Elbert 1N

TVD
2":100'

Company: PDC
Well Name: Elbert 1N
API: 05 123 44562 00
County/Parish: WELD
State: CO
Country: USA
Job number: 160-99
Field: Wattenberg
Rig Id: Ensign 160
Survey Company: Ensign Directional
Day Direction Driller Richard Stahl
Night Direction Driller Hugh McGraw

MWD 1 Chad Lousberg
MWD 2 Roy Montante

Log measurements: Gamma
Depth measured from:
Maximum temperature:

	Depth	Date
Start:	0 ft	9/2/17
End:	12082 ft	9/7/2017

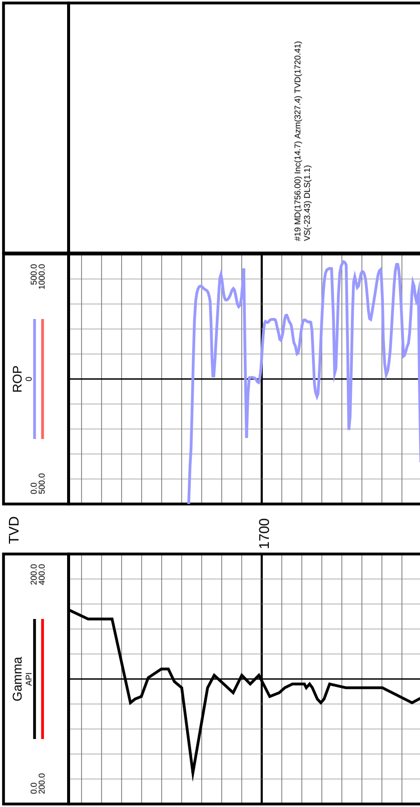
Casing	Depth	Size
Surface:	1650 ft	9 5/8"
Intermediate:		

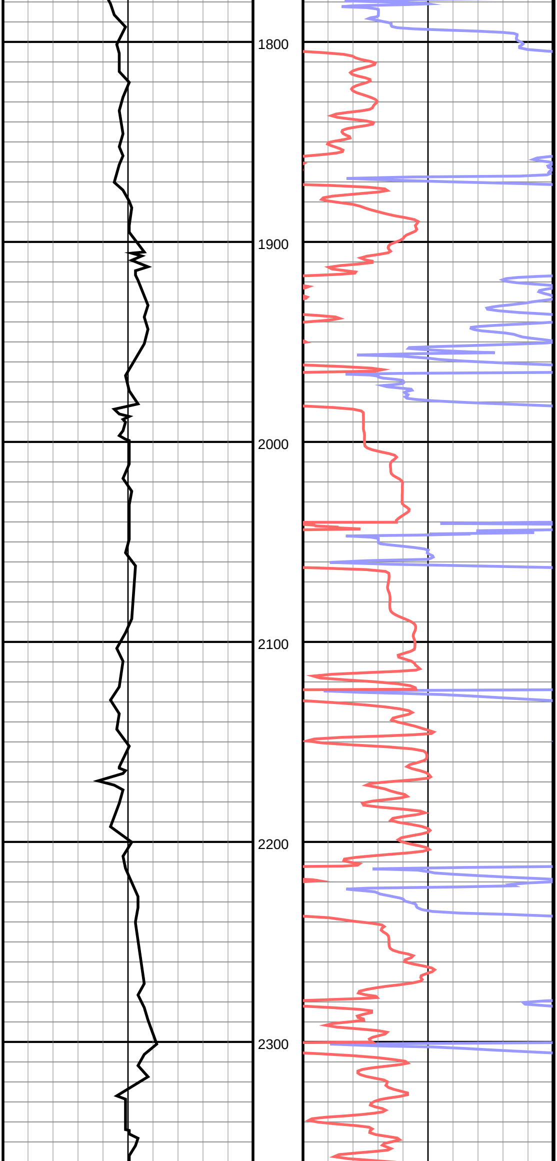
Mud Type: Water
Density:
Viscosity:
Rm: **Rmf:** **Rmc:**

Elevations
KB: 4661 ft
GL: 4638 ft
DF: 4661 ft

		Offsets		Depths		Dates	
Run	**Bit Size**	**Gamma**	**Survey**	**Start**	**End**	**Start**	**End**
1	12.25"		60.00 ft	0 ft	1670 ft	9/2/17	9/2/17
2	8.5"	62.20 ft	57.20 ft	1670 ft	12082 ft	9/3/17	9/7/2017
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.





