



5" = 100' FEET MD

COMPANY : ANADARKO E&P ONSHORE LLC  
WELL : FEHRN 37N-29HZ  
FIELD : WATTENBERG  
COUNTY : WELD  
STATE : COLORADO  
COUNTRY : U.S.A.  
UWI : 05-123-41490

COMPANY : ANADARKO E&P ONSHORE LLC

WELL : FEHRN 37N-29HZ

FIELD : WATTENBERG

COUNTY : WELD

STATE : COLORADO

COUNTRY : U.S.A.

UWI : 05-123-41490

WELL LOCATION

LAT:40°6'3.708"N LONG:104°47'40.362"W  
N:14563589.25 ft E:1697869.67 ft

OTHER SERVICES

DIRECTIONAL  
ROP

DEPTH REF. : RKB

REF. HEIGHT : 20.000 ft

RKB to Ground Level

GROUND LEVEL : 4926.000 ft

G.L. to MEAN SEA LEVEL

## BOREHOLE RECORD

## DEVIATION RECORD

HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft
12.25	0	1892	0-12	0	2056
8.5	1892	12946	12 - 0	2056	3675
			0 - 90	3675	7860
			90 - 92	7860	12946

## CASING RECORD

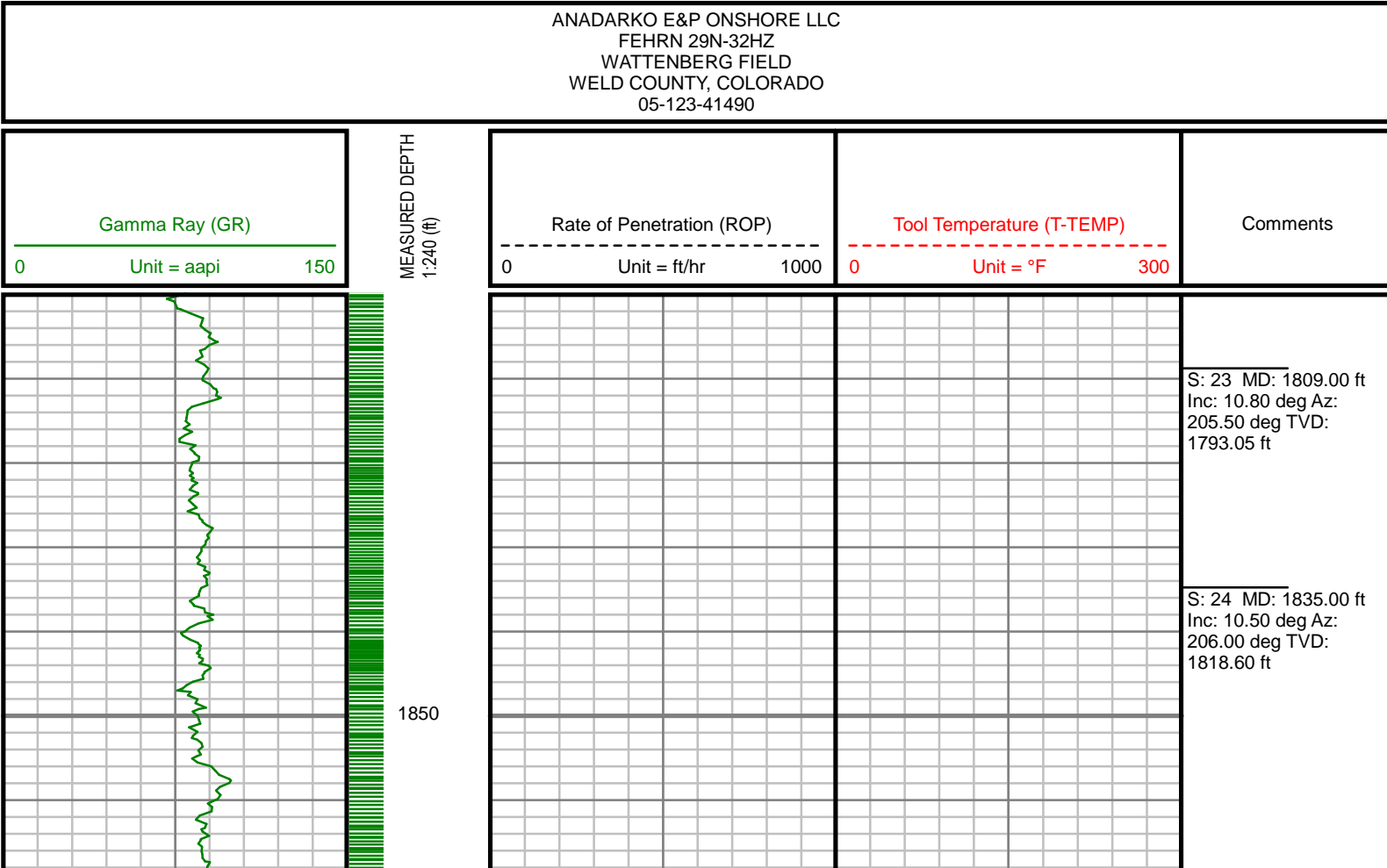
CASING SIZE in	FROM ft	TO ft	
9.625	0	1892	
			DRILLING CO. : PRECISION
			RIG : 461
			LWD UNIT NO. : MWD-00282-CDISTRICT : CASPER
			SPUD DATE : 06/13/2015
			LWD START DATE : 07/25/2015 DEPTH : 1892 ft
			LWD END DATE : 07/28/2015 DEPTH : 12946 ft
			TOTAL DEPTH : 12946 ft

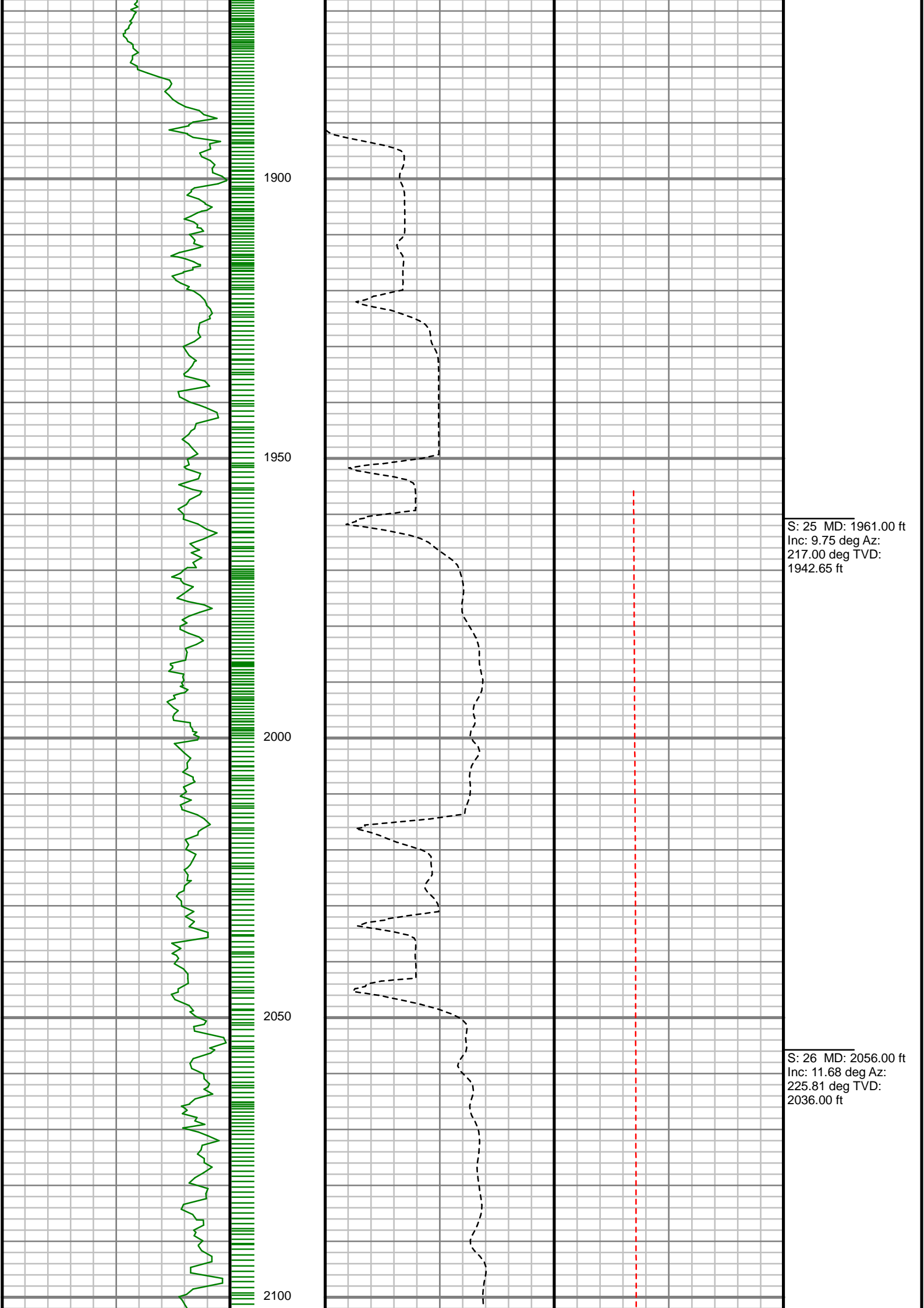
## Run Data

Run Data						
RUN NUMBER	1	2				
START DATE	7/25/2015	7/25/2015				
START TIME	0800	1400				
END DATE	7/25/12015	07/28/2015				
END TIME	1400	1515				
DEPTH IN (ft)	1892	1951				
DEPTH OUT (ft)	1951	12946				
LOG TOP (ft)	1847	1906				
LOG BOTTOM (ft)	1906	12900				
HOLE SIZE (in)	8.50	8.50				
MUD DATA @ (ft)	1951	3153				
MUD TYPE	OIL-BASED	OIL-BASED				
DENSITY (lb / gal)	9.4	9.2				
VISCOSITY (s / qt)	84	63				
pH	-	-				
FLUID LOSS (cm <sup>3</sup> / 30)	6	5.9				
SALINITY (ppm)	51000	53000				
Rm (ohmm @ deg F)	-	-				
Rmf (ohmm @ deg F)	-	-				
MAX TEMP (deg F)	-	232				
Rm @ MAX TEMP (ohmm)	-	-				
LWD ENGINEER #1	S. SCHULTZ	S. SCHULTZ				
LWD ENGINEER #2	S. NEJAD	S. NEJAD				
LWD ENGINEER #3	-	C. COLLINS				
LOG WITNESS #1	J. MORGAN	J. MORGAN				
LOG WITNESS #2	-	-				

Remarks
ANADARKO E&P ONSHORE LLC PRODUCTION AFE# 2108294
SCIENTIFIC DRILLING INTERNATIONAL JOB# 299222
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 = 128-333 / CONT = 163 / MWD EYE = 0479 / GAMMA RAY = 140
BIT TO SENSOR OFFSETS: SURVEY = 53.90 FT. / GAMMA RAY = 45.11 FT.
RUN # 2: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 128-151 / CONT = 358 / MWD EYE = 0285 / GAMMA RAY = 1218
BIT TO SENSOR OFFSETS: SURVEY = 53.90 FT. / GAMMA RAY = 45.11 FT.
MNEMONICS LIST:
GR = GAMMA RAY
ROP = RATE OF PENETRATION
T-TEMP = TOOL TEMPERATURE

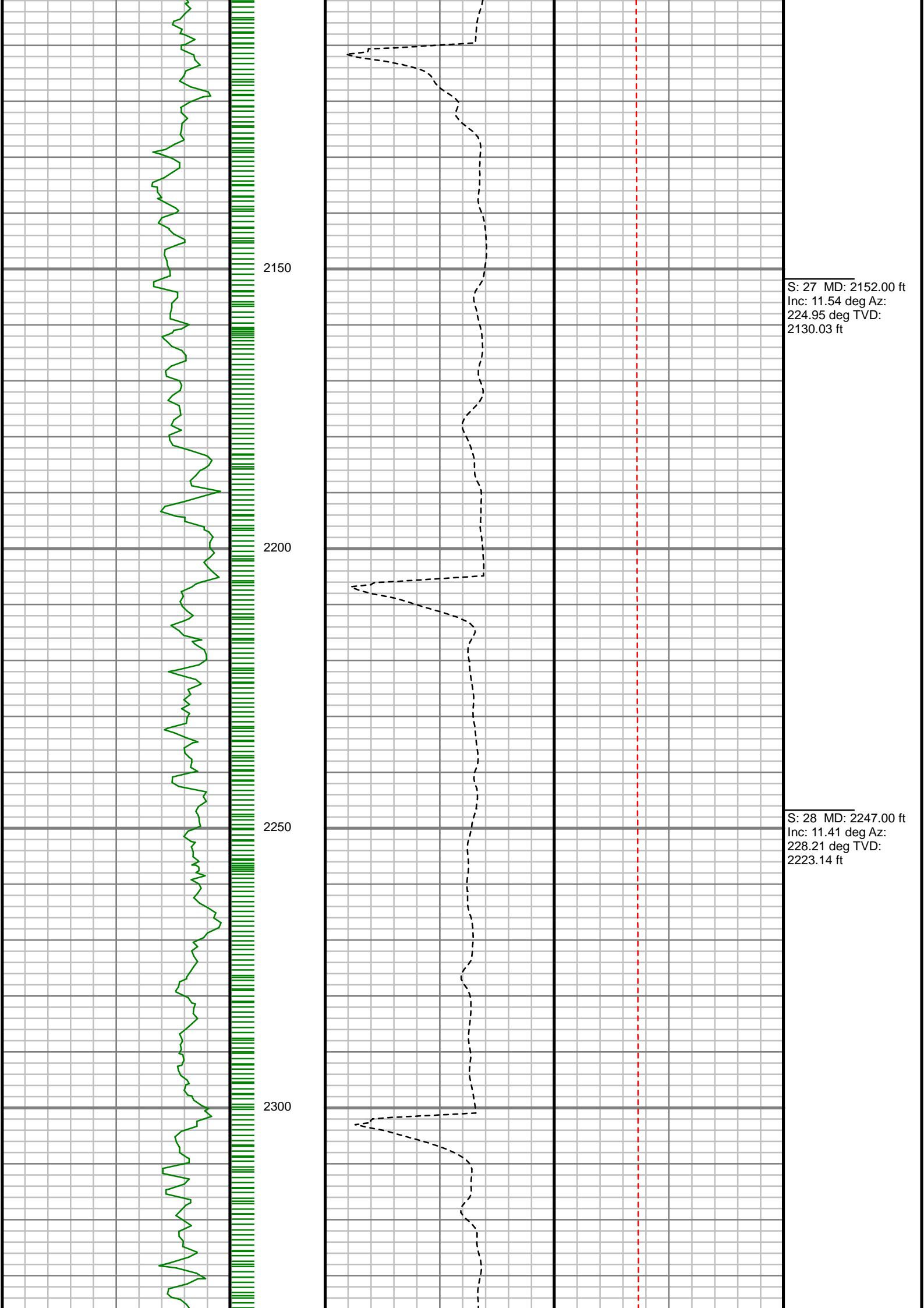
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

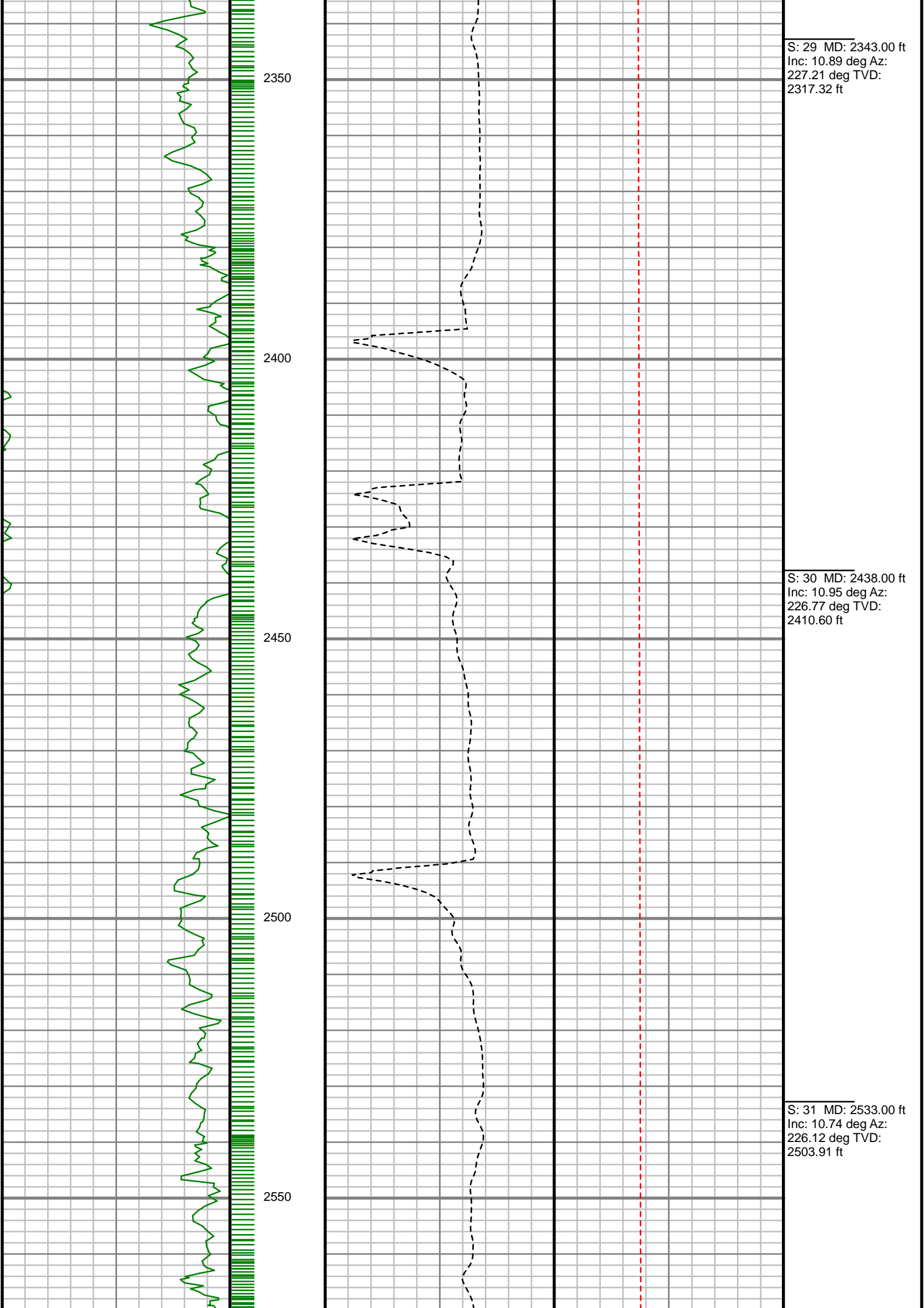


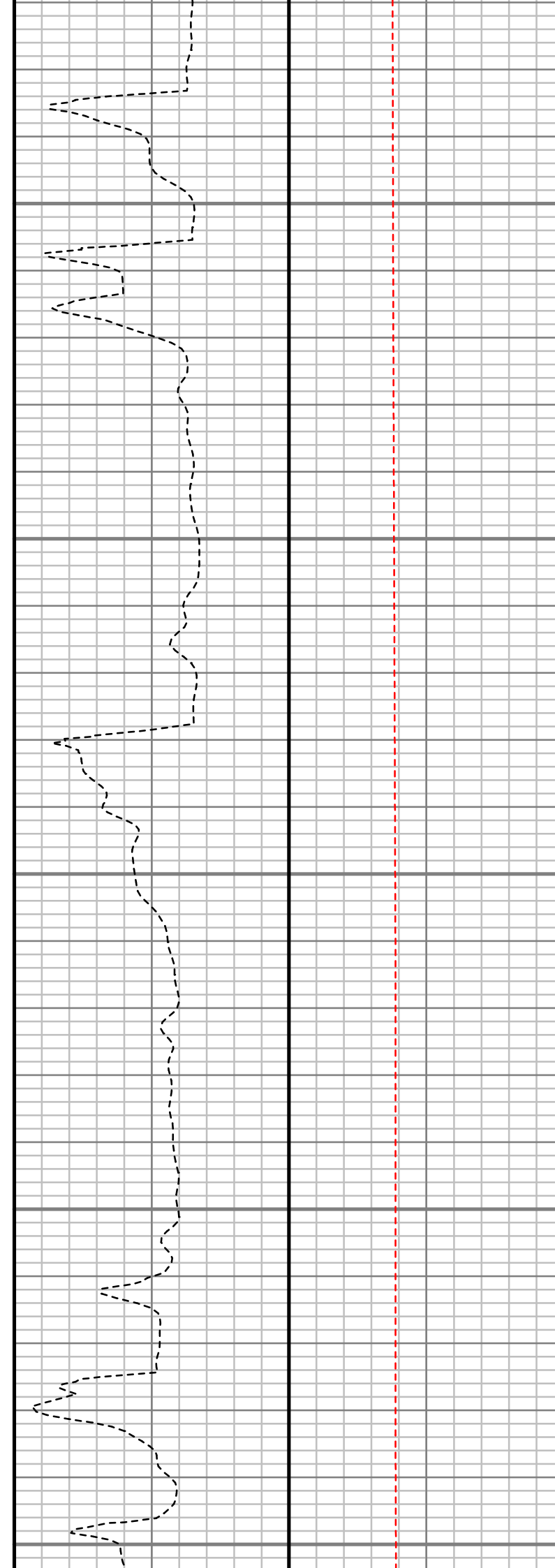
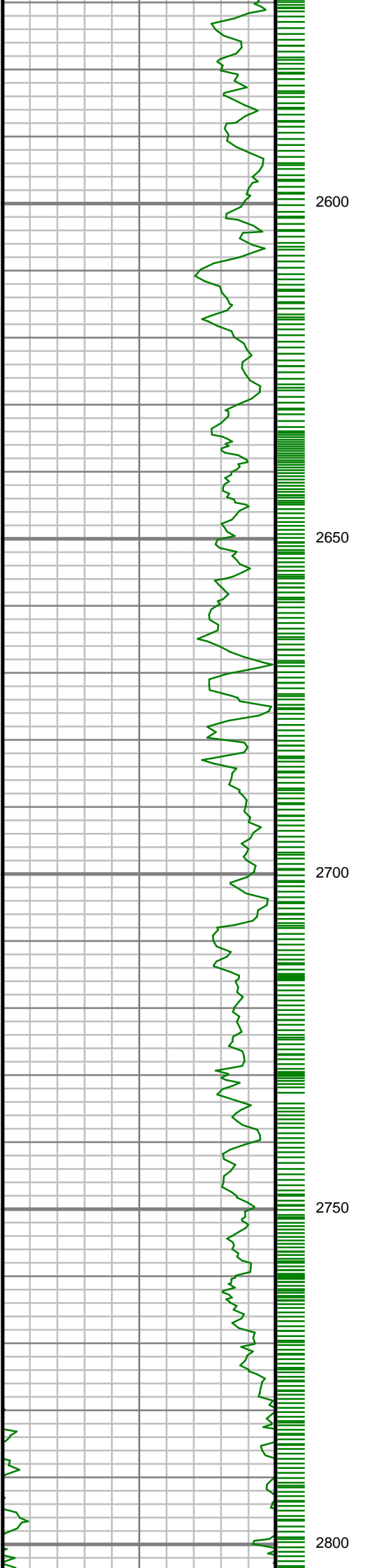


S: 25 MD: 1961.00 ft  
Inc: 9.75 deg Az:  
217.00 deg TVD:  
1942.65 ft

S: 26 MD: 2056.00 ft  
Inc: 11.68 deg Az:  
225.81 deg TVD:  
2036.00 ft

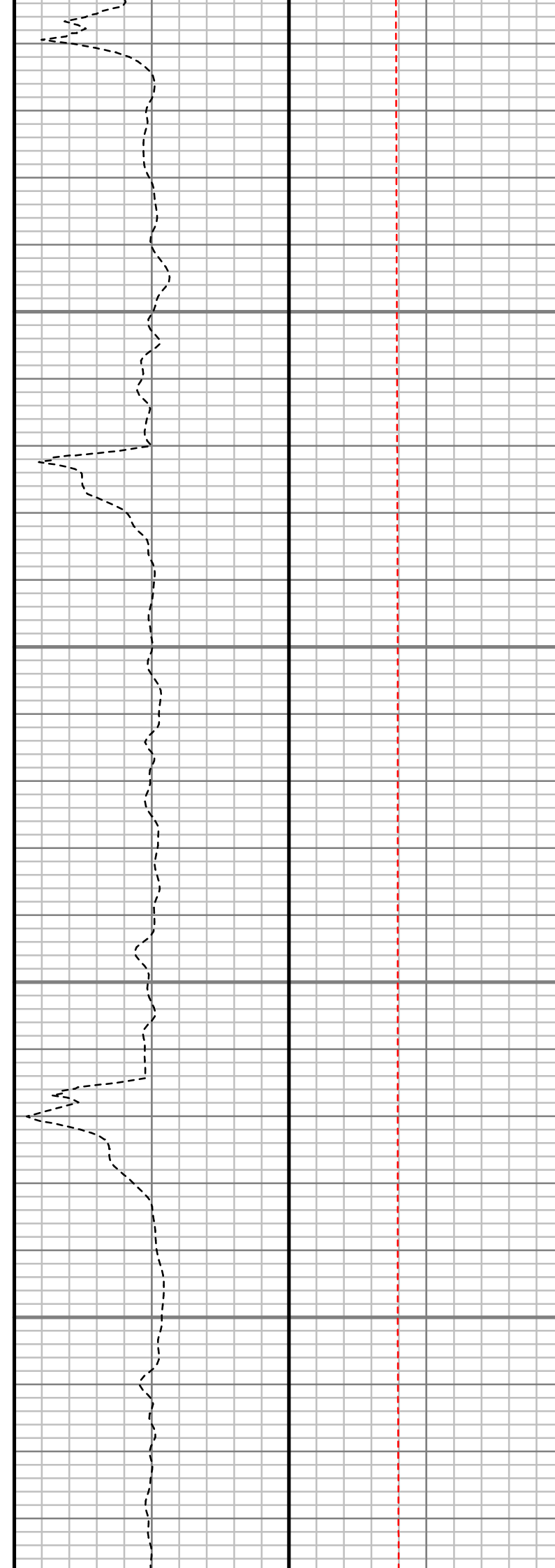
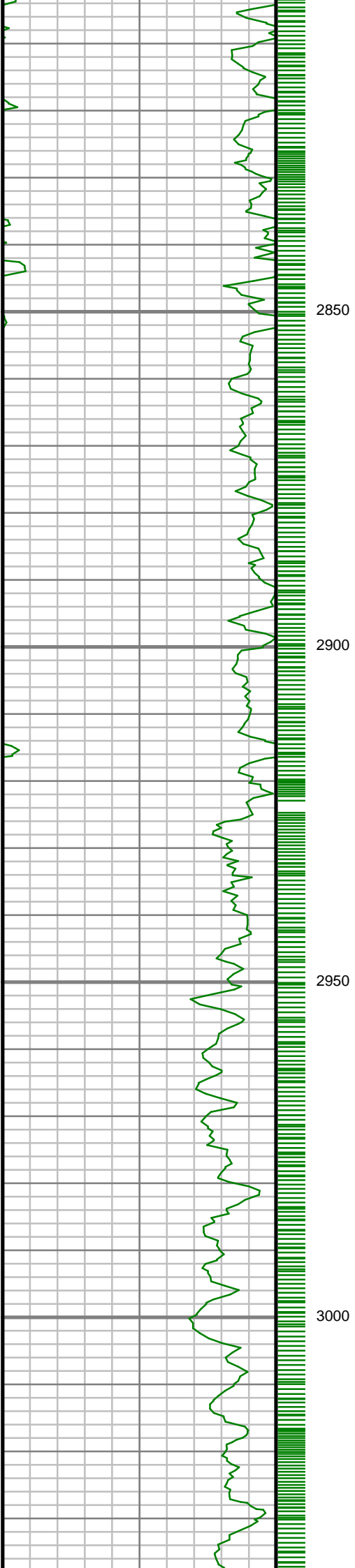






