

CATHEDRAL

Build & Lateral

Job #:

185214

Well ID:

16190993

Scale:

5" = 100 ft

Type:

MD

Well Site Information

Oil Company

Crestone Peak Resources

Surface Location

S4-T1N-R65W

Well Name

Ruegge 3Q-4H-N165

API

05-123-46560 00

Field

DJ Basin

State

Colorado

Country

USA

Surface Coordinates

Well Type

Horizontal

Latitude

40° 4' 31 N

Longitude

140° 40' 14 W

N / S Coordinates

1,271,355.55 usft

E / W Coordinates

3,232,110.24 usft

Azimuth Reference

True North

Grid Convergence

0.54°

MWD Engineers

Lead Hand

Aaron Clark

Second Hand

Ron Kenyon

Perm Datum

Ground

23.00 ft

Elevation

4,915.00 ft

Log depth measured from KB is

12,265.00 ft

above perm datum.

KB =

4,938.00 ft

Total Depth

12,265.00 ft

Spud Date

Jul/23/2018

End Date

Jul/26/2018

(MD) Log Interval

2,440.00 ft

Start Depth

2,440.00 ft

End Depth

12,265.18 ft

Bore Hole Record

Hole Size

From

To

13.50 in

0.00 ft

2,556.00 ft

8.50 in

2,556.00 ft

12,265.00 ft

Casing Record

Type

Size

WGT

From

To

LT&C

9.63 in

40lb.

0.00 ft

2,533.00 ft

DWC-C-IS

5.50 in

20lb.

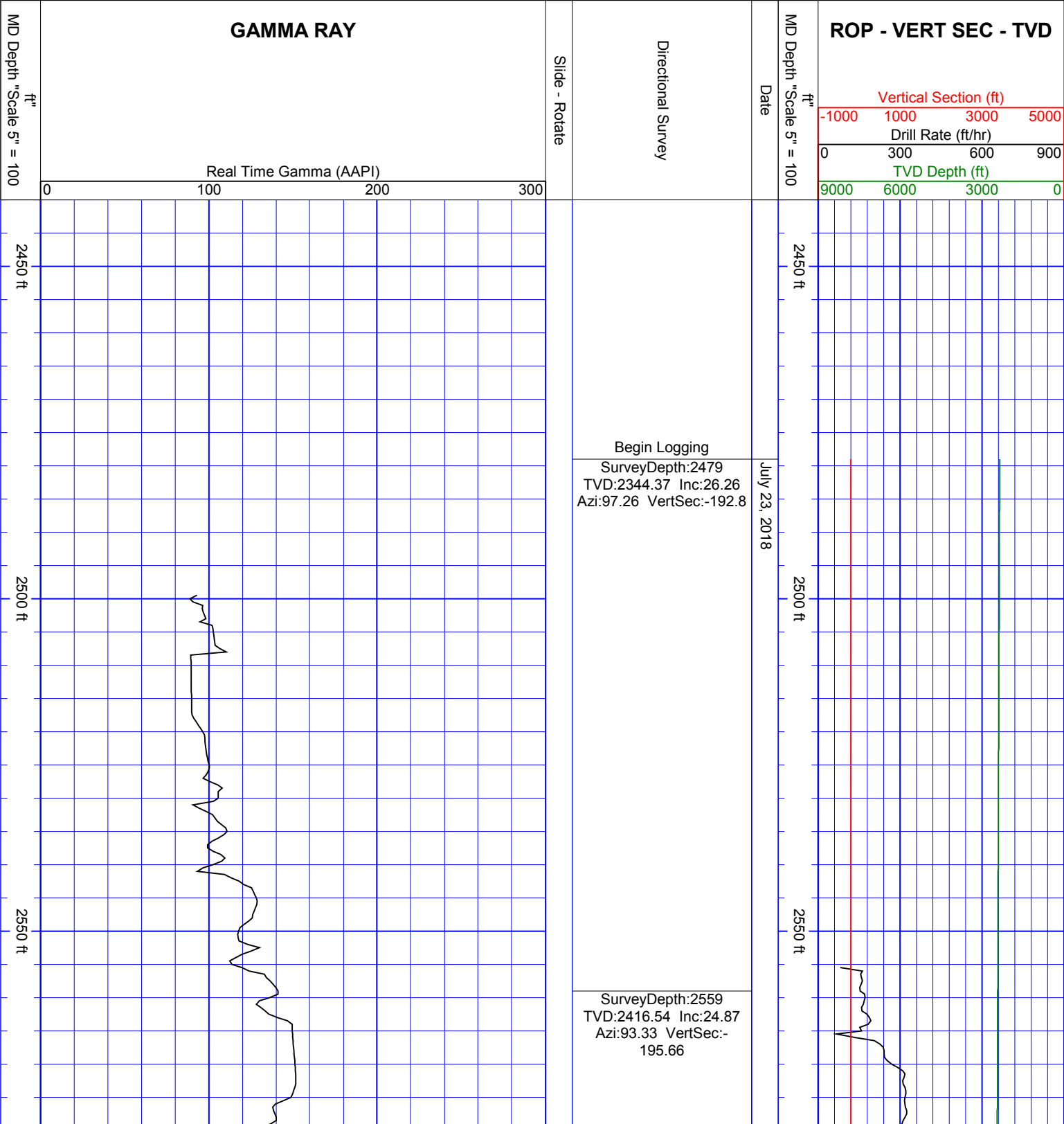
0.00 ft

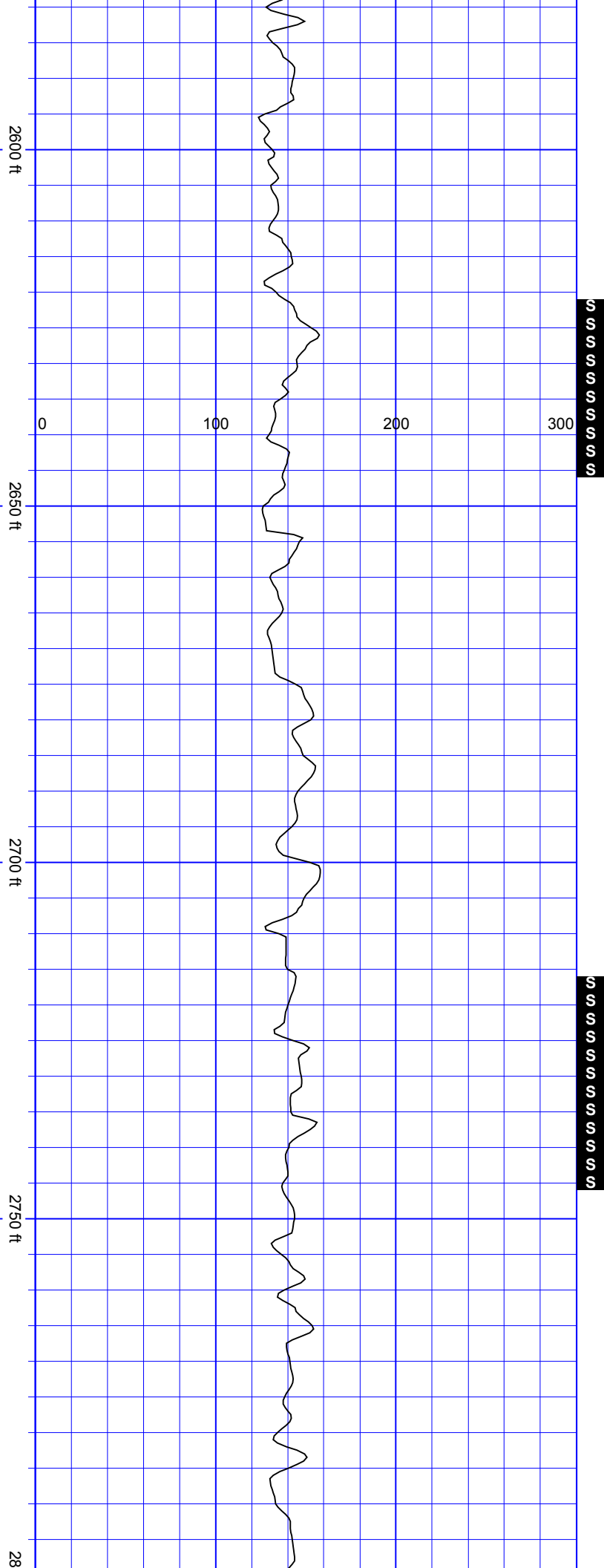
12,253.00 ft

Run Data					
Bit Run Number	1				
Start Date & Time	Jul/23/2018 20:00:00				
End Date & Time	Jul/26/2018 12:00:00				
Run Hours	64.00				
Depth In	2,550.00 ft				
Depth Out	12,265.00 ft				
Total Gamma Correction	5.78				
Gamma to Bit	56.77 ft				
Resistivity to Bit	N/A				
Mud Type	Oil Base				
Density	9.80 ppg				
Viscosity	49.00 sec/qt				
PH	N/A				
Fluid Loss	N/A				
K+ ppm	N/A				
CL- ppm	26,500.00 mg/L				
Max Mud Temp	241.00 °F				
Mud Report Depth	12,265.00 ft				

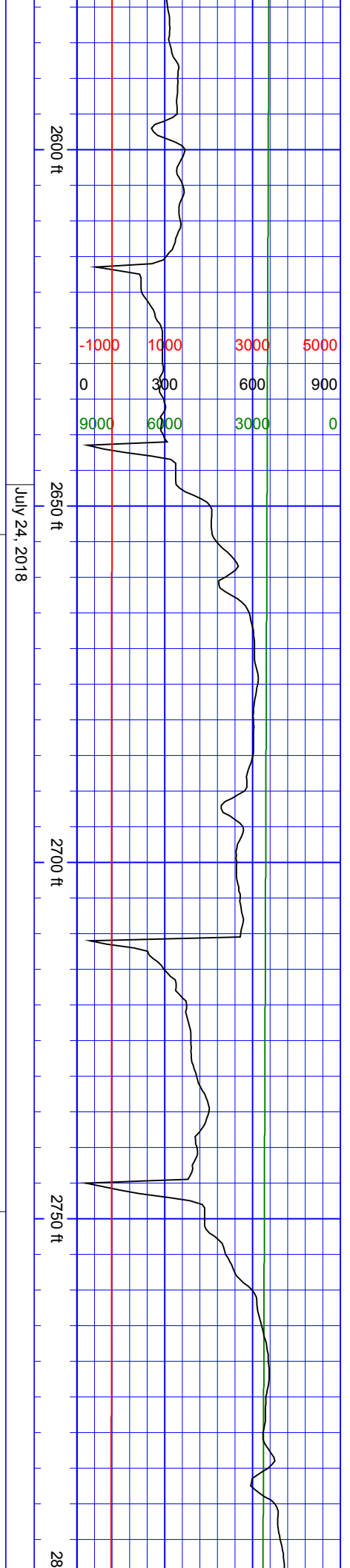
Remarks

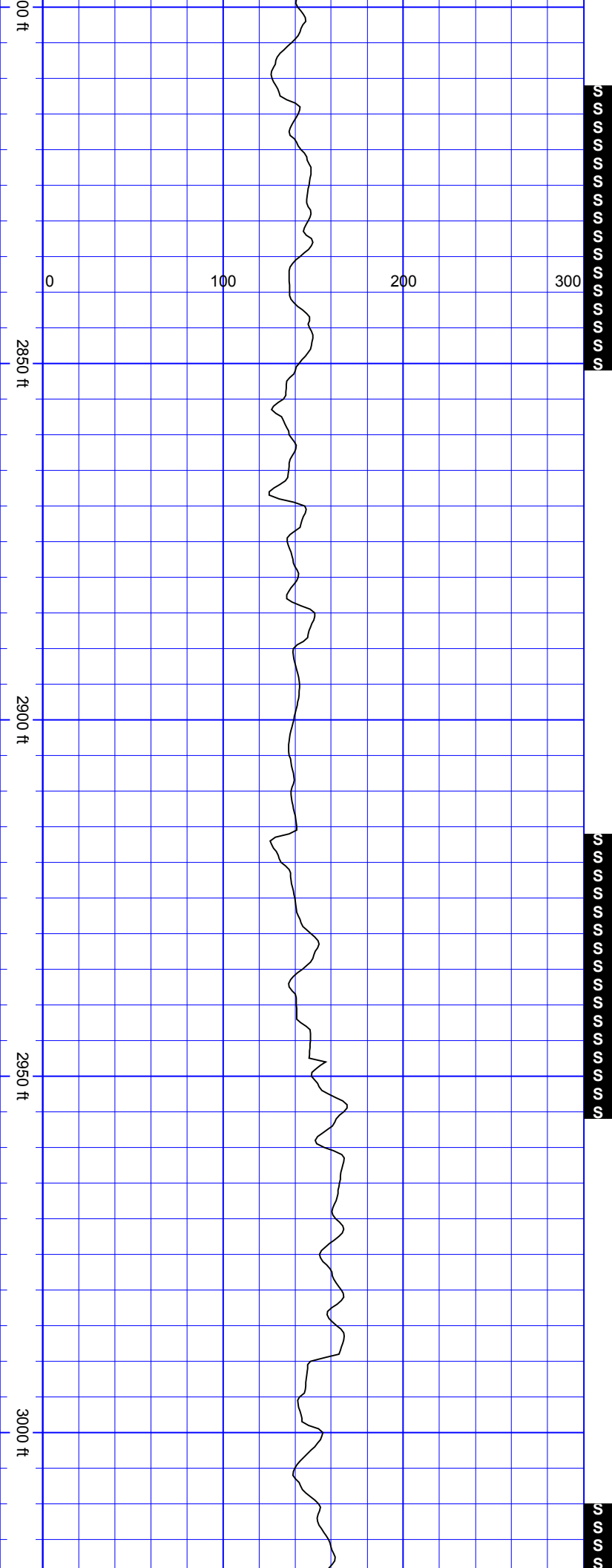
Interpretations of this data by Cathedral Energy Services will be of best judgment as to correctness. Cathedral Energy Services cannot and does not guarantee the accuracy or correctness of interpretations or any surveys derived therefrom. Cathedral Energy Services makes no warranties of performance, 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.





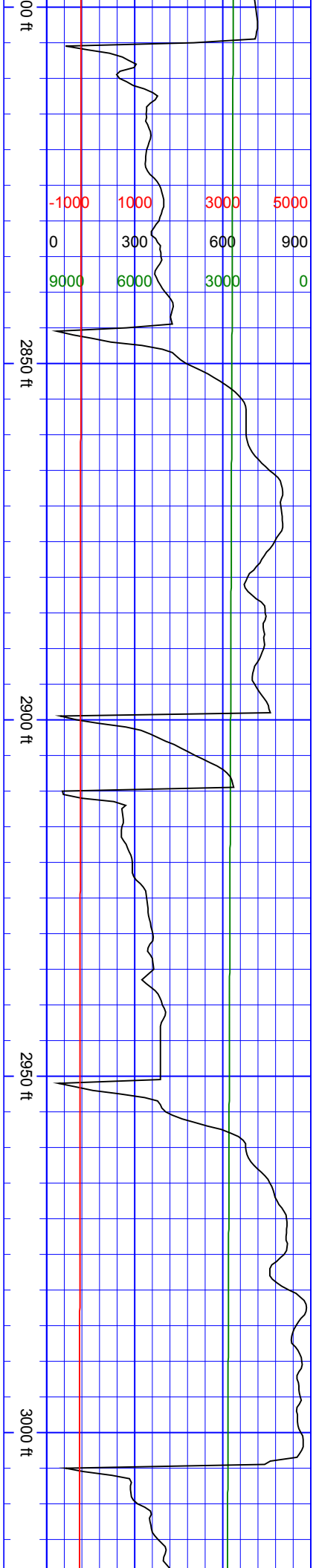
SurveyDepth:2654
TVD:2502.4 Inc:25.84
Azi:98.86 VertSec:-
199.59

