ENSIGN

Harold 6X-302

TVD
5":100’

Company: Petroleum Development Corp.
Well Name: Harold 6X-302
API: 051234574900
County/Parish: Weld
State: Colorado
Country: United States
Job number: 161-154
Field: Wattenburg
Rig Id: Ensign 161
Survey Company: Ensign
Operator: Petroleum Development Corp.
Company Man: Brady Sharp / John Falton

Daylight DD: Zach Gentry
Swing Shift DD: Tony Callow
Night DD: Eric Mays
Daylight MWD: Ryan Prue
Night MWD: Paul Wilson

Log measurements: Gamma, ROP
Depth measured from: 1655 ft
Maximum temperature: 245.5

	Depth	Date
Start:	0 ft	12-8-2018
End:	17653 ft	12-13-2018

Casing	Depth	Size
Surface:	1664 ft	9 5/8"
Intermediate:		

Mud Type: H2O
Density:
Viscosity:
Rm: **Rmf:** **Rmc:**

Elevations
KB: 23 ft
GL: 4788 ft
DF: 4811 ft

Run	Bit Size	Offsets Gamma	Offsets Survey	Depths Start	Depths End	Dates Start	Dates End
1	12.25"		70.00 ft	0 ft	1651 ft	12-8-2018	12-9-2018
2		62.80 ft	58.00 ft	1651 ft	17653 ft	12-10-2018	12-13-2018
3							
4							
5							
6							
7							
8							
9							
10							

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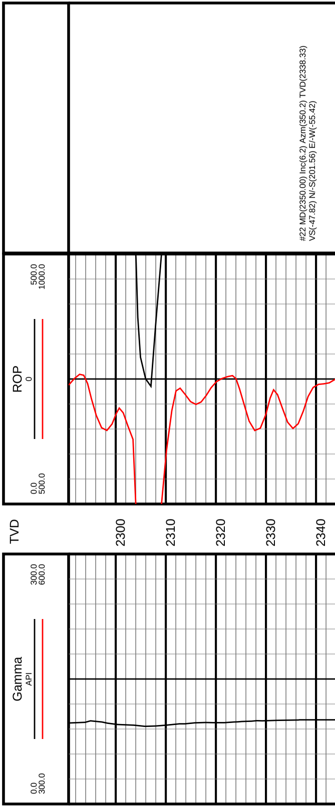
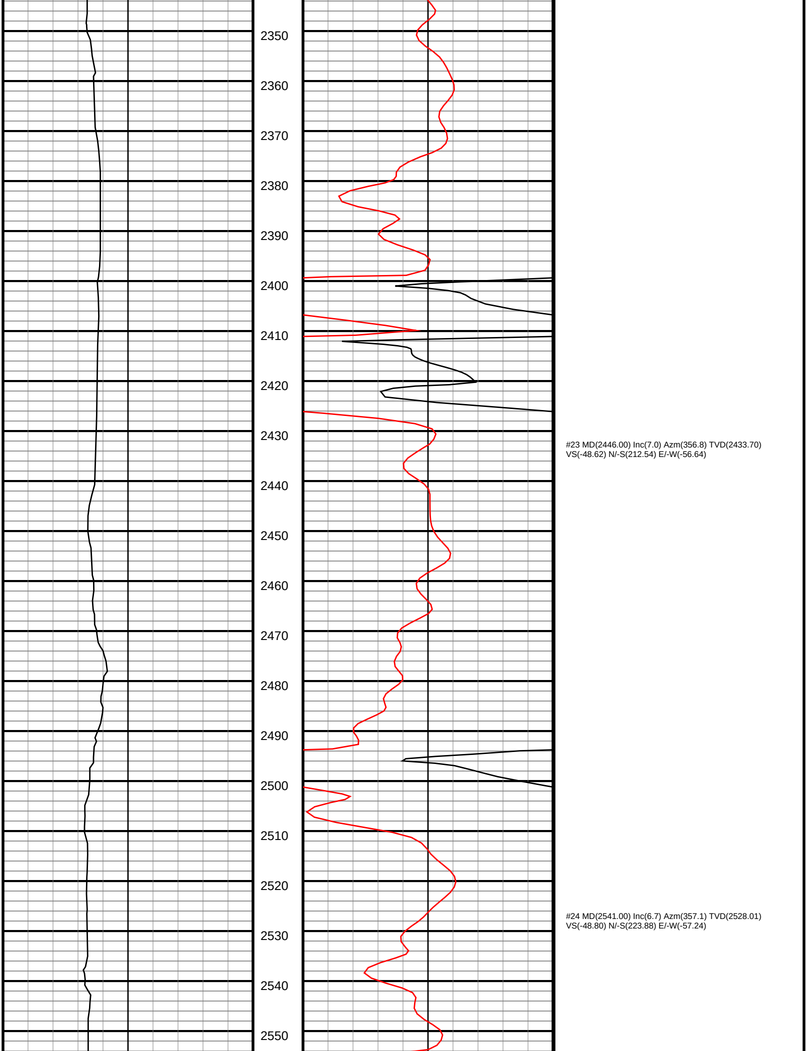
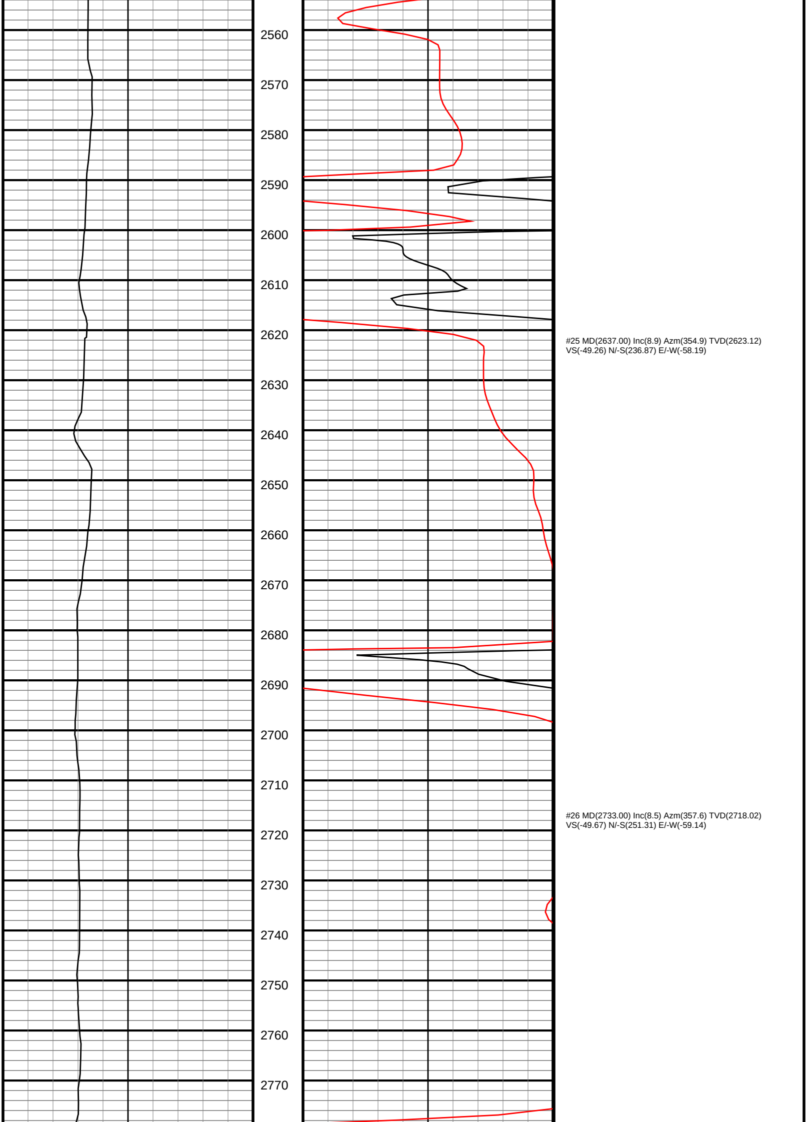