#20 MD(1845.00) Inc(14.9) Azm(332.3) TVD(1806.46)
VS(-27.66) DLS(1.4)

#21 MD(1935.00) Inc(14.1) Azm(328.0) TVD(1893.60)
VS(-31.72) DLS(1.5)

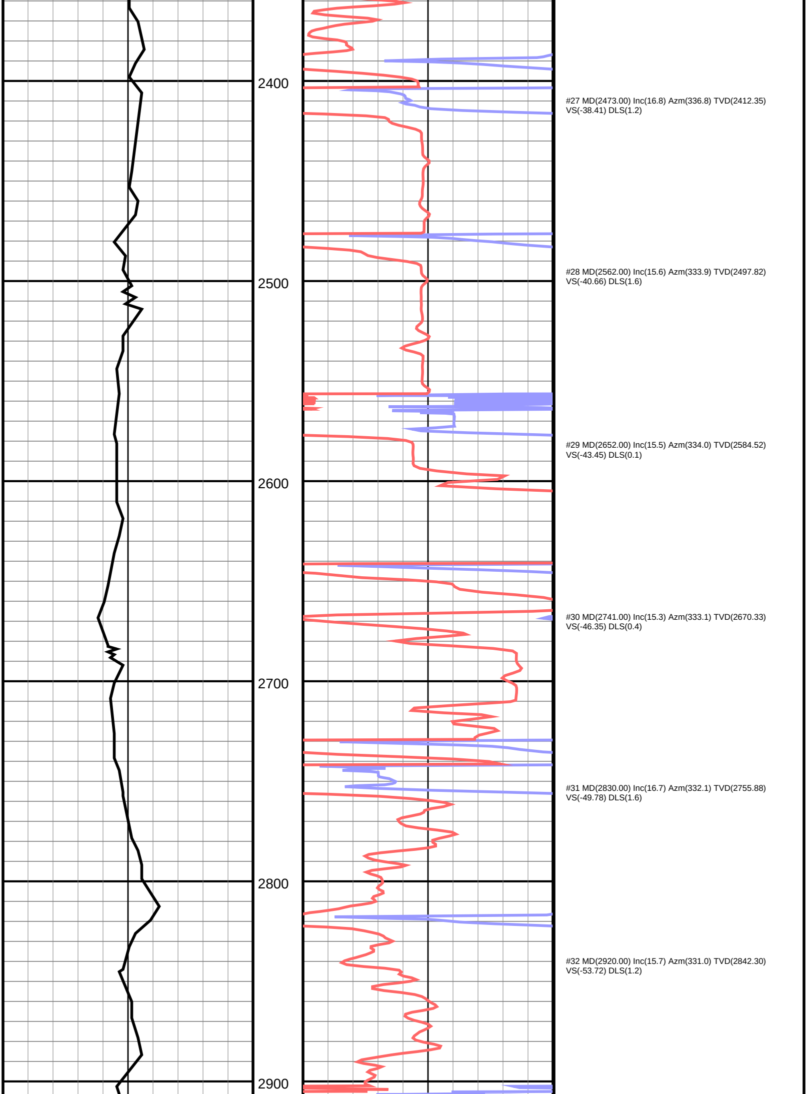
#22 MD(2025.00) Inc(14.3) Azm(336.4) TVD(1980.85)
VS(-34.93) DLS(2.3)

#23 MD(2115.00) Inc(15.8) Azm(340.0) TVD(2067.77)
VS(-35.87) DLS(2.0)

#24 MD(2204.00) Inc(14.5) Azm(340.9) TVD(2153.67)
VS(-35.94) DLS(1.5)

#25 MD(2294.00) Inc(16.3) Azm(339.2) TVD(2240.44)
VS(-36.19) DLS(2.1)

#26 MD(2384.00) Inc(15.8) Azm(338.1) TVD(2326.93)
VS(-37.03) DLS(0.7)



#27 MD(2473.00) Inc(16.8) Azm(336.8) TVD(2412.35)
VS(-38.41) DLS(1.2)

