



Build & Lateral

Job #:

185311

Well ID:

16191475

Scale:

5" = 100 ft

Type:

MD

Well Site Information

Oil Company Crestone Peak Resources

Surface Location S17-T2N-R65W

Well Name Melbon Ranch 4J-17H-M265

API 05-123-47752-00

Field DJ BASIN

State CO

Country USA

Surface Coordinates

Well Type Horizontal

Latitude 40° 8' 4.78 N

Longitude 104° 41' 47.89 W

N / S Coordinates 1,292,920.34 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 12,010.00 ft Spud Date Nov/06/2018 End Date Nov/09/2018

(MD) Log Interval Start Depth 2,341.78 ft End Depth 12,009.89 ft

Bore Hole Record

Hole Size From To

13.50 in 0.00 ft 2,404.00 ft

8.50 in 2,404.00 ft 12,010.00 ft

Casing Record

Type Size WGT From To

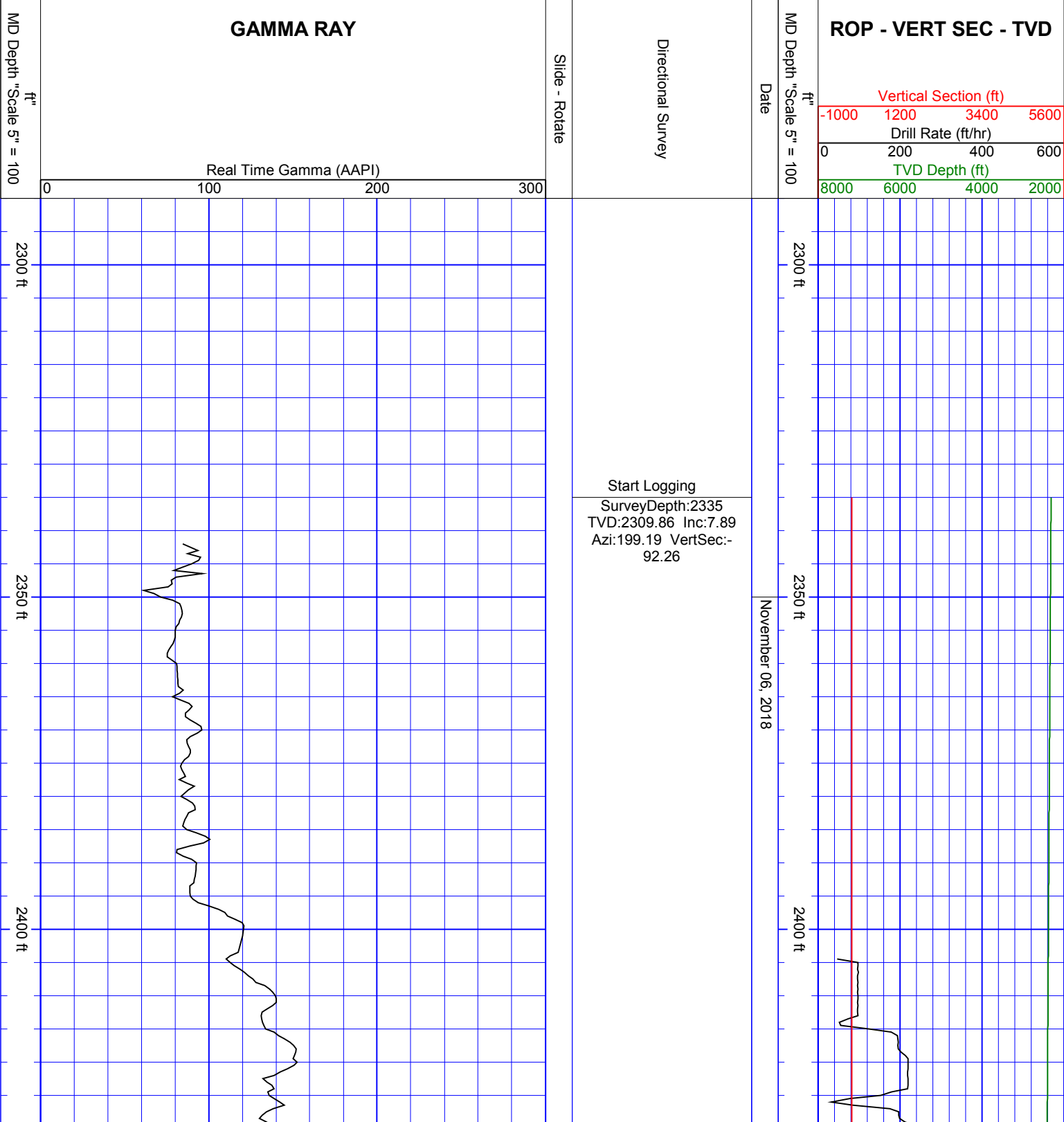
LTC 9.63 in 40.00 lbs/ft 0.00 ft 2,404.00 ft

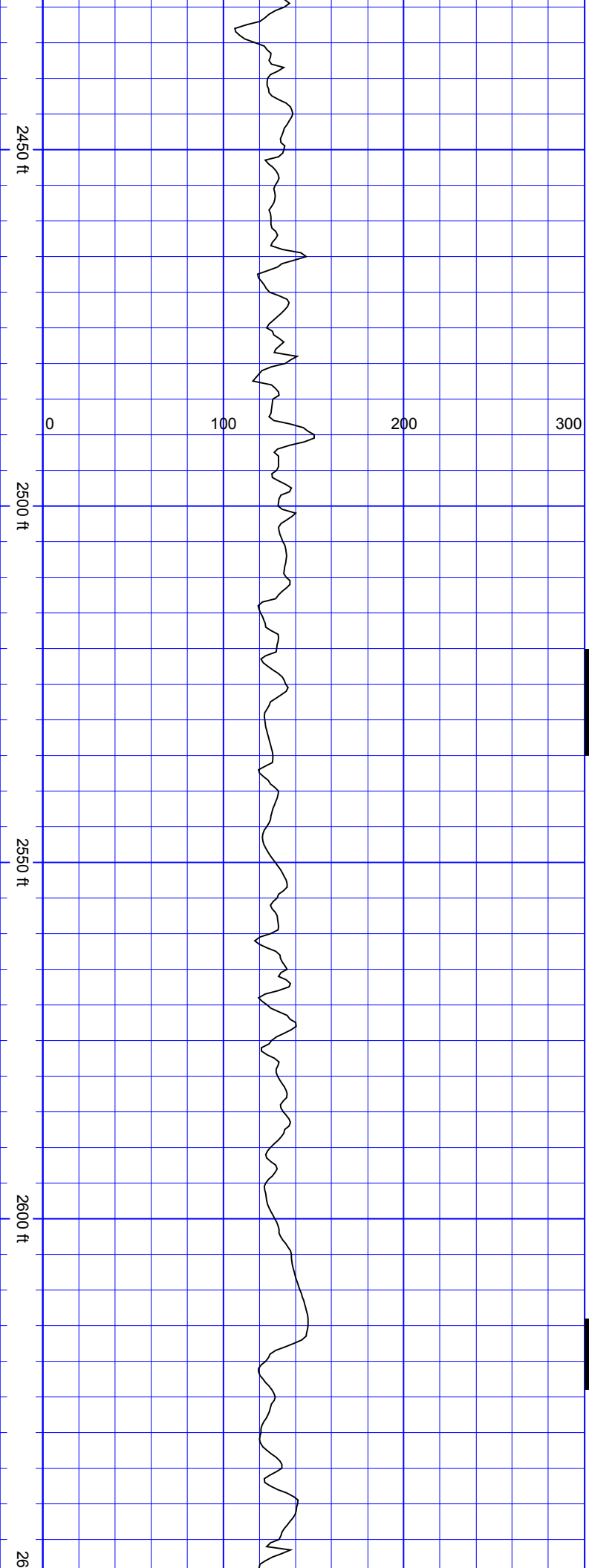
Run Data

|                        |                      |                      |  |  |  |
|------------------------|----------------------|----------------------|--|--|--|
| Bit Run Number         | 1                    | 2                    |  |  |  |
| Start Date & Time      | Nov/06/2018 12:30:00 | Nov/08/2018 23:00:00 |  |  |  |
| End Date & Time        | Nov/08/2018 21:30:00 | Nov/09/2018 23:30:00 |  |  |  |
| Run Hours              | 57                   | 24.5                 |  |  |  |
| Depth In               | 2,404.00 ft          | 10,927.00 ft         |  |  |  |
| Depth Out              | 10,927.00 ft         | 12,010.00 ft         |  |  |  |
| Total Gamma Correction | 6.00                 | 6.00                 |  |  |  |
| Gamma to Bit           | 62.90 ft             | 68.83 ft             |  |  |  |
| Resistivity to Bit     | -                    | -                    |  |  |  |
| Mud Type               | OBM                  | OBM                  |  |  |  |
| Density                | 10.00 ppg            | 10.40 ppg            |  |  |  |
| Viscosity              | 47.00 sec/qt         | 43.00 sec/qt         |  |  |  |
| PH                     | -                    | -                    |  |  |  |
| Fluid Loss             | -                    | -                    |  |  |  |
| K+ ppm                 | -                    | -                    |  |  |  |
| CL- ppm                | 209,867.00 ppm       | 208,941.00 ppm       |  |  |  |
| Max Mud Temp           | 237 °F               | 243.00 °F            |  |  |  |
| Mud Report Depth       | 7,697.00 ft          | 10,927.00 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.





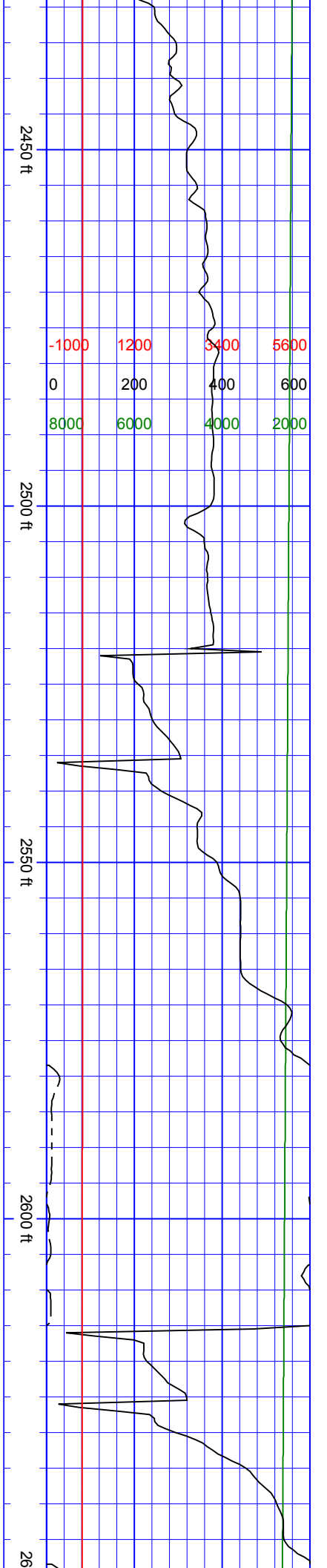
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TVD:2424.96 Inc:6.42  
Azi:191.56 VertSec:-93.41

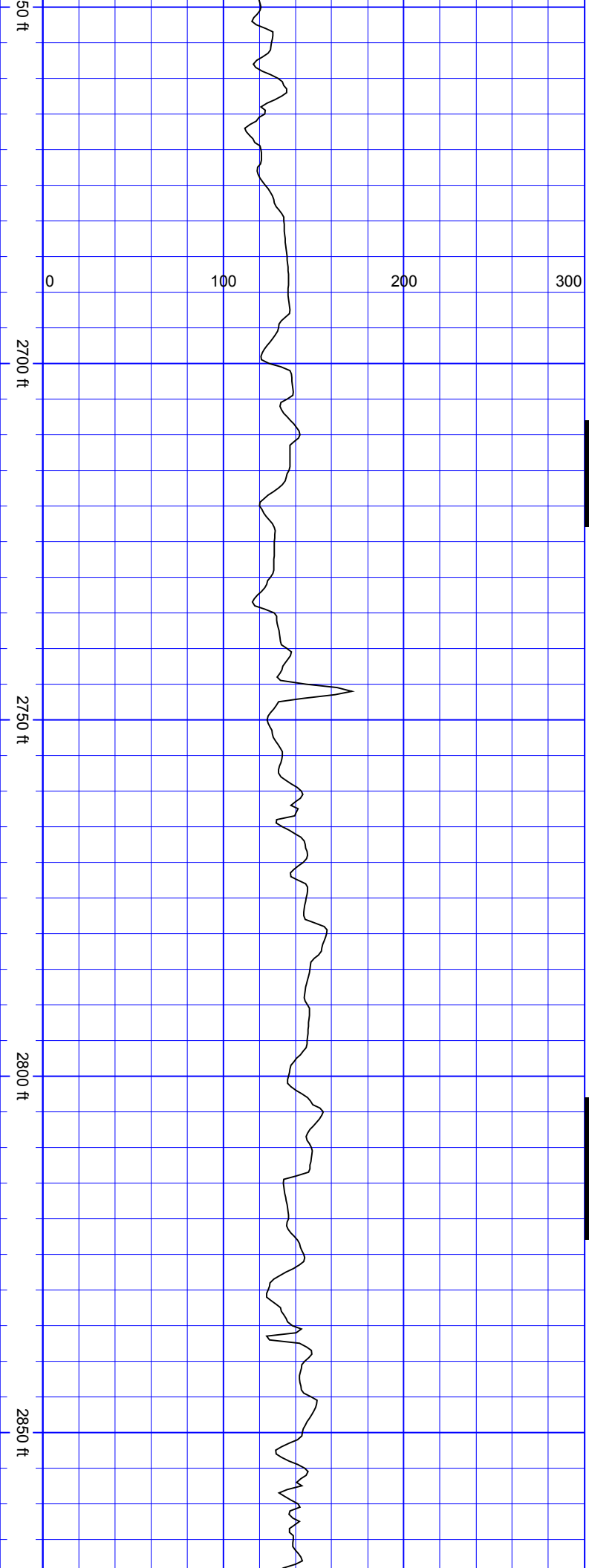
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SurveyDepth:2545  
TVD:2518.2 Inc:8.09  
Azi:201.58 VertSec:-94.64

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SurveyDepth:2639  
TVD:2611.31 Inc:7.73  
Azi:210.63 VertSec:-97.93



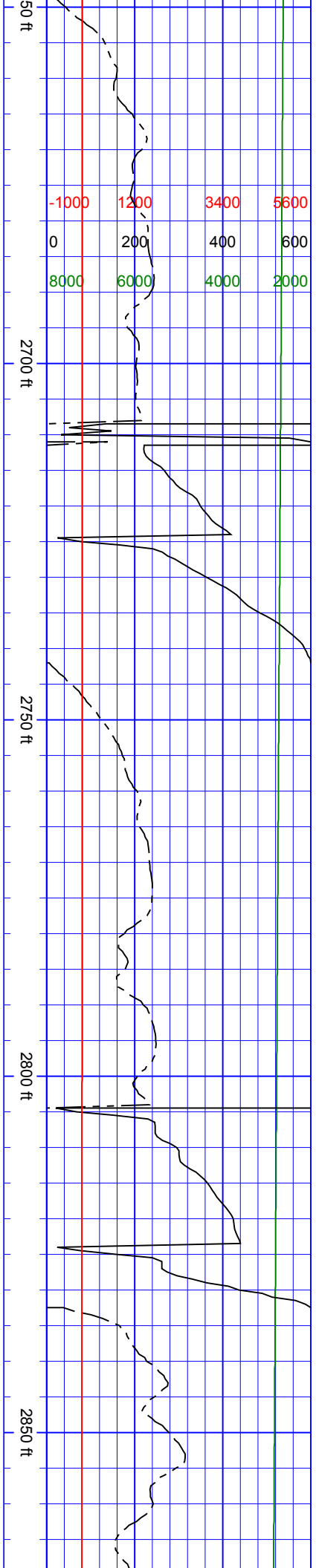


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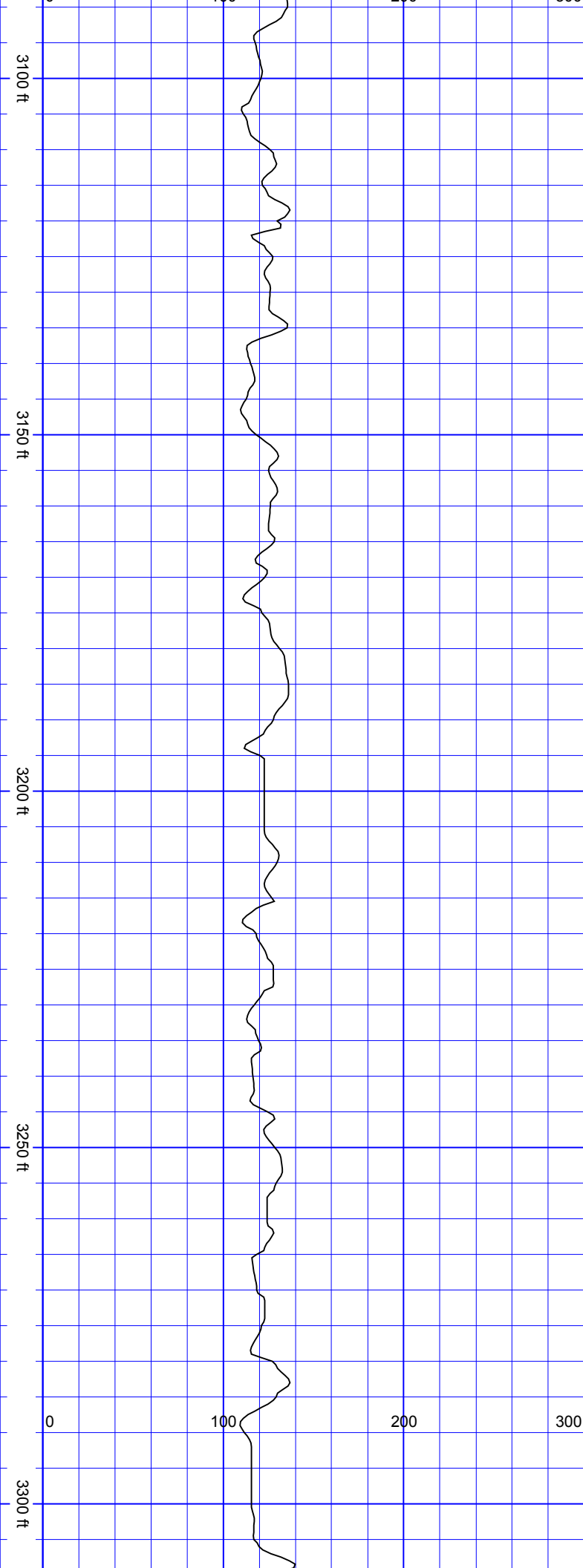
SurveyDepth:2734  
TVD:2705.42 Inc:8.04  
Azi:219.16 VertSec:-  
103.18

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SurveyDepth:2828  
TVD:2798.38 Inc:8.97  
Azi:223.11 VertSec:-  
110.14

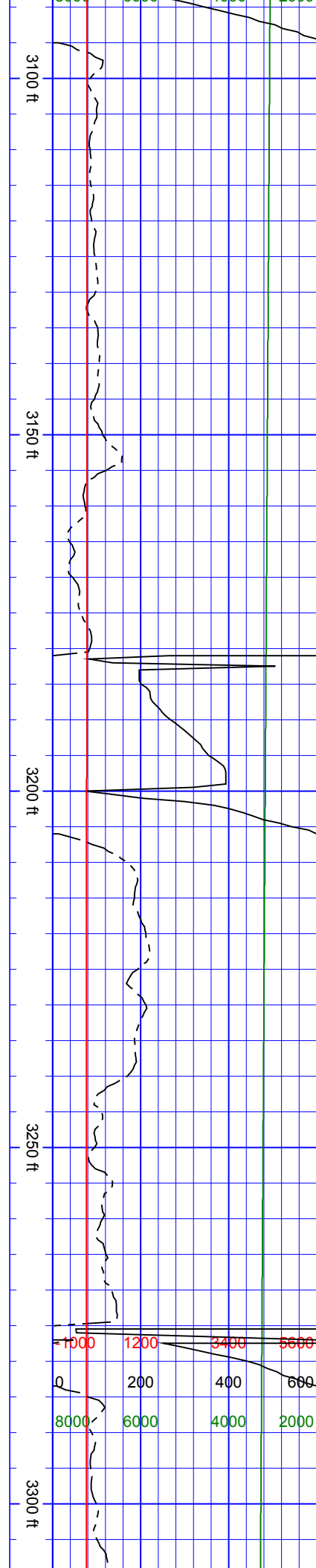




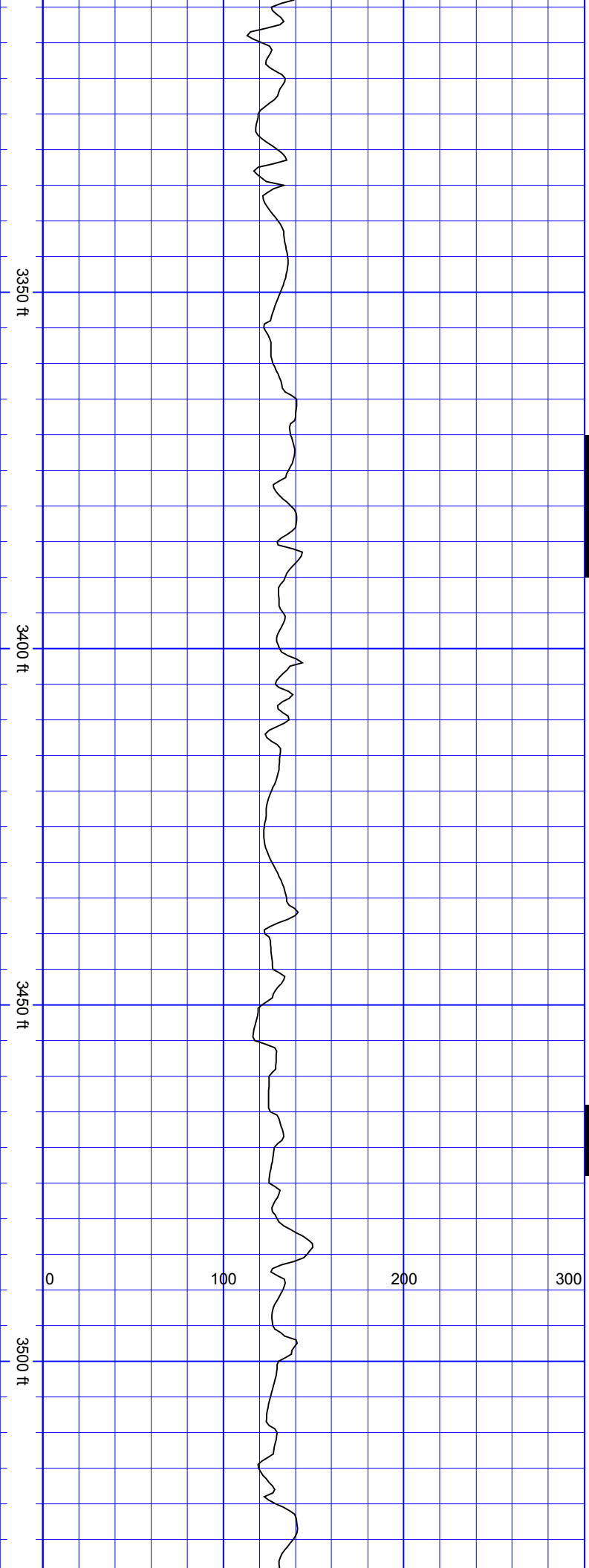


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| SurveyDepth:3112<br>TVD:3078.36 Inc:8.83<br>Azi:225.48 VertSec:-<br>136.56 |
| SurveyDepth:3206<br>TVD:3171.08 Inc:10.11<br>Azi:218.8 VertSec:-<br>144.45 |
| SurveyDepth:3301<br>TVD:3264.77 Inc:8.97<br>Azi:218.1 VertSec:-            |



