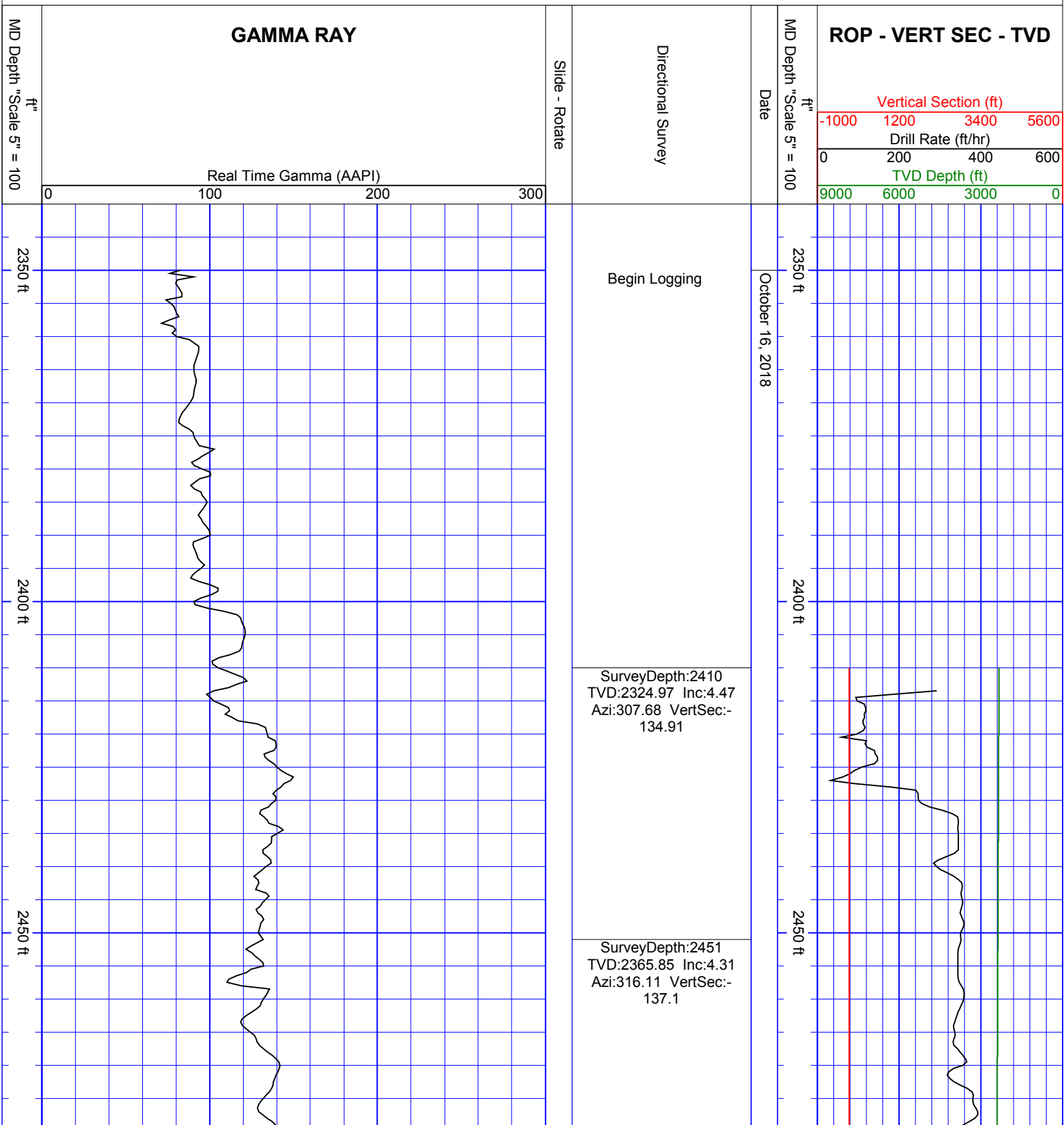
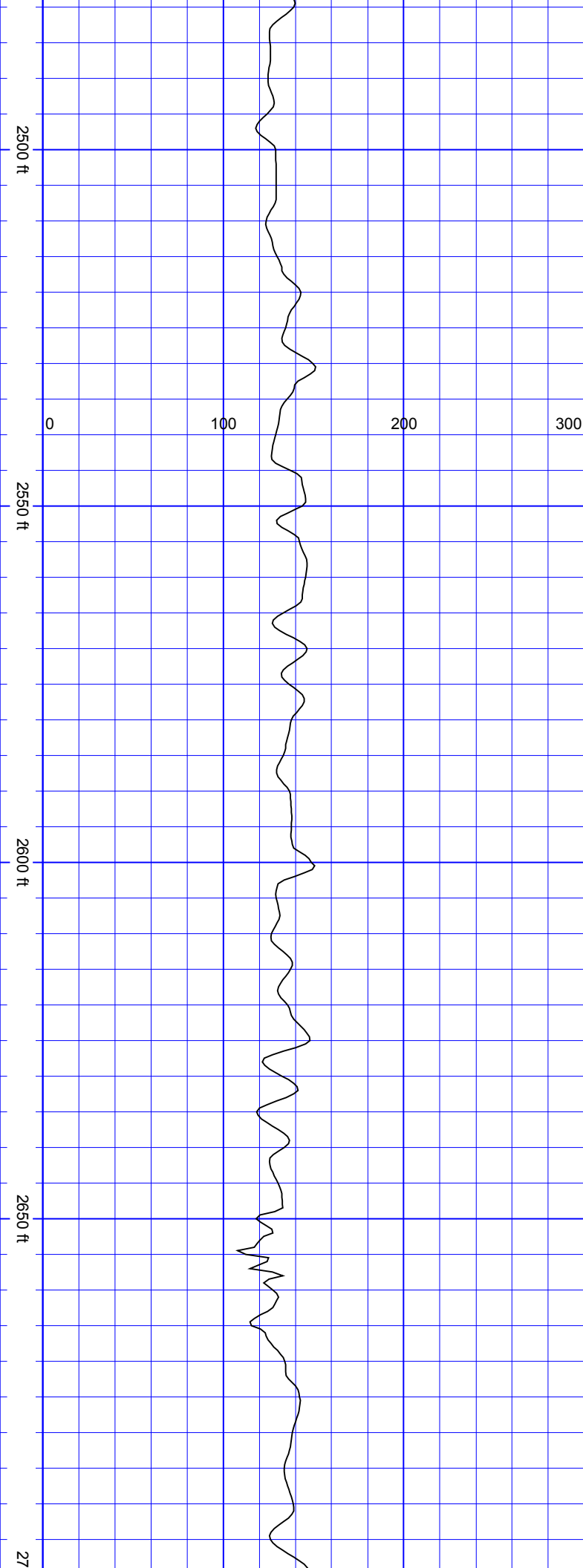


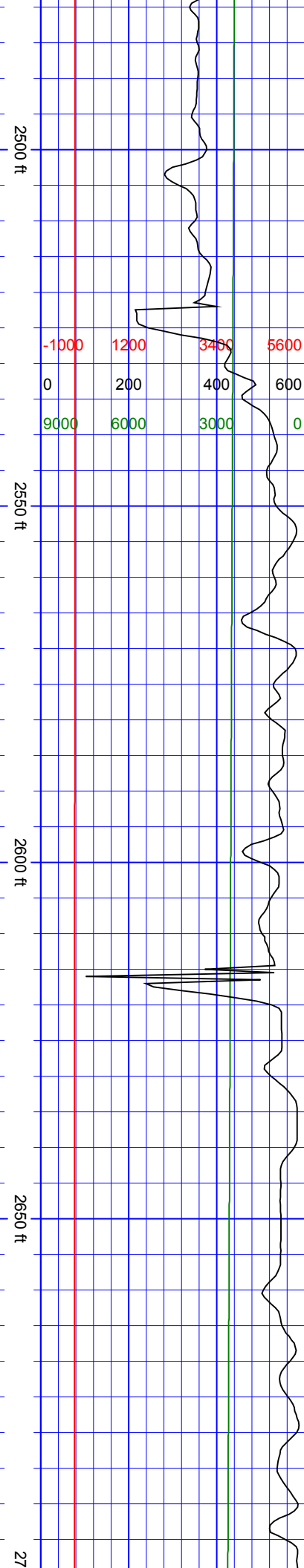
Interpretations of this data by Cathedral Energy Services will be of best judgment as to correctness. Cathedral Energy Services cannot and does not guarantee the accuracy or correctness of interpretations or any surveys derived therefrom. Cathedral Energy Services makes no warranties of performance, results, fitness or suitability for any particular purposes with respect to the goods being furnished under the terms and conditions. Cathedral Energy Services warrants that the equipment furnished will conform to Cathedral Energy Services published specifications in effect at the time and be in good working order.

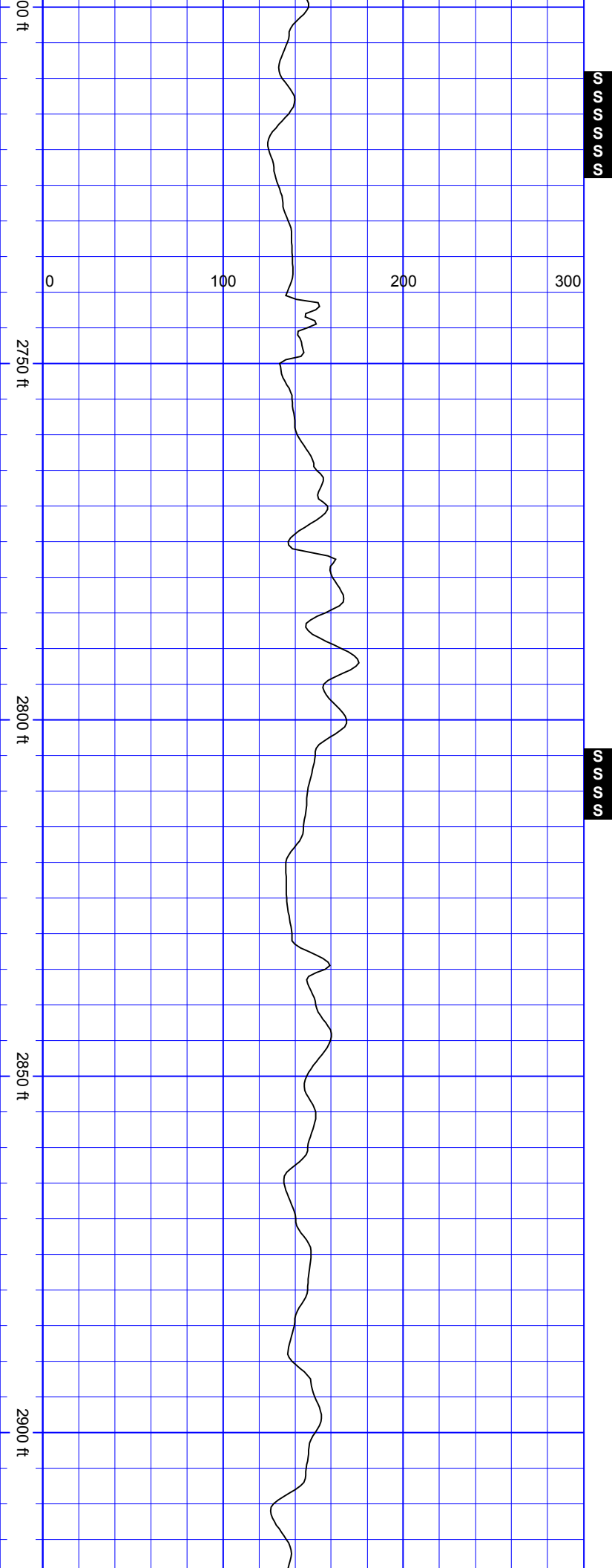




SurveyDepth:2545
TVD:2459.6 Inc:4.04
Azi:313.12 VertSec:-
141.63

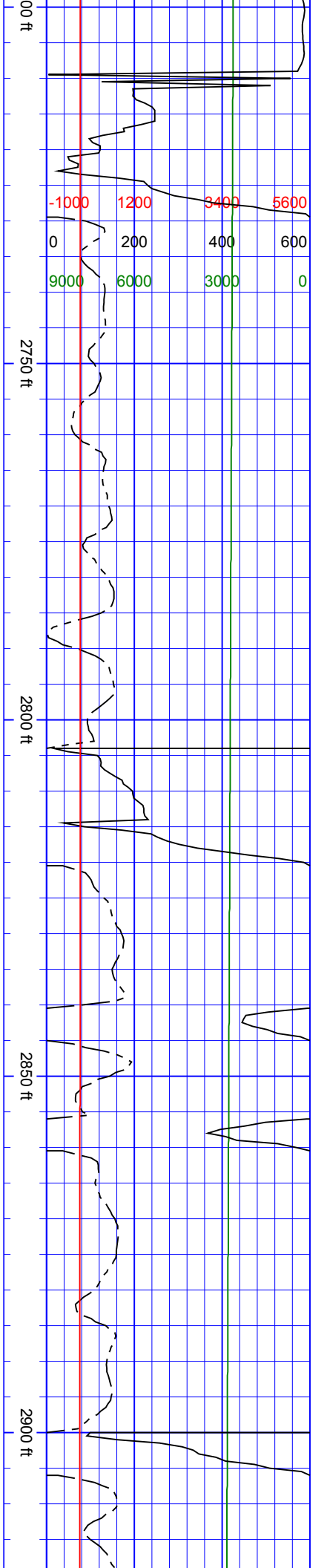
SurveyDepth:2639
TVD:2553.4 Inc:3.47
Azi:309.61 VertSec:-
145.95

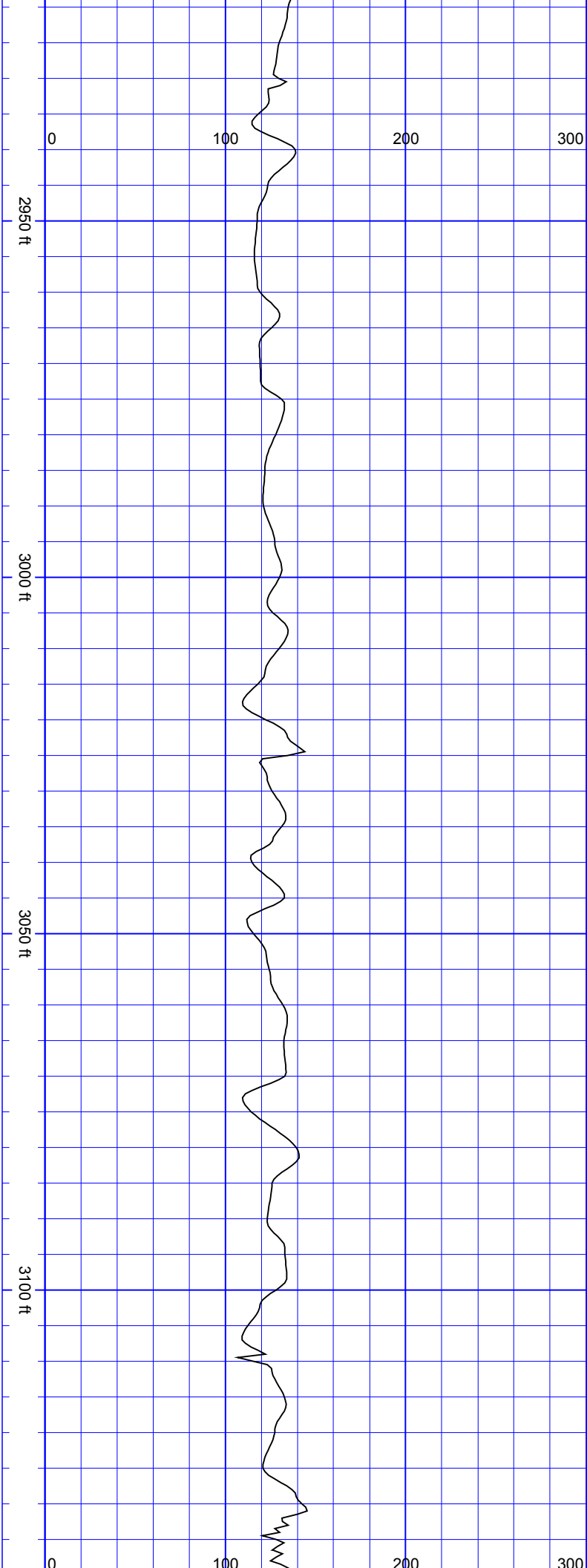




SurveyDepth:2734
TVD:2648.21 Inc:3.87
Azi:322.26 VertSec:-
149.83

SurveyDepth:2829
TVD:2742.96 Inc:4.4
Azi:309.17 VertSec:-
154.28

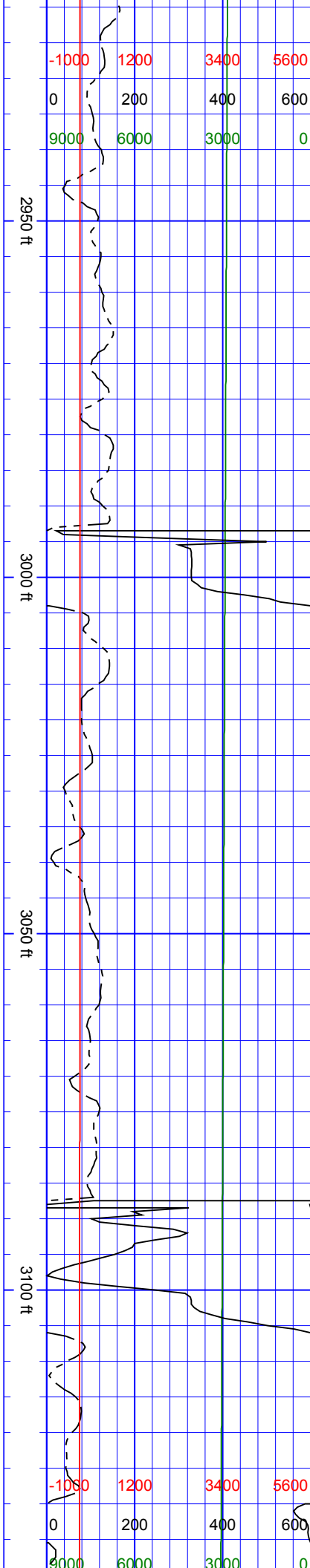


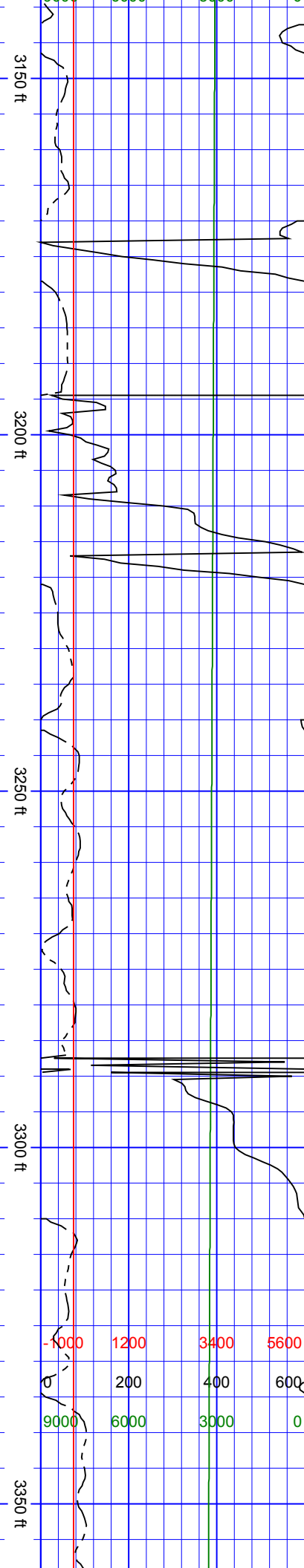


SurveyDepth:2923
TVD:2836.69 Inc:4.26
Azi:308.9 VertSec:-
159.48

SurveyDepth:3028
TVD:2941.42 Inc:3.91
Azi:306.97 VertSec:-
165.05

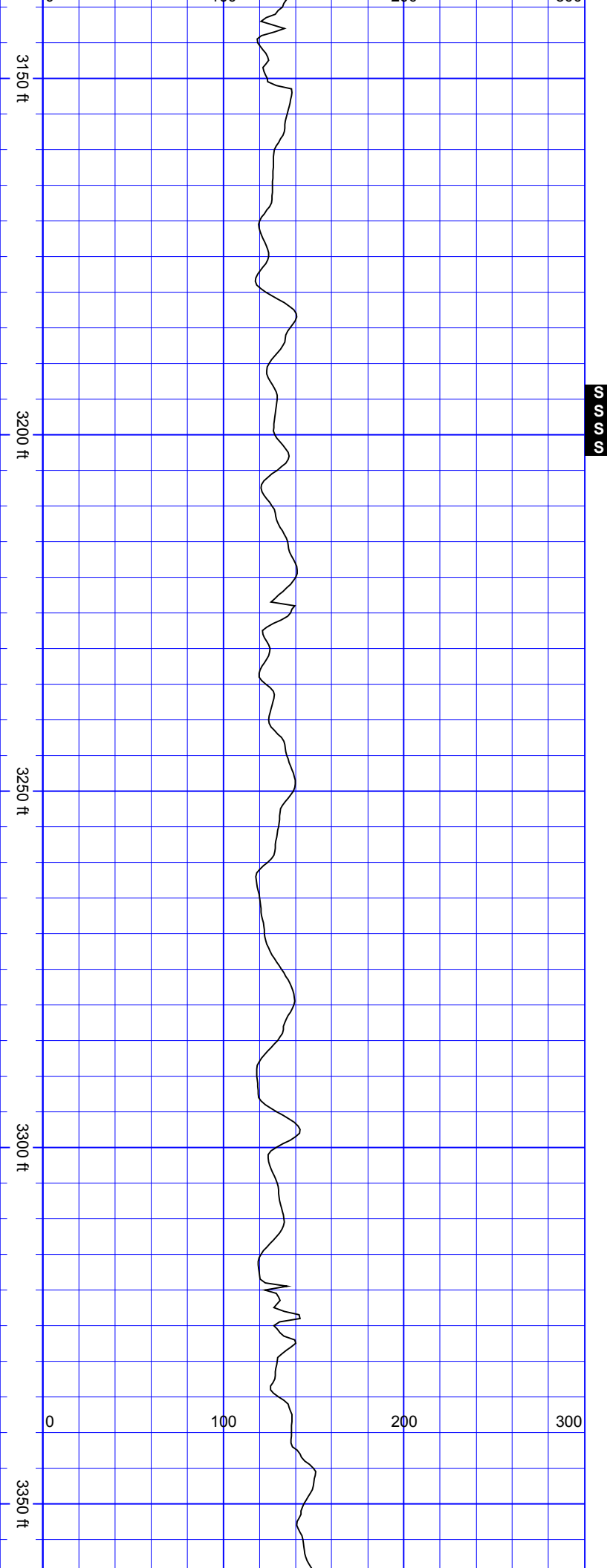
SurveyDepth:3123
TVD:3036.23 Inc:3.43
Azi:304.77 VertSec:-
169.72

