

# PETROLEUM DEVELOPMENT CORP Weld County CO

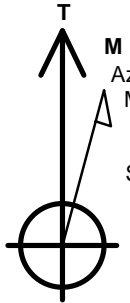
Well Name: **Spaur 10T-421**

Surface Location: Spaur 4N67W10LQ Pad Sec.10-T4N-R67W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 4831.0

| +N/-S                                 | +E/-W | Northing   | Easting    | Latitude  | Longitude   | Slot |
|---------------------------------------|-------|------------|------------|-----------|-------------|------|
| 0.0                                   | 0.0   | 1360156.41 | 3173452.25 | 40.320360 | -104.877940 |      |
| RKB - 13' WELL @ 4844.0ft (RKB - 13') |       |            |            |           |             |      |

## WELLBORE TARGET DETAILS

| Name                       | TVD    | +N/-S  | +E/-W  | Shape                             |
|----------------------------|--------|--------|--------|-----------------------------------|
| 50' E/W Hardline (10T-421) | 1.0    | 2510.4 | 1960.0 | Rectangle (Sides: L3926.8 W100.0) |
| SHL 284'FSL & 2393'FWL     | 1.0    | 0.0    | 0.0    | Point                             |
| BHL 500'FNL & 908'FEL      | 7257.0 | 4473.8 | 1960.0 | Point                             |



Azimuths to True North  
Magnetic North: 8.38°

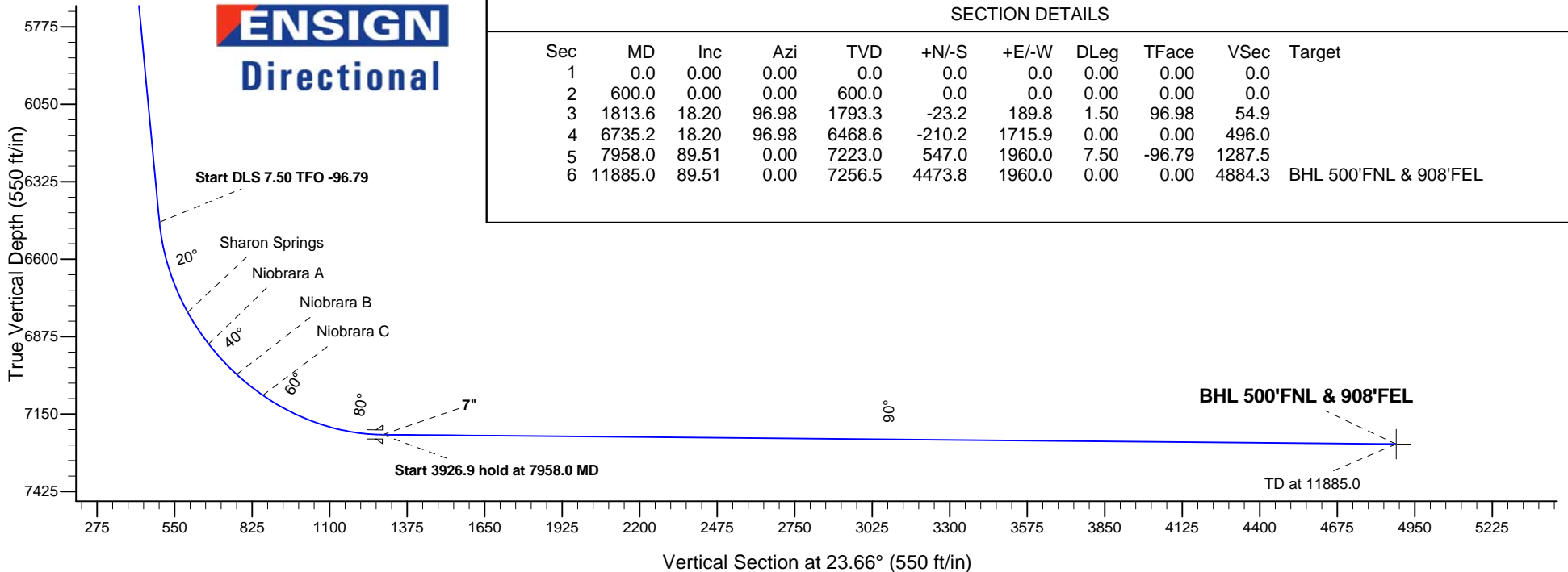
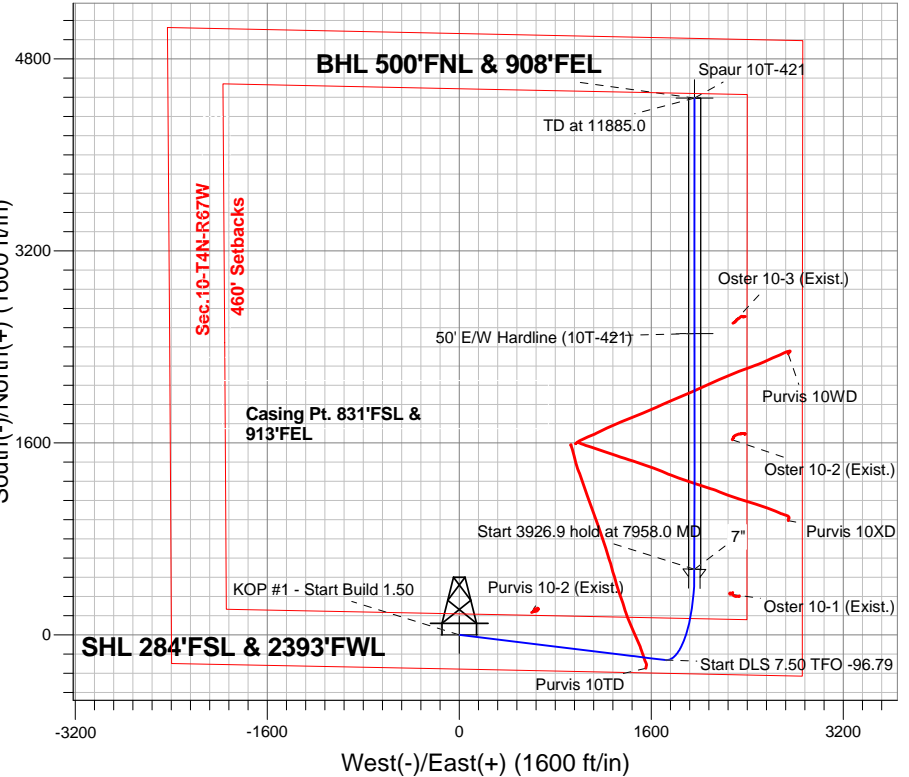
Magnetic Field  
Strength: 52657.6snT  
Dip Angle: 66.83°  
Date: 6/11/2015  
Model: IGRF2010

## ANNOTATIONS

| TVD    | MD      | Annotation                     |
|--------|---------|--------------------------------|
| 600.0  | 600.0   | KOP #1 - Start Build 1.50      |
| 6468.6 | 6735.2  | Start DLS 7.50 TFO -96.79      |
| 7223.0 | 7958.0  | Start 3926.9 hold at 7958.0 MD |
| 7256.5 | 11885.0 | TD at 11885.0                  |

Spaur 4N67W10LQ Pad Sec.10-T4N-R67W  
Spaur 10T-421  
Plan #1 (6-11-15)

South(-)/North(+) (1600 ft/in)



## SECTION DETAILS

| Sec | MD      | Inc   | Azi   | TVD    | +N/-S  | +E/-W  | DLeg | TFace  | VSec   | Target                |
|-----|---------|-------|-------|--------|--------|--------|------|--------|--------|-----------------------|
| 1   | 0.0     | 0.00  | 0.00  | 0.0    | 0.0    | 0.0    | 0.00 | 0.00   | 0.0    |                       |
| 2   | 600.0   | 0.00  | 0.00  | 600.0  | 0.0    | 0.0    | 0.00 | 0.00   | 0.0    |                       |
| 3   | 1813.6  | 18.20 | 96.98 | 1793.3 | -23.2  | 189.8  | 1.50 | 96.98  | 54.9   |                       |
| 4   | 6735.2  | 18.20 | 96.98 | 6468.6 | -210.2 | 1715.9 | 0.00 | 0.00   | 496.0  |                       |
| 5   | 7958.0  | 89.51 | 0.00  | 7223.0 | 547.0  | 1960.0 | 7.50 | -96.79 | 1287.5 |                       |
| 6   | 11885.0 | 89.51 | 0.00  | 7256.5 | 4473.8 | 1960.0 | 0.00 | 0.00   | 4884.3 | BHL 500'FNL & 908'FEL |



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.10-T4N-R67W**

**Spaur 4N67W10LQ Pad Sec.10-T4N-R67W**

**Spaur 10T-421**

**Wellbore #1**

**Plan: Plan #1 (6-11-15)**

## **Standard Planning Report**

**16 June, 2015**

|                  |                                           |                                     |                             |
|------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db                | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Company:</b>  | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Project:</b>  | SEC.10-T4N-R67W                           | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site:</b>     | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>North Reference:</b>             | True                        |
| <b>Well:</b>     | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Wellbore:</b> | Wellbore #1                               |                                     |                             |
| <b>Design:</b>   | Plan #1 (6-11-15)                         |                                     |                             |

|                    |                                        |                      |                             |
|--------------------|----------------------------------------|----------------------|-----------------------------|
| <b>Project</b>     | SEC.10-T4N-R67W, Weld County, Colorado |                      |                             |
| <b>Map System:</b> | US State Plane 1983                    | <b>System Datum:</b> | Mean Sea Level              |
| <b>Geo Datum:</b>  | North American Datum 1983              |                      |                             |
| <b>Map Zone:</b>   | Colorado Northern Zone                 |                      | Using geodetic scale factor |

|                       |  |  |          |  |  |                                     |  |  |                 |  |  |                   |  |  |             |  |  |
|-----------------------|--|--|----------|--|--|-------------------------------------|--|--|-----------------|--|--|-------------------|--|--|-------------|--|--|
| Site                  |  |  |          |  |  | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W |  |  |                 |  |  |                   |  |  |             |  |  |
| Site Position:        |  |  |          |  |  | Northing:                           |  |  | 1,360,247.47 ft |  |  | Latitude:         |  |  | 40.320610   |  |  |
| From:                 |  |  | Lat/Long |  |  | Easting:                            |  |  | 3,173,448.83 ft |  |  | Longitude:        |  |  | -104.877950 |  |  |
| Position Uncertainty: |  |  | 0.0 ft   |  |  | Slot Radius:                        |  |  | "               |  |  | Grid Convergence: |  |  | 0.40 °      |  |  |

|                      |               |          |                     |                 |               |             |
|----------------------|---------------|----------|---------------------|-----------------|---------------|-------------|
| Well                 | Spaur 10T-421 |          |                     |                 |               |             |
| Well Position        | +N/-S         | -91.1 ft | Northing:           | 1,360,156.41 ft | Latitude:     | 40.320360   |
|                      | +E/-W         | 2.8 ft   | Easting:            | 3,173,452.25 ft | Longitude:    | -104.877940 |
| Position Uncertainty |               | 0.0 ft   | Wellhead Elevation: | ft              | Ground Level: | 4,831.0 ft  |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 6/11/2015          | 8.38                   | 66.83                | 52,658                     |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | Plan #1 (6-11-15)            |                   |                      |                      |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                | PROTOTYPE         | <b>Tie On Depth:</b> | 0.0                  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.0                          | 0.0               | 0.0                  | 23.66                |

| <b>Plan Sections</b> |                 |             |                     |            |            |                       |                      |                     |         |                   |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|-------------------|
| Measured Depth (ft)  | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target            |
| 0.0                  | 0.00            | 0.00        | 0.0                 | 0.0        | 0.0        | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 600.0                | 0.00            | 0.00        | 600.0               | 0.0        | 0.0        | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 1,813.6              | 18.20           | 96.98       | 1,793.3             | -23.2      | 189.8      | 1.50                  | 1.50                 | 0.00                | 96.98   |                   |
| 6,735.2              | 18.20           | 96.98       | 6,468.6             | -210.2     | 1,715.9    | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 7,958.0              | 89.51           | 0.00        | 7,223.0             | 547.0      | 1,960.0    | 7.50                  | 5.83                 | -7.93               | -96.79  |                   |
| 11,885.0             | 89.51           | 0.00        | 7,256.5             | 4,473.8    | 1,960.0    | 0.00                  | 0.00                 | 0.00                | 0.00    | BHL 500'FNL & 90° |

|                  |                                           |                                     |                             |
|------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db                | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Company:</b>  | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Project:</b>  | SEC.10-T4N-R67W                           | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site:</b>     | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>North Reference:</b>             | True                        |
| <b>Well:</b>     | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Wellbore:</b> | Wellbore #1                               |                                     |                             |
| <b>Design:</b>   | Plan #1 (6-11-15)                         |                                     |                             |

| Planned 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) |
| 0.0                              | 0.00            | 0.00        | 0.0                 | 0.0       | 0.0       | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 100.0                            | 0.00            | 0.00        | 100.0               | 0.0       | 0.0       | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 200.0                            | 0.00            | 0.00        | 200.0               | 0.0       | 0.0       | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 300.0                            | 0.00            | 0.00        | 300.0               | 0.0       | 0.0       | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 400.0                            | 0.00            | 0.00        | 400.0               | 0.0       | 0.0       | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 500.0                            | 0.00            | 0.00        | 500.0               | 0.0       | 0.0       | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 600.0                            | 0.00            | 0.00        | 600.0               | 0.0       | 0.0       | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| <b>KOP #1 - Start Build 1.50</b> |                 |             |                     |           |           |                       |                       |                      |                     |
| 700.0                            | 1.50            | 96.98       | 700.0               | -0.2      | 1.3       | 0.4                   | 1.50                  | 1.50                 | 0.00                |
| 800.0                            | 3.00            | 96.98       | 799.9               | -0.6      | 5.2       | 1.5                   | 1.50                  | 1.50                 | 0.00                |
| 900.0                            | 4.50            | 96.98       | 899.7               | -1.4      | 11.7      | 3.4                   | 1.50                  | 1.50                 | 0.00                |
| 1,000.0                          | 6.00            | 96.98       | 999.3               | -2.5      | 20.8      | 6.0                   | 1.50                  | 1.50                 | 0.00                |
| 1,100.0                          | 7.50            | 96.98       | 1,098.6             | -4.0      | 32.4      | 9.4                   | 1.50                  | 1.50                 | 0.00                |
| 1,200.0                          | 9.00            | 96.98       | 1,197.5             | -5.7      | 46.7      | 13.5                  | 1.50                  | 1.50                 | 0.00                |
| 1,300.0                          | 10.50           | 96.98       | 1,296.1             | -7.8      | 63.5      | 18.4                  | 1.50                  | 1.50                 | 0.00                |
| 1,400.0                          | 12.00           | 96.98       | 1,394.2             | -10.1     | 82.9      | 23.9                  | 1.50                  | 1.50                 | 0.00                |
| 1,500.0                          | 13.50           | 96.98       | 1,491.7             | -12.8     | 104.8     | 30.3                  | 1.50                  | 1.50                 | 0.00                |
| 1,600.0                          | 15.00           | 96.98       | 1,588.6             | -15.8     | 129.2     | 37.3                  | 1.50                  | 1.50                 | 0.00                |
| 1,700.0                          | 16.50           | 96.98       | 1,684.9             | -19.1     | 156.1     | 45.1                  | 1.50                  | 1.50                 | 0.00                |
| 1,800.0                          | 18.00           | 96.98       | 1,780.4             | -22.7     | 185.6     | 53.6                  | 1.50                  | 1.50                 | 0.00                |
| 1,813.6                          | 18.20           | 96.98       | 1,793.3             | -23.2     | 189.8     | 54.9                  | 1.50                  | 1.50                 | 0.00                |
| 1,900.0                          | 18.20           | 96.98       | 1,875.4             | -26.5     | 216.5     | 62.6                  | 0.00                  | 0.00                 | 0.00                |
| 2,000.0                          | 18.20           | 96.98       | 1,970.4             | -30.3     | 247.6     | 71.6                  | 0.00                  | 0.00                 | 0.00                |
| 2,100.0                          | 18.20           | 96.98       | 2,065.4             | -34.1     | 278.6     | 80.5                  | 0.00                  | 0.00                 | 0.00                |
| 2,200.0                          | 18.20           | 96.98       | 2,160.3             | -37.9     | 309.6     | 89.5                  | 0.00                  | 0.00                 | 0.00                |
| 2,300.0                          | 18.20           | 96.98       | 2,255.3             | -41.7     | 340.6     | 98.5                  | 0.00                  | 0.00                 | 0.00                |
| 2,400.0                          | 18.20           | 96.98       | 2,350.3             | -45.5     | 371.6     | 107.4                 | 0.00                  | 0.00                 | 0.00                |
| 2,500.0                          | 18.20           | 96.98       | 2,445.3             | -49.3     | 402.6     | 116.4                 | 0.00                  | 0.00                 | 0.00                |
| 2,600.0                          | 18.20           | 96.98       | 2,540.3             | -53.1     | 433.6     | 125.3                 | 0.00                  | 0.00                 | 0.00                |
| 2,700.0                          | 18.20           | 96.98       | 2,635.3             | -56.9     | 464.6     | 134.3                 | 0.00                  | 0.00                 | 0.00                |
| 2,800.0                          | 18.20           | 96.98       | 2,730.3             | -60.7     | 495.6     | 143.3                 | 0.00                  | 0.00                 | 0.00                |
| 2,900.0                          | 18.20           | 96.98       | 2,825.3             | -64.5     | 526.6     | 152.2                 | 0.00                  | 0.00                 | 0.00                |
| 3,000.0                          | 18.20           | 96.98       | 2,920.3             | -68.3     | 557.6     | 161.2                 | 0.00                  | 0.00                 | 0.00                |
| 3,100.0                          | 18.20           | 96.98       | 3,015.3             | -72.1     | 588.7     | 170.2                 | 0.00                  | 0.00                 | 0.00                |
| 3,200.0                          | 18.20           | 96.98       | 3,110.3             | -75.9     | 619.7     | 179.1                 | 0.00                  | 0.00                 | 0.00                |
| 3,300.0                          | 18.20           | 96.98       | 3,205.3             | -79.7     | 650.7     | 188.1                 | 0.00                  | 0.00                 | 0.00                |
| 3,400.0                          | 18.20           | 96.98       | 3,300.3             | -83.5     | 681.7     | 197.1                 | 0.00                  | 0.00                 | 0.00                |
| 3,500.0                          | 18.20           | 96.98       | 3,395.3             | -87.3     | 712.7     | 206.0                 | 0.00                  | 0.00                 | 0.00                |
| 3,600.0                          | 18.20           | 96.98       | 3,490.3             | -91.1     | 743.7     | 215.0                 | 0.00                  | 0.00                 | 0.00                |
| 3,673.4                          | 18.20           | 96.98       | 3,560.0             | -93.9     | 766.5     | 221.6                 | 0.00                  | 0.00                 | 0.00                |
| <b>Parkman</b>                   |                 |             |                     |           |           |                       |                       |                      |                     |
| 3,700.0                          | 18.20           | 96.98       | 3,585.3             | -94.9     | 774.7     | 223.9                 | 0.00                  | 0.00                 | 0.00                |
| 3,800.0                          | 18.20           | 96.98       | 3,680.3             | -98.7     | 805.7     | 232.9                 | 0.00                  | 0.00                 | 0.00                |
| 3,900.0                          | 18.20           | 96.98       | 3,775.3             | -102.5    | 836.7     | 241.9                 | 0.00                  | 0.00                 | 0.00                |
| 4,000.0                          | 18.20           | 96.98       | 3,870.3             | -106.3    | 867.7     | 250.8                 | 0.00                  | 0.00                 | 0.00                |
| 4,100.0                          | 18.20           | 96.98       | 3,965.2             | -110.1    | 898.7     | 259.8                 | 0.00                  | 0.00                 | 0.00                |
| 4,200.0                          | 18.20           | 96.98       | 4,060.2             | -113.9    | 929.7     | 268.8                 | 0.00                  | 0.00                 | 0.00                |
| 4,241.9                          | 18.20           | 96.98       | 4,100.0             | -115.5    | 942.7     | 272.5                 | 0.00                  | 0.00                 | 0.00                |
| <b>Sussex</b>                    |                 |             |                     |           |           |                       |                       |                      |                     |
| 4,300.0                          | 18.20           | 96.98       | 4,155.2             | -117.7    | 960.8     | 277.7                 | 0.00                  | 0.00                 | 0.00                |
| 4,400.0                          | 18.20           | 96.98       | 4,250.2             | -121.5    | 991.8     | 286.7                 | 0.00                  | 0.00                 | 0.00                |
| 4,500.0                          | 18.20           | 96.98       | 4,345.2             | -125.3    | 1,022.8   | 295.7                 | 0.00                  | 0.00                 | 0.00                |
| 4,600.0                          | 18.20           | 96.98       | 4,440.2             | -129.1    | 1,053.8   | 304.6                 | 0.00                  | 0.00                 | 0.00                |

|                  |                                           |                                     |                             |
|------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db                | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Company:</b>  | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Project:</b>  | SEC.10-T4N-R67W                           | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site:</b>     | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>North Reference:</b>             | True                        |
| <b>Well:</b>     | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Wellbore:</b> | Wellbore #1                               |                                     |                             |
| <b>Design:</b>   | Plan #1 (6-11-15)                         |                                     |                             |

## Planned 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) |
|-----------------------------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 4,700.0                                             | 18.20           | 96.98       | 4,535.2             | -132.9     | 1,084.8    | 313.6                 | 0.00                  | 0.00                 | 0.00                |
| 4,785.0                                             | 18.20           | 96.98       | 4,616.0             | -136.1     | 1,111.2    | 321.2                 | 0.00                  | 0.00                 | 0.00                |
| <b>Shannon</b>                                      |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,800.0                                             | 18.20           | 96.98       | 4,630.2             | -136.7     | 1,115.8    | 322.5                 | 0.00                  | 0.00                 | 0.00                |
| 4,900.0                                             | 18.20           | 96.98       | 4,725.2             | -140.5     | 1,146.8    | 331.5                 | 0.00                  | 0.00                 | 0.00                |
| 5,000.0                                             | 18.20           | 96.98       | 4,820.2             | -144.3     | 1,177.8    | 340.5                 | 0.00                  | 0.00                 | 0.00                |
| 5,100.0                                             | 18.20           | 96.98       | 4,915.2             | -148.1     | 1,208.8    | 349.4                 | 0.00                  | 0.00                 | 0.00                |
| 5,200.0                                             | 18.20           | 96.98       | 5,010.2             | -151.9     | 1,239.8    | 358.4                 | 0.00                  | 0.00                 | 0.00                |
| 5,300.0                                             | 18.20           | 96.98       | 5,105.2             | -155.7     | 1,270.8    | 367.4                 | 0.00                  | 0.00                 | 0.00                |
| 5,400.0                                             | 18.20           | 96.98       | 5,200.2             | -159.5     | 1,301.9    | 376.3                 | 0.00                  | 0.00                 | 0.00                |
| 5,500.0                                             | 18.20           | 96.98       | 5,295.2             | -163.3     | 1,332.9    | 385.3                 | 0.00                  | 0.00                 | 0.00                |
| 5,600.0                                             | 18.20           | 96.98       | 5,390.2             | -167.1     | 1,363.9    | 394.3                 | 0.00                  | 0.00                 | 0.00                |
| 5,700.0                                             | 18.20           | 96.98       | 5,485.2             | -170.9     | 1,394.9    | 403.2                 | 0.00                  | 0.00                 | 0.00                |
| 5,800.0                                             | 18.20           | 96.98       | 5,580.2             | -174.7     | 1,425.9    | 412.2                 | 0.00                  | 0.00                 | 0.00                |
| 5,900.0                                             | 18.20           | 96.98       | 5,675.2             | -178.5     | 1,456.9    | 421.1                 | 0.00                  | 0.00                 | 0.00                |
| 6,000.0                                             | 18.20           | 96.98       | 5,770.2             | -182.3     | 1,487.9    | 430.1                 | 0.00                  | 0.00                 | 0.00                |
| 6,100.0                                             | 18.20           | 96.98       | 5,865.1             | -186.1     | 1,518.9    | 439.1                 | 0.00                  | 0.00                 | 0.00                |
| 6,200.0                                             | 18.20           | 96.98       | 5,960.1             | -189.9     | 1,549.9    | 448.0                 | 0.00                  | 0.00                 | 0.00                |
| 6,300.0                                             | 18.20           | 96.98       | 6,055.1             | -193.7     | 1,580.9    | 457.0                 | 0.00                  | 0.00                 | 0.00                |
| 6,400.0                                             | 18.20           | 96.98       | 6,150.1             | -197.5     | 1,611.9    | 466.0                 | 0.00                  | 0.00                 | 0.00                |
| 6,500.0                                             | 18.20           | 96.98       | 6,245.1             | -201.3     | 1,642.9    | 474.9                 | 0.00                  | 0.00                 | 0.00                |
| 6,600.0                                             | 18.20           | 96.98       | 6,340.1             | -205.1     | 1,674.0    | 483.9                 | 0.00                  | 0.00                 | 0.00                |
| 6,700.0                                             | 18.20           | 96.98       | 6,435.1             | -208.9     | 1,705.0    | 492.9                 | 0.00                  | 0.00                 | 0.00                |
| 6,735.2                                             | 18.20           | 96.98       | 6,468.6             | -210.2     | 1,715.9    | 496.0                 | 0.00                  | 0.00                 | 0.00                |
| <b>Start DLS 7.50 TFO -96.79</b>                    |                 |             |                     |            |            |                       |                       |                      |                     |
| 6,800.0                                             | 18.26           | 81.41       | 6,530.1             | -209.9     | 1,736.0    | 504.3                 | 7.50                  | 0.08                 | -24.04              |
| 6,900.0                                             | 20.64           | 59.89       | 6,624.5             | -198.7     | 1,766.8    | 526.9                 | 7.50                  | 2.38                 | -21.51              |
| 7,000.0                                             | 25.04           | 44.14       | 6,716.8             | -174.7     | 1,796.8    | 561.0                 | 7.50                  | 4.41                 | -15.75              |
| 7,080.1                                             | 29.44           | 35.17       | 6,788.0             | -146.4     | 1,819.9    | 596.2                 | 7.50                  | 5.49                 | -11.21              |
| <b>Sharon Springs</b>                               |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,100.0                                             | 30.61           | 33.31       | 6,805.2             | -138.1     | 1,825.5    | 606.0                 | 7.50                  | 5.88                 | -9.30               |
| 7,200.0                                             | 36.81           | 25.69       | 6,888.4             | -89.8      | 1,852.6    | 661.1                 | 7.50                  | 6.20                 | -7.63               |
| 7,215.8                                             | 37.83           | 24.69       | 6,901.0             | -81.1      | 1,856.6    | 670.7                 | 7.50                  | 6.44                 | -6.33               |
| <b>Niobrara A</b>                                   |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,300.0                                             | 43.38           | 20.04       | 6,964.9             | -30.5      | 1,877.3    | 725.4                 | 7.50                  | 6.59                 | -5.52               |
| 7,362.9                                             | 47.63           | 17.16       | 7,009.0             | 12.1       | 1,891.6    | 770.1                 | 7.50                  | 6.75                 | -4.58               |
| <b>Niobrara B</b>                                   |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,400.0                                             | 50.16           | 15.64       | 7,033.4             | 38.9       | 1,899.5    | 797.8                 | 7.50                  | 6.83                 | -4.10               |
| 7,482.5                                             | 55.86           | 12.62       | 7,083.0             | 102.8      | 1,915.5    | 862.8                 | 7.50                  | 6.91                 | -3.66               |
| <b>Niobrara C</b>                                   |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,500.0                                             | 57.08           | 12.04       | 7,092.7             | 117.0      | 1,918.6    | 877.1                 | 7.50                  | 6.96                 | -3.35               |
| 7,600.0                                             | 64.09           | 8.96        | 7,141.7             | 202.6      | 1,934.4    | 961.8                 | 7.50                  | 7.01                 | -3.07               |
| 7,700.0                                             | 71.15           | 6.24        | 7,179.8             | 294.2      | 1,946.6    | 1,050.6               | 7.50                  | 7.06                 | -2.73               |
| 7,789.6                                             | 77.51           | 3.98        | 7,204.0             | 380.1      | 1,954.2    | 1,132.3               | 7.50                  | 7.10                 | -2.51               |
| <b>Fort Hays</b>                                    |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,800.0                                             | 78.25           | 3.73        | 7,206.2             | 390.2      | 1,954.9    | 1,141.9               | 7.50                  | 7.11                 | -2.43               |
| 7,900.0                                             | 85.37           | 1.35        | 7,220.4             | 489.0      | 1,959.3    | 1,234.2               | 7.50                  | 7.12                 | -2.38               |
| 7,958.0                                             | 89.51           | 0.00        | 7,223.0             | 547.0      | 1,960.0    | 1,287.5               | 7.50                  | 7.13                 | -2.33               |
| <b>Start 3926.9 hold at 7958.0 MD - Codell - 7"</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,000.0                                             | 89.51           | 0.00        | 7,223.4             | 589.0      | 1,960.0    | 1,326.0               | 0.01                  | 0.01                 | 0.00                |
| 8,100.0                                             | 89.51           | 0.00        | 7,224.2             | 689.0      | 1,960.0    | 1,417.5               | 0.00                  | 0.00                 | 0.00                |
| 8,200.0                                             | 89.51           | 0.00        | 7,225.1             | 789.0      | 1,960.0    | 1,509.1               | 0.00                  | 0.00                 | 0.00                |

|                  |                                           |                                     |                             |
|------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db                | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Company:</b>  | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Project:</b>  | SEC.10-T4N-R67W                           | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site:</b>     | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>North Reference:</b>             | True                        |
| <b>Well:</b>     | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Wellbore:</b> | Wellbore #1                               |                                     |                             |
| <b>Design:</b>   | Plan #1 (6-11-15)                         |                                     |                             |

## Planned 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) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 8,300.0             | 89.51           | 0.00        | 7,225.9             | 888.9      | 1,960.0    | 1,600.7               | 0.00                  | 0.00                 | 0.00                |
| 8,400.0             | 89.51           | 0.00        | 7,226.8             | 988.9      | 1,960.0    | 1,692.3               | 0.00                  | 0.00                 | 0.00                |
| 8,500.0             | 89.51           | 0.00        | 7,227.6             | 1,088.9    | 1,960.0    | 1,783.9               | 0.00                  | 0.00                 | 0.00                |
| 8,600.0             | 89.51           | 0.00        | 7,228.5             | 1,188.9    | 1,960.0    | 1,875.5               | 0.00                  | 0.00                 | 0.00                |
| 8,700.0             | 89.51           | 0.00        | 7,229.3             | 1,288.9    | 1,960.0    | 1,967.1               | 0.00                  | 0.00                 | 0.00                |
| 8,800.0             | 89.51           | 0.00        | 7,230.2             | 1,388.9    | 1,960.0    | 2,058.7               | 0.00                  | 0.00                 | 0.00                |
| 8,900.0             | 89.51           | 0.00        | 7,231.0             | 1,488.9    | 1,960.0    | 2,150.3               | 0.00                  | 0.00                 | 0.00                |
| 9,000.0             | 89.51           | 0.00        | 7,231.9             | 1,588.9    | 1,960.0    | 2,241.9               | 0.00                  | 0.00                 | 0.00                |
| 9,100.0             | 89.51           | 0.00        | 7,232.7             | 1,688.9    | 1,960.0    | 2,333.5               | 0.00                  | 0.00                 | 0.00                |
| 9,200.0             | 89.51           | 0.00        | 7,233.6             | 1,788.9    | 1,960.0    | 2,425.1               | 0.00                  | 0.00                 | 0.00                |
| 9,300.0             | 89.51           | 0.00        | 7,234.4             | 1,888.9    | 1,960.0    | 2,516.6               | 0.00                  | 0.00                 | 0.00                |
| 9,400.0             | 89.51           | 0.00        | 7,235.3             | 1,988.9    | 1,960.0    | 2,608.2               | 0.00                  | 0.00                 | 0.00                |
| 9,500.0             | 89.51           | 0.00        | 7,236.1             | 2,088.9    | 1,960.0    | 2,699.8               | 0.00                  | 0.00                 | 0.00                |
| 9,600.0             | 89.51           | 0.00        | 7,237.0             | 2,188.9    | 1,960.0    | 2,791.4               | 0.00                  | 0.00                 | 0.00                |
| 9,700.0             | 89.51           | 0.00        | 7,237.9             | 2,288.9    | 1,960.0    | 2,883.0               | 0.00                  | 0.00                 | 0.00                |
| 9,800.0             | 89.51           | 0.00        | 7,238.7             | 2,388.9    | 1,960.0    | 2,974.6               | 0.00                  | 0.00                 | 0.00                |
| 9,900.0             | 89.51           | 0.00        | 7,239.6             | 2,488.9    | 1,960.0    | 3,066.2               | 0.00                  | 0.00                 | 0.00                |
| 10,000.0            | 89.51           | 0.00        | 7,240.4             | 2,588.9    | 1,960.0    | 3,157.8               | 0.00                  | 0.00                 | 0.00                |
| 10,100.0            | 89.51           | 0.00        | 7,241.3             | 2,688.9    | 1,960.0    | 3,249.4               | 0.00                  | 0.00                 | 0.00                |
| 10,200.0            | 89.51           | 0.00        | 7,242.1             | 2,788.9    | 1,960.0    | 3,341.0               | 0.00                  | 0.00                 | 0.00                |
| 10,300.0            | 89.51           | 0.00        | 7,243.0             | 2,888.9    | 1,960.0    | 3,432.6               | 0.00                  | 0.00                 | 0.00                |
| 10,400.0            | 89.51           | 0.00        | 7,243.8             | 2,988.9    | 1,960.0    | 3,524.2               | 0.00                  | 0.00                 | 0.00                |
| 10,500.0            | 89.51           | 0.00        | 7,244.7             | 3,088.9    | 1,960.0    | 3,615.8               | 0.00                  | 0.00                 | 0.00                |
| 10,600.0            | 89.51           | 0.00        | 7,245.5             | 3,188.9    | 1,960.0    | 3,707.3               | 0.00                  | 0.00                 | 0.00                |
| 10,700.0            | 89.51           | 0.00        | 7,246.4             | 3,288.9    | 1,960.0    | 3,798.9               | 0.00                  | 0.00                 | 0.00                |
| 10,800.0            | 89.51           | 0.00        | 7,247.2             | 3,388.9    | 1,960.0    | 3,890.5               | 0.00                  | 0.00                 | 0.00                |
| 10,900.0            | 89.51           | 0.00        | 7,248.1             | 3,488.9    | 1,960.0    | 3,982.1               | 0.00                  | 0.00                 | 0.00                |
| 11,000.0            | 89.51           | 0.00        | 7,248.9             | 3,588.8    | 1,960.0    | 4,073.7               | 0.00                  | 0.00                 | 0.00                |
| 11,100.0            | 89.51           | 0.00        | 7,249.8             | 3,688.8    | 1,960.0    | 4,165.3               | 0.00                  | 0.00                 | 0.00                |
| 11,200.0            | 89.51           | 0.00        | 7,250.6             | 3,788.8    | 1,960.0    | 4,256.9               | 0.00                  | 0.00                 | 0.00                |
| 11,300.0            | 89.51           | 0.00        | 7,251.5             | 3,888.8    | 1,960.0    | 4,348.5               | 0.00                  | 0.00                 | 0.00                |
| 11,400.0            | 89.51           | 0.00        | 7,252.3             | 3,988.8    | 1,960.0    | 4,440.1               | 0.00                  | 0.00                 | 0.00                |
| 11,500.0            | 89.51           | 0.00        | 7,253.2             | 4,088.8    | 1,960.0    | 4,531.7               | 0.00                  | 0.00                 | 0.00                |
| 11,600.0            | 89.51           | 0.00        | 7,254.1             | 4,188.8    | 1,960.0    | 4,623.3               | 0.00                  | 0.00                 | 0.00                |
| 11,700.0            | 89.51           | 0.00        | 7,254.9             | 4,288.8    | 1,960.0    | 4,714.9               | 0.00                  | 0.00                 | 0.00                |
| 11,800.0            | 89.51           | 0.00        | 7,255.8             | 4,388.8    | 1,960.0    | 4,806.5               | 0.00                  | 0.00                 | 0.00                |
| 11,885.0            | 89.51           | 0.00        | 7,256.5             | 4,473.8    | 1,960.0    | 4,884.3               | 0.00                  | 0.00                 | 0.00                |

|                  |                                           |                                     |                             |
|------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db                | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Company:</b>  | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Project:</b>  | SEC.10-T4N-R67W                           | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site:</b>     | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>North Reference:</b>             | True                        |
| <b>Well:</b>     | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Wellbore:</b> | Wellbore #1                               |                                     |                             |
| <b>Design:</b>   | Plan #1 (6-11-15)                         |                                     |                             |

| Targets                                                                               |                   |               |              |          |            |            |               |              |                       |
|---------------------------------------------------------------------------------------|-------------------|---------------|--------------|----------|------------|------------|---------------|--------------|-----------------------|
| Target Name                                                                           | - hit/miss target | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude Longitude    |
| 50' E/W Hardline (10T                                                                 |                   | 0.00          | 0.00         | 1.0      | 2,510.4    | 1,960.0    | 1,362,680.39  | 3,175,394.51 | 40.327251 -104.870910 |
| - plan misses target center by 3184.9ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)           |                   |               |              |          |            |            |               |              |                       |
| - Rectangle (sides W3,926.8 H100.0 D0.0)                                              |                   |               |              |          |            |            |               |              |                       |
| BHL 500'FNL & 908'F                                                                   |                   | 0.00          | 0.00         | 7,257.0  | 4,473.8    | 1,960.0    | 1,364,643.64  | 3,175,380.70 | 40.332640 -104.870910 |
| - plan misses target center by 0.5ft at 11885.0ft MD (7256.5 TVD, 4473.8 N, 1960.0 E) |                   |               |              |          |            |            |               |              |                       |
| - Point                                                                               |                   |               |              |          |            |            |               |              |                       |
| SHL 284'FSL & 2393'I                                                                  |                   | 0.00          | 0.00         | 1.0      | 0.0        | 0.0        | 1,360,156.42  | 3,173,452.25 | 40.320360 -104.877940 |
| - plan hits target center                                                             |                   |               |              |          |            |            |               |              |                       |
| - Point                                                                               |                   |               |              |          |            |            |               |              |                       |

| Casing Points       |                     |      |                     |                   |  |
|---------------------|---------------------|------|---------------------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (") | Hole Diameter (") |  |
| 7,958.0             | 7,223.0             | 7"   | 7                   | 7-1/2             |  |

| Formations          |                     |                |           |         |                   |  |
|---------------------|---------------------|----------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name           | Lithology | Dip (°) | Dip Direction (°) |  |
| 3,673.4             | 3,560.0             | Parkman        |           | 0.00    |                   |  |
| 4,241.9             | 4,100.0             | Sussex         |           | 0.00    |                   |  |
| 4,785.0             | 4,616.0             | Shannon        |           | 0.00    |                   |  |
| 7,080.1             | 6,788.0             | Sharon Springs |           | 0.00    |                   |  |
| 7,215.8             | 6,901.0             | Niobrara A     |           | 0.00    |                   |  |
| 7,362.9             | 7,009.0             | Niobrara B     |           | 0.00    |                   |  |
| 7,482.5             | 7,083.0             | Niobrara C     |           | 0.00    |                   |  |
| 7,789.6             | 7,204.0             | Fort Hays      |           | 0.00    |                   |  |
| 7,958.0             | 7,223.0             | Codell         |           | 0.00    |                   |  |

| Plan Annotations    |                     |            |            |                                |  |
|---------------------|---------------------|------------|------------|--------------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Comment                        |  |
| 600.0               | 600.0               | 0.0        | 0.0        | KOP #1 - Start Build 1.50      |  |
| 6,735.2             | 6,468.6             | -23.2      | 189.8      | Start DLS 7.50 TFO -96.79      |  |
| 7,958.0             | 7,223.0             | -210.2     | 1,715.9    | Start 3926.9 hold at 7958.0 MD |  |
| 11,885.0            | 7,256.5             | 547.0      | 1,960.0    | TD at 11885.0                  |  |



