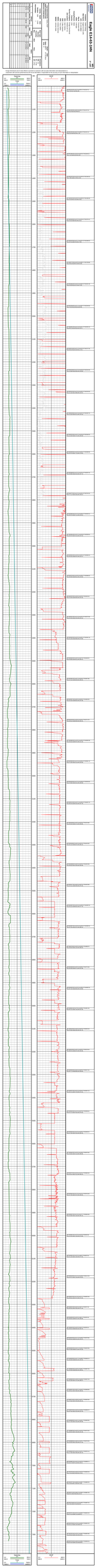

ENSIGN
Directional Services

# Eagle E14-63-1HN

MD
2":100'

Company: Noble Energy
Well Name: Eagle E14-63-1HN
API: 05-123-38862
Rig Id: Precision 829
State: Colorado
County/Parish: Weld
Country: USA
Survey Company: Ensign Directional
Job number: PD829-207-21
DD1 Zach Gentry
DD2 Colby Hansen
DD3 Tony Callow
MWD1 Andrew Demrow
MWD2 Johnnie Kibel

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

| | Depth | Date |
|---|---|---|
| Start: | 658 ft | 07-14-2014 |
| End: | ft | |

| Casing | Depth | Size |
|---|---|---|
| Surface: | 648 | 9 5/8 |
| Intermediate: | | 7 |

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

Elevations
KB: 16
GL: 4736
DF: 4752

| Run | Bit Size | Offsets Gamma | Offsets Survey | Depths Start | Depths End | Dates Start | Dates End |
|---|---|---|---|---|---|---|---|
| 1 | 13.5 | | | 0 | 658 | 07-13-2014 | 07-14-2014 |
| 2 | 8.75 | 53.44 | 48.44 | 658 | 7384 | 07-14-2014 | 07-16-2014 |
| 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.

#6 MD(1019.00) Inc(5.2) Azm(353.2) TVD(1018.71)
VS(2.79) NS(7.40) EW(1.98)

#7 MD(1108.00) Inc(6.8) Azm(354.2) TVD(1107.22)
VS(2.81) NS(16.65) EW(0.97)

#8 MD(1203.00) Inc(8.2) Azm(346.4) TVD(1201.41)
VS(2.02) NS(28.83) EW(-1.19)

#9 MD(1298.00) Inc(10.0) Azm(337.5) TVD(1295.21)
VS(-1.12) NS(43.04) EW(-5.94)

#10 MD(1397.00) Inc(10.5) Azm(323.9) TVD(1392.64)
VS(-7.98) NS(58.27) EW(-14.55)

#11 MD(1491.00) Inc(10.4) Azm(325.9) TVD(1485.09)
VS(-16.18) NS(72.22) EW(-24.35)

#12 MD(1583.00) Inc(11.5) Azm(318.4) TVD(1575.41)
VS(-25.33) NS(85.95) EW(-35.10)

#13 MD(1676.00) Inc(11.1) Azm(311.3) TVD(1666.62)
VS(-36.70) NS(98.79) EW(-47.98)

#14 MD(1770.00) Inc(10.3) Azm(305.7) TVD(1758.98)
VS(-49.03) NS(109.67) EW(-61.60)

#15 MD(1864.00) Inc(10.2) Azm(304.3) TVD(1851.48)
VS(-61.58) NS(119.27) EW(-75.30)

#16 MD(1959.00) Inc(11.1) Azm(307.7) TVD(1944.85)
VS(-74.53) NS(129.60) EW(-89.49)

#17 MD(2051.00) Inc(11.3) Azm(311.2) TVD(2035.10)
VS(-86.97) NS(140.95) EW(-103.27)

#18 MD(2145.00) Inc(11.4) Azm(312.9) TVD(2127.26)
VS(-99.25) NS(153.34) EW(-117.01)

#19 MD(2238.00) Inc(11.0) Azm(315.8) TVD(2218.49)
VS(-110.68) NS(165.96) EW(-129.93)

#20 MD(2332.00) Inc(11.8) Azm(322.2) TVD(2310.64)
VS(-121.19) NS(179.98) EW(-142.07)

#21 MD(2426.00) Inc(11.3) Azm(317.5) TVD(2402.73)
VS(-131.63) NS(194.37) EW(-154.18)

#22 MD(2519.00) Inc(10.7) Azm(315.8) TVD(2494.02)
VS(-142.30) NS(207.27) EW(-166.36)

#23 MD(2595.00) Inc(10.9) Azm(318.7) TVD(2568.68)
VS(-150.74) NS(217.73) EW(-176.02)

#24 MD(2685.00) Inc(11.0) Azm(314.9) TVD(2657.04)
VS(-160.98) NS(230.19) EW(-187.72)

#25 MD(2775.00) Inc(11.5) Azm(321.6) TVD(2745.32)
VS(-171.11) NS(243.28) EW(-199.37)

