Thistle Down 31H-232

MD
2":100’

Company: PDC Energy Inc
Well Name: Thistle Down 31H-232
API: 051234545500
County/Parish: WELD
State: COLORADO
Country: USA
Job number: 152-177
Field: Wattenberg
Rig Id: Ensign 152
Survey Company: Ensign Directional
DD1 Jesus Gallego
DD2 Dan Hanson
DD3
MWD1 Ryan Prue
MWD2 Paul Wilson

Log measurements: Gamma, ROP
Depth measured from: 1690 ft
Maximum temperature: 204.8

	Depth	Date
Start:	0 ft	12-11-2018
End:	12874 ft	12-14-2018

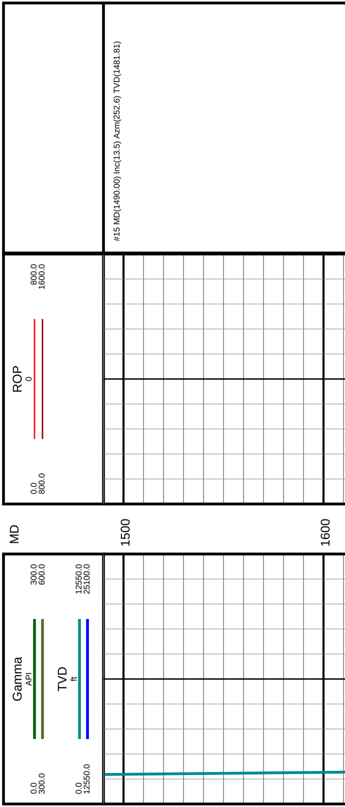
Casing	Depth	Size
Surface:	1690 ft	9 5/8"
Intermediate:		

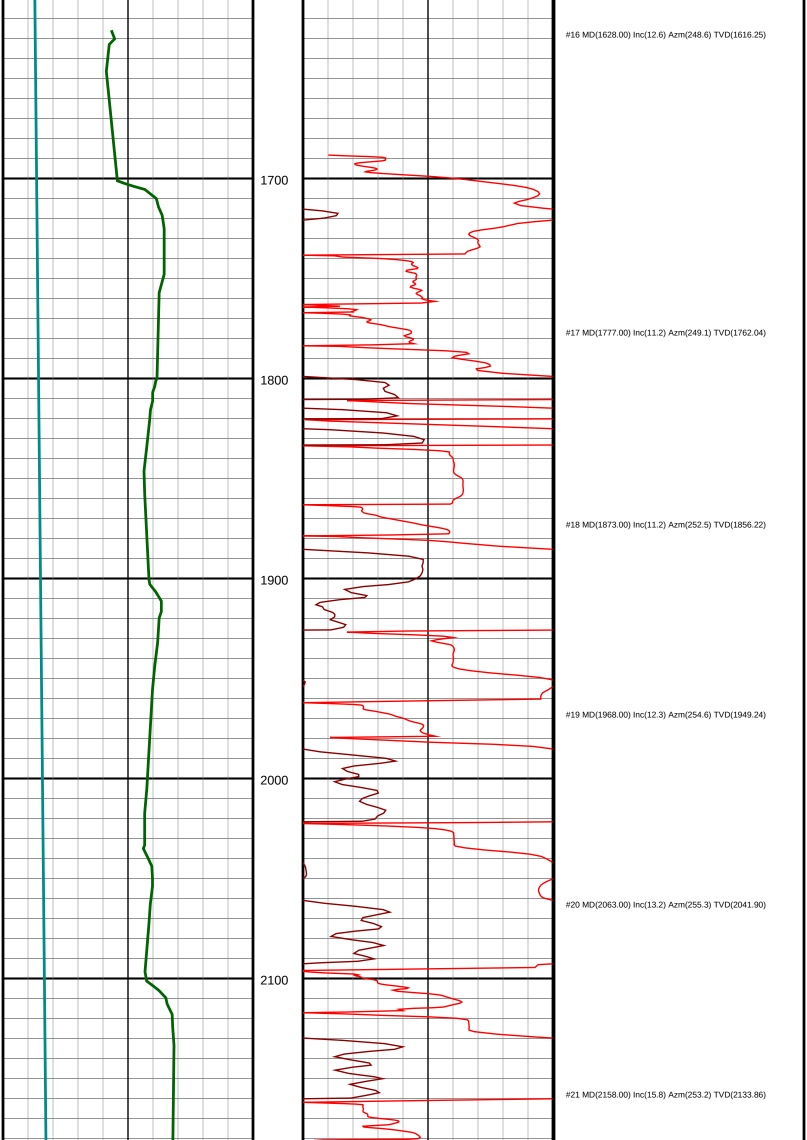
Mud Type: Water
Density: 10.4
Viscosity: 39
Rm: **Rmf:** **Rmc:**

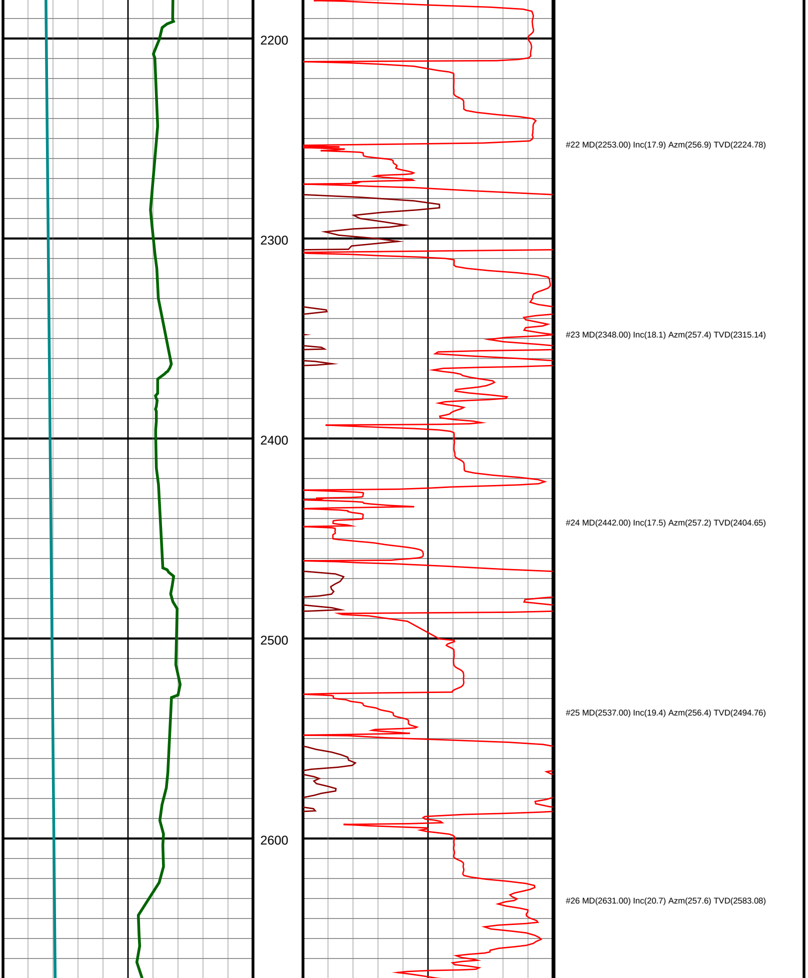
Elevations
KB: 23 ft
GL: 4804 ft
DF: 4827 ft