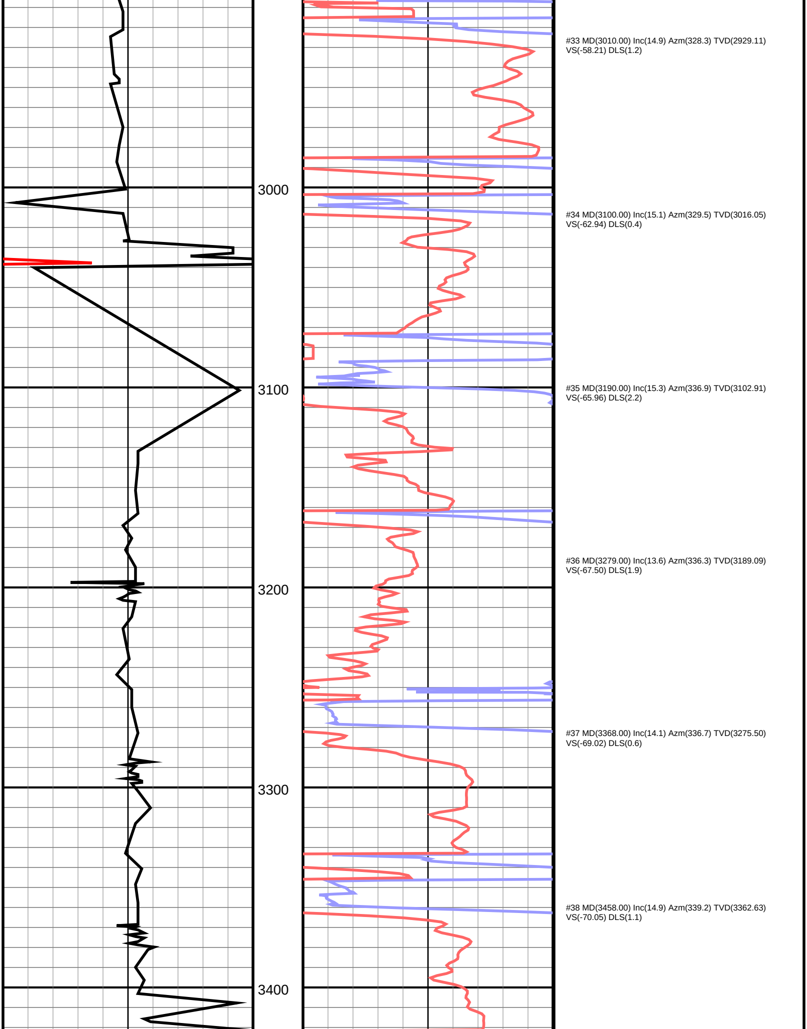
#28 MD(2562.00) Inc(15.6) Azm(333.9) TVD(2497.82)
VS(-40.66) DLS(1.6)

#29 MD(2652.00) Inc(15.5) Azm(334.0) TVD(2584.52)
VS(-43.45) DLS(0.1)

#30 MD(2741.00) Inc(15.3) Azm(333.1) TVD(2670.33)
VS(-46.35) DLS(0.4)

#31 MD(2830.00) Inc(16.7) Azm(332.1) TVD(2755.88)
VS(-49.78) DLS(1.6)

#32 MD(2920.00) Inc(15.7) Azm(331.0) TVD(2842.30)
VS(-53.72) DLS(1.2)



#33 MD(3010.00) Inc(14.9) Azm(328.3) TVD(2929.11)
VS(-58.21) DLS(1.2)

