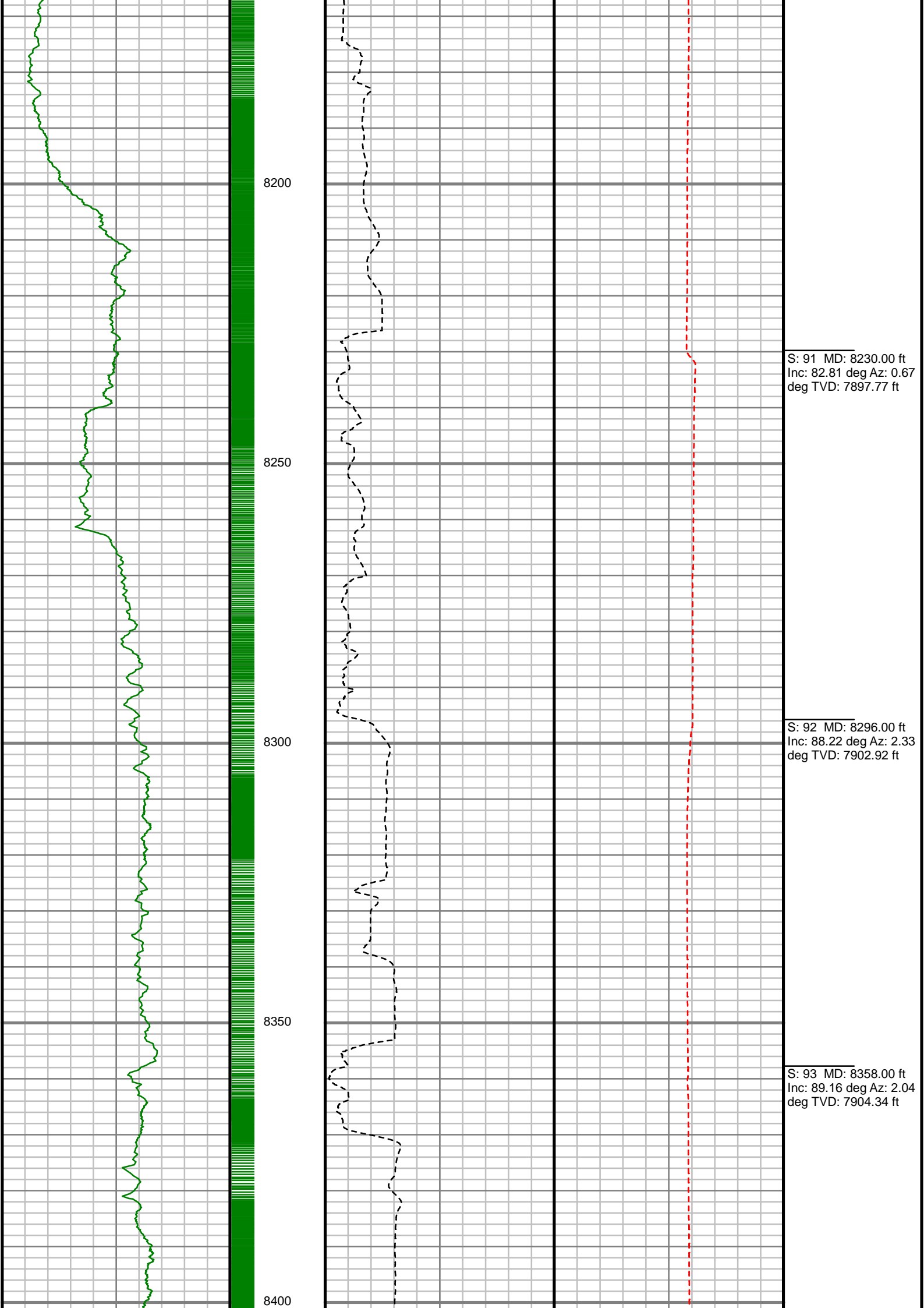


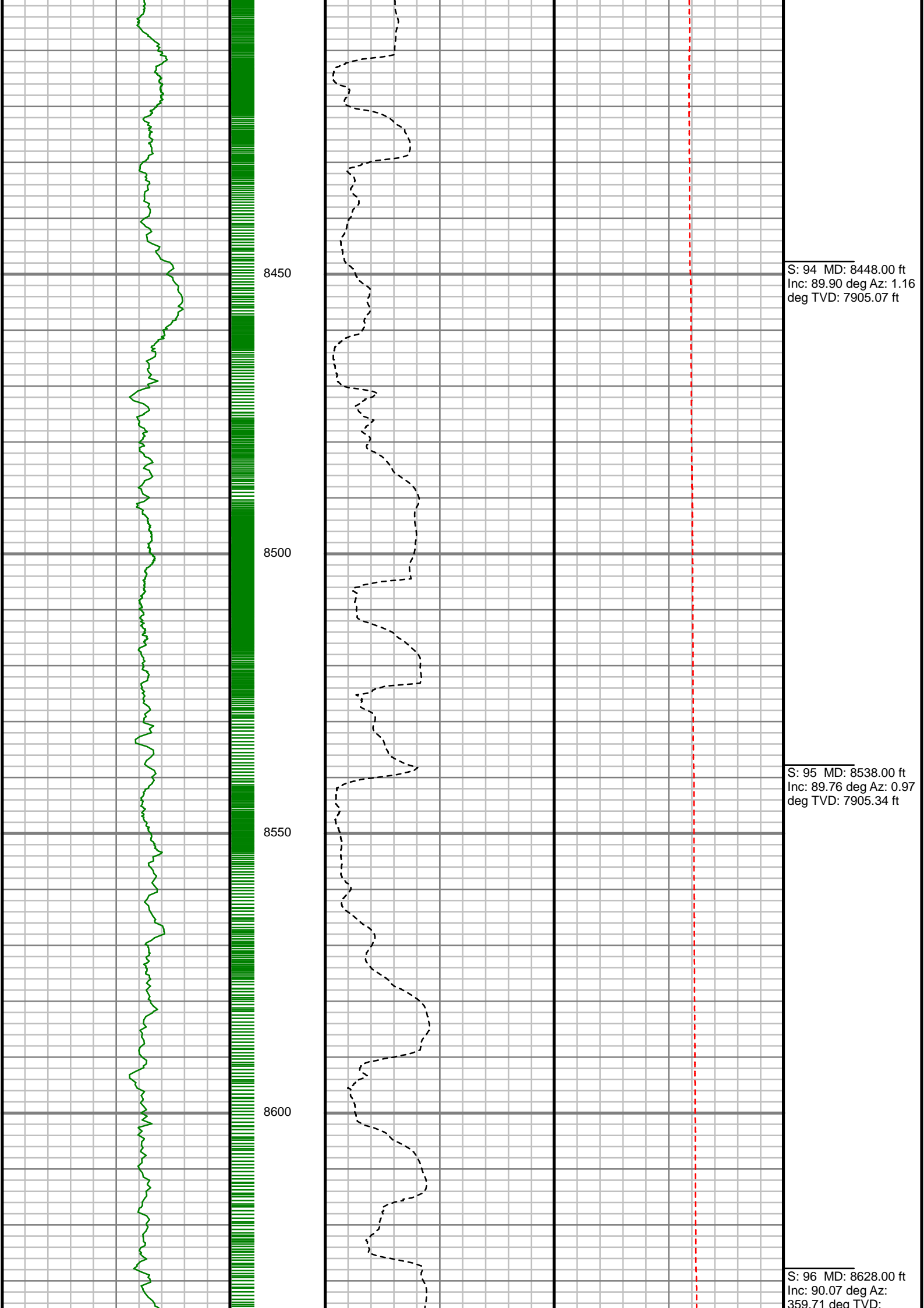


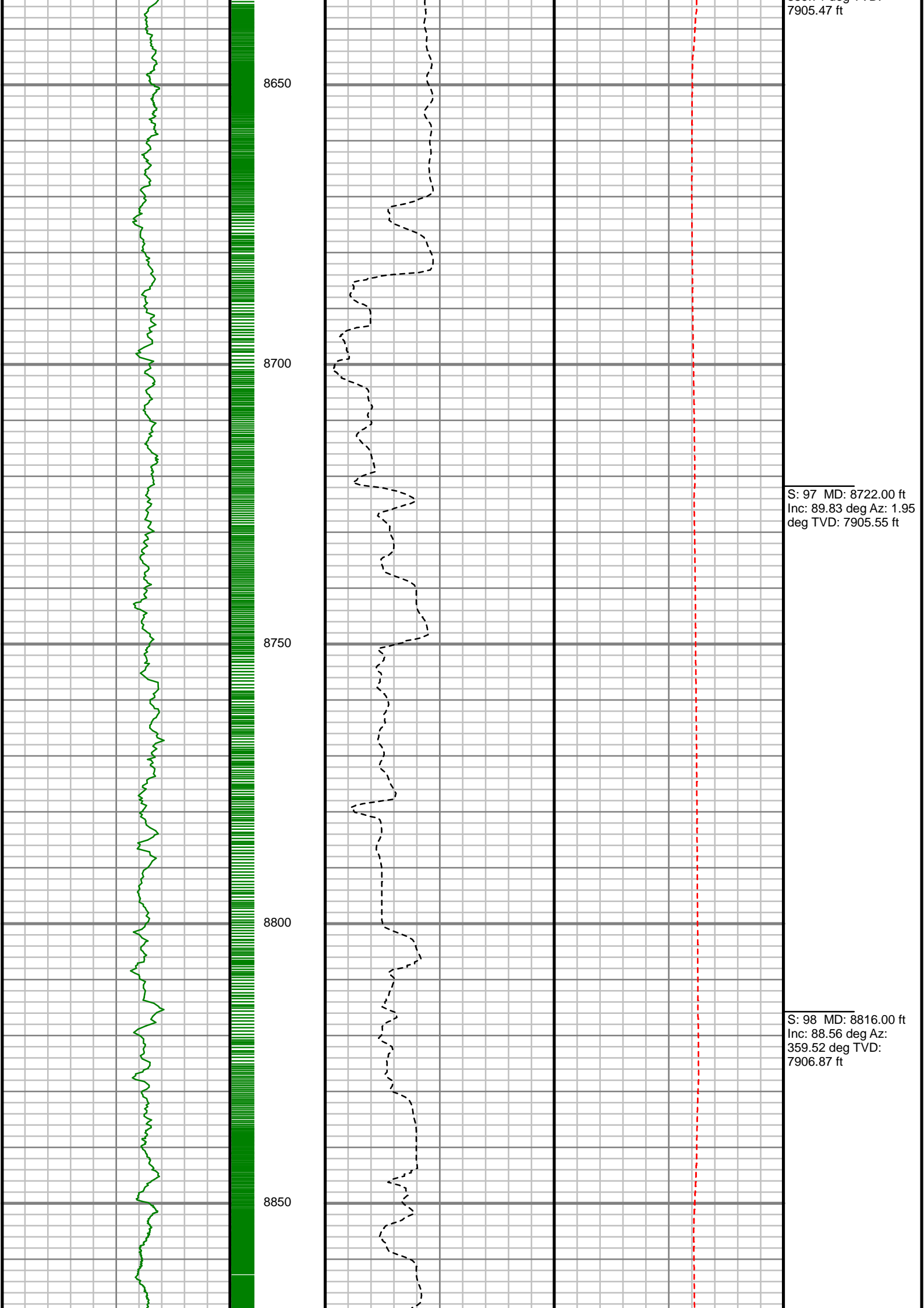
S: 88 MD: 7949.00 ft
Inc: 56.42 deg Az: 2.53
deg TVD: 7801.45 ft

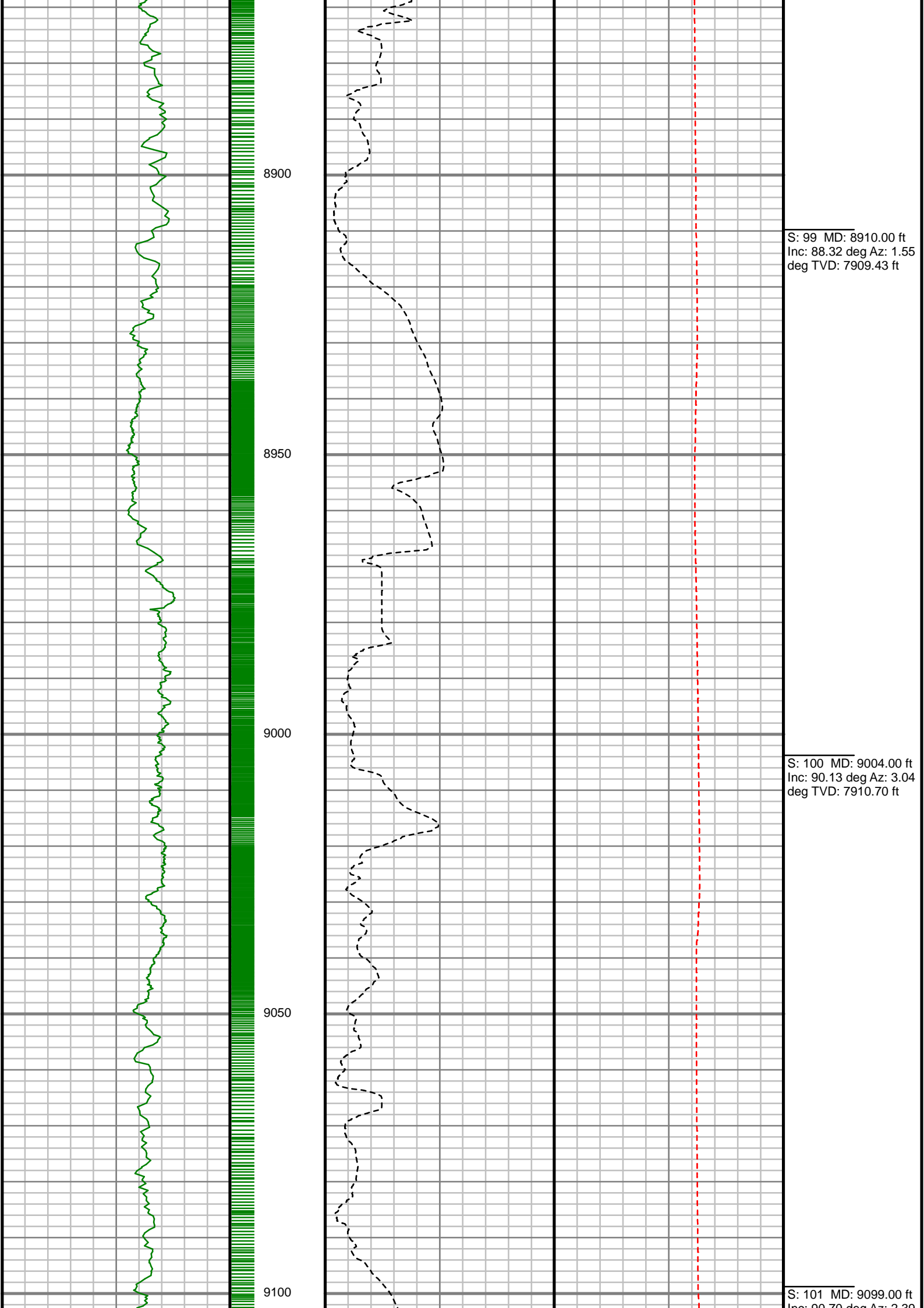
S: 89 MD: 8038.00 ft
Inc: 63.55 deg Az:
359.76 deg TVD:
7845.95 ft

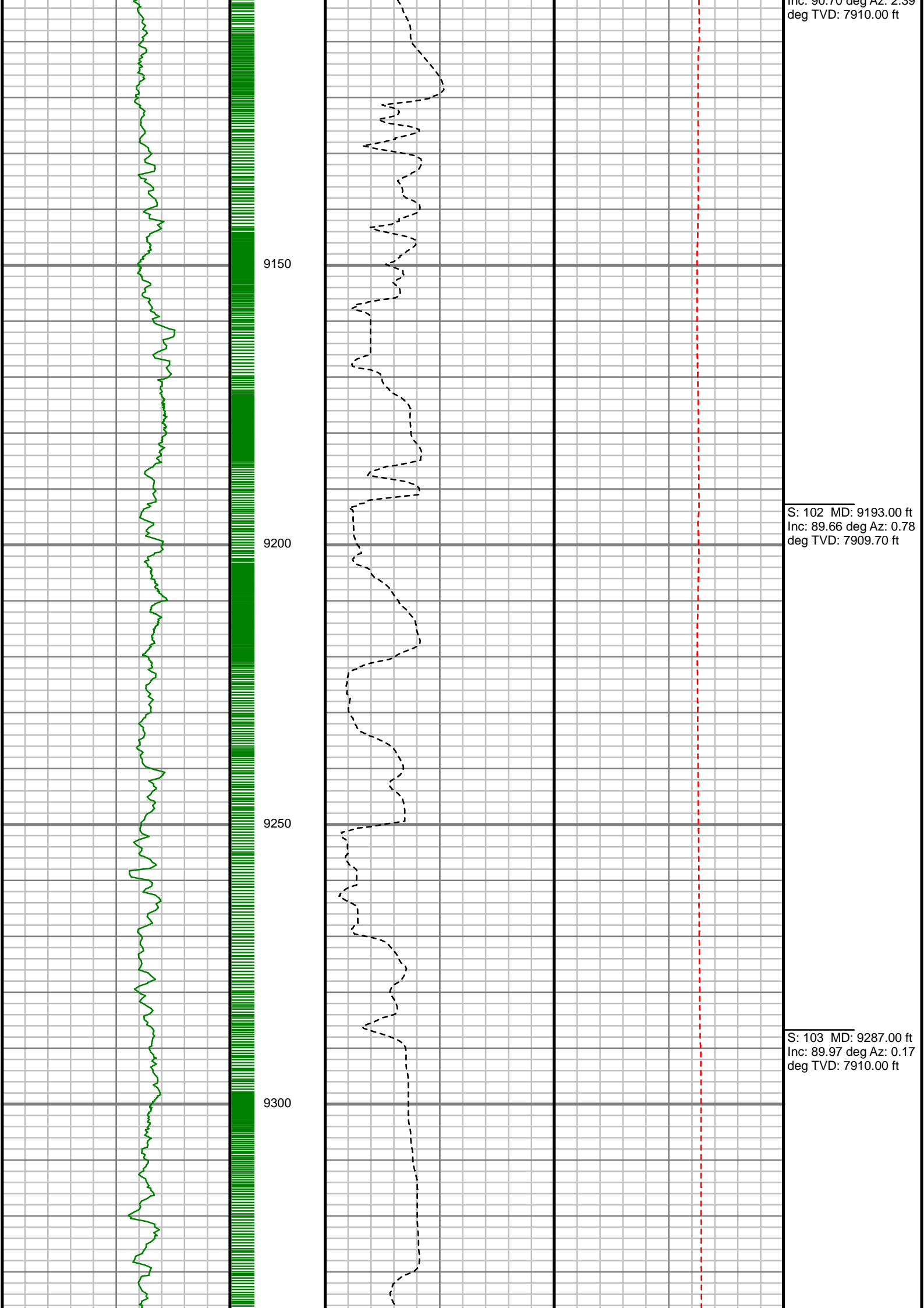
S: 90 MD: 8128.00 ft
Inc: 74.75 deg Az:
359.04 deg TVD:
7877.93 ft







