

Whiting Oil and Gas Corporation

Weld County, CO
Sec. 26-T10N-R58W
Razor #26K-3507A

Plan C

Design: Actual Field Surveys

Sperry Drilling Services Standard Report

17 June, 2014

Well Coordinates: 1,541,929.46 N, 3,461,058.64 E (40° 48' 32.73" N, 103° 50' 03.86" W)
Ground Level: 4,737.50 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

Centered on Well Razor #26K-3507A

KB 22 ft @ 4759.50usft (Frontier 26)

N

True

API - US Survey Feet - Custom

HALLIBURTON

Design Report for Razor #26K-3507A - Actual Field 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 |
| 170.00 | 0.42 | 42.10 | 170.00 | 0.46 | 0.42 | -0.44 | 0.25 |
| 261.00 | 0.36 | 77.95 | 261.00 | 0.77 | 0.92 | -0.73 | 0.27 |
| 352.00 | 1.46 | 114.29 | 351.98 | 0.35 | 2.26 | -0.26 | 1.31 |
| 444.00 | 1.91 | 134.07 | 443.94 | -1.20 | 4.43 | 1.38 | 0.79 |
| 535.00 | 3.22 | 173.17 | 534.86 | -4.79 | 5.82 | 5.03 | 2.32 |
| 626.00 | 5.27 | 180.39 | 625.60 | -11.51 | 6.10 | 11.75 | 2.32 |
| 718.00 | 5.86 | 181.66 | 717.17 | -20.43 | 5.93 | 20.66 | 0.66 |
| 809.00 | 5.39 | 175.61 | 807.73 | -29.33 | 6.12 | 29.56 | 0.83 |
| 900.00 | 4.71 | 163.09 | 898.38 | -37.17 | 7.54 | 37.45 | 1.42 |
| 992.00 | 4.22 | 142.77 | 990.11 | -43.48 | 10.68 | 43.89 | 1.79 |
| 1,084.00 | 3.81 | 144.71 | 1,081.88 | -48.67 | 14.50 | 49.23 | 0.47 |
| 1,175.00 | 4.27 | 157.78 | 1,172.66 | -54.27 | 17.53 | 54.96 | 1.13 |
| 1,267.00 | 3.55 | 181.20 | 1,264.45 | -60.29 | 18.76 | 61.02 | 1.89 |
| 1,358.00 | 2.39 | 181.19 | 1,355.32 | -65.00 | 18.66 | 65.73 | 1.27 |
| 1,450.00 | 2.16 | 185.71 | 1,447.25 | -68.65 | 18.45 | 69.36 | 0.32 |
| 1,531.00 | 1.89 | 189.08 | 1,528.20 | -71.48 | 18.09 | 72.18 | 0.36 |
| 1,637.00 | 2.18 | 195.22 | 1,634.13 | -75.16 | 17.28 | 75.81 | 0.34 |
| 1,728.00 | 5.02 | 164.83 | 1,724.95 | -80.67 | 17.87 | 81.35 | 3.66 |
| 1,820.00 | 4.83 | 170.40 | 1,816.61 | -88.37 | 19.57 | 89.11 | 0.56 |
| 1,911.00 | 4.92 | 165.35 | 1,907.28 | -95.93 | 21.20 | 96.73 | 0.48 |
| 2,003.00 | 5.08 | 164.39 | 1,998.93 | -103.67 | 23.29 | 104.55 | 0.20 |
