



5" = 100' FEET MD

COMPANY : ANADARKO E&P ONSHORE LLC  
WELL : TEDFORD 29N-28HZ  
FIELD : WATTENBERG  
COUNTY : WELD  
STATE : COLORADO  
COUNTRY : U.S.A.  
UWI : 05-123-41794

COMPANY : ANADARKO E&P ONSHORE LLC

WELL : TEDFORD 29N-28HZ

FIELD : WATTENBERG

COUNTY : WELD

STATE : COLORADO

COUNTRY : U.S.A.

UWI : 05-123-41794

WELL LOCATION

LAT:40°6'9.468"N LONG:104°47'13.412"W  
N:14564176.81 ft E:1699961.64 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	1867	13082	0-15	0	6825
			15-90	6825	7996
			90-92	7996	13082

## CASING RECORD

CASING SIZE	in	FROM	ft	TO	ft			
9.625		0		1857				

DRILLING CO. : H&amp;P

RIG : 307

LWD UNIT NO. : C-46

DISTRICT : CASPER

SPUD DATE : 08/12/2015

LWD START DATE : 08/13/2015 DEPTH : 1822 ft

LWD END DATE : 08/16/2015      DEPTH : 13082 ft

TOTAL DEPTH : 13082 ft

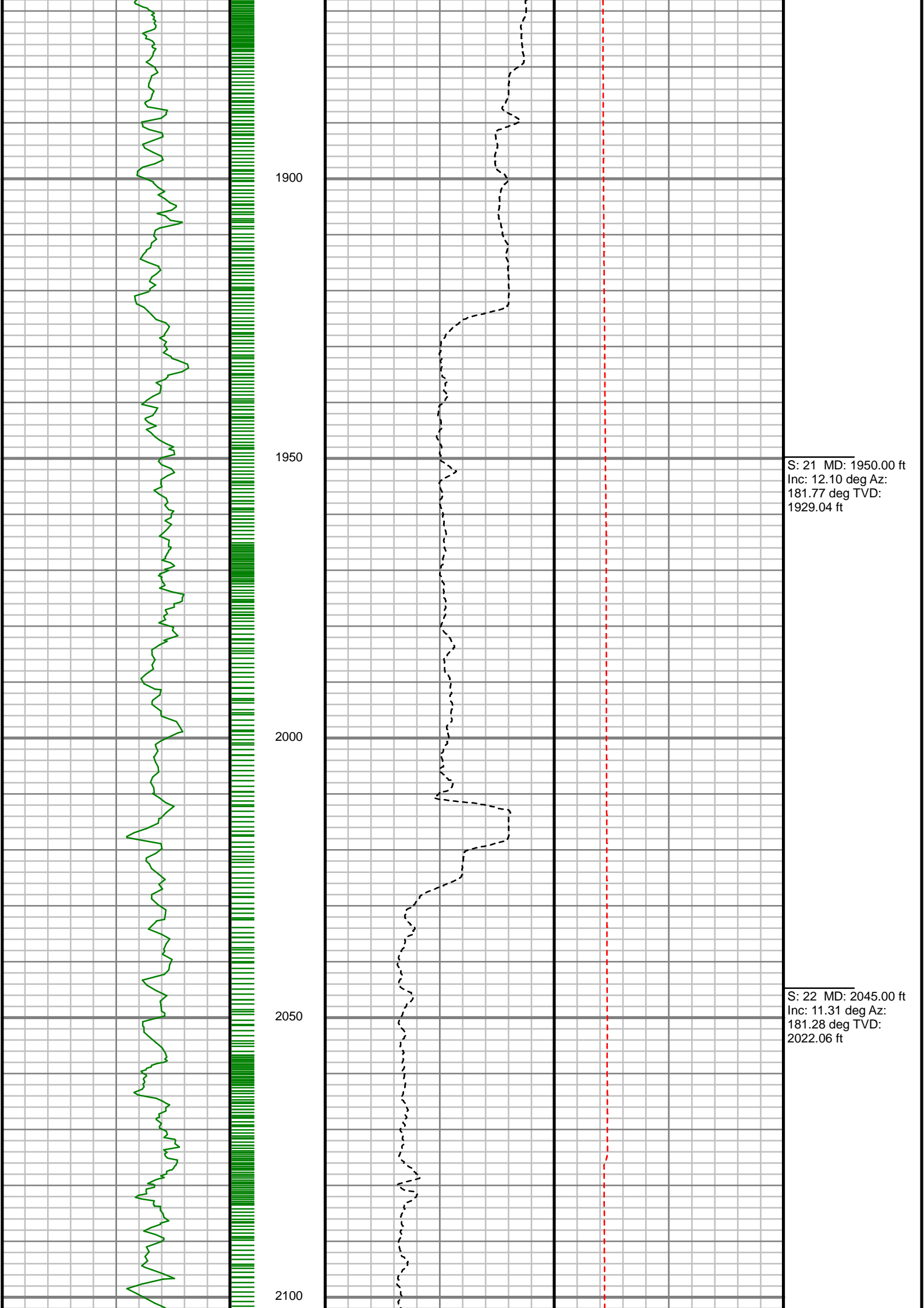
Run Data

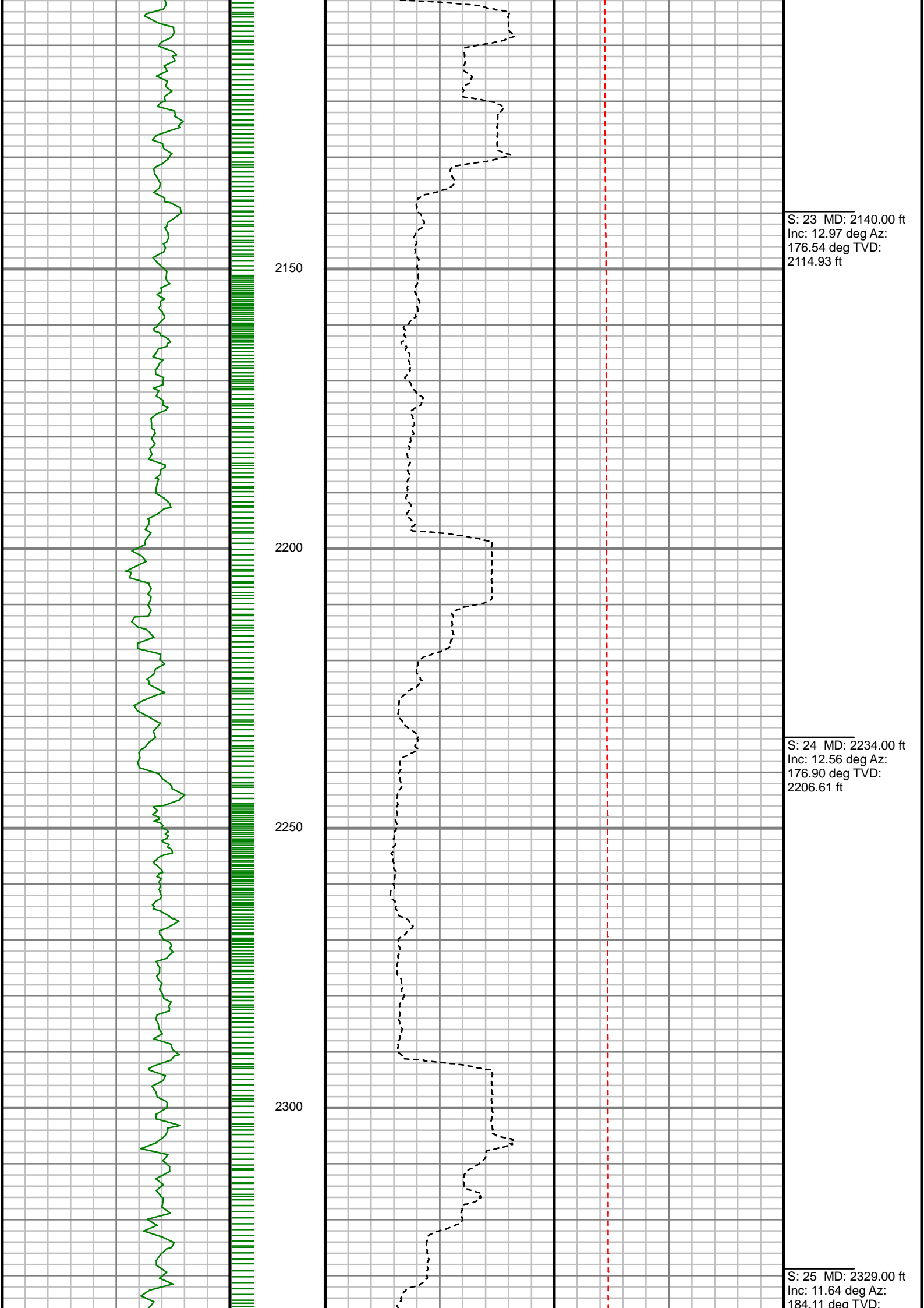
Run Data						
RUN NUMBER	1					
START DATE	08/12/2015					
START TIME	2330					
END DATE	08/16/2015					
END TIME	0830					
DEPTH IN (ft)	1867					
DEPTH OUT (ft)	13082					
LOG TOP (ft)	1822					
LOG BOTTOM (ft)	13036					
HOLE SIZE (in)	8.5					
MUD DATA @ (ft)	9559					
MUD TYPE	OIL-BASED					
DENSITY (lb / gal)	9.7					
VISCOSITY (s / qt)	55					
pH	-					
FLUID LOSS (cm <sup>3</sup> / 30)	3.2					
SALINITY (ppm)	58000					
Rm (ohmm @ deg F)	-					
Rmf (ohmm @ deg F)	-					
MAX TEMP (deg F)	225					
Rm @ MAX TEMP (ohmm)	-					
LWD ENGINEER #1	S. WAXLER					
LWD ENGINEER #2	B. GREER					
LWD ENGINEER #3	-					
LOG WITNESS #1	R. CANNON					
LOG WITNESS #2	S. SADLE					

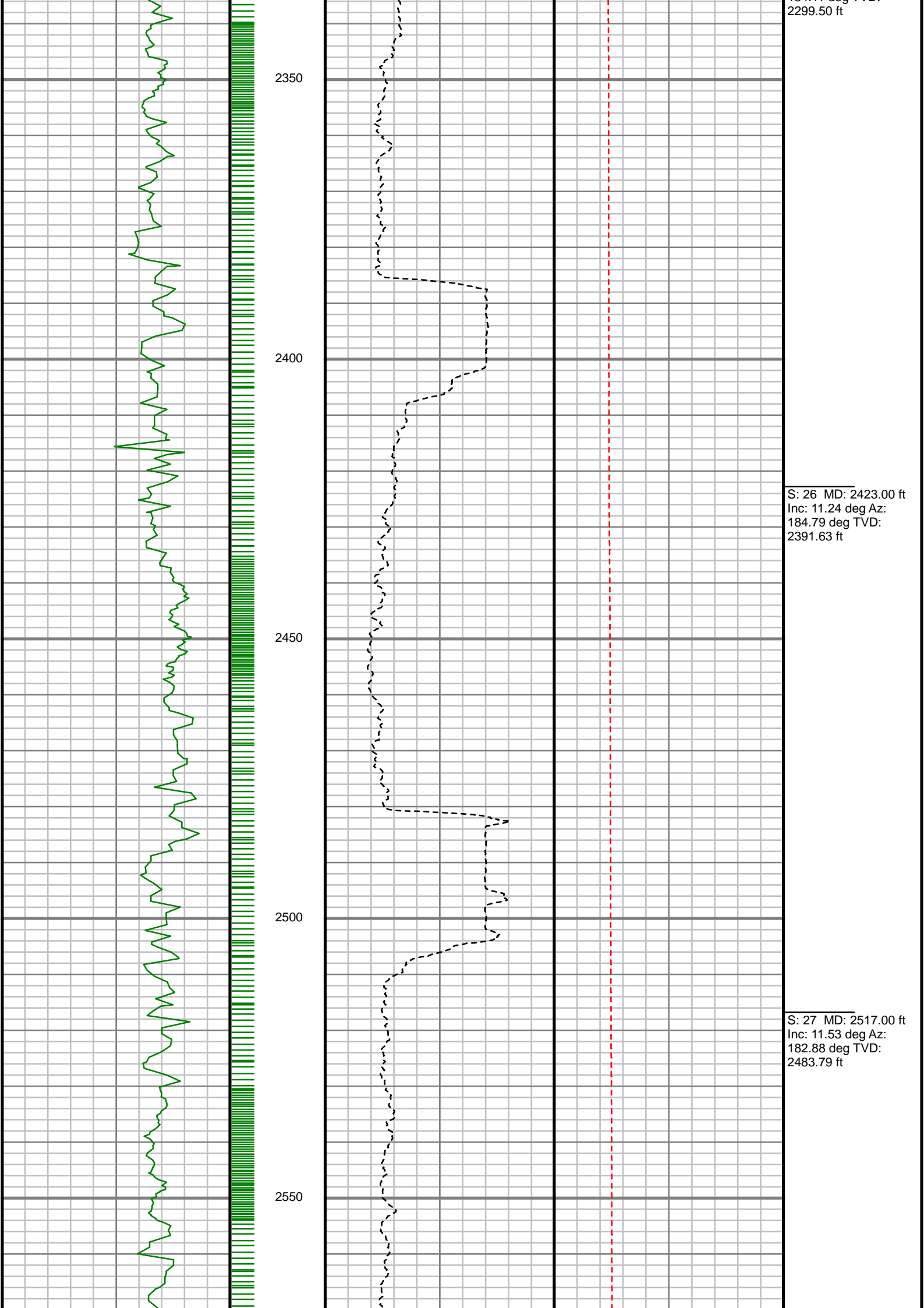
[illegible]

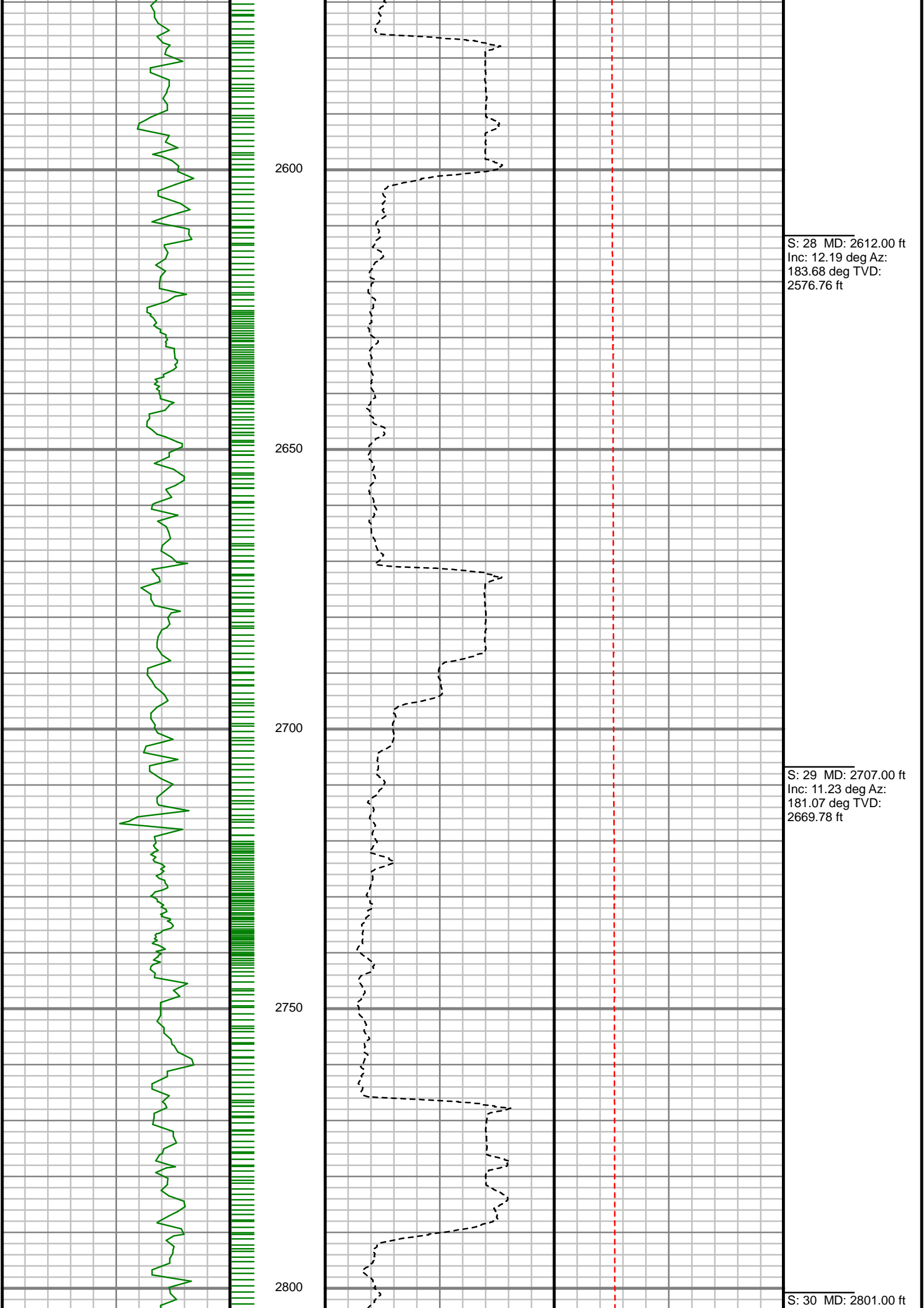
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

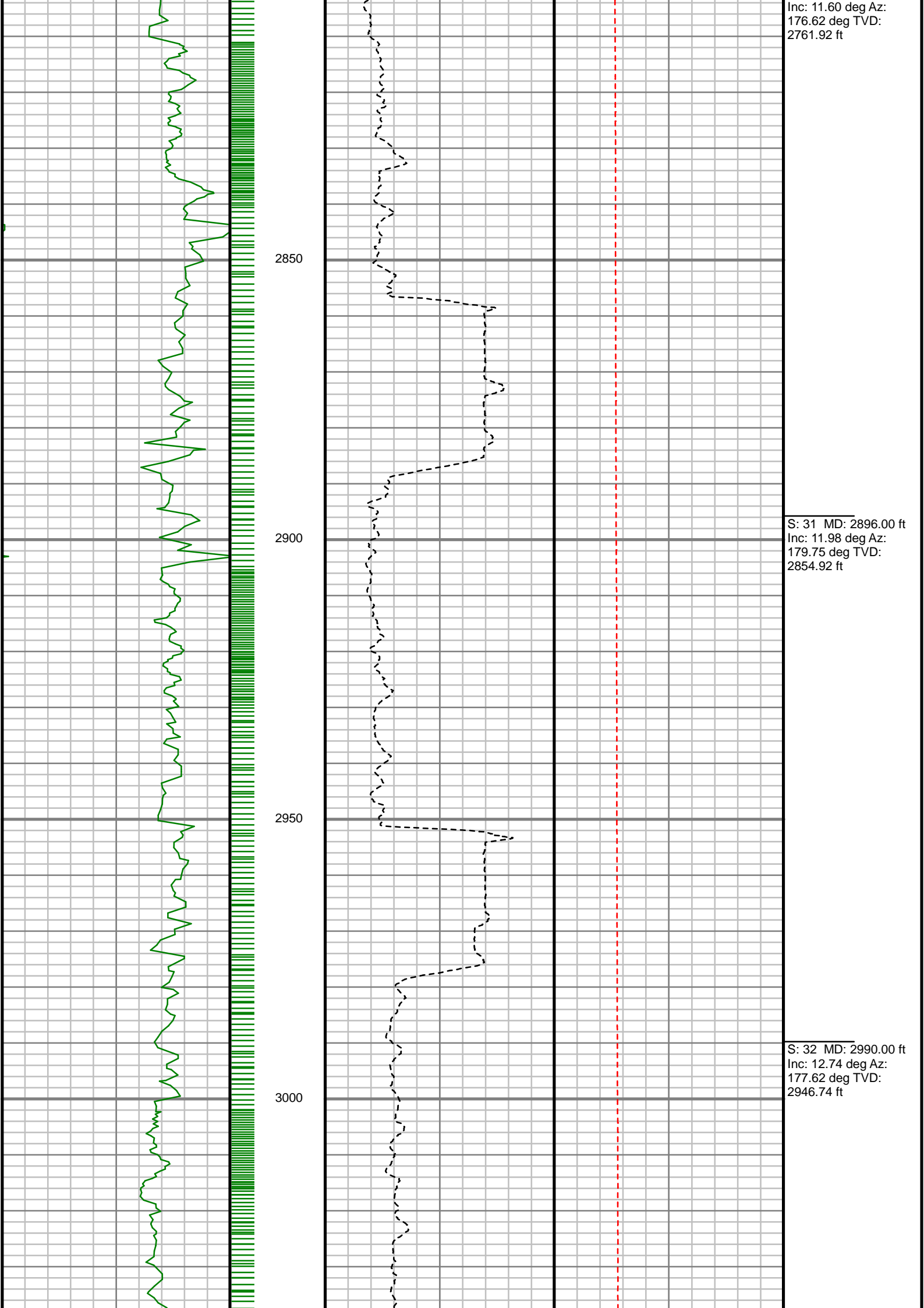
ANADARKO E&P ONSHORE LLC TEDFORD 29N-28HZ WATTENBERG FIELD WELD COUNTY, COLORADO 05-123-41794				
<div>Gamma Ray (GR)</div> <div>0Unit = aapi150</div>		MEASURED DEPTH 1:240 (ft)   		







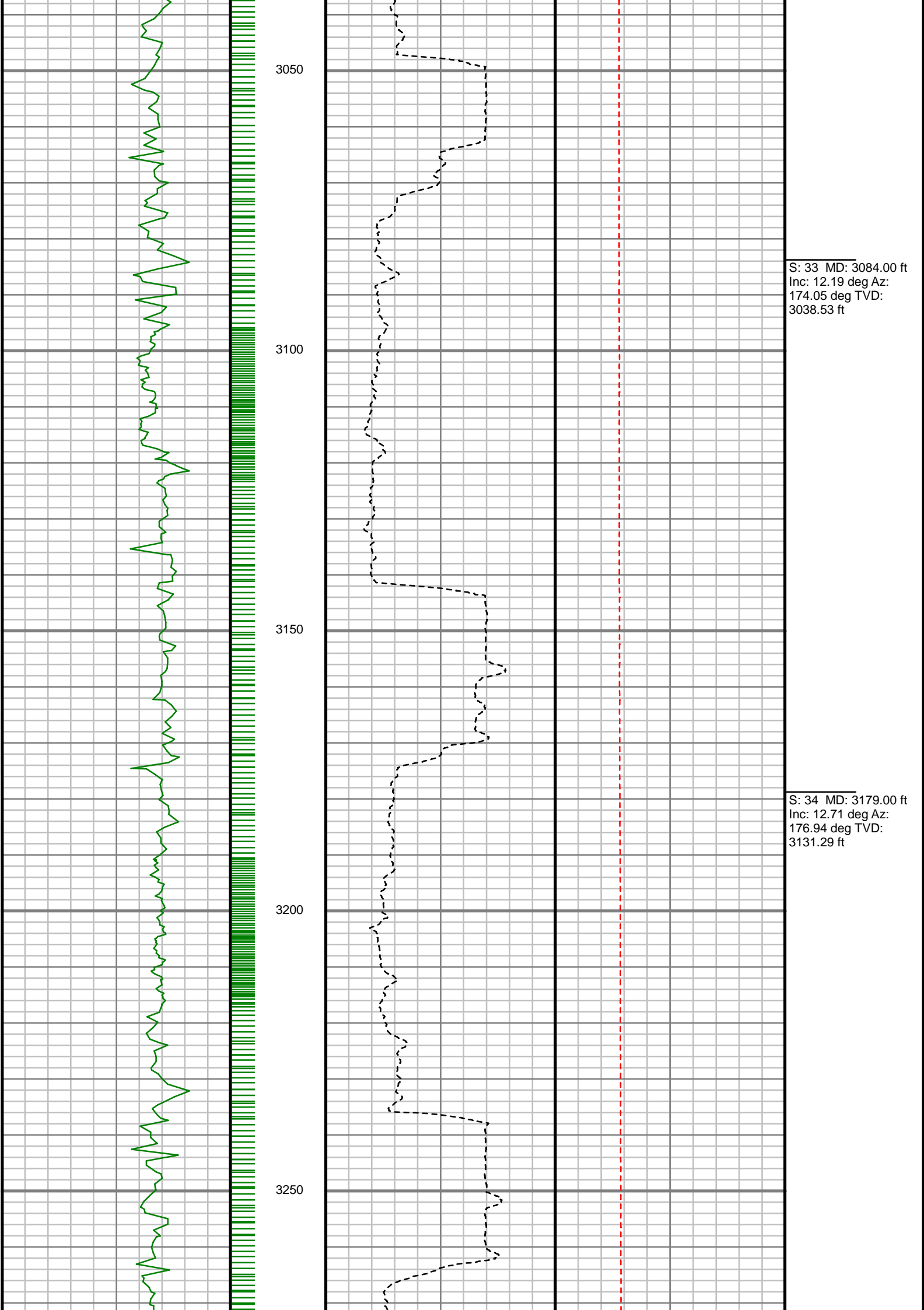




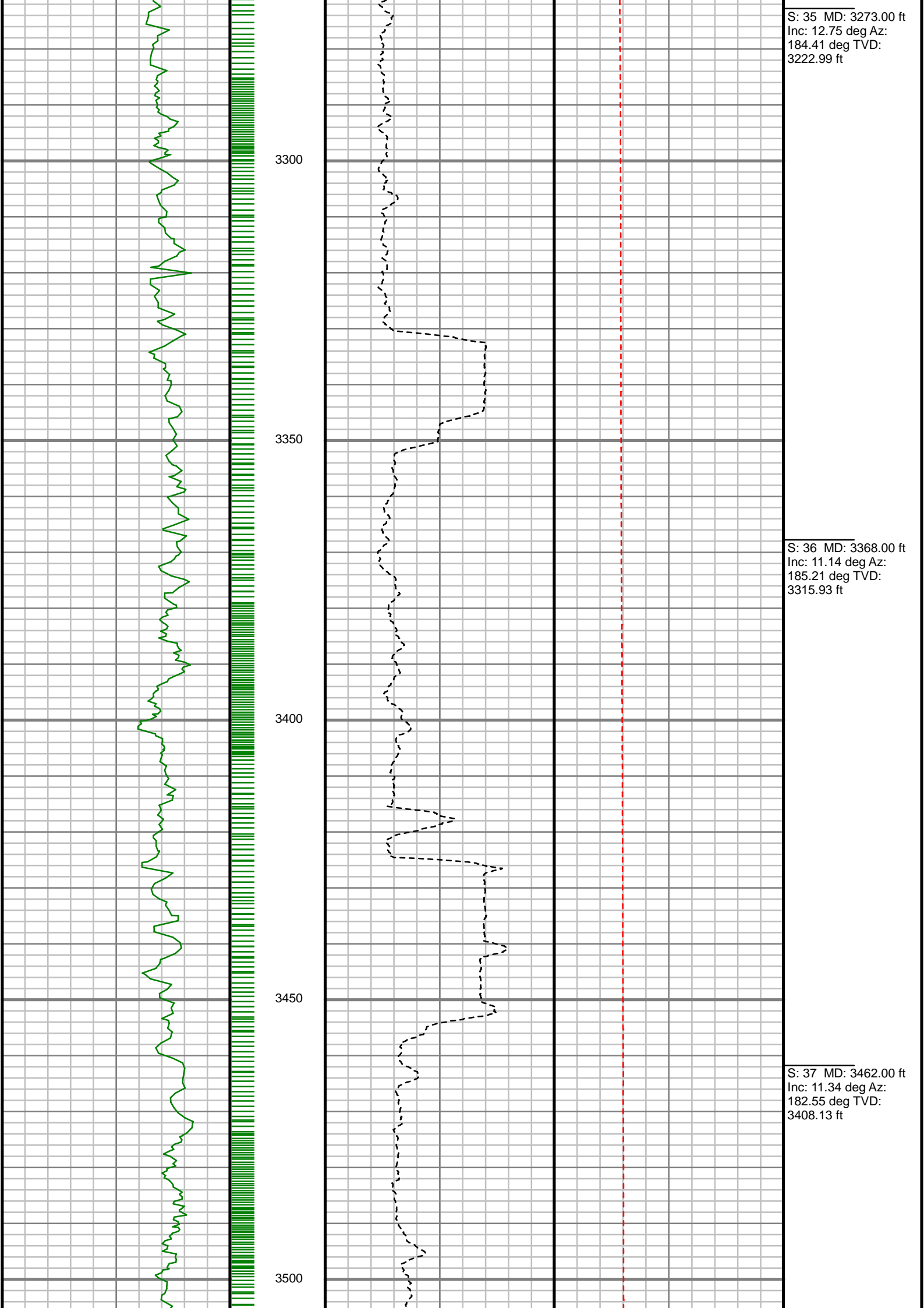
Inc: 11.60 deg Az:  
176.62 deg TVD:  
2761.92 ft