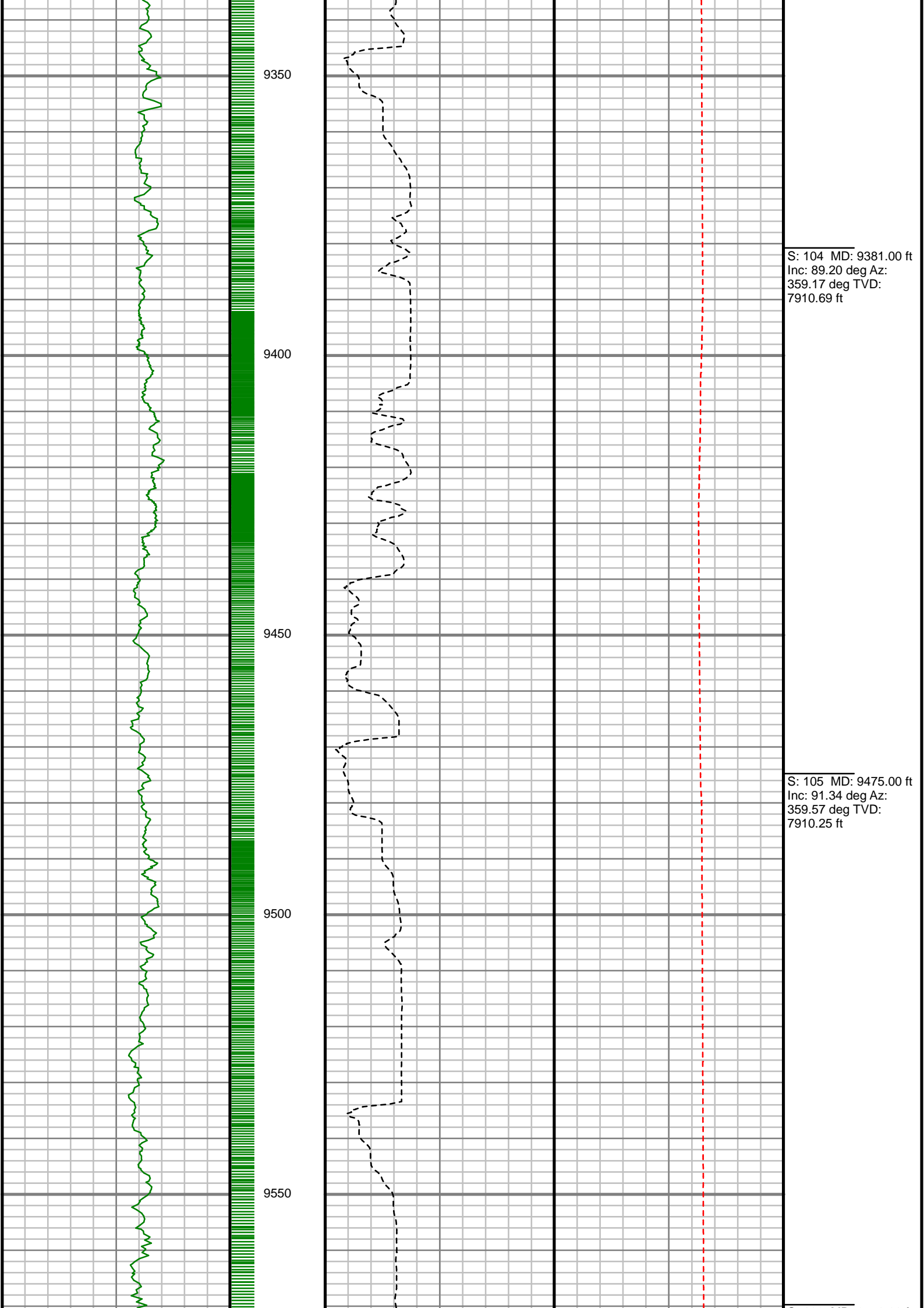


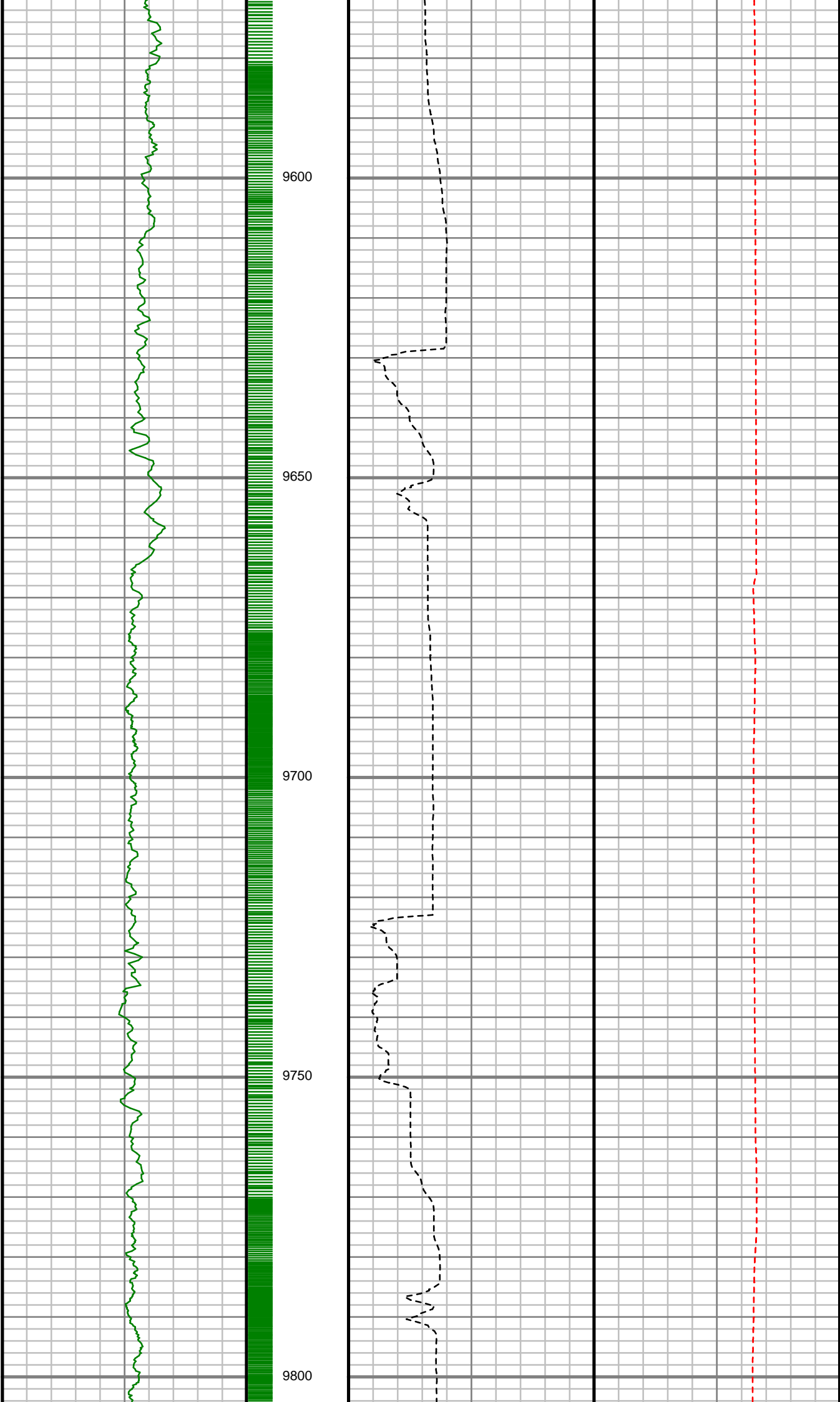


Inc: 90.70 deg Az: 2.39
deg TVD: 7910.00 ft

S: 102 MD: 9193.00 ft
Inc: 89.66 deg Az: 0.78
deg TVD: 7909.70 ft

S: 103 MD: 9287.00 ft
Inc: 89.97 deg Az: 0.17
deg TVD: 7910.00 ft

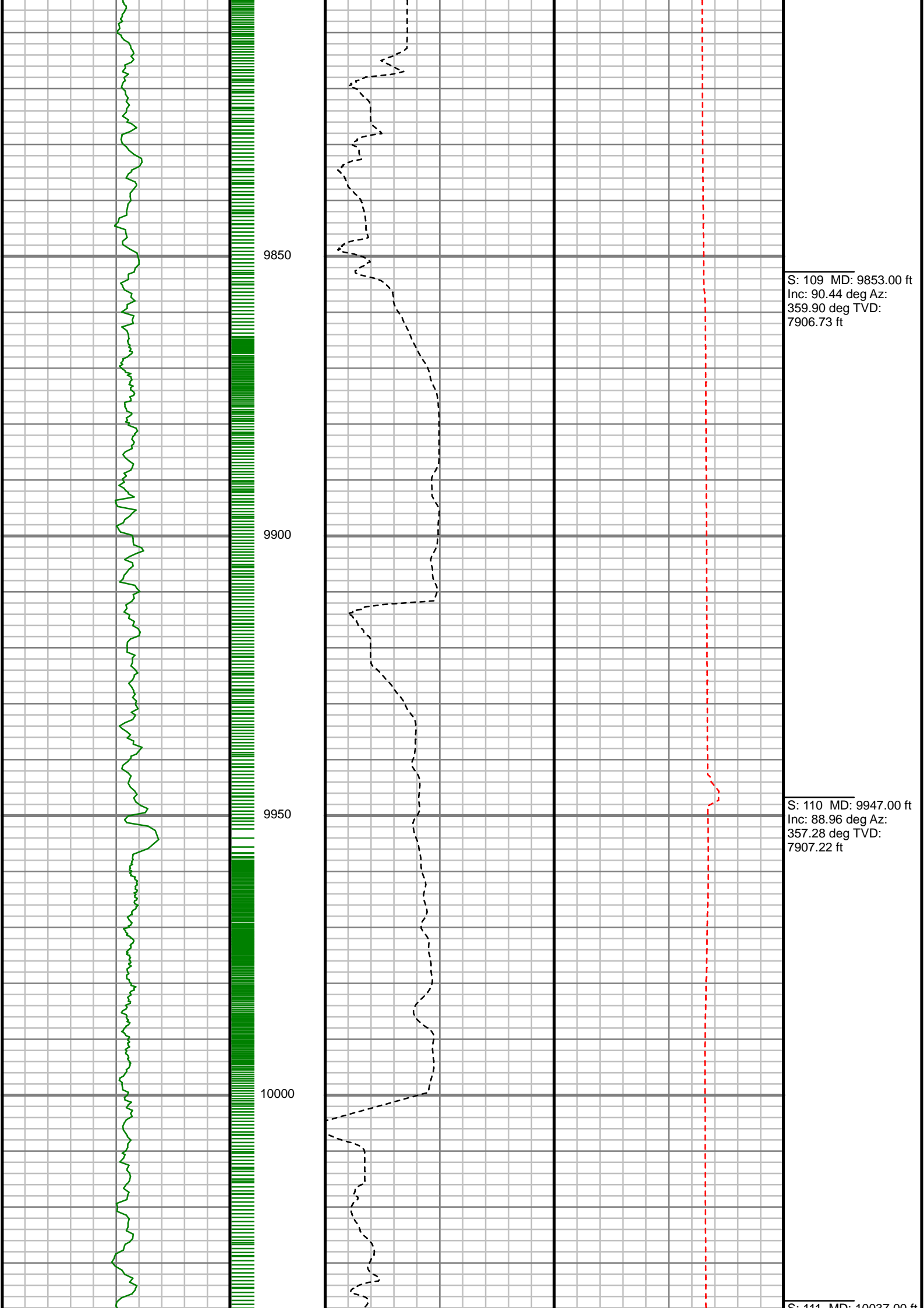


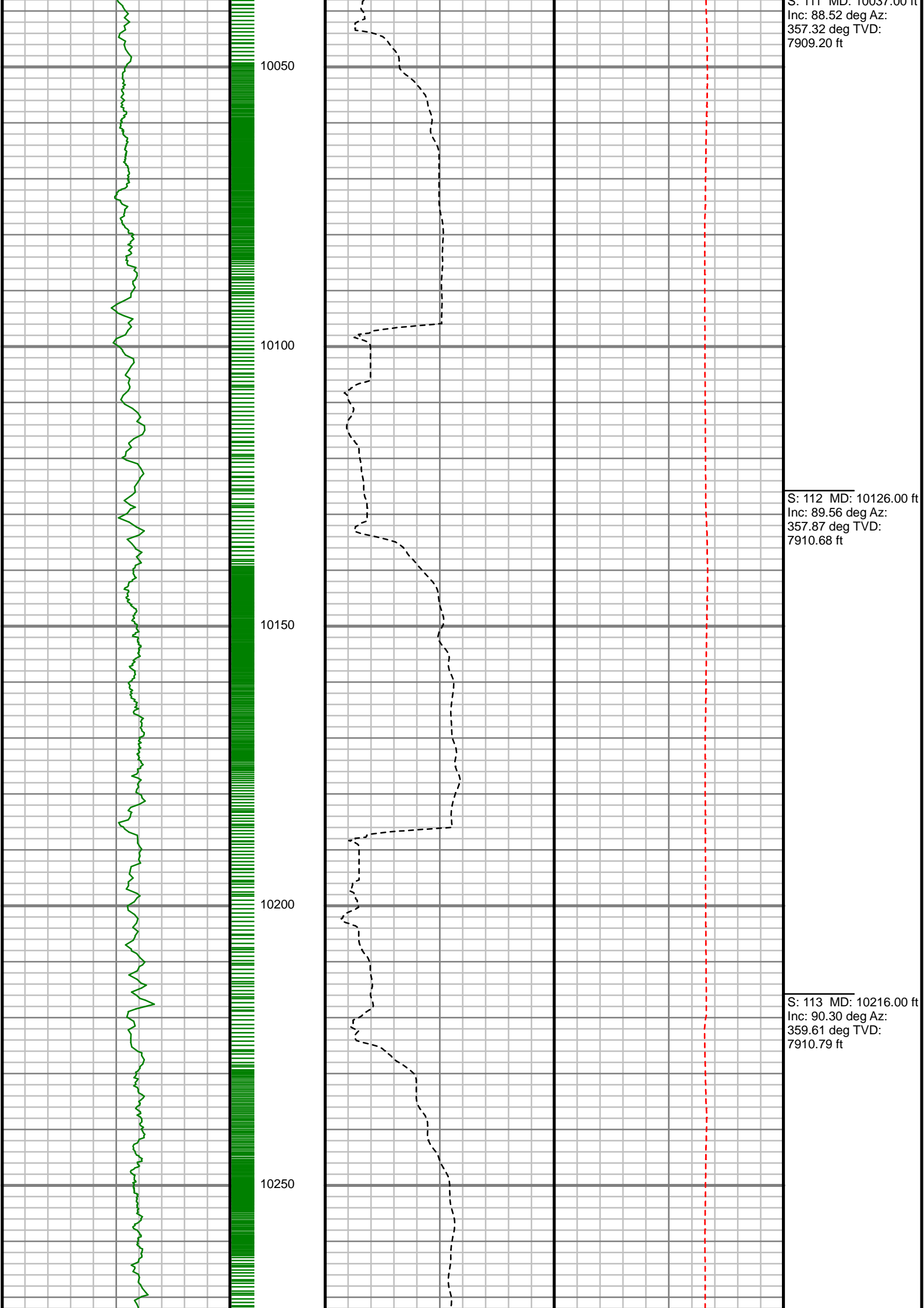


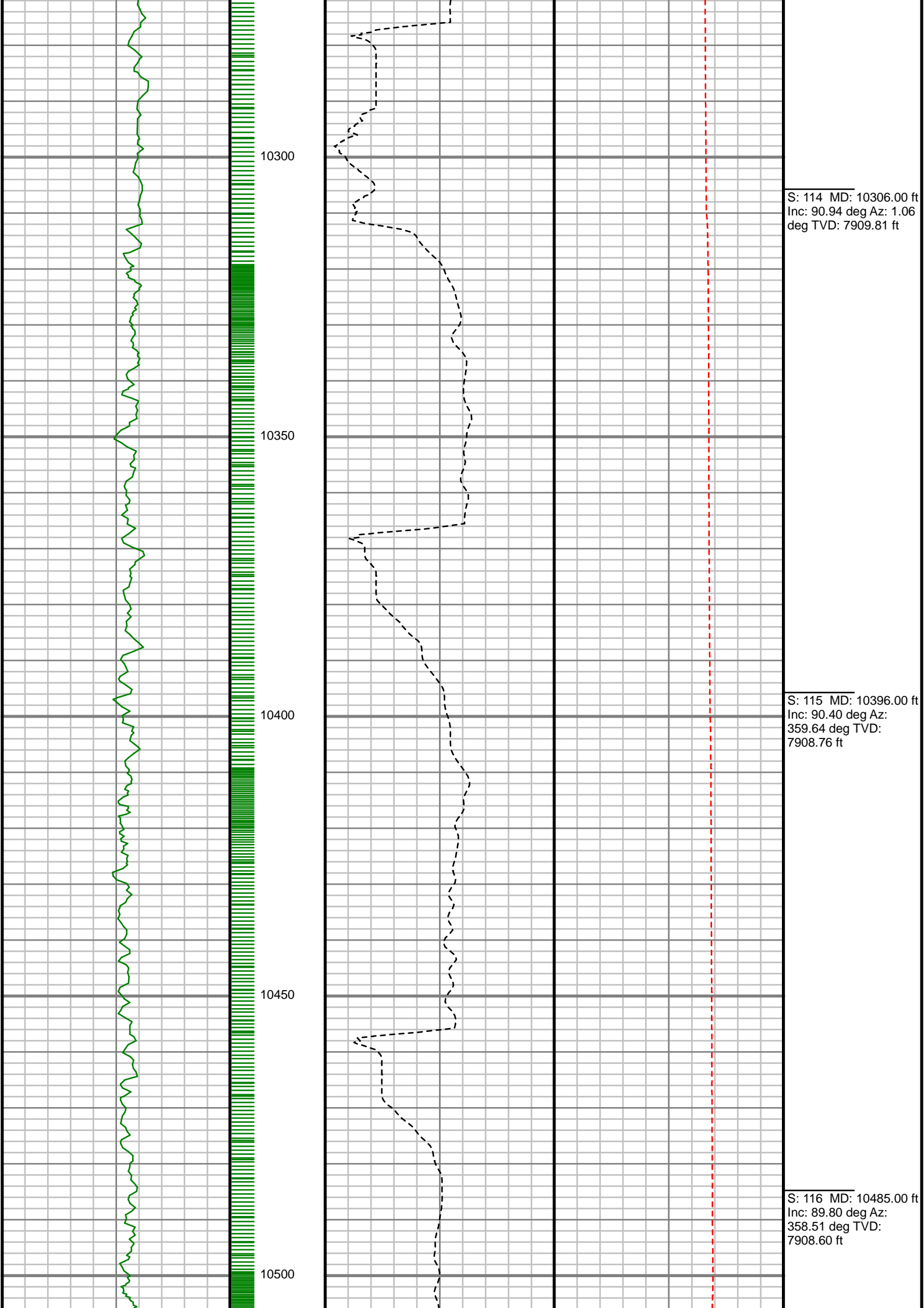
S: 106 MD: 9570.00 ft
Inc: 90.94 deg Az:
359.66 deg TVD:
7908.36 ft

