

# BISON OIL & GAS

## Survey Program

| Start MD (ft) | End MD (ft) | Tool          | Model   | Log Name/Comment | Wellbore                           |
|---------------|-------------|---------------|---|------------------|------------------------------------|
| 25.00         | 2000.00     | OWSG MWD rev2 | OWSG MWD rev2 + IFR1 + Multi-Station Correction       |                  | BOOMSLANG FED 8-60 14B-13-18-2 PWB |
| 2000.00       | 14333.97    | OWSG MWD rev2 | OWSG MWD rev2 + IFR1 + Sag + Multi-Station Correction |                  | BOOMSLANG FED 8-60 14B-13-18-2 PWB |

## Bottom Hole Location

| MD (ft)  | Inc (°) | Az (°) | TVD (ft) | Local N (ft) | Local E (ft) | Grid East (US ft) | Grid North (US ft) | Latitude       | Longitude       |
|----------|---------|--------|----------|--------------|--------------|-------------------|--------------------|----------------|-----------------|
| 14333.97 | 89.678  | 90.517 | 6220.00  | 1023.79      | 8427.03      | 3410588.26        | 1487317.75         | 40°39'42.034"N | 104°01'11.960"W |

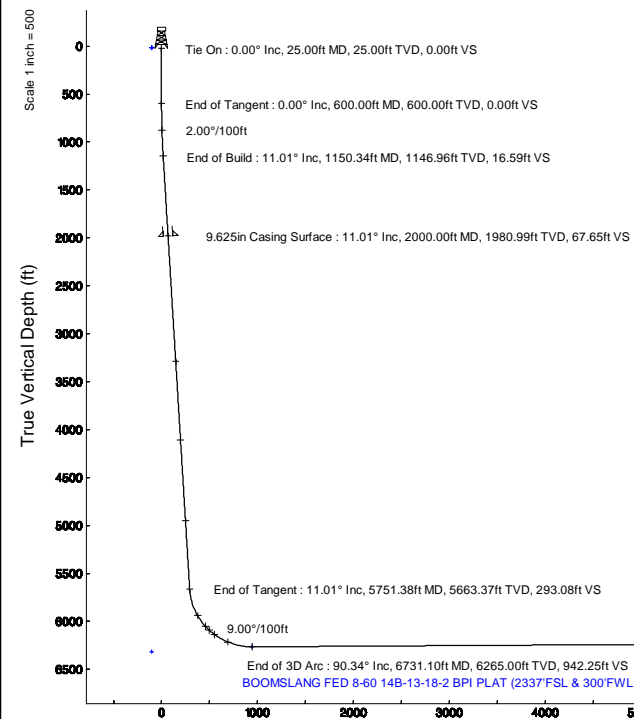
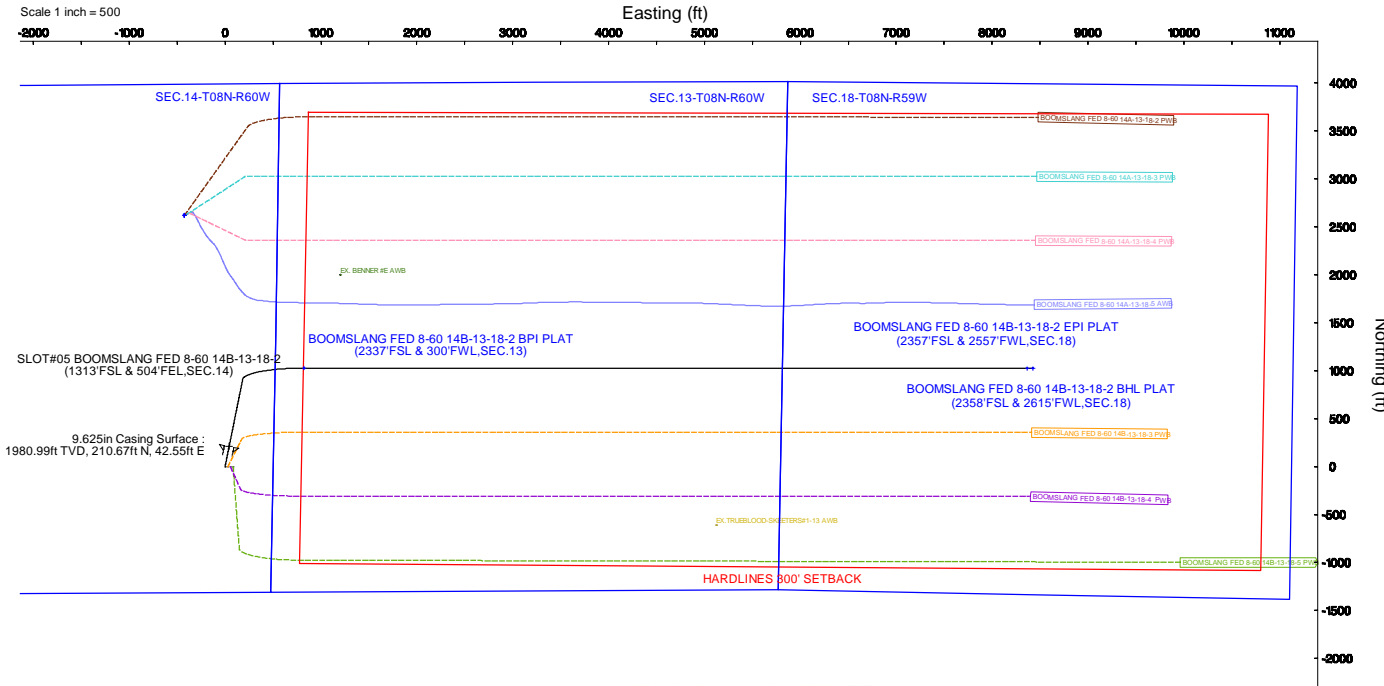
## Well Profile Data

| Design Comment | MD (ft)  | Inc (°) | Az (°) | TVD (ft) | Local N (ft) | Local E (ft) | DLS (°/100ft) | VS (ft) |
|----------------|----------|---------|--------|----------|--------------|--------------|---------------|---------|
| Tie On         | 25.00    | 0.000   | 11.419 | 25.00    | 0.00         | 0.00         | 0.00          | 0.00    |
| End of Tangent | 600.00   | 0.000   | 11.419 | 600.00   | 0.00         | 0.00         | 0.00          | 0.00    |
| End of Build   | 1150.34  | 11.007  | 11.419 | 1146.96  | 51.66        | 10.43        | 2.00          | 16.59   |
| End of Tangent | 5751.38  | 11.007  | 11.419 | 5663.37  | 912.73       | 184.35       | 0.00          | 293.08  |
| End of 3D Arc  | 6731.10  | 90.342  | 90.028 | 6265.00  | 1027.83      | 824.31       | 9.00          | 942.25  |
| End of Tangent | 14275.93 | 90.342  | 90.028 | 6220.00  | 1024.07      | 8369.00      | 0.00          | 8431.42 |
| End of 3D Arc  | 14332.25 | 89.678  | 90.517 | 6219.99  | 1023.81      | 8425.31      | 1.46          | 8487.29 |
| End of Tangent | 14333.97 | 89.678  | 90.517 | 6220.00  | 1023.79      | 8427.03      | 0.00          | 8488.99 |

