ENSIGN Directional Services

McGlothlin Farms 4X-334

TVD
5":100'

Company: Petroleum Development Corp.
Well Name: McGlothlin Farms 4X-334
API: 05 123 44009 00
County/Parish: Weld
State: Colorado
Country: United States
Job number: 161-92
Field: Wattenburg
Rig Id: Ensign 161
Survey Company: Ensign Directional Services
Operator: Petroleum Development Corp.
Company Man: Brady Sharp / John Falton
Daylight DD: Zach Gentry
Night DD: Tony Callow
Swing Shift DD: Chris Saykally
Daylight MWD: Ryan Prue
Night MWD: Roy Montante

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

	Depth	Date
Start:	0 ft	9/7/17
End:	14345 ft	9/16/17

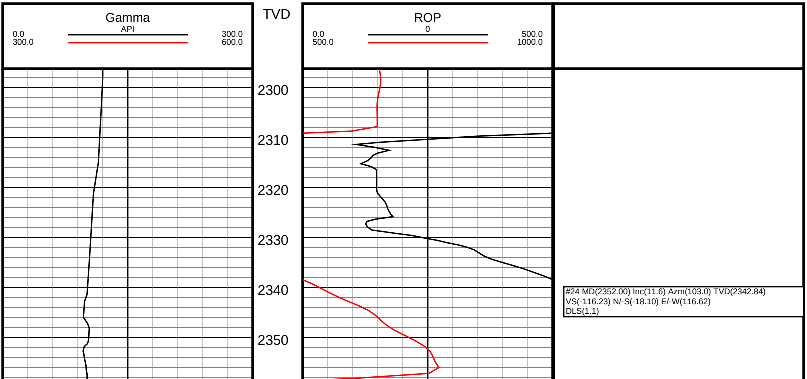
Casing	Depth	Size
Surface:		9 5/8"
Intermediate:		

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

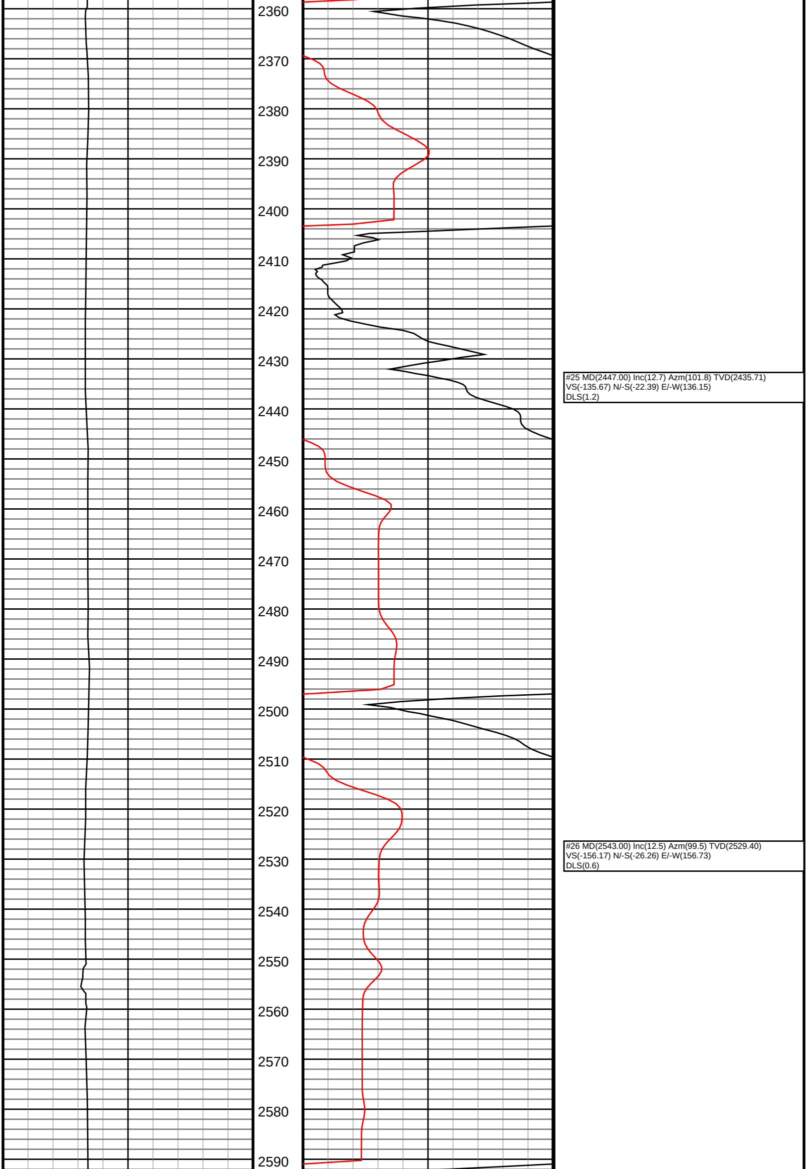
Elevations
KB: 4639 ft
GL: 4616 ft
DF: 4639 ft

		Offsets		Depths		Dates	
Run	**Bit Size**	**Gamma**	**Survey**	**Start**	**End**	**Start**	**End**
1	12.25"		57.85 ft	0 ft	1680 ft	9/7/17	9/7/17
2	8.5"	62.16 ft	57.16 ft	1680 ft	14345 ft	9/8/17	9/16/17
3							
4							
5							
6							
7							
8							
9							
10							

Ensign Directional Services 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.

