



**CROW CREEK STATE AC36-75-HN** **MD** 5":100'

Company: NOBLE ENERGY  
Well Name: CROW CREEK STATE AC36-75-HN  
UWI or LSD: 05-123-37419  
Rig Id: H&P 277  
State: CO  
County/Parish: WELD COUNTY  
Country: USA  
Survey Company: DRILTECH, LLC  
Job number: 2013-277-IDDT-CO  
RAYMOND HORTON MWD OPERATOR  
JEREMY HOWE MWD OPERATOR

Log measurements: Gamma, ROP, Temp  
Depth measured from: 612  
Maximum temperature:

Depth Start: 612 ft  
End: 9/20/13

Casing Depth Size  
Surface: 602 9 5/8  
Intermediate: 7201 7

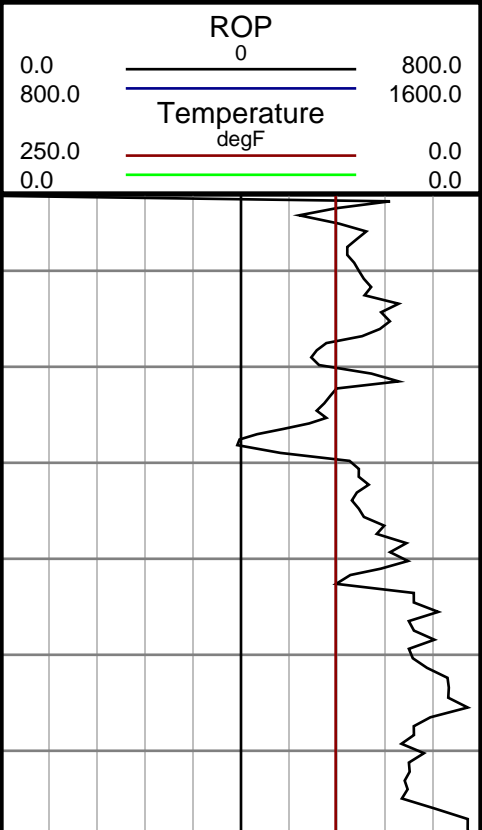
Mud Type: WATER BASE  
Density: 9.3  
Viscosity: 33  
Rm: Rmf: Rmc:

Elevations  
KB:  
GL:  
DF:

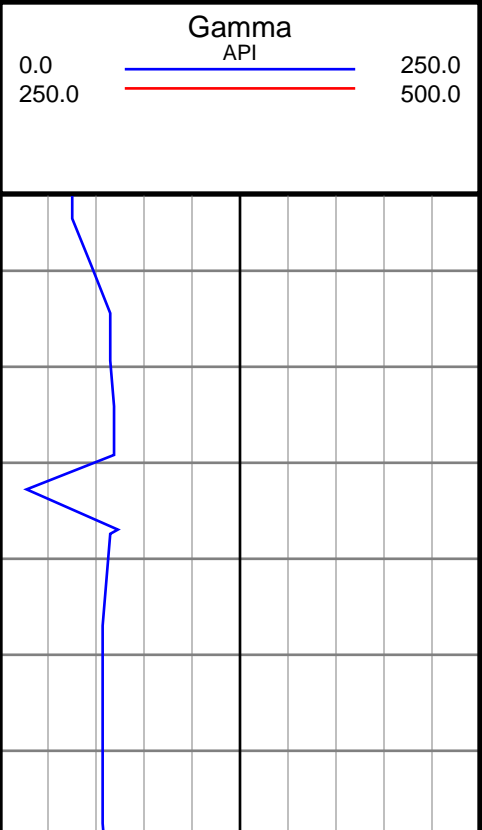
Run	Bit Size	Gamma	Offsets Survey	Start	End	Start	End	Dates
1	8 3/4	39.00	54.00	612	6091	9/20/13	9/21/13	
2	8 3/4	37.00	52.00	6091	7211	9/21/13	9/22/13	
3	6 1/8	44.00	59.00	7211		9/23/13		
4								
5								
6								
7								
8								
9								
10								

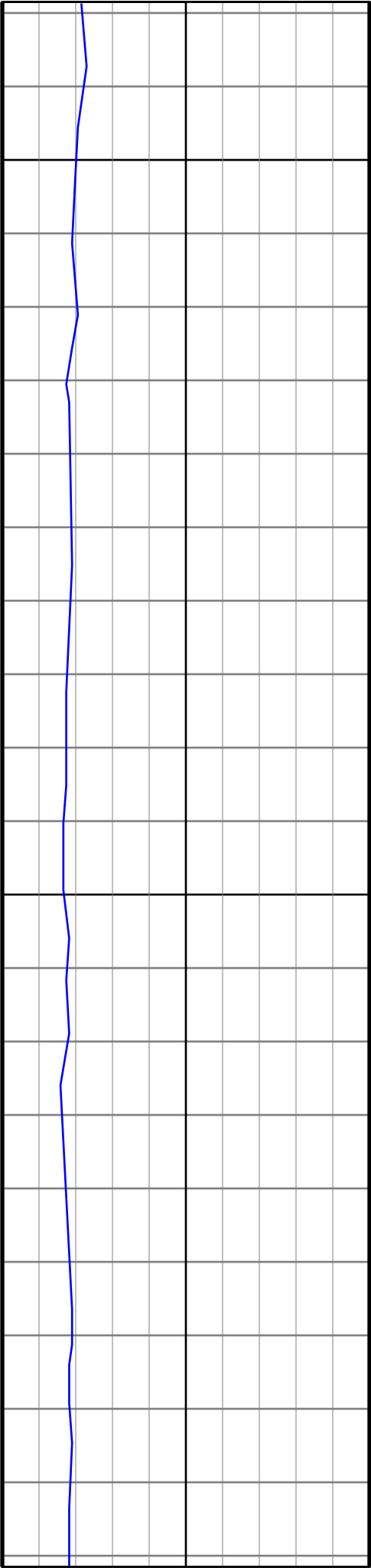
DRILTECH, LLC uses its best efforts to provide its customers with accurate information and interpretations in conjunction with services performed but will not be held liable or responsible for the accuracy of such information or interpretation.

MD



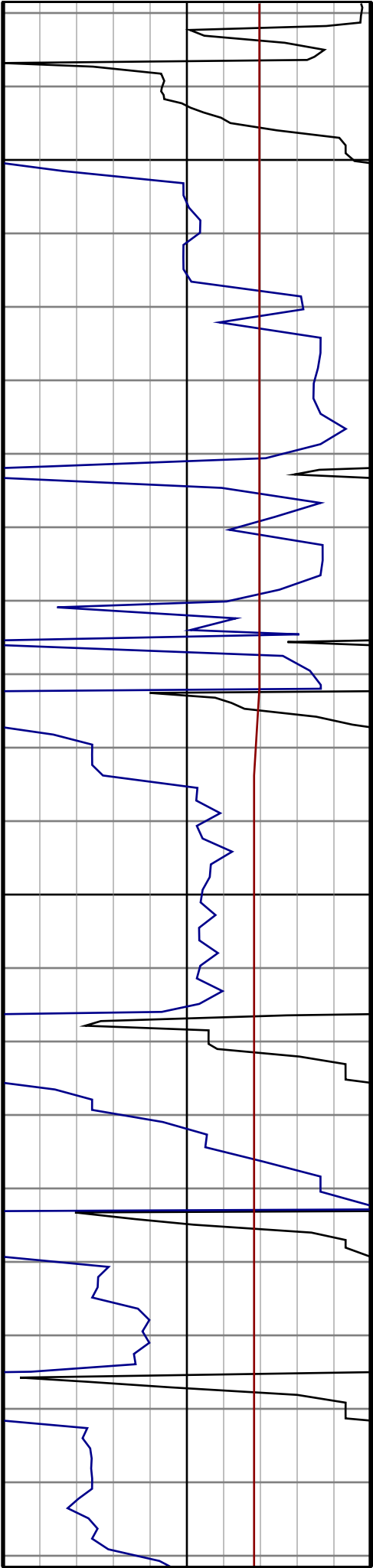
#3 MD(632.00) Inc(0.4) Azm(65.1) TVD(632.00)  
VS(0.80) NS(1.13) EW(1.21)





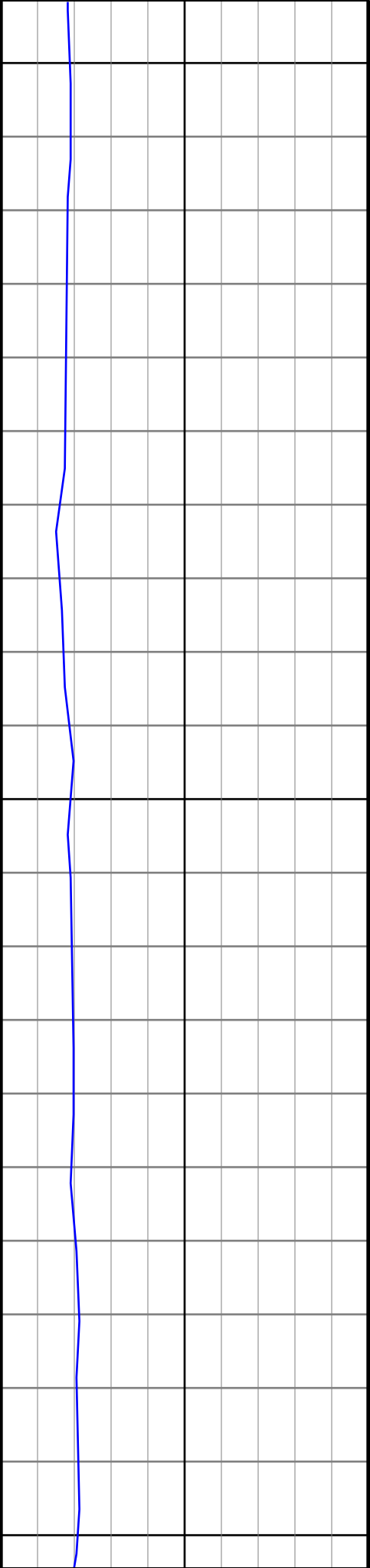
700

800



#4 MD(724.00) Inc(0.4) Azm(92.9) TVD(723.99)  
VS(0.77) NS(1.25) EW(1.82)

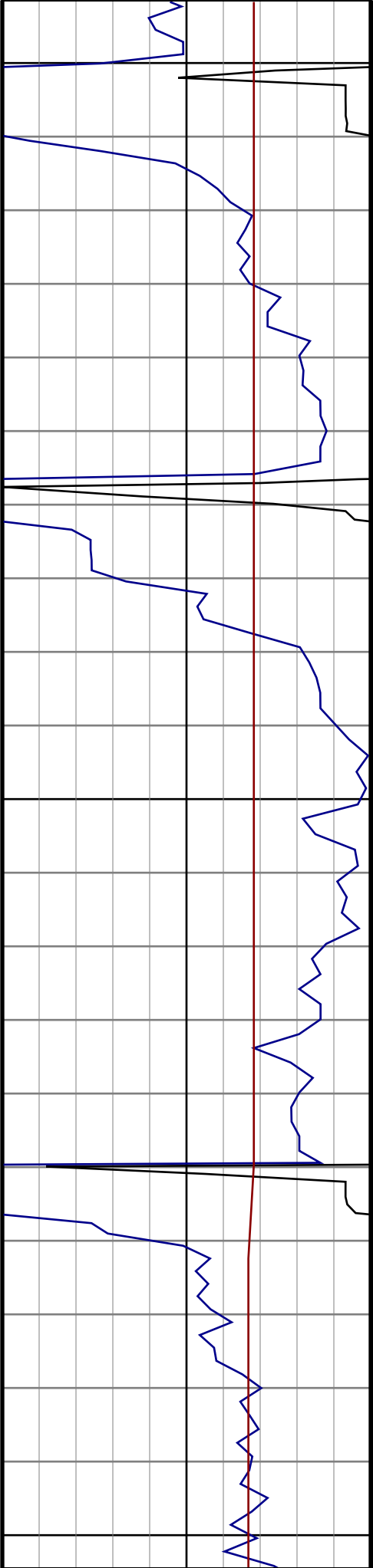
#5 MD(817.00) Inc(0.5) Azm(79.4) TVD(816.99)  
VS(0.65) NS(1.31) EW(2.55)



900

1000

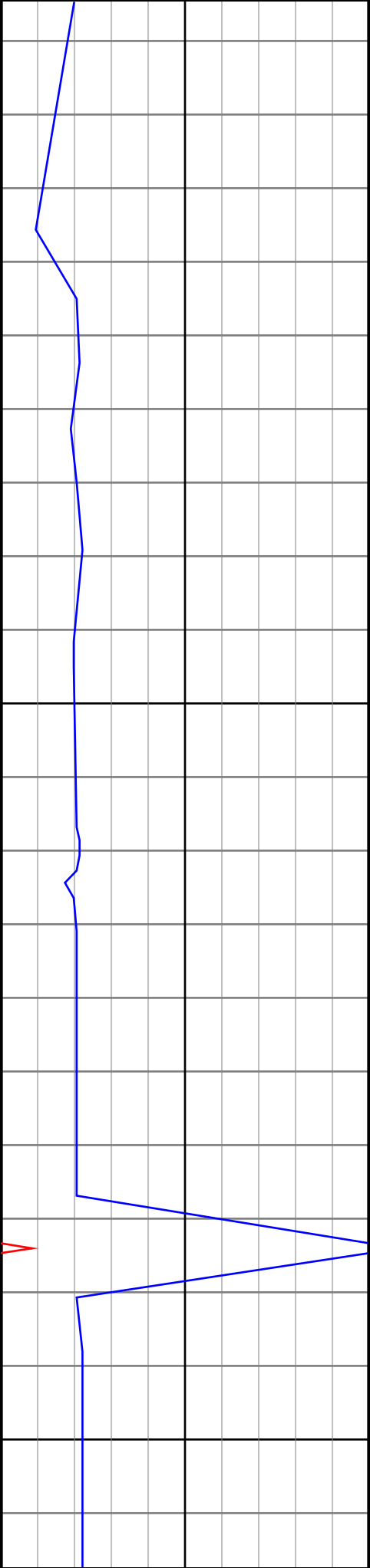
1100



#6 MD(911.00) Inc(0.4) Azm(88.5) TVD(910.99)  
VS(0.55) NS(1.39) EW(3.28)

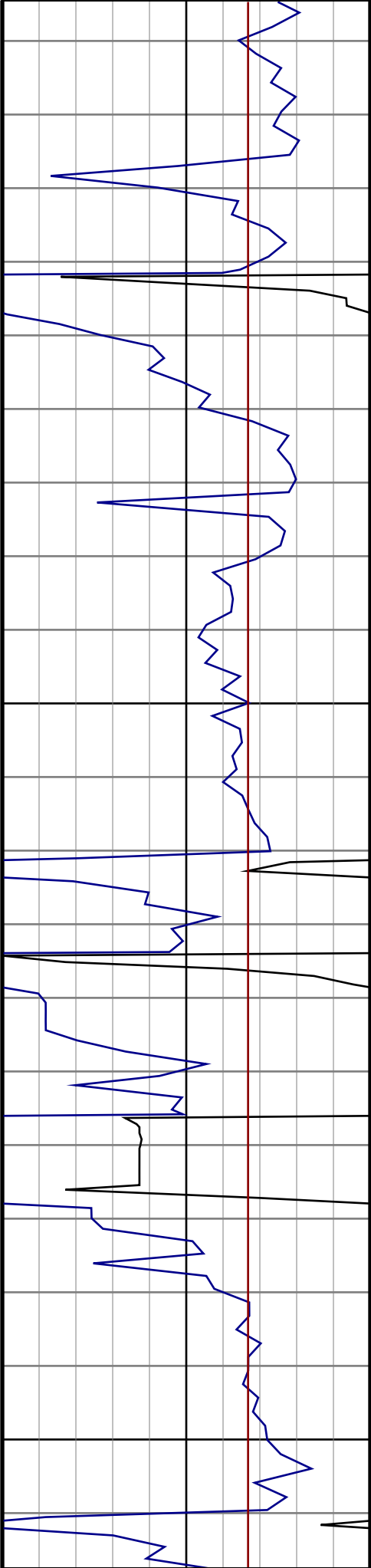
#7 MD(1004.00) Inc(0.5) Azm(84.1) TVD(1003.99)  
VS(0.42) NS(1.44) EW(4.01)

#8 MD(1097.00) Inc(0.5) Azm(87.5) TVD(1096.98)  
VS(0.28) NS(1.50) EW(4.81)



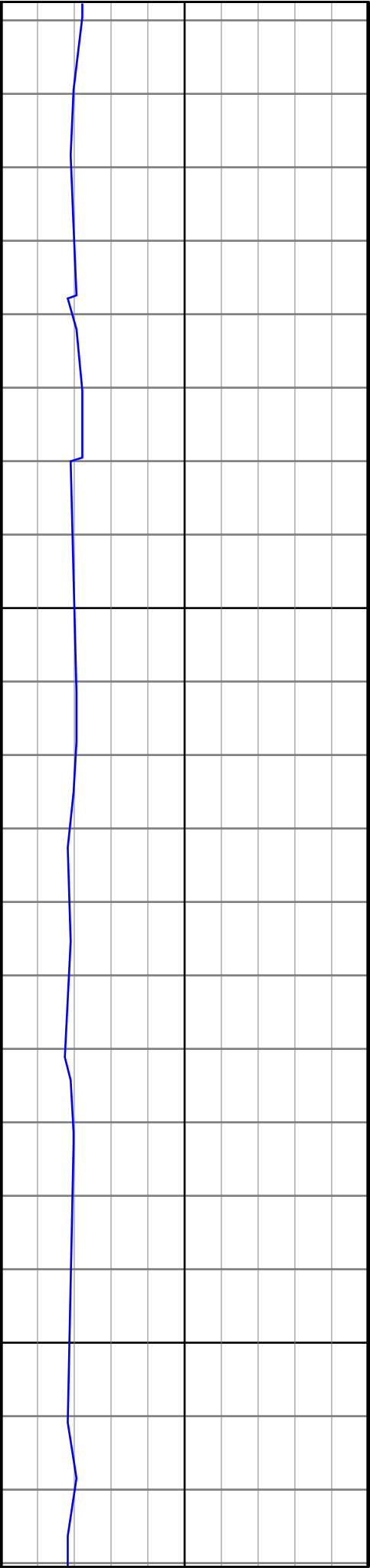
1200

1300



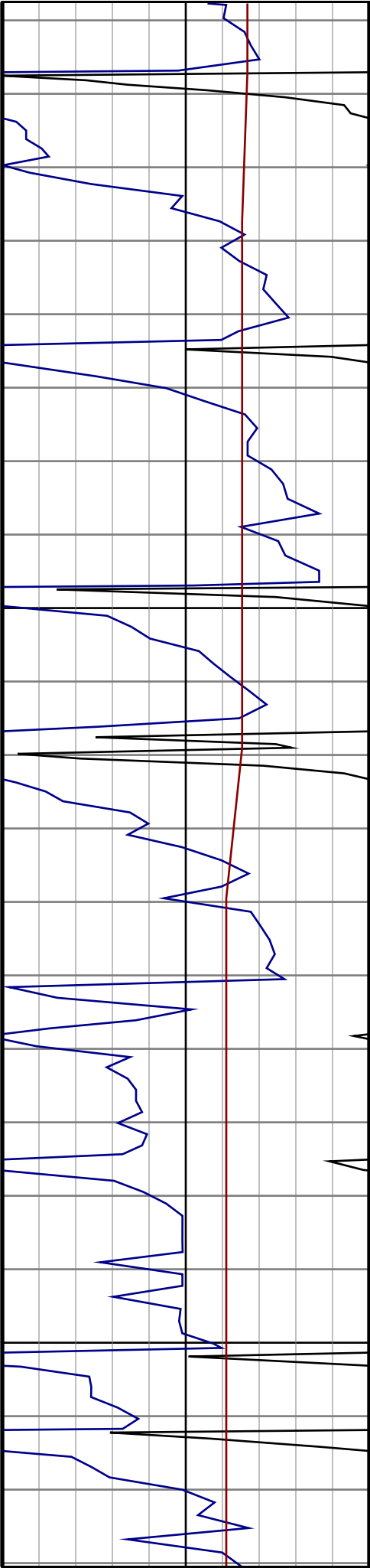
#9 MD(1189.00) Inc(0.5) Azm(91.7) TVD(1188.98)  
VS(0.09) NS(1.51) EW(5.62)

#10 MD(1282.00) Inc(0.7) Azm(326.5) TVD(1281.98)  
VS(0.52) NS(1.97) EW(5.71)



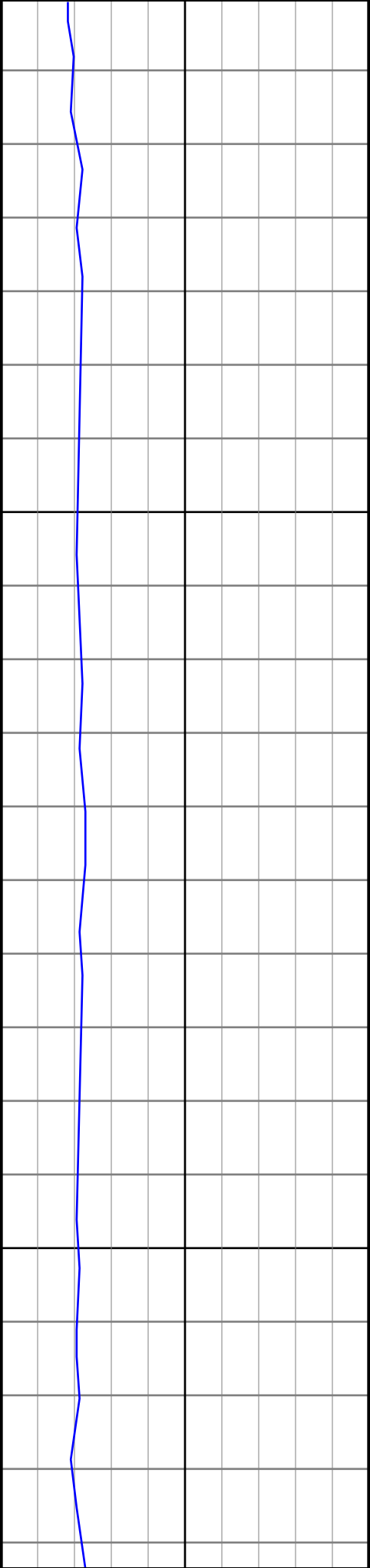
1400

1500

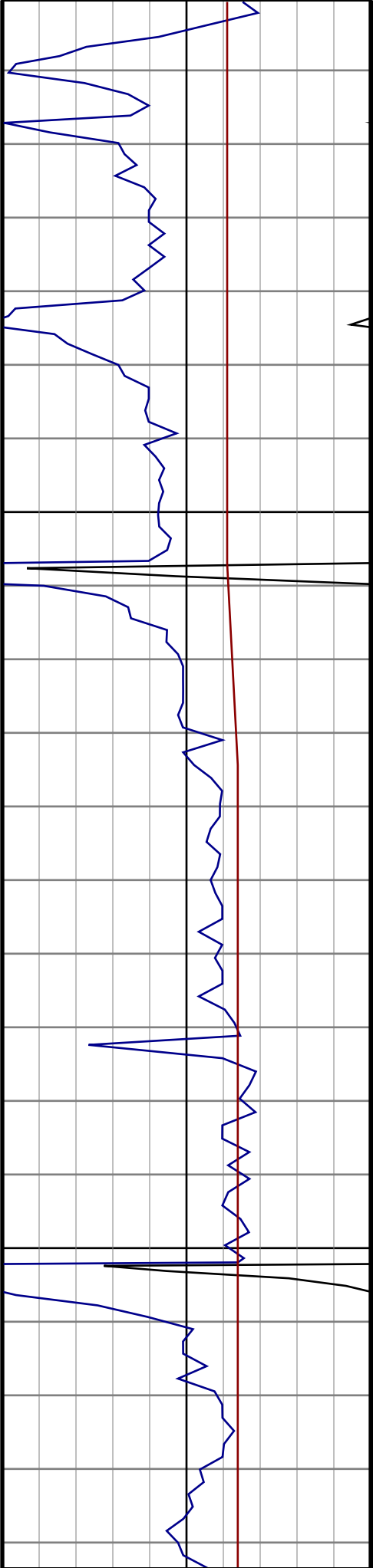


#11 MD(1376.00) Inc(1.2) Azm(313.3) TVD(1375.96)  
VS(1.89) NS(3.13) EW(4.68)

#12 MD(1469.00) Inc(1.1) Azm(306.3) TVD(1468.94)  
VS(3.40) NS(4.32) EW(3.25)



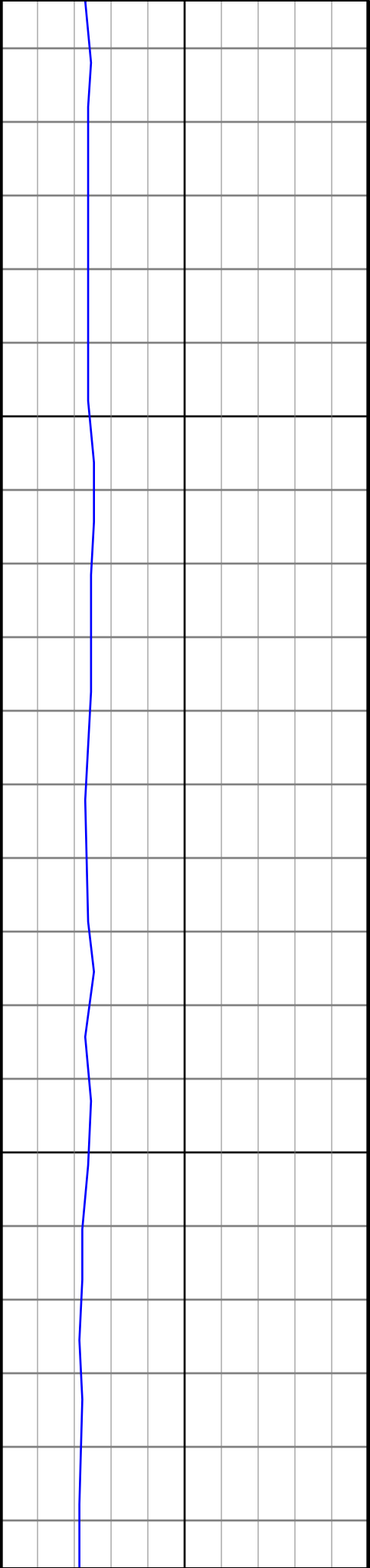
1600



#13 MD(1564.00) Inc(1.2) Azm(292.6) TVD(1563.93)  
VS(4.70) NS(5.24) EW(1.59)

