



5" = 100' FEET MD

COMPANY : ANADARKO E&P ONSHORE LLC
WELL : TEDFORD 3N-28HZ
FIELD : WATTENBERG
COUNTY : WELD
STATE : COLORADO
COUNTRY : U.S.A.
UWI : 05-123-41790

COMPANY : ANADARKO E&P ONSHORE LLC

WELL : TEDFORD 3N-28HZ

FIELD : WATTENBERG

COUNTY : WELD

STATE : COLORADO

COUNTRY : U.S.A.

UWI : 05-123-41790

WELL LOCATION

LAT:40°6'9.468"N LONG:104°47'13.027"W
N:14564176.89 ft E:16999991.56 ft

SEC:28

TWP: 2N

RANGE: 66W

OTHER SERVICES

DIRECTIONAL
ROP

DEPTH REF. : RKB

REF. HEIGHT : 25.000 ft

RKB to Ground Level

GROUND LEVEL : 4965.000 ft

G.L. to MEAN SEA LEVEL

BOREHOLE RECORD

DEVIATION RECORD

HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft
8.5	1890	13089	0 - 12	0	2045
			12 - 0	2045	6768
			0 - 88	6768	7807
			88 - 92	7807	13089

CASING RECORD

CASING SIZE in	FROM ft	TO ft			
9.625	0	1879			

DRILLING CO. : HP

RIG : 307

LWD UNIT NO. : C-46

DISTRICT : CASPER

SPUD DATE : 08/07/2015

LWD START DATE : 08/07/2015

DEPTH : 1890 ft

LWD END DATE : 08/11/2015

DEPTH : 13089 ft

TOTAL DEPTH : 13089 ft

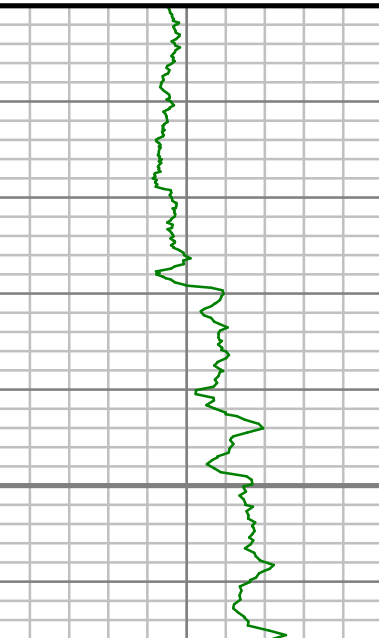
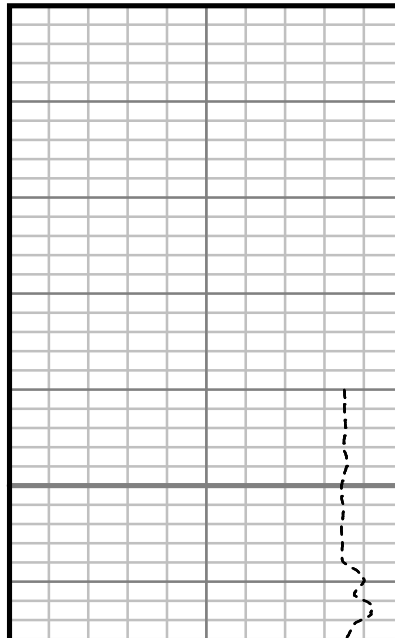
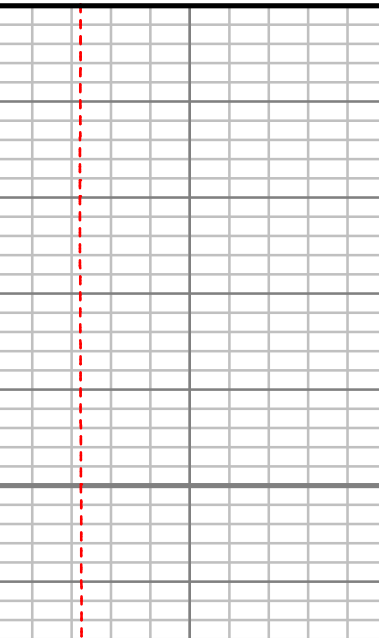
Run Data

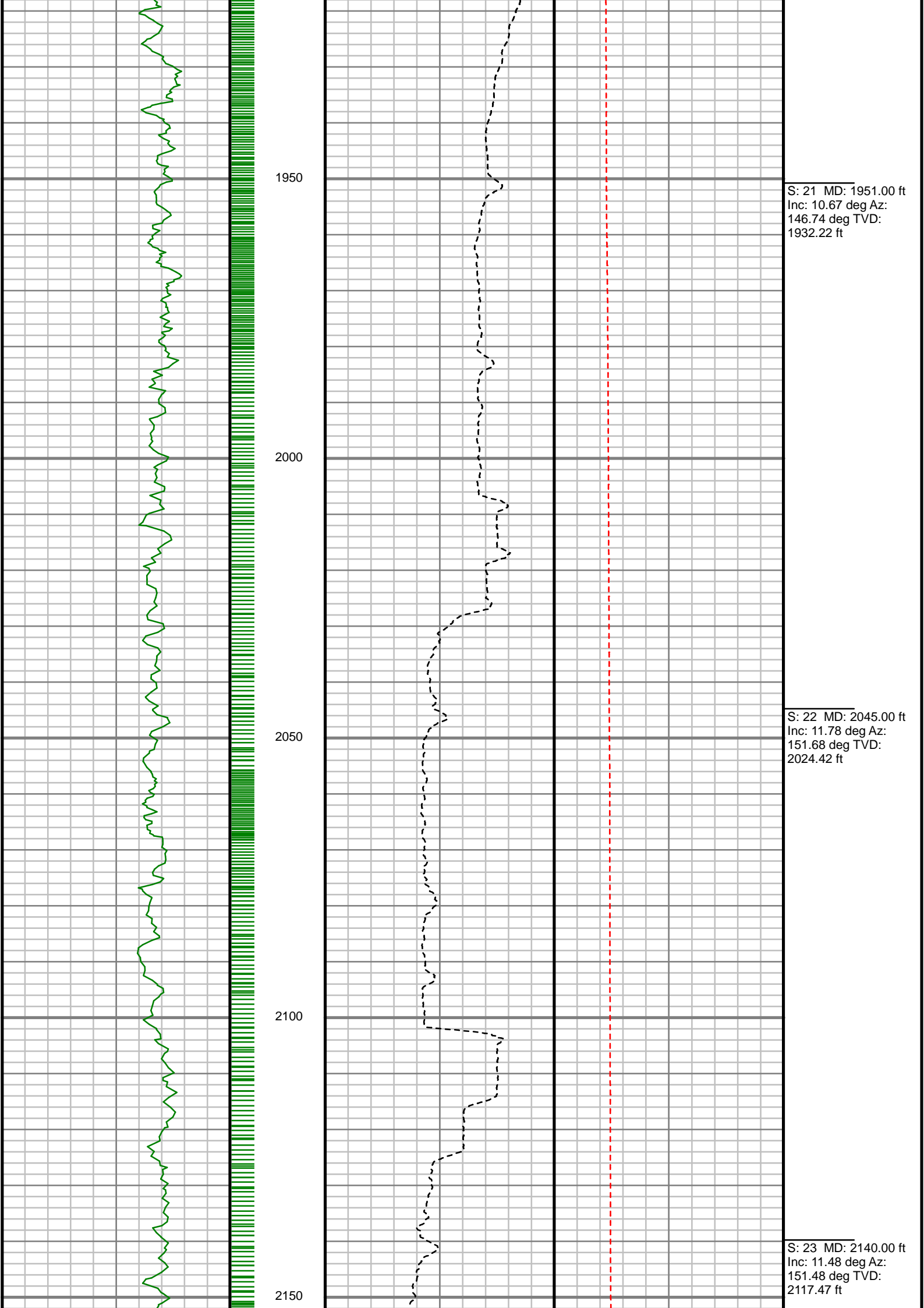
Run Data						
RUN NUMBER	1					
START DATE	08/07/2015					
START TIME	1100					
END DATE	08/10/2015					
END TIME	0930					
DEPTH IN (ft)	1890					
DEPTH OUT (ft)	13089					
LOG TOP (ft)	1844					
LOG BOTTOM (ft)	13043					
HOLE SIZE (in)	8.5					
MUD DATA @ (ft)	11490					
MUD TYPE	OIL-BASED					
DENSITY (lb / gal)	9.55					
VISCOSITY (s / qt)	54					
pH	-					
FLUID LOSS (cm ³ / 30)	3.6					
SALINITY (ppm)	-					
Rm (ohmm @ deg F)	-					
Rmf (ohmm @ deg F)	-					
MAX TEMP (deg F)	228					
Rm @ MAX TEMP (ohmm)	-					
LWD ENGINEER #1	S. WAXLER					
LWD ENGINEER #2	M. SCHUSTER					
LWD ENGINEER #3	-					
LOG WITNESS #1	S. SADLE					
LOG WITNESS #2	R. CANNON					

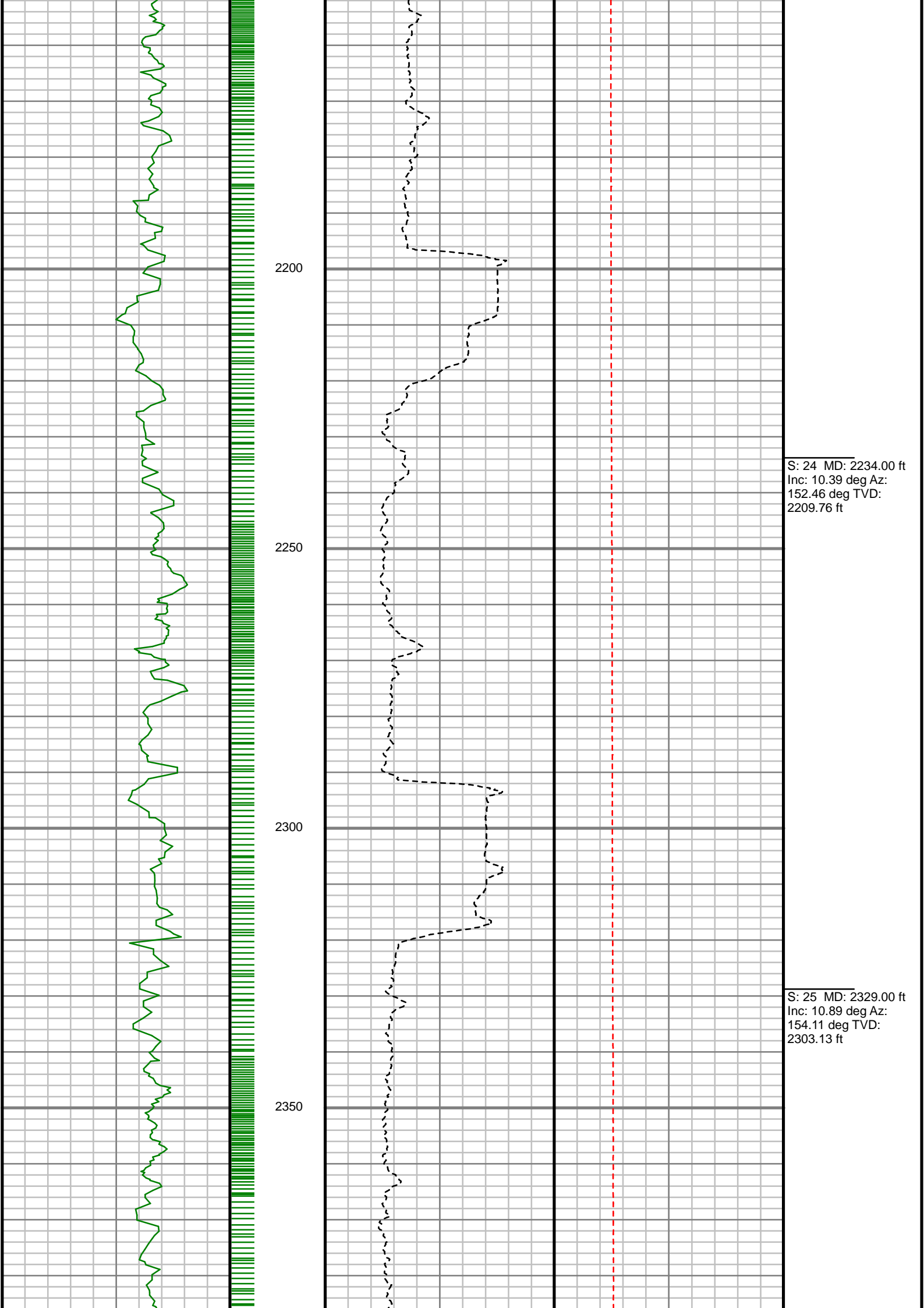
[illegible]

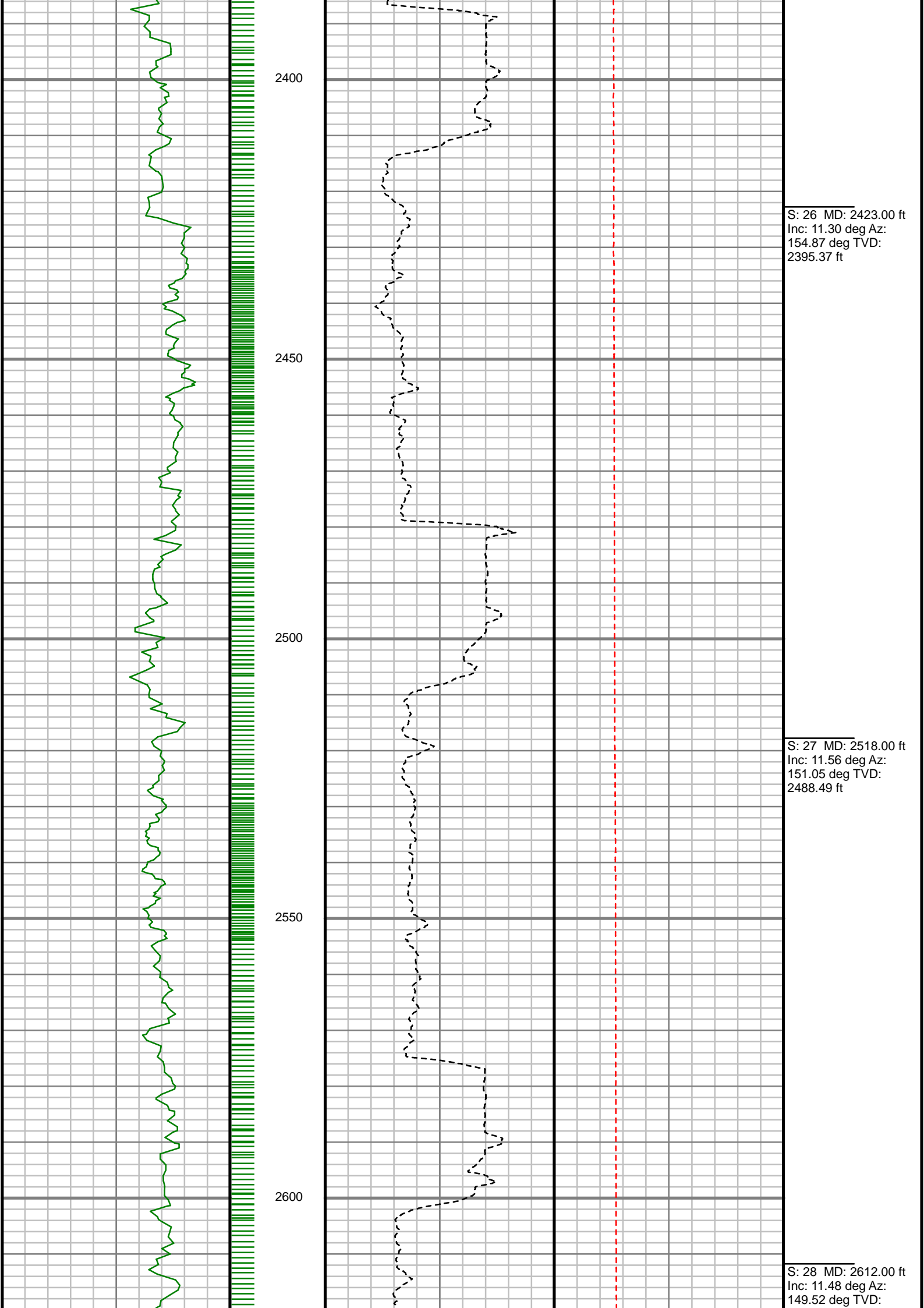
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

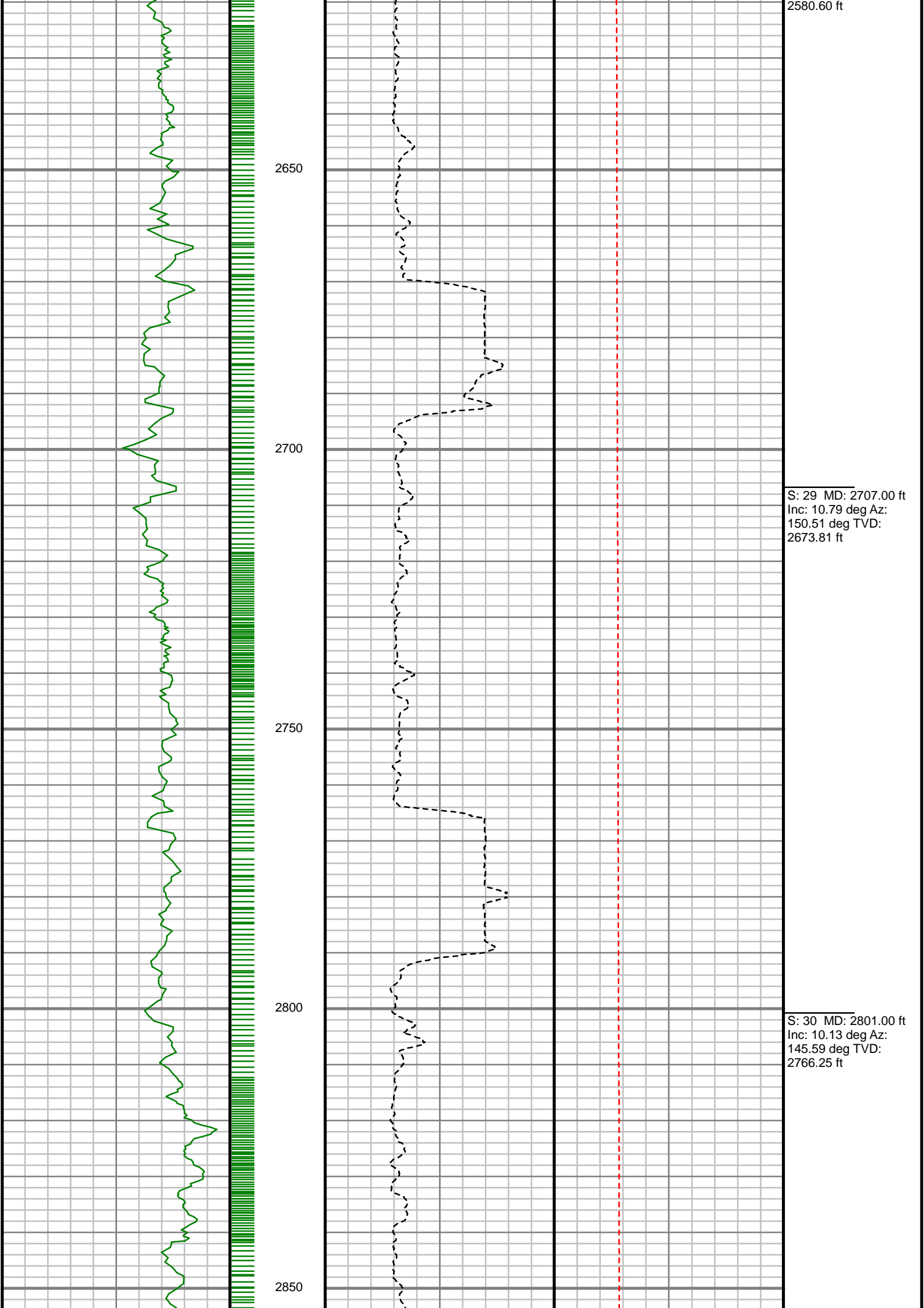
ANADARKO E&P ONSHORE LLC
 TEDFORD 3N-28HZ
 WATTENBERG FIELD
 WELD COUNTY, COLORADO
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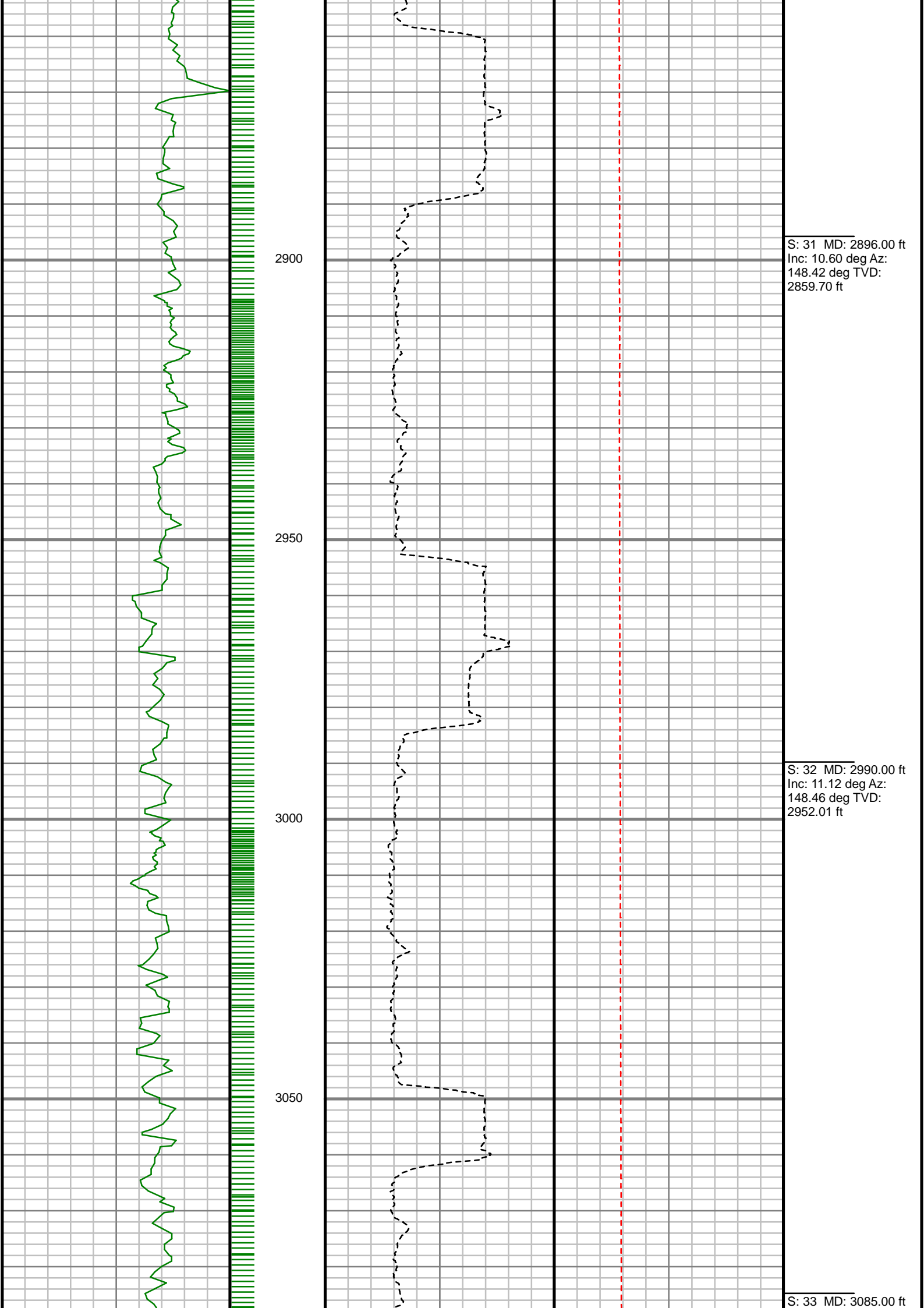
Gamma Ray (GR) 0 Unit = aapi 150	MEASURED DEPTH 1:240 (ft)	Rate of Penetration (ROP) 1000 Unit = ft/hr 0	Tool Temperature (T-TEMP) 50 Unit = °F 300	Comments
	<p>1:240 (ft)</p> <p>1900</p>			