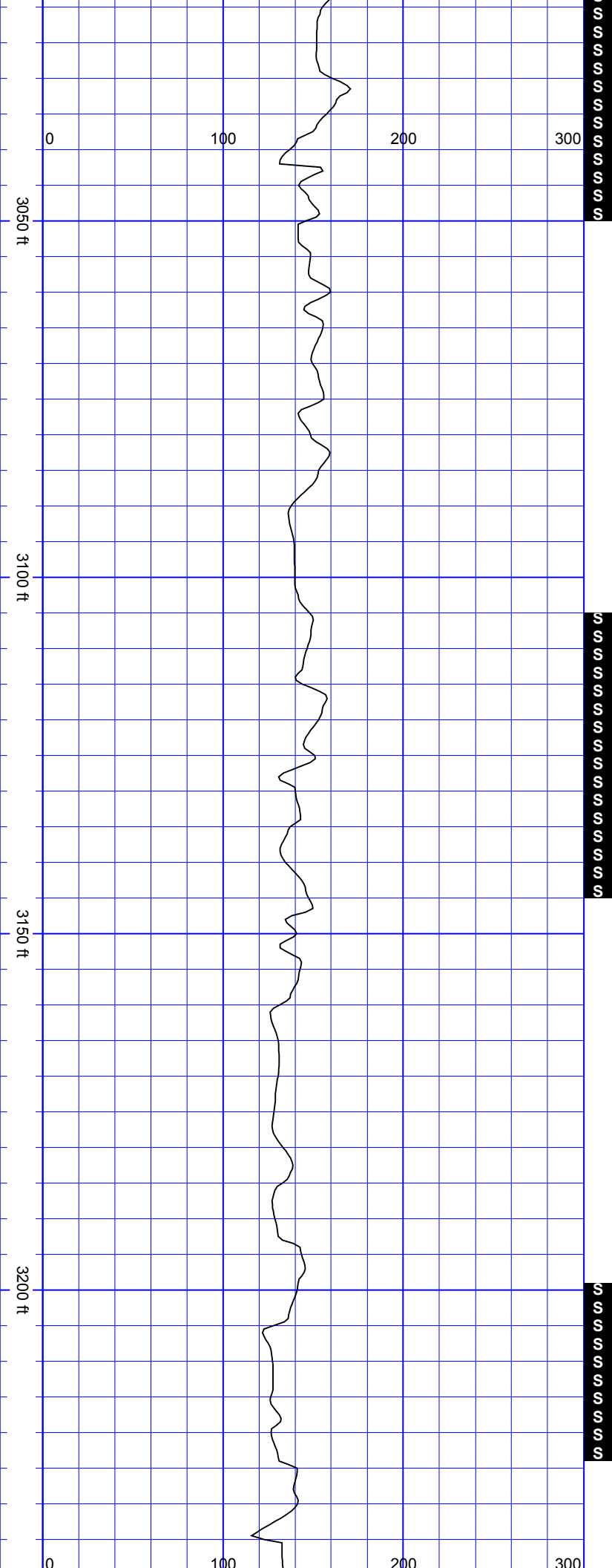




SurveyDepth:2854
TVD:2683.15 Inc:25.62
Azi:111.7 VertSec:-
220.46

SurveyDepth:2948
TVD:2767.96 Inc:25.49
Azi:116.09 VertSec:-
236.49

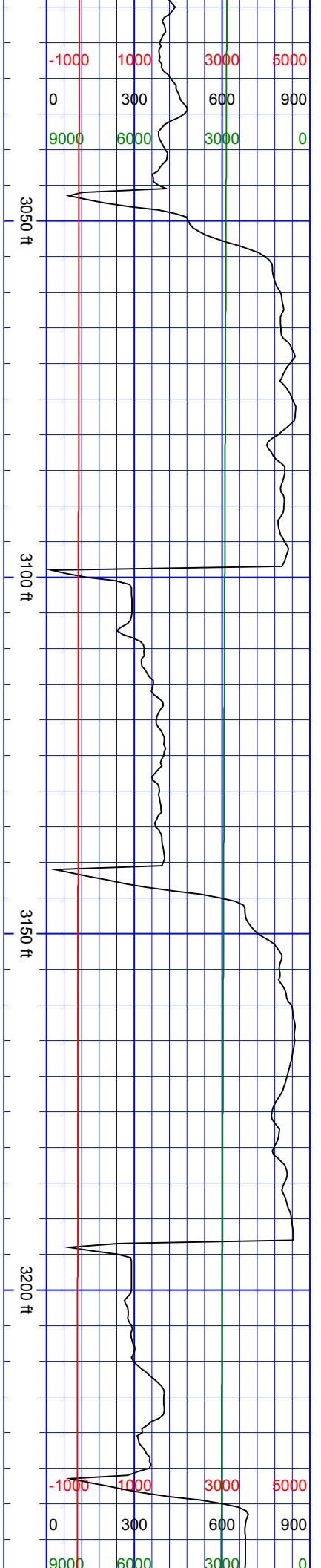


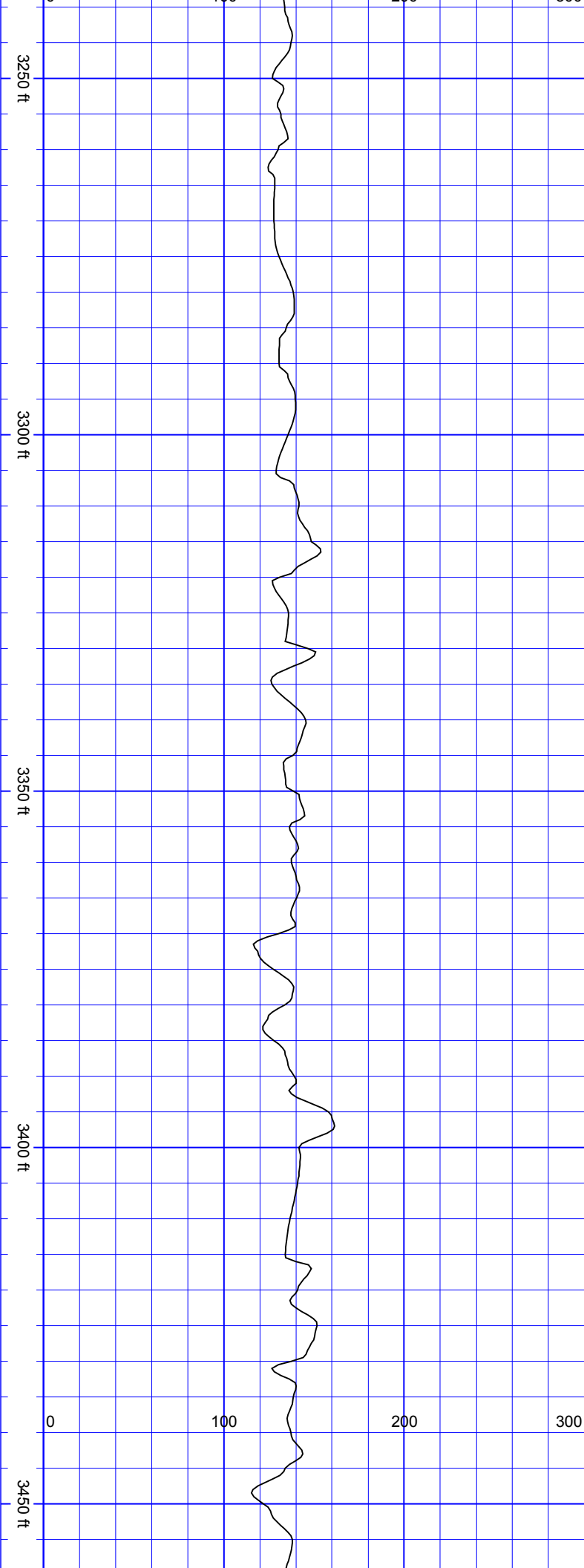


SurveyDepth:3043
TVD:2852.91 Inc:27.69
Azi:116.71 VertSec:-
255.01

SurveyDepth:3137
TVD:2935.1 Inc:30.37
Azi:114.95 VertSec:-
274.43

SurveyDepth:3232
TVD:3015.9 Inc:33.09
Azi:110.38 VertSec:-

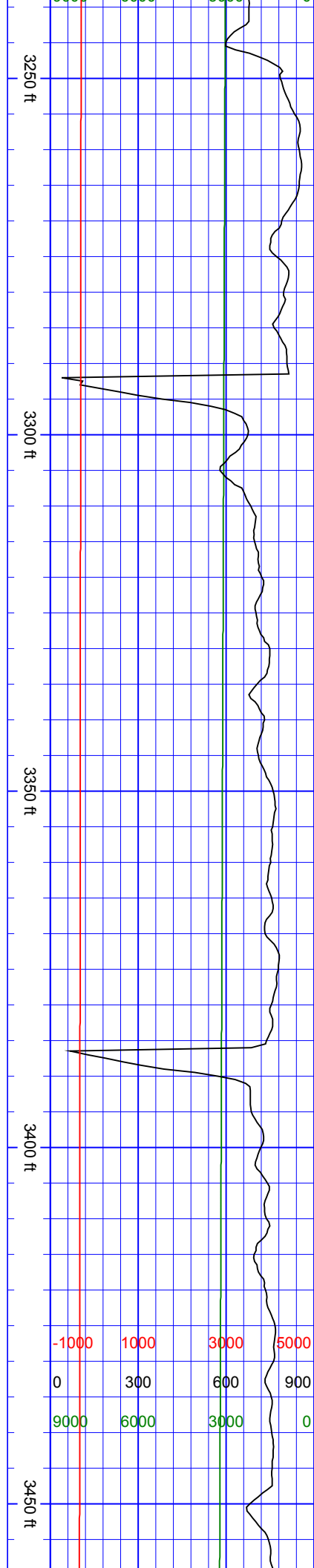


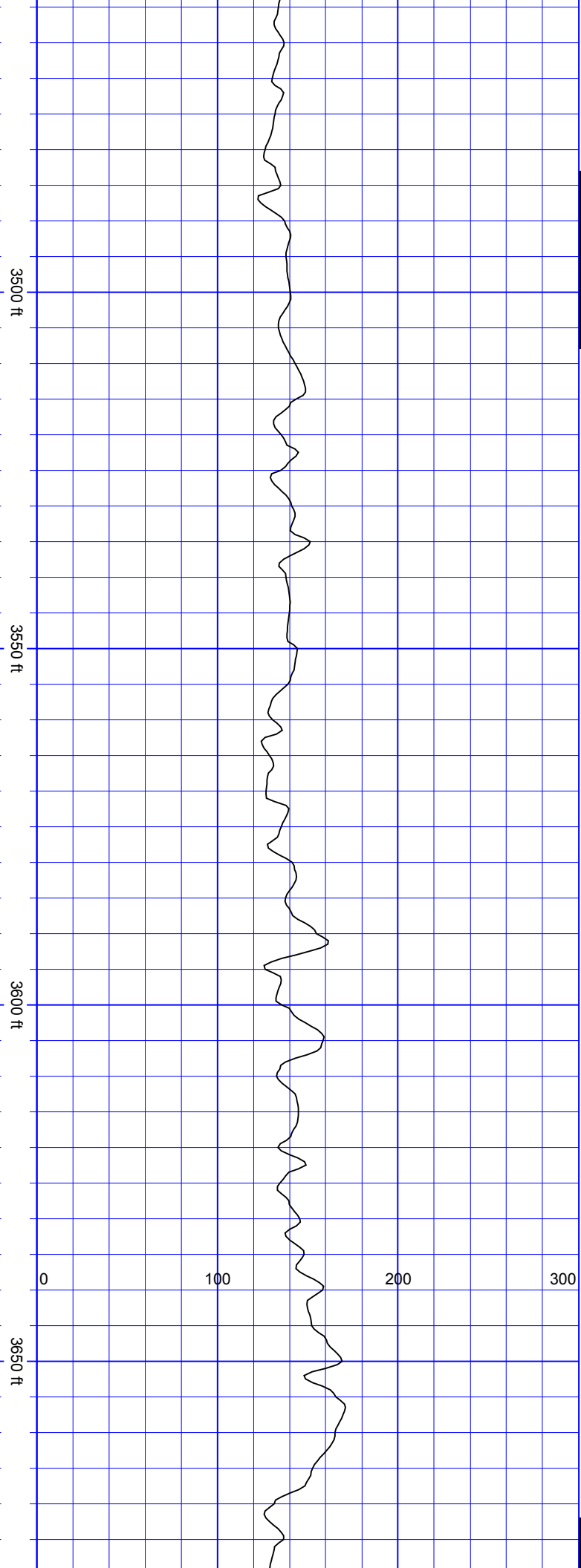


293.12

SurveyDepth:3326
TVD:3095.6 Inc:30.94
Azi:109.94 VertSec:-309.82

SurveyDepth:3421
TVD:3178.36 Inc:27.86
Azi:109.41 VertSec:-325.07

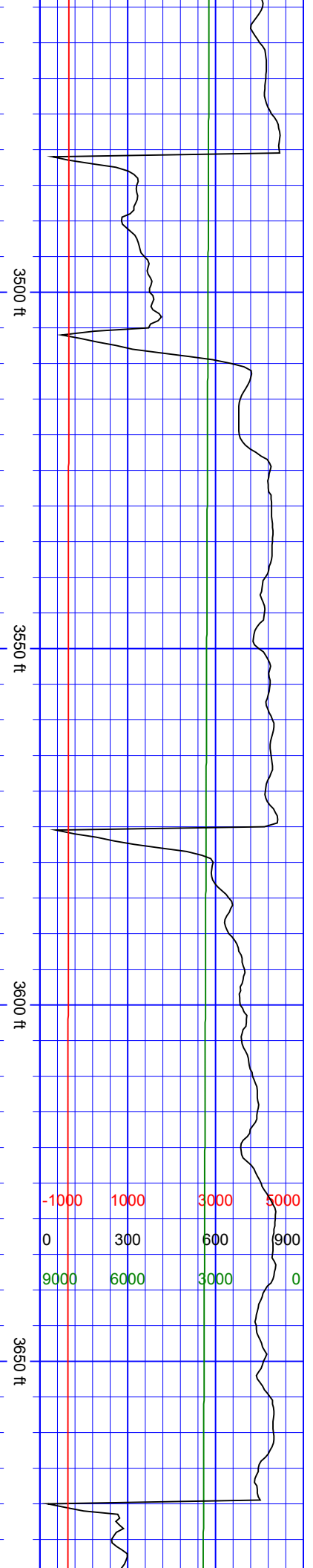


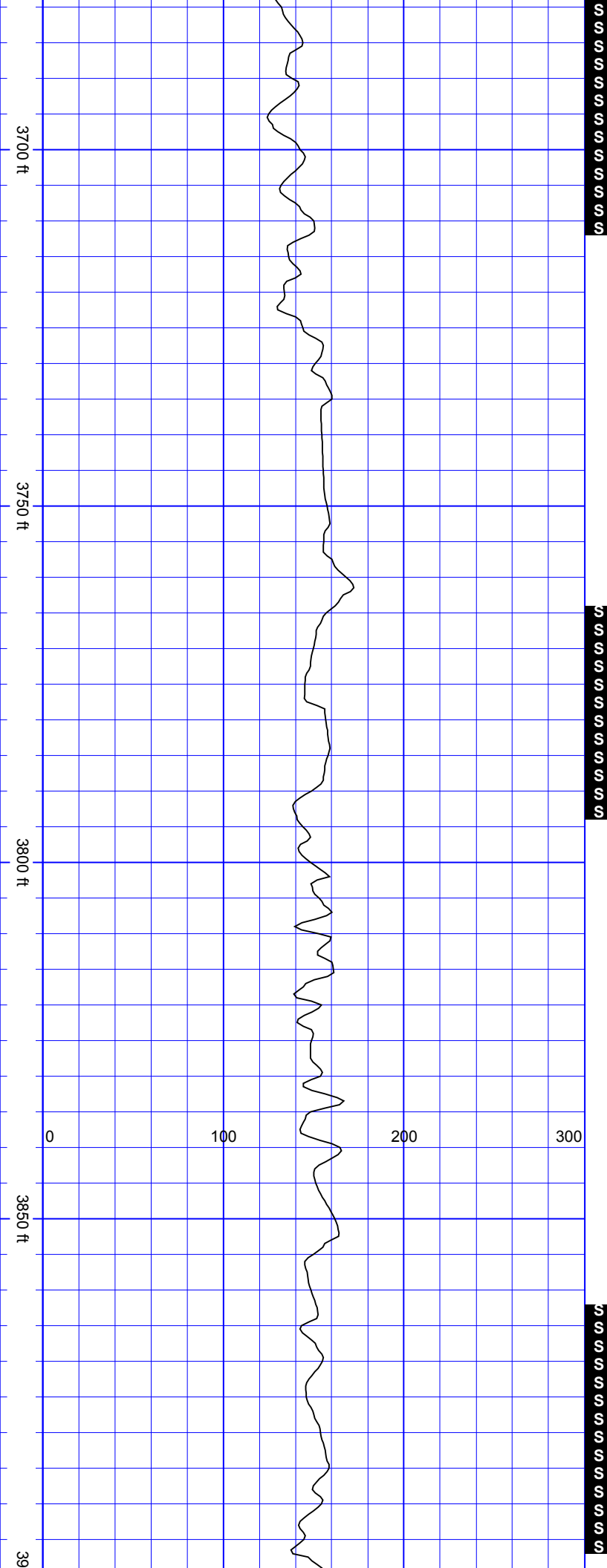


S S S S S S S

SurveyDepth:3516
TVD:3262.63 Inc:27.11
Azi:109.85 VertSec:-
339.38

SurveyDepth:3610
TVD:3347.49 Inc:23.82
Azi:109.23 VertSec:-
352.51

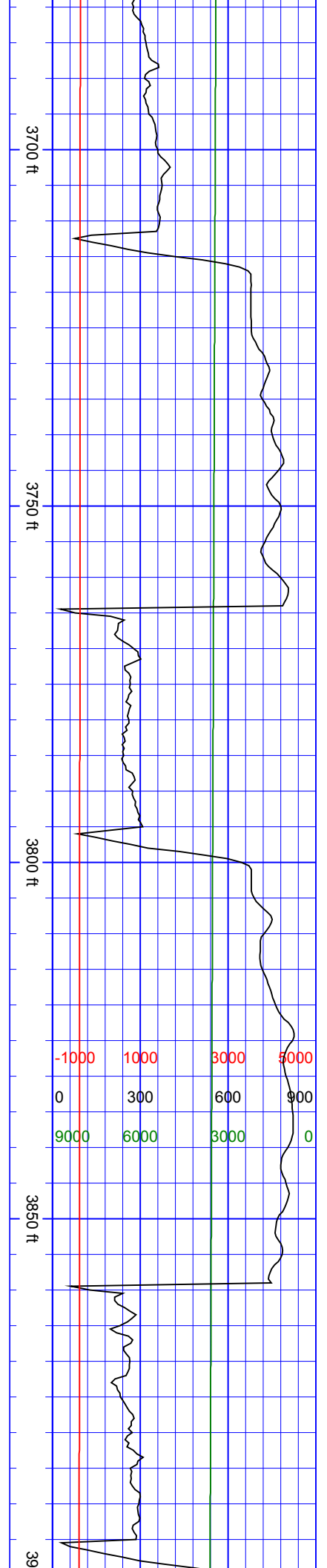


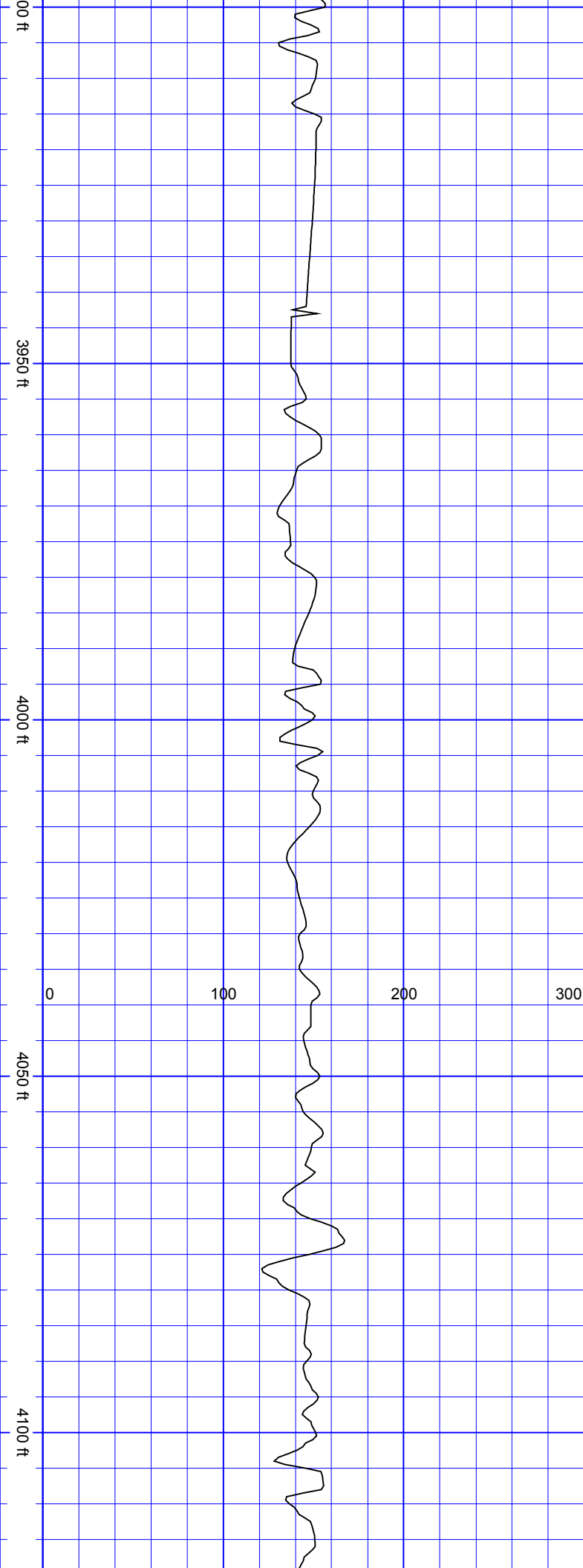


SurveyDepth:3702
TVD:3431.25 Inc:25.05
Azi:105.46 VertSec:-363.45

SurveyDepth:3800
TVD:3519.87 Inc:25.49
Azi:106.6 VertSec:-374.59

SurveyDepth:3895
TVD:3605.5 Inc:25.84

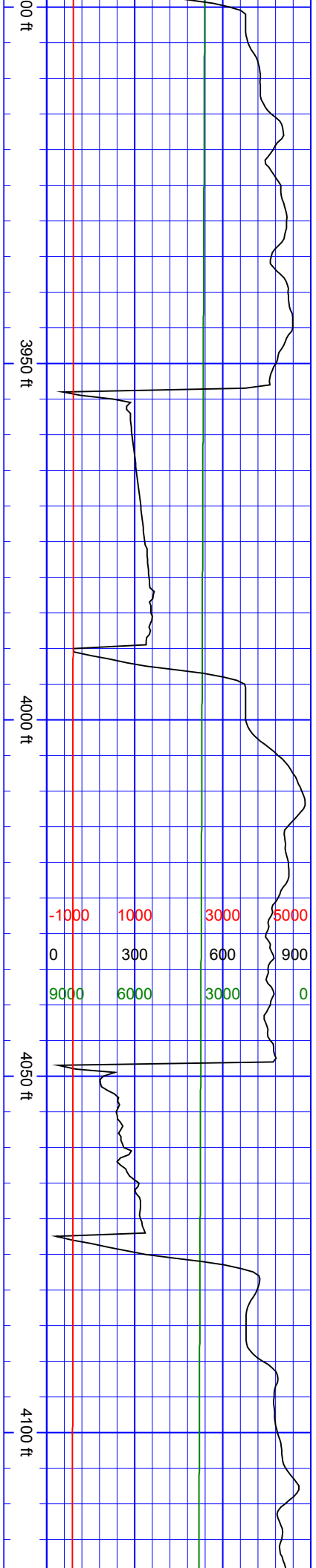


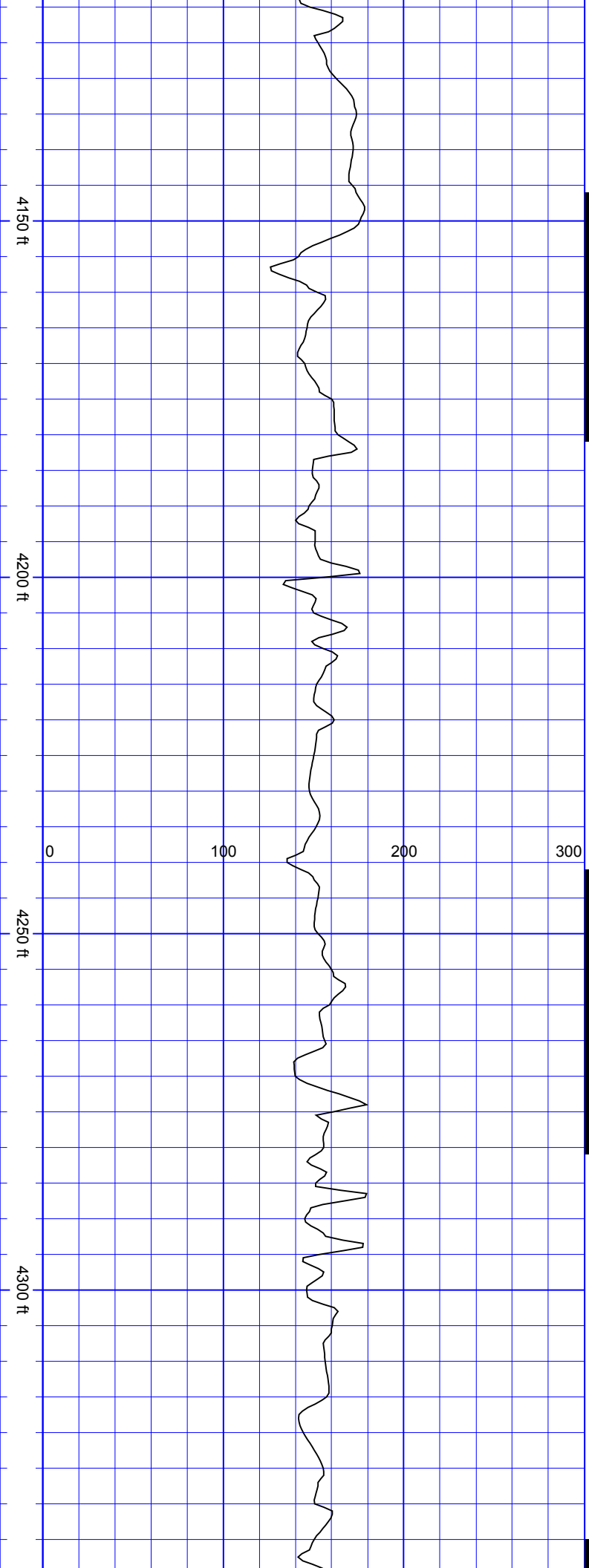


TVD:3689.68 Inc:27.03
Azi:104.4 VertSec:-385.17

SurveyDepth:3989
TVD:3689.68 Inc:27.03
Azi:102.2 VertSec:-394.36

SurveyDepth:4084
TVD:3774.82 Inc:25.62
Azi:104.93 VertSec:-403.79

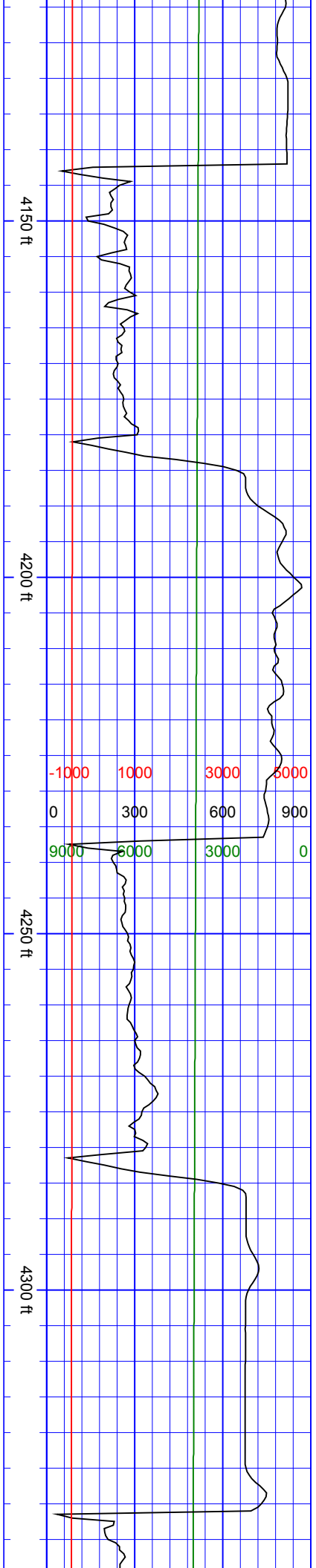


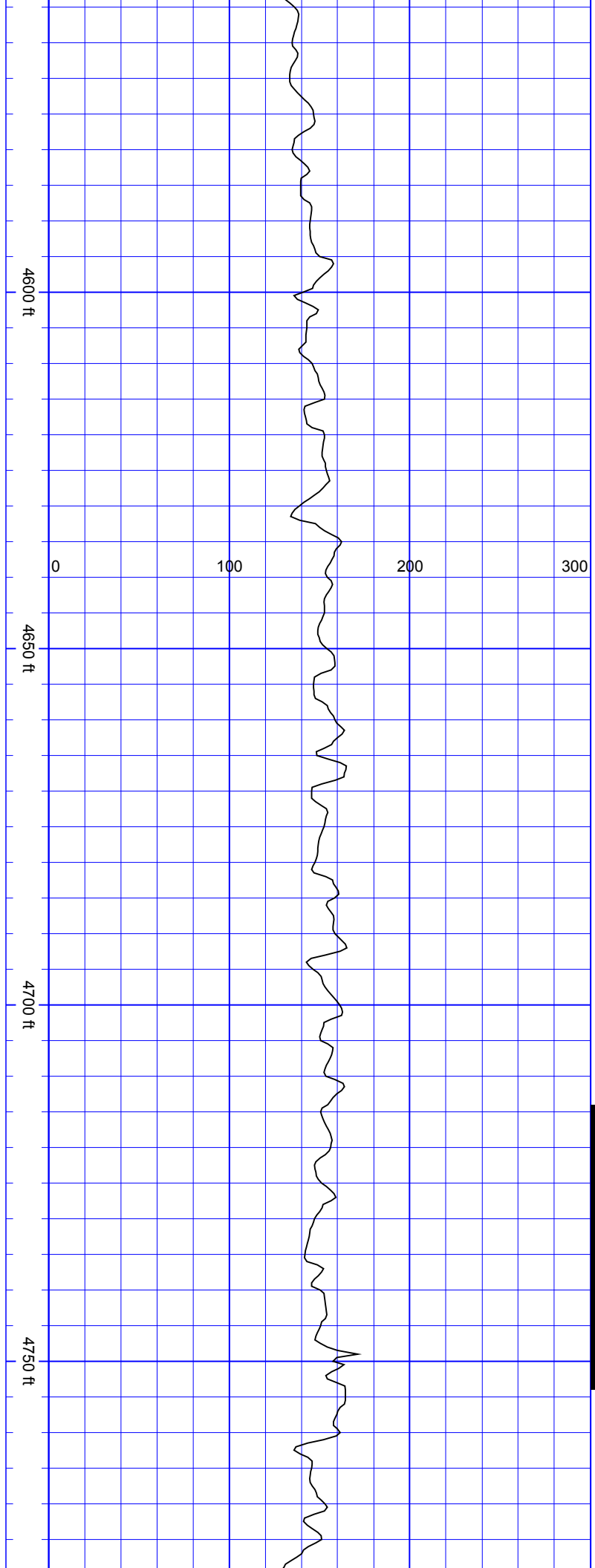


SurveyDepth:4179
TVD:3860.72 Inc:24.96
Azi:104.84 VertSec:-
413.81



SurveyDepth:4273
TVD:3945.13 Inc:27.25
Azi:106.95 VertSec:-
424.76

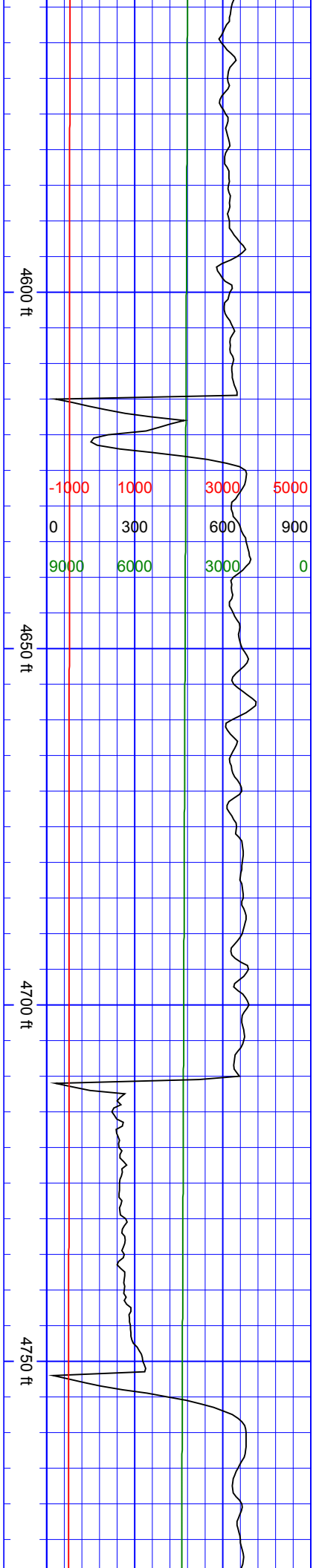
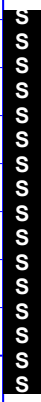


