ENSIGN Directional Services

Christine LC27-765

MD
2":100'

Company: Noble Energy
Well Name: Christine LC27-765
API:
Rig Id: H&P 326
State: Colorado
County/Parish: Weld
Country: USA
Survey Company: ENSIGN Directional
Job number: HP326-207-8
DD1 Zach Gentry
DD2 Tyler Bachelder
DD3 Colby Hansen
MWD1 Andrew Demrow
MWD2 Nick Jones

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

	Depth	**Date**
Start:	673 ft	04-19-2015
End:	ft	

Casing	**Depth**	**Size**
Surface:	663	9 5/8
Intermediate:	6424	7

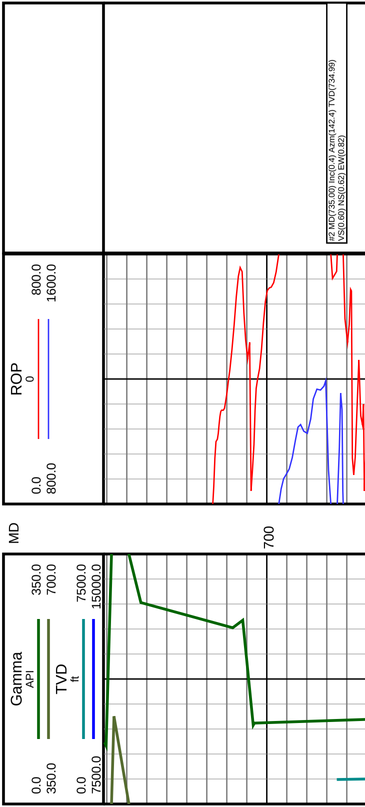
Mud Type:
Density:
Viscosity:
Rm: **Rmf:** **Rmc:**

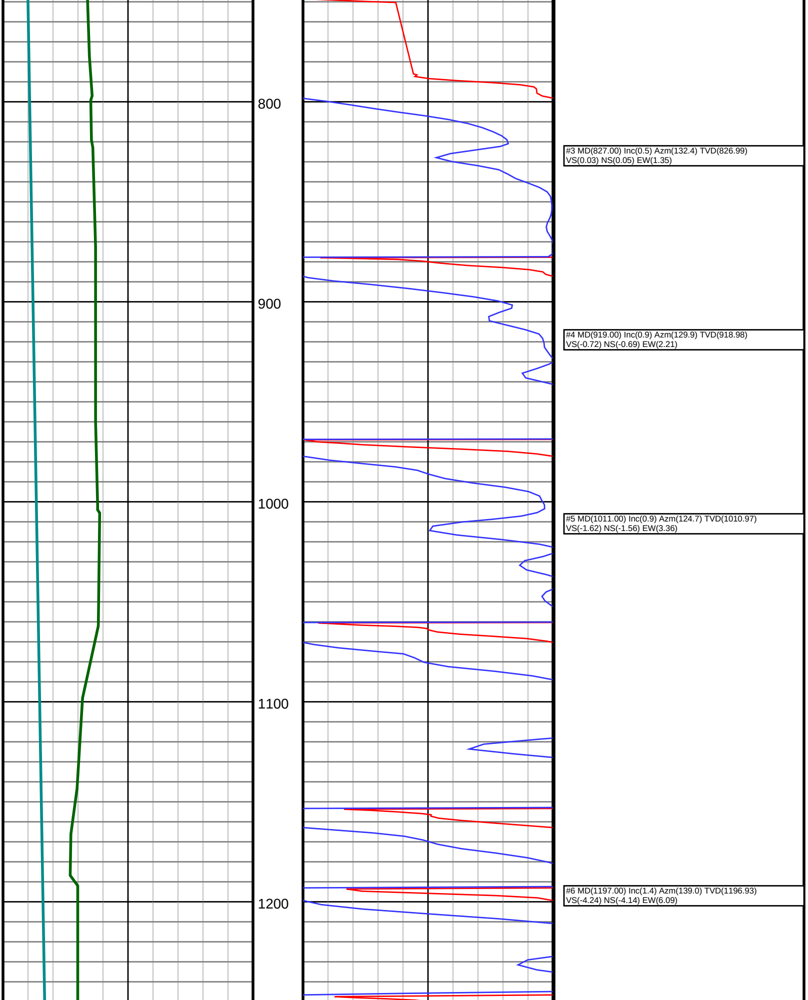
Elevations
KB: 30
GL: 4827
DF: 4857

		Offsets		**Depths**		**Dates**	
Run	**Bit Size**	**Gamma**	**Survey**	**Start**	**End**	**Start**	**End**
1	8.75	54.65	49.65	673	5311	04-19-2015	04-20-2015
2	8.75	54.65	49.65	5311	5320	04-20-2015	04-20-2015
3	8.75	51.38	48.88	5320	6434	04-20-2015	04-21-2015
4	6.125	61.03	58.53	6434	9721	04-22-2015	04-22-2015
5	6.125	61.03	58.53	9721		04-23-2015	04-23-2015
6							
7							
8							
9							
10							

Run 5 no agitator

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.