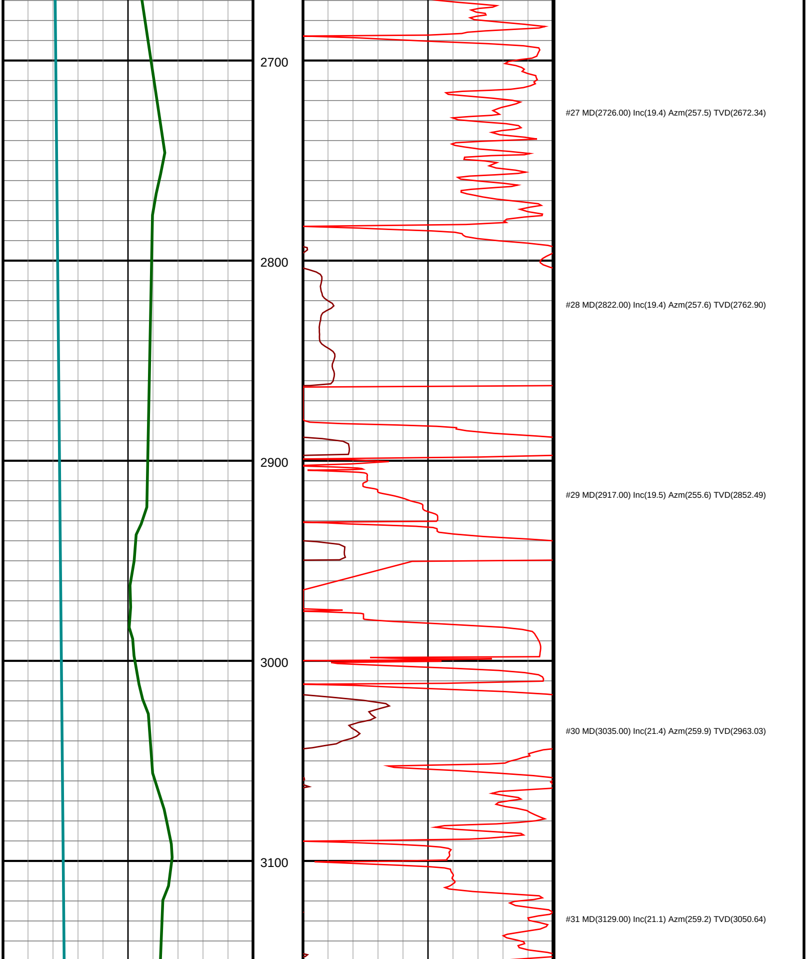
		Offsets		Depths		Dates	
Run	Bit Size	Gamma	Survey	Start	End	Start	End
1	12.25"		58.44 ft	0 ft	1688 ft	12-11-2018	12-11-2018
2	8.5"	60.17 ft	56.81 ft	1688 ft		12-12-2018	12-14-2018
3							
4							
5							
6							
7							
8							
9							
10							

Ensign Directional 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.









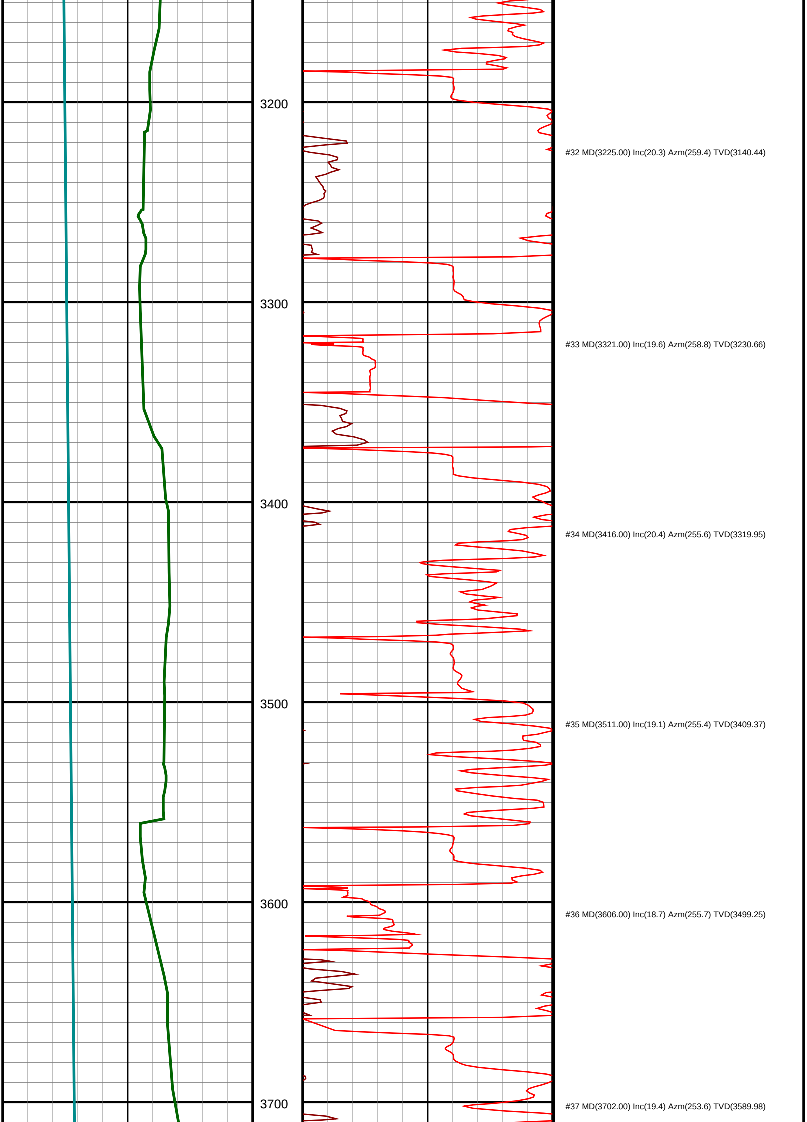
#27 MD(2726.00) Inc(19.4) Azm(257.5) TVD(2672.34)

#28 MD(2822.00) Inc(19.4) Azm(257.6) TVD(2762.90)

#29 MD(2917.00) Inc(19.5) Azm(255.6) TVD(2852.49)

#30 MD(3035.00) Inc(21.4) Azm(259.9) TVD(2963.03)

#31 MD(3129.00) Inc(21.1) Azm(259.2) TVD(3050.64)



#32 MD(3225.00) Inc(20.3) Azm(259.4) TVD(3140.44)

