

Project: Weld County, CO (NAD 83)
 Site: Sec. 25-T6N-R63W - NW/SW (Wells Ranch AA26 PAD)
 Well: Wells Ranch AA26-63HN
 Wellbore: Plan A
 Design: Final Surveys

Noble Energy

HALLIBURTON
 Sperry Drilling

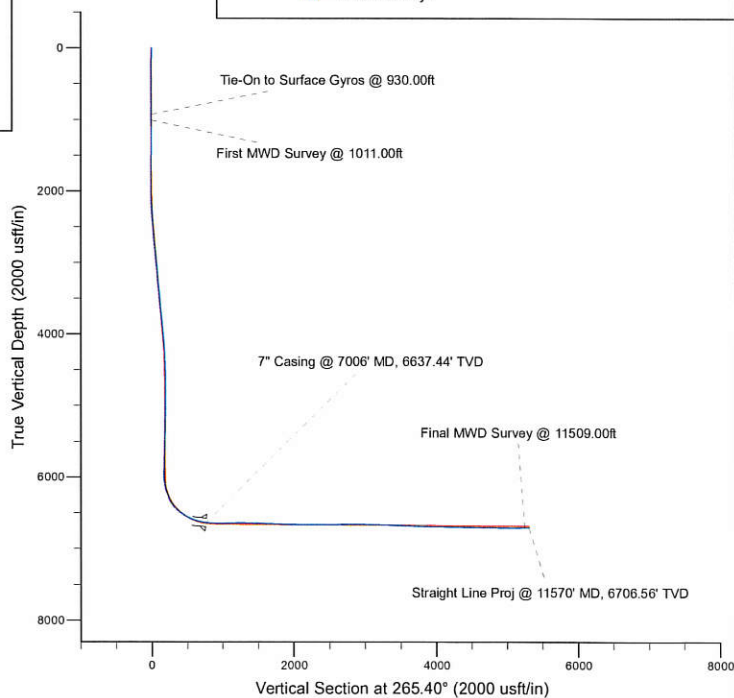
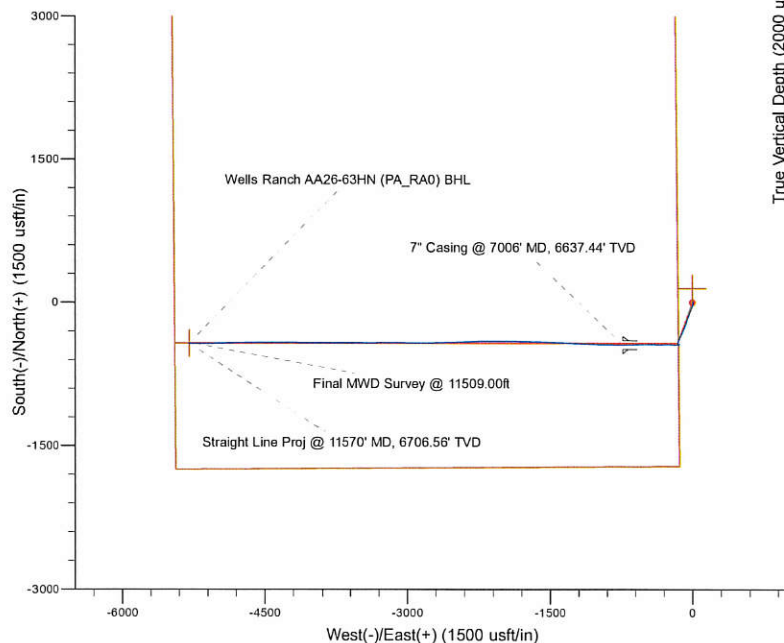
Platted SHL: 1712' FSL, 153' FWL
 Platted Lat/Long: 40.45485° N, 104.39410° W
 Location: Sec. 25-T6N-R63W

7" Casing: ~1272.86' FSL, ~584.18' FEL
 Lat/Long: 40° 27' 13.155 N, 104° 23' 48.309 W
 State Planes - CO Northern: 1,410,016.40' N, 3,307,014.79' E
 Location: Sec. 26-T6N-R63W

