



Build & Lateral

Job #:

185254

Well ID:

16190873

Scale:

5" = 100 ft

Type:

MD

Well Site Information

Oil CompanyCrestone Peak Resources

Surface LocationS25-T1N-R66W

Well NameSam 3G-25H-M166W

API05-123-46132- 00

FieldDJ Basin

StateColorado

CountryUSA

Surface Coordinates

Well TypeHorizontal

Latitude40° 01' 7 N

Longitude104° 44' 2 W

N / S Coordinates1,250,596.65 usft

E / W Coordinates3,214,576.93 usft

Azimuth ReferenceTrue North

Grid Convergence0.51°

MWD Engineers

Lead HandRon Kenyon

Second HandJamie Chestnut

Perm DatumGround

Elevation5,086.00 ft

Log depth measured from KB is23.00 ft

KB = 5,109.00 ft

Total Depth11,770.00 ft

Spud DateAug/25/2018

(MD) Log IntervalStart Depth2,230.00 ft

End DateAug/28/2018

End Depth11,770.81 ft

Bore Hole Record

Hole SizeFromTo

13.50 in0.00 ft2,419.00 ft

8.50 in2,419.00 ft11,770.00 ft

Casing Record

TypeSizeWGTFromTo

LT&C9.63 in40lb.0.00 ft2,419.00 ft

DWC/C-IS5.50 in20lb.0.00 ft11,770.00 ft

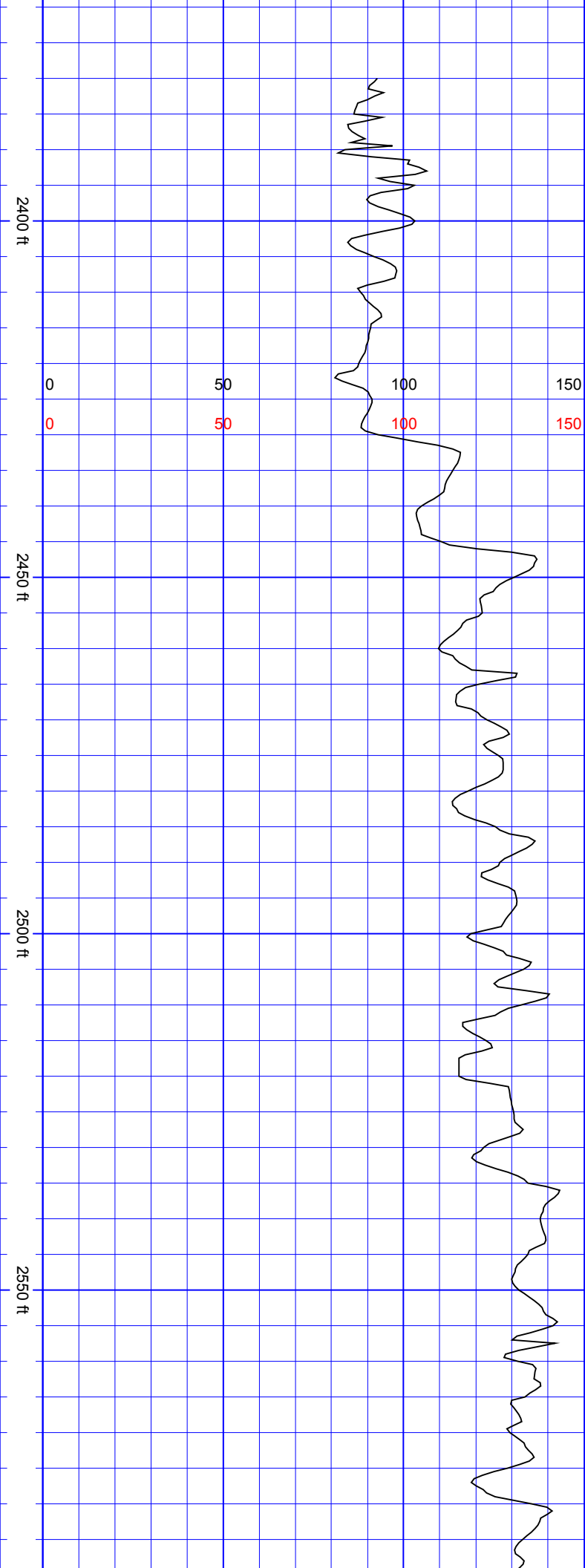
Run Data

Bit Run Number	1				
Start Date & Time	Aug/25/2018 20:30:00				
End Date & Time	Aug/28/2018 05:30:00				
Run Hours	57.00				
Depth In	2,449.00 ft				
Depth Out	11,770.00 ft				
Total Gamma Correction	5.44				
Gamma to Bit	60.13 ft				
Resistivity to Bit	N/A				
Mud Type	Oil Base				
Density	9.60 ppg				
Viscosity	53.00 sec/qt				
PH	N/A				
Fluid Loss	N/A				
K+ ppm	N/A				
CL- ppm	32,500.00 mg/L				
Max Mud Temp	236.75 °F				
Mud Report Depth	9,007.00 ft				

Remarks

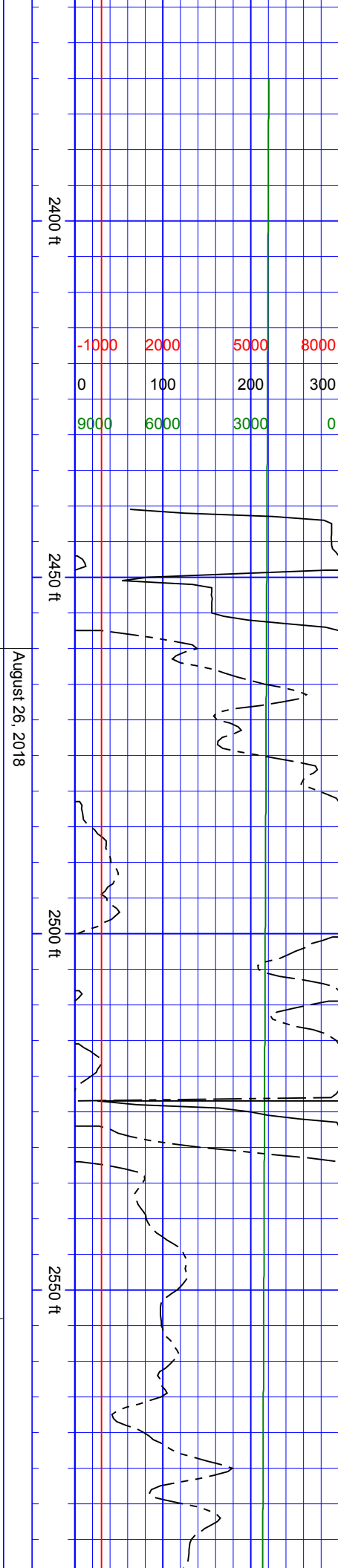
Interpretations of this data by Cathedral Energy Services will be of best judgment as to correctness. Cathedral Energy Services cannot and does not guarantee the accuracy or correctness of interpretations or any surveys derived therefrom. Cathedral Energy Services makes no warranties of performance,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

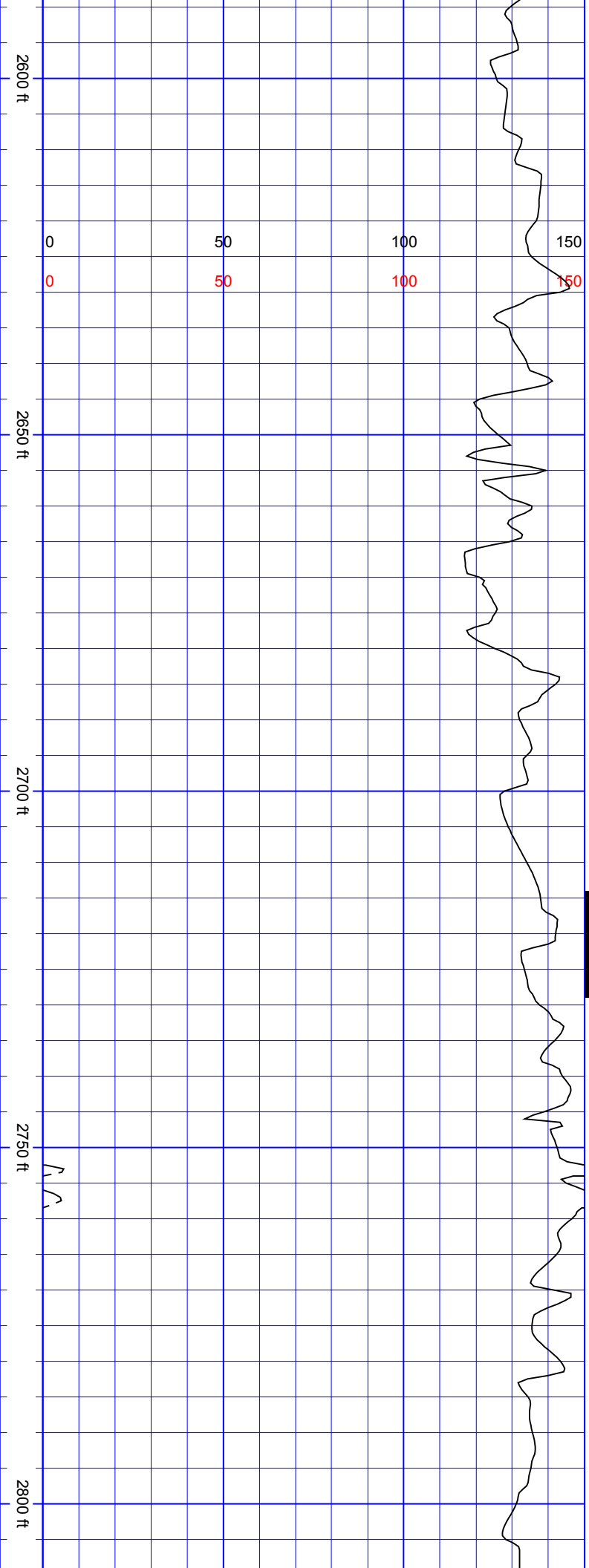
ROP - VERT SEC - TVD		Directional Survey		GAMMA RAY	
Vertical Section (ft)		Slide - Rotate		Real Time Gamma (AAPI)	
-1000	2000	5000	8000	0	150
Drill Rate (ft/hr)				Memory Gamma (AAPI)	
0	100	200	300	0	150
TVD Depth (ft)					
9000	6000	3000	0		
MD Depth "Scale 5" = 100		Gyro Tie-on		MD Depth "Scale 5" = 100	
Date		SurveyDepth:2267		ft"	
		TVD:2265.15 Inc:2.74		2250 ft	
		Azi:254.02 VertSec:-		2300 ft	
		74.14		2350 ft	



Begin logging
SurveyDepth:2460
TVD:2457.95 Inc:2.42
Azi:249.79 VertSec:-82.47

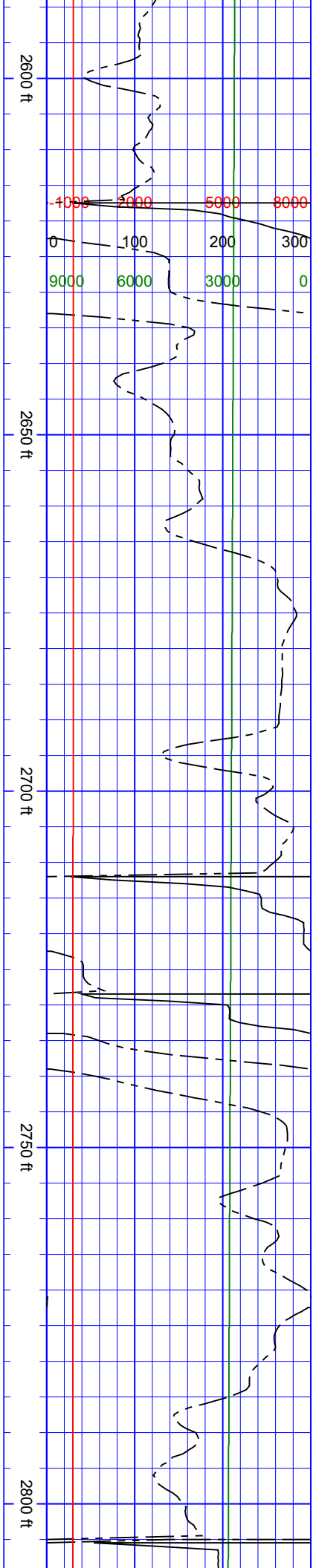
SurveyDepth:2554
TVD:2551.88 Inc:1.98
Azi:246.8 VertSec:-85.86

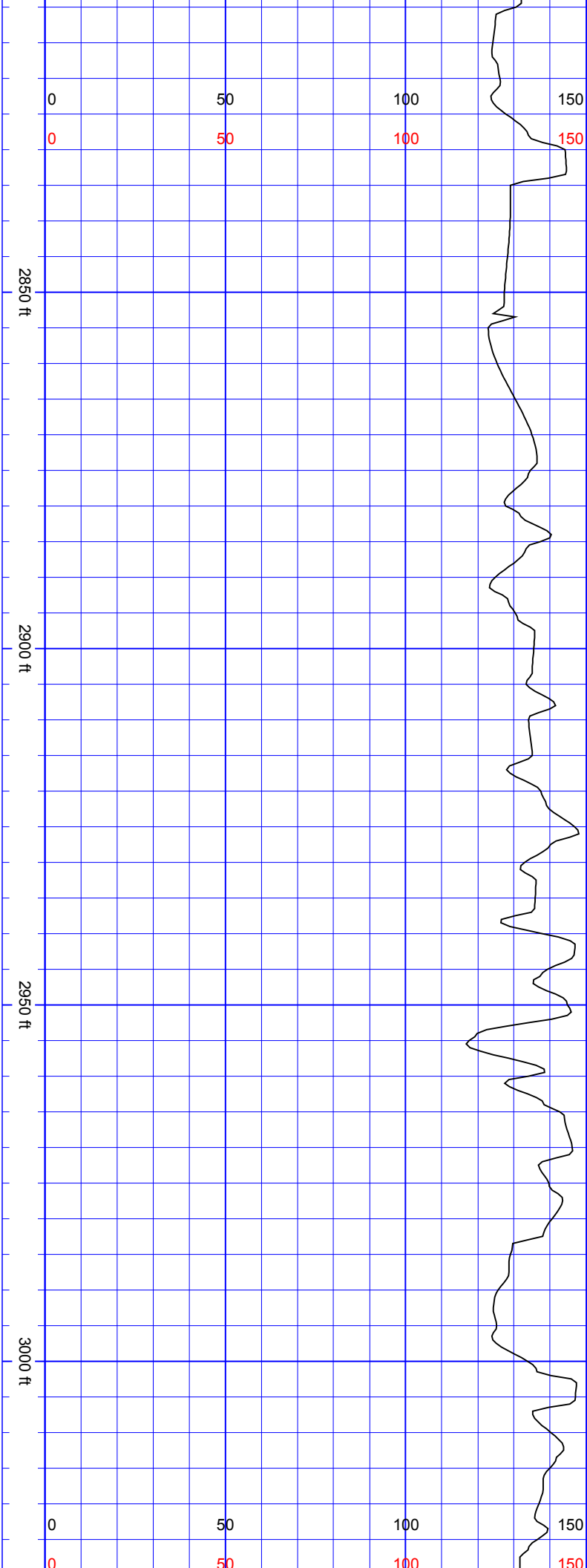




SurveyDepth:2648
TVD:2645.83 Inc:1.98
Azi:241.27 VertSec:-
88.82

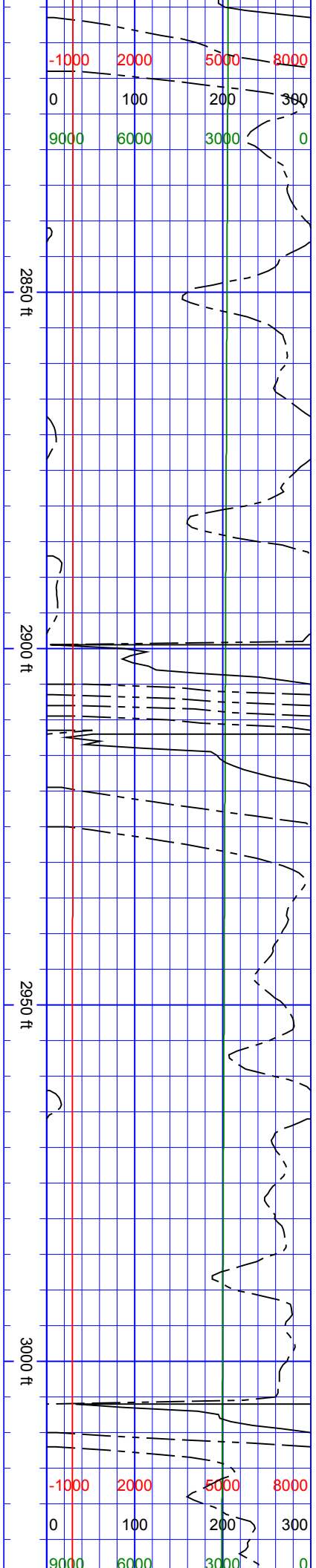
SurveyDepth:2743
TVD:2740.68 Inc:4.31
Azi:262.71 VertSec:-
93.83

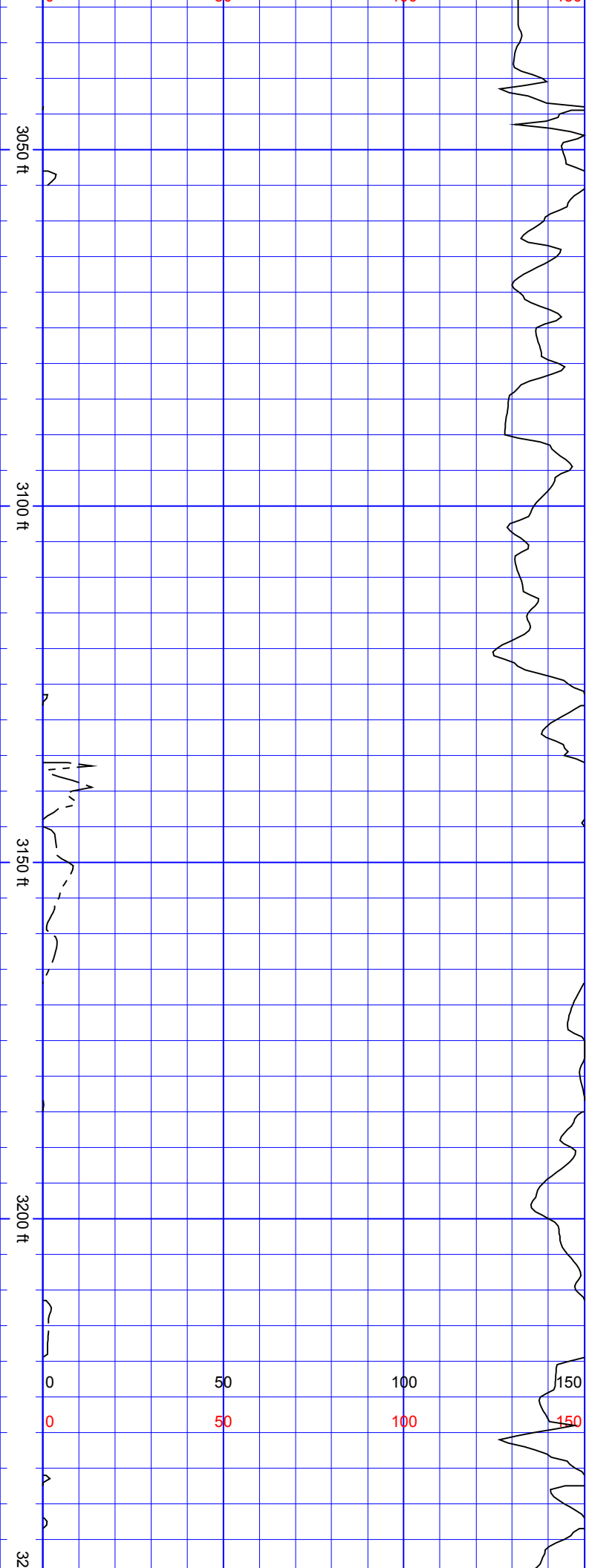




SurveyDepth:2848
TVD:2845.38 Inc:4.35
Azi:260.95 VertSec:-
101.71

SurveyDepth:2942
TVD:2939.14 Inc:3.91
Azi:260.25 VertSec:-
108.42

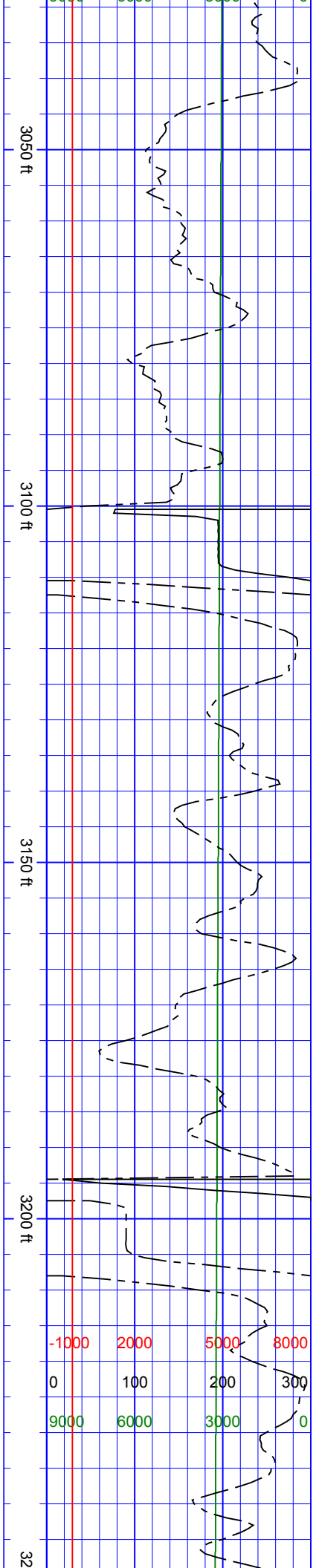


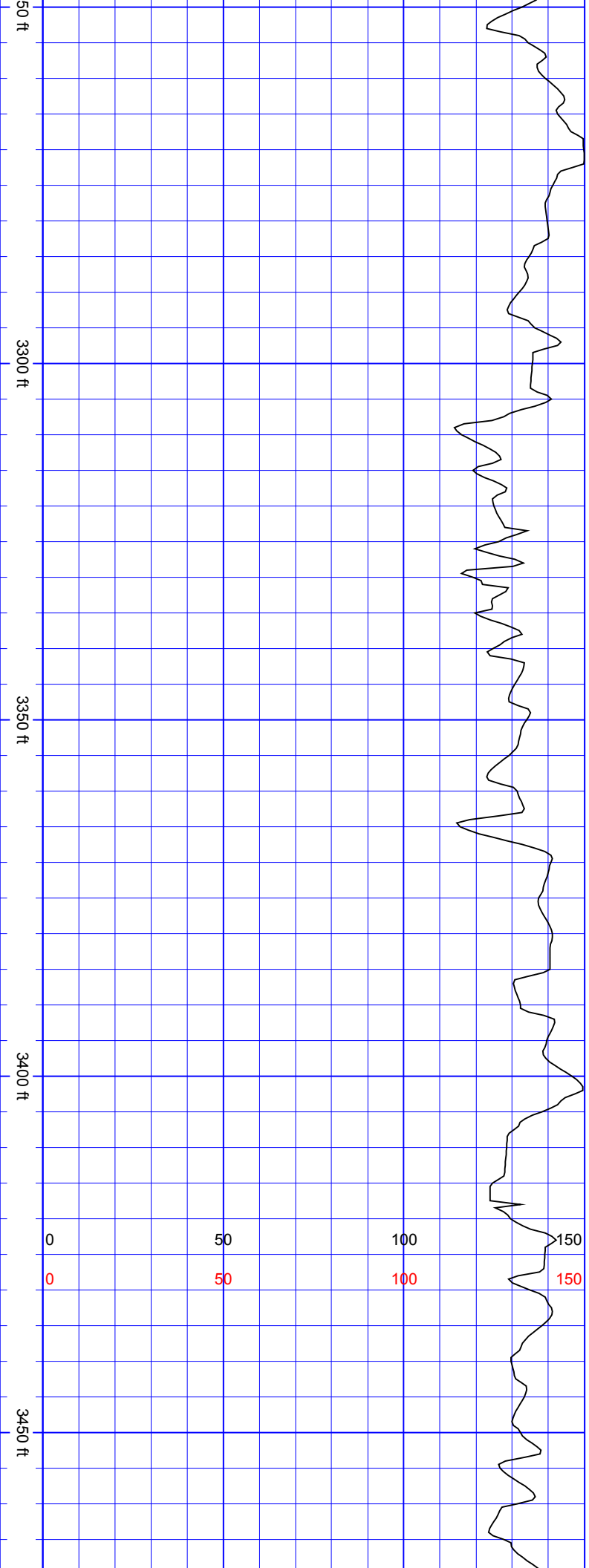


SurveyDepth:3037
TVD:3033.94 Inc:3.43
Azi:258.05 VertSec:-
114.42

SurveyDepth:3131
TVD:3127.8 Inc:2.81
Azi:258.14 VertSec:-
119.46

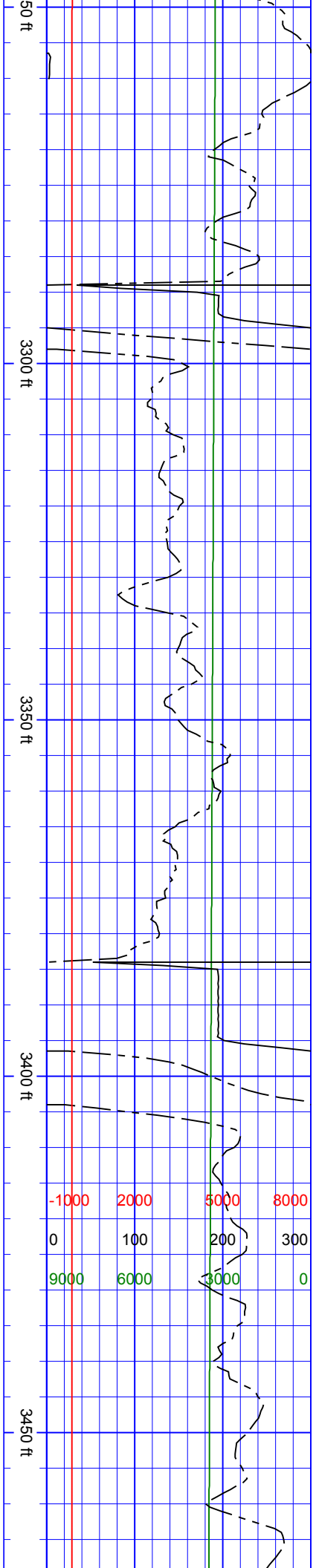
SurveyDepth:3226
TVD:3222.71 Inc:2.24
Azi:246.28 VertSec:-
123.47