| 2,094.00 | 5.21 | 164.22 | 2,089.57 | -111.52 | 25.50 | 112.49 | 0.14 |
| 2,186.00 | 3.43 | 164.63 | 2,181.30 | -118.20 | 27.36 | 119.24 | 1.94 |
| 2,276.00 | 2.98 | 153.49 | 2,271.16 | -122.89 | 29.12 | 124.00 | 0.85 |
| 2,368.00 | 3.06 | 152.40 | 2,363.04 | -127.20 | 31.33 | 128.40 | 0.11 |
| 2,460.00 | 2.57 | 155.33 | 2,454.92 | -131.25 | 33.33 | 132.53 | 0.55 |
| 2,551.00 | 4.18 | 155.92 | 2,545.76 | -136.14 | 35.53 | 137.50 | 1.77 |
| 2,643.00 | 3.90 | 146.92 | 2,637.54 | -141.82 | 38.61 | 143.31 | 0.75 |
| 2,734.00 | 5.33 | 157.98 | 2,728.24 | -148.33 | 41.88 | 149.95 | 1.84 |
| 2,826.00 | 3.99 | 185.73 | 2,819.94 | -155.48 | 43.16 | 157.14 | 2.81 |
| 2,917.00 | 3.98 | 185.68 | 2,910.72 | -161.77 | 42.53 | 163.41 | 0.01 |
| 3,009.00 | 4.77 | 162.65 | 3,002.46 | -168.60 | 43.36 | 170.26 | 2.08 |
| 3,100.00 | 4.04 | 154.67 | 3,093.19 | -175.11 | 45.86 | 176.87 | 1.05 |
| 3,191.00 | 4.92 | 154.47 | 3,183.92 | -181.53 | 48.91 | 183.41 | 0.97 |
| 3,283.00 | 4.89 | 183.83 | 3,275.59 | -189.00 | 50.35 | 190.94 | 2.70 |
| 3,374.00 | 4.81 | 182.64 | 3,366.27 | -196.68 | 49.92 | 198.59 | 0.14 |
| 3,466.00 | 4.75 | 180.58 | 3,457.95 | -204.34 | 49.70 | 206.24 | 0.20 |
| 3,558.00 | 4.29 | 178.66 | 3,549.66 | -211.59 | 49.74 | 213.49 | 0.53 |
| 3,649.00 | 3.38 | 180.56 | 3,640.46 | -217.68 | 49.79 | 219.57 | 1.01 |
| 3,741.00 | 2.84 | 174.48 | 3,732.32 | -222.66 | 49.99 | 224.55 | 0.69 |
| 3,833.00 | 2.15 | 173.83 | 3,824.23 | -226.64 | 50.39 | 228.55 | 0.75 |
| 3,924.00 | 5.14 | 155.17 | 3,915.04 | -232.04 | 52.29 | 234.02 | 3.49 |
| 4,016.00 | 4.84 | 152.59 | 4,006.69 | -239.23 | 55.81 | 241.35 | 0.41 |
| 4,108.00 | 4.81 | 151.70 | 4,098.37 | -246.07 | 59.42 | 248.34 | 0.09 |
| 4,200.00 | 4.29 | 149.48 | 4,190.08 | -252.43 | 63.00 | 254.84 | 0.60 |
| 4,291.00 | 3.49 | 148.49 | 4,280.87 | -257.72 | 66.17 | 260.26 | 0.88 |
| 4,382.00 | 3.42 | 153.82 | 4,371.70 | -262.52 | 68.82 | 265.16 | 0.36 |
| 4,473.00 | 2.95 | 160.72 | 4,462.56 | -267.17 | 70.79 | 269.89 | 0.67 |
| 4,565.00 | 2.83 | 161.66 | 4,554.44 | -271.56 | 72.28 | 274.34 | 0.14 |