BHL: ~1315.94' FSL, ~149.94' FWL
 Lat/Long: 40° 27' 13.859 N, 104° 24' 47.300 W
 State Planes - CO Northern: 1,410,031.36' N, 3,302,454.05' E
 Location: Sec. 26-T6N-R63W

LEGEND

- Wells Ranch AA26-63HN, Plan A, Rev A0 V0
- Final Surveys



WELL DETAILS: Wells Ranch AA26-63HN

Ground Level: 4792.00
 RKB 24 ft @ 4816.00usft (H&P 322)

Created By: Fred Hartmann
 Created On: 11/13/2013

Noble Energy

Weld County, CO (NAD 83)

Sec. 25-T6N-R63W - NW/SW (Wells Ranch AA26 PAD)

Wells Ranch AA26-63HN - A5

Design: Final Surveys

Sperry Drilling Services

Final Survey Report

13 November, 2013

Well Coordinates: 1,410,461.24 N, 3,307,747.42 E (40° 27' 17.46" N, 104° 23' 38.76" W)

Ground Level: 4,792.00 usft

Local Coordinate Origin:

Centered on Well Wells Ranch AA26-63HN - Slot A5

Viewing Datum:

RKB 24 ft. @ 4816.00usft (H&P 322)

TVDs to System:

N

North Reference:

