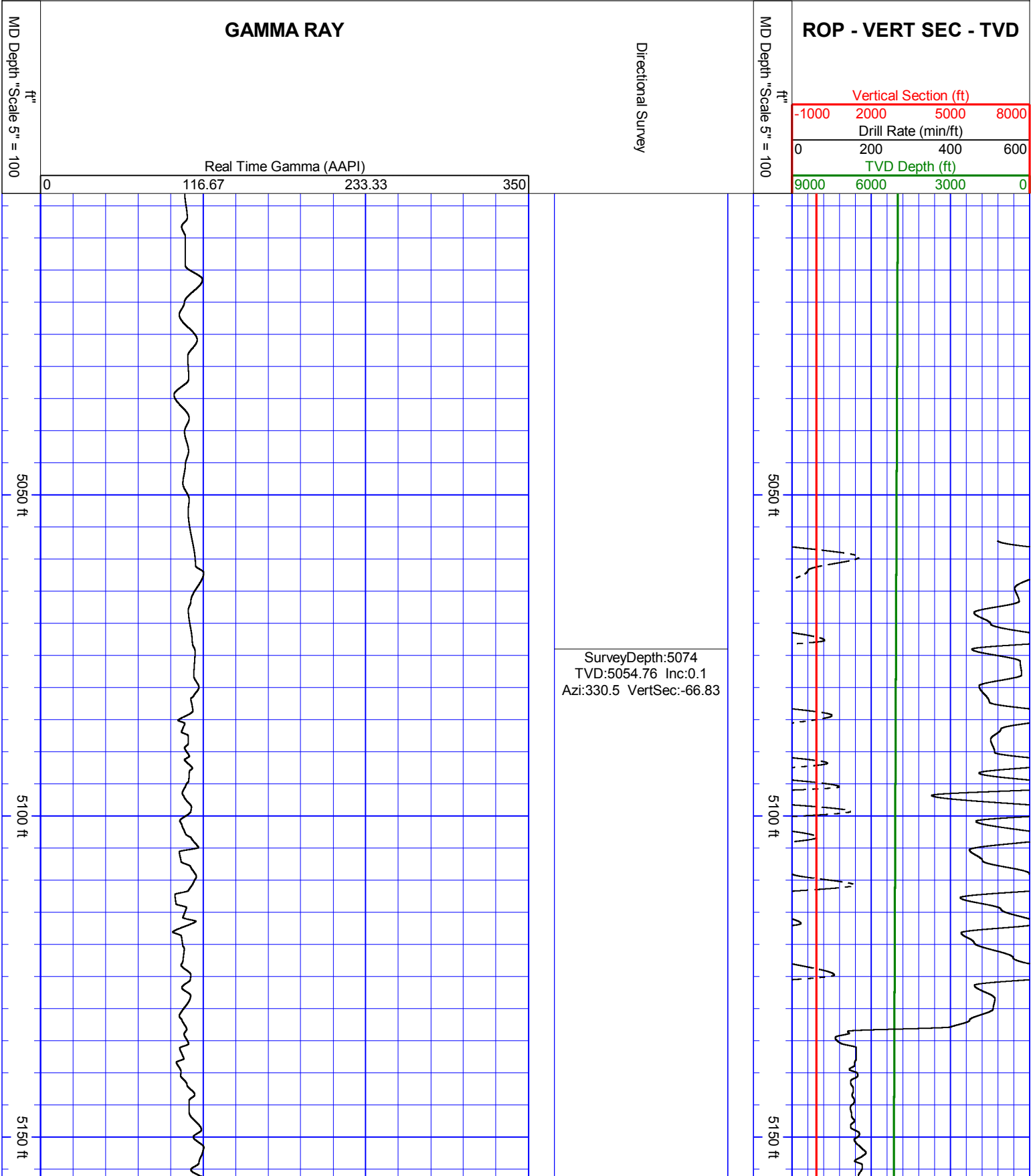
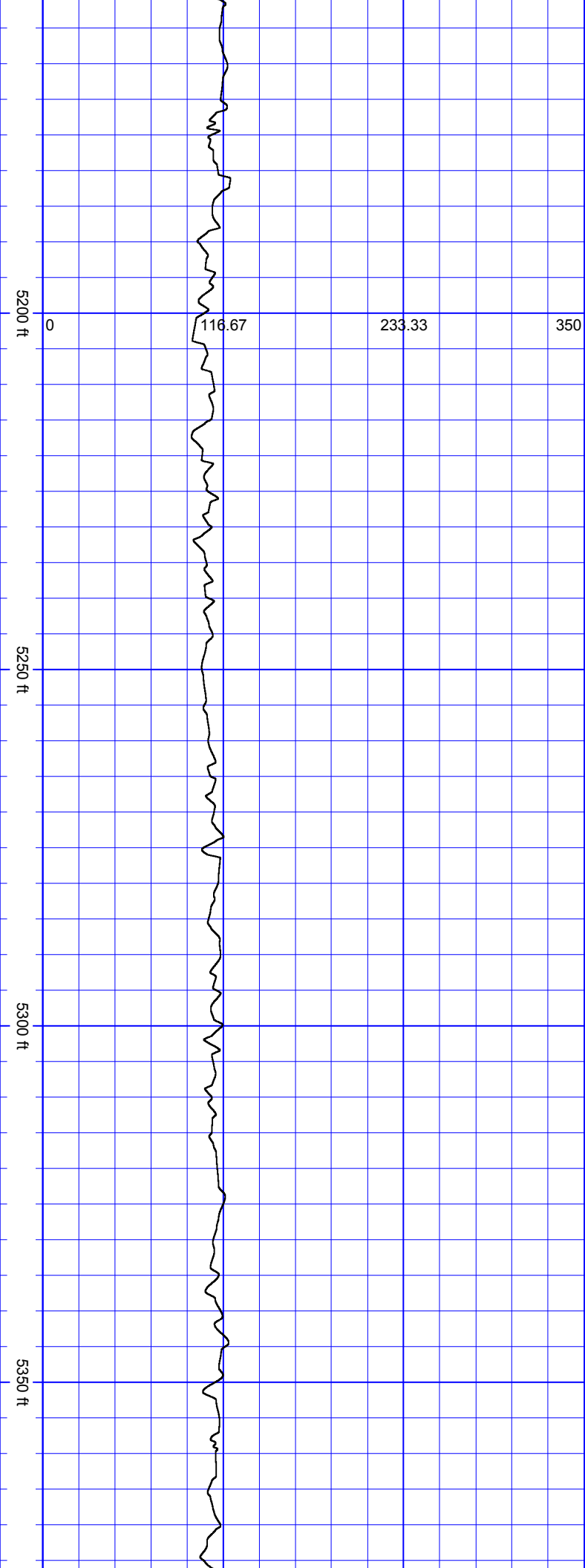




Oil Company: Whiting Oil and Petroleum
Well Name: Razor 21B-0909
Surface Location: S21-T10N-R58W
Bit Run: 3
Log Depth Start: 5003.03 ft Log Depth End: 13915.01 ft
Data Depth Start: 5003.03 ft Data Depth End: 13915.01 ft

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.

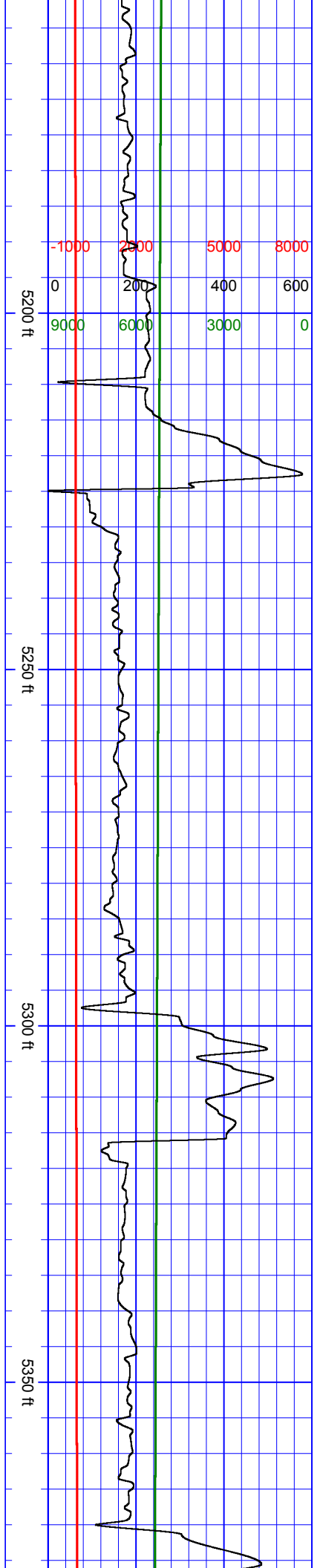


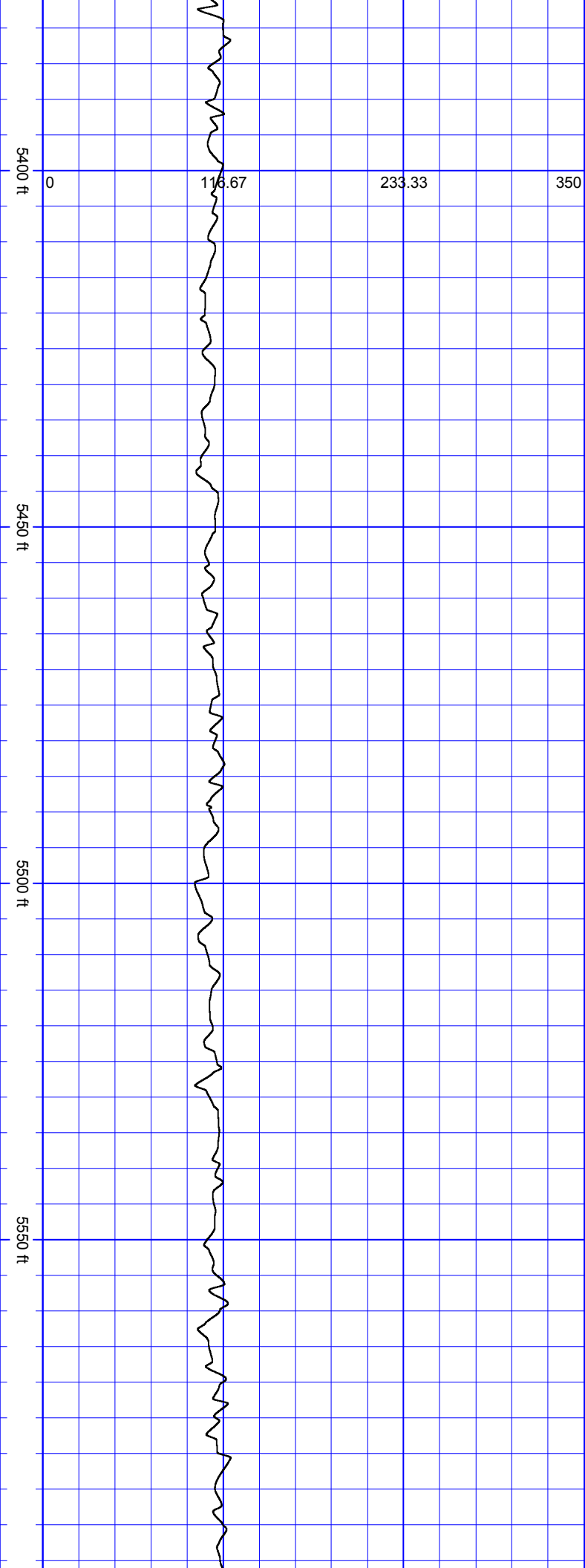


SurveyDepth:5166
TVD:5146.59 Inc:5.9
Azi:350.3 VertSec:-62.06

SurveyDepth:5258
TVD:5237.08 Inc:14.4
Azi:3 VertSec:-45.96

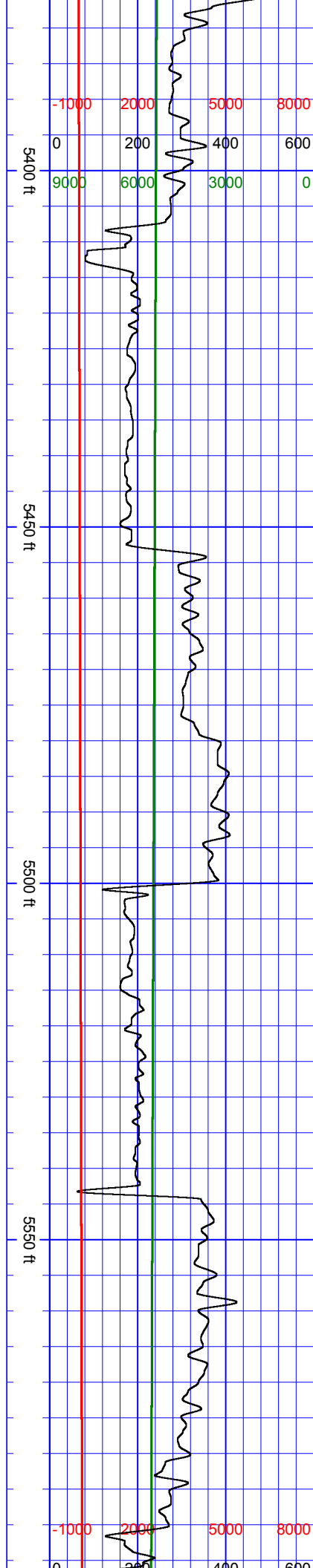
SurveyDepth:5348
TVD:5321.72 Inc:24.9
Azi:359.4 VertSec:-15.8

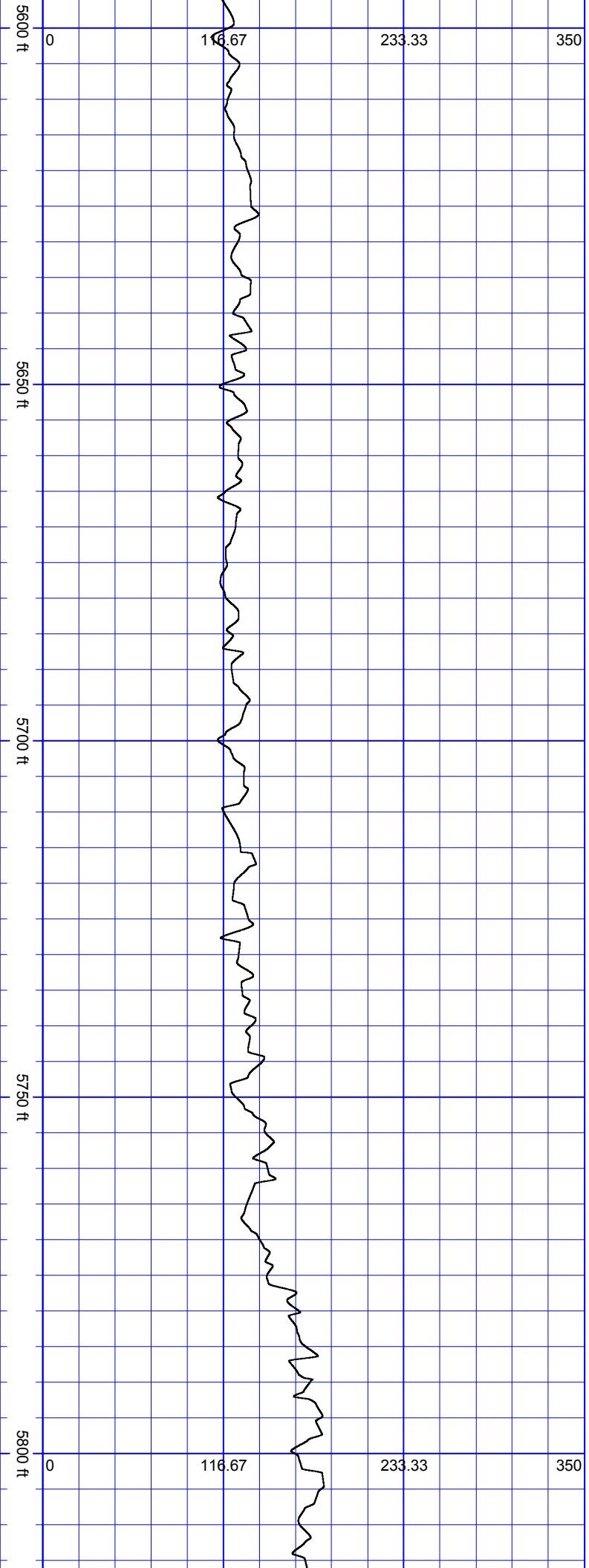




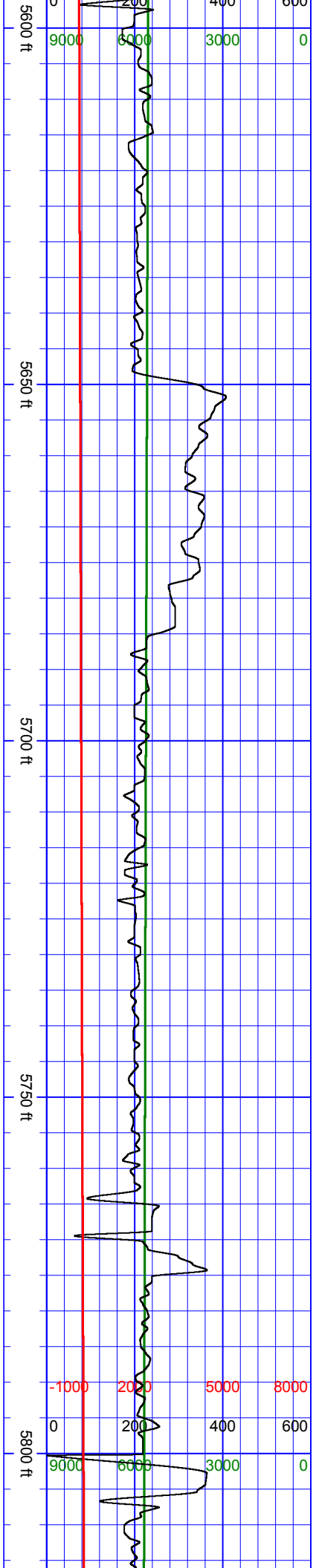
SurveyDepth:5440
TVD:5402.99 Inc:30.9
Azi:357 VertSec:27.22

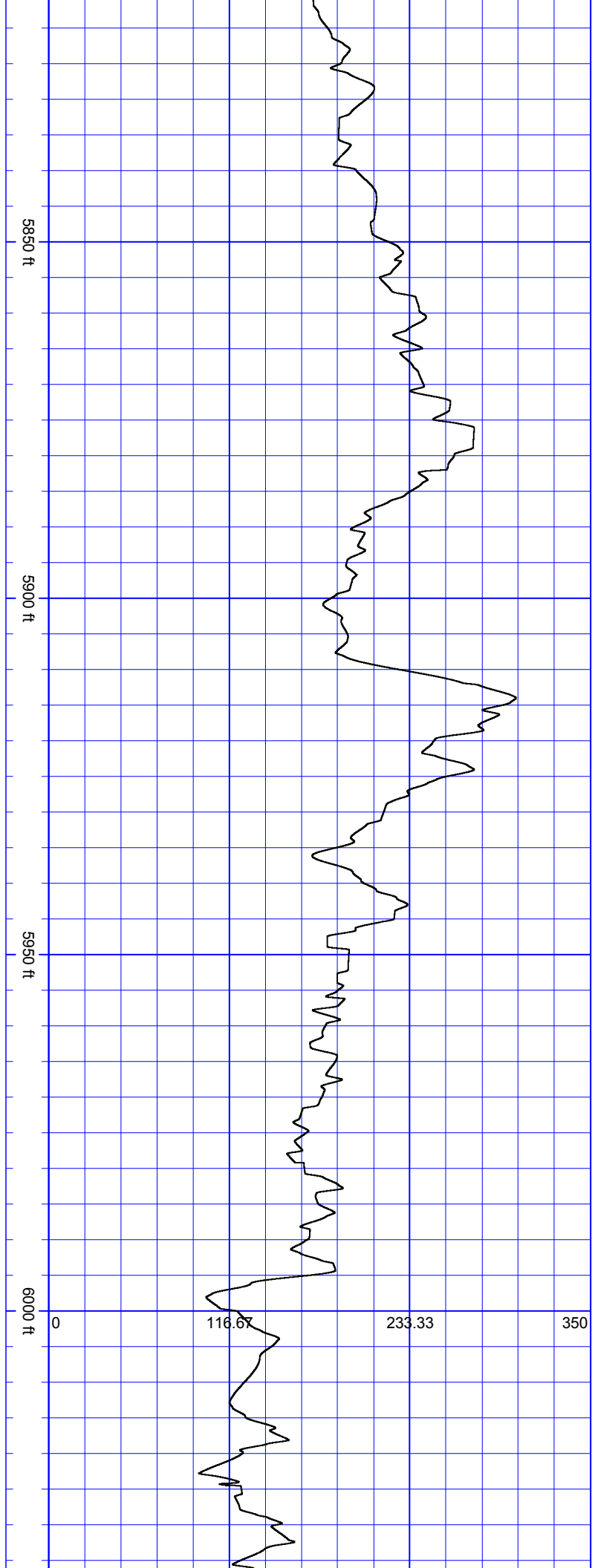
SurveyDepth:5532
TVD:5480.35 Inc:34.6
Azi:358.3 VertSec:76.98