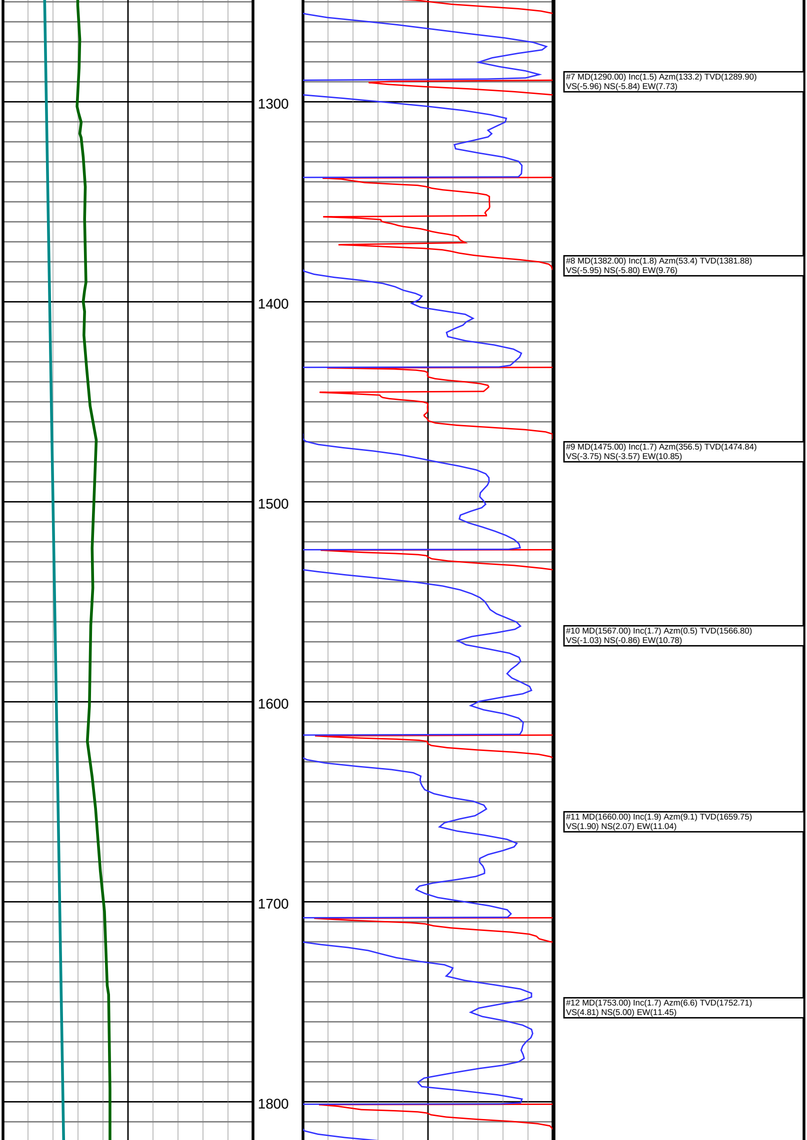


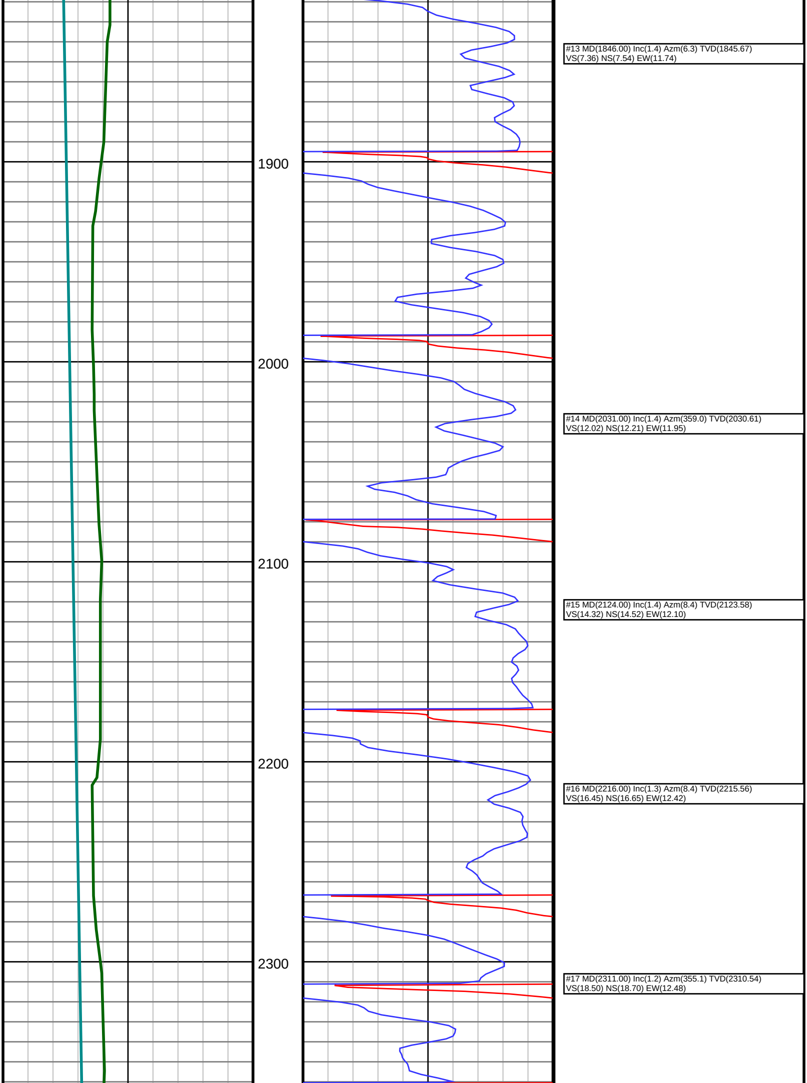
#3 MD(827.00) Inc(0.5) Azm(132.4) TVD(826.99)
VS(0.03) NS(0.05) EW(1.35)

#4 MD(919.00) Inc(0.9) Azm(129.9) TVD(918.98)
VS(-0.72) NS(-0.69) EW(2.21)

#5 MD(1011.00) Inc(0.9) Azm(124.7) TVD(1010.97)
VS(-1.62) NS(-1.56) EW(3.36)

#6 MD(1197.00) Inc(1.4) Azm(139.0) TVD(1196.93)
VS(-4.24) NS(-4.14) EW(6.09)





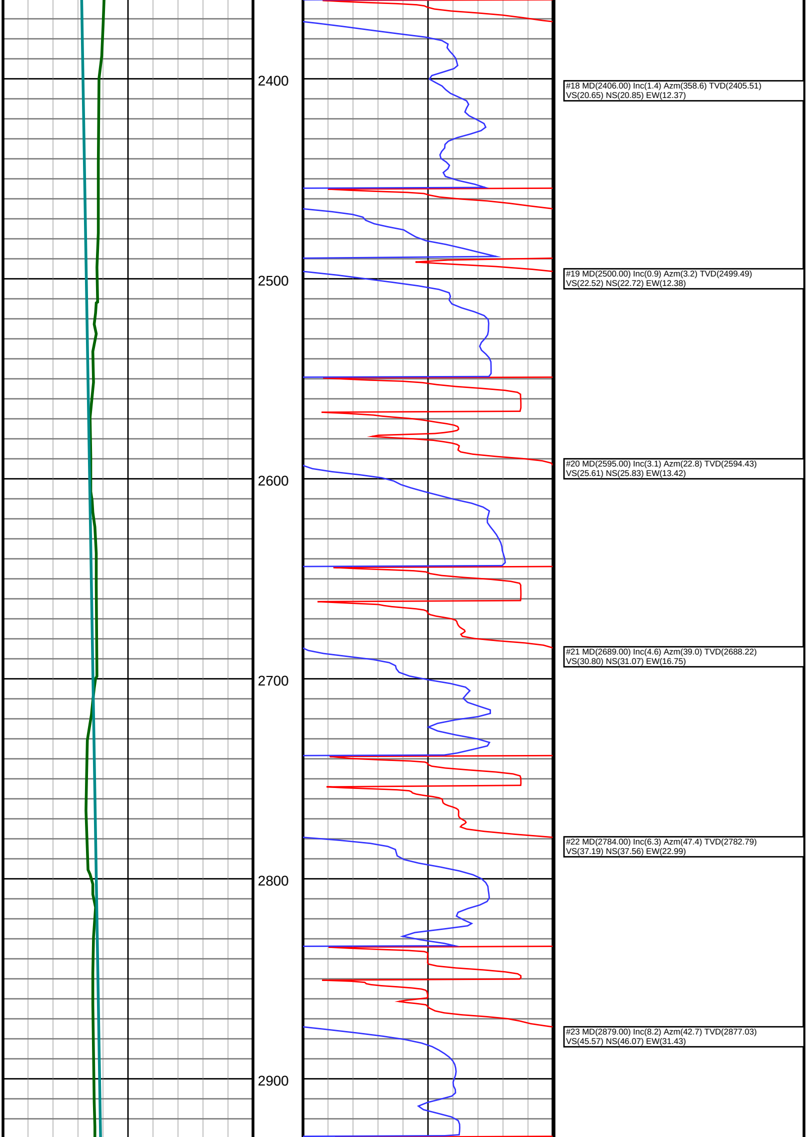
#13 MD(1846.00) Inc(1.4) Azm(6.3) TVD(1845.67)
VS(7.36) NS(7.54) EW(11.74)

