

**WELL DETAILS: Butterball 40N-34HZ**

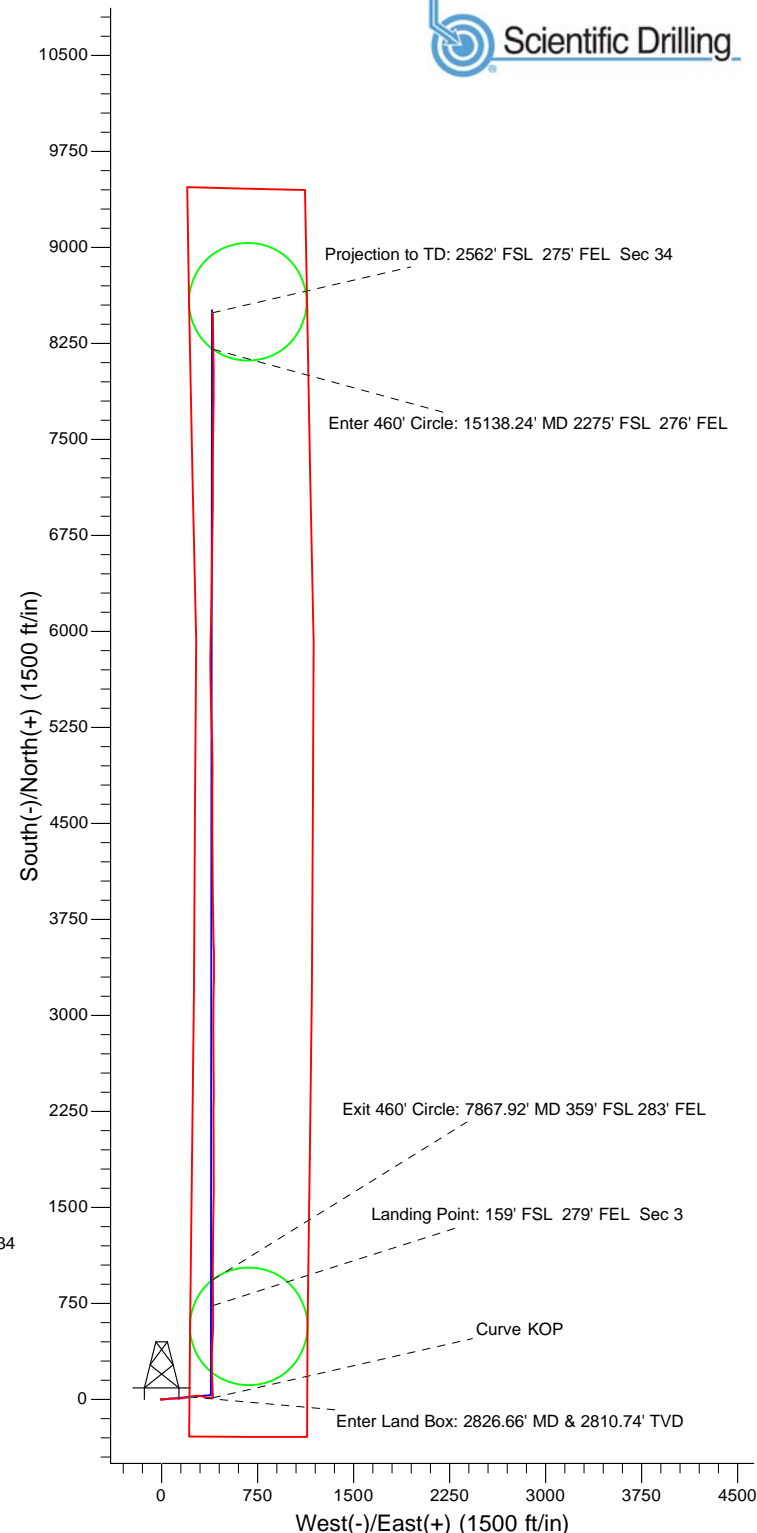
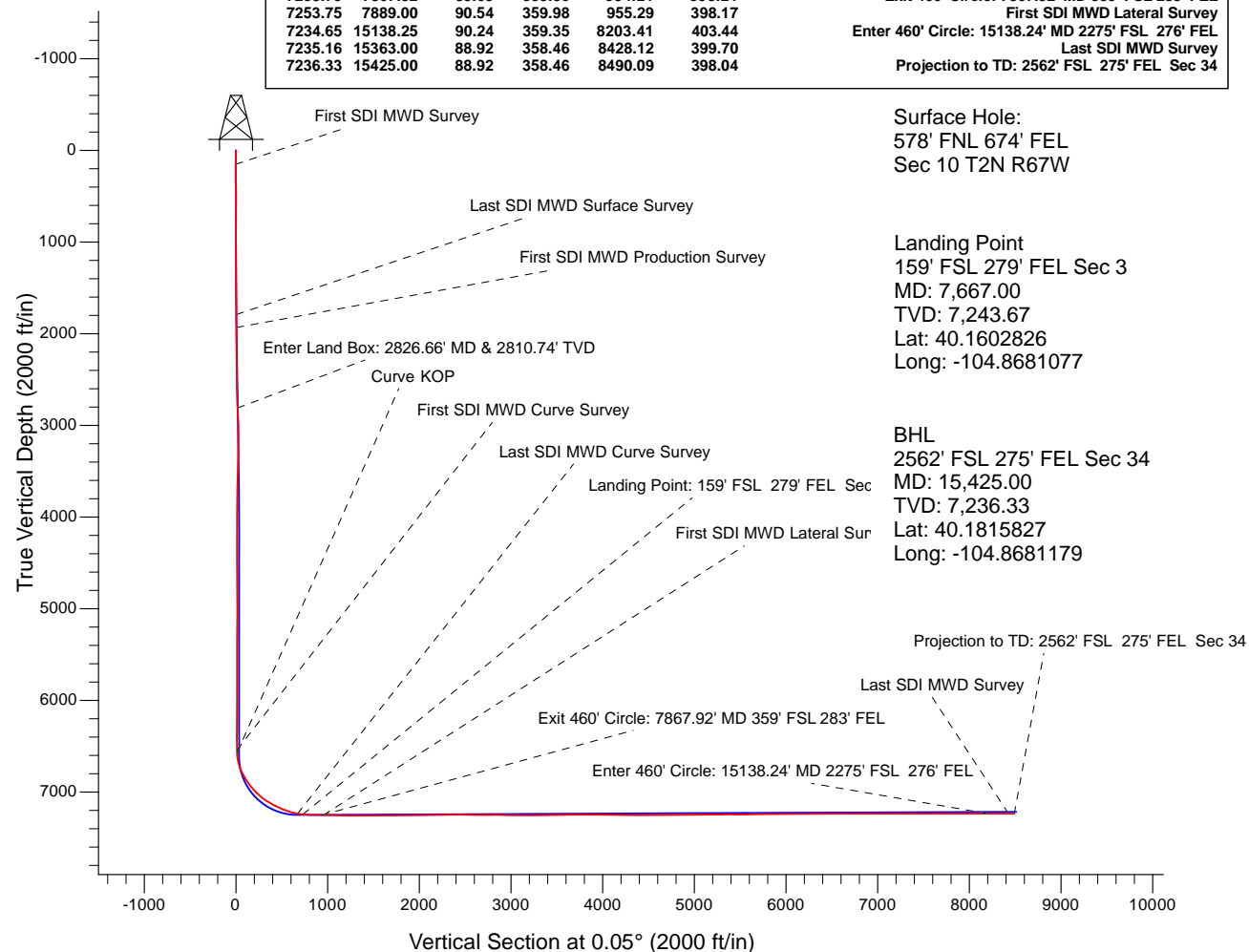
|   |            |            |              |
|---|------------|------------|--------------|
| GL 4916' & KB 20' @ 4936.00ft (Precision 461) |            | 4916.00    |              |
| Northing                                      | Easting    | Latitude   | Longitude    |
| 14584392.80                                   | 1676866.79 | 40.1582680 | -104.8695430 |
| Design: OH (Butterball 40N-34HZ/OH)           |            |            |              |
| Created By: Seth Burstad Date: 5-22-2017      |            |            |              |

