ENSIGN Directional Services

Rohn State LD10-64HN

MD
5":100'

Company: Noble Energy
Well Name: Rohn State LD10-64HN
API: 05-123-37625
Rig Id: Precision 829
State: Colorado
County/Parish: Weld
Country: USA
Survey Company: Ensign Directional
Job number: PD829-207-27
DD1 Zach Gentry
DD2 Colby Hansen
DD3 Tony Callow
MWD1 Andrew Demrow
MWD2 Buster Snider

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

	Depth	Date
Start:	1206 ft	10-20-2014
End:	ft	

Casing	Depth	Size
Surface:	1206	9
Intermediate:		

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

Elevations
KB: 16
GL: 4716
DF: 4732

Run	Bit Size	Offsets Gamma	Offsets Survey	Depths Start	Depths End	Dates Start	Dates End
1	13.5			0	1216	10-19-2014	10-19-2014
2	8.75	59.87	54.87	1216	6059	10-20-2014	10-21-2014
3	6.125	66.00	61.00	6059		10-21-2014	
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.

#3 MD(1228.00) Inc(0.1) Azm(39.5) TVD(1227.98)
VS(-5.24) NS(3.39) EW(-5.25)

#4 MD(1326.00) Inc(0.4) Azm(7.2) TVD(1325.98)
VS(-5.14) NS(3.80) EW(-5.16)

#5 MD(1421.00) Inc(0.5) Azm(50.1) TVD(1420.97)
VS(-4.78) NS(4.39) EW(-4.80)

#6 MD(1514.00) Inc(0.7) Azm(321.2) TVD(1513.97)
VS(-4.82) NS(5.09) EW(-4.84)

#7 MD(1607.00) Inc(1.1) Azm(323.7) TVD(1606.96)
VS(-5.70) NS(6.26) EW(-5.73)

#8 MD(1701.00) Inc(0.8) Azm(316.3) TVD(1700.95)
VS(-6.68) NS(7.46) EW(-6.71)

#9 MD(1794.00) Inc(1.3) Azm(194.3) TVD(1793.94)
VS(-7.39) NS(6.90) EW(-7.42)

#10 MD(1887.00) Inc(2.9) Azm(174.3) TVD(1886.87)
VS(-7.43) NS(3.54) EW(-7.45)

#11 MD(1980.00) Inc(3.6) Azm(156.4) TVD(1979.73)
VS(-6.05) NS(-1.48) EW(-6.05)

#12 MD(2073.00) Inc(4.1) Azm(174.3) TVD(2072.52)
VS(-4.58) NS(-7.46) EW(-4.55)

#13 MD(2166.00) Inc(6.1) Azm(176.7) TVD(2165.15)
VS(-4.00) NS(-15.70) EW(-3.93)

#14 MD(2258.00) Inc(8.1) Azm(171.3) TVD(2256.44)
VS(-2.79) NS(-26.99) EW(-2.67)

#15 MD(2351.00) Inc(8.9) Azm(164.8) TVD(2348.42)
VS(0.02) NS(-40.41) EW(0.21)

#16 MD(2445.00) Inc(10.2) Azm(155.7) TVD(2441.12)
VS(5.29) NS(-55.01) EW(5.54)

#17 MD(2538.00) Inc(11.1) Azm(142.4) TVD(2532.53)
VS(14.07) NS(-69.61) EW(14.39)

#18 MD(2627.00) Inc(10.4) Azm(126.8) TVD(2619.98)
VS(25.68) NS(-81.22) EW(26.05)

#19 MD(2717.00) Inc(10.4) Azm(115.2) TVD(2708.52)
VS(39.50) NS(-89.54) EW(39.91)

#20 MD(2807.00) Inc(9.5) Azm(113.1) TVD(2797.16)
VS(53.66) NS(-95.92) EW(54.09)

#21 MD(2896.00) Inc(9.1) Azm(107.6) TVD(2884.99)
VS(67.10) NS(-100.92) EW(67.56)

#22 MD(2986.00) Inc(8.3) Azm(97.7) TVD(2973.96)
VS(80.31) NS(-103.95) EW(80.78)

#23 MD(3076.00) Inc(7.9) Azm(96.2) TVD(3063.06)
VS(92.88) NS(-105.49) EW(93.36)

#24 MD(3165.00) Inc(7.9) Azm(95.3) TVD(3151.22)
VS(105.05) NS(-106.71) EW(105.53)

#25 MD(3255.00) Inc(7.9) Azm(93.7) TVD(3240.37)
VS(117.38) NS(-107.68) EW(117.87)

#26 MD(3344.00) Inc(7.7) Azm(93.6) TVD(3328.54)
VS(129.43) NS(-108.45) EW(129.92)

#27 MD(3434.00) Inc(7.3) Azm(96.9) TVD(3417.77)
VS(141.12) NS(-109.52) EW(141.61)

#28 MD(3523.00) Inc(7.3) Azm(95.8) TVD(3506.05)
VS(152.35) NS(-110.77) EW(152.85)

#29 MD(3613.00) Inc(5.8) Azm(92.8) TVD(3595.47)
VS(162.55) NS(-110.77) EW(163.05)

#30 MD(3702.00) Inc(4.0) Azm(79.4) TVD(3684.14)
VS(170.07) NS(-109.64) EW(170.57)

#31 MD(3792.00) Inc(1.6) Azm(79.0) TVD(3774.02)
VS(174.39) NS(-108.82) EW(174.89)

#32 MD(3882.00) Inc(0.7) Azm(49.7) TVD(3864.00)
VS(176.05) NS(-108.23) EW(176.54)

#33 MD(3971.00) Inc(0.6) Azm(46.7) TVD(3953.00)
VS(176.80) NS(-107.56) EW(177.29)

#34 MD(4061.00) Inc(1.0) Azm(49.7) TVD(4042.99)
VS(177.75) NS(-106.73) EW(178.24)

#35 MD(4151.00) Inc(1.0) Azm(32.3) TVD(4132.98)
VS(178.77) NS(-105.55) EW(179.25)

#36 MD(4240.00) Inc(1.6) Azm(6.5) TVD(4221.95)
VS(179.34) NS(-103.66) EW(179.81)

