ENSIGN Directional Services

Eagle E14-79HN

MD
2":100'

Company: Noble Energy
Well Name: Eagle E14-79HN
API: 05-123-38863
Rig Id: Precision 829
State: Colorado
County/Parish: Weld
Country: USA
Survey Company: Ensign Directional
Job number: PD829-207-19
DD1 Zach Gentry
DD2 Colby Hansen
DD3 Tony Callow
MWD1 Andrew Demrow
MWD2 Johnnie Kibel

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

	Depth	Date
Start:	667 ft	06-26-2014
End:	11288 ft	07-02-2014

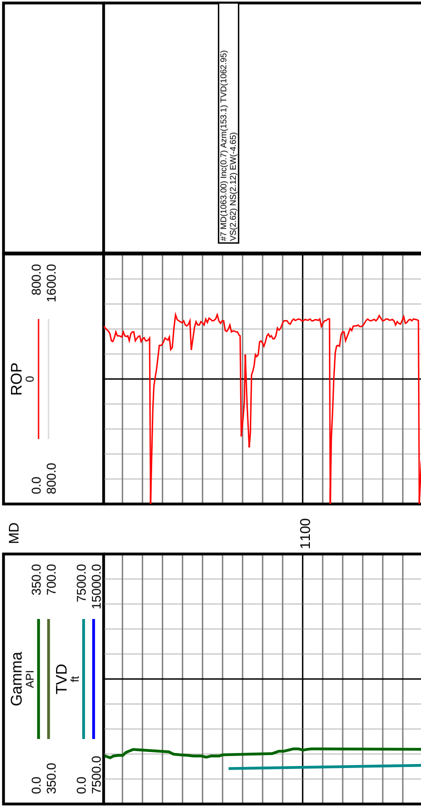
Casing	Depth	Size
Surface:	657	9 5/8
Intermediate:	7408	7

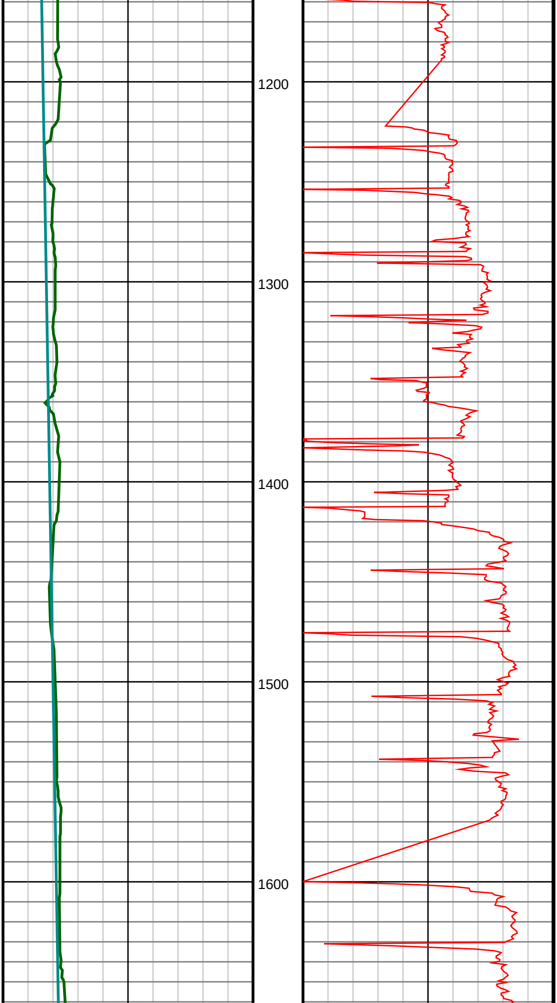
Mud Type:
Density:
Viscosity:
Rm: **Rmf:** **Rmc:**

Elevations
KB: 16
GL: 4737
DF: 4753

Run	Bit Size	Offsets		Depths		Dates	
		Gamma	Survey	Start	End	Start	End
1	13.5			0	667	06-25-2014	06-25-2014
2	8.75	53.45	48.45	667	7408	06-26-2014	06-28-2014
3	6.125	65.82	60.82	7408	11288	06-30-2014	07-02-2014
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.





#8 MD(1171.00) Inc(0.9) Azm(156.1) TVD(1170.94)
VS(1.20) NS(0.76) EW(-4.01)

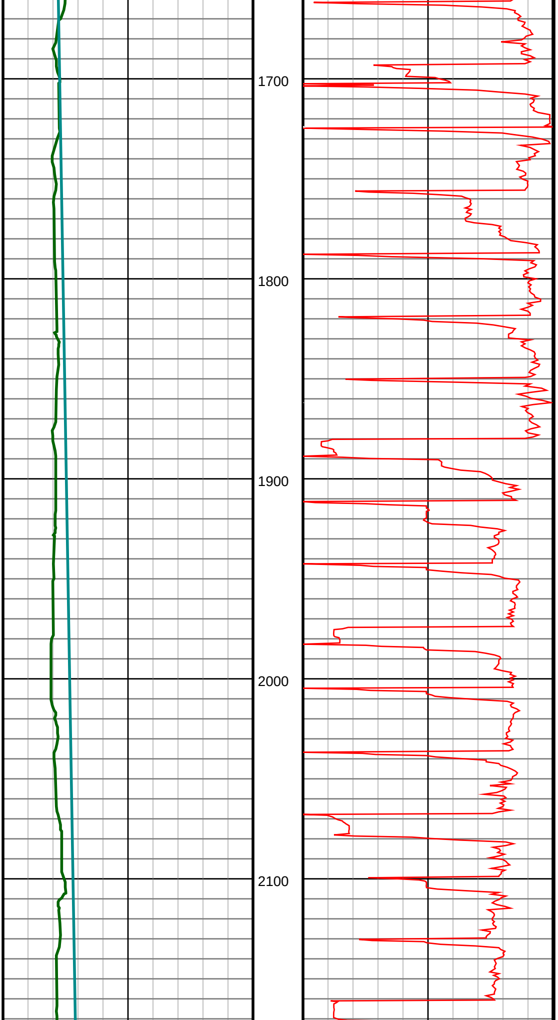
#9 MD(1266.00) Inc(0.7) Azm(157.5) TVD(1265.93)
VS(-0.07) NS(-0.46) EW(-3.48)

#10 MD(1363.00) Inc(0.3) Azm(166.4) TVD(1362.93)
VS(-0.89) NS(-1.25) EW(-3.20)

#11 MD(1457.00) Inc(1.1) Azm(14.1) TVD(1456.92)
VS(-0.29) NS(-0.62) EW(-2.92)

#12 MD(1550.00) Inc(1.1) Azm(18.3) TVD(1549.91)
VS(1.36) NS(1.10) EW(-2.42)

#13 MD(1643.00) Inc(0.7) Azm(345.7) TVD(1642.89)
VS(2.73) NS(2.49) EW(-2.28)