#14 MD(2031.00) Inc(1.4) Azm(359.0) TVD(2030.61)
VS(12.02) NS(12.21) EW(11.95)

#15 MD(2124.00) Inc(1.4) Azm(8.4) TVD(2123.58)
VS(14.32) NS(14.52) EW(12.10)

#16 MD(2216.00) Inc(1.3) Azm(8.4) TVD(2215.56)
VS(16.45) NS(16.65) EW(12.42)

#17 MD(2311.00) Inc(1.2) Azm(355.1) TVD(2310.54)
VS(18.50) NS(18.70) EW(12.48)



#18 MD(2406.00) Inc(1.4) Azm(358.6) TVD(2405.51)
VS(20.65) NS(20.85) EW(12.37)

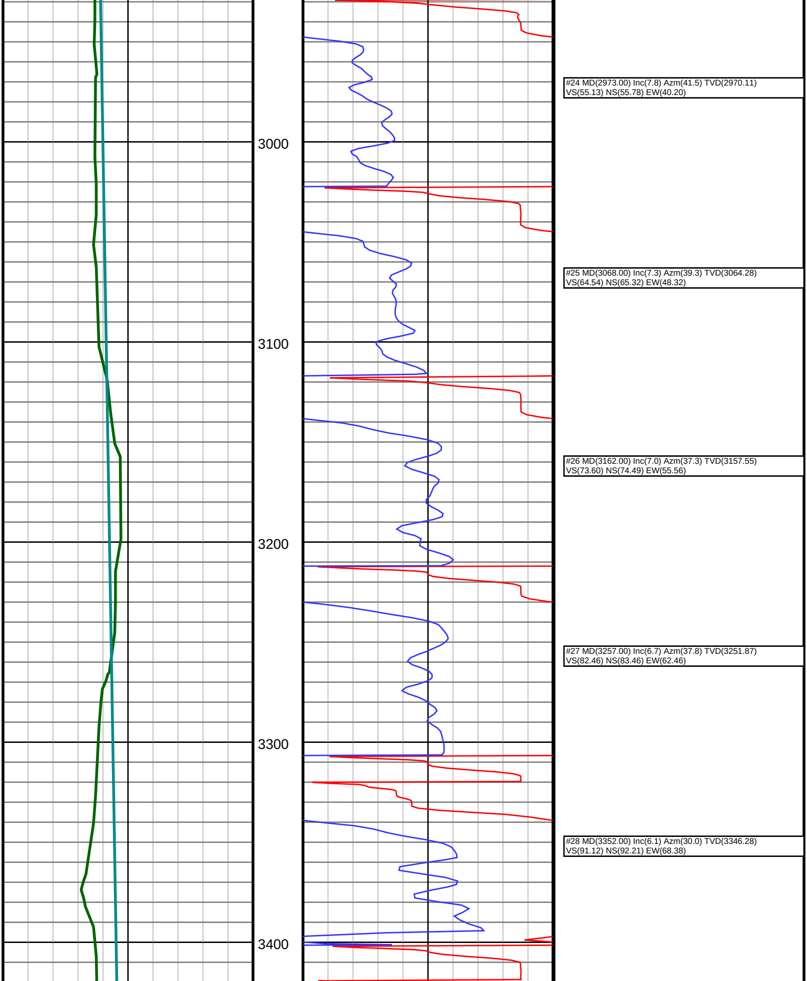
#19 MD(2500.00) Inc(0.9) Azm(3.2) TVD(2499.49)
VS(22.52) NS(22.72) EW(12.38)

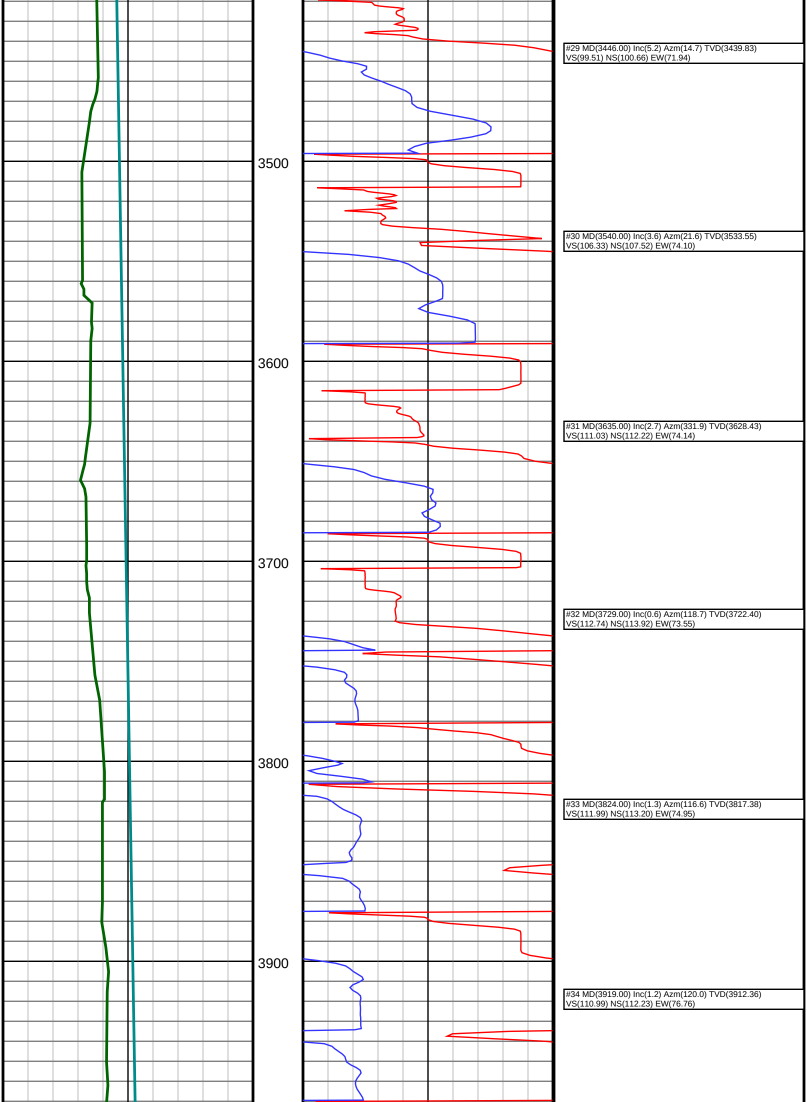
#20 MD(2595.00) Inc(3.1) Azm(22.8) TVD(2594.43)
VS(25.61) NS(25.83) EW(13.42)