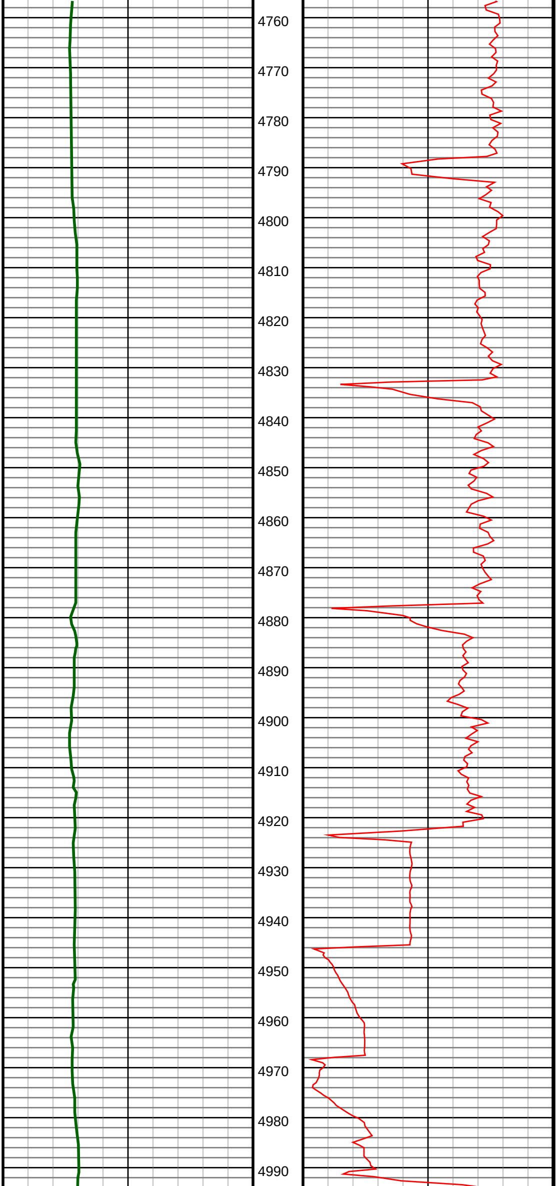
#37 MD(4330.00) Inc(1.5) Azm(9.4) TVD(4311.92)
VS(179.68) NS(-101.25) EW(180.14)

#38 MD(4419.00) Inc(0.9) Azm(342.6) TVD(4400.90)
VS(179.67) NS(-99.44) EW(180.13)

#39 MD(4509.00) Inc(1.1) Azm(335.6) TVD(4490.89)
VS(179.11) NS(-97.97) EW(179.56)

#40 MD(4598.00) Inc(1.4) Azm(307.4) TVD(4579.87)
VS(177.90) NS(-96.54) EW(178.34)

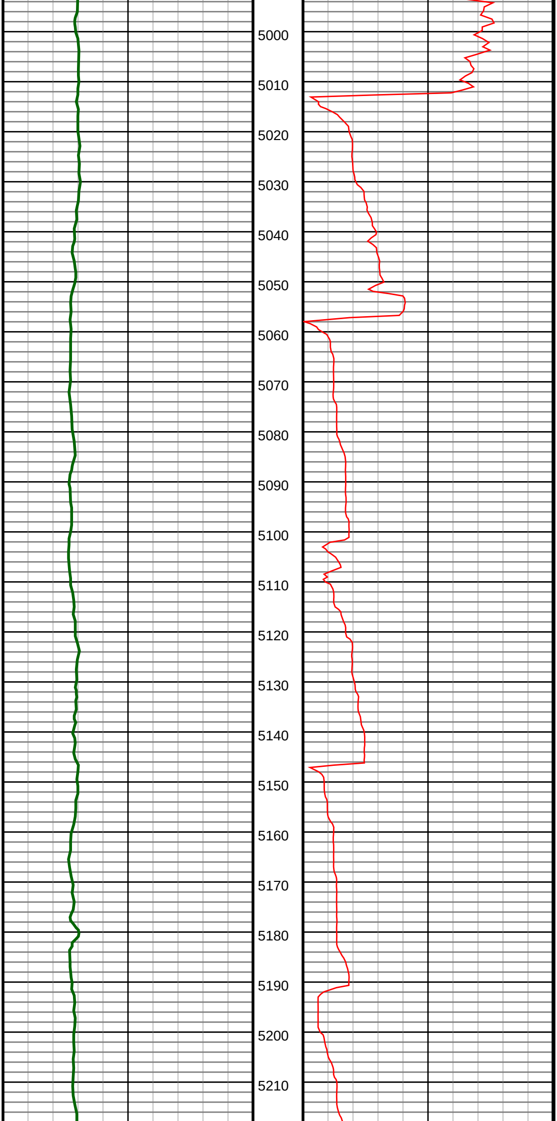
#41 MD(4688.00) Inc(0.6) Azm(236.6) TVD(4669.86)
VS(176.64) NS(-96.13) EW(177.07)



#42 MD(4778.00) Inc(0.6) Azm(240.2) TVD(4759.85)
VS(175.83) NS(-96.62) EW(176.27)

#43 MD(4867.00) Inc(0.4) Azm(244.8) TVD(4848.85)
VS(175.14) NS(-96.99) EW(175.59)

#44 MD(4957.00) Inc(1.8) Azm(138.6) TVD(4938.83)
VS(175.79) NS(-98.18) EW(176.24)



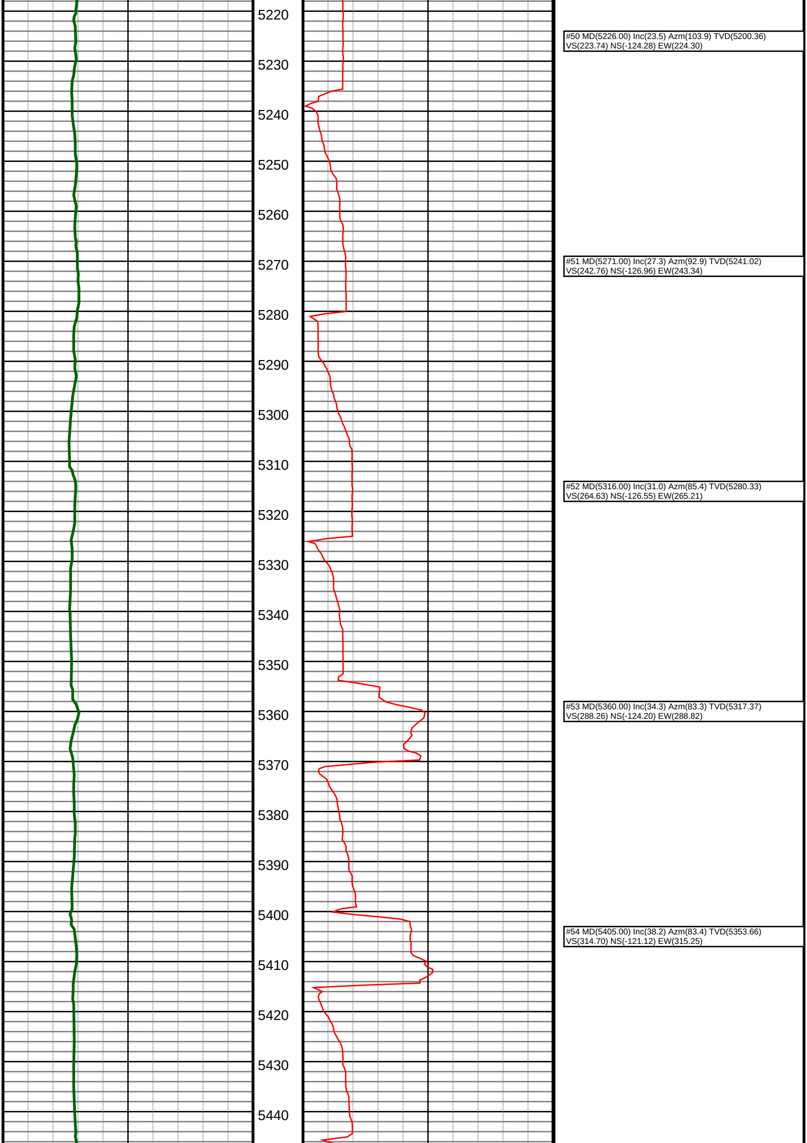
#45 MD(5002.00) Inc(4.7) Azm(138.4) TVD(4983.76)
VS(177.47) NS(-100.09) EW(177.93)