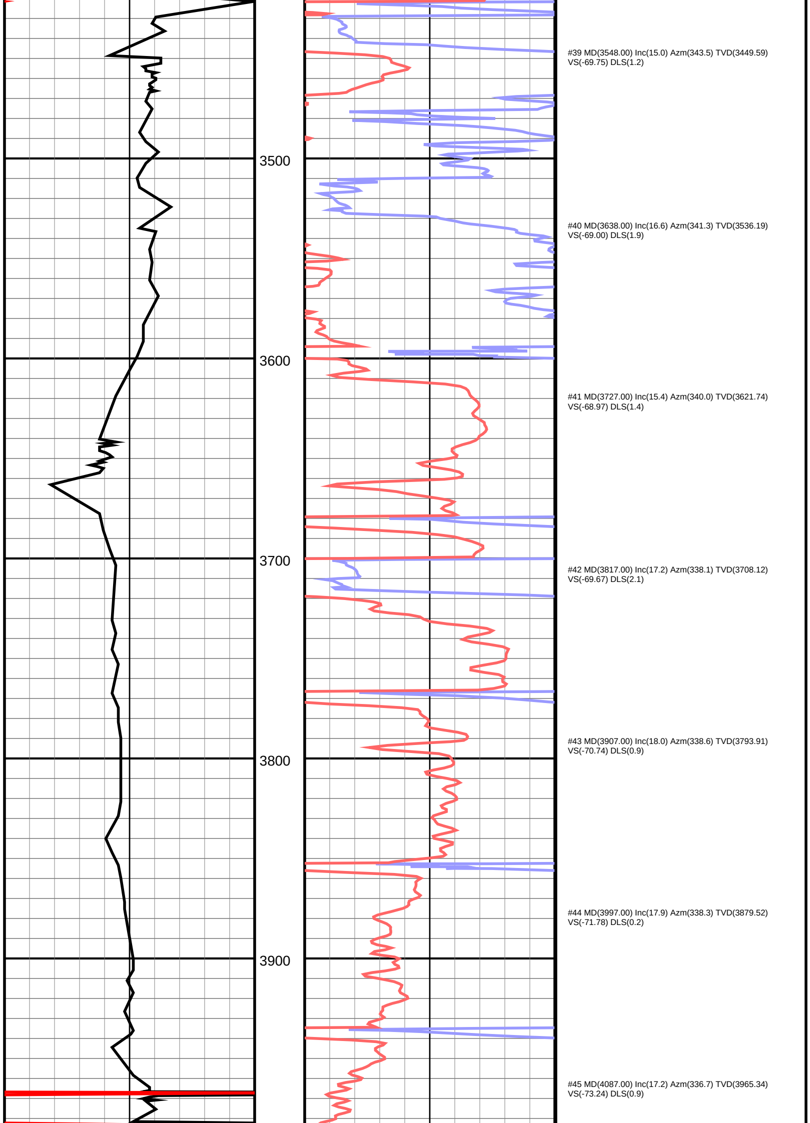
#34 MD(3100.00) Inc(15.1) Azm(329.5) TVD(3016.05)
VS(-62.94) DLS(0.4)

#35 MD(3190.00) Inc(15.3) Azm(336.9) TVD(3102.91)
VS(-65.96) DLS(2.2)

#36 MD(3279.00) Inc(13.6) Azm(336.3) TVD(3189.09)
VS(-67.50) DLS(1.9)

#37 MD(3368.00) Inc(14.1) Azm(336.7) TVD(3275.50)
VS(-69.02) DLS(0.6)

#38 MD(3458.00) Inc(14.9) Azm(339.2) TVD(3362.63)
VS(-70.05) DLS(1.1)



#39 MD(3548.00) Inc(15.0) Azm(343.5) TVD(3449.59)
VS(-69.75) DLS(1.2)

#40 MD(3638.00) Inc(16.6) Azm(341.3) TVD(3536.19)
VS(-69.00) DLS(1.9)

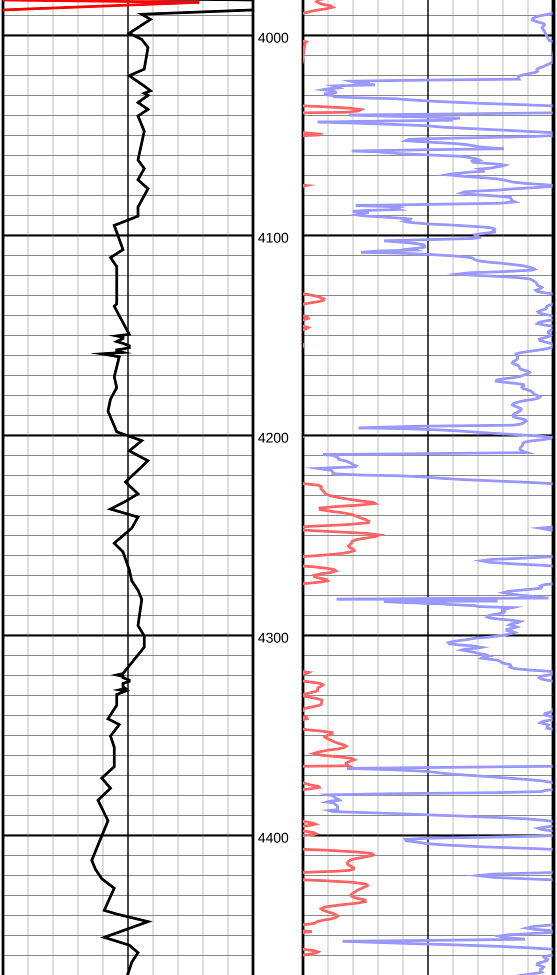
#41 MD(3727.00) Inc(15.4) Azm(340.0) TVD(3621.74)
VS(-68.97) DLS(1.4)