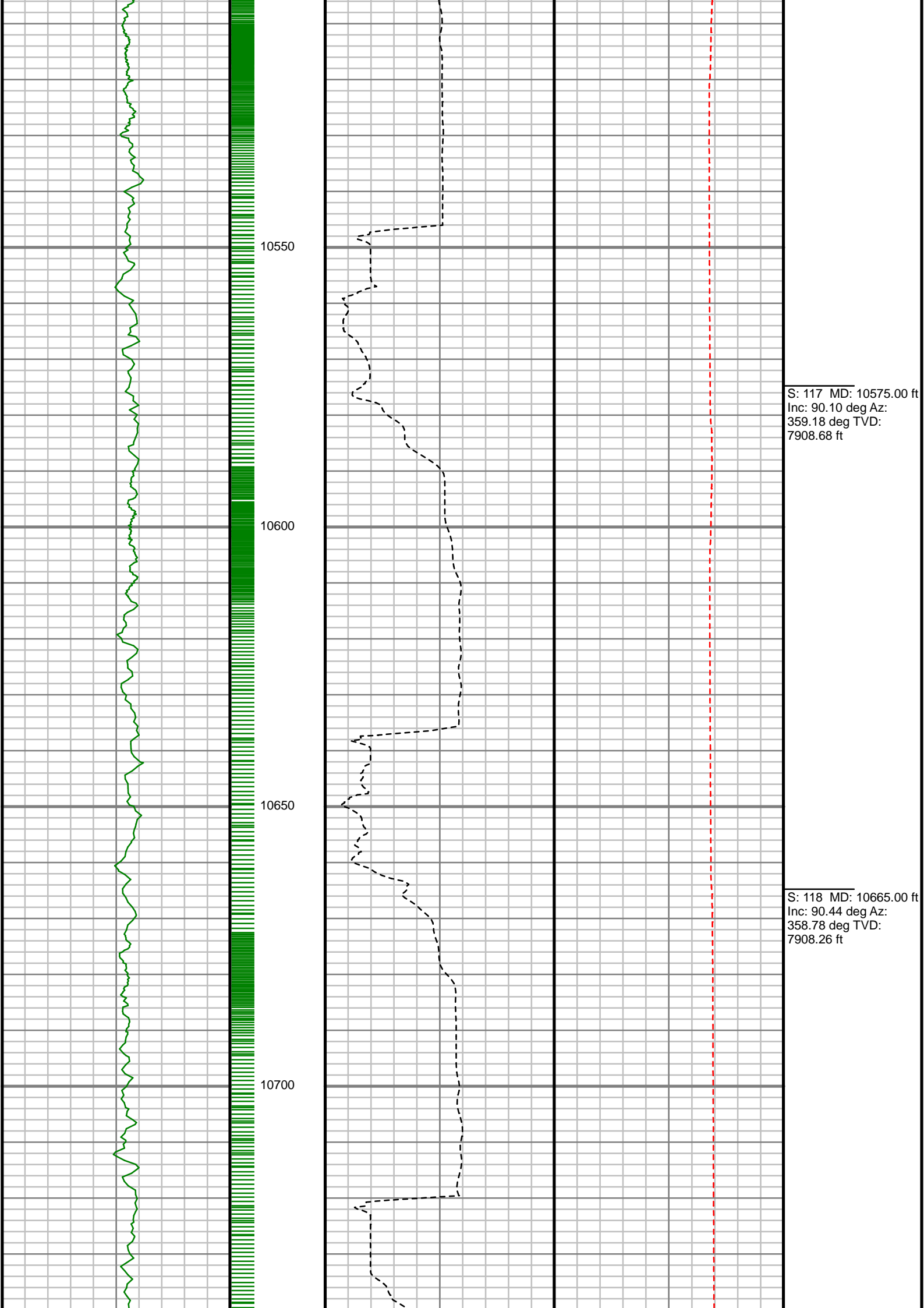
S: 107 MD: 9664.00 ft
Inc: 90.27 deg Az:
358.43 deg TVD:
7907.36 ft

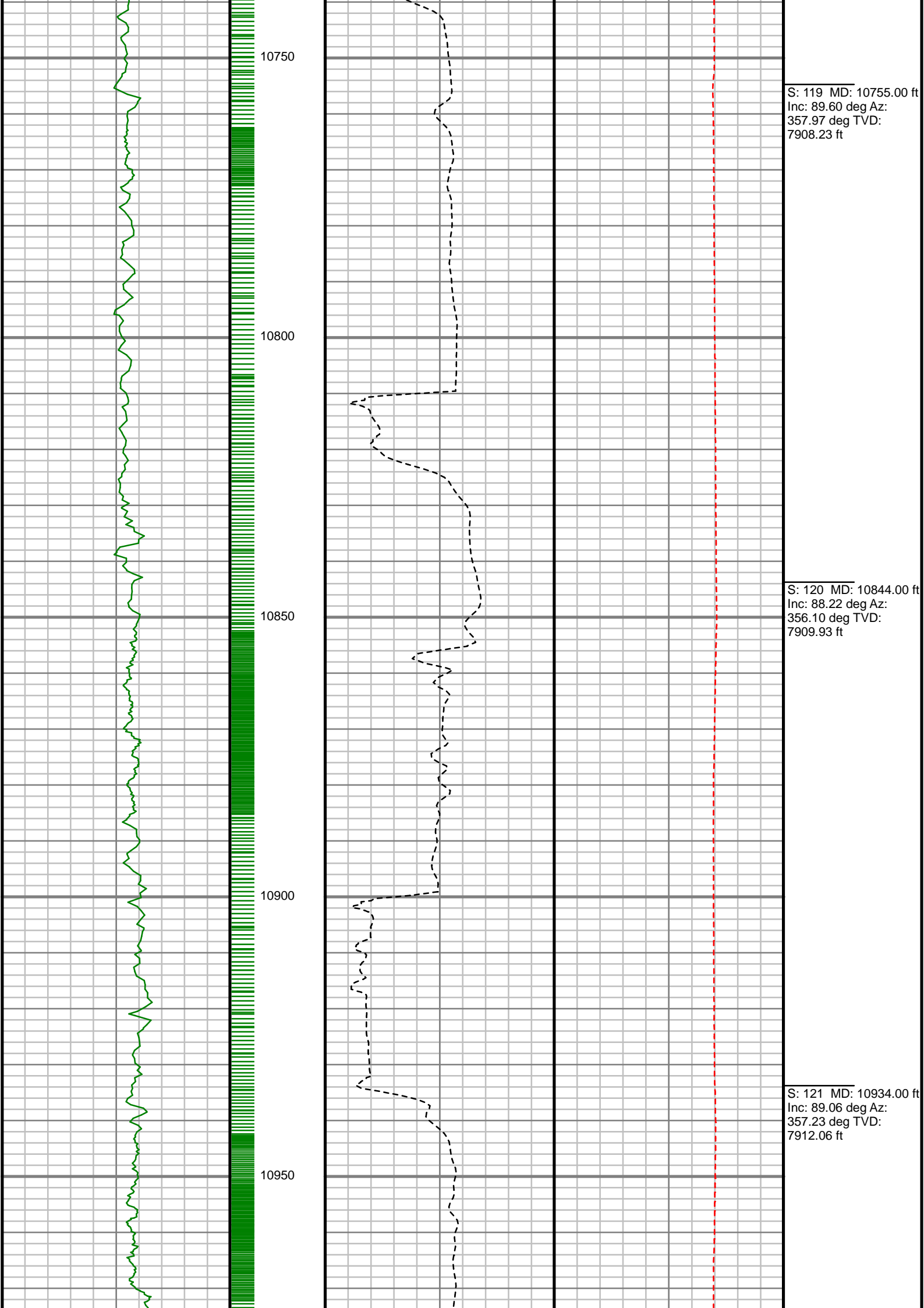
S: 108 MD: 9758.00 ft
Inc: 90.03 deg Az:
359.23 deg TVD:
7907.12 ft

