ENSIGN Directional Services

Todd LC25-760

MD
2":100'

Company: Noble Energy
Well Name: Todd LC25-760
API: 05-123-40675-00
Rig Id: H&P 326
State: Colorado
County/Parish: Weld
Country: USA
Survey Company: ENSIGN Directional
Job number: HP326-207-10
DD1 Zach Gentry
DD2 Tyler Bachelder
DD3 Colby Hansen
MWD1 Andrew Demrow
MWD2 Derek Saykally
MWD3 Buster Snider

Log measurements: Gama, ROP
Depth measured from:
Maximum temperature:

	Depth	**Date**
Start:	1408 ft	05-05-2015
End:	ft	

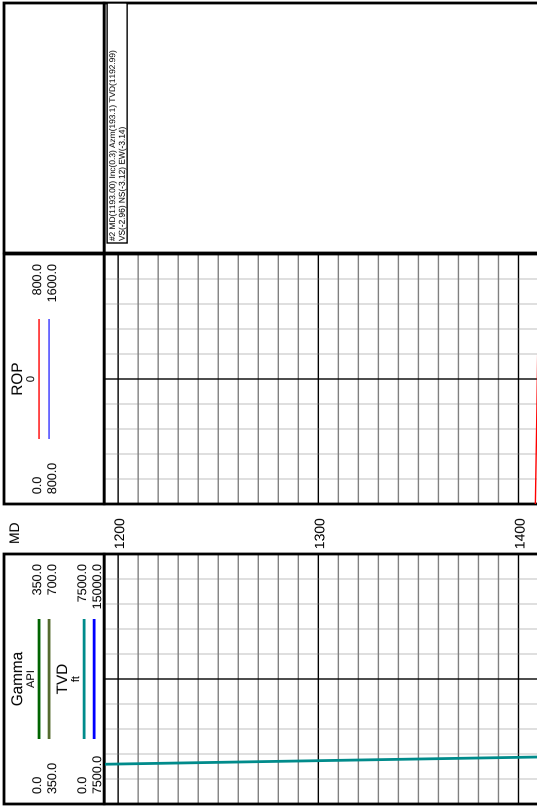
Casing	**Depth**	**Size**
Surface:	1408	9 5/8
Intermediate:	6477	7

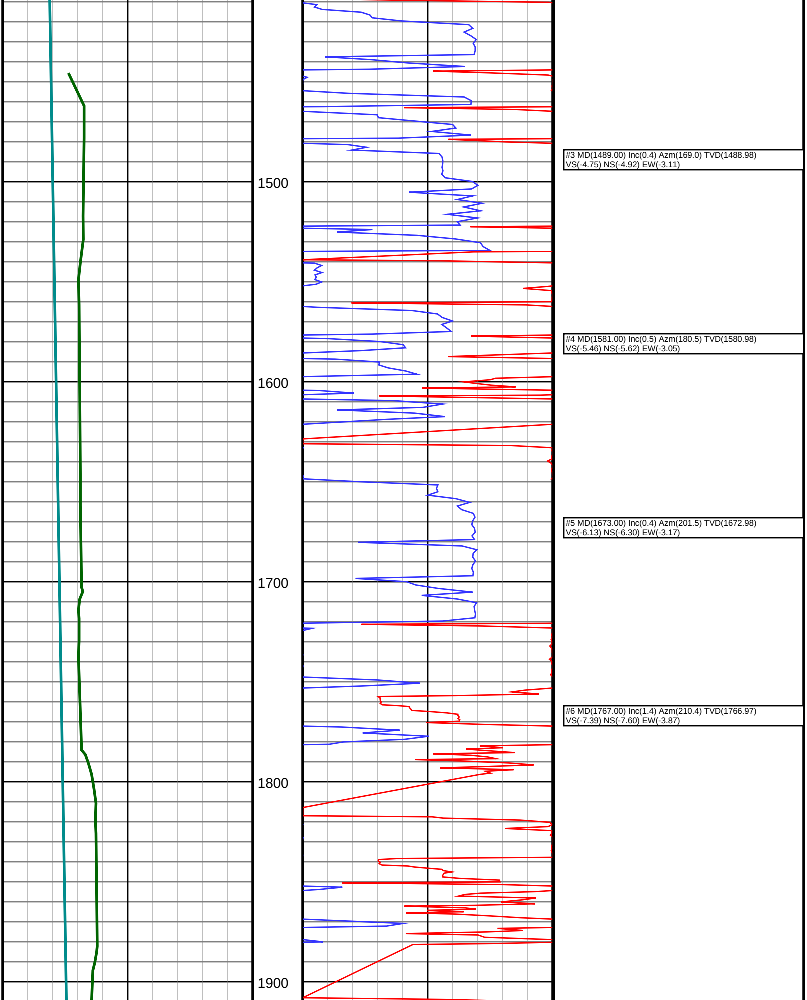
Mud Type:
Density:
Viscosity:
Rm: **Rmf:** **Rmc:**

Elevations
KB: 30
GL: 4827
DF: 4857

		Offsets		**Depths**		**Dates**	
Run	**Bit Size**	**Gamma**	**Survey**	**Start**	**End**	**Start**	**End**
1	8.75	54.22	49.22	1408	6477	05-05-2015	05-06-2015
2	6.125	64.86	59.86	6477		05-08-2015	
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.