## Location Information

| Facility Name  | Grid East (US ft) | Grid North (US ft) | Latitude       | Longitude       |
|--|-------------------|--------------------|----------------|-----------------|
| SEC.14-T08N-R60W   | 3401713.155       | 1488770.996        | 40°39'57.840"N | 104°03'06.800"W |
| SLOT#05 BOOMSLANG FED 8-60 14B-13-18-2 (1313FSL & 504FEL,SEC.14) | 3402179.252       | 1486156.361        | 40°39'31.932"N | 104°02'01.307"W |

Scale 1 inch = 500



End of Tangent : 90.34° Inc, 14275.93ft MD, 6220.00ft TVD, 8431.42ft VS  
1.46°/100ft  
End of 3D Arc : 89.68° Inc, 14332.25ft MD, 6219.99ft TVD, 8487.29ft VS  
End of Tangent : 89.68° Inc, 14333.97ft MD, 6220.00ft TVD, 8488.99ft VS

BOOMSLANG FED 8-60 14B-13-18-2 EPI PLAT (2357'FSL & 2557'FWL,SEC.18)  
BOOMSLANG FED 8-60 14B-13-18-2 BHL PLAT (2358'FSL & 2615'FWL,SEC.18)

Vertical Section (ft)  
Azimuth 85.07° with reference 0.00°N, 0.00° E

Scale 1 inch = 500



# Planned Wellpath Report

BOOMSLANG FED 8-60 14B-13-18-2 (REV-A.0) PWP  
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| REFERENCE WELLPATH IDENTIFICATION |                        |          |  |
|-----------------------------------|------------------------|----------|--|
| Operator                          | BISON OIL & GAS        | Slot     | SLOT#05 BOOMSLANG FED 8-60 14B-13-18-2 (1313'FSL & 504'FEL,SEC.14) |
| Area                              | COLORADO               | Well     | BOOMSLANG FED 8-60 14B-13-18-2                                     |
| Field                             | WELD COUNTY (NAD83/TN) | Wellbore | BOOMSLANG FED 8-60 14B-13-18-2 PWB                                 |
| Facility                          | SEC.14-T08N-R60W       |          |  |

| REPORT SETUP INFORMATION |   |                      |  |
|--------------------------|---|----------------------|--|
| Projection System        | NAD83 / Lambert Colorado SP, Northern Zone (501), US feet | Software System      | WellArchitect® 5.1                                       |
| North Reference          | True  | User                 | Hanisab  |
| Scale                    | 0.999982  | Report Generated     | 10/10/2019 at 8:02:07 AM                                 |
| Convergence at slot      | 0.94° East  | Database/Source file | WA DENVER/BOOMSLANG_FED_8-60_14B-13-18-2_REV-A.0_PWP.xml |

| WELLPATH LOCATION     |                   |          |                  |                 |                        |                 |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|-----------------|
|                       | Local coordinates |          | Grid coordinates |                 | Geographic coordinates |                 |
|                       | North[ft]         | East[ft] | Easting[US ft]   | Northing[US ft] | Latitude               | Longitude       |
| Slot Location         | -2621.95          | 423.35   | 3402179.25       | 1486156.36      | 40°39'31.932"N         | 104°03'01.307"W |
| Facility Reference Pt |                   |          | 3401713.16       | 1488771.00      | 40°39'57.840"N         | 104°03'06.800"W |
| Field Reference Pt    |                   |          | 3376841.67       | 1496090.80      | 40°41'14.050"N         | 104°08'28.060"W |

| WELLPATH DATUM           |                                 |  |                   |
|--------------------------|---------------------------------|--|-------------------|
| Calculation method       | Minimum curvature               | RIG (4890'GL+25'KB@4915') (RKB) to Facility Vertical Datum   | 4915.00ft         |
| Horizontal Reference Pt  | Slot                            | RIG (4890'GL+25'KB@4915') (RKB) to Mean Sea Level  | 4915.00ft         |
| Vertical Reference Pt    | RIG (4890'GL+25'KB@4915') (RKB) | RIG (4890'GL+25'KB@4915') (RKB) to Mud Line at Slot (SLOT#05 BOOMSLANG FED 8-60 14B-13-18-2 (1313'FSL & 504'FEL,SEC.14)) | 4915.00ft         |
| MD Reference Pt          | RIG (4890'GL+25'KB@4915') (RKB) | Section Origin   | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level                  | Section Azimuth  | 83.07°            |



# Planned Wellpath Report

## BOOMSLANG FED 8-60 14B-13-18-2 (REV-A.0) PWP

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### REFERENCE WELLPATH IDENTIFICATION

|          |                        |          |  |
|----------|------------------------|----------|--|
| Operator | BISON OIL & GAS        | Slot     | SLOT#05 BOOMSLANG FED 8-60 14B-13-18-2 (1313'FSL & 504'FEL,SEC.14) |
| Area     | COLORADO               | Well     | BOOMSLANG FED 8-60 14B-13-18-2                                     |
| Field    | WELD COUNTY (NAD83/TN) | Wellbore | BOOMSLANG FED 8-60 14B-13-18-2 PWB                                 |
| Facility | SEC.14-T08N-R60W       |          |  |