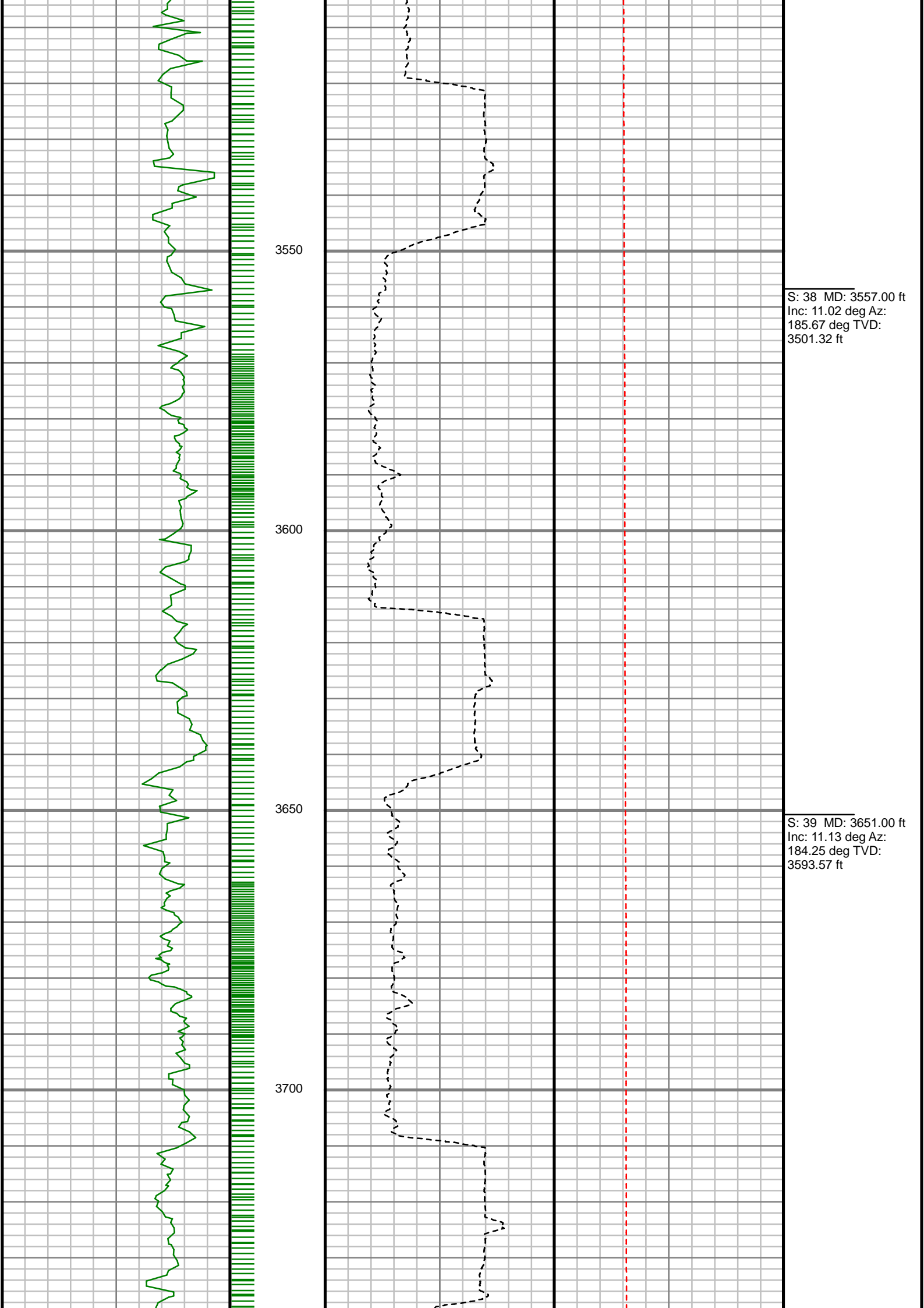
S: 31 MD: 2896.00 ft  
Inc: 11.98 deg Az:  
179.75 deg TVD:  
2854.92 ft

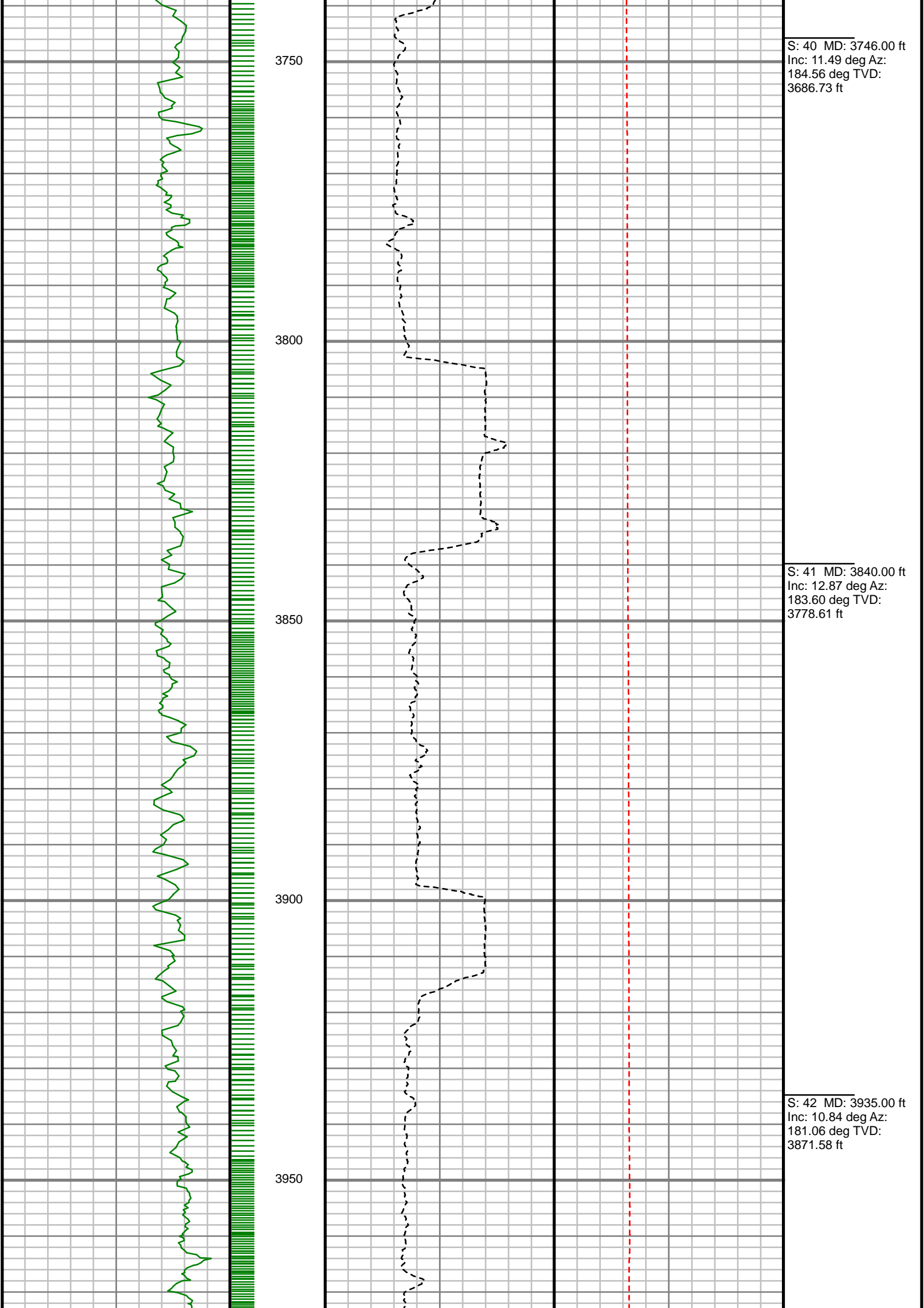
S: 32 MD: 2990.00 ft  
Inc: 12.74 deg Az:  
177.62 deg TVD:  
2946.74 ft







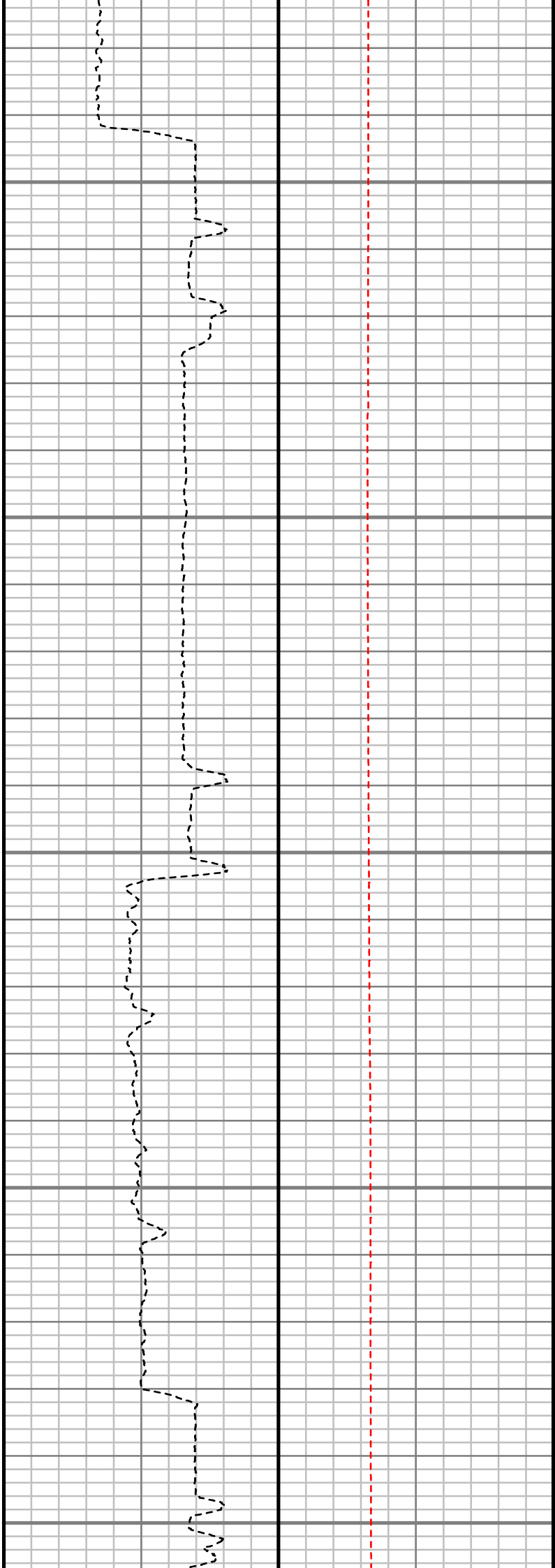
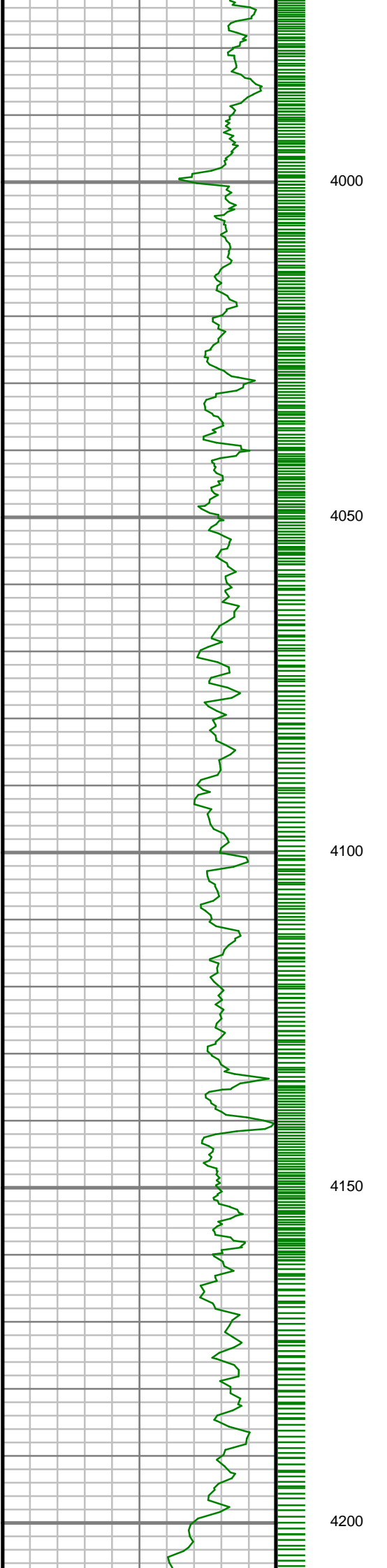




S: 40 MD: 3746.00 ft  
Inc: 11.49 deg Az:  
184.56 deg TVD:  
3686.73 ft

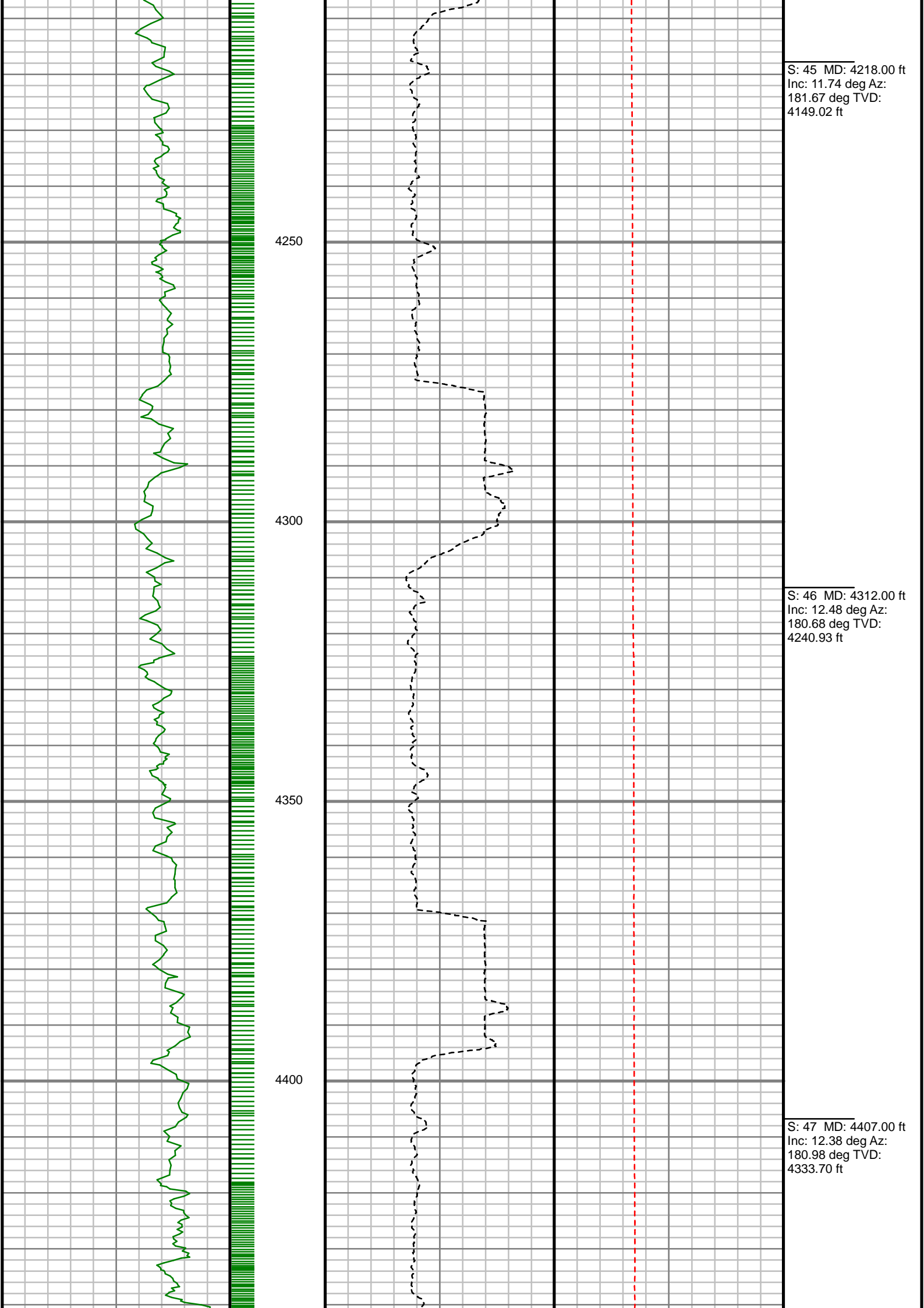
S: 41 MD: 3840.00 ft  
Inc: 12.87 deg Az:  
183.60 deg TVD:  
3778.61 ft

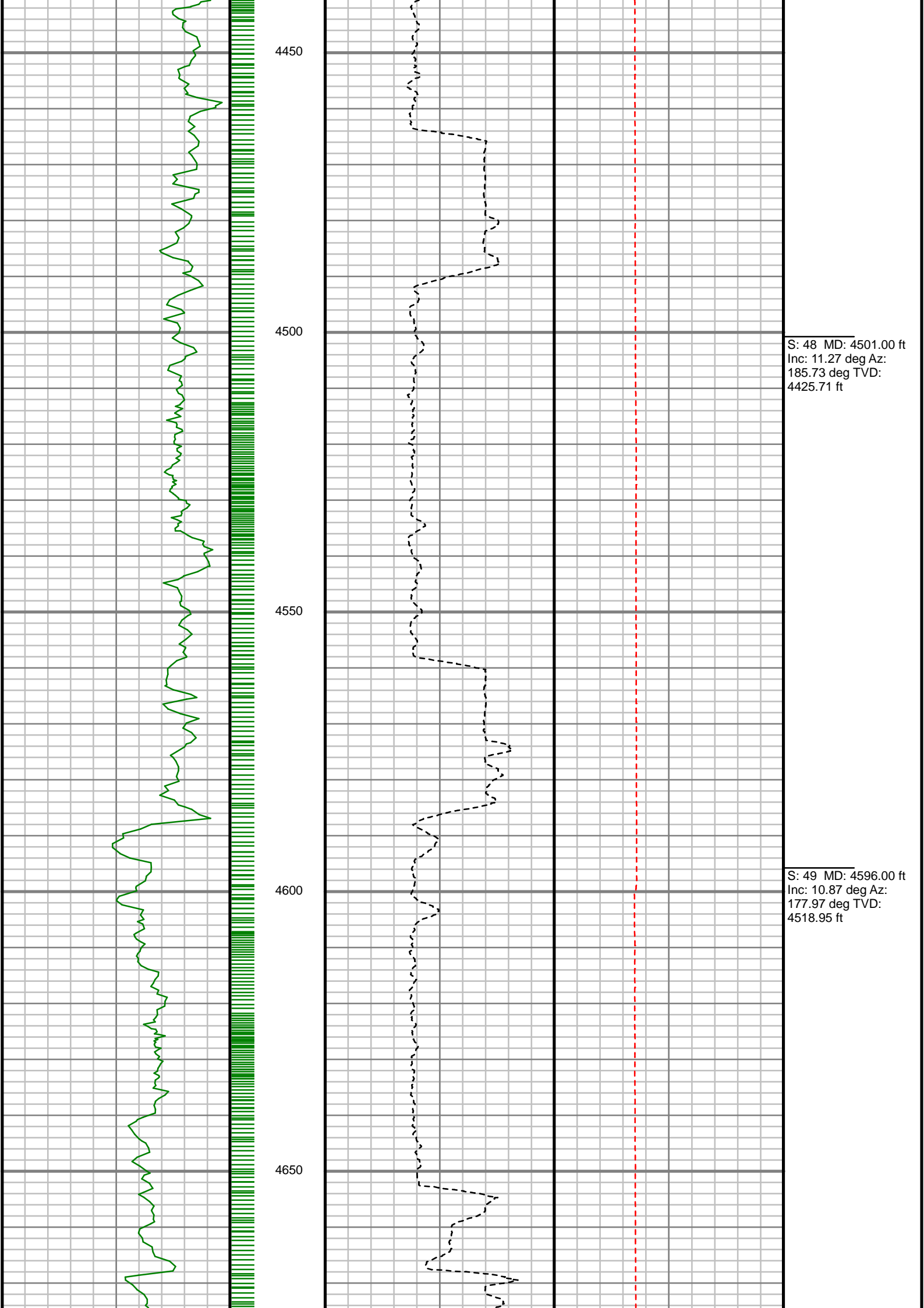
S: 42 MD: 3935.00 ft  
Inc: 10.84 deg Az:  
181.06 deg TVD:  
3871.58 ft