S: 32 MD: 2628.00 ft  
Inc: 10.44 deg Az:  
224.94 deg TVD:  
2597.29 ft

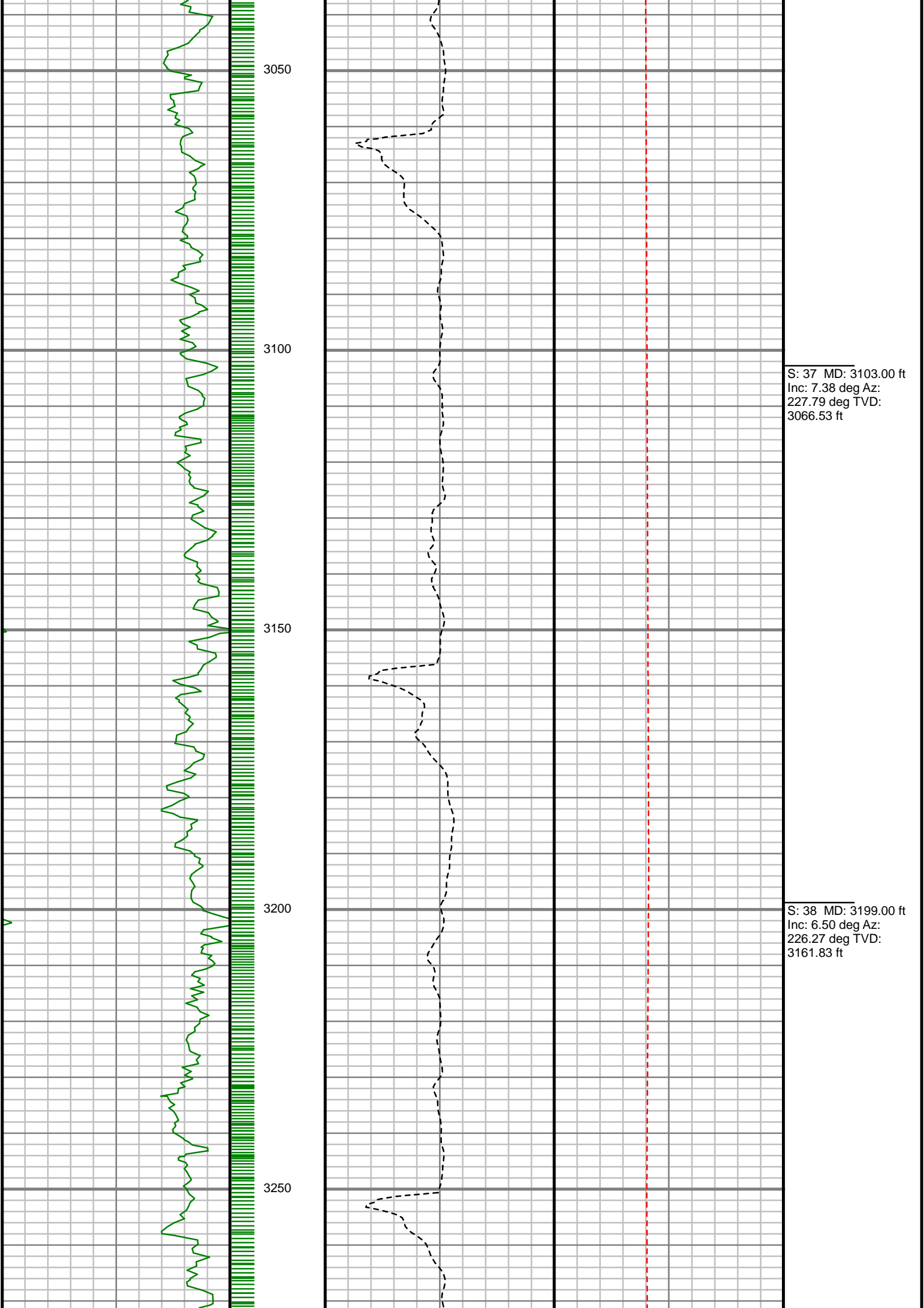
S: 33 MD: 2723.00 ft  
Inc: 9.58 deg Az:  
227.08 deg TVD:  
2690.84 ft



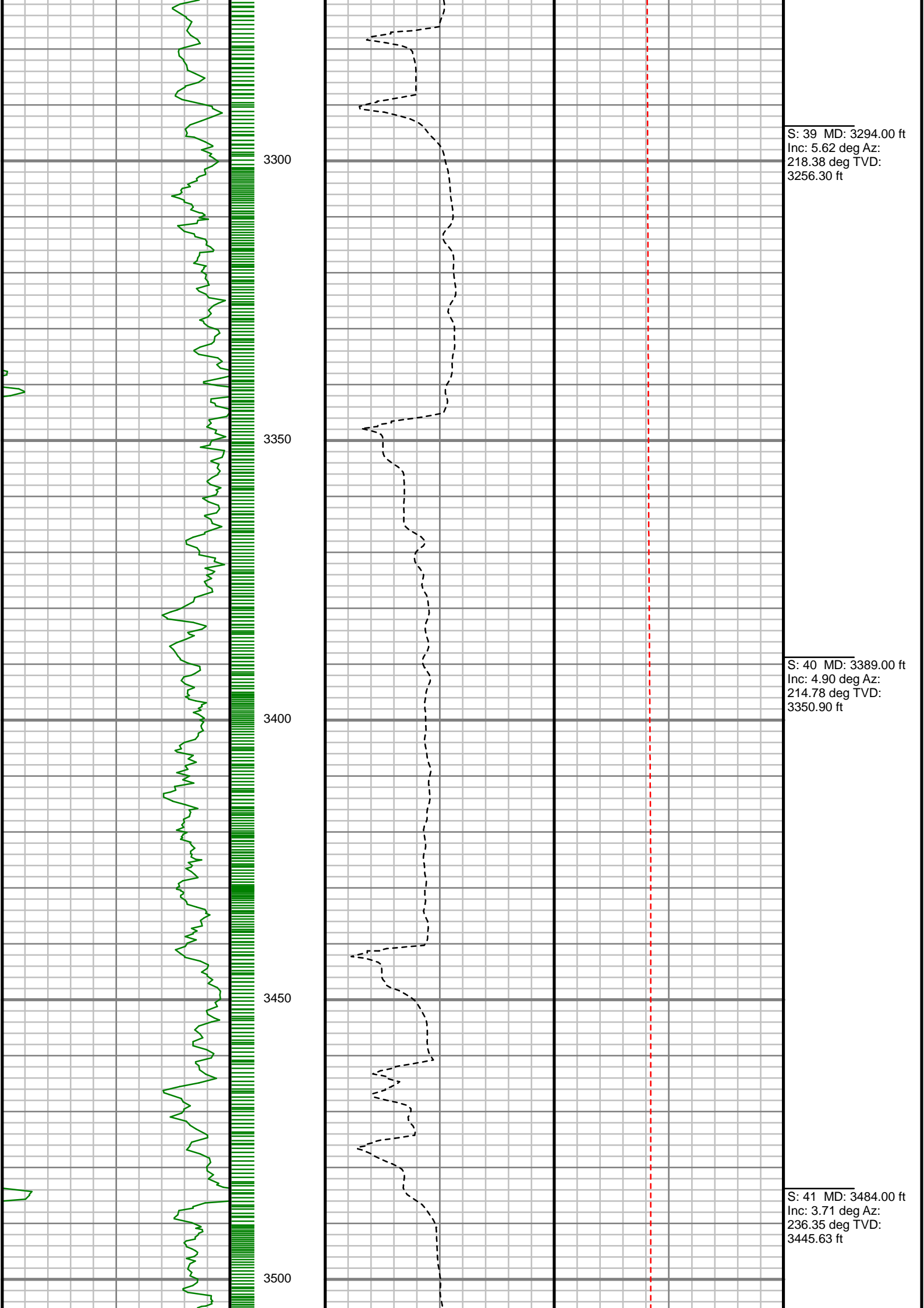
S: 34 MD: 2818.00 ft  
Inc: 9.38 deg Az:  
223.31 deg TVD:  
2784.54 ft

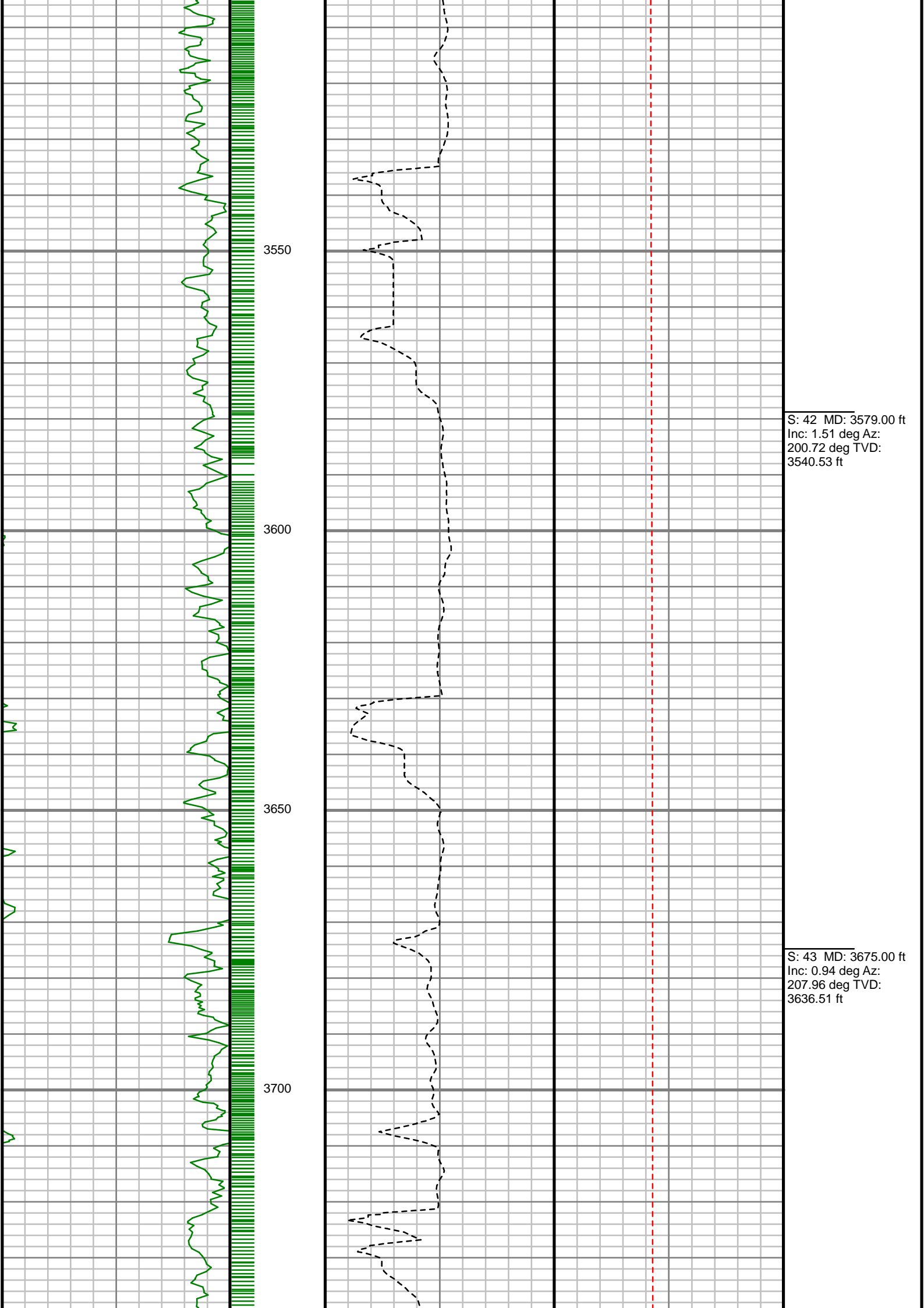
S: 35 MD: 2913.00 ft  
Inc: 8.70 deg Az:  
223.36 deg TVD:  
2878.36 ft

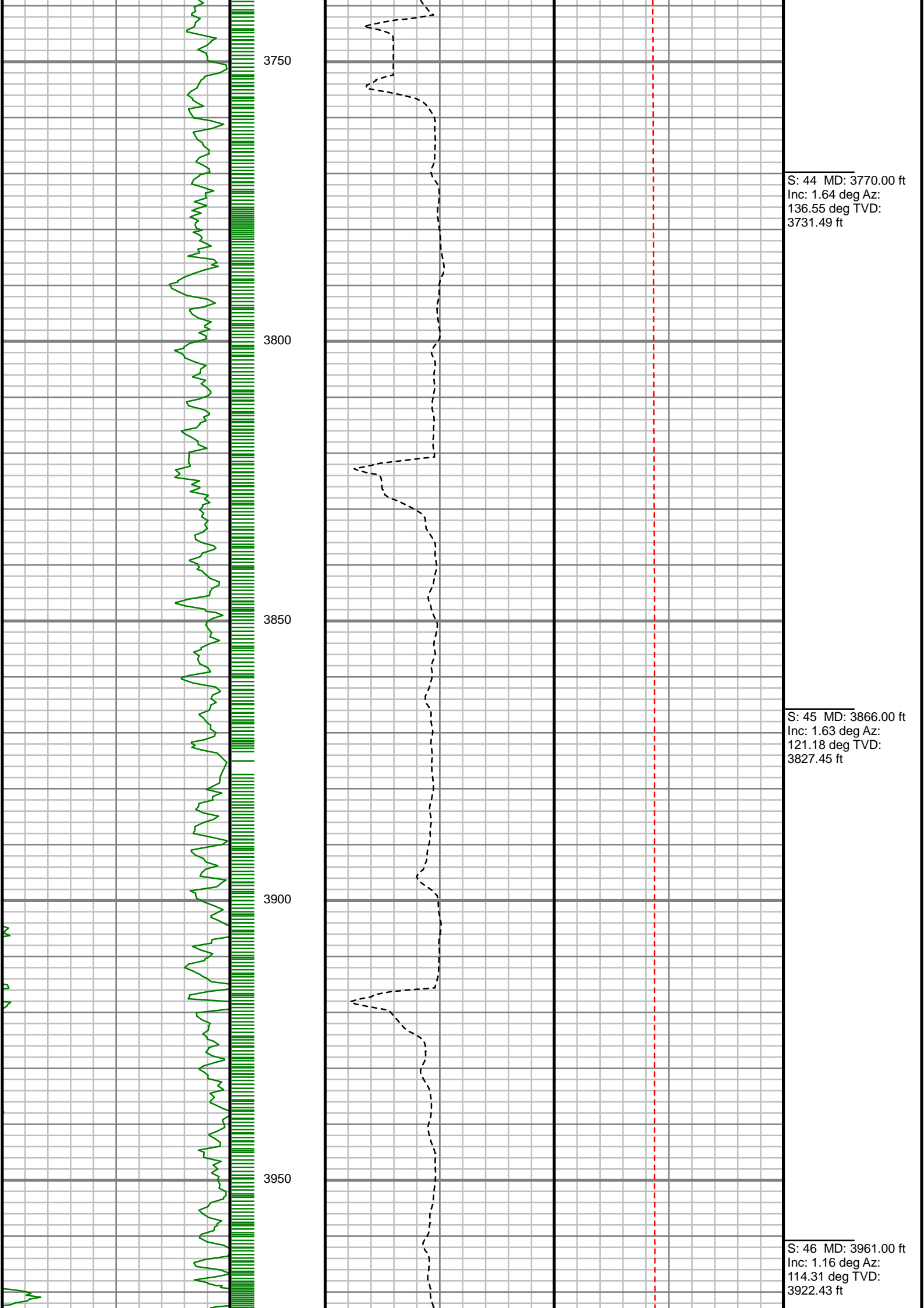
S: 36 MD: 3008.00 ft  
Inc: 7.87 deg Az:  
222.42 deg TVD:  
2972.37 ft

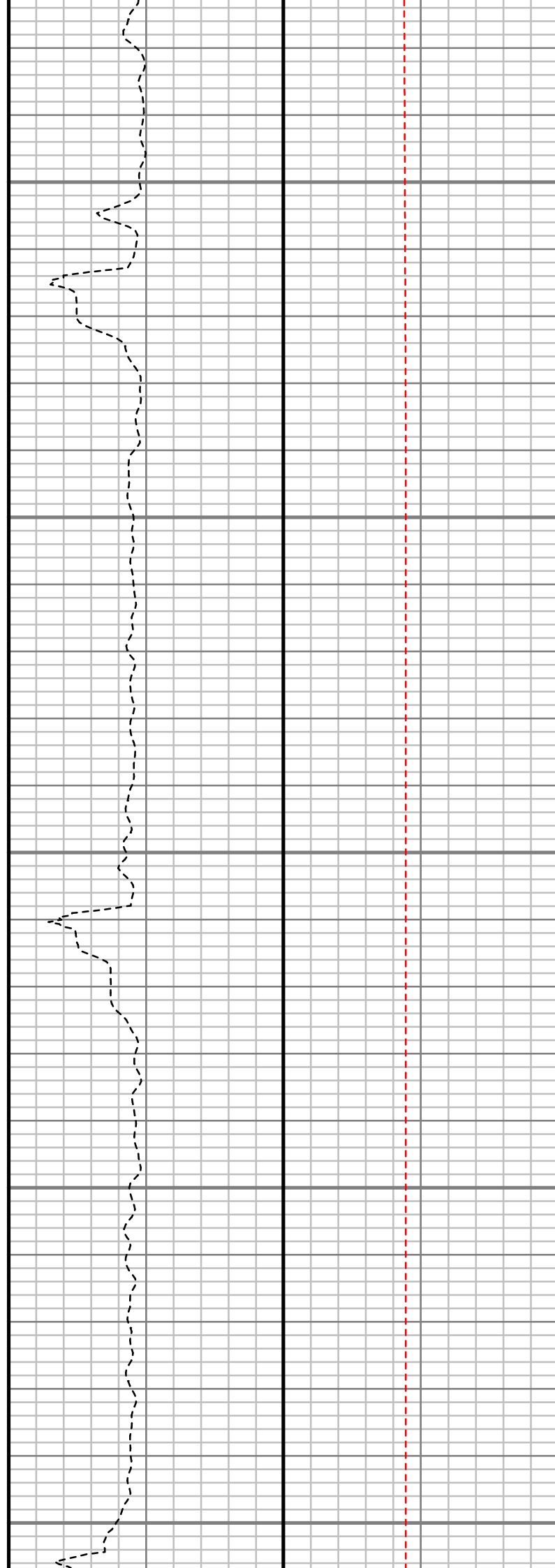
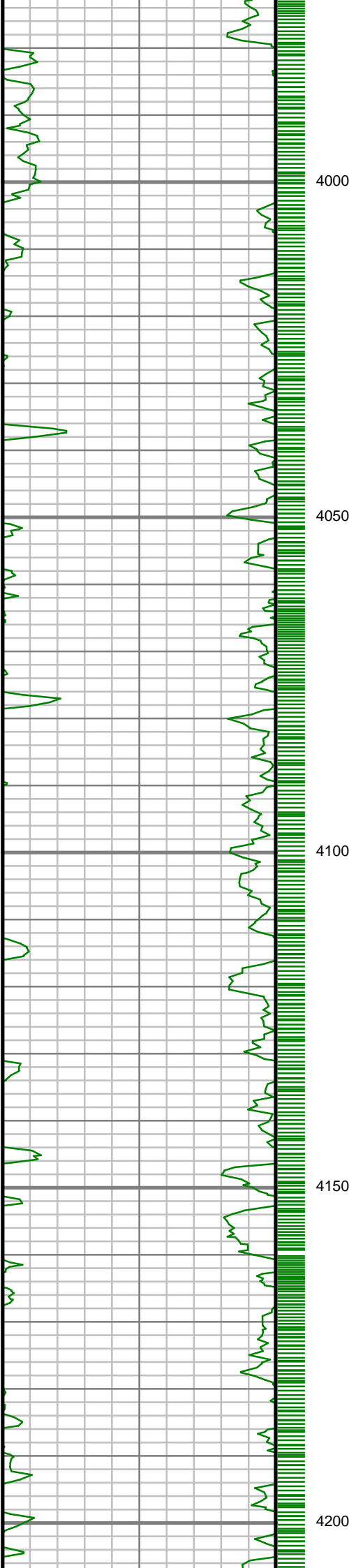