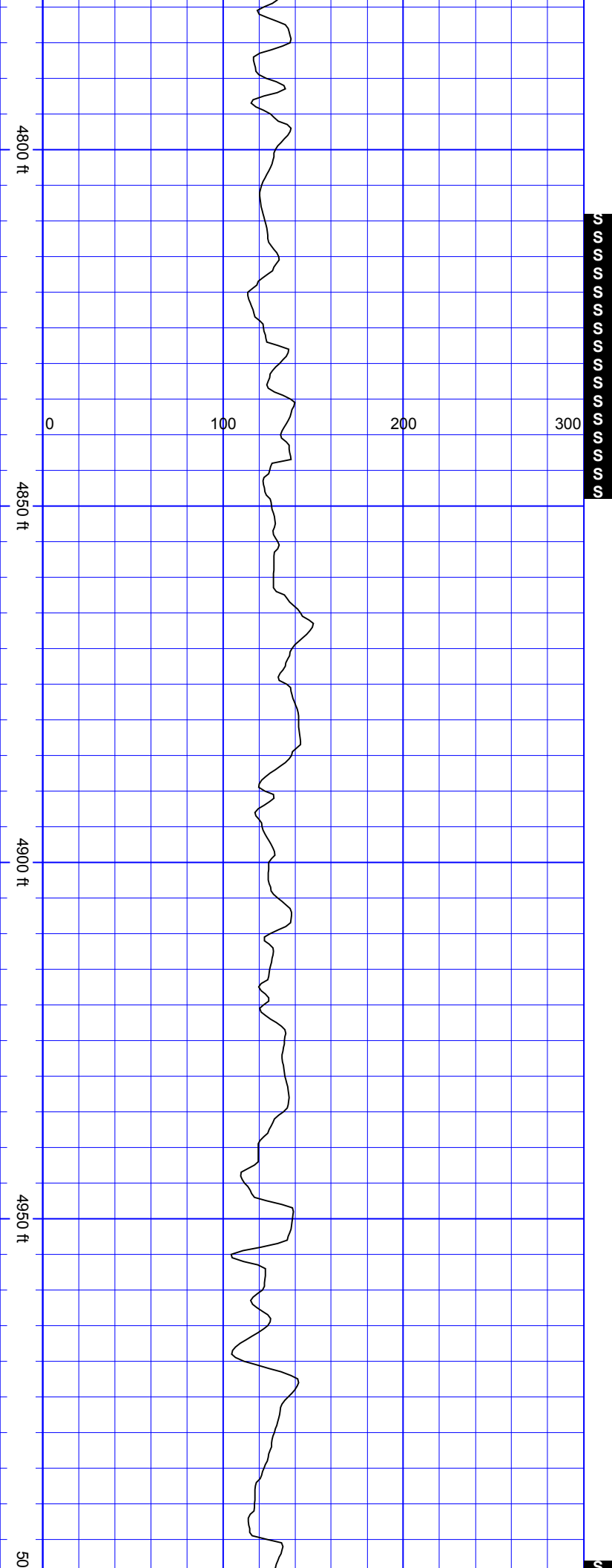


TVD:4193.57 Inc:28.48
Azi:109.32 VertSec:-467.46

SurveyDepth:4652
TVD:4278.46 Inc:24.83
Azi:108.88 VertSec:-481

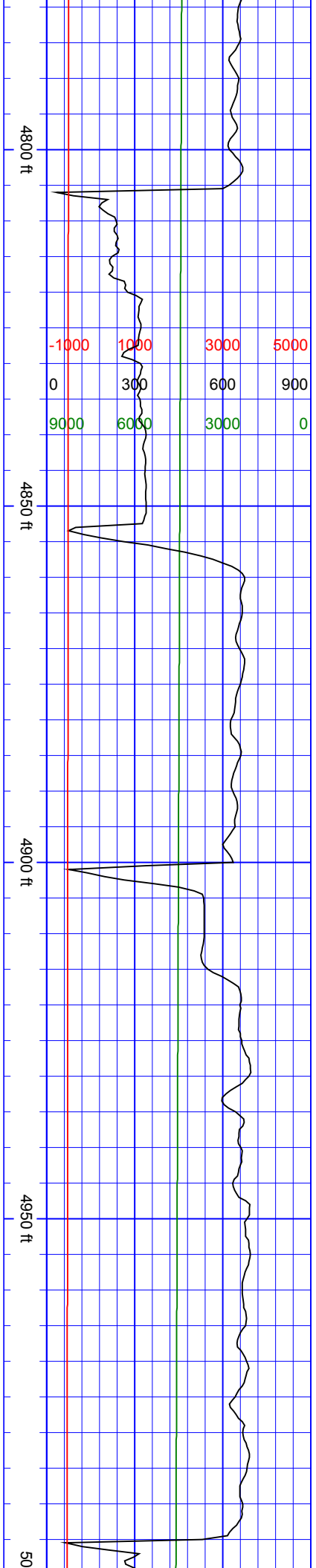
SurveyDepth:4747
TVD:4364.46 Inc:25.44
Azi:108.62 VertSec:-493.58

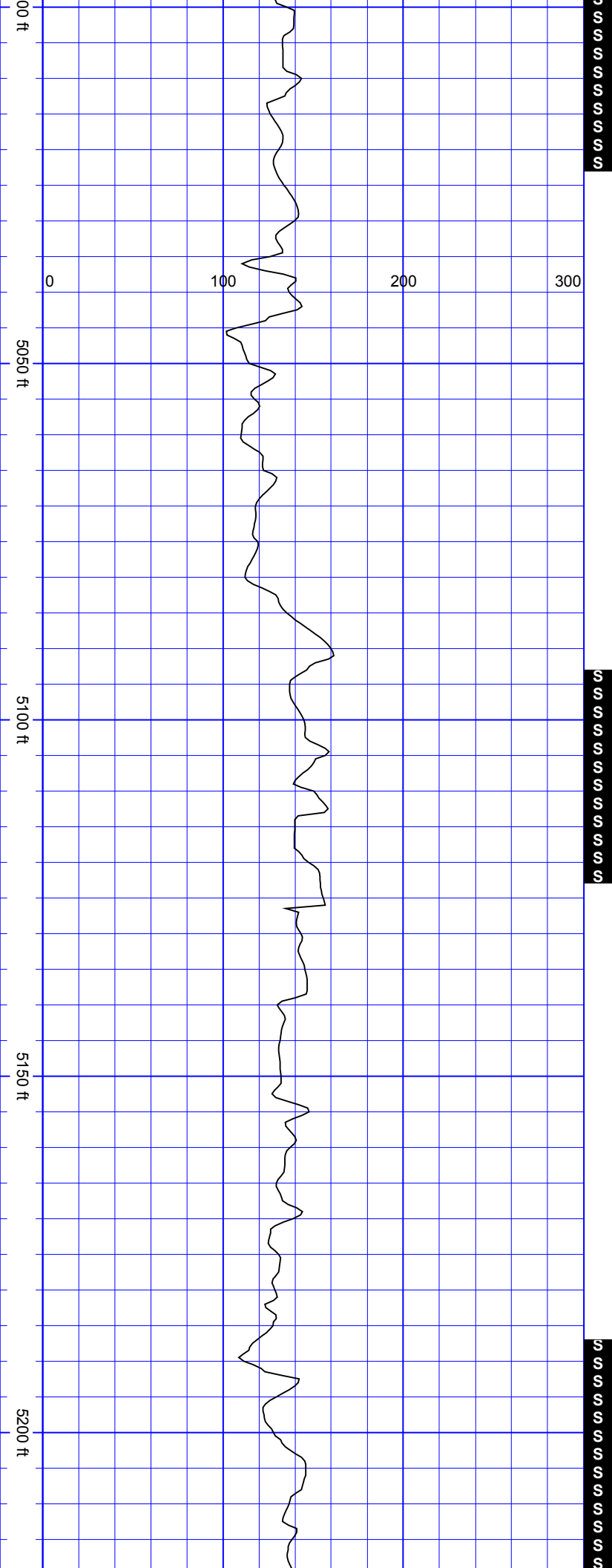




SurveyDepth:4841
TVD:4448.16 Inc:28.7
Azi:108.71 VertSec:-
506.85

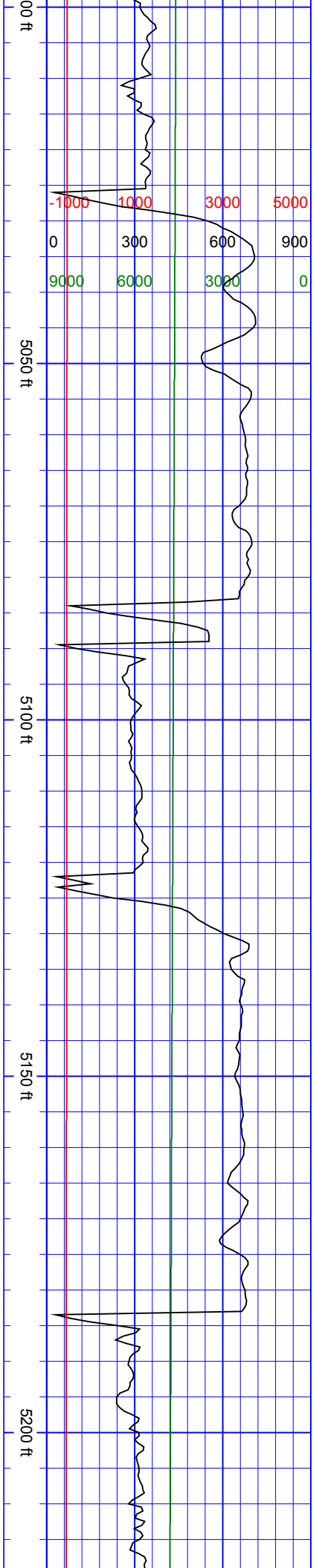
SurveyDepth:4936
TVD:4532.42 Inc:26.28
Azi:110.03 VertSec:-
520.94

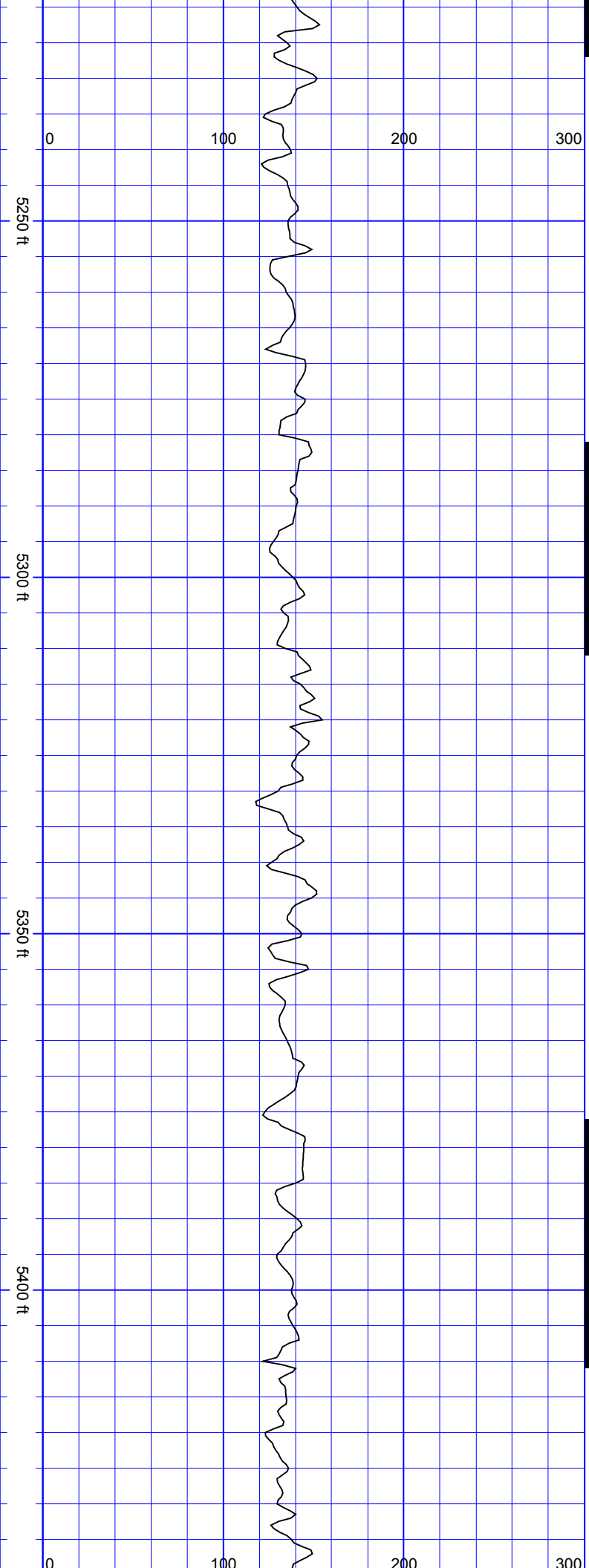




SurveyDepth:5031
TVD:4618.38 Inc:24.13
Azi:106.33 VertSec:-
533.21

SurveyDepth:5125
TVD:4704.36 Inc:23.56
Azi:104.31 VertSec:-
542.88

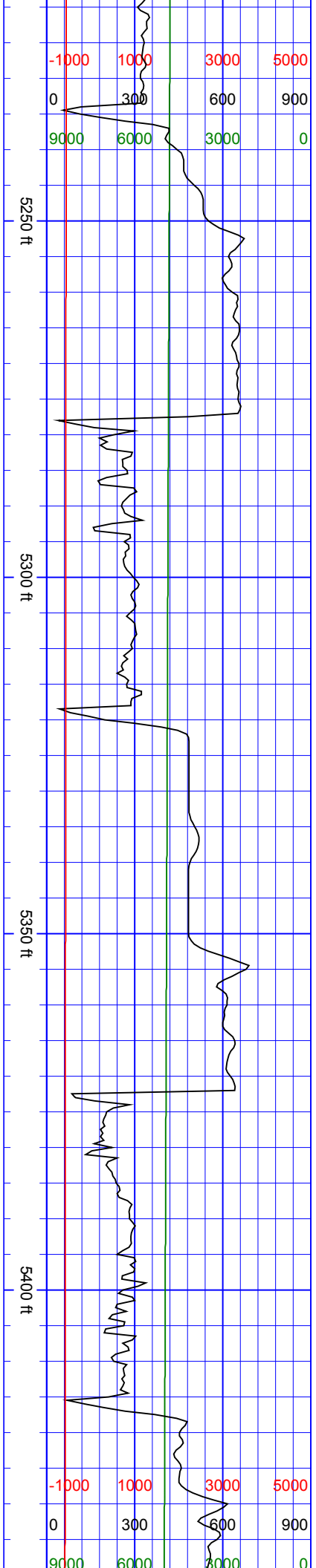


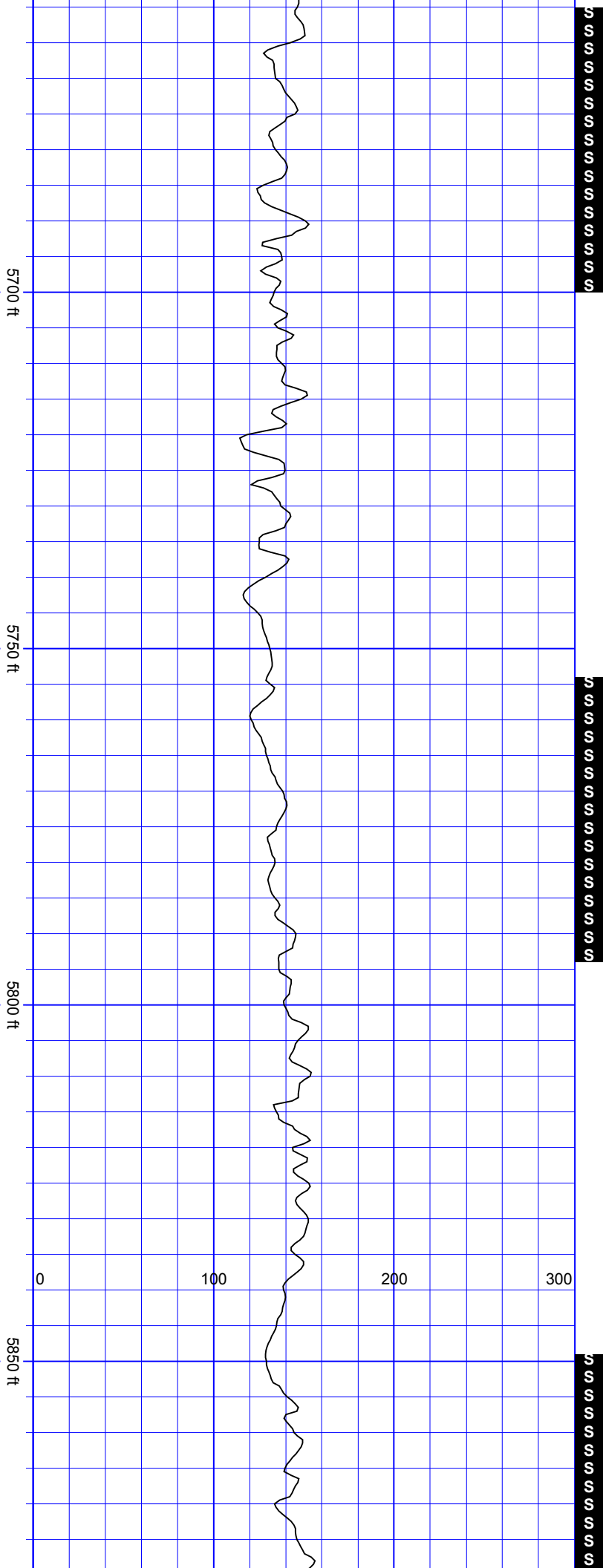


SurveyDepth:5219
TVD:4789.66 Inc:26.1
Azi:103.7 VertSec:-
552.03

SurveyDepth:5314
TVD:4874.75 Inc:26.72
Azi:106.95 VertSec:-
562.78

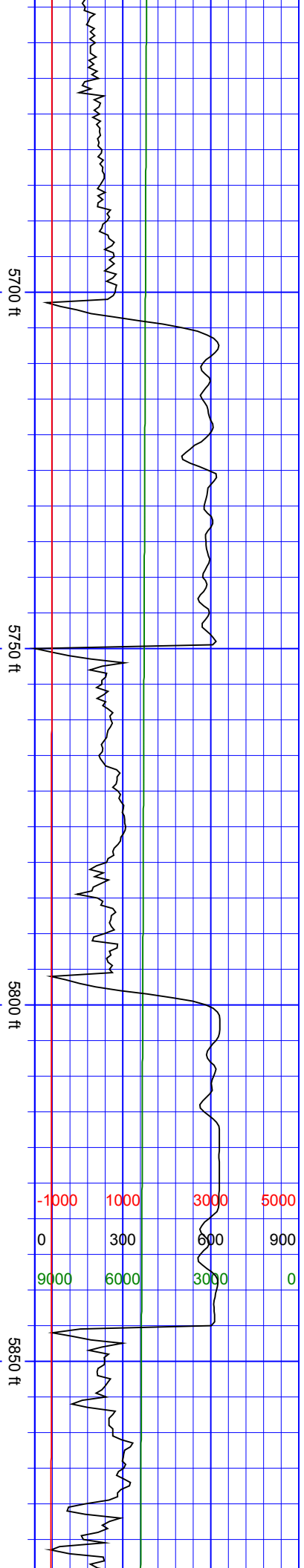
SurveyDepth:5408
TVD:4958.51 Inc:27.25
Azi:107.13 VertSec:-
574.86

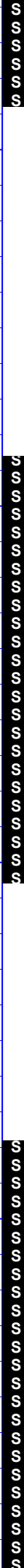
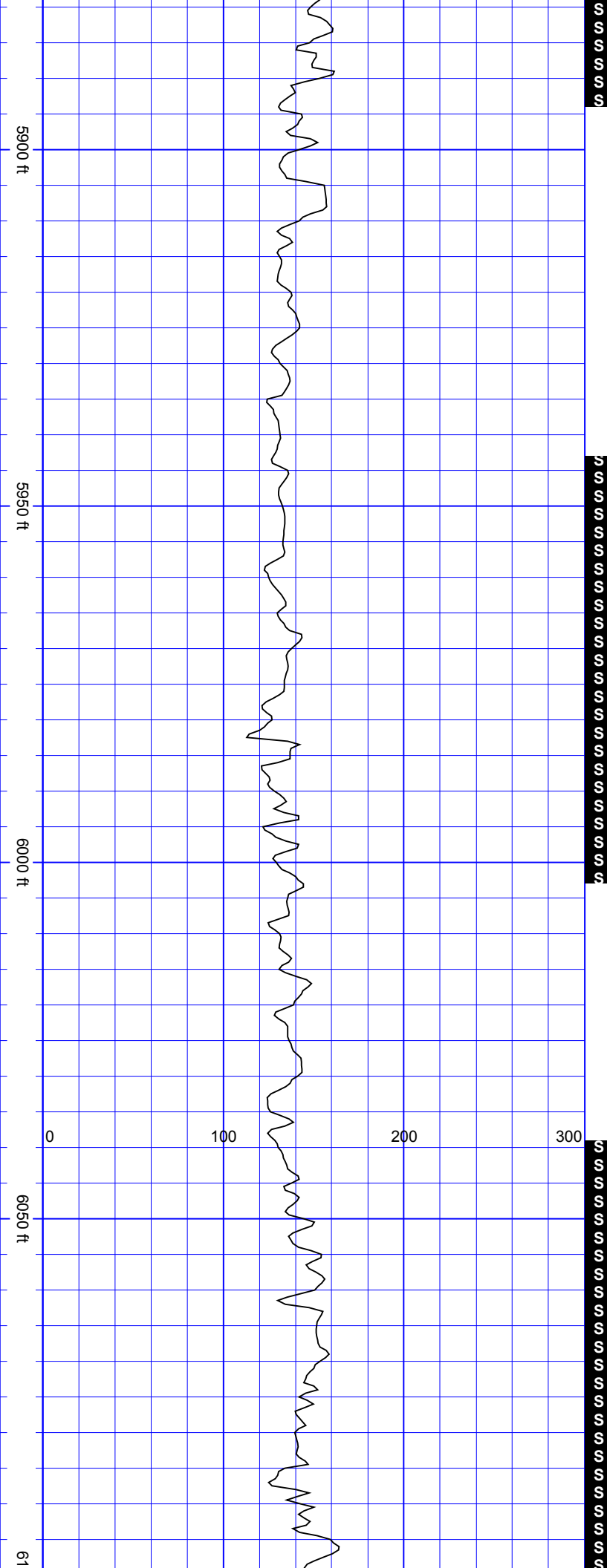