**PROJECT DETAILS: US Rockies Wattenberg Planning UTM83**

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: Zone 13N (108 W to 102 W)  
 System Datum: Mean Sea Level  
 Local North: True

**ANNOTATIONS**

| TVD     | MD       | Inc   | Azi    | +N/-S   | +E/-W  | Annotation   |
|---------|----------|-------|--------|---------|--------|--|
| 153.00  | 153.00   | 0.26  | 252.12 | -0.11   | -0.33  | First SDI MWD Survey                               |
| 1790.85 | 1794.00  | 7.70  | 87.03  | 5.98    | 58.09  | Last SDI MWD Surface Survey                        |
| 1933.79 | 1938.00  | 6.25  | 89.22  | 6.58    | 75.56  | First SDI MWD Production Survey                    |
| 2810.74 | 2826.66  | 10.07 | 78.22  | 19.26   | 217.23 | Enter Land Box: 2826.66' MD & 2810.74' TVD         |
| 6542.36 | 6570.00  | 0.71  | 76.05  | 11.50   | 399.01 | First SDI MWD Curve Survey                         |
| 6573.34 | 6601.00  | 3.24  | 3.84   | 12.42   | 399.26 | Curve KOP  |
| 7235.76 | 7605.00  | 80.68 | 0.35   | 672.12  | 401.15 | Last SDI MWD Curve Survey                          |
| 7243.67 | 7667.00  | 84.65 | 359.38 | 733.60  | 401.00 | Landing Point: 159' FSL 279' FEL Sec 3             |
| 7253.79 | 7867.92  | 89.69 | 359.80 | 934.21  | 398.21 | Exit 460' Circle: 7867.92' MD 359' FSL 283' FEL    |
| 7253.75 | 7889.00  | 90.54 | 359.98 | 955.29  | 398.17 | First SDI MWD Lateral Survey                       |
| 7234.65 | 15138.25 | 90.24 | 359.35 | 8203.41 | 403.44 | Enter 460' Circle: 15138.24' MD 2275' FSL 276' FEL |
| 7235.16 | 15363.00 | 88.92 | 358.46 | 8428.12 | 399.70 | Last SDI MWD Survey                                |
| 7236.33 | 15425.00 | 88.92 | 358.46 | 8490.09 | 398.04 | Projection to TD: 2562' FSL 275' FEL Sec 34        |





# **US ROCKIES REGION PLANNING**

**US Rockies Wattenberg Planning UTM83**

**Butterball 1-10HZ Pad 2N-67W-10**

**Butterball 40N-34HZ**

**OH**

**Design: OH**

## **Standard Survey Report**

**22 May, 2017**



|                  |                                      |                                     |   |
|------------------|--------------------------------------|-------------------------------------|---|
| <b>Company:</b>  | US ROCKIES REGION PLANNING           | <b>Local Co-ordinate Reference:</b> | Well Butterball 40N-34HZ                      |
| <b>Project:</b>  | US Rockies Wattenberg Planning UTM83 | <b>TVD Reference:</b>               | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Site:</b>     | Butterball 1-10HZ Pad 2N-67W-10      | <b>MD Reference:</b>                | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Well:</b>     | Butterball 40N-34HZ                  | <b>North Reference:</b>             | True  |
| <b>Wellbore:</b> | OH                                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | OH                                   | <b>Database:</b>                    | Denver Sales Office                           |

|                    |  |                      |                |
|--------------------|--|----------------------|----------------|
| <b>Project</b>     | US Rockies Wattenberg Planning UTM83           |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator (US Survey Feet) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983                      |                      |                |
| <b>Map Zone:</b>   | Zone 13N (108 W to 102 W)                      |                      |                |

|                       |   |              |                    |                   |              |
|-----------------------|---|--------------|--------------------|-------------------|--------------|
| Site                  | Butterball 1-10HZ Pad 2N-67W-10, Site Center : Butterball 9N-34HZ |              |                    |                   |              |
| Site Position:        |   | Northing:    | 14,584,393.12 usft | Latitude:         | 40.1582690   |
| From:                 | Lat/Long  | Easting:     | 1,676,836.61 usft  | Longitude:        | -104.8696510 |
| Position Uncertainty: | 0.00 ft   | Slot Radius: | 13.200 in          | Grid Convergence: | 0.08 °       |

|                      |  |         |                     |                    |               |              |
|----------------------|--|---------|---------------------|--------------------|---------------|--------------|
| Well                 | Butterball 40N-34HZ, 578' FNL 674' FEL Sec 10 T2N R67W |         |                     |                    |               |              |
| Well Position        | +N/-S  | 0.00 ft | Northing:           | 14,584,392.80 usft | Latitude:     | 40.1582680   |
|                      | +E/-W  | 0.00 ft | Easting:            | 1,676,866.79 usft  | Longitude:    | -104.8695430 |
| Position Uncertainty |  | 0.00 ft | Wellhead Elevation: | 0.00 ft            | Ground Level: | 4,916.00 ft  |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OH                |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | BGGM2016          | 4/6/2017           | 8.44                   | 66.67                | 52,273                     |