#21 MD(2689.00) Inc(4.6) Azm(39.0) TVD(2688.22)
VS(30.80) NS(31.07) EW(16.75)

#22 MD(2784.00) Inc(6.3) Azm(47.4) TVD(2782.79)
VS(37.19) NS(37.56) EW(22.99)

#23 MD(2879.00) Inc(8.2) Azm(42.7) TVD(2877.03)
VS(45.57) NS(46.07) EW(31.43)





#29 MD(3446.00) Inc(5.2) Azm(14.7) TVD(3439.83)
VS(99.51) NS(100.66) EW(71.94)

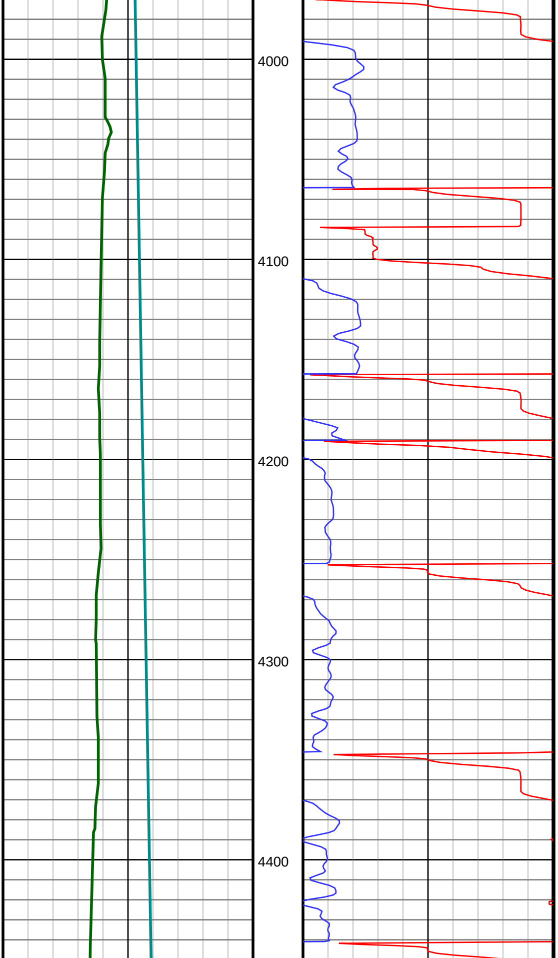
#30 MD(3540.00) Inc(3.6) Azm(21.6) TVD(3533.55)
VS(106.33) NS(107.52) EW(74.10)

#31 MD(3635.00) Inc(2.7) Azm(331.9) TVD(3628.43)
VS(111.03) NS(112.22) EW(74.14)

#32 MD(3729.00) Inc(0.6) Azm(118.7) TVD(3722.40)
VS(112.74) NS(113.92) EW(73.55)

#33 MD(3824.00) Inc(1.3) Azm(116.6) TVD(3817.38)
VS(111.99) NS(113.20) EW(74.95)

#34 MD(3919.00) Inc(1.2) Azm(120.0) TVD(3912.36)
VS(110.99) NS(112.23) EW(76.76)



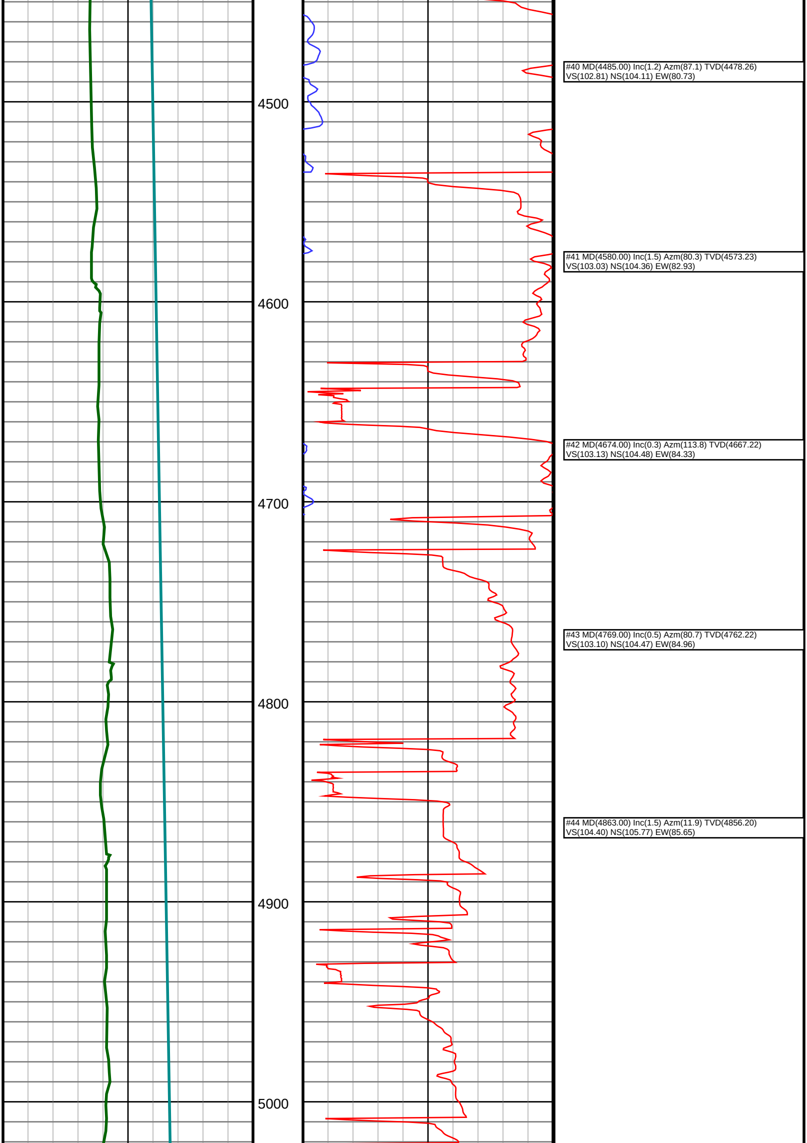
#35 MD(4013.00) Inc(1.6) Azm(134.1) TVD(4006.33)
VS(109.55) NS(110.81) EW(78.56)

#36 MD(4108.00) Inc(1.3) Azm(198.4) TVD(4101.31)
VS(107.60) NS(108.87) EW(79.20)

#37 MD(4202.00) Inc(0.9) Azm(182.6) TVD(4195.29)
VS(105.89) NS(107.16) EW(78.84)

#38 MD(4296.00) Inc(0.9) Azm(174.5) TVD(4289.28)
VS(104.45) NS(105.72) EW(78.87)

#39 MD(4390.00) Inc(0.8) Azm(139.8) TVD(4383.27)
VS(103.26) NS(104.53) EW(79.34)



