Wells Ranch State A36-675

MD
2":100'

Company: Noble Energy
Well Name: Wells Ranch State A36-675
API:
Rig Id: H&P 326
State: Colorado
County/Parish: Weld
Country: USA
Survey Company: ENSIGN Directional
Job number: HP326-207-15
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:	840 ft	06-30-2015
End:	16336 ft	7-7-2015

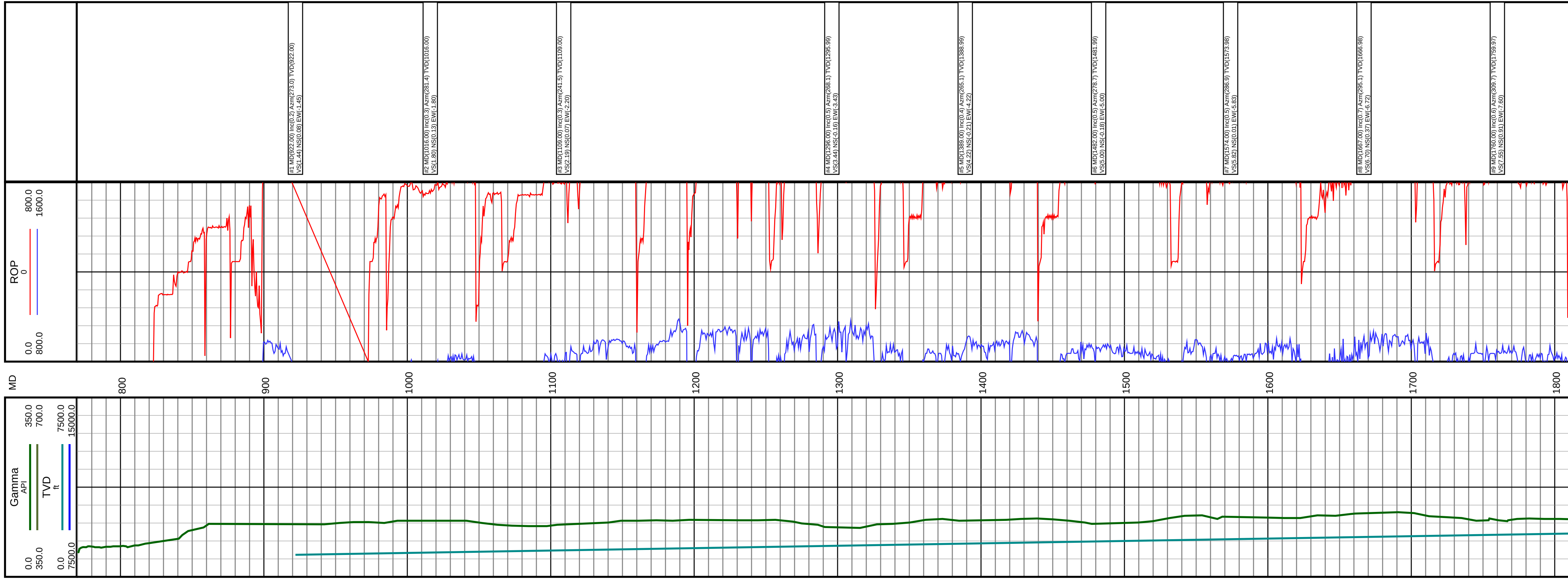
Casing	Depth	Size
Surface:	812	9 5/8
Intermediate:	7074	7

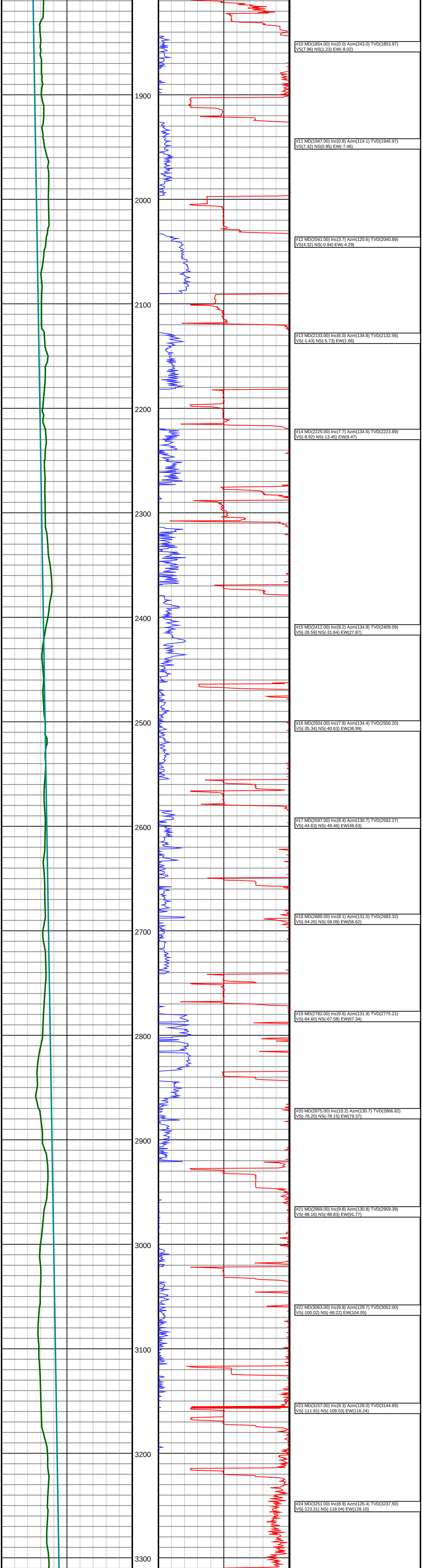
Mud Type:
Density:
Viscosity:
Rm: **Rmf:** **Rmc:**