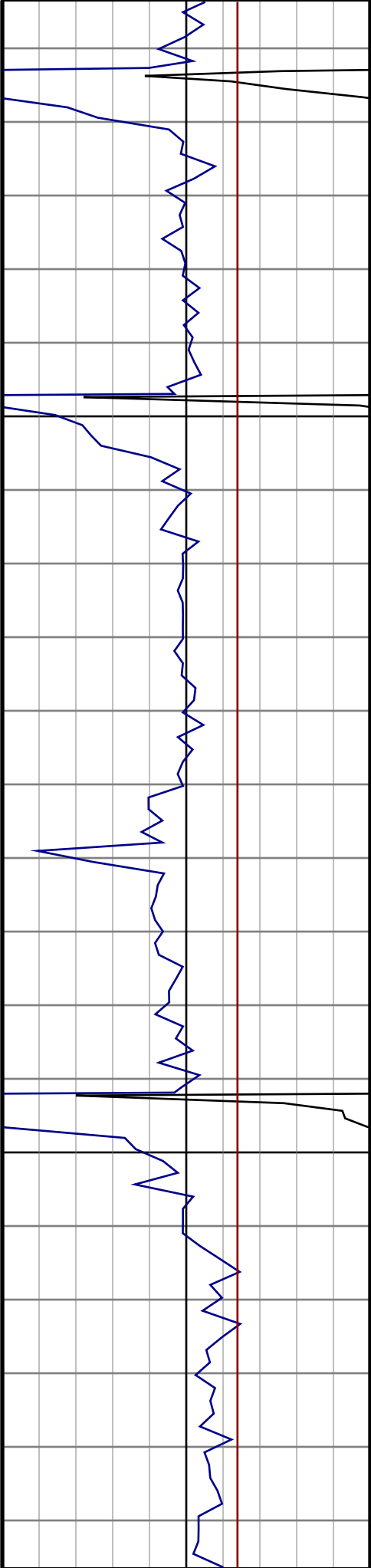
#14 MD(1659.00) Inc(1.1) Azm(305.1) TVD(1658.91)  
VS(5.98) NS(6.15) EW(-0.07)

1700



1800

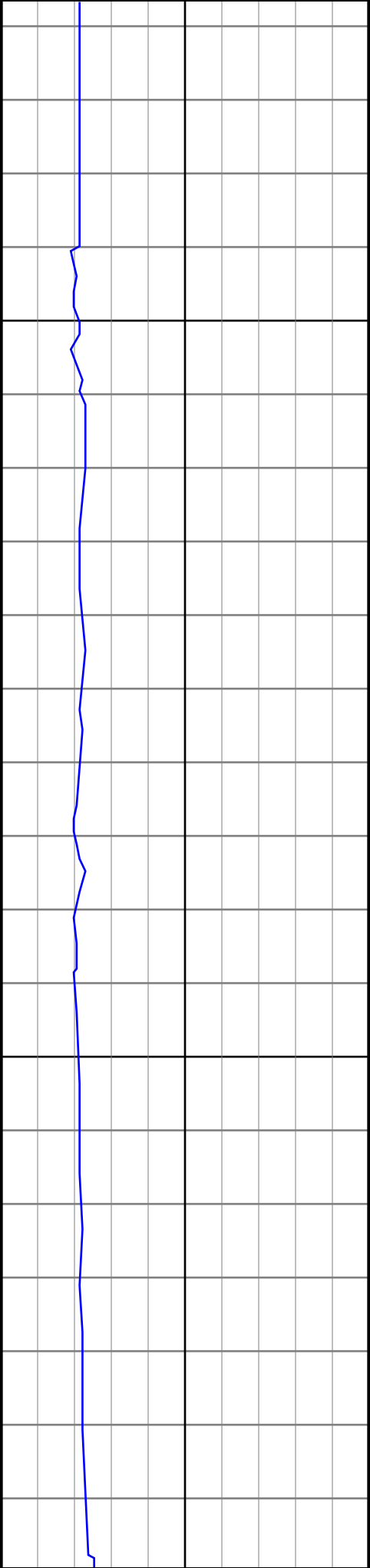
1900



#15 MD(1754.00) Inc(1.2) Azm(313.5) TVD(1753.89)  
VS(7.51) NS(7.36) EW(-1.54)

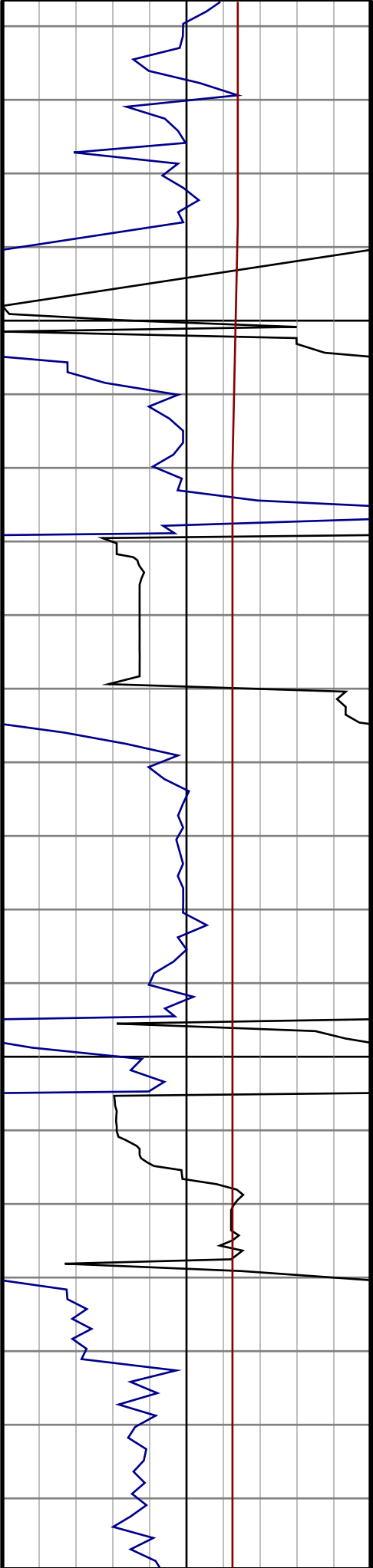
#16 MD(1849.00) Inc(1.2) Azm(304.7) TVD(1848.87)  
VS(9.10) NS(8.61) EW(-3.08)

#17 MD(1945.00) Inc(0.9) Azm(312.5) TVD(1944.85)  
VS(10.49) NS(9.69) EW(-4.46)



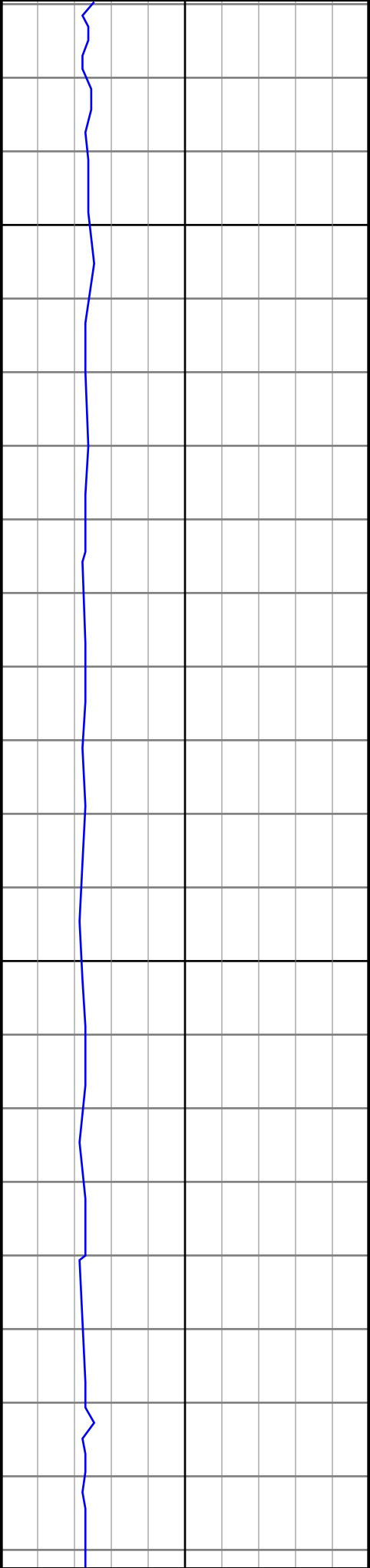
2000

2100



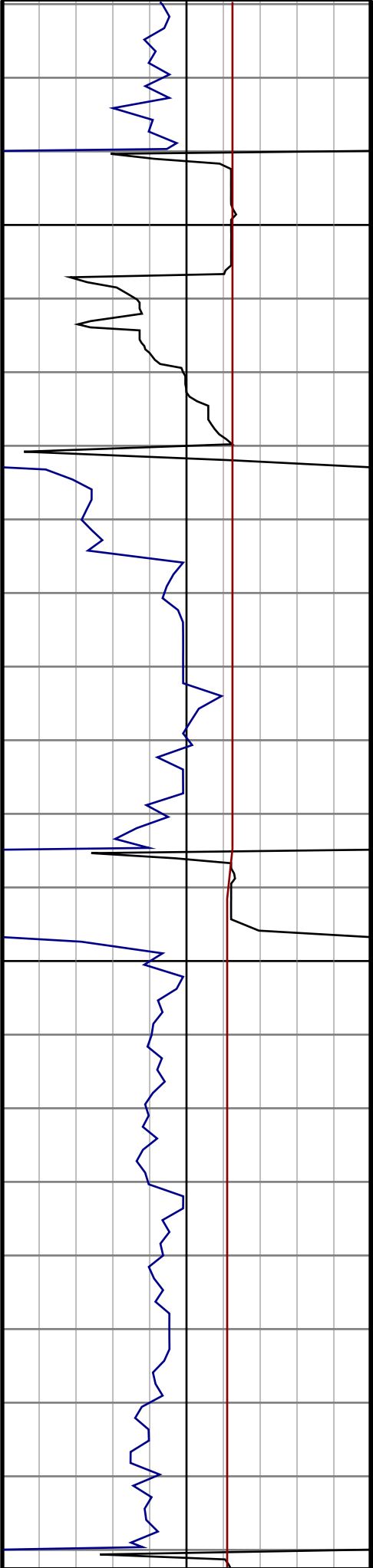
#18 MD(2040.00) Inc(1.4) Azm(293.5) TVD(2039.83)  
VS(11.82) NS(10.66) EW(-6.07)

#19 MD(2135.00) Inc(4.2) Azm(272.0) TVD(2134.71)  
VS(13.49) NS(11.24) EW(-10.62)



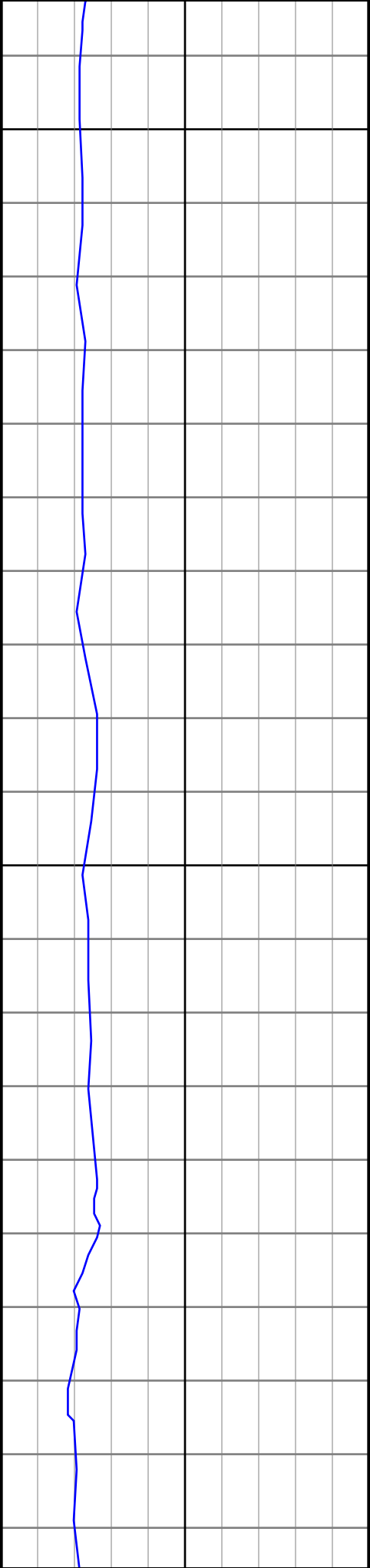
2200

2300



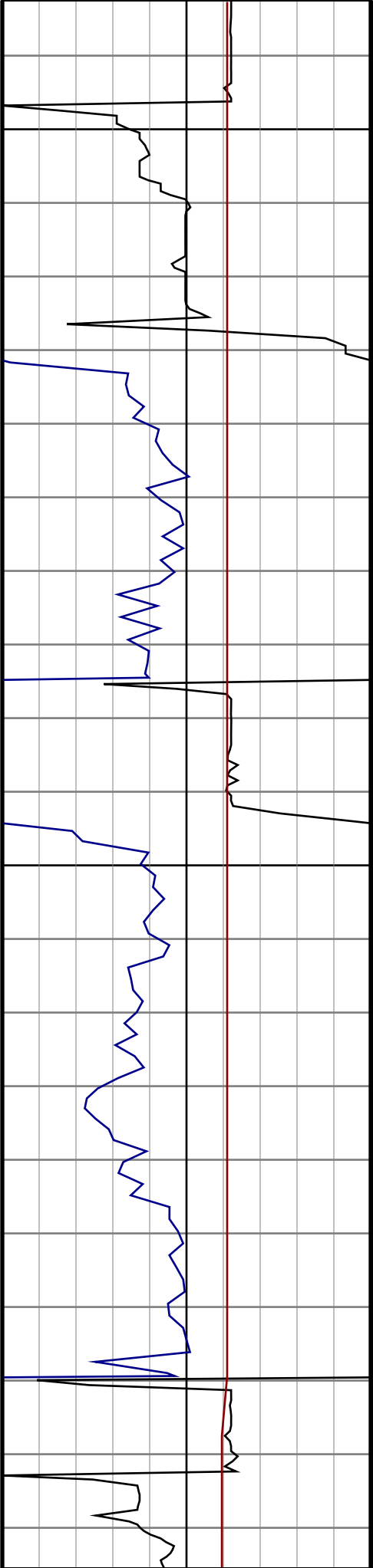
#20 MD(2230.00) Inc(5.5) Azm(267.6) TVD(2229.37)  
VS(15.39) NS(11.17) EW(-18.64)

#21 MD(2325.00) Inc(5.6) Azm(269.0) TVD(2323.92)  
VS(17.37) NS(10.90) EW(-27.83)



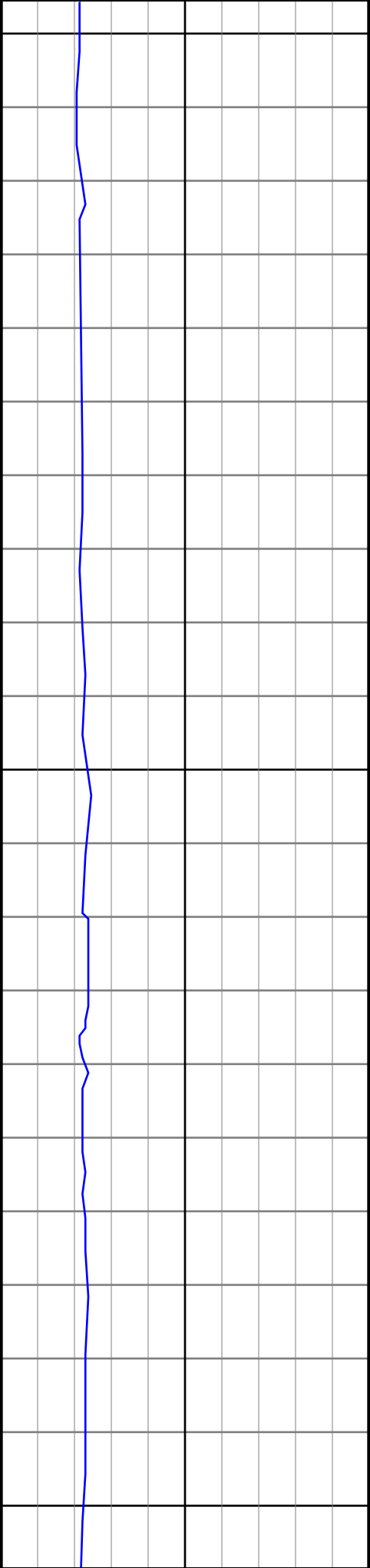
2400

2500



#22 MD(2420.00) Inc(7.7) Azm(260.2) TVD(2418.28)  
VS(18.90) NS(9.74) EW(-38.73)

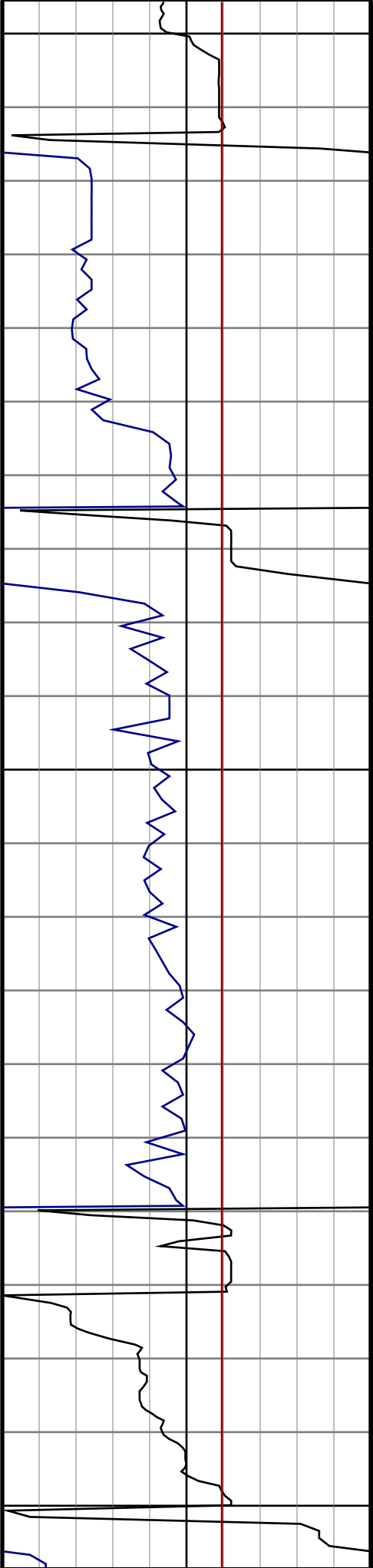
#23 MD(2515.00) Inc(7.7) Azm(260.2) TVD(2512.42)  
VS(19.86) NS(7.57) EW(-51.28)



2600

2700

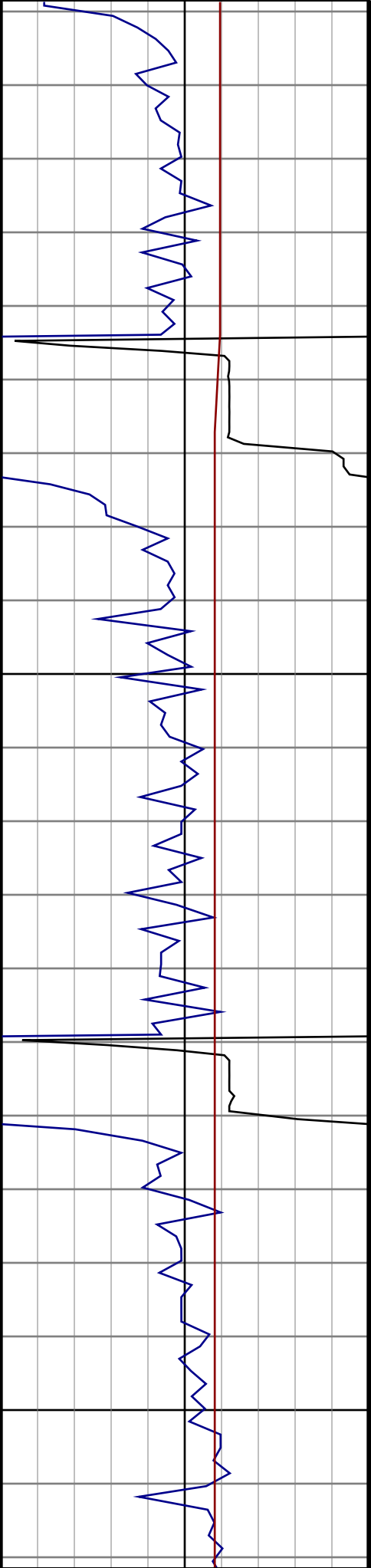
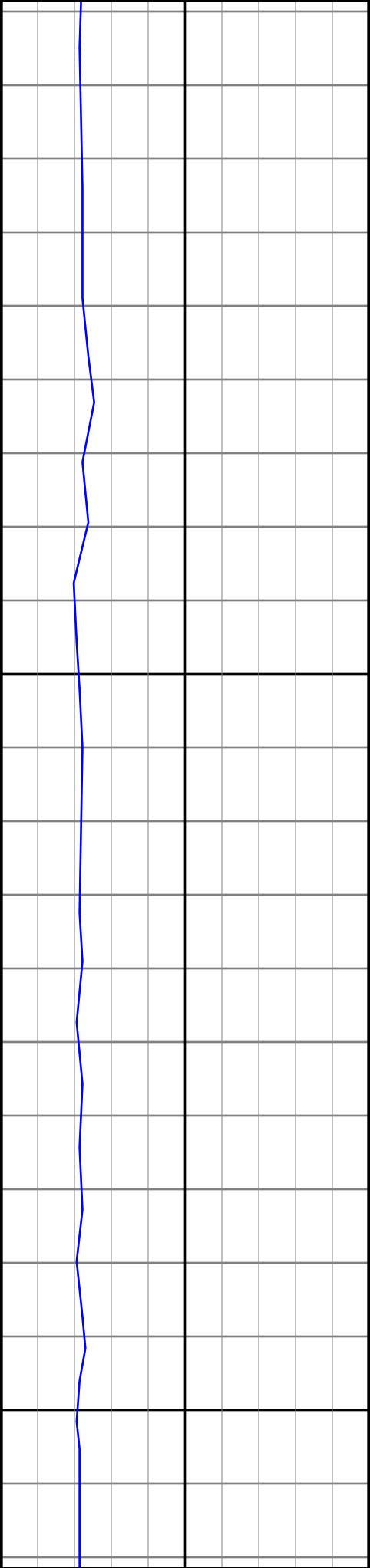
2800



#24 MD(2610.00) Inc(9.9) Azm(262.9) TVD(2606.30)  
VS(21.34) NS(5.48) EW(-65.65)

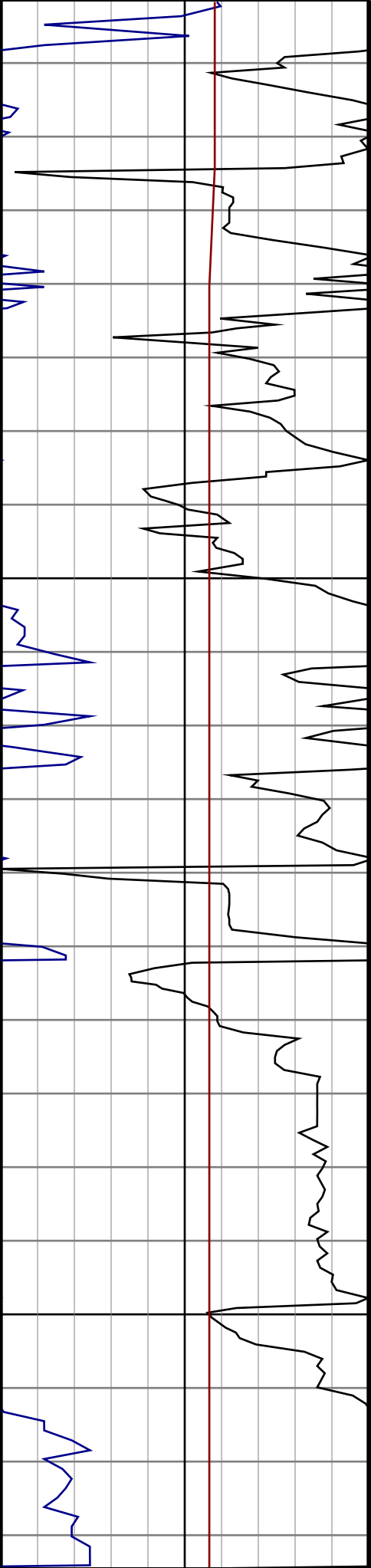
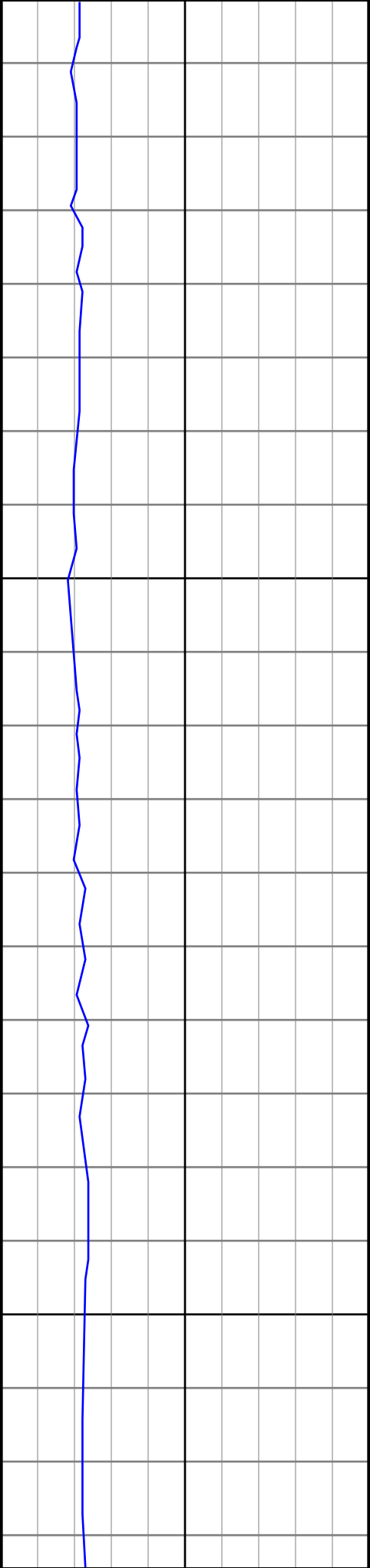
#25 MD(2705.00) Inc(10.4) Azm(262.2) TVD(2699.81)  
VS(23.28) NS(3.31) EW(-82.25)