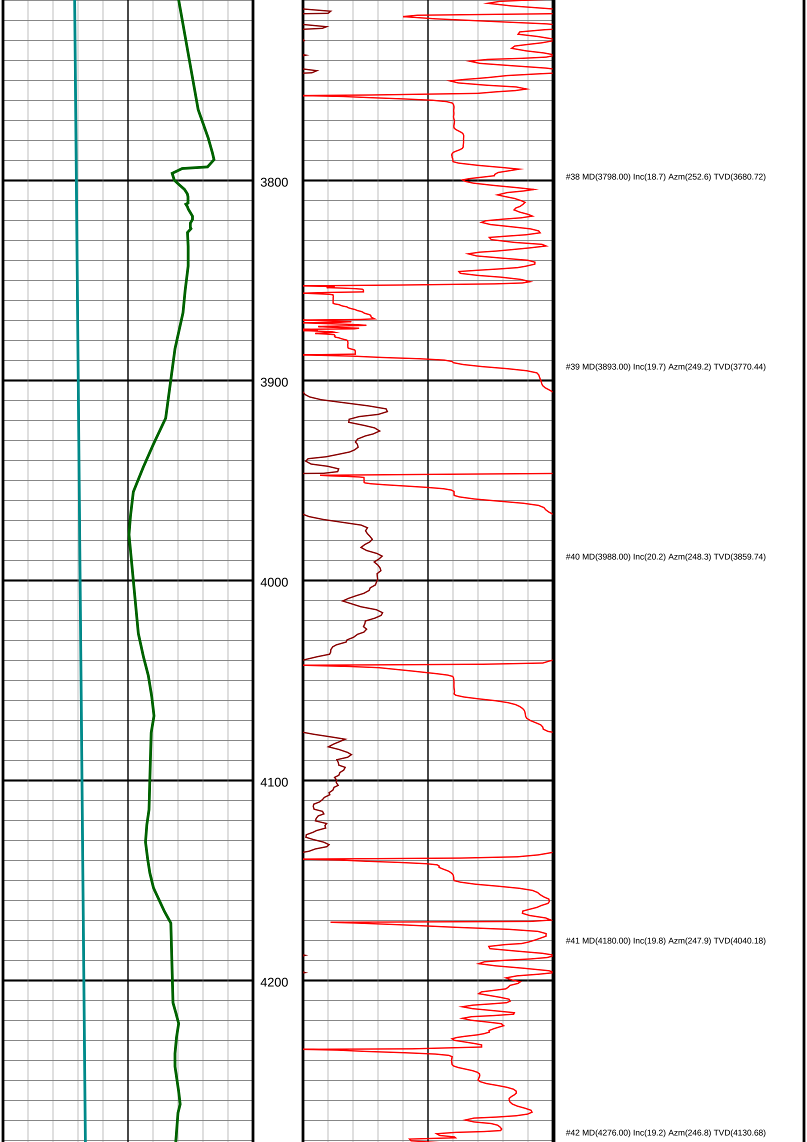
#33 MD(3321.00) Inc(19.6) Azm(258.8) TVD(3230.66)

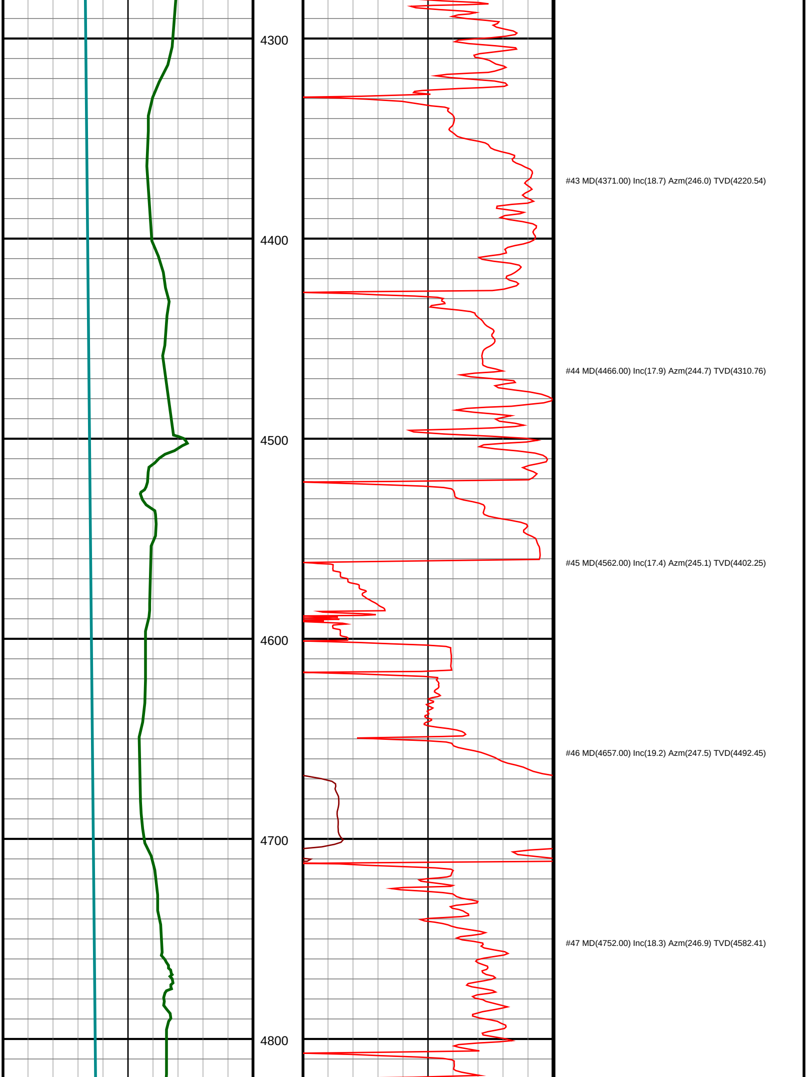
#34 MD(3416.00) Inc(20.4) Azm(255.6) TVD(3319.95)