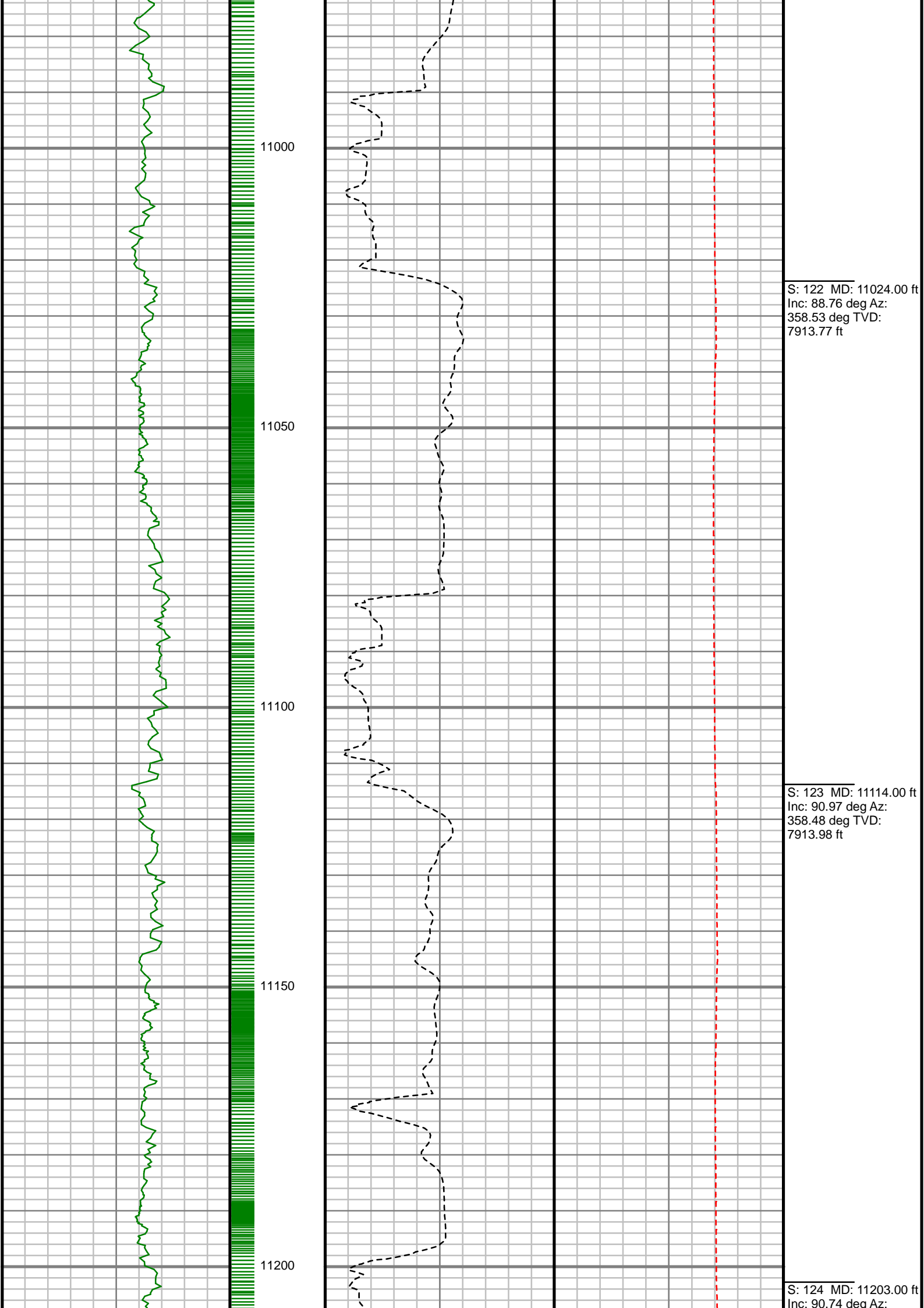


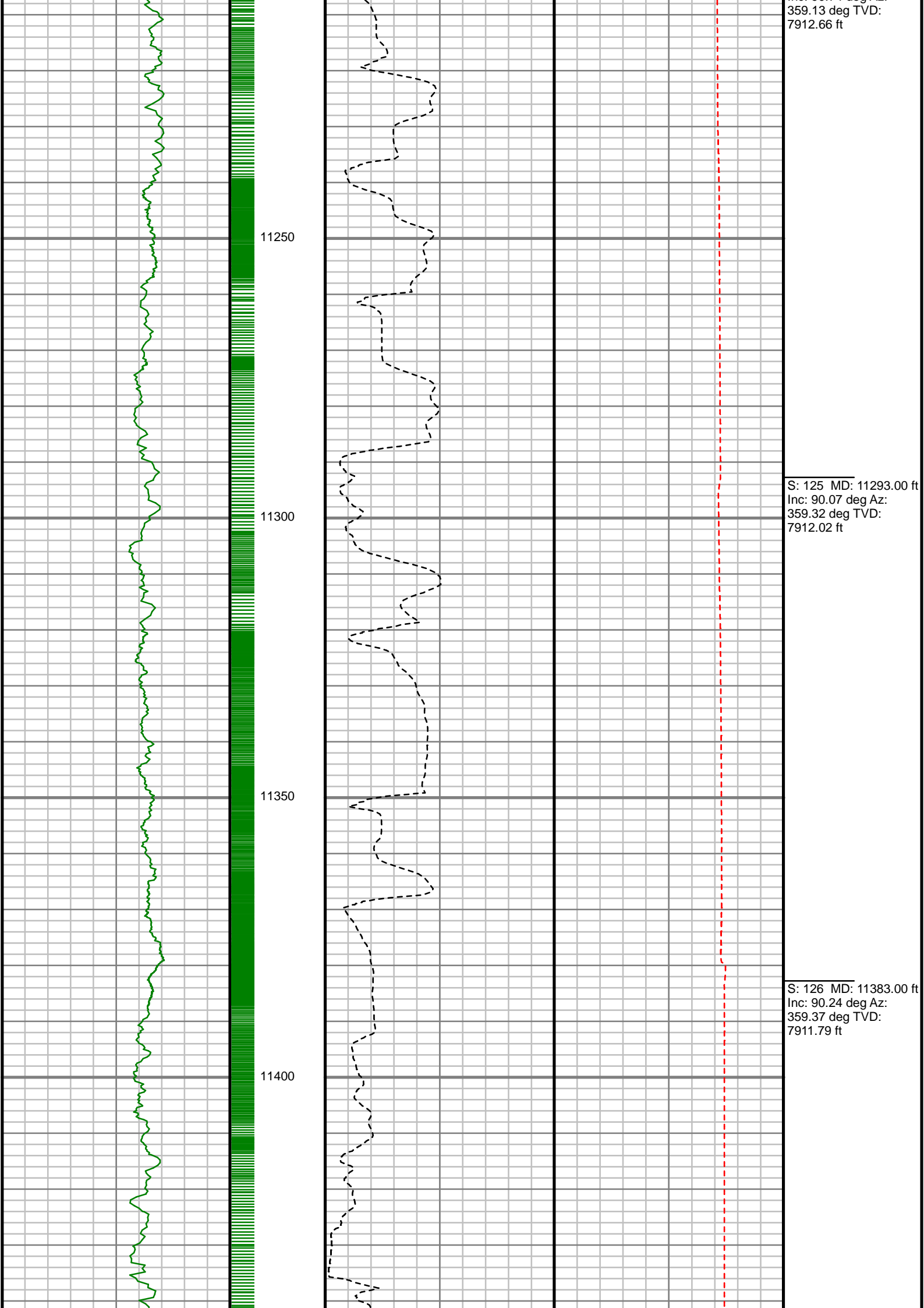


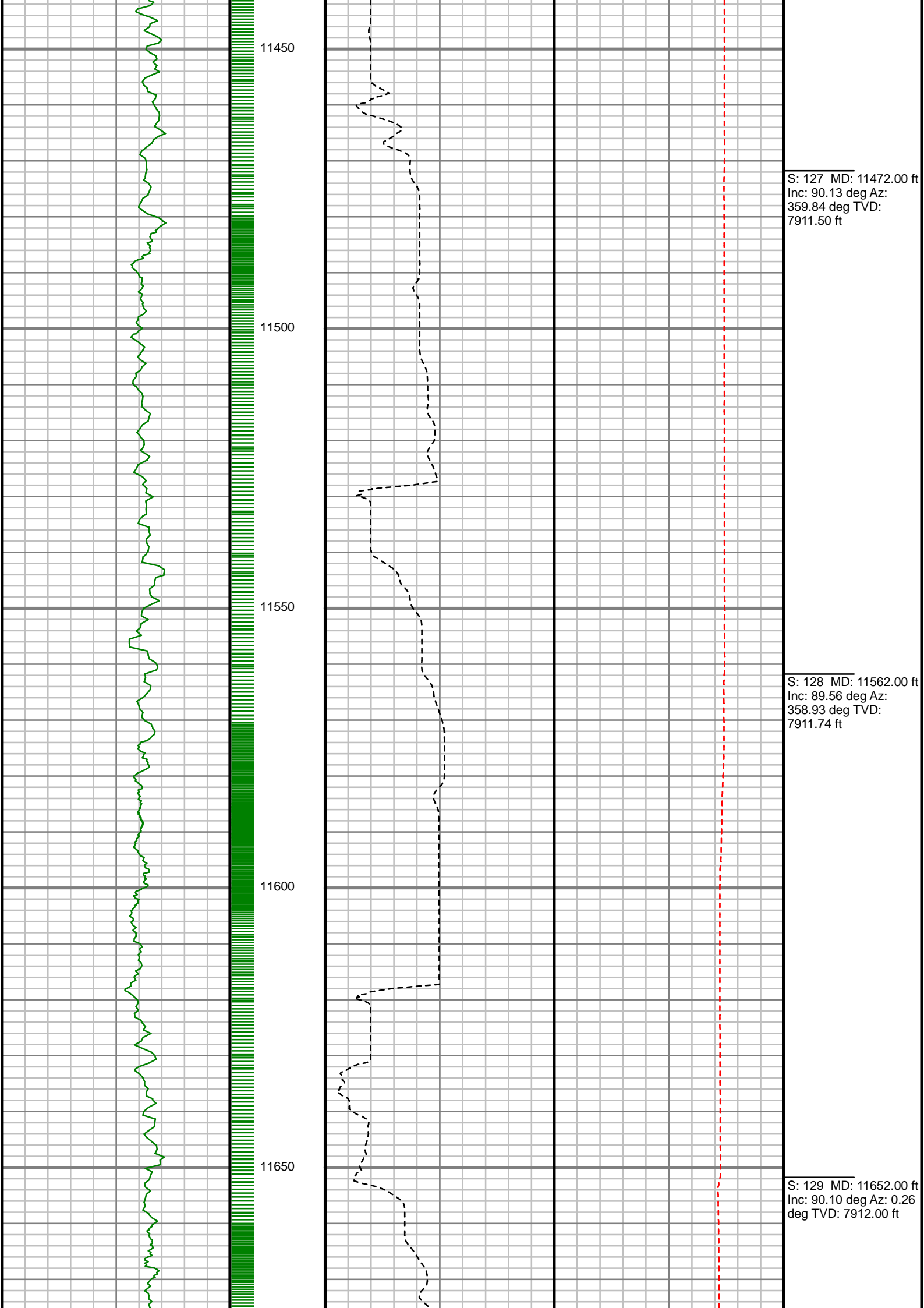


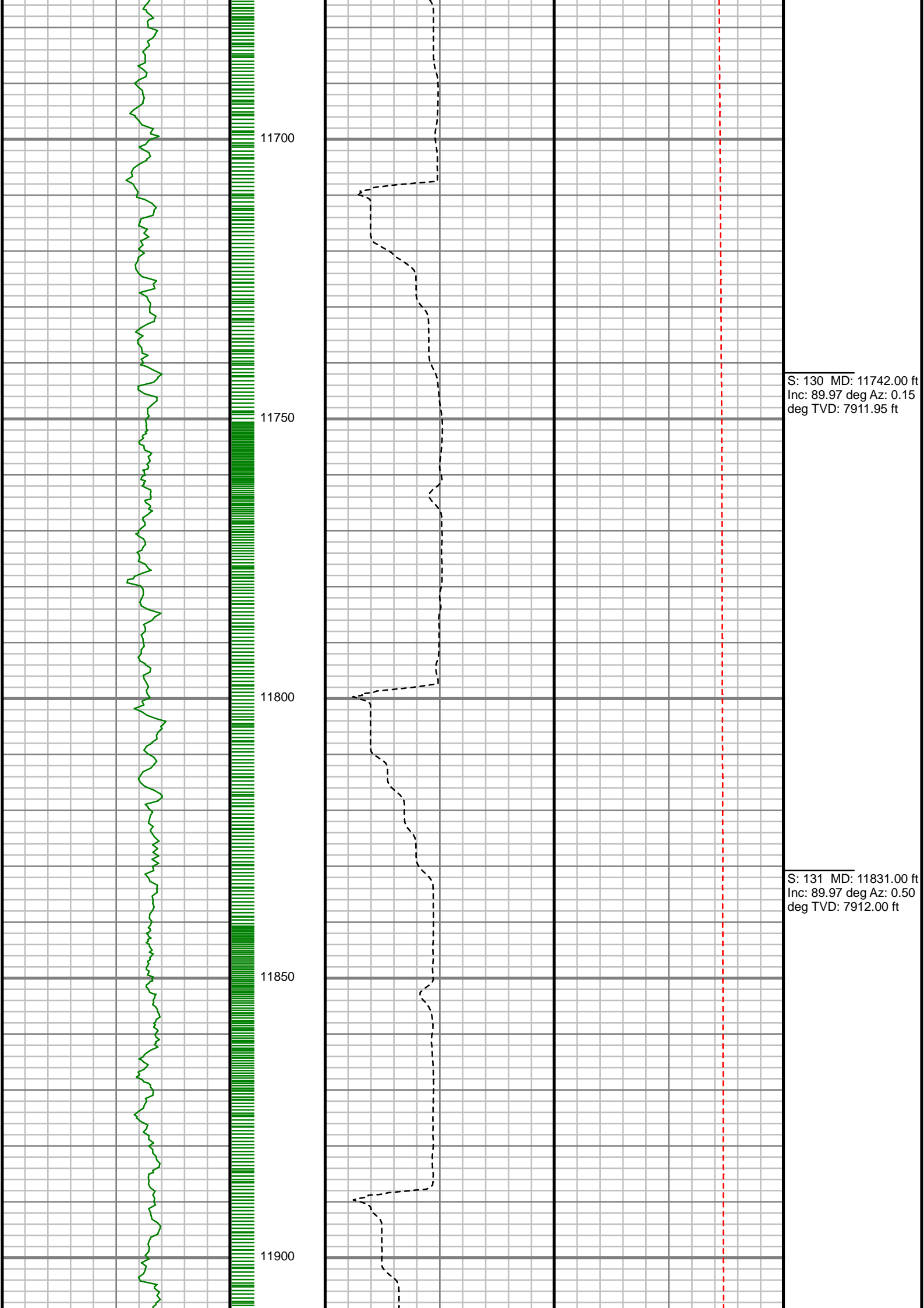


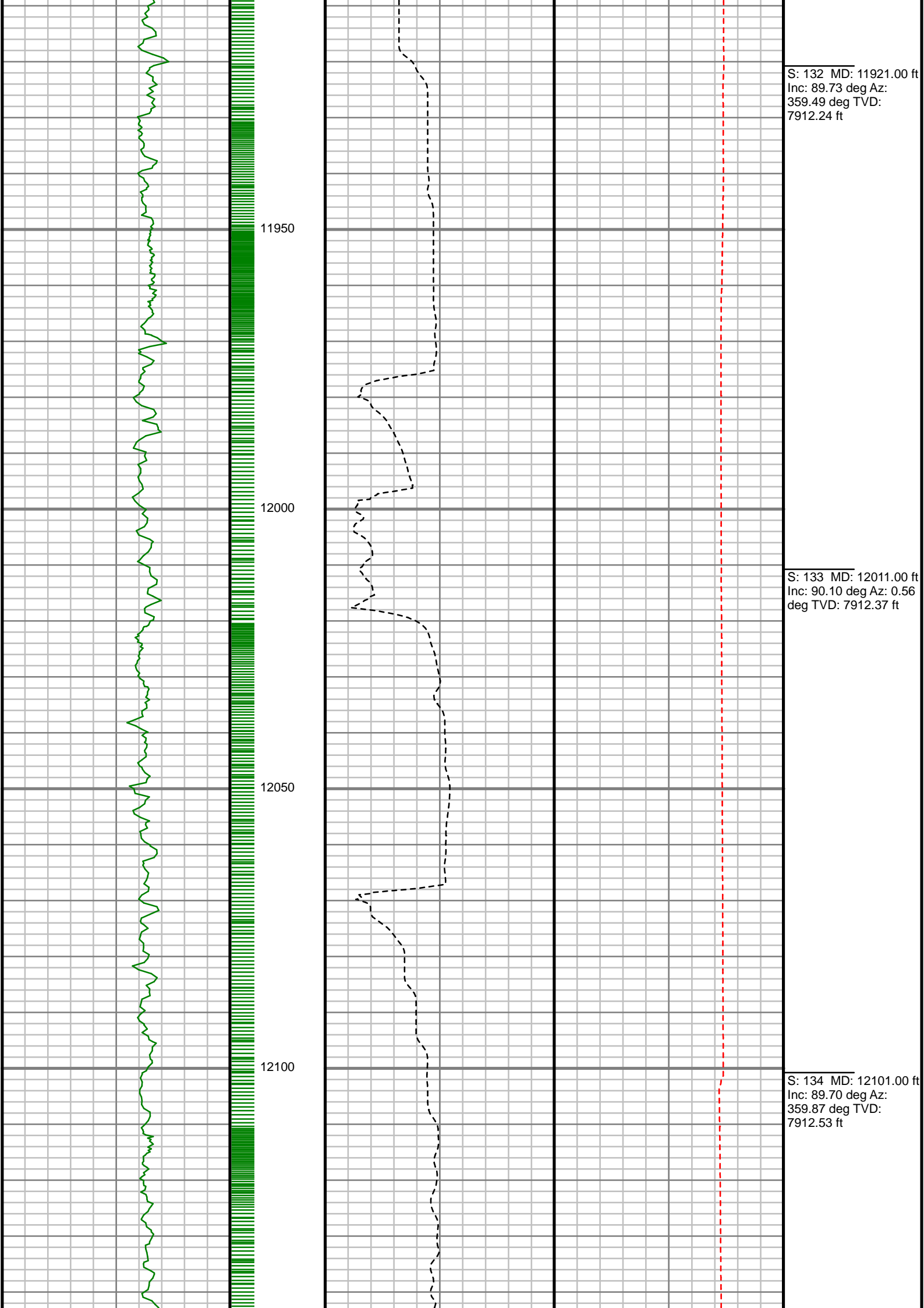








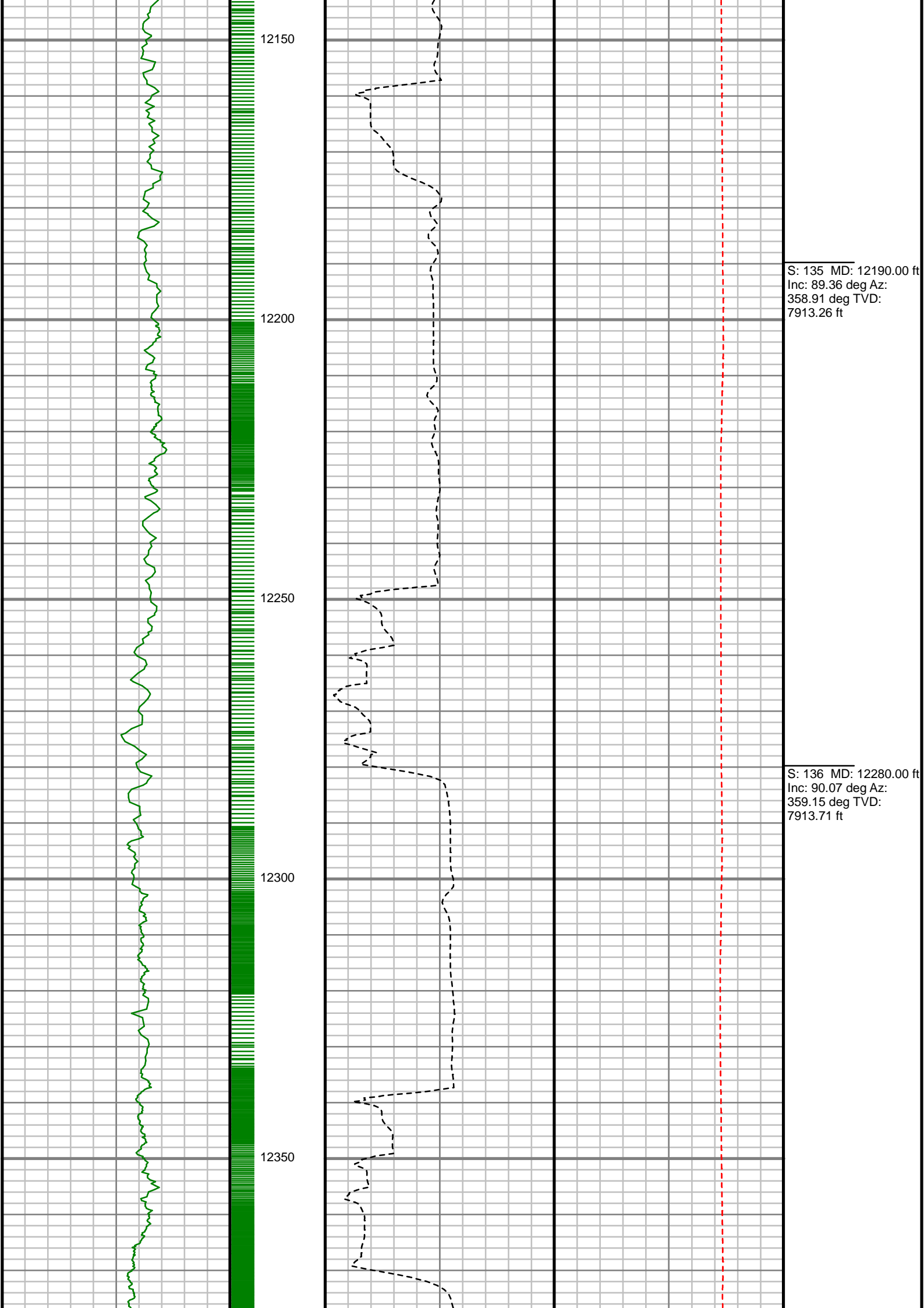


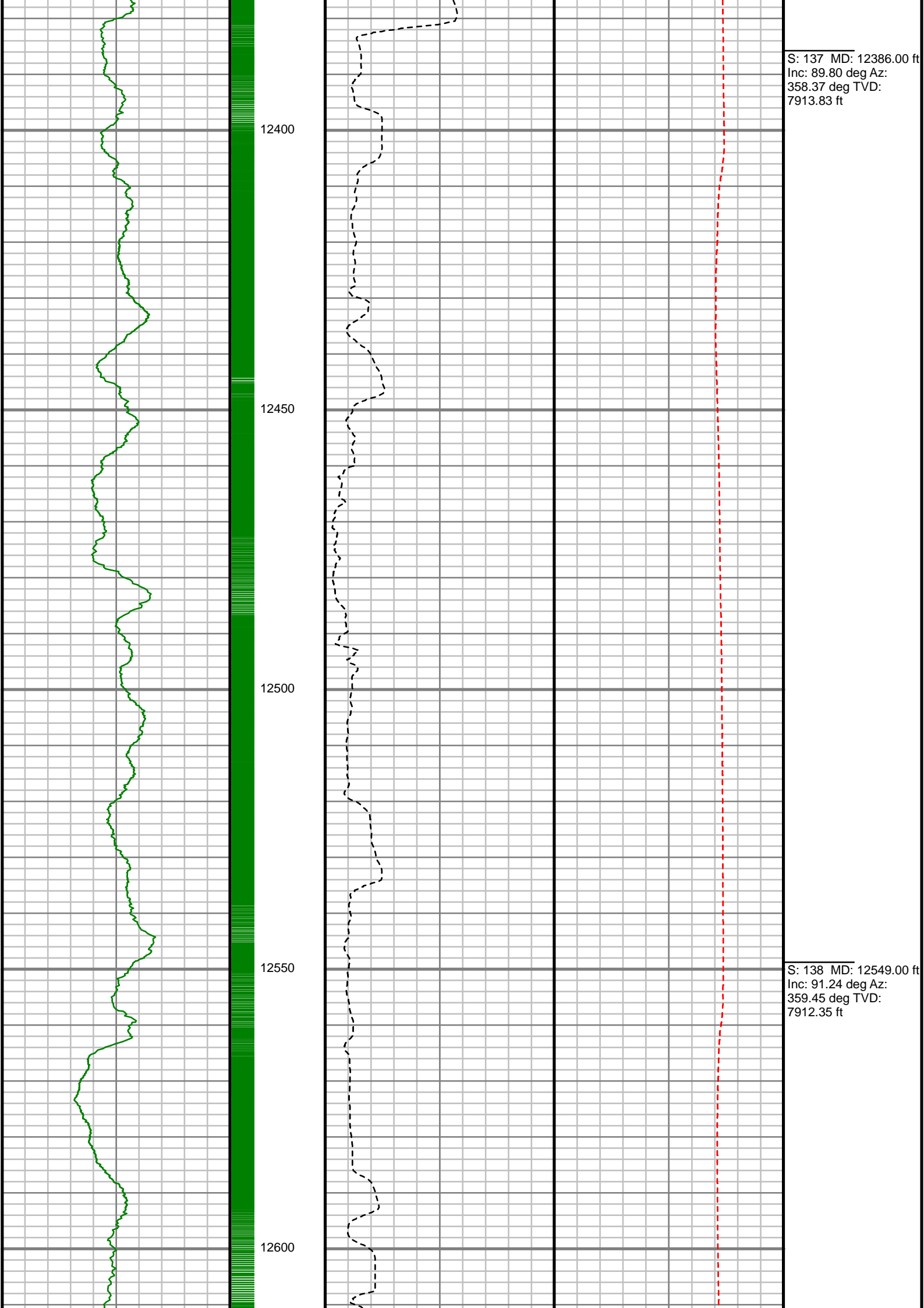


