

Conoco Phillips Company

Arapahoe County, Colorado

Sec. 2-T5S-R65W

State Elbert-1H (Re-Stake)

Plan B

Design: Actual Field Surveys

Sperry Drilling Services

Standard Report

10 September, 2014

Well Coordinates: 1,662,492.76 N, 3,246,704.48 E (39° 38' 56.66" N, 104° 37' 25.91" W)

Ground Level: 5,854.00 usft

Local Coordinate Origin:

Centered on Well State Elbert-1H (Re-Stake)

Viewing Datum:

KB 24 ft @ 5878.00usft (H&P 280)

TVDs to System:

N

North Reference:

True

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

HALLIBURTON

Design Report for State Elbert-1H (Re-Stake) - Actual Field Surveys

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) |
|--------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|
| 2,215.00 | 0.23 | 197.37 | 2,214.96 | -9.12 | -6.09 | -7.27 | 0.04 |
| Tie-On to Gyro Surveys @ 2215.00 ft | | | | | | | |
| 2,305.00 | 0.31 | 195.94 | 2,304.96 | -9.52 | -6.21 | -7.45 | 0.09 |
| First Sperry MWD Survey @ 2305.00 ft | | | | | | | |
| 2,400.00 | 1.68 | 54.41 | 2,399.94 | -8.96 | -5.15 | -6.32 | 2.03 |
| 2,494.00 | 4.02 | 45.35 | 2,493.82 | -5.84 | -1.69 | -2.46 | 2.53 |
| 2,589.00 | 6.02 | 43.72 | 2,588.45 | 0.10 | 4.13 | 4.10 | 2.11 |
| 2,683.00 | 8.99 | 40.93 | 2,681.64 | 9.21 | 12.35 | 13.48 | 3.18 |
| 2,778.00 | 10.43 | 40.92 | 2,775.27 | 21.32 | 22.84 | 25.52 | 1.52 |
| 2,873.00 | 11.46 | 33.75 | 2,868.55 | 35.66 | 33.72 | 38.24 | 1.79 |
| 2,968.00 | 11.49 | 32.79 | 2,961.65 | 51.46 | 44.09 | 50.65 | 0.20 |
| 3,062.00 | 11.25 | 32.05 | 3,053.81 | 67.11 | 54.02 | 62.61 | 0.30 |
| 3,157.00 | 12.07 | 27.41 | 3,146.85 | 83.78 | 63.51 | 74.27 | 1.31 |
| 3,251.00 | 12.00 | 26.82 | 3,238.78 | 101.22 | 72.45 | 85.48 | 0.15 |
| 3,346.00 | 11.37 | 26.45 | 3,331.81 | 118.42 | 81.07 | 96.36 | 0.67 |
| 3,440.00 | 11.44 | 30.96 | 3,423.96 | 134.71 | 90.00 | 107.40 | 0.95 |
| 3,534.00 | 11.08 | 32.50 | 3,516.15 | 150.32 | 99.64 | 119.08 | 0.50 |
| 3,628.00 | 11.82 | 31.18 | 3,608.28 | 166.18 | 109.48 | 130.97 | 0.84 |
| 3,723.00 | 11.88 | 30.38 | 3,701.25 | 182.94 | 119.47 | 143.13 | 0.18 |
| 3,817.00 | 11.78 | 29.82 | 3,793.26 | 199.61 | 129.13 | 154.96 | 0.16 |
