ENSIGN

Bunting 26Q-304

MD
5":100'

Company: Petroleum Development Corp.
Well Name: Bunting 26Q-304
API: 05123440930000
County/Parish: Weld
State: Colorado
Country: United States
Job number: 161-111
Field: Wattenburg
Rig Id: Ensign 161
Survey Company: Ensign Directional Services
Operator: Petroleum Development Corp.
Company Man: Brady Sharp / John Falton
Daylight DD: Zach Gentry
Swing Shift DD: Tony Callow
Night DD: Eric Mays
Daylight MWD: Ryan Prue
Night MWD: Terry Ash

Log measurements: Gamma, ROP
Depth measured from: 2000 ft
Maximum temperature:

	Depth	Date
Start:	0 ft	2-17-2018
End:	ft	

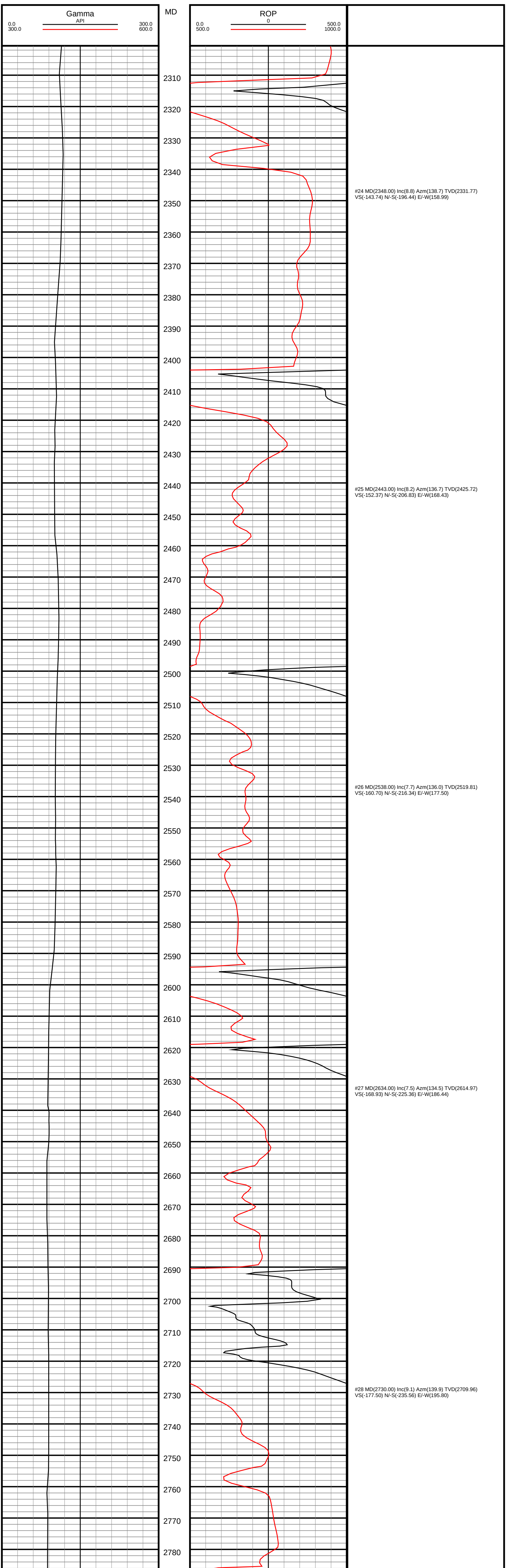
Casing	Depth	Size
Surface:	1626 ft	9 5/8"
Intermediate:		

Mud Type: H2O
Density:
Viscosity:
Rm: **Rmf:** **Rmc:**

Elevations
KB: 23 ft
GL: 4649 ft
DF: 4672 ft

Run	Bit Size	Offsets		Depths		Dates	
		Gamma	Survey	Start	End	Start	End
1	12.25"		59.98 ft	0 ft	1647 ft	2-17-2018	2-18-2018
2	8.5"	62.90 ft	58.07 ft	1647 ft		2-18-2018	
3							
4							
5							
6							
7							
8							
9							
10							

Ensign Directional Services 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.



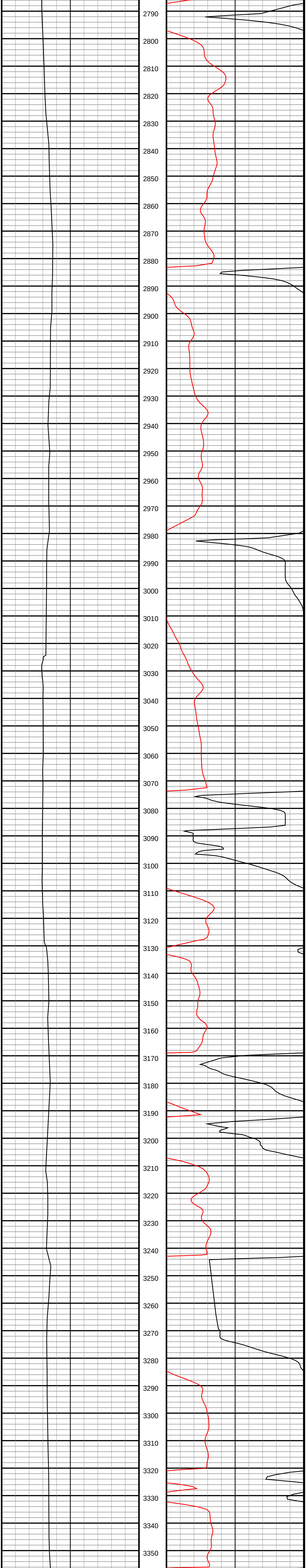
#24 MD(2348.00) Inc(8.8) Azm(138.7) TVD(2331.77)
VS(-143.74) N/-S(-196.44) E/-W(158.99)

#25 MD(2443.00) Inc(8.2) Azm(136.7) TVD(2425.72)
VS(-152.37) N/-S(-206.83) E/-W(168.43)

#26 MD(2538.00) Inc(7.7) Azm(136.0) TVD(2519.81)
VS(-160.70) N/-S(-216.34) E/-W(177.50)

#27 MD(2634.00) Inc(7.5) Azm(134.5) TVD(2614.97)
VS(-168.93) N/-S(-225.36) E/-W(186.44)

#28 MD(2730.00) Inc(9.1) Azm(139.9) TVD(2709.96)
VS(-177.50) N/-S(-235.56) E/-W(195.80)



#29 MD(2825.00) Inc(9.1) Azm(139.4) TVD(2803.77)
VS(-186.33) N/-S(-247.01) E/-W(205.52)