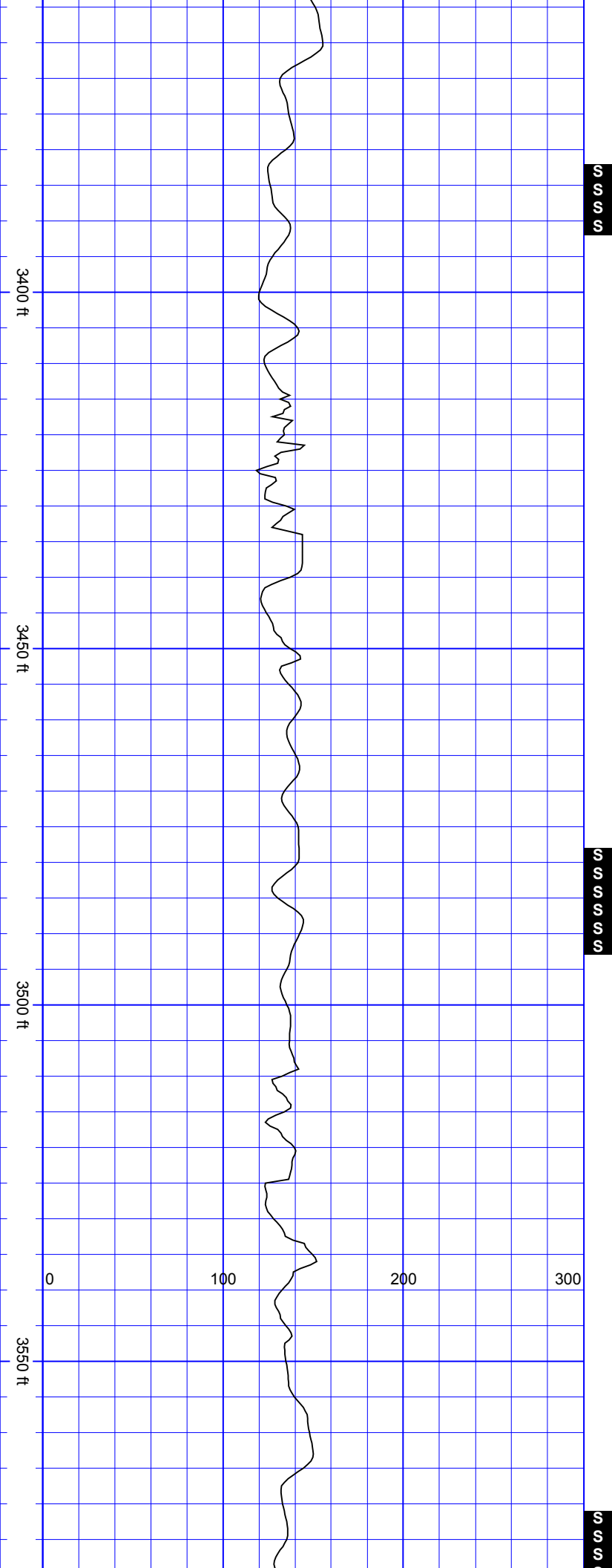




SurveyDepth:3217
TVD:3130.04 Inc:3.96
Azi:325.95 VertSec:-
173.55

SurveyDepth:3312
TVD:3224.83 Inc:3.56
Azi:326.74 VertSec:-
176.65





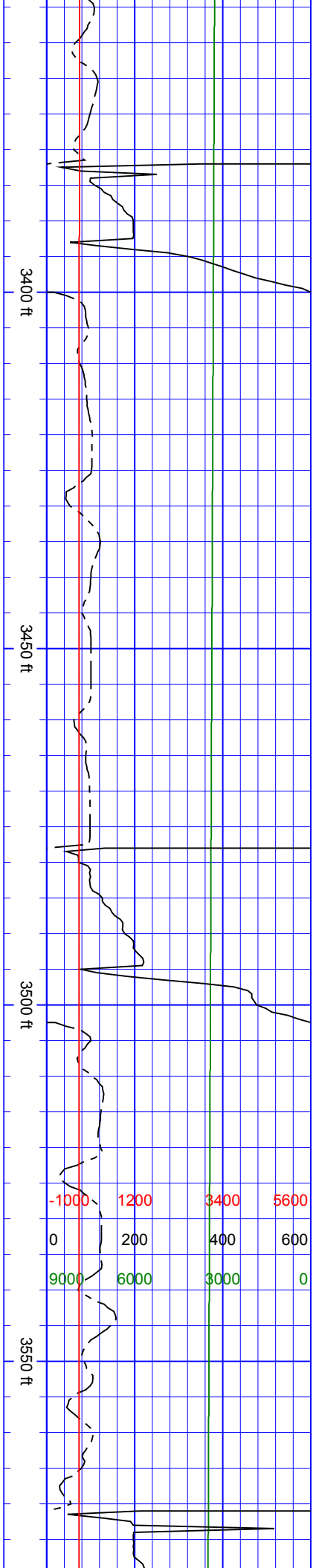
S
S
S
S

SurveyDepth:3406
TVD:3318.69 Inc:2.81
Azi:302.49 VertSec:-
179.94

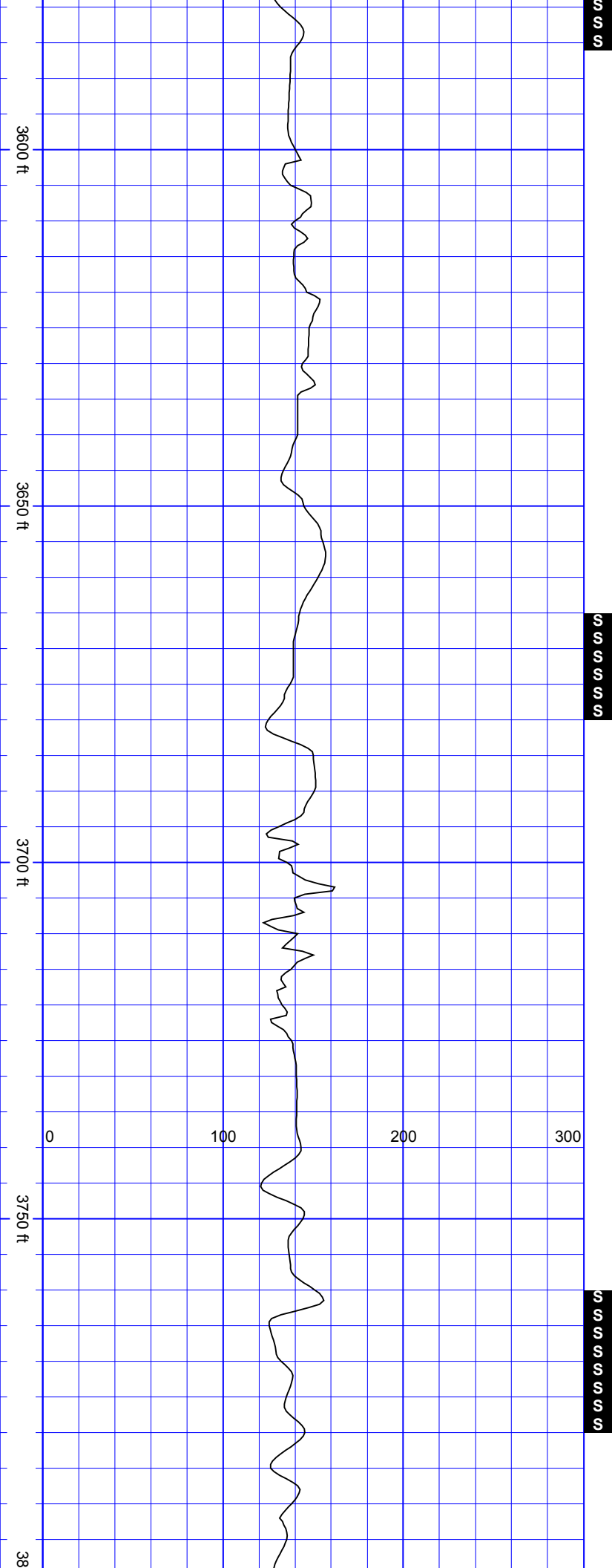
S
S
S
S
S

SurveyDepth:3501
TVD:3413.53 Inc:3.87
Azi:299.06 VertSec:-
184.5

S
S
S



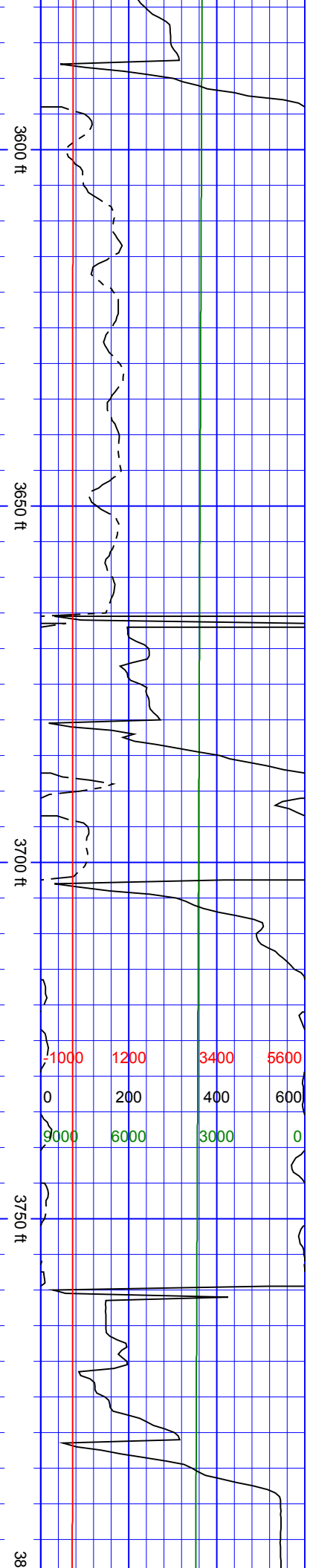
-1000	1200	3400	5600
0	200	400	600
9000	6000	3000	0

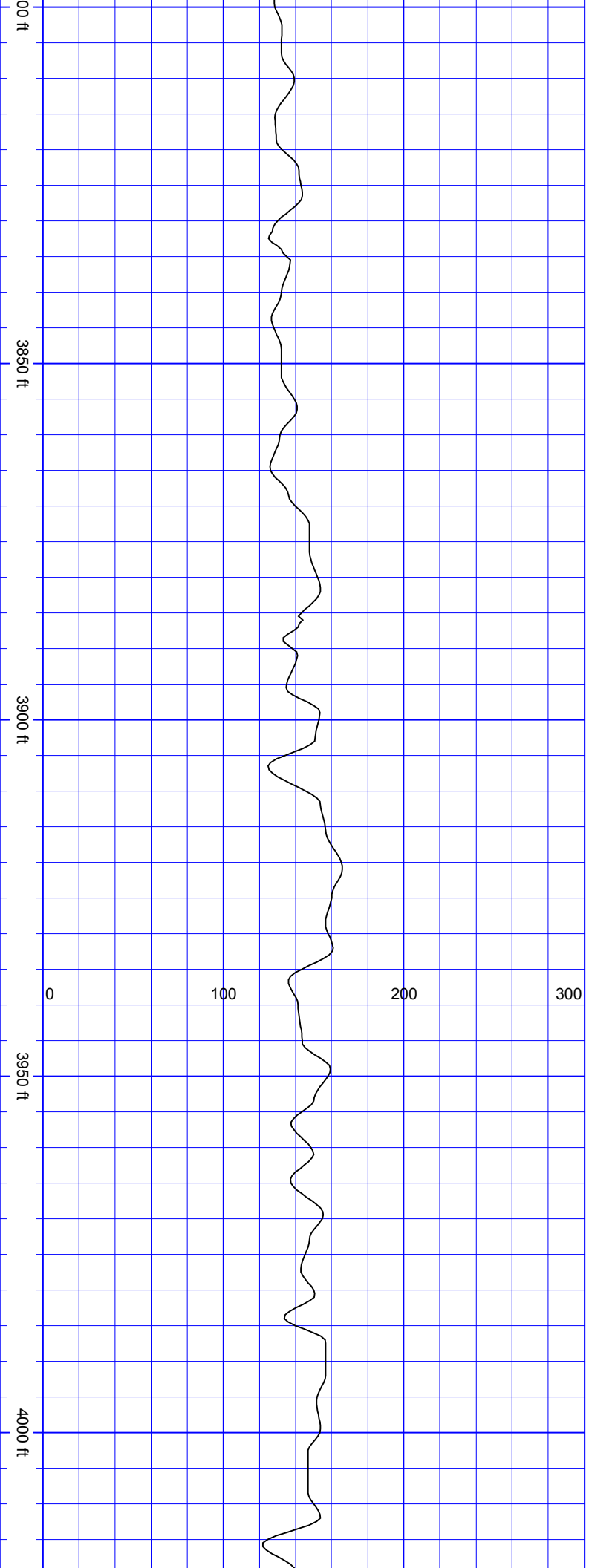


SurveyDepth:3595
TVD:3507.28 Inc:4.48
Azi:303.89 VertSec:-
190.07

SurveyDepth:3690
TVD:3601.98 Inc:4.66
Azi:310.57 VertSec:-
195.76

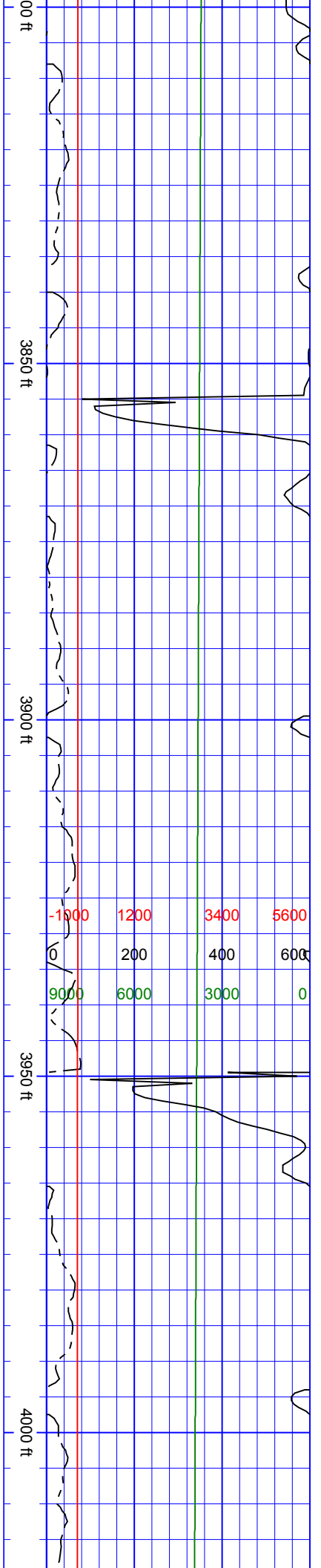
SurveyDepth:3785
TVD:3696.55 Inc:6.24
Azi:303.72 VertSec:-
202.61

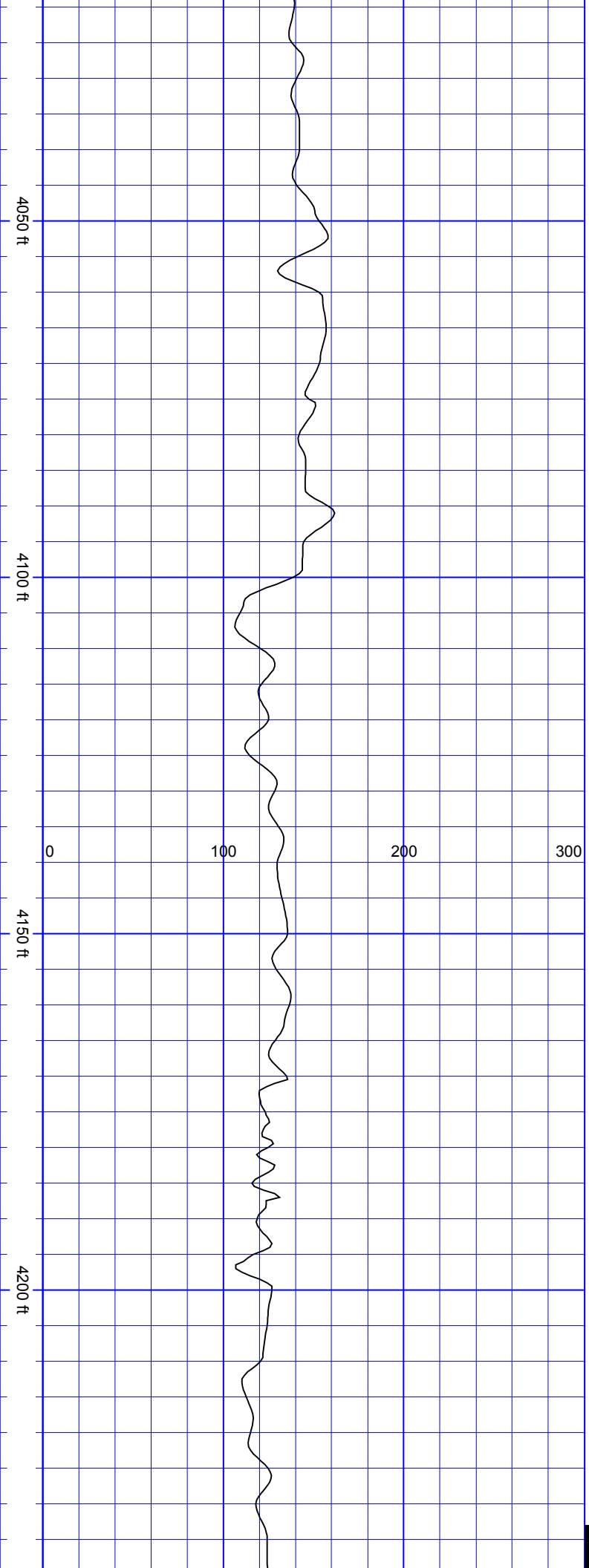




SurveyDepth:3879
TVD:3790 Inc:6.15
Azi:307.85 VertSec:-
210.41

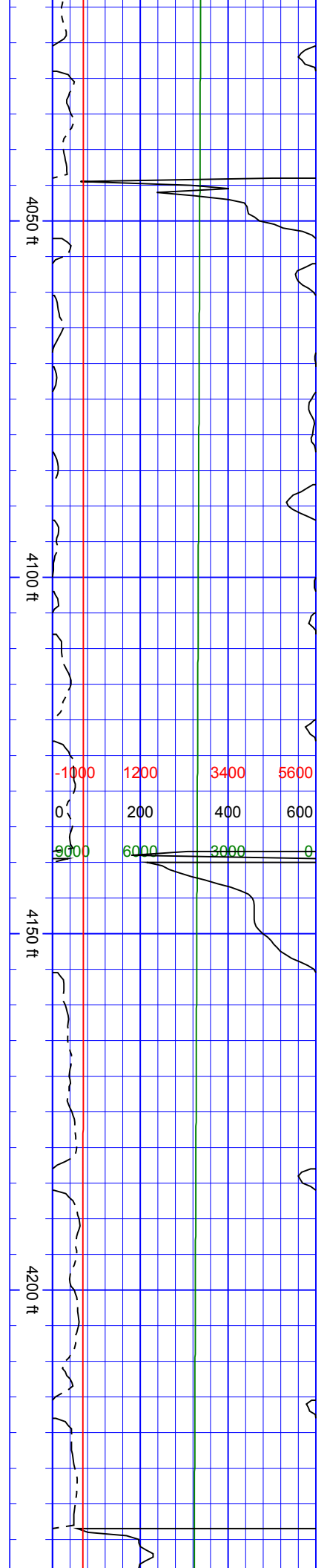
SurveyDepth:3974
TVD:3884.54 Inc:5.1
Azi:311.63 VertSec:-
217.17

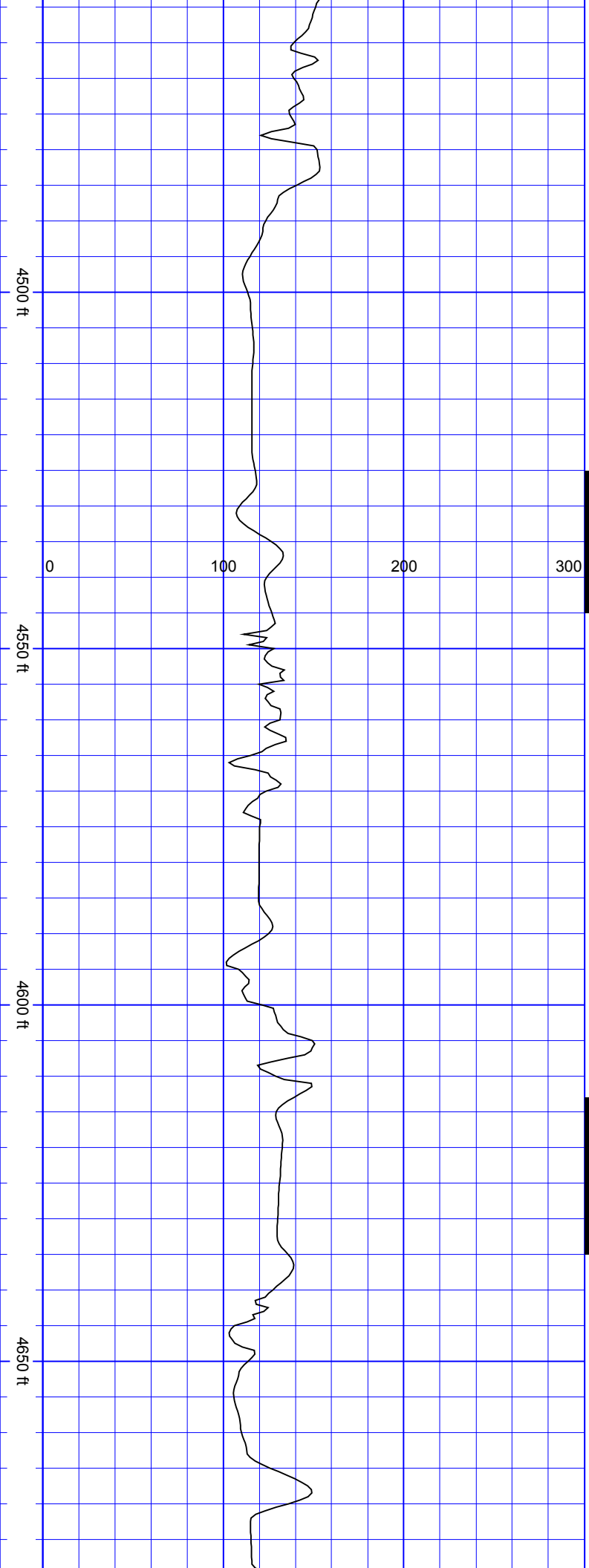




SurveyDepth:4068
TVD:3978.23 Inc:4.22
Azi:316.99 VertSec:-
222.29

SurveyDepth:4163
TVD:4072.99 Inc:3.91
Azi:319.01 VertSec:-
226.45



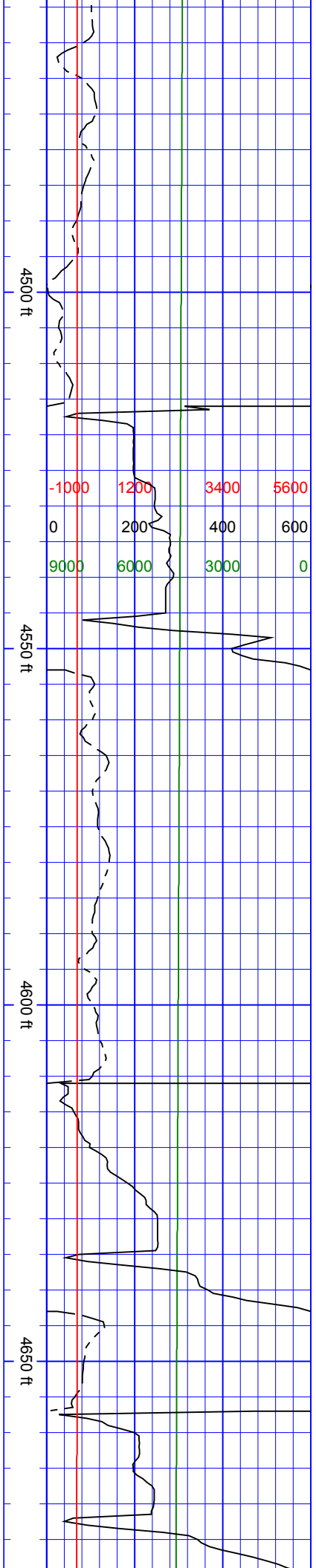


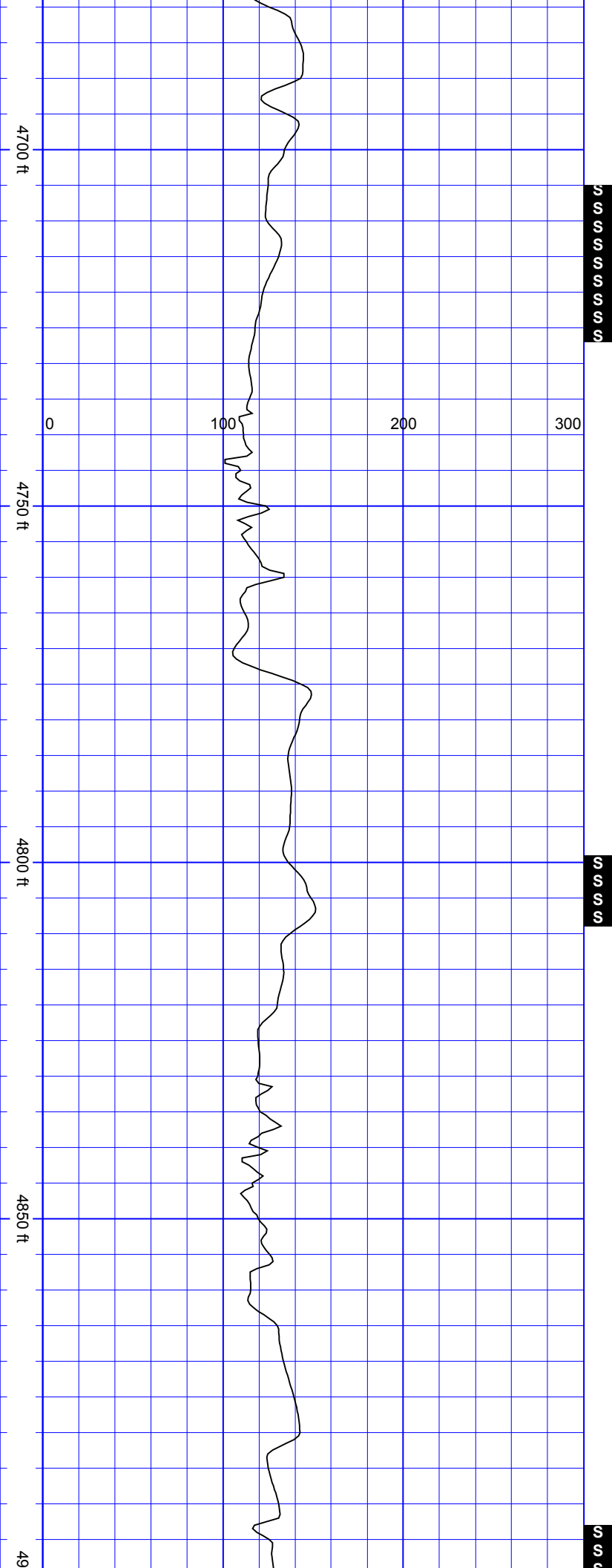
S
S
S
S
S
S
S
S

SurveyDepth:4540
TVD:4449.06 Inc:5.89
Azi:352.14 VertSec:-
234.38

S
S
S
S
S
S
S
S

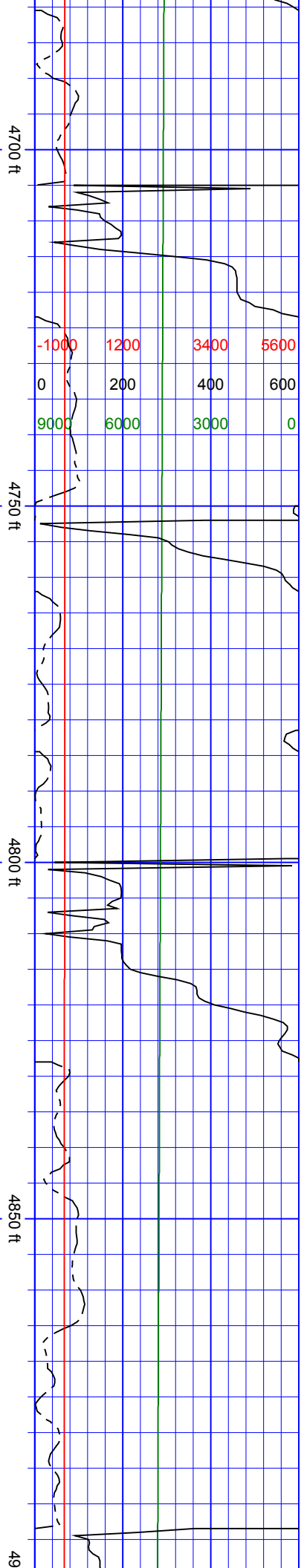
SurveyDepth:4635
TVD:4543.59 Inc:5.63
Azi:325.87 VertSec:-
237.07