|                          |                              |                   |                   |                      |      |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|------|
| <b>Design</b>            | OH                           |                   |                   |                      |      |
| <b>Audit Notes:</b>      |                              |                   |                   |                      |      |
| <b>Version:</b>          | 1.0                          | <b>Phase:</b>     | ACTUAL            | <b>Tie On Depth:</b> | 0.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Direction (°)</b> |      |
|                          | 0.00                         | 0.00              | 0.00              |                      | 0.05 |

|                       |                |                             |                       |                                    |  |
|-----------------------|----------------|-----------------------------|-----------------------|------------------------------------|--|
| <b>Survey Program</b> | <b>Date</b>    | 5/22/2017                   |                       |                                    |  |
| <b>From (ft)</b>      | <b>To (ft)</b> | <b>Survey (Wellbore)</b>    | <b>Tool Name</b>      | <b>Description</b>                 |  |
| 153.00                | 1,794.00       | Survey #1 - Surface (OH)    | APC_ISCWSA REV 2 MWD+ | Fixed:v2:crustal field declination |  |
| 1,938.00              | 15,425.00      | Survey #2 - Production (OH) | APC_ISCWSA REV 2 MWD+ | Fixed:v2:crustal field declination |  |

|                             |                        |                    |                            |                   |                   |                              |                              |                             |                            |  |
|-----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|------------------------------|-----------------------------|----------------------------|--|
| <b>Survey</b>               |                        |                    |                            |                   |                   |                              |                              |                             |                            |  |
| <b>Measured Depth (ft)</b>  | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b> | <b>Vertical Section (ft)</b> | <b>Dogleg Rate (°/100ft)</b> | <b>Build Rate (°/100ft)</b> | <b>Turn Rate (°/100ft)</b> |  |
| 0.00                        | 0.00                   | 0.00               | 0.00                       | 0.00              | 0.00              | 0.00                         | 0.00                         | 0.00                        | 0.00                       |  |
| 153.00                      | 0.26                   | 252.12             | 153.00                     | -0.11             | -0.33             | -0.11                        | 0.17                         | 0.17                        | 0.00                       |  |
| <b>First SDI MWD Survey</b> |                        |                    |                            |                   |                   |                              |                              |                             |                            |  |
| 239.00                      | 0.07                   | 143.03             | 239.00                     | -0.21             | -0.48             | -0.21                        | 0.34                         | -0.22                       | -126.85                    |  |
| 328.00                      | 0.29                   | 317.35             | 328.00                     | -0.09             | -0.60             | -0.09                        | 0.40                         | 0.25                        | 195.87                     |  |
| 459.00                      | 0.89                   | 290.28             | 458.99                     | 0.51              | -1.78             | 0.51                         | 0.49                         | 0.46                        | -20.66                     |  |
| 548.00                      | 0.78                   | 274.26             | 547.98                     | 0.79              | -3.04             | 0.79                         | 0.29                         | -0.12                       | -18.00                     |  |
| 637.00                      | 0.60                   | 277.75             | 636.98                     | 0.90              | -4.10             | 0.90                         | 0.21                         | -0.20                       | 3.92                       |  |
| 723.00                      | 0.17                   | 291.25             | 722.97                     | 1.01              | -4.67             | 1.01                         | 0.51                         | -0.50                       | 15.70                      |  |
| 810.00                      | 0.28                   | 170.76             | 809.97                     | 0.85              | -4.75             | 0.84                         | 0.45                         | 0.13                        | -138.49                    |  |

|                  |                                      |                                     |   |
|------------------|--------------------------------------|-------------------------------------|---|
| <b>Company:</b>  | US ROCKIES REGION PLANNING           | <b>Local Co-ordinate Reference:</b> | Well Butterball 40N-34HZ                      |
| <b>Project:</b>  | US Rockies Wattenberg Planning UTM83 | <b>TVD Reference:</b>               | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Site:</b>     | Butterball 1-10HZ Pad 2N-67W-10      | <b>MD Reference:</b>                | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Well:</b>     | Butterball 40N-34HZ                  | <b>North Reference:</b>             | True  |
| <b>Wellbore:</b> | OH                                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | OH                                   | <b>Database:</b>                    | Denver Sales Office                           |

