
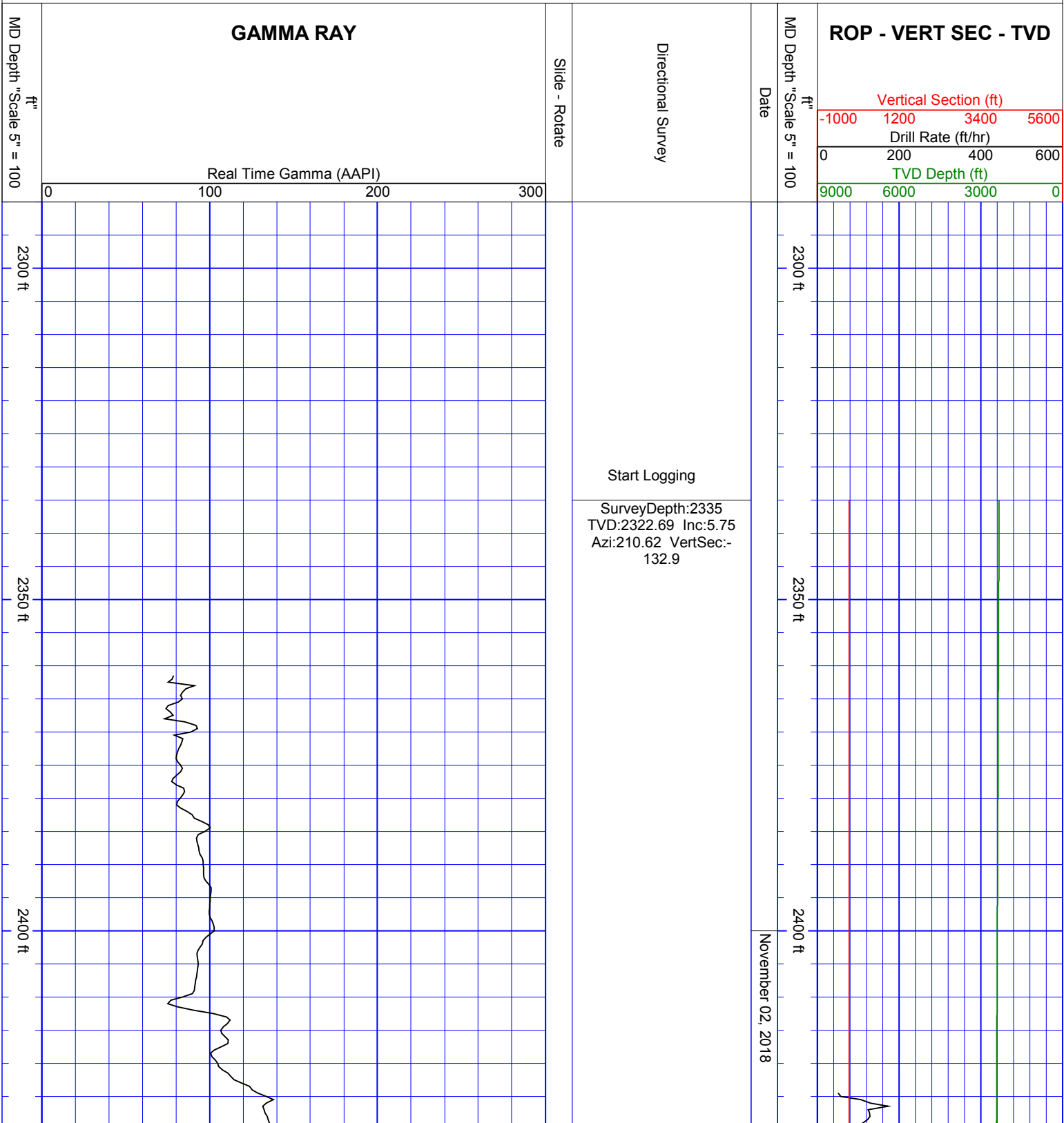


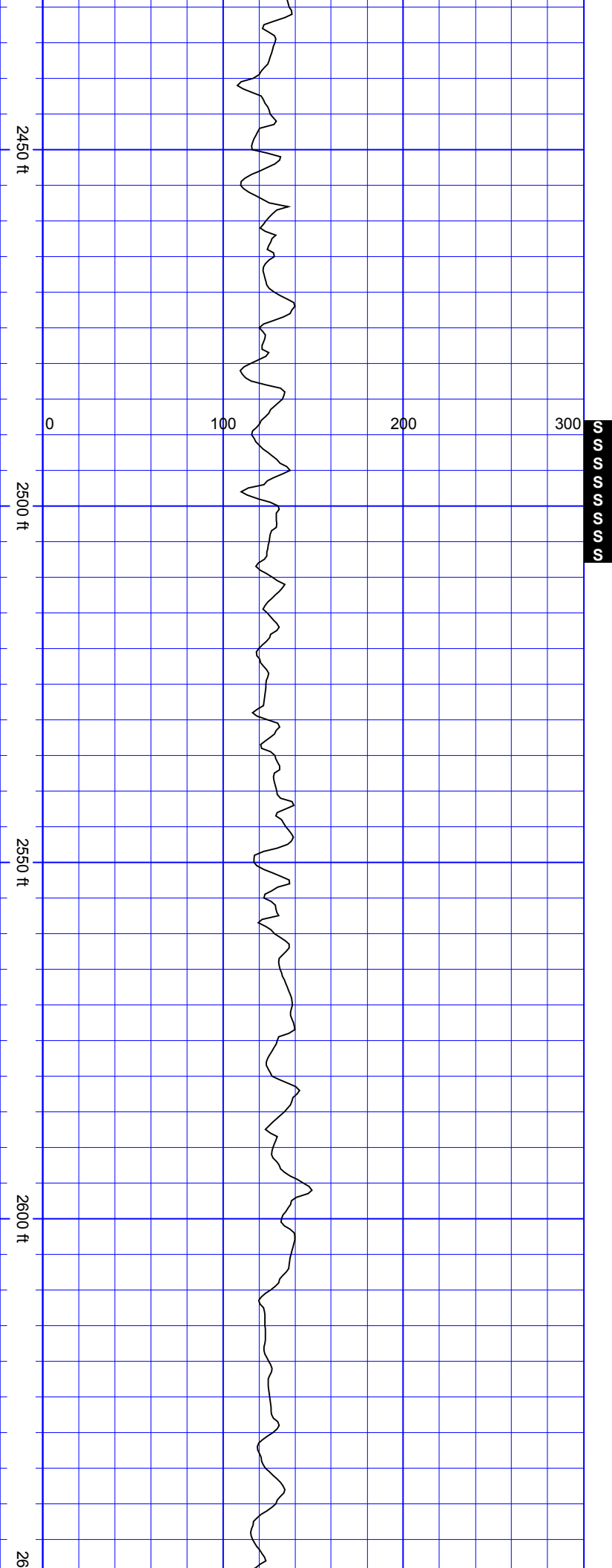
<div>CATHEDRAL</div>				<div>Build & Lateral</div> <div>Job #: 185310Well ID: 16191474</div> <div>Scale: 5" = 100 ftType: MD</div>			
Well Site Information							
Oil Company		Crestone Peak Resources					
Surface Location		S17-T2N-R65W					
Well Name		Melbon Ranch 4I-17H-M265					
API		05-123-47750-00					
Field		DJ BASIN					
State		CO					
Country		USA					
Surface Coordinates							
Well Type		Horizontal					
Latitude		40° 8' 4.87 N					
Longitude		104° 41' 47.89 W					
N / S Coordinates		1,292,930.21 us/ft					
E / W Coordinates		3,224,623.87 us/ft					
Azimuth Reference		True North					
Grid Convergence		0.52°					
MWD Engineers							
Lead Hand		Deric Group					
Second Hand		Jerry Shannahan					
Perm Datum		Ground		Elevation		4,956.00 ft	
Log depth measured from KB is		23.00 ft		above perm datum.		KB = 4,979.00 ft	
Total Depth		12,038.00 ft		Spud Date		Nov/02/2018	
(MD) Log Interval		Start Depth		2,361.37 ft		End Date	
						Nov/04/2018	
				End Depth		12,038.14 ft	
Bore Hole Record							
Hole Size		From		To			
13.50 in		0.00 ft		2,424.00 ft			
8.50 in		2,424.00 ft		12,038.00 ft			
Casing Record							
Type		Size		WGT		From	
LTC		9.63 in		40.00 lbs/ft		0.00 ft	
						2,400.00 ft	

Run Data					
Bit Run Number	1				
Start Date & Time	Nov/02/2018 06:00:00				
End Date & Time	Nov/05/2018 01:00:00				
Run Hours	67.00				
Depth In	2,424.00 ft				
Depth Out	12,038.00 ft				
Total Gamma Correction	6.00				
Gamma to Bit	62.95 ft				
Resistivity to Bit	-				
Mud Type	OBM				
Density	10.20 ppg				
Viscosity	45.00 sec/qt				
PH	-				
Fluid Loss	-				
K+ ppm	-				
CL- ppm	227,890 ppm				
Max Mud Temp	255.00 °F				
Mud Report Depth	8,118.00 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.

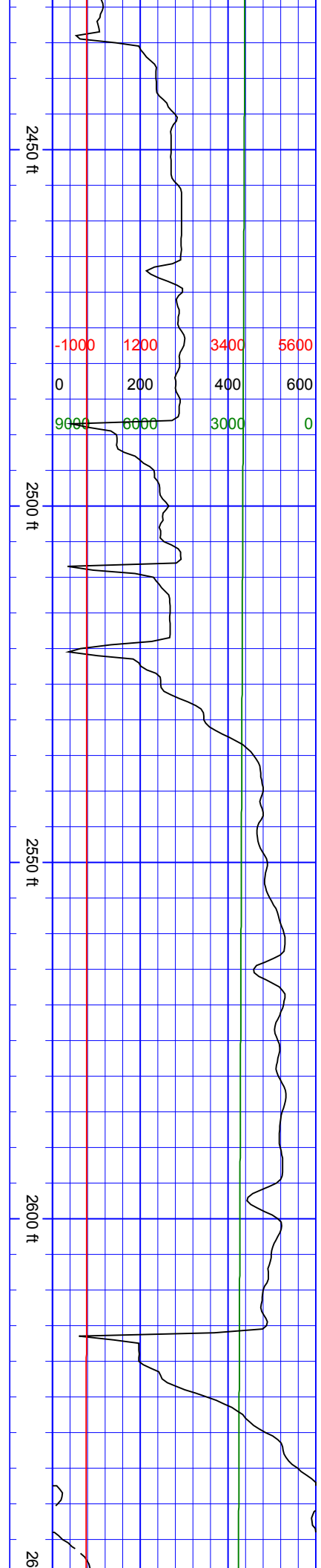


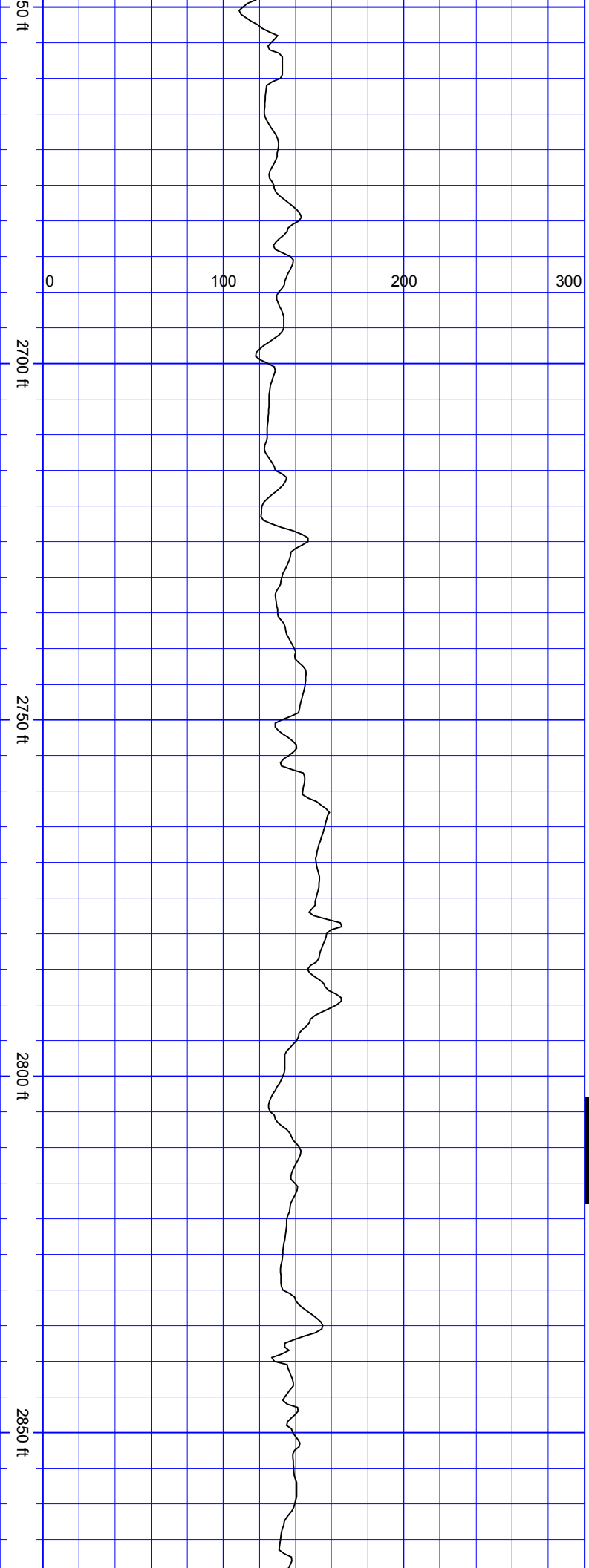


SurveyDepth:2451
TVD:2438.22 Inc:4.53
Azi:205.62 VertSec:-136.76

SurveyDepth:2545
TVD:2531.83 Inc:5.93
Azi:215.38 VertSec:-140.31

SurveyDepth:2639
TVD:2625.37 Inc:5.41
Azi:214.41 VertSec:-144.71

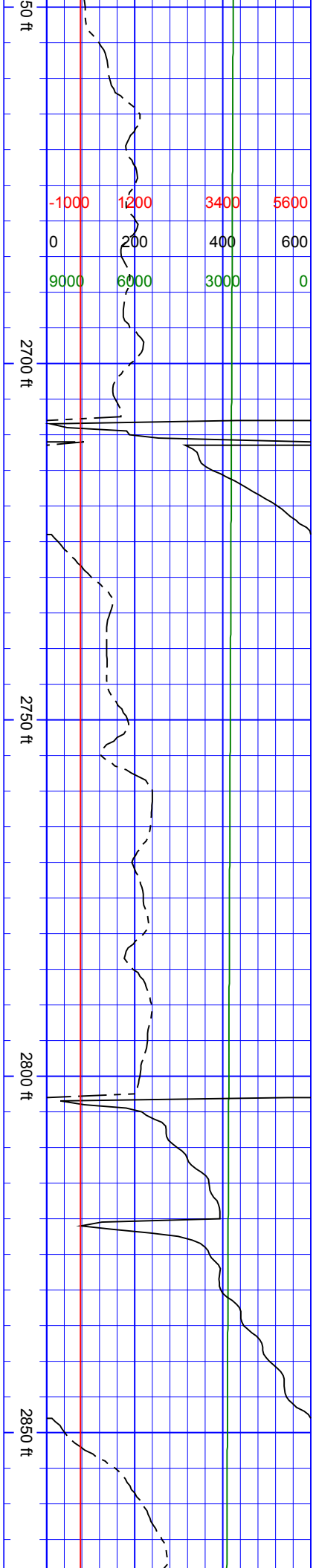


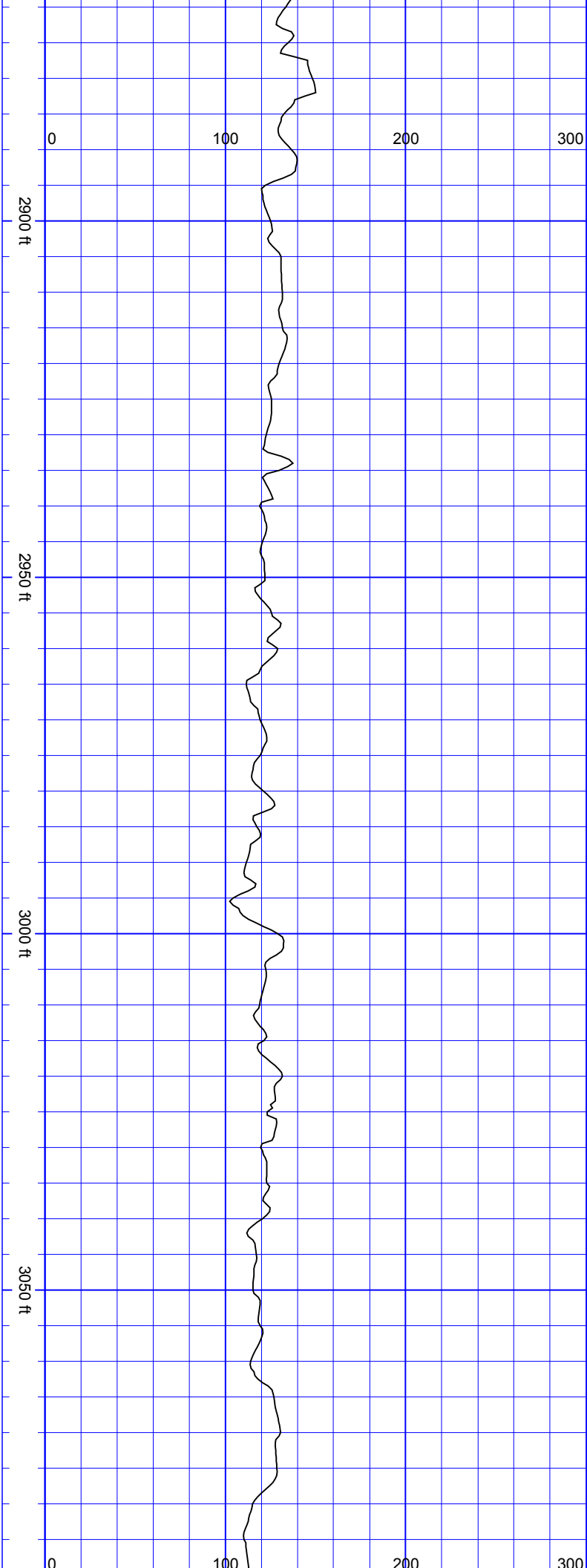


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SurveyDepth:2734
TVD:2720.03 Inc:4.22
Azi:210.81 VertSec:-
148.23

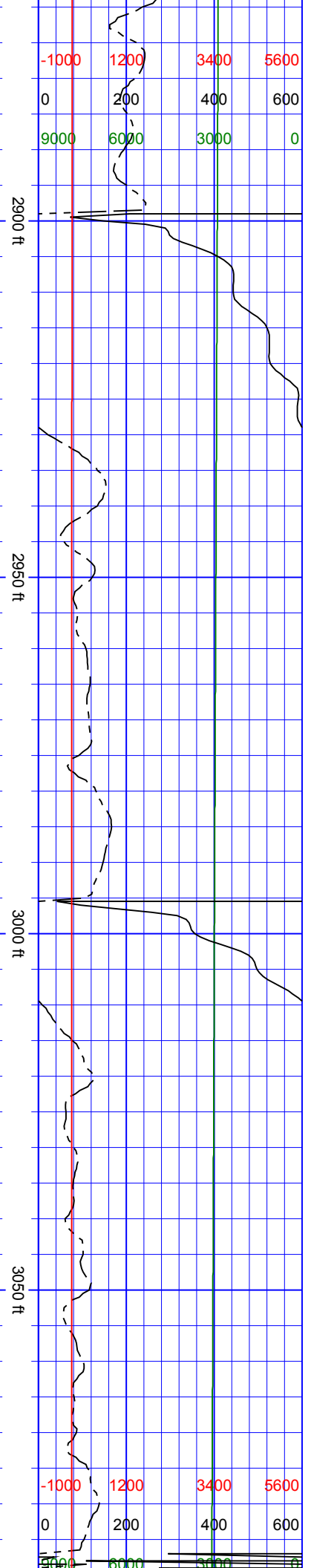
SurveyDepth:2828
TVD:2813.69 Inc:5.49
Azi:213.97 VertSec:-
151.71

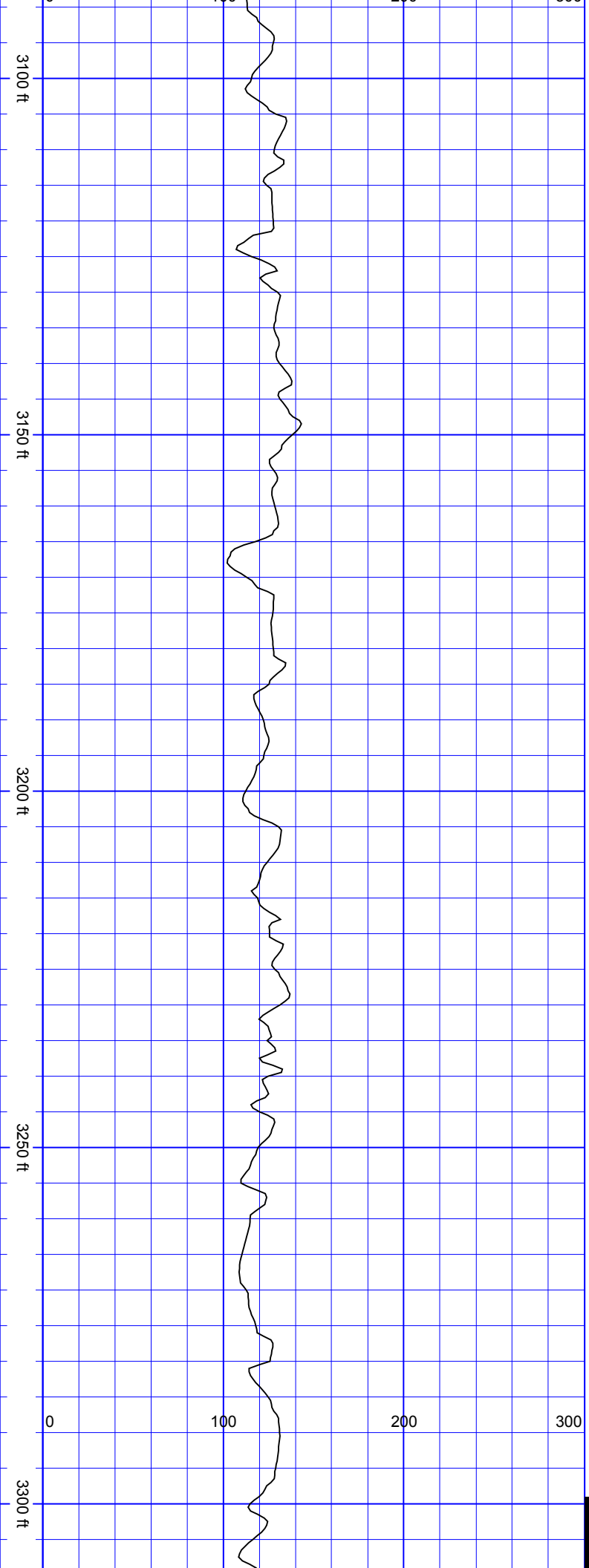




SurveyDepth:2922
TVD:2907.32 Inc:4.75
Azi:213.88 VertSec:-
155.56

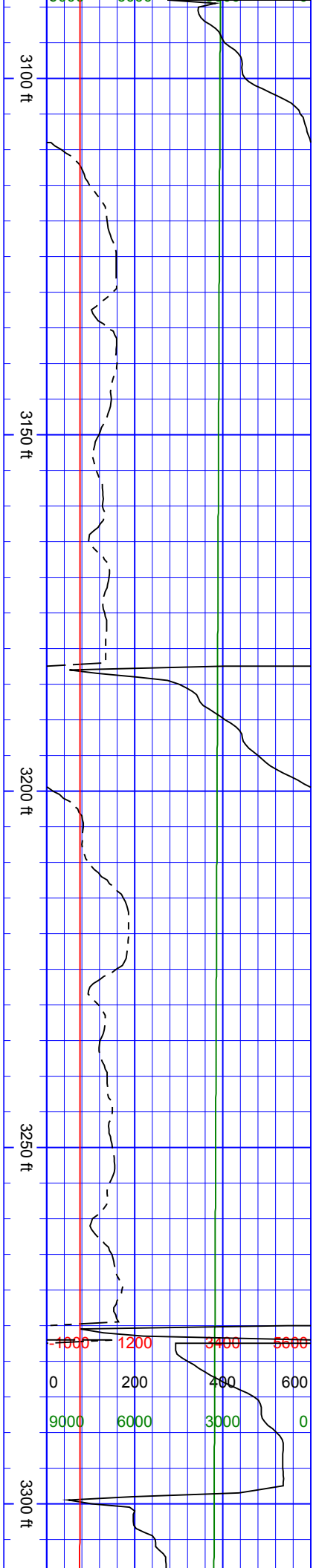
SurveyDepth:3017
TVD:3002.01 Inc:4.53
Azi:211.25 VertSec:-
158.93