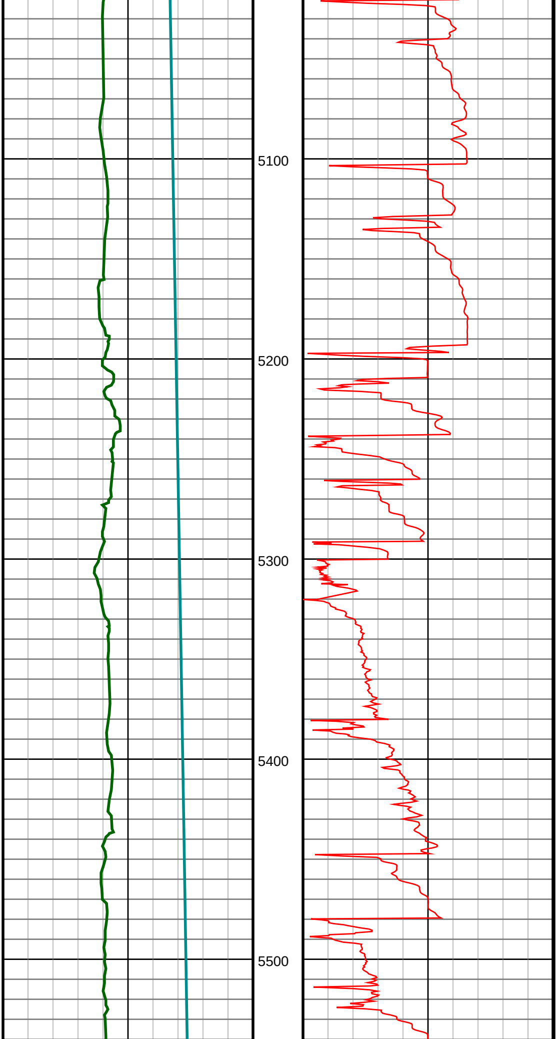
#40 MD(4485.00) Inc(1.2) Azm(87.1) TVD(4478.26)
VS(102.81) NS(104.11) EW(80.73)

#41 MD(4580.00) Inc(1.5) Azm(80.3) TVD(4573.23)
VS(103.03) NS(104.36) EW(82.93)

#42 MD(4674.00) Inc(0.3) Azm(113.8) TVD(4667.22)
VS(103.13) NS(104.48) EW(84.33)

#43 MD(4769.00) Inc(0.5) Azm(80.7) TVD(4762.22)
VS(103.10) NS(104.47) EW(84.96)

#44 MD(4863.00) Inc(1.5) Azm(11.9) TVD(4856.20)
VS(104.40) NS(105.77) EW(85.65)



#45 MD(5052.00) Inc(1.2) Azm(301.5) TVD(5045.16)
VS(107.96) NS(109.32) EW(84.45)

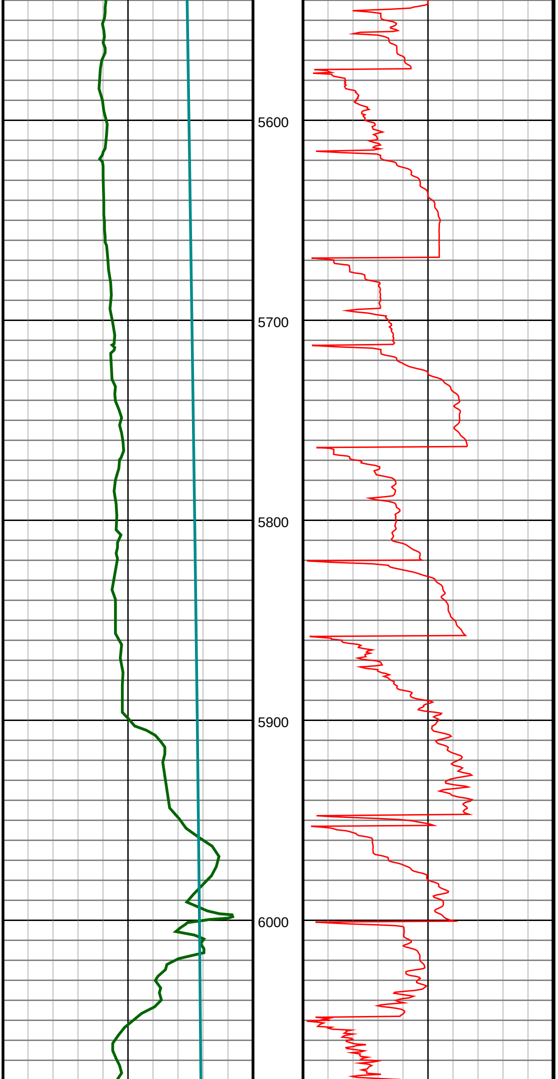
#46 MD(5147.00) Inc(0.9) Azm(313.5) TVD(5140.14)
VS(109.04) NS(110.37) EW(83.03)

#47 MD(5241.00) Inc(1.0) Azm(320.5) TVD(5234.13)
VS(110.21) NS(111.52) EW(81.96)

#48 MD(5336.00) Inc(3.6) Azm(355.9) TVD(5329.05)
VS(113.87) NS(115.18) EW(81.22)

#49 MD(5430.00) Inc(16.2) Azm(3.7) TVD(5421.46)
VS(130.00) NS(131.32) EW(81.85)

#50 MD(5525.00) Inc(23.3) Azm(2.7) TVD(5510.81)
VS(162.02) NS(163.37) EW(83.60)



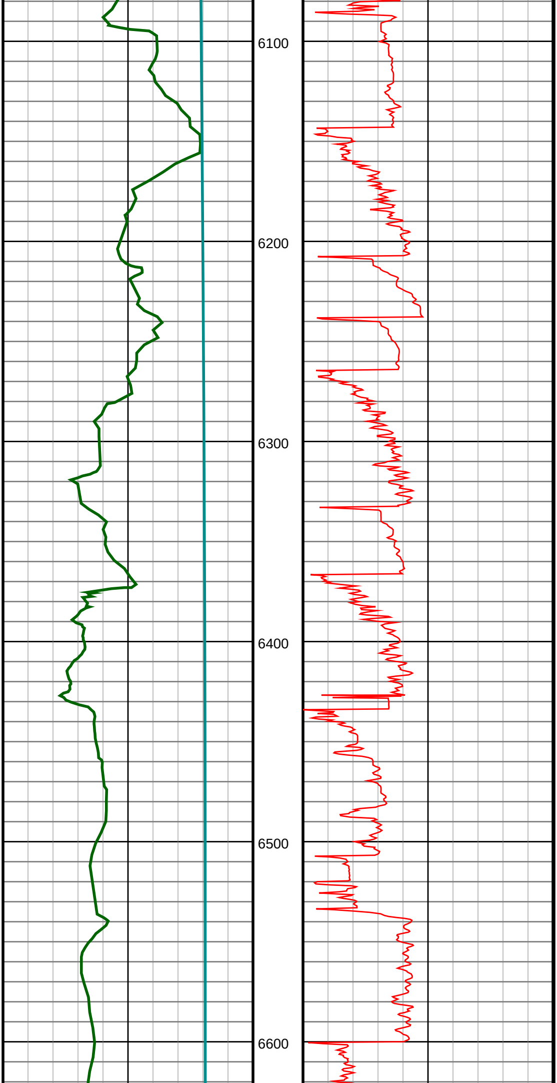
#51 MD(5619.00) Inc(27.0) Azm(0.9) TVD(5595.87)
VS(201.94) NS(203.31) EW(84.80)