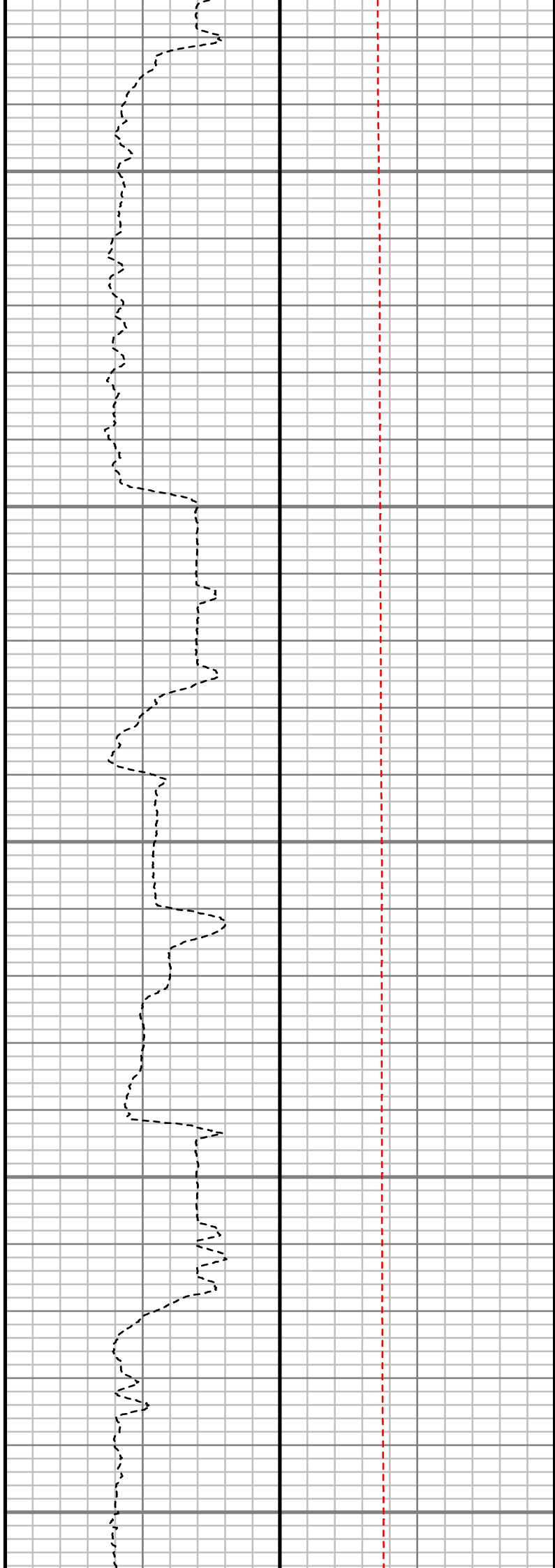
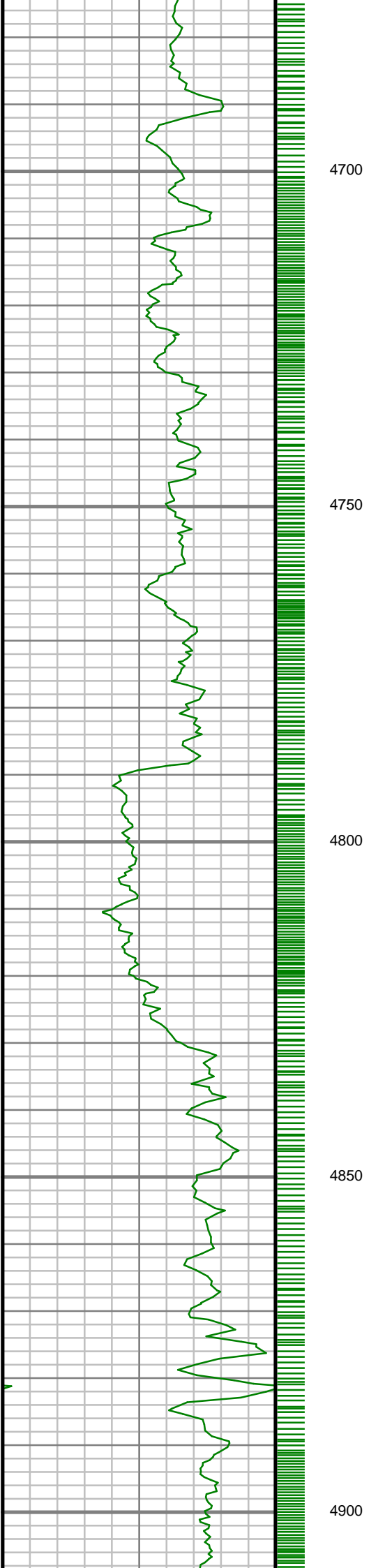


S: 43 MD: 4029.00 ft  
Inc: 10.78 deg Az:  
175.27 deg TVD:  
3963.91 ft

S: 44 MD: 4123.00 ft  
Inc: 12.03 deg Az:  
179.87 deg TVD:  
4056.06 ft



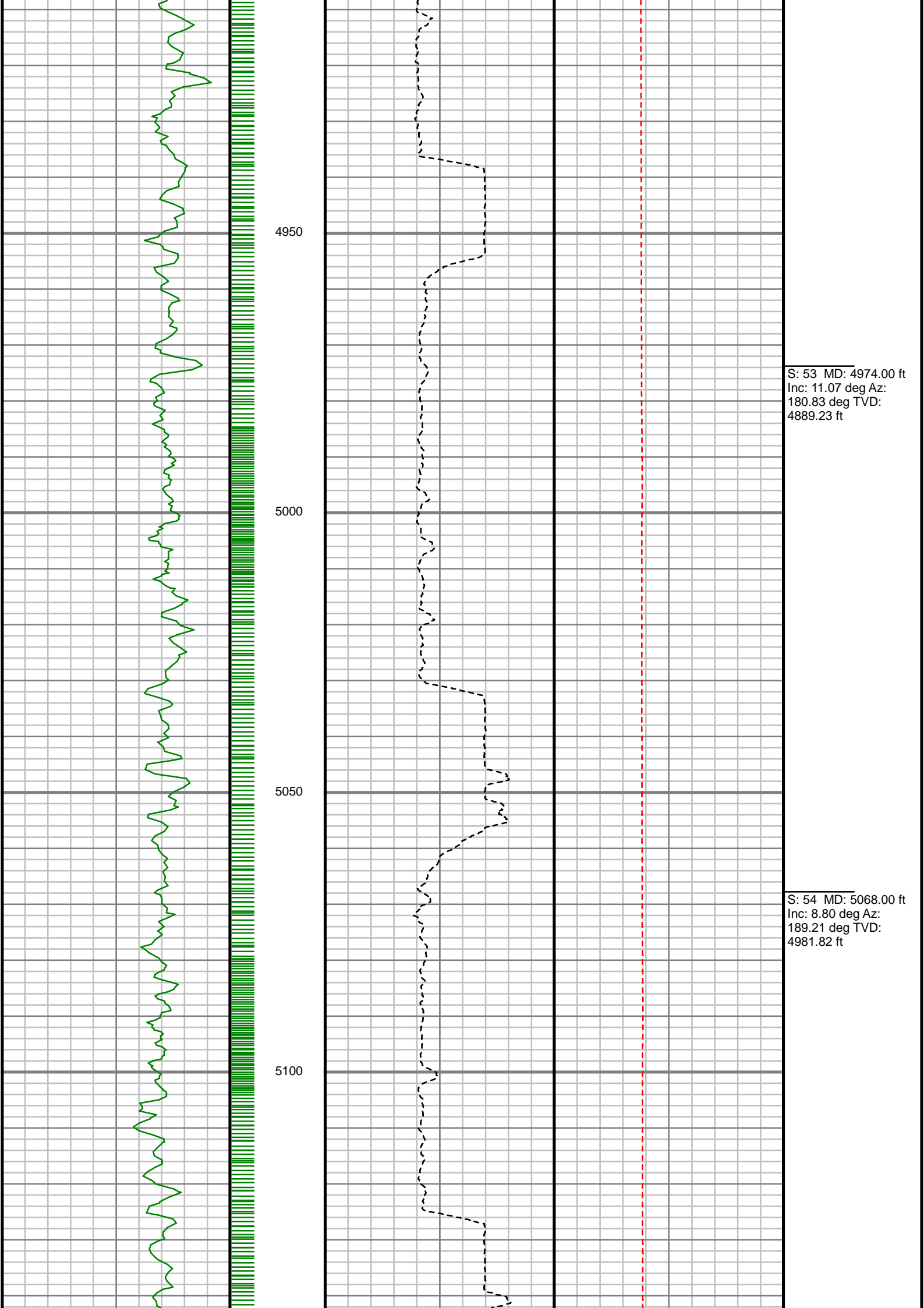




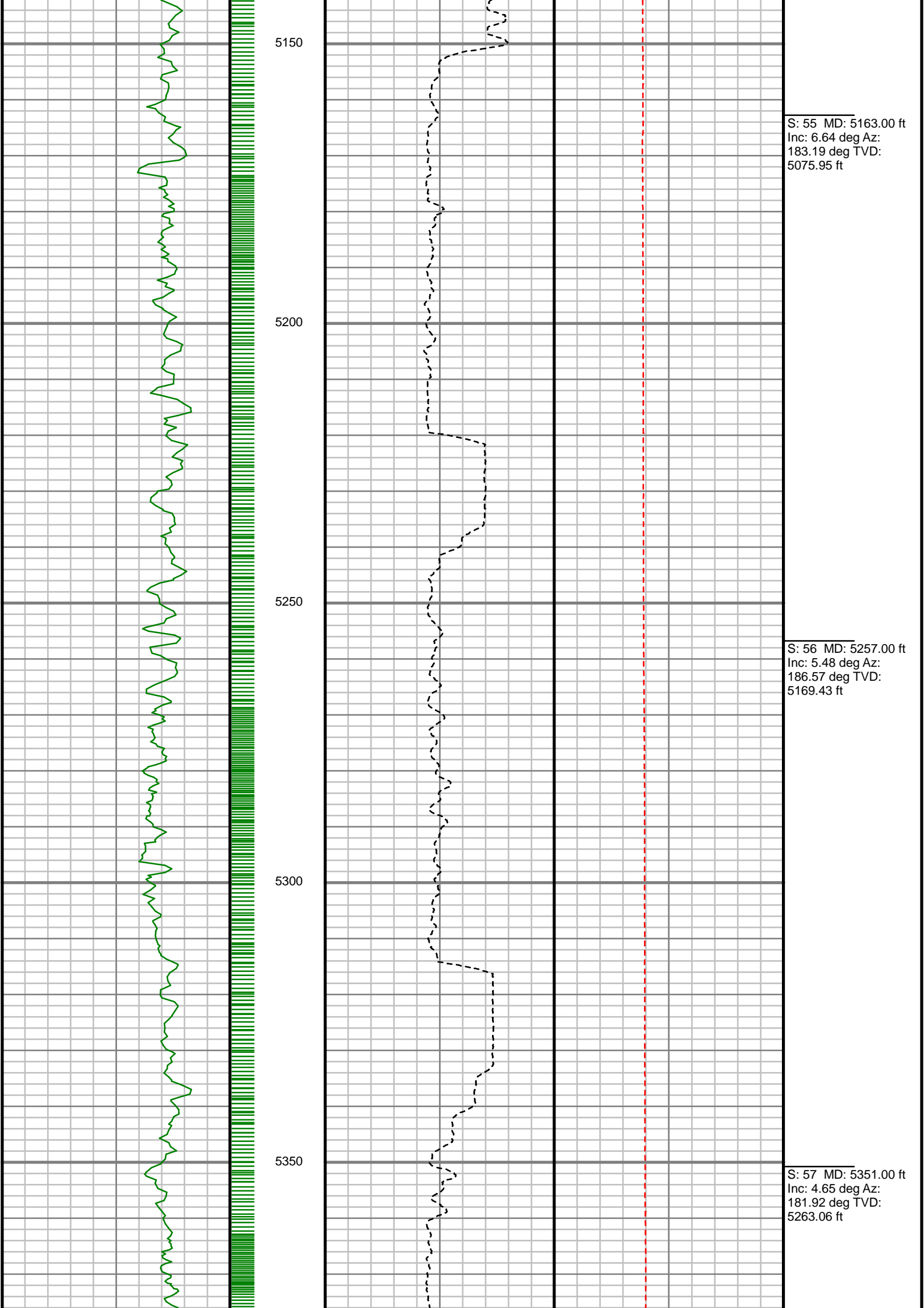
S: 50 MD: 4690.00 ft  
Inc: 11.23 deg Az:  
172.88 deg TVD:  
4611.21 ft

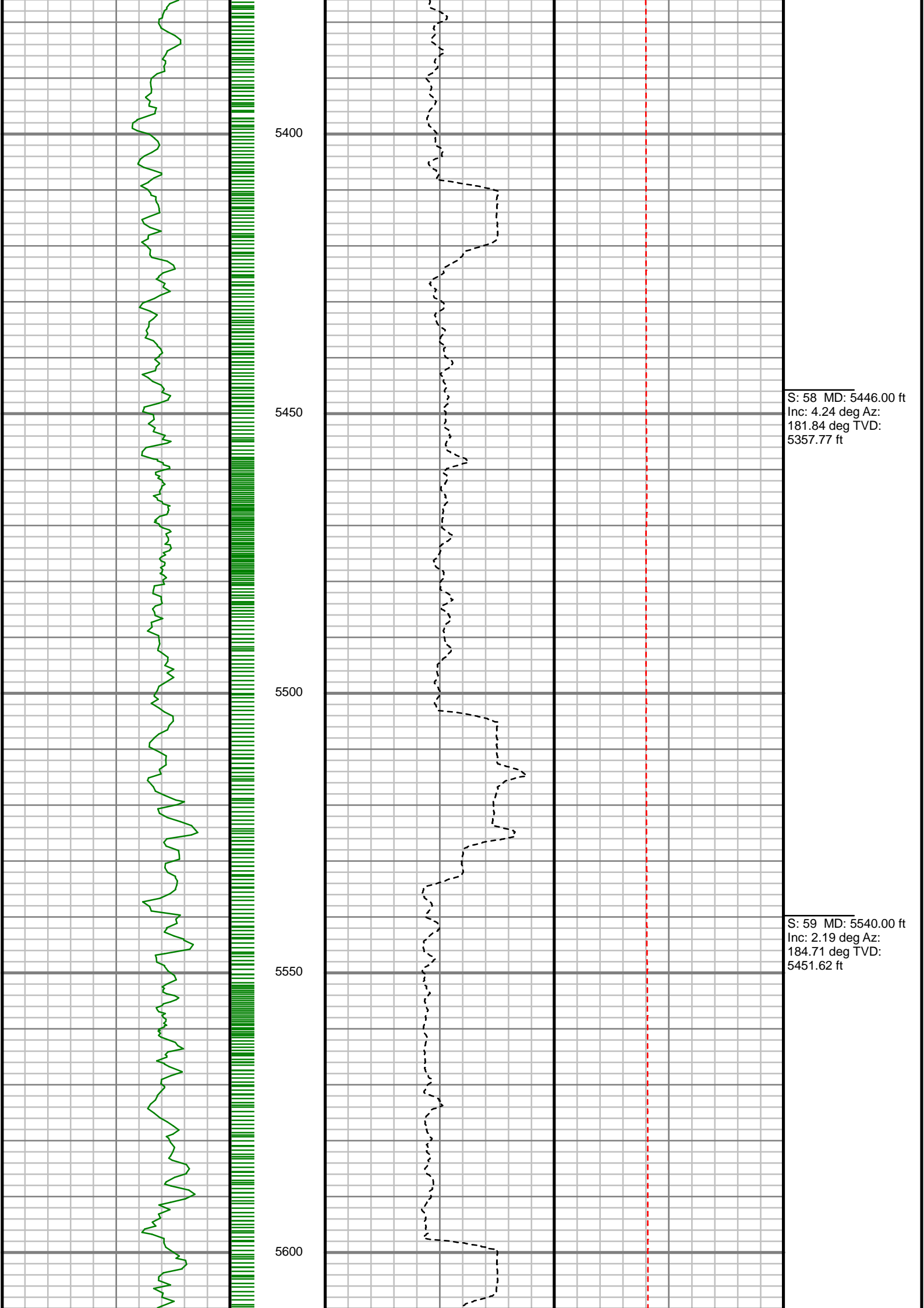
S: 51 MD: 4785.00 ft  
Inc: 12.19 deg Az:  
176.25 deg TVD:  
4704.23 ft

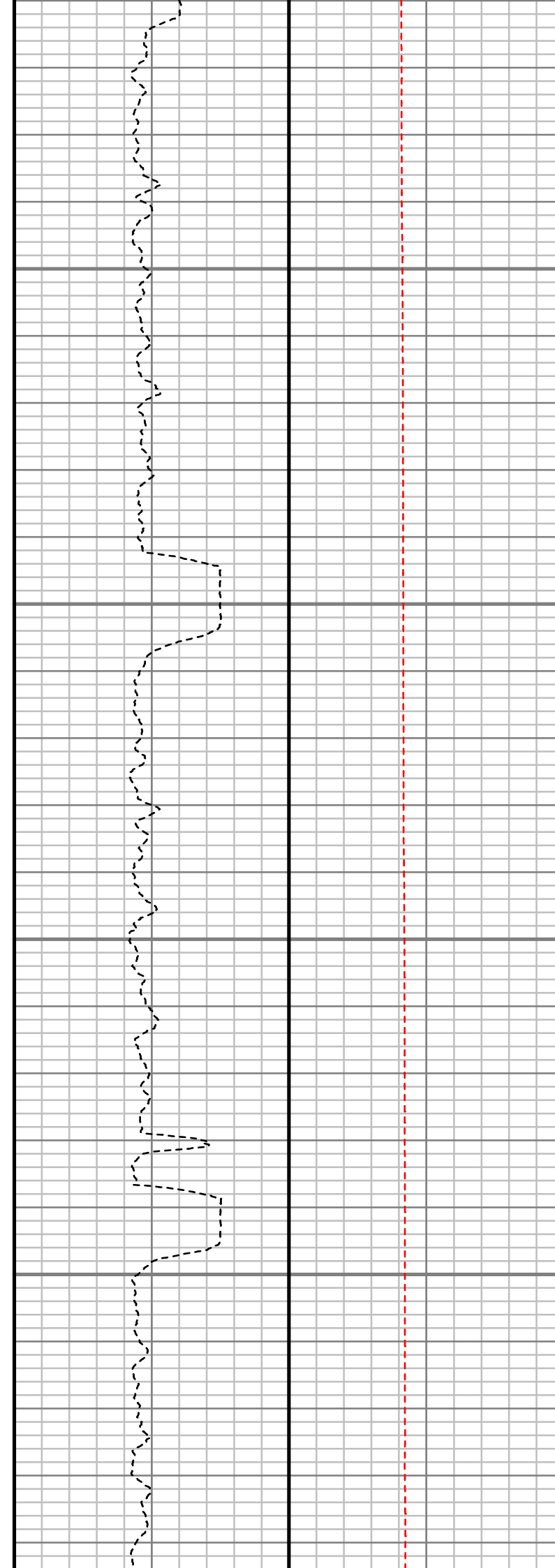
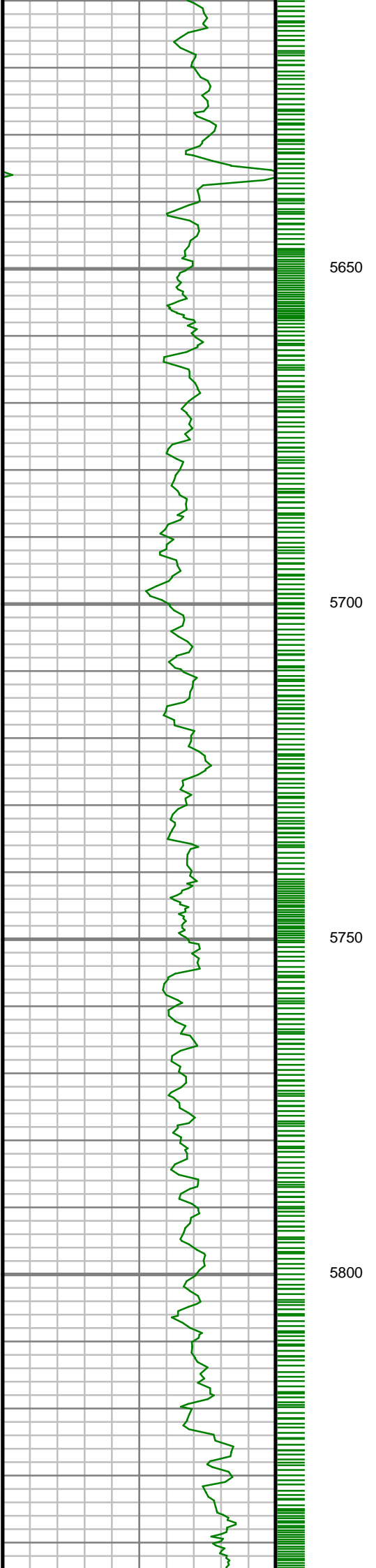
S: 52 MD: 4879.00 ft  
Inc: 12.01 deg Az:  
182.77 deg TVD:  
4796.15 ft