### WELLPATH DATA (159 stations) † = interpolated/extrapolated station

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Latitude       | Longitude       | DLS<br>[°/100ft] | Comments       |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------|-----------------|------------------|----------------|
| 0.00†      | 0.000              | 11.419         | 0.00        | 0.00              | 0.00          | 0.00         | 40°39'31.932"N | 104°03'01.307"W | 0.00             |                |
| 25.00      | 0.000              | 11.419         | 25.00       | 0.00              | 0.00          | 0.00         | 40°39'31.932"N | 104°03'01.307"W | 0.00             | Tie On         |
| 125.00†    | 0.000              | 11.419         | 125.00      | 0.00              | 0.00          | 0.00         | 40°39'31.932"N | 104°03'01.307"W | 0.00             |                |
| 225.00†    | 0.000              | 11.419         | 225.00      | 0.00              | 0.00          | 0.00         | 40°39'31.932"N | 104°03'01.307"W | 0.00             |                |
| 325.00†    | 0.000              | 11.419         | 325.00      | 0.00              | 0.00          | 0.00         | 40°39'31.932"N | 104°03'01.307"W | 0.00             |                |
| 425.00†    | 0.000              | 11.419         | 425.00      | 0.00              | 0.00          | 0.00         | 40°39'31.932"N | 104°03'01.307"W | 0.00             |                |
| 525.00†    | 0.000              | 11.419         | 525.00      | 0.00              | 0.00          | 0.00         | 40°39'31.932"N | 104°03'01.307"W | 0.00             |                |
| 600.00     | 0.000              | 11.419         | 600.00      | 0.00              | 0.00          | 0.00         | 40°39'31.932"N | 104°03'01.307"W | 0.00             | End of Tangent |
| 625.00†    | 0.500              | 11.419         | 625.00      | 0.03              | 0.11          | 0.02         | 40°39'31.933"N | 104°03'01.307"W | 2.00             |                |
| 725.00†    | 2.500              | 11.419         | 724.96      | 0.86              | 2.67          | 0.54         | 40°39'31.958"N | 104°03'01.300"W | 2.00             |                |
| 825.00†    | 4.500              | 11.419         | 824.77      | 2.78              | 8.66          | 1.75         | 40°39'32.018"N | 104°03'01.284"W | 2.00             |                |
| 925.00†    | 6.500              | 11.419         | 924.30      | 5.80              | 18.05         | 3.65         | 40°39'32.110"N | 104°03'01.260"W | 2.00             |                |
| 1025.00†   | 8.500              | 11.419         | 1023.44     | 9.90              | 30.84         | 6.23         | 40°39'32.237"N | 104°03'01.226"W | 2.00             |                |
| 1125.00†   | 10.500             | 11.419         | 1122.07     | 15.10             | 47.02         | 9.50         | 40°39'32.397"N | 104°03'01.184"W | 2.00             |                |
| 1150.34    | 11.007             | 11.419         | 1146.96     | 16.59             | 51.66         | 10.43        | 40°39'32.442"N | 104°03'01.172"W | 2.00             | End of Build   |
| 1225.00†   | 11.007             | 11.419         | 1220.25     | 21.07             | 65.63         | 13.26        | 40°39'32.580"N | 104°03'01.135"W | 0.00             |                |
| 1325.00†   | 11.007             | 11.419         | 1318.41     | 27.08             | 84.34         | 17.04        | 40°39'32.765"N | 104°03'01.086"W | 0.00             |                |
| 1425.00†   | 11.007             | 11.419         | 1416.57     | 33.09             | 103.06        | 20.82        | 40°39'32.950"N | 104°03'01.037"W | 0.00             |                |
| 1525.00†   | 11.007             | 11.419         | 1514.73     | 39.10             | 121.77        | 24.60        | 40°39'33.135"N | 104°03'00.988"W | 0.00             |                |
| 1625.00†   | 11.007             | 11.419         | 1612.89     | 45.11             | 140.49        | 28.38        | 40°39'33.320"N | 104°03'00.939"W | 0.00             |                |
| 1725.00†   | 11.007             | 11.419         | 1711.05     | 51.12             | 159.20        | 32.16        | 40°39'33.505"N | 104°03'00.890"W | 0.00             |                |
| 1825.00†   | 11.007             | 11.419         | 1809.21     | 57.13             | 177.92        | 35.94        | 40°39'33.690"N | 104°03'00.841"W | 0.00             |                |
| 1925.00†   | 11.007             | 11.419         | 1907.37     | 63.14             | 196.63        | 39.72        | 40°39'33.875"N | 104°03'00.792"W | 0.00             |                |
| 2025.00†   | 11.007             | 11.419         | 2005.53     | 69.15             | 215.35        | 43.50        | 40°39'34.060"N | 104°03'00.743"W | 0.00             |                |
| 2125.00†   | 11.007             | 11.419         | 2103.69     | 75.16             | 234.06        | 47.28        | 40°39'34.245"N | 104°03'00.694"W | 0.00             |                |
| 2225.00†   | 11.007             | 11.419         | 2201.85     | 81.17             | 252.78        | 51.06        | 40°39'34.430"N | 104°03'00.645"W | 0.00             |                |
| 2325.00†   | 11.007             | 11.419         | 2300.01     | 87.18             | 271.49        | 54.84        | 40°39'34.615"N | 104°03'00.595"W | 0.00             |                |
| 2425.00†   | 11.007             | 11.419         | 2398.17     | 93.19             | 290.20        | 58.62        | 40°39'34.800"N | 104°03'00.546"W | 0.00             |                |
| 2525.00†   | 11.007             | 11.419         | 2496.33     | 99.20             | 308.92        | 62.40        | 40°39'34.984"N | 104°03'00.497"W | 0.00             |                |
| 2625.00†   | 11.007             | 11.419         | 2594.49     | 105.21            | 327.63        | 66.18        | 40°39'35.169"N | 104°03'00.448"W | 0.00             |                |
| 2725.00†   | 11.007             | 11.419         | 2692.65     | 111.22            | 346.35        | 69.96        | 40°39'35.354"N | 104°03'00.399"W | 0.00             |                |
| 2825.00†   | 11.007             | 11.419         | 2790.81     | 117.23            | 365.06        | 73.74        | 40°39'35.539"N | 104°03'00.350"W | 0.00             |                |
| 2925.00†   | 11.007             | 11.419         | 2888.98     | 123.23            | 383.78        | 77.52        | 40°39'35.724"N | 104°03'00.301"W | 0.00             |                |
| 3025.00†   | 11.007             | 11.419         | 2987.14     | 129.24            | 402.49        | 81.30        | 40°39'35.909"N | 104°03'00.252"W | 0.00             |                |
| 3125.00†   | 11.007             | 11.419         | 3085.30     | 135.25            | 421.21        | 85.08        | 40°39'36.094"N | 104°03'00.203"W | 0.00             |                |