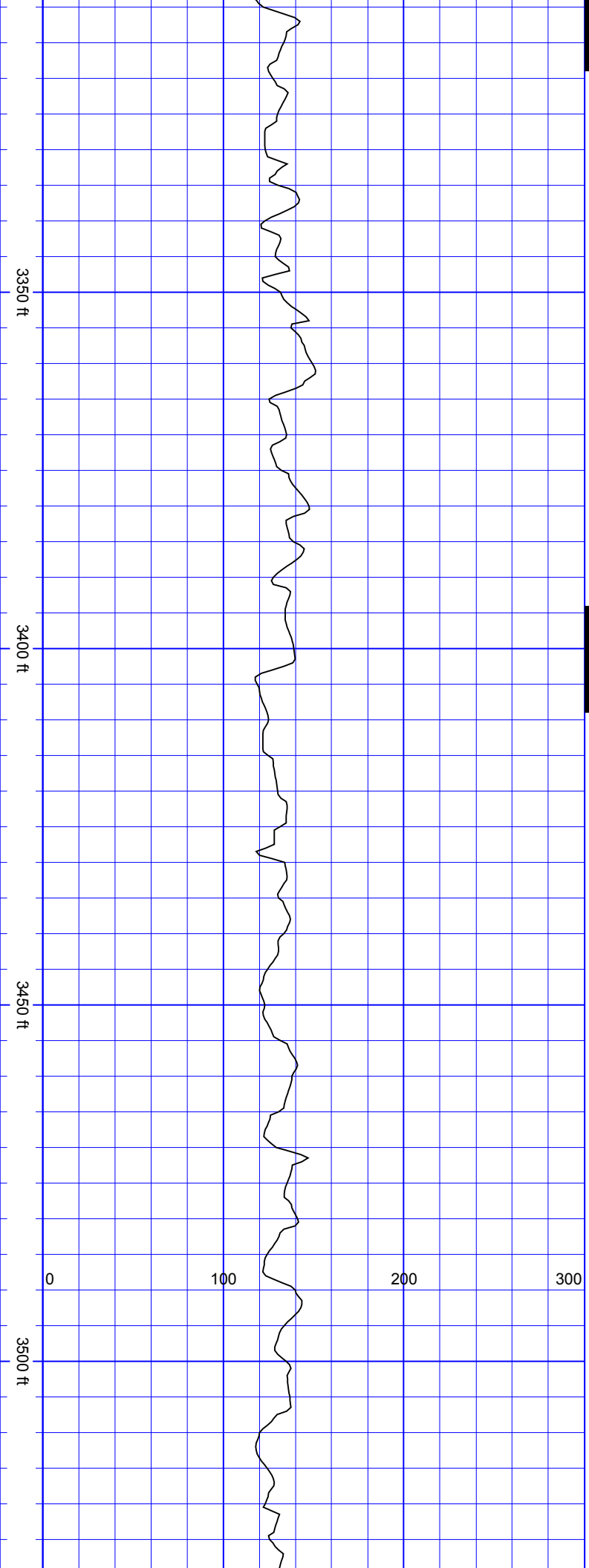




SurveyDepth:3112
TVD:3096.7 Inc:4.66
Azi:207.55 VertSec:-
161.87

SurveyDepth:3230
TVD:3214.36 Inc:4.04
Azi:202.28 VertSec:-
164.71

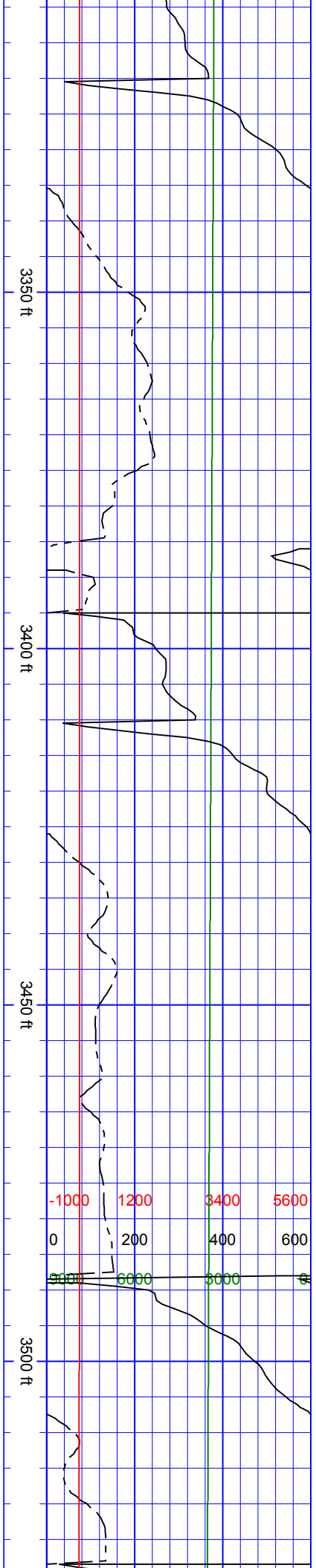


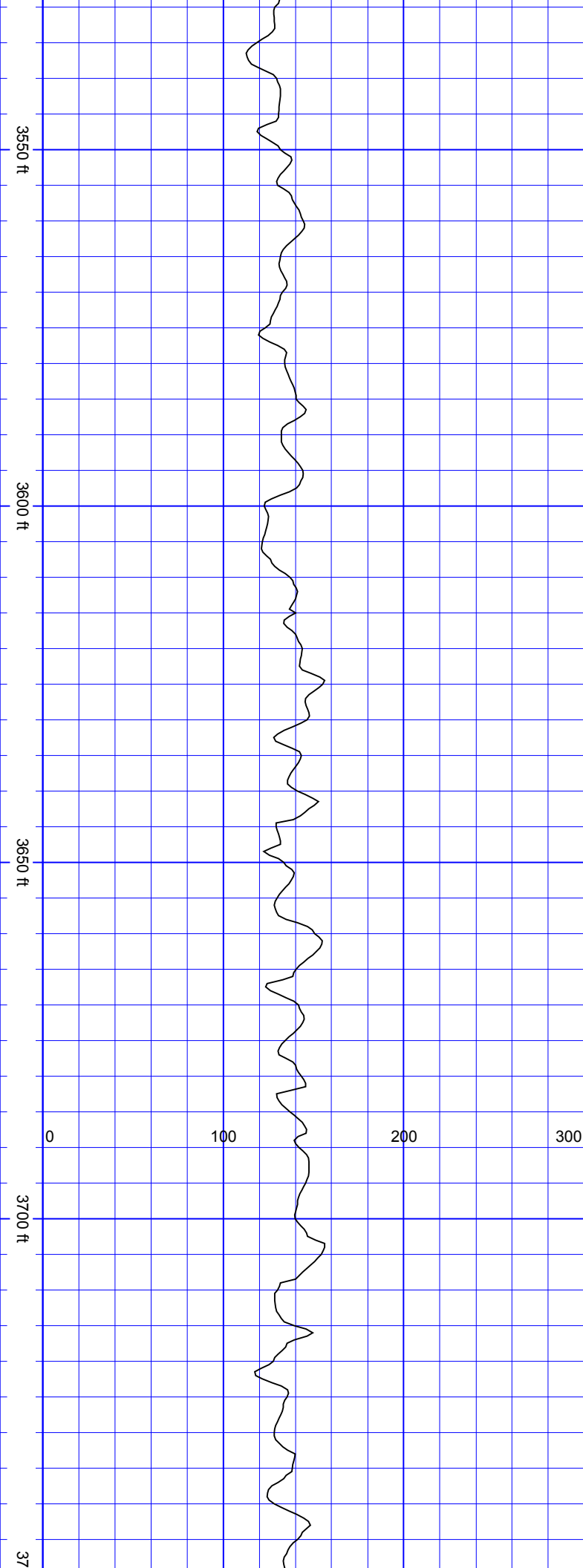


SurveyDepth:3325
TVD:3309.03 Inc:5.63
Azi:221.79 VertSec:-
168.3

SurveyDepth:3419
TVD:3402.43 Inc:7.25
Azi:220.47 VertSec:-
174.26

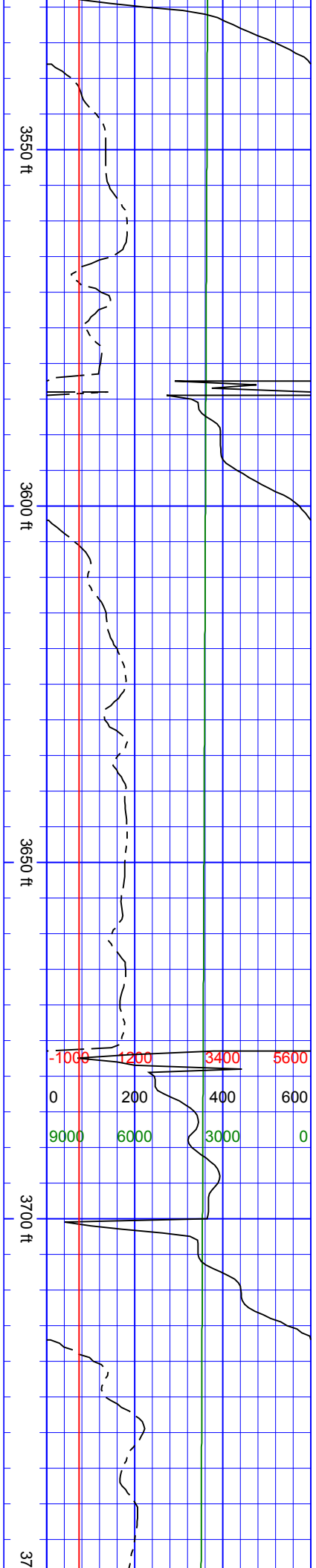
SurveyDepth:3513
TVD:3495.78 Inc:6.24
Azi:217.57 VertSec:-
180.19



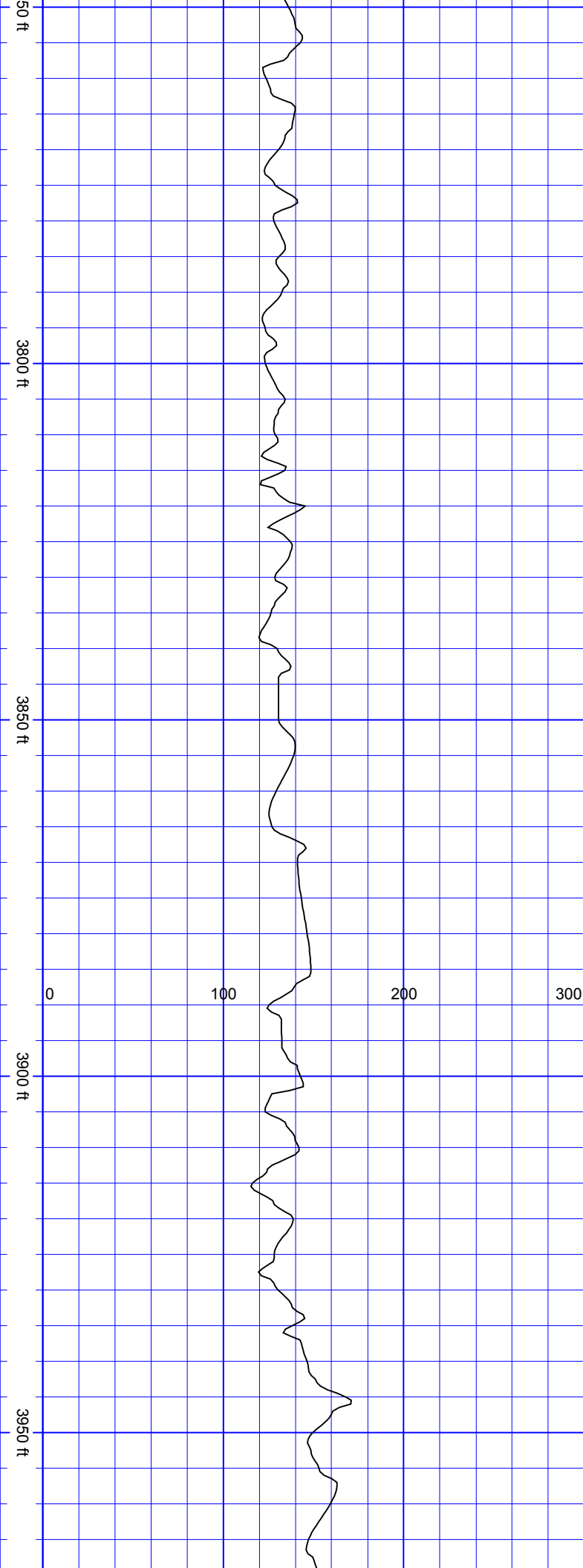


SurveyDepth:3607
TVD:3589.36 Inc:4.61
Azi:209.84 VertSec:-
184.31

SurveyDepth:3703
TVD:3684.96 Inc:5.76
Azi:215.55 VertSec:-
188.17

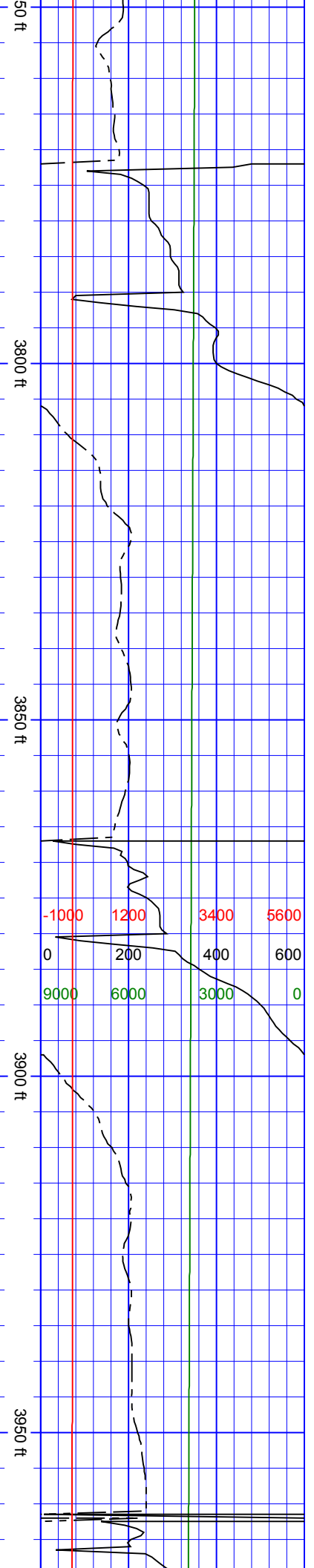


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0	9000	6000	3000	0



SurveyDepth:3797
TVD:3778.4 Inc:6.77
Azi:218.89 VertSec:-
193.41

SurveyDepth:3892
TVD:3872.76 Inc:6.59
Azi:218.54 VertSec:-
199.28

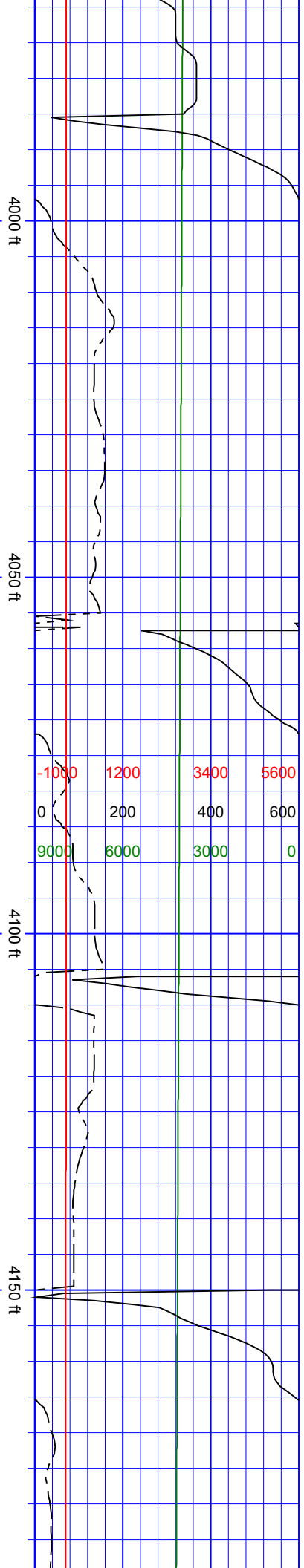
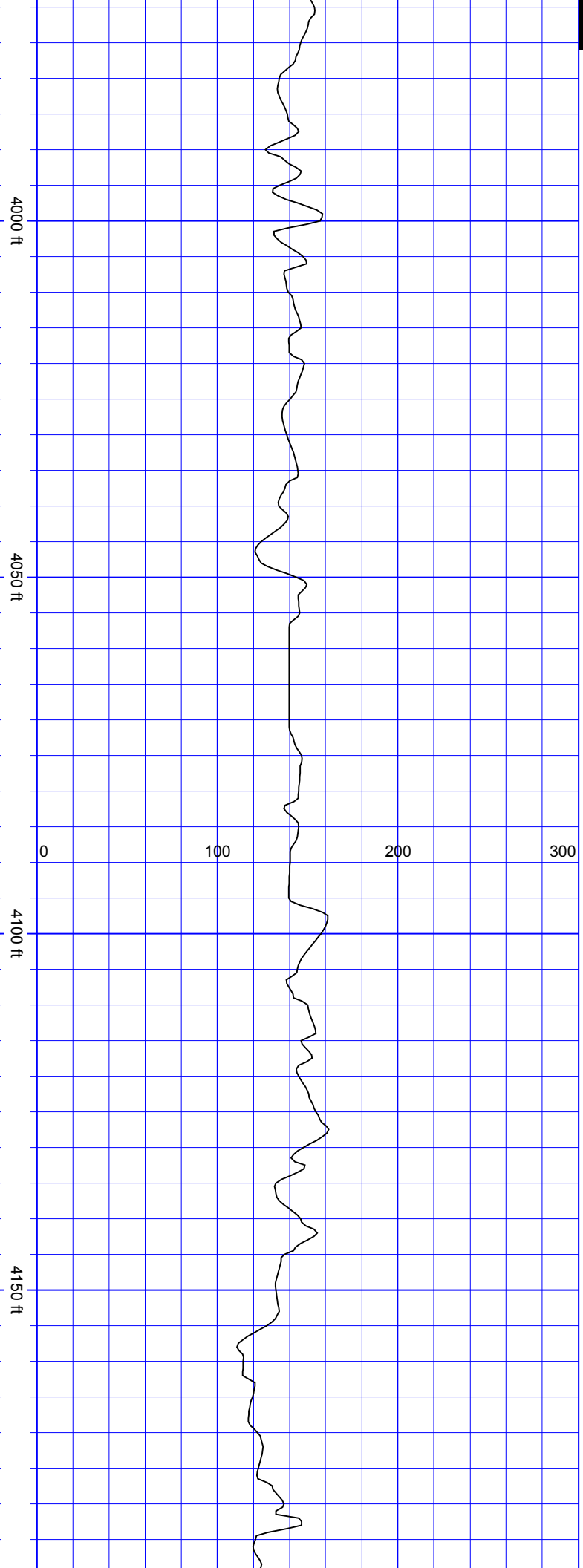


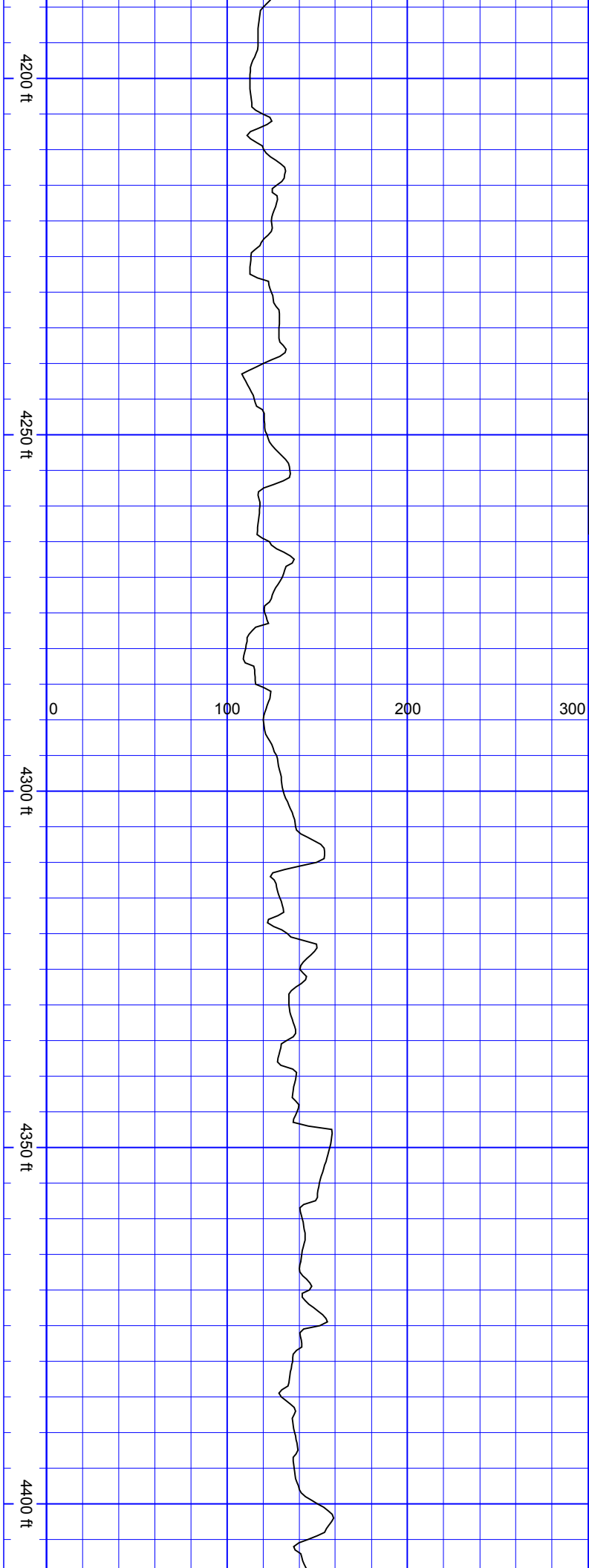
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SurveyDepth:3986
TVD:3966.09 Inc:7.08
Azi:226.54 VertSec:-
205.85

