

**Job Number:** 1010xxxx  
**Company:** Black Hills E&P  
**Lease/Well:** Ute #34-14  
**Location:** La Plata County, Colorado  
**Rig Name:** ☐  
**RKB:** 7260'  
**G.L. or M.S.L.:** 7249'

**State/Country:** CO  
**Declination:** ☐  
**Grid:** ☐  
**File name:** Y:\JOB\DAT~1\BLACKH~1\2010\UTE#34~1\#34-14.SVY  
**Date/Time:** 05-Feb-10 / 15:39  
**Curve Name:** Ute #34-14 plan 2-05-10

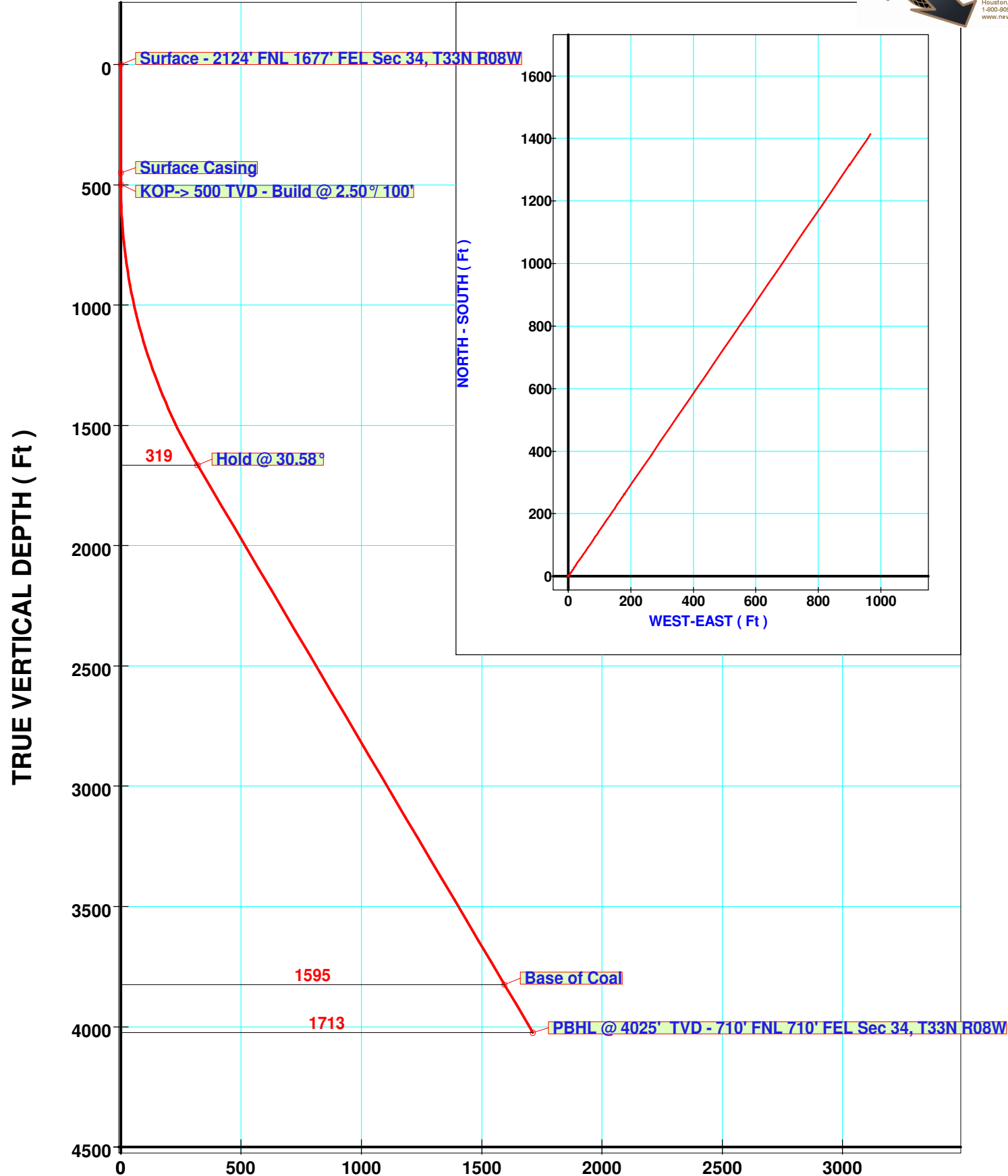
### Ute #34-14 plan 2-05-10

WINSERVE PROPOSAL REPORT  
*Minimum Curvature Method*  
*Vertical Section Plane 34.37*  
*Vertical Section Referenced to Wellhead*  
*Rectangular Coordinates Referenced to Wellhead*

| <i>Measured<br/>Depth<br/>FT</i>                                 | <i>Incl<br/>Angle<br/>Deg</i> | <i>Drift<br/>Direction<br/>Deg</i> | <i>True<br/>Vertical<br/>Depth</i> | <i>N-S<br/>FT</i> | <i>E-W<br/>FT</i> | <i>Vertical<br/>Section<br/>FT</i> | <i>C L O S U R E<br/>Distance<br/>FT</i> | <i>Direction<br/>Deg</i> | <i>Dogleg<br/>Severity<br/>Deg/100</i> |
|--|-------------------------------|------------------------------------|------------------------------------|-------------------|-------------------|------------------------------------|--|--------------------------|--|
| <b>Surface - 2124' FNL 1677' FEL Sec 34, T33N R08W</b>           |                               |                                    |                                    |                   |                   |                                    |  |                          |  |
| .00  | .00                           | .00                                | .00                                | .00               | .00               | .00                                | .00                                      | .00                      | .00                                    |
| <b>Surface Casing</b>  |                               |                                    |                                    |                   |                   |                                    |  |                          |  |
| 450.00   | .00                           | .00                                | 450.00                             | .00               | .00               | .00                                | .00                                      | .00                      | .00                                    |
| <b>KOP-&gt; 500 TVD Begin Build @ 2.50% 100', 34.37° Azimuth</b> |                               |                                    |                                    |                   |                   |                                    |  |                          |  |
| 500.00   | .00                           | 34.37                              | 500.00                             | .00               | .00               | .00                                | .00                                      | .00                      | .00                                    |
| 530.00   | .75                           | 34.37                              | 530.00                             | .16               | .11               | .20                                | .20                                      | 34.36                    | 2.50                                   |
| 560.00   | 1.50                          | 34.37                              | 559.99                             | .65               | .44               | .79                                | .79                                      | 34.37                    | 2.50                                   |
| 590.00   | 2.25                          | 34.37                              | 589.98                             | 1.46              | 1.00              | 1.77                               | 1.77                                     | 34.37                    | 2.50                                   |
| 620.00   | 3.00                          | 34.37                              | 619.95                             | 2.59              | 1.77              | 3.14                               | 3.14                                     | 34.37                    | 2.50                                   |
| 650.00   | 3.75                          | 34.37                              | 649.89                             | 4.05              | 2.77              | 4.91                               | 4.91                                     | 34.37                    | 2.50                                   |
| 680.00   | 4.50                          | 34.37                              | 679.82                             | 5.83              | 3.99              | 7.07                               | 7.07                                     | 34.37                    | 2.50                                   |