| 3,912.00 | 11.45 | 29.27 | 3,886.31 | 216.25 | 138.56 | 166.56 | 0.37 |
| 4,006.00 | 10.87 | 27.95 | 3,978.53 | 232.22 | 147.28 | 177.36 | 0.67 |
| 4,101.00 | 10.84 | 30.85 | 4,071.83 | 247.80 | 156.06 | 188.17 | 0.58 |
| 4,195.00 | 11.45 | 33.80 | 4,164.06 | 263.14 | 165.78 | 199.88 | 0.89 |
| 4,289.00 | 10.83 | 33.86 | 4,256.29 | 278.23 | 175.89 | 211.94 | 0.66 |
| 4,384.00 | 11.56 | 29.68 | 4,349.48 | 293.91 | 185.58 | 223.66 | 1.15 |
| 4,478.00 | 11.23 | 28.67 | 4,441.63 | 310.12 | 194.63 | 234.82 | 0.41 |
| 4,573.00 | 10.13 | 27.95 | 4,534.98 | 325.62 | 202.99 | 245.20 | 1.17 |
| 4,667.00 | 10.57 | 25.82 | 4,627.45 | 340.68 | 210.62 | 254.80 | 0.62 |
| 4,762.00 | 11.54 | 28.91 | 4,720.69 | 356.85 | 219.01 | 265.30 | 1.20 |
| 4,856.00 | 10.45 | 32.87 | 4,812.96 | 372.24 | 228.18 | 276.47 | 1.41 |
| 4,951.00 | 10.17 | 28.24 | 4,906.43 | 386.86 | 236.82 | 287.01 | 0.92 |
| 5,045.00 | 11.42 | 27.33 | 4,998.77 | 402.44 | 245.02 | 297.25 | 1.34 |
| 5,140.00 | 12.57 | 27.60 | 5,091.69 | 419.96 | 254.13 | 308.64 | 1.21 |
| 5,234.00 | 11.61 | 28.57 | 5,183.61 | 437.33 | 263.39 | 320.17 | 1.04 |
| 5,329.00 | 12.06 | 29.74 | 5,276.59 | 454.34 | 272.89 | 331.88 | 0.54 |
| 5,423.00 | 11.16 | 32.42 | 5,368.66 | 470.55 | 282.64 | 343.73 | 1.12 |
| 5,518.00 | 13.02 | 29.22 | 5,461.55 | 487.65 | 292.79 | 356.11 | 2.08 |
| 5,612.00 | 12.94 | 29.23 | 5,553.15 | 506.08 | 303.10 | 368.82 | 0.09 |
| 5,706.00 | 12.78 | 29.92 | 5,644.79 | 524.27 | 313.42 | 381.51 | 0.24 |
| 5,801.00 | 11.77 | 29.18 | 5,737.62 | 541.84 | 323.39 | 393.76 | 1.08 |
| 5,895.00 | 10.94 | 26.35 | 5,829.78 | 558.20 | 332.02 | 404.53 | 1.06 |
| 5,990.00 | 10.91 | 34.85 | 5,923.06 | 573.66 | 341.16 | 415.68 | 1.69 |
| 6,084.00 | 12.05 | 37.61 | 6,015.18 | 588.73 | 352.23 | 428.69 | 1.35 |
| 6,179.00 | 11.95 | 32.30 | 6,108.11 | 604.90 | 363.54 | 442.08 | 1.17 |
| 6,273.00 | 10.43 | 34.63 | 6,200.32 | 620.13 | 373.58 | 454.09 | 1.69 |
| 6,368.00 | 9.28 | 36.61 | 6,293.92 | 633.36 | 383.03 | 465.25 | 1.26 |
| 6,462.00 | 10.00 | 32.55 | 6,386.59 | 646.32 | 391.94 | 475.83 | 1.05 |
| 6,557.00 | 10.06 | 24.82 | 6,480.14 | 660.80 | 399.86 | 485.64 | 1.42 |