SurveyDepth:5692
TVD:5213.69 Inc:24.83
Azi:102.29 VertSec:-
604.22

SurveyDepth:5787
TVD:5299.85 Inc:25.01
Azi:104.75 VertSec:-
613.18

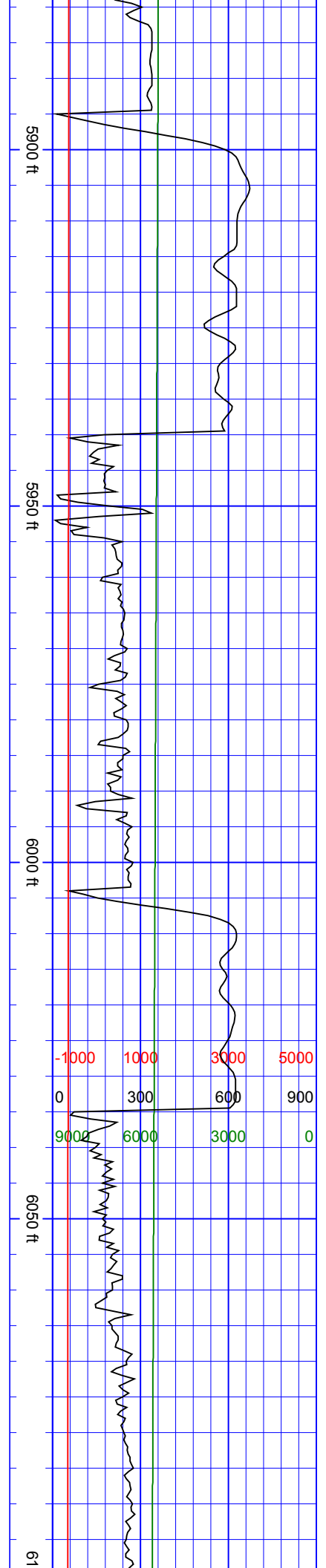


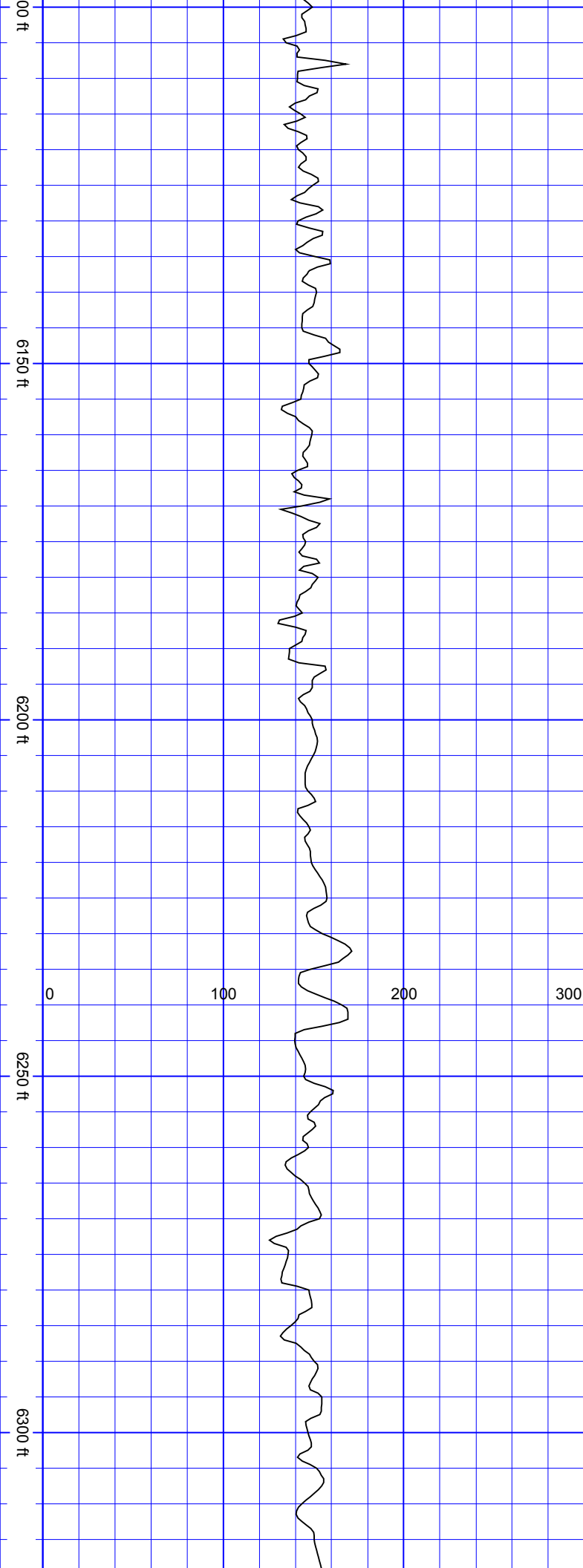


SurveyDepth:5881
TVD:5385.87 Inc:22.54
Azi:108.18 VertSec:-
623.49

SurveyDepth:5977
TVD:5475.07 Inc:20.87
Azi:113.28 VertSec:-
635.65

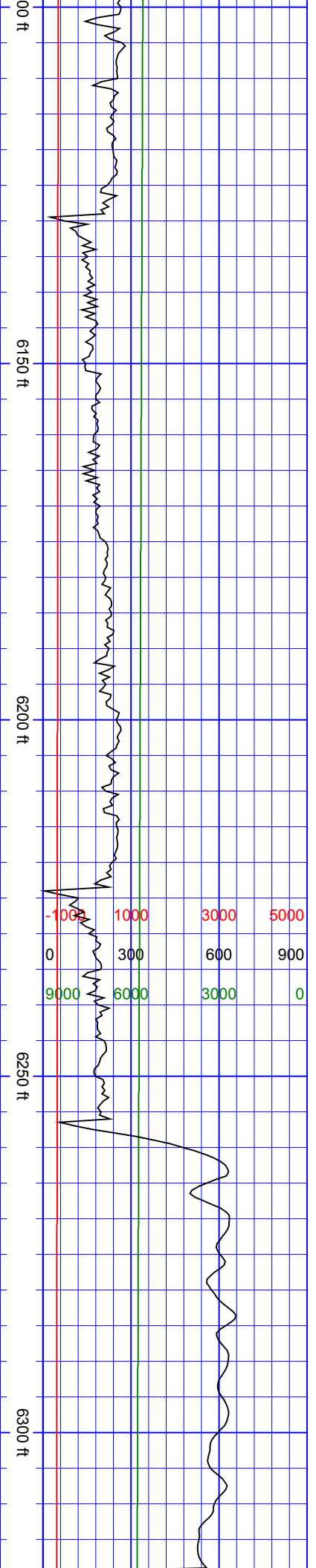
SurveyDepth:6071
TVD:5563.39 Inc:19.16
Azi:110.2 VertSec:-
647.28

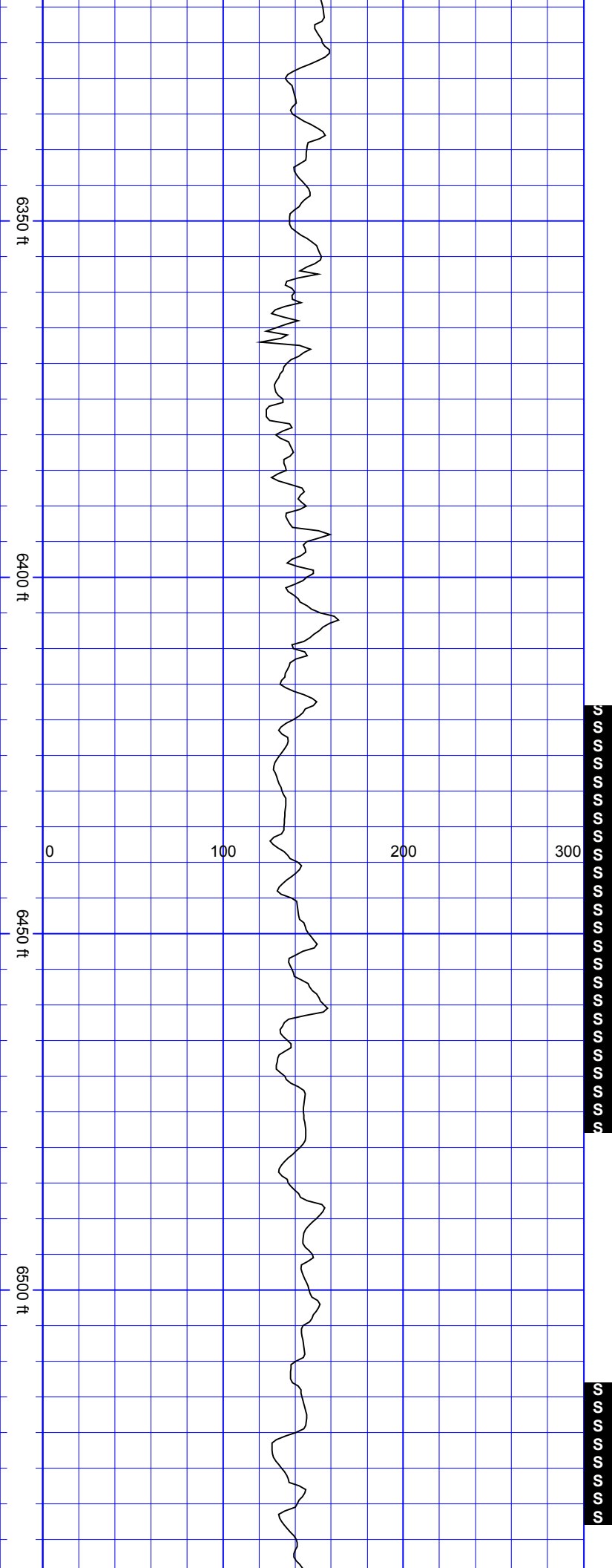




SurveyDepth:6166
TVD:5650.71 Inc:27.03
Azi:108.62 VertSec:-
659.22

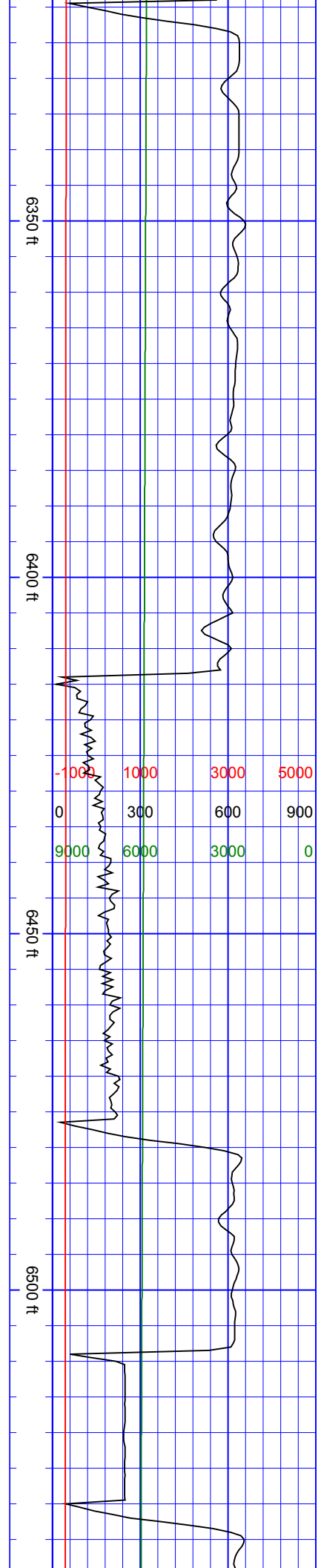
SurveyDepth:6261
TVD:5731.78 Inc:35.64
Azi:108.18 VertSec:-
674.29

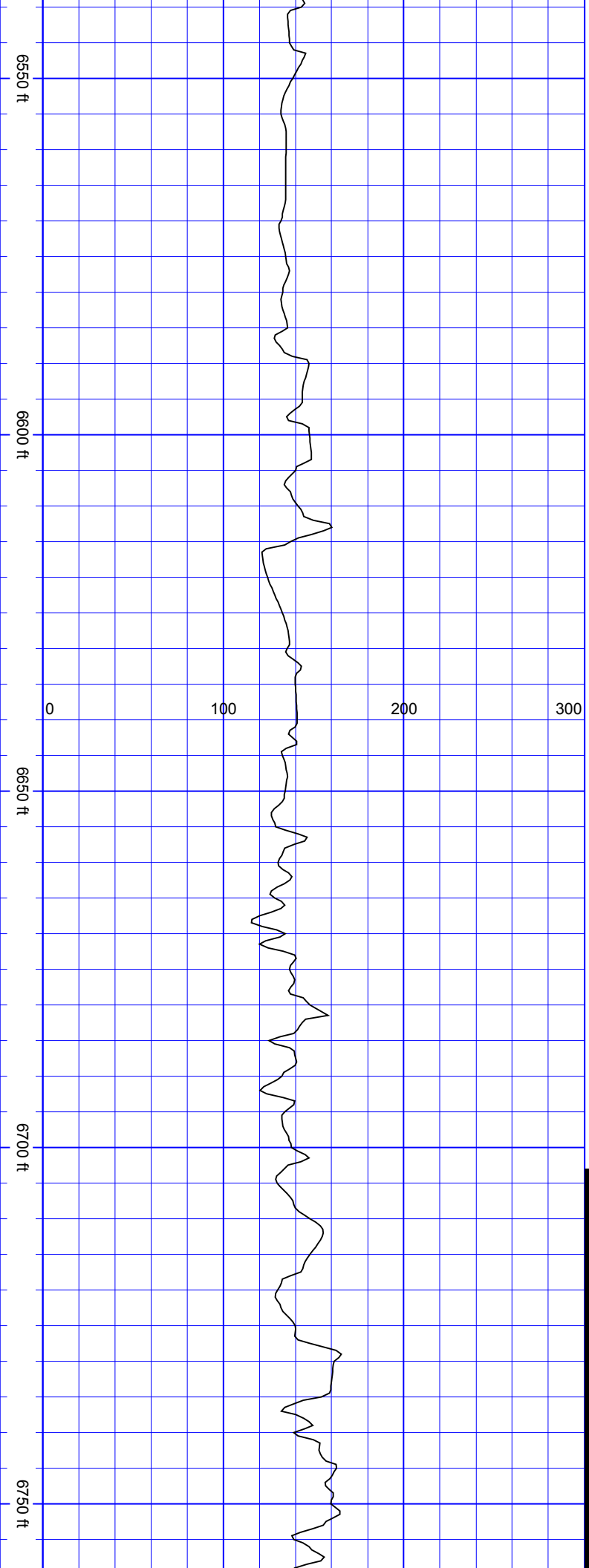




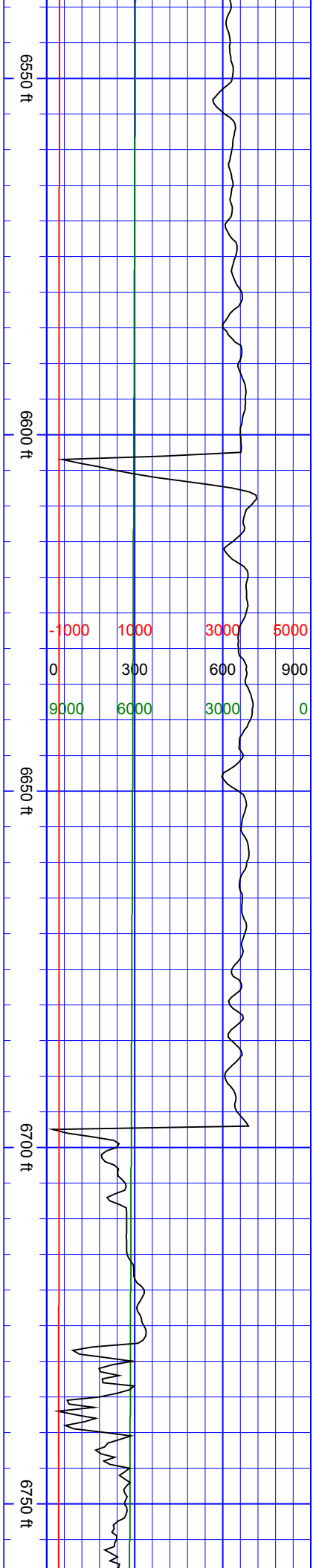
SurveyDepth:6356
TVD:5811.2 Inc:30.89
Azi:102.73 VertSec:-
687.79

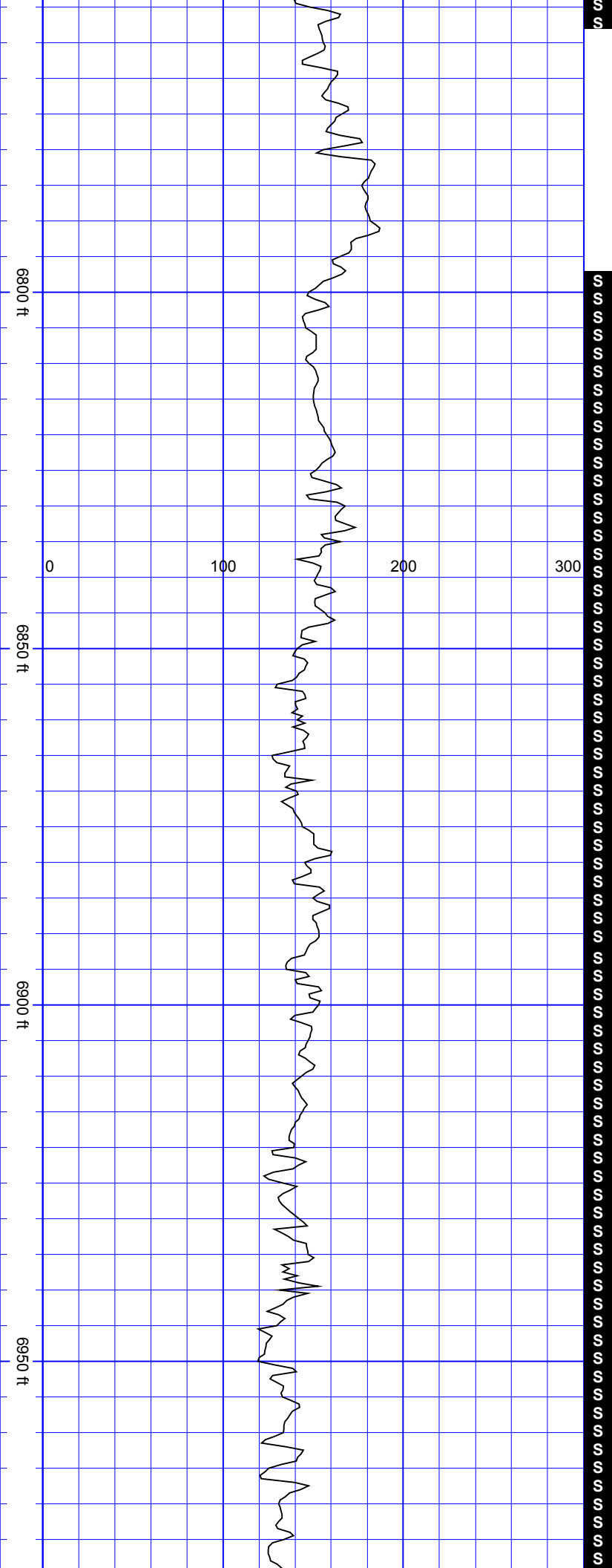
SurveyDepth:6451
TVD:5892.31 Inc:31.86
Azi:101.06 VertSec:-
697.48





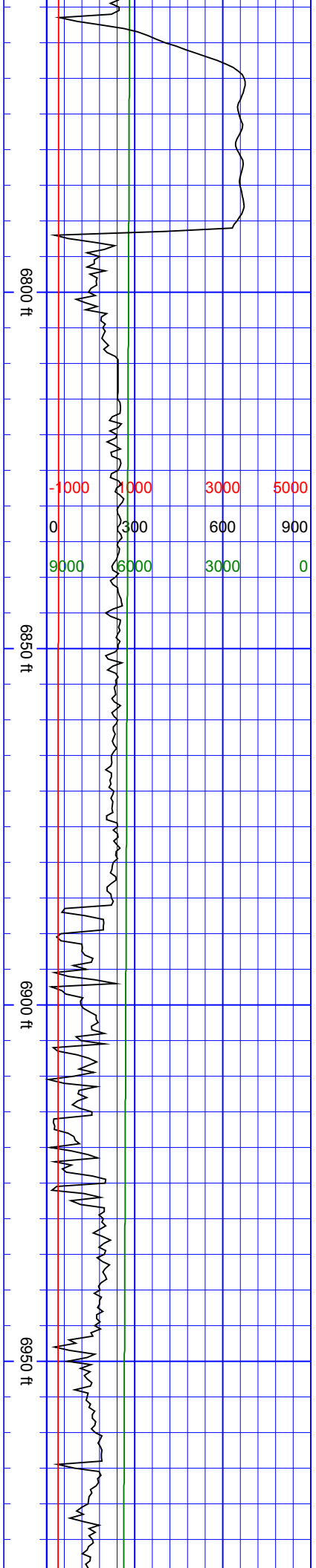
SurveyDepth:6546 TVD:5973.14 Inc:31.55 Azi:101.32 VertSec:- 706.66	SurveyDepth:6641 TVD:6056.79 Inc:24.92 Azi:97.55 VertSec:- 713.72	SurveyDepth:6735 TVD:6143.21 Inc:21.4 Azi:102.73 VertSec:- 719.73
---	--	--