Grid

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

HALLIBURTON

Design Report for Wells Ranch AA26-63HN - Final Surveys

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) |
|------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 286.00 | 0.30 | 36.20 | 286.00 | 0.60 | 0.44 | -0.49 | 0.10 |
| 488.00 | 0.80 | 10.70 | 487.99 | 2.42 | 1.02 | -1.21 | 0.27 |
| 742.00 | 0.60 | 349.90 | 741.97 | 5.47 | 1.11 | -1.55 | 0.13 |
| 930.00 | 0.20 | 286.60 | 929.97 | 6.53 | 0.63 | -1.15 | 0.29 |
| Tie-On to Surface Gyros @ 930.00ft | | | | | | | |
| 1,011.00 | 0.55 | 348.94 | 1,010.96 | 6.95 | 0.42 | -0.97 | 0.61 |
| First MWD Survey @ 1011.00ft | | | | | | | |
| 1,104.00 | 0.18 | 332.95 | 1,103.96 | 7.52 | 0.26 | -0.87 | 0.41 |
| 1,197.00 | 0.24 | 340.46 | 1,196.96 | 7.83 | 0.13 | -0.76 | 0.07 |
| 1,290.00 | 0.44 | 353.73 | 1,289.96 | 8.37 | 0.03 | -0.70 | 0.23 |
| 1,383.00 | 0.68 | 144.26 | 1,382.96 | 8.28 | 0.31 | -0.97 | 1.17 |
| 1,476.00 | 0.91 | 143.11 | 1,475.95 | 7.24 | 1.08 | -1.65 | 0.25 |
| 1,571.00 | 1.01 | 142.36 | 1,570.94 | 5.98 | 2.04 | -2.51 | 0.11 |
| 1,666.00 | 1.12 | 146.58 | 1,665.92 | 4.54 | 3.06 | -3.42 | 0.14 |
| 1,761.00 | 1.20 | 160.76 | 1,760.90 | 2.82 | 3.90 | -4.12 | 0.31 |
| 1,855.00 | 0.65 | 153.08 | 1,854.89 | 1.42 | 4.47 | -4.57 | 0.60 |
| 1,950.00 | 3.16 | 193.55 | 1,949.83 | -1.61 | 4.10 | -3.96 | 2.84 |
| 2,045.00 | 5.07 | 181.26 | 2,044.58 | -8.35 | 3.39 | -2.71 | 2.20 |
| 2,140.00 | 7.21 | 184.85 | 2,139.03 | -18.49 | 2.80 | -1.30 | 2.29 |
| 2,235.00 | 8.81 | 193.84 | 2,233.11 | -31.49 | 0.55 | 1.98 | 2.13 |
| 2,330.00 | 9.33 | 202.54 | 2,326.92 | -45.67 | -4.14 | 7.79 | 1.54 |
| 2,425.00 | 9.51 | 205.41 | 2,420.64 | -59.87 | -10.46 | 15.23 | 0.53 |
| 2,520.00 | 9.02 | 200.36 | 2,514.40 | -73.94 | -16.42 | 22.30 | 1.00 |
| 2,614.00 | 10.66 | 200.24 | 2,607.02 | -89.01 | -21.99 | 29.06 | 1.74 |
| 2,709.00 | 12.33 | 203.50 | 2,700.11 | -106.56 | -29.08 | 37.53 | 1.89 |
| 2,804.00 | 12.10 | 201.80 | 2,792.96 | -125.10 | -36.82 | 46.74 | 0.45 |
| 2,899.00 | 12.14 | 201.73 | 2,885.84 | -143.63 | -44.21 | 55.60 | 0.04 |
| 2,994.00 | 12.82 | 202.06 | 2,978.60 | -162.68 | -51.87 | 64.76 | 0.72 |
| 3,089.00 | 10.90 | 203.36 | 3,071.56 | -180.69 | -59.39 | 73.70 | 2.04 |
| 3,184.00 | 11.39 | 193.85 | 3,164.78 | -198.05 | -65.20 | 80.88 | 2.00 |
| 3,278.00 | 12.09 | 197.63 | 3,256.81 | -216.44 | -70.40 | 87.54 | 1.11 |
| 3,373.00 | 10.12 | 201.83 | 3,350.03 | -233.67 | -76.52 | 95.02 | 2.24 |
| 3,468.00 | 12.03 | 205.73 | 3,443.26 | -250.34 | -83.92 | 103.74 | 2.16 |
| 3,563.00 | 12.29 | 202.49 | 3,536.13 | -268.60 | -92.09 | 113.34 | 0.77 |
| 3,658.00 | 12.78 | 201.24 | 3,628.87 | -287.74 | -99.76 | 122.53 | 0.59 |
| 3,753.00 | 14.19 | 199.90 | 3,721.24 | -308.48 | -107.53 | 131.94 | 1.52 |
| 3,848.00 | 13.50 | 202.48 | 3,813.48 | -329.68 | -115.74 | 141.82 | 0.97 |
| 3,942.00 | 12.93 | 205.79 | 3,905.00 | -349.28 | -124.51 | 152.13 | 1.01 |
| 4,037.00 | 10.79 | 206.20 | 3,997.96 | -366.83 | -133.06 | 162.06 | 2.25 |
| 4,132.00 | 9.53 | 205.95 | 4,091.47 | -381.89 | -140.43 | 170.62 | 1.33 |
| 4,226.00 | 8.24 | 202.79 | 4,184.34 | -395.09 | -146.44 | 177.67 | 1.47 |
| 4,321.00 | 6.68 | 199.32 | 4,278.54 | -406.58 | -150.91 | 183.04 | 1.71 |
| 4,416.00 | 5.30 | 194.38 | 4,373.02 | -416.05 | -153.82 | 186.71 | 1.55 |
| 4,511.00 | 5.53 | 198.38 | 4,467.59 | -424.64 | -156.36 | 189.93 | 0.47 |
| 4,606.00 | 3.43 | 197.74 | 4,562.30 | -431.69 | -158.67 | 192.79 | 2.21 |
| 4,701.00 | 1.37 | 175.94 | 4,657.21 | -435.53 | -159.45 | 193.88 | 2.33 |
| 4,796.00 | 1.37 | 152.92 | 4,752.18 | -437.68 | -158.85 | 193.46 | 0.58 |
| 4,890.00 | 1.49 | 144.45 | 4,846.15 | -439.67 | -157.63 | 192.40 | 0.26 |
| 4,986.00 | 0.30 | 104.09 | 4,942.14 | -440.75 | -156.66 | 191.52 | 1.33 |