Design Report for Razor #26K-3507A - Actual Field Surveys

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|
| 4,656.00 | 2.26 | 154.55 | 4,645.35 | -275.31 | 73.76 | 278.15 | 0.71 |
| 4,751.00 | 3.89 | 151.57 | 4,740.21 | -279.83 | 76.10 | 282.77 | 1.72 |
| 4,846.00 | 3.25 | 142.56 | 4,835.03 | -284.81 | 79.27 | 287.87 | 0.89 |
| 4,942.00 | 3.90 | 148.71 | 4,930.84 | -289.76 | 82.62 | 292.95 | 0.79 |
| 5,005.00 | 3.92 | 144.79 | 4,993.70 | -293.35 | 84.98 | 296.64 | 0.43 |
| 5,037.00 | 6.58 | 154.22 | 5,025.56 | -295.89 | 86.41 | 299.24 | 8.71 |
| 5,068.00 | 11.00 | 153.47 | 5,056.19 | -300.14 | 88.50 | 303.57 | 14.26 |
| 5,100.00 | 15.58 | 155.88 | 5,087.32 | -306.80 | 91.62 | 310.36 | 14.41 |
| 5,132.00 | 19.29 | 162.71 | 5,117.85 | -315.77 | 94.95 | 319.46 | 13.22 |
| 5,163.00 | 19.51 | 174.22 | 5,147.10 | -325.81 | 96.99 | 329.58 | 12.33 |
| 5,195.00 | 21.38 | 172.43 | 5,177.08 | -336.91 | 98.30 | 340.72 | 6.16 |
| 5,227.00 | 24.19 | 171.55 | 5,206.58 | -349.18 | 100.03 | 353.06 | 8.85 |
| 5,258.00 | 27.26 | 170.94 | 5,234.51 | -362.48 | 102.09 | 366.43 | 9.94 |
| 5,290.00 | 27.97 | 168.26 | 5,262.86 | -377.06 | 104.77 | 381.11 | 4.47 |
| 5,322.00 | 29.43 | 166.87 | 5,290.93 | -392.07 | 108.08 | 396.24 | 5.02 |
| 5,353.00 | 33.99 | 165.87 | 5,317.30 | -407.90 | 111.93 | 412.21 | 14.81 |
| 5,385.00 | 38.36 | 165.64 | 5,343.12 | -426.20 | 116.58 | 430.70 | 13.66 |
| 5,417.00 | 42.72 | 169.47 | 5,367.44 | -446.50 | 121.02 | 451.17 | 15.68 |
| 5,448.00 | 46.67 | 172.24 | 5,389.47 | -468.02 | 124.47 | 472.81 | 14.21 |
| 5,480.00 | 48.98 | 170.25 | 5,410.96 | -491.46 | 128.09 | 496.38 | 8.56 |
| 5,512.00 | 51.59 | 168.60 | 5,431.40 | -515.65 | 132.61 | 520.74 | 9.07 |
| 5,543.00 | 54.56 | 168.63 | 5,450.03 | -539.94 | 137.50 | 545.21 | 9.58 |
| 5,575.00 | 57.53 | 167.75 | 5,467.90 | -565.92 | 142.94 | 571.39 | 9.56 |
| 5,607.00 | 59.47 | 166.81 | 5,484.62 | -592.53 | 148.95 | 598.24 | 6.56 |
| 5,638.00 | 61.24 | 166.02 | 5,499.95 | -618.72 | 155.28 | 624.66 | 6.12 |
| 5,670.00 | 64.36 | 166.22 | 5,514.57 | -646.35 | 162.10 | 652.55 | 9.77 |
| 5,702.00 | 67.40 | 165.64 | 5,527.65 | -674.67 | 169.20 | 681.15 | 9.64 |
| 5,733.00 | 69.62 | 163.71 | 5,539.01 | -702.49 | 176.83 | 709.26 | 9.21 |
| 5,765.00 | 72.25 | 162.17 | 5,549.46 | -731.40 | 185.70 | 738.51 | 9.39 |
| 5,796.00 | 74.75 | 162.16 | 5,558.26 | -759.69 | 194.81 | 767.16 | 8.06 |
| 5,828.00 | 76.94 | 162.95 | 5,566.09 | -789.29 | 204.11 | 797.12 | 7.25 |
| 5,860.00 | 79.12 | 162.18 | 5,572.72 | -819.15 | 213.49 | 827.35 | 7.21 |
| 5,891.00 | 81.59 | 162.56 | 5,577.92 | -848.28 | 222.74 | 856.84 | 8.06 |
| 5,923.00 | 83.76 | 164.04 | 5,582.00 | -878.67 | 231.86 | 887.59 | 8.19 |
| 5,955.00 | 84.79 | 164.32 | 5,585.19 | -909.31 | 240.54 | 918.56 | 3.33 |
| 5,986.00 | 86.66 | 165.15 | 5,587.50 | -939.13 | 248.68 | 948.70 | 6.60 |
| 5,992.00 | 87.26 | 164.43 | 5,587.82 | -944.91 | 250.25 | 954.54 | 15.61 |
| 6,107.00 | 90.28 | 164.33 | 5,590.29 | -1,055.63 | 281.21 | 1,066.45 | 2.63 |
| 6,202.00 | 90.03 | 166.28 | 5,590.03 | -1,147.51 | 305.30 | 1,159.26 | 2.07 |
| 6,297.00 | 89.69 | 168.64 | 5,590.26 | -1,240.24 | 325.93 | 1,252.77 | 2.51 |
| 6,392.00 | 89.08 | 171.55 | 5,591.28 | -1,333.81 | 342.27 | 1,346.94 | 3.13 |
| 6,487.00 | 87.51 | 173.46 | 5,594.11 | -1,427.95 | 354.65 | 1,441.51 | 2.60 |
| 6,582.00 | 89.14 | 174.60 | 5,596.89 | -1,522.39 | 364.53 | 1,536.28 | 2.09 |
| 6,676.00 | 90.31 | 177.42 | 5,597.34 | -1,616.15 | 371.07 | 1,630.23 | 3.25 |
| 6,771.00 | 89.88 | 180.37 | 5,597.18 | -1,711.12 | 372.90 | 1,725.20 | 3.14 |
| 6,866.00 | 88.92 | 184.58 | 5,598.17 | -1,806.00 | 368.80 | 1,819.83 | 4.55 |
| 6,961.00 | 90.03 | 184.61 | 5,599.05 | -1,900.69 | 361.19 | 1,914.12 | 1.17 |
| 7,056.00 | 89.35 | 185.99 | 5,599.56 | -1,995.28 | 352.41 | 2,008.26 | 1.62 |
| 7,151.00 | 89.45 | 185.78 | 5,600.55 | -2,089.77 | 342.67 | 2,102.26 | 0.24 |
| 7,245.00 | 90.43 | 186.44 | 5,600.65 | -2,183.24 | 332.67 | 2,195.23 | 1.26 |