Elevations
KB: 30
GL: 4855
DF: 4885

Run	Bit Size	Offsets Gamma	Offsets Survey	Depths Start	Depths End	Dates Start	Dates End
1	8.75	54.81	49.81	840	7084	06-30-2015	07-01-2015
2	6.125	67.16	62.16	7084	9789	07-02-2015	07-03-2015
3	6.125	65.76	60.76	9789	14505	07-03-2015	07-05-2015
4	6.125	65.76	60.76	14505	16336	07-05-2015	07-07-2015
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.





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VS(7.96) NS(1.23) EW(-8.02)

#11 MD(1947.00) Inc(0.8) Azm(114.1) TVD(1946.97)
VS(7.42) NS(0.95) EW(-7.46)

#12 MD(2041.00) Inc(3.7) Azm(120.6) TVD(2040.89)
VS(4.32) NS(-0.84) EW(-4.29)

#13 MD(2133.00) Inc(6.0) Azm(134.8) TVD(2132.56)
VS(-1.43) NS(-5.73) EW(1.66)

#14 MD(2225.00) Inc(7.7) Azm(134.6) TVD(2223.89)
VS(-8.92) NS(-13.45) EW(9.47)

#15 MD(2412.00) Inc(8.2) Azm(134.8) TVD(2409.09)
VS(-26.59) NS(-31.64) EW(27.87)

#16 MD(2504.00) Inc(7.8) Azm(134.4) TVD(2500.20)
VS(-35.34) NS(-40.63) EW(36.99)

#17 MD(2597.00) Inc(8.4) Azm(130.7) TVD(2592.27)
VS(-44.63) NS(-49.46) EW(46.63)

#18 MD(2689.00) Inc(8.1) Azm(131.0) TVD(2683.32)
VS(-54.26) NS(-58.09) EW(56.62)

#19 MD(2782.00) Inc(9.6) Azm(131.9) TVD(2775.21)
VS(-64.60) NS(-67.58) EW(67.34)

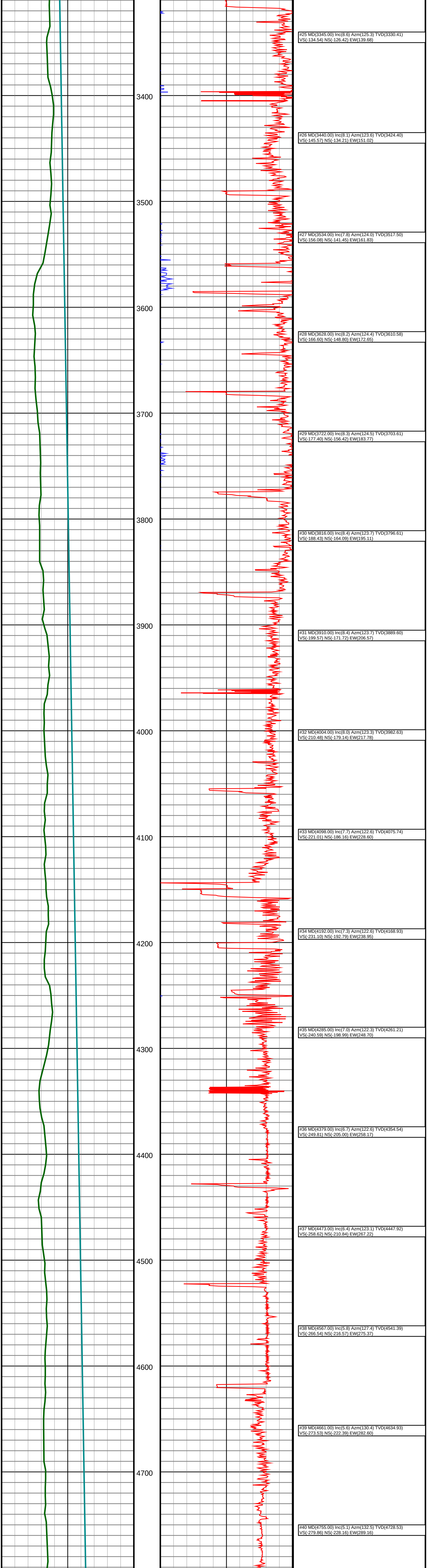
#20 MD(2875.00) Inc(10.2) Azm(130.7) TVD(2866.82)
VS(-76.20) NS(-78.15) EW(79.37)