Design Report for Wells Ranch AA26-63HN - Final Surveys

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) |
|------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|
| 5,081.00 | 0.26 | 113.63 | 5,037.14 | -440.90 | -156.22 | 191.10 | 0.06 |
| 5,176.00 | 0.75 | 105.51 | 5,132.14 | -441.15 | -155.43 | 190.32 | 0.52 |
| 5,271.00 | 1.12 | 90.76 | 5,227.12 | -441.33 | -153.90 | 188.82 | 0.46 |
| 5,366.00 | 1.12 | 92.53 | 5,322.10 | -441.38 | -152.04 | 186.97 | 0.04 |
| 5,460.00 | 1.57 | 92.78 | 5,416.08 | -441.48 | -149.84 | 184.78 | 0.48 |
| 5,555.00 | 1.43 | 71.12 | 5,511.05 | -441.16 | -147.42 | 182.34 | 0.61 |
| 5,650.00 | 1.17 | 66.37 | 5,606.02 | -440.39 | -145.41 | 180.28 | 0.30 |
| 5,745.00 | 1.38 | 79.43 | 5,701.00 | -439.79 | -143.40 | 178.22 | 0.38 |
| 5,840.00 | 1.15 | 68.81 | 5,795.98 | -439.24 | -141.38 | 176.17 | 0.34 |
| 5,935.00 | 1.20 | 58.20 | 5,890.96 | -438.37 | -139.65 | 174.37 | 0.23 |
| 6,023.00 | 1.11 | 53.69 | 5,978.94 | -437.38 | -138.18 | 172.83 | 0.15 |
| 6,070.00 | 2.58 | 258.74 | 6,025.93 | -437.32 | -138.85 | 173.49 | 7.69 |
| 6,118.00 | 8.04 | 259.63 | 6,073.70 | -438.13 | -143.21 | 177.91 | 11.38 |
| 6,165.00 | 11.87 | 259.58 | 6,119.99 | -439.60 | -151.20 | 185.99 | 8.15 |
| 6,213.00 | 15.40 | 259.99 | 6,166.63 | -441.60 | -162.34 | 197.25 | 7.36 |
| 6,260.00 | 18.33 | 264.60 | 6,211.60 | -443.38 | -175.85 | 210.85 | 6.85 |
| 6,308.00 | 20.91 | 274.25 | 6,256.82 | -443.46 | -191.91 | 226.87 | 8.61 |
| 6,355.00 | 24.03 | 275.94 | 6,300.25 | -441.84 | -209.80 | 244.57 | 6.78 |
| 6,403.00 | 28.99 | 273.10 | 6,343.19 | -440.20 | -231.14 | 265.72 | 10.66 |
| 6,450.00 | 34.70 | 270.73 | 6,383.10 | -439.42 | -255.92 | 290.35 | 12.43 |
| 6,498.00 | 42.21 | 269.26 | 6,420.66 | -439.45 | -285.74 | 320.08 | 15.76 |
| 6,545.00 | 47.85 | 270.02 | 6,453.87 | -439.65 | -318.98 | 353.23 | 12.05 |
| 6,593.00 | 52.38 | 270.53 | 6,484.64 | -439.47 | -355.80 | 389.92 | 9.47 |
| 6,640.00 | 55.01 | 271.02 | 6,512.46 | -438.95 | -393.67 | 427.62 | 5.66 |
| 6,688.00 | 58.05 | 270.59 | 6,538.93 | -438.39 | -433.70 | 467.48 | 6.38 |