Design Report for Razor #26K-3507A - Actual Field Surveys

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|
| 7,340.00 | 89.26 | 184.45 | 5,600.91 | -2,277.80 | 323.65 | 2,289.33 | 2.43 |
| 7,435.00 | 89.54 | 184.74 | 5,601.90 | -2,372.49 | 316.04 | 2,383.62 | 0.42 |
| 7,530.00 | 89.88 | 184.47 | 5,602.39 | -2,467.18 | 308.42 | 2,477.91 | 0.46 |
| 7,625.00 | 89.45 | 181.04 | 5,602.94 | -2,562.06 | 303.85 | 2,572.51 | 3.64 |
| 7,716.00 | 89.54 | 180.74 | 5,603.74 | -2,653.04 | 302.44 | 2,663.36 | 0.34 |
| 7,808.00 | 90.33 | 180.84 | 5,603.85 | -2,745.03 | 301.17 | 2,755.22 | 0.87 |
| 7,899.00 | 90.68 | 180.60 | 5,603.05 | -2,836.02 | 300.03 | 2,846.08 | 0.47 |
| 7,990.00 | 90.83 | 180.34 | 5,601.85 | -2,927.01 | 299.28 | 2,936.96 | 0.33 |
| 8,081.00 | 90.19 | 178.32 | 5,601.04 | -3,018.00 | 300.34 | 3,027.91 | 2.33 |
| 8,172.00 | 89.61 | 177.07 | 5,601.19 | -3,108.92 | 304.00 | 3,118.91 | 1.51 |
| 8,264.00 | 90.41 | 180.37 | 5,601.18 | -3,200.89 | 306.06 | 3,210.87 | 3.69 |
| 8,355.00 | 90.83 | 179.57 | 5,600.19 | -3,291.88 | 306.11 | 3,301.79 | 0.99 |
| 8,447.00 | 90.56 | 177.45 | 5,599.08 | -3,383.84 | 308.50 | 3,393.77 | 2.32 |
| 8,538.00 | 89.42 | 179.41 | 5,599.09 | -3,474.80 | 310.99 | 3,484.75 | 2.49 |
| 8,630.00 | 89.60 | 178.90 | 5,599.88 | -3,566.78 | 312.35 | 3,576.71 | 0.59 |
| 8,722.00 | 89.30 | 180.02 | 5,600.76 | -3,658.77 | 313.22 | 3,668.66 | 1.26 |
| 8,813.00 | 89.23 | 179.86 | 5,601.93 | -3,749.76 | 313.31 | 3,759.58 | 0.19 |
| 8,905.00 | 89.94 | 181.24 | 5,602.60 | -3,841.76 | 312.43 | 3,851.45 | 1.69 |
| 8,996.00 | 89.44 | 180.33 | 5,603.09 | -3,932.74 | 311.18 | 3,942.31 | 1.14 |
| 9,087.00 | 87.94 | 180.73 | 5,605.17 | -4,023.71 | 310.34 | 4,033.16 | 1.71 |
| 9,179.00 | 87.87 | 180.55 | 5,608.53 | -4,115.65 | 309.31 | 4,124.97 | 0.21 |
| 9,270.00 | 86.85 | 179.39 | 5,612.73 | -4,206.55 | 309.36 | 4,215.80 | 1.70 |
| 9,331.00 | 87.91 | 179.87 | 5,615.51 | -4,267.48 | 309.75 | 4,276.69 | 1.91 |
| 9,392.00 | 89.97 | 180.60 | 5,616.64 | -4,328.47 | 309.50 | 4,337.62 | 3.58 |
| 9,453.00 | 89.78 | 181.78 | 5,616.78 | -4,389.45 | 308.24 | 4,398.50 | 1.96 |