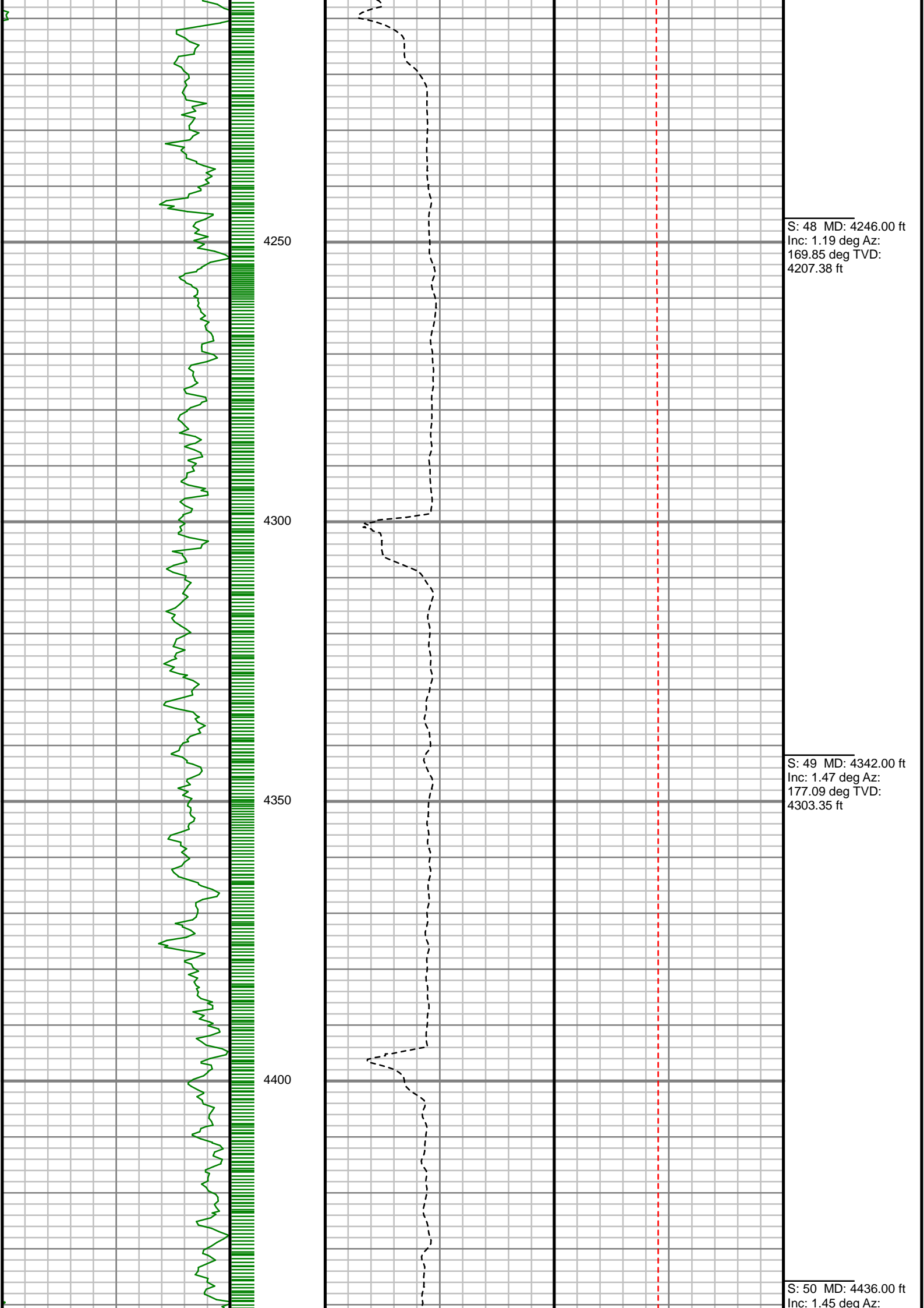


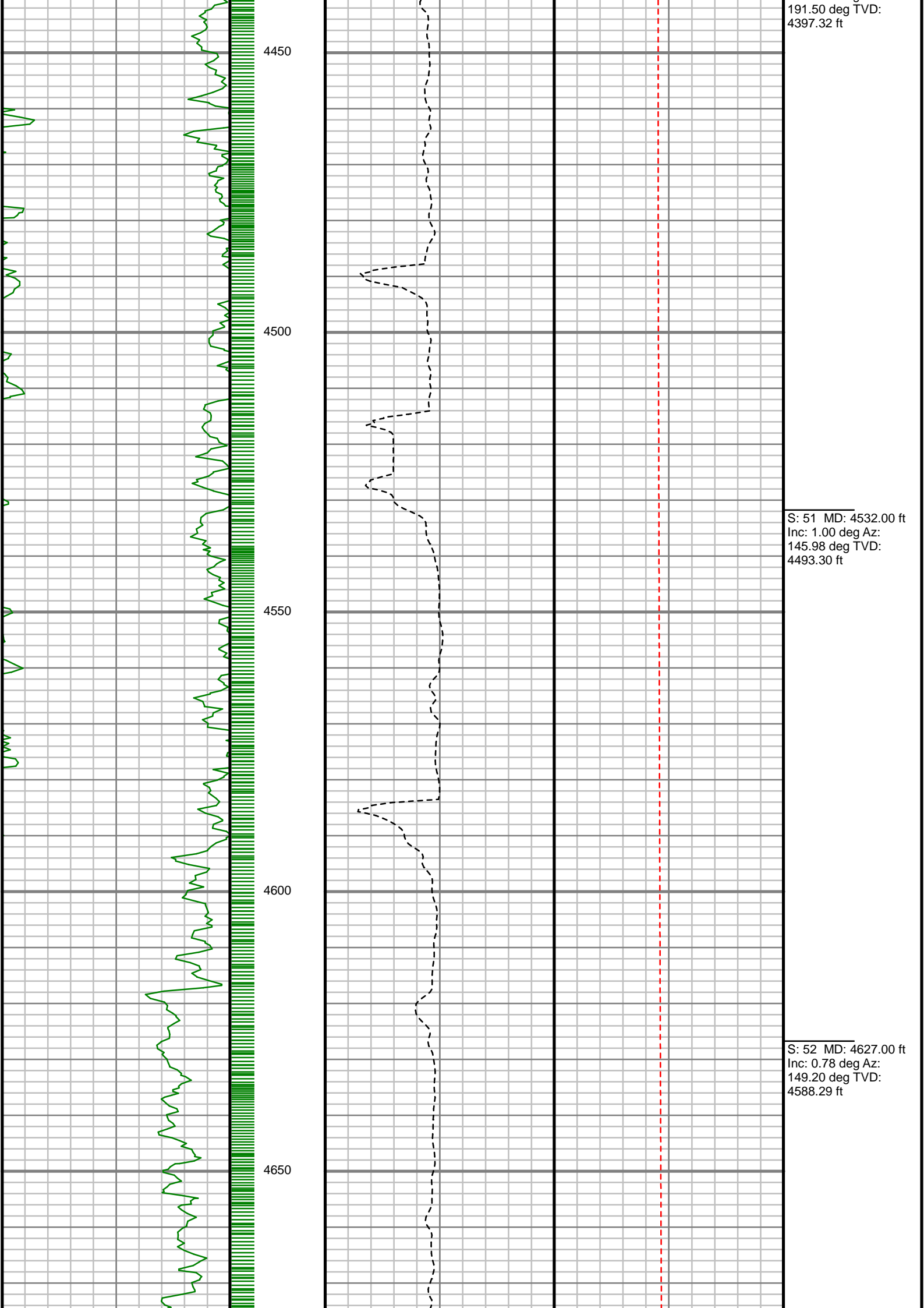






S: 47 MD: 4056.00 ft  
Inc: 1.19 deg Az: 96.88  
deg TVD: 4017.41 ft

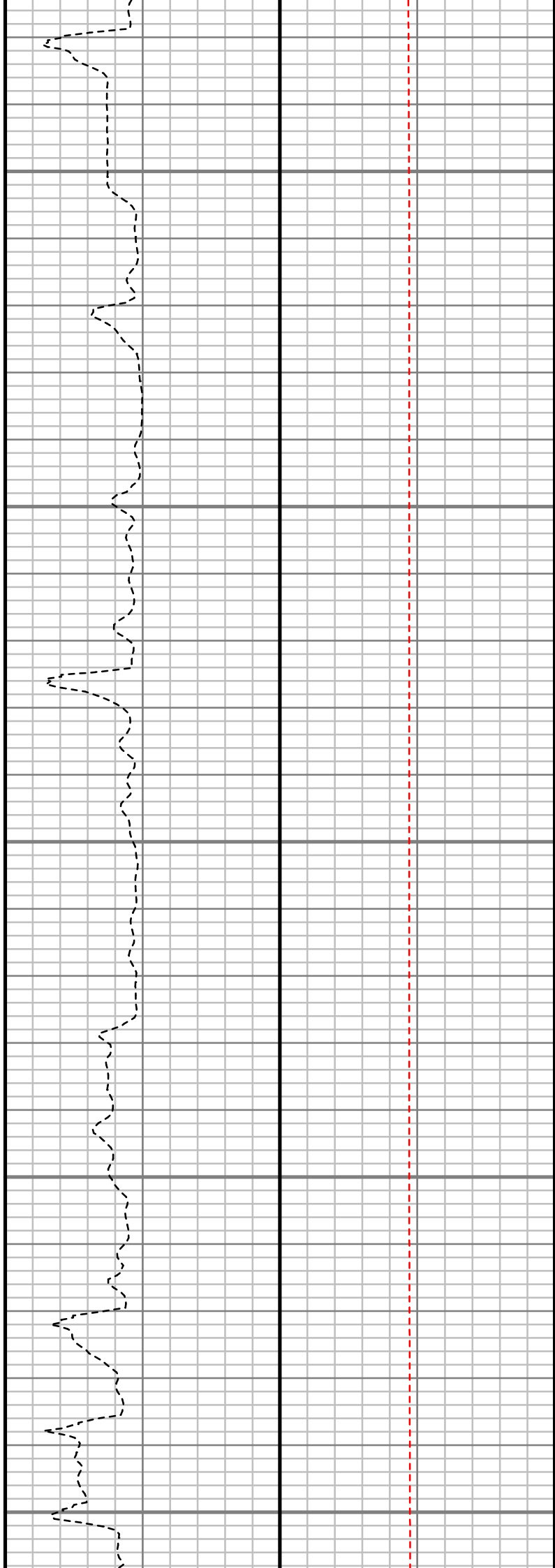
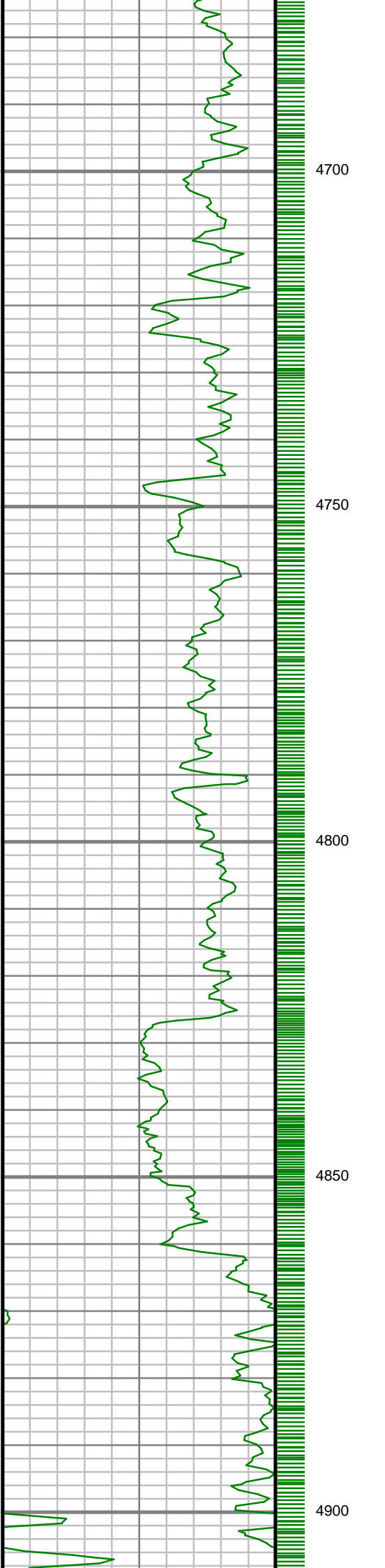




191.50 deg TVD:  
4397.32 ft

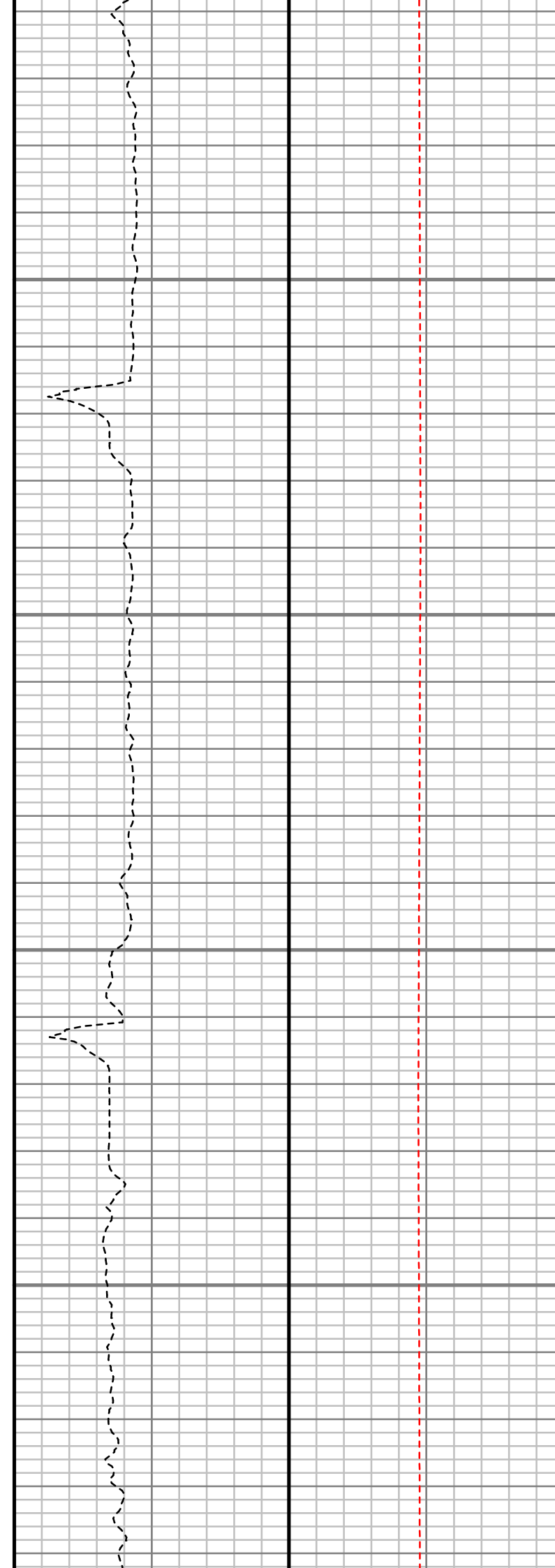
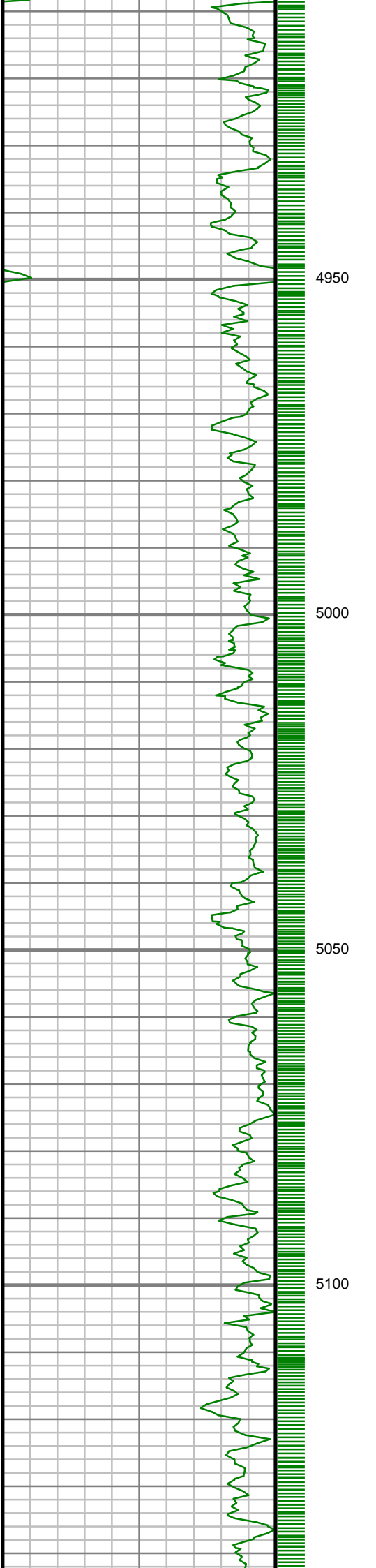
S: 51 MD: 4532.00 ft  
Inc: 1.00 deg Az:  
145.98 deg TVD:  
4493.30 ft

S: 52 MD: 4627.00 ft  
Inc: 0.78 deg Az:  
149.20 deg TVD:  
4588.29 ft



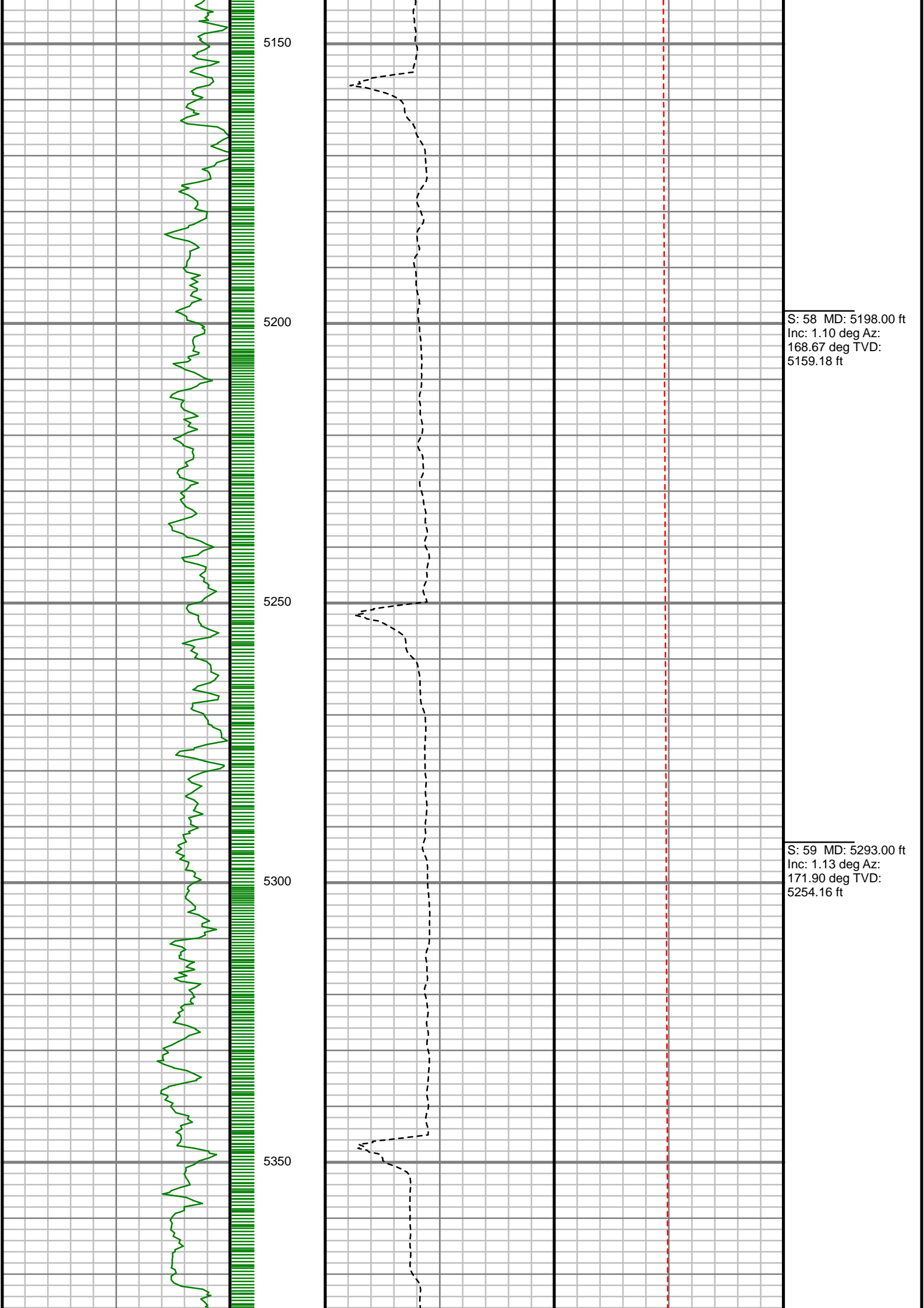
S: 53 MD: 4722.00 ft  
Inc: 0.93 deg Az:  
208.17 deg TVD:  
4683.28 ft

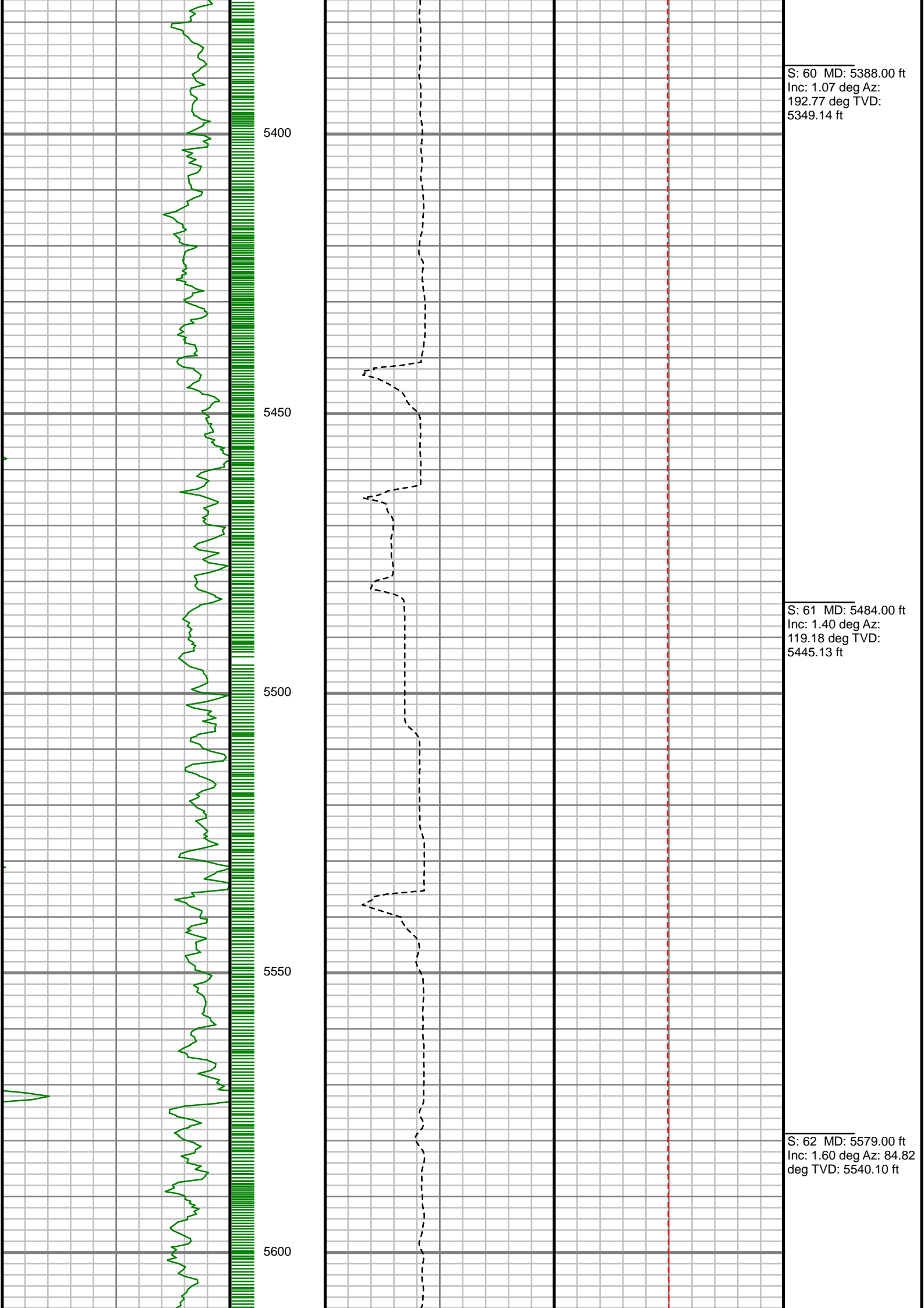
S: 54 MD: 4817.00 ft  
Inc: 1.46 deg Az:  
216.88 deg TVD:  
4778.26 ft

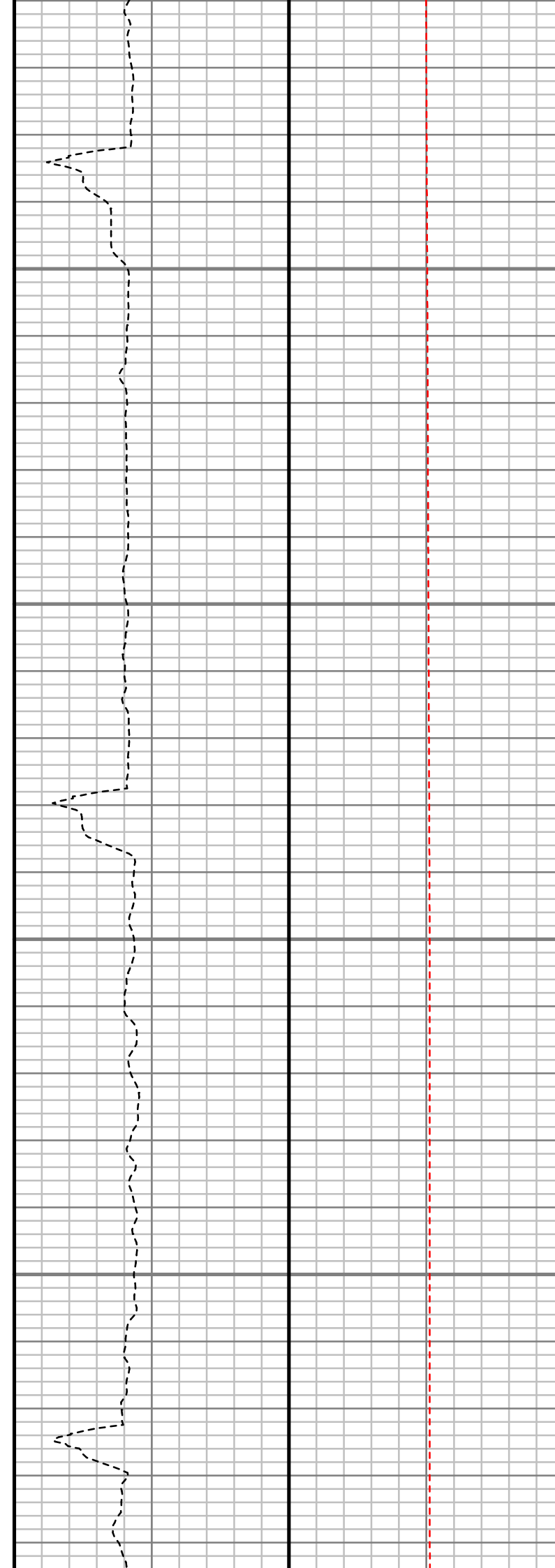
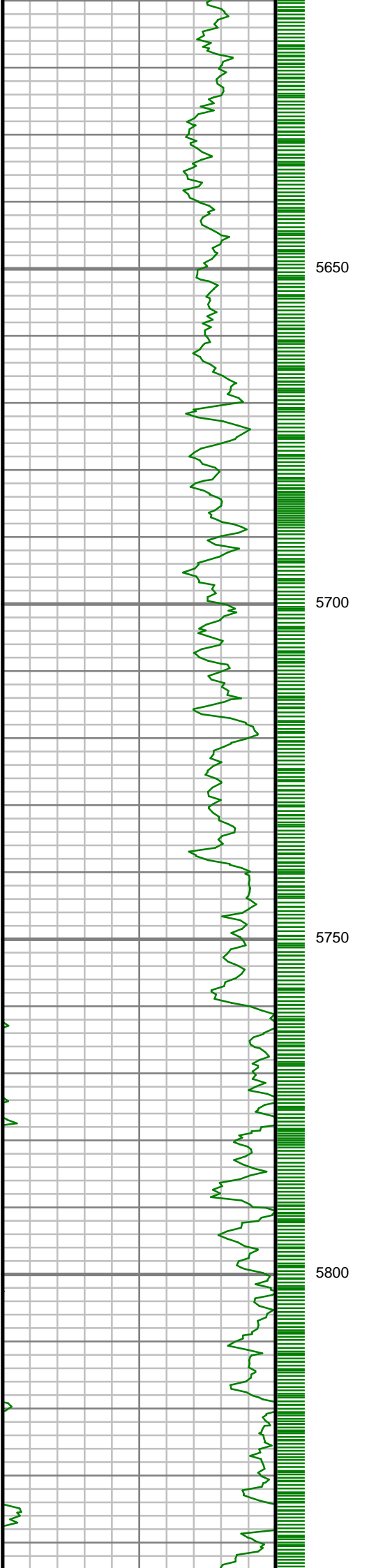


S: 55 MD: 4912.00 ft Inc: 0.57 deg Az: 155.37 deg TVD: 4873.24 ft
S: 56 MD: 5007.00 ft Inc: 1.05 deg Az: 179.43 deg TVD: 4968.23 ft
S: 57 MD: 5103.00 ft Inc: 1.65 deg Az: 165.18 deg TVD: 5064.21 ft