#42 MD(3817.00) Inc(17.2) Azm(338.1) TVD(3708.12)
VS(-69.67) DLS(2.1)

#43 MD(3907.00) Inc(18.0) Azm(338.6) TVD(3793.91)
VS(-70.74) DLS(0.9)

#44 MD(3997.00) Inc(17.9) Azm(338.3) TVD(3879.52)
VS(-71.78) DLS(0.2)

#45 MD(4087.00) Inc(17.2) Azm(336.7) TVD(3965.34)
VS(-73.24) DLS(0.9)



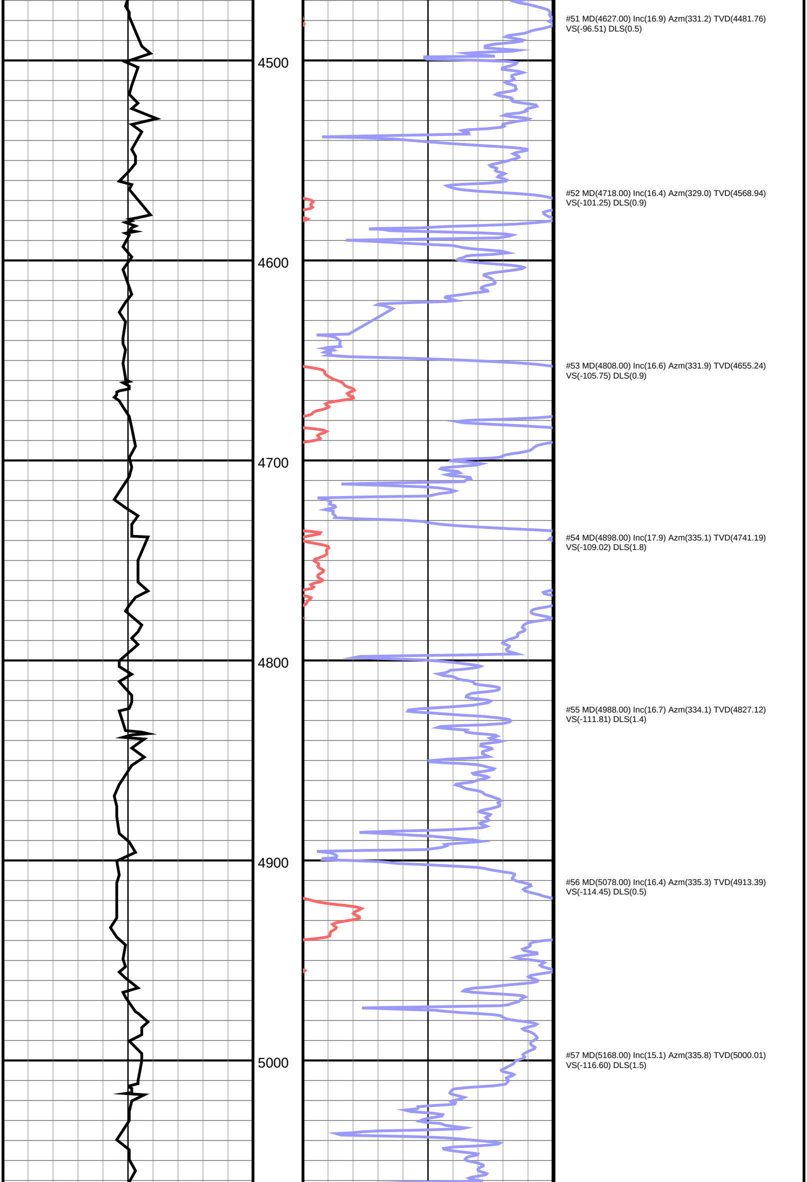
#46 MD(4177.00) Inc(17.6) Azm(333.2) TVD(4051.22)
VS(-75.90) DLS(1.2)

#47 MD(4267.00) Inc(16.4) Azm(330.5) TVD(4137.29)
VS(-79.88) DLS(1.6)

#48 MD(4357.00) Inc(17.4) Azm(331.8) TVD(4223.40)
VS(-84.16) DLS(1.2)

#49 MD(4447.00) Inc(16.2) Azm(331.2) TVD(4309.56)
VS(-88.27) DLS(1.3)