#21 MD(2969.00) Inc(9.8) Azm(130.8) TVD(2959.39)
VS(-88.16) NS(-88.83) EW(91.77)

#22 MD(3063.00) Inc(9.8) Azm(129.7) TVD(3052.00)
VS(-100.02) NS(-99.22) EW(104.05)

#23 MD(3157.00) Inc(9.3) Azm(128.0) TVD(3144.69)
VS(-111.81) NS(-109.03) EW(116.24)

#24 MD(3251.00) Inc(8.9) Azm(126.4) TVD(3237.50)
VS(-123.31) NS(-118.04) EW(128.10)



#25 MD(3345.00) Inc(8.6) Azm(125.3) TVD(3330.41)
VS(-134.54) NS(-126.42) EW(139.68)

#26 MD(3440.00) Inc(8.1) Azm(123.6) TVD(3424.40)
VS(-145.57) NS(-134.21) EW(151.02)

#27 MD(3534.00) Inc(7.8) Azm(124.0) TVD(3517.50)
VS(-156.08) NS(-141.45) EW(161.83)

#28 MD(3628.00) Inc(8.2) Azm(124.4) TVD(3610.58)
VS(-166.60) NS(-148.80) EW(172.65)

#29 MD(3722.00) Inc(8.3) Azm(124.5) TVD(3703.61)
VS(-177.40) NS(-156.42) EW(183.77)

#30 MD(3816.00) Inc(8.4) Azm(123.7) TVD(3796.61)
VS(-188.43) NS(-164.09) EW(195.11)

#31 MD(3910.00) Inc(8.4) Azm(123.7) TVD(3889.60)
VS(-199.57) NS(-171.72) EW(206.57)

#32 MD(4004.00) Inc(8.0) Azm(123.3) TVD(3982.63)
VS(-210.48) NS(-179.14) EW(217.78)

#33 MD(4098.00) Inc(7.7) Azm(122.6) TVD(4075.74)
VS(-221.01) NS(-186.16) EW(228.60)

#34 MD(4192.00) Inc(7.3) Azm(122.6) TVD(4168.93)
VS(-231.10) NS(-192.79) EW(238.95)

#35 MD(4285.00) Inc(7.0) Azm(122.3) TVD(4261.21)
VS(-240.59) NS(-198.99) EW(248.70)

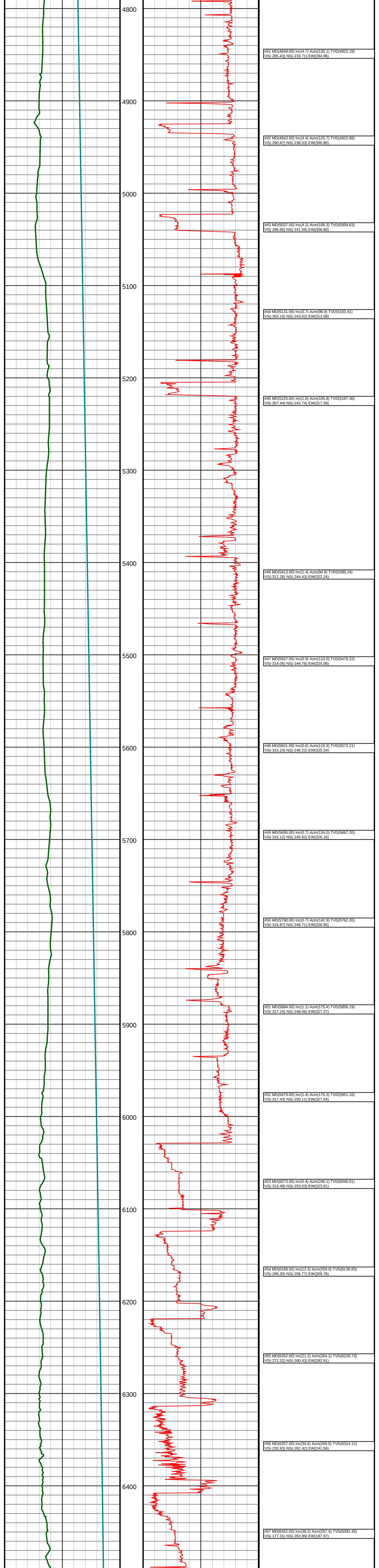
#36 MD(4379.00) Inc(6.7) Azm(122.6) TVD(4354.54)
VS(-249.81) NS(-205.00) EW(258.17)