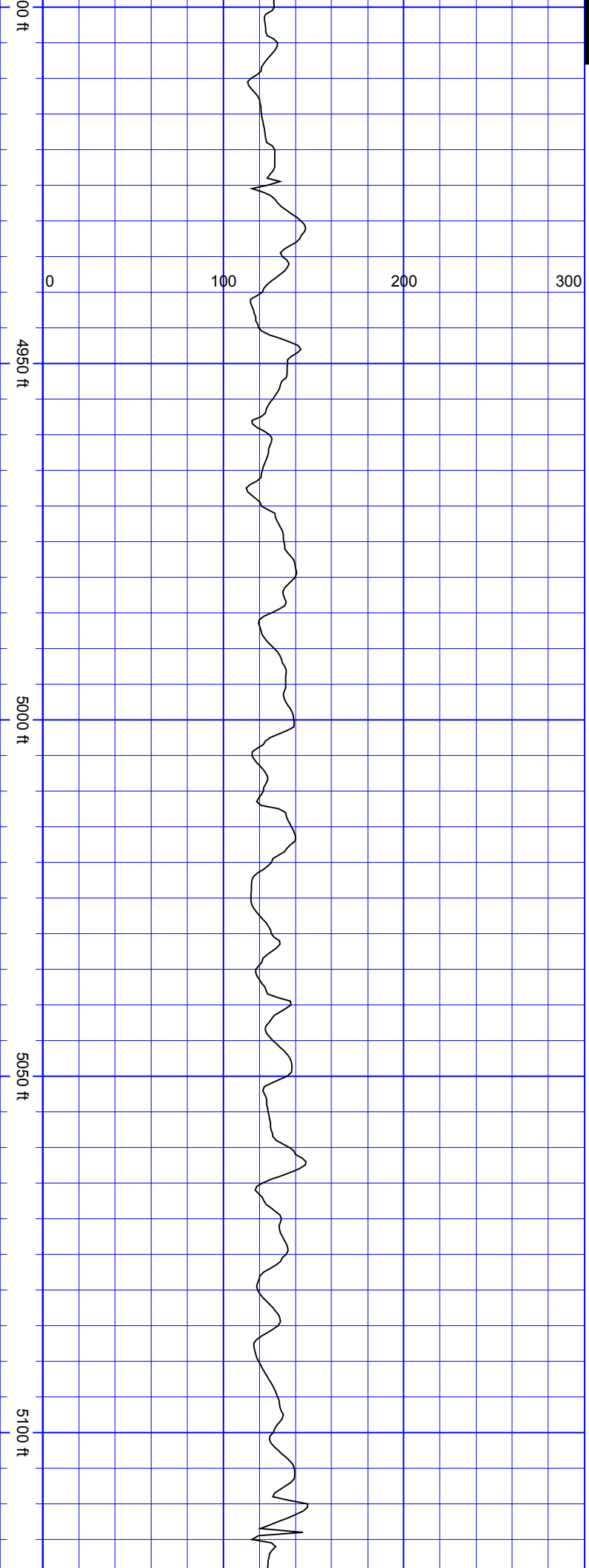




SurveyDepth:4729
TVD:4637.15 Inc:5.63
Azi:299.15 VertSec:-
243.27

SurveyDepth:4823
TVD:4730.67 Inc:6.02
Azi:296.6 VertSec:-
251.38

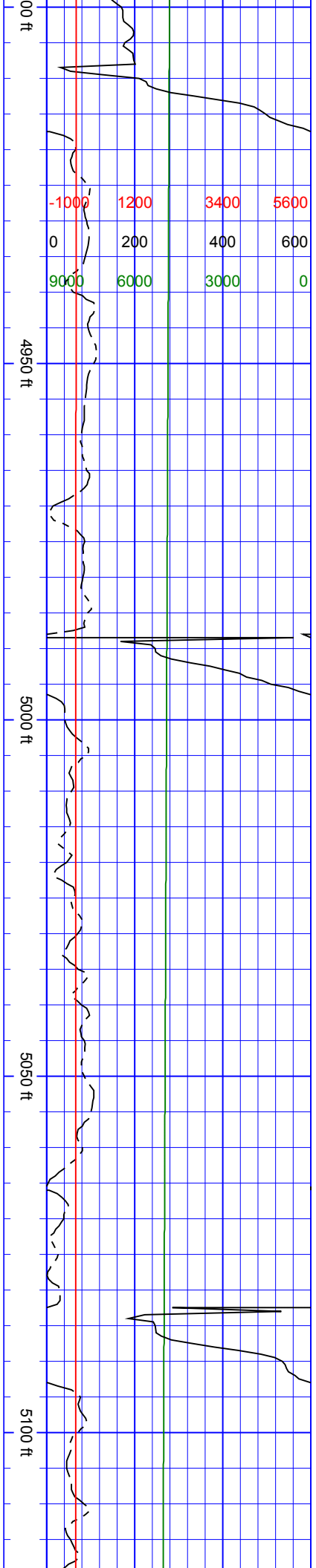


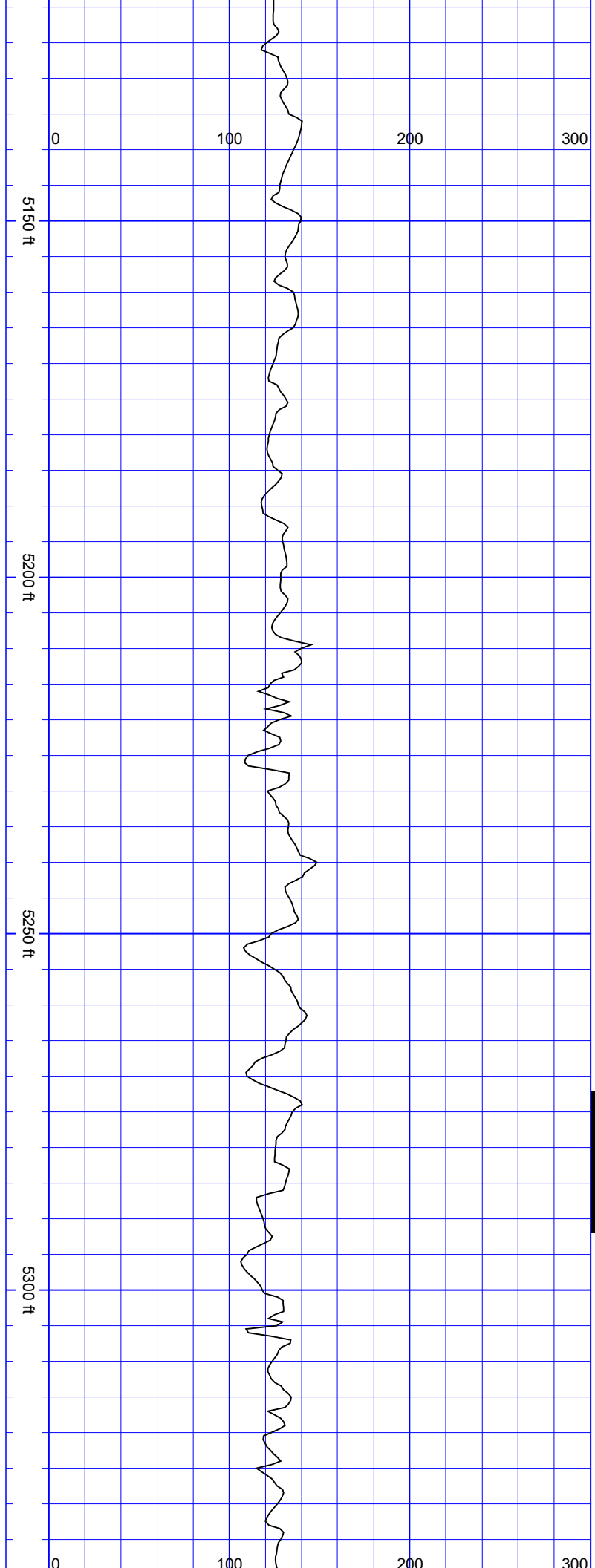


SurveyDepth:4917
TVD:4824.23 Inc:5.1
Azi:280.16 VertSec:-
259.68

SurveyDepth:5012
TVD:4918.93 Inc:4.04
Azi:288.78 VertSec:-
266.87

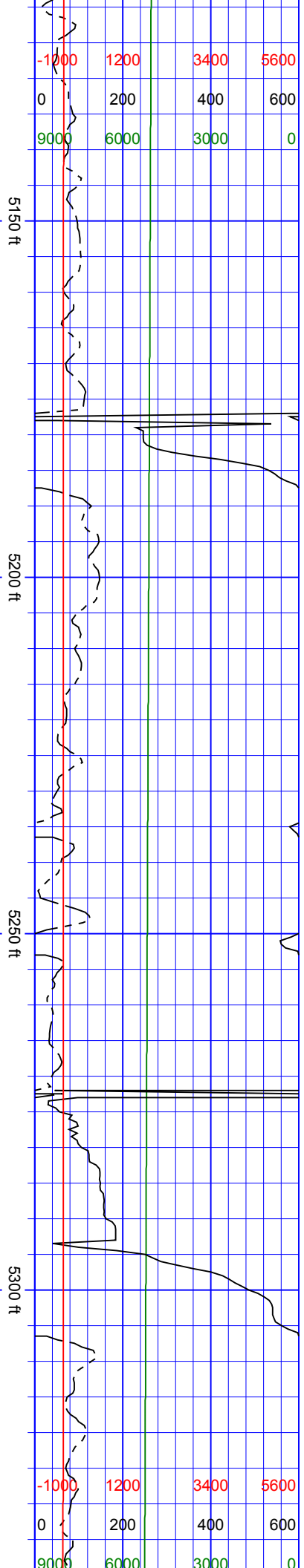
SurveyDepth:5107
TVD:5013.73 Inc:3.47
Azi:282.18 VertSec:-
272.72

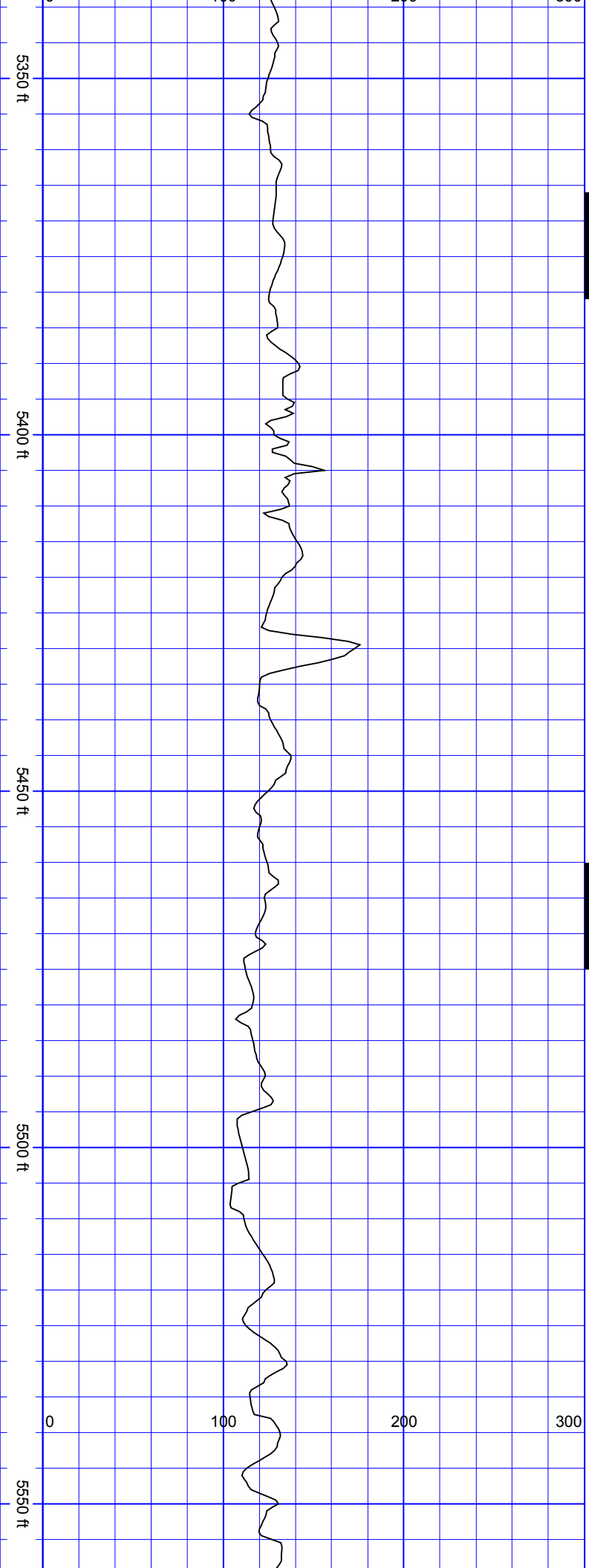




SurveyDepth:5202
TVD:5108.59 Inc:2.81
Azi:258.98 VertSec:-
277.8

SurveyDepth:5296
TVD:5202.38 Inc:4.66
Azi:273.66 VertSec:-
283.87



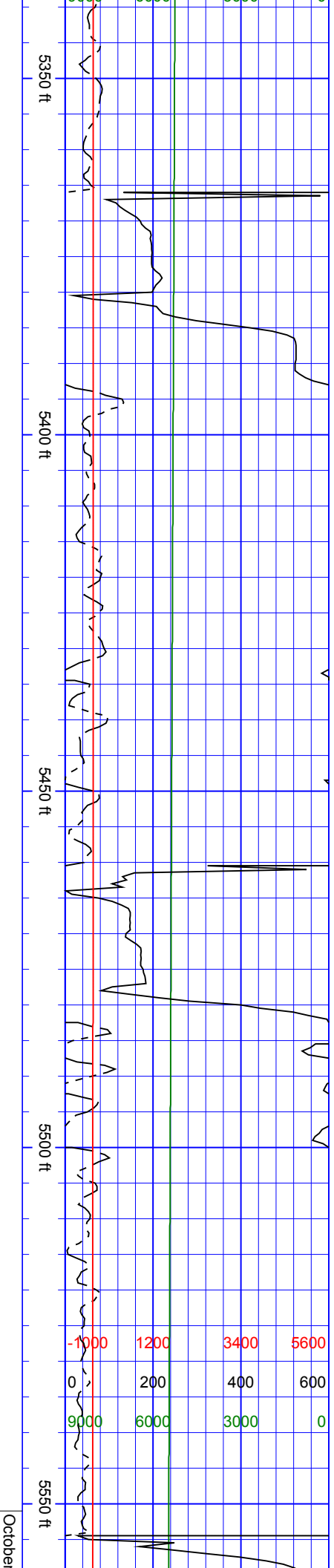


SSSSSS

SurveyDepth:5390
TVD:5296.08 Inc:4.61
Azi:288.69 VertSec:-
291.14

SSSSSS

SurveyDepth:5484
TVD:5389.72 Inc:5.49
Azi:297.39 VertSec:-
298.48



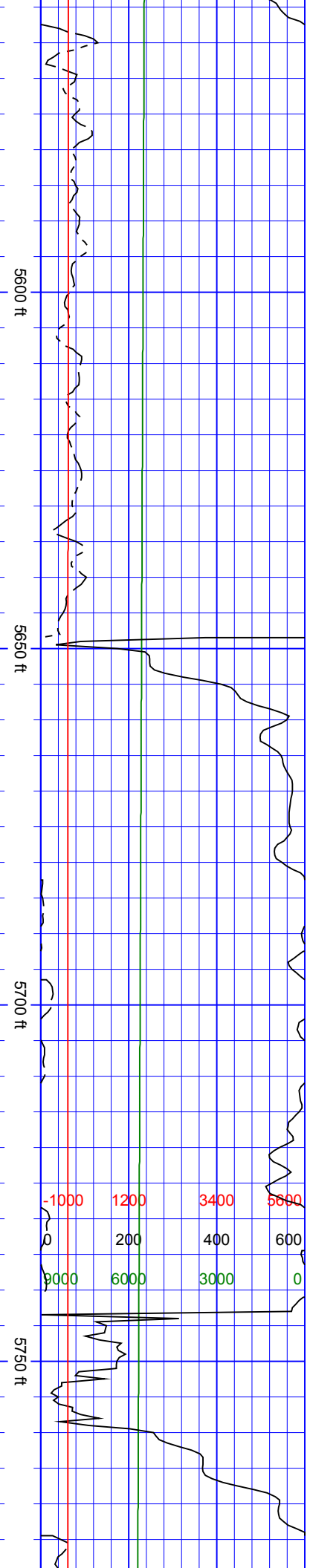
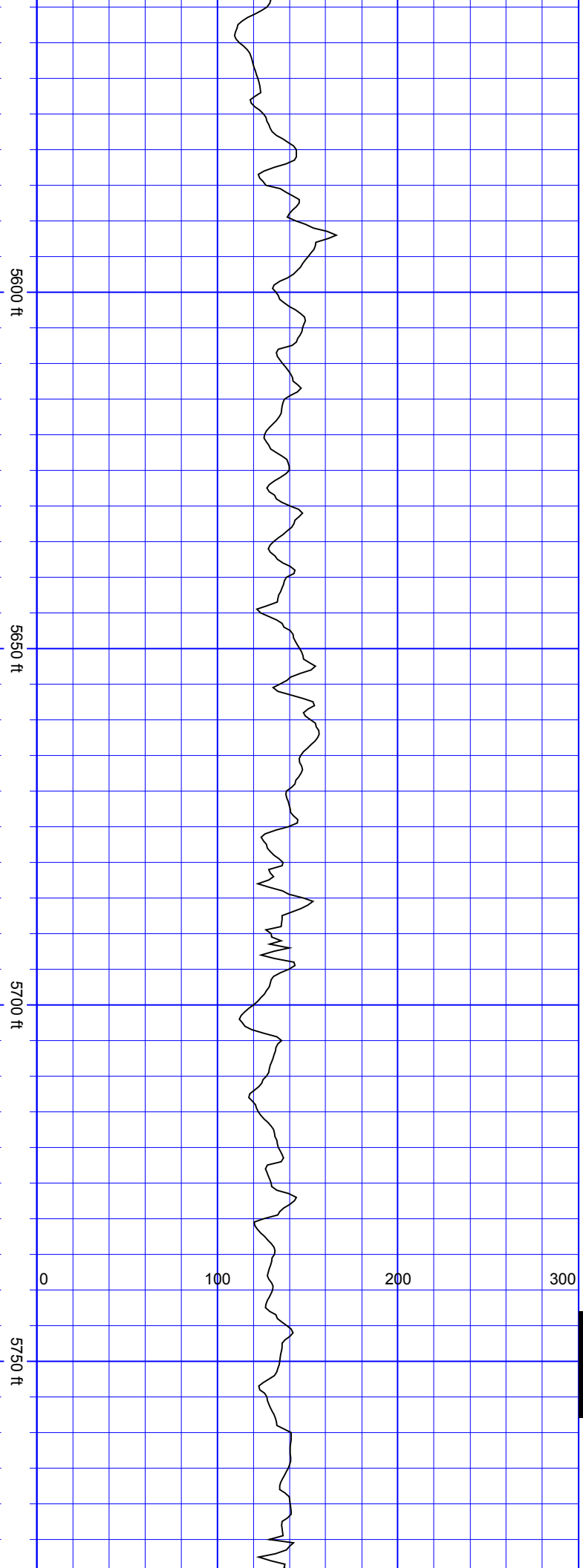
October

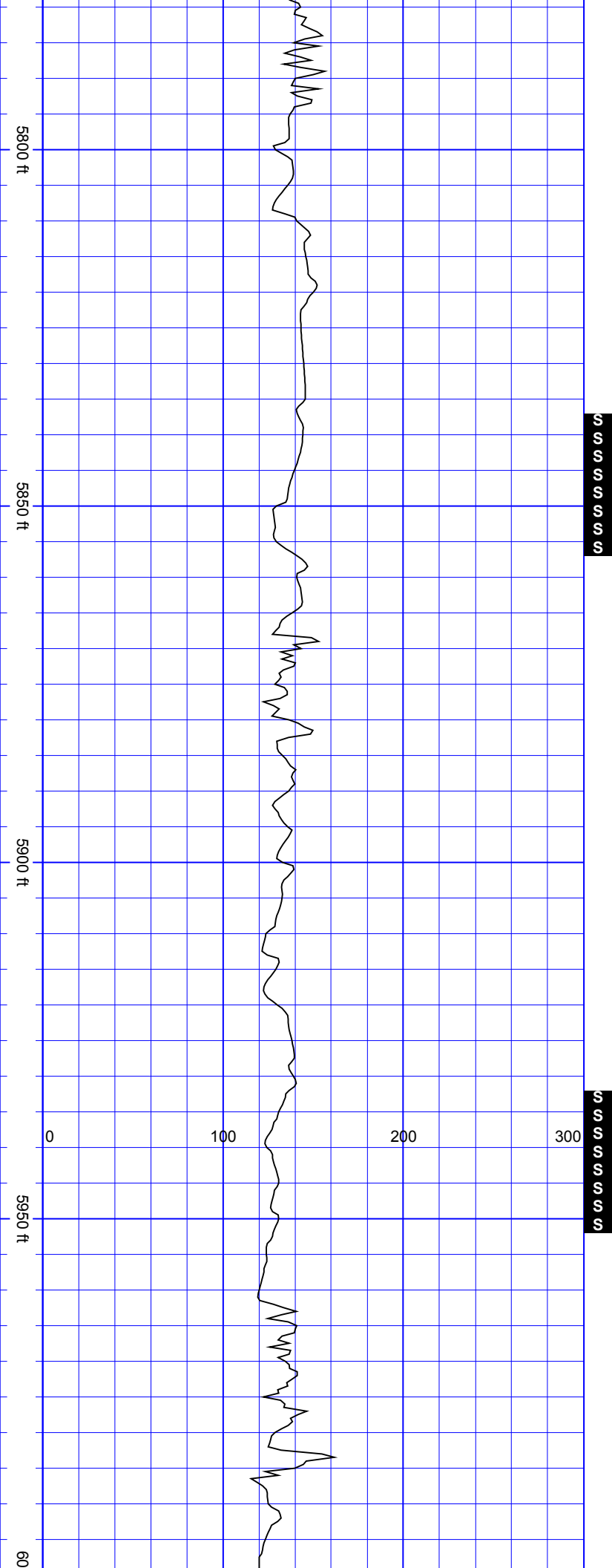
17, 2018

SurveyDepth:5578
TVD:5483.32 Inc:5.1
Azi:294.58 VertSec:-
305.99

SurveyDepth:5673
TVD:5577.99 Inc:4.44
Azi:293.35 VertSec:-
312.98

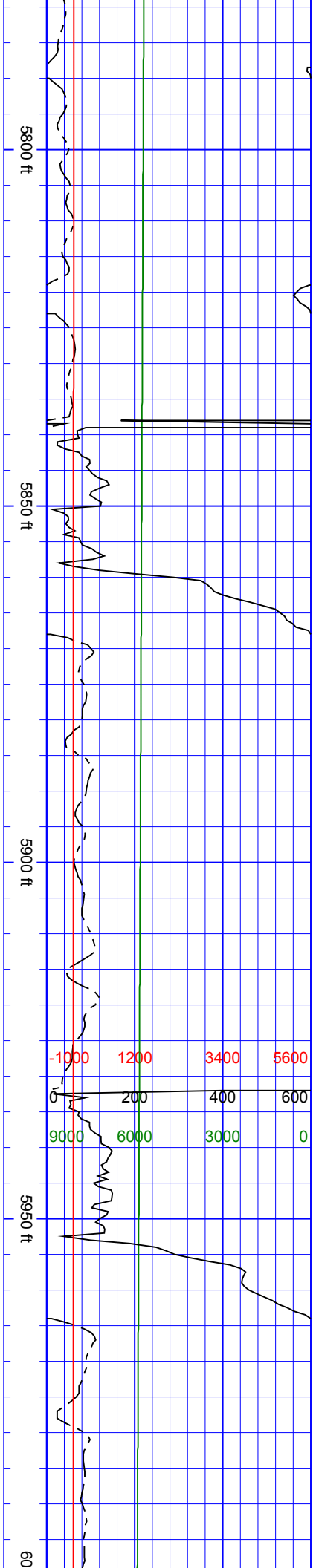
SurveyDepth:5767
TVD:5671.76 Inc:3.47
Azi:290.27 VertSec:-
318.81