SurveyDepth:4081
TVD:4060.47 Inc:5.98
Azi:220.65 VertSec:-
212.38

SurveyDepth:4175
TVD:4154.04 Inc:5.01
Azi:219.07 VertSec:-
217.32

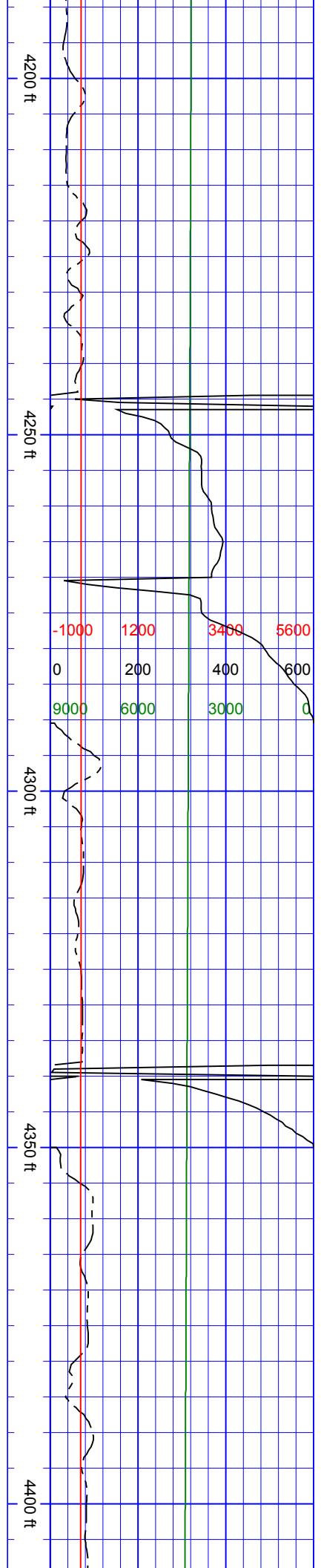


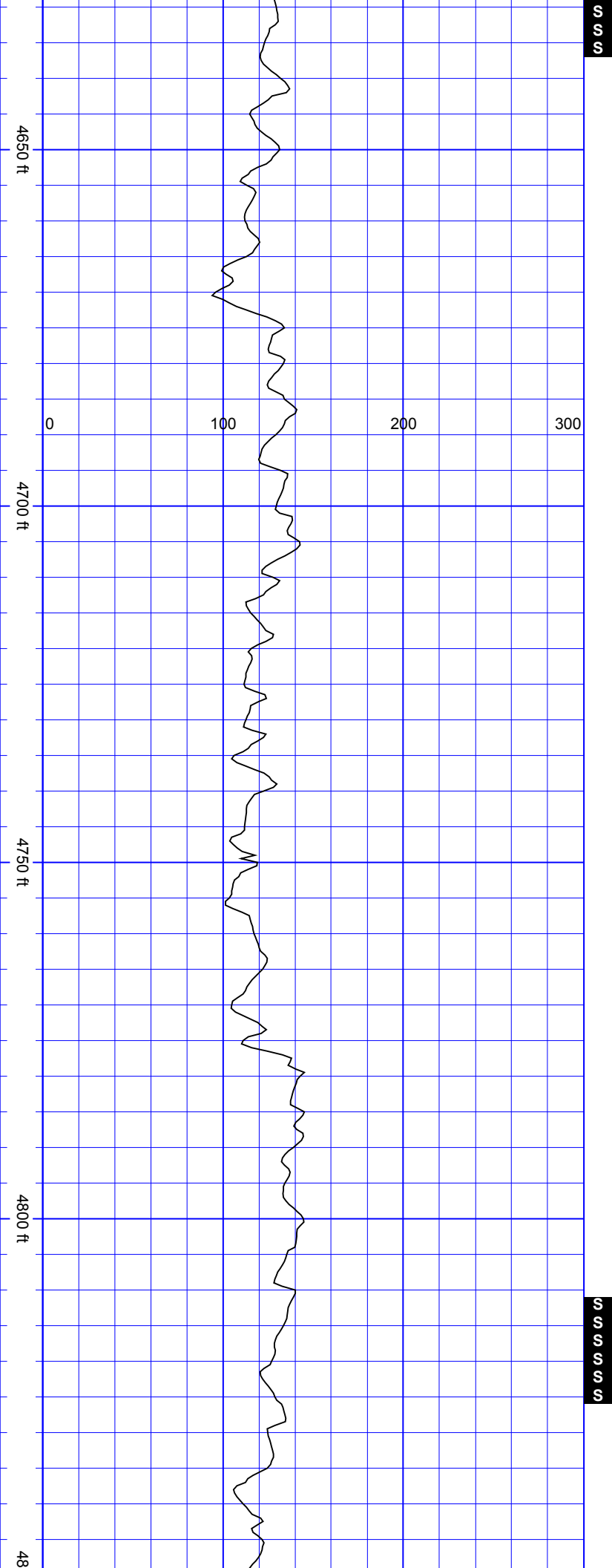


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SurveyDepth:4269
TVD:4247.52 Inc:6.99
Azi:217.57 VertSec:-
222.47

SurveyDepth:4364
TVD:4341.89 Inc:6.24
Azi:226.1 VertSec:-
228.73



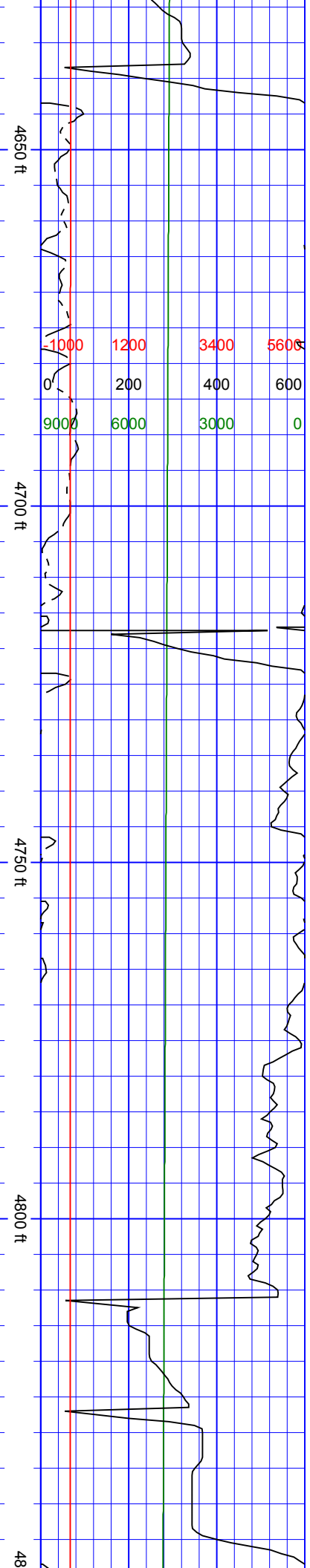


SurveyDepth:4647
TVD:4623.26 Inc:6.72
Azi:223.46 VertSec:-
249.42

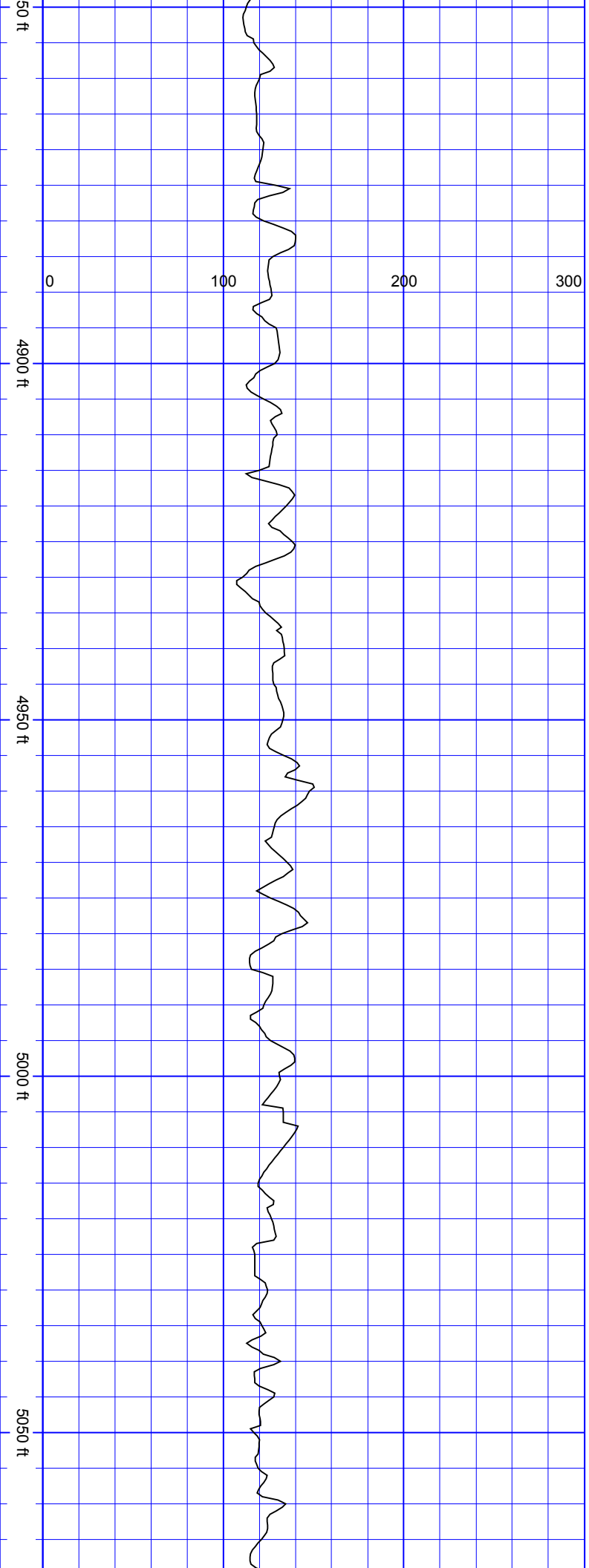
SurveyDepth:4742
TVD:4717.71 Inc:5.63
Azi:221.53 VertSec:-
255.42

SurveyDepth:4836
TVD:4811.14 Inc:6.99
Azi:209.49 VertSec:-
260.28

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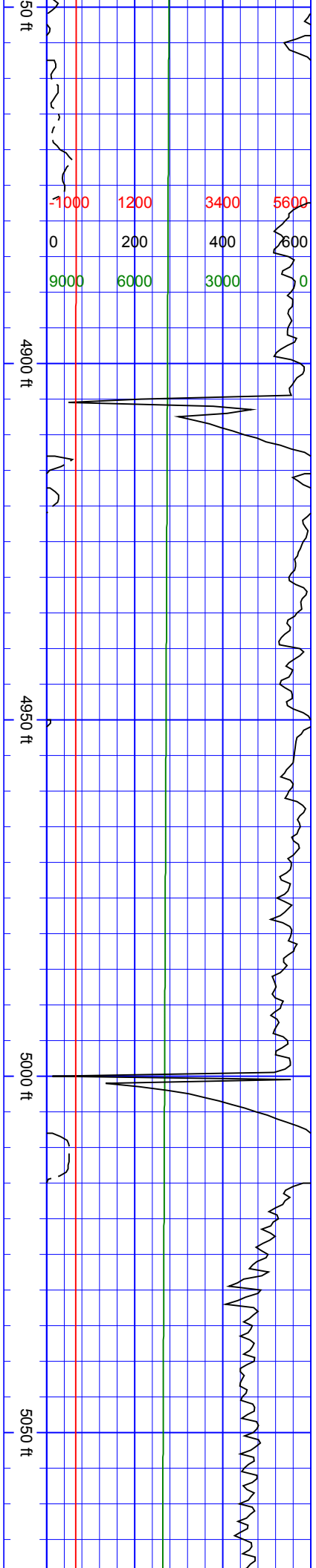


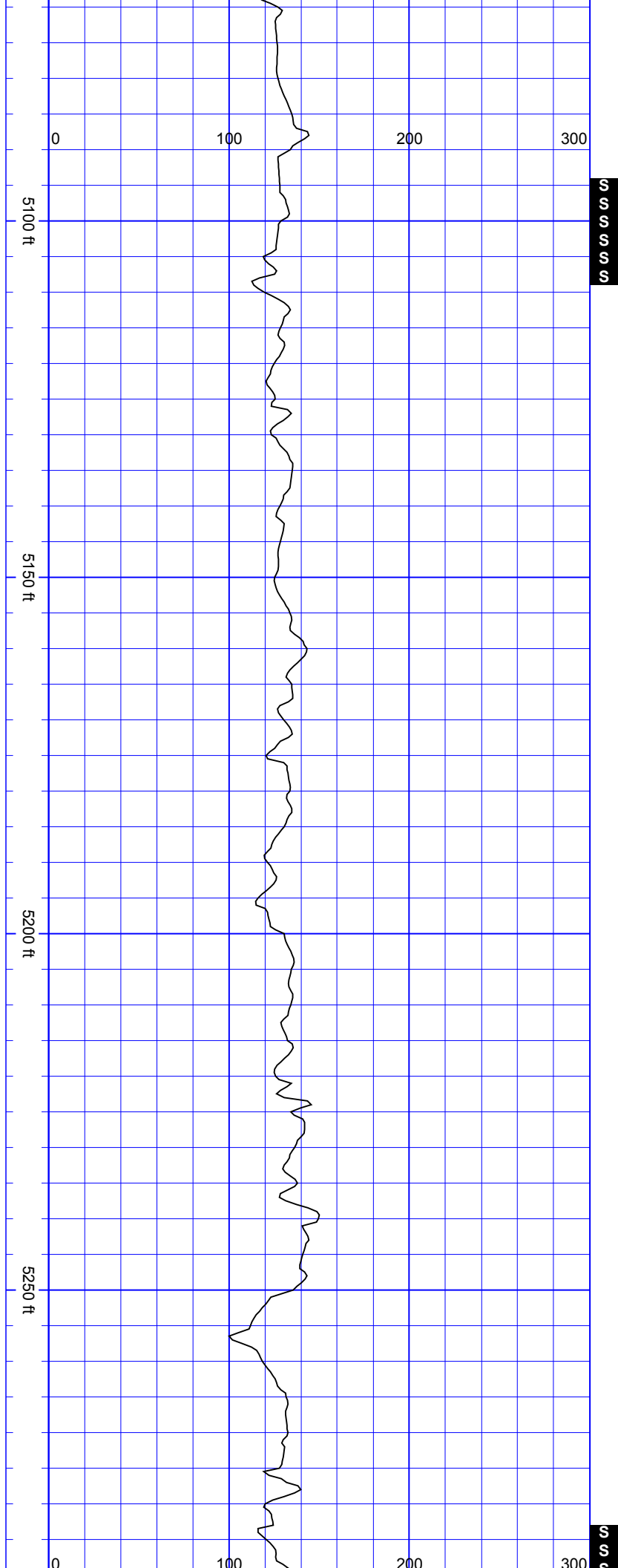
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SurveyDepth:4930
TVD:4904.53 Inc:6.11
Azi:208.35 VertSec:-
264.36

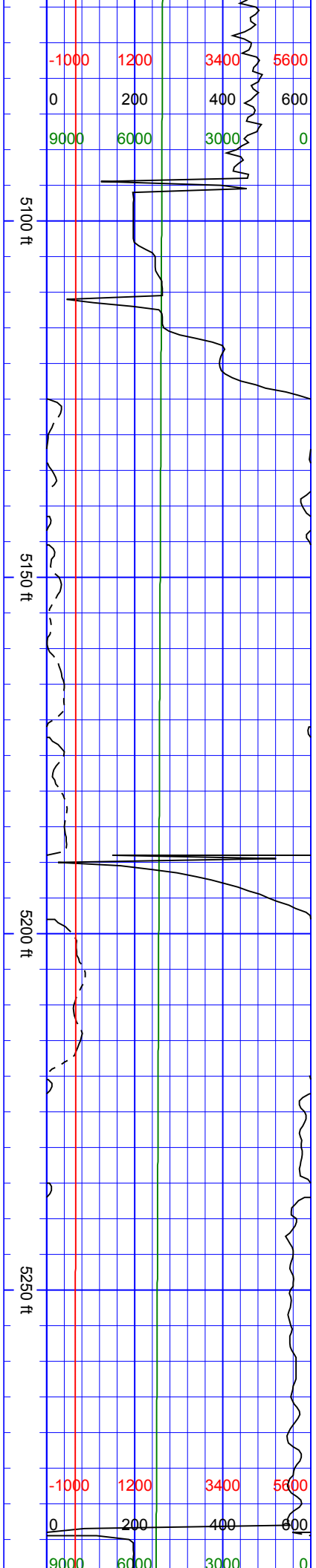
SurveyDepth:5025
TVD:4999.05 Inc:5.36
Azi:209.66 VertSec:-
267.97

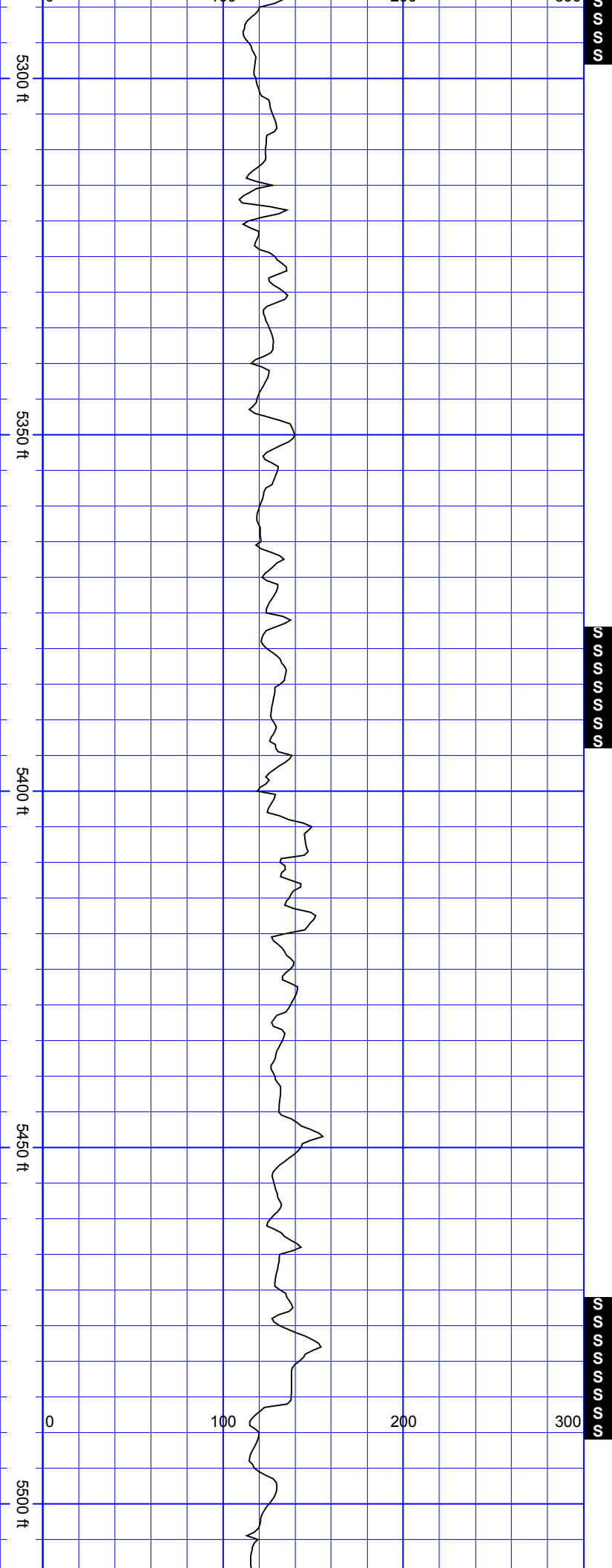




SurveyDepth:5120
TVD:5093.54 Inc:6.55
Azi:204.74 VertSec:-
271.39

SurveyDepth:5214
TVD:5187.04 Inc:5.27
Azi:197.97 VertSec:-
273.91

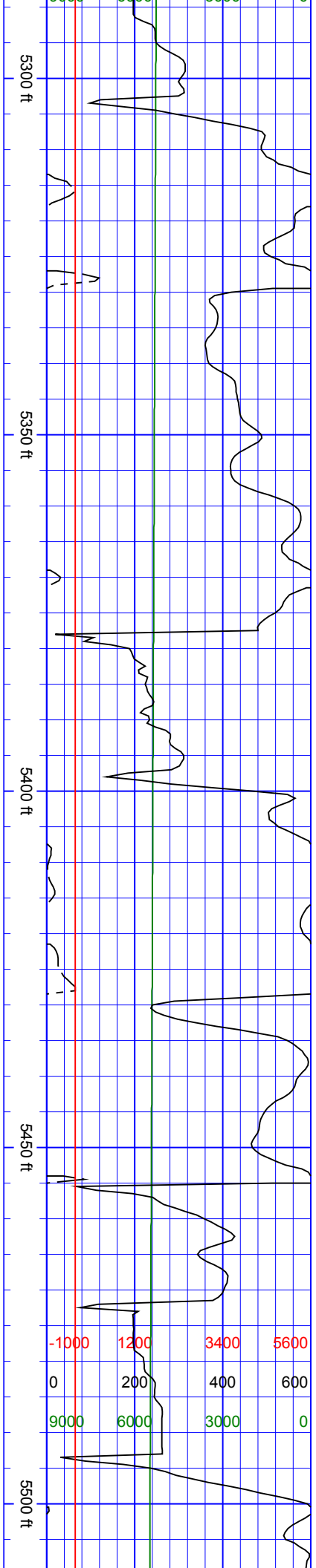




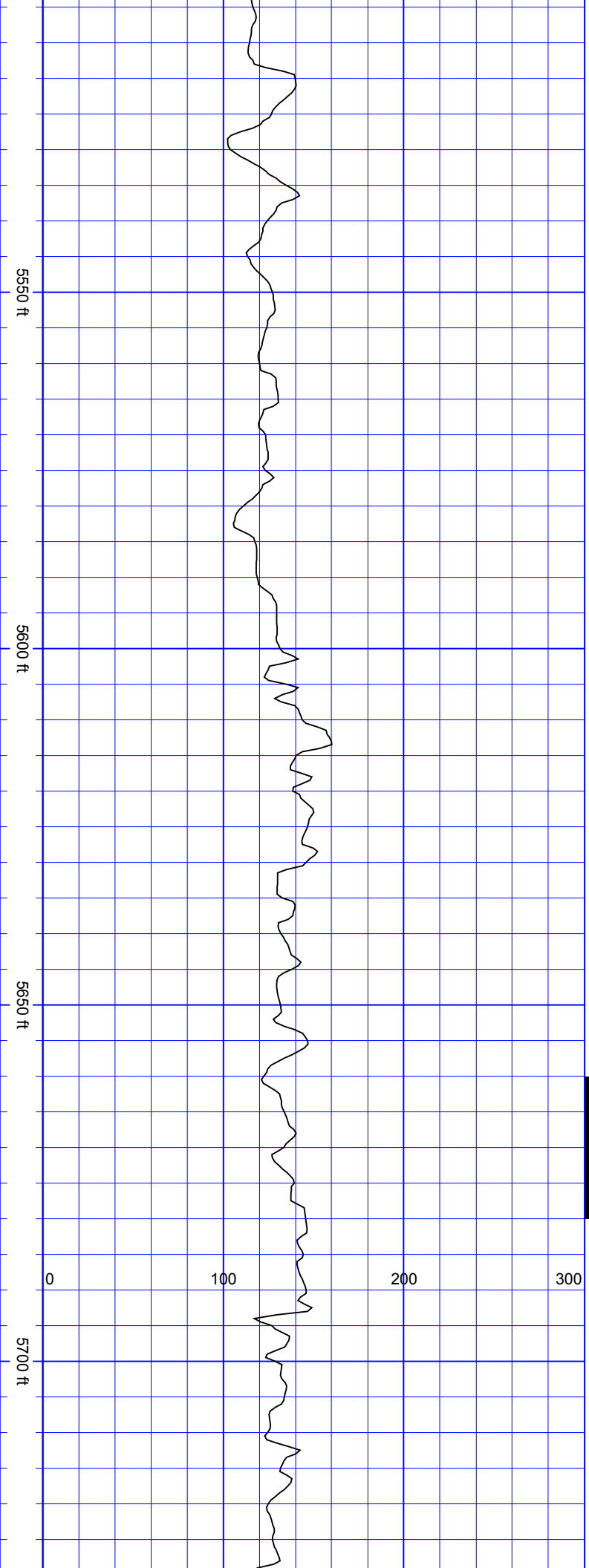
SurveyDepth:5308
TVD:5280.65 Inc:5.14
Azi:201.49 VertSec:-
275.84

SurveyDepth:5402
TVD:5374.25 Inc:5.41
Azi:211.33 VertSec:-
278.78

SurveyDepth:5497
TVD:5468.73 Inc:6.59
Azi:219.77 VertSec:-
283.63



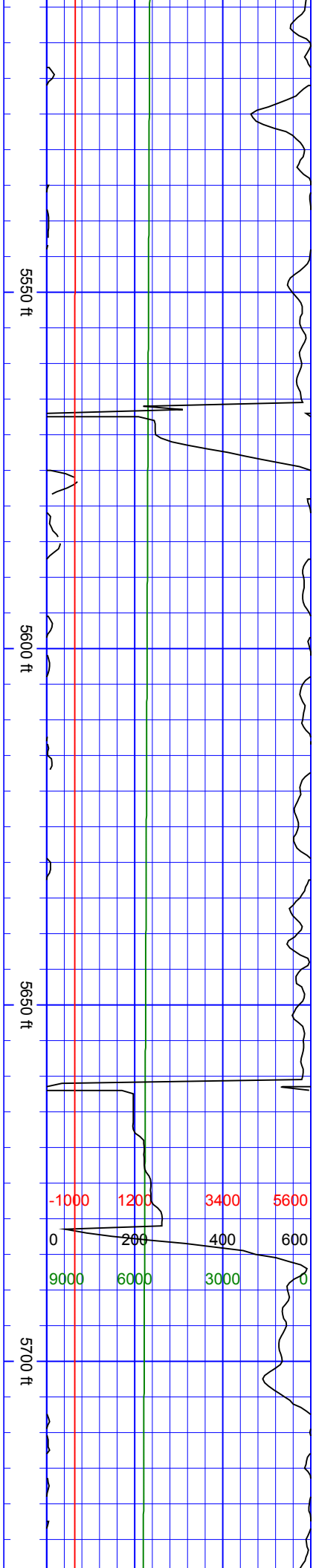
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0	200	400	600
9000	6000	3000	0