#26 MD(2800.00) Inc(12.1) Azm(269.6) TVD(2792.99)  
VS(26.59) NS(2.07) EW(-100.71)



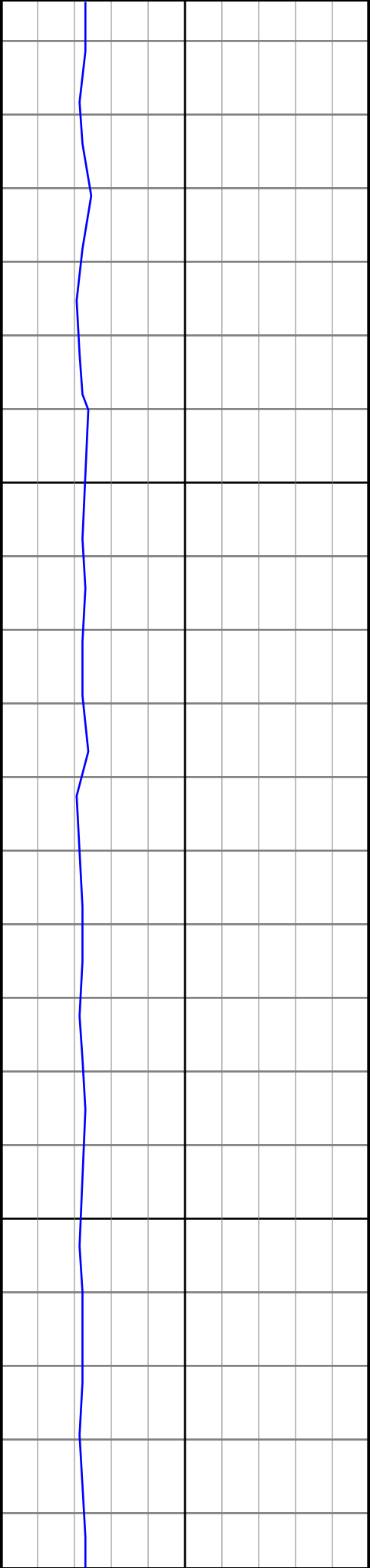
#27 MD(2896.00) Inc(12.0) Azm(270.4) TVD(2886.87)  
VS(31.49) NS(2.07) EW(-120.75)

#28 MD(2991.00) Inc(11.4) Azm(271.7) TVD(2979.90)  
VS(36.52) NS(2.42) EW(-140.01)



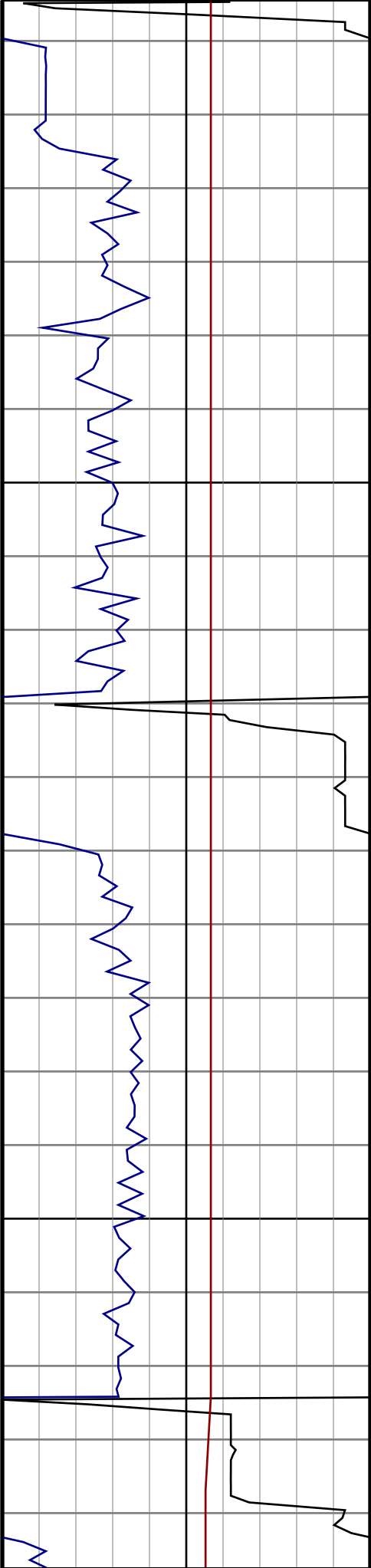
#29 MD(3086.00) Inc(11.6) Azm(271.0) TVD(3072.99)  
VS(41.58) NS(2.86) EW(-158.94)

#30 MD(3181.00) Inc(11.6) Azm(271.1) TVD(3166.05)  
VS(46.58) NS(3.21) EW(-178.04)



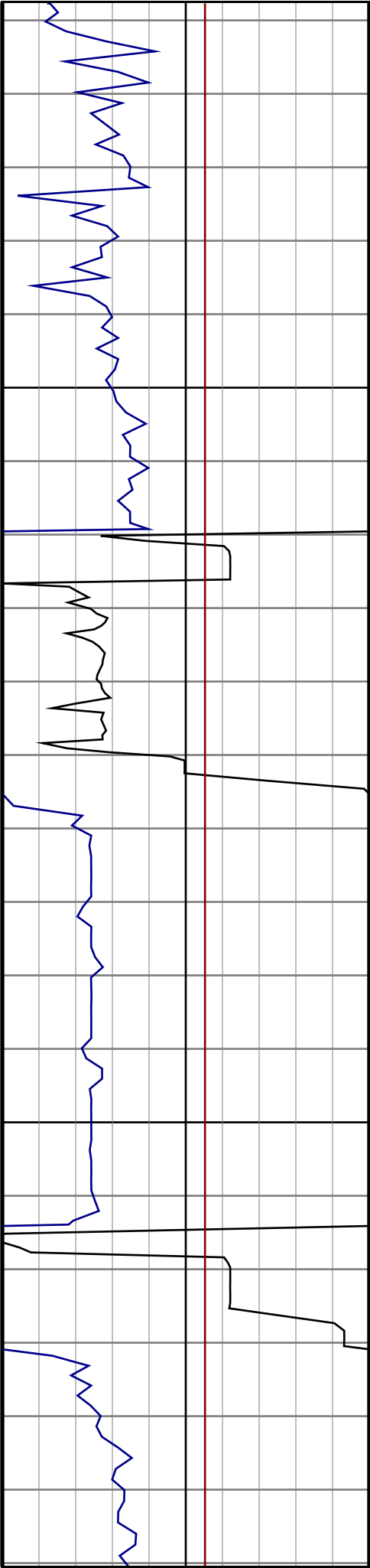
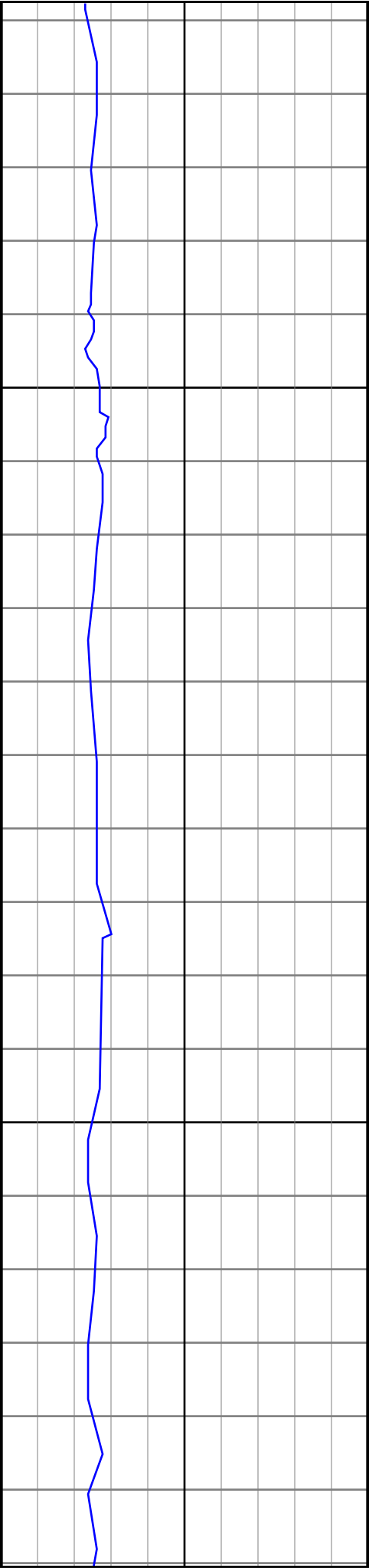
3300

3400



#31 MD(3276.00) Inc(12.0) Azm(270.4) TVD(3259.05)  
VS(51.57) NS(3.47) EW(-197.47)

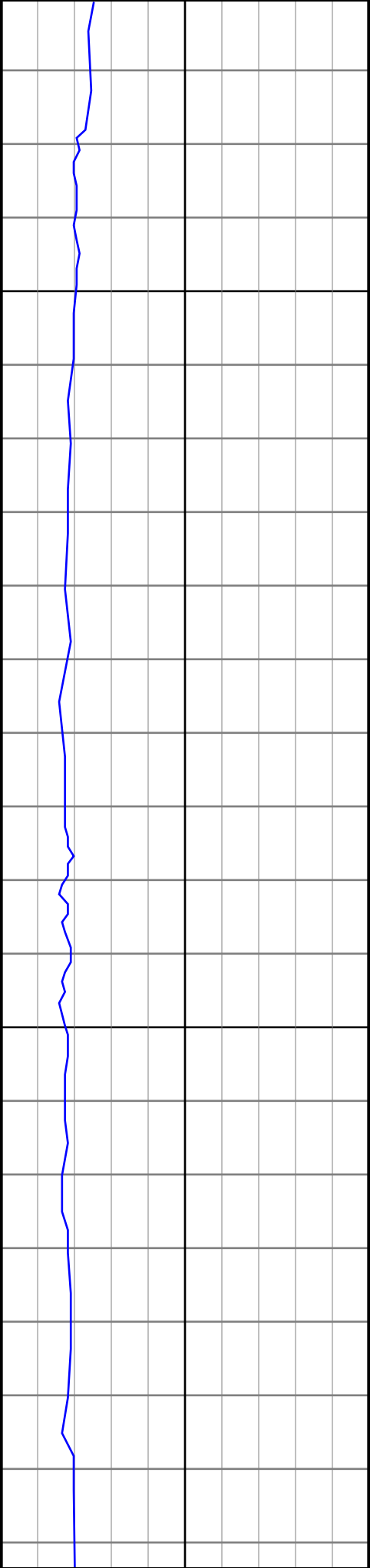
#32 MD(3371.00) Inc(12.0) Azm(266.9) TVD(3351.97)  
VS(55.93) NS(3.00) EW(-217.20)



#33 MD(3467.00) Inc(10.7) Azm(269.0) TVD(3446.09)  
VS(59.87) NS(2.31) EW(-236.08)

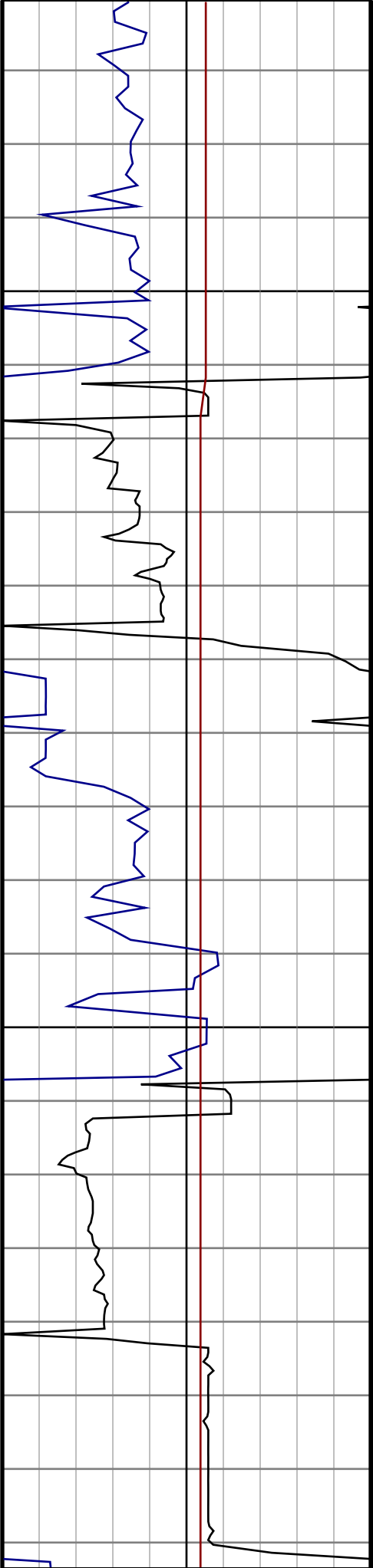
#34 MD(3562.00) Inc(11.3) Azm(270.1) TVD(3539.35)  
VS(64.16) NS(2.17) EW(-254.21)

#35 MD(3657.00) Inc(10.7) Azm(269.0) TVD(3632.60)  
VS(68.45) NS(2.03) EW(-272.33)



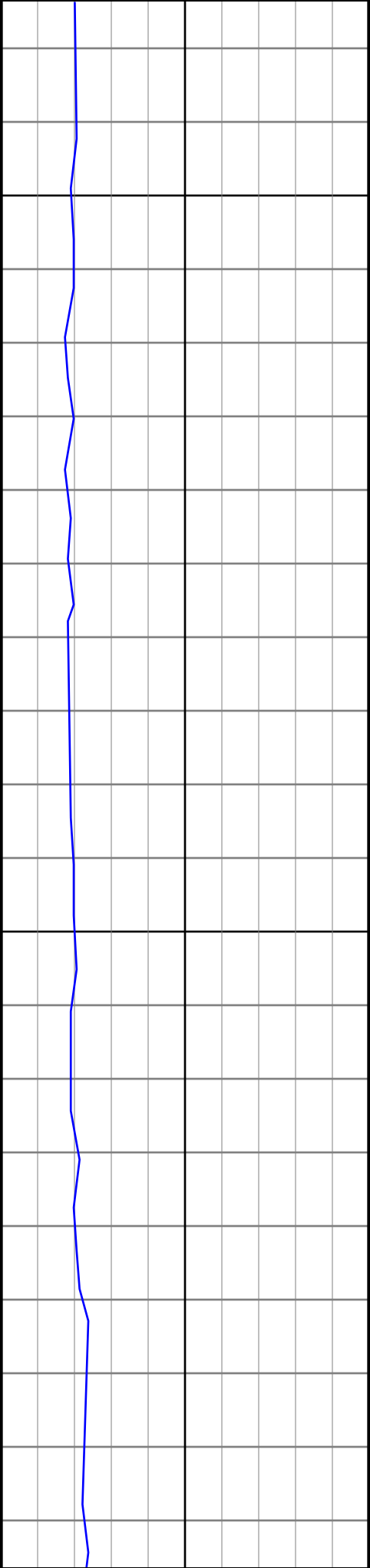
3700

3800



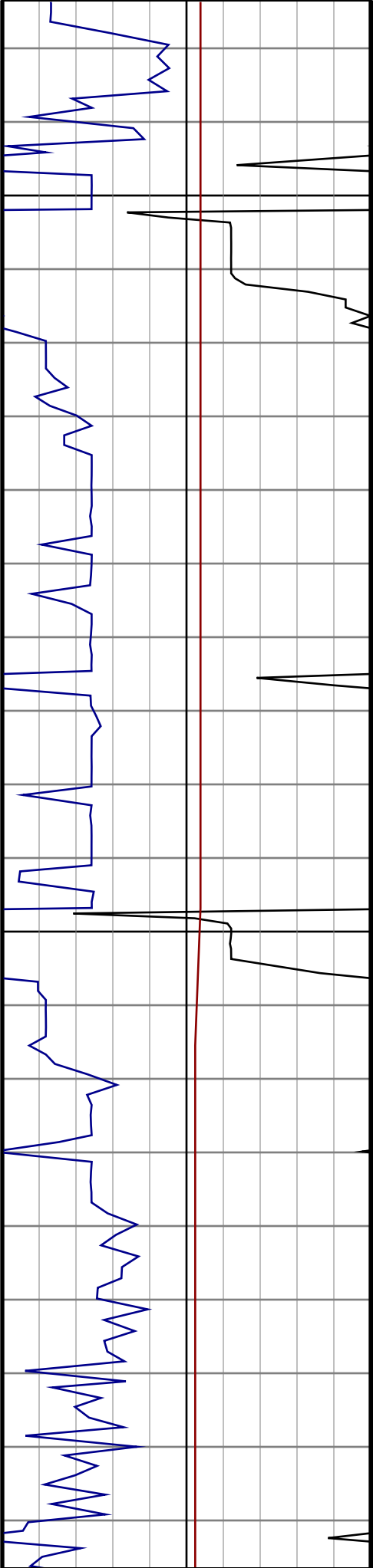
#36 MD(3752.00) Inc(10.7) Azm(274.5) TVD(3725.95)  
VS(73.27) NS(2.57) EW(-289.94)

#37 MD(3848.00) Inc(13.0) Azm(271.0) TVD(3819.90)  
VS(78.94) NS(3.46) EW(-309.62)



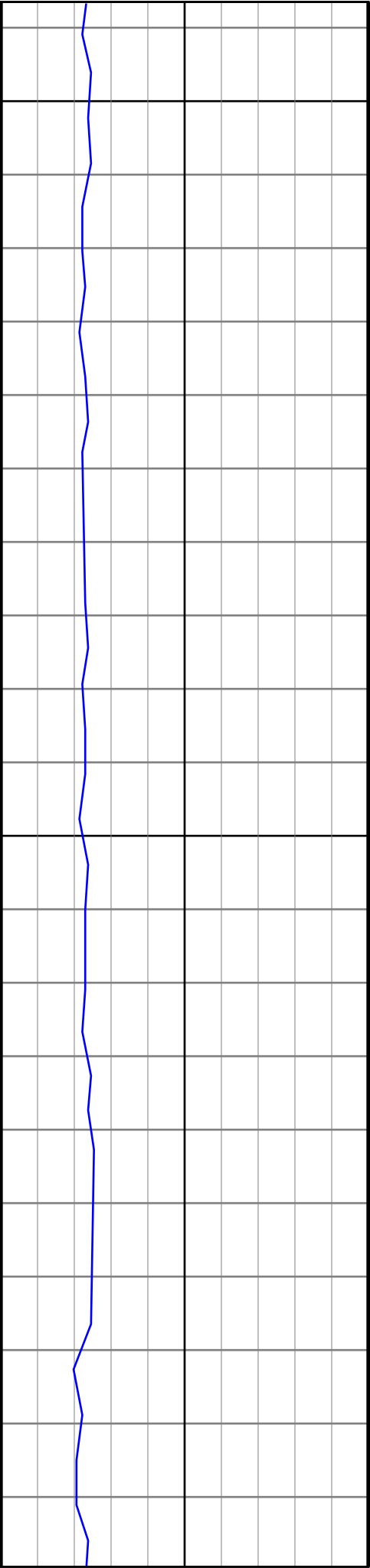
3900

4000



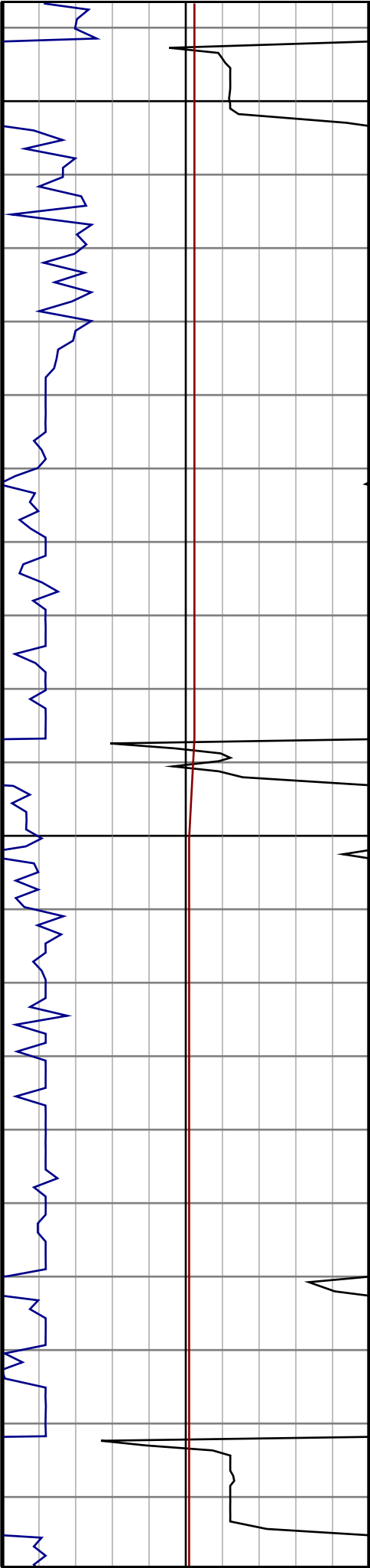
#38 MD(3943.00) Inc(13.9) Azm(273.6) TVD(3912.29)  
VS(85.20) NS(4.36) EW(-331.70)

#39 MD(4038.00) Inc(14.6) Azm(272.7) TVD(4004.37)  
VS(92.14) NS(5.64) EW(-355.05)



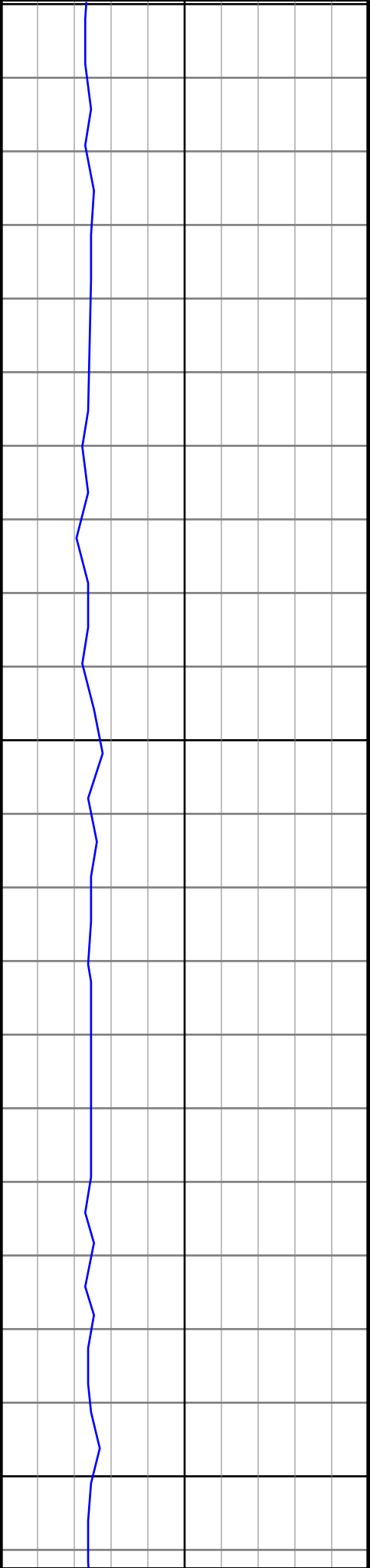
4100

4200



#40 MD(4133.00) Inc(14.4) Azm(271.8) TVD(4096.34)  
VS(98.85) NS(6.58) EW(-378.81)

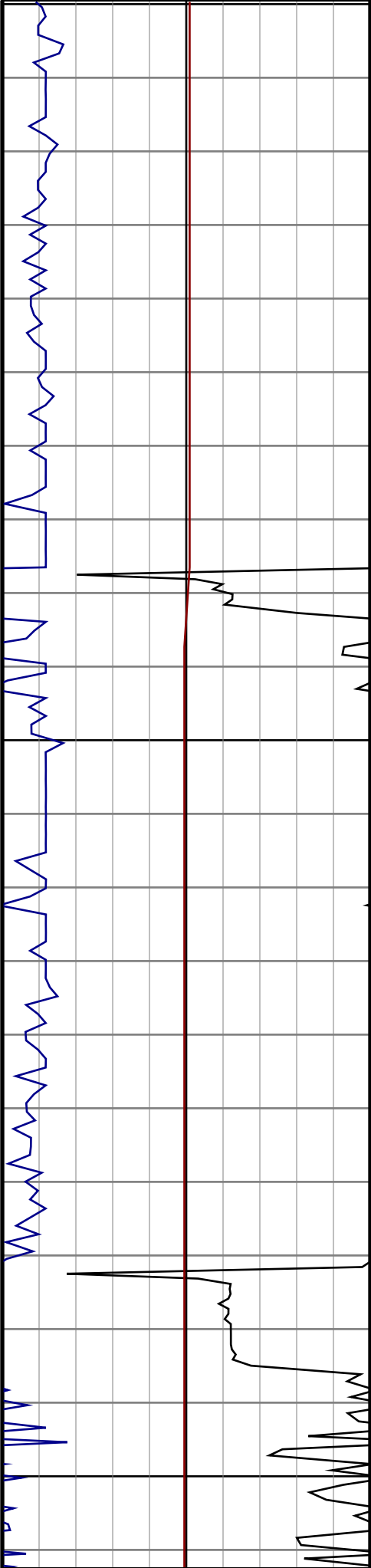
#41 MD(4228.00) Inc(14.1) Azm(272.7) TVD(4188.42)  
VS(105.45) NS(7.49) EW(-402.18)