#46 MD(5047.00) Inc(7.7) Azm(126.9) TVD(5028.49)
VS(181.09) NS(-103.28) EW(181.56)

#47 MD(5091.00) Inc(11.7) Azm(120.9) TVD(5071.85)
VS(187.26) NS(-107.34) EW(187.75)

#48 MD(5136.00) Inc(15.2) Azm(123.0) TVD(5115.61)
VS(196.10) NS(-112.90) EW(196.62)

#49 MD(5181.00) Inc(19.8) Azm(113.2) TVD(5158.53)
VS(208.04) NS(-119.12) EW(208.58)



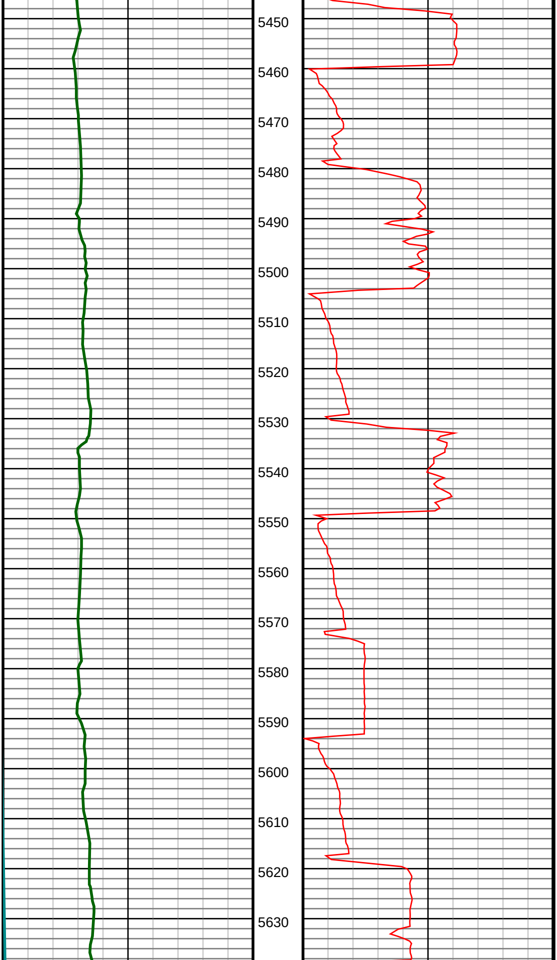
#50 MD(5226.00) Inc(23.5) Azm(103.9) TVD(5200.36)
VS(223.74) NS(-124.28) EW(224.30)

#51 MD(5271.00) Inc(27.3) Azm(92.9) TVD(5241.02)
VS(242.76) NS(-126.96) EW(243.34)

#52 MD(5316.00) Inc(31.0) Azm(85.4) TVD(5280.33)
VS(264.63) NS(-126.55) EW(265.21)

#53 MD(5360.00) Inc(34.3) Azm(83.3) TVD(5317.37)
VS(288.26) NS(-124.20) EW(288.82)

#54 MD(5405.00) Inc(38.2) Azm(83.4) TVD(5353.66)
VS(314.70) NS(-121.12) EW(315.25)



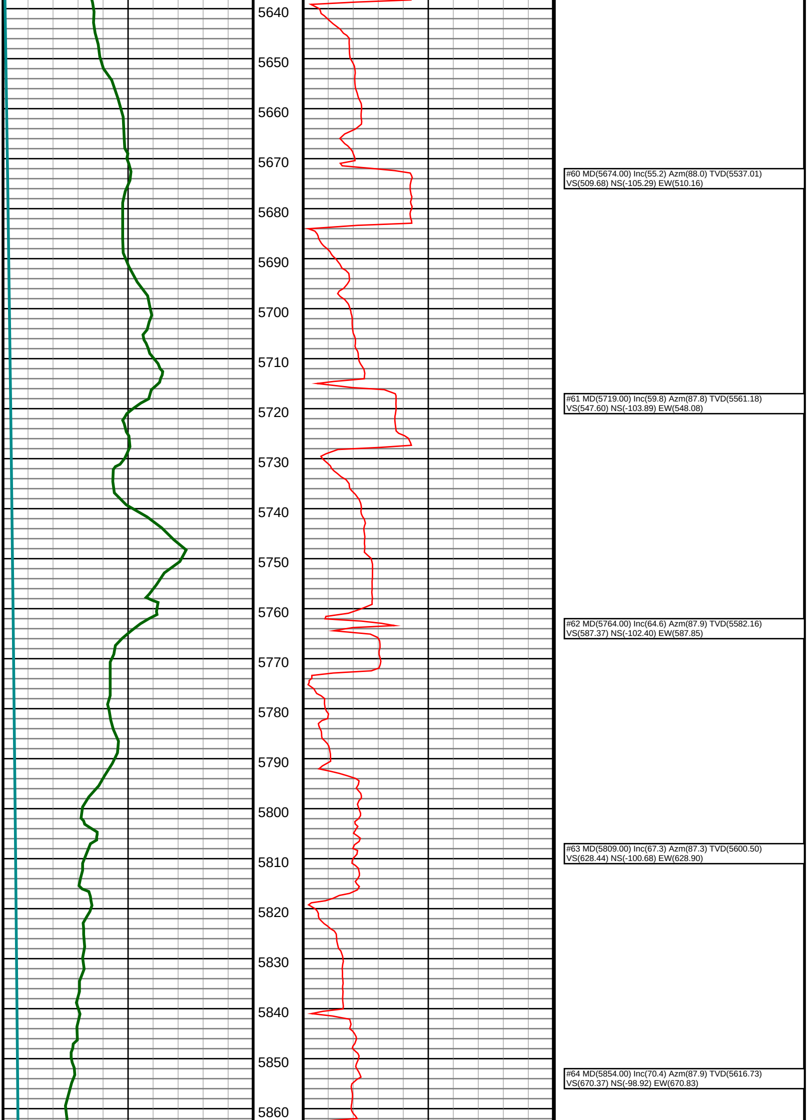
#55 MD(5450.00) Inc(41.7) Azm(85.7) TVD(5388.15)
VS(343.47) NS(-118.39) EW(344.01)

#56 MD(5495.00) Inc(44.0) Azm(85.1) TVD(5421.14)
VS(373.98) NS(-115.94) EW(374.51)

#57 MD(5540.00) Inc(47.1) Azm(84.4) TVD(5452.65)
VS(405.98) NS(-112.99) EW(406.49)

#58 MD(5585.00) Inc(49.8) Azm(84.2) TVD(5482.49)
VS(439.50) NS(-109.65) EW(440.00)