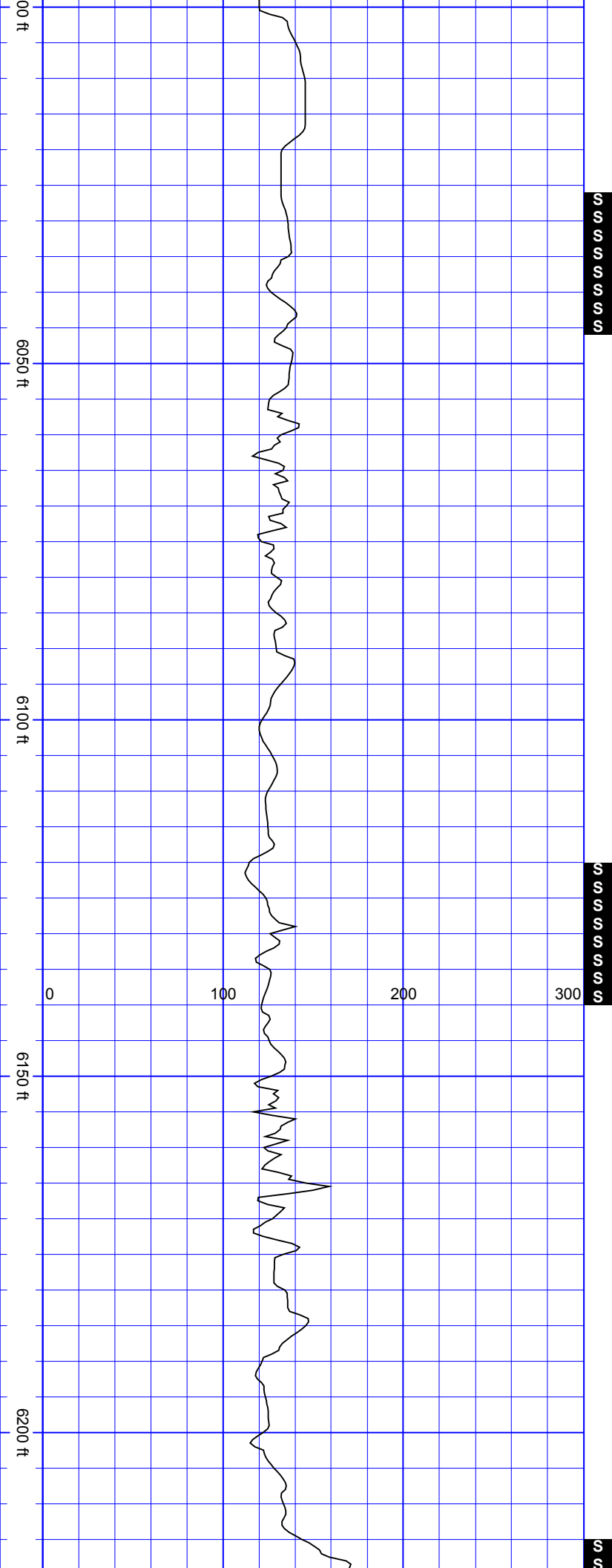




SurveyDepth:5862
TVD:5766.6 Inc:3.34
Azi:305.12 VertSec:-
323.58

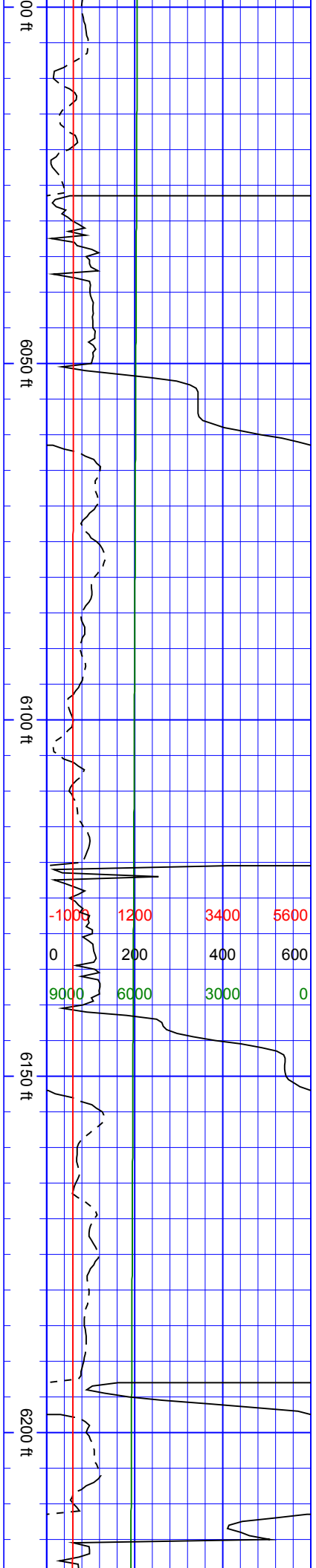
SurveyDepth:5956
TVD:5860.35 Inc:5.01
Azi:327.62 VertSec:-
327.67





SurveyDepth:6050
TVD:5953.87 Inc:6.5
Azi:325.16 VertSec:-
332.37

SurveyDepth:6145
TVD:6048.17 Inc:7.43
Azi:315.85 VertSec:-
339.11



SSSSSS

SurveyDepth:6240
TVD:6142.45 Inc:6.9
Azi:296.07 VertSec:-
348.03

SurveyDepth:6334
TVD:6235.91 Inc:5.27
Azi:293.87 VertSec:-
356.75

SurveyDepth:6429
TVD:6330.62 Inc:3.69
Azi:293.08 VertSec:-
363.33

6250 ft

6300 ft

6350 ft

6400 ft

0 100 200 300

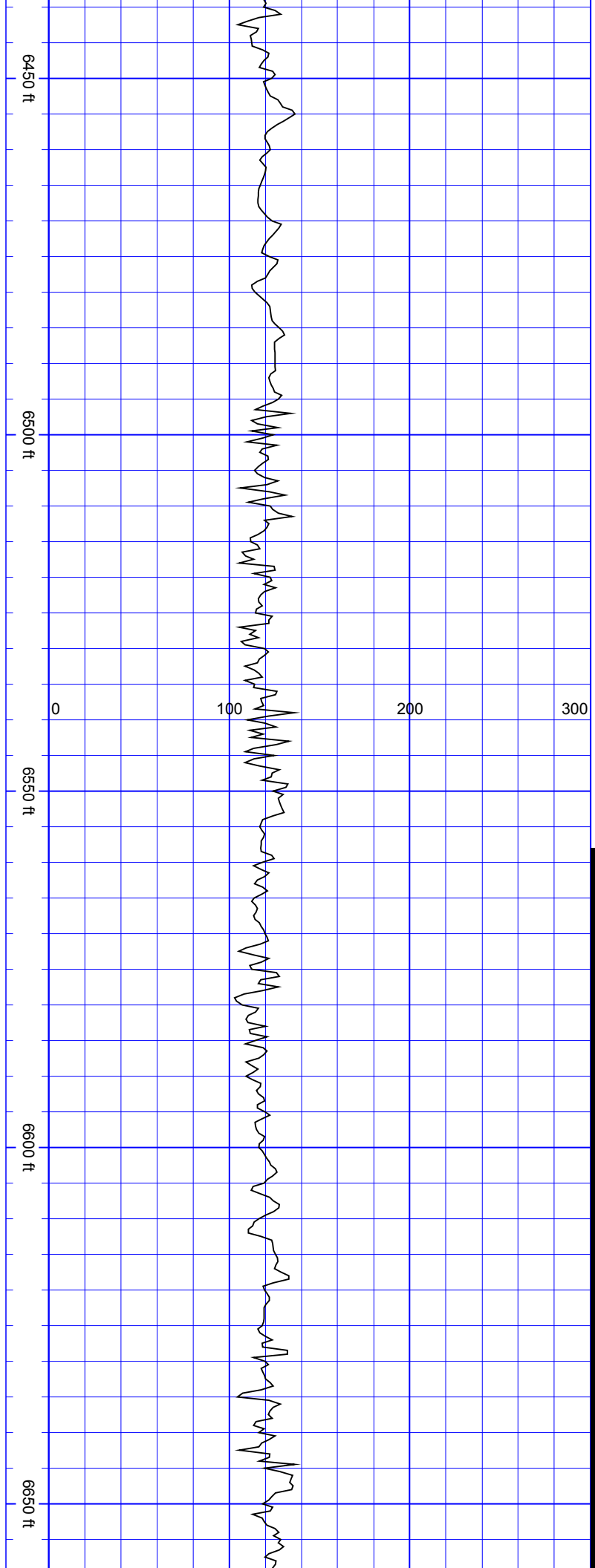
6250 ft

6300 ft

6350 ft

6400 ft

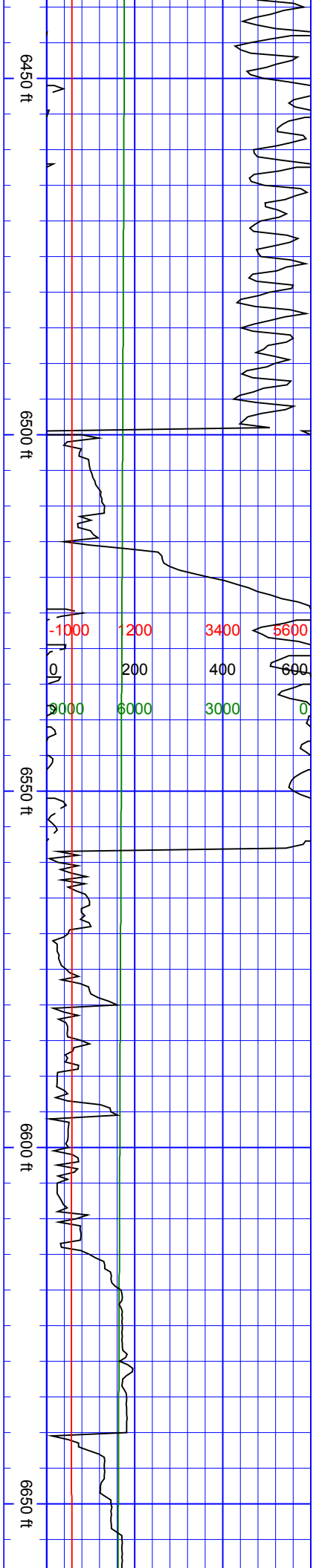
-1000	1200	3400	5600
0	200	400	600
8000	6000	3000	0



SurveyDepth:6523
TVD:6424.46 Inc:3.03
Azi:321.12 VertSec:-367.46

SurveyDepth:6570
TVD:6471.37 Inc:4
Azi:330 VertSec:-368.89

SurveyDepth:6618
TVD:6519.23 Inc:4.88
Azi:342.48 VertSec:-370.11



6700 ft

6750 ft

6800 ft

6850 ft

SurveyDepth:6665
TVD:6565.86 Inc:9.49
Azi:11.92 VertSec:-
369.53

SurveyDepth:6712
TVD:6611.95 Inc:13.14
Azi:26.51 VertSec:-
365.77

SurveyDepth:6759
TVD:6657.75 Inc:13.14
Azi:46.99 VertSec:-
358.92

SurveyDepth:6806
TVD:6703.48 Inc:13.54
Azi:53.49 VertSec:-
350.15

SurveyDepth:6853
TVD:6749.15 Inc:13.76
Azi:54.37 VertSec:-
340.76

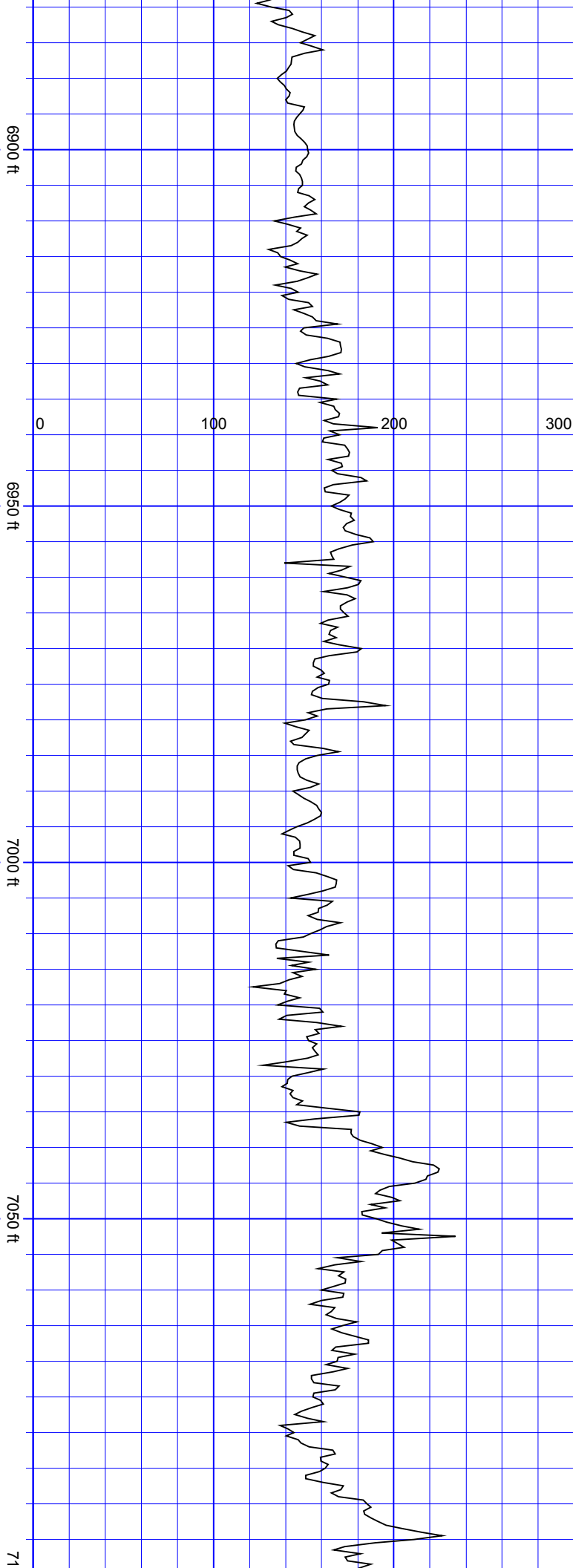
6700 ft

6750 ft

6800 ft

6850 ft

-1000	1200	3400	5600
0	200	400	600
9000	6000	3000	0

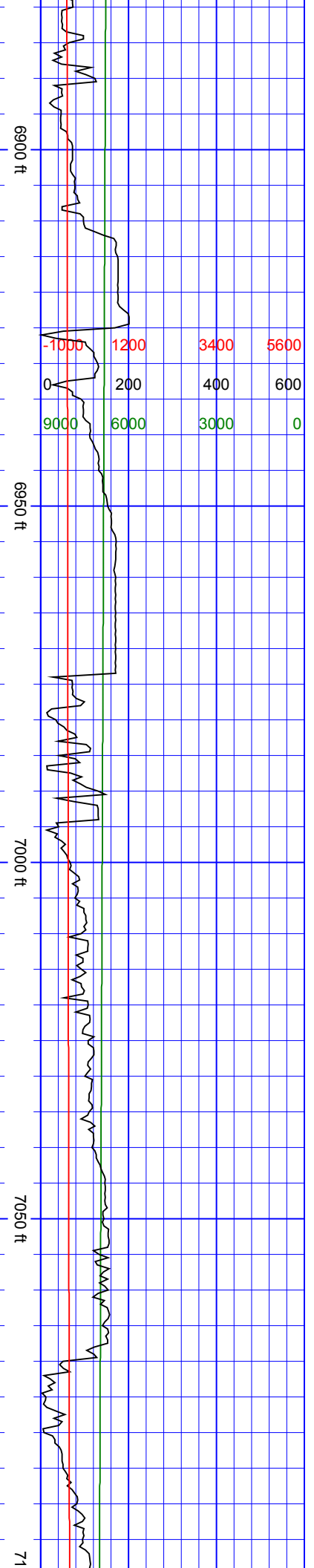


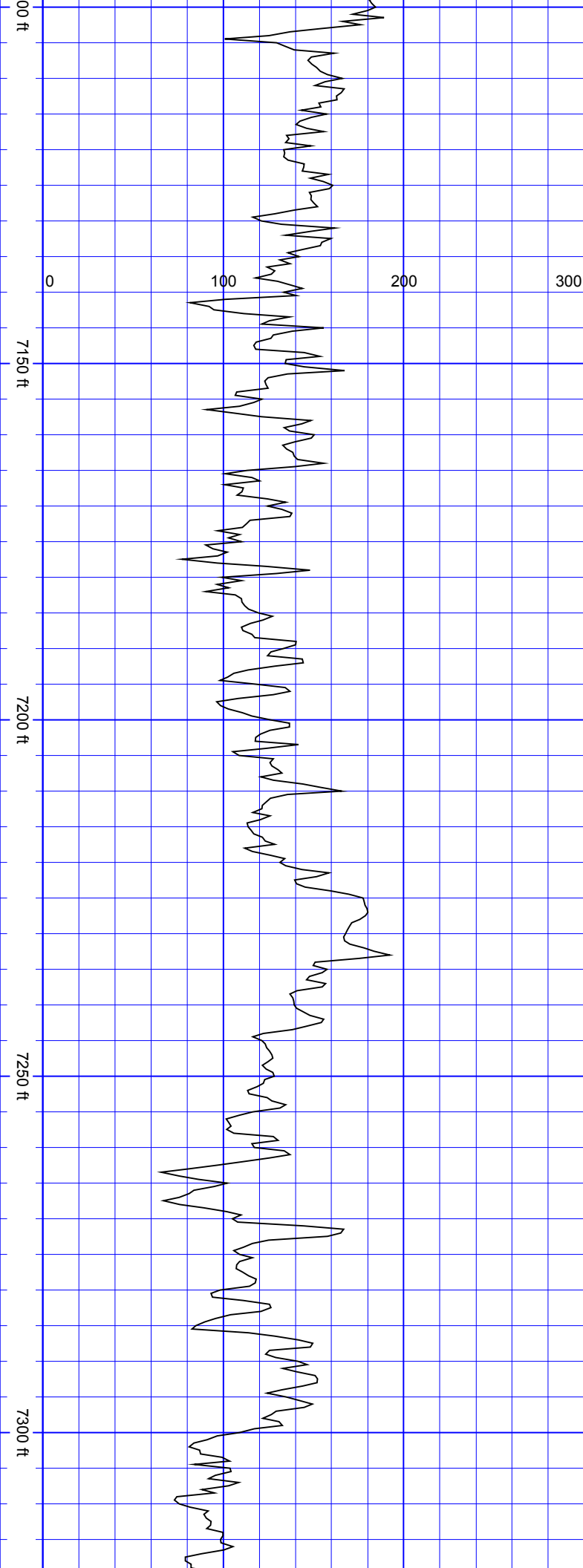
SurveyDepth:6901
TVD:6795.89 Inc:12.7
Azi:69.66 VertSec:-330.85

SurveyDepth:6996
TVD:6887.91 Inc:16.48
Azi:96.29 VertSec:-307.54

SurveyDepth:7043
TVD:6932.38 Inc:21.31
Azi:107.11 VertSec:-292.99

SurveyDepth:7090
TVD:6975.42 Inc:26.02
Azi:108.34 VertSec:-275.46





SurveyDepth:7103
TVD:6987.03 Inc:27.38
Azi:106.75 VertSec:-270.02

SurveyDepth:7134
TVD:7014.14 Inc:30.63
Azi:103.15 VertSec:-255.79

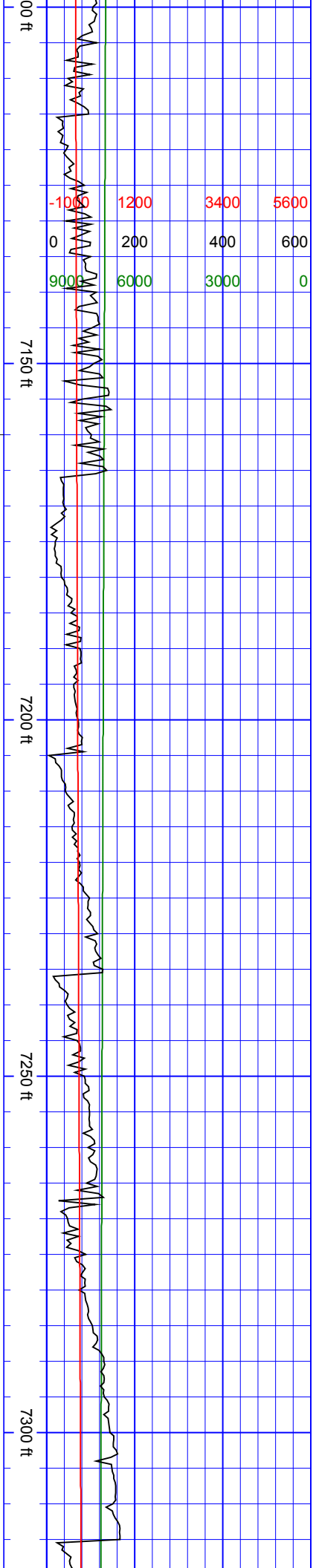
SurveyDepth:7165
TVD:7040.38 Inc:33.71
Azi:101.48 VertSec:-239.94

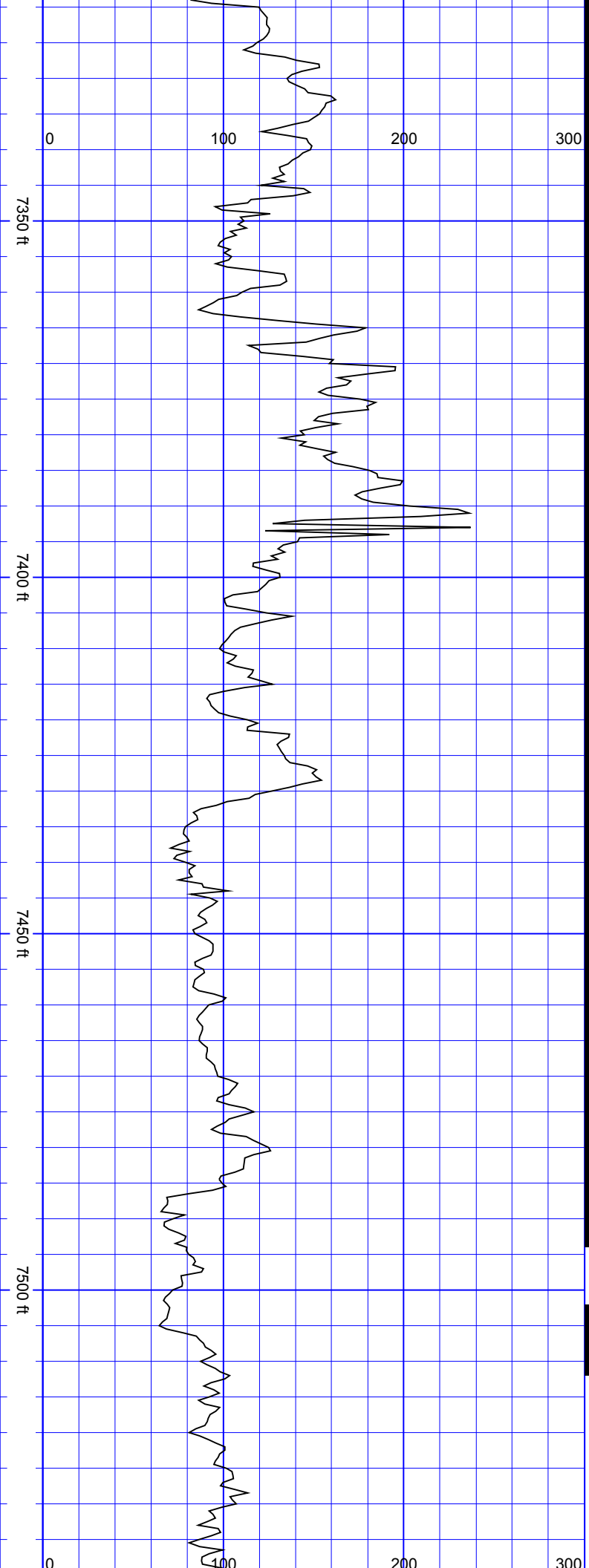
SurveyDepth:7197
TVD:7066.29 Inc:38.15
Azi:101.74 VertSec:-221.85