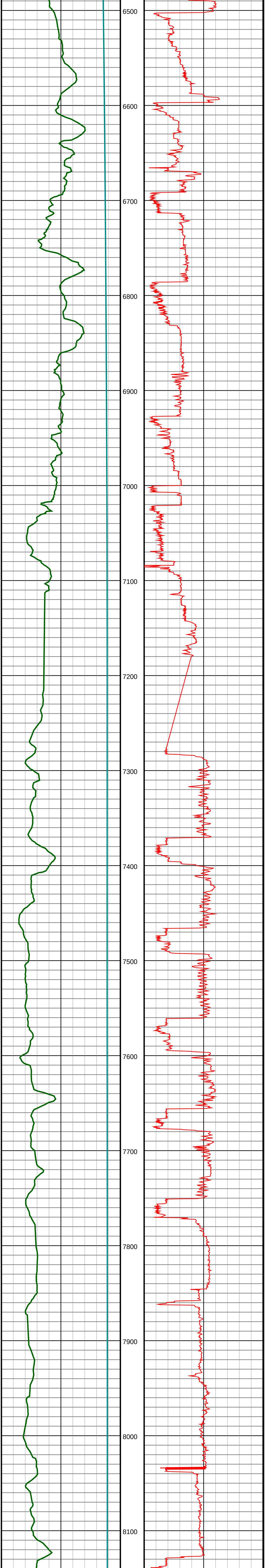
#37 MD(4473.00) Inc(6.4) Azm(123.1) TVD(4447.92)
VS(-258.62) NS(-210.84) EW(267.22)

#38 MD(4567.00) Inc(5.8) Azm(127.4) TVD(4541.39)
VS(-266.54) NS(-216.57) EW(275.37)

#39 MD(4661.00) Inc(5.6) Azm(130.4) TVD(4634.93)
VS(-273.53) NS(-222.39) EW(282.60)

#40 MD(4755.00) Inc(5.1) Azm(132.5) TVD(4728.53)
VS(-279.86) NS(-228.16) EW(289.16)





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VS(-113.91) NS(-267.94) EW(124.67)

#59 MD(6640.00) Inc(59.0) Azm(270.0) TVD(6518.36)
VS(-39.14) NS(-270.56) EW(49.94)

#60 MD(6735.00) Inc(64.7) Azm(274.6) TVD(6563.13)
VS(44.31) NS(-267.12) EW(-33.71)

#61 MD(6830.00) Inc(70.0) Azm(274.9) TVD(6599.67)
VS(131.30) NS(-259.85) EW(-121.06)

#62 MD(6925.00) Inc(71.7) Azm(273.6) TVD(6630.87)
VS(220.44) NS(-253.16) EW(-210.54)

#63 MD(7019.00) Inc(79.1) Azm(271.1) TVD(6654.61)
VS(311.02) NS(-249.41) EW(-301.34)

#64 MD(7034.00) Inc(80.8) Azm(270.7) TVD(6657.23)
VS(325.77) NS(-249.17) EW(-316.10)

#65 MD(7118.00) Inc(86.7) Azm(272.8) TVD(6666.36)
VS(409.02) NS(-246.62) EW(-399.52)

#66 MD(7212.00) Inc(89.9) Azm(272.7) TVD(6669.14)
VS(502.61) NS(-242.13) EW(-493.36)

#67 MD(7307.00) Inc(91.5) Azm(273.3) TVD(6667.99)
VS(597.19) NS(-237.14) EW(-588.22)

#68 MD(7402.00) Inc(90.5) Azm(272.3) TVD(6666.35)
VS(691.80) NS(-232.49) EW(-683.09)

#69 MD(7497.00) Inc(90.9) Azm(269.4) TVD(6665.19)
VS(786.64) NS(-231.13) EW(-778.07)

#70 MD(7591.00) Inc(86.4) Azm(268.6) TVD(6667.37)
VS(880.57) NS(-232.85) EW(-872.00)

#71 MD(7686.00) Inc(87.2) Azm(267.6) TVD(6672.67)
VS(975.42) NS(-236.06) EW(-966.80)

#72 MD(7780.00) Inc(88.9) Azm(268.7) TVD(6675.88)
VS(1069.36) NS(-239.09) EW(-1060.69)

#73 MD(7875.00) Inc(89.0) Azm(267.8) TVD(6677.57)
VS(1164.34) NS(-241.94) EW(-1155.63)

#74 MD(7970.00) Inc(90.1) Azm(268.3) TVD(6678.31)
VS(1259.33) NS(-245.14) EW(-1250.57)