| 9,514.00 | 91.14 | 182.09 | 5,616.29 | -4,450.41 | 306.18 | 4,459.32 | 2.29 |
| 9,545.00 | 91.55 | 182.41 | 5,615.56 | -4,481.38 | 304.96 | 4,490.21 | 1.68 |
| 9,636.00 | 91.33 | 181.95 | 5,613.27 | -4,572.29 | 301.50 | 4,580.89 | 0.56 |
| 9,727.00 | 91.45 | 182.14 | 5,611.06 | -4,663.20 | 298.25 | 4,671.59 | 0.25 |
| 9,818.00 | 91.32 | 180.99 | 5,608.86 | -4,754.14 | 295.77 | 4,762.34 | 1.27 |
| 9,909.00 | 89.41 | 179.73 | 5,608.28 | -4,845.13 | 295.20 | 4,853.23 | 2.51 |
| 10,001.00 | 90.13 | 180.12 | 5,608.65 | -4,937.13 | 295.32 | 4,945.15 | 0.89 |
| 10,093.00 | 89.38 | 181.26 | 5,609.05 | -5,029.12 | 294.21 | 5,037.02 | 1.48 |
| 10,184.00 | 89.75 | 181.19 | 5,609.74 | -5,120.09 | 292.26 | 5,127.83 | 0.41 |
| 10,275.00 | 89.88 | 180.63 | 5,610.03 | -5,211.08 | 290.82 | 5,218.68 | 0.63 |
| 10,367.00 | 87.41 | 179.80 | 5,612.21 | -5,303.05 | 290.47 | 5,310.55 | 2.83 |
| 10,459.00 | 87.16 | 179.17 | 5,616.56 | -5,394.94 | 291.30 | 5,402.40 | 0.74 |
| 10,550.00 | 88.09 | 176.97 | 5,620.34 | -5,485.80 | 294.36 | 5,493.31 | 2.62 |
| 10,641.00 | 88.24 | 177.41 | 5,623.25 | -5,576.65 | 298.82 | 5,584.26 | 0.51 |
| 10,732.00 | 87.94 | 176.85 | 5,626.28 | -5,667.48 | 303.37 | 5,675.21 | 0.70 |
| 10,824.00 | 88.12 | 178.05 | 5,629.45 | -5,759.34 | 307.47 | 5,767.15 | 1.32 |
| 10,916.00 | 90.96 | 179.89 | 5,630.18 | -5,851.30 | 309.12 | 5,859.11 | 3.68 |
| 11,007.00 | 91.15 | 179.18 | 5,628.51 | -5,942.29 | 309.86 | 5,950.04 | 0.81 |
| 11,099.00 | 90.59 | 177.87 | 5,627.11 | -6,034.24 | 312.22 | 6,042.02 | 1.55 |
| 11,191.00 | 91.36 | 179.17 | 5,625.55 | -6,126.20 | 314.60 | 6,133.99 | 1.64 |
| 11,282.00 | 91.04 | 179.71 | 5,623.64 | -6,217.17 | 315.49 | 6,224.92 | 0.69 |
| 11,374.00 | 90.15 | 180.29 | 5,622.69 | -6,309.16 | 315.49 | 6,316.84 | 1.15 |
| 11,465.00 | 90.37 | 179.79 | 5,622.27 | -6,400.16 | 315.43 | 6,407.75 | 0.60 |
| 11,557.00 | 90.00 | 177.94 | 5,621.98 | -6,492.14 | 317.25 | 6,499.73 | 2.05 |
| 11,649.00 | 91.42 | 179.60 | 5,620.84 | -6,584.11 | 319.22 | 6,591.69 | 2.37 |
| 11,741.00 | 90.15 | 179.85 | 5,619.57 | -6,676.10 | 319.66 | 6,683.62 | 1.41 |