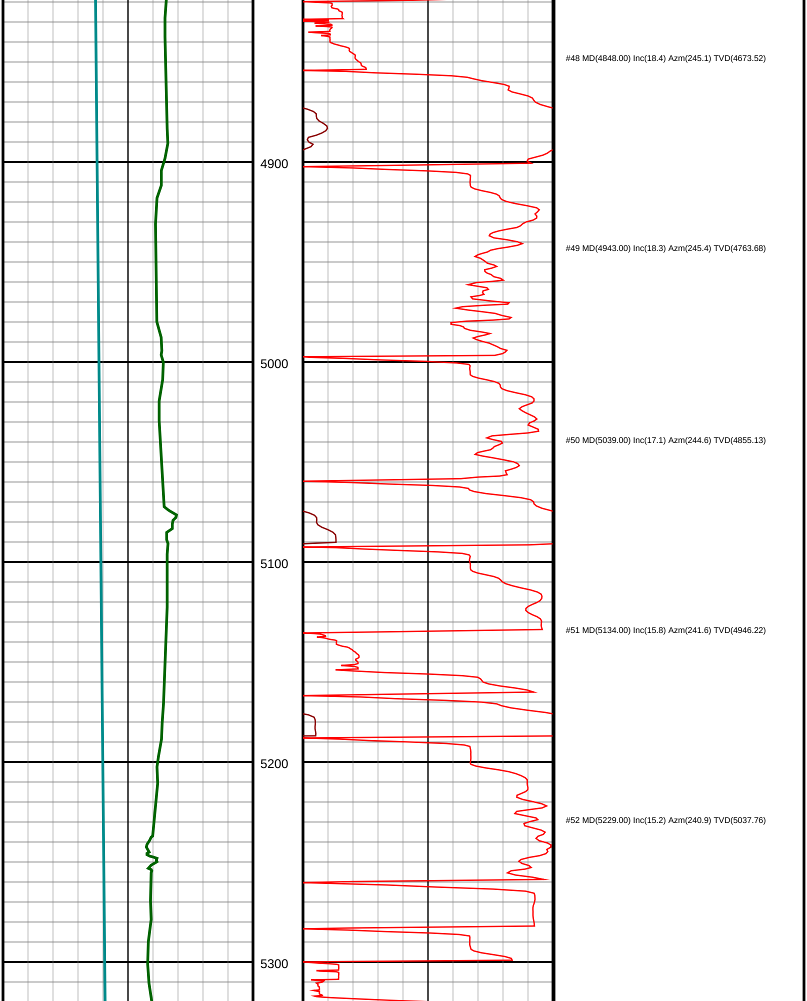
#35 MD(3511.00) Inc(19.1) Azm(255.4) TVD(3409.37)

#36 MD(3606.00) Inc(18.7) Azm(255.7) TVD(3499.25)

#37 MD(3702.00) Inc(19.4) Azm(253.6) TVD(3589.98)







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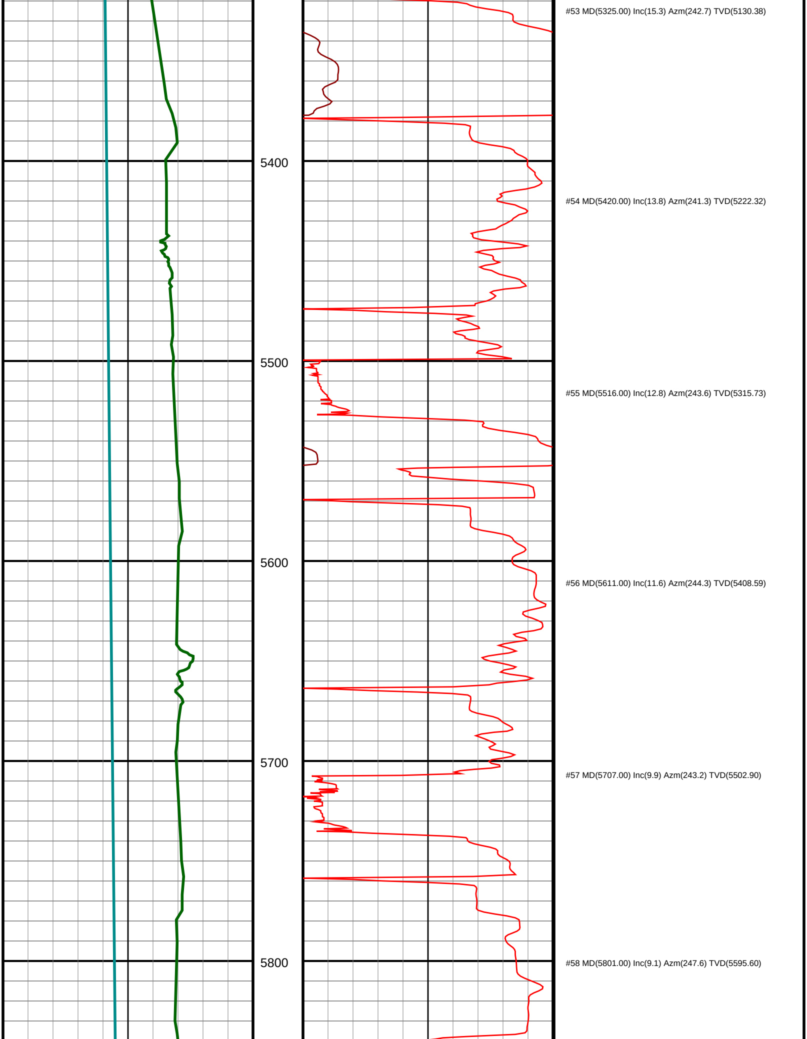
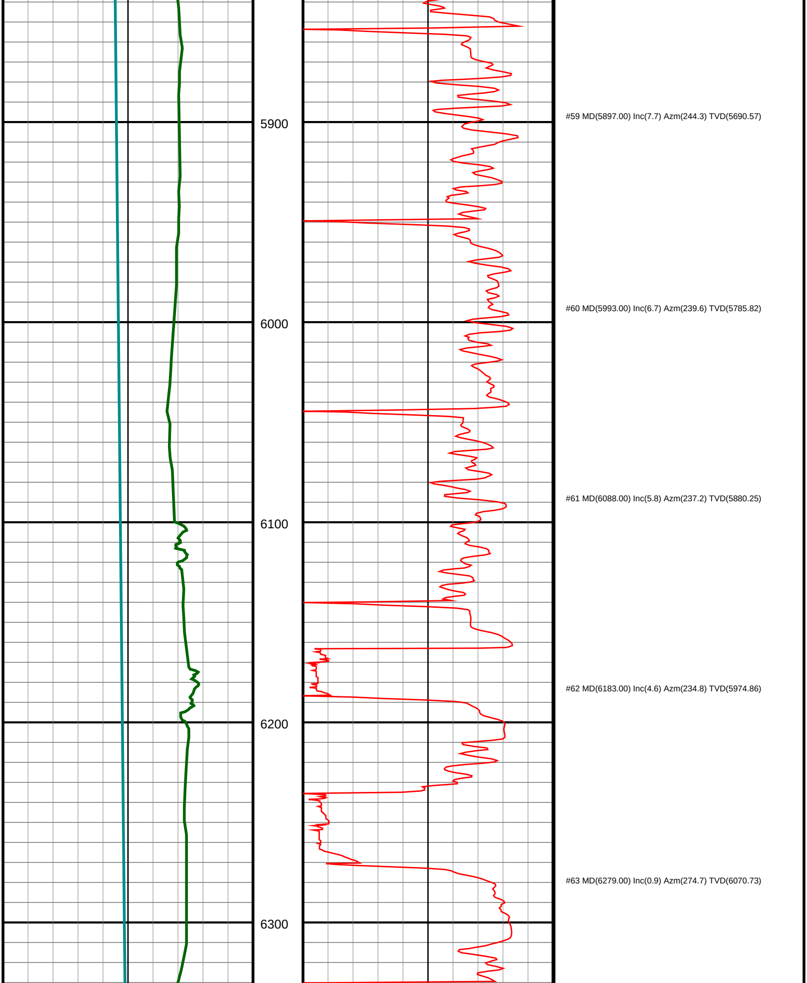
#49 MD(4943.00) Inc(18.3) Azm(245.4) TVD(4763.68)