4300

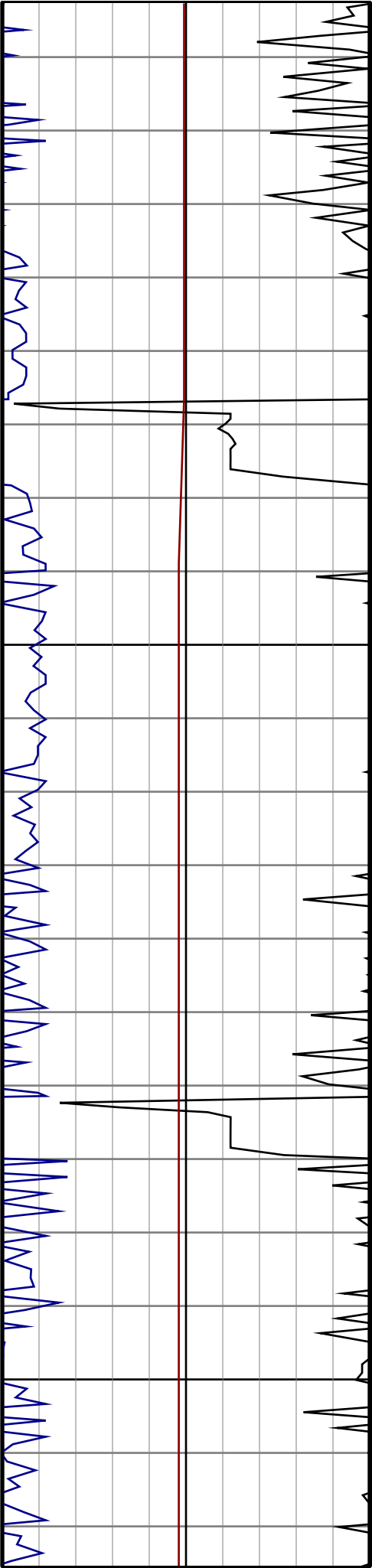
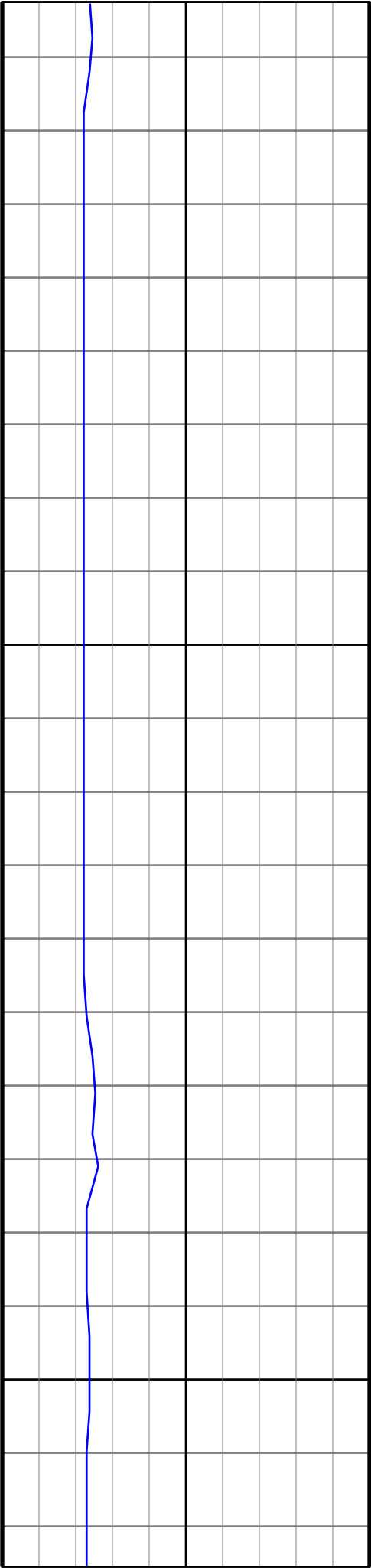
4400

4500



#42 MD(4323.00) Inc(13.5) Azm(269.9) TVD(4280.68)  
VS(111.48) NS(8.02) EW(-424.83)

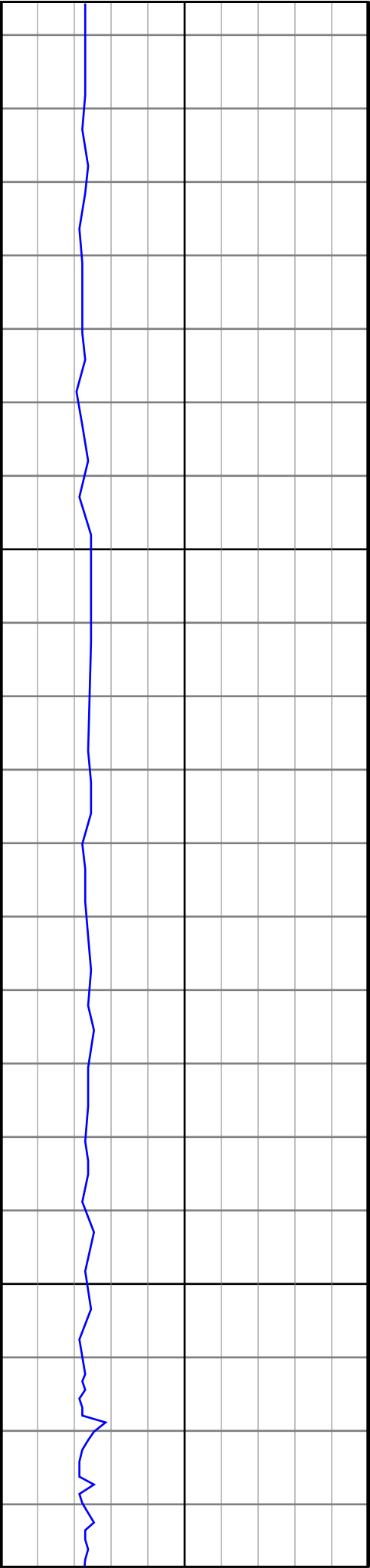
#43 MD(4419.00) Inc(12.7) Azm(270.6) TVD(4374.18)  
VS(116.88) NS(8.11) EW(-446.58)



#44 MD(4514.00) Inc(12.0) Azm(267.3) TVD(4466.98)  
VS(121.50) NS(7.75) EW(-466.89)

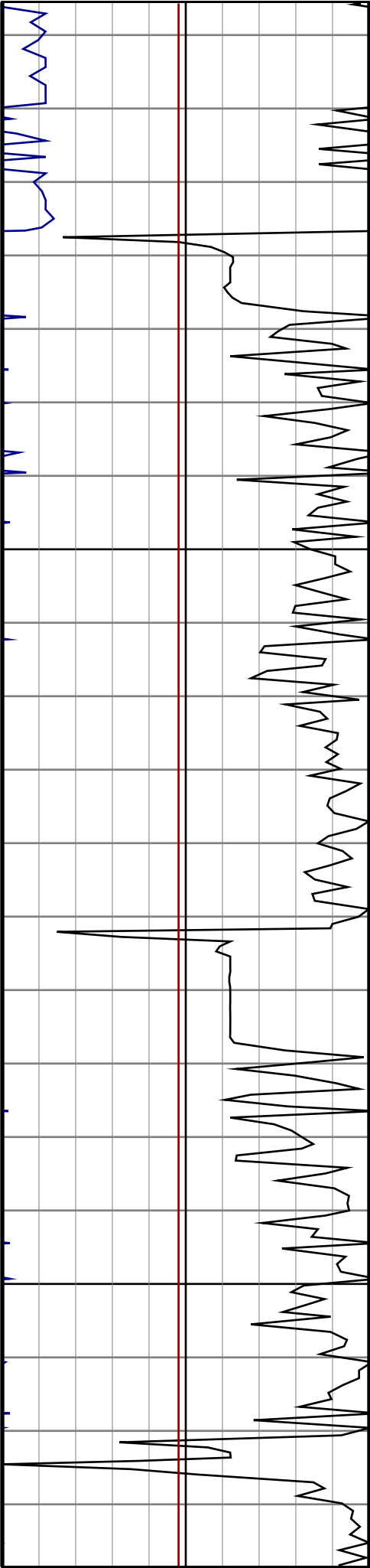
#45 MD(4609.00) Inc(11.8) Azm(265.7) TVD(4559.94)  
VS(125.11) NS(6.56) EW(-486.44)

#46 MD(4704.00) Inc(10.9) Azm(263.9) TVD(4653.08)  
VS(128.03) NS(4.88) EW(-505.06)



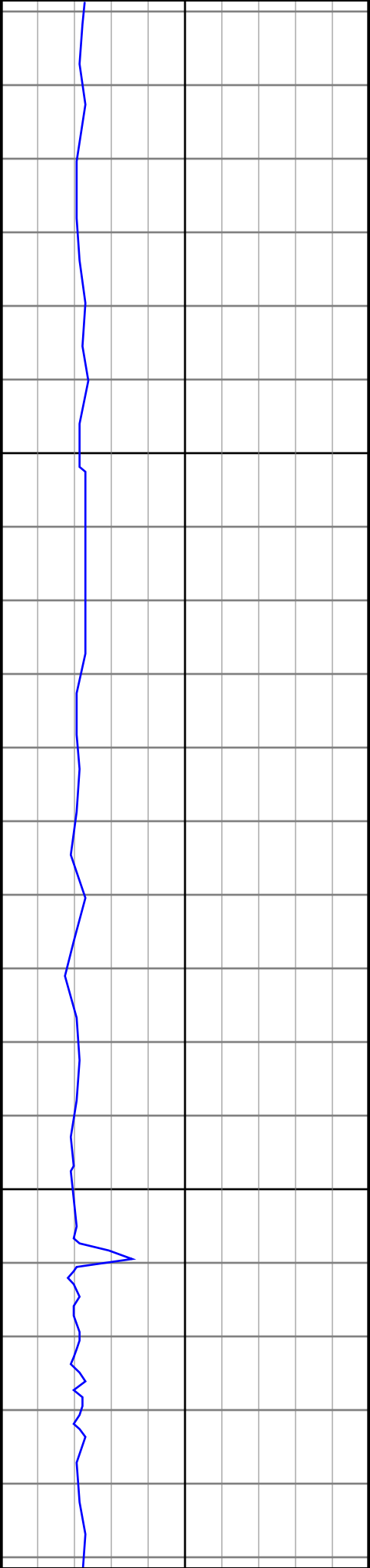
4800

4900



#47 MD(4799.00) Inc(10.7) Azm(266.0) TVD(4746.40)  
VS(130.83) NS(3.31) EW(-522.79)

#48 MD(4895.00) Inc(10.2) Azm(266.2) TVD(4840.81)  
VS(133.92) NS(2.12) EW(-540.16)



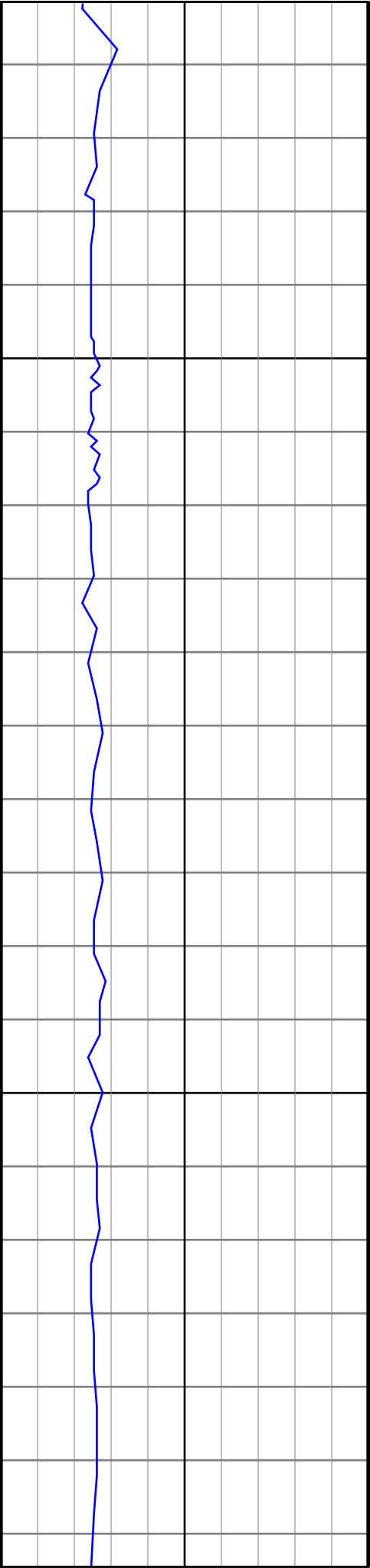
5000

5100



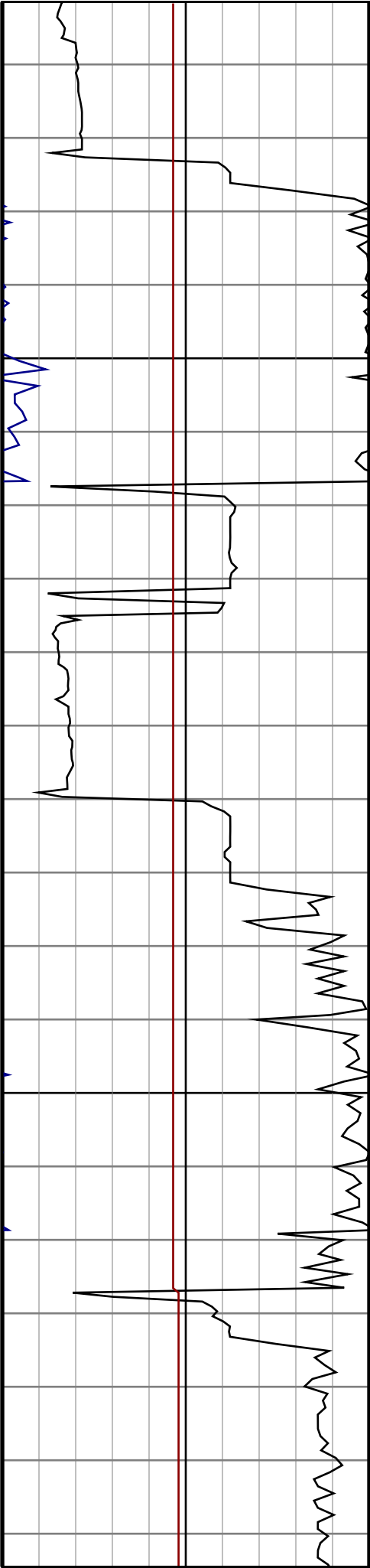
#49 MD(4990.00) Inc(10.6) Azm(267.5) TVD(4934.25)  
VS(137.19) NS(1.18) EW(-557.28)

#50 MD(5085.00) Inc(10.2) Azm(266.4) TVD(5027.69)  
VS(140.49) NS(0.27) EW(-574.41)



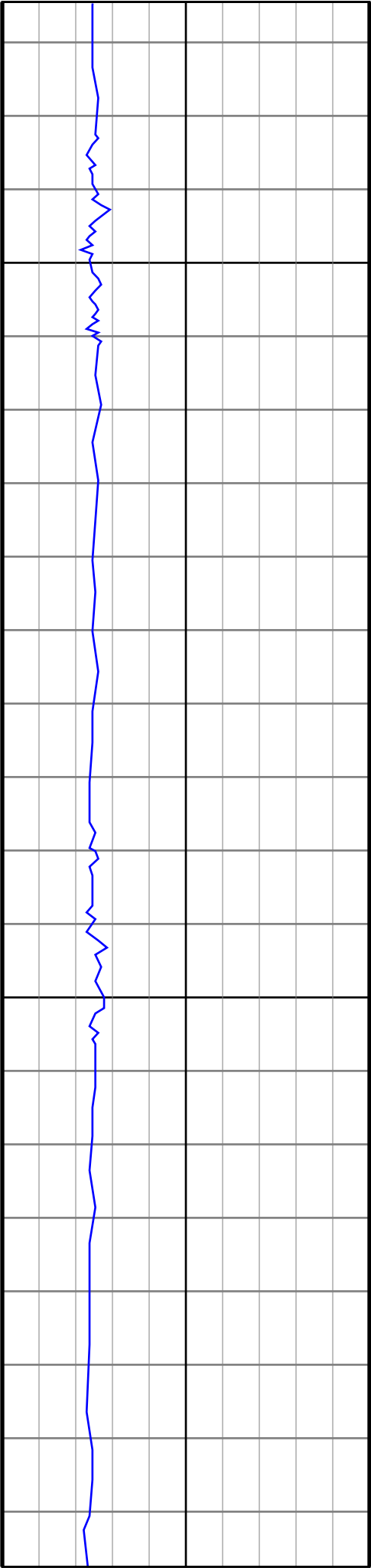
5200

5300



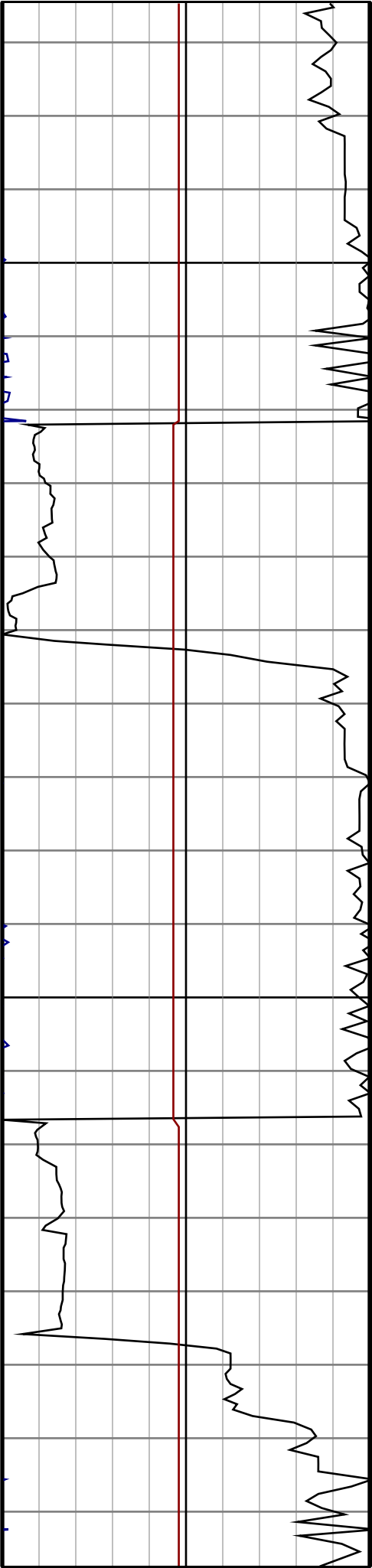
#51 MD(5180.00) Inc(10.9) Azm(272.6) TVD(5121.08)  
VS(144.61) NS(0.15) EW(-591.78)

#52 MD(5275.00) Inc(11.6) Azm(270.3) TVD(5214.26)  
VS(149.58) NS(0.61) EW(-610.30)



5400

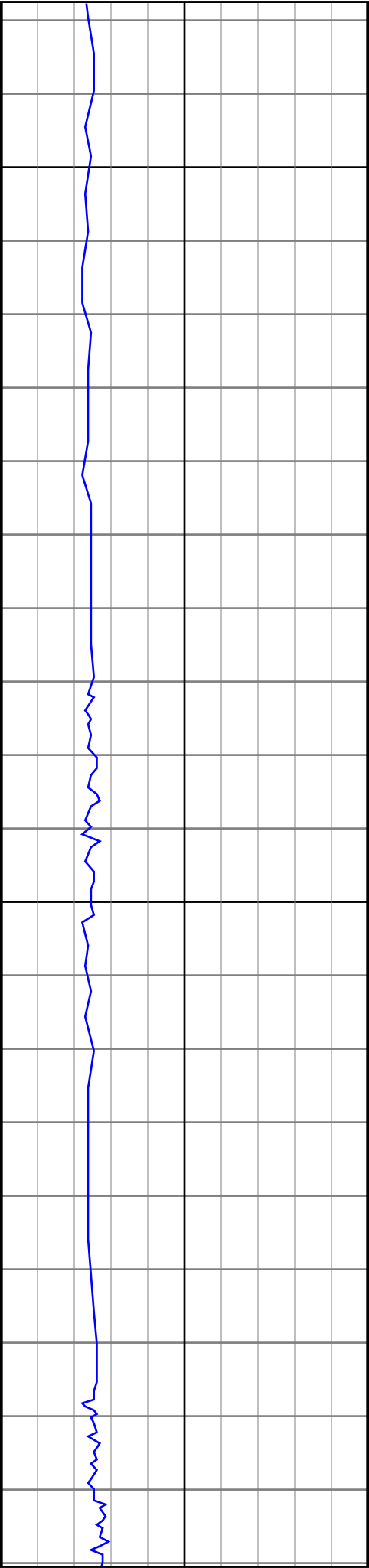
5500



#53 MD(5370.00) Inc(10.6) Azm(266.8) TVD(5307.48)  
VS(153.62) NS(0.17) EW(-628.58)

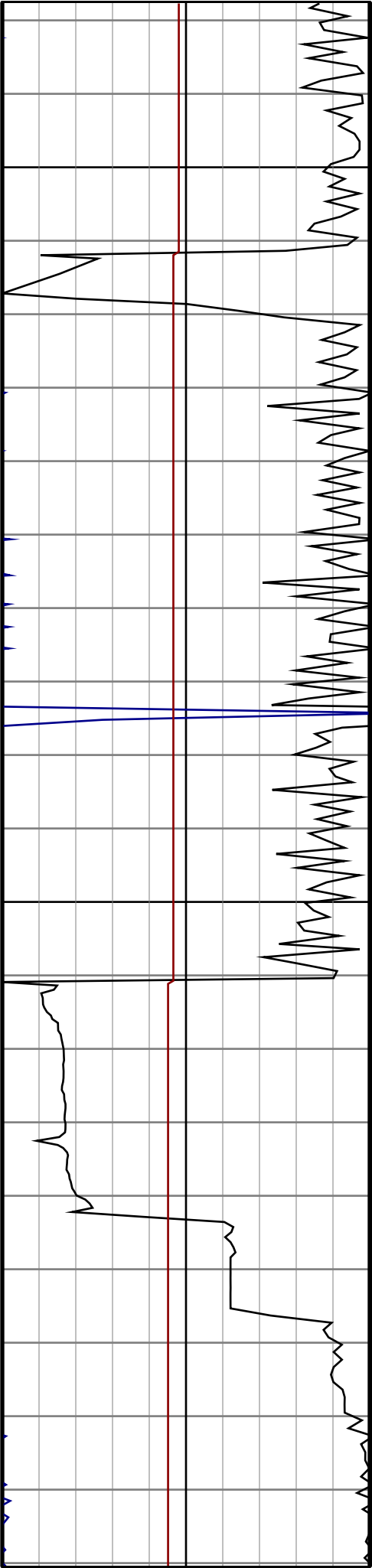
#54 MD(5465.00) Inc(10.9) Azm(273.6) TVD(5400.82)  
VS(158.01) NS(0.25) EW(-646.27)

#55 MD(5561.00) Inc(12.0) Azm(270.4) TVD(5494.91)  
VS(163.28) NS(0.89) EW(-665.31)



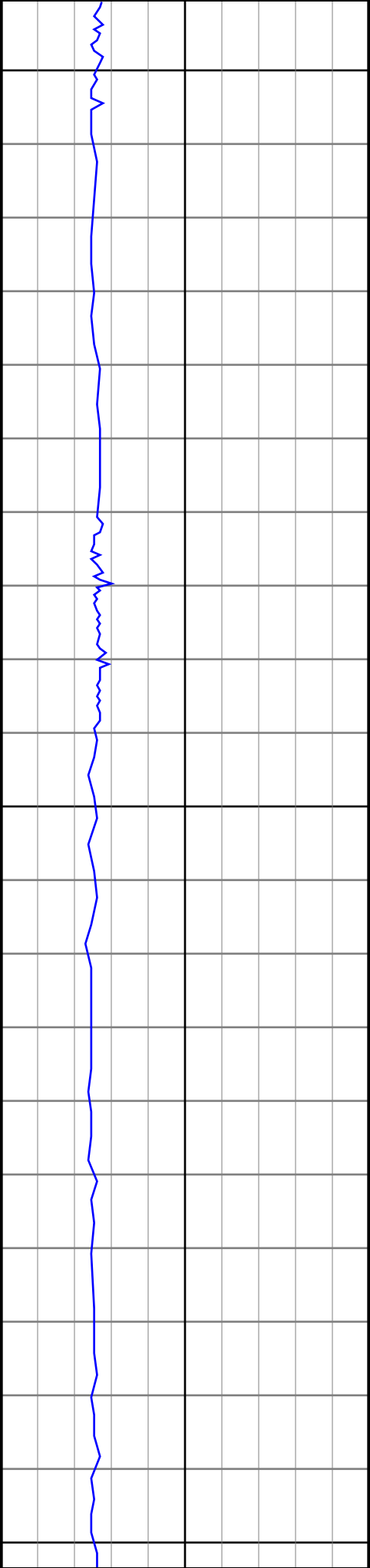
5600

5700



#56 MD(5656.00) Inc(10.9) Azm(268.7) TVD(5588.01)  
VS(167.75) NS(0.75) EW(-684.16)

