



Berry Petroleum Company

# **BERRY PETROLEUM COMPANY**

**GARFIELD COUNTY, COLORADO**

**OM G03 696 PAD**

**GRANLEE OM10B**

**OM10B**

**Plan: PLAN #1**

## **Standard Planning Report**

**08 September, 2008**



**Weatherford®**



Berry Petroleum Company

GRANLEE OM10B  
GARFIELD COUNTY, COLORADO  
SECTION 3-T6S-R96W  
1973' FNL, 1601' FEL  
39° 33' 27.480 N  
108° 5' 30.2600 W



Weatherford®

#### WELL DETAILS: GRANLEE OM10B

| +N/-S | +E/-W | Northing   | Easting    | Ground Level: | Latitude         | Longitude         | Slot |
|-------|-------|------------|------------|---------------|------------------|-------------------|------|
| 0.00  | 0.00  | 1638419.36 | 2269349.64 | 8163.50       | 39° 33' 27.480 N | 108° 5' 30.2600 W |      |

#### WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

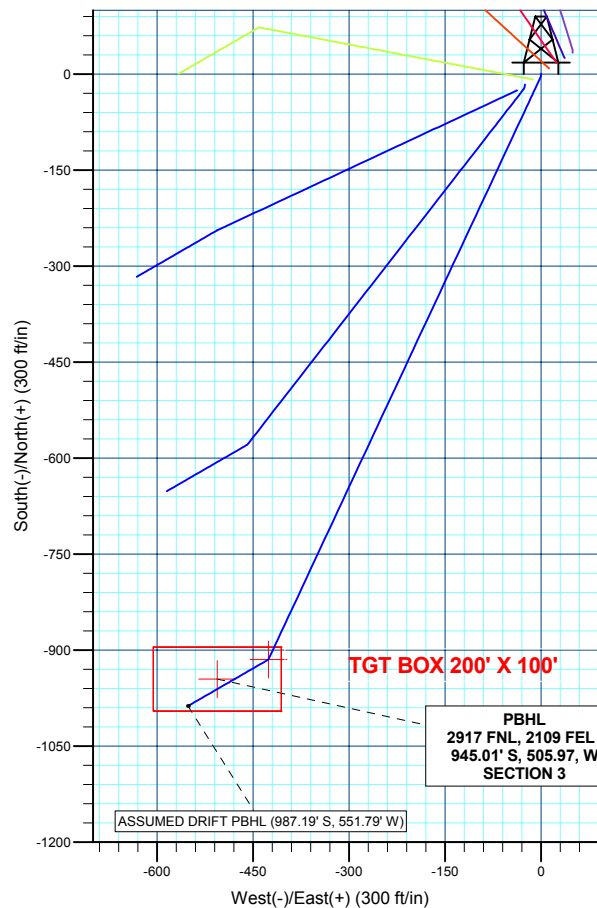
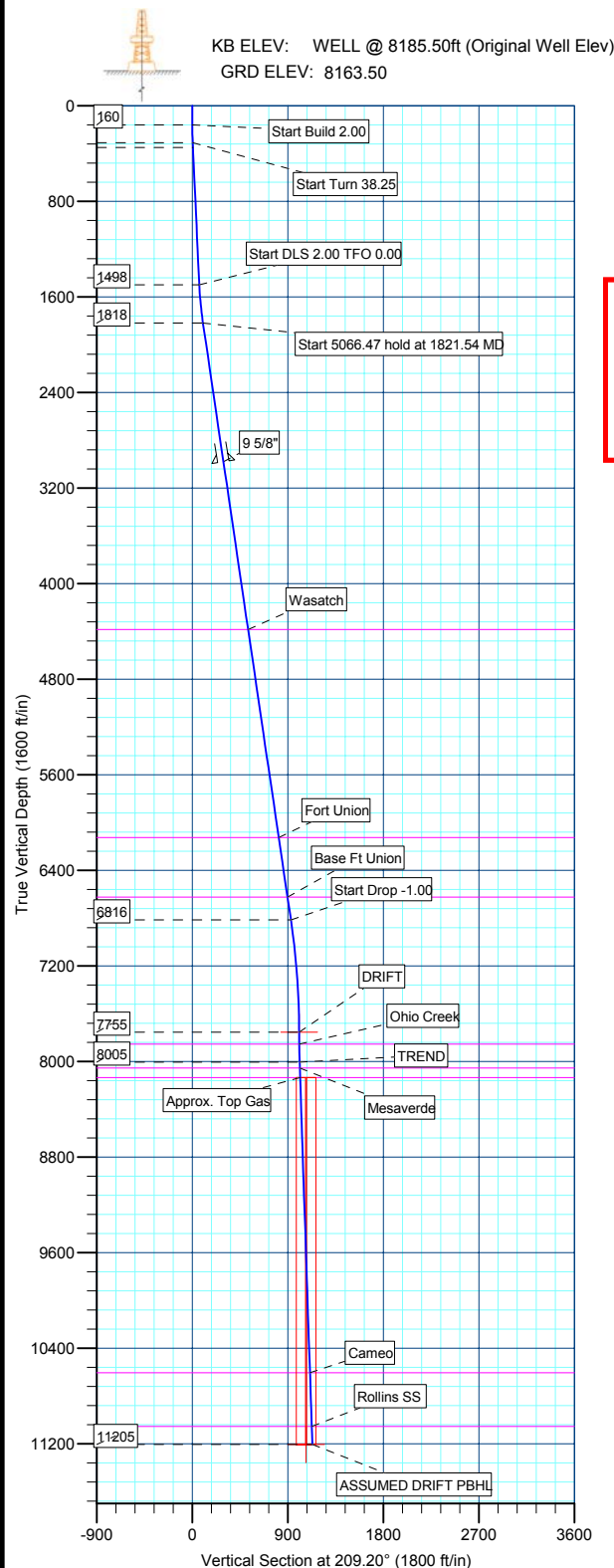
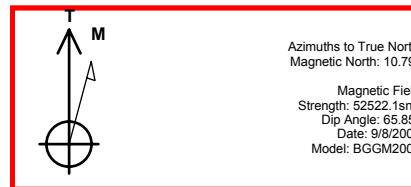
| Name               | TVD      | +N/-S   | +E/-W   | Northing   | Easting    | Latitude         | Longitude         | Shape                              |
|--------------------|----------|---------|---------|------------|------------|------------------|-------------------|------------------------------------|
| PBHL_OM10B-G03-695 | 11205.00 | -945.01 | -505.97 | 1637489.17 | 2268816.93 | 39° 33' 18.140 N | 108° 5' 36.7200 W | Rectangle (Sides: L100.00 W200.00) |