| 710.00   | 5.25                          | 34.37                              | 709.71                             | 7.94              | 5.43              | 9.61                               | 9.61                                     | 34.37                    | 2.50                                   |
| 740.00   | 6.00                          | 34.37                              | 739.56                             | 10.36             | 7.09              | 12.55                              | 12.55                                    | 34.37                    | 2.50                                   |
| 770.00   | 6.75                          | 34.37                              | 769.38                             | 13.11             | 8.97              | 15.89                              | 15.89                                    | 34.37                    | 2.50                                   |
| 800.00   | 7.50                          | 34.37                              | 799.14                             | 16.18             | 11.07             | 19.61                              | 19.61                                    | 34.37                    | 2.50                                   |
| 830.00   | 8.25                          | 34.37                              | 828.86                             | 19.58             | 13.39             | 23.72                              | 23.72                                    | 34.37                    | 2.50                                   |
| 860.00   | 9.00                          | 34.37                              | 858.52                             | 23.29             | 15.93             | 28.22                              | 28.22                                    | 34.37                    | 2.50                                   |
| 890.00   | 9.75                          | 34.37                              | 888.12                             | 27.32             | 18.69             | 33.10                              | 33.10                                    | 34.37                    | 2.50                                   |
| 920.00   | 10.50                         | 34.37                              | 917.65                             | 31.68             | 21.66             | 38.38                              | 38.38                                    | 34.37                    | 2.50                                   |
| 950.00   | 11.25                         | 34.37                              | 947.11                             | 36.35             | 24.86             | 44.04                              | 44.04                                    | 34.37                    | 2.50                                   |
| 980.00   | 12.00                         | 34.37                              | 976.50                             | 41.34             | 28.27             | 50.08                              | 50.08                                    | 34.37                    | 2.50                                   |
| 1010.00  | 12.75                         | 34.37                              | 1005.80                            | 46.65             | 31.90             | 56.51                              | 56.51                                    | 34.37                    | 2.50                                   |

| Measured<br>Depth<br>FT         | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E  |                  | Dogleg<br>Severity<br>Deg/100 |
|---------------------------------|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|----------------|------------------|-------------------------------|
|                                 |                      |                           |                           | FT        | FT        | FT                        | Distance<br>FT | Direction<br>Deg |                               |
| 1040.00                         | 13.50                | 34.37                     | 1035.02                   | 52.27     | 35.75     | 63.32                     | 63.32          | 34.37            | 2.50                          |
| 1070.00                         | 14.25                | 34.37                     | 1064.14                   | 58.21     | 39.81     | 70.52                     | 70.52          | 34.37            | 2.50                          |
| 1100.00                         | 15.00                | 34.37                     | 1093.17                   | 64.46     | 44.08     | 78.09                     | 78.09          | 34.37            | 2.50                          |
| 1130.00                         | 15.75                | 34.37                     | 1122.10                   | 71.03     | 48.57     | 86.05                     | 86.05          | 34.37            | 2.50                          |
| 1160.00                         | 16.50                | 34.37                     | 1150.92                   | 77.90     | 53.28     | 94.38                     | 94.38          | 34.37            | 2.50                          |