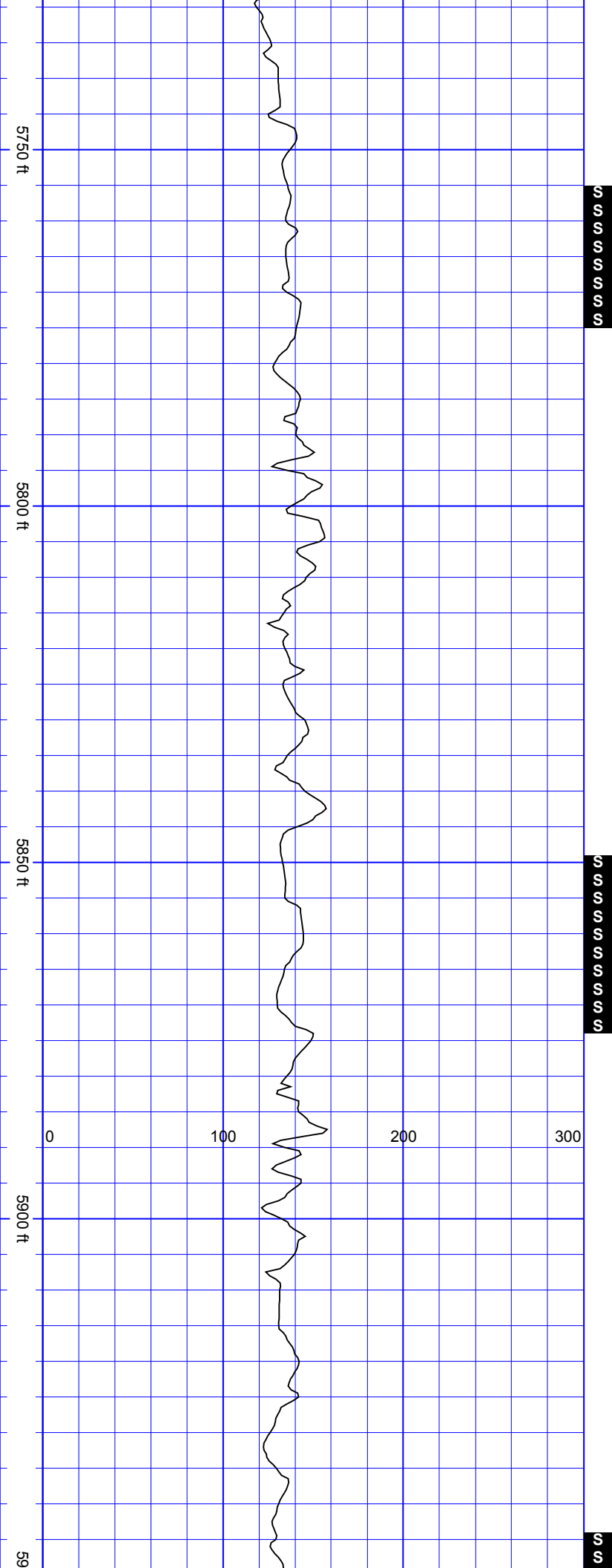


SurveyDepth:5591
TVD:5562.2 Inc:5.63
Azi:213.53 VertSec:-
288.67

SurveyDepth:5686
TVD:5656.78 Inc:5.23
Azi:229 VertSec:-293.7

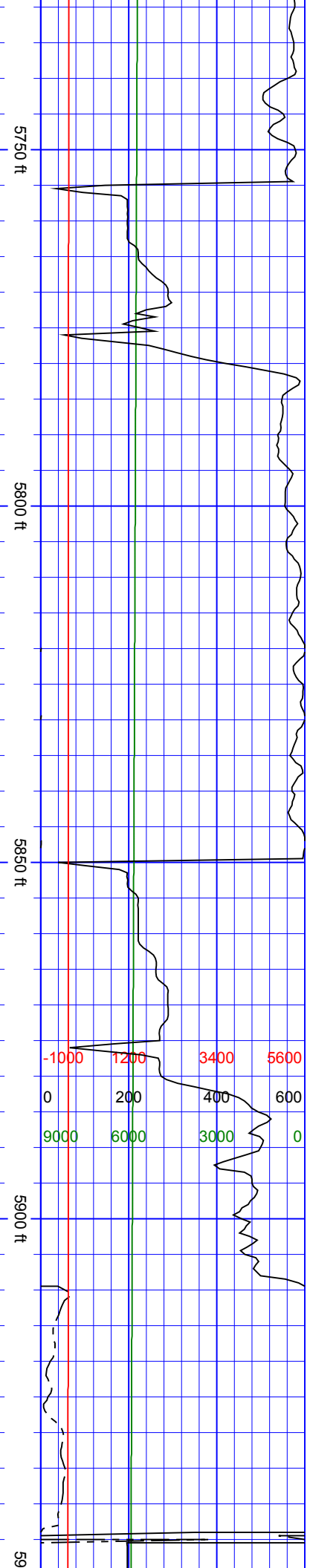
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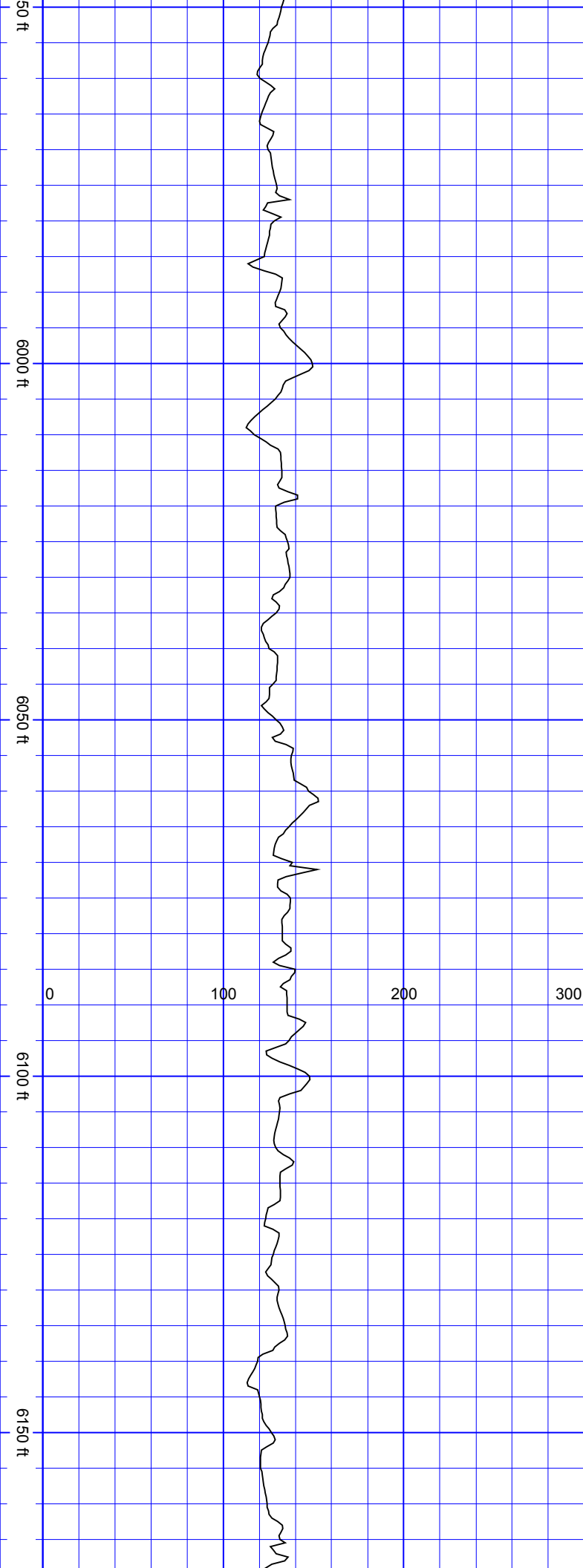




SurveyDepth:5780
TVD:5750.36 Inc:5.54
Azi:224.61 VertSec:-
299.38

SurveyDepth:5875
TVD:5844.84 Inc:6.5
Azi:230.41 VertSec:-
305.93





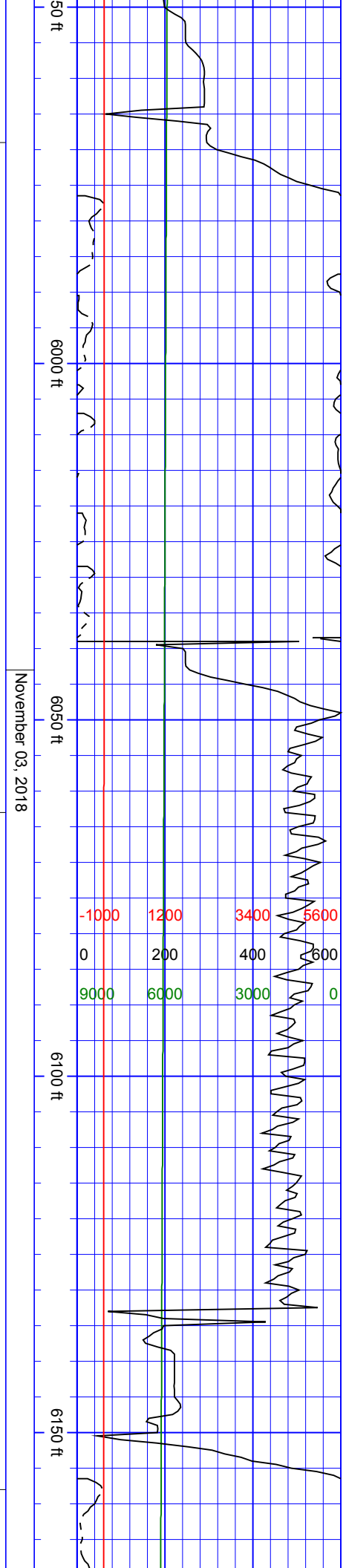
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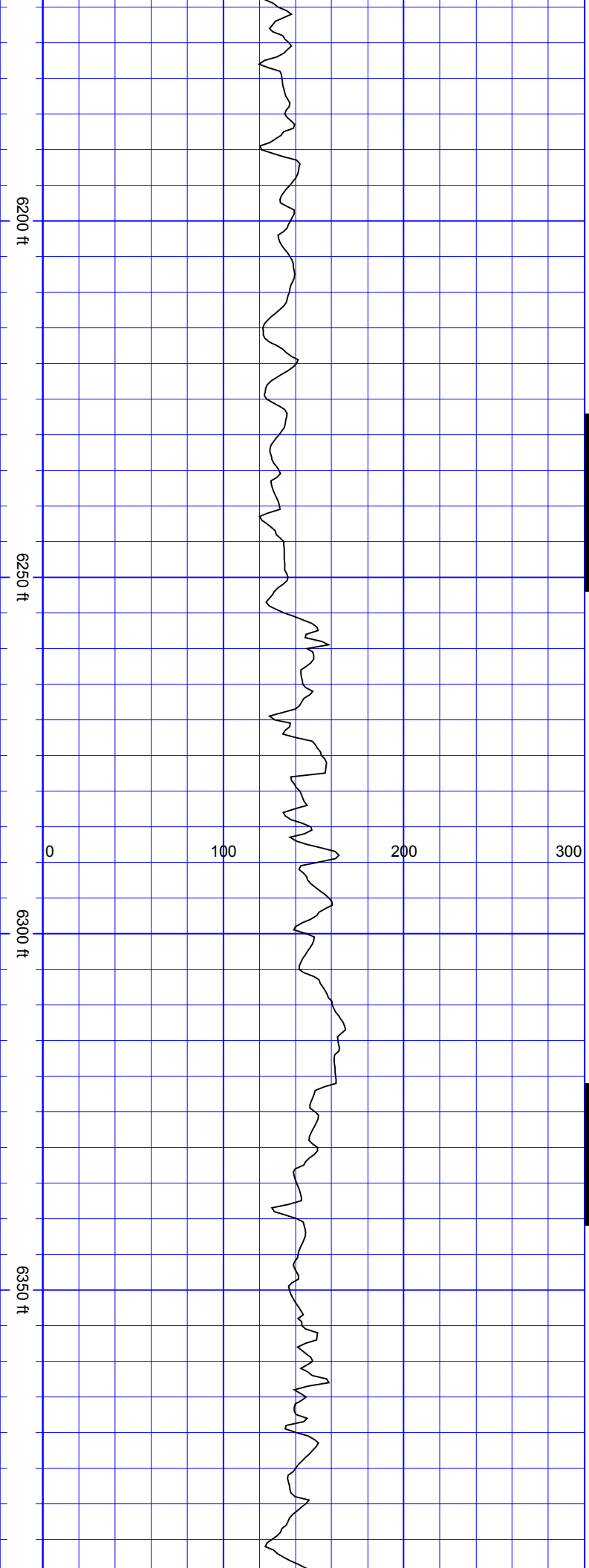
SurveyDepth:5969
TVD:5938.13 Inc:7.56
Azi:235.42 VertSec:-
314.26

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SurveyDepth:6063
TVD:6031.5 Inc:5.67
Azi:236.73 VertSec:-
322.48

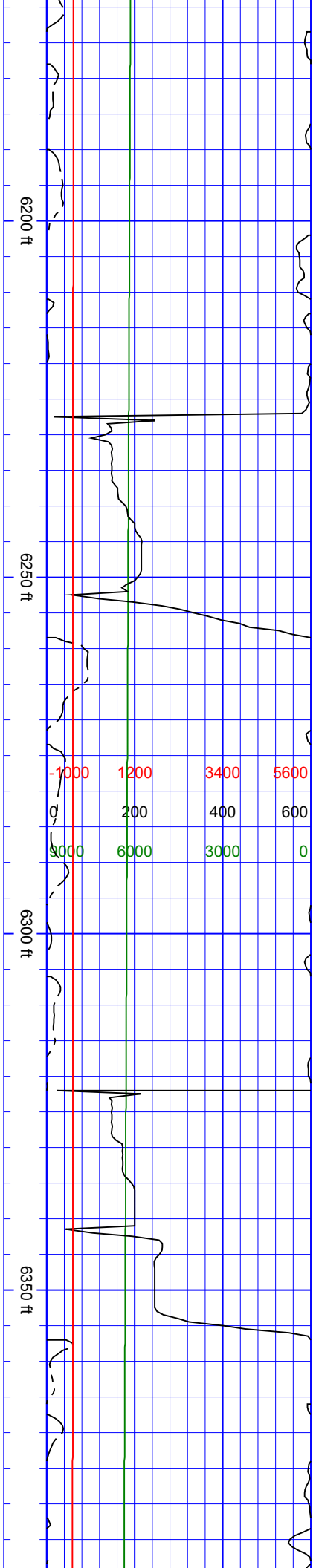
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TVD:6126.04 Inc:5.67
Azi:240.6 VertSec:-
329.88

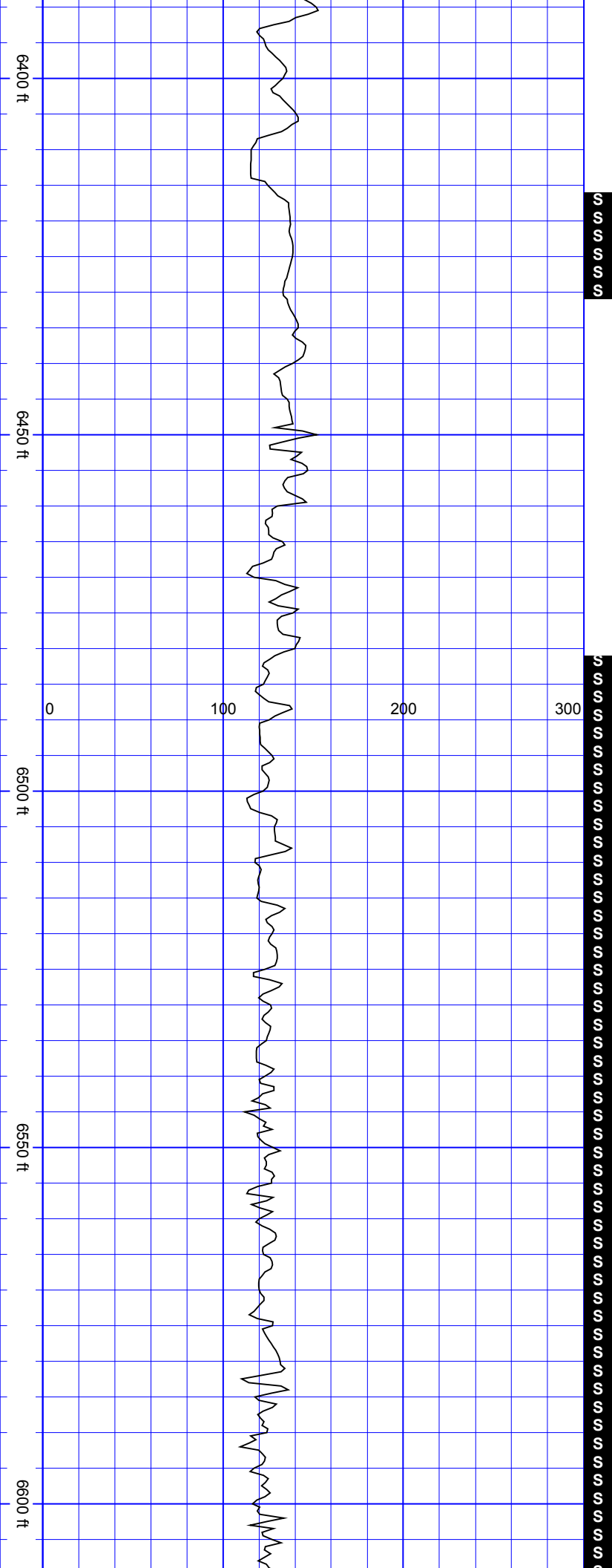




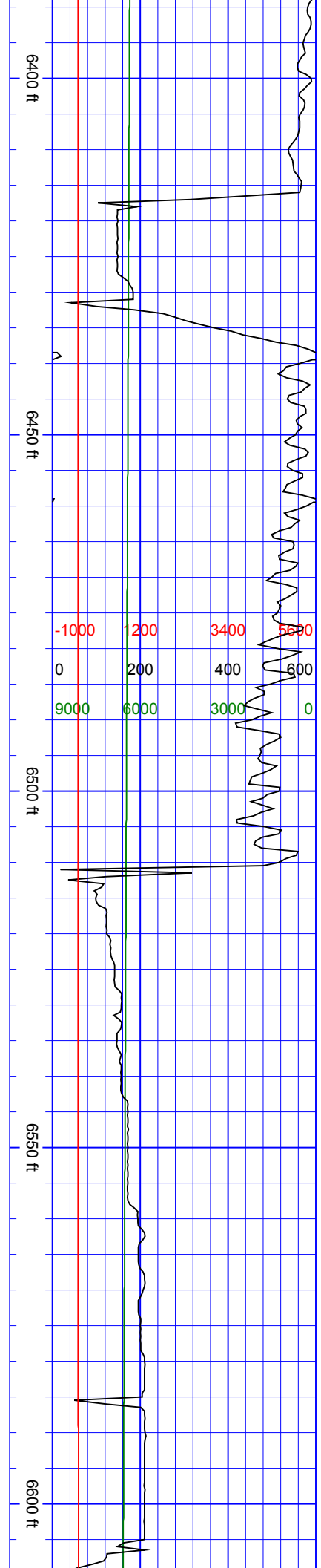
SurveyDepth:6252
TVD:6219.5 Inc:6.64
Azi:231.99 VertSec:-
337.5

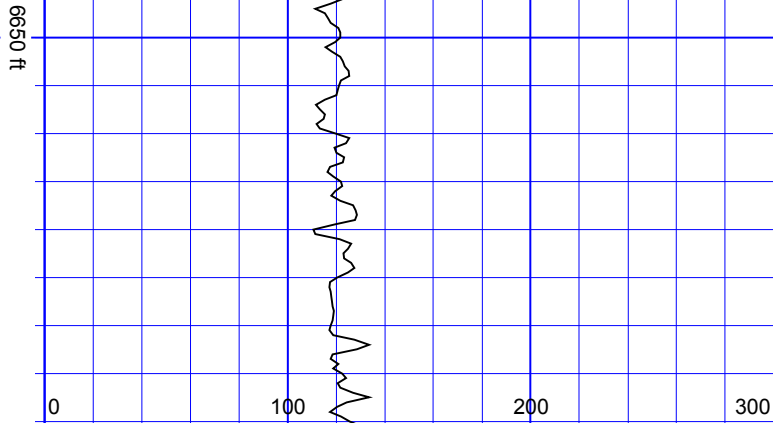
SurveyDepth:6347
TVD:6313.83 Inc:6.94
Azi:218.54 VertSec:-
344.45





SurveyDepth:6441 TVD:6407.18 Inc:6.59 Azi:210.89 VertSec:-349.67
SurveyDepth:6536 TVD:6501.78 Inc:4.48 Azi:162.2 VertSec:-350.38
SurveyDepth:6583 TVD:6548.54 Inc:7.6 Azi:120.63 VertSec:-346.78





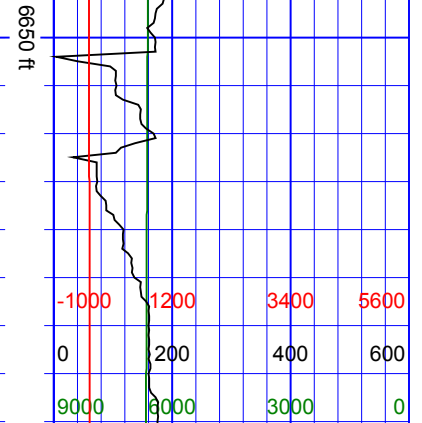
SurveyDepth:6630
TVD:6595.02 Inc:9.32
Azi:118.26 VertSec:-340.4

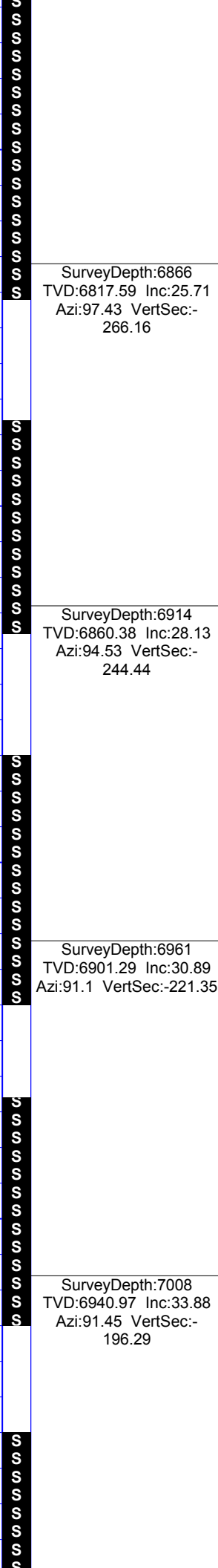
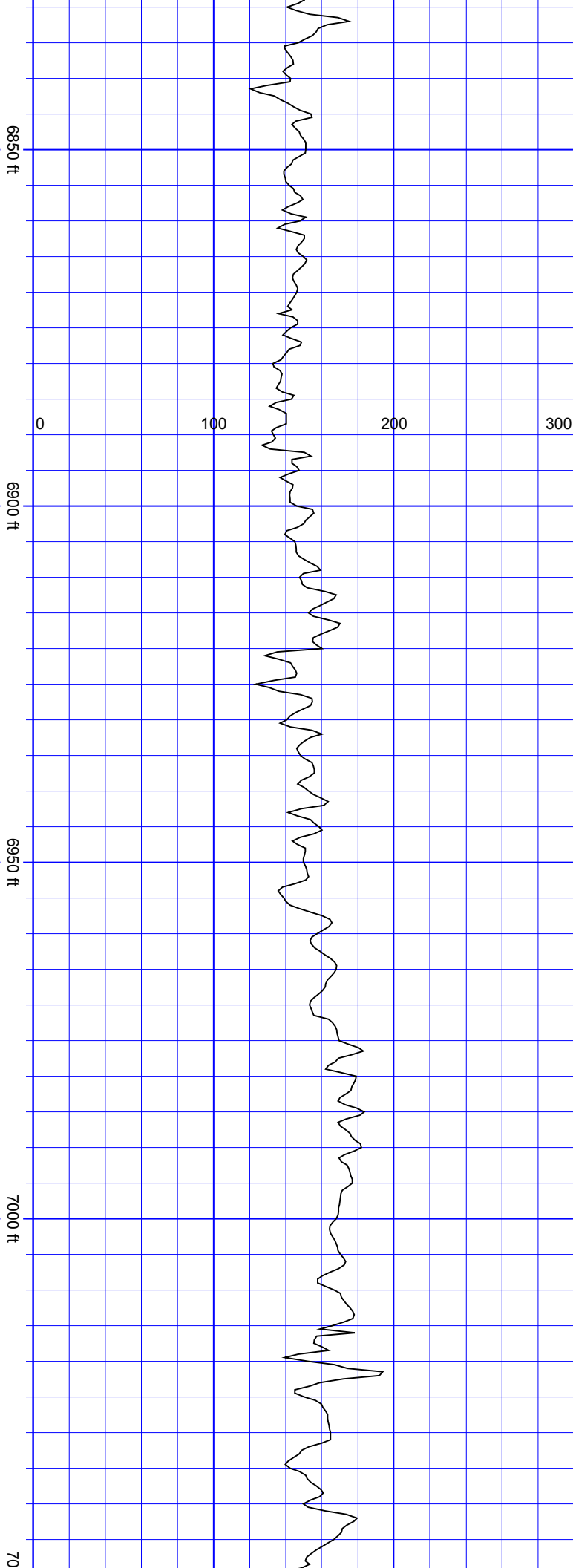
SurveyDepth:6677
TVD:6641.14 Inc:12.88
Azi:113.69 VertSec:-331.85