#50 MD(5039.00) Inc(17.1) Azm(244.6) TVD(4855.13)

#51 MD(5134.00) Inc(15.8) Azm(241.6) TVD(4946.22)

#52 MD(5229.00) Inc(15.2) Azm(240.9) TVD(5037.76)





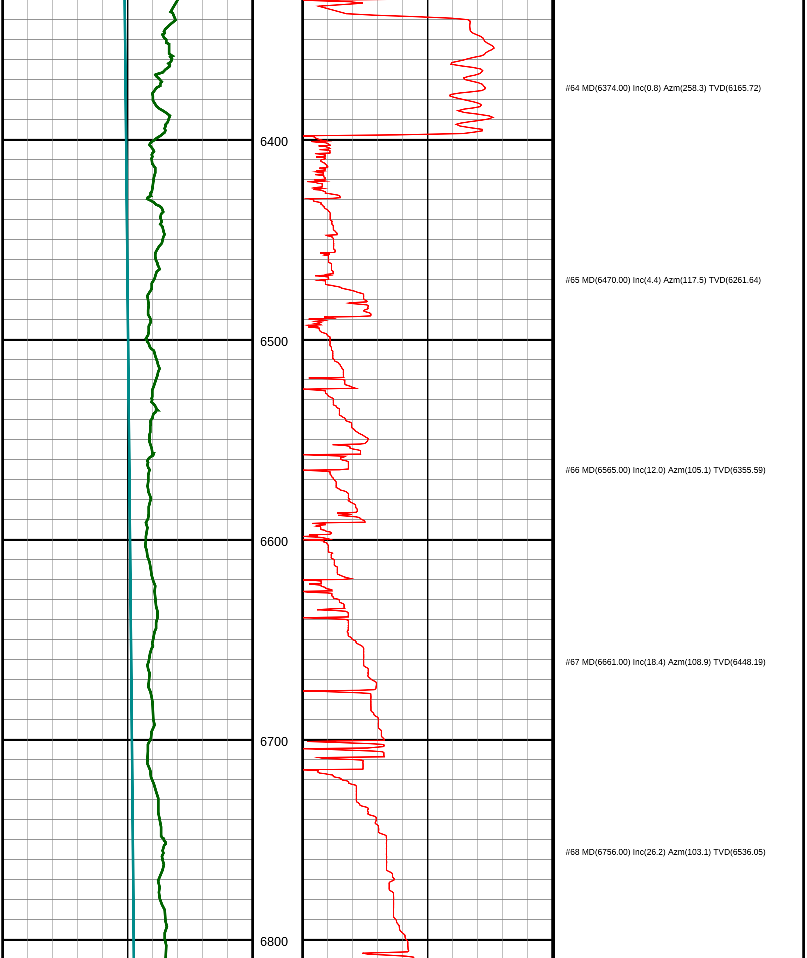
#59 MD(5897.00) Inc(7.7) Azm(244.3) TVD(5690.57)

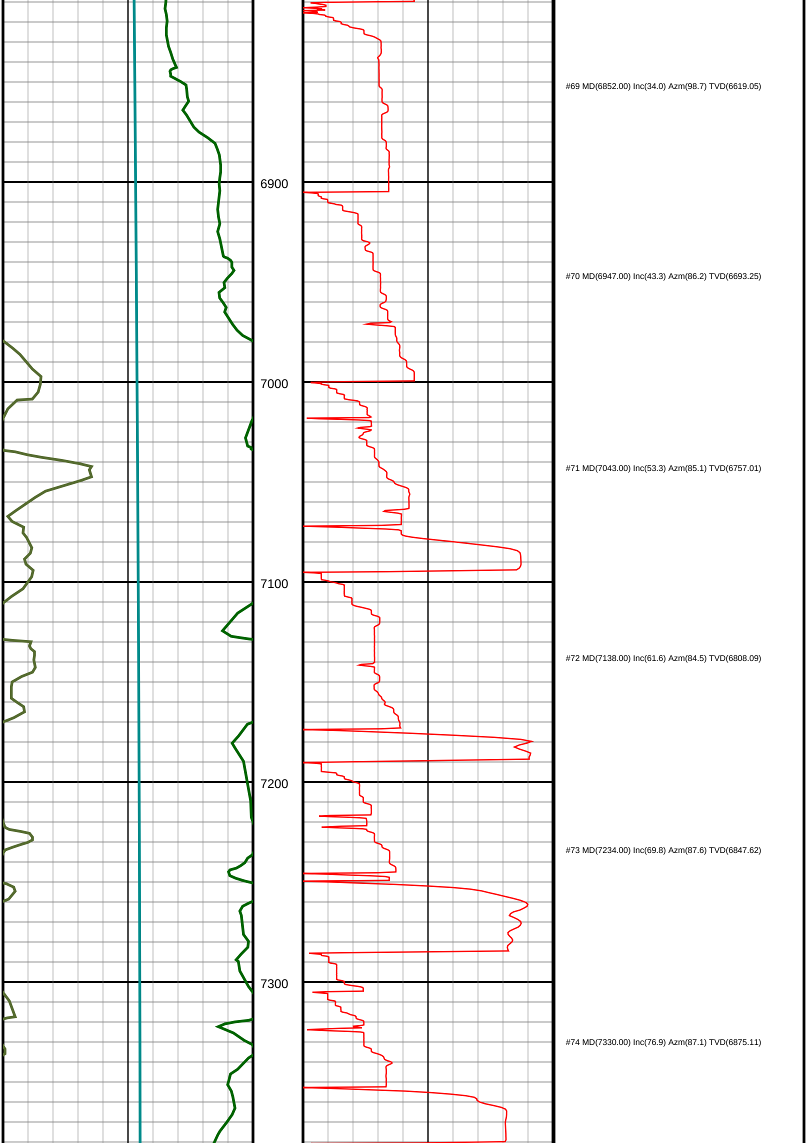
#60 MD(5993.00) Inc(6.7) Azm(239.6) TVD(5785.82)