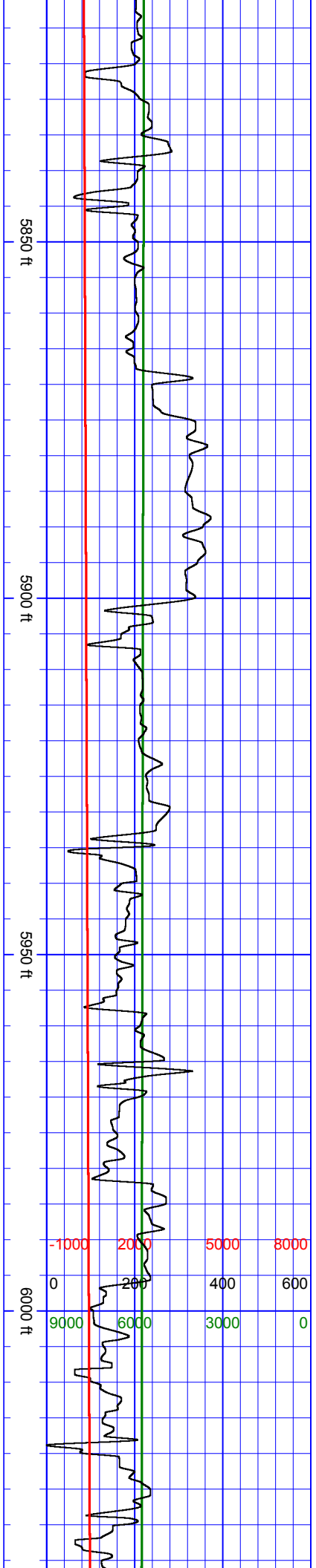


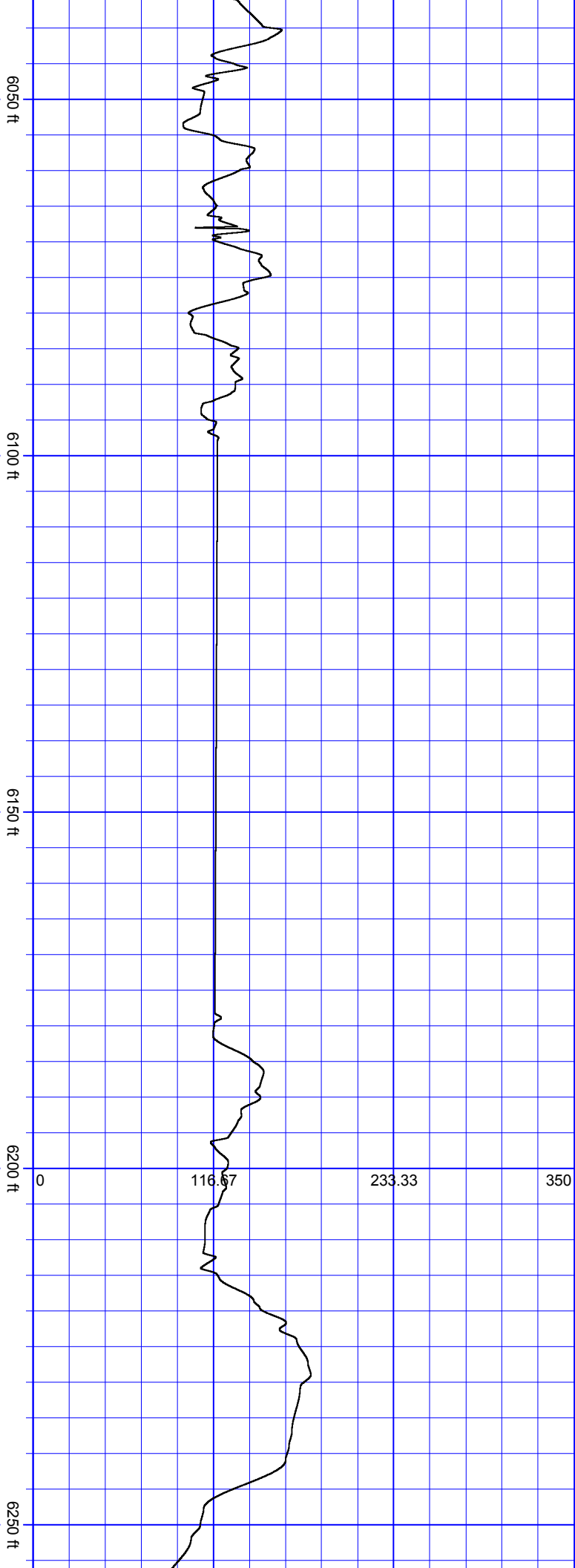
SurveyDepth:5623 TVD:5553.3 Inc:38.8 Azi:0.8 VertSec:131.3
SurveyDepth:5714 TVD:5619.44 Inc:47.9 Azi:7.2 VertSec:193.18
SurveyDepth:5746 TVD:5639.5 Inc:54.4 Azi:7.1 VertSec:217.72
SurveyDepth:5777 TVD:5656.81 Inc:57.7 Azi:7.6 VertSec:243.04
SurveyDepth:5809 TVD:5672.91 Inc:61.9 Azi:5.4 VertSec:270.34





SurveyDepth:5841 TVD:5687.71 Inc:63 Azi:2.8 VertSec:298.51
SurveyDepth:5872 TVD:5701.35 Inc:64.8 Azi:0.8 VertSec:326.26
SurveyDepth:5904 TVD:5714.67 Inc:66 Azi:359.5 VertSec:355.32
SurveyDepth:5935 TVD:5726.76 Inc:68.1 Azi:357.7 VertSec:383.85
SurveyDepth:5967 TVD:5737.75 Inc:71.7 Azi:356.5 VertSec:413.9
SurveyDepth:5999 TVD:5747.32 Inc:73.5 Azi:357.5 VertSec:444.43
SurveyDepth:6030 TVD:5755.42 Inc:76.2 Azi:358.0 VertSec:474.95



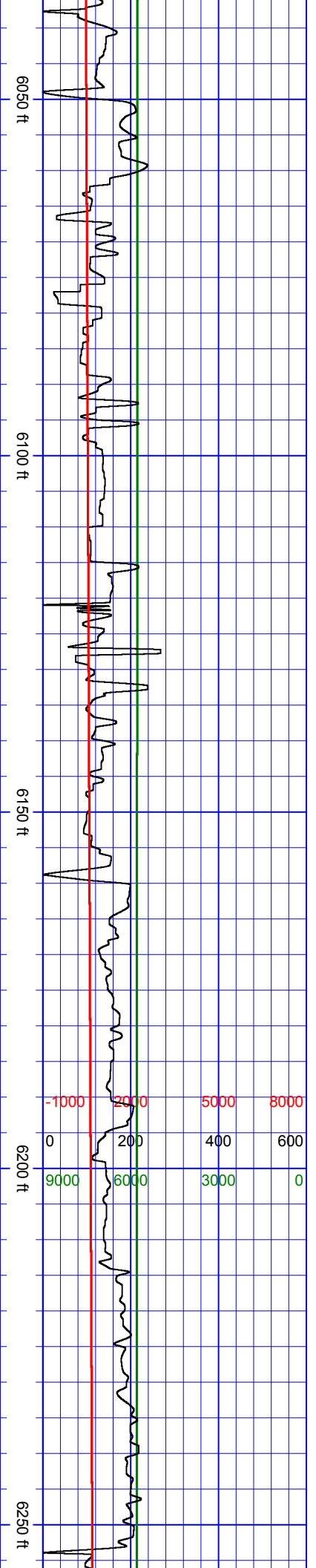


Azi:358 VertSec:474.35

SurveyDepth:6062
TVD:5762.68 Inc:77.6
Azi:356.6
VertSec:505.52

SurveyDepth:6094
TVD:5768.4 Inc:81.8
Azi:355.8
VertSec:536.99

SurveyDepth:6197
TVD:5778.26 Inc:87.2
Azi:356 VertSec:639.44



6300 ft

6350 ft

6400 ft

6450 ft

SurveyDepth:6292
TVD:5781.91 Inc:88.4
Azi:356.9
VertSec:734.36

SurveyDepth:6387
TVD:5783.16 Inc:90.1
Azi:358.6
VertSec:829.34

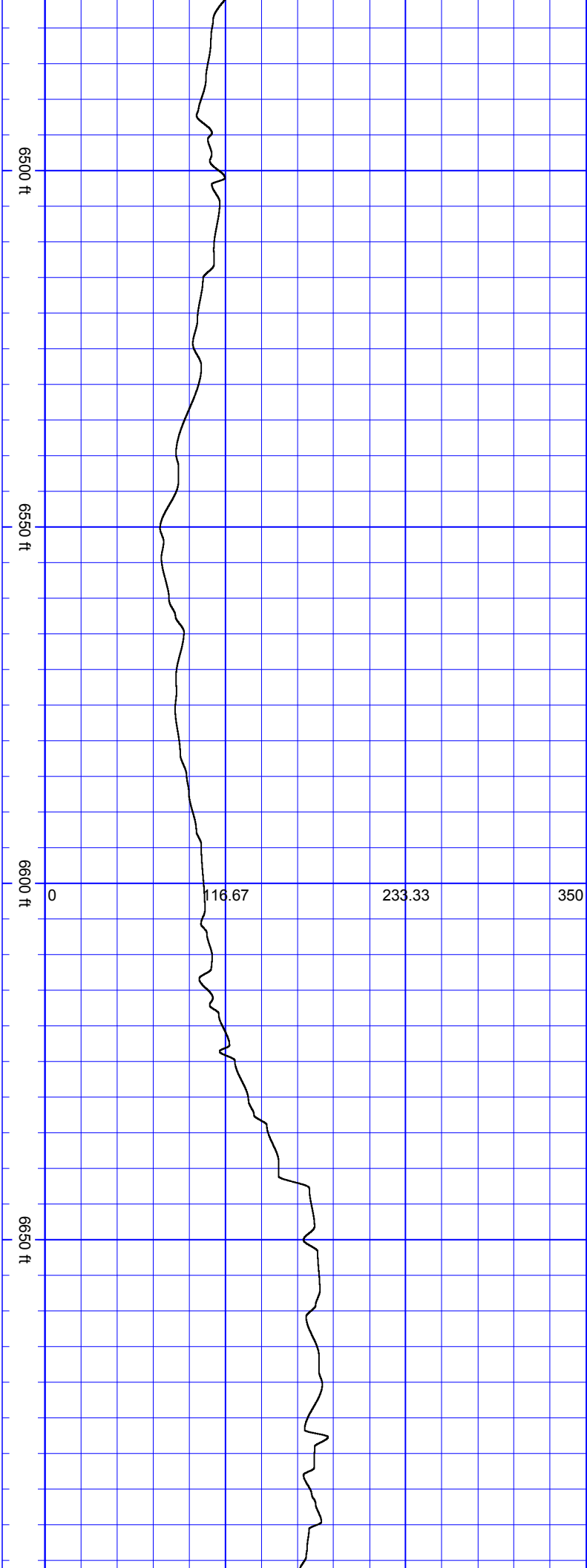
6300 ft

6350 ft

6400 ft

6450 ft

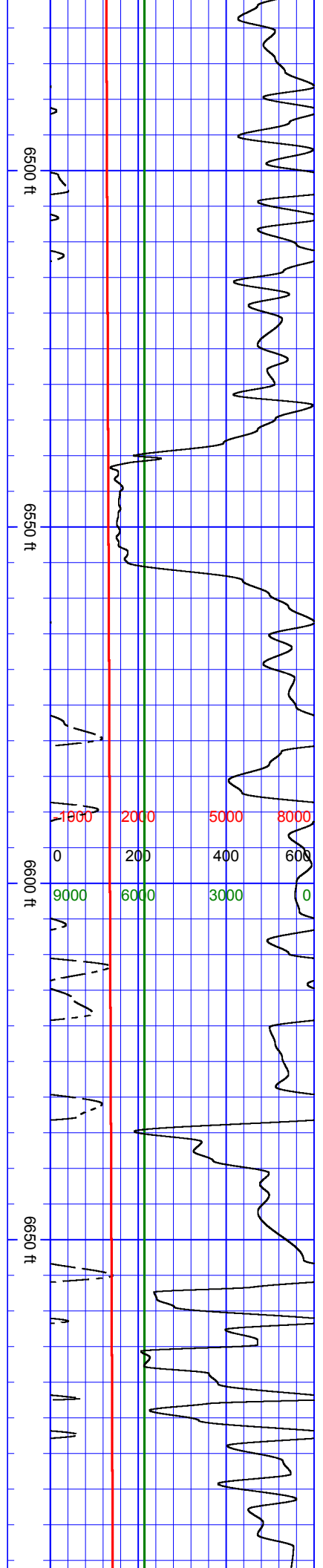
-1000 2000 5000 8000
0 200 400 600
9000 6000 3000 0

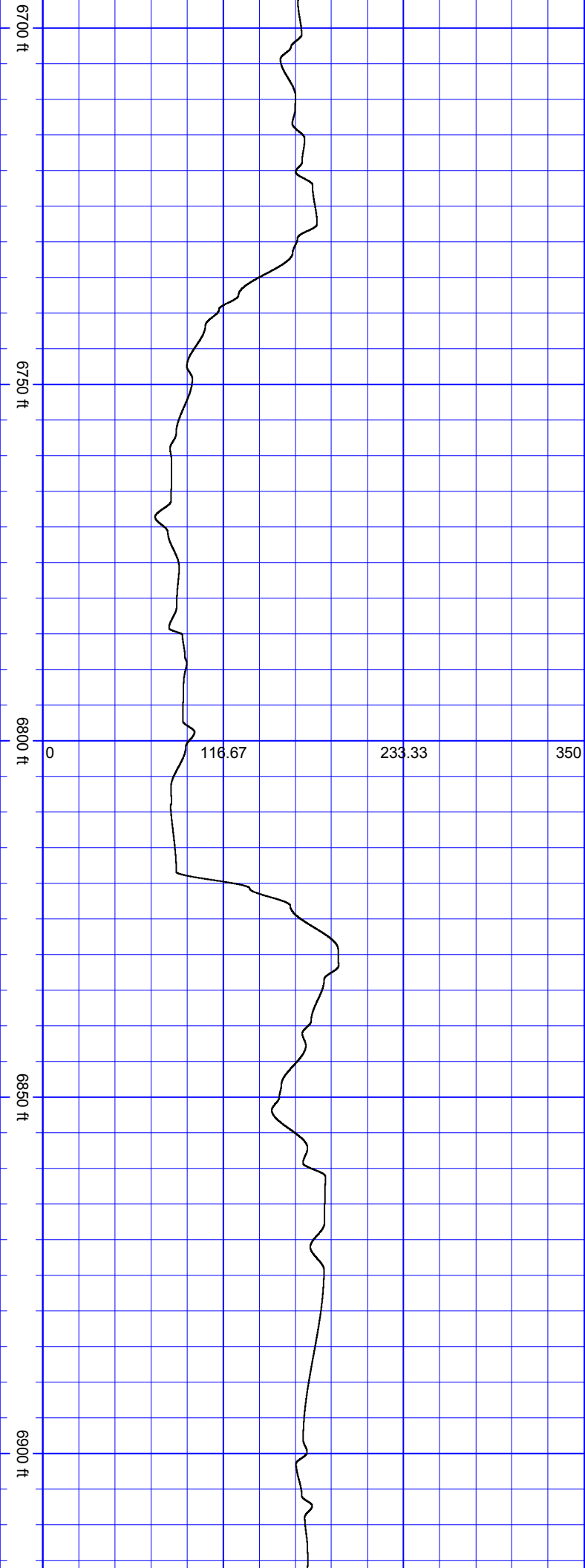


SurveyDepth:6482
TVD:5781.99 Inc:91.3
Azi:1.1 VertSec:924.23

SurveyDepth:6576
TVD:5781.34 Inc:89.5
Azi:0.3 VertSec:1018.07

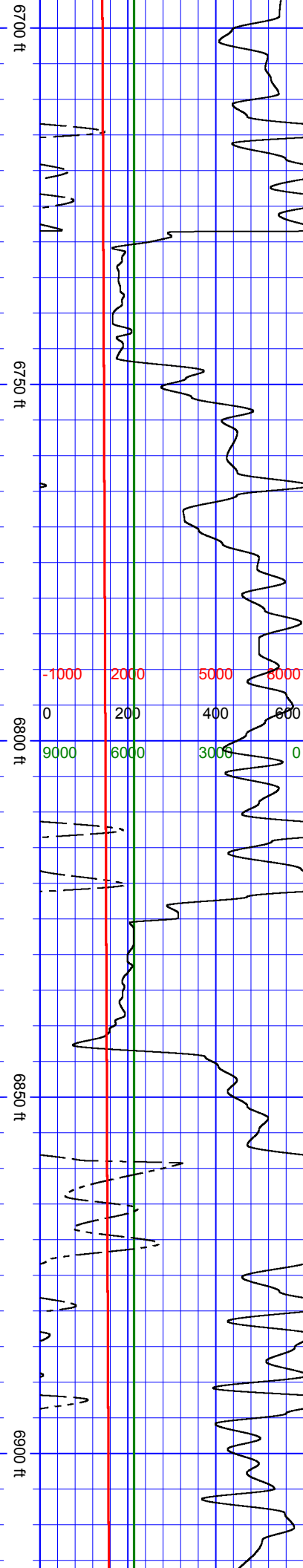
SurveyDepth:6671
TVD:5781.34 Inc:90.5
Azi:0.9 VertSec:1112.91

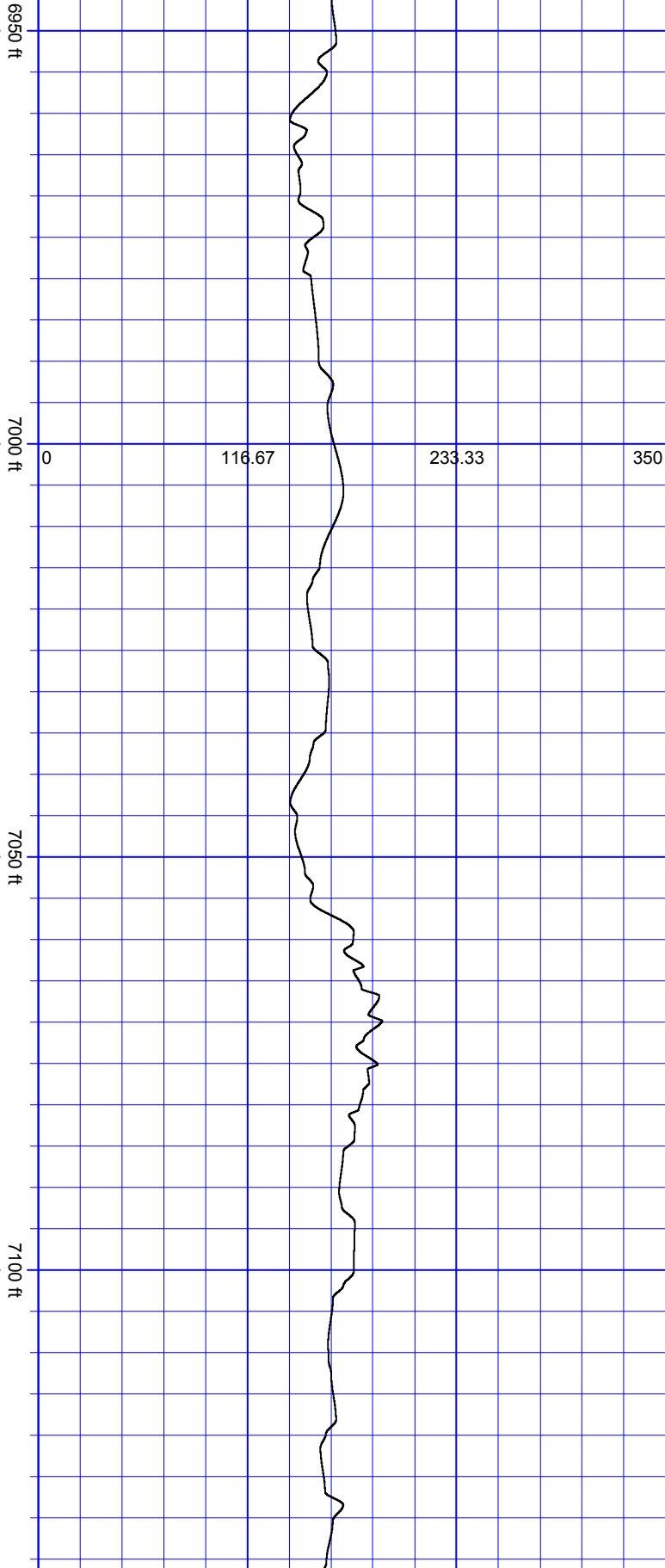




SurveyDepth:6766
TVD:5783.74 Inc:86.6
Azi:358.3
VertSec:1207.78

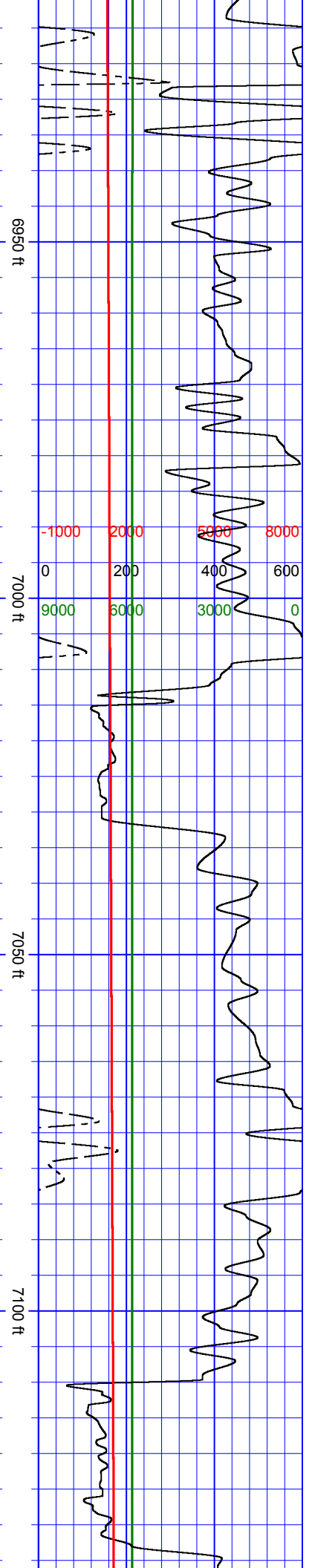
SurveyDepth:6861
TVD:5787.06 Inc:89.4
Azi:0.4 VertSec:1302.65