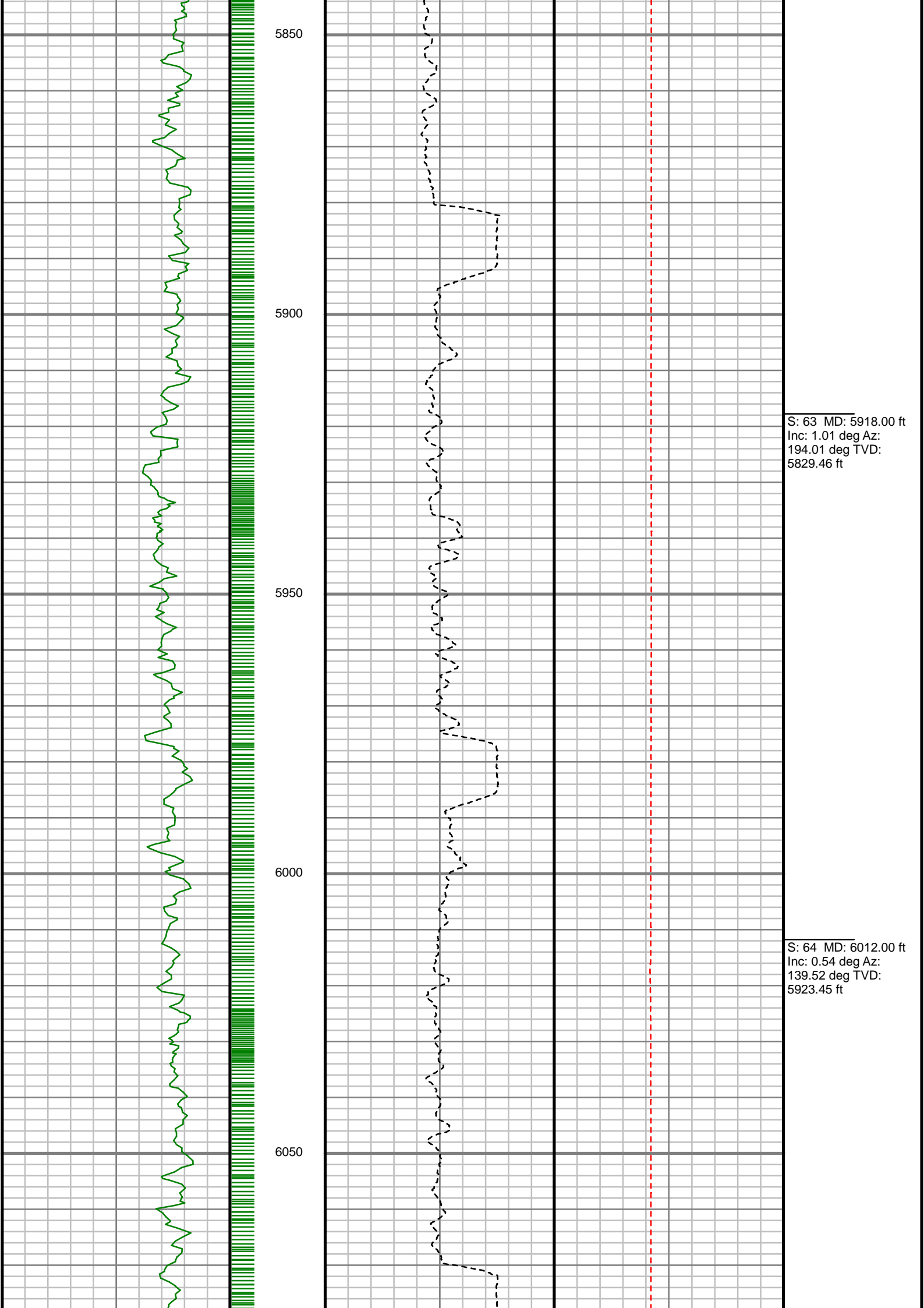


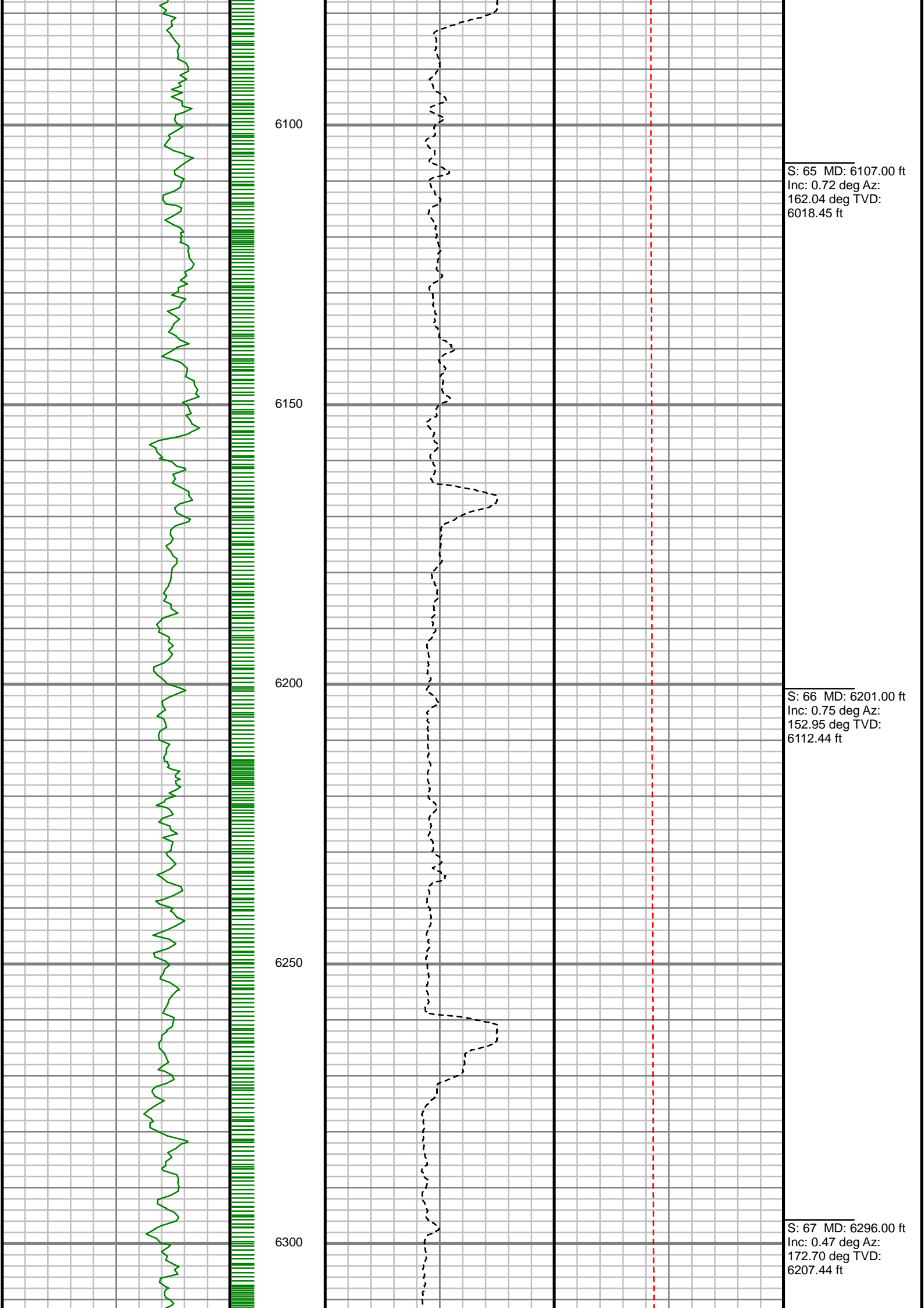


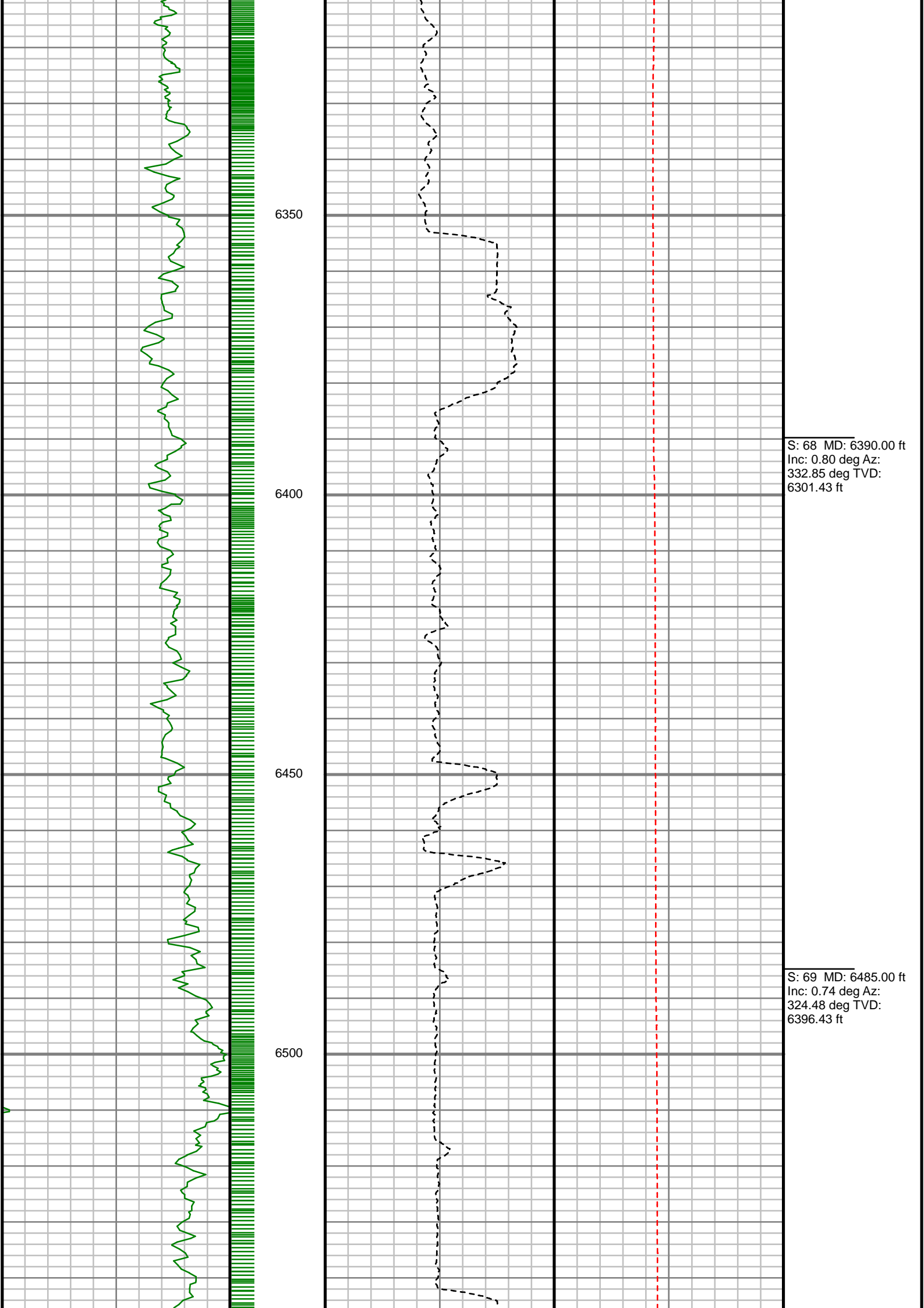
S: 60 MD: 5635.00 ft  
Inc: 1.99 deg Az:  
186.70 deg TVD:  
5546.56 ft

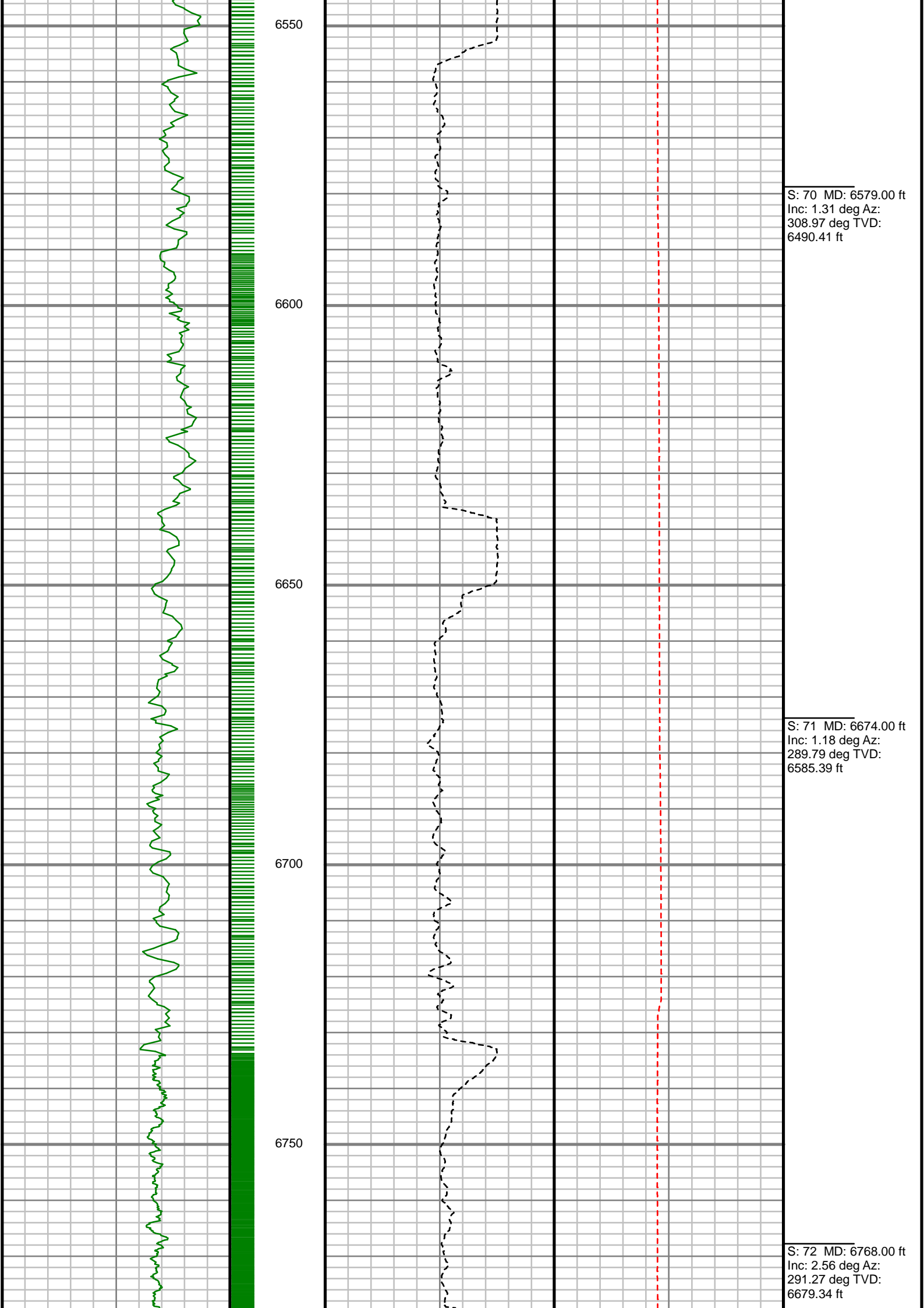
S: 61 MD: 5729.00 ft  
Inc: 1.75 deg Az:  
176.08 deg TVD:  
5640.51 ft

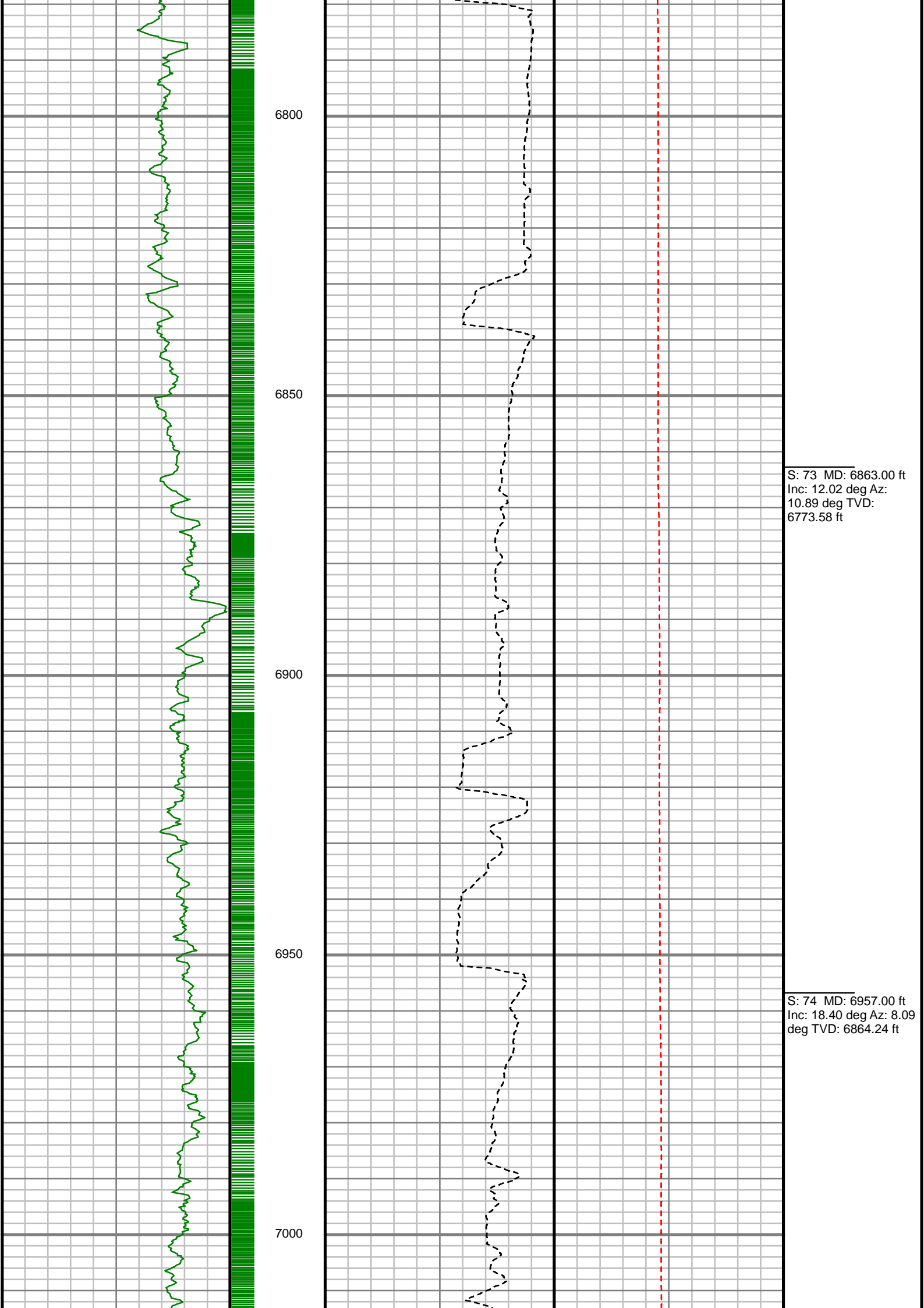
S: 62 MD: 5823.00 ft  
Inc: 1.11 deg Az:  
184.83 deg TVD:  
5734.48 ft







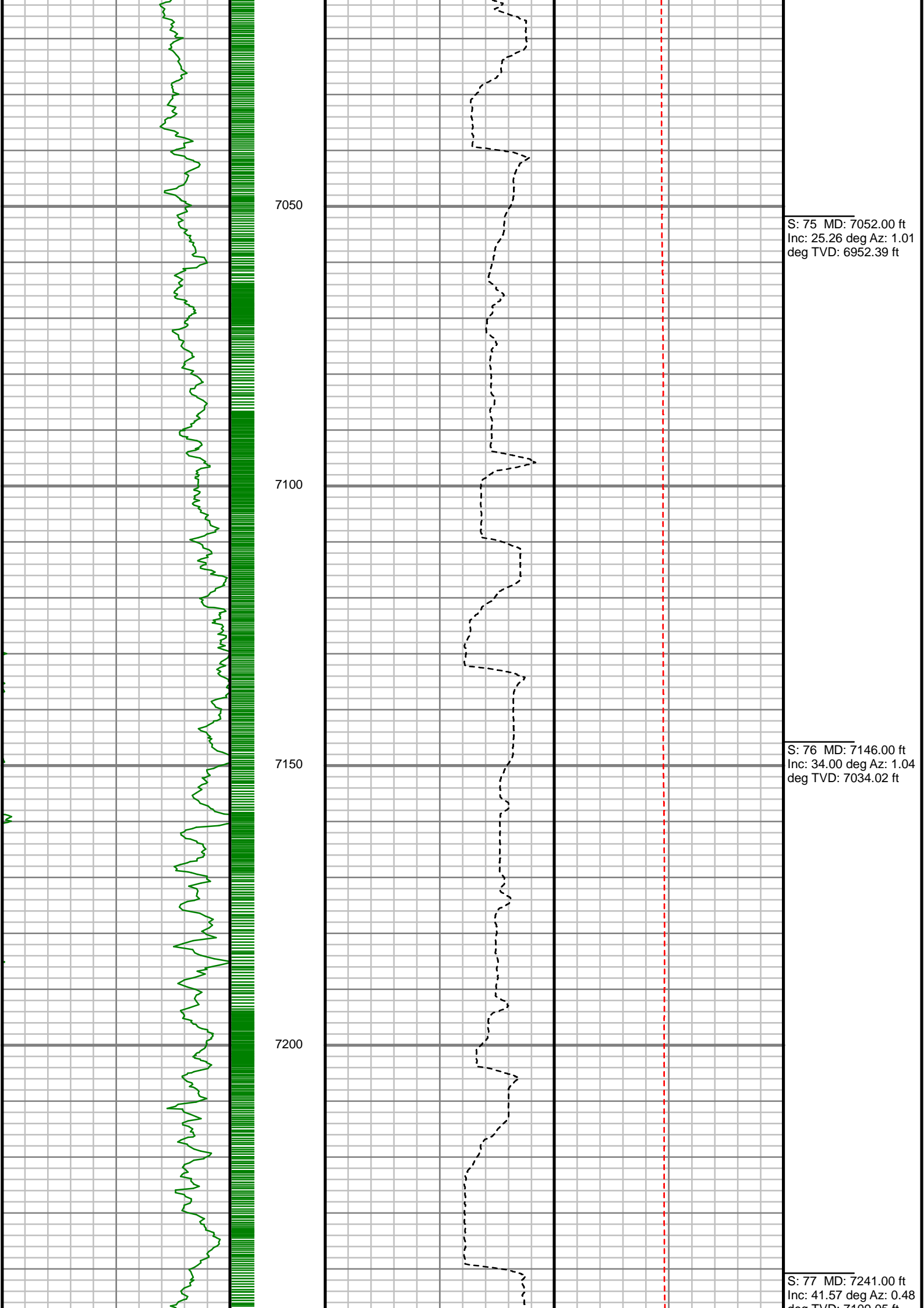


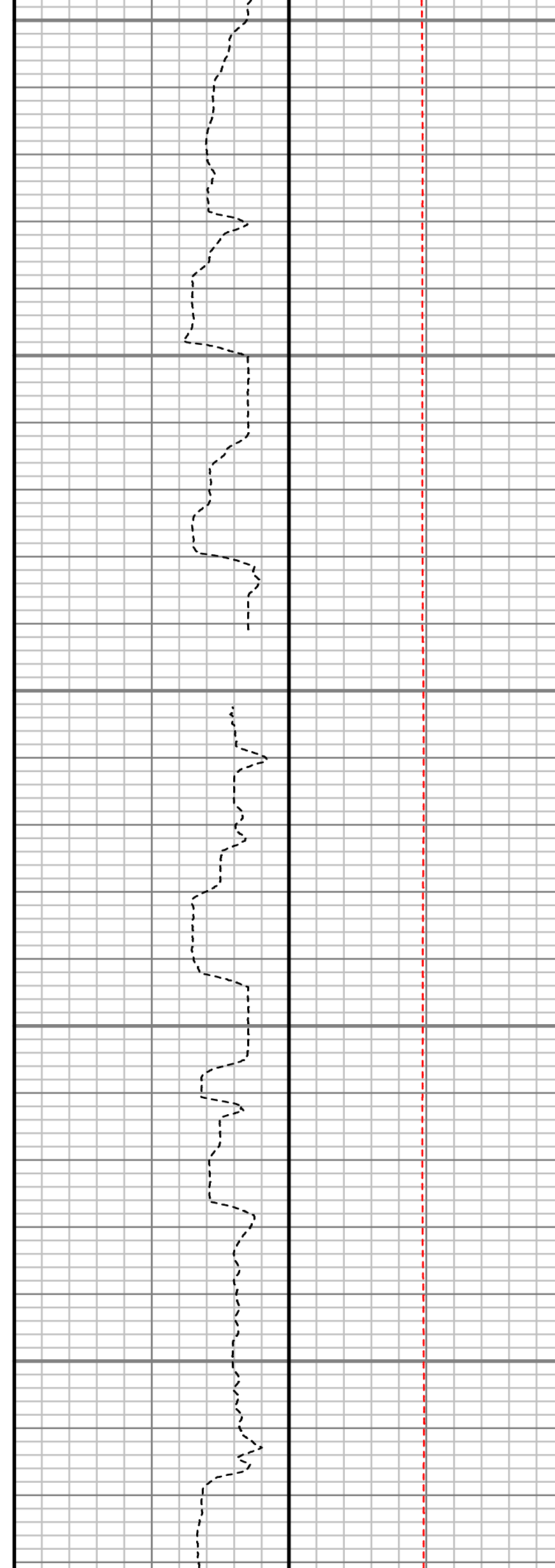
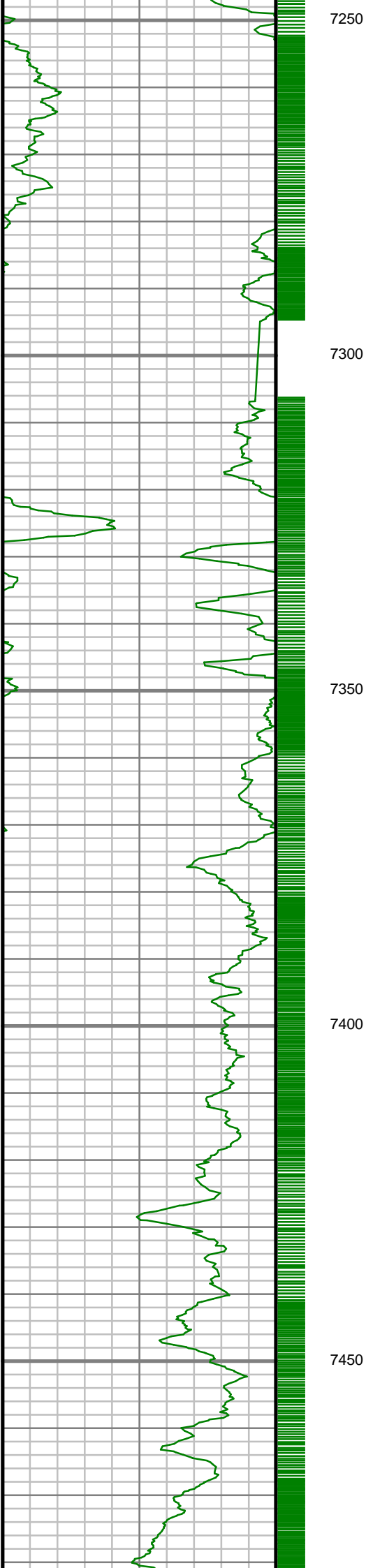


