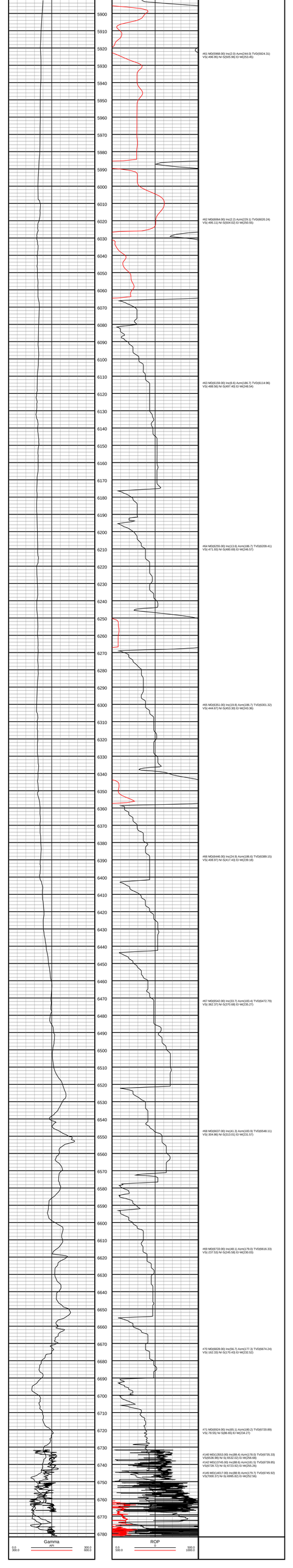

ENSIGN

Ottenhoff 29R-323

TVD
5":100'

Company: Petroleum Development Corp.
Well Name: Ottenhoff 29R-323
API:
County/Parish: Weld
State: Colorado
Country: United States
Job number: 161-132
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
Swing Shift DD: Tony Callow
Night DD: Eric Mays
Daylight MWD: Justin Klatt
Night MWD: Ryan Prue

Log measurements: Gamma, ROP
Depth measured from: 1650 ft
Maximum temperature:

	Depth	Date
Start:	0 ft	7-26-2018
End:	14077 ft	7-30-2018

Casing	Depth	Size
Surface:	1650 ft	9 5/8"
Intermediate:		

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

Elevations
KB: 23 ft
GL: 4662 ft
DF: 4685 ft

Run	Bit Size	Offsets Gamma	Offsets Survey	Depths Start	Depths End	Dates Start	Dates End
1	12.25"			0 ft	1650 ft	7-26-2018	7-26-2018
2	8.5"			1650 ft	14077 ft	7-27-2018	7-30-2018
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.

#23 MD(2341.00) Inc(9.4) Azm(16.1) TVD(2325.05)
VS(-188.20) N/-S(191.50) E/-W(92.50)

#24 MD(2436.00) Inc(10.6) Azm(23.4) TVD(2418.60)
VS(-203.48) N/-S(206.97) E/-W(98.12)

#25 MD(2531.00) Inc(9.8) Azm(23.8) TVD(2512.10)
VS(-218.65) N/-S(222.39) E/-W(104.86)

#26 MD(2627.00) Inc(9.2) Azm(22.7) TVD(2606.79)
VS(-232.98) N/-S(236.94) E/-W(111.11)

#27 MD(2723.00) Inc(9.3) Azm(22.4) TVD(2701.54)
VS(-247.02) N/-S(251.19) E/-W(117.03)

#28 MD(2818.00) Inc(9.1) Azm(22.4) TVD(2795.31)
VS(-260.86) N/-S(265.24) E/-W(122.82)

#29 MD(2912.00) Inc(10.0) Azm(25.9) TVD(2888.01)
VS(-274.85) N/-S(279.45) E/-W(129.22)

#30 MD(3008.00) Inc(10.6) Azm(24.8) TVD(2982.46)
VS(-290.10) N/-S(294.97) E/-W(136.56)

#31 MD(3103.00) Inc(9.6) Azm(24.7) TVD(3075.99)
VS(-304.98) N/-S(310.09) E/-W(143.54)

#32 MD(3198.00) Inc(8.3) Azm(22.6) TVD(3169.83)
VS(-318.29) N/-S(323.62) E/-W(149.48)

#33 MD(3294.00) Inc(6.9) Azm(19.4) TVD(3264.99)
VS(-329.96) N/-S(335.46) E/-W(154.06)

#34 MD(3389.00) Inc(8.1) Azm(30.8) TVD(3359.18)
VS(-340.91) N/-S(346.59) E/-W(159.38)

#35 MD(3485.00) Inc(8.4) Azm(29.6) TVD(3454.18)
VS(-352.57) N/-S(358.50) E/-W(166.31)

#36 MD(3580.00) Inc(7.7) Azm(23.6) TVD(3548.25)
VS(-364.22) N/-S(370.36) E/-W(172.29)

#37 MD(3675.00) Inc(9.1) Azm(25.7) TVD(3642.23)
VS(-376.62) N/-S(382.97) E/-W(178.09)

#38 MD(3771.00) Inc(9.4) Azm(22.2) TVD(3736.98)
VS(-390.49) N/-S(397.07) E/-W(184.35)

#39 MD(3866.00) Inc(9.5) Azm(22.4) TVD(3830.69)
VS(-404.71) N/-S(411.50) E/-W(190.27)

#40 MD(3961.00) Inc(9.0) Azm(21.9) TVD(3924.46)
VS(-418.65) N/-S(425.64) E/-W(196.02)