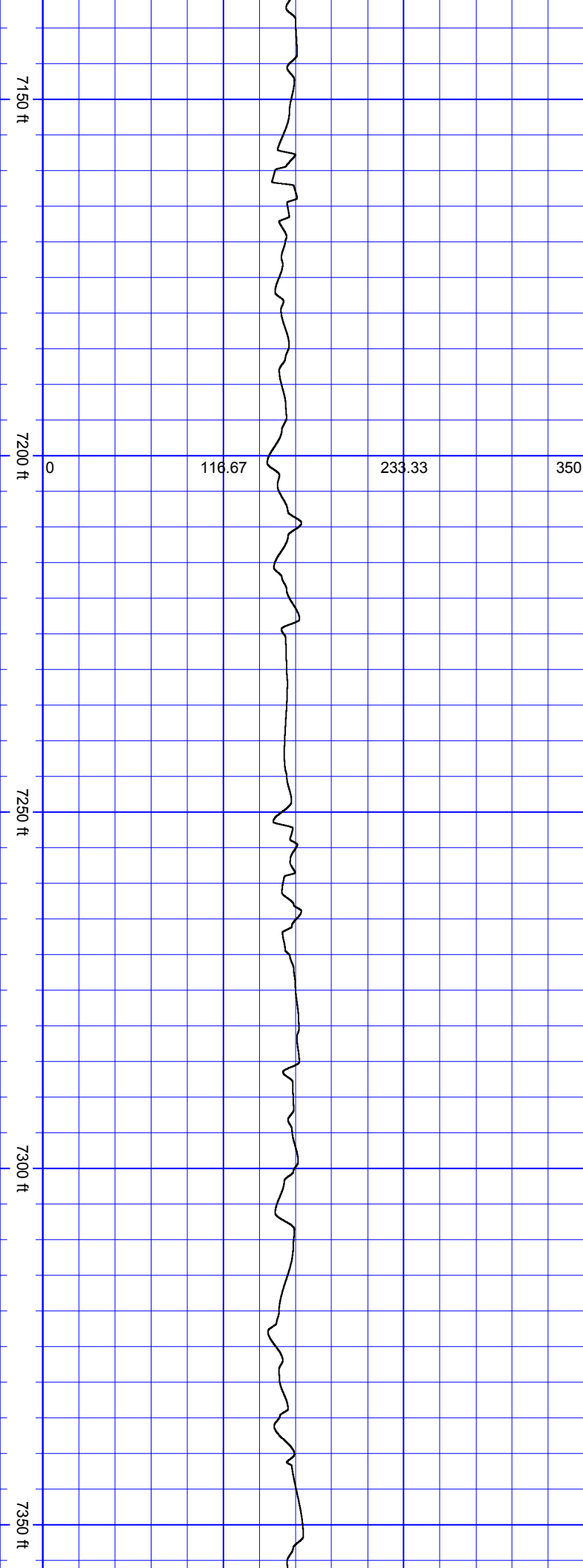




SurveyDepth:6956
TVD:5789.63 Inc:87.5
Azi:357.1
VertSec:1397.57

SurveyDepth:7051
TVD:5793.11 Inc:88.3
Azi:357.5
VertSec:1492.5

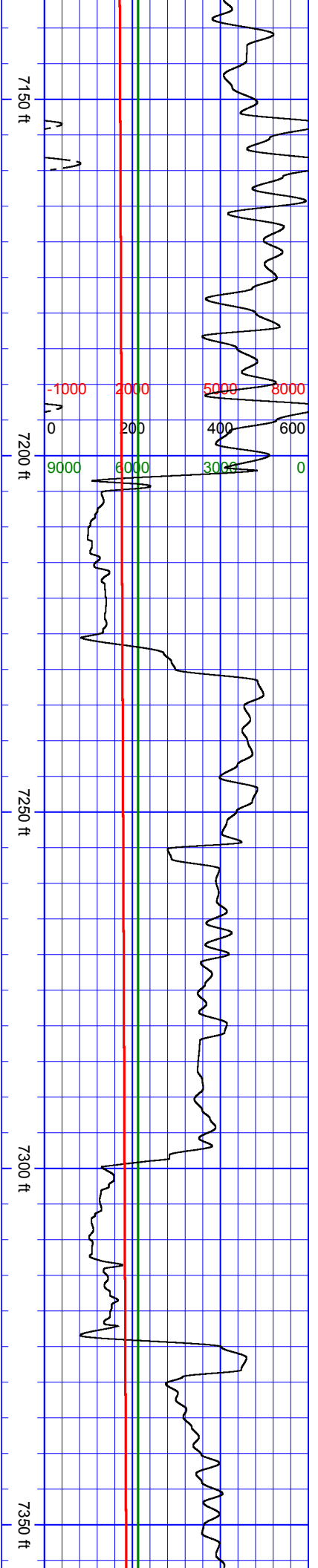


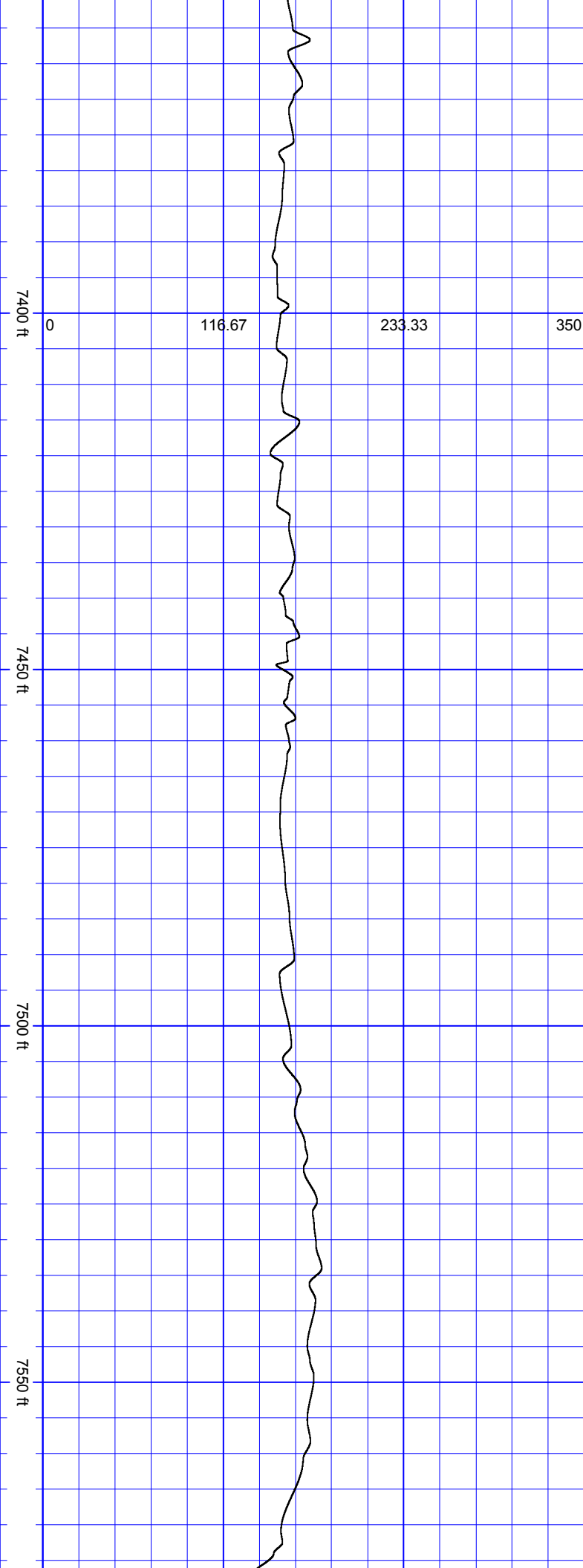


SurveyDepth:7146
TVD:5795.26 Inc:89.1
Azi:359 VertSec:1587.46

SurveyDepth:7241
TVD:5796.01 Inc:90
Azi:359.8
VertSec:1682.4

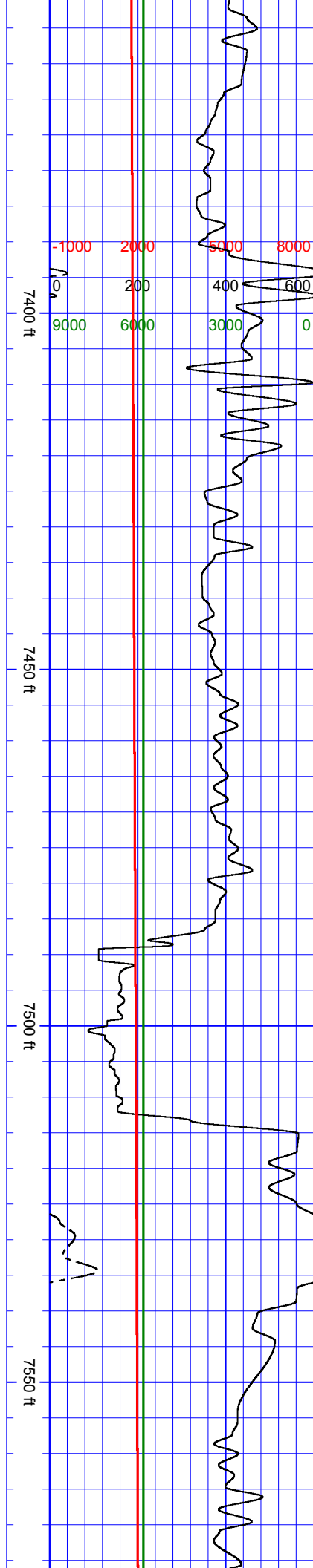
SurveyDepth:7335
TVD:5795.68 Inc:90.4
Azi:1.2 VertSec:1776.25

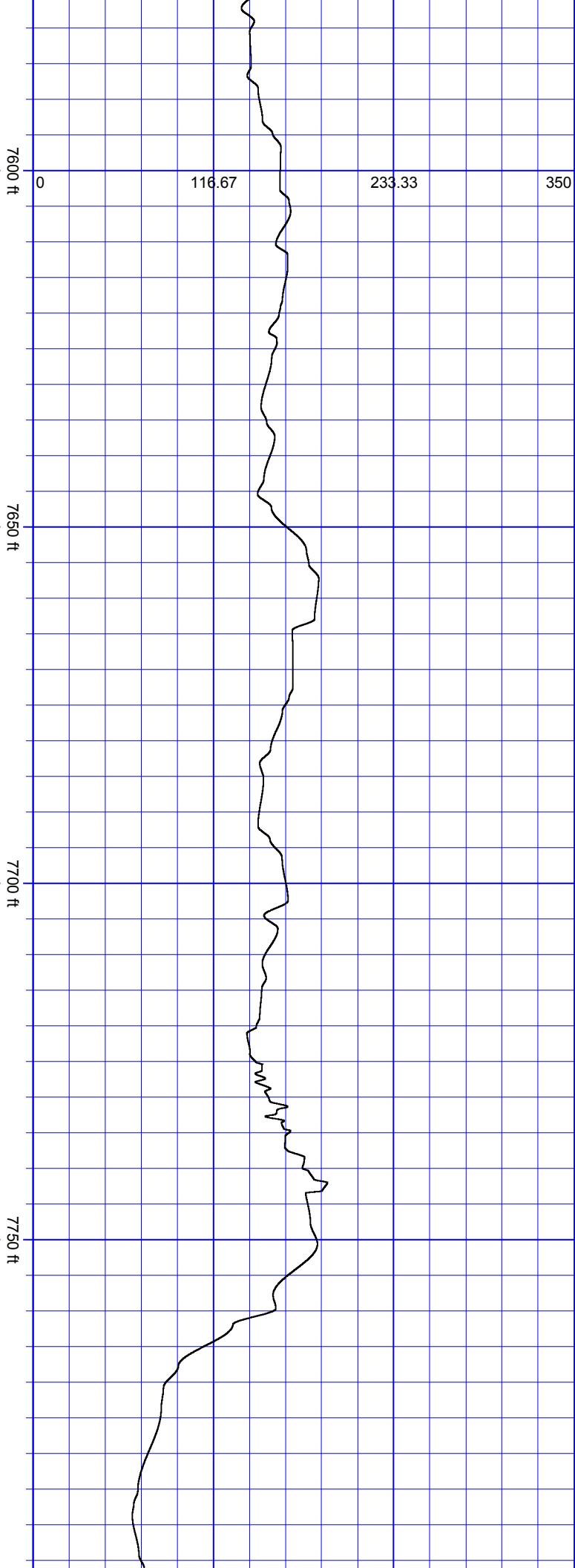




SurveyDepth:7430
TVD:5795.18 Inc:90.2
Azi:0.7 VertSec:1871.06

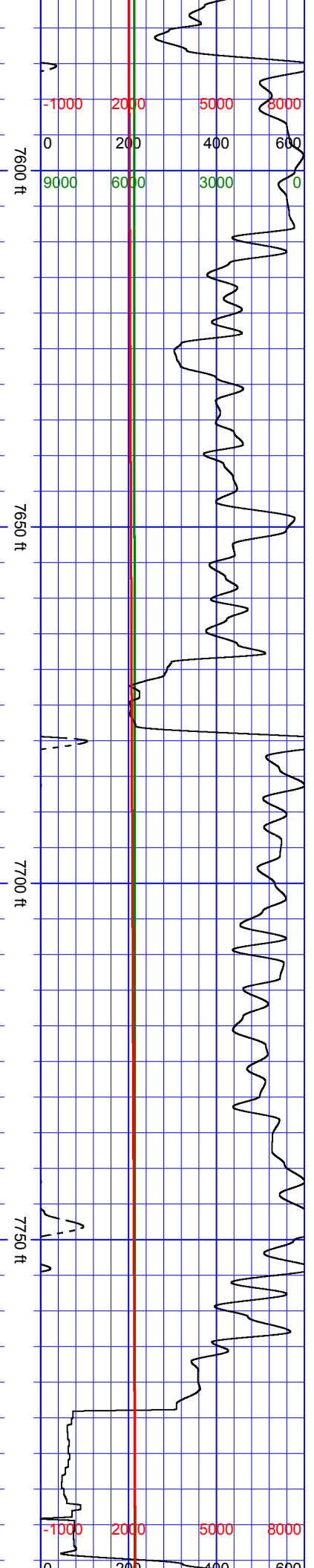
SurveyDepth:7525
TVD:5793.44 Inc:91.9
Azi:3.6 VertSec:1965.7

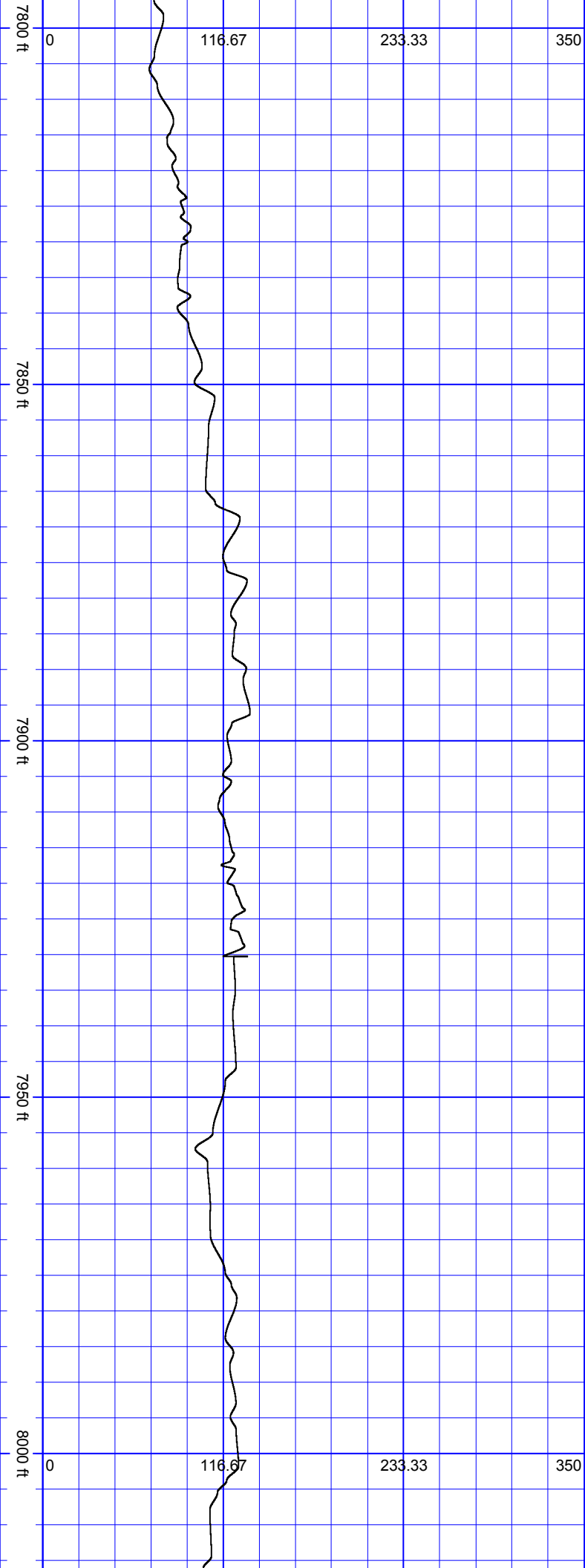




SurveyDepth:7620
TVD:5790.38 Inc:91.8
Azi:2.1 VertSec:2060.21

SurveyDepth:7715
TVD:5786.81 Inc:92.5
Azi:1.2 VertSec:2154.87

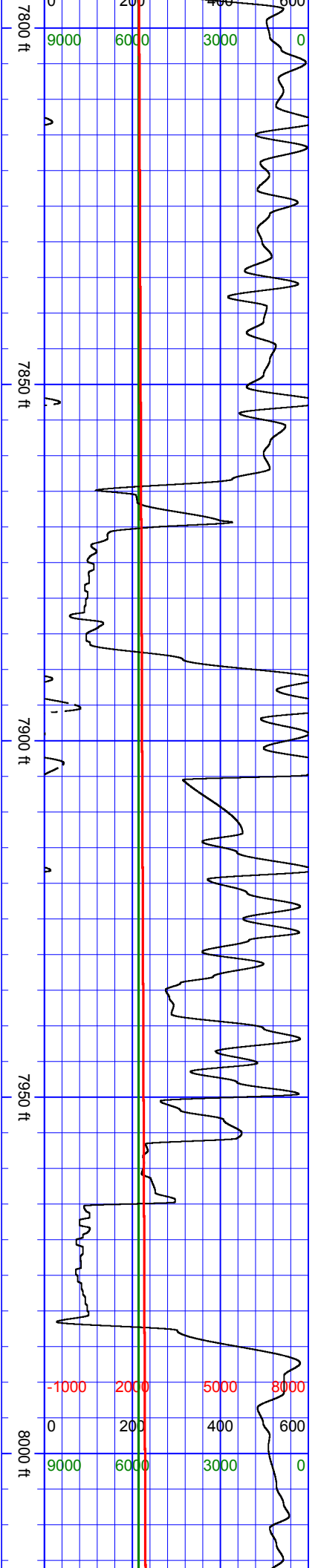


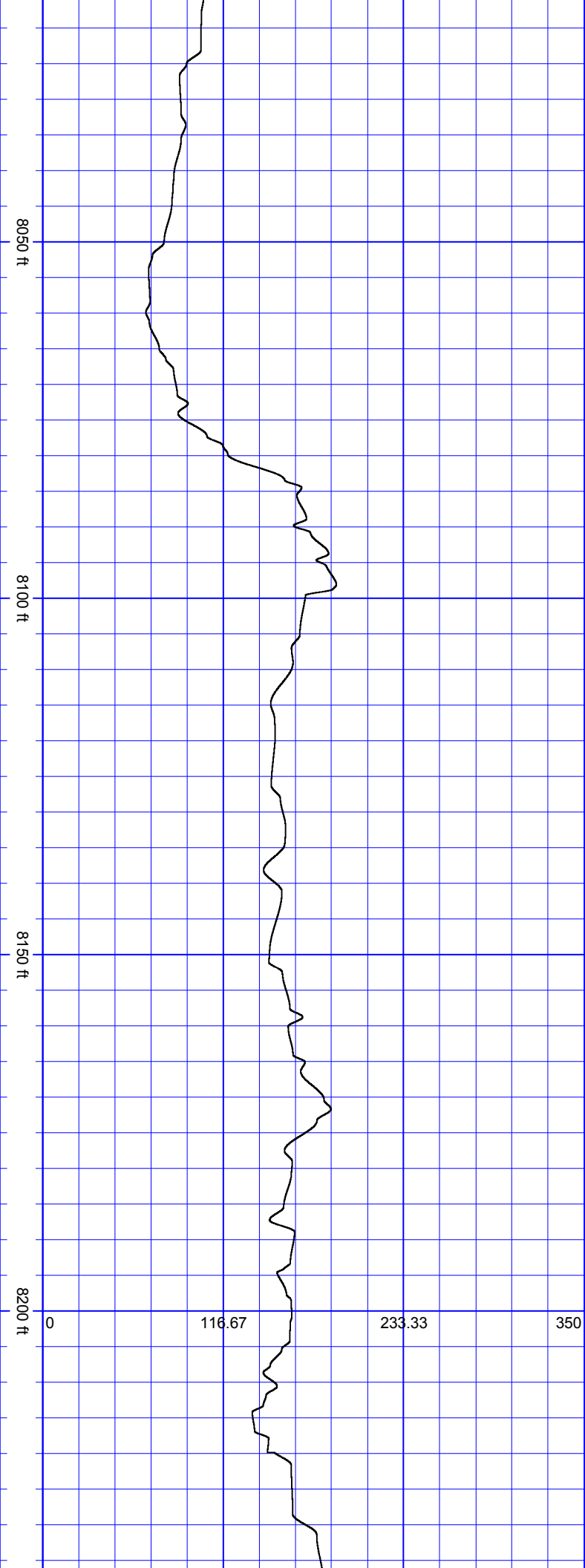


SurveyDepth:7810
TVD:5783.75 Inc:91.2
Azi:2.7 VertSec:2249.51

SurveyDepth:7905
TVD:5782 Inc:90.9
Azi:3.6 VertSec:2344

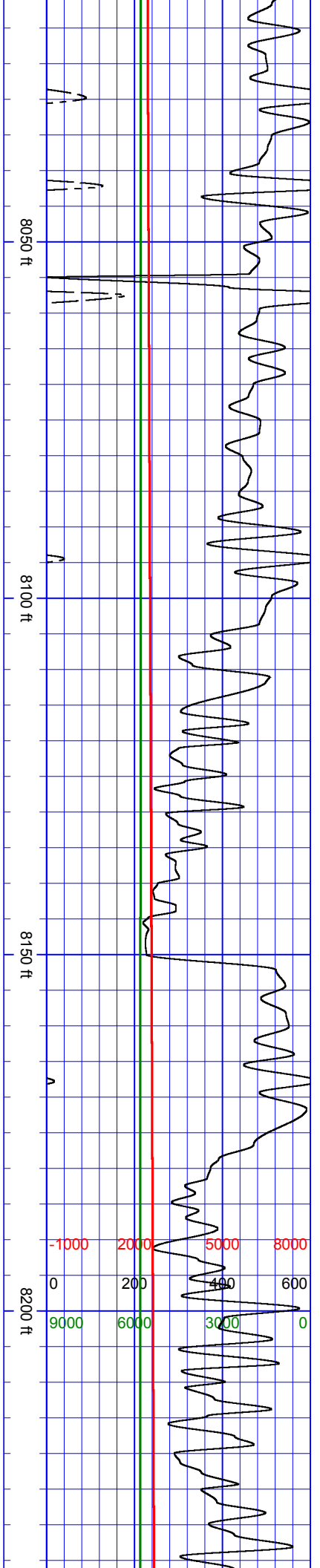
SurveyDepth:7999
TVD:5782.99 Inc:87.9
Azi:3.1 VertSec:2437.47

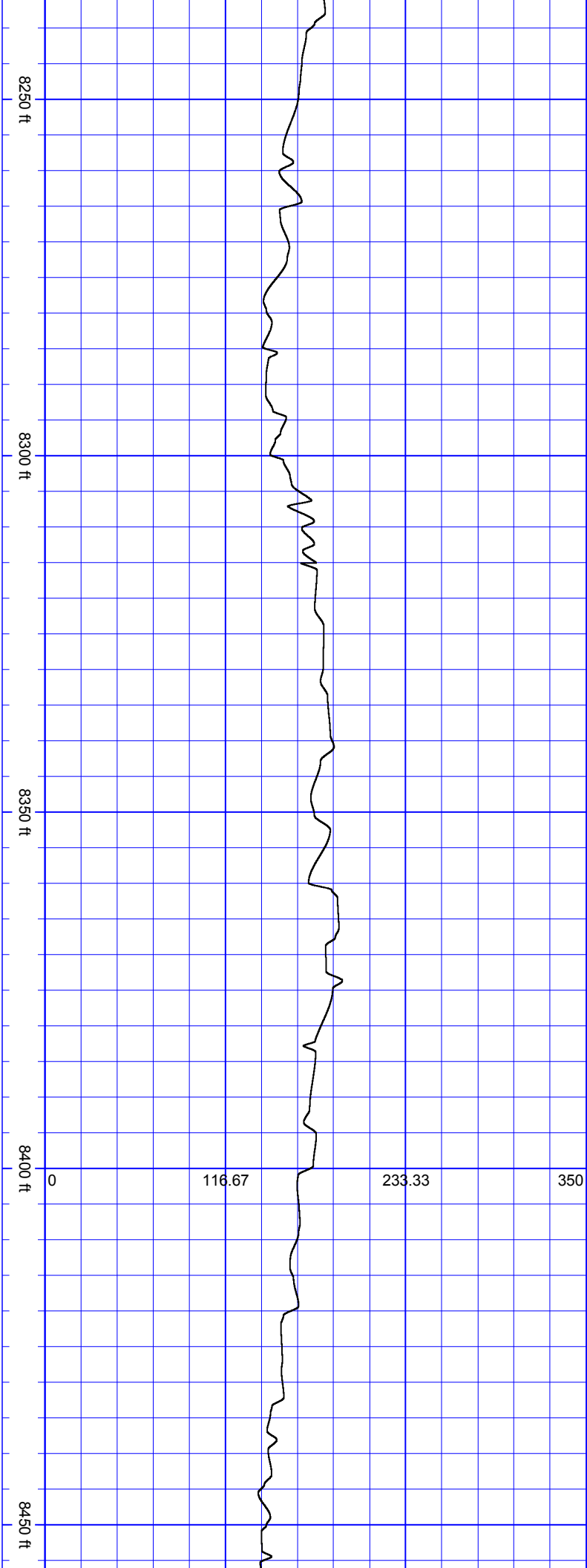




SurveyDepth:8094
TVD:5786.8 Inc:87.5
Azi:2.2 VertSec:2531.98

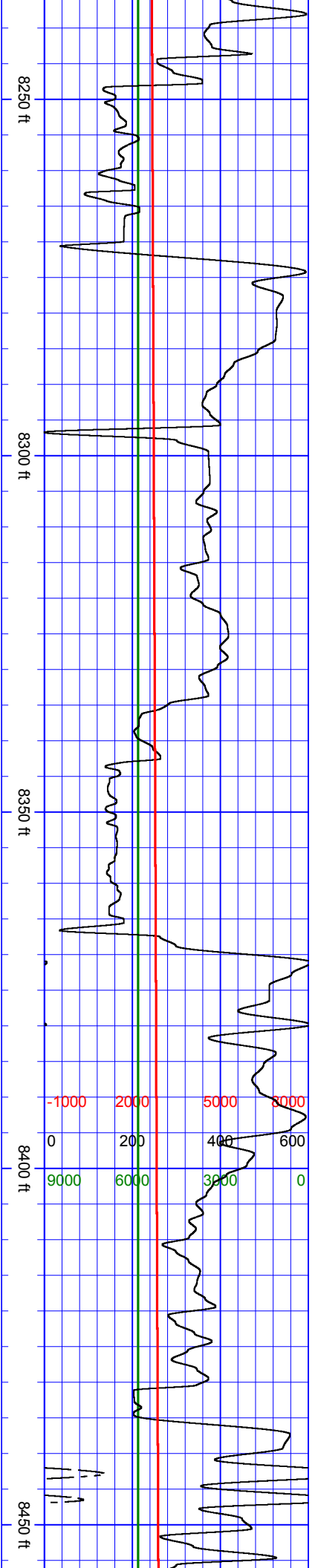
SurveyDepth:8189
TVD:5791.28 Inc:87.1
Azi:1.8 VertSec:2626.57