| Survey                                     |                 |             |                     |            |            |                       |                       |                      |                     |
|--|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft)                        | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 899.00                                     | 0.29            | 268.71      | 898.97              | 0.63       | -4.94      | 0.62                  | 0.48                  | 0.01                 | 110.06              |
| 987.00                                     | 0.67            | 124.47      | 986.97              | 0.33       | -4.74      | 0.33                  | 1.05                  | 0.43                 | -163.91             |
| 1,076.00                                   | 1.17            | 96.45       | 1,075.96            | -0.07      | -3.41      | -0.07                 | 0.74                  | 0.56                 | -31.48              |
| 1,165.00                                   | 2.28            | 89.42       | 1,164.92            | -0.15      | -0.74      | -0.15                 | 1.27                  | 1.25                 | -7.90               |
| 1,253.00                                   | 3.12            | 86.01       | 1,252.82            | 0.03       | 3.40       | 0.04                  | 0.97                  | 0.95                 | -3.88               |
| 1,340.00                                   | 4.05            | 89.98       | 1,339.65            | 0.20       | 8.84       | 0.21                  | 1.11                  | 1.07                 | 4.56                |
| 1,425.00                                   | 5.20            | 82.37       | 1,424.37            | 0.71       | 15.66      | 0.73                  | 1.53                  | 1.35                 | -8.95               |
| 1,511.00                                   | 6.27            | 80.04       | 1,509.94            | 2.04       | 24.15      | 2.06                  | 1.27                  | 1.24                 | -2.71               |
| 1,598.00                                   | 6.62            | 80.35       | 1,596.39            | 3.70       | 33.77      | 3.73                  | 0.40                  | 0.40                 | 0.36                |
| 1,685.00                                   | 6.96            | 84.51       | 1,682.78            | 5.05       | 43.96      | 5.09                  | 0.69                  | 0.39                 | 4.78                |
| 1,773.00                                   | 7.83            | 87.34       | 1,770.05            | 5.84       | 55.25      | 5.89                  | 1.07                  | 0.99                 | 3.22                |
| 1,794.00                                   | 7.70            | 87.03       | 1,790.85            | 5.98       | 58.09      | 6.03                  | 0.65                  | -0.62                | -1.48               |
| Last SDI MWD Surface Survey                |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,938.00                                   | 6.25            | 89.22       | 1,933.79            | 6.58       | 75.56      | 6.65                  | 1.02                  | -1.01                | 1.52                |
| First SDI MWD Production Survey            |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,032.00                                   | 6.86            | 91.42       | 2,027.17            | 6.51       | 86.29      | 6.59                  | 0.70                  | 0.65                 | 2.34                |
| 2,127.00                                   | 9.03            | 89.67       | 2,121.25            | 6.42       | 99.42      | 6.50                  | 2.30                  | 2.28                 | -1.84               |
| 2,222.00                                   | 9.80            | 88.85       | 2,214.97            | 6.62       | 114.96     | 6.72                  | 0.82                  | 0.81                 | -0.86               |
| 2,315.00                                   | 9.19            | 85.72       | 2,306.70            | 7.33       | 130.28     | 7.45                  | 0.86                  | -0.66                | -3.37               |
| 2,408.00                                   | 9.92            | 86.60       | 2,398.41            | 8.36       | 145.68     | 8.49                  | 0.80                  | 0.78                 | 0.95                |
| 2,503.00                                   | 9.33            | 84.29       | 2,492.07            | 9.62       | 161.51     | 9.76                  | 0.74                  | -0.62                | -2.43               |
| 2,597.00                                   | 9.83            | 80.69       | 2,584.76            | 11.67      | 177.01     | 11.83                 | 0.83                  | 0.53                 | -3.83               |
| 2,691.00                                   | 10.57           | 79.22       | 2,677.27            | 14.58      | 193.40     | 14.75                 | 0.83                  | 0.79                 | -1.56               |
| 2,785.00                                   | 10.21           | 78.89       | 2,769.73            | 17.80      | 210.04     | 17.98                 | 0.39                  | -0.38                | -0.35               |
| 2,826.66                                   | 10.07           | 78.22       | 2,810.74            | 19.26      | 217.23     | 19.45                 | 0.45                  | -0.34                | -1.62               |
| Enter Land Box: 2826.66' MD & 2810.74' TVD |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,879.00                                   | 9.89            | 77.34       | 2,862.29            | 21.18      | 226.09     | 21.37                 | 0.45                  | -0.34                | -1.67               |
| 2,973.00                                   | 9.39            | 77.35       | 2,954.96            | 24.62      | 241.45     | 24.83                 | 0.53                  | -0.53                | 0.01                |
| 3,068.00                                   | 9.41            | 84.34       | 3,048.69            | 27.09      | 256.74     | 27.31                 | 1.20                  | 0.02                 | 7.36                |
| 3,162.00                                   | 8.96            | 83.20       | 3,141.48            | 28.71      | 271.66     | 28.95                 | 0.52                  | -0.48                | -1.21               |
| 3,256.00                                   | 8.88            | 96.60       | 3,234.36            | 28.74      | 286.14     | 28.99                 | 2.21                  | -0.09                | 14.26               |
| 3,349.00                                   | 9.07            | 98.63       | 3,326.22            | 26.82      | 300.51     | 27.08                 | 0.40                  | 0.20                 | 2.18                |
| 3,441.00                                   | 9.06            | 102.96      | 3,417.07            | 24.11      | 314.74     | 24.38                 | 0.74                  | -0.01                | 4.71                |
| 3,535.00                                   | 8.16            | 102.88      | 3,510.01            | 20.96      | 328.46     | 21.25                 | 0.96                  | -0.96                | -0.09               |
| 3,630.00                                   | 6.95            | 102.04      | 3,604.19            | 18.26      | 340.65     | 18.56                 | 1.28                  | -1.27                | -0.88               |
| 3,723.00                                   | 5.35            | 98.90       | 3,696.65            | 16.41      | 350.44     | 16.72                 | 1.76                  | -1.72                | -3.38               |
| 3,818.00                                   | 4.39            | 97.28       | 3,791.30            | 15.27      | 358.42     | 15.58                 | 1.02                  | -1.01                | -1.71               |
| 3,910.00                                   | 3.84            | 99.10       | 3,883.07            | 14.33      | 364.96     | 14.65                 | 0.61                  | -0.60                | 1.98                |
| 4,005.00                                   | 3.19            | 96.21       | 3,977.89            | 13.54      | 370.73     | 13.87                 | 0.71                  | -0.68                | -3.04               |
| 4,100.00                                   | 2.91            | 93.76       | 4,072.75            | 13.10      | 375.76     | 13.43                 | 0.33                  | -0.29                | -2.58               |
| 4,194.00                                   | 2.43            | 89.40       | 4,166.65            | 12.97      | 380.13     | 13.30                 | 0.55                  | -0.51                | -4.64               |
| 4,288.00                                   | 1.98            | 86.96       | 4,260.58            | 13.07      | 383.75     | 13.41                 | 0.49                  | -0.48                | -2.60               |
| 4,383.00                                   | 1.58            | 97.48       | 4,355.53            | 12.99      | 386.68     | 13.33                 | 0.54                  | -0.42                | 11.07               |
| 4,478.00                                   | 1.38            | 91.05       | 4,450.50            | 12.80      | 389.13     | 13.14                 | 0.27                  | -0.21                | -6.77               |

|                  |                                      |                                     |   |
|------------------|--------------------------------------|-------------------------------------|---|
| <b>Company:</b>  | US ROCKIES REGION PLANNING           | <b>Local Co-ordinate Reference:</b> | Well Butterball 40N-34HZ                      |
| <b>Project:</b>  | US Rockies Wattenberg Planning UTM83 | <b>TVD Reference:</b>               | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Site:</b>     | Butterball 1-10HZ Pad 2N-67W-10      | <b>MD Reference:</b>                | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Well:</b>     | Butterball 40N-34HZ                  | <b>North Reference:</b>             | True  |
| <b>Wellbore:</b> | OH                                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | OH                                   | <b>Database:</b>                    | Denver Sales Office                           |