| 6,735.00 | 61.34 | 269.85 | 6,562.65 | -438.24 | -474.27 | 507.91 | 7.13 |
| 6,783.00 | 65.36 | 268.59 | 6,584.17 | -438.83 | -517.16 | 550.71 | 8.70 |
| 6,830.00 | 71.00 | 268.12 | 6,601.64 | -440.09 | -560.76 | 594.26 | 12.04 |
| 6,878.00 | 75.93 | 267.95 | 6,615.29 | -441.67 | -606.73 | 640.21 | 10.28 |
| 6,925.00 | 79.31 | 268.03 | 6,625.37 | -443.28 | -652.60 | 686.07 | 7.19 |
| 6,961.00 | 81.24 | 268.48 | 6,631.45 | -444.36 | -688.07 | 721.50 | 5.50 |
| 7,006.00 | 83.46 | 270.21 | 6,637.44 | -444.86 | -732.66 | 765.99 | 6.23 |
| 7" Casing @ 7006' MD, 6637.44' TVD | | | | | | | |
| 7,047.00 | 85.49 | 271.77 | 6,641.39 | -444.16 | -773.46 | 806.61 | 6.23 |
| 7,142.00 | 88.83 | 271.08 | 6,646.09 | -441.80 | -868.30 | 900.95 | 3.59 |
| 7,237.00 | 90.59 | 271.44 | 6,646.57 | -439.71 | -963.27 | 995.45 | 1.89 |
| 7,332.00 | 91.33 | 271.48 | 6,644.98 | -437.29 | -1,058.23 | 1,089.90 | 0.78 |
| 7,427.00 | 90.89 | 272.22 | 6,643.14 | -434.22 | -1,153.16 | 1,184.28 | 0.91 |
| 7,521.00 | 88.67 | 273.16 | 6,643.50 | -429.81 | -1,247.05 | 1,277.52 | 2.56 |
| 7,616.00 | 88.95 | 272.93 | 6,645.47 | -424.77 | -1,341.89 | 1,371.65 | 0.38 |
| 7,711.00 | 88.46 | 272.74 | 6,647.62 | -420.07 | -1,436.75 | 1,465.83 | 0.55 |
| 7,806.00 | 88.80 | 272.13 | 6,649.89 | -416.04 | -1,531.64 | 1,560.08 | 0.73 |
| 7,901.00 | 87.26 | 271.73 | 6,653.16 | -412.84 | -1,626.53 | 1,654.41 | 1.67 |
| 7,996.00 | 86.67 | 271.92 | 6,658.19 | -409.82 | -1,721.34 | 1,748.68 | 0.65 |
| 8,091.00 | 87.96 | 270.44 | 6,662.64 | -407.86 | -1,816.22 | 1,843.09 | 2.07 |
| 8,185.00 | 89.63 | 269.72 | 6,664.62 | -407.73 | -1,910.19 | 1,936.75 | 1.93 |
| 8,280.00 | 90.37 | 271.12 | 6,664.62 | -407.04 | -2,005.19 | 2,031.38 | 1.67 |
| 8,375.00 | 89.54 | 269.47 | 6,664.69 | -406.55 | -2,100.18 | 2,126.03 | 1.94 |
| 8,470.00 | 89.66 | 269.66 | 6,665.35 | -407.27 | -2,195.17 | 2,220.78 | 0.24 |
| 8,564.00 | 89.07 | 268.57 | 6,666.40 | -408.72 | -2,289.16 | 2,314.57 | 1.32 |
| 8,659.00 | 88.74 | 266.99 | 6,668.21 | -412.40 | -2,384.06 | 2,409.47 | 1.70 |