#22 MD(2350.00) Inc(6.2) Azm(350.2) TVD(2338.33)
VS(-47.82) N/-S(201.56) E/-W(-55.42)



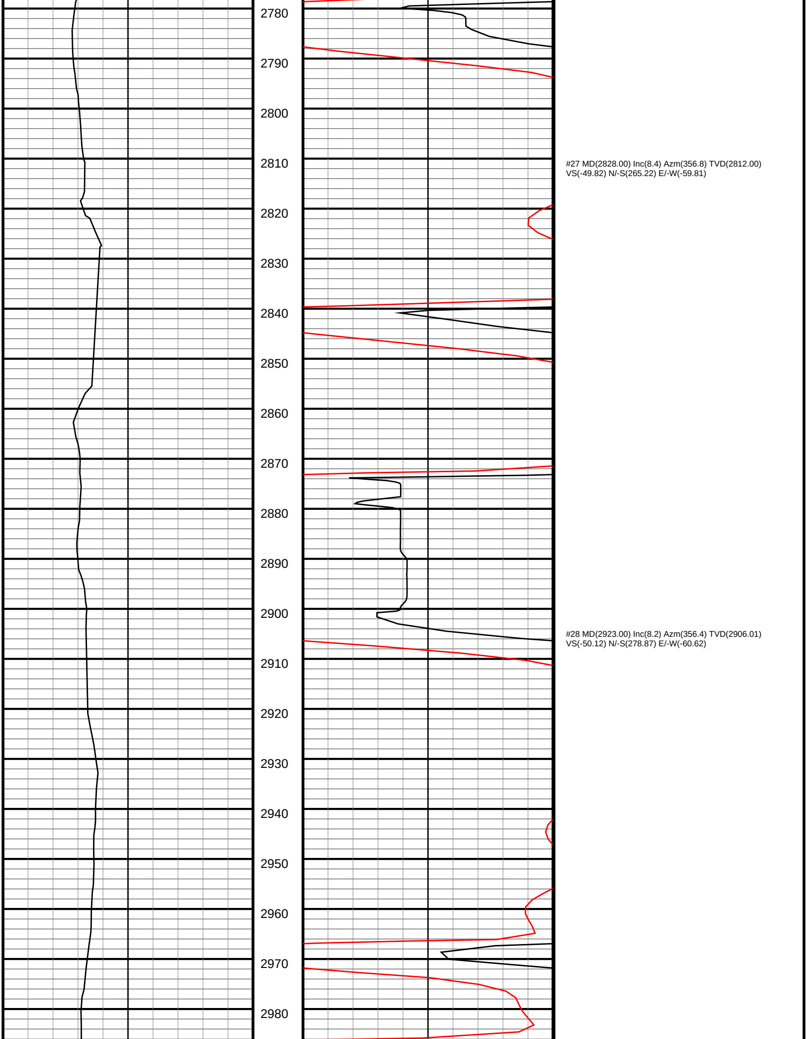
#23 MD(2446.00) Inc(7.0) Azm(356.8) TVD(2433.70)
VS(-48.62) N/-S(212.54) E/-W(-56.64)

#24 MD(2541.00) Inc(6.7) Azm(357.1) TVD(2528.01)
VS(-48.80) N/-S(223.88) E/-W(-57.24)



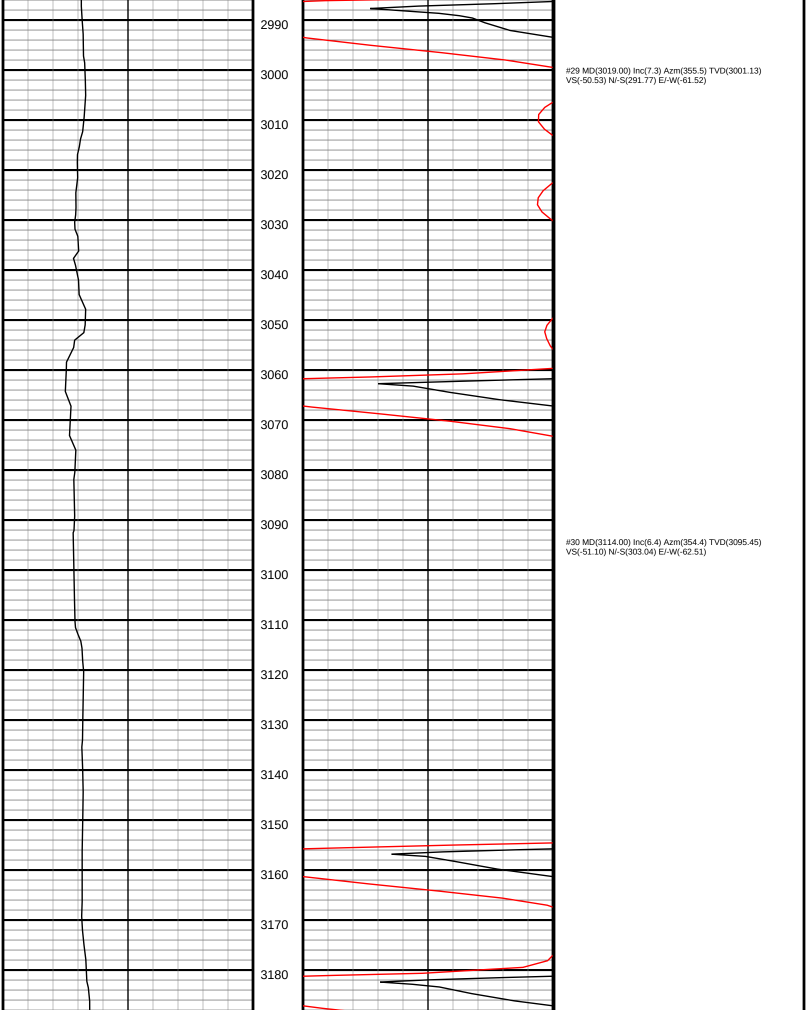
#25 MD(2637.00) Inc(8.9) Azm(354.9) TVD(2623.12)
VS(-49.26) N/-S(236.87) E/-W(-58.19)