151.67

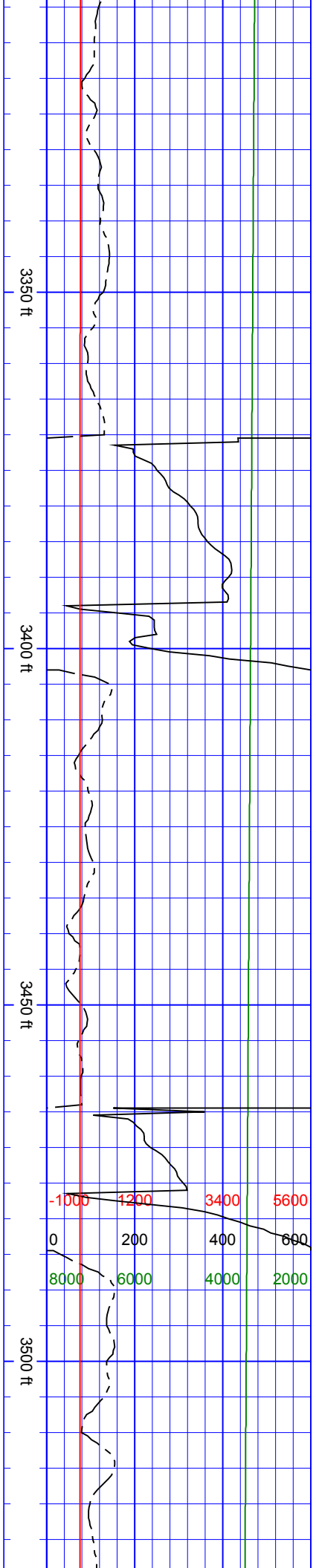


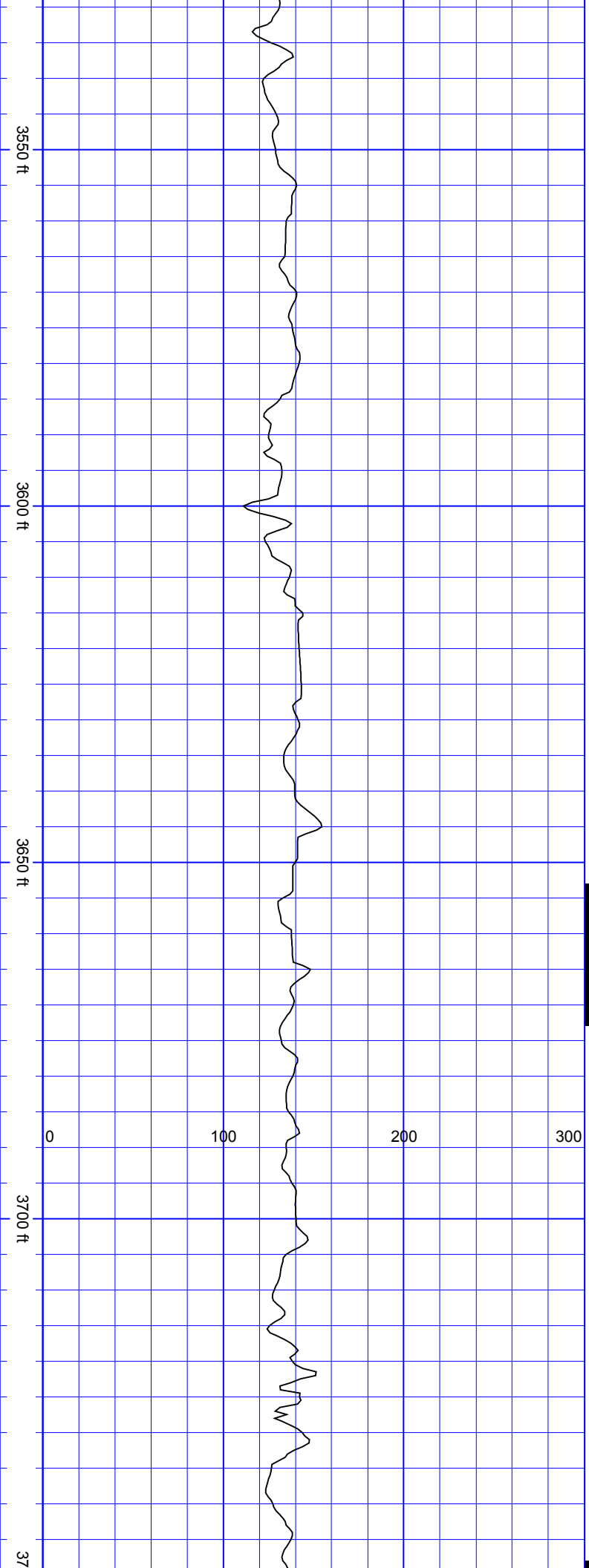
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SurveyDepth:3395  
TVD:3357.45 Inc:10.2  
Azi:216.34 VertSec:-  
158.52

SurveyDepth:3489  
TVD:3450.06 Inc:9.62  
Azi:205.8 VertSec:-  
164.04

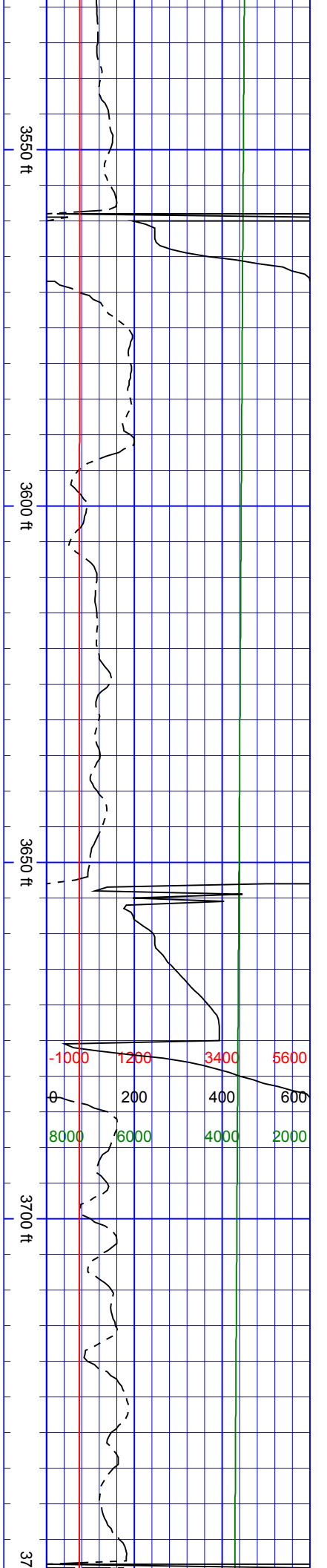




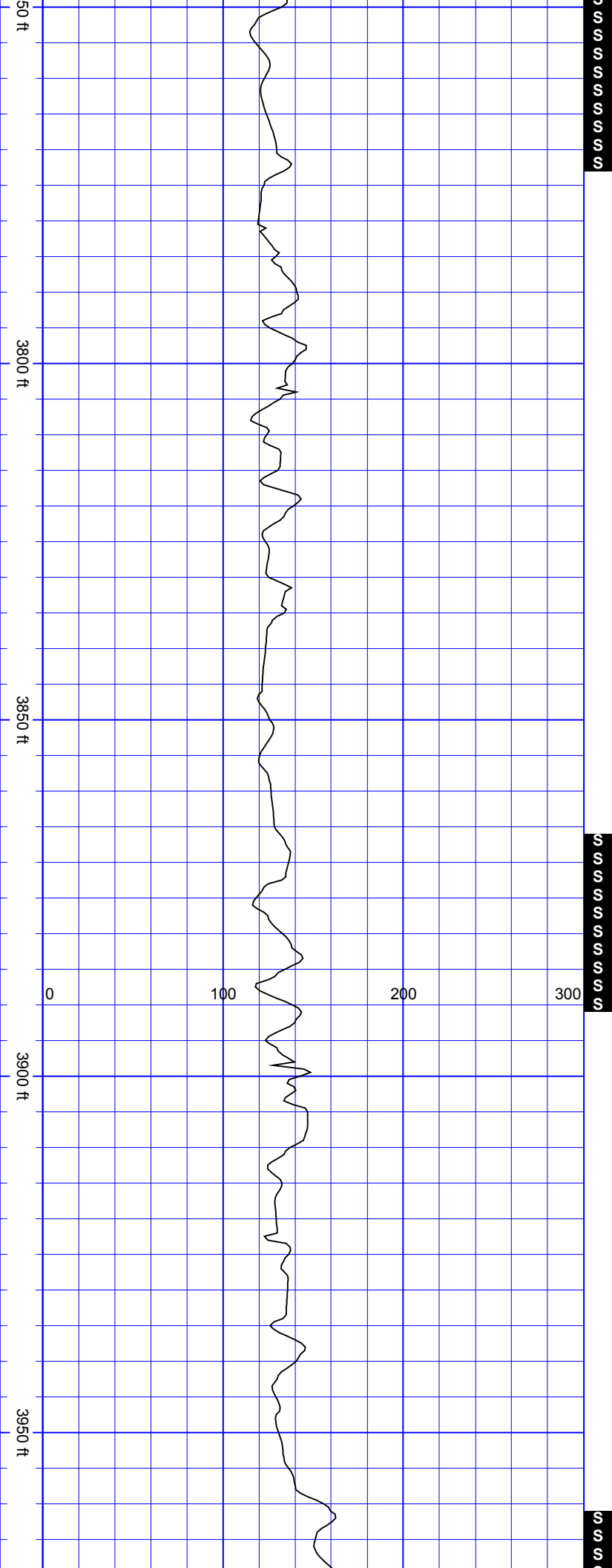
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TVD:3544.01 Inc:7.38  
Azi:203.42 VertSec:-  
167.34

SurveyDepth:3679  
TVD:3638.14 Inc:8.13  
Azi:206.76 VertSec:-  
170.43

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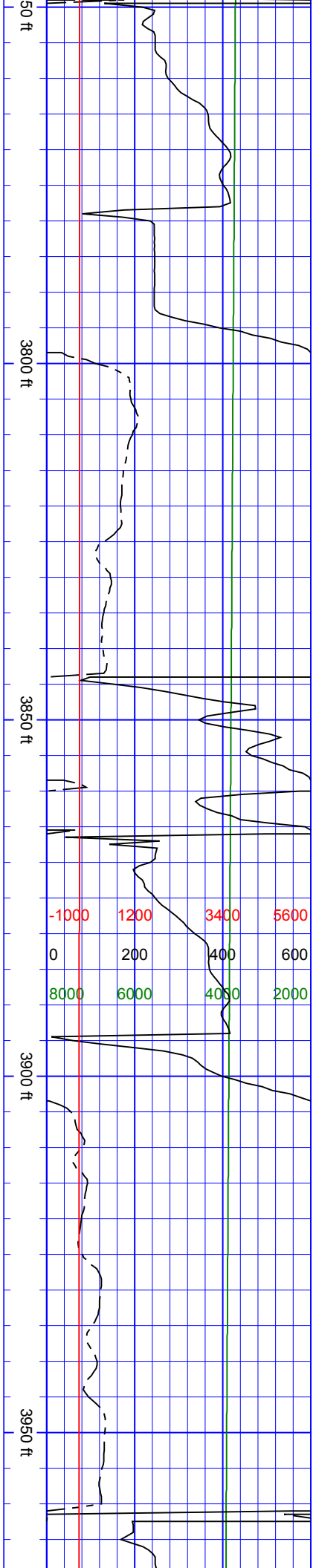




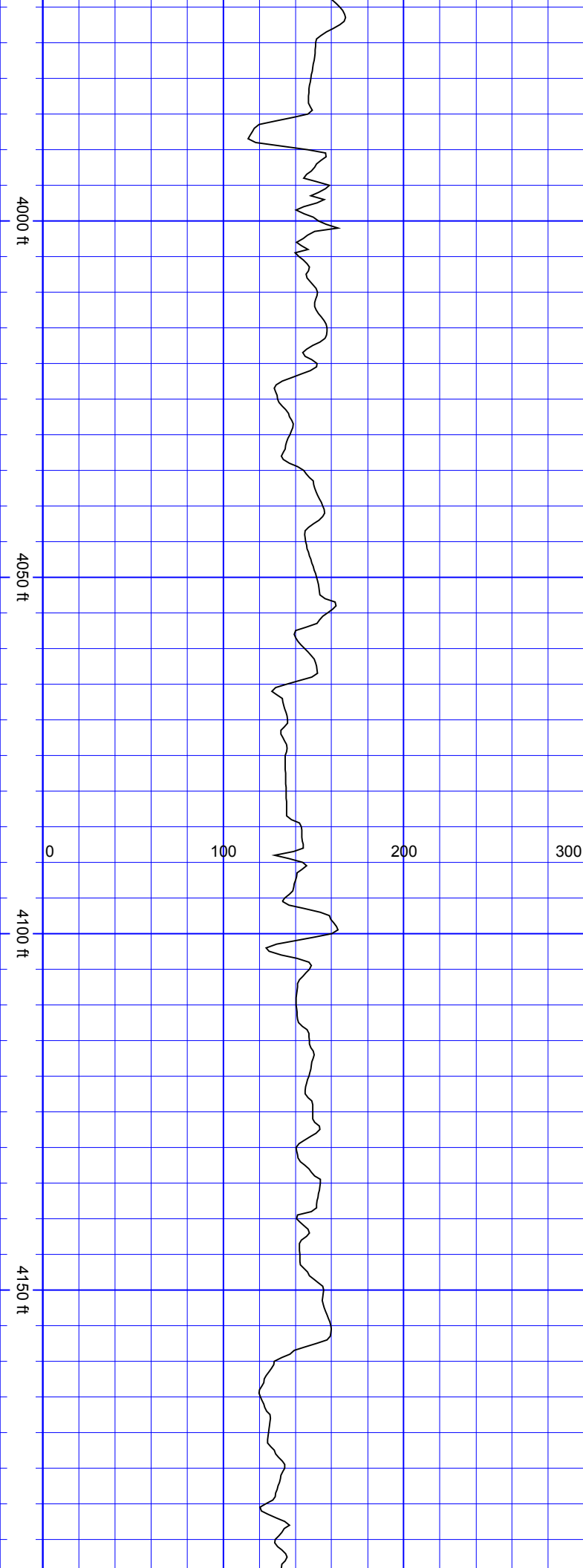


SurveyDepth:3797  
TVD:3754.83 Inc:8.92  
Azi:208.7 VertSec:-  
175.43

SurveyDepth:3892  
TVD:3848.49 Inc:10.37  
Azi:207.64 VertSec:-  
180.06



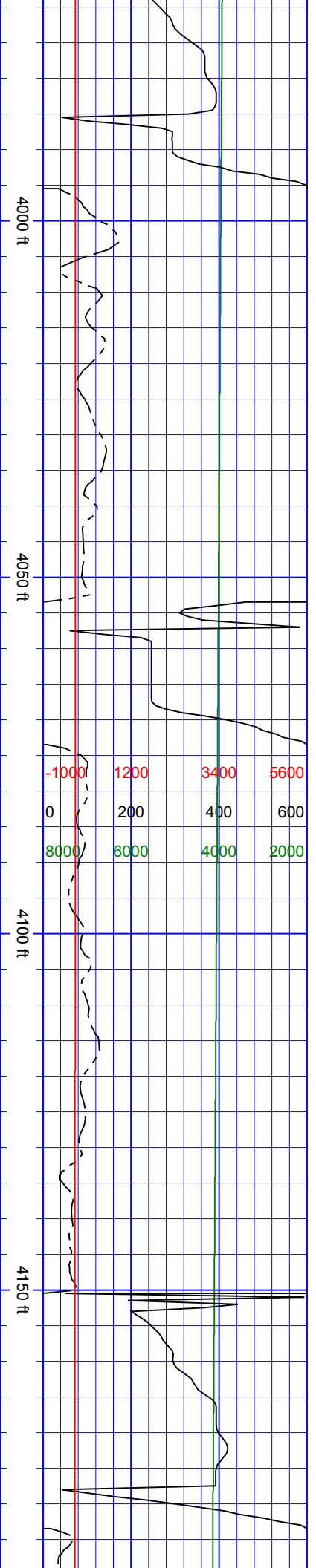
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|-------|------|------|------|
| -1000 | 1200 | 3400 | 5600 |
| 0     | 200  | 400  | 600  |
| 8000  | 6000 | 4000 | 2000 |



SurveyDepth:3986  
TVD:3940.81 Inc:11.34  
Azi:206.85 VertSec:-  
184.95

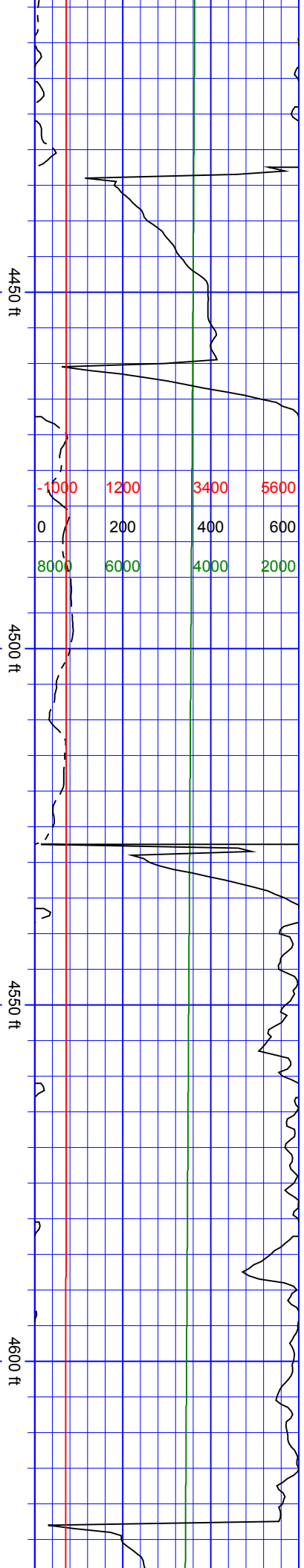
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TVD:4034.21 Inc:9.67  
Azi:206.32 VertSec:-  
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SurveyDepth:4175  
TVD:4126.67 Inc:11.12  
Azi:206.24 VertSec:-  
193.97