**WELLPATH DATA (159 stations) † = interpolated/extrapolated station**

| MD [ft]  | Inclination [°] | Azimuth [°] | TVD [ft]             | Vert Sect [ft] | North [ft] | East [ft] | Latitude       | Longitude       | DLS [°/100ft] | Comments       |
|----------|-----------------|-------------|----------------------|----------------|------------|-----------|----------------|-----------------|---------------|----------------|
| 3225.00† | 11.007          | 11.419      | 3183.46              | 141.26         | 439.92     | 88.86     | 40°39'36.279"N | 104°03'00.154"W | 0.00          |                |
| 3325.00† | 11.007          | 11.419      | 3281.62              | 147.27         | 458.64     | 92.64     | 40°39'36.464"N | 104°03'00.105"W | 0.00          |                |
| 3333.54† | 11.007          | 11.419      | 3290.00              | 147.79         | 460.23     | 92.96     | 40°39'36.480"N | 104°03'00.101"W | 0.00          | Parkman        |
| 3425.00† | 11.007          | 11.419      | 3379.78              | 153.28         | 477.35     | 96.42     | 40°39'36.649"N | 104°03'00.056"W | 0.00          |                |
| 3525.00† | 11.007          | 11.419      | 3477.94              | 159.29         | 496.07     | 100.20    | 40°39'36.834"N | 104°03'00.007"W | 0.00          |                |
| 3625.00† | 11.007          | 11.419      | 3576.10              | 165.30         | 514.78     | 103.98    | 40°39'37.019"N | 104°02'59.958"W | 0.00          |                |
| 3725.00† | 11.007          | 11.419      | 3674.26              | 171.31         | 533.50     | 107.76    | 40°39'37.204"N | 104°02'59.909"W | 0.00          |                |
| 3825.00† | 11.007          | 11.419      | 3772.42              | 177.32         | 552.21     | 111.54    | 40°39'37.388"N | 104°02'59.860"W | 0.00          |                |
| 3925.00† | 11.007          | 11.419      | 3870.58              | 183.33         | 570.92     | 115.32    | 40°39'37.573"N | 104°02'59.811"W | 0.00          |                |
| 4025.00† | 11.007          | 11.419      | 3968.74              | 189.34         | 589.64     | 119.10    | 40°39'37.758"N | 104°02'59.762"W | 0.00          |                |
| 4125.00† | 11.007          | 11.419      | 4066.90              | 195.35         | 608.35     | 122.88    | 40°39'37.943"N | 104°02'59.713"W | 0.00          |                |
| 4168.91† | 11.007          | 11.419      | 4110.00              | 197.99         | 616.57     | 124.54    | 40°39'38.024"N | 104°02'59.691"W | 0.00          | Sussex         |
| 4225.00† | 11.007          | 11.419      | 4165.06              | 201.36         | 627.07     | 126.66    | 40°39'38.128"N | 104°02'59.664"W | 0.00          |                |
| 4325.00† | 11.007          | 11.419      | 4263.22              | 207.37         | 645.78     | 130.44    | 40°39'38.313"N | 104°02'59.615"W | 0.00          |                |
| 4425.00† | 11.007          | 11.419      | 4361.38              | 213.38         | 664.50     | 134.22    | 40°39'38.498"N | 104°02'59.565"W | 0.00          |                |
| 4525.00† | 11.007          | 11.419      | 4459.54              | 219.39         | 683.21     | 138.00    | 40°39'38.683"N | 104°02'59.516"W | 0.00          |                |
| 4625.00† | 11.007          | 11.419      | 4557.70              | 225.40         | 701.93     | 141.78    | 40°39'38.868"N | 104°02'59.467"W | 0.00          |                |
| 4725.00† | 11.007          | 11.419      | 4655.86              | 231.40         | 720.64     | 145.56    | 40°39'39.053"N | 104°02'59.418"W | 0.00          |                |
| 4825.00† | 11.007          | 11.419      | 4754.02              | 237.41         | 739.36     | 149.34    | 40°39'39.238"N | 104°02'59.369"W | 0.00          |                |
| 4925.00† | 11.007          | 11.419      | 4852.18              | 243.42         | 758.07     | 153.12    | 40°39'39.423"N | 104°02'59.320"W | 0.00          |                |
| 5024.65† | 11.007          | 11.419      | 4950.00              | 249.41         | 776.72     | 156.88    | 40°39'39.607"N | 104°02'59.271"W | 0.00          | Shannon        |
| 5025.00† | 11.007          | 11.419      | 4950.34              | 249.43         | 776.79     | 156.90    | 40°39'39.608"N | 104°02'59.271"W | 0.00          |                |
| 5125.00† | 11.007          | 11.419      | 5048.51              | 255.44         | 795.50     | 160.68    | 40°39'39.792"N | 104°02'59.222"W | 0.00          |                |
| 5225.00† | 11.007          | 11.419      | 5146.67              | 261.45         | 814.22     | 164.46    | 40°39'39.977"N | 104°02'59.173"W | 0.00          |                |
| 5325.00† | 11.007          | 11.419      | 5244.83              | 267.46         | 832.93     | 168.24    | 40°39'40.162"N | 104°02'59.124"W | 0.00          |                |
| 5425.00† | 11.007          | 11.419      | 5342.99              | 273.47         | 851.65     | 172.02    | 40°39'40.347"N | 104°02'59.075"W | 0.00          |                |
| 5525.00† | 11.007          | 11.419      | 5441.15              | 279.48         | 870.36     | 175.80    | 40°39'40.532"N | 104°02'59.026"W | 0.00          |                |
| 5625.00† | 11.007          | 11.419      | 5539.31              | 285.49         | 889.07     | 179.58    | 40°39'40.717"N | 104°02'58.977"W | 0.00          |                |
| 5725.00† | 11.007          | 11.419      | 5637.47              | 291.50         | 907.79     | 183.36    | 40°39'40.902"N | 104°02'58.928"W | 0.00          |                |
| 5751.38  | 11.007          | 11.419      | 5663.37              | 293.08         | 912.73     | 184.35    | 40°39'40.951"N | 104°02'58.915"W | 0.00          | End of Tangent |
| 5825.00† | 13.892          | 39.540      | 5735.31              | 301.71         | 926.45     | 191.38    | 40°39'41.086"N | 104°02'58.824"W | 9.00          |                |
| 5925.00† | 20.724          | 59.709      | 5830.81              | 326.71         | 944.67     | 214.35    | 40°39'41.266"N | 104°02'58.526"W | 9.00          |                |
| 6025.00† | 28.740          | 69.622      | 5921.60              | 366.42         | 962.00     | 252.24    | 40°39'41.438"N | 104°02'58.034"W | 9.00          |                |
| 6046.17† | 30.503          | 71.084      | 5940.00              | 376.62         | 965.51     | 262.09    | 40°39'41.472"N | 104°02'57.906"W | 9.00          | Sharon Springs |
| 6125.00† | 37.181          | 75.408      | 6005.45              | 419.86         | 978.01     | 304.13    | 40°39'41.596"N | 104°02'57.361"W | 9.00          |                |
| 6182.89† | 42.161          | 77.811      | 6050.00              | 456.57         | 986.53     | 340.07    | 40°39'41.680"N | 104°02'56.894"W | 9.00          | Niobrara A     |
| 6225.00† | 45.810          | 79.284      | 6080.29              | 485.71         | 992.32     | 368.73    | 40°39'41.737"N | 104°02'56.523"W | 9.00          |                |
| 6309.26† | 53.159          | 81.752      | 6135.00              | 549.66         | 1002.79    | 431.87    | 40°39'41.841"N | 104°02'55.703"W | 9.00          | Niobrara B     |
| 6325.00† | 54.537          | 82.159      | 6144.28              | 562.36         | 1004.57    | 444.45    | 40°39'41.858"N | 104°02'55.540"W | 9.00          |                |
| 6425.00† | 63.318          | 84.466      | 6195.85              | 647.92         | 1014.45    | 529.44    | 40°39'41.956"N | 104°02'54.437"W | 9.00          |                |
| 6470.91† | 67.361          | 85.403      | 6215.00              | 689.61         | 1018.13    | 570.99    | 40°39'41.992"N | 104°02'53.898"W | 9.00          | Niobrara C     |
| 6525.00† | 72.132          | 86.440      | 6233.72              | 740.28         | 1021.73    | 621.59    | 40°39'42.028"N | 104°02'53.241"W | 9.00          |                |
| 6625.00† | 80.963          | 88.226      | 6256.96              | 837.16         | 1026.23    | 718.64    | 40°39'42.072"N | 104°02'51.982"W | 9.00          |                |
| 6725.00† | 89.802          | 89.926      | 6265.01              | 936.19         | 1027.82    | 818.20    | 40°39'42.088"N | 104°02'50.690"W | 9.00          |                |
| 6731.10  | 90.342          | 90.028      | 6265.00 <sup>1</sup> | 942.25         | 1027.83    | 824.31    | 40°39'42.088"N | 104°02'50.611"W | 9.00          | End of 3D Arc  |
| 6825.00† | 90.342          | 90.028      | 6264.44              | 1035.45        | 1027.78    | 918.20    | 40°39'42.088"N | 104°02'49.393"W | 0.00          |                |
| 6925.00† | 90.342          | 90.028      | 6263.84              | 1134.71        | 1027.73    | 1018.20   | 40°39'42.087"N | 104°02'48.095"W | 0.00          |                |
| 7025.00† | 90.342          | 90.028      | 6263.25              | 1233.98        | 1027.68    | 1118.20   | 40°39'42.086"N | 104°02'46.798"W | 0.00          |                |
| 7125.00† | 90.342          | 90.028      | 6262.65              | 1333.24        | 1027.63    | 1218.20   | 40°39'42.086"N | 104°02'45.500"W | 0.00          |                |
| 7225.00† | 90.342          | 90.028      | 6262.05              | 1432.50        | 1027.58    | 1318.20   | 40°39'42.085"N | 104°02'44.202"W | 0.00          |                |