#59 MD(5629.00) Inc(51.9) Azm(86.7) TVD(5510.27)
VS(473.52) NS(-106.95) EW(474.01)



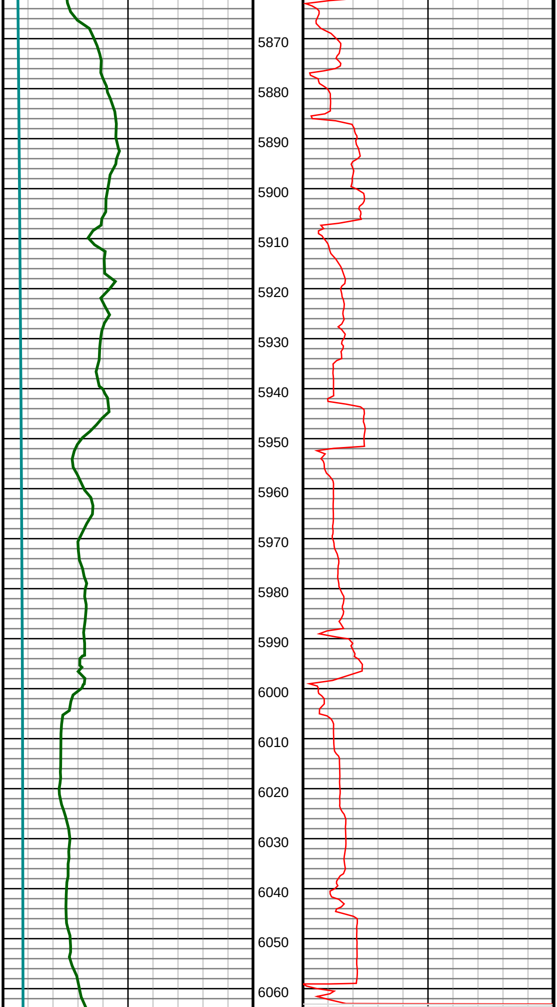
#60 MD(5674.00) Inc(55.2) Azm(88.0) TVD(5537.01)
VS(509.68) NS(-105.29) EW(510.16)

#61 MD(5719.00) Inc(59.8) Azm(87.8) TVD(5561.18)
VS(547.60) NS(-103.89) EW(548.08)

#62 MD(5764.00) Inc(64.6) Azm(87.9) TVD(5582.16)
VS(587.37) NS(-102.40) EW(587.85)

#63 MD(5809.00) Inc(67.3) Azm(87.3) TVD(5600.50)
VS(628.44) NS(-100.68) EW(628.90)

#64 MD(5854.00) Inc(70.4) Azm(87.9) TVD(5616.73)
VS(670.37) NS(-98.92) EW(670.83)

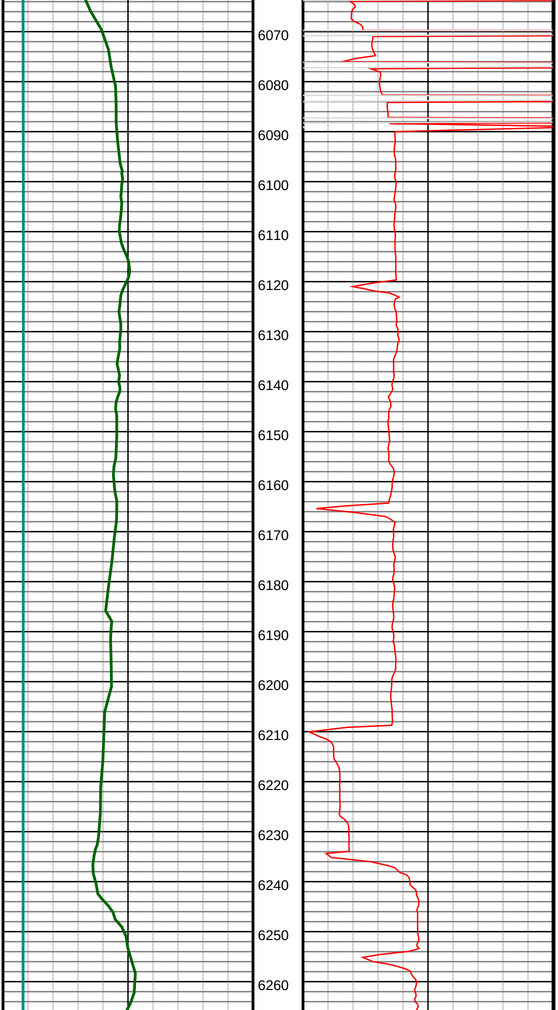


#65 MD(5898.00) Inc(71.1) Azm(89.7) TVD(5631.24)
VS(711.90) NS(-98.06) EW(712.35)

#66 MD(5943.00) Inc(75.3) Azm(89.2) TVD(5644.24)
VS(754.97) NS(-97.64) EW(755.42)

#67 MD(5988.00) Inc(80.5) Azm(89.5) TVD(5653.67)
VS(798.95) NS(-97.14) EW(799.40)

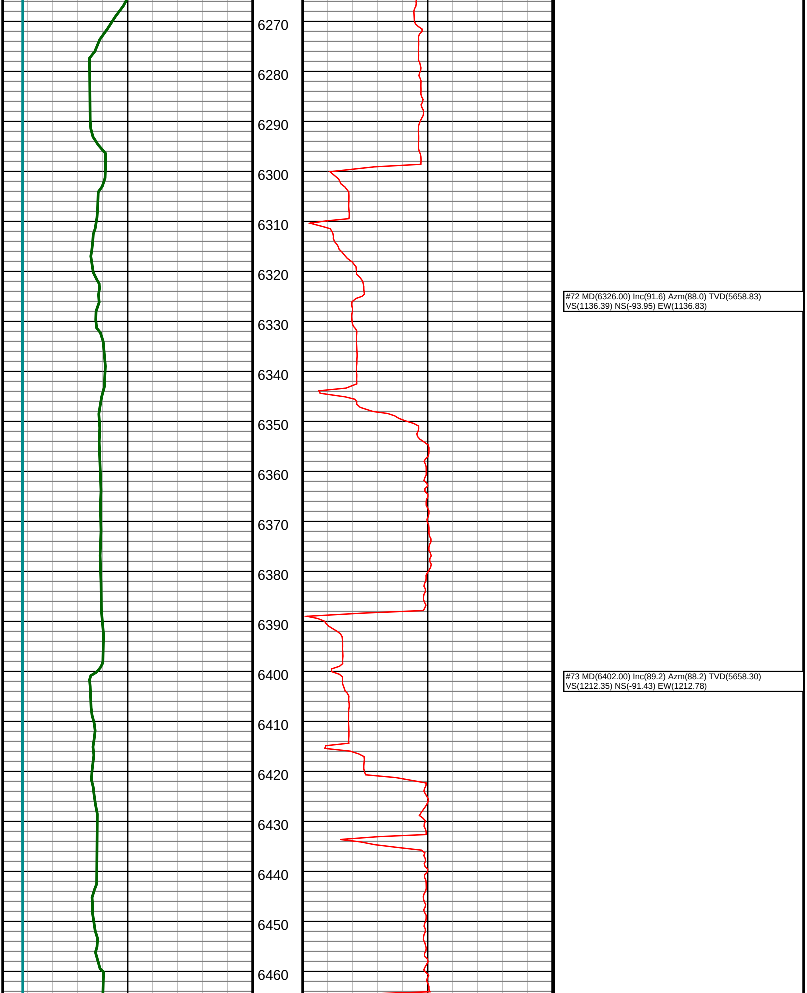
#68 MD(6004.00) Inc(82.4) Azm(89.2) TVD(5656.05)
VS(814.78) NS(-96.96) EW(815.22)