| Survey  |                 |             |                     |            |            |                       |                       |                      |                     |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft)                             | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 4,572.00  | 0.78            | 70.69       | 4,544.49            | 12.99      | 390.86     | 13.33                 | 0.75                  | -0.64                | -21.66              |
| 4,666.00  | 0.65            | 71.84       | 4,638.48            | 13.37      | 391.97     | 13.71                 | 0.14                  | -0.14                | 1.22                |
| 4,759.00  | 0.48            | 68.64       | 4,731.47            | 13.67      | 392.84     | 14.02                 | 0.19                  | -0.18                | -3.44               |
| 4,854.00  | 0.69            | 34.90       | 4,826.47            | 14.29      | 393.53     | 14.63                 | 0.42                  | 0.22                 | -35.52              |
| 4,948.00  | 1.24            | 21.68       | 4,920.46            | 15.70      | 394.23     | 16.04                 | 0.63                  | 0.59                 | -14.06              |
| 5,043.00  | 0.96            | 233.06      | 5,015.45            | 16.17      | 393.98     | 16.52                 | 2.23                  | -0.29                | -156.44             |
| 5,137.00  | 1.18            | 227.58      | 5,109.43            | 15.05      | 392.63     | 15.39                 | 0.26                  | 0.23                 | -5.83               |
| 5,256.00  | 0.79            | 226.95      | 5,228.41            | 13.66      | 391.13     | 14.00                 | 0.33                  | -0.33                | -0.53               |
| 5,351.00  | 0.38            | 223.03      | 5,323.41            | 12.98      | 390.44     | 13.32                 | 0.43                  | -0.43                | -4.13               |
| 5,447.00  | 0.32            | 238.81      | 5,419.41            | 12.61      | 389.99     | 12.95                 | 0.12                  | -0.06                | 16.44               |
| 5,541.00  | 0.08            | 158.02      | 5,513.41            | 12.41      | 389.79     | 12.75                 | 0.34                  | -0.26                | -85.95              |
| 5,635.00  | 0.24            | 124.65      | 5,607.41            | 12.24      | 389.98     | 12.58                 | 0.19                  | 0.17                 | -35.50              |
| 5,727.00  | 0.39            | 88.60       | 5,699.40            | 12.14      | 390.45     | 12.48                 | 0.26                  | 0.16                 | -39.18              |
| 5,819.00  | 0.54            | 63.06       | 5,791.40            | 12.34      | 391.15     | 12.68                 | 0.27                  | 0.16                 | -27.76              |
| 5,913.00  | 0.76            | 81.68       | 5,885.40            | 12.63      | 392.16     | 12.98                 | 0.32                  | 0.23                 | 19.81               |
| 6,007.00  | 0.80            | 122.53      | 5,979.39            | 12.37      | 393.33     | 12.72                 | 0.58                  | 0.04                 | 43.46               |
| 6,100.00  | 0.67            | 119.22      | 6,072.38            | 11.76      | 394.35     | 12.10                 | 0.15                  | -0.14                | -3.56               |
| 6,194.00  | 0.46            | 104.41      | 6,166.38            | 11.40      | 395.20     | 11.74                 | 0.27                  | -0.22                | -15.76              |
| 6,288.00  | 0.57            | 101.87      | 6,260.37            | 11.21      | 396.02     | 11.55                 | 0.12                  | 0.12                 | -2.70               |
| 6,382.00  | 0.59            | 84.17       | 6,354.37            | 11.16      | 396.96     | 11.50                 | 0.19                  | 0.02                 | -18.83              |
| 6,476.00  | 0.62            | 81.58       | 6,448.36            | 11.28      | 397.94     | 11.63                 | 0.04                  | 0.03                 | -2.76               |
| 6,570.00  | 0.71            | 76.05       | 6,542.36            | 11.50      | 399.01     | 11.84                 | 0.12                  | 0.10                 | -5.88               |
| First SDI MWD Curve Survey                      |                 |             |                     |            |            |                       |                       |                      |                     |
| 6,601.00  | 3.24            | 3.84        | 6,573.34            | 12.42      | 399.26     | 12.77                 | 10.00                 | 8.17                 | -232.94             |
| Curve KOP                                       |                 |             |                     |            |            |                       |                       |                      |                     |
| 6,664.00  | 9.49            | 355.49      | 6,635.92            | 19.38      | 398.97     | 19.73                 | 10.00                 | 9.92                 | -13.25              |
| 6,757.00  | 18.93           | 359.32      | 6,725.97            | 42.16      | 398.18     | 42.51                 | 10.20                 | 10.15                | 4.12                |
| 6,851.00  | 27.46           | 359.75      | 6,812.30            | 79.15      | 397.91     | 79.49                 | 9.08                  | 9.07                 | 0.46                |
| 6,946.00  | 35.01           | 356.68      | 6,893.47            | 128.33     | 396.23     | 128.68                | 8.12                  | 7.95                 | -3.23               |
| 7,039.00  | 41.81           | 355.51      | 6,966.30            | 185.94     | 392.25     | 186.28                | 7.35                  | 7.31                 | -1.26               |
| 7,133.00  | 47.40           | 1.44        | 7,033.23            | 251.84     | 390.67     | 252.18                | 7.41                  | 5.95                 | 6.31                |
| 7,227.00  | 56.51           | 0.97        | 7,091.10            | 325.77     | 392.21     | 326.12                | 9.70                  | 9.69                 | -0.50               |
| 7,323.00  | 62.03           | 1.90        | 7,140.14            | 408.23     | 394.29     | 408.58                | 5.81                  | 5.75                 | 0.97                |
| 7,417.00  | 66.69           | 2.99        | 7,180.80            | 492.87     | 397.92     | 493.22                | 5.07                  | 4.96                 | 1.16                |
| 7,512.00  | 72.31           | 0.43        | 7,214.06            | 581.78     | 400.54     | 582.12                | 6.43                  | 5.92                 | -2.69               |
| 7,605.00  | 80.68           | 0.35        | 7,235.76            | 672.12     | 401.15     | 672.47                | 9.00                  | 9.00                 | -0.09               |
| Last SDI MWD Curve Survey                       |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,667.00  | 84.65           | 359.38      | 7,243.67            | 733.60     | 401.00     | 733.95                | 6.59                  | 6.41                 | -1.56               |
| Landing Point: 159' FSL 279' FEL Sec 3          |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,700.00  | 86.77           | 358.87      | 7,246.14            | 766.50     | 400.50     | 766.85                | 6.59                  | 6.41                 | -1.55               |
| 7,795.00  | 86.74           | 359.16      | 7,251.52            | 861.34     | 398.87     | 861.68                | 0.31                  | -0.03                | 0.31                |
| 7,867.92  | 89.69           | 359.80      | 7,253.79            | 934.21     | 398.21     | 934.56                | 4.14                  | 4.04                 | 0.87                |
| Exit 460' Circle: 7867.92' MD 359' FSL 283' FEL |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,889.00  | 90.54           | 359.98      | 7,253.75            | 955.29     | 398.17     | 955.64                | 4.14                  | 4.04                 | 0.87                |