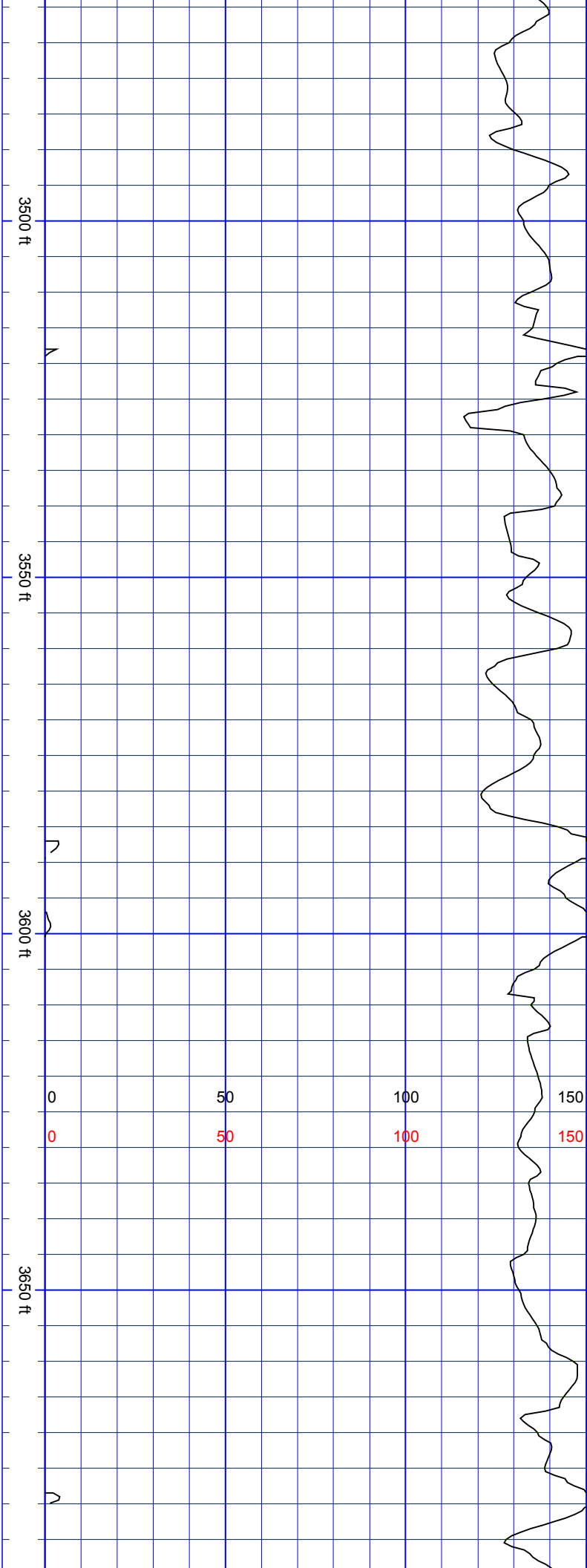




SurveyDepth:3321
TVD:3317.64 Inc:2.2
Azi:241.79 VertSec:-
126.82

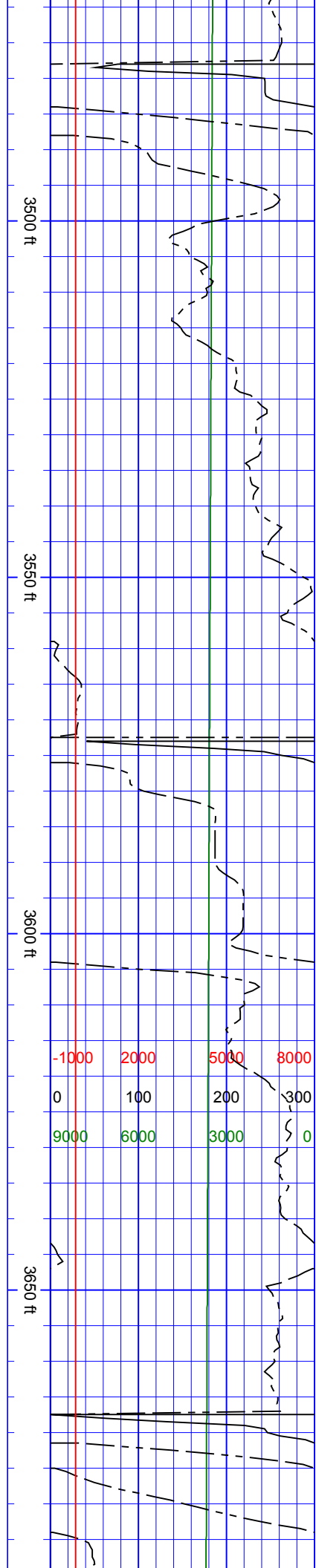
SurveyDepth:3415
TVD:3411.57 Inc:2.2
Azi:241 VertSec:-130.04

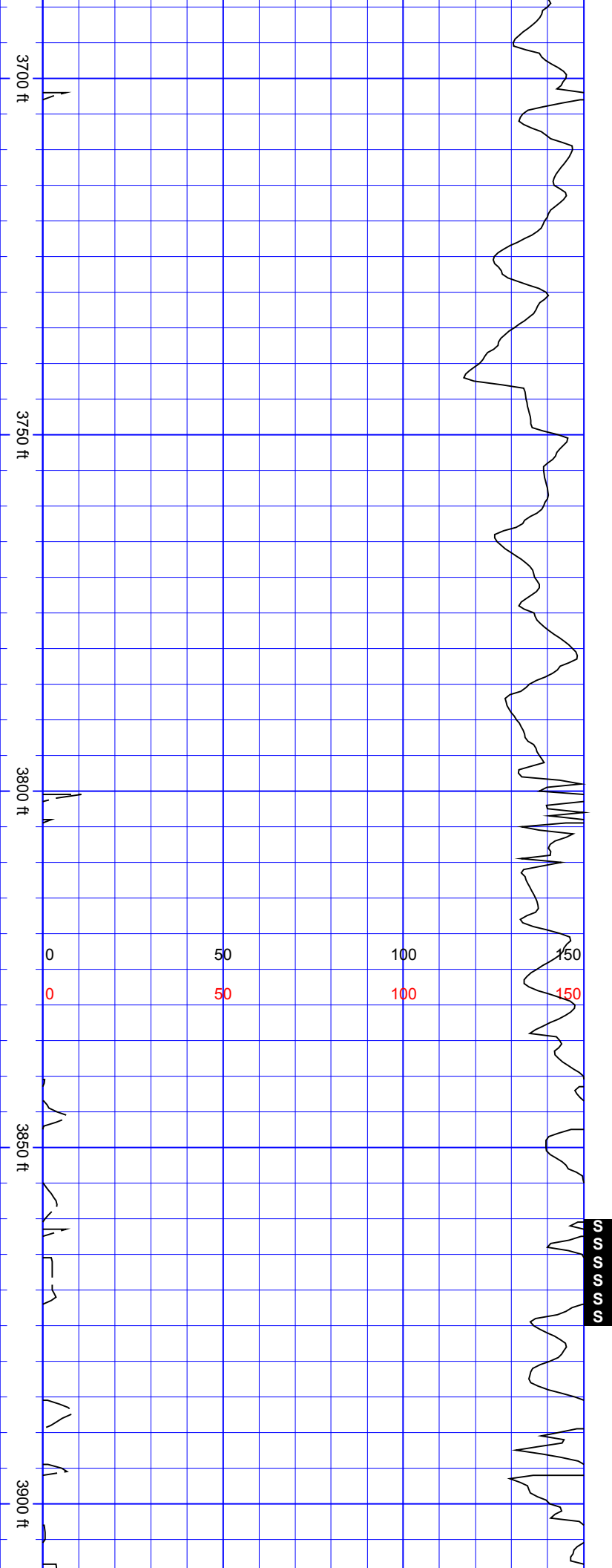




SurveyDepth:3511
TVD:3507.51 Inc:1.98
Azi:236.87 VertSec:-133.09

SurveyDepth:3605
TVD:3601.46 Inc:1.8
Azi:240.48 VertSec:-135.78

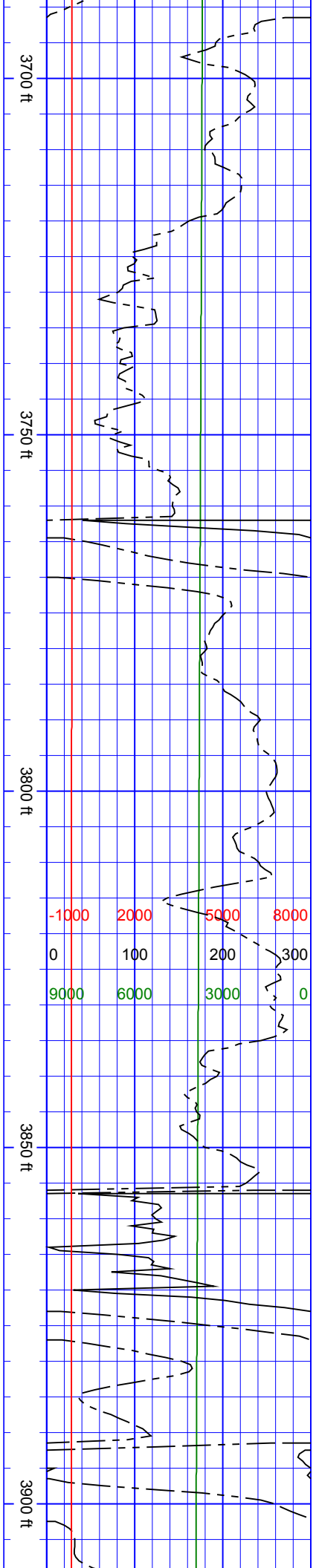


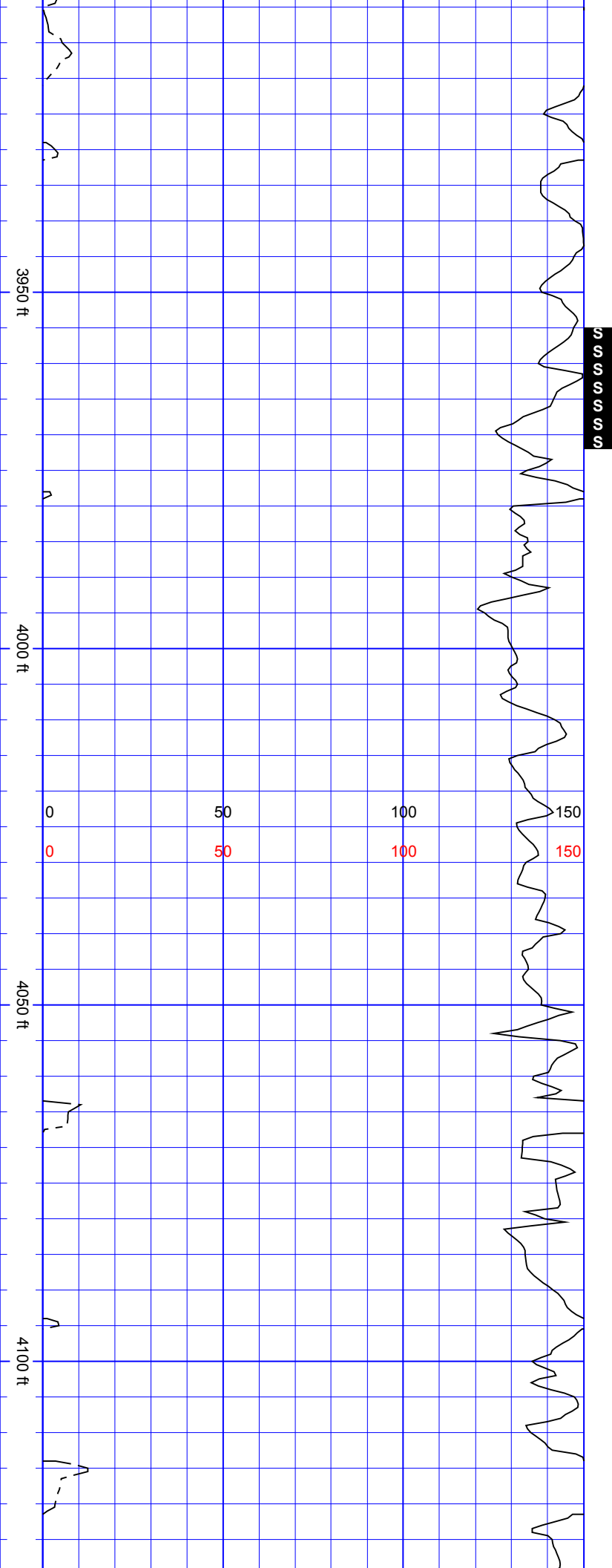


SurveyDepth:3700
TVD:3696.41 Inc:1.58
Azi:254.98 VertSec:-
138.37

SurveyDepth:3794
TVD:3790.39 Inc:1.19
Azi:271.41 VertSec:-
140.61

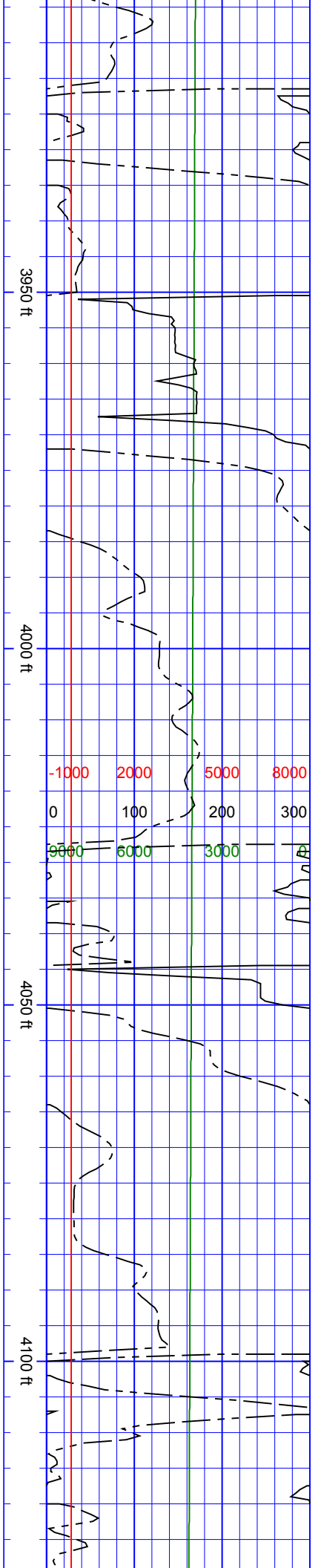
SurveyDepth:3889
TVD:3885.37 Inc:0.66
Azi:267.63 VertSec:-
142.14

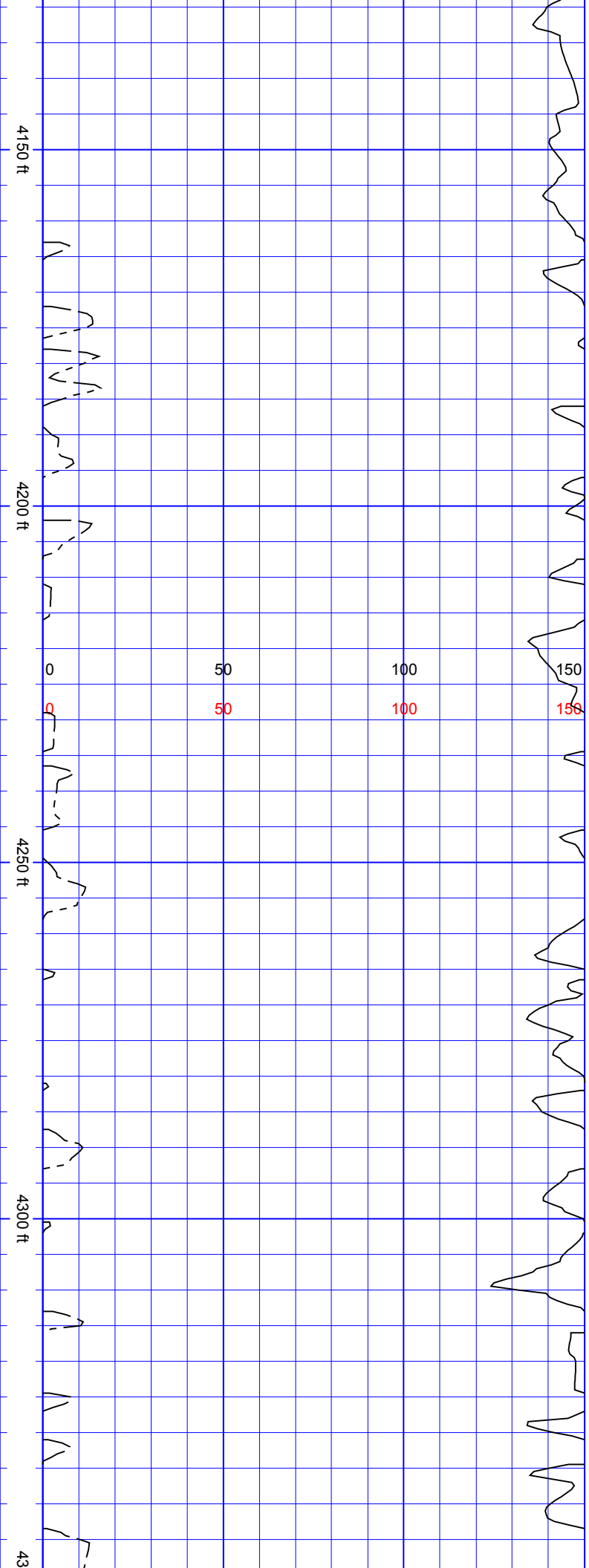




SurveyDepth:3983
TVD:3979.31 Inc:3.3
Azi:300.68 VertSec:-
144.97

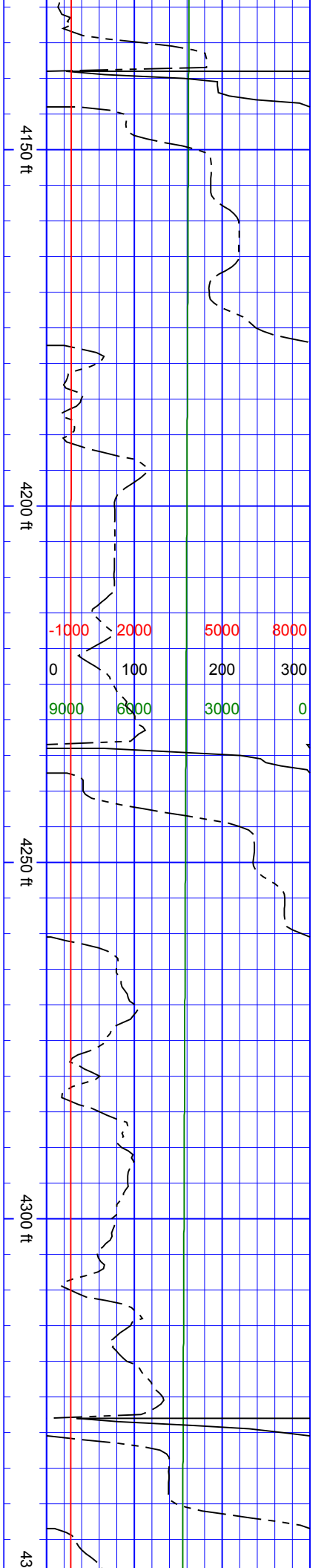
SurveyDepth:4077
TVD:4073.15 Inc:3.47
Azi:294.62 VertSec:-
149.8