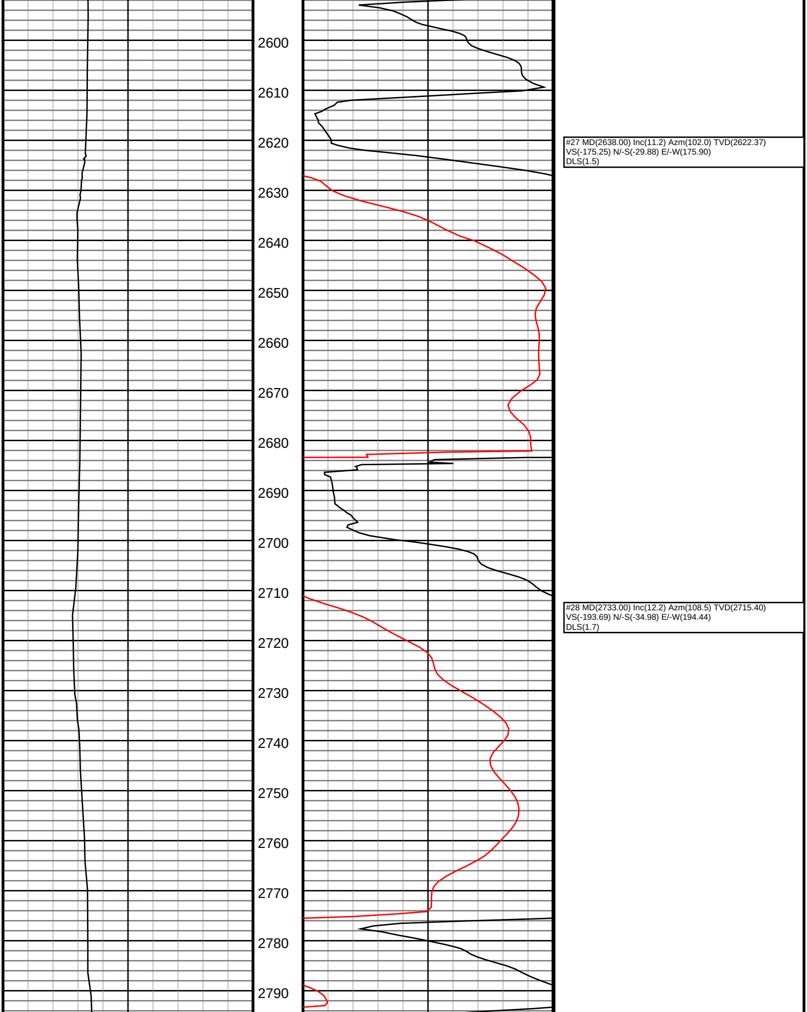


#24 MD(2352.00) Inc(11.6) Azm(103.0) TVD(2342.84)
VS(-116.23) N/-S(-18.10) E/-W(116.62)
DLS(1.1)



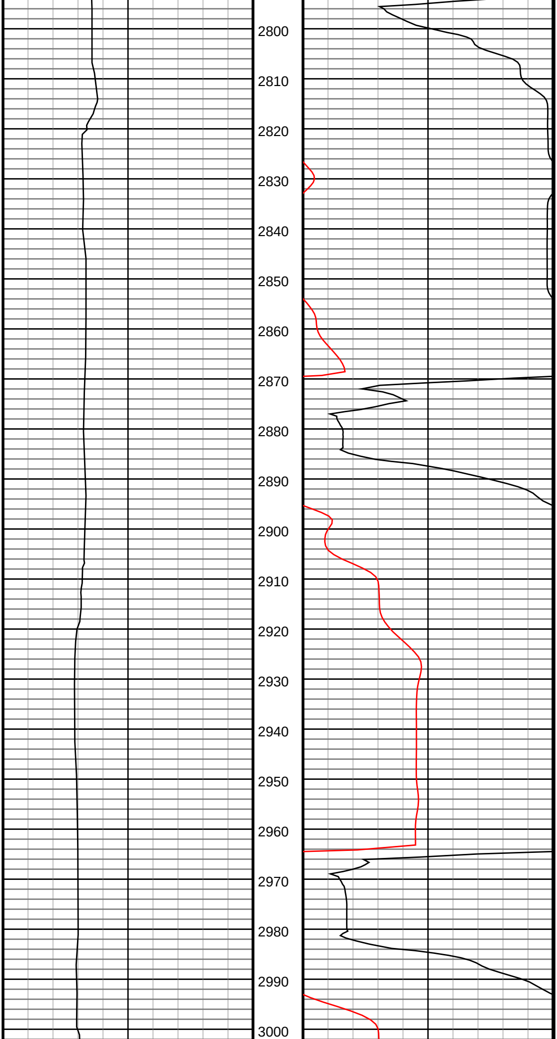
#25 MD(2447.00) Inc(12.7) Azm(101.8) TVD(2435.71)
VS(-135.67) N/-S(-22.39) E/-W(136.15)
DLS(1.2)

#26 MD(2543.00) Inc(12.5) Azm(99.5) TVD(2529.40)
VS(-156.17) N/-S(-26.26) E/-W(156.73)
DLS(0.6)



#27 MD(2638.00) Inc(11.2) Azm(102.0) TVD(2622.37)
VS(-175.25) N/-S(-29.88) E/-W(175.90)
DLS(1.5)

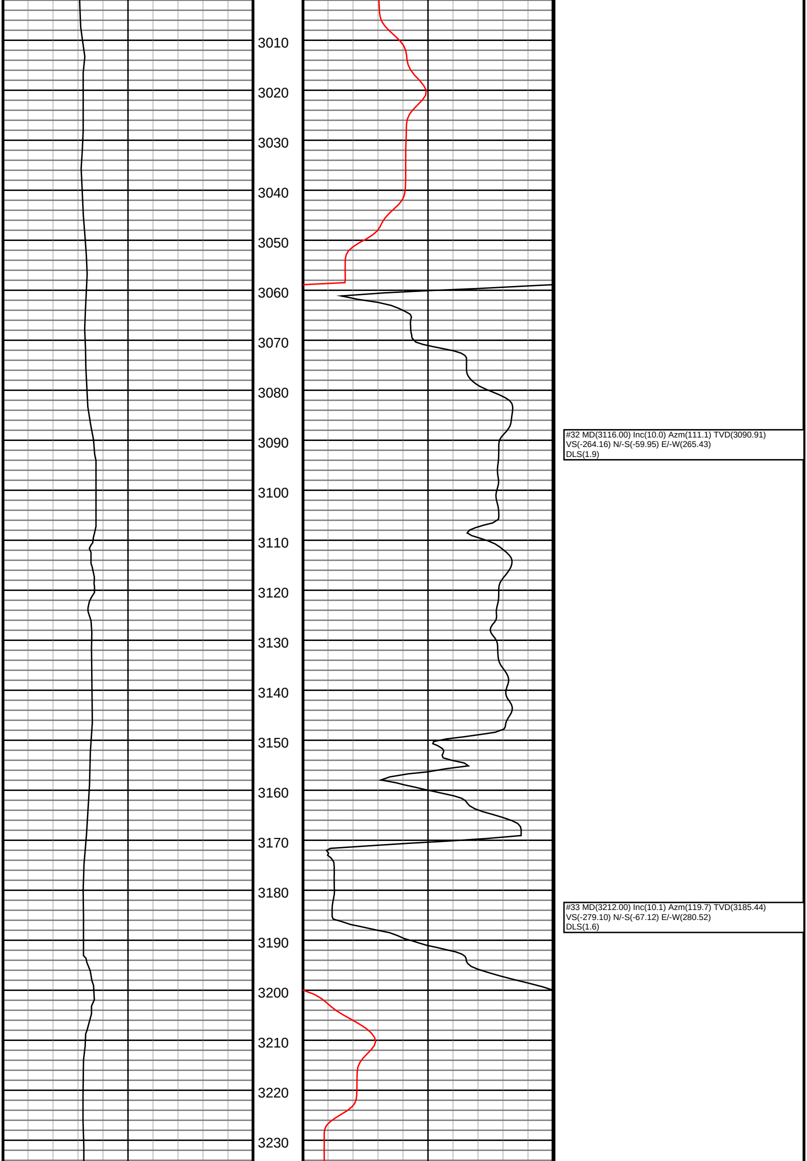
#28 MD(2733.00) Inc(12.2) Azm(108.5) TVD(2715.40)
VS(-193.69) N/-S(-34.98) E/-W(194.44)
DLS(1.7)