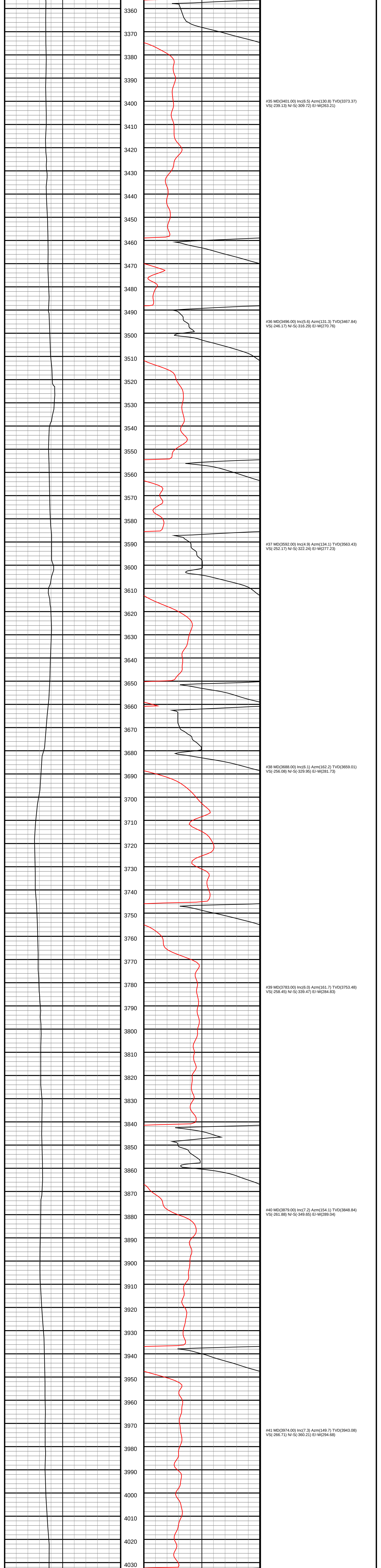
#30 MD(2921.00) Inc(8.9) Azm(137.6) TVD(2898.58)
VS(-195.41) N/-S(-258.26) E/-W(215.47)

#31 MD(3017.00) Inc(8.6) Azm(136.4) TVD(2993.47)
VS(-204.53) N/-S(-268.94) E/-W(225.43)

#32 MD(3113.00) Inc(9.6) Azm(141.1) TVD(3088.26)
VS(-213.62) N/-S(-280.37) E/-W(235.41)

#33 MD(3209.00) Inc(8.5) Azm(137.6) TVD(3183.06)
VS(-222.54) N/-S(-291.83) E/-W(245.22)

#34 MD(3305.00) Inc(7.7) Azm(135.0) TVD(3278.10)
VS(-231.11) N/-S(-301.62) E/-W(254.55)



#35 MD(3401.00) Inc(6.5) Azm(130.8) TVD(3373.37)
VS(-239.13) N/-S(-309.72) E/-W(263.21)

#36 MD(3496.00) Inc(5.6) Azm(131.3) TVD(3467.84)
VS(-246.17) N/-S(-316.29) E/-W(270.76)

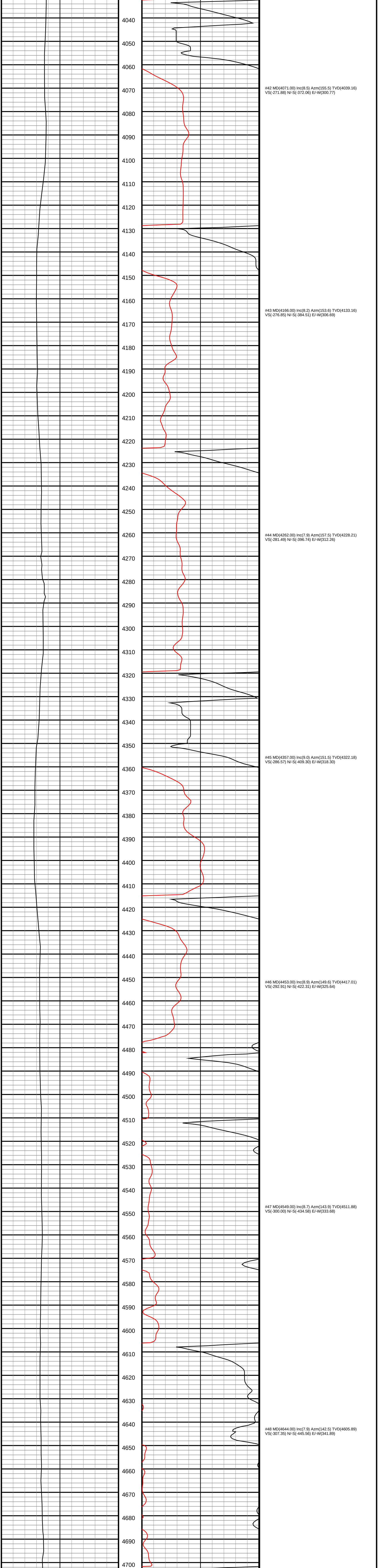
#37 MD(3592.00) Inc(4.9) Azm(134.1) TVD(3563.43)
VS(-252.17) N/-S(-322.24) E/-W(277.23)

#38 MD(3688.00) Inc(6.1) Azm(162.2) TVD(3659.01)
VS(-256.08) N/-S(-329.95) E/-W(281.73)

#39 MD(3783.00) Inc(6.0) Azm(161.7) TVD(3753.48)
VS(-258.45) N/-S(-339.47) E/-W(284.83)

#40 MD(3879.00) Inc(7.2) Azm(154.1) TVD(3848.84)
VS(-261.88) N/-S(-349.65) E/-W(289.04)

#41 MD(3974.00) Inc(7.3) Azm(149.7) TVD(3943.08)
VS(-266.71) N/-S(-360.21) E/-W(294.68)



#42 MD(4071.00) Inc(8.5) Azm(155.5) TVD(4039.16)
VS(-271.88) N/-S(-372.06) E/-W(300.77)

#43 MD(4166.00) Inc(8.2) Azm(153.6) TVD(4133.16)
VS(-276.85) N/-S(-384.51) E/-W(306.69)

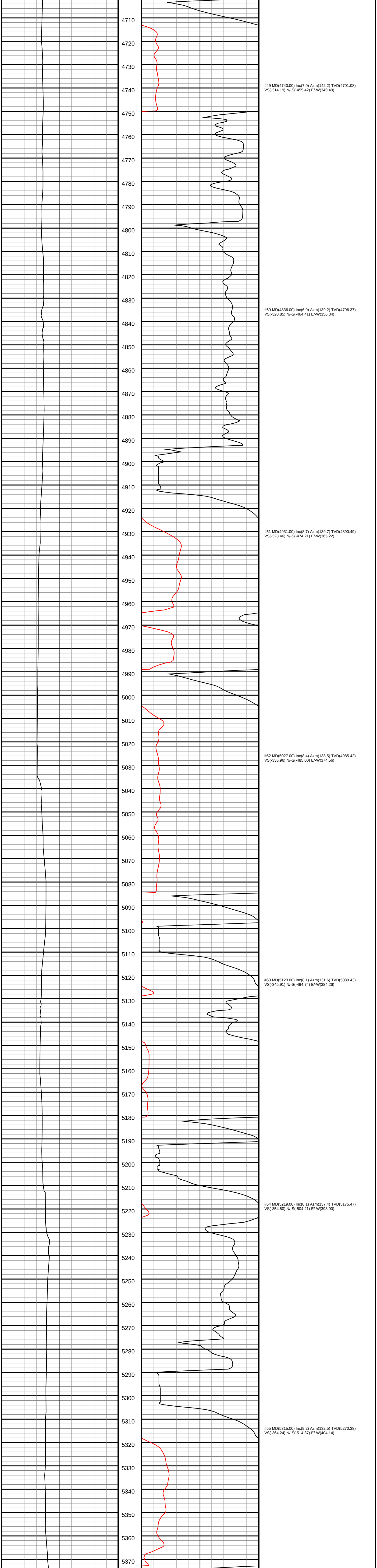
#44 MD(4262.00) Inc(7.9) Azm(157.5) TVD(4228.21)
VS(-281.49) N/-S(-396.74) E/-W(312.26)