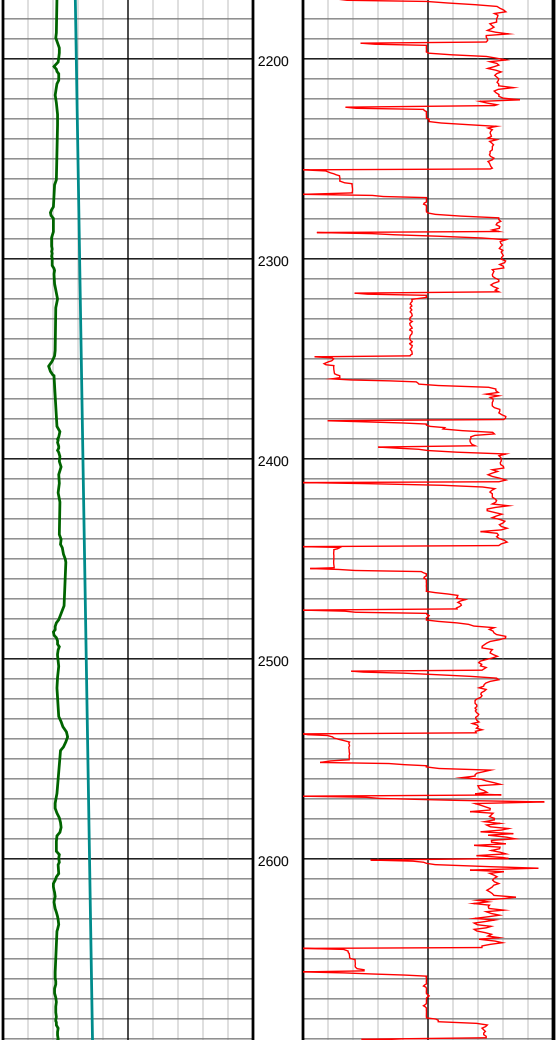
#14 MD(1737.00) Inc(0.4) Azm(281.0) TVD(1736.89)
VS(3.40) NS(3.11) EW(-2.74)

#15 MD(1830.00) Inc(1.1) Azm(296.8) TVD(1829.88)
VS(3.98) NS(3.58) EW(-3.86)

#16 MD(1924.00) Inc(2.7) Azm(265.6) TVD(1923.83)
VS(4.55) NS(3.81) EW(-6.87)

#17 MD(2017.00) Inc(3.1) Azm(268.2) TVD(2016.71)
VS(4.82) NS(3.57) EW(-11.57)

#18 MD(2110.00) Inc(3.9) Azm(272.1) TVD(2109.54)
VS(5.48) NS(3.60) EW(-17.24)



#19 MD(2205.00) Inc(4.7) Azm(263.8) TVD(2204.27)
VS(5.97) NS(3.30) EW(-24.34)

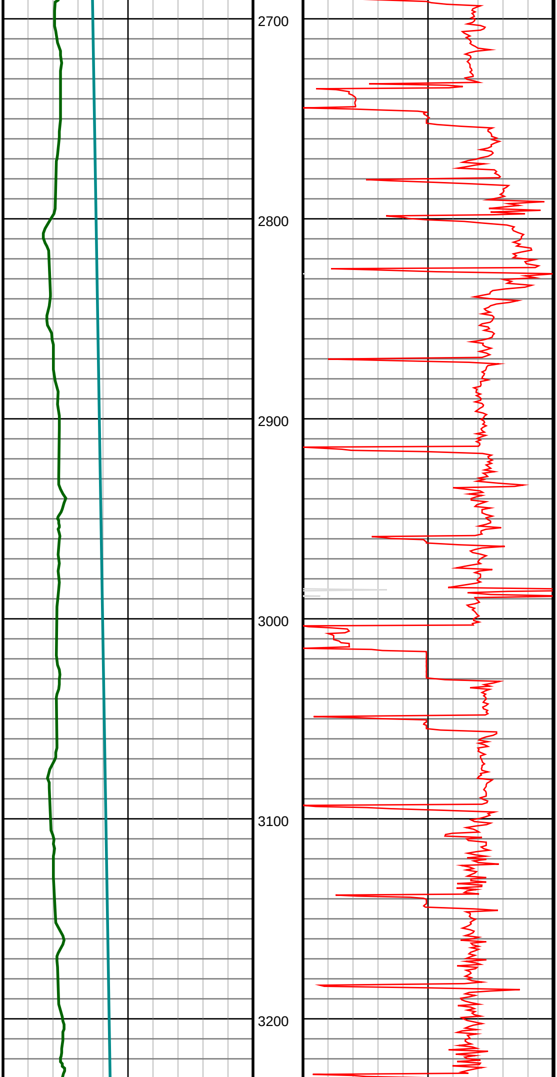
#20 MD(2298.00) Inc(6.5) Azm(267.0) TVD(2296.82)
VS(6.28) NS(2.62) EW(-33.39)

#21 MD(2393.00) Inc(6.8) Azm(261.3) TVD(2391.18)
VS(6.36) NS(1.48) EW(-44.32)

#22 MD(2486.00) Inc(8.3) Azm(262.8) TVD(2483.37)
VS(6.03) NS(-0.19) EW(-56.42)

#23 MD(2593.00) Inc(9.6) Azm(263.9) TVD(2589.07)
VS(5.95) NS(-2.11) EW(-72.95)

#24 MD(2683.00) Inc(10.9) Azm(263.5) TVD(2677.63)
VS(5.95) NS(-3.87) EW(-88.87)



#25 MD(2773.00) Inc(12.1) Azm(259.1) TVD(2765.83)
VS(5.18) NS(-6.62) EW(-106.59)

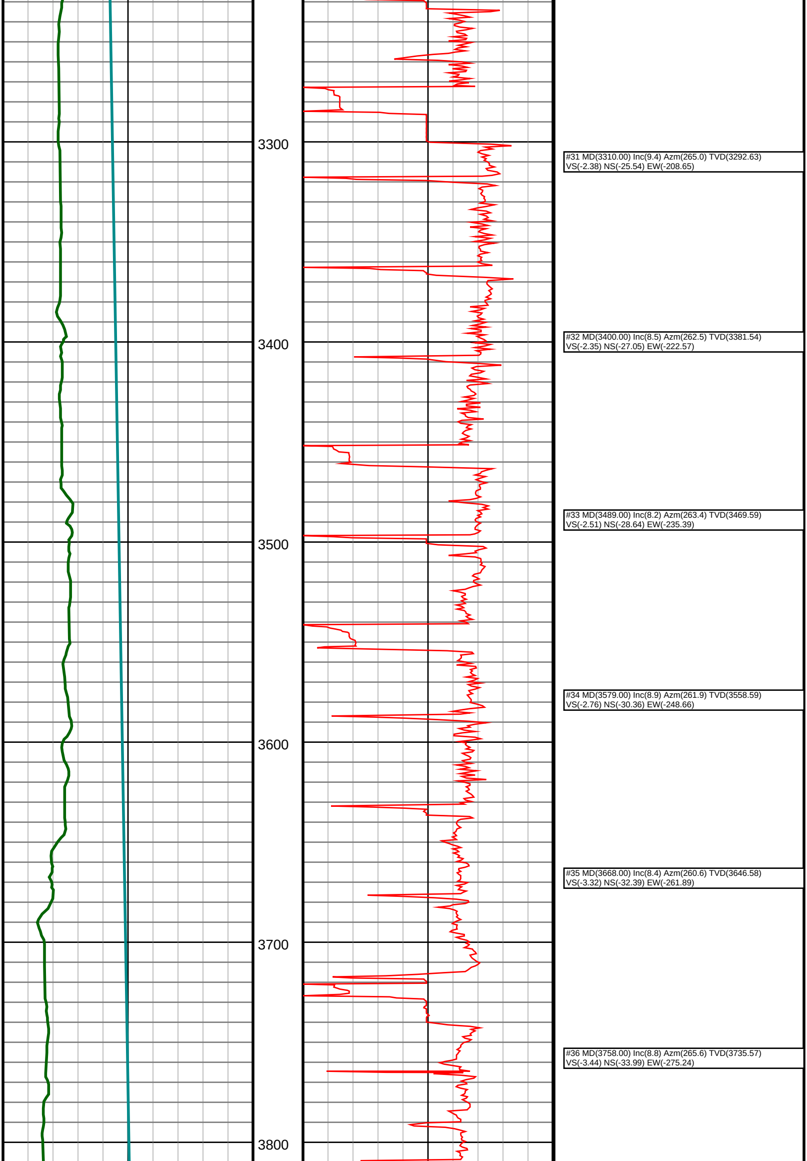
#26 MD(2862.00) Inc(12.1) Azm(259.9) TVD(2852.85)
VS(3.82) NS(-10.02) EW(-124.93)