SurveyDepth:6725
TVD:6687.36 Inc:18.24
Azi:112.02 VertSec:-319.49

SurveyDepth:6772
TVD:6731.56 Inc:21.49
Azi:105.6 VertSec:-303.89

SurveyDepth:6819
TVD:6774.93 Inc:23.91
Azi:99.71 VertSec:-285.87



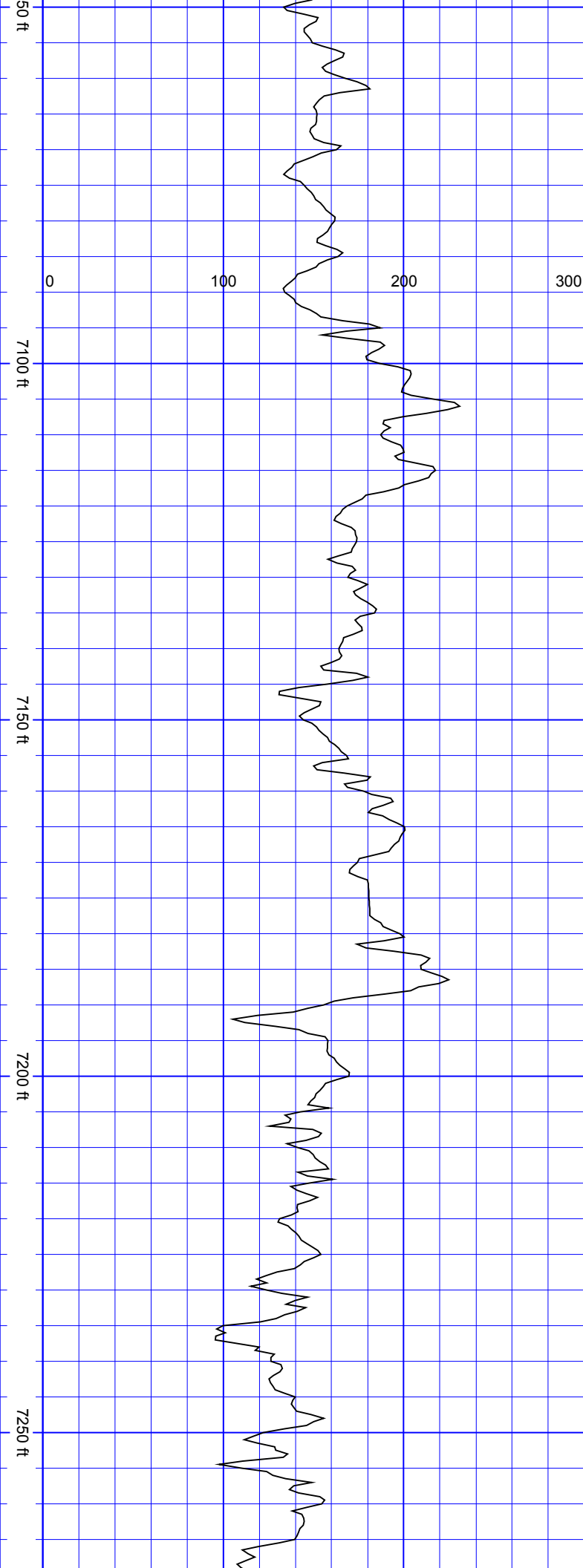


SurveyDepth:6866
TVD:6817.59 Inc:25.71
Azi:97.43 VertSec:-
266.16

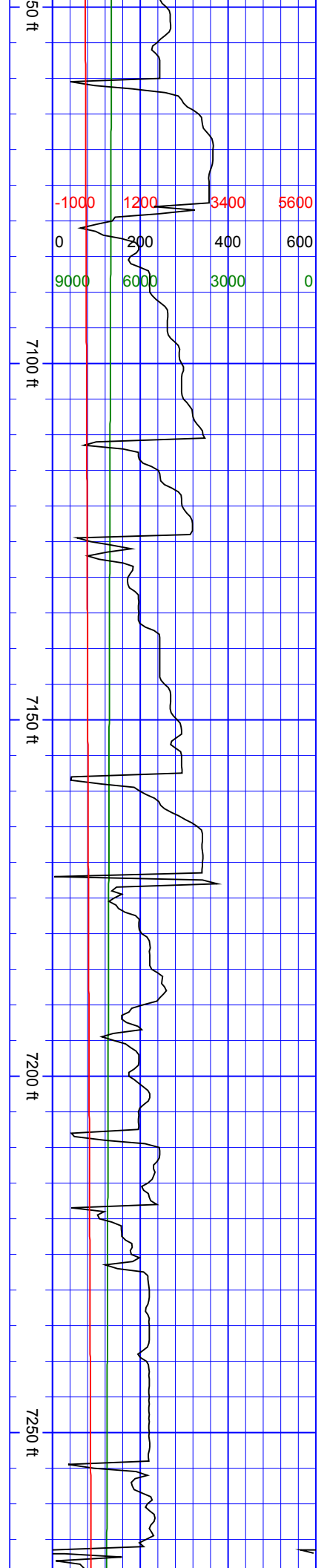
SurveyDepth:6914
TVD:6860.38 Inc:28.13
Azi:94.53 VertSec:-
244.44

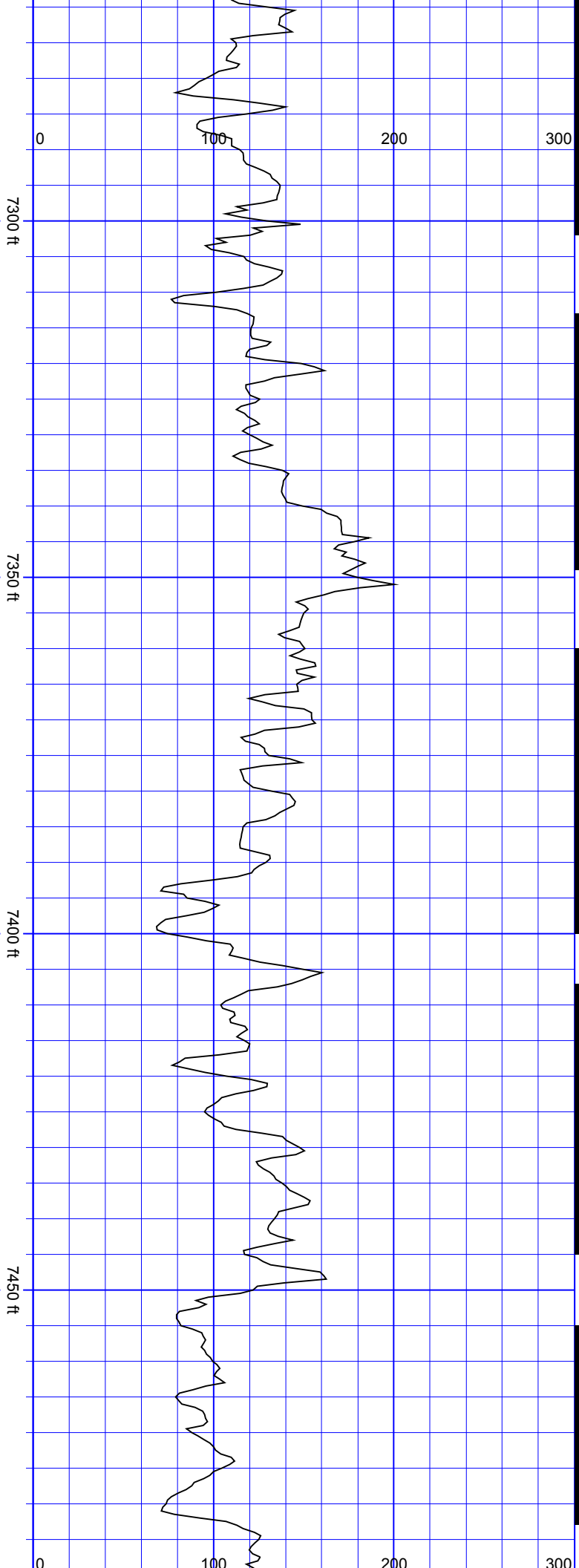
SurveyDepth:6961
TVD:6901.29 Inc:30.89
Azi:91.1 VertSec:-221.35

SurveyDepth:7008
TVD:6940.97 Inc:33.88
Azi:91.45 VertSec:-
196.29



SurveyDepth:7055 TVD:6979.4 Inc:36.39 Azi:91.28 VertSec:-169.36
SurveyDepth:7102 TVD:7016.7 Inc:38.58 Azi:92.15 VertSec:-140.86
SurveyDepth:7149 TVD:7052.82 Inc:40.96 Azi:95.14 VertSec:-110.84
SurveyDepth:7197 TVD:7088.35 Inc:43.55 Azi:92.42 VertSec:-78.62
SurveyDepth:7244 TVD:7121.52 Inc:46.67 Azi:92.68 VertSec:-45.41





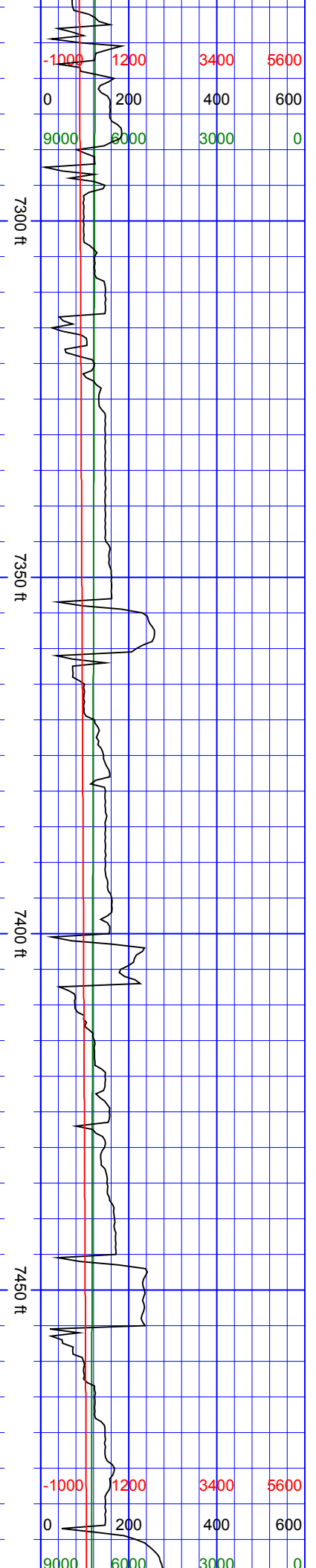
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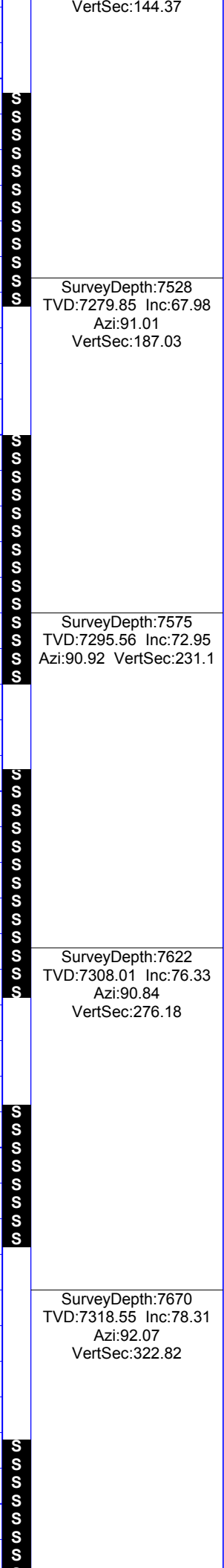
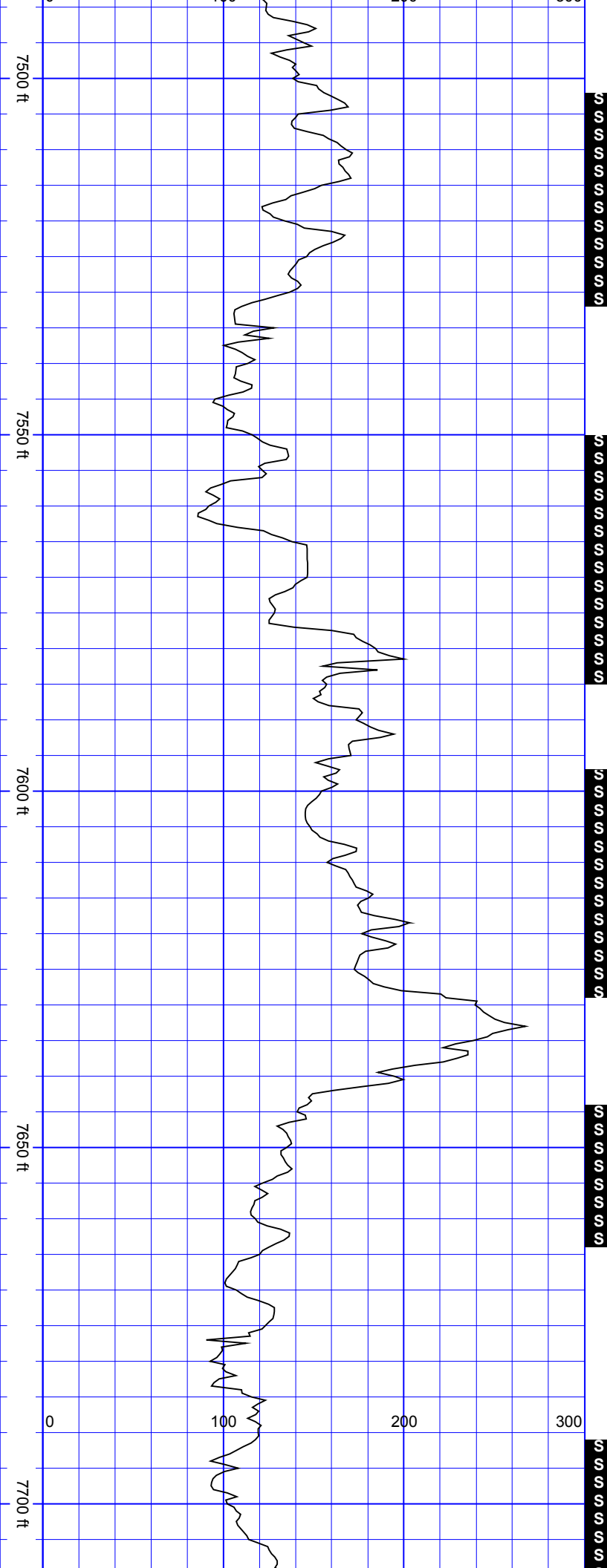
SurveyDepth:7338
TVD:7184.56 Inc:50.93
Azi:92.94 VertSec:24.16

SurveyDepth:7386
TVD:7213.15 Inc:55.94
Azi:90.57 VertSec:62.55

SurveyDepth:7433
TVD:7237.99 Inc:60.25
Azi:90.75
VertSec:102.23

SurveyDepth:7481
TVD:7260.58 Inc:63.59
Azi:91.28





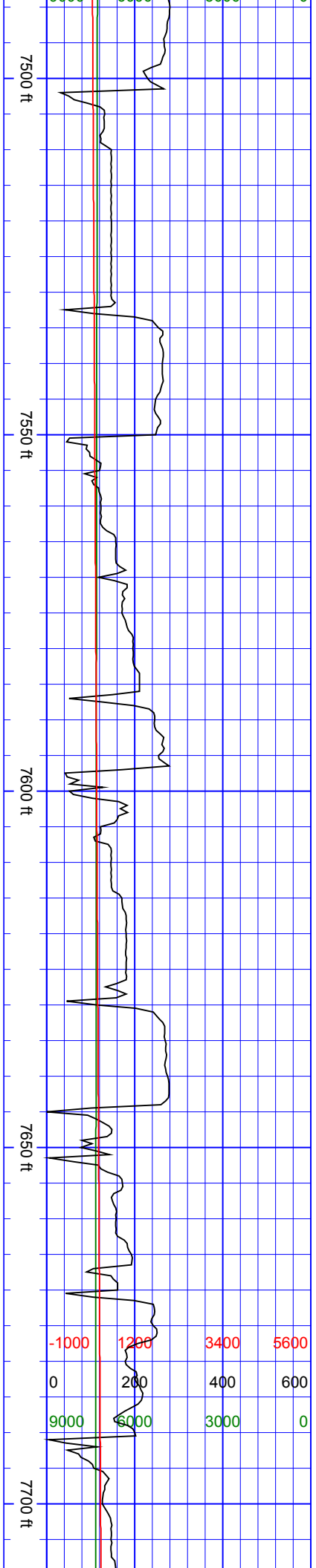
VertSec:144.37

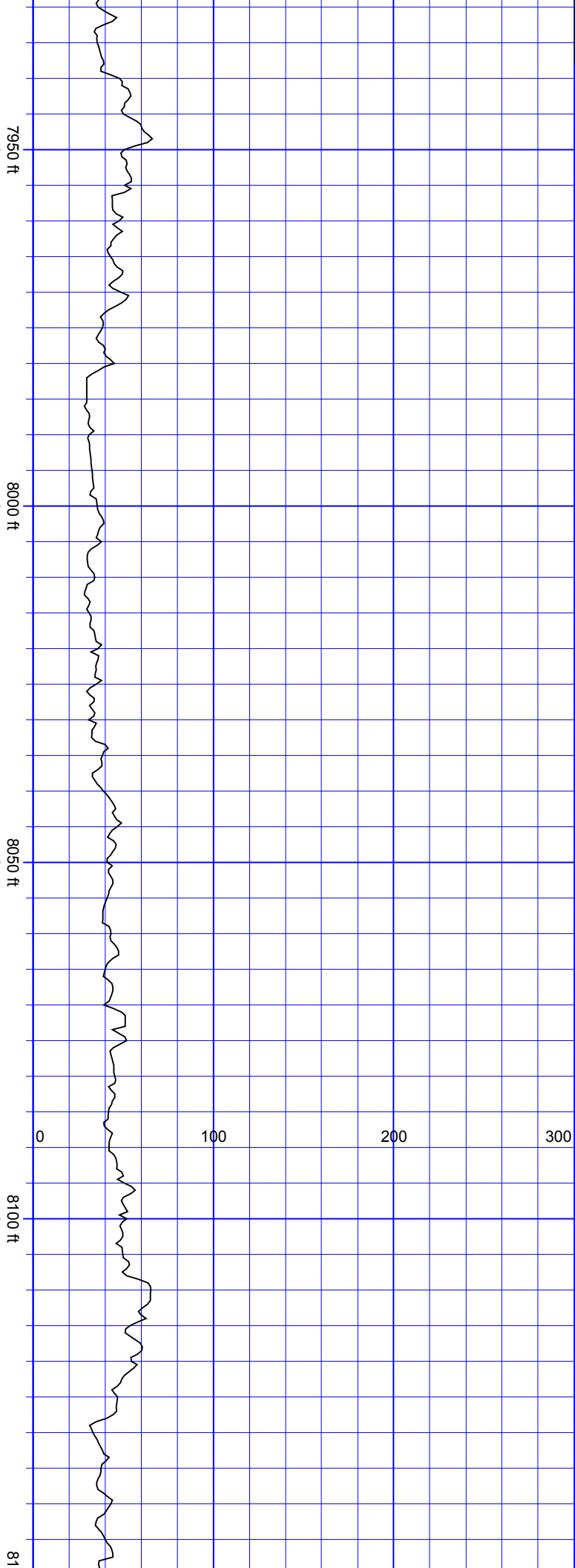
SurveyDepth:7528
TVD:7279.85 Inc:67.98
Azi:91.01
VertSec:187.03