#26 MD(2733.00) Inc(8.5) Azm(357.6) TVD(2718.02)
VS(-49.67) N/-S(251.31) E/-W(-59.14)



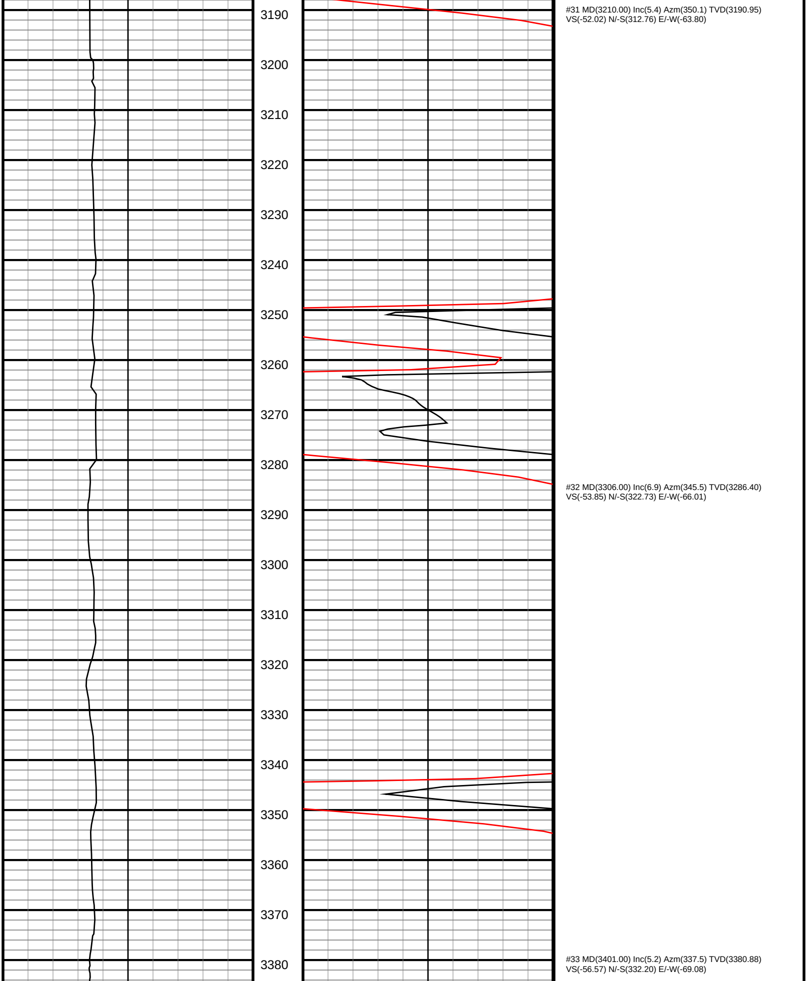
#27 MD(2828.00) Inc(8.4) Azm(356.8) TVD(2812.00)
VS(-49.82) N/-S(265.22) E/-W(-59.81)

#28 MD(2923.00) Inc(8.2) Azm(356.4) TVD(2906.01)
VS(-50.12) N/-S(278.87) E/-W(-60.62)



#29 MD(3019.00) Inc(7.3) Azm(355.5) TVD(3001.13)
VS(-50.53) N/-S(291.77) E/-W(-61.52)

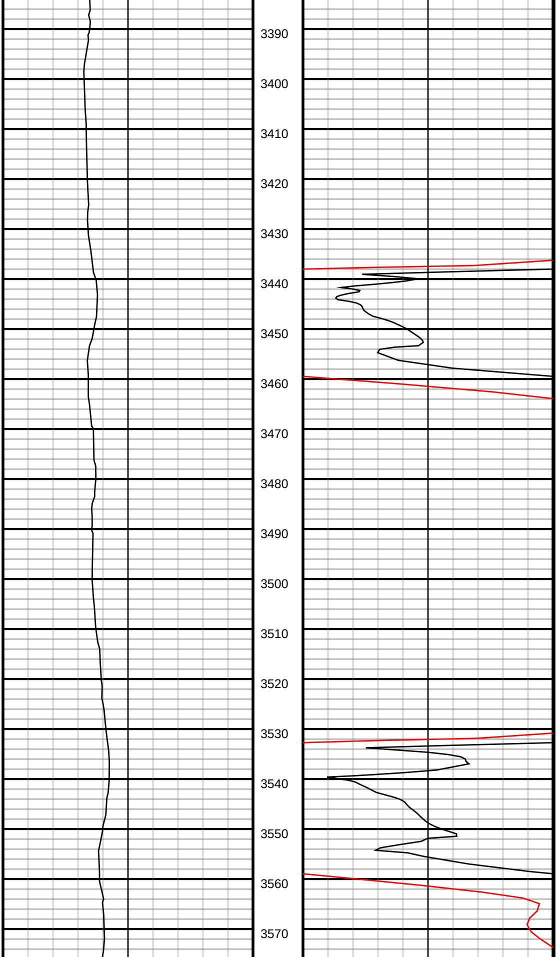
#30 MD(3114.00) Inc(6.4) Azm(354.4) TVD(3095.45)
VS(-51.10) N/-S(303.04) E/-W(-62.51)



#31 MD(3210.00) Inc(5.4) Azm(350.1) TVD(3190.95)
VS(-52.02) N/-S(312.76) E/-W(-63.80)