**WELLPATH DATA (159 stations) † = interpolated/extrapolated station**

| MD [ft]   | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Latitude       | Longitude       | DLS [°/100ft] | Comments |
|-----------|-----------------|-------------|----------|----------------|------------|-----------|----------------|-----------------|---------------|----------|
| 7325.00†  | 90.342          | 90.028      | 6261.46  | 1531.76        | 1027.53    | 1418.19   | 40°39'42.085"N | 104°02'42.905"W | 0.00          |          |
| 7425.00†  | 90.342          | 90.028      | 6260.86  | 1631.03        | 1027.48    | 1518.19   | 40°39'42.084"N | 104°02'41.607"W | 0.00          |          |
| 7525.00†  | 90.342          | 90.028      | 6260.26  | 1730.29        | 1027.43    | 1618.19   | 40°39'42.084"N | 104°02'40.310"W | 0.00          |          |
| 7625.00†  | 90.342          | 90.028      | 6259.67  | 1829.55        | 1027.38    | 1718.19   | 40°39'42.083"N | 104°02'39.012"W | 0.00          |          |
| 7725.00†  | 90.342          | 90.028      | 6259.07  | 1928.81        | 1027.33    | 1818.19   | 40°39'42.083"N | 104°02'37.715"W | 0.00          |          |
| 7825.00†  | 90.342          | 90.028      | 6258.48  | 2028.08        | 1027.28    | 1918.18   | 40°39'42.082"N | 104°02'36.417"W | 0.00          |          |
| 7925.00†  | 90.342          | 90.028      | 6257.88  | 2127.34        | 1027.23    | 2018.18   | 40°39'42.081"N | 104°02'35.120"W | 0.00          |          |
| 8025.00†  | 90.342          | 90.028      | 6257.28  | 2226.60        | 1027.18    | 2118.18   | 40°39'42.081"N | 104°02'33.822"W | 0.00          |          |
| 8125.00†  | 90.342          | 90.028      | 6256.69  | 2325.86        | 1027.13    | 2218.18   | 40°39'42.080"N | 104°02'32.524"W | 0.00          |          |
| 8225.00†  | 90.342          | 90.028      | 6256.09  | 2425.12        | 1027.08    | 2318.18   | 40°39'42.080"N | 104°02'31.227"W | 0.00          |          |
| 8325.00†  | 90.342          | 90.028      | 6255.49  | 2524.39        | 1027.03    | 2418.18   | 40°39'42.079"N | 104°02'29.929"W | 0.00          |          |
| 8425.00†  | 90.342          | 90.028      | 6254.90  | 2623.65        | 1026.98    | 2518.17   | 40°39'42.079"N | 104°02'28.632"W | 0.00          |          |
| 8525.00†  | 90.342          | 90.028      | 6254.30  | 2722.91        | 1026.93    | 2618.17   | 40°39'42.078"N | 104°02'27.334"W | 0.00          |          |
| 8625.00†  | 90.342          | 90.028      | 6253.70  | 2822.17        | 1026.88    | 2718.17   | 40°39'42.077"N | 104°02'26.037"W | 0.00          |          |
| 8725.00†  | 90.342          | 90.028      | 6253.11  | 2921.44        | 1026.83    | 2818.17   | 40°39'42.077"N | 104°02'24.739"W | 0.00          |          |
| 8825.00†  | 90.342          | 90.028      | 6252.51  | 3020.70        | 1026.78    | 2918.17   | 40°39'42.076"N | 104°02'23.442"W | 0.00          |          |
| 8925.00†  | 90.342          | 90.028      | 6251.91  | 3119.96        | 1026.73    | 3018.16   | 40°39'42.076"N | 104°02'22.144"W | 0.00          |          |
| 9025.00†  | 90.342          | 90.028      | 6251.32  | 3219.22        | 1026.68    | 3118.16   | 40°39'42.075"N | 104°02'20.847"W | 0.00          |          |
| 9125.00†  | 90.342          | 90.028      | 6250.72  | 3318.49        | 1026.63    | 3218.16   | 40°39'42.074"N | 104°02'19.549"W | 0.00          |          |
| 9225.00†  | 90.342          | 90.028      | 6250.13  | 3417.75        | 1026.59    | 3318.16   | 40°39'42.074"N | 104°02'18.251"W | 0.00          |          |
| 9325.00†  | 90.342          | 90.028      | 6249.53  | 3517.01        | 1026.54    | 3418.16   | 40°39'42.073"N | 104°02'16.954"W | 0.00          |          |
| 9425.00†  | 90.342          | 90.028      | 6248.93  | 3616.27        | 1026.49    | 3518.16   | 40°39'42.072"N | 104°02'15.656"W | 0.00          |          |
| 9525.00†  | 90.342          | 90.028      | 6248.34  | 3715.54        | 1026.44    | 3618.15   | 40°39'42.072"N | 104°02'14.359"W | 0.00          |          |
| 9625.00†  | 90.342          | 90.028      | 6247.74  | 3814.80        | 1026.39    | 3718.15   | 40°39'42.071"N | 104°02'13.061"W | 0.00          |          |