#41 MD(4057.00) Inc(7.7) Azm(15.5) TVD(4019.44)
VS(-431.65) N/-S(438.80) E/-W(200.54)

#42 MD(4153.00) Inc(9.3) Azm(24.7) TVD(4114.38)
VS(-444.72) N/-S(452.05) E/-W(205.50)

#43 MD(4248.00) Inc(8.3) Azm(23.3) TVD(4208.27)
VS(-457.78) N/-S(465.32) E/-W(211.42)

#44 MD(4343.00) Inc(6.7) Azm(26.3) TVD(4302.45)
VS(-468.86) N/-S(476.59) E/-W(216.59)

#45 MD(4439.00) Inc(7.1) Azm(34.9) TVD(4397.76)
VS(-478.54) N/-S(486.48) E/-W(222.47)

#46 MD(4535.00) Inc(6.4) Azm(33.1) TVD(4493.09)
VS(-487.67) N/-S(495.82) E/-W(228.79)

#47 MD(4630.00) Inc(4.7) Azm(35.0) TVD(4587.64)
VS(-495.11) N/-S(503.45) E/-W(233.91)

#48 MD(4726.00) Inc(4.9) Azm(42.8) TVD(4683.31)
VS(-501.16) N/-S(509.68) E/-W(238.95)

#49 MD(4821.00) Inc(4.6) Azm(47.5) TVD(4777.98)
VS(-506.52) N/-S(515.23) E/-W(244.52)

#50 MD(4917.00) Inc(4.0) Azm(56.5) TVD(4873.71)
VS(-510.77) N/-S(519.68) E/-W(250.15)

#51 MD(5012.00) Inc(1.7) Azm(78.8) TVD(4968.59)
VS(-512.73) N/-S(521.78) E/-W(254.29)

#52 MD(5108.00) Inc(0.7) Azm(116.1) TVD(5064.57)
VS(-512.68) N/-S(521.80) E/-W(256.22)

#53 MD(5204.00) Inc(0.9) Azm(150.0) TVD(5160.56)
VS(-511.74) N/-S(520.89) E/-W(257.12)

#54 MD(5299.00) Inc(1.1) Azm(172.3) TVD(5255.55)
VS(-510.18) N/-S(519.34) E/-W(257.62)

#55 MD(5395.00) Inc(1.4) Azm(152.5) TVD(5351.52)
VS(-508.20) N/-S(517.39) E/-W(258.28)

#56 MD(5491.00) Inc(1.6) Azm(131.9) TVD(5447.49)
VS(-506.21) N/-S(515.45) E/-W(259.82)

#57 MD(5586.00) Inc(1.4) Azm(222.4) TVD(5542.47)
VS(-504.46) N/-S(513.71) E/-W(260.02)

#58 MD(5681.00) Inc(1.7) Azm(191.1) TVD(5637.44)
VS(-502.26) N/-S(511.47) E/-W(258.97)

#59 MD(5777.00) Inc(1.6) Azm(198.9) TVD(5733.40)
VS(-499.62) N/-S(508.80) E/-W(258.26)

#60 MD(5872.00) Inc(1.8) Azm(253.5) TVD(5828.36)
VS(-498.01) N/-S(507.12) E/-W(256.40)

#61 MD(5968.00) Inc(2.0) Azm(244.0) TVD(5924.31)
VS(-496.95) N/-S(505.96) E/-W(253.45)

#62 MD(6064.00) Inc(2.2) Azm(229.1) TVD(6020.24)
VS(-495.11) N/-S(504.02) E/-W(250.55)

#63 MD(6159.00) Inc(6.6) Azm(186.7) TVD(6114.96)
VS(-488.56) N/-S(497.40) E/-W(248.54)

#64 MD(6255.00) Inc(13.6) Azm(186.7) TVD(6209.41)
VS(-471.93) N/-S(480.69) E/-W(246.57)

#65 MD(6351.00) Inc(19.8) Azm(186.7) TVD(6301.32)
VS(-444.67) N/-S(453.30) E/-W(243.36)

#66 MD(6446.00) Inc(24.9) Azm(186.6) TVD(6389.15)
VS(-408.97) N/-S(417.43) E/-W(239.18)

#67 MD(6542.00) Inc(33.7) Azm(183.4) TVD(6472.79)
VS(-362.37) N/-S(370.68) E/-W(235.27)

#68 MD(6637.00) Inc(41.3) Azm(183.9) TVD(6548.11)
VS(-304.86) N/-S(313.01) E/-W(231.57)

#69 MD(6733.00) Inc(48.1) Azm(179.0) TVD(6616.33)
VS(-237.53) N/-S(245.58) E/-W(230.03)

#70 MD(6828.00) Inc(56.7) Azm(177.3) TVD(6674.24)
VS(-162.33) N/-S(170.43) E/-W(232.52)

#71 MD(6924.00) Inc(65.1) Azm(180.2) TVD(6720.89)
VS(-78.55) N/-S(86.65) E/-W(234.27)

#140 MD(13553.00) Inc(88.4) Azm(178.0) TVD(6735.33)
VS(6536.98) N/-S(-6532.02) E/-W(256.68)

#142 MD(13745.00) Inc(88.6) Azm(181.5) TVD(6739.85)
VS(6728.72) N/-S(-6723.92) E/-W(255.26)

#145 MD(14017.00) Inc(88.9) Azm(179.7) TVD(6745.92)
VS(7000.37) N/-S(-6995.82) E/-W(252.56)