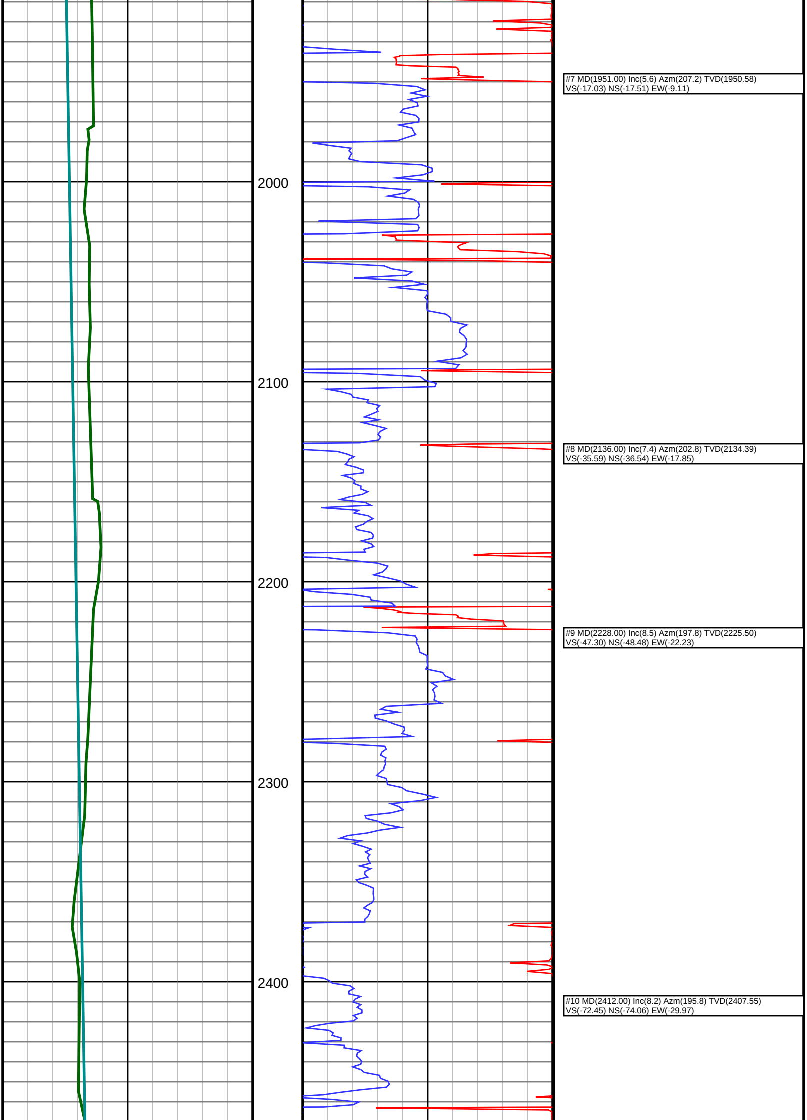


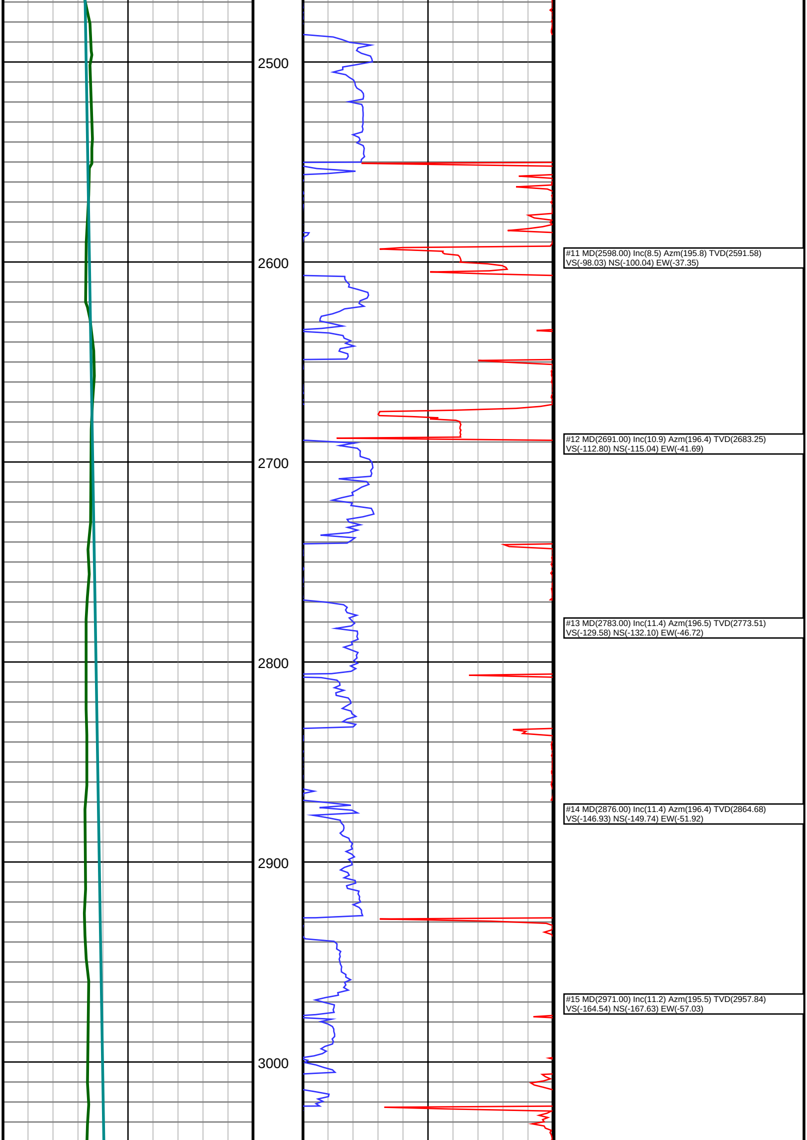
#3 MD(1489.00) Inc(0.4) Azm(169.0) TVD(1488.98)
VS(-4.75) NS(-4.92) EW(-3.11)

#4 MD(1581.00) Inc(0.5) Azm(180.5) TVD(1580.98)
VS(-5.46) NS(-5.62) EW(-3.05)

#5 MD(1673.00) Inc(0.4) Azm(201.5) TVD(1672.98)
VS(-6.13) NS(-6.30) EW(-3.17)

#6 MD(1767.00) Inc(1.4) Azm(210.4) TVD(1766.97)
VS(-7.39) NS(-7.60) EW(-3.87)