| 9725.00†  | 90.342          | 90.028      | 6247.14  | 3914.06        | 1026.34    | 3818.15   | 40°39'42.070"N | 104°02'11.764"W | 0.00          |          |
| 9825.00†  | 90.342          | 90.028      | 6246.55  | 4013.32        | 1026.29    | 3918.15   | 40°39'42.070"N | 104°02'10.466"W | 0.00          |          |
| 9925.00†  | 90.342          | 90.028      | 6245.95  | 4112.58        | 1026.24    | 4018.15   | 40°39'42.069"N | 104°02'09.169"W | 0.00          |          |
| 10025.00† | 90.342          | 90.028      | 6245.35  | 4211.85        | 1026.19    | 4118.14   | 40°39'42.069"N | 104°02'07.871"W | 0.00          |          |
| 10125.00† | 90.342          | 90.028      | 6244.76  | 4311.11        | 1026.14    | 4218.14   | 40°39'42.068"N | 104°02'06.573"W | 0.00          |          |
| 10225.00† | 90.342          | 90.028      | 6244.16  | 4410.37        | 1026.09    | 4318.14   | 40°39'42.067"N | 104°02'05.276"W | 0.00          |          |
| 10325.00† | 90.342          | 90.028      | 6243.56  | 4509.63        | 1026.04    | 4418.14   | 40°39'42.067"N | 104°02'03.978"W | 0.00          |          |
| 10425.00† | 90.342          | 90.028      | 6242.97  | 4608.90        | 1025.99    | 4518.14   | 40°39'42.066"N | 104°02'02.681"W | 0.00          |          |
| 10525.00† | 90.342          | 90.028      | 6242.37  | 4708.16        | 1025.94    | 4618.14   | 40°39'42.065"N | 104°02'01.383"W | 0.00          |          |
| 10625.00† | 90.342          | 90.028      | 6241.78  | 4807.42        | 1025.89    | 4718.13   | 40°39'42.065"N | 104°02'00.086"W | 0.00          |          |
| 10725.00† | 90.342          | 90.028      | 6241.18  | 4906.68        | 1025.84    | 4818.13   | 40°39'42.064"N | 104°01'58.788"W | 0.00          |          |
| 10825.00† | 90.342          | 90.028      | 6240.58  | 5005.95        | 1025.79    | 4918.13   | 40°39'42.063"N | 104°01'57.491"W | 0.00          |          |
| 10925.00† | 90.342          | 90.028      | 6239.99  | 5105.21        | 1025.74    | 5018.13   | 40°39'42.062"N | 104°01'56.193"W | 0.00          |          |
| 11025.00† | 90.342          | 90.028      | 6239.39  | 5204.47        | 1025.69    | 5118.13   | 40°39'42.062"N | 104°01'54.895"W | 0.00          |          |
| 11125.00† | 90.342          | 90.028      | 6238.79  | 5303.73        | 1025.64    | 5218.13   | 40°39'42.061"N | 104°01'53.598"W | 0.00          |          |
| 11225.00† | 90.342          | 90.028      | 6238.20  | 5402.99        | 1025.59    | 5318.12   | 40°39'42.060"N | 104°01'52.300"W | 0.00          |          |
| 11325.00† | 90.342          | 90.028      | 6237.60  | 5502.26        | 1025.54    | 5418.12   | 40°39'42.060"N | 104°01'51.003"W | 0.00          |          |
| 11425.00† | 90.342          | 90.028      | 6237.00  | 5601.52        | 1025.49    | 5518.12   | 40°39'42.059"N | 104°01'49.705"W | 0.00          |          |
| 11525.00† | 90.342          | 90.028      | 6236.41  | 5700.78        | 1025.44    | 5618.12   | 40°39'42.058"N | 104°01'48.408"W | 0.00          |          |
| 11625.00† | 90.342          | 90.028      | 6235.81  | 5800.04        | 1025.39    | 5718.12   | 40°39'42.058"N | 104°01'47.110"W | 0.00          |          |
| 11725.00† | 90.342          | 90.028      | 6235.21  | 5899.31        | 1025.34    | 5818.11   | 40°39'42.057"N | 104°01'45.813"W | 0.00          |          |
| 11825.00† | 90.342          | 90.028      | 6234.62  | 5998.57        | 1025.29    | 5918.11   | 40°39'42.056"N | 104°01'44.515"W | 0.00          |          |
| 11925.00† | 90.342          | 90.028      | 6234.02  | 6097.83        | 1025.24    | 6018.11   | 40°39'42.055"N | 104°01'43.218"W | 0.00          |          |
| 12025.00† | 90.342          | 90.028      | 6233.43  | 6197.09        | 1025.19    | 6118.11   | 40°39'42.055"N | 104°01'41.920"W | 0.00          |          |
| 12125.00† | 90.342          | 90.028      | 6232.83  | 6296.36        | 1025.14    | 6218.11   | 40°39'42.054"N | 104°01'40.622"W | 0.00          |          |
| 12225.00† | 90.342          | 90.028      | 6232.23  | 6395.62        | 1025.09    | 6318.11   | 40°39'42.053"N | 104°01'39.325"W | 0.00          |          |