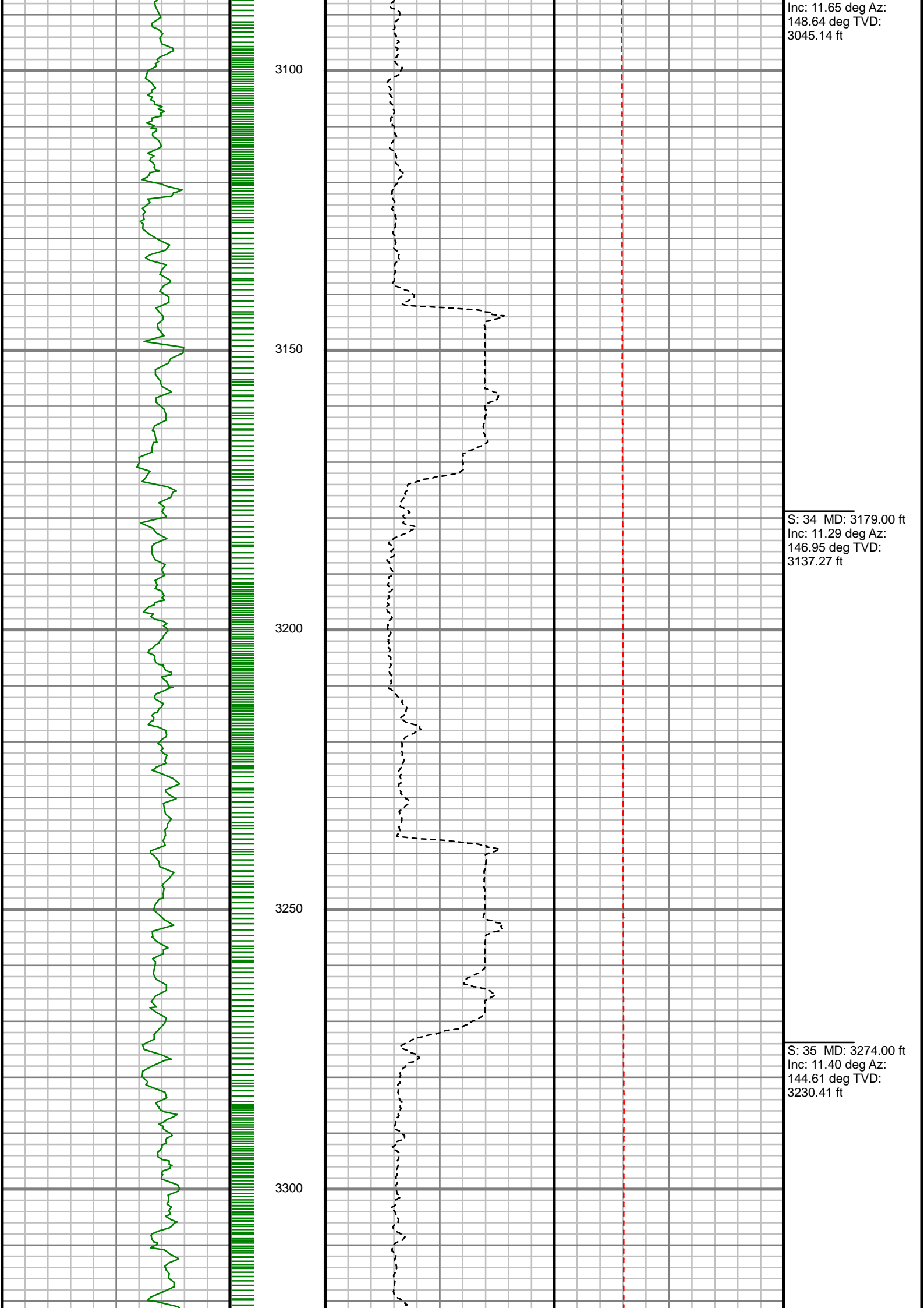








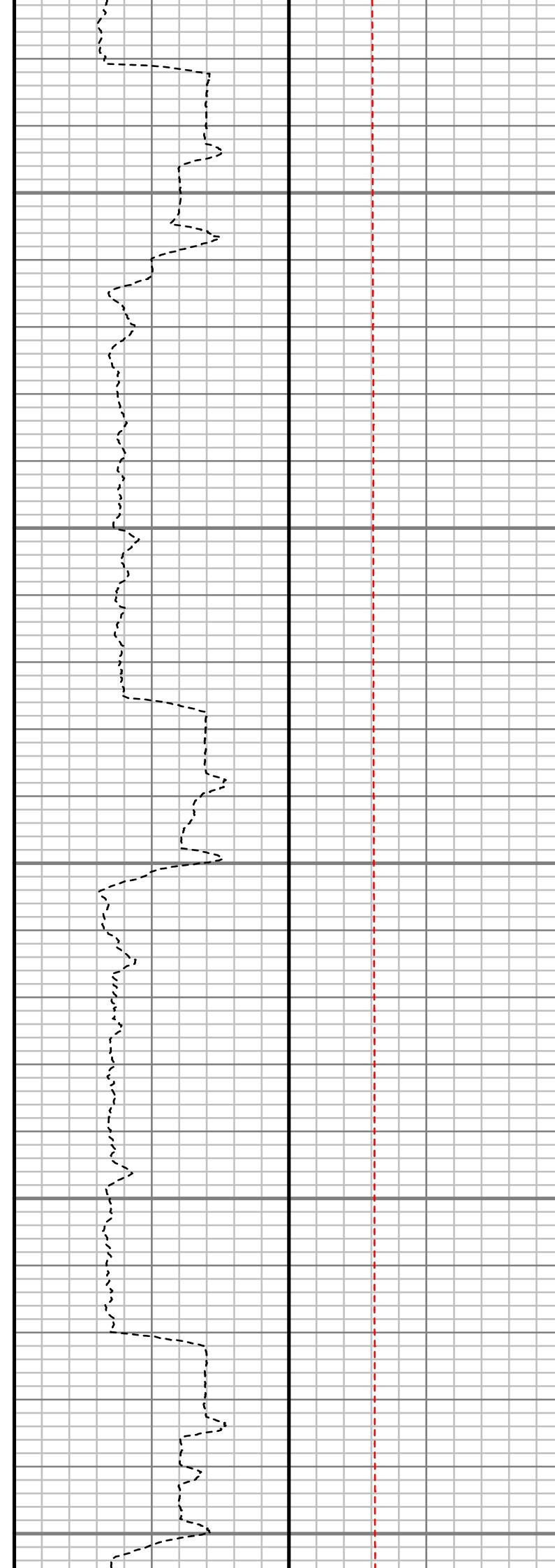
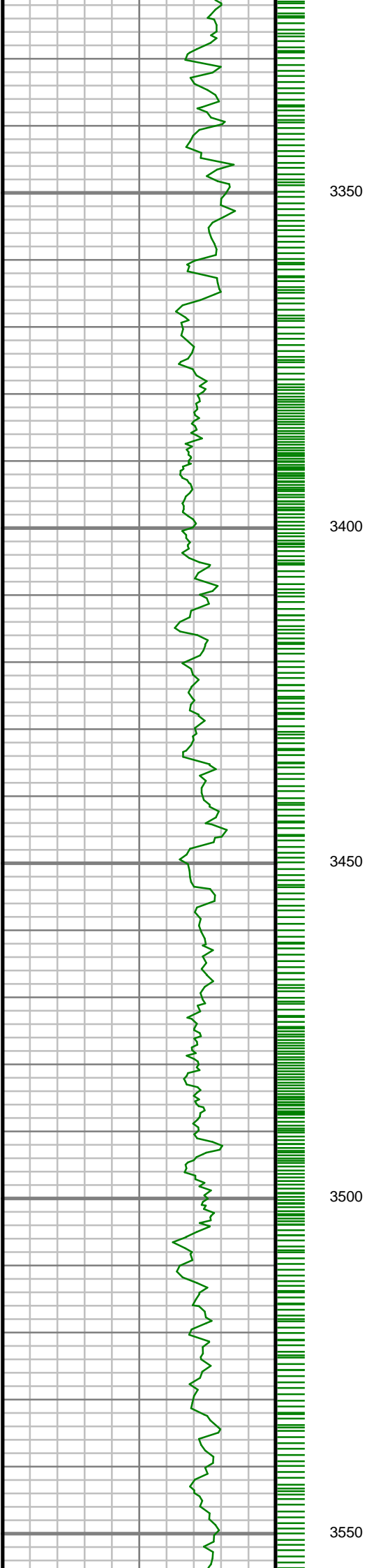




Inc: 11.65 deg Az:
148.64 deg TVD:
3045.14 ft

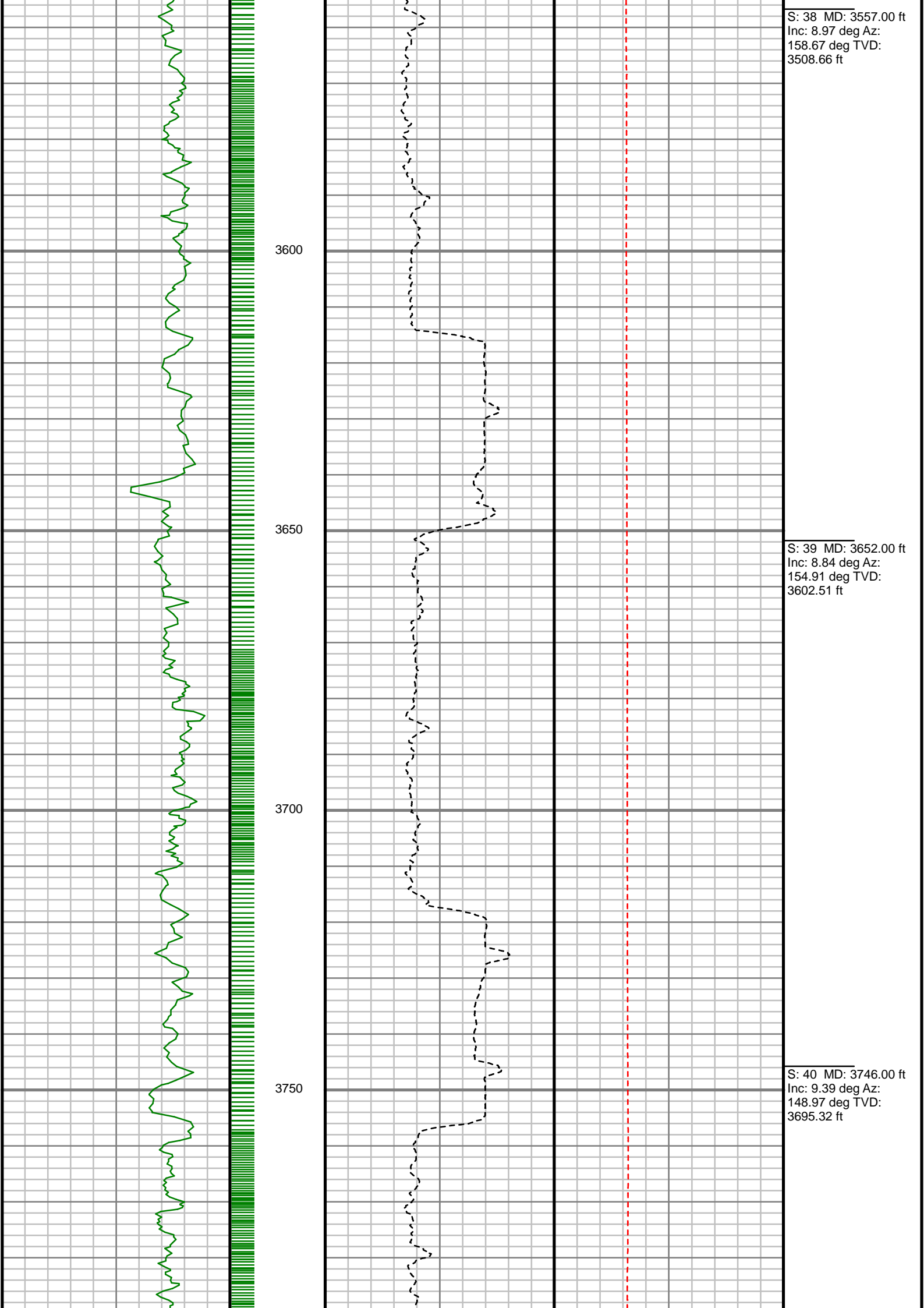
S: 34 MD: 3179.00 ft
Inc: 11.29 deg Az:
146.95 deg TVD:
3137.27 ft

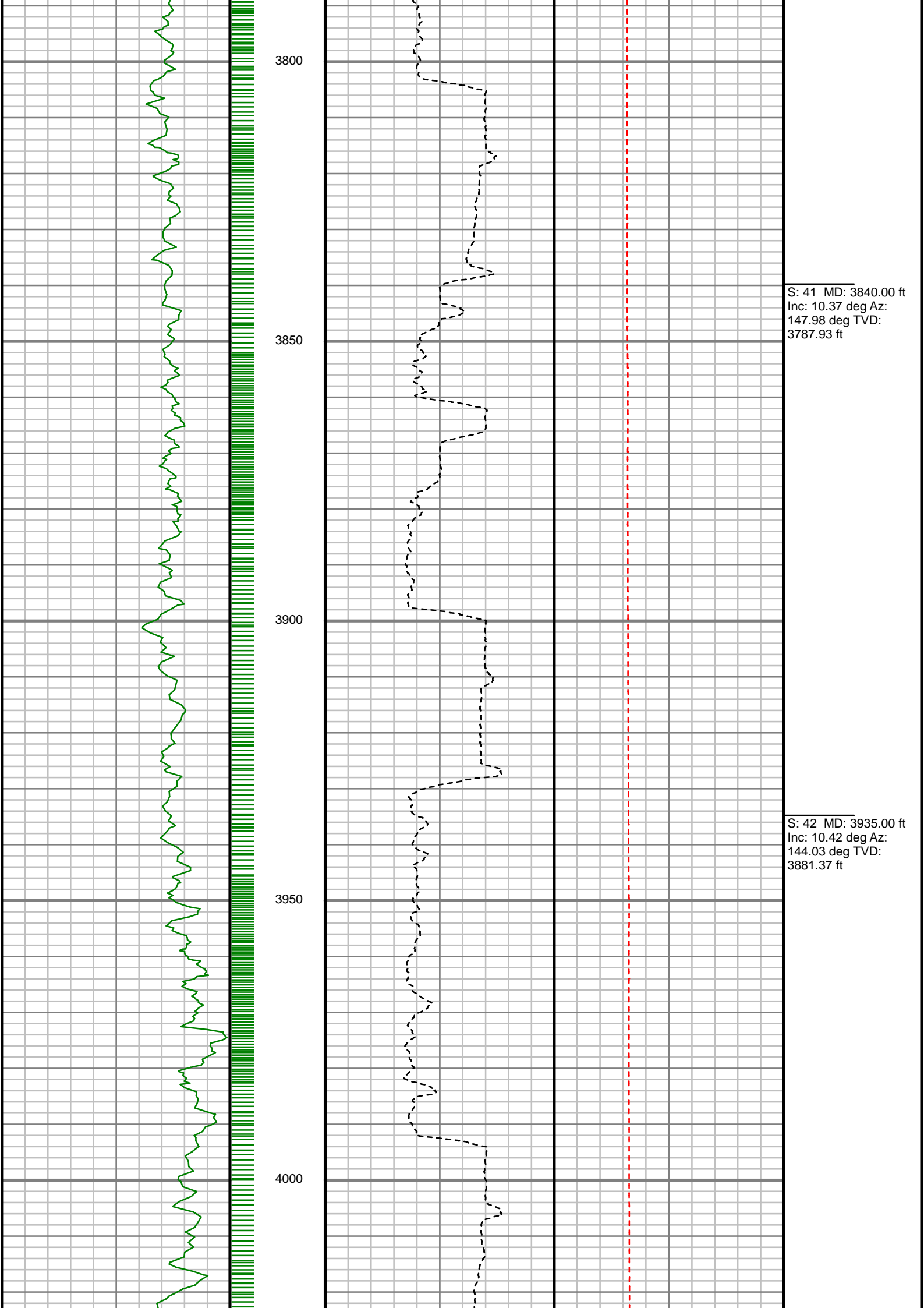
S: 35 MD: 3274.00 ft
Inc: 11.40 deg Az:
144.61 deg TVD:
3230.41 ft

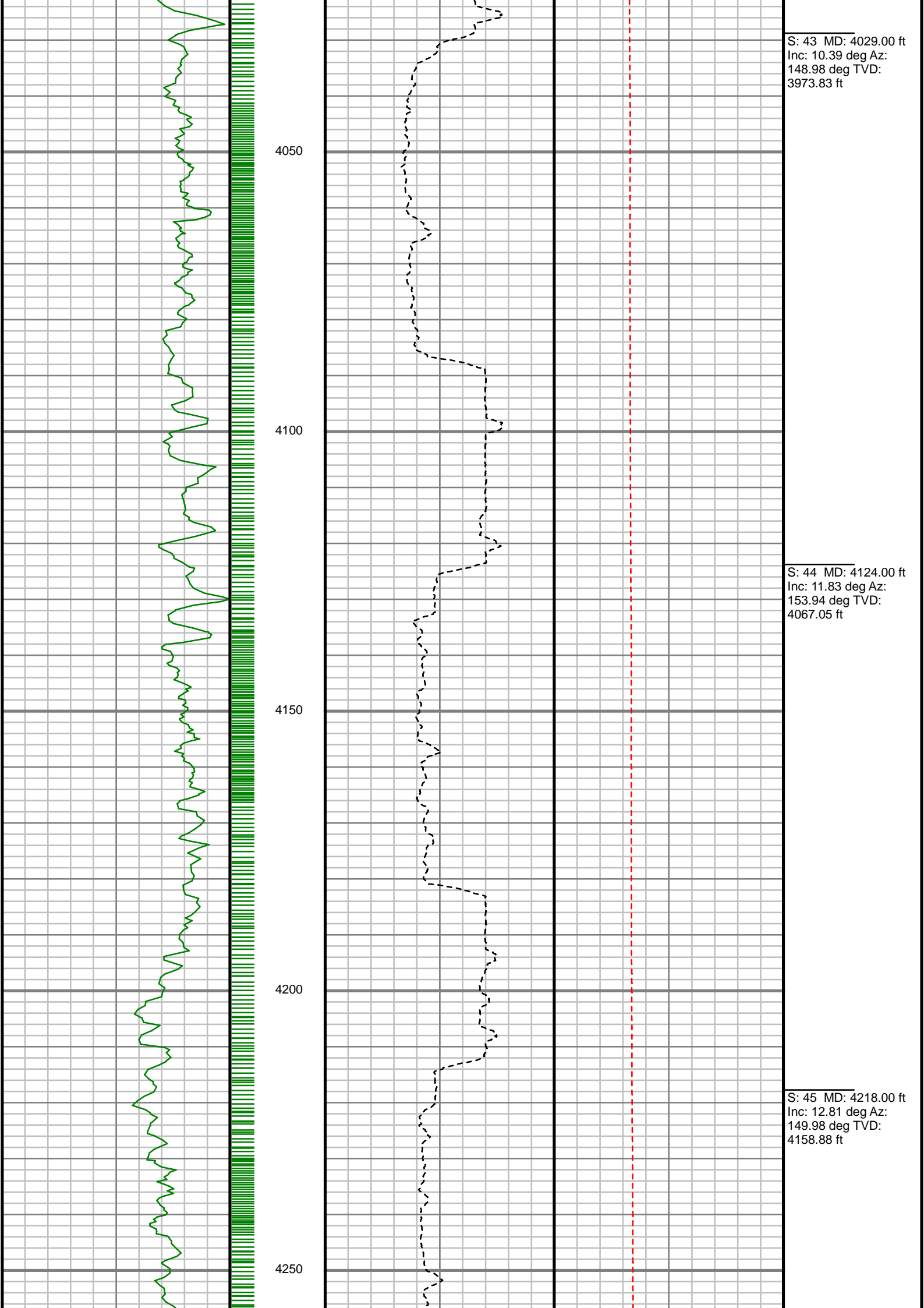


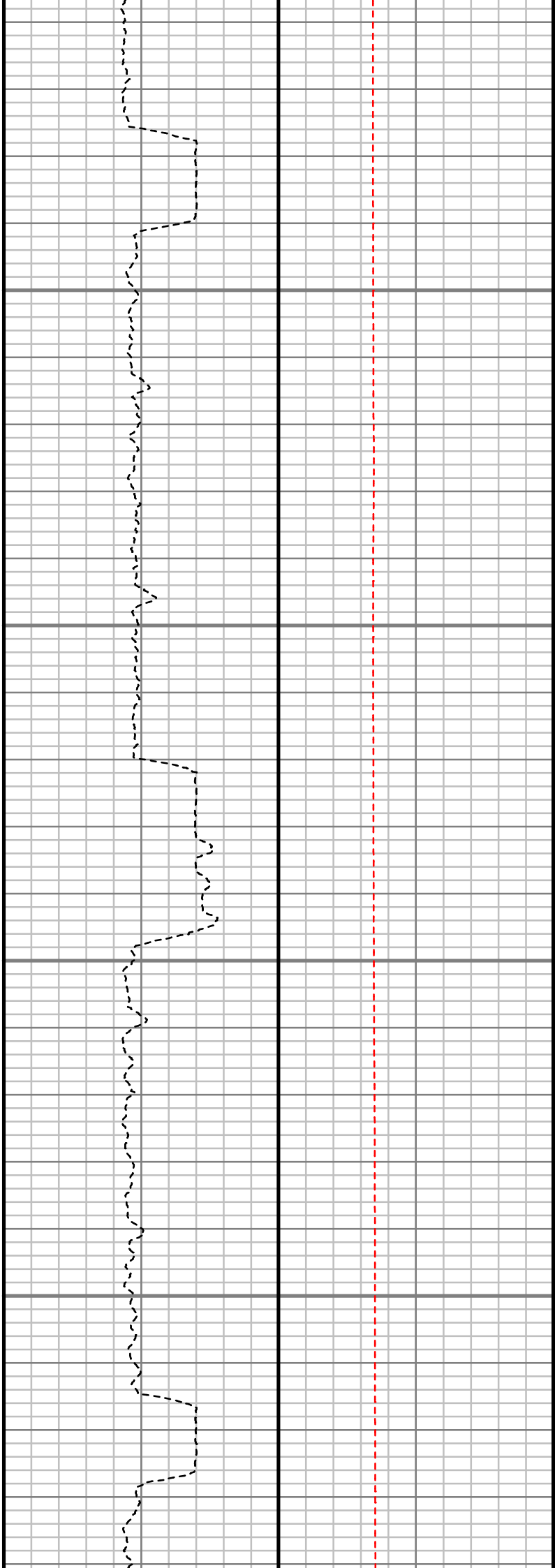
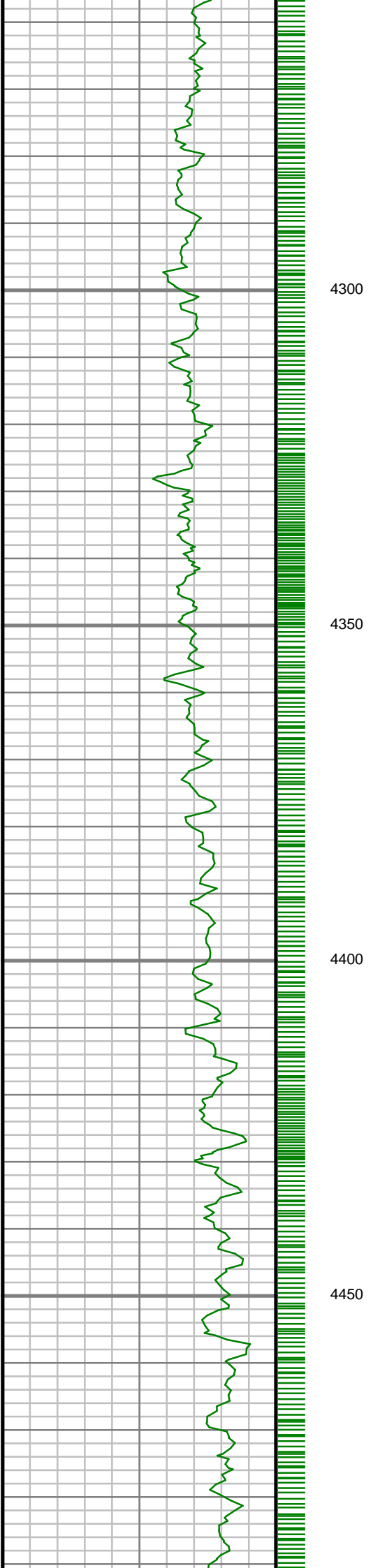
S: 36 MD: 3368.00 ft
Inc: 11.12 deg Az:
145.47 deg TVD:
3322.60 ft