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.10-T4N-R67W**

**Spaur 4N67W10LQ Pad Sec.10-T4N-R67W**

**Spaur 10T-421**

**Wellbore #1**

**Plan #1 (6-11-15)**

## **Anticollision Report**

**16 June, 2015**





|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

|                                     |                                                                     |
|-------------------------------------|---------------------------------------------------------------------|
| <b>Reference</b>                    | Plan #1 (6-11-15)                                                   |
| <b>Filter type:</b>                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |
| <b>Interpolation Method:</b>        | MD Interval 100.0ft                                                 |
| <b>Depth Range:</b>                 | Unlimited                                                           |
| <b>Results Limited by:</b>          | Maximum center-center distance of 1,000.0ft                         |
| <b>Warning Levels Evaluated at:</b> | 2.00 Sigma                                                          |
| <b>Error Model:</b>                 | ISCWSA                                                              |
| <b>Scan Method:</b>                 | Closest Approach 3D                                                 |
| <b>Error Surface:</b>               | Elliptical Conic                                                    |

| Survey Tool Program |          | Date                            | 6/16/2015 |                |  |
|---------------------|----------|---------------------------------|-----------|----------------|--|
| From (ft)           | To (ft)  | Survey (Wellbore)               | Tool Name | Description    |  |
| 0.0                 | 11,885.0 | Plan #1 (6-11-15) (Wellbore #1) | MWD       | MWD - Standard |  |

| Summary                                          |                                        |                                     |                                        |                             |                      |                 |
|--------------------------------------------------|----------------------------------------|-------------------------------------|----------------------------------------|-----------------------------|----------------------|-----------------|
| Site Name<br>Offset Well - Wellbore - Design     | Reference<br>Measured<br>Depth<br>(ft) | Offset<br>Measured<br>Depth<br>(ft) | Distance<br>Between<br>Centres<br>(ft) | Between<br>Ellipses<br>(ft) | Separation<br>Factor | Warning         |
| Existing Wells Sec.10-T4N-R67W                   |                                        |                                     |                                        |                             |                      |                 |
| Oster 10-1 (Exist.) - Wellbore #1 - Wellbore #1  | 7,771.9                                | 7,145.9                             | 302.4                                  | 266.6                       | 8.451                | CC, ES, SF      |
| Oster 10-2 (Exist.) - Wellbore #1 - Wellbore #1  | 9,037.9                                | 7,163.9                             | 314.4                                  | 259.6                       | 5.742                | CC, ES, SF      |
| Oster 10-3 (Exist.) - Wellbore #1 - Wellbore #1  | 10,009.2                               | 7,175.3                             | 322.0                                  | 250.2                       | 4.485                | CC, ES, SF      |
| Purvis 10-2 (Exist.) - Wellbore #1 - Wellbore #1 | 3,168.1                                | 3,059.4                             | 273.0                                  | 252.7                       | 13.440               | CC              |
| Purvis 10-2 (Exist.) - Wellbore #1 - Wellbore #1 | 3,200.0                                | 3,089.4                             | 273.2                                  | 252.6                       | 13.293               | ES              |
| Purvis 10-2 (Exist.) - Wellbore #1 - Wellbore #1 | 3,300.0                                | 3,185.0                             | 276.3                                  | 255.0                       | 13.013               | SF              |
| Purvis 10TD Pad Sec. 10-T4N-R67W                 |                                        |                                     |                                        |                             |                      |                 |
| Purvis 10TD - Wellbore #1 - Wellbore #1          | 6,236.4                                | 6,325.2                             | 50.2                                   | -6.0                        | 0.894                | Level 1, CC     |
| Purvis 10TD - Wellbore #1 - Wellbore #1          | 6,300.0                                | 6,385.8                             | 53.7                                   | -7.9                        | 0.872                | Level 1, ES, SF |
| Purvis 10WD - Wellbore #1 - Wellbore #1          | 9,757.2                                | 7,630.8                             | 782.4                                  | 709.3                       | 10.708               | CC, ES          |
| Purvis 10WD - Wellbore #1 - Wellbore #1          | 9,900.0                                | 7,627.5                             | 795.3                                  | 719.7                       | 10.519               | SF              |
| Purvis 10XD - Wellbore #1 - Wellbore #1          | 8,366.2                                | 7,536.3                             | 779.8                                  | 729.1                       | 15.380               | CC, ES          |
| Purvis 10XD - Wellbore #1 - Wellbore #1          | 8,500.0                                | 7,534.4                             | 791.2                                  | 738.7                       | 15.076               | SF              |
| Spaur 4N67W10LQ Pad Sec.10-T4N-R67W              |                                        |                                     |                                        |                             |                      |                 |
| Spaur 10Q-321 - Wellbore #1 - Plan #3 (6-11-15)  | 600.0                                  | 598.0                               | 62.0                                   | 59.5                        | 25.418               | CC              |
| Spaur 10Q-321 - Wellbore #1 - Plan #3 (6-11-15)  | 700.0                                  | 698.0                               | 62.2                                   | 59.3                        | 21.650               | ES              |
| Spaur 10Q-321 - Wellbore #1 - Plan #3 (6-11-15)  | 1,100.0                                | 1,096.6                             | 74.7                                   | 70.1                        | 16.048               | SF              |
| Spaur 10Q-401 - Wellbore #1 - Plan #2 (6-11-15)  | 600.0                                  | 598.0                               | 76.5                                   | 74.1                        | 31.371               | CC              |
| Spaur 10Q-401 - Wellbore #1 - Plan #2 (6-11-15)  | 700.0                                  | 698.0                               | 76.7                                   | 73.8                        | 26.680               | ES              |
| Spaur 10Q-401 - Wellbore #1 - Plan #2 (6-11-15)  | 1,200.0                                | 1,195.5                             | 94.5                                   | 89.4                        | 18.403               | SF              |
| Spaur 10T-201 - Wellbore #1 - Plan #1 (6-11-15)  | 600.0                                  | 599.0                               | 14.8                                   | 12.4                        | 6.078                | CC, ES          |
| Spaur 10T-201 - Wellbore #1 - Plan #1 (6-11-15)  | 11,885.0                               | 11,655.5                            | 356.3                                  | 227.0                       | 2.755                | SF              |
| Spaur 10T-241 - Wellbore #1 - Plan #2 (6-11-15)  | 600.0                                  | 599.0                               | 43.8                                   | 41.4                        | 17.944               | CC              |
| Spaur 10T-241 - Wellbore #1 - Plan #2 (6-11-15)  | 700.0                                  | 699.0                               | 44.1                                   | 41.2                        | 15.320               | ES              |
| Spaur 10T-241 - Wellbore #1 - Plan #2 (6-11-15)  | 11,885.0                               | 11,534.0                            | 895.5                                  | 729.0                       | 5.377                | SF              |
| Spaur 10T-301 - Wellbore #1 - Plan #2 (6-11-15)  | 600.0                                  | 599.0                               | 29.3                                   | 26.8                        | 11.993               | CC              |
| Spaur 10T-301 - Wellbore #1 - Plan #2 (6-11-15)  | 700.0                                  | 699.0                               | 29.6                                   | 26.7                        | 10.286               | ES              |
| Spaur 10T-301 - Wellbore #1 - Plan #2 (6-11-15)  | 11,885.0                               | 11,693.7                            | 596.4                                  | 428.7                       | 3.557                | SF              |
| Spaur 10T-321 - Wellbore #1 - Plan #1 (6-11-15)  | 514.0                                  | 514.1                               | 14.7                                   | 12.7                        | 7.220                | CC, ES          |
| Spaur 10T-321 - Wellbore #1 - Plan #1 (6-11-15)  | 11,885.0                               | 11,807.7                            | 295.3                                  | 132.9                       | 1.819                | SF              |
| Spaur 10Y-241 - Wellbore #1 - Plan #1 (6-11-15)  | 200.0                                  | 200.0                               | 29.3                                   | 28.6                        | 45.386               | CC              |
| Spaur 10Y-241 - Wellbore #1 - Plan #1 (6-11-15)  | 300.0                                  | 300.0                               | 29.3                                   | 28.2                        | 27.085               | ES              |
| Spaur 10Y-241 - Wellbore #1 - Plan #1 (6-11-15)  | 11,885.0                               | 12,054.6                            | 652.5                                  | 479.8                       | 3.779                | SF              |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Existing Wells Sec.10-T4N-R67W - Oster 10-1 (Exist.) - Wellbore #1 - Wellbore #1 |                |                |                |                 |        |                   |                        |            |                 |                  | Offset Site Error: |                   | 0.0 ft  |
|------------------------------------------------------------------------------------------------|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|------------|-----------------|------------------|--------------------|-------------------|---------|
| Survey Program: 100-NS-GYRO-MS                                                                 |                |                |                |                 |        |                   |                        |            |                 |                  | Offset Well Error: |                   | 0.0 ft  |
| Reference                                                                                      |                | Offset         |                | Semi Major Axis |        |                   | Distance               |            |                 |                  |                    |                   | Warning |
| Measured Depth                                                                                 | Vertical Depth | Measured Depth | Vertical Depth | Reference       | Offset | Highside Toolface | Offset Wellbore Centre |            | Between Centres | Between Ellipses | Minimum Separation | Separation Factor |         |
| (ft)                                                                                           | (ft)           | (ft)           | (ft)           | (ft)            | (ft)   | (°)               | +N/-S (ft)             | +E/-W (ft) | (ft)            | (ft)             | (ft)               |                   |         |
| 5,800.0                                                                                        | 5,580.2        | 5,521.1        | 5,519.0        | 31.5            | 10.6   | -40.62            | 348.9                  | 2,256.2    | 981.6           | 947.1            | 34.47              | 28.481            |         |
| 5,900.0                                                                                        | 5,675.2        | 5,618.6        | 5,616.4        | 32.2            | 10.7   | -41.83            | 348.9                  | 2,256.5    | 957.9           | 922.5            | 35.38              | 27.070            |         |
| 6,000.0                                                                                        | 5,770.2        | 5,714.1        | 5,711.9        | 32.8            | 10.8   | -43.07            | 348.9                  | 2,256.7    | 934.4           | 898.1            | 36.32              | 25.729            |         |
| 6,100.0                                                                                        | 5,865.1        | 5,809.5        | 5,807.3        | 33.5            | 10.8   | -44.37            | 348.7                  | 2,257.0    | 911.4           | 874.2            | 37.28              | 24.446            |         |
| 6,200.0                                                                                        | 5,960.1        | 5,906.9        | 5,904.8        | 34.2            | 10.9   | -45.75            | 348.4                  | 2,257.1    | 888.8           | 850.5            | 38.30              | 23.203            |         |
| 6,300.0                                                                                        | 6,055.1        | 6,005.4        | 6,003.3        | 34.8            | 11.1   | -47.23            | 347.9                  | 2,257.1    | 866.3           | 826.9            | 39.39              | 21.991            |         |
| 6,400.0                                                                                        | 6,150.1        | 6,101.2        | 6,099.0        | 35.5            | 11.3   | -48.76            | 347.5                  | 2,256.5    | 844.1           | 803.6            | 40.55              | 20.817            |         |
| 6,500.0                                                                                        | 6,245.1        | 6,196.8        | 6,194.7        | 36.2            | 11.4   | -50.35            | 347.0                  | 2,256.1    | 822.5           | 780.8            | 41.73              | 19.713            |         |
| 6,600.0                                                                                        | 6,340.1        | 6,290.8        | 6,288.6        | 36.8            | 11.6   | -51.95            | 345.9                  | 2,256.1    | 801.6           | 758.7            | 42.87              | 18.699            |         |
| 6,700.0                                                                                        | 6,435.1        | 6,387.4        | 6,385.2        | 37.5            | 11.7   | -53.67            | 344.9                  | 2,256.1    | 781.3           | 737.2            | 44.06              | 17.734            |         |
| 6,800.0                                                                                        | 6,530.1        | 6,485.8        | 6,483.6        | 38.1            | 11.9   | -39.81            | 343.6                  | 2,255.8    | 759.4           | 714.7            | 44.73              | 16.976            |         |
| 6,900.0                                                                                        | 6,624.5        | 6,580.8        | 6,578.6        | 38.7            | 12.1   | -19.04            | 342.1                  | 2,255.4    | 728.9           | 684.6            | 44.33              | 16.443            |         |
| 7,000.0                                                                                        | 6,716.8        | 6,667.3        | 6,665.1        | 39.2            | 12.2   | -2.80             | 341.0                  | 2,254.9    | 689.8           | 646.9            | 42.96              | 16.056            |         |
| 7,100.0                                                                                        | 6,805.2        | 6,755.6        | 6,753.4        | 39.6            | 12.4   | 10.02             | 340.2                  | 2,255.0    | 642.9           | 602.2            | 40.74              | 15.780            |         |
| 7,200.0                                                                                        | 6,888.4        | 6,838.2        | 6,836.0        | 40.0            | 12.5   | 21.51             | 339.7                  | 2,254.5    | 588.2           | 550.3            | 37.91              | 15.516            |         |
| 7,300.0                                                                                        | 6,964.9        | 6,910.8        | 6,908.6        | 40.4            | 12.7   | 33.30             | 339.5                  | 2,254.2    | 528.1           | 493.0            | 35.07              | 15.058            |         |
| 7,400.0                                                                                        | 7,033.4        | 6,976.8        | 6,974.6        | 40.8            | 12.8   | 46.42             | 339.5                  | 2,254.3    | 465.0           | 431.8            | 33.24              | 13.988            |         |
| 7,500.0                                                                                        | 7,092.7        | 7,036.9        | 7,034.7        | 41.1            | 12.9   | 60.88             | 339.5                  | 2,254.6    | 403.0           | 369.6            | 33.36              | 12.079            |         |
| 7,600.0                                                                                        | 7,141.7        | 7,087.7        | 7,085.5        | 41.4            | 12.9   | 74.78             | 339.5                  | 2,254.6    | 348.3           | 313.6            | 34.68              | 10.043            |         |
| 7,700.0                                                                                        | 7,179.8        | 7,125.9        | 7,123.7        | 41.6            | 13.0   | 85.36             | 339.4                  | 2,254.5    | 311.3           | 275.7            | 35.57              | 8.750             |         |
| 7,771.9                                                                                        | 7,200.0        | 7,145.9        | 7,143.7        | 41.8            | 13.1   | 90.15             | 339.4                  | 2,254.5    | 302.4           | 266.6            | 35.78              | 8.451 CC, ES, SF  |         |
| 7,800.0                                                                                        | 7,206.2        | 7,152.1        | 7,149.9        | 41.9            | 13.1   | 91.34             | 339.4                  | 2,254.4    | 303.8           | 268.0            | 35.81              | 8.484             |         |
| 7,900.0                                                                                        | 7,220.4        | 7,166.1        | 7,163.9        | 42.2            | 13.1   | 92.30             | 339.3                  | 2,254.4    | 330.9           | 294.8            | 36.14              | 9.157             |         |
| 8,000.0                                                                                        | 7,223.4        | 7,168.9        | 7,166.7        | 42.4            | 13.1   | 90.47             | 339.3                  | 2,254.4    | 386.0           | 349.0            | 37.02              | 10.428            |         |
| 8,100.0                                                                                        | 7,224.2        | 7,169.5        | 7,167.3        | 42.8            | 13.1   | 90.60             | 339.3                  | 2,254.4    | 457.1           | 419.1            | 37.98              | 12.035            |         |
| 8,200.0                                                                                        | 7,225.1        | 7,170.2        | 7,168.0        | 43.2            | 13.1   | 90.73             | 339.3                  | 2,254.4    | 537.4           | 498.4            | 39.05              | 13.764            |         |
| 8,300.0                                                                                        | 7,225.9        | 7,170.8        | 7,168.6        | 43.7            | 13.1   | 90.85             | 339.3                  | 2,254.4    | 623.5           | 583.3            | 40.21              | 15.507            |         |
| 8,400.0                                                                                        | 7,226.8        | 7,171.5        | 7,169.3        | 44.3            | 13.1   | 90.98             | 339.3                  | 2,254.4    | 713.2           | 671.8            | 41.45              | 17.208            |         |
| 8,500.0                                                                                        | 7,227.6        | 7,172.1        | 7,169.9        | 44.9            | 13.1   | 91.11             | 339.3                  | 2,254.4    | 805.4           | 762.6            | 42.76              | 18.835            |         |
| 8,600.0                                                                                        | 7,228.5        | 7,172.8        | 7,170.6        | 45.6            | 13.1   | 91.23             | 339.3                  | 2,254.4    | 899.2           | 855.0            | 44.13              | 20.374            |         |
| 8,700.0                                                                                        | 7,229.3        | 7,173.4        | 7,171.2        | 46.4            | 13.1   | 91.36             | 339.3                  | 2,254.4    | 994.2           | 948.6            | 45.56              | 21.822            |         |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Existing Wells Sec.10-T4N-R67W - Oster 10-2 (Exist.) - Wellbore #1 - Wellbore #1 |                     |                     |                     |           |        |                 |                       |                                   |                                   |                      |                       |                         | Offset Site Error: | 0.0 ft     |
|------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|--------------------|------------|
| Survey Program: 100-NS-GYRO-MS                                                                 |                     |                     |                     |           |        |                 |                       |                                   |                                   |                      |                       |                         | Offset Well Error: | 0.0 ft     |
| Measured Depth (ft)                                                                            | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning    |
| 8,100.0                                                                                        | 7,224.2             | 7,165.3             | 7,163.6             | 42.8      | 16.9   | 89.90           | 89.90                 | 1,626.8                           | 2,274.3                           | 989.2                | 947.3                 | 41.86                   | 23.632             |            |
| 8,200.0                                                                                        | 7,225.1             | 7,165.1             | 7,163.5             | 43.2      | 16.9   | 89.87           | 89.87                 | 1,626.8                           | 2,274.3                           | 894.9                | 852.0                 | 42.94                   | 20.840             |            |
| 8,300.0                                                                                        | 7,225.9             | 7,165.0             | 7,163.3             | 43.7      | 16.9   | 89.84           | 89.84                 | 1,626.8                           | 2,274.3                           | 802.0                | 757.9                 | 44.12                   | 18.179             |            |
| 8,400.0                                                                                        | 7,226.8             | 7,164.8             | 7,163.2             | 44.3      | 16.9   | 89.82           | 89.82                 | 1,626.8                           | 2,274.3                           | 711.1                | 665.8                 | 45.38                   | 15.671             |            |
| 8,500.0                                                                                        | 7,227.6             | 7,164.7             | 7,163.1             | 44.9      | 16.9   | 89.79           | 89.79                 | 1,626.8                           | 2,274.3                           | 623.0                | 576.3                 | 46.71                   | 13.338             |            |
| 8,600.0                                                                                        | 7,228.5             | 7,164.5             | 7,162.9             | 45.6      | 16.9   | 89.76           | 89.76                 | 1,626.8                           | 2,274.3                           | 539.0                | 490.9                 | 48.10                   | 11.207             |            |
| 8,700.0                                                                                        | 7,229.3             | 7,164.4             | 7,162.8             | 46.4      | 16.9   | 89.74           | 89.74                 | 1,626.8                           | 2,274.3                           | 461.5                | 412.0                 | 49.55                   | 9.315              |            |
| 8,800.0                                                                                        | 7,230.2             | 7,164.2             | 7,162.6             | 47.3      | 16.9   | 89.71           | 89.71                 | 1,626.8                           | 2,274.3                           | 394.2                | 343.2                 | 51.04                   | 7.724              |            |
| 8,900.0                                                                                        | 7,231.0             | 7,164.1             | 7,162.5             | 48.2      | 16.9   | 89.69           | 89.69                 | 1,626.8                           | 2,274.3                           | 343.3                | 290.7                 | 52.57                   | 6.530              |            |
| 9,000.0                                                                                        | 7,231.9             | 7,164.0             | 7,162.3             | 49.2      | 16.9   | 89.66           | 89.66                 | 1,626.8                           | 2,274.3                           | 316.6                | 262.5                 | 54.14                   | 5.849              |            |
| 9,037.9                                                                                        | 7,232.2             | 7,163.9             | 7,162.3             | 49.6      | 16.9   | 89.65           | 89.65                 | 1,626.8                           | 2,274.3                           | 314.4                | 259.6                 | 54.75                   | 5.742              | CC, ES, SF |
| 9,100.0                                                                                        | 7,232.7             | 7,163.8             | 7,162.2             | 50.3      | 16.9   | 89.63           | 89.63                 | 1,626.8                           | 2,274.3                           | 320.4                | 264.7                 | 55.74                   | 5.749              |            |
| 9,200.0                                                                                        | 7,233.6             | 7,163.7             | 7,162.0             | 51.4      | 16.9   | 89.61           | 89.61                 | 1,626.8                           | 2,274.3                           | 353.7                | 296.3                 | 57.37                   | 6.165              |            |
| 9,300.0                                                                                        | 7,234.4             | 7,163.5             | 7,161.9             | 52.6      | 16.9   | 89.58           | 89.58                 | 1,626.8                           | 2,274.3                           | 409.3                | 350.3                 | 59.02                   | 6.935              |            |
| 9,400.0                                                                                        | 7,235.3             | 7,163.4             | 7,161.8             | 53.8      | 16.9   | 89.55           | 89.55                 | 1,626.8                           | 2,274.3                           | 479.5                | 418.8                 | 60.70                   | 7.900              |            |
| 9,500.0                                                                                        | 7,236.1             | 7,163.2             | 7,161.6             | 55.1      | 16.9   | 89.53           | 89.53                 | 1,626.8                           | 2,274.3                           | 558.9                | 496.5                 | 62.39                   | 8.958              |            |
| 9,600.0                                                                                        | 7,237.0             | 7,163.1             | 7,161.5             | 56.5      | 16.9   | 89.50           | 89.50                 | 1,626.8                           | 2,274.3                           | 644.1                | 580.0                 | 64.10                   | 10.047             |            |
| 9,700.0                                                                                        | 7,237.9             | 7,163.0             | 7,161.3             | 57.8      | 16.9   | 89.48           | 89.48                 | 1,626.8                           | 2,274.3                           | 733.0                | 667.1                 | 65.83                   | 11.134             |            |
| 9,800.0                                                                                        | 7,238.7             | 7,162.8             | 7,161.2             | 59.2      | 16.9   | 89.45           | 89.45                 | 1,626.8                           | 2,274.3                           | 824.4                | 756.8                 | 67.57                   | 12.200             |            |
| 9,900.0                                                                                        | 7,239.6             | 7,162.7             | 7,161.0             | 60.7      | 16.9   | 89.42           | 89.42                 | 1,626.8                           | 2,274.3                           | 917.7                | 848.3                 | 69.33                   | 13.237             |            |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Existing Wells Sec.10-T4N-R67W - Oster 10-3 (Exist.) - Wellbore #1 - Wellbore #1 |                |                |                |                 |        |                   |                        |            |                 |                  |                    | Offset Site Error: |  | 0.0 ft  |  |
|------------------------------------------------------------------------------------------------|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|------------|-----------------|------------------|--------------------|--------------------|--|---------|--|
| Survey Program: 100-NS-GYRO-MS                                                                 |                |                |                |                 |        |                   |                        |            |                 |                  |                    | Offset Well Error: |  | 0.0 ft  |  |
| Reference                                                                                      |                | Offset         |                | Semi Major Axis |        |                   | Distance               |            |                 |                  |                    |                    |  | Warning |  |
| Measured Depth                                                                                 | Vertical Depth | Measured Depth | Vertical Depth | Reference       | Offset | Highside Toolface | Offset Wellbore Centre |            | Between Centres | Between Ellipses | Minimum Separation | Separation Factor  |  |         |  |
| (ft)                                                                                           | (ft)           | (ft)           | (ft)           | (ft)            | (ft)   | (°)               | +N/-S (ft)             | +E/-W (ft) | (ft)            | (ft)             | (ft)               |                    |  |         |  |
| 9,100.0                                                                                        | 7,232.7        | 7,175.5        | 7,174.2        | 50.3            | 17.6   | 90.83             | 2,598.0                | 2,281.9    | 964.5           | 908.2            | 56.29              | 17.135             |  |         |  |
| 9,200.0                                                                                        | 7,233.6        | 7,175.5        | 7,174.1        | 51.4            | 17.6   | 90.83             | 2,598.0                | 2,281.9    | 870.9           | 813.0            | 57.92              | 15.037             |  |         |  |
| 9,300.0                                                                                        | 7,234.4        | 7,175.5        | 7,174.1        | 52.6            | 17.6   | 90.82             | 2,598.0                | 2,281.9    | 778.9           | 719.3            | 59.57              | 13.075             |  |         |  |
| 9,400.0                                                                                        | 7,235.3        | 7,175.4        | 7,174.1        | 53.8            | 17.6   | 90.82             | 2,598.0                | 2,281.9    | 689.1           | 627.8            | 61.24              | 11.251             |  |         |  |
| 9,500.0                                                                                        | 7,236.1        | 7,175.4        | 7,174.1        | 55.1            | 17.6   | 90.82             | 2,598.0                | 2,281.9    | 602.5           | 539.5            | 62.94              | 9.572              |  |         |  |
| 9,600.0                                                                                        | 7,237.0        | 7,175.4        | 7,174.0        | 56.5            | 17.6   | 90.81             | 2,598.0                | 2,281.9    | 520.7           | 456.0            | 64.65              | 8.054              |  |         |  |
| 9,700.0                                                                                        | 7,237.9        | 7,175.4        | 7,174.0        | 57.8            | 17.6   | 90.81             | 2,598.0                | 2,281.9    | 446.4           | 380.0            | 66.37              | 6.726              |  |         |  |
| 9,800.0                                                                                        | 7,238.7        | 7,175.4        | 7,174.0        | 59.2            | 17.6   | 90.80             | 2,598.0                | 2,281.9    | 384.0           | 315.9            | 68.11              | 5.637              |  |         |  |
| 9,900.0                                                                                        | 7,239.6        | 7,175.3        | 7,174.0        | 60.7            | 17.6   | 90.80             | 2,598.0                | 2,281.9    | 340.0           | 270.1            | 69.87              | 4.867              |  |         |  |
| 10,000.0                                                                                       | 7,240.4        | 7,175.3        | 7,174.0        | 62.2            | 17.6   | 90.80             | 2,598.0                | 2,281.9    | 322.1           | 250.5            | 71.63              | 4.497              |  |         |  |
| 10,009.2                                                                                       | 7,240.5        | 7,175.3        | 7,174.0        | 62.3            | 17.6   | 90.80             | 2,598.0                | 2,281.9    | 322.0           | 250.2            | 71.79              | 4.485 CC, ES, SF   |  |         |  |
| 10,100.0                                                                                       | 7,241.3        | 7,175.3        | 7,173.9        | 63.7            | 17.6   | 90.79             | 2,598.0                | 2,281.9    | 334.6           | 261.2            | 73.41              | 4.558              |  |         |  |
| 10,200.0                                                                                       | 7,242.1        | 7,175.3        | 7,173.9        | 65.2            | 17.6   | 90.79             | 2,598.0                | 2,281.9    | 374.3           | 299.1            | 75.19              | 4.978              |  |         |  |
| 10,300.0                                                                                       | 7,243.0        | 7,175.2        | 7,173.9        | 66.7            | 17.6   | 90.78             | 2,598.0                | 2,281.9    | 433.9           | 356.9            | 76.98              | 5.636              |  |         |  |
| 10,400.0                                                                                       | 7,243.8        | 7,175.2        | 7,173.9        | 68.3            | 17.6   | 90.78             | 2,598.0                | 2,281.9    | 506.4           | 427.6            | 78.78              | 6.428              |  |         |  |
| 10,500.0                                                                                       | 7,244.7        | 7,175.2        | 7,173.8        | 69.9            | 17.6   | 90.78             | 2,598.0                | 2,281.9    | 587.0           | 506.4            | 80.59              | 7.284              |  |         |  |
| 10,600.0                                                                                       | 7,245.5        | 7,175.2        | 7,173.8        | 71.5            | 17.6   | 90.77             | 2,598.0                | 2,281.9    | 672.9           | 590.5            | 82.40              | 8.166              |  |         |  |
| 10,700.0                                                                                       | 7,246.4        | 7,175.1        | 7,173.8        | 73.2            | 17.6   | 90.77             | 2,598.0                | 2,281.9    | 762.2           | 678.0            | 84.22              | 9.050              |  |         |  |
| 10,800.0                                                                                       | 7,247.2        | 7,175.1        | 7,173.8        | 74.8            | 17.6   | 90.76             | 2,598.0                | 2,281.9    | 853.9           | 767.8            | 86.05              | 9.923              |  |         |  |
| 10,900.0                                                                                       | 7,248.1        | 7,175.1        | 7,173.8        | 76.5            | 17.6   | 90.76             | 2,598.0                | 2,281.9    | 947.2           | 859.3            | 87.88              | 10.779             |  |         |  |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Existing Wells Sec.10-T4N-R67W - Purvis 10-2 (Exist.) - Wellbore #1 - Wellbore #1 |                     |                     |                     |           |        |                 |                       |                                   |                                   |                      |                       |                         | Offset Site Error: | 0.0 ft  |
|-------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 100-NS-GYRO-MS                                                                  |                     |                     |                     |           |        |                 |                       |                                   |                                   |                      |                       |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                             | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 0.0                                                                                             | 0.0                 | 0.0                 | 0.0                 | 0.0       | 0.0    | 71.12           | 71.12                 | 222.2                             | 649.7                             | 687.0                |                       |                         |                    |         |
| 100.0                                                                                           | 100.0               | 74.0                | 74.0                | 0.1       | 0.1    | 71.12           | 71.12                 | 222.3                             | 649.9                             | 686.9                | 686.7                 | 0.20                    | 3,503.061          |         |
| 200.0                                                                                           | 200.0               | 172.5               | 172.5               | 0.3       | 0.3    | 71.12           | 71.12                 | 222.5                             | 650.6                             | 687.7                | 687.0                 | 0.65                    | 1,065.477          |         |
| 300.0                                                                                           | 300.0               | 273.9               | 273.9               | 0.5       | 0.6    | 71.14           | 71.14                 | 222.5                             | 651.4                             | 688.4                | 687.3                 | 1.14                    | 605.573            |         |
| 400.0                                                                                           | 400.0               | 374.8               | 374.7               | 0.8       | 0.8    | 71.18           | 71.18                 | 222.3                             | 652.1                             | 688.9                | 687.3                 | 1.61                    | 429.043            |         |
| 500.0                                                                                           | 500.0               | 476.4               | 476.4               | 1.0       | 1.1    | 71.27           | 71.27                 | 221.3                             | 652.8                             | 689.3                | 687.2                 | 2.05                    | 335.867            |         |
| 600.0                                                                                           | 600.0               | 574.2               | 574.2               | 1.2       | 1.3    | 71.36           | 71.36                 | 220.3                             | 653.4                             | 689.6                | 687.1                 | 2.50                    | 275.730            |         |
| 700.0                                                                                           | 700.0               | 673.9               | 673.8               | 1.4       | 1.5    | -25.58          | -25.58                | 219.5                             | 654.4                             | 689.1                | 686.1                 | 2.96                    | 232.632            |         |
| 800.0                                                                                           | 799.9               | 775.9               | 775.9               | 1.6       | 1.8    | -25.71          | -25.71                | 219.2                             | 655.0                             | 688.0                | 682.6                 | 3.42                    | 200.417            |         |
| 900.0                                                                                           | 899.7               | 875.2               | 875.2               | 1.9       | 2.0    | -25.94          | -25.94                | 218.8                             | 655.4                             | 680.4                | 676.5                 | 3.88                    | 175.287            |         |
| 1,000.0                                                                                         | 999.3               | 972.2               | 972.2               | 2.1       | 2.3    | -26.29          | -26.29                | 218.6                             | 656.0                             | 672.7                | 668.3                 | 4.35                    | 154.752            |         |
| 1,100.0                                                                                         | 1,098.6             | 1,076.2             | 1,076.2             | 2.4       | 2.5    | -26.75          | -26.75                | 218.0                             | 656.9                             | 662.7                | 657.9                 | 4.82                    | 137.570            |         |
| 1,200.0                                                                                         | 1,197.5             | 1,176.3             | 1,176.2             | 2.6       | 2.8    | -27.32          | -27.32                | 217.0                             | 657.1                             | 649.8                | 644.5                 | 5.27                    | 123.361            |         |
| 1,300.0                                                                                         | 1,296.1             | 1,274.3             | 1,274.3             | 3.0       | 3.0    | -28.02          | -28.02                | 215.9                             | 657.4                             | 634.7                | 629.0                 | 5.73                    | 110.701            |         |
| 1,400.0                                                                                         | 1,394.2             | 1,371.2             | 1,371.1             | 3.3       | 3.2    | -28.95          | -28.95                | 215.6                             | 657.6                             | 617.5                | 611.3                 | 6.23                    | 99.141             |         |
| 1,500.0                                                                                         | 1,491.7             | 1,472.4             | 1,472.3             | 3.7       | 3.5    | -30.08          | -30.08                | 214.9                             | 657.9                             | 598.2                | 591.4                 | 6.75                    | 88.679             |         |
| 1,600.0                                                                                         | 1,588.6             | 1,570.9             | 1,570.8             | 4.2       | 3.6    | -31.40          | -31.40                | 213.8                             | 657.6                             | 576.2                | 569.0                 | 7.22                    | 79.846             |         |
| 1,700.0                                                                                         | 1,684.9             | 1,671.9             | 1,671.8             | 4.7       | 3.8    | -33.10          | -33.10                | 213.0                             | 656.8                             | 552.0                | 544.3                 | 7.69                    | 71.767             |         |
| 1,800.0                                                                                         | 1,780.4             | 1,769.0             | 1,768.9             | 5.3       | 3.9    | -35.01          | -35.01                | 211.4                             | 655.5                             | 525.1                | 516.9                 | 8.23                    | 63.804             |         |
| 1,900.0                                                                                         | 1,875.4             | 1,861.4             | 1,861.3             | 5.9       | 4.1    | -36.92          | -36.92                | 209.8                             | 654.4                             | 497.6                | 488.8                 | 8.85                    | 56.259             |         |
| 2,000.0                                                                                         | 1,970.4             | 1,955.6             | 1,955.4             | 6.5       | 4.2    | -39.10          | -39.10                | 208.9                             | 653.4                             | 471.1                | 461.6                 | 9.50                    | 49.602             |         |
| 2,100.0                                                                                         | 2,065.4             | 2,051.8             | 2,051.6             | 7.1       | 4.3    | -41.64          | -41.64                | 208.1                             | 651.9                             | 445.2                | 435.0                 | 10.20                   | 43.663             |         |
| 2,200.0                                                                                         | 2,160.3             | 2,146.4             | 2,146.3             | 7.7       | 4.5    | -44.39          | -44.39                | 207.0                             | 650.5                             | 419.8                | 408.9                 | 10.96                   | 38.315             |         |
| 2,300.0                                                                                         | 2,255.3             | 2,239.3             | 2,239.1             | 8.4       | 4.7    | -47.32          | -47.32                | 205.5                             | 649.6                             | 395.8                | 384.0                 | 11.80                   | 33.550             |         |
| 2,400.0                                                                                         | 2,350.3             | 2,333.9             | 2,333.7             | 9.0       | 4.9    | -50.57          | -50.57                | 203.9                             | 649.3                             | 373.4                | 360.6                 | 12.72                   | 29.362             |         |
| 2,500.0                                                                                         | 2,445.3             | 2,430.6             | 2,430.4             | 9.7       | 5.1    | -54.31          | -54.31                | 202.1                             | 648.6                             | 351.9                | 338.2                 | 13.70                   | 25.683             |         |
| 2,600.0                                                                                         | 2,540.3             | 2,525.0             | 2,524.7             | 10.3      | 5.4    | -58.41          | -58.41                | 200.3                             | 647.8                             | 331.9                | 317.2                 | 14.72                   | 22.547             |         |
| 2,700.0                                                                                         | 2,635.3             | 2,619.1             | 2,618.9             | 11.0      | 5.6    | -62.98          | -62.98                | 198.8                             | 647.0                             | 314.1                | 298.3                 | 15.78                   | 19.905             |         |
| 2,800.0                                                                                         | 2,730.3             | 2,714.0             | 2,713.7             | 11.6      | 5.8    | -68.12          | -68.12                | 197.3                             | 645.9                             | 298.7                | 281.8                 | 16.86                   | 17.717             |         |
| 2,900.0                                                                                         | 2,825.3             | 2,805.6             | 2,805.3             | 12.3      | 5.9    | -73.66          | -73.66                | 196.8                             | 644.4                             | 286.7                | 268.8                 | 17.88                   | 16.031             |         |
| 3,000.0                                                                                         | 2,920.3             | 2,900.3             | 2,900.0             | 12.9      | 6.1    | -79.86          | -79.86                | 196.9                             | 642.6                             | 278.5                | 259.6                 | 18.85                   | 14.774             |         |
| 3,100.0                                                                                         | 3,015.3             | 2,995.1             | 2,994.8             | 13.6      | 6.2    | -86.29          | -86.29                | 196.8                             | 640.9                             | 273.9                | 254.1                 | 19.75                   | 13.866             |         |
| 3,168.1                                                                                         | 3,080.0             | 3,059.4             | 3,059.1             | 14.0      | 6.3    | -90.72          | -90.72                | 196.6                             | 639.8                             | 273.0                | 252.7                 | 20.31                   | 13.440 CC          |         |
| 3,200.0                                                                                         | 3,110.3             | 3,089.4             | 3,089.1             | 14.2      | 6.3    | -92.79          | -92.79                | 196.6                             | 639.2                             | 273.2                | 252.6                 | 20.55                   | 13.293 ES          |         |
| 3,300.0                                                                                         | 3,205.3             | 3,185.0             | 3,184.7             | 14.9      | 6.5    | -99.33          | -99.33                | 196.2                             | 637.5                             | 276.3                | 255.0                 | 21.23                   | 13.013 SF          |         |
| 3,400.0                                                                                         | 3,300.3             | 3,276.2             | 3,275.9             | 15.6      | 6.7    | -105.31         | -105.31               | 196.1                             | 636.1                             | 283.3                | 261.6                 | 21.75                   | 13.025             |         |
| 3,500.0                                                                                         | 3,395.3             | 3,370.3             | 3,369.9             | 16.2      | 6.8    | -111.09         | -111.09               | 197.0                             | 634.9                             | 294.8                | 272.6                 | 22.12                   | 13.326             |         |
| 3,600.0                                                                                         | 3,490.3             | 3,466.0             | 3,465.6             | 16.9      | 6.9    | -116.53         | -116.53               | 197.6                             | 633.6                             | 309.0                | 286.6                 | 22.39                   | 13.798             |         |
| 3,700.0                                                                                         | 3,585.3             | 3,560.9             | 3,560.5             | 17.5      | 7.0    | -121.50         | -121.50               | 197.8                             | 632.1                             | 325.6                | 303.0                 | 22.62                   | 14.396             |         |
| 3,800.0                                                                                         | 3,680.3             | 3,654.5             | 3,654.1             | 18.2      | 7.2    | -125.90         | -125.90               | 198.1                             | 630.8                             | 344.5                | 321.8                 | 22.79                   | 15.121             |         |
| 3,900.0                                                                                         | 3,775.3             | 3,749.8             | 3,749.4             | 18.9      | 7.3    | -129.79         | -129.79               | 199.1                             | 630.1                             | 365.6                | 342.7                 | 22.91                   | 15.962             |         |
| 4,000.0                                                                                         | 3,870.3             | 3,844.9             | 3,844.5             | 19.5      | 7.4    | -133.21         | -133.21               | 200.0                             | 629.9                             | 387.8                | 364.8                 | 23.00                   | 16.857             |         |
| 4,100.0                                                                                         | 3,965.2             | 3,939.9             | 3,939.5             | 20.2      | 7.4    | -136.19         | -136.19               | 201.4                             | 630.0                             | 411.4                | 388.3                 | 23.11                   | 17.800             |         |
| 4,200.0                                                                                         | 4,060.2             | 4,037.1             | 4,036.7             | 20.9      | 7.5    | -138.97         | -138.97               | 202.2                             | 630.1                             | 435.6                | 412.3                 | 23.22                   | 18.758             |         |
| 4,300.0                                                                                         | 4,155.2             | 4,130.4             | 4,130.0             | 21.5      | 7.6    | -141.36         | -141.36               | 202.8                             | 630.2                             | 460.5                | 437.1                 | 23.36                   | 19.712             |         |
| 4,400.0                                                                                         | 4,250.2             | 4,221.2             | 4,220.7             | 22.2      | 7.7    | -143.44         | -143.44               | 204.1                             | 629.9                             | 486.9                | 463.3                 | 23.54                   | 20.683             |         |
| 4,500.0                                                                                         | 4,345.2             | 4,315.9             | 4,315.5             | 22.8      | 7.8    | -145.35         | -145.35               | 206.0                             | 629.5                             | 514.3                | 490.5                 | 23.74                   | 21.662             |         |
| 4,600.0                                                                                         | 4,440.2             | 4,413.3             | 4,412.9             | 23.5      | 7.9    | -147.15         | -147.15               | 207.5                             | 629.2                             | 541.8                | 517.9                 | 23.95                   | 22.623             |         |
| 4,700.0                                                                                         | 4,535.2             | 4,508.3             | 4,507.8             | 24.2      | 8.1    | -148.71         | -148.71               | 209.0                             | 629.2                             | 569.6                | 545.4                 | 24.19                   | 23.550             |         |
| 4,800.0                                                                                         | 4,630.2             | 4,604.6             | 4,604.1             | 24.8      | 8.2    | -150.15         | -150.15               | 210.5                             | 629.4                             | 597.7                | 573.2                 | 24.44                   | 24.455             |         |
| 4,900.0                                                                                         | 4,725.2             | 4,698.8             | 4,698.3             | 25.5      | 8.3    | -151.44         | -151.44               | 211.8                             | 629.4                             | 626.0                | 601.3                 | 24.71                   | 25.331             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Existing Wells Sec.10-T4N-R67W - Purvis 10-2 (Exist.) - Wellbore #1 - Wellbore #1 |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       | Offset Site Error:      |                   | 0.0 ft  |
|-------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|-------------------|---------|
| Survey Program: 100-NS-GYRO-MS                                                                  |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       | Offset Well Error:      |                   | 0.0 ft  |
| Reference                                                                                       |                     | Offset              |                     | Semi Major Axis |             |                       | Distance                          |                                   |                      |                       |                         |                   | Warning |
| Measured Depth (ft)                                                                             | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |         |
| 5,000.0                                                                                         | 4,820.2             | 4,795.1             | 4,794.6             | 26.2            | 8.5         | -152.64               | 213.3                             | 629.6                             | 654.5                | 629.5                 | 25.00                   | 26.180            |         |
| 5,100.0                                                                                         | 4,915.2             | 4,888.0             | 4,887.5             | 26.8            | 8.6         | -153.69               | 214.8                             | 629.8                             | 683.3                | 658.0                 | 25.31                   | 26.997            |         |
| 5,200.0                                                                                         | 5,010.2             | 4,982.1             | 4,981.6             | 27.5            | 8.7         | -154.70               | 216.1                             | 629.7                             | 712.6                | 687.0                 | 25.64                   | 27.797            |         |
| 5,300.0                                                                                         | 5,105.2             | 5,077.8             | 5,077.2             | 28.2            | 8.9         | -155.66               | 217.4                             | 629.4                             | 742.0                | 716.1                 | 25.97                   | 28.571            |         |
| 5,400.0                                                                                         | 5,200.2             | 5,177.0             | 5,176.4             | 28.8            | 9.1         | -156.60               | 218.2                             | 629.2                             | 771.4                | 745.1                 | 26.32                   | 29.312            |         |
| 5,500.0                                                                                         | 5,295.2             | 5,266.5             | 5,265.9             | 29.5            | 9.2         | -157.42               | 218.5                             | 629.0                             | 800.8                | 774.1                 | 26.68                   | 30.019            |         |
| 5,600.0                                                                                         | 5,390.2             | 5,362.5             | 5,361.9             | 30.2            | 9.4         | -158.21               | 219.5                             | 628.4                             | 830.9                | 803.9                 | 27.06                   | 30.712            |         |
| 5,700.0                                                                                         | 5,485.2             | 5,461.8             | 5,461.3             | 30.8            | 9.6         | -159.02               | 219.6                             | 628.0                             | 860.6                | 833.2                 | 27.44                   | 31.363            |         |
| 5,800.0                                                                                         | 5,580.2             | 5,561.1             | 5,560.5             | 31.5            | 9.8         | -159.82               | 218.9                             | 627.6                             | 890.0                | 862.2                 | 27.82                   | 31.995            |         |
| 5,900.0                                                                                         | 5,675.2             | 5,664.4             | 5,663.8             | 32.2            | 10.0        | -160.63               | 217.4                             | 627.7                             | 919.0                | 890.8                 | 28.18                   | 32.606            |         |
| 6,000.0                                                                                         | 5,770.2             | 5,761.6             | 5,761.0             | 32.8            | 10.1        | -161.36               | 215.5                             | 628.2                             | 947.3                | 918.8                 | 28.55                   | 33.182            |         |
| 6,100.0                                                                                         | 5,865.1             | 5,863.3             | 5,862.7             | 33.5            | 10.3        | -162.10               | 213.1                             | 628.9                             | 975.7                | 946.8                 | 28.92                   | 33.738            |         |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design           |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |                       | Offset Site Error: | 0.0 ft |
|-------------------------|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-----------------------|--------------------|--------|
| Survey Program: 155-MWD |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |                       | Offset Well Error: | 0.0 ft |
| Reference               |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |                       |                    |        |
| Offset                  |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |                       |                    |        |
| Semi Major Axis         |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |                       |                    |        |
| Distance                |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |                       |                    |        |
| Measured Depth (ft)     | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor     | Warning            |        |
| 3,000.0                 | 2,920.3             | 3,289.7             | 3,086.7             | 12.9           | 19.8        | -55.69                | 608.4                             | 1,255.5    | 993.2                | 964.5                 | 28.69                   | 34.618                |                    |        |
| 3,100.0                 | 3,015.3             | 3,381.9             | 3,170.7             | 13.6           | 20.5        | -55.07                | 572.1                             | 1,265.9    | 954.3                | 924.5                 | 29.86                   | 31.959                |                    |        |
| 3,200.0                 | 3,110.3             | 3,468.0             | 3,249.8             | 14.2           | 21.1        | -54.52                | 539.2                             | 1,275.2    | 916.0                | 885.1                 | 30.97                   | 29.577                |                    |        |
| 3,300.0                 | 3,205.3             | 3,553.4             | 3,328.5             | 14.9           | 21.7        | -53.98                | 507.2                             | 1,284.4    | 878.5                | 846.4                 | 32.07                   | 27.396                |                    |        |
| 3,400.0                 | 3,300.3             | 3,640.7             | 3,409.1             | 15.6           | 22.3        | -53.40                | 475.4                             | 1,294.0    | 841.7                | 808.6                 | 33.16                   | 25.381                |                    |        |
| 3,500.0                 | 3,395.3             | 3,733.3             | 3,495.2             | 16.2           | 22.9        | -52.82                | 442.4                             | 1,303.6    | 805.3                | 771.0                 | 34.29                   | 23.487                |                    |        |
| 3,600.0                 | 3,490.3             | 3,828.8             | 3,583.9             | 16.9           | 23.6        | -52.18                | 408.4                             | 1,313.4    | 768.8                | 733.4                 | 35.44                   | 21.693                |                    |        |
| 3,700.0                 | 3,585.3             | 3,922.1             | 3,669.6             | 17.5           | 24.3        | -51.29                | 373.4                             | 1,324.2    | 732.1                | 695.5                 | 36.61                   | 19.998                |                    |        |
| 3,800.0                 | 3,680.3             | 4,010.0             | 3,750.4             | 18.2           | 24.9        | -50.33                | 340.3                             | 1,334.8    | 695.8                | 658.1                 | 37.74                   | 18.436                |                    |        |
| 3,900.0                 | 3,775.3             | 4,098.0             | 3,831.0             | 18.9           | 25.6        | -49.19                | 307.0                             | 1,346.7    | 660.6                | 621.7                 | 38.88                   | 16.991                |                    |        |
| 4,000.0                 | 3,870.3             | 4,190.5             | 3,915.8             | 19.5           | 26.2        | -47.87                | 272.2                             | 1,359.1    | 625.7                | 585.7                 | 40.03                   | 15.632                |                    |        |
| 4,100.0                 | 3,965.2             | 4,282.5             | 4,001.0             | 20.2           | 26.9        | -46.64                | 239.3                             | 1,370.5    | 591.5                | 550.4                 | 41.13                   | 14.383                |                    |        |
| 4,200.0                 | 4,060.2             | 4,380.2             | 4,092.2             | 20.9           | 27.6        | -45.43                | 205.8                             | 1,380.6    | 556.9                | 514.7                 | 42.22                   | 13.193                |                    |        |
| 4,300.0                 | 4,155.2             | 4,469.2             | 4,175.1             | 21.5           | 28.2        | -44.10                | 174.8                             | 1,390.2    | 522.7                | 479.4                 | 43.23                   | 12.089                |                    |        |
| 4,400.0                 | 4,250.2             | 4,555.0             | 4,254.9             | 22.2           | 28.8        | -42.61                | 145.1                             | 1,400.6    | 489.9                | 445.6                 | 44.21                   | 11.081                |                    |        |
| 4,500.0                 | 4,345.2             | 4,641.1             | 4,334.9             | 22.8           | 29.4        | -40.84                | 115.6                             | 1,412.6    | 459.0                | 413.9                 | 45.14                   | 10.169                |                    |        |
| 4,600.0                 | 4,440.2             | 4,737.4             | 4,423.6             | 23.5           | 30.1        | -38.33                | 81.2                              | 1,427.3    | 429.1                | 383.1                 | 46.07                   | 9.314                 |                    |        |
| 4,700.0                 | 4,535.2             | 4,824.5             | 4,503.5             | 24.2           | 30.7        | -35.62                | 49.7                              | 1,441.5    | 400.8                | 353.9                 | 46.85                   | 8.554                 |                    |        |
| 4,800.0                 | 4,630.2             | 4,921.9             | 4,593.1             | 24.8           | 31.4        | -32.23                | 14.9                              | 1,457.4    | 373.8                | 326.3                 | 47.51                   | 7.867                 |                    |        |
| 4,900.0                 | 4,725.2             | 5,016.4             | 4,680.0             | 25.5           | 32.1        | -28.47                | -18.9                             | 1,472.4    | 347.6                | 299.7                 | 47.97                   | 7.246                 |                    |        |
| 5,000.0                 | 4,820.2             | 5,112.1             | 4,768.4             | 26.2           | 32.8        | -24.25                | -52.6                             | 1,486.9    | 322.8                | 274.5                 | 48.21                   | 6.695                 |                    |        |
| 5,100.0                 | 4,915.2             | 5,209.4             | 4,859.1             | 26.8           | 33.5        | -19.71                | -85.1                             | 1,500.5    | 299.0                | 250.8                 | 48.21                   | 6.201                 |                    |        |
| 5,200.0                 | 5,010.2             | 5,309.5             | 4,953.9             | 27.5           | 34.1        | -15.07                | -115.1                            | 1,512.2    | 275.5                | 227.5                 | 48.05                   | 5.734                 |                    |        |
| 5,300.0                 | 5,105.2             | 5,408.1             | 5,048.4             | 28.2           | 34.6        | -10.51                | -141.4                            | 1,521.8    | 252.2                | 204.4                 | 47.78                   | 5.277                 |                    |        |
| 5,400.0                 | 5,200.2             | 5,507.6             | 5,144.7             | 28.8           | 35.1        | -5.71                 | -165.1                            | 1,530.1    | 229.0                | 181.6                 | 47.41                   | 4.831                 |                    |        |
| 5,500.0                 | 5,295.2             | 5,608.0             | 5,243.0             | 29.5           | 35.5        | -1.02                 | -184.6                            | 1,536.4    | 205.2                | 158.1                 | 47.07                   | 4.359                 |                    |        |
| 5,600.0                 | 5,390.2             | 5,707.0             | 5,340.7             | 30.2           | 35.8        | 3.59                  | -199.9                            | 1,541.3    | 180.9                | 134.1                 | 46.78                   | 3.866                 |                    |        |
| 5,700.0                 | 5,485.2             | 5,805.1             | 5,438.0             | 30.8           | 36.1        | 8.41                  | -211.6                            | 1,545.3    | 156.1                | 109.6                 | 46.56                   | 3.353                 |                    |        |
| 5,800.0                 | 5,580.2             | 5,902.5             | 5,534.9             | 31.5           | 36.3        | 13.99                 | -220.8                            | 1,548.9    | 131.6                | 85.2                  | 46.39                   | 2.838                 |                    |        |
| 5,900.0                 | 5,675.2             | 6,000.2             | 5,632.3             | 32.2           | 36.5        | 21.17                 | -228.1                            | 1,552.0    | 107.4                | 61.1                  | 46.30                   | 2.320                 |                    |        |
| 6,000.0                 | 5,770.2             | 6,097.3             | 5,729.2             | 32.8           | 36.7        | 31.62                 | -233.6                            | 1,554.3    | 84.0                 | 37.6                  | 46.40                   | 1.811                 |                    |        |
| 6,100.0                 | 5,865.1             | 6,193.9             | 5,825.7             | 33.5           | 36.8        | 48.47                 | -237.9                            | 1,555.9    | 63.8                 | 16.6                  | 47.20                   | 1.351 Level 3         |                    |        |
| 6,200.0                 | 5,960.1             | 6,290.2             | 5,921.9             | 34.2           | 37.0        | 75.17                 | -240.7                            | 1,557.2    | 51.3                 | -1.1                  | 52.45                   | 0.979 Level 1         |                    |        |
| 6,236.4                 | 5,994.8             | 6,325.2             | 5,956.9             | 34.4           | 37.0        | 86.89                 | -241.4                            | 1,557.7    | 50.2                 | -6.0                  | 56.19                   | 0.894 Level 1, CC     |                    |        |
| 6,300.0                 | 6,055.1             | 6,385.8             | 6,017.5             | 34.8           | 37.1        | 106.77                | -242.4                            | 1,558.4    | 53.7                 | -7.9                  | 61.60                   | 0.872 Level 1, ES, SF |                    |        |
| 6,400.0                 | 6,150.1             | 6,481.1             | 6,112.8             | 35.5           | 37.1        | 130.11                | -243.9                            | 1,559.2    | 70.3                 | 6.9                   | 63.35                   | 1.110 Level 2         |                    |        |
| 6,500.0                 | 6,245.1             | 6,576.0             | 6,207.7             | 36.2           | 37.2        | 143.69                | -245.3                            | 1,559.7    | 94.2                 | 32.4                  | 61.77                   | 1.525                 |                    |        |
| 6,600.0                 | 6,340.1             | 6,670.8             | 6,302.5             | 36.8           | 37.3        | 151.48                | -247.2                            | 1,560.0    | 121.5                | 61.2                  | 60.29                   | 2.015                 |                    |        |
| 6,700.0                 | 6,435.1             | 6,765.4             | 6,397.0             | 37.5           | 37.4        | 156.36                | -249.2                            | 1,560.0    | 150.5                | 91.1                  | 59.32                   | 2.536                 |                    |        |
| 6,800.0                 | 6,530.1             | 6,860.2             | 6,491.8             | 38.1           | 37.5        | 175.06                | -251.5                            | 1,559.9    | 181.0                | 122.7                 | 58.30                   | 3.104                 |                    |        |
| 6,900.0                 | 6,624.5             | 6,953.1             | 6,584.7             | 38.7           | 37.7        | -163.81               | -254.1                            | 1,559.6    | 214.5                | 156.5                 | 57.97                   | 3.699                 |                    |        |
| 7,000.0                 | 6,716.8             | 7,043.6             | 6,675.1             | 39.2           | 37.8        | -150.62               | -256.8                            | 1,558.9    | 251.7                | 193.7                 | 58.02                   | 4.339                 |                    |        |
| 7,100.0                 | 6,805.2             | 7,130.5             | 6,762.0             | 39.6           | 37.9        | -143.27               | -259.3                            | 1,558.0    | 293.8                | 235.9                 | 57.89                   | 5.075                 |                    |        |
| 7,200.0                 | 6,888.4             | 7,212.0             | 6,843.4             | 40.0           | 38.0        | -139.16               | -261.7                            | 1,557.2    | 341.9                | 284.5                 | 57.31                   | 5.965                 |                    |        |
| 7,300.0                 | 6,964.9             | 7,285.8             | 6,917.2             | 40.4           | 38.0        | -136.34               | -263.9                            | 1,556.5    | 397.0                | 340.7                 | 56.30                   | 7.051                 |                    |        |
| 7,400.0                 | 7,033.4             | 7,350.4             | 6,981.7             | 40.8           | 38.1        | -133.52               | -266.1                            | 1,555.7    | 459.8                | 404.6                 | 55.19                   | 8.330                 |                    |        |
| 7,500.0                 | 7,092.7             | 7,406.9             | 7,038.2             | 41.1           | 38.2        | -130.04               | -268.1                            | 1,555.1    | 529.8                | 475.3                 | 54.51                   | 9.721                 |                    |        |
| 7,600.0                 | 7,141.7             | 7,452.7             | 7,084.0             | 41.4           | 38.3        | -124.99               | -269.7                            | 1,554.6    | 606.4                | 551.5                 | 54.86                   | 11.054                |                    |        |
| 7,700.0                 | 7,179.8             | 7,486.7             | 7,118.0             | 41.6           | 38.3        | -117.60               | -270.9                            | 1,554.3    | 688.4                | 631.8                 | 56.58                   | 12.165                |                    |        |
| 7,800.0                 | 7,206.2             | 7,508.8             | 7,140.0             | 41.9           | 38.3        | -107.32               | -271.8                            | 1,554.2    | 774.4                | 715.3                 | 59.07                   | 13.111                |                    |        |
| 7,900.0                 | 7,220.4             | 7,518.7             | 7,150.0             | 42.2           | 38.3        | -94.26                | -272.2                            | 1,554.1    | 863.0                | 802.6                 | 60.40                   | 14.289                |                    |        |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