|                                 |                      |                           |                           |           |           |                           |                |                  |                               |
| 1190.00                         | 17.25                | 34.37                     | 1179.62                   | 85.09     | 58.19     | 103.09                    | 103.09         | 34.37            | 2.50                          |
| 1220.00                         | 18.00                | 34.37                     | 1208.21                   | 92.59     | 63.32     | 112.17                    | 112.17         | 34.37            | 2.50                          |
| 1250.00                         | 18.75                | 34.37                     | 1236.68                   | 100.40    | 68.66     | 121.63                    | 121.63         | 34.37            | 2.50                          |
| 1280.00                         | 19.50                | 34.37                     | 1265.03                   | 108.51    | 74.21     | 131.46                    | 131.46         | 34.37            | 2.50                          |
| 1310.00                         | 20.25                | 34.37                     | 1293.24                   | 116.93    | 79.96     | 141.66                    | 141.66         | 34.37            | 2.50                          |
|                                 |                      |                           |                           |           |           |                           |                |                  |                               |
| 1340.00                         | 21.00                | 34.37                     | 1321.32                   | 125.65    | 85.93     | 152.22                    | 152.22         | 34.37            | 2.50                          |
| 1370.00                         | 21.75                | 34.37                     | 1349.26                   | 134.68    | 92.10     | 163.16                    | 163.16         | 34.37            | 2.50                          |
| 1400.00                         | 22.50                | 34.37                     | 1377.05                   | 144.00    | 98.48     | 174.46                    | 174.46         | 34.37            | 2.50                          |
| 1430.00                         | 23.25                | 34.37                     | 1404.69                   | 153.63    | 105.06    | 186.12                    | 186.12         | 34.37            | 2.50                          |
| 1460.00                         | 24.00                | 34.37                     | 1432.17                   | 163.55    | 111.85    | 198.14                    | 198.14         | 34.37            | 2.50                          |
|                                 |                      |                           |                           |           |           |                           |                |                  |                               |
| 1490.00                         | 24.75                | 34.37                     | 1459.50                   | 173.77    | 118.84    | 210.52                    | 210.52         | 34.37            | 2.50                          |
| 1520.00                         | 25.50                | 34.37                     | 1486.66                   | 184.29    | 126.03    | 223.26                    | 223.26         | 34.37            | 2.50                          |
| 1550.00                         | 26.25                | 34.37                     | 1513.65                   | 195.09    | 133.42    | 236.35                    | 236.35         | 34.37            | 2.50                          |
| 1580.00                         | 27.00                | 34.37                     | 1540.47                   | 206.19    | 141.01    | 249.79                    | 249.79         | 34.37            | 2.50                          |
| 1610.00                         | 27.75                | 34.37                     | 1567.11                   | 217.58    | 148.79    | 263.59                    | 263.59         | 34.37            | 2.50                          |
|                                 |                      |                           |                           |           |           |                           |                |                  |                               |
| 1640.00                         | 28.50                | 34.37                     | 1593.57                   | 229.25    | 156.78    | 277.73                    | 277.73         | 34.37            | 2.50                          |
| 1670.00                         | 29.25                | 34.37                     | 1619.84                   | 241.21    | 164.96    | 292.22                    | 292.22         | 34.37            | 2.50                          |