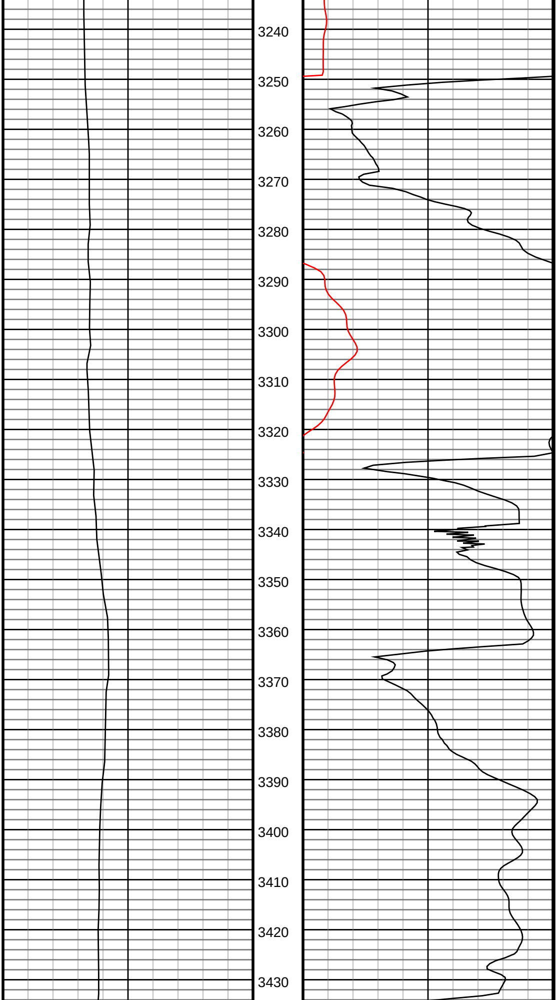


#29 MD(2829.00) Inc(11.3) Azm(106.3) TVD(2809.39)
VS(-212.22) N/-S(-40.84) E/-W(213.09)
DLS(1.0)

#30 MD(2925.00) Inc(11.3) Azm(107.1) TVD(2903.53)
VS(-230.12) N/-S(-46.24) E/-W(231.10)
DLS(0.2)

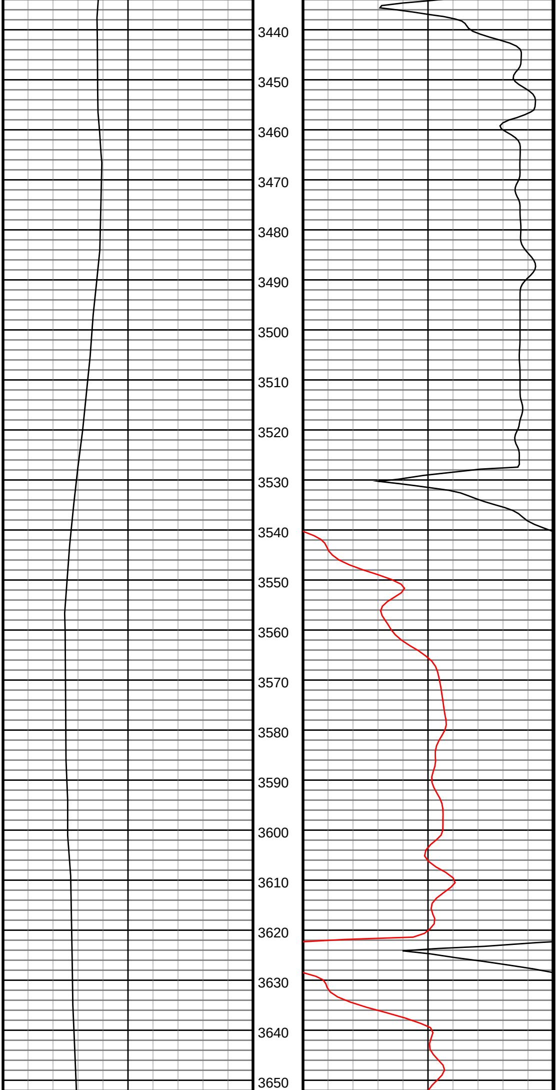
#31 MD(3020.00) Inc(11.7) Azm(114.3) TVD(2996.63)
VS(-247.66) N/-S(-52.95) E/-W(248.78)
DLS(1.6)