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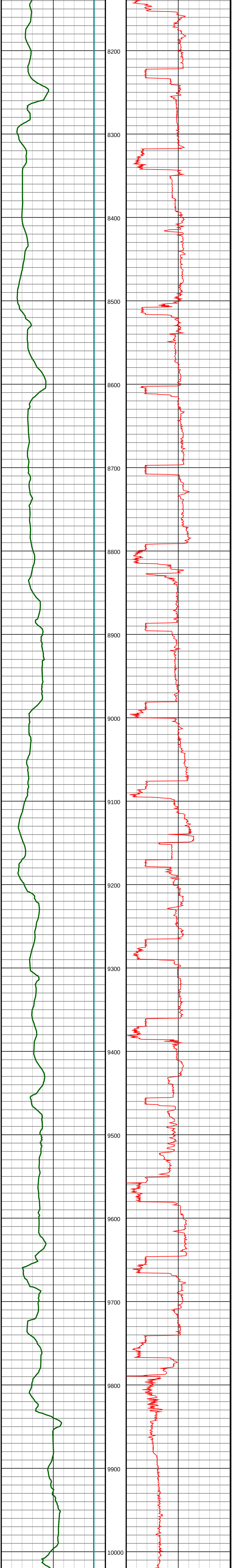

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#77 MD(8254.00) Inc(91.0) Azm(267.1) TVD(6674.85)
VS(1543.29) NS(-254.73) EW(-1534.37)

#78 MD(8349.00) Inc(89.8) Azm(267.7) TVD(6674.13)
VS(1638.28) NS(-259.03) EW(-1629.27)

#79 MD(8443.00) Inc(88.8) Azm(267.8) TVD(6675.24)
VS(1732.28) NS(-262.74) EW(-1723.19)

#80 MD(8538.00) Inc(89.3) Azm(266.9) TVD(6676.77)
VS(1827.26) NS(-267.12) EW(-1818.07)

#81 MD(8632.00) Inc(89.4) Azm(267.5) TVD(6677.84)
VS(1921.25) NS(-271.70) EW(-1911.96)

#82 MD(8727.00) Inc(89.0) Azm(266.7) TVD(6679.18)
VS(2016.24) NS(-276.54) EW(-2006.82)

#83 MD(8822.00) Inc(91.0) Azm(269.0) TVD(6679.19)
VS(2111.22) NS(-280.13) EW(-2101.74)

#84 MD(8916.00) Inc(91.6) Azm(270.0) TVD(6677.11)
VS(2205.16) NS(-280.98) EW(-2195.72)

#85 MD(9011.00) Inc(89.9) Azm(267.4) TVD(6675.89)
VS(2300.12) NS(-283.13) EW(-2290.67)

#86 MD(9106.00) Inc(91.1) Azm(266.8) TVD(6675.06)
VS(2395.11) NS(-287.95) EW(-2385.54)

#87 MD(9201.00) Inc(92.3) Azm(266.8) TVD(6672.19)
VS(2490.05) NS(-293.31) EW(-2480.35)

#88 MD(9296.00) Inc(92.5) Azm(268.1) TVD(6668.15)
VS(2584.96) NS(-297.56) EW(-2575.16)

#89 MD(9390.00) Inc(91.8) Azm(269.9) TVD(6664.60)
VS(2678.87) NS(-299.18) EW(-2669.08)

#90 MD(9485.00) Inc(92.3) Azm(269.8) TVD(6661.22)
VS(2773.74) NS(-299.43) EW(-2764.02)

#91 MD(9580.00) Inc(91.4) Azm(270.6) TVD(6658.13)
VS(2868.60) NS(-299.14) EW(-2858.96)

#92 MD(9674.00) Inc(90.7) Azm(270.8) TVD(6656.39)
VS(2962.46) NS(-298.00) EW(-2952.94)

#93 MD(9768.00) Inc(88.9) Azm(270.0) TVD(6656.73)
VS(3056.35) NS(-297.36) EW(-3046.93)

#94 MD(9863.00) Inc(89.1) Azm(269.9) TVD(6658.35)
VS(3151.27) NS(-297.50) EW(-3141.92)