Design Report for State Elbert-1H (Re-Stake) - Actual Field Surveys

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|
| 6,651.00 | 9.01 | 24.27 | 6,572.84 | 674.97 | 406.34 | 493.97 | 1.12 |
| 6,746.00 | 7.68 | 25.20 | 6,666.83 | 687.49 | 412.10 | 501.37 | 1.41 |
| 6,841.00 | 5.42 | 25.09 | 6,761.21 | 697.30 | 416.70 | 507.26 | 2.38 |
| 6,936.00 | 3.51 | 22.77 | 6,855.92 | 704.05 | 419.73 | 511.18 | 2.02 |
| 7,030.00 | 2.10 | 16.14 | 6,949.80 | 708.35 | 421.32 | 513.34 | 1.54 |
| 7,125.00 | 1.09 | 6.67 | 7,044.76 | 710.92 | 421.91 | 514.27 | 1.10 |
| 7,219.00 | 0.93 | 13.31 | 7,138.75 | 712.55 | 422.19 | 514.77 | 0.21 |
| 7,251.00 | 0.87 | 14.35 | 7,170.74 | 713.04 | 422.31 | 514.95 | 0.19 |
| 7,282.00 | 1.39 | 71.49 | 7,201.74 | 713.39 | 422.73 | 515.41 | 3.78 |
| 7,314.00 | 3.92 | 100.38 | 7,233.70 | 713.32 | 424.17 | 516.83 | 8.70 |
| 7,345.00 | 7.87 | 105.85 | 7,264.53 | 712.54 | 427.26 | 519.78 | 12.86 |
| 7,377.00 | 11.67 | 105.52 | 7,296.06 | 711.08 | 432.48 | 524.76 | 11.88 |
| 7,408.00 | 14.10 | 103.00 | 7,326.28 | 709.39 | 439.19 | 531.17 | 8.04 |
| 7,440.00 | 16.18 | 99.96 | 7,357.17 | 707.74 | 447.38 | 539.07 | 6.96 |
| 7,471.00 | 18.54 | 98.44 | 7,386.76 | 706.27 | 456.51 | 547.91 | 7.75 |
| 7,502.00 | 20.54 | 97.45 | 7,415.97 | 704.84 | 466.77 | 557.89 | 6.54 |
| 7,534.00 | 23.01 | 95.27 | 7,445.68 | 703.54 | 478.57 | 569.41 | 8.12 |
| 7,566.00 | 25.64 | 91.86 | 7,474.84 | 702.74 | 491.72 | 582.33 | 9.31 |
| 7,597.00 | 28.07 | 89.93 | 7,502.50 | 702.53 | 505.72 | 596.17 | 8.33 |
| 7,629.00 | 29.79 | 89.84 | 7,530.50 | 702.56 | 521.20 | 611.51 | 5.38 |
| 7,660.00 | 31.92 | 91.47 | 7,557.11 | 702.38 | 537.10 | 627.23 | 7.38 |
| 7,691.00 | 35.40 | 91.65 | 7,582.91 | 701.91 | 554.27 | 644.19 | 11.23 |
| 7,723.00 | 38.34 | 90.85 | 7,608.51 | 701.49 | 573.46 | 663.15 | 9.31 |
| 7,754.00 | 41.11 | 89.32 | 7,632.35 | 701.47 | 593.27 | 682.77 | 9.48 |
| 7,786.00 | 43.89 | 87.41 | 7,655.94 | 702.10 | 614.88 | 704.26 | 9.58 |