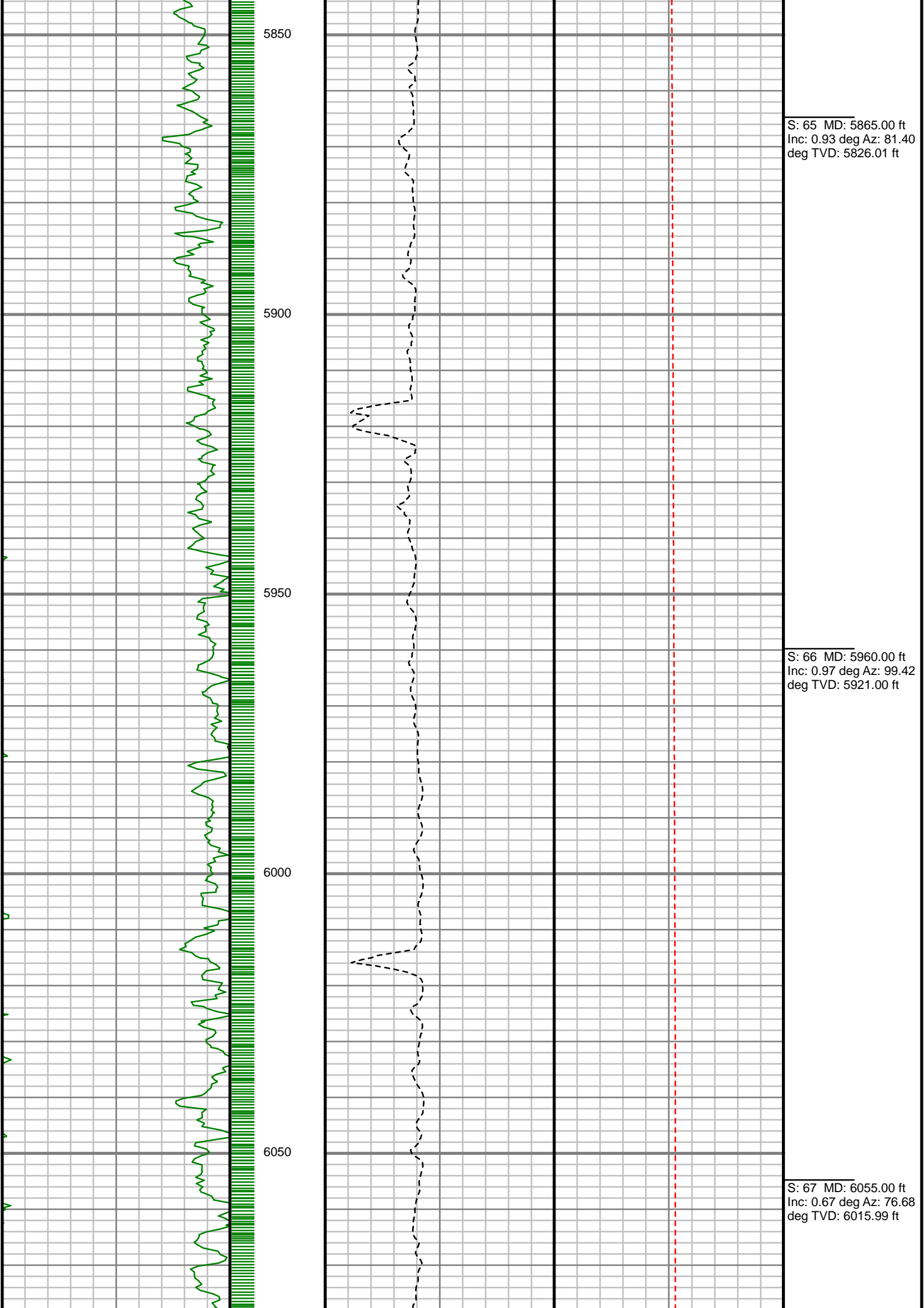


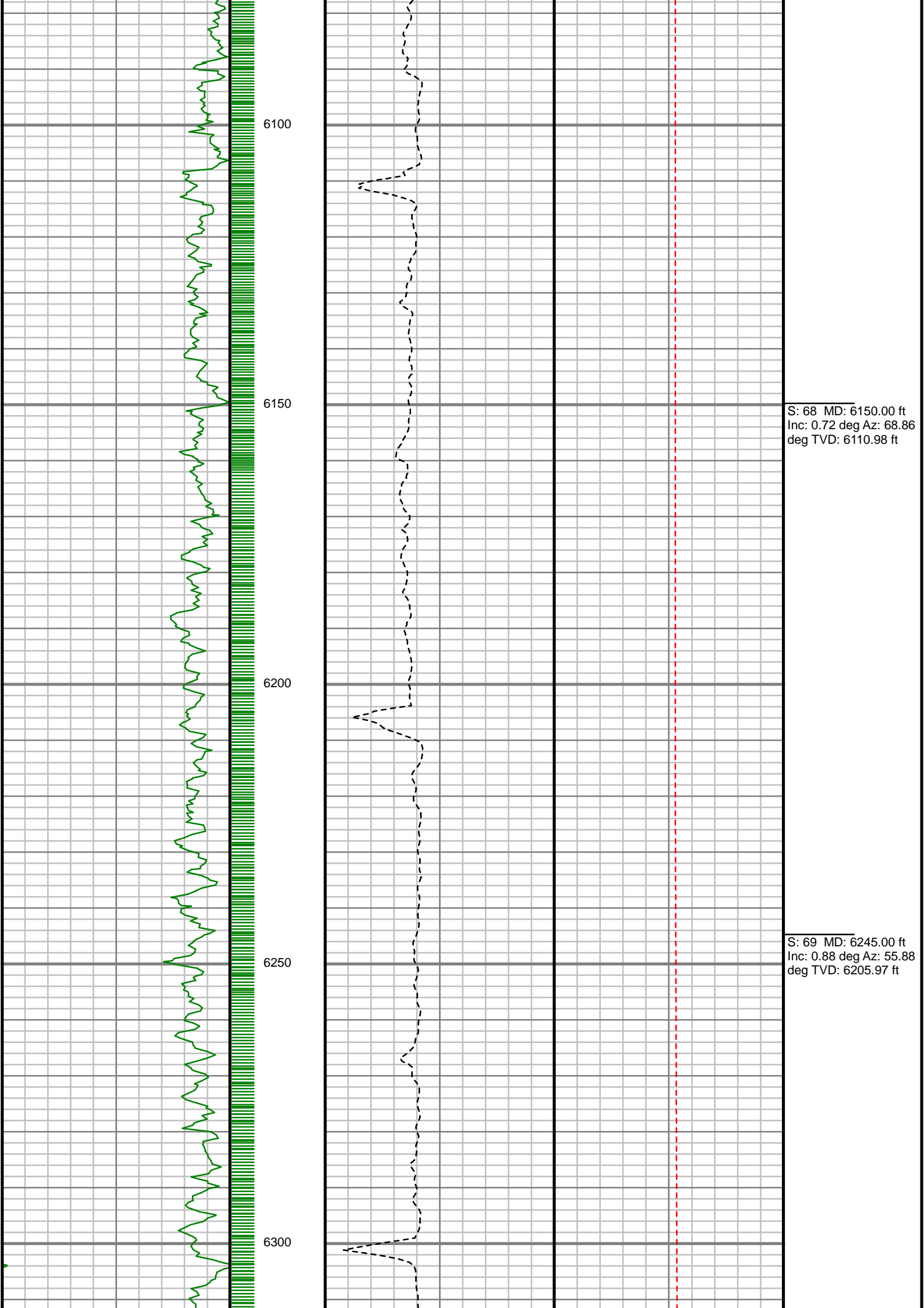


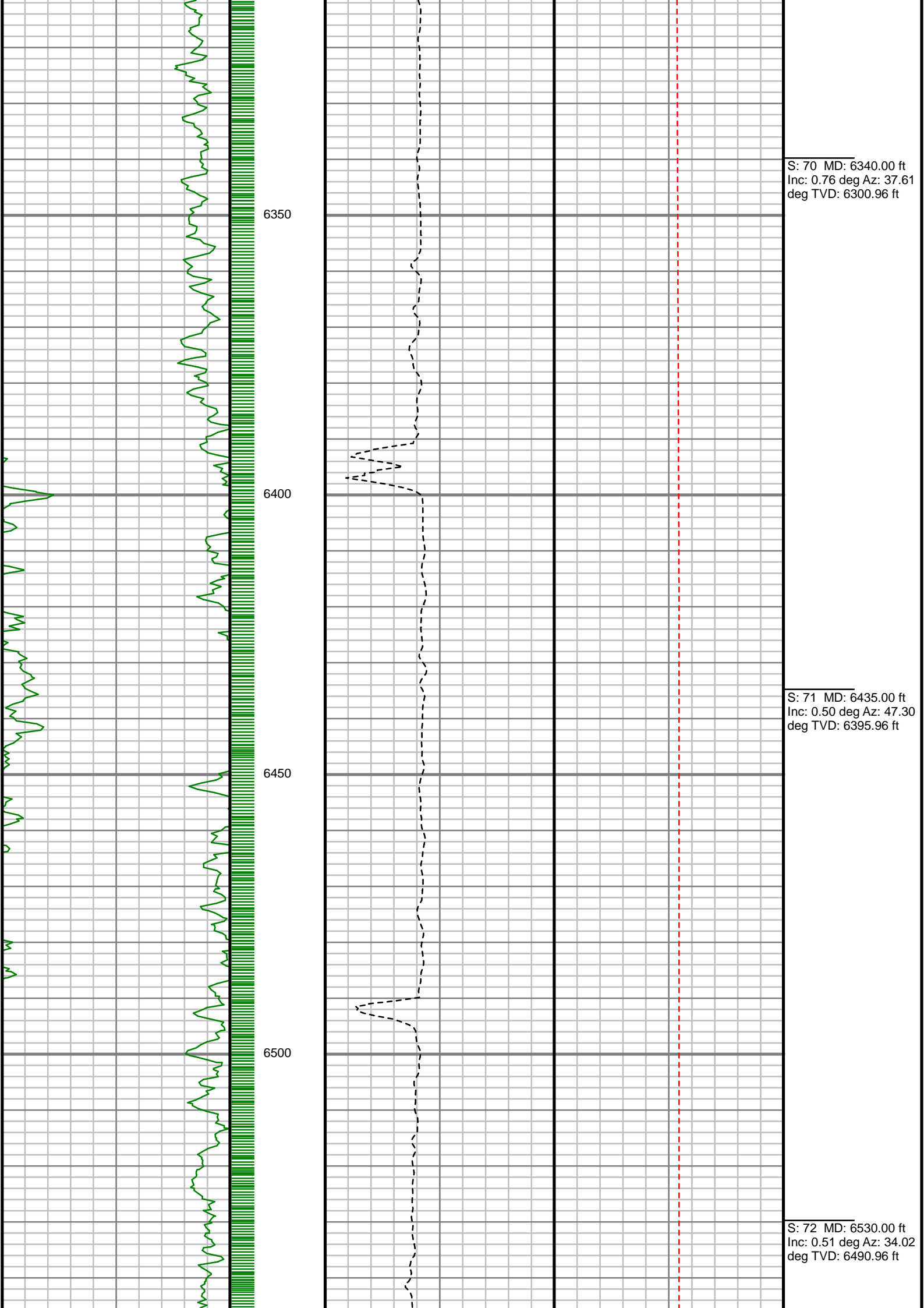


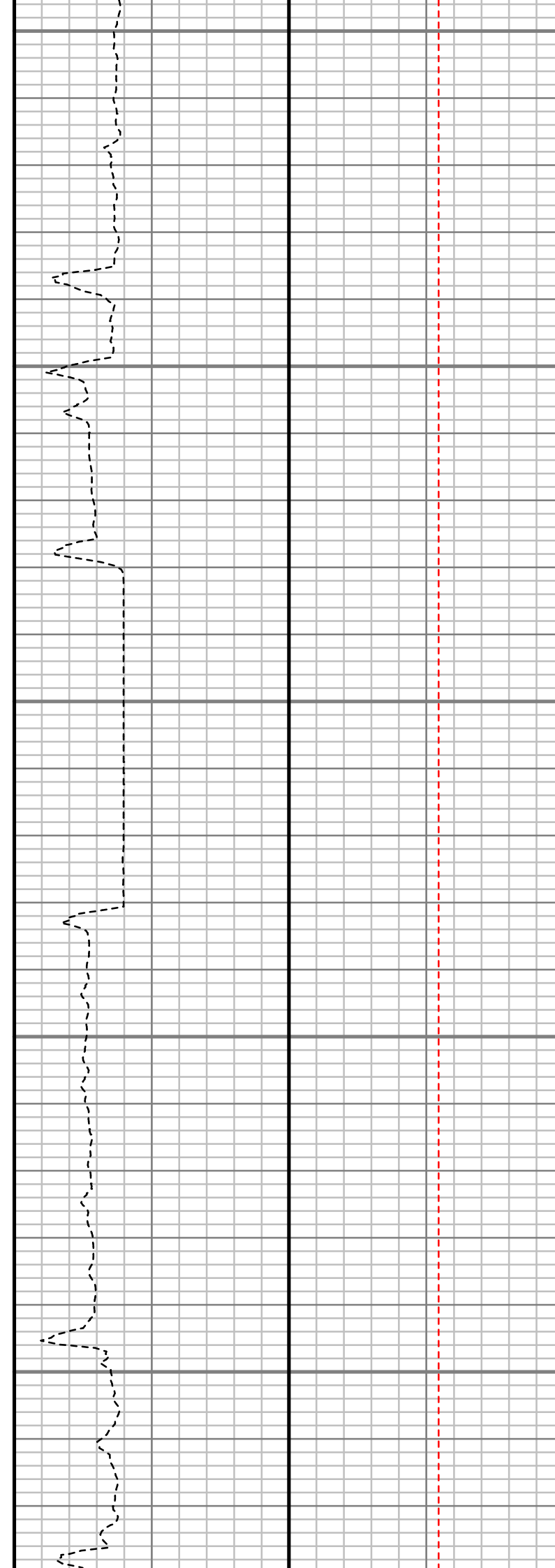
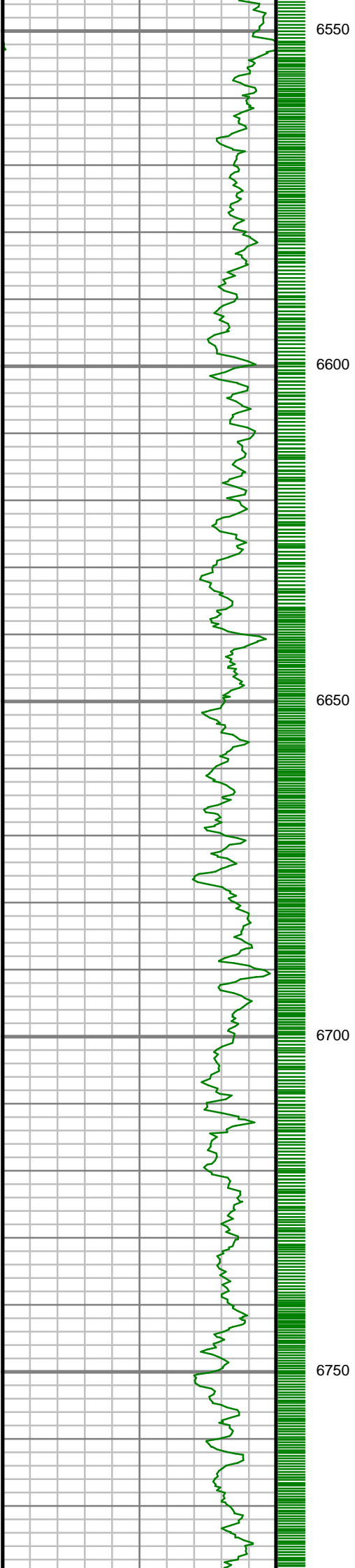
S: 63 MD: 5675.00 ft  
Inc: 1.53 deg Az: 75.62  
deg TVD: 5636.06 ft

S: 64 MD: 5770.00 ft  
Inc: 1.32 deg Az: 92.72  
deg TVD: 5731.03 ft



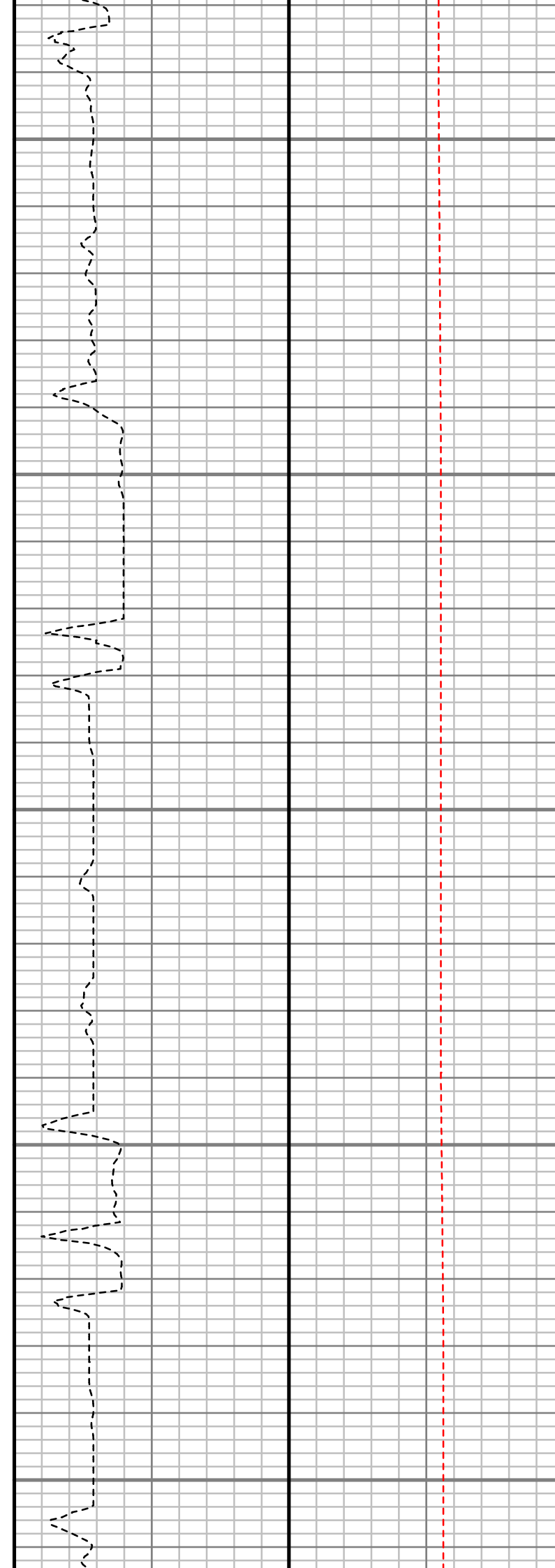
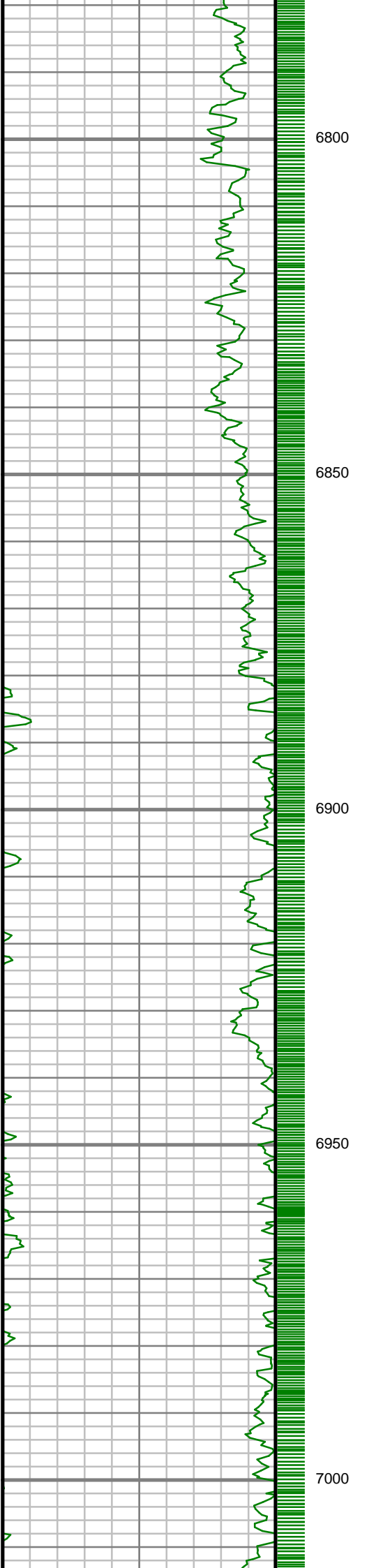






S: 73 MD: 6625.00 ft  
Inc: 3.23 deg Az: 9.89  
deg TVD: 6585.90 ft

S: 74 MD: 6718.00 ft  
Inc: 10.94 deg Az: 7.08  
deg TVD: 6678.12 ft

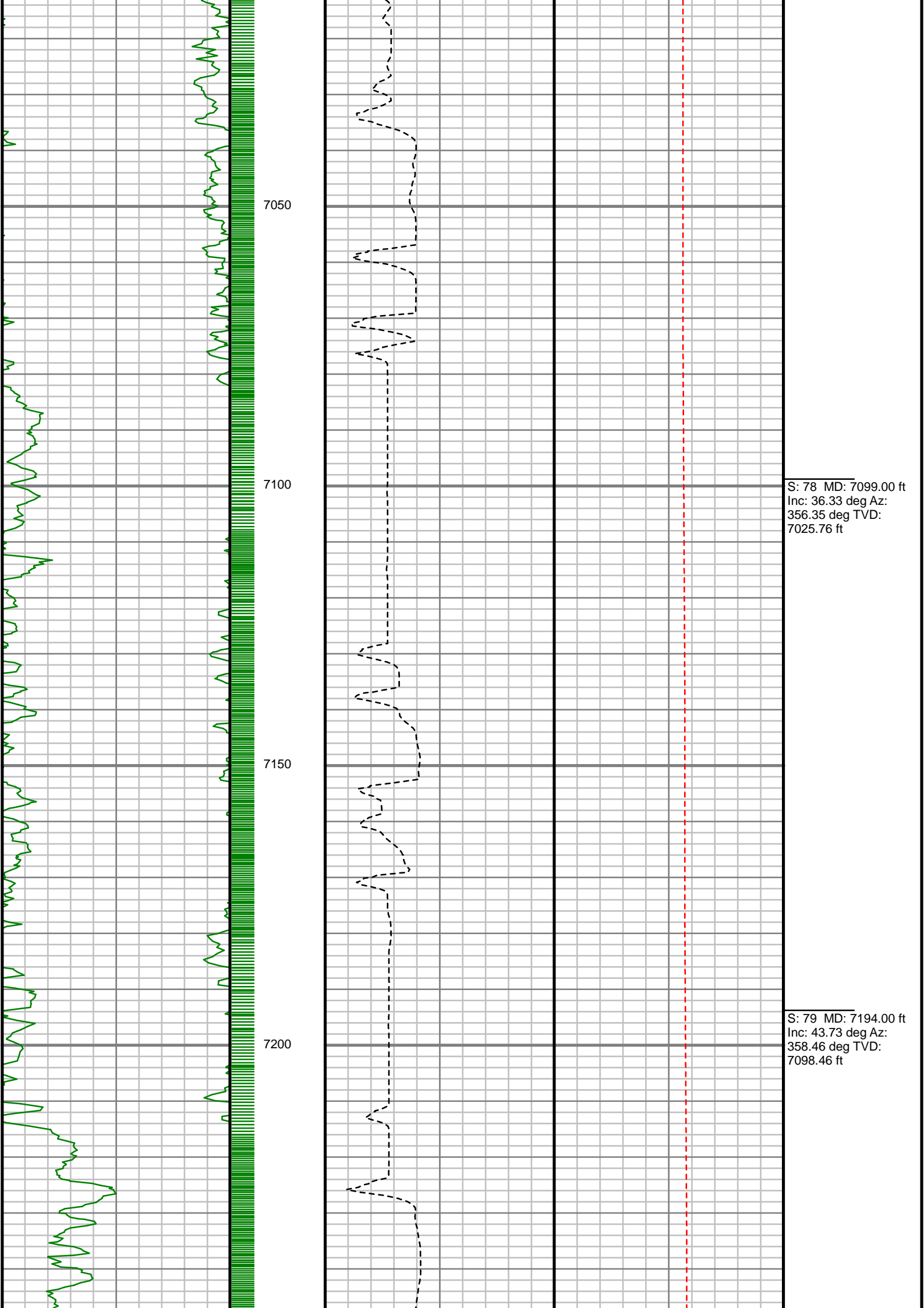


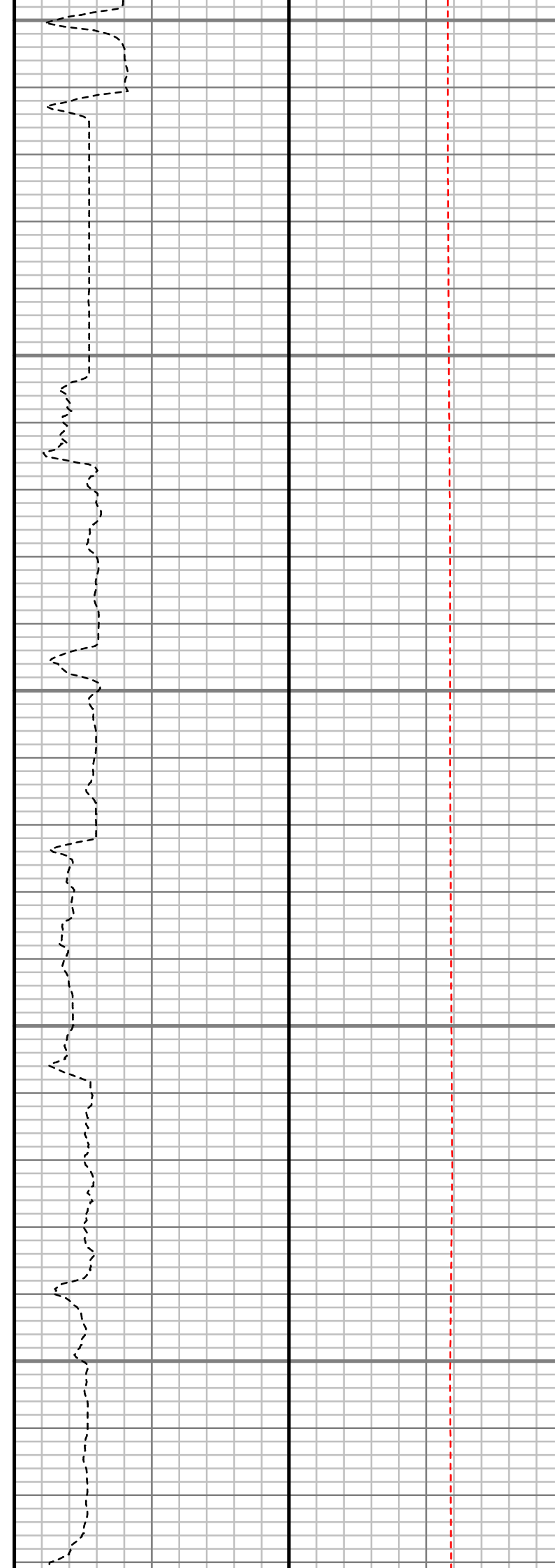
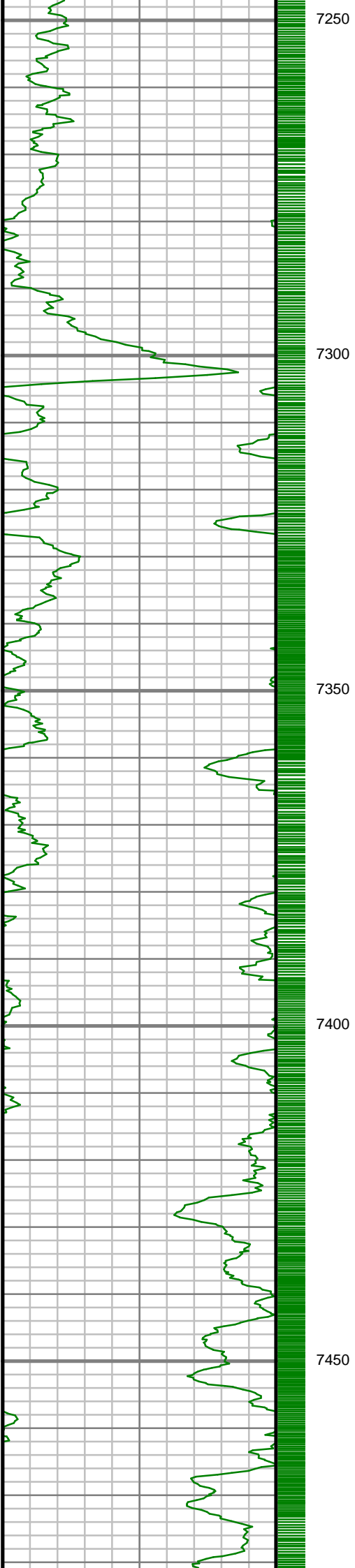
S: 75 MD: 6814.00 ft  
Inc: 18.08 deg Az: 5.26  
deg TVD: 6770.99 ft