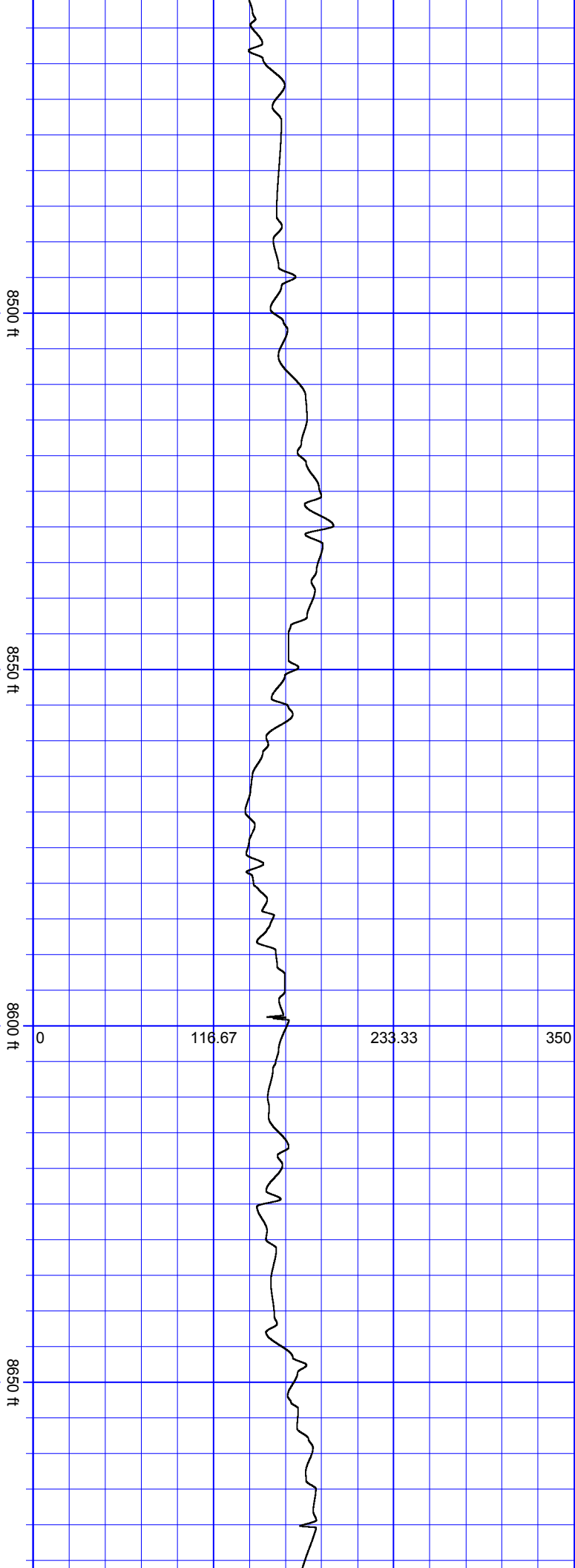




SurveyDepth:8284
TVD:5794.84 Inc:88.6
Azi:1.6 VertSec:2721.22

SurveyDepth:8379
TVD:5795.59 Inc:90.5
Azi:360 VertSec:2816.04

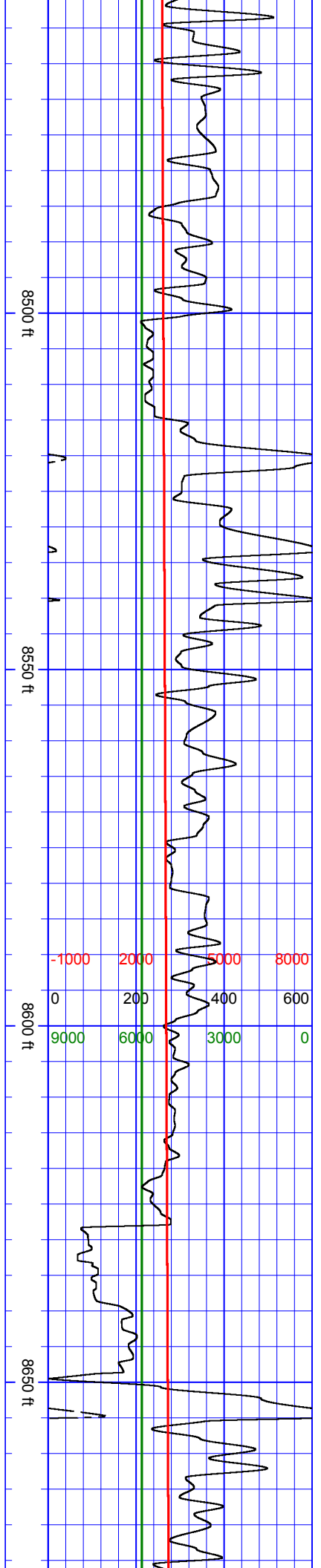


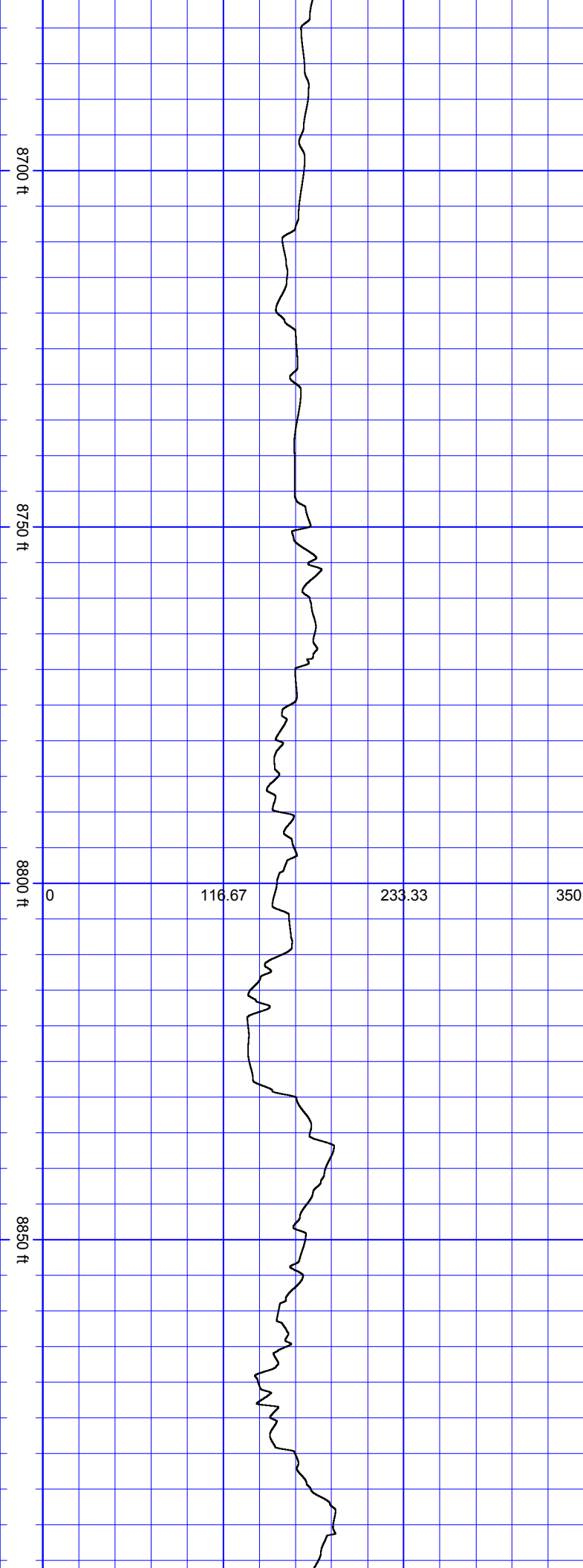


SurveyDepth:8474
TVD:5794.76 Inc:90.5
Azi:360 VertSec:2910.93

SurveyDepth:8569
TVD:5794.09 Inc:90.3
Azi:358.8
VertSec:3005.87

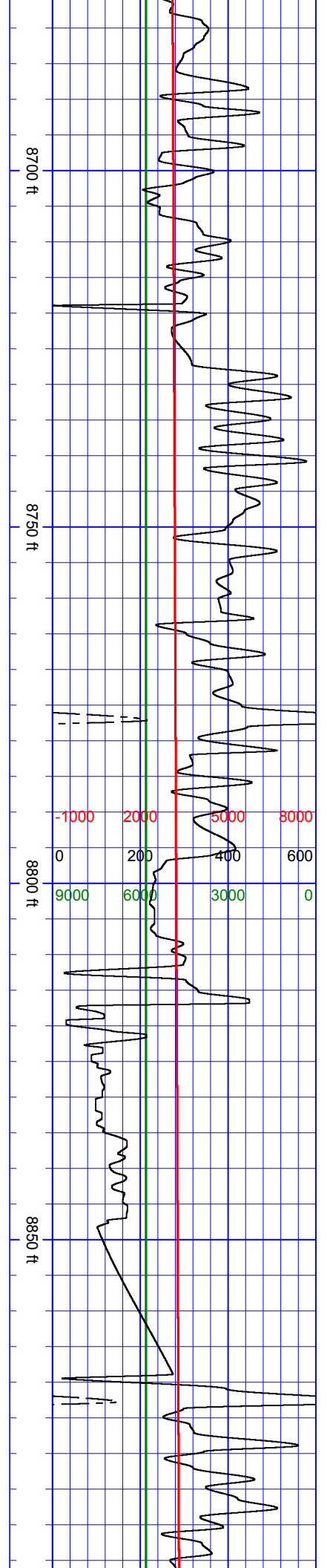
SurveyDepth:8663
TVD:5794.34 Inc:89.4
Azi:1 VertSec:3099.77

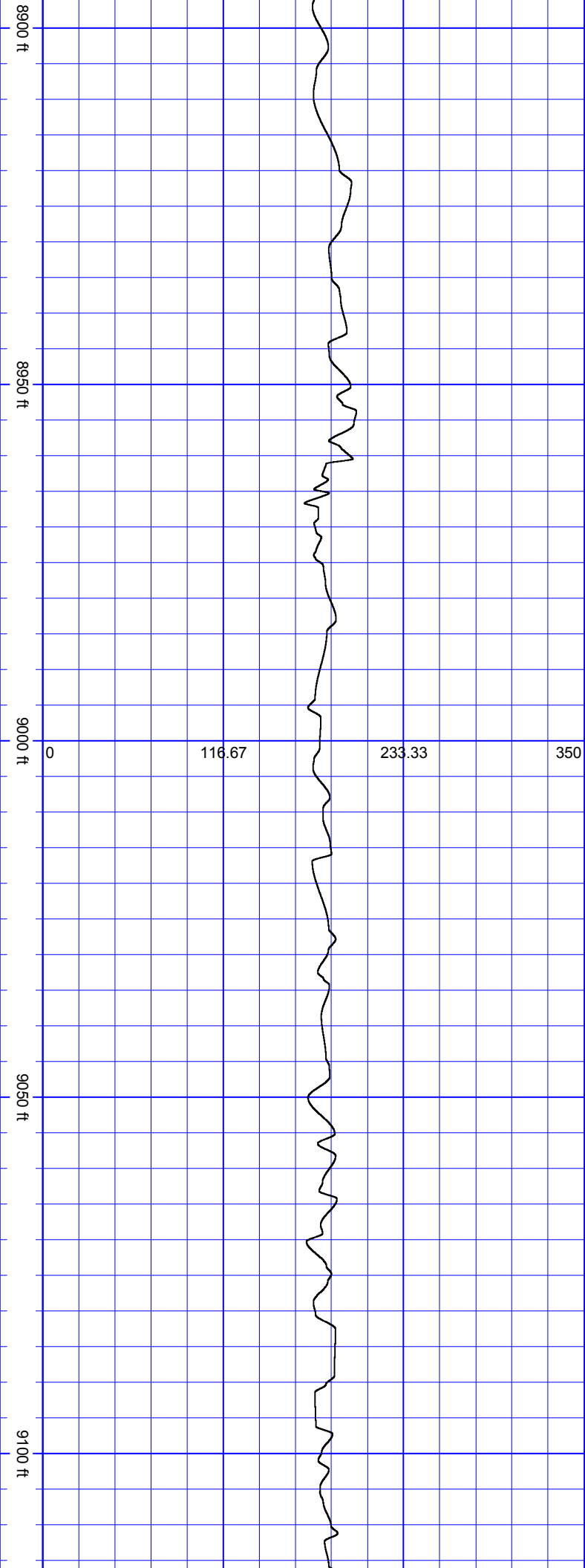




SurveyDepth:8758
TVD:5796.74 Inc:87.7
Azi:359.7
VertSec:3194.6

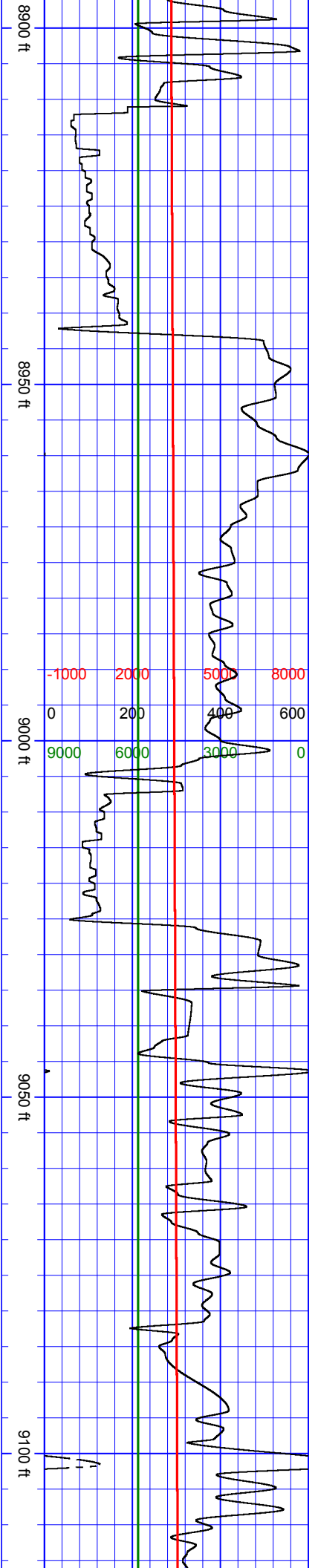
SurveyDepth:8853
TVD:5800.81 Inc:87.4
Azi:1.3 VertSec:3289.36

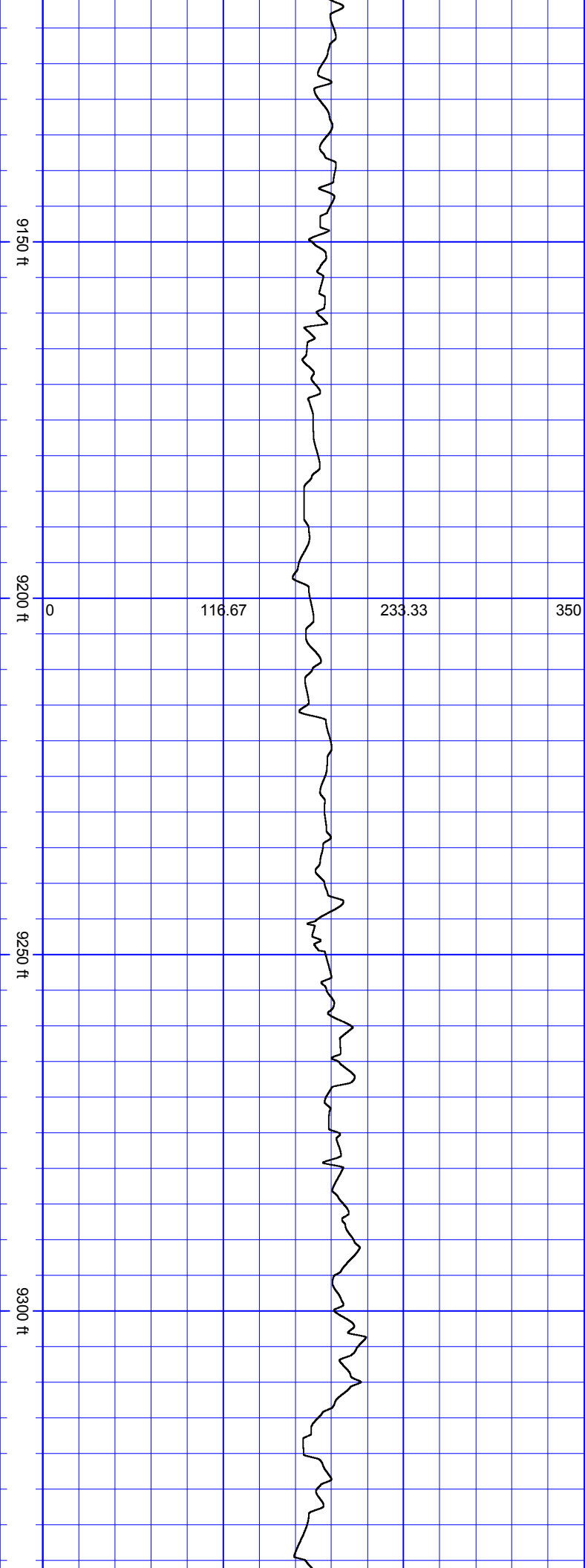




SurveyDepth:8948
TVD:5803.46 Inc:89.4
Azi:2.7 VertSec:3384.01

SurveyDepth:9043
TVD:5803.38 Inc:90.7
Azi:2.5 VertSec:3478.6

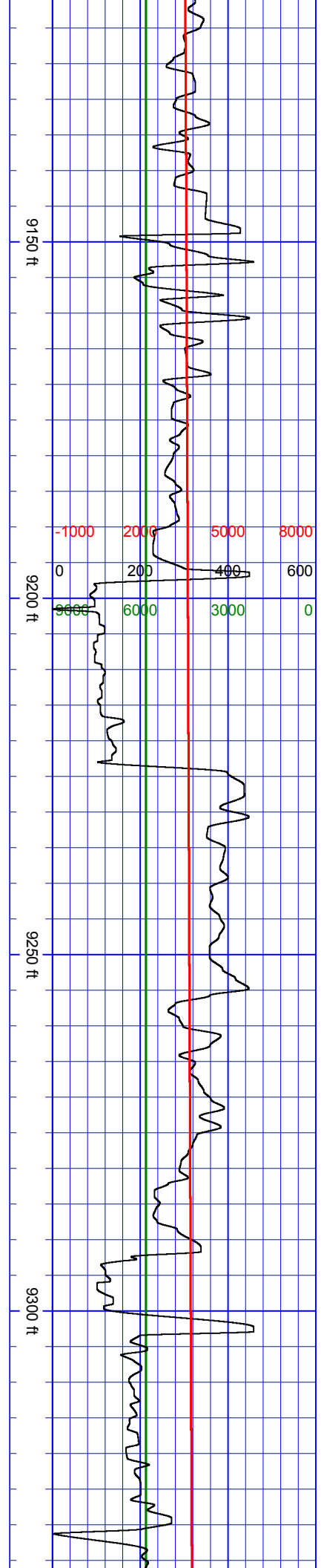


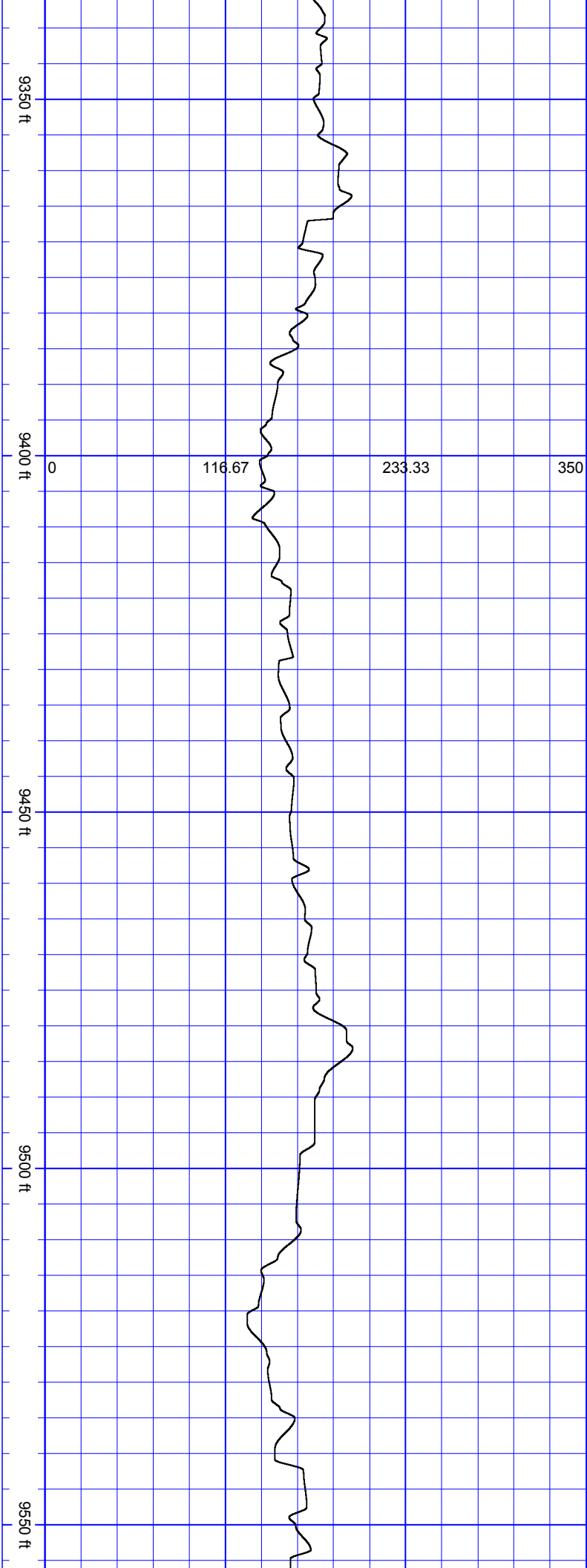


SurveyDepth:9137
TVD:5803.21 Inc:89.5
Azi:1 VertSec:3572.32

SurveyDepth:9232
TVD:5802.38 Inc:91.5
Azi:2 VertSec:3667.06

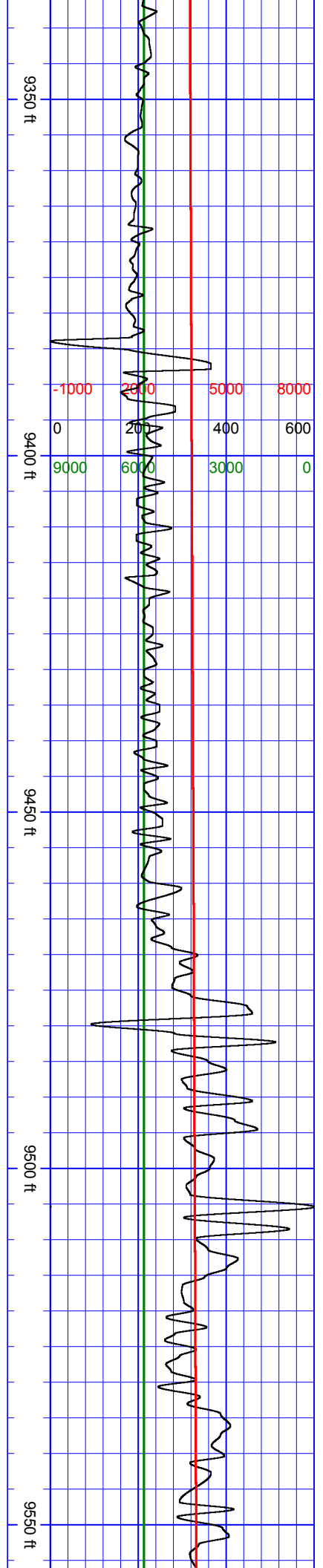
SurveyDepth:9327
TVD:5799.81 Inc:91.6
Azi:1.6 VertSec:3761.74