|                                                                                                 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         |                           |         |
|-------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| <b>Offset Design</b> Purvis 10TD Pad Sec. 10-T4N-R67W - Purvis 10TD - Wellbore #1 - Wellbore #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | <b>Offset Site Error:</b> | 0.0 ft  |
| Survey Program: 155-MWD                                                                         |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | <b>Offset Well Error:</b> | 0.0 ft  |
| Reference                                                                                       |                     | Offset              |                     | Semi Major Axis |             | Distance              |                                   |            |                      |                       |                         |                           |         |
| Measured Depth (ft)                                                                             | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor         | Warning |
| 8,000.0                                                                                         | 7,223.4             | 7,517.7             | 7,148.9             | 42.4            | 38.3        | -85.76                | -272.2                            | 1,554.1    | 952.7                | 892.6                 | 60.13                   | 15.845                    |         |



|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design           |                |                |                |                 |        |                   |                        |            |                 |                  |                    | Purvis 10TD Pad Sec. 10-T4N-R67W - Purvis 10WD - Wellbore #1 - Wellbore #1 |  | Offset Site Error: |  | 0.0 ft |  |
|-------------------------|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|------------|-----------------|------------------|--------------------|----------------------------------------------------------------------------|--|--------------------|--|--------|--|
| Survey Program: 701-MWD |                |                |                |                 |        |                   |                        |            |                 |                  |                    |                                                                            |  | Offset Well Error: |  | 0.0 ft |  |
| Reference               |                | Offset         |                | Semi Major Axis |        |                   | Distance               |            |                 |                  |                    |                                                                            |  | Warning            |  |        |  |
| Measured Depth          | Vertical Depth | Measured Depth | Vertical Depth | Reference       | Offset | Highside Toolface | Offset Wellbore Centre |            | Between Centres | Between Ellipses | Minimum Separation | Separation Factor                                                          |  |                    |  |        |  |
| (ft)                    | (ft)           | (ft)           | (ft)           | (ft)            | (ft)   | (°)               | +N/-S (ft)             | +E/-W (ft) | (ft)            | (ft)             | (ft)               |                                                                            |  |                    |  |        |  |
| 9,200.0                 | 7,233.6        | 7,643.4        | 7,223.8        | 51.4            | 40.2   | 91.72             | 2,345.6                | 2,742.1    | 960.4           | 897.0            | 63.43              | 15.142                                                                     |  |                    |  |        |  |
| 9,300.0                 | 7,234.4        | 7,641.2        | 7,221.5        | 52.6            | 40.2   | 91.55             | 2,345.7                | 2,742.1    | 906.1           | 841.0            | 65.11              | 13.916                                                                     |  |                    |  |        |  |
| 9,400.0                 | 7,235.3        | 7,638.9        | 7,219.3        | 53.8            | 40.2   | 91.39             | 2,345.8                | 2,742.1    | 860.0           | 793.2            | 66.82              | 12.871                                                                     |  |                    |  |        |  |
| 9,500.0                 | 7,236.1        | 7,636.7        | 7,217.0        | 55.1            | 40.2   | 91.22             | 2,345.8                | 2,742.2    | 823.5           | 755.0            | 68.55              | 12.014                                                                     |  |                    |  |        |  |
| 9,600.0                 | 7,237.0        | 7,634.4        | 7,214.8        | 56.5            | 40.2   | 91.06             | 2,345.9                | 2,742.2    | 798.0           | 727.7            | 70.29              | 11.353                                                                     |  |                    |  |        |  |
| 9,700.0                 | 7,237.9        | 7,632.1        | 7,212.5        | 57.8            | 40.2   | 90.89             | 2,346.0                | 2,742.2    | 784.4           | 712.4            | 72.05              | 10.888                                                                     |  |                    |  |        |  |
| 9,757.2                 | 7,238.3        | 7,630.8        | 7,211.1        | 58.6            | 40.2   | 90.79             | 2,346.0                | 2,742.2    | 782.4           | 709.3            | 73.06              | 10.708 CC, ES                                                              |  |                    |  |        |  |
| 9,800.0                 | 7,238.7        | 7,629.8        | 7,210.2        | 59.2            | 40.2   | 90.72             | 2,346.0                | 2,742.3    | 783.5           | 709.7            | 73.82              | 10.614                                                                     |  |                    |  |        |  |
| 9,900.0                 | 7,239.6        | 7,627.5        | 7,207.8        | 60.7            | 40.2   | 90.55             | 2,346.1                | 2,742.3    | 795.3           | 719.7            | 75.60              | 10.519 SF                                                                  |  |                    |  |        |  |
| 10,000.0                | 7,240.4        | 7,625.1        | 7,205.5        | 62.2            | 40.2   | 90.38             | 2,346.2                | 2,742.3    | 819.1           | 741.7            | 77.40              | 10.583                                                                     |  |                    |  |        |  |
| 10,100.0                | 7,241.3        | 7,625.0        | 7,205.4        | 63.7            | 40.2   | 90.37             | 2,346.2                | 2,742.3    | 854.1           | 775.0            | 79.17              | 10.788                                                                     |  |                    |  |        |  |
| 10,200.0                | 7,242.1        | 7,620.8        | 7,201.1        | 65.2            | 40.2   | 90.06             | 2,346.3                | 2,742.4    | 898.9           | 817.9            | 81.01              | 11.096                                                                     |  |                    |  |        |  |
| 10,300.0                | 7,243.0        | 7,618.7        | 7,199.0        | 66.7            | 40.2   | 89.90             | 2,346.4                | 2,742.4    | 952.1           | 869.3            | 82.83              | 11.495                                                                     |  |                    |  |        |  |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