Design Report for Wells Ranch AA26-63HN - Final Surveys

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) |
|---|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|
| 8,754.00 | 90.74 | 268.31 | 6,668.64 | -416.29 | -2,478.98 | 2,504.39 | 2.52 |
| 8,849.00 | 92.13 | 268.36 | 6,666.26 | -419.05 | -2,573.90 | 2,599.23 | 1.46 |
| 8,944.00 | 91.29 | 268.06 | 6,663.43 | -422.02 | -2,668.81 | 2,694.07 | 0.94 |
| 9,039.00 | 90.77 | 268.44 | 6,661.72 | -424.92 | -2,763.75 | 2,788.94 | 0.68 |
| 9,134.00 | 90.59 | 270.61 | 6,660.59 | -425.71 | -2,858.74 | 2,883.68 | 2.29 |
| 9,229.00 | 89.51 | 270.68 | 6,660.51 | -424.64 | -2,953.73 | 2,978.28 | 1.14 |
| 9,324.00 | 87.25 | 271.19 | 6,663.20 | -423.09 | -3,048.67 | 3,072.79 | 2.44 |
| 9,419.00 | 87.07 | 269.37 | 6,667.90 | -422.63 | -3,143.55 | 3,167.33 | 1.92 |
| 9,513.00 | 90.34 | 269.81 | 6,670.03 | -423.30 | -3,237.51 | 3,261.04 | 3.51 |
| 9,609.00 | 86.52 | 269.37 | 6,672.66 | -423.98 | -3,333.46 | 3,356.73 | 4.01 |
| 9,704.00 | 87.44 | 269.81 | 6,677.66 | -424.66 | -3,428.32 | 3,451.34 | 1.07 |
| 9,798.00 | 87.94 | 270.56 | 6,681.45 | -424.36 | -3,522.24 | 3,544.94 | 0.96 |
| 9,893.00 | 87.75 | 270.59 | 6,685.02 | -423.41 | -3,617.17 | 3,639.48 | 0.20 |
| 9,988.00 | 88.64 | 269.88 | 6,688.01 | -423.02 | -3,712.12 | 3,734.09 | 1.20 |
| 10,083.00 | 89.72 | 270.43 | 6,689.37 | -422.76 | -3,807.11 | 3,828.76 | 1.28 |
| 10,177.00 | 87.93 | 269.85 | 6,691.30 | -422.53 | -3,901.09 | 3,922.41 | 2.00 |
| 10,272.00 | 89.04 | 269.66 | 6,693.81 | -422.94 | -3,996.05 | 4,017.10 | 1.19 |
| 10,367.00 | 90.09 | 269.34 | 6,694.53 | -423.77 | -4,091.04 | 4,111.85 | 1.16 |
| 10,462.00 | 90.09 | 271.36 | 6,694.39 | -423.18 | -4,186.03 | 4,206.49 | 2.13 |
| 10,557.00 | 87.50 | 271.08 | 6,696.38 | -421.16 | -4,280.98 | 4,300.97 | 2.74 |
| 10,652.00 | 89.85 | 271.31 | 6,698.58 | -419.18 | -4,375.93 | 4,395.46 | 2.49 |
| 10,747.00 | 90.00 | 269.81 | 6,698.70 | -418.25 | -4,470.92 | 4,490.07 | 1.59 |
| 10,841.00 | 89.01 | 269.33 | 6,699.52 | -418.96 | -4,564.92 | 4,583.81 | 1.17 |
| 10,936.00 | 88.37 | 269.19 | 6,701.69 | -420.19 | -4,659.88 | 4,678.57 | 0.69 |
| 11,032.00 | 89.54 | 269.89 | 6,703.44 | -420.96 | -4,755.86 | 4,774.30 | 1.42 |
| 11,126.00 | 87.90 | 268.68 | 6,705.54 | -422.13 | -4,849.83 | 4,868.06 | 2.17 |
| 11,221.00 | 87.84 | 267.68 | 6,709.07 | -425.14 | -4,944.71 | 4,962.88 | 1.05 |
| 11,316.00 | 90.80 | 267.89 | 6,710.20 | -428.81 | -5,039.62 | 5,057.78 | 3.12 |
| 11,411.00 | 90.99 | 269.86 | 6,708.71 | -430.68 | -5,134.59 | 5,152.59 | 2.08 |
| 11,509.00 | 90.68 | 270.47 | 6,707.28 | -430.40 | -5,232.58 | 5,250.24 | 0.70 |
| Final MWD Survey @ 11509.00ft | | | | | | | |
| 11,570.00 | 90.68 | 270.47 | 6,706.56 | -429.90 | -5,293.57 | 5,311.00 | 0.00 |
| Straight Line Proj @ 11570' MD, 6706.56' TVD | | | | | | | |