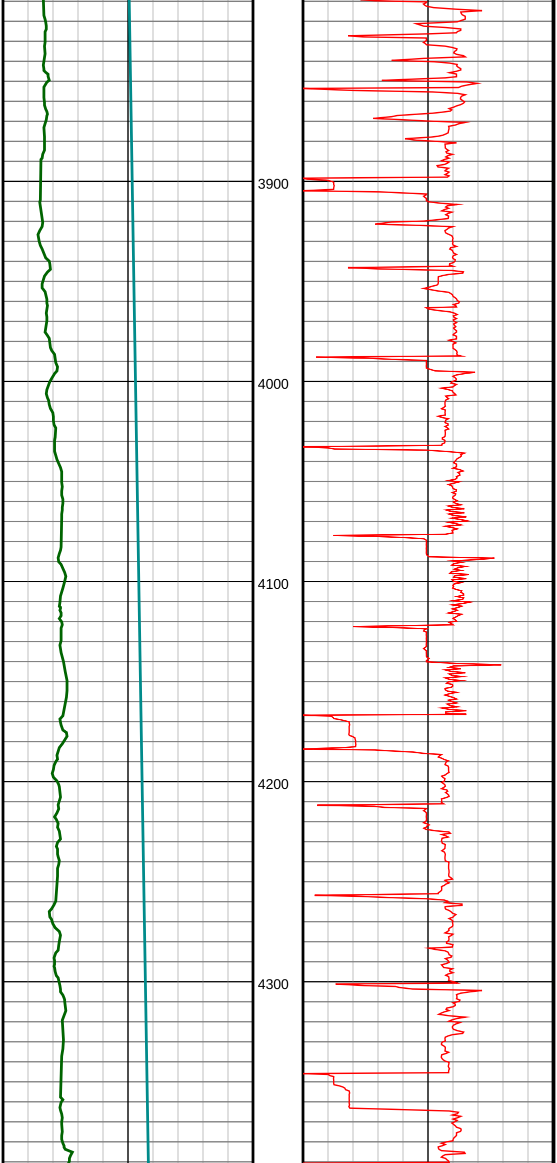
#27 MD(2952.00) Inc(11.6) Azm(256.7) TVD(2940.93)
VS(2.10) NS(-13.75) EW(-143.03)

#28 MD(3041.00) Inc(11.3) Azm(262.4) TVD(3028.16)
VS(0.82) NS(-16.96) EW(-160.38)

#29 MD(3131.00) Inc(11.1) Azm(259.7) TVD(3116.45)
VS(0.03) NS(-19.68) EW(-177.64)

#30 MD(3220.00) Inc(10.1) Azm(256.4) TVD(3203.93)
VS(-1.55) NS(-23.04) EW(-193.66)





#37 MD(3848.00) Inc(9.4) Azm(263.7) TVD(3824.44)
VS(-3.20) NS(-35.33) EW(-289.41)

#38 MD(3937.00) Inc(8.5) Azm(262.6) TVD(3912.35)
VS(-3.32) NS(-36.97) EW(-303.16)

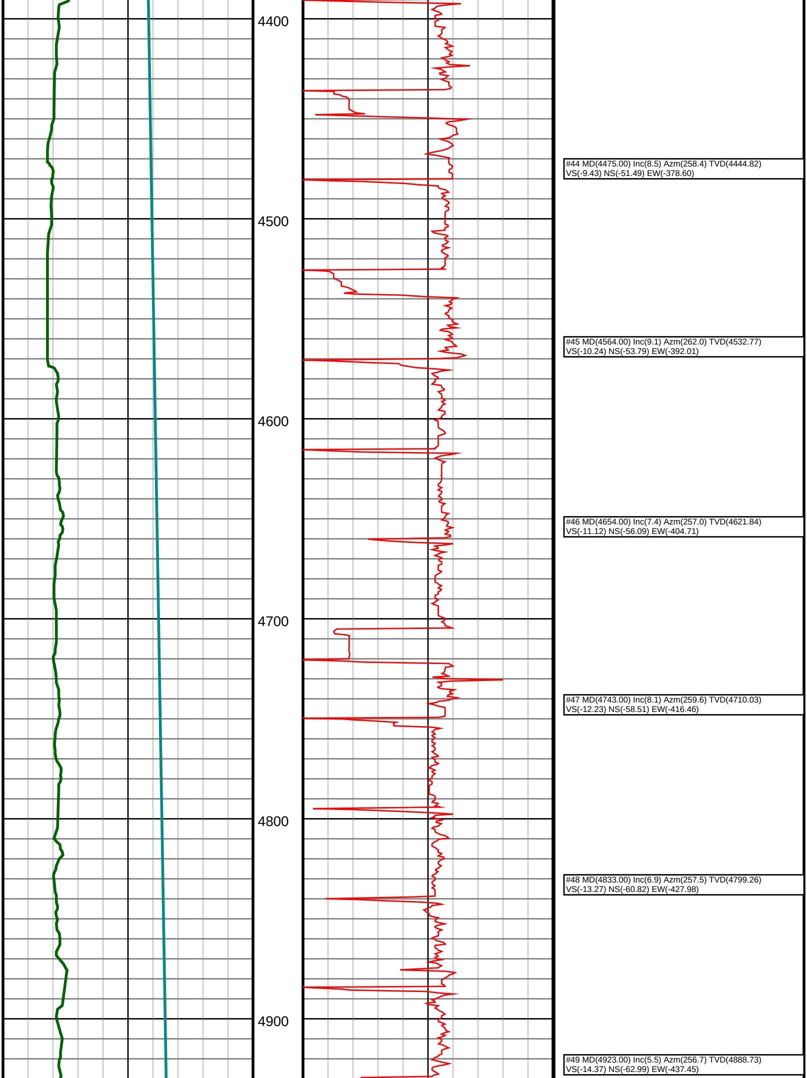
#39 MD(4027.00) Inc(8.6) Azm(260.6) TVD(4001.35)
VS(-3.80) NS(-38.93) EW(-316.39)

#40 MD(4116.00) Inc(7.3) Azm(257.6) TVD(4089.50)
VS(-4.76) NS(-41.23) EW(-328.48)

#41 MD(4206.00) Inc(9.0) Azm(261.7) TVD(4178.58)
VS(-5.61) NS(-43.47) EW(-341.03)

