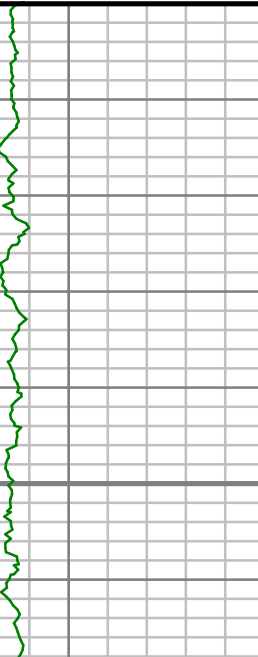
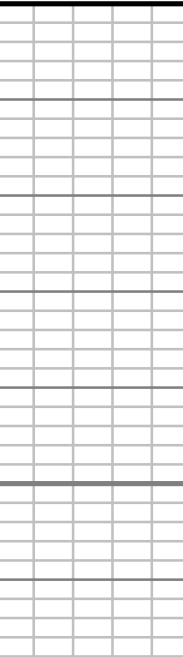
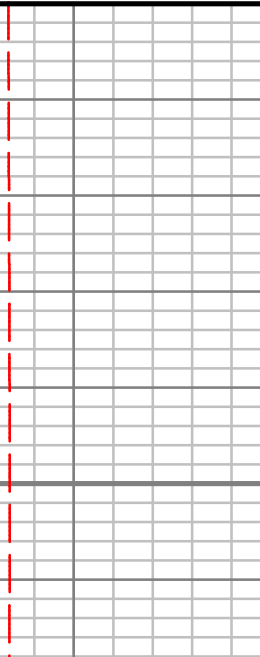
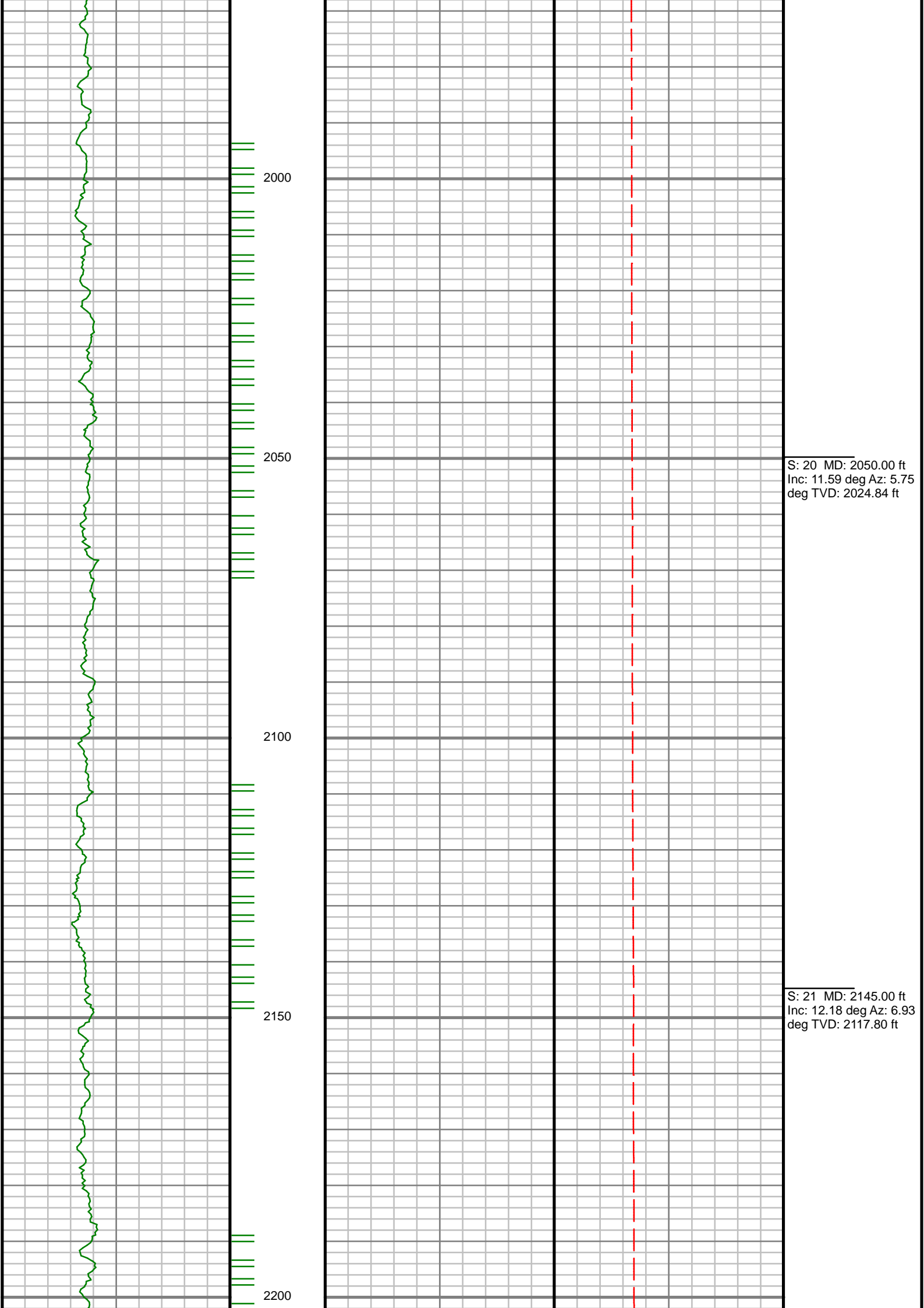
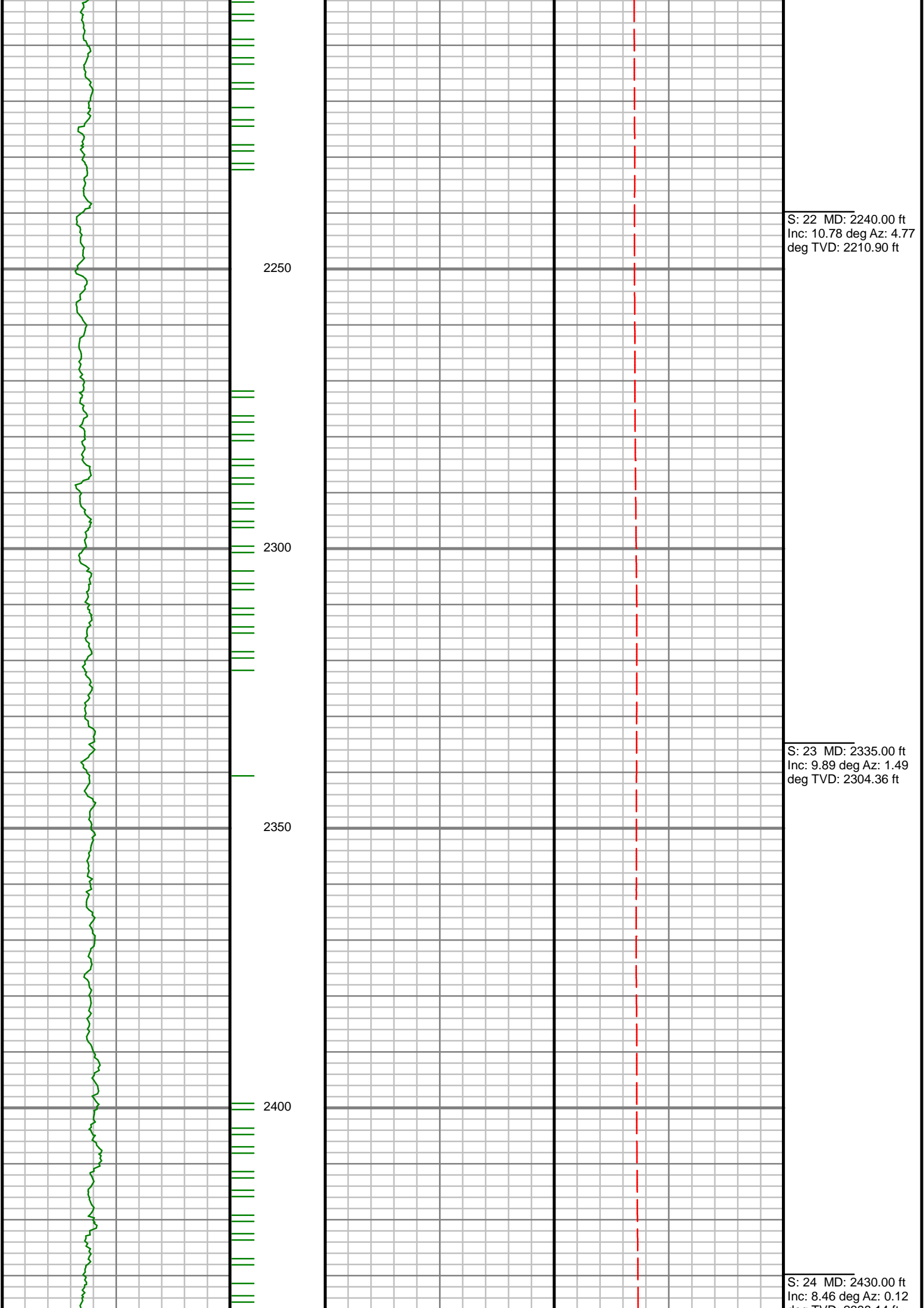


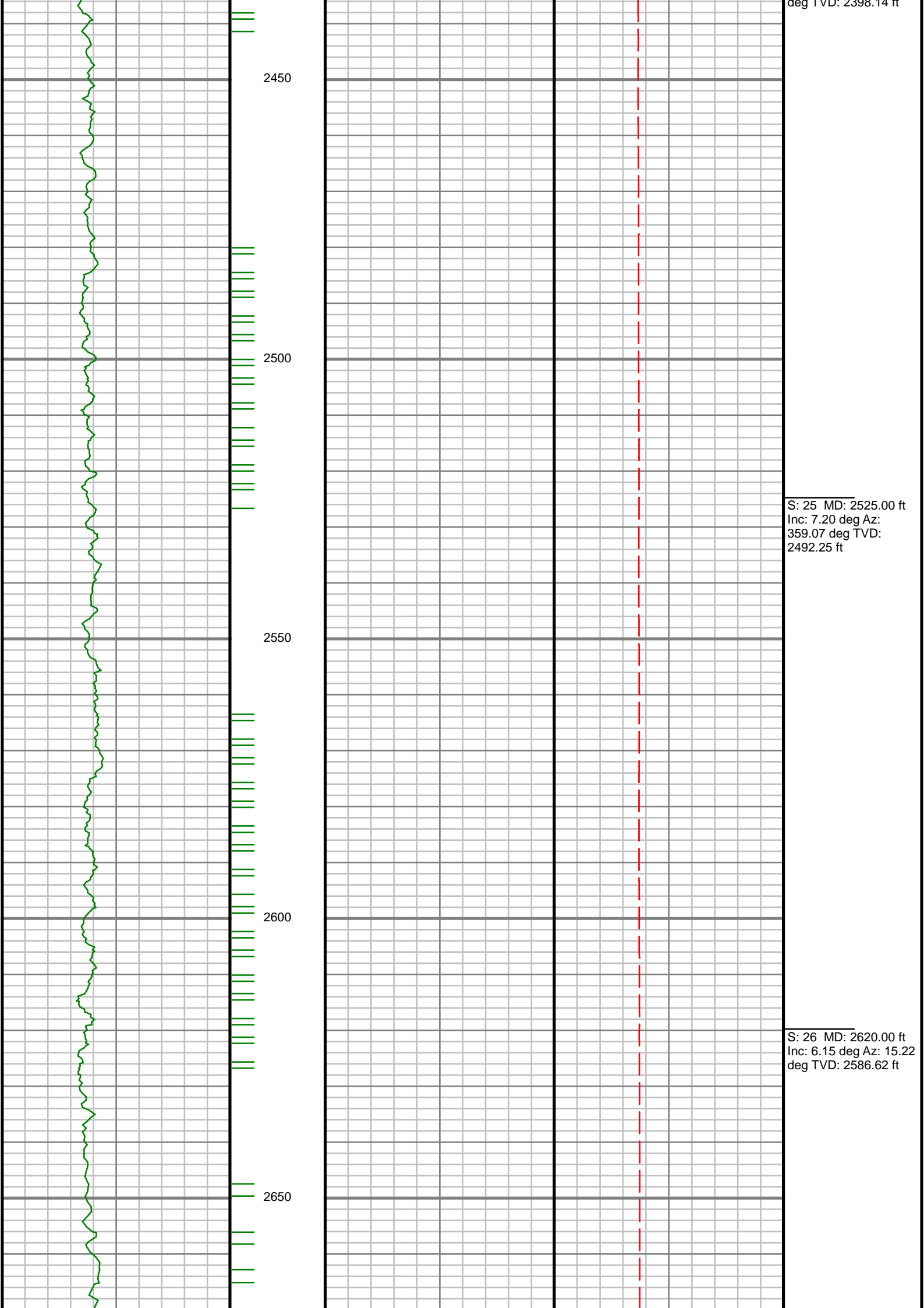
[illegible]

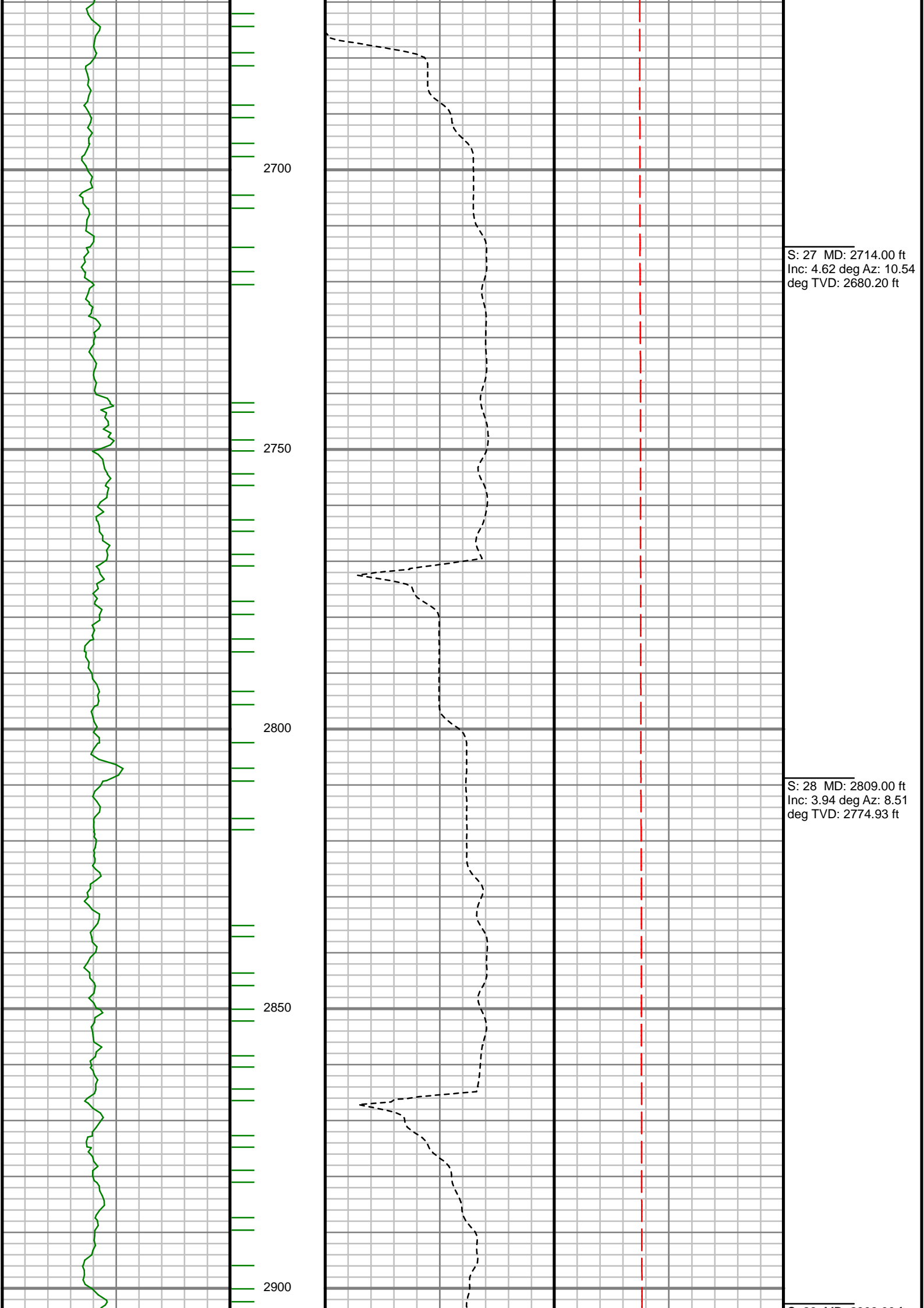
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

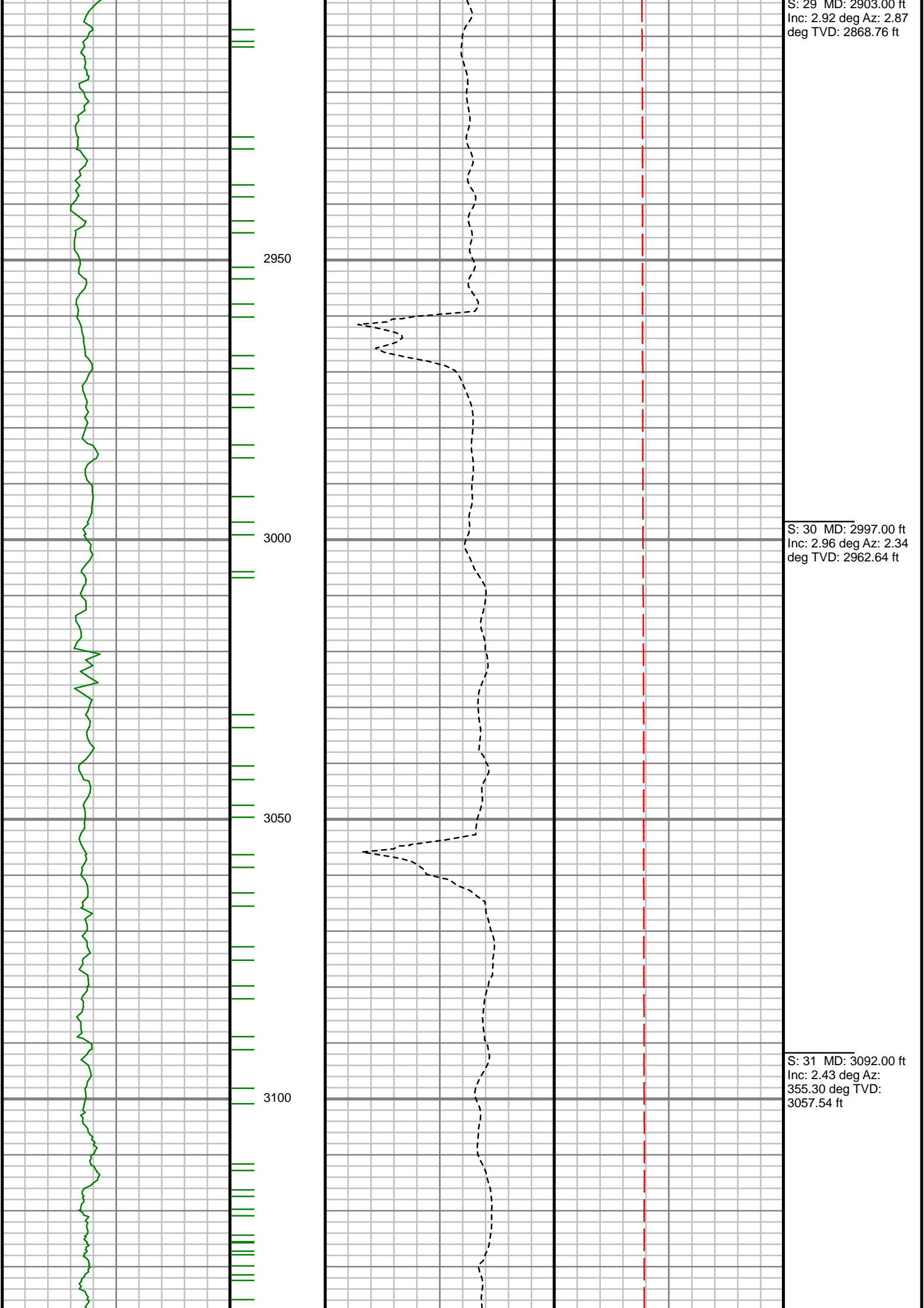
ANADARKO E&P ONSHORE LLC. LAND FED 35N-29HZ WATTERNBERG FIELD WELD COUNTY, COLORADO 05123423920000							
Gamma Ray (GR) Unit = aapi		MEASURED DEPTH 1'240 (ft)	Rate of Penetration (ROP) Unit = ft/hr		Tool Temperature (TEMP) Unit = °F		Comments
0	300		0	1000	0	300	
							S: 19 MD: 1956.00 ft Inc: 10.83 deg Az: 4.55 deg TVD: 1932.64 ft