S: 73 MD: 6863.00 ft  
Inc: 12.02 deg Az:  
10.89 deg TVD:  
6773.58 ft

S: 74 MD: 6957.00 ft  
Inc: 18.40 deg Az: 8.09  
deg TVD: 6864.24 ft



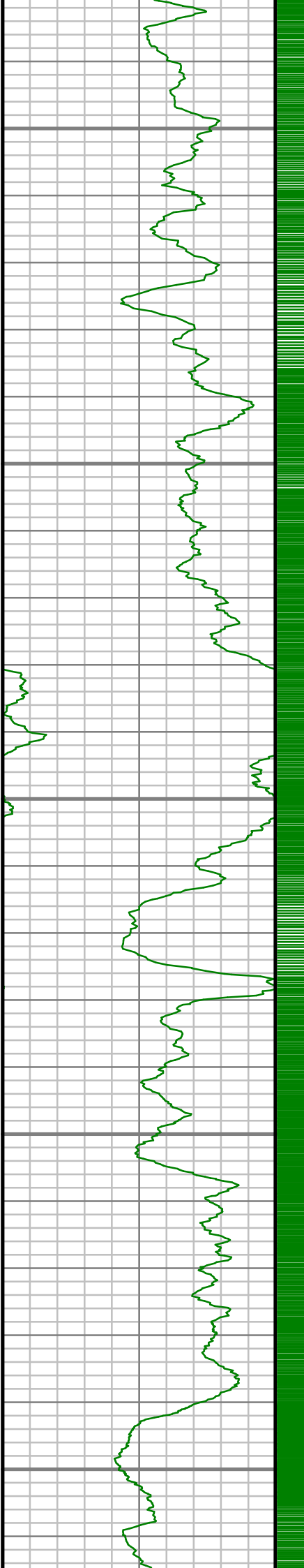




deg TVD: 7109.05 ft

S: 78 MD: 7335.00 ft  
Inc: 47.44 deg Az:  
358.94 deg TVD:  
7176.06 ft

S: 79 MD: 7430.00 ft  
Inc: 54.14 deg Az:  
357.93 deg TVD:  
7236.09 ft



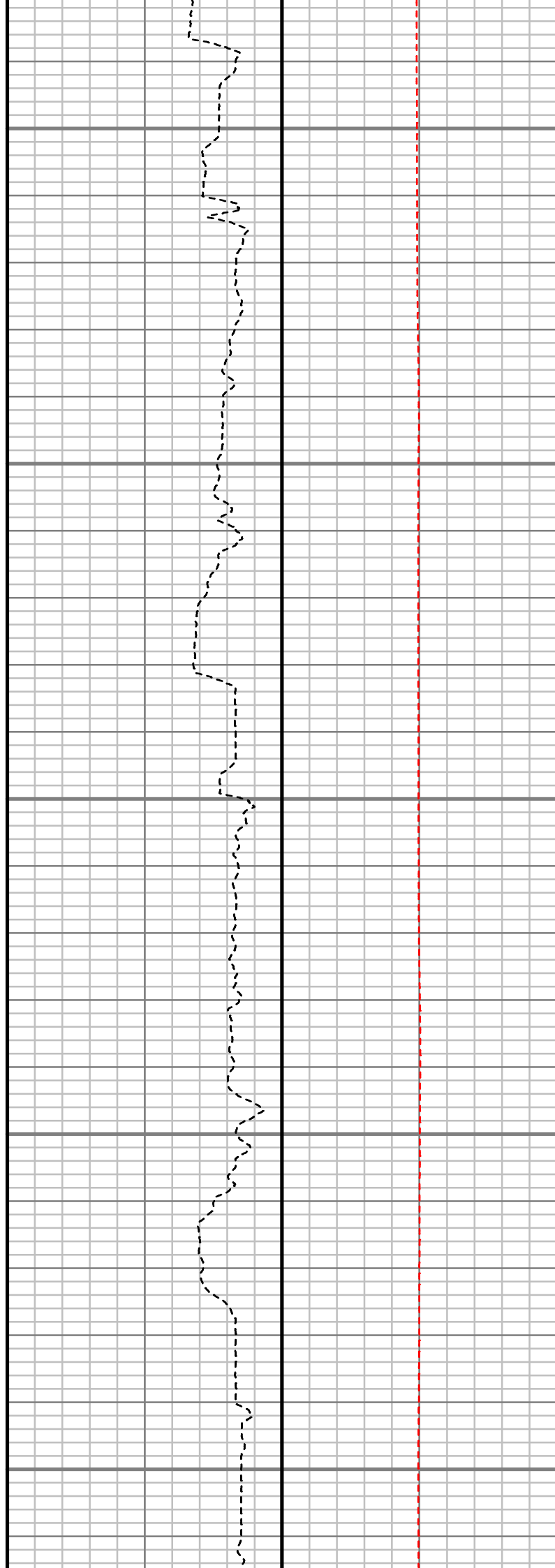
7500

7550

7600

7650

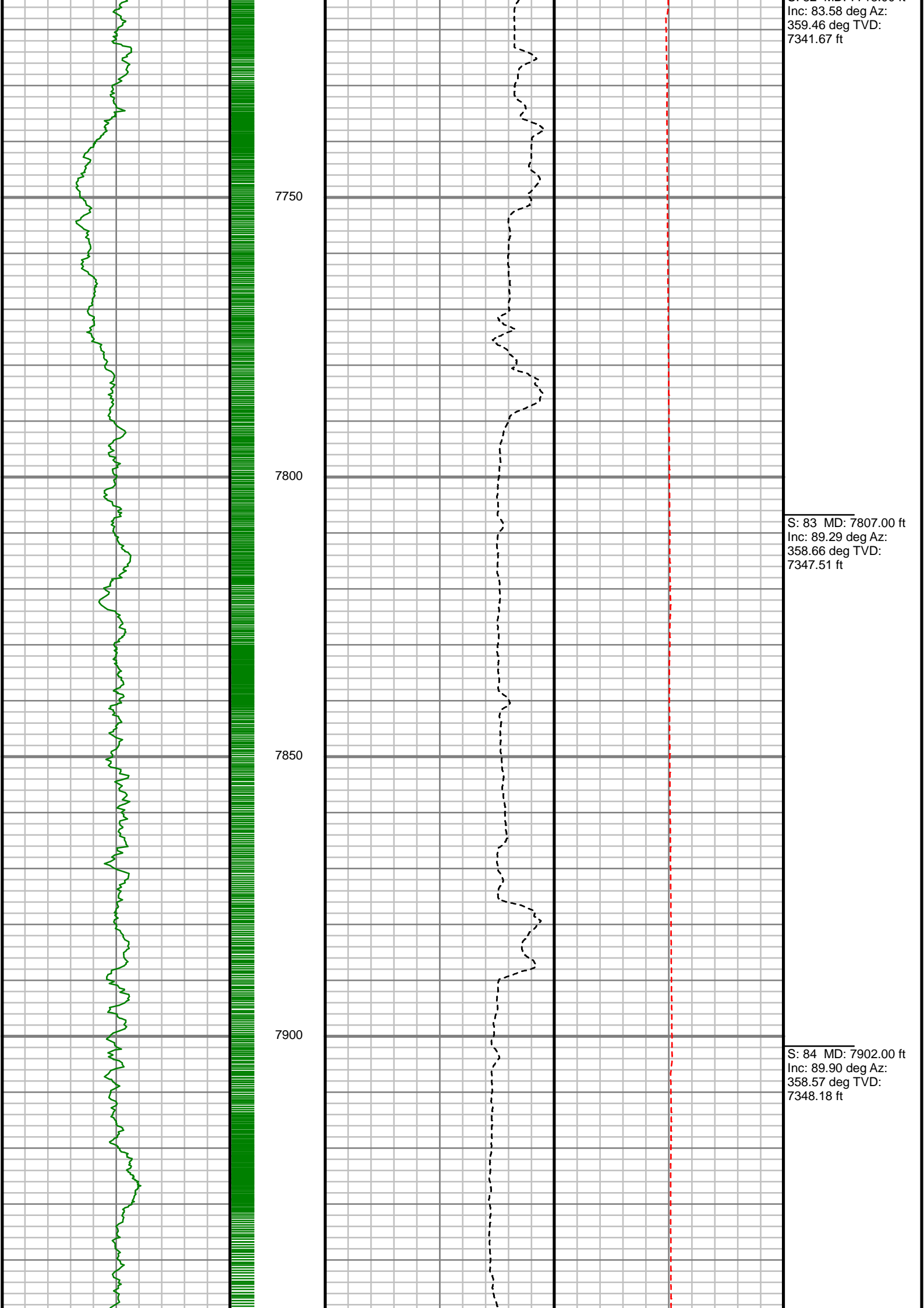
7700



S: 80 MD: 7524.00 ft  
Inc: 62.65 deg Az: 1.54  
deg TVD: 7285.32 ft

S: 81 MD: 7618.00 ft  
Inc: 71.94 deg Az: 2.13  
deg TVD: 7321.56 ft

S: 82 MD: 7713.00 ft



7750

7800

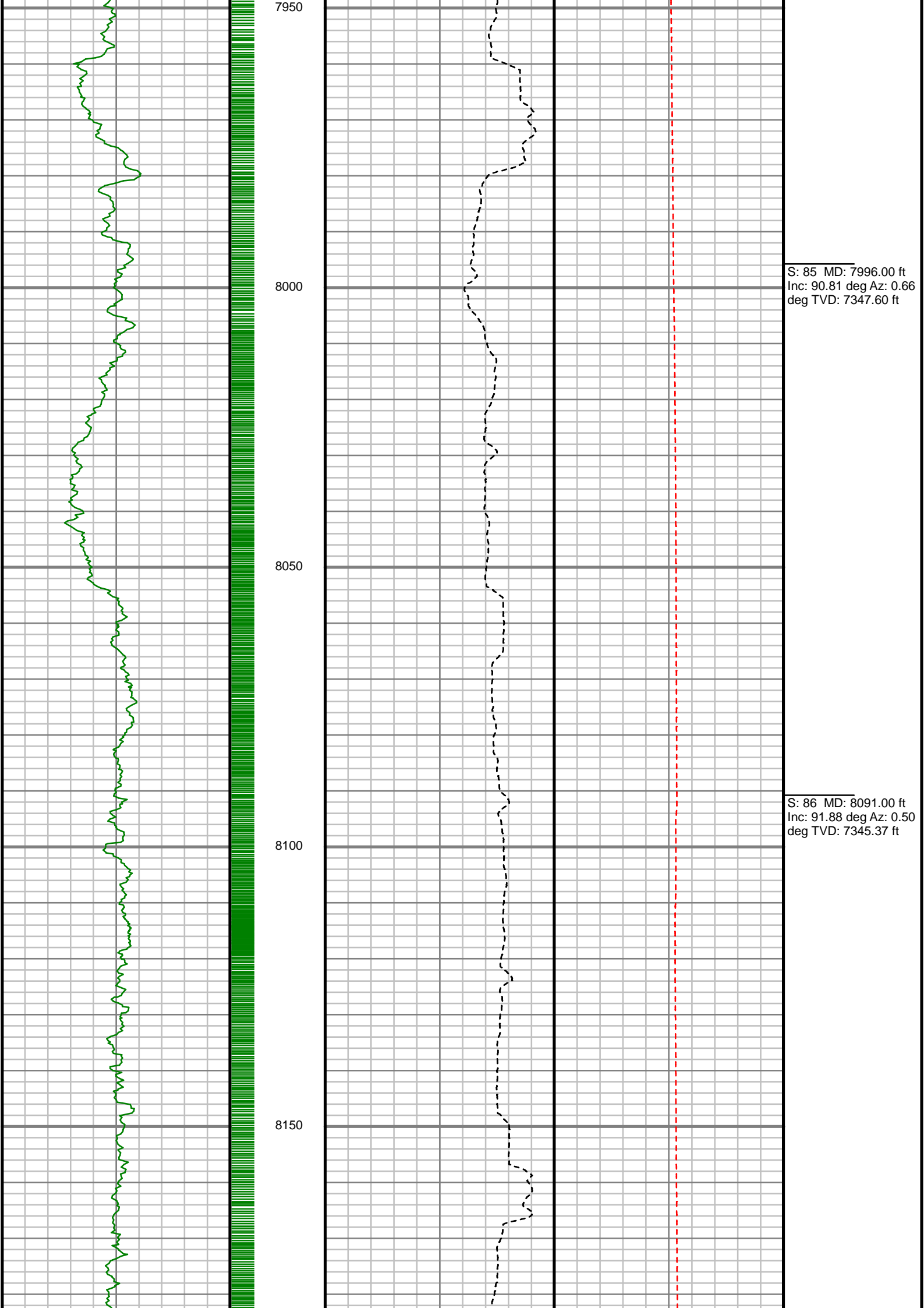
7850

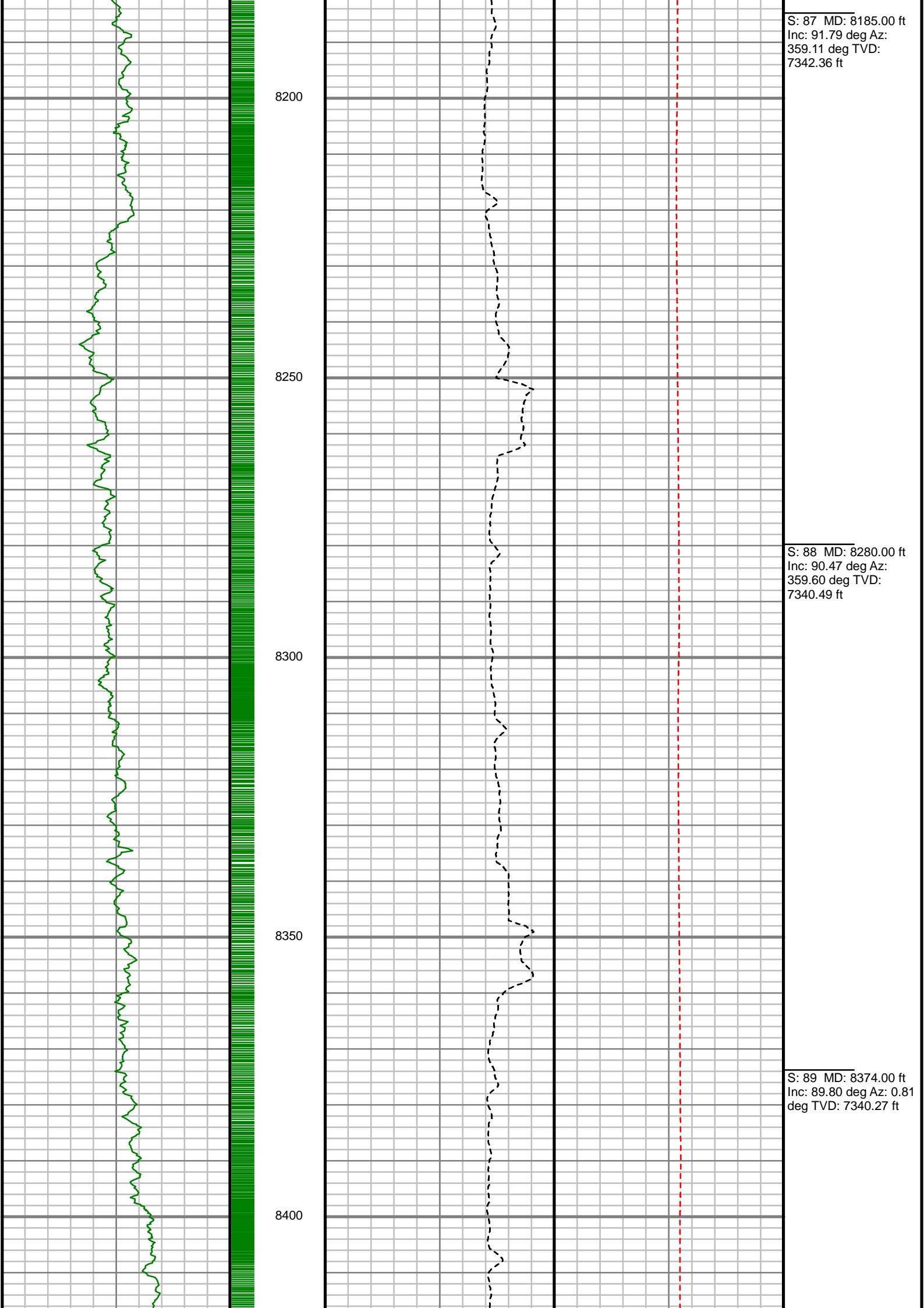
7900

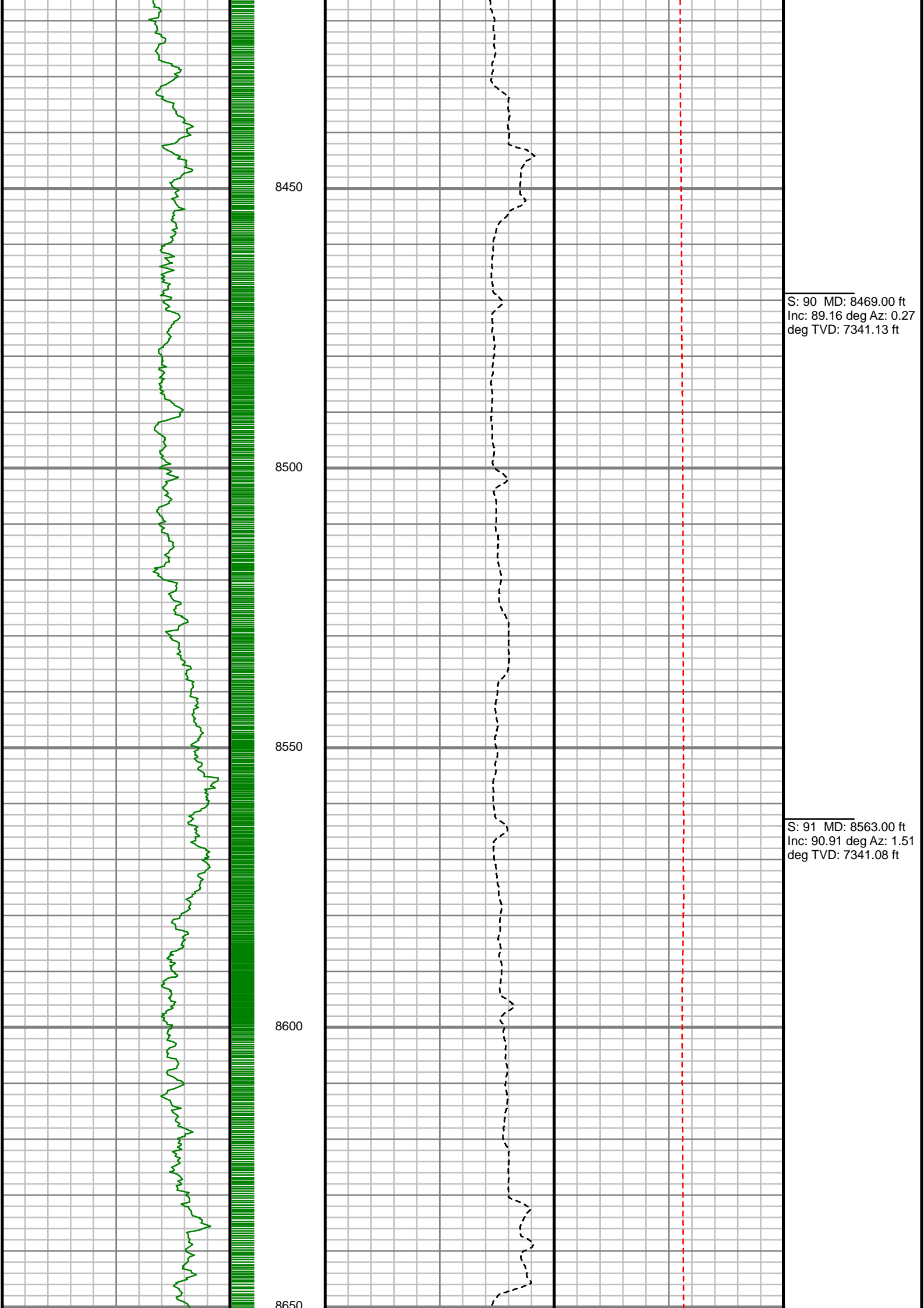
S: 85 MD: 7952.00 ft  
Inc: 83.58 deg Az:  
359.46 deg TVD:  
7341.67 ft

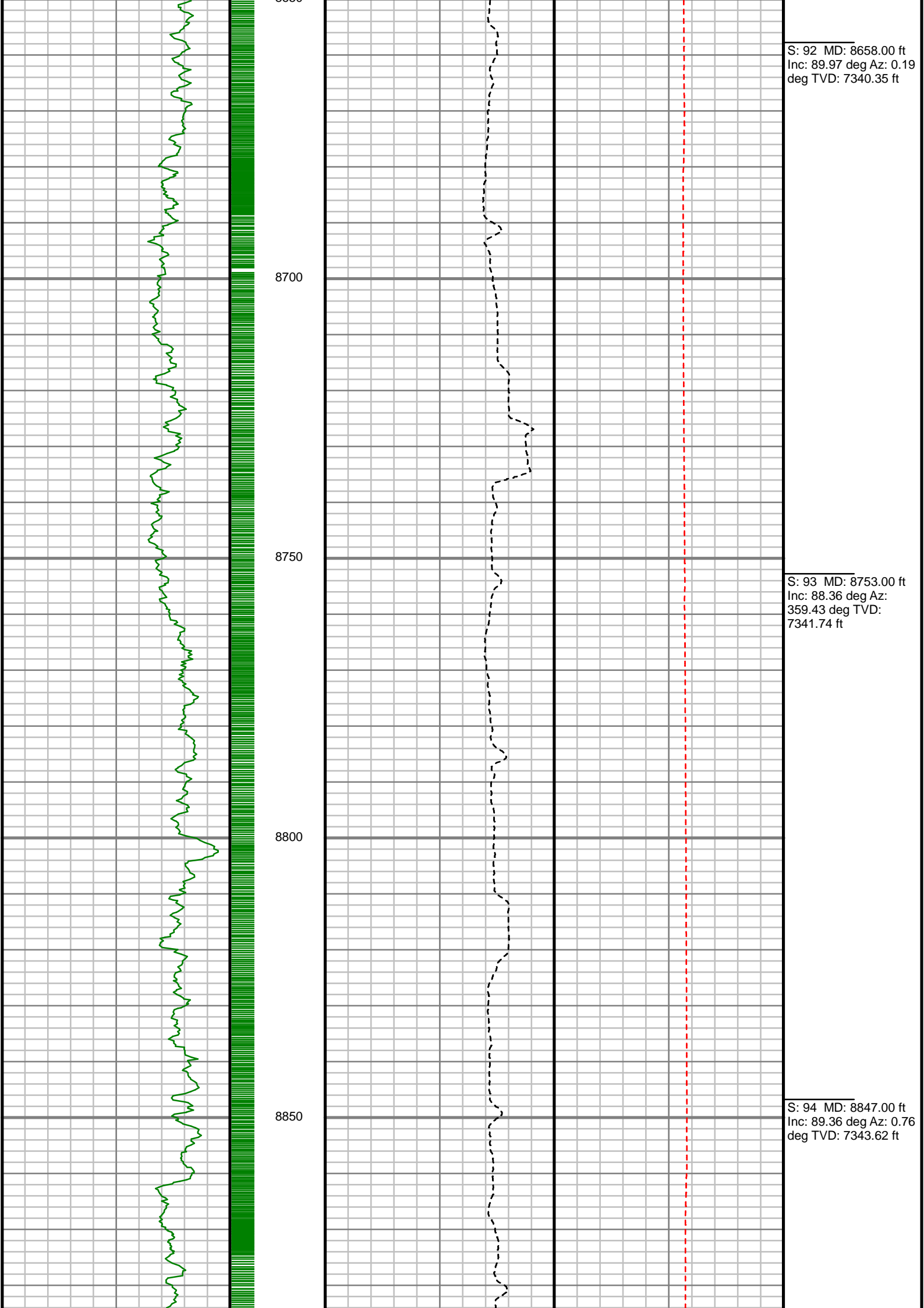
S: 83 MD: 7807.00 ft  
Inc: 89.29 deg Az:  
358.66 deg TVD:  
7347.51 ft