|                  |                                      |                                     |   |
|------------------|--------------------------------------|-------------------------------------|---|
| <b>Company:</b>  | US ROCKIES REGION PLANNING           | <b>Local Co-ordinate Reference:</b> | Well Butterball 40N-34HZ                      |
| <b>Project:</b>  | US Rockies Wattenberg Planning UTM83 | <b>TVD Reference:</b>               | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Site:</b>     | Butterball 1-10HZ Pad 2N-67W-10      | <b>MD Reference:</b>                | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Well:</b>     | Butterball 40N-34HZ                  | <b>North Reference:</b>             | True  |
| <b>Wellbore:</b> | OH                                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | OH                                   | <b>Database:</b>                    | Denver Sales Office                           |

| Survey                              |                 |             |                     |            |            |                       |                       |                      |                     |
|-------------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft)                 | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| <b>First SDI MWD Lateral Survey</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,983.00                            | 89.73           | 0.60        | 7,253.53            | 1,049.29   | 398.64     | 1,049.63              | 1.09                  | -0.86                | 0.66                |
| 8,077.00                            | 89.06           | 0.51        | 7,254.52            | 1,143.28   | 399.55     | 1,143.62              | 0.72                  | -0.71                | -0.10               |
| 8,172.00                            | 88.52           | 0.71        | 7,256.53            | 1,238.25   | 400.56     | 1,238.60              | 0.61                  | -0.57                | 0.21                |
| 8,265.00                            | 89.90           | 0.74        | 7,257.81            | 1,331.23   | 401.74     | 1,331.58              | 1.48                  | 1.48                 | 0.03                |
| 8,359.00                            | 90.30           | 0.81        | 7,257.65            | 1,425.22   | 403.01     | 1,425.57              | 0.43                  | 0.43                 | 0.07                |
| 8,452.00                            | 90.74           | 0.69        | 7,256.80            | 1,518.21   | 404.23     | 1,518.56              | 0.49                  | 0.47                 | -0.13               |
| 8,548.00                            | 91.04           | 0.52        | 7,255.31            | 1,614.19   | 405.24     | 1,614.55              | 0.36                  | 0.31                 | -0.18               |
| 8,641.00                            | 89.63           | 0.91        | 7,254.77            | 1,707.18   | 406.40     | 1,707.54              | 1.57                  | -1.52                | 0.42                |
| 8,736.00                            | 90.30           | 359.71      | 7,254.82            | 1,802.18   | 406.92     | 1,802.53              | 1.45                  | 0.71                 | -1.26               |
| 8,830.00                            | 91.17           | 359.16      | 7,253.62            | 1,896.16   | 405.99     | 1,896.52              | 1.09                  | 0.93                 | -0.59               |
| 8,925.00                            | 90.40           | 359.45      | 7,252.32            | 1,991.15   | 404.84     | 1,991.50              | 0.87                  | -0.81                | 0.31                |
| 9,020.00                            | 90.91           | 359.70      | 7,251.23            | 2,086.14   | 404.13     | 2,086.49              | 0.60                  | 0.54                 | 0.26                |
| 9,114.00                            | 91.21           | 0.82        | 7,249.49            | 2,180.12   | 404.56     | 2,180.47              | 1.23                  | 0.32                 | 1.19                |
| 9,208.00                            | 89.87           | 0.04        | 7,248.61            | 2,274.11   | 405.27     | 2,274.46              | 1.65                  | -1.43                | -0.83               |
| 9,302.00                            | 90.91           | 0.64        | 7,247.97            | 2,368.10   | 405.82     | 2,368.46              | 1.28                  | 1.11                 | 0.64                |
| 9,397.00                            | 89.16           | 359.53      | 7,247.91            | 2,463.10   | 405.96     | 2,463.45              | 2.18                  | -1.84                | -1.17               |
| 9,492.00                            | 89.29           | 359.81      | 7,249.19            | 2,558.09   | 405.42     | 2,558.44              | 0.32                  | 0.14                 | 0.29                |
| 9,586.00                            | 89.63           | 359.45      | 7,250.08            | 2,652.08   | 404.81     | 2,652.43              | 0.53                  | 0.36                 | -0.38               |
| 9,681.00                            | 89.80           | 359.72      | 7,250.55            | 2,747.08   | 404.12     | 2,747.43              | 0.34                  | 0.18                 | 0.28                |
| 9,775.00                            | 90.91           | 359.38      | 7,249.97            | 2,841.07   | 403.38     | 2,841.42              | 1.24                  | 1.18                 | -0.36               |
| 9,869.00                            | 89.36           | 0.37        | 7,249.75            | 2,935.07   | 403.18     | 2,935.42              | 1.96                  | -1.65                | 1.05                |
| 9,963.00                            | 89.03           | 0.63        | 7,251.07            | 3,029.05   | 404.00     | 3,029.41              | 0.45                  | -0.35                | 0.28                |
| 10,057.00                           | 89.09           | 0.53        | 7,252.61            | 3,123.04   | 404.95     | 3,123.39              | 0.12                  | 0.06                 | -0.11               |
| 10,150.00                           | 89.06           | 1.19        | 7,254.11            | 3,216.01   | 406.35     | 3,216.37              | 0.71                  | -0.03                | 0.71                |
| 10,245.00                           | 90.98           | 359.93      | 7,254.08            | 3,311.00   | 407.27     | 3,311.36              | 2.42                  | 2.02                 | -1.33               |
| 10,338.00                           | 90.94           | 0.47        | 7,252.52            | 3,403.99   | 407.60     | 3,404.34              | 0.58                  | -0.04                | 0.58                |
| 10,433.00                           | 91.04           | 358.82      | 7,250.88            | 3,498.97   | 407.01     | 3,499.32              | 1.74                  | 0.11                 | -1.74               |
| 10,525.00                           | 91.24           | 358.47      | 7,249.05            | 3,590.93   | 404.84     | 3,591.28              | 0.44                  | 0.22                 | -0.38               |
| 10,620.00                           | 91.14           | 358.88      | 7,247.08            | 3,685.88   | 402.64     | 3,686.23              | 0.44                  | -0.11                | 0.43                |
| 10,715.00                           | 91.38           | 359.04      | 7,244.99            | 3,780.84   | 400.92     | 3,781.19              | 0.30                  | 0.25                 | 0.17                |
| 10,809.00                           | 89.13           | 359.42      | 7,244.57            | 3,874.83   | 399.65     | 3,875.17              | 2.43                  | -2.39                | 0.40                |
| 10,903.00                           | 88.72           | 359.37      | 7,246.33            | 3,968.80   | 398.66     | 3,969.15              | 0.44                  | -0.44                | -0.05               |
| 10,997.00                           | 88.39           | 359.73      | 7,248.70            | 4,062.77   | 397.92     | 4,063.12              | 0.52                  | -0.35                | 0.38                |
| 11,091.00                           | 89.80           | 359.37      | 7,250.19            | 4,156.75   | 397.18     | 4,157.10              | 1.55                  | 1.50                 | -0.38               |
| 11,185.00                           | 90.00           | 359.80      | 7,250.35            | 4,250.75   | 396.50     | 4,251.09              | 0.50                  | 0.21                 | 0.46                |
| 11,279.00                           | 89.36           | 359.88      | 7,250.88            | 4,344.75   | 396.24     | 4,345.09              | 0.69                  | -0.68                | 0.09                |
| 11,373.00                           | 89.19           | 359.88      | 7,252.07            | 4,438.74   | 396.04     | 4,439.08              | 0.18                  | -0.18                | 0.00                |
| 11,466.00                           | 90.34           | 359.60      | 7,252.45            | 4,531.74   | 395.62     | 4,532.08              | 1.27                  | 1.24                 | -0.30               |
| 11,559.00                           | 89.97           | 0.01        | 7,252.20            | 4,624.74   | 395.31     | 4,625.08              | 0.59                  | -0.40                | 0.44                |
| 11,652.00                           | 90.84           | 0.35        | 7,251.54            | 4,717.73   | 395.60     | 4,718.08              | 1.00                  | 0.94                 | 0.37                |
| 11,745.00                           | 90.13           | 0.47        | 7,250.75            | 4,810.73   | 396.26     | 4,811.07              | 0.77                  | -0.76                | 0.13                |
| 11,840.00                           | 91.72           | 359.96      | 7,249.22            | 4,905.71   | 396.62     | 4,906.05              | 1.76                  | 1.67                 | -0.54               |