#52 MD(5713.00) Inc(31.1) Azm(355.2) TVD(5678.02)
VS(247.55) NS(248.90) EW(83.11)

#53 MD(5808.00) Inc(35.3) Azm(355.6) TVD(5757.47)
VS(299.49) NS(300.79) EW(78.97)

#54 MD(5903.00) Inc(43.5) Azm(0.1) TVD(5830.83)
VS(359.71) NS(360.97) EW(76.90)

#55 MD(5998.00) Inc(55.2) Azm(358.4) TVD(5892.65)
VS(431.62) NS(432.88) EW(75.86)



#56 MD(6092.00) Inc(59.2) Azm(357.6) TVD(5943.62)
VS(510.56) NS(511.79) EW(73.12)

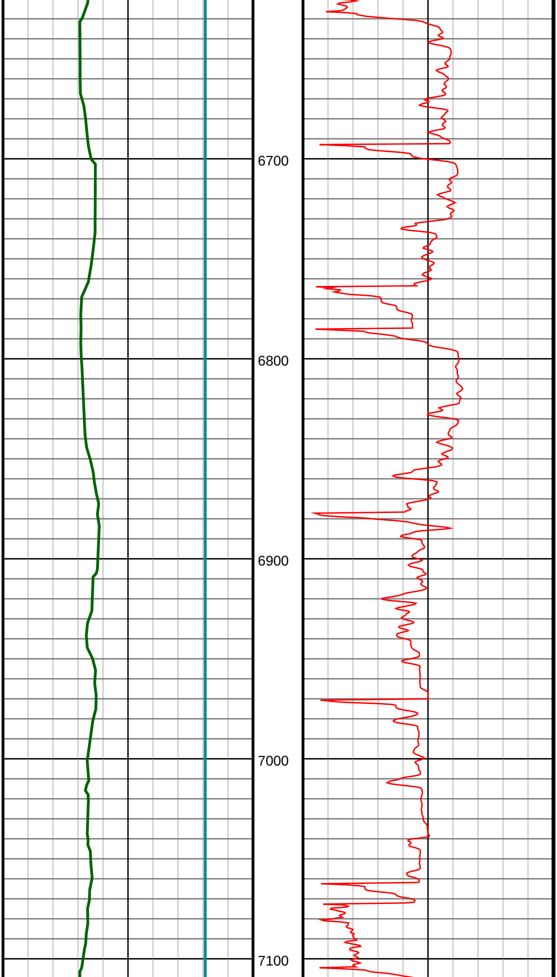
#57 MD(6186.00) Inc(65.0) Azm(357.5) TVD(5987.61)
VS(593.56) NS(594.74) EW(69.61)

#58 MD(6281.00) Inc(70.1) Azm(358.1) TVD(6023.87)
VS(681.31) NS(682.45) EW(66.25)

#59 MD(6384.00) Inc(79.2) Azm(358.6) TVD(6051.14)
VS(780.52) NS(781.62) EW(63.36)

#60 MD(6448.00) Inc(85.1) Azm(358.3) TVD(6059.88)
VS(843.88) NS(844.97) EW(61.65)

#61 MD(6540.00) Inc(87.1) Azm(358.2) TVD(6066.12)
VS(935.66) NS(936.71) EW(58.91)



#62 MD(6633.00) Inc(90.0) Azm(357.9) TVD(6068.47)
VS(1028.60) NS(1029.62) EW(55.77)

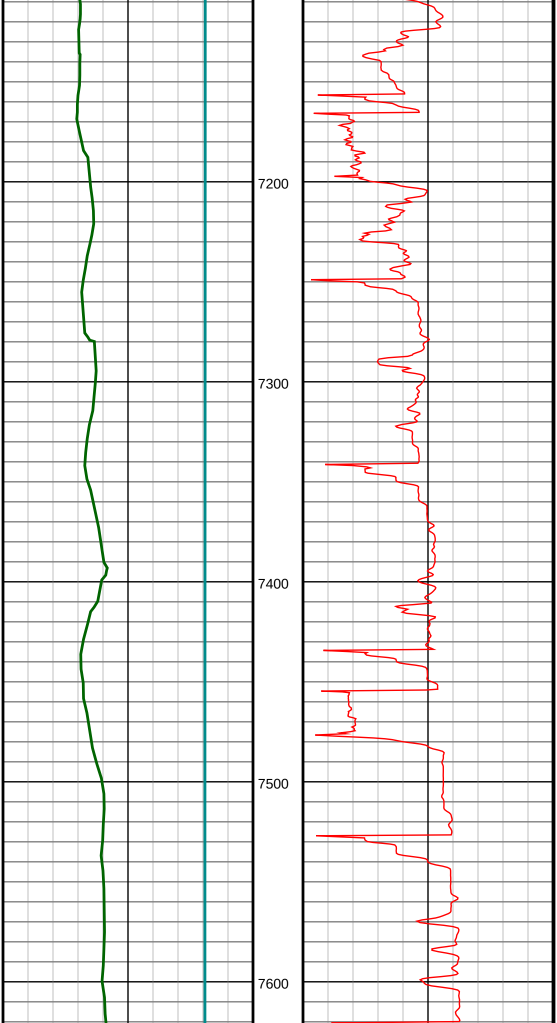
#63 MD(6725.00) Inc(90.2) Azm(357.1) TVD(6068.29)
VS(1120.57) NS(1121.53) EW(51.75)

#64 MD(6818.00) Inc(90.4) Azm(357.2) TVD(6067.79)
VS(1213.51) NS(1214.41) EW(47.11)

#65 MD(6911.00) Inc(89.8) Azm(356.1) TVD(6067.61)
VS(1306.42) NS(1307.25) EW(41.68)

#66 MD(7003.00) Inc(90.0) Azm(355.9) TVD(6067.76)
VS(1398.29) NS(1399.03) EW(35.33)

#67 MD(7096.00) Inc(90.1) Azm(356.7) TVD(6067.68)
VS(1491.18) NS(1491.84) EW(29.33)