Design Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
|-----------------------|-----------------------|-------------------|--------------|--|
| | | +N/-S (usft) | +E/-W (usft) | |
| 930.00 | 929.97 | 6.53 | 0.63 | Tie-On to Surface Gyros @ 930.00ft |
| 1,011.00 | 1,010.96 | 6.95 | 0.42 | First MWD Survey @ 1011.00ft |
| 11,509.00 | 6,707.28 | -430.40 | -5,232.58 | Final MWD Survey @ 11509.00ft |
| 11,570.00 | 6,706.56 | -429.90 | -5,293.57 | Straight Line Proj @ 11570' MD, 6706.56' TVD |

Vertical Section Information

| Angle Type | Target | Azimuth (°) | Origin Type | Origin | | Start TVD (usft) |
|------------|------------------------------------|-------------|-------------|--------------|--------------|------------------|
| | | | | +N/-S (usft) | +E/-W (usft) | |
| Target | Wells Ranch AA26-63HN (PA_RA0) BHL | 265.40 | Slot | 0.00 | 0.00 | 0.00 |

Design Report for Wells Ranch AA26-63HN - Final Surveys

Survey tool program

| From (usft) | To (usft) | Survey/Plan | Survey Tool |
|----------------|--------------|--------------------------|----------------|
| 286.00 | 930.00 | Surface Gyros | Flexi-Shot |
| 1,011.00 | 6,961.00 | MWD Surveys - Vert/Build | MWD+IFR1+MS_WY |
| 7,047.00 | 11,509.00 | MWD Surveys - Lateral | MWD+IFR1+MS_WY |

Casing Details

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|-----------------------------|-----------------------------|------------------------------------|---------------------------|-------------------------|
| 7,006.00 | 6,637.44 | 7" Casing @ 7006' MD, 6637.44' TVD | 7 | 8-3/4 |