S: 37 MD: 3463.00 ft
Inc: 10.21 deg Az:
154.64 deg TVD:
3415.97 ft



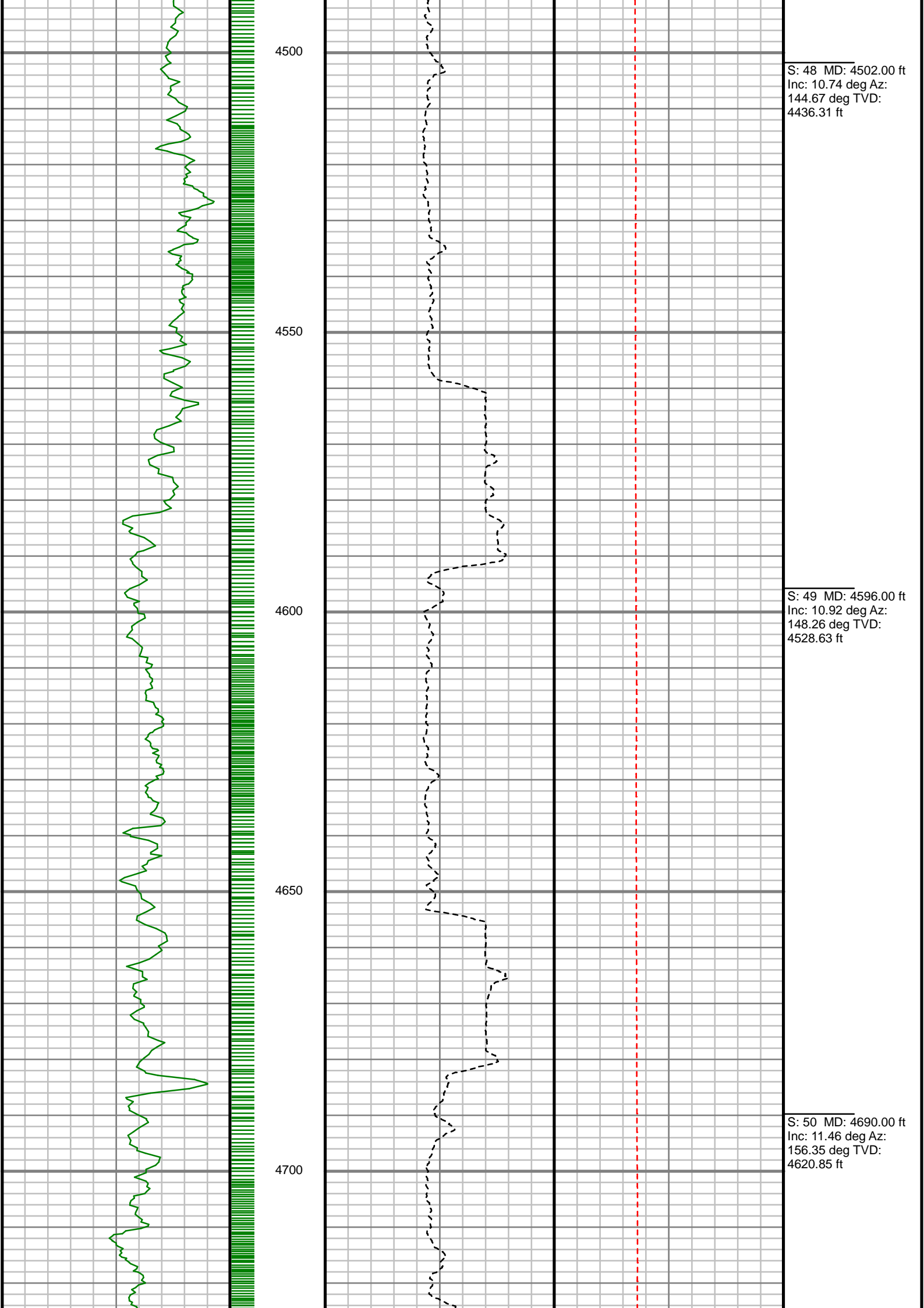


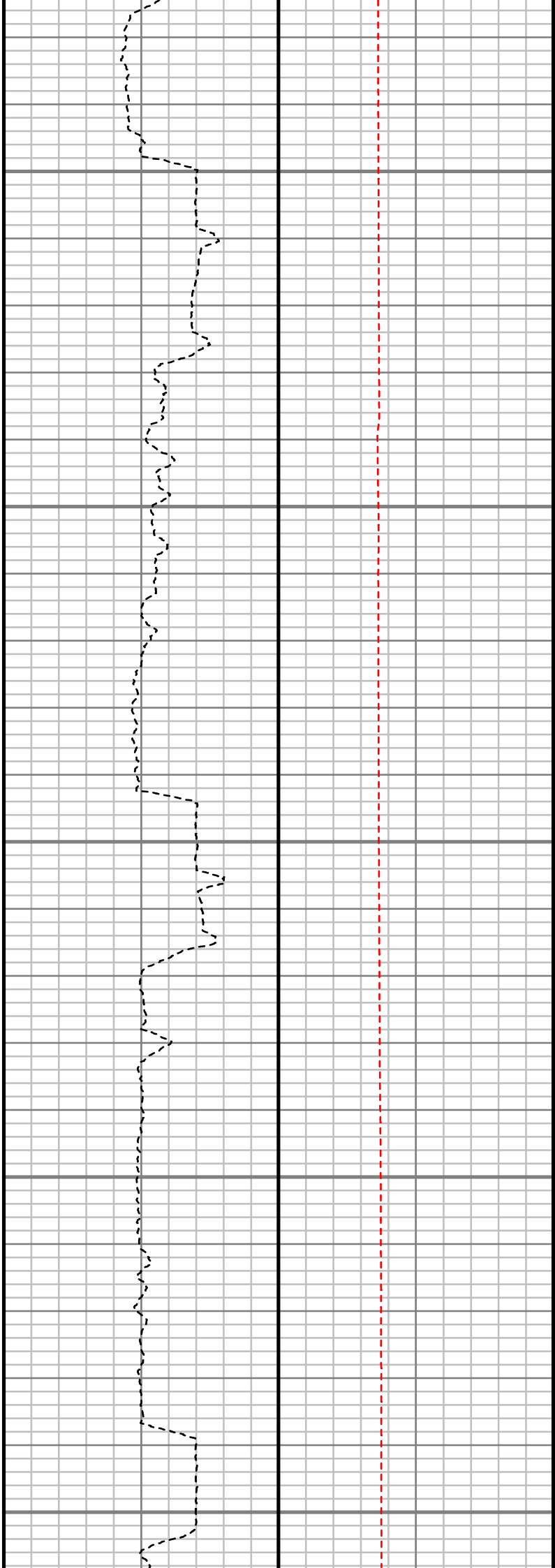
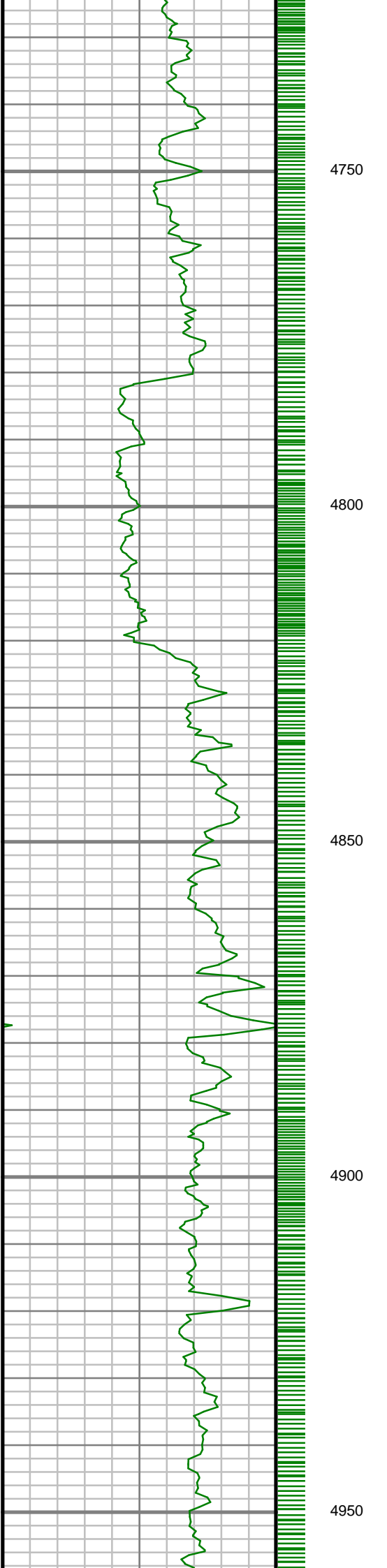




S: 46 MD: 4312.00 ft
Inc: 12.50 deg Az:
148.72 deg TVD:
4250.60 ft

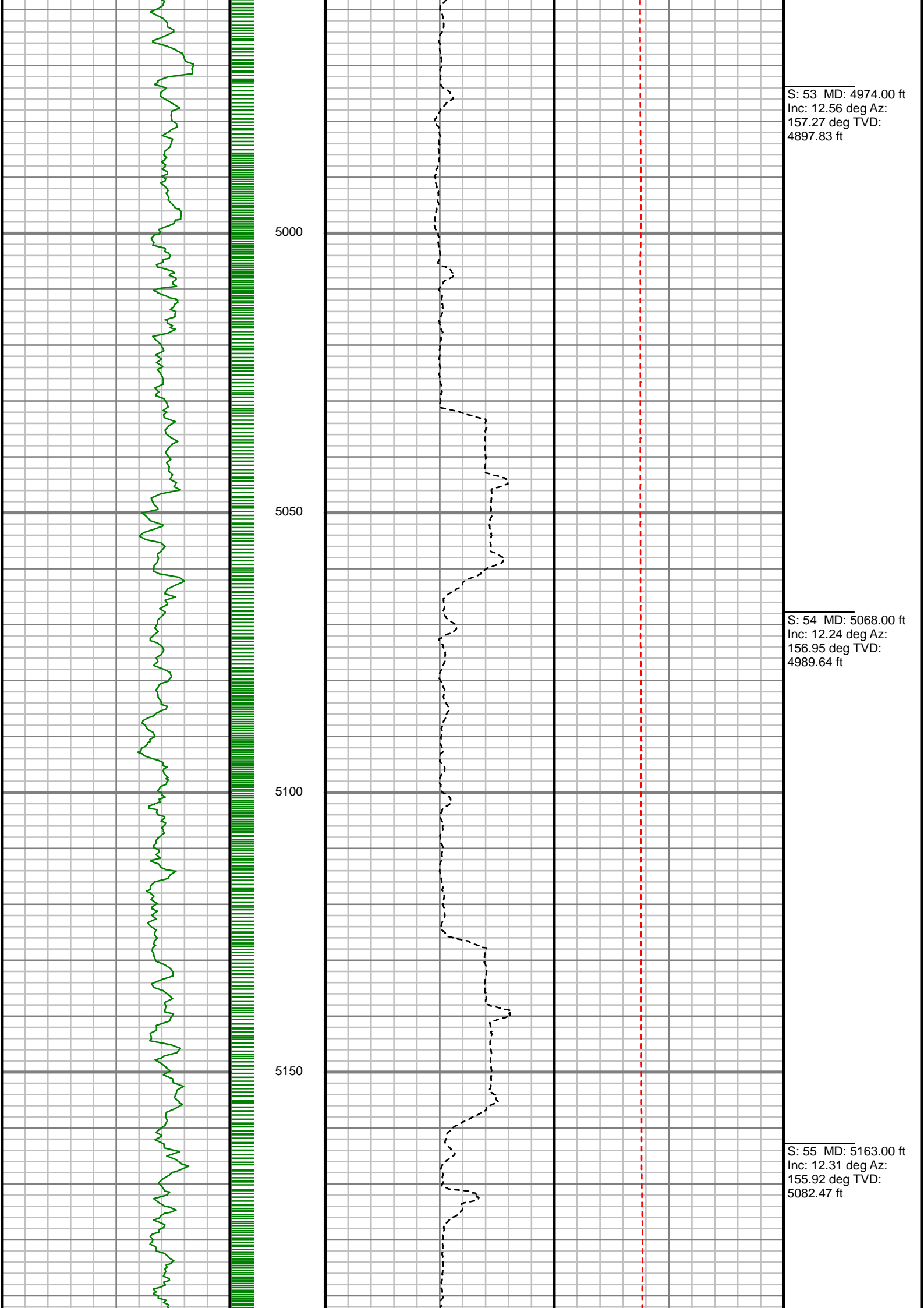
S: 47 MD: 4407.00 ft
Inc: 12.76 deg Az:
146.94 deg TVD:
4343.30 ft

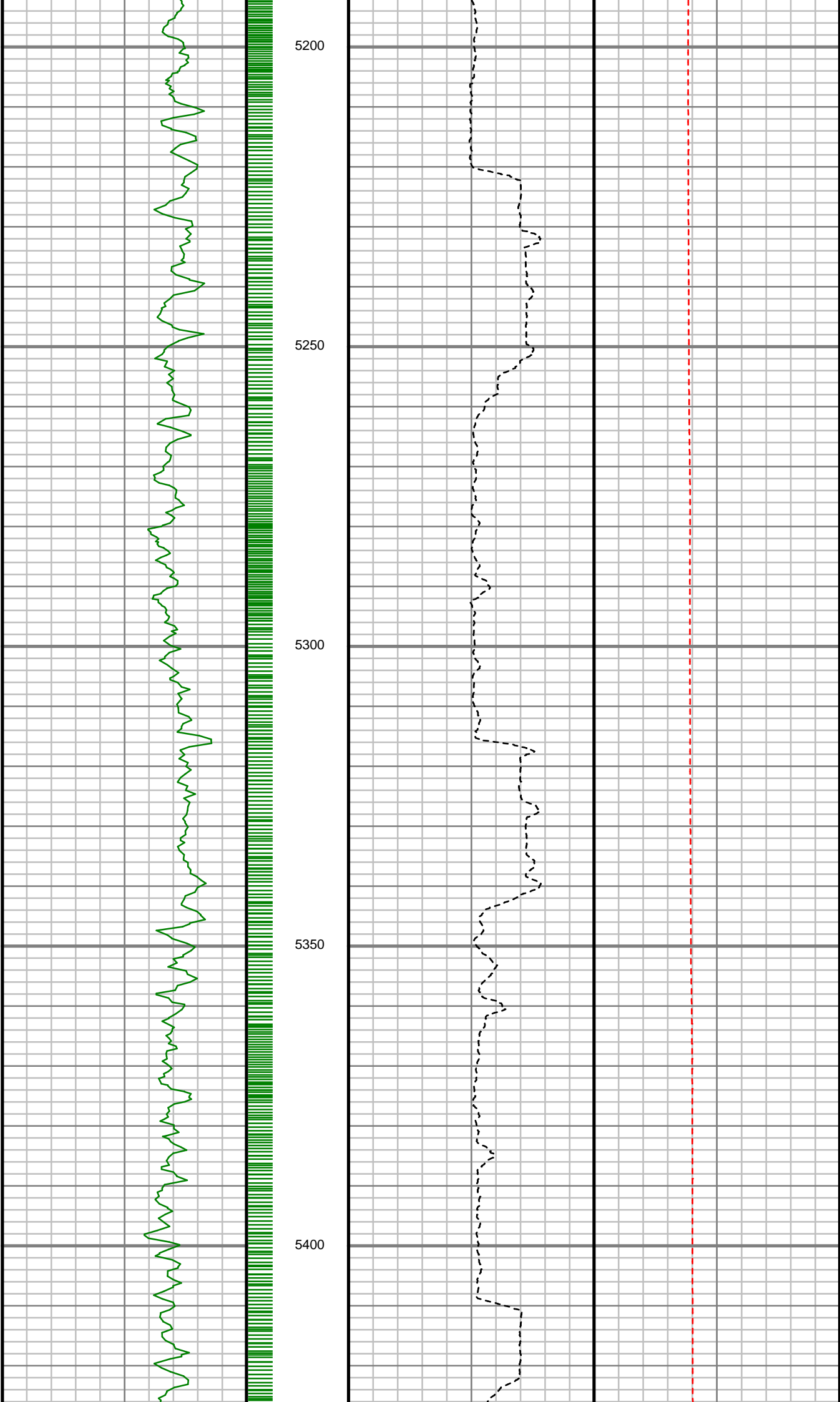




S: 51 MD: 4785.00 ft
Inc: 12.78 deg Az:
156.25 deg TVD:
4713.73 ft

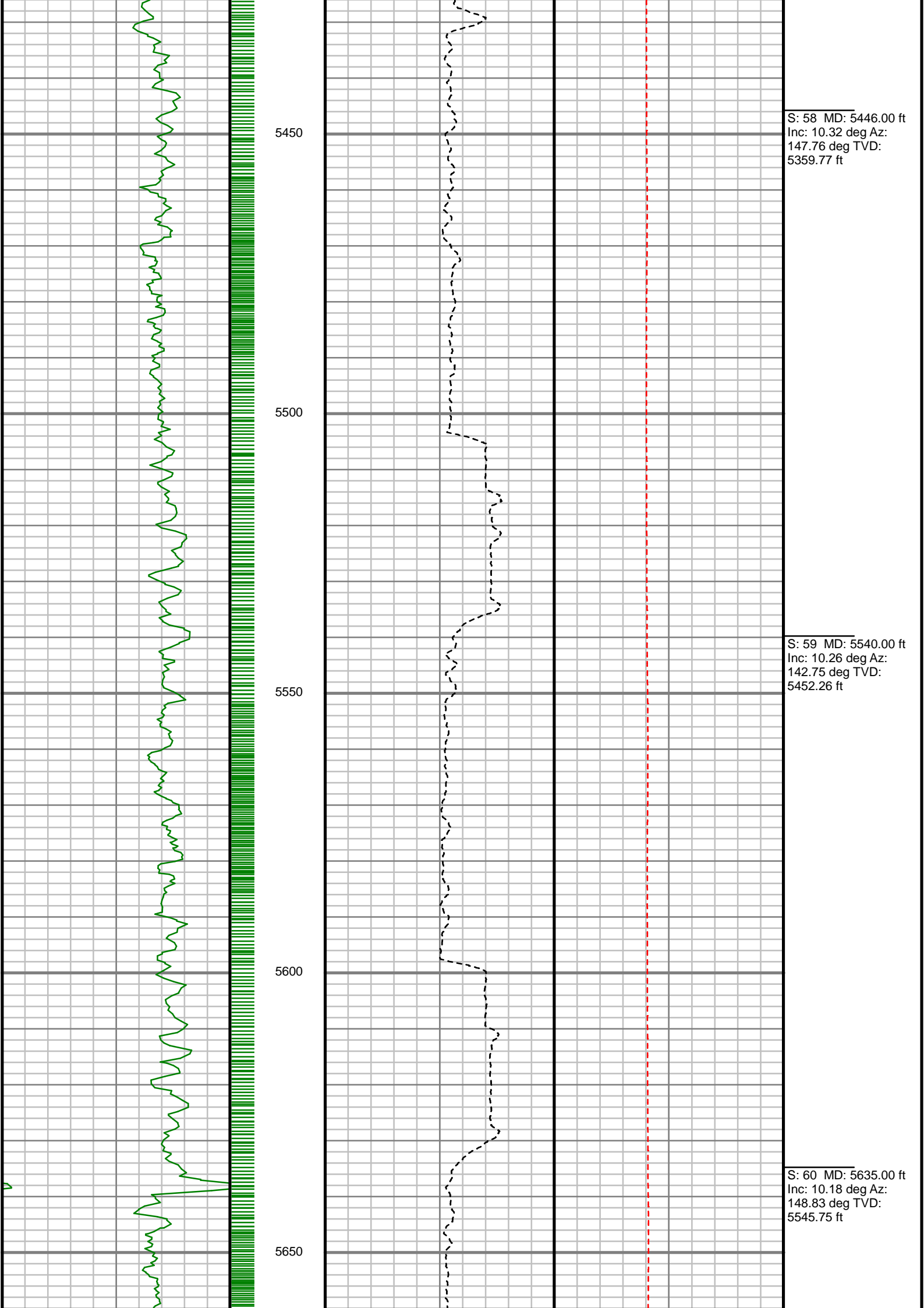
S: 52 MD: 4879.00 ft
Inc: 13.48 deg Az:
155.36 deg TVD:
4805.27 ft





S: 56 MD: 5257.00 ft
Inc: 11.42 deg Az:
145.57 deg TVD:
5174.47 ft

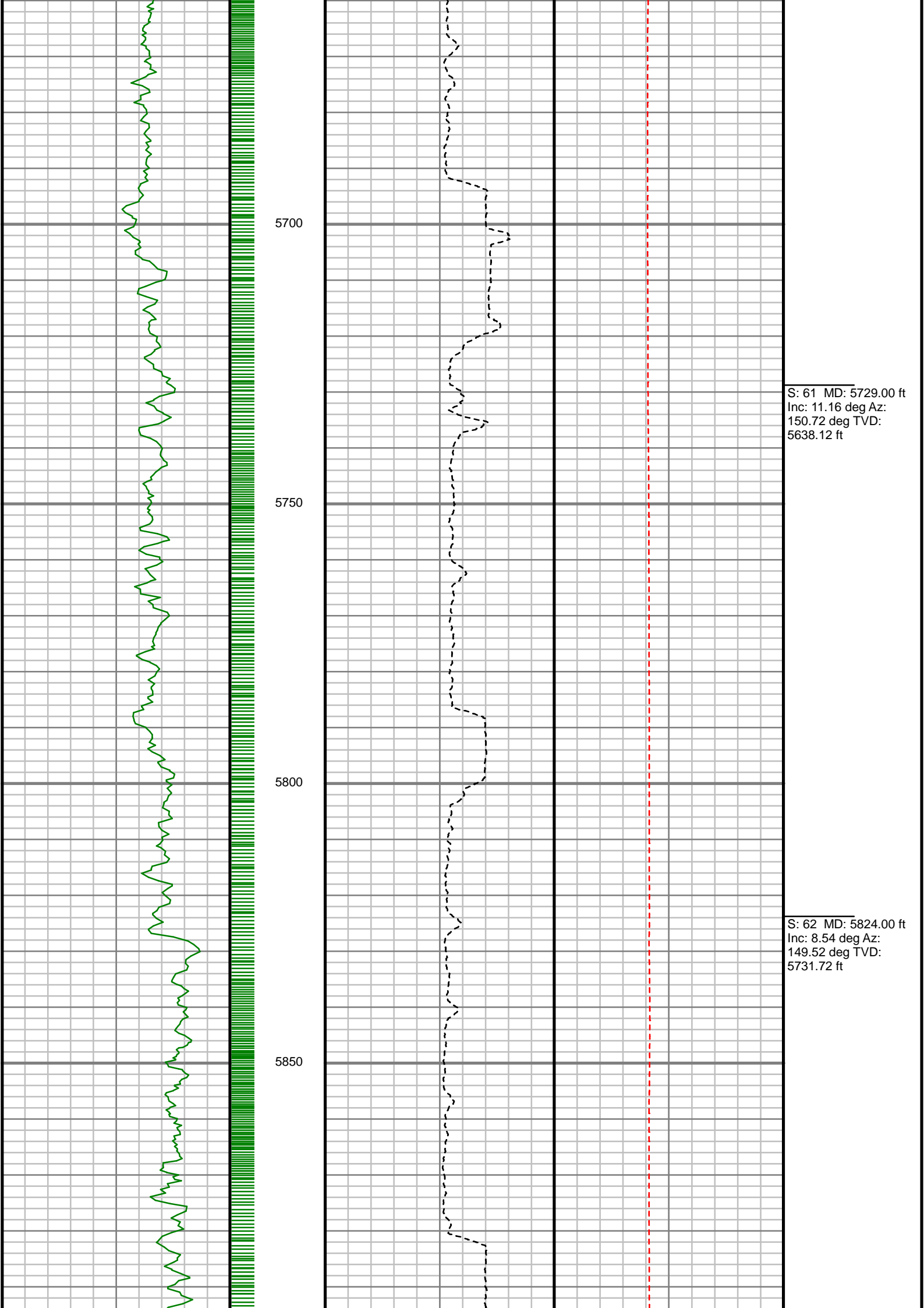
S: 57 MD: 5352.00 ft
Inc: 11.83 deg Az:
145.94 deg TVD:
5267.52 ft

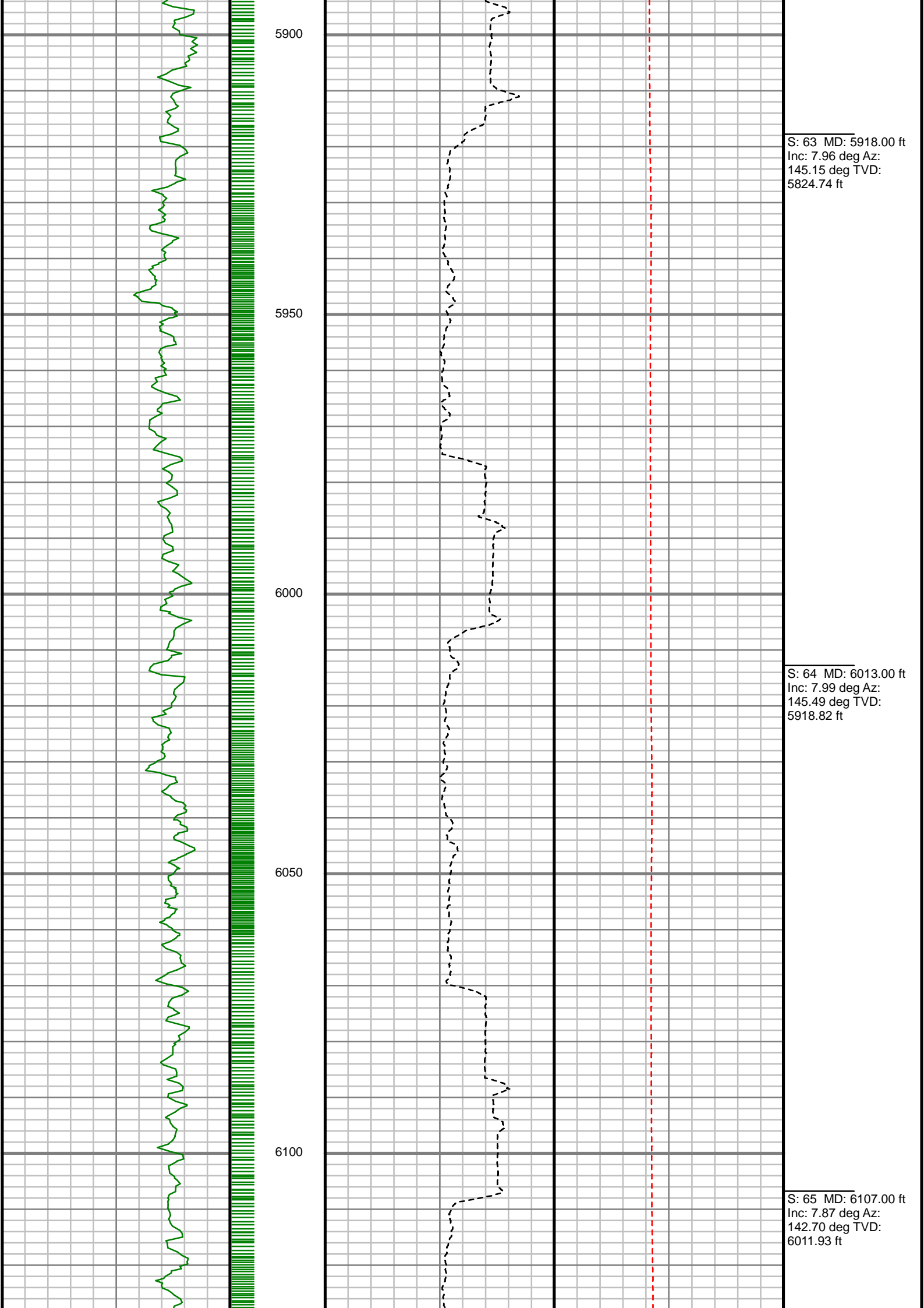


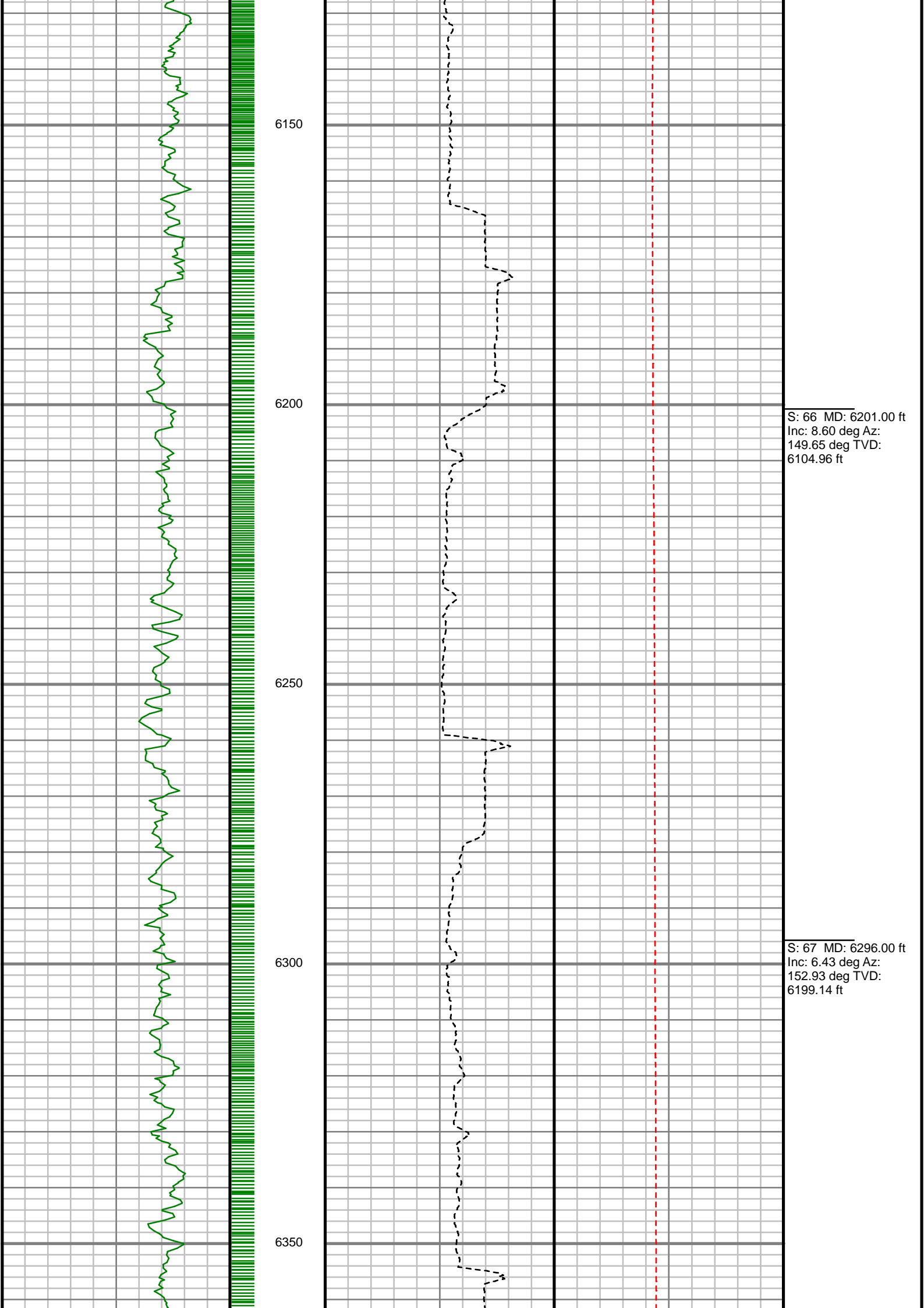
S: 58 MD: 5446.00 ft
Inc: 10.32 deg Az:
147.76 deg TVD:
5359.77 ft