#69 MD(6102.00) Inc(89.5) Azm(90.5) TVD(5662.97)
VS(912.47) NS(-96.71) EW(912.91)

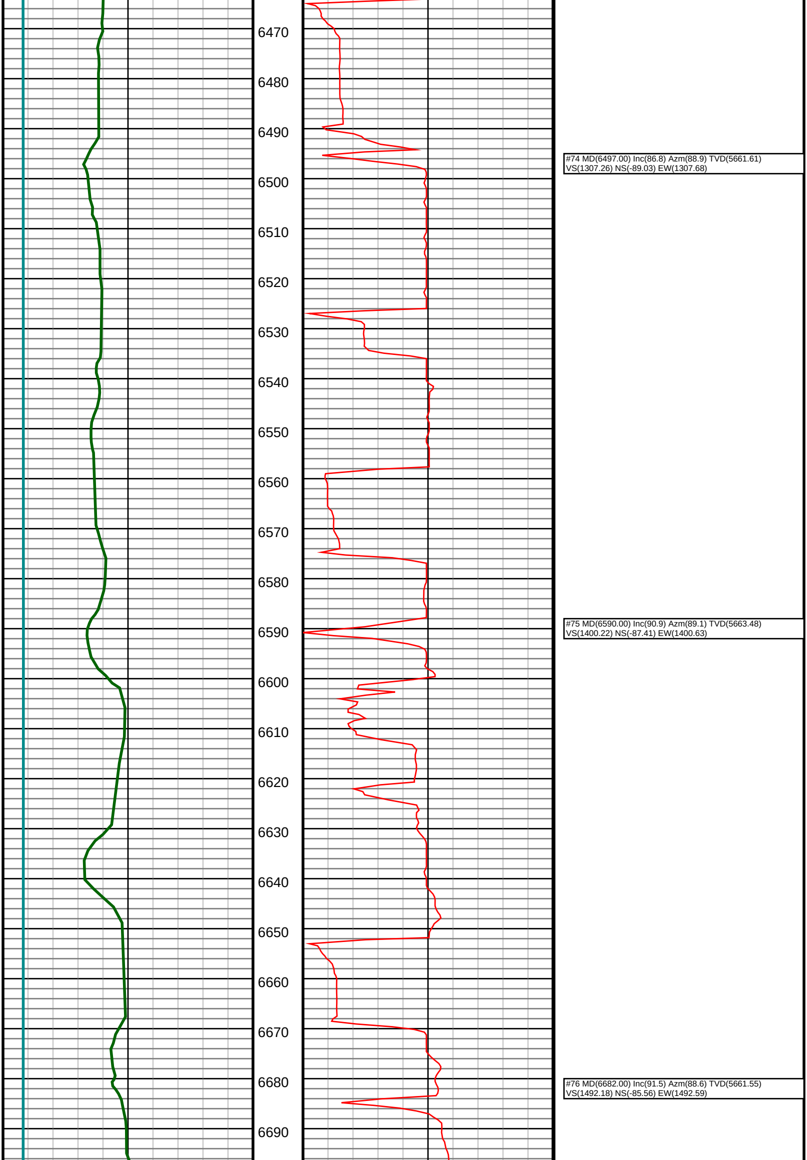
#70 MD(6147.00) Inc(90.9) Azm(90.4) TVD(5662.81)
VS(957.46) NS(-97.07) EW(957.91)

#71 MD(6237.00) Inc(91.3) Azm(88.8) TVD(5661.08)
VS(1047.44) NS(-96.44) EW(1047.89)



#72 MD(6326.00) Inc(91.6) Azm(88.0) TVD(5658.83)
VS(1136.39) NS(-93.95) EW(1136.83)

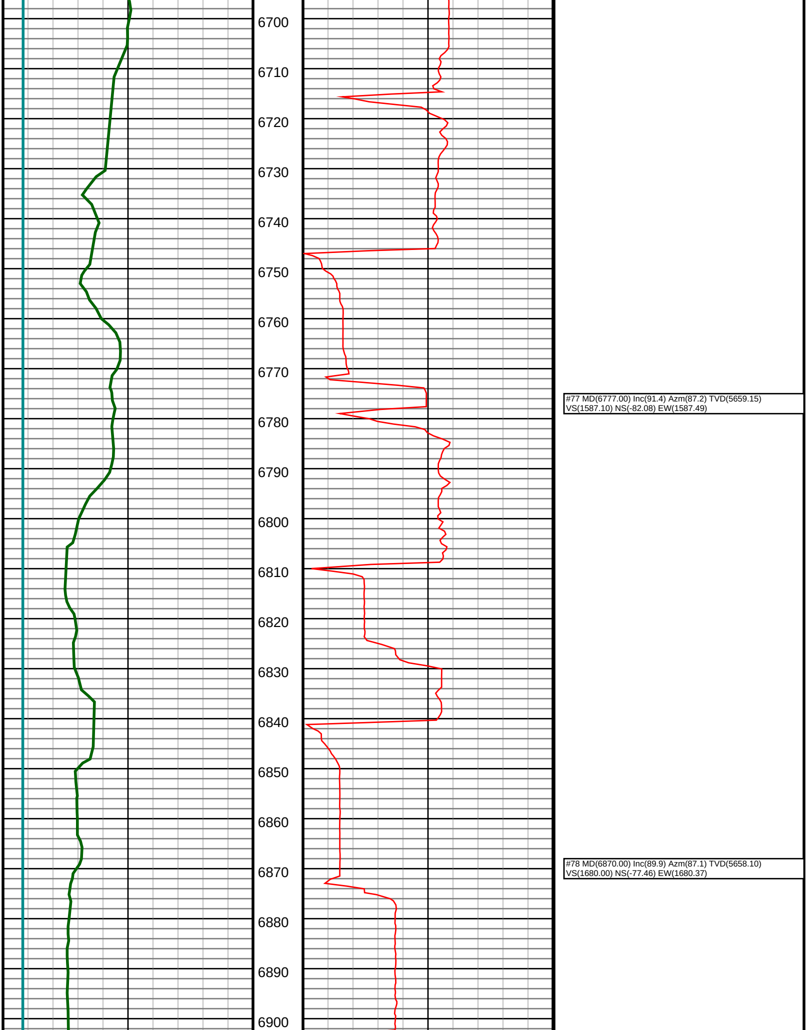
#73 MD(6402.00) Inc(89.2) Azm(88.2) TVD(5658.30)
VS(1212.35) NS(-91.43) EW(1212.78)