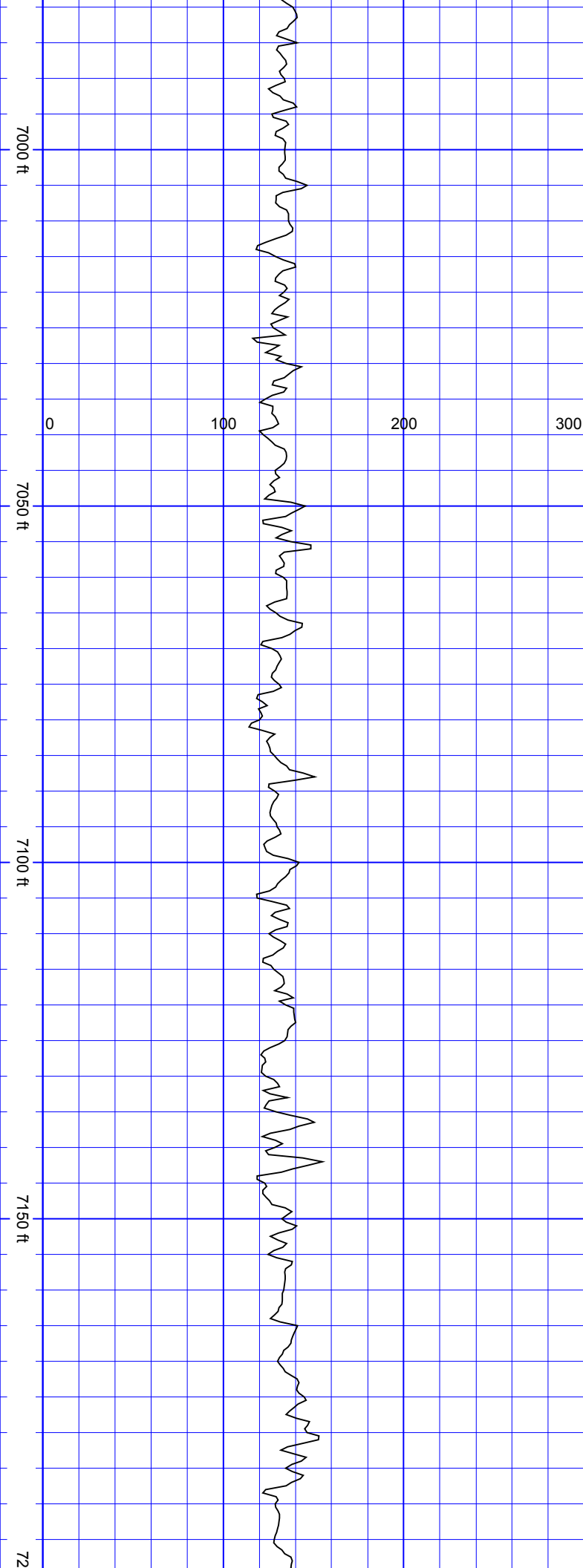




SurveyDepth:6830
TVD:6231.69 Inc:21.31
Azi:105.72 VertSec:-
727.88

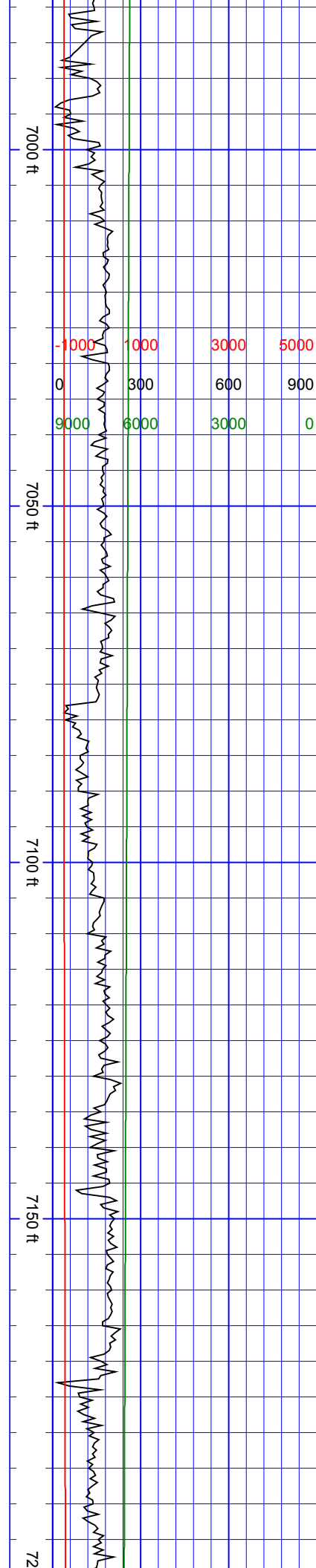
SurveyDepth:6925
TVD:6319.13 Inc:24.7
Azi:103.87 VertSec:-
736.95

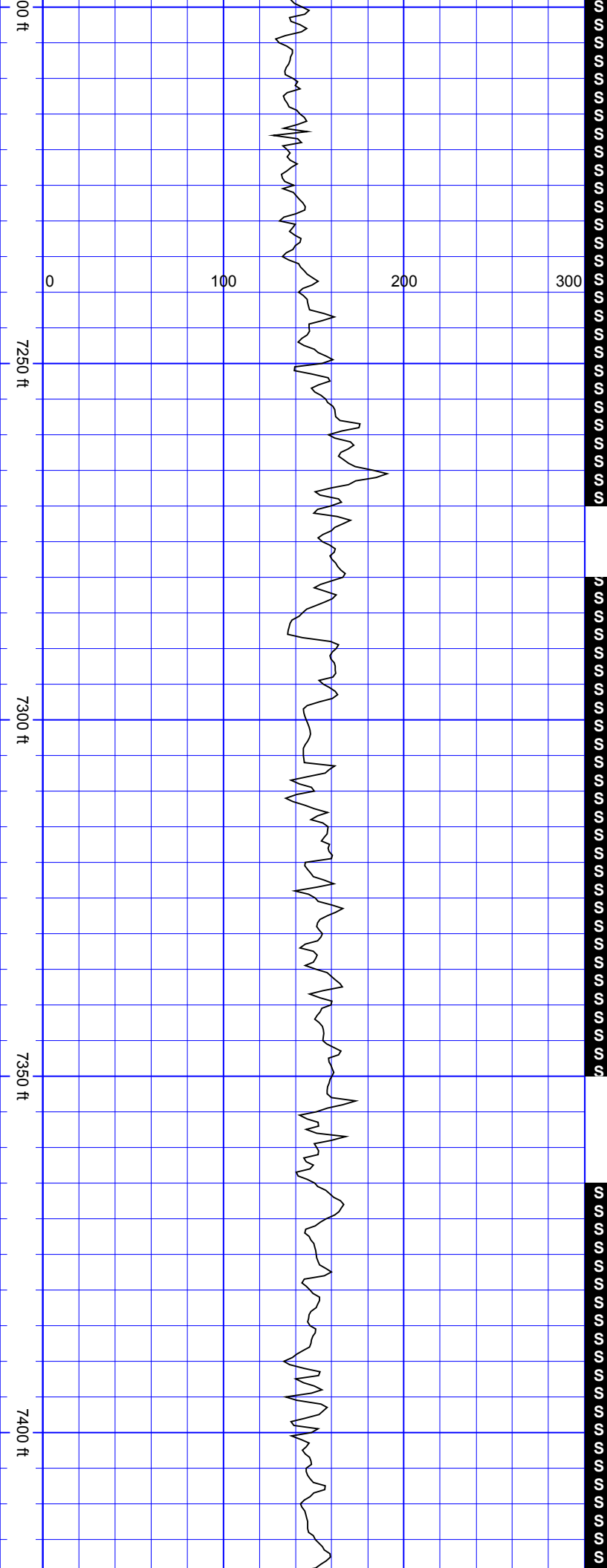




SurveyDepth:7019
TVD:6403.26 Inc:28.52
Azi:87.88 VertSec:-
740.41

SurveyDepth:7114
TVD:6485.01 Inc:33.18
Azi:68.19 VertSec:-
729.39

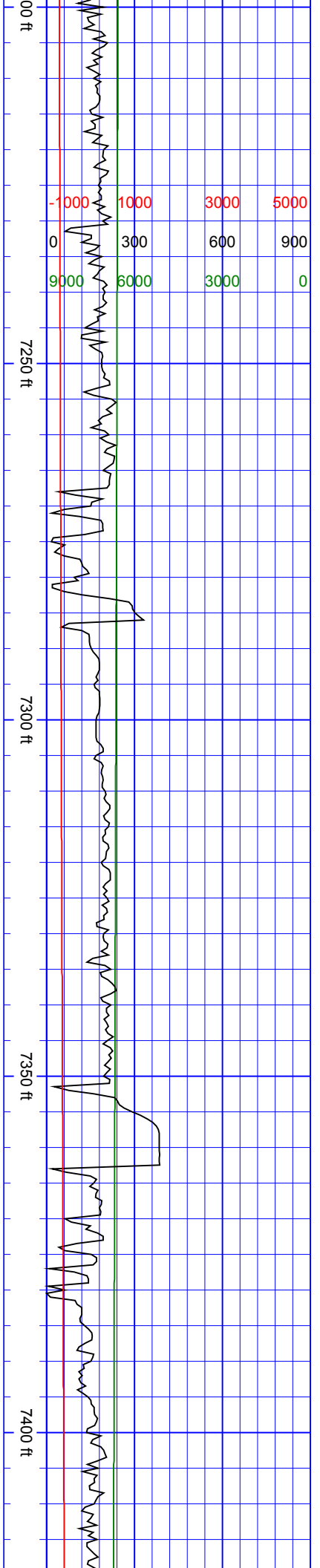




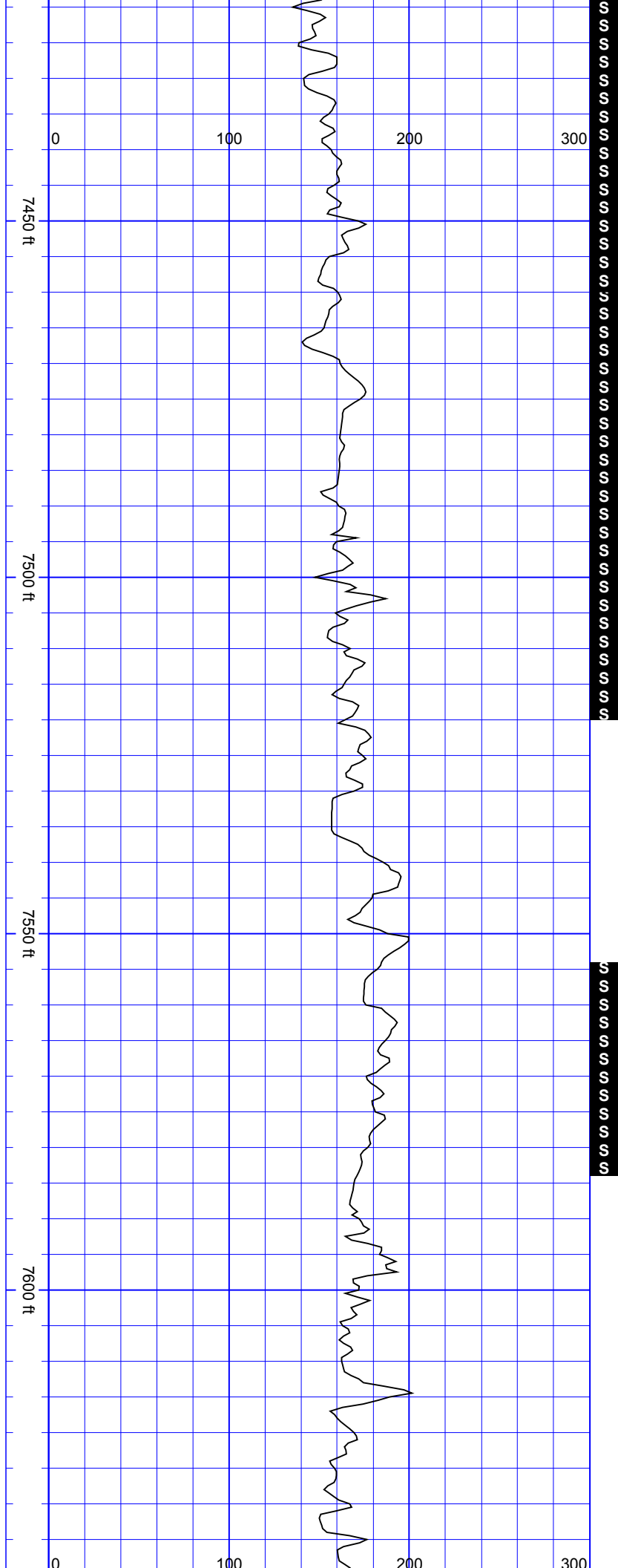
SurveyDepth:7208
TVD:6560.61 Inc:39.86
Azi:55.8 VertSec:-702.34

SurveyDepth:7303
TVD:6630.36 Inc:45.7
Azi:47.45 VertSec:-661.65

SurveyDepth:7398
TVD:6693.77 Inc:50.71
Azi:36.37 VertSec:-608.46

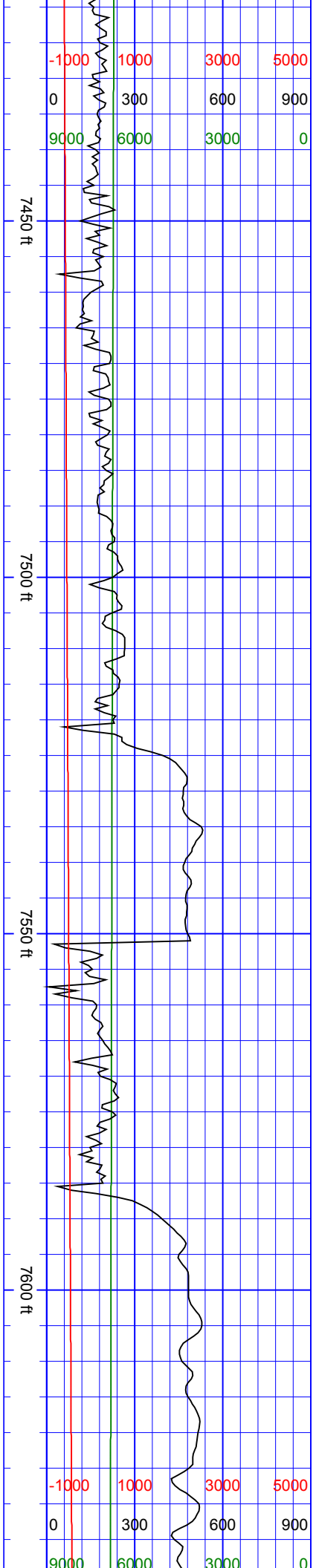


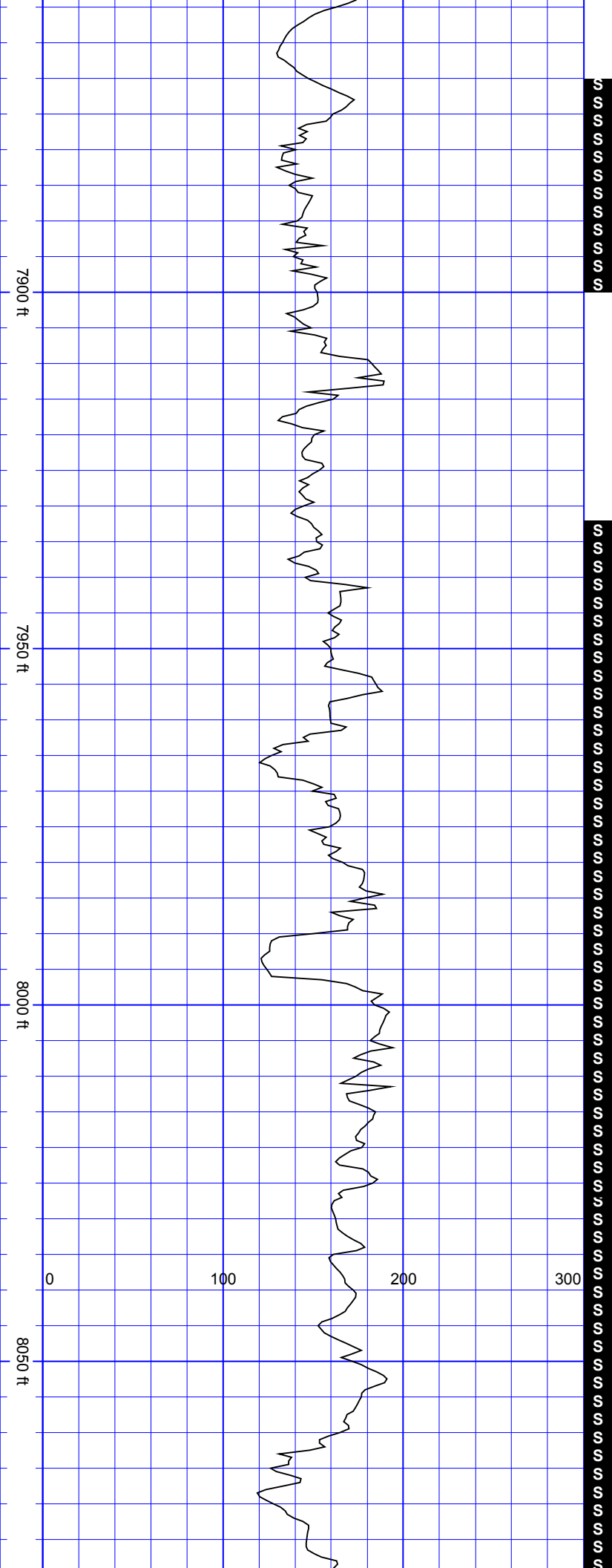
-1000	1000	3000	5000
0	300	600	900
9000	6000	3000	0



SurveyDepth:7492
TVD:6748.47 Inc:58.27
Azi:24.16 VertSec:-
542.05

SurveyDepth:7587
TVD:6795.48 Inc:62.4
Azi:21.34 VertSec:-
465.61

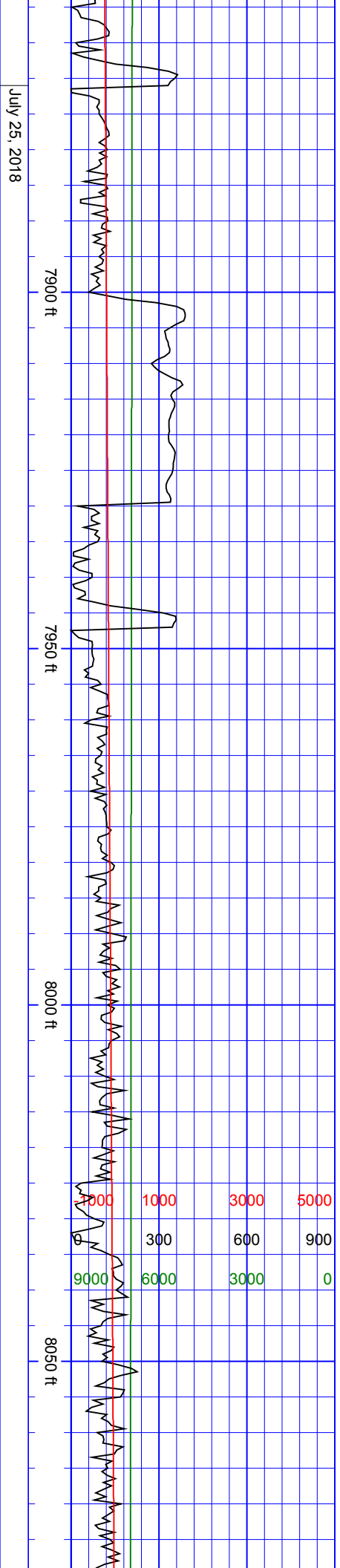


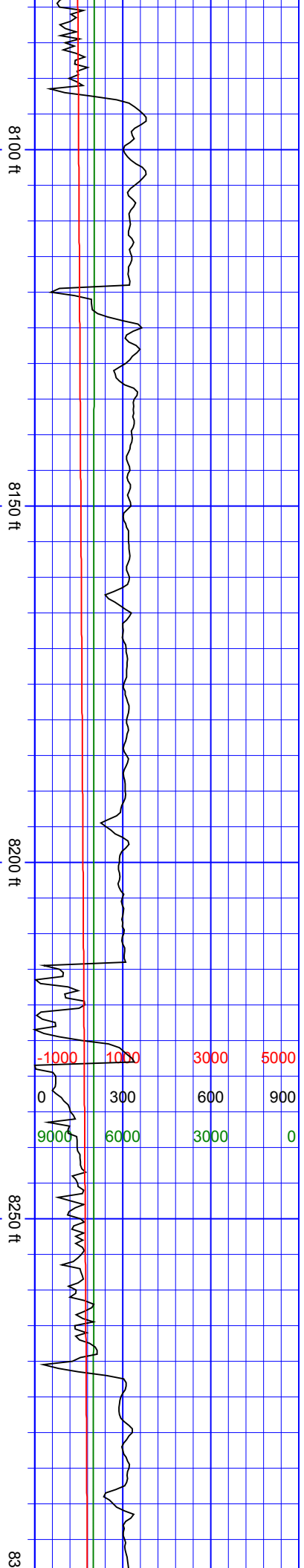


SurveyDepth:7870
TVD:6910.64 Inc:71.28
Azi:12.91 VertSec:-
217.61

SurveyDepth:7965
TVD:6938.71 Inc:74.36
Azi:8.25 VertSec:-128.26

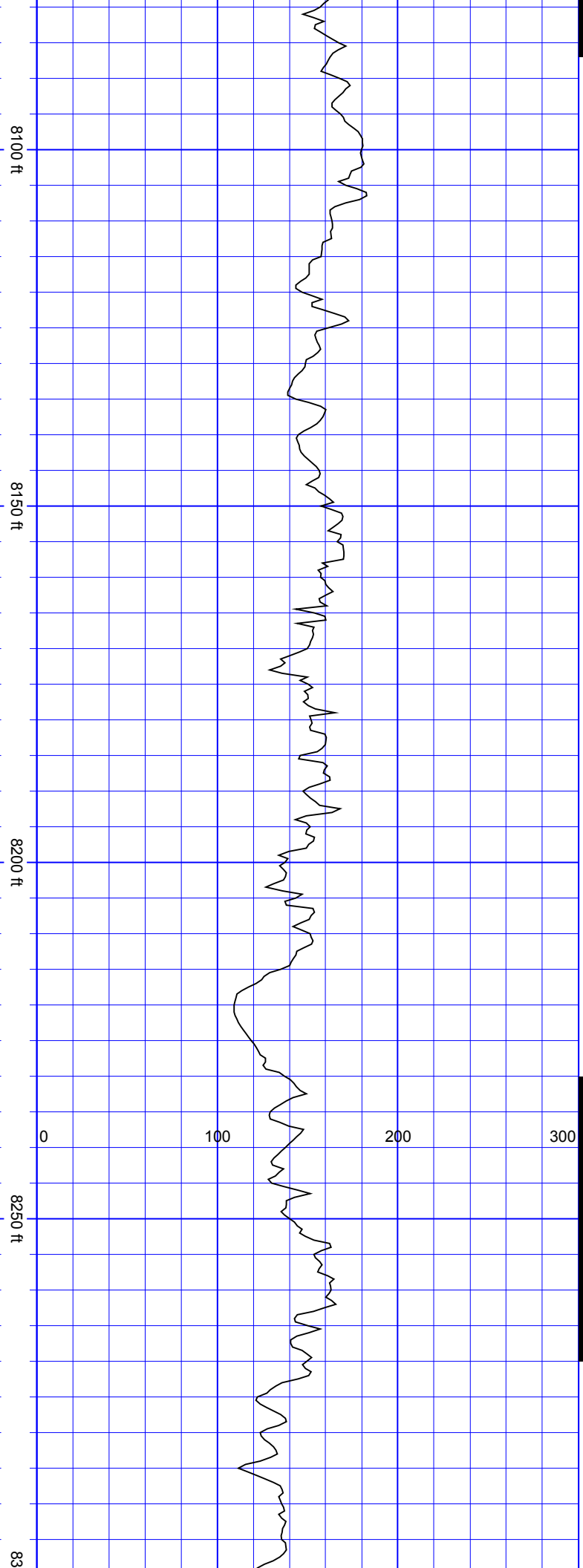
SurveyDepth:8060
TVD:6960.33 Inc:79.41
Azi:356.38 VertSec:-
35.99