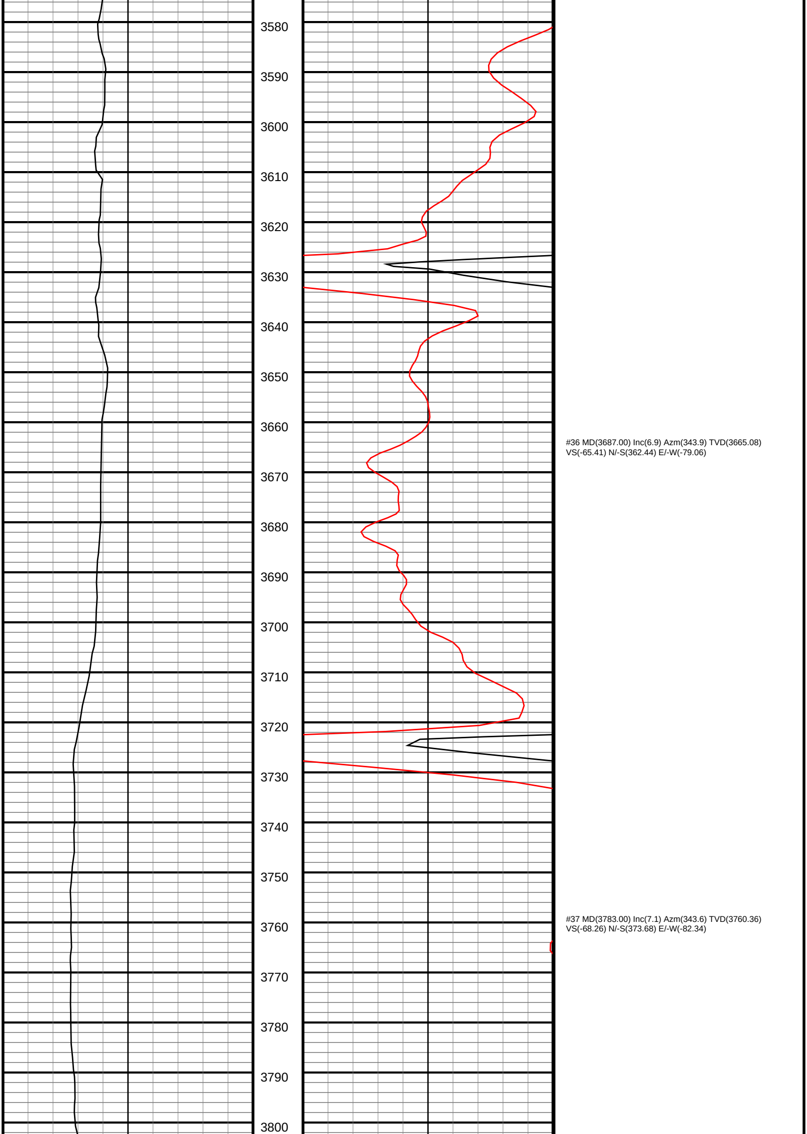
#32 MD(3306.00) Inc(6.9) Azm(345.5) TVD(3286.40)
VS(-53.85) N/-S(322.73) E/-W(-66.01)

#33 MD(3401.00) Inc(5.2) Azm(337.5) TVD(3380.88)
VS(-56.57) N/-S(332.20) E/-W(-69.08)



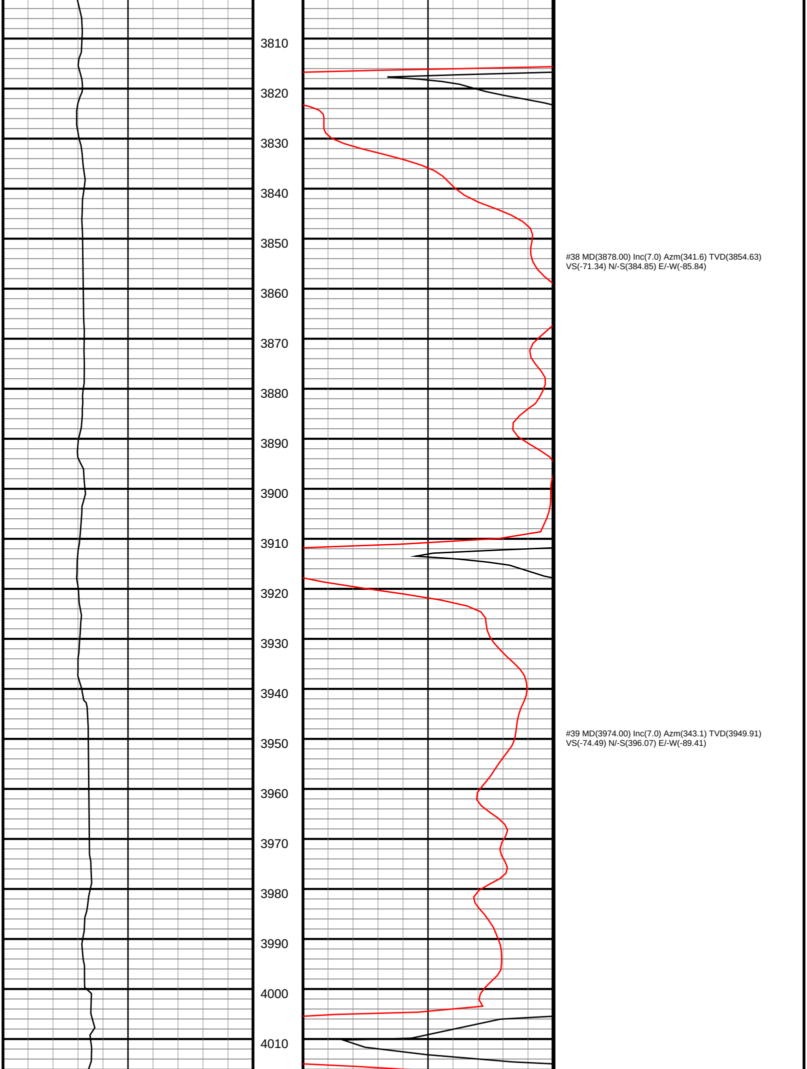
#34 MD(3496.00) Inc(6.0) Azm(338.1) TVD(3475.42)
VS(-59.75) N/-S(340.80) E/-W(-72.58)

#35 MD(3591.00) Inc(7.1) Azm(345.2) TVD(3569.79)
VS(-62.72) N/-S(351.13) E/-W(-75.94)