#45 MD(4357.00) Inc(9.0) Azm(151.5) TVD(4322.18)
VS(-286.57) N/-S(-409.30) E/-W(318.30)

#46 MD(4453.00) Inc(8.9) Azm(149.6) TVD(4417.01)
VS(-292.91) N/-S(-422.31) E/-W(325.64)

#47 MD(4549.00) Inc(8.7) Azm(143.9) TVD(4511.88)
VS(-300.00) N/-S(-434.58) E/-W(333.68)

#48 MD(4644.00) Inc(7.9) Azm(142.5) TVD(4605.89)
VS(-307.35) N/-S(-445.56) E/-W(341.89)



#49 MD(4740.00) Inc(7.0) Azm(142.2) TVD(4701.08)
VS(-314.19) N/-S(-455.42) E/-W(349.49)

#50 MD(4836.00) Inc(6.9) Azm(139.2) TVD(4796.37)
VS(-320.85) N/-S(-464.41) E/-W(356.84)

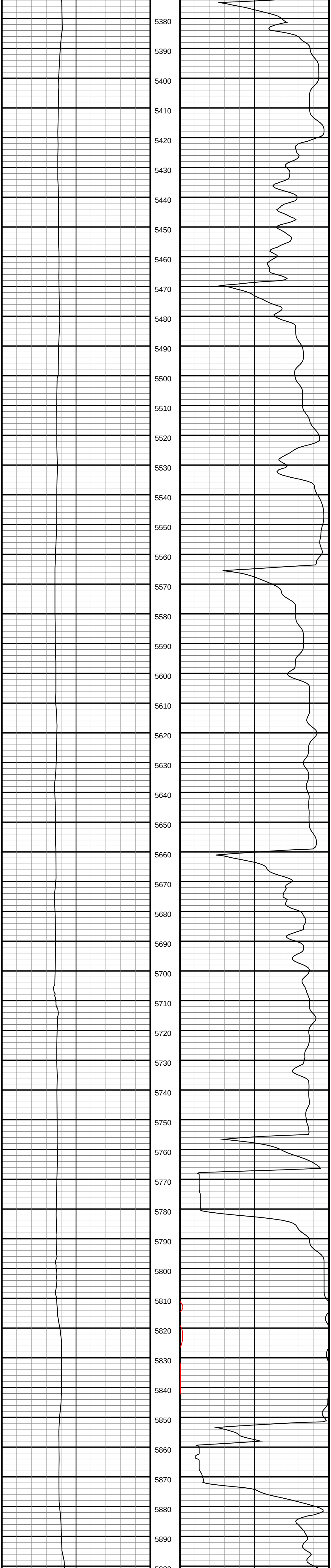
#51 MD(4931.00) Inc(8.7) Azm(139.7) TVD(4890.49)
VS(-328.46) N/-S(-474.21) E/-W(365.22)

#52 MD(5027.00) Inc(8.4) Azm(138.5) TVD(4985.42)
VS(-336.96) N/-S(-485.00) E/-W(374.56)

#53 MD(5123.00) Inc(8.1) Azm(131.6) TVD(5080.43)
VS(-345.91) N/-S(-494.74) E/-W(384.26)

#54 MD(5219.00) Inc(8.1) Azm(137.4) TVD(5175.47)
VS(-354.80) N/-S(-504.21) E/-W(393.90)

#55 MD(5315.00) Inc(9.2) Azm(132.5) TVD(5270.38)
VS(-364.24) N/-S(-514.37) E/-W(404.14)



#56 MD(5410.00) Inc(8.6) Azm(131.3) TVD(5364.24)
VS(-374.41) N/-S(-524.19) E/-W(415.07)

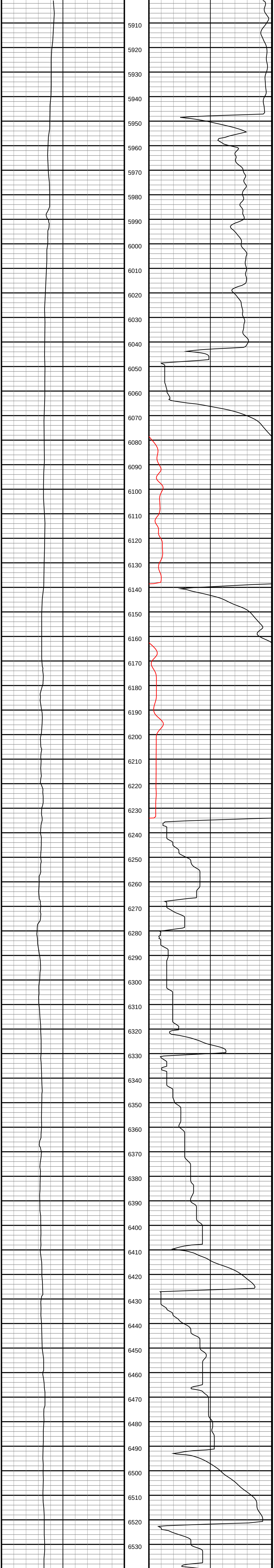
#57 MD(5506.00) Inc(7.8) Azm(132.2) TVD(5459.25)
VS(-383.91) N/-S(-533.30) E/-W(425.29)

#58 MD(5602.00) Inc(7.7) Azm(134.8) TVD(5554.38)
VS(-392.60) N/-S(-542.21) E/-W(434.68)

#59 MD(5698.00) Inc(7.0) Azm(136.2) TVD(5649.59)
VS(-400.53) N/-S(-550.97) E/-W(443.29)

#60 MD(5794.00) Inc(4.6) Azm(140.3) TVD(5745.09)
VS(-406.48) N/-S(-558.15) E/-W(449.80)

#61 MD(5890.00) Inc(2.9) Azm(129.7) TVD(5840.88)
VS(-410.45) N/-S(-562.66) E/-W(454.13)



#62 MD(5985.00) Inc(2.6) Azm(135.0) TVD(5935.77)
VS(-413.59) N/-S(-565.72) E/-W(457.50)

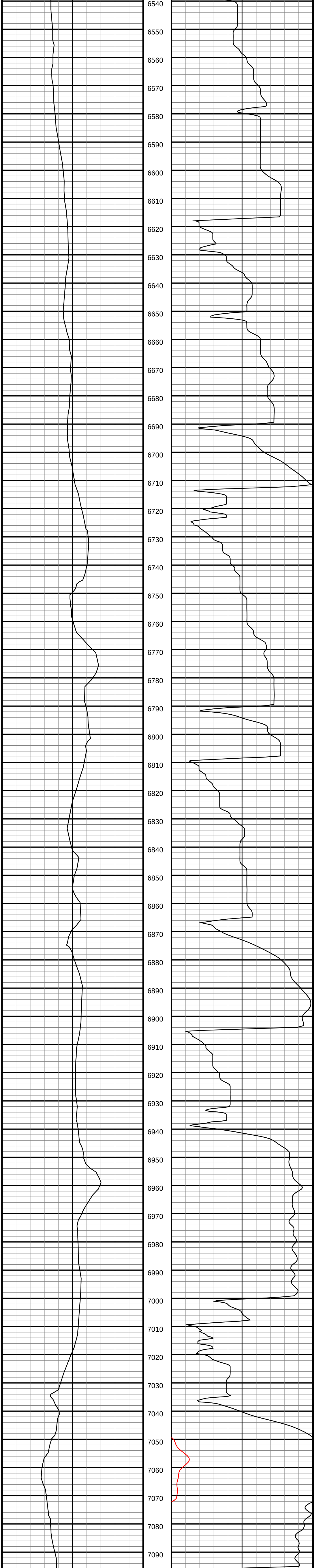
#63 MD(6081.00) Inc(0.0) Azm(0.0) TVD(6031.74) VS(-415.01)
N/-S(-567.26) E/-W(459.04)