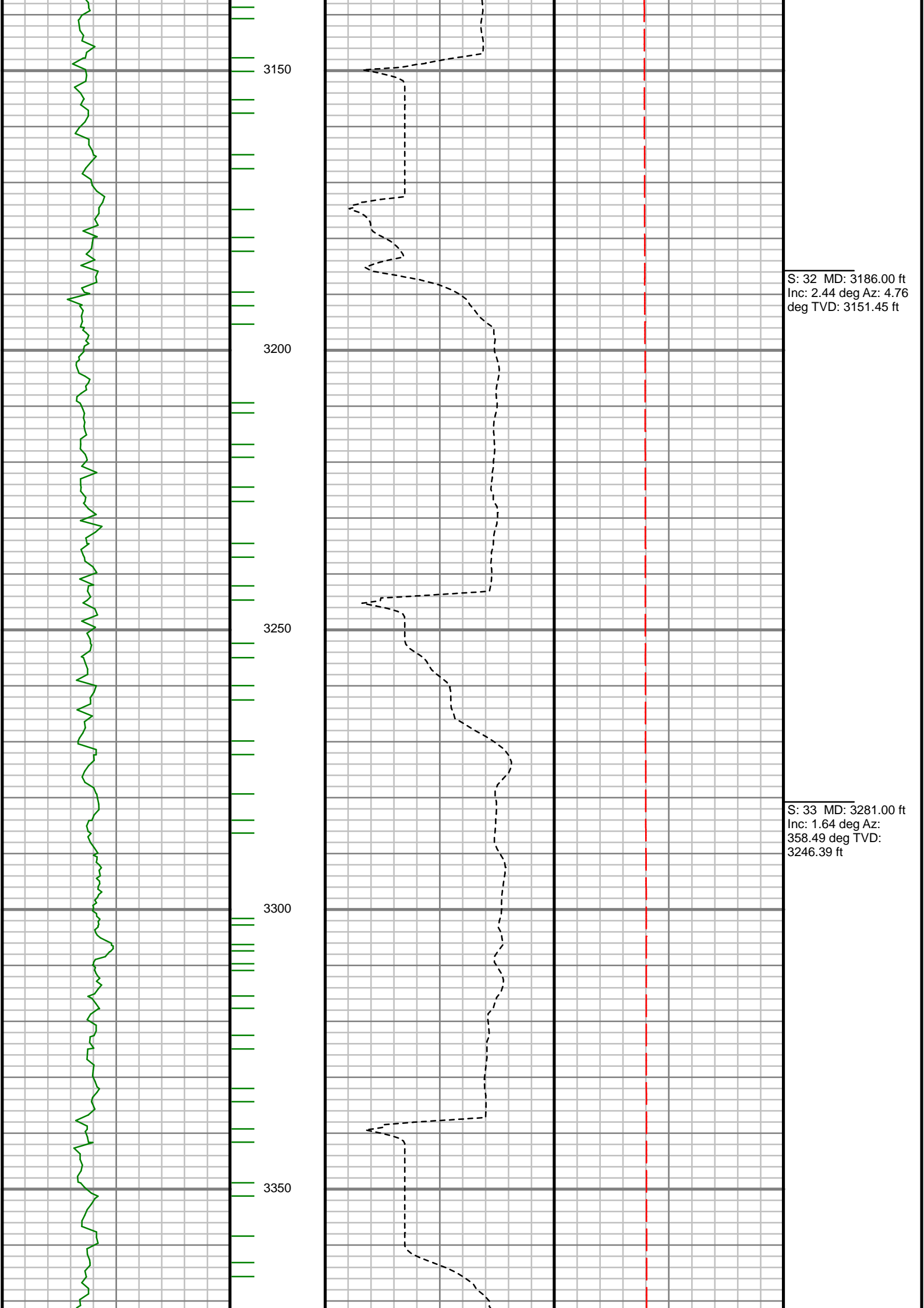


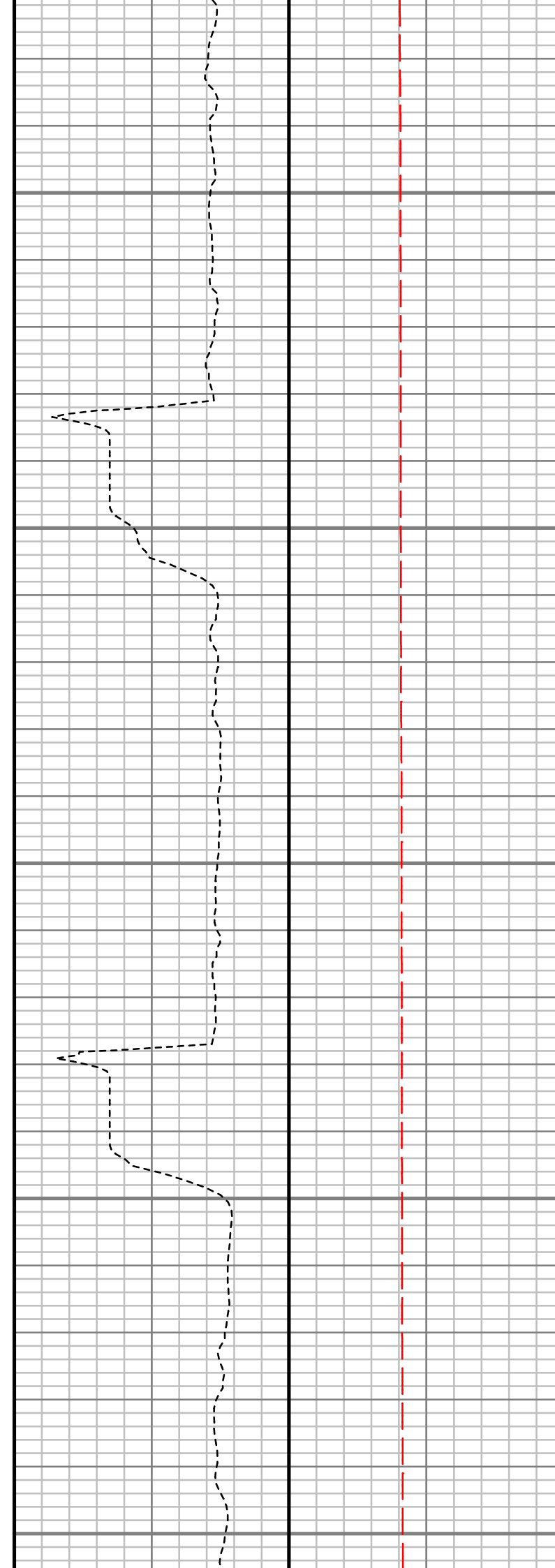
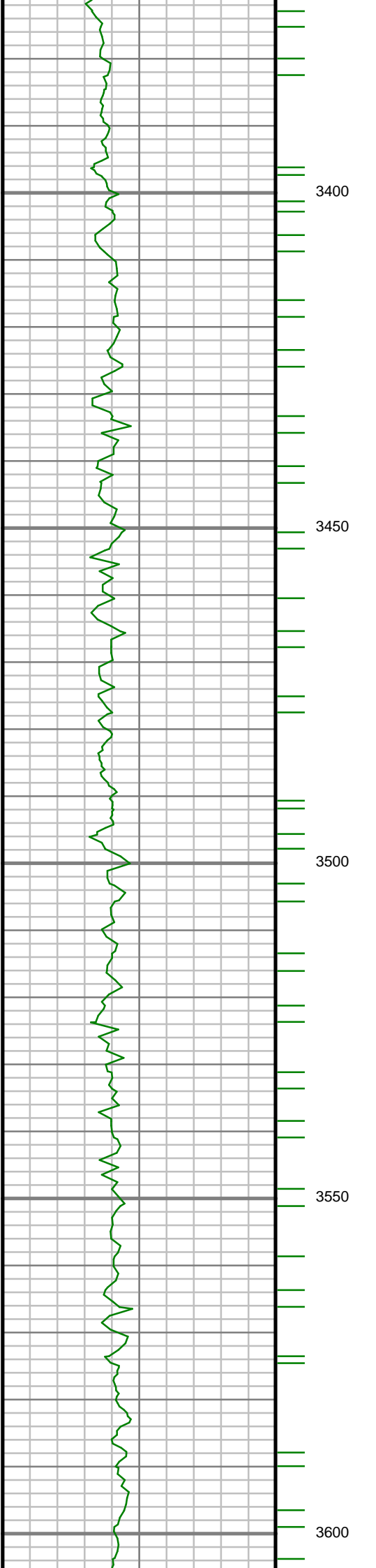








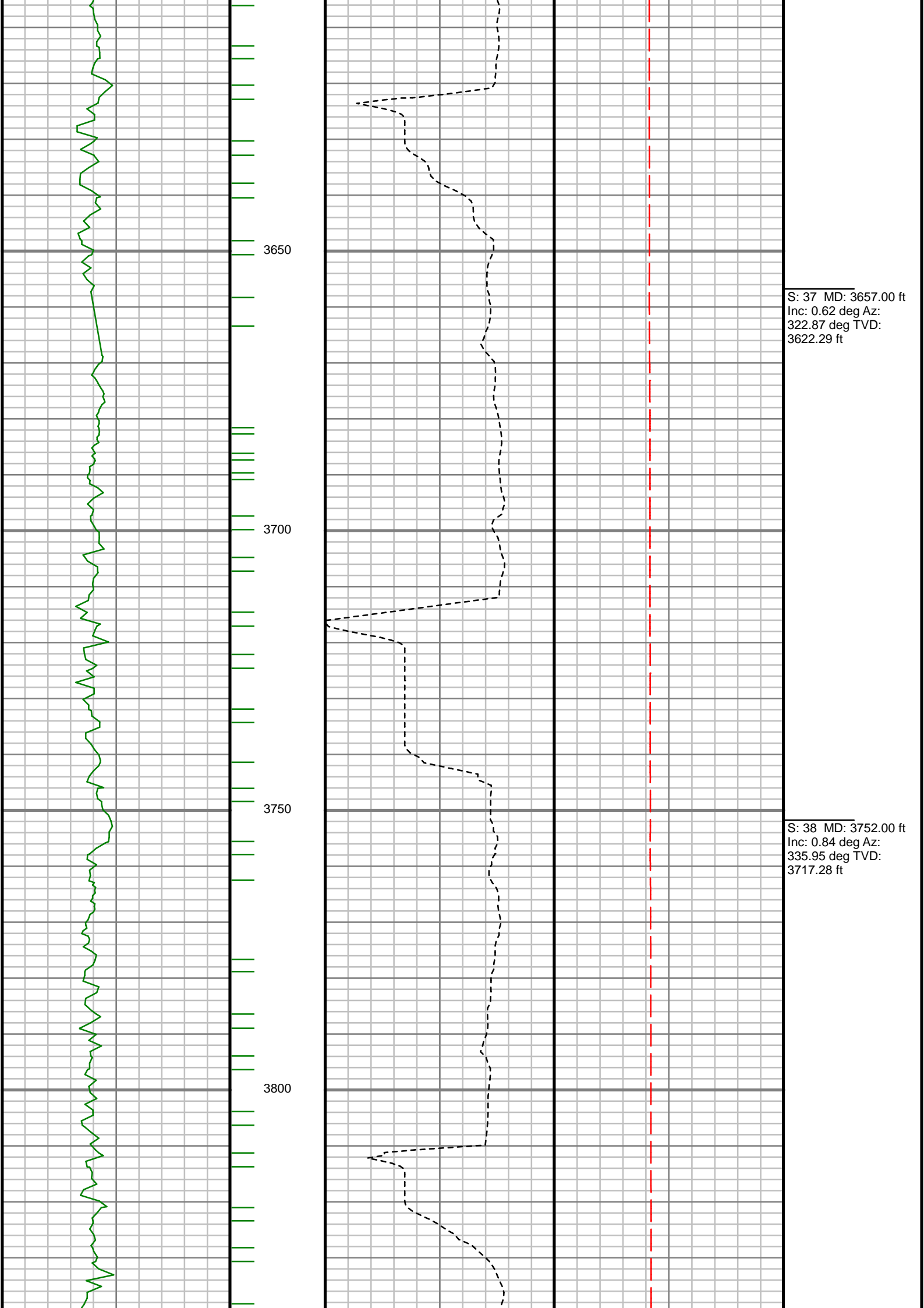


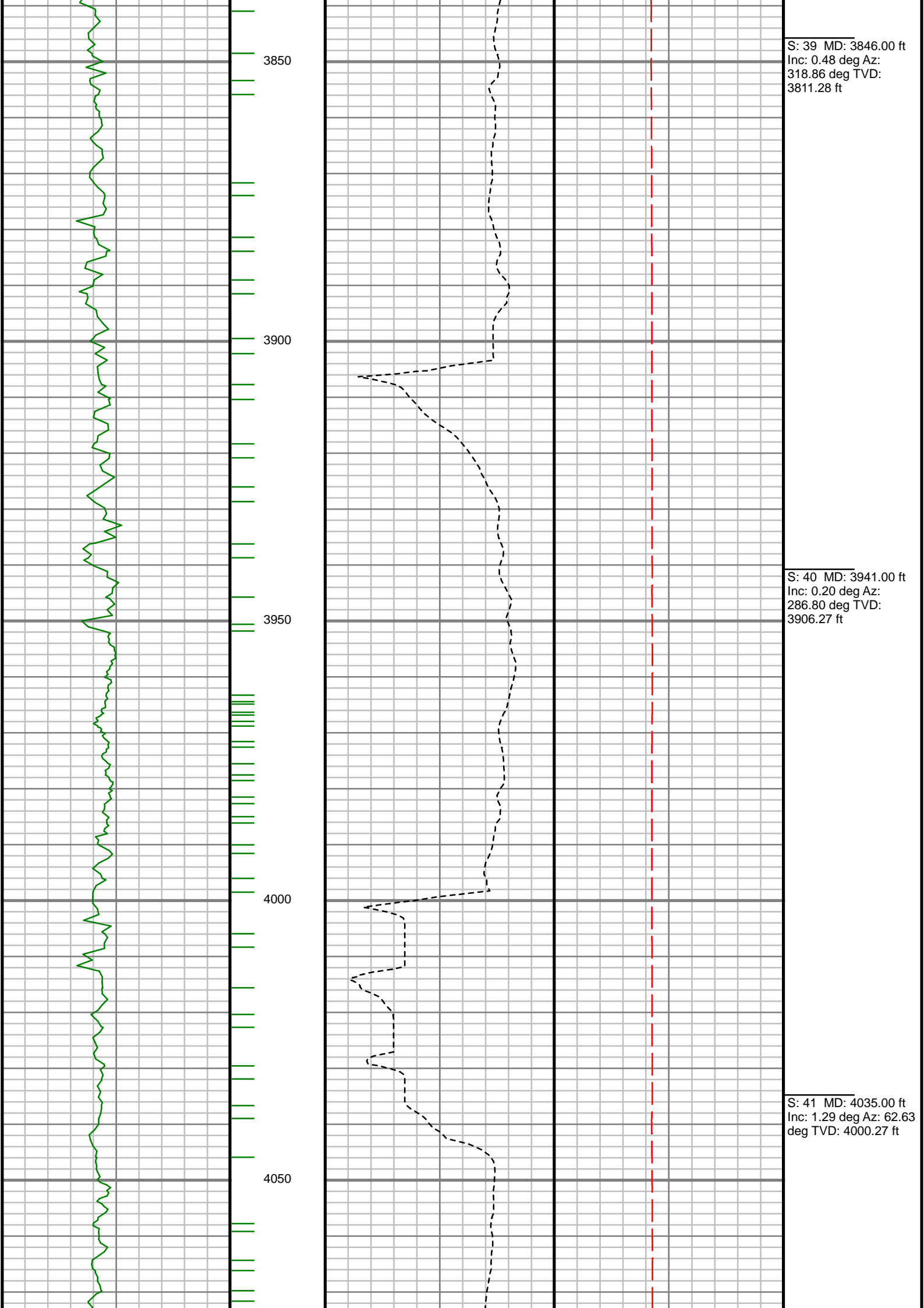


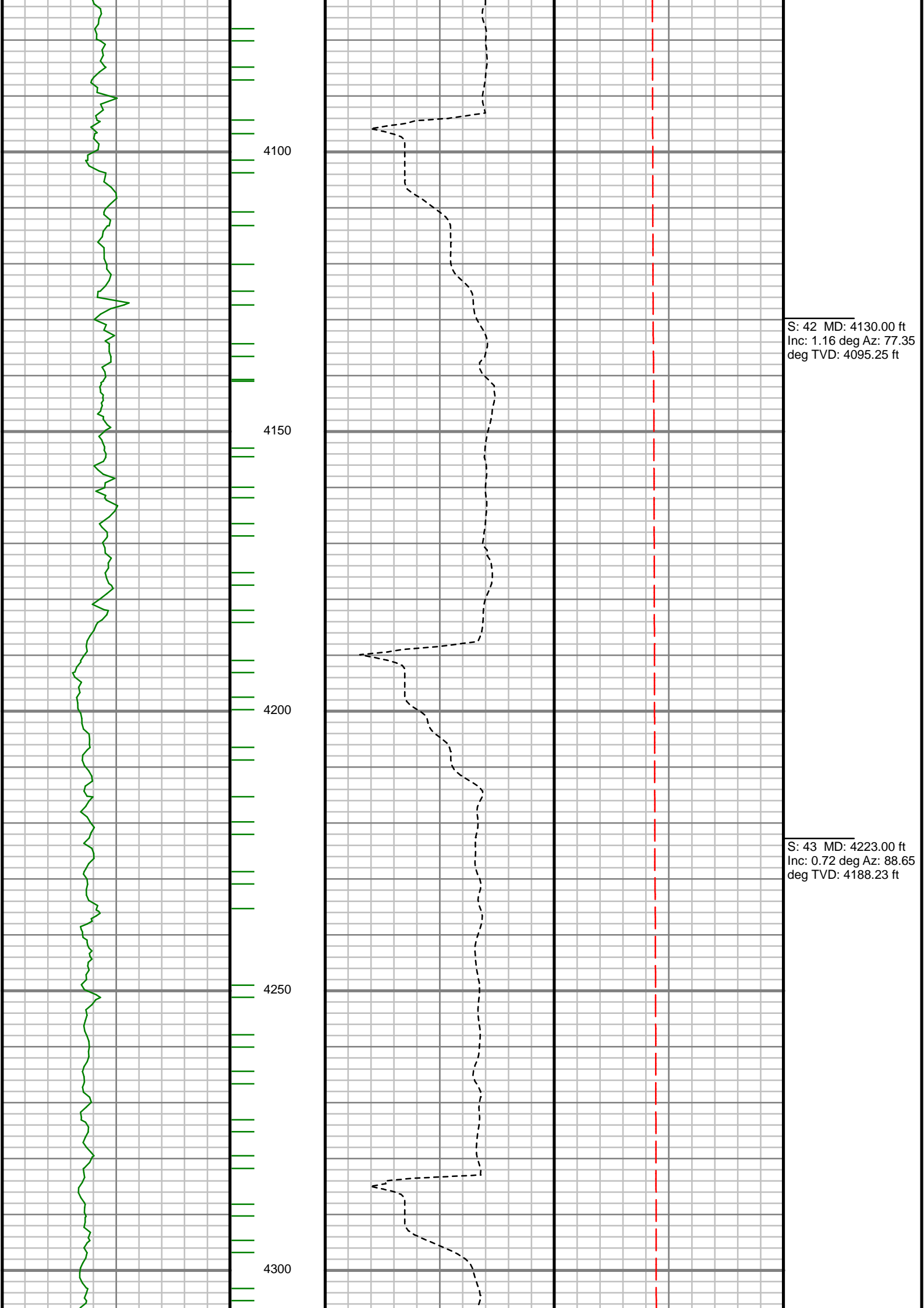
S: 34 MD: 3376.00 ft
Inc: 1.52 deg Az: 1.54
deg TVD: 3341.35 ft

S: 35 MD: 3470.00 ft
Inc: 1.61 deg Az:
351.57 deg TVD:
3435.32 ft

S: 36 MD: 3565.00 ft
Inc: 0.83 deg Az:
325.37 deg TVD:
3530.30 ft

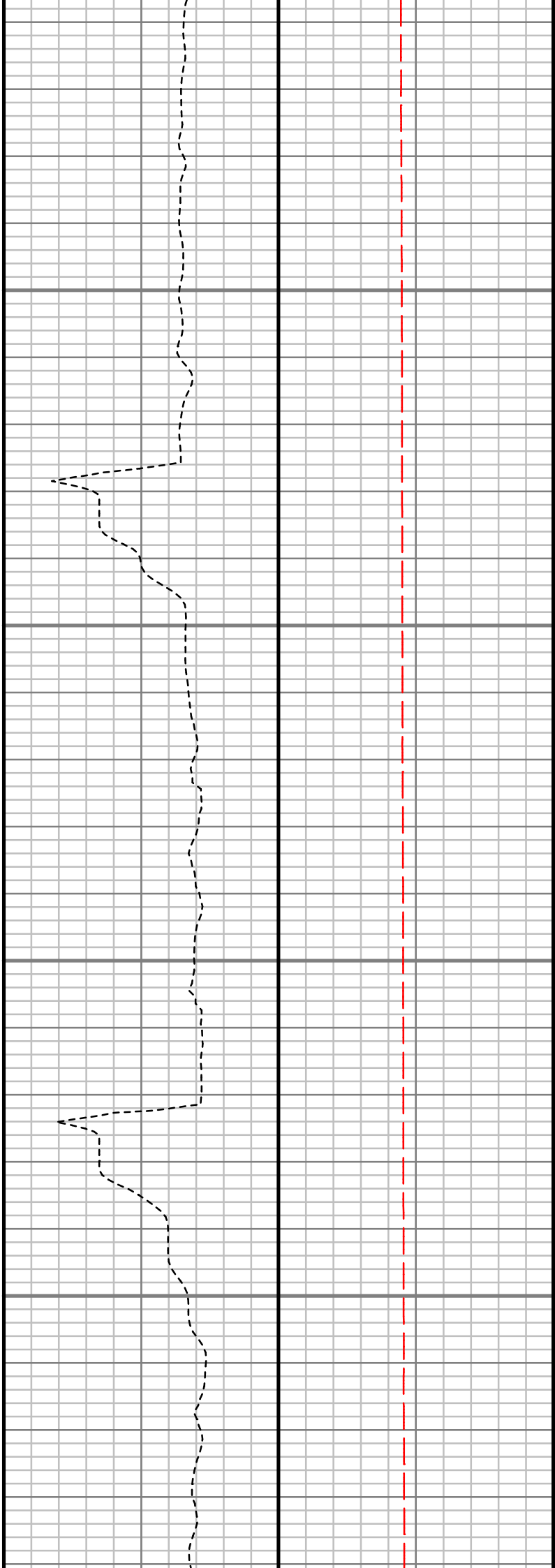
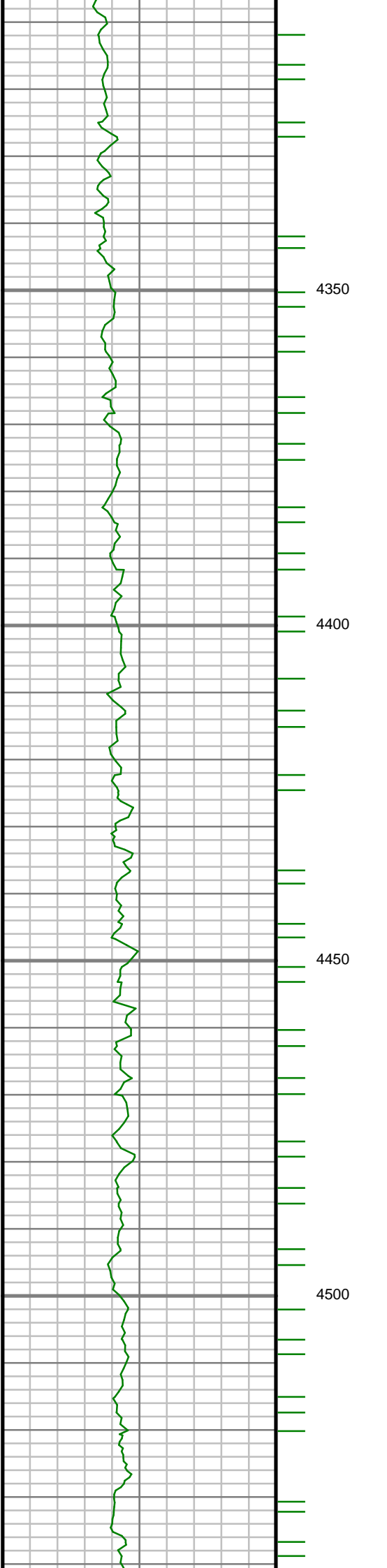






S: 42 MD: 4130.00 ft
Inc: 1.16 deg Az: 77.35
deg TVD: 4095.25 ft

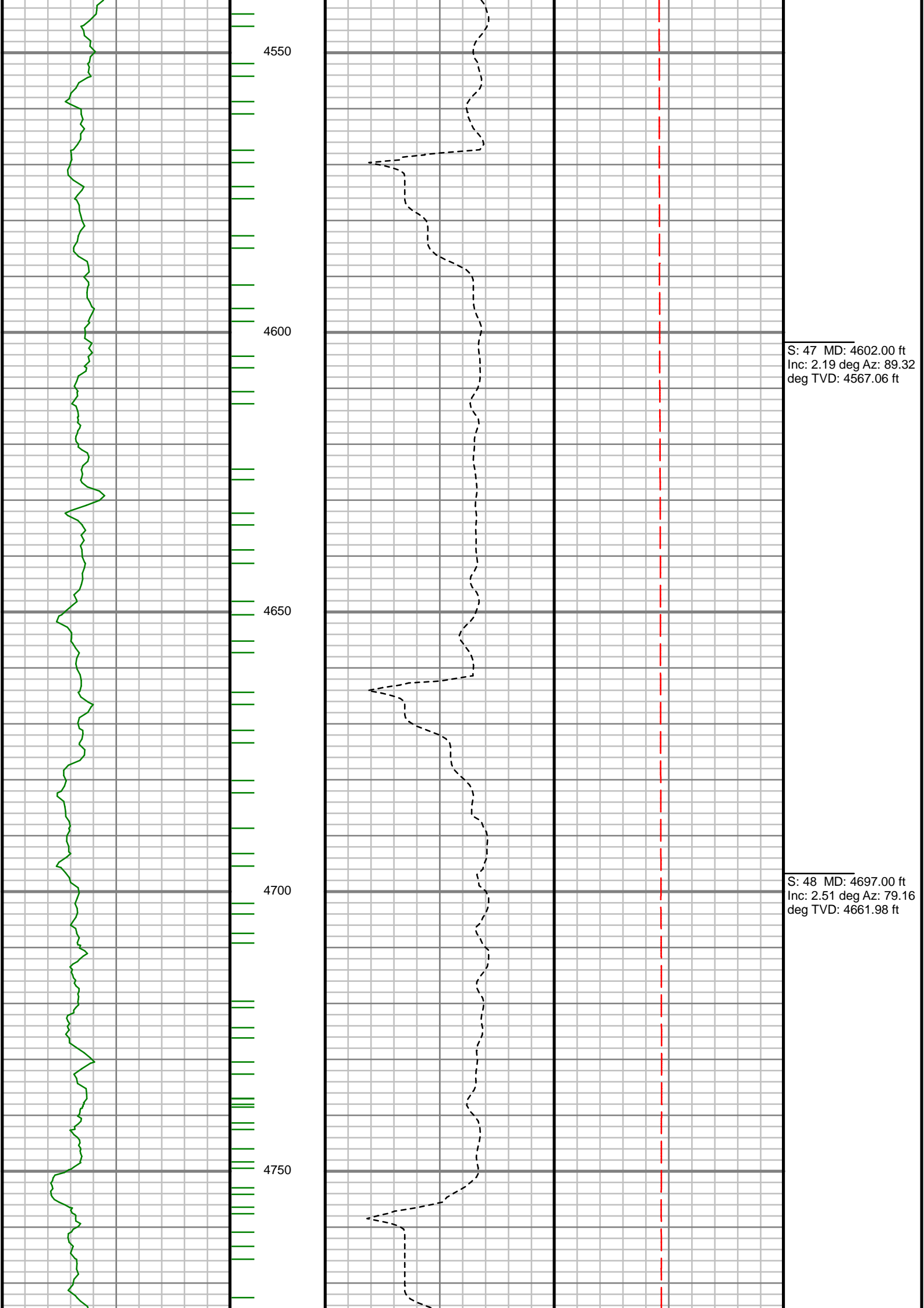
S: 43 MD: 4223.00 ft
Inc: 0.72 deg Az: 88.65
deg TVD: 4188.23 ft