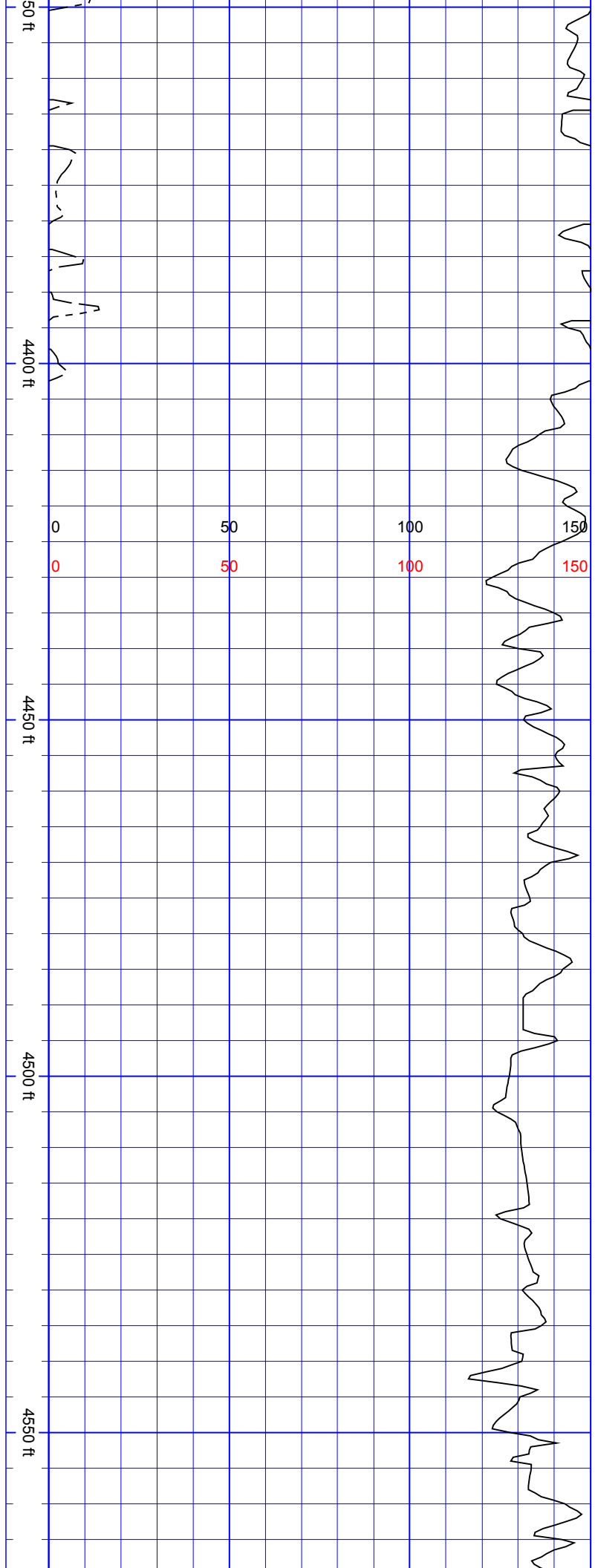




SurveyDepth:4172
TVD:4167.97 Inc:3.52
Azi:285.65 VertSec:-
155.17

SurveyDepth:4267
TVD:4262.8 Inc:3.43
Azi:285.21 VertSec:-
160.67

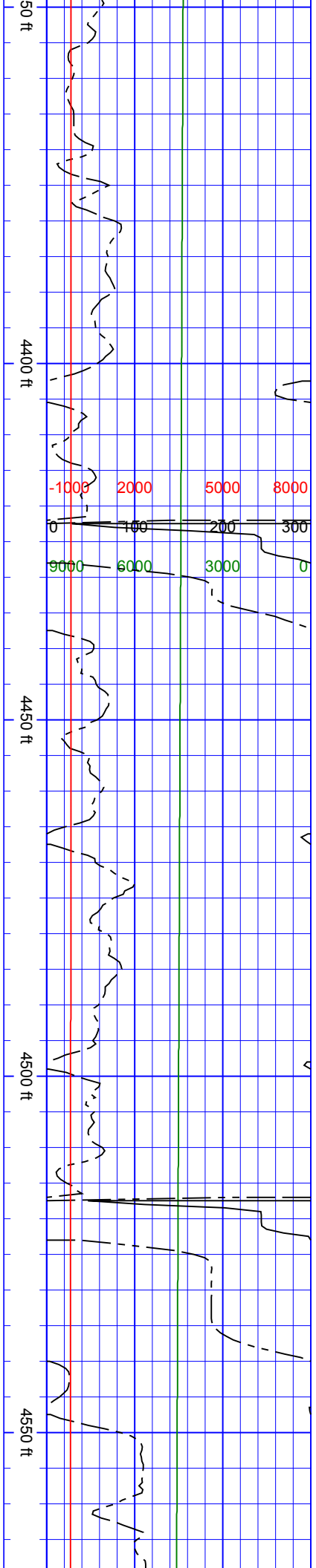


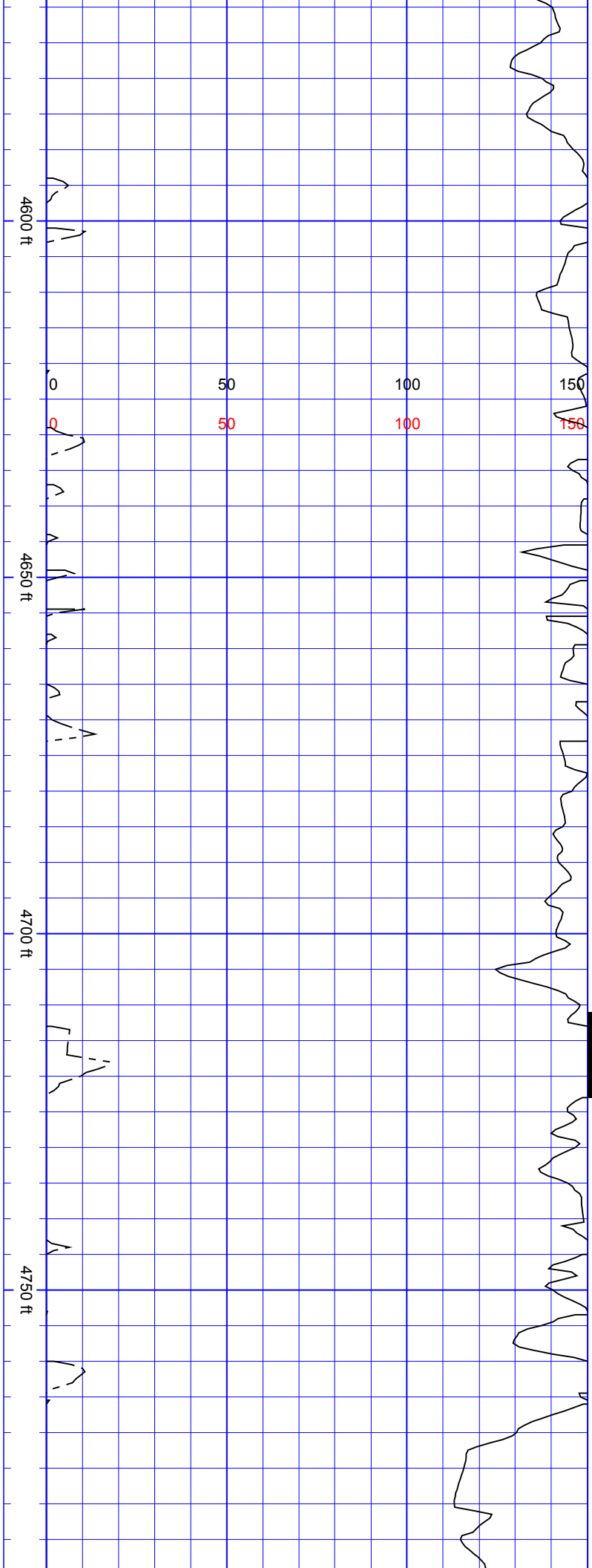


SurveyDepth:4362
TVD:4357.64 Inc:3.25
Azi:284.42 VertSec:-
165.98

SurveyDepth:4456
TVD:4451.49 Inc:3.16
Azi:282.22 VertSec:-
171.05

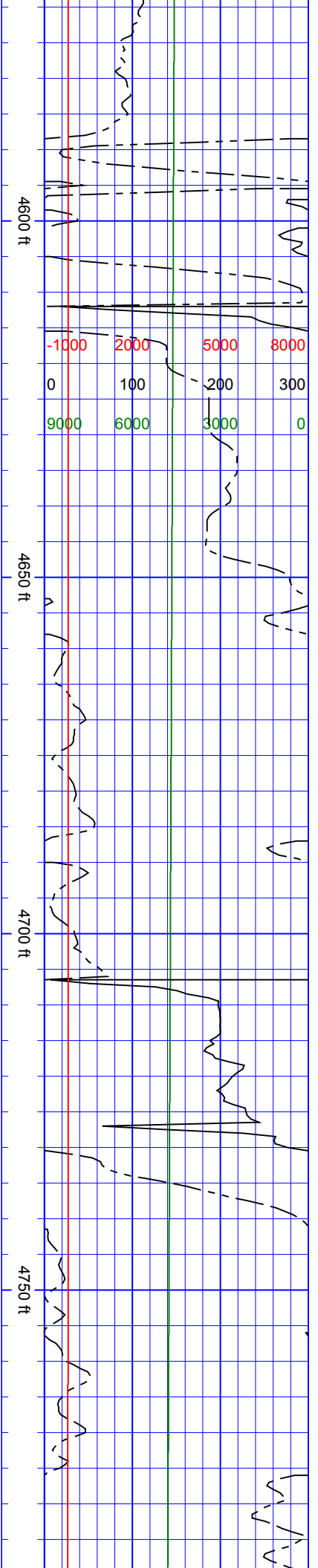
SurveyDepth:4551
TVD:4546.35 Inc:3.08
Azi:280.55 VertSec:-
176.09

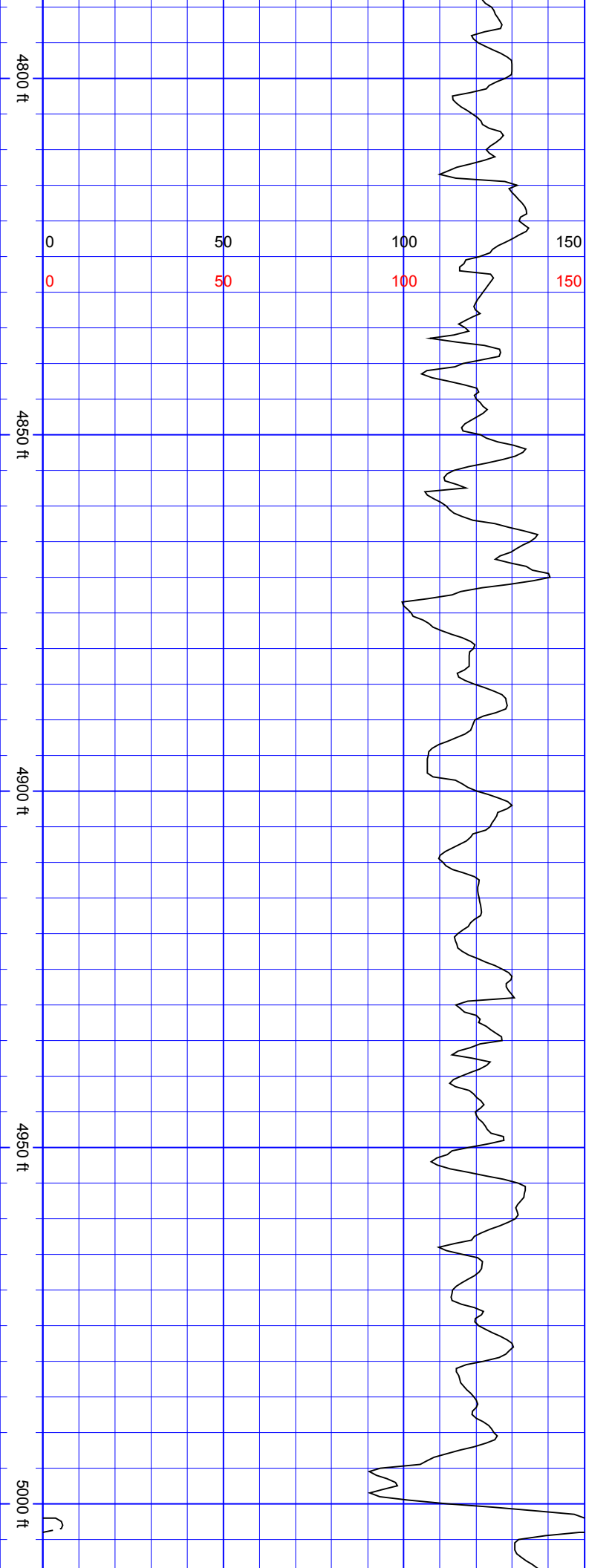




SurveyDepth:4645
TVD:4640.23 Inc:2.68
Azi:278.53 VertSec:-
180.72

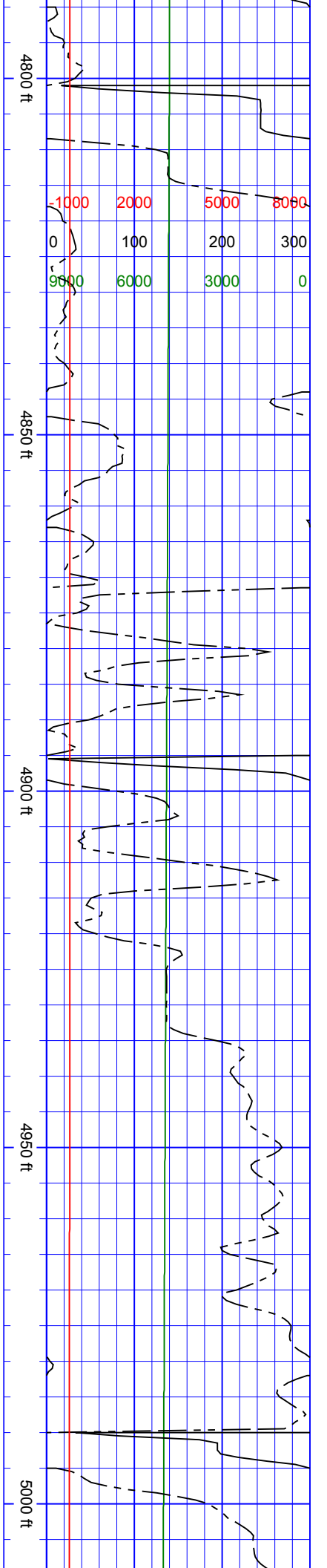
SurveyDepth:4740
TVD:4735 Inc:5.19
Azi:261.31 VertSec:-
187.17

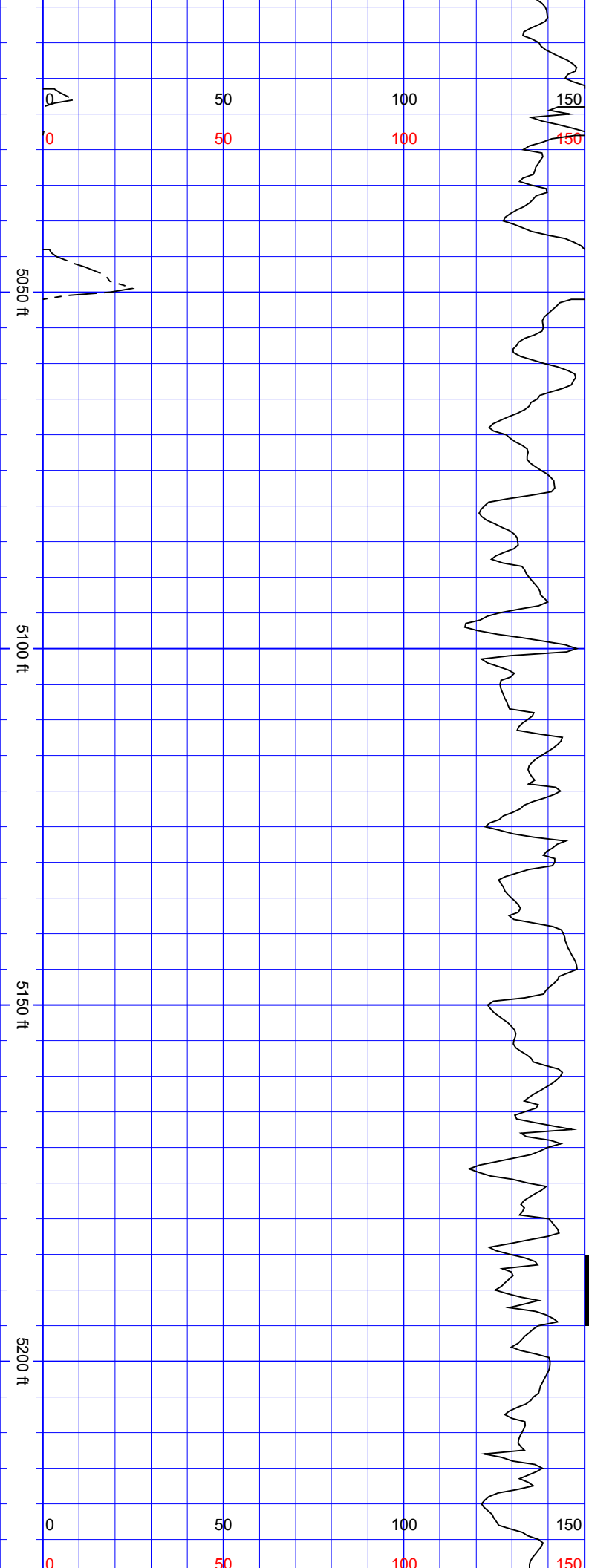




SurveyDepth:4834
TVD:4828.64 Inc:4.79
Azi:259.81 VertSec:-
195.27

SurveyDepth:4929
TVD:4923.33 Inc:4.57
Azi:259.46 VertSec:-
202.93

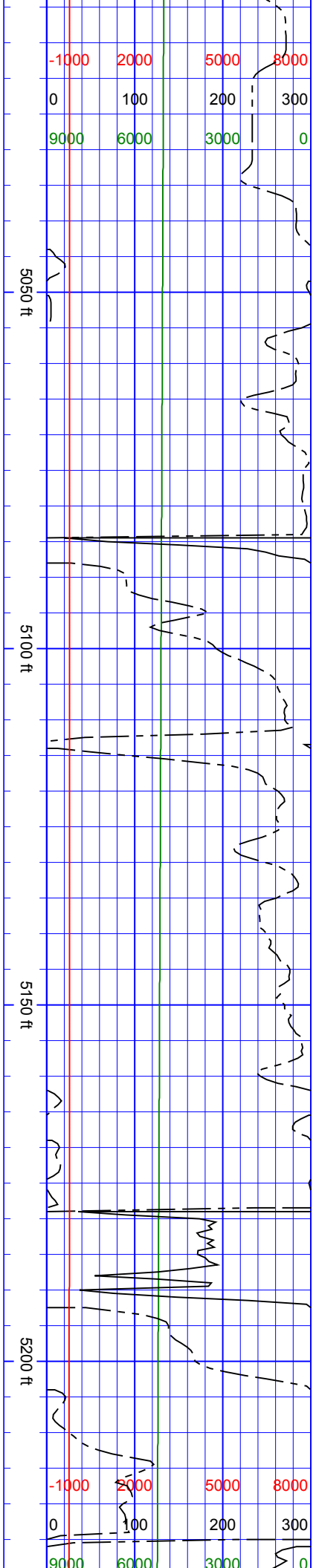


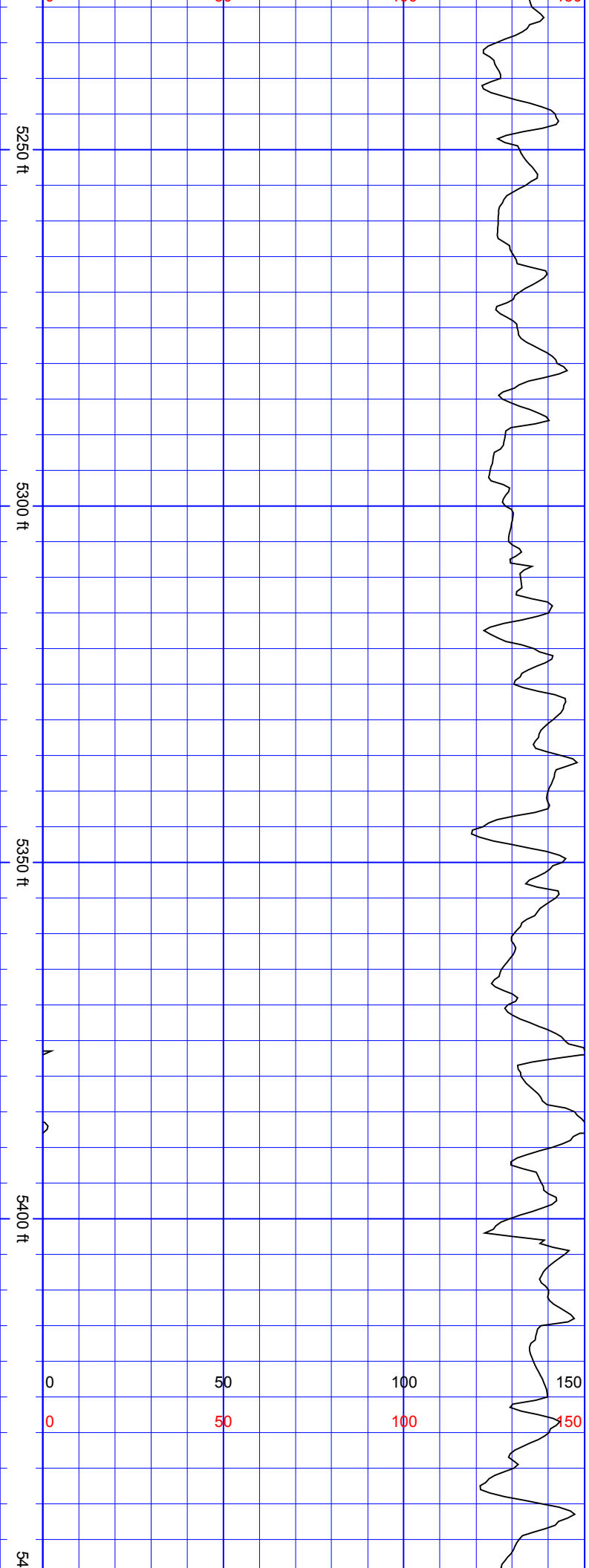


SurveyDepth:5023
TVD:5017.06 Inc:4.13
Azi:261.13 VertSec:-
209.99

SurveyDepth:5119
TVD:5112.79 Inc:4.44
Azi:261.31 VertSec:-
217.11

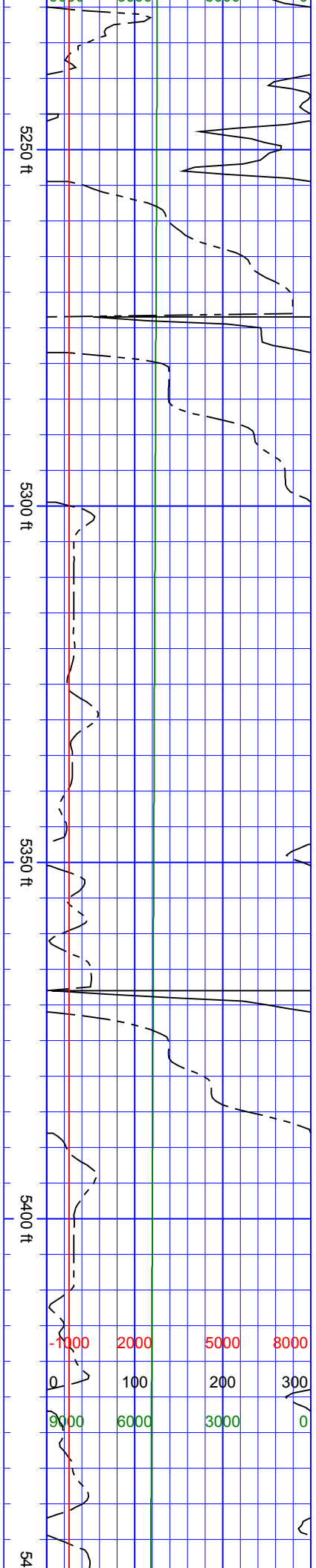
SurveyDepth:5213
TVD:5206.59 Inc:2.94
Azi:258.76 VertSec:-
223.1

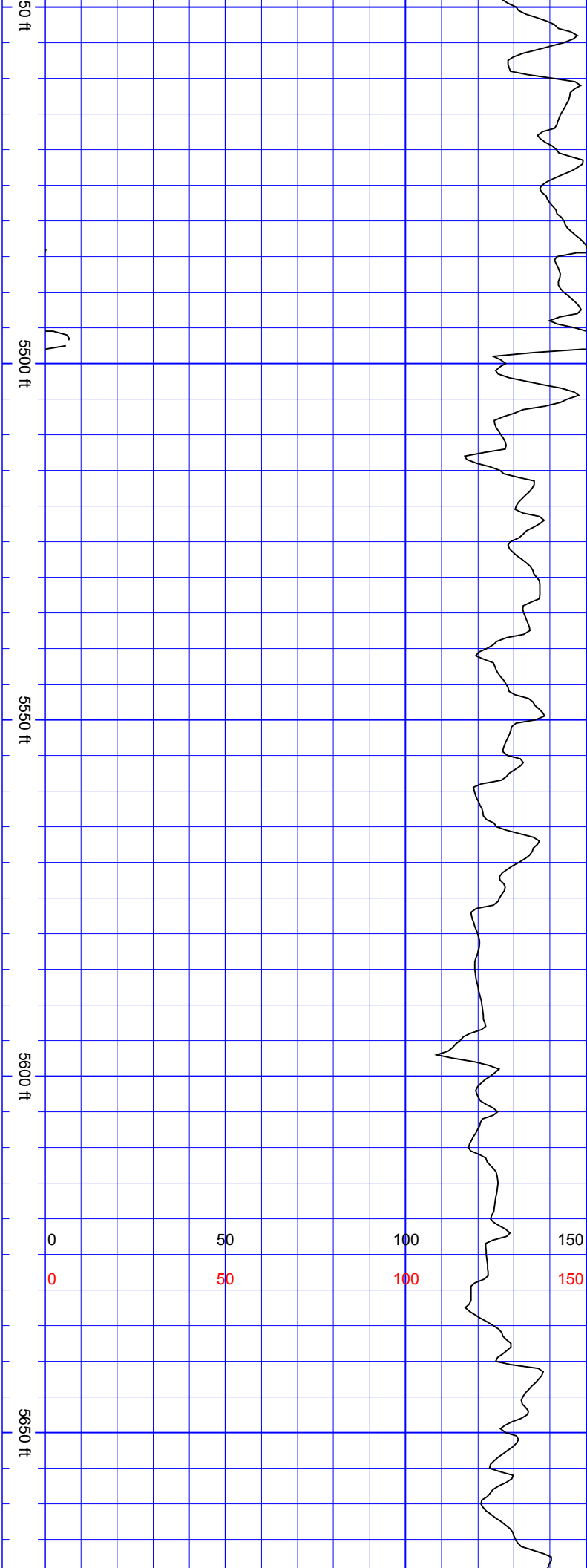




SurveyDepth:5308
TVD:5301.49 Inc:2.42
Azi:266.14 VertSec:-227.51

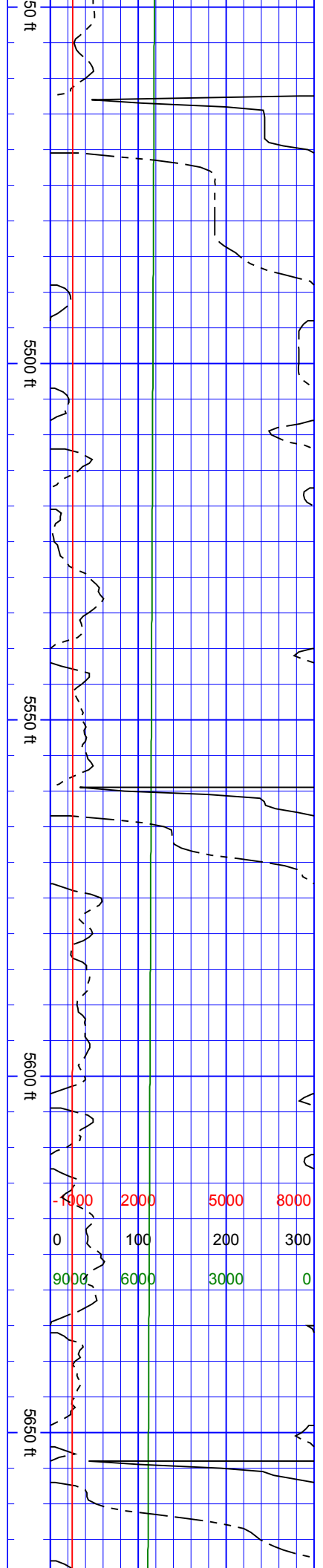
SurveyDepth:5402
TVD:5395.41 Inc:2.24
Azi:268.78 VertSec:-231.33