S: 84 MD: 7902.00 ft  
Inc: 89.90 deg Az:  
358.57 deg TVD:  
7348.18 ft







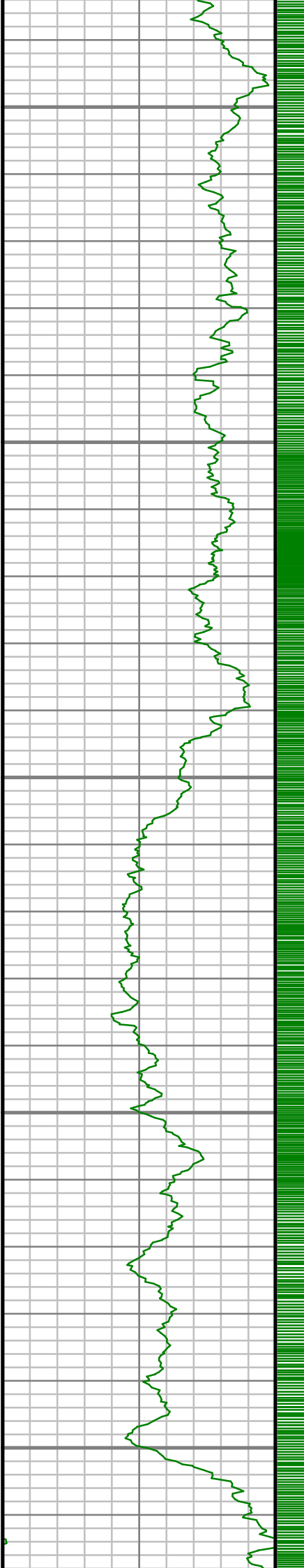


S: 92 MD: 8658.00 ft  
Inc: 89.97 deg Az: 0.19  
deg TVD: 7340.35 ft

S: 93 MD: 8753.00 ft  
Inc: 88.36 deg Az:  
359.43 deg TVD:  
7341.74 ft

S: 94 MD: 8847.00 ft  
Inc: 89.36 deg Az: 0.76  
deg TVD: 7343.62 ft





8900

8950

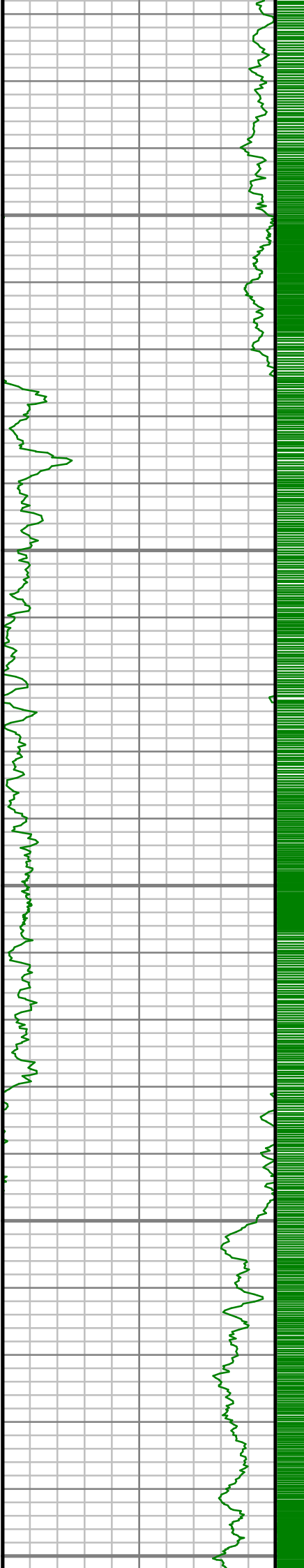
9000

9050

9100

S: 95 MD: 8942.00 ft  
Inc: 90.37 deg Az:  
359.78 deg TVD:  
7343.84 ft

S: 96 MD: 9036.00 ft  
Inc: 89.73 deg Az:  
358.98 deg TVD:  
7343.76 ft



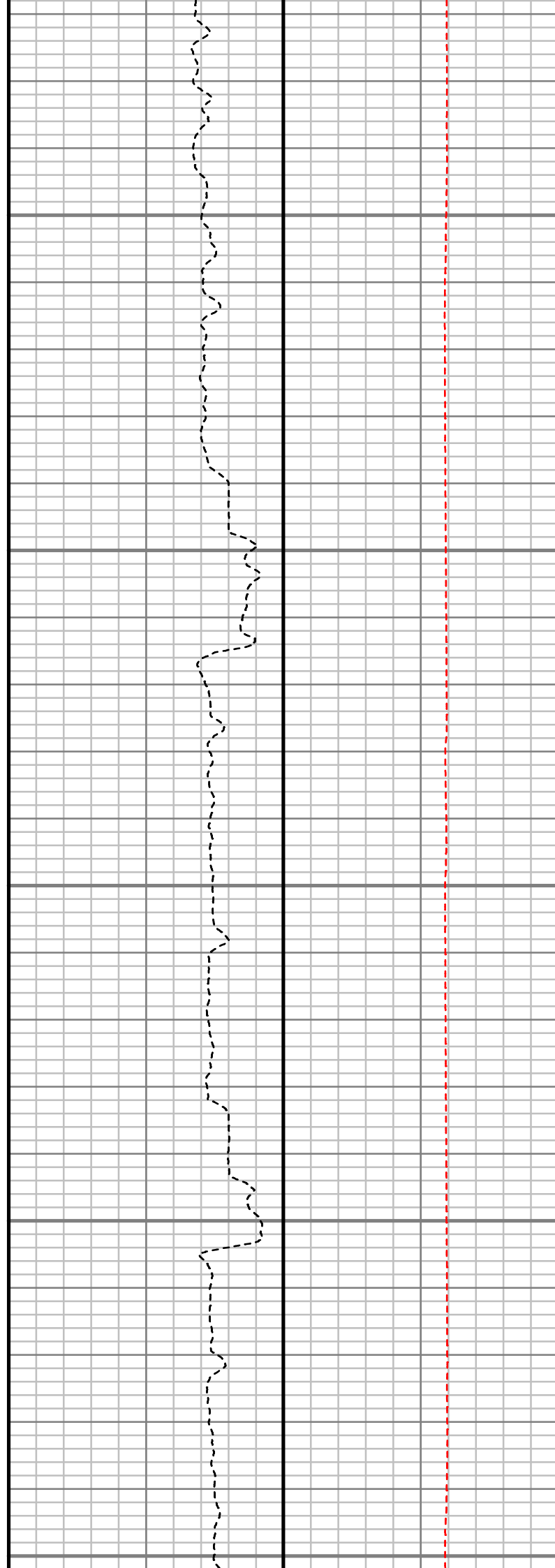
9150

9200

9250

9300

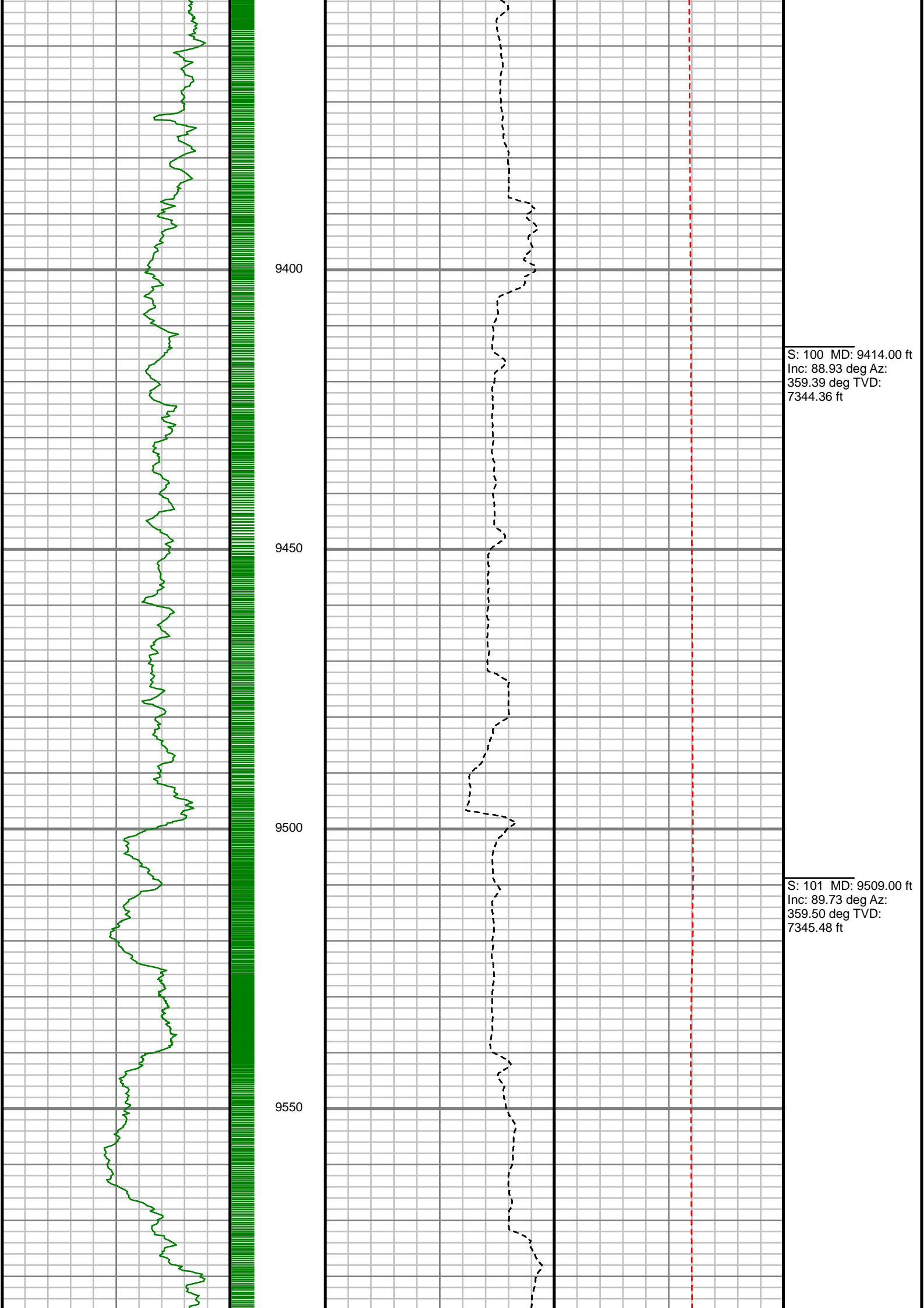
9350

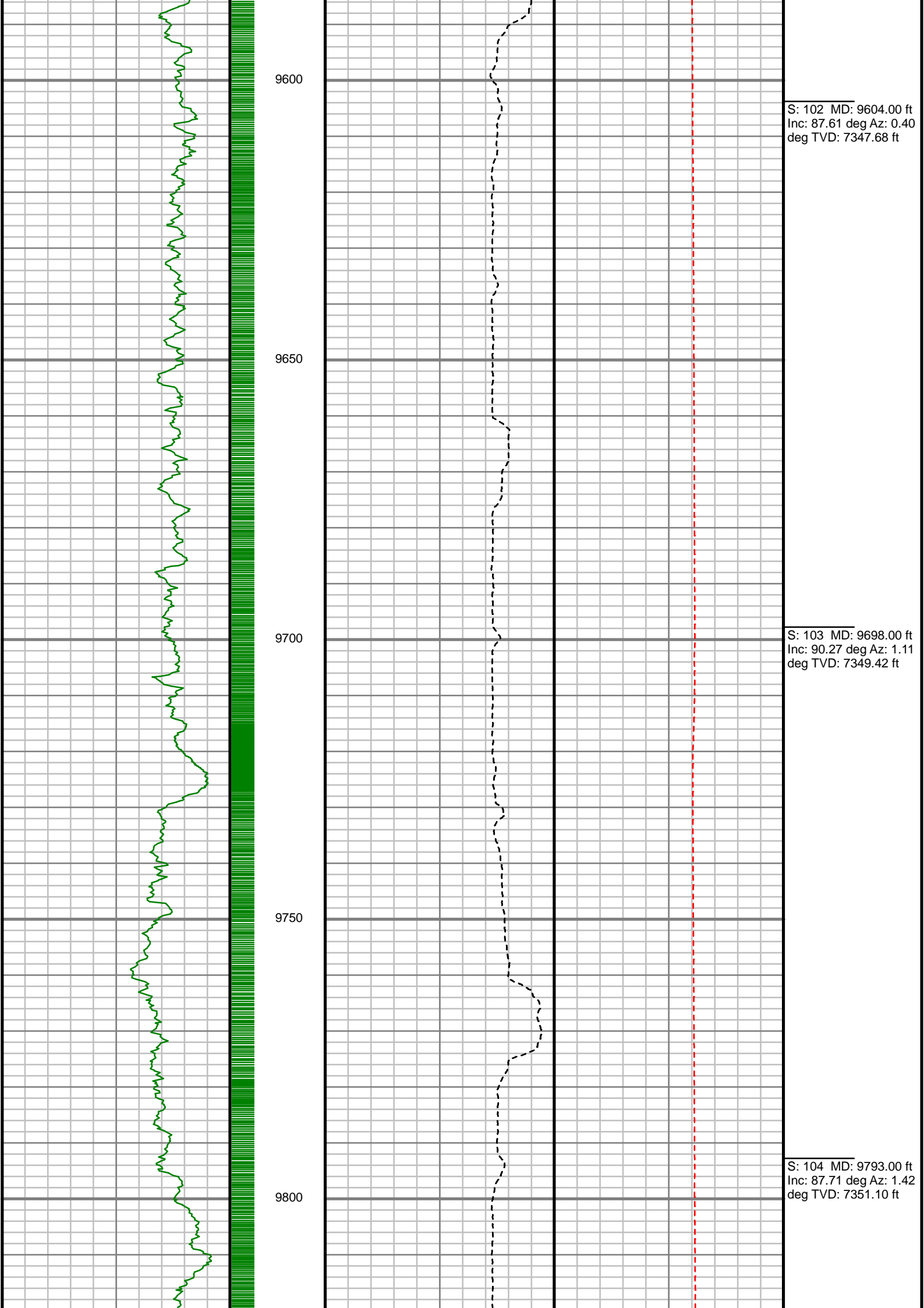


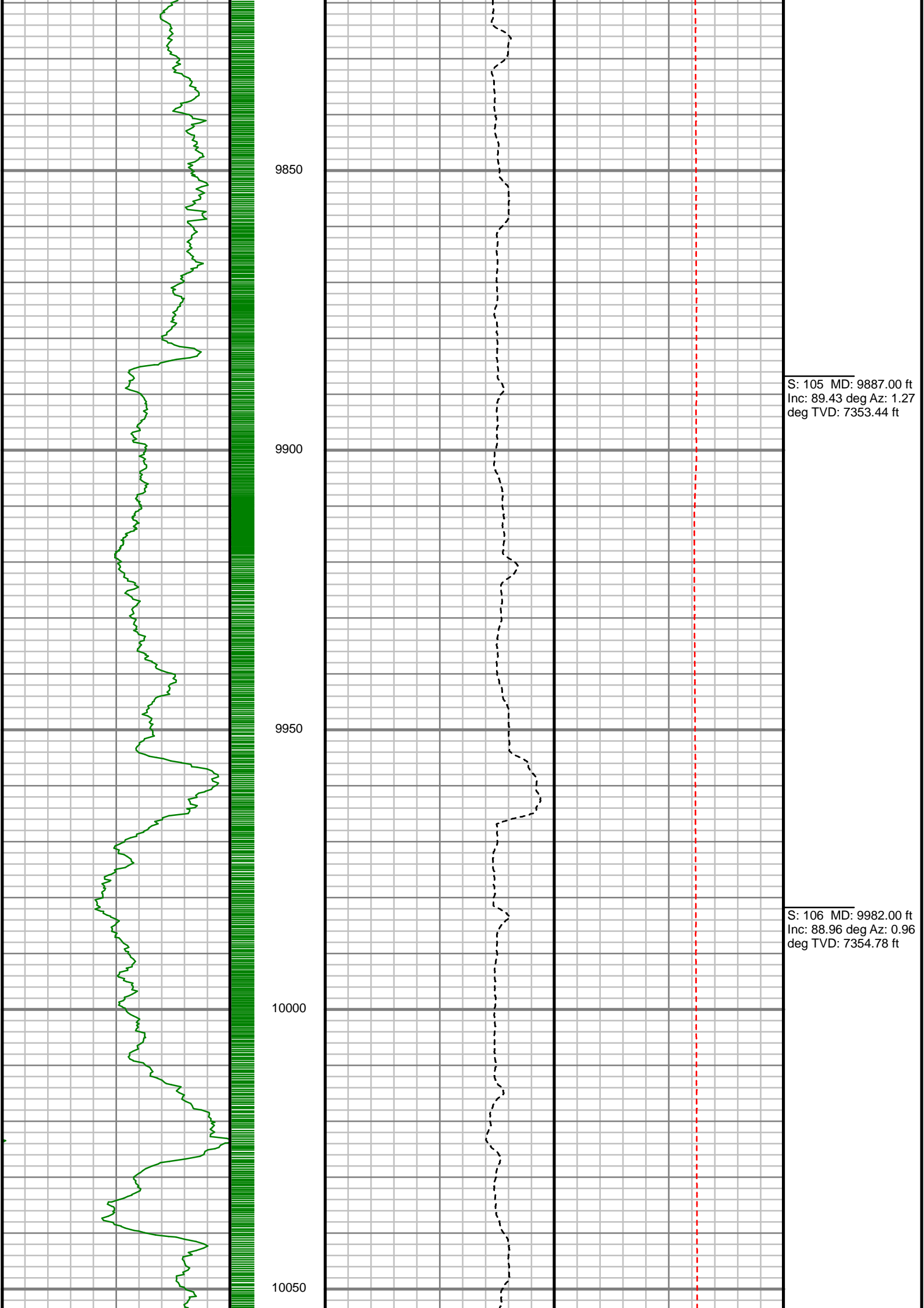
S: 97 MD: 9131.00 ft  
Inc: 91.14 deg Az:  
357.93 deg TVD:  
7343.03 ft

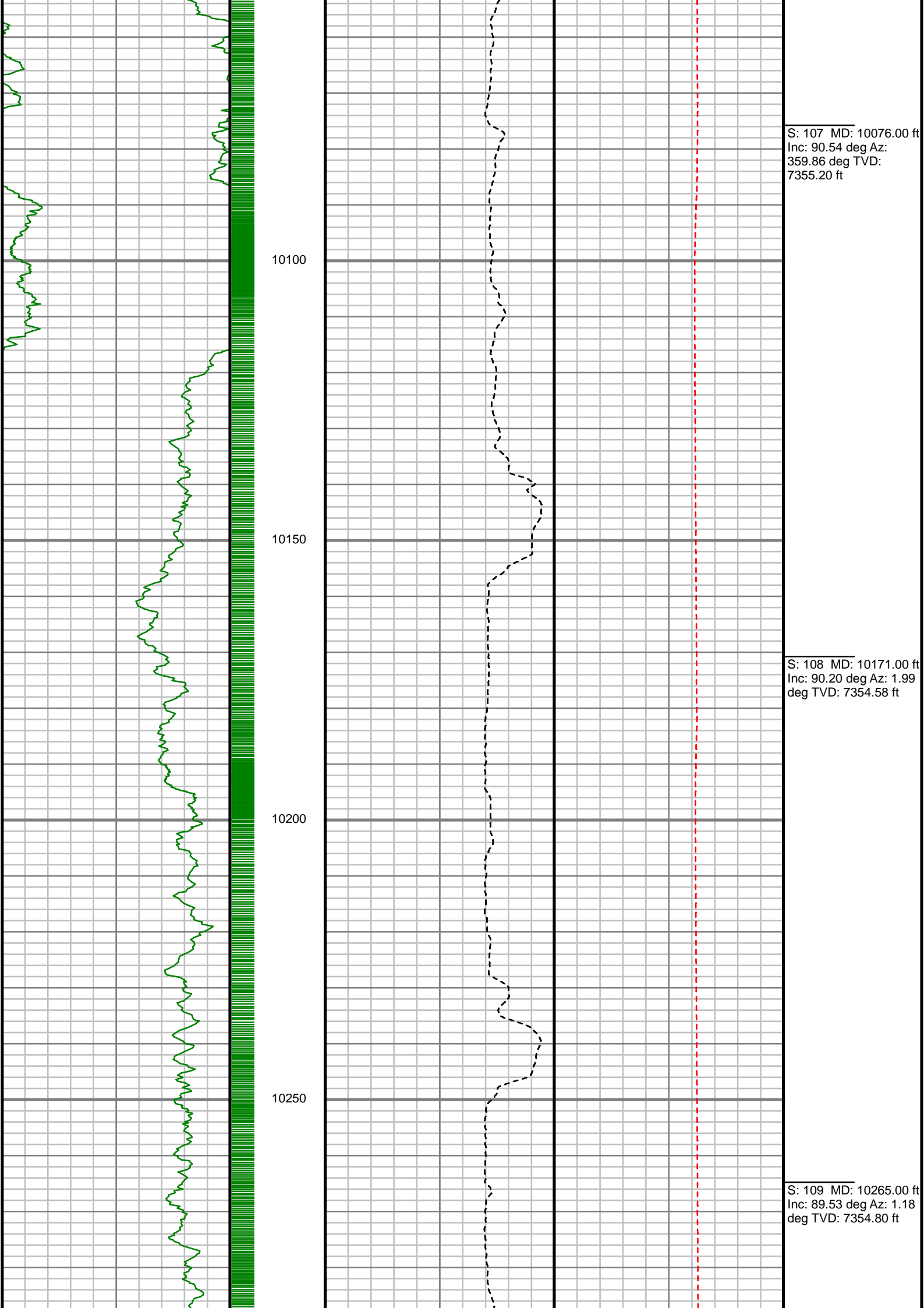
S: 98 MD: 9225.00 ft  
Inc: 89.70 deg Az:  
358.68 deg TVD:  
7342.35 ft

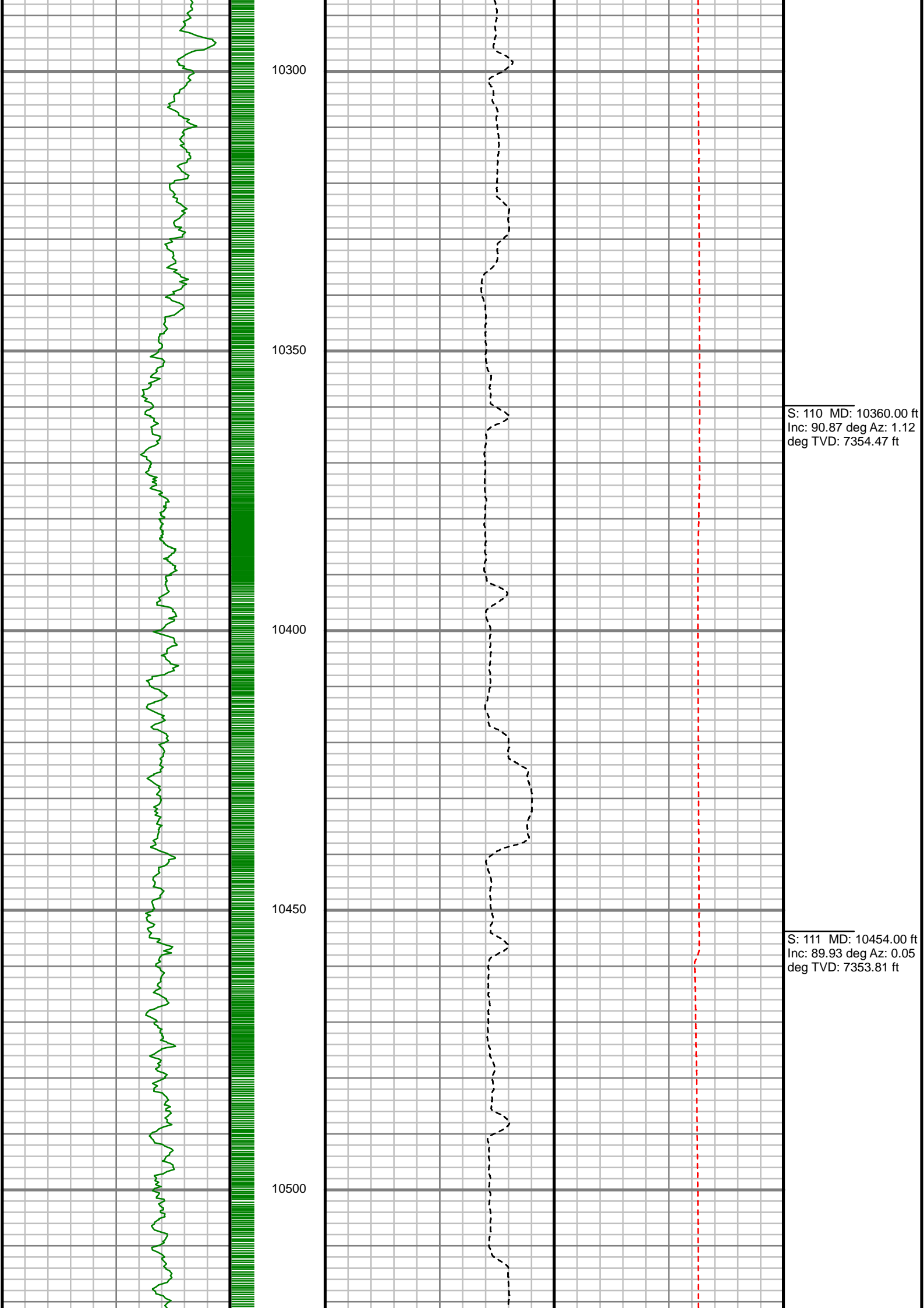
S: 99 MD: 9320.00 ft  
Inc: 89.46 deg Az:  
358.95 deg TVD:  
7343.04 ft