SurveyDepth:7575
TVD:7295.56 Inc:72.95
Azi:90.92 VertSec:231.1

SurveyDepth:7622
TVD:7308.01 Inc:76.33
Azi:90.84
VertSec:276.18

SurveyDepth:7670
TVD:7318.55 Inc:78.31
Azi:92.07
VertSec:322.82

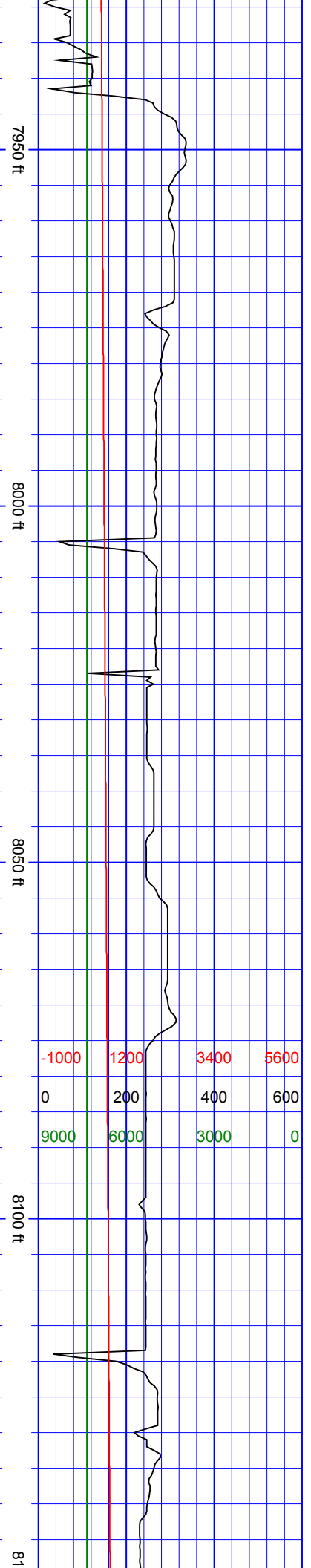


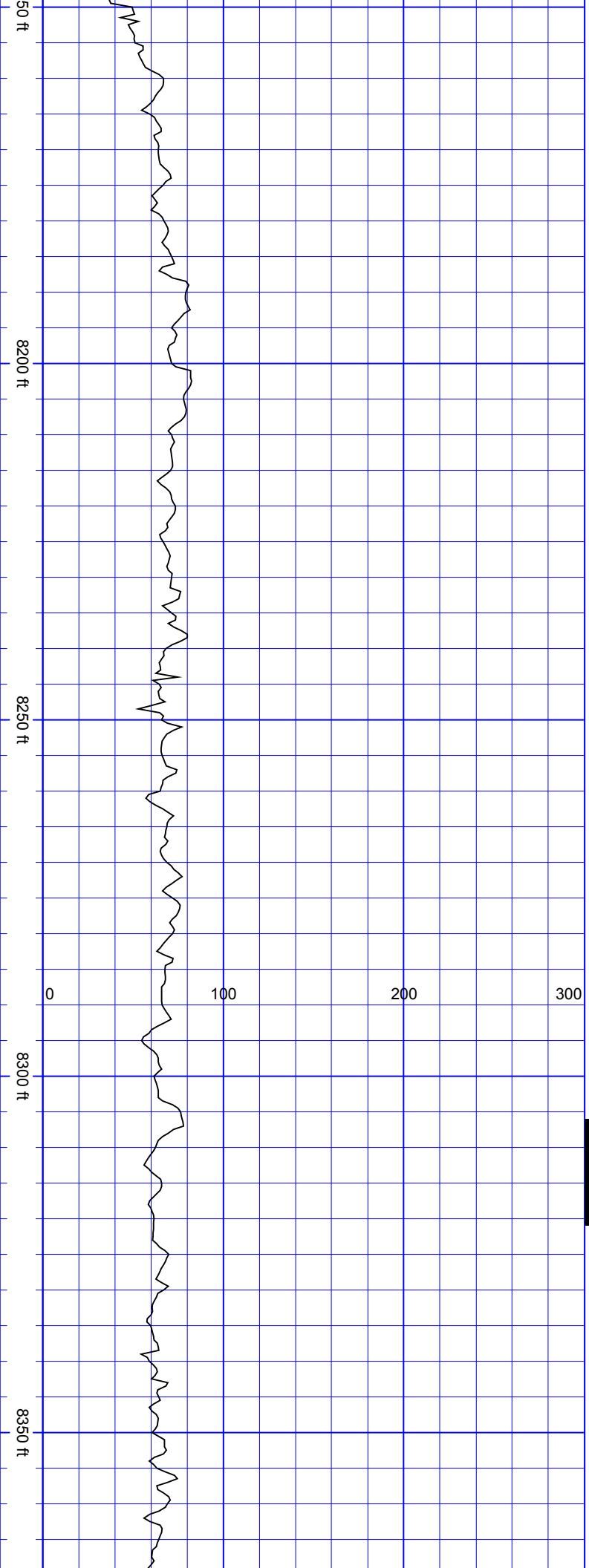


SurveyDepth:7953
TVD:7334.01 Inc:90.35
Azi:89.61
VertSec:603.59

SurveyDepth:8048
TVD:7332.92 Inc:90.97
Azi:89.52
VertSec:697.87

SurveyDepth:8142
TVD:7330.93 Inc:91.45
Azi:89.52

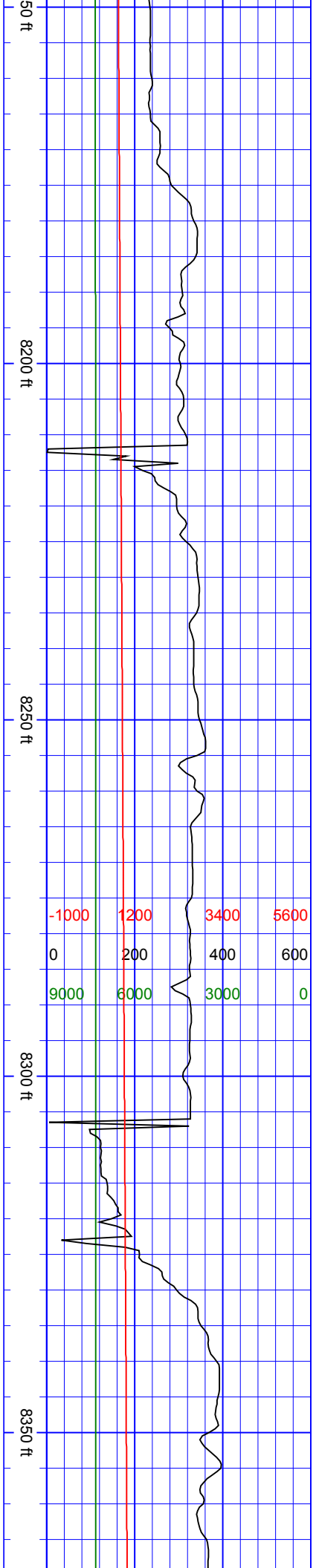




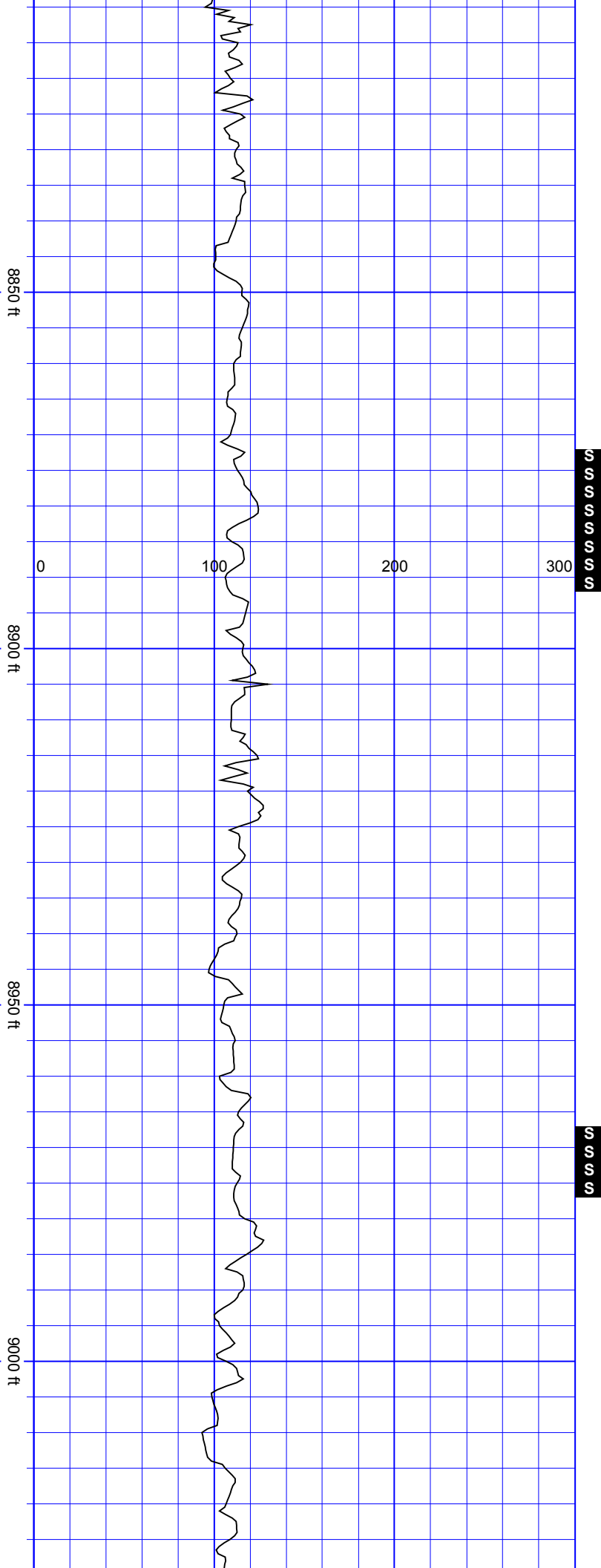
VertSec:791.13

SurveyDepth:8237
TVD:7328.56 Inc:91.41
Azi:87.67
VertSec:885.17

SurveyDepth:8332
TVD:7326.7 Inc:90.84
Azi:85.3 VertSec:978.66

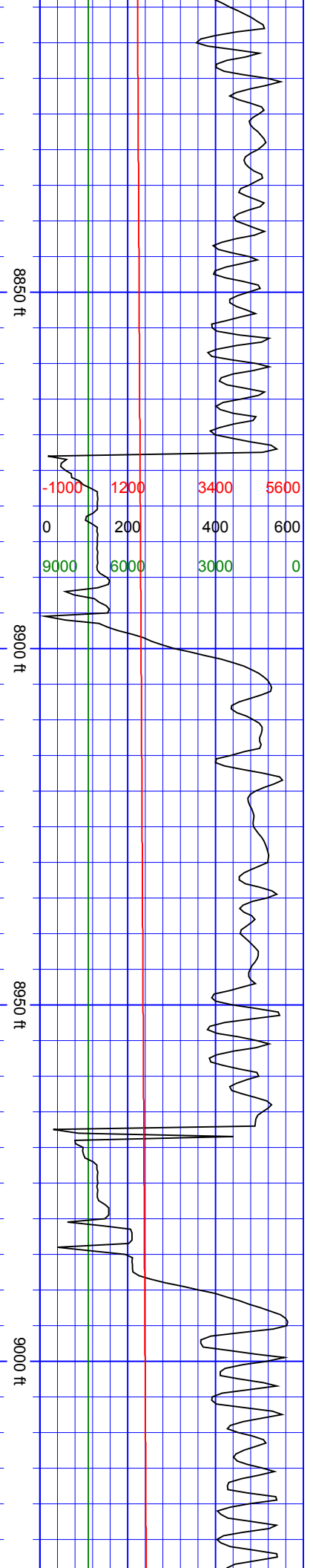


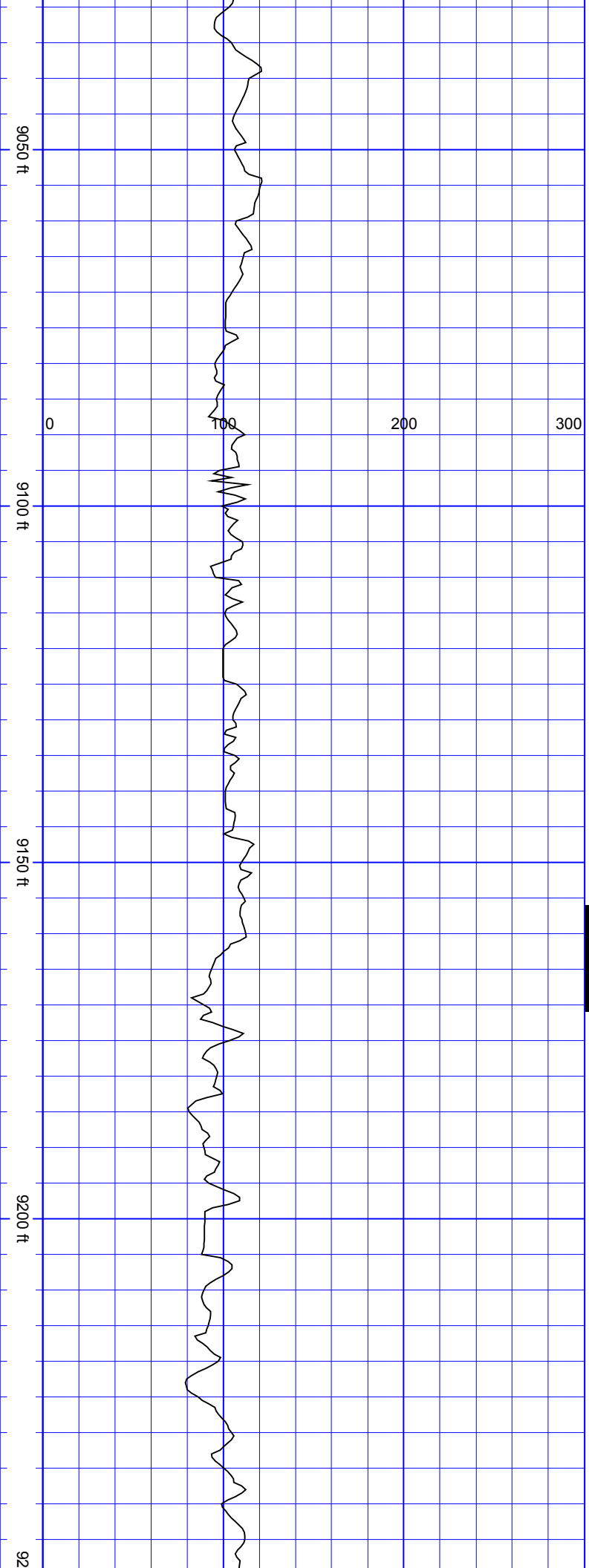
Azi:91.19
VertSec:1444.83



SurveyDepth:8898
TVD:7335.68 Inc:89.78
Azi:90.92
VertSec:1539.35

SurveyDepth:8992
TVD:7334.56 Inc:91.58
Azi:90.92
VertSec:1632.87

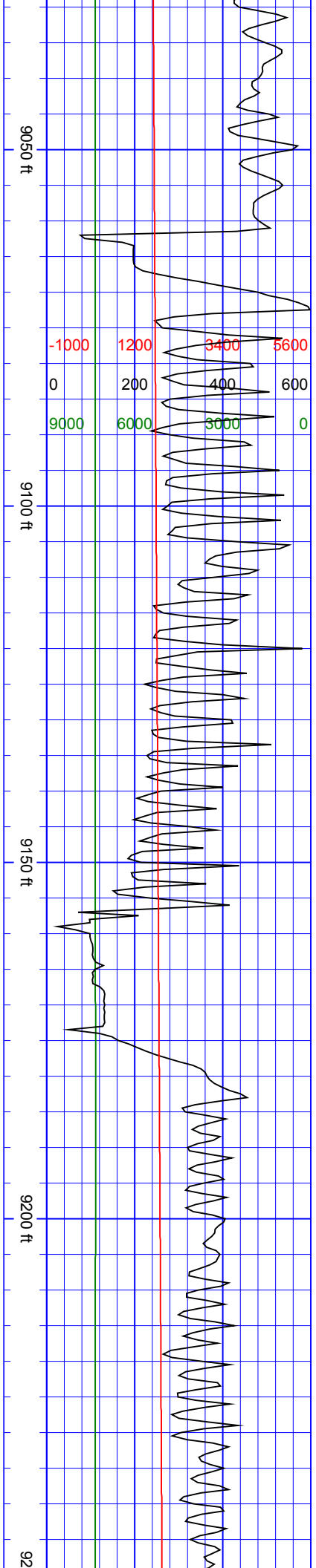


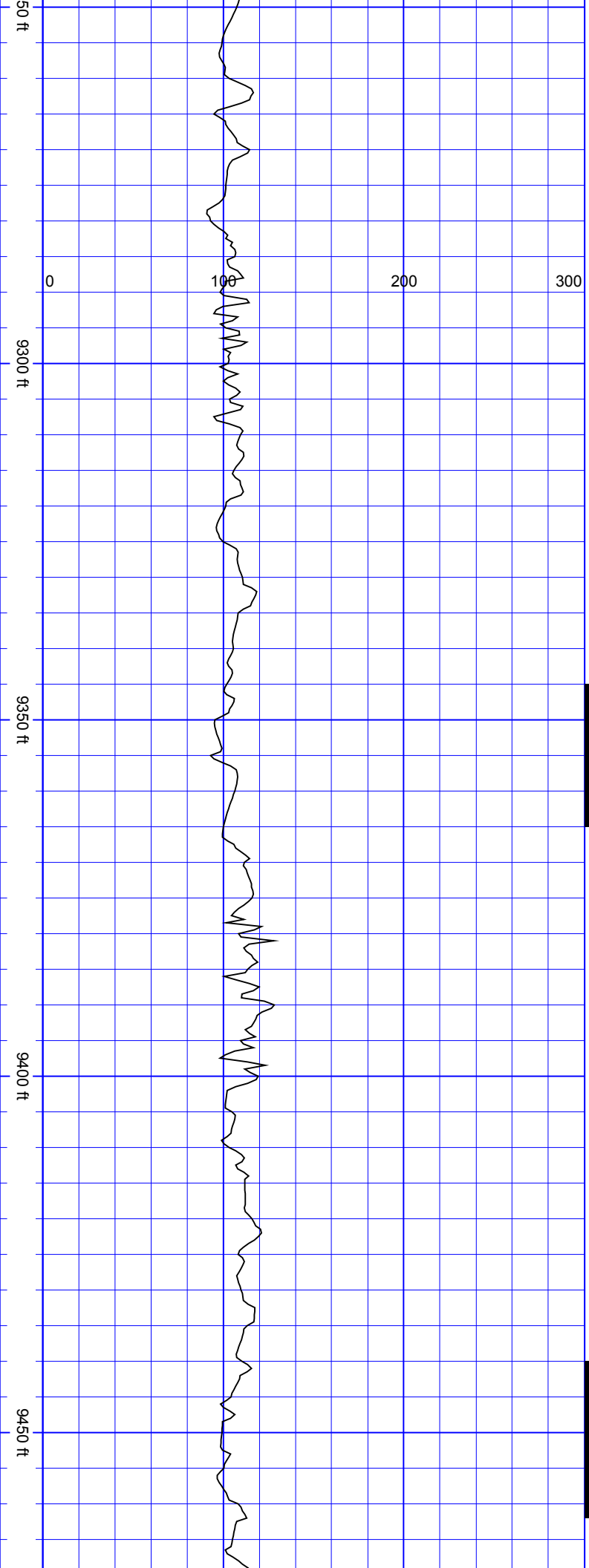


SurveyDepth:9087
TVD:7331.5 Inc:92.11
Azi:90.84
VertSec:1727.35

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SurveyDepth:9182
TVD:7329.46 Inc:90.35
Azi:88.99
VertSec:1821.67

