Precision
Directional Services

Horsetail 07H-0646

TVD
5":100'

Company: Whiting Oil and Gas Corp
Well Name: Horsetail 07H-0646
API: 05-123-41834-00
County/Parish: Weld County
State: Colorado
Country: USA
Job number: GC-170004
Field: Niobrara
Rig Id: Unit 406
Survey Company: Precision Directional Services, Inc.

Log measurements: GR, ROP
Depth measured from:
Maximum temperature: 226

	Depth	Date
Start:	0 ft	02/12/2017
End:	13570 ft	02/15/2017

Casing	Depth	Size
Surface:	2075 ft	9 5/8"
Intermediate:		

Mud Type: WBM
Density: 10.4
Viscosity: 39
Rm: **Rmf:** **Rmc:**

Elevations
KB: 4933 ft
GL: 4912 ft
DF: 21 ft

Run	Bit Size	Offsets		Depths		Dates	
		Gamma	Survey	Start	End	Start	End
1	13 1/2"		57.00 ft	0 ft	2075 ft	02/12/2017	02/12/2017
2	8 1/2"	46.00 ft	59.00 ft	2075 ft	13570 ft	02/12/2017	02/15/2017
3							
4							
5							
6							
7							
8							
9							
10							

Precision Directional Services, Inc. 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.

#23 MD(2220.00) Inc(8.6) Azm(214.8) TVD(2202.06)
VS(-199.48) N/-S(-206.94) E/-W(-145.99)

#24 MD(2315.00) Inc(8.6) Azm(214.3) TVD(2295.98)
VS(-210.83) N/-S(-218.71) E/-W(-154.09)

#25 MD(2409.00) Inc(8.3) Azm(213.1) TVD(2388.95)
VS(-221.99) N/-S(-230.26) E/-W(-161.80)

#26 MD(2504.00) Inc(7.9) Azm(215.5) TVD(2483.00)
VS(-232.69) N/-S(-241.34) E/-W(-169.34)

#27 MD(2599.00) Inc(7.2) Azm(215.3) TVD(2577.18)
VS(-242.49) N/-S(-251.51) E/-W(-176.57)

#28 MD(2693.00) Inc(6.9) Azm(215.4) TVD(2670.46)
VS(-251.59) N/-S(-260.96) E/-W(-183.28)

#29 MD(2788.00) Inc(7.0) Azm(215.3) TVD(2764.76)
VS(-260.64) N/-S(-270.35) E/-W(-189.94)

#30 MD(2882.00) Inc(6.5) Azm(215.6) TVD(2858.10)
VS(-269.34) N/-S(-279.37) E/-W(-196.35)

#31 MD(2977.00) Inc(6.3) Azm(214.7) TVD(2952.51)
VS(-277.69) N/-S(-288.04) E/-W(-202.46)

#32 MD(3072.00) Inc(8.5) Azm(226.8) TVD(3046.72)
VS(-286.35) N/-S(-297.11) E/-W(-210.53)

#33 MD(3167.00) Inc(7.4) Azm(227.5) TVD(3140.81)
VS(-294.82) N/-S(-306.06) E/-W(-220.17)

#34 MD(3262.00) Inc(6.5) Azm(226.5) TVD(3235.11)
VS(-302.23) N/-S(-313.90) E/-W(-228.59)

#35 MD(3356.00) Inc(8.7) Azm(223.9) TVD(3328.27)
VS(-310.58) N/-S(-322.70) E/-W(-237.40)

#36 MD(3451.00) Inc(7.9) Azm(223.1) TVD(3422.27)
VS(-320.06) N/-S(-332.65) E/-W(-246.85)

#37 MD(3546.00) Inc(11.1) Azm(227.0) TVD(3515.96)
VS(-330.51) N/-S(-343.67) E/-W(-258.01)

#38 MD(3640.00) Inc(10.3) Azm(225.9) TVD(3608.32)
VS(-341.92) N/-S(-355.71) E/-W(-270.69)

#39 MD(3734.00) Inc(10.1) Azm(226.4) TVD(3700.82)
VS(-352.88) N/-S(-367.28) E/-W(-282.73)