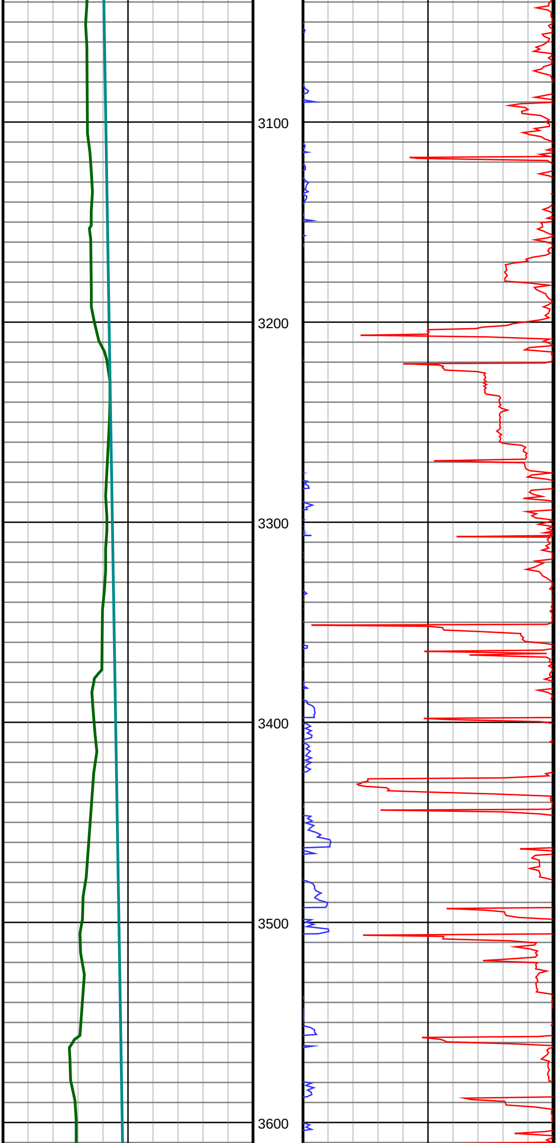
#11 MD(2598.00) Inc(8.5) Azm(195.8) TVD(2591.58)
VS(-98.03) NS(-100.04) EW(-37.35)

#12 MD(2691.00) Inc(10.9) Azm(196.4) TVD(2683.25)
VS(-112.80) NS(-115.04) EW(-41.69)

#13 MD(2783.00) Inc(11.4) Azm(196.5) TVD(2773.51)
VS(-129.58) NS(-132.10) EW(-46.72)

#14 MD(2876.00) Inc(11.4) Azm(196.4) TVD(2864.68)
VS(-146.93) NS(-149.74) EW(-51.92)