Design Report for Razor #26K-3507A - Actual Field Surveys

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|
| 11,832.00 | 90.37 | 182.51 | 5,619.16 | -6,767.07 | 317.79 | 6,774.43 | 2.93 |
| 11,924.00 | 90.40 | 186.07 | 5,618.54 | -6,858.79 | 310.91 | 6,865.79 | 3.87 |
| 12,015.00 | 90.13 | 189.99 | 5,618.12 | -6,948.88 | 298.20 | 6,955.27 | 4.32 |
| 12,073.00 | 90.13 | 189.99 | 5,617.99 | -7,006.00 | 288.14 | 7,011.92 | 0.00 |

Vertical Section Information

| Angle Type | Target | Azimuth (°) | Origin Type | Origin +N/-S (usft) | Origin +E/-W (usft) | Start TVD (usft) |
|------------|------------------------|-------------|-------------|---------------------|---------------------|------------------|
| Target | Razor 26K-3507A C0 BHL | 177.61 | Slot | 0.00 | 0.00 | 0.00 |

Survey tool program

| From (usft) | To (usft) | Survey/Plan | Survey Tool |
|-------------|-----------|---------------------------------------|-----------------|
| 170.00 | 1,531.00 | Surface_Sperry MWD Surveys | MWD+IFR1+MS+sag |
| 1,637.00 | 5,992.00 | Vertical and Build_Sperry MWD Surveys | MWD+IFR1+MS+sag |
| 5,992.00 | 12,015.00 | Lateral_Sperry MWD Surveys | MWD+IFR1+MS+sag |