|                         |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       |                         |                           |         |
|-------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| <b>Offset Design</b>    |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       |                         | <b>Offset Site Error:</b> | 0.0 ft  |
| Survey Program: 150-MWD |                     |                     |                     |                 |             |                       |                                   |                                   |                      |                       |                         | <b>Offset Well Error:</b> | 0.0 ft  |
| Reference               |                     | Offset              |                     | Semi Major Axis |             | Distance              |                                   |                                   |                      |                       |                         |                           |         |
| Measured Depth (ft)     | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft)  | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor         | Warning |
| 7,800.0                 | 7,206.2             | 7,530.0             | 7,180.1             | 41.9            | 39.3        | 81.35                 | 955.3                             | 2,739.7                           | 967.1                | 921.3                 | 45.81                   | 21.112                    |         |
| 7,900.0                 | 7,220.4             | 7,540.3             | 7,190.5             | 42.2            | 39.3        | 87.69                 | 955.0                             | 2,739.8                           | 909.0                | 863.1                 | 45.98                   | 19.771                    |         |
| 8,000.0                 | 7,223.4             | 7,541.1             | 7,191.2             | 42.4            | 39.3        | 90.20                 | 955.0                             | 2,739.8                           | 861.5                | 814.9                 | 46.57                   | 18.497                    |         |
| 8,100.0                 | 7,224.2             | 7,539.8             | 7,189.9             | 42.8            | 39.3        | 90.11                 | 955.0                             | 2,739.8                           | 824.0                | 776.4                 | 47.57                   | 17.322                    |         |
| 8,200.0                 | 7,225.1             | 7,538.5             | 7,188.6             | 43.2            | 39.3        | 90.01                 | 955.1                             | 2,739.7                           | 797.3                | 748.6                 | 48.67                   | 16.383                    |         |
| 8,300.0                 | 7,225.9             | 7,537.2             | 7,187.3             | 43.7            | 39.3        | 89.91                 | 955.1                             | 2,739.7                           | 782.6                | 732.7                 | 49.86                   | 15.696                    |         |
| 8,366.2                 | 7,226.5             | 7,536.3             | 7,186.4             | 44.1            | 39.3        | 89.85                 | 955.1                             | 2,739.7                           | 779.8                | 729.1                 | 50.70                   | 15.380 CC, ES             |         |
| 8,400.0                 | 7,226.8             | 7,535.8             | 7,185.9             | 44.3            | 39.3        | 89.81                 | 955.1                             | 2,739.7                           | 780.5                | 729.4                 | 51.13                   | 15.264                    |         |
| 8,500.0                 | 7,227.6             | 7,534.4             | 7,184.6             | 44.9            | 39.3        | 89.71                 | 955.2                             | 2,739.7                           | 791.2                | 738.7                 | 52.48                   | 15.076 SF                 |         |
| 8,600.0                 | 7,228.5             | 7,533.1             | 7,183.2             | 45.6            | 39.3        | 89.61                 | 955.2                             | 2,739.7                           | 814.1                | 760.2                 | 53.88                   | 15.108                    |         |
| 8,700.0                 | 7,229.3             | 7,531.7             | 7,181.8             | 46.4            | 39.3        | 89.51                 | 955.2                             | 2,739.7                           | 848.2                | 792.9                 | 55.34                   | 15.326                    |         |
| 8,800.0                 | 7,230.2             | 7,530.2             | 7,180.3             | 47.3            | 39.3        | 89.40                 | 955.3                             | 2,739.7                           | 892.3                | 835.5                 | 56.85                   | 15.696                    |         |
| 8,900.0                 | 7,231.0             | 7,530.0             | 7,180.1             | 48.2            | 39.3        | 89.39                 | 955.3                             | 2,739.7                           | 945.0                | 886.6                 | 58.38                   | 16.185                    |         |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10Q-321 - Wellbore #1 - Plan #3 (6-11-15) |                     |                     |                     |           |        |                 |                       |                                   |                                   |                               |                                |                         | Offset Site Error: | 0.0 ft  |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|-----------------------------------|-------------------------------|--------------------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |           |        |                 |                       |                                   |                                   |                               |                                |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 0.0                                                                                                 | 0.0                 | 0.0                 | 0.0                 | 0.0       | 0.0    | 0.0             | -2.58                 | 61.9                              | -2.8                              | 62.0                          |                                |                         |                    |         |
| 100.0                                                                                               | 100.0               | 98.0                | 98.0                | 0.1       | 0.1    | 0.1             | -2.58                 | 61.9                              | -2.8                              | 62.0                          | 61.8                           | 0.19                    | 320.194            |         |
| 200.0                                                                                               | 200.0               | 198.0               | 198.0               | 0.3       | 0.3    | 0.3             | -2.58                 | 61.9                              | -2.8                              | 62.0                          | 61.3                           | 0.64                    | 96.766             |         |
| 300.0                                                                                               | 300.0               | 298.0               | 298.0               | 0.5       | 0.5    | 0.5             | -2.58                 | 61.9                              | -2.8                              | 62.0                          | 60.9                           | 1.09                    | 56.863             |         |
| 400.0                                                                                               | 400.0               | 398.0               | 398.0               | 0.8       | 0.8    | 0.8             | -2.58                 | 61.9                              | -2.8                              | 62.0                          | 60.4                           | 1.54                    | 40.260             |         |
| 500.0                                                                                               | 500.0               | 498.0               | 498.0               | 1.0       | 1.0    | 1.0             | -2.58                 | 61.9                              | -2.8                              | 62.0                          | 60.0                           | 1.99                    | 31.162             |         |
| 600.0                                                                                               | 600.0               | 598.0               | 598.0               | 1.2       | 1.2    | 1.2             | -2.58                 | 61.9                              | -2.8                              | 62.0                          | 59.5                           | 2.44                    | 25.418 CC          |         |
| 700.0                                                                                               | 700.0               | 698.0               | 698.0               | 1.4       | 1.4    | 1.4             | -100.75               | 61.9                              | -2.8                              | 62.2                          | 59.3                           | 2.87                    | 21.650 ES          |         |
| 800.0                                                                                               | 799.9               | 797.9               | 797.9               | 1.6       | 1.7    | 1.7             | -104.24               | 61.9                              | -2.8                              | 63.1                          | 59.8                           | 3.30                    | 19.096             |         |
| 900.0                                                                                               | 899.7               | 897.7               | 897.7               | 1.9       | 1.9    | 1.9             | -109.80               | 61.9                              | -2.8                              | 65.0                          | 61.2                           | 3.74                    | 17.361             |         |
| 1,000.0                                                                                             | 999.3               | 997.3               | 997.3               | 2.1       | 2.1    | 2.1             | -116.93               | 61.9                              | -2.8                              | 68.6                          | 64.4                           | 4.20                    | 16.359             |         |
| 1,100.0                                                                                             | 1,098.6             | 1,096.6             | 1,096.6             | 2.4       | 2.3    | 2.3             | -124.88               | 61.9                              | -2.8                              | 74.7                          | 70.1                           | 4.66                    | 16.048 SF          |         |
| 1,200.0                                                                                             | 1,197.5             | 1,195.5             | 1,195.5             | 2.6       | 2.6    | 2.6             | -132.81               | 61.9                              | -2.8                              | 83.8                          | 78.7                           | 5.12                    | 16.372             |         |
| 1,300.0                                                                                             | 1,296.1             | 1,294.1             | 1,294.1             | 3.0       | 2.8    | 2.8             | -140.07               | 61.9                              | -2.8                              | 96.2                          | 90.6                           | 5.58                    | 17.245             |         |
| 1,400.0                                                                                             | 1,394.2             | 1,392.2             | 1,392.2             | 3.3       | 3.0    | 3.0             | -146.32               | 61.9                              | -2.8                              | 111.9                         | 105.9                          | 6.03                    | 18.562             |         |
| 1,500.0                                                                                             | 1,491.7             | 1,489.7             | 1,489.7             | 3.7       | 3.2    | 3.2             | -151.44               | 61.7                              | -1.7                              | 130.0                         | 123.5                          | 6.47                    | 20.101             |         |
| 1,600.0                                                                                             | 1,588.6             | 1,586.6             | 1,586.6             | 4.2       | 3.4    | 3.4             | -155.36               | 61.1                              | 2.1                               | 148.8                         | 141.9                          | 6.89                    | 21.595             |         |
| 1,700.0                                                                                             | 1,684.9             | 1,682.9             | 1,682.9             | 4.7       | 3.6    | 3.6             | -158.44               | 60.0                              | 8.5                               | 168.0                         | 160.6                          | 7.32                    | 22.958             |         |
| 1,800.0                                                                                             | 1,780.4             | 1,778.4             | 1,778.4             | 5.3       | 3.8    | 3.8             | -160.92               | 58.4                              | 17.6                              | 187.5                         | 179.7                          | 7.75                    | 24.180             |         |
| 1,900.0                                                                                             | 1,875.4             | 1,873.4             | 1,873.4             | 5.9       | 4.1    | 4.1             | -162.94               | 56.5                              | 28.2                              | 207.0                         | 198.8                          | 8.22                    | 25.179             |         |
| 2,000.0                                                                                             | 1,970.4             | 1,968.4             | 1,968.4             | 6.5       | 4.3    | 4.3             | -164.60               | 54.7                              | 38.8                              | 226.7                         | 218.0                          | 8.70                    | 26.048             |         |
| 2,100.0                                                                                             | 2,065.4             | 2,063.4             | 2,063.4             | 7.1       | 4.6    | 4.6             | -166.00               | 52.8                              | 49.4                              | 246.5                         | 237.4                          | 9.19                    | 26.829             |         |
| 2,200.0                                                                                             | 2,160.3             | 2,158.3             | 2,158.3             | 7.7       | 4.8    | 4.8             | -167.19               | 51.0                              | 60.0                              | 266.5                         | 256.8                          | 9.68                    | 27.532             |         |
| 2,300.0                                                                                             | 2,255.3             | 2,253.3             | 2,253.3             | 8.4       | 5.1    | 5.1             | -168.21               | 49.2                              | 70.6                              | 286.6                         | 276.4                          | 10.18                   | 28.164             |         |
| 2,400.0                                                                                             | 2,350.3             | 2,348.3             | 2,348.3             | 9.0       | 5.3    | 5.3             | -169.09               | 47.3                              | 81.2                              | 306.7                         | 296.1                          | 10.67                   | 28.733             |         |
| 2,500.0                                                                                             | 2,445.3             | 2,443.3             | 2,443.3             | 9.7       | 5.6    | 5.6             | -169.87               | 45.5                              | 91.7                              | 326.9                         | 315.8                          | 11.18                   | 29.249             |         |
| 2,600.0                                                                                             | 2,540.3             | 2,538.3             | 2,538.3             | 10.3      | 5.9    | 5.9             | -170.56               | 43.6                              | 102.3                             | 347.2                         | 335.5                          | 11.68                   | 29.716             |         |
| 2,700.0                                                                                             | 2,635.3             | 2,633.3             | 2,633.3             | 11.0      | 6.1    | 6.1             | -171.17               | 41.8                              | 112.9                             | 367.5                         | 355.3                          | 12.19                   | 30.141             |         |
| 2,800.0                                                                                             | 2,730.3             | 2,728.3             | 2,728.3             | 11.6      | 6.4    | 6.4             | -171.72               | 39.9                              | 123.5                             | 387.8                         | 375.1                          | 12.70                   | 30.528             |         |
| 2,900.0                                                                                             | 2,825.3             | 2,823.3             | 2,823.3             | 12.3      | 6.7    | 6.7             | -172.22               | 38.1                              | 134.1                             | 408.2                         | 395.0                          | 13.22                   | 30.882             |         |
| 3,000.0                                                                                             | 2,920.3             | 2,918.3             | 2,918.3             | 12.9      | 6.9    | 6.9             | -172.66               | 36.3                              | 144.7                             | 428.6                         | 414.9                          | 13.73                   | 31.207             |         |
| 3,100.0                                                                                             | 3,015.3             | 3,013.3             | 3,013.3             | 13.6      | 7.2    | 7.2             | -173.07               | 34.4                              | 155.3                             | 449.0                         | 434.7                          | 14.25                   | 31.505             |         |
| 3,200.0                                                                                             | 3,110.3             | 3,108.3             | 3,108.3             | 14.2      | 7.5    | 7.5             | -173.44               | 32.6                              | 165.8                             | 469.4                         | 454.7                          | 14.77                   | 31.780             |         |
| 3,300.0                                                                                             | 3,205.3             | 3,203.3             | 3,203.3             | 14.9      | 7.8    | 7.8             | -173.78               | 30.7                              | 176.4                             | 489.9                         | 474.6                          | 15.29                   | 32.034             |         |
| 3,400.0                                                                                             | 3,300.3             | 3,298.3             | 3,298.3             | 15.6      | 8.1    | 8.1             | -174.09               | 28.9                              | 187.0                             | 510.4                         | 494.5                          | 15.82                   | 32.269             |         |
| 3,500.0                                                                                             | 3,395.3             | 3,393.3             | 3,393.3             | 16.2      | 8.4    | 8.4             | -174.38               | 27.1                              | 197.6                             | 530.8                         | 514.5                          | 16.34                   | 32.486             |         |
| 3,600.0                                                                                             | 3,490.3             | 3,488.3             | 3,488.3             | 16.9      | 8.6    | 8.6             | -174.65               | 25.2                              | 208.2                             | 551.3                         | 534.5                          | 16.87                   | 32.689             |         |
| 3,700.0                                                                                             | 3,585.3             | 3,583.3             | 3,583.3             | 17.5      | 8.9    | 8.9             | -174.90               | 23.4                              | 218.8                             | 571.8                         | 554.4                          | 17.39                   | 32.878             |         |
| 3,800.0                                                                                             | 3,680.3             | 3,678.3             | 3,678.3             | 18.2      | 9.2    | 9.2             | -175.13               | 21.5                              | 229.3                             | 592.3                         | 574.4                          | 17.92                   | 33.053             |         |
| 3,900.0                                                                                             | 3,775.3             | 3,773.3             | 3,773.3             | 18.9      | 9.5    | 9.5             | -175.34               | 19.7                              | 239.9                             | 612.9                         | 594.4                          | 18.45                   | 33.218             |         |
| 4,000.0                                                                                             | 3,870.3             | 3,868.3             | 3,868.3             | 19.5      | 9.8    | 9.8             | -175.54               | 17.8                              | 250.5                             | 633.4                         | 614.4                          | 18.98                   | 33.372             |         |
| 4,100.0                                                                                             | 3,965.2             | 3,963.2             | 3,963.2             | 20.2      | 10.1   | 10.1            | -175.73               | 16.0                              | 261.1                             | 653.9                         | 634.4                          | 19.51                   | 33.517             |         |
| 4,200.0                                                                                             | 4,060.2             | 4,058.2             | 4,058.2             | 20.9      | 10.4   | 10.4            | -175.91               | 14.2                              | 271.7                             | 674.5                         | 654.4                          | 20.04                   | 33.652             |         |
| 4,300.0                                                                                             | 4,155.2             | 4,153.2             | 4,153.2             | 21.5      | 10.7   | 10.7            | -176.08               | 12.3                              | 282.3                             | 695.0                         | 674.5                          | 20.58                   | 33.780             |         |
| 4,400.0                                                                                             | 4,250.2             | 4,248.2             | 4,248.2             | 22.2      | 11.0   | 11.0            | -176.23               | 10.5                              | 292.9                             | 715.6                         | 694.5                          | 21.11                   | 33.901             |         |
| 4,500.0                                                                                             | 4,345.2             | 4,343.2             | 4,343.2             | 22.8      | 11.3   | 11.3            | -176.38               | 8.6                               | 303.4                             | 736.1                         | 714.5                          | 21.64                   | 34.014             |         |
| 4,600.0                                                                                             | 4,440.2             | 4,438.2             | 4,438.2             | 23.5      | 11.5   | 11.5            | -176.52               | 6.8                               | 314.0                             | 756.7                         | 734.5                          | 22.18                   | 34.122             |         |
| 4,700.0                                                                                             | 4,535.2             | 4,533.2             | 4,533.2             | 24.2      | 11.8   | 11.8            | -176.65               | 5.0                               | 324.6                             | 777.3                         | 754.6                          | 22.71                   | 34.223             |         |
| 4,800.0                                                                                             | 4,630.2             | 4,628.2             | 4,628.2             | 24.8      | 12.1   | 12.1            | -176.78               | 3.1                               | 335.2                             | 797.8                         | 774.6                          | 23.25                   | 34.320             |         |
| 4,900.0                                                                                             | 4,725.2             | 4,723.2             | 4,723.2             | 25.5      | 12.4   | 12.4            | -176.90               | 1.3                               | 345.8                             | 818.4                         | 794.6                          | 23.78                   | 34.411             |         |
| 5,000.0                                                                                             | 4,820.2             | 4,818.2             | 4,818.2             | 26.2      | 12.7   | 12.7            | -177.01               | -0.6                              | 356.4                             | 839.0                         | 814.7                          | 24.32                   | 34.498             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| <b>Offset Design</b> Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10Q-321 - Wellbore #1 - Plan #3 (6-11-15) |                     |                     |                     |                |             |                       |                                   |                                   |                      |                       |                         | <b>Offset Site Error:</b> | 0.0 ft  |
|------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| Survey Program: 0-MWD                                                                                      |                     |                     |                     |                |             |                       |                                   |                                   |                      |                       |                         | <b>Offset Well Error:</b> | 0.0 ft  |
| Reference                                                                                                  | Offset              | Semi Major Axis     |                     | Distance       |             |                       |                                   |                                   |                      |                       |                         |                           |         |
| Measured Depth (ft)                                                                                        | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor         | Warning |
| 5,100.0                                                                                                    | 4,915.2             | 5,027.8             | 5,007.6             | 26.8           | 13.0        | -177.12               | -2.4                              | 367.0                             | 859.6                | 834.7                 | 24.86                   | 34.580                    |         |
| 5,200.0                                                                                                    | 5,010.2             | 5,125.7             | 5,104.8             | 27.5           | 13.3        | -177.23               | -4.3                              | 377.5                             | 880.2                | 854.8                 | 25.40                   | 34.658                    |         |
| 5,300.0                                                                                                    | 5,105.2             | 5,223.5             | 5,202.1             | 28.2           | 13.6        | -177.32               | -6.1                              | 388.1                             | 900.8                | 874.8                 | 25.93                   | 34.733                    |         |
| 5,400.0                                                                                                    | 5,200.2             | 5,321.4             | 5,299.3             | 28.8           | 13.9        | -177.42               | -7.9                              | 398.7                             | 921.3                | 894.9                 | 26.47                   | 34.804                    |         |
| 5,500.0                                                                                                    | 5,295.2             | 5,419.2             | 5,396.6             | 29.5           | 14.2        | -177.51               | -9.8                              | 409.3                             | 941.9                | 914.9                 | 27.01                   | 34.872                    |         |
| 5,600.0                                                                                                    | 5,390.2             | 5,517.1             | 5,493.9             | 30.2           | 14.5        | -177.60               | -11.6                             | 419.9                             | 962.5                | 935.0                 | 27.55                   | 34.937                    |         |
| 5,700.0                                                                                                    | 5,485.2             | 5,614.9             | 5,591.1             | 30.8           | 14.8        | -177.68               | -13.5                             | 430.5                             | 983.1                | 955.0                 | 28.09                   | 34.999                    |         |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10Q-401 - Wellbore #1 - Plan #2 (6-11-15) |                     |                     |                     |           |        |                 |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.0 ft  |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |           |        |                 |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 0.0                                                                                                 | 0.0                 | 0.0                 | 0.0                 | 0.0       | 0.0    | 0.00            | 0.00                  | 76.5                              | 0.0        | 76.5                 |                       |                         |                    |         |
| 100.0                                                                                               | 100.0               | 98.0                | 98.0                | 0.1       | 0.1    | 0.00            | 0.00                  | 76.5                              | 0.0        | 76.5                 | 76.3                  | 0.19                    | 395.186            |         |
| 200.0                                                                                               | 200.0               | 198.0               | 198.0               | 0.3       | 0.3    | 0.00            | 0.00                  | 76.5                              | 0.0        | 76.5                 | 75.9                  | 0.64                    | 119.429            |         |
| 300.0                                                                                               | 300.0               | 298.0               | 298.0               | 0.5       | 0.5    | 0.00            | 0.00                  | 76.5                              | 0.0        | 76.5                 | 75.4                  | 1.09                    | 70.180             |         |
| 400.0                                                                                               | 400.0               | 398.0               | 398.0               | 0.8       | 0.8    | 0.00            | 0.00                  | 76.5                              | 0.0        | 76.5                 | 75.0                  | 1.54                    | 49.690             |         |
| 500.0                                                                                               | 500.0               | 498.0               | 498.0               | 1.0       | 1.0    | 0.00            | 0.00                  | 76.5                              | 0.0        | 76.5                 | 74.5                  | 1.99                    | 38.460             |         |
| 600.0                                                                                               | 600.0               | 598.0               | 598.0               | 1.2       | 1.2    | 0.00            | 0.00                  | 76.5                              | 0.0        | 76.5                 | 74.1                  | 2.44                    | 31.371 CC          |         |
| 700.0                                                                                               | 700.0               | 698.0               | 698.0               | 1.4       | 1.4    | -97.95          | 0.00                  | 76.5                              | 0.0        | 76.7                 | 73.8                  | 2.87                    | 26.680 ES          |         |
| 800.0                                                                                               | 799.9               | 797.9               | 797.9               | 1.6       | 1.7    | -100.82         | 0.00                  | 76.5                              | 0.0        | 77.3                 | 74.0                  | 3.30                    | 23.409             |         |
| 900.0                                                                                               | 899.7               | 897.7               | 897.7               | 1.9       | 1.9    | -105.47         | 0.00                  | 76.5                              | 0.0        | 78.8                 | 75.1                  | 3.74                    | 21.048             |         |
| 1,000.0                                                                                             | 999.3               | 997.3               | 997.3               | 2.1       | 2.1    | -111.60         | 0.00                  | 76.5                              | 0.0        | 81.7                 | 77.5                  | 4.20                    | 19.464             |         |
| 1,100.0                                                                                             | 1,098.6             | 1,096.6             | 1,096.6             | 2.4       | 2.3    | -118.73         | 0.00                  | 76.5                              | 0.0        | 86.8                 | 82.1                  | 4.67                    | 18.598             |         |
| 1,200.0                                                                                             | 1,197.5             | 1,195.5             | 1,195.5             | 2.6       | 2.6    | -126.23         | 0.00                  | 76.5                              | 0.0        | 94.5                 | 89.4                  | 5.14                    | 18.403 SF          |         |
| 1,300.0                                                                                             | 1,296.1             | 1,294.1             | 1,294.1             | 3.0       | 2.8    | -133.49         | 0.00                  | 76.5                              | 0.0        | 105.5                | 99.9                  | 5.61                    | 18.812             |         |
| 1,400.0                                                                                             | 1,394.2             | 1,392.2             | 1,392.2             | 3.3       | 3.0    | -140.08         | 0.00                  | 76.5                              | 0.0        | 119.9                | 113.8                 | 6.07                    | 19.737             |         |
| 1,500.0                                                                                             | 1,491.7             | 1,489.7             | 1,489.7             | 3.7       | 3.2    | -145.78         | 0.00                  | 76.5                              | 0.0        | 137.7                | 131.1                 | 6.53                    | 21.077             |         |
| 1,600.0                                                                                             | 1,588.6             | 1,586.6             | 1,586.6             | 4.2       | 3.4    | -150.59         | 0.00                  | 76.5                              | 0.0        | 158.8                | 151.8                 | 6.98                    | 22.739             |         |
| 1,700.0                                                                                             | 1,684.9             | 1,682.9             | 1,682.9             | 4.7       | 3.7    | -154.57         | 0.00                  | 76.5                              | 0.0        | 183.1                | 175.7                 | 7.43                    | 24.644             |         |
| 1,800.0                                                                                             | 1,780.4             | 1,778.4             | 1,778.4             | 5.3       | 3.9    | -157.86         | 0.00                  | 76.5                              | 0.0        | 210.4                | 202.6                 | 7.87                    | 26.729             |         |
| 1,900.0                                                                                             | 1,875.4             | 1,873.4             | 1,873.4             | 5.9       | 4.1    | -160.64         | 0.00                  | 76.5                              | 0.0        | 239.8                | 231.5                 | 8.34                    | 28.752             |         |
| 2,000.0                                                                                             | 1,970.4             | 1,968.4             | 1,968.4             | 6.5       | 4.3    | -162.83         | 0.00                  | 76.5                              | 0.0        | 269.6                | 260.8                 | 8.82                    | 30.582             |         |
| 2,100.0                                                                                             | 2,065.4             | 2,063.4             | 2,063.4             | 7.1       | 4.5    | -164.71         | 0.4                   | 76.1                              | 0.4        | 299.2                | 289.9                 | 9.29                    | 32.220             |         |
| 2,200.0                                                                                             | 2,160.3             | 2,158.3             | 2,158.3             | 7.7       | 4.7    | -166.48         | 2.8                   | 73.9                              | 2.8        | 326.8                | 317.0                 | 9.74                    | 33.564             |         |
| 2,300.0                                                                                             | 2,255.3             | 2,253.3             | 2,253.3             | 8.4       | 4.9    | -168.17         | 7.3                   | 69.6                              | 7.3        | 352.2                | 342.0                 | 10.18                   | 34.580             |         |
| 2,400.0                                                                                             | 2,350.3             | 2,348.3             | 2,348.3             | 9.0       | 5.1    | -169.84         | 13.9                  | 63.4                              | 13.9       | 375.4                | 364.7                 | 10.64                   | 35.277             |         |
| 2,500.0                                                                                             | 2,445.3             | 2,443.3             | 2,443.3             | 9.7       | 5.3    | -171.37         | 21.8                  | 55.9                              | 21.8       | 396.9                | 385.8                 | 11.10                   | 35.760             |         |
| 2,600.0                                                                                             | 2,540.3             | 2,538.3             | 2,538.3             | 10.3      | 5.5    | -172.71         | 29.6                  | 48.6                              | 29.6       | 418.5                | 407.0                 | 11.57                   | 36.182             |         |
| 2,700.0                                                                                             | 2,635.3             | 2,633.3             | 2,633.3             | 11.0      | 5.7    | -173.92         | 37.4                  | 41.3                              | 37.4       | 440.4                | 428.3                 | 12.05                   | 36.557             |         |
| 2,800.0                                                                                             | 2,730.3             | 2,728.3             | 2,728.3             | 11.6      | 6.0    | -175.01         | 45.2                  | 34.0                              | 45.2       | 462.4                | 449.8                 | 12.53                   | 36.893             |         |
| 2,900.0                                                                                             | 2,825.3             | 2,823.3             | 2,823.3             | 12.3      | 6.2    | -176.01         | 52.9                  | 26.6                              | 52.9       | 484.5                | 471.5                 | 13.03                   | 37.186             |         |
| 3,000.0                                                                                             | 2,920.3             | 2,918.3             | 2,918.3             | 12.9      | 6.4    | -176.92         | 60.7                  | 19.3                              | 60.7       | 506.8                | 493.2                 | 13.53                   | 37.444             |         |
| 3,100.0                                                                                             | 3,015.3             | 3,013.3             | 3,013.3             | 13.6      | 6.7    | -177.75         | 68.5                  | 12.0                              | 68.5       | 529.1                | 515.1                 | 14.05                   | 37.670             |         |
| 3,200.0                                                                                             | 3,110.3             | 3,108.3             | 3,108.3             | 14.2      | 6.9    | -178.52         | 76.2                  | 4.7                               | 76.2       | 551.6                | 537.1                 | 14.57                   | 37.868             |         |
| 3,300.0                                                                                             | 3,205.3             | 3,203.3             | 3,203.3             | 14.9      | 7.2    | -179.22         | 84.0                  | -2.6                              | 84.0       | 574.2                | 559.1                 | 15.09                   | 38.040             |         |
| 3,400.0                                                                                             | 3,300.3             | 3,298.3             | 3,298.3             | 15.6      | 7.4    | -179.87         | 91.8                  | -10.0                             | 91.8       | 596.8                | 581.2                 | 15.63                   | 38.189             |         |
| 3,500.0                                                                                             | 3,395.3             | 3,393.3             | 3,393.3             | 16.2      | 7.7    | -179.52         | 99.5                  | -17.3                             | 99.5       | 619.5                | 603.4                 | 16.17                   | 38.319             |         |
| 3,600.0                                                                                             | 3,490.3             | 3,488.3             | 3,488.3             | 16.9      | 8.0    | -178.96         | 107.3                 | -24.6                             | 107.3      | 642.3                | 625.6                 | 16.71                   | 38.431             |         |
| 3,700.0                                                                                             | 3,585.3             | 3,583.3             | 3,583.3             | 17.5      | 8.2    | -178.43         | 115.1                 | -31.9                             | 115.1      | 665.1                | 647.9                 | 17.26                   | 38.528             |         |
| 3,800.0                                                                                             | 3,680.3             | 3,678.3             | 3,678.3             | 18.2      | 8.5    | -177.94         | 122.9                 | -39.2                             | 122.9      | 688.0                | 670.2                 | 17.82                   | 38.611             |         |
| 3,900.0                                                                                             | 3,775.3             | 3,773.3             | 3,773.3             | 18.9      | 8.8    | -177.49         | 130.6                 | -46.6                             | 130.6      | 710.9                | 692.6                 | 18.38                   | 38.683             |         |
| 4,000.0                                                                                             | 3,870.3             | 3,868.3             | 3,868.3             | 19.5      | 9.0    | -177.06         | 138.4                 | -53.9                             | 138.4      | 733.9                | 715.0                 | 18.94                   | 38.744             |         |
| 4,100.0                                                                                             | 3,965.3             | 3,963.3             | 3,963.3             | 20.2      | 9.3    | -176.65         | 146.2                 | -61.2                             | 146.2      | 756.9                | 737.4                 | 19.51                   | 38.795             |         |
| 4,200.0                                                                                             | 4,060.3             | 4,058.3             | 4,058.3             | 20.9      | 9.6    | -176.28         | 153.9                 | -68.5                             | 153.9      | 779.9                | 759.8                 | 20.08                   | 38.839             |         |
| 4,300.0                                                                                             | 4,155.3             | 4,153.3             | 4,153.3             | 21.5      | 9.9    | -175.92         | 161.7                 | -75.9                             | 161.7      | 803.0                | 782.3                 | 20.66                   | 38.875             |         |
| 4,400.0                                                                                             | 4,250.3             | 4,248.3             | 4,248.3             | 22.2      | 10.1   | -175.58         | 169.5                 | -83.2                             | 169.5      | 826.1                | 804.8                 | 21.23                   | 38.905             |         |
| 4,500.0                                                                                             | 4,345.3             | 4,343.3             | 4,343.3             | 22.8      | 10.4   | -175.26         | 177.2                 | -90.5                             | 177.2      | 849.2                | 827.4                 | 21.81                   | 38.930             |         |
| 4,600.0                                                                                             | 4,440.3             | 4,438.3             | 4,438.3             | 23.5      | 10.7   | -174.96         | 185.0                 | -97.8                             | 185.0      | 872.3                | 849.9                 | 22.40                   | 38.950             |         |
| 4,700.0                                                                                             | 4,535.3             | 4,533.3             | 4,533.3             | 24.2      | 11.0   | -174.67         | 192.8                 | -105.1                            | 192.8      | 895.5                | 872.5                 | 22.98                   | 38.965             |         |
| 4,800.0                                                                                             | 4,630.3             | 4,628.3             | 4,628.3             | 24.8      | 11.3   | -174.40         | 200.6                 | -112.5                            | 200.6      | 918.7                | 895.1                 | 23.57                   | 38.977             |         |
| 4,900.0                                                                                             | 4,725.3             | 4,723.3             | 4,723.3             | 25.5      | 11.6   | -174.14         | 208.3                 | -119.8                            | 208.3      | 941.9                | 917.7                 | 24.16                   | 38.985             |         |
| 5,000.0                                                                                             | 4,820.3             | 4,818.3             | 4,818.3             | 26.2      | 11.8   | -173.89         | 216.1                 | -127.1                            | 216.1      | 965.1                | 940.3                 | 24.75                   | 38.991             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