#### SECTION DETAILS

| Sec | MD       | Inc  | Azi    | TVD      | +N/-S   | +E/-W   | DLeg | TFace  | VSec    | Target             |
|-----|----------|------|--------|----------|---------|---------|------|--------|---------|--------------------|
| 1   | 0.00     | 0.00 | 0.00   | 0.00     | 0.00    | 0.00    | 0.00 | 0.00   | 0.00    |                    |
| 2   | 160.00   | 0.00 | 0.00   | 160.00   | 0.00    | 0.00    | 0.00 | 0.00   | 0.00    |                    |
| 3   | 310.00   | 3.00 | 190.00 | 309.93   | -3.87   | -0.68   | 2.00 | 190.00 | 3.71    |                    |
| 4   | 349.35   | 3.00 | 205.05 | 349.22   | -5.82   | -1.30   | 2.00 | 90.00  | 5.72    |                    |
| 5   | 1500.00  | 3.00 | 205.05 | 1498.30  | -60.38  | -26.80  | 0.00 | 0.00   | 65.78   |                    |
| 6   | 1821.79  | 9.44 | 205.05 | 1818.03  | -91.94  | -41.55  | 2.00 | 0.00   | 100.52  |                    |
| 7   | 6887.98  | 9.44 | 205.05 | 6815.68  | -844.37 | -393.24 | 0.00 | 0.00   | 928.91  |                    |
| 8   | 7831.57  | 0.00 | 0.00   | 7755.00  | -914.60 | -426.06 | 1.00 | 180.00 | 1006.23 |                    |
| 9   | 8081.57  | 2.50 | 240.00 | 8004.92  | -917.33 | -430.79 | 1.00 | 240.00 | 1010.91 |                    |
| 10  | 11284.69 | 2.50 | 240.00 | 11205.00 | -987.19 | -551.79 | 0.00 | 0.00   | 1130.93 | PBHL_OM10B-G03-695 |