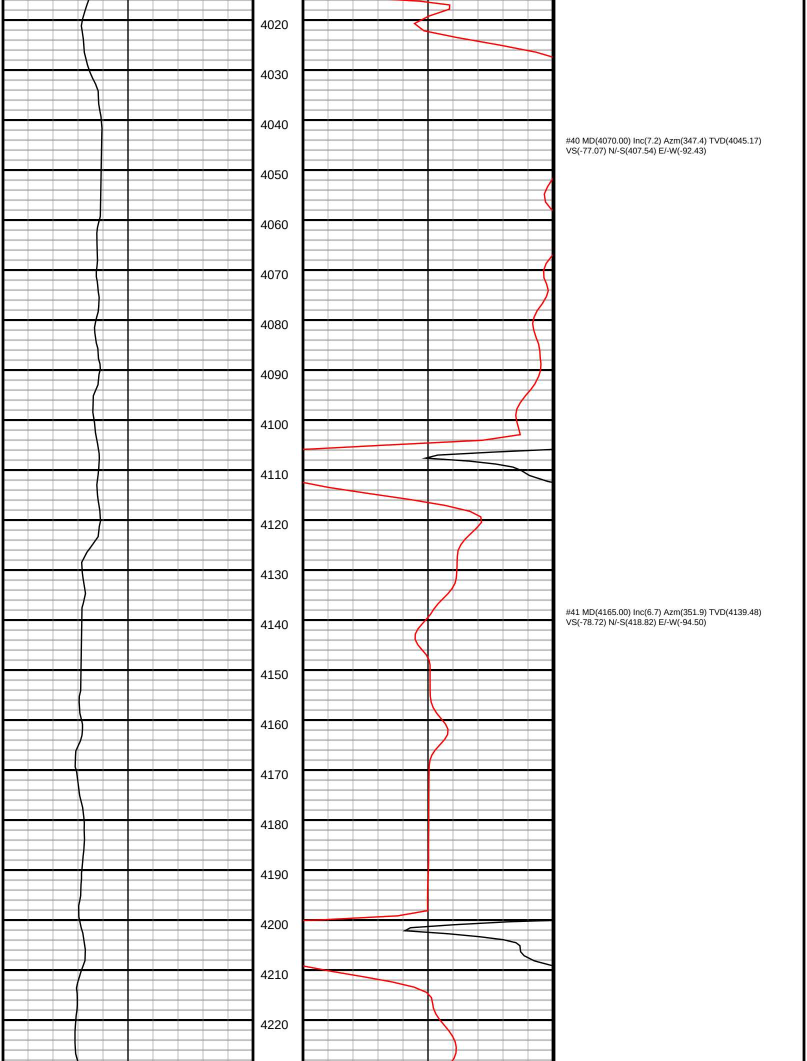
#36 MD(3687.00) Inc(6.9) Azm(343.9) TVD(3665.08)
VS(-65.41) N/-S(362.44) E/-W(-79.06)

#37 MD(3783.00) Inc(7.1) Azm(343.6) TVD(3760.36)
VS(-68.26) N/-S(373.68) E/-W(-82.34)



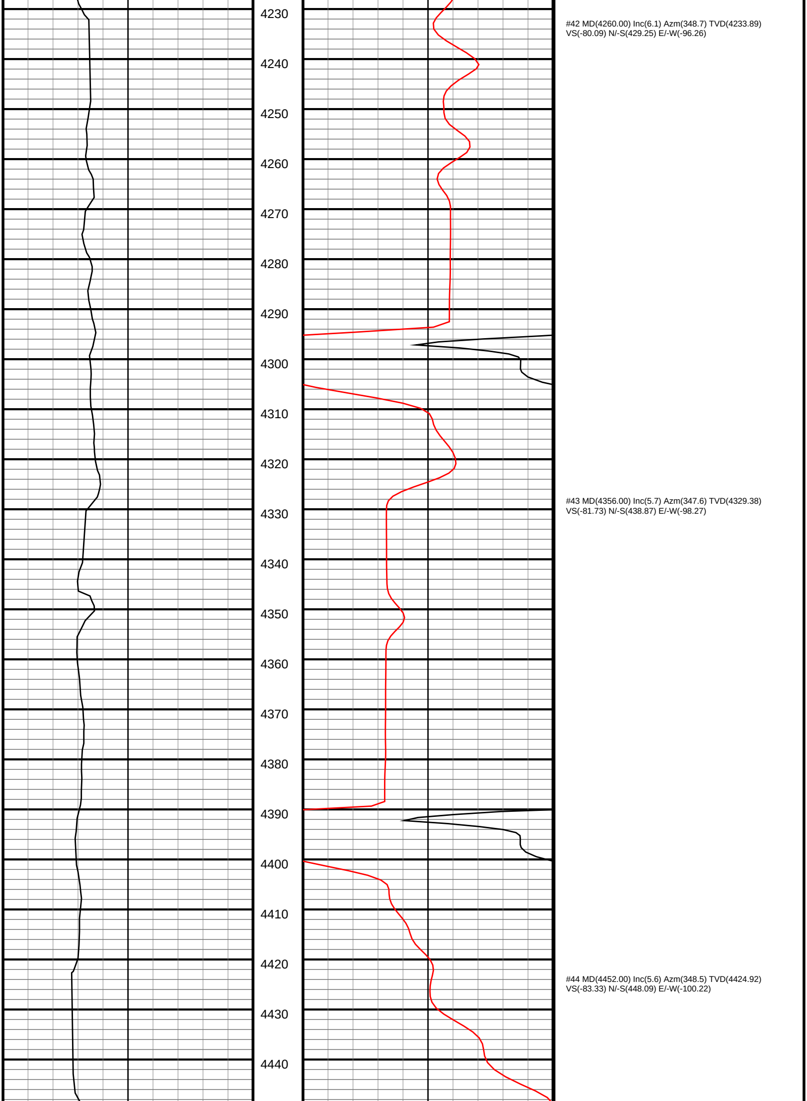
#38 MD(3878.00) Inc(7.0) Azm(341.6) TVD(3854.63)
VS(-71.34) N/-S(384.85) E/-W(-85.84)

#39 MD(3974.00) Inc(7.0) Azm(343.1) TVD(3949.91)
VS(-74.49) N/-S(396.07) E/-W(-89.41)



#40 MD(4070.00) Inc(7.2) Azm(347.4) TVD(4045.17)
VS(-77.07) N/-S(407.54) E/-W(-92.43)