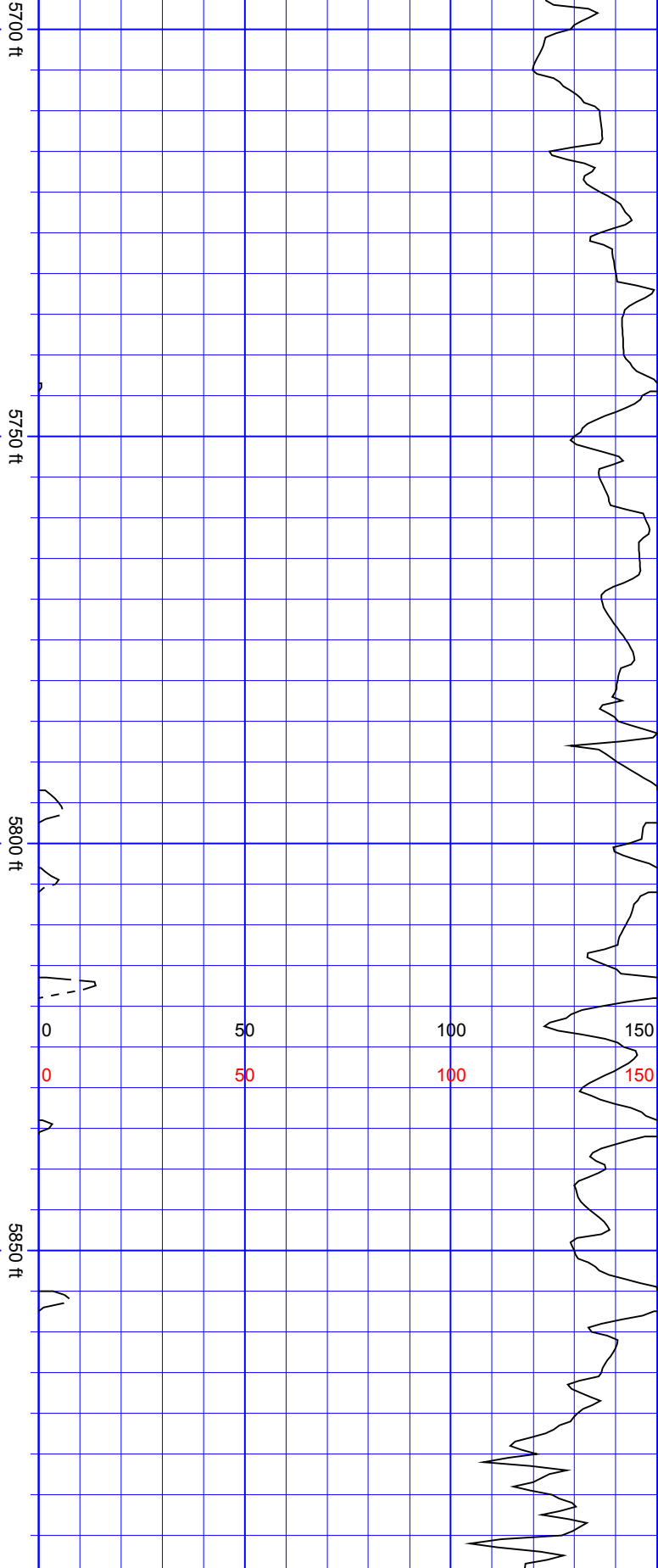




SurveyDepth:5497
TVD:5490.35 Inc:1.85
Azi:267.99 VertSec:-
234.72

SurveyDepth:5591
TVD:5584.3 Inc:1.67
Azi:271.76 VertSec:-
237.6

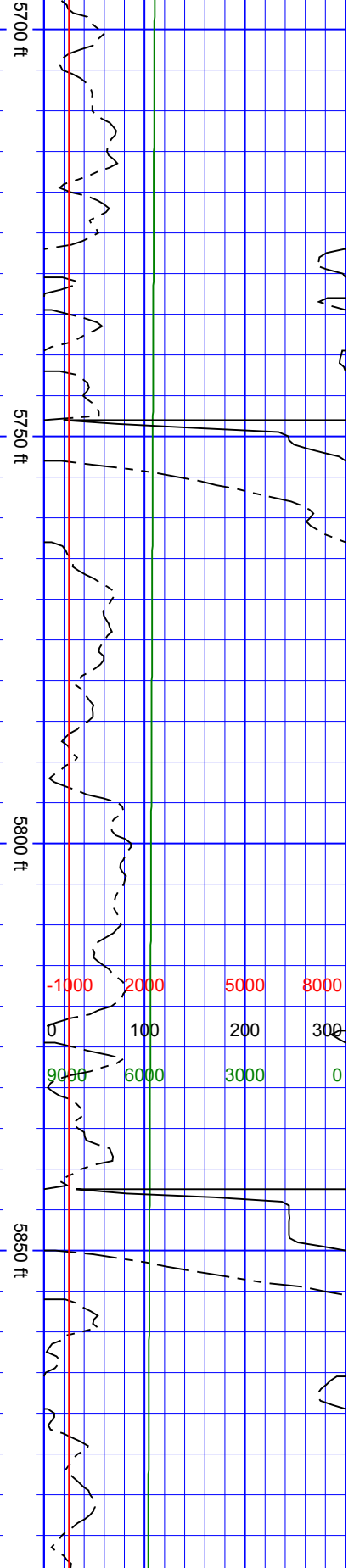


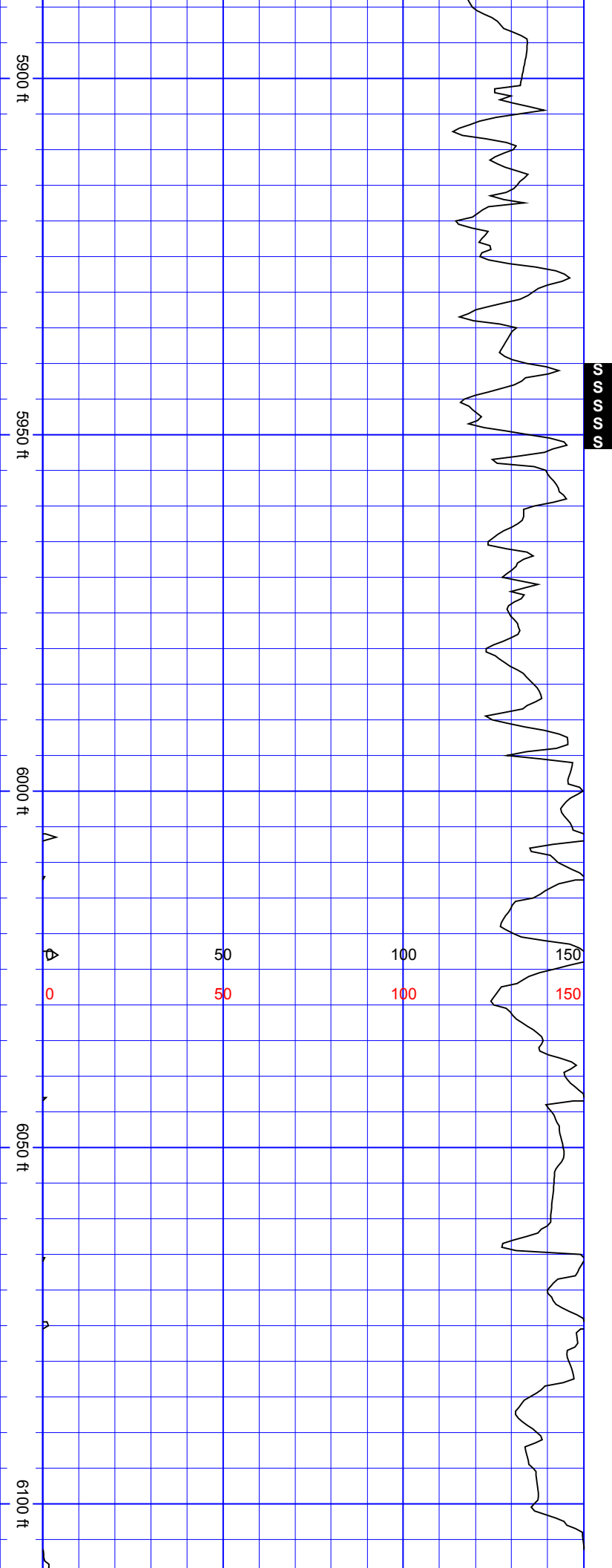


SurveyDepth:5685
TVD:5678.27 Inc:1.58
Azi:276.6 VertSec:-
240.25

SurveyDepth:5780
TVD:5773.24 Inc:1.27
Azi:271.41 VertSec:-
242.6

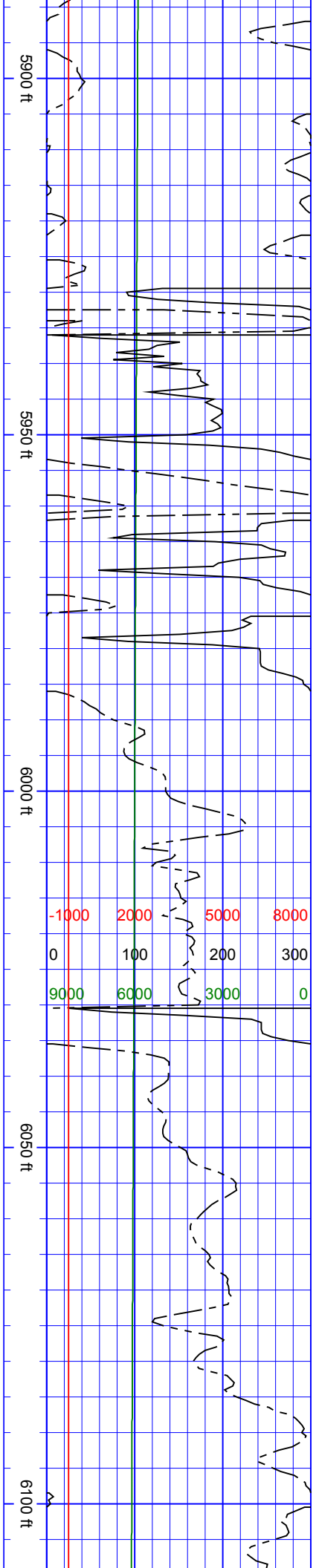
SurveyDepth:5874
TVD:5867.21 Inc:1.32
Azi:270.71 VertSec:-
244.72

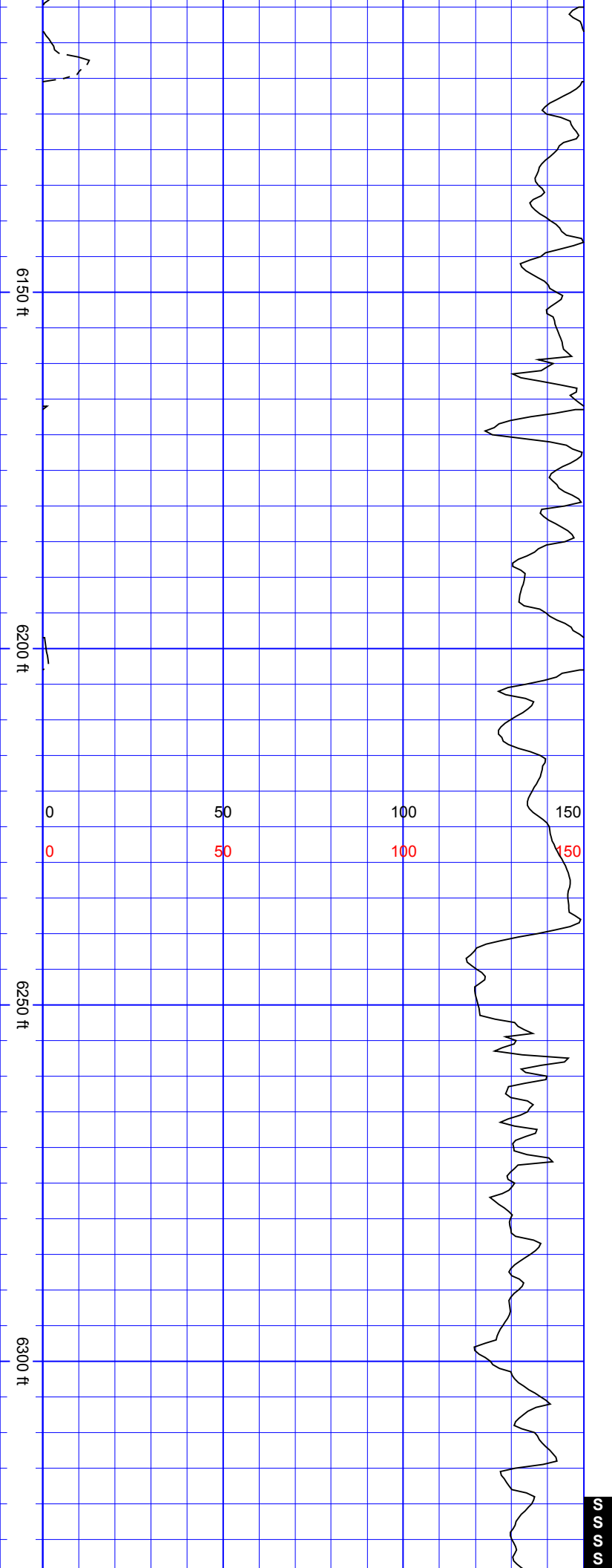




SurveyDepth:5969
TVD:5962.15 Inc:2.73
Azi:258.67 VertSec:-
248.04

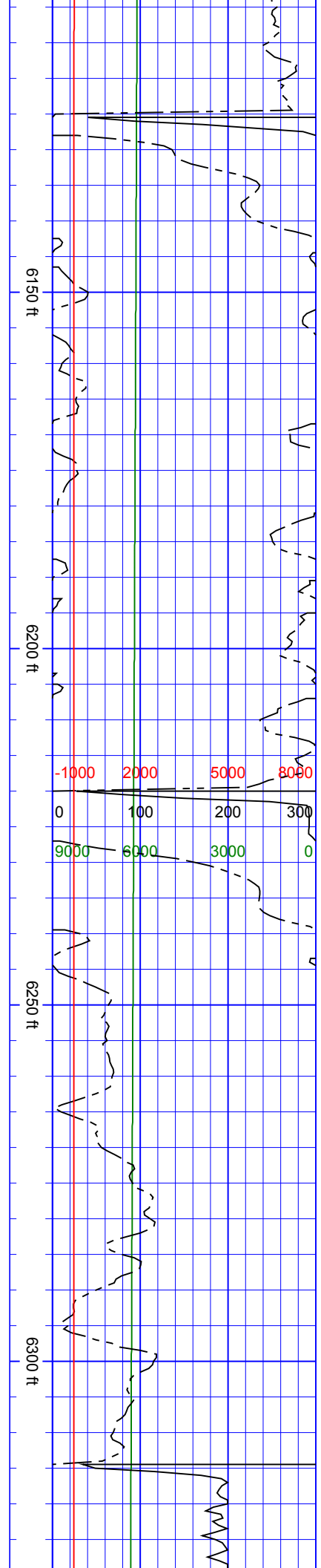
SurveyDepth:6064
TVD:6057.06 Inc:2.42
Azi:254.36 VertSec:-
252.22

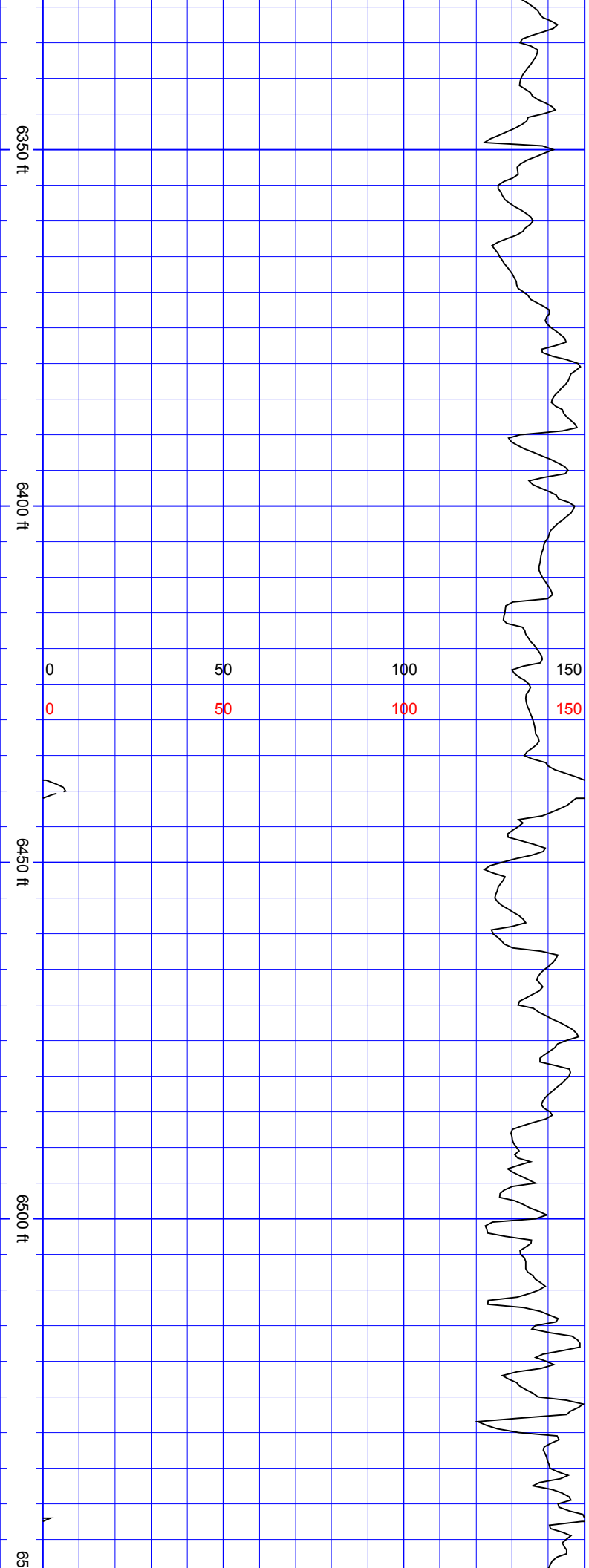




SurveyDepth:6158
TVD:6150.98 Inc:2.02
Azi:250.93 VertSec:-
255.73

SurveyDepth:6253
TVD:6245.95 Inc:1.27
Azi:248.12 VertSec:-
258.31

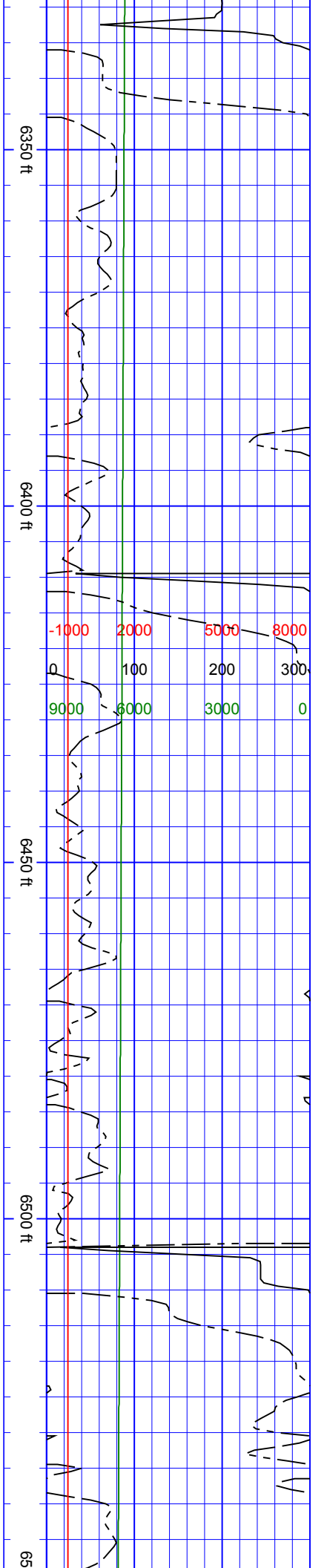


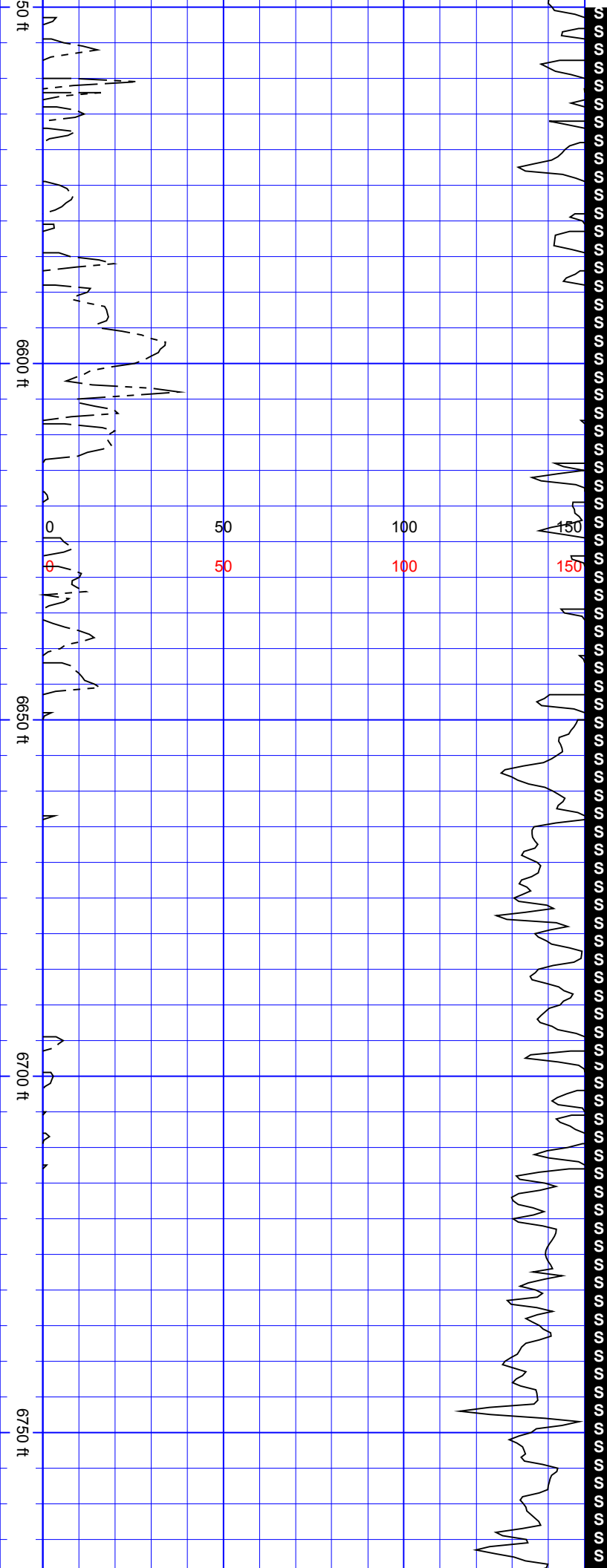


SurveyDepth:6348
TVD:6340.92 Inc:1.49
Azi:302.26 VertSec:-
260.32

SurveyDepth:6442
TVD:6434.9 Inc:0.88
Azi:303.23 VertSec:-
261.93

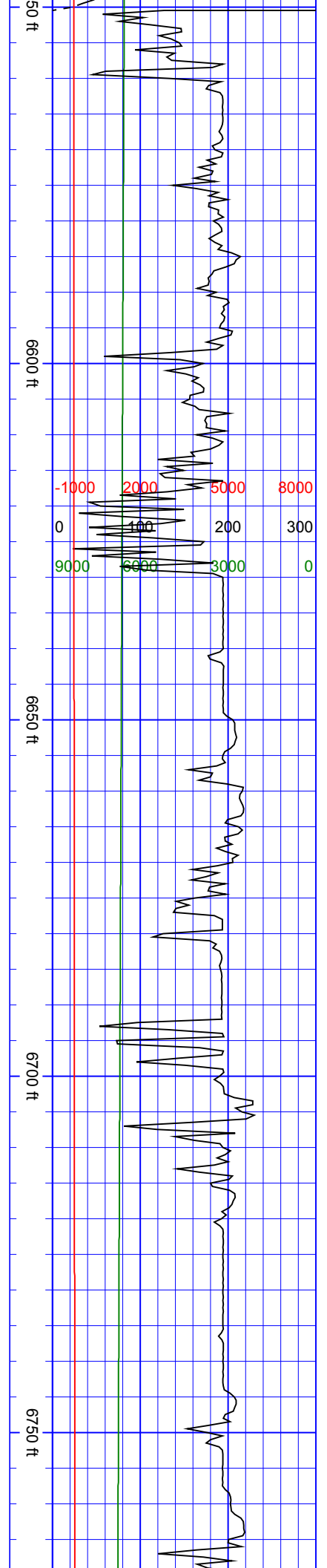
SurveyDepth:6537
TVD:6529.89 Inc:0.48
Azi:282.05 VertSec:-
262.92