#15 MD(2971.00) Inc(11.2) Azm(195.5) TVD(2957.84)
VS(-164.54) NS(-167.63) EW(-57.03)



#16 MD(3065.00) Inc(11.0) Azm(195.7) TVD(3050.07)
VS(-181.74) NS(-185.10) EW(-61.90)

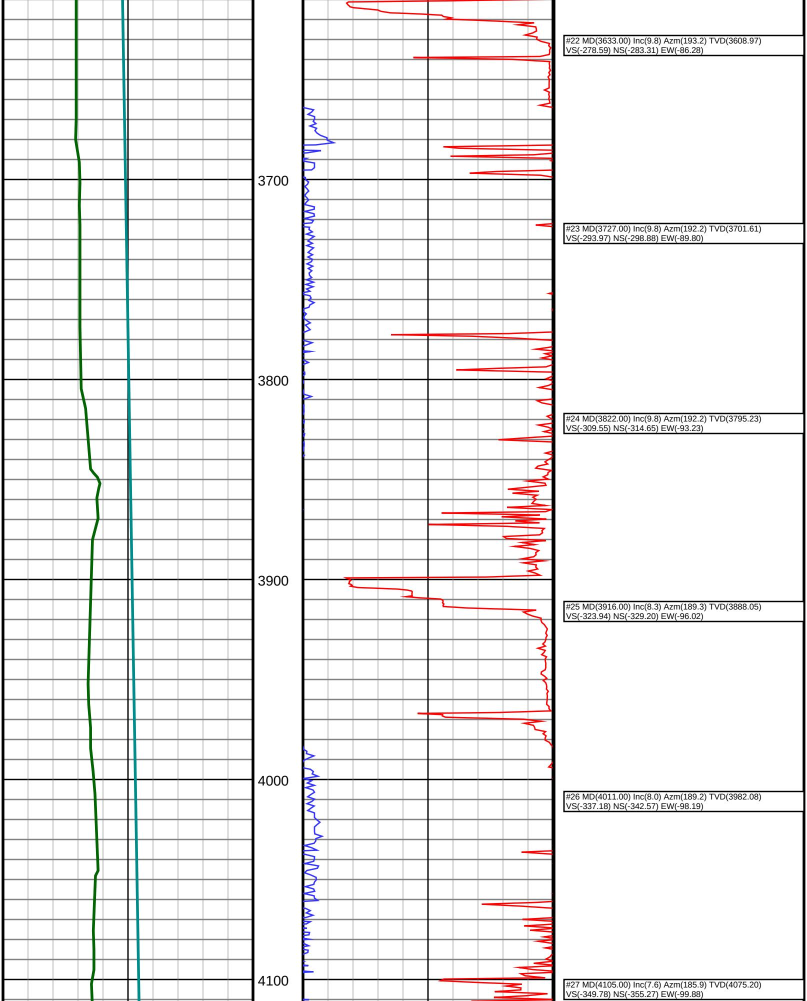
#17 MD(3160.00) Inc(10.7) Azm(195.2) TVD(3143.36)
VS(-198.77) NS(-202.39) EW(-66.69)

#18 MD(3254.00) Inc(10.2) Azm(194.5) TVD(3235.80)
VS(-215.03) NS(-218.89) EW(-71.08)

#19 MD(3349.00) Inc(10.2) Azm(195.1) TVD(3329.30)
VS(-231.02) NS(-235.12) EW(-75.36)

#20 MD(3444.00) Inc(10.0) Azm(191.8) TVD(3422.84)
VS(-246.94) NS(-251.26) EW(-79.22)

#21 MD(3538.00) Inc(10.1) Azm(192.3) TVD(3515.40)
VS(-262.78) NS(-267.29) EW(-82.65)



#22 MD(3633.00) Inc(9.8) Azm(193.2) TVD(3608.97)
VS(-278.59) NS(-283.31) EW(-86.28)