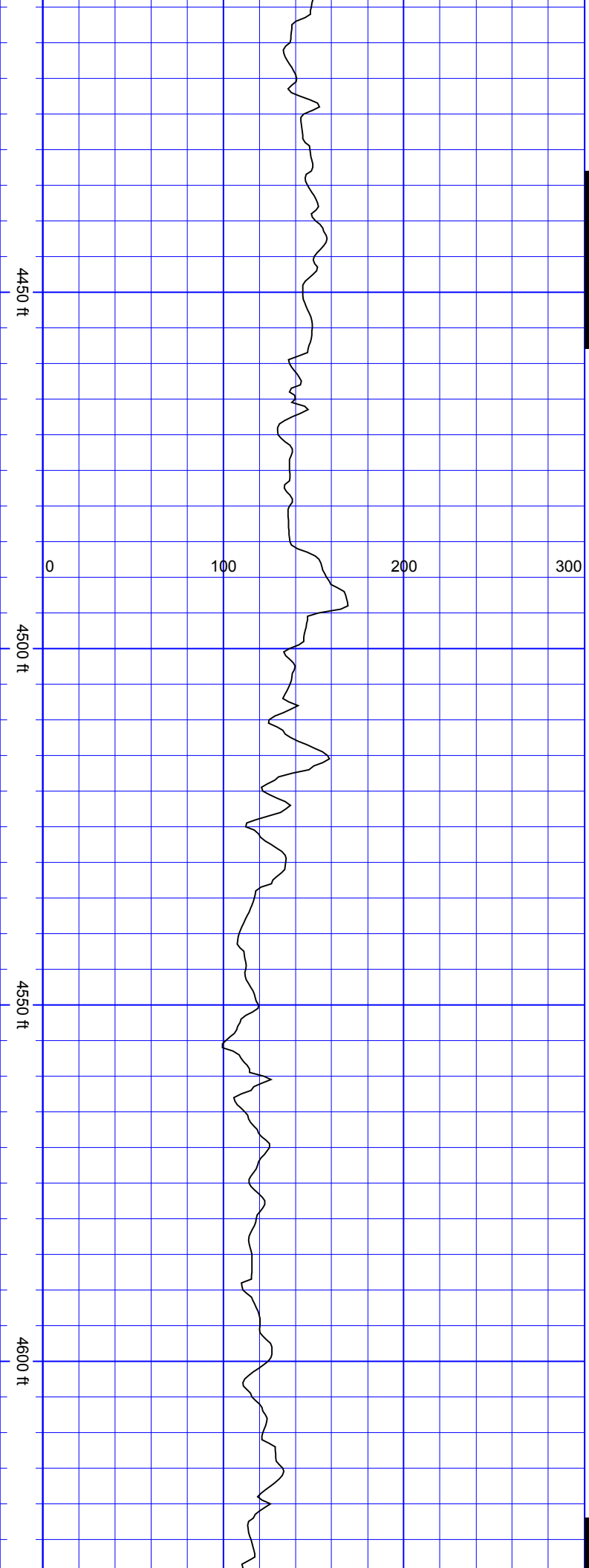


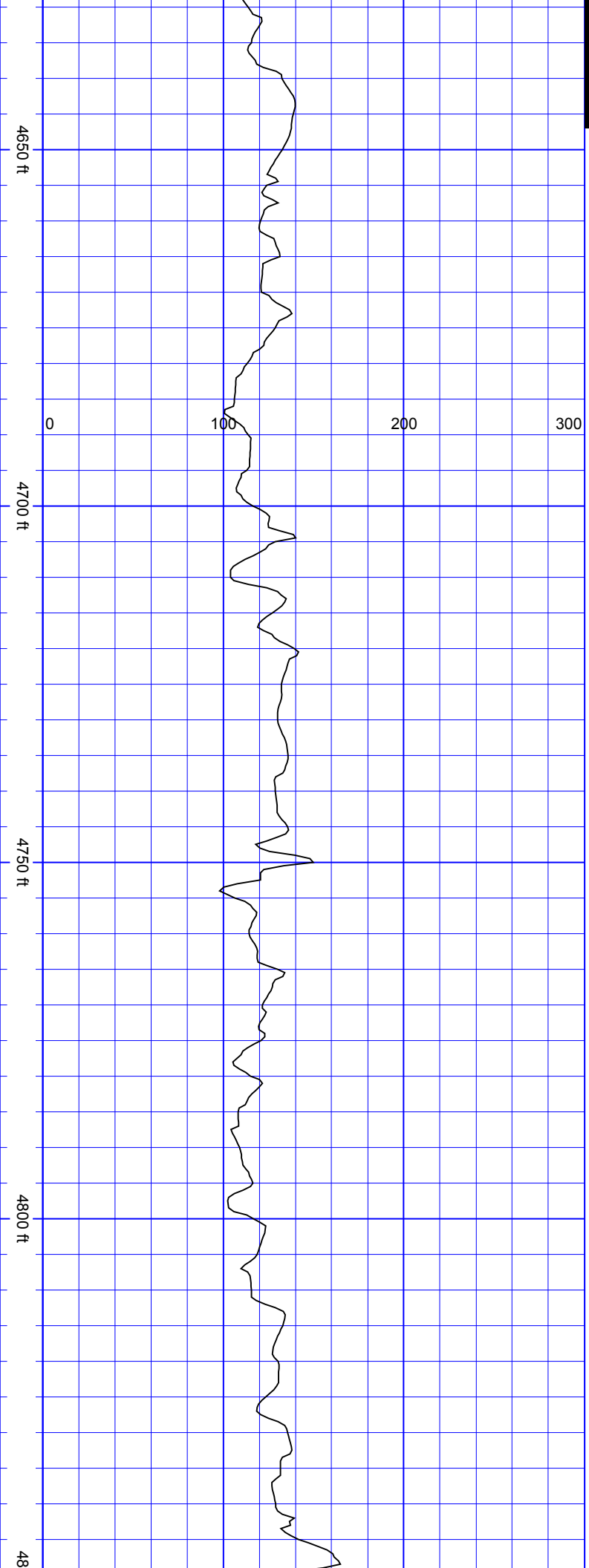
7, 2018



SurveyDepth:4458  
TVD:4405.22 Inc:10.11  
Azi:210.89 VertSec:-  
207.82

SurveyDepth:4553  
TVD:4498.94 Inc:8.7  
Azi:209.75 VertSec:-  
212.92



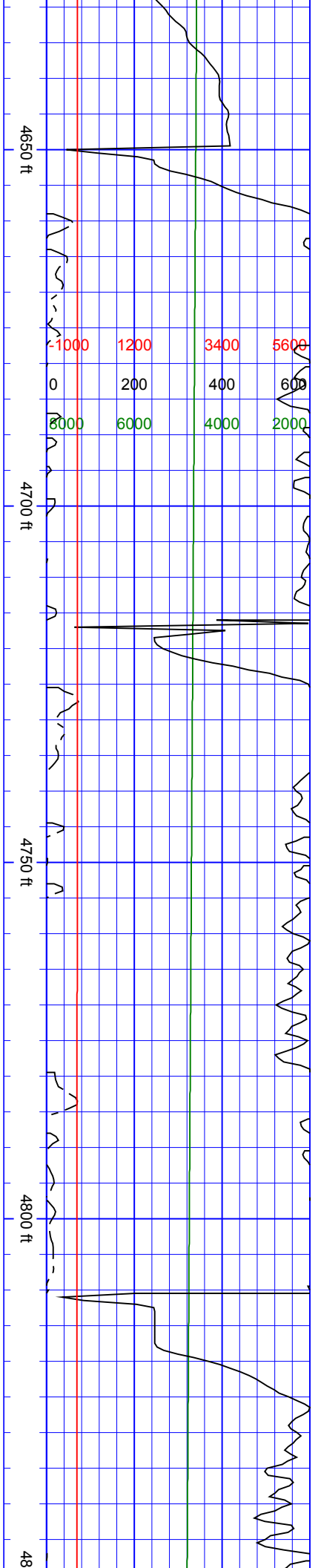


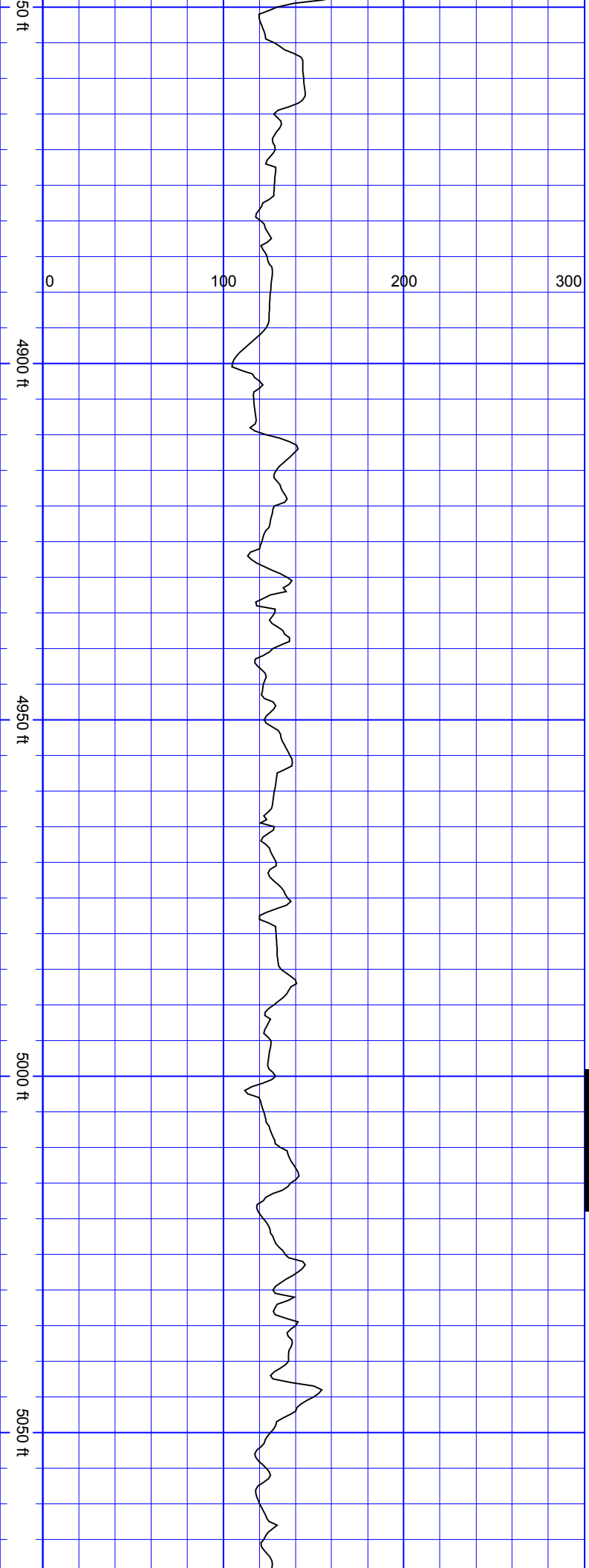
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SurveyDepth:4647  
TVD:4591.52 Inc:11.25  
Azi:214.41 VertSec:-  
218.8

SurveyDepth:4741  
TVD:4683.87 Inc:10.24  
Azi:212.21 VertSec:-  
225.41

SurveyDepth:4835  
TVD:4776.53 Inc:9.14  
Azi:211.42 VertSec:-  
230.99

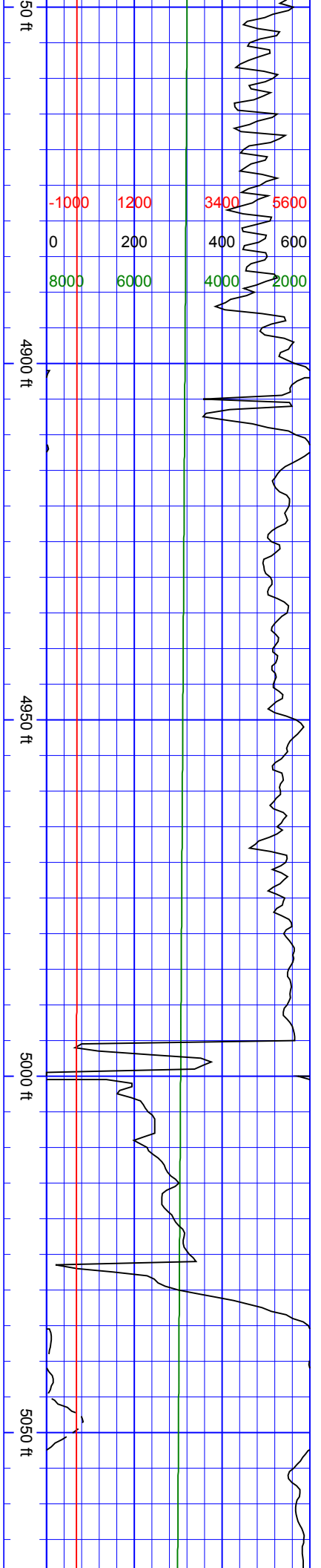




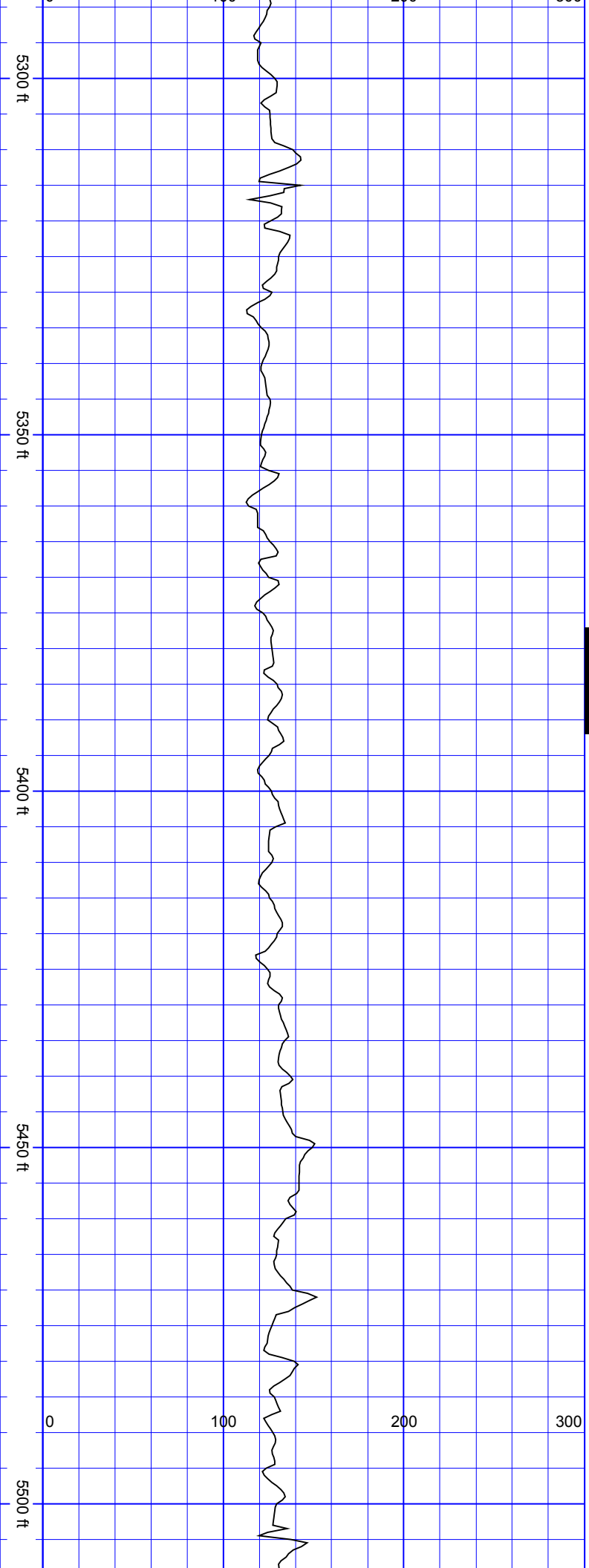
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TVD:4870.41 Inc:8.44  
Azi:211.42 VertSec:-  
236.01

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SurveyDepth:5025  
TVD:4964.42 Inc:8.09  
Azi:209.58 VertSec:-  
240.53





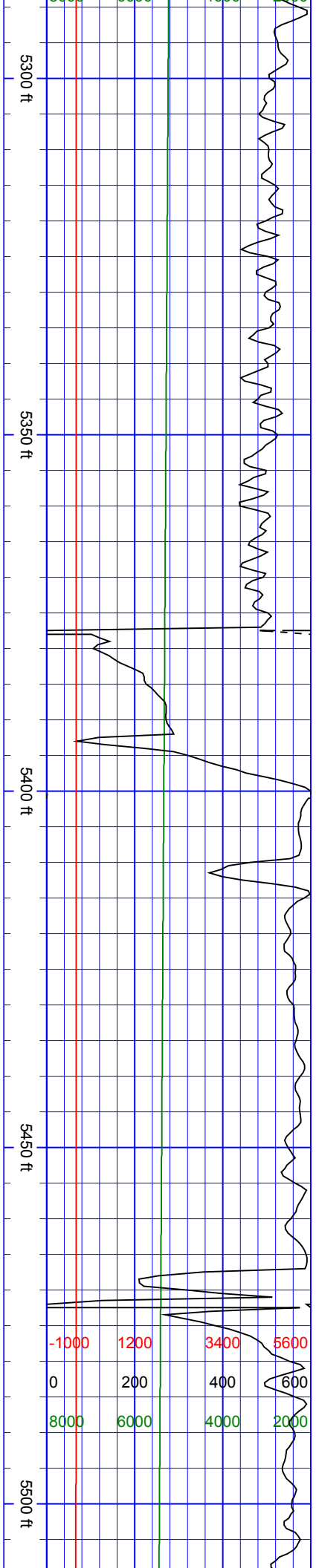


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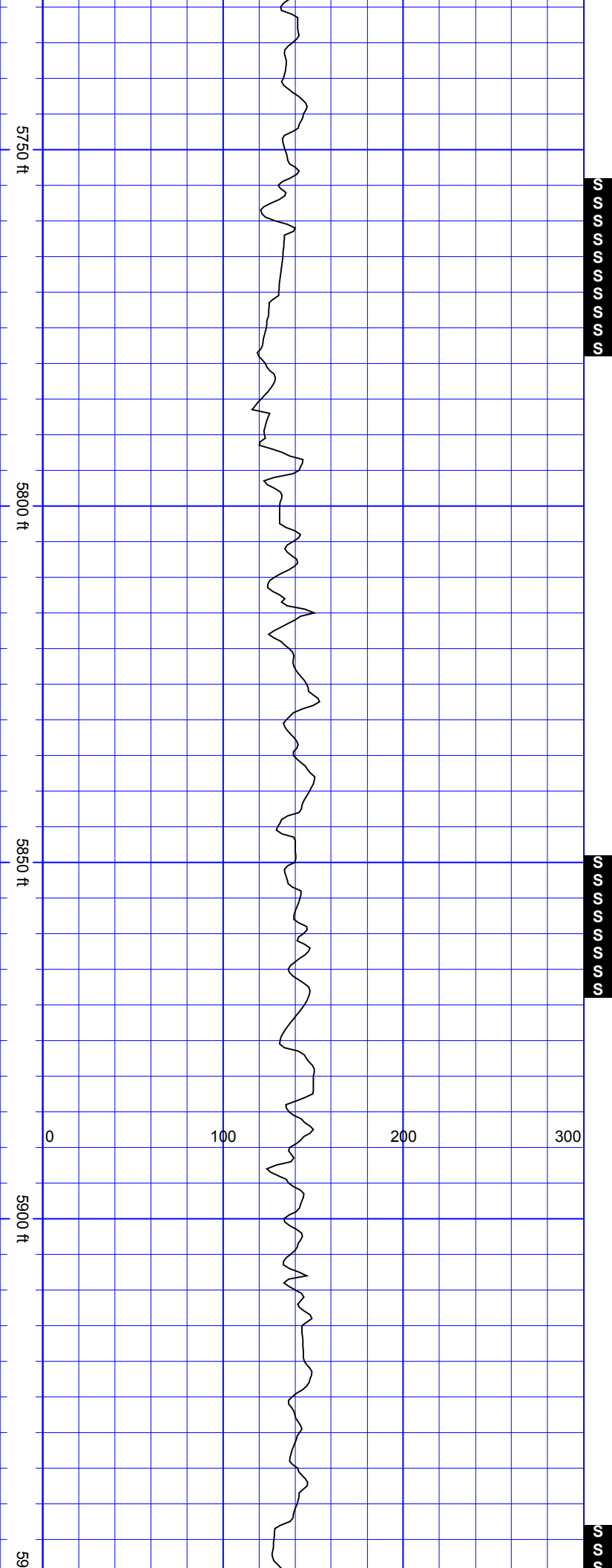
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TVD:5335.4 Inc:10.55  
Azi:210.98 VertSec:-258.27