S: 76 MD: 6908.00 ft  
Inc: 20.84 deg Az: 3.55  
deg TVD: 6859.62 ft

S: 77 MD: 7004.00 ft  
Inc: 29.95 deg Az: 0.19  
deg TVD: 6946.25 ft



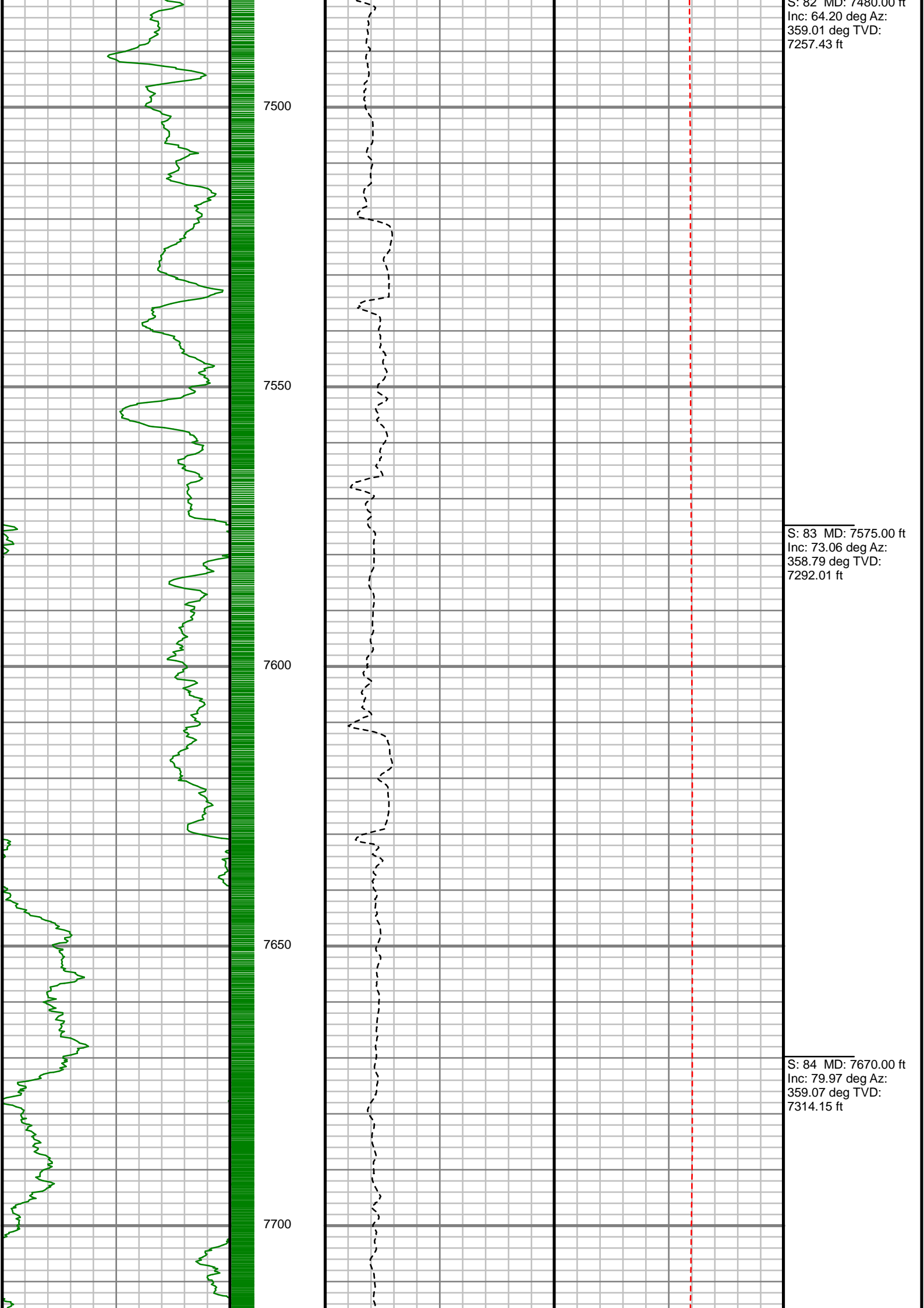


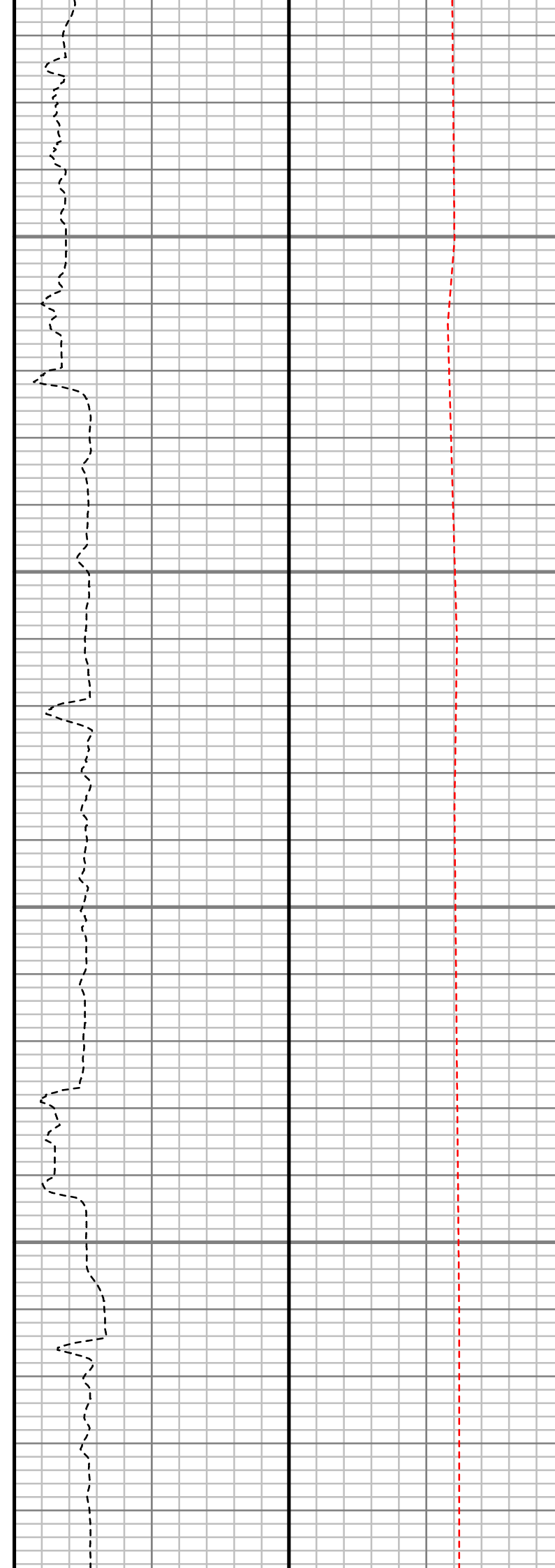
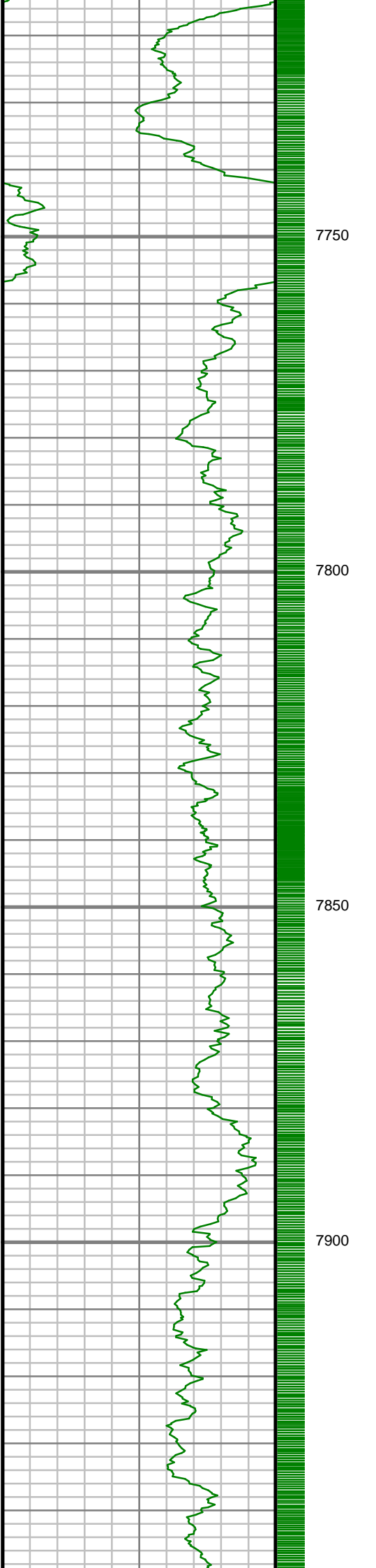


S: 80 MD: 7289.00 ft  
Inc: 53.84 deg Az: 3.08  
deg TVD: 7160.99 ft

S: 81 MD: 7385.00 ft  
Inc: 60.27 deg Az: 0.22  
deg TVD: 7213.18 ft

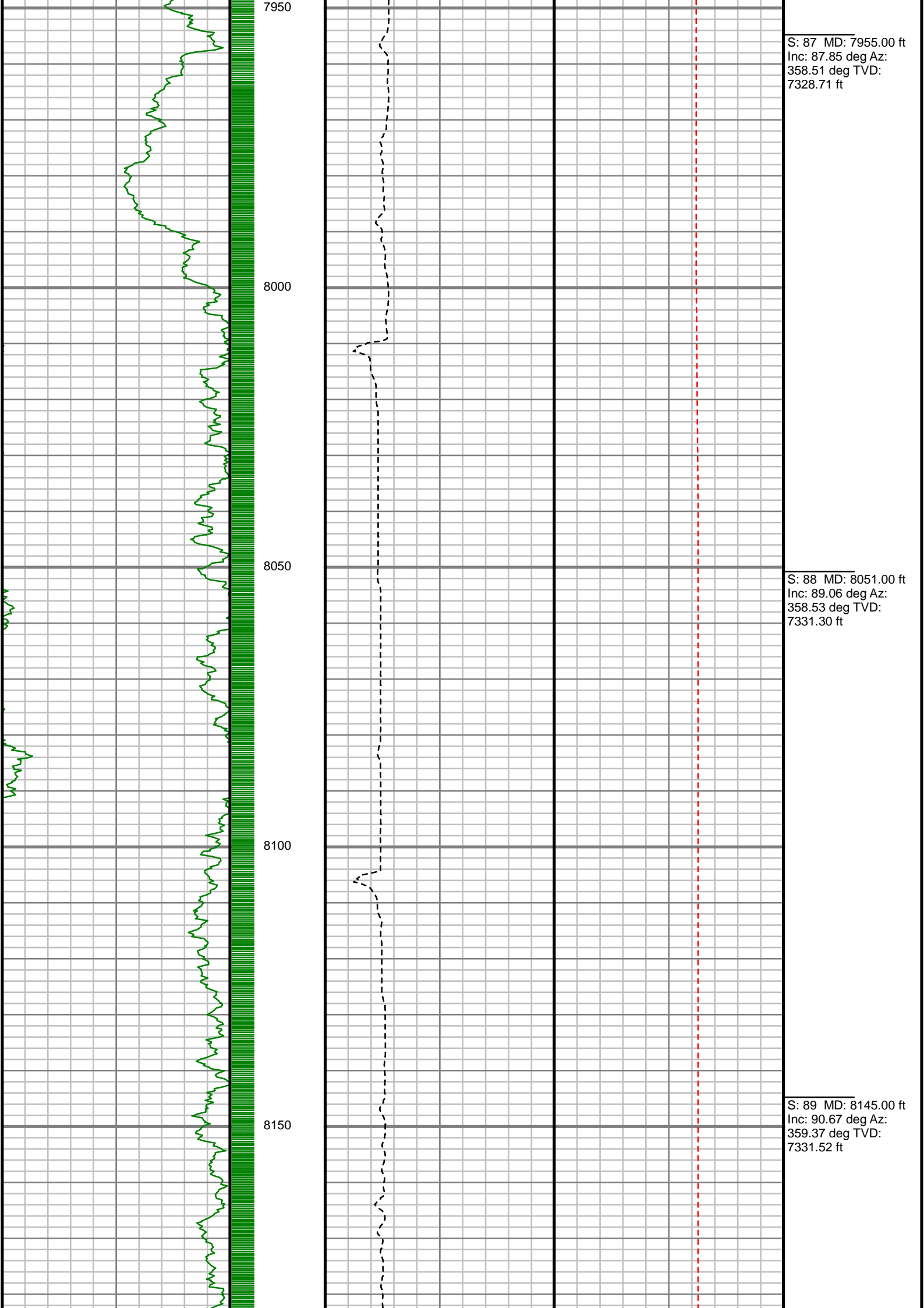
S: 82 MD: 7480.00 ft

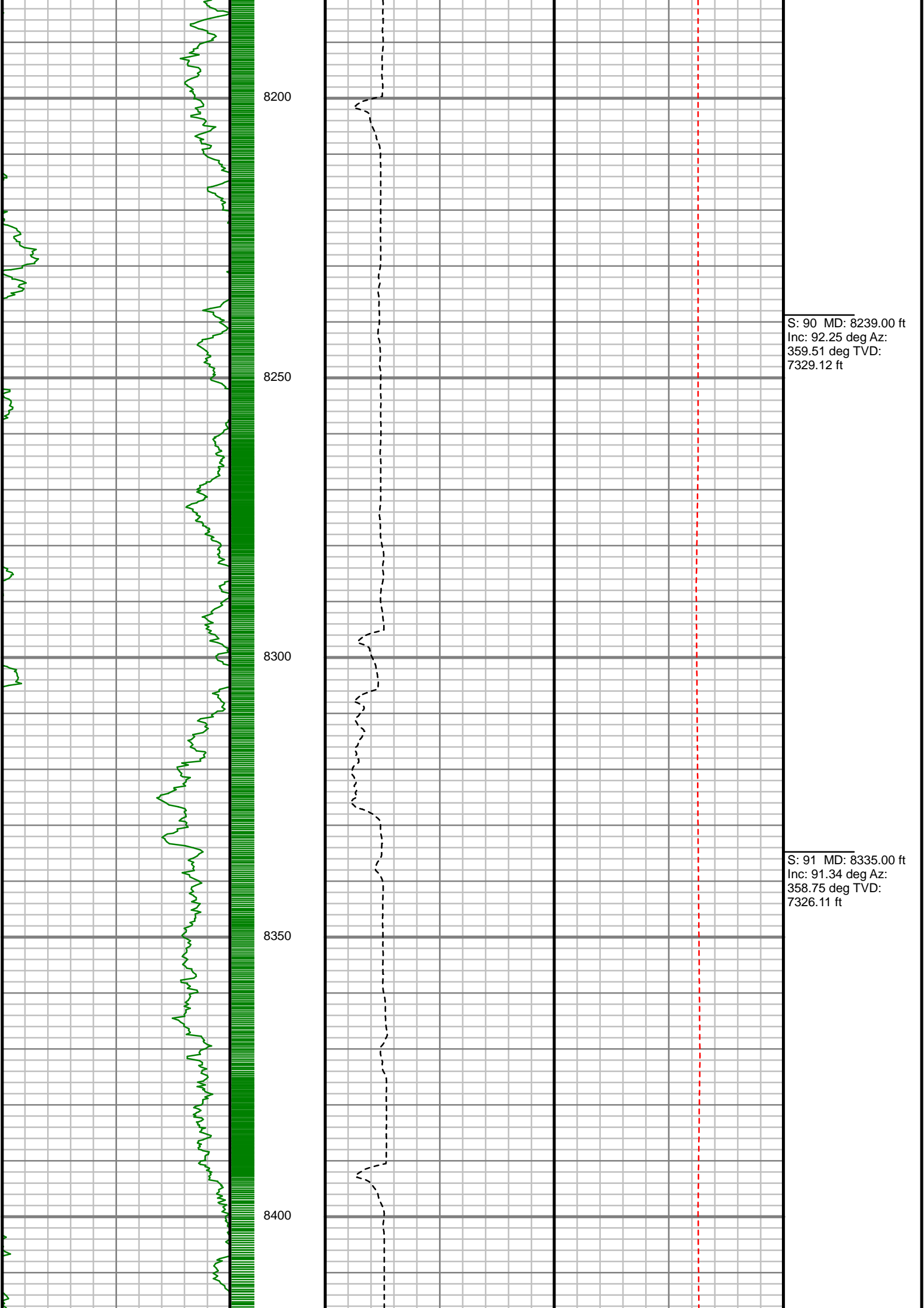


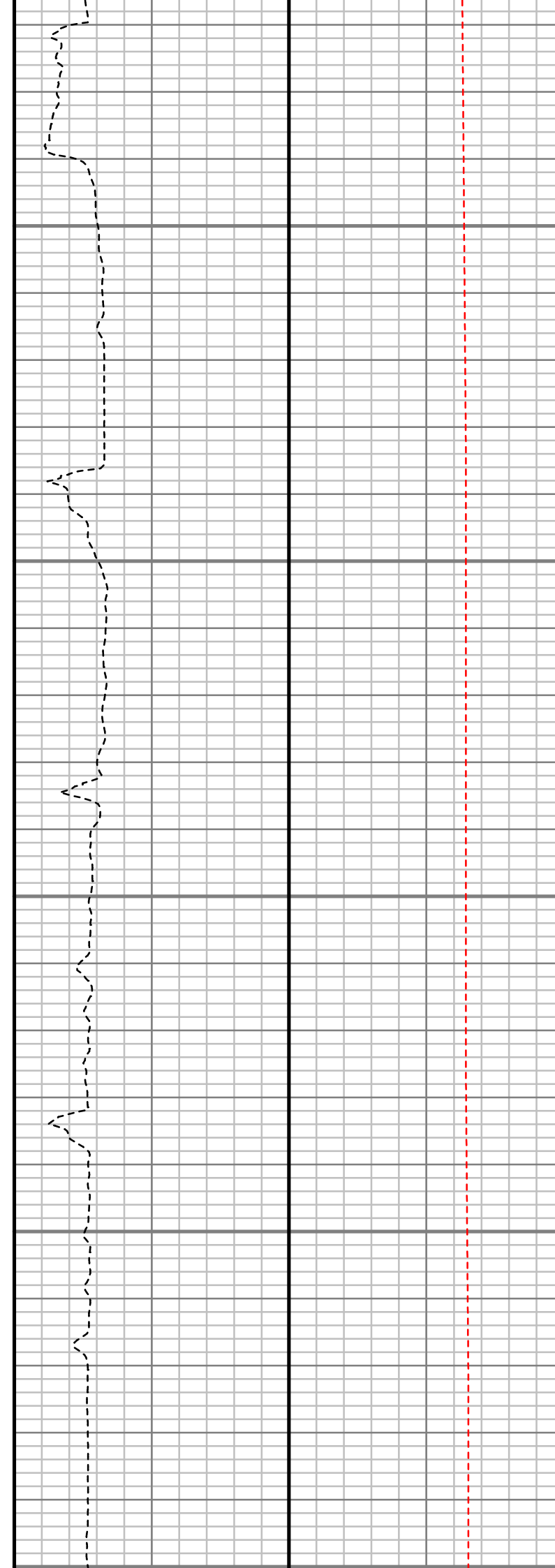
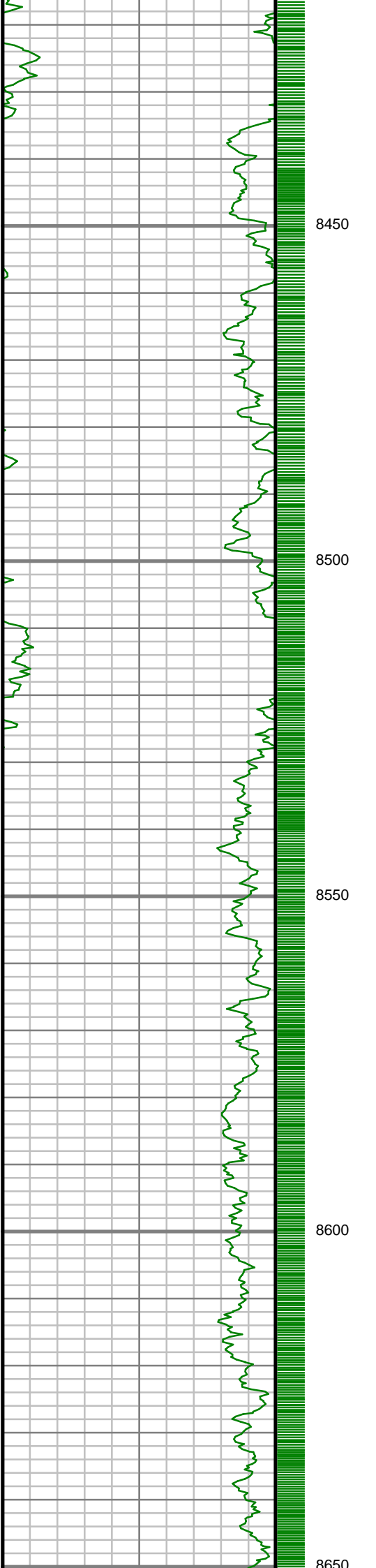


S: 85 MD: 7765.00 ft  
Inc: 87.11 deg Az:  
358.31 deg TVD:  
7324.82 ft

S: 86 MD: 7860.00 ft  
Inc: 90.17 deg Az:  
358.30 deg TVD:  
7327.07 ft



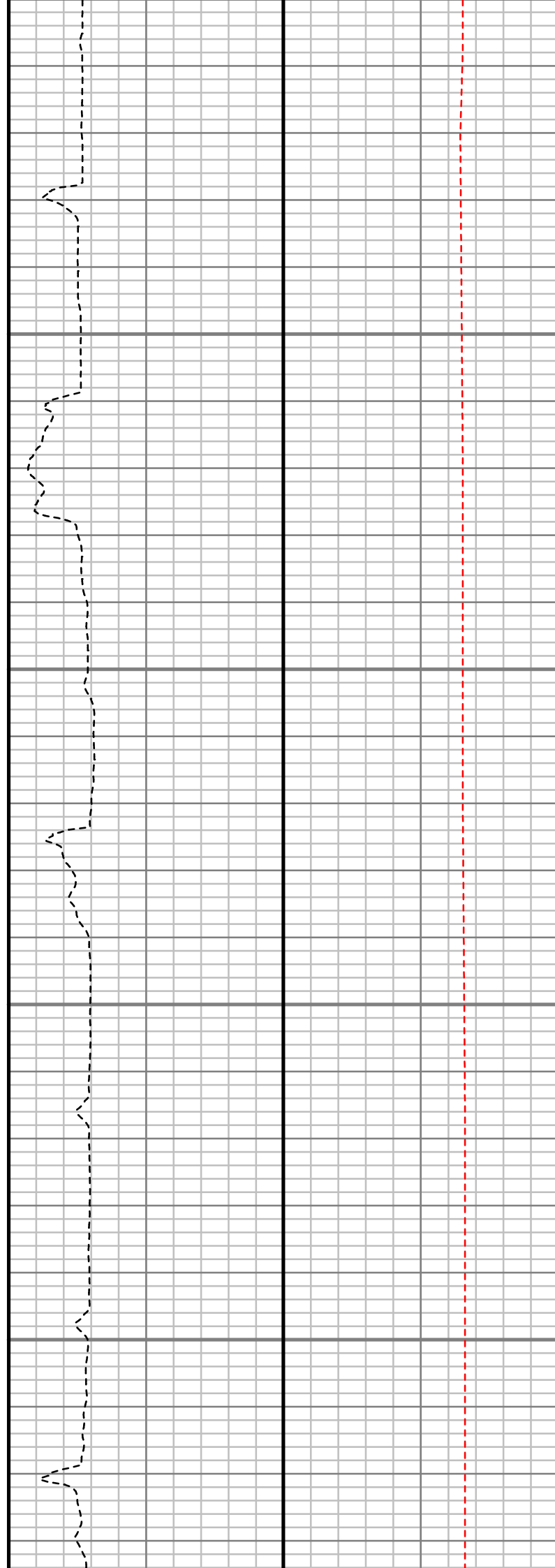
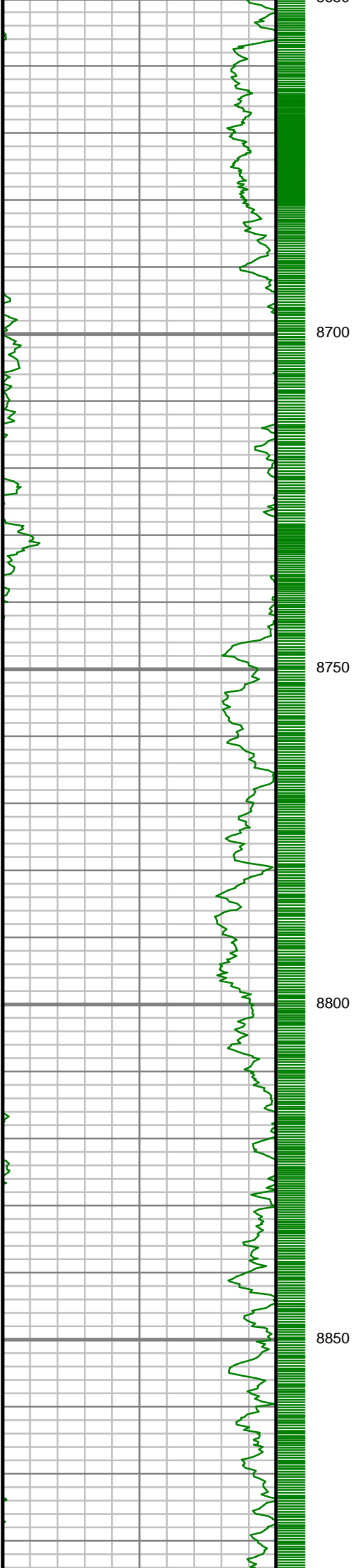




S: 92 MD: 8430.00 ft  
Inc: 89.90 deg Az:  
357.81 deg TVD:  
7325.08 ft

S: 93 MD: 8525.00 ft  
Inc: 89.63 deg Az:  
358.53 deg TVD:  
7325.47 ft

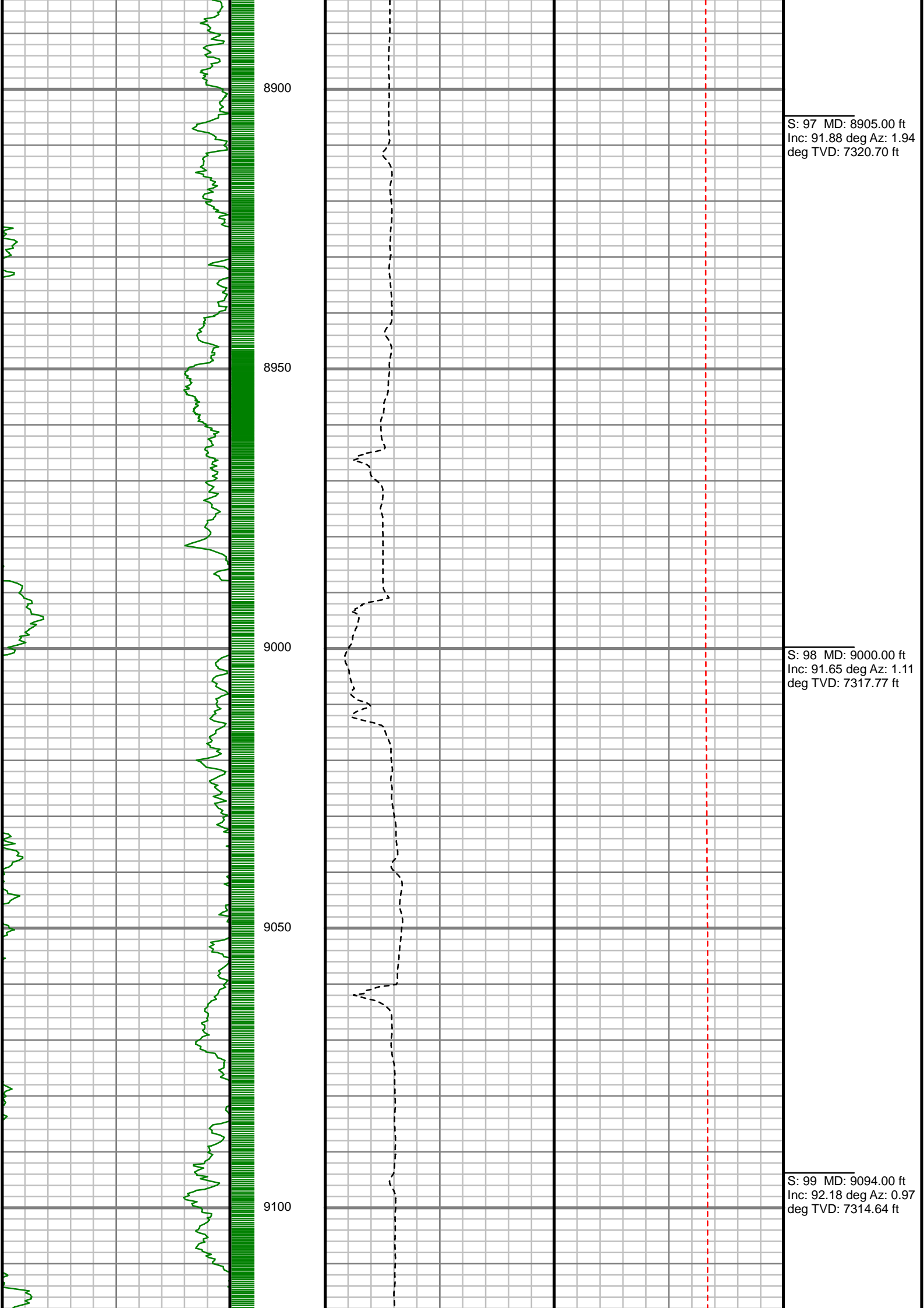
S: 94 MD: 8620.00 ft  
Inc: 91.08 deg Az:  
359.67 deg TVD:  
7324.89 ft