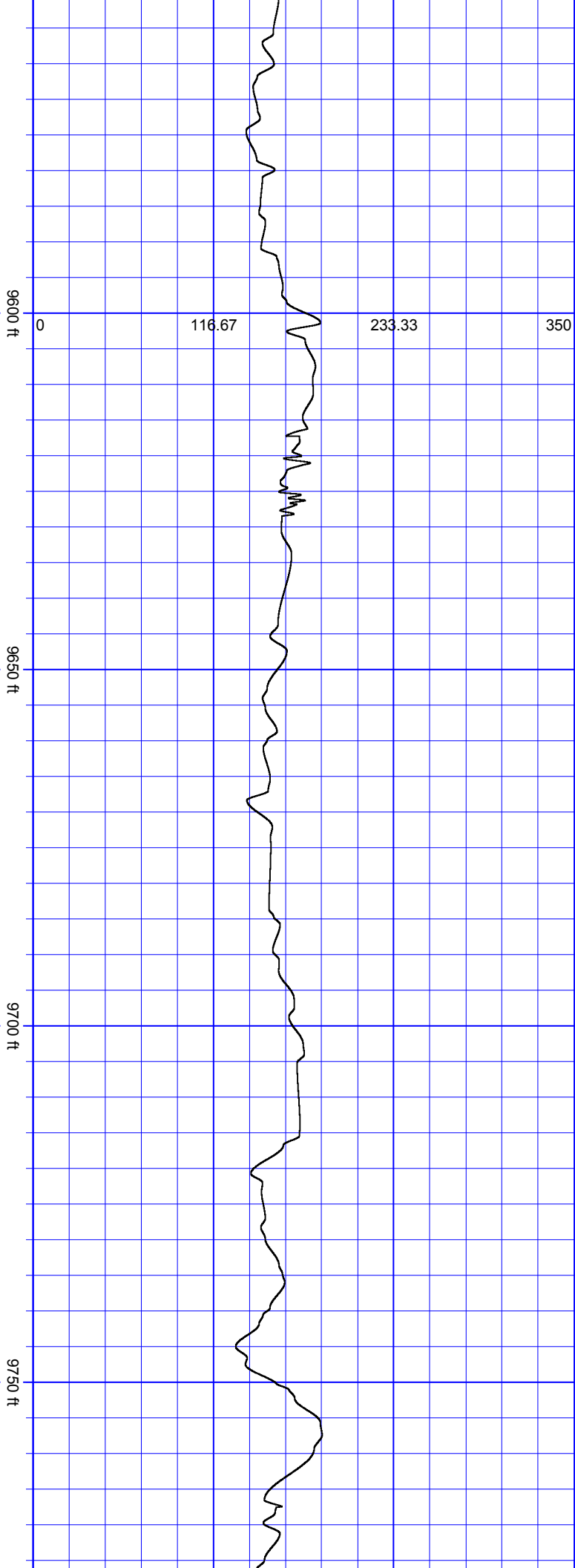




SurveyDepth:9422
TVD:5797.41 Inc:91.3
Azi:0.9 VertSec:3856.49

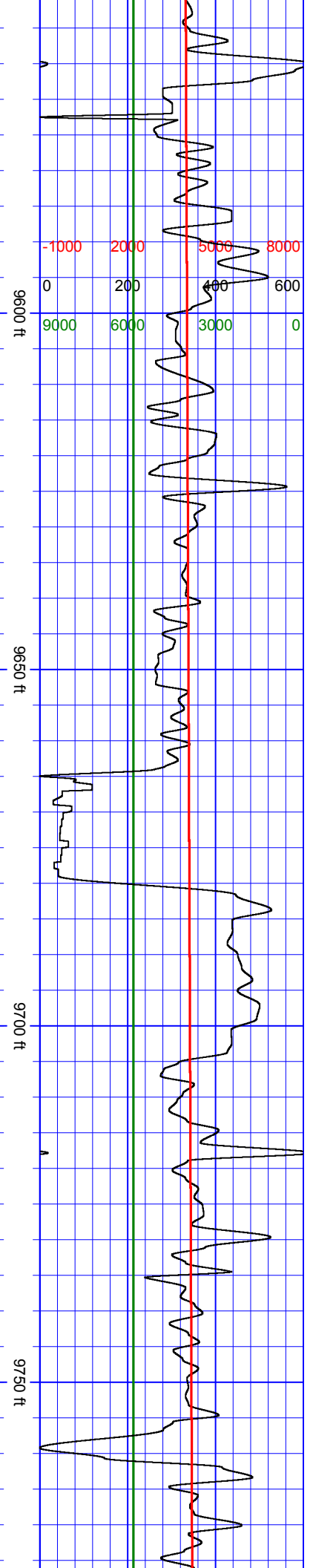
SurveyDepth:9517
TVD:5795.25 Inc:91.3
Azi:0.3 VertSec:3951.31

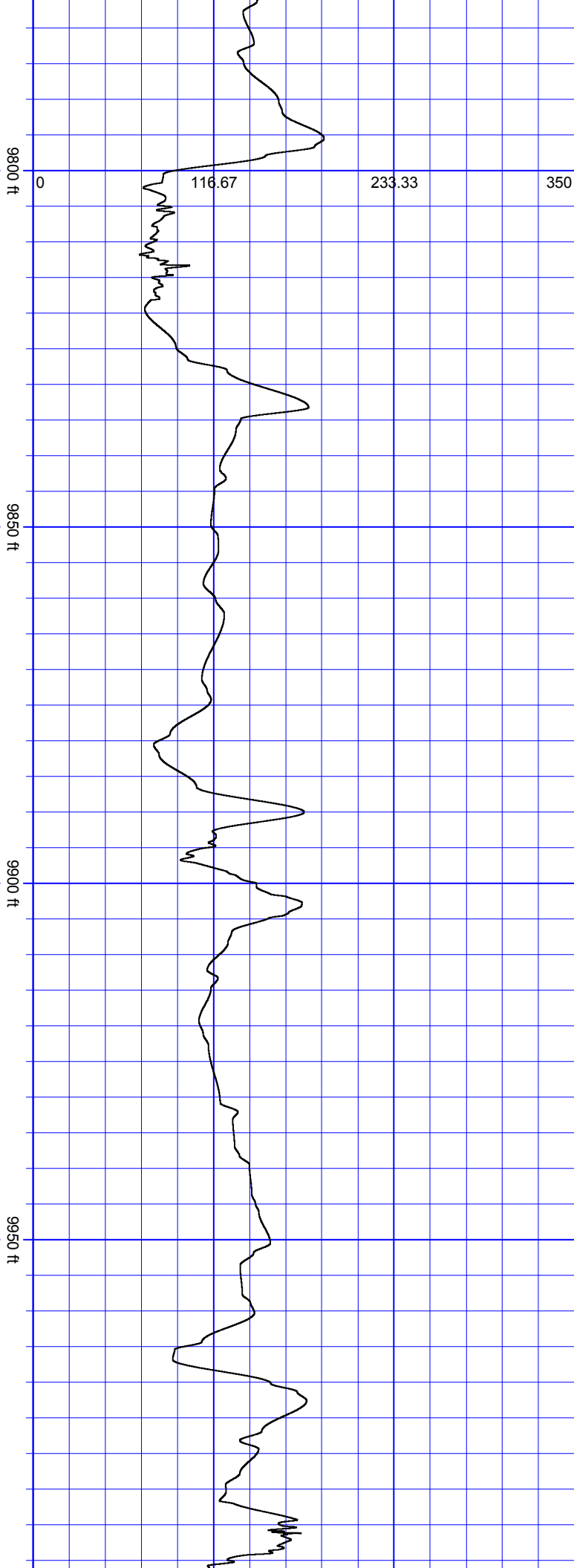




SurveyDepth:9610
TVD:5792.82 Inc:91.7
Azi:359.9
VertSec:4044.17

SurveyDepth:9704
TVD:5791.42 Inc:90
Azi:358.7
VertSec:4138.1

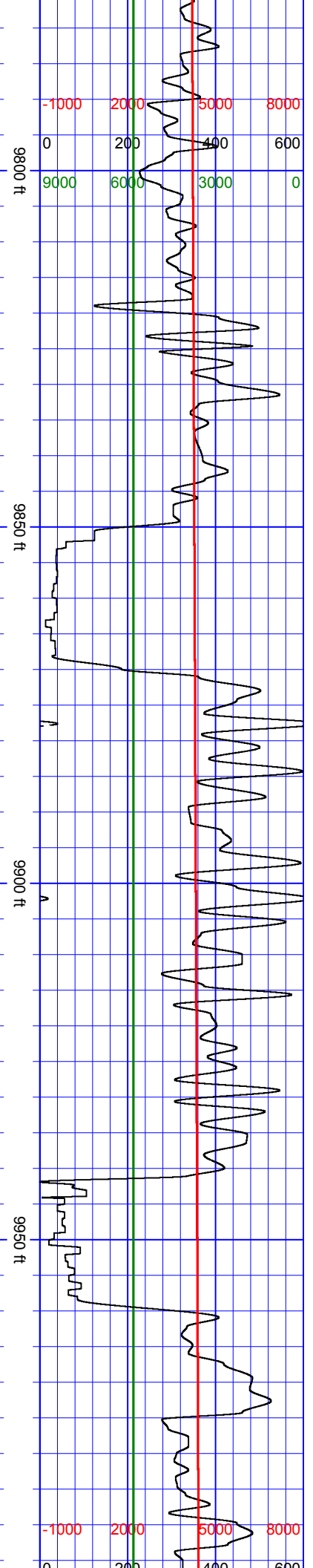


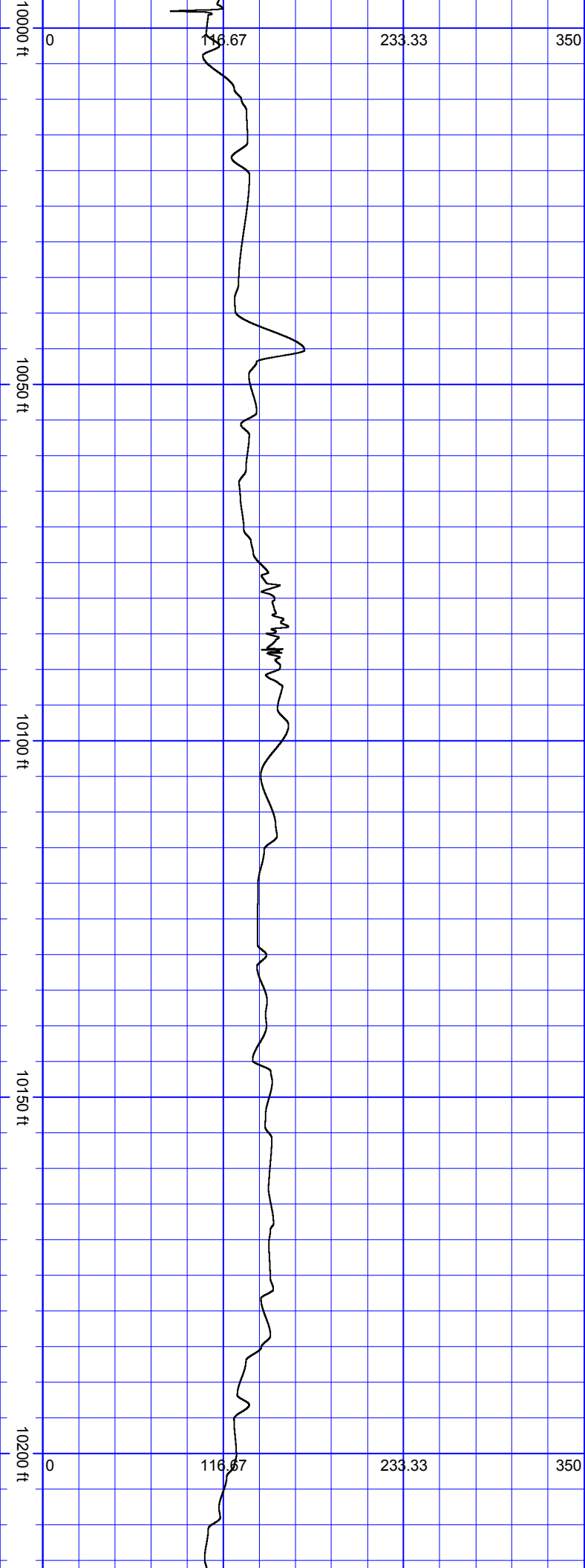


SurveyDepth:9796
TVD:5792.71 Inc:88.4
Azi:357.9
VertSec:4230.07

SurveyDepth:9887
TVD:5794.38 Inc:89.5
Azi:358.7
VertSec:4321.04

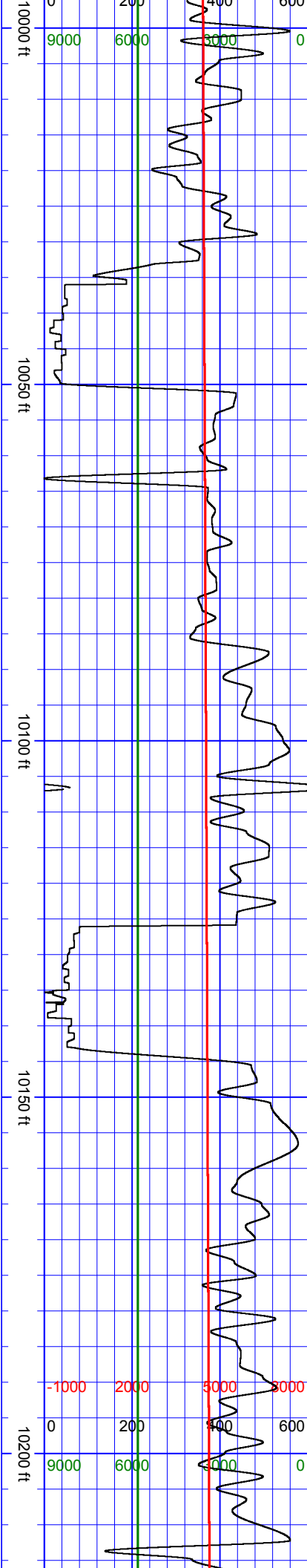
SurveyDepth:9978
TVD:5794.06 Inc:90.9
Azi:359.5
VertSec:4411.99

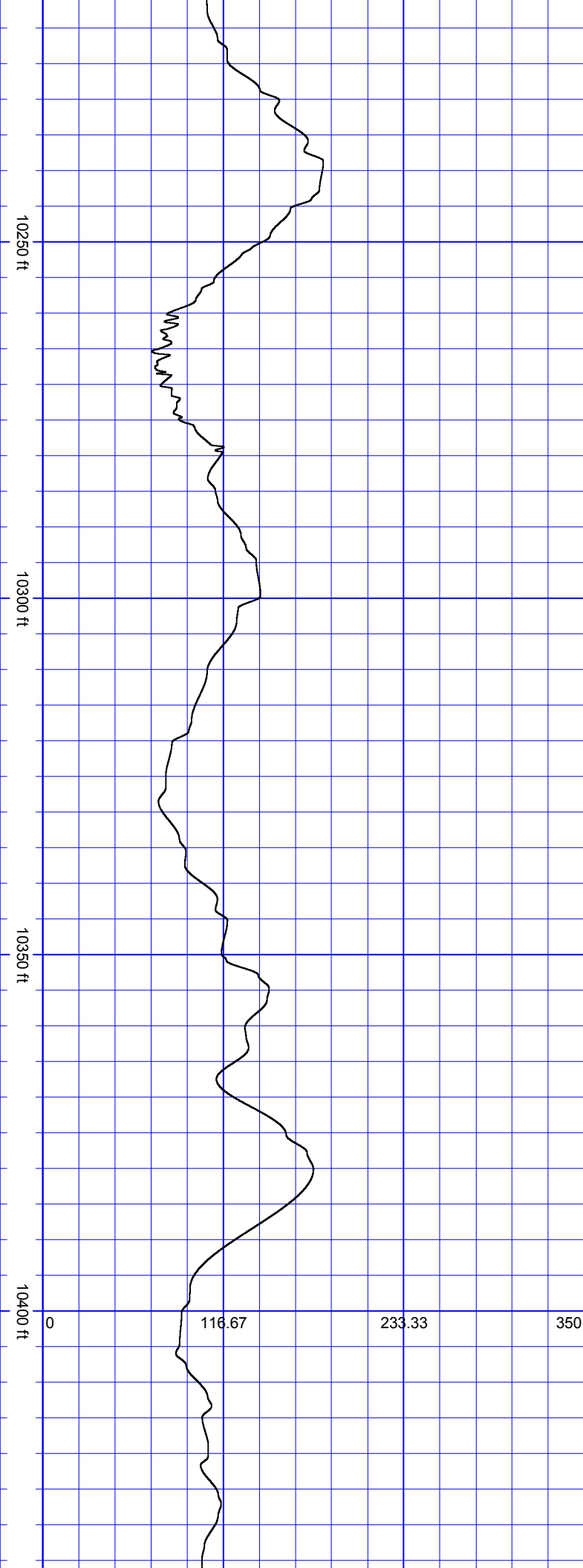




SurveyDepth:10069
TVD:5792.07 Inc:91.6
Azi:0.6 VertSec:4502.87

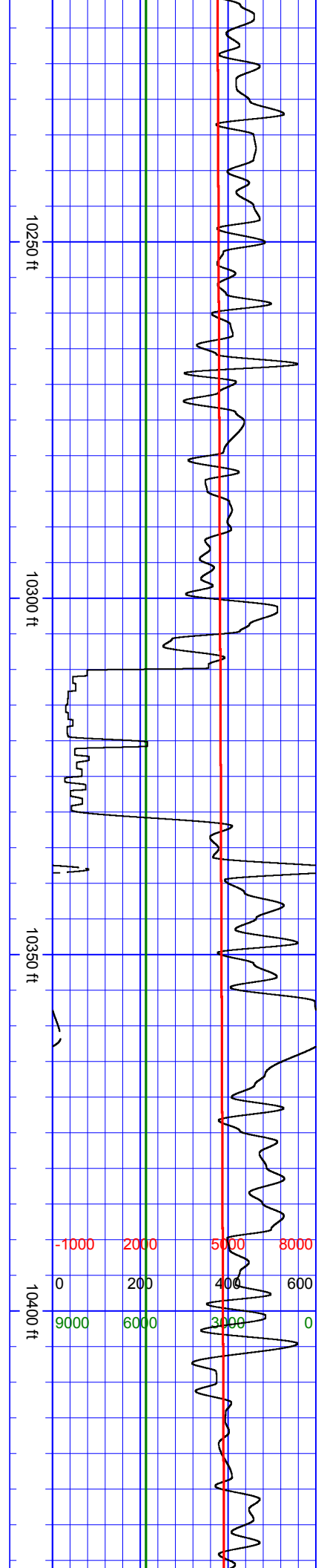
SurveyDepth:10162
TVD:5790.45 Inc:90.4
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SurveyDepth:10254
TVD:5789.65 Inc:90.6
Azi:0.7 VertSec:4687.48

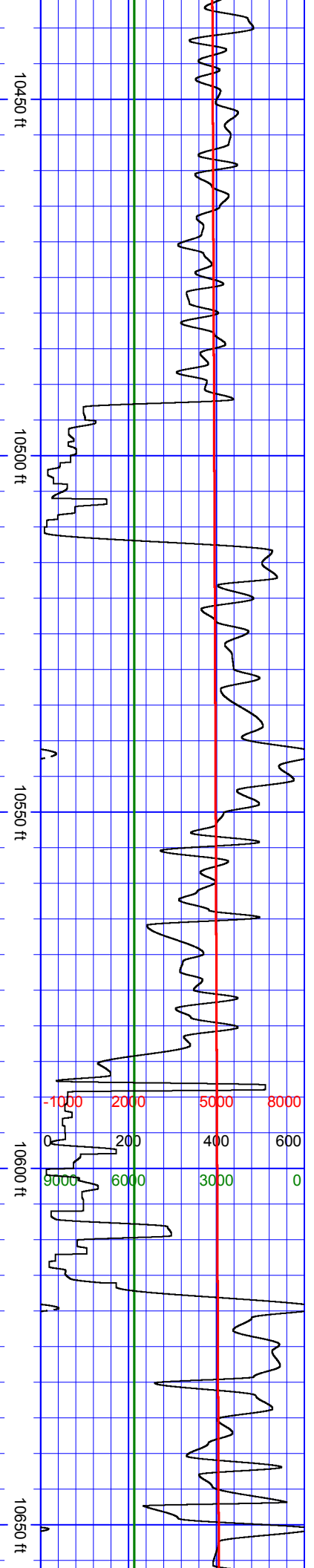
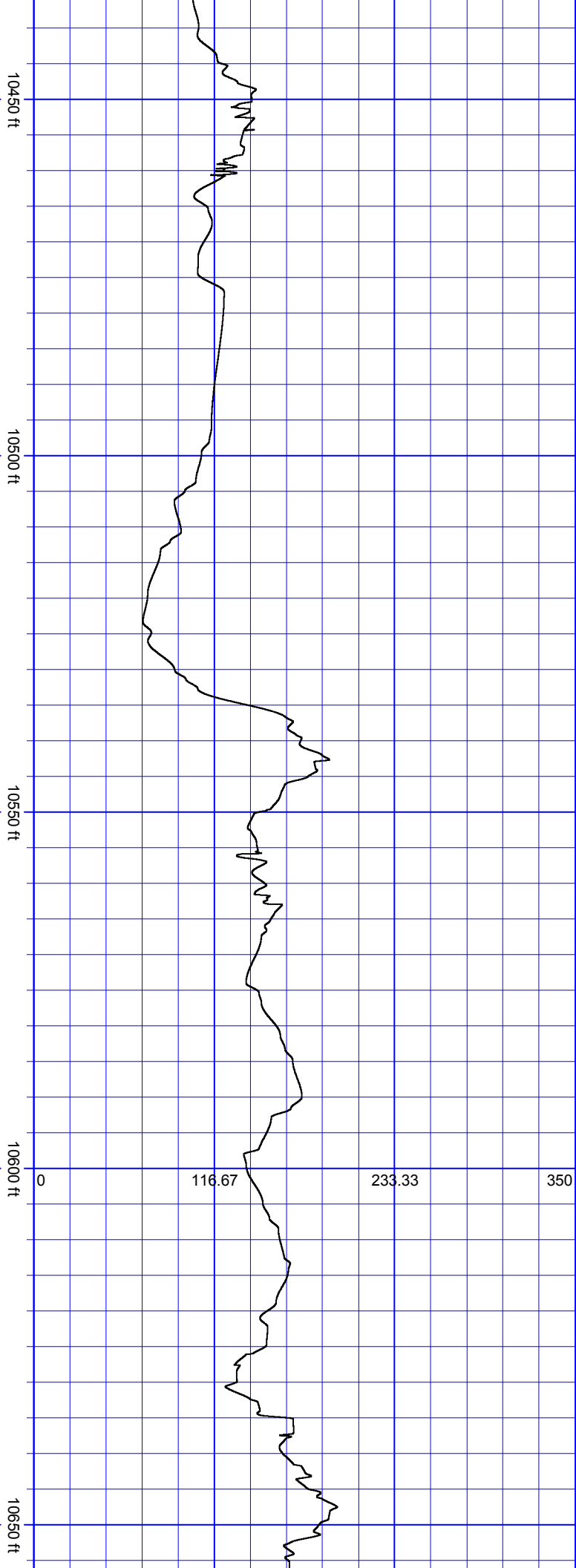
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Azi:1.1 VertSec:4778.3