#40 MD(3829.00) Inc(9.9) Azm(224.1) TVD(3794.37)
VS(-363.92) N/-S(-378.92) E/-W(-294.47)

#41 MD(3923.00) Inc(10.3) Azm(211.7) TVD(3886.92)
VS(-376.38) N/-S(-391.89) E/-W(-304.53)

#42 MD(4018.00) Inc(9.7) Azm(212.5) TVD(3980.48)
VS(-389.90) N/-S(-405.86) E/-W(-313.29)

#43 MD(4113.00) Inc(8.5) Azm(208.6) TVD(4074.29)
VS(-402.37) N/-S(-418.72) E/-W(-320.93)

#44 MD(4208.00) Inc(8.5) Azm(209.4) TVD(4168.26)
VS(-414.24) N/-S(-430.95) E/-W(-327.71)

#45 MD(4303.00) Inc(8.5) Azm(208.8) TVD(4262.22)
VS(-426.10) N/-S(-443.16) E/-W(-334.51)

#46 MD(4397.00) Inc(7.8) Azm(209.4) TVD(4355.27)
VS(-437.41) N/-S(-454.80) E/-W(-340.99)

#47 MD(4492.00) Inc(7.1) Azm(209.9) TVD(4449.46)
VS(-447.85) N/-S(-465.56) E/-W(-347.11)

#48 MD(4586.00) Inc(4.5) Azm(250.3) TVD(4543.01)
VS(-453.83) N/-S(-471.86) E/-W(-353.47)

#49 MD(4681.00) Inc(5.8) Azm(216.9) TVD(4637.65)
VS(-458.58) N/-S(-476.93) E/-W(-359.81)

#50 MD(4776.00) Inc(4.8) Azm(227.1) TVD(4732.25)
VS(-464.80) N/-S(-483.44) E/-W(-365.58)

#51 MD(4870.00) Inc(3.6) Azm(226.4) TVD(4826.00)
VS(-469.24) N/-S(-488.14) E/-W(-370.58)

#52 MD(4965.00) Inc(2.8) Azm(229.3) TVD(4920.85)
VS(-472.63) N/-S(-491.72) E/-W(-374.52)

#53 MD(5059.00) Inc(0.7) Azm(193.8) TVD(5014.80)
VS(-474.58) N/-S(-493.76) E/-W(-376.41)

#54 MD(5154.00) Inc(0.8) Azm(175.1) TVD(5109.79)
VS(-475.81) N/-S(-495.00) E/-W(-376.48)

#55 MD(5282.00) Inc(3.0) Azm(10.7) TVD(5237.74)
VS(-473.46) N/-S(-492.62) E/-W(-375.77)

#56 MD(5377.00) Inc(14.2) Azm(10.6) TVD(5331.53)
VS(-459.67) N/-S(-478.68) E/-W(-373.16)