Wellbore Targets

| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|--|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|
| Razor 26K-3507A B - hit/miss target - Shape | 0.00 | 0.00 | 5,580.00 | -7,177.40 | 300.00 | 1,534,758.93 | 3,461,493.40 | 40° 47' 21.811 N | 103° 49' 59.961 W |
| - actual wellpath misses target center by 175.96usft at 12073.00usft MD (5617.99 TVD, -7006.00 N, 288.14 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Razor 26K-3507A C - actual wellpath misses target center by 173.92usft at 12073.00usft MD (5617.99 TVD, -7006.00 N, 288.14 E) | 0.00 | 0.00 | 5,591.00 | -7,177.40 | 300.00 | 1,534,758.93 | 3,461,493.40 | 40° 47' 21.811 N | 103° 49' 59.961 W |
| - Point | | | | | | | | | |

Directional Difficulty Index

| | | | |
|------------------------------------|----------------|-------------------------------|----------------------------------|
| Average Dogleg over Survey: | 2.05 °/100usft | Maximum Dogleg over Survey: | 15.68 °/100usft at 5,417.00 usft |
| Net Tortosity applicable to Plans: | 1.18 °/100usft | Directional Difficulty Index: | 6.575 |

Audit Info

North Reference Sheet for Sec. 26-T10N-R58W - Razor #26K-3507A - Plan C

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

Vertical Depths are relative to KB 22 ft @ 4759.50usft (Frontier 26). Northing and Easting are relative to Razor #26K-3507A

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: 1.00000428

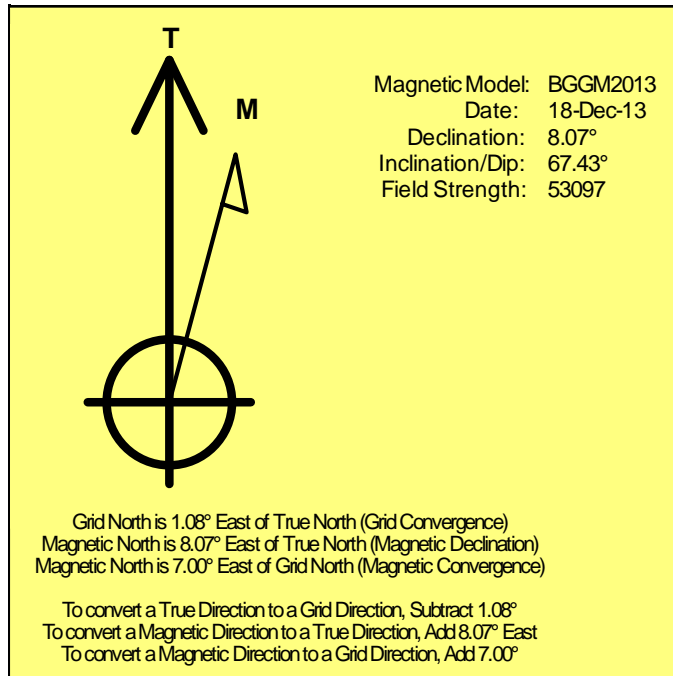
Grid Coordinates of Well: 1,541,929.46 usft N, 3,461,058.64 usft E