| 7,817.00 | 46.47 | 86.52 | 7,677.79 | 703.26 | 636.83 | 726.17 | 8.57 |
| 7,849.00 | 49.84 | 86.35 | 7,699.14 | 704.75 | 660.62 | 749.94 | 10.54 |
| 7,880.00 | 52.89 | 86.92 | 7,718.49 | 706.17 | 684.79 | 774.08 | 9.94 |
| 7,912.00 | 56.19 | 87.76 | 7,737.05 | 707.37 | 710.82 | 800.04 | 10.53 |
| 7,943.00 | 58.54 | 88.15 | 7,753.77 | 708.30 | 736.91 | 826.01 | 7.65 |
| 7,975.00 | 60.90 | 88.86 | 7,769.90 | 709.02 | 764.53 | 853.48 | 7.62 |
| 8,006.00 | 64.18 | 89.76 | 7,784.20 | 709.35 | 792.04 | 880.77 | 10.89 |
| 8,038.00 | 67.69 | 90.89 | 7,797.24 | 709.18 | 821.25 | 909.69 | 11.43 |
| 8,069.00 | 71.24 | 92.61 | 7,808.12 | 708.29 | 850.26 | 938.32 | 12.57 |
| 8,101.00 | 74.03 | 93.59 | 7,817.67 | 706.63 | 880.75 | 968.30 | 9.20 |
| 8,132.00 | 76.47 | 93.58 | 7,825.56 | 704.76 | 910.67 | 997.69 | 7.87 |
| 8,164.00 | 79.56 | 93.31 | 7,832.20 | 702.88 | 941.91 | 1,028.39 | 9.69 |
| 8,196.00 | 82.50 | 92.57 | 7,837.19 | 701.26 | 973.48 | 1,059.45 | 9.47 |
| 8,227.00 | 85.49 | 92.62 | 7,840.43 | 699.86 | 1,004.27 | 1,089.77 | 9.65 |
| 8,258.00 | 89.07 | 92.77 | 7,841.90 | 698.41 | 1,035.20 | 1,120.21 | 11.56 |
| 8,290.00 | 90.68 | 92.93 | 7,841.97 | 696.82 | 1,067.16 | 1,151.66 | 5.06 |
| 8,327.00 | 91.85 | 93.22 | 7,841.16 | 694.83 | 1,104.09 | 1,187.99 | 3.26 |
| 8,373.00 | 91.79 | 92.11 | 7,839.70 | 692.70 | 1,150.02 | 1,233.20 | 2.42 |
| 8,468.00 | 91.73 | 90.22 | 7,836.78 | 690.76 | 1,244.95 | 1,327.00 | 1.99 |
| 8,562.00 | 91.30 | 89.36 | 7,834.29 | 691.11 | 1,338.92 | 1,420.15 | 1.02 |
| 8,657.00 | 90.49 | 89.11 | 7,832.81 | 692.38 | 1,433.89 | 1,514.42 | 0.89 |
| 8,751.00 | 89.32 | 89.10 | 7,832.97 | 693.85 | 1,527.88 | 1,607.74 | 1.24 |
| 8,846.00 | 88.77 | 88.41 | 7,834.55 | 695.91 | 1,622.84 | 1,702.11 | 0.93 |
| 8,941.00 | 89.69 | 88.11 | 7,835.83 | 698.79 | 1,717.79 | 1,796.58 | 1.02 |
| 9,035.00 | 89.57 | 89.01 | 7,836.43 | 701.16 | 1,811.76 | 1,890.00 | 0.97 |
| 9,129.00 | 89.01 | 88.71 | 7,837.60 | 703.03 | 1,905.73 | 1,983.36 | 0.68 |