**WELLPATH DATA (159 stations) † = interpolated/extrapolated station**

| MD [ft]   | Inclination [°] | Azimuth [°] | TVD [ft]             | Vert Sect [ft] | North [ft] | East [ft] | Latitude       | Longitude       | DLS [°/100ft] | Comments       |
|-----------|-----------------|-------------|----------------------|----------------|------------|-----------|----------------|-----------------|---------------|----------------|
| 12325.00† | 90.342          | 90.028      | 6231.64              | 6494.88        | 1025.04    | 6418.10   | 40°39'42.052"N | 104°01'38.027"W | 0.00          |                |
| 12425.00† | 90.342          | 90.028      | 6231.04              | 6594.14        | 1024.99    | 6518.10   | 40°39'42.052"N | 104°01'36.730"W | 0.00          |                |
| 12525.00† | 90.342          | 90.028      | 6230.44              | 6693.40        | 1024.94    | 6618.10   | 40°39'42.051"N | 104°01'35.432"W | 0.00          |                |
| 12625.00† | 90.342          | 90.028      | 6229.85              | 6792.67        | 1024.89    | 6718.10   | 40°39'42.050"N | 104°01'34.135"W | 0.00          |                |
| 12725.00† | 90.342          | 90.028      | 6229.25              | 6891.93        | 1024.84    | 6818.10   | 40°39'42.049"N | 104°01'32.837"W | 0.00          |                |
| 12825.00† | 90.342          | 90.028      | 6228.65              | 6991.19        | 1024.80    | 6918.09   | 40°39'42.049"N | 104°01'31.540"W | 0.00          |                |
| 12925.00† | 90.342          | 90.028      | 6228.06              | 7090.45        | 1024.75    | 7018.09   | 40°39'42.048"N | 104°01'30.242"W | 0.00          |                |
| 13025.00† | 90.342          | 90.028      | 6227.46              | 7189.72        | 1024.70    | 7118.09   | 40°39'42.047"N | 104°01'28.944"W | 0.00          |                |
| 13125.00† | 90.342          | 90.028      | 6226.86              | 7288.98        | 1024.65    | 7218.09   | 40°39'42.046"N | 104°01'27.647"W | 0.00          |                |
| 13225.00† | 90.342          | 90.028      | 6226.27              | 7388.24        | 1024.60    | 7318.09   | 40°39'42.045"N | 104°01'26.349"W | 0.00          |                |
| 13325.00† | 90.342          | 90.028      | 6225.67              | 7487.50        | 1024.55    | 7418.09   | 40°39'42.045"N | 104°01'25.052"W | 0.00          |                |
| 13425.00† | 90.342          | 90.028      | 6225.08              | 7586.77        | 1024.50    | 7518.08   | 40°39'42.044"N | 104°01'23.754"W | 0.00          |                |
| 13525.00† | 90.342          | 90.028      | 6224.48              | 7686.03        | 1024.45    | 7618.08   | 40°39'42.043"N | 104°01'22.457"W | 0.00          |                |
| 13625.00† | 90.342          | 90.028      | 6223.88              | 7785.29        | 1024.40    | 7718.08   | 40°39'42.042"N | 104°01'21.159"W | 0.00          |                |
| 13725.00† | 90.342          | 90.028      | 6223.29              | 7884.55        | 1024.35    | 7818.08   | 40°39'42.041"N | 104°01'19.862"W | 0.00          |                |
| 13825.00† | 90.342          | 90.028      | 6222.69              | 7983.81        | 1024.30    | 7918.08   | 40°39'42.041"N | 104°01'18.564"W | 0.00          |                |
| 13925.00† | 90.342          | 90.028      | 6222.09              | 8083.08        | 1024.25    | 8018.08   | 40°39'42.040"N | 104°01'17.267"W | 0.00          |                |
| 14025.00† | 90.342          | 90.028      | 6221.50              | 8182.34        | 1024.20    | 8118.07   | 40°39'42.039"N | 104°01'15.969"W | 0.00          |                |
| 14125.00† | 90.342          | 90.028      | 6220.90              | 8281.60        | 1024.15    | 8218.07   | 40°39'42.038"N | 104°01'14.671"W | 0.00          |                |
| 14225.00† | 90.342          | 90.028      | 6220.30              | 8380.86        | 1024.10    | 8318.07   | 40°39'42.037"N | 104°01'13.374"W | 0.00          |                |
| 14275.93  | 90.342          | 90.028      | 6220.00 <sup>2</sup> | 8431.42        | 1024.07    | 8369.00   | 40°39'42.037"N | 104°01'12.713"W | 0.00          | End of Tangent |
| 14325.00† | 89.763          | 90.455      | 6219.96              | 8480.10        | 1023.87    | 8418.07   | 40°39'42.035"N | 104°01'12.076"W | 1.46          |                |
| 14332.25  | 89.678          | 90.517      | 6219.99              | 8487.29        | 1023.81    | 8425.31   | 40°39'42.034"N | 104°01'11.982"W | 1.46          | End of 3D Arc  |
| 14333.97  | 89.678          | 90.517      | 6220.00 <sup>3</sup> | 8488.99        | 1023.79    | 8427.03   | 40°39'42.034"N | 104°01'11.960"W | 0.00          | End of Tangent |