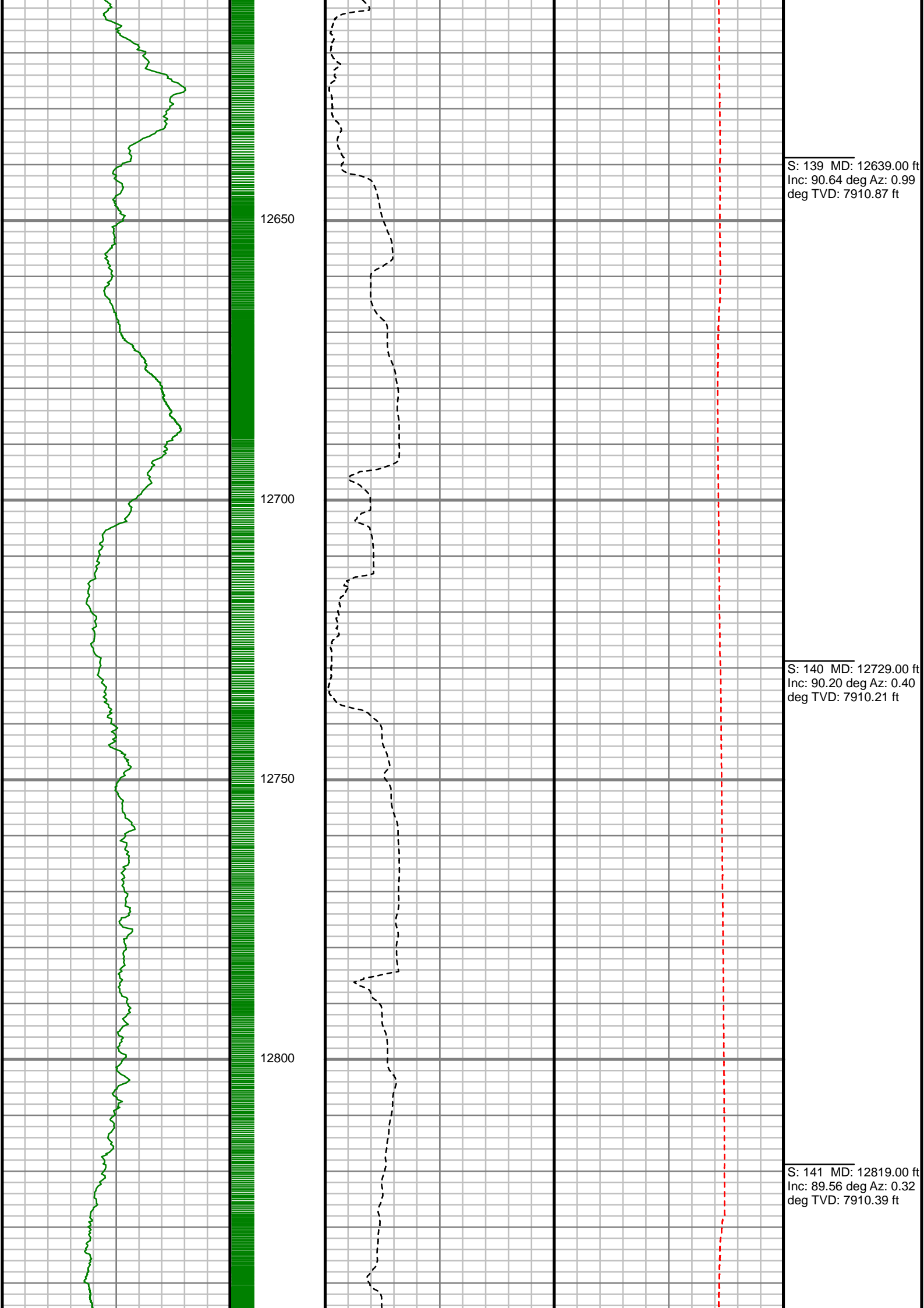
S: 132 MD: 11921.00 ft
Inc: 89.73 deg Az:
359.49 deg TVD:
7912.24 ft

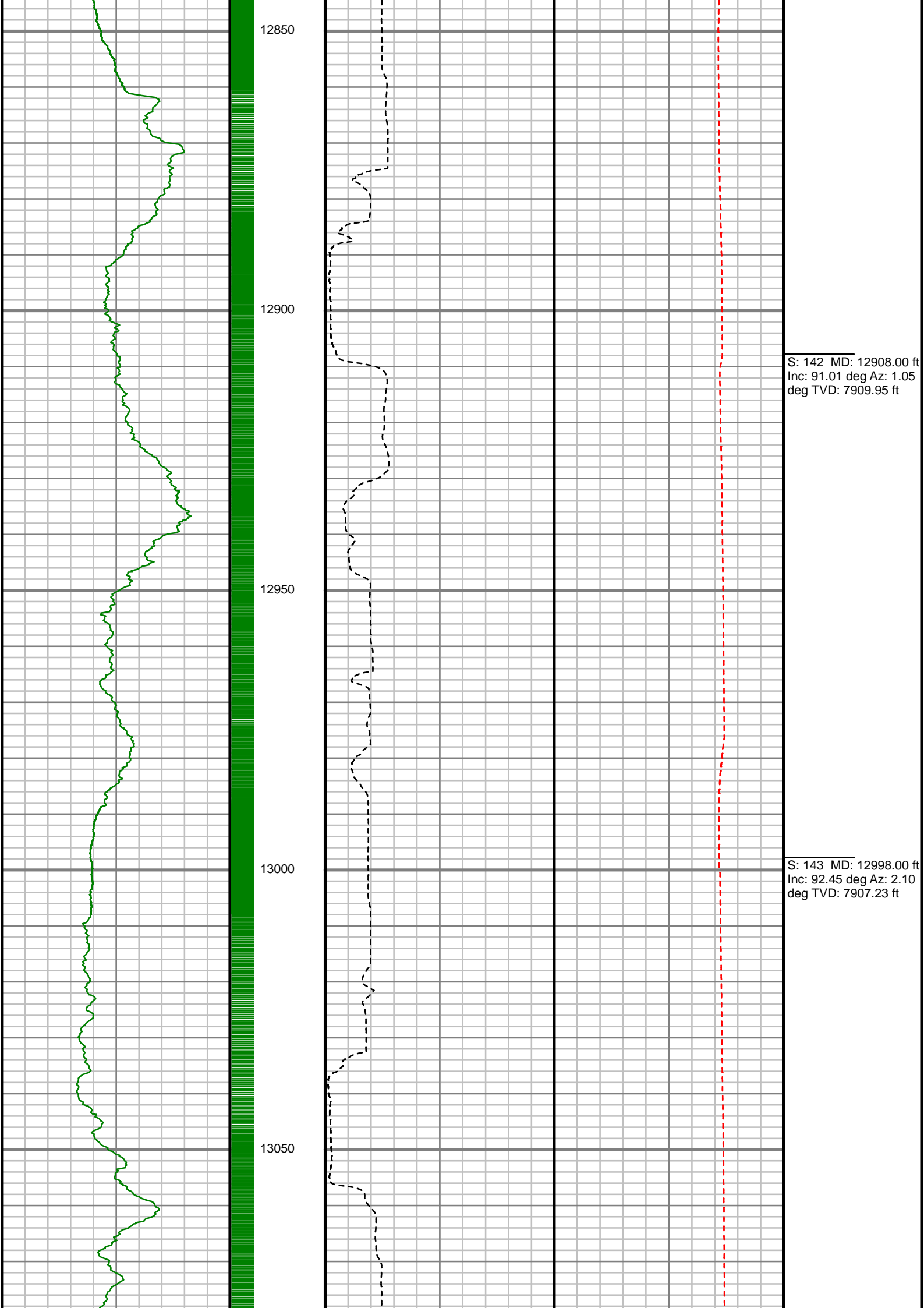
S: 133 MD: 12011.00 ft
Inc: 90.10 deg Az: 0.56
deg TVD: 7912.37 ft

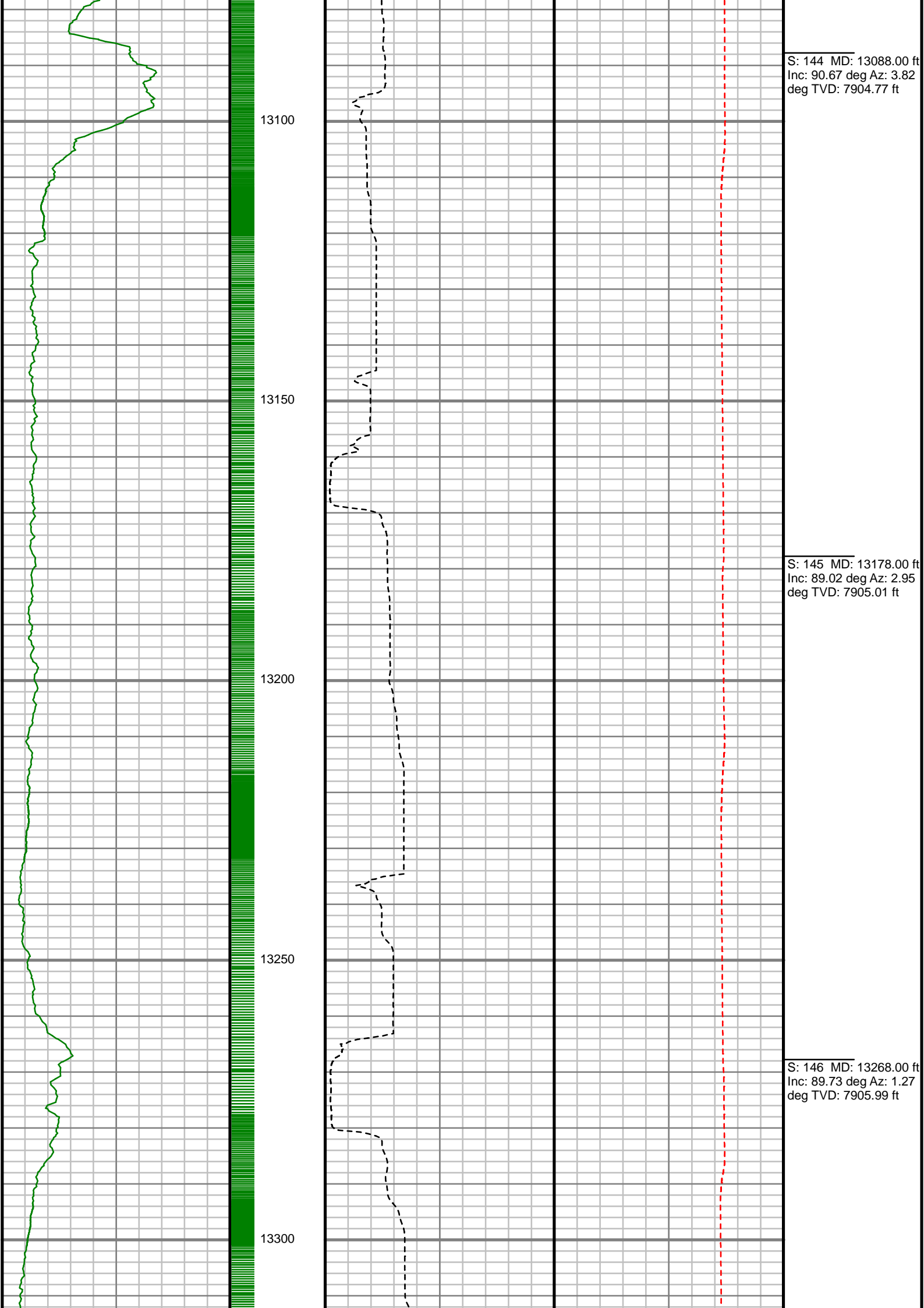
S: 134 MD: 12101.00 ft
Inc: 89.70 deg Az:
359.87 deg TVD:
7912.53 ft