SurveyDepth:7244
TVD:7101.33 Inc:45.35
Azi:99.99 VertSec:-191.59

SurveyDepth:7291
TVD:7132.34 Inc:52.03
Azi:97.88 VertSec:-157.18

October 18, 2018





SurveyDepth:7338
TVD:7158.97 Inc:58.89
Azi:95.24 VertSec:-119.12

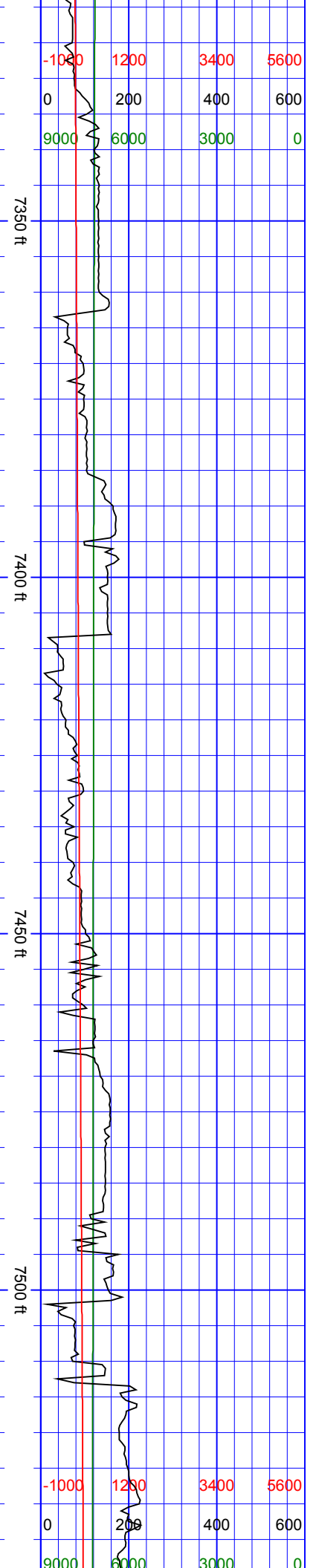
SurveyDepth:7385
TVD:7180.9 Inc:65.48
Azi:92.08 VertSec:-77.94

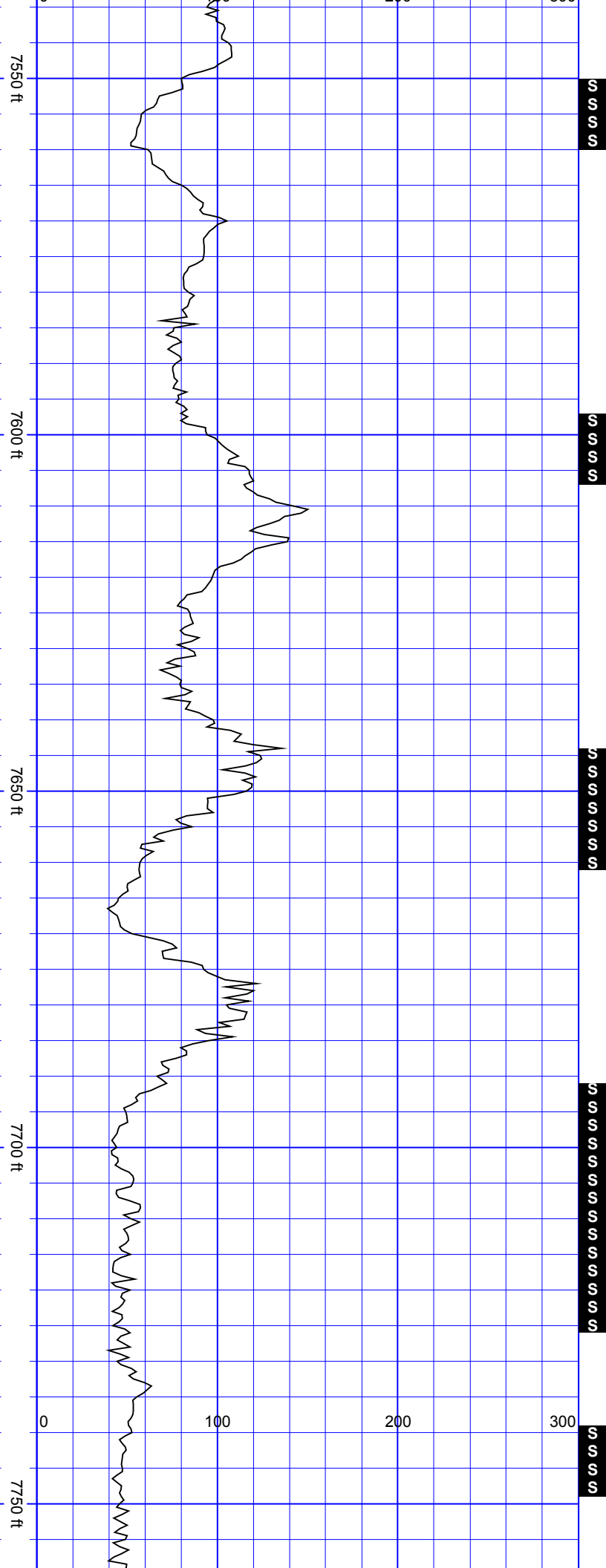
SurveyDepth:7432
TVD:7198.02 Inc:71.76
Azi:90.41 VertSec:-34.37

SurveyDepth:7480
TVD:7210.57 Inc:77.92
Azi:88.03 VertSec:11.87

SurveyDepth:7527
TVD:7219.77 Inc:79.5
Azi:86.36 VertSec:57.95

October 19, 2018



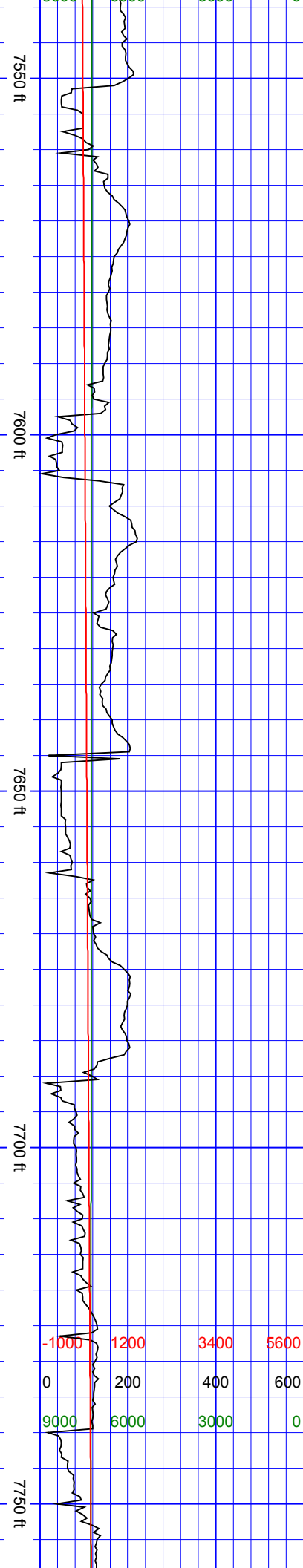


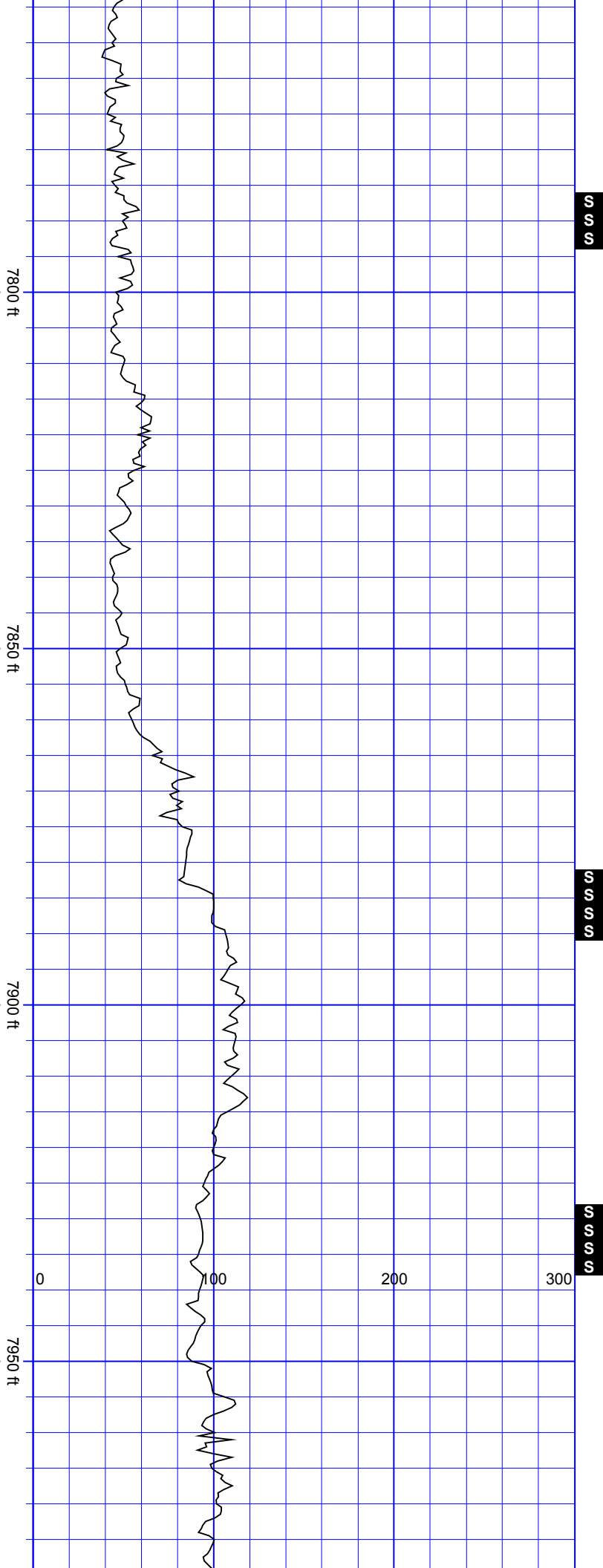
SurveyDepth:7574
TVD:7228.34 Inc:79.5
Azi:85.92
VertSec:104.16

SurveyDepth:7621
TVD:7236.9 Inc:79.5
Azi:86.28
VertSec:150.37

SurveyDepth:7669
TVD:7244.66 Inc:81.91
Azi:86.01
VertSec:197.74

SurveyDepth:7716
TVD:7249.52 Inc:86.22
Azi:86.54
VertSec:244.48

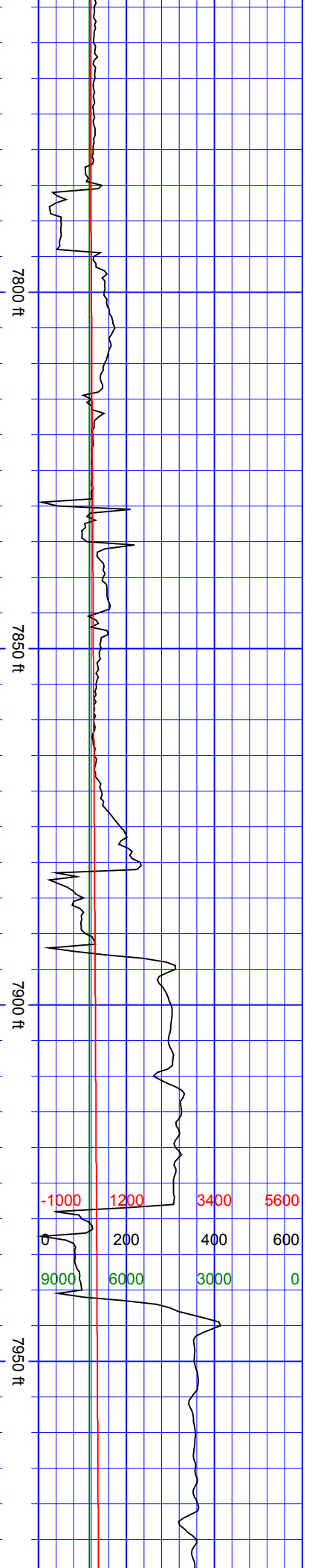


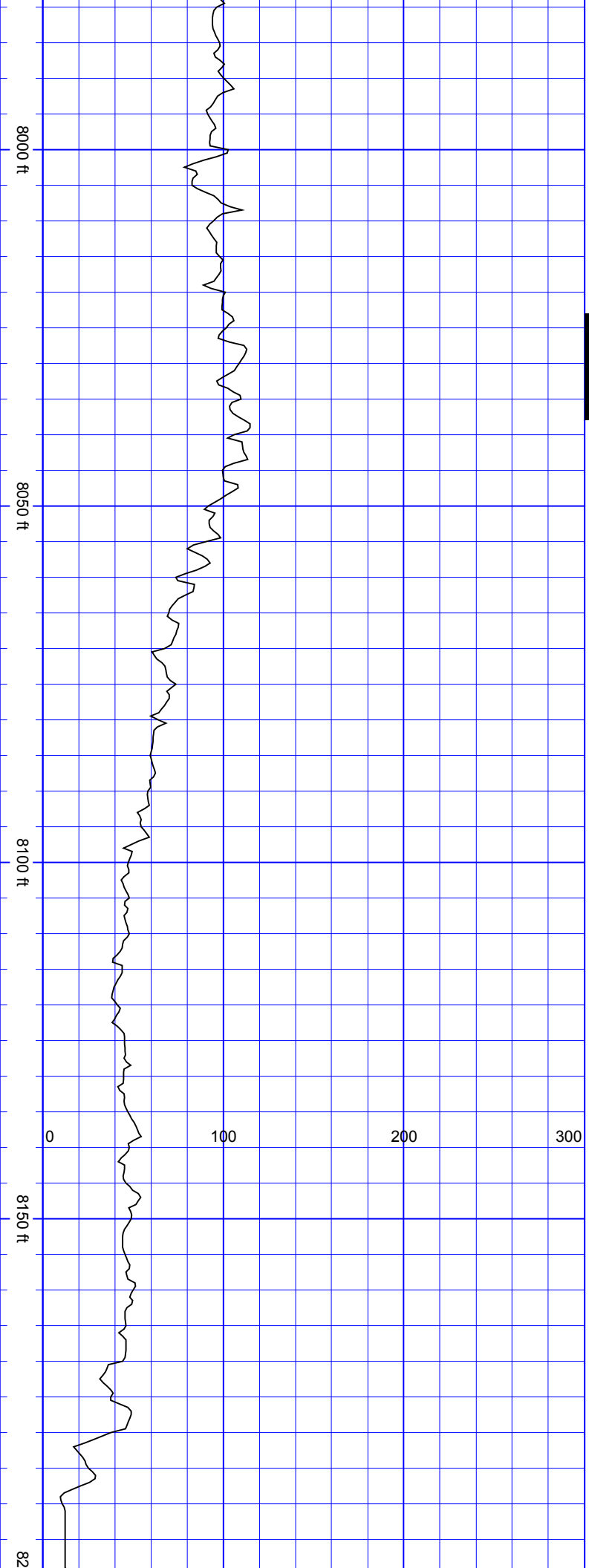


SurveyDepth:7764
TVD:7251.61 Inc:88.77
Azi:87.51
VertSec:292.42

SurveyDepth:7858
TVD:7252.05 Inc:90.7
Azi:88.21
VertSec:386.37

SurveyDepth:7953
TVD:7252.78 Inc:88.42
Azi:88.74
VertSec:481.28

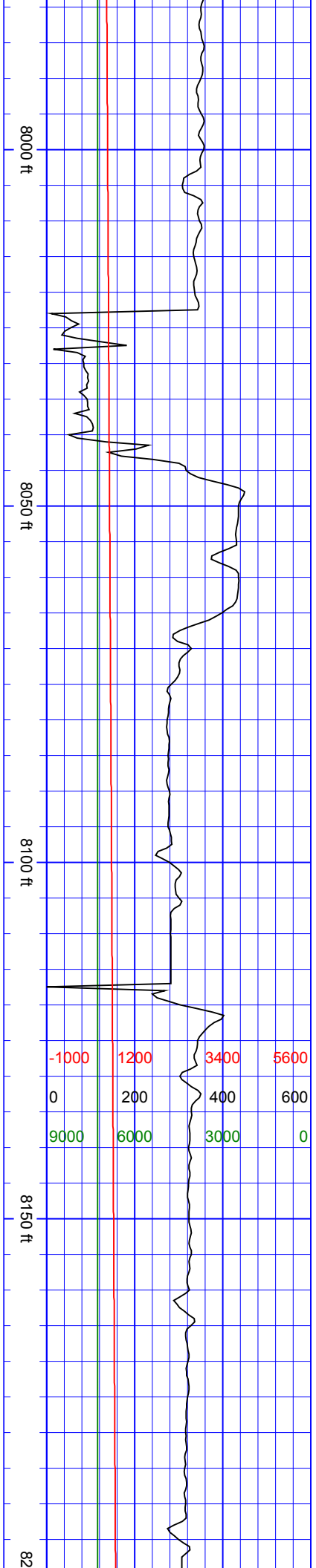


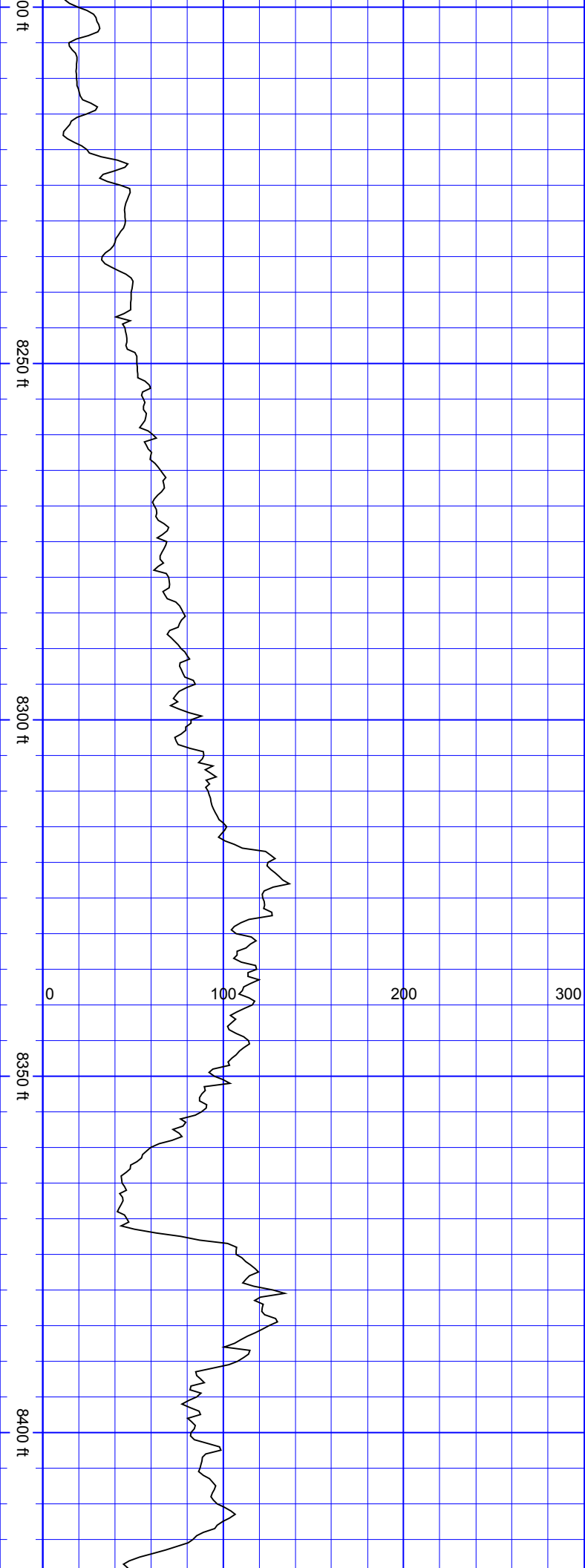


S
S
S
S
S
S

SurveyDepth:8047
TVD:7256.96 Inc:86.48
Azi:90.14
VertSec:575.03

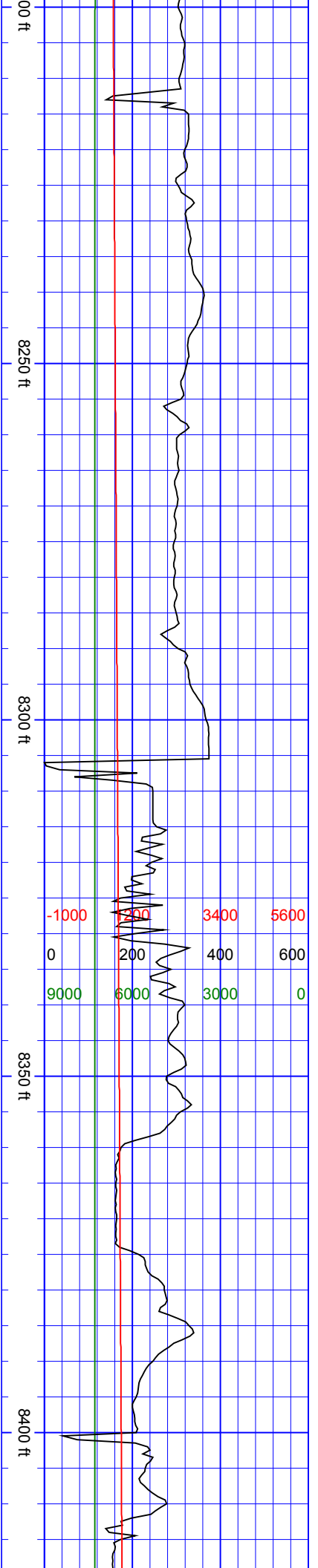
SurveyDepth:8142
TVD:7262.28 Inc:87.1
Azi:90.49
VertSec:669.63