SurveyDepth:5496  
TVD:5428.11 Inc:8.48  
Azi:203.34 VertSec:-262.64



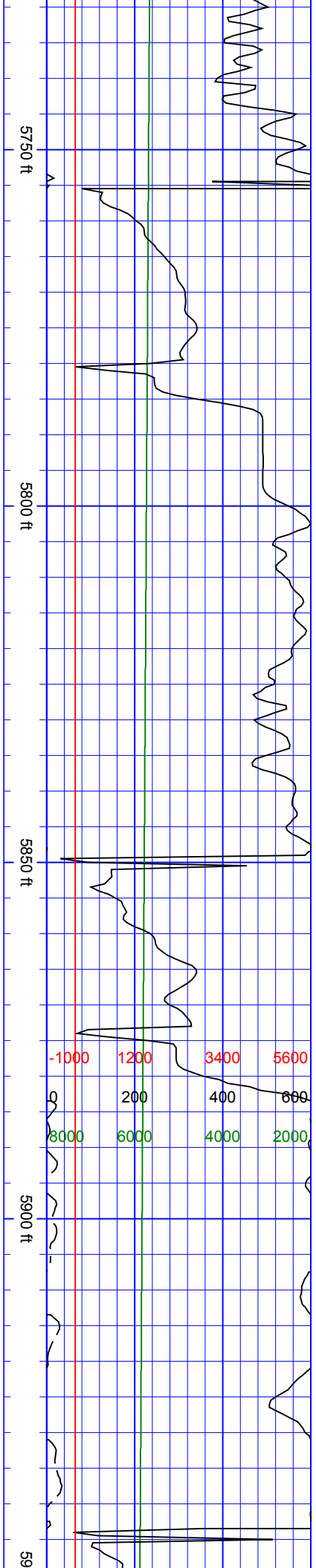


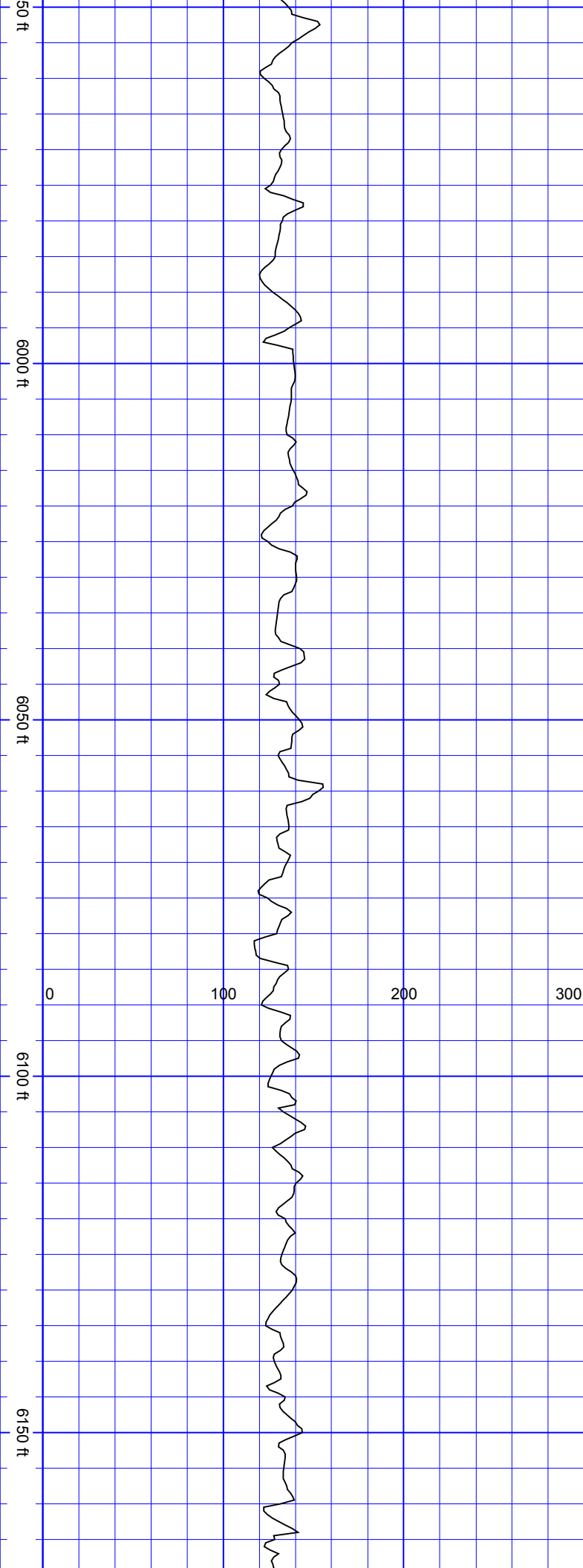




SurveyDepth:5780  
TVD:5709.08 Inc:8.66  
Azi:209.31 VertSec:-  
278.01

SurveyDepth:5874  
TVD:5801.99 Inc:8.79  
Azi:205.8 VertSec:-  
282.02

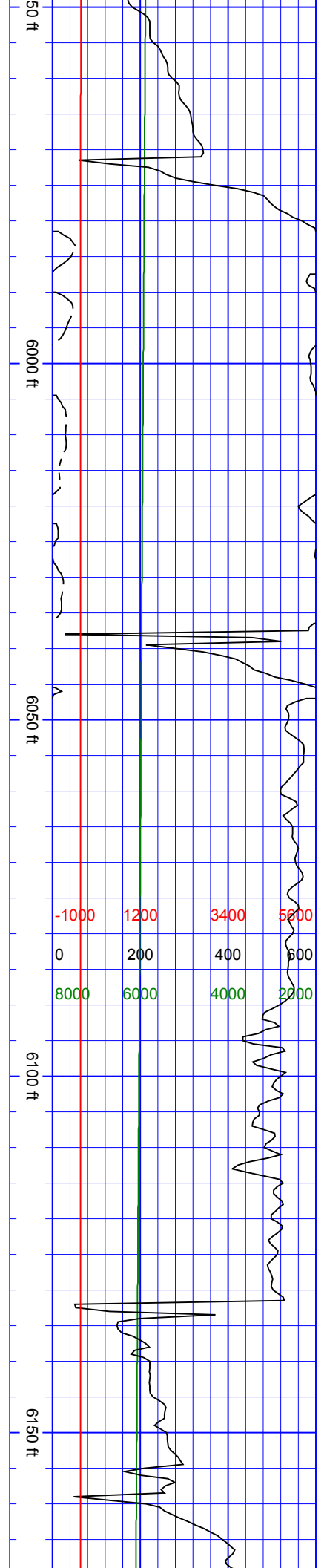




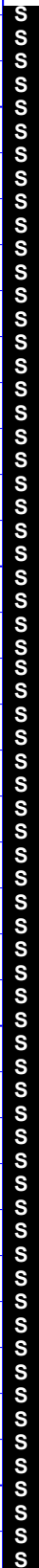
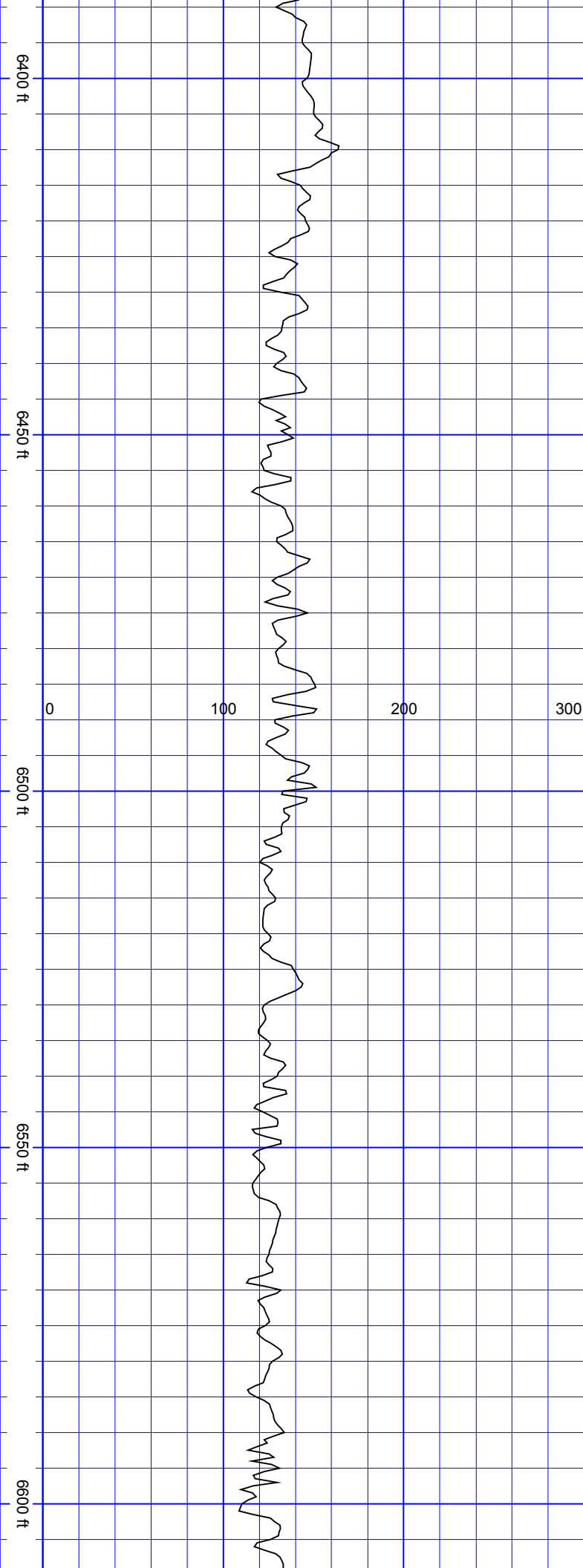
SurveyDepth:5968  
TVD:5894.7 Inc:10.24  
Azi:211.77 VertSec:-  
286.77

SurveyDepth:6063  
TVD:5988.47 Inc:8.22  
Azi:211.42 VertSec:-  
292.09

SurveyDepth:6158  
TVD:6082.44 Inc:8.61  
Azi:212.65 VertSec:-  
297.04





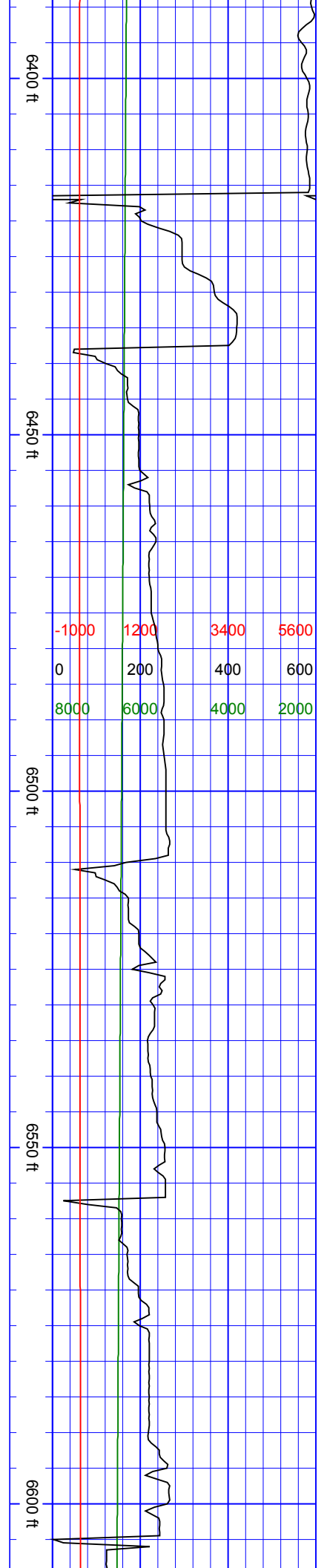


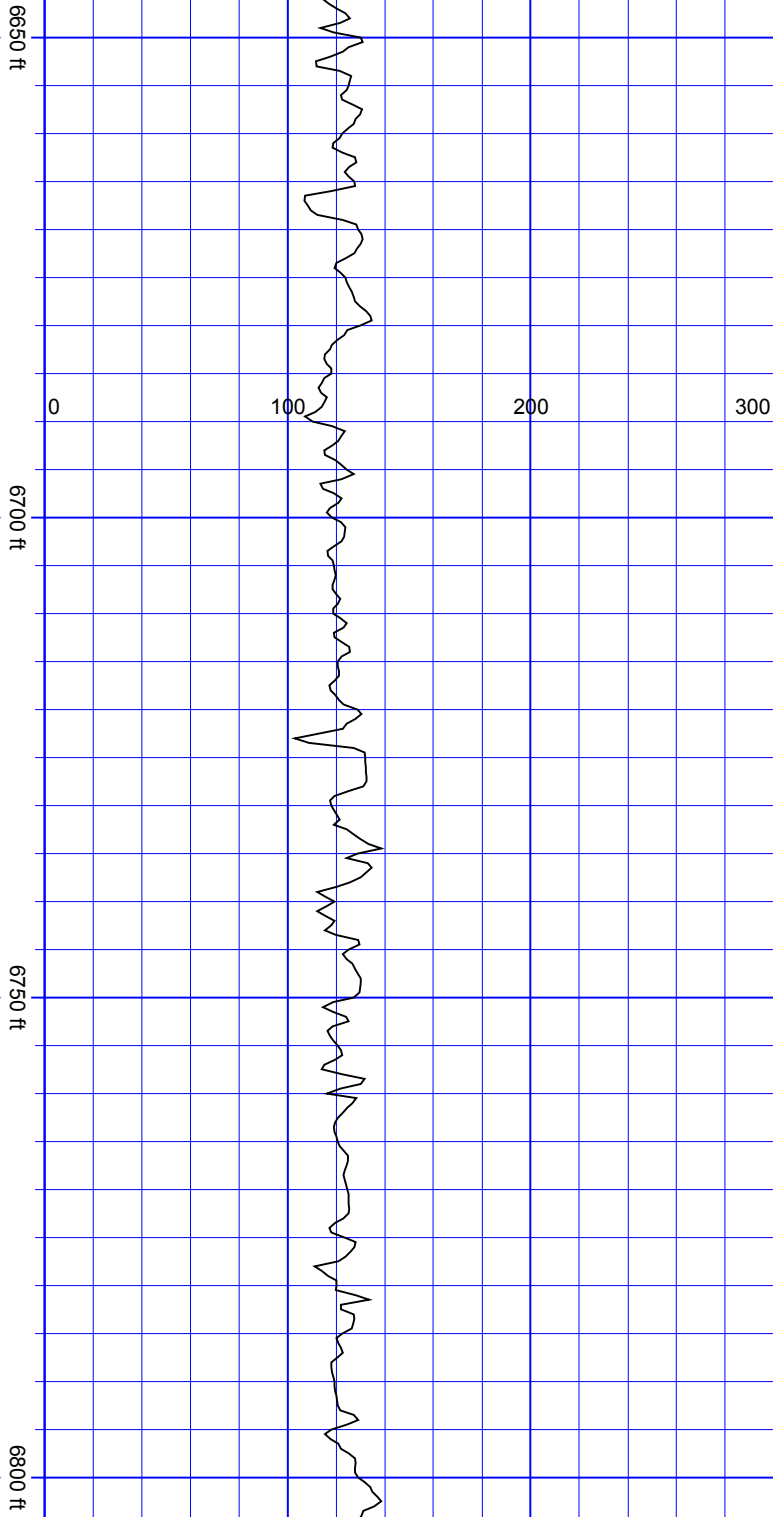
SurveyDepth:6441  
TVD:6361.96 Inc:7.3  
Azi:207.99 VertSec:-312.92

SurveyDepth:6488  
TVD:6408.53 Inc:8.97  
Azi:162.64 VertSec:-312.03

SurveyDepth:6536  
TVD:6455.67 Inc:12.92  
Azi:137.33 VertSec:-305.9

SurveyDepth:6583  
TVD:6501.02 Inc:17.53  
Azi:129.33 VertSec:-295.41





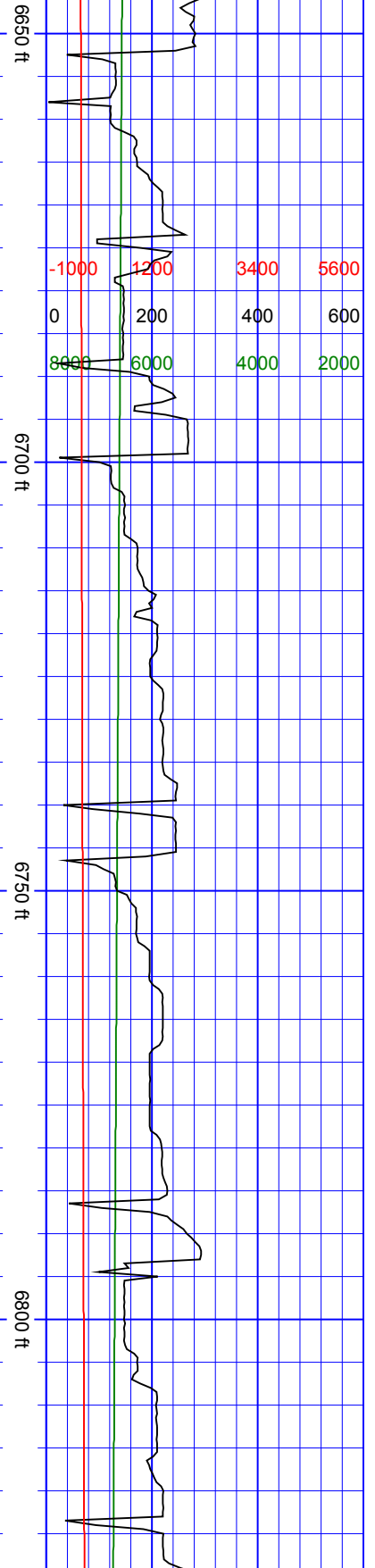
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TVD:6545.38 Inc:21.01  
Azi:122.92 VertSec:-  
281.34

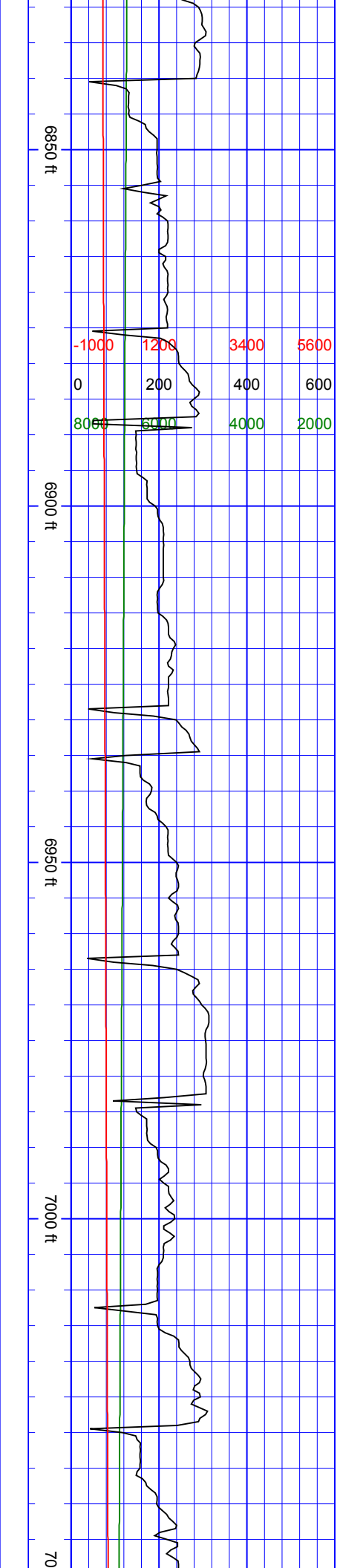
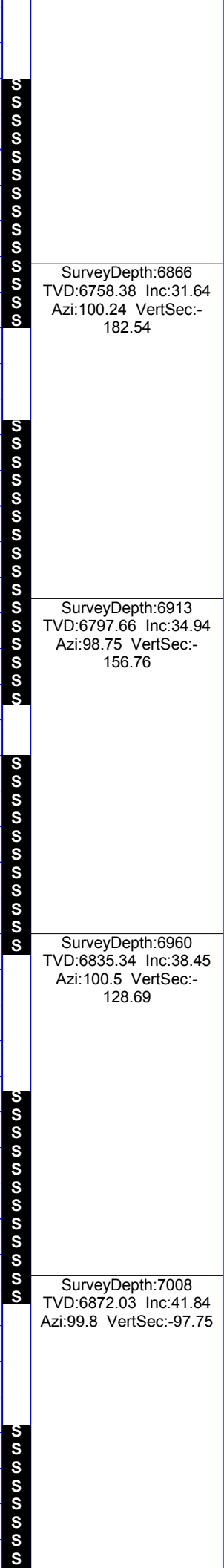
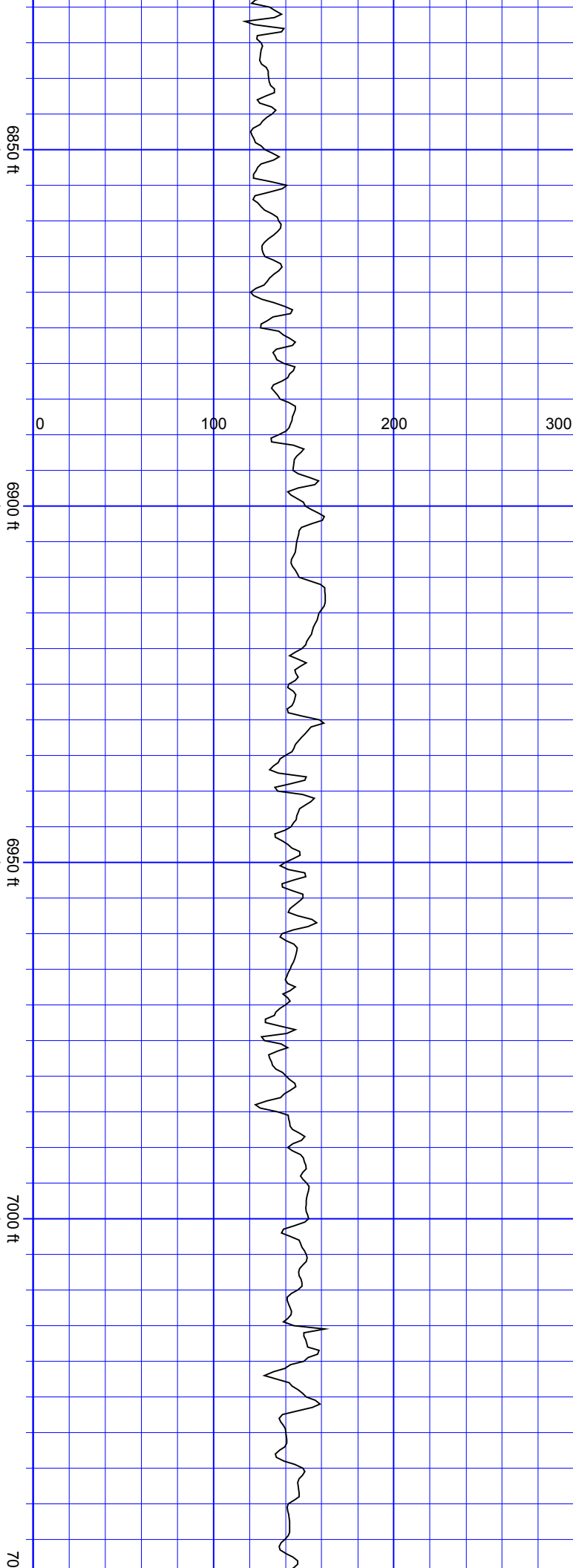
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TVD:6589.18 Inc:21.53  
Azi:120.37 VertSec:-  
265.36

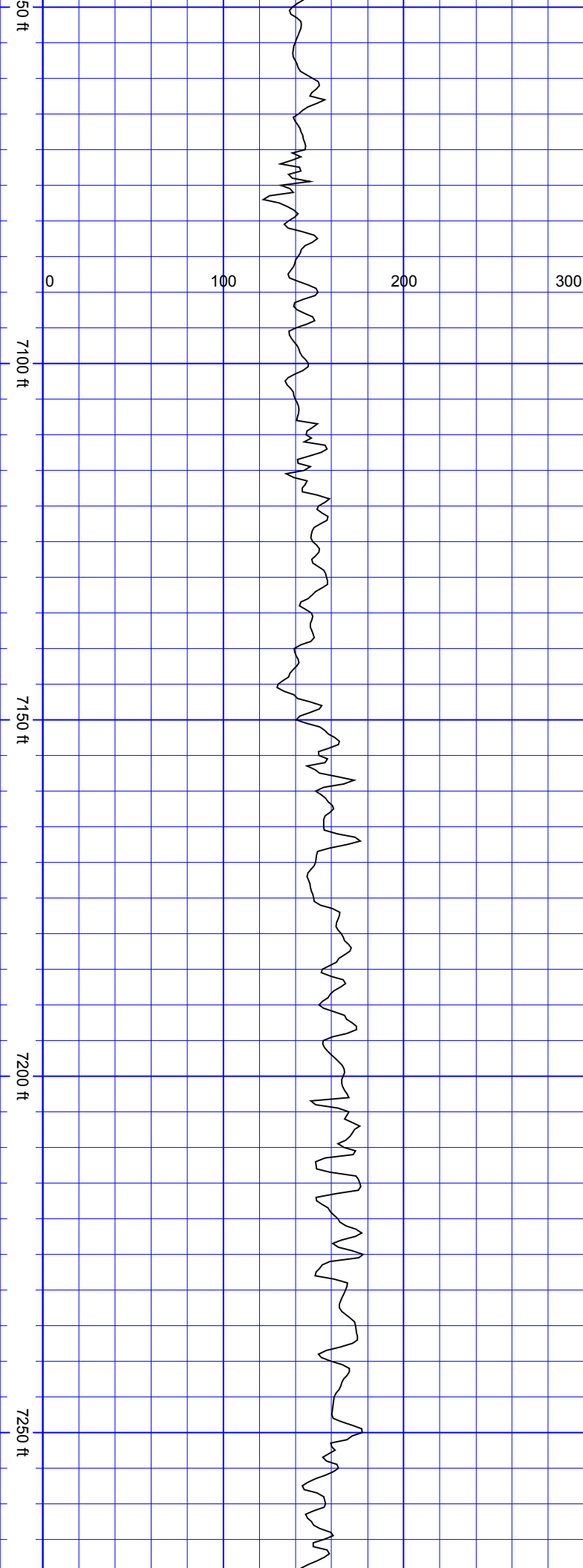
SurveyDepth:6724  
TVD:6632.54 Inc:23.91  
Azi:112.37 VertSec:-  
247.87

SurveyDepth:6771  
TVD:6675.1 Inc:26.32  
Azi:106.74 VertSec:-  
228.15

SurveyDepth:6819  
TVD:6717.71 Inc:28.52  
Azi:101.65 VertSec:-  
206.09







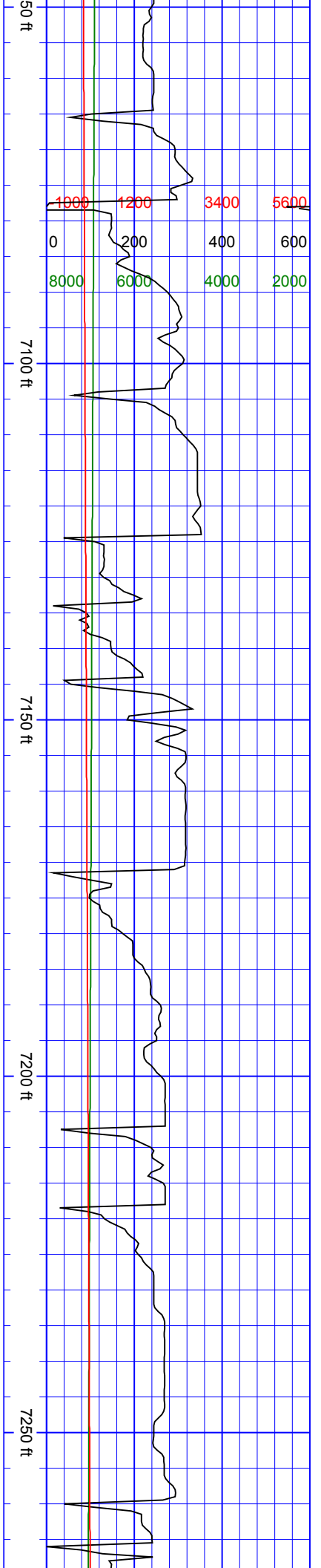
SurveyDepth:7055  
TVD:6906.02 Inc:45.48  
Azi:98.75 VertSec:-65.33