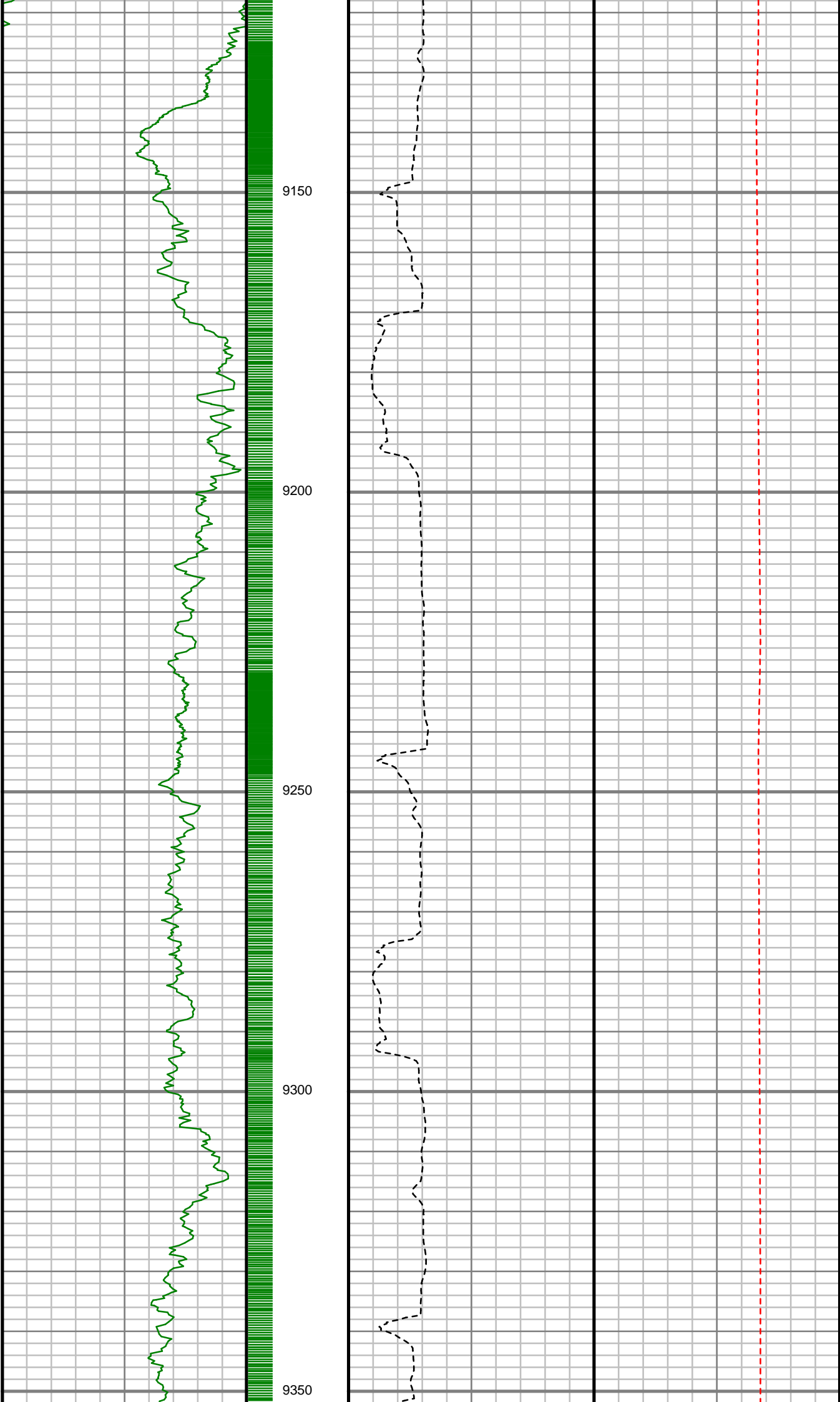


S: 95 MD: 8715.00 ft  
Inc: 90.84 deg Az: 0.91  
deg TVD: 7323.30 ft

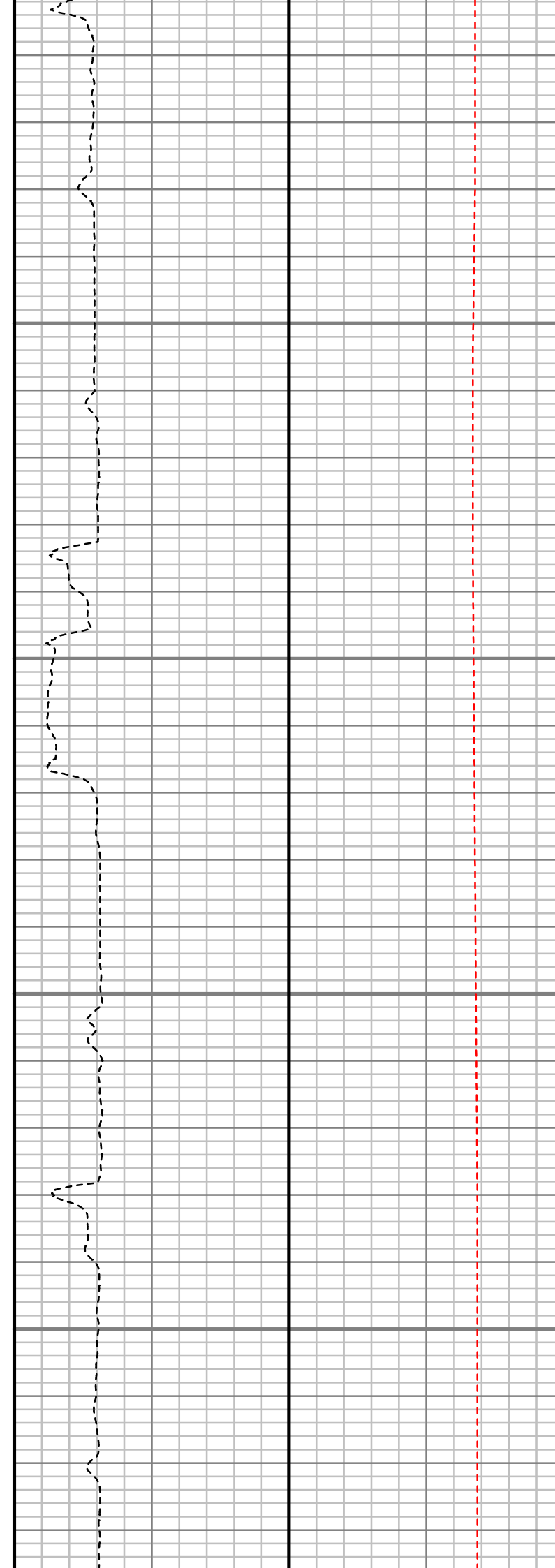
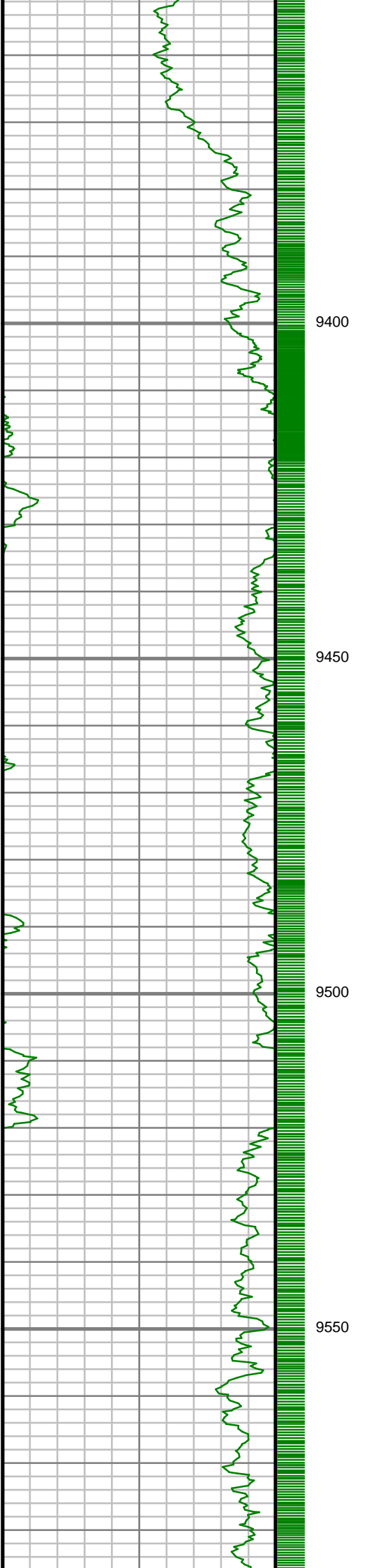
S: 96 MD: 8809.00 ft  
Inc: 90.20 deg Az: 1.71  
deg TVD: 7322.44 ft







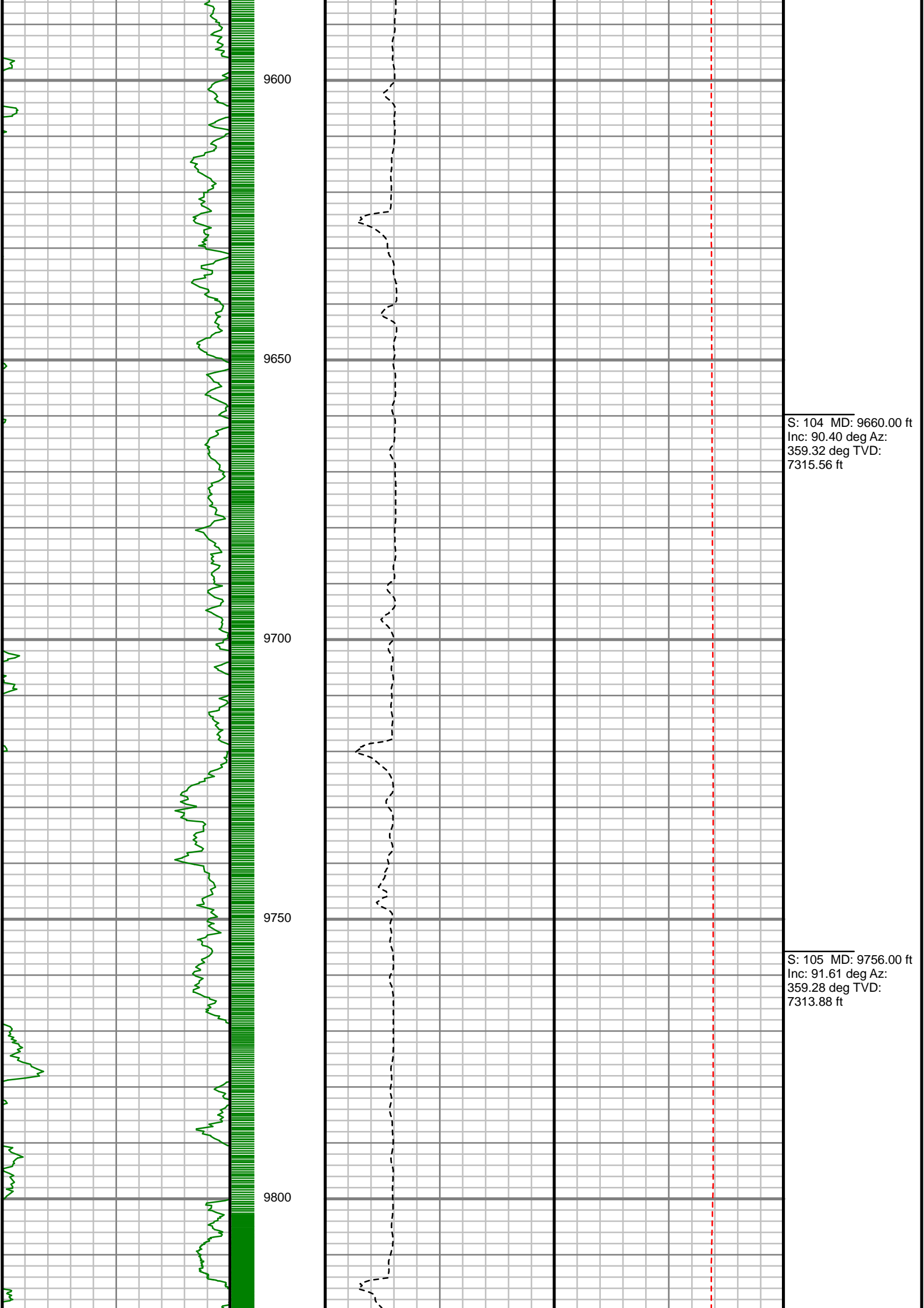
S: 100 MD: 9186.00 ft  
Inc: 91.07 deg Az:  
359.14 deg TVD:  
7312.02 ft

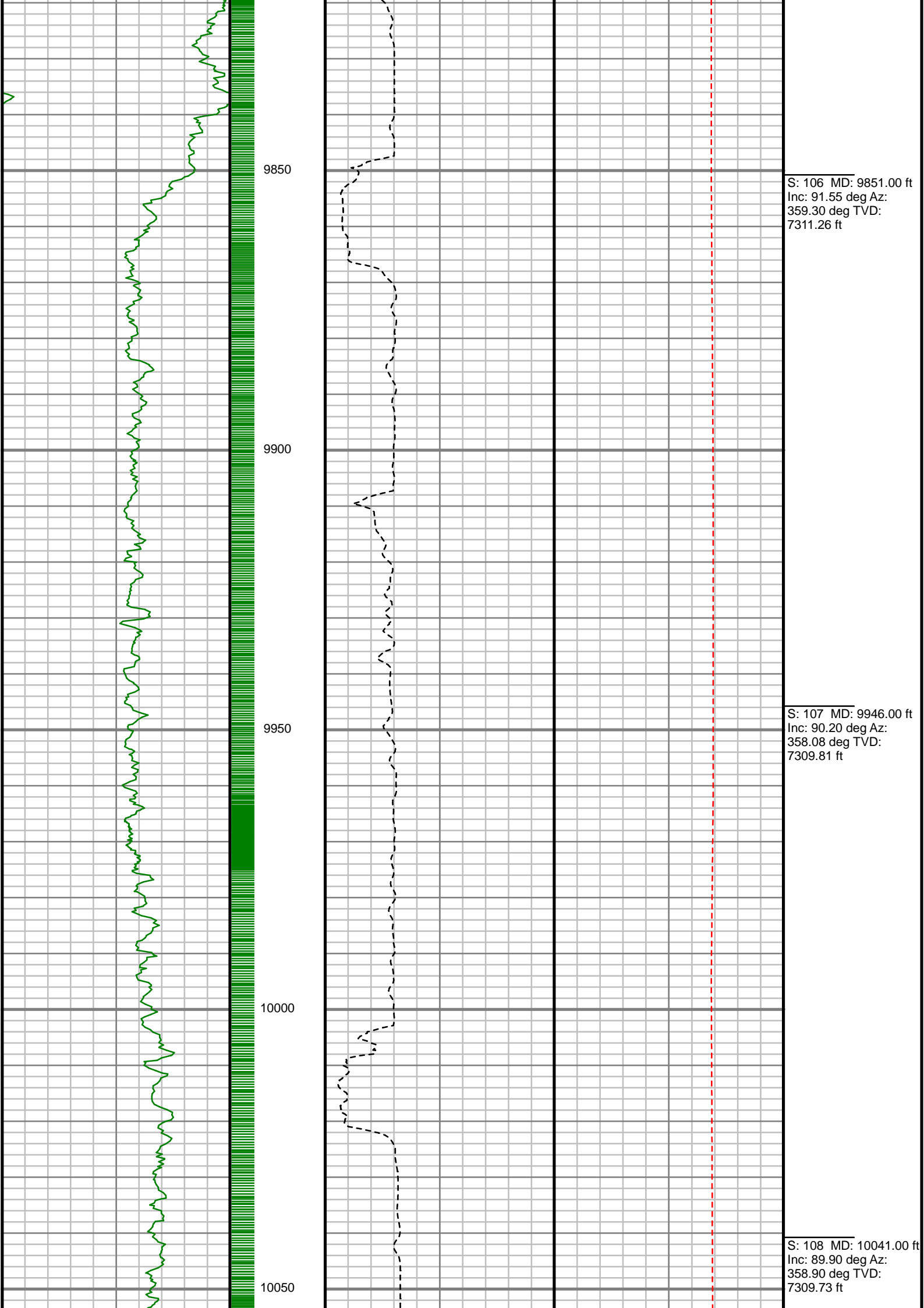


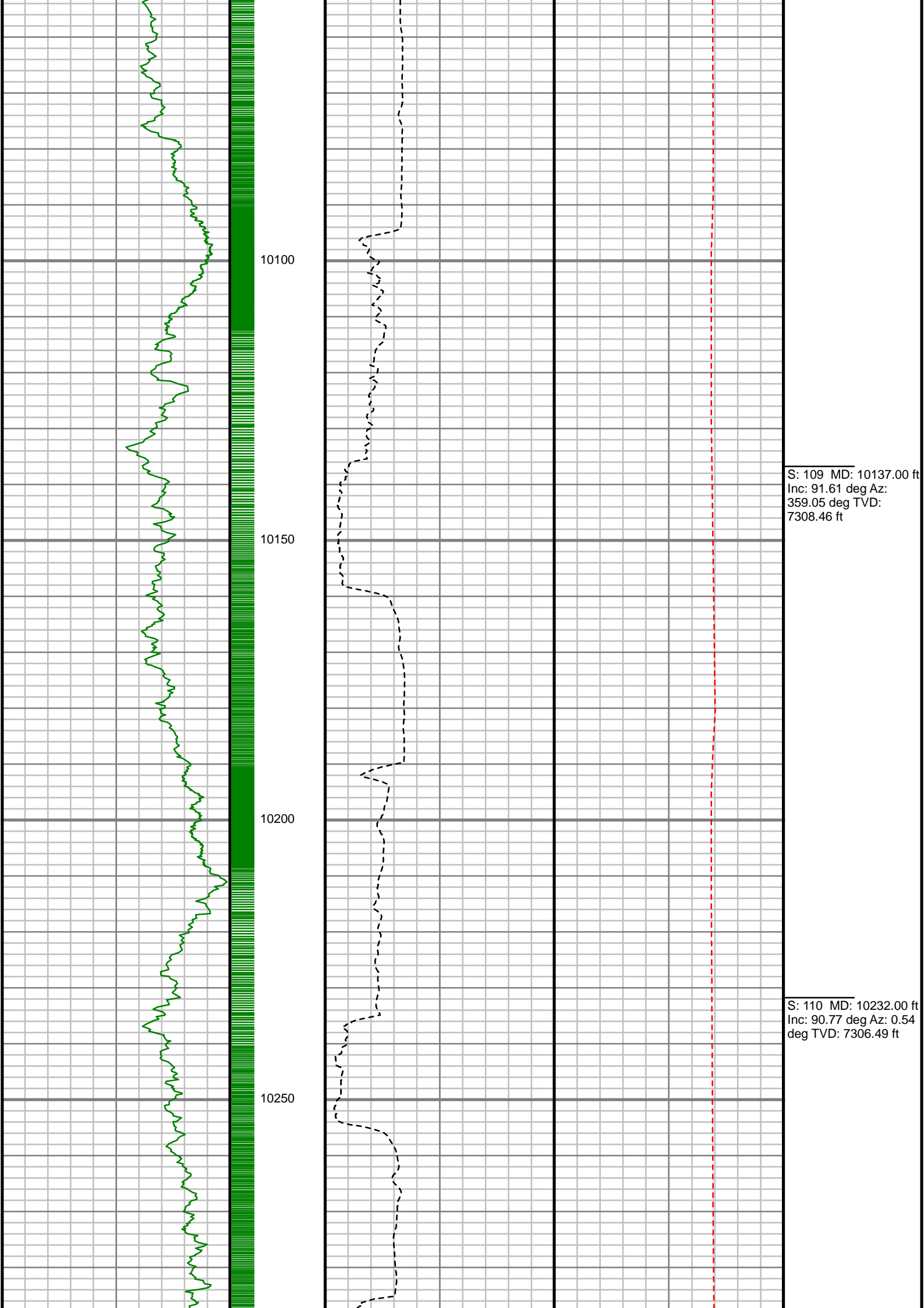
S: 101 MD: 9377.00 ft  
Inc: 89.43 deg Az:  
356.51 deg TVD:  
7311.19 ft

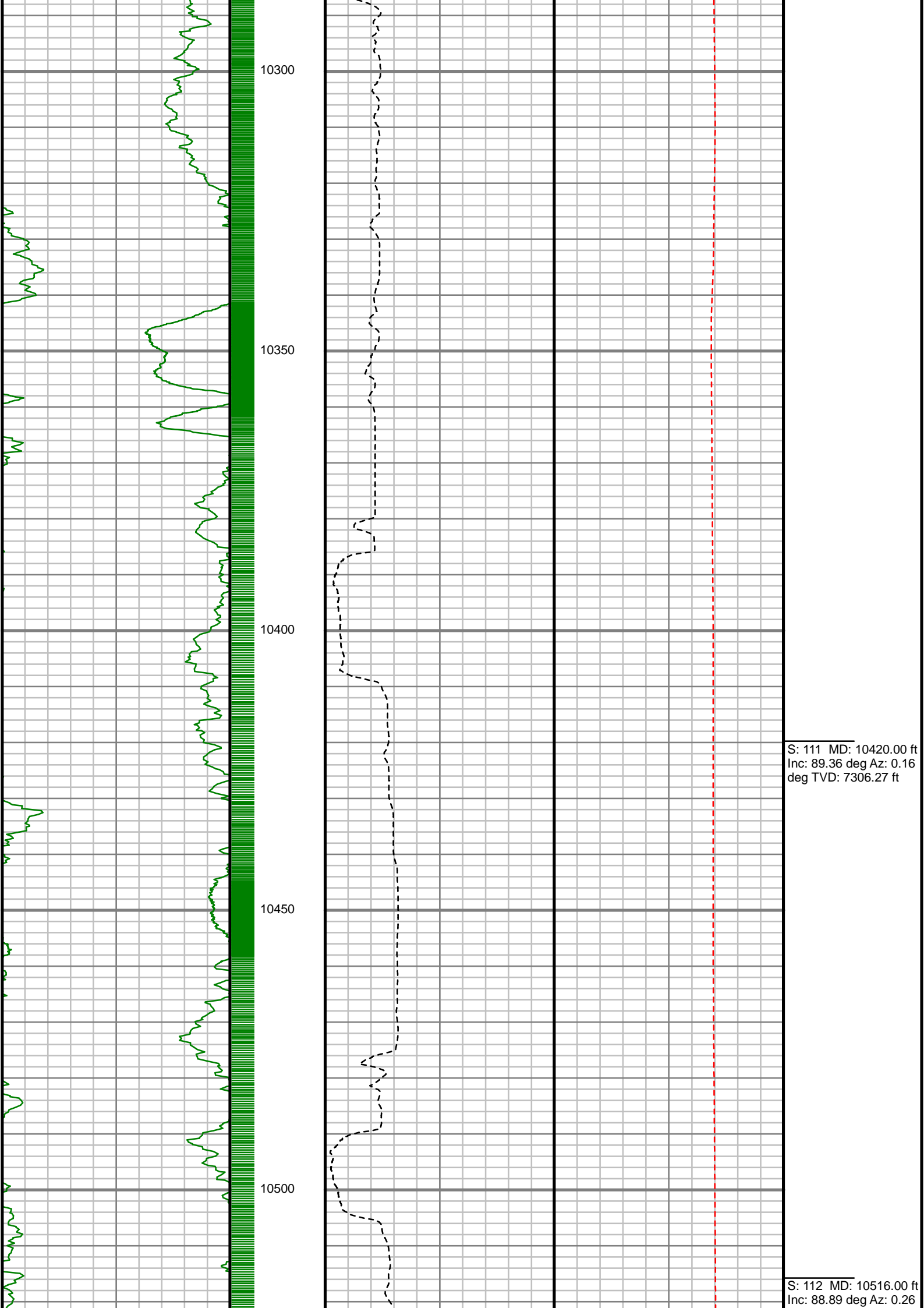
S: 102 MD: 9470.00 ft  
Inc: 88.22 deg Az:  
358.31 deg TVD:  
7313.09 ft