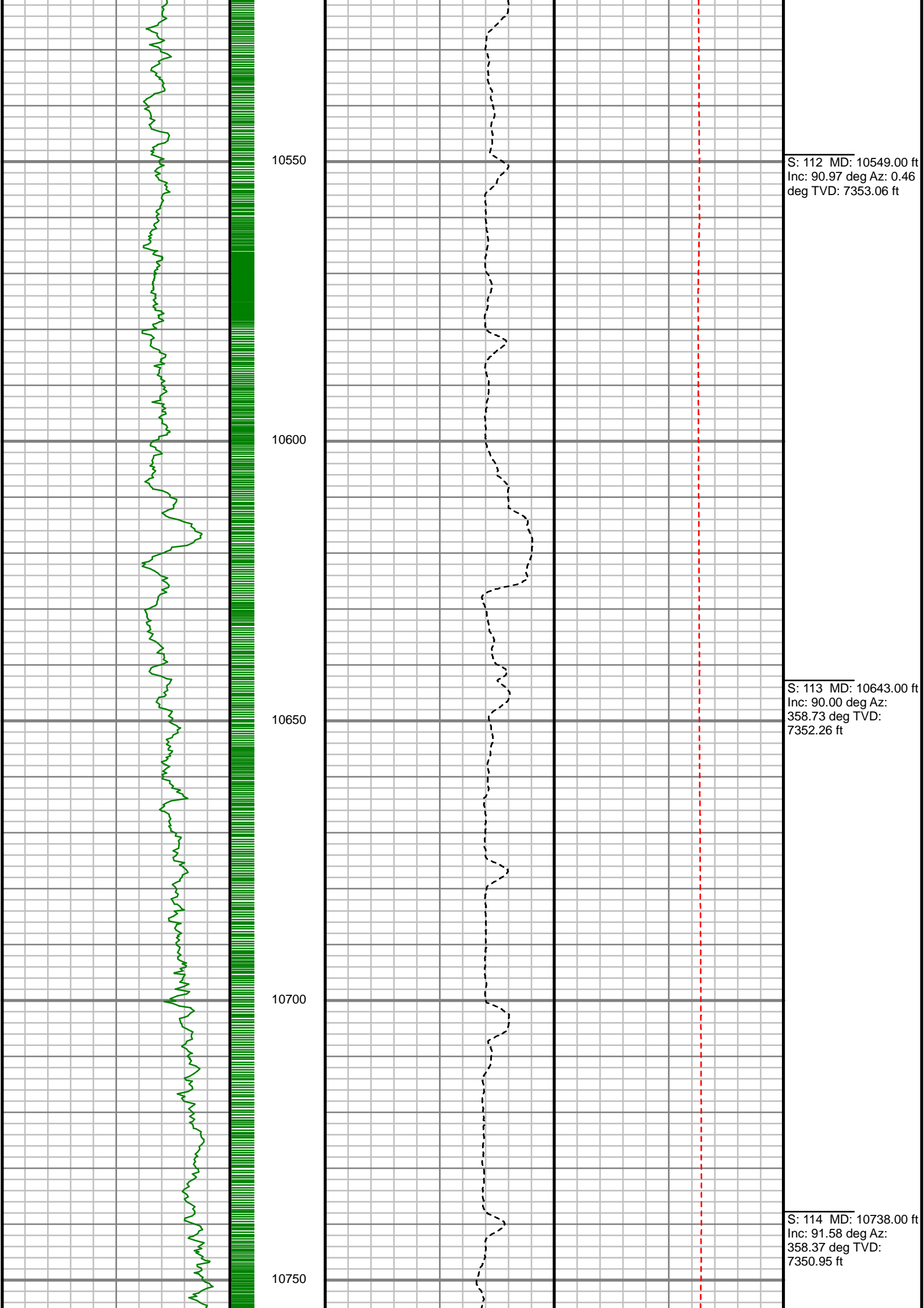




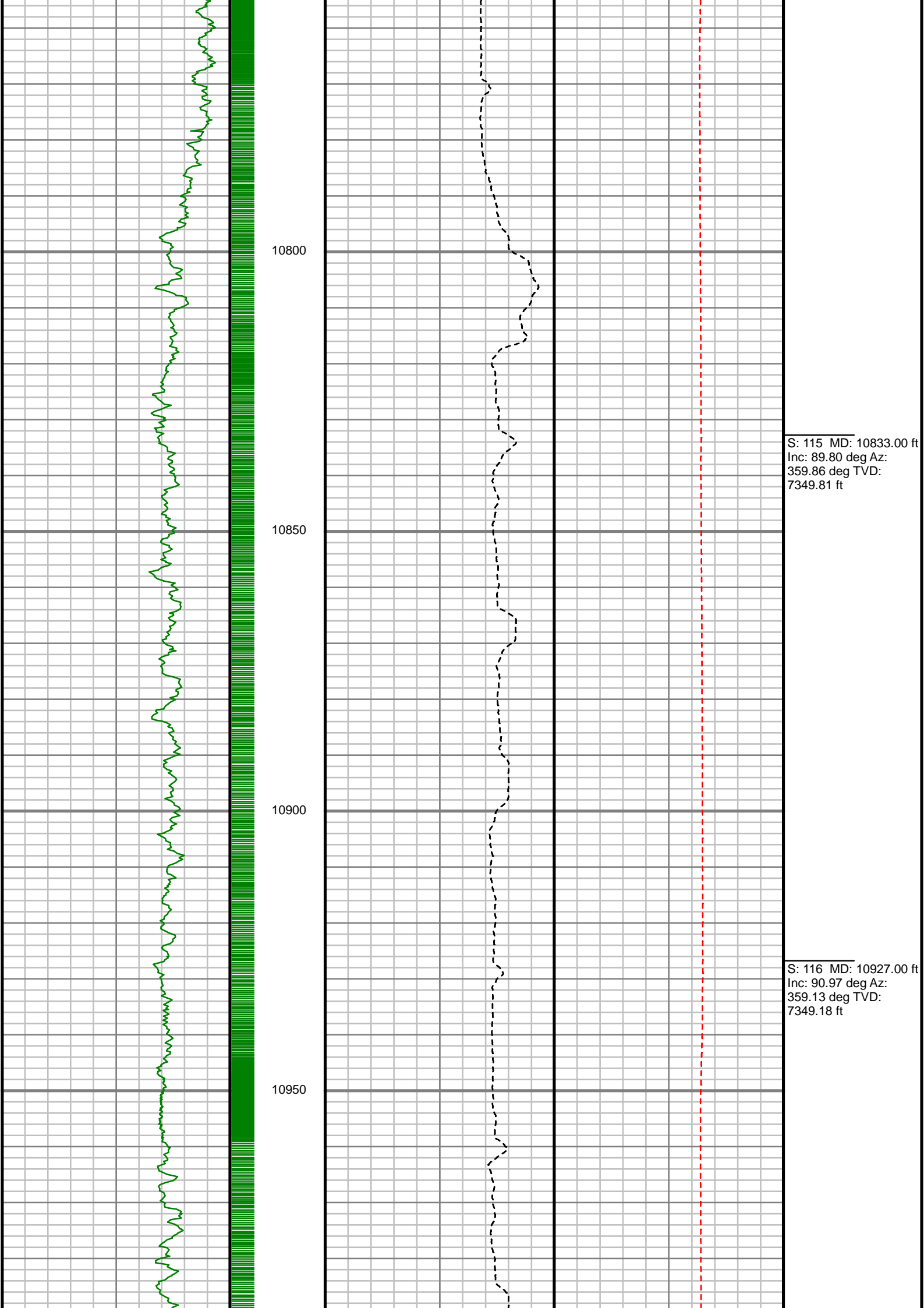


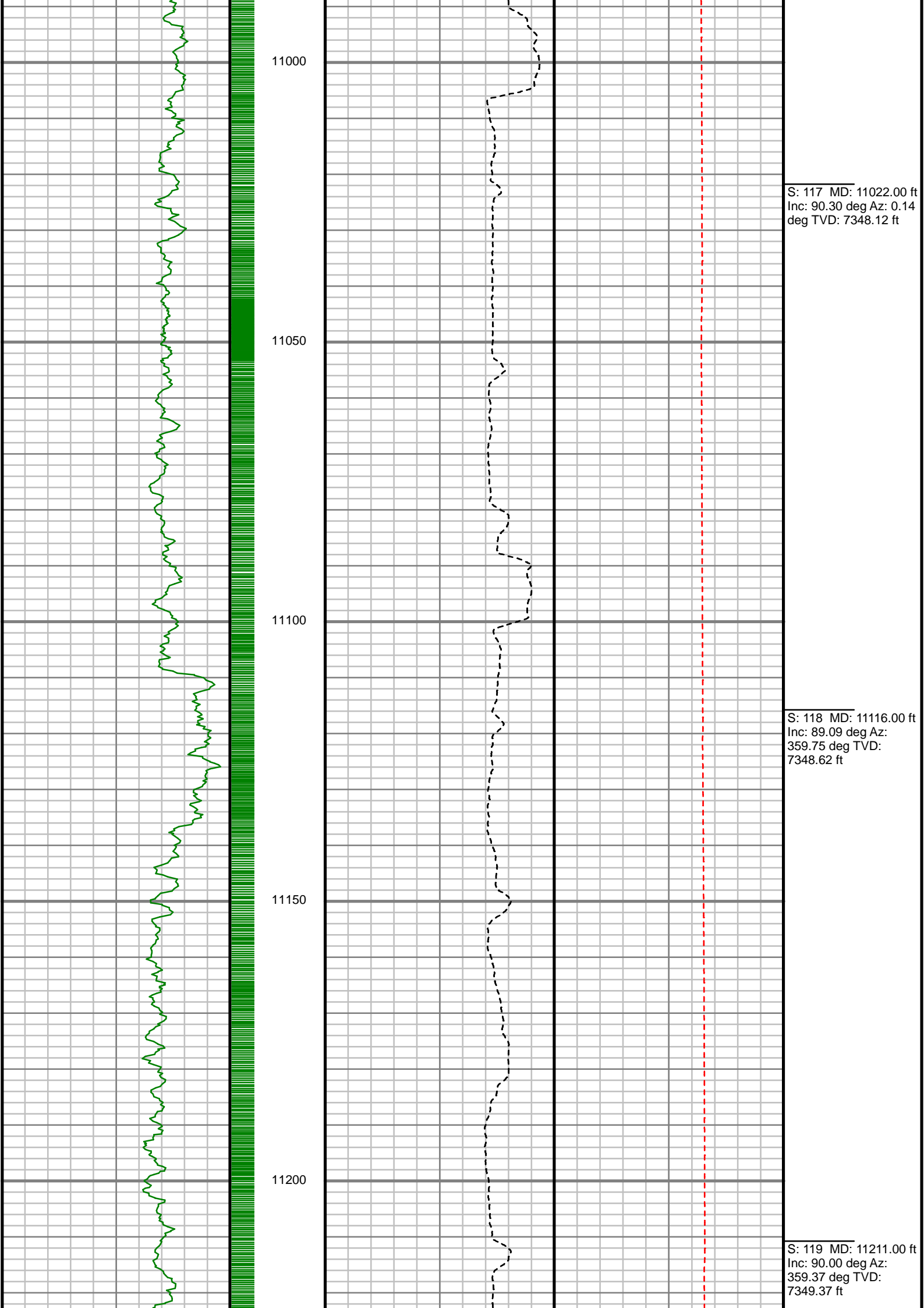


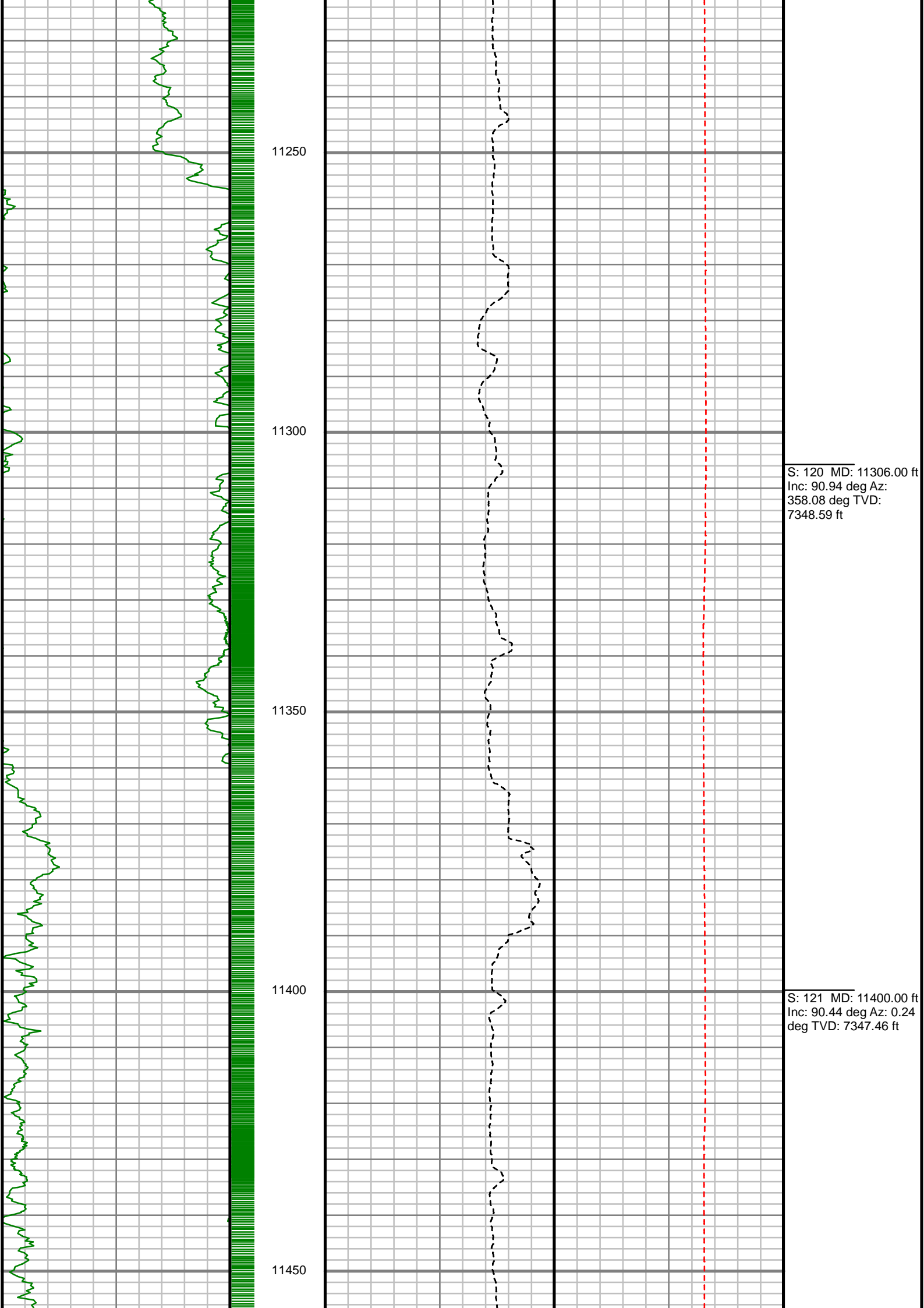


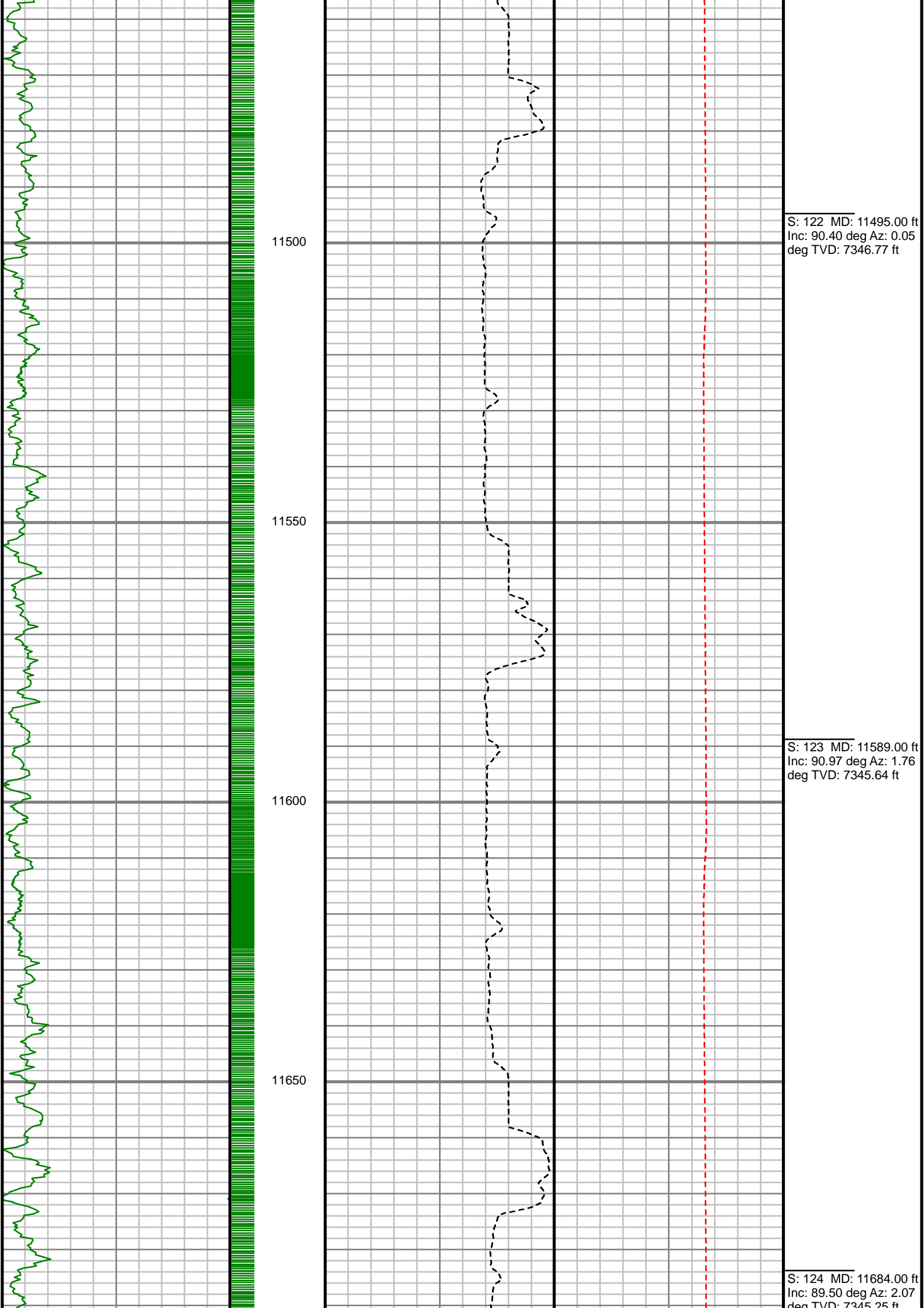


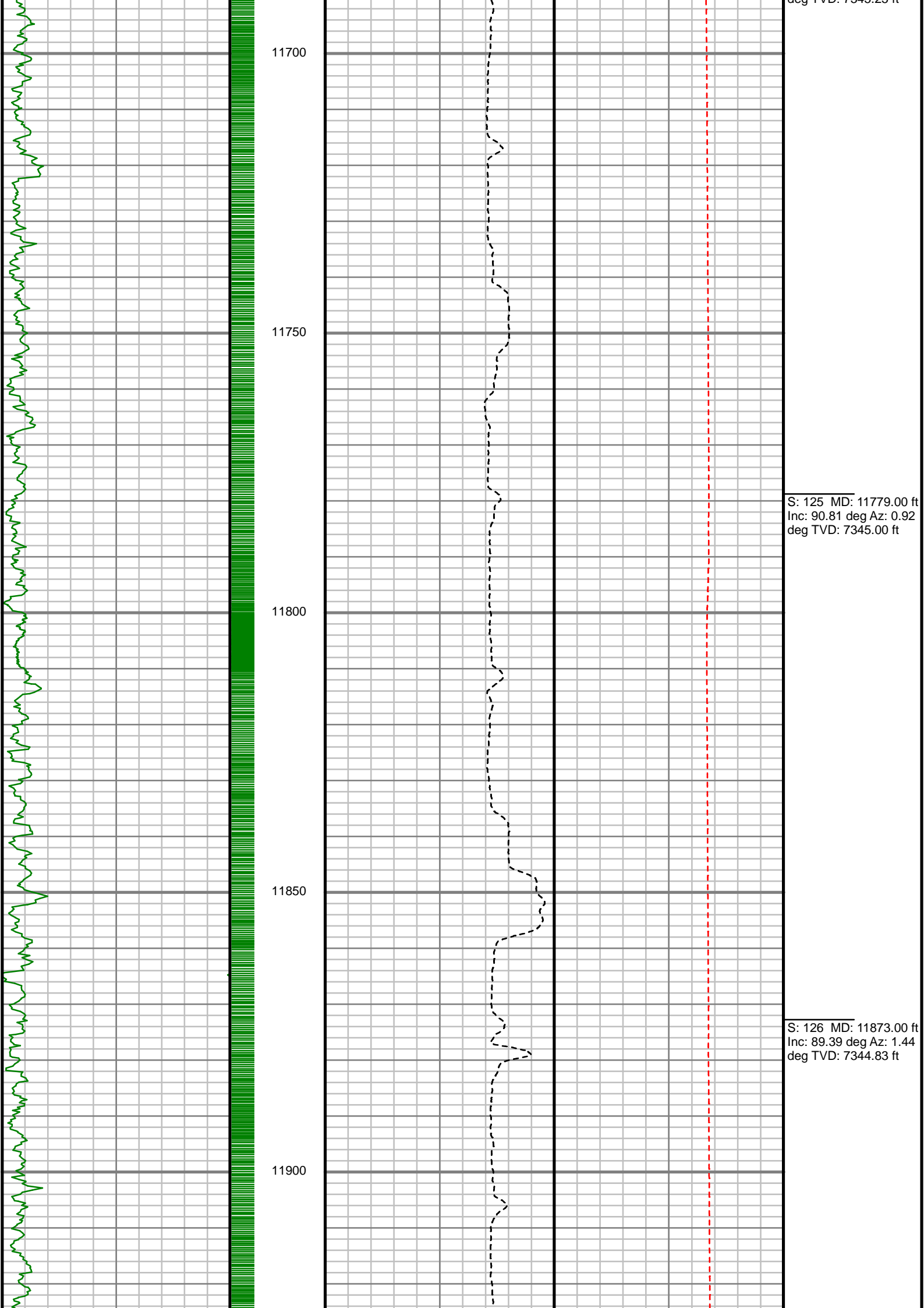


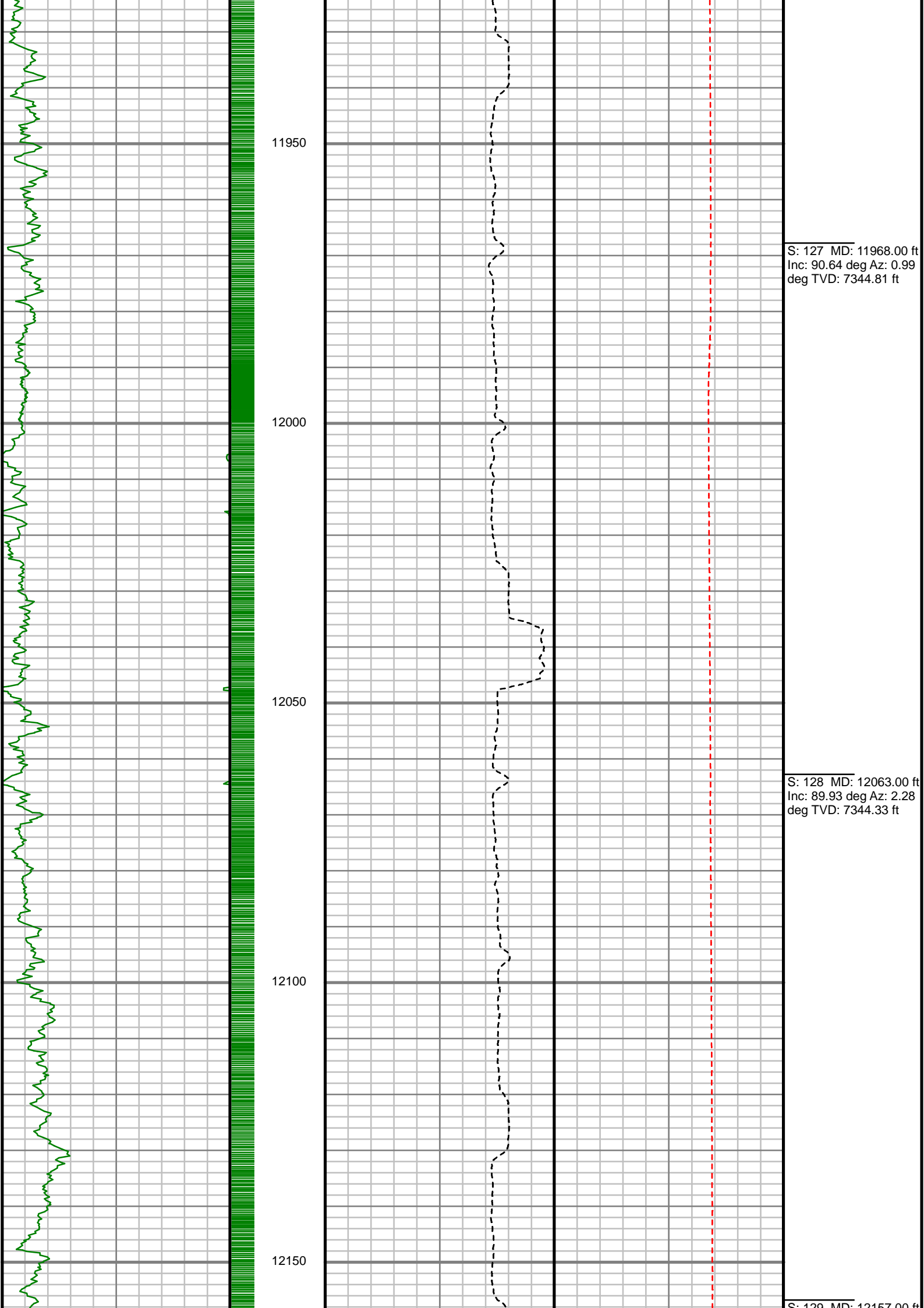


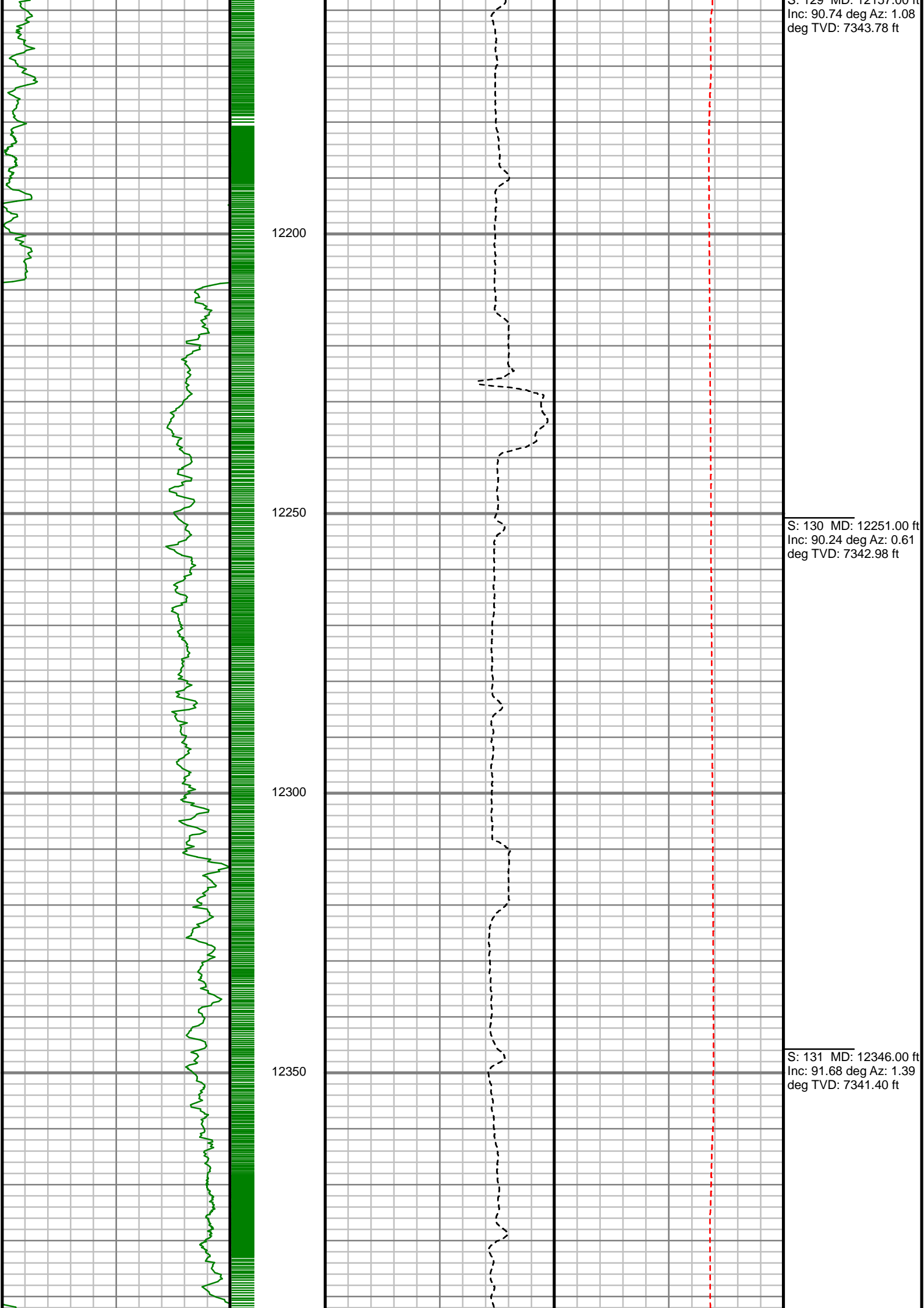


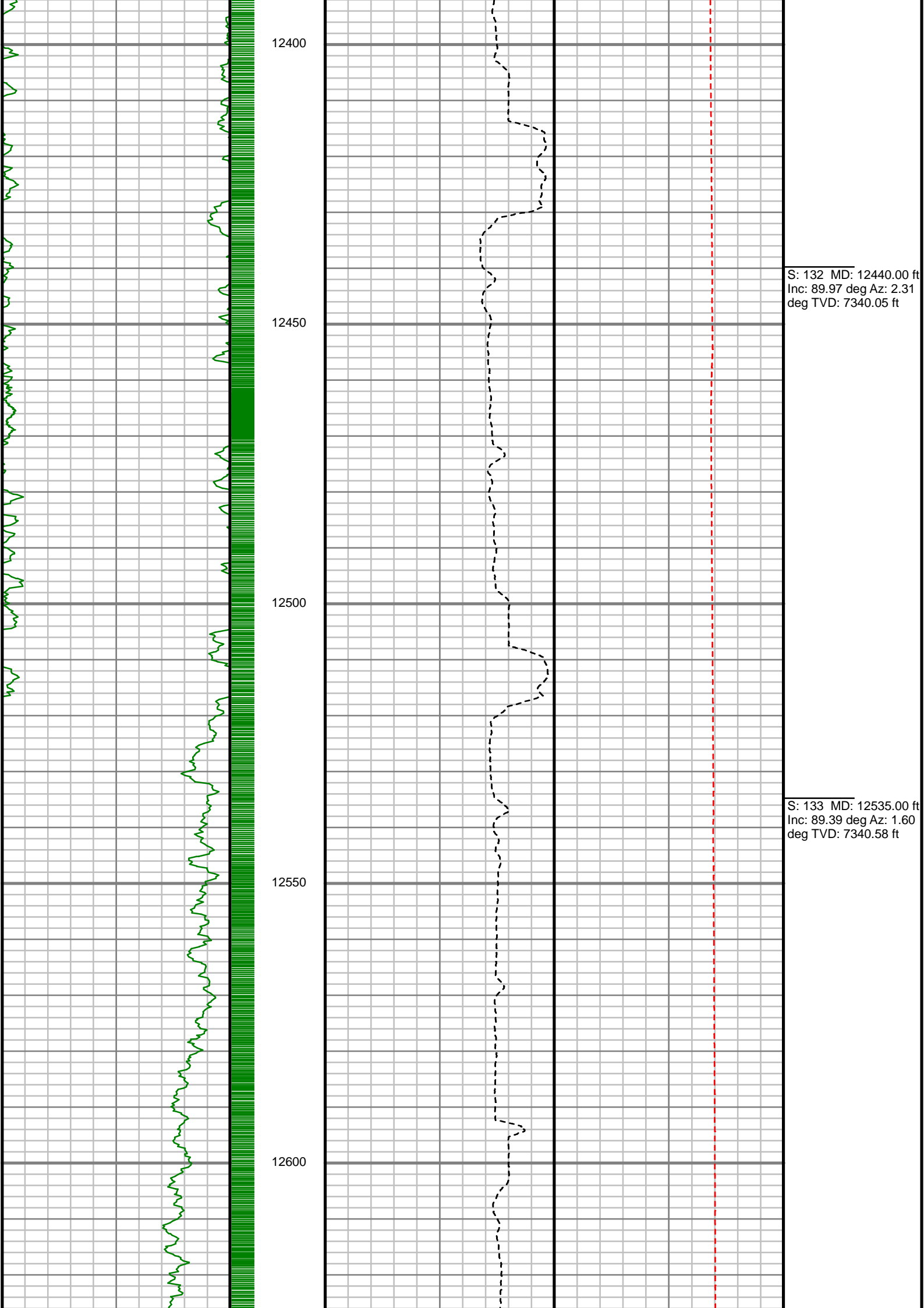




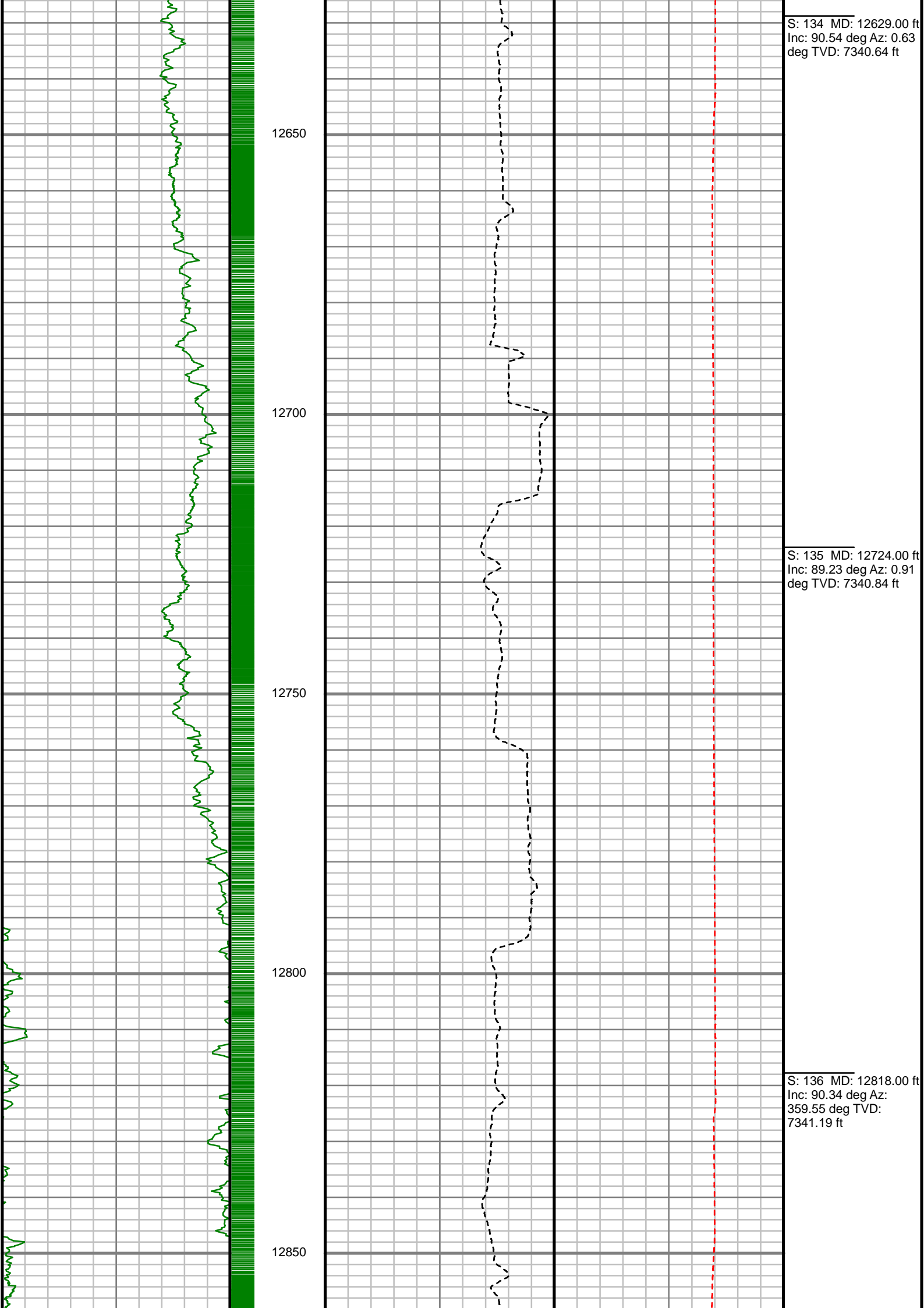


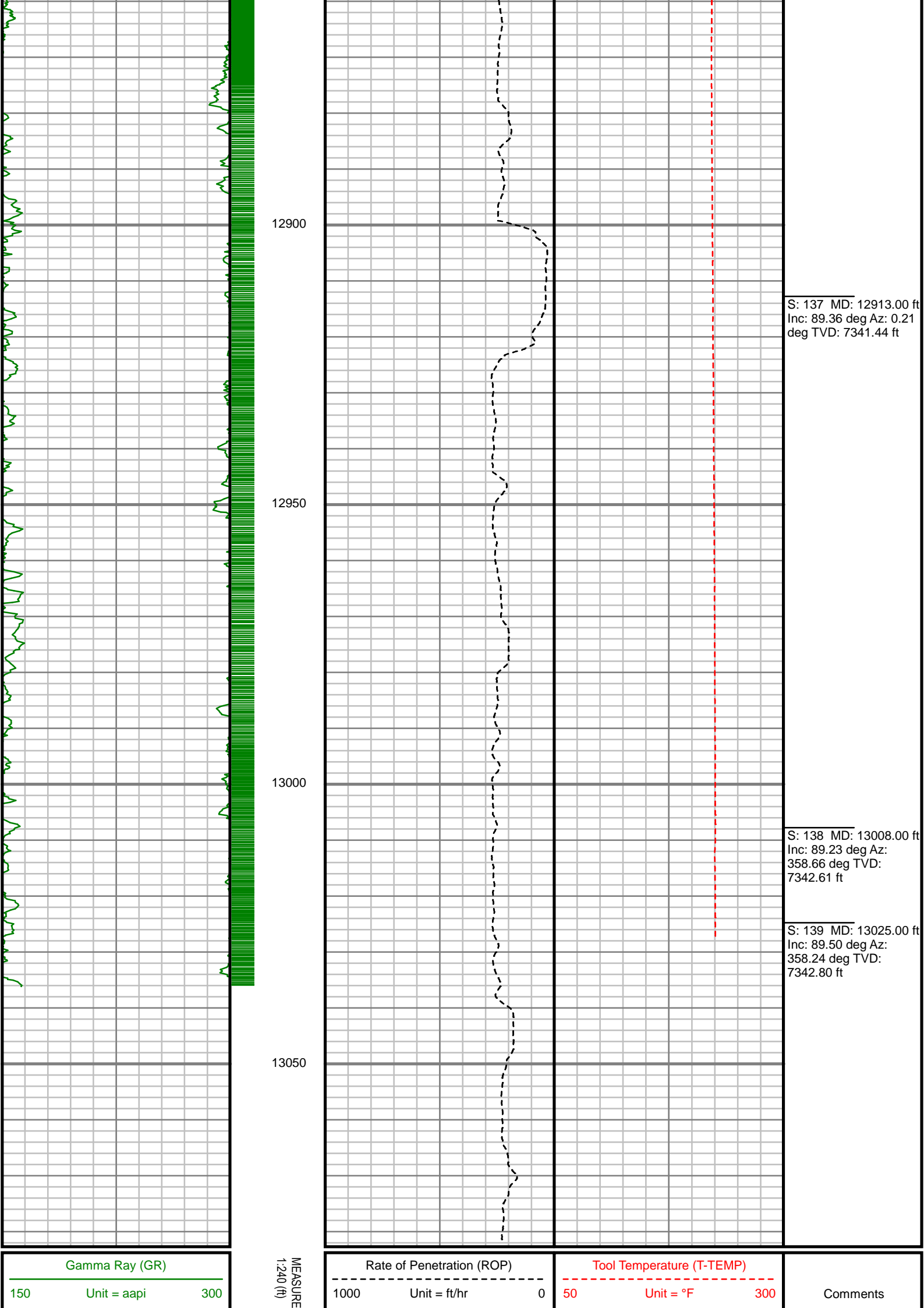












Gamma Ray (GR)

150 Unit = aapi 300

Rate of Penetration (ROP)

1000 Unit = ft/hr 0

Tool Temperature (T-TEMP)

50 Unit = °F 300

Comments

MEASURE  
1:240 (ft)


D DEPTH

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Well Location	2N-66W-28 TEDFORD PAD
Well Name	TEDFORD 29N-28HZ
Survey Date	8/12/2015
Latitude	40°6'9.468"N
Longitude	104°47'13.412"W
Btotal	52709 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), 0.34Azim (deg)
Operator(s)	B. GREER, S. WAXLER

Well Notes

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	%/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
18.00	0.00	0.00	18.00	0.00	0.00	0.00	0.00
105.00	0.15	159.78	105.00	-0.11	-0.11	0.04	0.17
196.00	1.18	136.74	195.99	-0.90	-0.90	0.72	1.15
287.00	2.64	160.72	286.94	-3.55	-3.56	2.06	1.80
446.00	4.96	175.36	445.58	-13.85	-13.87	3.82	1.57
541.00	5.93	188.98	540.16	-22.79	-22.81	3.39	1.69
636.00	7.22	192.91	634.53	-33.47	-33.48	1.29	1.44
731.00	8.03	189.57	728.69	-45.85	-45.84	-1.15	0.97
826.00	9.46	183.21	822.59	-60.19	-60.18	-2.69	1.81
921.00	9.75	181.21	916.26	-76.04	-76.02	-3.30	0.47
1016.00	9.37	179.36	1009.94	-91.81	-91.79	-3.38	0.51
1111.00	9.44	180.91	1103.66	-107.33	-107.32	-3.42	0.28
1206.00	9.60	182.63	1197.35	-123.04	-123.02	-3.90	0.34
1301.00	9.44	181.68	1291.04	-138.74	-138.72	-4.50	0.24
1396.00	9.68	183.56	1384.72	-154.51	-154.48	-5.22	0.41
1491.00	10.09	184.77	1478.31	-170.78	-170.74	-6.41	0.48
1587.00	9.92	184.86	1572.85	-187.40	-187.36	-7.81	0.18
1682.00	10.30	181.52	1666.38	-204.05	-204.01	-8.73	0.74
1777.00	11.32	180.66	1759.69	-221.87	-221.82	-9.06	1.09

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
1808.00	11.64	181.89	1790.07	-228.04	-227.99	-9.20	1.30
1950.00	12.10	181.77	1929.04	-257.23	-257.18	-10.13	0.32
2045.00	11.31	181.28	2022.06	-276.50	-276.44	-10.65	0.83
2140.00	12.97	176.54	2114.93	-296.46	-296.41	-10.21	2.04
2234.00	12.56	176.90	2206.61	-317.19	-317.14	-9.02	0.45
2329.00	11.64	184.11	2299.50	-337.07	-337.02	-9.15	1.86
2423.00	11.24	184.79	2391.63	-355.66	-355.60	-10.59	0.45
2517.00	11.53	182.88	2483.79	-374.18	-374.11	-11.83	0.50
2612.00	12.19	183.68	2576.76	-393.67	-393.60	-12.95	0.72
2707.00	11.23	181.07	2669.78	-412.93	-412.86	-13.77	1.16
2801.00	11.60	176.62	2761.92	-431.52	-431.44	-13.38	1.02
2896.00	11.98	179.75	2854.92	-450.91	-450.84	-12.78	0.78
2990.00	12.74	177.62	2946.74	-471.01	-470.95	-12.30	0.94
3084.00	12.19	174.05	3038.53	-491.23	-491.17	-10.84	1.01
3179.00	12.71	176.94	3131.29	-511.63	-511.58	-9.25	0.86
3273.00	12.75	184.41	3222.99	-532.30	-532.25	-9.49	1.75
3368.00	11.14	185.21	3315.93	-551.90	-551.84	-11.13	1.70
3462.00	11.34	182.55	3408.13	-570.19	-570.13	-12.37	0.59
3557.00	11.02	185.67	3501.32	-588.57	-588.50	-13.68	0.72
3651.00	11.13	184.25	3593.57	-606.57	-606.49	-15.24	0.31

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
3746.00	11.49	184.56	3686.73	-625.15	-625.06	-16.67	0.39
3840.00	12.87	183.60	3778.61	-644.94	-644.84	-18.07	1.48
3935.00	10.84	181.06	3871.58	-664.44	-664.34	-18.90	2.20
4029.00	10.78	175.27	3963.91	-682.04	-681.94	-18.34	1.16
4123.00	12.03	179.87	4056.06	-700.59	-700.50	-17.59	1.65
4218.00	11.74	181.67	4149.02	-720.15	-720.06	-17.85	0.50
4312.00	12.48	180.68	4240.93	-739.86	-739.77	-18.25	0.82
4407.00	12.38	180.98	4333.70	-760.30	-760.21	-18.55	0.13
4501.00	11.27	185.73	4425.71	-779.52	-779.41	-19.64	1.57
4596.00	10.87	177.97	4518.95	-797.70	-797.60	-20.25	1.62
4690.00	11.23	172.88	4611.21	-815.63	-815.53	-18.80	1.11
4785.00	12.19	176.25	4704.23	-834.80	-834.72	-16.99	1.24
4879.00	12.01	182.77	4796.15	-854.48	-854.39	-16.82	1.46
4974.00	11.07	180.83	4889.23	-873.48	-873.39	-17.43	1.08
5068.00	8.80	189.21	4981.82	-889.60	-889.51	-18.71	2.86
5163.00	6.64	183.19	5075.95	-902.27	-902.17	-20.18	2.42
5257.00	5.48	186.57	5169.43	-912.16	-912.05	-20.99	1.29
5351.00	4.65	181.92	5263.06	-920.42	-920.31	-21.63	0.99
5446.00	4.24	181.84	5357.77	-927.78	-927.66	-21.88	0.43
5540.00	2.19	184.71	5451.62	-933.04	-932.93	-22.14	2.18

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
5635.00	1.99	186.70	5546.56	-936.49	-936.38	-22.48	0.22