#26 MD(2864.00) Inc(11.6) Azm(320.2) TVD(2832.51)
VS(-180.74) NS(257.11) EW(-210.61)

#27 MD(2954.00) Inc(10.7) Azm(316.6) TVD(2920.81)
VS(-190.75) NS(270.13) EW(-222.15)

#28 MD(3044.00) Inc(10.9) Azm(321.6) TVD(3009.22)
VS(-200.30) NS(282.87) EW(-233.17)

#29 MD(3133.00) Inc(10.9) Azm(328.1) TVD(3096.62)
VS(-208.38) NS(296.61) EW(-242.85)

#30 MD(3223.00) Inc(9.8) Azm(323.0) TVD(3185.16)
VS(-215.95) NS(309.95) EW(-251.95)

#31 MD(3312.00) Inc(11.0) Azm(327.9) TVD(3272.69)
VS(-223.49) NS(323.19) EW(-261.02)

#32 MD(3402.00) Inc(10.2) Azm(321.2) TVD(3361.16)
VS(-231.49) NS(336.68) EW(-270.58)

#33 MD(3492.00) Inc(9.2) Azm(317.8) TVD(3449.87)
VS(-239.98) NS(348.22) EW(-280.41)

#34 MD(3581.00) Inc(8.1) Azm(320.0) TVD(3537.86)
VS(-247.61) NS(358.29) EW(-289.22)

#35 MD(3671.00) Inc(8.5) Azm(325.3) TVD(3626.92)
VS(-254.28) NS(368.62) EW(-297.08)

#36 MD(3760.00) Inc(9.8) Azm(333.4) TVD(3714.79)
VS(-260.02) NS(380.80) EW(-304.22)

#37 MD(3850.00) Inc(10.5) Azm(333.2) TVD(3803.38)
VS(-265.53) NS(394.97) EW(-311.34)

#38 MD(3940.00) Inc(11.5) Azm(331.0) TVD(3891.73)
VS(-271.84) NS(410.13) EW(-319.39)

#39 MD(4029.00) Inc(11.6) Azm(328.3) TVD(3978.92)
VS(-279.08) NS(425.51) EW(-328.39)

#40 MD(4119.00) Inc(10.7) Azm(326.3) TVD(4067.22)
VS(-286.78) NS(440.16) EW(-337.78)

#41 MD(4208.00) Inc(9.2) Azm(323.0) TVD(4154.88)
VS(-294.20) NS(452.71) EW(-346.65)

#42 MD(4298.00) Inc(8.4) Azm(321.0) TVD(4243.82)
VS(-301.41) NS(463.57) EW(-355.12)

#43 MD(4388.00) Inc(8.0) Azm(322.3) TVD(4332.90)
VS(-308.20) NS(473.63) EW(-363.08)

#44 MD(4477.00) Inc(8.5) Azm(327.6) TVD(4420.98)
VS(-314.31) NS(484.09) EW(-370.40)

#45 MD(4567.00) Inc(10.4) Azm(332.6) TVD(4509.76)
VS(-320.14) NS(496.91) EW(-377.70)

#46 MD(4657.00) Inc(10.0) Azm(323.0) TVD(4598.34)
VS(-327.04) NS(510.37) EW(-386.14)

#47 MD(4746.00) Inc(9.5) Azm(309.9) TVD(4686.07)
VS(-336.05) NS(521.25) EW(-396.43)

#48 MD(4836.00) Inc(9.5) Azm(309.2) TVD(4774.83)
VS(-346.38) NS(530.71) EW(-407.88)

#49 MD(4925.00) Inc(10.0) Azm(306.3) TVD(4862.55)
VS(-357.20) NS(539.93) EW(-419.80)

#50 MD(5015.00) Inc(7.8) Azm(298.3) TVD(4951.46)
VS(-367.97) NS(547.45) EW(-431.48)

#51 MD(5105.00) Inc(9.6) Azm(307.8) TVD(5040.43)
VS(-378.38) NS(554.95) EW(-442.79)

#52 MD(5195.00) Inc(8.2) Azm(303.3) TVD(5129.34)
VS(-388.70) NS(563.07) EW(-454.08)

#53 MD(5284.00) Inc(6.5) Azm(297.5) TVD(5217.61)
VS(-397.77) NS(568.88) EW(-463.85)

#54 MD(5374.00) Inc(5.4) Azm(291.6) TVD(5307.13)
VS(-405.74) NS(572.79) EW(-472.31)

#55 MD(5463.00) Inc(4.3) Azm(274.9) TVD(5395.81)
VS(-412.71) NS(574.62) EW(-479.53)

#56 MD(5553.00) Inc(2.0) Azm(282.5) TVD(5485.67)
VS(-417.50) NS(575.25) EW(-484.43)