#64 MD(6177.00) Inc(0.4) Azm(149.4) TVD(6127.74)
VS(-415.16) N/-S(-567.55) E/-W(459.21)

#65 MD(6273.00) Inc(2.8) Azm(279.5) TVD(6223.70)
VS(-413.03) N/-S(-567.45) E/-W(457.07)

#66 MD(6368.00) Inc(12.2) Azm(277.9) TVD(6317.79)
VS(-400.94) N/-S(-565.69) E/-W(444.81)

#67 MD(6464.00) Inc(18.9) Azm(276.5) TVD(6410.22)
VS(-375.72) N/-S(-562.53) E/-W(419.29)



#68 MD(6560.00) Inc(25.2) Azm(268.4) TVD(6499.17)
VS(-339.99) N/-S(-561.34) E/-W(383.36)

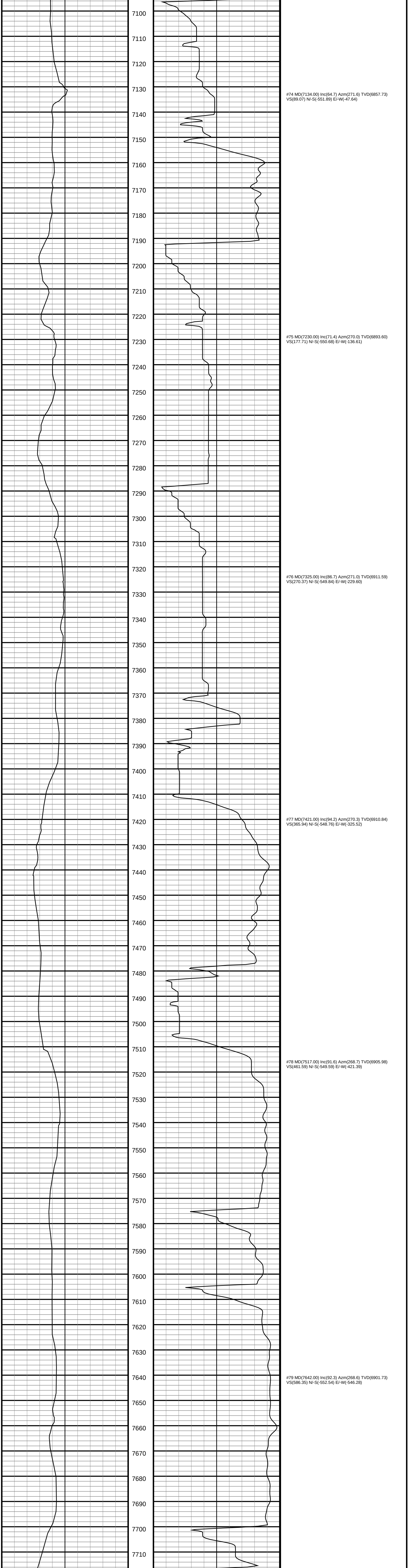
#69 MD(6655.00) Inc(35.3) Azm(266.8) TVD(6581.13)
VS(-292.22) N/-S(-563.44) E/-W(335.62)

#70 MD(6751.00) Inc(43.6) Azm(269.3) TVD(6655.20)
VS(-231.34) N/-S(-565.40) E/-W(274.71)

#71 MD(6847.00) Inc(54.1) Azm(273.3) TVD(6718.30)
VS(-159.55) N/-S(-563.56) E/-W(202.58)

#72 MD(6943.00) Inc(61.4) Azm(273.0) TVD(6769.49)
VS(-79.10) N/-S(-559.11) E/-W(121.57)

#73 MD(7038.00) Inc(61.9) Azm(272.6) TVD(6814.60) VS(3.86)
N/-S(-555.02) E/-W(38.06)



#74 MD(7134.00) Inc(64.7) Azm(271.6) TVD(6857.73)
VS(89.07) N/-S(-551.89) E/-W(-47.64)

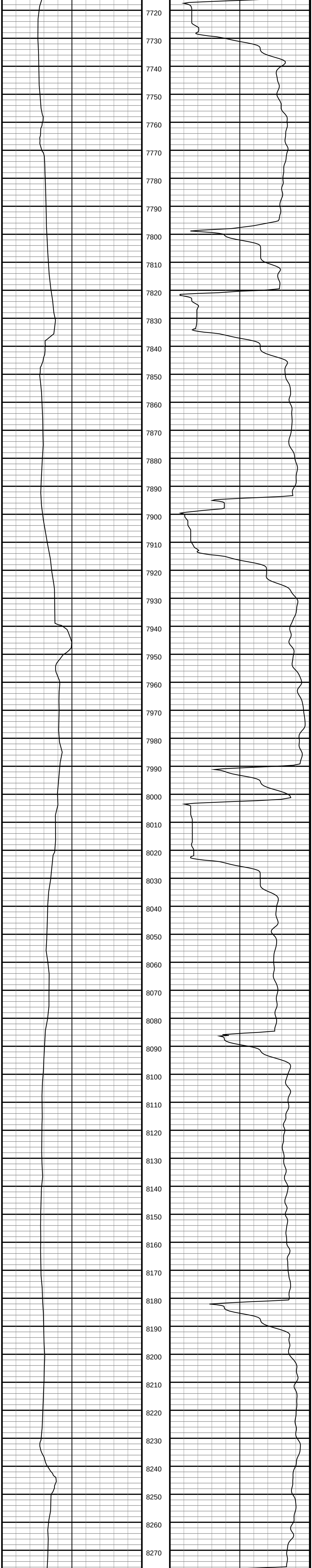
#75 MD(7230.00) Inc(71.4) Azm(270.0) TVD(6893.60)
VS(177.71) N/-S(-550.68) E/-W(-136.61)

#76 MD(7325.00) Inc(86.7) Azm(271.0) TVD(6911.59)
VS(270.37) N/-S(-549.84) E/-W(-229.60)

#77 MD(7421.00) Inc(94.2) Azm(270.3) TVD(6910.84)
VS(365.94) N/-S(-548.76) E/-W(-325.52)

#78 MD(7517.00) Inc(91.6) Azm(268.7) TVD(6905.98)
VS(461.59) N/-S(-549.59) E/-W(-421.39)

#79 MD(7642.00) Inc(92.3) Azm(268.6) TVD(6901.73)
VS(586.35) N/-S(-552.54) E/-W(-546.28)



#80 MD(7737.00) Inc(91.2) Azm(267.7) TVD(6898.83)
VS(681.21) N/-S(-555.60) E/-W(-641.18)