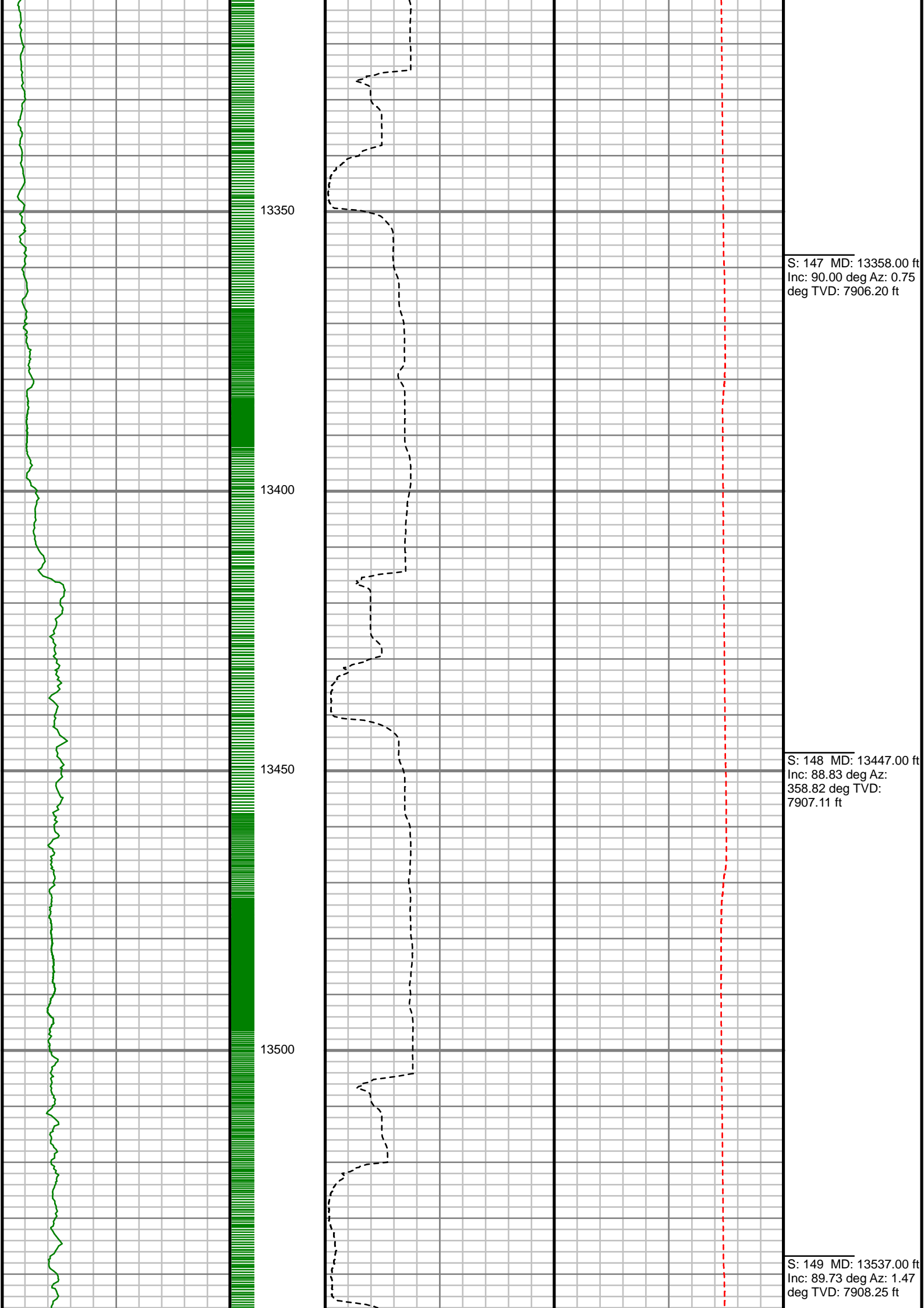


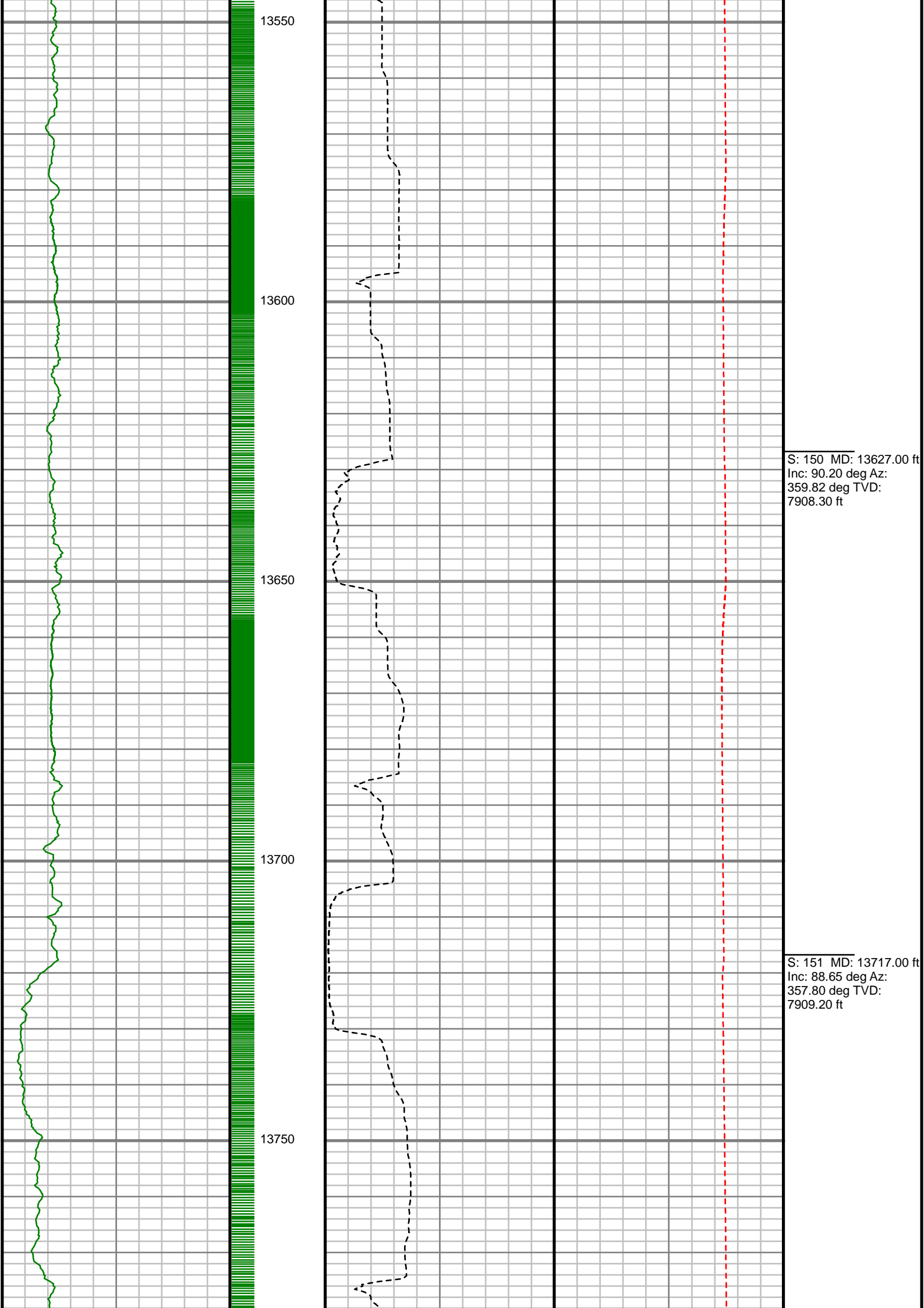


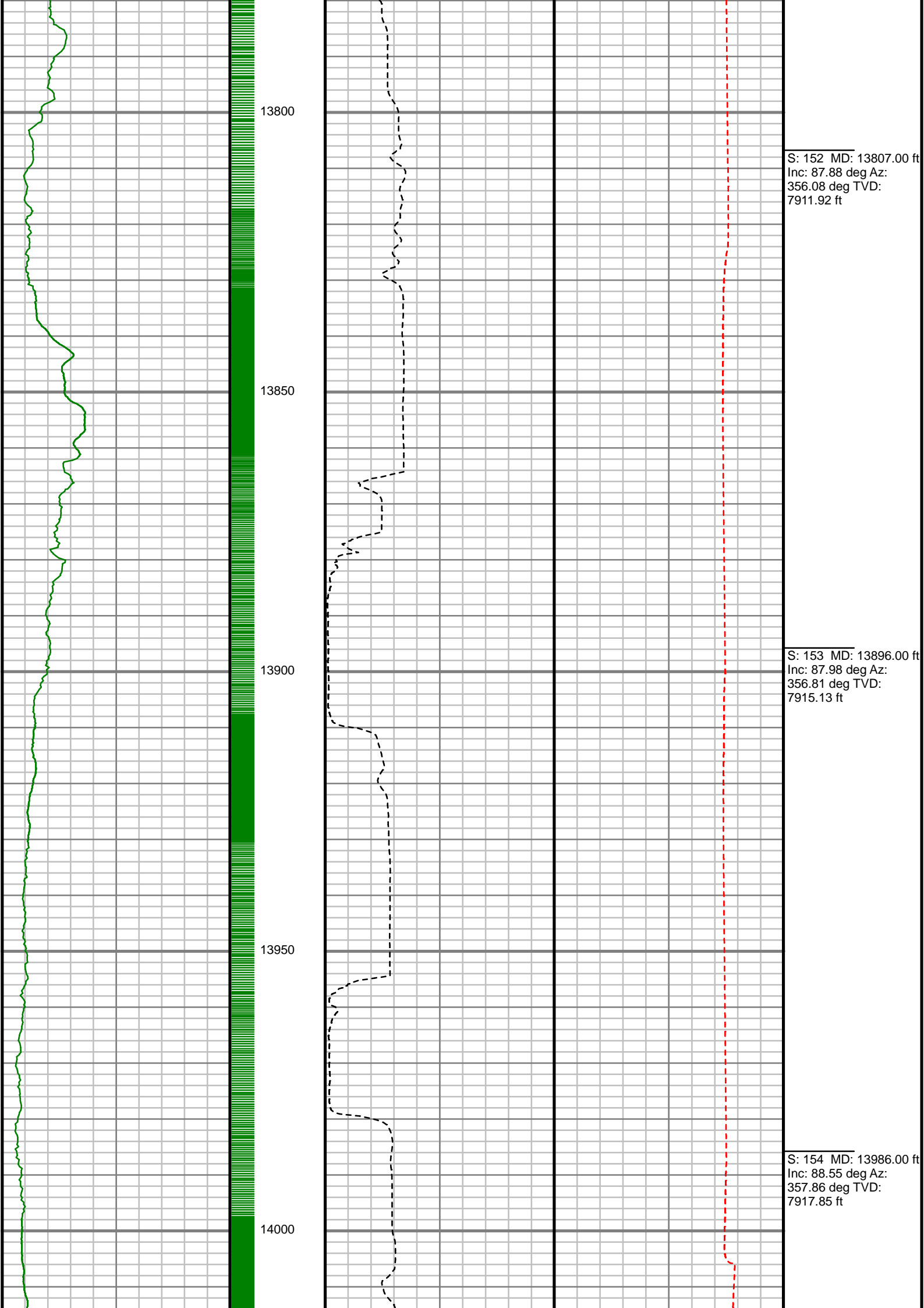


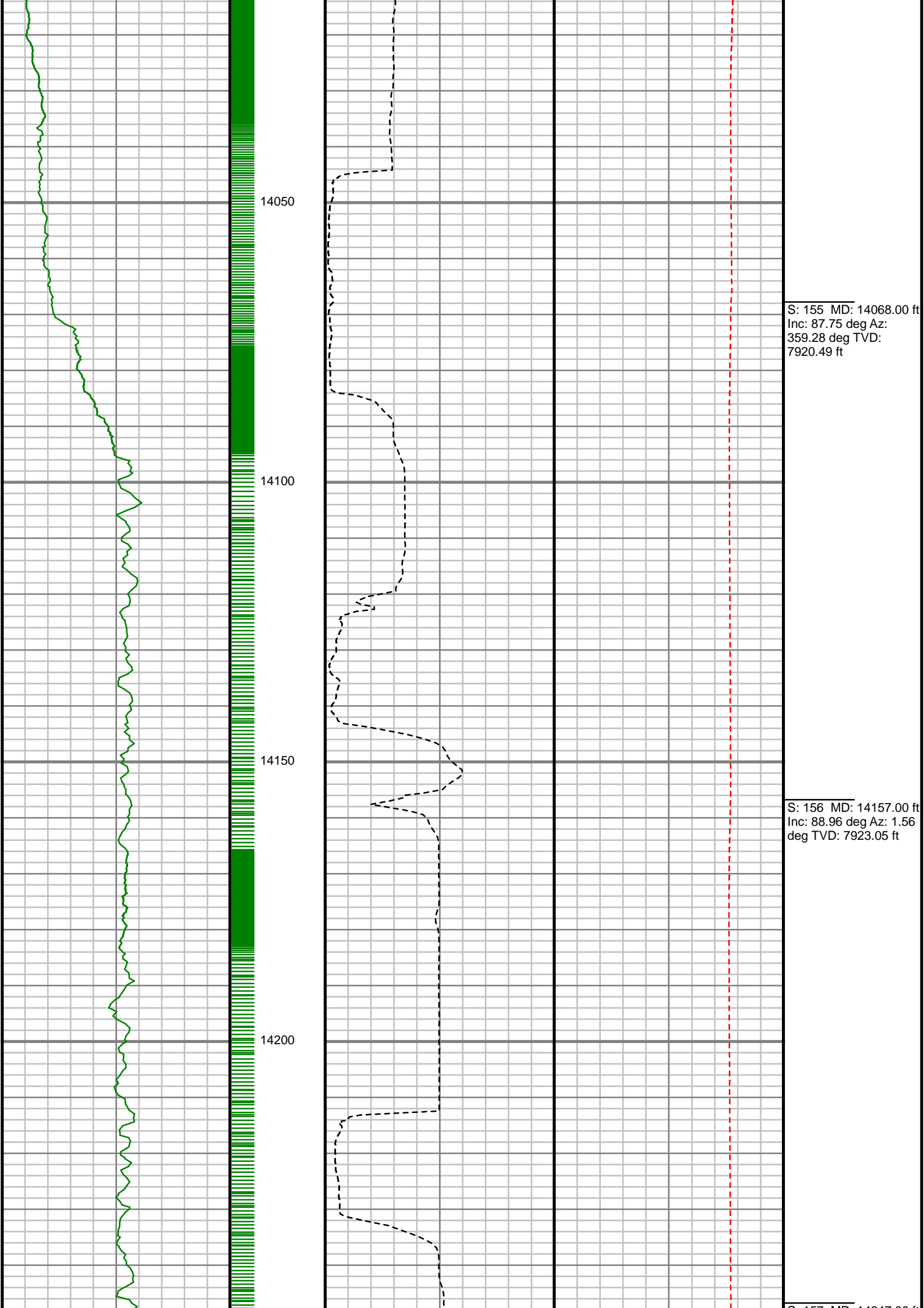


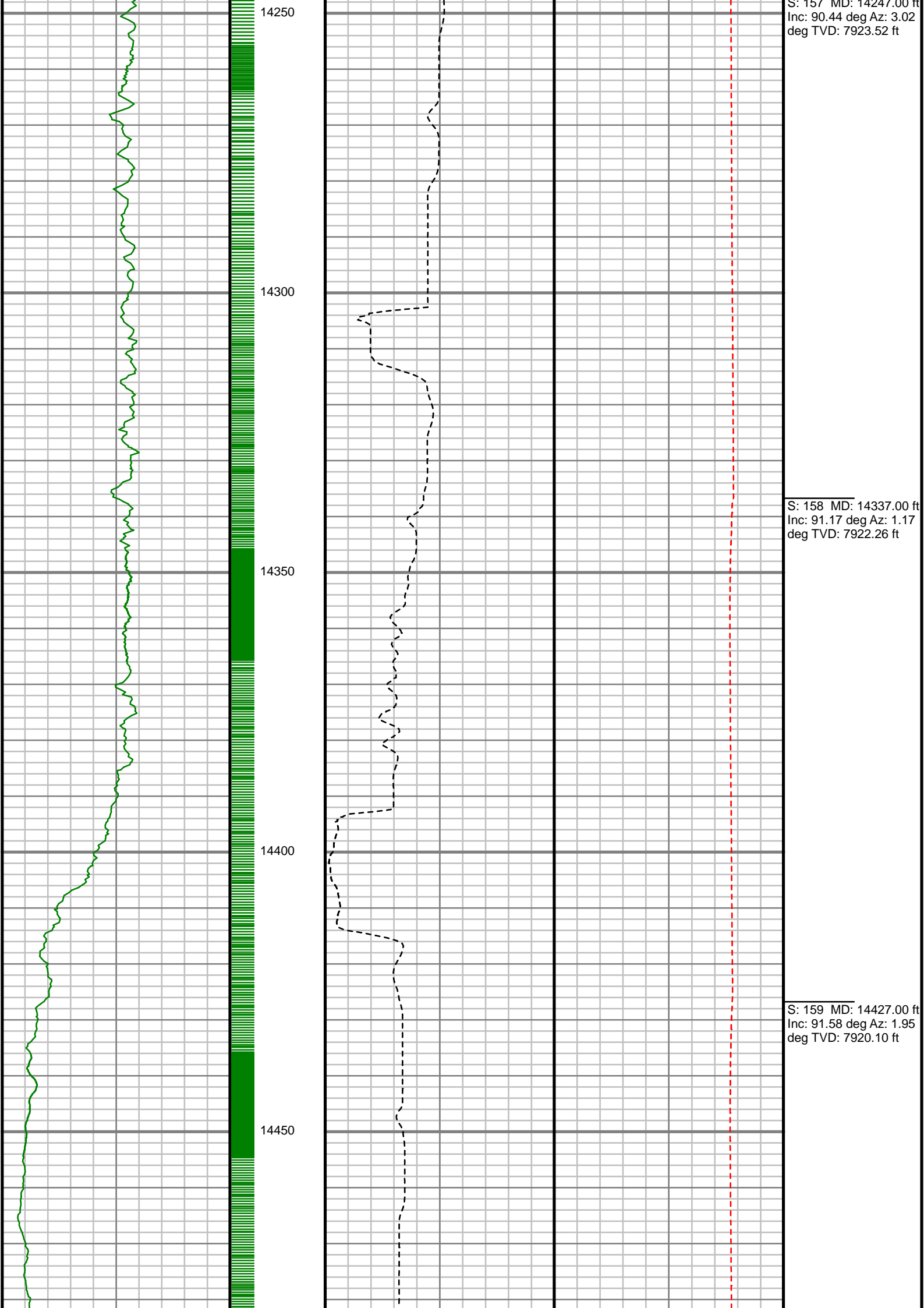


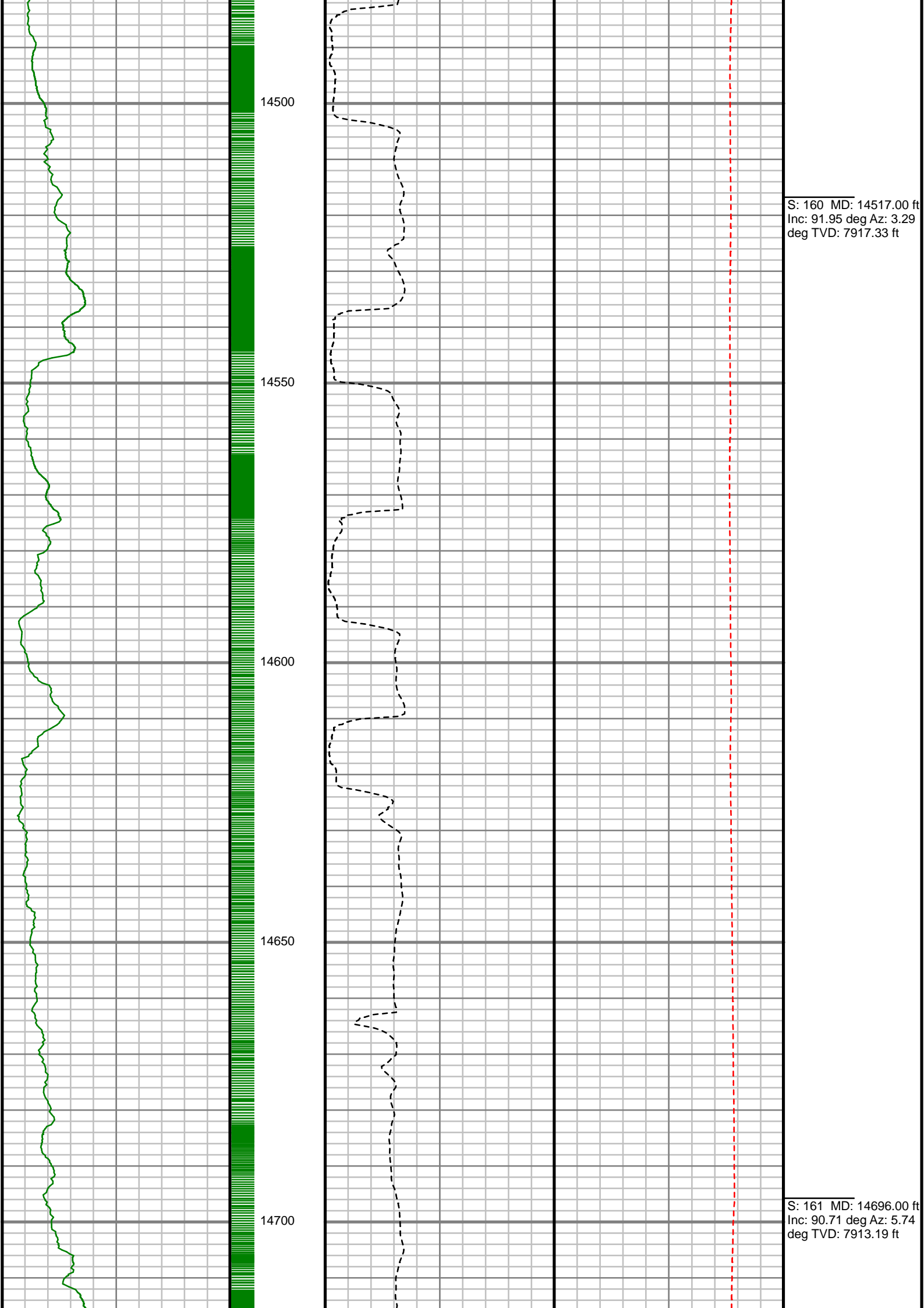


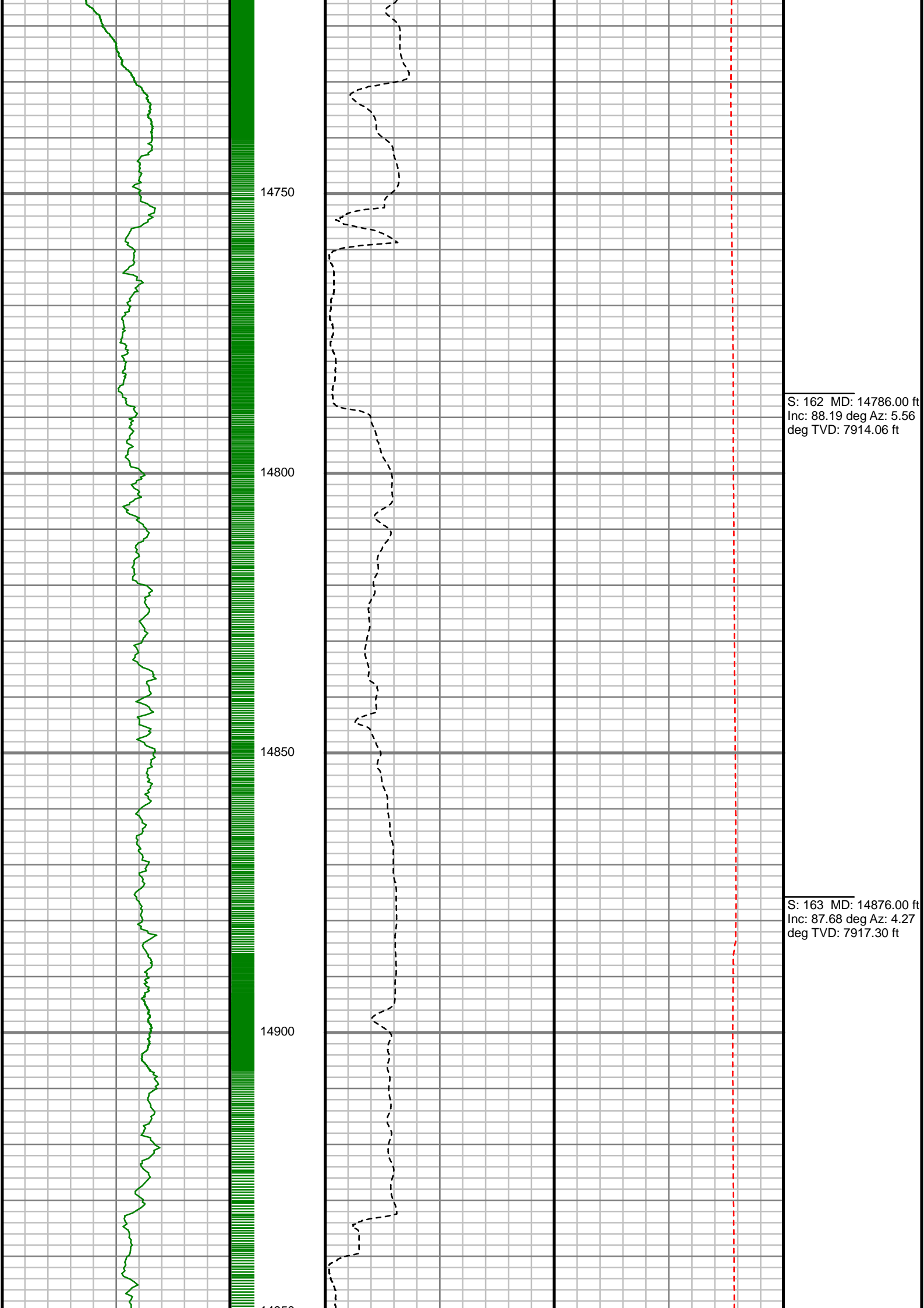


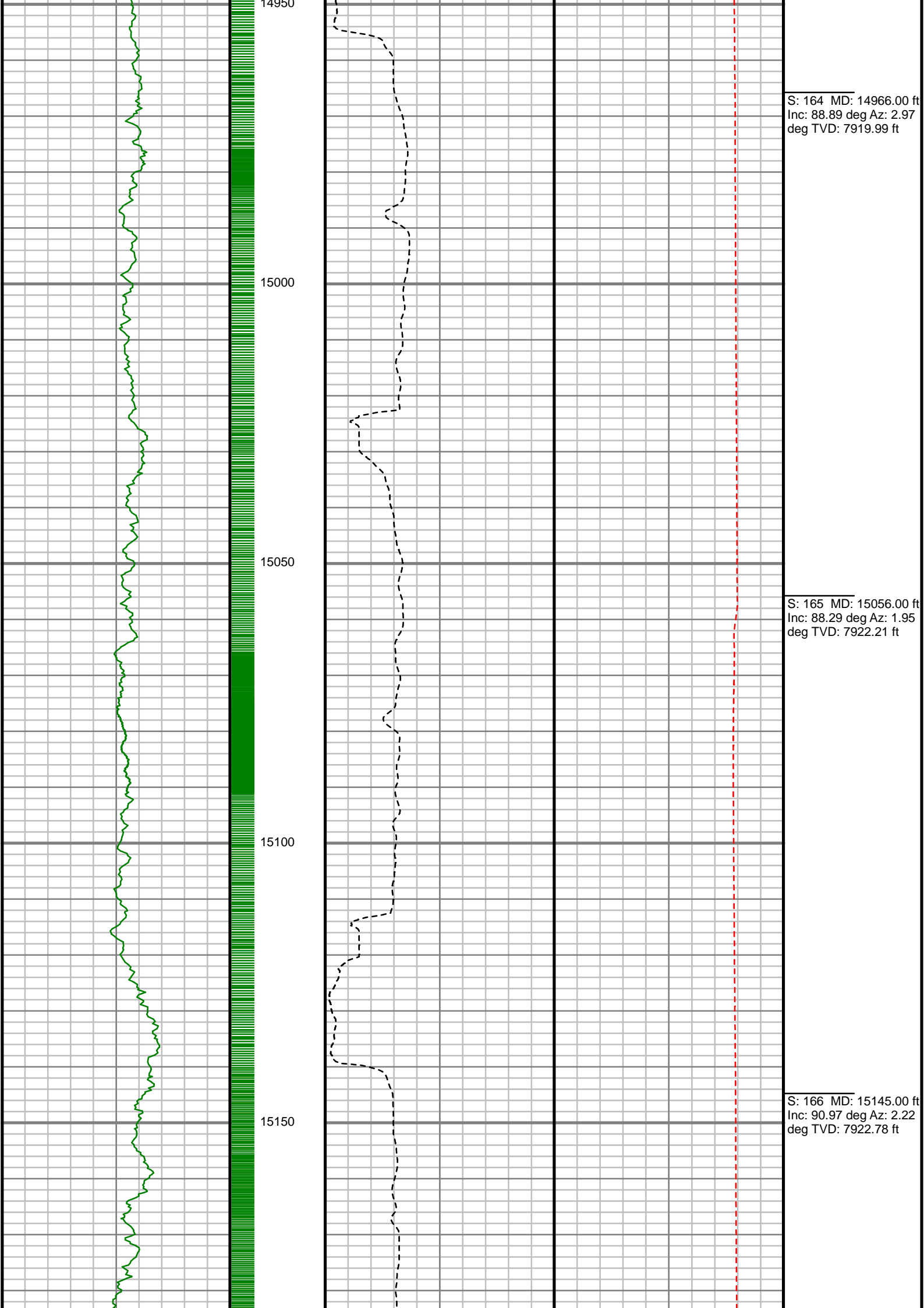


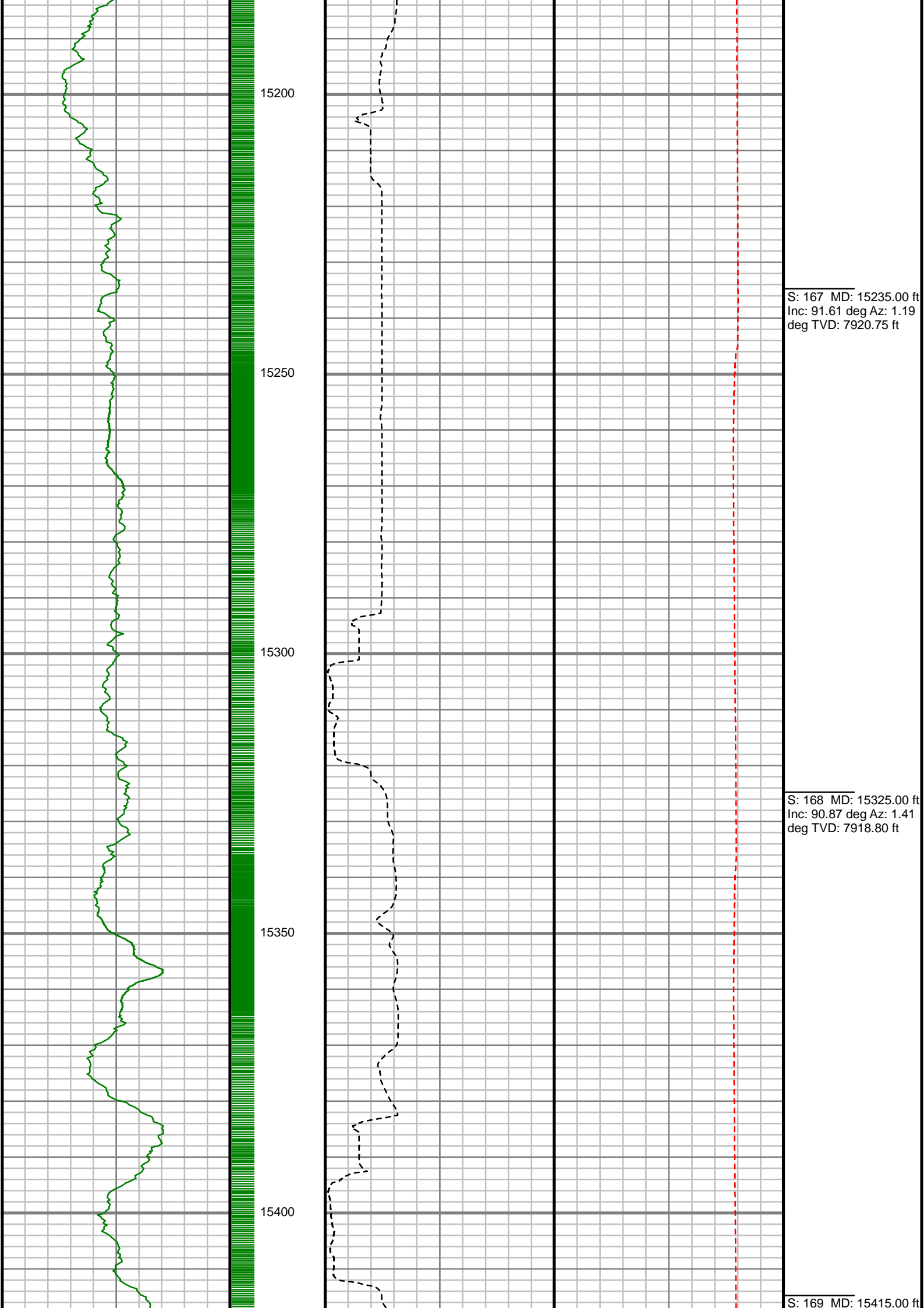


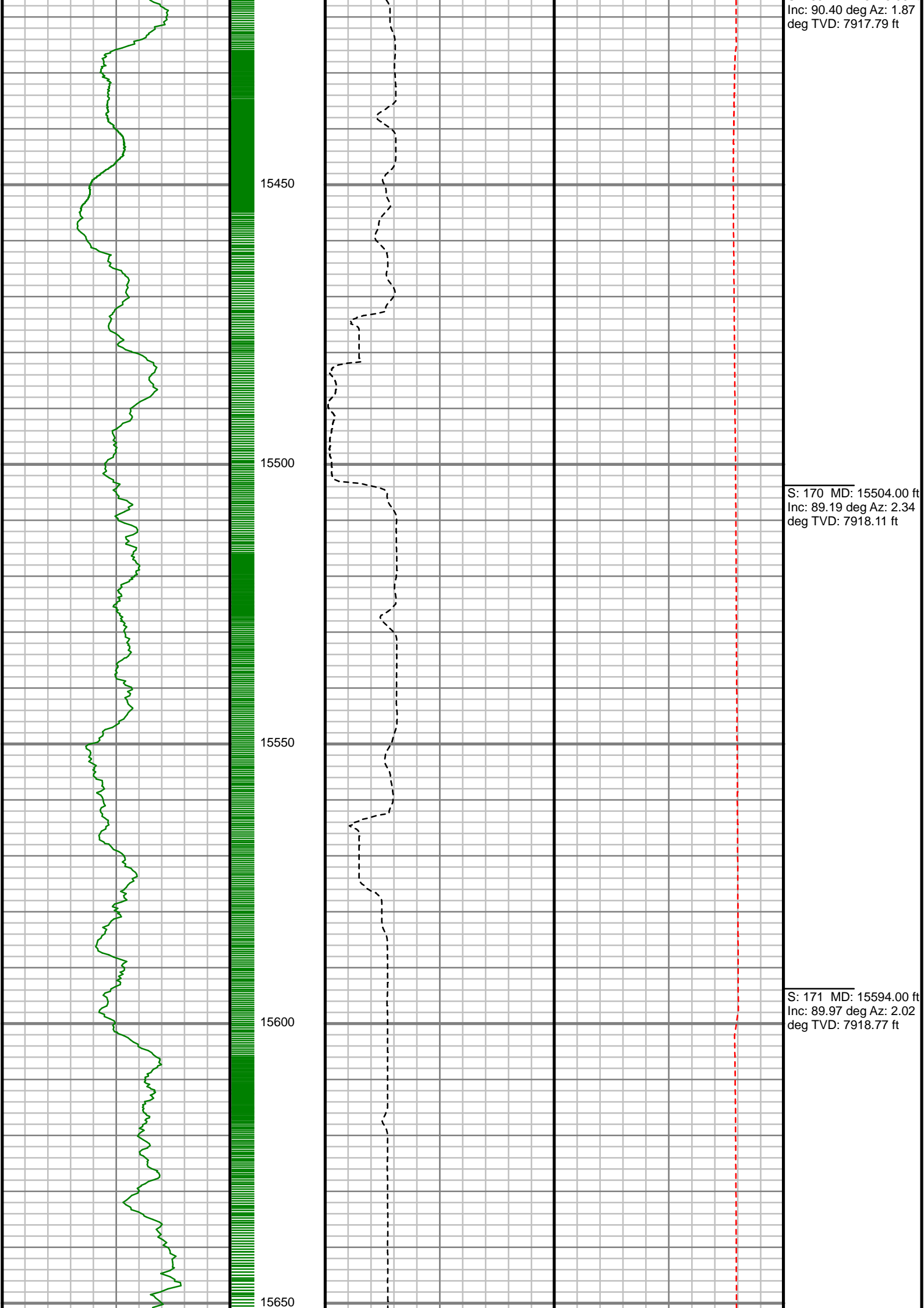


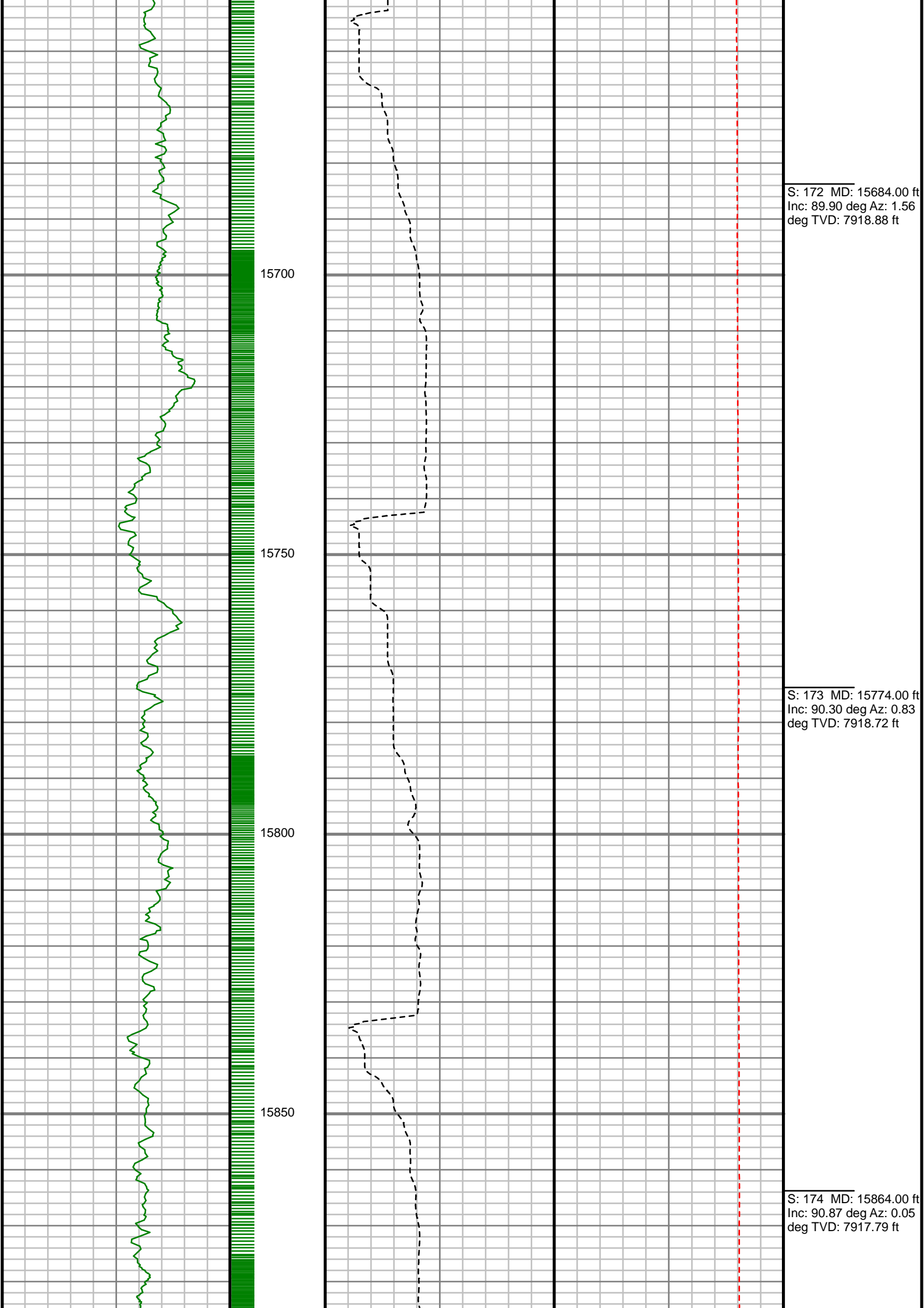


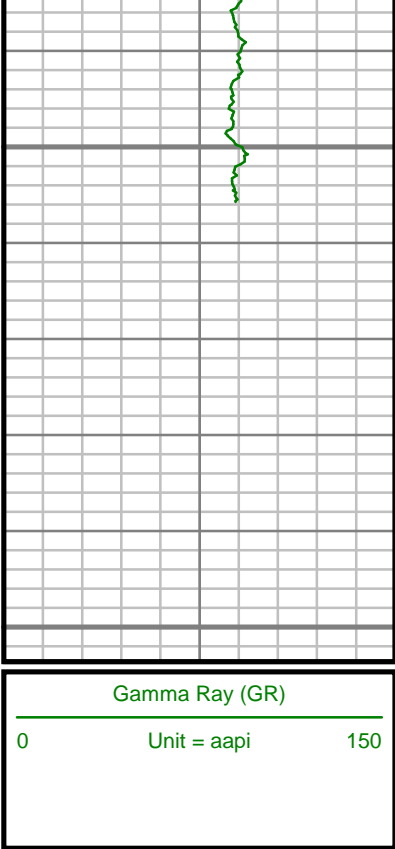








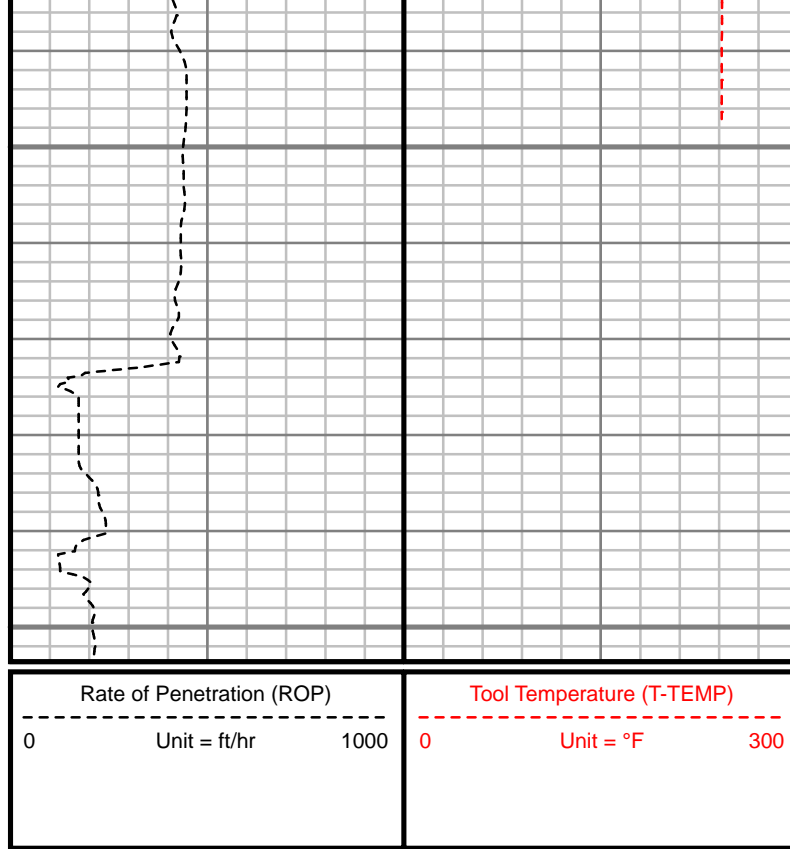




15900

15950

MEASURED DEPTH
1:240 (ft)



Comments

MWD Survey Report

Well Location	BUFFALO & BADGER 4W-15HZ PAD
Well Name	BADGER STATE 32C-3HZ
Survey Date	5/27/2015
Latitude	40°3'26.389"N
Longitude	104°59'47.234"W
Btotal	52576, 52619, 52667, 52683 nT
Dip	66.52, 66.53, 66.59 deg
Magnetic Declination	8.59, 8.61, 8.63, 8.66 deg
North Reference	True North
Grid Correction	None
Depth Reference	RKB (20.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 0.00Azim (deg)
Operator(s)	C. COLLINS, H. ORAHOOD, S. NEJAD

Well Notes
SURVEYS FROM 0 FT. TO 1244 FT. WERE ACQUIRED BY CATHEDRAL MWD.
SURVEYS FROM 1297 FT. TO 15864 FT. WERE ACQUIRED BY SCIENTIFIC DRILLING INTERNATIONAL MWD.