#42 MD(4295.00) Inc(7.8) Azm(257.7) TVD(4266.63)
VS(-6.47) NS(-45.76) EW(-353.82)

#43 MD(4385.00) Inc(8.1) Azm(255.9) TVD(4355.76)
VS(-7.97) NS(-48.61) EW(-365.94)



#44 MD(4475.00) Inc(8.5) Azm(258.4) TVD(4444.82)
VS(-9.43) NS(-51.49) EW(-378.60)

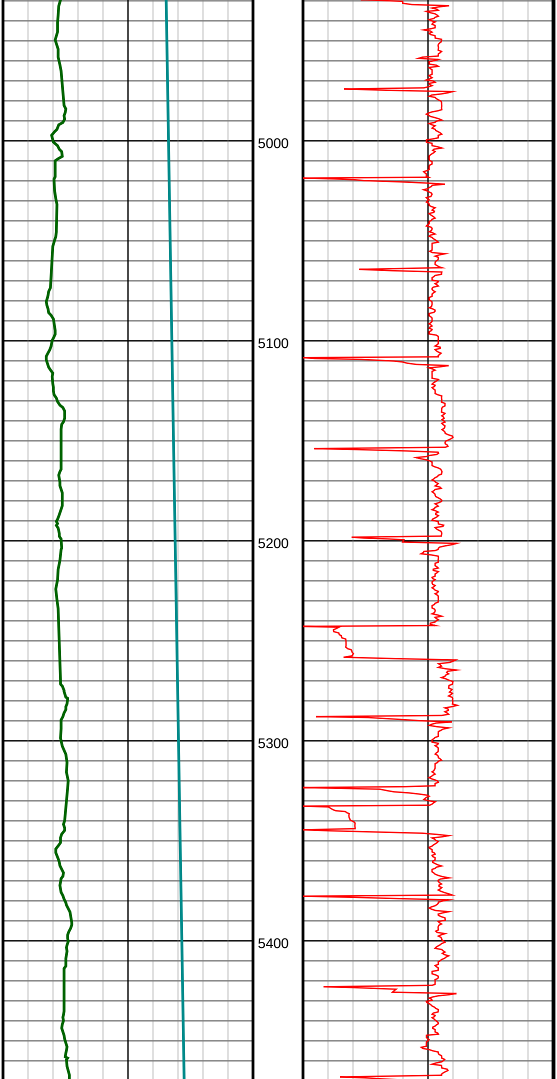
#45 MD(4564.00) Inc(9.1) Azm(262.0) TVD(4532.77)
VS(-10.24) NS(-53.79) EW(-392.01)

#46 MD(4654.00) Inc(7.4) Azm(257.0) TVD(4621.84)
VS(-11.12) NS(-56.09) EW(-404.71)

#47 MD(4743.00) Inc(8.1) Azm(259.6) TVD(4710.03)
VS(-12.23) NS(-58.51) EW(-416.46)

#48 MD(4833.00) Inc(6.9) Azm(257.5) TVD(4799.26)
VS(-13.27) NS(-60.82) EW(-427.98)

#49 MD(4923.00) Inc(5.5) Azm(256.7) TVD(4888.73)
VS(-14.37) NS(-62.99) EW(-437.45)



#50 MD(5012.00) Inc(4.5) Azm(253.6) TVD(4977.39)
VS(-15.50) NS(-64.95) EW(-444.95)

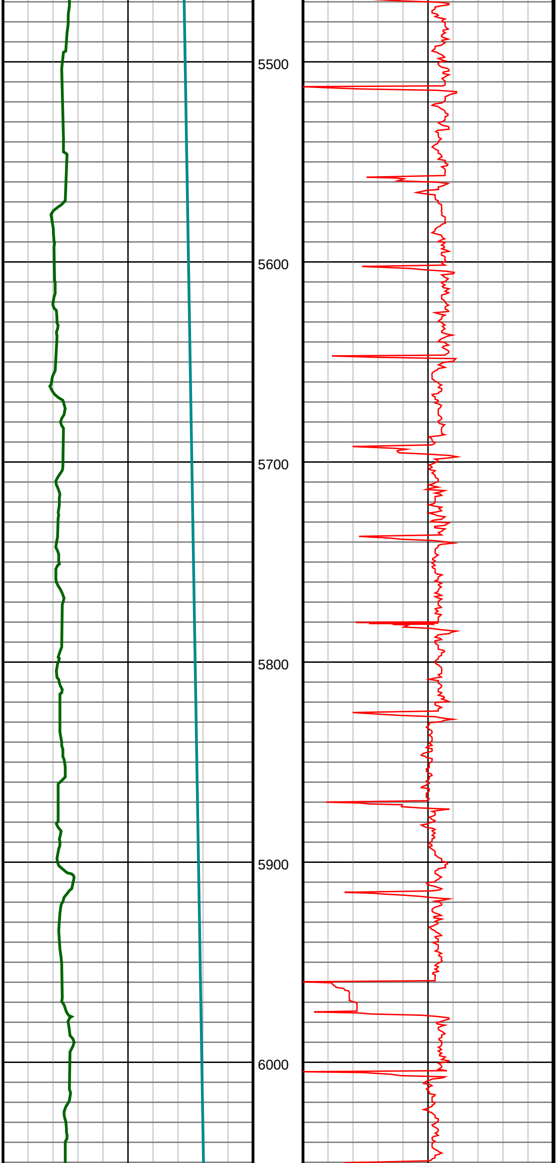
#51 MD(5102.00) Inc(4.3) Azm(253.8) TVD(5067.12)
VS(-16.69) NS(-66.89) EW(-451.58)

#52 MD(5191.00) Inc(3.6) Azm(241.5) TVD(5155.91)
VS(-18.32) NS(-69.15) EW(-457.24)

#53 MD(5281.00) Inc(1.5) Azm(258.1) TVD(5245.82)
VS(-19.50) NS(-70.75) EW(-460.88)

#54 MD(5371.00) Inc(1.4) Azm(217.8) TVD(5335.79)
VS(-20.40) NS(-71.86) EW(-462.70)

#55 MD(5460.00) Inc(1.1) Azm(194.5) TVD(5424.77)
VS(-21.98) NS(-73.54) EW(-463.58)



#56 MD(5550.00) Inc(1.2) Azm(206.1) TVD(5514.75)
VS(-23.59) NS(-75.23) EW(-464.21)