#95 MD(9957.00) Inc(89.5) Azm(269.6) TVD(6659.44)
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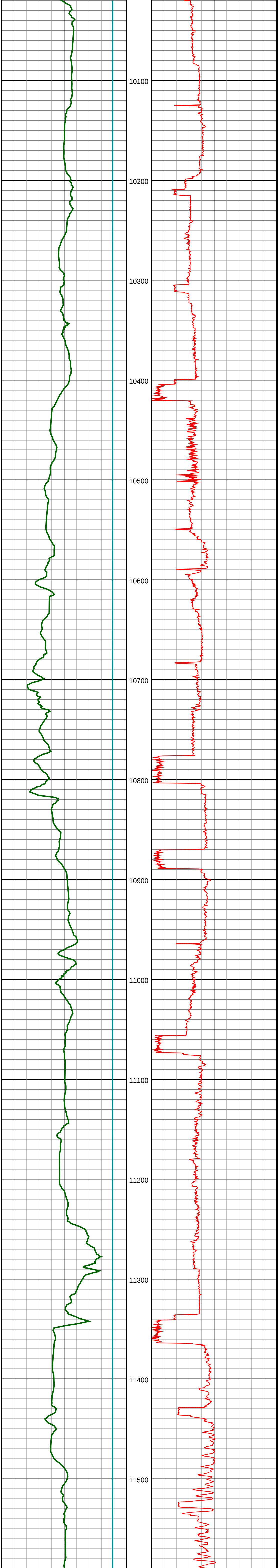

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#97 MD(10146.00) Inc(89.9) Azm(269.4) TVD(6660.49)
VS(3434.11) NS(-299.67) EW(-3424.90)

#98 MD(10241.00) Inc(90.5) Azm(269.8) TVD(6660.14)
VS(3529.06) NS(-300.30) EW(-3519.90)

#99 MD(10336.00) Inc(90.7) Azm(269.4) TVD(6659.13)
VS(3624.00) NS(-300.92) EW(-3614.89)

#100 MD(10431.00) Inc(89.3) Azm(268.8) TVD(6659.13)
VS(3718.97) NS(-302.38) EW(-3709.87)

#101 MD(10525.00) Inc(89.8) Azm(268.6) TVD(6659.86)
VS(3812.95) NS(-304.53) EW(-3803.85)

#102 MD(10618.00) Inc(90.5) Azm(268.4) TVD(6659.56)
VS(3905.94) NS(-306.98) EW(-3896.81)

#103 MD(10713.00) Inc(91.8) Azm(268.5) TVD(6657.62)
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#104 MD(10805.00) Inc(90.9) Azm(270.0) TVD(6655.46)
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#105 MD(10898.00) Inc(89.8) Azm(269.9) TVD(6654.87)
VS(4185.78) NS(-310.90) EW(-4176.72)

#106 MD(10990.00) Inc(90.4) Azm(269.9) TVD(6654.67)
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#107 MD(11083.00) Inc(88.4) Azm(270.1) TVD(6655.62)
VS(4370.63) NS(-311.14) EW(-4361.71)

#108 MD(11176.00) Inc(89.4) Azm(270.1) TVD(6657.43)
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#109 MD(11269.00) Inc(91.0) Azm(270.2) TVD(6657.16)
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#110 MD(11362.00) Inc(89.3) Azm(270.2) TVD(6656.94)
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#111 MD(11456.00) Inc(89.7) Azm(269.9) TVD(6657.74)
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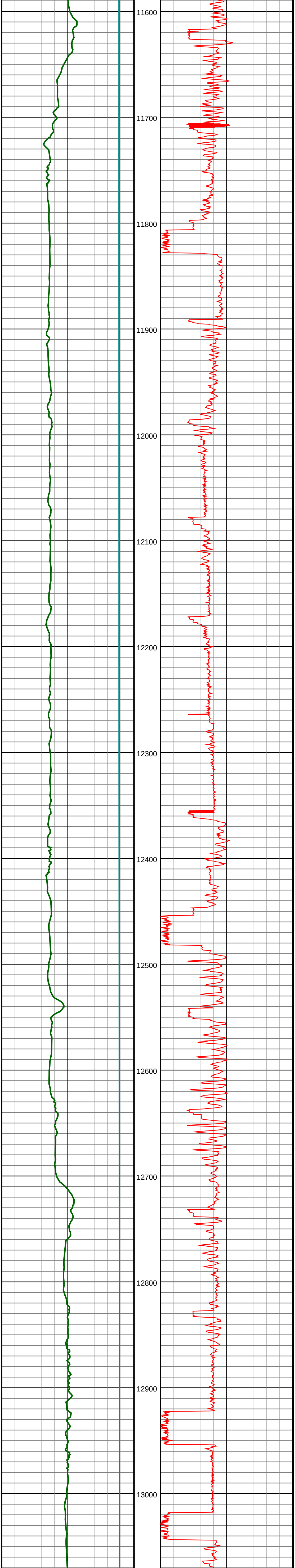

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#114 MD(11734.00) Inc(90.6) Azm(268.7) TVD(6657.97)
VS(5021.18) NS(-314.30) EW(-5012.64)

#115 MD(11828.00) Inc(89.4) Azm(268.7) TVD(6657.97)
VS(5115.16) NS(-316.46) EW(-5106.61)