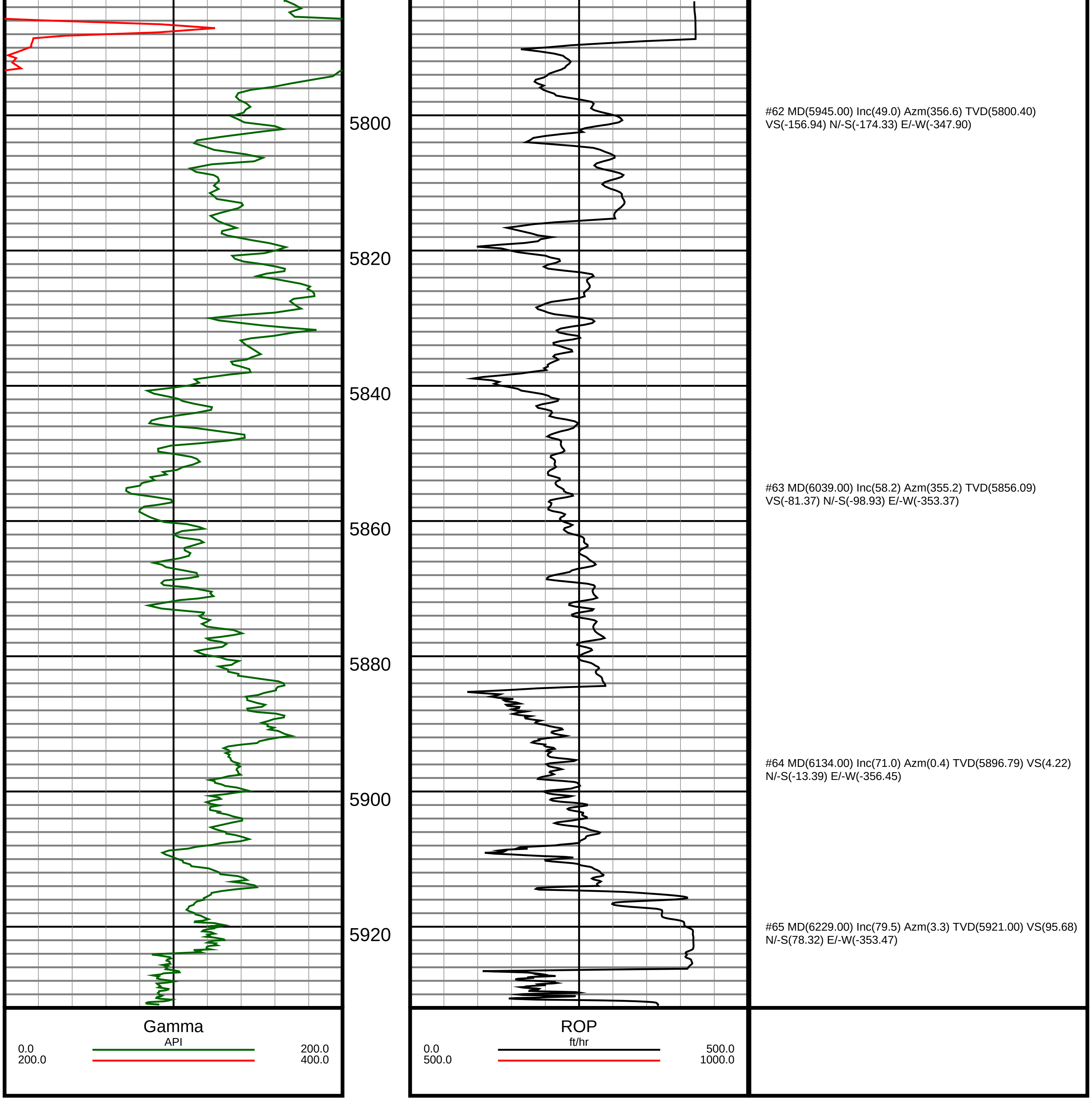
#57 MD(5471.00) Inc(22.6) Azm(16.5) TVD(5420.67)
VS(-431.42) N/-S(-450.03) E/-W(-365.91)

#58 MD(5566.00) Inc(29.4) Azm(17.0) TVD(5506.01)
VS(-392.22) N/-S(-410.19) E/-W(-353.90)

#59 MD(5661.00) Inc(38.0) Azm(3.7) TVD(5585.07)
VS(-341.05) N/-S(-358.53) E/-W(-345.19)

#60 MD(5755.00) Inc(37.2) Azm(0.2) TVD(5659.56)
VS(-283.92) N/-S(-301.23) E/-W(-343.25)

#61 MD(5850.00) Inc(41.0) Azm(357.6) TVD(5733.28)
VS(-224.07) N/-S(-241.37) E/-W(-344.45)



#62 MD(5945.00) Inc(49.0) Azm(356.6) TVD(5800.40) VS(-156.94) N/-S(-174.33) E/-W(-347.90)

#63 MD(6039.00) Inc(58.2) Azm(355.2) TVD(5856.09) VS(-81.37) N/-S(-98.93) E/-W(-353.37)

#64 MD(6134.00) Inc(71.0) Azm(0.4) TVD(5896.79) VS(4.22) N/-S(-13.39) E/-W(-356.45)

#65 MD(6229.00) Inc(79.5) Azm(3.3) TVD(5921.00) VS(95.68) N/-S(78.32) E/-W(-353.47)