#### FORMATION TOP DETAILS

| TVDPathMDPath     | Formation       |
|-------------------|-----------------|
| 4385.00 4423.97   | Wasatch         |
| 6125.00 6187.83   | Fort Union      |
| 6625.00 6694.69   | Base Ft Union   |
| 7855.00 7931.57   | Ohio Creek      |
| 8055.00 8131.69   | Mesaverde       |
| 8135.00 8211.77   | Approx. Top Gas |
| 10605.00 10684.12 | Cameo           |
| 11055.00 11134.55 | Rollins SS      |



Plan: PLAN #1 (GRANLEE OM10B/OM10B)

Created By: Robert H. Scott



|                  |                            |                                     |                                       |
|------------------|----------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Company:</b>  | BERRY PETROLEUM COMPANY    | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Project:</b>  | GARFIELD COUNTY, COLORADO  | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site:</b>     | OM G03 696 PAD             | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | GRANLEE OM10B              | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | OM10B                      |                                     |                                       |
| <b>Design:</b>   | PLAN #1                    |                                     |                                       |

|                    |                                     |                      |                |
|--------------------|-------------------------------------|----------------------|----------------|
| <b>Project</b>     | GARFIELD COUNTY, COLORADO, 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 Central Zone               |                      |                |

|                       |                                    |              |                |                   |                   |
|-----------------------|------------------------------------|--------------|----------------|-------------------|-------------------|
| Site                  | OM G03 696 PAD, SECTION 3-T6S-R96W |              |                |                   |                   |
| Site Position:        |                                    | Northing:    | 1,638,395.15ft | Latitude:         | 39° 33' 27.230 N  |
| From:                 | Lat/Long                           | Easting:     | 2,269,311.35ft | Longitude:        | 108° 5' 30.7400 W |
| Position Uncertainty: | 0.00 ft                            | Slot Radius: | in             | Grid Convergence: | -1.63 °           |

| Well                 | GRANLEE OM10B |          |                     |                 |               |                   |
|----------------------|---------------|----------|---------------------|-----------------|---------------|-------------------|
| Well Position        | +N/-S         | 25.29 ft | Northing:           | 1,638,419.36 ft | Latitude:     | 39° 33' 27.480 N  |
|                      | +E/-W         | 37.59 ft | Easting:            | 2,269,349.64 ft | Longitude:    | 108° 5' 30.2600 W |
| Position Uncertainty |               | 0.00 ft  | Wellhead Elevation: | ft              | Ground Level: | 8,163.50 ft       |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | OM10B             |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | BGGM2007          | 9/8/2008           | 10.79                  | 65.85                | 52,522                     |

|                          |                              |                   |                      |                      |  |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|--|
| <b>Design</b>            | PLAN #1                      |                   |                      |                      |  |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |  |
| <b>Version:</b>          | <b>Phase:</b>                | PLAN              | <b>Tie On Depth:</b> | 0.00                 |  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |  |
|                          | 0.00                         | 0.00              | 0.00                 | 209.20               |  |

