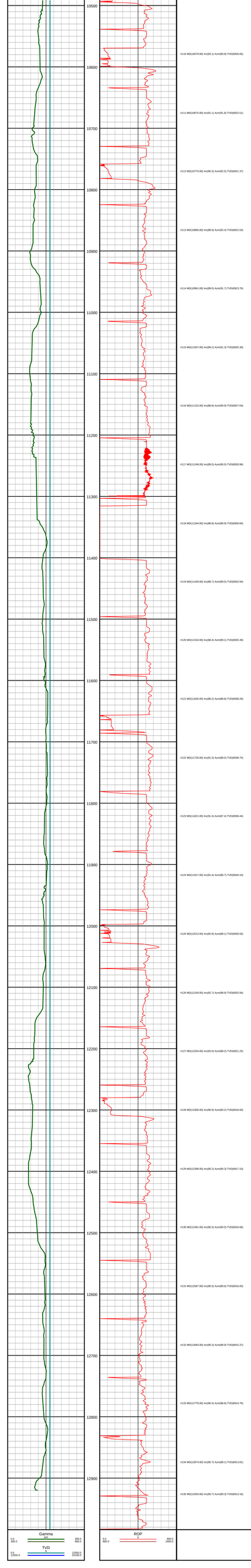

Thistle Down 31G-332

MD
2":100’

Company:	PDC Energy Inc
Well Name:	Thistle Down 31G-332
API:	051234525700
County/Parish:	WELD
State:	COLORADO
Country:	USA
Job number:	152-182
Field:	Wattenberg
Rig Id:	Ensign 152
Survey Company:	Ensign Directional
DD1	Jesus Gallego
DD2	Dan Hanson
DD3	
MWD1	Ryan Prue
MWD2	Paul Wilson

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

	Depth	Date
Start:	0 ft	1-6-2019
End:	12983 ft	1-9-2019

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

Mud Type: Water
Density: 10.5
Viscosity: 42
Rm: **Rmf:** **Rmc:**

Elevations	
KB:	23 ft
GL:	4805 ft
DF:	4828 ft

Run	Bit Size	Offsets		Depths		Dates	
		Gamma	Survey	Start	End	Start	End
1	12.25"		60.24 ft	0 ft	2573 ft	1-6-2019	1-6-2018
2	8.5"	63.25 ft	57.30 ft	2573 ft	12983 ft	1-7-2018	1-9-2019
3							
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.

ROP
0 800.0 1600.0
0.0 800.0
MD
Gamma
API
0.0 300.0 300.0 600.0
TVD
ft
0.0 12550.0 12550.0 25100.0
1500
1600
#15 MD(1491.00) Inc(16.5) Azm(301.5) TVD(1468.20)
#16 MD(1586.00) Inc(16.9) Azm(302.3) TVD(1559.19)
#17 MD(1682.00) Inc(15.2) Azm(301.3) TVD(1651.45)
#18 MD(1777.00) Inc(13.9) Azm(299.6) TVD(1743.40)
#19 MD(1873.00) Inc(14.2) Azm(296.8) TVD(1836.53)
#20 MD(1968.00) Inc(14.6) Azm(293.6) TVD(1928.55)
#21 MD(2063.00) Inc(14.5) Azm(293.2) TVD(2020.50)
#22 MD(2158.00) Inc(14.5) Azm(293.0) TVD(2112.47)
#23 MD(2253.00) Inc(14.2) Azm(293.9) TVD(2204.51)
#24 MD(2348.00) Inc(13.5) Azm(293.9) TVD(2296.75)
#25 MD(2442.00) Inc(11.9) Azm(293.9) TVD(2388.44)
#26 MD(2513.00) Inc(12.1) Azm(294.3) TVD(2457.89)
#27 MD(2632.00) Inc(14.7) Azm(293.2) TVD(2573.65)
#28 MD(2727.00) Inc(17.7) Azm(297.9) TVD(2664.87)
#29 MD(2822.00) Inc(20.2) Azm(302.4) TVD(2754.71)
#30 MD(2917.00) Inc(24.0) Azm(302.0) TVD(2842.73)
#31 MD(3037.00) Inc(24.2) Azm(301.1) TVD(2952.29)
#32 MD(3132.00) Inc(23.9) Azm(300.5) TVD(3039.05)
#33 MD(3227.00) Inc(23.6) Azm(299.8) TVD(3126.03)
#34 MD(3323.00) Inc(22.2) Azm(298.6) TVD(3214.46)
#35 MD(3418.00) Inc(21.2) Azm(298.7) TVD(3302.70)

#110 MD(10579.00) Inc(93.1) Azm(90.8) TVD(6926.05)

#111 MD(10675.00) Inc(91.1) Azm(91.8) TVD(6922.51)

#112 MD(10770.00) Inc(90.3) Azm(92.5) TVD(6921.37)

#113 MD(10866.00) Inc(88.9) Azm(92.4) TVD(6922.04)

#114 MD(10961.00) Inc(89.0) Azm(91.7) TVD(6923.76)

#115 MD(11057.00) Inc(89.2) Azm(91.3) TVD(6925.30)

#116 MD(11152.00) Inc(88.8) Azm(90.9) TVD(6927.04)

#117 MD(11248.00) Inc(89.0) Azm(90.5) TVD(6928.96)

#118 MD(11344.00) Inc(88.8) Azm(89.9) TVD(6930.84)

#119 MD(11439.00) Inc(88.7) Azm(89.5) TVD(6932.94)

#120 MD(11534.00) Inc(88.4) Azm(89.1) TVD(6935.39)

#121 MD(11630.00) Inc(88.2) Azm(88.8) TVD(6938.29)

#122 MD(11726.00) Inc(91.3) Azm(88.0) TVD(6938.70)

#123 MD(11821.00) Inc(91.4) Azm(87.4) TVD(6936.44)

#124 MD(11917.00) Inc(91.4) Azm(86.7) TVD(6934.10)

#125 MD(12013.00) Inc(92.8) Azm(88.1) TVD(6930.55)

#126 MD(12109.00) Inc(92.7) Azm(88.9) TVD(6925.94)

#127 MD(12204.00) Inc(93.0) Azm(88.2) TVD(6921.25)

#128 MD(12300.00) Inc(90.9) Azm(90.2) TVD(6918.00)

#129 MD(12396.00) Inc(90.2) Azm(90.3) TVD(6917.10)

#130 MD(12491.00) Inc(90.3) Azm(90.0) TVD(6916.66)

#131 MD(12587.00) Inc(90.5) Azm(89.6) TVD(6916.00)

#132 MD(12683.00) Inc(90.3) Azm(88.9) TVD(6915.37)

#133 MD(12778.00) Inc(90.4) Azm(88.8) TVD(6914.76)

#134 MD(12874.00) Inc(90.7) Azm(88.1) TVD(6913.81)

#135 MD(12926.00) Inc(90.7) Azm(89.3) TVD(6913.16)