#74 MD(6497.00) Inc(86.8) Azm(88.9) TVD(5661.61)
VS(1307.26) NS(-89.03) EW(1307.68)

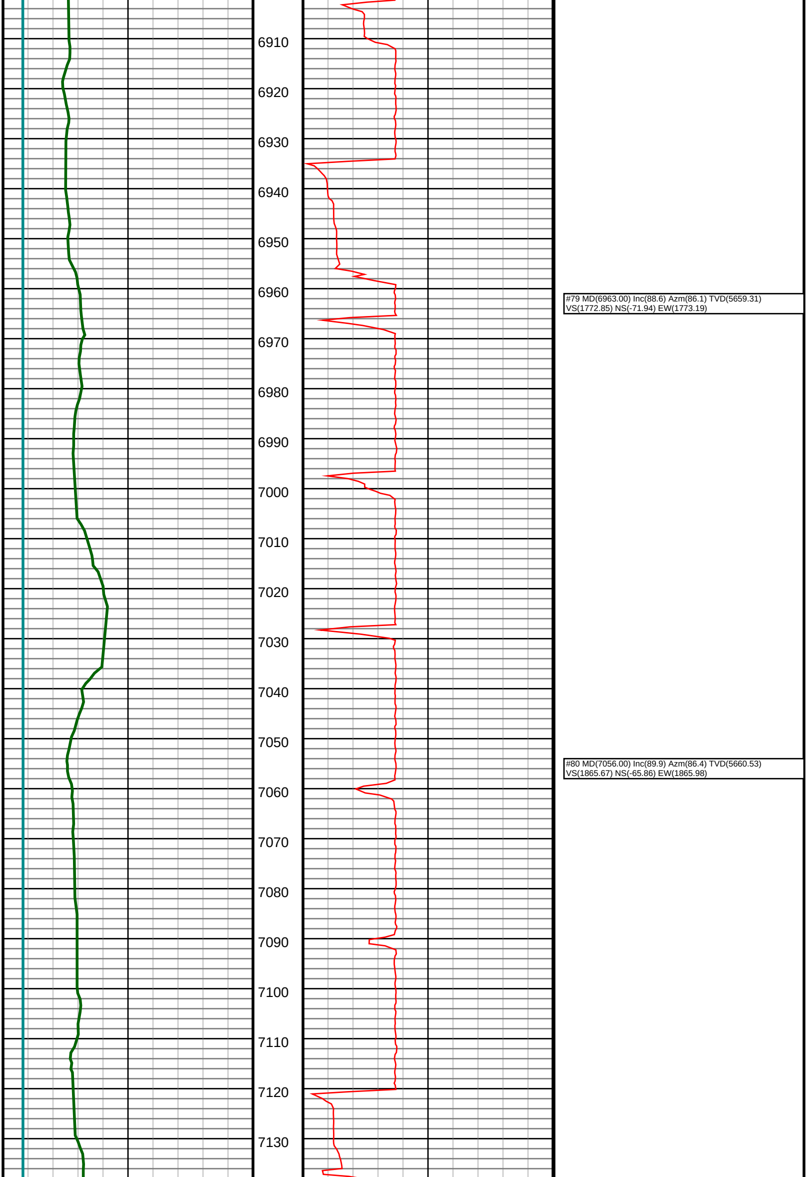
#75 MD(6590.00) Inc(90.9) Azm(89.1) TVD(5663.48)
VS(1400.22) NS(-87.41) EW(1400.63)

#76 MD(6682.00) Inc(91.5) Azm(88.6) TVD(5661.55)
VS(1492.18) NS(-85.56) EW(1492.59)



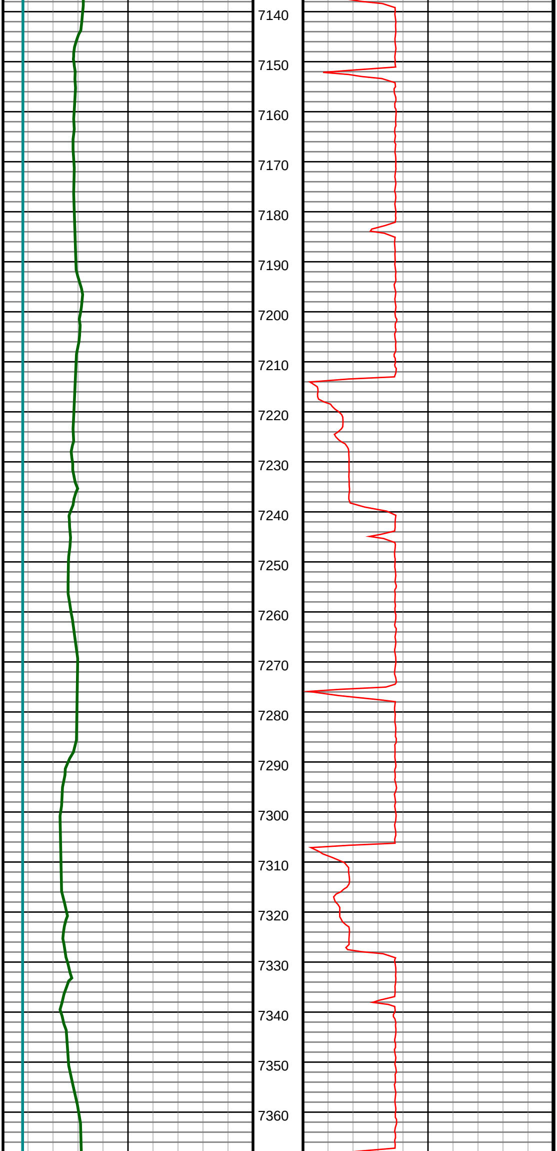
#77 MD(6777.00) Inc(91.4) Azm(87.2) TVD(5659.15)
VS(1587.10) NS(-82.08) EW(1587.49)

#78 MD(6870.00) Inc(89.9) Azm(87.1) TVD(5658.10)
VS(1680.00) NS(-77.46) EW(1680.37)



#79 MD(6963.00) Inc(88.6) Azm(86.1) TVD(5659.31)
VS(1772.85) NS(-71.94) EW(1773.19)