|                  |                                      |                                     |   |
|------------------|--------------------------------------|-------------------------------------|---|
| <b>Company:</b>  | US ROCKIES REGION PLANNING           | <b>Local Co-ordinate Reference:</b> | Well Butterball 40N-34HZ                      |
| <b>Project:</b>  | US Rockies Wattenberg Planning UTM83 | <b>TVD Reference:</b>               | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Site:</b>     | Butterball 1-10HZ Pad 2N-67W-10      | <b>MD Reference:</b>                | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Well:</b>     | Butterball 40N-34HZ                  | <b>North Reference:</b>             | True  |
| <b>Wellbore:</b> | OH                                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | OH                                   | <b>Database:</b>                    | Denver Sales Office                           |

| Survey  |                 |             |                     |            |            |                       |                       |                      |                     |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft)                                       | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 11,934.00   | 91.68           | 359.14      | 7,246.43            | 4,999.66   | 395.88     | 5,000.01              | 0.87                  | -0.04                | -0.87               |
| 12,028.00   | 90.24           | 359.05      | 7,244.85            | 5,093.64   | 394.40     | 5,093.98              | 1.53                  | -1.53                | -0.10               |
| 12,122.00   | 90.20           | 358.59      | 7,244.49            | 5,187.62   | 392.46     | 5,187.96              | 0.49                  | -0.04                | -0.49               |
| 12,217.00   | 90.34           | 358.26      | 7,244.04            | 5,282.58   | 389.85     | 5,282.92              | 0.38                  | 0.15                 | -0.35               |
| 12,310.00   | 90.00           | 357.55      | 7,243.77            | 5,375.52   | 386.45     | 5,375.85              | 0.85                  | -0.37                | -0.76               |
| 12,404.00   | 89.60           | 359.27      | 7,244.10            | 5,469.47   | 383.84     | 5,469.81              | 1.88                  | -0.43                | 1.83                |
| 12,498.00   | 90.30           | 359.13      | 7,244.18            | 5,563.46   | 382.53     | 5,563.80              | 0.76                  | 0.74                 | -0.15               |
| 12,593.00   | 90.71           | 358.64      | 7,243.34            | 5,658.44   | 380.68     | 5,658.77              | 0.67                  | 0.43                 | -0.52               |
| 12,688.00   | 91.01           | 0.45        | 7,241.92            | 5,753.43   | 379.93     | 5,753.75              | 1.93                  | 0.32                 | 1.91                |
| 12,782.00   | 90.60           | 0.95        | 7,240.60            | 5,847.41   | 381.08     | 5,847.74              | 0.69                  | -0.44                | 0.53                |
| 12,875.00   | 91.21           | 1.00        | 7,239.13            | 5,940.38   | 382.66     | 5,940.71              | 0.66                  | 0.66                 | 0.05                |
| 12,970.00   | 91.08           | 1.14        | 7,237.23            | 6,035.35   | 384.43     | 6,035.68              | 0.20                  | -0.14                | 0.15                |
| 13,065.00   | 89.53           | 0.71        | 7,236.72            | 6,130.33   | 385.96     | 6,130.66              | 1.69                  | -1.63                | -0.45               |
| 13,159.00   | 90.44           | 1.29        | 7,236.75            | 6,224.31   | 387.61     | 6,224.65              | 1.15                  | 0.97                 | 0.62                |
| 13,253.00   | 89.87           | 0.88        | 7,236.49            | 6,318.30   | 389.39     | 6,318.63              | 0.75                  | -0.61                | -0.44               |
| 13,348.00   | 89.83           | 0.98        | 7,236.74            | 6,413.28   | 390.93     | 6,413.62              | 0.11                  | -0.04                | 0.11                |
| 13,442.00   | 90.50           | 1.26        | 7,236.47            | 6,507.26   | 392.76     | 6,507.61              | 0.77                  | 0.71                 | 0.30                |
| 13,536.00   | 90.34           | 0.35        | 7,235.78            | 6,601.25   | 394.08     | 6,601.59              | 0.98                  | -0.17                | -0.97               |
| 13,630.00   | 90.30           | 0.50        | 7,235.26            | 6,695.25   | 394.78     | 6,695.59              | 0.17                  | -0.04                | 0.16                |
| 13,725.00   | 89.97           | 1.17        | 7,235.03            | 6,790.24   | 396.17     | 6,790.58              | 0.79                  | -0.35                | 0.71                |
| 13,818.00   | 90.10           | 0.58        | 7,234.98            | 6,883.23   | 397.59     | 6,883.57              | 0.65                  | 0.14                 | -0.63               |
| 13,912.00   | 90.10           | 0.38        | 7,234.81            | 6,977.22   | 398.37     | 6,977.57              | 0.21                  | 0.00                 | -0.21               |
| 14,006.00   | 89.97           | 0.02        | 7,234.75            | 7,071.22   | 398.70     | 7,071.57              | 0.41                  | -0.14                | -0.38               |
| 14,101.00   | 90.03           | 359.89      | 7,234.75            | 7,166.22   | 398.63     | 7,166.57              | 0.15                  | 0.06                 | -0.14               |
| 14,196.00   | 90.07           | 0.21        | 7,234.67            | 7,261.22   | 398.71     | 7,261.57              | 0.34                  | 0.04                 | 0.34                |
| 14,290.00   | 89.97           | 0.53        | 7,234.64            | 7,355.22   | 399.32     | 7,355.56              | 0.36                  | -0.11                | 0.34                |