|                                                                                                            |                     |                     |                     |                |             |                       |                                   |                                   |                      |                       |                         |                   |                           |        |
|------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|-------------------|---------------------------|--------|
| <b>Offset Design</b> Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10Q-401 - Wellbore #1 - Plan #2 (6-11-15) |                     |                     |                     |                |             |                       |                                   |                                   |                      |                       |                         |                   | <b>Offset Site Error:</b> | 0.0 ft |
| Survey Program: 0-MWD                                                                                      |                     |                     |                     |                |             |                       |                                   |                                   |                      |                       |                         |                   | <b>Offset Well Error:</b> | 0.0 ft |
| Reference                                                                                                  | Offset              | Semi Major Axis     |                     | Distance       |             |                       |                                   |                                   |                      |                       |                         |                   | Warning                   |        |
| Measured Depth (ft)                                                                                        | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor |                           |        |
| 5,100.0                                                                                                    | 4,915.2             | 5,010.0             | 4,993.5             | 26.8           | 12.1        | 173.66                | -134.4                            | 223.9                             | 988.3                | 963.0                 | 25.35                   | 38.994            |                           |        |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-201 - Wellbore #1 - Plan #1 (6-11-15) |                     |                     |                     |                |             |                      |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.0 ft  |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|----------------|-------------|----------------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |                |             |                      |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Semi Major Axis (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 0.0                                                                                                 | 0.0                 | 0.0                 | 0.0                 | 0.0            | 0.0         | -10.83               |                       | 14.6                              | -2.8       | 14.9                 |                       |                         |                    |         |
| 100.0                                                                                               | 100.0               | 99.0                | 99.0                | 0.1            | 0.1         | -10.83               |                       | 14.6                              | -2.8       | 14.8                 | 14.6                  | 0.19                    | 76.254             |         |
| 200.0                                                                                               | 200.0               | 199.0               | 199.0               | 0.3            | 0.3         | -10.83               |                       | 14.6                              | -2.8       | 14.8                 | 14.2                  | 0.64                    | 23.080             |         |
| 300.0                                                                                               | 300.0               | 299.0               | 299.0               | 0.5            | 0.5         | -10.83               |                       | 14.6                              | -2.8       | 14.8                 | 13.7                  | 1.09                    | 13.582             |         |
| 400.0                                                                                               | 400.0               | 399.0               | 399.0               | 0.8            | 0.8         | -10.83               |                       | 14.6                              | -2.8       | 14.8                 | 13.3                  | 1.54                    | 9.622              |         |
| 500.0                                                                                               | 500.0               | 499.0               | 499.0               | 1.0            | 1.0         | -10.83               |                       | 14.6                              | -2.8       | 14.8                 | 12.8                  | 1.99                    | 7.450              |         |
| 600.0                                                                                               | 600.0               | 599.0               | 599.0               | 1.2            | 1.2         | -10.83               |                       | 14.6                              | -2.8       | 14.8                 | 12.4                  | 2.44                    | 6.078 CC, ES       |         |
| 700.0                                                                                               | 700.0               | 699.0               | 699.0               | 1.4            | 1.4         | -112.49              |                       | 14.6                              | -2.8       | 15.3                 | 12.4                  | 2.88                    | 5.316              |         |
| 800.0                                                                                               | 799.9               | 798.9               | 798.9               | 1.6            | 1.7         | -124.65              |                       | 14.6                              | -2.8       | 17.2                 | 13.9                  | 3.30                    | 5.199              |         |
| 900.0                                                                                               | 899.7               | 899.1               | 899.1               | 1.9            | 1.9         | -136.85              |                       | 14.4                              | -1.5       | 20.6                 | 16.9                  | 3.72                    | 5.532              |         |
| 1,000.0                                                                                             | 999.3               | 999.4               | 999.4               | 2.1            | 2.1         | -145.52              |                       | 13.7                              | 2.3        | 24.6                 | 20.5                  | 4.13                    | 5.953              |         |
| 1,100.0                                                                                             | 1,098.6             | 1,099.9             | 1,099.6             | 2.4            | 2.3         | -151.83              |                       | 12.7                              | 8.8        | 29.0                 | 24.4                  | 4.55                    | 6.362              |         |
| 1,200.0                                                                                             | 1,197.5             | 1,200.5             | 1,199.8             | 2.6            | 2.5         | -156.61              |                       | 11.2                              | 17.9       | 33.5                 | 28.5                  | 4.98                    | 6.734              |         |
| 1,300.0                                                                                             | 1,296.1             | 1,301.3             | 1,299.9             | 3.0            | 2.8         | -160.37              |                       | 9.3                               | 29.6       | 38.2                 | 32.8                  | 5.41                    | 7.061              |         |
| 1,400.0                                                                                             | 1,394.2             | 1,402.2             | 1,399.7             | 3.3            | 3.1         | -163.42              |                       | 7.0                               | 44.0       | 43.0                 | 37.1                  | 5.85                    | 7.343              |         |
| 1,500.0                                                                                             | 1,491.7             | 1,503.2             | 1,499.3             | 3.7            | 3.4         | -165.98              |                       | 4.2                               | 60.9       | 47.8                 | 41.5                  | 6.30                    | 7.584              |         |
| 1,600.0                                                                                             | 1,588.6             | 1,604.4             | 1,598.5             | 4.2            | 3.7         | -168.17              |                       | 1.0                               | 80.5       | 52.6                 | 45.9                  | 6.76                    | 7.786              |         |
| 1,700.0                                                                                             | 1,684.9             | 1,705.7             | 1,697.2             | 4.7            | 4.1         | -170.09              |                       | -2.6                              | 102.7      | 57.5                 | 50.3                  | 7.23                    | 7.953              |         |
| 1,800.0                                                                                             | 1,780.4             | 1,807.2             | 1,795.5             | 5.3            | 4.6         | -171.79              |                       | -6.7                              | 127.5      | 62.4                 | 54.7                  | 7.71                    | 8.087              |         |
| 1,900.0                                                                                             | 1,875.4             | 1,908.8             | 1,893.3             | 5.9            | 5.1         | -173.25              |                       | -11.1                             | 154.9      | 66.3                 | 58.0                  | 8.24                    | 8.042              |         |
| 2,000.0                                                                                             | 1,970.4             | 2,009.1             | 1,989.3             | 6.5            | 5.6         | -174.43              |                       | -15.8                             | 183.8      | 68.4                 | 59.6                  | 8.79                    | 7.781              |         |
| 2,100.0                                                                                             | 2,065.4             | 2,109.1             | 2,084.9             | 7.1            | 6.2         | -175.54              |                       | -20.5                             | 212.6      | 70.4                 | 61.1                  | 9.34                    | 7.538              |         |
| 2,200.0                                                                                             | 2,160.3             | 2,209.1             | 2,180.5             | 7.7            | 6.7         | -176.58              |                       | -25.2                             | 241.4      | 72.5                 | 62.6                  | 9.90                    | 7.320              |         |
| 2,300.0                                                                                             | 2,255.3             | 2,309.1             | 2,276.1             | 8.4            | 7.3         | -177.57              |                       | -29.9                             | 270.2      | 74.6                 | 64.1                  | 10.47                   | 7.120              |         |
| 2,400.0                                                                                             | 2,350.3             | 2,409.0             | 2,371.7             | 9.0            | 7.9         | -178.50              |                       | -34.6                             | 299.1      | 76.7                 | 65.6                  | 11.05                   | 6.938              |         |
| 2,500.0                                                                                             | 2,445.3             | 2,509.0             | 2,467.3             | 9.7            | 8.5         | -179.38              |                       | -39.3                             | 327.9      | 78.8                 | 67.2                  | 11.64                   | 6.771              |         |
| 2,600.0                                                                                             | 2,540.3             | 2,609.0             | 2,563.0             | 10.3           | 9.1         | -179.78              |                       | -44.0                             | 356.7      | 81.0                 | 68.8                  | 12.24                   | 6.617              |         |
| 2,700.0                                                                                             | 2,635.3             | 2,708.9             | 2,658.6             | 11.0           | 9.7         | -178.99              |                       | -48.7                             | 385.5      | 83.2                 | 70.3                  | 12.85                   | 6.474              |         |
| 2,800.0                                                                                             | 2,730.3             | 2,808.9             | 2,754.2             | 11.6           | 10.3        | -178.24              |                       | -53.4                             | 414.3      | 85.3                 | 71.9                  | 13.46                   | 6.341              |         |
| 2,900.0                                                                                             | 2,825.3             | 2,908.9             | 2,849.8             | 12.3           | 10.9        | -177.52              |                       | -58.1                             | 443.1      | 87.5                 | 73.5                  | 14.08                   | 6.217              |         |
| 3,000.0                                                                                             | 2,920.3             | 3,008.8             | 2,945.4             | 12.9           | 11.5        | -176.85              |                       | -62.8                             | 471.9      | 89.8                 | 75.0                  | 14.71                   | 6.101              |         |
| 3,100.0                                                                                             | 3,015.3             | 3,108.8             | 3,041.0             | 13.6           | 12.1        | -176.20              |                       | -67.5                             | 500.8      | 92.0                 | 76.6                  | 15.35                   | 5.992              |         |
| 3,200.0                                                                                             | 3,110.3             | 3,208.8             | 3,136.6             | 14.2           | 12.7        | -175.58              |                       | -72.2                             | 529.6      | 94.2                 | 78.2                  | 16.00                   | 5.889              |         |
| 3,300.0                                                                                             | 3,205.3             | 3,308.8             | 3,232.2             | 14.9           | 13.3        | -175.00              |                       | -76.9                             | 558.4      | 96.5                 | 79.8                  | 16.65                   | 5.793              |         |
| 3,400.0                                                                                             | 3,300.3             | 3,408.7             | 3,327.9             | 15.6           | 13.9        | -174.44              |                       | -81.6                             | 587.2      | 98.7                 | 81.4                  | 17.31                   | 5.702              |         |
| 3,500.0                                                                                             | 3,395.3             | 3,508.7             | 3,423.5             | 16.2           | 14.6        | -173.90              |                       | -86.3                             | 616.0      | 101.0                | 83.0                  | 17.98                   | 5.616              |         |
| 3,600.0                                                                                             | 3,490.3             | 3,608.7             | 3,519.1             | 16.9           | 15.2        | -173.39              |                       | -91.0                             | 644.8      | 103.3                | 84.6                  | 18.66                   | 5.535              |         |
| 3,700.0                                                                                             | 3,585.3             | 3,708.6             | 3,614.7             | 17.5           | 15.8        | -172.90              |                       | -95.7                             | 673.6      | 105.5                | 86.2                  | 19.34                   | 5.457              |         |
| 3,800.0                                                                                             | 3,680.3             | 3,808.6             | 3,710.3             | 18.2           | 16.4        | -172.43              |                       | -100.4                            | 702.5      | 107.8                | 87.8                  | 20.03                   | 5.384              |         |
| 3,900.0                                                                                             | 3,775.3             | 3,908.6             | 3,805.9             | 18.9           | 17.0        | -171.99              |                       | -105.0                            | 731.3      | 110.1                | 89.4                  | 20.72                   | 5.315              |         |
| 4,000.0                                                                                             | 3,870.3             | 4,008.5             | 3,901.5             | 19.5           | 17.7        | -171.55              |                       | -109.7                            | 760.1      | 112.4                | 91.0                  | 21.42                   | 5.248              |         |
| 4,100.0                                                                                             | 3,965.2             | 4,108.5             | 3,997.1             | 20.2           | 18.3        | -171.14              |                       | -114.4                            | 788.9      | 114.7                | 92.6                  | 22.13                   | 5.185              |         |
| 4,200.0                                                                                             | 4,060.2             | 4,208.5             | 4,092.7             | 20.9           | 18.9        | -170.74              |                       | -119.1                            | 817.7      | 117.1                | 94.2                  | 22.84                   | 5.125              |         |
| 4,300.0                                                                                             | 4,155.2             | 4,308.5             | 4,188.4             | 21.5           | 19.5        | -170.36              |                       | -123.8                            | 846.5      | 119.4                | 95.8                  | 23.55                   | 5.068              |         |
| 4,400.0                                                                                             | 4,250.2             | 4,408.4             | 4,284.0             | 22.2           | 20.1        | -170.00              |                       | -128.5                            | 875.3      | 121.7                | 97.4                  | 24.28                   | 5.013              |         |
| 4,500.0                                                                                             | 4,345.2             | 4,508.4             | 4,379.6             | 22.8           | 20.7        | -169.64              |                       | -133.2                            | 904.2      | 124.0                | 99.0                  | 25.00                   | 4.961              |         |
| 4,600.0                                                                                             | 4,440.2             | 4,608.4             | 4,475.2             | 23.5           | 21.4        | -169.30              |                       | -137.9                            | 933.0      | 126.4                | 100.6                 | 25.73                   | 4.911              |         |
| 4,700.0                                                                                             | 4,535.2             | 4,708.3             | 4,570.8             | 24.2           | 22.0        | -168.97              |                       | -142.6                            | 961.8      | 128.7                | 102.2                 | 26.46                   | 4.863              |         |
| 4,800.0                                                                                             | 4,630.2             | 4,808.3             | 4,666.4             | 24.8           | 22.6        | -168.66              |                       | -147.3                            | 990.6      | 131.0                | 103.8                 | 27.20                   | 4.818              |         |
| 4,900.0                                                                                             | 4,725.2             | 4,908.3             | 4,762.0             | 25.5           | 23.2        | -168.35              |                       | -152.0                            | 1,019.4    | 133.4                | 105.4                 | 27.94                   | 4.774              |         |
| 5,000.0                                                                                             | 4,820.2             | 5,008.2             | 4,857.6             | 26.2           | 23.9        | -168.06              |                       | -156.7                            | 1,048.2    | 135.7                | 107.1                 | 28.69                   | 4.732              |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-201 - Wellbore #1 - Plan #1 (6-11-15) |                     |                     |                     |           |        |                 |                       |                                   |                                   |                      |                       |                         | Offset Site Error: | 0.0 ft  |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |           |        |                 |                       |                                   |                                   |                      |                       |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 5,100.0                                                                                             | 4,915.2             | 5,108.2             | 4,953.3             | 26.8      | 24.5   | 167.77          |                       | -161.4                            | 1,077.0                           | 138.1                | 108.7                 | 29.44                   | 4.691              |         |
| 5,200.0                                                                                             | 5,010.2             | 5,208.2             | 5,048.9             | 27.5      | 25.1   | 167.50          |                       | -166.1                            | 1,105.9                           | 140.4                | 110.3                 | 30.19                   | 4.653              |         |
| 5,300.0                                                                                             | 5,105.2             | 5,308.2             | 5,144.5             | 28.2      | 25.7   | 167.23          |                       | -170.8                            | 1,134.7                           | 142.8                | 111.9                 | 30.94                   | 4.615              |         |
| 5,400.0                                                                                             | 5,200.2             | 5,408.1             | 5,240.1             | 28.8      | 26.3   | 166.98          |                       | -175.5                            | 1,163.5                           | 145.2                | 113.5                 | 31.70                   | 4.579              |         |
| 5,500.0                                                                                             | 5,295.2             | 5,508.1             | 5,335.7             | 29.5      | 27.0   | 166.73          |                       | -180.2                            | 1,192.3                           | 147.5                | 115.1                 | 32.46                   | 4.545              |         |
| 5,600.0                                                                                             | 5,390.2             | 5,608.1             | 5,431.3             | 30.2      | 27.6   | 166.49          |                       | -184.9                            | 1,221.1                           | 149.9                | 116.7                 | 33.22                   | 4.512              |         |
| 5,700.0                                                                                             | 5,485.2             | 5,708.0             | 5,526.9             | 30.8      | 28.2   | 166.25          |                       | -189.6                            | 1,249.9                           | 152.3                | 118.3                 | 33.99                   | 4.480              |         |
| 5,800.0                                                                                             | 5,580.2             | 5,808.0             | 5,622.5             | 31.5      | 28.8   | 166.03          |                       | -194.3                            | 1,278.7                           | 154.6                | 119.9                 | 34.76                   | 4.449              |         |
| 5,900.0                                                                                             | 5,675.2             | 5,908.0             | 5,718.2             | 32.2      | 29.5   | 165.81          |                       | -199.0                            | 1,307.6                           | 157.0                | 121.5                 | 35.53                   | 4.419              |         |
| 6,000.0                                                                                             | 5,770.2             | 6,007.9             | 5,813.8             | 32.8      | 30.1   | 165.59          |                       | -203.7                            | 1,336.4                           | 159.4                | 123.1                 | 36.30                   | 4.391              |         |
| 6,100.0                                                                                             | 5,865.1             | 6,107.9             | 5,909.4             | 33.5      | 30.7   | 165.39          |                       | -208.4                            | 1,365.2                           | 161.8                | 124.7                 | 37.08                   | 4.363              |         |
| 6,200.0                                                                                             | 5,960.1             | 6,207.9             | 6,005.0             | 34.2      | 31.3   | 165.19          |                       | -213.0                            | 1,394.0                           | 164.2                | 126.3                 | 37.86                   | 4.336              |         |
| 6,300.0                                                                                             | 6,055.1             | 6,307.9             | 6,100.6             | 34.8      | 32.0   | 164.99          |                       | -217.7                            | 1,422.8                           | 166.5                | 127.9                 | 38.64                   | 4.311              |         |
| 6,400.0                                                                                             | 6,150.1             | 6,407.8             | 6,196.2             | 35.5      | 32.6   | 164.80          |                       | -222.4                            | 1,451.6                           | 168.9                | 129.5                 | 39.42                   | 4.286              |         |
| 6,500.0                                                                                             | 6,245.1             | 6,508.6             | 6,292.6             | 36.2      | 33.2   | 164.74          |                       | -226.8                            | 1,480.7                           | 171.3                | 131.1                 | 40.14                   | 4.267              |         |
| 6,600.0                                                                                             | 6,340.1             | 6,611.1             | 6,390.6             | 36.8      | 33.7   | 167.86          |                       | -221.5                            | 1,510.2                           | 172.4                | 132.9                 | 39.46                   | 4.369              |         |
| 6,700.0                                                                                             | 6,435.1             | 6,709.5             | 6,483.1             | 37.5      | 34.2   | 175.02          |                       | -203.6                            | 1,538.2                           | 173.9                | 136.0                 | 37.88                   | 4.591              |         |
| 6,800.0                                                                                             | 6,530.1             | 6,802.0             | 6,567.4             | 38.1      | 34.6   | -160.56         |                       | -175.6                            | 1,563.7                           | 179.8                | 141.8                 | 37.98                   | 4.735              |         |
| 6,900.0                                                                                             | 6,624.5             | 6,891.0             | 6,645.0             | 38.7      | 34.9   | -131.34         |                       | -138.8                            | 1,587.1                           | 190.6                | 149.8                 | 40.73                   | 4.679              |         |
| 7,000.0                                                                                             | 6,716.8             | 6,977.3             | 6,715.7             | 39.2      | 35.2   | -109.21         |                       | -94.4                             | 1,608.5                           | 204.6                | 160.3                 | 44.36                   | 4.613              |         |
| 7,100.0                                                                                             | 6,805.2             | 7,061.3             | 6,779.5             | 39.6      | 35.5   | -93.34          |                       | -43.4                             | 1,627.9                           | 220.6                | 173.2                 | 47.33                   | 4.660              |         |
| 7,200.0                                                                                             | 6,888.4             | 7,143.3             | 6,836.3             | 40.0      | 35.7   | -81.90          |                       | 13.2                              | 1,645.1                           | 237.1                | 188.2                 | 48.95                   | 4.845              |         |
| 7,300.0                                                                                             | 6,964.9             | 7,223.6             | 6,885.9             | 40.4      | 36.0   | -73.50          |                       | 74.4                              | 1,660.3                           | 253.4                | 204.3                 | 49.11                   | 5.160              |         |
| 7,400.0                                                                                             | 7,033.4             | 7,300.0             | 6,927.2             | 40.8      | 36.2   | -67.31          |                       | 137.4                             | 1,672.8                           | 268.6                | 220.8                 | 47.81                   | 5.618              |         |
| 7,500.0                                                                                             | 7,092.7             | 7,380.5             | 6,963.9             | 41.1      | 36.4   | -62.55          |                       | 208.1                             | 1,684.1                           | 282.2                | 236.7                 | 45.51                   | 6.201              |         |
| 7,600.0                                                                                             | 7,141.7             | 7,457.4             | 6,992.2             | 41.4      | 36.6   | -59.07          |                       | 279.1                             | 1,692.8                           | 293.8                | 251.4                 | 42.41                   | 6.927              |         |
| 7,700.0                                                                                             | 7,179.8             | 7,533.6             | 7,013.4             | 41.6      | 36.8   | -56.56          |                       | 352.0                             | 1,699.3                           | 303.1                | 264.2                 | 38.93                   | 7.785              |         |
| 7,800.0                                                                                             | 7,206.2             | 7,609.4             | 7,027.4             | 41.9      | 37.0   | -54.86          |                       | 426.2                             | 1,703.7                           | 309.9                | 274.3                 | 35.54                   | 8.718              |         |
| 7,900.0                                                                                             | 7,220.4             | 7,684.7             | 7,034.2             | 42.2      | 37.2   | -53.88          |                       | 501.2                             | 1,705.9                           | 314.0                | 281.3                 | 32.79                   | 9.577              |         |
| 8,000.0                                                                                             | 7,223.4             | 7,771.1             | 7,034.7             | 42.4      | 37.5   | -53.51          |                       | 587.5                             | 1,706.3                           | 315.6                | 283.3                 | 32.29                   | 9.772              |         |
| 8,100.0                                                                                             | 7,224.2             | 7,871.1             | 7,033.9             | 42.8      | 37.9   | -53.27          |                       | 687.5                             | 1,706.3                           | 316.6                | 282.7                 | 33.82                   | 9.361              |         |
| 8,200.0                                                                                             | 7,225.1             | 7,971.0             | 7,033.2             | 43.2      | 38.4   | -53.04          |                       | 787.5                             | 1,706.3                           | 317.5                | 282.0                 | 35.53                   | 8.936              |         |
| 8,300.0                                                                                             | 7,225.9             | 8,071.0             | 7,032.4             | 43.7      | 39.0   | -52.81          |                       | 887.5                             | 1,706.3                           | 318.5                | 281.1                 | 37.42                   | 8.511              |         |
| 8,400.0                                                                                             | 7,226.8             | 8,171.0             | 7,031.6             | 44.3      | 39.6   | -52.58          |                       | 987.5                             | 1,706.3                           | 319.5                | 280.0                 | 39.46                   | 8.096              |         |
| 8,500.0                                                                                             | 7,227.6             | 8,271.0             | 7,030.9             | 44.9      | 40.4   | -52.35          |                       | 1,087.5                           | 1,706.3                           | 320.4                | 278.8                 | 41.61                   | 7.700              |         |
| 8,600.0                                                                                             | 7,228.5             | 8,371.0             | 7,030.1             | 45.6      | 41.2   | -52.13          |                       | 1,187.4                           | 1,706.3                           | 321.4                | 277.6                 | 43.87                   | 7.327              |         |
| 8,700.0                                                                                             | 7,229.3             | 8,471.0             | 7,029.4             | 46.4      | 42.1   | -51.90          |                       | 1,287.4                           | 1,706.3                           | 322.4                | 276.2                 | 46.21                   | 6.977              |         |
| 8,800.0                                                                                             | 7,230.2             | 8,571.0             | 7,028.6             | 47.3      | 43.1   | -51.68          |                       | 1,387.4                           | 1,706.3                           | 323.4                | 274.8                 | 48.62                   | 6.652              |         |
| 8,900.0                                                                                             | 7,231.0             | 8,670.9             | 7,027.9             | 48.2      | 44.2   | -51.45          |                       | 1,487.4                           | 1,706.3                           | 324.4                | 273.3                 | 51.08                   | 6.351              |         |
| 9,000.0                                                                                             | 7,231.9             | 8,770.9             | 7,027.1             | 49.2      | 45.4   | -51.23          |                       | 1,587.4                           | 1,706.3                           | 325.4                | 271.8                 | 53.59                   | 6.072              |         |
| 9,100.0                                                                                             | 7,232.7             | 8,870.9             | 7,026.4             | 50.3      | 46.6   | -51.01          |                       | 1,687.4                           | 1,706.3                           | 326.4                | 270.3                 | 56.14                   | 5.815              |         |
| 9,200.0                                                                                             | 7,233.6             | 8,970.9             | 7,025.6             | 51.4      | 47.9   | -50.79          |                       | 1,787.4                           | 1,706.3                           | 327.4                | 268.7                 | 58.71                   | 5.577              |         |
| 9,300.0                                                                                             | 7,234.4             | 9,070.9             | 7,024.9             | 52.6      | 49.2   | -50.58          |                       | 1,887.3                           | 1,706.3                           | 328.5                | 267.1                 | 61.32                   | 5.357              |         |
| 9,400.0                                                                                             | 7,235.3             | 9,170.9             | 7,024.1             | 53.8      | 50.5   | -50.36          |                       | 1,987.3                           | 1,706.3                           | 329.5                | 265.5                 | 63.94                   | 5.153              |         |
| 9,500.0                                                                                             | 7,236.1             | 9,270.9             | 7,023.3             | 55.1      | 51.9   | -50.15          |                       | 2,087.3                           | 1,706.3                           | 330.5                | 263.9                 | 66.57                   | 4.965              |         |
| 9,600.0                                                                                             | 7,237.0             | 9,370.9             | 7,022.6             | 56.5      | 53.4   | -49.93          |                       | 2,187.3                           | 1,706.3                           | 331.5                | 262.3                 | 69.22                   | 4.790              |         |
| 9,700.0                                                                                             | 7,237.9             | 9,470.8             | 7,021.8             | 57.8      | 54.9   | -49.72          |                       | 2,287.3                           | 1,706.3                           | 332.6                | 260.7                 | 71.88                   | 4.627              |         |
| 9,800.0                                                                                             | 7,238.7             | 9,570.8             | 7,021.1             | 59.2      | 56.4   | -49.51          |                       | 2,387.3                           | 1,706.3                           | 333.6                | 259.1                 | 74.54                   | 4.476              |         |
| 9,900.0                                                                                             | 7,239.6             | 9,670.8             | 7,020.3             | 60.7      | 57.9   | -49.30          |                       | 2,487.2                           | 1,706.3                           | 334.7                | 257.5                 | 77.20                   | 4.335              |         |
| 10,000.0                                                                                            | 7,240.4             | 9,770.8             | 7,019.6             | 62.2      | 59.5   | -49.09          |                       | 2,587.2                           | 1,706.3                           | 335.7                | 255.8                 | 79.87                   | 4.203              |         |
| 10,100.0                                                                                            | 7,241.3             | 9,870.8             | 7,018.8             | 63.7      | 61.1   | -48.89          |                       | 2,687.2                           | 1,706.3                           | 336.8                | 254.2                 | 82.54                   | 4.080              |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-201 - Wellbore #1 - Plan #1 (6-11-15) |                     |                     |                     |           |        |                 |                       |                                   |                                   |                               |                                |                         | Offset Site Error: | 0.0 ft  |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|-----------------------------------|-------------------------------|--------------------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |           |        |                 |                       |                                   |                                   |                               |                                |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 10,200.0                                                                                            | 7,242.1             | 9,970.8             | 7,018.1             | 65.2      | 62.7   | -48.68          |                       | 2,787.2                           | 1,706.3                           | 337.8                         | 252.6                          | 85.21                   | 3.965              |         |
| 10,300.0                                                                                            | 7,243.0             | 10,070.8            | 7,017.3             | 66.7      | 64.3   | -48.48          |                       | 2,887.2                           | 1,706.3                           | 338.9                         | 251.0                          | 87.88                   | 3.856              |         |
| 10,400.0                                                                                            | 7,243.8             | 10,170.8            | 7,016.6             | 68.3      | 66.0   | -48.27          |                       | 2,987.2                           | 1,706.3                           | 340.0                         | 249.4                          | 90.54                   | 3.755              |         |
| 10,500.0                                                                                            | 7,244.7             | 10,270.7            | 7,015.8             | 69.9      | 67.6   | -48.07          |                       | 3,087.1                           | 1,706.3                           | 341.0                         | 247.8                          | 93.20                   | 3.659              |         |
| 10,600.0                                                                                            | 7,245.5             | 10,370.7            | 7,015.0             | 71.5      | 69.3   | -47.87          |                       | 3,187.1                           | 1,706.3                           | 342.1                         | 246.2                          | 95.85                   | 3.569              |         |
| 10,700.0                                                                                            | 7,246.4             | 10,470.7            | 7,014.3             | 73.2      | 71.0   | -47.67          |                       | 3,287.1                           | 1,706.3                           | 343.2                         | 244.7                          | 98.50                   | 3.484              |         |
| 10,800.0                                                                                            | 7,247.2             | 10,570.7            | 7,013.5             | 74.8      | 72.7   | -47.48          |                       | 3,387.1                           | 1,706.3                           | 344.3                         | 243.1                          | 101.15                  | 3.404              |         |
| 10,900.0                                                                                            | 7,248.1             | 10,670.7            | 7,012.8             | 76.5      | 74.4   | -47.28          |                       | 3,487.1                           | 1,706.3                           | 345.4                         | 241.6                          | 103.78                  | 3.328              |         |
| 11,000.0                                                                                            | 7,248.9             | 10,770.7            | 7,012.0             | 78.1      | 76.2   | -47.08          |                       | 3,587.1                           | 1,706.3                           | 346.4                         | 240.0                          | 106.41                  | 3.256              |         |
| 11,100.0                                                                                            | 7,249.8             | 10,870.7            | 7,011.3             | 79.8      | 77.9   | -46.89          |                       | 3,687.1                           | 1,706.3                           | 347.5                         | 238.5                          | 109.03                  | 3.187              |         |
| 11,200.0                                                                                            | 7,250.6             | 10,970.7            | 7,010.5             | 81.5      | 79.6   | -46.70          |                       | 3,787.0                           | 1,706.3                           | 348.6                         | 237.0                          | 111.65                  | 3.123              |         |
| 11,300.0                                                                                            | 7,251.5             | 11,070.6            | 7,009.8             | 83.2      | 81.4   | -46.51          |                       | 3,887.0                           | 1,706.3                           | 349.7                         | 235.5                          | 114.25                  | 3.061              |         |
| 11,400.0                                                                                            | 7,252.3             | 11,170.6            | 7,009.0             | 85.0      | 83.2   | -46.32          |                       | 3,987.0                           | 1,706.3                           | 350.9                         | 234.0                          | 116.85                  | 3.003              |         |
| 11,500.0                                                                                            | 7,253.2             | 11,270.6            | 7,008.3             | 86.7      | 84.9   | -46.13          |                       | 4,087.0                           | 1,706.3                           | 352.0                         | 232.5                          | 119.44                  | 2.947              |         |
| 11,600.0                                                                                            | 7,254.1             | 11,370.6            | 7,007.5             | 88.4      | 86.7   | -45.94          |                       | 4,187.0                           | 1,706.3                           | 353.1                         | 231.1                          | 122.02                  | 2.894              |         |
| 11,700.0                                                                                            | 7,254.9             | 11,470.6            | 7,006.7             | 90.2      | 88.5   | -45.75          |                       | 4,287.0                           | 1,706.3                           | 354.2                         | 229.6                          | 124.59                  | 2.843              |         |
| 11,800.0                                                                                            | 7,255.8             | 11,570.6            | 7,006.0             | 91.9      | 90.3   | -45.57          |                       | 4,386.9                           | 1,706.3                           | 355.3                         | 228.2                          | 127.15                  | 2.795              |         |
| 11,885.0                                                                                            | 7,256.5             | 11,655.5            | 7,005.3             | 93.4      | 91.8   | -45.41          |                       | 4,471.9                           | 1,706.3                           | 356.3                         | 227.0                          | 129.32                  | 2.755 SF           |         |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-241 - Wellbore #1 - Plan #2 (6-11-15) |                     |                     |                     |                |             |                                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.0 ft  |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|----------------|-------------|---------------------------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |                |             |                                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Semi Major Axis Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 0.0                                                                                                 | 0.0                 | 0.0                 | 0.0                 | 0.0            | 0.0         | -3.65                                 | 43.7                              | -2.8       | 43.8                 |                       |                         |                    |         |
| 100.0                                                                                               | 100.0               | 99.0                | 99.0                | 0.1            | 0.1         | -3.65                                 | 43.7                              | -2.8       | 43.8                 | 43.6                  | 0.19                    | 225.121            |         |
| 200.0                                                                                               | 200.0               | 199.0               | 199.0               | 0.3            | 0.3         | -3.65                                 | 43.7                              | -2.8       | 43.8                 | 43.2                  | 0.64                    | 68.139             |         |
| 300.0                                                                                               | 300.0               | 299.0               | 299.0               | 0.5            | 0.5         | -3.65                                 | 43.7                              | -2.8       | 43.8                 | 42.7                  | 1.09                    | 40.098             |         |
| 400.0                                                                                               | 400.0               | 399.0               | 399.0               | 0.8            | 0.8         | -3.65                                 | 43.7                              | -2.8       | 43.8                 | 42.3                  | 1.54                    | 28.408             |         |
| 500.0                                                                                               | 500.0               | 499.0               | 499.0               | 1.0            | 1.0         | -3.65                                 | 43.7                              | -2.8       | 43.8                 | 41.8                  | 1.99                    | 21.995             |         |
| 600.0                                                                                               | 600.0               | 599.0               | 599.0               | 1.2            | 1.2         | -3.65                                 | 43.7                              | -2.8       | 43.8                 | 41.4                  | 2.44                    | 17.944 CC          |         |
| 700.0                                                                                               | 700.0               | 699.0               | 699.0               | 1.4            | 1.4         | -102.30                               | 43.7                              | -2.8       | 44.1                 | 41.2                  | 2.88                    | 15.320 ES          |         |
| 800.0                                                                                               | 799.9               | 798.9               | 798.9               | 1.6            | 1.7         | -107.17                               | 43.7                              | -2.8       | 45.1                 | 41.8                  | 3.30                    | 13.635             |         |
| 900.0                                                                                               | 899.7               | 898.7               | 898.7               | 1.9            | 1.9         | -114.70                               | 43.7                              | -2.8       | 47.4                 | 43.7                  | 3.74                    | 12.660             |         |
| 1,000.0                                                                                             | 999.3               | 998.3               | 998.3               | 2.1            | 2.1         | -123.83                               | 43.7                              | -2.8       | 51.9                 | 47.7                  | 4.19                    | 12.380             |         |
| 1,100.0                                                                                             | 1,098.6             | 1,097.6             | 1,097.6             | 2.4            | 2.3         | -133.19                               | 43.7                              | -2.8       | 59.3                 | 54.6                  | 4.65                    | 12.763             |         |
| 1,200.0                                                                                             | 1,197.5             | 1,196.5             | 1,196.5             | 2.6            | 2.6         | -141.66                               | 43.7                              | -2.8       | 69.9                 | 64.8                  | 5.09                    | 13.726             |         |
| 1,300.0                                                                                             | 1,296.1             | 1,297.1             | 1,297.1             | 3.0            | 2.8         | -148.55                               | 43.3                              | -1.6       | 82.8                 | 77.3                  | 5.53                    | 14.985             |         |
| 1,400.0                                                                                             | 1,394.2             | 1,398.1             | 1,398.0             | 3.3            | 3.0         | -153.81                               | 42.2                              | 2.1        | 96.3                 | 90.4                  | 5.94                    | 16.224             |         |
| 1,500.0                                                                                             | 1,491.7             | 1,499.5             | 1,499.2             | 3.7            | 3.2         | -158.01                               | 40.2                              | 8.4        | 110.3                | 103.9                 | 6.35                    | 17.357             |         |
| 1,600.0                                                                                             | 1,588.6             | 1,601.3             | 1,600.6             | 4.2            | 3.4         | -161.47                               | 37.3                              | 17.3       | 124.6                | 117.8                 | 6.78                    | 18.380             |         |
| 1,700.0                                                                                             | 1,684.9             | 1,703.5             | 1,702.1             | 4.7            | 3.6         | -164.42                               | 33.7                              | 28.8       | 139.0                | 131.8                 | 7.21                    | 19.295             |         |
| 1,800.0                                                                                             | 1,780.4             | 1,806.2             | 1,803.6             | 5.3            | 3.9         | -167.00                               | 29.2                              | 43.0       | 153.7                | 146.0                 | 7.64                    | 20.109             |         |
| 1,900.0                                                                                             | 1,875.4             | 1,909.4             | 1,905.3             | 5.9            | 4.2         | -169.27                               | 23.8                              | 59.8       | 167.5                | 159.4                 | 8.12                    | 20.624             |         |
| 2,000.0                                                                                             | 1,970.4             | 2,013.1             | 2,006.9             | 6.5            | 4.6         | -171.22                               | 17.6                              | 79.4       | 178.9                | 170.3                 | 8.62                    | 20.750             |         |
| 2,100.0                                                                                             | 2,065.4             | 2,112.4             | 2,104.1             | 7.1            | 4.9         | -172.88                               | 11.3                              | 99.3       | 189.2                | 180.0                 | 9.12                    | 20.730             |         |
| 2,200.0                                                                                             | 2,160.3             | 2,211.7             | 2,201.2             | 7.7            | 5.3         | -174.37                               | 5.0                               | 119.2      | 199.6                | 190.0                 | 9.64                    | 20.705             |         |
| 2,300.0                                                                                             | 2,255.3             | 2,311.1             | 2,298.3             | 8.4            | 5.7         | -175.71                               | -1.3                              | 139.1      | 210.1                | 200.0                 | 10.17                   | 20.671             |         |
| 2,400.0                                                                                             | 2,350.3             | 2,410.4             | 2,395.4             | 9.0            | 6.1         | -176.93                               | -7.6                              | 159.0      | 220.8                | 210.1                 | 10.70                   | 20.629             |         |
| 2,500.0                                                                                             | 2,445.3             | 2,509.7             | 2,492.5             | 9.7            | 6.5         | -178.03                               | -13.9                             | 178.9      | 231.5                | 220.3                 | 11.25                   | 20.581             |         |
| 2,600.0                                                                                             | 2,540.3             | 2,609.0             | 2,589.6             | 10.3           | 6.9         | -179.03                               | -20.3                             | 198.8      | 242.4                | 230.5                 | 11.81                   | 20.527             |         |
| 2,700.0                                                                                             | 2,635.3             | 2,708.4             | 2,686.7             | 11.0           | 7.3         | -179.95                               | -26.6                             | 218.7      | 253.2                | 240.9                 | 12.37                   | 20.468             |         |
| 2,800.0                                                                                             | 2,730.3             | 2,807.7             | 2,783.8             | 11.6           | 7.7         | -179.21                               | -32.9                             | 238.6      | 264.2                | 251.2                 | 12.95                   | 20.405             |         |
| 2,900.0                                                                                             | 2,825.3             | 2,907.0             | 2,880.9             | 12.3           | 8.2         | -178.43                               | -39.2                             | 258.5      | 275.2                | 261.6                 | 13.53                   | 20.339             |         |
| 3,000.0                                                                                             | 2,920.3             | 3,006.3             | 2,978.0             | 12.9           | 8.6         | -177.72                               | -45.5                             | 278.4      | 286.2                | 272.1                 | 14.12                   | 20.271             |         |
| 3,100.0                                                                                             | 3,015.3             | 3,105.7             | 3,075.1             | 13.6           | 9.0         | -177.05                               | -51.8                             | 298.3      | 297.3                | 282.6                 | 14.72                   | 20.201             |         |
| 3,200.0                                                                                             | 3,110.3             | 3,205.0             | 3,172.2             | 14.2           | 9.5         | -176.44                               | -58.2                             | 318.3      | 308.4                | 293.1                 | 15.32                   | 20.130             |         |
| 3,300.0                                                                                             | 3,205.3             | 3,304.3             | 3,269.3             | 14.9           | 9.9         | -175.87                               | -64.5                             | 338.2      | 319.6                | 303.6                 | 15.93                   | 20.059             |         |
| 3,400.0                                                                                             | 3,300.3             | 3,403.7             | 3,366.4             | 15.6           | 10.4        | -175.34                               | -70.8                             | 358.1      | 330.8                | 314.2                 | 16.55                   | 19.988             |         |
| 3,500.0                                                                                             | 3,395.3             | 3,503.0             | 3,463.6             | 16.2           | 10.8        | -174.84                               | -77.1                             | 378.0      | 342.0                | 324.8                 | 17.17                   | 19.917             |         |
| 3,600.0                                                                                             | 3,490.3             | 3,602.3             | 3,560.7             | 16.9           | 11.2        | -174.37                               | -83.4                             | 397.9      | 353.2                | 335.4                 | 17.80                   | 19.847             |         |
| 3,700.0                                                                                             | 3,585.3             | 3,701.6             | 3,657.8             | 17.5           | 11.7        | -173.93                               | -89.7                             | 417.8      | 364.4                | 346.0                 | 18.43                   | 19.778             |         |
| 3,800.0                                                                                             | 3,680.3             | 3,801.0             | 3,754.9             | 18.2           | 12.1        | -173.52                               | -96.1                             | 437.7      | 375.7                | 356.7                 | 19.06                   | 19.710             |         |
| 3,900.0                                                                                             | 3,775.3             | 3,900.3             | 3,852.0             | 18.9           | 12.6        | -173.13                               | -102.4                            | 457.6      | 387.0                | 367.3                 | 19.70                   | 19.644             |         |
| 4,000.0                                                                                             | 3,870.3             | 3,999.6             | 3,949.1             | 19.5           | 13.0        | -172.77                               | -108.7                            | 477.5      | 398.3                | 378.0                 | 20.34                   | 19.579             |         |
| 4,100.0                                                                                             | 3,965.2             | 4,098.9             | 4,046.2             | 20.2           | 13.5        | -172.42                               | -115.0                            | 497.4      | 409.6                | 388.7                 | 20.99                   | 19.516             |         |
| 4,200.0                                                                                             | 4,060.2             | 4,198.3             | 4,143.3             | 20.9           | 14.0        | -172.10                               | -121.3                            | 517.3      | 421.0                | 399.3                 | 21.64                   | 19.454             |         |
| 4,300.0                                                                                             | 4,155.2             | 4,297.6             | 4,240.4             | 21.5           | 14.4        | -171.79                               | -127.6                            | 537.2      | 432.3                | 410.0                 | 22.29                   | 19.394             |         |
| 4,400.0                                                                                             | 4,250.2             | 4,396.9             | 4,337.5             | 22.2           | 14.9        | -171.49                               | -134.0                            | 557.1      | 443.7                | 420.7                 | 22.95                   | 19.335             |         |
| 4,500.0                                                                                             | 4,345.2             | 4,496.3             | 4,434.6             | 22.8           | 15.3        | -171.21                               | -140.3                            | 577.0      | 455.1                | 431.5                 | 23.61                   | 19.278             |         |
| 4,600.0                                                                                             | 4,440.2             | 4,595.6             | 4,531.7             | 23.5           | 15.8        | -170.95                               | -146.6                            | 596.9      | 466.5                | 442.2                 | 24.27                   | 19.223             |         |
| 4,700.0                                                                                             | 4,535.2             | 4,694.9             | 4,628.8             | 24.2           | 16.2        | -170.69                               | -152.9                            | 616.8      | 477.8                | 452.9                 | 24.93                   | 19.169             |         |
| 4,800.0                                                                                             | 4,630.2             | 4,794.2             | 4,725.9             | 24.8           | 16.7        | -170.45                               | -159.2                            | 636.7      | 489.2                | 463.7                 | 25.59                   | 19.117             |         |
| 4,900.0                                                                                             | 4,725.2             | 4,893.6             | 4,823.1             | 25.5           | 17.1        | -170.22                               | -165.5                            | 656.7      | 500.7                | 474.4                 | 26.26                   | 19.066             |         |
| 5,000.0                                                                                             | 4,820.2             | 4,992.9             | 4,920.2             | 26.2           | 17.6        | -170.00                               | -171.9                            | 676.6      | 512.1                | 485.1                 | 26.93                   | 19.017             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-241 - Wellbore #1 - Plan #2 (6-11-15) |                     |                     |                     |           |        |                 |                       |                                   |                                   |                      |                       |                         | Offset Site Error: | 0.0 ft  |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |           |        |                 |                       |                                   |                                   |                      |                       |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 5,100.0                                                                                             | 4,915.2             | 5,092.2             | 5,017.3             | 26.8      | 18.1   | 169.79          |                       | -178.2                            | 696.5                             | 523.5                | 495.9                 | 27.60                   | 18.969             |         |
| 5,200.0                                                                                             | 5,010.2             | 5,191.6             | 5,114.4             | 27.5      | 18.5   | 169.59          |                       | -184.5                            | 716.4                             | 534.9                | 506.7                 | 28.27                   | 18.923             |         |
| 5,300.0                                                                                             | 5,105.2             | 5,290.9             | 5,211.5             | 28.2      | 19.0   | 169.40          |                       | -190.8                            | 736.3                             | 546.4                | 517.4                 | 28.94                   | 18.878             |         |
| 5,400.0                                                                                             | 5,200.2             | 5,390.2             | 5,308.6             | 28.8      | 19.4   | 169.21          |                       | -197.1                            | 756.2                             | 557.8                | 528.2                 | 29.62                   | 18.834             |         |
| 5,500.0                                                                                             | 5,295.2             | 5,489.5             | 5,405.7             | 29.5      | 19.9   | 169.04          |                       | -203.4                            | 776.1                             | 569.3                | 539.0                 | 30.29                   | 18.792             |         |
| 5,600.0                                                                                             | 5,390.2             | 5,588.9             | 5,502.8             | 30.2      | 20.4   | 168.86          |                       | -209.8                            | 796.0                             | 580.7                | 549.7                 | 30.97                   | 18.751             |         |
| 5,700.0                                                                                             | 5,485.2             | 5,688.2             | 5,599.9             | 30.8      | 20.8   | 168.70          |                       | -216.1                            | 815.9                             | 592.2                | 560.5                 | 31.65                   | 18.711             |         |
| 5,800.0                                                                                             | 5,580.2             | 5,787.5             | 5,697.0             | 31.5      | 21.3   | 168.54          |                       | -222.4                            | 835.8                             | 603.6                | 571.3                 | 32.33                   | 18.672             |         |
| 5,900.0                                                                                             | 5,675.2             | 5,886.8             | 5,794.1             | 32.2      | 21.7   | 168.39          |                       | -228.7                            | 855.7                             | 615.1                | 582.1                 | 33.01                   | 18.634             |         |
| 6,000.0                                                                                             | 5,770.2             | 5,986.2             | 5,891.2             | 32.8      | 22.2   | 168.24          |                       | -235.0                            | 875.6                             | 626.6                | 592.9                 | 33.69                   | 18.597             |         |
| 6,100.0                                                                                             | 5,865.1             | 6,085.5             | 5,988.3             | 33.5      | 22.7   | 168.10          |                       | -241.3                            | 895.5                             | 638.0                | 603.7                 | 34.37                   | 18.562             |         |
| 6,200.0                                                                                             | 5,960.1             | 6,184.8             | 6,085.4             | 34.2      | 23.1   | 167.97          |                       | -247.7                            | 915.4                             | 649.5                | 614.5                 | 35.06                   | 18.527             |         |
| 6,300.0                                                                                             | 6,055.1             | 6,284.2             | 6,182.6             | 34.8      | 23.6   | 167.84          |                       | -254.0                            | 935.3                             | 661.0                | 625.3                 | 35.74                   | 18.494             |         |
| 6,400.0                                                                                             | 6,150.1             | 6,389.1             | 6,285.3             | 35.5      | 24.0   | 167.97          |                       | -257.5                            | 956.4                             | 672.2                | 635.9                 | 36.32                   | 18.509             |         |
| 6,500.0                                                                                             | 6,245.1             | 6,495.2             | 6,388.6             | 36.2      | 24.4   | 169.26          |                       | -247.3                            | 977.6                             | 682.4                | 646.0                 | 36.45                   | 18.723             |         |
| 6,600.0                                                                                             | 6,340.1             | 6,595.6             | 6,484.2             | 36.8      | 24.6   | 171.54          |                       | -224.2                            | 997.2                             | 692.4                | 656.1                 | 36.26                   | 19.096             |         |
| 6,700.0                                                                                             | 6,435.1             | 6,687.5             | 6,568.6             | 37.5      | 24.8   | 174.47          |                       | -192.0                            | 1,014.6                           | 703.5                | 667.5                 | 36.00                   | 19.542             |         |
| 6,800.0                                                                                             | 6,530.1             | 6,771.1             | 6,641.4             | 38.1      | 25.0   | -166.89         |                       | -154.0                            | 1,029.6                           | 717.4                | 681.6                 | 35.86                   | 20.007             |         |
| 6,900.0                                                                                             | 6,624.5             | 6,850.0             | 6,706.1             | 38.7      | 25.1   | -142.58         |                       | -110.9                            | 1,042.9                           | 733.8                | 697.6                 | 36.18                   | 20.284             |         |
| 7,000.0                                                                                             | 6,716.8             | 6,927.9             | 6,765.3             | 39.2      | 25.2   | -124.23         |                       | -61.8                             | 1,055.1                           | 751.8                | 714.8                 | 36.98                   | 20.332             |         |
| 7,100.0                                                                                             | 6,805.2             | 7,000.0             | 6,815.5             | 39.6      | 25.3   | -111.22         |                       | -11.1                             | 1,065.5                           | 770.6                | 732.6                 | 38.01                   | 20.275             |         |
| 7,200.0                                                                                             | 6,888.4             | 7,075.6             | 6,862.8             | 40.0      | 25.4   | -101.63         |                       | 46.9                              | 1,075.3                           | 789.6                | 750.4                 | 39.13                   | 20.180             |         |
| 7,300.0                                                                                             | 6,964.9             | 7,150.0             | 6,903.7             | 40.4      | 25.5   | -94.43          |                       | 108.5                             | 1,083.8                           | 807.9                | 767.8                 | 40.05                   | 20.173             |         |
| 7,400.0                                                                                             | 7,033.4             | 7,217.3             | 6,935.5             | 40.8      | 25.6   | -89.02          |                       | 167.4                             | 1,090.4                           | 824.9                | 784.3                 | 40.60                   | 20.319             |         |
| 7,500.0                                                                                             | 7,092.7             | 7,286.6             | 6,962.8             | 41.1      | 25.7   | -84.80          |                       | 230.8                             | 1,096.1                           | 840.3                | 799.4                 | 40.88                   | 20.556             |         |
| 7,600.0                                                                                             | 7,141.7             | 7,350.0             | 6,982.7             | 41.4      | 25.9   | -81.62          |                       | 290.8                             | 1,100.3                           | 853.5                | 812.7                 | 40.82                   | 20.911             |         |
| 7,700.0                                                                                             | 7,179.8             | 7,423.0             | 6,999.6             | 41.6      | 26.1   | -79.16          |                       | 361.8                             | 1,103.8                           | 864.2                | 823.5                 | 40.67                   | 21.248             |         |
| 7,800.0                                                                                             | 7,206.2             | 7,490.5             | 7,009.2             | 41.9      | 26.3   | -77.50          |                       | 428.5                             | 1,105.9                           | 872.2                | 831.7                 | 40.45                   | 21.559             |         |
| 7,900.0                                                                                             | 7,220.4             | 7,557.6             | 7,013.0             | 42.2      | 26.6   | -76.50          |                       | 495.5                             | 1,106.8                           | 877.1                | 836.8                 | 40.37                   | 21.729             |         |
| 8,000.0                                                                                             | 7,223.4             | 7,649.5             | 7,012.4             | 42.4      | 27.1   | -76.18          |                       | 587.4                             | 1,106.8                           | 878.6                | 837.3                 | 41.31                   | 21.267             |         |
| 8,100.0                                                                                             | 7,224.2             | 7,749.5             | 7,011.7             | 42.8      | 27.7   | -76.08          |                       | 687.4                             | 1,106.8                           | 879.0                | 835.7                 | 43.26                   | 20.317             |         |
| 8,200.0                                                                                             | 7,225.1             | 7,849.5             | 7,010.9             | 43.2      | 28.5   | -75.97          |                       | 787.3                             | 1,106.8                           | 879.4                | 833.9                 | 45.43                   | 19.354             |         |
| 8,300.0                                                                                             | 7,225.9             | 7,949.5             | 7,010.2             | 43.7      | 29.5   | -75.87          |                       | 887.3                             | 1,106.8                           | 879.7                | 831.9                 | 47.80                   | 18.406             |         |
| 8,400.0                                                                                             | 7,226.8             | 8,049.5             | 7,009.4             | 44.3      | 30.5   | -75.77          |                       | 987.3                             | 1,106.8                           | 880.1                | 829.8                 | 50.32                   | 17.492             |         |
| 8,500.0                                                                                             | 7,227.6             | 8,149.4             | 7,008.7             | 44.9      | 31.7   | -75.67          |                       | 1,087.3                           | 1,106.8                           | 880.5                | 827.6                 | 52.98                   | 16.621             |         |
| 8,600.0                                                                                             | 7,228.5             | 8,249.4             | 7,007.9             | 45.6      | 33.0   | -75.57          |                       | 1,187.3                           | 1,106.8                           | 880.9                | 825.2                 | 55.76                   | 15.800             |         |
| 8,700.0                                                                                             | 7,229.3             | 8,349.4             | 7,007.2             | 46.4      | 34.3   | -75.47          |                       | 1,287.3                           | 1,106.8                           | 881.3                | 822.7                 | 58.63                   | 15.031             |         |
| 8,800.0                                                                                             | 7,230.2             | 8,449.4             | 7,006.4             | 47.3      | 35.7   | -75.37          |                       | 1,387.2                           | 1,106.8                           | 881.7                | 820.1                 | 61.60                   | 14.314             |         |
| 8,900.0                                                                                             | 7,231.0             | 8,549.4             | 7,005.6             | 48.2      | 37.1   | -75.27          |                       | 1,487.2                           | 1,106.8                           | 882.1                | 817.5                 | 64.64                   | 13.648             |         |
| 9,000.0                                                                                             | 7,231.9             | 8,649.4             | 7,004.9             | 49.2      | 38.6   | -75.16          |                       | 1,587.2                           | 1,106.8                           | 882.6                | 814.8                 | 67.74                   | 13.029             |         |
| 9,100.0                                                                                             | 7,232.7             | 8,749.4             | 7,004.1             | 50.3      | 40.1   | -75.06          |                       | 1,687.2                           | 1,106.8                           | 883.0                | 812.1                 | 70.89                   | 12.455             |         |
| 9,200.0                                                                                             | 7,233.6             | 8,849.4             | 7,003.4             | 51.4      | 41.7   | -74.96          |                       | 1,787.2                           | 1,106.8                           | 883.4                | 809.3                 | 74.10                   | 11.922             |         |
| 9,300.0                                                                                             | 7,234.4             | 8,949.3             | 7,002.6             | 52.6      | 43.3   | -74.86          |                       | 1,887.2                           | 1,106.8                           | 883.8                | 806.5                 | 77.34                   | 11.428             |         |
| 9,400.0                                                                                             | 7,235.3             | 9,049.3             | 7,001.9             | 53.8      | 44.9   | -74.76          |                       | 1,987.2                           | 1,106.8                           | 884.2                | 803.6                 | 80.62                   | 10.968             |         |
| 9,500.0                                                                                             | 7,236.1             | 9,149.3             | 7,001.1             | 55.1      | 46.5   | -74.66          |                       | 2,087.1                           | 1,106.8                           | 884.6                | 800.7                 | 83.93                   | 10.541             |         |
| 9,600.0                                                                                             | 7,237.0             | 9,249.3             | 7,000.4             | 56.5      | 48.2   | -74.56          |                       | 2,187.1                           | 1,106.8                           | 885.1                | 797.8                 | 87.26                   | 10.143             |         |
| 9,700.0                                                                                             | 7,237.9             | 9,349.3             | 6,999.6             | 57.8      | 49.9   | -74.46          |                       | 2,287.1                           | 1,106.8                           | 885.5                | 794.9                 | 90.62                   | 9.771              |         |
| 9,800.0                                                                                             | 7,238.7             | 9,449.3             | 6,998.9             | 59.2      | 51.6   | -74.36          |                       | 2,387.1                           | 1,106.8                           | 885.9                | 791.9                 | 94.00                   | 9.425              |         |
| 9,900.0                                                                                             | 7,239.6             | 9,549.3             | 6,998.1             | 60.7      | 53.3   | -74.26          |                       | 2,487.1                           | 1,106.8                           | 886.4                | 789.0                 | 97.40                   | 9.100              |         |
| 10,000.0                                                                                            | 7,240.4             | 9,649.3             | 6,997.4             | 62.2      | 55.0   | -74.16          |                       | 2,587.1                           | 1,106.8                           | 886.8                | 786.0                 | 100.81                  | 8.797              |         |
| 10,100.0                                                                                            | 7,241.3             | 9,749.2             | 6,996.6             | 63.7      | 56.8   | -74.06          |                       | 2,687.0                           | 1,106.8                           | 887.2                | 783.0                 | 104.24                  | 8.511              |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| <b>Offset Design</b> Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-241 - Wellbore #1 - Plan #2 (6-11-15) |                     |                     |                     |           |        |                       |                                   |            |                      |                       |                         | <b>Offset Site Error:</b> | 0.0 ft  |
|------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| Survey Program: 0-MWD                                                                                      |                     |                     |                     |           |        |                       |                                   |            |                      |                       |                         | <b>Offset Well Error:</b> | 0.0 ft  |
| Measured Depth (ft)                                                                                        | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor         | Warning |
| 10,200.0                                                                                                   | 7,242.1             | 9,849.2             | 6,995.8             | 65.2      | 58.5   | -73.96                | 2,787.0                           | 1,106.8    | 887.7                | 780.0                 | 107.68                  | 8.244                     |         |
| 10,300.0                                                                                                   | 7,243.0             | 9,949.2             | 6,995.1             | 66.7      | 60.3   | -73.86                | 2,887.0                           | 1,106.8    | 888.1                | 777.0                 | 111.13                  | 7.992                     |         |
| 10,400.0                                                                                                   | 7,243.8             | 10,049.2            | 6,994.3             | 68.3      | 62.1   | -73.76                | 2,987.0                           | 1,106.8    | 888.6                | 774.0                 | 114.59                  | 7.754                     |         |
| 10,500.0                                                                                                   | 7,244.7             | 10,149.2            | 6,993.6             | 69.9      | 63.8   | -73.66                | 3,087.0                           | 1,106.8    | 889.0                | 771.0                 | 118.06                  | 7.530                     |         |
| 10,600.0                                                                                                   | 7,245.5             | 10,249.2            | 6,992.8             | 71.5      | 65.6   | -73.56                | 3,187.0                           | 1,106.8    | 889.5                | 767.9                 | 121.54                  | 7.319                     |         |
| 10,700.0                                                                                                   | 7,246.4             | 10,349.2            | 6,992.1             | 73.2      | 67.4   | -73.47                | 3,286.9                           | 1,106.8    | 889.9                | 764.9                 | 125.02                  | 7.118                     |         |
| 10,800.0                                                                                                   | 7,247.2             | 10,449.1            | 6,991.3             | 74.8      | 69.2   | -73.37                | 3,386.9                           | 1,106.8    | 890.4                | 761.9                 | 128.51                  | 6.929                     |         |
| 10,900.0                                                                                                   | 7,248.1             | 10,549.1            | 6,990.6             | 76.5      | 71.0   | -73.27                | 3,486.9                           | 1,106.8    | 890.9                | 758.9                 | 132.00                  | 6.749                     |         |
| 11,000.0                                                                                                   | 7,248.9             | 10,649.1            | 6,989.8             | 78.1      | 72.8   | -73.17                | 3,586.9                           | 1,106.8    | 891.3                | 755.8                 | 135.50                  | 6.578                     |         |
| 11,100.0                                                                                                   | 7,249.8             | 10,749.1            | 6,989.1             | 79.8      | 74.7   | -73.07                | 3,686.9                           | 1,106.8    | 891.8                | 752.8                 | 139.00                  | 6.416                     |         |
| 11,200.0                                                                                                   | 7,250.6             | 10,849.1            | 6,988.3             | 81.5      | 76.5   | -72.97                | 3,786.9                           | 1,106.8    | 892.3                | 749.8                 | 142.50                  | 6.261                     |         |
| 11,300.0                                                                                                   | 7,251.5             | 10,949.1            | 6,987.6             | 83.2      | 78.3   | -72.87                | 3,886.9                           | 1,106.8    | 892.7                | 746.7                 | 146.01                  | 6.114                     |         |
| 11,400.0                                                                                                   | 7,252.3             | 11,049.1            | 6,986.8             | 85.0      | 80.1   | -72.77                | 3,986.8                           | 1,106.8    | 893.2                | 743.7                 | 149.51                  | 5.974                     |         |
| 11,500.0                                                                                                   | 7,253.2             | 11,149.1            | 6,986.0             | 86.7      | 82.0   | -72.68                | 4,086.8                           | 1,106.8    | 893.7                | 740.7                 | 153.02                  | 5.840                     |         |
| 11,600.0                                                                                                   | 7,254.1             | 11,249.0            | 6,985.3             | 88.4      | 83.8   | -72.58                | 4,186.8                           | 1,106.8    | 894.2                | 737.6                 | 156.53                  | 5.712                     |         |
| 11,700.0                                                                                                   | 7,254.9             | 11,349.0            | 6,984.5             | 90.2      | 85.7   | -72.48                | 4,286.8                           | 1,106.8    | 894.6                | 734.6                 | 160.05                  | 5.590                     |         |
| 11,800.0                                                                                                   | 7,255.8             | 11,449.0            | 6,983.8             | 91.9      | 87.5   | -72.38                | 4,386.8                           | 1,106.8    | 895.1                | 731.6                 | 163.56                  | 5.473                     |         |
| 11,885.0                                                                                                   | 7,256.5             | 11,534.0            | 6,983.1             | 93.4      | 89.1   | -72.30                | 4,471.7                           | 1,106.8    | 895.5                | 729.0                 | 166.54                  | 5.377 SF                  |         |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-301 - Wellbore #1 - Plan #2 (6-11-15) |                     |                     |                     |           |        |                 |                       |                                   |            |                               |                       |                         | Offset Site Error: | 0.0 ft  |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|------------|-------------------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |           |        |                 |                       |                                   |            |                               |                       |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Distance Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 0.0                                                                                                 | 0.0                 | 0.0                 | 0.0                 | 0.0       | 0.0    | 0.0             | -5.47                 | 29.1                              | -2.8       | 29.3                          |                       |                         |                    |         |
| 100.0                                                                                               | 100.0               | 99.0                | 99.0                | 0.1       | 0.1    | 0.1             | -5.47                 | 29.1                              | -2.8       | 29.3                          | 29.1                  | 0.19                    | 150.453            |         |
| 200.0                                                                                               | 200.0               | 199.0               | 199.0               | 0.3       | 0.3    | 0.3             | -5.47                 | 29.1                              | -2.8       | 29.3                          | 28.6                  | 0.64                    | 45.539             |         |
| 300.0                                                                                               | 300.0               | 299.0               | 299.0               | 0.5       | 0.5    | 0.5             | -5.47                 | 29.1                              | -2.8       | 29.3                          | 28.2                  | 1.09                    | 26.798             |         |
| 400.0                                                                                               | 400.0               | 399.0               | 399.0               | 0.8       | 0.8    | 0.8             | -5.47                 | 29.1                              | -2.8       | 29.3                          | 27.7                  | 1.54                    | 18.985             |         |
| 500.0                                                                                               | 500.0               | 499.0               | 499.0               | 1.0       | 1.0    | 1.0             | -5.47                 | 29.1                              | -2.8       | 29.3                          | 27.3                  | 1.99                    | 14.700             |         |
| 600.0                                                                                               | 600.0               | 599.0               | 599.0               | 1.2       | 1.2    | 1.2             | -5.47                 | 29.1                              | -2.8       | 29.3                          | 26.8                  | 2.44                    | 11.993 CC          |         |
| 700.0                                                                                               | 700.0               | 699.0               | 699.0               | 1.4       | 1.4    | 1.4             | -104.92               | 29.1                              | -2.8       | 29.6                          | 26.7                  | 2.88                    | 10.286 ES          |         |
| 800.0                                                                                               | 799.9               | 798.9               | 798.9               | 1.6       | 1.7    | 1.7             | -111.97               | 29.1                              | -2.8       | 30.8                          | 27.5                  | 3.30                    | 9.329              |         |
| 900.0                                                                                               | 899.7               | 898.7               | 898.7               | 1.9       | 1.9    | 1.9             | -122.24               | 29.1                              | -2.8       | 33.8                          | 30.1                  | 3.74                    | 9.038              |         |
| 1,000.0                                                                                             | 999.3               | 998.3               | 998.3               | 2.1       | 2.1    | 2.1             | -133.46               | 29.1                              | -2.8       | 39.5                          | 35.3                  | 4.19                    | 9.432              |         |
| 1,100.0                                                                                             | 1,098.6             | 1,098.6             | 1,098.6             | 2.4       | 2.3    | 2.3             | -142.85               | 28.8                              | -1.6       | 47.3                          | 42.6                  | 4.61                    | 10.243             |         |
| 1,200.0                                                                                             | 1,197.5             | 1,199.3             | 1,199.2             | 2.6       | 2.5    | 2.5             | -149.75               | 27.9                              | 2.3        | 55.8                          | 50.8                  | 5.03                    | 11.097             |         |
| 1,300.0                                                                                             | 1,296.1             | 1,300.2             | 1,299.9             | 3.0       | 2.7    | 2.7             | -155.03               | 26.4                              | 8.7        | 64.8                          | 59.3                  | 5.44                    | 11.894             |         |
| 1,400.0                                                                                             | 1,394.2             | 1,401.4             | 1,400.7             | 3.3       | 3.0    | 3.0             | -159.21               | 24.2                              | 17.7       | 74.0                          | 68.2                  | 5.87                    | 12.613             |         |
| 1,500.0                                                                                             | 1,491.7             | 1,502.9             | 1,501.5             | 3.7       | 3.2    | 3.2             | -162.65               | 21.4                              | 29.3       | 83.5                          | 77.2                  | 6.30                    | 13.254             |         |
| 1,600.0                                                                                             | 1,588.6             | 1,604.7             | 1,602.2             | 4.2       | 3.5    | 3.5             | -165.57               | 17.9                              | 43.6       | 93.1                          | 86.4                  | 6.74                    | 13.818             |         |
| 1,700.0                                                                                             | 1,684.9             | 1,706.7             | 1,702.7             | 4.7       | 3.8    | 3.8             | -168.11               | 13.8                              | 60.6       | 102.8                         | 95.6                  | 7.18                    | 14.310             |         |
| 1,800.0                                                                                             | 1,780.4             | 1,809.0             | 1,803.0             | 5.3       | 4.1    | 4.1             | -170.36               | 9.1                               | 80.2       | 112.6                         | 104.9                 | 7.64                    | 14.735             |         |
| 1,900.0                                                                                             | 1,875.4             | 1,911.7             | 1,903.1             | 5.9       | 4.5    | 4.5             | -172.35               | 3.7                               | 102.5      | 121.5                         | 113.3                 | 8.14                    | 14.915             |         |
| 2,000.0                                                                                             | 1,970.4             | 2,012.6             | 2,000.9             | 6.5       | 5.0    | 5.0             | -174.04               | -2.1                              | 126.4      | 128.3                         | 119.7                 | 8.66                    | 14.818             |         |
| 2,100.0                                                                                             | 2,065.4             | 2,112.3             | 2,097.5             | 7.1       | 5.4    | 5.4             | -175.55               | -7.9                              | 150.2      | 135.1                         | 126.0                 | 9.19                    | 14.701             |         |
| 2,200.0                                                                                             | 2,160.3             | 2,212.0             | 2,194.2             | 7.7       | 5.9    | 5.9             | -176.91               | -13.6                             | 174.0      | 142.0                         | 132.3                 | 9.74                    | 14.590             |         |
| 2,300.0                                                                                             | 2,255.3             | 2,311.7             | 2,290.8             | 8.4       | 6.3    | 6.3             | -178.14               | -19.4                             | 197.9      | 149.0                         | 138.7                 | 10.29                   | 14.482             |         |
| 2,400.0                                                                                             | 2,350.3             | 2,411.4             | 2,387.5             | 9.0       | 6.8    | 6.8             | -179.26               | -25.1                             | 221.7      | 156.0                         | 145.2                 | 10.85                   | 14.375             |         |
| 2,500.0                                                                                             | 2,445.3             | 2,511.1             | 2,484.1             | 9.7       | 7.3    | 7.3             | -179.71               | -30.9                             | 245.5      | 163.1                         | 151.7                 | 11.43                   | 14.271             |         |
| 2,600.0                                                                                             | 2,540.3             | 2,610.8             | 2,580.8             | 10.3      | 7.8    | 7.8             | -178.77               | -36.7                             | 269.3      | 170.2                         | 158.2                 | 12.01                   | 14.168             |         |
| 2,700.0                                                                                             | 2,635.3             | 2,710.5             | 2,677.4             | 11.0      | 8.3    | 8.3             | -177.91               | -42.4                             | 293.2      | 177.4                         | 164.8                 | 12.61                   | 14.068             |         |
| 2,800.0                                                                                             | 2,730.3             | 2,810.3             | 2,774.1             | 11.6      | 8.8    | 8.8             | -177.11               | -48.2                             | 317.0      | 184.6                         | 171.4                 | 13.22                   | 13.969             |         |
| 2,900.0                                                                                             | 2,825.3             | 2,910.0             | 2,870.7             | 12.3      | 9.3    | 9.3             | -176.38               | -53.9                             | 340.8      | 191.8                         | 178.0                 | 13.83                   | 13.873             |         |
| 3,000.0                                                                                             | 2,920.3             | 3,009.7             | 2,967.4             | 12.9      | 9.8    | 9.8             | -175.69               | -59.7                             | 364.6      | 199.1                         | 184.7                 | 14.45                   | 13.779             |         |
| 3,100.0                                                                                             | 3,015.3             | 3,109.4             | 3,064.0             | 13.6      | 10.3   | 10.3            | -175.06               | -65.5                             | 388.4      | 206.4                         | 191.3                 | 15.08                   | 13.688             |         |
| 3,200.0                                                                                             | 3,110.3             | 3,209.1             | 3,160.7             | 14.2      | 10.8   | 10.8            | -174.47               | -71.2                             | 412.3      | 213.7                         | 198.0                 | 15.72                   | 13.600             |         |
| 3,300.0                                                                                             | 3,205.3             | 3,308.8             | 3,257.3             | 14.9      | 11.3   | 11.3            | -173.91               | -77.0                             | 436.1      | 221.1                         | 204.7                 | 16.36                   | 13.514             |         |
| 3,400.0                                                                                             | 3,300.3             | 3,408.5             | 3,354.0             | 15.6      | 11.9   | 11.9            | -173.40               | -82.7                             | 459.9      | 228.4                         | 211.4                 | 17.01                   | 13.431             |         |
| 3,500.0                                                                                             | 3,395.3             | 3,508.2             | 3,450.6             | 16.2      | 12.4   | 12.4            | -172.91               | -88.5                             | 483.7      | 235.8                         | 218.1                 | 17.66                   | 13.351             |         |
| 3,600.0                                                                                             | 3,490.3             | 3,607.9             | 3,547.3             | 16.9      | 12.9   | 12.9            | -172.46               | -94.3                             | 507.5      | 243.2                         | 224.9                 | 18.32                   | 13.274             |         |
| 3,700.0                                                                                             | 3,585.3             | 3,707.6             | 3,643.9             | 17.5      | 13.4   | 13.4            | -172.03               | -100.0                            | 531.4      | 250.6                         | 231.6                 | 18.99                   | 13.199             |         |
| 3,800.0                                                                                             | 3,680.3             | 3,807.3             | 3,740.6             | 18.2      | 13.9   | 13.9            | -171.62               | -105.8                            | 555.2      | 258.0                         | 238.4                 | 19.65                   | 13.127             |         |
| 3,900.0                                                                                             | 3,775.3             | 3,907.0             | 3,837.2             | 18.9      | 14.5   | 14.5            | -171.24               | -111.5                            | 579.0      | 265.4                         | 245.1                 | 20.33                   | 13.058             |         |
| 4,000.0                                                                                             | 3,870.3             | 4,006.8             | 3,933.9             | 19.5      | 15.0   | 15.0            | -170.88               | -117.3                            | 602.8      | 272.9                         | 251.9                 | 21.01                   | 12.991             |         |
| 4,100.0                                                                                             | 3,965.2             | 4,106.5             | 4,030.5             | 20.2      | 15.5   | 15.5            | -170.54               | -123.0                            | 626.7      | 280.3                         | 258.7                 | 21.69                   | 12.927             |         |
| 4,200.0                                                                                             | 4,060.2             | 4,206.2             | 4,127.2             | 20.9      | 16.0   | 16.0            | -170.22               | -128.8                            | 650.5      | 287.8                         | 265.4                 | 22.37                   | 12.865             |         |
| 4,300.0                                                                                             | 4,155.2             | 4,305.9             | 4,223.8             | 21.5      | 16.6   | 16.6            | -169.91               | -134.6                            | 674.3      | 295.3                         | 272.2                 | 23.06                   | 12.806             |         |
| 4,400.0                                                                                             | 4,250.2             | 4,405.6             | 4,320.5             | 22.2      | 17.1   | 17.1            | -169.62               | -140.3                            | 698.1      | 302.8                         | 279.0                 | 23.75                   | 12.749             |         |
| 4,500.0                                                                                             | 4,345.2             | 4,505.3             | 4,417.1             | 22.8      | 17.6   | 17.6            | -169.34               | -146.1                            | 721.9      | 310.2                         | 285.8                 | 24.44                   | 12.693             |         |
| 4,600.0                                                                                             | 4,440.2             | 4,605.0             | 4,513.8             | 23.5      | 18.1   | 18.1            | -169.08               | -151.8                            | 745.8      | 317.7                         | 292.6                 | 25.14                   | 12.640             |         |
| 4,700.0                                                                                             | 4,535.2             | 4,704.7             | 4,610.4             | 24.2      | 18.7   | 18.7            | -168.82               | -157.6                            | 769.6      | 325.2                         | 299.4                 | 25.83                   | 12.589             |         |
| 4,800.0                                                                                             | 4,630.2             | 4,804.4             | 4,707.1             | 24.8      | 19.2   | 19.2            | -168.58               | -163.4                            | 793.4      | 332.7                         | 306.2                 | 26.53                   | 12.539             |         |
| 4,900.0                                                                                             | 4,725.2             | 4,904.1             | 4,803.7             | 25.5      | 19.7   | 19.7            | -168.35               | -169.1                            | 817.2      | 340.2                         | 313.0                 | 27.24                   | 12.492             |         |
| 5,000.0                                                                                             | 4,820.2             | 5,003.8             | 4,900.4             | 26.2      | 20.2   | 20.2            | -168.13               | -174.9                            | 841.1      | 347.8                         | 319.8                 | 27.94                   | 12.446             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-301 - Wellbore #1 - Plan #2 (6-11-15) |                     |                     |                     |                 |        |                       |                        |            |                      |                       |                         | Offset Site Error: 0.0 ft |         |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|--------|-----------------------|------------------------|------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |                 |        |                       |                        |            |                      |                       |                         | Offset Well Error: 0.0 ft |         |
| Reference                                                                                           |                     | Offset              |                     | Semi Major Axis |        | Highside Toolface (°) | Offset Wellbore Centre |            | Distance             |                       | Minimum Separation (ft) | Separation Factor         | Warning |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference       | Offset |                       | +N/-S (ft)             | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) |                         |                           |         |
| 5,100.0                                                                                             | 4,915.2             | 5,103.5             | 4,997.0             | 26.8            | 20.8   | 167.92                | -180.6                 | 864.9      | 355.3                | 326.6                 | 28.65                   | 12.402                    |         |
| 5,200.0                                                                                             | 5,010.2             | 5,203.3             | 5,093.7             | 27.5            | 21.3   | 167.72                | -186.4                 | 888.7      | 362.8                | 333.5                 | 29.36                   | 12.359                    |         |
| 5,300.0                                                                                             | 5,105.2             | 5,303.0             | 5,190.3             | 28.2            | 21.8   | 167.52                | -192.2                 | 912.5      | 370.3                | 340.3                 | 30.07                   | 12.318                    |         |
| 5,400.0                                                                                             | 5,200.2             | 5,402.7             | 5,287.0             | 28.8            | 22.4   | 167.34                | -197.9                 | 936.3      | 377.9                | 347.1                 | 30.78                   | 12.278                    |         |
| 5,500.0                                                                                             | 5,295.2             | 5,502.4             | 5,383.6             | 29.5            | 22.9   | 167.16                | -203.7                 | 960.2      | 385.4                | 353.9                 | 31.49                   | 12.239                    |         |
| 5,600.0                                                                                             | 5,390.2             | 5,602.1             | 5,480.3             | 30.2            | 23.4   | 166.98                | -209.4                 | 984.0      | 392.9                | 360.7                 | 32.20                   | 12.202                    |         |
| 5,700.0                                                                                             | 5,485.2             | 5,701.8             | 5,576.9             | 30.8            | 23.9   | 166.82                | -215.2                 | 1,007.8    | 400.5                | 367.6                 | 32.92                   | 12.166                    |         |
| 5,800.0                                                                                             | 5,580.2             | 5,801.5             | 5,673.6             | 31.5            | 24.5   | 166.66                | -221.0                 | 1,031.6    | 408.0                | 374.4                 | 33.64                   | 12.131                    |         |
| 5,900.0                                                                                             | 5,675.2             | 5,901.2             | 5,770.2             | 32.2            | 25.0   | 166.51                | -226.7                 | 1,055.4    | 415.6                | 381.2                 | 34.35                   | 12.097                    |         |
| 6,000.0                                                                                             | 5,770.2             | 6,000.9             | 5,866.9             | 32.8            | 25.5   | 166.36                | -232.5                 | 1,079.3    | 423.1                | 388.1                 | 35.07                   | 12.065                    |         |
| 6,100.0                                                                                             | 5,865.1             | 6,100.6             | 5,963.5             | 33.5            | 26.1   | 166.21                | -238.2                 | 1,103.1    | 430.7                | 394.9                 | 35.79                   | 12.033                    |         |
| 6,200.0                                                                                             | 5,960.1             | 6,200.3             | 6,060.2             | 34.2            | 26.6   | 166.08                | -244.0                 | 1,126.9    | 438.3                | 401.7                 | 36.51                   | 12.003                    |         |
| 6,300.0                                                                                             | 6,055.1             | 6,300.0             | 6,156.8             | 34.8            | 27.1   | 165.94                | -249.8                 | 1,150.7    | 445.8                | 408.6                 | 37.24                   | 11.973                    |         |
| 6,400.0                                                                                             | 6,150.1             | 6,399.8             | 6,253.5             | 35.5            | 27.6   | 165.81                | -255.5                 | 1,174.6    | 453.4                | 415.4                 | 37.96                   | 11.944                    |         |
| 6,500.0                                                                                             | 6,245.1             | 6,501.2             | 6,351.8             | 36.2            | 28.2   | 165.72                | -261.1                 | 1,198.8    | 460.9                | 422.3                 | 38.67                   | 11.920                    |         |
| 6,600.0                                                                                             | 6,340.1             | 6,608.7             | 6,456.0             | 36.8            | 28.6   | 166.88                | -256.7                 | 1,224.5    | 467.3                | 428.5                 | 38.81                   | 12.039                    |         |
| 6,700.0                                                                                             | 6,435.1             | 6,711.8             | 6,554.5             | 37.5            | 29.0   | 169.66                | -238.4                 | 1,248.8    | 472.7                | 434.3                 | 38.34                   | 12.329                    |         |
| 6,800.0                                                                                             | 6,530.1             | 6,808.5             | 6,643.8             | 38.1            | 29.3   | -171.52               | -208.9                 | 1,270.9    | 479.0                | 441.4                 | 37.64                   | 12.725                    |         |
| 6,900.0                                                                                             | 6,624.5             | 6,901.2             | 6,725.4             | 38.7            | 29.6   | -147.12               | -170.0                 | 1,291.1    | 487.3                | 449.9                 | 37.39                   | 13.034                    |         |
| 7,000.0                                                                                             | 6,716.8             | 6,990.7             | 6,799.3             | 39.2            | 29.8   | -128.73               | -123.0                 | 1,309.4    | 497.2                | 459.4                 | 37.73                   | 13.179                    |         |
| 7,100.0                                                                                             | 6,805.2             | 7,077.5             | 6,865.4             | 39.6            | 30.0   | -115.56               | -69.3                  | 1,325.8    | 508.2                | 469.6                 | 38.53                   | 13.190                    |         |
| 7,200.0                                                                                             | 6,888.4             | 7,162.1             | 6,923.7             | 40.0            | 30.1   | -105.95               | -9.8                   | 1,340.3    | 519.7                | 480.2                 | 39.55                   | 13.143                    |         |
| 7,300.0                                                                                             | 6,964.9             | 7,244.6             | 6,974.1             | 40.4            | 30.3   | -98.70                | 54.3                   | 1,352.8    | 531.4                | 490.9                 | 40.55                   | 13.107                    |         |
| 7,400.0                                                                                             | 7,033.4             | 7,325.5             | 7,016.7             | 40.8            | 30.4   | -93.10                | 122.2                  | 1,363.5    | 542.7                | 501.3                 | 41.38                   | 13.113                    |         |
| 7,500.0                                                                                             | 7,092.7             | 7,405.1             | 7,051.6             | 41.1            | 30.6   | -88.73                | 193.1                  | 1,372.2    | 553.2                | 511.3                 | 41.86                   | 13.213                    |         |
| 7,600.0                                                                                             | 7,141.7             | 7,483.5             | 7,078.8             | 41.4            | 30.8   | -85.35                | 266.3                  | 1,379.0    | 562.4                | 520.3                 | 42.11                   | 13.356                    |         |
| 7,700.0                                                                                             | 7,179.8             | 7,561.0             | 7,098.4             | 41.6            | 30.9   | -82.78                | 341.1                  | 1,384.0    | 570.2                | 528.1                 | 42.16                   | 13.526                    |         |
| 7,800.0                                                                                             | 7,206.2             | 7,637.8             | 7,110.4             | 41.9            | 31.1   | -80.93                | 416.9                  | 1,387.1    | 576.3                | 534.1                 | 42.13                   | 13.679                    |         |
| 7,900.0                                                                                             | 7,220.4             | 7,714.1             | 7,115.0             | 42.2            | 31.4   | -79.74                | 493.0                  | 1,388.4    | 580.4                | 538.2                 | 42.17                   | 13.763                    |         |
| 8,000.0                                                                                             | 7,223.4             | 7,809.3             | 7,114.4             | 42.4            | 31.8   | -79.30                | 588.1                  | 1,388.4    | 581.6                | 538.5                 | 43.13                   | 13.486                    |         |
| 8,100.0                                                                                             | 7,224.2             | 7,909.3             | 7,113.6             | 42.8            | 32.3   | -79.15                | 688.1                  | 1,388.4    | 581.9                | 536.9                 | 45.06                   | 12.916                    |         |
| 8,200.0                                                                                             | 7,225.1             | 8,009.2             | 7,112.9             | 43.2            | 32.9   | -78.99                | 788.1                  | 1,388.4    | 582.3                | 535.1                 | 47.20                   | 12.337                    |         |
| 8,300.0                                                                                             | 7,225.9             | 8,109.2             | 7,112.1             | 43.7            | 33.6   | -78.84                | 888.1                  | 1,388.4    | 582.6                | 533.0                 | 49.53                   | 11.762                    |         |
| 8,400.0                                                                                             | 7,226.8             | 8,209.2             | 7,111.4             | 44.3            | 34.5   | -78.68                | 988.1                  | 1,388.4    | 582.9                | 530.9                 | 52.02                   | 11.205                    |         |
| 8,500.0                                                                                             | 7,227.6             | 8,309.2             | 7,110.6             | 44.9            | 35.5   | -78.53                | 1,088.1                | 1,388.4    | 583.2                | 528.5                 | 54.65                   | 10.671                    |         |
| 8,600.0                                                                                             | 7,228.5             | 8,409.2             | 7,109.9             | 45.6            | 36.5   | -78.37                | 1,188.0                | 1,388.4    | 583.5                | 526.1                 | 57.41                   | 10.165                    |         |
| 8,700.0                                                                                             | 7,229.3             | 8,509.2             | 7,109.1             | 46.4            | 37.7   | -78.22                | 1,288.0                | 1,388.4    | 583.8                | 523.6                 | 60.26                   | 9.689                     |         |
| 8,800.0                                                                                             | 7,230.2             | 8,609.2             | 7,108.4             | 47.3            | 38.9   | -78.06                | 1,388.0                | 1,388.4    | 584.2                | 521.0                 | 63.20                   | 9.243                     |         |
| 8,900.0                                                                                             | 7,231.0             | 8,709.1             | 7,107.6             | 48.2            | 40.2   | -77.91                | 1,488.0                | 1,388.4    | 584.5                | 518.3                 | 66.22                   | 8.827                     |         |
| 9,000.0                                                                                             | 7,231.9             | 8,809.1             | 7,106.8             | 49.2            | 41.5   | -77.76                | 1,588.0                | 1,388.4    | 584.8                | 515.5                 | 69.30                   | 8.439                     |         |
| 9,100.0                                                                                             | 7,232.7             | 8,909.1             | 7,106.1             | 50.3            | 42.9   | -77.60                | 1,688.0                | 1,388.4    | 585.2                | 512.7                 | 72.44                   | 8.078                     |         |
| 9,200.0                                                                                             | 7,233.6             | 9,009.1             | 7,105.3             | 51.4            | 44.3   | -77.45                | 1,788.0                | 1,388.4    | 585.5                | 509.9                 | 75.63                   | 7.742                     |         |
| 9,300.0                                                                                             | 7,234.4             | 9,109.1             | 7,104.6             | 52.6            | 45.8   | -77.30                | 1,887.9                | 1,388.4    | 585.9                | 507.0                 | 78.86                   | 7.429                     |         |
| 9,400.0                                                                                             | 7,235.3             | 9,209.1             | 7,103.8             | 53.8            | 47.3   | -77.14                | 1,987.9                | 1,388.4    | 586.2                | 504.1                 | 82.13                   | 7.138                     |         |
| 9,500.0                                                                                             | 7,236.1             | 9,309.1             | 7,103.1             | 55.1            | 48.9   | -76.99                | 2,087.9                | 1,388.4    | 586.6                | 501.2                 | 85.42                   | 6.867                     |         |
| 9,600.0                                                                                             | 7,237.0             | 9,409.1             | 7,102.3             | 56.5            | 50.5   | -76.84                | 2,187.9                | 1,388.4    | 587.0                | 498.2                 | 88.75                   | 6.614                     |         |
| 9,700.0                                                                                             | 7,237.9             | 9,509.0             | 7,101.6             | 57.8            | 52.1   | -76.68                | 2,287.9                | 1,388.4    | 587.3                | 495.2                 | 92.10                   | 6.377                     |         |
| 9,800.0                                                                                             | 7,238.7             | 9,609.0             | 7,100.8             | 59.2            | 53.7   | -76.53                | 2,387.9                | 1,388.4    | 587.7                | 492.2                 | 95.47                   | 6.156                     |         |
| 9,900.0                                                                                             | 7,239.6             | 9,709.0             | 7,100.1             | 60.7            | 55.3   | -76.38                | 2,487.8                | 1,388.4    | 588.1                | 489.2                 | 98.86                   | 5.949                     |         |
| 10,000.0                                                                                            | 7,240.4             | 9,809.0             | 7,099.3             | 62.2            | 57.0   | -76.23                | 2,587.8                | 1,388.4    | 588.5                | 486.2                 | 102.26                  | 5.755                     |         |
| 10,100.0                                                                                            | 7,241.3             | 9,909.0             | 7,098.5             | 63.7            | 58.7   | -76.08                | 2,687.8                | 1,388.4    | 588.8                | 483.2                 | 105.68                  | 5.572                     |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-301 - Wellbore #1 - Plan #2 (6-11-15) |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |                   | Offset Site Error: | 0.0 ft |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |                   | Offset Well Error: | 0.0 ft |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning            |        |
| 10,200.0                                                                                            | 7,242.1             | 10,009.0            | 7,097.8             | 65.2           | 60.4        | -75.92                | 2,787.8                           | 1,388.4    | 589.2                | 480.1                 | 109.11                  | 5.400             |                    |        |
| 10,300.0                                                                                            | 7,243.0             | 10,109.0            | 7,097.0             | 66.7           | 62.1        | -75.77                | 2,887.8                           | 1,388.4    | 589.6                | 477.1                 | 112.55                  | 5.239             |                    |        |
| 10,400.0                                                                                            | 7,243.8             | 10,209.0            | 7,096.3             | 68.3           | 63.8        | -75.62                | 2,987.8                           | 1,388.4    | 590.0                | 474.0                 | 116.00                  | 5.087             |                    |        |
| 10,500.0                                                                                            | 7,244.7             | 10,308.9            | 7,095.5             | 69.9           | 65.5        | -75.47                | 3,087.7                           | 1,388.4    | 590.4                | 471.0                 | 119.46                  | 4.943             |                    |        |
| 10,600.0                                                                                            | 7,245.5             | 10,408.9            | 7,094.8             | 71.5           | 67.3        | -75.32                | 3,187.7                           | 1,388.4    | 590.8                | 467.9                 | 122.92                  | 4.807             |                    |        |
| 10,700.0                                                                                            | 7,246.4             | 10,508.9            | 7,094.0             | 73.2           | 69.0        | -75.17                | 3,287.7                           | 1,388.4    | 591.2                | 464.9                 | 126.39                  | 4.678             |                    |        |
| 10,800.0                                                                                            | 7,247.2             | 10,608.9            | 7,093.3             | 74.8           | 70.8        | -75.02                | 3,387.7                           | 1,388.4    | 591.7                | 461.8                 | 129.86                  | 4.556             |                    |        |
| 10,900.0                                                                                            | 7,248.1             | 10,708.9            | 7,092.5             | 76.5           | 72.6        | -74.87                | 3,487.7                           | 1,388.4    | 592.1                | 458.7                 | 133.34                  | 4.440             |                    |        |
| 11,000.0                                                                                            | 7,248.9             | 10,808.9            | 7,091.7             | 78.1           | 74.4        | -74.72                | 3,587.7                           | 1,388.4    | 592.5                | 455.7                 | 136.82                  | 4.330             |                    |        |
| 11,100.0                                                                                            | 7,249.8             | 10,908.9            | 7,091.0             | 79.8           | 76.1        | -74.57                | 3,687.7                           | 1,388.4    | 592.9                | 452.6                 | 140.31                  | 4.226             |                    |        |
| 11,200.0                                                                                            | 7,250.6             | 11,008.9            | 7,090.2             | 81.5           | 77.9        | -74.42                | 3,787.6                           | 1,388.4    | 593.4                | 449.6                 | 143.79                  | 4.126             |                    |        |
| 11,300.0                                                                                            | 7,251.5             | 11,108.8            | 7,089.5             | 83.2           | 79.7        | -74.27                | 3,887.6                           | 1,388.4    | 593.8                | 446.5                 | 147.28                  | 4.032             |                    |        |
| 11,400.0                                                                                            | 7,252.3             | 11,208.8            | 7,088.7             | 85.0           | 81.5        | -74.12                | 3,987.6                           | 1,388.4    | 594.2                | 443.5                 | 150.77                  | 3.941             |                    |        |
| 11,500.0                                                                                            | 7,253.2             | 11,308.8            | 7,088.0             | 86.7           | 83.3        | -73.97                | 4,087.6                           | 1,388.4    | 594.7                | 440.4                 | 154.25                  | 3.855             |                    |        |
| 11,600.0                                                                                            | 7,254.1             | 11,408.8            | 7,087.2             | 88.4           | 85.2        | -73.82                | 4,187.6                           | 1,388.4    | 595.1                | 437.4                 | 157.74                  | 3.773             |                    |        |
| 11,700.0                                                                                            | 7,254.9             | 11,508.8            | 7,086.5             | 90.2           | 87.0        | -73.67                | 4,287.6                           | 1,388.4    | 595.6                | 434.3                 | 161.23                  | 3.694             |                    |        |
| 11,800.0                                                                                            | 7,255.8             | 11,608.8            | 7,085.7             | 91.9           | 88.8        | -73.52                | 4,387.5                           | 1,388.4    | 596.0                | 431.3                 | 164.72                  | 3.618             |                    |        |
| 11,885.0                                                                                            | 7,256.5             | 11,693.7            | 7,085.1             | 93.4           | 90.3        | -73.40                | 4,472.5                           | 1,388.4    | 596.4                | 428.7                 | 167.68                  | 3.557 SF          |                    |        |