SurveyDepth:7102  
TVD:6938.22 Inc:48.03  
Azi:96.81 VertSec:-31.16

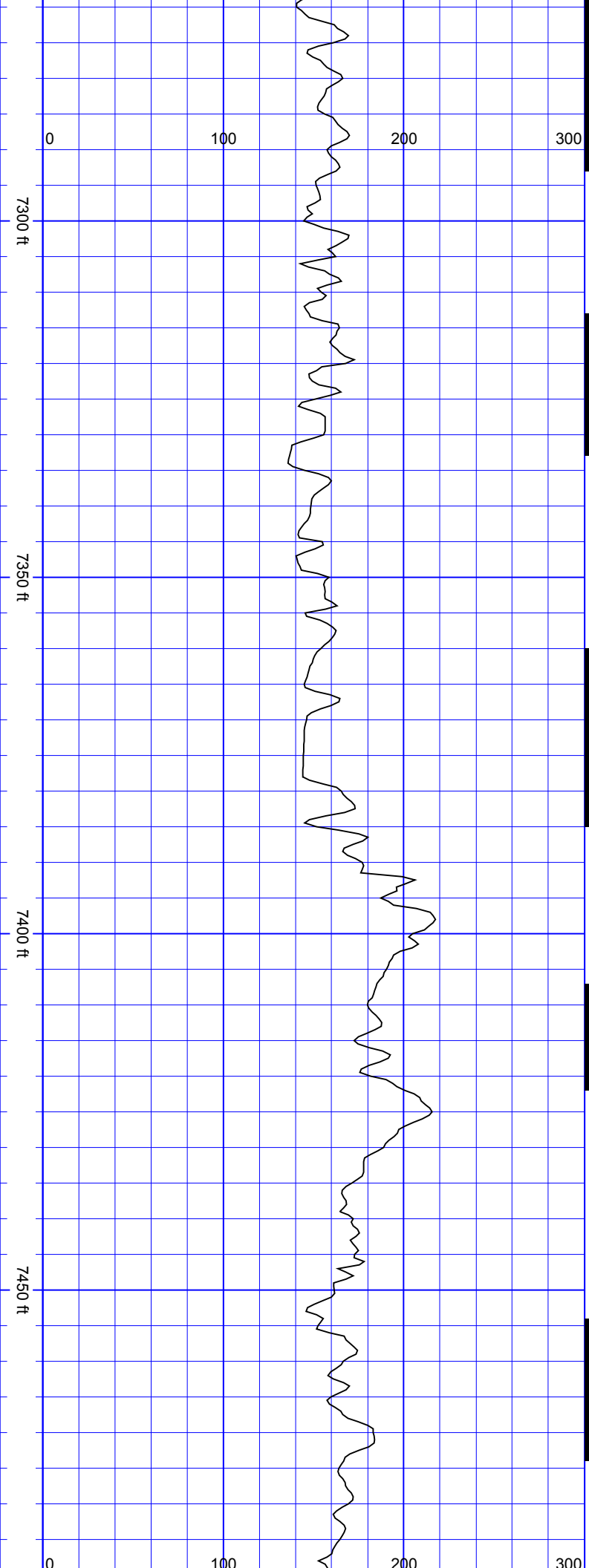
SurveyDepth:7149  
TVD:6969.59 Inc:48.25  
Azi:96.28 VertSec:3.73

SurveyDepth:7197  
TVD:7000.68 Inc:51.02  
Azi:93.82 VertSec:40.08

SurveyDepth:7244  
TVD:7028.71 Inc:55.72  
Azi:95.41 VertSec:77.54







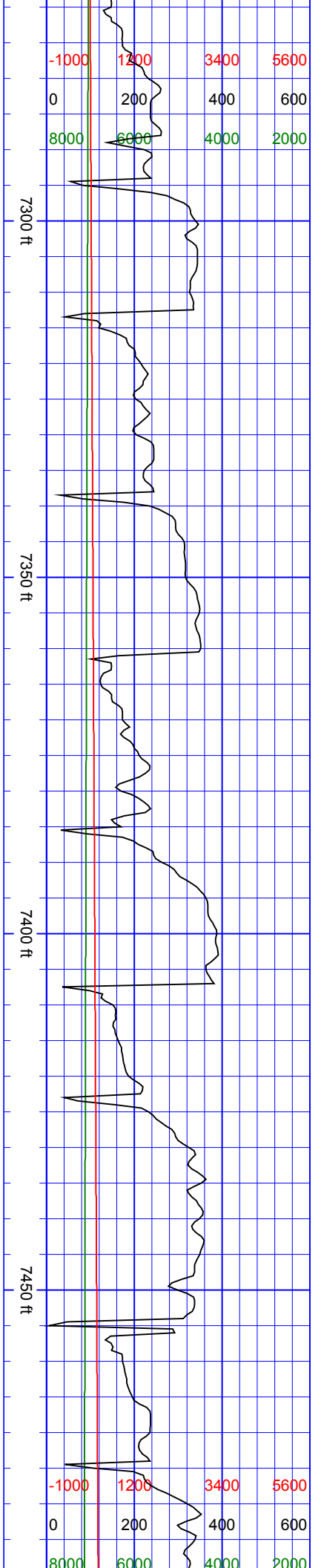
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TVD:7053.61 Inc:60.29  
Azi:96.9 VertSec:117.23

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TVD:7075.81 Inc:63.33  
Azi:97.25  
VertSec:158.55

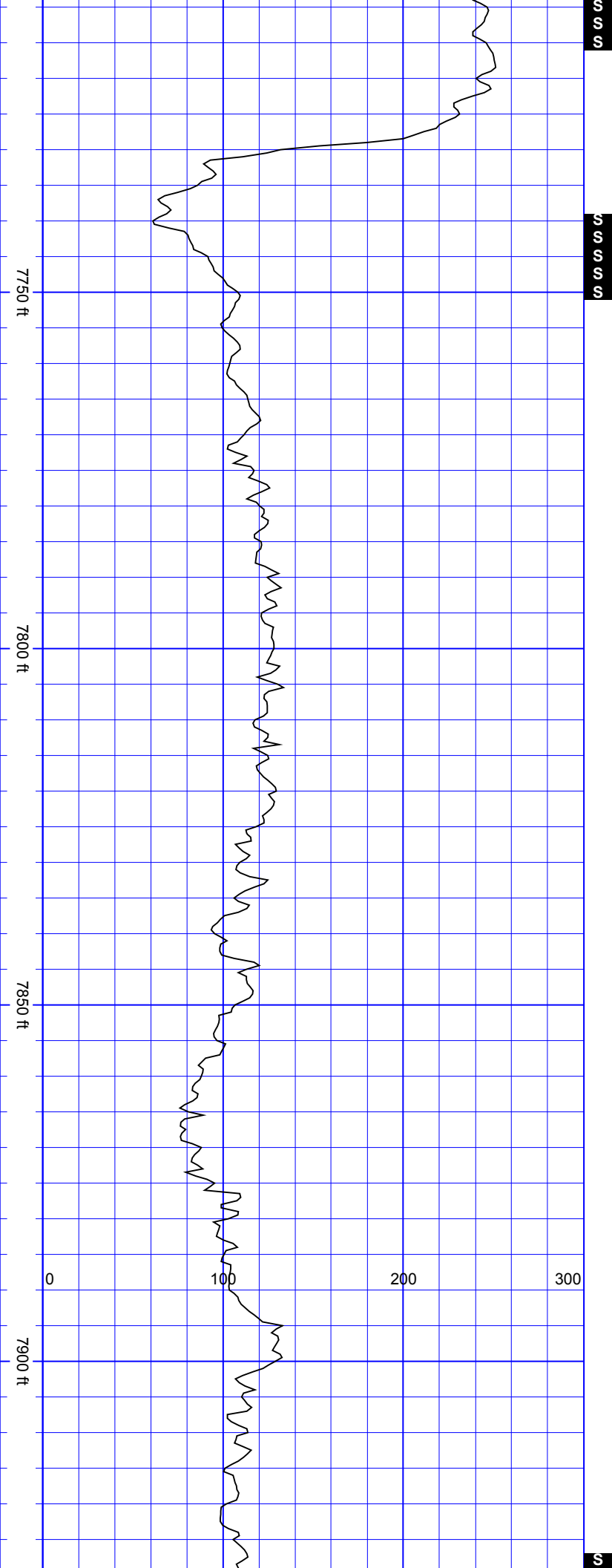
SurveyDepth:7385  
TVD:7095.7 Inc:66.58  
Azi:96.28  
VertSec:200.99

SurveyDepth:7432  
TVD:7113.54 Inc:68.82  
Azi:96.46  
VertSec:244.32

SurveyDepth:7480  
TVD:7129.7 Inc:71.81  
Azi:95.32  
VertSec:289.32

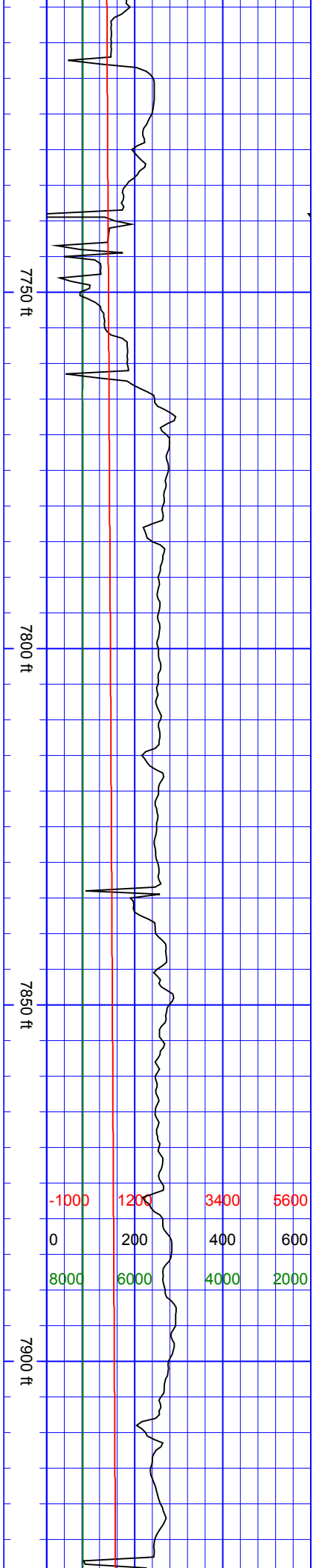


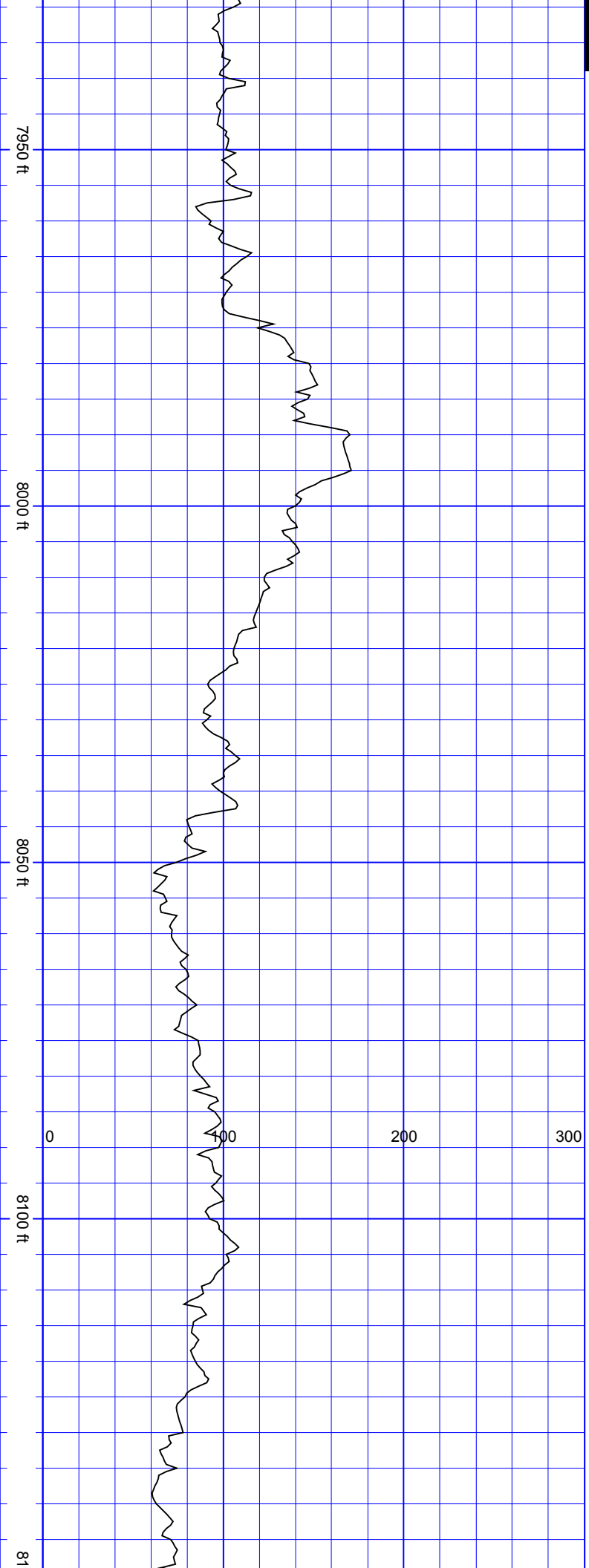




SurveyDepth:7764  
TVD:7178.39 Inc:89.74  
Azi:90.04  
VertSec:563.24

SurveyDepth:7858  
TVD:7177.88 Inc:90.88  
Azi:90.04  
VertSec:655.47

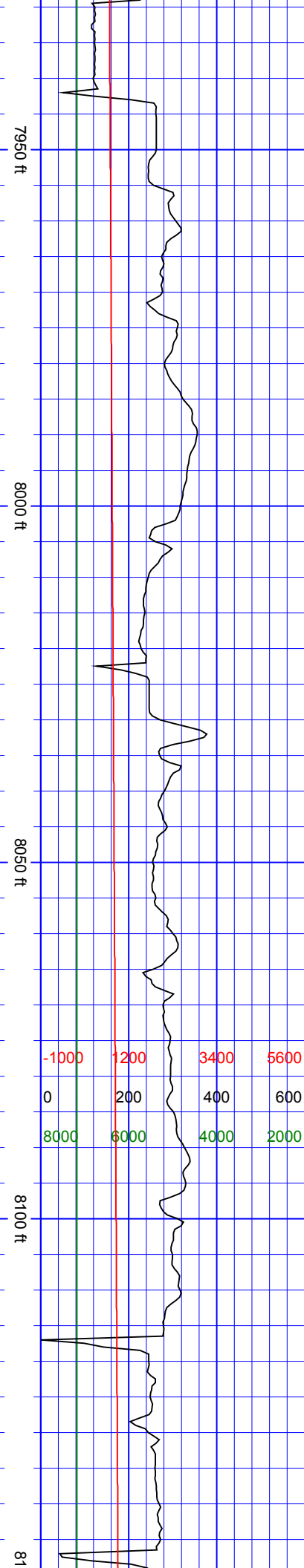




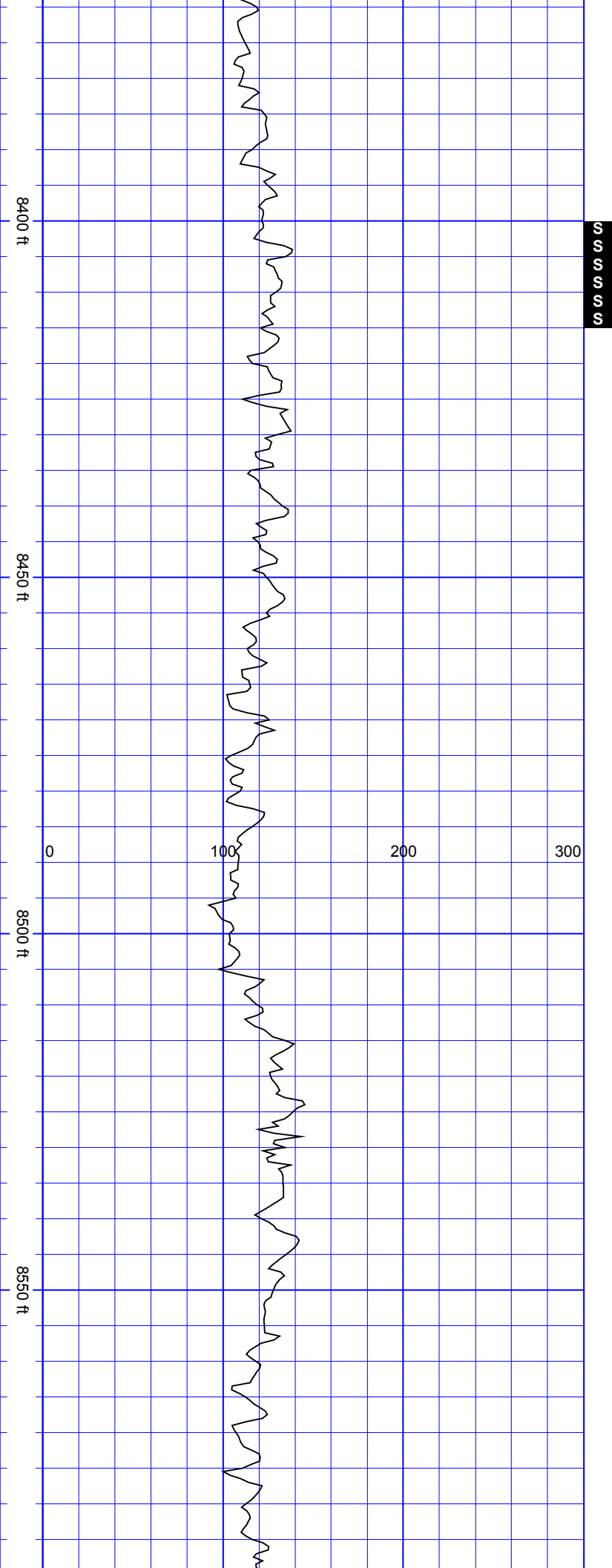
SurveyDepth:7953  
TVD:7176.16 Inc:91.19  
Azi:87.23  
VertSec:748.17

SurveyDepth:8079  
TVD:7173.3 Inc:91.41  
Azi:86.79 VertSec:870.3

SurveyDepth:8142  
TVD:7171.73 Inc:91.45  
Azi:85.83



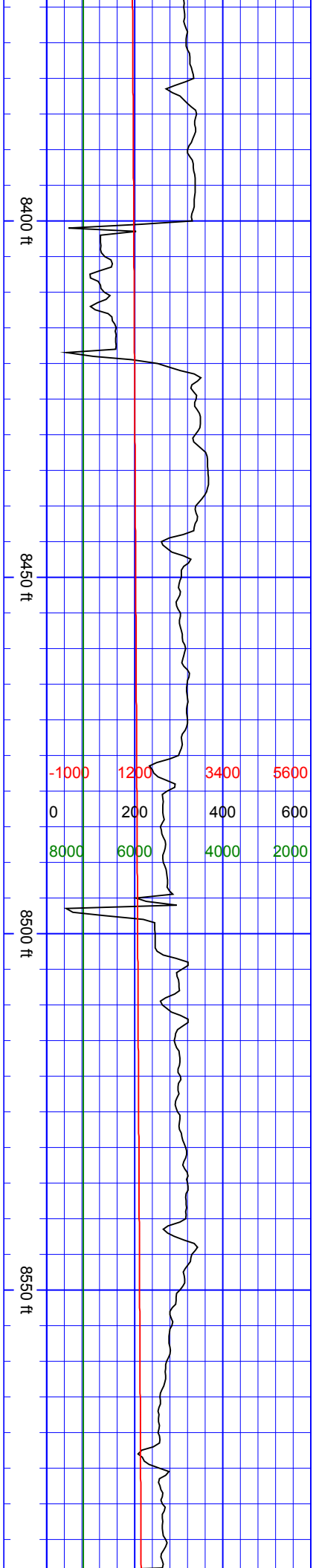


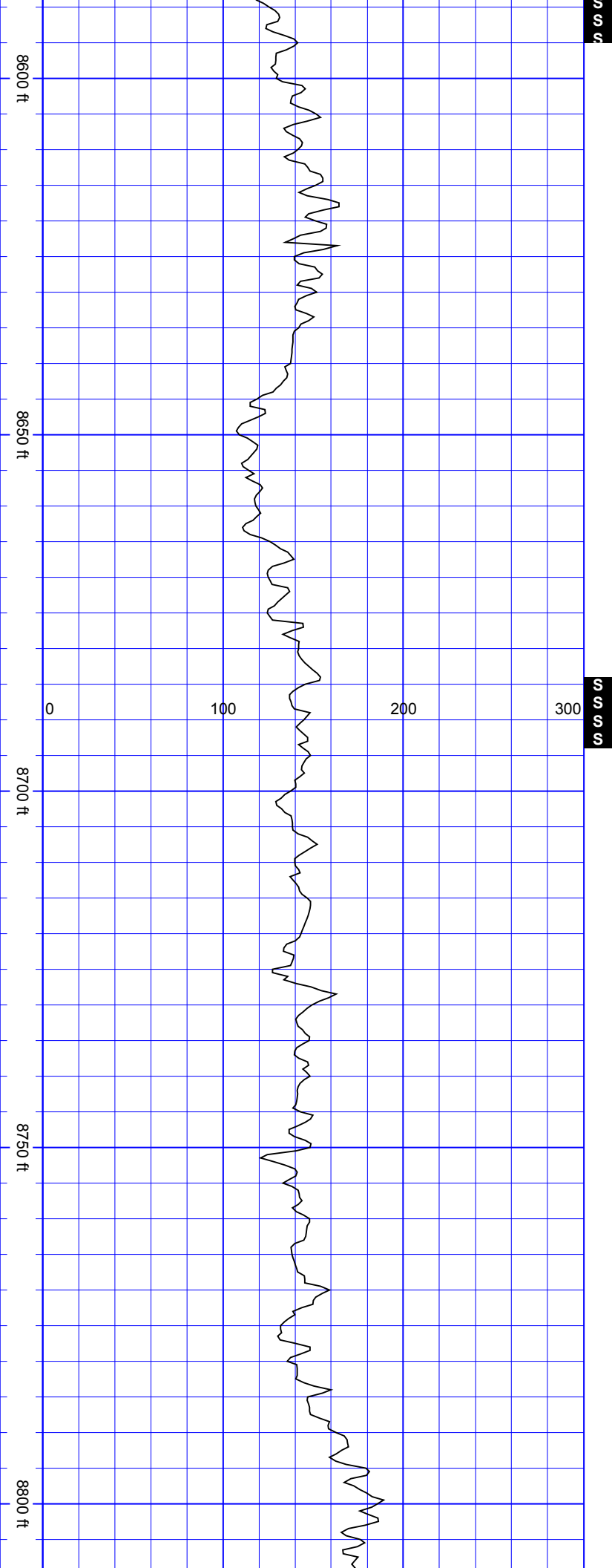


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SurveyDepth:8426  
TVD:7164.29 Inc:91.58  
Azi:89.52  
VertSec:1206.93