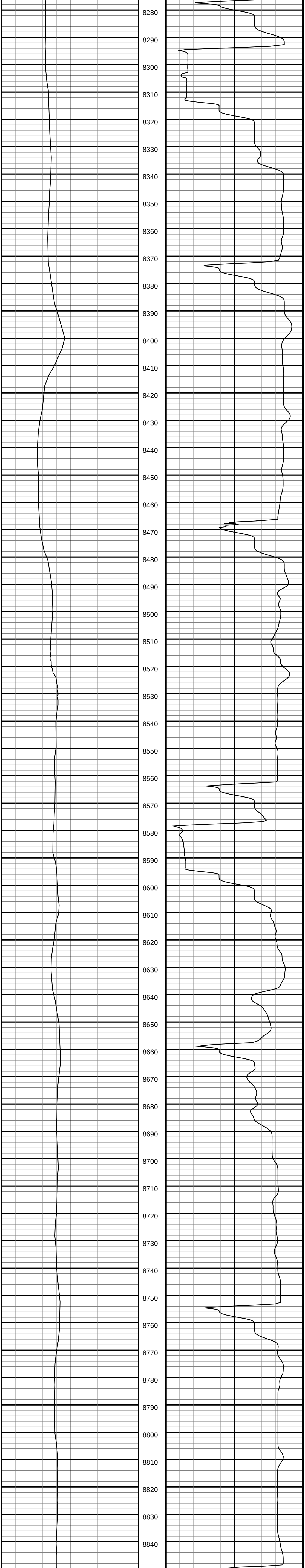
#81 MD(7833.00) Inc(90.1) Azm(267.2) TVD(6897.74)
VS(777.16) N/-S(-559.87) E/-W(-737.08)

#82 MD(7929.00) Inc(88.9) Azm(268.2) TVD(6898.58)
VS(873.09) N/-S(-563.73) E/-W(-833.00)

#83 MD(8024.00) Inc(89.3) Azm(269.8) TVD(6900.07)
VS(967.92) N/-S(-565.38) E/-W(-927.97)

#84 MD(8119.00) Inc(89.3) Azm(269.1) TVD(6901.23)
VS(1062.70) N/-S(-566.30) E/-W(-1022.95)

#85 MD(8215.00) Inc(90.0) Azm(268.7) TVD(6901.82)
VS(1158.55) N/-S(-568.14) E/-W(-1118.93)



#86 MD(8310.00) Inc(90.3) Azm(270.7) TVD(6901.57)
VS(1253.31) N/-S(-568.64) E/-W(-1213.93)

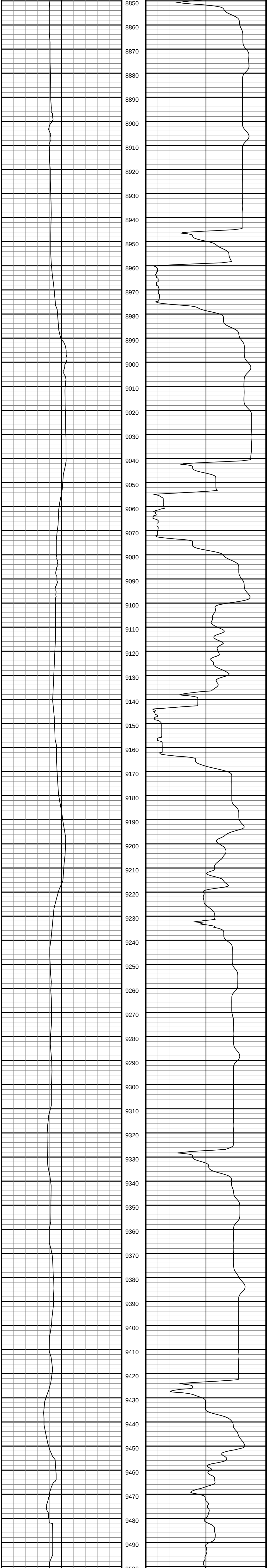
#87 MD(8406.00) Inc(90.7) Azm(270.5) TVD(6900.73)
VS(1348.95) N/-S(-567.63) E/-W(-1309.92)

#88 MD(8502.00) Inc(91.1) Azm(269.6) TVD(6899.22)
VS(1444.66) N/-S(-567.55) E/-W(-1405.90)

#89 MD(8598.00) Inc(90.3) Azm(270.7) TVD(6898.05)
VS(1540.36) N/-S(-567.30) E/-W(-1501.90)

#90 MD(8693.00) Inc(90.2) Azm(270.3) TVD(6897.63)
VS(1635.02) N/-S(-566.47) E/-W(-1596.89)

#91 MD(8789.00) Inc(90.6) Azm(269.5) TVD(6896.96)
VS(1730.76) N/-S(-566.63) E/-W(-1692.89)



#92 MD(8884.00) Inc(90.8) Azm(269.1) TVD(6895.80)
VS(1825.56) N/-S(-567.79) E/-W(-1787.87)

#93 MD(8980.00) Inc(90.7) Azm(270.5) TVD(6894.55)
VS(1921.30) N/-S(-568.13) E/-W(-1883.86)

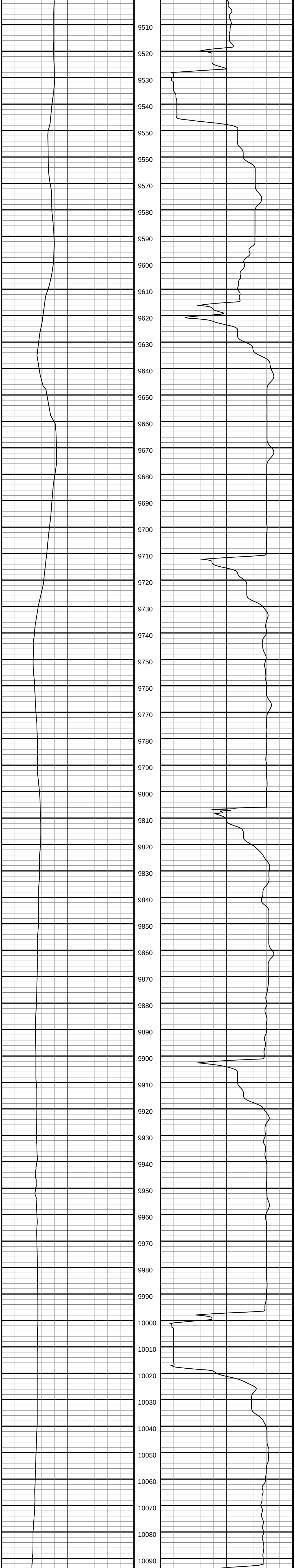
#94 MD(9076.00) Inc(89.8) Azm(270.0) TVD(6894.13)
VS(2017.00) N/-S(-567.71) E/-W(-1979.86)

#95 MD(9171.00) Inc(88.4) Azm(271.0) TVD(6895.62)
VS(2111.65) N/-S(-566.88) E/-W(-2074.84)

#96 MD(9267.00) Inc(88.1) Azm(270.7) TVD(6898.55)
VS(2207.21) N/-S(-565.46) E/-W(-2170.78)

#97 MD(9361.00) Inc(88.0) Azm(270.3) TVD(6901.75)
VS(2300.82) N/-S(-564.64) E/-W(-2264.73)

#98 MD(9458.00) Inc(87.8) Azm(270.2) TVD(6905.30)
VS(2397.45) N/-S(-564.22) E/-W(-2361.66)



#99 MD(9554.00) Inc(89.5) Azm(270.5) TVD(6907.57)
VS(2493.10) N/-S(-563.63) E/-W(-2457.63)