#50 MD(4537.00) Inc(17.3) Azm(331.9) TVD(4395.74)
VS(-92.35) DLS(1.2)



#51 MD(4627.00) Inc(16.9) Azm(331.2) TVD(4481.76)
VS(-96.51) DLS(0.5)

#52 MD(4718.00) Inc(16.4) Azm(329.0) TVD(4568.94)
VS(-101.25) DLS(0.9)

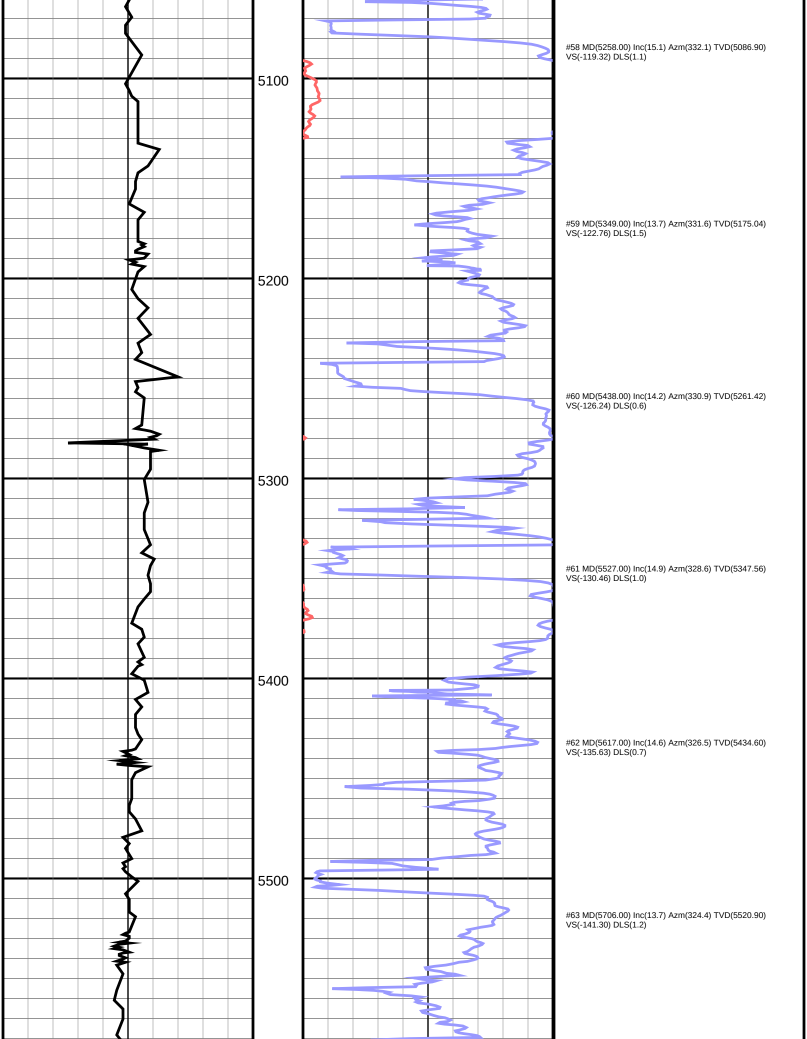
#53 MD(4808.00) Inc(16.6) Azm(331.9) TVD(4655.24)
VS(-105.75) DLS(0.9)

#54 MD(4898.00) Inc(17.9) Azm(335.1) TVD(4741.19)
VS(-109.02) DLS(1.8)

#55 MD(4988.00) Inc(16.7) Azm(334.1) TVD(4827.12)
VS(-111.81) DLS(1.4)

#56 MD(5078.00) Inc(16.4) Azm(335.3) TVD(4913.39)
VS(-114.45) DLS(0.5)

#57 MD(5168.00) Inc(15.1) Azm(335.8) TVD(5000.01)
VS(-116.60) DLS(1.5)



#58 MD(5258.00) Inc(15.1) Azm(332.1) TVD(5086.90)
VS(-119.32) DLS(1.1)