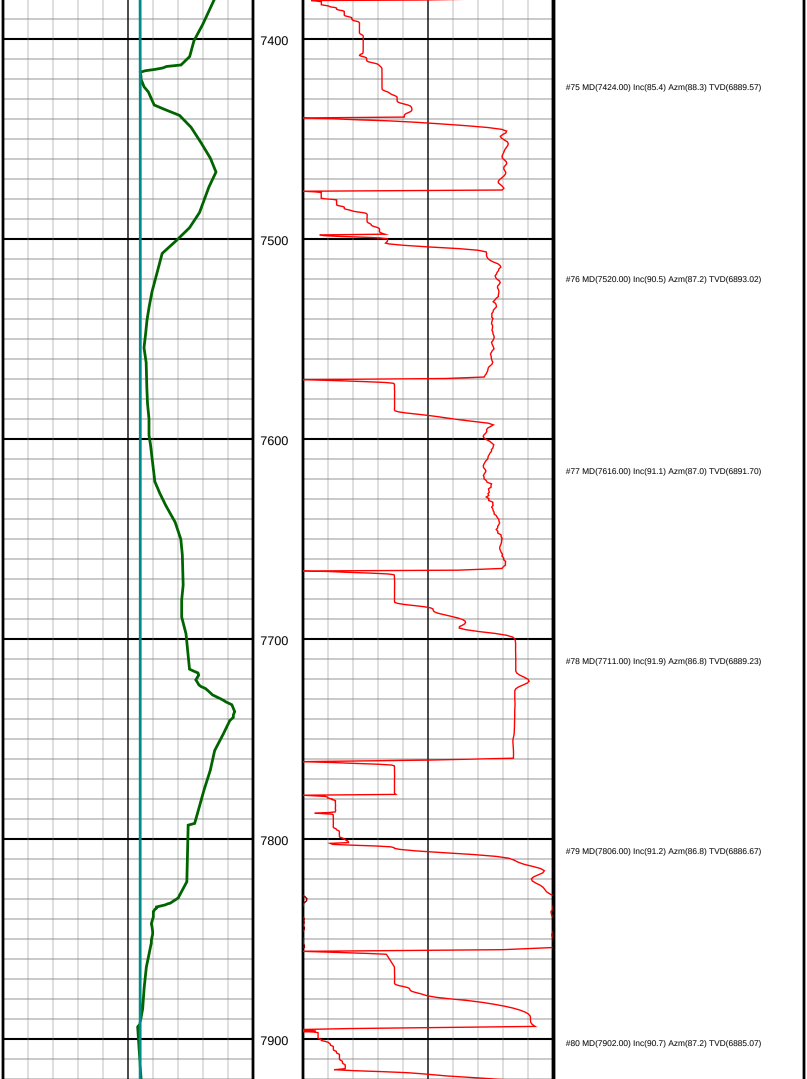
#61 MD(6088.00) Inc(5.8) Azm(237.2) TVD(5880.25)

#62 MD(6183.00) Inc(4.6) Azm(234.8) TVD(5974.86)

#63 MD(6279.00) Inc(0.9) Azm(274.7) TVD(6070.73)







#75 MD(7424.00) Inc(85.4) Azm(88.3) TVD(6889.57)

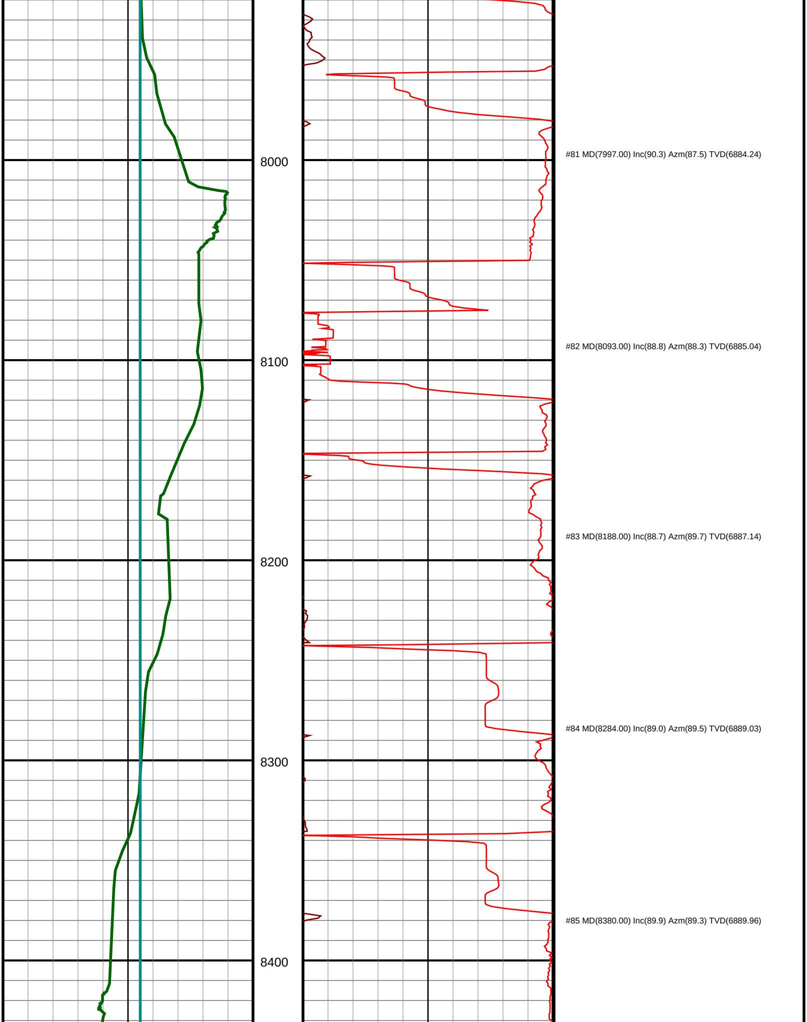
#76 MD(7520.00) Inc(90.5) Azm(87.2) TVD(6893.02)

#77 MD(7616.00) Inc(91.1) Azm(87.0) TVD(6891.70)

#78 MD(7711.00) Inc(91.9) Azm(86.8) TVD(6889.23)

#79 MD(7806.00) Inc(91.2) Azm(86.8) TVD(6886.67)

#80 MD(7902.00) Inc(90.7) Azm(87.2) TVD(6885.07)