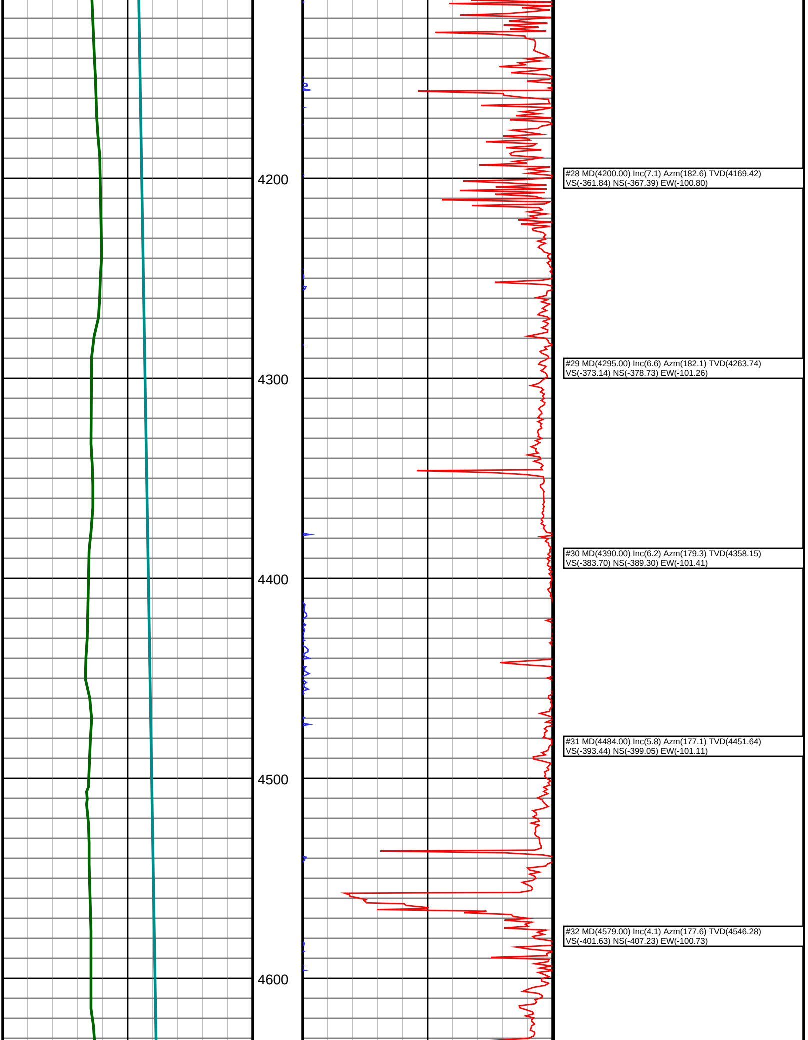
#23 MD(3727.00) Inc(9.8) Azm(192.2) TVD(3701.61)
VS(-293.97) NS(-298.88) EW(-89.80)

#24 MD(3822.00) Inc(9.8) Azm(192.2) TVD(3795.23)
VS(-309.55) NS(-314.65) EW(-93.23)

#25 MD(3916.00) Inc(8.3) Azm(189.3) TVD(3888.05)
VS(-323.94) NS(-329.20) EW(-96.02)

#26 MD(4011.00) Inc(8.0) Azm(189.2) TVD(3982.08)
VS(-337.18) NS(-342.57) EW(-98.19)

#27 MD(4105.00) Inc(7.6) Azm(185.9) TVD(4075.20)
VS(-349.78) NS(-355.27) EW(-99.88)



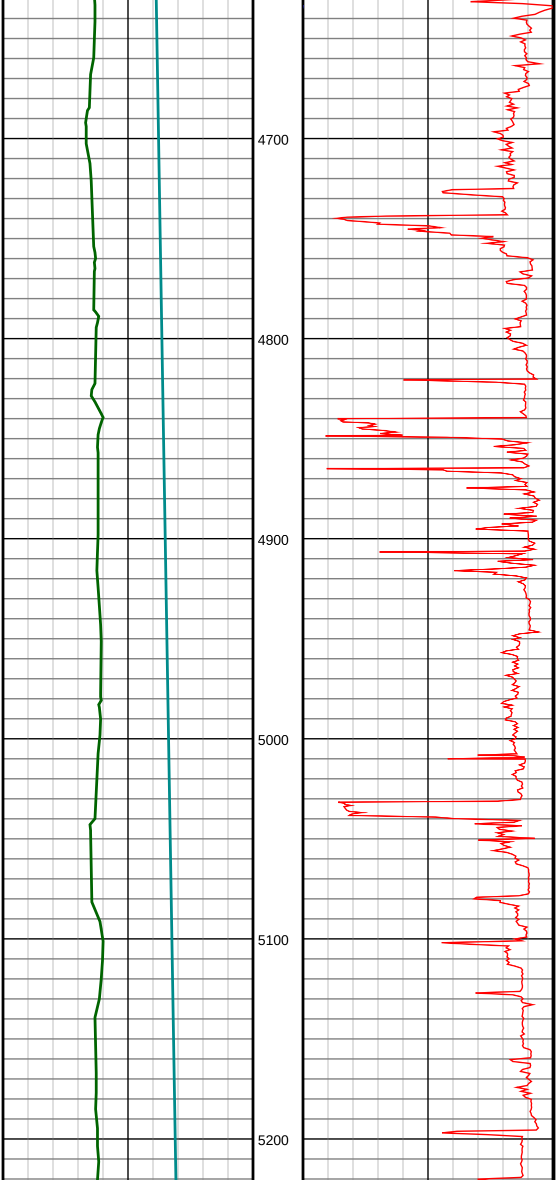
#28 MD(4200.00) Inc(7.1) Azm(182.6) TVD(4169.42)
VS(-361.84) NS(-367.39) EW(-100.80)