S: 44 MD: 4319.00 ft
Inc: 0.74 deg Az: 62.70
deg TVD: 4284.23 ft

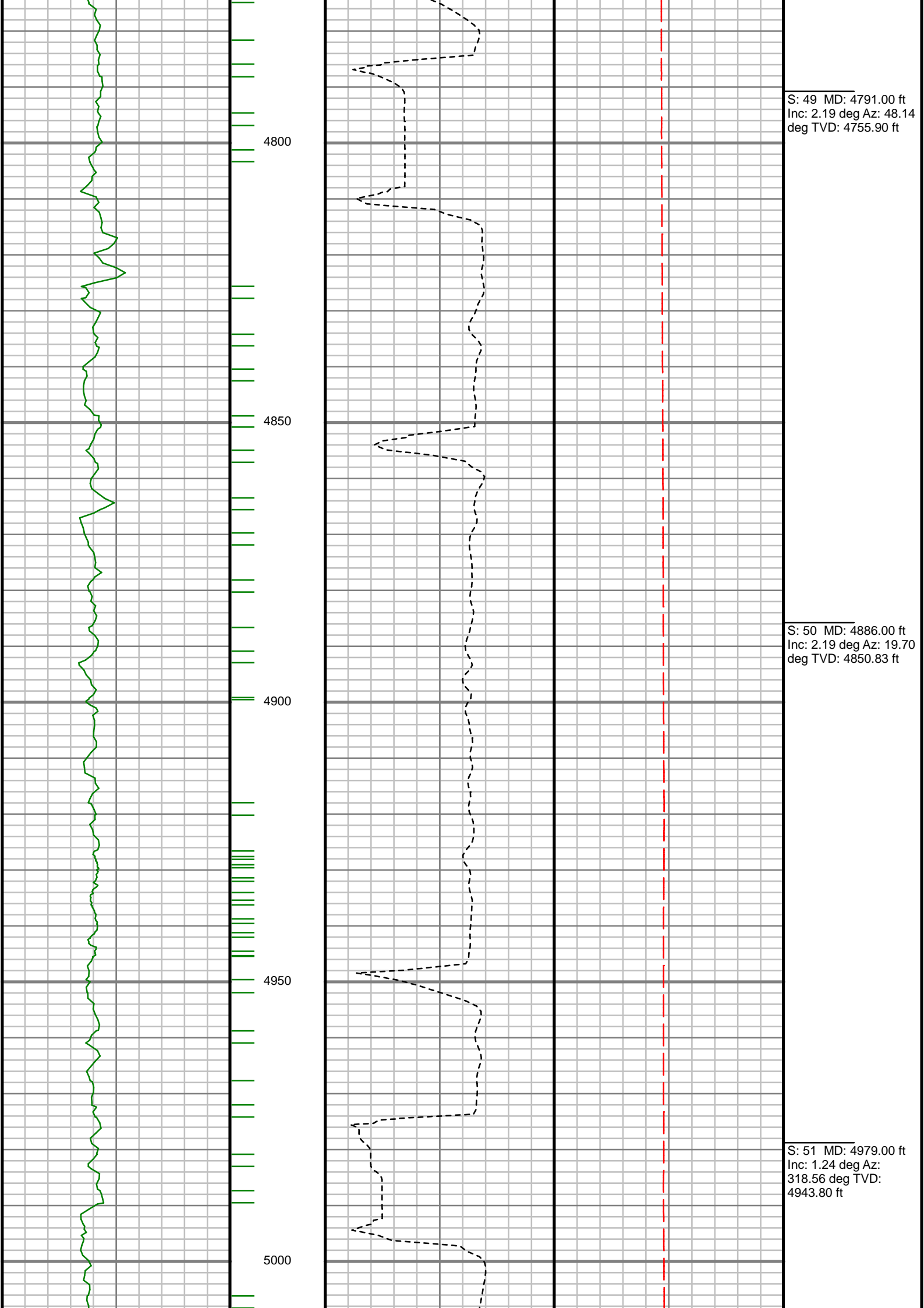
S: 45 MD: 4414.00 ft
Inc: 2.00 deg Az: 66.61
deg TVD: 4379.20 ft

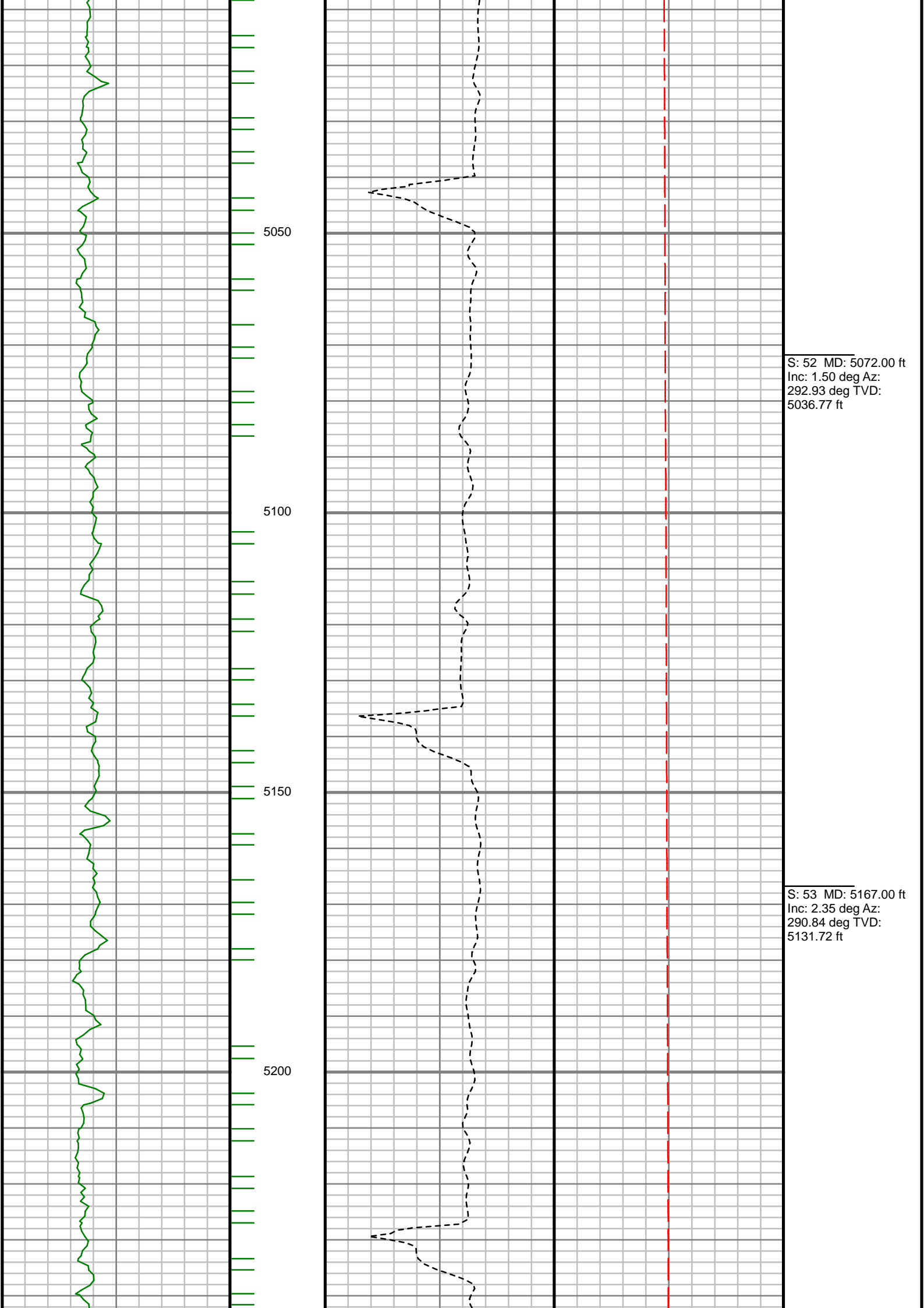
S: 46 MD: 4507.00 ft
Inc: 2.34 deg Az: 82.30
deg TVD: 4472.13 ft

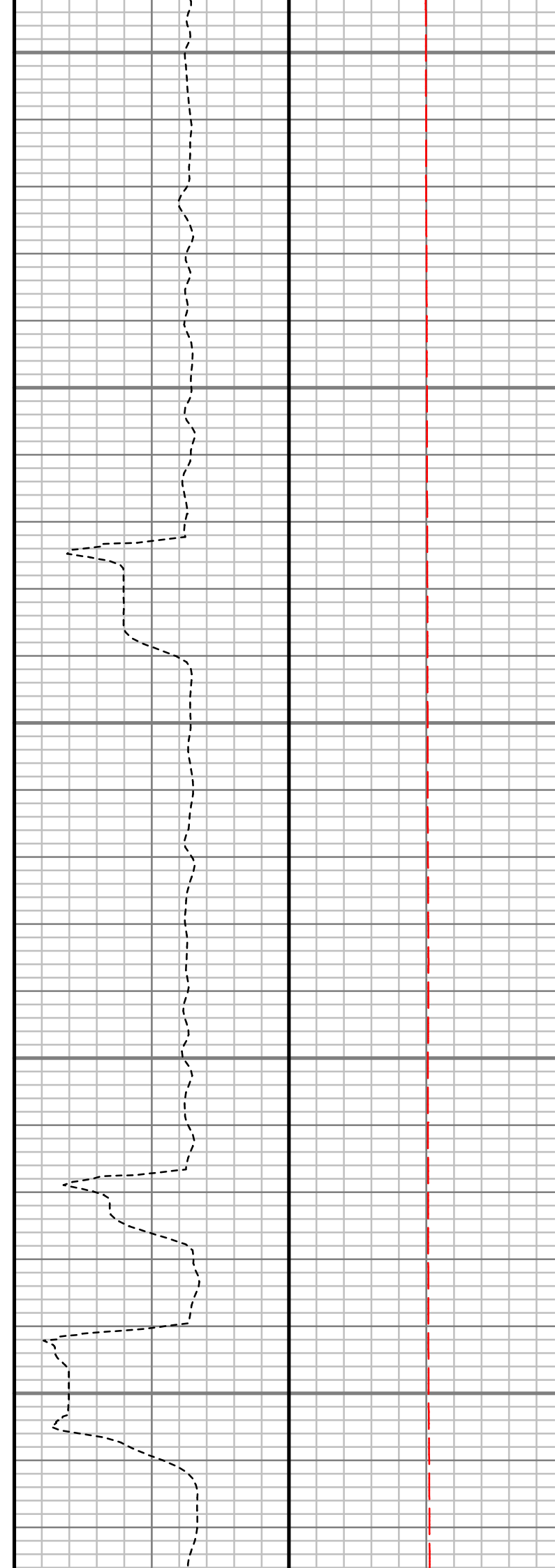
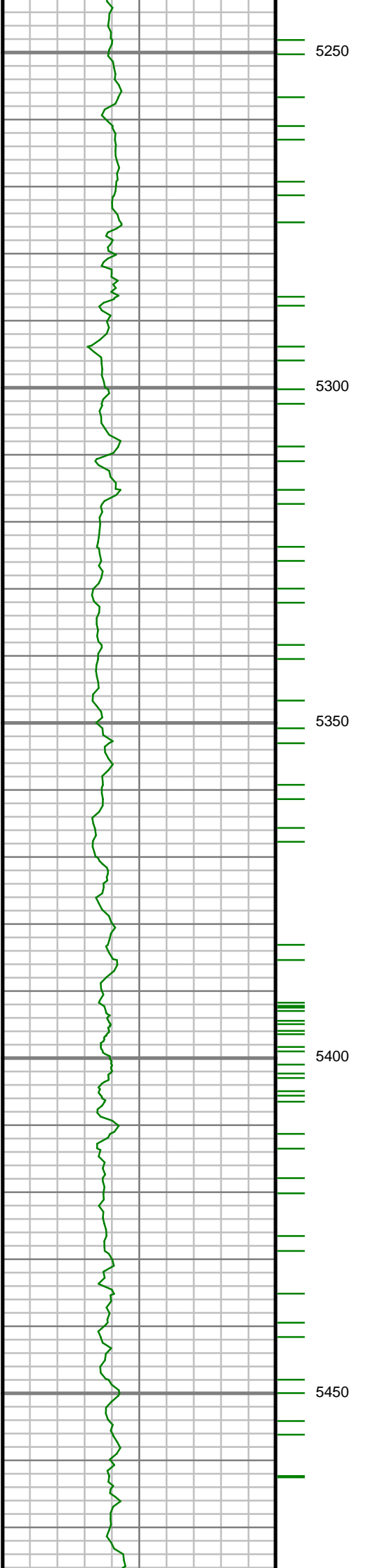


S: 47 MD: 4602.00 ft
Inc: 2.19 deg Az: 89.32
deg TVD: 4567.06 ft

S: 48 MD: 4697.00 ft
Inc: 2.51 deg Az: 79.16
deg TVD: 4661.98 ft



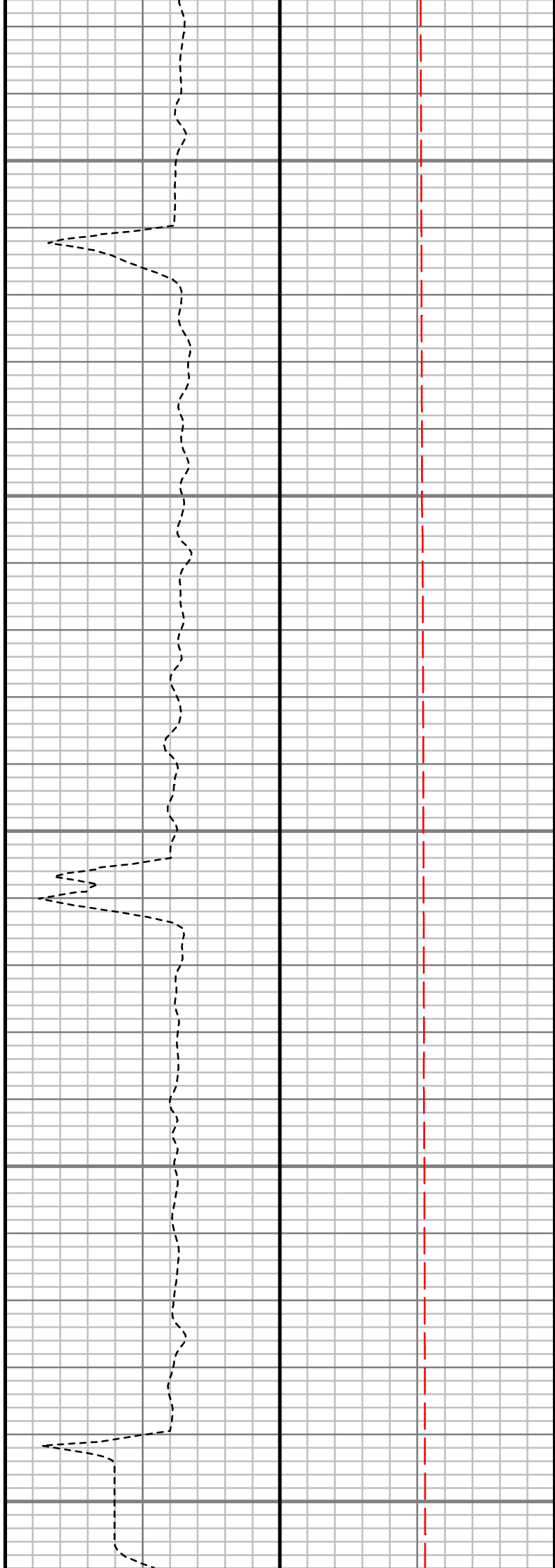
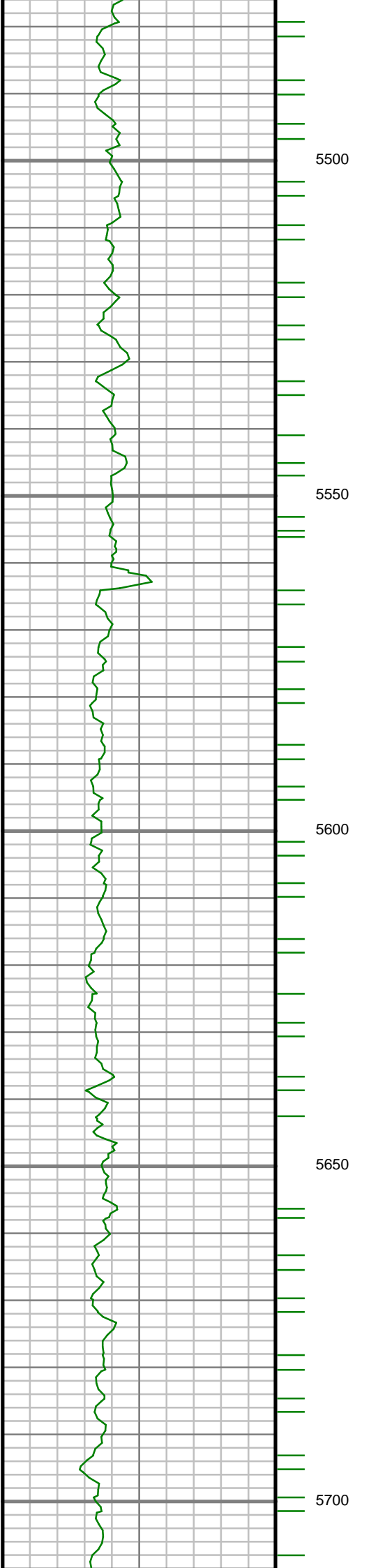




S: 54 MD: 5261.00 ft
Inc: 2.29 deg Az:
292.92 deg TVD:
5225.64 ft

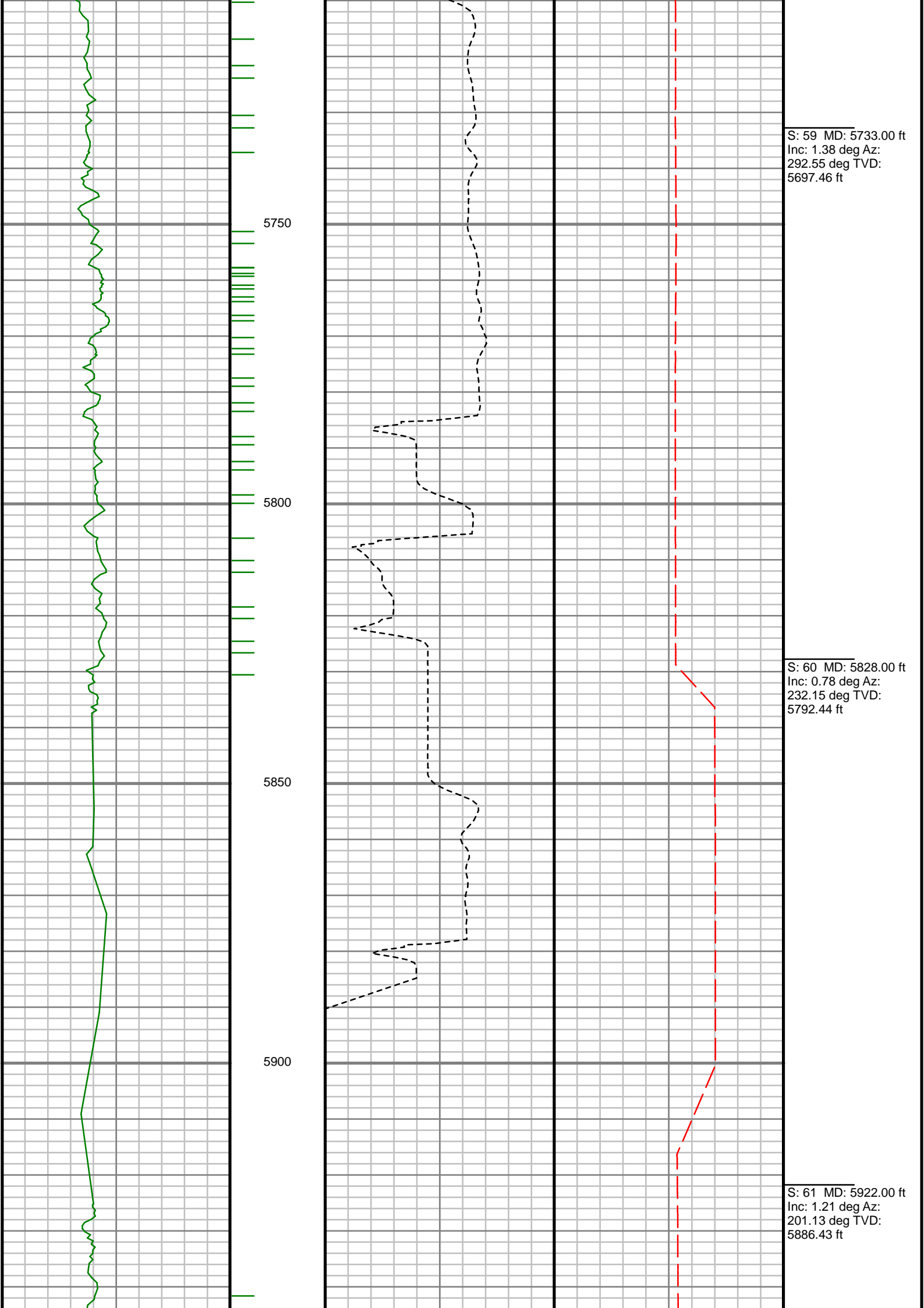
S: 55 MD: 5355.00 ft
Inc: 2.13 deg Az:
286.09 deg TVD:
5319.57 ft

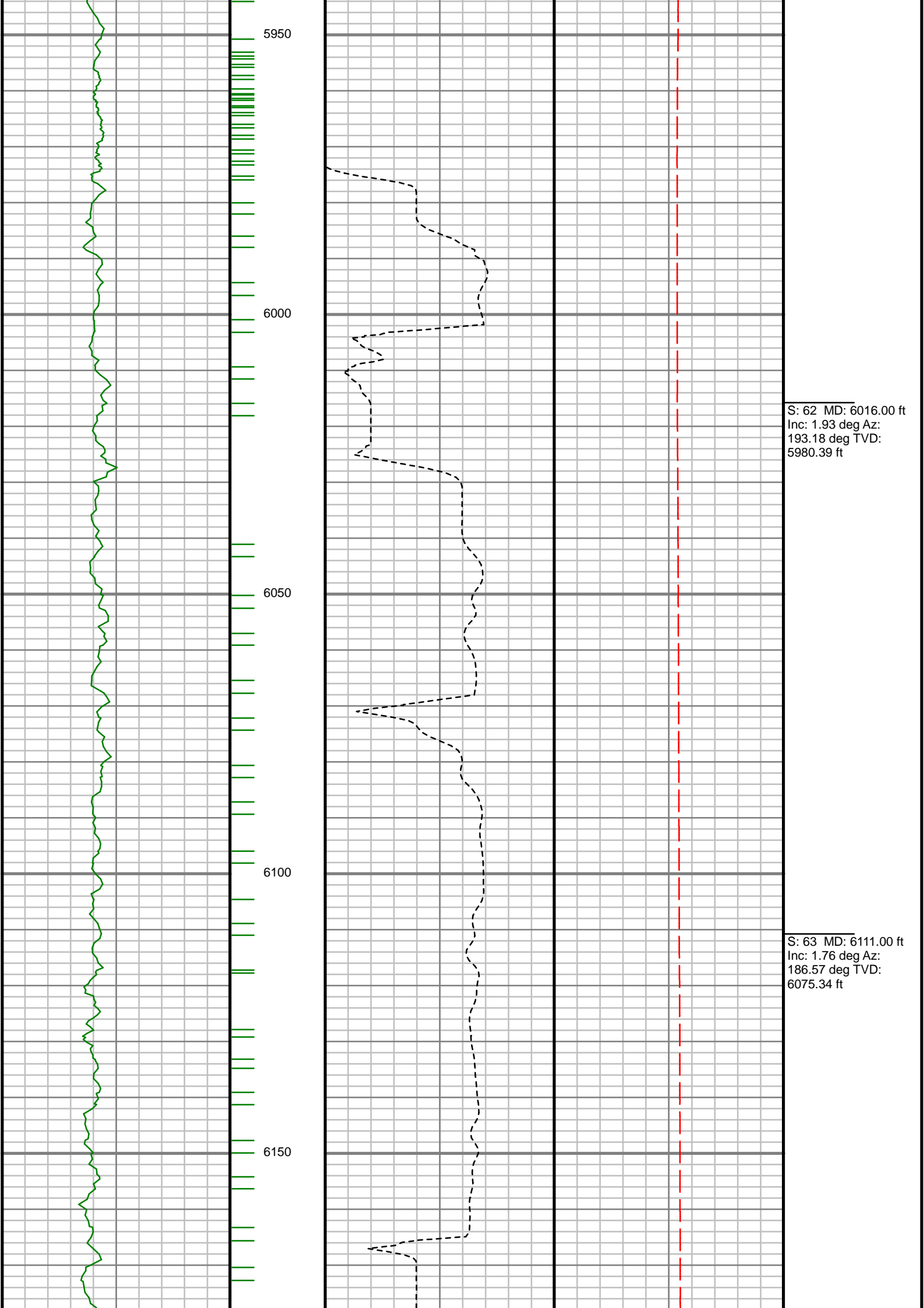
S: 56 MD: 5449.00 ft
Inc: 1.19 deg Az:
289.05 deg TVD:
5413.53 ft