|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-321 - Wellbore #1 - Plan #1 ( 6-11-15) |                |                |                |                 |        |                   |                        |            |                 |                  |                    | Offset Site Error: | 0.0 ft  |
|------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|------------|-----------------|------------------|--------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                                |                |                |                |                 |        |                   |                        |            |                 |                  |                    | Offset Well Error: | 0.0 ft  |
| Reference                                                                                            |                | Offset         |                | Semi Major Axis |        |                   | Distance               |            |                 |                  |                    |                    | Warning |
| Measured Depth                                                                                       | Vertical Depth | Measured Depth | Vertical Depth | Reference       | Offset | Highside Toolface | Offset Wellbore Centre |            | Between Centres | Between Ellipses | Minimum Separation | Separation Factor  |         |
| (ft)                                                                                                 | (ft)           | (ft)           | (ft)           | (ft)            | (ft)   | (°)               | +N/-S (ft)             | +E/-W (ft) | (ft)            | (ft)             | (ft)               |                    |         |
| 0.0                                                                                                  | 0.0            | 0.0            | 0.0            | 0.0             | 0.0    | -169.17           | -14.6                  | -2.8       | 14.8            |                  |                    |                    |         |
| 100.0                                                                                                | 100.0          | 100.0          | 100.0          | 0.1             | 0.1    | -169.17           | -14.6                  | -2.8       | 14.8            | 14.6             | 0.20               | 75.873             |         |
| 200.0                                                                                                | 200.0          | 200.0          | 200.0          | 0.3             | 0.3    | -169.17           | -14.6                  | -2.8       | 14.8            | 14.2             | 0.65               | 23.000             |         |
| 300.0                                                                                                | 300.0          | 300.0          | 300.0          | 0.5             | 0.5    | -169.17           | -14.6                  | -2.8       | 14.8            | 13.7             | 1.09               | 13.554             |         |
| 400.0                                                                                                | 400.0          | 400.0          | 400.0          | 0.8             | 0.8    | -169.17           | -14.6                  | -2.8       | 14.8            | 13.3             | 1.54               | 9.608              |         |
| 500.0                                                                                                | 500.0          | 500.0          | 500.0          | 1.0             | 1.0    | -174.23           | -14.7                  | -1.5       | 14.7            | 12.8             | 1.98               | 7.445              |         |
| 514.0                                                                                                | 514.0          | 514.1          | 514.0          | 1.0             | 1.0    | -175.76           | -14.7                  | -1.1       | 14.7            | 12.7             | 2.04               | 7.220 CC, ES       |         |
| 600.0                                                                                                | 600.0          | 599.9          | 599.8          | 1.2             | 1.2    | 170.78            | -15.0                  | 2.4        | 15.2            | 12.7             | 2.41               | 6.278              |         |
| 700.0                                                                                                | 700.0          | 699.6          | 699.3          | 1.4             | 1.4    | 56.46             | -15.4                  | 8.9        | 17.1            | 14.2             | 2.84               | 6.009              |         |
| 800.0                                                                                                | 799.9          | 799.2          | 798.4          | 1.6             | 1.7    | 43.32             | -16.1                  | 18.0       | 20.1            | 16.9             | 3.27               | 6.154              |         |
| 900.0                                                                                                | 899.7          | 898.6          | 897.2          | 1.9             | 1.9    | 33.76             | -17.0                  | 29.6       | 23.9            | 20.2             | 3.71               | 6.433              |         |
| 1,000.0                                                                                              | 999.3          | 997.9          | 995.5          | 2.1             | 2.2    | 26.70             | -18.0                  | 43.8       | 28.0            | 23.8             | 4.15               | 6.741              |         |
| 1,100.0                                                                                              | 1,098.6        | 1,097.1        | 1,093.2        | 2.4             | 2.6    | 21.34             | -19.3                  | 60.5       | 32.4            | 27.8             | 4.60               | 7.033              |         |
| 1,200.0                                                                                              | 1,197.5        | 1,196.1        | 1,190.3        | 2.6             | 2.9    | 17.11             | -20.7                  | 79.6       | 36.9            | 31.9             | 5.06               | 7.294              |         |
| 1,300.0                                                                                              | 1,296.1        | 1,295.0        | 1,286.8        | 3.0             | 3.4    | 13.67             | -22.3                  | 101.3      | 41.5            | 36.0             | 5.53               | 7.520              |         |
| 1,400.0                                                                                              | 1,394.2        | 1,393.8        | 1,382.6        | 3.3             | 3.8    | 10.80             | -24.1                  | 125.4      | 46.2            | 40.2             | 6.00               | 7.710              |         |
| 1,500.0                                                                                              | 1,491.7        | 1,492.4        | 1,477.6        | 3.7             | 4.3    | 8.33              | -26.0                  | 151.9      | 51.0            | 44.5             | 6.48               | 7.866              |         |
| 1,600.0                                                                                              | 1,588.6        | 1,590.9        | 1,571.7        | 4.2             | 4.9    | 6.18              | -28.2                  | 180.9      | 55.8            | 48.8             | 6.98               | 7.993              |         |
| 1,700.0                                                                                              | 1,684.9        | 1,689.3        | 1,665.0        | 4.7             | 5.5    | 4.26              | -30.5                  | 212.2      | 60.5            | 53.1             | 7.49               | 8.087              |         |
| 1,800.0                                                                                              | 1,780.4        | 1,788.3        | 1,758.1        | 5.3             | 6.2    | 2.54              | -33.0                  | 245.8      | 65.0            | 57.0             | 8.01               | 8.117              |         |
| 1,900.0                                                                                              | 1,875.4        | 1,888.3        | 1,851.9        | 5.9             | 6.9    | 1.03              | -35.6                  | 280.1      | 68.3            | 59.7             | 8.59               | 7.956              |         |
| 2,000.0                                                                                              | 1,970.4        | 1,988.2        | 1,945.7        | 6.5             | 7.6    | -0.33             | -38.1                  | 314.4      | 71.6            | 62.5             | 9.18               | 7.803              |         |
| 2,100.0                                                                                              | 2,065.4        | 2,088.1        | 2,039.6        | 7.1             | 8.3    | -1.57             | -40.6                  | 348.7      | 75.0            | 65.2             | 9.78               | 7.662              |         |
| 2,200.0                                                                                              | 2,160.3        | 2,188.1        | 2,133.4        | 7.7             | 9.0    | -2.71             | -43.2                  | 382.9      | 78.3            | 67.9             | 10.40              | 7.531              |         |
| 2,300.0                                                                                              | 2,255.3        | 2,288.0        | 2,227.2        | 8.4             | 9.7    | -3.75             | -45.7                  | 417.2      | 81.7            | 70.7             | 11.03              | 7.408              |         |
| 2,400.0                                                                                              | 2,350.3        | 2,387.9        | 2,321.1        | 9.0             | 10.4   | -4.71             | -48.3                  | 451.5      | 85.2            | 73.5             | 11.68              | 7.294              |         |
| 2,500.0                                                                                              | 2,445.3        | 2,487.9        | 2,414.9        | 9.7             | 11.1   | -5.60             | -50.8                  | 485.8      | 88.6            | 76.3             | 12.33              | 7.186              |         |
| 2,600.0                                                                                              | 2,540.3        | 2,587.8        | 2,508.7        | 10.3            | 11.9   | -6.41             | -53.4                  | 520.1      | 92.1            | 79.1             | 13.00              | 7.084              |         |
| 2,700.0                                                                                              | 2,635.3        | 2,687.7        | 2,602.6        | 11.0            | 12.6   | -7.17             | -55.9                  | 554.4      | 95.6            | 81.9             | 13.67              | 6.988              |         |
| 2,800.0                                                                                              | 2,730.3        | 2,787.7        | 2,696.4        | 11.6            | 13.3   | -7.88             | -58.4                  | 588.7      | 99.1            | 84.7             | 14.36              | 6.897              |         |
| 2,900.0                                                                                              | 2,825.3        | 2,887.6        | 2,790.2        | 12.3            | 14.0   | -8.54             | -61.0                  | 622.9      | 102.6           | 87.5             | 15.06              | 6.811              |         |
| 3,000.0                                                                                              | 2,920.3        | 2,987.5        | 2,884.0        | 12.9            | 14.8   | -9.15             | -63.5                  | 657.2      | 106.1           | 90.3             | 15.76              | 6.730              |         |
| 3,100.0                                                                                              | 3,015.3        | 3,087.4        | 2,977.9        | 13.6            | 15.5   | -9.72             | -66.1                  | 691.5      | 109.6           | 93.1             | 16.48              | 6.653              |         |
| 3,200.0                                                                                              | 3,110.3        | 3,187.4        | 3,071.7        | 14.2            | 16.2   | -10.26            | -68.6                  | 725.8      | 113.2           | 96.0             | 17.20              | 6.580              |         |
| 3,300.0                                                                                              | 3,205.3        | 3,287.3        | 3,165.5        | 14.9            | 17.0   | -10.77            | -71.2                  | 760.1      | 116.7           | 98.8             | 17.93              | 6.511              |         |
| 3,400.0                                                                                              | 3,300.3        | 3,387.2        | 3,259.4        | 15.6            | 17.7   | -11.24            | -73.7                  | 794.4      | 120.3           | 101.6            | 18.66              | 6.446              |         |
| 3,500.0                                                                                              | 3,395.3        | 3,487.2        | 3,353.2        | 16.2            | 18.4   | -11.69            | -76.2                  | 828.7      | 123.9           | 104.5            | 19.40              | 6.384              |         |
| 3,600.0                                                                                              | 3,490.3        | 3,587.1        | 3,447.0        | 16.9            | 19.2   | -12.11            | -78.8                  | 862.9      | 127.4           | 107.3            | 20.15              | 6.325              |         |
| 3,700.0                                                                                              | 3,585.3        | 3,687.0        | 3,540.9        | 17.5            | 19.9   | -12.51            | -81.3                  | 897.2      | 131.0           | 110.1            | 20.90              | 6.269              |         |
| 3,800.0                                                                                              | 3,680.3        | 3,787.0        | 3,634.7        | 18.2            | 20.6   | -12.89            | -83.9                  | 931.5      | 134.6           | 113.0            | 21.66              | 6.215              |         |
| 3,900.0                                                                                              | 3,775.3        | 3,886.9        | 3,728.5        | 18.9            | 21.4   | -13.25            | -86.4                  | 965.8      | 138.2           | 115.8            | 22.42              | 6.165              |         |
| 4,000.0                                                                                              | 3,870.3        | 3,986.8        | 3,822.4        | 19.5            | 22.1   | -13.59            | -89.0                  | 1,000.1    | 141.8           | 118.6            | 23.19              | 6.116              |         |
| 4,100.0                                                                                              | 3,965.2        | 4,086.8        | 3,916.2        | 20.2            | 22.8   | -13.91            | -91.5                  | 1,034.4    | 145.4           | 121.5            | 23.96              | 6.070              |         |
| 4,200.0                                                                                              | 4,060.2        | 4,186.7        | 4,010.0        | 20.9            | 23.6   | -14.22            | -94.0                  | 1,068.7    | 149.0           | 124.3            | 24.73              | 6.026              |         |
| 4,300.0                                                                                              | 4,155.2        | 4,286.6        | 4,103.9        | 21.5            | 24.3   | -14.52            | -96.6                  | 1,102.9    | 152.7           | 127.1            | 25.51              | 5.984              |         |
| 4,400.0                                                                                              | 4,250.2        | 4,386.6        | 4,197.7        | 22.2            | 25.0   | -14.80            | -99.1                  | 1,137.2    | 156.3           | 130.0            | 26.29              | 5.944              |         |
| 4,500.0                                                                                              | 4,345.2        | 4,486.5        | 4,291.5        | 22.8            | 25.8   | -15.06            | -101.7                 | 1,171.5    | 159.9           | 132.8            | 27.07              | 5.906              |         |
| 4,600.0                                                                                              | 4,440.2        | 4,586.4        | 4,385.3        | 23.5            | 26.5   | -15.32            | -104.2                 | 1,205.8    | 163.5           | 135.7            | 27.86              | 5.870              |         |
| 4,700.0                                                                                              | 4,535.2        | 4,686.4        | 4,479.2        | 24.2            | 27.2   | -15.56            | -106.8                 | 1,240.1    | 167.2           | 138.5            | 28.65              | 5.835              |         |
| 4,800.0                                                                                              | 4,630.2        | 4,786.3        | 4,573.0        | 24.8            | 28.0   | -15.80            | -109.3                 | 1,274.4    | 170.8           | 141.3            | 29.44              | 5.801              |         |
| 4,900.0                                                                                              | 4,725.2        | 4,886.2        | 4,666.8        | 25.5            | 28.7   | -16.02            | -111.8                 | 1,308.7    | 174.4           | 144.2            | 30.24              | 5.769              |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-321 - Wellbore #1 - Plan #1 ( 6-11-15) |                     |                     |                     |                 |        |                       |                        |            |                      |                       |                         | Offset Site Error: | 0.0 ft  |
|------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------------|--------|-----------------------|------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                                |                     |                     |                     |                 |        |                       |                        |            |                      |                       |                         | Offset Well Error: | 0.0 ft  |
| Reference                                                                                            |                     | Offset              |                     | Semi Major Axis |        | Highside Toolface (°) | Offset Wellbore Centre |            | Distance             |                       | Minimum Separation (ft) | Separation Factor  | Warning |
| Measured Depth (ft)                                                                                  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference       | Offset |                       | +N/-S (ft)             | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) |                         |                    |         |
| 5,000.0                                                                                              | 4,820.2             | 4,986.1             | 4,760.7             | 26.2            | 29.4   | -16.24                | -114.4                 | 1,343.0    | 178.1                | 147.0                 | 31.03                   | 5.738              |         |
| 5,100.0                                                                                              | 4,915.2             | 5,086.1             | 4,854.5             | 26.8            | 30.2   | -16.44                | -116.9                 | 1,377.2    | 181.7                | 149.9                 | 31.83                   | 5.708              |         |
| 5,200.0                                                                                              | 5,010.2             | 5,186.0             | 4,948.3             | 27.5            | 30.9   | -16.64                | -119.5                 | 1,411.5    | 185.3                | 152.7                 | 32.63                   | 5.680              |         |
| 5,300.0                                                                                              | 5,105.2             | 5,285.9             | 5,042.2             | 28.2            | 31.6   | -16.83                | -122.0                 | 1,445.8    | 189.0                | 155.6                 | 33.43                   | 5.653              |         |
| 5,400.0                                                                                              | 5,200.2             | 5,385.9             | 5,136.0             | 28.8            | 32.4   | -17.01                | -124.6                 | 1,480.1    | 192.6                | 158.4                 | 34.24                   | 5.626              |         |
| 5,500.0                                                                                              | 5,295.2             | 5,485.8             | 5,229.8             | 29.5            | 33.1   | -17.19                | -127.1                 | 1,514.4    | 196.3                | 161.2                 | 35.04                   | 5.601              |         |
| 5,600.0                                                                                              | 5,390.2             | 5,585.7             | 5,323.7             | 30.2            | 33.8   | -17.36                | -129.6                 | 1,548.7    | 199.9                | 164.1                 | 35.85                   | 5.577              |         |
| 5,700.0                                                                                              | 5,485.2             | 5,685.7             | 5,417.5             | 30.8            | 34.6   | -17.53                | -132.2                 | 1,583.0    | 203.6                | 166.9                 | 36.66                   | 5.553              |         |
| 5,800.0                                                                                              | 5,580.2             | 5,785.6             | 5,511.3             | 31.5            | 35.3   | -17.68                | -134.7                 | 1,617.2    | 207.2                | 169.8                 | 37.47                   | 5.531              |         |
| 5,900.0                                                                                              | 5,675.2             | 5,885.5             | 5,605.2             | 32.2            | 36.0   | -17.84                | -137.3                 | 1,651.5    | 210.9                | 172.6                 | 38.28                   | 5.509              |         |
| 6,000.0                                                                                              | 5,770.2             | 5,985.5             | 5,699.0             | 32.8            | 36.8   | -17.98                | -139.8                 | 1,685.8    | 214.6                | 175.5                 | 39.10                   | 5.488              |         |
| 6,100.0                                                                                              | 5,865.1             | 6,085.4             | 5,792.8             | 33.5            | 37.5   | -18.13                | -142.4                 | 1,720.1    | 218.2                | 178.3                 | 39.91                   | 5.468              |         |
| 6,200.0                                                                                              | 5,960.1             | 6,185.3             | 5,886.6             | 34.2            | 38.2   | -18.26                | -144.9                 | 1,754.4    | 221.9                | 181.1                 | 40.73                   | 5.448              |         |
| 6,300.0                                                                                              | 6,055.1             | 6,285.3             | 5,980.5             | 34.8            | 39.0   | -18.40                | -147.4                 | 1,788.7    | 225.5                | 184.0                 | 41.54                   | 5.429              |         |
| 6,400.0                                                                                              | 6,150.1             | 6,385.2             | 6,074.3             | 35.5            | 39.7   | -18.53                | -150.0                 | 1,823.0    | 229.2                | 186.8                 | 42.36                   | 5.411              |         |
| 6,500.0                                                                                              | 6,245.1             | 6,485.1             | 6,168.1             | 36.2            | 40.5   | -18.65                | -152.5                 | 1,857.2    | 232.9                | 189.7                 | 43.18                   | 5.393              |         |
| 6,600.0                                                                                              | 6,340.1             | 6,585.1             | 6,262.0             | 36.8            | 41.2   | -18.77                | -155.1                 | 1,891.5    | 236.5                | 192.5                 | 44.00                   | 5.376              |         |
| 6,700.0                                                                                              | 6,435.1             | 6,685.0             | 6,355.8             | 37.5            | 41.9   | -18.89                | -157.6                 | 1,925.8    | 240.2                | 195.4                 | 44.82                   | 5.359              |         |
| 6,800.0                                                                                              | 6,530.1             | 6,781.2             | 6,446.1             | 38.1            | 42.6   | -4.22                 | -158.1                 | 1,958.8    | 243.7                | 198.2                 | 45.52                   | 5.354              |         |
| 6,900.0                                                                                              | 6,624.5             | 6,874.7             | 6,533.4             | 38.7            | 43.2   | 16.13                 | -148.1                 | 1,990.8    | 247.1                | 201.3                 | 45.79                   | 5.395              |         |
| 7,000.0                                                                                              | 6,716.8             | 6,968.3             | 6,619.0             | 39.2            | 43.7   | 30.88                 | -126.8                 | 2,022.1    | 250.2                | 204.5                 | 45.68                   | 5.477              |         |
| 7,100.0                                                                                              | 6,805.2             | 7,062.2             | 6,701.6             | 39.6            | 44.2   | 40.86                 | -94.5                  | 2,052.4    | 253.2                | 207.9                 | 45.30                   | 5.589              |         |
| 7,200.0                                                                                              | 6,888.4             | 7,156.3             | 6,780.1             | 40.0            | 44.7   | 47.77                 | -51.4                  | 2,081.2    | 255.9                | 211.1                 | 44.80                   | 5.712              |         |
| 7,300.0                                                                                              | 6,964.9             | 7,250.0             | 6,852.8             | 40.4            | 45.2   | 52.79                 | 1.3                    | 2,107.9    | 258.3                | 214.0                 | 44.34                   | 5.825              |         |
| 7,400.0                                                                                              | 7,033.4             | 7,345.7             | 6,920.1             | 40.8            | 45.6   | 56.67                 | 64.6                   | 2,132.7    | 260.5                | 216.4                 | 44.13                   | 5.903              |         |
| 7,500.0                                                                                              | 7,092.7             | 7,441.2             | 6,979.4             | 41.1            | 46.0   | 59.80                 | 136.1                  | 2,154.5    | 262.4                | 218.1                 | 44.28                   | 5.926              |         |
| 7,600.0                                                                                              | 7,141.7             | 7,537.3             | 7,030.1             | 41.4            | 46.3   | 62.41                 | 215.5                  | 2,173.3    | 264.0                | 219.1                 | 44.90                   | 5.879              |         |
| 7,700.0                                                                                              | 7,179.8             | 7,634.1             | 7,071.3             | 41.6            | 46.7   | 64.65                 | 301.7                  | 2,188.6    | 265.3                | 219.3                 | 46.00                   | 5.768              |         |
| 7,800.0                                                                                              | 7,206.2             | 7,731.7             | 7,102.1             | 41.9            | 47.0   | 66.61                 | 393.4                  | 2,200.1    | 266.4                | 218.9                 | 47.51                   | 5.607              |         |
| 7,900.0                                                                                              | 7,220.4             | 7,830.1             | 7,121.9             | 42.2            | 47.3   | 68.31                 | 489.5                  | 2,207.6    | 267.1                | 217.8                 | 49.32                   | 5.417              |         |
| 8,000.0                                                                                              | 7,223.4             | 7,929.4             | 7,129.9             | 42.4            | 47.6   | 69.56                 | 588.3                  | 2,210.8    | 267.7                | 216.4                 | 51.24                   | 5.224              |         |
| 8,100.0                                                                                              | 7,224.2             | 8,029.3             | 7,129.4             | 42.8            | 47.9   | 69.31                 | 688.2                  | 2,210.9    | 268.2                | 215.0                 | 53.19                   | 5.043              |         |
| 8,200.0                                                                                              | 7,225.1             | 8,129.3             | 7,128.7             | 43.2            | 48.2   | 68.98                 | 788.2                  | 2,210.9    | 268.8                | 213.5                 | 55.26                   | 4.864              |         |
| 8,300.0                                                                                              | 7,225.9             | 8,229.3             | 7,127.9             | 43.7            | 48.7   | 68.67                 | 888.2                  | 2,210.9    | 269.4                | 211.9                 | 57.49                   | 4.686              |         |
| 8,400.0                                                                                              | 7,226.8             | 8,329.3             | 7,127.1             | 44.3            | 49.2   | 68.35                 | 988.2                  | 2,210.9    | 270.0                | 210.1                 | 59.84                   | 4.512              |         |
| 8,500.0                                                                                              | 7,227.6             | 8,429.3             | 7,126.4             | 44.9            | 49.7   | 68.03                 | 1,088.2                | 2,210.9    | 270.6                | 208.3                 | 62.30                   | 4.343              |         |
| 8,600.0                                                                                              | 7,228.5             | 8,529.2             | 7,125.6             | 45.6            | 50.3   | 67.72                 | 1,188.2                | 2,210.9    | 271.2                | 206.3                 | 64.86                   | 4.181              |         |
| 8,700.0                                                                                              | 7,229.3             | 8,629.2             | 7,124.9             | 46.4            | 51.0   | 67.40                 | 1,288.1                | 2,210.9    | 271.8                | 204.3                 | 67.50                   | 4.027              |         |
| 8,800.0                                                                                              | 7,230.2             | 8,729.2             | 7,124.1             | 47.3            | 51.7   | 67.09                 | 1,388.1                | 2,210.9    | 272.4                | 202.2                 | 70.21                   | 3.880              |         |
| 8,900.0                                                                                              | 7,231.0             | 8,829.2             | 7,123.4             | 48.2            | 52.6   | 66.78                 | 1,488.1                | 2,210.9    | 273.0                | 200.1                 | 72.98                   | 3.741              |         |
| 9,000.0                                                                                              | 7,231.9             | 8,929.2             | 7,122.6             | 49.2            | 53.4   | 66.47                 | 1,588.1                | 2,210.9    | 273.7                | 197.9                 | 75.80                   | 3.610              |         |
| 9,100.0                                                                                              | 7,232.7             | 9,029.2             | 7,121.9             | 50.3            | 54.4   | 66.16                 | 1,688.1                | 2,210.9    | 274.3                | 195.7                 | 78.67                   | 3.487              |         |
| 9,200.0                                                                                              | 7,233.6             | 9,129.2             | 7,121.1             | 51.4            | 55.4   | 65.86                 | 1,788.1                | 2,210.9    | 275.0                | 193.4                 | 81.57                   | 3.371              |         |
| 9,300.0                                                                                              | 7,234.4             | 9,229.2             | 7,120.4             | 52.6            | 56.4   | 65.55                 | 1,888.0                | 2,210.9    | 275.6                | 191.1                 | 84.51                   | 3.262              |         |
| 9,400.0                                                                                              | 7,235.3             | 9,329.1             | 7,119.6             | 53.8            | 57.5   | 65.25                 | 1,988.0                | 2,210.9    | 276.3                | 188.8                 | 87.47                   | 3.159              |         |
| 9,500.0                                                                                              | 7,236.1             | 9,429.1             | 7,118.9             | 55.1            | 58.7   | 64.95                 | 2,088.0                | 2,210.9    | 277.0                | 186.5                 | 90.46                   | 3.062              |         |
| 9,600.0                                                                                              | 7,237.0             | 9,529.1             | 7,118.1             | 56.5            | 59.9   | 64.65                 | 2,188.0                | 2,210.9    | 277.7                | 184.2                 | 93.46                   | 2.971              |         |
| 9,700.0                                                                                              | 7,237.9             | 9,629.1             | 7,117.3             | 57.8            | 61.1   | 64.35                 | 2,288.0                | 2,210.9    | 278.4                | 181.9                 | 96.48                   | 2.885              |         |
| 9,800.0                                                                                              | 7,238.7             | 9,729.1             | 7,116.6             | 59.2            | 62.4   | 64.05                 | 2,388.0                | 2,210.9    | 279.1                | 179.5                 | 99.51                   | 2.804              |         |
| 9,900.0                                                                                              | 7,239.6             | 9,829.1             | 7,115.8             | 60.7            | 63.7   | 63.76                 | 2,488.0                | 2,210.9    | 279.8                | 177.2                 | 102.55                  | 2.728              |         |
| 10,000.0                                                                                             | 7,240.4             | 9,929.1             | 7,115.1             | 62.2            | 65.1   | 63.46                 | 2,587.9                | 2,210.9    | 280.5                | 174.9                 | 105.60                  | 2.656              |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| <b>Offset Design</b> Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10T-321 - Wellbore #1 - Plan #1 ( 6-11-15) |                     |                     |                     |                |             |                       |                                   |                                   |                      |                       |                         | <b>Offset Site Error:</b> | 0.0 ft  |
|-------------------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| Survey Program: 0-MWD                                                                                       |                     |                     |                     |                |             |                       |                                   |                                   |                      |                       |                         | <b>Offset Well Error:</b> | 0.0 ft  |
| Measured Depth (ft)                                                                                         | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor         | Warning |
| 10,100.0                                                                                                    | 7,241.3             | 10,029.1            | 7,114.3             | 63.7           | 66.5        | 63.17                 | 2,687.9                           | 2,210.9                           | 281.2                | 172.6                 | 108.65                  | 2.588                     |         |
| 10,200.0                                                                                                    | 7,242.1             | 10,129.0            | 7,113.6             | 65.2           | 67.9        | 62.88                 | 2,787.9                           | 2,210.9                           | 281.9                | 170.2                 | 111.70                  | 2.524                     |         |
| 10,300.0                                                                                                    | 7,243.0             | 10,229.0            | 7,112.8             | 66.7           | 69.4        | 62.59                 | 2,887.9                           | 2,210.9                           | 282.7                | 167.9                 | 114.76                  | 2.463                     |         |
| 10,400.0                                                                                                    | 7,243.8             | 10,329.0            | 7,112.1             | 68.3           | 70.9        | 62.30                 | 2,987.9                           | 2,210.9                           | 283.4                | 165.6                 | 117.81                  | 2.406                     |         |
| 10,500.0                                                                                                    | 7,244.7             | 10,429.0            | 7,111.3             | 69.9           | 72.4        | 62.01                 | 3,087.9                           | 2,210.9                           | 284.2                | 163.3                 | 120.86                  | 2.351                     |         |
| 10,600.0                                                                                                    | 7,245.5             | 10,529.0            | 7,110.6             | 71.5           | 73.9        | 61.73                 | 3,187.8                           | 2,210.9                           | 284.9                | 161.0                 | 123.91                  | 2.299                     |         |
| 10,700.0                                                                                                    | 7,246.4             | 10,629.0            | 7,109.8             | 73.2           | 75.5        | 61.44                 | 3,287.8                           | 2,210.9                           | 285.7                | 158.7                 | 126.96                  | 2.250                     |         |
| 10,800.0                                                                                                    | 7,247.2             | 10,729.0            | 7,109.0             | 74.8           | 77.0        | 61.16                 | 3,387.8                           | 2,210.9                           | 286.5                | 156.5                 | 130.00                  | 2.204                     |         |
| 10,900.0                                                                                                    | 7,248.1             | 10,828.9            | 7,108.3             | 76.5           | 78.6        | 60.88                 | 3,487.8                           | 2,210.9                           | 287.2                | 154.2                 | 133.03                  | 2.159                     |         |
| 11,000.0                                                                                                    | 7,248.9             | 10,928.9            | 7,107.5             | 78.1           | 80.2        | 60.60                 | 3,587.8                           | 2,210.9                           | 288.0                | 152.0                 | 136.06                  | 2.117                     |         |
| 11,100.0                                                                                                    | 7,249.8             | 11,028.9            | 7,106.8             | 79.8           | 81.9        | 60.32                 | 3,687.8                           | 2,210.9                           | 288.8                | 149.7                 | 139.08                  | 2.077                     |         |
| 11,200.0                                                                                                    | 7,250.6             | 11,128.9            | 7,106.0             | 81.5           | 83.5        | 60.05                 | 3,787.8                           | 2,210.9                           | 289.6                | 147.5                 | 142.09                  | 2.038                     |         |
| 11,300.0                                                                                                    | 7,251.5             | 11,228.9            | 7,105.3             | 83.2           | 85.2        | 59.77                 | 3,887.7                           | 2,210.9                           | 290.4                | 145.3                 | 145.10                  | 2.002                     |         |
| 11,400.0                                                                                                    | 7,252.3             | 11,328.9            | 7,104.5             | 85.0           | 86.8        | 59.50                 | 3,987.7                           | 2,210.9                           | 291.2                | 143.1                 | 148.09                  | 1.967                     |         |
| 11,500.0                                                                                                    | 7,253.2             | 11,428.9            | 7,103.8             | 86.7           | 88.5        | 59.23                 | 4,087.7                           | 2,210.9                           | 292.1                | 141.0                 | 151.08                  | 1.933                     |         |
| 11,600.0                                                                                                    | 7,254.1             | 11,528.9            | 7,103.0             | 88.4           | 90.2        | 58.96                 | 4,187.7                           | 2,210.9                           | 292.9                | 138.8                 | 154.05                  | 1.901                     |         |
| 11,700.0                                                                                                    | 7,254.9             | 11,628.8            | 7,102.3             | 90.2           | 91.9        | 58.69                 | 4,287.7                           | 2,210.9                           | 293.7                | 136.7                 | 157.02                  | 1.871                     |         |
| 11,800.0                                                                                                    | 7,255.8             | 11,728.8            | 7,101.5             | 91.9           | 93.6        | 58.42                 | 4,387.7                           | 2,210.9                           | 294.5                | 134.6                 | 159.97                  | 1.841                     |         |
| 11,885.0                                                                                                    | 7,256.5             | 11,807.7            | 7,100.9             | 93.4           | 95.0        | 58.21                 | 4,466.5                           | 2,210.9                           | 295.3                | 132.9                 | 162.39                  | 1.819 SF                  |         |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10Y-241 - Wellbore #1 - Plan #1 (6-11-15) |                     |                     |                     |           |        |                 |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.0 ft  |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |           |        |                 |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 0.0                                                                                                 | 0.0                 | 0.0                 | 0.0                 | 0.0       | 0.0    | -174.53         | -174.53               | -29.1                             | -2.8       | 29.3                 |                       |                         |                    |         |
| 100.0                                                                                               | 100.0               | 100.0               | 100.0               | 0.1       | 0.1    | -174.53         | -174.53               | -29.1                             | -2.8       | 29.3                 | 29.1                  | 0.20                    | 149.722            |         |
| 200.0                                                                                               | 200.0               | 200.0               | 200.0               | 0.3       | 0.3    | -174.53         | -174.53               | -29.1                             | -2.8       | 29.3                 | 28.6                  | 0.65                    | 45.386 CC          |         |
| 200.0                                                                                               | 200.0               | 200.0               | 200.0               | 0.3       | 0.3    | -174.53         | -174.53               | -29.1                             | -2.8       | 29.3                 | 28.6                  | 0.65                    | 45.384             |         |
| 300.0                                                                                               | 300.0               | 300.0               | 300.0               | 0.5       | 0.5    | -177.09         | -177.09               | -29.3                             | -1.5       | 29.3                 | 28.2                  | 1.08                    | 27.085 ES          |         |
| 400.0                                                                                               | 400.0               | 399.8               | 399.7               | 0.8       | 0.8    | 175.38          | 175.38                | -29.7                             | 2.4        | 29.8                 | 28.3                  | 1.52                    | 19.572             |         |
| 500.0                                                                                               | 500.0               | 499.3               | 499.0               | 1.0       | 1.0    | 163.80          | 163.80                | -30.5                             | 8.9        | 31.8                 | 29.8                  | 1.98                    | 16.055             |         |
| 600.0                                                                                               | 600.0               | 598.5               | 597.8               | 1.2       | 1.2    | 150.49          | 150.49                | -31.5                             | 17.8       | 36.3                 | 33.8                  | 2.45                    | 14.810             |         |
| 700.0                                                                                               | 700.0               | 697.3               | 695.9               | 1.4       | 1.5    | 42.32           | 42.32                 | -32.8                             | 29.3       | 43.2                 | 40.3                  | 2.90                    | 14.909             |         |
| 800.0                                                                                               | 799.9               | 795.8               | 793.4               | 1.6       | 1.8    | 34.44           | 34.44                 | -34.5                             | 43.3       | 51.3                 | 48.0                  | 3.35                    | 15.349             |         |
| 900.0                                                                                               | 899.7               | 894.0               | 890.2               | 1.9       | 2.2    | 28.78           | 28.78                 | -36.3                             | 59.7       | 60.1                 | 56.3                  | 3.80                    | 15.821             |         |
| 1,000.0                                                                                             | 999.3               | 992.0               | 986.3               | 2.1       | 2.6    | 24.59           | 24.59                 | -38.5                             | 78.5       | 69.2                 | 65.0                  | 4.26                    | 16.246             |         |
| 1,100.0                                                                                             | 1,098.6             | 1,089.7             | 1,081.7             | 2.4       | 3.0    | 21.38           | 21.38                 | -41.0                             | 99.7       | 78.6                 | 73.8                  | 4.73                    | 16.600             |         |
| 1,200.0                                                                                             | 1,197.5             | 1,187.2             | 1,176.3             | 2.6       | 3.5    | 18.87           | 18.87                 | -43.7                             | 123.2      | 88.1                 | 82.8                  | 5.22                    | 16.878             |         |
| 1,300.0                                                                                             | 1,296.1             | 1,284.5             | 1,270.0             | 3.0       | 4.0    | 16.85           | 16.85                 | -46.6                             | 149.1      | 97.6                 | 91.9                  | 5.71                    | 17.084             |         |
| 1,400.0                                                                                             | 1,394.2             | 1,381.5             | 1,362.7             | 3.3       | 4.6    | 15.20           | 15.20                 | -49.9                             | 177.3      | 107.2                | 101.0                 | 6.22                    | 17.223             |         |
| 1,500.0                                                                                             | 1,491.7             | 1,478.2             | 1,454.5             | 3.7       | 5.2    | 13.81           | 13.81                 | -53.4                             | 207.7      | 116.7                | 110.0                 | 6.74                    | 17.317             |         |
| 1,600.0                                                                                             | 1,588.6             | 1,574.8             | 1,545.3             | 4.2       | 5.9    | 12.64           | 12.64                 | -57.2                             | 240.3      | 126.3                | 119.0                 | 7.28                    | 17.347             |         |
| 1,700.0                                                                                             | 1,684.9             | 1,671.1             | 1,635.0             | 4.7       | 6.6    | 11.64           | 11.64                 | -61.2                             | 275.2      | 135.7                | 127.9                 | 7.83                    | 17.335             |         |
| 1,800.0                                                                                             | 1,780.4             | 1,769.3             | 1,725.7             | 5.3       | 7.3    | 10.78           | 10.78                 | -65.5                             | 312.5      | 144.7                | 136.3                 | 8.40                    | 17.222             |         |
| 1,900.0                                                                                             | 1,875.4             | 1,869.0             | 1,817.7             | 5.9       | 8.1    | 10.13           | 10.13                 | -69.9                             | 350.7      | 152.3                | 143.3                 | 9.02                    | 16.889             |         |
| 2,000.0                                                                                             | 1,970.4             | 1,968.7             | 1,909.7             | 6.5       | 8.9    | 9.55            | 9.55                  | -74.3                             | 388.8      | 159.8                | 150.2                 | 9.64                    | 16.581             |         |
| 2,100.0                                                                                             | 2,065.4             | 2,068.4             | 2,001.8             | 7.1       | 9.7    | 9.01            | 9.01                  | -78.6                             | 426.9      | 167.4                | 157.2                 | 10.27                   | 16.307             |         |
| 2,200.0                                                                                             | 2,160.3             | 2,168.1             | 2,093.8             | 7.7       | 10.6   | 8.53            | 8.53                  | -83.0                             | 465.0      | 175.0                | 164.1                 | 10.90                   | 16.060             |         |
| 2,300.0                                                                                             | 2,255.3             | 2,267.8             | 2,185.8             | 8.4       | 11.4   | 8.08            | 8.08                  | -87.4                             | 503.2      | 182.6                | 171.1                 | 11.53                   | 15.838             |         |
| 2,400.0                                                                                             | 2,350.3             | 2,367.5             | 2,277.8             | 9.0       | 12.2   | 7.67            | 7.67                  | -91.8                             | 541.3      | 190.3                | 178.1                 | 12.17                   | 15.637             |         |
| 2,500.0                                                                                             | 2,445.3             | 2,467.2             | 2,369.8             | 9.7       | 13.0   | 7.29            | 7.29                  | -96.2                             | 579.4      | 197.9                | 185.1                 | 12.80                   | 15.454             |         |
| 2,600.0                                                                                             | 2,540.3             | 2,566.9             | 2,461.9             | 10.3      | 13.8   | 6.94            | 6.94                  | -100.6                            | 617.5      | 205.5                | 192.1                 | 13.44                   | 15.287             |         |
| 2,700.0                                                                                             | 2,635.3             | 2,666.6             | 2,553.9             | 11.0      | 14.6   | 6.62            | 6.62                  | -105.0                            | 655.7      | 213.2                | 199.1                 | 14.08                   | 15.134             |         |
| 2,800.0                                                                                             | 2,730.3             | 2,766.3             | 2,645.9             | 11.6      | 15.5   | 6.32            | 6.32                  | -109.4                            | 693.8      | 220.8                | 206.1                 | 14.73                   | 14.993             |         |
| 2,900.0                                                                                             | 2,825.3             | 2,866.0             | 2,737.9             | 12.3      | 16.3   | 6.03            | 6.03                  | -113.8                            | 731.9      | 228.5                | 213.1                 | 15.37                   | 14.863             |         |
| 3,000.0                                                                                             | 2,920.3             | 2,965.7             | 2,829.9             | 12.9      | 17.1   | 5.77            | 5.77                  | -118.2                            | 770.0      | 236.1                | 220.1                 | 16.02                   | 14.743             |         |
| 3,100.0                                                                                             | 3,015.3             | 3,065.4             | 2,922.0             | 13.6      | 17.9   | 5.52            | 5.52                  | -122.6                            | 808.1      | 243.8                | 227.1                 | 16.66                   | 14.631             |         |
| 3,200.0                                                                                             | 3,110.3             | 3,165.1             | 3,014.0             | 14.2      | 18.8   | 5.29            | 5.29                  | -127.0                            | 846.3      | 251.5                | 234.1                 | 17.31                   | 14.527             |         |
| 3,300.0                                                                                             | 3,205.3             | 3,264.8             | 3,106.0             | 14.9      | 19.6   | 5.07            | 5.07                  | -131.3                            | 884.4      | 259.1                | 241.2                 | 17.96                   | 14.429             |         |
| 3,400.0                                                                                             | 3,300.3             | 3,364.5             | 3,198.0             | 15.6      | 20.4   | 4.87            | 4.87                  | -135.7                            | 922.5      | 266.8                | 248.2                 | 18.61                   | 14.338             |         |
| 3,500.0                                                                                             | 3,395.3             | 3,464.2             | 3,290.0             | 16.2      | 21.2   | 4.67            | 4.67                  | -140.1                            | 960.6      | 274.5                | 255.2                 | 19.26                   | 14.253             |         |
| 3,600.0                                                                                             | 3,490.3             | 3,563.9             | 3,382.1             | 16.9      | 22.1   | 4.49            | 4.49                  | -144.5                            | 998.8      | 282.2                | 262.3                 | 19.91                   | 14.173             |         |
| 3,700.0                                                                                             | 3,585.3             | 3,663.6             | 3,474.1             | 17.5      | 22.9   | 4.31            | 4.31                  | -148.9                            | 1,036.9    | 289.9                | 269.3                 | 20.56                   | 14.097             |         |
| 3,800.0                                                                                             | 3,680.3             | 3,763.3             | 3,566.1             | 18.2      | 23.7   | 4.15            | 4.15                  | -153.3                            | 1,075.0    | 297.5                | 276.3                 | 21.21                   | 14.026             |         |
| 3,900.0                                                                                             | 3,775.3             | 3,863.0             | 3,658.1             | 18.9      | 24.5   | 3.99            | 3.99                  | -157.7                            | 1,113.1    | 305.2                | 283.4                 | 21.87                   | 13.958             |         |
| 4,000.0                                                                                             | 3,870.3             | 3,962.7             | 3,750.1             | 19.5      | 25.4   | 3.84            | 3.84                  | -162.1                            | 1,151.2    | 312.9                | 290.4                 | 22.52                   | 13.895             |         |
| 4,100.0                                                                                             | 3,965.2             | 4,062.4             | 3,842.2             | 20.2      | 26.2   | 3.70            | 3.70                  | -166.5                            | 1,189.4    | 320.6                | 297.4                 | 23.18                   | 13.834             |         |
| 4,200.0                                                                                             | 4,060.2             | 4,162.1             | 3,934.2             | 20.9      | 27.0   | 3.56            | 3.56                  | -170.9                            | 1,227.5    | 328.3                | 304.5                 | 23.83                   | 13.777             |         |
| 4,300.0                                                                                             | 4,155.2             | 4,261.8             | 4,026.2             | 21.5      | 27.8   | 3.44            | 3.44                  | -175.3                            | 1,265.6    | 336.0                | 311.5                 | 24.49                   | 13.722             |         |
| 4,400.0                                                                                             | 4,250.2             | 4,361.5             | 4,118.2             | 22.2      | 28.7   | 3.31            | 3.31                  | -179.7                            | 1,303.7    | 343.7                | 318.6                 | 25.14                   | 13.670             |         |
| 4,500.0                                                                                             | 4,345.2             | 4,461.2             | 4,210.2             | 22.8      | 29.5   | 3.19            | 3.19                  | -184.1                            | 1,341.9    | 351.4                | 325.6                 | 25.80                   | 13.620             |         |
| 4,600.0                                                                                             | 4,440.2             | 4,560.9             | 4,302.3             | 23.5      | 30.3   | 3.08            | 3.08                  | -188.4                            | 1,380.0    | 359.1                | 332.7                 | 26.46                   | 13.573             |         |
| 4,700.0                                                                                             | 4,535.2             | 4,660.6             | 4,394.3             | 24.2      | 31.1   | 2.97            | 2.97                  | -192.8                            | 1,418.1    | 366.8                | 339.7                 | 27.12                   | 13.528             |         |
| 4,800.0                                                                                             | 4,630.2             | 4,760.3             | 4,486.3             | 24.8      | 32.0   | 2.87            | 2.87                  | -197.2                            | 1,456.2    | 374.5                | 346.7                 | 27.77                   | 13.485             |         |
| 4,900.0                                                                                             | 4,725.2             | 4,860.0             | 4,578.3             | 25.5      | 32.8   | 2.77            | 2.77                  | -201.6                            | 1,494.3    | 382.2                | 353.8                 | 28.43                   | 13.444             |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10Y-241 - Wellbore #1 - Plan #1 (6-11-15) |                     |                     |                     |           |        |                 |                       |                                   |                                   |                               |                                |                         | Offset Site Error: | 0.0 ft  |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|-----------------------------------|-------------------------------|--------------------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |           |        |                 |                       |                                   |                                   |                               |                                |                         | Offset Well Error: | 0.0 ft  |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 5,000.0                                                                                             | 4,820.2             | 4,959.7             | 4,670.3             | 26.2      | 33.6   | 2.67            | 2.67                  | -206.0                            | 1,532.5                           | 389.9                         | 360.8                          | 29.09                   | 13.404             |         |
| 5,100.0                                                                                             | 4,915.2             | 5,059.4             | 4,762.3             | 26.8      | 34.5   | 2.58            | 2.58                  | -210.4                            | 1,570.6                           | 397.6                         | 367.9                          | 29.75                   | 13.366             |         |
| 5,200.0                                                                                             | 5,010.2             | 5,159.1             | 4,854.4             | 27.5      | 35.3   | 2.49            | 2.49                  | -214.8                            | 1,608.7                           | 405.4                         | 374.9                          | 30.41                   | 13.329             |         |
| 5,300.0                                                                                             | 5,105.2             | 5,258.8             | 4,946.4             | 28.2      | 36.1   | 2.41            | 2.41                  | -219.2                            | 1,646.8                           | 413.1                         | 382.0                          | 31.07                   | 13.294             |         |
| 5,400.0                                                                                             | 5,200.2             | 5,358.5             | 5,038.4             | 28.8      | 36.9   | 2.33            | 2.33                  | -223.6                            | 1,685.0                           | 420.8                         | 389.0                          | 31.73                   | 13.261             |         |
| 5,500.0                                                                                             | 5,295.2             | 5,458.2             | 5,130.4             | 29.5      | 37.8   | 2.25            | 2.25                  | -228.0                            | 1,723.1                           | 428.5                         | 396.1                          | 32.39                   | 13.228             |         |
| 5,600.0                                                                                             | 5,390.2             | 5,557.9             | 5,222.4             | 30.2      | 38.6   | 2.17            | 2.17                  | -232.4                            | 1,761.2                           | 436.2                         | 403.1                          | 33.05                   | 13.197             |         |
| 5,700.0                                                                                             | 5,485.2             | 5,657.6             | 5,314.5             | 30.8      | 39.4   | 2.10            | 2.10                  | -236.8                            | 1,799.3                           | 443.9                         | 410.2                          | 33.71                   | 13.167             |         |
| 5,800.0                                                                                             | 5,580.2             | 5,757.3             | 5,406.5             | 31.5      | 40.3   | 2.03            | 2.03                  | -241.1                            | 1,837.5                           | 451.6                         | 417.3                          | 34.38                   | 13.138             |         |
| 5,900.0                                                                                             | 5,675.2             | 5,857.0             | 5,498.5             | 32.2      | 41.1   | 1.96            | 1.96                  | -245.5                            | 1,875.6                           | 459.3                         | 424.3                          | 35.04                   | 13.110             |         |
| 6,000.0                                                                                             | 5,770.2             | 5,956.7             | 5,590.5             | 32.8      | 41.9   | 1.89            | 1.89                  | -249.9                            | 1,913.7                           | 467.1                         | 431.4                          | 35.70                   | 13.083             |         |
| 6,100.0                                                                                             | 5,865.1             | 6,056.4             | 5,682.5             | 33.5      | 42.7   | 1.83            | 1.83                  | -254.3                            | 1,951.8                           | 474.8                         | 438.4                          | 36.36                   | 13.057             |         |
| 6,200.0                                                                                             | 5,960.1             | 6,156.1             | 5,774.6             | 34.2      | 43.6   | 1.77            | 1.77                  | -258.7                            | 1,989.9                           | 482.5                         | 445.5                          | 37.02                   | 13.032             |         |
| 6,300.0                                                                                             | 6,055.1             | 6,255.8             | 5,866.6             | 34.8      | 44.4   | 1.71            | 1.71                  | -263.1                            | 2,028.1                           | 490.2                         | 452.5                          | 37.69                   | 13.007             |         |
| 6,400.0                                                                                             | 6,150.1             | 6,355.5             | 5,958.6             | 35.5      | 45.2   | 1.65            | 1.65                  | -267.5                            | 2,066.2                           | 497.9                         | 459.6                          | 38.35                   | 12.983             |         |
| 6,500.0                                                                                             | 6,245.1             | 6,455.2             | 6,050.6             | 36.2      | 46.1   | 1.59            | 1.59                  | -271.9                            | 2,104.3                           | 505.6                         | 466.6                          | 39.01                   | 12.961             |         |
| 6,600.0                                                                                             | 6,340.1             | 6,554.9             | 6,142.6             | 36.8      | 46.9   | 1.54            | 1.54                  | -276.3                            | 2,142.4                           | 513.4                         | 473.7                          | 39.68                   | 12.938             |         |
| 6,700.0                                                                                             | 6,435.1             | 6,654.6             | 6,234.7             | 37.5      | 47.7   | 1.48            | 1.48                  | -280.7                            | 2,180.6                           | 521.1                         | 480.7                          | 40.34                   | 12.917             |         |
| 6,800.0                                                                                             | 6,530.1             | 6,754.2             | 6,326.6             | 38.1      | 48.5   | 16.13           | 16.13                 | -285.1                            | 2,218.6                           | 529.2                         | 488.2                          | 40.98                   | 12.912             |         |
| 6,900.0                                                                                             | 6,624.5             | 6,855.3             | 6,419.9             | 38.7      | 49.4   | 37.23           | 37.23                 | -289.1                            | 2,257.3                           | 539.2                         | 497.5                          | 41.64                   | 12.949             |         |
| 7,000.0                                                                                             | 6,716.8             | 6,967.0             | 6,522.7             | 39.2      | 50.2   | 52.91           | 52.91                 | -282.3                            | 2,300.1                           | 550.0                         | 507.7                          | 42.35                   | 12.988             |         |
| 7,100.0                                                                                             | 6,805.2             | 7,082.0             | 6,626.4             | 39.6      | 50.9   | 63.44           | 63.44                 | -258.4                            | 2,343.4                           | 560.9                         | 517.8                          | 43.08                   | 13.019             |         |
| 7,200.0                                                                                             | 6,888.4             | 7,200.1             | 6,728.2             | 40.0      | 51.6   | 70.50           | 70.50                 | -216.6                            | 2,386.1                           | 571.4                         | 527.6                          | 43.81                   | 13.041             |         |
| 7,300.0                                                                                             | 6,964.9             | 7,321.2             | 6,824.9             | 40.4      | 52.3   | 75.29           | 75.29                 | -156.7                            | 2,427.1                           | 581.1                         | 536.6                          | 44.55                   | 13.045             |         |
| 7,400.0                                                                                             | 7,033.4             | 7,444.7             | 6,913.2             | 40.8      | 52.8   | 78.52           | 78.52                 | -79.2                             | 2,464.7                           | 589.8                         | 544.5                          | 45.29                   | 13.023             |         |
| 7,500.0                                                                                             | 7,092.7             | 7,570.0             | 6,989.8             | 41.1      | 53.3   | 80.60           | 80.60                 | 14.1                              | 2,497.7                           | 597.1                         | 551.0                          | 46.10                   | 12.953             |         |
| 7,600.0                                                                                             | 7,141.7             | 7,696.4             | 7,051.7             | 41.4      | 53.8   | 81.80           | 81.80                 | 120.8                             | 2,524.8                           | 602.8                         | 555.8                          | 47.00                   | 12.826             |         |
| 7,700.0                                                                                             | 7,179.8             | 7,823.0             | 7,096.6             | 41.6      | 54.1   | 82.28           | 82.28                 | 237.3                             | 2,544.9                           | 606.8                         | 558.7                          | 48.09                   | 12.618             |         |
| 7,800.0                                                                                             | 7,206.2             | 7,948.9             | 7,122.9             | 41.9      | 54.4   | 82.13           | 82.13                 | 359.7                             | 2,557.4                           | 609.0                         | 559.6                          | 49.40                   | 12.329             |         |
| 7,900.0                                                                                             | 7,220.4             | 8,073.3             | 7,130.3             | 42.2      | 54.6   | 81.46           | 81.46                 | 483.6                             | 2,562.1                           | 609.6                         | 558.6                          | 50.97                   | 11.960             |         |
| 7,924.5                                                                                             | 7,222.2             | 8,100.2             | 7,129.6             | 42.2      | 54.7   | 81.23           | 81.23                 | 510.5                             | 2,562.2                           | 609.5                         | 558.1                          | 51.41                   | 11.856             |         |
| 8,000.0                                                                                             | 7,223.4             | 8,175.7             | 7,127.2             | 42.4      | 54.8   | 80.93           | 80.93                 | 585.9                             | 2,562.2                           | 609.8                         | 557.2                          | 52.62                   | 11.590             |         |
| 8,100.0                                                                                             | 7,224.2             | 8,275.6             | 7,124.1             | 42.8      | 55.1   | 80.56           | 80.56                 | 685.8                             | 2,562.2                           | 610.5                         | 555.9                          | 54.61                   | 11.180             |         |
| 8,200.0                                                                                             | 7,225.1             | 8,375.5             | 7,120.9             | 43.2      | 55.4   | 80.19           | 80.19                 | 785.7                             | 2,562.2                           | 611.2                         | 554.4                          | 56.78                   | 10.764             |         |
| 8,300.0                                                                                             | 7,225.9             | 8,475.4             | 7,117.8             | 43.7      | 55.7   | 79.82           | 79.82                 | 885.6                             | 2,562.2                           | 611.8                         | 552.7                          | 59.12                   | 10.350             |         |
| 8,400.0                                                                                             | 7,226.8             | 8,575.4             | 7,114.7             | 44.3      | 56.1   | 79.46           | 79.46                 | 985.4                             | 2,562.2                           | 612.6                         | 551.0                          | 61.60                   | 9.945              |         |
| 8,500.0                                                                                             | 7,227.6             | 8,675.3             | 7,111.5             | 44.9      | 56.5   | 79.09           | 79.09                 | 1,085.3                           | 2,562.2                           | 613.3                         | 549.1                          | 64.20                   | 9.553              |         |
| 8,600.0                                                                                             | 7,228.5             | 8,775.2             | 7,108.4             | 45.6      | 57.0   | 78.73           | 78.73                 | 1,185.2                           | 2,562.2                           | 614.1                         | 547.2                          | 66.92                   | 9.177              |         |
| 8,700.0                                                                                             | 7,229.3             | 8,875.1             | 7,105.3             | 46.4      | 57.6   | 78.36           | 78.36                 | 1,285.0                           | 2,562.2                           | 614.9                         | 545.1                          | 69.73                   | 8.818              |         |
| 8,800.0                                                                                             | 7,230.2             | 8,975.0             | 7,102.1             | 47.3      | 58.2   | 78.00           | 78.00                 | 1,384.9                           | 2,562.2                           | 615.7                         | 543.1                          | 72.62                   | 8.479              |         |
| 8,900.0                                                                                             | 7,231.0             | 9,075.0             | 7,099.0             | 48.2      | 58.9   | 77.64           | 77.64                 | 1,484.8                           | 2,562.2                           | 616.5                         | 541.0                          | 75.58                   | 8.158              |         |
| 9,000.0                                                                                             | 7,231.9             | 9,174.9             | 7,095.9             | 49.2      | 59.6   | 77.28           | 77.28                 | 1,584.7                           | 2,562.2                           | 617.4                         | 538.8                          | 78.60                   | 7.855              |         |
| 9,100.0                                                                                             | 7,232.7             | 9,274.8             | 7,092.7             | 50.3      | 60.4   | 76.91           | 76.91                 | 1,684.5                           | 2,562.2                           | 618.3                         | 536.6                          | 81.67                   | 7.571              |         |
| 9,200.0                                                                                             | 7,233.6             | 9,374.7             | 7,089.6             | 51.4      | 61.2   | 76.56           | 76.56                 | 1,784.4                           | 2,562.2                           | 619.2                         | 534.4                          | 84.79                   | 7.303              |         |
| 9,300.0                                                                                             | 7,234.4             | 9,474.6             | 7,086.5             | 52.6      | 62.1   | 76.20           | 76.20                 | 1,884.3                           | 2,562.2                           | 620.1                         | 532.2                          | 87.94                   | 7.052              |         |
| 9,400.0                                                                                             | 7,235.3             | 9,574.6             | 7,083.3             | 53.8      | 63.1   | 75.84           | 75.84                 | 1,984.1                           | 2,562.2                           | 621.1                         | 530.0                          | 91.13                   | 6.815              |         |
| 9,500.0                                                                                             | 7,236.1             | 9,674.5             | 7,080.2             | 55.1      | 64.1   | 75.48           | 75.48                 | 2,084.0                           | 2,562.2                           | 622.1                         | 527.7                          | 94.35                   | 6.594              |         |
| 9,600.0                                                                                             | 7,237.0             | 9,774.4             | 7,077.0             | 56.5      | 65.1   | 75.13           | 75.13                 | 2,183.9                           | 2,562.2                           | 623.1                         | 525.5                          | 97.59                   | 6.385              |         |
| 9,700.0                                                                                             | 7,237.9             | 9,874.3             | 7,073.9             | 57.8      | 66.2   | 74.78           | 74.78                 | 2,283.8                           | 2,562.2                           | 624.1                         | 523.3                          | 100.85                  | 6.189              |         |
| 9,800.0                                                                                             | 7,238.7             | 9,974.2             | 7,070.8             | 59.2      | 67.3   | 74.42           | 74.42                 | 2,383.6                           | 2,562.2                           | 625.2                         | 521.1                          | 104.12                  | 6.004              |         |
| 9,900.0                                                                                             | 7,239.6             | 10,074.2            | 7,067.6             | 60.7      | 68.5   | 74.07           | 74.07                 | 2,483.5                           | 2,562.2                           | 626.3                         | 518.9                          | 107.41                  | 5.831              |         |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