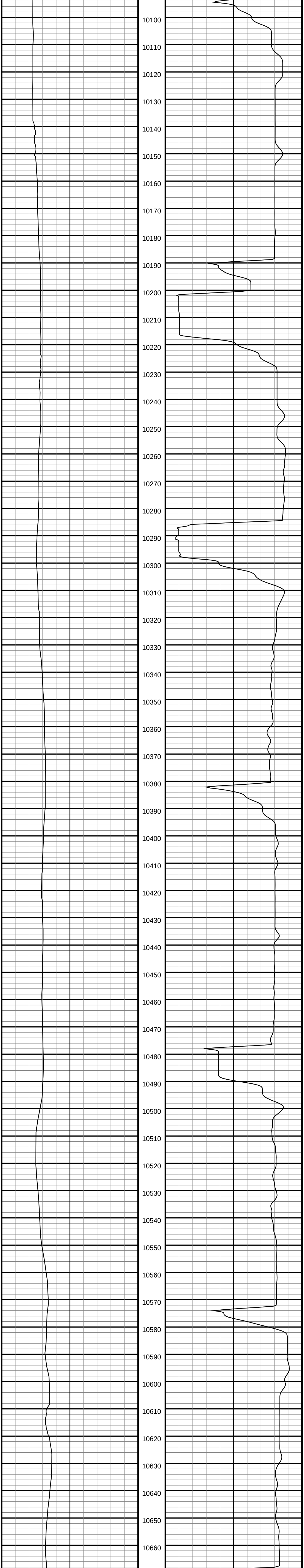
#100 MD(9649.00) Inc(90.0) Azm(270.0) TVD(6907.98)
VS(2587.80) N/-S(-563.22) E/-W(-2552.62)

#101 MD(9745.00) Inc(90.5) Azm(269.1) TVD(6907.56)
VS(2683.58) N/-S(-563.97) E/-W(-2648.62)

#102 MD(9840.00) Inc(90.7) Azm(268.6) TVD(6906.57)
VS(2778.43) N/-S(-565.88) E/-W(-2743.60)

#103 MD(9936.00) Inc(91.0) Azm(268.0) TVD(6905.14)
VS(2874.31) N/-S(-568.72) E/-W(-2839.54)

#104 MD(10032.00) Inc(90.0) Azm(268.7) TVD(6904.31)
VS(2970.20) N/-S(-571.49) E/-W(-2935.50)



#105 MD(10128.00) Inc(90.3) Azm(267.7) TVD(6904.05)
VS(3066.11) N/-S(-574.50) E/-W(-3031.45)

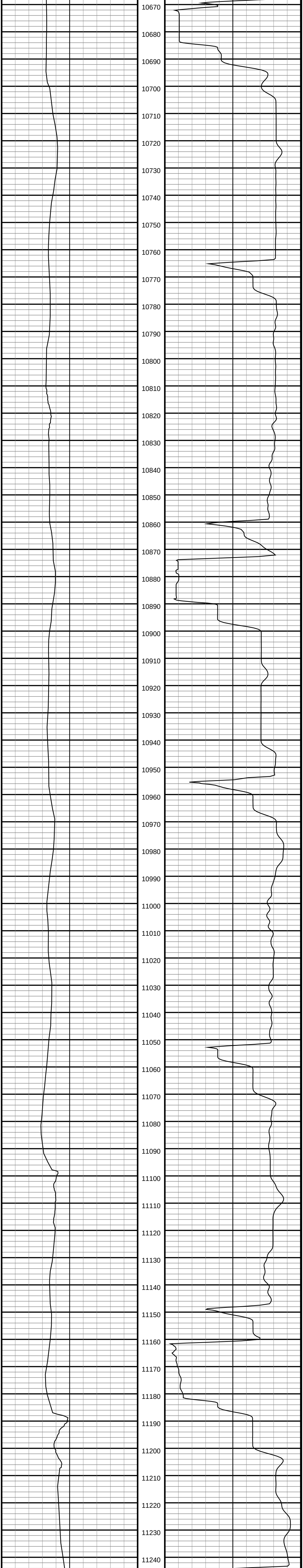
#106 MD(10224.00) Inc(90.6) Azm(269.8) TVD(6903.30)
VS(3161.96) N/-S(-576.60) E/-W(-3127.42)

#107 MD(10320.00) Inc(90.3) Azm(271.0) TVD(6902.55)
VS(3257.63) N/-S(-575.93) E/-W(-3223.41)

#108 MD(10416.00) Inc(90.1) Azm(270.7) TVD(6902.21)
VS(3353.24) N/-S(-574.50) E/-W(-3319.40)

#109 MD(10511.00) Inc(90.7) Azm(269.8) TVD(6901.55)
VS(3447.94) N/-S(-574.09) E/-W(-3414.39)

#110 MD(10607.00) Inc(91.0) Azm(269.3) TVD(6900.12)
VS(3543.71) N/-S(-574.84) E/-W(-3510.38)



#111 MD(10702.00) Inc(90.3) Azm(270.3) TVD(6899.05)
VS(3638.45) N/-S(-575.17) E/-W(-3605.37)

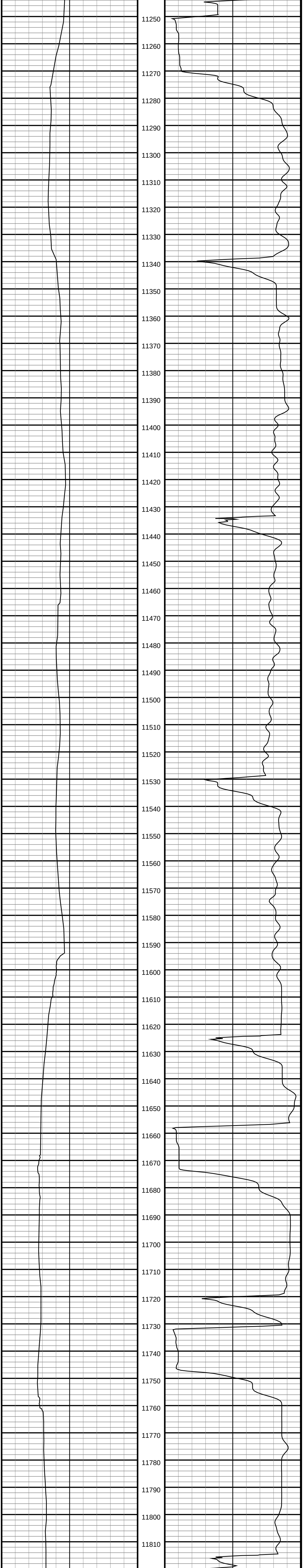
#112 MD(10798.00) Inc(90.4) Azm(269.5) TVD(6898.46)
VS(3734.19) N/-S(-575.34) E/-W(-3701.37)

#113 MD(10894.00) Inc(89.1) Azm(269.8) TVD(6898.88)
VS(3829.96) N/-S(-575.93) E/-W(-3797.36)

#114 MD(10990.00) Inc(89.2) Azm(268.6) TVD(6900.30)
VS(3925.76) N/-S(-577.27) E/-W(-3893.34)

#115 MD(11085.00) Inc(89.3) Azm(267.9) TVD(6901.55)
VS(4020.66) N/-S(-580.17) E/-W(-3988.29)

#116 MD(11181.00) Inc(89.5) Azm(269.6) TVD(6902.55)
VS(4116.51) N/-S(-582.26) E/-W(-4084.26)