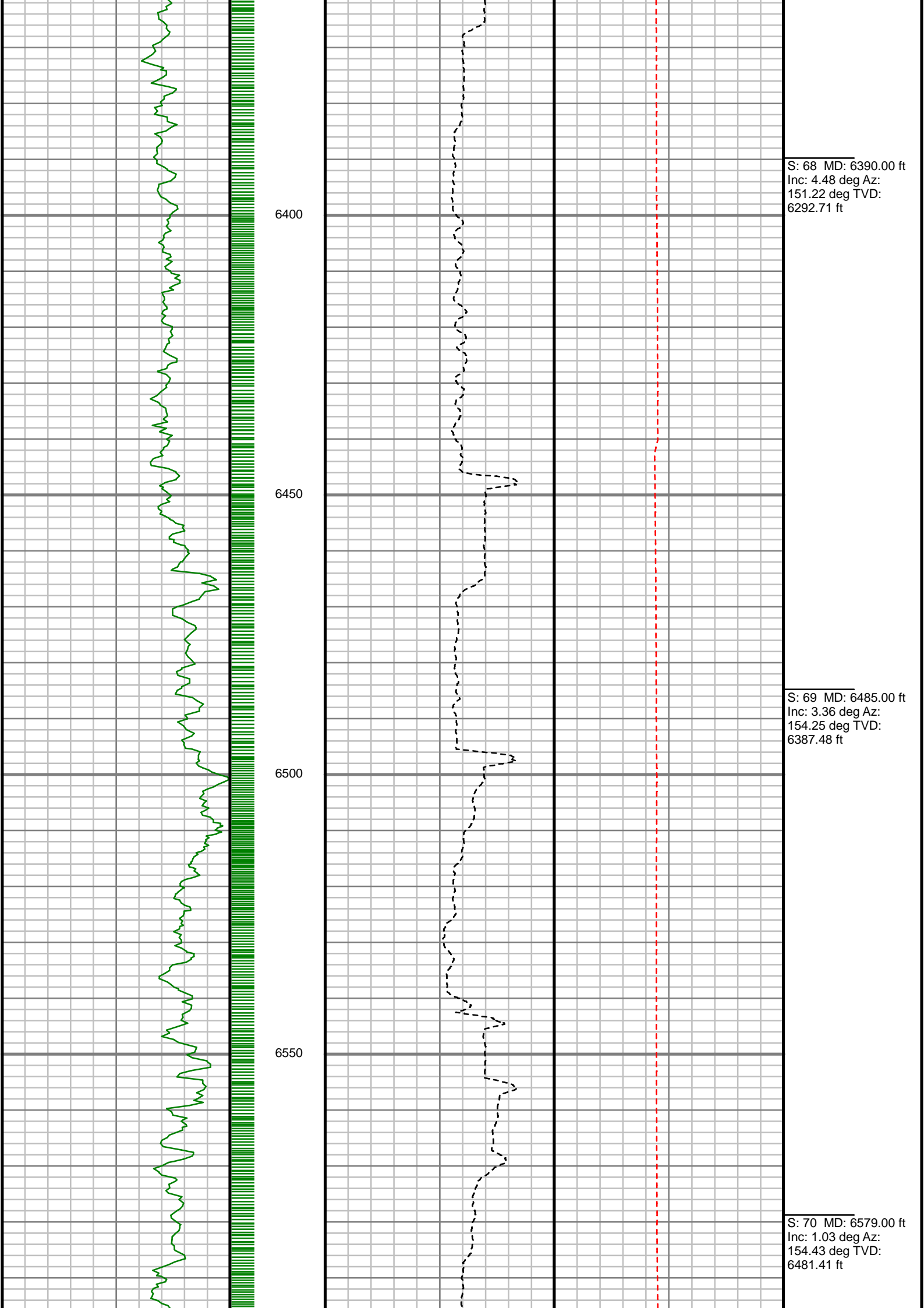
S: 59 MD: 5540.00 ft
Inc: 10.26 deg Az:
142.75 deg TVD:
5452.26 ft

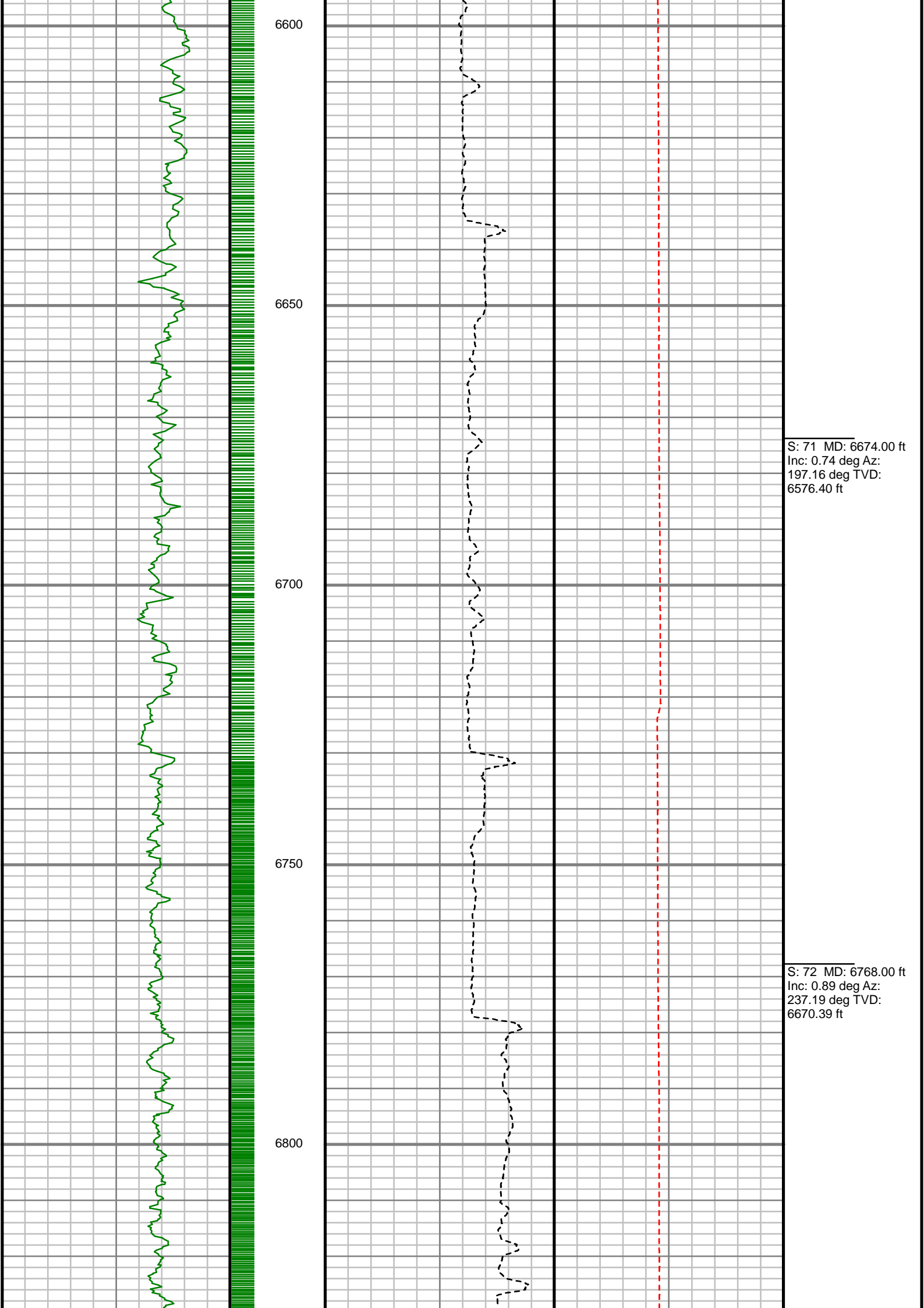
S: 60 MD: 5635.00 ft
Inc: 10.18 deg Az:
148.83 deg TVD:
5545.75 ft