| Offset Design Spaur 4N67W10LQ Pad Sec.10-T4N-R67W - Spaur 10Y-241 - Wellbore #1 - Plan #1 (6-11-15) |                     |                     |                     |           |        |                       |                                   |                                   |                      |                       |                         |                   | Offset Site Error: | 0.0 ft |
|-----------------------------------------------------------------------------------------------------|---------------------|---------------------|---------------------|-----------|--------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD                                                                               |                     |                     |                     |           |        |                       |                                   |                                   |                      |                       |                         |                   | Offset Well Error: | 0.0 ft |
| Measured Depth (ft)                                                                                 | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning            |        |
| 10,000.0                                                                                            | 7,240.4             | 10,174.1            | 7,064.5             | 62.2      | 69.8   | 73.72                 | 2,583.4                           | 2,562.2                           | 627.4                | 516.7                 | 110.71                  | 5.667             |                    |        |
| 10,100.0                                                                                            | 7,241.3             | 10,274.0            | 7,061.4             | 63.7      | 71.0   | 73.37                 | 2,683.2                           | 2,562.2                           | 628.5                | 514.5                 | 114.02                  | 5.512             |                    |        |
| 10,200.0                                                                                            | 7,242.1             | 10,373.9            | 7,058.2             | 65.2      | 72.3   | 73.03                 | 2,783.1                           | 2,562.2                           | 629.7                | 512.3                 | 117.33                  | 5.367             |                    |        |
| 10,300.0                                                                                            | 7,243.0             | 10,473.9            | 7,055.1             | 66.7      | 73.7   | 72.68                 | 2,883.0                           | 2,562.2                           | 630.9                | 510.2                 | 120.65                  | 5.229             |                    |        |
| 10,400.0                                                                                            | 7,243.8             | 10,573.8            | 7,052.0             | 68.3      | 75.0   | 72.33                 | 2,982.8                           | 2,562.2                           | 632.1                | 508.1                 | 123.97                  | 5.099             |                    |        |
| 10,500.0                                                                                            | 7,244.7             | 10,673.7            | 7,048.8             | 69.9      | 76.5   | 71.99                 | 3,082.7                           | 2,562.2                           | 633.3                | 506.0                 | 127.29                  | 4.975             |                    |        |
| 10,600.0                                                                                            | 7,245.5             | 10,773.6            | 7,045.7             | 71.5      | 77.9   | 71.65                 | 3,182.6                           | 2,562.2                           | 634.5                | 503.9                 | 130.61                  | 4.858             |                    |        |
| 10,700.0                                                                                            | 7,246.4             | 10,873.5            | 7,042.6             | 73.2      | 79.3   | 71.31                 | 3,282.5                           | 2,562.2                           | 635.8                | 501.9                 | 133.92                  | 4.747             |                    |        |
| 10,800.0                                                                                            | 7,247.2             | 10,973.5            | 7,039.4             | 74.8      | 80.8   | 70.97                 | 3,382.3                           | 2,562.2                           | 637.1                | 499.8                 | 137.24                  | 4.642             |                    |        |
| 10,900.0                                                                                            | 7,248.1             | 11,073.4            | 7,036.3             | 76.5      | 82.3   | 70.63                 | 3,482.2                           | 2,562.2                           | 638.4                | 497.9                 | 140.54                  | 4.542             |                    |        |
| 11,000.0                                                                                            | 7,248.9             | 11,173.3            | 7,033.2             | 78.1      | 83.8   | 70.29                 | 3,582.1                           | 2,562.2                           | 639.7                | 495.9                 | 143.85                  | 4.447             |                    |        |
| 11,100.0                                                                                            | 7,249.8             | 11,273.2            | 7,030.0             | 79.8      | 85.4   | 69.96                 | 3,681.9                           | 2,562.2                           | 641.1                | 493.9                 | 147.14                  | 4.357             |                    |        |
| 11,200.0                                                                                            | 7,250.6             | 11,373.1            | 7,026.9             | 81.5      | 87.0   | 69.62                 | 3,781.8                           | 2,562.2                           | 642.5                | 492.0                 | 150.43                  | 4.271             |                    |        |
| 11,300.0                                                                                            | 7,251.5             | 11,473.1            | 7,023.8             | 83.2      | 88.5   | 69.29                 | 3,881.7                           | 2,562.2                           | 643.9                | 490.2                 | 153.72                  | 4.189             |                    |        |
| 11,400.0                                                                                            | 7,252.3             | 11,573.0            | 7,020.6             | 85.0      | 90.1   | 68.96                 | 3,981.6                           | 2,562.2                           | 645.3                | 488.3                 | 156.99                  | 4.110             |                    |        |
| 11,500.0                                                                                            | 7,253.2             | 11,672.9            | 7,017.5             | 86.7      | 91.7   | 68.63                 | 4,081.4                           | 2,562.2                           | 646.7                | 486.5                 | 160.25                  | 4.036             |                    |        |
| 11,600.0                                                                                            | 7,254.1             | 11,772.8            | 7,014.4             | 88.4      | 93.4   | 68.30                 | 4,181.3                           | 2,562.2                           | 648.2                | 484.7                 | 163.51                  | 3.964             |                    |        |
| 11,700.0                                                                                            | 7,254.9             | 11,872.7            | 7,011.2             | 90.2      | 95.0   | 67.98                 | 4,281.2                           | 2,562.2                           | 649.7                | 482.9                 | 166.75                  | 3.896             |                    |        |
| 11,800.0                                                                                            | 7,255.8             | 11,972.7            | 7,008.1             | 91.9      | 96.7   | 67.65                 | 4,381.0                           | 2,562.2                           | 651.2                | 481.2                 | 169.98                  | 3.831             |                    |        |
| 11,885.0                                                                                            | 7,256.5             | 12,054.6            | 7,005.5             | 93.4      | 98.0   | 67.38                 | 4,462.9                           | 2,562.2                           | 652.5                | 479.8                 | 172.68                  | 3.779 SF          |                    |        |