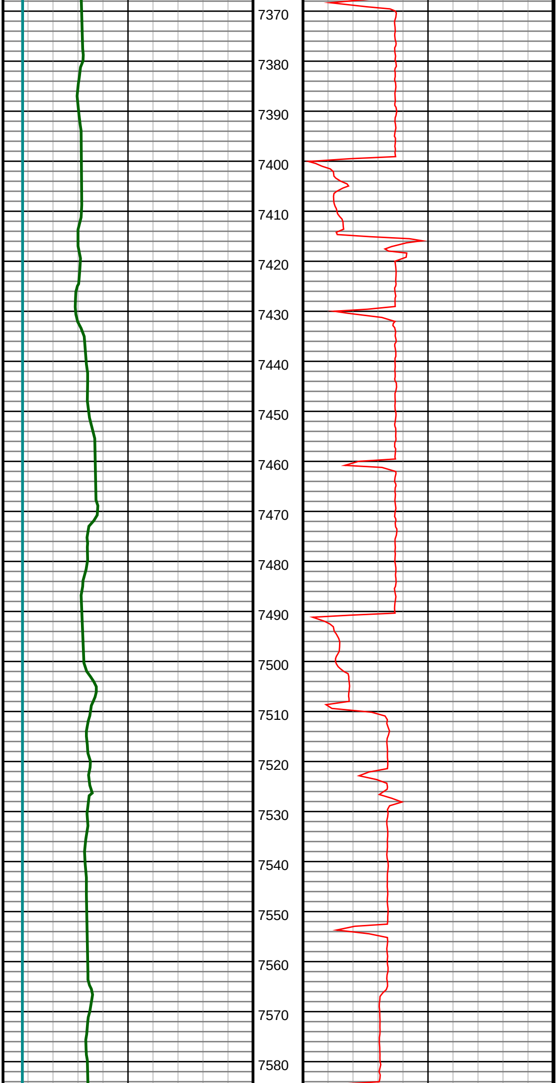
#80 MD(7056.00) Inc(89.9) Azm(86.4) TVD(5660.53)
VS(1865.67) NS(-65.86) EW(1865.98)



#81 MD(7149.00) Inc(91.4) Azm(88.0) TVD(5659.47)
VS(1958.56) NS(-61.32) EW(1958.86)

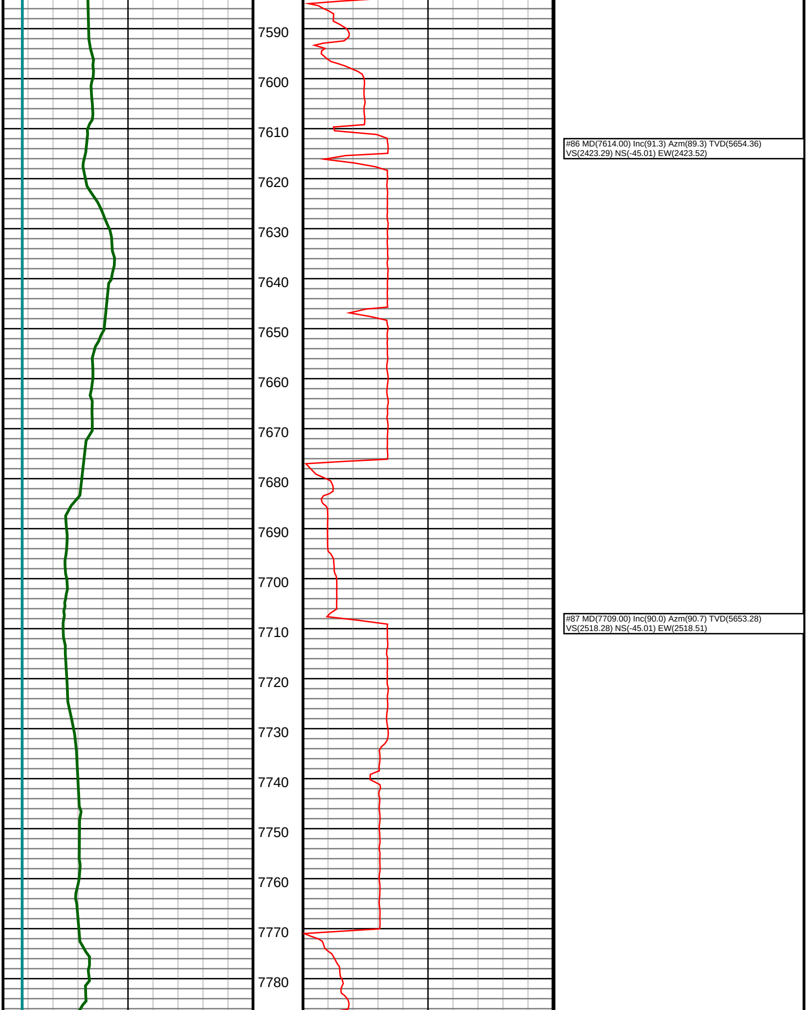
#82 MD(7242.00) Inc(90.8) Azm(87.8) TVD(5657.69)
VS(2051.50) NS(-57.91) EW(2051.78)

#83 MD(7335.00) Inc(90.0) Azm(87.3) TVD(5657.04)
VS(2144.43) NS(-53.94) EW(2144.69)



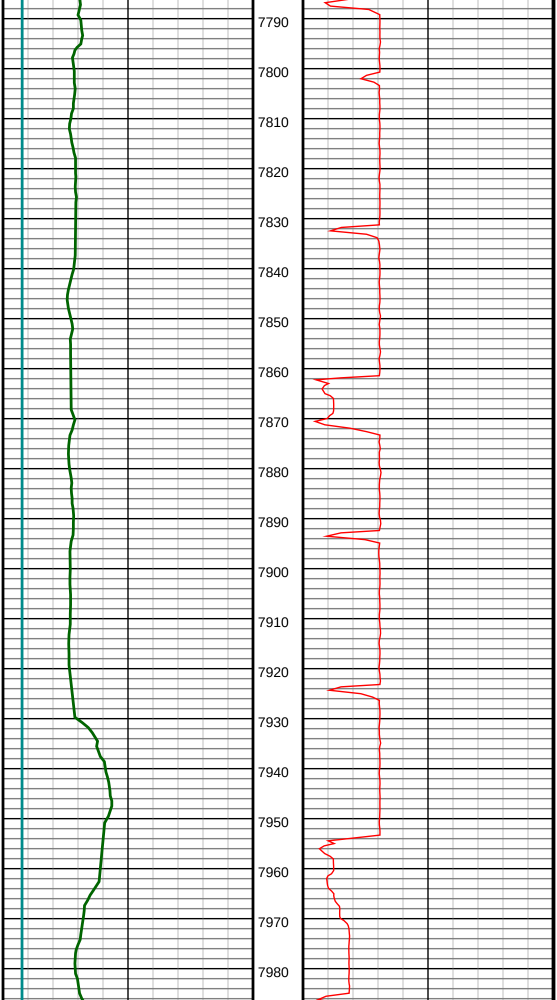
#84 MD(7428.00) Inc(90.4) Azm(88.0) TVD(5656.72)
VS(2237.36) NS(-50.12) EW(2237.61)

#85 MD(7521.00) Inc(90.6) Azm(88.2) TVD(5655.90)
VS(2330.32) NS(-47.04) EW(2330.56)