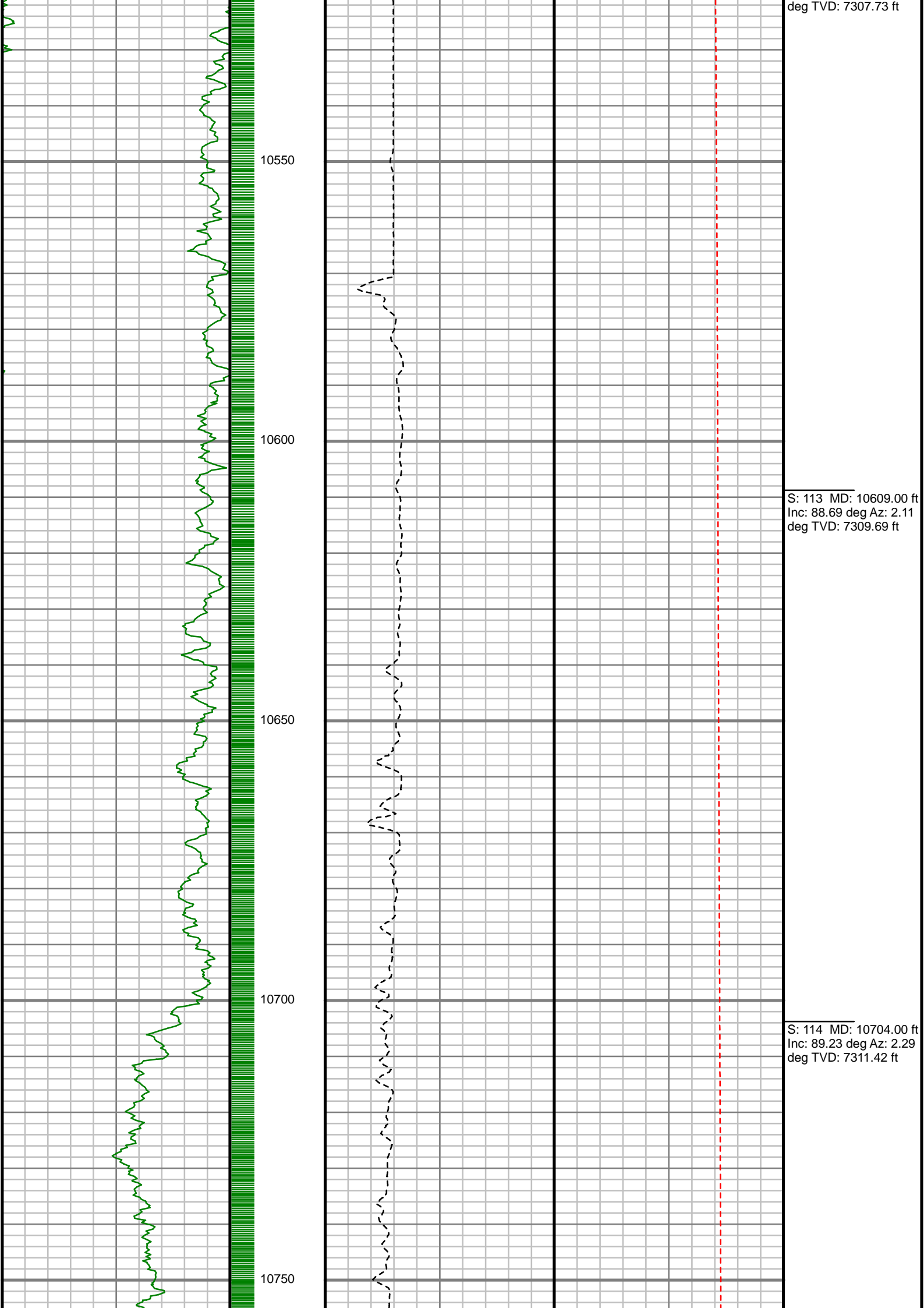
S: 103 MD: 9565.00 ft  
Inc: 89.19 deg Az:  
359.16 deg TVD:  
7315.23 ft











deg TVD: 7307.73 ft

10550

10600

10650

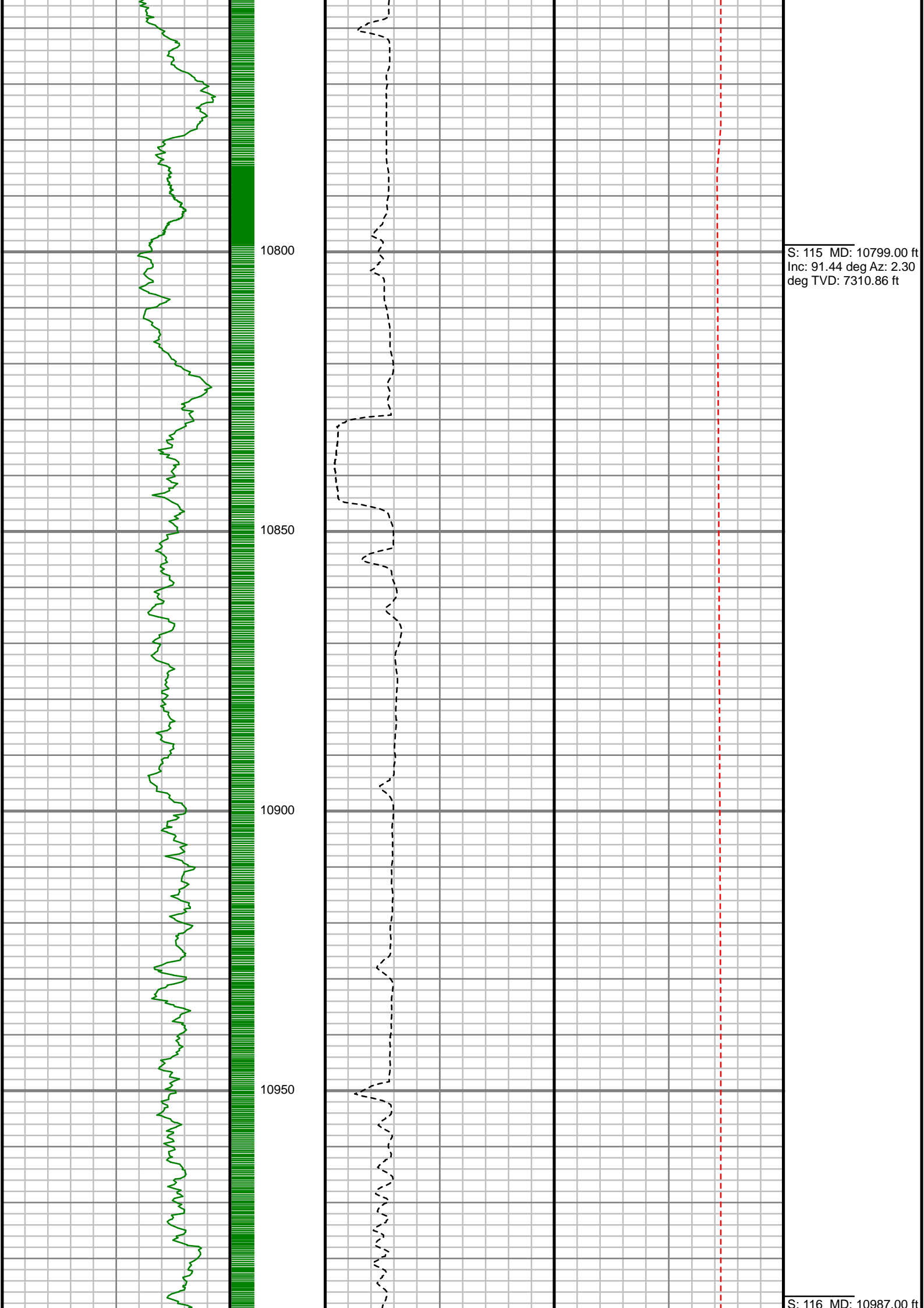
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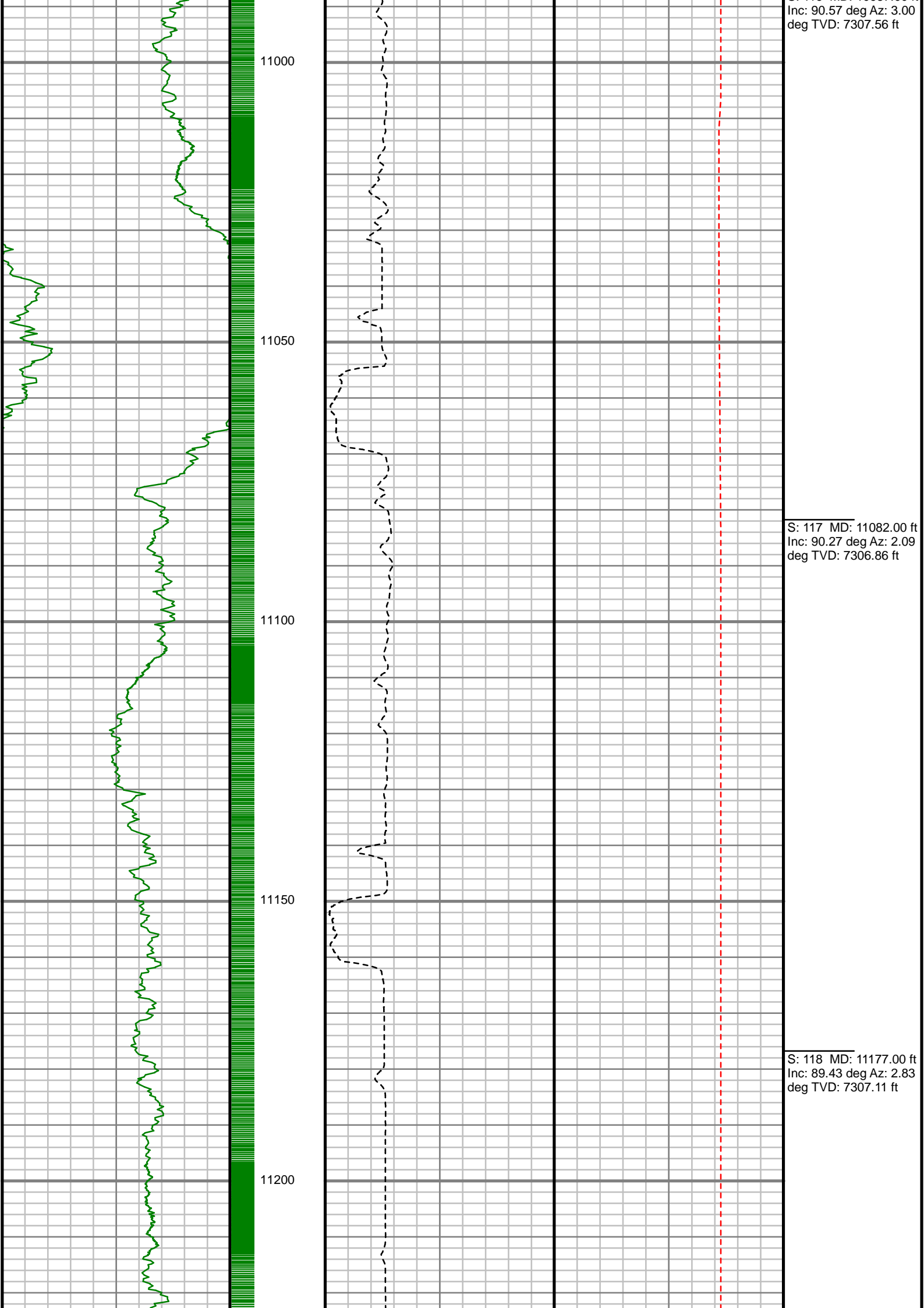
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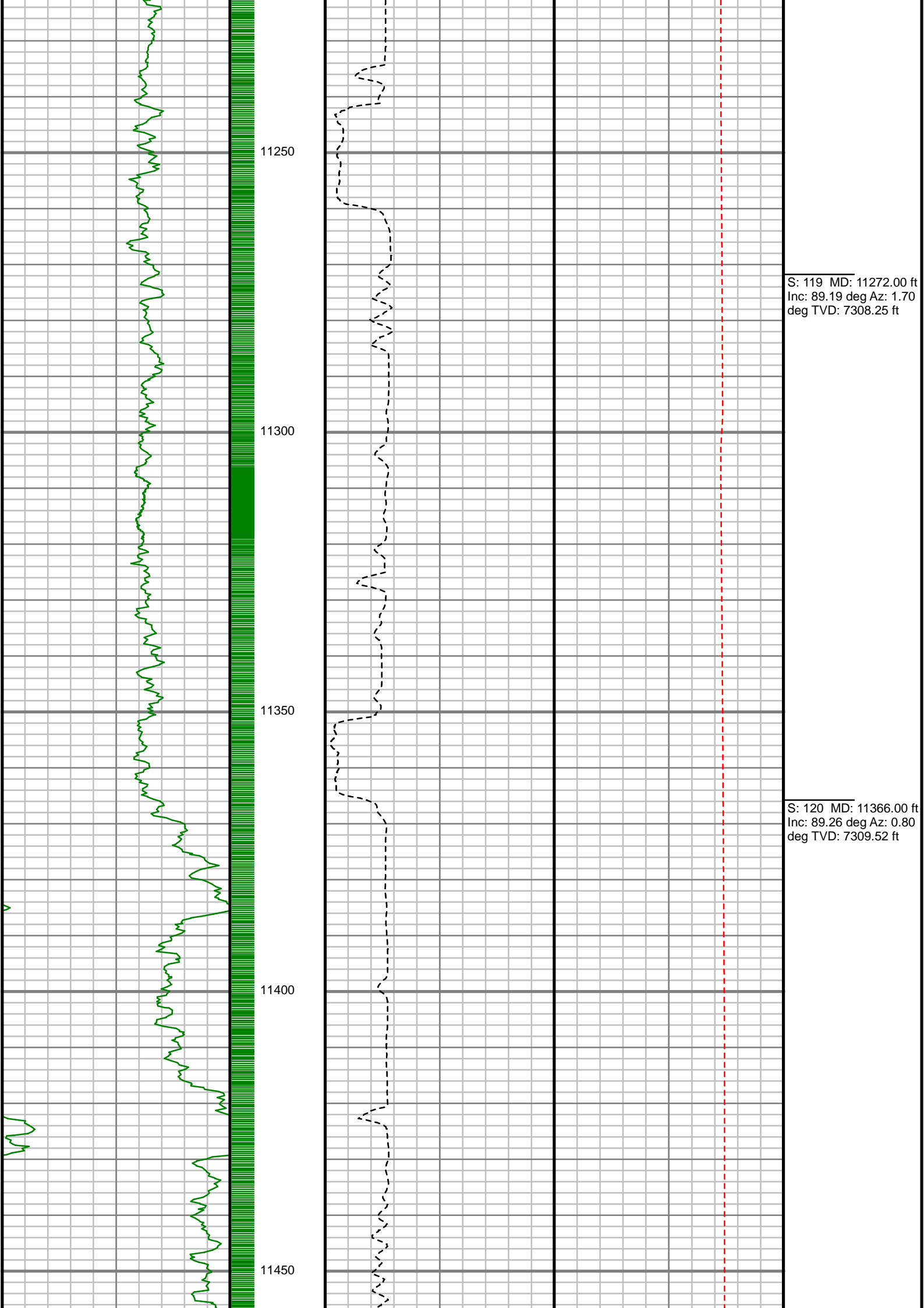
S: 113 MD: 10609.00 ft  
Inc: 88.69 deg Az: 2.11  
deg TVD: 7309.69 ft

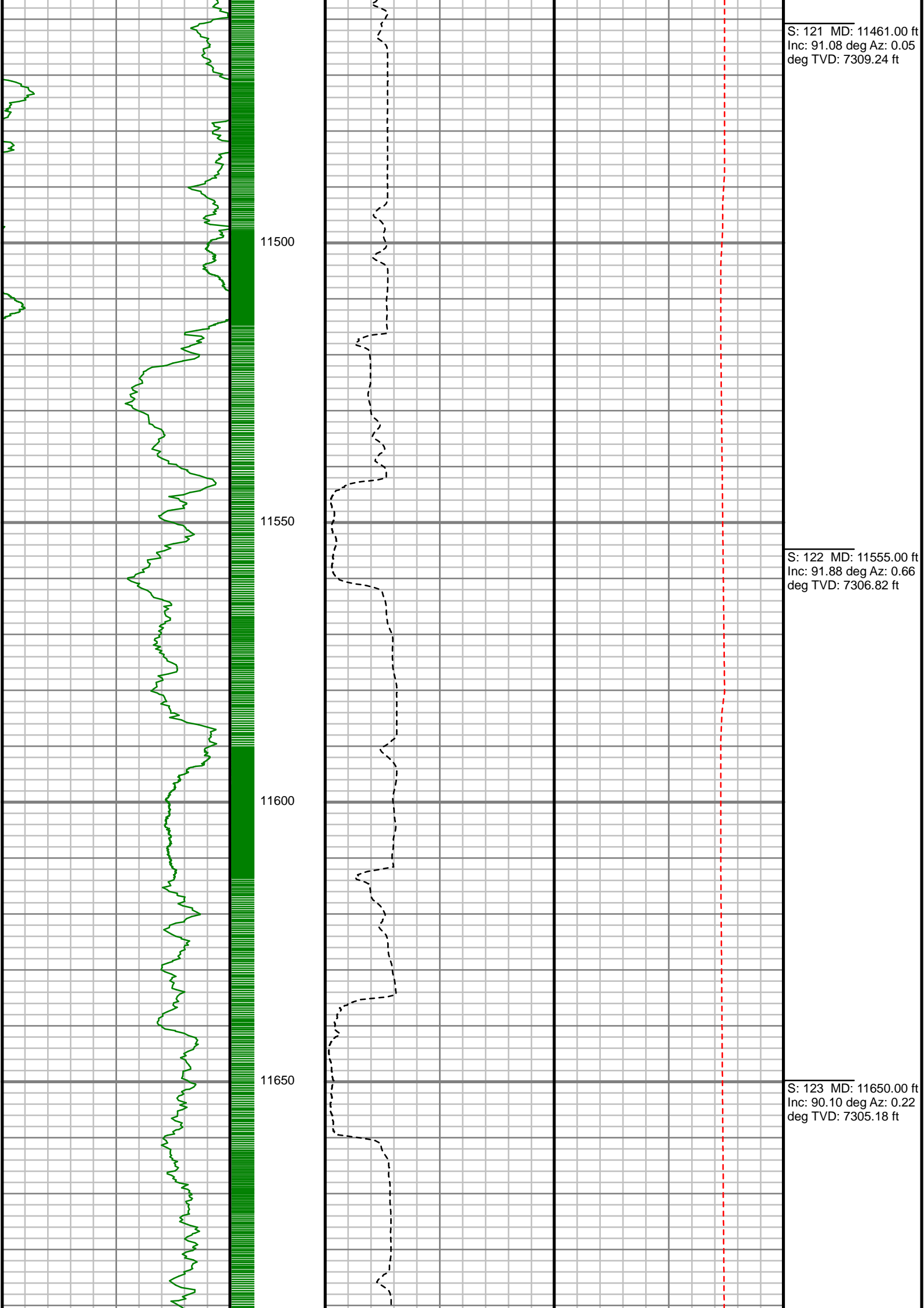
S: 114 MD: 10704.00 ft  
Inc: 89.23 deg Az: 2.29  
deg TVD: 7311.42 ft







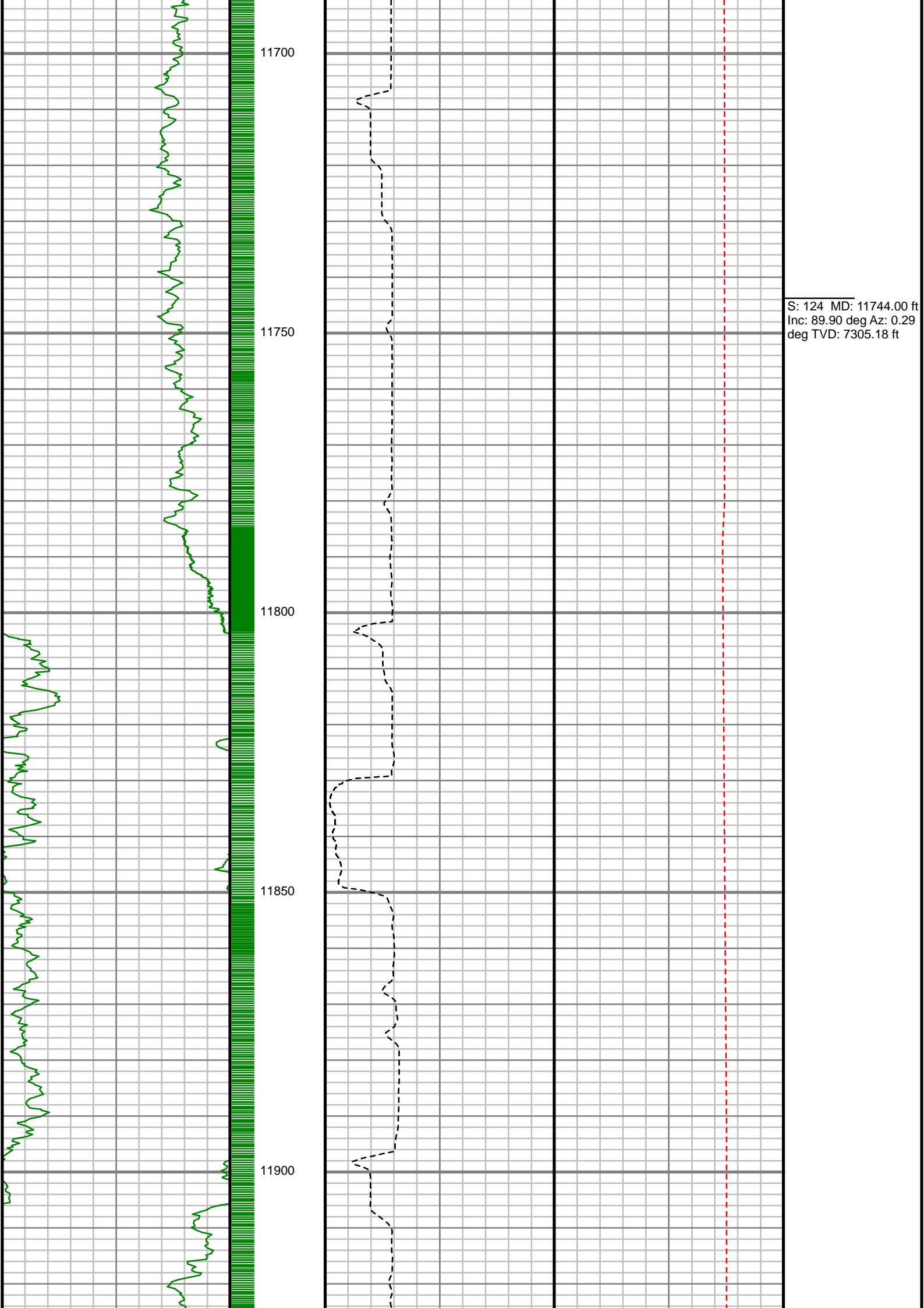


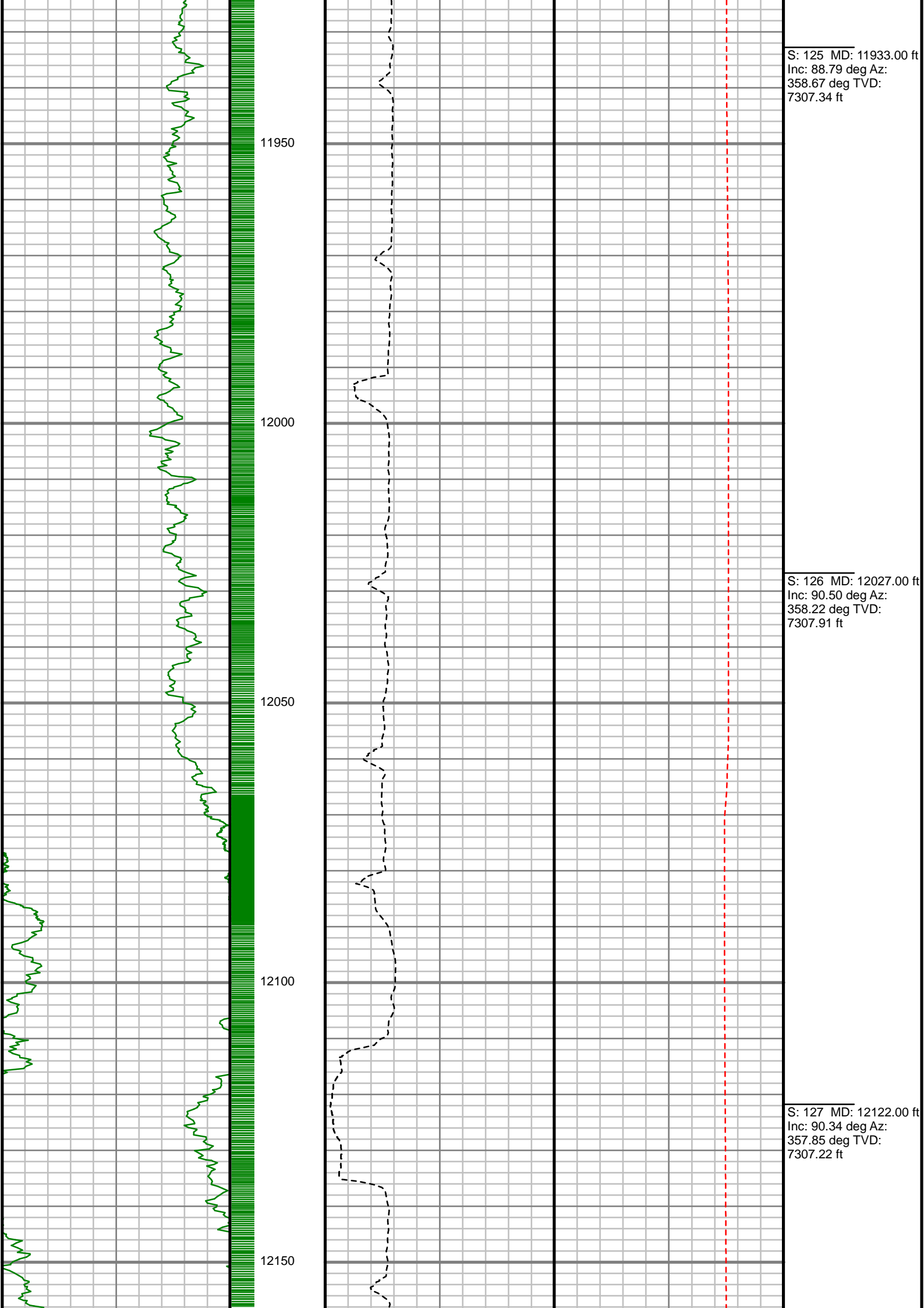


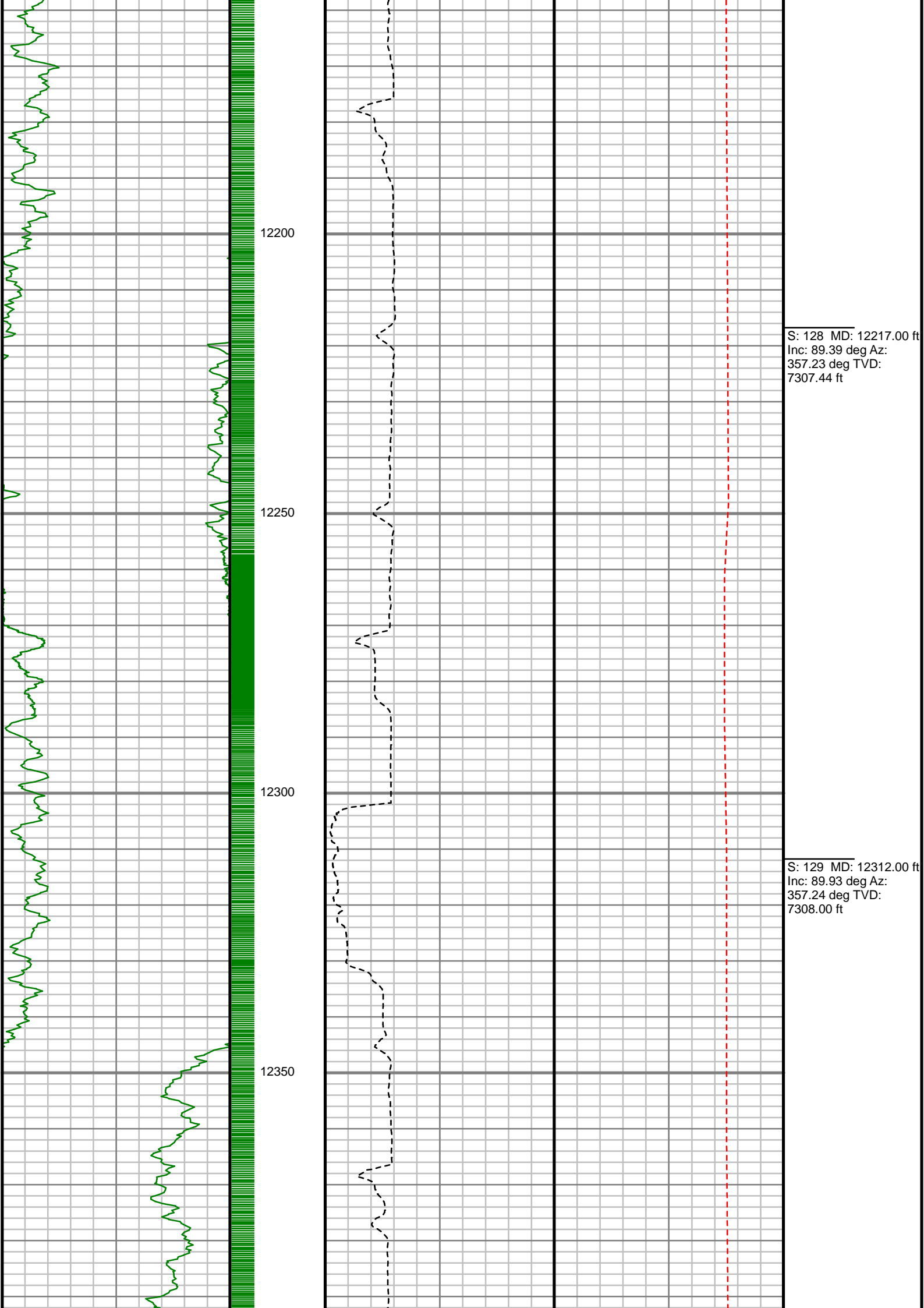
S: 121 MD: 11461.00 ft  
Inc: 91.08 deg Az: 0.05  
deg TVD: 7309.24 ft