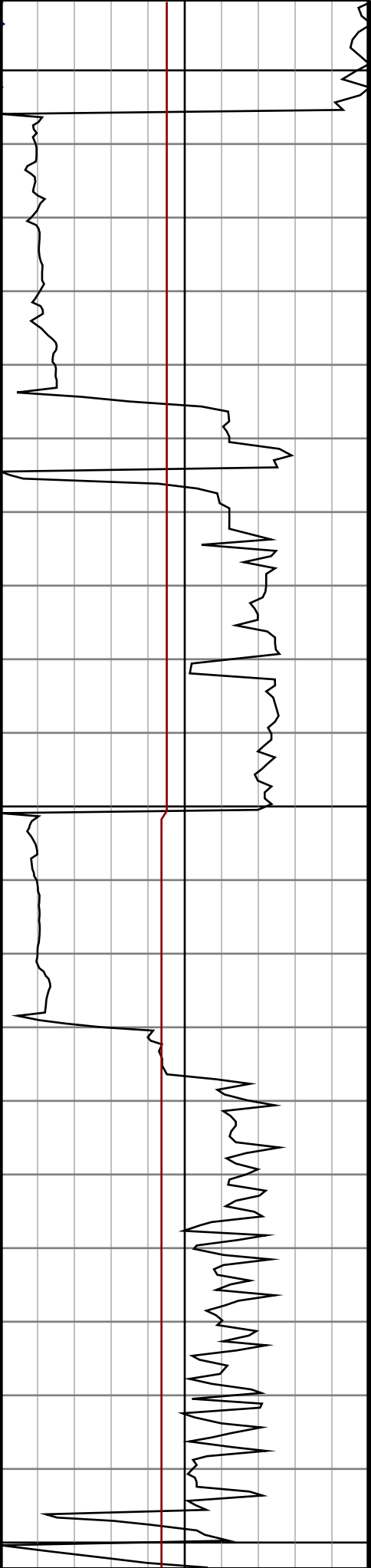
#57 MD(5751.00) Inc(11.4) Azm(278.4) TVD(5681.23)  
VS(173.34) NS(1.92) EW(-702.43)



5800

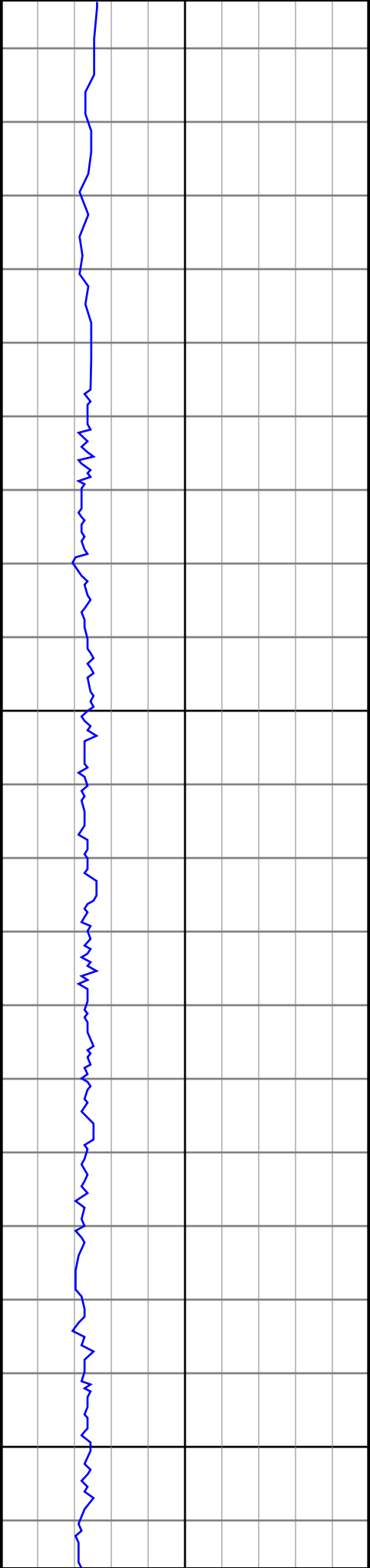
5900

6000



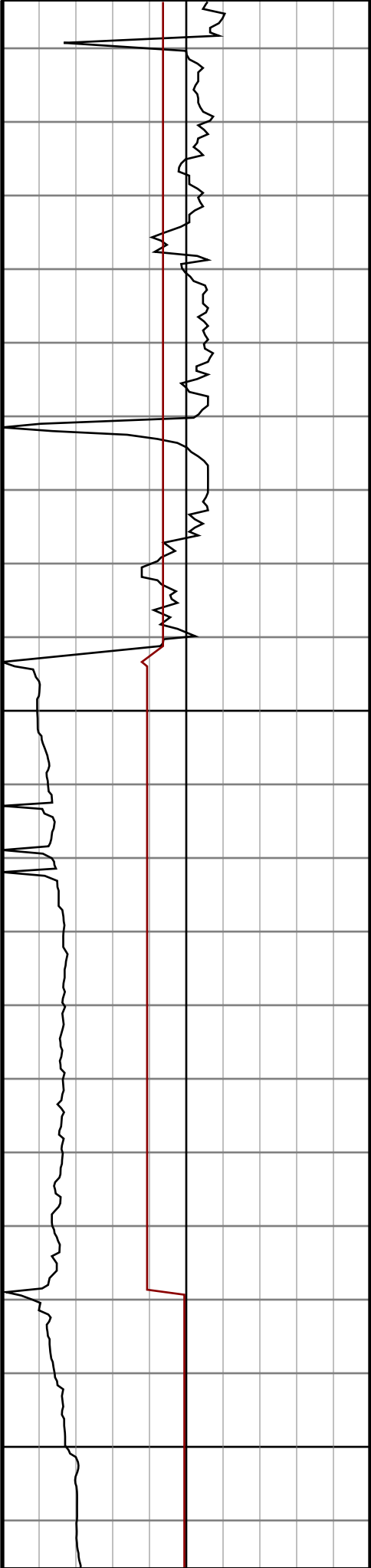
#58 MD(5846.00) Inc(12.3) Azm(271.1) TVD(5774.21)  
VS(179.60) NS(3.49) EW(-721.84)

#59 MD(5941.00) Inc(13.4) Azm(275.0) TVD(5866.83)  
VS(185.86) NS(4.64) EW(-742.92)



6100

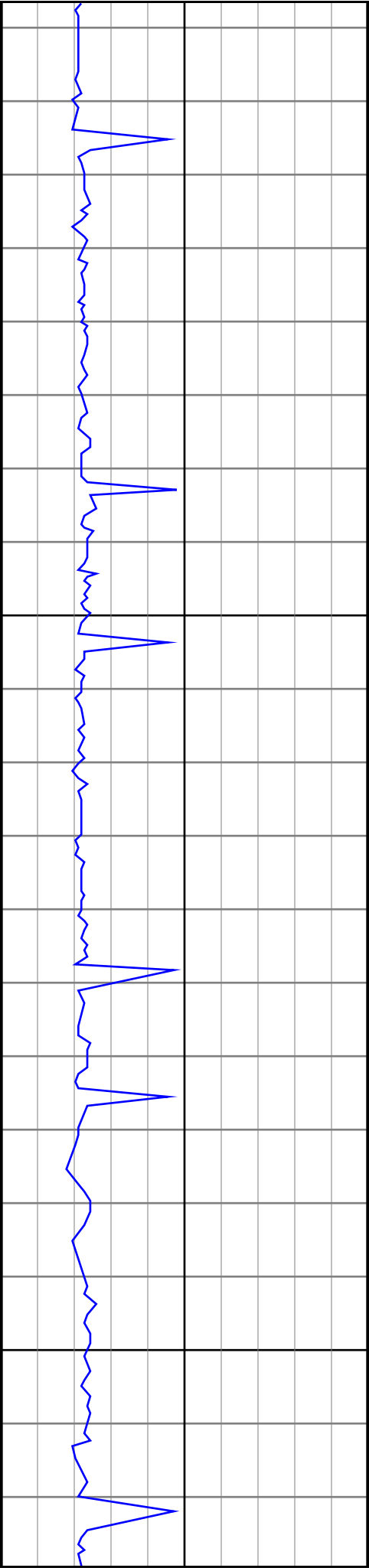
6200



#60 MD(6036.00) Inc(12.5) Azm(272.4) TVD(5959.41)  
VS(192.40) NS(6.03) EW(-764.16)

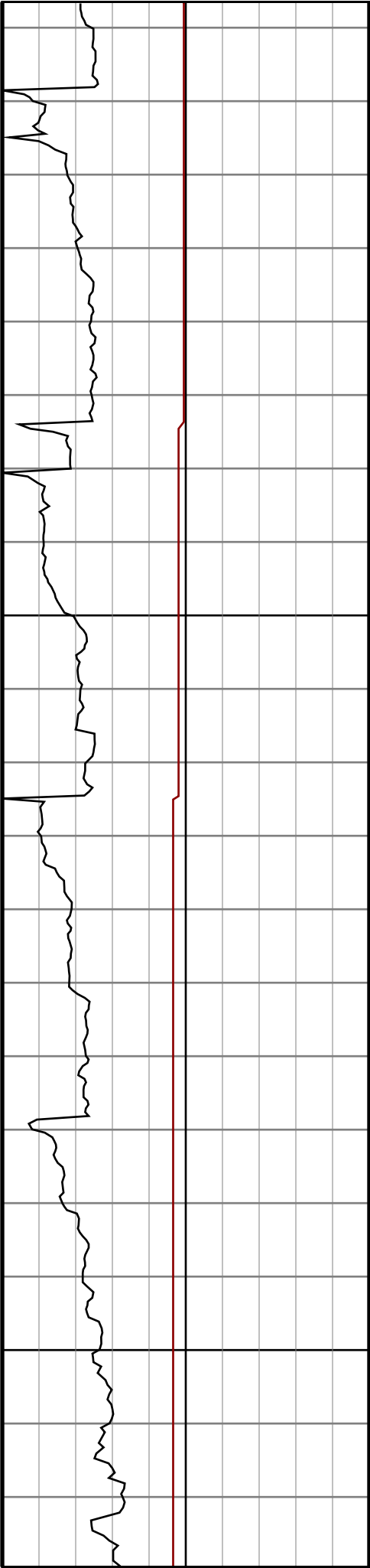
#61 MD(6126.00) Inc(14.1) Azm(272.0) TVD(6047.00)  
VS(198.21) NS(6.82) EW(-784.85)

#62 MD(6174.00) Inc(14.4) Azm(274.6) TVD(6093.52)  
VS(201.76) NS(7.50) EW(-796.64)



6300

6400



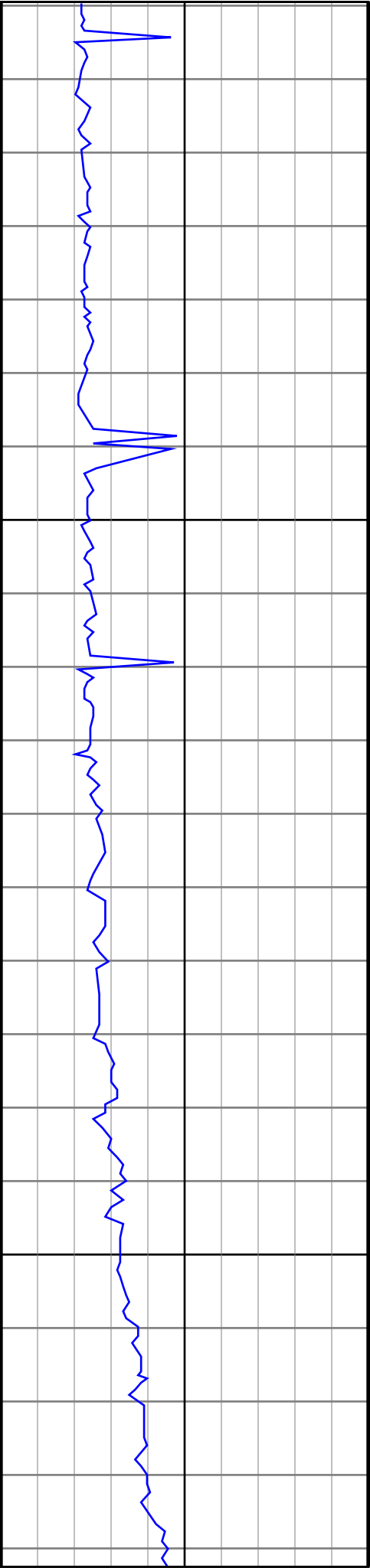
#63 MD(6221.00) Inc(17.9) Azm(286.5) TVD(6138.67)  
VS(207.32) NS(10.03) EW(-809.40)

#64 MD(6269.00) Inc(21.2) Azm(294.3) TVD(6183.91)  
VS(216.47) NS(15.69) EW(-824.39)

#65 MD(6316.00) Inc(23.7) Azm(299.6) TVD(6227.34)  
VS(228.29) NS(23.86) EW(-840.35)

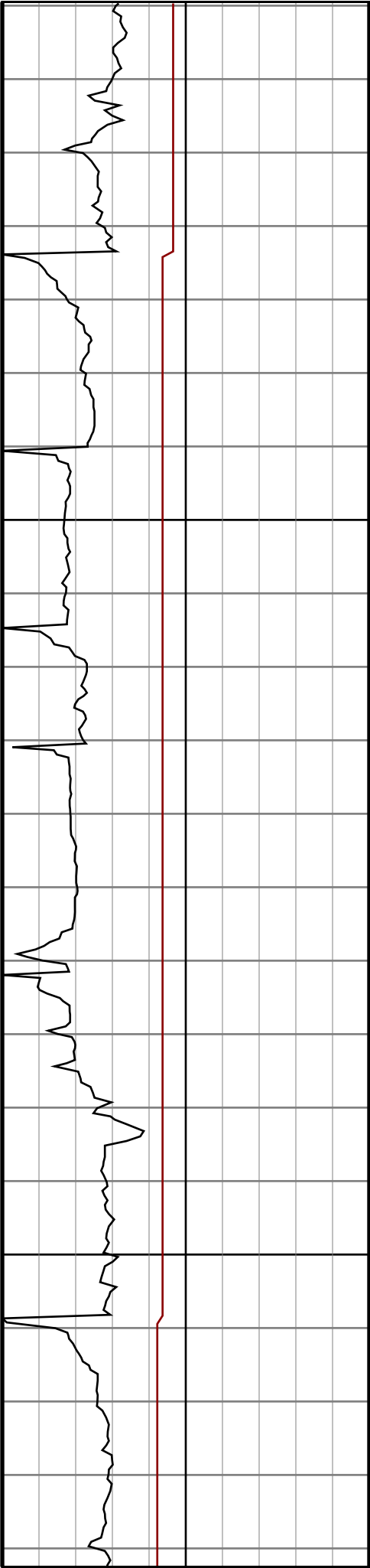
#66 MD(6364.00) Inc(29.4) Azm(305.1) TVD(6270.27)  
VS(243.89) NS(35.41) EW(-858.40)

#67 MD(6412.00) Inc(34.9) Azm(311.2) TVD(6310.91)  
VS(264.13) NS(51.25) EW(-878.39)



6500

6600

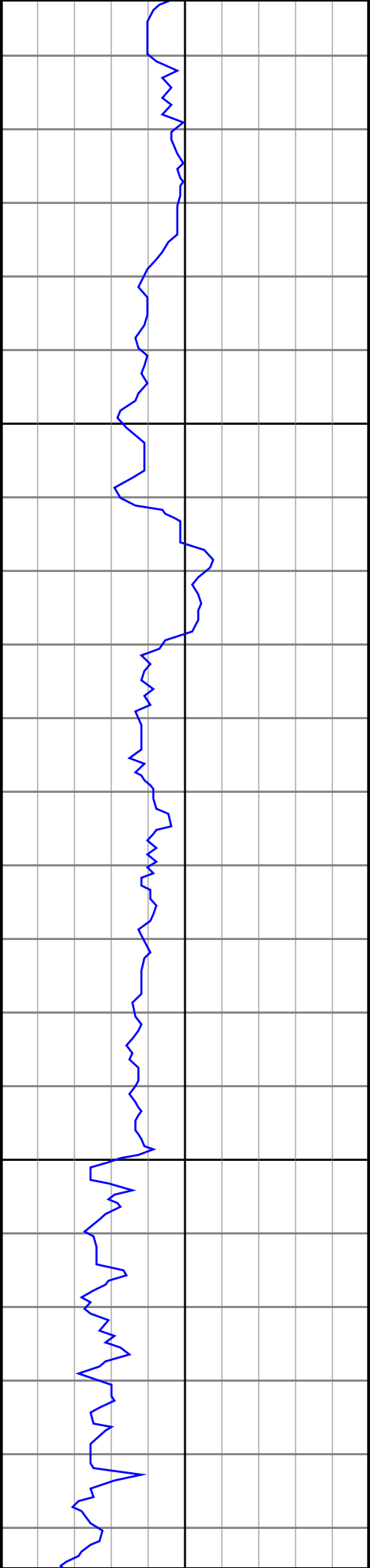


#68 MD(6459.00) Inc(40.5) Azm(320.0) TVD(6348.11)  
VS(288.96) NS(71.83) EW(-898.35)

#69 MD(6507.00) Inc(42.2) Azm(321.6) TVD(6384.14)  
VS(317.68) NS(96.40) EW(-918.38)

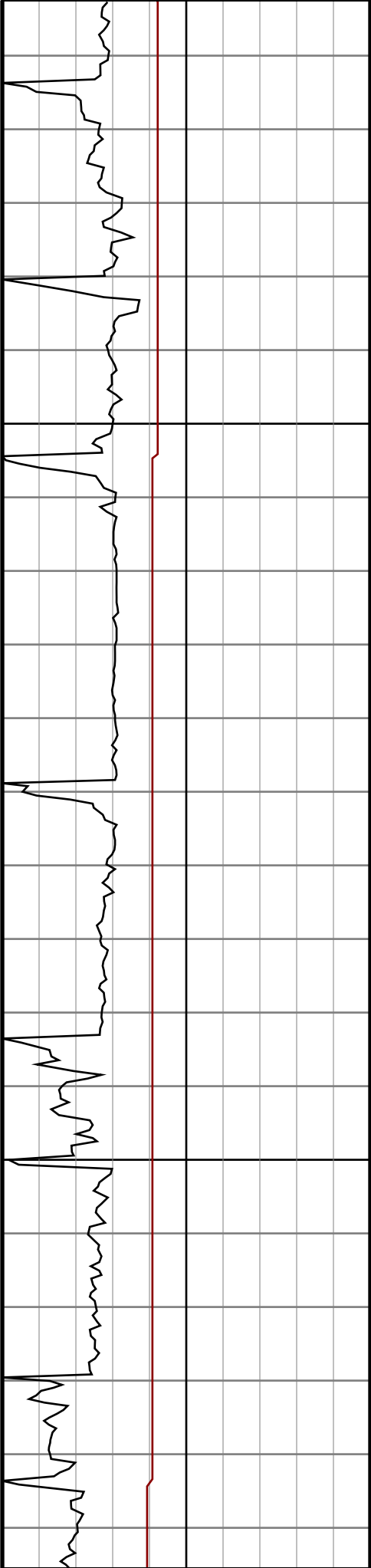
#70 MD(6554.00) Inc(43.6) Azm(322.2) TVD(6418.57)  
VS(346.92) NS(121.58) EW(-938.12)

#71 MD(6602.00) Inc(49.0) Azm(325.3) TVD(6451.72)  
VS(379.06) NS(149.57) EW(-958.59)



6700

6800



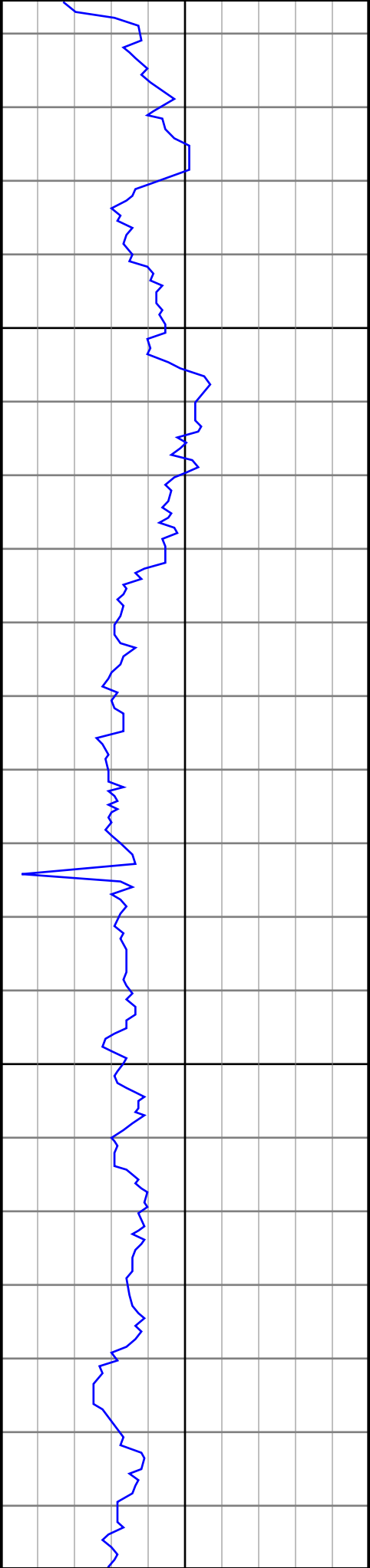
#72 MD(6650.00) Inc(57.9) Azm(327.9) TVD(6480.28)  
VS(415.44) NS(181.76) EW(-979.75)

#73 MD(6697.00) Inc(62.0) Azm(329.8) TVD(6503.81)  
VS(454.33) NS(216.57) EW(-1000.78)

#74 MD(6745.00) Inc(62.3) Azm(329.8) TVD(6526.24)  
VS(495.11) NS(253.25) EW(-1022.13)

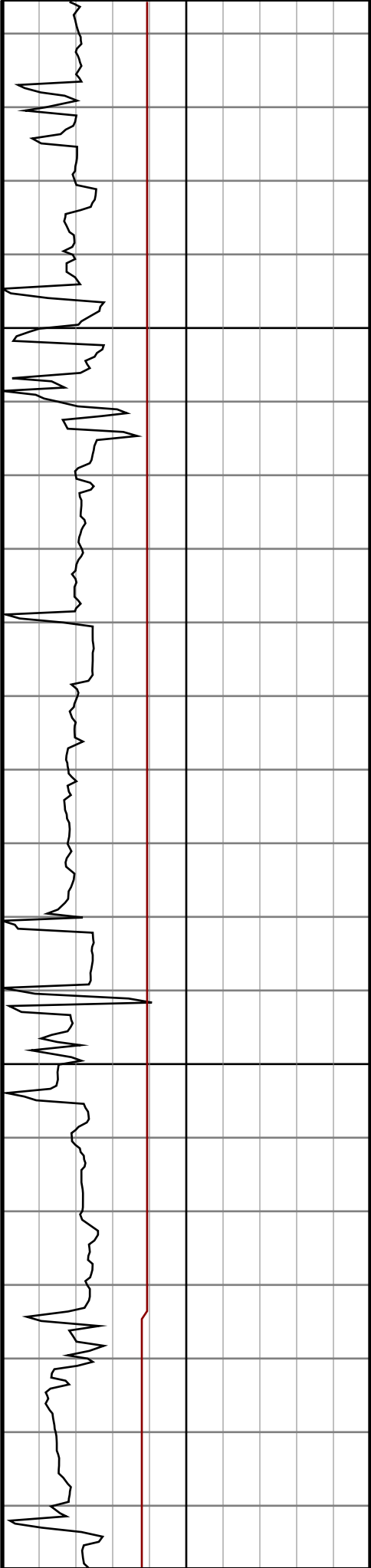
#75 MD(6792.00) Inc(62.9) Azm(331.2) TVD(6547.87)  
VS(535.35) NS(289.57) EW(-1042.67)

#76 MD(6840.00) Inc(63.6) Azm(334.8) TVD(6569.48)  
VS(577.12) NS(327.75) EW(-1062.12)



6900

7000

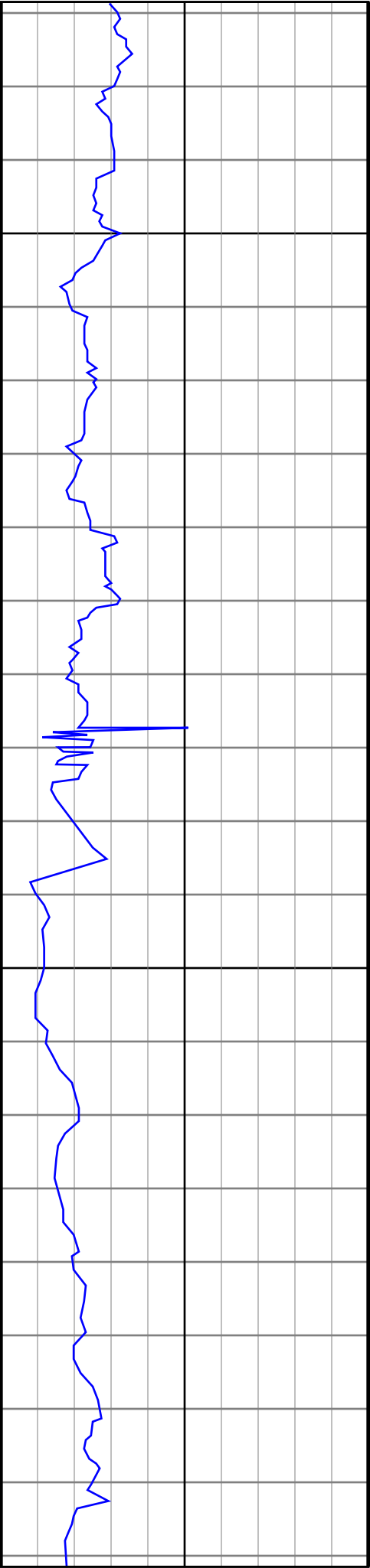


#77 MD(6887.00) Inc(65.0) Azm(338.3) TVD(6589.86)  
VS(618.91) NS(366.60) EW(-1078.97)

#78 MD(6935.00) Inc(68.7) Azm(343.8) TVD(6608.74)  
VS(662.86) NS(408.32) EW(-1093.26)