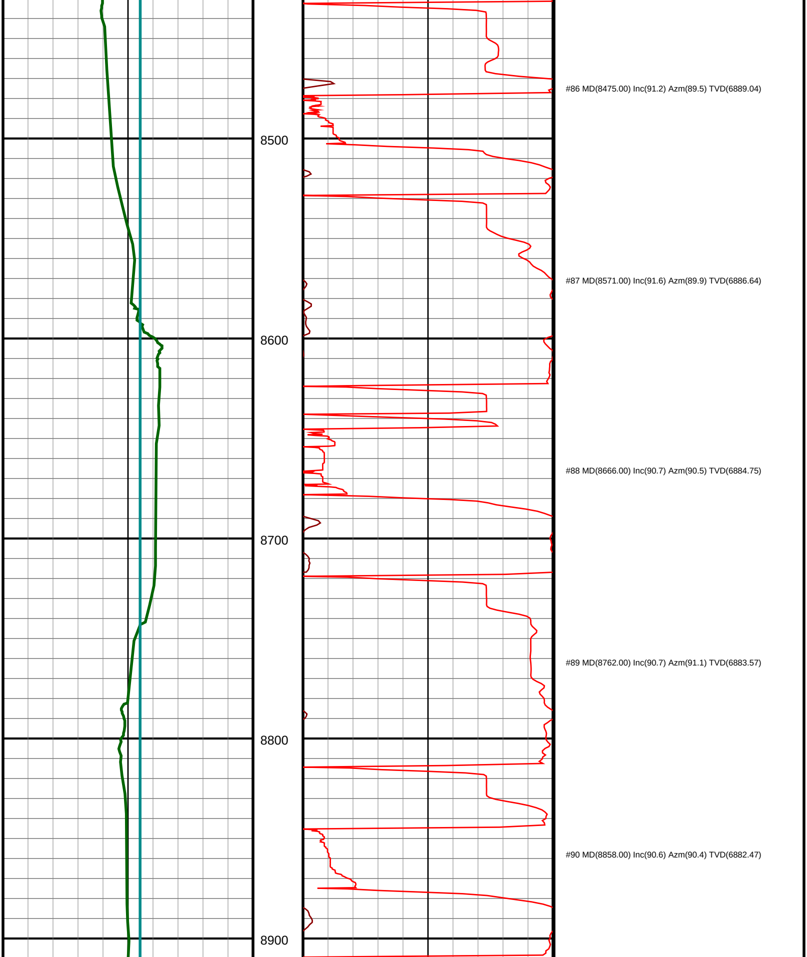
#81 MD(7997.00) Inc(90.3) Azm(87.5) TVD(6884.24)

#82 MD(8093.00) Inc(88.8) Azm(88.3) TVD(6885.04)

#83 MD(8188.00) Inc(88.7) Azm(89.7) TVD(6887.14)

#84 MD(8284.00) Inc(89.0) Azm(89.5) TVD(6889.03)

#85 MD(8380.00) Inc(89.9) Azm(89.3) TVD(6889.96)



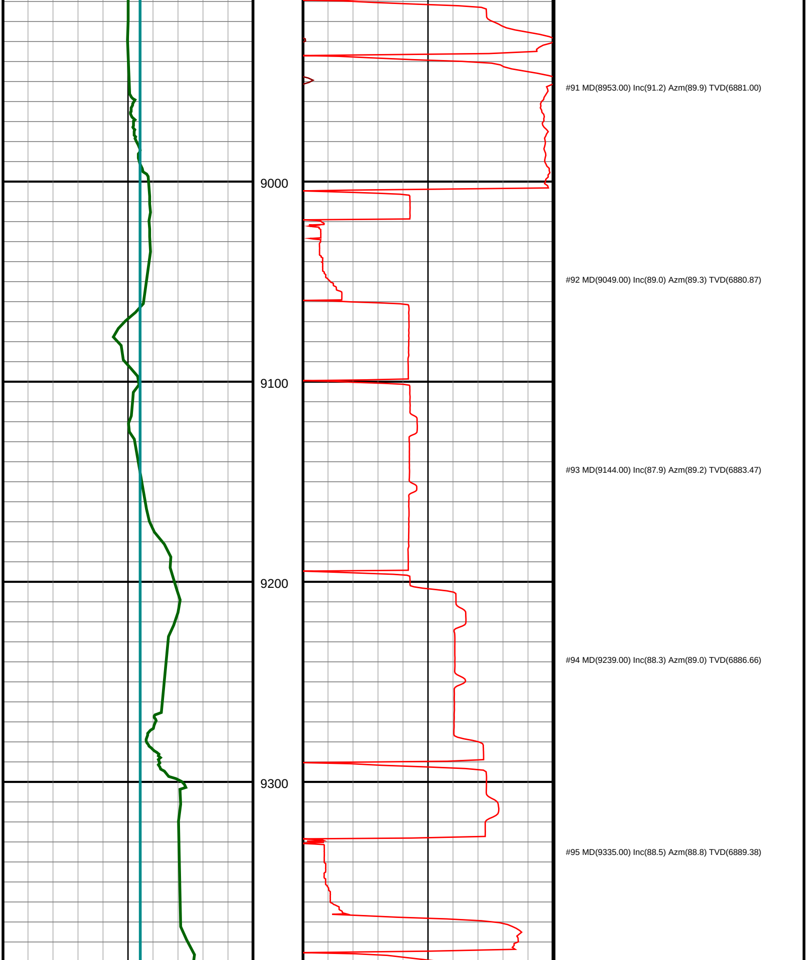
#86 MD(8475.00) Inc(91.2) Azm(89.5) TVD(6889.04)

#87 MD(8571.00) Inc(91.6) Azm(89.9) TVD(6886.64)

#88 MD(8666.00) Inc(90.7) Azm(90.5) TVD(6884.75)

#89 MD(8762.00) Inc(90.7) Azm(91.1) TVD(6883.57)

#90 MD(8858.00) Inc(90.6) Azm(90.4) TVD(6882.47)



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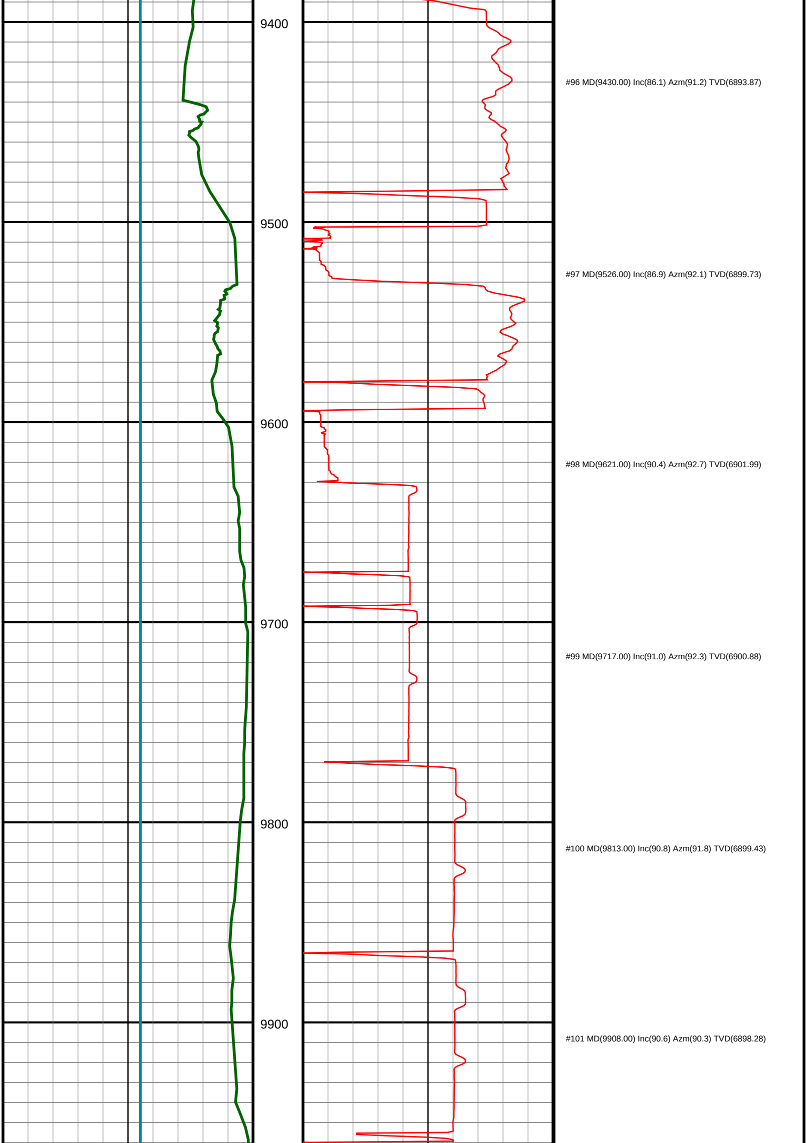
#92 MD(9049.00) Inc(89.0) Azm(89.3) TVD(6880.87)