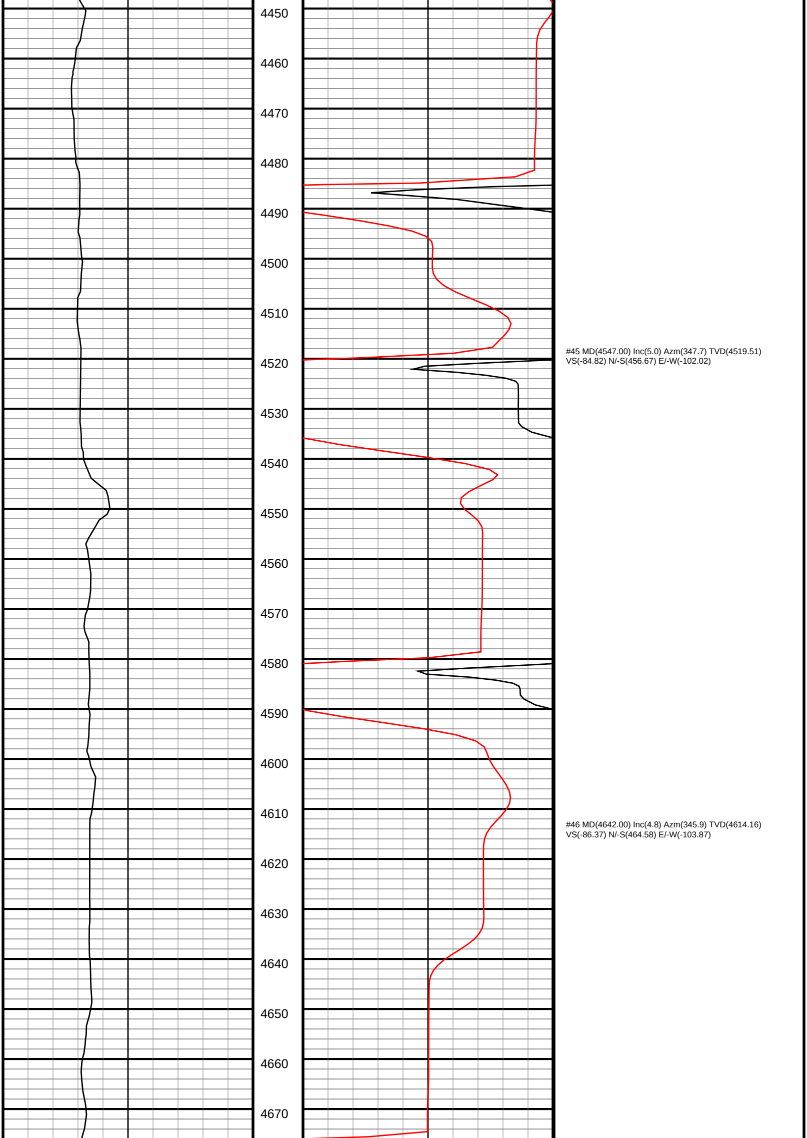
#41 MD(4165.00) Inc(6.7) Azm(351.9) TVD(4139.48)
VS(-78.72) N/-S(418.82) E/-W(-94.50)



#42 MD(4260.00) Inc(6.1) Azm(348.7) TVD(4233.89)
VS(-80.09) N/-S(429.25) E/-W(-96.26)

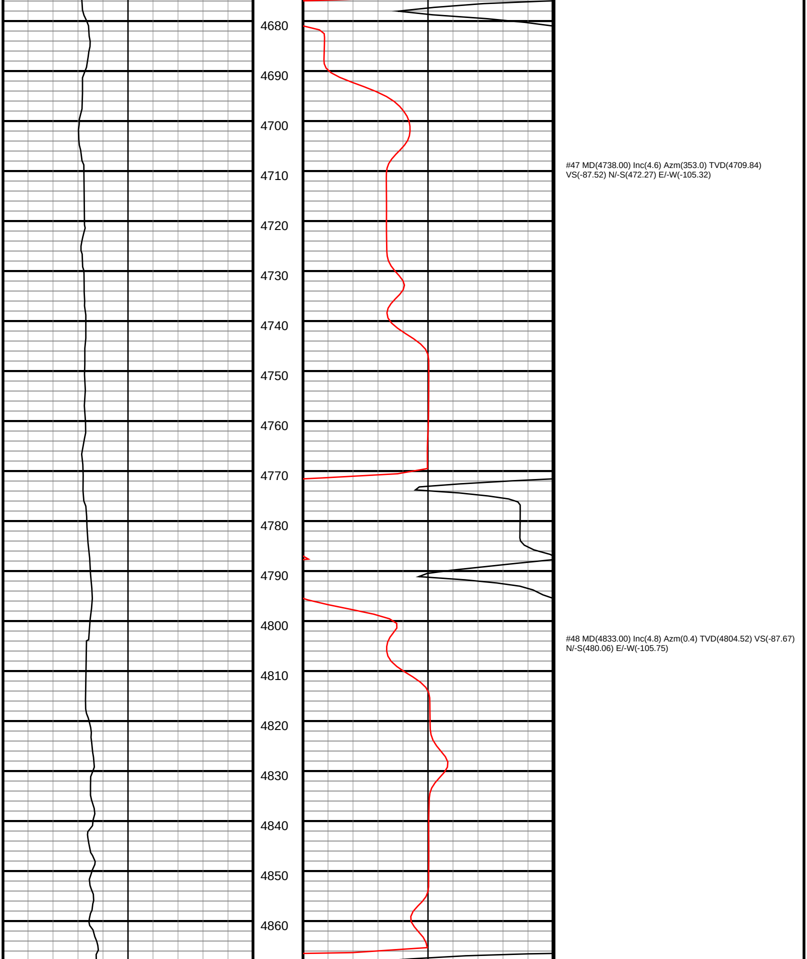
#43 MD(4356.00) Inc(5.7) Azm(347.6) TVD(4329.38)
VS(-81.73) N/-S(438.87) E/-W(-98.27)

#44 MD(4452.00) Inc(5.6) Azm(348.5) TVD(4424.92)
VS(-83.33) N/-S(448.09) E/-W(-100.22)



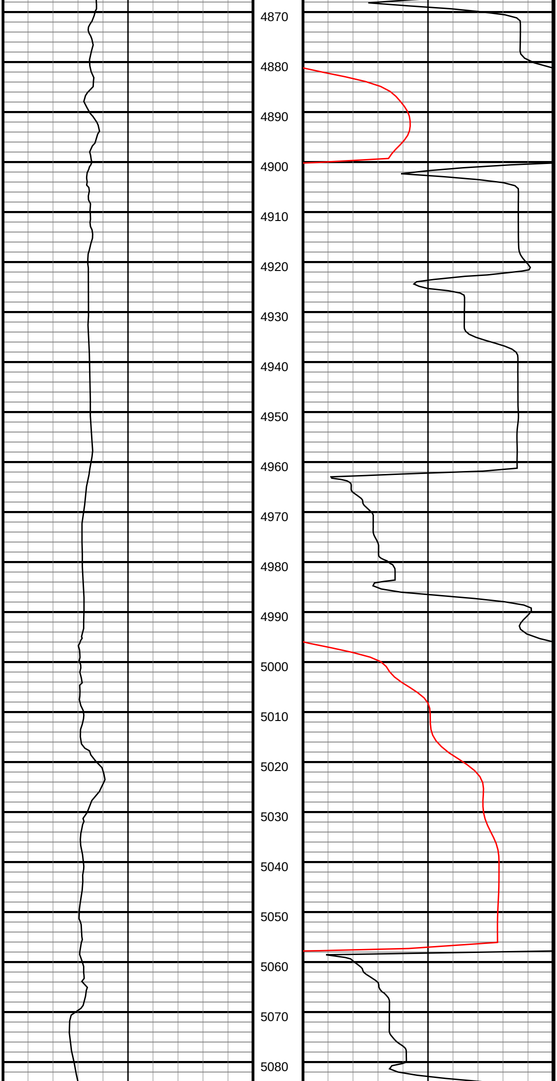
#45 MD(4547.00) Inc(5.0) Azm(347.7) TVD(4519.51)
VS(-84.82) N/-S(456.67) E/-W(-102.02)