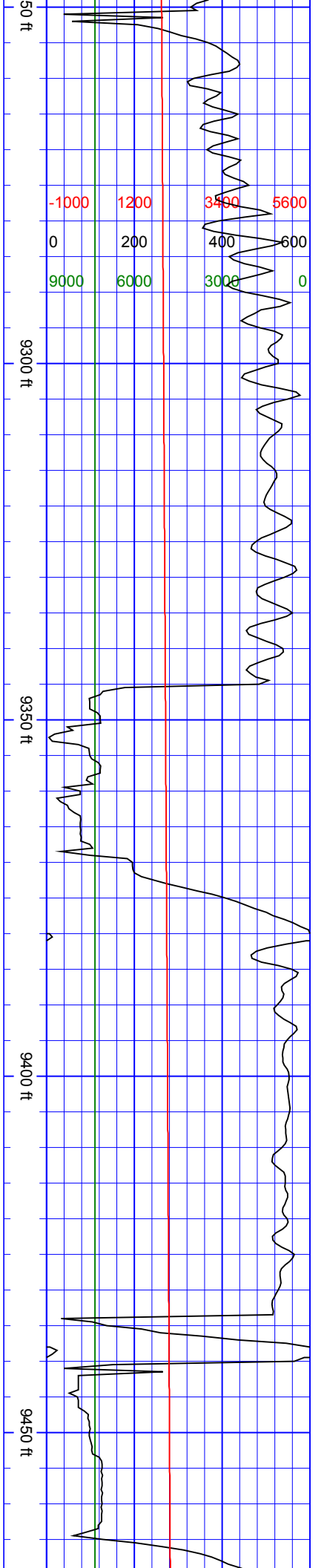


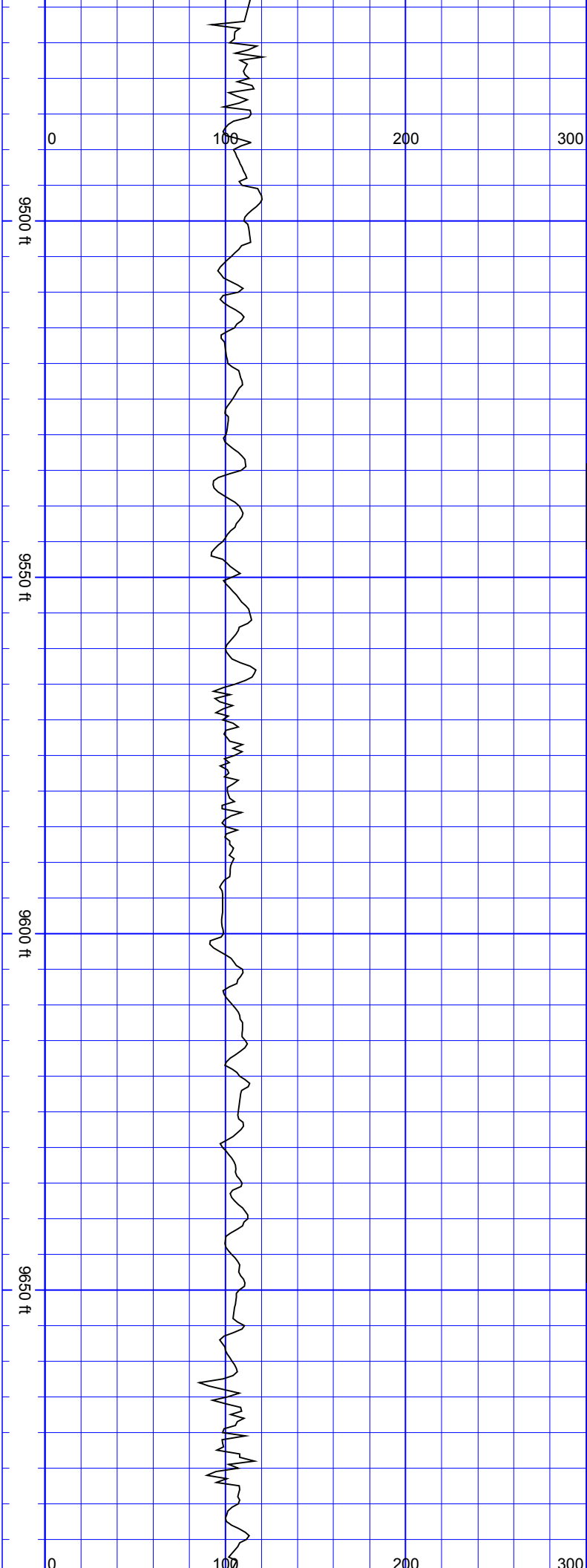


SurveyDepth:9276
TVD:7330.55 Inc:88.33
Azi:87.23
VertSec:1914.62

SurveyDepth:9371
TVD:7333.6 Inc:87.98
Azi:87.06
VertSec:2008.28

SurveyDepth:9465
TVD:7334.07 Inc:91.45

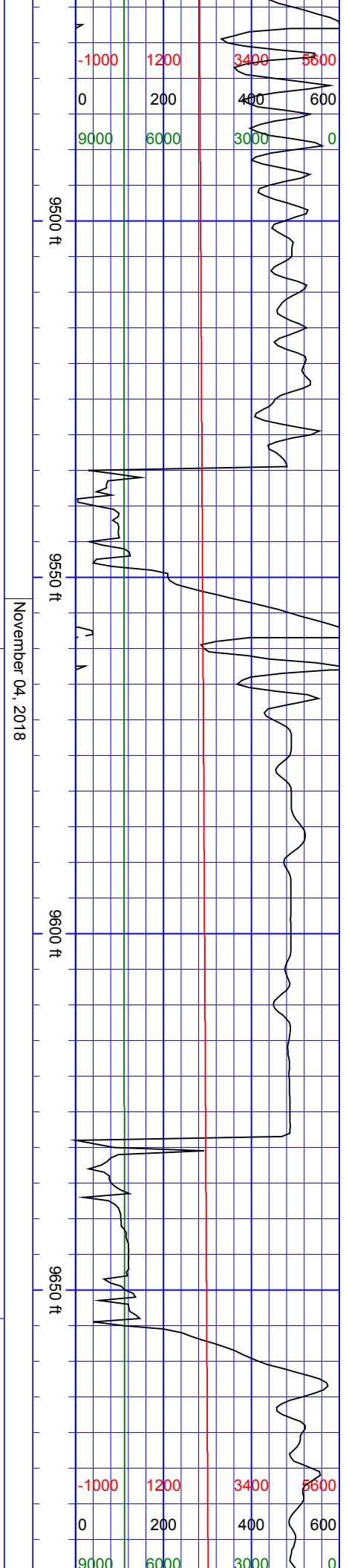


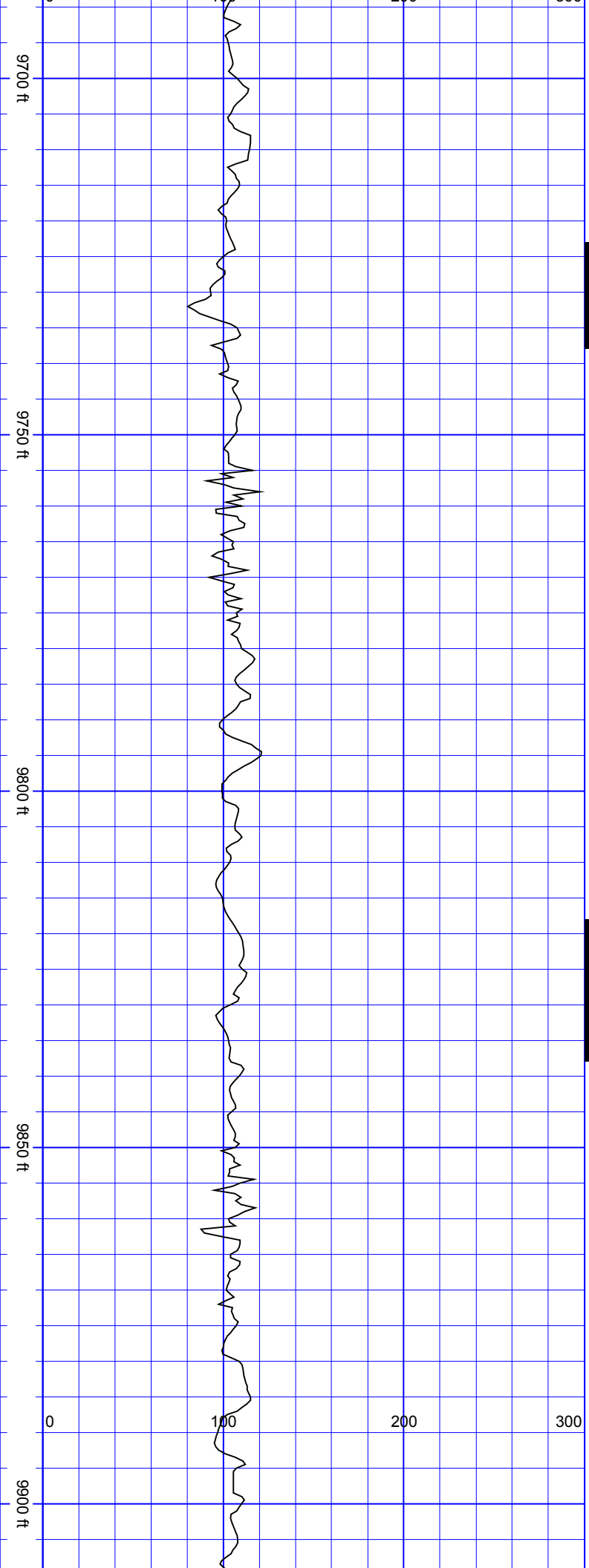


TVD:7334.87 Inc:91.43
Azi:87.06
VertSec:2100.96

SurveyDepth:9560
TVD:7331.34 Inc:91.85
Azi:87.14
VertSec:2194.62

SurveyDepth:9654
TVD:7328.99 Inc:91.01
Azi:89.34
VertSec:2287.58



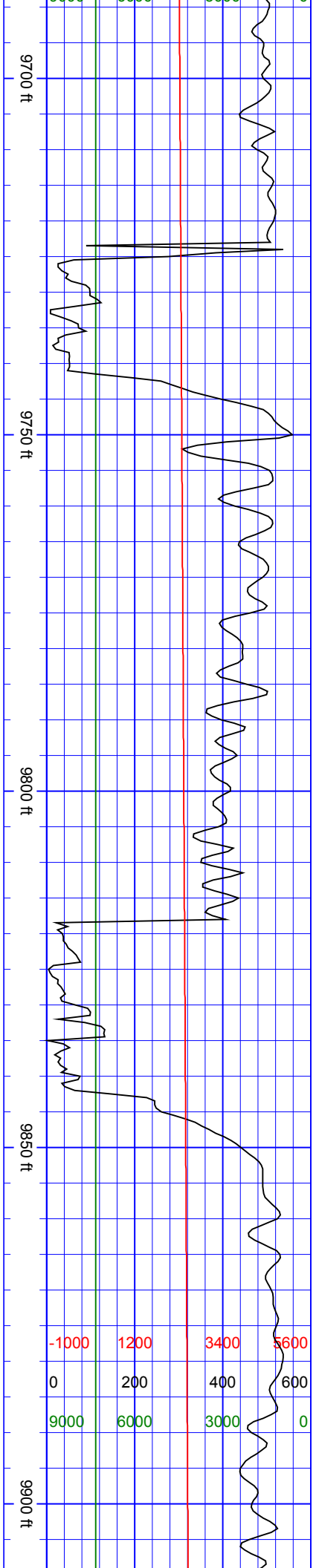


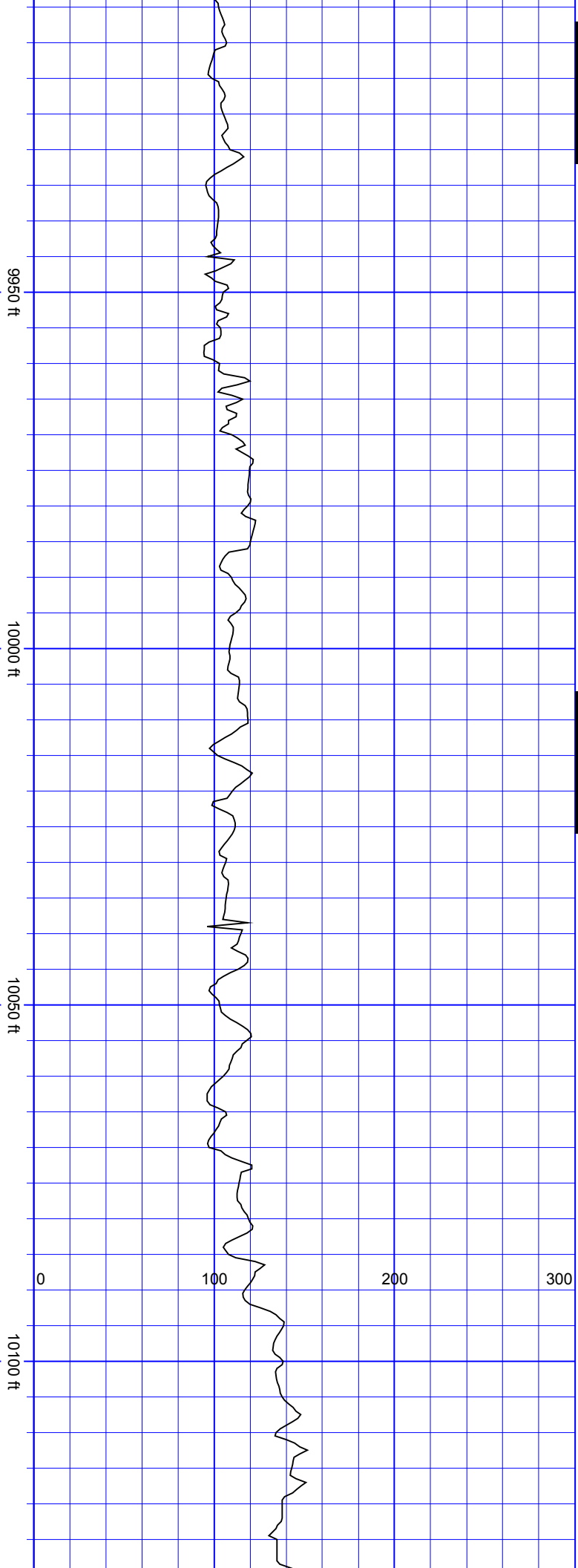
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SurveyDepth:9749
TVD:7326.51 Inc:91.98
Azi:89.08
VertSec:2381.76

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SurveyDepth:9843
TVD:7324.56 Inc:90.4
Azi:87.5
VertSec:2474.74

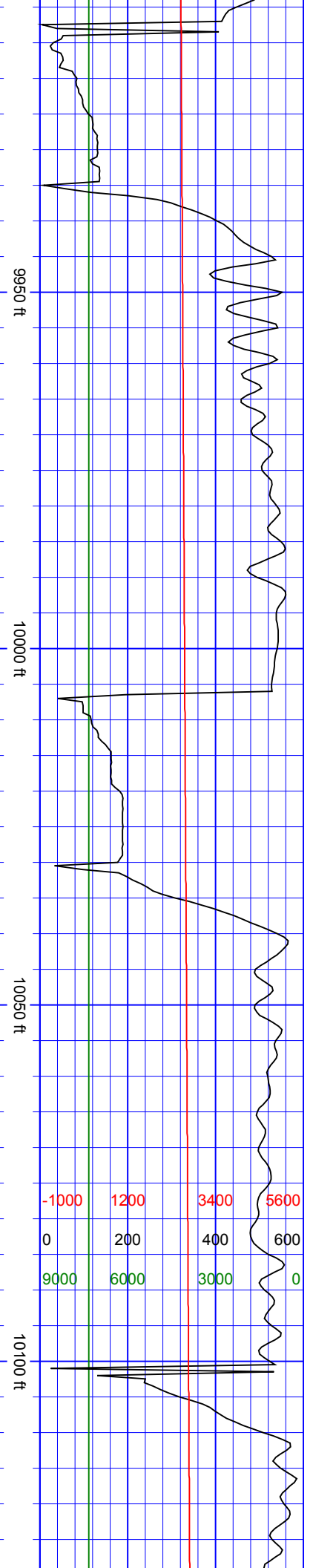


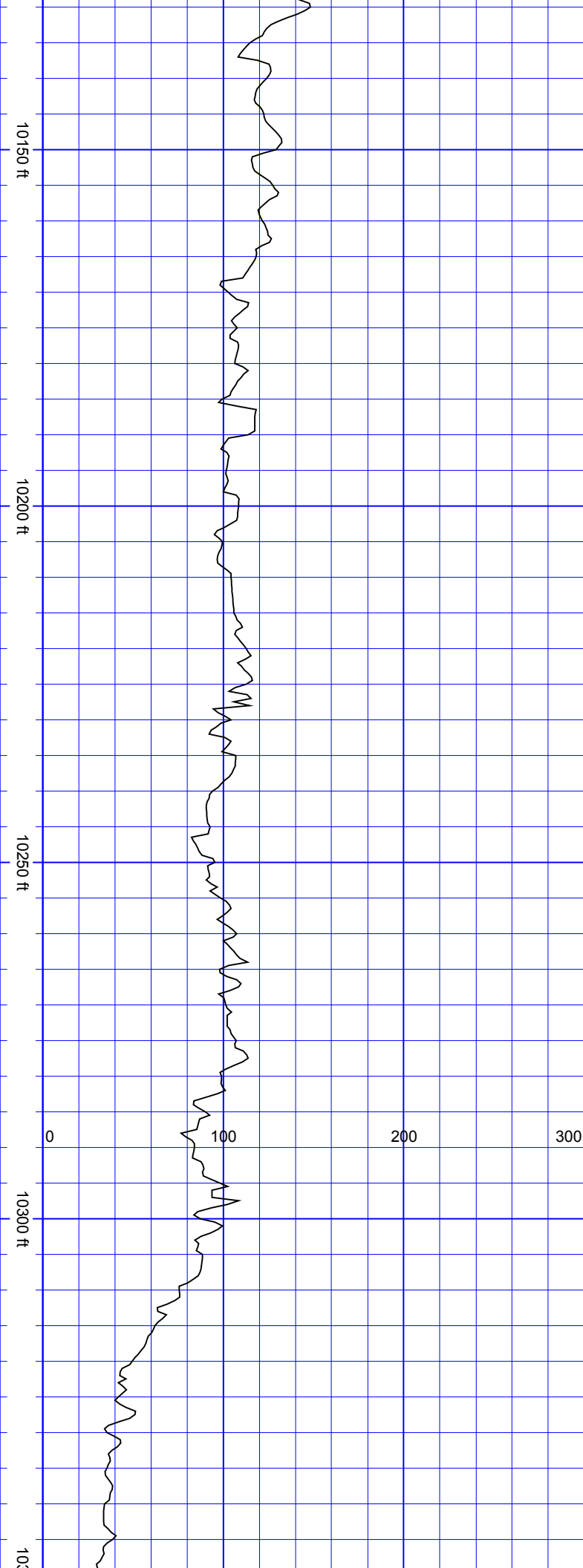


SurveyDepth:9937
TVD:7324.38 Inc:89.82
Azi:88.81
VertSec:2567.72

SurveyDepth:10032
TVD:7324.71 Inc:89.78
Azi:91.89
VertSec:2662.14

SurveyDepth:10126

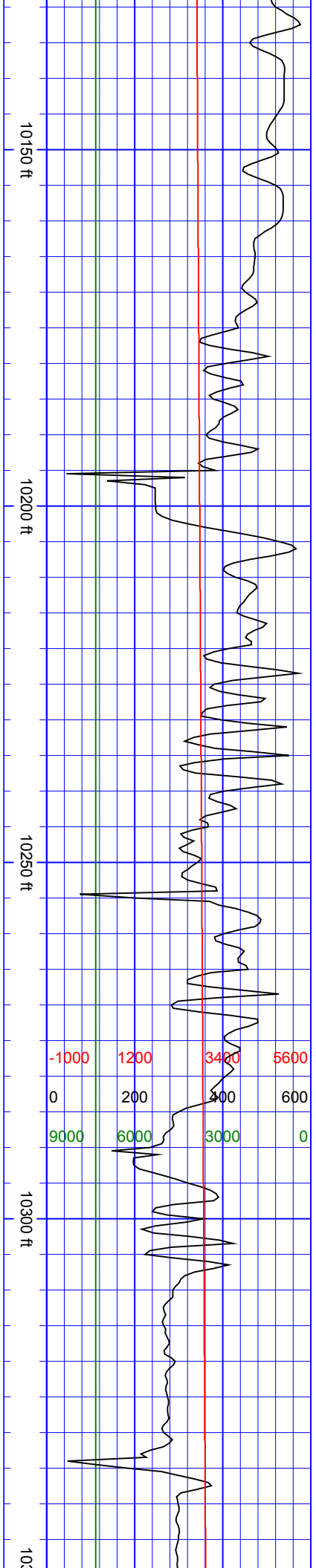


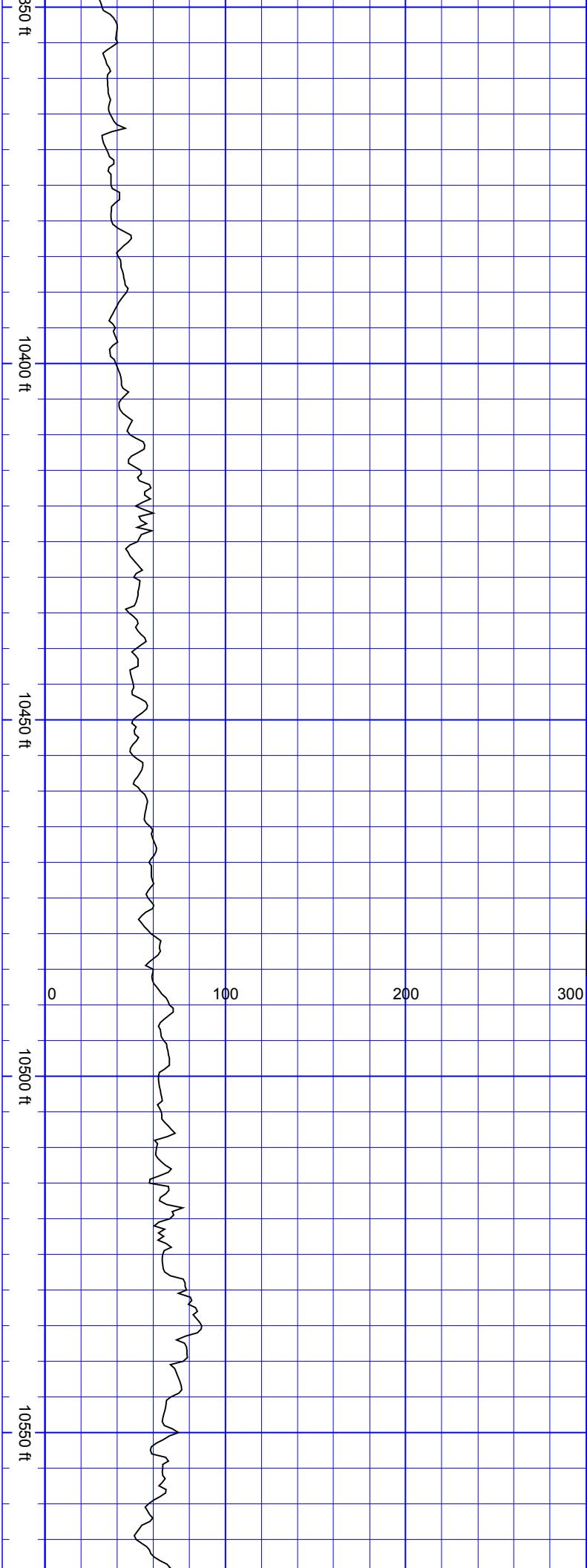


TVD:7324.78 Inc:90.13
Azi:91.89
VertSec:2755.82

SurveyDepth:10220
TVD:7324.14 Inc:90.66
Azi:91.89
VertSec:2849.5

SurveyDepth:10314
TVD:7323.45 Inc:90.18
Azi:90.22
VertSec:2943.05

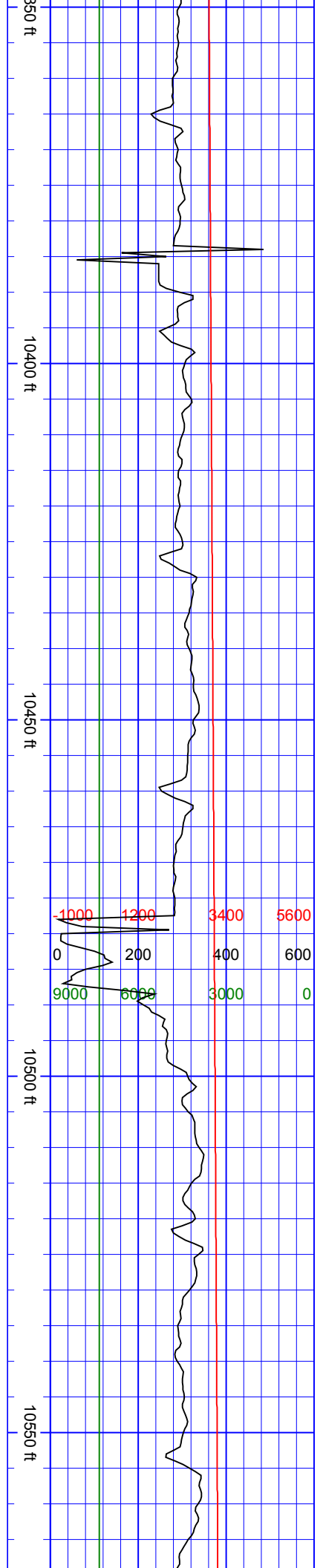


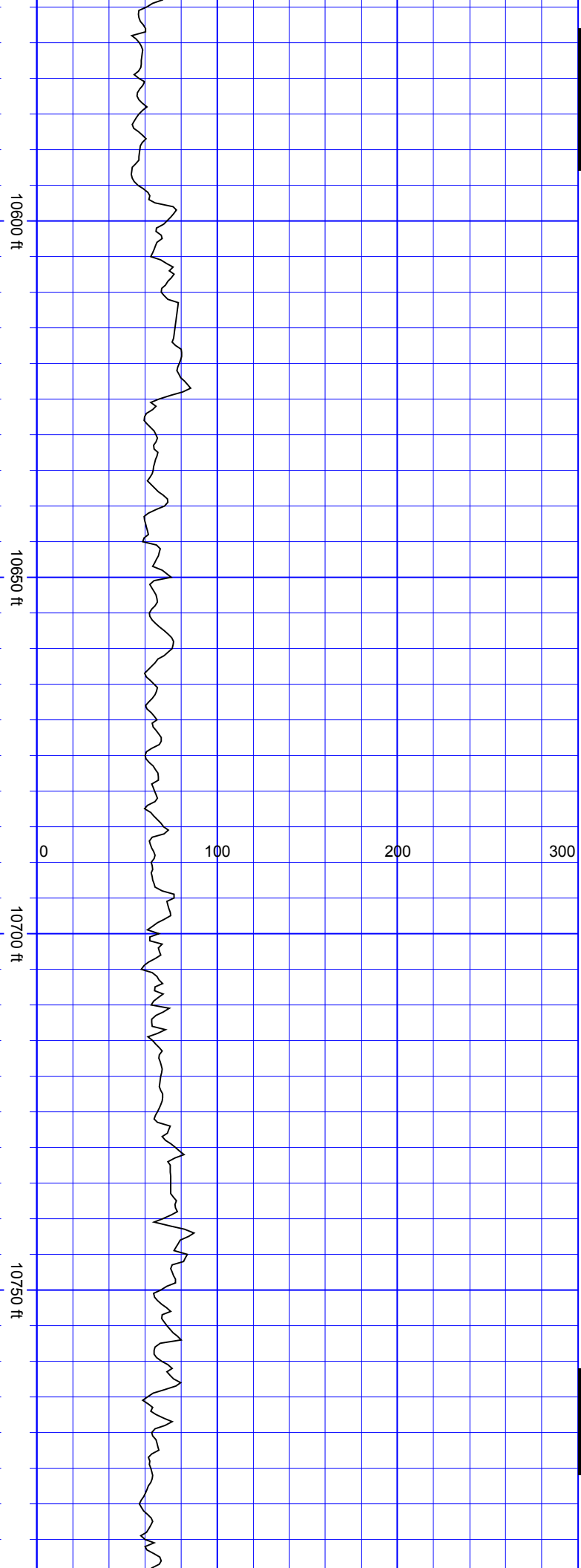


SurveyDepth:10409
TVD:7322.49 Inc:90.97
Azi:90.13
VertSec:3037.45

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SurveyDepth:10504
TVD:7320.16 Inc:91.85
Azi:90.04
VertSec:3131.8





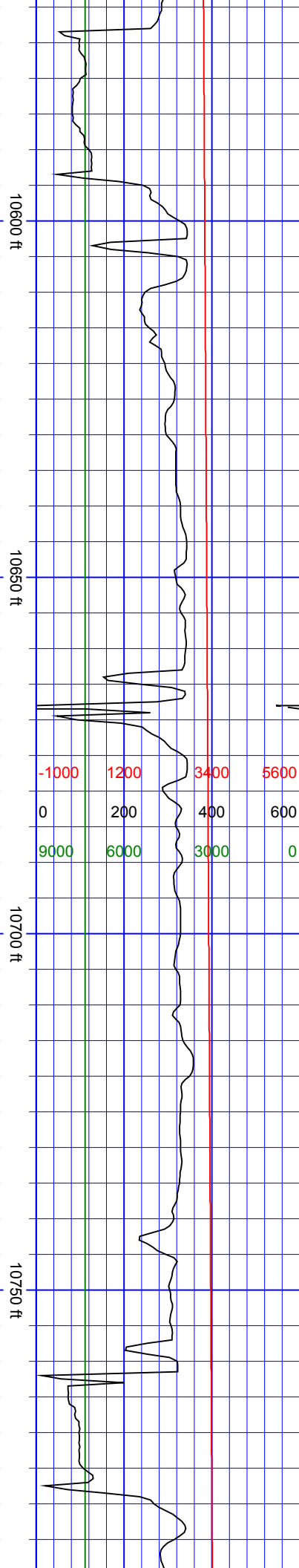
SSSSSS

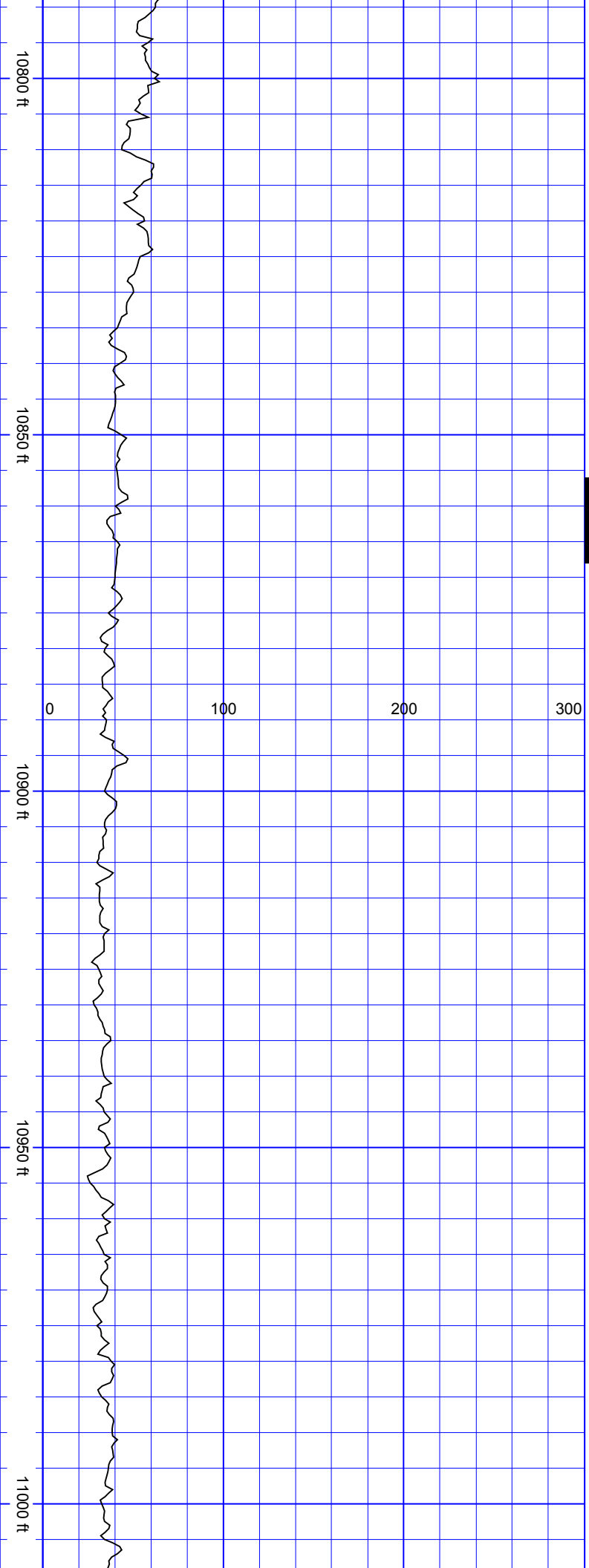
SurveyDepth:10598
TVD:7318.61 Inc:90.04
Azi:91.28
VertSec:3225.28