Design Report for State Elbert-1H (Re-Stake) - Actual Field Surveys

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) |
|---|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|
| 9,224.00 | 90.06 | 88.66 | 7,838.37 | 705.21 | 2,000.70 | 2,077.75 | 1.11 |
| 9,319.00 | 90.56 | 90.20 | 7,837.85 | 706.15 | 2,095.69 | 2,172.00 | 1.70 |
| 9,413.00 | 91.98 | 90.43 | 7,835.77 | 705.63 | 2,189.67 | 2,265.03 | 1.53 |
| 9,508.00 | 91.48 | 90.34 | 7,832.90 | 705.00 | 2,284.62 | 2,359.03 | 0.53 |
| 9,602.00 | 91.36 | 89.84 | 7,830.57 | 704.85 | 2,378.59 | 2,452.11 | 0.55 |
| 9,697.00 | 92.35 | 90.16 | 7,827.50 | 704.85 | 2,473.54 | 2,546.19 | 1.10 |
| 9,791.00 | 91.73 | 90.01 | 7,824.15 | 704.71 | 2,567.48 | 2,639.24 | 0.68 |
| 9,886.00 | 92.84 | 90.10 | 7,820.36 | 704.62 | 2,662.40 | 2,733.28 | 1.17 |
| 9,981.00 | 91.98 | 90.60 | 7,816.37 | 704.04 | 2,757.32 | 2,827.24 | 1.05 |
| 10,075.00 | 90.19 | 89.89 | 7,814.59 | 703.64 | 2,851.29 | 2,920.30 | 2.05 |
| 10,170.00 | 89.26 | 90.45 | 7,815.05 | 703.36 | 2,946.29 | 3,014.38 | 1.14 |
| 10,264.00 | 90.25 | 90.36 | 7,815.45 | 702.69 | 3,040.29 | 3,107.43 | 1.06 |
| 10,359.00 | 90.93 | 90.18 | 7,814.47 | 702.24 | 3,135.28 | 3,201.48 | 0.74 |
| 10,453.00 | 90.31 | 90.12 | 7,813.45 | 702.00 | 3,229.27 | 3,294.58 | 0.66 |
| 10,548.00 | 89.57 | 91.15 | 7,813.55 | 700.94 | 3,324.27 | 3,388.55 | 1.34 |
| 10,642.00 | 90.93 | 91.72 | 7,813.14 | 698.59 | 3,418.23 | 3,481.34 | 1.57 |
| 10,737.00 | 90.43 | 91.73 | 7,812.01 | 695.73 | 3,513.18 | 3,575.03 | 0.53 |
| 10,831.00 | 89.94 | 90.57 | 7,811.71 | 693.84 | 3,607.16 | 3,667.88 | 1.34 |
| 10,926.00 | 89.63 | 89.68 | 7,812.07 | 693.64 | 3,702.16 | 3,761.98 | 0.99 |
| 11,020.00 | 88.89 | 89.28 | 7,813.28 | 694.49 | 3,796.15 | 3,855.22 | 0.89 |
| 11,114.00 | 89.69 | 89.27 | 7,814.45 | 695.68 | 3,890.13 | 3,948.50 | 0.85 |
| 11,208.00 | 91.30 | 89.94 | 7,813.63 | 696.33 | 3,984.12 | 4,041.71 | 1.86 |
| 11,303.00 | 89.88 | 89.82 | 7,812.66 | 696.53 | 4,079.11 | 4,135.86 | 1.50 |
| 11,397.00 | 89.44 | 90.49 | 7,813.21 | 696.27 | 4,173.11 | 4,228.95 | 0.85 |
| 11,491.00 | 90.49 | 91.23 | 7,813.27 | 694.86 | 4,267.10 | 4,321.88 | 1.37 |
| 11,586.00 | 90.06 | 90.54 | 7,812.81 | 693.39 | 4,362.09 | 4,415.80 | 0.86 |
| 11,680.00 | 89.51 | 89.99 | 7,813.17 | 692.96 | 4,456.08 | 4,508.87 | 0.83 |
| 11,775.00 | 90.80 | 90.22 | 7,812.91 | 692.78 | 4,551.08 | 4,602.97 | 1.38 |
| 11,869.00 | 89.75 | 90.02 | 7,812.46 | 692.59 | 4,645.08 | 4,696.08 | 1.14 |
| 11,964.00 | 88.27 | 90.56 | 7,814.10 | 692.11 | 4,740.06 | 4,790.12 | 1.66 |
| 12,059.00 | 88.89 | 90.62 | 7,816.46 | 691.13 | 4,835.03 | 4,884.08 | 0.66 |
| 12,153.00 | 89.81 | 91.04 | 7,817.52 | 689.77 | 4,929.01 | 4,977.01 | 1.08 |
| 12,194.00 | 90.43 | 91.11 | 7,817.44 | 689.00 | 4,970.00 | 5,017.52 | 1.52 |
| Final Sperry MWD Survey @ 12194.00 ft | | | | | | | |
| 12,263.00 | 90.43 | 91.11 | 7,816.92 | 687.66 | 5,038.99 | 5,085.69 | 0.00 |
| Straight Line Projection to TD @ 12263.00 ft | | | | | | | |