|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

Reference Depths are relative to WELL @ 4844.0ft (RKB - 13')

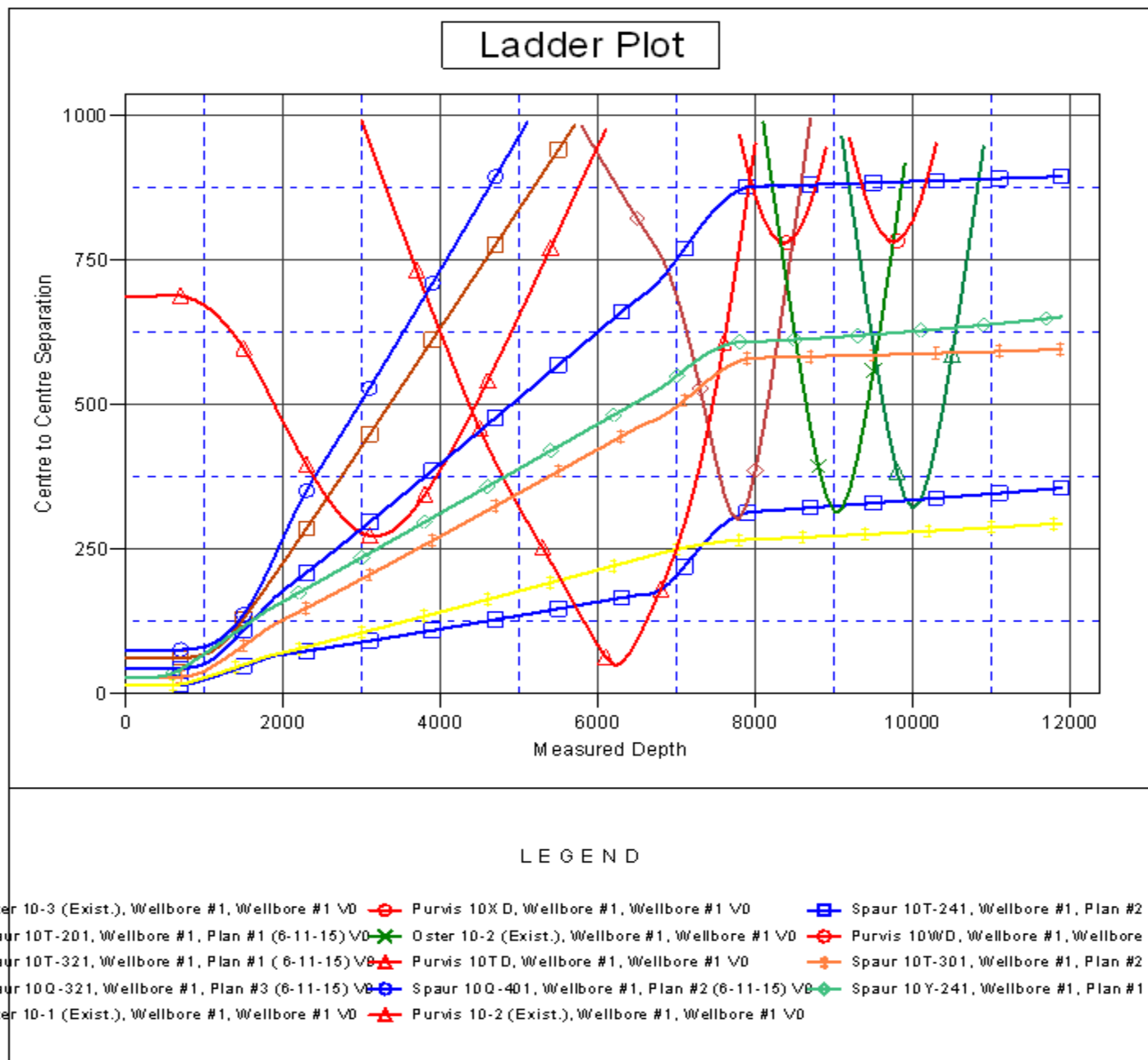
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Spaur 10T-421

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.40°



|                           |                                           |                                     |                             |
|---------------------------|-------------------------------------------|-------------------------------------|-----------------------------|
| <b>Company:</b>           | PETROLEUM DEVELOPMENT CORP Weld County CO | <b>Local Co-ordinate Reference:</b> | Well Spaur 10T-421          |
| <b>Project:</b>           | SEC.10-T4N-R67W                           | <b>TVD Reference:</b>               | WELL @ 4844.0ft (RKB - 13') |
| <b>Reference Site:</b>    | Spaur 4N67W10LQ Pad Sec.10-T4N-R67W       | <b>MD Reference:</b>                | WELL @ 4844.0ft (RKB - 13') |
| <b>Site Error:</b>        | 0.0ft                                     | <b>North Reference:</b>             | True                        |
| <b>Reference Well:</b>    | Spaur 10T-421                             | <b>Survey Calculation Method:</b>   | Minimum Curvature           |
| <b>Well Error:</b>        | 0.0ft                                     | <b>Output errors are at</b>         | 2.00 sigma                  |
| <b>Reference Wellbore</b> | Wellbore #1                               | <b>Database:</b>                    | EDM 2003.21 Single User Db  |
| <b>Reference Design:</b>  | Plan #1 (6-11-15)                         | <b>Offset TVD Reference:</b>        | Offset Datum                |

Reference Depths are relative to WELL @ 4844.0ft (RKB - 13')  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: Spaur 10T-421  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.40°