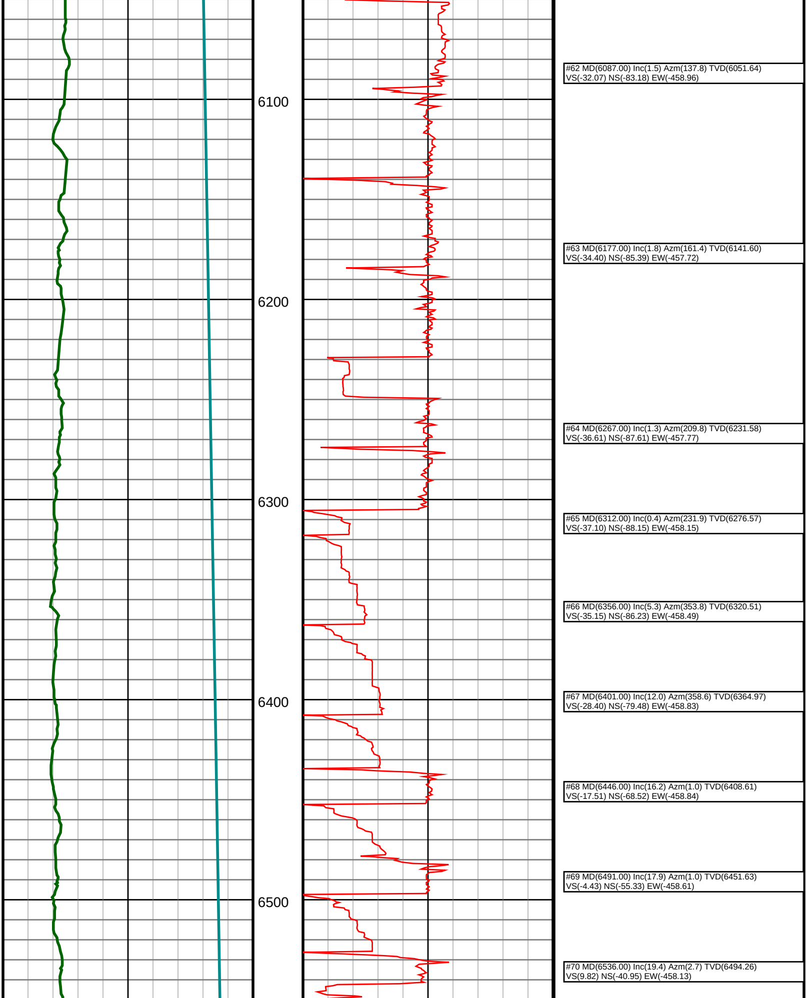
#57 MD(5639.00) Inc(0.4) Azm(128.4) TVD(5603.75)
VS(-24.59) NS(-76.26) EW(-464.38)

#58 MD(5729.00) Inc(0.7) Azm(144.9) TVD(5693.74)
VS(-25.29) NS(-76.90) EW(-463.82)

#59 MD(5819.00) Inc(1.3) Azm(158.9) TVD(5783.73)
VS(-26.76) NS(-78.30) EW(-463.14)

#60 MD(5908.00) Inc(1.6) Azm(161.5) TVD(5872.70)
VS(-28.95) NS(-80.42) EW(-462.38)

#61 MD(5998.00) Inc(1.5) Azm(107.3) TVD(5962.67)
VS(-30.65) NS(-81.97) EW(-460.85)



#62 MD(6087.00) Inc(1.5) Azm(137.8) TVD(6051.64)
VS(-32.07) NS(-83.18) EW(-458.96)

#63 MD(6177.00) Inc(1.8) Azm(161.4) TVD(6141.60)
VS(-34.40) NS(-85.39) EW(-457.72)

#64 MD(6267.00) Inc(1.3) Azm(209.8) TVD(6231.58)
VS(-36.61) NS(-87.61) EW(-457.77)

#65 MD(6312.00) Inc(0.4) Azm(231.9) TVD(6276.57)
VS(-37.10) NS(-88.15) EW(-458.15)

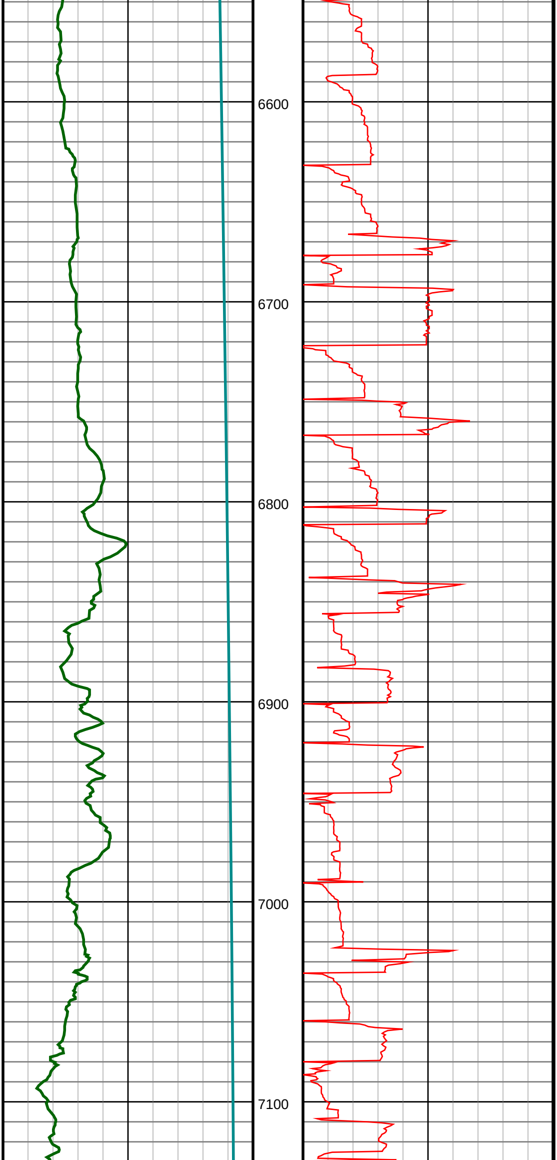
#66 MD(6356.00) Inc(5.3) Azm(353.8) TVD(6320.51)
VS(-35.15) NS(-86.23) EW(-458.49)

#67 MD(6401.00) Inc(12.0) Azm(358.6) TVD(6364.97)
VS(-28.40) NS(-79.48) EW(-458.83)

#68 MD(6446.00) Inc(16.2) Azm(1.0) TVD(6408.61)
VS(-17.51) NS(-68.52) EW(-458.84)

#69 MD(6491.00) Inc(17.9) Azm(1.0) TVD(6451.63)
VS(-4.43) NS(-55.33) EW(-458.61)

#70 MD(6536.00) Inc(19.4) Azm(2.7) TVD(6494.26)
VS(9.82) NS(-40.95) EW(-458.13)



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VS(25.95) NS(-24.62) EW(-457.33)

#72 MD(6626.00) Inc(29.5) Azm(2.6) TVD(6576.49)
VS(45.67) NS(-4.68) EW(-456.38)

#73 MD(6670.00) Inc(34.5) Azm(1.3) TVD(6613.79)
VS(68.73) NS(18.61) EW(-455.61)

#74 MD(6715.00) Inc(34.9) Azm(359.4) TVD(6650.79)
VS(94.17) NS(44.23) EW(-455.45)

#75 MD(6760.00) Inc(37.5) Azm(357.8) TVD(6687.10)
VS(120.65) NS(70.79) EW(-456.11)

#76 MD(6805.00) Inc(41.9) Azm(0.9) TVD(6721.72)
VS(149.24) NS(99.52) EW(-456.40)

#77 MD(6850.00) Inc(45.1) Azm(2.2) TVD(6754.35)
VS(179.91) NS(130.48) EW(-455.55)

#78 MD(6895.00) Inc(47.7) Azm(2.2) TVD(6785.38)
VS(212.14) NS(163.04) EW(-454.30)