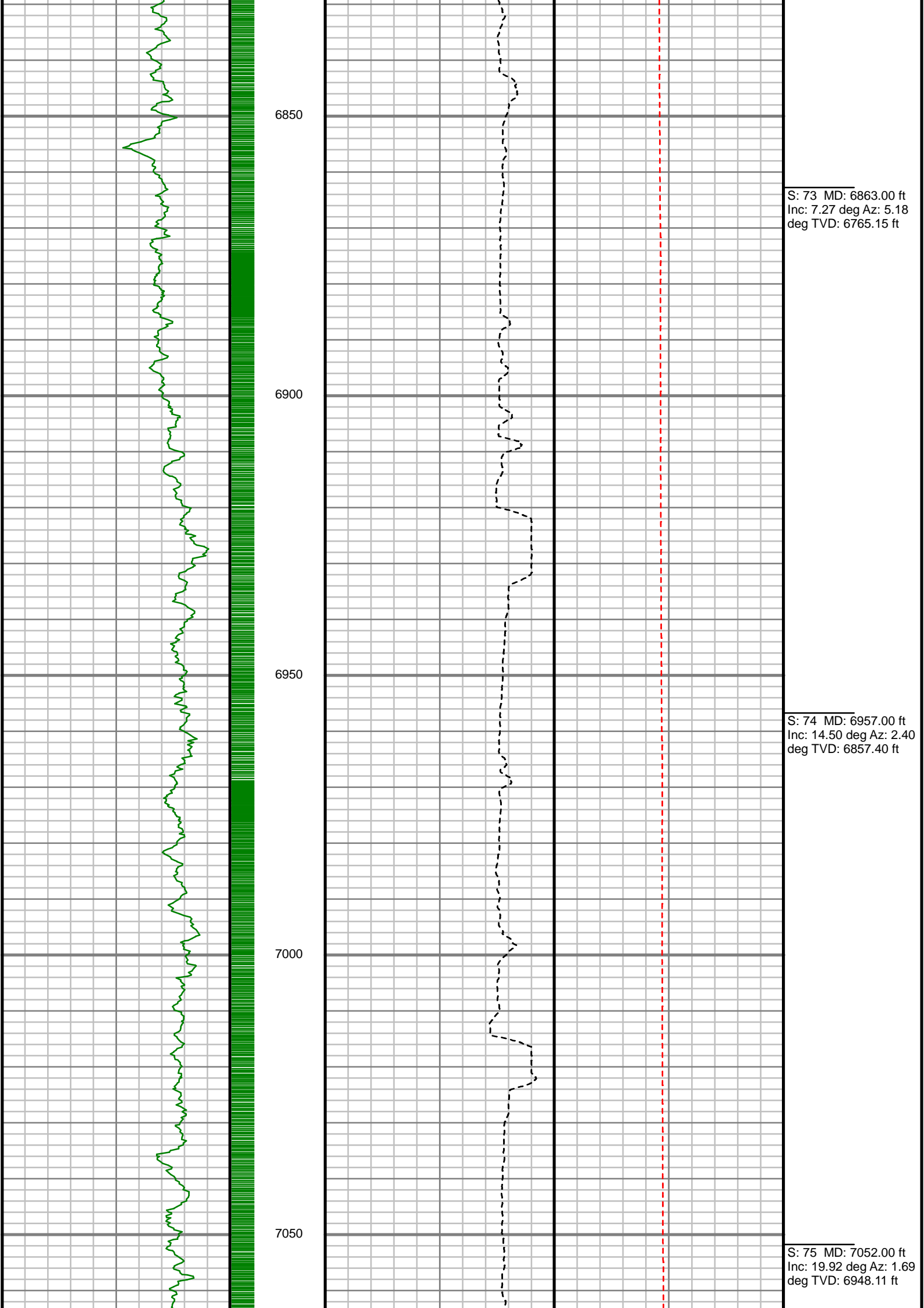


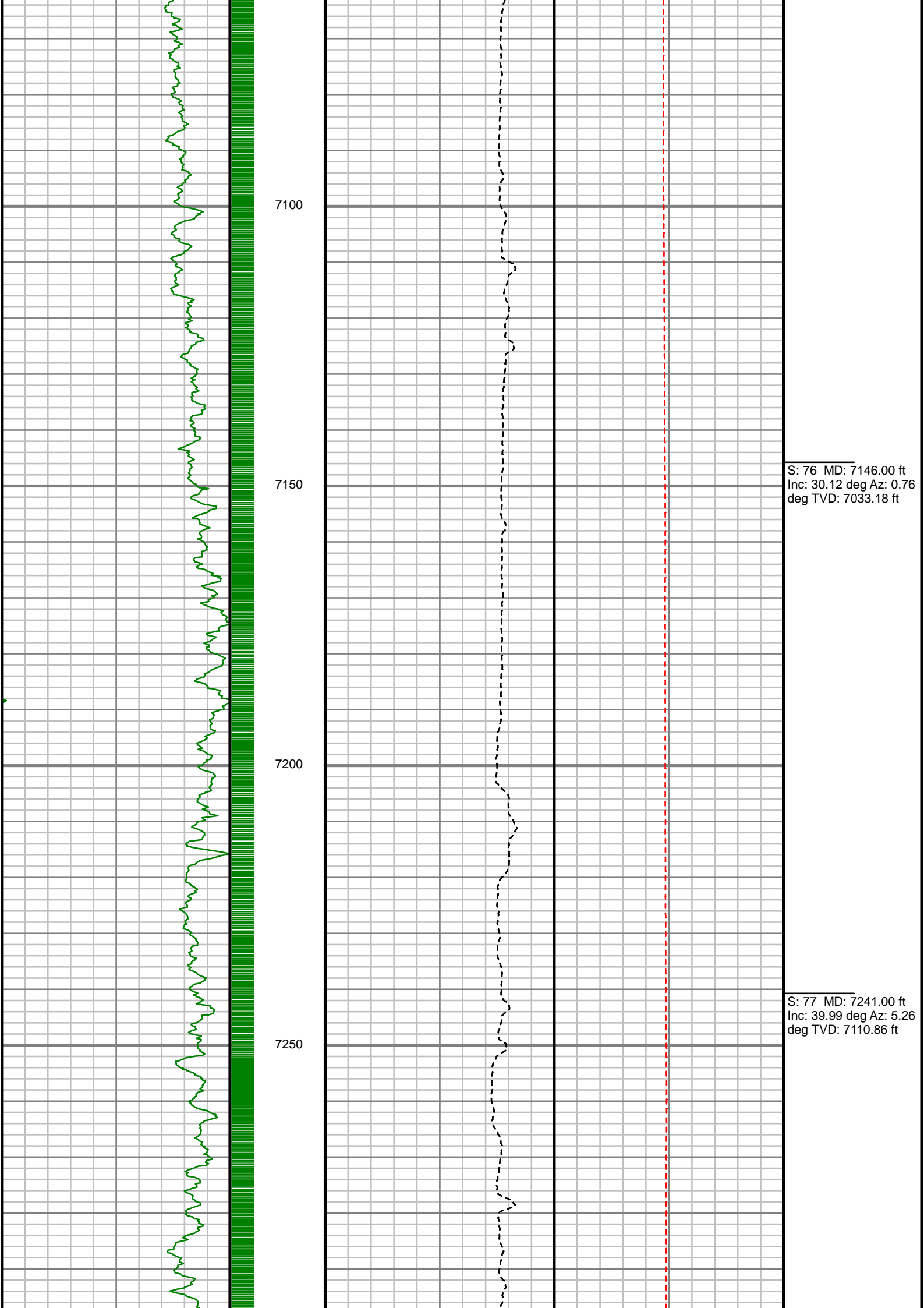


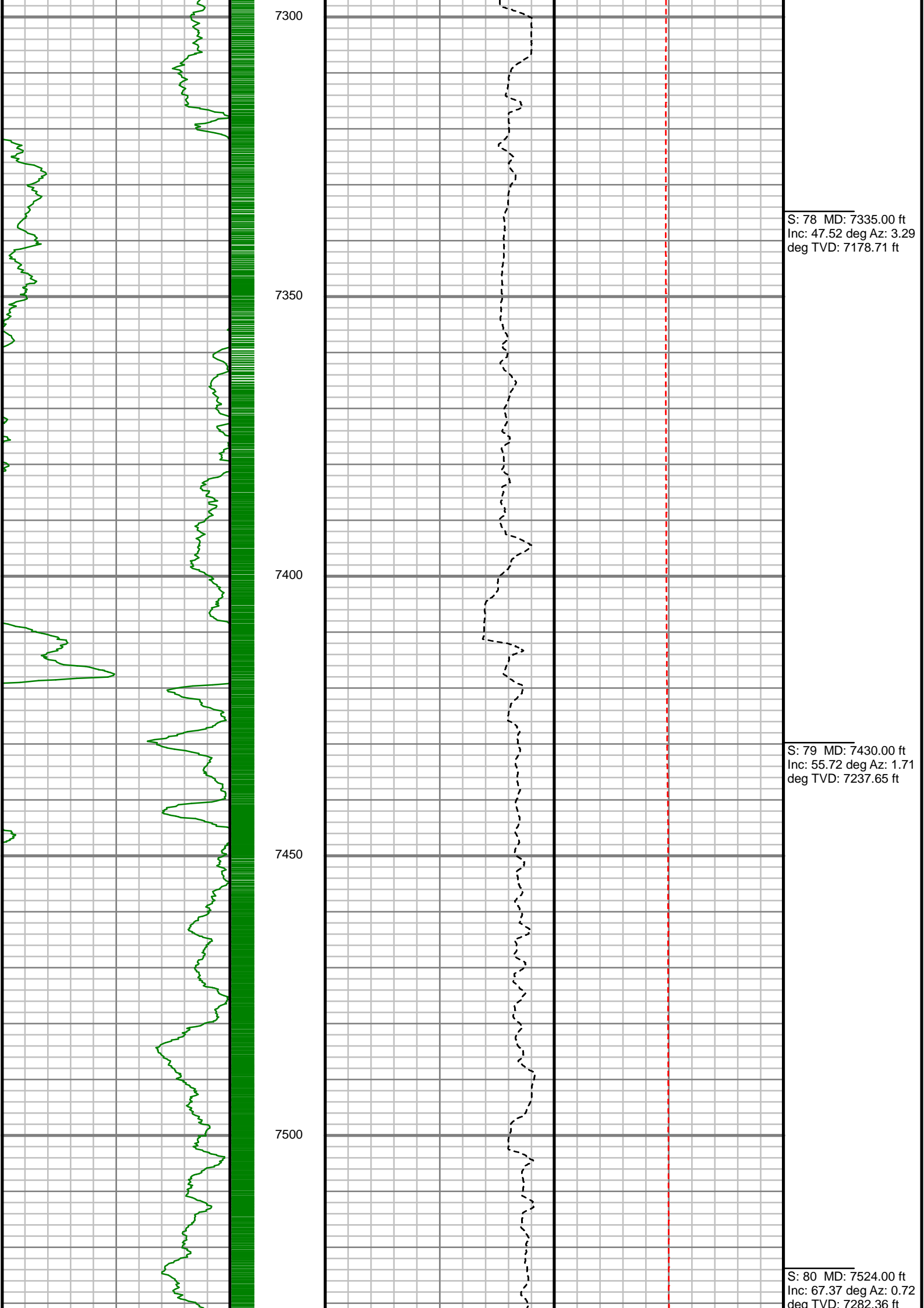


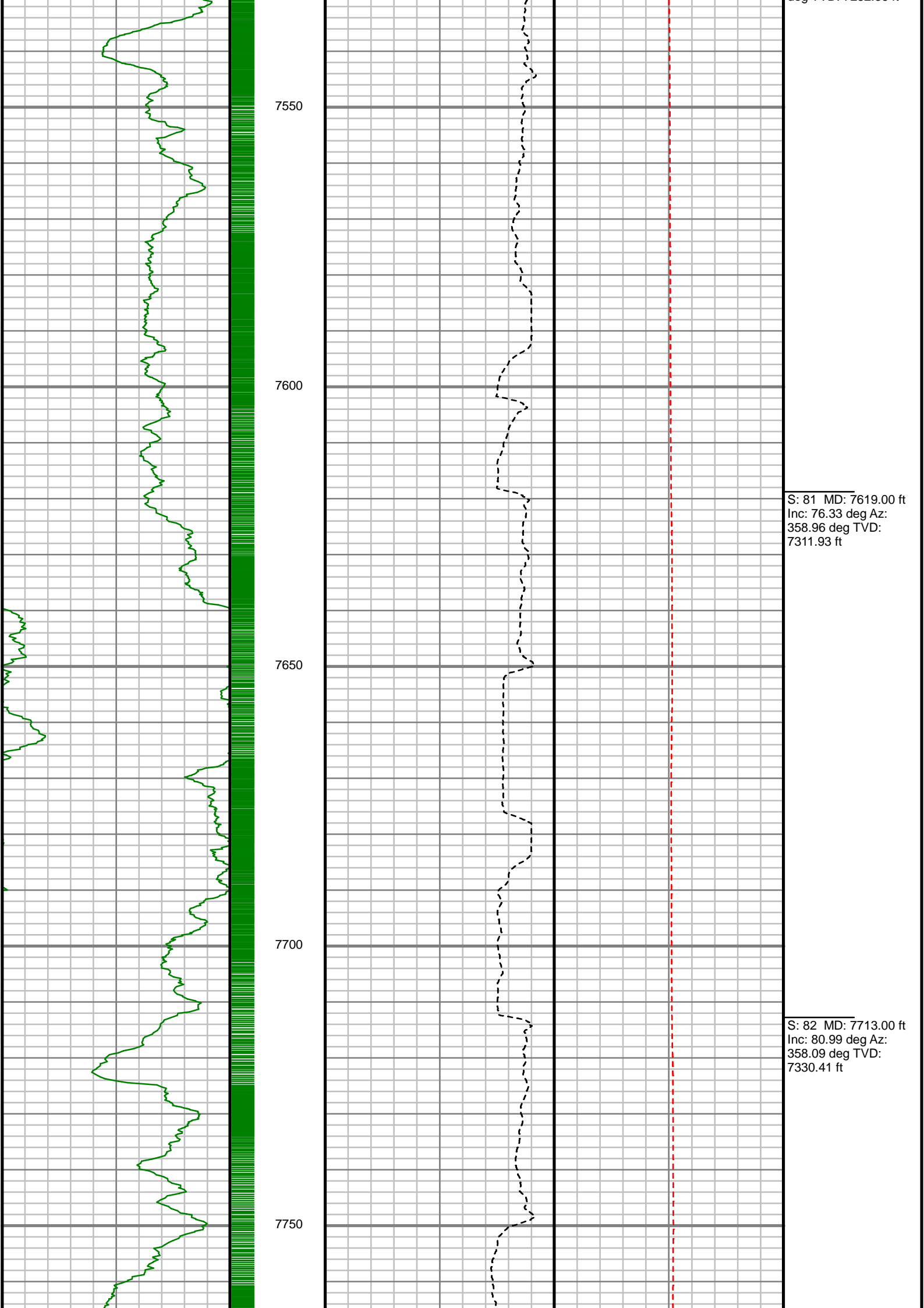


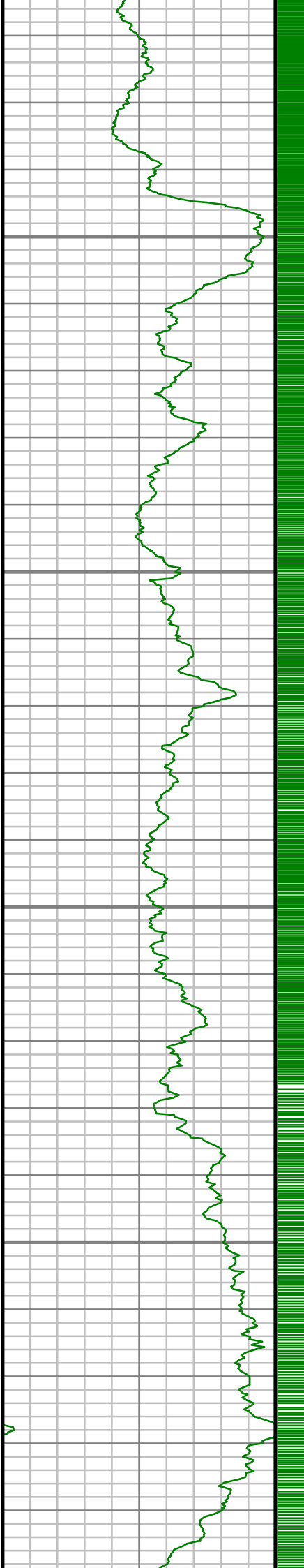










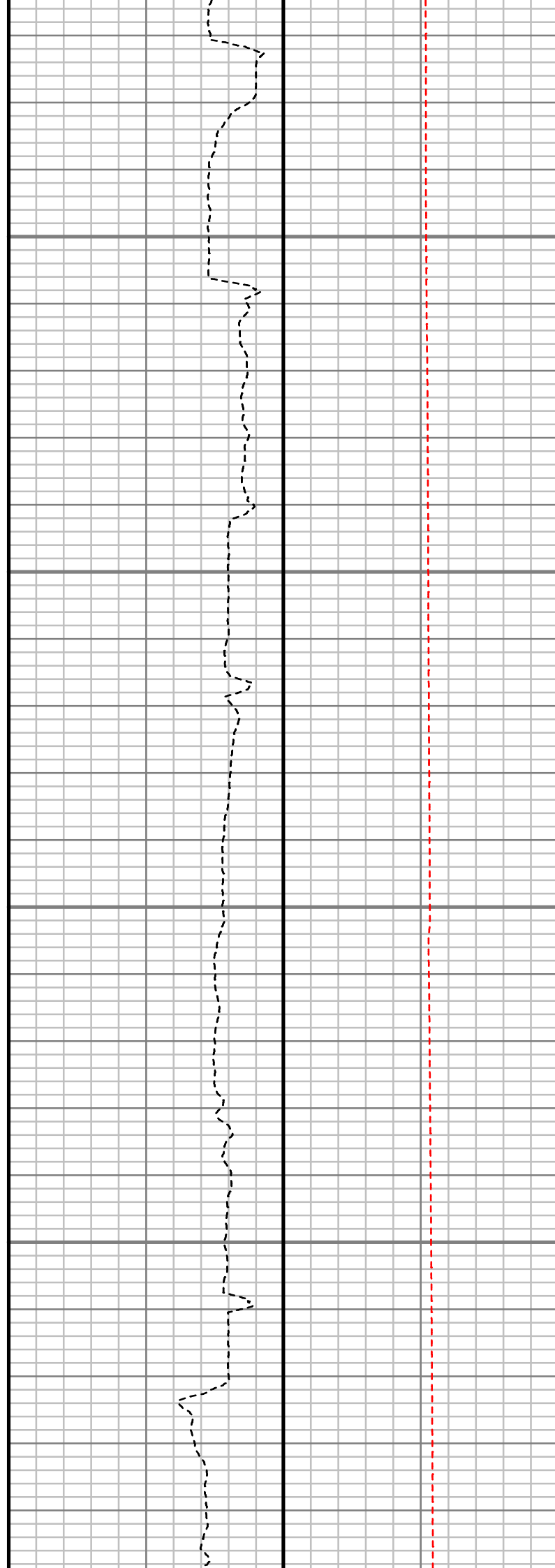


7800

7850

7900

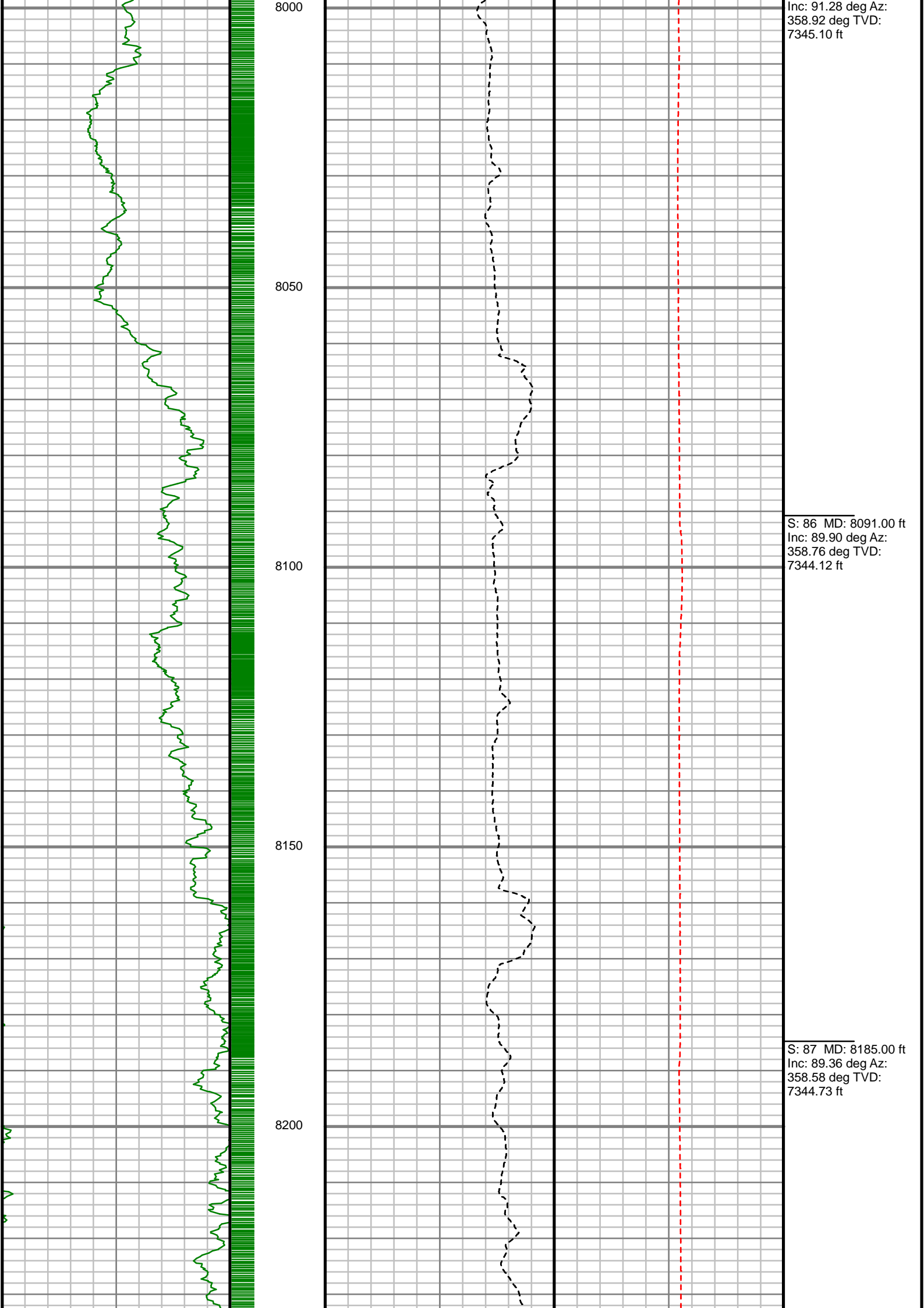
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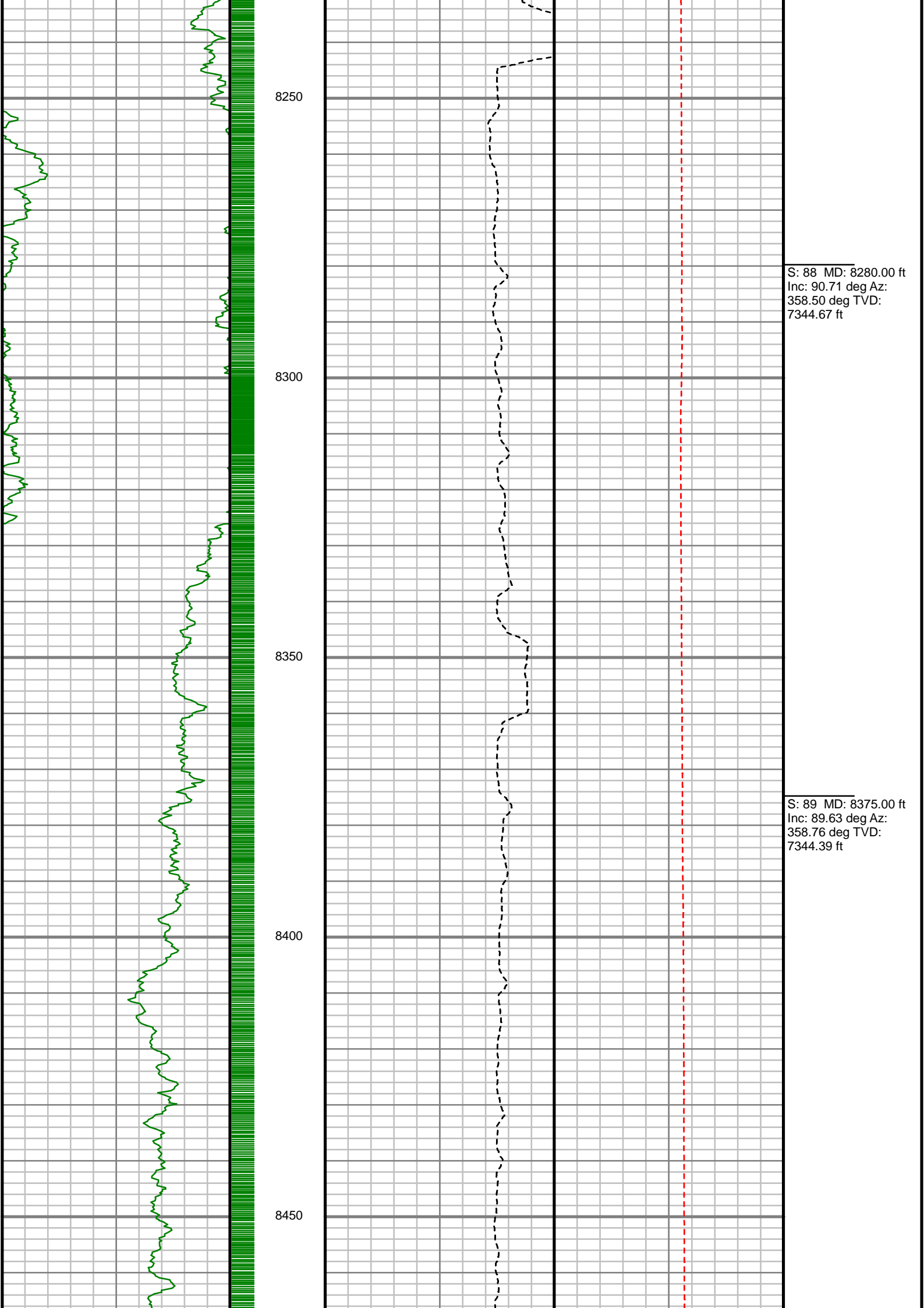


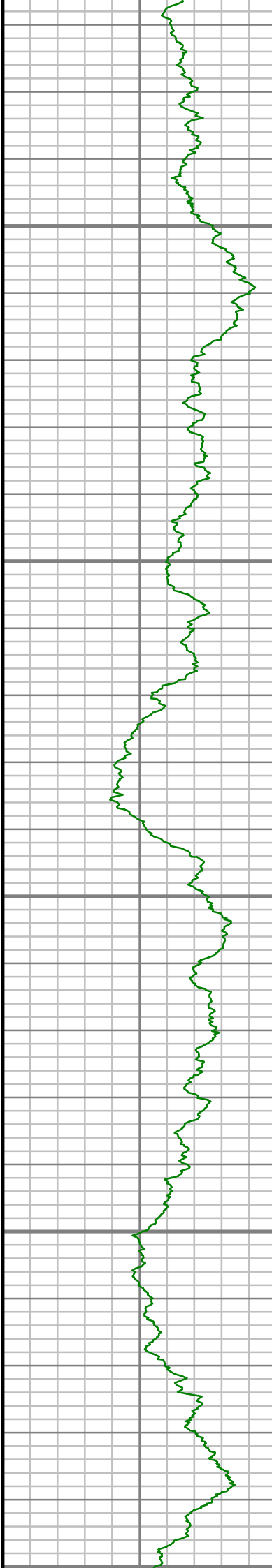
S: 83 MD: 7807.00 ft
Inc: 85.43 deg Az:
357.61 deg TVD:
7341.53 ft

S: 84 MD: 7902.00 ft
Inc: 89.50 deg Az:
358.99 deg TVD:
7345.73 ft

S: 85 MD: 7996.00 ft







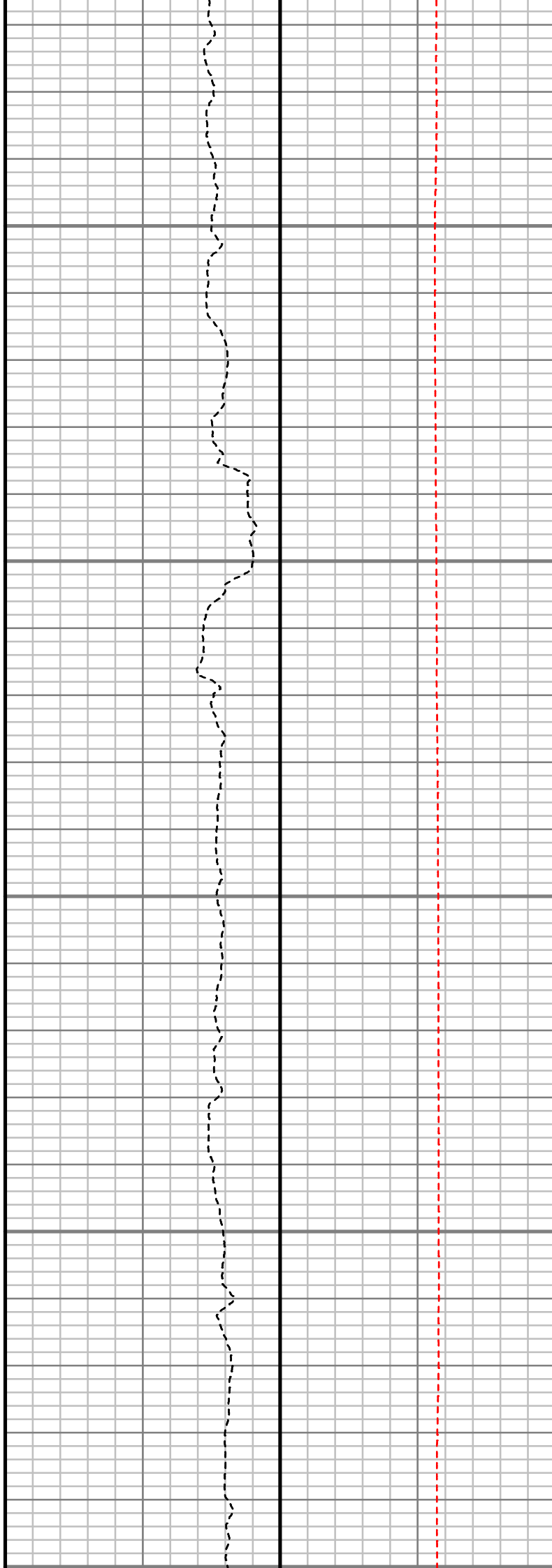
8500

8550

8600

8650

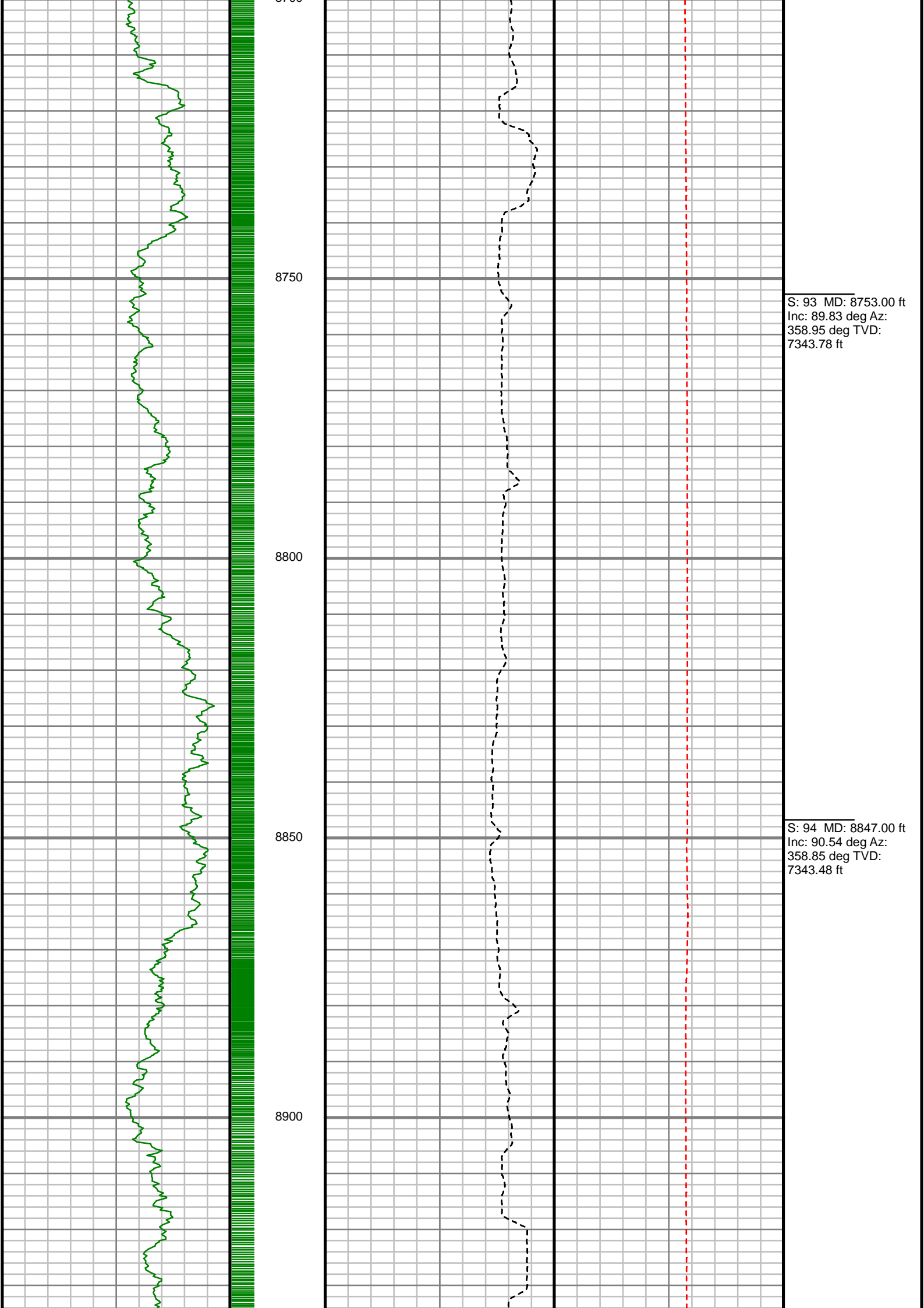
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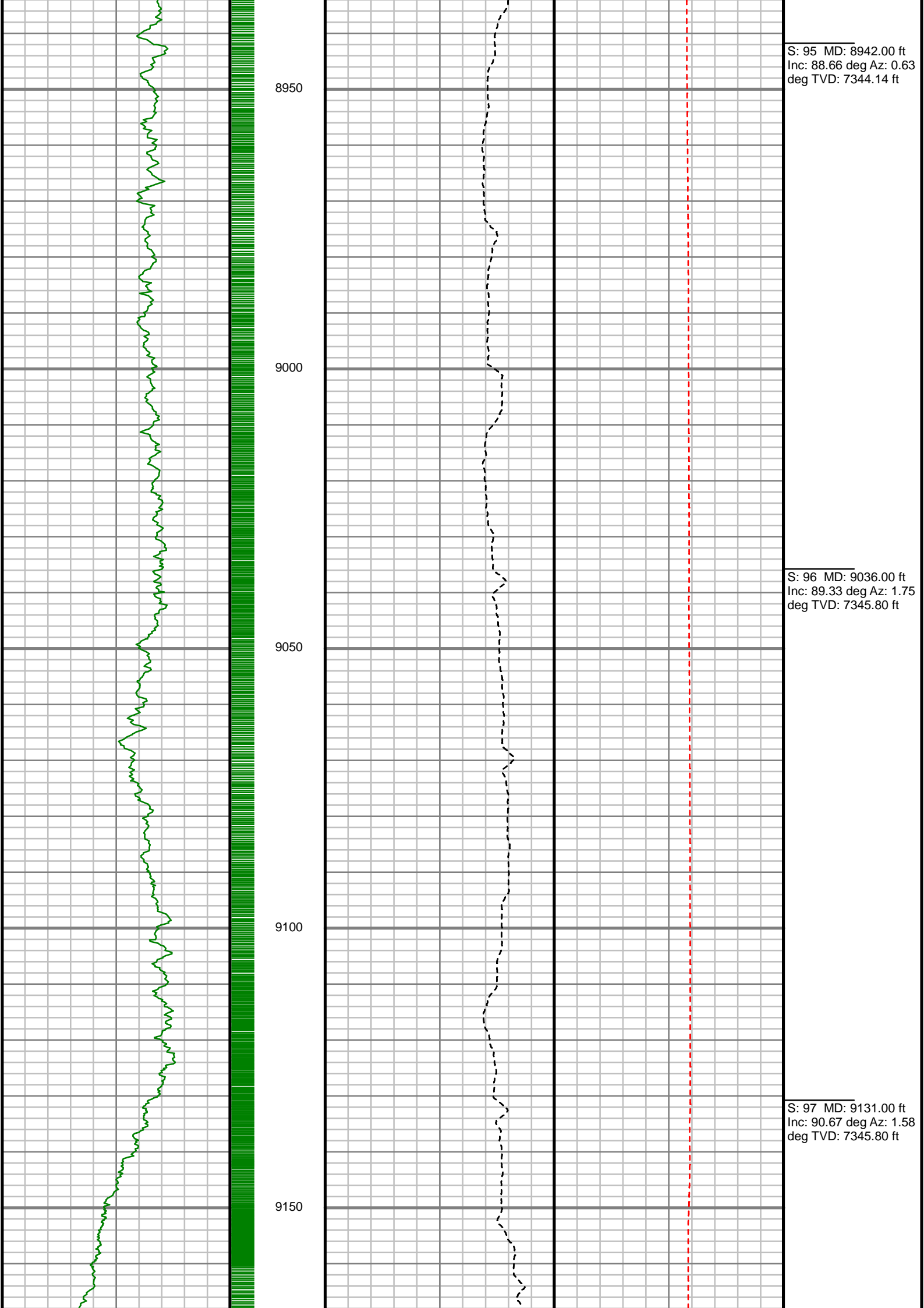