#93 MD(9144.00) Inc(87.9) Azm(89.2) TVD(6883.47)

#94 MD(9239.00) Inc(88.3) Azm(89.0) TVD(6886.66)

#95 MD(9335.00) Inc(88.5) Azm(88.8) TVD(6889.38)



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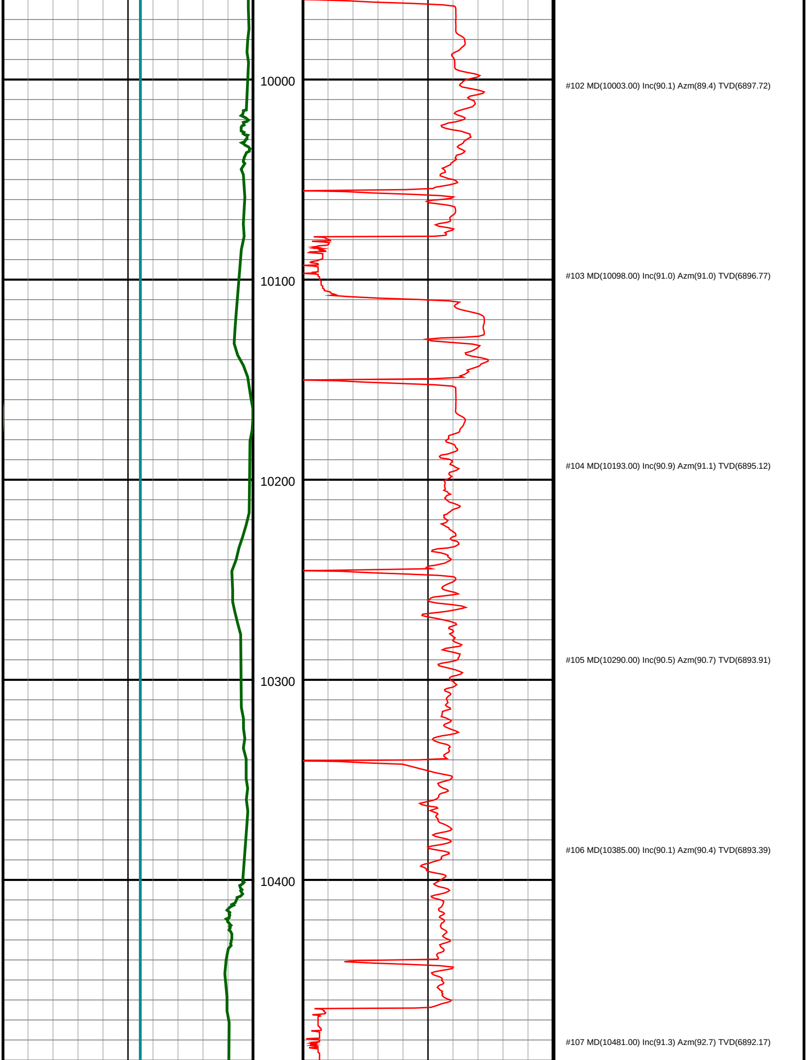
#97 MD(9526.00) Inc(86.9) Azm(92.1) TVD(6899.73)

#98 MD(9621.00) Inc(90.4) Azm(92.7) TVD(6901.99)

#99 MD(9717.00) Inc(91.0) Azm(92.3) TVD(6900.88)

#100 MD(9813.00) Inc(90.8) Azm(91.8) TVD(6899.43)

#101 MD(9908.00) Inc(90.6) Azm(90.3) TVD(6898.28)



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#109 MD(10672.00) Inc(90.6) Azm(93.3) TVD(6888.56)

#110 MD(10767.00) Inc(90.2) Azm(92.8) TVD(6887.90)

#111 MD(10863.00) Inc(90.5) Azm(93.7) TVD(6887.28)

#112 MD(10958.00) Inc(91.3) Azm(94.2) TVD(6885.79)

#113 MD(11054.00) Inc(91.2) Azm(89.9) TVD(6883.75)

#114 MD(11150.00) Inc(91.0) Azm(86.7) TVD(6881.91)

#115 MD(11245.00) Inc(91.3) Azm(86.3) TVD(6879.96)

#116 MD(11341.00) Inc(91.6) Azm(86.6) TVD(6877.56)

#117 MD(11437.00) Inc(91.5) Azm(86.3) TVD(6874.98)

#118 MD(11532.00) Inc(91.2) Azm(85.9) TVD(6872.70)

#119 MD(11628.00) Inc(88.8) Azm(87.1) TVD(6872.69)

#120 MD(11723.00) Inc(88.0) Azm(87.5) TVD(6875.29)

#121 MD(11819.00) Inc(87.2) Azm(86.8) TVD(6879.28)

#122 MD(11914.00) Inc(88.8) Azm(88.4) TVD(6882.56)

#123 MD(12010.00) Inc(88.5) Azm(88.0) TVD(6884.81)

#124 MD(12106.00) Inc(88.7) Azm(87.6) TVD(6887.16)

#125 MD(12202.00) Inc(89.2) Azm(88.6) TVD(6888.85)

#126 MD(12298.00) Inc(89.4) Azm(88.2) TVD(6889.96)

#127 MD(12393.00) Inc(91.0) Azm(89.3) TVD(6889.63)

#128 MD(12489.00) Inc(91.8) Azm(88.8) TVD(6887.37)

#129 MD(12584.00) Inc(92.7) Azm(89.0) TVD(6883.68)

#130 MD(12680.00) Inc(91.7) Azm(87.9) TVD(6879.99)

#131 MD(12776.00) Inc(91.1) Azm(87.3) TVD(6877.64)

#132 MD(12817.00) Inc(90.9) Azm(87.5) TVD(6876.93)