#29 MD(4295.00) Inc(6.6) Azm(182.1) TVD(4263.74)
VS(-373.14) NS(-378.73) EW(-101.26)

#30 MD(4390.00) Inc(6.2) Azm(179.3) TVD(4358.15)
VS(-383.70) NS(-389.30) EW(-101.41)

#31 MD(4484.00) Inc(5.8) Azm(177.1) TVD(4451.64)
VS(-393.44) NS(-399.05) EW(-101.11)

#32 MD(4579.00) Inc(4.1) Azm(177.6) TVD(4546.28)
VS(-401.63) NS(-407.23) EW(-100.73)



#33 MD(4673.00) Inc(3.6) Azm(171.1) TVD(4640.07)
VS(-407.94) NS(-413.51) EW(-100.13)

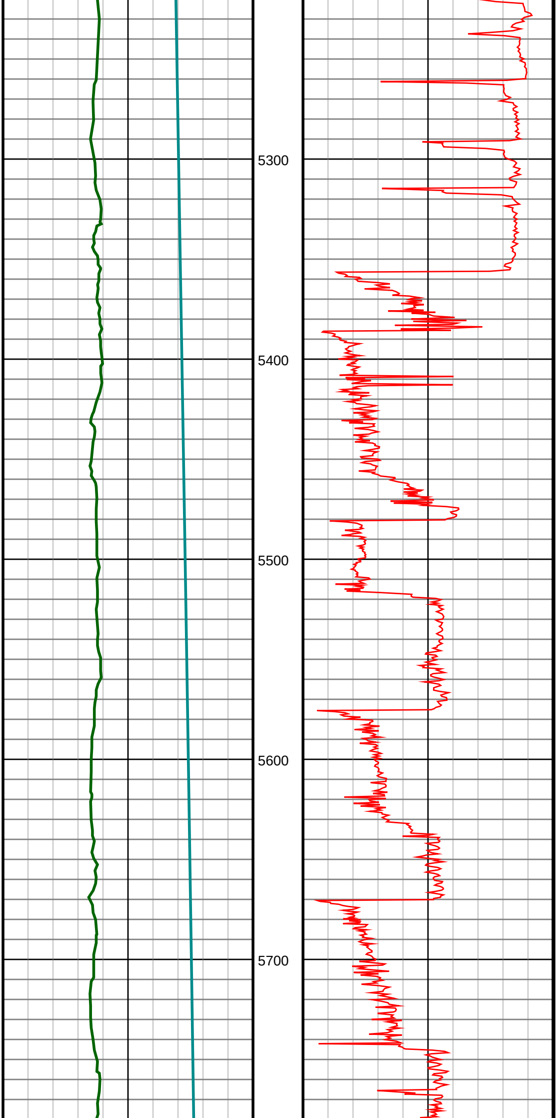
#34 MD(4768.00) Inc(3.5) Azm(189.0) TVD(4734.89)
VS(-413.70) NS(-419.28) EW(-100.13)

#35 MD(4863.00) Inc(1.2) Azm(186.3) TVD(4829.81)
VS(-417.52) NS(-423.14) EW(-100.69)

#36 MD(4957.00) Inc(1.3) Azm(181.1) TVD(4923.78)
VS(-419.56) NS(-425.18) EW(-100.82)

#37 MD(5052.00) Inc(0.6) Azm(139.3) TVD(5018.77)
VS(-421.01) NS(-426.62) EW(-100.50)

#38 MD(5146.00) Inc(0.5) Azm(122.3) TVD(5112.77)
VS(-421.64) NS(-427.22) EW(-99.84)



#39 MD(5241.00) Inc(0.5) Azm(144.5) TVD(5207.76)
VS(-422.21) NS(-427.75) EW(-99.27)