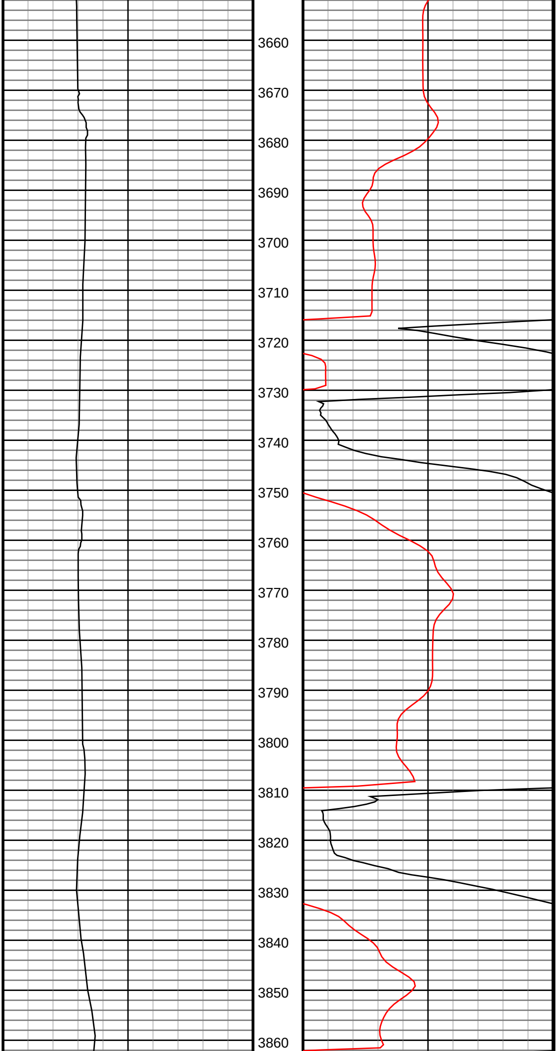
#34 MD(3308.00) Inc(12.0) Azm(120.6) TVD(3279.65)
VS(-294.82) N/-S(-76.38) E/-W(296.42)
DLS(2.0)

#35 MD(3404.00) Inc(11.7) Azm(119.0) TVD(3373.61)
VS(-311.72) N/-S(-86.17) E/-W(313.53)
DLS(0.5)



#36 MD(3499.00) Inc(11.1) Azm(116.2) TVD(3466.73)
VS(-328.17) N/-S(-94.88) E/-W(330.16)
DLS(0.9)

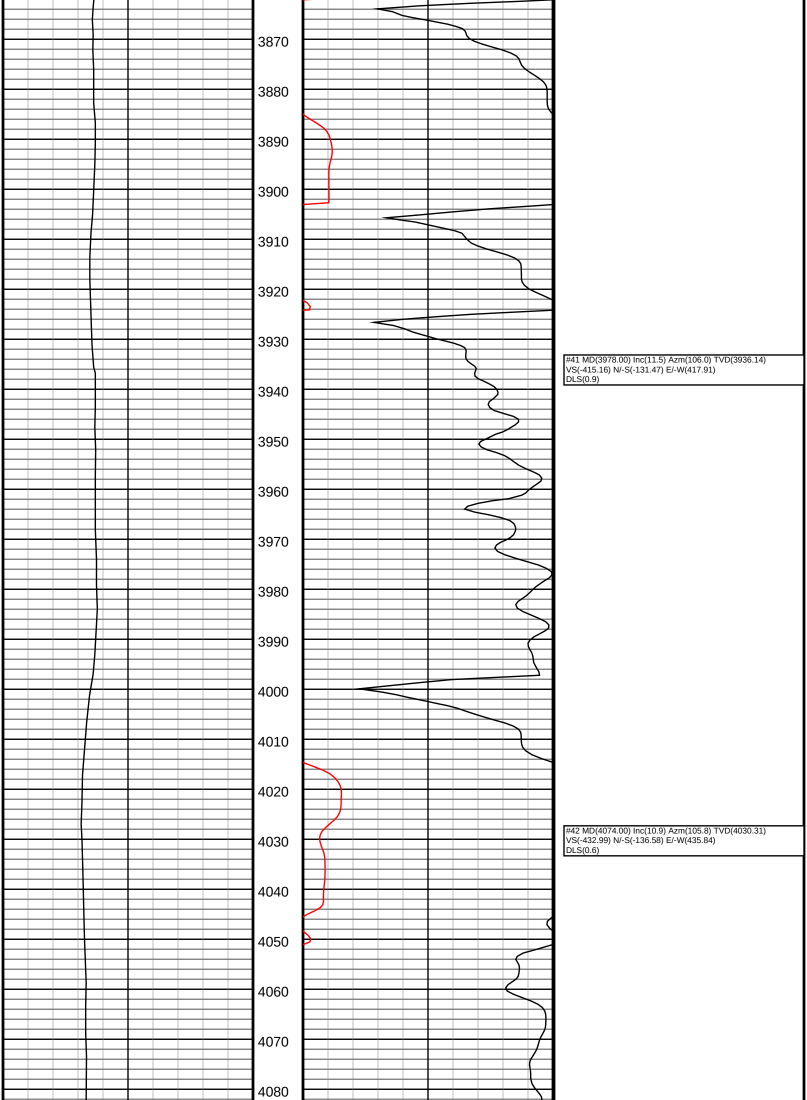
#37 MD(3595.00) Inc(11.1) Azm(115.8) TVD(3560.94)
VS(-344.61) N/-S(-102.98) E/-W(346.77)
DLS(0.1)



#38 MD(3691.00) Inc(10.9) Azm(116.7) TVD(3655.18)
VS(-360.87) N/-S(-111.08) E/-W(363.20)
DLS(0.3)