| 14,384.00   | 89.87           | 0.72        | 7,234.77            | 7,449.21   | 400.34     | 7,449.56              | 0.23                  | -0.11                | 0.20                |
| 14,478.00   | 89.80           | 0.69        | 7,235.04            | 7,543.21   | 401.50     | 7,543.55              | 0.08                  | -0.07                | -0.03               |
| 14,573.00   | 89.87           | 1.00        | 7,235.31            | 7,638.20   | 402.90     | 7,638.54              | 0.33                  | 0.07                 | 0.33                |
| 14,667.00   | 89.97           | 0.86        | 7,235.45            | 7,732.18   | 404.43     | 7,732.53              | 0.18                  | 0.11                 | -0.15               |
| 14,761.00   | 90.20           | 0.58        | 7,235.31            | 7,826.17   | 405.61     | 7,826.53              | 0.39                  | 0.24                 | -0.30               |
| 14,853.00   | 90.00           | 359.48      | 7,235.15            | 7,918.17   | 405.66     | 7,918.52              | 1.22                  | -0.22                | -1.20               |
| 14,947.00   | 90.00           | 359.76      | 7,235.15            | 8,012.17   | 405.03     | 8,012.52              | 0.30                  | 0.00                 | 0.30                |
| 15,040.00   | 90.17           | 359.50      | 7,235.01            | 8,105.17   | 404.43     | 8,105.52              | 0.33                  | 0.18                 | -0.28               |
| 15,134.00   | 90.24           | 359.35      | 7,234.67            | 8,199.16   | 403.49     | 8,199.51              | 0.18                  | 0.07                 | -0.16               |
| 15,138.25   | 90.24           | 359.35      | 7,234.65            | 8,203.41   | 403.44     | 8,203.76              | 0.06                  | 0.06                 | 0.01                |
| <b>Enter 460' Circle: 15138.24' MD 2275' FSL 276' FEL</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 15,229.00   | 90.30           | 359.36      | 7,234.22            | 8,294.16   | 402.42     | 8,294.50              | 0.06                  | 0.06                 | 0.01                |
| 15,321.00   | 89.33           | 358.60      | 7,234.52            | 8,386.14   | 400.78     | 8,386.49              | 1.34                  | -1.05                | -0.83               |
| 15,363.00   | 88.92           | 358.46      | 7,235.16            | 8,428.12   | 399.70     | 8,428.47              | 1.03                  | -0.98                | -0.33               |
| <b>Last SDI MWD Survey</b>                                |                 |             |                     |            |            |                       |                       |                      |                     |
| 15,425.00   | 88.92           | 358.46      | 7,236.33            | 8,490.09   | 398.04     | 8,490.43              | 0.00                  | 0.00                 | 0.00                |
| <b>Projection to TD: 2562' FSL 275' FEL Sec 34</b>        |                 |             |                     |            |            |                       |                       |                      |                     |

|                  |                                      |                                     |   |
|------------------|--------------------------------------|-------------------------------------|---|
| <b>Company:</b>  | US ROCKIES REGION PLANNING           | <b>Local Co-ordinate Reference:</b> | Well Butterball 40N-34HZ                      |
| <b>Project:</b>  | US Rockies Wattenberg Planning UTM83 | <b>TVD Reference:</b>               | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Site:</b>     | Butterball 1-10HZ Pad 2N-67W-10      | <b>MD Reference:</b>                | GL 4916' & KB 20' @ 4936.00ft (Precision 461) |
| <b>Well:</b>     | Butterball 40N-34HZ                  | <b>North Reference:</b>             | True  |
| <b>Wellbore:</b> | OH                                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | OH                                   | <b>Database:</b>                    | Denver Sales Office                           |

| Design Annotations  |                     |                   |            |  |
|---------------------|---------------------|-------------------|------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment  |
|                     |                     | +N/-S (ft)        | +E/-W (ft) |  |
| 153.00              | 153.00              | -0.11             | -0.33      | First SDI MWD Survey                               |
| 1,794.00            | 1,790.85            | 5.98              | 58.09      | Last SDI MWD Surface Survey                        |
| 1,938.00            | 1,933.79            | 6.58              | 75.56      | First SDI MWD Production Survey                    |
| 2,826.66            | 2,810.74            | 19.26             | 217.23     | Enter Land Box: 2826.66' MD & 2810.74' TVD         |
| 6,570.00            | 6,542.36            | 11.50             | 399.01     | First SDI MWD Curve Survey                         |
| 6,601.00            | 6,573.34            | 12.42             | 399.26     | Curve KOP  |
| 7,605.00            | 7,235.76            | 672.12            | 401.15     | Last SDI MWD Curve Survey                          |
| 7,667.00            | 7,243.67            | 733.60            | 401.00     | Landing Point: 159' FSL 279' FEL Sec 3             |
| 7,867.92            | 7,253.79            | 934.21            | 398.21     | Exit 460' Circle: 7867.92' MD 359' FSL 283' FEL    |
| 7,889.00            | 7,253.75            | 955.29            | 398.17     | First SDI MWD Lateral Survey                       |
| 15,138.25           | 7,234.65            | 8,203.41          | 403.44     | Enter 460' Circle: 15138.24' MD 2275' FSL 276' FEL |
| 15,363.00           | 7,235.16            | 8,428.12          | 399.70     | Last SDI MWD Survey                                |
| 15,425.00           | 7,236.33            | 8,490.09          | 398.04     | Projection to TD: 2562' FSL 275' FEL Sec 34        |

|                   |                    |             |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
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