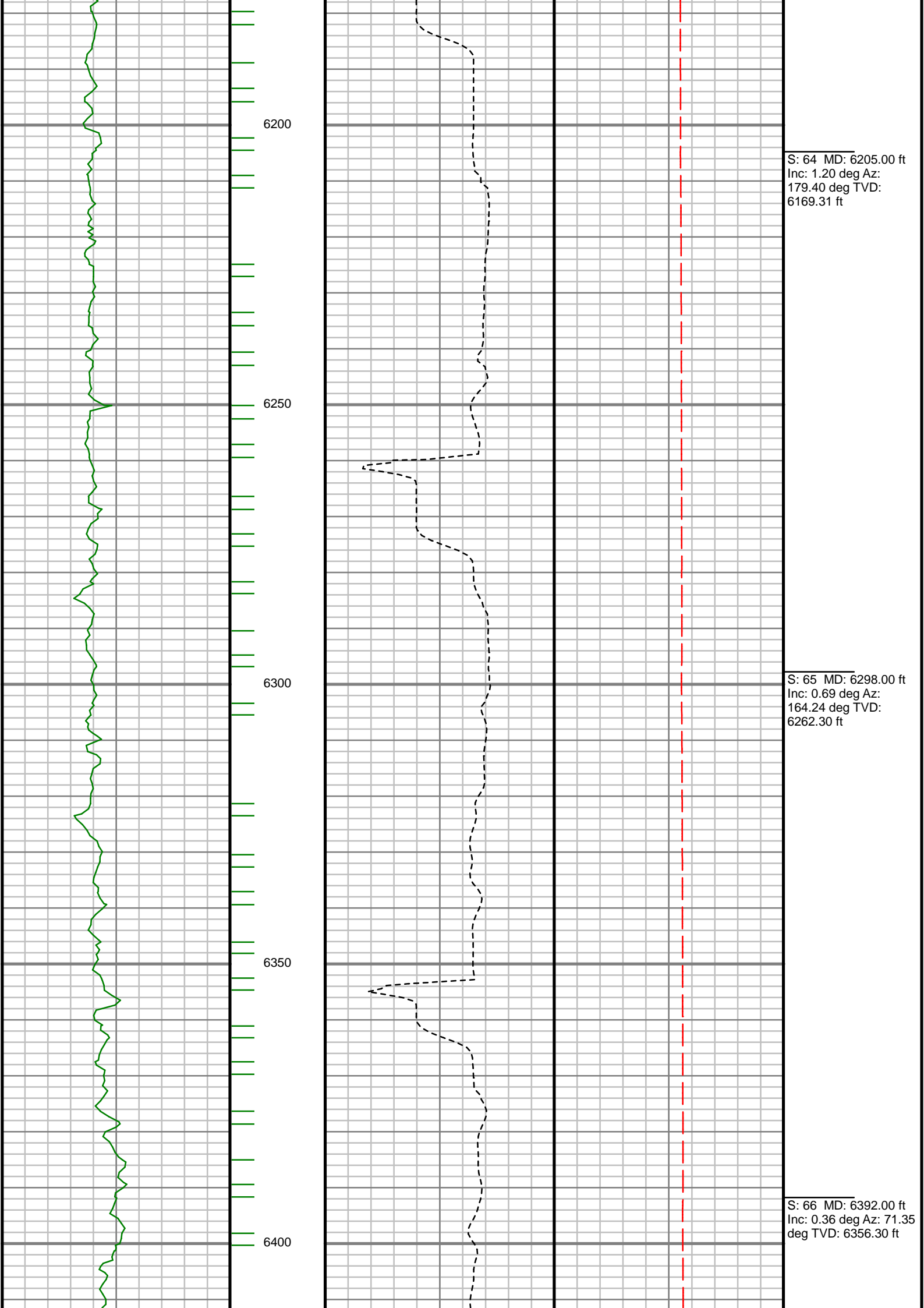


S: 57 MD: 5542.00 ft
Inc: 1.30 deg Az:
299.41 deg TVD:
5506.51 ft

S: 58 MD: 5637.00 ft
Inc: 1.39 deg Az:
309.60 deg TVD:
5601.48 ft



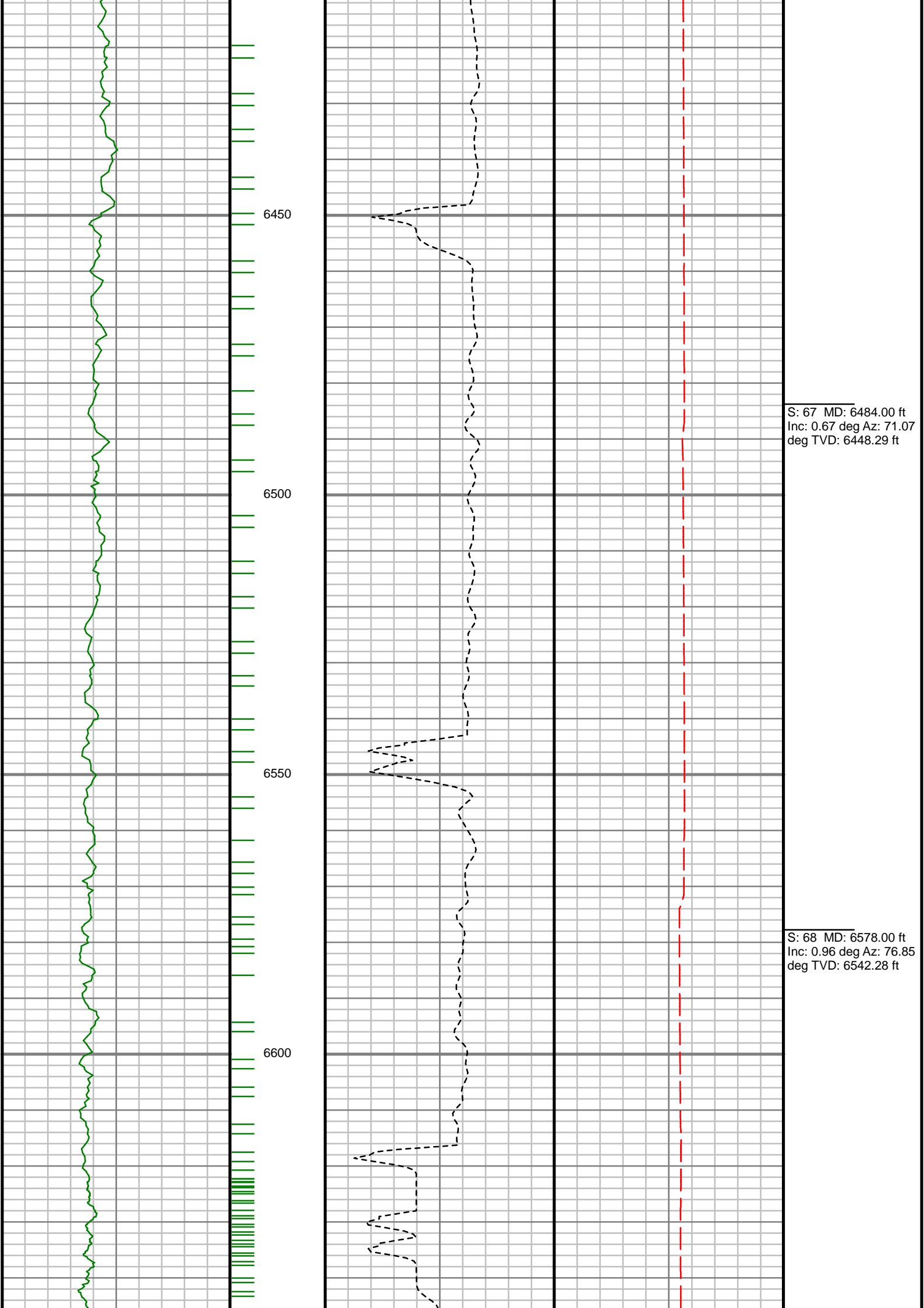


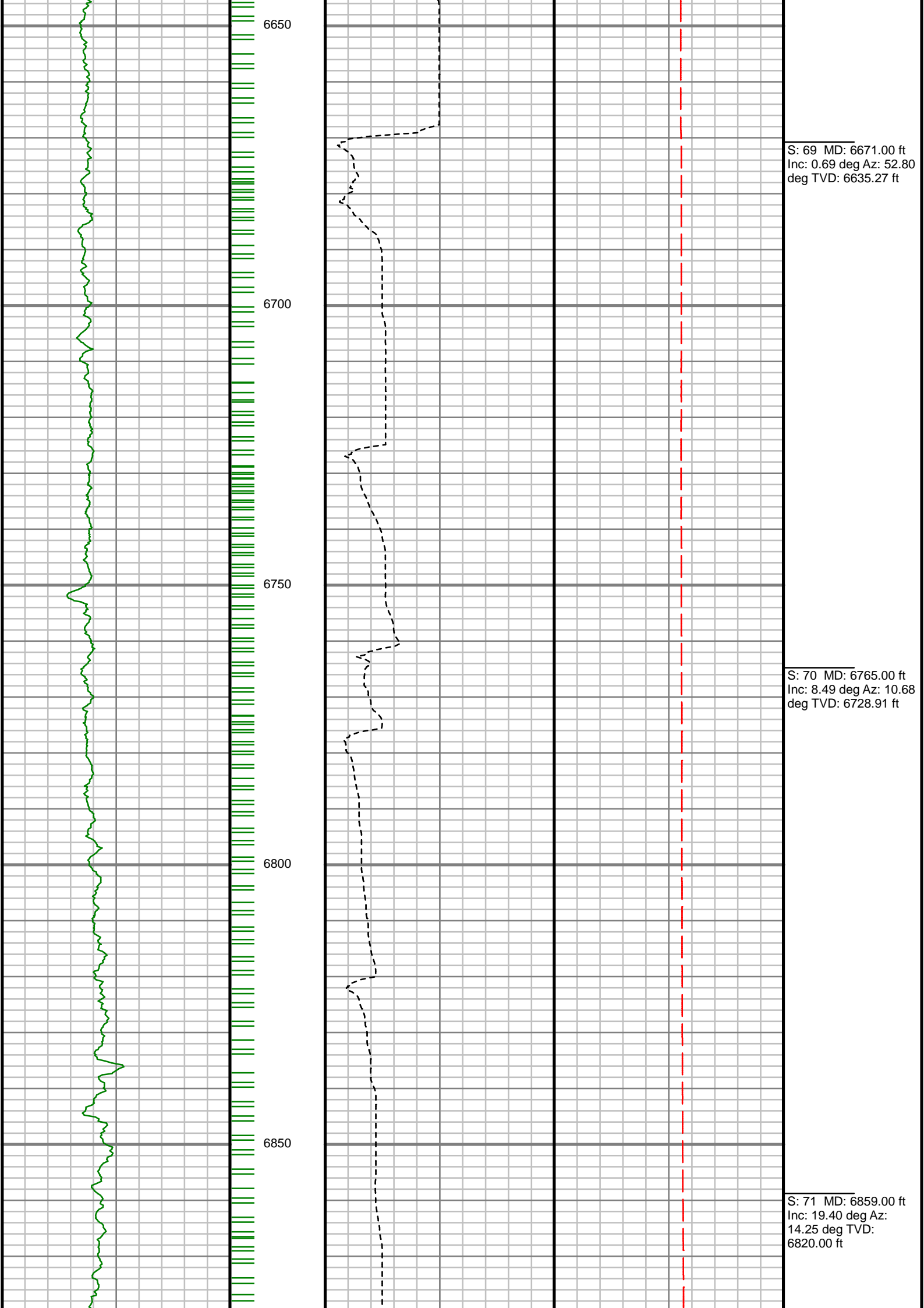


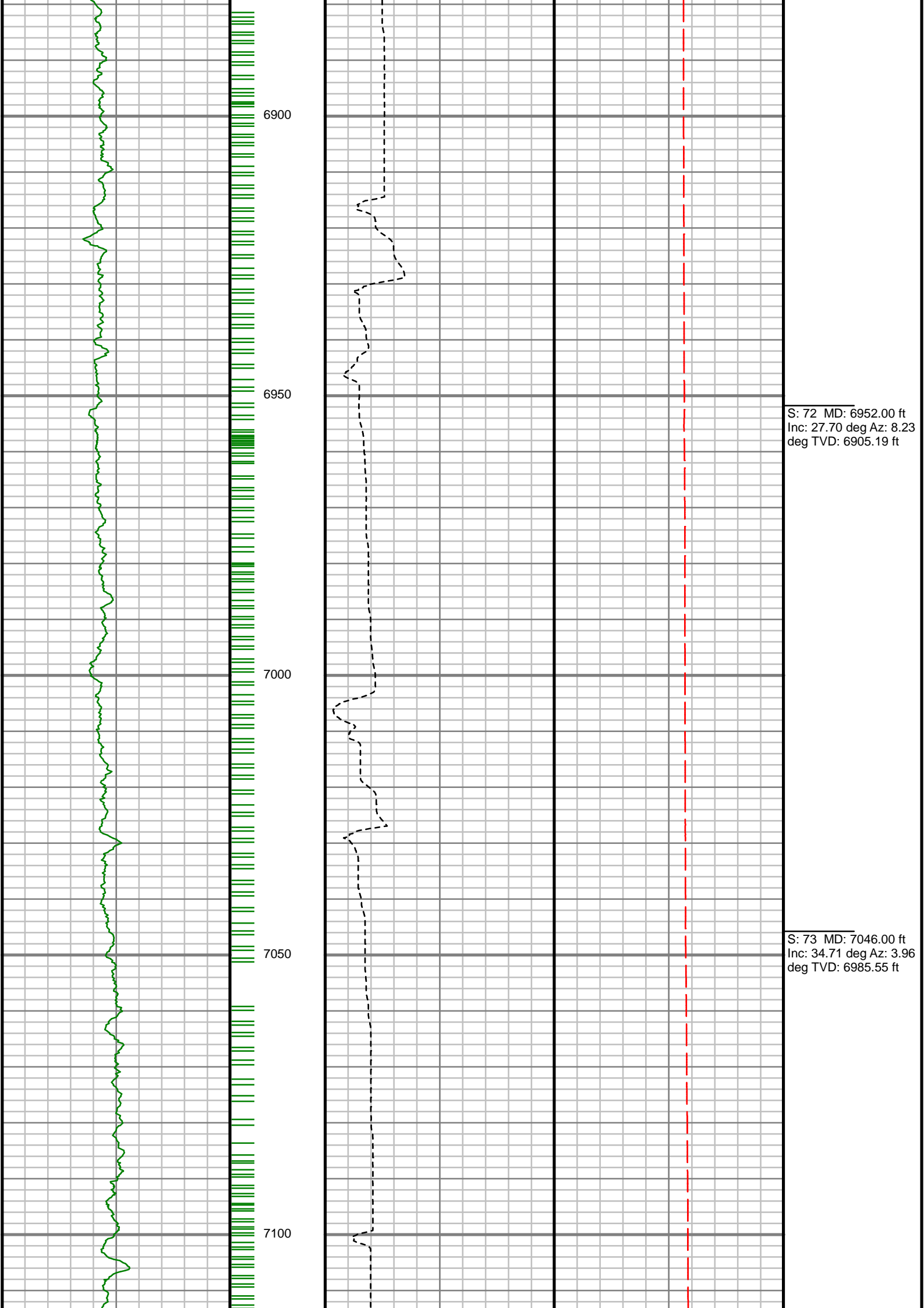
S: 64 MD: 6205.00 ft
Inc: 1.20 deg Az:
179.40 deg TVD:
6169.31 ft

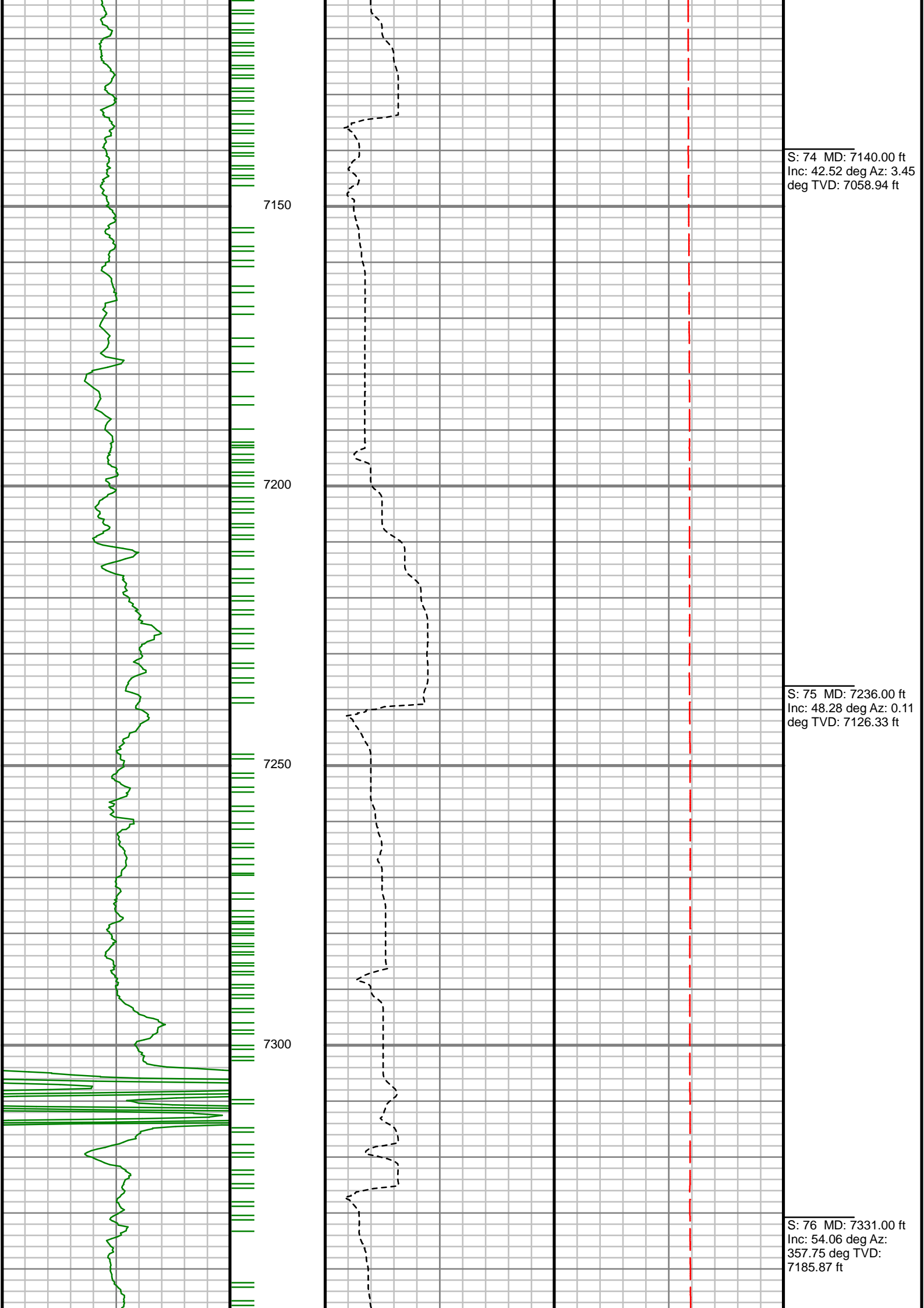
S: 65 MD: 6298.00 ft
Inc: 0.69 deg Az:
164.24 deg TVD:
6262.30 ft