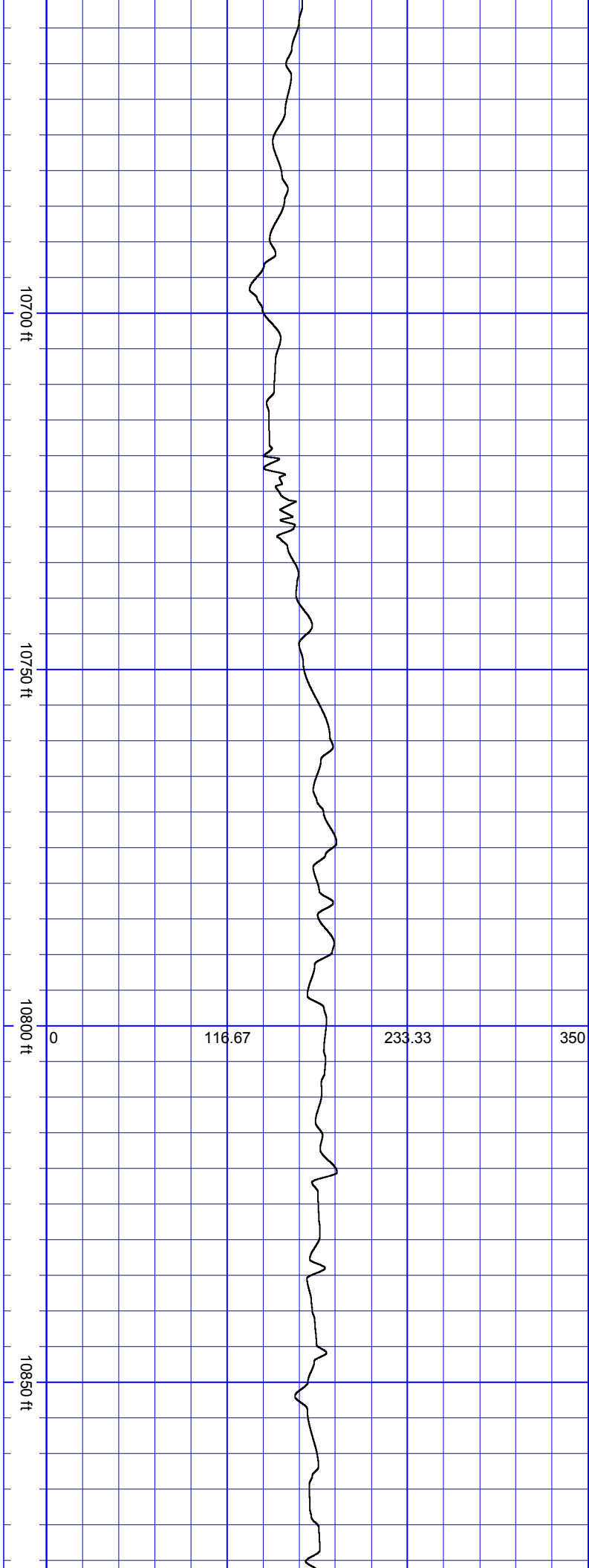


SurveyDepth:10436
TVD:5791.24 Inc:88.6
Azi:0.5 VertSec:4869.12

SurveyDepth:10528
TVD:5794.13 Inc:87.8
Azi:0.3 VertSec:4960.94

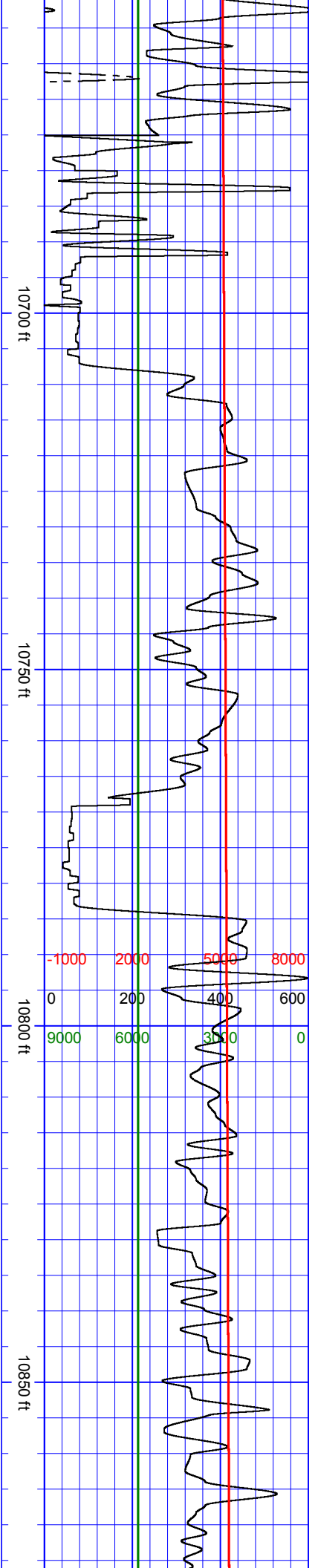
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TVD:5797.18 Inc:88.4
Azi:0.1 VertSec:5052.78

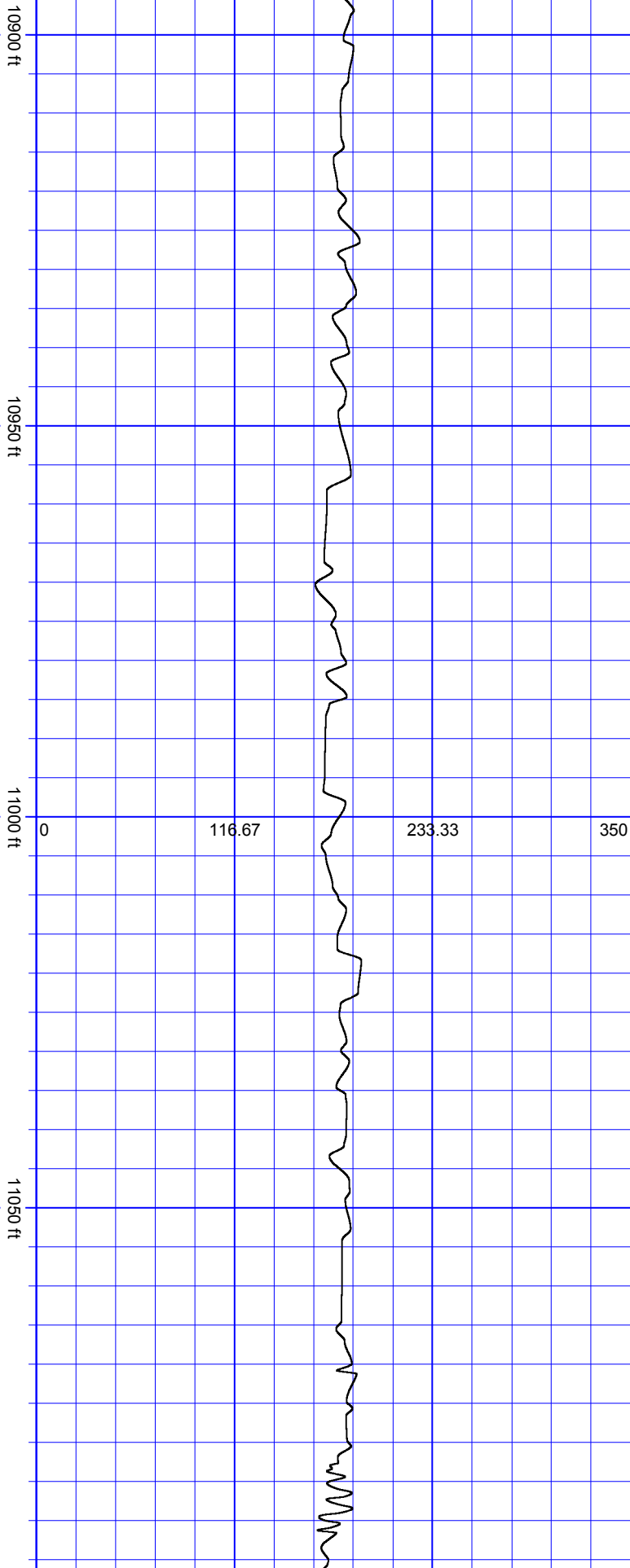




SurveyDepth:10711
TVD:5798.61 Inc:89.8
Azi:359.9
VertSec:5143.66

SurveyDepth:10802
TVD:5798.53 Inc:90.3
Azi:0.9 VertSec:5234.53

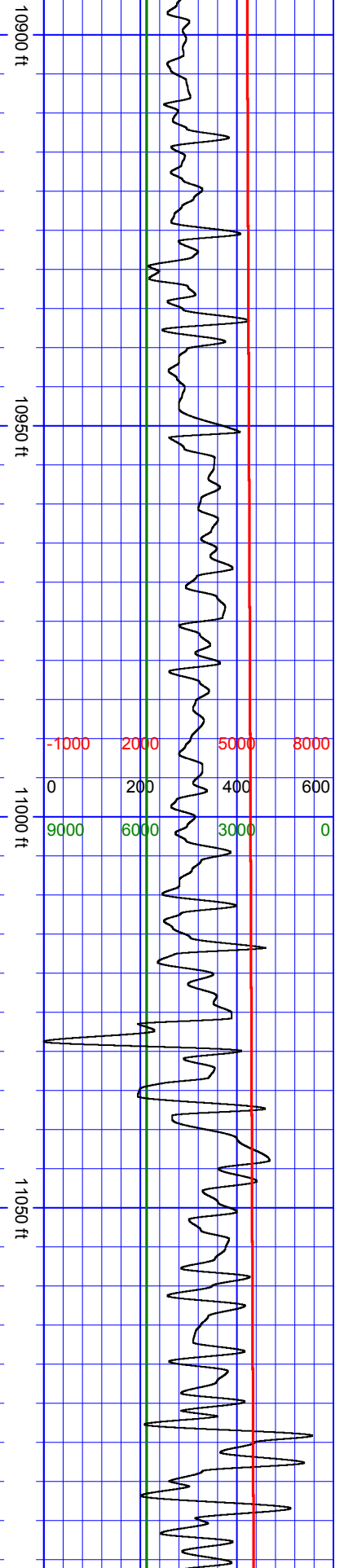


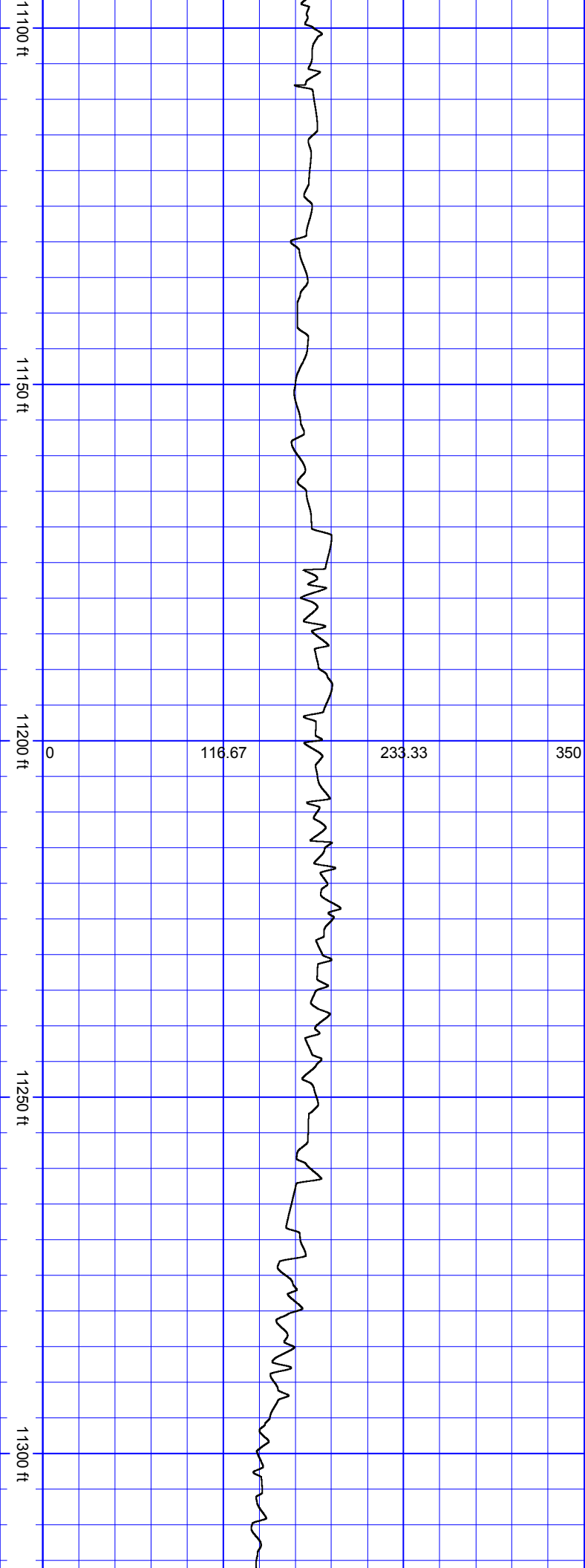


SurveyDepth:10893
TVD:5797.73 Inc:90.7
Azi:0.9 VertSec:5325.35

SurveyDepth:10984
TVD:5796.86 Inc:90.4
Azi:0.4 VertSec:5416.2

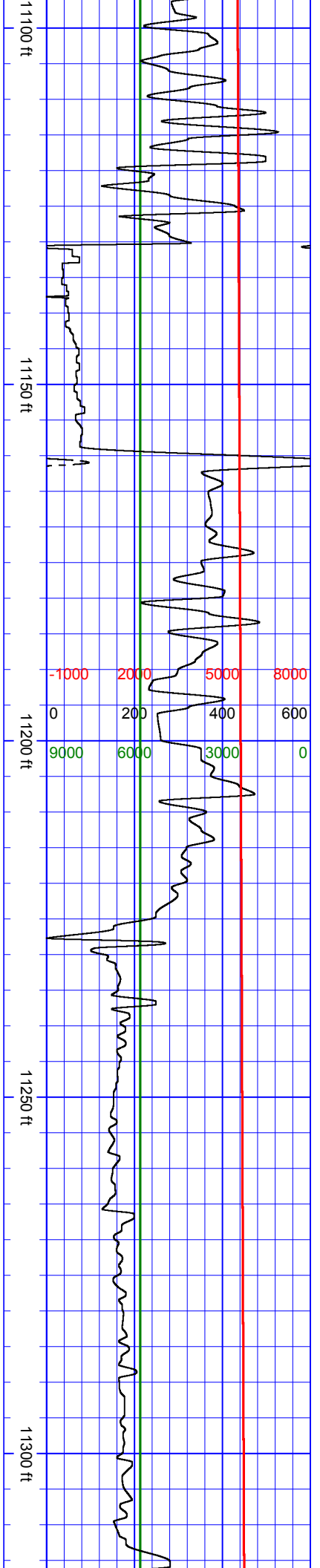
SurveyDepth:11075
TVD:5796.78 Inc:89.7
Azi:358.7
VertSec:5507.13

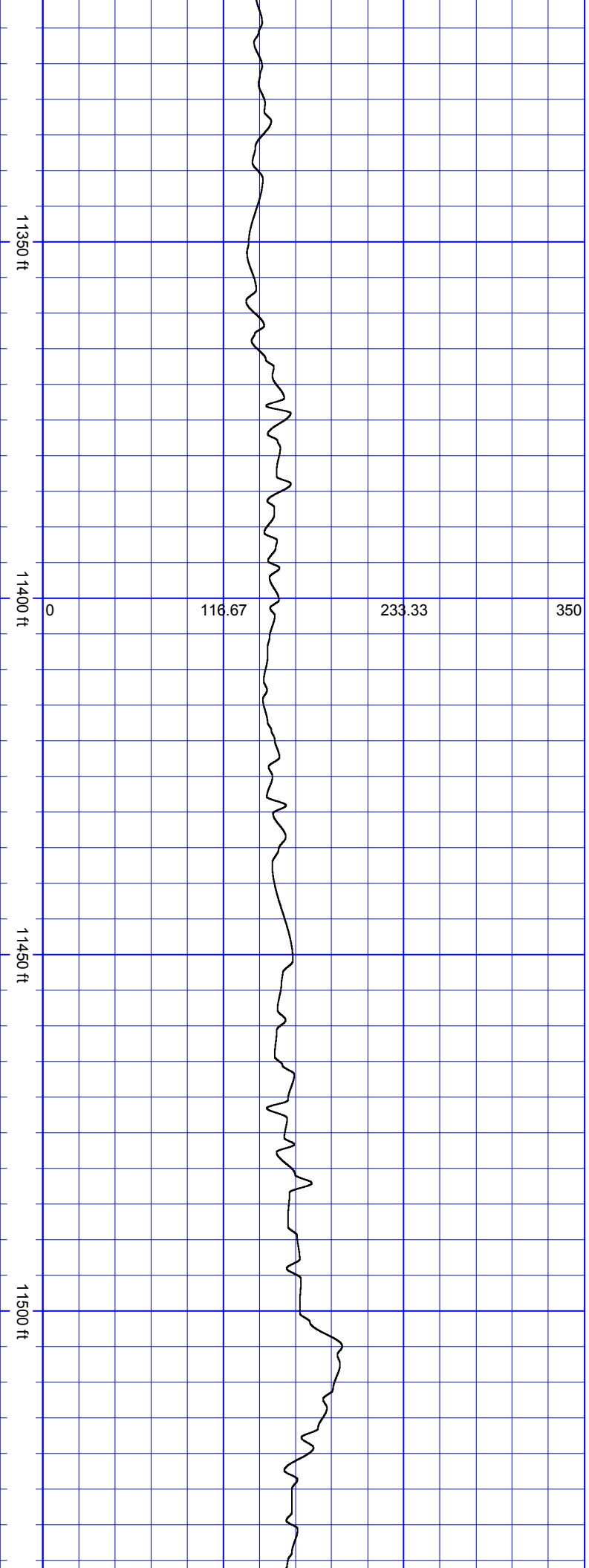




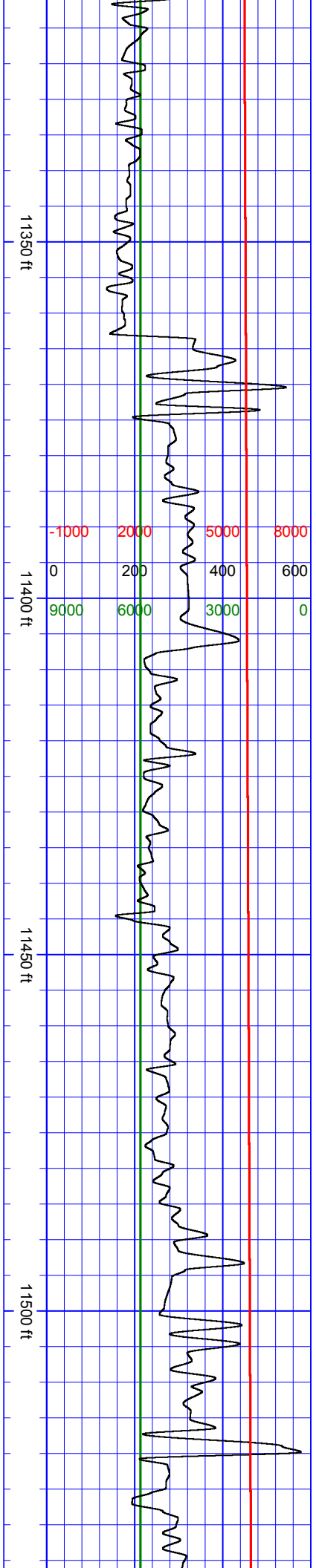
SurveyDepth:11167
TVD:5796.3 Inc:90.87
Azi:1.4 VertSec:5599.01

SurveyDepth:11258
TVD:5794.95 Inc:90.8
Azi:0.5 VertSec:5689.82





SurveyDepth:11349 TVD:5793.76 Inc:90.7 Azi:0.1 VertSec:5780.69	SurveyDepth:11440 TVD:5792.96 Inc:90.3 Azi:359.8 VertSec:5871.59	SurveyDepth:11532 TVD:5792.8 Inc:89.9
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TVD:5792.9 Inc:91.3
Azi:0.1 VertSec:5963.5