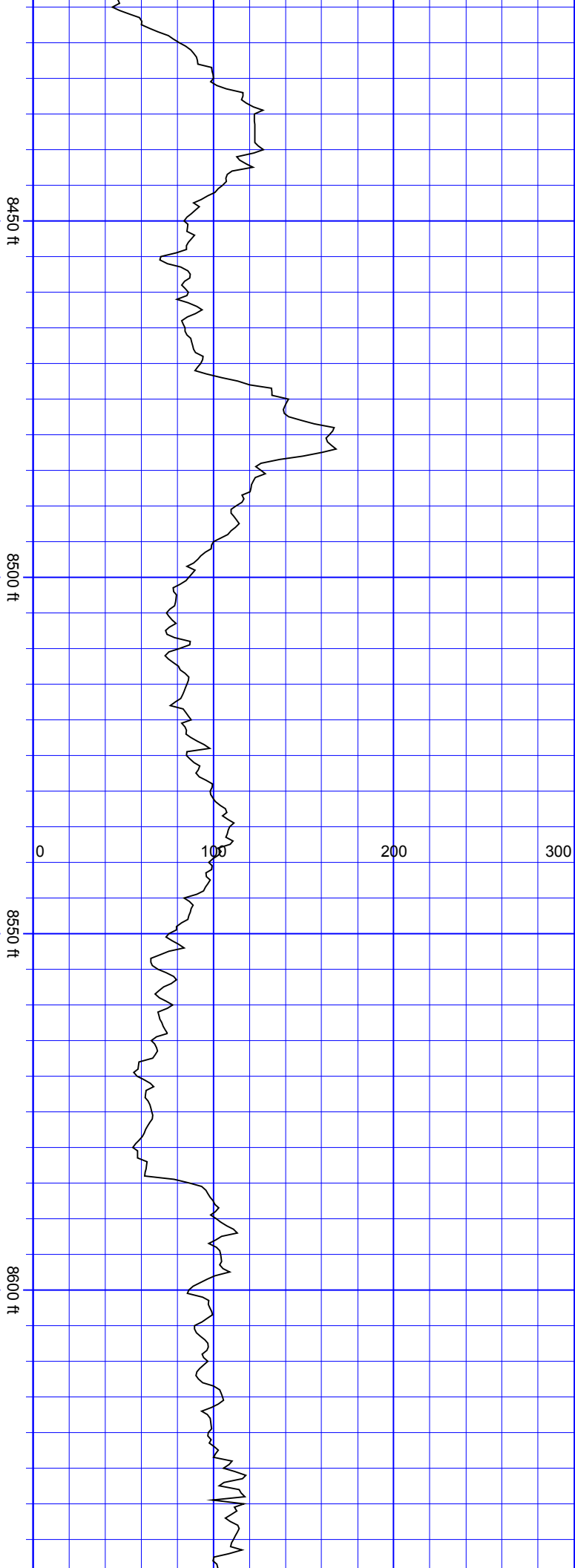




SurveyDepth:8236
TVD:7266.46 Inc:87.8
Azi:89.97
VertSec:763.29

SurveyDepth:8330
TVD:7269.45 Inc:88.55
Azi:90.49
VertSec:857.01

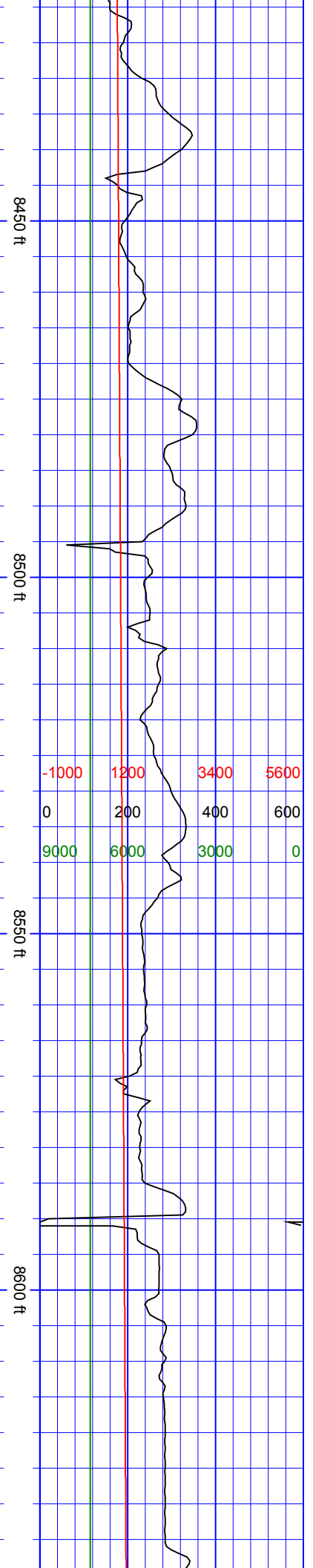


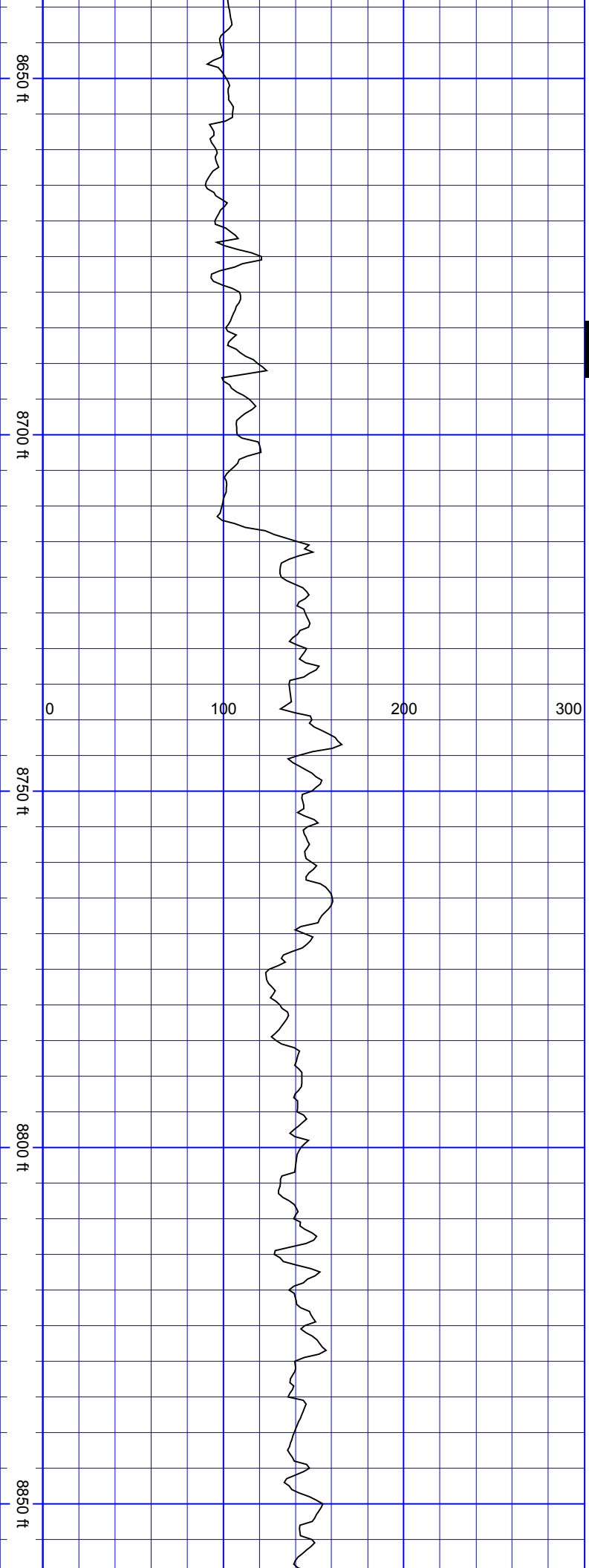


SurveyDepth:8425
TVD:7271.34 Inc:89.17
Azi:89.88
VertSec:951.75

SurveyDepth:8519
TVD:7272.28 Inc:89.69
Azi:89.7
VertSec:1045.55

SurveyDepth:8614
TVD:7272.61 Inc:89.91
Azi:89.44
VertSec:1140.38

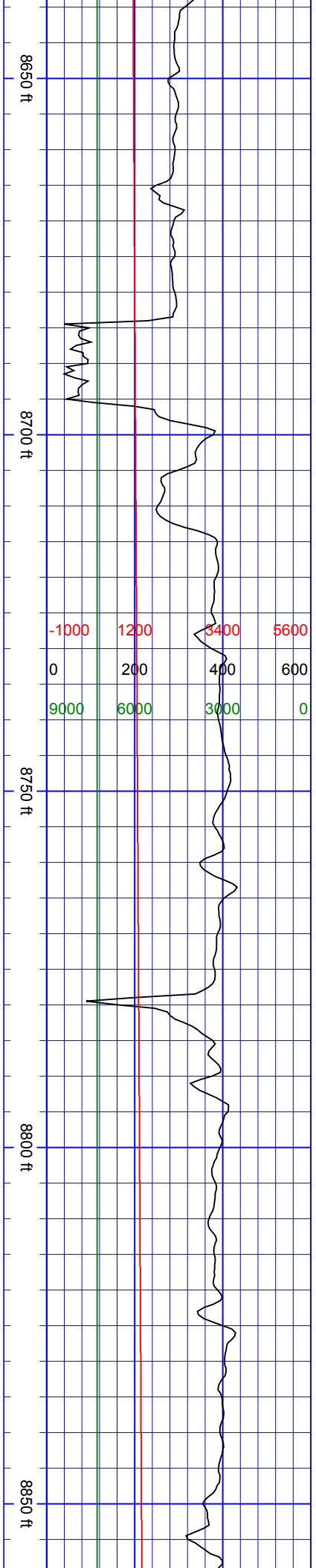


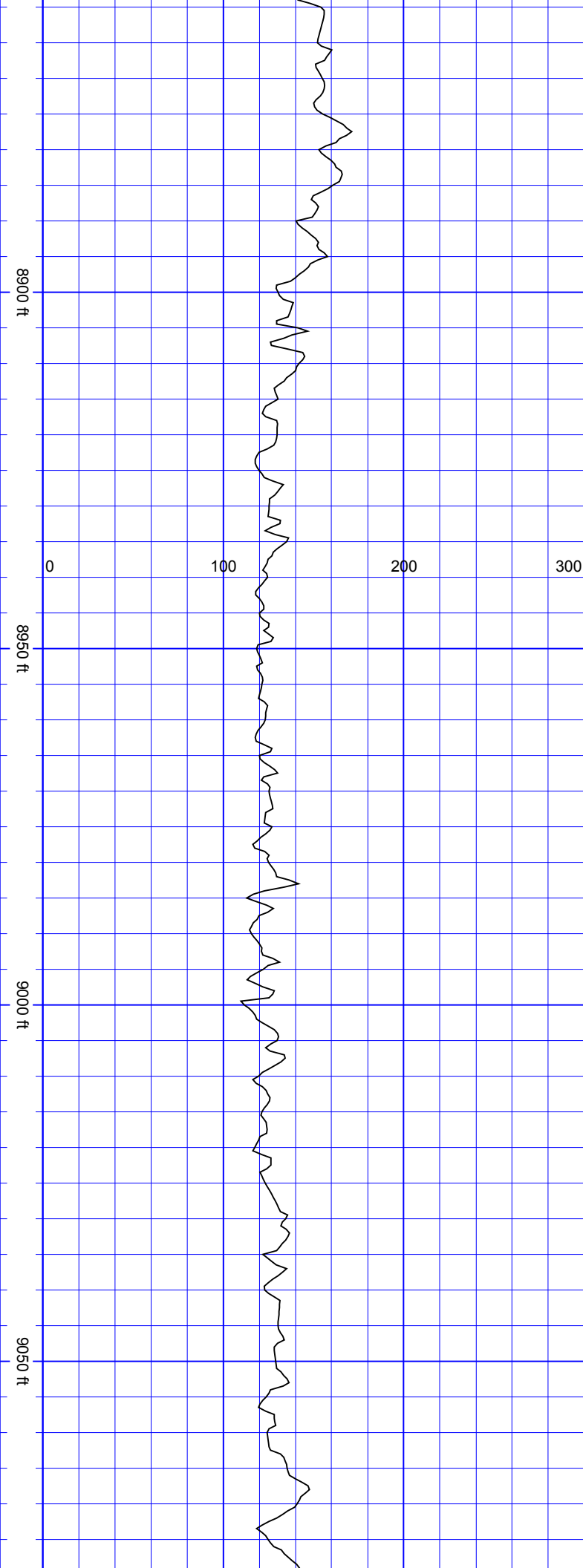


S
S
S

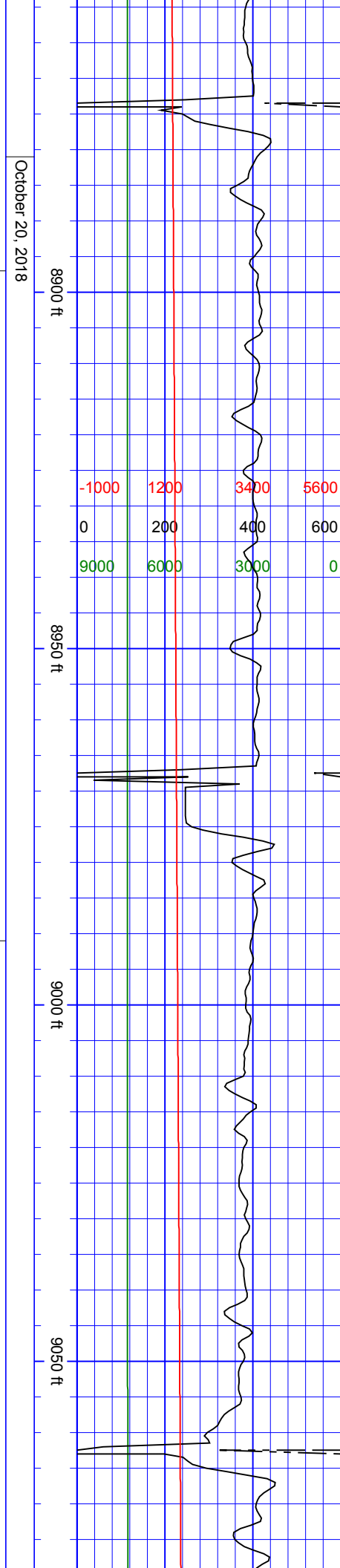
SurveyDepth:8708
TVD:7272.14 Inc:90.66
Azi:89.09
VertSec:1234.24

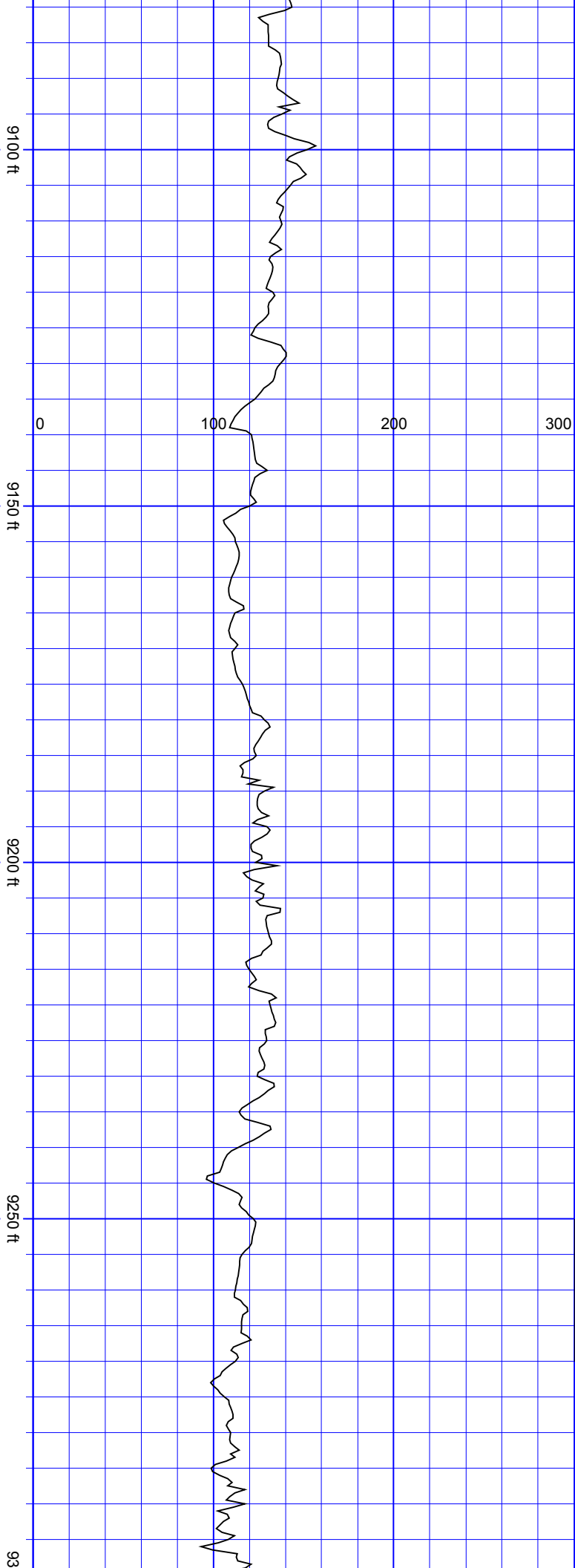
SurveyDepth:8803
TVD:7270.83 Inc:90.92
Azi:89.09
VertSec:1329.11





SurveyDepth:8897 TVD:7269 Inc:91.32 Azi:89.35 VertSec:1422.95	SurveyDepth:8991 TVD:7266.65 Inc:91.54 Azi:89.35 VertSec:1516.78
--	---



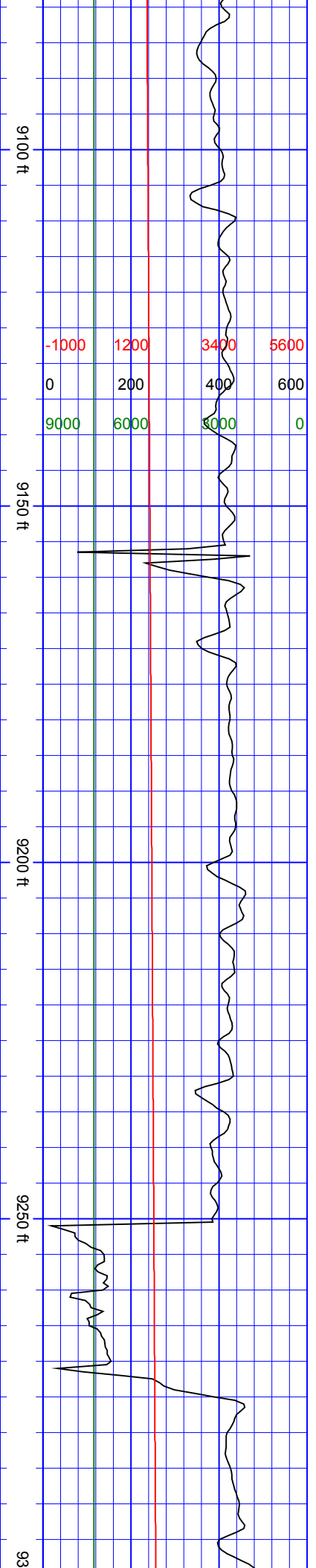


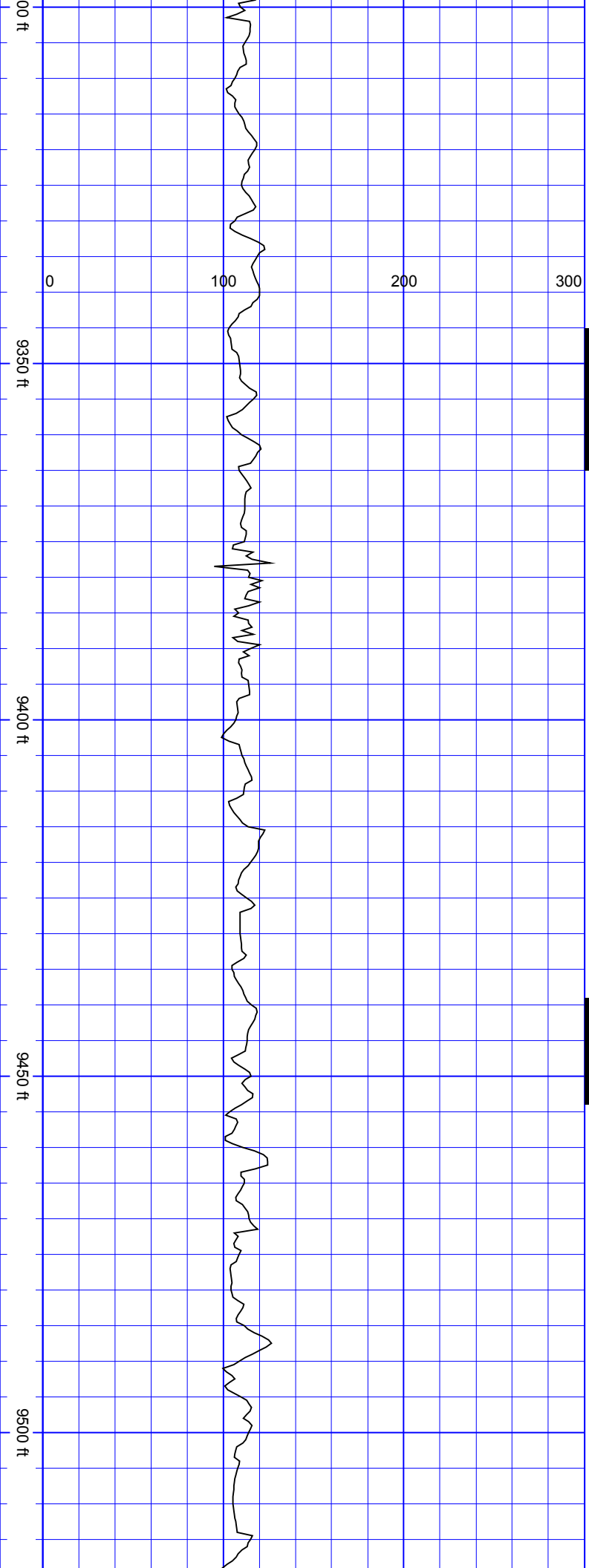
SurveyDepth:9086
TVD:7263.96 Inc:91.71
Azi:88.12
VertSec:1611.64