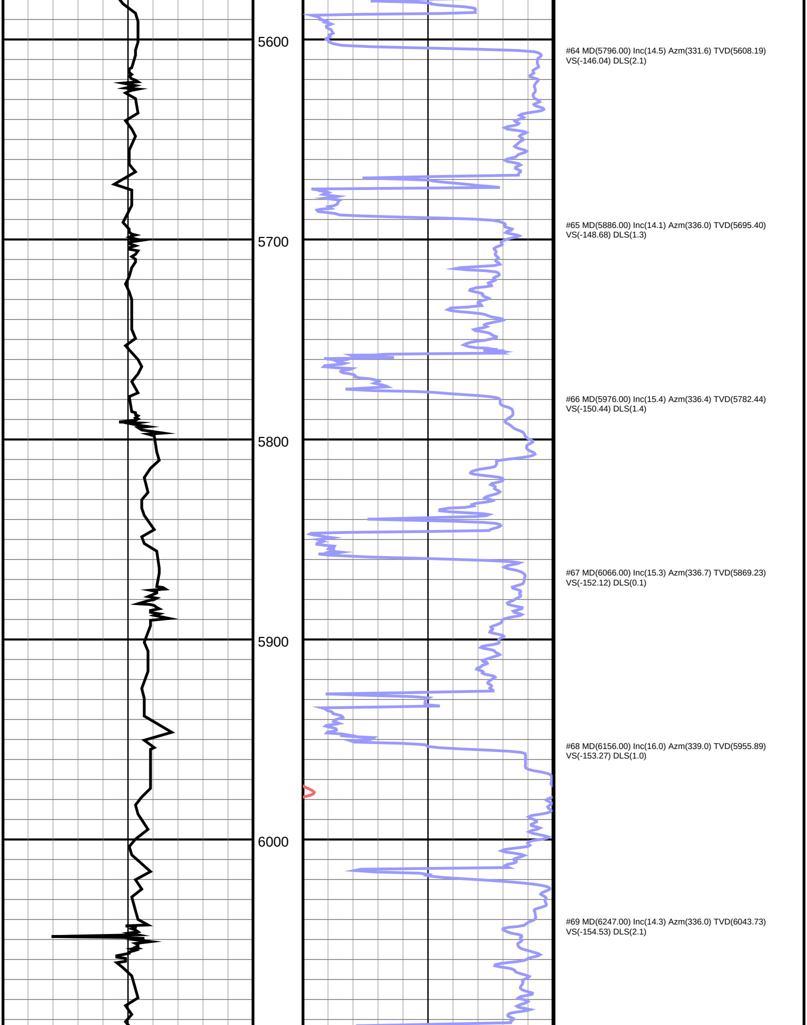
#59 MD(5349.00) Inc(13.7) Azm(331.6) TVD(5175.04)
VS(-122.76) DLS(1.5)

#60 MD(5438.00) Inc(14.2) Azm(330.9) TVD(5261.42)
VS(-126.24) DLS(0.6)

#61 MD(5527.00) Inc(14.9) Azm(328.6) TVD(5347.56)
VS(-130.46) DLS(1.0)

#62 MD(5617.00) Inc(14.6) Azm(326.5) TVD(5434.60)
VS(-135.63) DLS(0.7)

#63 MD(5706.00) Inc(13.7) Azm(324.4) TVD(5520.90)
VS(-141.30) DLS(1.2)



#64 MD(5796.00) Inc(14.5) Azm(331.6) TVD(5608.19)
VS(-146.04) DLS(2.1)

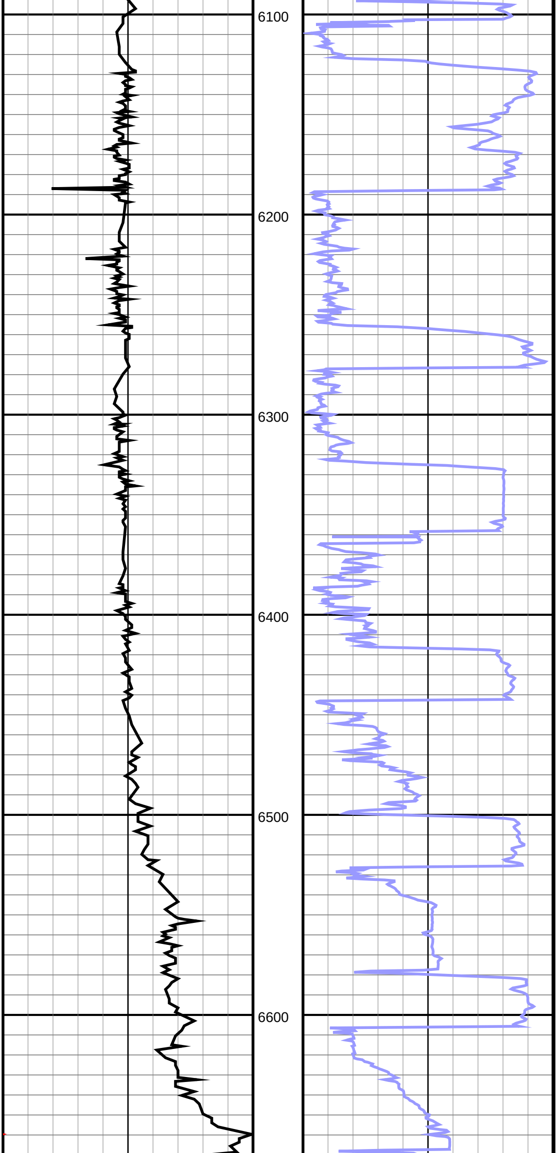
#65 MD(5886.00) Inc(14.1) Azm(336.0) TVD(5695.40)
VS(-148.68) DLS(1.3)