S: 66 MD: 6392.00 ft
Inc: 0.36 deg Az: 71.35
deg TVD: 6356.30 ft





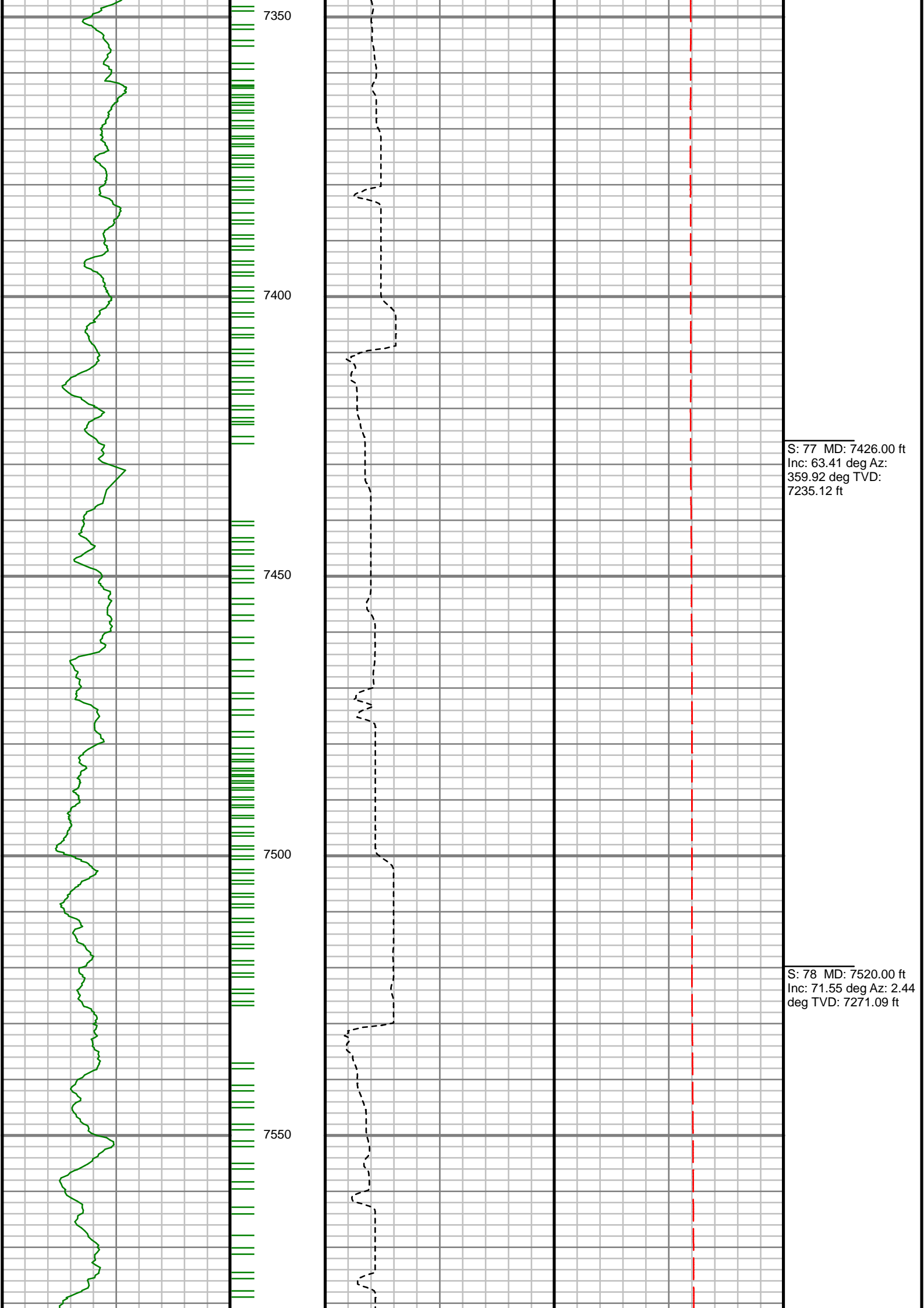


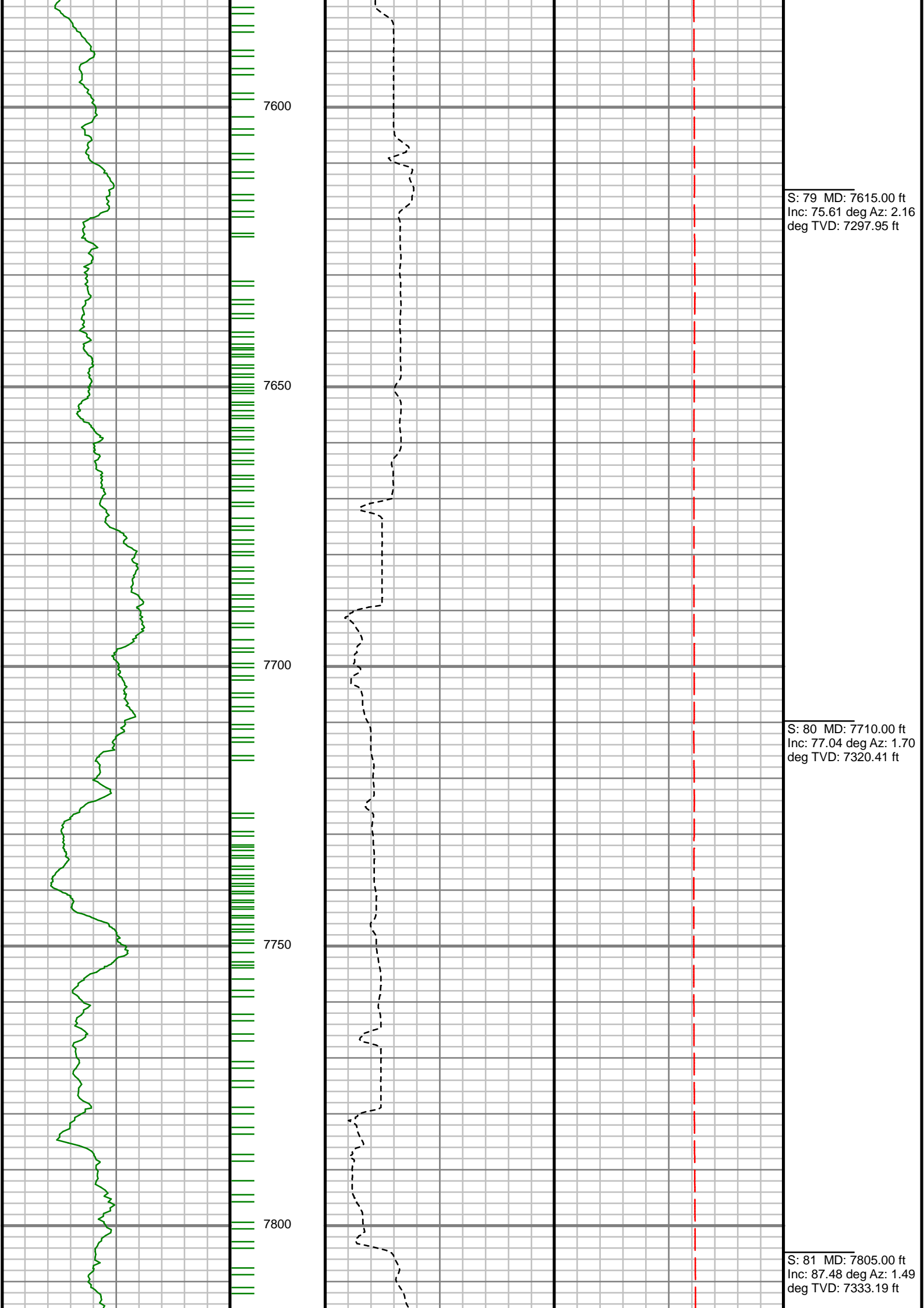


S: 74 MD: 7140.00 ft
Inc: 42.52 deg Az: 3.45
deg TVD: 7058.94 ft

S: 75 MD: 7236.00 ft
Inc: 48.28 deg Az: 0.11
deg TVD: 7126.33 ft

S: 76 MD: 7331.00 ft
Inc: 54.06 deg Az:
357.75 deg TVD:
7185.87 ft

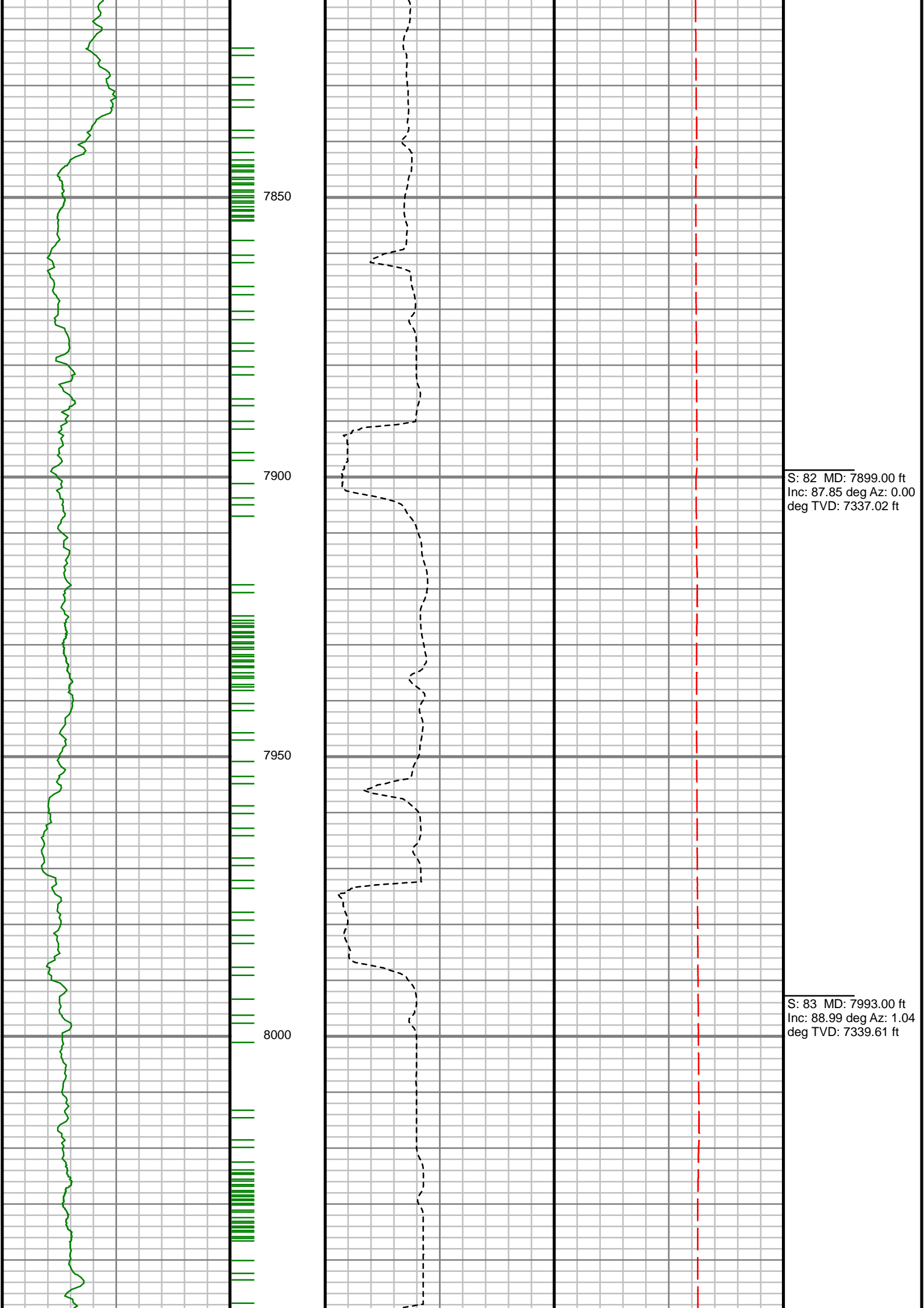


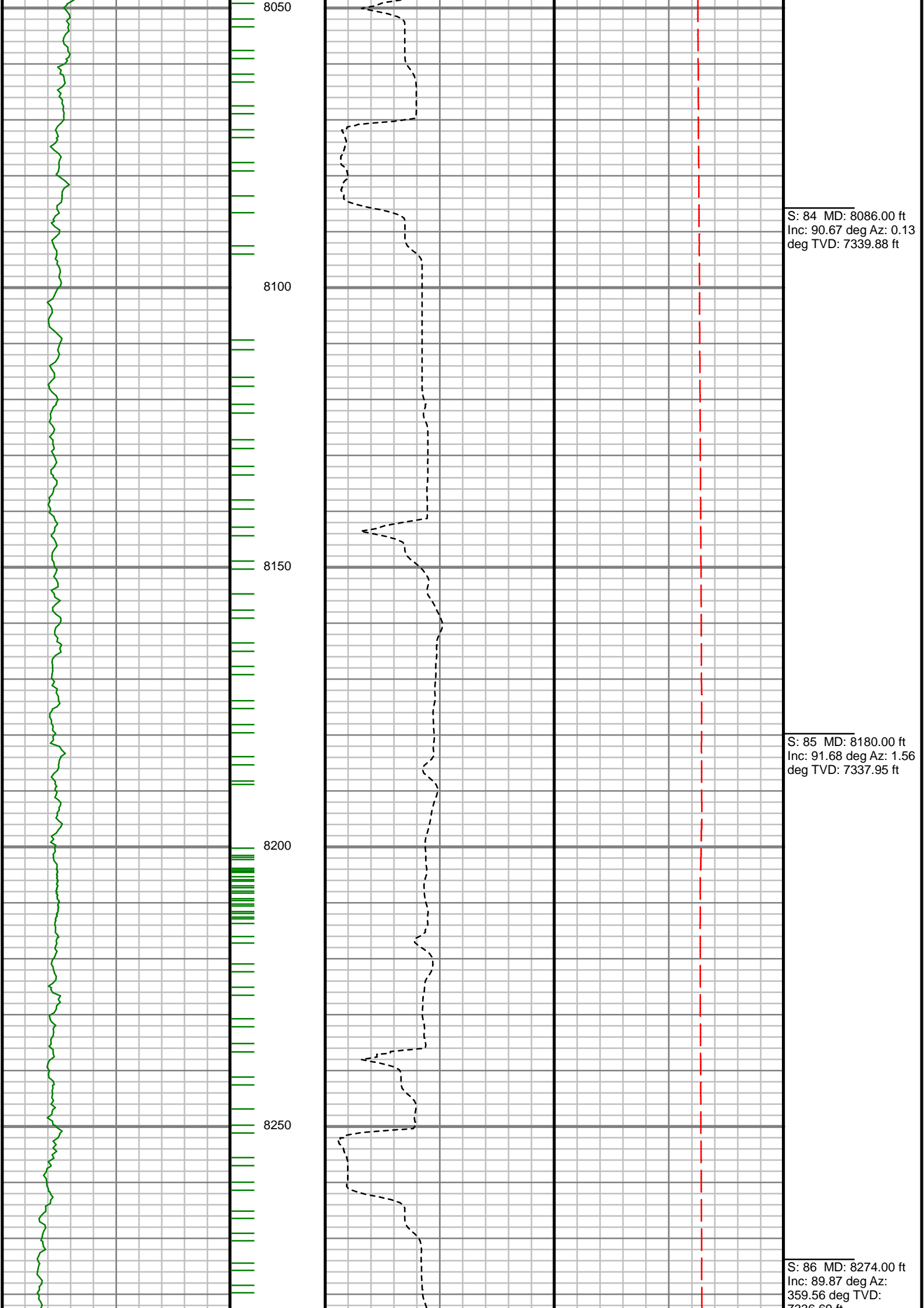


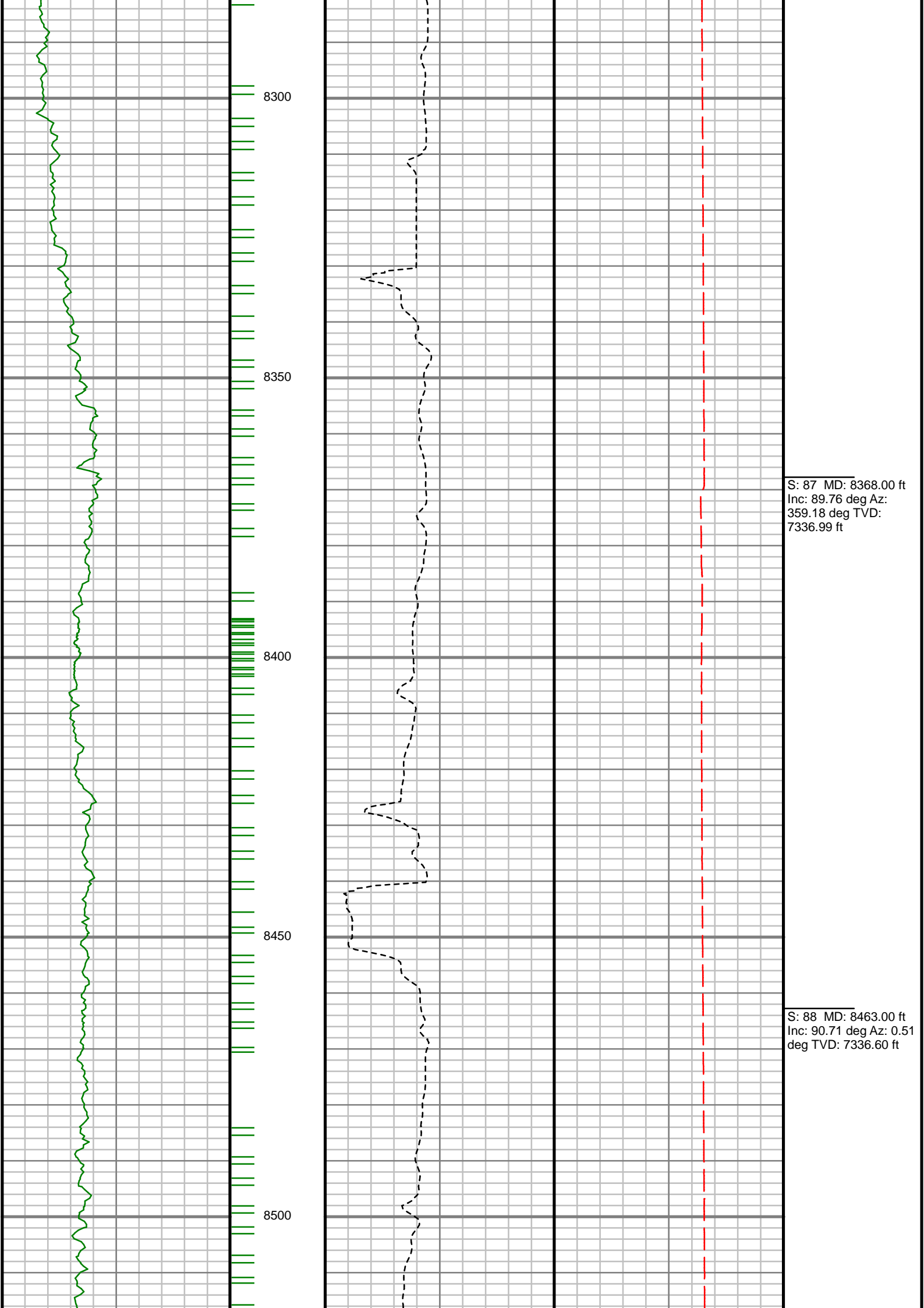
S: 79 MD: 7615.00 ft
Inc: 75.61 deg Az: 2.16
deg TVD: 7297.95 ft

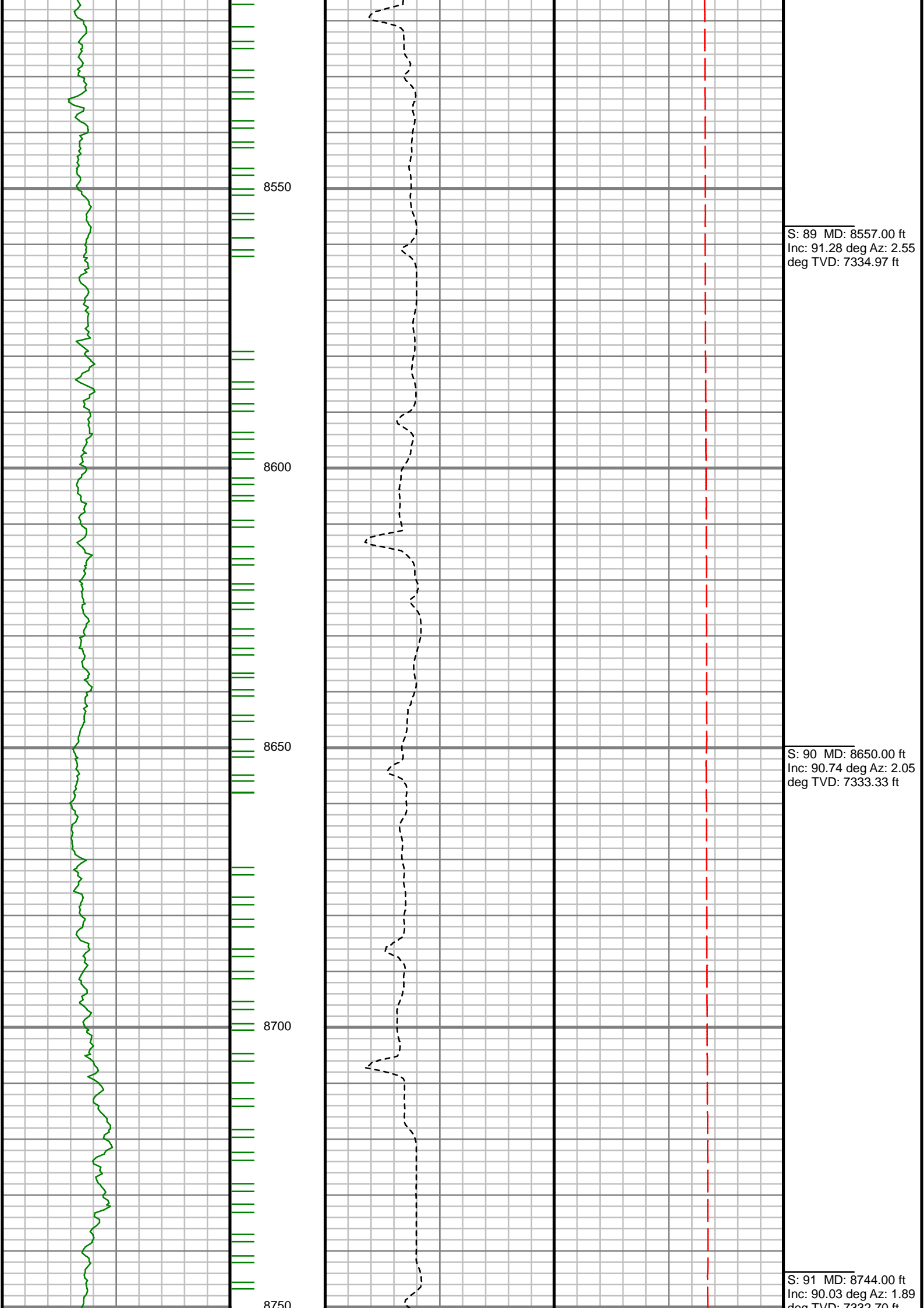
S: 80 MD: 7710.00 ft
Inc: 77.04 deg Az: 1.70
deg TVD: 7320.41 ft

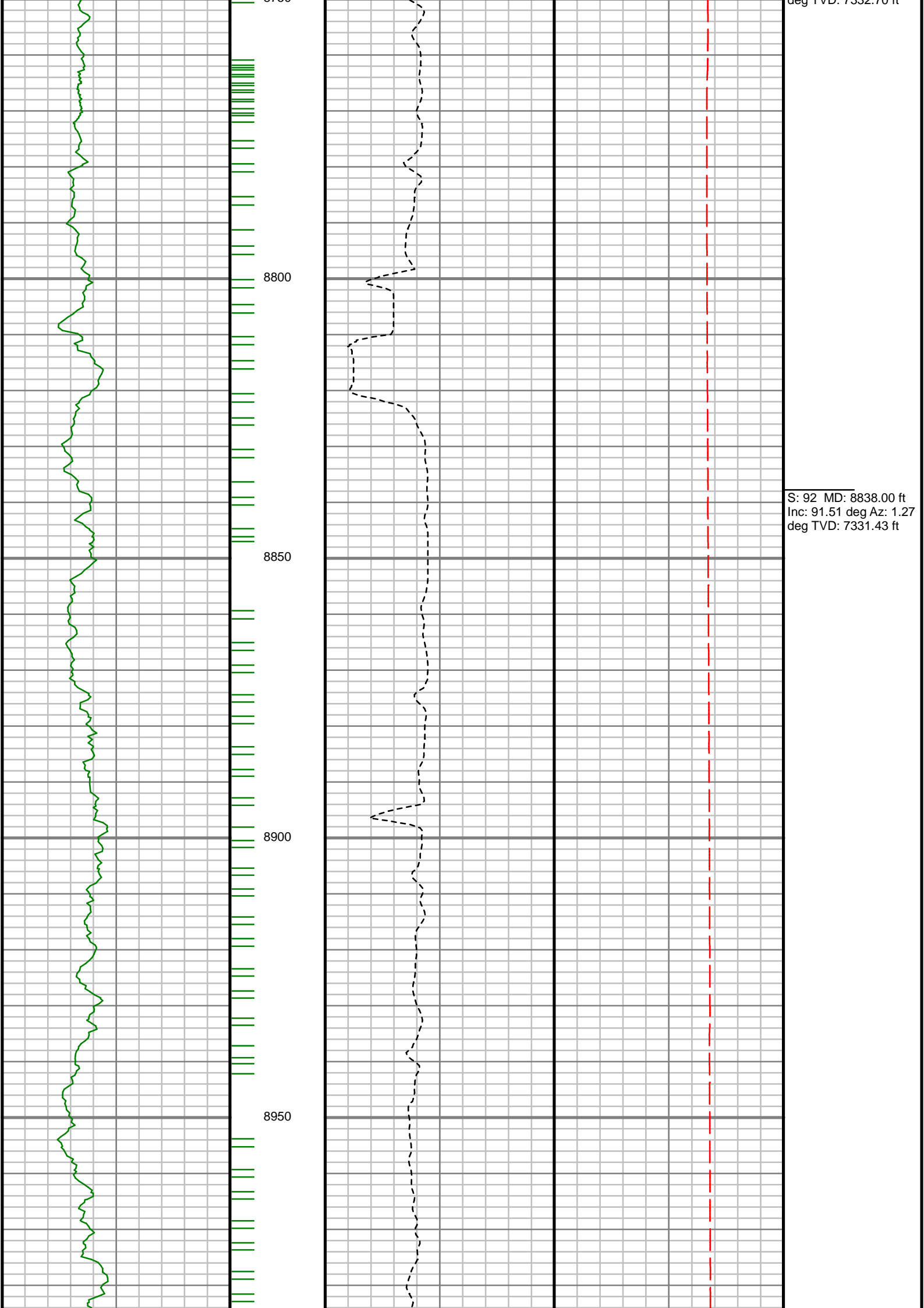
S: 81 MD: 7805.00 ft
Inc: 87.48 deg Az: 1.49
deg TVD: 7333.19 ft

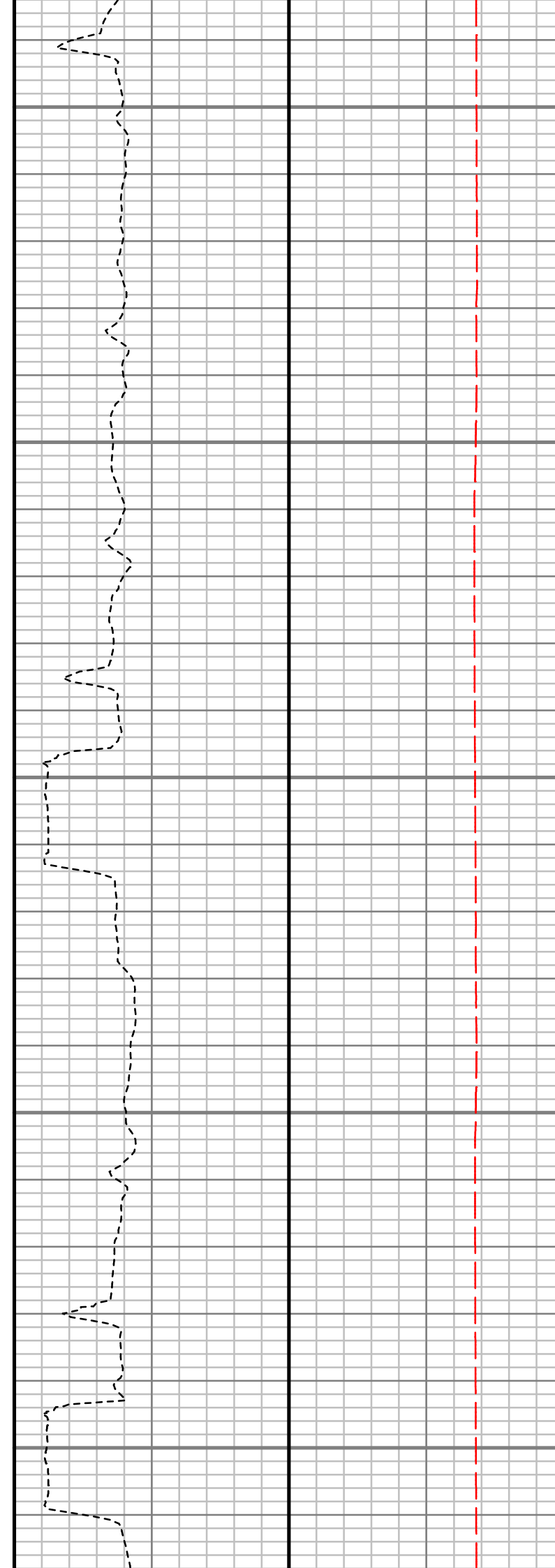
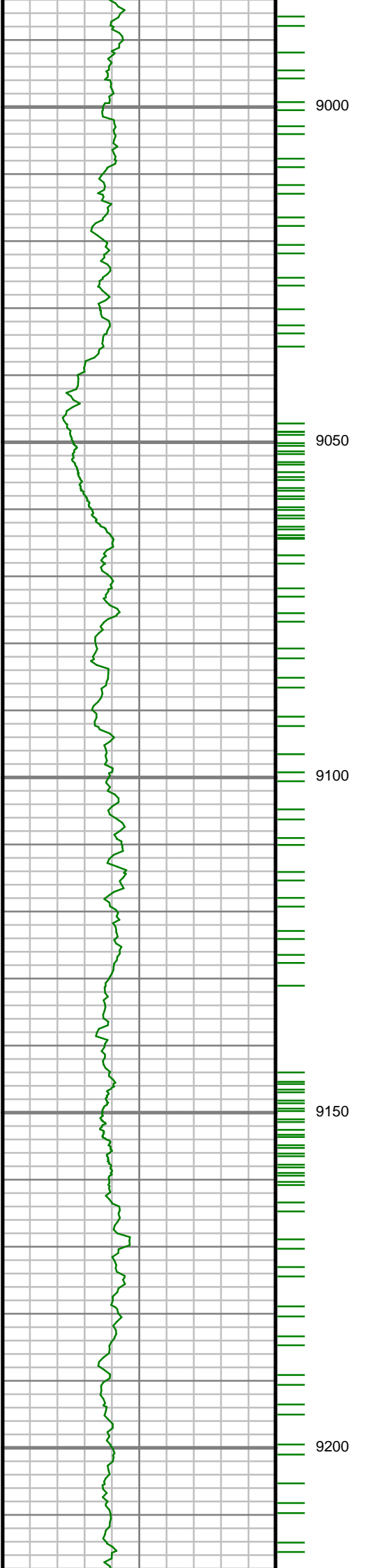