| <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         |
| 0.00                 | 0.00            | 0.00        | 0.00                | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                |
| 160.00               | 0.00            | 0.00        | 160.00              | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                |
| 310.00               | 3.00            | 190.00      | 309.93              | -3.87      | -0.68      | 2.00                  | 2.00                 | 0.00                | 190.00  |                |
| 349.35               | 3.00            | 205.05      | 349.22              | -5.82      | -1.30      | 2.00                  | 0.00                 | 38.25               | 90.00   |                |
| 1,500.00             | 3.00            | 205.05      | 1,498.30            | -60.38     | -26.80     | 0.00                  | 0.00                 | 0.00                | 0.00    |                |
| 1,821.79             | 9.44            | 205.05      | 1,818.03            | -91.94     | -41.55     | 2.00                  | 2.00                 | 0.00                | 0.00    |                |
| 6,887.98             | 9.44            | 205.05      | 6,815.68            | -844.37    | -393.24    | 0.00                  | 0.00                 | 0.00                | 0.00    |                |
| 7,831.57             | 0.00            | 0.00        | 7,755.00            | -914.60    | -426.06    | 1.00                  | -1.00                | 0.00                | 180.00  |                |
| 8,081.57             | 2.50            | 240.00      | 8,004.92            | -917.33    | -430.79    | 1.00                  | 1.00                 | 0.00                | 240.00  |                |
| 11,284.69            | 2.50            | 240.00      | 11,205.00           | -987.19    | -551.79    | 0.00                  | 0.00                 | 0.00                | 0.00    | PBHL_OM10B-G03 |



|                  |                            |                                     |                                       |
|------------------|----------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Company:</b>  | BERRY PETROLEUM COMPANY    | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Project:</b>  | GARFIELD COUNTY, COLORADO  | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site:</b>     | OM G03 696 PAD             | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | GRANLEE OM10B              | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | OM10B                      |                                     |                                       |
| <b>Design:</b>   | PLAN #1                    |                                     |                                       |