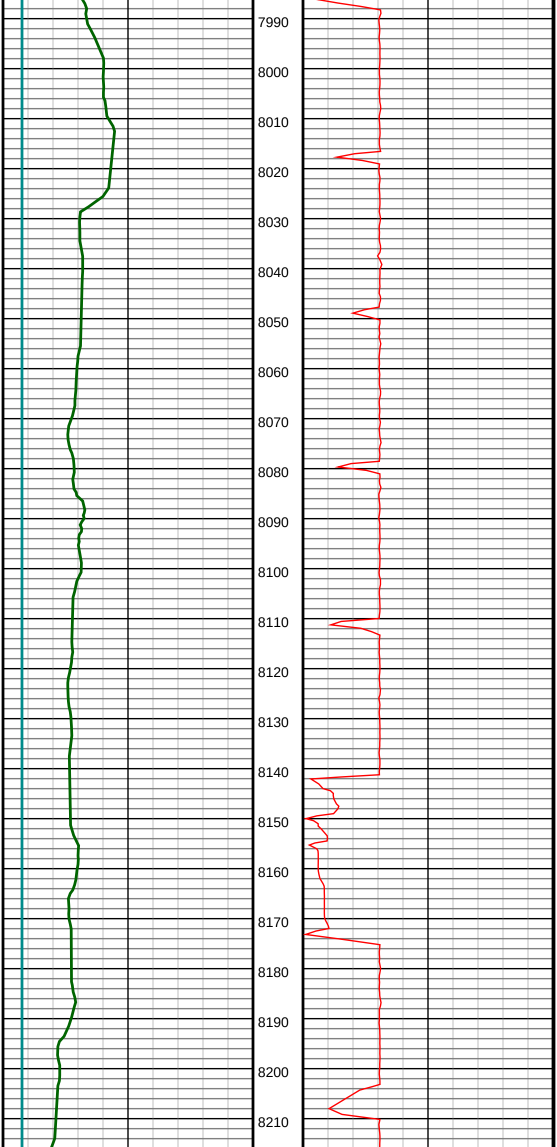
#86 MD(7614.00) Inc(91.3) Azm(89.3) TVD(5654.36)
VS(2423.29) NS(-45.01) EW(2423.52)

#87 MD(7709.00) Inc(90.0) Azm(90.7) TVD(5653.28)
VS(2518.28) NS(-45.01) EW(2518.51)



#88 MD(7801.00) Inc(89.9) Azm(90.1) TVD(5653.36)
VS(2610.27) NS(-45.65) EW(2610.51)

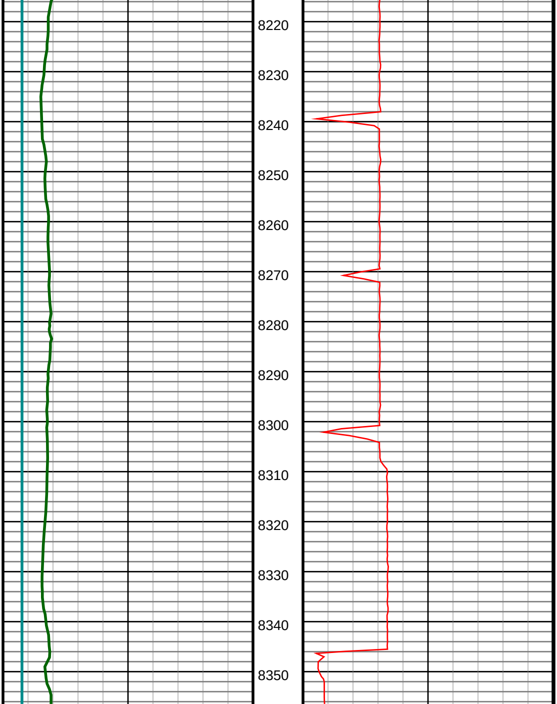
#89 MD(7895.00) Inc(91.0) Azm(88.8) TVD(5652.63)
VS(2704.27) NS(-44.75) EW(2704.50)



#90 MD(7989.00) Inc(89.6) Azm(88.3) TVD(5652.13)
VS(2798.24) NS(-42.37) EW(2798.46)

#91 MD(8083.00) Inc(90.8) Azm(88.4) TVD(5651.81)
VS(2892.21) NS(-39.67) EW(2892.42)

#92 MD(8177.00) Inc(89.0) Azm(87.2) TVD(5651.97)
VS(2986.15) NS(-36.06) EW(2986.35)



#93 MD(8284.00) Inc(90.6) Azm(87.1) TVD(5652.34)
VS(3093.04) NS(-30.74) EW(3093.21)

#94 MD(8374.00) Inc(90.3) Azm(87.8) TVD(5651.64) VS(3182.96) NS(-26.74) EW(3183.12)

#95 MD(8463.00) Inc(92.0) Azm(88.1) TVD(5649.85) VS(3271.90) NS(-23.55) EW(3272.04)

#96 MD(8553.00) Inc(91.1) Azm(89.0) TVD(5647.42) VS(3361.85) NS(-21.28) EW(3361.98)

#97 MD(8642.00) Inc(88.4) Azm(89.7) TVD(5647.80) VS(3450.83) NS(-20.27) EW(3450.96)

#98 MD(8732.00) Inc(88.8) Azm(89.8) TVD(5650.00) VS(3540.81) NS(-19.87) EW(3540.93)

#99 MD(8822.00) Inc(90.4) Azm(90.0) TVD(5650.63) VS(3630.80) NS(-19.72) EW(3630.93)

#100 MD(8912.00) Inc(92.2) Azm(89.2) TVD(5648.59) VS(3720.77) NS(-19.09) EW(3720.90)

#101 MD(9001.00) Inc(91.2) Azm(87.7) TVD(5645.95) VS(3809.71) NS(-16.68) EW(3809.82)

#102 MD(9091.00) Inc(89.7) Azm(87.0) TVD(5645.24) VS(3899.62) NS(-12.52) EW(3899.72)

#103 MD(9180.00) Inc(91.2) Azm(87.4) TVD(5644.54) VS(3988.53) NS(-8.17) EW(3988.61)

#104 MD(9270.00) Inc(91.5) Azm(88.6) TVD(5642.42) VS(4078.46) NS(-5.03) EW(4078.53)

#105 MD(9360.00) Inc(90.3) Azm(88.6) TVD(5641.01) VS(4168.43) NS(-2.84) EW(4168.49)

#106 MD(9449.00) Inc(91.2) Azm(88.8) TVD(5639.84) VS(4257.41) NS(-0.82) EW(4257.46)

#107 MD(9539.00) Inc(90.7) Azm(88.0) TVD(5638.35) VS(4347.37) NS(1.70) EW(4347.41)

#108 MD(9629.00) Inc(90.3) Azm(88.0) TVD(5637.57) VS(4437.33) NS(4.84) EW(4437.35)

#109 MD(9718.00) Inc(89.2) Azm(88.6) TVD(5637.96) VS(4526.30) NS(7.48) EW(4526.31)

#110 MD(9808.00) Inc(90.3) Azm(89.1) TVD(5638.35) VS(4616.28) NS(9.28) EW(4616.29)

#111 MD(9898.00) Inc(91.8) Azm(89.0) TVD(5636.70) VS(4706.26) NS(10.78) EW(4706.26)

#112 MD(9987.00) Inc(92.1) Azm(89.8) TVD(5633.67) VS(4795.20) NS(11.71) EW(4795.20)

#113 MD(10068.00) Inc(92.8) Azm(90.4) TVD(5630.21) VS(4876.13) NS(11.57) EW(4876.12)

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