SurveyDepth:8520  
TVD:7161.88 Inc:91.36  
Azi:89.34  
VertSec:1298.92

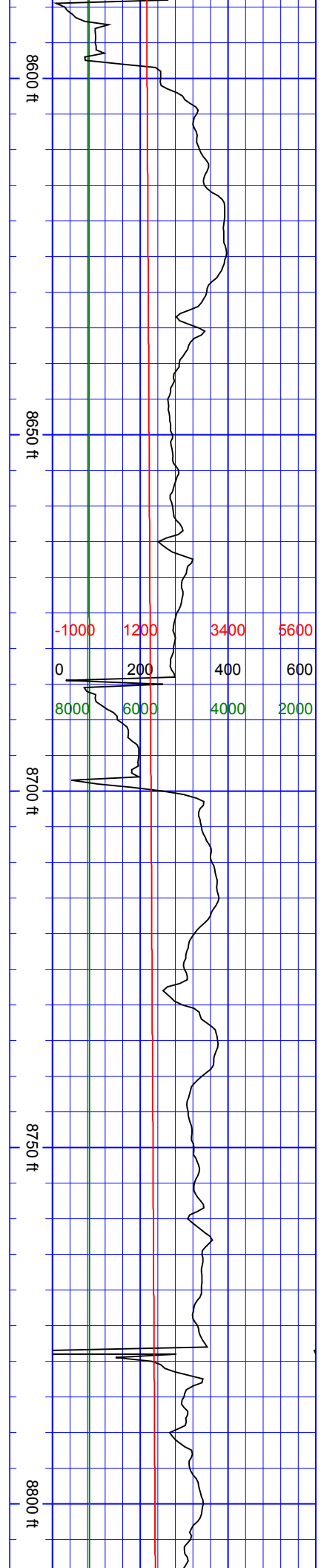


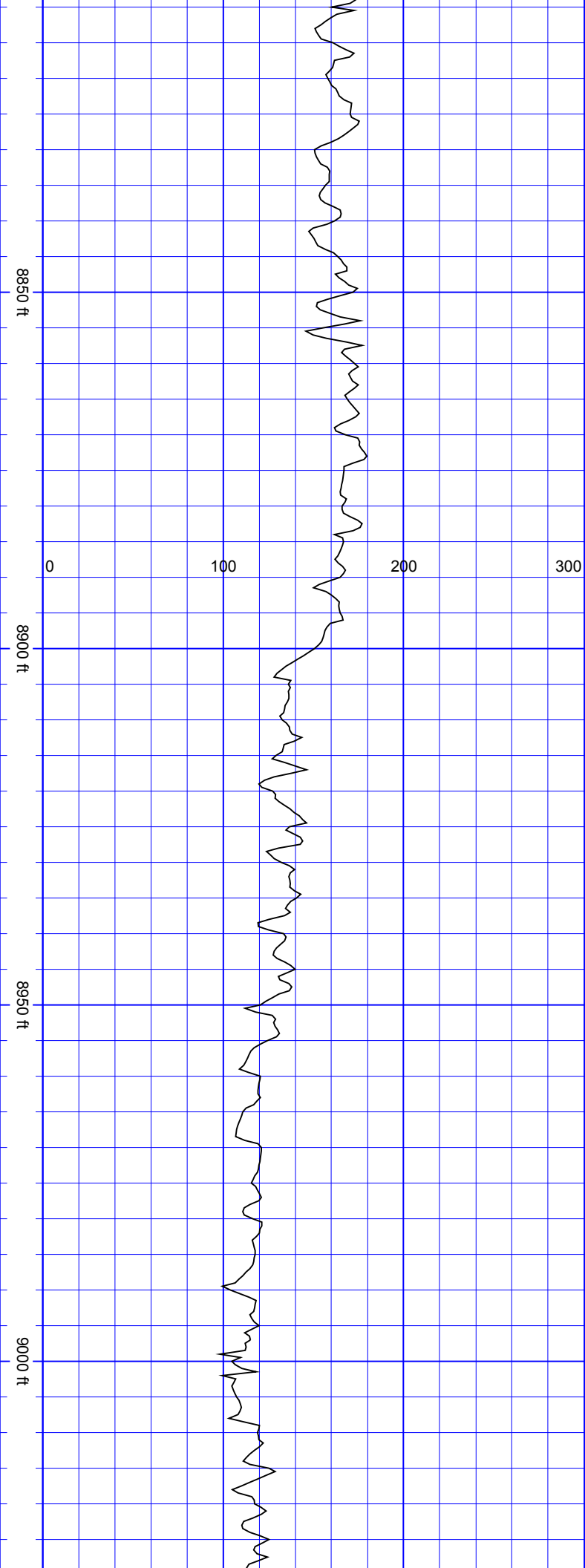


SurveyDepth:8615  
TVD:7159.4 Inc:91.63  
Azi:90.31  
VertSec:1392.03

SurveyDepth:8709  
TVD:7155.3 Inc:93.38  
Azi:90.92  
VertSec:1484.34

SurveyDepth:8803  
TVD:7149.57 Inc:93.6  
Azi:90.57

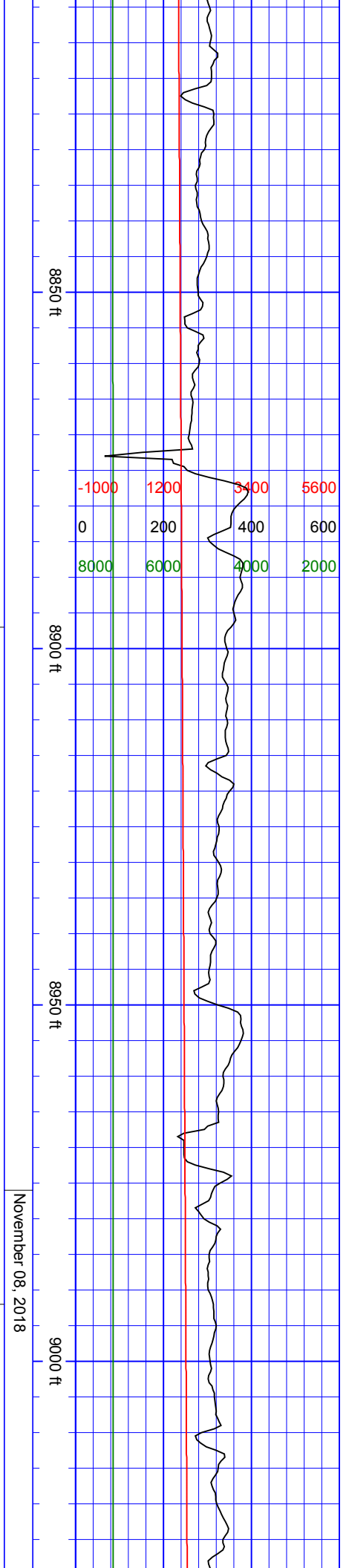




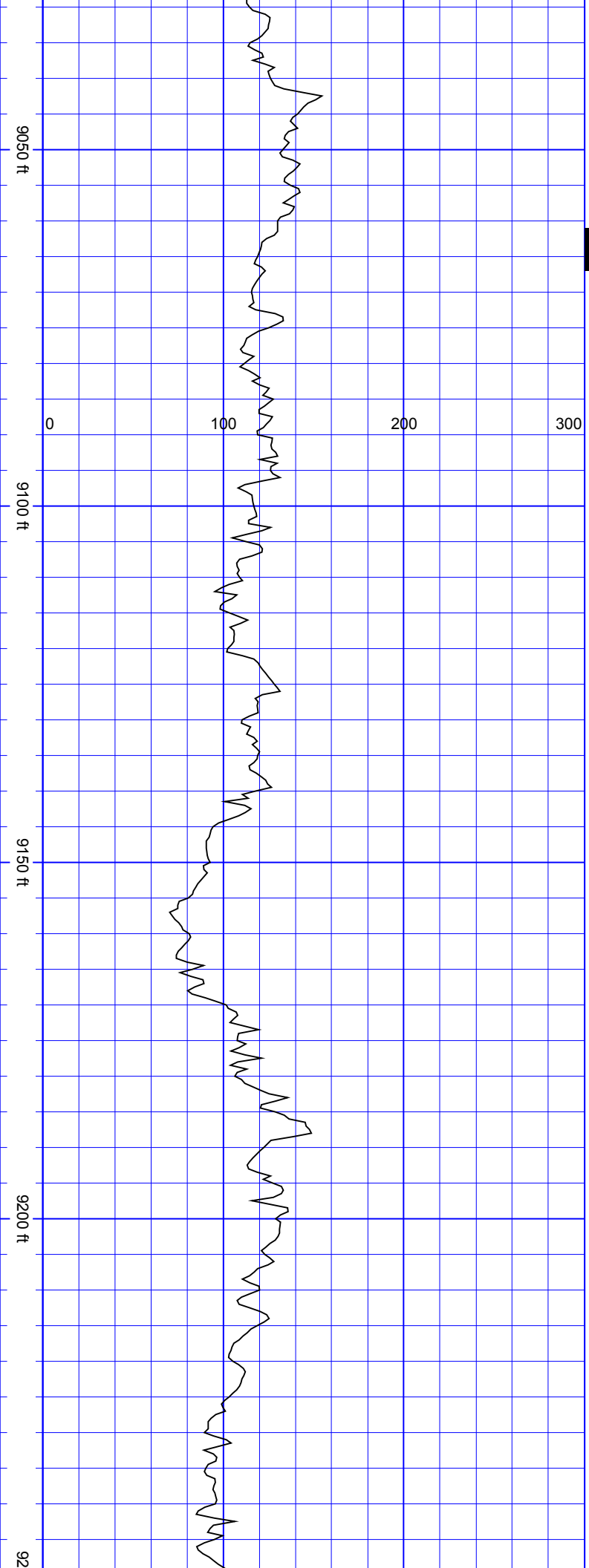
Azi:90.57  
VertSec:1576.61

SurveyDepth:8897  
TVD:7143.88 Inc:93.34  
Azi:90.22  
VertSec:1668.78

SurveyDepth:8992  
TVD:7138.17 Inc:93.56  
Azi:89.87  
VertSec:1761.82



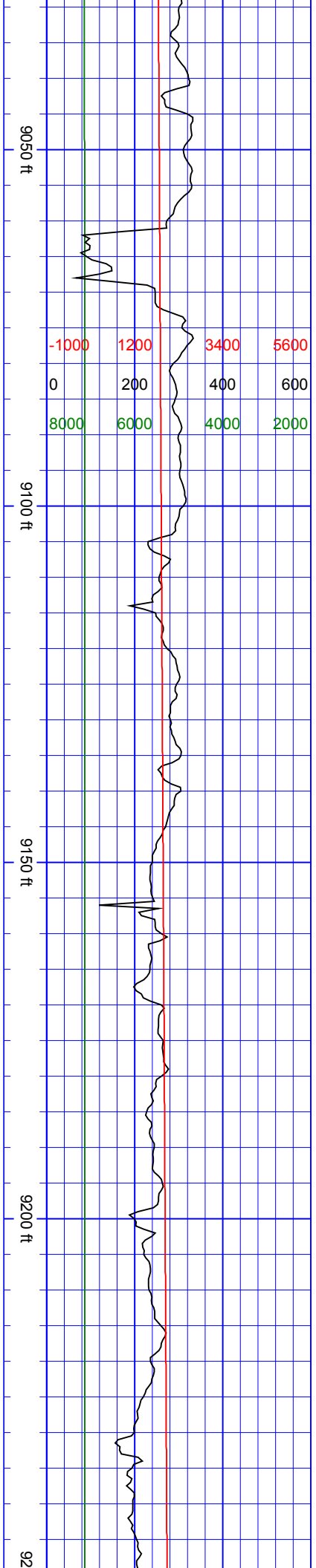




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SurveyDepth:9087  
TVD:7133.07 Inc:92.59  
Azi:89.34  
VertSec:1854.74

SurveyDepth:9181  
TVD:7128.54 Inc:92.94  
Azi:89.52  
VertSec:1946.66

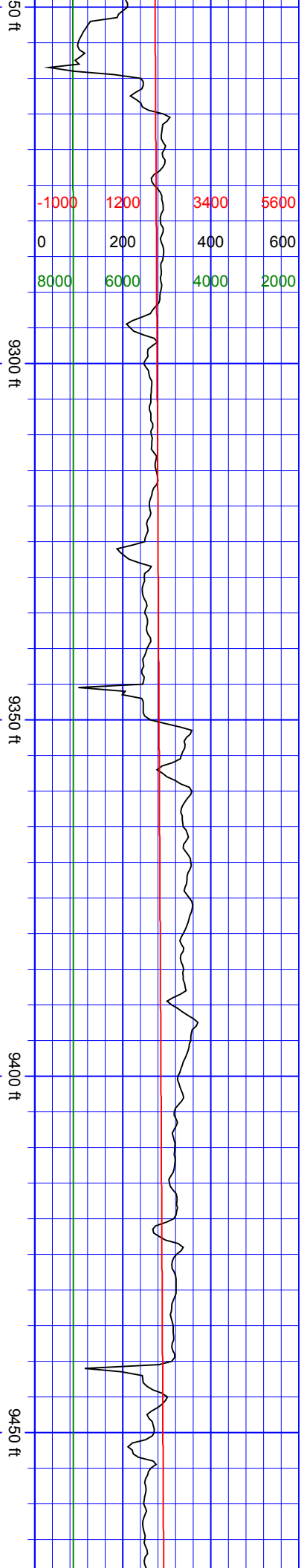
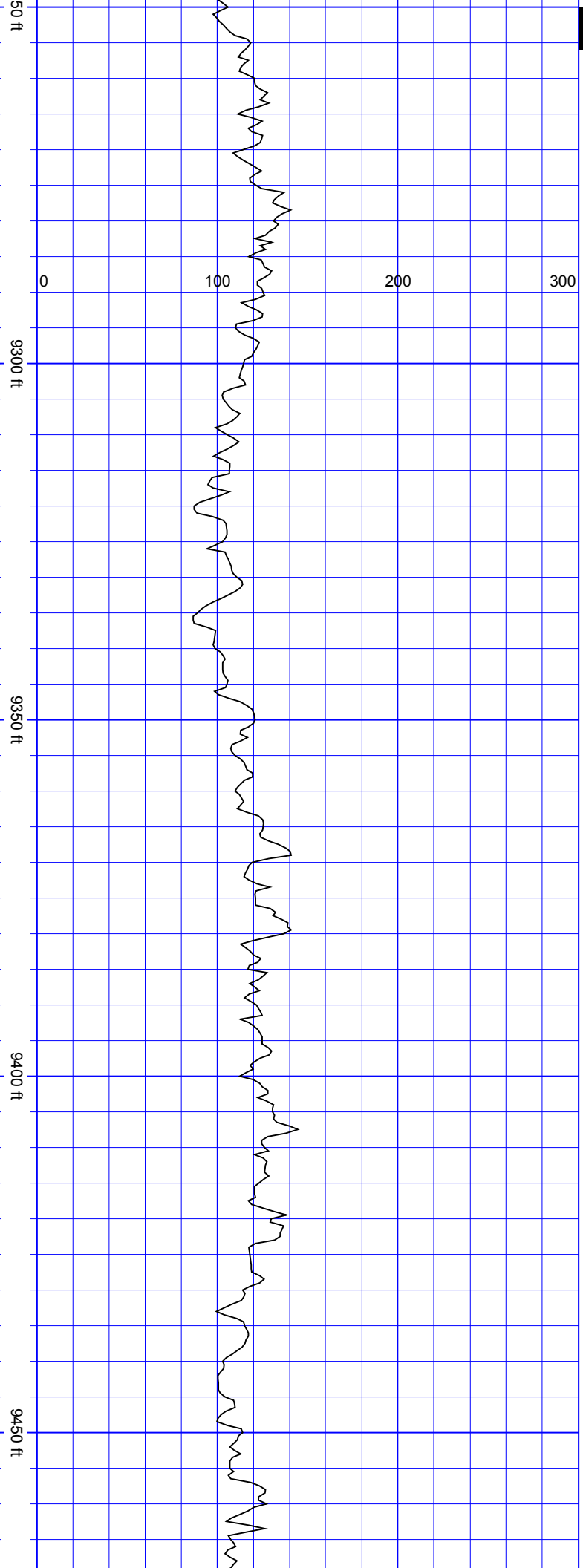


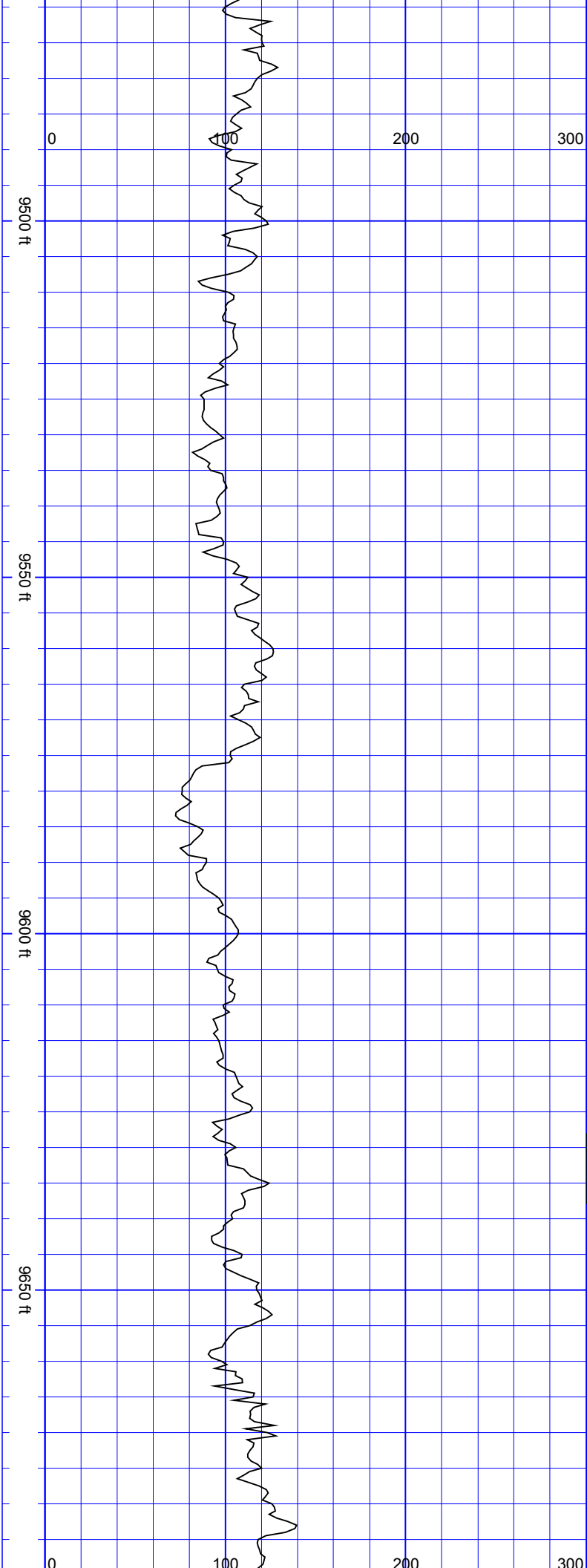
SS

SurveyDepth:9276  
TVD:7124.32 Inc:92.15  
Azi:88.81  
VertSec:2039.49

SurveyDepth:9371  
TVD:7120.5 Inc:92.46  
Azi:88.9  
VertSec:2132.22

SurveyDepth:9465  
TVD:7115.85 Inc:93.21

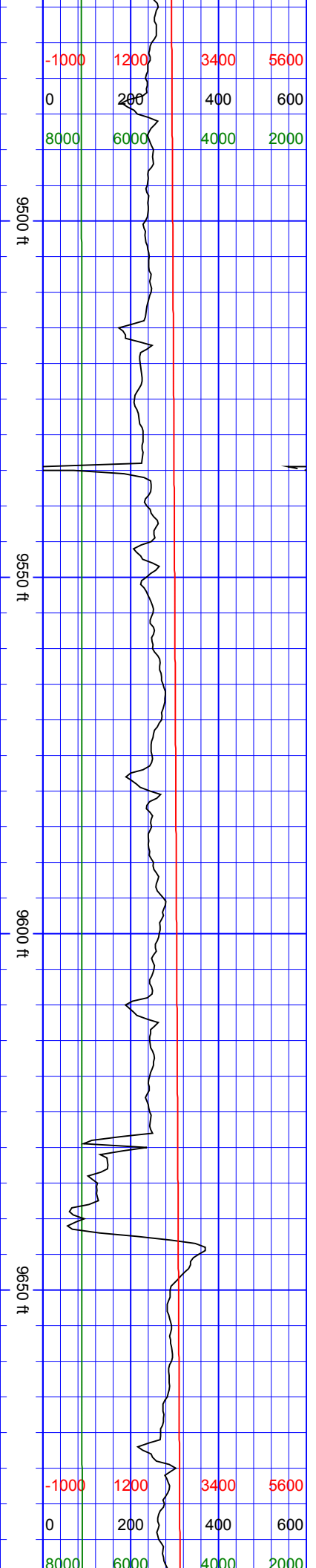




TVD:7119.89 Inc:93.21  
Azi:88.55  
VertSec:2223.89

SurveyDepth:9559  
TVD:7110.01 Inc:93.91  
Azi:88.29  
VertSec:2315.39

SurveyDepth:9654  
TVD:7103.82 Inc:93.56  
Azi:88.46  
VertSec:2407.82



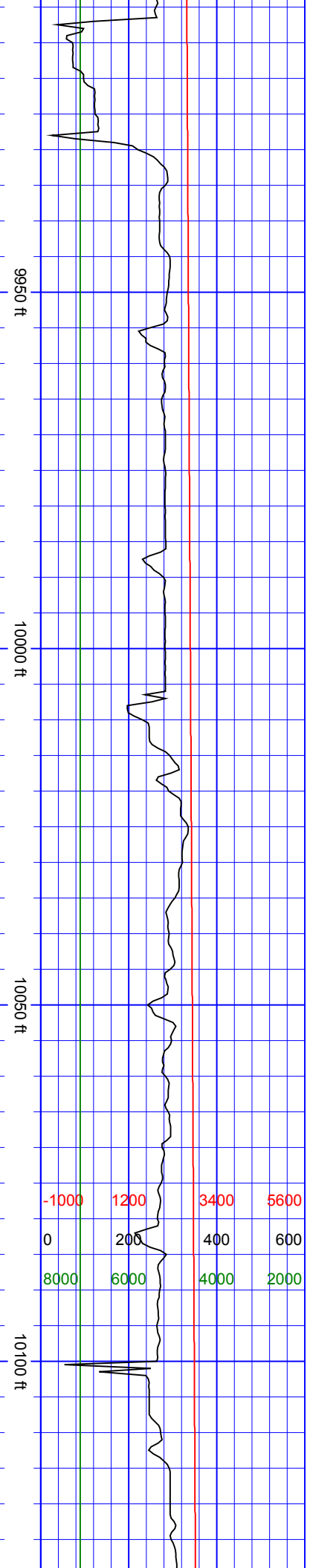
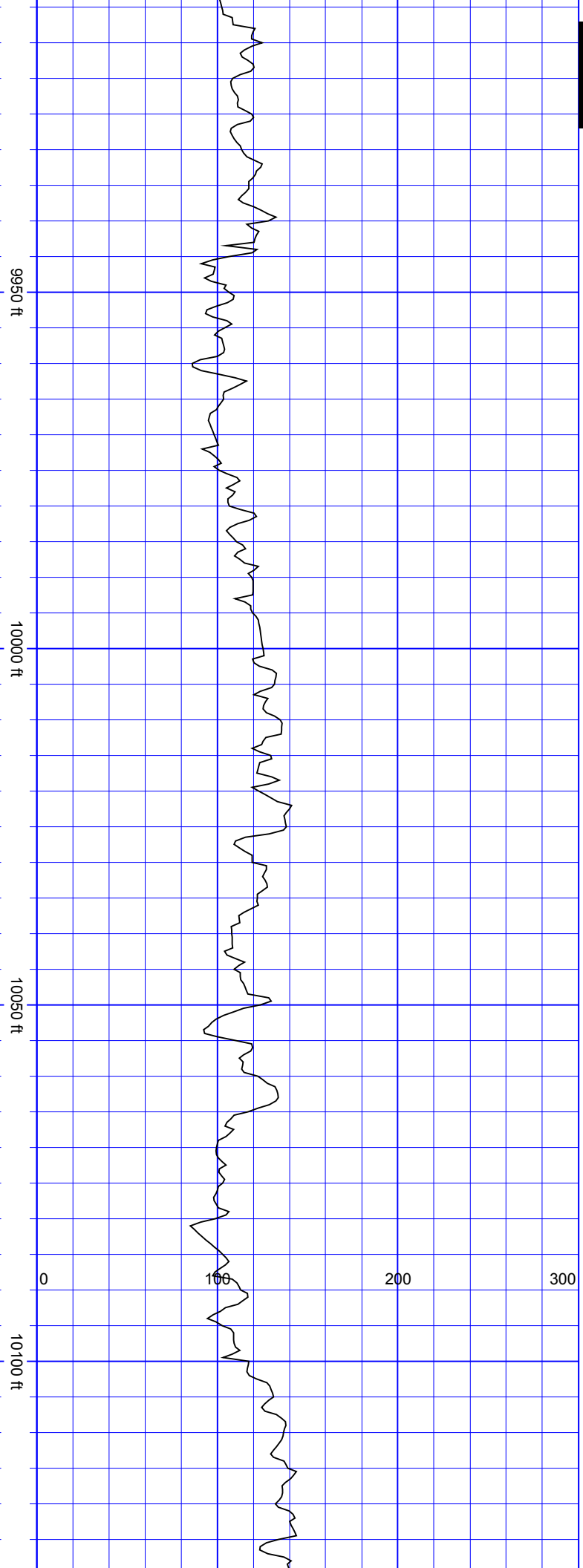