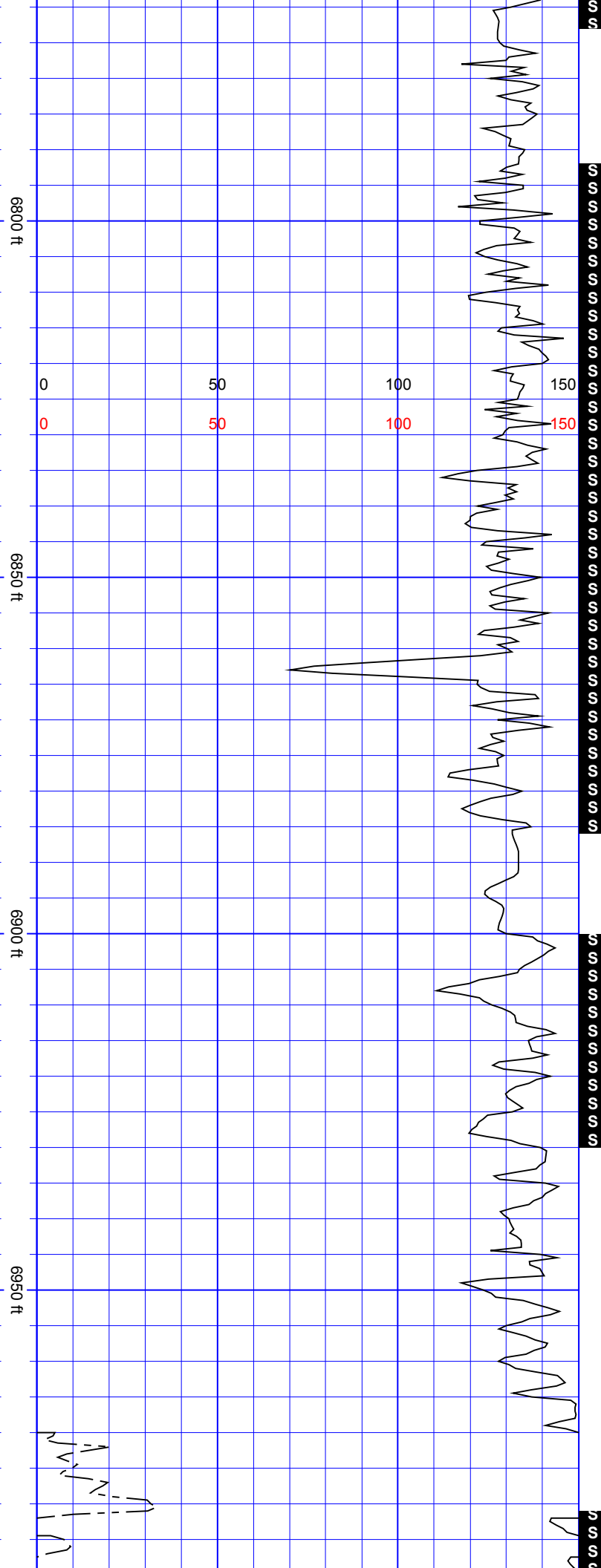




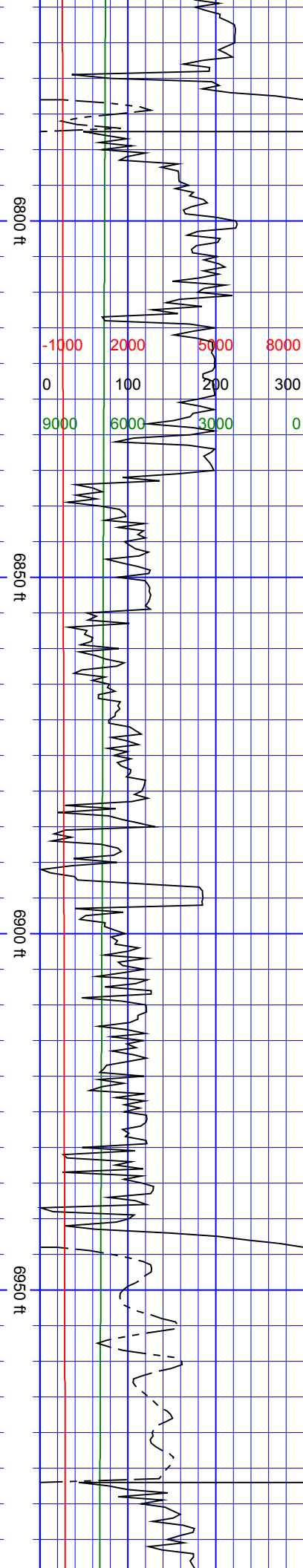
SurveyDepth:6632
TVD:6624.63 Inc:7.65
Azi:97.74 VertSec:-
257.05

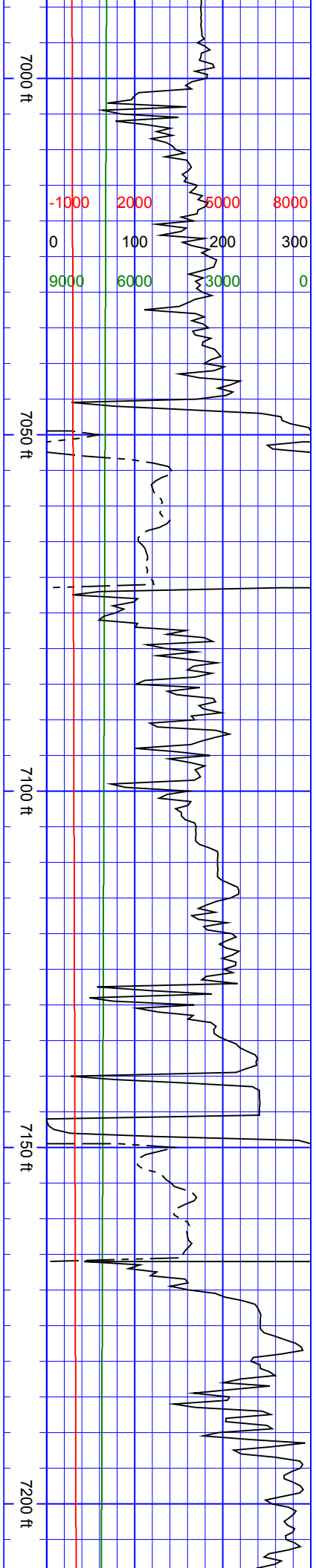
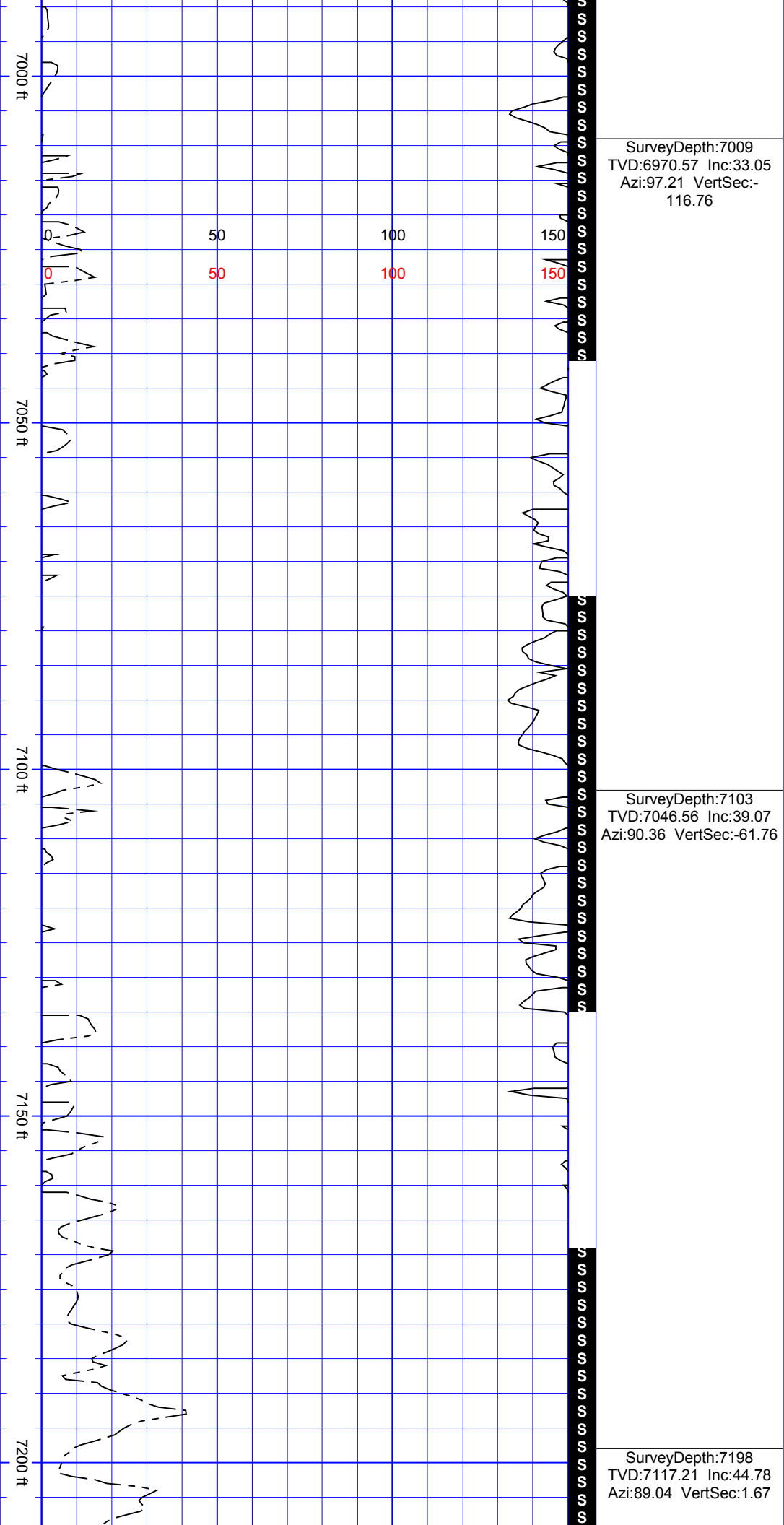
SurveyDepth:6726
TVD:6716.67 Inc:15.38
Azi:87.72 VertSec:-
238.39

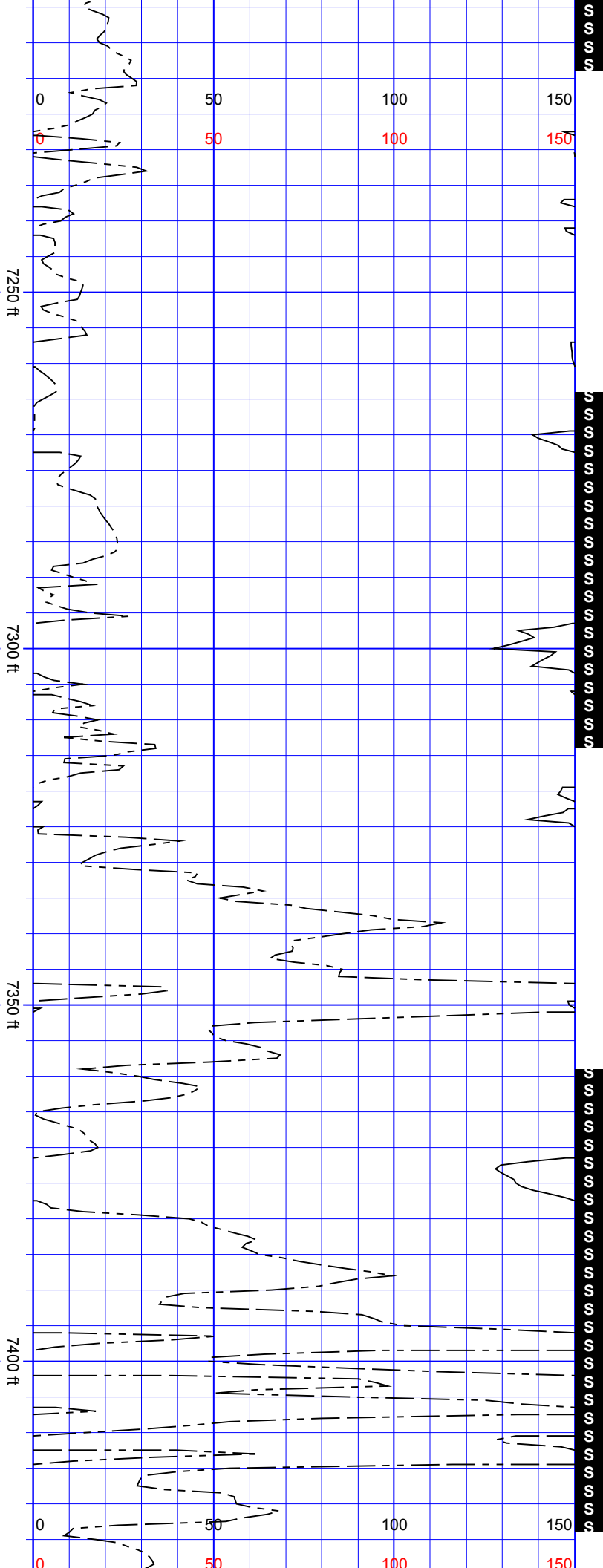




SurveyDepth:6820
TVD:6805.23 Inc:23.56
Azi:92.56 VertSec:-
207.13

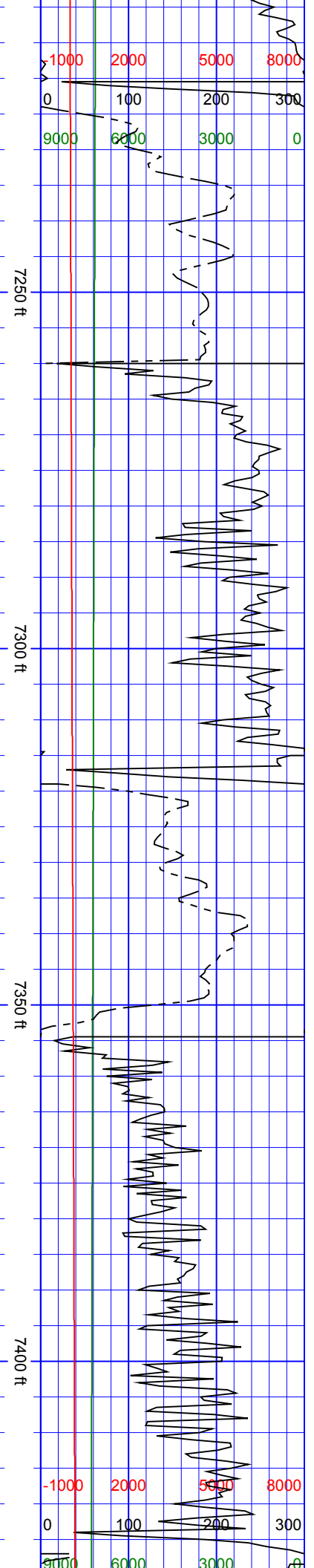


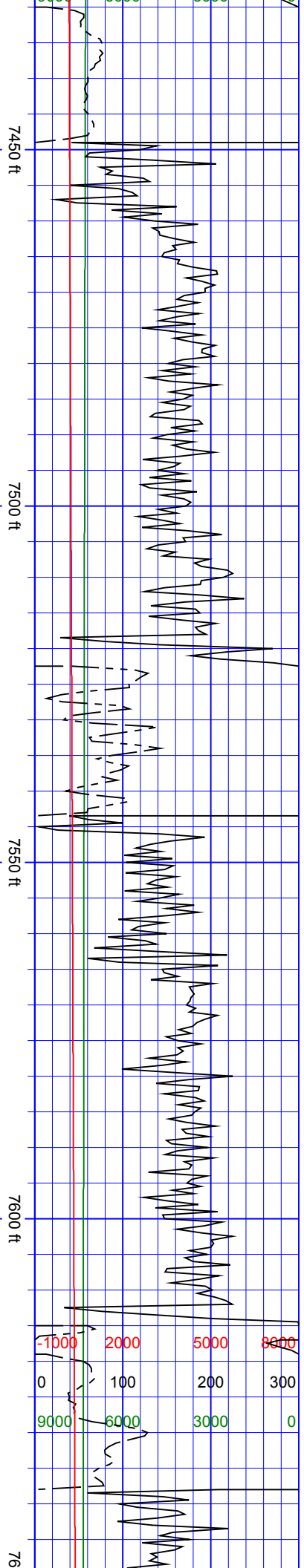




SurveyDepth:7293
TVD:7181.88 Inc:49.4
Azi:92.03 VertSec:71.16

SurveyDepth:7387
TVD:7239.55 Inc:54.89
Azi:89.48
VertSec:145.28

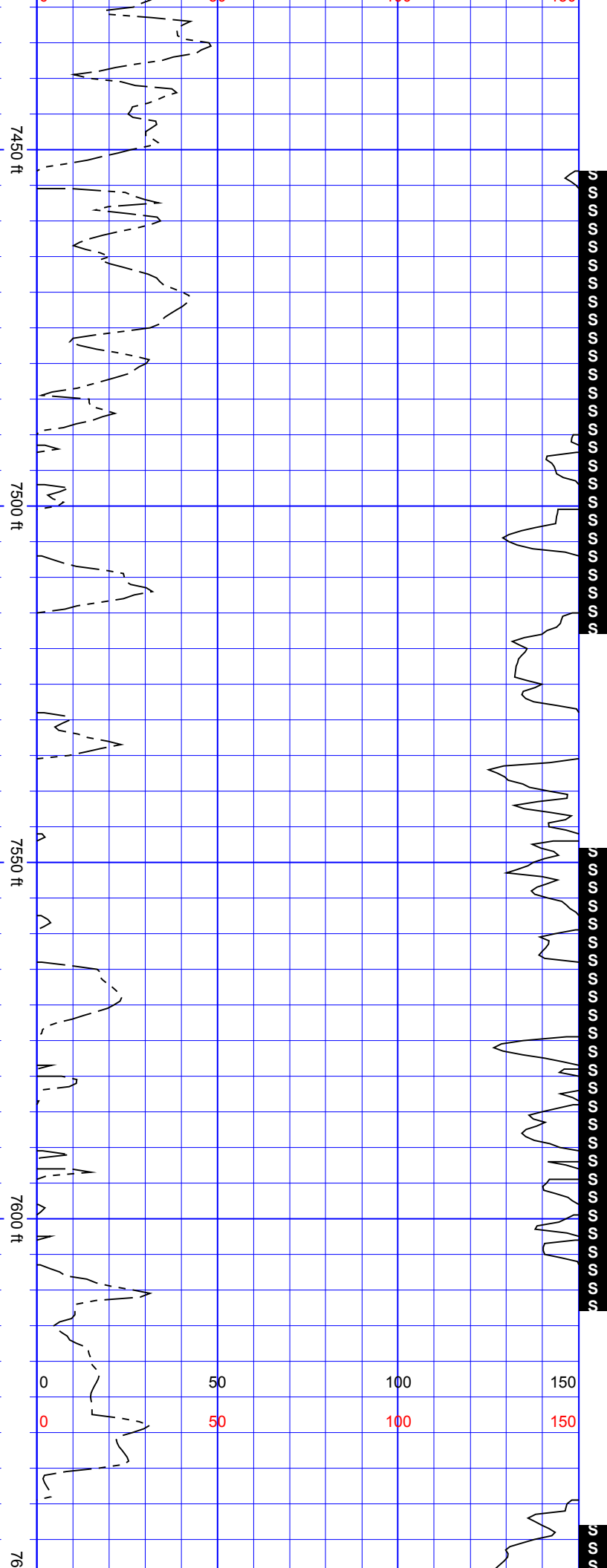




August 27, 2018

SurveyDepth:7482
TVD:7288.91 Inc:62.45
Azi:88.16
VertSec:226.36

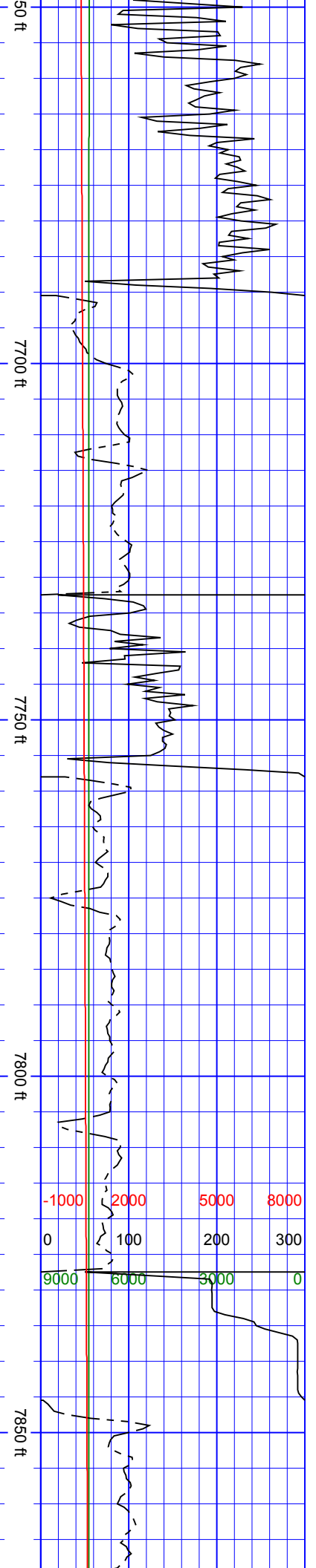
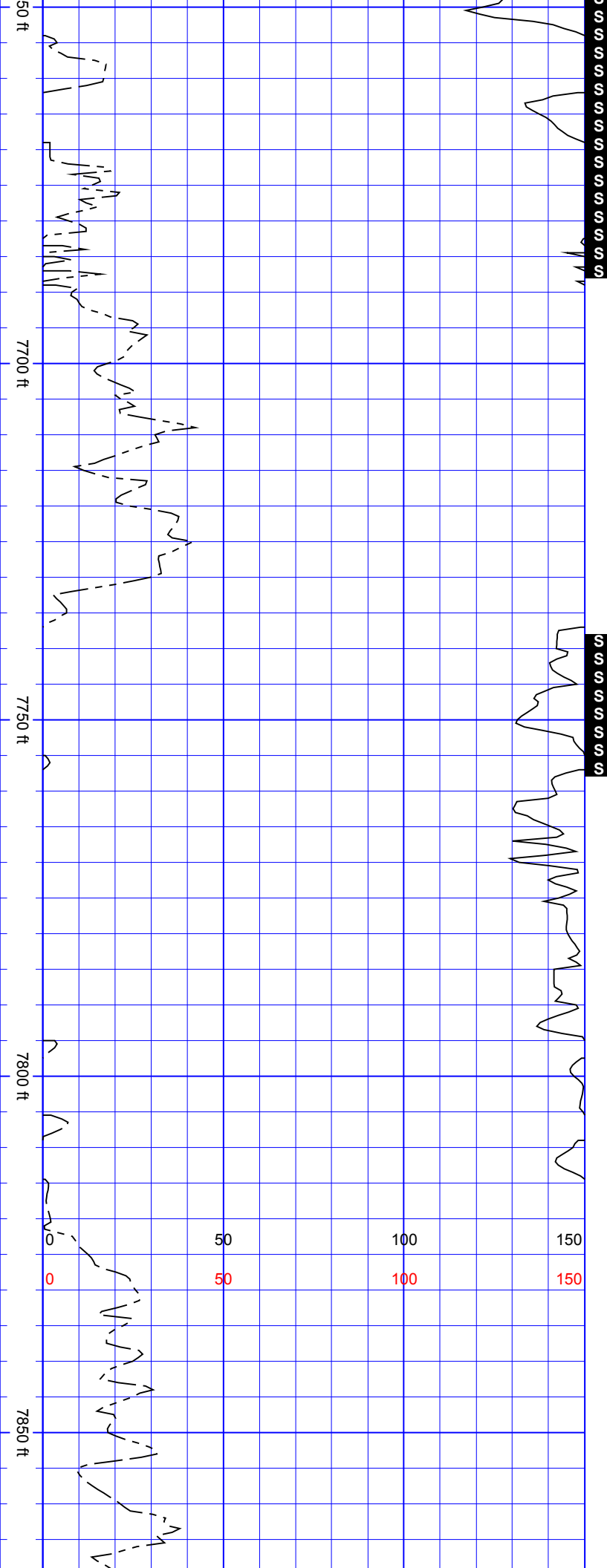
SurveyDepth:7577
TVD:7325.49 Inc:72.2
Azi:88.34
VertSec:313.91