#57 MD(5643.00) Inc(0.6) Azm(166.8) TVD(5575.65)
VS(-418.93) NS(575.13) EW(-485.85)

#58 MD(5732.00) Inc(0.9) Azm(131.4) TVD(5664.64)
VS(-418.41) NS(574.21) EW(-485.22)

#59 MD(5822.00) Inc(1.3) Azm(131.4) TVD(5754.63)
VS(-417.25) NS(573.07) EW(-483.92)

#60 MD(5912.00) Inc(1.6) Azm(127.7) TVD(5844.60)
VS(-415.66) NS(571.63) EW(-482.16)

#61 MD(6001.00) Inc(2.0) Azm(75.8) TVD(5933.56)
VS(-413.23) NS(571.25) EW(-479.68)

#62 MD(6091.00) Inc(0.3) Azm(88.2) TVD(6023.54)
VS(-411.44) NS(571.64) EW(-477.92)

#63 MD(6180.00) Inc(1.2) Azm(109.9) TVD(6112.53)
VS(-410.37) NS(571.33) EW(-476.81)

#64 MD(6270.00) Inc(1.9) Azm(111.1) TVD(6202.50)
VS(-408.20) NS(570.47) EW(-474.53)

#65 MD(6315.00) Inc(6.5) Azm(94.7) TVD(6247.36)
VS(-405.04) NS(570.00) EW(-471.29)

#66 MD(6360.00) Inc(6.9) Azm(86.1) TVD(6292.06)
VS(-399.84) NS(569.97) EW(-466.06)

#67 MD(6404.00) Inc(9.5) Azm(93.2) TVD(6335.61)
VS(-393.61) NS(569.95) EW(-459.79)

#68 MD(6449.00) Inc(11.4) Azm(96.6) TVD(6379.86)
VS(-385.62) NS(569.23) EW(-451.67)

#69 MD(6494.00) Inc(16.1) Azm(90.0) TVD(6423.56)
VS(-375.08) NS(568.72) EW(-441.00)

#70 MD(6539.00) Inc(21.7) Azm(88.6) TVD(6466.12)
VS(-360.58) NS(568.92) EW(-426.44)

#71 MD(6584.00) Inc(25.5) Azm(85.7) TVD(6507.35)
VS(-342.60) NS(569.85) EW(-408.45)

#72 MD(6629.00) Inc(28.0) Azm(84.6) TVD(6547.53)
VS(-322.36) NS(571.57) EW(-388.27)

#73 MD(6674.00) Inc(30.1) Azm(84.3) TVD(6586.86)
VS(-300.51) NS(573.69) EW(-366.53)

#74 MD(6718.00) Inc(36.6) Azm(87.1) TVD(6623.60)
VS(-276.36) NS(575.45) EW(-342.42)

#75 MD(6763.00) Inc(42.6) Azm(93.3) TVD(6658.27)
VS(-247.92) NS(575.25) EW(-313.78)

#76 MD(6808.00) Inc(44.1) Azm(94.1) TVD(6690.99)
VS(-217.50) NS(573.25) EW(-282.96)

#77 MD(6853.00) Inc(45.5) Azm(91.8) TVD(6722.93)
VS(-186.22) NS(571.63) EW(-251.30)

#78 MD(6898.00) Inc(50.3) Azm(87.1) TVD(6753.09)
VS(-153.02) NS(572.00) EW(-217.94)

#79 MD(6943.00) Inc(52.6) Azm(87.4) TVD(6781.14)
VS(-117.90) NS(573.69) EW(-182.79)

#80 MD(6987.00) Inc(51.6) Azm(87.8) TVD(6808.17)
VS(-83.27) NS(575.14) EW(-148.10)

#81 MD(7032.00) Inc(53.5) Azm(87.9) TVD(6835.53)
VS(-47.64) NS(576.48) EW(-112.40)

#82 MD(7077.00) Inc(58.9) Azm(88.7) TVD(6860.55)
VS(-10.39) NS(577.58) EW(-75.04)

#83 MD(7122.00) Inc(66.2) Azm(88.4) TVD(6881.28)
VS(29.37) NS(578.60) EW(-35.14)

#84 MD(7166.00) Inc(71.8) Azm(88.3) TVD(6897.04)
VS(70.29) NS(579.78) EW(5.90)

#85 MD(7211.00) Inc(74.1) Azm(89.2) TVD(6910.24)
VS(113.14) NS(580.72) EW(48.91)

#86 MD(7256.00) Inc(75.0) Azm(89.0) TVD(6922.22)
VS(156.31) NS(581.40) EW(92.28)

#87 MD(7301.00) Inc(78.1) Azm(88.7) TVD(6932.69)
VS(199.89) NS(582.28) EW(136.03)

#88 MD(7334.00) Inc(82.8) Azm(88.4) TVD(6938.16)
VS(232.30) NS(583.10) EW(168.55)