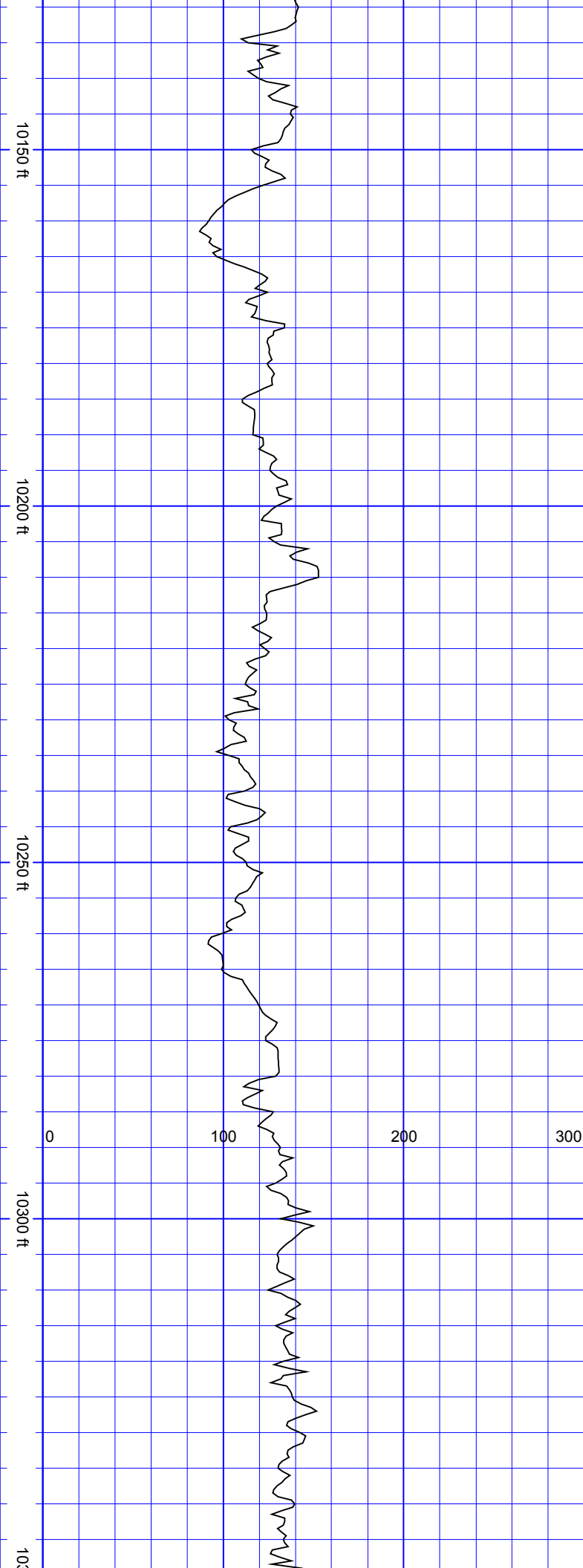
SSSSSS

SurveyDepth:9937  
TVD:7095.21 Inc:89.69  
Azi:90.04  
VertSec:2684.08

SurveyDepth:10031  
TVD:7096.08 Inc:89.25  
Azi:89.87  
VertSec:2776.28

SurveyDepth:10126





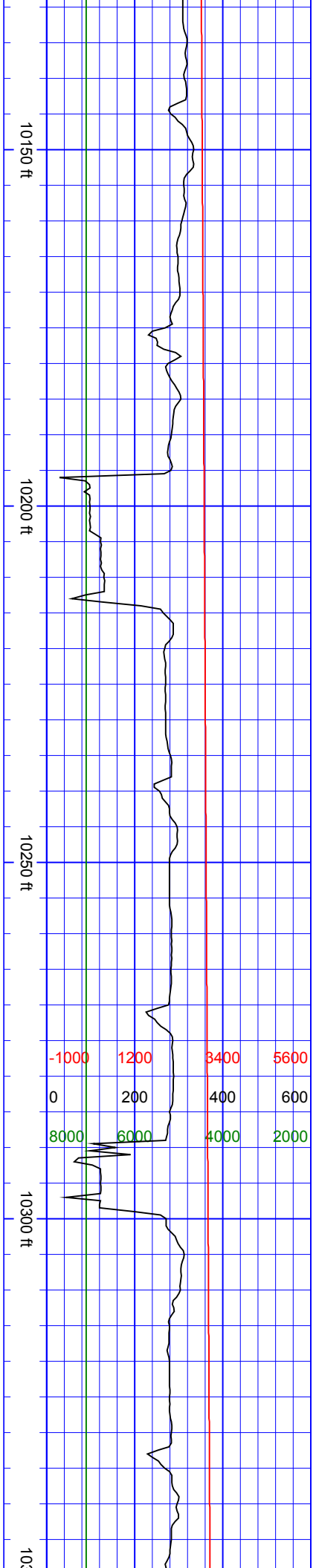
TVD:7097.64 Inc:88.86  
Azi:89.43  
VertSec:2869.34

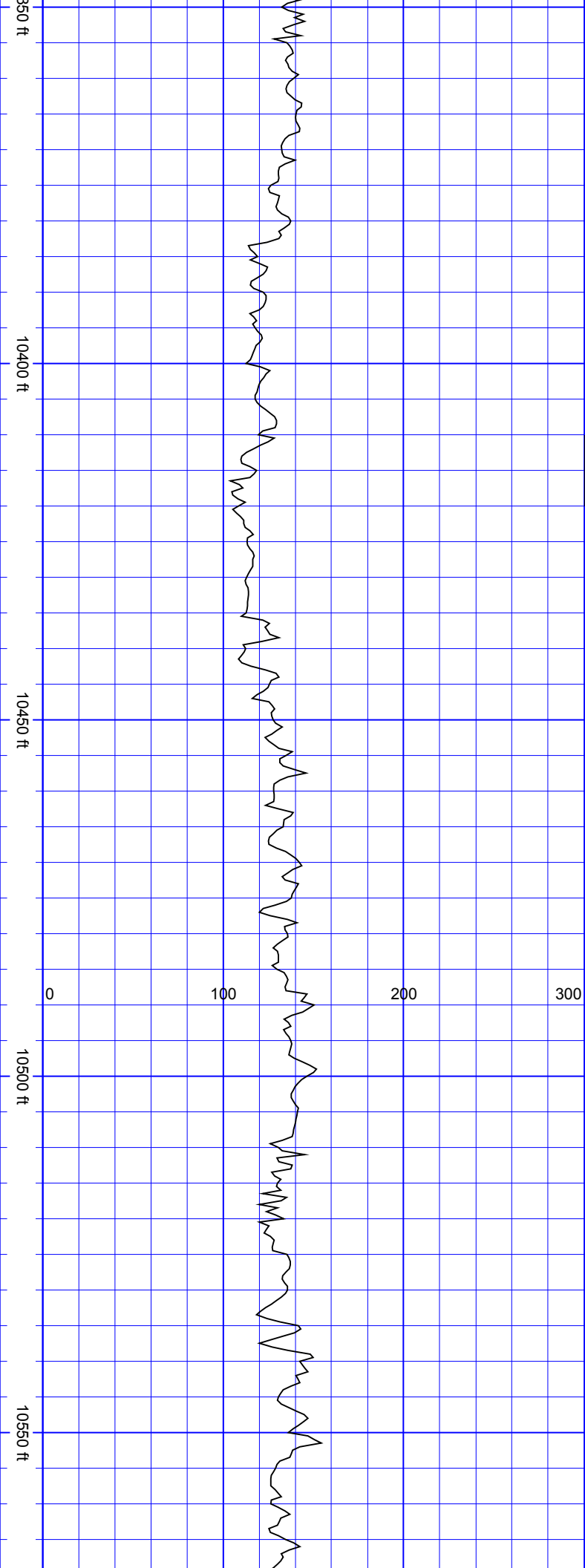
SurveyDepth:10220  
TVD:7098.47 Inc:90.13  
Azi:88.81  
VertSec:2961.26

SurveyDepth:10314  
TVD:7097.86 Inc:90.62  
Azi:88.99  
VertSec:3053.1

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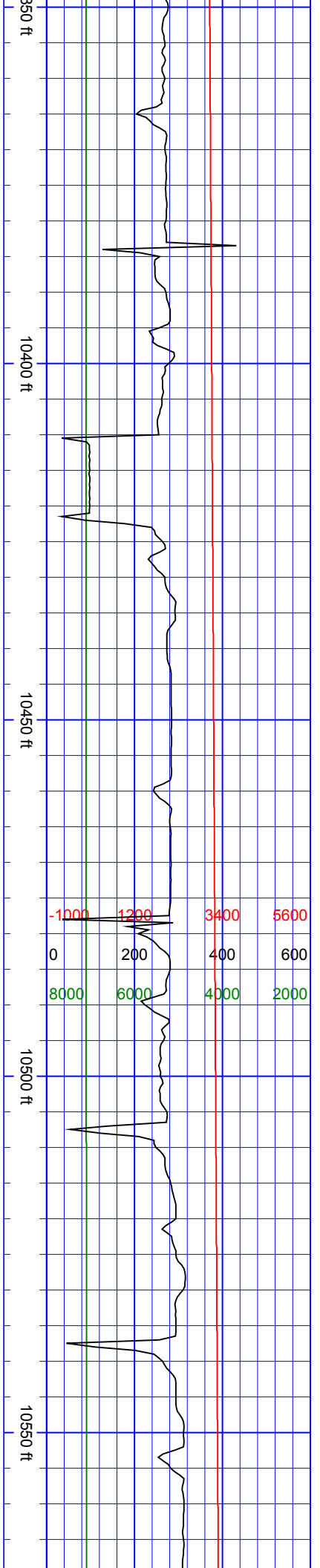


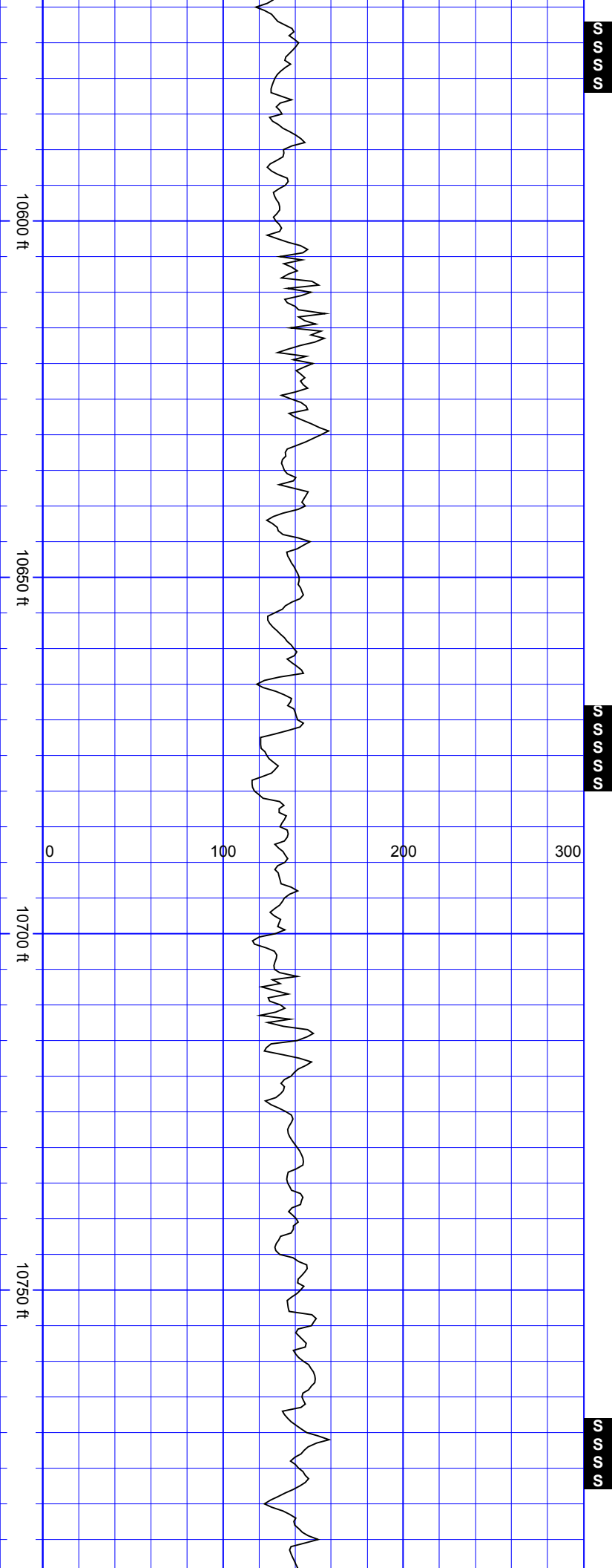
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SurveyDepth:10438  
TVD:7094.71 Inc:92.29  
Azi:88.29  
VertSec:3174.09

SurveyDepth:10468  
TVD:7093.52 Inc:92.24  
Azi:87.94  
VertSec:3203.29

SurveyDepth:10503  
TVD:7092.14 Inc:92.29  
Azi:87.5 VertSec:3237.3

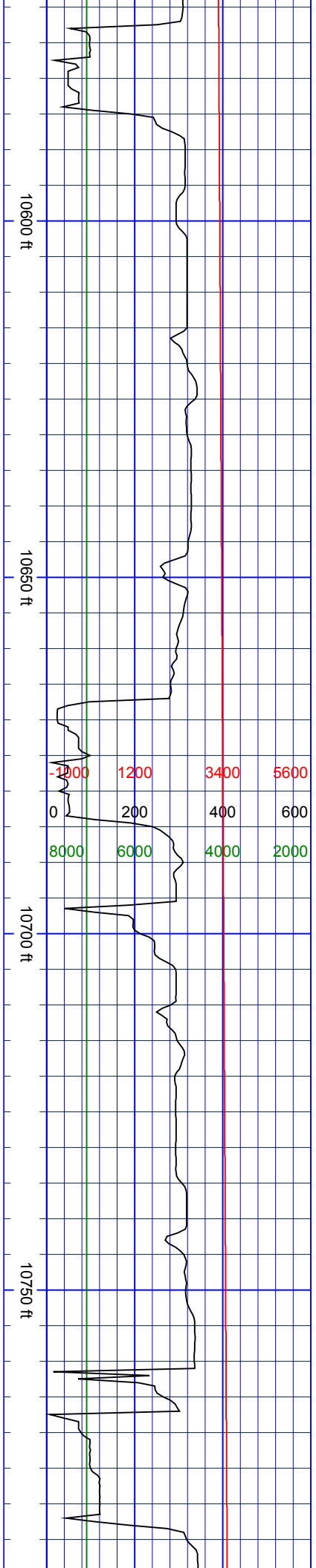




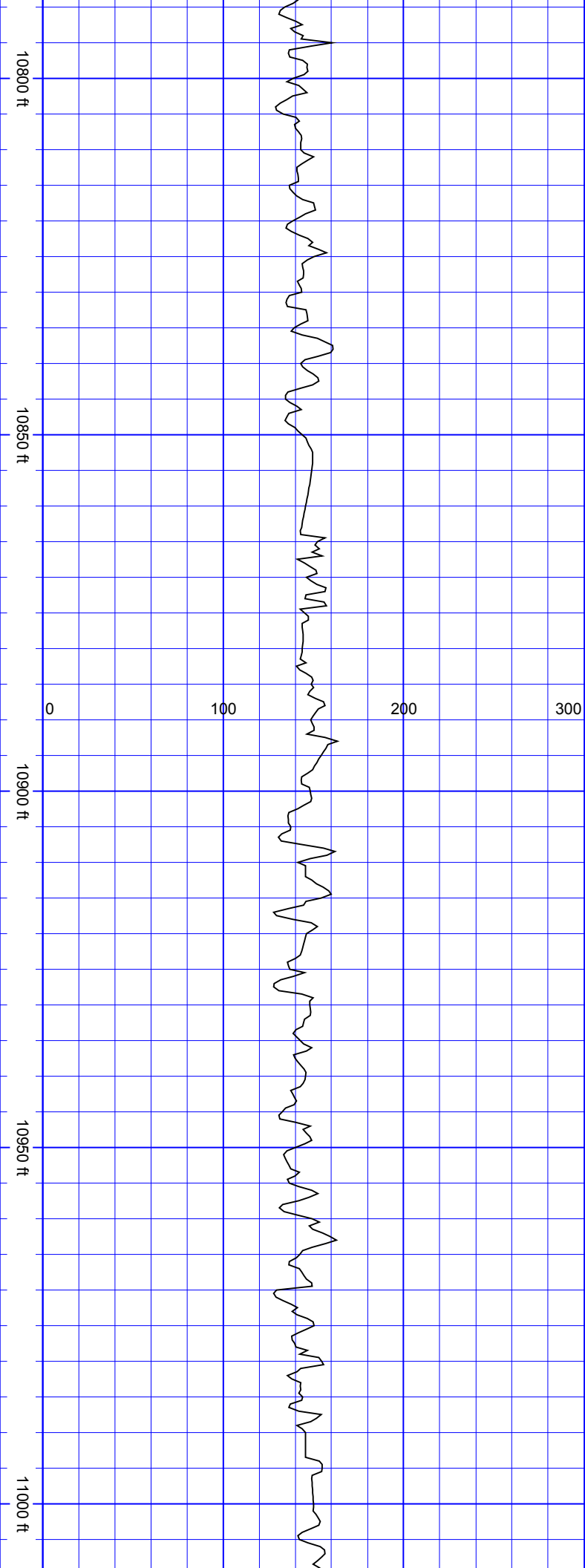
SurveyDepth:10598  
TVD:7088.34 Inc:92.29  
Azi:87.94  
VertSec:3329.62