#116 MD(11921.00) Inc(89.3) Azm(268.1) TVD(6659.05)
VS(5208.15) NS(-319.11) EW(-5199.57)

#117 MD(12013.00) Inc(89.8) Azm(269.3) TVD(6659.80)
VS(5300.13) NS(-321.25) EW(-5291.54)

#118 MD(12106.00) Inc(90.2) Azm(270.0) TVD(6659.81)
VS(5393.08) NS(-321.84) EW(-5384.54)

#119 MD(12198.00) Inc(89.9) Azm(268.6) TVD(6659.76)
VS(5485.04) NS(-322.94) EW(-5476.53)

#120 MD(12291.00) Inc(89.2) Azm(267.9) TVD(6660.47)
VS(5578.03) NS(-325.73) EW(-5569.48)

#121 MD(12383.00) Inc(87.2) Azm(264.1) TVD(6663.31)
VS(5669.93) NS(-332.08) EW(-5661.20)

#122 MD(12478.00) Inc(88.3) Azm(265.4) TVD(6666.99)
VS(5764.72) NS(-340.75) EW(-5755.72)

#123 MD(12573.00) Inc(89.1) Azm(265.7) TVD(6669.13)
VS(5859.63) NS(-348.15) EW(-5850.41)

#124 MD(12667.00) Inc(89.4) Azm(265.5) TVD(6670.40)
VS(5953.56) NS(-355.37) EW(-5944.13)

#125 MD(12762.00) Inc(89.2) Azm(264.8) TVD(6671.62)
VS(6048.45) NS(-363.42) EW(-6038.77)

#126 MD(12857.00) Inc(89.3) Azm(264.9) TVD(6672.89)
VS(6143.32) NS(-371.97) EW(-6133.38)

#127 MD(12952.00) Inc(88.6) Azm(266.3) TVD(6674.59)
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#128 MD(13046.00) Inc(89.4) Azm(268.8) TVD(6676.18)
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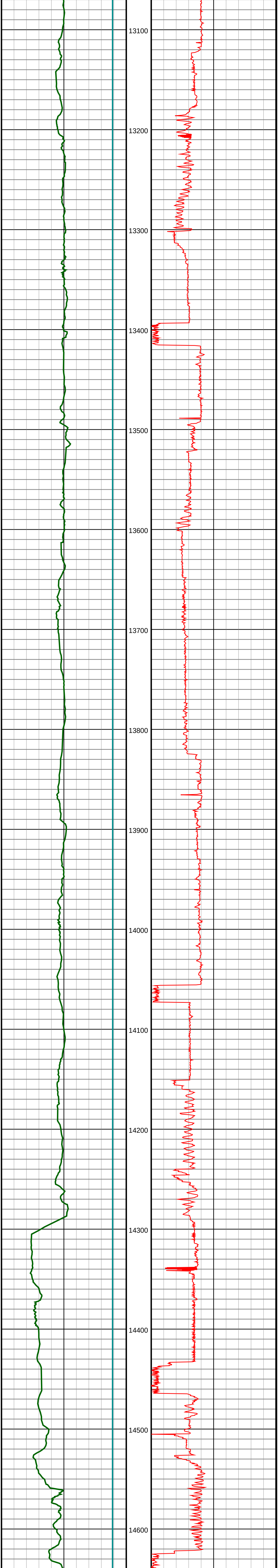

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#130 MD(13235.00) Inc(90.2) Azm(268.2) TVD(6677.12)
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#131 MD(13330.00) Inc(90.1) Azm(267.7) TVD(6676.84)
VS(6616.19) NS(-391.40) EW(-6605.85)

#132 MD(13424.00) Inc(89.2) Azm(269.9) TVD(6677.40)
VS(6710.17) NS(-393.34) EW(-6699.82)

#133 MD(13518.00) Inc(89.3) Azm(269.8) TVD(6678.65)
VS(6804.09) NS(-393.59) EW(-6793.81)

#134 MD(13613.00) Inc(89.2) Azm(269.5) TVD(6679.89)
VS(6899.03) NS(-394.18) EW(-6888.80)

#135 MD(13707.00) Inc(89.8) Azm(269.8) TVD(6680.69)
VS(6992.97) NS(-394.76) EW(-6982.80)

#136 MD(13802.00) Inc(89.0) Azm(268.4) TVD(6681.66)
VS(7087.94) NS(-396.28) EW(-7077.78)

#137 MD(13896.00) Inc(89.6) Azm(269.1) TVD(6682.82)
VS(7181.91) NS(-398.30) EW(-7171.75)

#138 MD(13991.00) Inc(89.4) Azm(269.6) TVD(6683.69)
VS(7276.87) NS(-399.40) EW(-7266.74)

#139 MD(14085.00) Inc(90.6) Azm(270.6) TVD(6683.74)
VS(7370.79) NS(-399.26) EW(-7360.73)