## 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) |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 160.00                                  | 0.00            | 0.00        | 160.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| <b>Start Build 2.00</b>                 |                 |             |                     |            |            |                       |                       |                      |                     |
| 200.00                                  | 0.80            | 190.00      | 200.00              | -0.28      | -0.05      | 0.26                  | 2.00                  | 2.00                 | 0.00                |
| 300.00                                  | 2.80            | 190.00      | 299.94              | -3.37      | -0.59      | 3.23                  | 2.00                  | 2.00                 | 0.00                |
| 310.00                                  | 3.00            | 190.00      | 309.93              | -3.87      | -0.68      | 3.71                  | 2.00                  | 2.00                 | 0.00                |
| <b>Start Turn 38.25</b>                 |                 |             |                     |            |            |                       |                       |                      |                     |
| 349.35                                  | 3.00            | 205.05      | 349.22              | -5.82      | -1.30      | 5.72                  | 2.00                  | 0.00                 | 38.25               |
| <b>Start 1150.42 hold at 349.35 MD</b>  |                 |             |                     |            |            |                       |                       |                      |                     |
| 400.00                                  | 3.00            | 205.05      | 399.81              | -8.23      | -2.42      | 8.36                  | 0.00                  | 0.00                 | 0.00                |
| 500.00                                  | 3.00            | 205.05      | 499.67              | -12.97     | -4.64      | 13.58                 | 0.00                  | 0.00                 | 0.00                |
| 600.00                                  | 3.00            | 205.05      | 599.53              | -17.71     | -6.85      | 18.80                 | 0.00                  | 0.00                 | 0.00                |
| 700.00                                  | 3.00            | 205.05      | 699.40              | -22.45     | -9.07      | 24.02                 | 0.00                  | 0.00                 | 0.00                |
| 800.00                                  | 3.00            | 205.05      | 799.26              | -27.19     | -11.29     | 29.24                 | 0.00                  | 0.00                 | 0.00                |
| 900.00                                  | 3.00            | 205.05      | 899.12              | -31.93     | -13.50     | 34.46                 | 0.00                  | 0.00                 | 0.00                |
| 1,000.00                                | 3.00            | 205.05      | 998.99              | -36.67     | -15.72     | 39.68                 | 0.00                  | 0.00                 | 0.00                |
| 1,100.00                                | 3.00            | 205.05      | 1,098.85            | -41.42     | -17.93     | 44.90                 | 0.00                  | 0.00                 | 0.00                |
| 1,200.00                                | 3.00            | 205.05      | 1,198.71            | -46.16     | -20.15     | 50.12                 | 0.00                  | 0.00                 | 0.00                |
| 1,300.00                                | 3.00            | 205.05      | 1,298.57            | -50.90     | -22.37     | 55.34                 | 0.00                  | 0.00                 | 0.00                |
| 1,400.00                                | 3.00            | 205.05      | 1,398.44            | -55.64     | -24.58     | 60.56                 | 0.00                  | 0.00                 | 0.00                |
| 1,499.76                                | 3.00            | 205.05      | 1,498.07            | -60.37     | -26.79     | 65.77                 | 0.00                  | 0.00                 | 0.00                |
| <b>Start DLS 2.00 TFO 0.00</b>          |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,500.00                                | 3.00            | 205.05      | 1,498.30            | -60.38     | -26.80     | 65.78                 | 0.00                  | 0.00                 | 0.00                |
| 1,600.00                                | 5.00            | 205.05      | 1,598.05            | -66.70     | -29.75     | 72.74                 | 2.00                  | 2.00                 | 0.00                |
| 1,700.00                                | 7.00            | 205.05      | 1,697.50            | -76.17     | -34.18     | 83.16                 | 2.00                  | 2.00                 | 0.00                |
| 1,800.00                                | 9.00            | 205.05      | 1,796.52            | -88.78     | -40.07     | 97.04                 | 2.00                  | 2.00                 | 0.00                |
| 1,821.54                                | 9.43            | 205.05      | 1,817.78            | -91.90     | -41.53     | 100.48                | 2.00                  | 2.00                 | 0.00                |