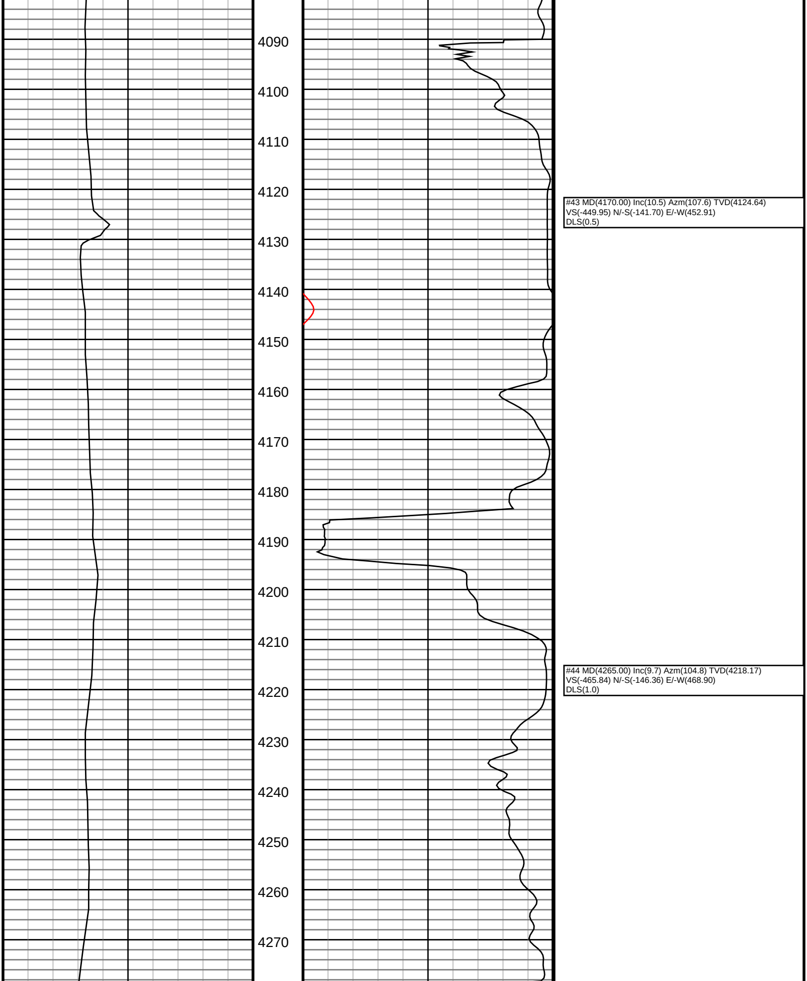
#39 MD(3786.00) Inc(11.8) Azm(113.4) TVD(3748.32)
VS(-377.65) N/-S(-118.98) E/-W(380.14)
DLS(1.2)

#40 MD(3883.00) Inc(12.3) Azm(106.9) TVD(3843.18)
VS(-396.49) N/-S(-125.92) E/-W(399.12)
DLS(1.5)



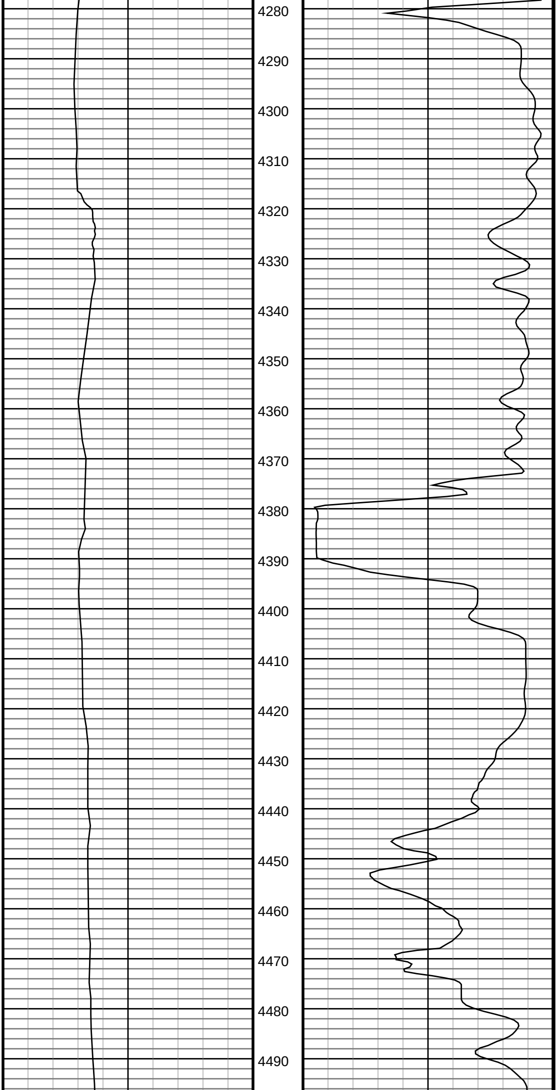
#41 MD(3978.00) Inc(11.5) Azm(106.0) TVD(3936.14)
VS(-415.16) N/-S(-131.47) E/-W(417.91)
DLS(0.9)

#42 MD(4074.00) Inc(10.9) Azm(105.8) TVD(4030.31)
VS(-432.99) N/-S(-136.58) E/-W(435.84)
DLS(0.6)



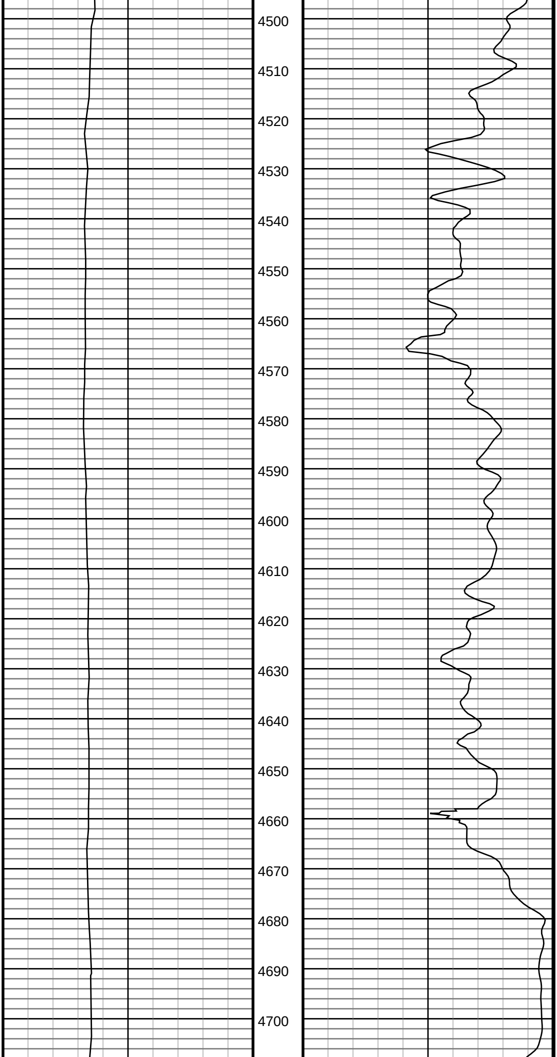
#43 MD(4170.00) Inc(10.5) Azm(107.6) TVD(4124.64)
VS(-449.95) N/-S(-141.70) E/-W(452.91)
DLS(0.5)