#140 MD(14180.00) Inc(91.1) Azm(270.6) TVD(6682.33)
VS(7465.66) NS(-398.24) EW(-7455.72)

#141 MD(14275.00) Inc(91.5) Azm(270.6) TVD(6680.19)
VS(7560.51) NS(-397.28) EW(-7550.69)

#142 MD(14369.00) Inc(92.0) Azm(270.6) TVD(6677.35)
VS(7654.35) NS(-396.29) EW(-7644.64)

#143 MD(14464.00) Inc(90.3) Azm(270.5) TVD(6675.44)
VS(7749.21) NS(-395.34) EW(-7739.61)

#144 MD(14558.00) Inc(91.0) Azm(270.3) TVD(6674.36)
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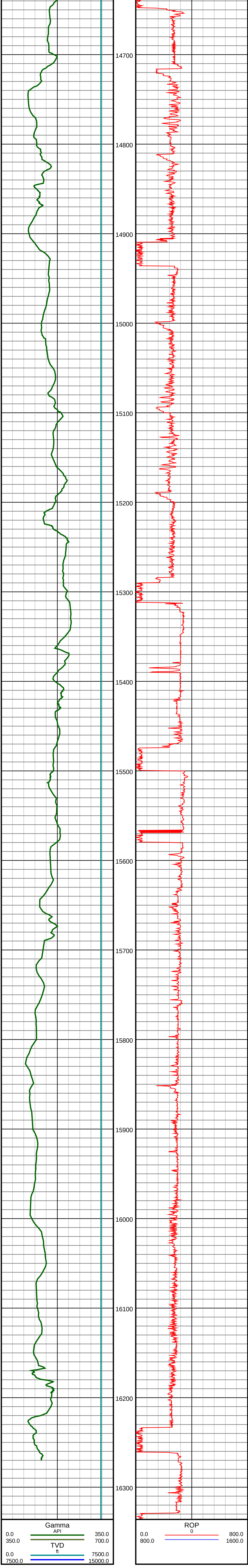

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#146 MD(14747.00) Inc(90.2) Azm(271.7) TVD(6674.28)
VS(8031.75) NS(-390.87) EW(-8022.55)

#147 MD(14841.00) Inc(91.1) Azm(271.8) TVD(6673.18)
VS(8125.52) NS(-388.05) EW(-8116.50)

#148 MD(14936.00) Inc(88.7) Azm(271.5) TVD(6673.36)
VS(8220.29) NS(-385.39) EW(-8211.46)

#149 MD(15030.00) Inc(89.3) Azm(271.3) TVD(6675.01)
VS(8314.08) NS(-383.12) EW(-8305.42)

#150 MD(15125.00) Inc(90.5) Azm(271.2) TVD(6675.21)
VS(8408.90) NS(-381.04) EW(-8400.39)

#151 MD(15220.00) Inc(91.6) Azm(271.1) TVD(6673.54)
VS(8503.71) NS(-379.12) EW(-8495.36)

#152 MD(15314.00) Inc(90.6) Azm(270.1) TVD(6671.72)
VS(8597.58) NS(-378.16) EW(-8589.33)

#153 MD(15409.00) Inc(91.5) Azm(269.0) TVD(6669.97)
VS(8692.51) NS(-378.90) EW(-8684.31)

#154 MD(15503.00) Inc(90.3) Azm(269.0) TVD(6668.52)
VS(8786.47) NS(-380.55) EW(-8778.28)

#155 MD(15598.00) Inc(88.8) Azm(268.5) TVD(6669.24)
VS(8881.45) NS(-382.67) EW(-8873.25)

#156 MD(15693.00) Inc(88.6) Azm(267.9) TVD(6671.35)
VS(8976.43) NS(-385.71) EW(-8968.18)

#157 MD(15788.00) Inc(88.7) Azm(268.2) TVD(6673.60)
VS(9071.40) NS(-389.01) EW(-9063.10)

#158 MD(15883.00) Inc(88.8) Azm(268.4) TVD(6675.68)
VS(9166.37) NS(-391.87) EW(-9158.03)

#159 MD(15978.00) Inc(90.2) Azm(268.8) TVD(6676.54)
VS(9261.35) NS(-394.21) EW(-9253.00)

#160 MD(16073.00) Inc(91.1) Azm(269.2) TVD(6675.49)
VS(9356.32) NS(-395.90) EW(-9347.97)

#161 MD(16168.00) Inc(92.1) Azm(268.9) TVD(6672.80)
VS(9451.26) NS(-397.47) EW(-9442.92)

#162 MD(16263.00) Inc(90.5) Azm(268.8) TVD(6670.59)
VS(9546.21) NS(-399.32) EW(-9537.87)