#66 MD(5976.00) Inc(15.4) Azm(336.4) TVD(5782.44)
VS(-150.44) DLS(1.4)

#67 MD(6066.00) Inc(15.3) Azm(336.7) TVD(5869.23)
VS(-152.12) DLS(0.1)

#68 MD(6156.00) Inc(16.0) Azm(339.0) TVD(5955.89)
VS(-153.27) DLS(1.0)

#69 MD(6247.00) Inc(14.3) Azm(336.0) TVD(6043.73)
VS(-154.53) DLS(2.1)



#70 MD(6336.00) Inc(15.2) Azm(335.0) TVD(6129.79)
VS(-156.55) DLS(1.1)

#71 MD(6425.00) Inc(13.6) Azm(358.8) TVD(6216.07)
VS(-154.41) DLS(6.8)

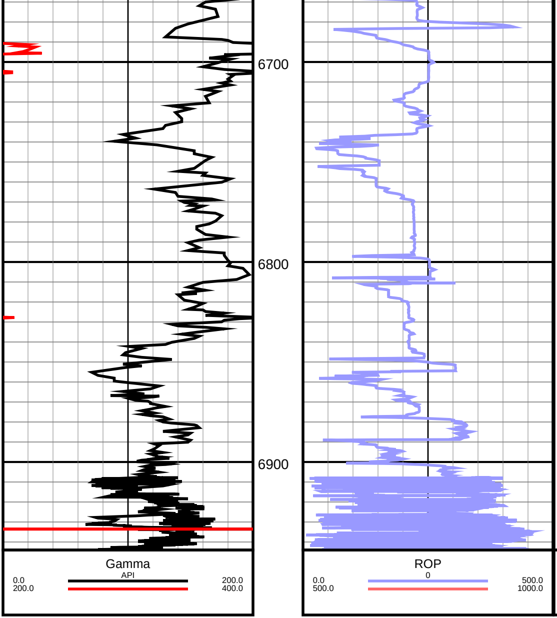
#72 MD(6515.00) Inc(17.5) Azm(28.7) TVD(6302.89)
VS(-141.01) DLS(9.8)

#73 MD(6604.00) Inc(20.0) Azm(43.5) TVD(6387.21)
VS(-117.49) DLS(6.0)

#74 MD(6694.00) Inc(24.3) Azm(59.0) TVD(6470.62)
VS(-85.60) DLS(8.0)

#75 MD(6783.00) Inc(28.1) Azm(67.9) TVD(6550.49)
VS(-46.70) DLS(6.1)

#76 MD(6873.00) Inc(31.3) Azm(73.7) TVD(6628.68) VS(-2.16)
DLS(4.8)



#77 MD(6963.00) Inc(37.9) Azm(77.4) TVD(6702.73) VS(48.69) DLS(7.7)

#78 MD(7053.00) Inc(47.5) Azm(80.1) TVD(6768.80) VS(109.01) DLS(10.9)

#79 MD(7144.00) Inc(56.8) Azm(78.8) TVD(6824.58) VS(179.94) DLS(10.3)

#80 MD(7234.00) Inc(66.8) Azm(80.6) TVD(6867.05) VS(258.14) DLS(11.2)

#81 MD(7324.00) Inc(74.2) Azm(81.6) TVD(6897.08) VS(341.50) DLS(8.3)

#133 MD(12022.00) Inc(90.4) Azm(90.0) TVD(6909.48) VS(4777.34) DLS(0.7)