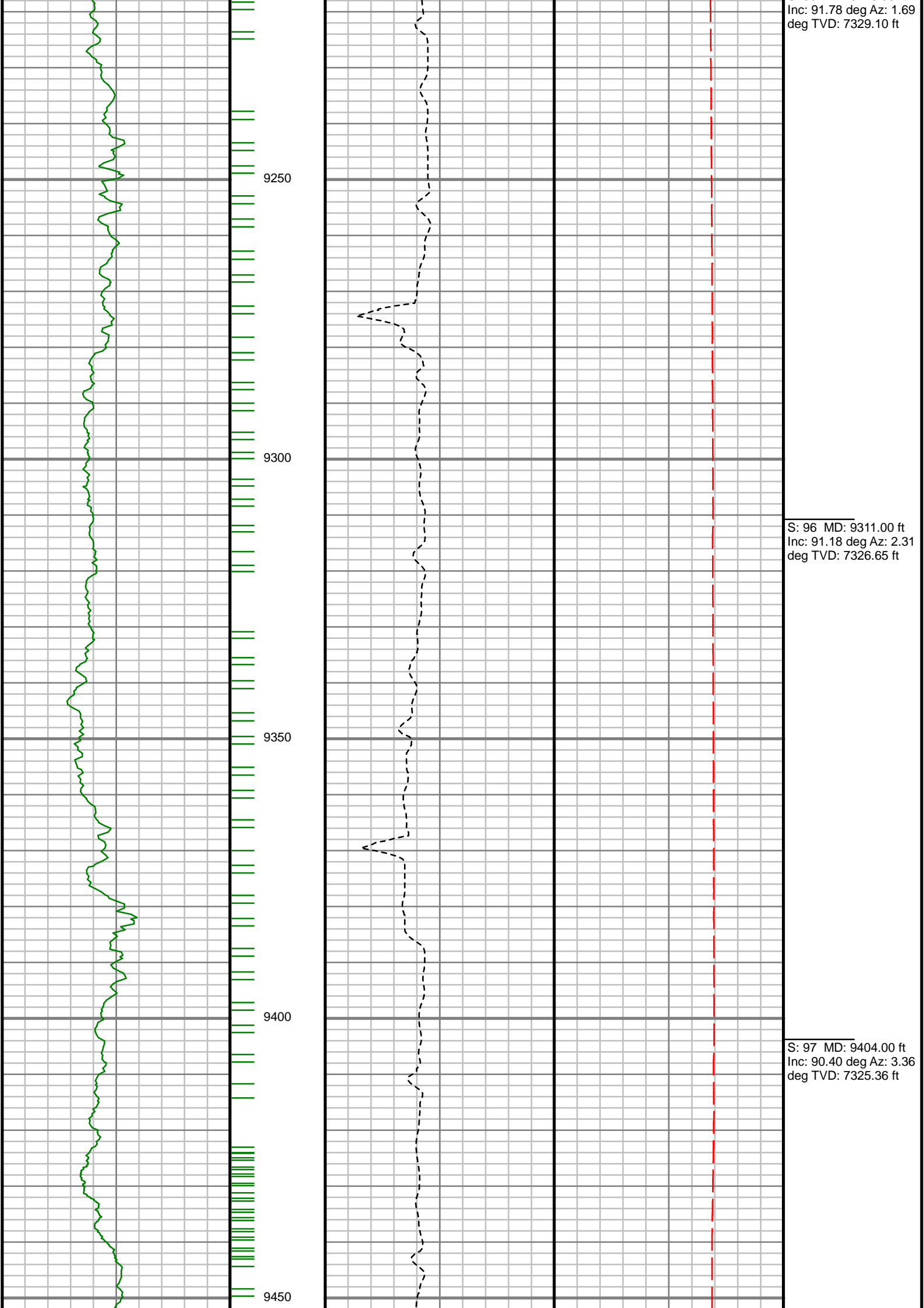


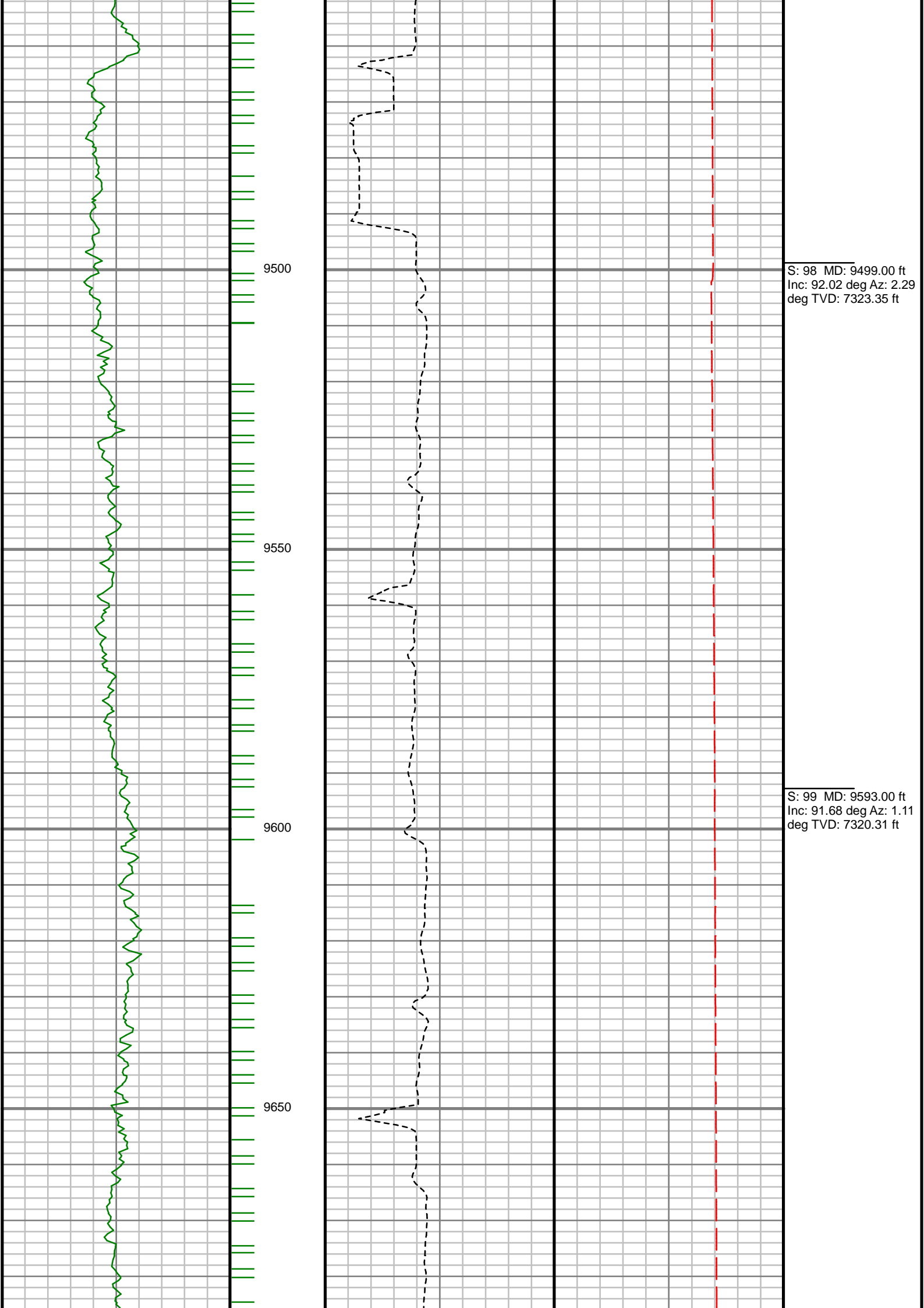


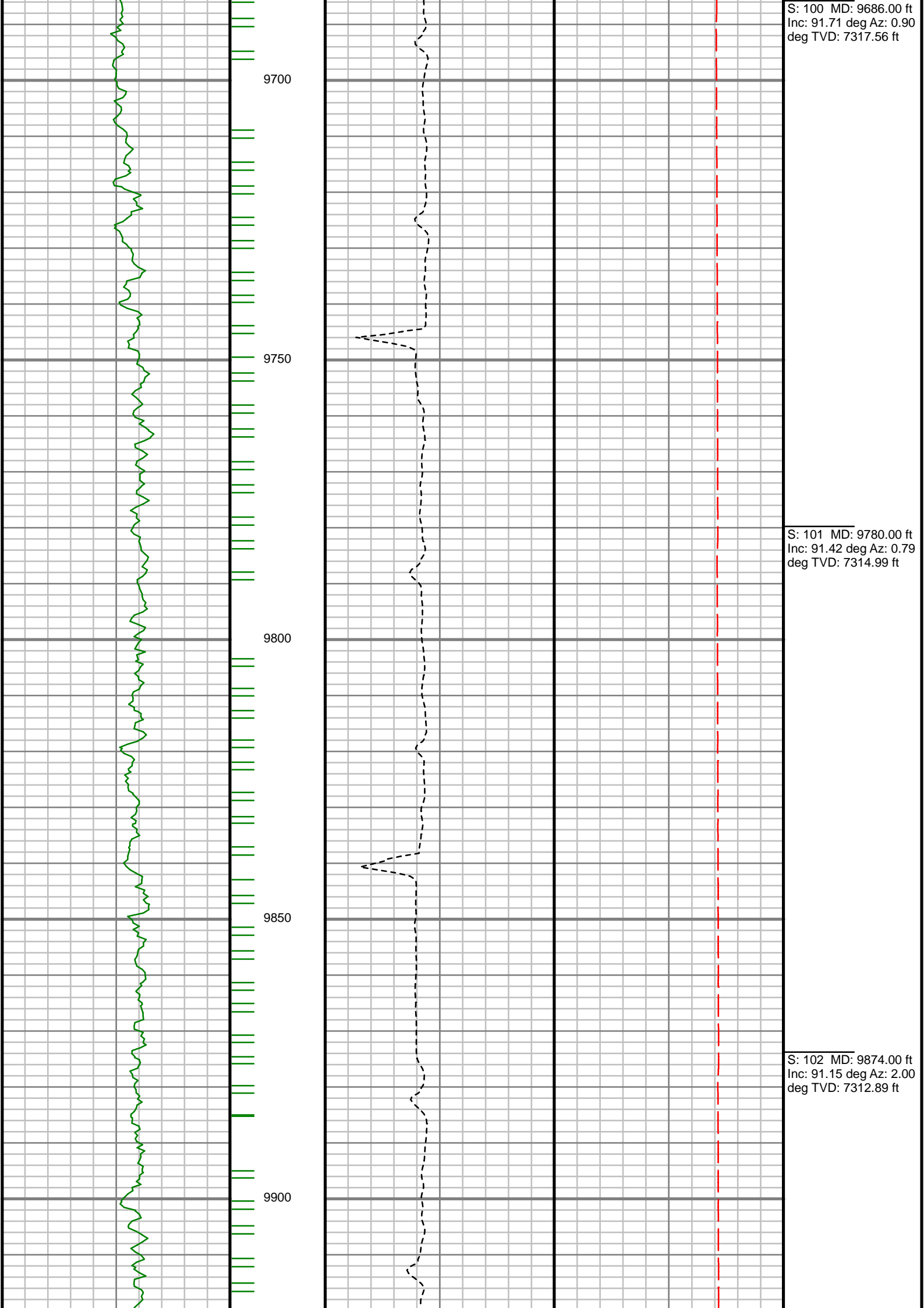
S: 93 MD: 9028.00 ft
Inc: 89.50 deg Az: 2.78
deg TVD: 7329.76 ft

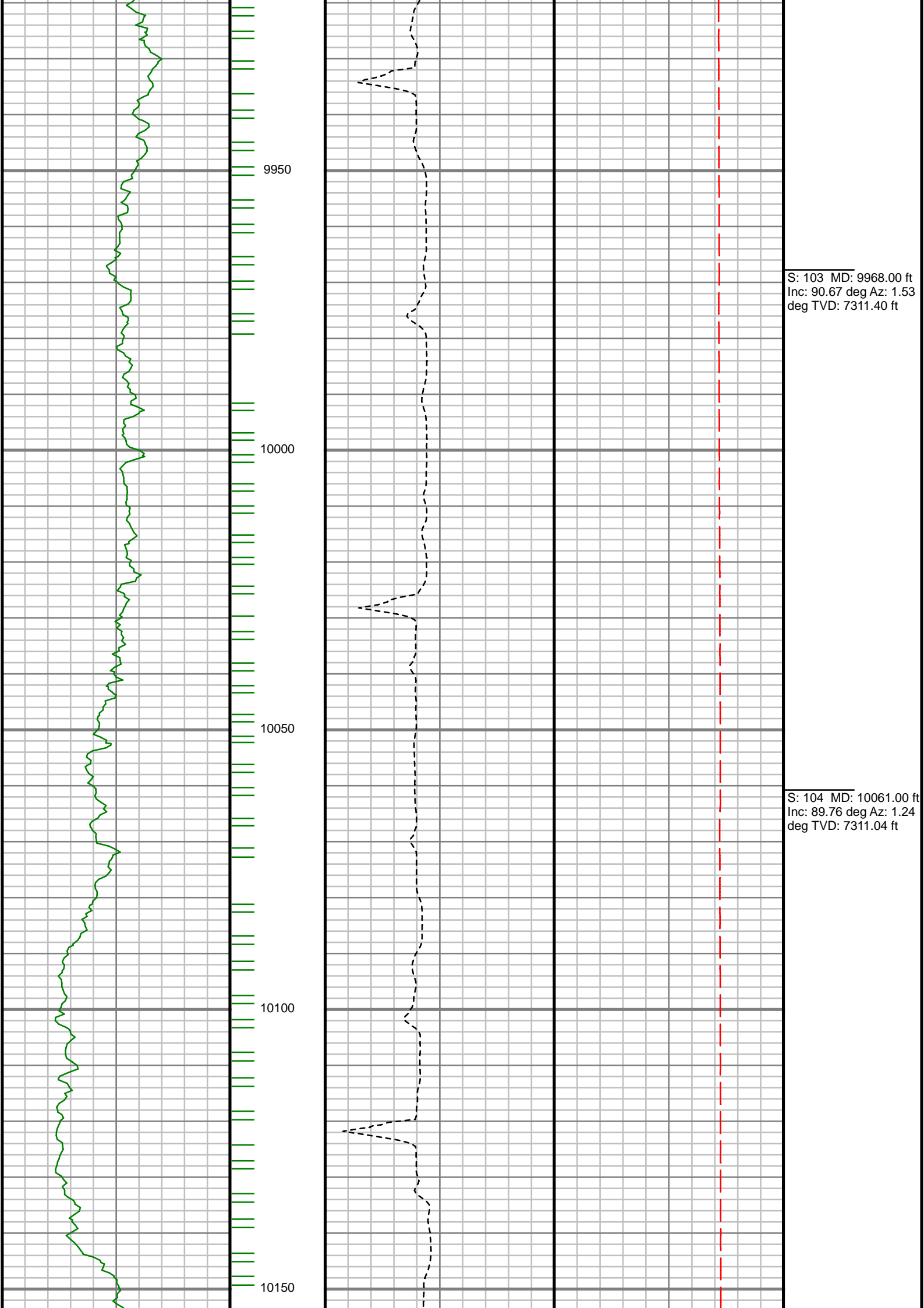
S: 94 MD: 9122.00 ft
Inc: 89.76 deg Az: 1.87
deg TVD: 7330.36 ft