SurveyDepth:11623
TVD:5792.01 Inc:91.1
Azi:0.8 VertSec:6054.36

SurveyDepth:11714
TVD:5790.34 Inc:91
Azi:0.4 VertSec:6145.19

11550 ft
11600 ft
0 116.67 233.33 350

11650 ft

11700 ft

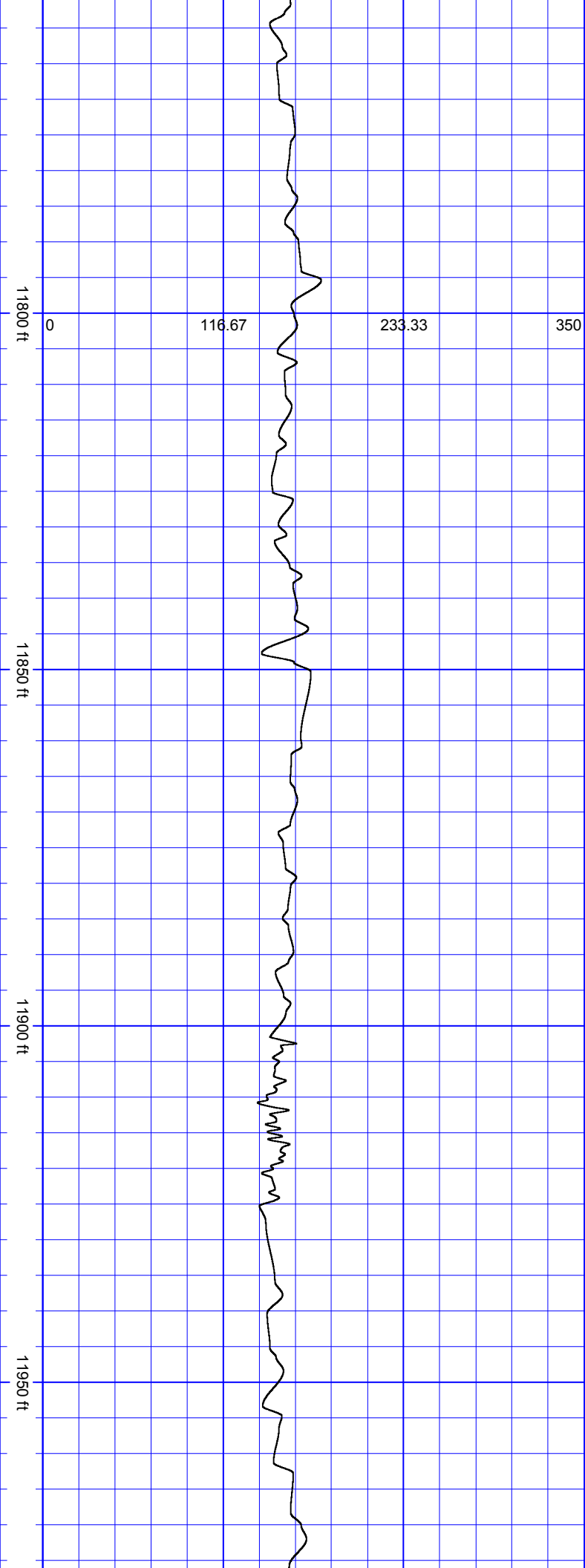
11750 ft

11550 ft
11600 ft
0 200 400 600
4000 2000 5000 8000
9000 6000 3000 0

11650 ft

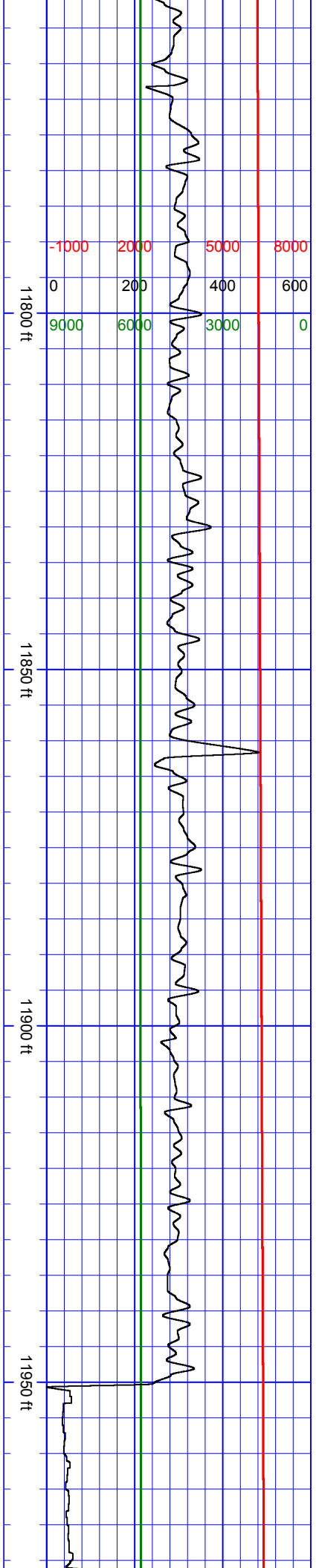
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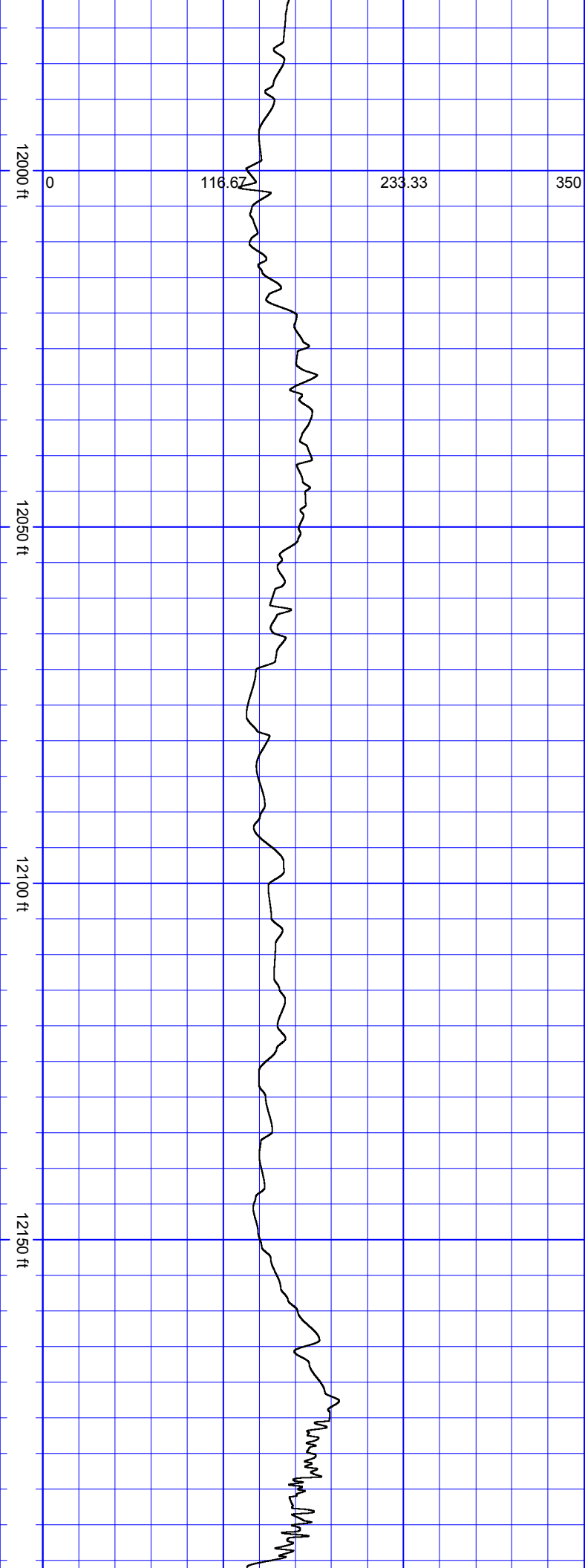
11750 ft



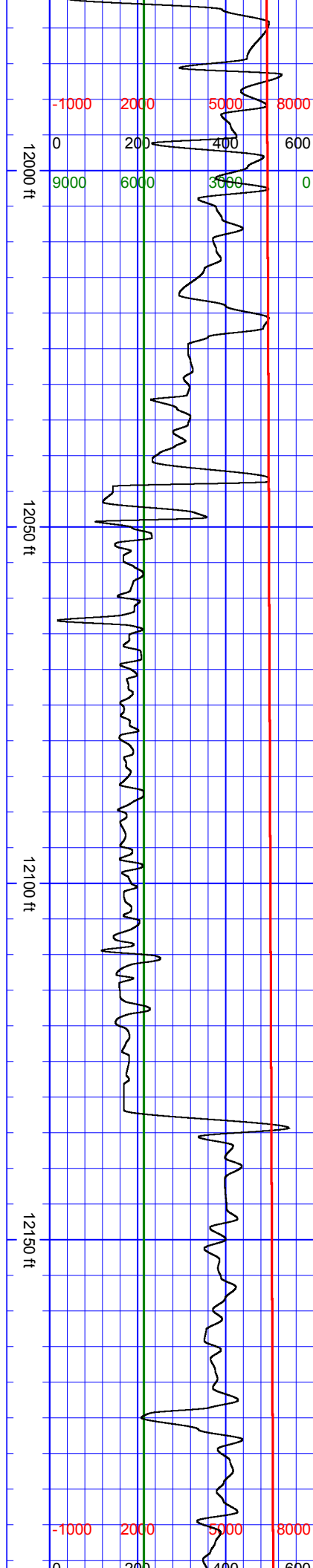
SurveyDepth:11805
TVD:5789.23 Inc:90.4
Azi:359.6
VertSec:6236.09

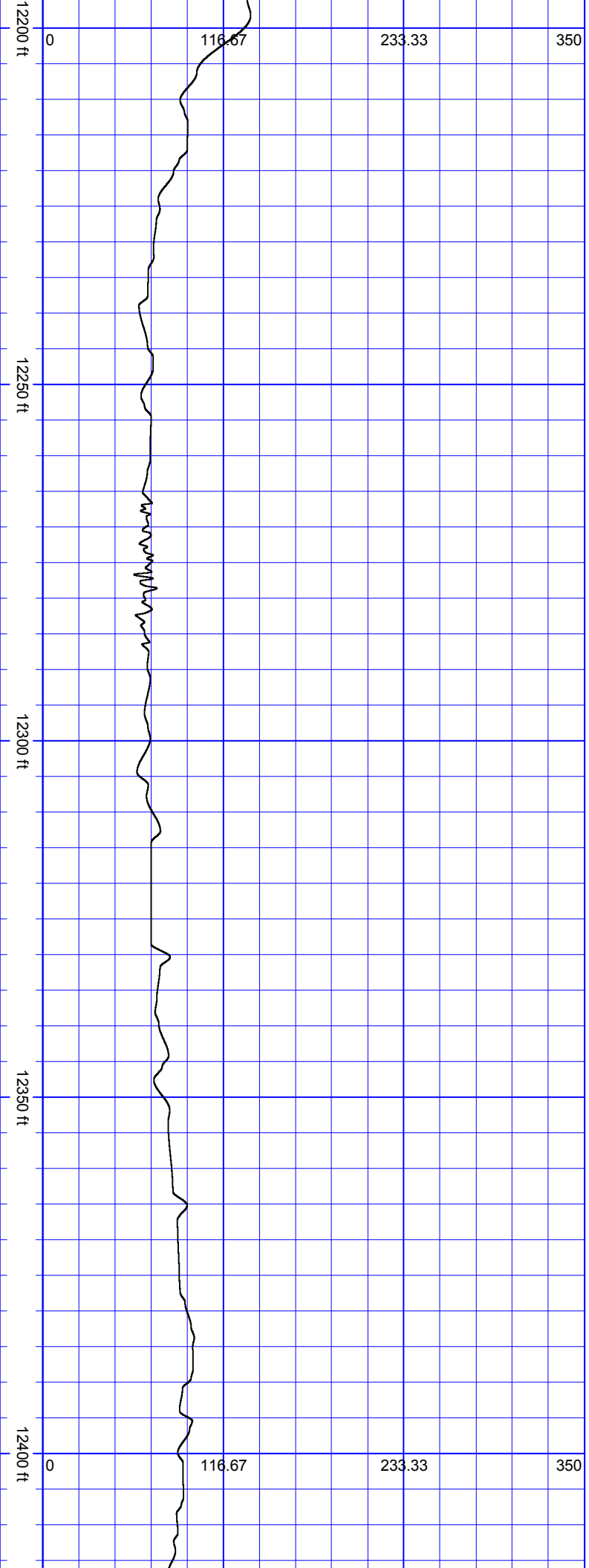
SurveyDepth:11896
TVD:5789.31 Inc:89.5
Azi:359 VertSec:6327.03





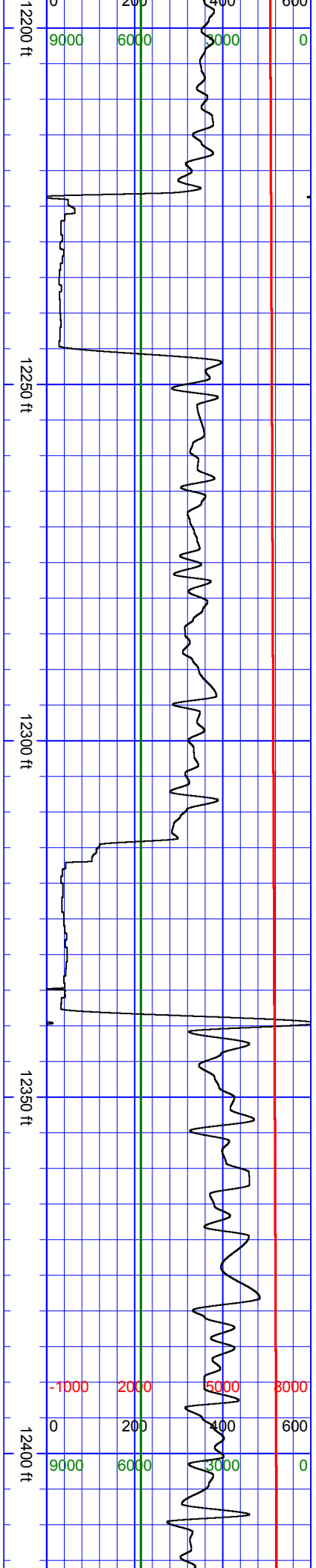
SurveyDepth:11987 TVD:5788.67 Inc:91.3 Azi:359.5 VertSec:6417.98	SurveyDepth:12078 TVD:5786.69 Inc:91.2 Azi:358.9 VertSec:6508.91	SurveyDepth:12169 TVD:5784.23 Inc:91.9 Azi:358.5 VertSec:6599.85
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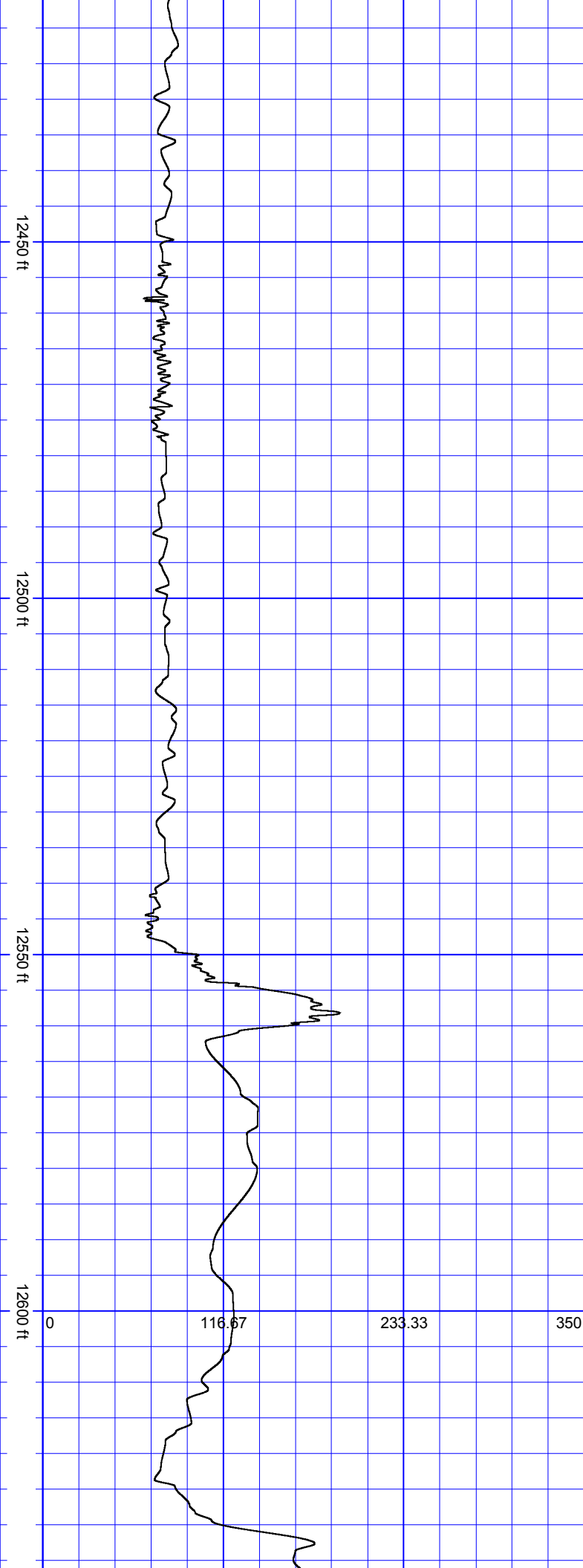




SurveyDepth:12260
TVD:5782.72 Inc:90
Azi:359 VertSec:6690.8

SurveyDepth:12351
TVD:5782.16 Inc:90.7
Azi:0.8 VertSec:6781.71

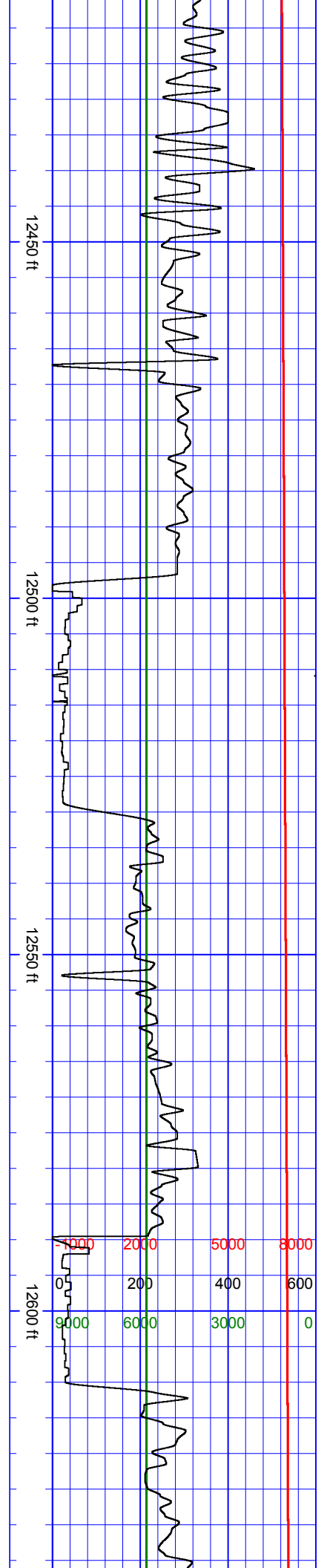


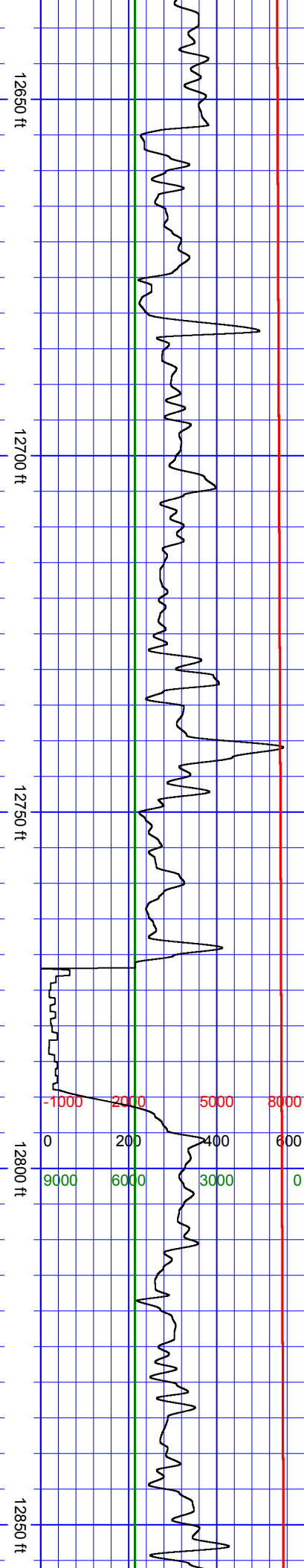


SurveyDepth:12443
TVD:5781.44 Inc:90.2
Azi:358.9
VertSec:6873.61

SurveyDepth:12534
TVD:5779.93 Inc:91.7
Azi:1.5 VertSec:6964.47

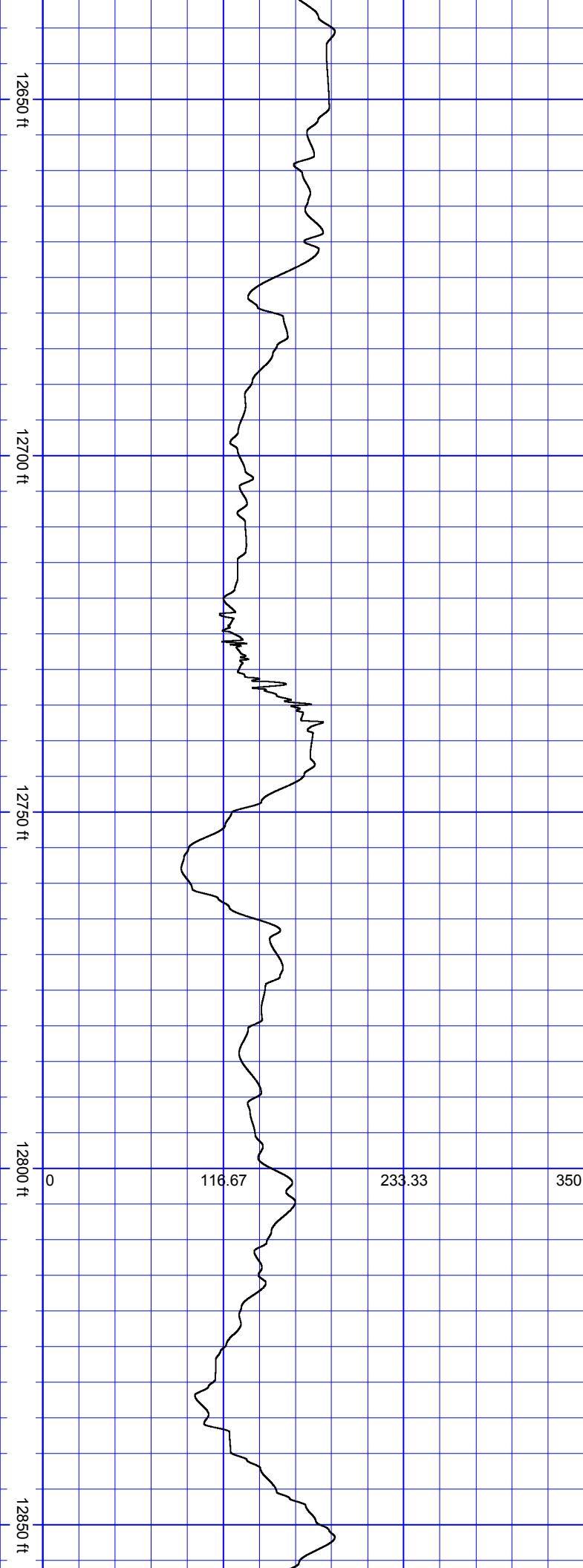
SurveyDepth:12626
TVD:5779.21 Inc:89.2
Azi:2.4 VertSec:7056.16