#46 MD(4642.00) Inc(4.8) Azm(345.9) TVD(4614.16)
VS(-86.37) N/-S(464.58) E/-W(-103.87)



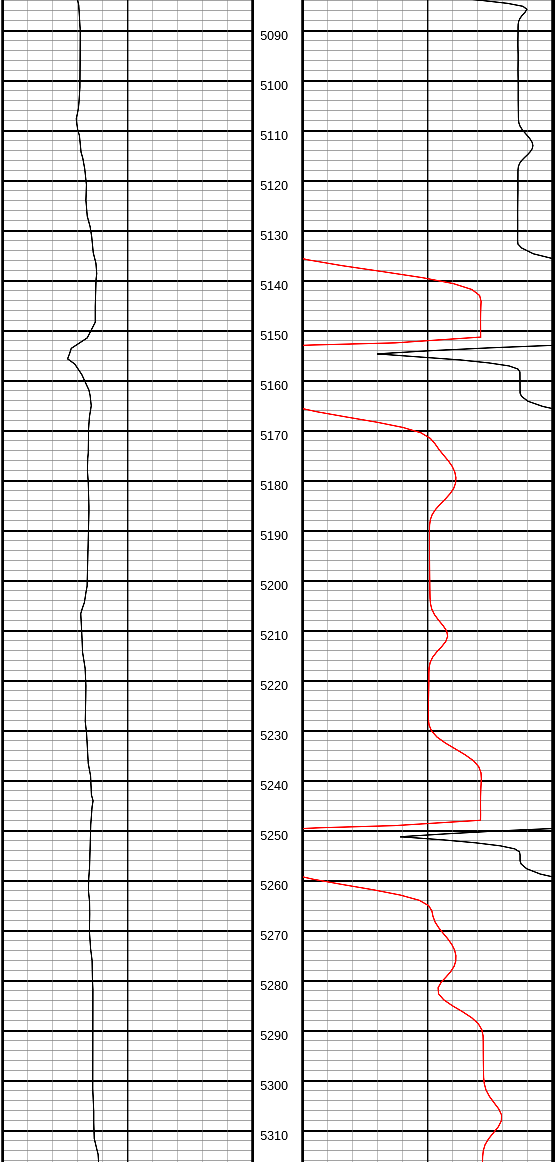
#47 MD(4738.00) Inc(4.6) Azm(353.0) TVD(4709.84)
VS(-87.52) N/-S(472.27) E/-W(-105.32)

#48 MD(4833.00) Inc(4.8) Azm(0.4) TVD(4804.52) VS(-87.67)
N/-S(480.06) E/-W(-105.75)



#49 MD(4929.00) Inc(4.6) Azm(3.9) TVD(4900.20) VS(-87.08)
N/-S(487.95) E/-W(-105.46)

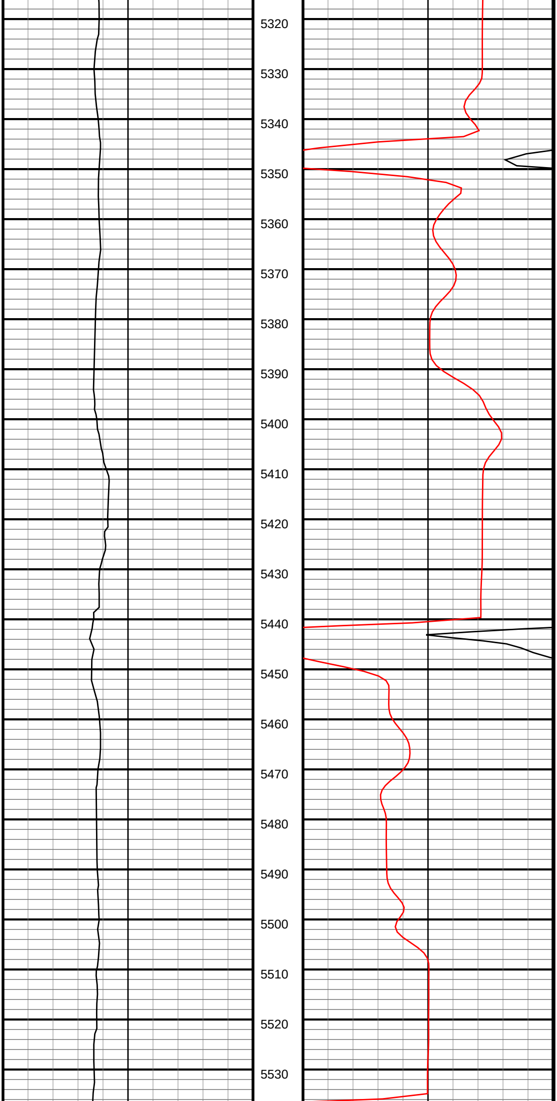
#50 MD(5025.00) Inc(2.3) Azm(316.1) TVD(4996.04)
VS(-87.97) N/-S(493.17) E/-W(-106.55)



#51 MD(5120.00) Inc(1.2) Azm(216.0) TVD(5091.01)
VS(-89.85) N/-S(493.76) E/-W(-108.45)