SurveyDepth:7672
TVD:7346.78 Inc:81.87
Azi:89.13
VertSec:406.38

SurveyDepth:7766
TVD:7355.24 Inc:87.8
Azi:89.04
VertSec:499.94

SurveyDepth:7861
TVD:7358.48 Inc:88.29
Azi:89.83



VertSec:594.87

SurveyDepth:7955
TVD:7361.4 Inc:88.15
Azi:89.57 VertSec:688.8

SurveyDepth:8050
TVD:7364.79 Inc:87.76
Azi:89.04
VertSec:783.72

7900 ft

7950 ft

8000 ft

8050 ft

50

100

150

50

100

150

7900 ft

7950 ft

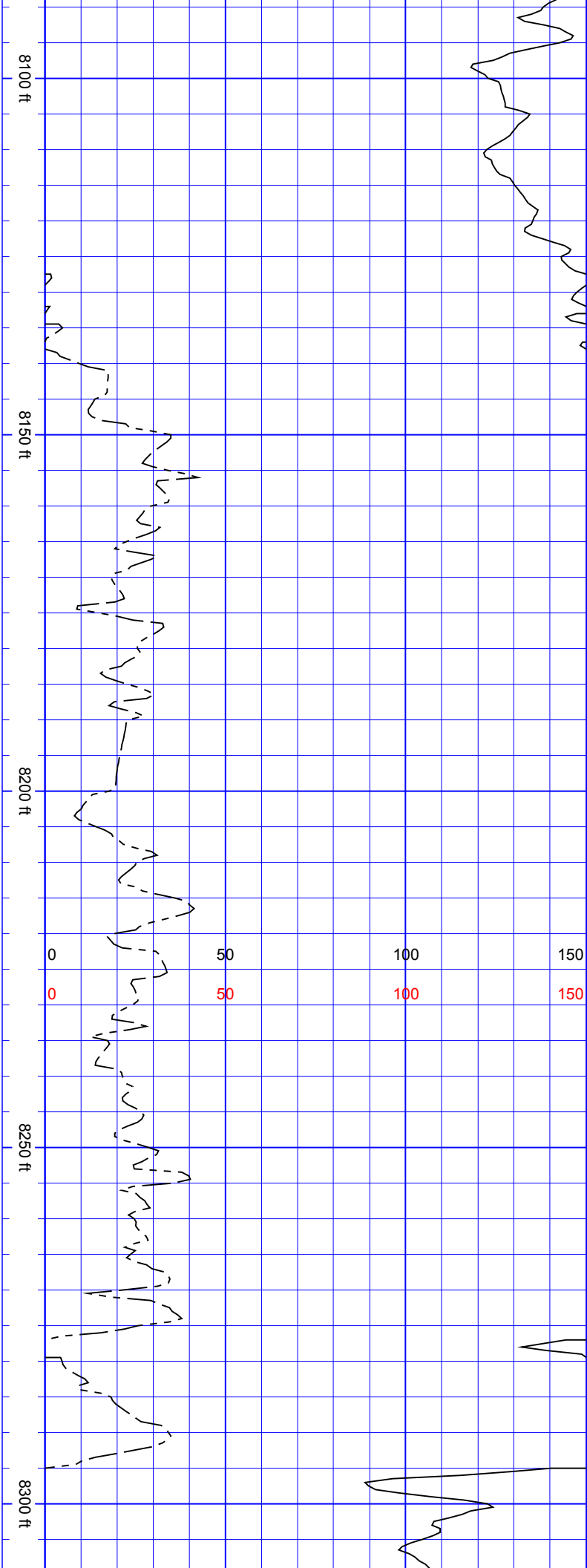
8000 ft

8050 ft

-1000 2000 5000 8000

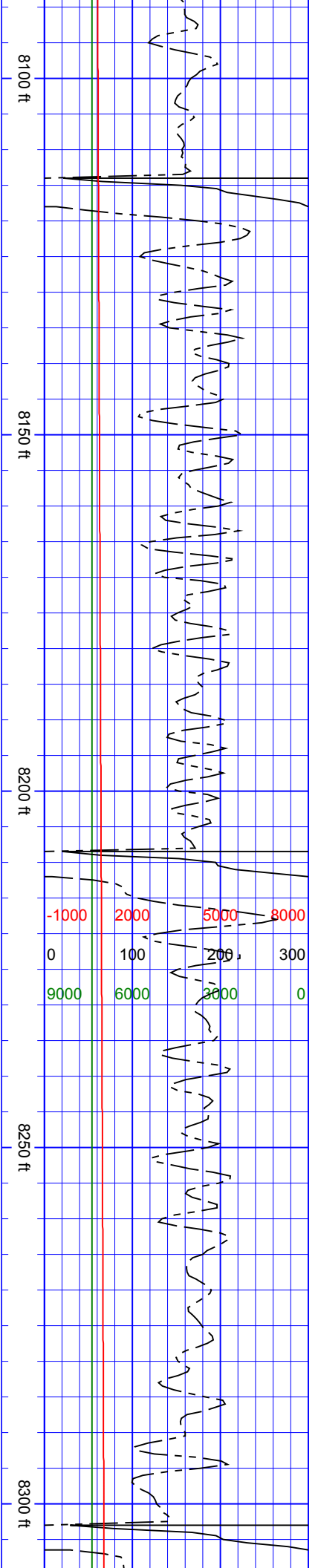
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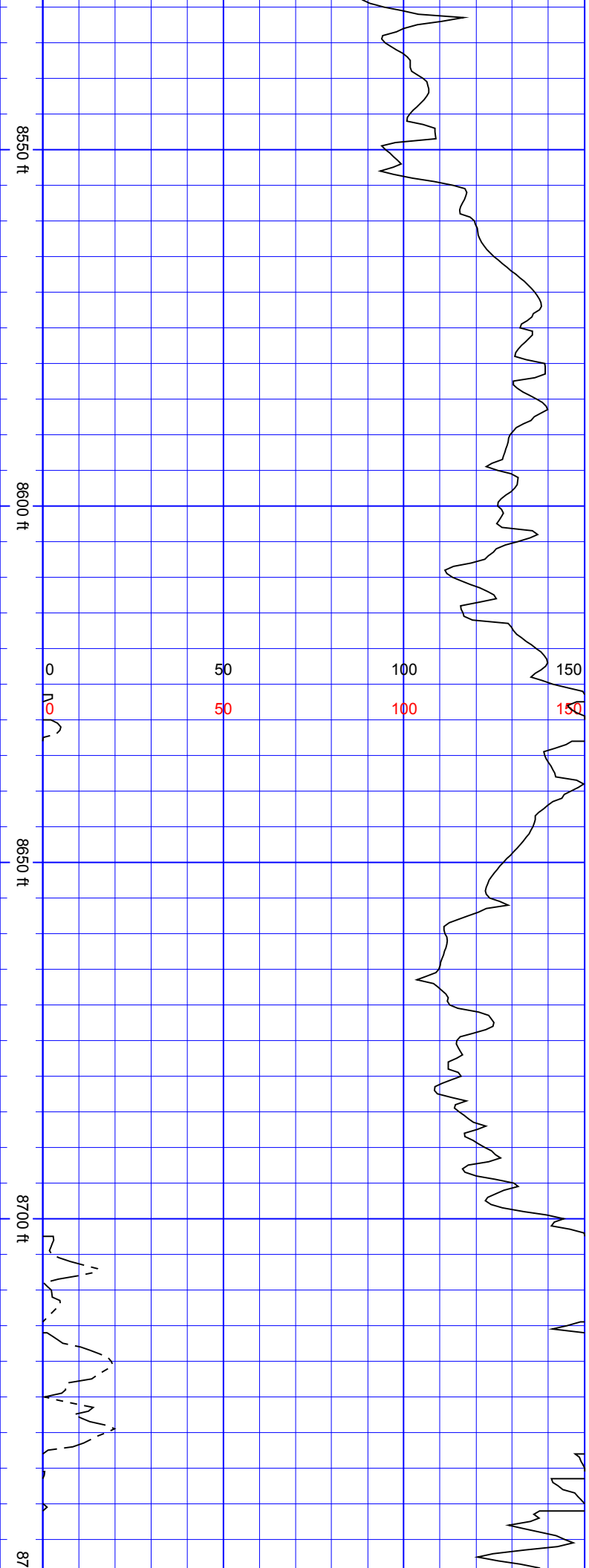
9000 6000 3000 0



SurveyDepth:8144
TVD:7368.61 Inc:87.58
Azi:88.69
VertSec:877.64

SurveyDepth:8239
TVD:7372.91 Inc:87.23
Azi:88.78
VertSec:972.54

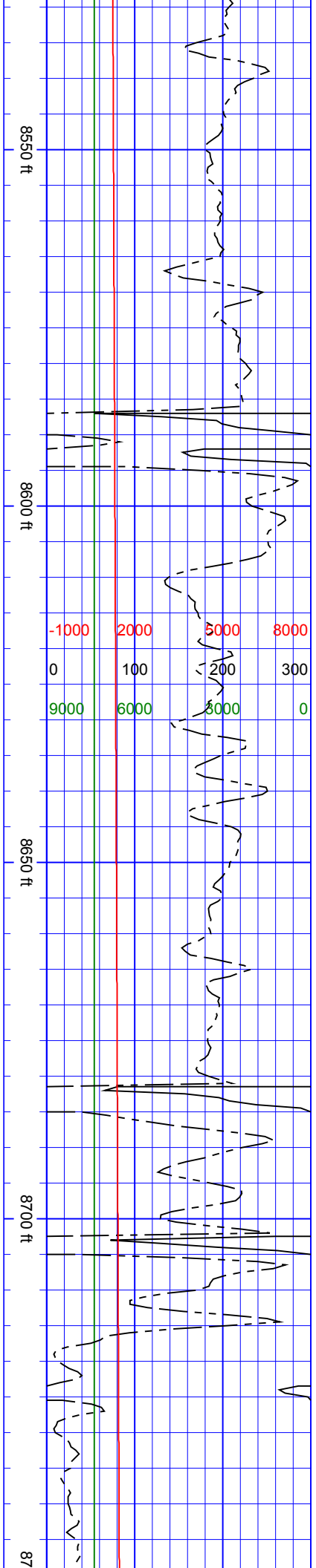


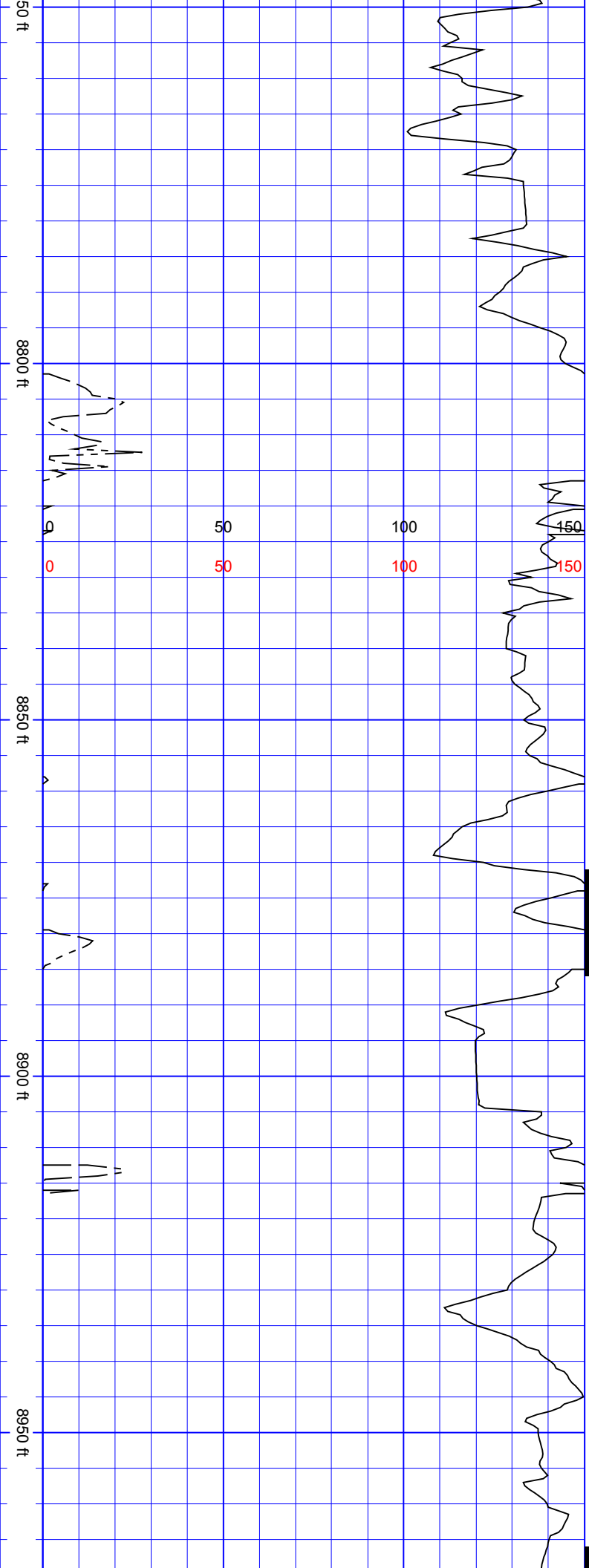


VertSec:1255.46

SurveyDepth:8616
TVD:7375.51 Inc:90.66
Azi:87.46
VertSec:1349.44

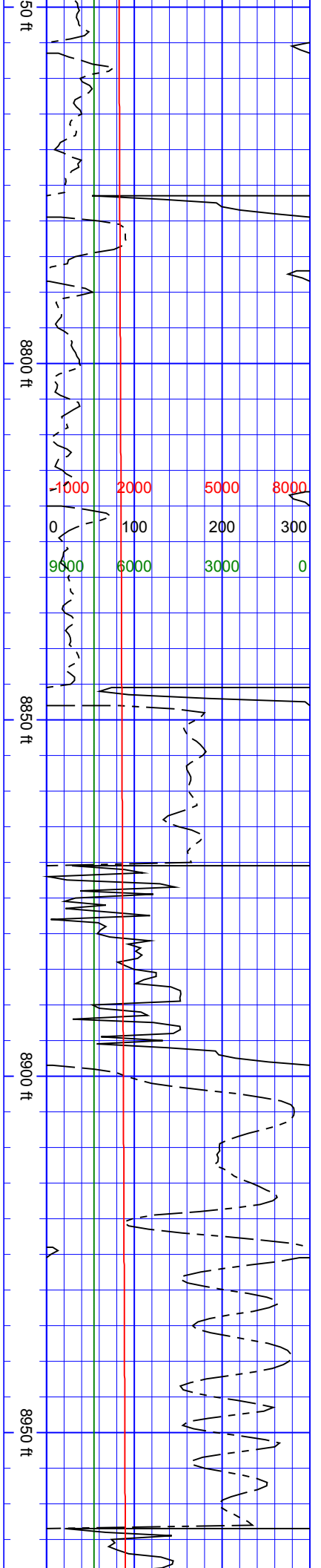
SurveyDepth:8711
TVD:7373.84 Inc:91.36
Azi:86.93
VertSec:1444.41

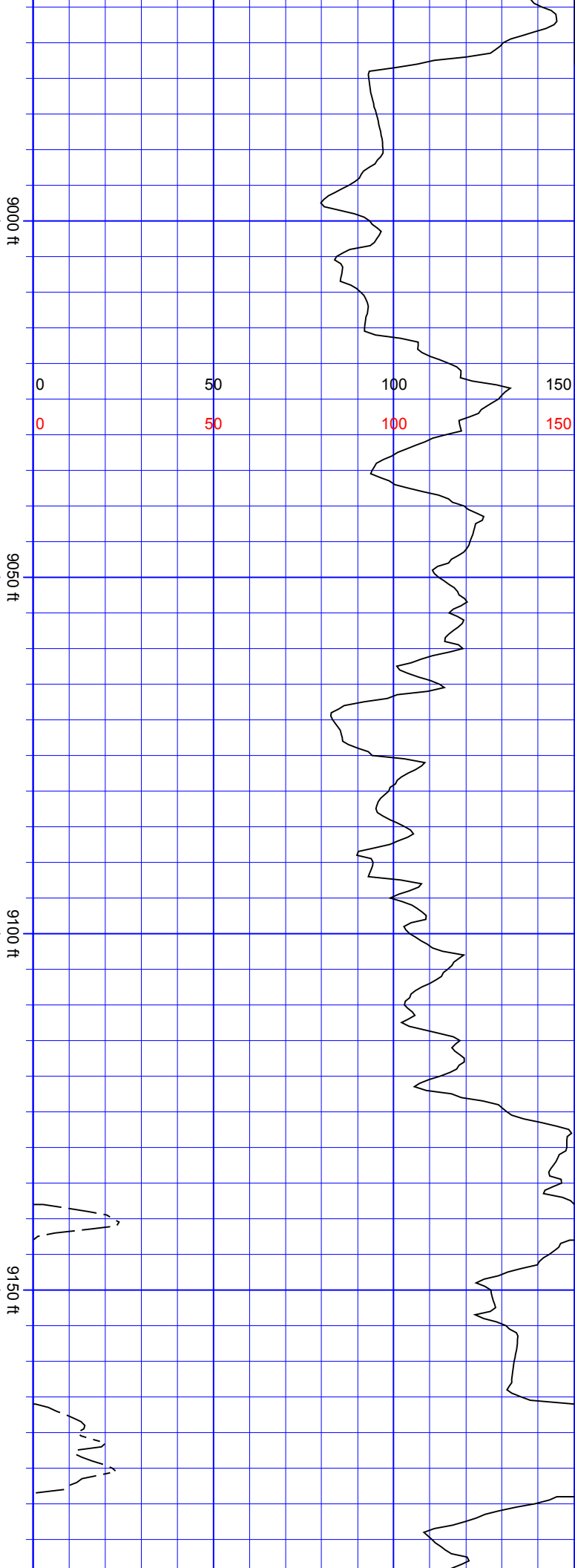




SurveyDepth:8805
TVD:7371.53 Inc:91.45
Azi:86.14
VertSec:1538.33

SurveyDepth:8900
TVD:7369.45 Inc:91.06
Azi:88.42
VertSec:1633.29

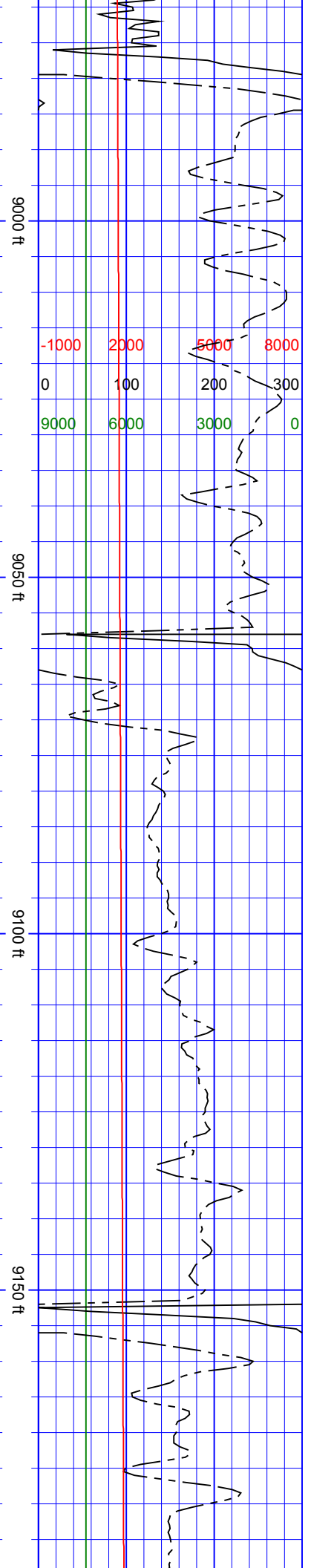


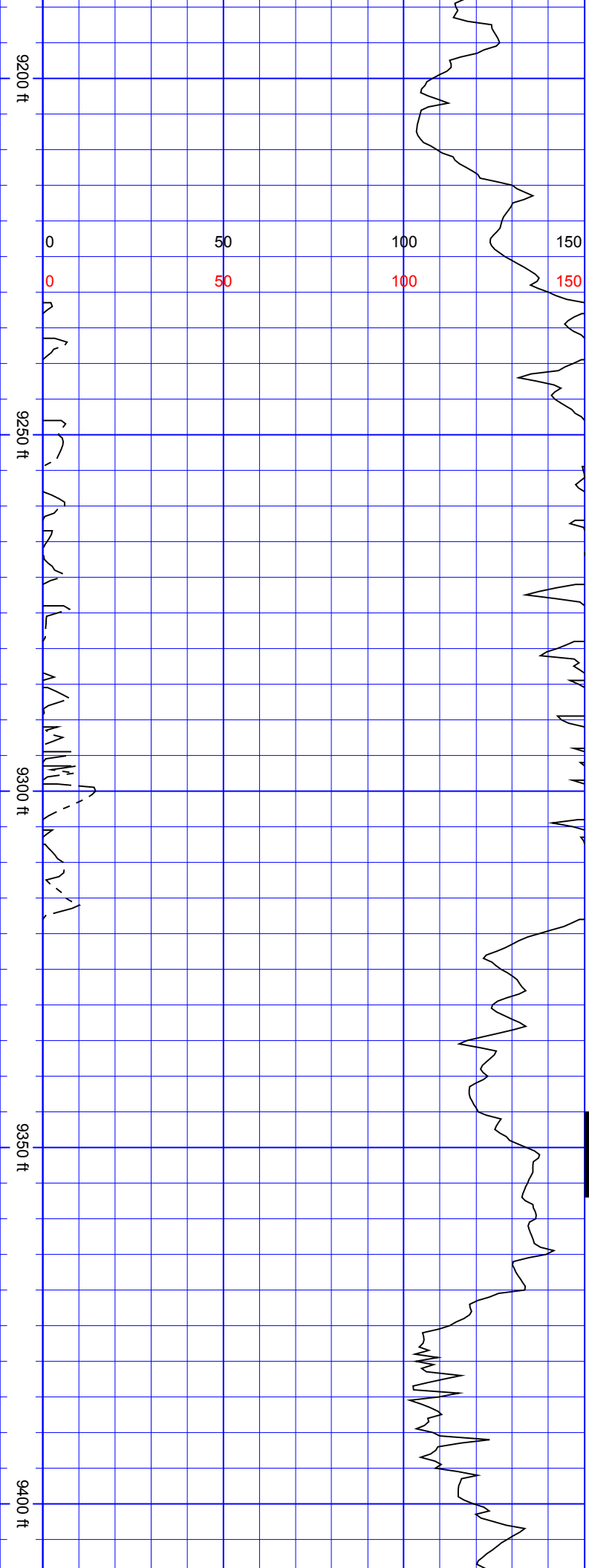


SurveyDepth:8995
TVD:7369.74 Inc:88.59
Azi:88.25
VertSec:1728.28

SurveyDepth:9090
TVD:7371.53 Inc:89.25
Azi:87.9
VertSec:1823.26

SurveyDepth:9185
TVD:7372.88 Inc:89.12

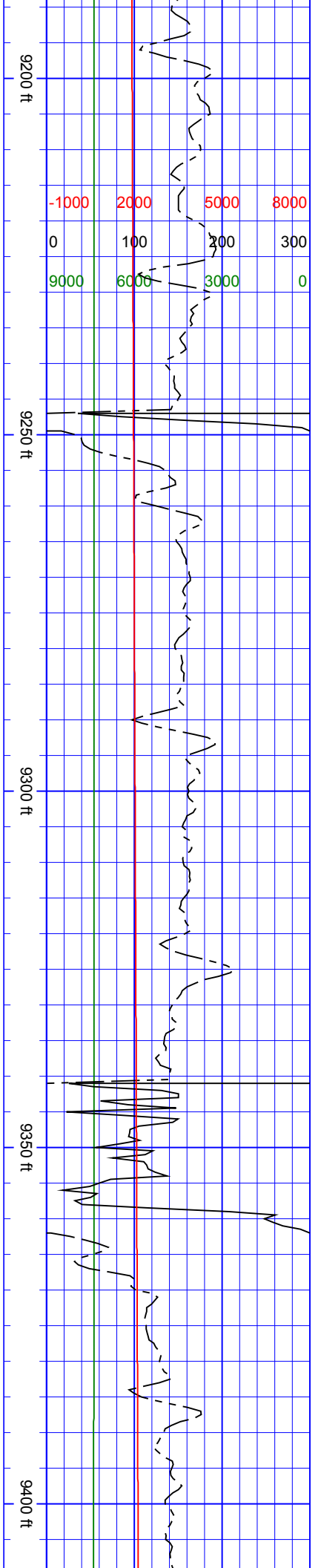


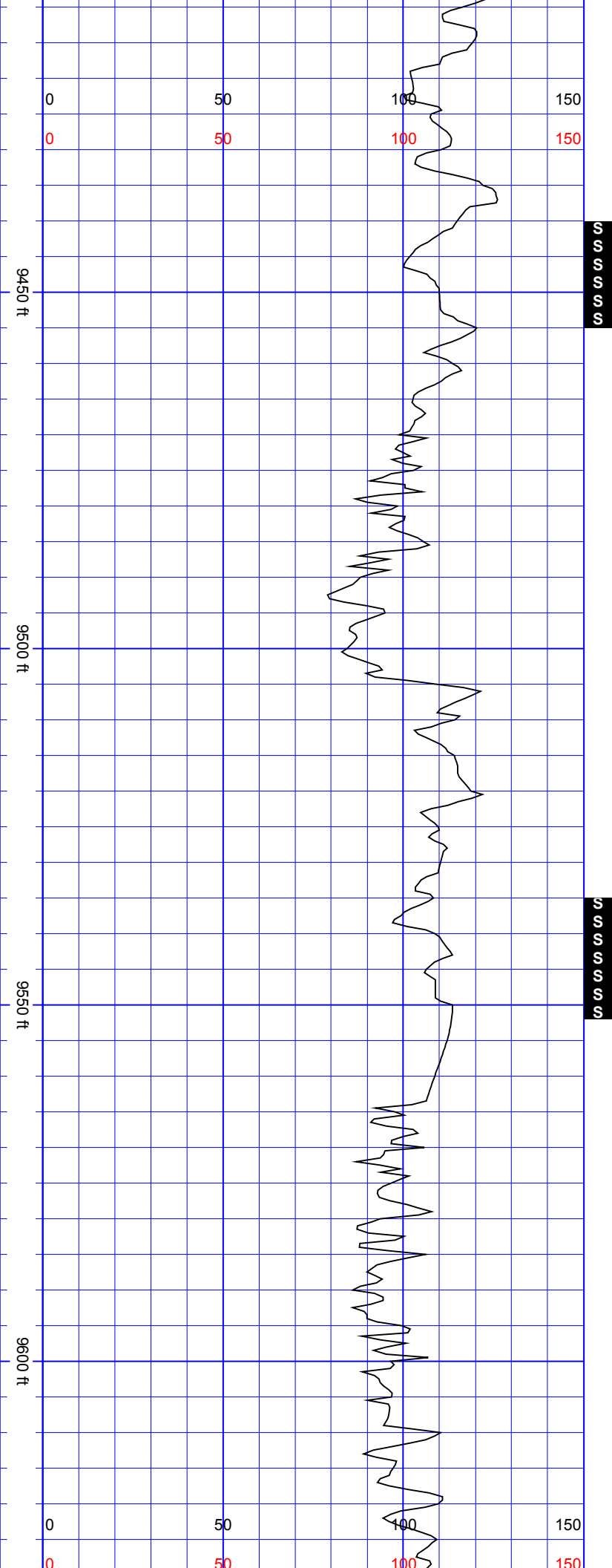


TVD:7372.88 Inc:88.12
Azi:87.19
VertSec:1918.24

SurveyDepth:9279
TVD:7374.58 Inc:88.81
Azi:86.58
VertSec:2012.19

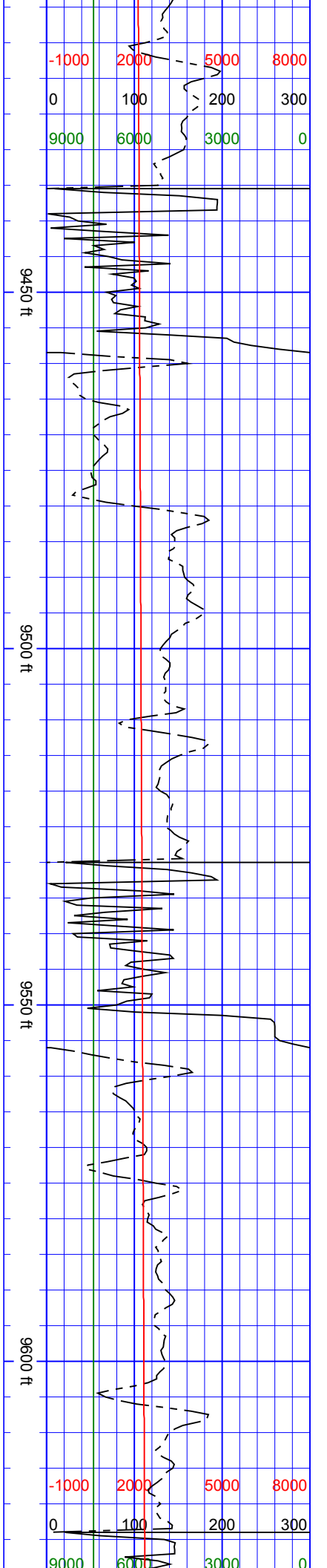
SurveyDepth:9374
TVD:7377.82 Inc:87.28
Azi:88.6
VertSec:2107.12