#117 MD(11277.00) Inc(88.2) Azm(271.7) TVD(6904.48)
VS(4212.13) N/-S(-581.17) E/-W(-4180.22)

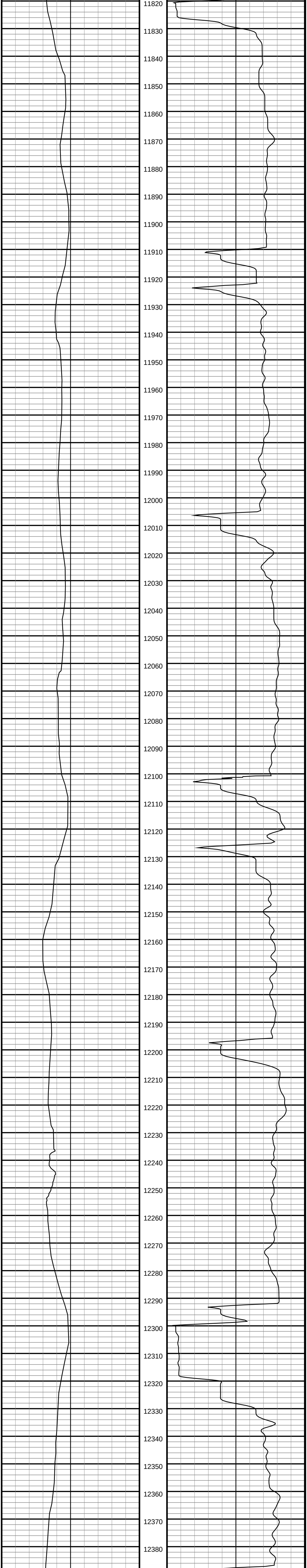
#118 MD(11373.00) Inc(88.1) Azm(270.9) TVD(6907.58)
VS(4307.61) N/-S(-579.00) E/-W(-4276.15)

#119 MD(11468.00) Inc(88.3) Azm(270.5) TVD(6910.56)
VS(4402.20) N/-S(-577.84) E/-W(-4371.09)

#120 MD(11563.00) Inc(88.2) Azm(270.0) TVD(6913.46)
VS(4496.86) N/-S(-577.42) E/-W(-4466.05)

#121 MD(11659.00) Inc(88.4) Azm(271.2) TVD(6916.31)
VS(4592.46) N/-S(-576.42) E/-W(-4562.00)

#122 MD(11754.00) Inc(90.5) Azm(272.1) TVD(6917.22)
VS(4686.93) N/-S(-573.68) E/-W(-4656.95)



#123 MD(11849.00) Inc(90.9) Azm(271.4) TVD(6916.06)
VS(4781.39) N/-S(-570.78) E/-W(-4751.90)

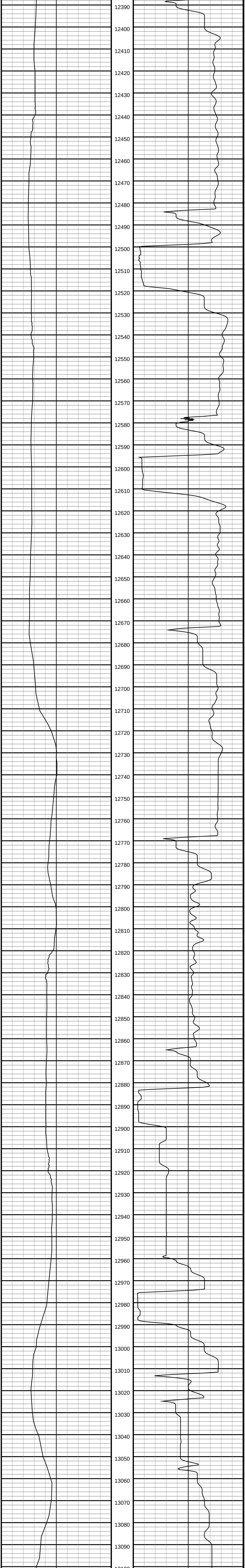
#124 MD(11945.00) Inc(91.3) Azm(270.7) TVD(6914.22)
VS(4876.95) N/-S(-569.02) E/-W(-4847.86)

#125 MD(12040.00) Inc(91.5) Azm(270.0) TVD(6911.90)
VS(4971.61) N/-S(-568.44) E/-W(-4942.83)

#126 MD(12135.00) Inc(91.7) Azm(269.5) TVD(6909.25)
VS(5066.33) N/-S(-568.86) E/-W(-5037.79)

#127 MD(12231.00) Inc(92.4) Azm(268.7) TVD(6905.81)
VS(5162.10) N/-S(-570.36) E/-W(-5133.72)

#128 MD(12326.00) Inc(90.1) Azm(268.6) TVD(6903.74)
VS(5256.94) N/-S(-572.60) E/-W(-5228.66)



#129 MD(12421.00) Inc(90.6) Azm(268.4) TVD(6903.16)
VS(5351.82) N/-S(-575.09) E/-W(-5323.63)

#130 MD(12516.00) Inc(90.6) Azm(269.3) TVD(6902.16)
VS(5446.67) N/-S(-576.99) E/-W(-5418.60)

#131 MD(12612.00) Inc(89.2) Azm(270.0) TVD(6902.33)
VS(5542.44) N/-S(-577.58) E/-W(-5514.60)

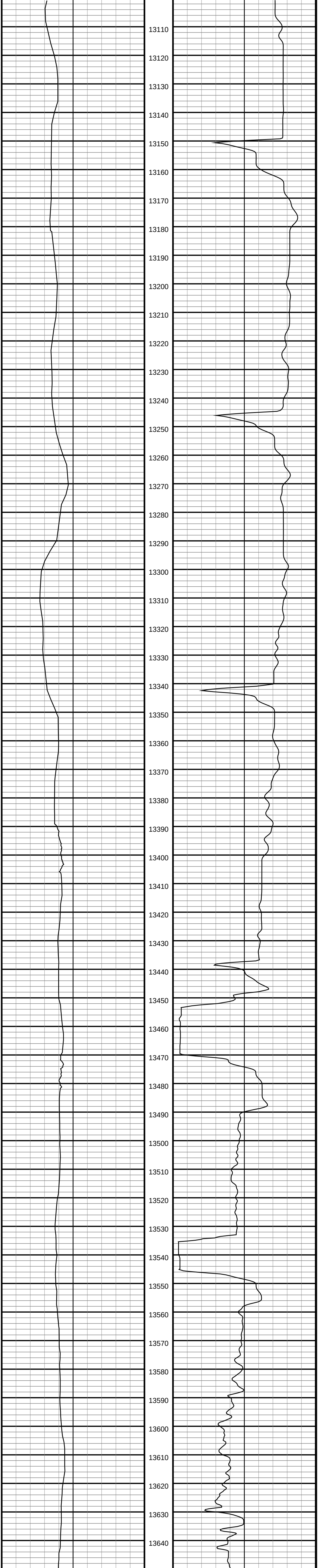
#132 MD(12707.00) Inc(89.3) Azm(269.3) TVD(6903.57)
VS(5637.20) N/-S(-578.16) E/-W(-5609.59)

#133 MD(12802.00) Inc(89.4) Azm(268.9) TVD(6904.65)
VS(5732.03) N/-S(-579.65) E/-W(-5704.57)