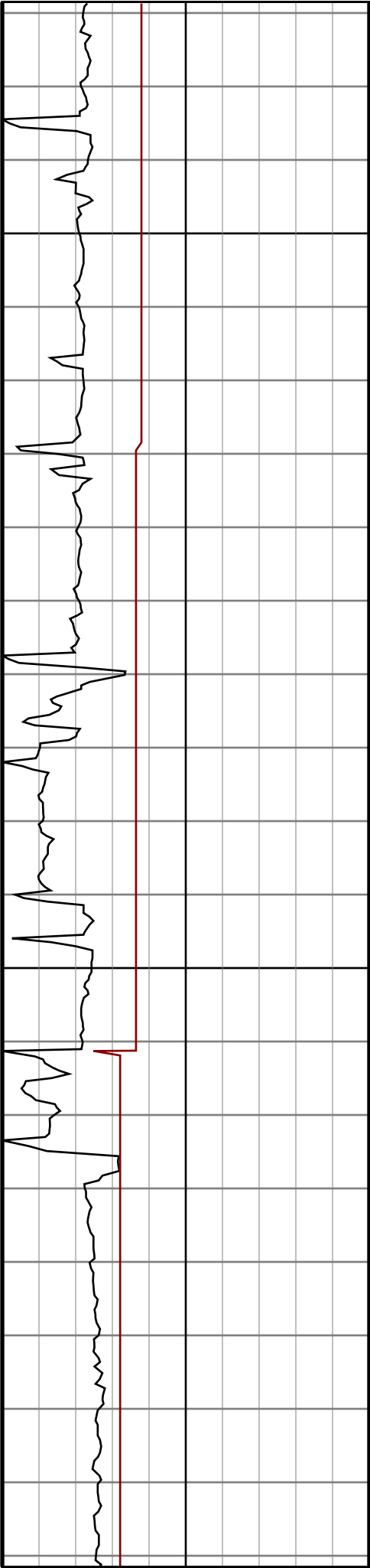
#79 MD(6983.00) Inc(74.1) Azm(348.4) TVD(6624.06)  
VS(708.32) NS(452.46) EW(-1104.15)

#80 MD(7030.00) Inc(76.2) Azm(352.4) TVD(6636.10)  
VS(753.59) NS(497.24) EW(-1111.72)



7100

7200

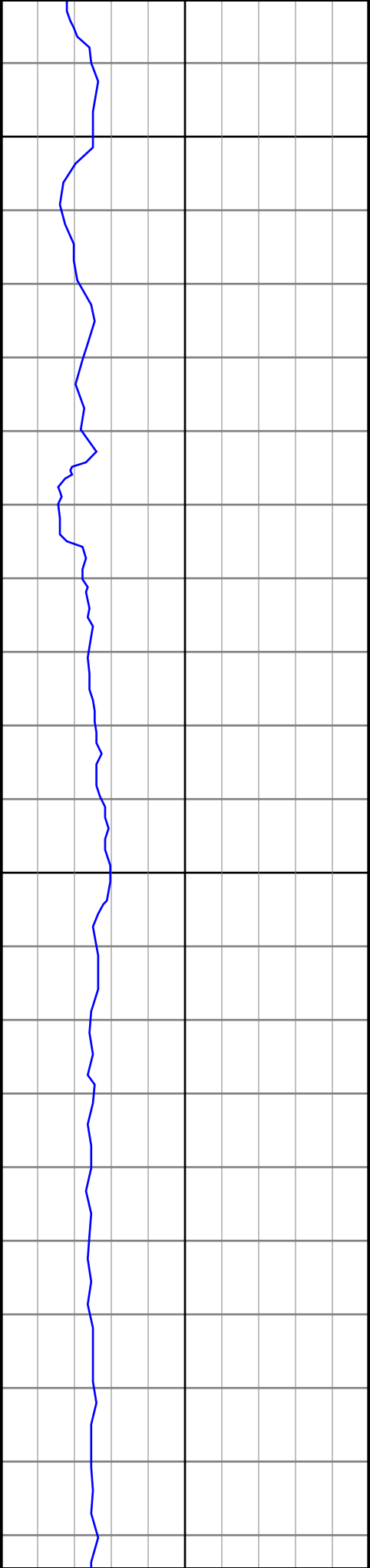


#81 MD(7078.00) Inc(77.8) Azm(356.2) TVD(6646.91)  
VS(799.85) NS(543.77) EW(-1116.36)

#82 MD(7125.00) Inc(79.1) Azm(355.5) TVD(6656.32)  
VS(845.20) NS(589.70) EW(-1119.69)

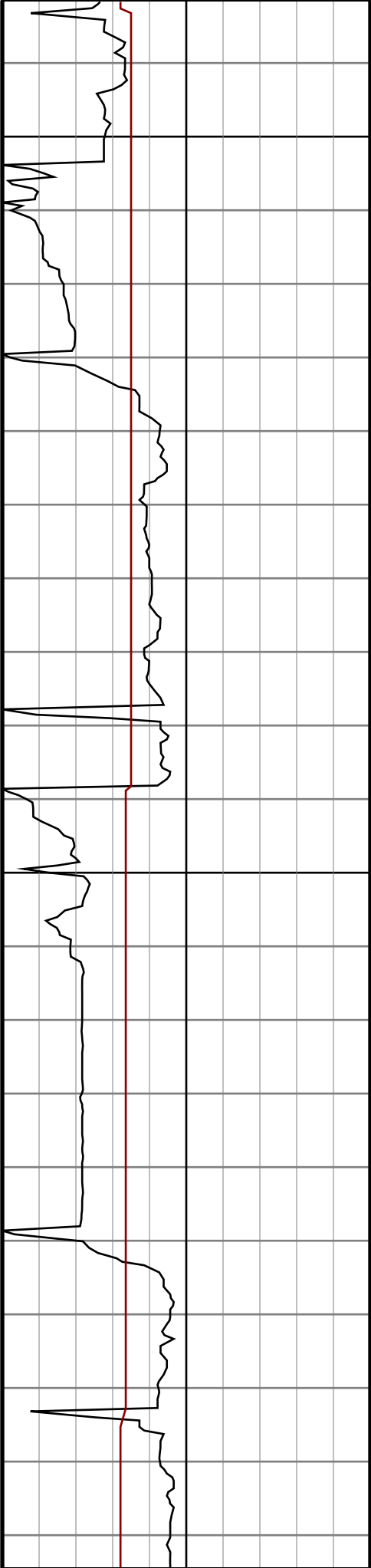
#83 MD(7157.00) Inc(81.0) Azm(355.5) TVD(6661.85)  
VS(876.27) NS(621.12) EW(-1122.17)

#84 MD(7223.00) Inc(83.6) Azm(357.6) TVD(6670.69)  
VS(940.53) NS(686.39) EW(-1126.10)



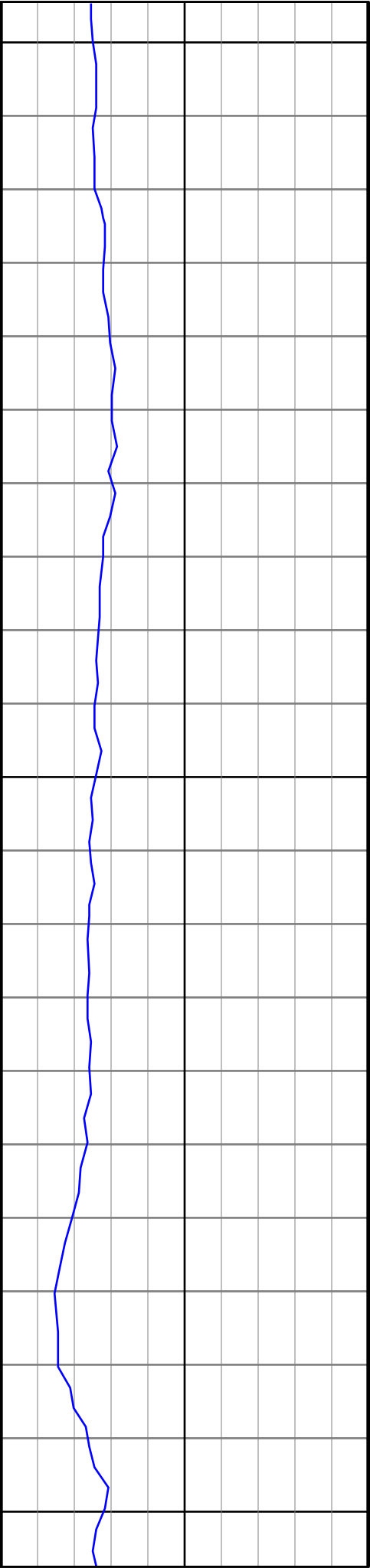
7300

7400



#85 MD(7318.00) Inc(84.1) Azm(359.7) TVD(6680.87)  
VS(1032.64) NS(780.81) EW(-1128.32)

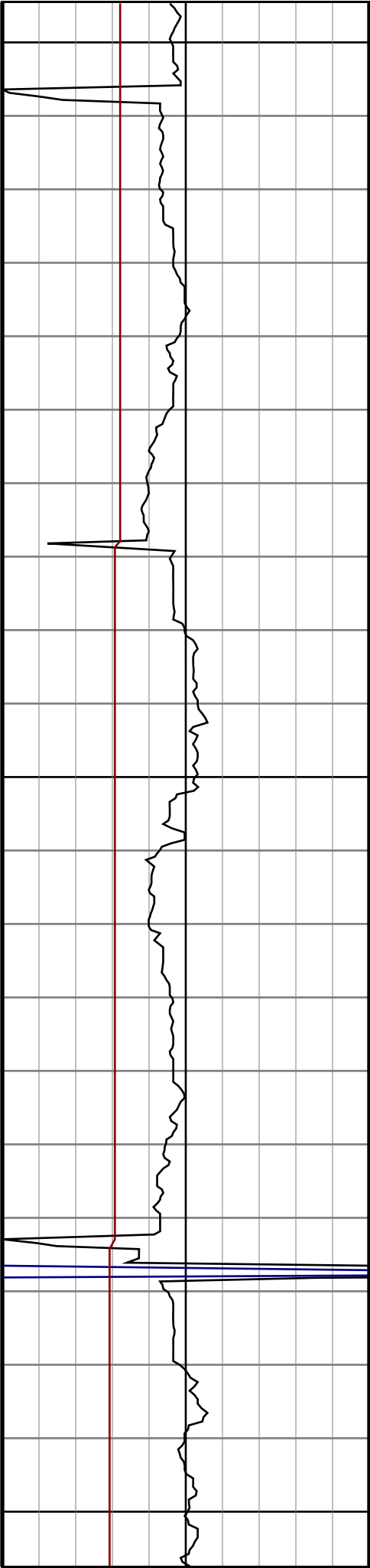
#86 MD(7413.00) Inc(86.7) Azm(1.1) TVD(6688.49)  
VS(1124.29) NS(875.50) EW(-1127.66)



7500

7600

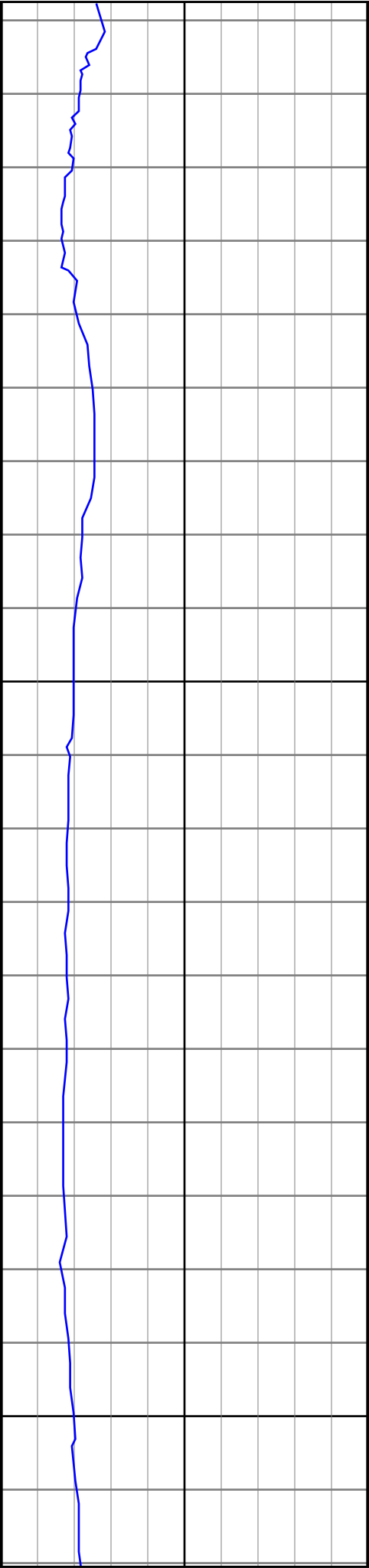
7700



#87 MD(7509.00) Inc(91.0) Azm(1.7) TVD(6690.41)  
VS(1216.75) NS(971.42) EW(-1125.31)

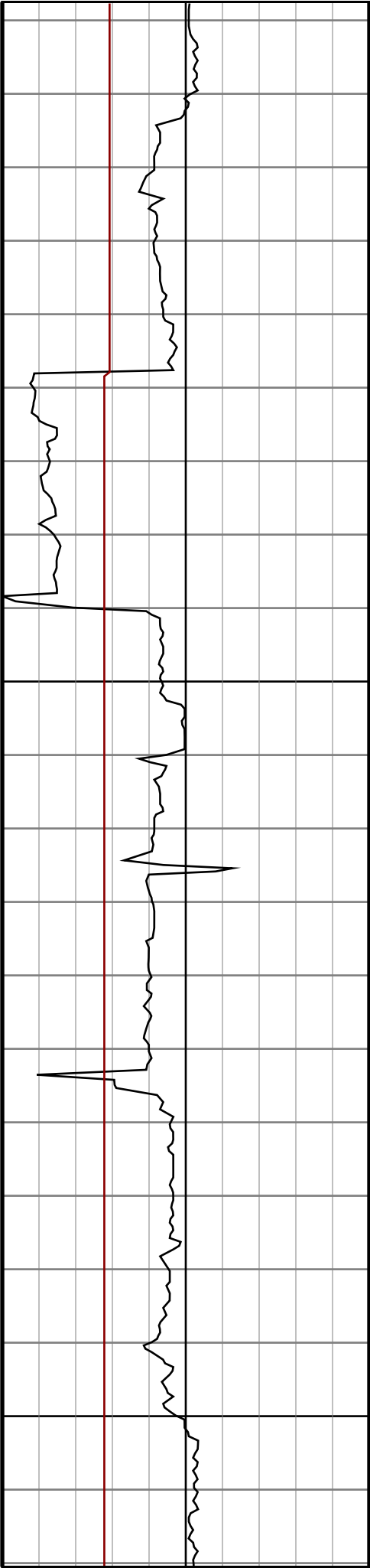
#88 MD(7604.00) Inc(91.0) Azm(359.4) TVD(6688.75)  
VS(1308.63) NS(1066.40) EW(-1124.40)

#89 MD(7699.00) Inc(91.8) Azm(0.1) TVD(6686.43)  
VS(1400.82) NS(1161.37) EW(-1124.82)



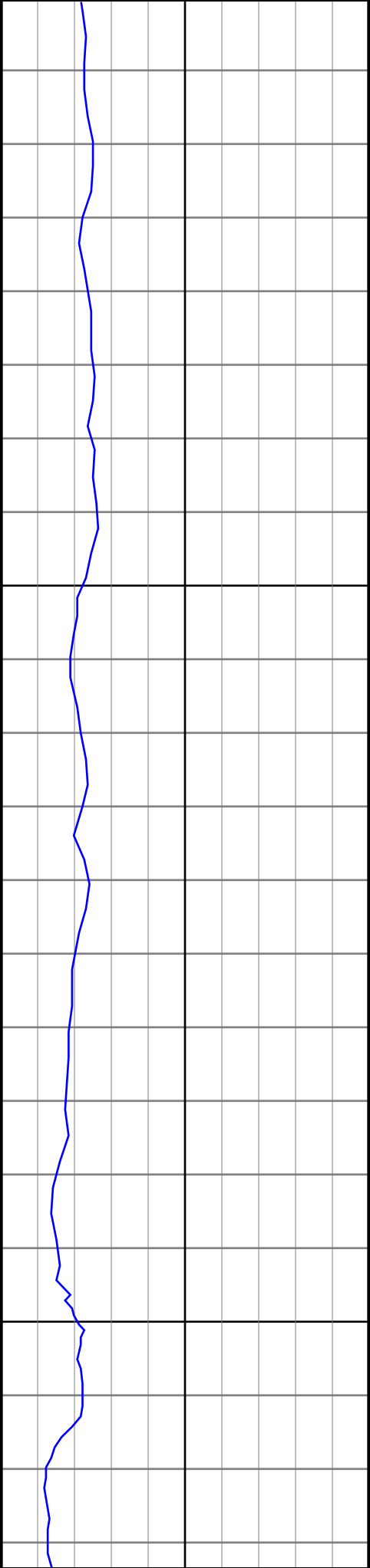
7800

7900



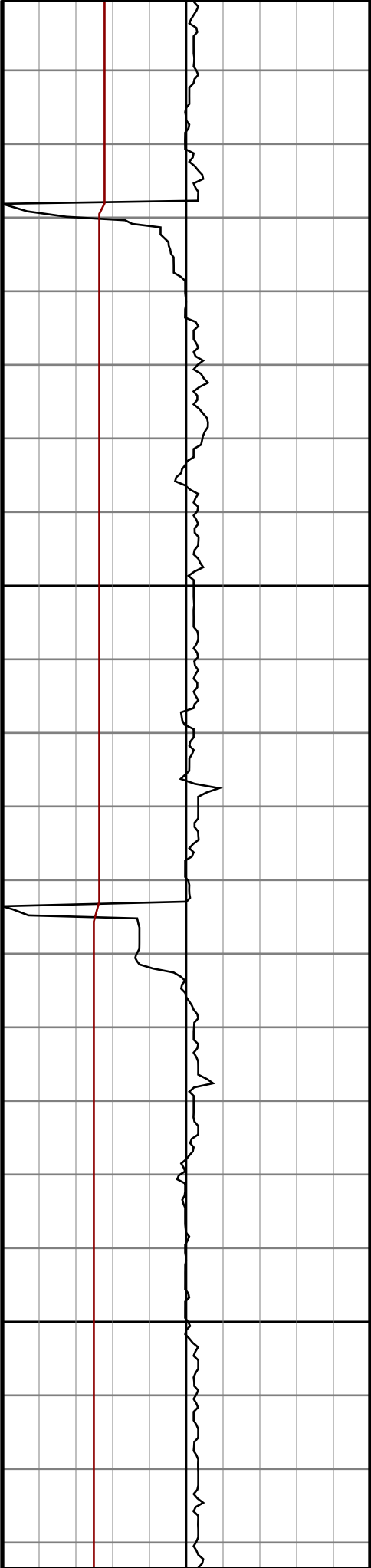
#90 MD(7794.00) Inc(89.9) Azm(0.3) TVD(6685.02)  
VS(1492.85) NS(1256.35) EW(-1124.48)

#91 MD(7889.00) Inc(90.3) Azm(359.9) TVD(6684.86)  
VS(1584.94) NS(1351.35) EW(-1124.32)



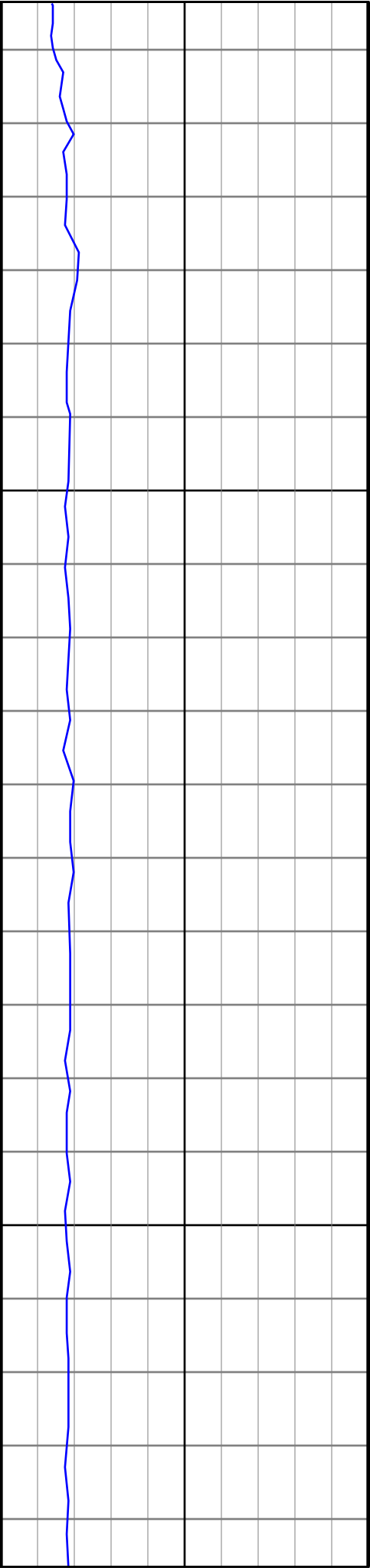
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8100



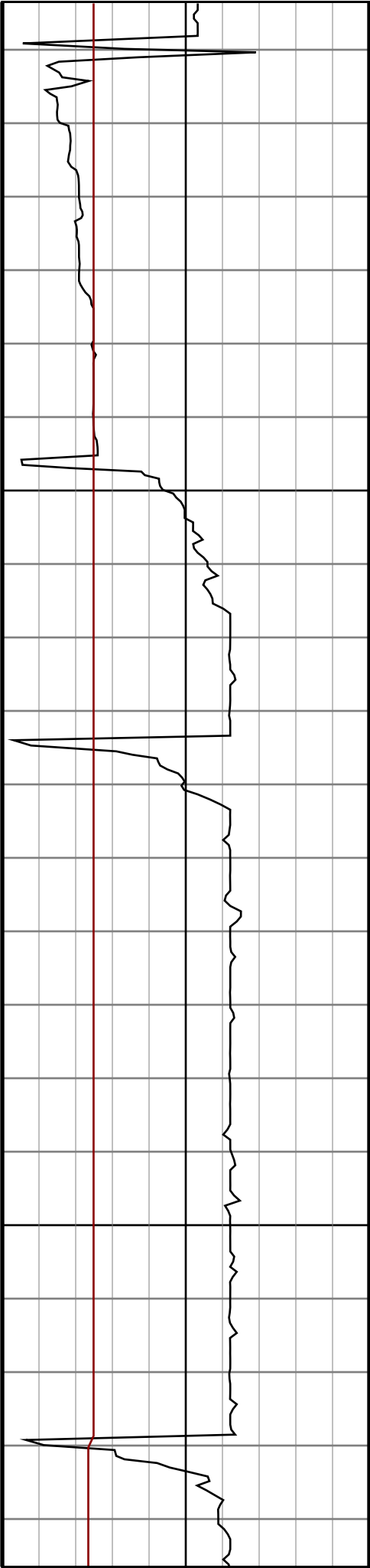
#92 MD(7985.00) Inc(91.0) Azm(0.6) TVD(6683.77)  
VS(1677.92) NS(1447.34) EW(-1123.90)

#93 MD(8080.00) Inc(92.2) Azm(359.4) TVD(6681.12)  
VS(1770.01) NS(1542.30) EW(-1123.90)



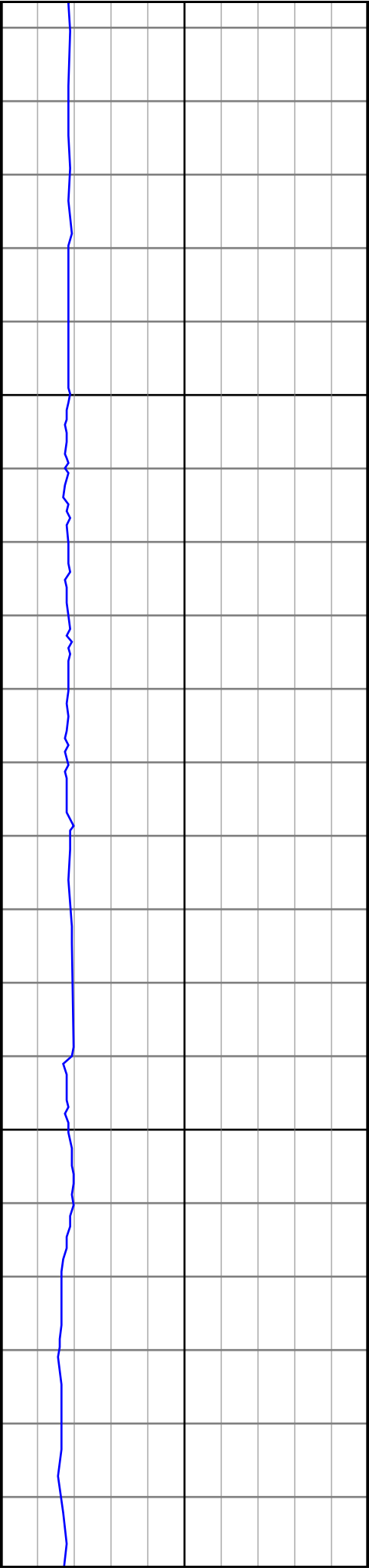
8200

8300



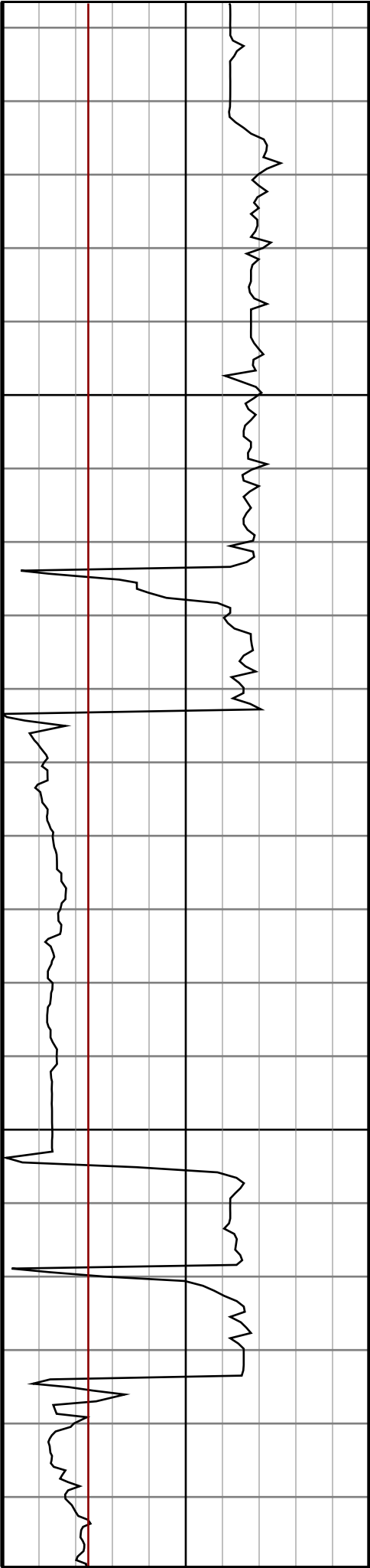
#94 MD(8175.00) Inc(90.4) Azm(0.8) TVD(6678.96)  
VS(1862.06) NS(1637.27) EW(-1123.73)