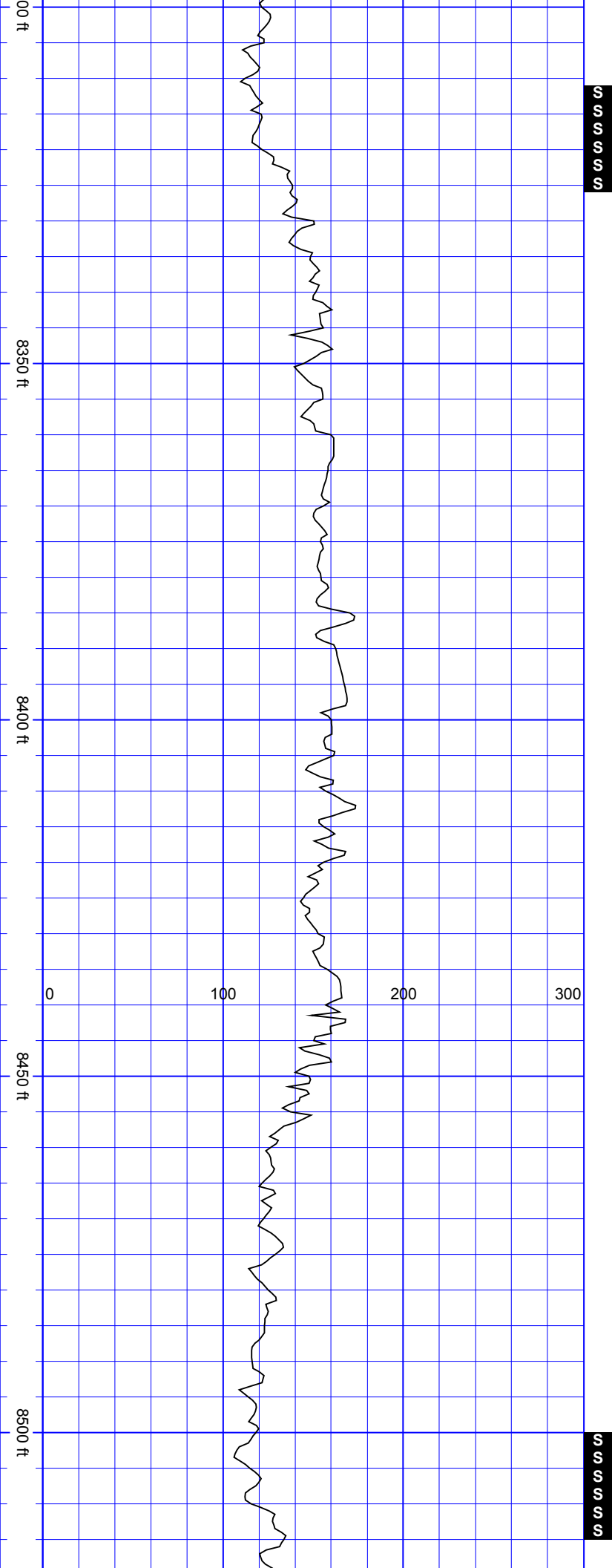




SurveyDepth:8154
TVD:6975.94 Inc:81.48
Azi:352.69
VertSec:56.17

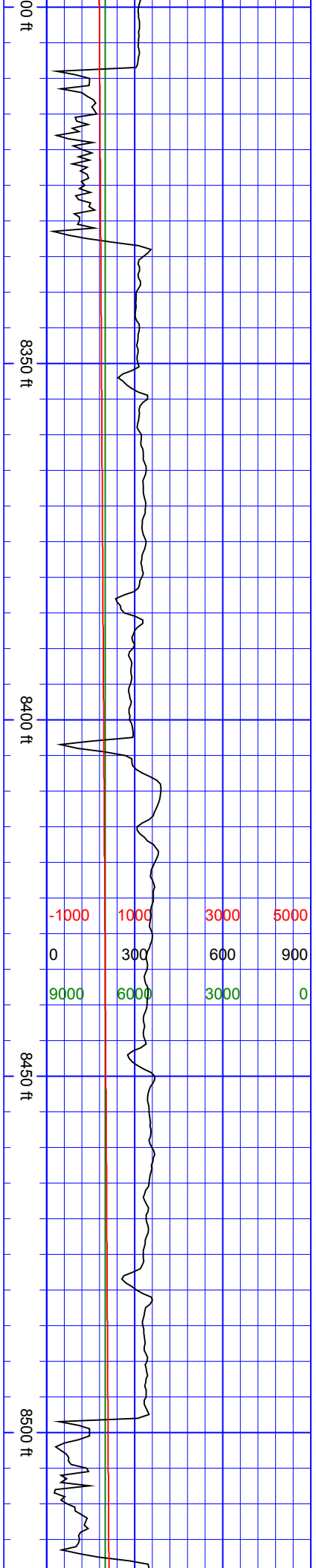
SurveyDepth:8249
TVD:6987.89 Inc:84.07
Azi:354.45
VertSec:149.7

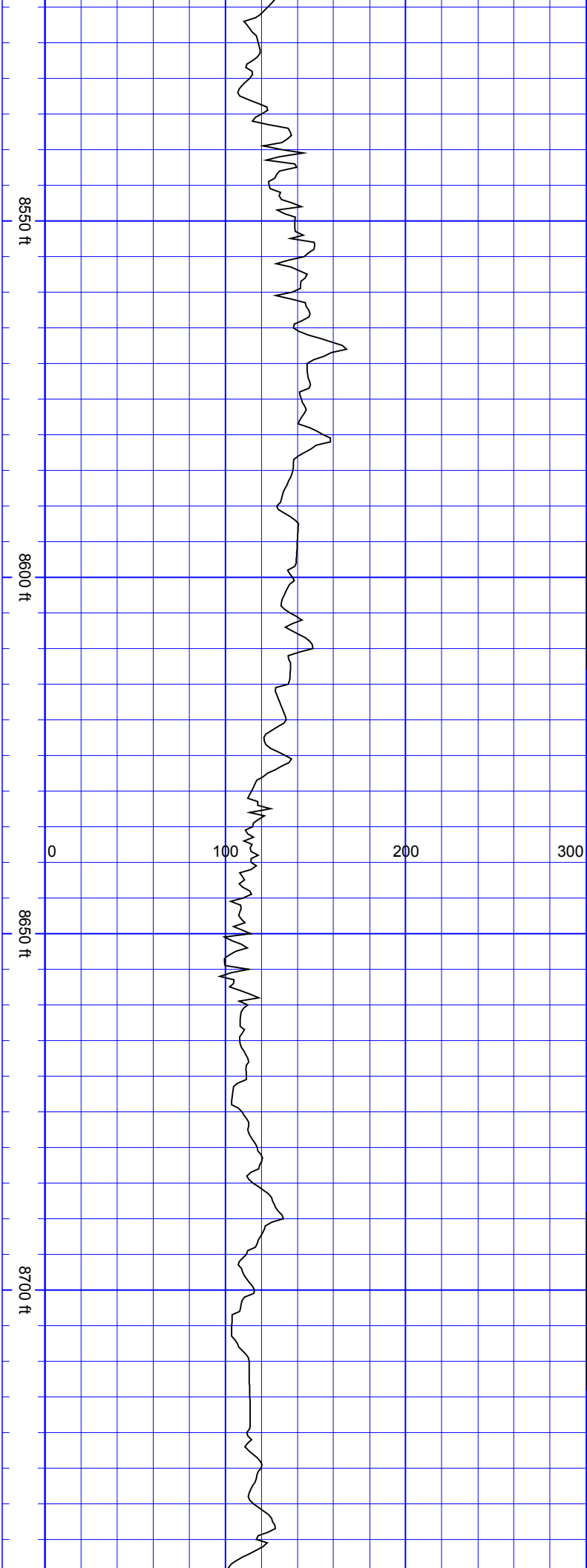




SurveyDepth:8344
TVD:6994.15 Inc:88.37
Azi:356.56
VertSec:244.09

SurveyDepth:8438
TVD:6996.86 Inc:88.33
Azi:355.86
VertSec:337.78





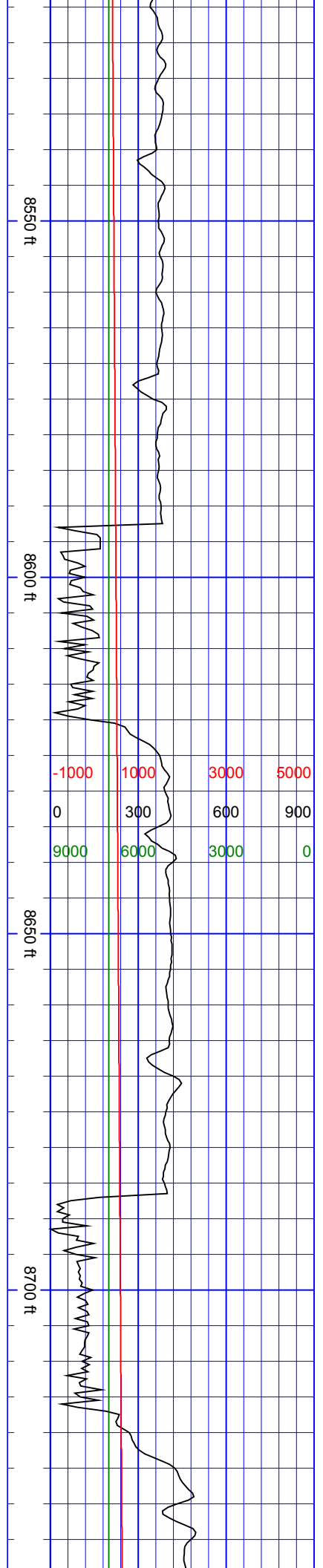
SurveyDepth:8533
TVD:7000.17 Inc:87.67
Azi:356.91
VertSec:432.46

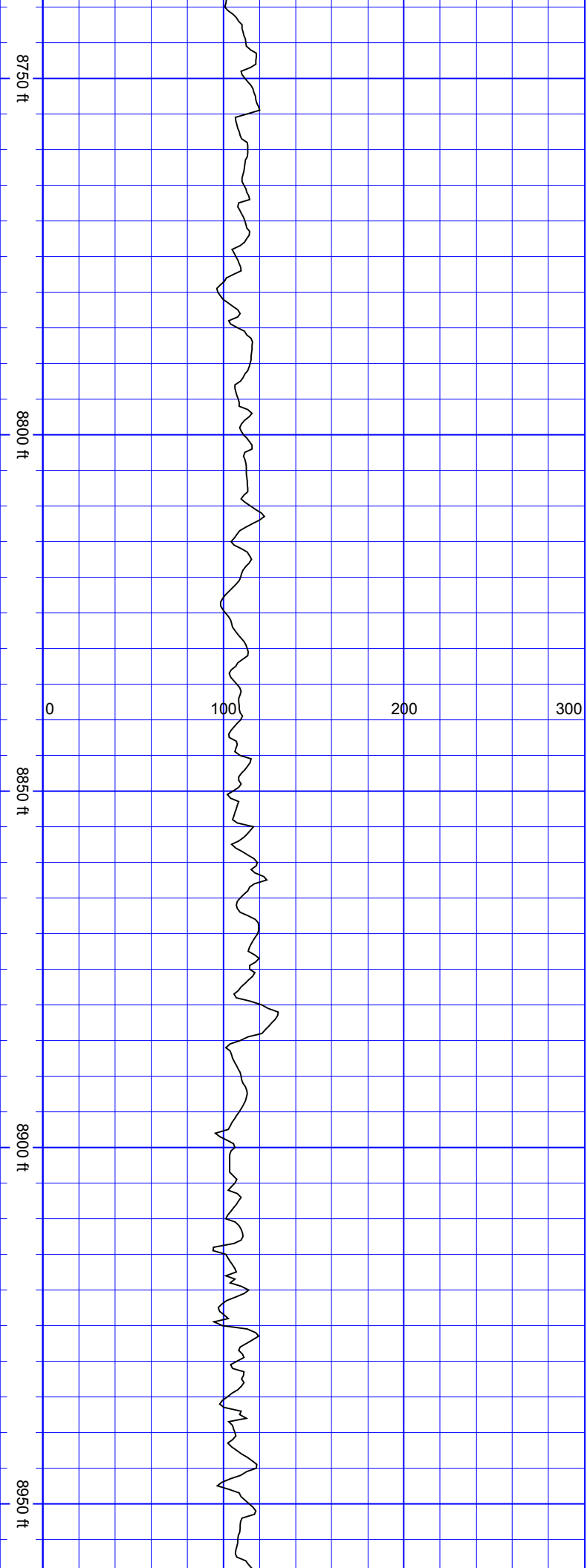
SurveyDepth:8627
TVD:7002.41 Inc:89.6
Azi:358.76
VertSec:526.32

SurveyDepth:8722
TVD:7002.78 Inc:89.96
Azi:2.54 VertSec:621.3

S
S
S
S
S
S
S
S
S
S

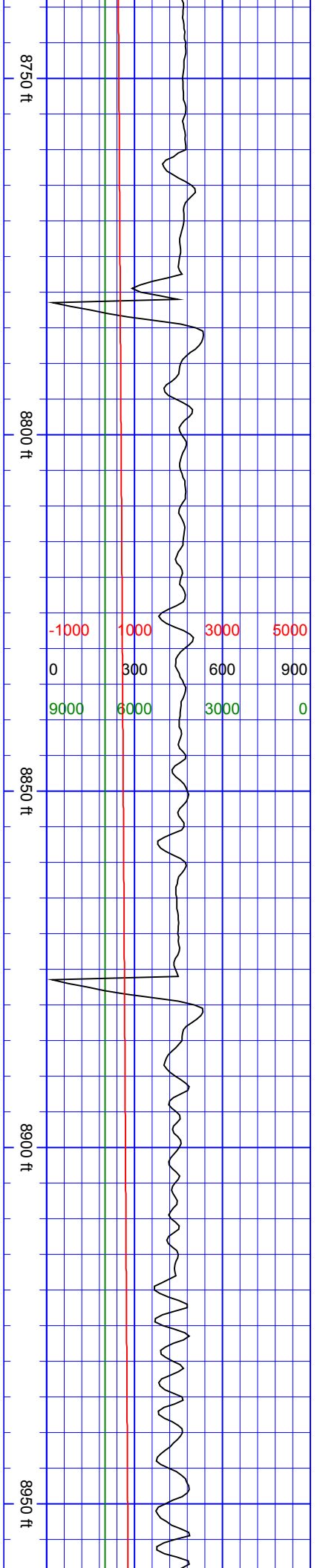
S
S
S
S
S
S
S
S
S
S

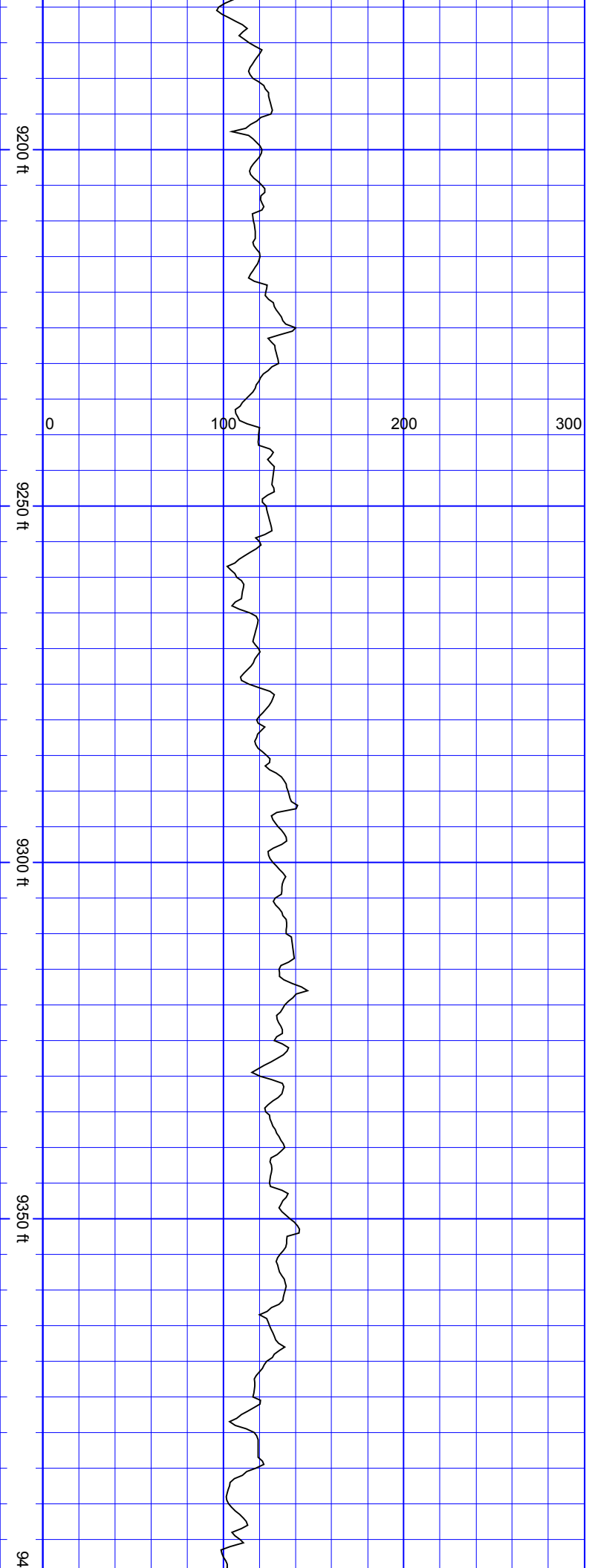




SurveyDepth:8817
TVD:7002.84 Inc:89.96
Azi:2.97 VertSec:716.23

SurveyDepth:8911
TVD:7002.48 Inc:90.48
Azi:3.5 VertSec:810.13

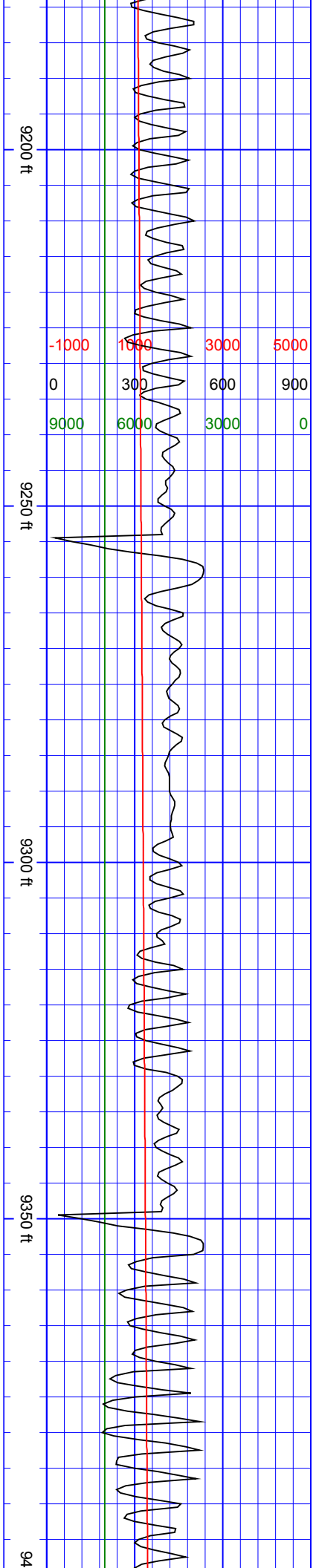


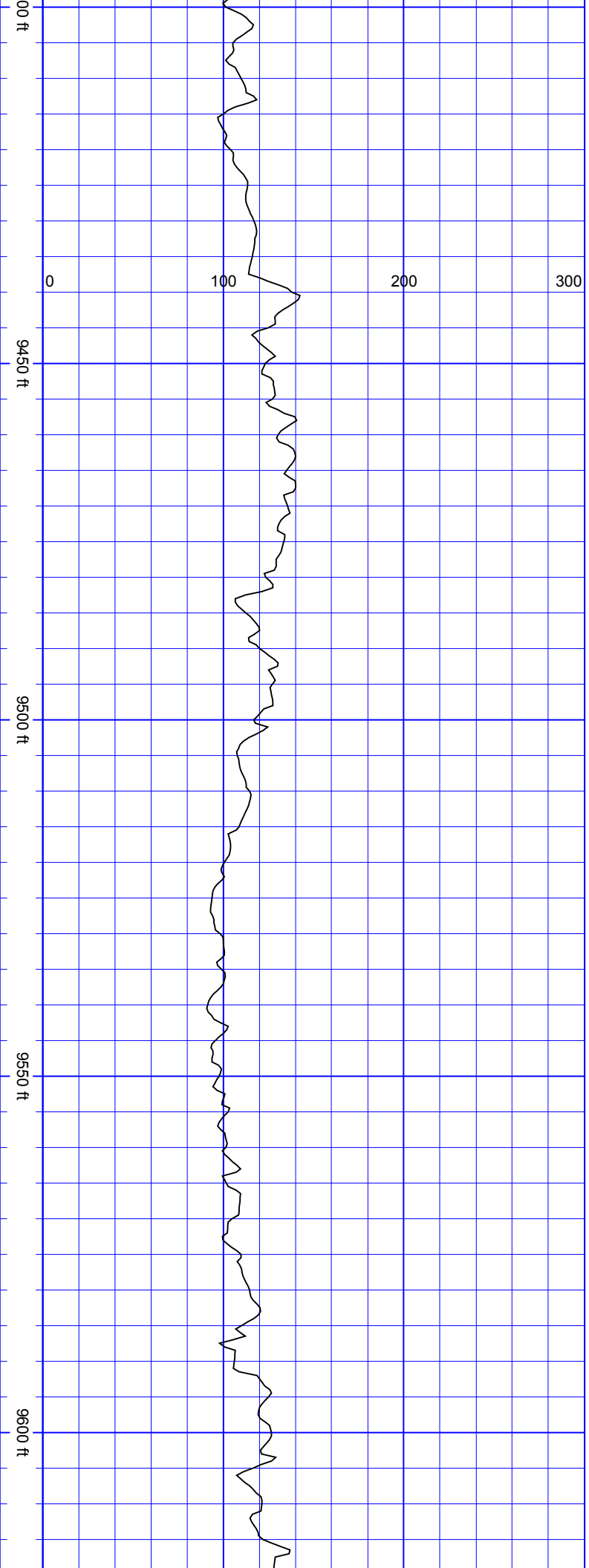


SurveyDepth:9195
TVD:7007.92 Inc:88.55
Azi:0.78 VertSec:1094

SurveyDepth:9290
TVD:7009.99 Inc:88.95
Azi:0.6 VertSec:1188.98

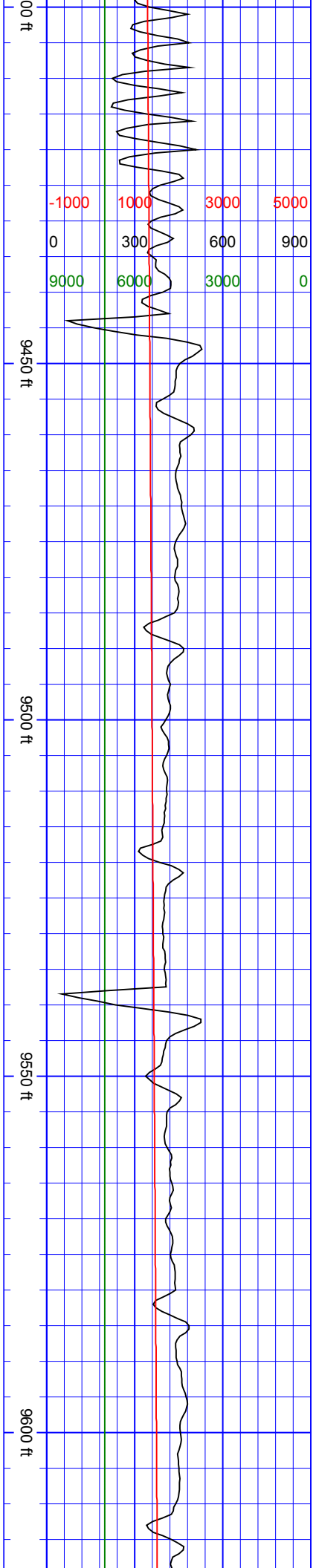
SurveyDepth:9384
TVD:7011.79 Inc:88.86
Azi:0.43
VertSec:1282.96