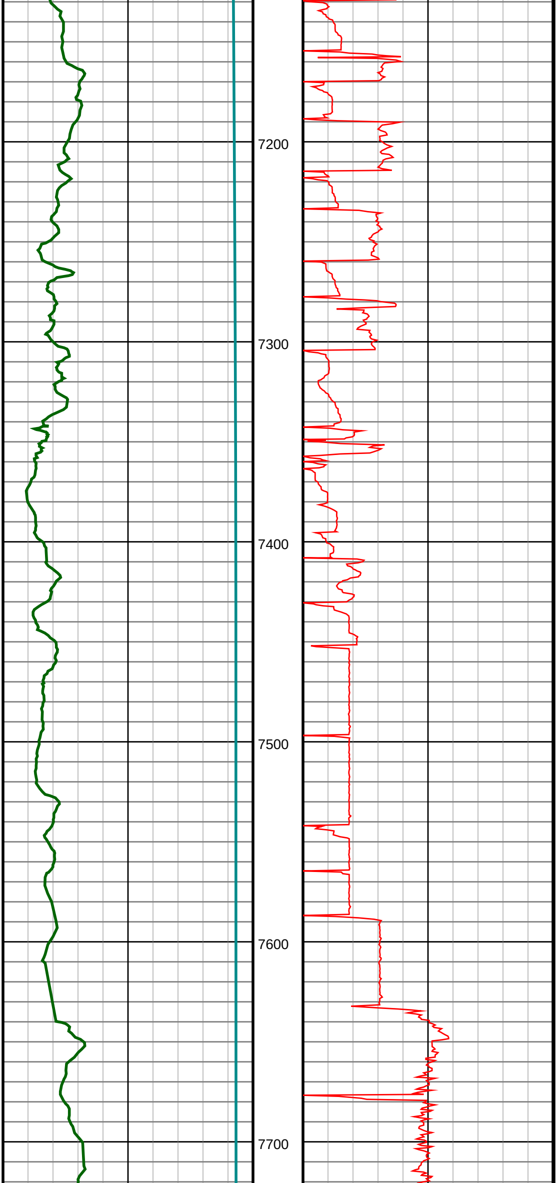
#79 MD(6939.00) Inc(49.1) Azm(2.3) TVD(6814.60)
VS(244.67) NS(195.92) EW(-453.01)

#80 MD(6984.00) Inc(54.0) Azm(2.2) TVD(6842.57)
VS(279.51) NS(231.12) EW(-451.63)

#81 MD(7029.00) Inc(59.7) Azm(2.4) TVD(6867.17)
VS(316.74) NS(268.75) EW(-450.12)

#82 MD(7074.00) Inc(62.8) Azm(2.9) TVD(6888.81)
VS(355.70) NS(308.16) EW(-448.29)

#83 MD(7118.00) Inc(65.2) Azm(1.5) TVD(6908.10)
VS(394.81) NS(347.67) EW(-446.78)



#84 MD(7163.00) Inc(69.0) Azm(0.0) TVD(6925.61)
VS(435.94) NS(389.11) EW(-446.24)

#85 MD(7208.00) Inc(71.4) Azm(359.1) TVD(6940.85)
VS(478.05) NS(431.45) EW(-446.58)

#86 MD(7253.00) Inc(73.3) Azm(359.8) TVD(6954.49)
VS(520.71) NS(474.32) EW(-446.99)

#87 MD(7298.00) Inc(75.3) Azm(0.0) TVD(6966.67)
VS(563.78) NS(517.64) EW(-447.06)

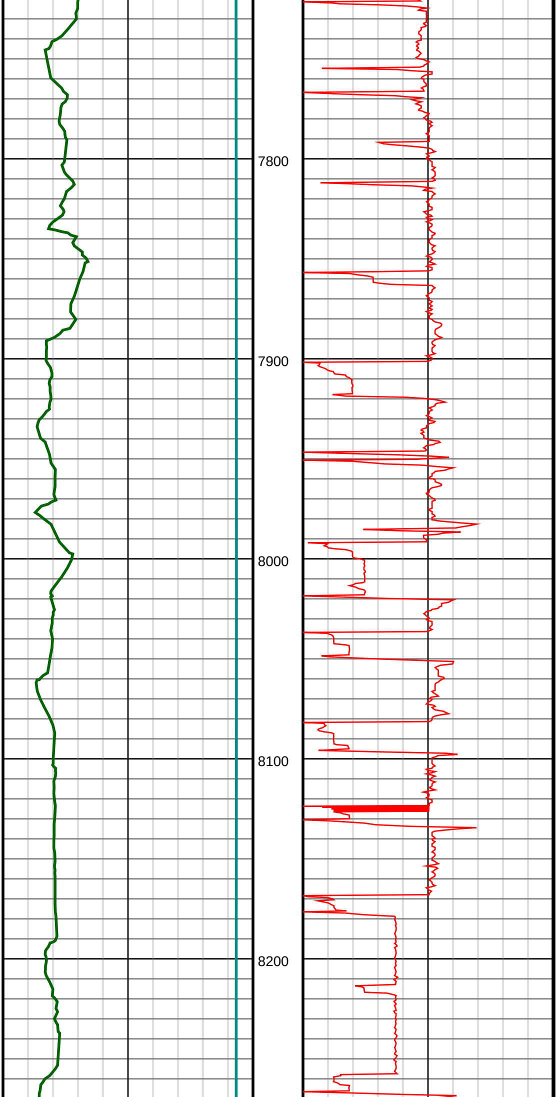
#88 MD(7358.00) Inc(80.8) Azm(0.4) TVD(6979.09)
VS(622.07) NS(576.32) EW(-446.85)

#89 MD(7433.00) Inc(87.8) Azm(0.7) TVD(6986.53)
VS(696.12) NS(650.90) EW(-446.14)

#90 MD(7478.00) Inc(90.3) Azm(0.1) TVD(6987.28)
VS(740.80) NS(695.89) EW(-445.82)

#91 MD(7568.00) Inc(89.1) Azm(359.1) TVD(6987.75)
VS(830.31) NS(785.88) EW(-446.45)

#92 MD(7657.00) Inc(88.7) Azm(358.9) TVD(6989.46)
VS(918.91) NS(874.85) EW(-448.00)



#93 MD(7747.00) Inc(87.5) Azm(359.1) TVD(6992.44)
VS(1008.47) NS(964.79) EW(-449.57)

#94 MD(7836.00) Inc(86.5) Azm(359.0) TVD(6997.10)
VS(1096.96) NS(1053.65) EW(-451.05)

#95 MD(7926.00) Inc(87.3) Azm(359.6) TVD(7001.97)
VS(1186.39) NS(1143.51) EW(-452.15)

#96 MD(8016.00) Inc(89.5) Azm(359.7) TVD(7004.48)
VS(1275.86) NS(1233.47) EW(-452.69)

#97 MD(8106.00) Inc(93.7) Azm(359.2) TVD(7001.97)
VS(1365.35) NS(1323.41) EW(-453.56)