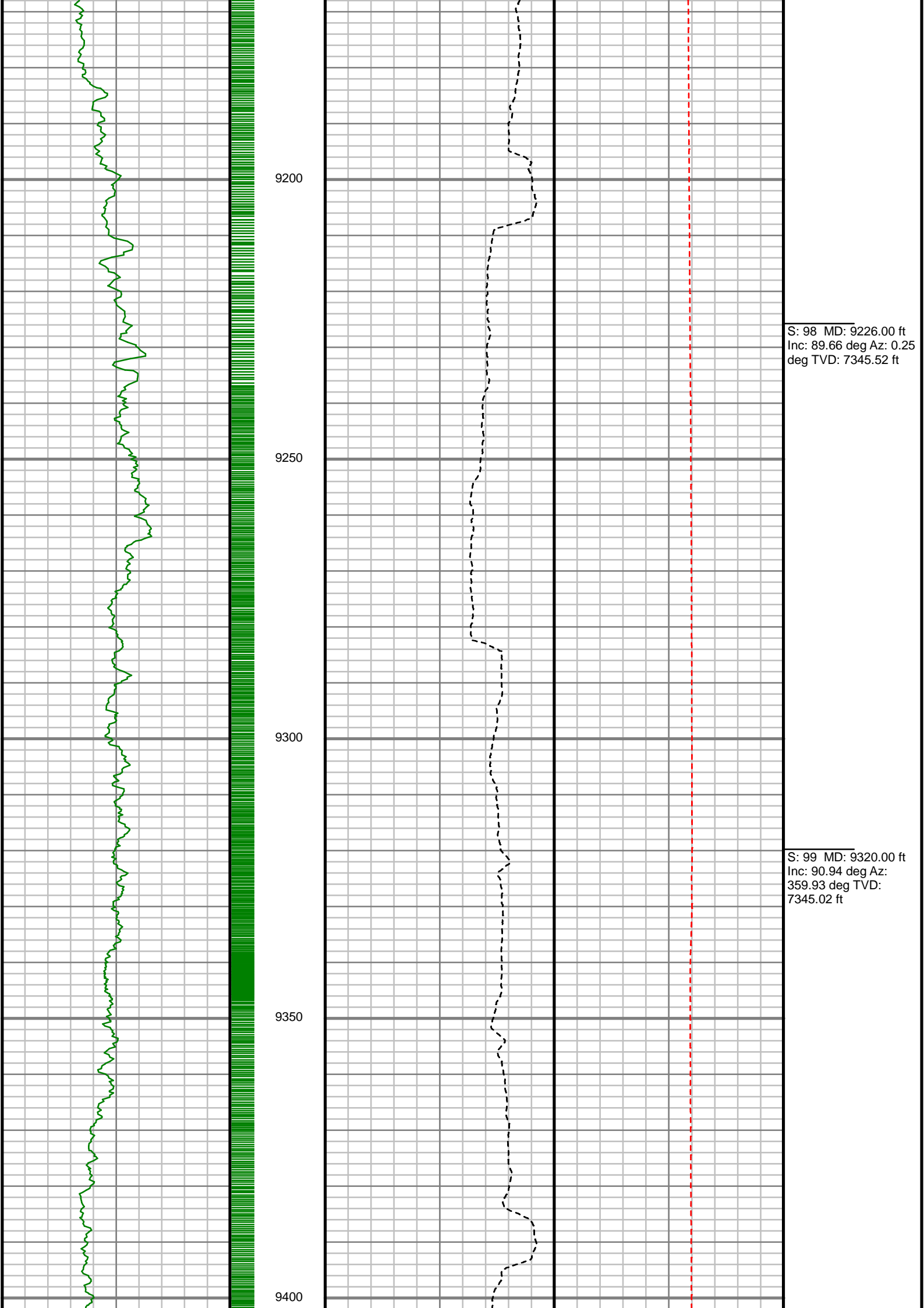
S: 90 MD: 8469.00 ft
Inc: 90.81 deg Az:
359.06 deg TVD:
7344.03 ft

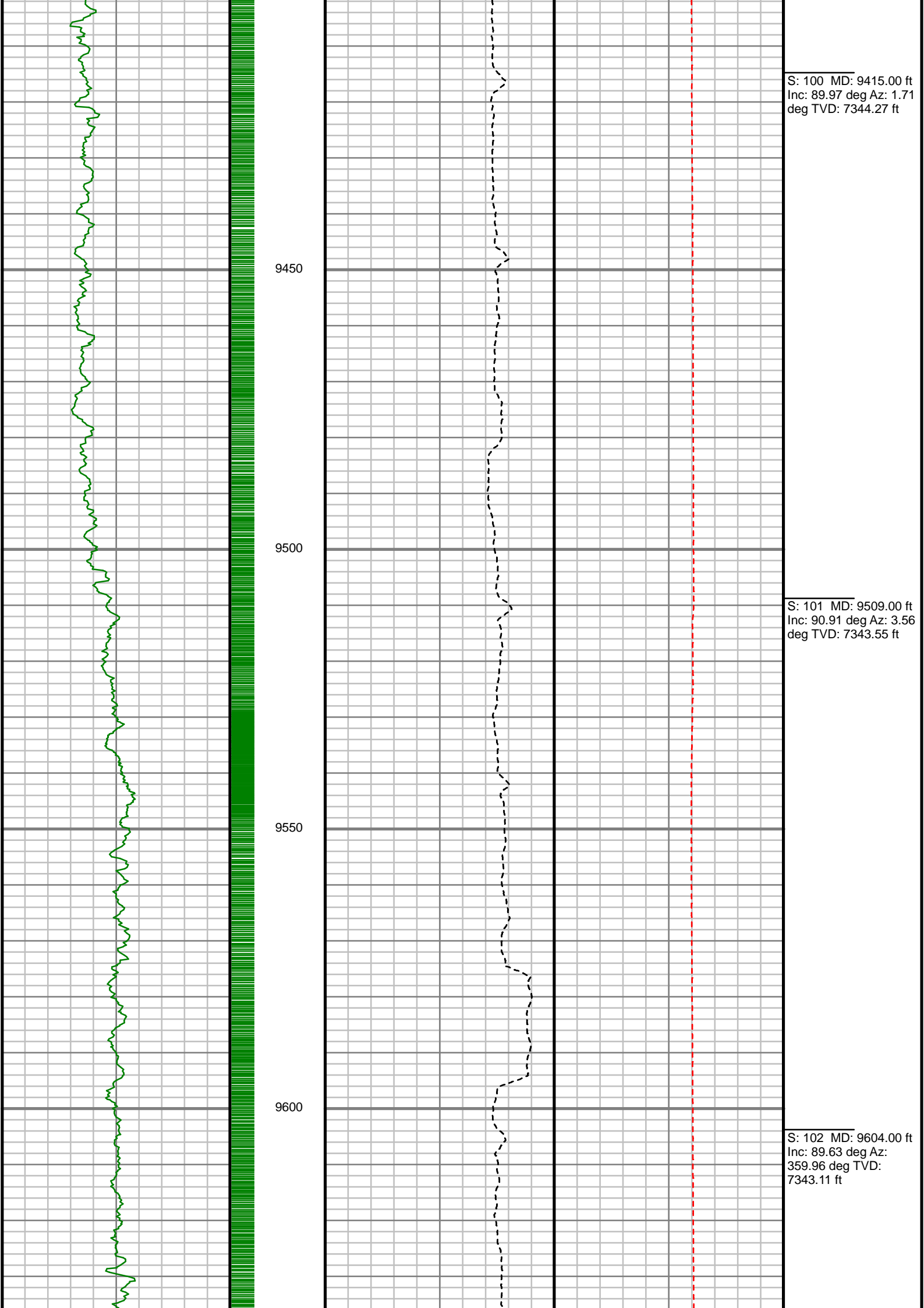
S: 91 MD: 8564.00 ft
Inc: 89.40 deg Az:
359.03 deg TVD:
7343.87 ft

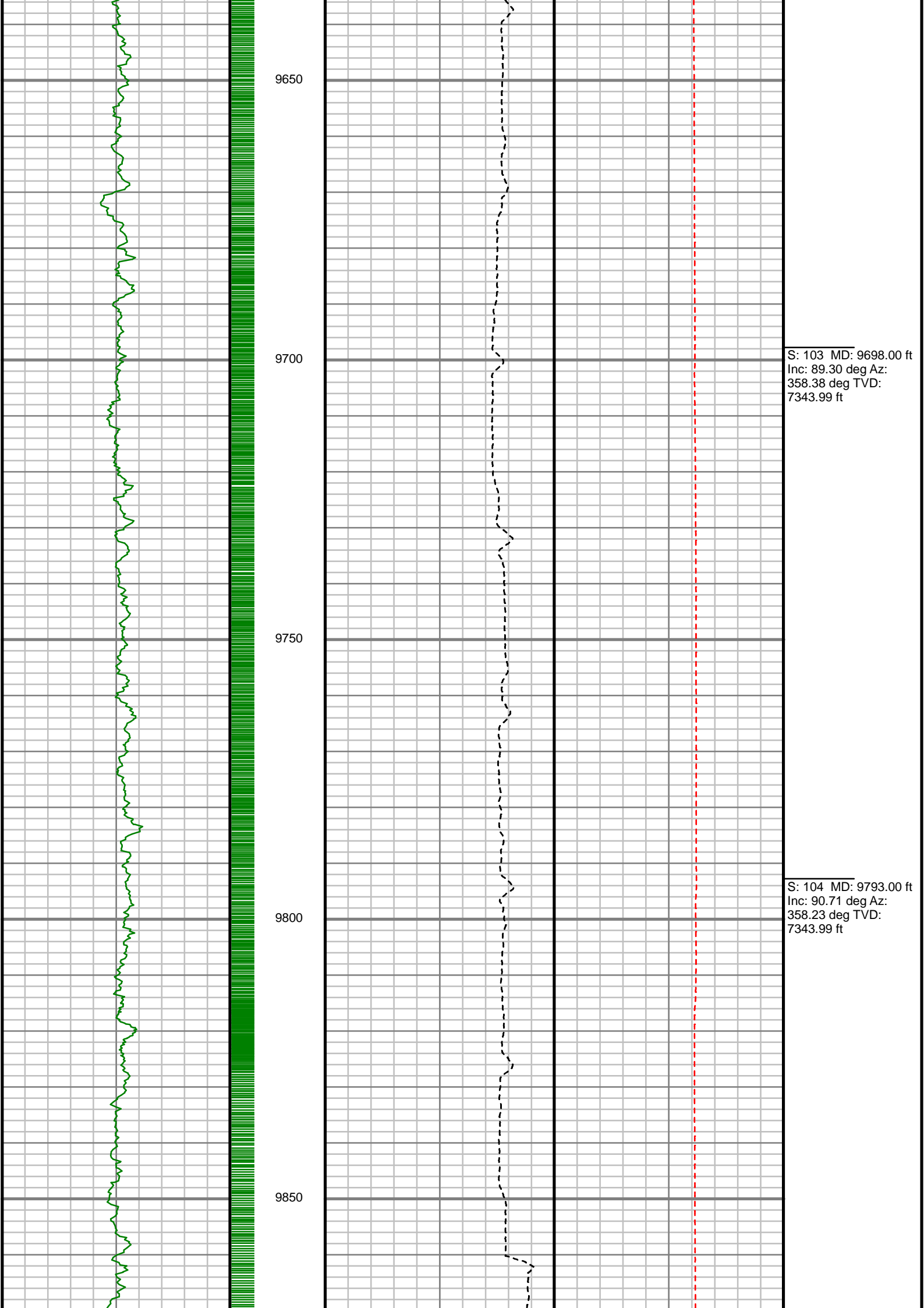
S: 92 MD: 8658.00 ft
Inc: 90.44 deg Az:
358.80 deg TVD:
7344.00 ft