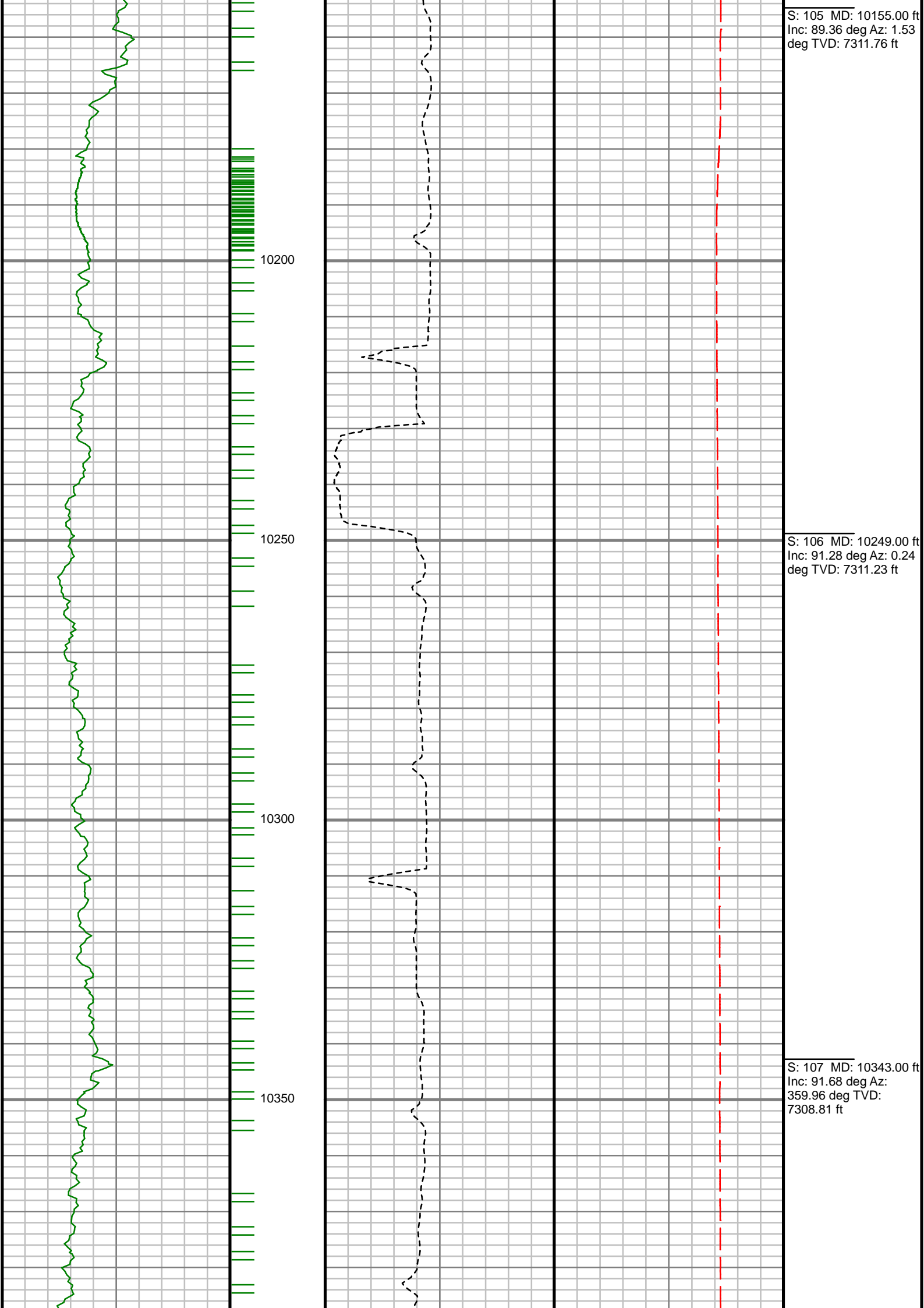
S: 95 MD: 9216.00 ft

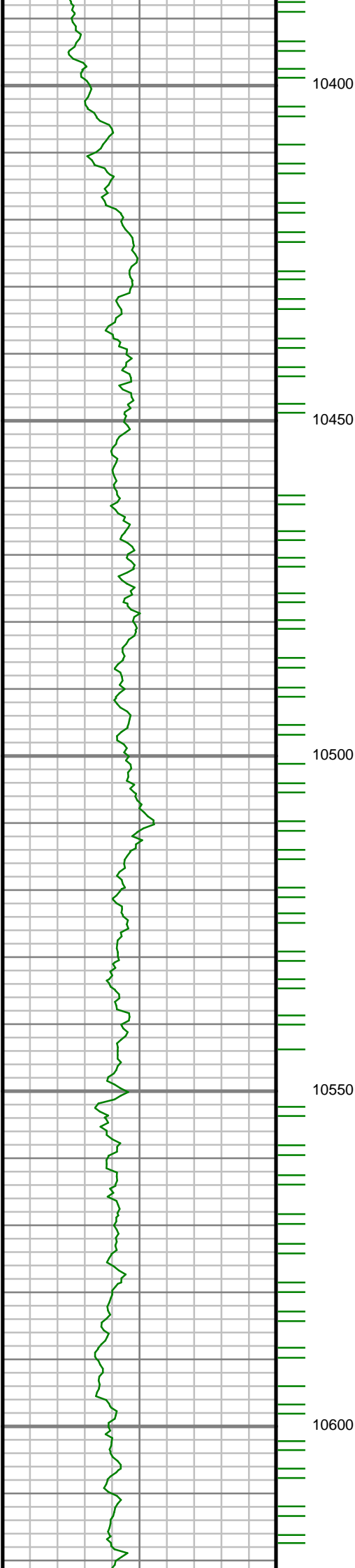






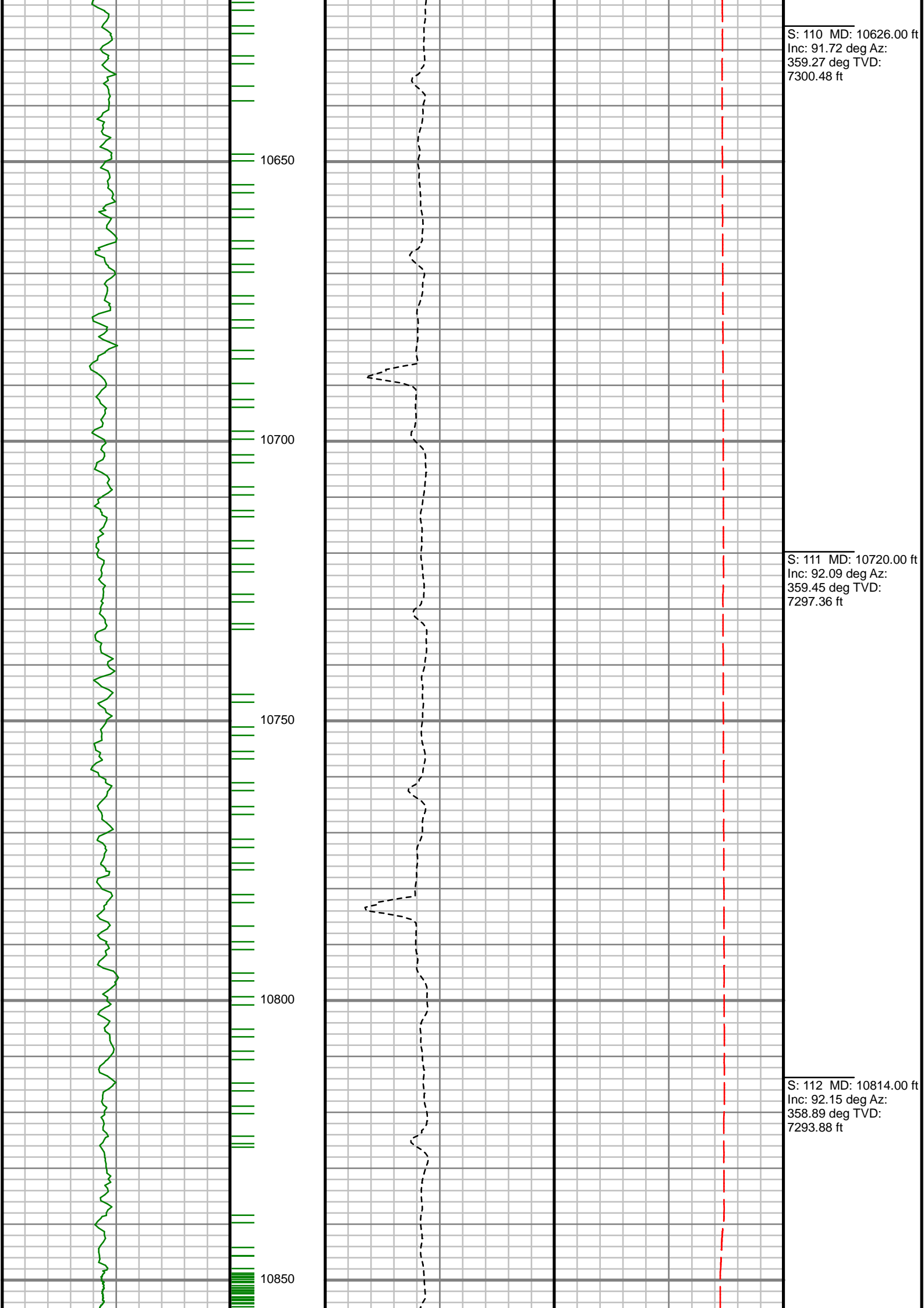


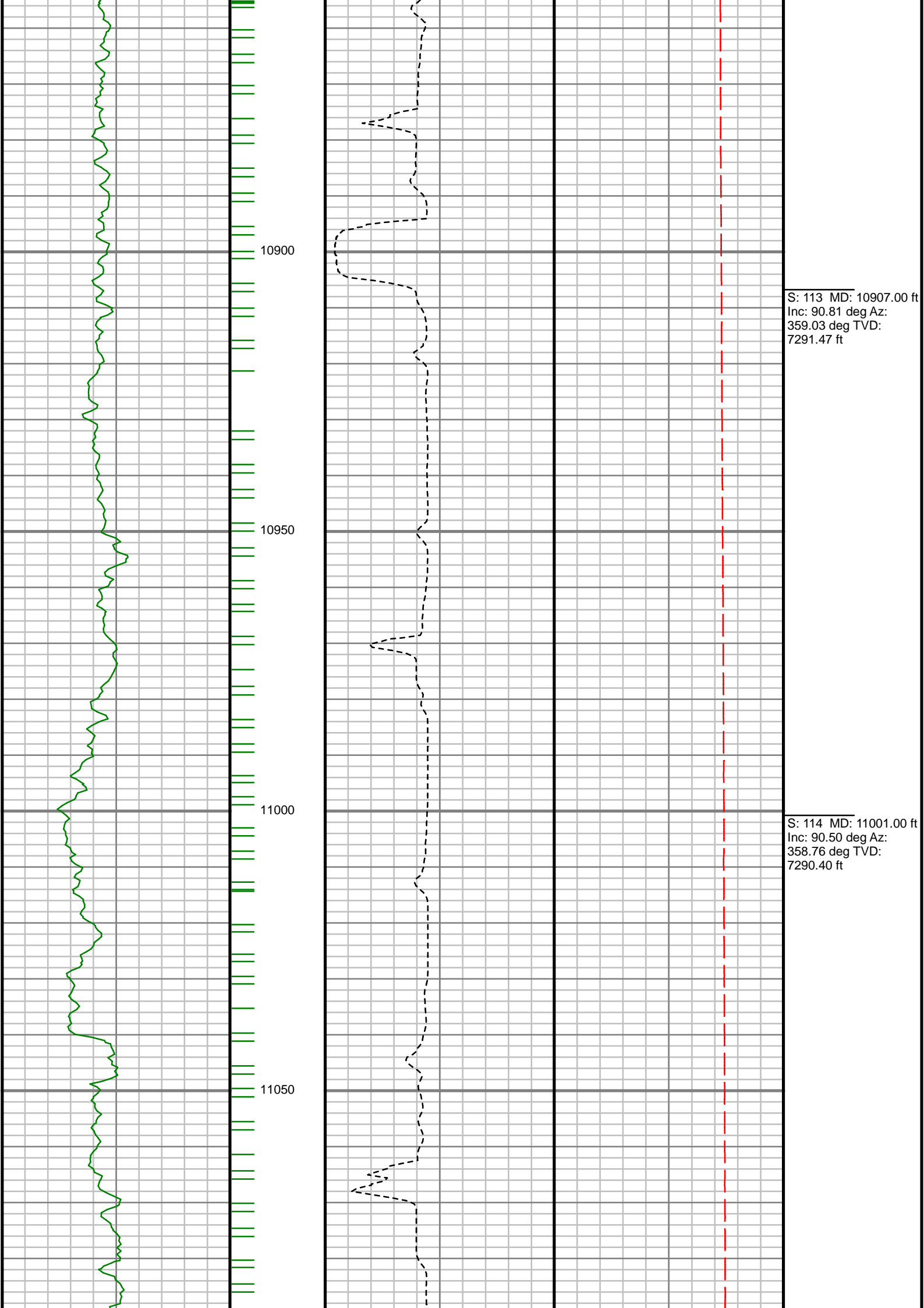




S: 108 MD: 10437.00 ft
Inc: 91.68 deg Az:
359.25 deg TVD:
7306.05 ft

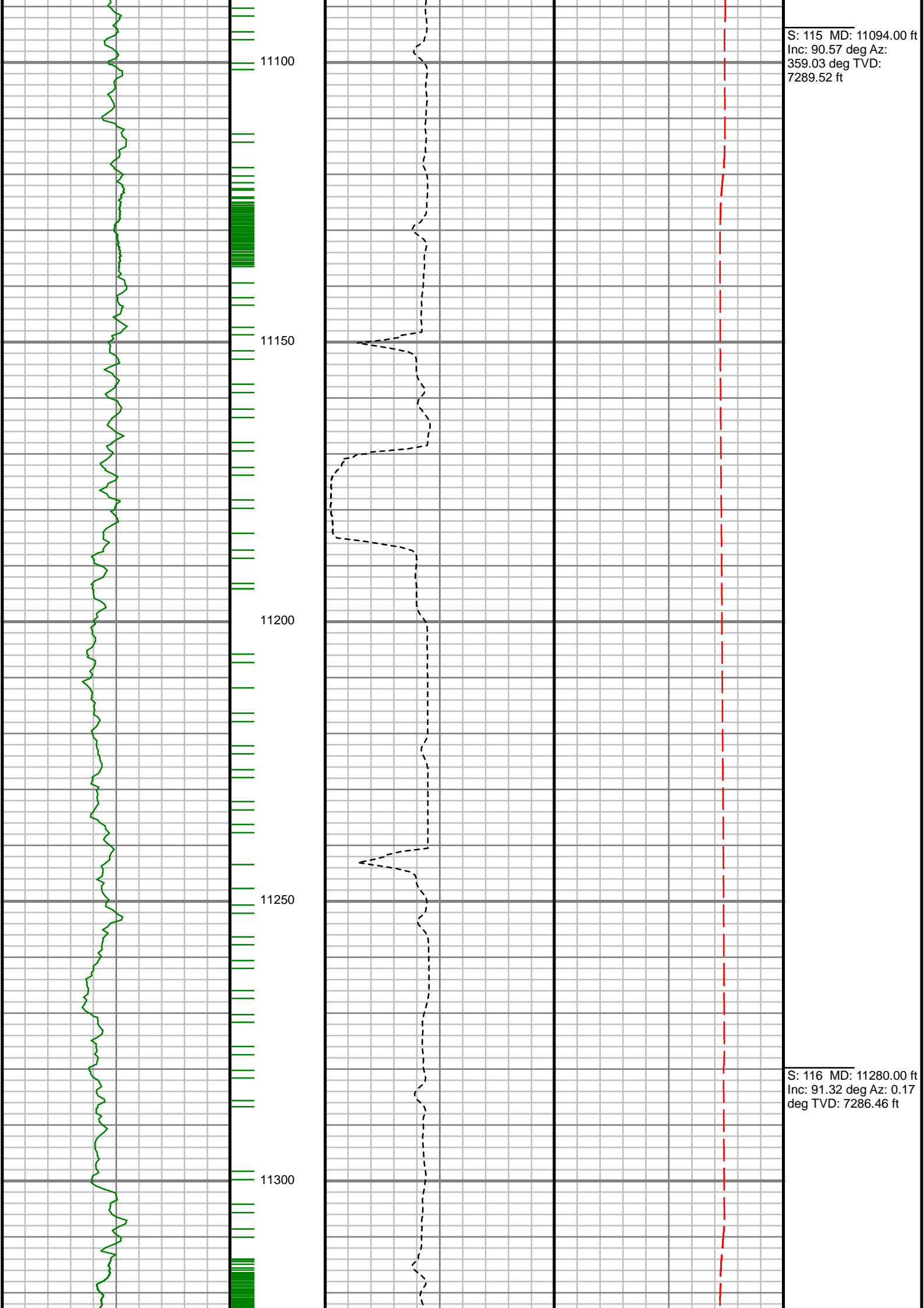
S: 109 MD: 10531.00 ft
Inc: 91.68 deg Az:
359.39 deg TVD:
7303.29 ft

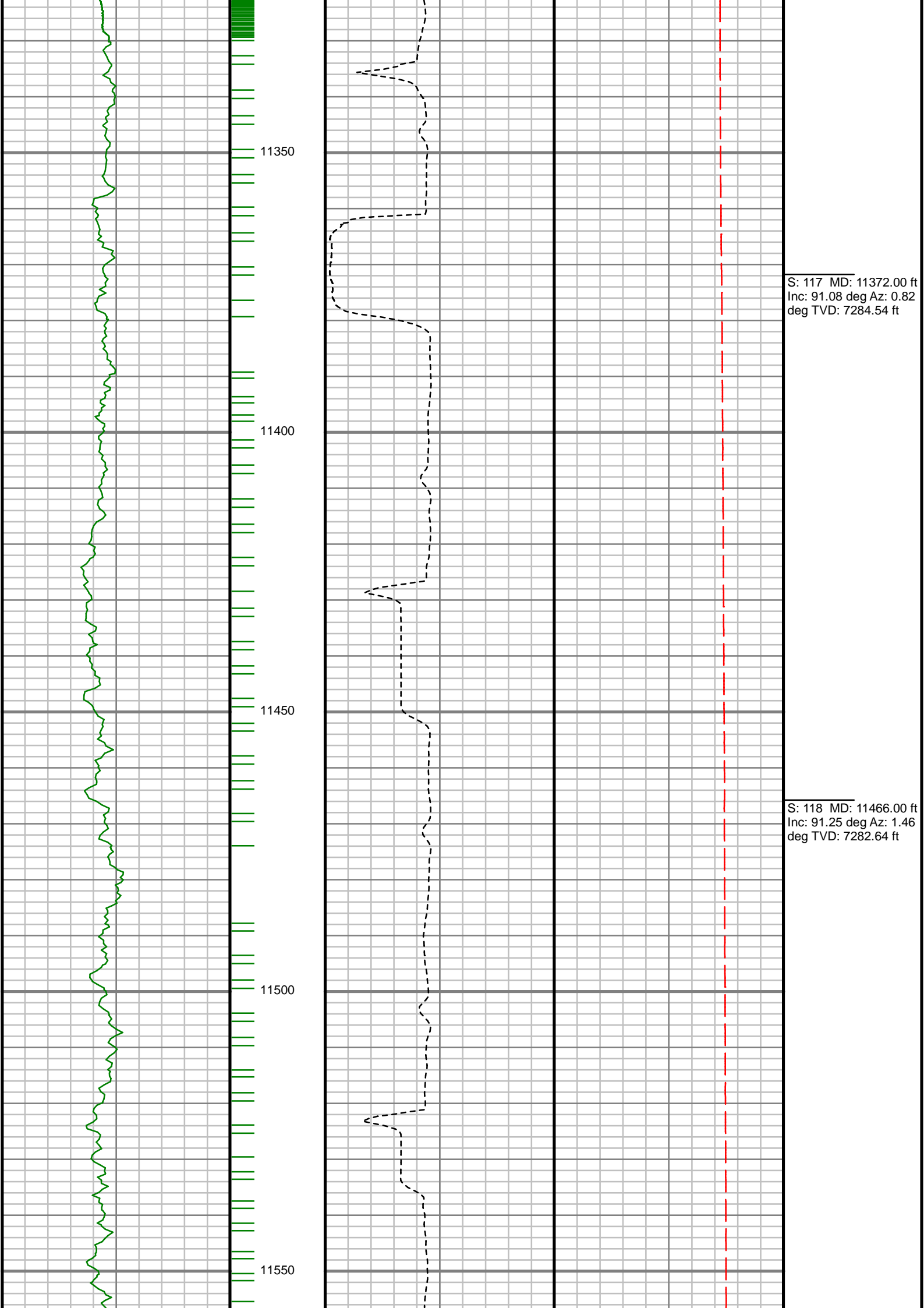


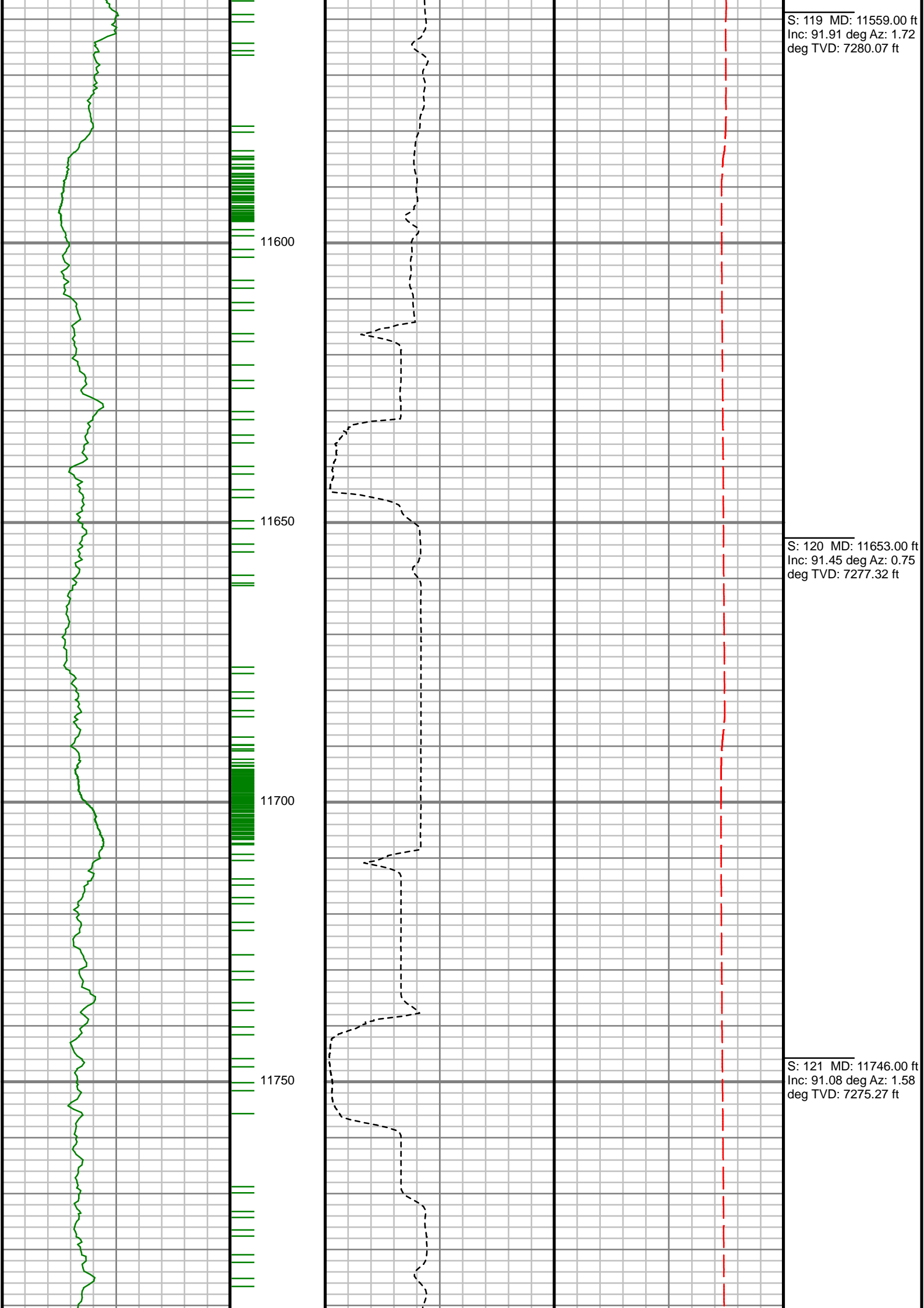


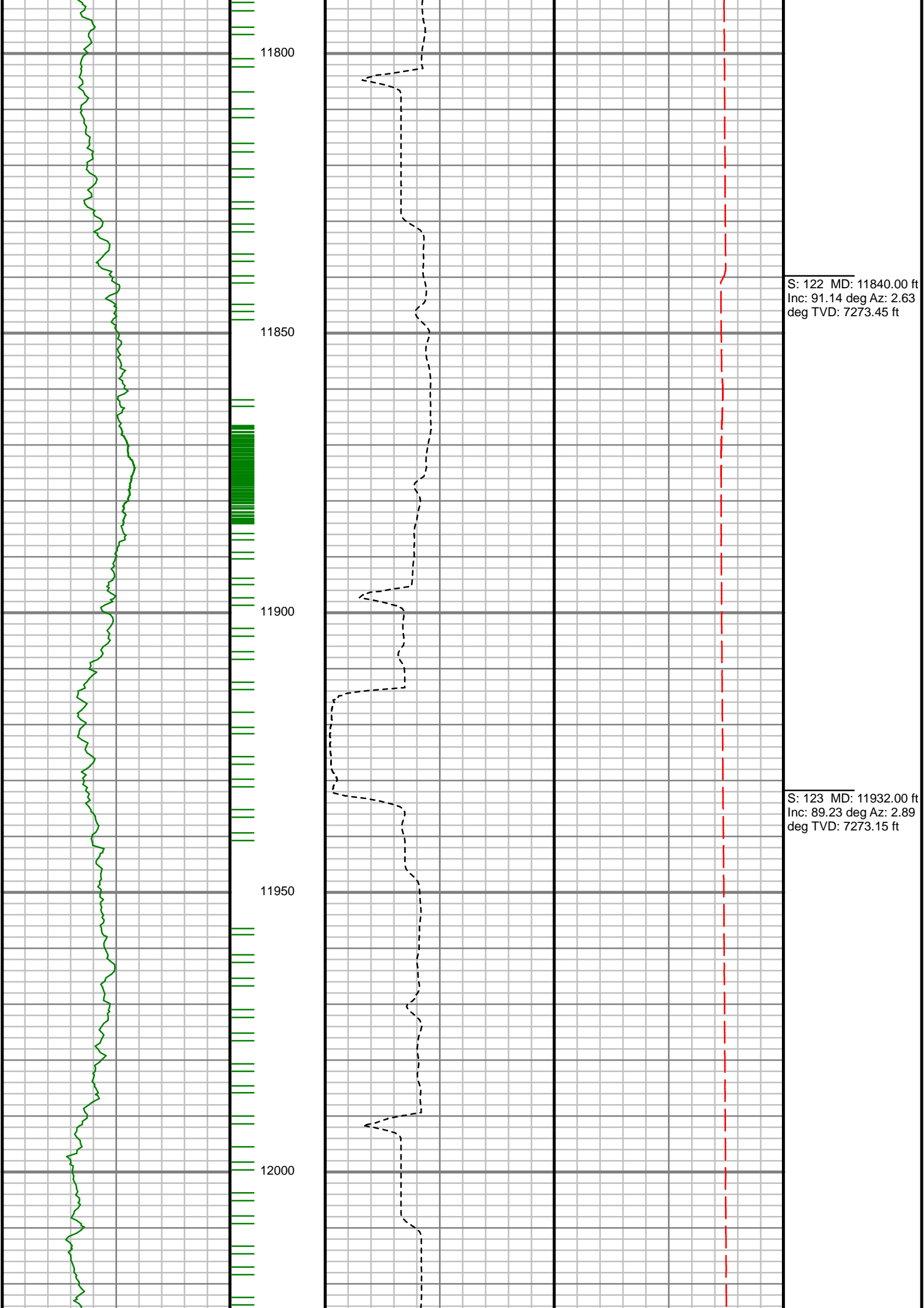
S: 113 MD: 10907.00 ft
Inc: 90.81 deg Az:
359.03 deg TVD:
7291.47 ft