| <b>Start 5066.47 hold at 1821.54 MD</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,821.79                                | 9.44            | 205.05      | 1,818.03            | -91.94     | -41.55     | 100.52                | 2.00                  | 2.00                 | 0.00                |
| 1,900.00                                | 9.44            | 205.05      | 1,895.18            | -103.55    | -46.98     | 113.31                | 0.00                  | 0.00                 | 0.00                |
| 2,000.00                                | 9.44            | 205.05      | 1,993.83            | -118.41    | -53.92     | 129.66                | 0.00                  | 0.00                 | 0.00                |
| 2,100.00                                | 9.44            | 205.05      | 2,092.48            | -133.26    | -60.86     | 146.02                | 0.00                  | 0.00                 | 0.00                |
| 2,200.00                                | 9.44            | 205.05      | 2,191.12            | -148.11    | -67.80     | 162.37                | 0.00                  | 0.00                 | 0.00                |
| 2,300.00                                | 9.44            | 205.05      | 2,289.77            | -162.96    | -74.74     | 178.72                | 0.00                  | 0.00                 | 0.00                |
| 2,400.00                                | 9.44            | 205.05      | 2,388.42            | -177.81    | -81.69     | 195.07                | 0.00                  | 0.00                 | 0.00                |
| 2,500.00                                | 9.44            | 205.05      | 2,487.06            | -192.67    | -88.63     | 211.42                | 0.00                  | 0.00                 | 0.00                |
| 2,600.00                                | 9.44            | 205.05      | 2,585.71            | -207.52    | -95.57     | 227.77                | 0.00                  | 0.00                 | 0.00                |
| 2,700.00                                | 9.44            | 205.05      | 2,684.36            | -222.37    | -102.51    | 244.12                | 0.00                  | 0.00                 | 0.00                |
| 2,800.00                                | 9.44            | 205.05      | 2,783.00            | -237.22    | -109.45    | 260.47                | 0.00                  | 0.00                 | 0.00                |
| 2,900.00                                | 9.44            | 205.05      | 2,881.65            | -252.07    | -116.40    | 276.83                | 0.00                  | 0.00                 | 0.00                |
| 3,000.00                                | 9.44            | 205.05      | 2,980.30            | -266.93    | -123.34    | 293.18                | 0.00                  | 0.00                 | 0.00                |
| <b>9 5/8"</b>                           |                 |             |                     |            |            |                       |                       |                      |                     |
| 3,100.00                                | 9.44            | 205.05      | 3,078.95            | -281.78    | -130.28    | 309.53                | 0.00                  | 0.00                 | 0.00                |
| 3,200.00                                | 9.44            | 205.05      | 3,177.59            | -296.63    | -137.22    | 325.88                | 0.00                  | 0.00                 | 0.00                |
| 3,300.00                                | 9.44            | 205.05      | 3,276.24            | -311.48    | -144.16    | 342.23                | 0.00                  | 0.00                 | 0.00                |
| 3,400.00                                | 9.44            | 205.05      | 3,374.89            | -326.33    | -151.11    | 358.58                | 0.00                  | 0.00                 | 0.00                |
| 3,500.00                                | 9.44            | 205.05      | 3,473.53            | -341.19    | -158.05    | 374.93                | 0.00                  | 0.00                 | 0.00                |
| 3,600.00                                | 9.44            | 205.05      | 3,572.18            | -356.04    | -164.99    | 391.28                | 0.00                  | 0.00                 | 0.00                |
| 3,700.00                                | 9.44            | 205.05      | 3,670.83            | -370.89    | -171.93    | 407.64                | 0.00                  | 0.00                 | 0.00                |
| 3,800.00                                | 9.44            | 205.05      | 3,769.47            | -385.74    | -178.87    | 423.99                | 0.00                  | 0.00                 | 0.00                |
| 3,900.00                                | 9.44            | 205.05      | 3,868.12            | -400.59    | -185.82    | 440.34                | 0.00                  | 0.00                 | 0.00                |
| 4,000.00                                | 9.44            | 205.05      | 3,966.77            | -415.45    | -192.76    | 456.69                | 0.00                  | 0.00                 | 0.00                |
| 4,100.00                                | 9.44            | 205.05      | 4,065.41            | -430.30    | -199.70    | 473.04                | 0.00                  | 0.00                 | 0.00                |
| 4,200.00                                | 9.44            | 205.05      | 4,164.06            | -445.15    | -206.64    | 489.39                | 0.00                  | 0.00                 | 0.00                |