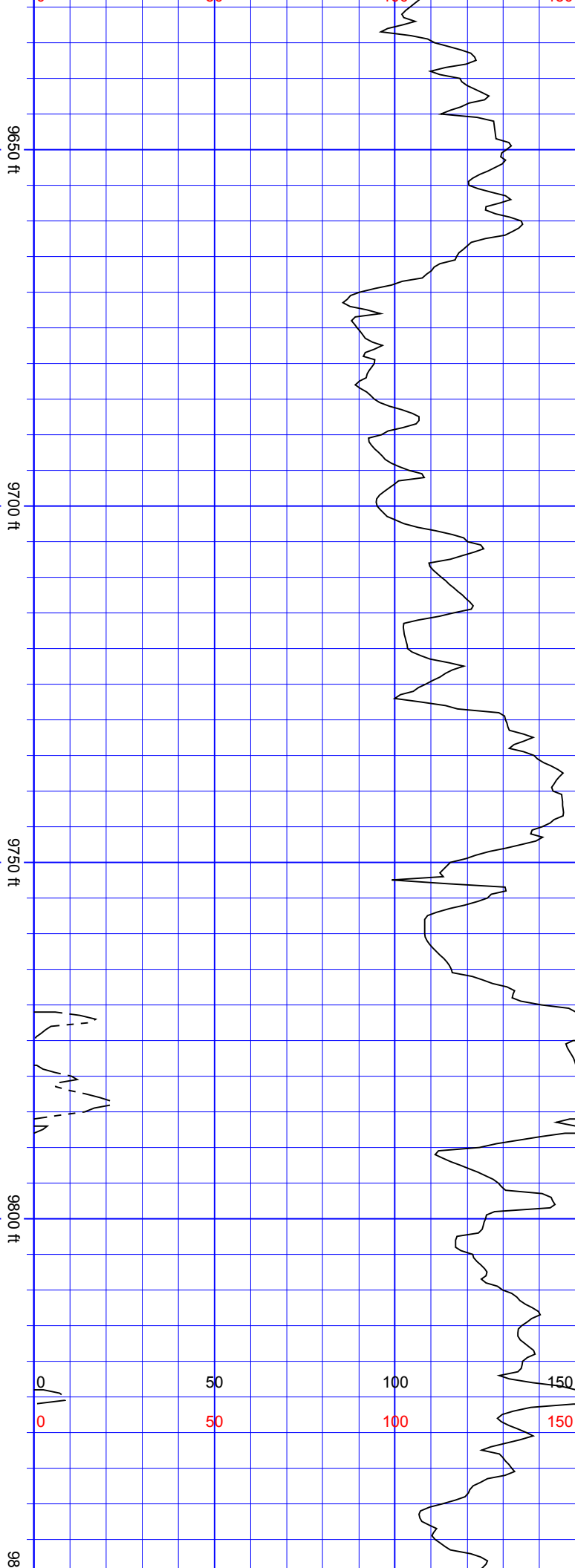




SurveyDepth:9469
TVD:7381.54 Inc:88.24
Azi:89.13
VertSec:2202.05

SurveyDepth:9563
TVD:7383.96 Inc:88.81
Azi:88.6
VertSec:2296.01



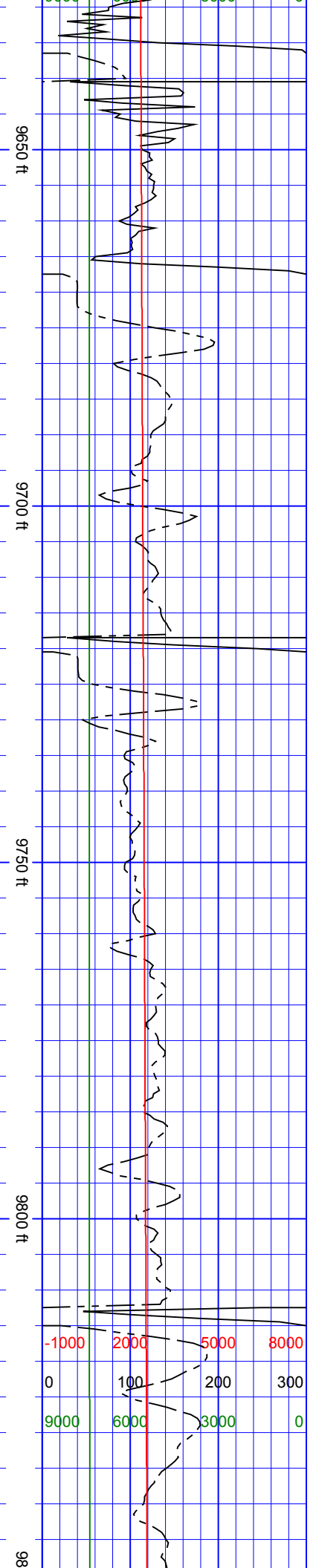


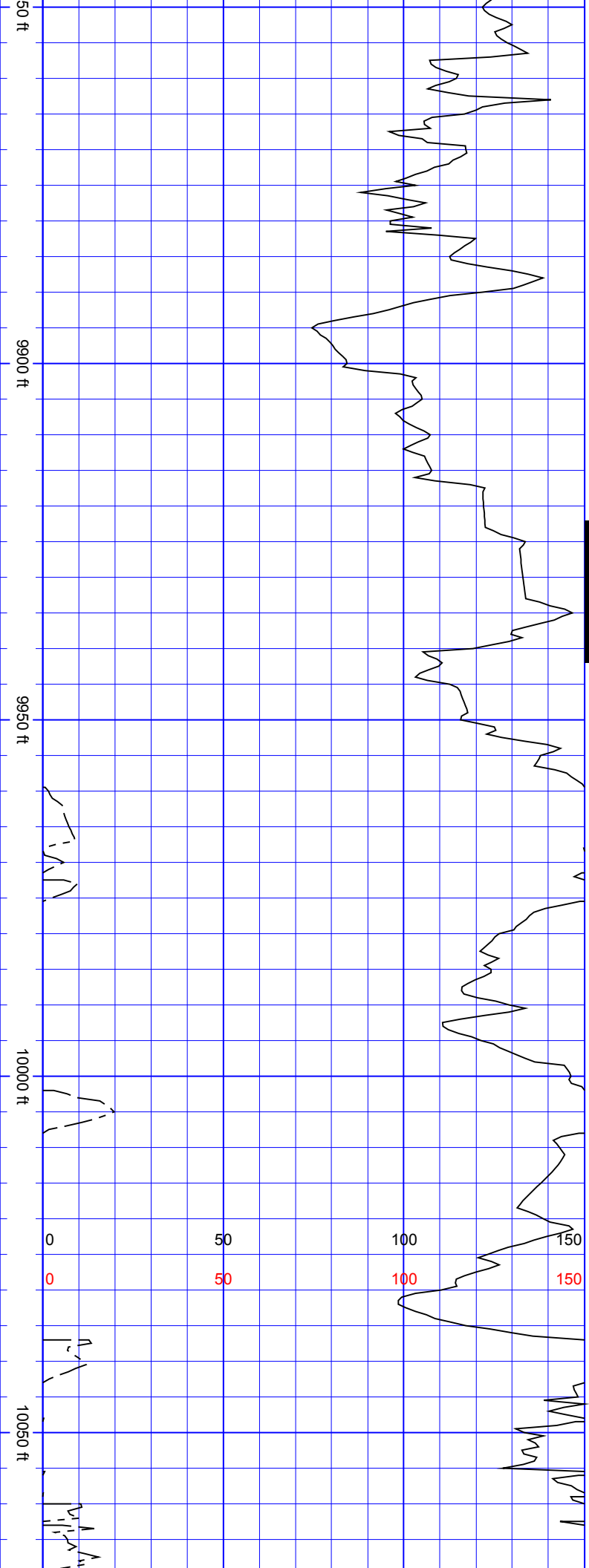
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SurveyDepth:9658
TVD:7384.4 Inc:90.66
Azi:88.95 VertSec:2391

SurveyDepth:9752
TVD:7381.87 Inc:92.42
Azi:89.3
VertSec:2484.95

SurveyDepth:9846

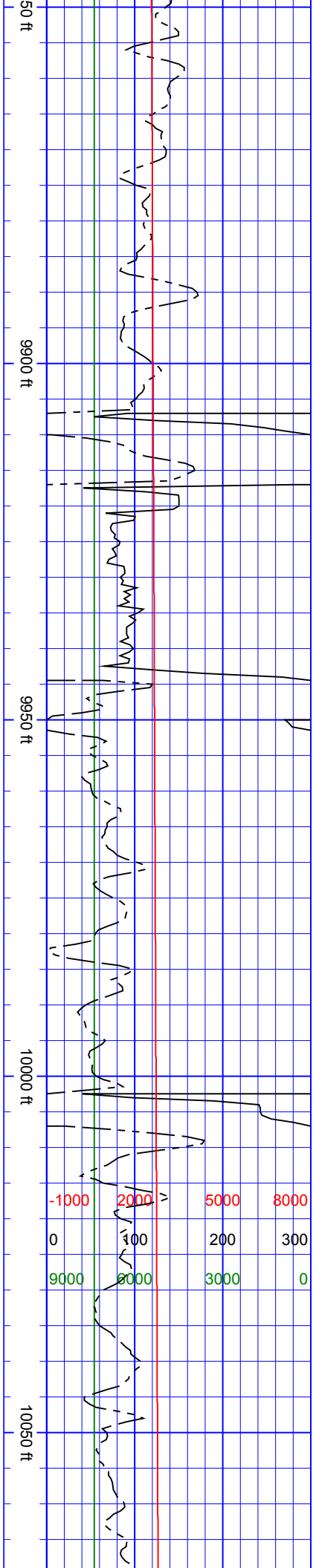




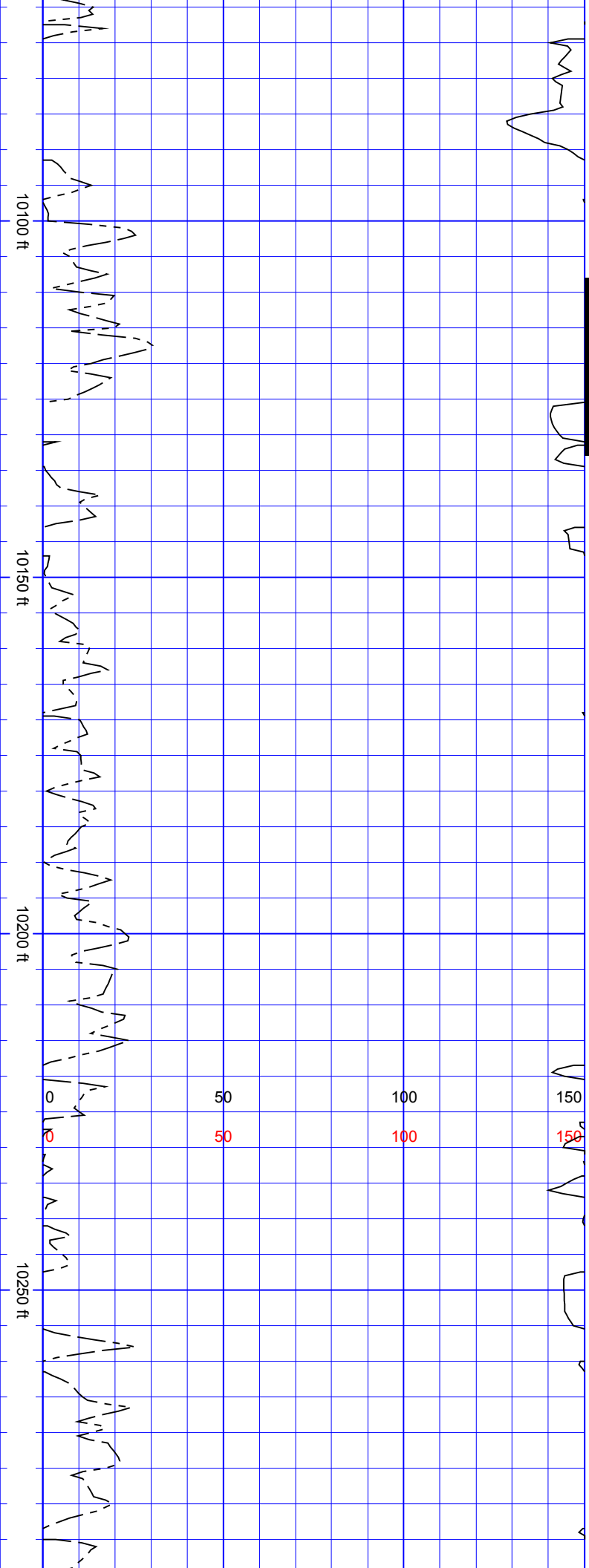
TVD:7377.4 Inc:93.03
Azi:89.13
VertSec:2578.84

SurveyDepth:9941
TVD:7373.54 Inc:91.63
Azi:89.39
VertSec:2673.74

SurveyDepth:10035
TVD:7370.44 Inc:92.15
Azi:89.3
VertSec:2767.68



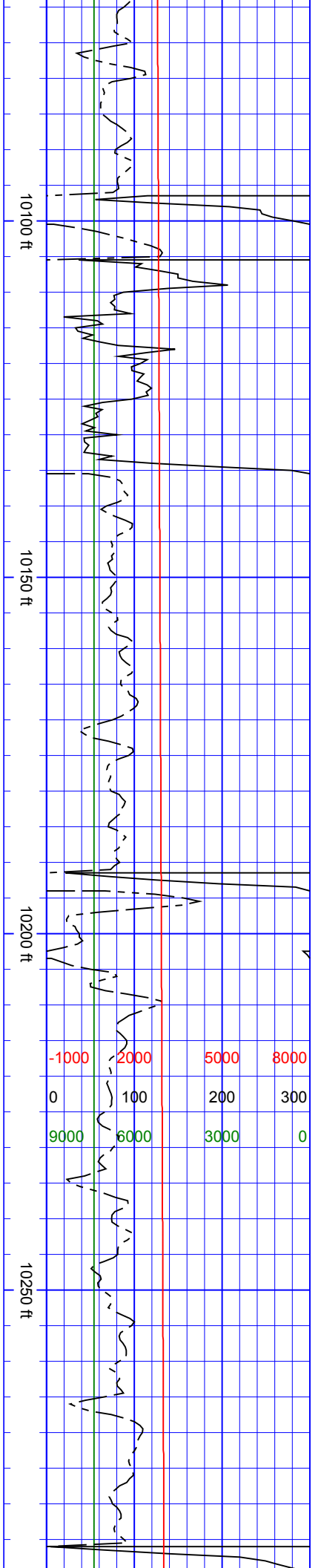
Red	Green	Blue
-1000	2000	5000
0	100	200
0	9000	8000
	3000	0

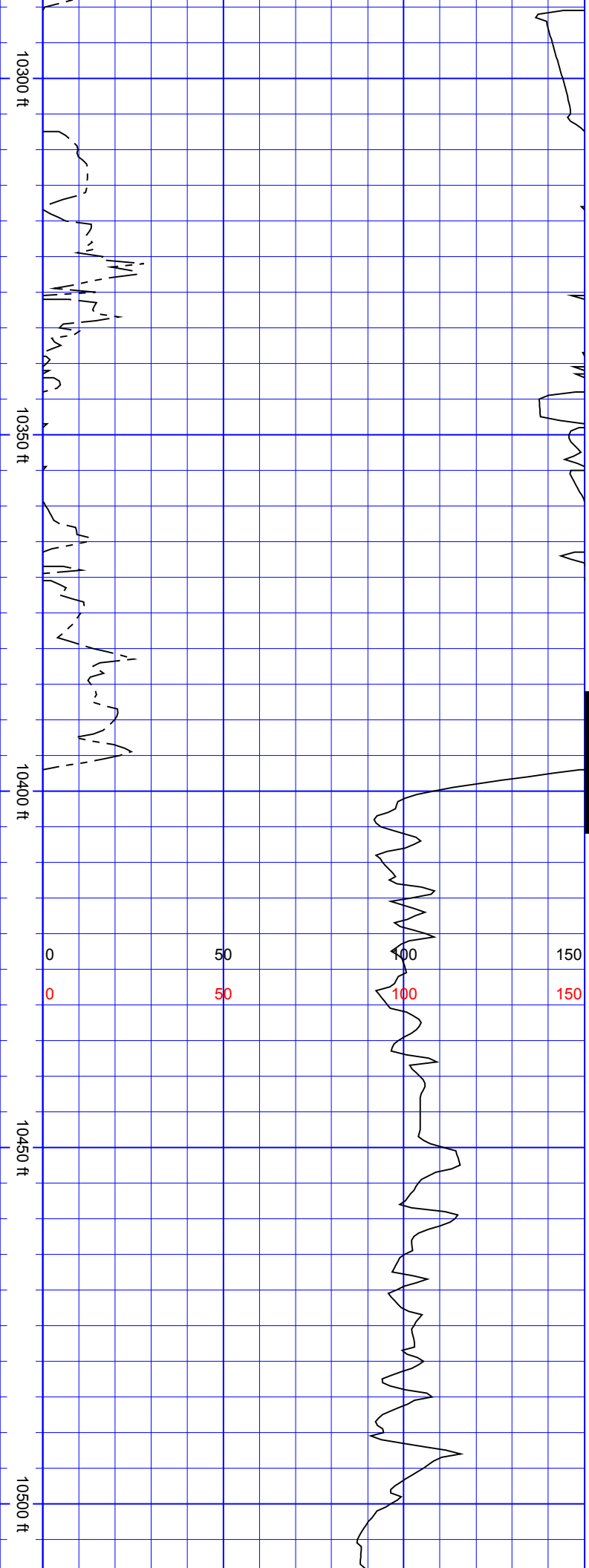


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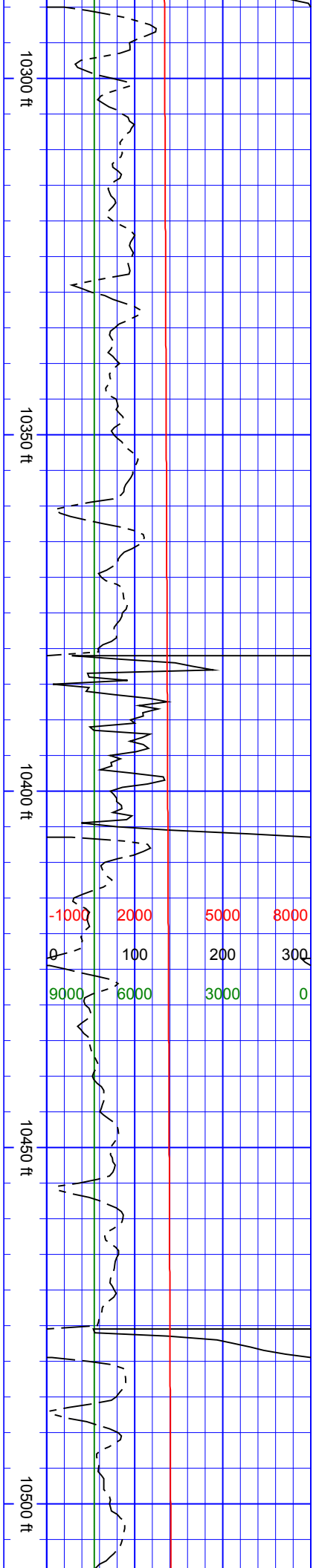
SurveyDepth:10130
TVD:7367.64 Inc:91.23
Azi:87.9
VertSec:2862.63

SurveyDepth:10225
TVD:7366.22 Inc:90.48
Azi:86.84
VertSec:2957.6





SurveyDepth:10320
TVD:7364.98 Inc:91.01
Azi:86.84
VertSec:3052.56

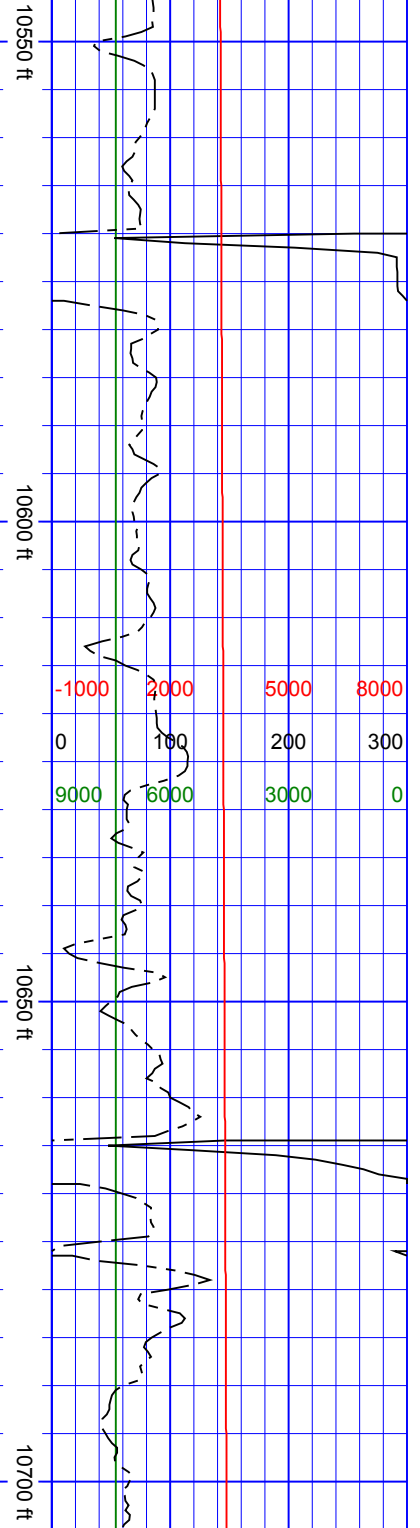
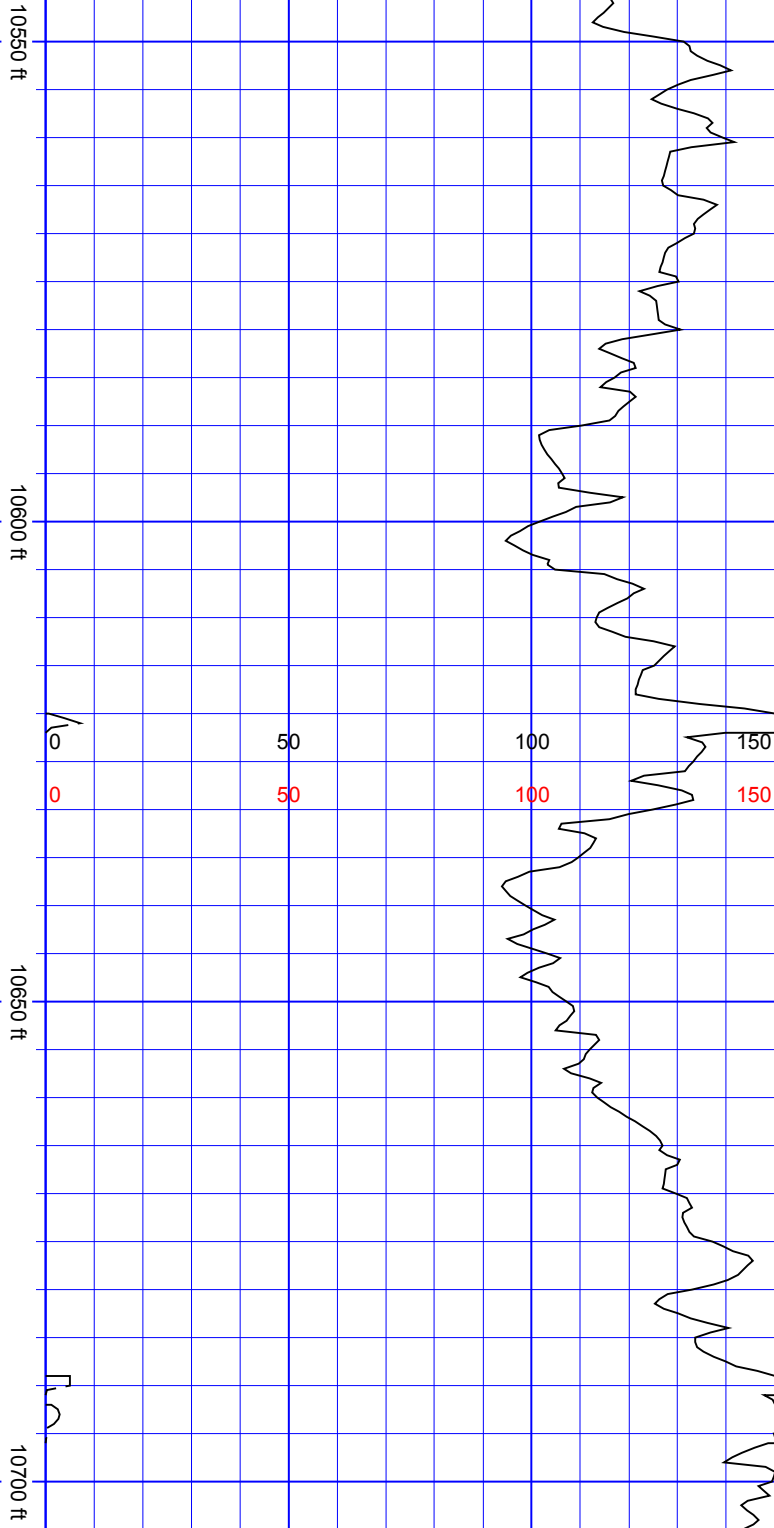