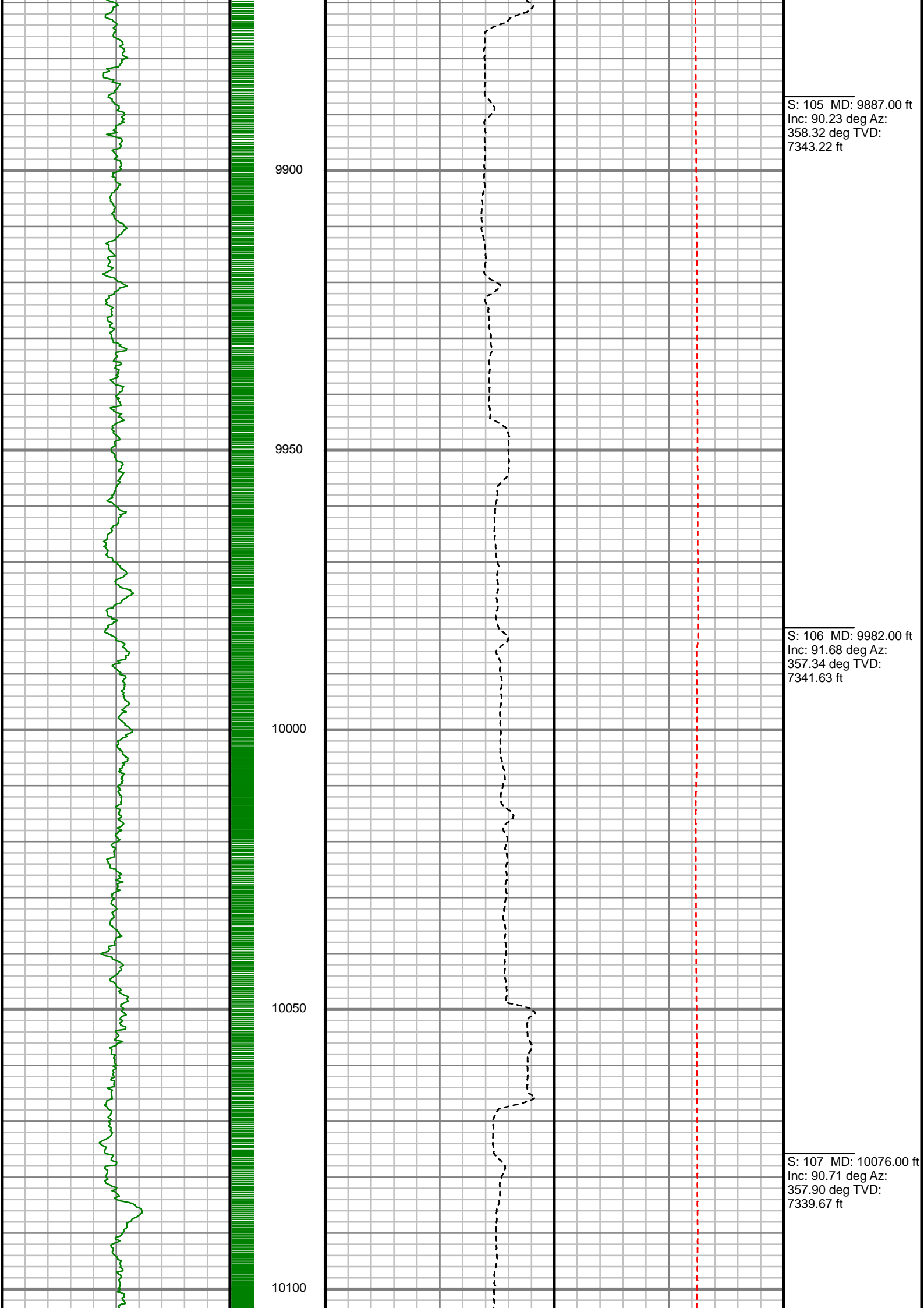


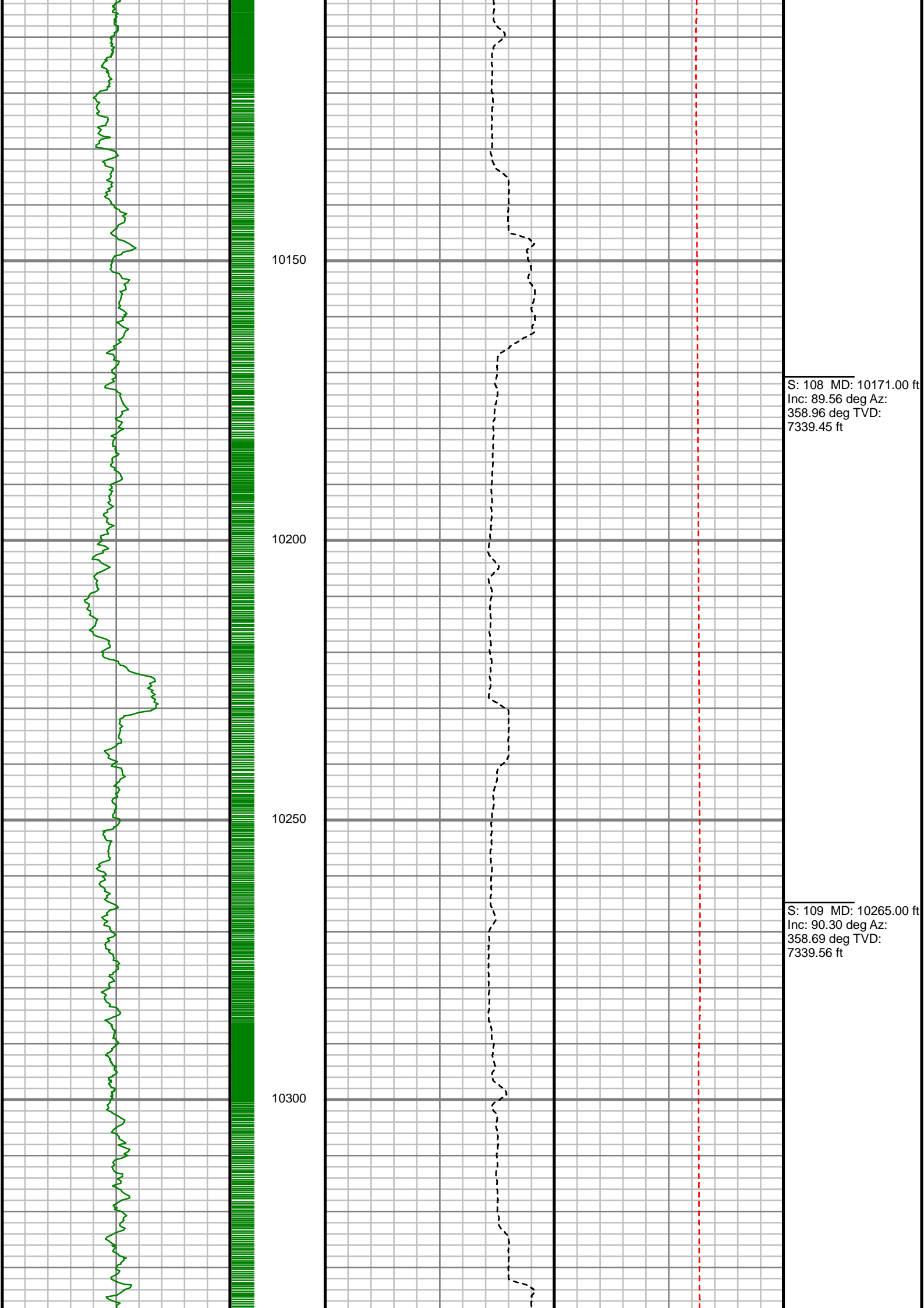


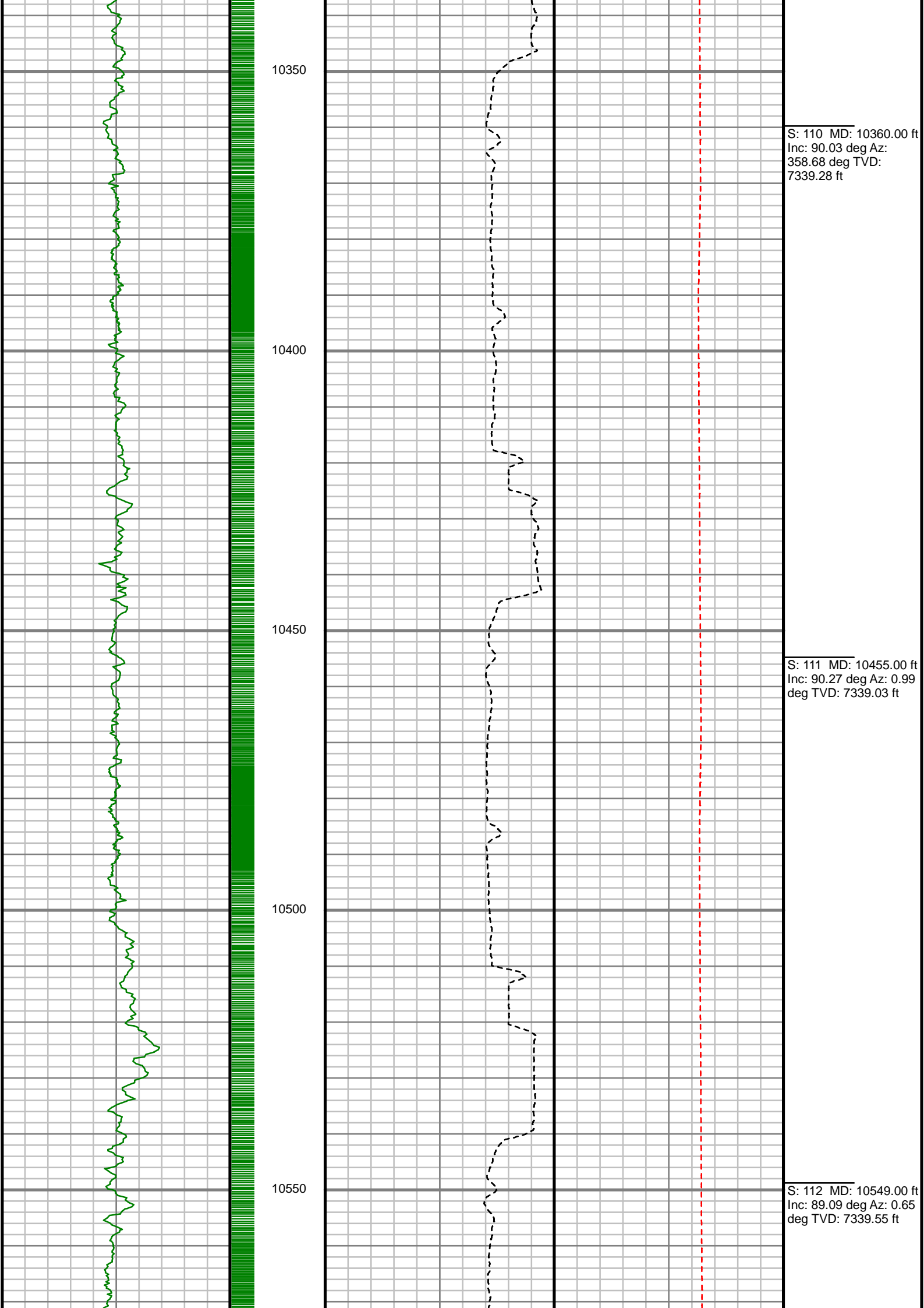


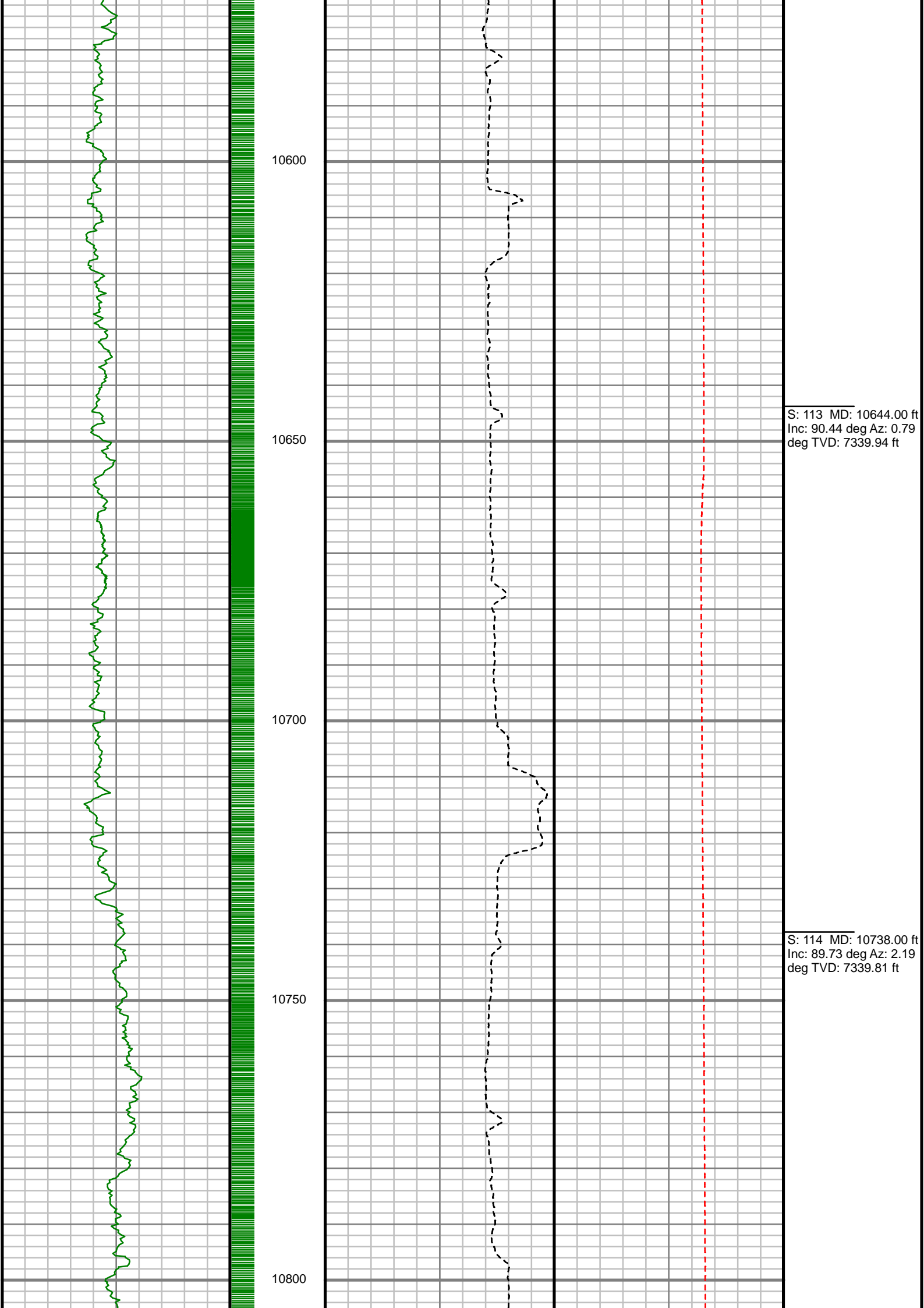


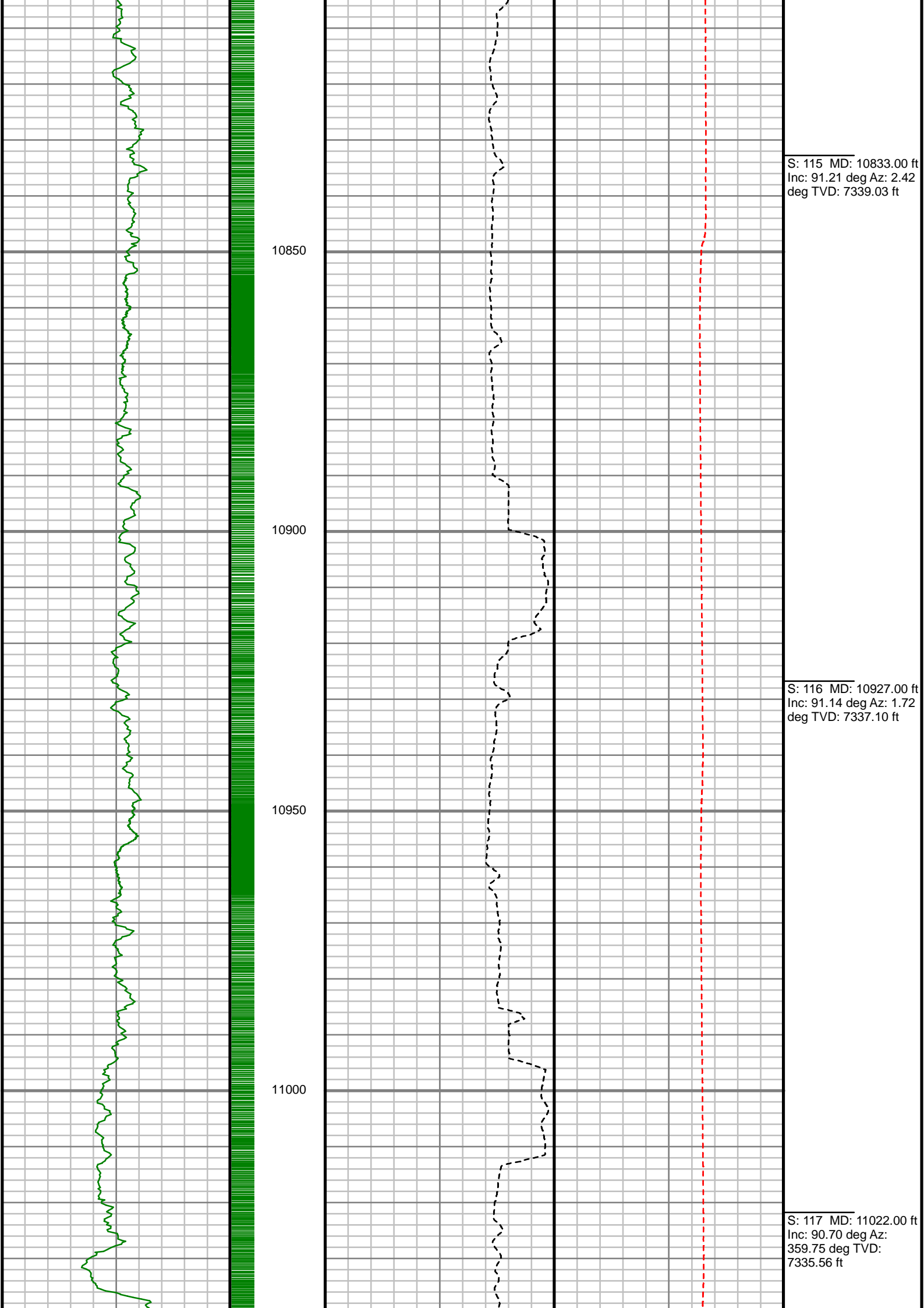


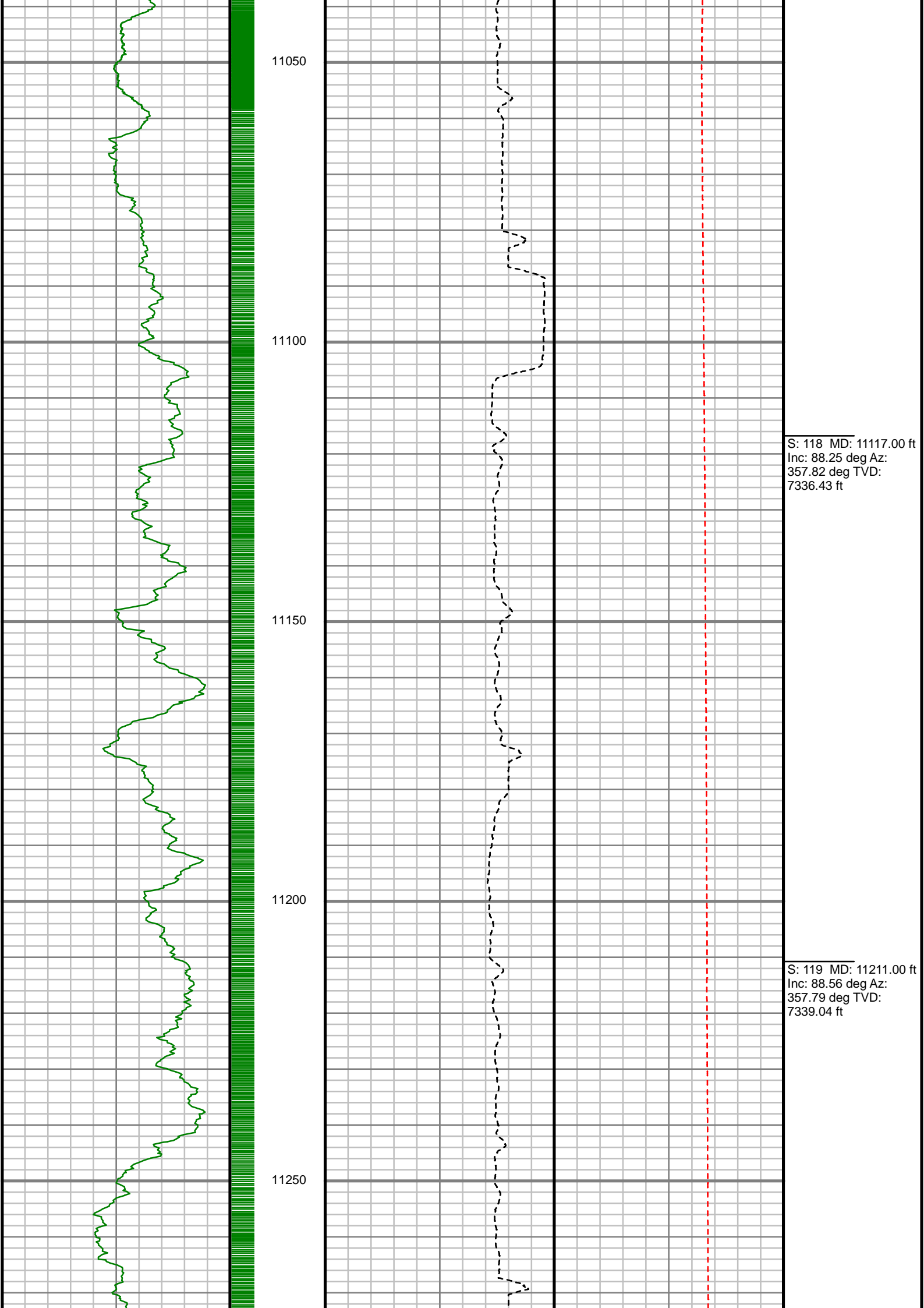


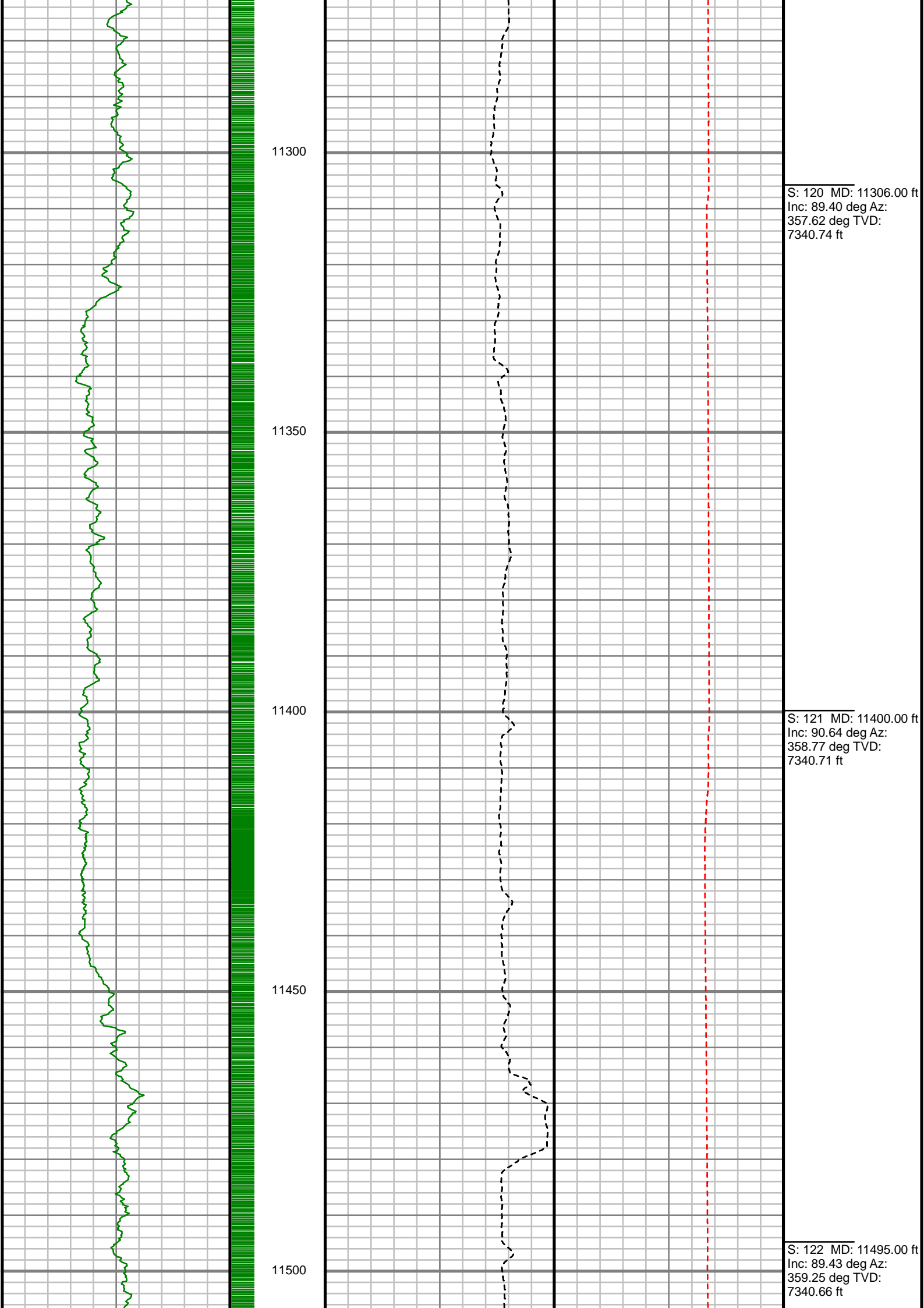


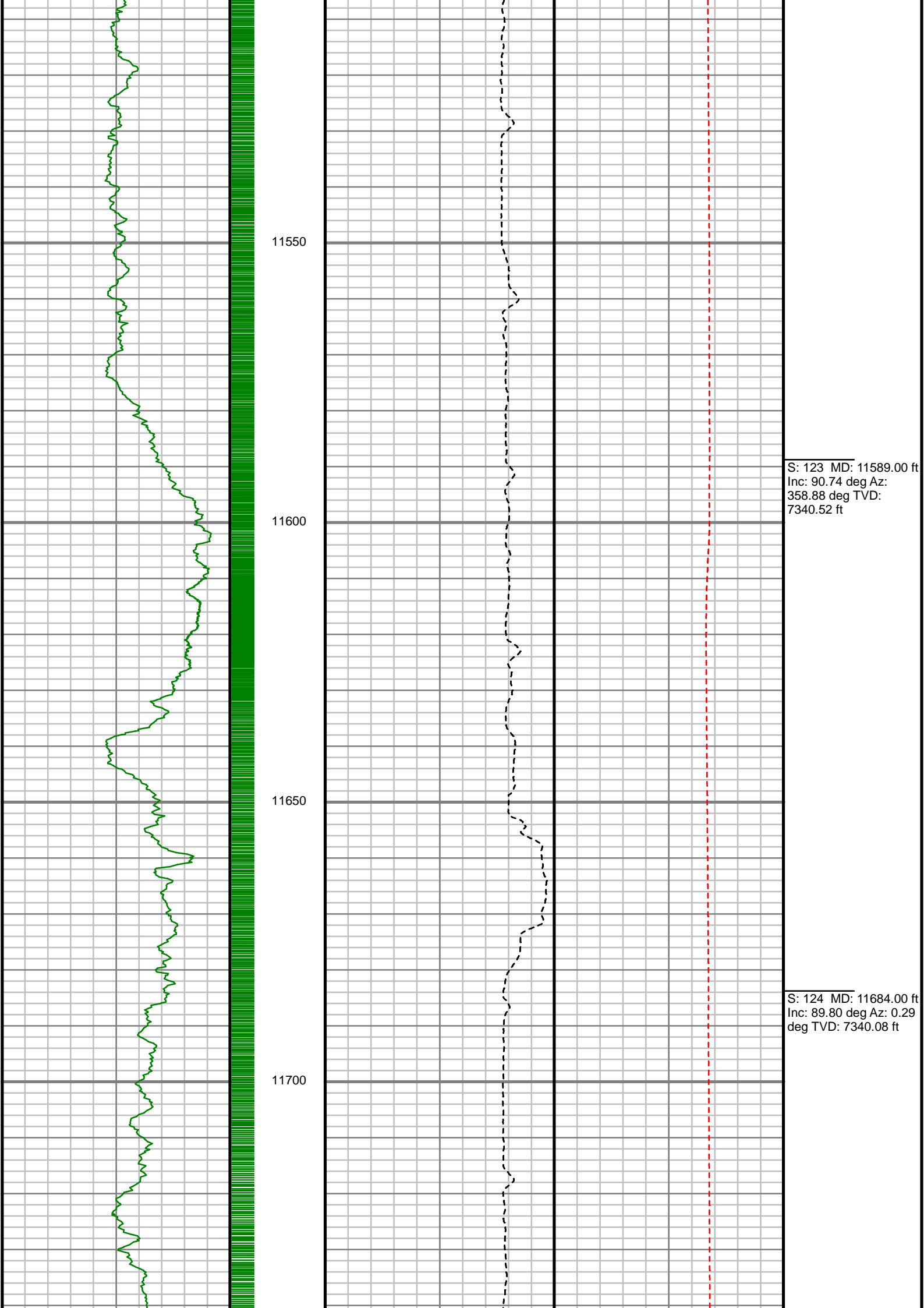


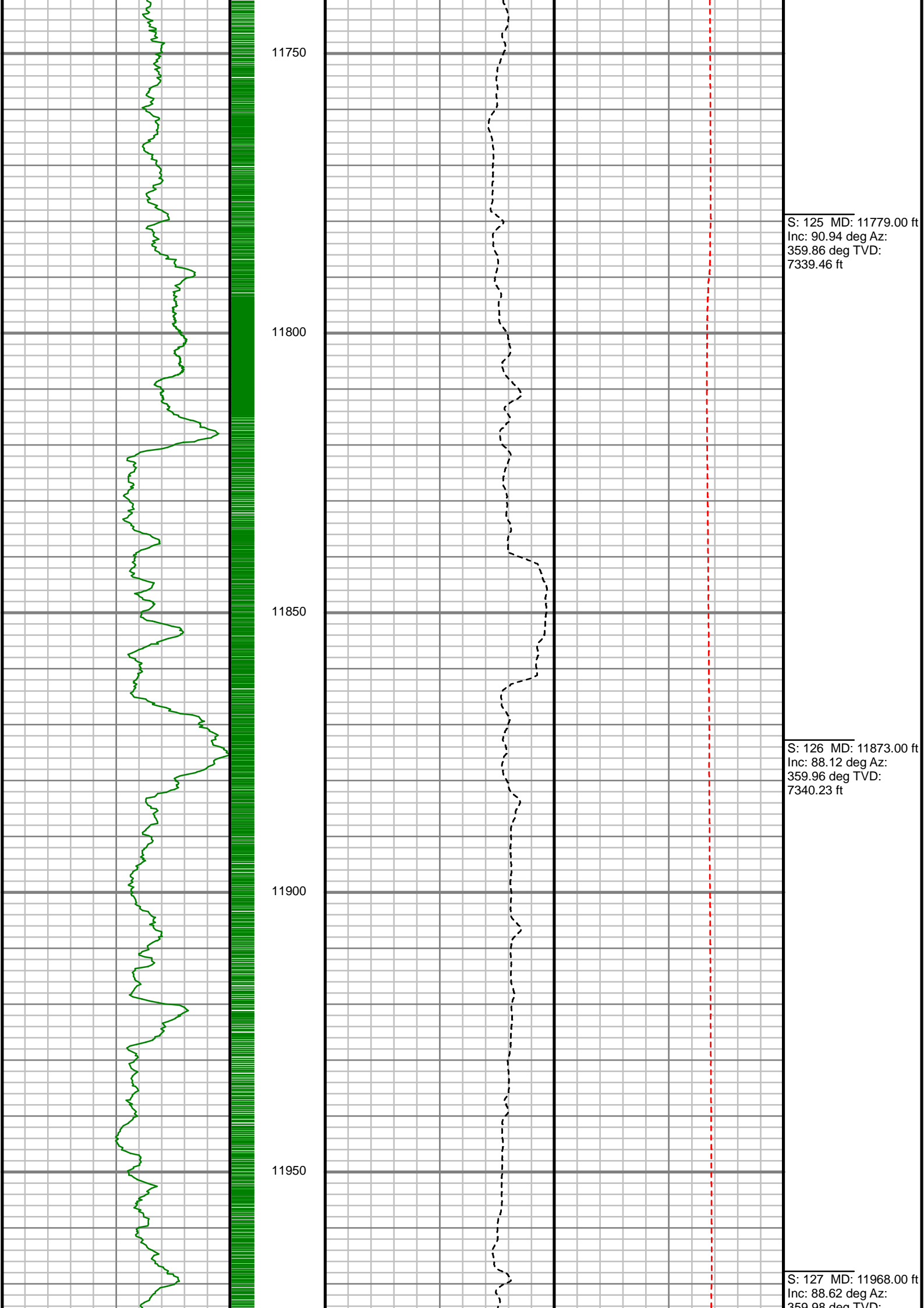


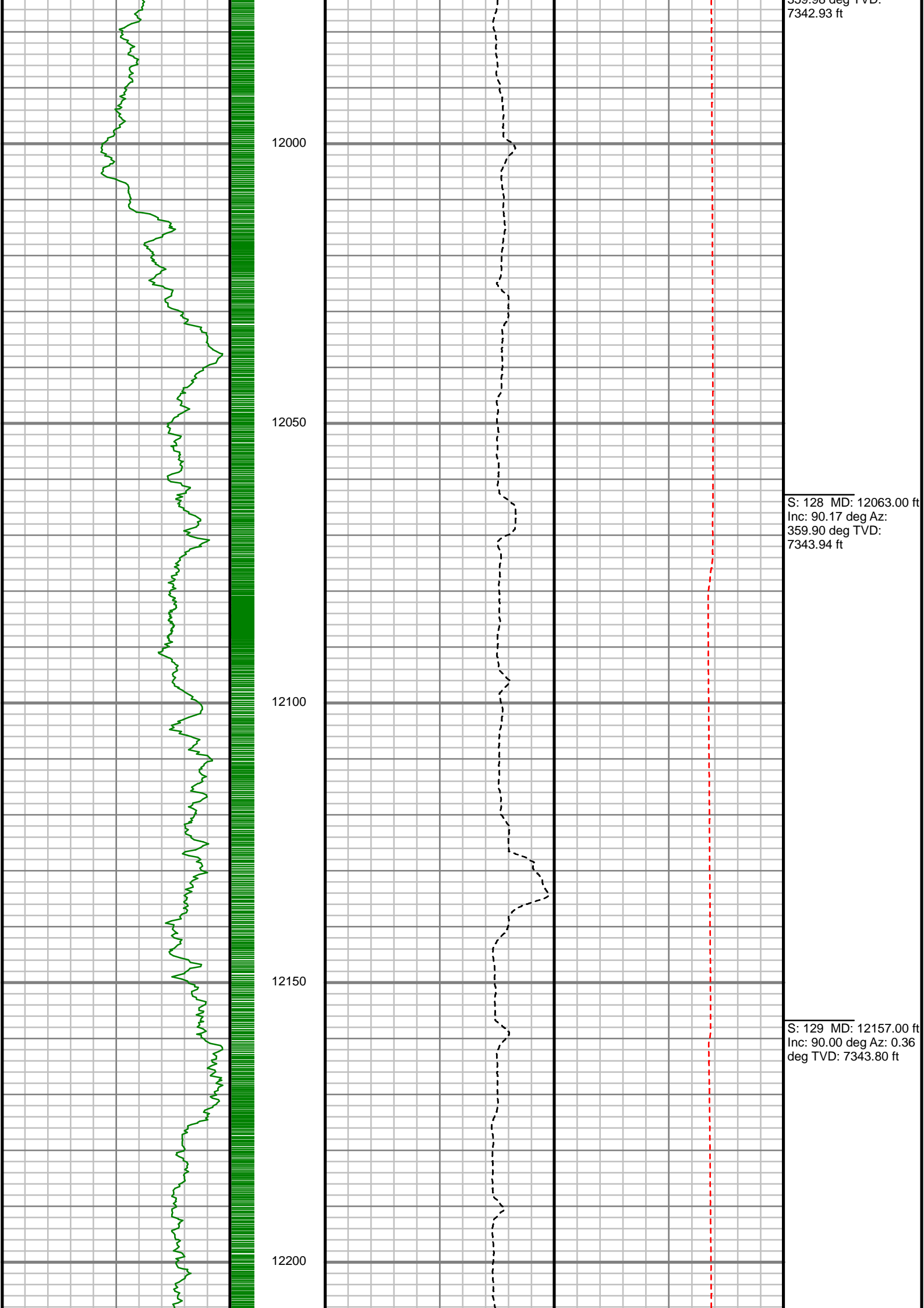


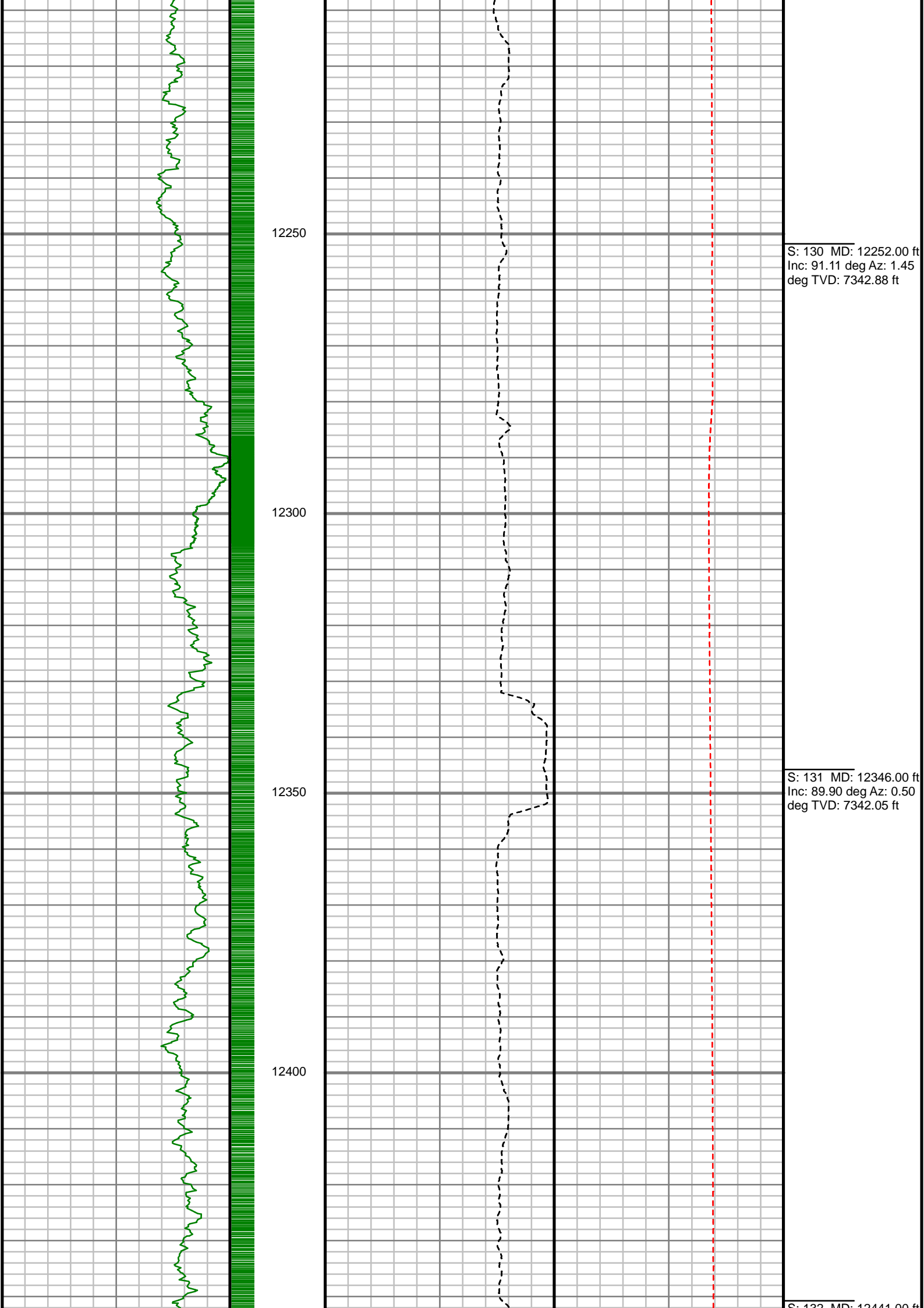


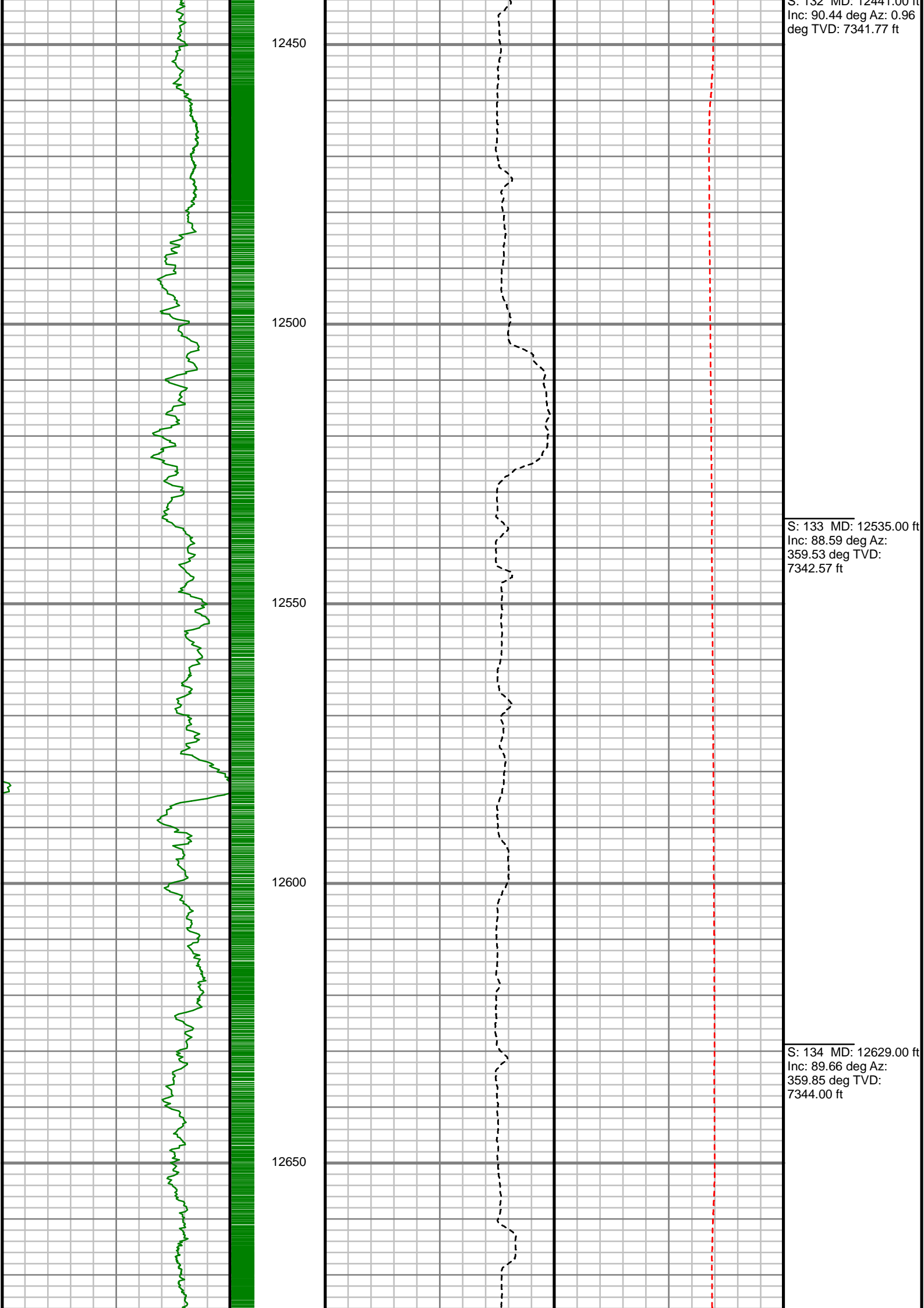


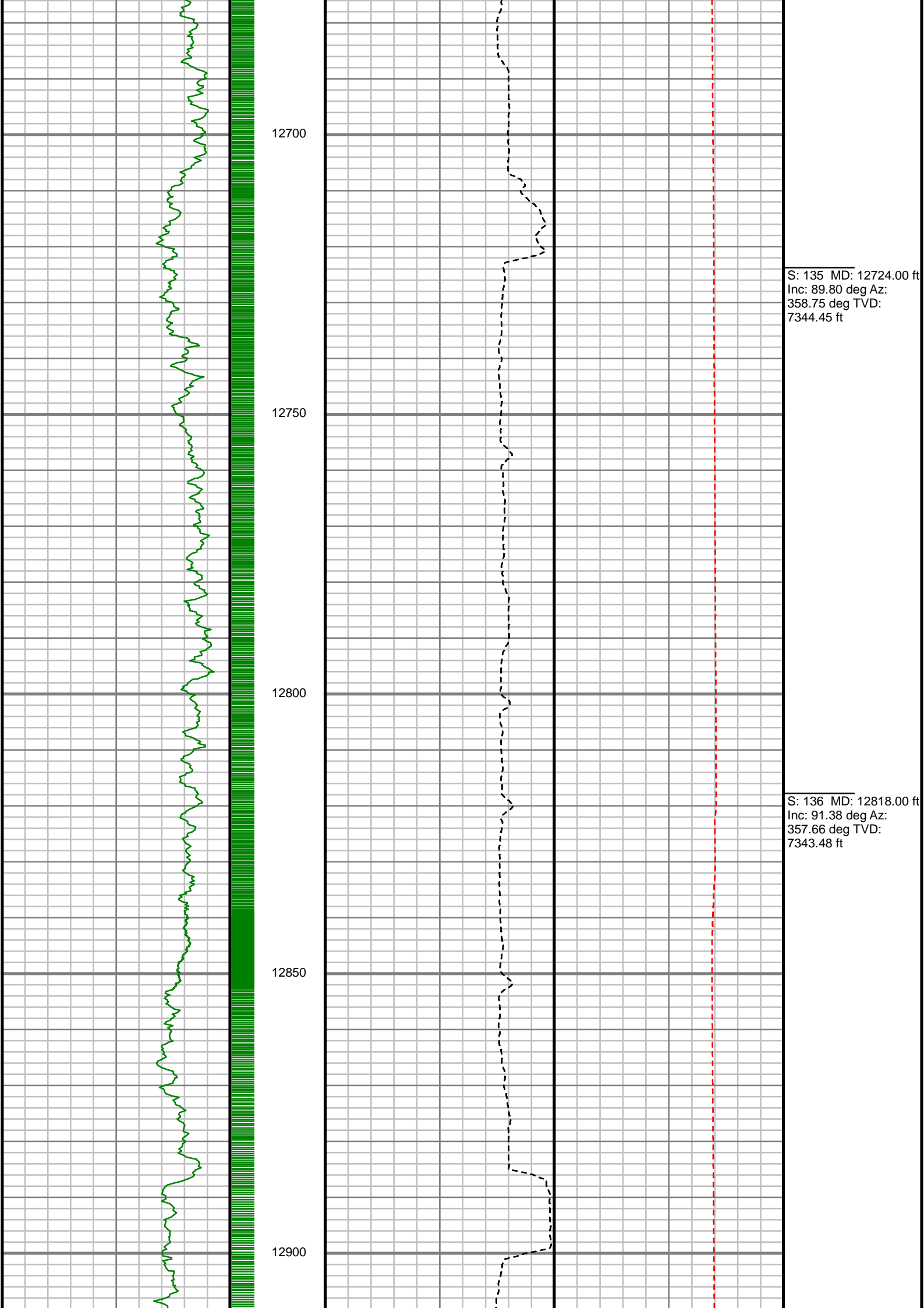


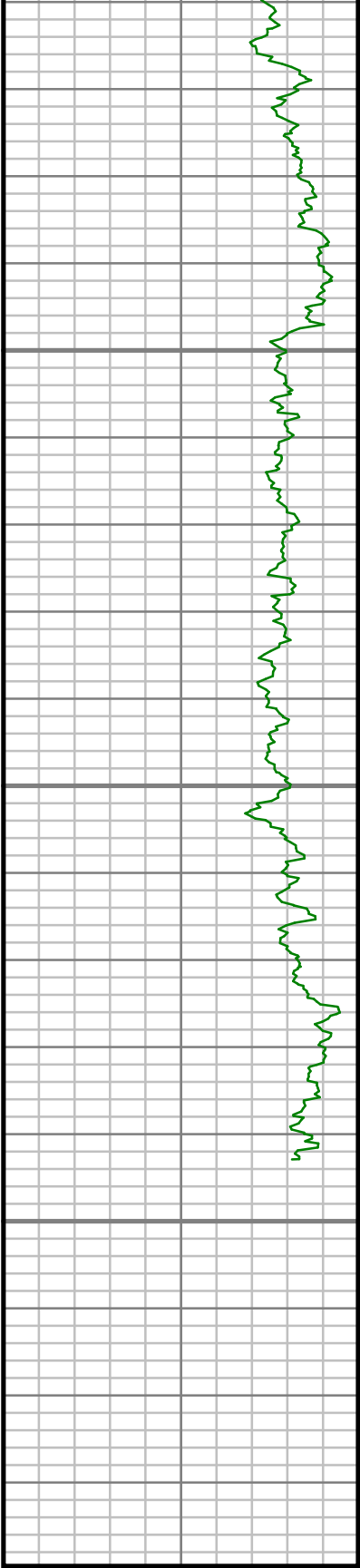






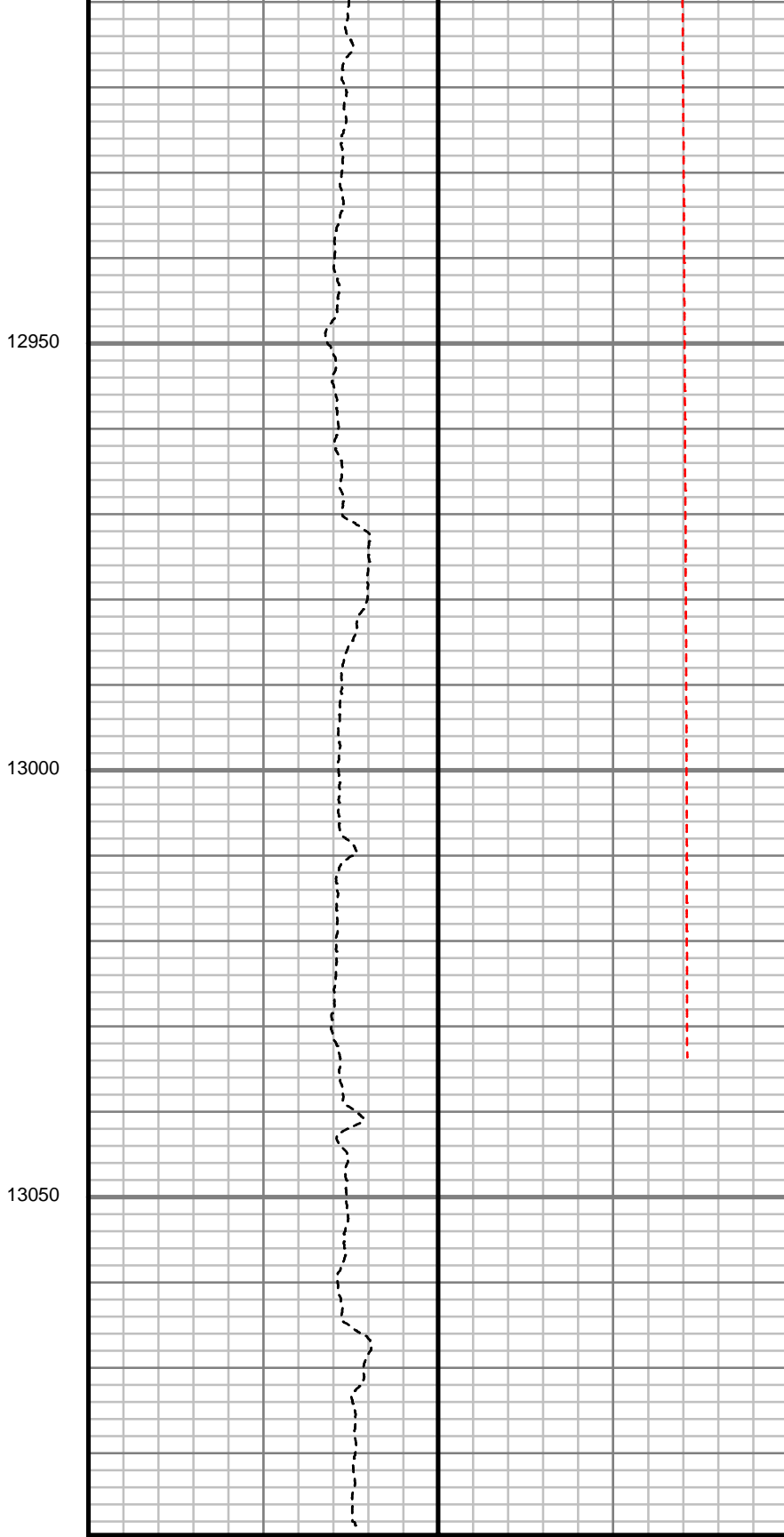






Gamma Ray (GR)		
0	Unit = aapi	150

MEASURED DEPTH
1,240 (ft)



Rate of Penetration (ROP)		
1000	Unit = ft/hr	0

Tool Temperature (T-TEMP)		
50	Unit = °F	300

Comments

S: 137 MD: 12913.00 ft
Inc: 89.40 deg Az:
356.71 deg TVD:
7342.84 ft

S: 138 MD: 13032.00 ft
Inc: 91.18 deg Az:
357.54 deg TVD:
7342.25 ft

MWD Survey Report

Well Location	2N-66W-28 TEDFORD PAD
Well Name	TEDFORD 3N-28HZ
Survey Date	8/6/2015
Latitude	40°6'9.468"N
Longitude	104°47'13.027"W
Btotal	52710 nT
Dip	66.74 deg
Magnetic Declination	8.37 deg
North Reference	True North
Grid Correction	None
Depth Reference	RKB (25.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 359.42Azim (deg)
Operator(s)	M. SCHUSTER, S. WAXLER
Well Notes	

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	Invalid
18.00	0.00	0.00	18.00	0.00	0.00	0.00	0.00	18.00
105.00	0.91	52.03	105.00	0.42	0.43	0.54	1.05	87.00
196.00	0.74	57.08	195.99	1.17	1.19	1.61	0.20	91.00
318.00	2.57	117.81	317.94	0.29	0.34	4.69	1.89	122.00
414.00	3.52	128.78	413.80	-2.60	-2.51	8.89	1.16	96.00
509.00	5.23	133.02	508.52	-7.43	-7.29	14.33	1.83	95.00
604.00	6.62	138.97	603.01	-14.59	-14.38	21.09	1.60	95.00
699.00	7.38	150.34	697.31	-24.09	-23.81	27.70	1.66	95.00
794.00	7.75	153.60	791.48	-35.19	-34.85	33.57	0.60	95.00
889.00	9.04	151.43	885.46	-47.54	-47.14	39.99	1.40	95.00
984.00	8.69	152.38	979.33	-60.53	-60.05	46.89	0.40	95.00
1079.00	8.81	148.32	1073.22	-73.15	-72.60	54.03	0.66	95.00
1174.00	8.93	147.22	1167.09	-85.62	-84.99	61.85	0.22	95.00
1269.00	8.71	148.04	1260.96	-98.00	-97.30	69.65	0.27	95.00
1365.00	8.96	148.27	1355.82	-110.60	-109.82	77.43	0.26	96.00
1491.00	10.55	149.11	1480.00	-128.96	-128.07	88.51	1.27	126.00
1587.00	10.35	148.31	1574.41	-143.93	-142.95	97.55	0.26	96.00
1682.00	10.53	149.07	1667.83	-158.72	-157.65	106.50	0.24	95.00

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
1777.00	10.70	146.18	1761.21	-173.59	-172.43	115.87	0.59	95.00
1831.00	10.60	146.69	1814.28	-181.96	-180.74	121.38	0.25	54.00
1951.00	10.67	146.74	1932.22	-200.60	-199.25	133.53	0.06	120.00
2045.00	11.78	151.68	2024.42	-216.41	-214.98	142.86	1.57	94.00
2140.00	11.48	151.48	2117.47	-233.35	-231.82	151.97	0.32	95.00
2234.00	10.39	152.46	2209.76	-249.17	-247.55	160.36	1.18	94.00
2329.00	10.89	154.11	2303.13	-264.91	-263.22	168.24	0.62	95.00
2423.00	11.30	154.87	2395.37	-281.31	-279.54	176.02	0.46	94.00
2518.00	11.56	151.05	2488.49	-298.15	-296.30	184.58	0.84	95.00
2612.00	11.48	149.52	2580.60	-314.54	-312.60	193.89	0.33	94.00
2707.00	10.79	150.51	2673.81	-330.52	-328.48	203.06	0.76	95.00
2801.00	10.13	145.59	2766.25	-345.10	-342.97	212.06	1.18	94.00
2896.00	10.60	148.42	2859.70	-359.53	-357.30	221.36	0.73	95.00
2990.00	11.12	148.46	2952.01	-374.71	-372.40	230.63	0.55	94.00
3085.00	11.65	148.64	3045.14	-390.80	-388.39	240.41	0.55	95.00
3179.00	11.29	146.95	3137.27	-406.72	-404.20	250.37	0.52	94.00
3274.00	11.40	144.61	3230.41	-422.26	-419.64	260.87	0.50	95.00
3368.00	11.12	145.47	3322.60	-437.41	-434.68	271.39	0.34	94.00

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
3463.00	10.21	154.64	3415.97	-452.65	-449.84	280.19	2.03	95.00
3557.00	8.97	158.67	3508.66	-467.07	-464.20	286.42	1.49	94.00
3652.00	8.84	154.91	3602.51	-480.65	-477.71	292.21	0.63	95.00
3746.00	9.39	148.97	3695.32	-493.83	-490.83	299.23	1.16	94.00
3840.00	10.37	147.98	3787.93	-507.66	-504.57	307.67	1.06	94.00
3935.00	10.42	144.03	3881.37	-521.95	-518.77	317.24	0.75	95.00
4029.00	10.39	148.98	3973.83	-536.19	-532.91	326.60	0.95	94.00
4124.00	11.83	153.94	4067.05	-552.37	-549.00	335.30	1.81	95.00
4218.00	12.81	149.98	4158.88	-570.14	-566.68	344.74	1.38	94.00
4312.00	12.50	148.72	4250.60	-587.96	-584.40	355.24	0.44	94.00
4407.00	12.76	146.94	4343.30	-605.65	-601.98	366.30	0.49	95.00
4502.00	10.74	144.67	4436.31	-621.78	-617.99	377.14	2.18	95.00
4596.00	10.92	148.26	4528.63	-636.59	-632.71	386.89	0.74	94.00
4690.00	11.46	156.35	4620.85	-652.80	-648.83	395.32	1.77	94.00
4785.00	12.78	156.25	4713.73	-671.15	-667.10	403.34	1.39	95.00
4879.00	13.48	155.36	4805.27	-690.72	-686.58	412.10	0.78	94.00
4974.00	12.56	157.27	4897.83	-710.40	-706.17	420.71	1.07	95.00