#98 MD(8195.00) Inc(91.6) Azm(359.3) TVD(6997.85)
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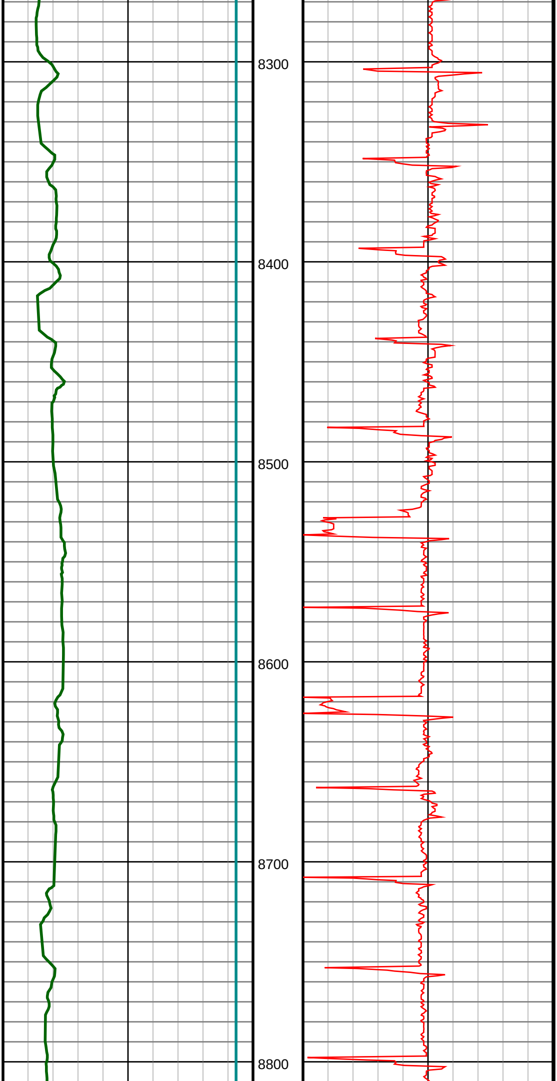

#99 MD(8285.00) Inc(90.9) Azm(359.0) TVD(6995.89)
VS(1543.39) NS(1502.27) EW(-456.06)

#100 MD(8374.00) Inc(90.7) Azm(358.6) TVD(6994.65)
VS(1632.03) NS(1591.24) EW(-457.92)

#101 MD(8464.00) Inc(91.4) Azm(358.0) TVD(6993.00)
VS(1721.72) NS(1681.19) EW(-460.59)

#102 MD(8554.00) Inc(90.7) Azm(359.0) TVD(6991.35)
VS(1811.38) NS(1771.14) EW(-462.94)

#103 MD(8643.00) Inc(89.6) Azm(359.5) TVD(6991.11)
VS(1899.96) NS(1860.13) EW(-464.11)

#104 MD(8733.00) Inc(89.6) Azm(359.1) TVD(6991.74)
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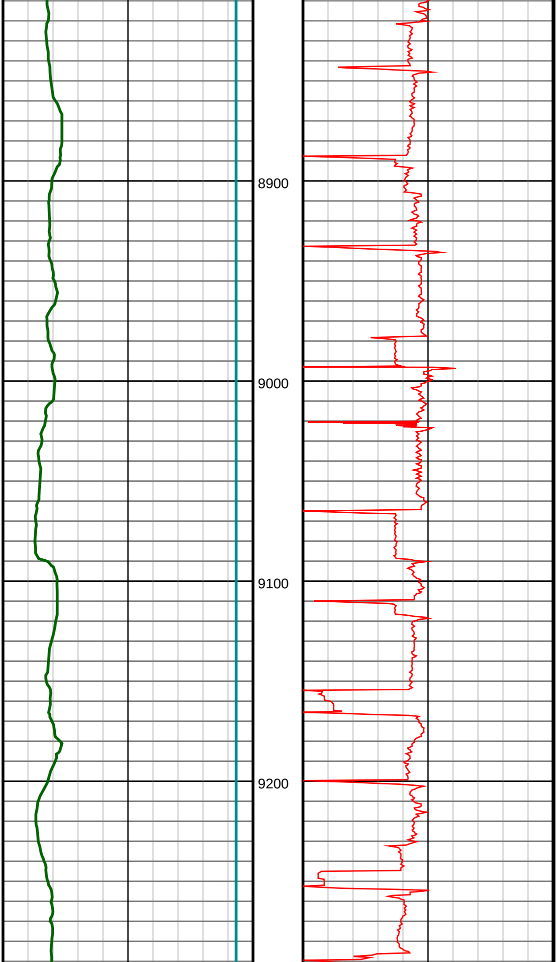


#105 MD(8823.00) Inc(89.6) Azm(359.0) TVD(6992.37)
VS(2079.12) NS(2040.10) EW(-466.70)

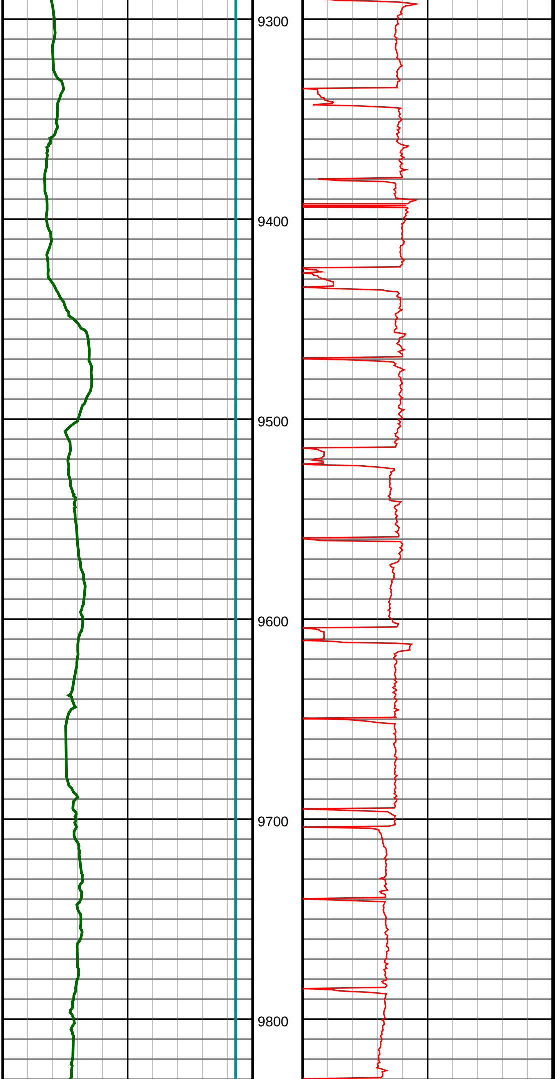
#106 MD(8913.00) Inc(89.7) Azm(358.7) TVD(6992.92)
VS(2168.75) NS(2130.09) EW(-468.51)

#107 MD(9002.00) Inc(89.2) Azm(357.9) TVD(6993.77)
VS(2257.46) NS(2219.04) EW(-471.15)

#108 MD(9091.00) Inc(88.7) Azm(357.6) TVD(6995.41)
VS(2346.22) NS(2307.96) EW(-474.64)

#109 MD(9180.00) Inc(90.9) Azm(358.3) TVD(6995.72)
VS(2434.96) NS(2396.89) EW(-477.82)

#110 MD(9270.00) Inc(91.6) Azm(359.4) TVD(6993.75)
VS(2524.57) NS(2486.85) EW(-479.63)



#111 MD(9359.00) Inc(90.9) Azm(359.9) TVD(6991.81)
VS(2613.07) NS(2575.83) EW(-480.17)