| 1700.00                         | 30.00                | 34.37                     | 1645.92                   | 253.45    | 173.33    | 307.05                    | 307.05         | 34.37            | 2.50                          |
|                                 |                      |                           |                           |           |           |                           |                |                  |                               |
| Begin Hold @ 30.58°, 34.37° Azm |                      |                           |                           |           |           |                           |                |                  |                               |
| 1723.39                         | 30.58                | 34.37                     | 1666.11                   | 263.18    | 179.99    | 318.84                    | 318.84         | 34.37            | 2.50                          |
|                                 |                      |                           |                           |           |           |                           |                |                  |                               |
| 1823.39                         | 30.58                | 34.37                     | 1752.20                   | 305.18    | 208.71    | 369.72                    | 369.72         | 34.37            | .00                           |
| 1923.39                         | 30.58                | 34.37                     | 1838.28                   | 347.18    | 237.43    | 420.61                    | 420.61         | 34.37            | .00                           |
| 2023.39                         | 30.58                | 34.37                     | 1924.37                   | 389.18    | 266.15    | 471.49                    | 471.49         | 34.37            | .00                           |
| 2123.39                         | 30.58                | 34.37                     | 2010.46                   | 431.18    | 294.87    | 522.37                    | 522.37         | 34.37            | .00                           |
|                                 |                      |                           |                           |           |           |                           |                |                  |                               |
| 2223.39                         | 30.58                | 34.37                     | 2096.55                   | 473.18    | 323.60    | 573.25                    | 573.25         | 34.37            | .00                           |
| 2323.39                         | 30.58                | 34.37                     | 2182.63                   | 515.18    | 352.32    | 624.13                    | 624.13         | 34.37            | .00                           |
| 2423.39                         | 30.58                | 34.37                     | 2268.72                   | 557.18    | 381.04    | 675.01                    | 675.01         | 34.37            | .00                           |
| 2523.39                         | 30.58                | 34.37                     | 2354.81                   | 599.18    | 409.76    | 725.89                    | 725.89         | 34.37            | .00                           |
| 2623.39                         | 30.58                | 34.37                     | 2440.90                   | 641.18    | 438.48    | 776.77                    | 776.77         | 34.37            | .00                           |
|                                 |                      |                           |                           |           |           |                           |                |                  |                               |
| 2723.39                         | 30.58                | 34.37                     | 2526.99                   | 683.18    | 467.21    | 827.65                    | 827.65         | 34.37            | .00                           |
| 2823.39                         | 30.58                | 34.37                     | 2613.07                   | 725.17    | 495.93    | 878.53                    | 878.53         | 34.37            | .00                           |
| 2923.39                         | 30.58                | 34.37                     | 2699.16                   | 767.17    | 524.65    | 929.42                    | 929.42         | 34.37            | .00                           |
| 3023.39                         | 30.58                | 34.37                     | 2785.25                   | 809.17    | 553.37    | 980.30                    | 980.30         | 34.37            | .00                           |