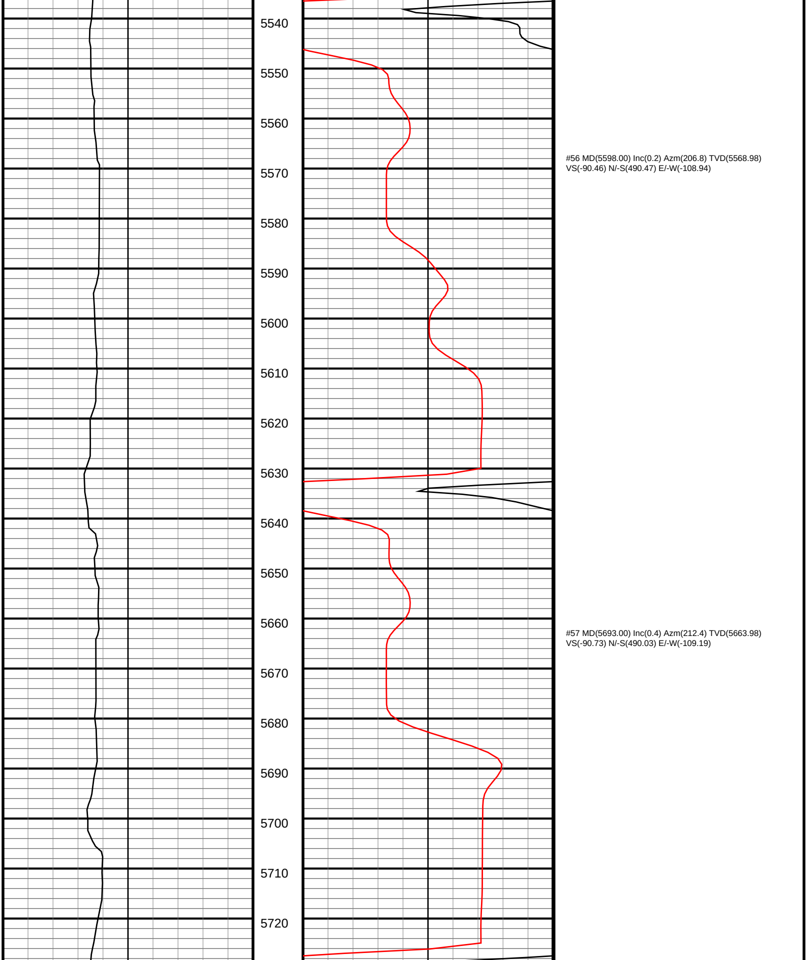
#52 MD(5216.00) Inc(0.7) Azm(207.6) TVD(5186.99)
VS(-90.74) N/-S(492.45) E/-W(-109.29)

#53 MD(5312.00) Inc(0.4) Azm(196.8) TVD(5282.99)
VS(-91.14) N/-S(491.62) E/-W(-109.66)



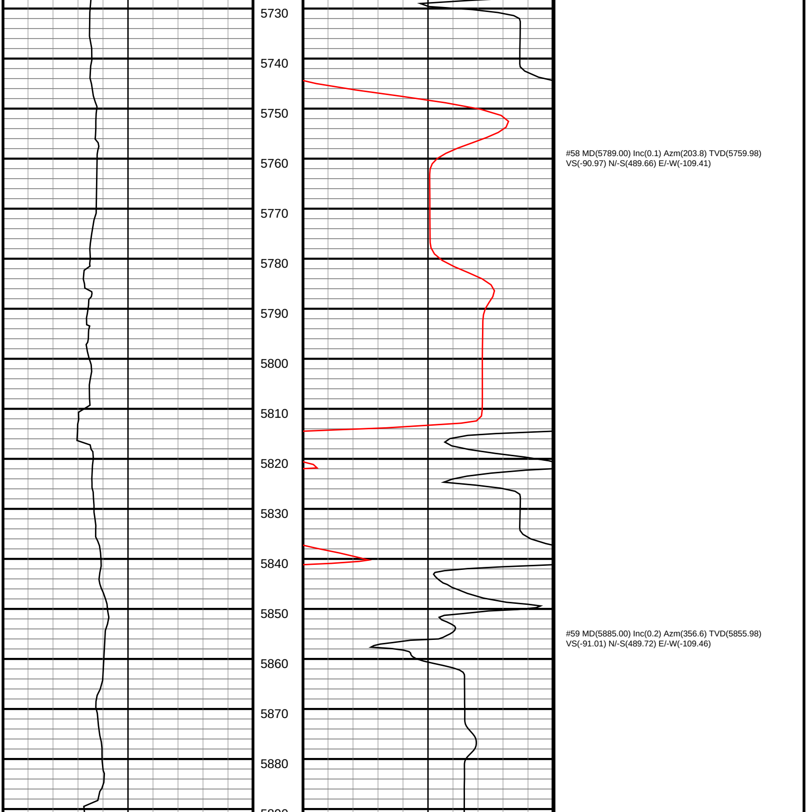
#54 MD(5407.00) Inc(0.3) Azm(171.2) TVD(5377.99)
VS(-91.21) N/-S(491.05) E/-W(-109.71)

#55 MD(5502.00) Inc(0.5) Azm(102.8) TVD(5472.98)
VS(-90.78) N/-S(490.71) E/-W(-109.27)



#56 MD(5598.00) Inc(0.2) Azm(206.8) TVD(5568.98)
VS(-90.46) N/-S(490.47) E/-W(-108.94)

#57 MD(5693.00) Inc(0.4) Azm(212.4) TVD(5663.98)
VS(-90.73) N/-S(490.03) E/-W(-109.19)



#58 MD(5789.00) Inc(0.1) Azm(203.8) TVD(5759.98)
VS(-90.97) N/-S(489.66) E/-W(-109.41)

#59 MD(5885.00) Inc(0.2) Azm(356.6) TVD(5855.98)
VS(-91.01) N/-S(489.72) E/-W(-109.46)

#60 MD(5980.00) Inc(0.3) Azm(269.1) TVD(5950.98)
VS(-91.26) N/-S(489.87) E/-W(-109.72)

#61 MD(6076.00) Inc(0.4) Azm(270.6) TVD(6046.98)
VS(-91.83) N/-S(489.87) E/-W(-110.29)

#62 MD(6172.00) Inc(0.5) Azm(237.2) TVD(6142.98)
VS(-92.53) N/-S(489.63) E/-W(-110.97)

#63 MD(6267.00) Inc(6.2) Azm(92.4) TVD(6237.80) VS(-87.80)
N/-S(489.19) E/-W(-106.23)

#64 MD(6363.00) Inc(13.0) Azm(89.7) TVD(6332.40)
VS(-71.82) N/-S(489.03) E/-W(-90.23)

#65 MD(6458.00) Inc(17.8) Azm(88.0) TVD(6423.96)
VS(-46.57) N/-S(489.61) E/-W(-64.98)

#66 MD(6554.00) Inc(24.9) Azm(90.8) TVD(6513.31)
VS(-11.65) N/-S(489.83) E/-W(-30.05)

#67 MD(6650.00) Inc(34.6) Azm(93.1) TVD(6596.54) VS(35.82)
N/-S(488.06) E/-W(17.53)

#68 MD(6746.00) Inc(45.2) Azm(91.7) TVD(6670.06) VS(97.15)
N/-S(485.60) E/-W(78.99)

#69 MD(6841.00) Inc(51.7) Azm(92.1) TVD(6733.05)
VS(168.02) N/-S(483.27) E/-W(150.00)

#70 MD(6937.00) Inc(58.0) Azm(90.8) TVD(6788.33)
VS(246.30) N/-S(481.37) E/-W(228.40)

#71 MD(7033.00) Inc(64.0) Azm(89.2) TVD(6834.86)
VS(330.16) N/-S(481.47) E/-W(312.32)

#181 MD(17593.00) Inc(92.5) Azm(86.1) TVD(6842.64)
VS(10868.44) N/-S(505.95) E/-W(10857.10)