S: 114 MD: 11001.00 ft
Inc: 90.50 deg Az:
358.76 deg TVD:
7290.40 ft



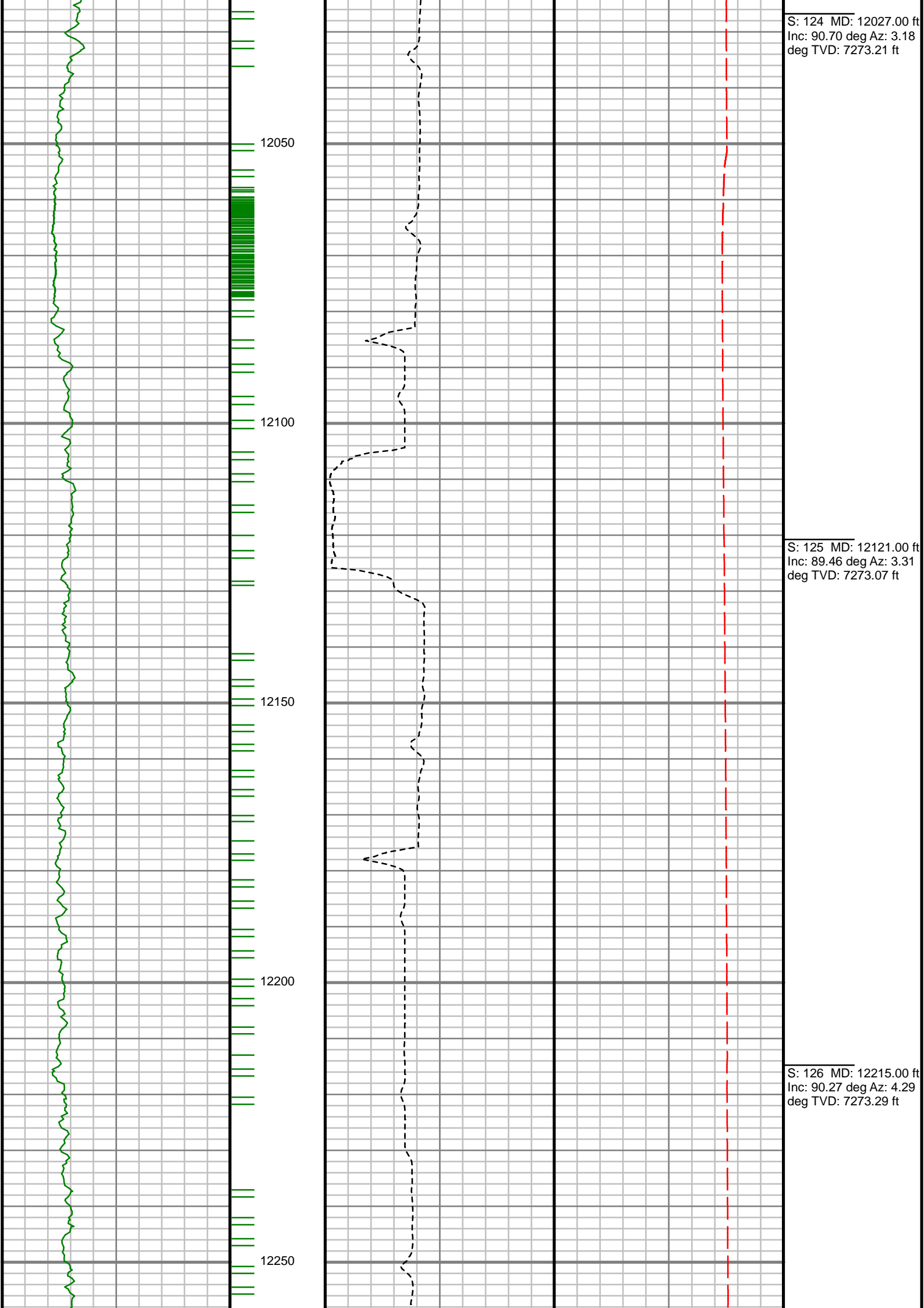


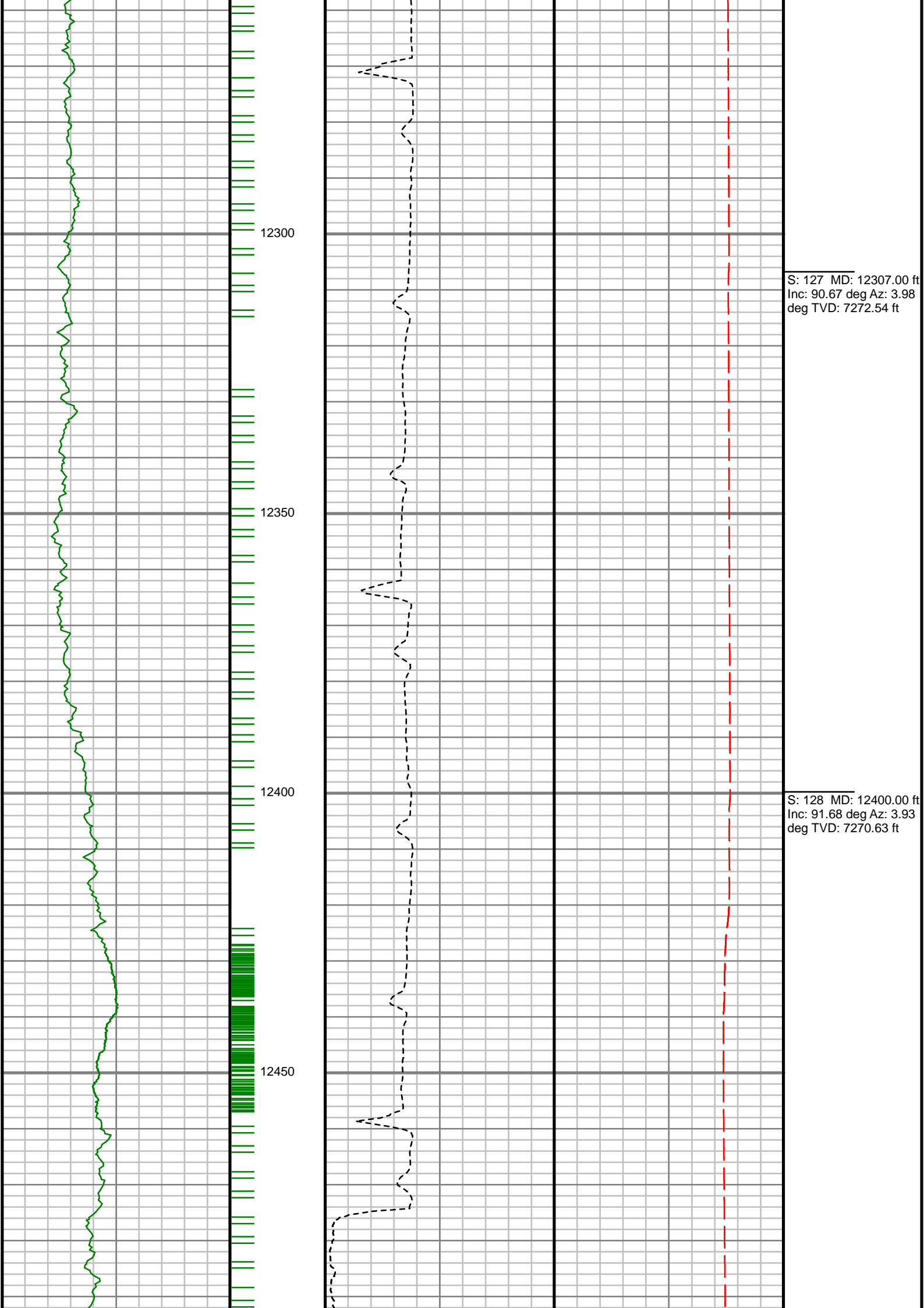


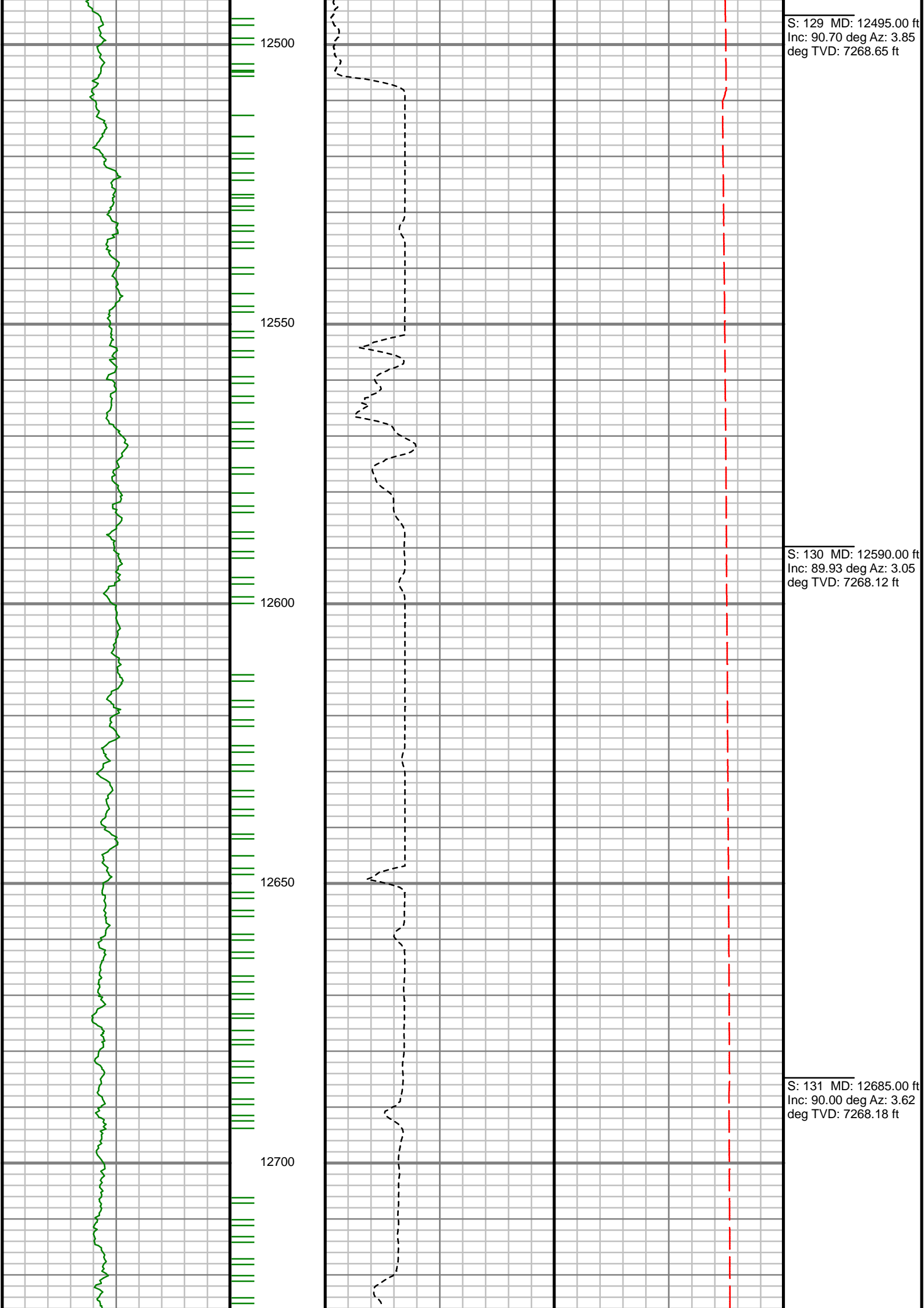


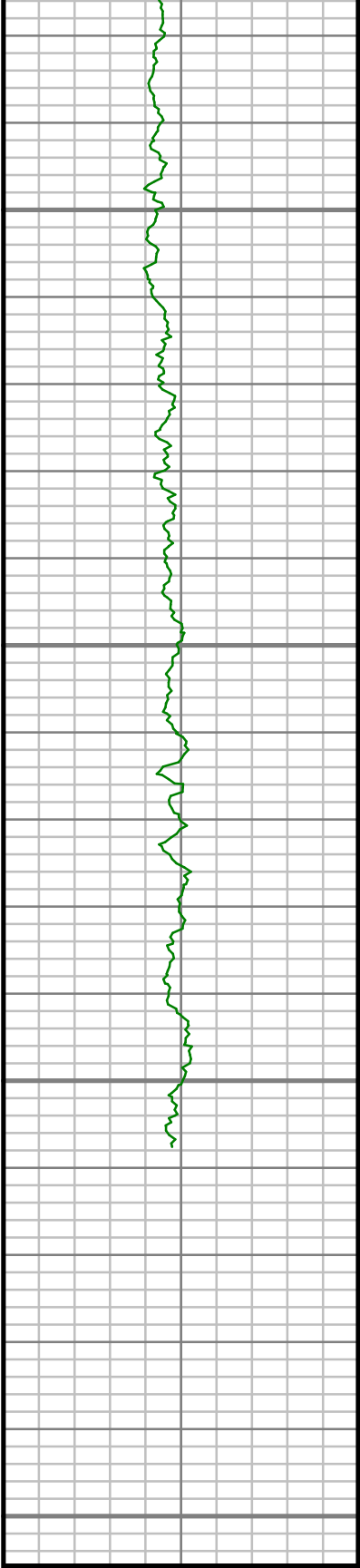
S: 122 MD: 11840.00 ft
Inc: 91.14 deg Az: 2.63
deg TVD: 7273.45 ft

S: 123 MD: 11932.00 ft
Inc: 89.23 deg Az: 2.89
deg TVD: 7273.15 ft





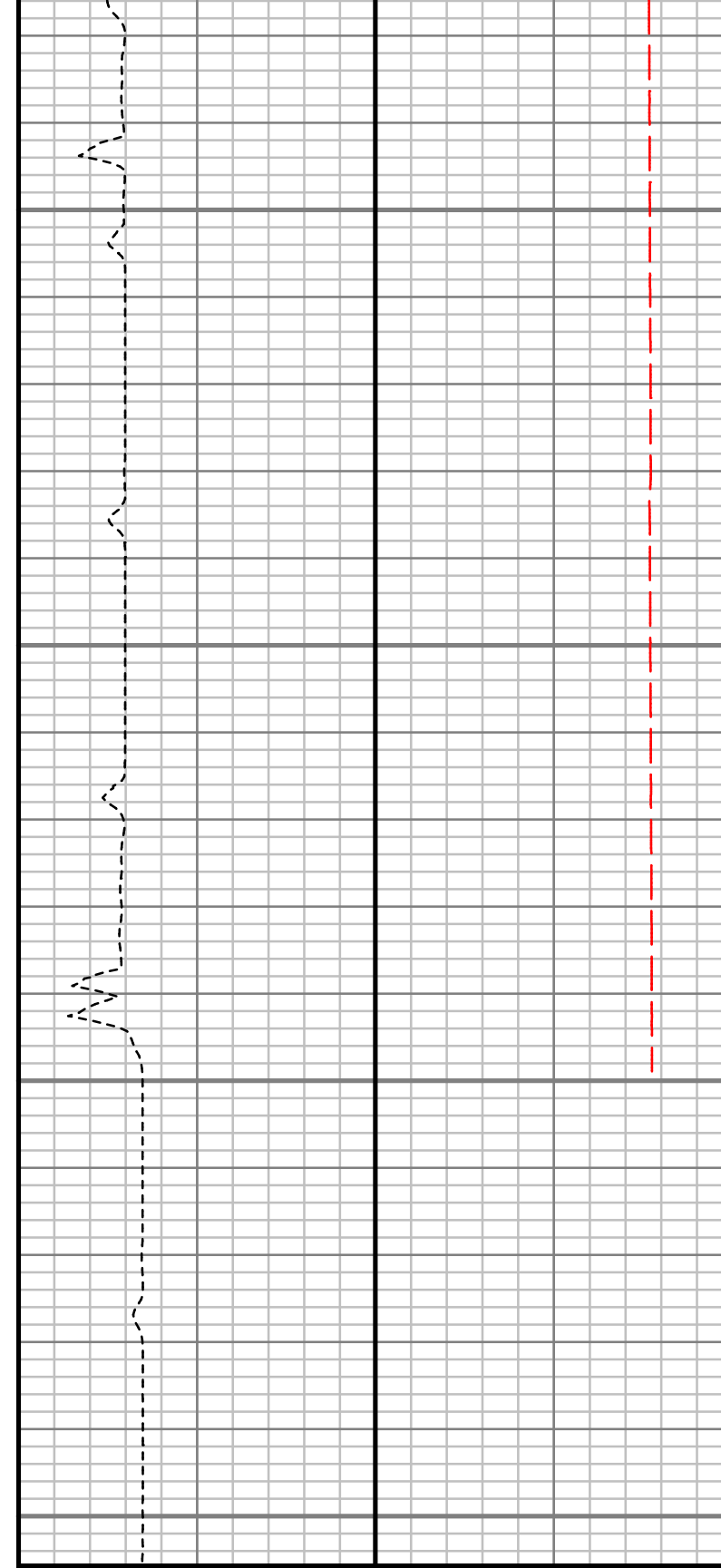




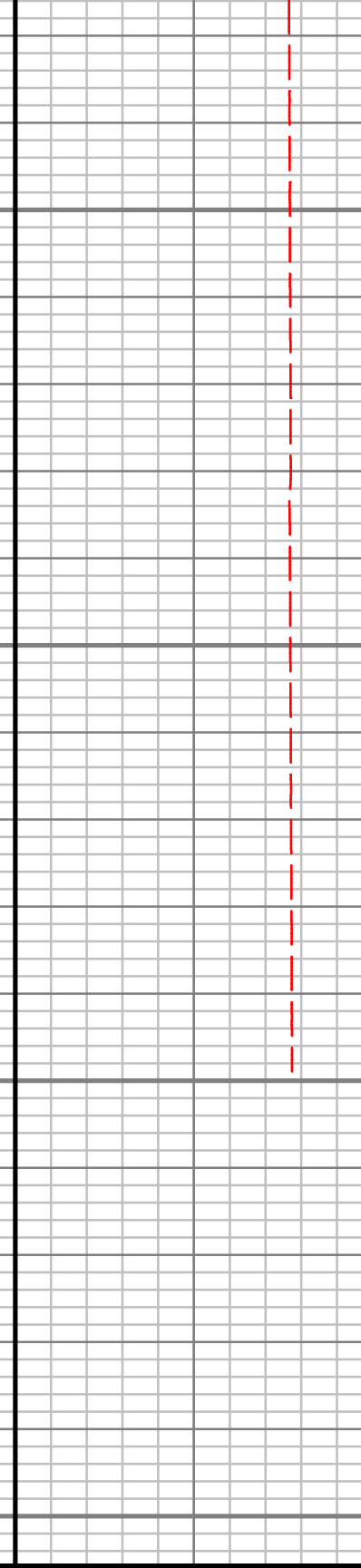
Gamma Ray (GR)		
0	Unit = aapi	300



MEASURED DEPTH
1,240 (ft)



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



Tool Temperature (TEMP)		
0	Unit = °F	300

S: 132 MD: 12779.00 ft
Inc: 90.71 deg Az: 4.29
deg TVD: 7267.60 ft

S: 133 MD: 12847.00 ft
Inc: 90.10 deg Az: 4.05
deg TVD: 7267.12 ft

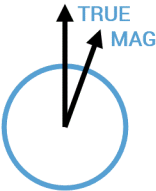
Comments

CUSTOMER ANADARKO E&P ONSHORE LLC.
PROJECT LAND FED
FIELD WATTENBERG

WELL INFORMATION
Lat/Long 40° 5' 56.49" N, 104° 48' 19.102" W
Northing 14,562,852.37 ft
Easting 1,694,862.08 ft
UWI 05123423920000

MAP INFORMATION
North Reference True North
Grid Correction System Universal Transverse Mercator (US Survey Feet)
Datum North American Datum 1983 (GRS 1980)
Map Zone Zone 13N (108 W to 102 W)

VERTICAL SECTION REFERENCE
+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 1.18°
Calculation Method Minimum Curvature



GEOMAGNETIC REFERENCE INFORMATION Local Gravity: 999.046 mG [computed]

MD	MODEL	DATE	DECLINATION	MAG TO TRUE
0-3656 ft	ANADARKO MAGVAR	03 Jul 2016	8.34°	add 8.34°
3656-5829 ft	ANADARKO MAGVAR	03 Jul 2016	8.35°	add 8.35°
5829-12847 ft	ANADARKO MAGVAR	03 Jul 2016	8.37°	add 8.37°

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
213.00	0.87	291.14	212.99	0.55	0.58	-1.51	0.41
307.00	1.12	297.57	306.98	1.20	1.27	-2.99	0.29
401.00	0.92	298.01	400.96	1.95	2.05	-4.47	0.21
495.00	1.23	354.98	494.95	3.30	3.40	-5.22	1.13
589.00	2.82	12.18	588.89	6.57	6.67	-4.82	1.79
683.00	3.93	9.59	682.72	12.03	12.11	-3.80	1.19
777.00	5.55	9.57	776.40	19.71	19.77	-2.51	1.72
871.00	7.44	14.09	869.79	30.14	30.15	-0.27	2.08
965.00	8.58	19.12	962.87	42.74	42.68	3.51	1.42
1059.00	9.91	18.95	1055.65	57.12	56.96	8.43	1.42
1153.00	11.87	16.33	1147.95	74.15	73.89	13.78	2.15
1247.00	12.22	15.88	1239.88	93.11	92.73	19.22	0.39
1341.00	11.91	13.98	1331.81	112.19	111.71	24.28	0.54
1434.00	12.30	13.17	1422.74	131.24	130.67	28.86	0.46
1528.00	13.01	12.47	1514.46	151.41	150.75	33.43	0.77
1624.00	12.94	11.32	1608.01	172.59	171.84	37.87	0.28
1719.00	12.38	11.39	1700.70	193.08	192.26	41.97	0.59
1807.00	12.30	9.51	1786.66	211.64	210.75	45.38	0.47
1956.00	10.83	4.55	1932.64	241.32	240.36	49.11	1.19

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
2050.00	11.59	5.75	2024.84	259.56	258.57	50.76	0.85
2145.00	12.18	6.93	2117.80	279.04	278.01	52.92	0.67
2240.00	10.78	4.77	2210.90	297.88	296.82	54.87	1.54
2335.00	9.89	1.49	2304.36	314.91	313.83	55.82	1.12
2430.00	8.46	0.12	2398.14	330.07	328.98	56.05	1.52
2525.00	7.20	359.07	2492.25	343.00	341.92	55.97	1.34
2620.00	6.15	15.22	2586.62	353.89	352.79	57.21	2.25
2714.00	4.62	10.54	2680.20	362.51	361.37	59.22	1.69
2809.00	3.94	8.51	2774.93	369.52	368.36	60.41	0.74
2903.00	2.92	2.87	2868.76	375.12	373.94	61.00	1.14
2997.00	2.96	2.34	2962.64	379.94	378.76	61.22	0.05
3092.00	2.43	355.30	3057.54	384.39	383.21	61.16	0.66
3186.00	2.44	4.76	3151.45	388.37	387.19	61.16	0.43
3281.00	1.64	358.49	3246.39	391.74	390.57	61.29	0.88
3376.00	1.52	1.54	3341.35	394.36	393.18	61.29	0.15
3470.00	1.61	351.57	3435.32	396.91	395.73	61.13	0.30
3565.00	0.83	325.37	3530.30	398.79	397.62	60.54	0.99
3657.00	0.62	322.87	3622.29	399.72	398.57	59.86	0.24
3752.00	0.84	335.95	3717.28	400.75	399.61	59.27	0.29
3846.00	0.48	318.86	3811.28	401.66	400.54	58.73	0.44

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
3941.00	0.20	286.80	3906.27	402.00	400.89	58.31	0.34
4035.00	1.29	62.63	4000.27	402.55	401.42	59.08	1.53
4130.00	1.16	77.35	4095.25	403.29	402.12	60.97	0.36
4223.00	0.72	88.65	4188.23	403.54	402.34	62.47	0.51
4319.00	0.74	62.70	4284.23	403.86	402.64	63.62	0.34
4414.00	2.00	66.61	4379.20	404.84	403.58	65.69	1.32
4507.00	2.34	82.30	4472.13	405.81	404.47	69.05	0.73
4602.00	2.19	89.32	4567.06	406.17	404.76	72.79	0.33
4697.00	2.51	79.16	4661.98	406.66	405.17	76.65	0.55
4791.00	2.19	48.14	4755.90	408.32	406.75	80.01	1.37
4886.00	2.19	19.70	4850.83	411.28	409.67	81.97	1.13
4979.00	1.24	318.56	4943.80	413.70	412.10	81.91	2.07
5072.00	1.50	292.93	5036.77	414.89	413.33	80.12	0.71
5167.00	2.35	290.84	5131.72	416.01	414.51	77.15	0.90
5261.00	2.29	292.92	5225.64	417.35	415.92	73.62	0.11
5355.00	2.13	286.09	5319.57	418.49	417.14	70.22	0.33
5449.00	1.19	289.05	5413.53	419.24	417.94	67.62	1.01
5542.00	1.30	299.41	5506.51	420.04	418.77	65.78	0.27
5637.00	1.39	309.60	5601.48	421.27	420.04	63.95	0.27
5733.00	1.38	292.55	5697.46	422.41	421.22	61.99	0.43

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
5828.00	0.78	232.15	5792.44	422.42	421.27	60.43	1.27
5922.00	1.21	201.13	5886.43	421.09	419.95	59.56	0.72
6016.00	1.93	193.18	5980.39	418.61	417.49	58.85	0.80
6111.00	1.76	186.57	6075.34	415.60	414.48	58.32	0.29
6205.00	1.20	179.40	6169.31	413.18	412.07	58.16	0.62
6298.00	0.69	164.24	6262.30	411.67	410.55	58.32	0.60
6392.00	0.36	71.35	6356.30	411.22	410.10	58.76	0.85
6484.00	0.67	71.07	6448.29	411.50	410.36	59.53	0.34
6578.00	0.96	76.85	6542.28	411.89	410.72	60.82	0.33
6671.00	0.69	52.80	6635.27	412.43	411.24	62.03	0.47
6765.00	8.49	10.68	6728.91	419.64	418.41	63.77	8.50
6859.00	19.40	14.25	6820.00	441.75	440.43	68.91	11.63
6952.00	27.70	8.23	6905.19	478.31	476.85	75.82	9.28
7046.00	34.71	3.96	6985.55	526.79	525.24	80.81	7.82
7140.00	42.52	3.45	7058.94	585.35	583.74	84.57	8.32
7236.00	48.28	0.11	7126.33	653.66	652.02	86.60	6.49
7331.00	54.06	357.75	7185.87	727.57	725.97	85.16	6.39
7426.00	63.41	359.92	7235.12	808.61	807.06	83.58	10.03
7520.00	71.55	2.44	7271.09	895.37	893.80	85.42	9.00
7615.00	75.61	2.16	7297.95	986.45	984.83	89.07	4.28

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
7710.00	77.04	1.70	7320.41	1078.75	1077.08	92.18	1.58
7805.00	87.48	1.49	7333.19	1172.75	1171.05	94.79	11.00
7899.00	87.85	0.00	7337.02	1266.67	1264.96	96.02	1.62
7993.00	88.99	1.04	7339.61	1360.62	1358.92	96.88	1.64
8086.00	90.67	0.13	7339.88	1453.61	1451.91	97.82	2.06
8180.00	91.68	1.56	7337.95	1547.59	1545.87	99.21	1.86
8274.00	89.87	359.56	7336.69	1641.57	1639.85	100.12	2.87
8368.00	89.76	359.18	7336.99	1735.52	1733.84	99.09	0.41
8463.00	90.71	0.51	7336.60	1830.49	1828.84	98.83	1.71
8557.00	91.28	2.55	7334.97	1924.47	1922.79	101.34	2.26
8650.00	90.74	2.05	7333.33	2017.43	2015.70	105.08	0.79
8744.00	90.03	1.89	7332.70	2111.42	2109.64	108.31	0.77
8838.00	91.51	1.27	7331.43	2205.41	2203.59	110.90	1.71
9028.00	89.50	2.78	7329.76	2395.36	2393.45	117.60	1.33
9122.00	89.76	1.87	7330.36	2489.34	2487.37	121.41	1.01
9216.00	91.78	1.69	7329.10	2583.32	2581.31	124.33	2.15
9311.00	91.18	2.31	7326.65	2678.28	2676.22	127.64	0.91
9404.00	90.40	3.36	7325.36	2771.23	2769.10	132.24	1.41
9499.00	92.02	2.29	7323.35	2866.17	2863.96	136.92	2.05
9593.00	91.68	1.11	7320.31	2960.11	2957.86	139.70	1.31

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
9686.00	91.71	0.90	7317.56	3053.07	3050.81	141.32	0.22
9780.00	91.42	0.79	7314.99	3147.03	3144.76	142.71	0.34
9874.00	91.15	2.00	7312.89	3241.01	3238.71	145.00	1.32
9968.00	90.67	1.53	7311.40	3334.99	3332.65	147.90	0.72
10061.00	89.76	1.24	7311.04	3427.99	3425.62	150.14	1.02
10155.00	89.36	1.53	7311.76	3521.99	3519.59	152.42	0.53
10249.00	91.28	0.24	7311.23	3615.98	3613.57	153.87	2.46
10343.00	91.68	359.96	7308.81	3709.93	3707.54	154.03	0.52
10437.00	91.68	359.25	7306.05	3803.85	3801.50	153.37	0.75
10531.00	91.68	359.39	7303.29	3897.76	3895.45	152.25	0.15
10626.00	91.72	359.27	7300.48	3992.67	3990.40	151.14	0.13
10720.00	92.09	359.45	7297.36	4086.57	4084.35	150.09	0.44
10814.00	92.15	358.89	7293.88	4180.45	4178.27	148.73	0.60
10907.00	90.81	359.03	7291.47	4273.35	4271.22	147.05	1.46
11001.00	90.50	358.76	7290.40	4367.26	4365.20	145.24	0.43
11094.00	90.57	359.03	7289.52	4460.19	4458.18	143.45	0.30
11280.00	91.32	0.17	7286.46	4646.09	4644.14	142.15	0.73
11372.00	91.08	0.82	7284.54	4738.06	4736.12	142.94	0.75
11466.00	91.25	1.46	7282.64	4832.04	4830.08	144.82	0.70
11559.00	91.91	1.72	7280.07	4925.00	4923.01	147.39	0.77

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
11653.00	91.45	0.75	7277.32	5018.96	5016.95	149.41	1.14
11746.00	91.08	1.58	7275.27	5111.94	5109.90	151.30	0.98
11840.00	91.14	2.63	7273.45	5205.90	5203.82	154.76	1.12
11932.00	89.23	2.89	7273.15	5297.86	5295.71	159.19	2.10
12027.00	90.70	3.18	7273.21	5392.81	5390.57	164.22	1.58
12121.00	89.46	3.31	7273.07	5486.75	5484.42	169.54	1.33
12215.00	90.27	4.29	7273.29	5580.65	5578.21	175.77	1.35
12307.00	90.67	3.98	7272.54	5672.52	5669.97	182.41	0.56
12400.00	91.68	3.93	7270.63	5765.39	5762.73	188.82	1.09
12495.00	90.70	3.85	7268.65	5860.26	5857.49	195.26	1.03
12590.00	89.93	3.05	7268.12	5955.19	5952.31	200.97	1.18
12685.00	90.00	3.62	7268.18	6050.12	6047.15	206.49	0.60
12779.00	90.71	4.29	7267.60	6144.01	6140.92	212.98	1.04
12847.00	90.10	4.05	7267.12	6211.91	6208.74	217.92	0.96

5" = 100' FEET MD