Geographical Coordinates of Well: 40° 48' 32.73" N, 103° 50' 03.86" W

Grid Convergence at Surface is: 1.08°

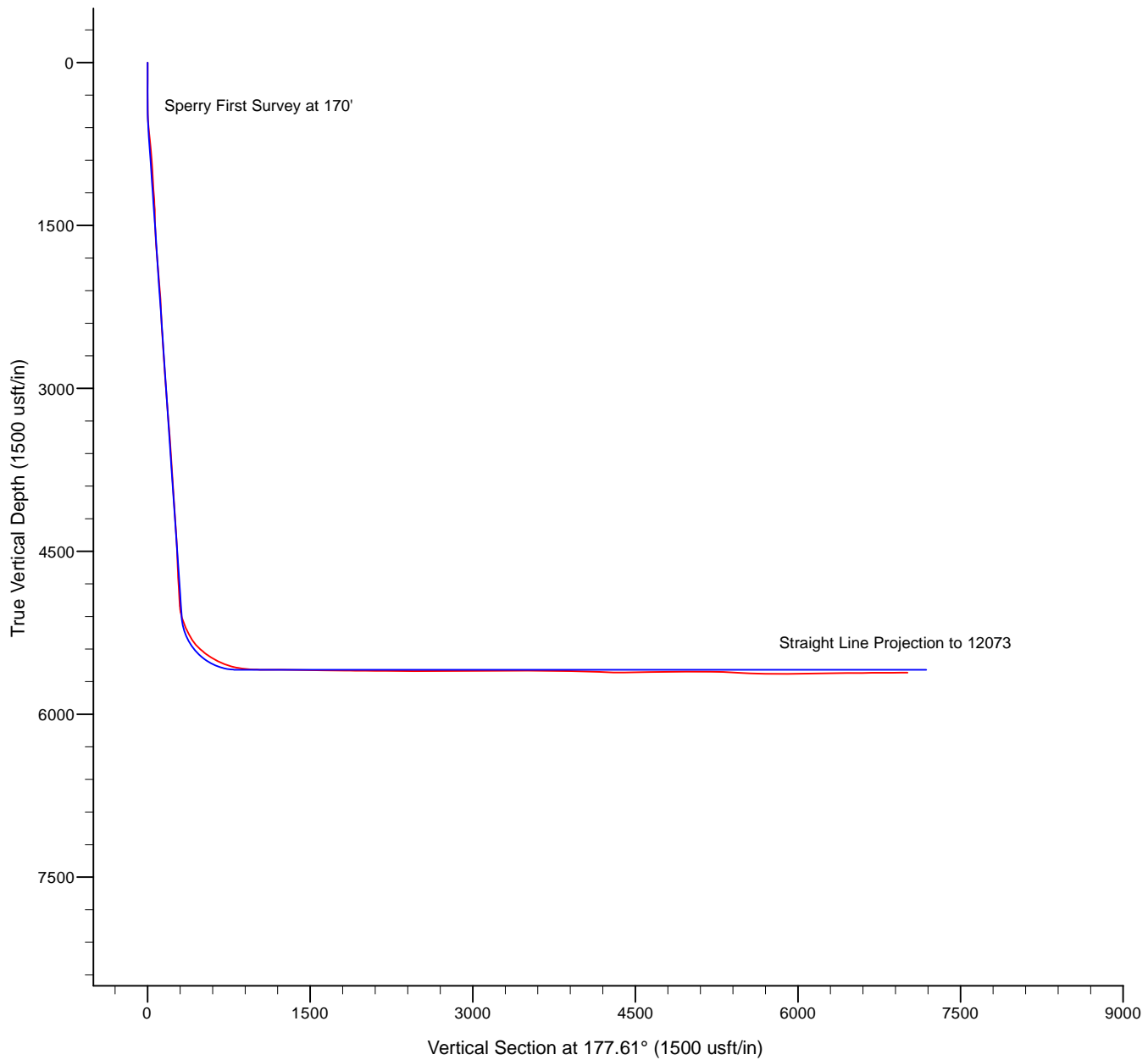
Based upon Minimum Curvature type calculations, at a Measured Depth of 12,073.00usft the Bottom Hole Displacement is 7,011.92usft in the Direction of 177.64° (True).

Magnetic Convergence at surface is: -7.00° (18 December 2013, , BGGM2013)



LEGEND

- Razor #26K-3507A, Plan C, Actual Field Surveys V0
- Rev C0



LEGEND

- - - Razor #26K-3507A, Plan C, Actual Field Surveys V0
- - - Rev C0

West(-)/East(+) (1200 usft/in)