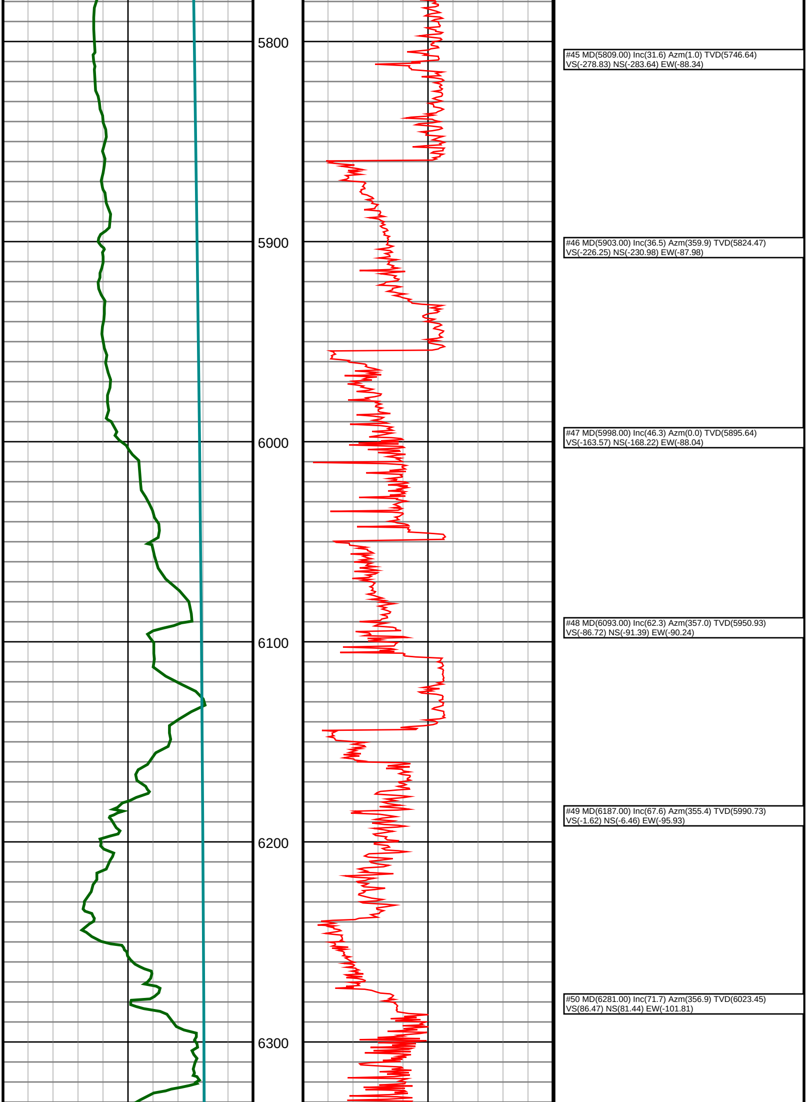
#40 MD(5336.00) Inc(0.7) Azm(154.1) TVD(5302.76)
VS(-423.07) NS(-428.60) EW(-98.79)

#41 MD(5430.00) Inc(10.6) Azm(17.1) TVD(5396.25)
VS(-415.49) NS(-420.87) EW(-96.00)

#42 MD(5525.00) Inc(16.4) Azm(14.1) TVD(5488.59)
VS(-394.44) NS(-399.50) EW(-90.16)

#43 MD(5620.00) Inc(20.7) Azm(357.4) TVD(5578.69)
VS(-364.76) NS(-369.65) EW(-87.64)

#44 MD(5714.00) Inc(28.0) Azm(359.5) TVD(5664.25)
VS(-326.02) NS(-330.91) EW(-88.59)



#45 MD(5809.00) Inc(31.6) Azm(1.0) TVD(5746.64)
VS(-278.83) NS(-283.64) EW(-88.34)

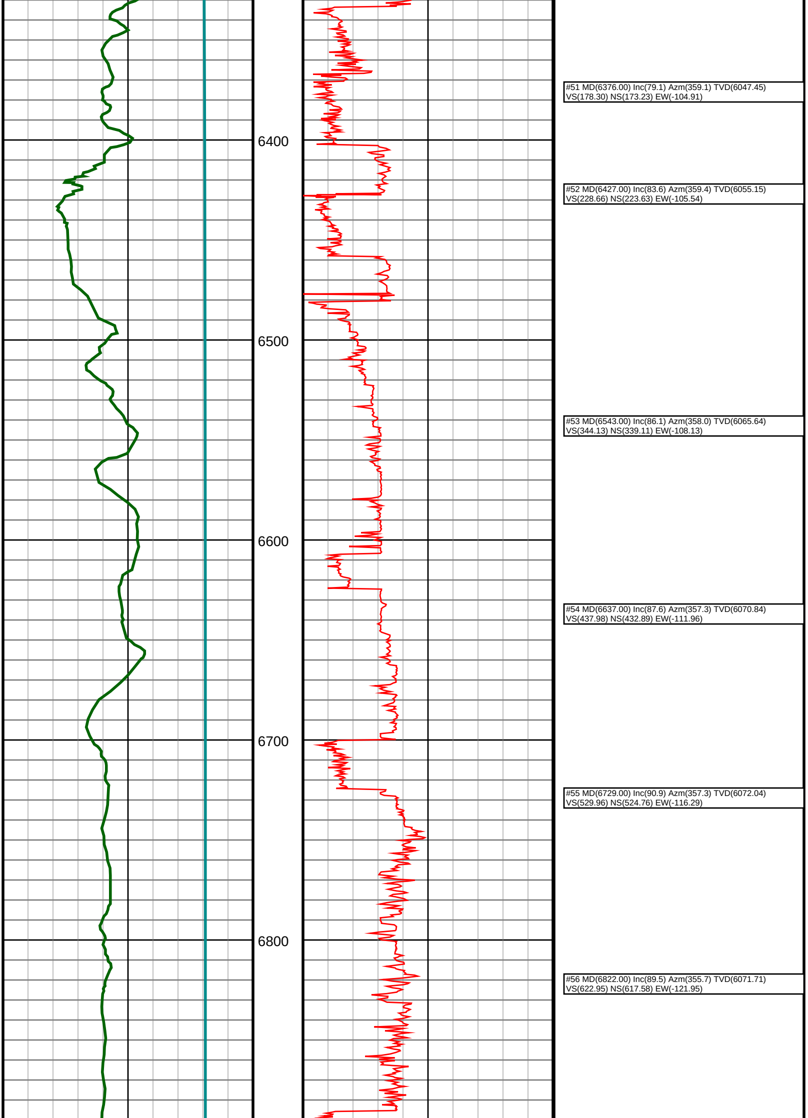
#46 MD(5903.00) Inc(36.5) Azm(359.9) TVD(5824.47)
VS(-226.25) NS(-230.98) EW(-87.98)