| 3123.39                         | 30.58                | 34.37                     | 2871.34                   | 851.17    | 582.10    | 1031.18                   | 1031.18        | 34.37            | .00                           |
|                                 |                      |                           |                           |           |           |                           |                |                  |                               |
| 3223.39                         | 30.58                | 34.37                     | 2957.43                   | 893.17    | 610.82    | 1082.06                   | 1082.06        | 34.37            | .00                           |
| 3323.39                         | 30.58                | 34.37                     | 3043.51                   | 935.17    | 639.54    | 1132.94                   | 1132.94        | 34.37            | .00                           |
| 3423.39                         | 30.58                | 34.37                     | 3129.60                   | 977.17    | 668.26    | 1183.82                   | 1183.82        | 34.37            | .00                           |
| 3523.39                         | 30.58                | 34.37                     | 3215.69                   | 1019.17   | 696.98    | 1234.70                   | 1234.70        | 34.37            | .00                           |
| 3623.39                         | 30.58                | 34.37                     | 3301.78                   | 1061.17   | 725.71    | 1285.58                   | 1285.58        | 34.37            | .00                           |

| Measured<br>Depth<br>FT                                       | Incl<br>Angle<br>Deg | Drift<br>Direction<br>Deg | True<br>Vertical<br>Depth | N-S<br>FT | E-W<br>FT | Vertical<br>Section<br>FT | C L O S U R E<br>Distance<br>FT | Direction<br>Deg | Dogleg<br>Severity<br>Deg/100 |
|---|----------------------|---------------------------|---------------------------|-----------|-----------|---------------------------|---------------------------------|------------------|-------------------------------|
| 3723.39   | 30.58                | 34.37                     | 3387.86                   | 1103.17   | 754.43    | 1336.46                   | 1336.46                         | 34.37            | .00                           |
| 3823.39   | 30.58                | 34.37                     | 3473.95                   | 1145.16   | 783.15    | 1387.35                   | 1387.35                         | 34.37            | .00                           |
| 3923.39   | 30.58                | 34.37                     | 3560.04                   | 1187.16   | 811.87    | 1438.23                   | 1438.23                         | 34.37            | .00                           |
| 4023.39   | 30.58                | 34.37                     | 3646.13                   | 1229.16   | 840.59    | 1489.11                   | 1489.11                         | 34.37            | .00                           |
| 4123.39   | 30.58                | 34.37                     | 3732.22                   | 1271.16   | 869.32    | 1539.99                   | 1539.99                         | 34.37            | .00                           |
| 4223.39   | 30.58                | 34.37                     | 3818.30                   | 1313.16   | 898.04    | 1590.87                   | 1590.87                         | 34.37            | .00                           |
| <b>Base of Coal</b>   |                      |                           |                           |           |           |                           |                                 |                  |                               |
| 4231.16   | 30.58                | 34.37                     | 3825.00                   | 1316.43   | 900.27    | 1594.83                   | 1594.83                         | 34.37            | .00                           |
| 4323.39   | 30.58                | 34.37                     | 3904.39                   | 1355.16   | 926.76    | 1641.75                   | 1641.75                         | 34.37            | .00                           |
| 4423.39   | 30.58                | 34.37                     | 3990.48                   | 1397.16   | 955.48    | 1692.63                   | 1692.63                         | 34.37            | .00                           |
| <b>PBHL @ 4025' TVD - 710' FNL 710' FEL Sec 34, T33N R08W</b> |                      |                           |                           |           |           |                           |                                 |                  |                               |
| 4463.48   | 30.58                | 34.37                     | 4025.00                   | 1414.00   | 967.00    | 1713.03                   | 1713.03                         | 34.37            | .00                           |



VERTICAL SECTION ( Ft ) @ 34.37°