#44 MD(4265.00) Inc(9.7) Azm(104.8) TVD(4218.17)
VS(-465.84) N/-S(-146.36) E/-W(468.90)
DLS(1.0)



#45 MD(4361.00) Inc(9.2) Azm(105.5) TVD(4312.87)
VS(-480.97) N/-S(-150.48) E/-W(484.12)
DLS(0.5)

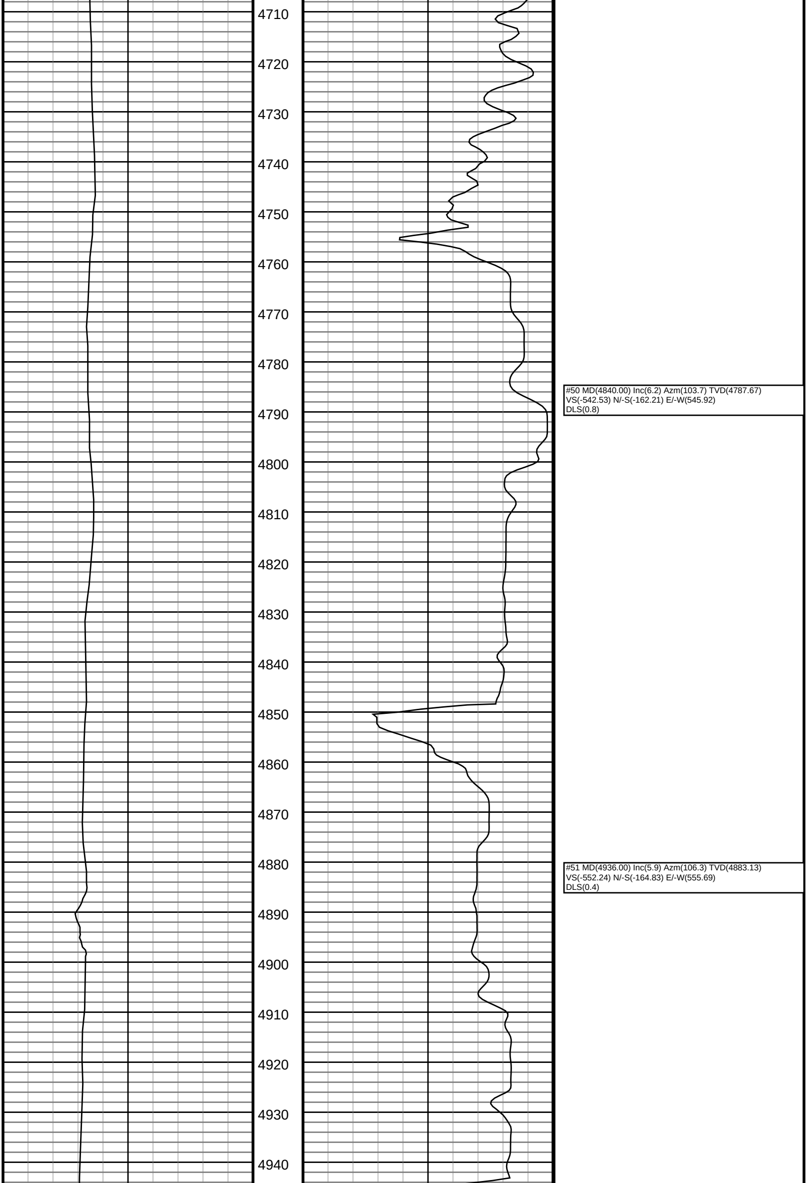
#46 MD(4457.00) Inc(8.4) Azm(95.3) TVD(4407.74)
VS(-495.29) N/-S(-153.18) E/-W(498.50)
DLS(1.8)



#47 MD(4553.00) Inc(7.6) Azm(99.8) TVD(4502.81)
VS(-508.49) N/-S(-154.90) E/-W(511.73)
DLS(1.1)

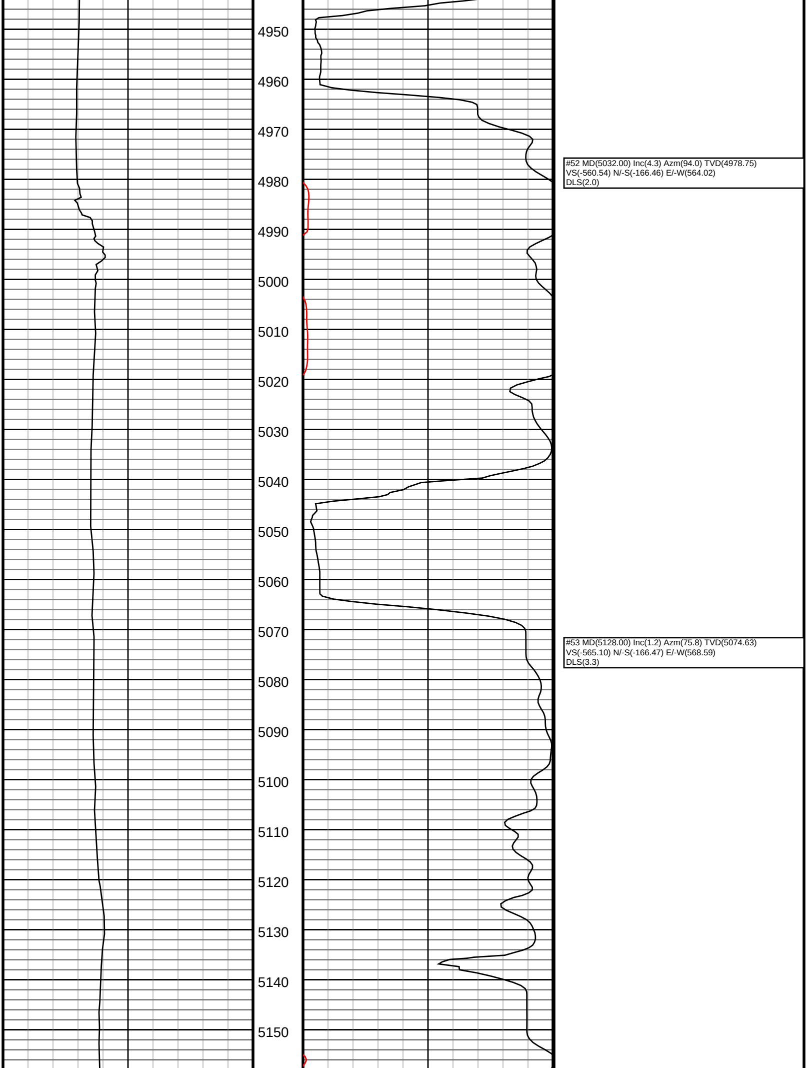
#48 MD(4648.00) Inc(7.2) Azm(103.0) TVD(4597.02)
VS(-520.43) N/-S(-157.31) E/-W(523.73)
DLS(0.6)