**HOLE & CASING SECTIONS**
**- Ref Wellbore: BOOMSLANG FED 8-60 14B-13-18-2 PWB      Ref Wellpath: BOOMSLANG FED 8-60 14B-13-18-2 (REV-A.0) PWP**

| String/Diameter        | Start MD [ft] | End MD [ft] | Interval [ft] | Start TVD [ft] | End TVD [ft] | Start N/S [ft] | Start E/W [ft] | End N/S [ft] | End E/W [ft] |
|------------------------|---------------|-------------|---------------|----------------|--------------|----------------|----------------|--------------|--------------|
| 13.5in Open Hole       | 25.00         | 2000.00     | 1975.00       | 25.00          | 1980.99      | 0.00           | 0.00           | 210.67       | 42.55        |
| 9.625in Casing Surface | 25.00         | 2000.00     | 1975.00       | 25.00          | 1980.99      | 0.00           | 0.00           | 210.67       | 42.55        |
| 8.5in Open Hole        | 2000.00       | 14333.97    | 12333.97      | 1980.99        | 6220.00      | 210.67         | 42.55          | 1023.79      | 8427.03      |

**TARGETS**

| Name  | MD [ft]  | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude       | Longitude       | Shape   |
|---|----------|----------|------------|-----------|-------------------|--------------------|----------------|-----------------|---------|
| SEC.13-T08N-R60W  |          | 15.00    | 2622.44    | -423.33   | 3401713.12        | 1488771.48         | 40°39'57.845"N | 104°03'06.800"W | polygon |
| SEC.14-T08N-R60W  |          | 15.00    | 2622.44    | -423.33   | 3401713.12        | 1488771.48         | 40°39'57.845"N | 104°03'06.800"W | polygon |
| SEC.18-T08N-R59W  |          | 15.00    | 2622.44    | -423.33   | 3401713.12        | 1488771.48         | 40°39'57.845"N | 104°03'06.800"W | polygon |
| 3) BOOMSLANG FED 8-60 14B-13-18-2 BHL PLAT (2358'FSL & 2615'FWL,SEC.18) | 14333.97 | 6220.00  | 1023.79    | 8427.03   | 3410588.26        | 1487317.75         | 40°39'42.034"N | 104°01'11.960"W | point   |
| 2) BOOMSLANG FED 8-60 14B-13-18-2 EPI PLAT (2357'FSL & 2557'FWL,SEC.18) | 14275.93 | 6220.00  | 1024.07    | 8369.00   | 3410530.23        | 1487317.08         | 40°39'42.037"N | 104°01'12.713"W | point   |

| <b>TARGETS</b>   |         |          |            |           |                   |                    |                |                 |         |
|--|---------|----------|------------|-----------|-------------------|--------------------|----------------|-----------------|---------|
| Name   | MD [ft] | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude       | Longitude       | Shape   |
| 1) BOOMSLANG FED 8-60 14B-13-18-2 BPI PLAT (2337'FSL & 300'FWL,SEC.13) | 6731.10 | 6265.00  | 1027.83    | 824.31    | 3402986.63        | 1487197.50         | 40°39'42.088"N | 104°02'50.611"W | point   |
| HARDLINES 300' SETBACK   |         | 6315.00  | 2622.44    | -423.33   | 3401713.12        | 1488771.48         | 40°39'57.845"N | 104°03'06.800"W | polygon |

| <b>SURVEY PROGRAM - Ref Wellbore: BOOMSLANG FED 8-60 14B-13-18-2 PWB</b> |             |   |  |  |  | <b>Ref Wellpath: BOOMSLANG FED 8-60 14B-13-18-2 (REV-A.0) PWP</b> |  |                                    |  |
|--|-------------|---|--|--|--|---|--|------------------------------------|--|
| Start MD [ft]  | End MD [ft] | Positional Uncertainty Model                          |  |  |  | Log Name/Comment  |  | Wellbore                           |  |
| 25.00  | 2000.00     | OWSG MWD rev2 + IFR1 + Multi-Station Correction       |  |  |  |   |  | BOOMSLANG FED 8-60 14B-13-18-2 PWB |  |
| 2000.00  | 14333.97    | OWSG MWD rev2 + IFR1 + Sag + Multi-Station Correction |  |  |  |   |  | BOOMSLANG FED 8-60 14B-13-18-2 PWB |  |



# Planned Wellpath Report

BOOMSLANG FED 8-60 14B-13-18-2 (REV-A.0) PWP  
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## REFERENCE WELLPATH IDENTIFICATION

|          |                        |          |  |
|----------|------------------------|----------|--|
| Operator | BISON OIL & GAS        | Slot     | SLOT#05 BOOMSLANG FED 8-60 14B-13-18-2 (1313'FSL & 504'FEL,SEC.14) |
| Area     | COLORADO               | Well     | BOOMSLANG FED 8-60 14B-13-18-2                                     |
| Field    | WELD COUNTY (NAD83/TN) | Wellbore | BOOMSLANG FED 8-60 14B-13-18-2 PWB                                 |
| Facility | SEC.14-T08N-R60W       |          |  |

## WELLPATH COMMENTS

| MD [ft] | Inclination [°] | Azimuth [°] | TVD [ft] | Comment        |
|---------|-----------------|-------------|----------|----------------|
| 3333.54 | 11.007          | 11.419      | 3290.00  | Parkman        |
| 4168.91 | 11.007          | 11.419      | 4110.00  | Sussex         |
| 5024.65 | 11.007          | 11.419      | 4950.00  | Shannon        |
| 6046.17 | 30.503          | 71.084      | 5940.00  | Sharon Springs |
| 6182.89 | 42.161          | 77.811      | 6050.00  | Niobrara A     |
| 6309.26 | 53.159          | 81.752      | 6135.00  | Niobrara B     |
| 6470.91 | 67.361          | 85.403      | 6215.00  | Niobrara C     |

## DESIGN COMMENTS

| MD [ft]  | Inclination [°] | Azimuth [°] | TVD [ft] | Comment        |
|----------|-----------------|-------------|----------|----------------|
| 25.00    | 0.000           | 11.419      | 25.00    | Tie On         |
| 600.00   | 0.000           | 11.419      | 600.00   | End of Tangent |
| 1150.34  | 11.007          | 11.419      | 1146.96  | End of Build   |
| 5751.38  | 11.007          | 11.419      | 5663.37  | End of Tangent |
| 6731.10  | 90.342          | 90.028      | 6265.00  | End of 3D Arc  |
| 14275.93 | 90.342          | 90.028      | 6220.00  | End of Tangent |
| 14332.25 | 89.678          | 90.517      | 6219.99  | End of 3D Arc  |
| 14333.97 | 89.678          | 90.517      | 6220.00  | End of Tangent |