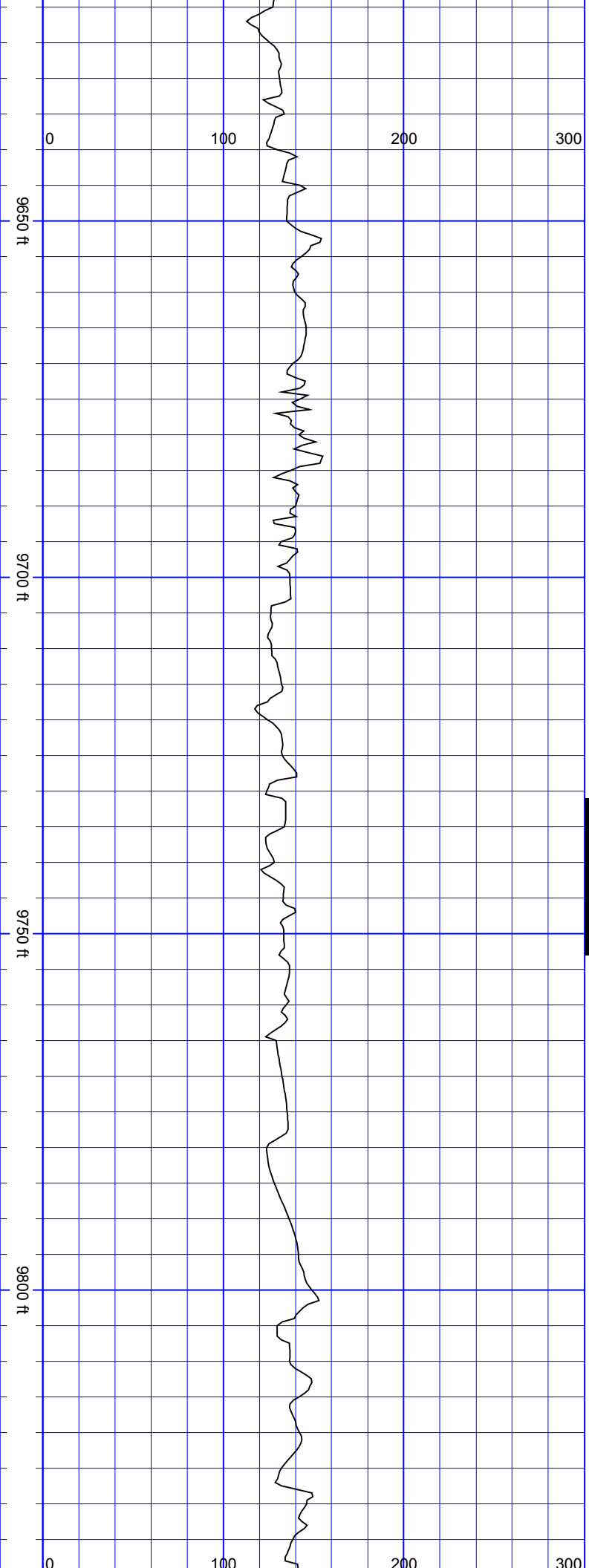




SurveyDepth:9479
TVD:7013.42 Inc:89.17
Azi:0.07
VertSec:1377.95

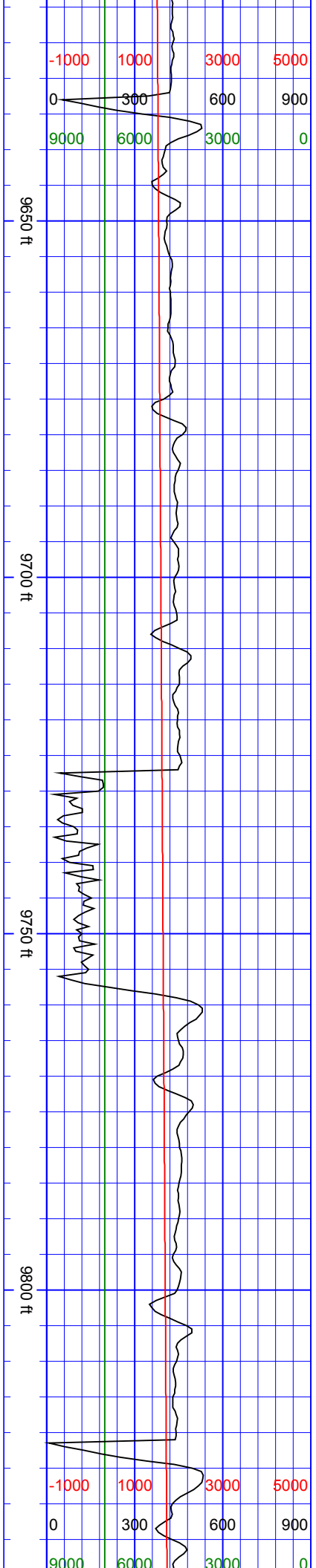
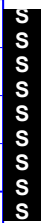
SurveyDepth:9574
TVD:7014.69 Inc:89.3
Azi:359.46
VertSec:1472.93