#95 MD(8270.00) Inc(89.0) Azm(2.2) TVD(6679.46)  
VS(1953.55) NS(1732.23) EW(-1121.25)



8400

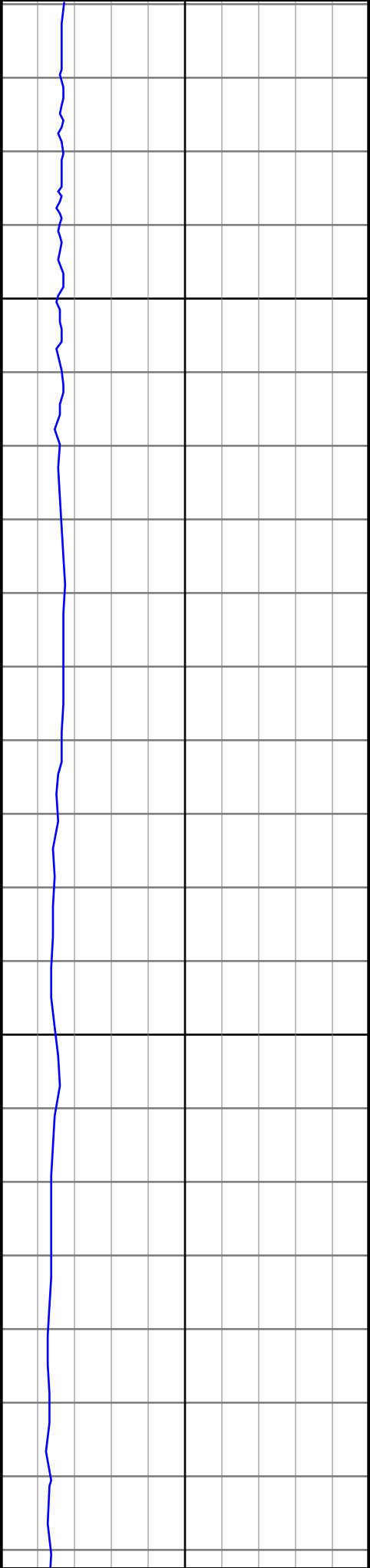
8500



#96 MD(8365.00) Inc(89.4) Azm(5.7) TVD(6680.79)  
VS(2043.83) NS(1826.98) EW(-1114.70)

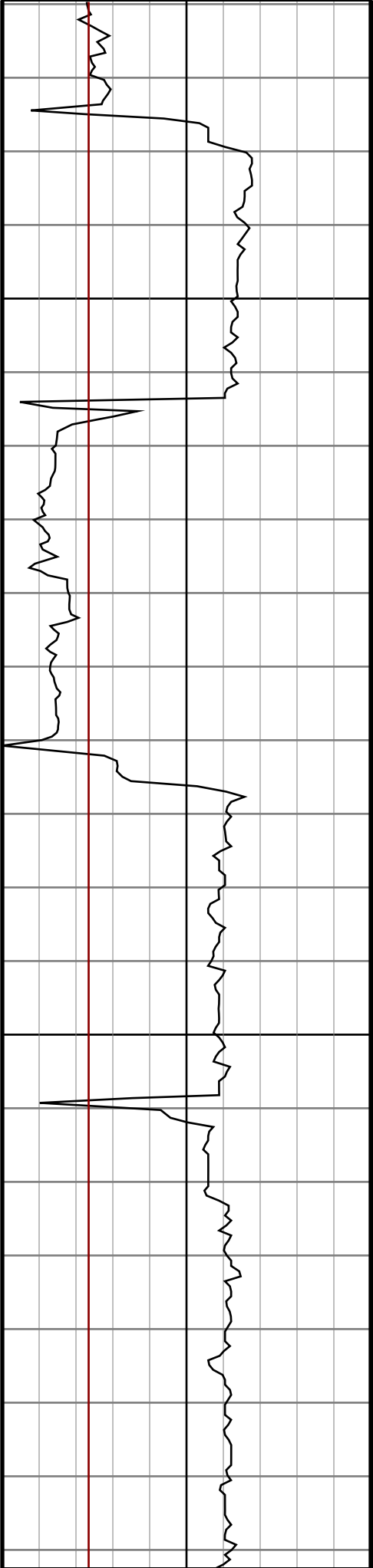
#97 MD(8460.00) Inc(89.4) Azm(7.7) TVD(6681.78)  
VS(2132.61) NS(1921.33) EW(-1103.62)

#98 MD(8556.00) Inc(89.9) Azm(2.2) TVD(6682.37)  
VS(2223.30) NS(2016.93) EW(-1095.34)



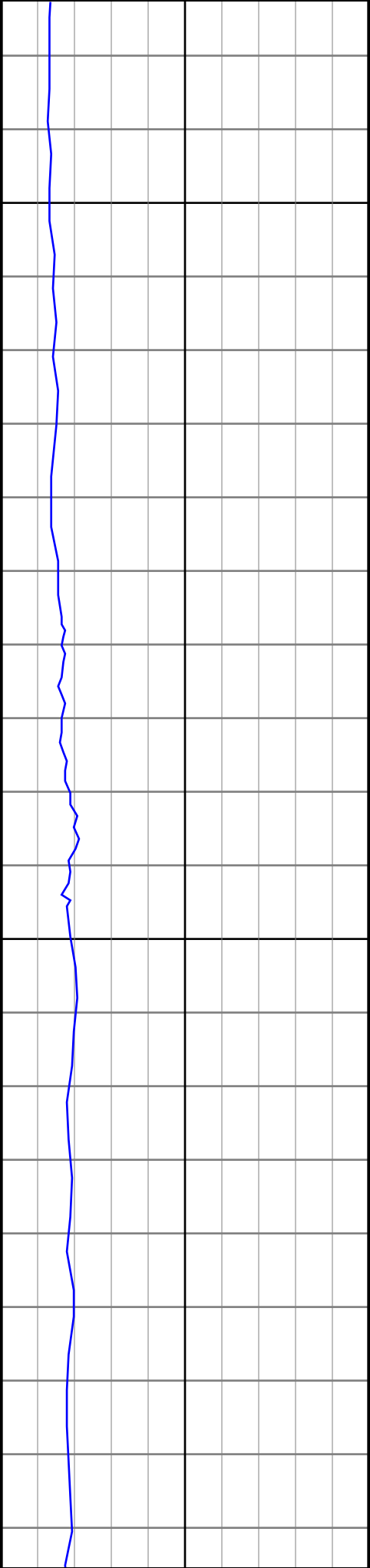
8600

8700



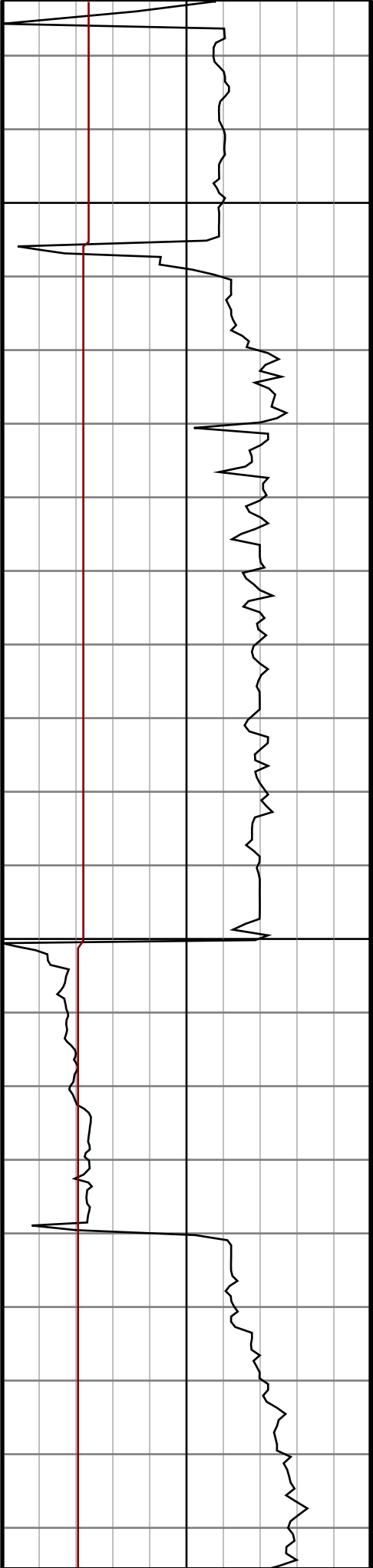
#99 MD(8651.00) Inc(89.0) Azm(356.9) TVD(6683.28)  
VS(2315.57) NS(2111.89) EW(-1096.09)

#100 MD(8746.00) Inc(89.4) Azm(355.9) TVD(6684.61)  
VS(2408.96) NS(2206.69) EW(-1102.05)



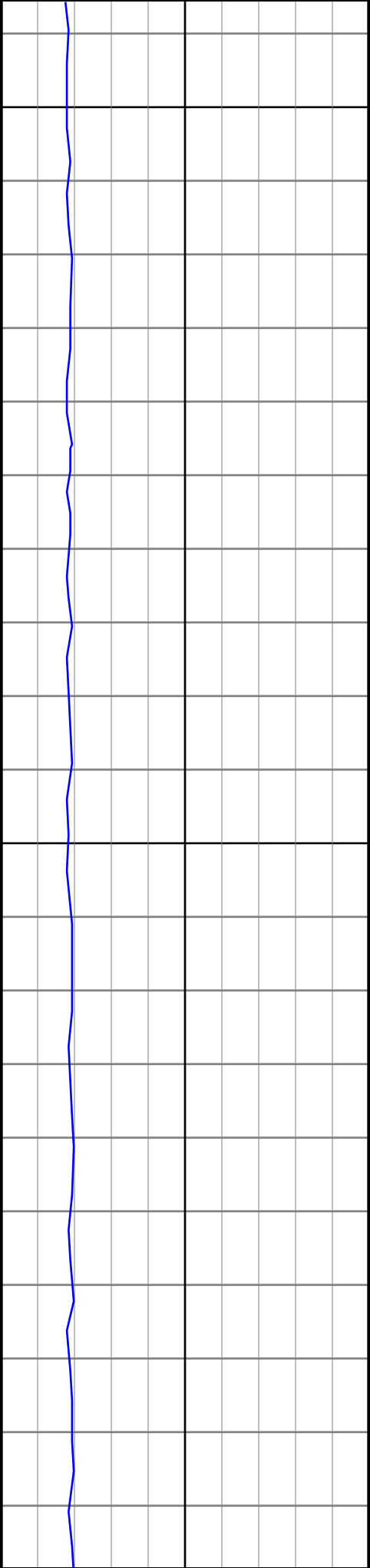
8800

8900



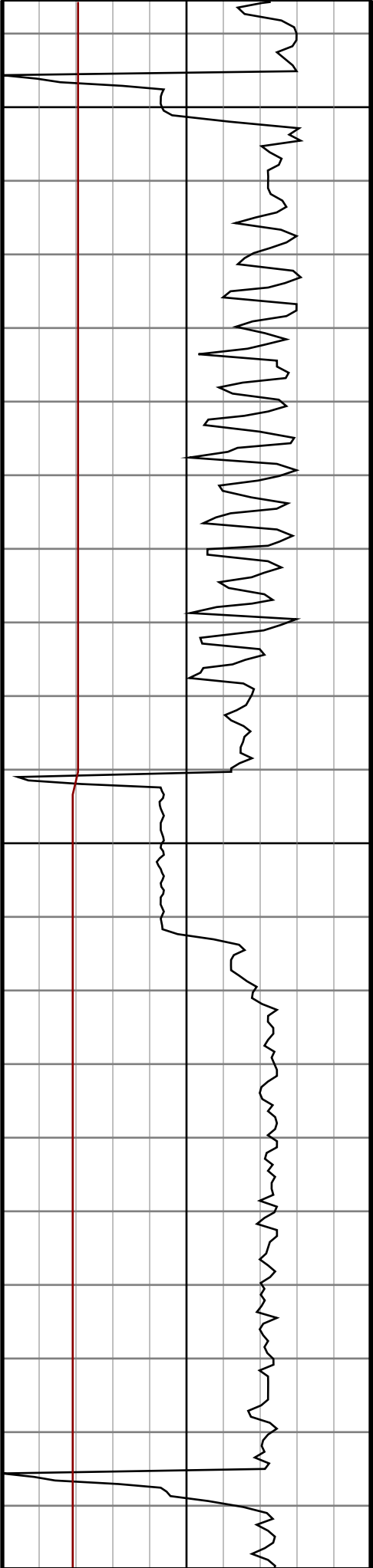
#101 MD(8841.00) Inc(90.1) Azm(353.8) TVD(6685.02)  
VS(2502.79) NS(2301.30) EW(-1110.58)

#102 MD(8937.00) Inc(89.7) Azm(356.6) TVD(6685.19)  
VS(2597.51) NS(2396.95) EW(-1118.61)



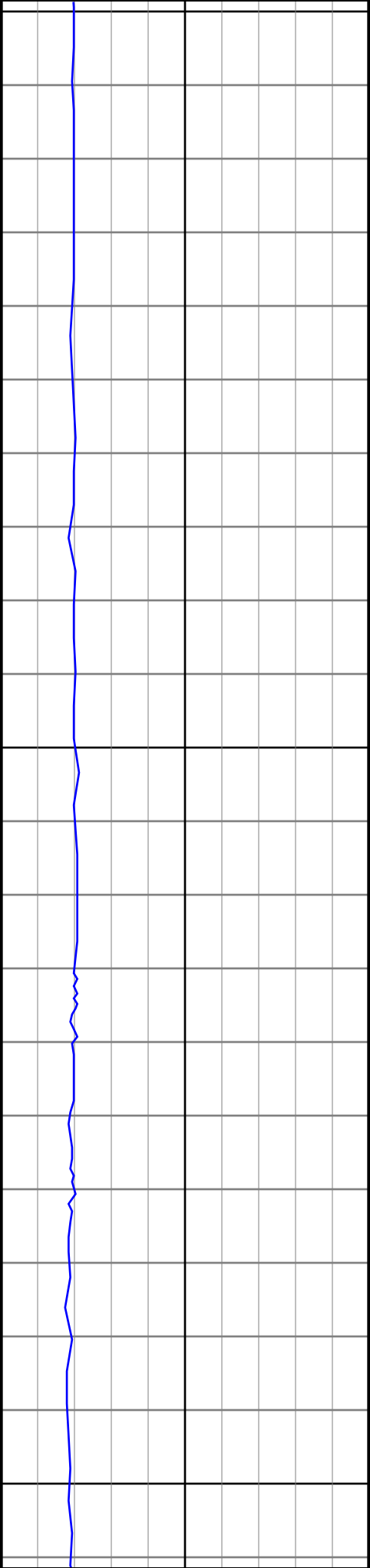
9000

9100



#103 MD(9032.00) Inc(89.6) Azm(358.2) TVD(6685.77)  
VS(2690.59) NS(2491.85) EW(-1122.92)

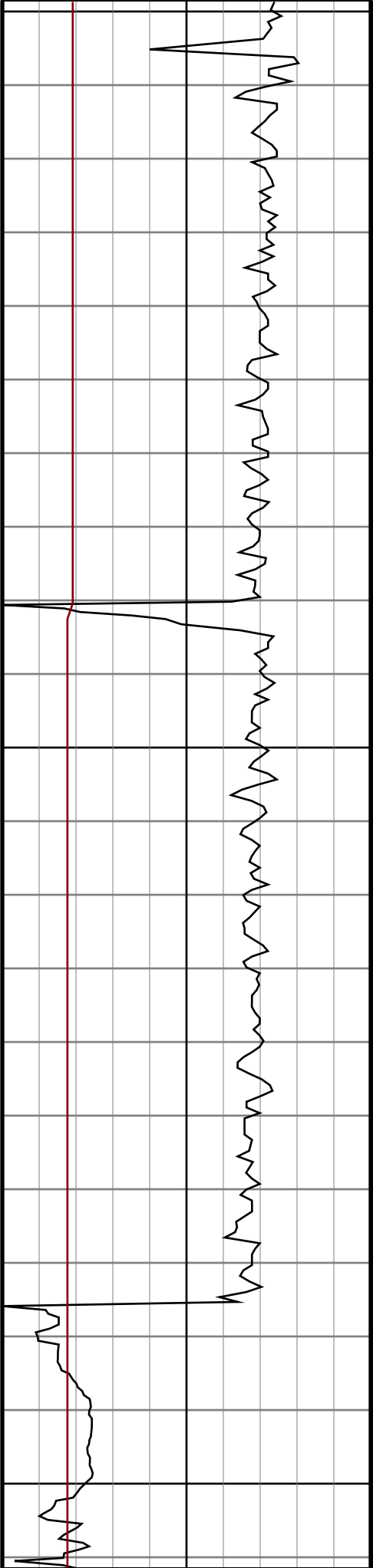
#104 MD(9127.00) Inc(89.6) Azm(1.0) TVD(6686.43)  
VS(2782.86) NS(2586.83) EW(-1123.58)



9200

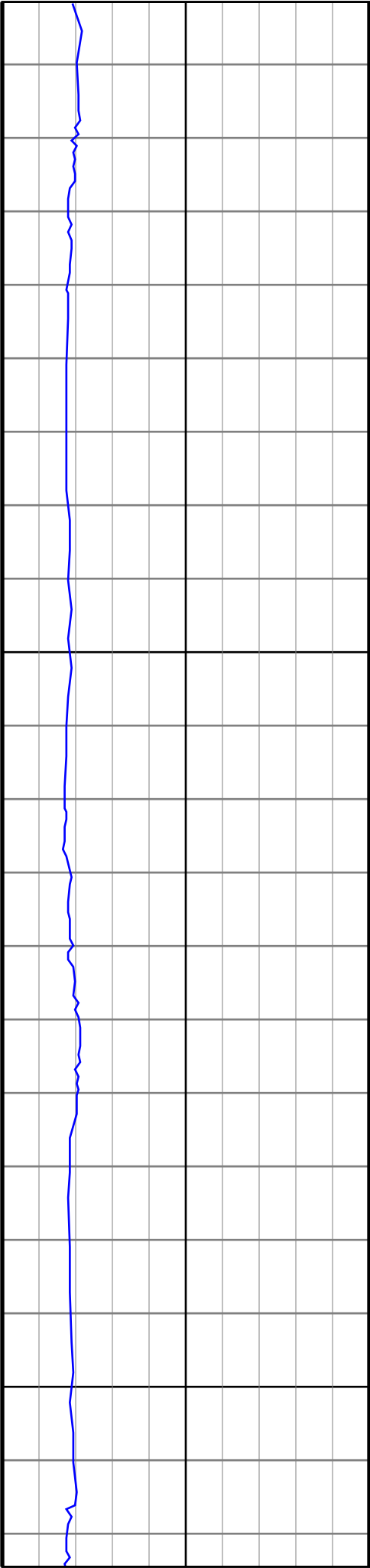
9300

9400



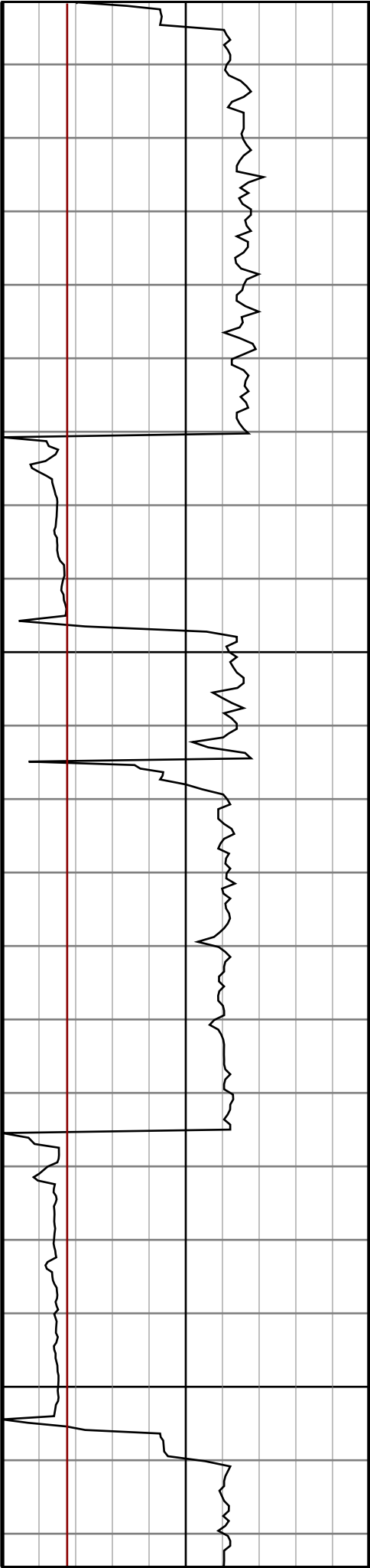
#105 MD(9222.00) Inc(89.4) Azm(1.1) TVD(6687.26)  
VS(2874.54) NS(2681.82) EW(-1121.84)

#106 MD(9317.00) Inc(89.6) Azm(4.8) TVD(6688.09)  
VS(2965.33) NS(2776.67) EW(-1116.95)



9500

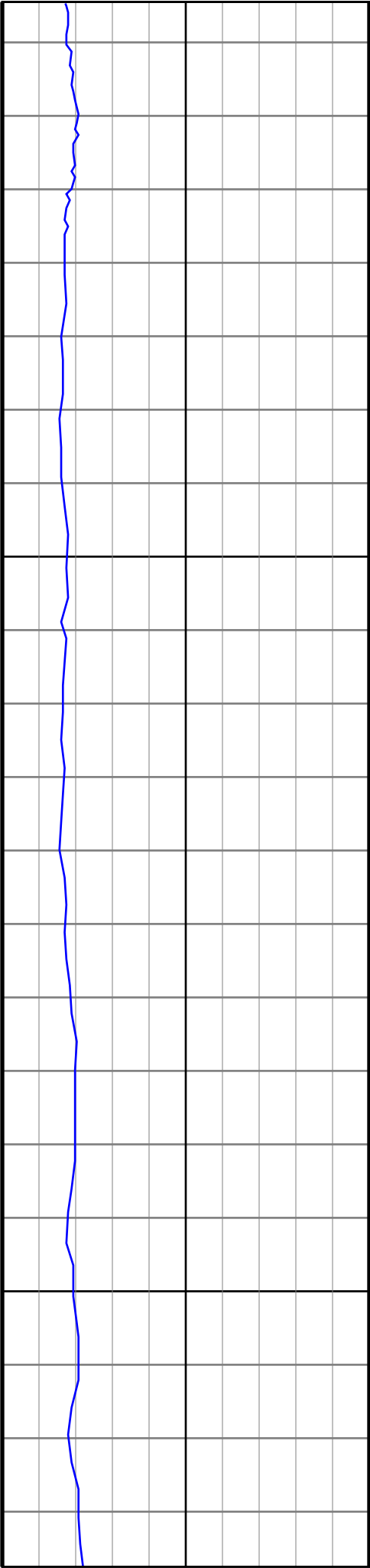
9600



#107 MD(9412.00) Inc(89.0) Azm(5.2) TVD(6689.25)  
VS(3055.08) NS(2871.30) EW(-1108.68)

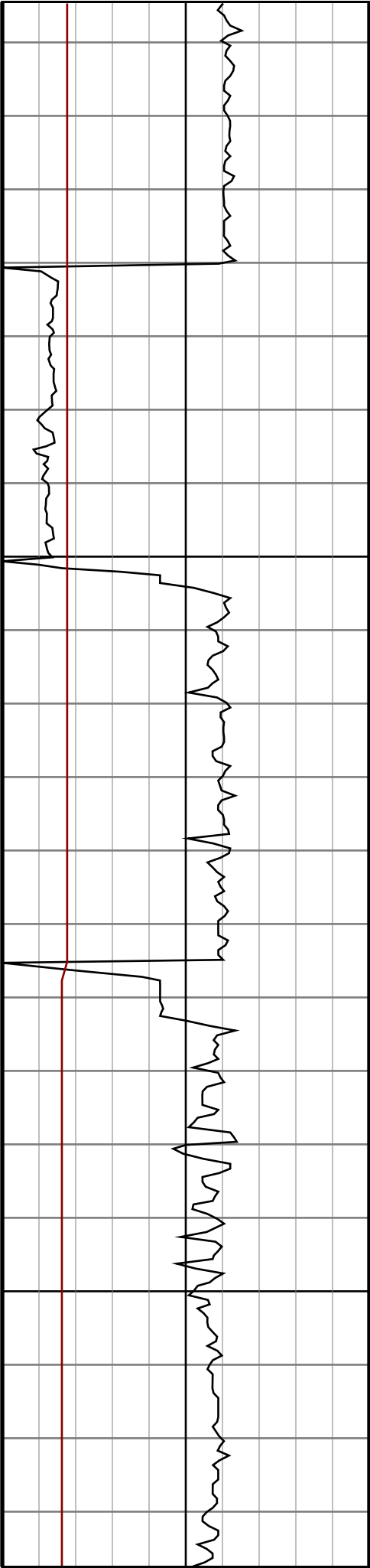
#108 MD(9508.00) Inc(89.9) Azm(2.2) TVD(6690.17)  
VS(3146.45) NS(2967.08) EW(-1102.48)

#109 MD(9603.00) Inc(88.5) Azm(359.9) TVD(6691.50)  
VS(3238.12) NS(3062.05) EW(-1100.74)