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	Invalid
14.00	0.00	0.00	14.00	0.00	0.00	0.00	0.00	14.00
66.00	0.20	298.20	66.00	0.04	0.04	-0.08	0.38	52.00
176.00	0.50	321.50	176.00	0.51	0.51	-0.55	0.30	110.00
256.00	0.40	289.40	256.00	0.88	0.88	-1.03	0.33	80.00
335.00	0.70	287.30	334.99	1.11	1.11	-1.75	0.38	79.00
415.00	0.50	264.50	414.99	1.22	1.22	-2.56	0.38	80.00
495.00	0.50	243.30	494.98	1.03	1.03	-3.22	0.23	80.00
575.00	0.50	176.50	574.98	0.53	0.53	-3.51	0.69	80.00
655.00	0.50	176.60	654.98	-0.17	-0.17	-3.47	0.00	80.00
735.00	0.80	190.40	734.97	-1.07	-1.07	-3.55	0.42	80.00
815.00	0.30	130.40	814.97	-1.75	-1.75	-3.49	0.87	80.00
895.00	0.70	33.00	894.97	-1.48	-1.48	-3.07	1.00	80.00
975.00	0.90	34.30	974.96	-0.55	-0.55	-2.45	0.25	80.00
1055.00	0.70	62.20	1054.95	0.20	0.20	-1.66	0.54	80.00
1135.00	0.60	141.60	1134.95	0.10	0.10	-0.97	1.04	80.00
1215.00	0.60	166.40	1214.94	-0.64	-0.64	-0.61	0.32	80.00
1244.00	0.40	172.20	1243.94	-0.89	-0.89	-0.56	0.71	29.00
1297.00	0.44	112.40	1296.94	-1.15	-1.15	-0.35	0.79	53.00

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
1390.00	2.07	223.39	1389.92	-2.50	-2.50	-1.18	2.43	93.00
1485.00	4.36	222.60	1484.77	-6.41	-6.41	-4.80	2.41	95.00
1574.00	6.19	223.51	1573.39	-12.38	-12.38	-10.39	2.05	89.00
1664.00	7.68	221.34	1662.73	-20.41	-20.41	-17.70	1.68	90.00
1754.00	8.75	220.35	1751.80	-30.14	-30.14	-26.11	1.20	90.00
1844.00	8.77	235.44	1840.76	-39.25	-39.25	-36.19	2.54	90.00
1933.00	10.22	236.40	1928.54	-47.47	-47.47	-48.36	1.64	89.00
2023.00	9.79	235.22	2017.17	-56.26	-56.26	-61.29	0.54	90.00
2113.00	10.25	232.23	2105.80	-65.52	-65.52	-73.90	0.77	90.00
2203.00	9.48	230.99	2194.47	-75.09	-75.09	-85.99	0.88	90.00
2292.00	10.77	230.81	2282.08	-84.96	-84.96	-98.13	1.45	89.00
2382.00	10.27	226.77	2370.57	-95.77	-95.77	-110.49	0.99	90.00
2472.00	11.22	228.78	2458.99	-107.03	-107.03	-122.92	1.14	90.00
2562.00	10.30	229.94	2547.41	-117.98	-117.98	-135.67	1.06	90.00
2652.00	8.77	229.85	2636.16	-127.59	-127.59	-147.07	1.69	90.00
2741.00	9.68	228.95	2724.01	-136.88	-136.88	-157.90	1.03	89.00
2831.00	9.84	221.53	2812.71	-147.60	-147.60	-168.70	1.41	90.00
2921.00	9.85	216.17	2901.39	-159.57	-159.57	-178.35	1.02	90.00

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
3011.00	9.87	227.47	2990.07	-171.00	-171.00	-188.58	2.15	90.00
3100.00	10.66	228.32	3077.64	-181.63	-181.63	-200.35	0.90	89.00
3190.00	9.91	226.47	3166.20	-192.50	-192.50	-212.18	0.90	90.00
3280.00	9.52	232.74	3254.91	-202.34	-202.34	-223.72	1.25	90.00
3370.00	10.54	236.58	3343.53	-211.39	-211.39	-236.52	1.35	90.00
3460.00	11.15	230.51	3431.93	-221.46	-221.46	-250.10	1.44	90.00
3549.00	10.10	229.17	3519.40	-232.03	-232.03	-262.65	1.21	89.00
3639.00	10.53	224.76	3607.94	-243.03	-243.03	-274.41	1.00	90.00
3729.00	9.37	240.63	3696.61	-252.47	-252.47	-286.60	3.30	90.00
3819.00	11.78	249.86	3785.08	-259.23	-259.23	-301.61	3.27	90.00
3998.00	10.89	227.56	3960.66	-276.95	-276.95	-331.27	2.48	179.00
4088.00	9.06	228.70	4049.30	-287.37	-287.37	-342.87	2.05	90.00
4178.00	8.94	233.66	4138.19	-296.19	-296.19	-353.83	0.87	90.00
4268.00	8.65	224.53	4227.14	-305.16	-305.16	-364.21	1.58	90.00
4357.00	8.18	227.26	4315.18	-314.23	-314.23	-373.56	0.70	89.00
4447.00	9.23	229.94	4404.14	-323.22	-323.22	-383.79	1.24	90.00
4537.00	9.75	223.80	4492.91	-333.36	-333.36	-394.58	1.26	90.00
4627.00	9.27	214.34	4581.68	-344.85	-344.85	-403.95	1.81	90.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
4716.00	7.93	211.88	4669.68	-355.99	-355.99	-411.24	1.56	89.00
4806.00	6.23	207.49	4758.99	-365.59	-365.59	-416.77	1.99	90.00
4896.00	5.96	205.24	4848.48	-374.15	-374.15	-421.02	0.40	90.00
4986.00	5.70	200.18	4938.02	-382.57	-382.57	-424.55	0.64	90.00
5075.00	4.24	182.90	5026.68	-390.01	-390.01	-426.25	2.34	89.00
5165.00	4.31	184.15	5116.43	-396.70	-396.70	-426.66	0.13	90.00
5255.00	3.86	167.84	5206.21	-403.03	-403.03	-426.26	1.38	90.00
5345.00	3.16	144.96	5296.04	-408.03	-408.03	-424.20	1.73	90.00
5524.00	0.55	135.42	5474.93	-412.68	-412.68	-420.77	1.47	179.00
5614.00	0.66	67.78	5564.93	-412.79	-412.79	-419.99	0.75	90.00
5704.00	0.93	51.13	5654.92	-412.13	-412.13	-418.94	0.39	90.00
5794.00	1.30	6.15	5744.91	-410.66	-410.66	-418.27	1.02	90.00
5884.00	1.08	351.40	5834.89	-408.80	-408.80	-418.28	0.42	90.00
5974.00	1.30	329.42	5924.87	-407.08	-407.08	-418.93	0.56	90.00
6063.00	1.19	344.83	6013.85	-405.32	-405.32	-419.69	0.40	89.00
6153.00	1.03	16.41	6103.83	-403.65	-403.65	-419.70	0.69	90.00
6243.00	1.00	15.07	6193.82	-402.12	-402.12	-419.27	0.04	90.00
6333.00	0.95	34.30	6283.80	-400.75	-400.75	-418.65	0.36	90.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
6512.00	1.86	333.35	6462.76	-396.93	-396.93	-419.11	0.91	179.00
6602.00	0.81	115.15	6552.74	-395.90	-395.90	-419.19	2.83	90.00
6692.00	0.85	73.87	6642.73	-395.98	-395.98	-417.98	0.65	90.00
6782.00	1.12	51.73	6732.72	-395.25	-395.25	-416.65	0.51	90.00
6872.00	1.10	23.87	6822.70	-393.92	-393.92	-415.61	0.59	90.00
6961.00	0.85	10.08	6911.69	-392.49	-392.49	-415.15	0.38	89.00
7141.00	2.72	340.90	7091.60	-387.14	-387.14	-416.32	1.13	180.00
7231.00	4.08	341.41	7181.44	-382.08	-382.08	-418.04	1.51	90.00
7321.00	6.90	347.09	7271.02	-373.78	-373.78	-420.27	3.18	90.00
7410.00	11.05	344.26	7358.91	-360.35	-360.35	-423.78	4.69	89.00
7500.00	14.82	347.78	7446.61	-340.80	-340.80	-428.56	4.27	90.00
7590.00	22.90	353.21	7531.72	-312.11	-312.11	-433.07	9.17	90.00
7679.00	33.82	1.07	7609.94	-270.02	-270.02	-434.66	12.95	89.00
7769.00	40.72	1.56	7681.52	-215.56	-215.56	-433.39	7.67	90.00
7859.00	47.55	1.50	7746.08	-152.95	-152.95	-431.72	7.59	90.00
7949.00	56.42	2.53	7801.45	-82.16	-82.16	-429.19	9.90	90.00
8038.00	63.55	359.76	7845.95	-5.17	-5.17	-427.72	8.45	89.00
8128.00	74.75	359.04	7877.93	78.79	78.79	-428.62	12.47	90.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
8230.00	82.81	0.67	7897.77	178.76	178.76	-428.84	8.05	102.00
8296.00	88.22	2.33	7902.92	244.51	244.51	-427.11	8.58	66.00
8358.00	89.16	2.04	7904.34	306.45	306.45	-424.75	1.59	62.00
8448.00	89.90	1.16	7905.07	396.41	396.41	-422.24	1.28	90.00
8538.00	89.76	0.97	7905.34	486.39	486.39	-420.57	0.26	90.00
8628.00	90.07	359.71	7905.47	576.39	576.39	-420.04	1.44	90.00
8722.00	89.83	1.95	7905.55	670.37	670.37	-418.68	2.40	94.00
8816.00	88.56	359.52	7906.87	764.34	764.34	-417.47	2.92	94.00
8910.00	88.32	1.55	7909.43	858.30	858.30	-416.60	2.17	94.00
9004.00	90.13	3.04	7910.70	952.21	952.21	-412.83	2.50	94.00
9099.00	90.70	2.39	7910.00	1047.10	1047.10	-408.33	0.91	95.00
9193.00	89.66	0.78	7909.70	1141.06	1141.06	-405.73	2.04	94.00
9287.00	89.97	0.17	7910.00	1235.05	1235.05	-404.95	0.72	94.00
9381.00	89.20	359.17	7910.69	1329.05	1329.05	-405.49	1.34	94.00
9475.00	91.34	359.57	7910.25	1423.04	1423.04	-406.52	2.32	94.00
9570.00	90.94	359.66	7908.36	1518.01	1518.01	-407.16	0.44	95.00
9664.00	90.27	358.43	7907.36	1611.99	1611.99	-408.72	1.49	94.00
9758.00	90.03	359.23	7907.12	1705.97	1705.97	-410.64	0.89	94.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
9853.00	90.44	359.90	7906.73	1800.97	1800.97	-411.36	0.82	95.00
9947.00	88.96	357.28	7907.22	1894.93	1894.93	-413.68	3.20	94.00
10037.00	88.52	357.32	7909.20	1984.81	1984.81	-417.92	0.49	90.00
10126.00	89.56	357.87	7910.68	2073.71	2073.71	-421.66	1.32	89.00
10216.00	90.30	359.61	7910.79	2163.69	2163.69	-423.64	2.10	90.00
10306.00	90.94	1.06	7909.81	2253.68	2253.68	-423.11	1.76	90.00
10396.00	90.40	359.64	7908.76	2343.67	2343.67	-422.56	1.69	90.00
10485.00	89.80	358.51	7908.60	2432.65	2432.65	-424.01	1.44	89.00
10575.00	90.10	359.18	7908.68	2522.64	2522.64	-425.82	0.81	90.00
10665.00	90.44	358.78	7908.26	2612.62	2612.62	-427.43	0.57	90.00
10755.00	89.60	357.97	7908.23	2702.58	2702.58	-429.98	1.30	90.00
10844.00	88.22	356.10	7909.93	2791.44	2791.44	-434.58	2.61	89.00
10934.00	89.06	357.23	7912.06	2881.26	2881.26	-439.81	1.56	90.00
11024.00	88.76	358.53	7913.77	2971.18	2971.18	-443.14	1.48	90.00
11114.00	90.97	358.48	7913.98	3061.14	3061.14	-445.49	2.46	90.00
11203.00	90.74	359.13	7912.66	3150.11	3150.11	-447.35	0.78	89.00
11293.00	90.07	359.32	7912.02	3240.10	3240.10	-448.57	0.78	90.00
11383.00	90.24	359.37	7911.79	3330.10	3330.10	-449.60	0.19	90.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
11472.00	90.13	359.84	7911.50	3419.09	3419.09	-450.22	0.55	89.00
11562.00	89.56	358.93	7911.74	3509.09	3509.09	-451.18	1.19	90.00
11652.00	90.10	0.26	7912.00	3599.08	3599.08	-451.81	1.60	90.00
11742.00	89.97	0.15	7911.95	3689.08	3689.08	-451.48	0.20	90.00
11831.00	89.97	0.50	7912.00	3778.08	3778.08	-450.98	0.40	89.00
11921.00	89.73	359.49	7912.24	3868.08	3868.08	-450.99	1.16	90.00
12011.00	90.10	0.56	7912.37	3958.08	3958.08	-450.95	1.26	90.00
12101.00	89.70	359.87	7912.53	4048.08	4048.08	-450.61	0.89	90.00
12190.00	89.36	358.91	7913.26	4137.07	4137.07	-451.56	1.14	89.00
12280.00	90.07	359.15	7913.71	4227.05	4227.05	-453.09	0.83	90.00
12386.00	89.80	358.37	7913.83	4333.03	4333.03	-455.39	0.78	106.00
12549.00	91.24	359.45	7912.35	4495.98	4495.98	-458.49	1.11	163.00
12639.00	90.64	0.99	7910.87	4585.97	4585.97	-458.14	1.83	90.00
12729.00	90.20	0.40	7910.21	4675.96	4675.96	-457.04	0.81	90.00
12819.00	89.56	0.32	7910.39	4765.95	4765.95	-456.48	0.72	90.00
12908.00	91.01	1.05	7909.95	4854.94	4854.94	-455.42	1.82	89.00
12998.00	92.45	2.10	7907.23	4944.87	4944.87	-452.95	1.99	90.00
13088.00	90.67	3.82	7904.77	5034.70	5034.70	-448.30	2.75	90.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
13178.00	89.02	2.95	7905.01	5124.54	5124.54	-442.98	2.07	90.00
13268.00	89.73	1.27	7905.99	5214.47	5214.47	-439.66	2.03	90.00
13358.00	90.00	0.75	7906.20	5304.46	5304.46	-438.07	0.65	90.00
13447.00	88.83	358.82	7907.11	5393.45	5393.45	-438.41	2.54	89.00
13537.00	89.73	1.47	7908.25	5483.43	5483.43	-438.18	3.11	90.00
13627.00	90.20	359.82	7908.30	5573.42	5573.42	-437.17	1.90	90.00
13717.00	88.65	357.80	7909.20	5663.39	5663.39	-439.03	2.83	90.00
13807.00	87.88	356.08	7911.92	5753.22	5753.22	-443.83	2.10	90.00
13896.00	87.98	356.81	7915.13	5841.99	5841.99	-449.35	0.83	89.00
13986.00	88.55	357.86	7917.85	5931.85	5931.85	-453.53	1.33	90.00
14068.00	87.75	359.28	7920.49	6013.78	6013.78	-455.57	1.98	82.00
14157.00	88.96	1.56	7923.05	6102.73	6102.73	-454.92	2.90	89.00
14247.00	90.44	3.02	7923.52	6192.65	6192.65	-451.33	2.31	90.00
14337.00	91.17	1.17	7922.26	6282.58	6282.58	-448.04	2.21	90.00
14427.00	91.58	1.95	7920.10	6372.52	6372.52	-445.59	0.98	90.00
14517.00	91.95	3.29	7917.33	6462.38	6462.38	-441.47	1.55	90.00
14696.00	90.71	5.74	7913.19	6640.76	6640.76	-427.37	1.53	179.00
14786.00	88.19	5.56	7914.06	6730.31	6730.31	-418.52	2.80	90.00
14876.00	87.68	4.27	7917.30	6819.92	6819.92	-410.81	1.54	90.00

5" = 100' FEET MD