SurveyDepth:10627  
TVD:7087.23 Inc:92.11  
Azi:88.55  
VertSec:3357.86

SurveyDepth:10692  
TVD:7085.58 Inc:90.79  
Azi:88.37  
VertSec:3421.24





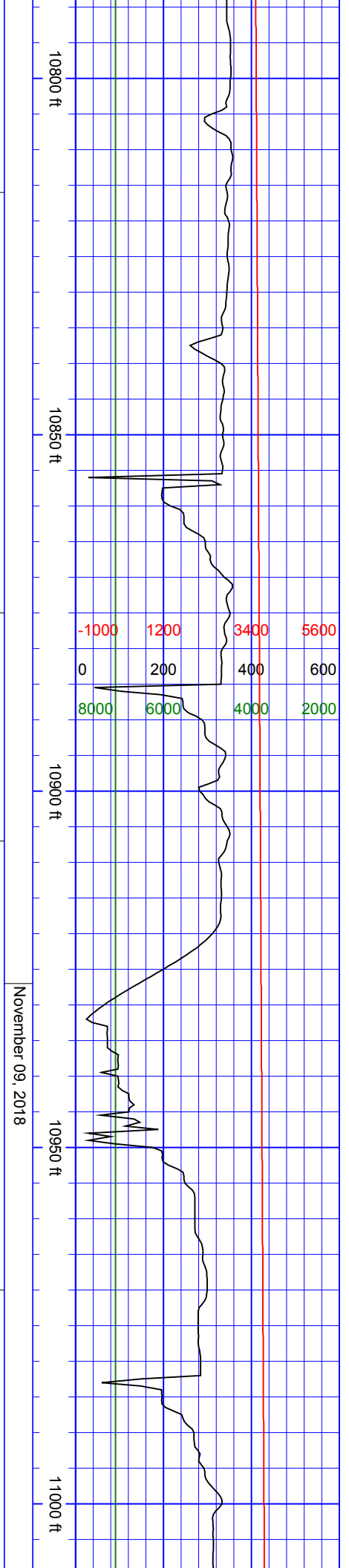


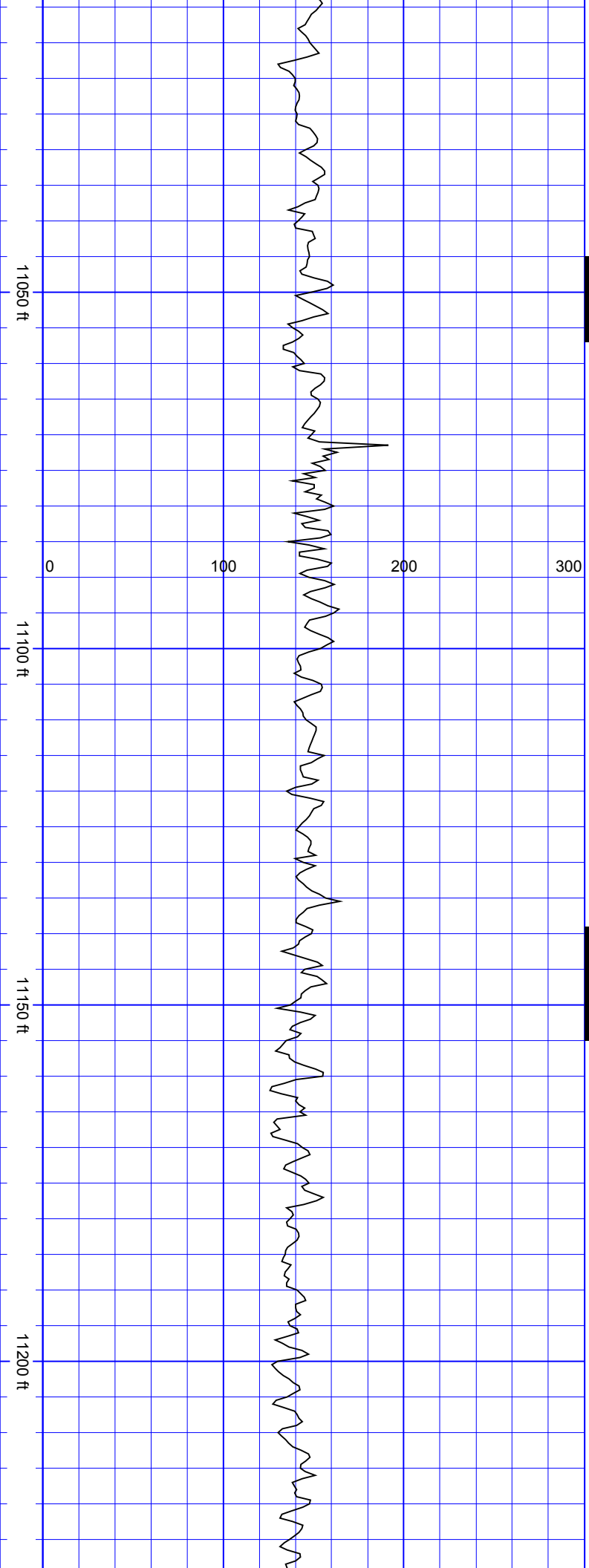
SurveyDepth:10816  
TVD:7083.82 Inc:90.84  
Azi:86.7  
VertSec:3541.72

SurveyDepth:10875  
TVD:7082.91 Inc:90.92  
Azi:87.5  
VertSec:3598.94

SurveyDepth:10907  
TVD:7082.46 Inc:90.7  
Azi:87.58  
VertSec:3630.03

SurveyDepth:10970  
TVD:7081.74 Inc:90.62  
Azi:88.64  
VertSec:3691.39



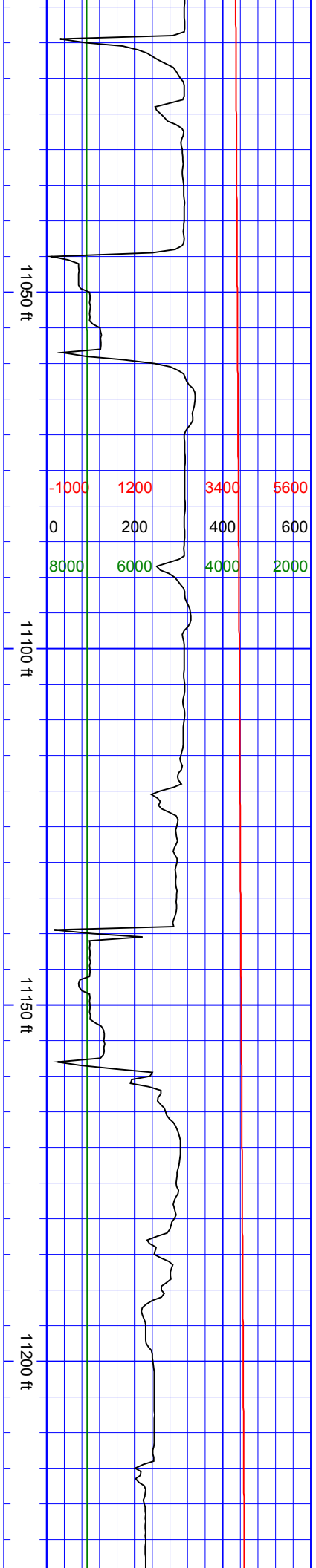


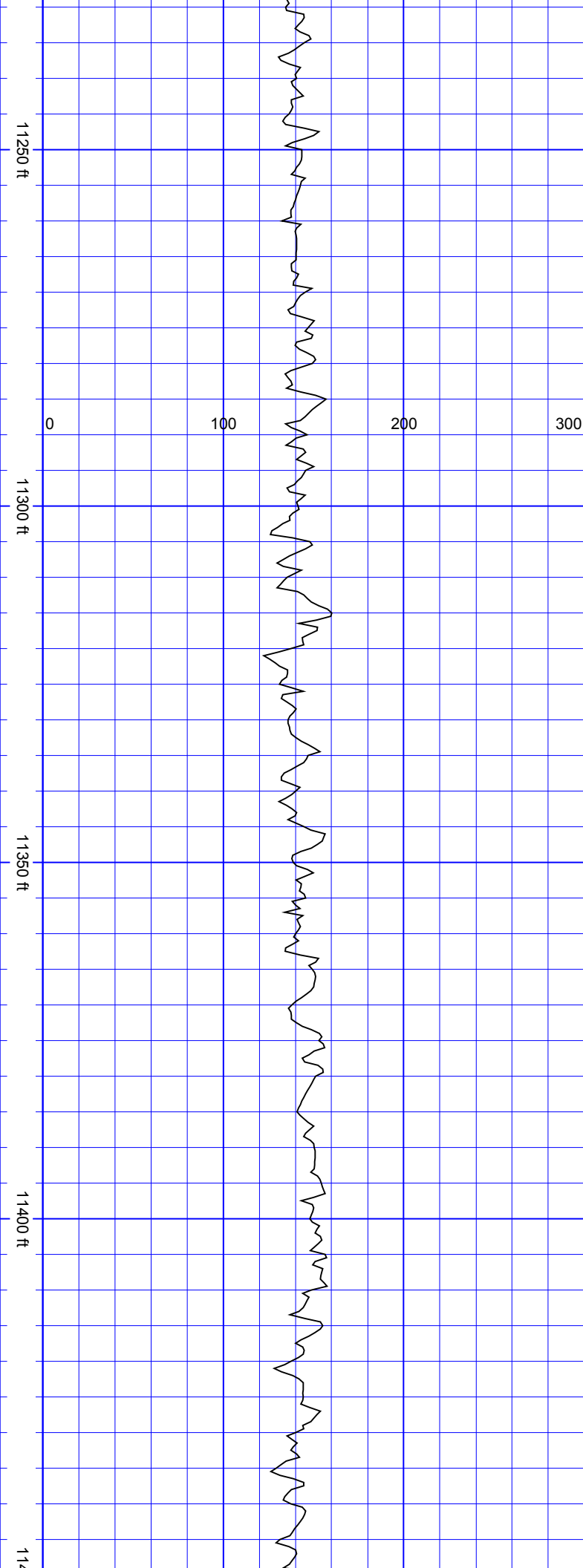
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SurveyDepth:11064  
TVD:7081.01 Inc:90.26  
Azi:88.64  
VertSec:3783.14

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SurveyDepth:11158  
TVD:7080.55 Inc:90.31  
Azi:91.54  
VertSec:3875.37

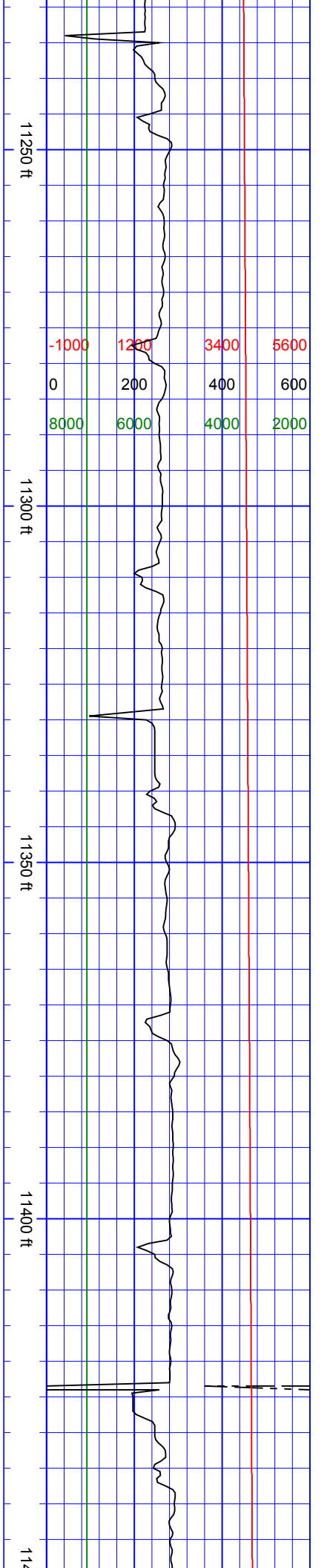




SurveyDepth:11253  
TVD:7079.67 Inc:90.75  
Azi:91.71  
VertSec:3969.05

SurveyDepth:11348  
TVD:7078.1 Inc:91.14  
Azi:91.71  
VertSec:4062.74

SurveyDepth:11442  
TVD:7076.16 Inc:91.23  
Azi:91.89

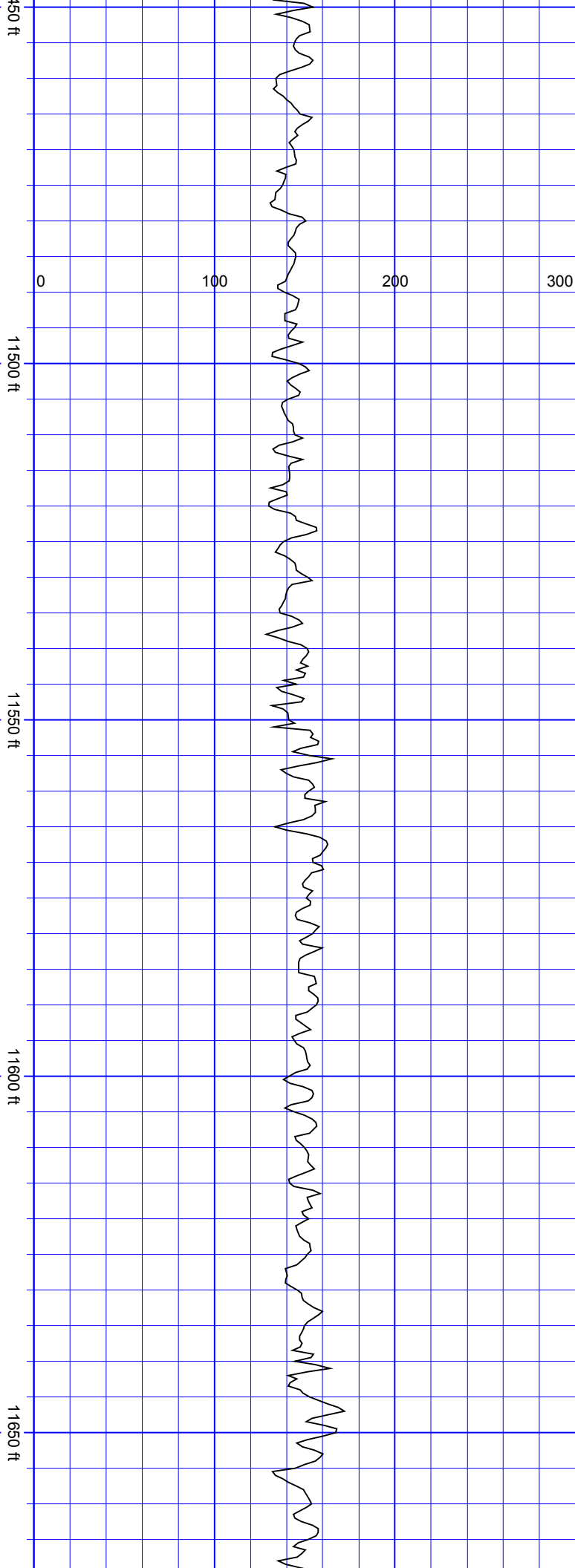
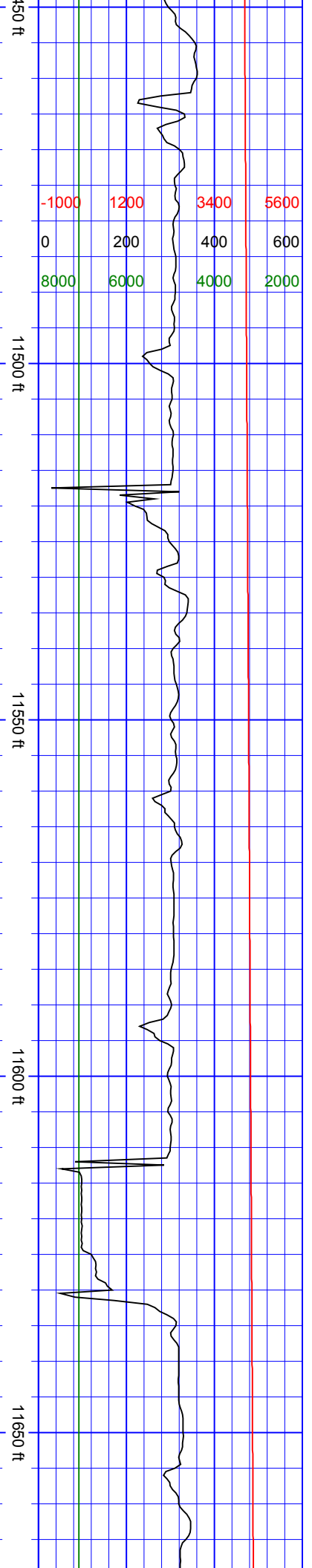


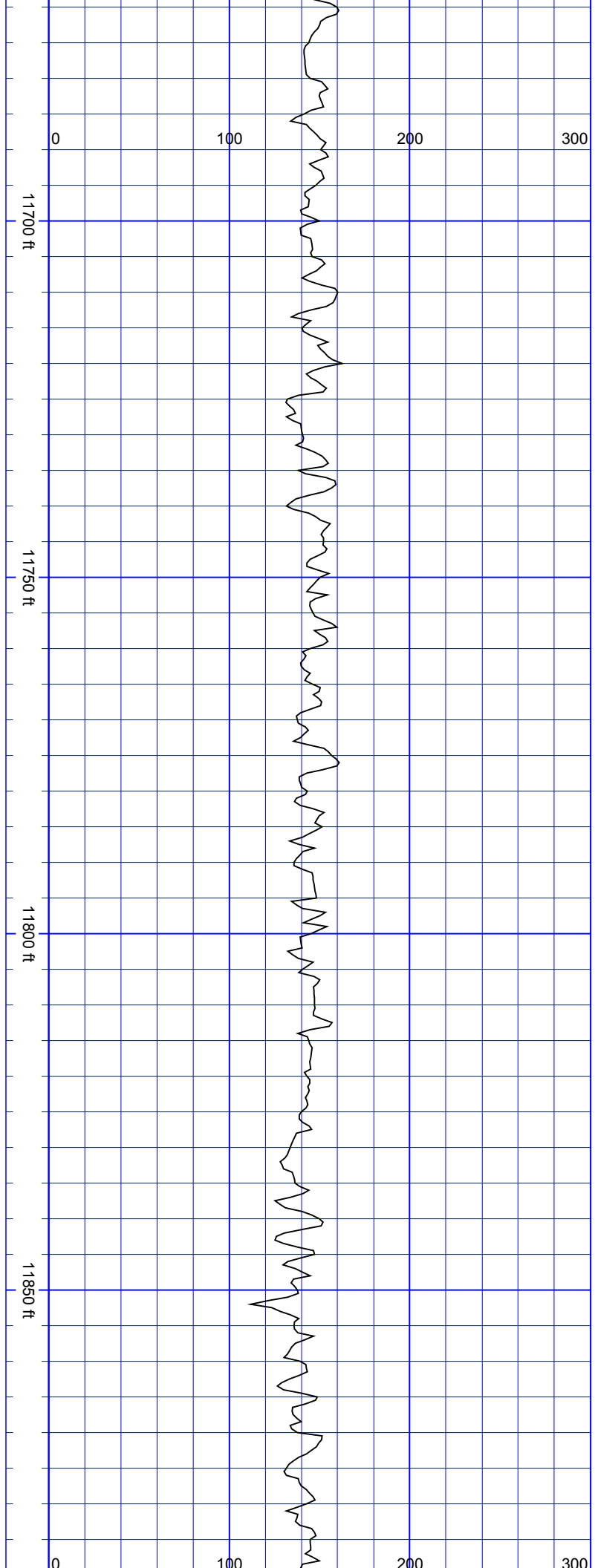
VertSec:4155.46

SurveyDepth:11537  
TVD:7074.81 Inc:90.4  
Azi:90.31  
VertSec:4248.97

SurveyDepth:11631  
TVD:7074.04 Inc:90.53  
Azi:93.12  
VertSec:4341.68

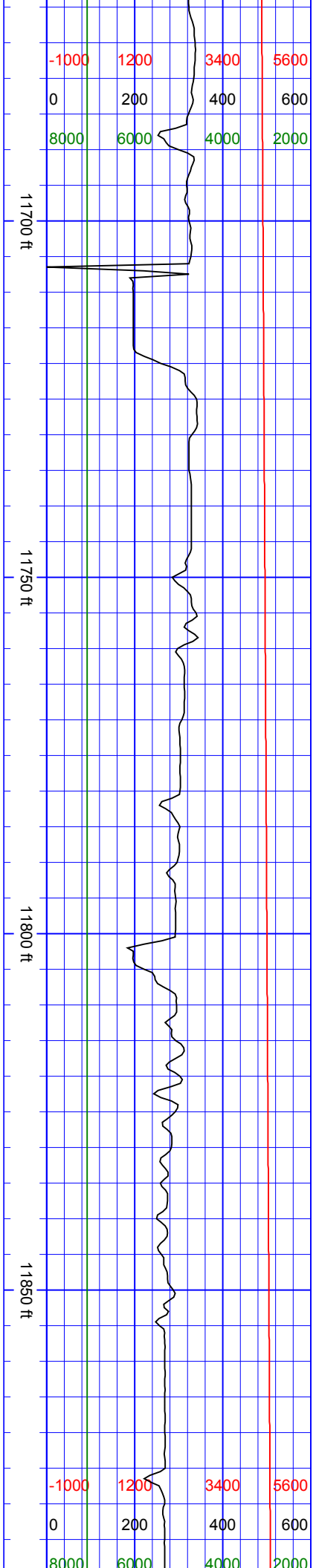
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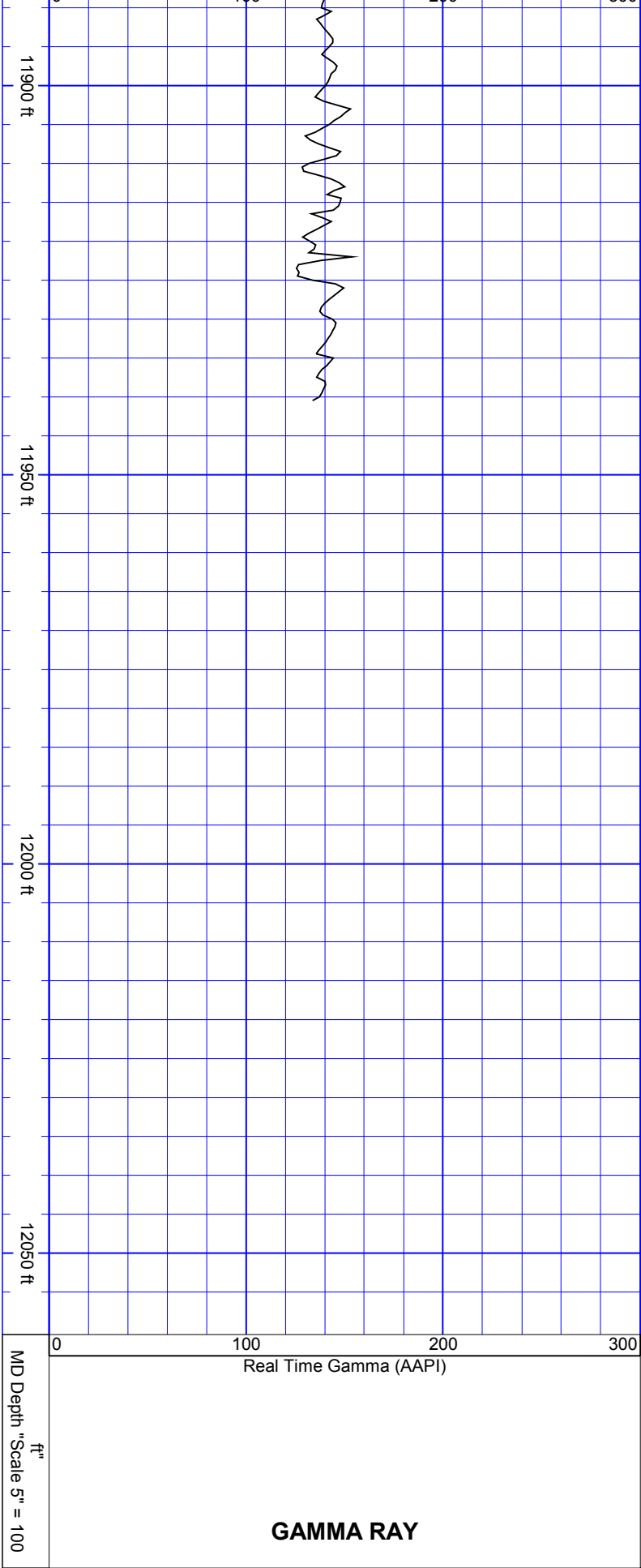




SurveyDepth:11725  
TVD:7073.5 Inc:90.13  
Azi:93.38  
VertSec:4434.78

SurveyDepth:11819  
TVD:7073.25 Inc:90.18  
Azi:94.44  
VertSec:4528.02





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|--------------------|---|
| Directional Survey | SurveyDepth:11913<br>TVD:7072.92 Inc:90.22<br>Azi:95.05<br>VertSec:4621.42                      |
|                    | SurveyDepth:11935<br>TVD:7072.88 Inc:90<br>Azi:95.49<br>VertSec:4643.3                          |
|                    | Extrapolation to Bit<br>SurveyDepth:12010<br>TVD:7072.88 Inc:90<br>Azi:95.49<br>VertSec:4717.93 |