#49 MD(4744.00) Inc(6.9) Azm(101.6) TVD(4692.29)
VS(-531.89) N/-S(-159.83) E/-W(535.24)
DLS(0.4)



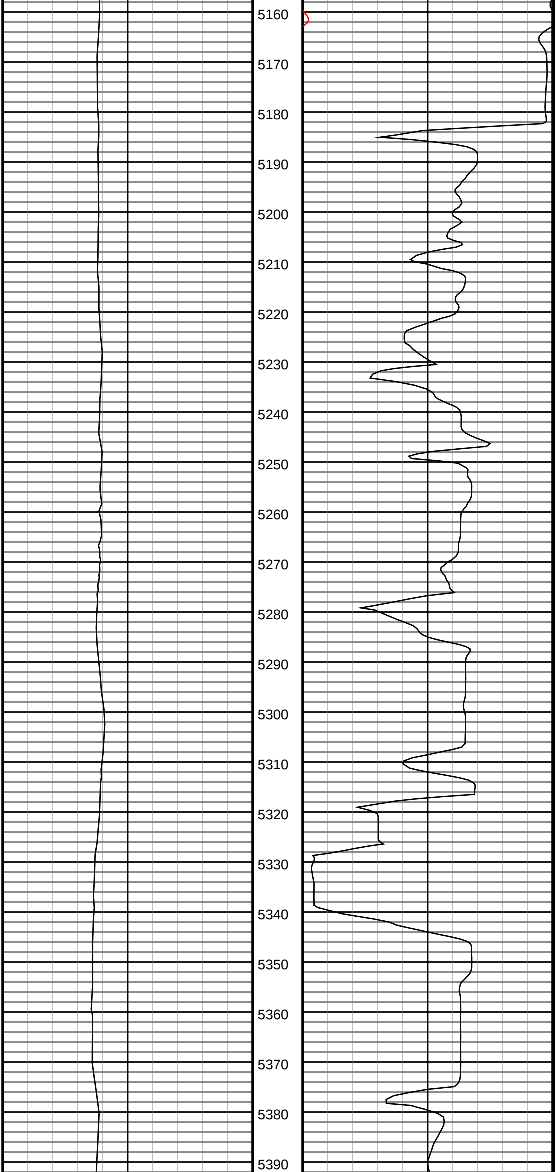
#50 MD(4840.00) Inc(6.2) Azm(103.7) TVD(4787.67)
VS(-542.53) N/-S(-162.21) E/-W(545.92)
DLS(0.8)

#51 MD(4936.00) Inc(5.9) Azm(106.3) TVD(4883.13)
VS(-552.24) N/-S(-164.83) E/-W(555.69)
DLS(0.4)



#52 MD(5032.00) Inc(4.3) Azm(94.0) TVD(4978.75)
VS(-560.54) N/-S(-166.46) E/-W(564.02)
DLS(2.0)

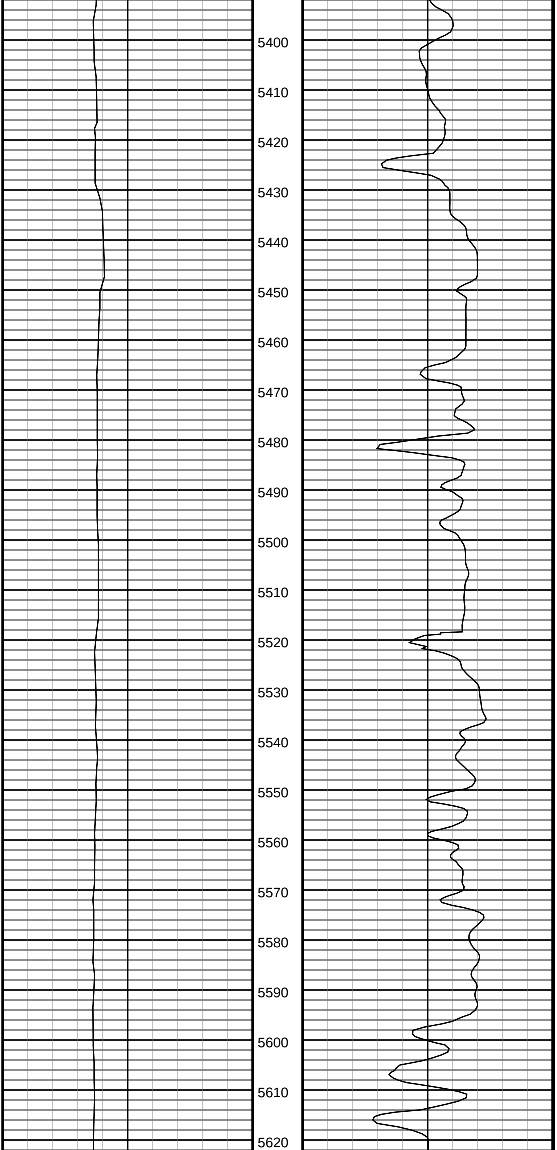
#53 MD(5128.00) Inc(1.2) Azm(75.8) TVD(5074.63)
VS(-565.10) N/-S(-166.47) E/-W(568.59)
DLS(3.3)



#54 MD(5223.00) Inc(1.0) Azm(87.0) TVD(5169.61)
VS(-566.90) N/-S(-166.18) E/-W(570.38)
DLS(0.3)