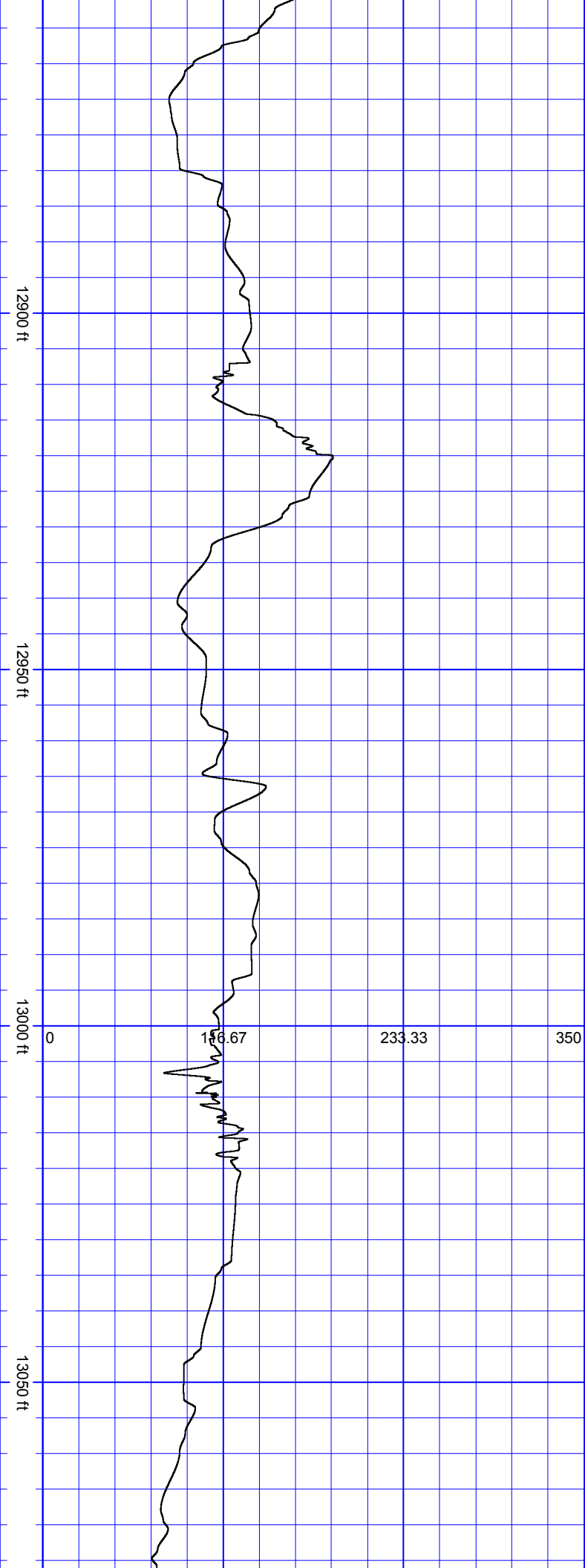




SurveyDepth:12717
TVD:5781.35 Inc:88.1
Azi:0.8 VertSec:7146.88

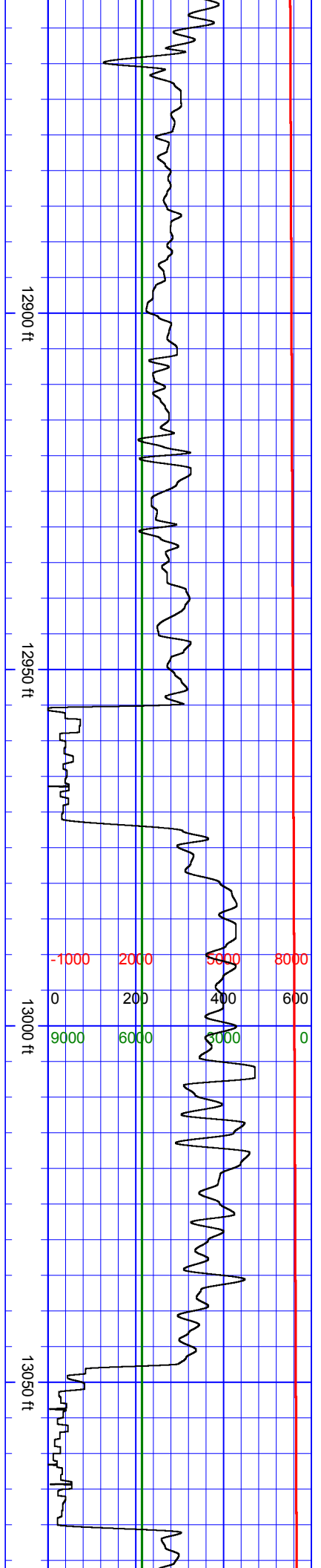
SurveyDepth:12808
TVD:5783.73 Inc:88.9
Azi:1.8 VertSec:7237.63



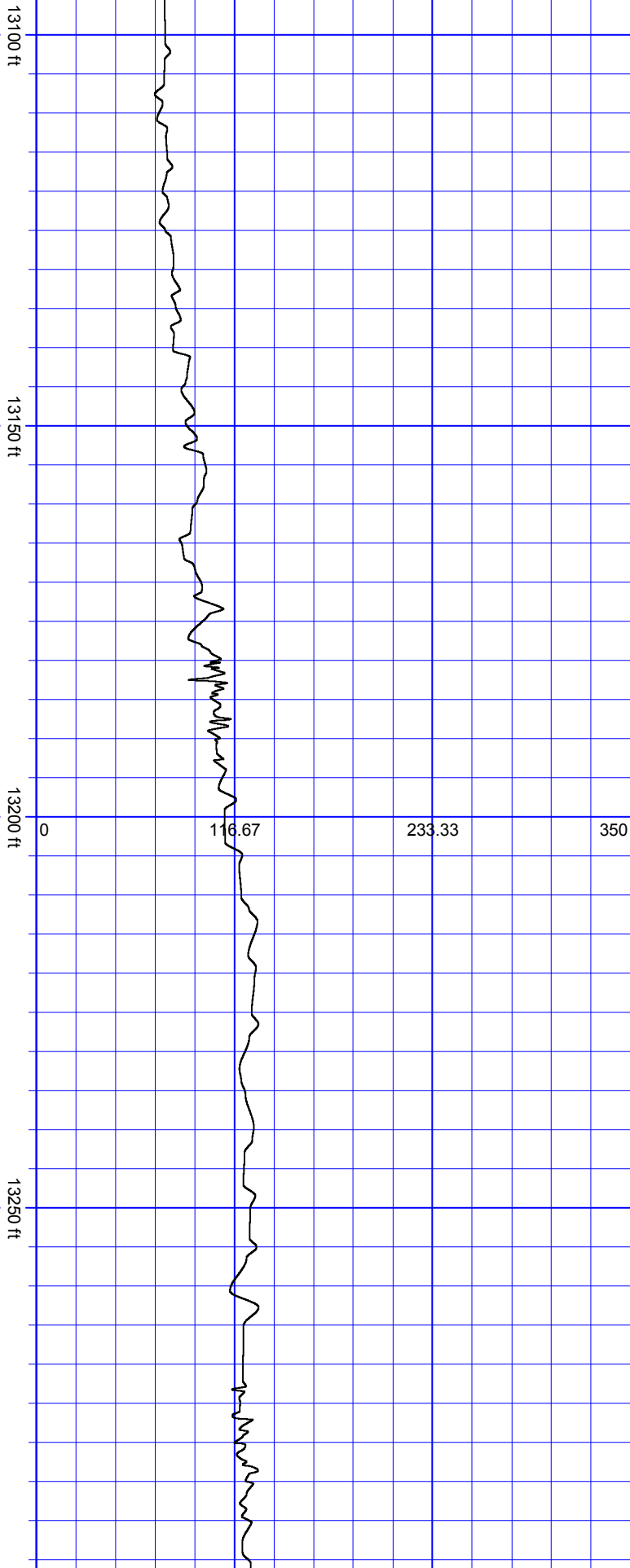


SurveyDepth:12900
TVD:5785.9 Inc:88.4
Azi:1.3 VertSec:7329.36

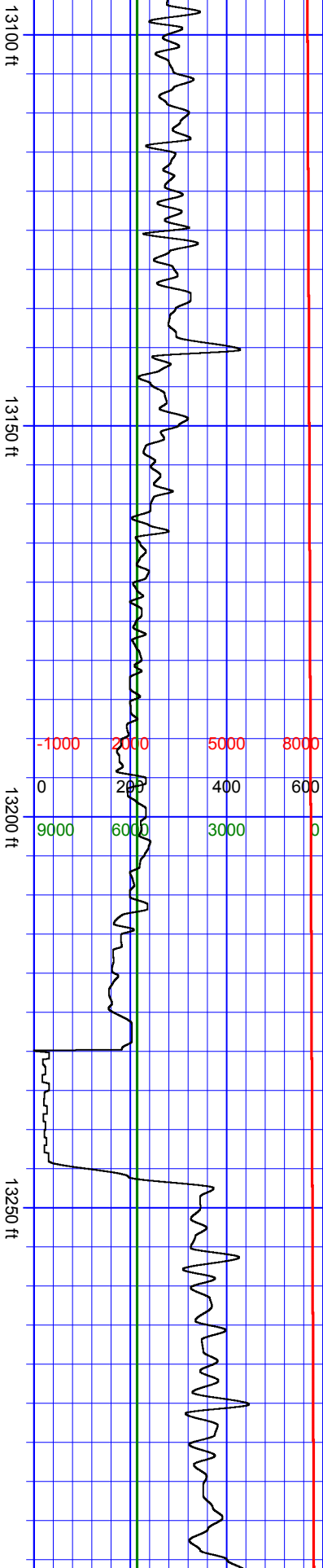
SurveyDepth:12992
TVD:5787.83 Inc:89.2
Azi:0.9 VertSec:7421.14

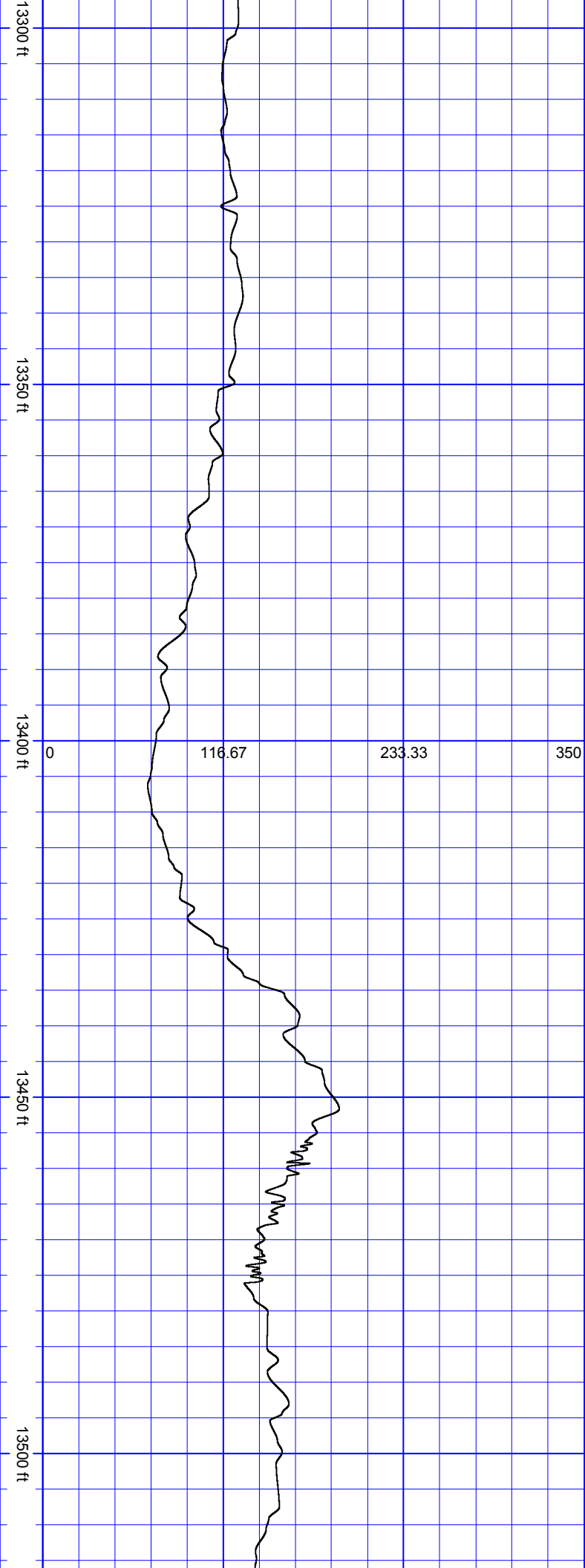


SurveyDepth:13084
TVD:5787.51 Inc:91.2
Azi:1.5 VertSec:7512.93



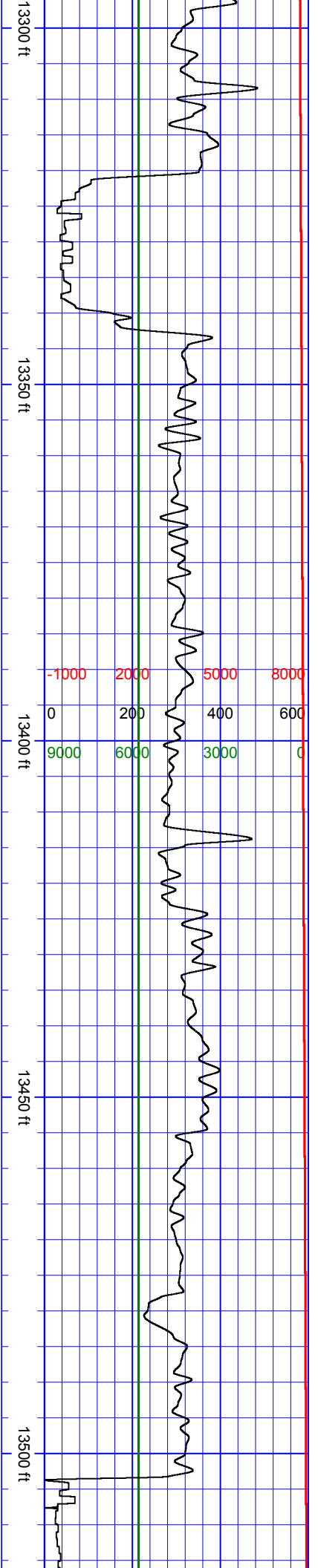
SurveyDepth:13266
TVD:5783.54 Inc:91.3
Azi:1.4 VertSec:7694.41

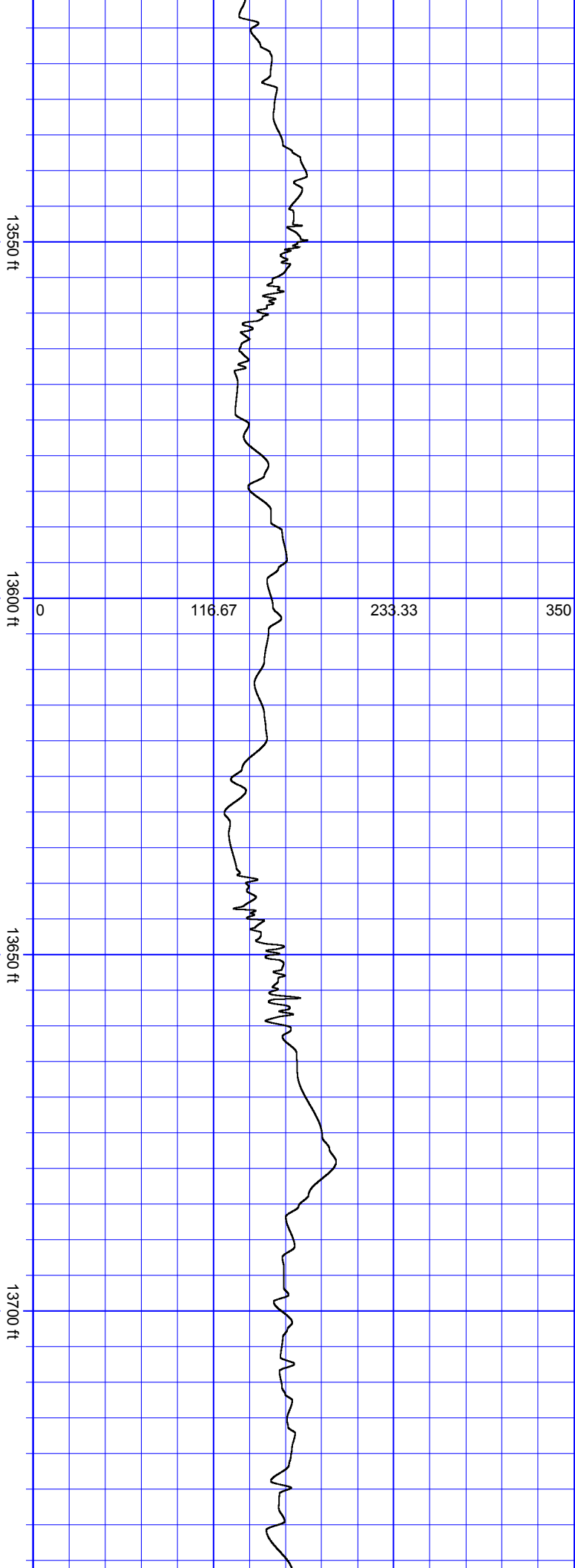




SurveyDepth:13357
TVD:5783.46 Inc:88.8
Azi:359.8
VertSec:7785.26

SurveyDepth:13448
TVD:5785.92 Inc:88.1
Azi:359.6
VertSec:7876.15

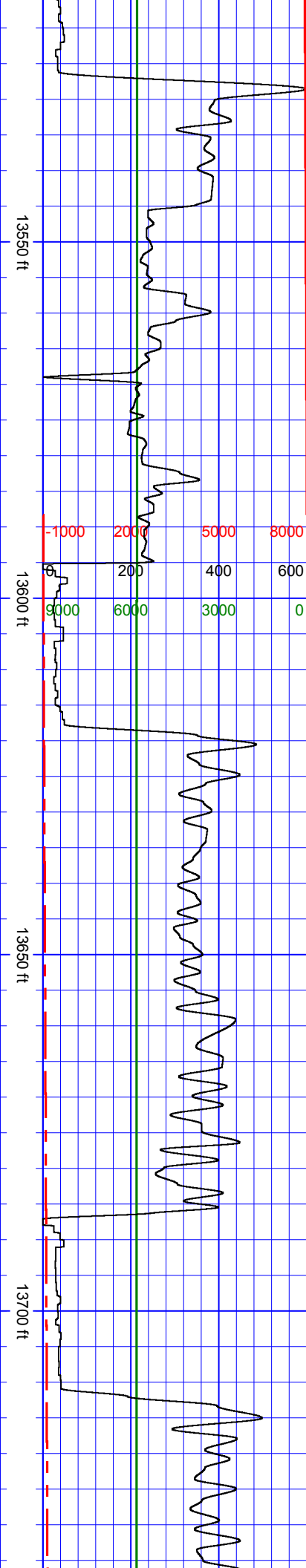


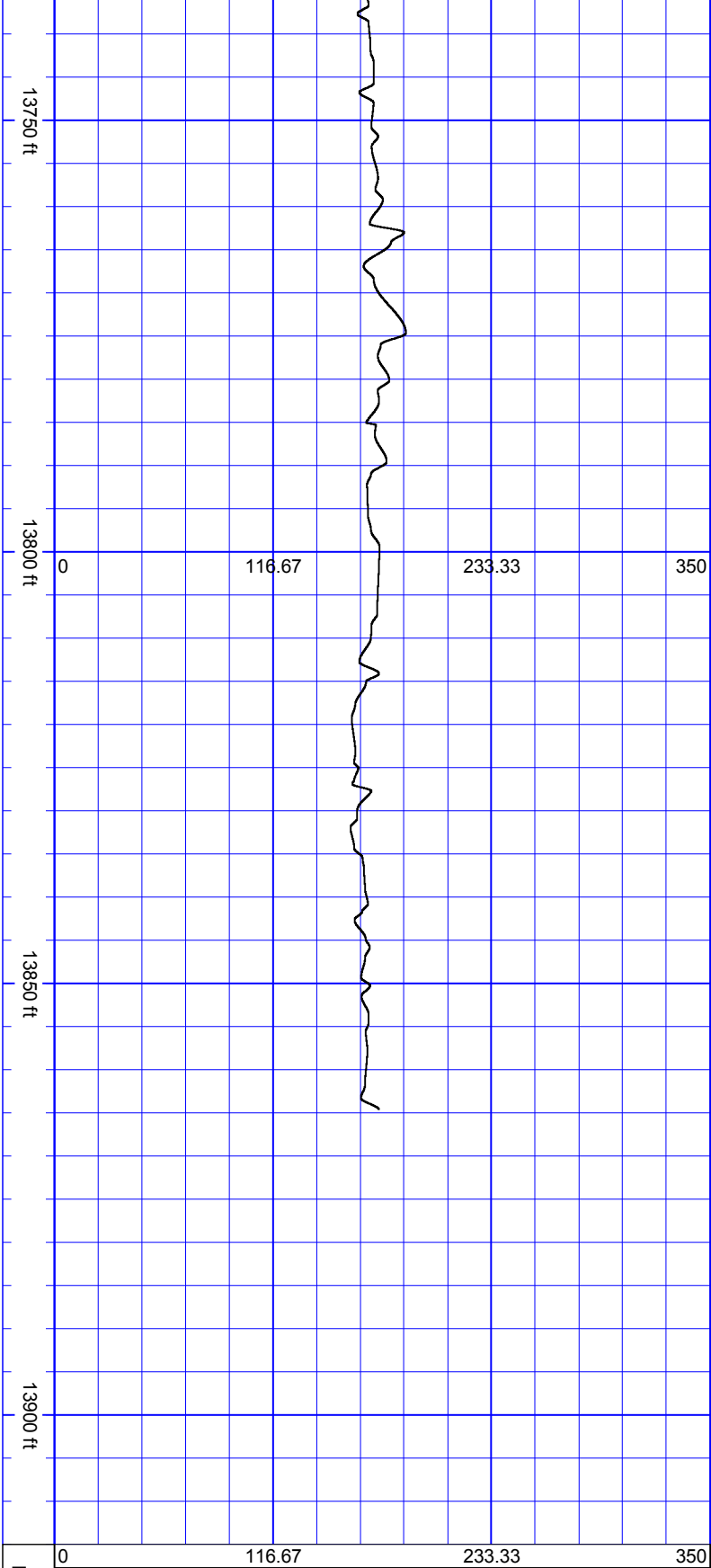


SurveyDepth:13540
TVD:5788.97 Inc:88.1
Azi:0.2 VertSec:7968

SurveyDepth:13632
TVD:5791.62 Inc:88.6
Azi:0.8 VertSec:8059.82

SurveyDepth:13722
TVD:5792.48 Inc:90.3
Azi:1.2 VertSec:8149.63



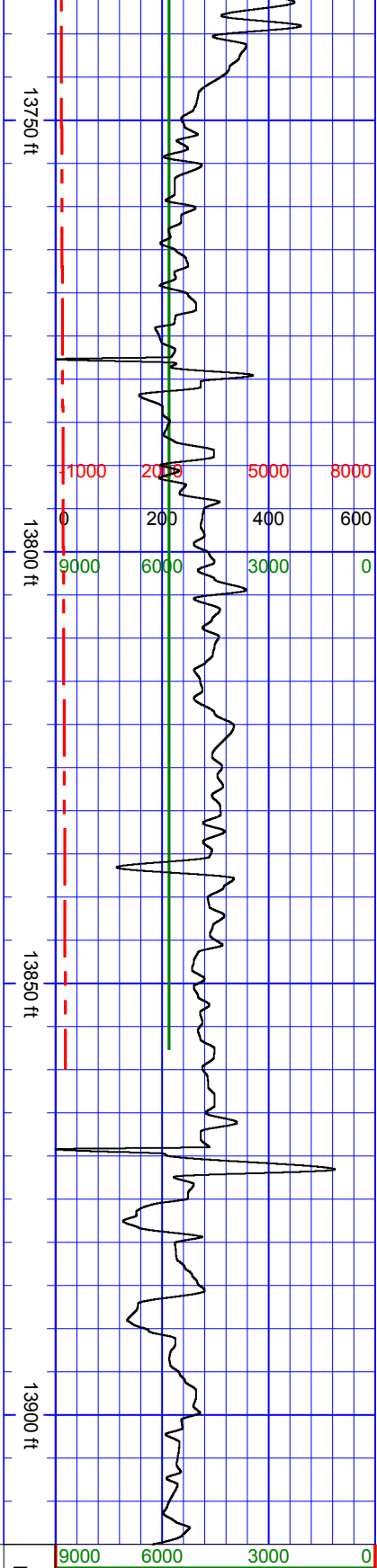


MD Depth "Scale 5" = 100 ft"	Real Time Gamma (AAPI)
0	116.67
13860	233.33
13900	350

GAMMA RAY

SurveyDepth:13860
TVD:5793.2 Inc:89.1
Azi:357.2
VertSec:8287.53

Directional Survey



MD Depth "Scale 5" = 100 ft"	TVD Depth (ft)	Drill Rate (min/ft)	Vertical Section (ft)
0	200	400	600
13860	5793.2	89.1	357.2
13900	8287.53		

ROP - VERT SEC - TVD



Oil Company: Whiting Oil and Petroleum
Well Name: Razor 21B-0909
Surface Location: S21-T10N-R58W



Bit Run: 3

Log Depth Start: 5003.03 ft

Log Depth End: 13915.01 ft

Data Depth Start: 5003.03 ft

Data Depth End: 13915.01 ft