Design Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
|-----------------------|-----------------------|-------------------|--------------|--|
| | | +N/-S (usft) | +E/-W (usft) | |
| 2,215.00 | 2,214.96 | -9.12 | -6.09 | Tie-On to Gyro Surveys @ 2215.00 ft |
| 2,305.00 | 2,304.96 | -9.52 | -6.21 | First Sperry MWD Survey @ 2305.00 ft |
| 12,194.00 | 7,817.44 | 689.00 | 4,970.00 | Final Sperry MWD Survey @ 12194.00 ft |
| 12,263.00 | 7,816.92 | 687.66 | 5,038.99 | Straight Line Projection to TD @ 12263.00 ft |

Design Report for State Elbert-1H (Re-Stake) - Actual Field Surveys

Vertical Section Information

| Angle Type | Target | Azimuth (°) | Origin Type | Origin +N/-S (usft) | Origin +E/-W (usft) | Start TVD (usft) |
|------------|--|-------------|-------------|---------------------|---------------------|------------------|
| Target | State Elbert-1H (Re-Stake)_Rev B0_BHL Tgt | 82.22 | Slot | 0.00 | 0.00 | 0.00 |

Survey tool program

| From (usft) | To (usft) | Survey/Plan | Survey Tool |
|-------------|-----------|---|-------------|
| 93.00 | 2,215.00 | Surface_Gyro | NS-GYRO-MS |
| 2,305.00 | 12,194.00 | Vertical-Build-Lateral_Sperry MWD Surveys | MWD |
| 12,263.00 | 12,263.00 | Projection to Bit | Blind |

Casing Details

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|-----------------------|-----------------------|--------|---------------------|-------------------|
| 2,239.00 | 2,238.96 | 9 5/8" | 9-5/8 | 13-1/2 |

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 |
|--|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|-------------------|
| State Elbert-1H (Re-St | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,662,492.76 | 3,246,704.48 | 39° 38' 56.660 N | 104° 37' 25.910 W |
| - actual wellpath misses target center by 2214.99usft at 2215.00usft MD (2214.96 TVD, -9.12 N, -6.09 E) | | | | | | | | | |
| - Polygon | | | | | | | | | |
| Point 1 | | | | 0.00 | -3,328.41 | 4,993.52 | 1,659,212.72 | 3,251,729.77 | |
| Point 2 | | | | 0.00 | -1,291.50 | 5,030.68 | 1,661,249.86 | 3,251,747.29 | |
| Point 3 | | | | 0.00 | 746.51 | 5,068.96 | 1,663,288.11 | 3,251,765.91 | |
| Point 4 | | | | 0.00 | 767.00 | 398.10 | 1,663,263.55 | 3,247,095.15 | |
| Point 5 | | | | 0.00 | 786.78 | -4,272.72 | 1,663,238.28 | 3,242,424.45 | |
| Point 6 | | | | 0.00 | -3,258.60 | -4,348.91 | 1,659,192.43 | 3,242,387.27 | |
| Point 7 | | | | 0.00 | -3,269.30 | 356.00 | 1,659,227.11 | 3,247,091.98 | |
| State Elbert-1H (Re-St | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,662,492.76 | 3,246,704.48 | 39° 38' 56.660 N | 104° 37' 25.910 W |
| - actual wellpath misses target center by 2214.99usft at 2215.00usft MD (2214.96 TVD, -9.12 N, -6.09 E) | | | | | | | | | |
| - Polygon | | | | | | | | | |
| Point 1 | | | | 0.00 | 1,367.01 | 398.12 | 1,663,863.52 | 3,247,089.39 | |
| Point 2 | | | | 0.00 | -3,869.28 | 355.95 | 1,658,627.17 | 3,247,097.72 | |
| Point 3 | | | | 0.00 | -3,928.41 | 5,593.52 | 1,658,618.55 | 3,252,335.52 | |
| Point 4 | | | | 0.00 | -1,291.50 | 5,630.68 | 1,661,255.65 | 3,252,347.25 | |
| Point 5 | | | | 0.00 | 1,346.51 | 5,668.96 | 1,663,893.85 | 3,252,360.08 | |
| Point 6 | | | | 0.00 | 1,367.01 | 398.12 | 1,663,863.52 | 3,247,089.39 | |
| Point 7 | | | | 0.00 | 1,386.78 | -4,872.72 | 1,663,832.46 | 3,241,818.70 | |
| Point 8 | | | | 0.00 | -3,858.60 | -4,948.91 | 1,658,586.69 | 3,241,793.10 | |
| Point 9 | | | | 0.00 | -3,869.28 | 355.95 | 1,658,627.17 | 3,247,097.72 | |
| State Elbert-1H (Re-St | 0.00 | 0.00 | 7,813.00 | 688.56 | 5,039.58 | 1,663,229.88 | 3,251,737.09 | 39° 39' 3.460 N | 104° 36' 21.480 W |
| - actual wellpath misses target center by 4.06usft at 12263.00usft MD (7816.92 TVD, 687.66 N, 5038.99 E) | | | | | | | | | |
| - Point | | | | | | | | | |