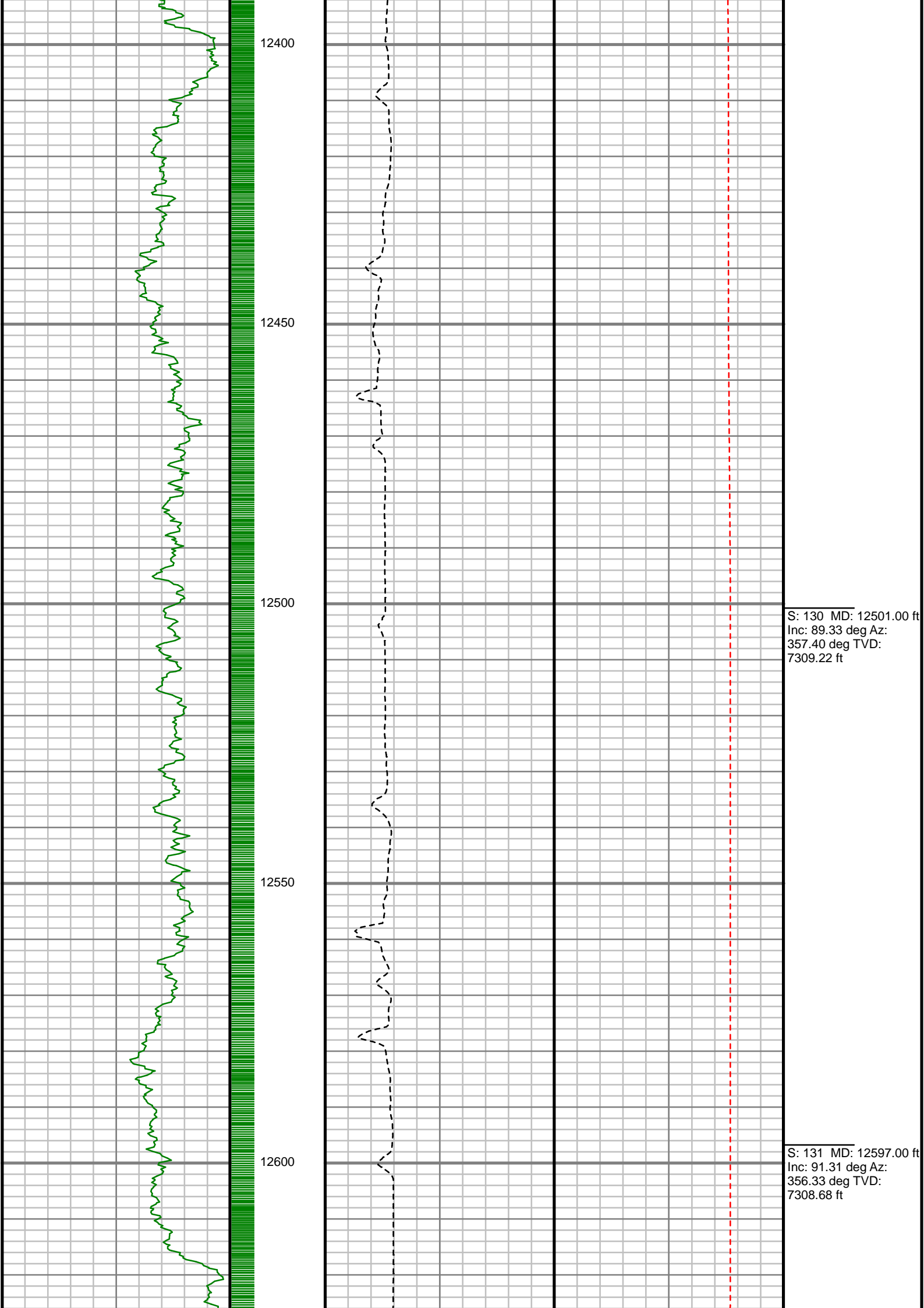
S: 122 MD: 11555.00 ft  
Inc: 91.88 deg Az: 0.66  
deg TVD: 7306.82 ft

S: 123 MD: 11650.00 ft  
Inc: 90.10 deg Az: 0.22  
deg TVD: 7305.18 ft

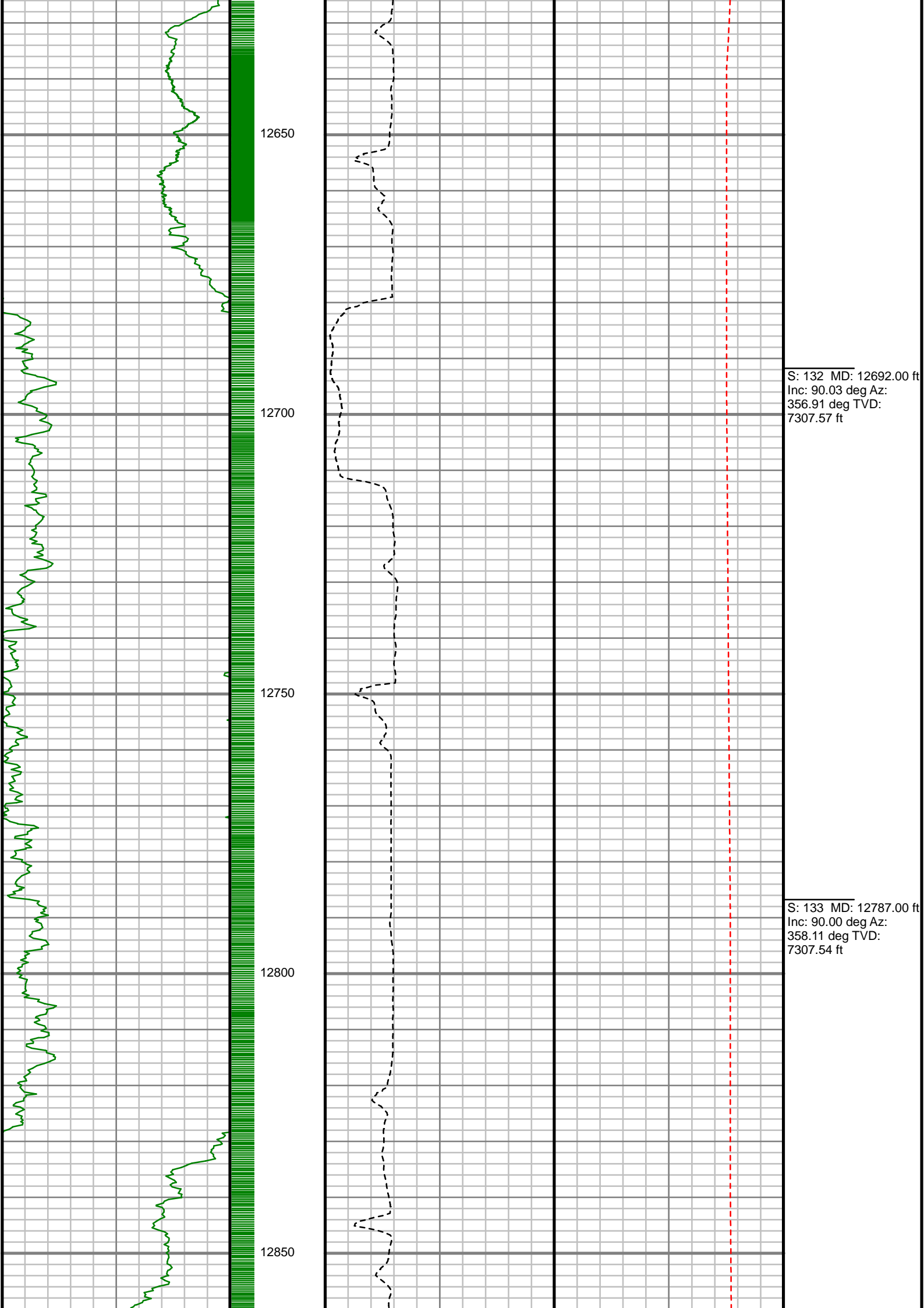


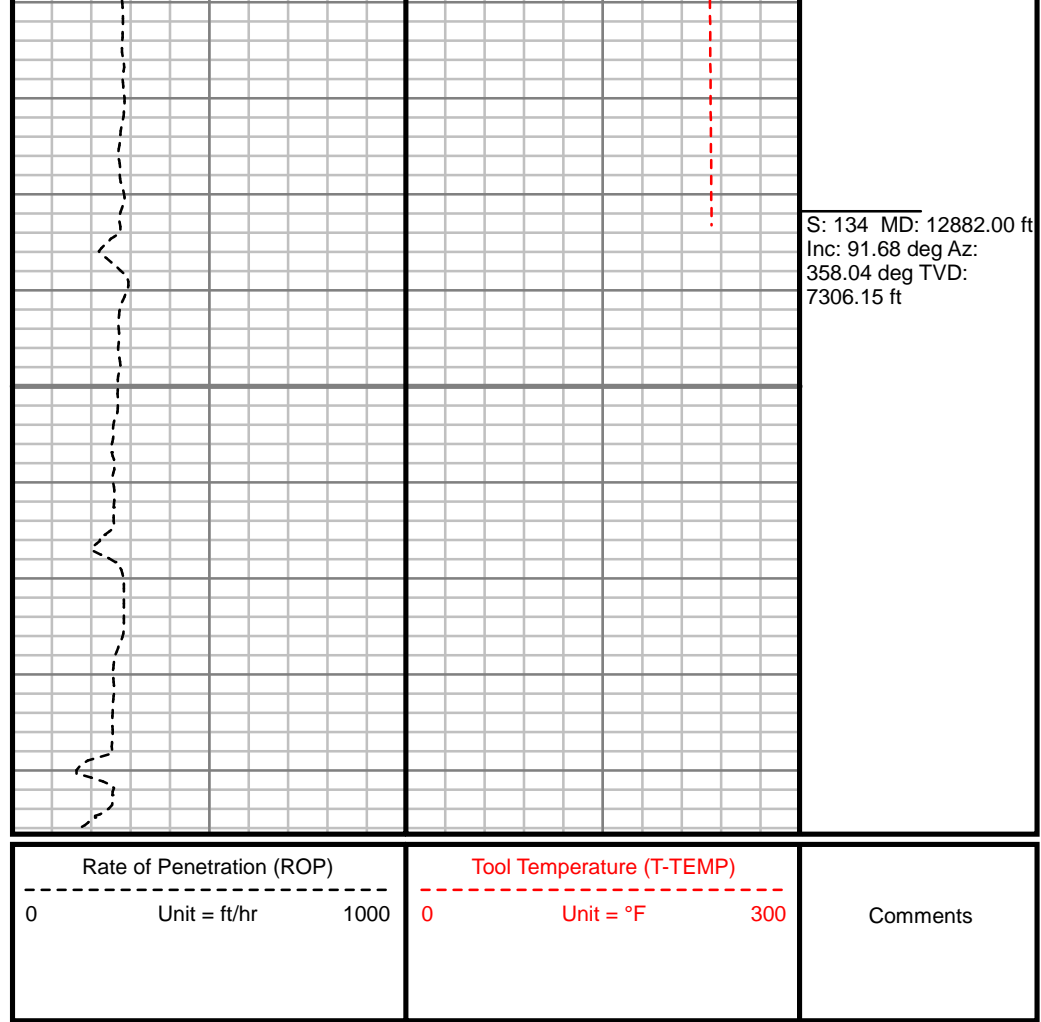
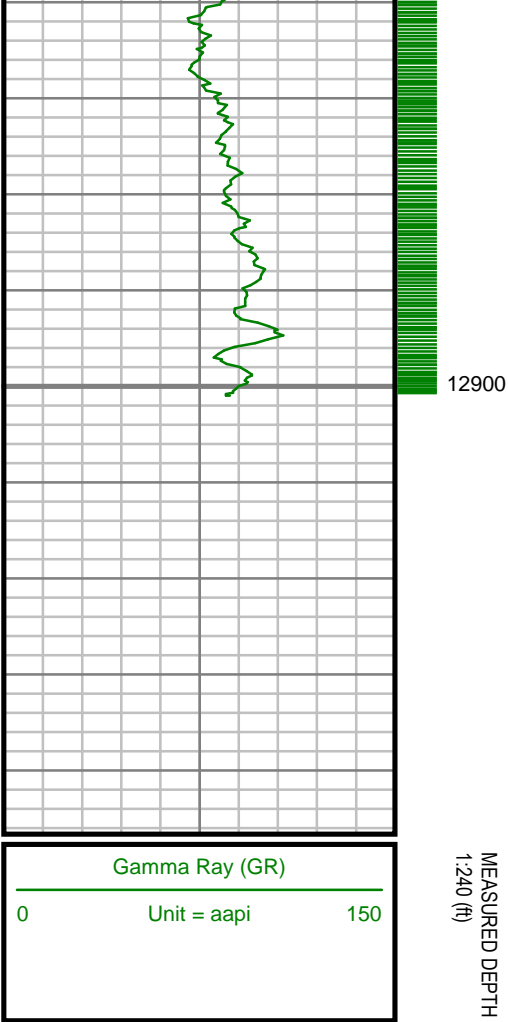












## MWD Survey Report

Well Location	2N-66W-32 FEHRN PAD
Well Name	FEHRN 37N-29HZ
Survey Date	7/23/2015
Latitude	40°6'3.708"N
Longitude	104°47'40.362"W
Btotal	52702, 52756 nT
Dip	66.73, 66.77 deg
Magnetic Declination	8.39 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, S. NEJAD, S. SCHULTZ

<b>Well Notes</b>
SURVEYS FROM 0 FT. TO 1809 FT. WERE ACQUIRED BY CATHEDRAL MWD.
SURVEYS FROM 1835 FT. TO 12882 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
13.00	0.00	0.00	13.00	0.00	0.00	0.00	0.00	13.00
125.00	0.50	333.00	125.00	0.44	0.44	-0.22	0.45	112.00
187.00	0.60	330.50	187.00	0.96	0.96	-0.50	0.17	62.00
249.00	1.00	346.80	248.99	1.77	1.77	-0.79	0.74	62.00
310.00	1.40	346.20	309.98	3.01	3.01	-1.09	0.66	61.00
373.00	1.90	293.70	372.95	4.18	4.18	-2.23	2.42	63.00
458.00	3.50	260.00	457.86	4.29	4.29	-6.07	2.58	85.00
543.00	4.70	245.40	542.64	2.39	2.39	-11.79	1.86	85.00
628.00	5.00	234.70	627.34	-1.20	-1.20	-17.98	1.12	85.00
713.00	5.10	227.10	712.01	-5.91	-5.91	-23.78	0.80	85.00
797.00	5.30	214.70	795.67	-11.64	-11.64	-28.72	1.36	84.00
881.00	6.10	210.00	879.25	-18.70	-18.70	-33.16	1.10	84.00
966.00	6.60	211.30	963.73	-26.78	-26.78	-37.95	0.61	85.00
1051.00	6.90	213.50	1048.14	-35.21	-35.21	-43.31	0.47	85.00
1135.00	8.90	217.50	1131.34	-44.58	-44.58	-50.05	2.47	84.00
1219.00	10.20	219.50	1214.18	-55.47	-55.47	-58.74	1.60	84.00
1304.00	11.20	219.80	1297.70	-67.62	-67.62	-68.81	1.18	85.00
1387.00	10.80	215.10	1379.17	-80.18	-80.18	-78.44	1.18	83.00

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
1471.00	11.00	209.50	1461.66	-93.59	-93.59	-86.91	1.28	84.00
1555.00	11.60	205.30	1544.03	-108.20	-108.20	-94.47	1.21	84.00
1639.00	11.70	203.10	1626.30	-123.67	-123.67	-101.42	0.54	84.00
1724.00	11.20	202.50	1709.61	-139.22	-139.22	-107.96	0.60	85.00
1809.00	10.80	205.50	1793.05	-154.04	-154.04	-114.55	0.82	85.00
1835.00	10.50	206.00	1818.60	-158.37	-158.37	-116.64	1.21	26.00
1961.00	9.75	217.00	1942.65	-177.21	-177.21	-128.09	1.64	126.00
2056.00	11.68	225.81	2036.00	-190.34	-190.34	-139.83	2.66	95.00
2152.00	11.54	224.95	2130.03	-203.91	-203.91	-153.58	0.24	96.00
2247.00	11.41	228.21	2223.14	-216.89	-216.89	-167.29	0.70	95.00
2343.00	10.89	227.21	2317.32	-229.38	-229.38	-181.03	0.57	96.00
2438.00	10.95	226.77	2410.60	-241.66	-241.66	-194.19	0.11	95.00
2533.00	10.74	226.12	2503.91	-253.97	-253.97	-207.14	0.26	95.00
2628.00	10.44	224.94	2597.29	-266.20	-266.20	-219.60	0.39	95.00
2723.00	9.58	227.08	2690.84	-277.68	-277.68	-231.47	0.99	95.00
2818.00	9.38	223.31	2784.54	-288.70	-288.70	-242.58	0.69	95.00
2913.00	8.70	223.36	2878.36	-299.55	-299.55	-252.82	0.72	95.00
3008.00	7.87	222.42	2972.37	-309.58	-309.58	-262.14	0.88	95.00

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
3103.00	7.38	227.79	3066.53	-318.48	-318.48	-271.04	0.91	95.00
3199.00	6.50	226.27	3161.83	-326.38	-326.38	-279.54	0.94	96.00
3294.00	5.62	218.38	3256.30	-333.74	-333.74	-286.31	1.27	95.00
3389.00	4.90	214.78	3350.90	-340.72	-340.72	-291.52	0.84	95.00
3484.00	3.71	236.35	3445.63	-345.76	-345.76	-296.39	2.09	95.00
3579.00	1.51	200.72	3540.53	-348.63	-348.63	-299.39	2.77	95.00
3675.00	0.94	207.96	3636.51	-350.51	-350.51	-300.21	0.61	96.00
3770.00	1.64	136.55	3731.49	-352.18	-352.18	-299.64	1.69	95.00
3866.00	1.63	121.18	3827.45	-353.88	-353.88	-297.53	0.45	96.00
3961.00	1.16	114.31	3922.43	-354.98	-354.98	-295.49	0.52	95.00
4056.00	1.19	96.88	4017.41	-355.49	-355.49	-293.64	0.38	95.00
4246.00	1.19	169.85	4207.38	-357.67	-357.67	-291.33	0.74	190.00
4342.00	1.47	177.09	4303.35	-359.88	-359.88	-291.10	0.34	96.00
4436.00	1.45	191.50	4397.32	-362.25	-362.25	-291.27	0.39	94.00
4532.00	1.00	145.98	4493.30	-364.14	-364.14	-291.05	1.08	96.00
4627.00	0.78	149.20	4588.29	-365.38	-365.38	-290.25	0.23	95.00
4722.00	0.93	208.17	4683.28	-366.62	-366.62	-290.29	0.90	95.00
4817.00	1.46	216.88	4778.26	-368.27	-368.27	-291.38	0.59	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
4912.00	0.57	155.37	4873.24	-369.67	-369.67	-291.91	1.36	95.00
5007.00	1.05	179.43	4968.23	-370.97	-370.97	-291.71	0.61	95.00
5103.00	1.65	165.18	5064.21	-373.19	-373.19	-291.34	0.70	96.00
5198.00	1.10	168.67	5159.18	-375.40	-375.40	-290.82	0.58	95.00
5293.00	1.13	171.90	5254.16	-377.22	-377.22	-290.51	0.07	95.00
5388.00	1.07	192.77	5349.14	-379.01	-379.01	-290.57	0.42	95.00
5484.00	1.40	119.18	5445.13	-380.46	-380.46	-289.75	1.57	96.00
5579.00	1.60	84.82	5540.10	-380.90	-380.90	-287.41	0.96	95.00
5675.00	1.53	75.62	5636.06	-380.46	-380.46	-284.83	0.27	96.00
5770.00	1.32	92.72	5731.03	-380.20	-380.20	-282.51	0.50	95.00
5865.00	0.93	81.40	5826.01	-380.14	-380.14	-280.65	0.47	95.00
5960.00	0.97	99.42	5921.00	-380.15	-380.15	-279.08	0.32	95.00
6055.00	0.67	76.68	6015.99	-380.16	-380.16	-277.75	0.46	95.00
6150.00	0.72	68.86	6110.98	-379.81	-379.81	-276.65	0.11	95.00
6245.00	0.88	55.88	6205.97	-379.19	-379.19	-275.48	0.25	95.00
6340.00	0.76	37.61	6300.96	-378.28	-378.28	-274.49	0.30	95.00
6435.00	0.50	47.30	6395.96	-377.49	-377.49	-273.80	0.29	95.00
6530.00	0.51	34.02	6490.96	-376.86	-376.86	-273.25	0.12	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
6625.00	3.23	9.89	6585.90	-373.87	-373.87	-272.56	2.92	95.00
6718.00	10.94	7.08	6678.12	-362.51	-362.51	-271.02	8.30	93.00
6814.00	18.08	5.26	6770.99	-338.60	-338.60	-268.52	7.45	96.00
6908.00	20.84	3.55	6859.62	-307.38	-307.38	-266.15	2.99	94.00
7004.00	29.95	0.19	6946.25	-266.29	-266.29	-265.01	9.61	96.00
7099.00	36.33	356.35	7025.76	-214.42	-214.42	-266.72	7.07	95.00
7194.00	43.73	358.46	7098.46	-153.43	-153.43	-269.40	7.91	95.00
7289.00	53.84	3.08	7160.99	-82.11	-82.11	-268.22	11.24	95.00
7385.00	60.27	0.22	7213.18	-1.63	-1.63	-265.97	7.16	96.00
7480.00	64.20	359.01	7257.43	82.41	82.41	-266.56	4.29	95.00
7575.00	73.06	358.79	7292.01	170.78	170.78	-268.26	9.33	95.00
7670.00	79.97	359.07	7314.15	263.09	263.09	-269.98	7.28	95.00
7765.00	87.11	358.31	7324.82	357.40	357.40	-272.14	7.56	95.00
7860.00	90.17	358.30	7327.07	452.32	452.32	-274.94	3.21	95.00
7955.00	87.85	358.51	7328.71	547.26	547.26	-277.58	2.45	95.00
8051.00	89.06	358.53	7331.30	643.19	643.19	-280.05	1.26	96.00
8145.00	90.67	359.37	7331.52	737.17	737.17	-281.78	1.93	94.00
8239.00	92.25	359.51	7329.12	831.13	831.13	-282.70	1.69	94.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
8335.00	91.34	358.75	7326.11	927.07	927.07	-284.16	1.24	96.00
8430.00	89.90	357.81	7325.08	1022.02	1022.02	-287.00	1.81	95.00
8525.00	89.63	358.53	7325.47	1116.97	1116.97	-290.03	0.81	95.00
8620.00	91.08	359.67	7324.89	1211.95	1211.95	-291.52	1.94	95.00
8715.00	90.84	0.91	7323.30	1306.94	1306.94	-291.04	1.33	95.00
8809.00	90.20	1.71	7322.44	1400.91	1400.91	-288.89	1.09	94.00
8905.00	91.88	1.94	7320.70	1496.84	1496.84	-285.83	1.77	96.00
9000.00	91.65	1.11	7317.77	1591.76	1591.76	-283.30	0.91	95.00
9094.00	92.18	0.97	7314.64	1685.69	1685.69	-281.60	0.59	94.00
9186.00	91.07	359.14	7312.02	1777.65	1777.65	-281.51	2.33	92.00
9377.00	89.43	356.51	7311.19	1968.49	1968.49	-288.76	1.62	191.00
9470.00	88.22	358.31	7313.09	2061.37	2061.37	-292.96	2.33	93.00
9565.00	89.19	359.16	7315.23	2156.32	2156.32	-295.06	1.36	95.00
9660.00	90.40	359.32	7315.56	2251.31	2251.31	-296.32	1.28	95.00
9756.00	91.61	359.28	7313.88	2347.28	2347.28	-297.49	1.26	96.00
9851.00	91.55	359.30	7311.26	2442.24	2442.24	-298.67	0.07	95.00
9946.00	90.20	358.08	7309.81	2537.20	2537.20	-300.84	1.91	95.00
10041.00	89.90	358.90	7309.73	2632.17	2632.17	-303.34	0.92	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
10137.00	91.61	359.05	7308.46	2728.14	2728.14	-305.06	1.79	96.00
10232.00	90.77	0.54	7306.49	2823.11	2823.11	-305.40	1.79	95.00
10420.00	89.36	0.16	7306.27	3011.11	3011.11	-304.26	0.78	188.00
10516.00	88.89	0.26	7307.73	3107.09	3107.09	-303.90	0.50	96.00
10609.00	88.69	2.11	7309.69	3200.05	3200.05	-301.98	2.00	93.00
10704.00	89.23	2.29	7311.42	3294.96	3294.96	-298.34	0.60	95.00
10799.00	91.44	2.30	7310.86	3389.88	3389.88	-294.53	2.33	95.00
10987.00	90.57	3.00	7307.56	3577.65	3577.65	-285.85	0.59	188.00
11082.00	90.27	2.09	7306.86	3672.55	3672.55	-281.63	1.01	95.00
11177.00	89.43	2.83	7307.11	3767.46	3767.46	-277.56	1.18	95.00
11272.00	89.19	1.70	7308.25	3862.38	3862.38	-273.80	1.22	95.00
11366.00	89.26	0.80	7309.52	3956.34	3956.34	-271.76	0.96	94.00
11461.00	91.08	0.05	7309.24	4051.34	4051.34	-271.05	2.07	95.00
11555.00	91.88	0.66	7306.82	4145.30	4145.30	-270.47	1.07	94.00
11650.00	90.10	0.22	7305.18	4240.28	4240.28	-269.75	1.93	95.00
11744.00	89.90	0.29	7305.18	4334.28	4334.28	-269.33	0.23	94.00
11933.00	88.79	358.67	7307.34	4523.25	4523.25	-271.04	1.04	189.00
12027.00	90.50	358.22	7307.91	4617.21	4617.21	-273.59	1.88	94.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
12122.00	90.34	357.85	7307.22	4712.15	4712.15	-276.85	0.43	95.00
12217.00	89.39	357.23	7307.44	4807.06	4807.06	-280.93	1.19	95.00
12312.00	89.93	357.24	7308.00	4901.95	4901.95	-285.52	0.57	95.00
12501.00	89.33	357.40	7309.22	5090.74	5090.74	-294.36	0.33	189.00
12597.00	91.31	356.33	7308.68	5186.59	5186.59	-299.61	2.34	96.00
12692.00	90.03	356.91	7307.57	5281.41	5281.41	-305.21	1.47	95.00
12787.00	90.00	358.11	7307.54	5376.32	5376.32	-309.34	1.27	95.00
12882.00	91.68	358.04	7306.15	5471.25	5471.25	-312.53	1.77	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft



GAMMA RAY

5" = 100' FEET MD