SurveyDepth:9180
TVD:7260.75 Inc:92.2
Azi:87.33
VertSec:1705.55

SSSSSSSS

SurveyDepth:9275
TVD:7258.01 Inc:91.1
Azi:89.35
VertSec:1800.43



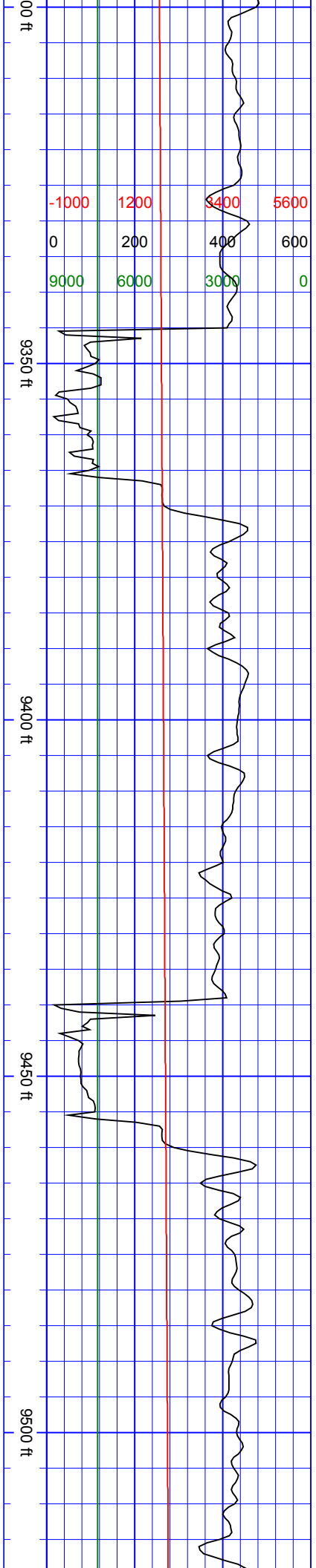


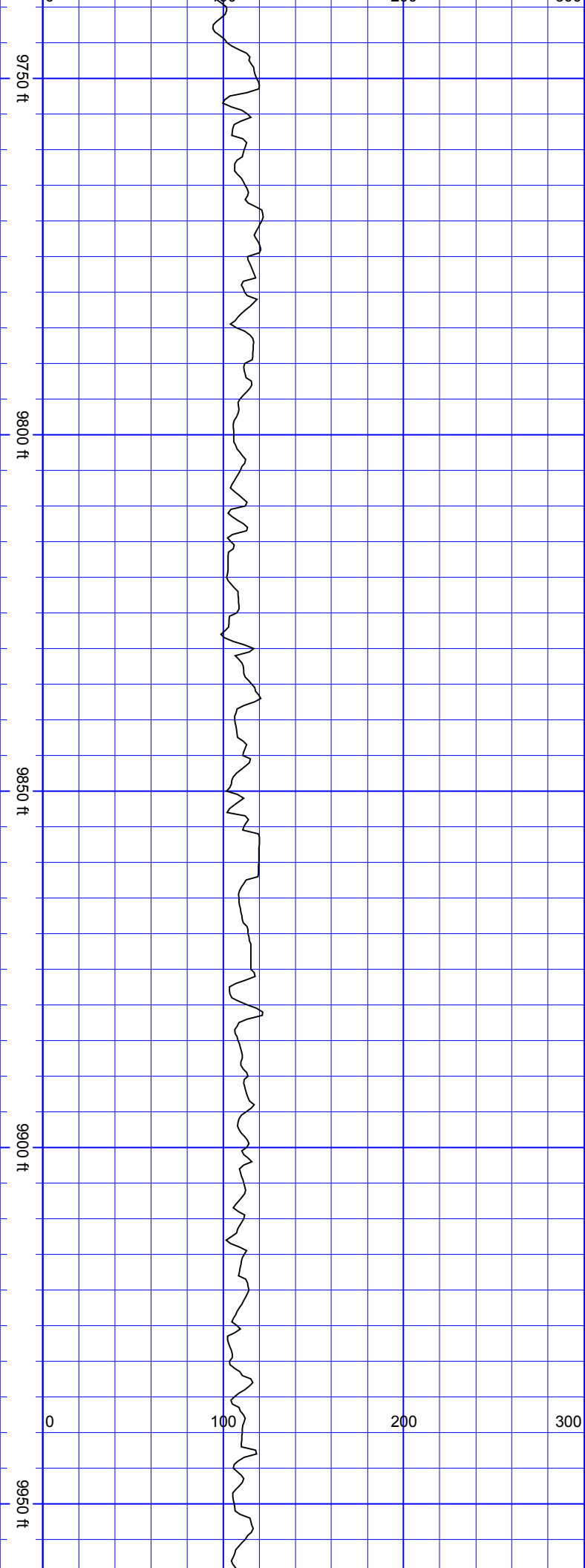
S
S
S
S
S
S
S
S
S
S

SurveyDepth:9369
TVD:7256.54 Inc:90.7
Azi:90.58
VertSec:1894.21

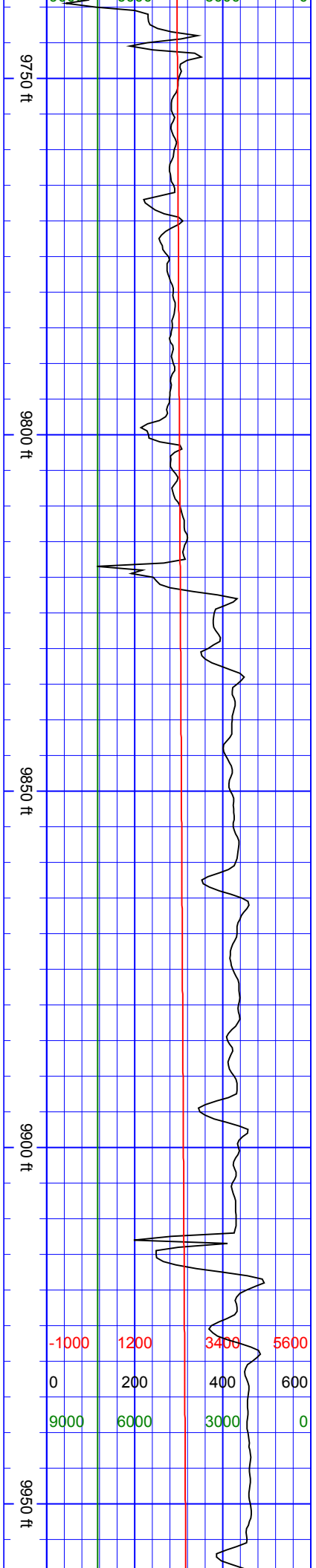
S
S
S
S
S
S
S
S
S
S

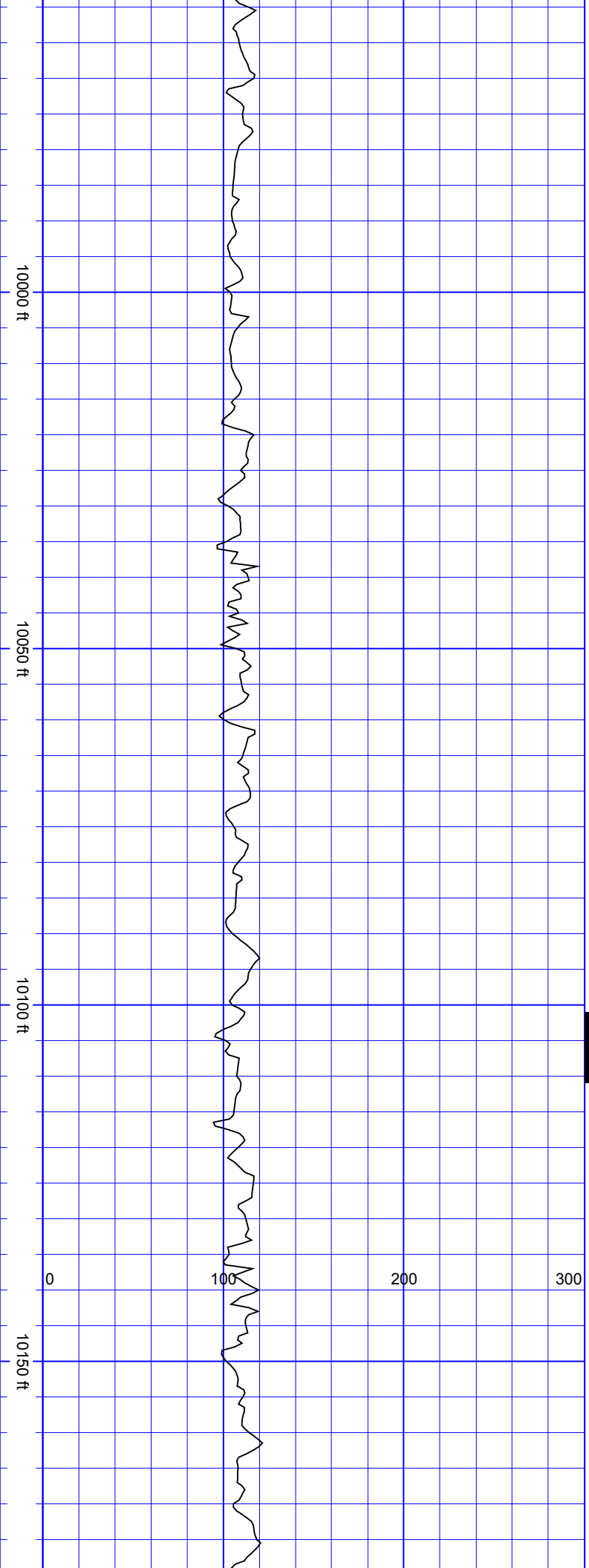
SurveyDepth:9464
TVD:7255.01 Inc:91.14
Azi:92.6
VertSec:1988.76





SurveyDepth:9748 TVD:7250.16 Inc:90 Azi:91.72 VertSec:2271.45
SurveyDepth:9842 TVD:7250.34 Inc:89.78 Azi:90.14 VertSec:2365.12
SurveyDepth:9936 TVD:7250.19 Inc:90.4 Azi:90.14 VertSec:2458.89

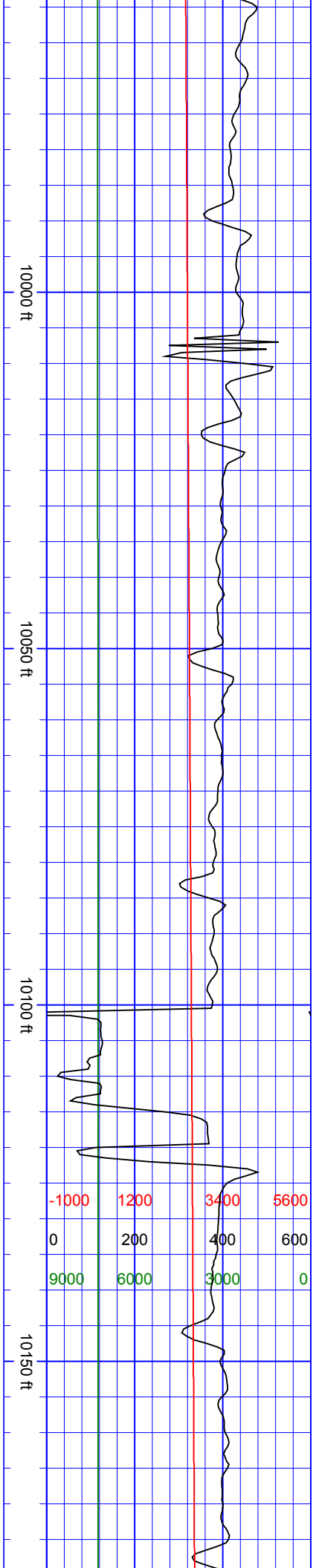


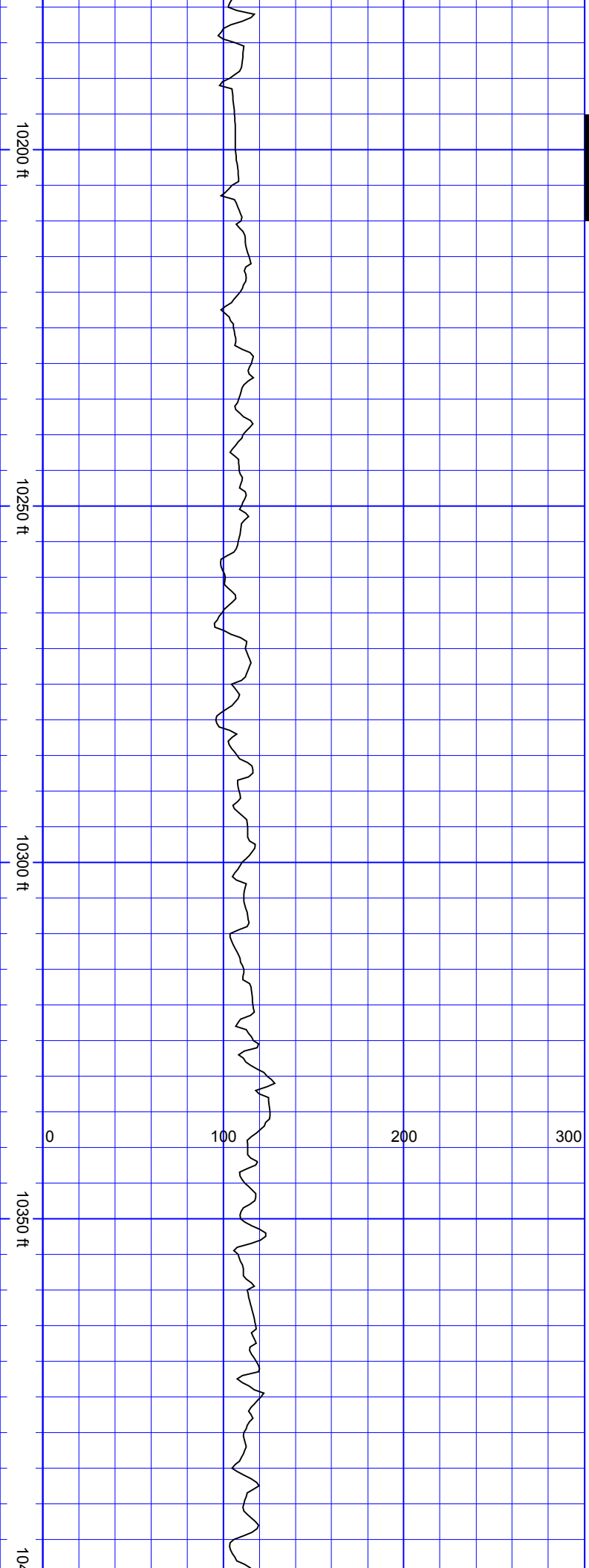


SurveyDepth:10031
TVD:7248.73 Inc:91.36
Azi:89.7
VertSec:2553.67

SSS

SurveyDepth:10125
TVD:7246.64 Inc:91.19
Azi:90.41
VertSec:2647.43

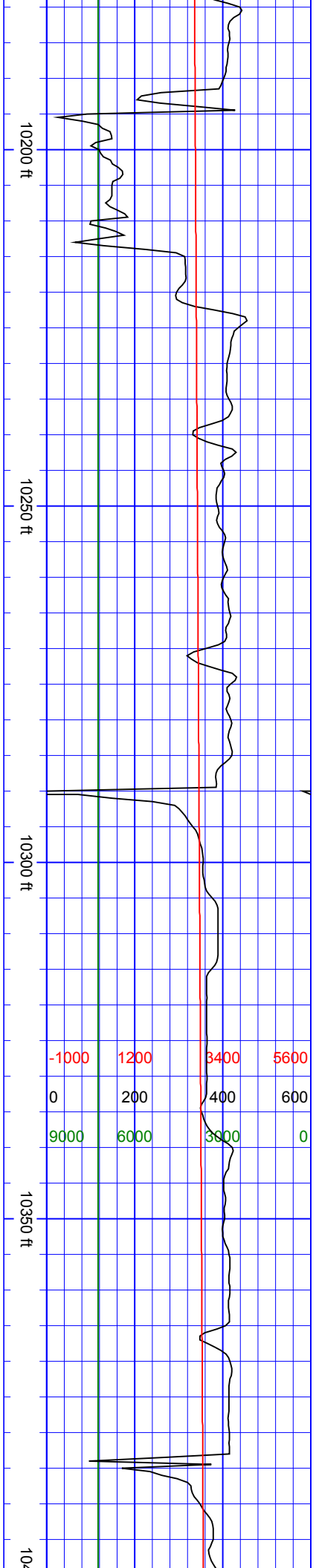


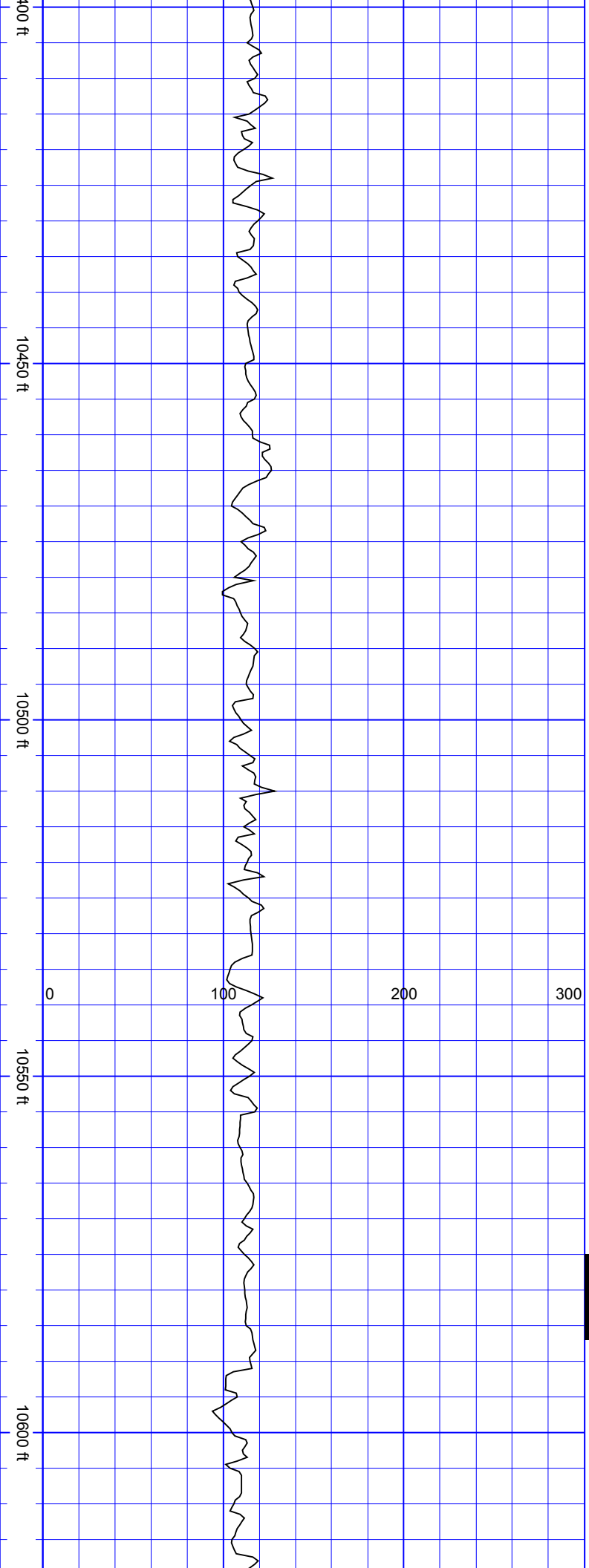


S
S
S
S
S

SurveyDepth:10219
TVD:7245.92 Inc:89.69
Azi:89.97
VertSec:2741.19

SurveyDepth:10313
TVD:7246.07 Inc:90.13
Azi:90.32
VertSec:2834.96



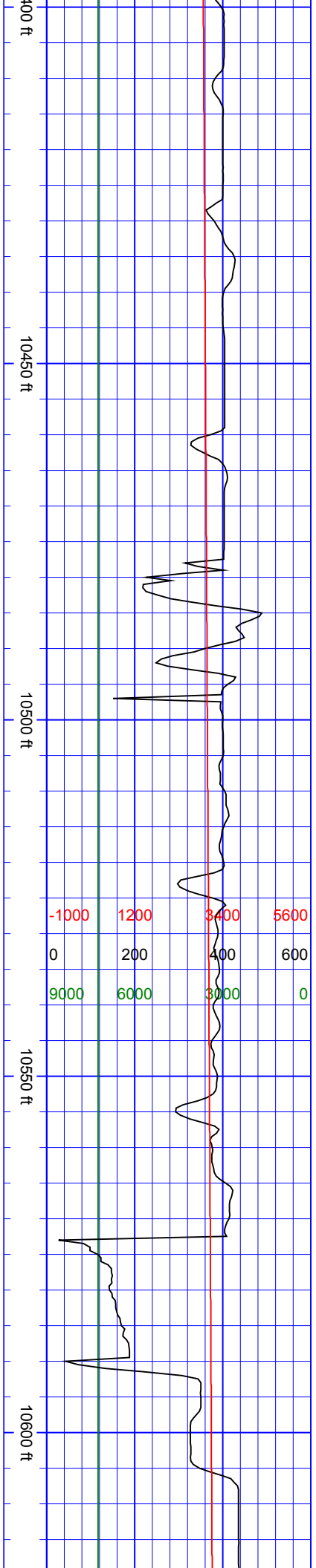


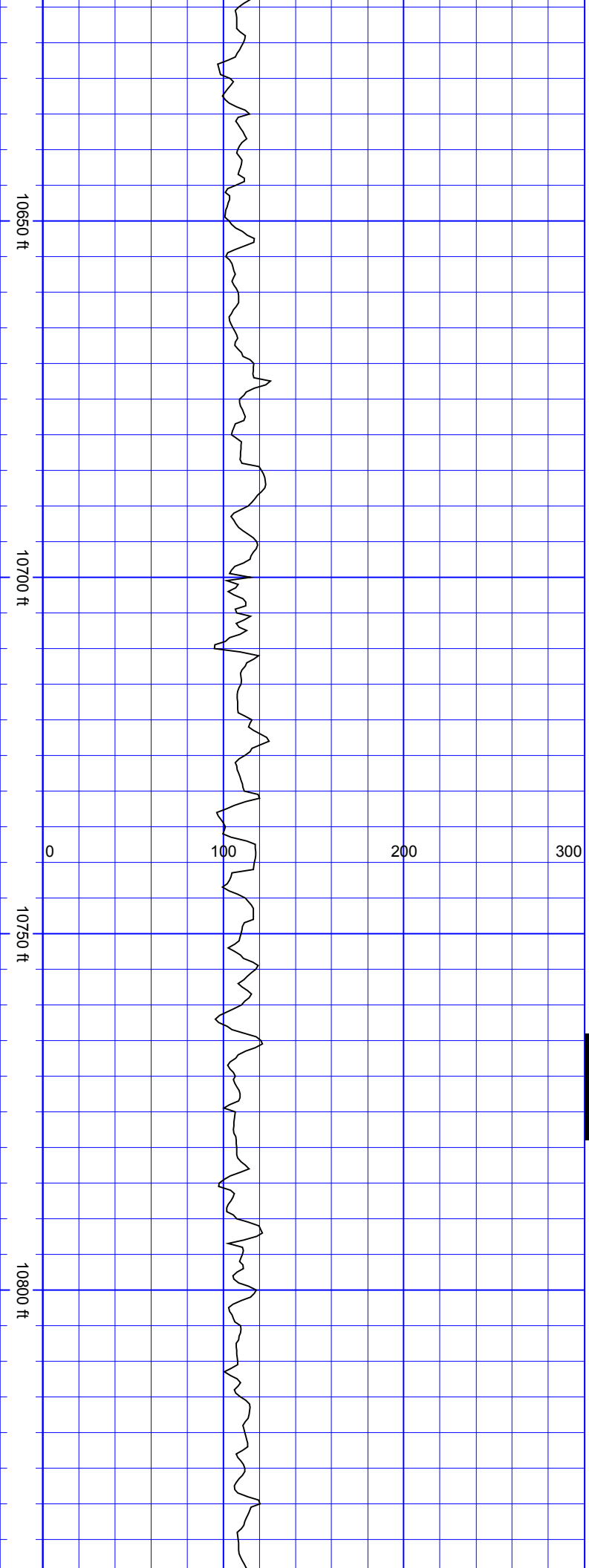
SurveyDepth:10408
TVD:7245.34 Inc:90.75
Azi:90.41
VertSec:2929.7

SurveyDepth:10502
TVD:7243.43 Inc:91.58
Azi:90.32
VertSec:3023.42

SSSS

SurveyDepth:10597
TVD:7241.46 Inc:90.79
Azi:89.97
VertSec:3118.17

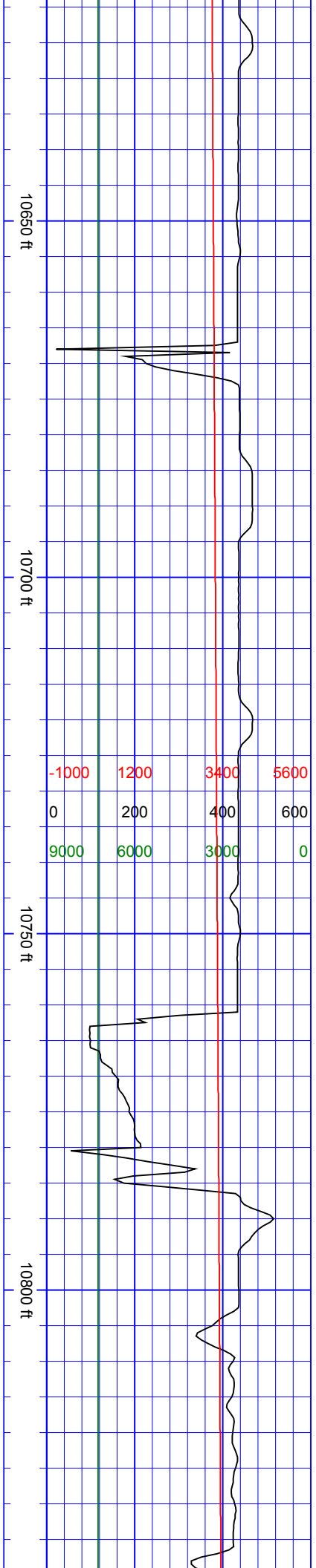


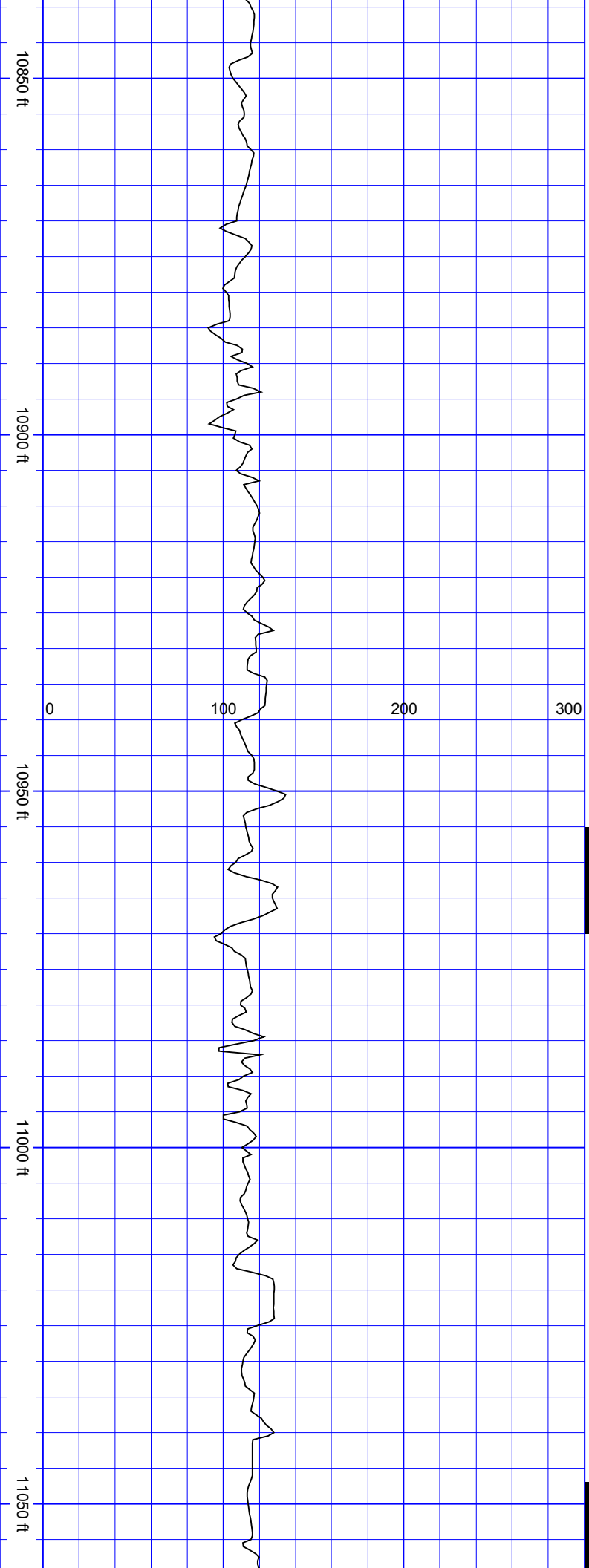


SurveyDepth:10691
TVD:7239.7 Inc:91.36
Azi:90.14
VertSec:3211.93

S
S
S
S
S

SurveyDepth:10786
TVD:7239.38 Inc:89.03
Azi:88.82
VertSec:3306.76



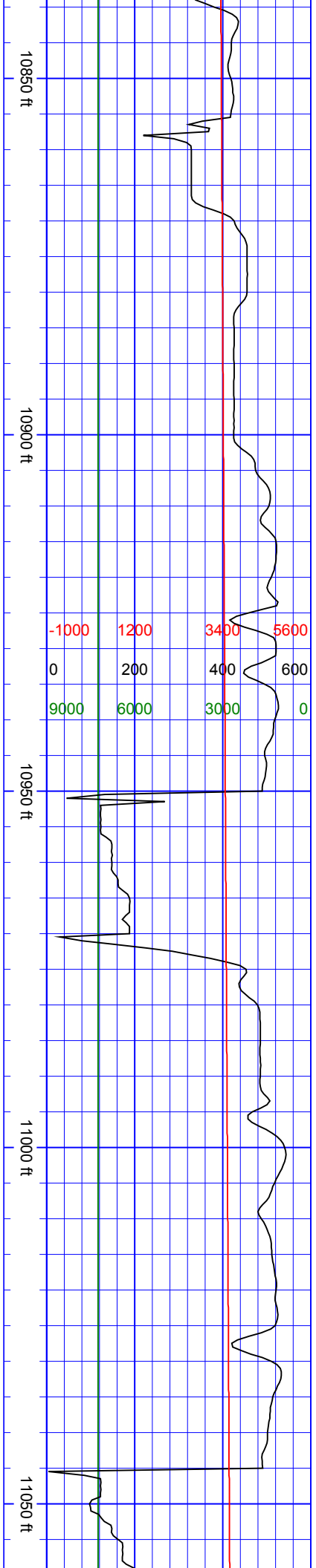


SurveyDepth:10880
TVD:7240.79 Inc:89.25
Azi:88.65
VertSec:3400.66

S
S
S
S
S

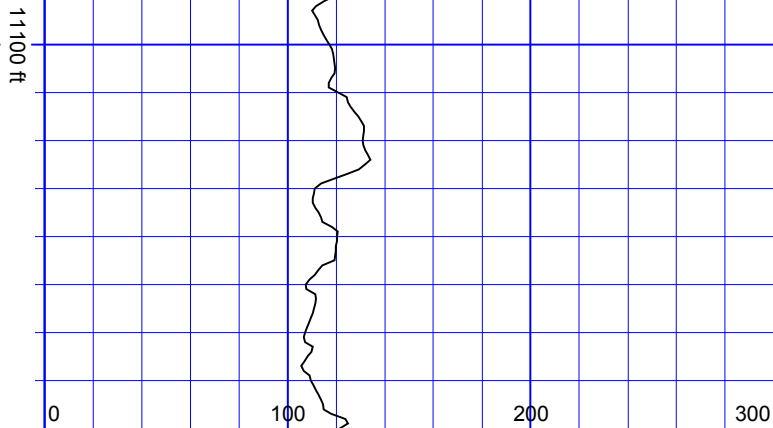
SurveyDepth:10975
TVD:7242.32 Inc:88.9
Azi:89.18
VertSec:3495.53