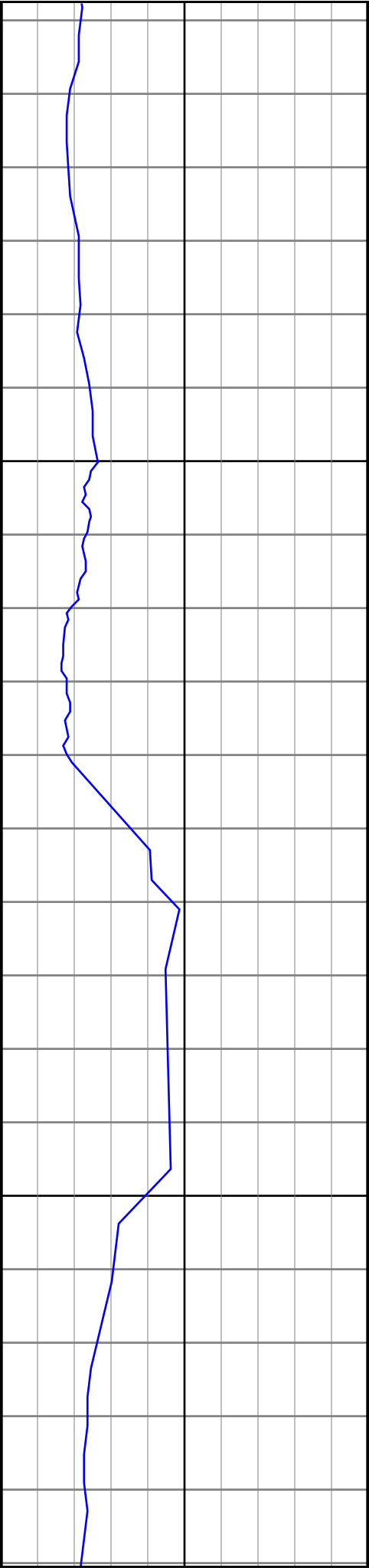
9700

9800



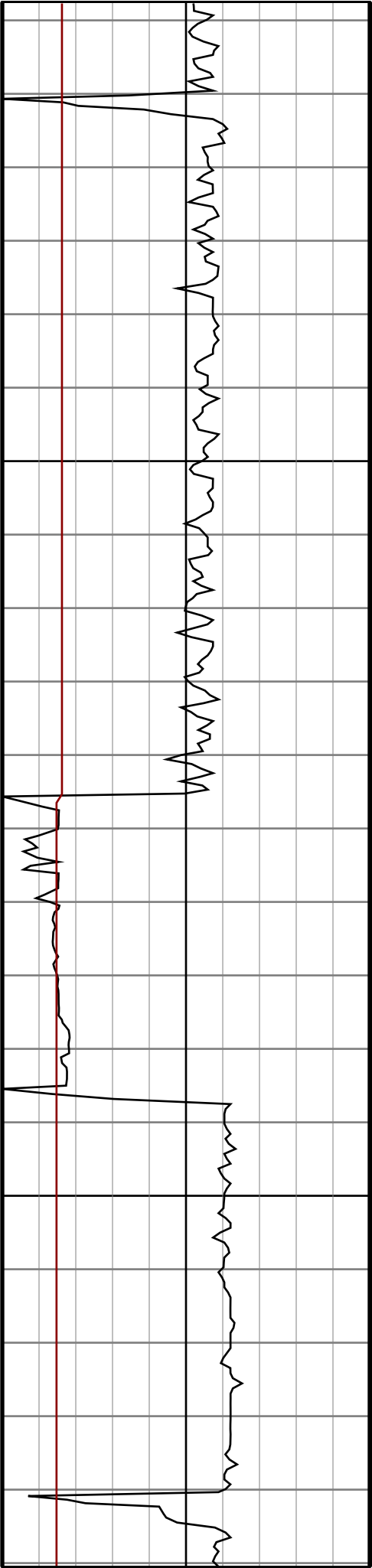
#110 MD(9698.00) Inc(89.2) Azm(355.9) TVD(6693.41)  
VS(3331.00) NS(3156.95) EW(-1104.22)

#111 MD(9793.00) Inc(91.0) Azm(353.8) TVD(6693.24)  
VS(3424.82) NS(3251.55) EW(-1112.75)



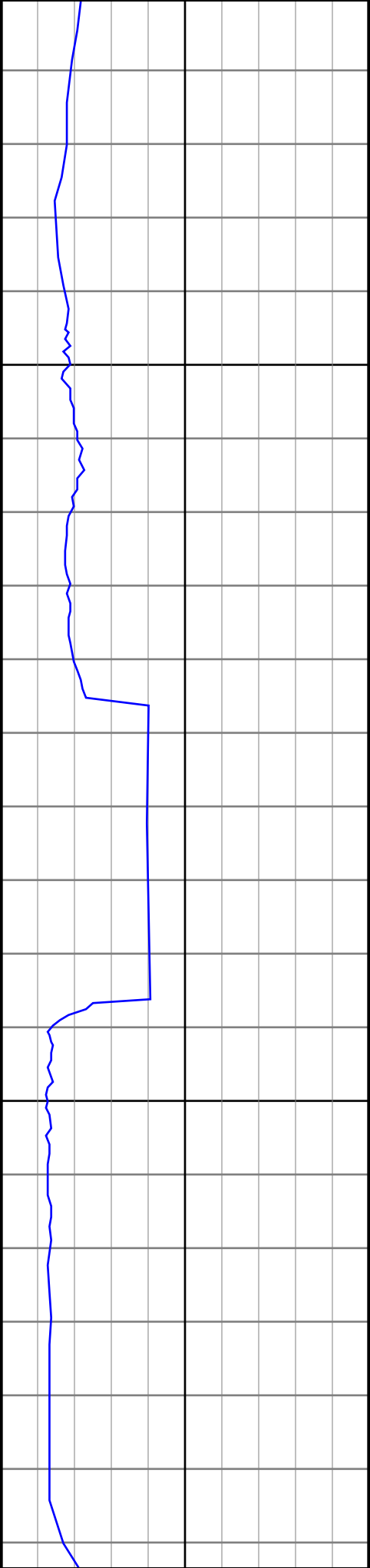
9900

10000



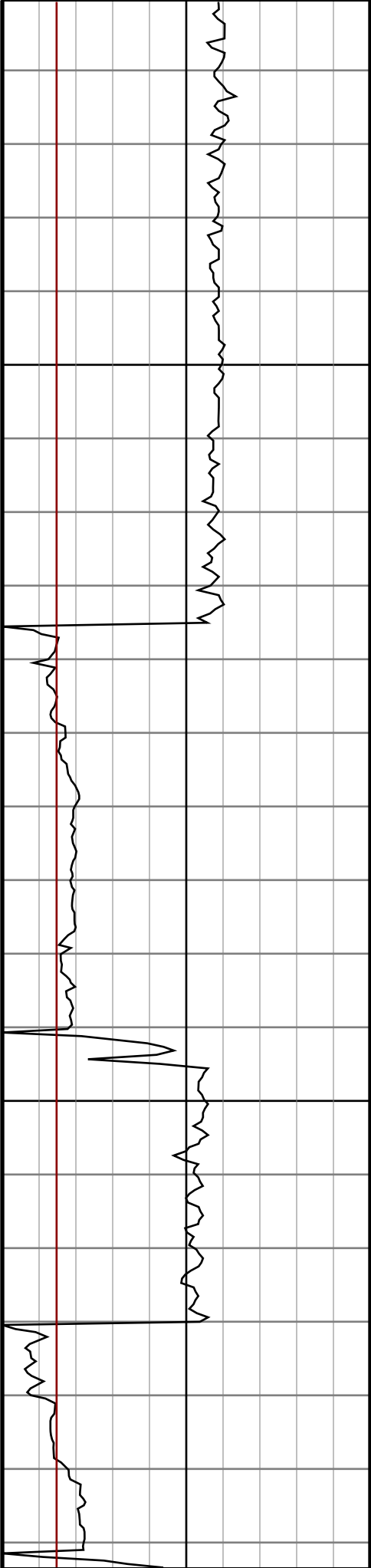
#112 MD(9888.00) Inc(91.8) Azm(353.8) TVD(6690.92)  
VS(3518.89) NS(3345.97) EW(-1123.00)

#113 MD(9984.00) Inc(91.1) Azm(355.2) TVD(6688.49)  
VS(3613.77) NS(3441.49) EW(-1132.20)



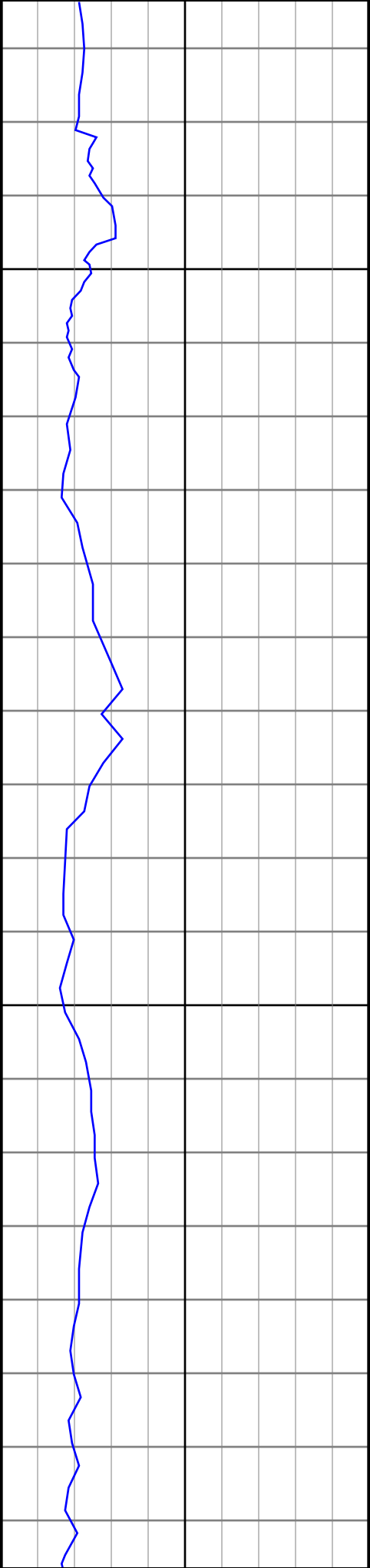
10100

10200



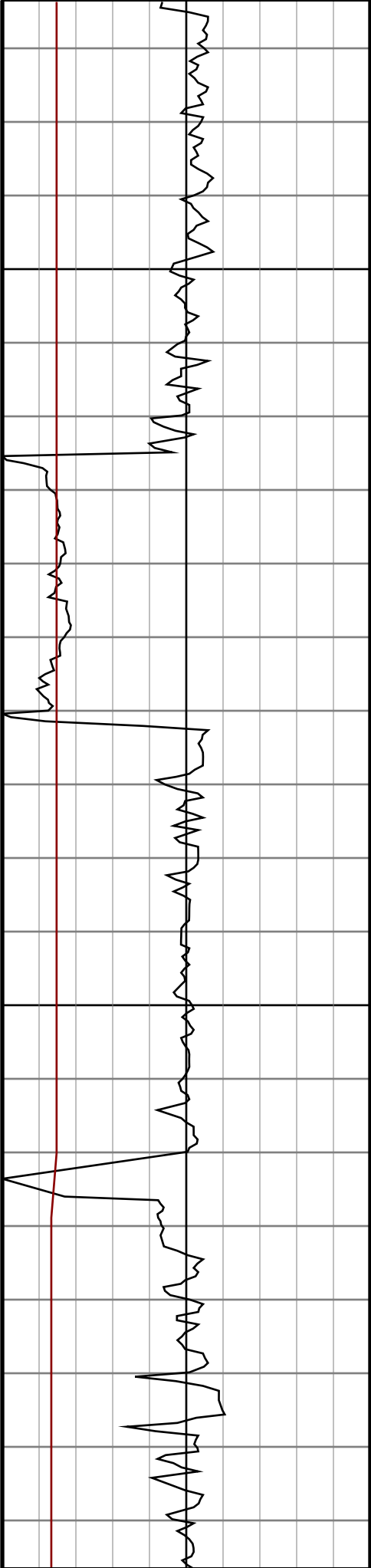
#114 MD(10079.00) Inc(91.1) Azm(352.7) TVD(6686.67)  
VS(3707.80) NS(3535.94) EW(-1142.21)

#115 MD(10174.00) Inc(90.1) Azm(356.4) TVD(6685.67)  
VS(3801.69) NS(3630.49) EW(-1151.23)



10300

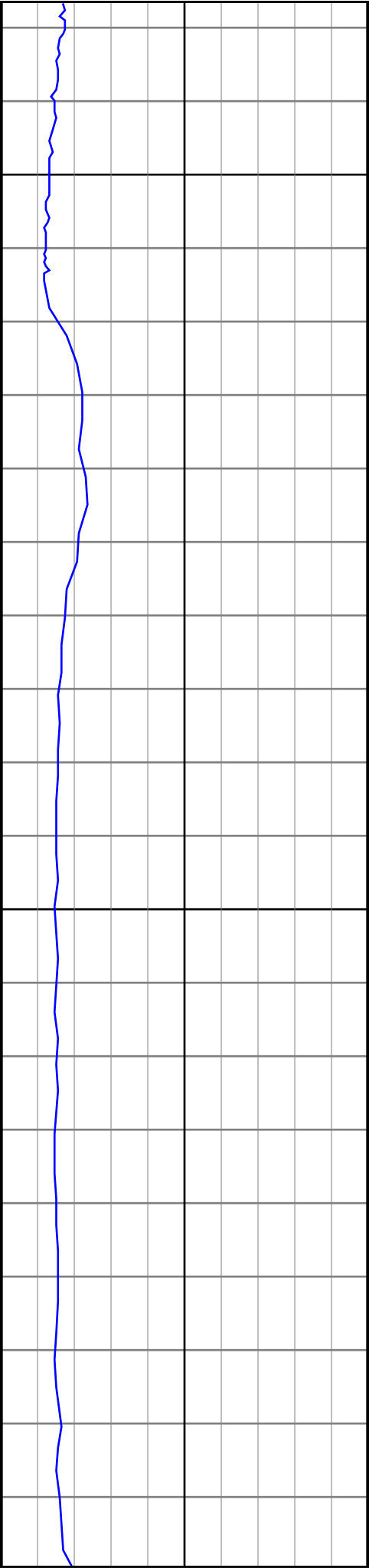
10400



#116 MD(10269.00) Inc(87.4) Azm(357.5) TVD(6687.74)  
VS(3894.88) NS(3725.32) EW(-1156.29)

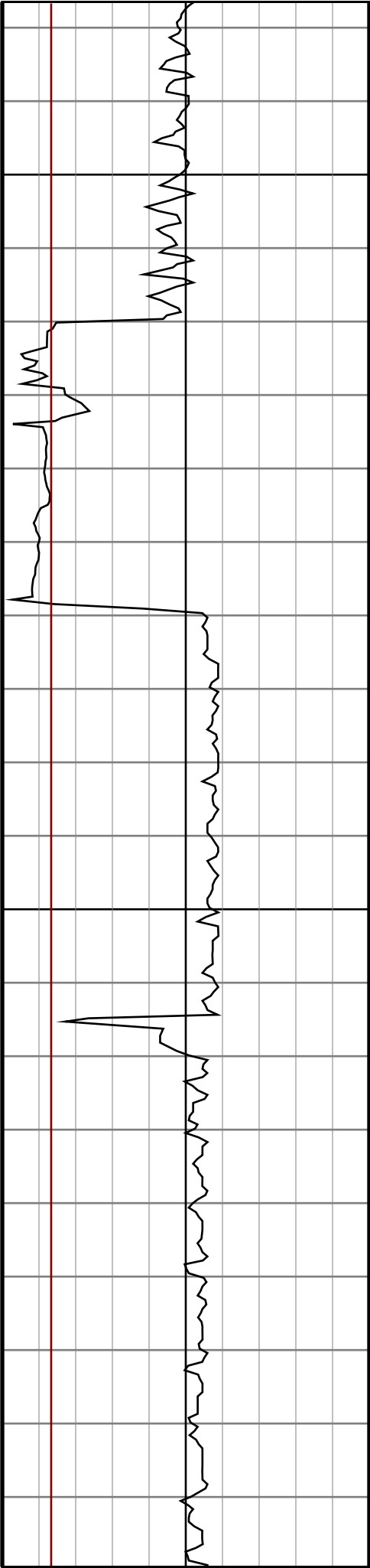
#117 MD(10365.00) Inc(87.1) Azm(359.6) TVD(6692.35)  
VS(3988.43) NS(3821.17) EW(-1158.71)

#118 MD(10460.00) Inc(87.1) Azm(359.4) TVD(6697.16)  
VS(4080.64) NS(3916.05) EW(-1159.54)



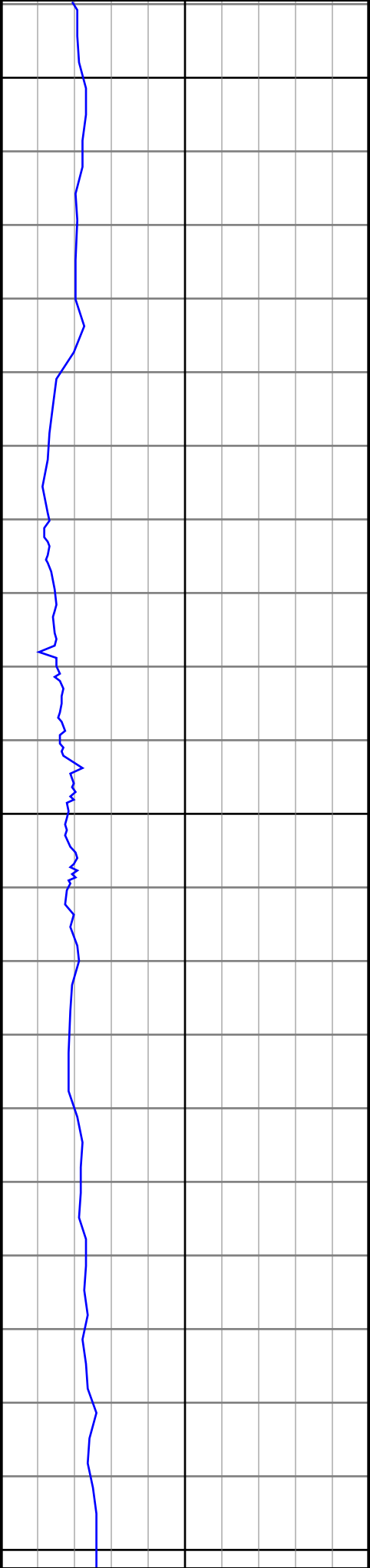
10500

10600



#119 MD(10555.00) Inc(89.0) Azm(2.6) TVD(6700.39)  
VS(4172.27) NS(4010.96) EW(-1157.88)

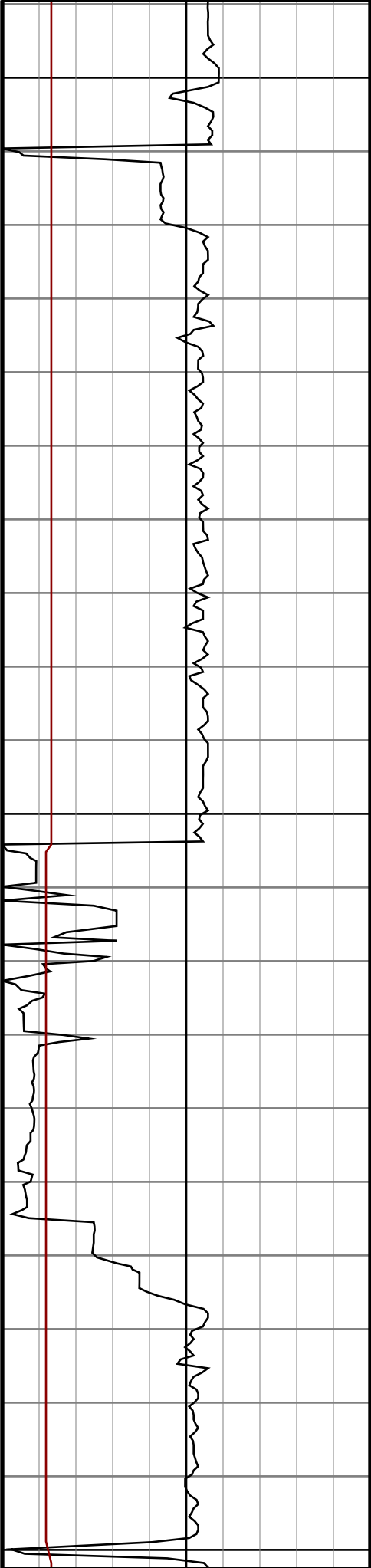
#120 MD(10650.00) Inc(90.4) Azm(1.3) TVD(6700.89)  
VS(4263.55) NS(4105.90) EW(-1154.65)



10700

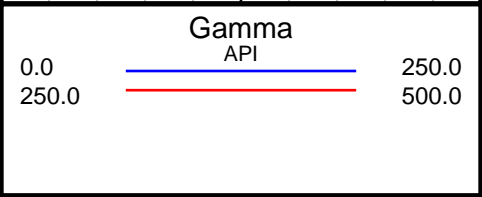
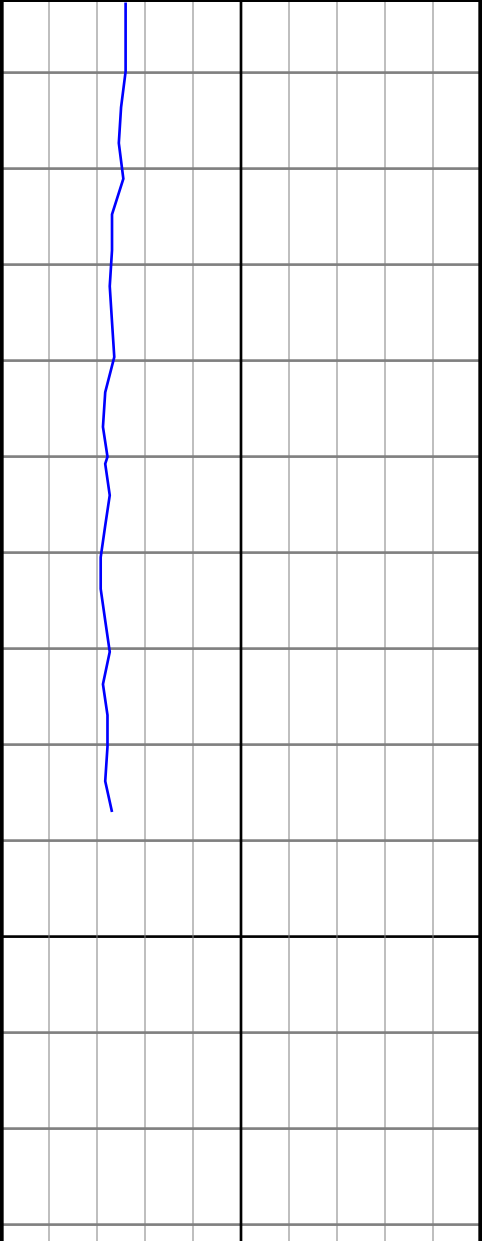
10800

10900

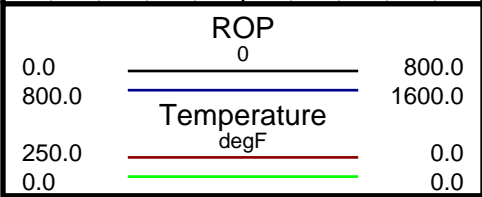
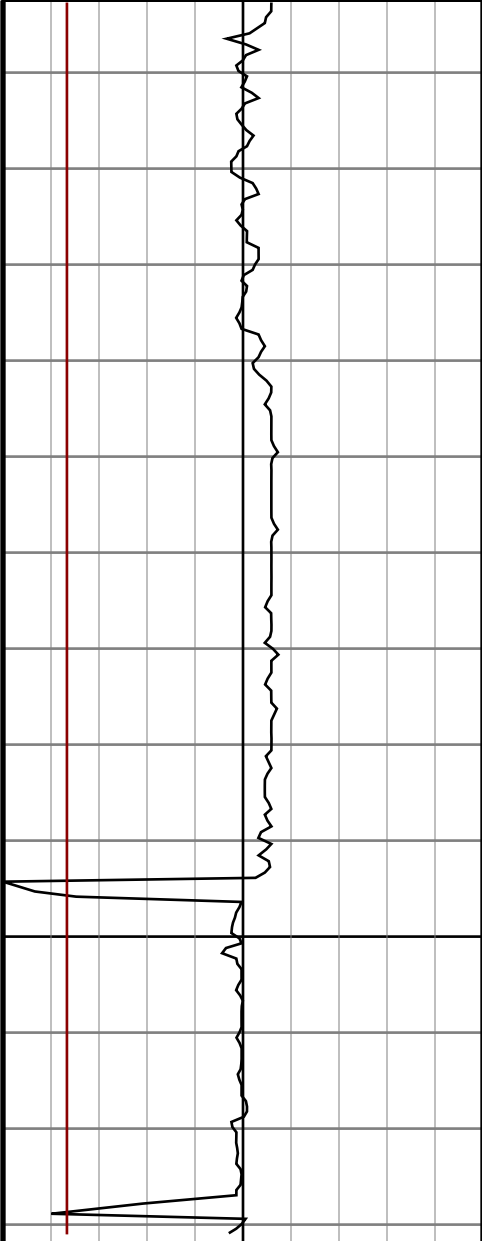


#121 MD(10745.00) Inc(91.5) Azm(1.1) TVD(6699.31)  
VS(4355.16) NS(4200.87) EW(-1152.66)

#122 MD(10840.00) Inc(90.6) Azm(3.3) TVD(6697.57)  
VS(4446.30) NS(4295.77) EW(-1149.01)



11000



#123 MD(10935.00) Inc(89.7) Azm(2.4) TVD(6697.32)  
VS(4537.16) NS(4390.65) EW(-1144.29)

#124 MD(11030.00) Inc(89.7) Azm(2.4) TVD(6697.82)  
VS(4628.23) NS(4485.57) EW(-1140.31)