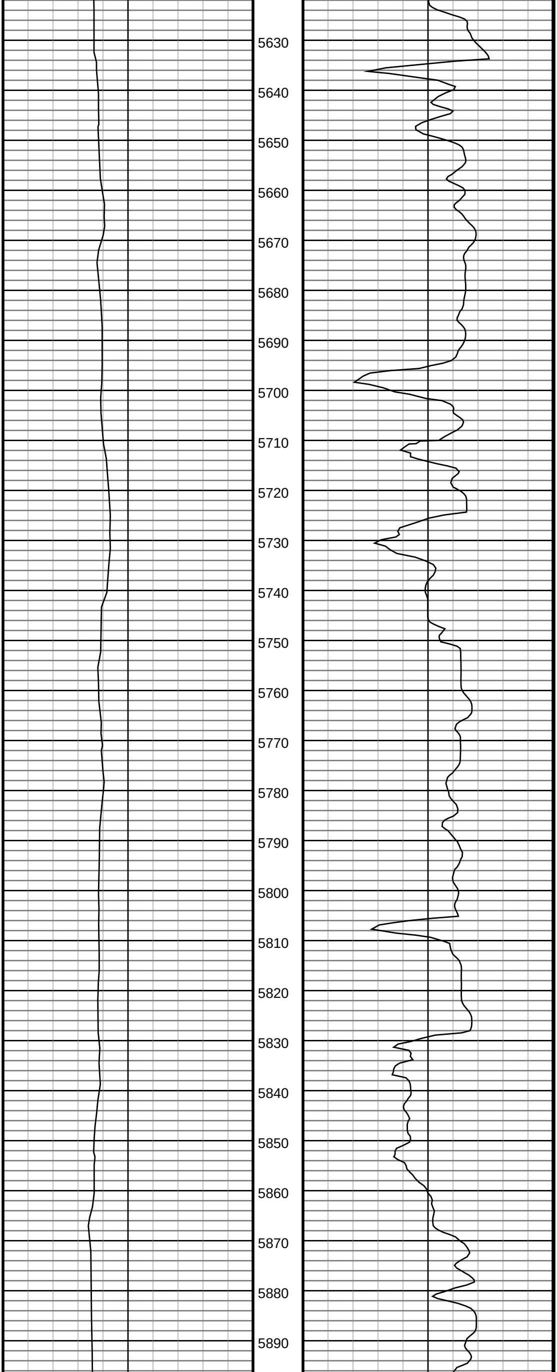
#55 MD(5319.00) Inc(1.6) Azm(101.4) TVD(5265.59)
VS(-569.04) N/-S(-166.40) E/-W(572.53)
DLS(0.7)

#56 MD(5415.00) Inc(0.2) Azm(260.9) TVD(5361.58)
VS(-570.19) N/-S(-166.69) E/-W(573.68)
DLS(1.9)



#57 MD(5511.00) Inc(0.7) Azm(197.4) TVD(5457.57)
VS(-569.83) N/-S(-167.28) E/-W(573.34)
DLS(0.7)

#58 MD(5607.00) Inc(0.8) Azm(183.0) TVD(5553.57)
VS(-569.60) N/-S(-168.51) E/-W(573.13)
DLS(0.2)



#59 MD(5702.00) Inc(0.7) Azm(170.0) TVD(5648.56)
VS(-569.64) N/-S(-169.74) E/-W(573.19)
DLS(0.2)

#60 MD(5798.00) Inc(0.8) Azm(176.0) TVD(5744.55)
VS(-569.76) N/-S(-170.99) E/-W(573.34)
DLS(0.1)

#61 MD(5921.00) Inc(0.3) Azm(144.8) TVD(5867.54)
VS(-569.98) N/-S(-172.11) E/-W(573.59)
DLS(0.5)

#62 MD(6017.00) Inc(0.4) Azm(111.6) TVD(5963.54)
VS(-570.43) N/-S(-172.43) E/-W(574.04)
DLS(0.2)

#63 MD(6113.00) Inc(4.6) Azm(279.5) TVD(6059.45)
VS(-566.96) N/-S(-171.92) E/-W(570.56)
DLS(5.2)

#64 MD(6209.00) Inc(15.3) Azm(282.5) TVD(6153.87)
VS(-550.82) N/-S(-168.54) E/-W(554.35)
DLS(11.2)

#65 MD(6305.00) Inc(22.4) Azm(272.3) TVD(6244.68)
VS(-520.21) N/-S(-165.05) E/-W(523.66)
DLS(8.1)

#66 MD(6400.00) Inc(28.8) Azm(269.8) TVD(6330.31)
VS(-479.22) N/-S(-164.41) E/-W(482.64)
DLS(6.8)

#67 MD(6496.00) Inc(35.2) Azm(271.1) TVD(6411.69)
VS(-428.39) N/-S(-163.96) E/-W(431.80)
DLS(6.7)

#68 MD(6592.00) Inc(42.9) Azm(271.8) TVD(6486.18)
VS(-368.02) N/-S(-162.40) E/-W(371.39)
DLS(8.0)

#69 MD(6688.00) Inc(51.0) Azm(271.6) TVD(6551.66)
VS(-298.02) N/-S(-160.33) E/-W(301.32)
DLS(8.4)

#70 MD(6784.00) Inc(57.7) Azm(272.6) TVD(6607.58)
VS(-220.18) N/-S(-157.44) E/-W(223.42)
DLS(7.0)

#71 MD(6879.00) Inc(63.8) Azm(271.4) TVD(6653.98)
VS(-137.46) N/-S(-154.57) E/-W(140.62)
DLS(6.5)

#72 MD(6975.00) Inc(69.2) Azm(271.1) TVD(6692.25)
VS(-49.53) N/-S(-152.66) E/-W(52.63)
DLS(5.6)

#73 MD(7071.00) Inc(75.2) Azm(269.6) TVD(6721.58)
VS(41.79) N/-S(-152.12) E/-W(-38.72)
DLS(6.4)

#149 MD(14285.00) Inc(92.1) Azm(268.6) TVD(6740.67)
VS(7251.89) N/-S(-155.89) E/-W(-7250.22)
DLS(0.8)