Directional Difficulty Index

| | | | |
|-------------------------------------|----------------|-------------------------------|----------------------------------|
| Average Dogleg over Survey: | 1.60 °/100usft | Maximum Dogleg over Survey: | 12.86 °/100usft at 7,345.00 usft |
| Net Tortousity applicable to Plans: | 0.64 °/100usft | Directional Difficulty Index: | 6.224 |

Design Report for State Elbert-1H (Re-Stake) - Actual Field Surveys

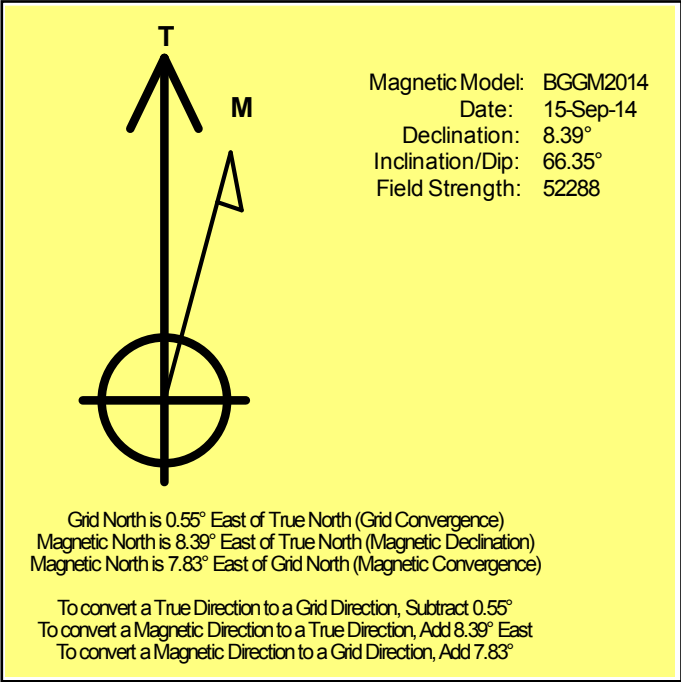
Audit Info

North Reference Sheet for Sec. 2-T5S-R65W - State Elbert-1H (Re-Stake) - Plan B

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference .
 Vertical Depths are relative to KB 24 ft @ 5878.00usft (H&P 280). Northing and Easting are relative to State Elbert-1H (Re-Stake)
 Coordinate System is US State Plane 1983, Colorado Central 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:39° 45' 0.000 N°
 False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99998159

Grid Coordinates of Well: 1,662,492.76 usft N, 3,246,704.48 usft E
 Geographical Coordinates of Well: 39° 38' 56.66" N, 104° 37' 25.91" W
 Grid Convergence at Surface is: 0.55°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,263.00usft
 the Bottom Hole Displacement is 5,085.69usft in the Direction of 82.23° (True).
 Magnetic Convergence at surface is: -7.83° (15 September 2014, , BGGM2014)



Project: Arapahoe County, Colorado

Site: Sec. 2-T5S-R65W

Well: State Elbert-1H (Re-Stake)

Conoco Phillips Company

HALLIBURTON

Sperry Drilling

LEGEND

— State Elbert-1H, Plan B

— Actual Field Surveys