#134 MD(12898.00) Inc(90.0) Azm(270.0) TVD(6905.15)
VS(5827.81) N/-S(-580.57) E/-W(-5800.56)

#135 MD(12993.00) Inc(89.9) Azm(271.2) TVD(6905.24)
VS(5922.46) N/-S(-579.58) E/-W(-5895.56)

#136 MD(13089.00) Inc(90.4) Azm(270.7) TVD(6904.99)
VS(6018.06) N/-S(-577.99) E/-W(-5991.54)



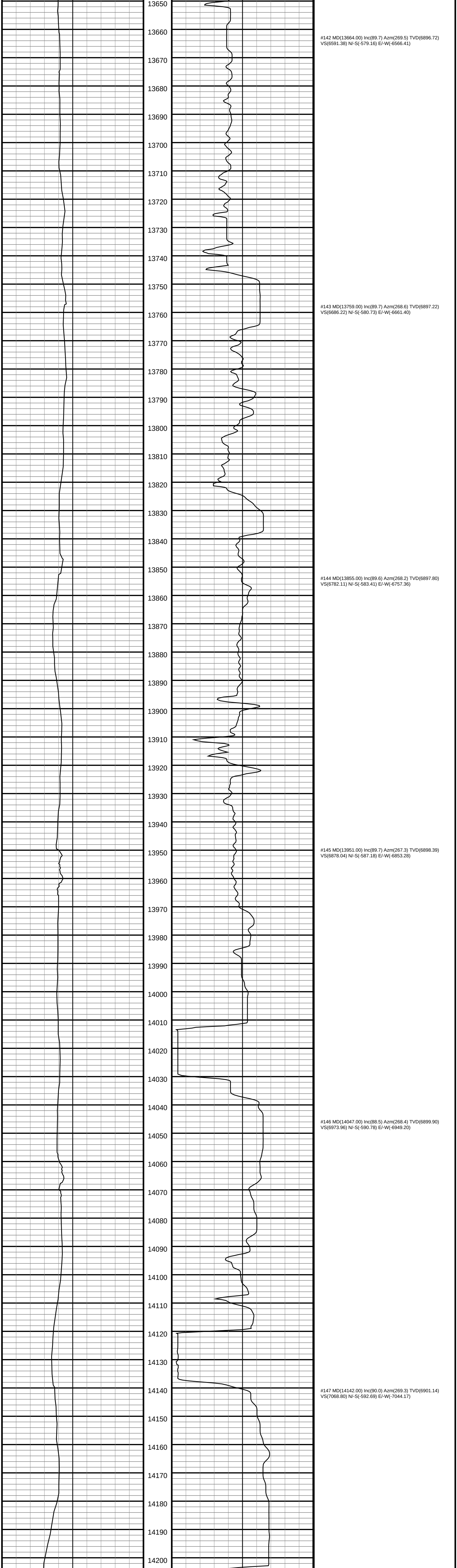
#137 MD(13185.00) Inc(91.0) Azm(270.2) TVD(6903.81)
VS(6113.72) N/-S(-577.23) E/-W(-6087.53)

#138 MD(13281.00) Inc(91.4) Azm(269.4) TVD(6901.80)
VS(6209.45) N/-S(-577.57) E/-W(-6183.51)

#139 MD(13377.00) Inc(91.8) Azm(268.9) TVD(6899.12)
VS(6305.23) N/-S(-578.99) E/-W(-6279.46)

#140 MD(13472.00) Inc(91.1) Azm(270.7) TVD(6896.72)
VS(6399.95) N/-S(-579.32) E/-W(-6374.42)

#141 MD(13568.00) Inc(89.6) Azm(270.0) TVD(6896.13)
VS(6495.63) N/-S(-578.74) E/-W(-6470.42)



#142 MD(13664.00) Inc(89.7) Azm(269.5) TVD(6896.72)
VS(6591.38) N/-S(-579.16) E/-W(-6566.41)

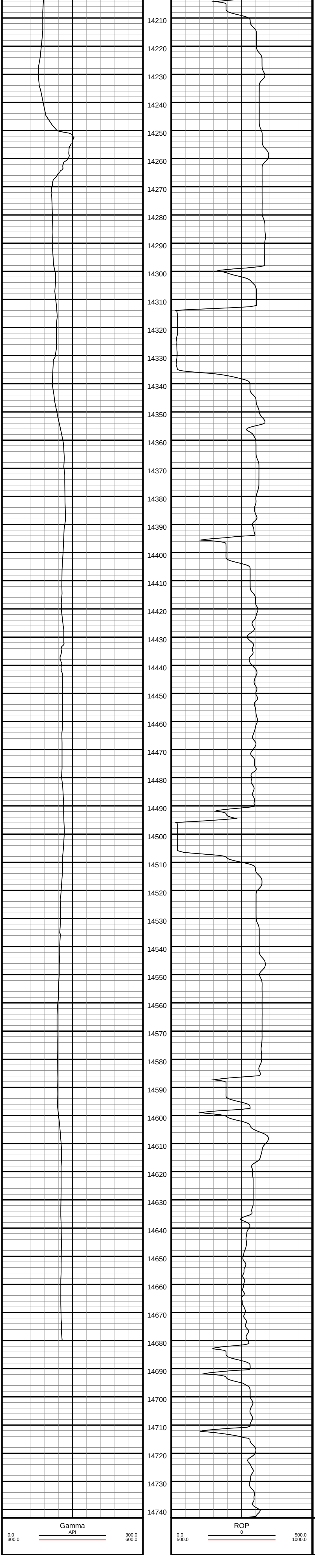
#143 MD(13759.00) Inc(89.7) Azm(268.6) TVD(6897.22)
VS(6686.22) N/-S(-580.73) E/-W(-6661.40)

#144 MD(13855.00) Inc(89.6) Azm(268.2) TVD(6897.80)
VS(6782.11) N/-S(-583.41) E/-W(-6757.36)

#145 MD(13951.00) Inc(89.7) Azm(267.3) TVD(6898.39)
VS(6878.04) N/-S(-587.18) E/-W(-6853.28)

#146 MD(14047.00) Inc(88.5) Azm(268.4) TVD(6899.90)
VS(6973.96) N/-S(-590.78) E/-W(-6949.20)

#147 MD(14142.00) Inc(90.0) Azm(269.3) TVD(6901.14)
VS(7068.80) N/-S(-592.69) E/-W(-7044.17)



#148 MD(14238.00) Inc(90.1) Azm(268.6) TVD(6901.06)
VS(7164.64) N/-S(-594.45) E/-W(-7140.15)

#149 MD(14334.00) Inc(89.2) Azm(270.9) TVD(6901.64)
VS(7260.39) N/-S(-594.87) E/-W(-7236.14)

#150 MD(14430.00) Inc(88.9) Azm(270.3) TVD(6903.23)
VS(7356.02) N/-S(-593.86) E/-W(-7332.12)

#151 MD(14525.00) Inc(89.3) Azm(271.2) TVD(6904.73)
VS(7450.64) N/-S(-592.62) E/-W(-7427.10)

#152 MD(14621.00) Inc(88.9) Azm(271.2) TVD(6906.23)
VS(7546.18) N/-S(-590.61) E/-W(-7523.07)

#153 MD(14683.00) Inc(89.0) Azm(270.9) TVD(6907.37)
VS(7607.90) N/-S(-589.47) E/-W(-7585.05)