Wellbore Targets

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|--|---------------------|--------------------|---------------|-----------------|-----------------|--------------------|-------------------|------------------|-------------------|
| Wells Ranch AA26-63H - actual wellpath hits target center - Point | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,410,461.24 | 3,307,747.42 | 40° 27' 17.460 N | 104° 23' 38.760 W |
| NW/SW (Wells Ranch AA26-63H) - actual wellpath misses target center by 149.37usft at 1.31usft MD (1.31 TVD, 0.00 N, 0.00 E) - Polygon | 0.00 | 0.00 | 1.00 | 149.36 | -1.86 | 1,410,610.60 | 3,307,745.56 | 40° 27' 18.936 N | 104° 23' 38.760 W |
| Point 1 | | | | 1.00 | -1,896.14 | -5,431.73 | 1,408,714.53 | 3,302,314.03 | |
| Point 2 | | | | 1.00 | -1,863.48 | -135.41 | 1,408,747.19 | 3,307,610.16 | |
| Point 3 | | | | 1.00 | 3,451.71 | -182.19 | 1,414,062.18 | 3,307,563.38 | |
| Point 4 | | | | 1.00 | 3,415.48 | -5,471.76 | 1,414,025.95 | 3,302,274.00 | |
| NW/SW (Wells Ranch AA26-63H) - actual wellpath misses target center by 149.37usft at 1.31usft MD (1.31 TVD, 0.00 N, 0.00 E) - Polygon | 0.00 | 0.00 | 1.00 | 149.36 | -1.86 | 1,410,610.60 | 3,307,745.56 | 40° 27' 18.936 N | 104° 23' 38.760 W |
| Point 1 | | | | 1.00 | -1,403.48 | 324.59 | 1,409,207.17 | 3,308,070.14 | |
| Point 2 | | | | 1.00 | -1,337.18 | 4,678.23 | 1,409,273.47 | 3,312,423.62 | |
| Point 3 | | | | 1.00 | 3,047.32 | 4,649.94 | 1,413,657.81 | 3,312,395.33 | |
| Point 4 | | | | 1.00 | 2,990.21 | 277.81 | 1,413,600.70 | 3,308,023.36 | |
| NW/SW (Wells Ranch AA26-63H) - actual wellpath misses target center by 149.37usft at 1.31usft MD (1.31 TVD, 0.00 N, 0.00 E) - Polygon | 0.00 | 0.00 | 1.00 | 149.36 | -1.86 | 1,410,610.60 | 3,307,745.56 | 40° 27' 18.936 N | 104° 23' 38.760 W |
| Point 1 | | | | 1.00 | -1,863.48 | -135.41 | 1,408,747.19 | 3,307,610.16 | |
| Point 2 | | | | 1.00 | -1,797.18 | 5,138.23 | 1,408,813.48 | 3,312,883.60 | |
| Point 3 | | | | 1.00 | 3,507.32 | 5,109.94 | 1,414,117.79 | 3,312,855.31 | |
| Point 4 | | | | 1.00 | 3,451.71 | -182.19 | 1,414,062.18 | 3,307,563.38 | |
| NW/SW (Wells Ranch AA26-63H) - actual wellpath misses target center by 149.37usft at 1.31usft MD (1.31 TVD, 0.00 N, 0.00 E) - Polygon | 0.00 | 0.00 | 1.00 | 149.36 | -1.86 | 1,410,610.60 | 3,307,745.56 | 40° 27' 18.936 N | 104° 23' 38.760 W |
| Point 1 | | | | 1.00 | -1,436.14 | -4,971.73 | 1,409,174.51 | 3,302,774.01 | |
| Point 2 | | | | 1.00 | -1,403.48 | -595.41 | 1,409,207.17 | 3,307,150.17 | |
| Point 3 | | | | 1.00 | 2,990.21 | -642.19 | 1,413,600.70 | 3,307,103.40 | |
| Point 4 | | | | 1.00 | 2,958.48 | -5,008.01 | 1,413,568.97 | 3,302,737.74 | |
| Wells Ranch AA26-63H - actual wellpath misses target center by 19.70usft at 7010.64usft MD (6637.96 TVD, -444.84 N, -737.27 E) - Point | 0.00 | 0.00 | 6,644.62 | -426.32 | -736.31 | 1,410,034.94 | 3,307,011.14 | 40° 27' 13.338 N | 104° 23' 48.353 W |
| Wells Ranch AA26-63H - actual wellpath misses target center by 19.84usft at 11570.00usft MD (6706.56 TVD, -429.90 N, -5293.57 E) - Point | 0.00 | 0.00 | 6,687.08 | -426.15 | -5,293.91 | 1,410,035.10 | 3,302,453.70 | 40° 27' 13.896 N | 104° 24' 47.304 W |

Design Report for Wells Ranch AA26-63HN - Final Surveys

Directional Difficulty Index

| | | | |
|------------------------------------|----------------|-------------------------------|-------------------------------------|
| Average Dogleg over Survey: | 1.87 °/100usft | Maximum Dogleg over Survey: | 15.76 °/100usft at 6,498.00 usft |
| Net Tortosity applicable to Plans: | 0.88 °/100usft | Directional Difficulty Index: | 6.324 |

Audit Info

**North Reference Sheet for Sec. 25-T6N-R63W - NW/SW (Wells Ranch AA26 PAD) -
Wells Ranch AA26-63HN**

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to RKB 24 ft. @ 4816.00usft (H&P 322). Northing and Easting are relative to Wells Ranch AA26-63HN - Slot A5

Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is 105° 30' 0.000 W°, Longitude Origin: 0° 0' 0.000 E°, Latitude Origin: 40° 47' 0.000 N°

False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99996317

Grid Coordinates of Well: 1,410,461.24 usft N, 3,307,747.42 usft E

Geographical Coordinates of Well: 40° 27' 17.46" N, 104° 23' 38.76" W

Grid Convergence at Surface is: 0.71°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,570.00usft

the Bottom Hole Displacement is 5,311.00usft in the Direction of 265.36° (Grid).

Magnetic Convergence at surface is: -7.68° (22 September 2013, , BGGM2013)