5068.00	12.24	156.95	4989.64	-729.07	-724.77	428.56	0.35	94.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
5163.00	12.31	155.92	5082.47	-747.66	-743.28	436.63	0.24	95.00
5257.00	11.42	145.57	5174.47	-764.58	-760.11	445.99	2.45	94.00
5352.00	11.83	145.94	5267.52	-780.52	-775.93	456.76	0.44	95.00
5446.00	10.32	147.76	5359.77	-795.72	-791.04	466.65	1.65	94.00
5540.00	10.26	142.75	5452.26	-809.60	-804.82	476.20	0.95	94.00
5635.00	10.18	148.83	5545.75	-823.61	-818.74	485.67	1.14	95.00
5729.00	11.16	150.72	5638.12	-838.75	-833.78	494.42	1.10	94.00
5824.00	8.54	149.52	5731.72	-852.93	-847.88	502.50	2.77	95.00
5918.00	7.96	145.15	5824.74	-864.36	-859.24	509.76	0.90	94.00
6013.00	7.99	145.49	5918.82	-875.27	-870.08	517.26	0.05	95.00
6107.00	7.87	142.70	6011.93	-885.84	-880.58	524.85	0.43	94.00
6201.00	8.60	149.65	6104.96	-897.11	-891.76	532.31	1.31	94.00
6296.00	6.43	152.93	6199.14	-908.03	-902.63	538.32	2.33	95.00
6390.00	4.48	151.22	6292.71	-915.98	-910.54	542.48	2.08	94.00
6485.00	3.36	154.25	6387.48	-921.77	-916.29	545.47	1.20	95.00
6579.00	1.03	154.43	6481.41	-925.02	-919.53	547.03	2.48	94.00
6674.00	0.74	197.16	6576.40	-926.38	-920.88	547.22	0.73	95.00
6768.00	0.89	237.19	6670.39	-927.34	-921.86	546.43	0.61	94.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
6863.00	7.27	5.18	6765.15	-921.74	-916.26	546.35	8.26	95.00
6957.00	14.50	2.40	6857.40	-904.05	-898.56	547.38	7.71	94.00
7052.00	19.92	1.69	6948.11	-875.98	-870.48	548.36	5.72	95.00
7146.00	30.12	0.76	7033.18	-836.29	-830.78	549.15	10.86	94.00
7241.00	39.99	5.26	7110.86	-781.95	-776.40	552.27	10.73	95.00
7335.00	47.52	3.29	7178.71	-717.23	-711.62	557.04	8.15	94.00
7430.00	55.72	1.71	7237.65	-642.93	-637.29	560.22	8.72	95.00
7524.00	67.37	0.72	7282.36	-560.47	-554.81	561.94	12.43	94.00
7619.00	76.33	358.96	7311.93	-470.29	-464.63	561.65	9.60	95.00
7713.00	80.99	358.09	7330.41	-378.17	-372.52	559.27	5.04	94.00
7807.00	85.43	357.61	7341.53	-284.89	-279.27	555.77	4.75	94.00
7902.00	89.50	358.99	7345.73	-190.02	-184.43	552.95	4.52	95.00
7996.00	91.28	358.92	7345.10	-96.03	-90.45	551.23	1.90	94.00
8091.00	89.90	358.76	7344.12	-1.04	4.52	549.32	1.46	95.00
8185.00	89.36	358.58	7344.73	92.95	98.49	547.14	0.60	94.00
8280.00	90.71	358.50	7344.67	187.94	193.46	544.72	1.42	95.00
8375.00	89.63	358.76	7344.39	282.93	288.43	542.45	1.16	95.00
8469.00	90.81	359.06	7344.03	376.92	382.41	540.67	1.29	94.00

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
8564.00	89.40	359.03	7343.87	471.91	477.40	539.09	1.49	95.00
8658.00	90.44	358.80	7344.00	565.91	571.38	537.31	1.14	94.00
8753.00	89.83	358.95	7343.78	660.90	666.36	535.44	0.66	95.00
8847.00	90.54	358.85	7343.48	754.90	760.34	533.64	0.76	94.00
8942.00	88.66	0.63	7344.14	849.89	855.33	533.21	2.73	95.00
9036.00	89.33	1.75	7345.80	943.83	949.29	535.17	1.38	94.00
9131.00	90.67	1.58	7345.80	1038.75	1044.25	537.93	1.43	95.00
9226.00	89.66	0.25	7345.52	1133.71	1139.23	539.45	1.76	95.00
9320.00	90.94	359.93	7345.02	1227.70	1233.23	539.60	1.40	94.00
9415.00	89.97	1.71	7344.27	1322.67	1328.21	540.96	2.13	95.00
9509.00	90.91	3.56	7343.55	1416.51	1422.11	545.28	2.21	94.00
9604.00	89.63	359.96	7343.11	1511.41	1517.04	548.20	4.02	95.00
9698.00	89.30	358.38	7343.99	1605.41	1611.02	546.85	1.72	94.00
9793.00	90.71	358.23	7343.99	1700.39	1705.98	544.04	1.49	95.00
9887.00	90.23	358.32	7343.22	1794.36	1799.93	541.20	0.51	94.00
9982.00	91.68	357.34	7341.63	1889.31	1894.85	537.60	1.84	95.00
10076.00	90.71	357.90	7339.67	1983.24	1988.75	533.70	1.20	94.00
10171.00	89.56	358.96	7339.45	2078.22	2083.71	531.10	1.64	95.00

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
10265.00	90.30	358.69	7339.56	2172.22	2177.69	529.18	0.84	94.00
10360.00	90.03	358.68	7339.28	2267.21	2272.66	527.00	0.28	95.00
10455.00	90.27	0.99	7339.03	2362.20	2367.65	526.73	2.45	95.00
10549.00	89.09	0.65	7339.55	2456.17	2461.64	528.08	1.30	94.00
10644.00	90.44	0.79	7339.94	2551.14	2556.63	529.27	1.42	95.00
10738.00	89.73	2.19	7339.81	2645.08	2650.60	531.72	1.67	94.00
10833.00	91.21	2.42	7339.03	2739.95	2745.51	535.54	1.58	95.00
10927.00	91.14	1.72	7337.10	2833.83	2839.43	538.94	0.75	94.00
11022.00	90.70	359.75	7335.56	2928.79	2934.41	540.17	2.12	95.00
11117.00	88.25	357.82	7336.43	3023.77	3029.37	538.15	3.29	95.00
11211.00	88.56	357.79	7339.04	3117.69	3123.26	534.56	0.32	94.00
11306.00	89.40	357.62	7340.74	3212.63	3218.17	530.76	0.90	95.00
11400.00	90.64	358.77	7340.71	3306.61	3312.12	527.80	1.80	94.00
11495.00	89.43	359.25	7340.66	3401.60	3407.11	526.15	1.37	95.00
11589.00	90.74	358.88	7340.52	3495.60	3501.09	524.61	1.45	94.00
11684.00	89.80	0.29	7340.08	3590.60	3596.08	523.92	1.78	95.00
11779.00	90.94	359.86	7339.46	3685.59	3691.08	524.04	1.28	95.00
11873.00	88.12	359.96	7340.23	3779.57	3785.07	523.88	3.00	94.00

5" = 100' FEET MD