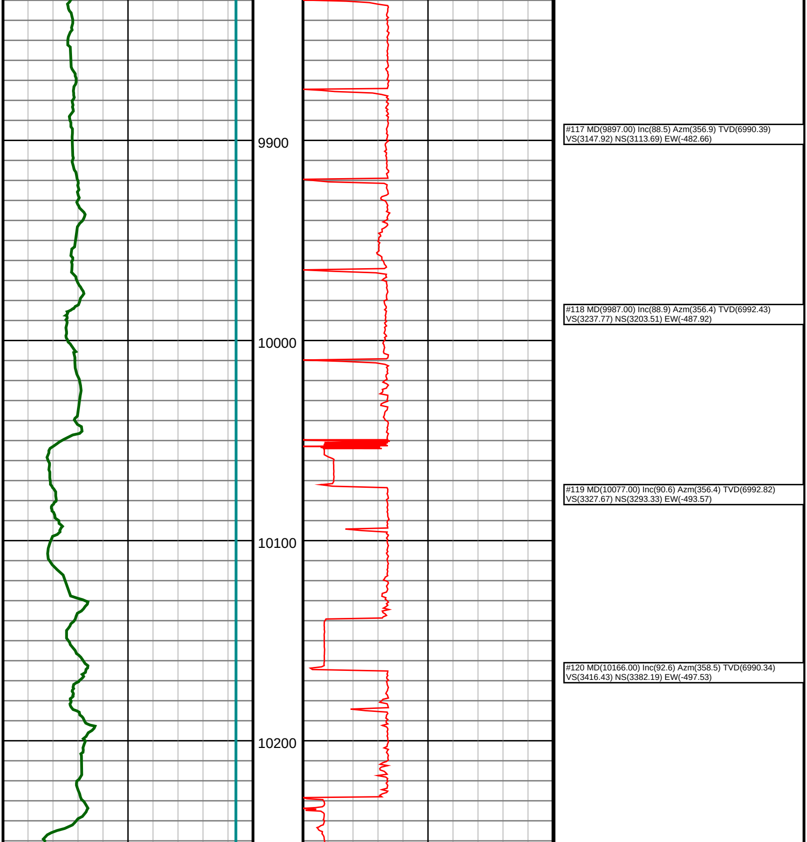
#112 MD(9449.00) Inc(91.2) Azm(0.8) TVD(6990.16)
VS(2702.44) NS(2665.81) EW(-479.62)

#113 MD(9539.00) Inc(90.5) Azm(1.0) TVD(6988.83)
VS(2791.71) NS(2755.79) EW(-478.21)

#114 MD(9629.00) Inc(90.2) Azm(0.2) TVD(6988.28)
VS(2881.05) NS(2845.78) EW(-477.27)

#115 MD(9718.00) Inc(89.5) Azm(359.1) TVD(6988.51)
VS(2969.57) NS(2934.78) EW(-477.81)

#116 MD(9807.00) Inc(89.8) Azm(358.9) TVD(6989.05)
VS(3058.18) NS(3023.76) EW(-479.37)



#117 MD(9897.00) Inc(88.5) Azm(356.9) TVD(6990.39)
VS(3147.92) NS(3113.69) EW(-482.66)

#118 MD(9987.00) Inc(88.9) Azm(356.4) TVD(6992.43)
VS(3237.77) NS(3203.51) EW(-487.92)

#119 MD(10077.00) Inc(90.6) Azm(356.4) TVD(6992.82)
VS(3327.67) NS(3293.33) EW(-493.57)

#120 MD(10166.00) Inc(92.6) Azm(358.5) TVD(6990.34)
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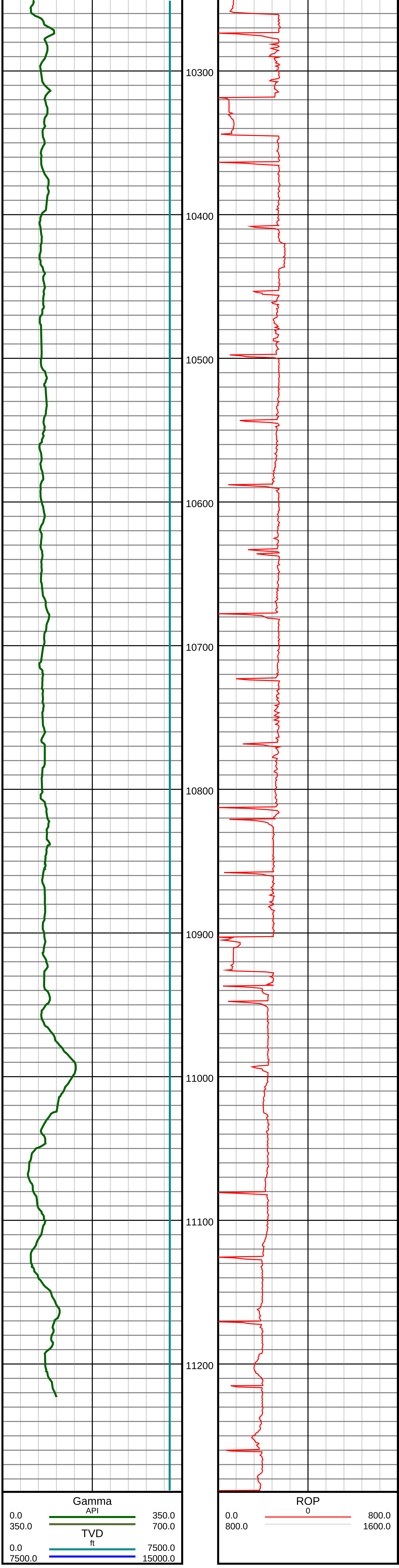

#121 MD(10256.00) Inc(93.3) Azm(1.5) TVD(6985.71)
VS(3505.75) NS(3472.06) EW(-497.53)

#122 MD(10345.00) Inc(90.5) Azm(1.6) TVD(6982.76)
VS(3593.85) NS(3560.97) EW(-495.12)

#123 MD(10435.00) Inc(90.0) Azm(0.9) TVD(6982.36)
VS(3683.06) NS(3650.95) EW(-493.16)

#124 MD(10524.00) Inc(89.8) Azm(0.1) TVD(6982.52)
VS(3771.43) NS(3739.95) EW(-492.38)

#125 MD(10614.00) Inc(89.4) Azm(359.3) TVD(6983.15)
VS(3860.93) NS(3829.94) EW(-492.86)

#126 MD(10704.00) Inc(90.0) Azm(359.1) TVD(6983.62)
VS(3950.51) NS(3919.93) EW(-494.11)

#127 MD(10793.00) Inc(88.9) Azm(357.9) TVD(6984.47)
VS(4039.19) NS(4008.89) EW(-496.44)

#128 MD(10883.00) Inc(88.7) Azm(357.3) TVD(6986.36)
VS(4128.96) NS(4098.79) EW(-500.21)

#129 MD(10973.00) Inc(91.3) Azm(358.6) TVD(6986.36)
VS(4218.70) NS(4188.73) EW(-503.43)

#130 MD(11062.00) Inc(91.3) Azm(357.8) TVD(6984.34)
VS(4307.39) NS(4277.66) EW(-506.22)

#131 MD(11152.00) Inc(91.8) Azm(357.1) TVD(6981.90)
VS(4397.16) NS(4367.54) EW(-510.23)

#132 MD(11226.00) Inc(92.1) Azm(356.5) TVD(6979.38)
VS(4471.01) NS(4441.38) EW(-514.35)