S
S
S
S
S

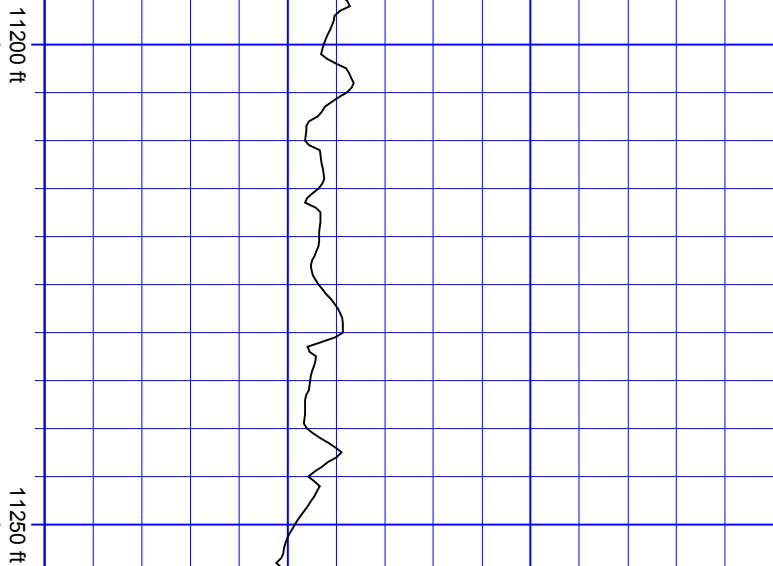
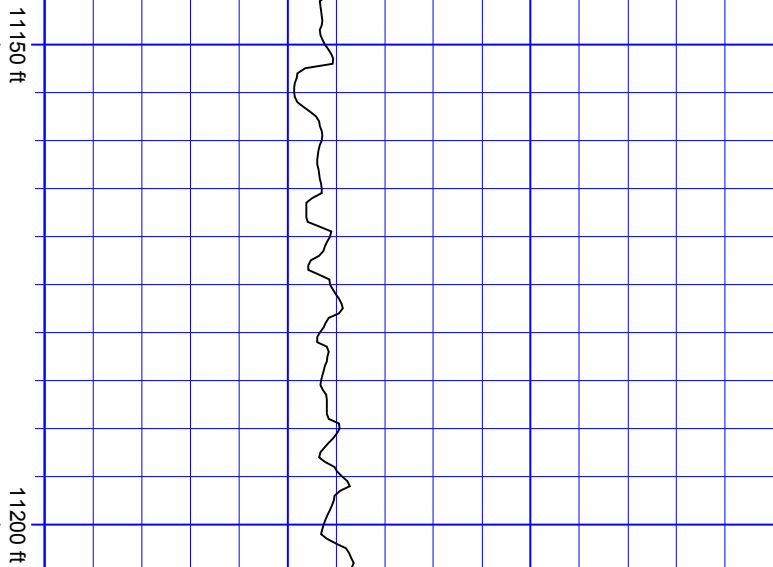


S

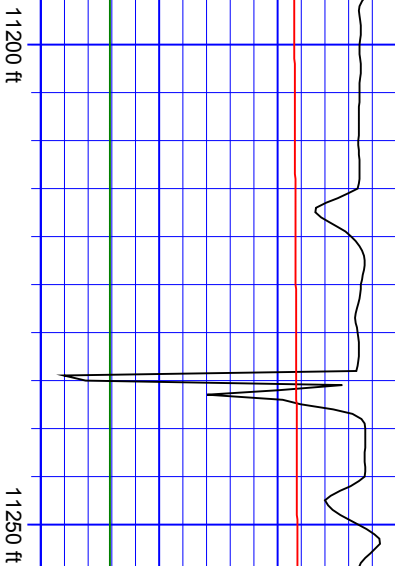
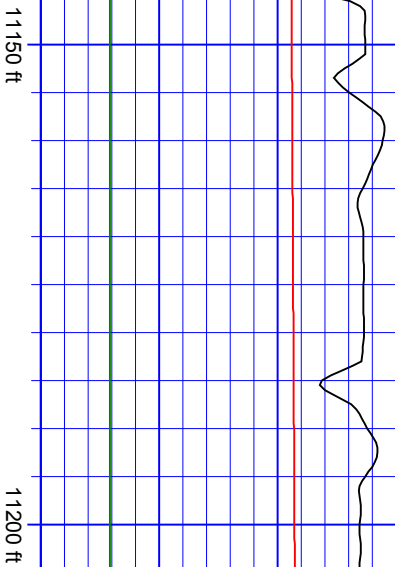
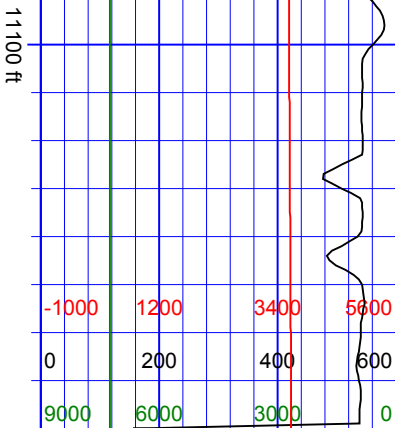
SurveyDepth:11069
TVD:7243.01 Inc:90.26
Azi:91.99
VertSec:3589.23

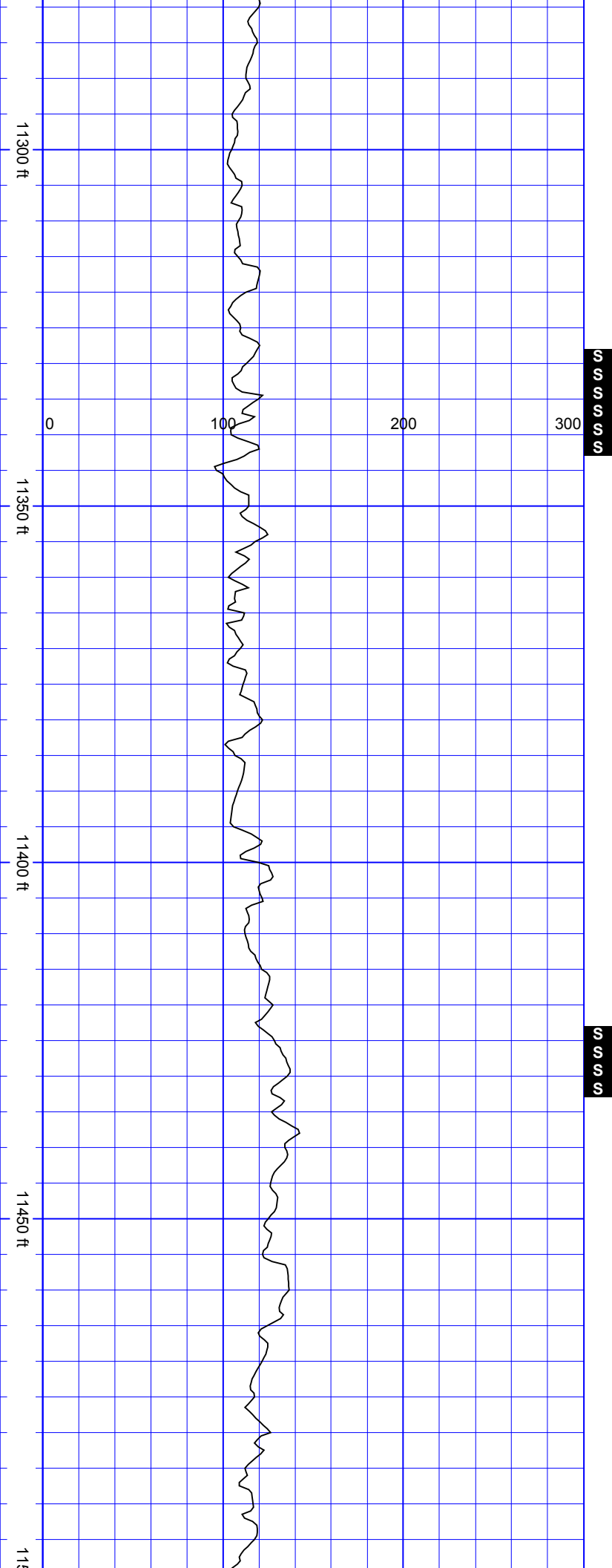


SurveyDepth:11164
TVD:7241.81 Inc:91.19
Azi:91.99
VertSec:3683.73



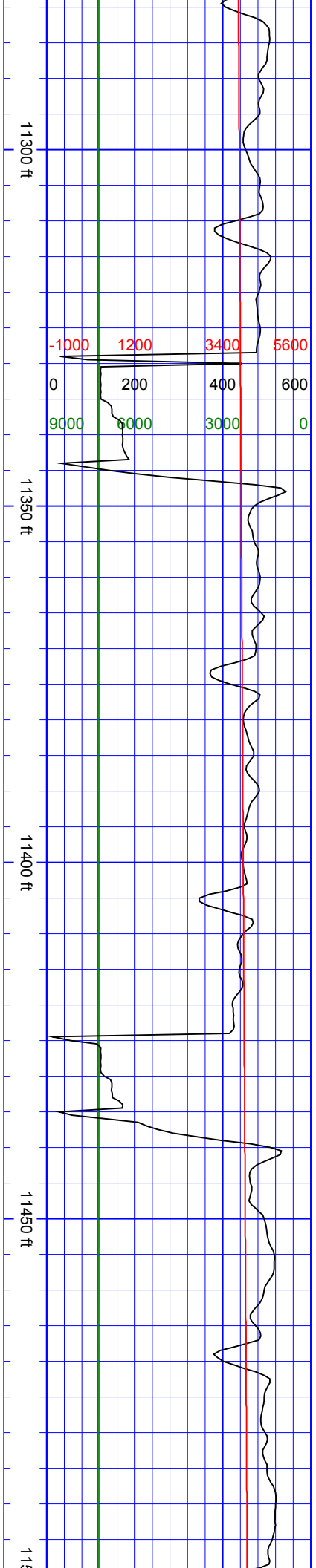
SurveyDepth:11258
TVD:7239.13 Inc:92.07
Azi:92.25
VertSec:3777.18

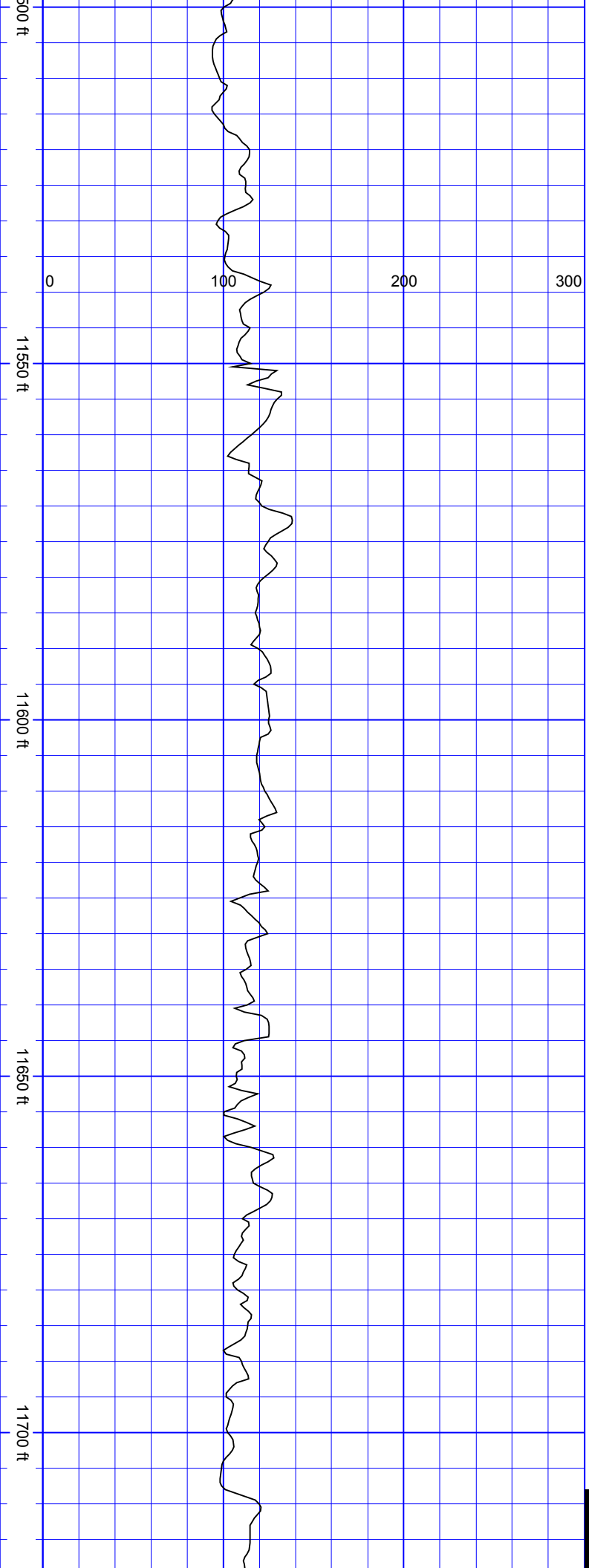




SurveyDepth:11353
TVD:7237.27 Inc:90.18
Azi:91.81
VertSec:3871.66

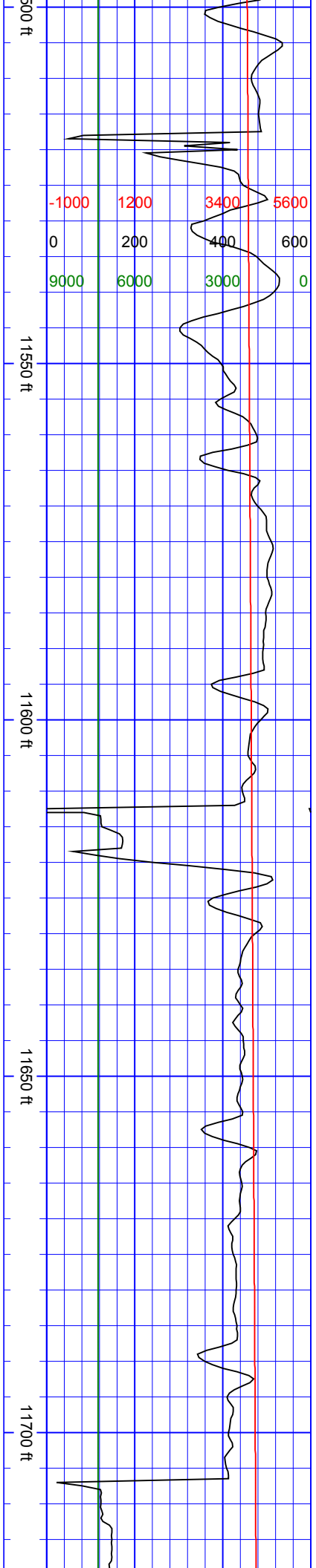
SurveyDepth:11448
TVD:7237.59 Inc:89.43
Azi:90.23
VertSec:3966.31

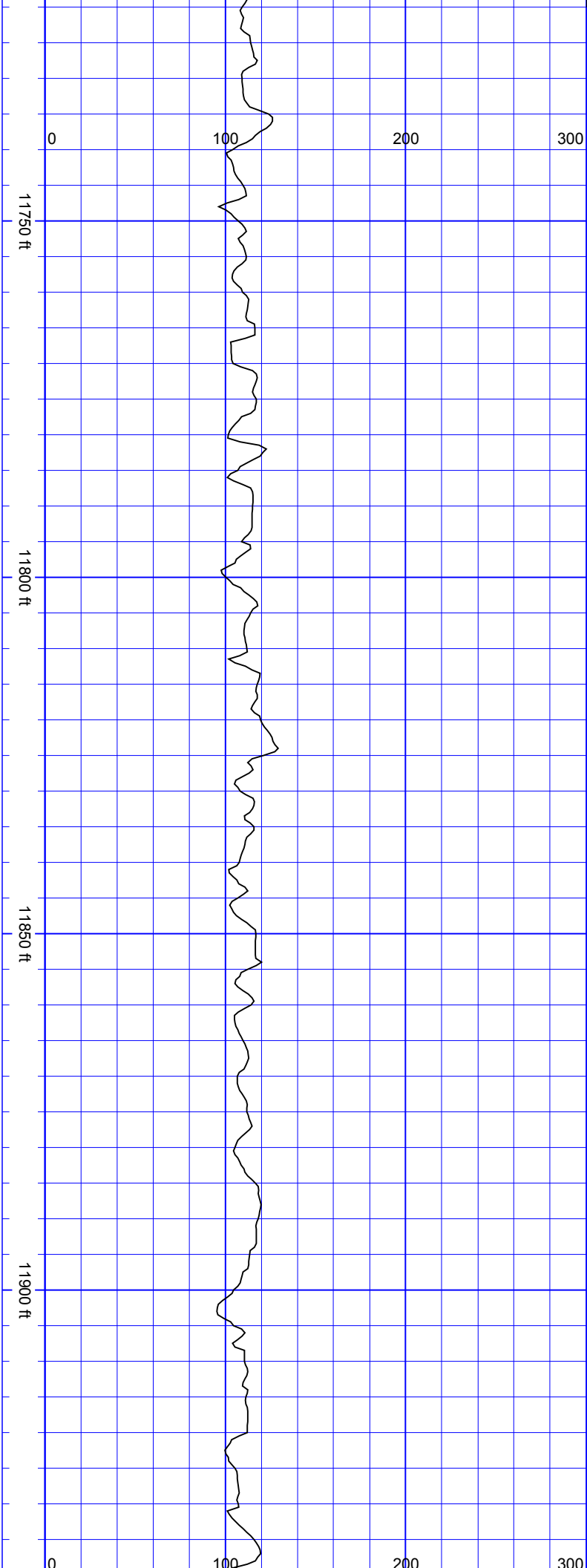




SurveyDepth:11542
TVD:7237.85 Inc:90.26
Azi:90.41
VertSec:4060.06

SurveyDepth:11636
TVD:7236.59 Inc:91.27
Azi:90.41
VertSec:4153.79

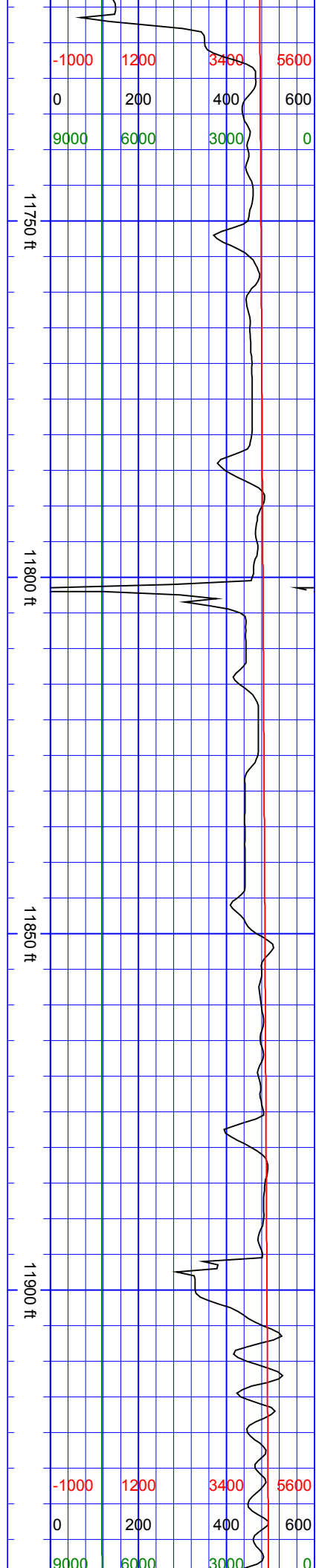


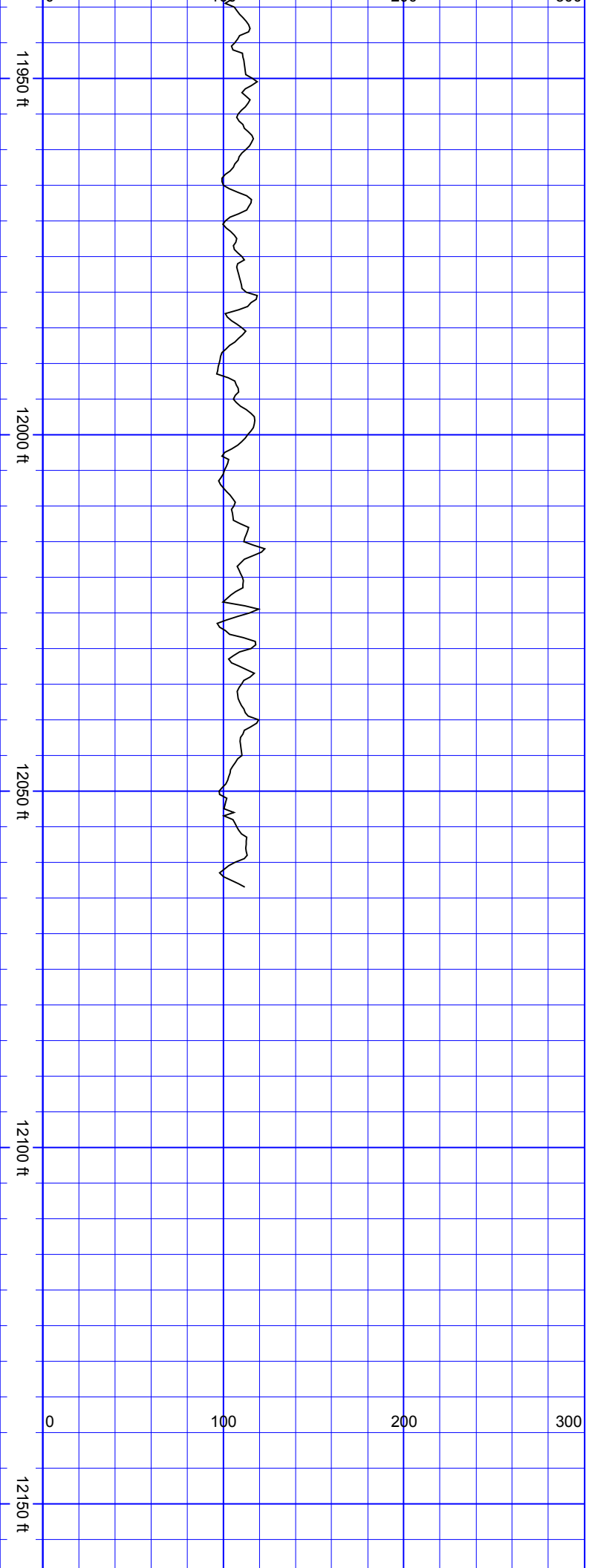


SurveyDepth:11731
TVD:7235.43 Inc:90.13
Azi:88.91
VertSec:4248.6

SurveyDepth:11825
TVD:7234.71 Inc:90.75
Azi:88.82
VertSec:4342.49

SurveyDepth:11919
TVD:7232.98 Inc:91.36
Azi:89.26
VertSec:4436.35





SurveyDepth:12014 TVD:7230.13 Inc:92.07 Azi:88.82 VertSec:4531.18
SurveyDepth:12057 TVD:7228.45 Inc:92.42 Azi:88.91 VertSec:4574.1
Extrapolation to Bit SurveyDepth:12127 TVD:7225.49 Inc:92.42 Azi:88.91 VertSec:4643.96