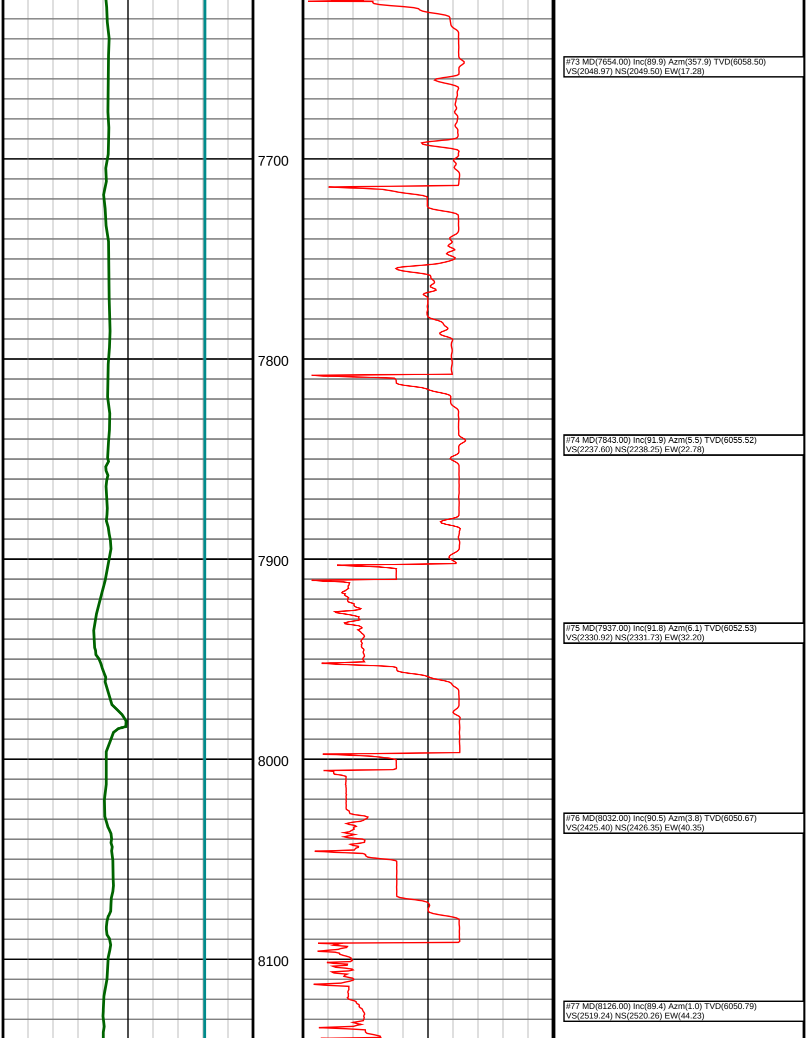
#68 MD(7189.00) Inc(91.1) Azm(359.1) TVD(6066.75)
VS(1584.15) NS(1584.76) EW(25.91)

#69 MD(7282.00) Inc(91.7) Azm(359.5) TVD(6064.50)
VS(1677.12) NS(1677.73) EW(24.76)

#70 MD(7374.00) Inc(92.0) Azm(0.1) TVD(6061.54)
VS(1769.07) NS(1769.68) EW(24.41)

#71 MD(7467.00) Inc(91.2) Azm(359.5) TVD(6058.90)
VS(1862.02) NS(1862.64) EW(24.05)

#72 MD(7559.00) Inc(89.7) Azm(357.2) TVD(6058.16)
VS(1954.00) NS(1954.59) EW(21.37)



#73 MD(7654.00) Inc(89.9) Azm(357.9) TVD(6058.50)
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#74 MD(7843.00) Inc(91.9) Azm(5.5) TVD(6055.52)
VS(2237.60) NS(2238.25) EW(22.78)

#75 MD(7937.00) Inc(91.8) Azm(6.1) TVD(6052.53)
VS(2330.92) NS(2331.73) EW(32.20)

#76 MD(8032.00) Inc(90.5) Azm(3.8) TVD(6050.67)
VS(2425.40) NS(2426.35) EW(40.35)

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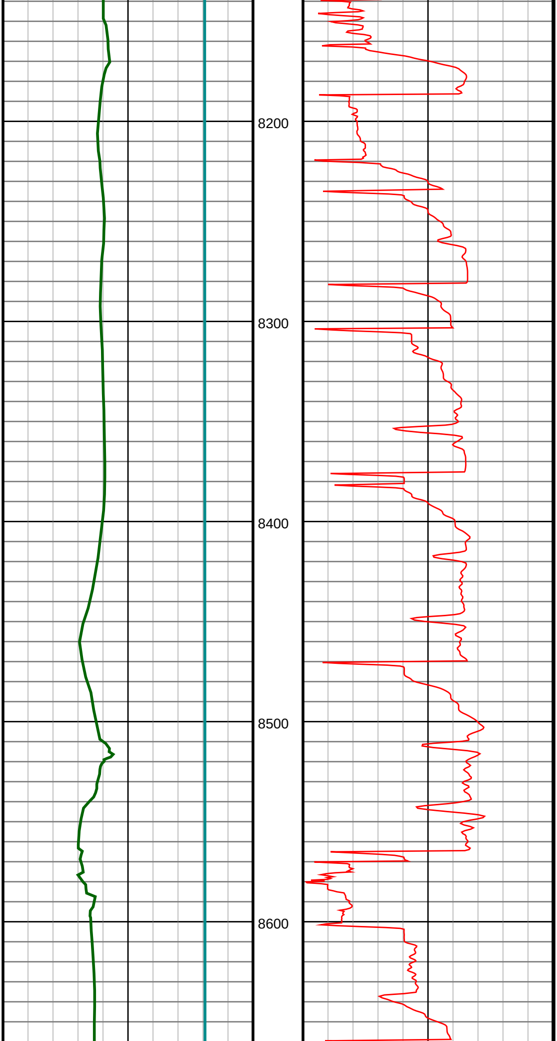

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#79 MD(8315.00) Inc(88.7) Azm(355.4) TVD(6053.70)
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#80 MD(8426.16) Inc(88.9) Azm(355.4) TVD(6055.99)
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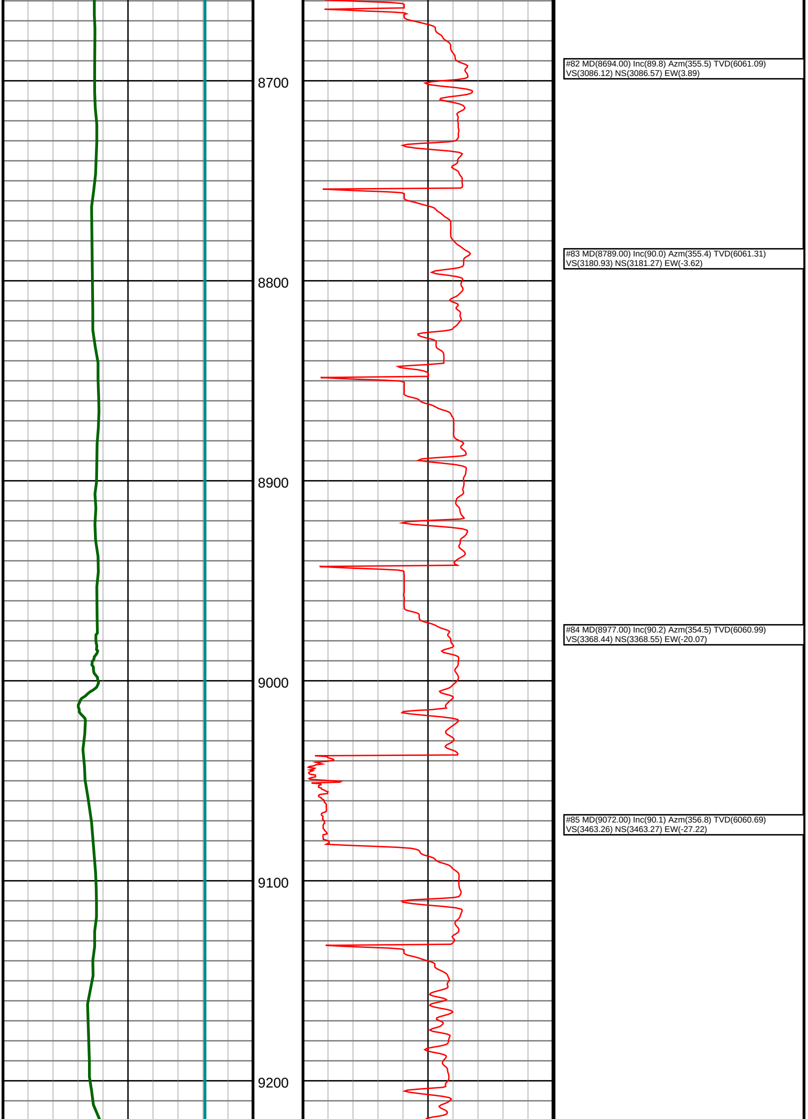