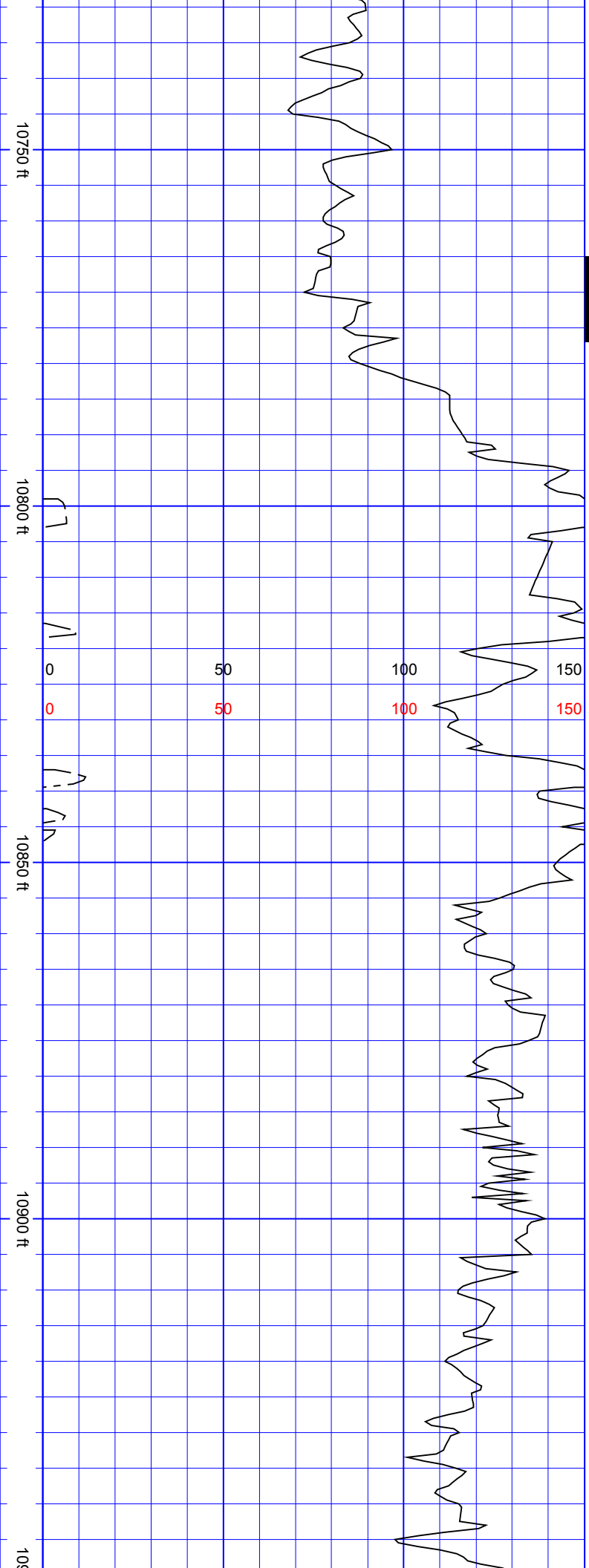
SurveyDepth:10415
TVD:7365.2 Inc:88.73
Azi:88.25
VertSec:3147.55

SurveyDepth:10509
TVD:7367 Inc:89.08
Azi:87.99
VertSec:3241.53

SurveyDepth:10604
TVD:7368.63 Inc:88.95
Azi:87.72
VertSec:3336.51

SurveyDepth:10699
TVD:7370.96 Inc:88.24
Azi:87.55
VertSec:3431.47

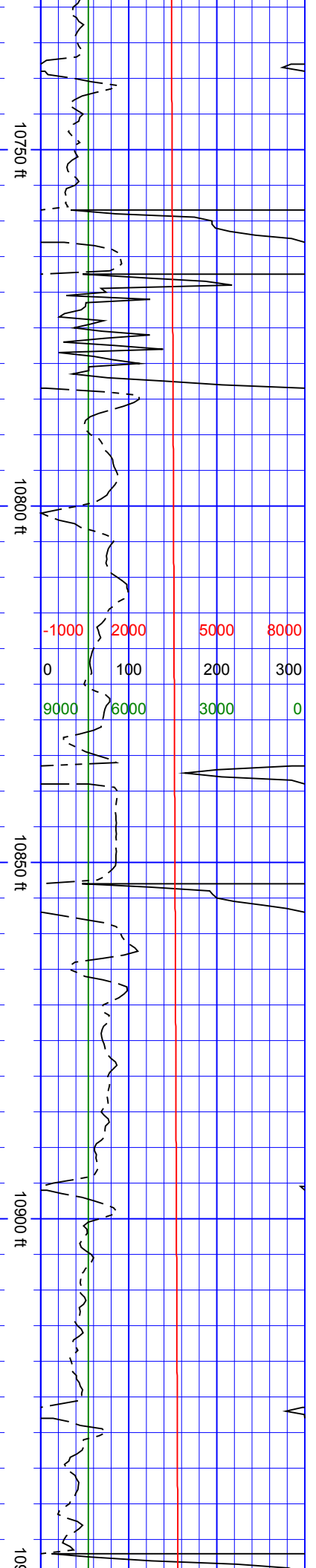


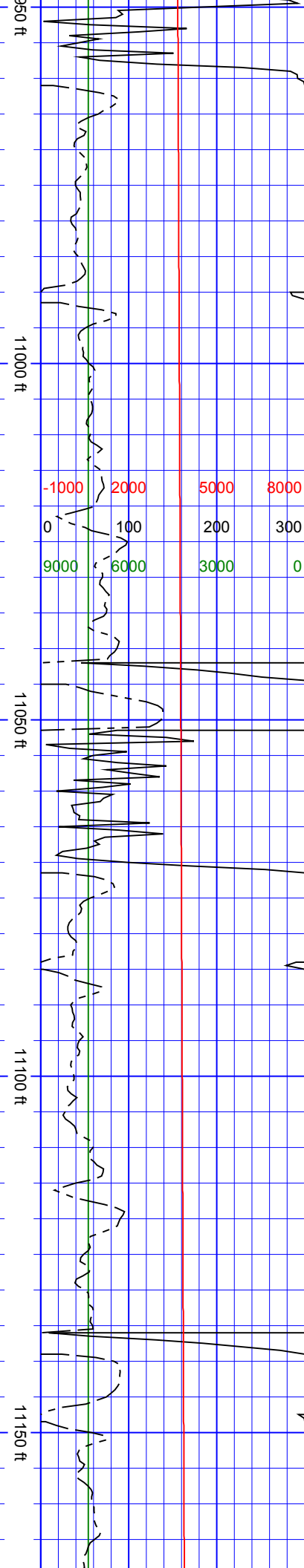


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SurveyDepth:10793
TVD:7372.58 Inc:89.78
Azi:86.84
VertSec:3525.44

SurveyDepth:10888
TVD:7372.29 Inc:90.57
Azi:86.84
VertSec:3620.41



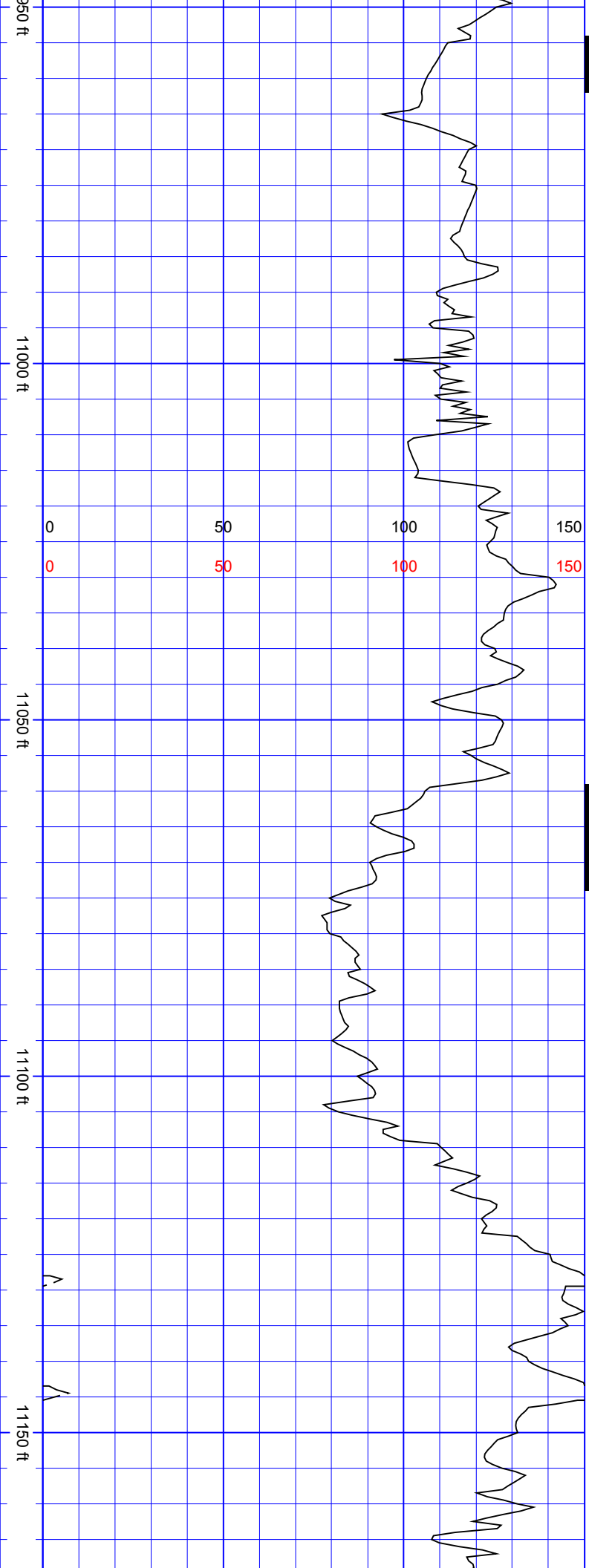


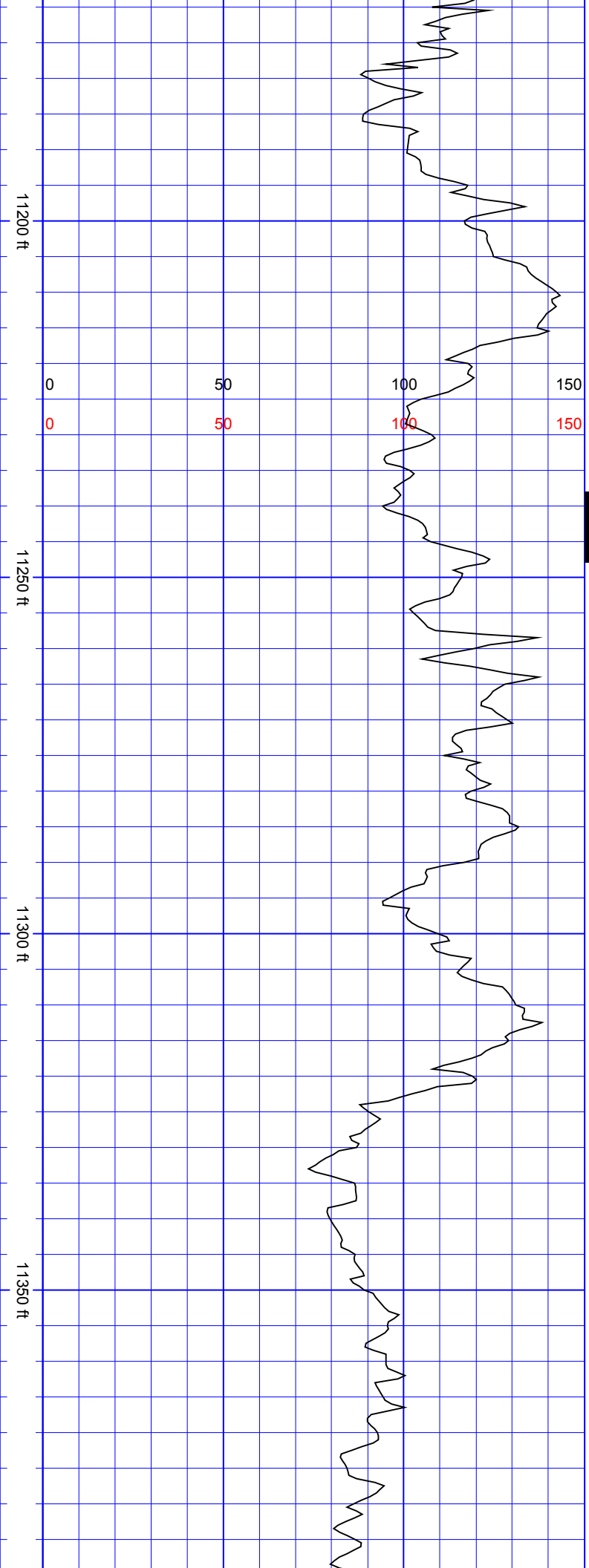
SurveyDepth:10983
TVD:7371.31 Inc:90.62
Azi:86.67
VertSec:3715.36

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SurveyDepth:11077
TVD:7370.51 Inc:90.35
Azi:87.9
VertSec:3809.34

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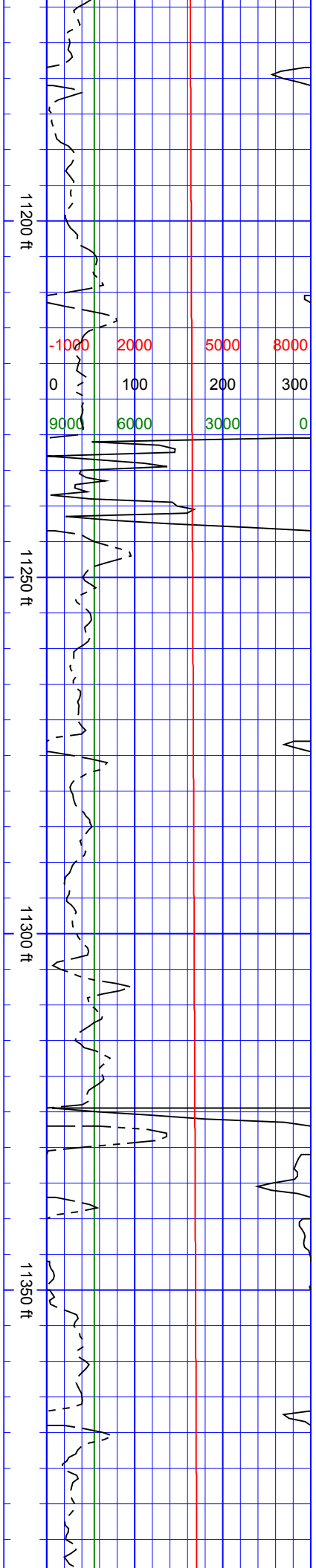


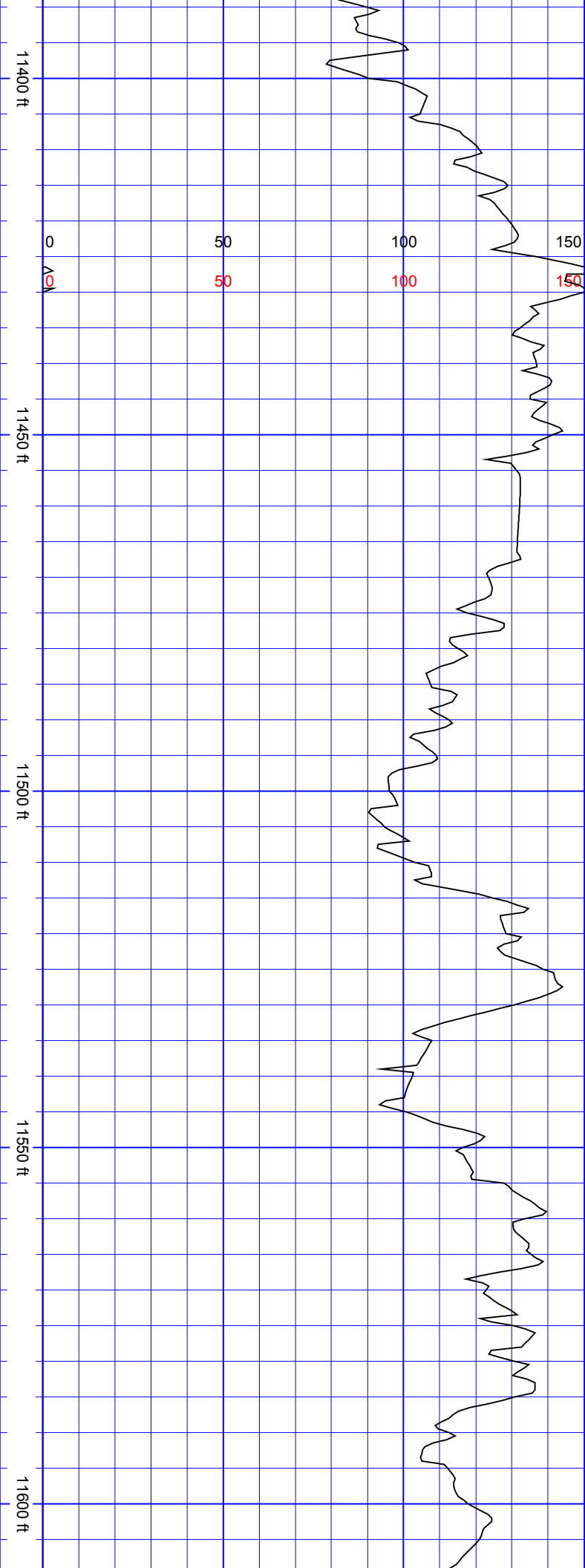
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SurveyDepth:11172
TVD:7369.78 Inc:90.53
Azi:88.16
VertSec:3904.34

SurveyDepth:11266
TVD:7369.56 Inc:89.74
Azi:88.69
VertSec:3998.34

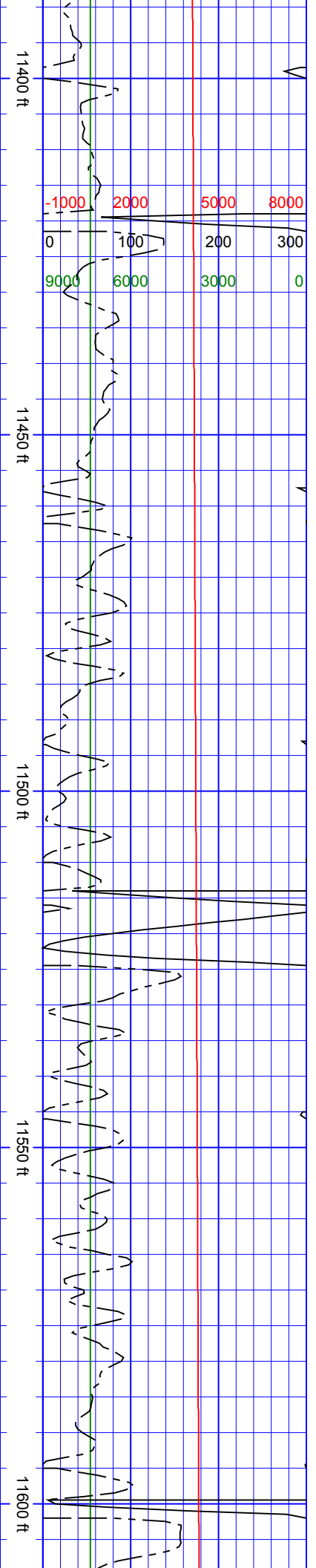
SurveyDepth:11361
TVD:7370.46 Inc:89.17
Azi:88.78
VertSec:4093.33

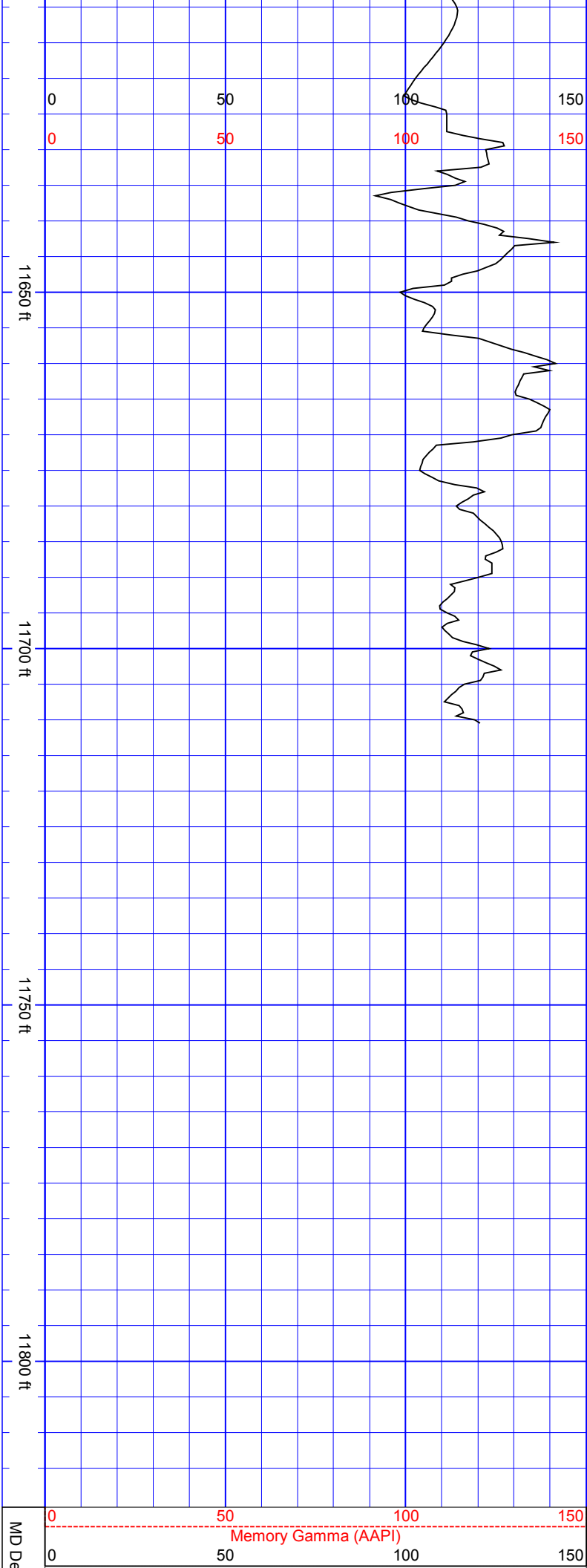




SurveyDepth:11456
TVD:7371.81 Inc:89.21
Azi:88.95
VertSec:4188.32

SurveyDepth:11551
TVD:7373.11 Inc:89.21
Azi:88.86
VertSec:4283.3



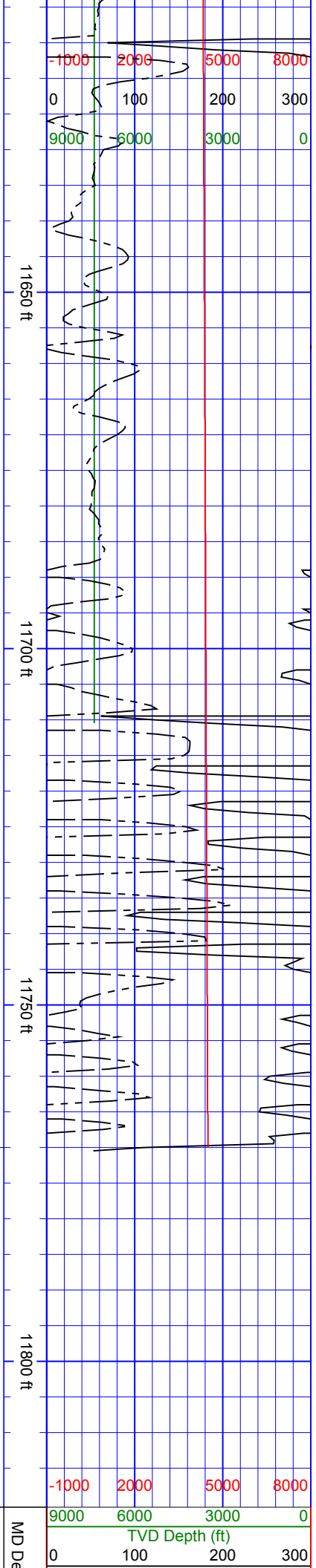


SurveyDepth:11645
TVD:7373.98 Inc:89.74
Azi:88.6 VertSec:4377.3

SurveyDepth:11704
TVD:7374.04 Inc:90.13
Azi:88.42
VertSec:4436.3

Extrapolation to bit
SurveyDepth:11770
TVD:7373.89 Inc:90.13
Azi:88.42
VertSec:4502.3

August 27, 2018



ft" Depth "Scale 5" = 100	Real Time Gamma (AAPL)	Slide - Rotate	Sectional Survey	Date	ft" Depth "Scale 5" = 100	Drill Rate (ft/hr)			
						-1000	2000	5000	8000
						Vertical Section (ft)			
GAMMA RAY						ROP - VERT SEC - TVD			