5729.00	1.75	176.08	5640.51	-939.55	-939.44	-22.57	0.45
5823.00	1.11	184.83	5734.48	-941.89	-941.78	-22.55	0.72
5918.00	1.01	194.01	5829.46	-943.63	-943.51	-22.83	0.21
6012.00	0.54	139.52	5923.45	-944.76	-944.65	-22.74	0.87
6107.00	0.72	162.04	6018.45	-945.67	-945.55	-22.27	0.32
6201.00	0.75	152.95	6112.44	-946.77	-946.66	-21.81	0.13
6296.00	0.47	172.70	6207.44	-947.71	-947.60	-21.48	0.36
6390.00	0.80	332.85	6301.43	-947.51	-947.40	-21.72	1.33
6485.00	0.74	324.48	6396.43	-946.43	-946.32	-22.38	0.13
6579.00	1.31	308.97	6490.41	-945.27	-945.14	-23.57	0.67
6674.00	1.18	289.79	6585.39	-944.26	-944.13	-25.33	0.46
6768.00	2.56	291.27	6679.34	-943.19	-943.04	-28.20	1.47
6863.00	12.02	10.89	6773.58	-932.68	-932.52	-28.30	12.45
6957.00	18.40	8.09	6864.24	-908.33	-908.20	-24.36	6.84
7052.00	25.26	1.01	6952.39	-873.15	-873.03	-21.89	7.72
7146.00	34.00	1.04	7034.02	-826.72	-826.61	-21.06	9.30
7241.00	41.57	0.48	7109.05	-768.56	-768.45	-20.32	7.97
7335.00	47.44	358.94	7176.06	-702.71	-702.60	-20.70	6.35
7430.00	54.14	357.93	7236.09	-629.19	-629.07	-22.74	7.11

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
7524.00	62.65	1.54	7285.32	-549.23	-549.10	-23.00	9.62
7618.00	71.94	2.13	7321.56	-462.64	-462.53	-20.21	9.91
7713.00	83.58	359.46	7341.67	-369.97	-369.86	-18.97	12.55
7807.00	89.29	358.66	7347.51	-276.21	-276.10	-20.51	6.14
7902.00	89.90	358.57	7348.18	-181.26	-181.13	-22.81	0.64
7996.00	90.81	0.66	7347.60	-87.28	-87.14	-23.43	2.43
8091.00	91.88	0.50	7345.37	7.70	7.83	-22.47	1.15
8185.00	91.79	359.11	7342.36	101.64	101.78	-22.78	1.49
8280.00	90.47	359.60	7340.49	196.61	196.75	-23.85	1.48
8374.00	89.80	0.81	7340.27	290.60	290.75	-23.51	1.47
8469.00	89.16	0.27	7341.13	385.60	385.74	-22.62	0.88
8563.00	90.91	1.51	7341.08	479.59	479.72	-21.16	2.29
8658.00	89.97	0.19	7340.35	574.58	574.71	-19.74	1.71
8753.00	88.36	359.43	7341.74	669.56	669.69	-20.06	1.88
8847.00	89.36	0.76	7343.62	763.54	763.67	-19.91	1.77
8942.00	90.37	359.78	7343.84	858.54	858.67	-19.47	1.48
9036.00	89.73	358.98	7343.76	952.52	952.66	-20.49	1.09
9131.00	91.14	357.93	7343.03	1047.46	1047.62	-23.04	1.85
9225.00	89.70	358.68	7342.35	1141.40	1141.57	-25.82	1.73
9320.00	89.46	358.95	7343.04	1236.36	1236.55	-27.79	0.38

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
9414.00	88.93	359.39	7344.36	1330.33	1330.53	-29.15	0.74
9509.00	89.73	359.50	7345.48	1425.31	1425.52	-30.08	0.85
9604.00	87.61	0.40	7347.68	1520.28	1520.49	-30.17	2.43
9698.00	90.27	1.11	7349.42	1614.25	1614.45	-28.93	2.93
9793.00	87.71	1.42	7351.10	1709.22	1709.41	-26.84	2.71
9887.00	89.43	1.27	7353.44	1803.17	1803.35	-24.63	1.83
9982.00	88.96	0.96	7354.78	1898.15	1898.32	-22.79	0.59
10076.00	90.54	359.86	7355.20	1992.15	1992.31	-22.11	2.05
10171.00	90.20	1.99	7354.58	2087.13	2087.29	-20.57	2.27
10265.00	89.53	1.18	7354.80	2181.11	2181.25	-17.97	1.12
10360.00	90.87	1.12	7354.47	2276.10	2276.23	-16.06	1.41
10454.00	89.93	0.05	7353.81	2370.09	2370.22	-15.10	1.52
10549.00	90.97	0.46	7353.06	2465.09	2465.22	-14.69	1.18
10643.00	90.00	358.73	7352.26	2559.07	2559.21	-15.35	2.10
10738.00	91.58	358.37	7350.95	2654.01	2654.16	-17.75	1.70
10833.00	89.80	359.86	7349.81	2748.98	2749.14	-19.22	2.44
10927.00	90.97	359.13	7349.18	2842.96	2843.13	-20.04	1.47
11022.00	90.30	0.14	7348.12	2937.95	2938.12	-20.65	1.27
11116.00	89.09	359.75	7348.62	3031.94	3032.12	-20.74	1.35
11211.00	90.00	359.37	7349.37	3126.93	3127.11	-21.47	1.04

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
11306.00	90.94	358.08	7348.59	3221.89	3222.08	-23.58	1.67
11400.00	90.44	0.24	7347.46	3315.85	3316.06	-24.96	2.36
11495.00	90.40	0.05	7346.77	3410.85	3411.06	-24.72	0.21
11589.00	90.97	1.76	7345.64	3504.83	3505.03	-23.23	1.92
11684.00	89.50	2.07	7345.25	3599.80	3599.98	-20.05	1.59
11779.00	90.81	0.92	7345.00	3694.77	3694.94	-17.58	1.84
11873.00	89.39	1.44	7344.83	3788.76	3788.92	-15.65	1.61
11968.00	90.64	0.99	7344.81	3883.75	3883.89	-13.63	1.39
12063.00	89.93	2.28	7344.33	3978.72	3978.85	-10.91	1.54
12157.00	90.74	1.08	7343.78	4072.69	4072.81	-8.16	1.54
12251.00	90.24	0.61	7342.98	4166.68	4166.79	-6.78	0.73
12346.00	91.68	1.39	7341.40	4261.66	4261.76	-5.12	1.72
12440.00	89.97	2.31	7340.05	4355.61	4355.70	-2.09	2.07
12535.00	89.39	1.60	7340.58	4450.57	4450.64	1.15	0.96
12629.00	90.54	0.63	7340.64	4544.56	4544.62	2.98	1.59
12724.00	89.23	0.91	7340.84	4639.55	4639.61	4.26	1.41
12818.00	90.34	359.55	7341.19	4733.55	4733.61	4.64	1.87
12913.00	89.36	0.21	7341.44	4828.54	4828.60	4.44	1.24
13008.00	89.23	358.66	7342.61	4923.52	4923.59	3.51	1.64
13025.00	89.50	358.24	7342.80	4940.51	4940.58	3.05	2.92

5" = 100' FEET MD