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#83 MD(8789.00) Inc(90.0) Azm(355.4) TVD(6061.31)
VS(3180.93) NS(3181.27) EW(-3.62)

#84 MD(8977.00) Inc(90.2) Azm(354.5) TVD(6060.99)
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#85 MD(9072.00) Inc(90.1) Azm(356.8) TVD(6060.69)
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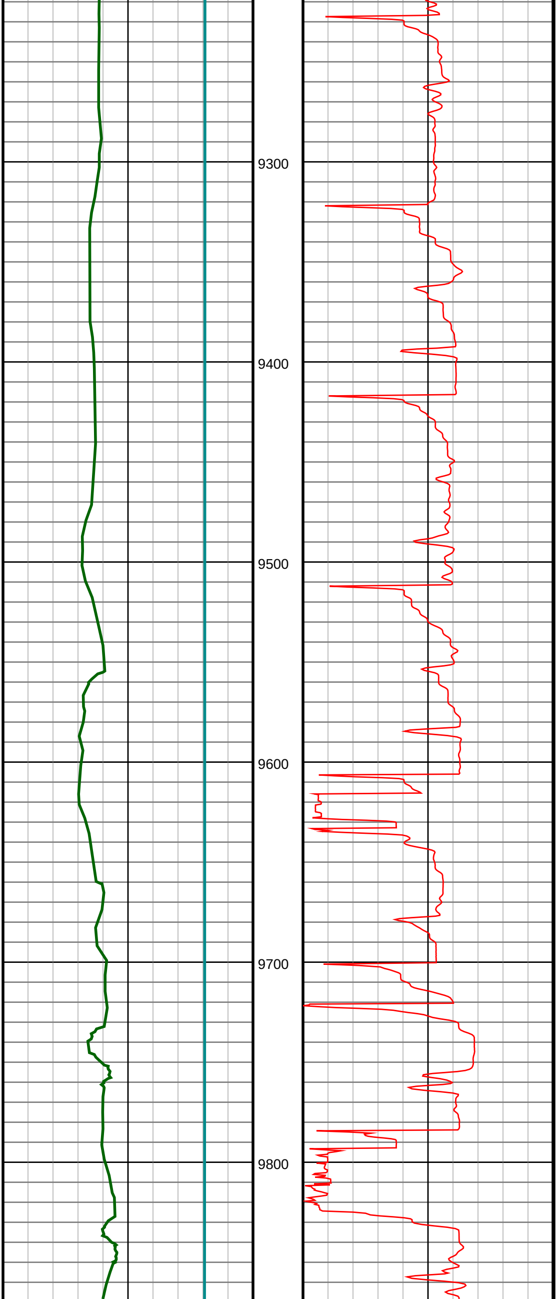

#86 MD(9261.00) Inc(90.8) Azm(357.2) TVD(6059.10)
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#87 MD(9355.00) Inc(91.0) Azm(356.7) TVD(6057.64)
VS(3746.06) NS(3745.86) EW(-42.05)

#88 MD(9450.00) Inc(91.2) Azm(356.6) TVD(6055.87)
VS(3840.95) NS(3840.68) EW(-47.59)

#89 MD(9544.00) Inc(91.4) Azm(356.1) TVD(6053.77)
VS(3934.82) NS(3934.47) EW(-53.55)

#90 MD(9638.00) Inc(90.8) Azm(356.4) TVD(6052.00)
VS(4028.69) NS(4028.25) EW(-59.70)

#91 MD(9724.00) Inc(90.9) Azm(356.2) TVD(6050.75)
VS(4114.58) NS(4114.06) EW(-65.25)

#92 MD(9818.00) Inc(92.1) Azm(357.5) TVD(6048.26)
VS(4208.47) NS(4207.89) EW(-70.36)

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#96 MD(10196.00) Inc(89.1) Azm(358.4) TVD(6040.89) VS(4586.31) NS(4585.64) EW(-78.56)
#97 MD(10290.00) Inc(87.9) Azm(357.6) TVD(6043.31) VS(4680.26) NS(4679.55) EW(-81.82)
#98 MD(10385.00) Inc(87.3) Azm(356.5) TVD(6047.24) VS(4775.12) NS(4774.34) EW(-86.73)
#99 MD(10479.00) Inc(88.6) Azm(357.3) TVD(6050.56) VS(4868.98) NS(4868.14) EW(-91.84)
#100 MD(10573.00) Inc(89.8) Azm(358.9) TVD(6051.84) VS(4962.96) NS(4962.07) EW(-94.96)
#101 MD(10667.00) Inc(90.0) Azm(359.4) TVD(6051.95) VS(5056.96) NS(5056.06) EW(-96.37)
#102 MD(10762.00) Inc(89.5) Azm(358.9) TVD(6052.31) VS(5151.95) NS(5151.05) EW(-97.84)
#103 MD(10856.00) Inc(88.3) Azm(358.2) TVD(6054.10) VS(5245.93) NS(5245.00) EW(-100.23)
#104 MD(10950.00) Inc(89.1) Azm(358.2) TVD(6056.21) VS(5339.90) NS(5338.93) EW(-103.16)
#105 MD(11045.00) Inc(89.8) Azm(358.1) TVD(6057.09) VS(5434.88) NS(5433.88) EW(-106.21)
#106 MD(11139.00) Inc(88.7) Azm(356.7) TVD(6058.32) VS(5528.82) NS(5527.77) EW(-110.49)
#107 MD(11237.00) Inc(87.9) Azm(356.6) TVD(6061.23) VS(5626.69) NS(5625.55) EW(-116.23)
Gamma
API
0.0 350.0
350.0 700.0
TVD
ft
0.0 7500.0
7500.0 15000.0
ROP
0
0.0 800.0
800.0 1600.0