SurveyDepth:10692
TVD:7317.67 Inc:91.1
Azi:92.33
VertSec:3318.94

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SurveyDepth:10787



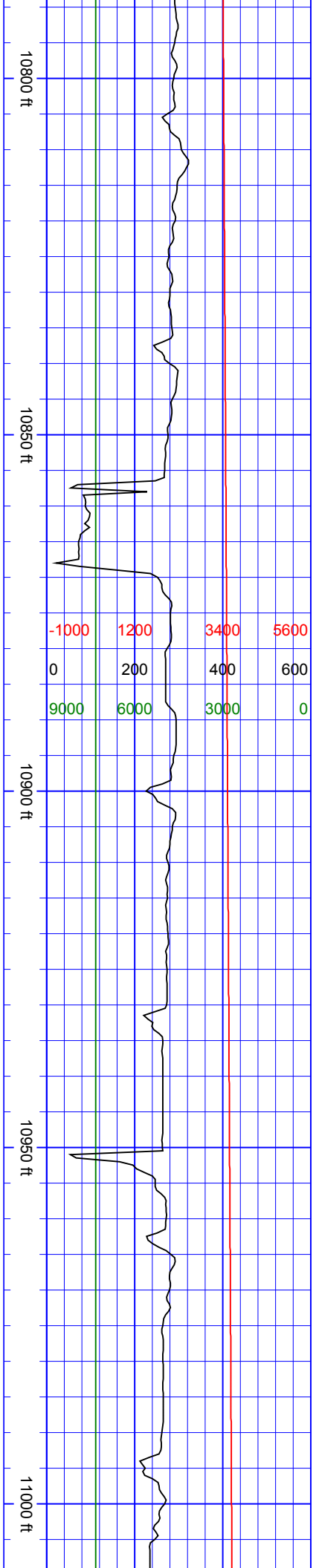


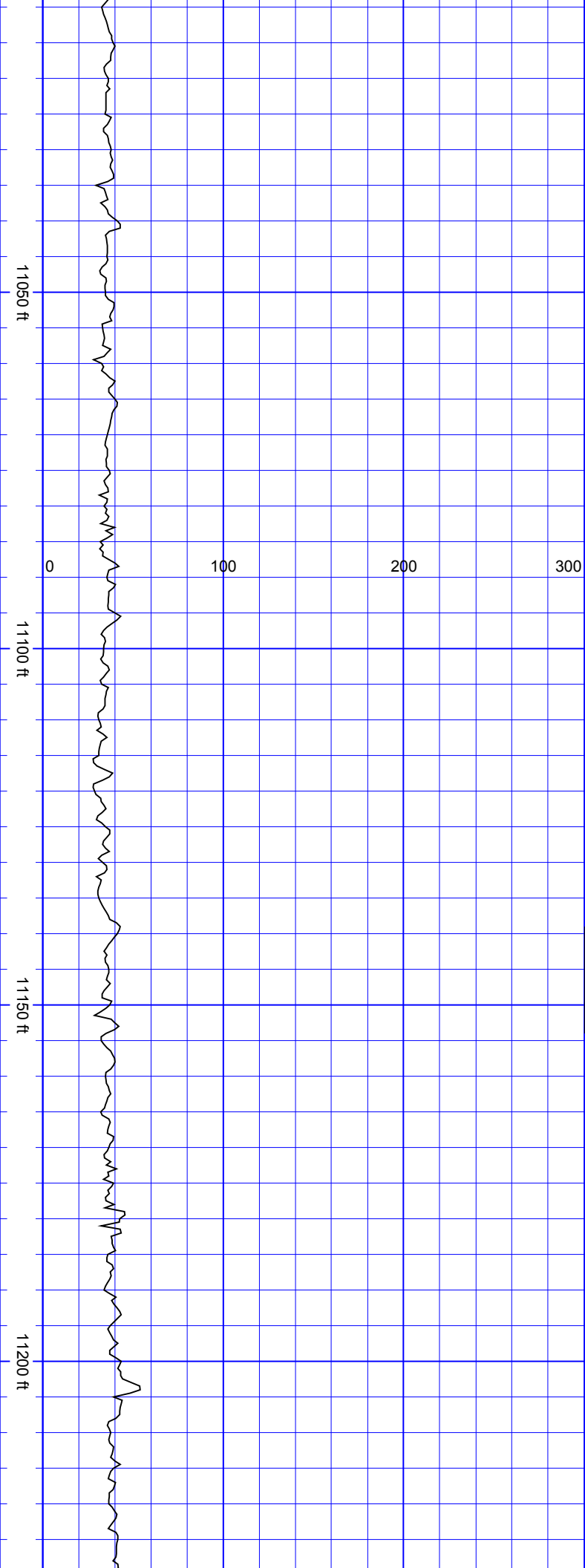
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TVD:7317.67 Inc:88.9
Azi:90.57
VertSec:3413.55

SurveyDepth:10881
TVD:7318.93 Inc:89.56
Azi:91.54
VertSec:3507.09

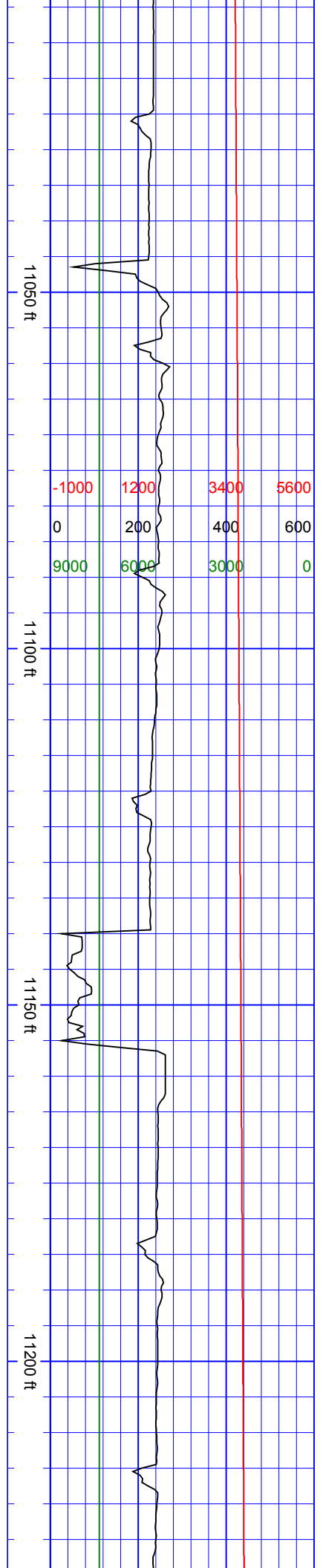
SurveyDepth:10976
TVD:7318.97 Inc:90.4
Azi:91.63
VertSec:3601.73

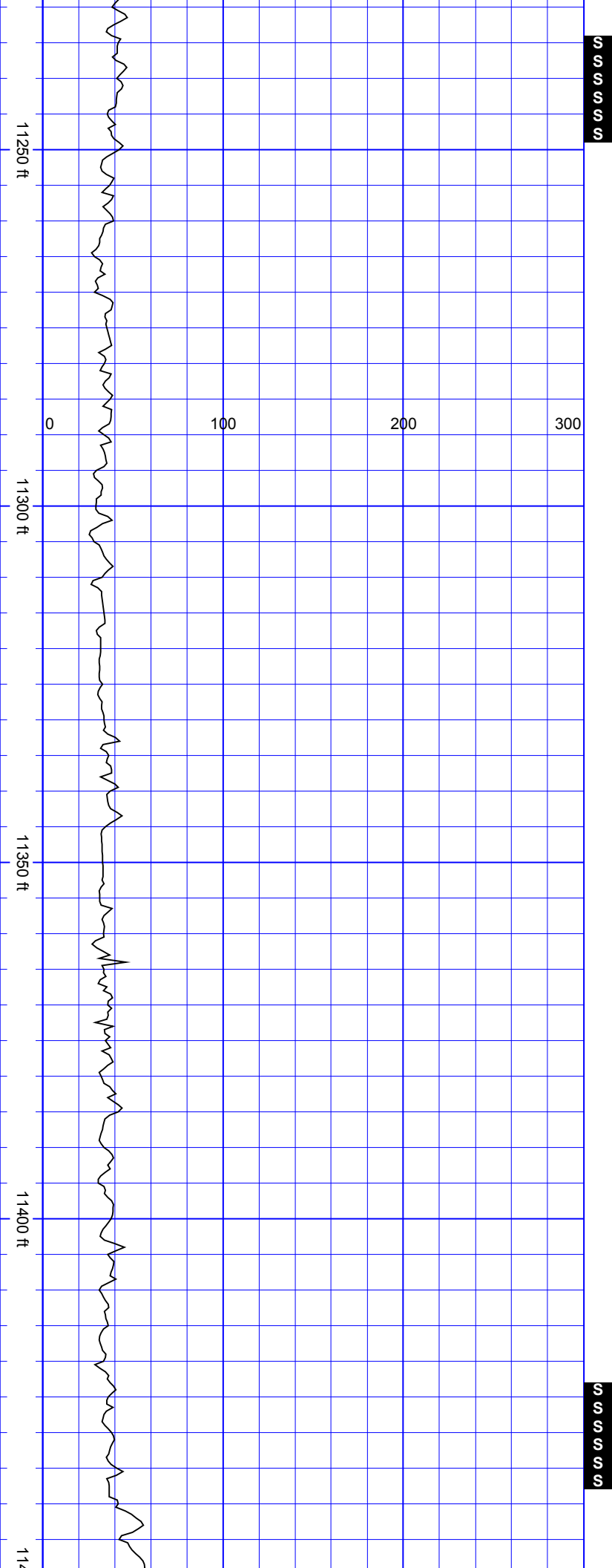




SurveyDepth:11070
TVD:7317.3 Inc:91.63
Azi:91.8
VertSec:3695.37

SurveyDepth:11165
TVD:7314.78 Inc:91.41
Azi:91.98
VertSec:3790.01



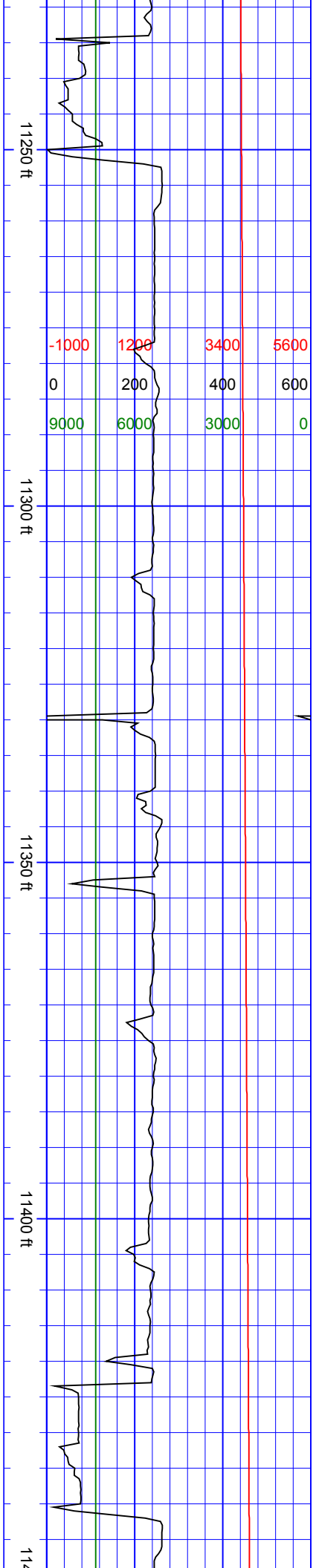


SurveyDepth:11260
TVD:7313.87 Inc:89.69
Azi:91.71
VertSec:3884.68

SurveyDepth:11354
TVD:7313.8 Inc:90.4
Azi:91.98
VertSec:3978.35

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SurveyDepth:11449

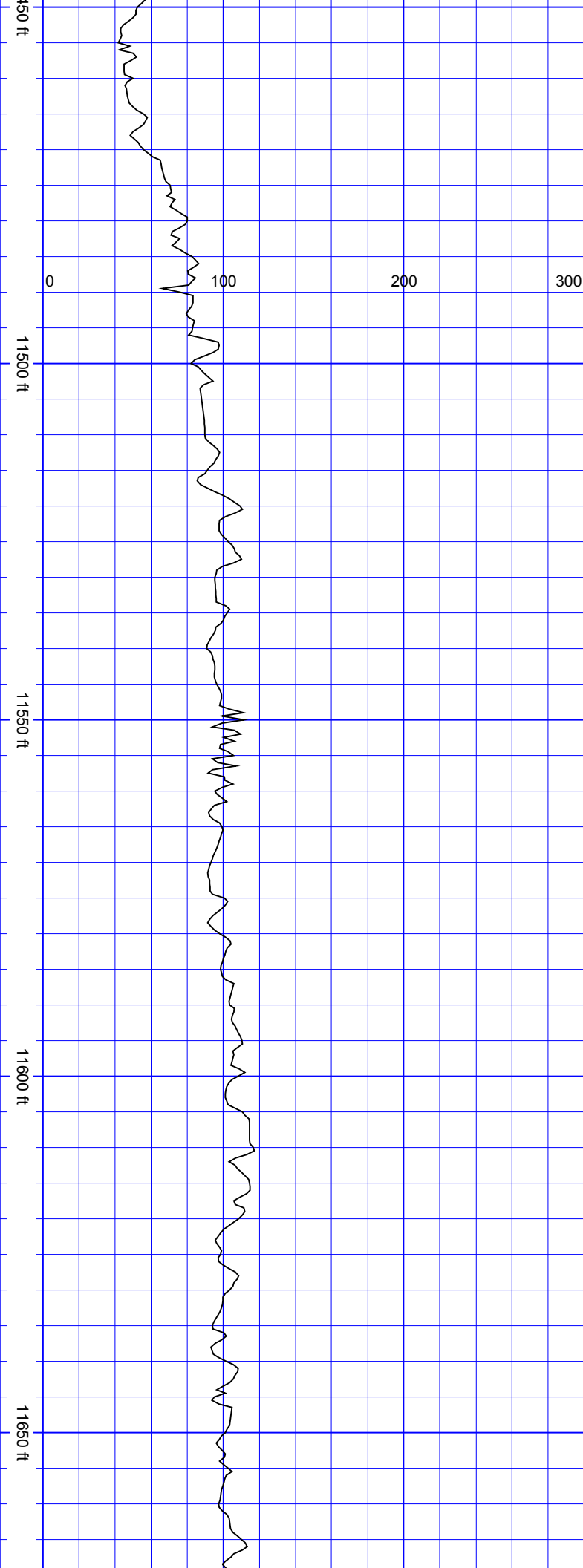
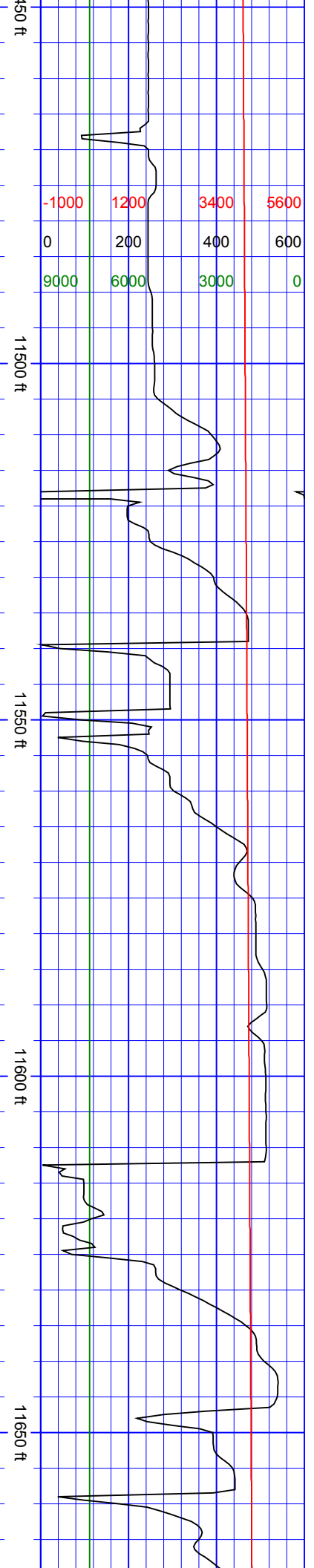


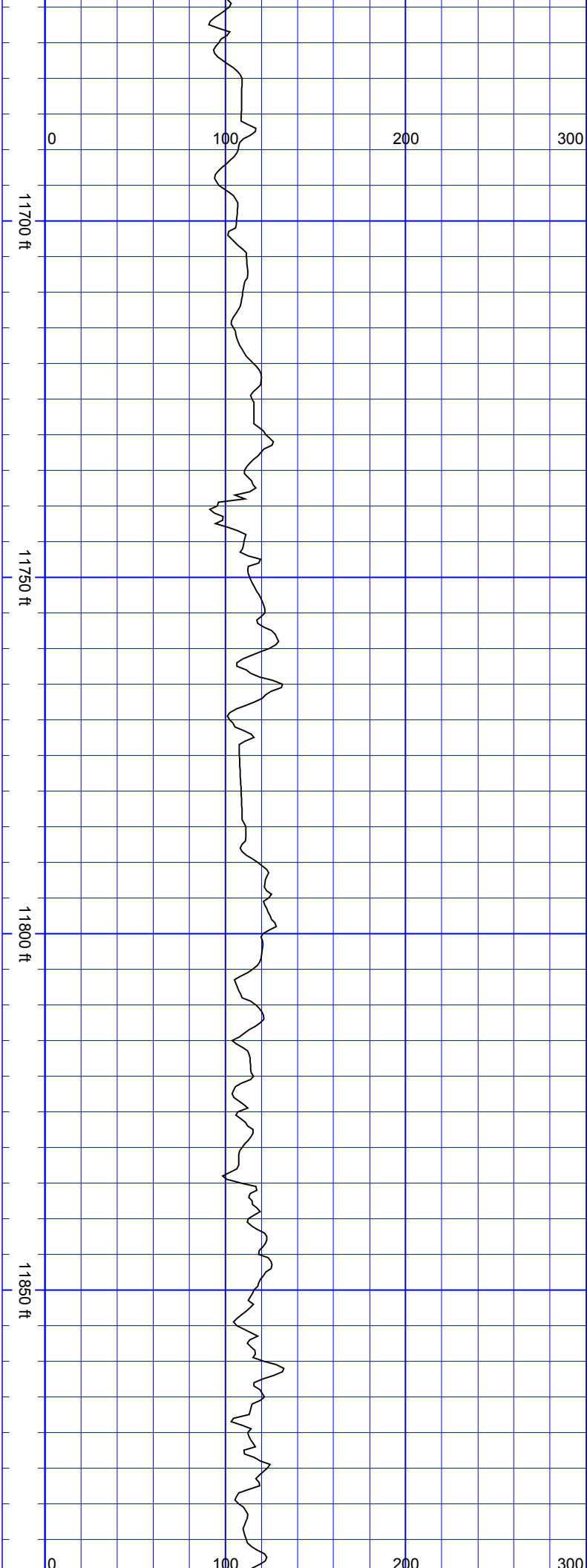
SurveyDepth:11448
TVD:7313.86 Inc:89.52
Azi:92.07
VertSec:4072.05

SurveyDepth:11543
TVD:7315.57 Inc:88.42
Azi:90.57
VertSec:4166.63

SurveyDepth:11637
TVD:7317.41 Inc:89.34
Azi:90.92
VertSec:4260.11

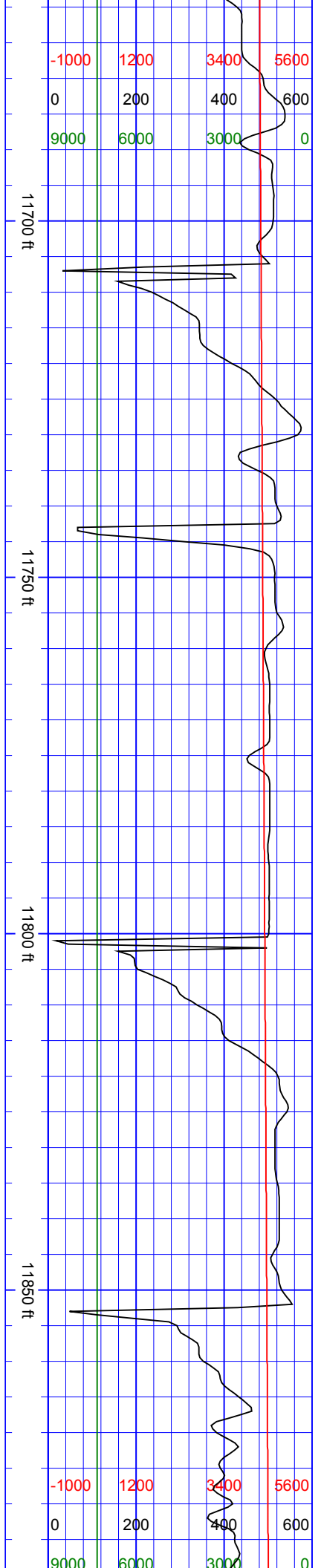
SSSS

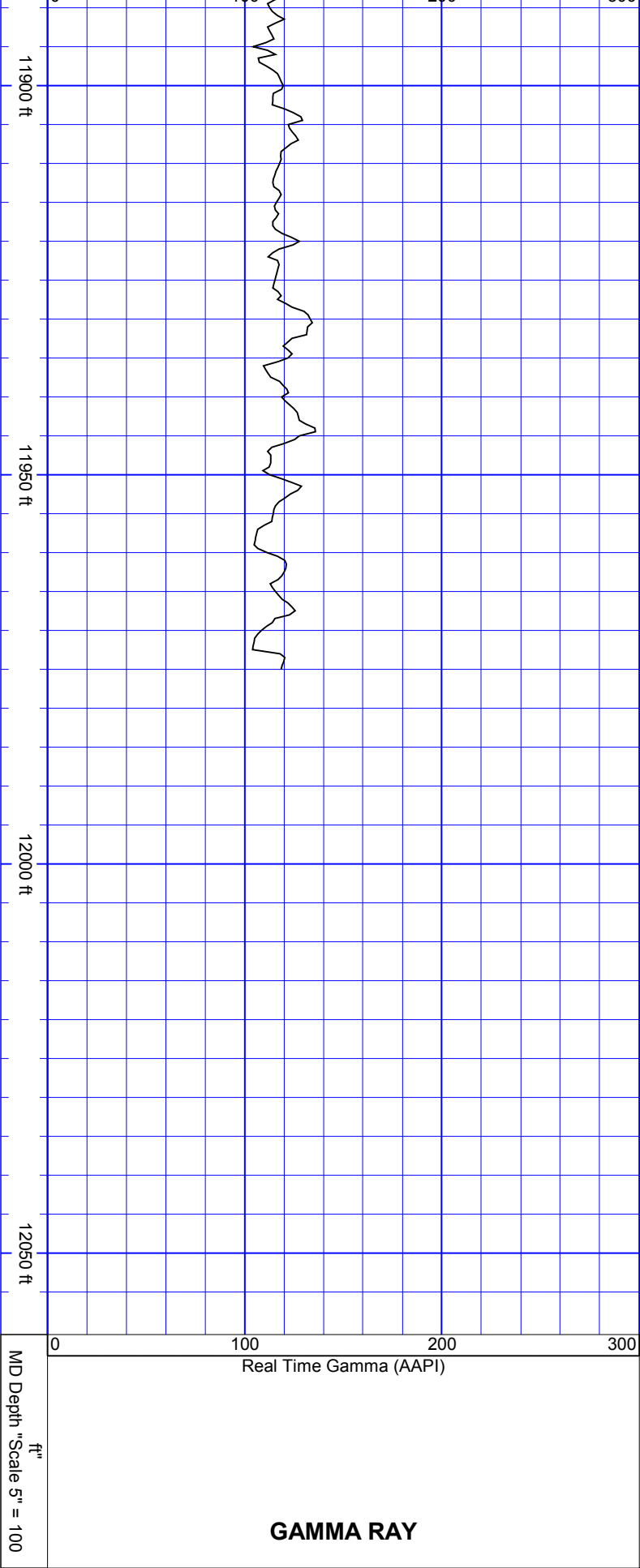




SurveyDepth:11732
TVD:7317.85 Inc:90.13
Azi:91.1
VertSec:4354.66

SurveyDepth:11826
TVD:7317.49 Inc:90.31
Azi:90.66
VertSec:4448.19





Directional Survey	SurveyDepth:11920 TVD:7316.66 Inc:90.7 Azi:90.04 VertSec:4541.62
	SurveyDepth:11969 TVD:7315.85 Inc:91.19 Azi:89.25 VertSec:4590.25
	Extrapolation to Bit SurveyDepth:12038 TVD:7314.42 Inc:91.19 Azi:89.25 VertSec:4658.67