#47 MD(5998.00) Inc(46.3) Azm(0.0) TVD(5895.64)
VS(-163.57) NS(-168.22) EW(-88.04)

#48 MD(6093.00) Inc(62.3) Azm(357.0) TVD(5950.93)
VS(-86.72) NS(-91.39) EW(-90.24)

#49 MD(6187.00) Inc(67.6) Azm(355.4) TVD(5990.73)
VS(-1.62) NS(-6.46) EW(-95.93)

#50 MD(6281.00) Inc(71.7) Azm(356.9) TVD(6023.45)
VS(86.47) NS(81.44) EW(-101.81)



#51 MD(6376.00) Inc(79.1) Azm(359.1) TVD(6047.45)
VS(178.30) NS(173.23) EW(-104.91)

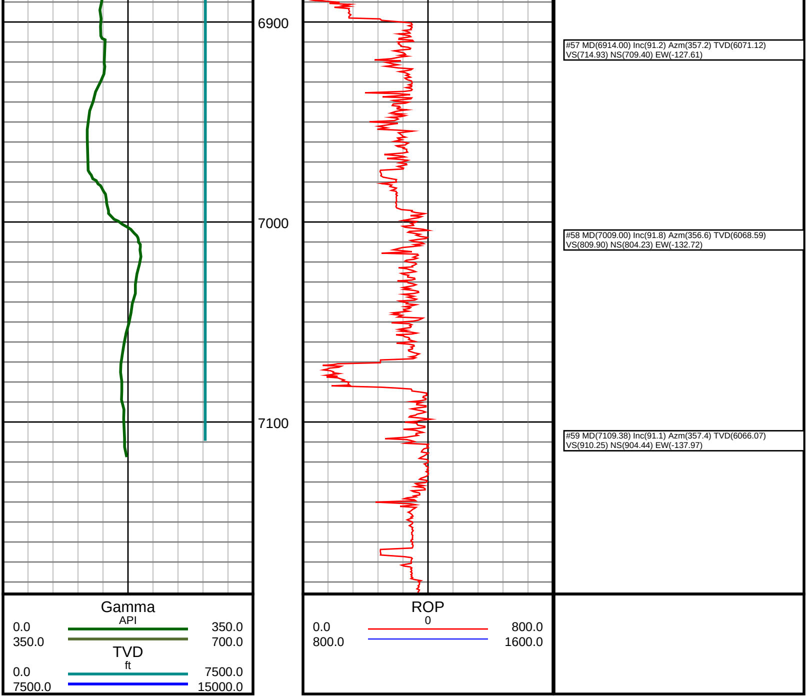
#52 MD(6427.00) Inc(83.6) Azm(359.4) TVD(6055.15)
VS(228.66) NS(223.63) EW(-105.54)

#53 MD(6543.00) Inc(86.1) Azm(358.0) TVD(6065.64)
VS(344.13) NS(339.11) EW(-108.13)

#54 MD(6637.00) Inc(87.6) Azm(357.3) TVD(6070.84)
VS(437.98) NS(432.89) EW(-111.96)

#55 MD(6729.00) Inc(90.9) Azm(357.3) TVD(6072.04)
VS(529.96) NS(524.76) EW(-116.29)

#56 MD(6822.00) Inc(89.5) Azm(355.7) TVD(6071.71)
VS(622.95) NS(617.58) EW(-121.95)


6900
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#57 MD(6914.00) Inc(91.2) Azm(357.2) TVD(6071.12)
VS(714.93) NS(709.40) EW(-127.61)
#58 MD(7009.00) Inc(91.8) Azm(356.6) TVD(6068.59)
VS(809.90) NS(804.23) EW(-132.72)
#59 MD(7109.38) Inc(91.1) Azm(357.4) TVD(6066.07)
VS(910.25) NS(904.44) EW(-137.97)
Gamma
API
0.0
350.0
350.0
700.0
TVD
ft
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7500.0
7500.0
15000.0
ROP
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0.0
800.0
800.0
1600.0