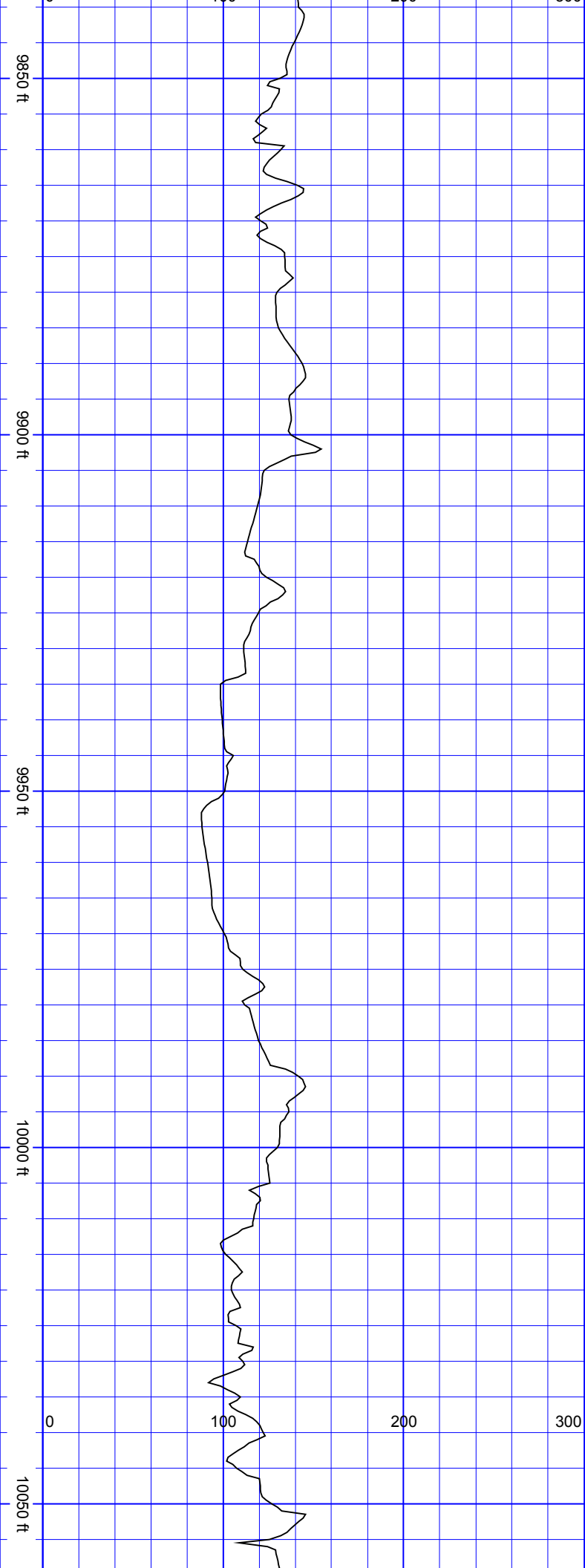




SurveyDepth:9669
TVD:7015.64 Inc:89.56
Azi:358.93
VertSec:1567.9

SurveyDepth:9763
TVD:7016.18 Inc:89.78
Azi:1.83
VertSec:1661.88

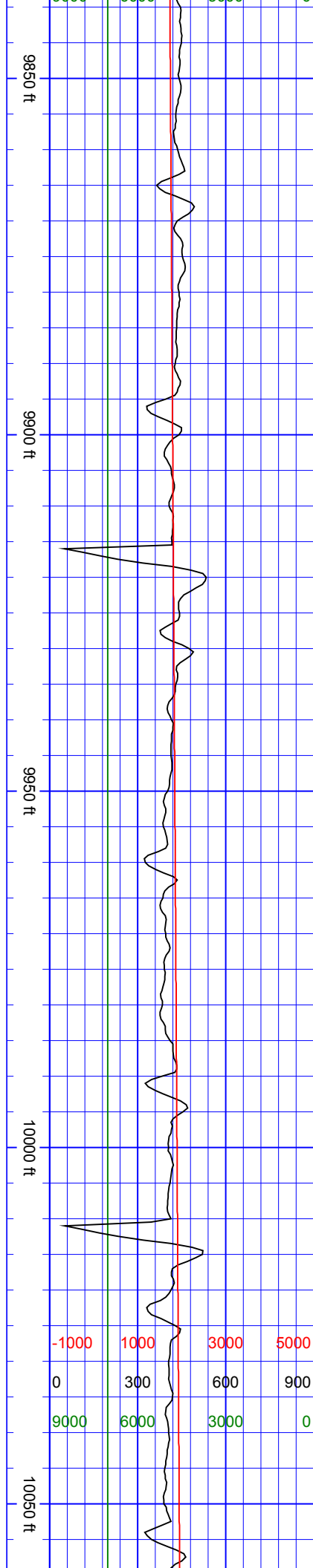


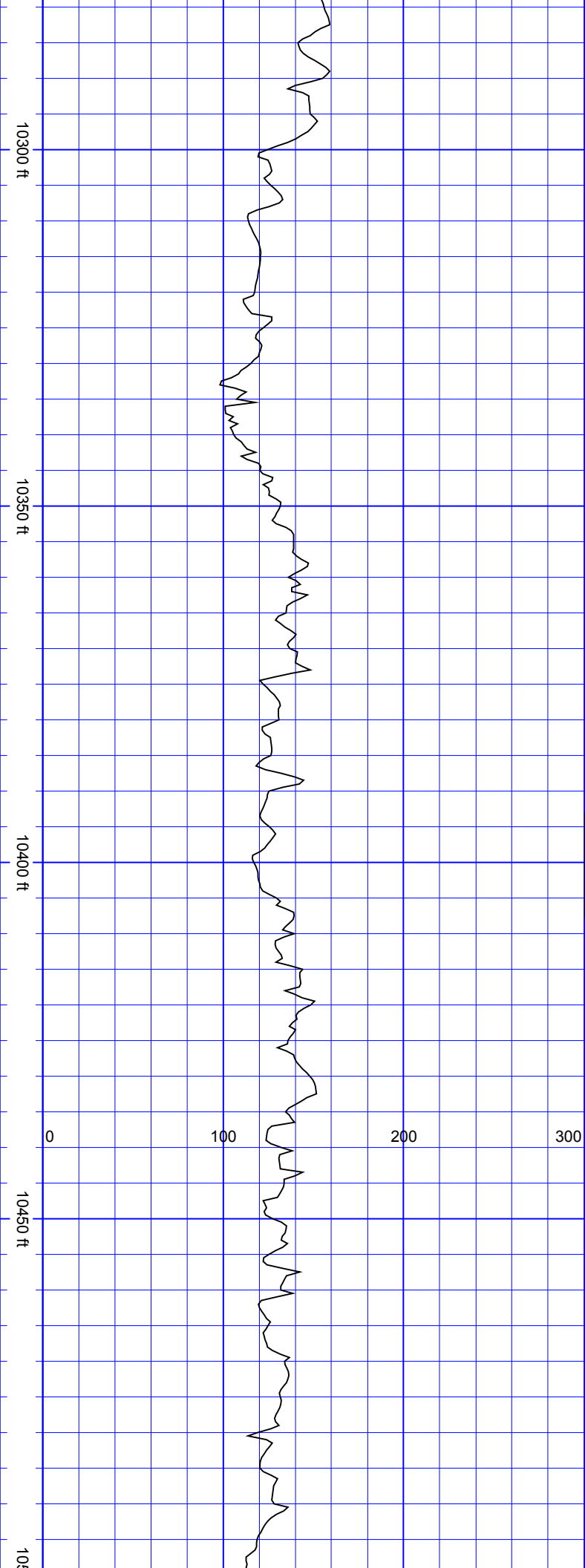


SurveyDepth:9858
TVD:7015.31 Inc:91.27
Azi:2.97
VertSec:1756.83

SurveyDepth:9952
TVD:7012.9 Inc:91.67
Azi:1.83
VertSec:1850.75

SurveyDepth:10047
TVD:7009.25 Inc:92.73
Azi:1.22
VertSec:1945.66

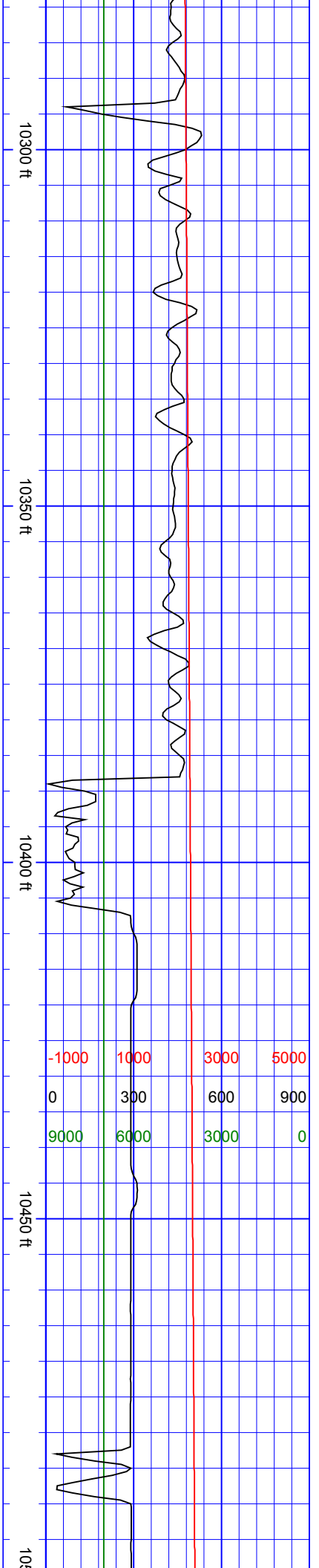


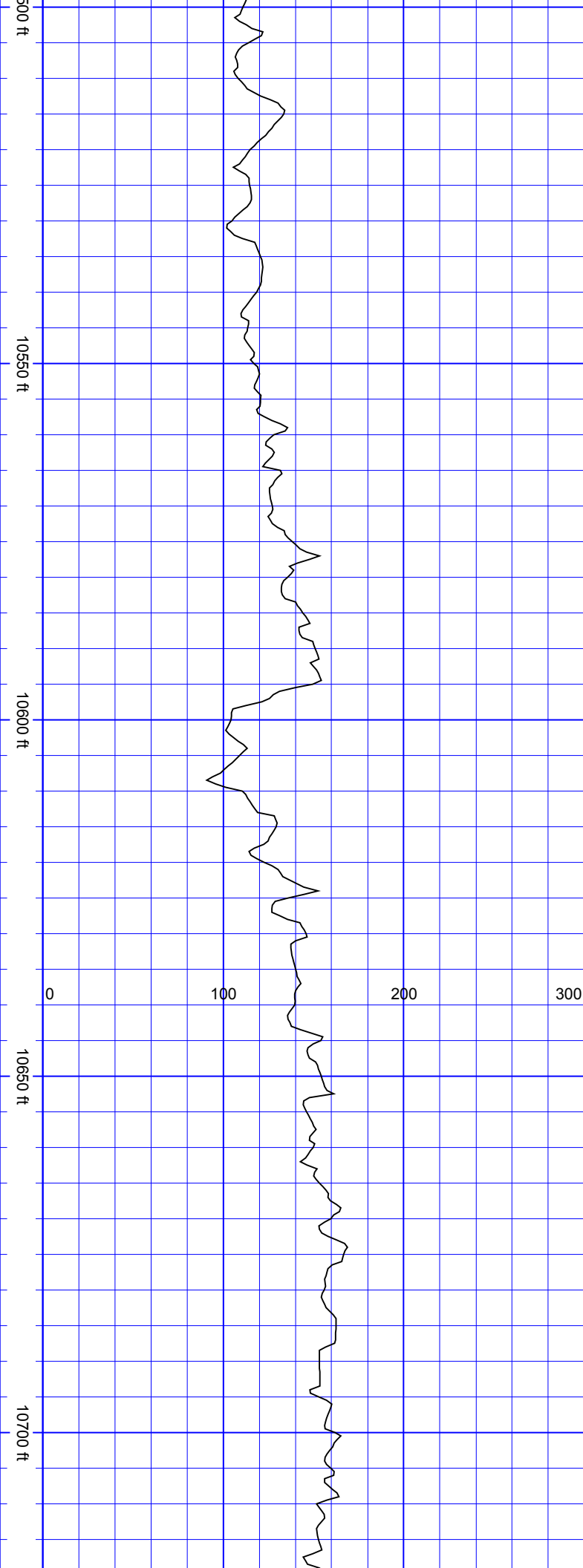


S
S
S
S
S

SurveyDepth:10331
TVD:7010.33 Inc:87.1
Azi:1.39
VertSec:2229.42

SurveyDepth:10425
TVD:7012.99 Inc:89.65
Azi:1.04
VertSec:2323.37

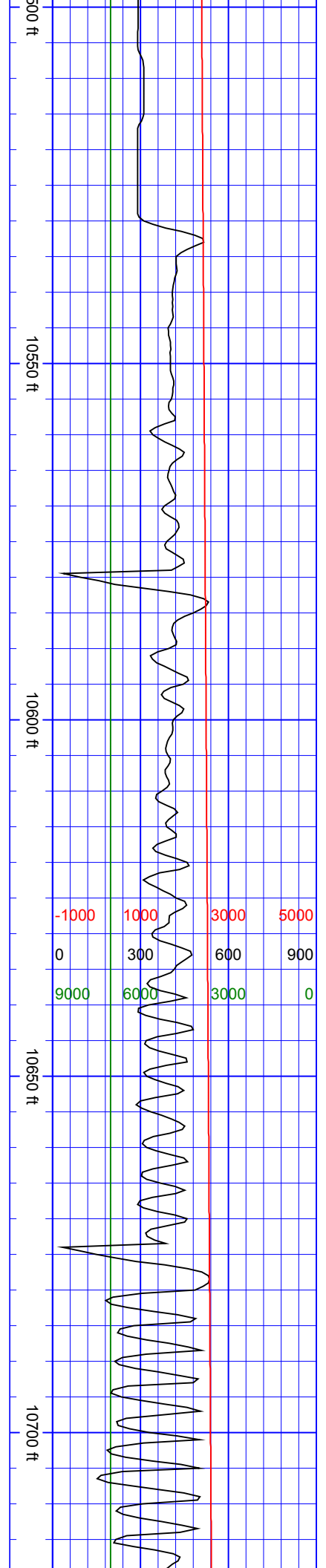


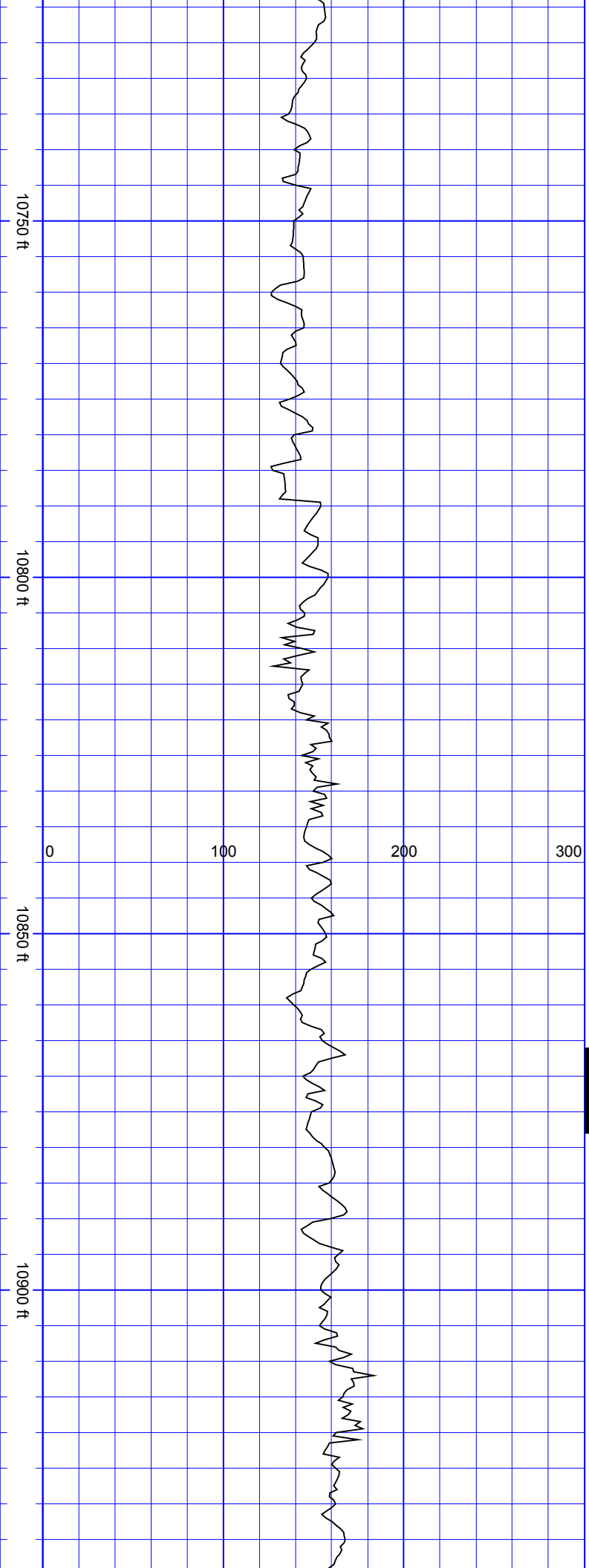


SurveyDepth:10520
TVD:7013.54 Inc:89.69
Azi:0.6 VertSec:2418.36

SurveyDepth:10614
TVD:7013.44 Inc:90.44
Azi:0.34
VertSec:2512.36

SurveyDepth:10709
TVD:7012.37 Inc:90.84
Azi:359.99
VertSec:2607.35

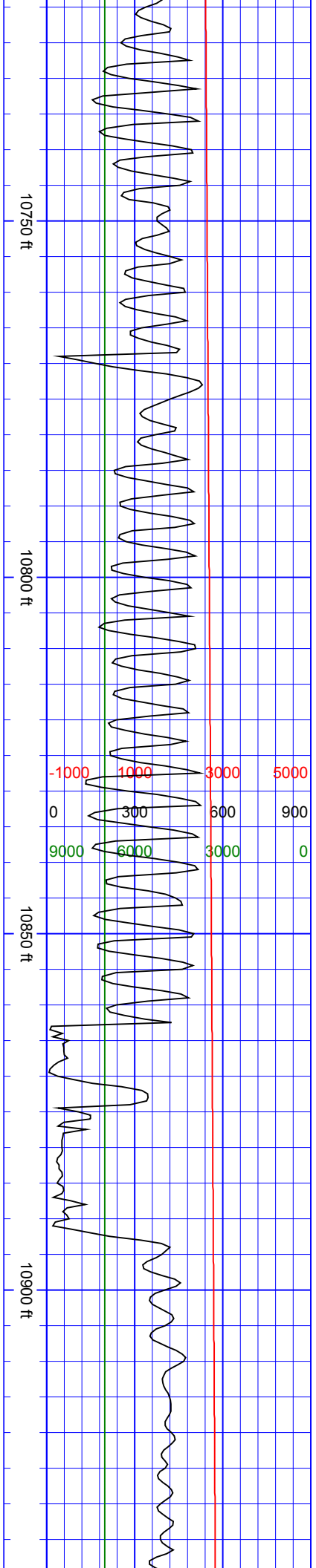


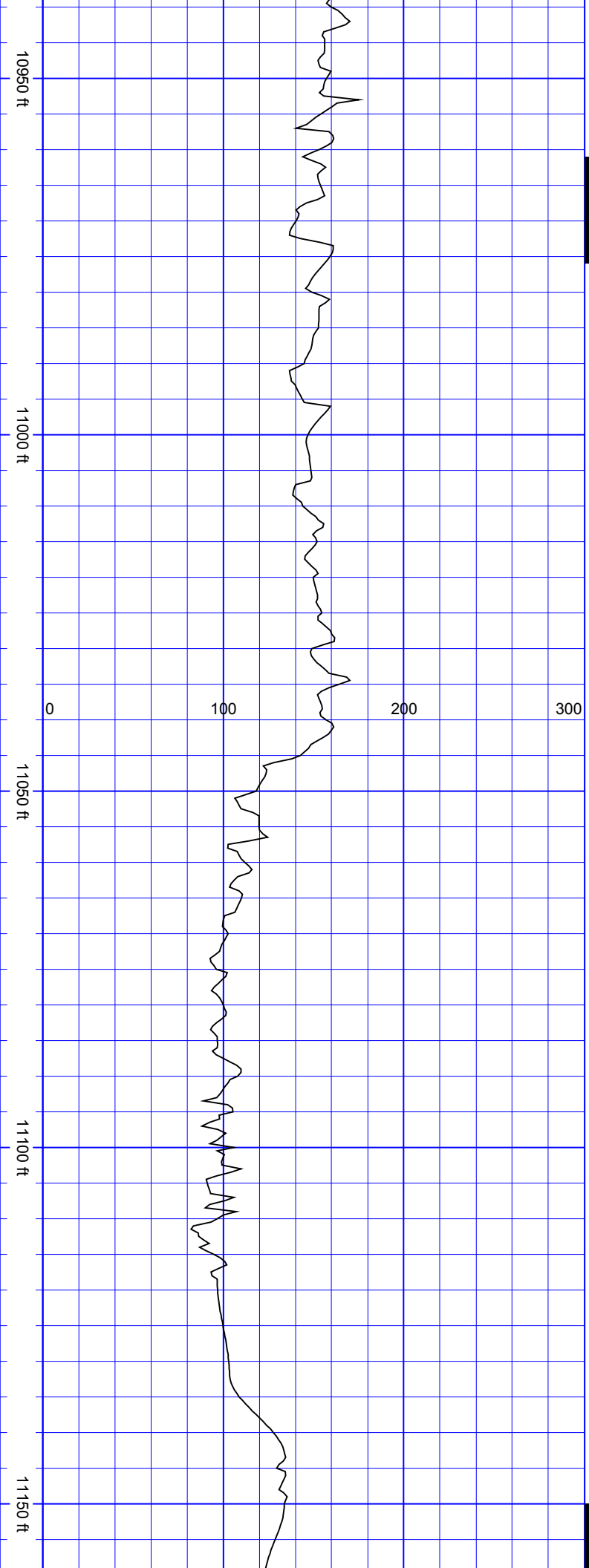


SurveyDepth:10804
TVD:7010.73 Inc:91.14
Azi:359.28
VertSec:2702.33

SSSS

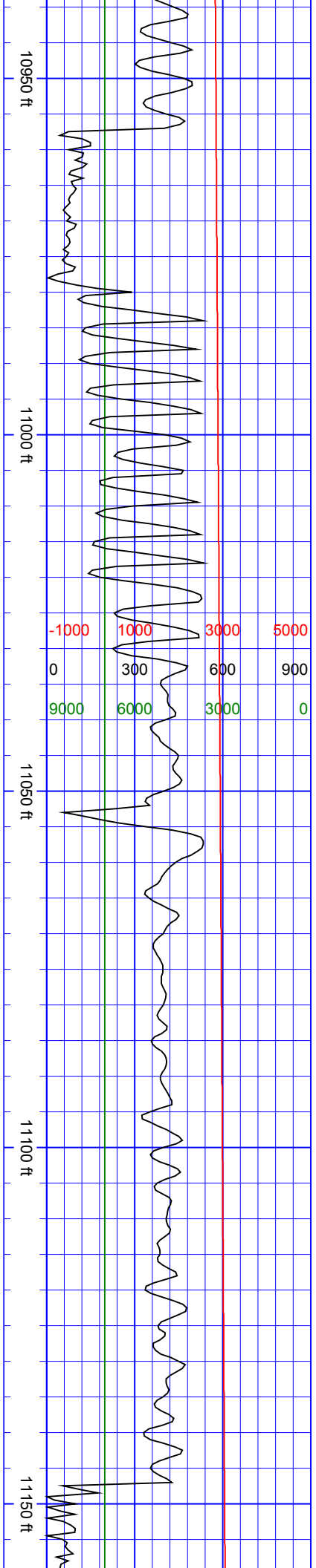
SurveyDepth:10899
TVD:7008.59 Inc:91.45
Azi:359.11
VertSec:2797.27





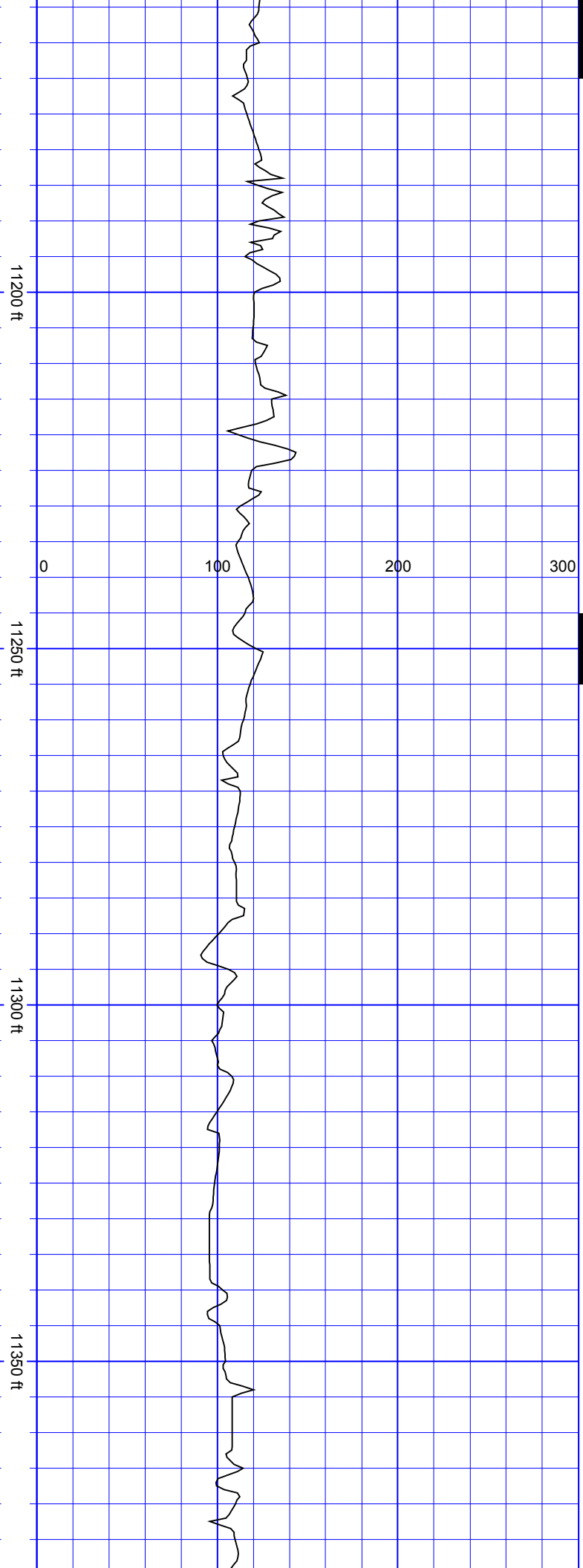
SurveyDepth:10994
TVD:7007.49 Inc:89.87
Azi:358.93
VertSec:2892.23

SurveyDepth:11088
TVD:7006.88 Inc:90.88
Azi:358.93
VertSec:2986.19



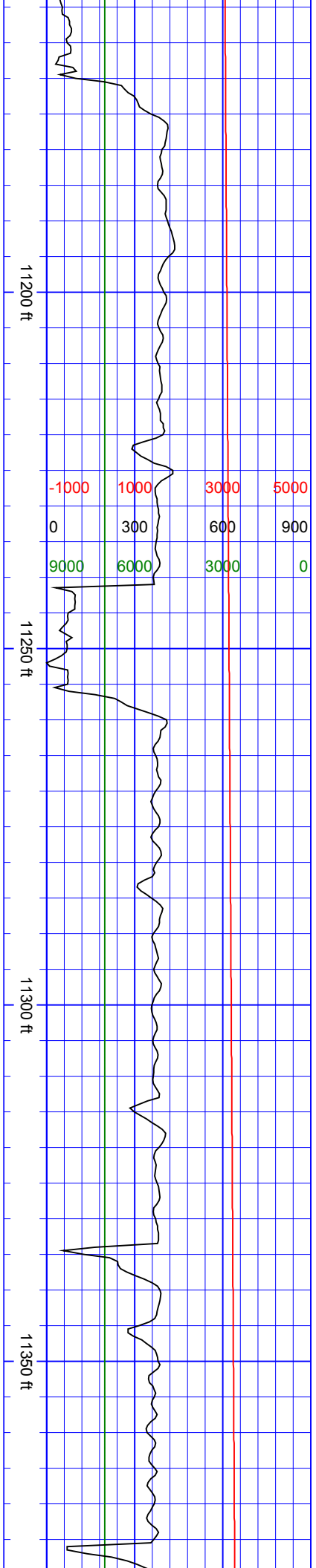
S
S
S
S
S

SurveyDepth:11183
TVD:7006.91 Inc:89.08
Azi:0.6 VertSec:3081.17

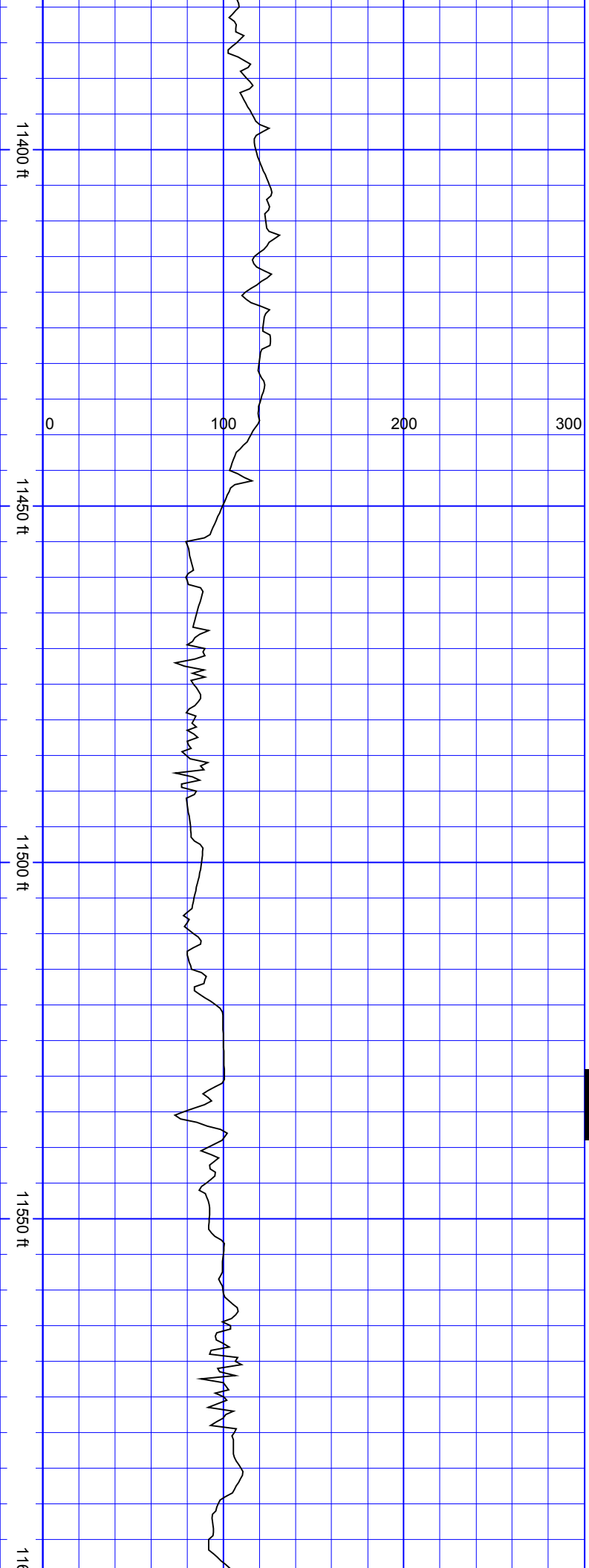


S
S
S
S
S

SurveyDepth:11278
TVD:7008.48 Inc:89.03
Azi:1.92
VertSec:3176.15



SurveyDepth:11372
TVD:7009.24 Inc:90.04
Azi:1.31

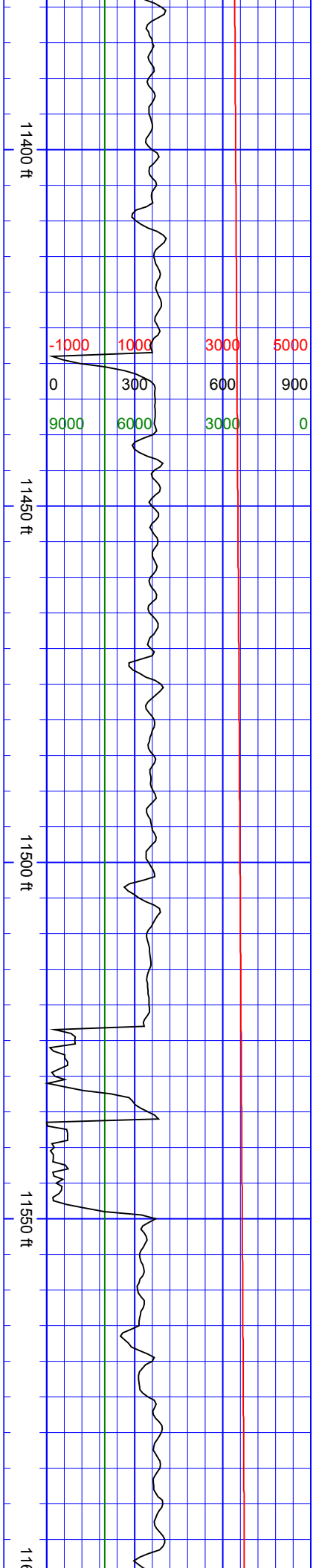


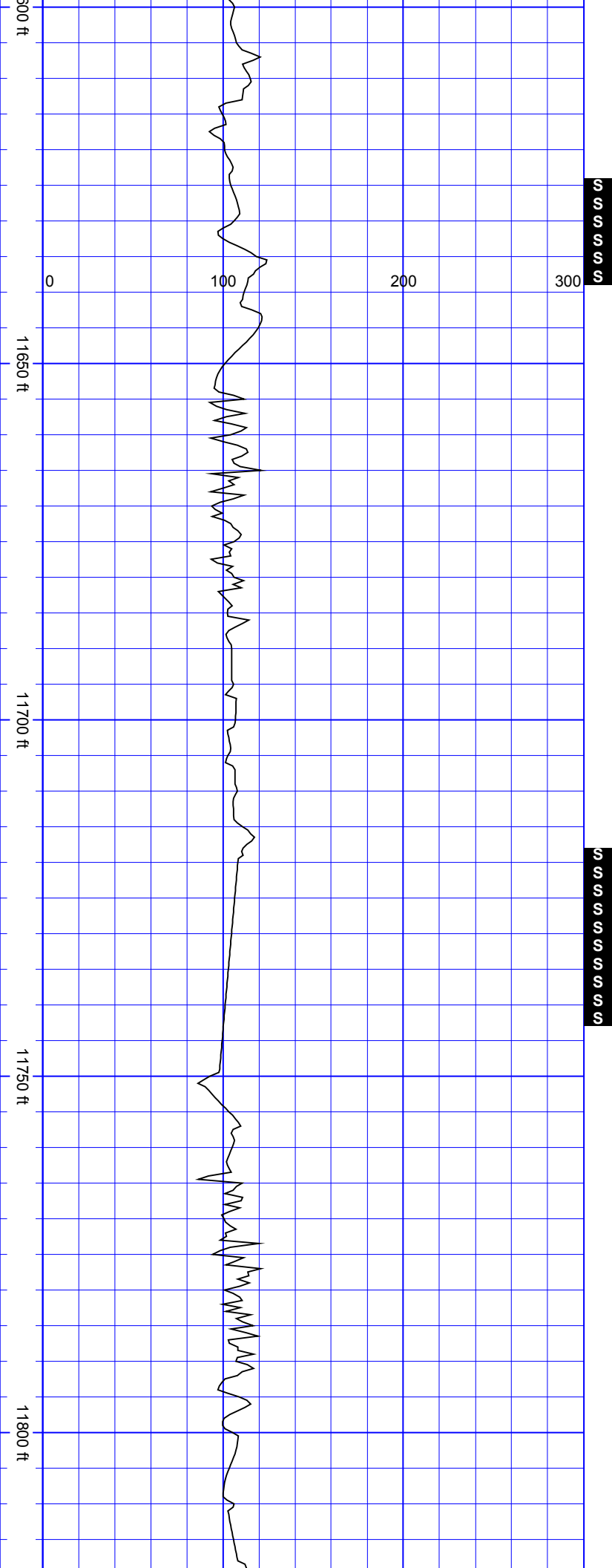
VertSec:3270.13

SurveyDepth:11467
TVD:7008.51 Inc:90.84
Azi:1.48
VertSec:3365.12

S
S
S
S

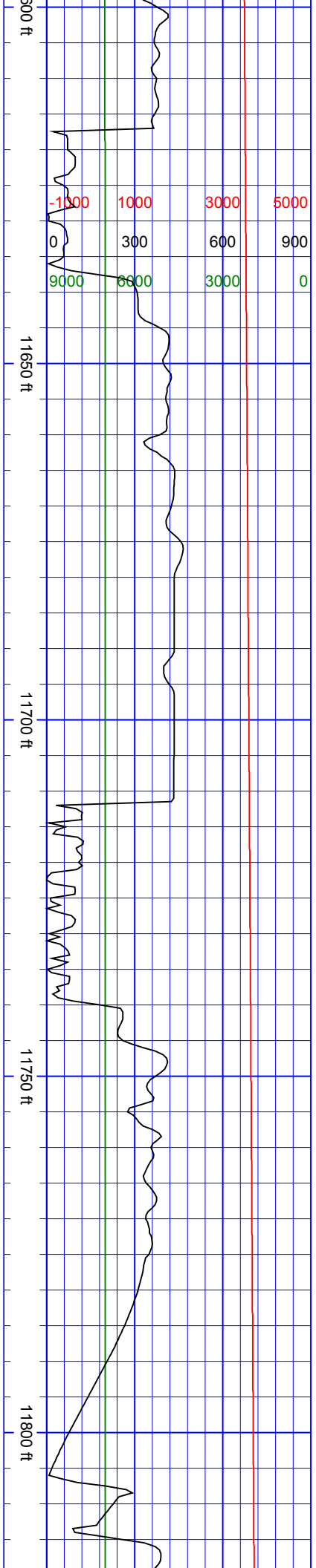
SurveyDepth:11562
TVD:7006.79 Inc:91.23
Azi:1.83
VertSec:3460.08

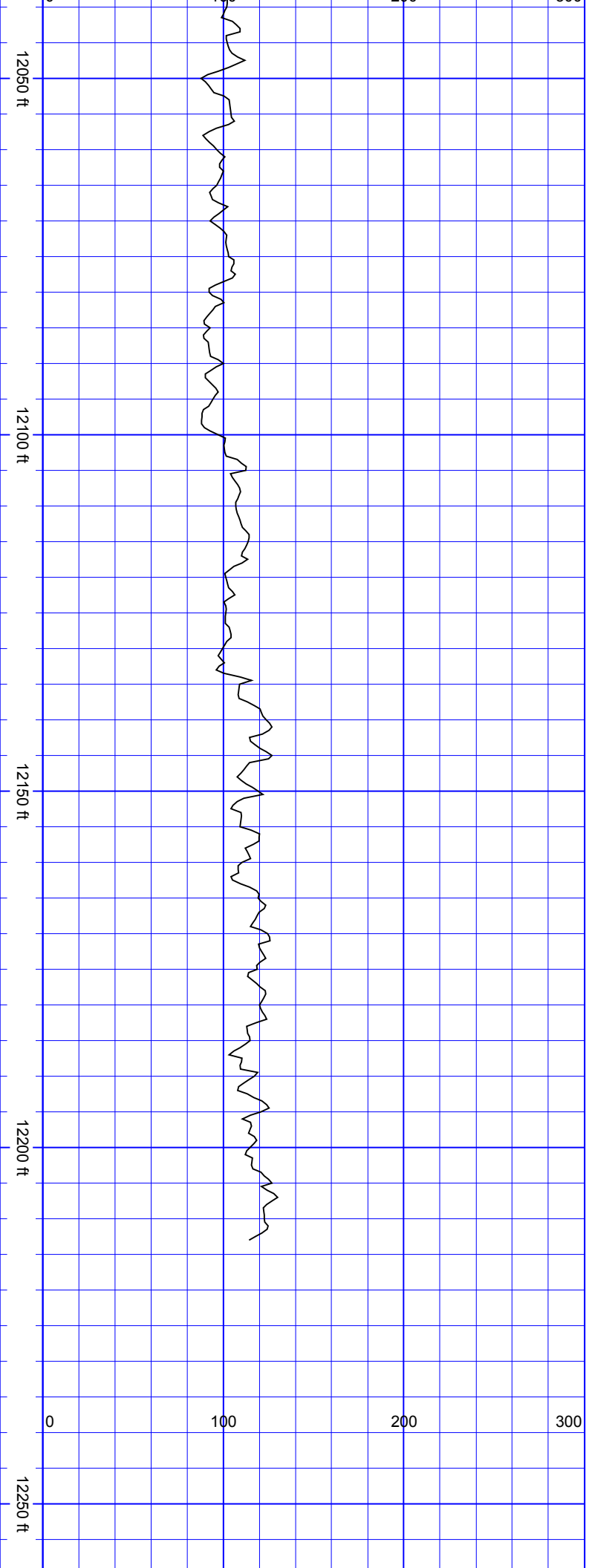




SurveyDepth:11656
TVD:7004.49 Inc:91.58
Azi:2.97
VertSec:3554.01

SurveyDepth:11751
TVD:7002.42 Inc:90.92
Azi:3.41
VertSec:3648.88





Azi:1.22
VertSec:3931.73

SurveyDepth:12129
TVD:7005.45 Inc:89.78
Azi:0.87
VertSec:4026.72

SurveyDepth:12203
TVD:7005.71 Inc:89.82
Azi:0.6 VertSec:4100.72