|                  |                            |                                     |                                       |
|------------------|----------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Company:</b>  | BERRY PETROLEUM COMPANY    | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Project:</b>  | GARFIELD COUNTY, COLORADO  | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site:</b>     | OM G03 696 PAD             | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | GRANLEE OM10B              | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | OM10B                      |                                     |                                       |
| <b>Design:</b>   | PLAN #1                    |                                     |                                       |

## 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) |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 4,300.00  | 9.44            | 205.05      | 4,262.71            | -460.00    | -213.58    | 505.74                | 0.00                  | 0.00                 | 0.00                |
| 4,400.00  | 9.44            | 205.05      | 4,361.36            | -474.85    | -220.52    | 522.09                | 0.00                  | 0.00                 | 0.00                |
| 4,423.97  | 9.44            | 205.05      | 4,385.00            | -478.41    | -222.19    | 526.01                | 0.00                  | 0.00                 | 0.00                |
| <b>Wasatch</b>  |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,500.00  | 9.44            | 205.05      | 4,460.00            | -489.71    | -227.47    | 538.45                | 0.00                  | 0.00                 | 0.00                |
| 4,600.00  | 9.44            | 205.05      | 4,558.65            | -504.56    | -234.41    | 554.80                | 0.00                  | 0.00                 | 0.00                |
| 4,700.00  | 9.44            | 205.05      | 4,657.30            | -519.41    | -241.35    | 571.15                | 0.00                  | 0.00                 | 0.00                |
| 4,800.00  | 9.44            | 205.05      | 4,755.94            | -534.26    | -248.29    | 587.50                | 0.00                  | 0.00                 | 0.00                |
| 4,900.00  | 9.44            | 205.05      | 4,854.59            | -549.11    | -255.23    | 603.85                | 0.00                  | 0.00                 | 0.00                |
| 5,000.00  | 9.44            | 205.05      | 4,953.24            | -563.97    | -262.18    | 620.20                | 0.00                  | 0.00                 | 0.00                |
| 5,100.00  | 9.44            | 205.05      | 5,051.88            | -578.82    | -269.12    | 636.55                | 0.00                  | 0.00                 | 0.00                |
| 5,200.00  | 9.44            | 205.05      | 5,150.53            | -593.67    | -276.06    | 652.90                | 0.00                  | 0.00                 | 0.00                |
| 5,300.00  | 9.44            | 205.05      | 5,249.18            | -608.52    | -283.00    | 669.26                | 0.00                  | 0.00                 | 0.00                |
| 5,400.00  | 9.44            | 205.05      | 5,347.83            | -623.37    | -289.94    | 685.61                | 0.00                  | 0.00                 | 0.00                |
| 5,500.00  | 9.44            | 205.05      | 5,446.47            | -638.23    | -296.89    | 701.96                | 0.00                  | 0.00                 | 0.00                |
| 5,600.00  | 9.44            | 205.05      | 5,545.12            | -653.08    | -303.83    | 718.31                | 0.00                  | 0.00                 | 0.00                |
| 5,700.00  | 9.44            | 205.05      | 5,643.77            | -667.93    | -310.77    | 734.66                | 0.00                  | 0.00                 | 0.00                |
| 5,800.00  | 9.44            | 205.05      | 5,742.41            | -682.78    | -317.71    | 751.01                | 0.00                  | 0.00                 | 0.00                |
| 5,900.00  | 9.44            | 205.05      | 5,841.06            | -697.63    | -324.65    | 767.36                | 0.00                  | 0.00                 | 0.00                |
| 6,000.00  | 9.44            | 205.05      | 5,939.71            | -712.49    | -331.60    | 783.71                | 0.00                  | 0.00                 | 0.00                |
| 6,100.00  | 9.44            | 205.05      | 6,038.35            | -727.34    | -338.54    | 800.07                | 0.00                  | 0.00                 | 0.00                |
| 6,187.83  | 9.44            | 205.05      | 6,125.00            | -740.38    | -344.63    | 814.43                | 0.00                  | 0.00                 | 0.00                |
| <b>Fort Union</b>   |                 |             |                     |            |            |                       |                       |                      |                     |
| 6,200.00  | 9.44            | 205.05      | 6,137.00            | -742.19    | -345.48    | 816.42                | 0.00                  | 0.00                 | 0.00                |
| 6,300.00  | 9.44            | 205.05      | 6,235.65            | -757.04    | -352.42    | 832.77                | 0.00                  | 0.00                 | 0.00                |
| 6,400.00  | 9.44            | 205.05      | 6,334.30            | -771.89    | -359.36    | 849.12                | 0.00                  | 0.00                 | 0.00                |
| 6,500.00  | 9.44            | 205.05      | 6,432.94            | -786.75    | -366.30    | 865.47                | 0.00                  | 0.00                 | 0.00                |
| 6,600.00  | 9.44            | 205.05      | 6,531.59            | -801.60    | -373.25    | 881.82                | 0.00                  | 0.00                 | 0.00                |
| 6,694.69  | 9.44            | 205.05      | 6,625.00            | -815.66    | -379.82    | 897.31                | 0.00                  | 0.00                 | 0.00                |
| <b>Base Ft Union</b>  |                 |             |                     |            |            |                       |                       |                      |                     |
| 6,700.00  | 9.44            | 205.05      | 6,630.24            | -816.45    | -380.19    | 898.17                | 0.00                  | 0.00                 | 0.00                |
| 6,800.00  | 9.44            | 205.05      | 6,728.88            | -831.30    | -387.13    | 914.52                | 0.00                  | 0.00                 | 0.00                |
| 6,887.98  | 9.44            | 205.05      | 6,815.68            | -844.37    | -393.24    | 928.91                | 0.00                  | 0.00                 | 0.00                |
| 6,888.01  | 9.44            | 205.05      | 6,815.71            | -844.37    | -393.24    | 928.92                | 0.00                  | 0.00                 | 0.00                |
| <b>Start Drop -1.00</b>                                     |                 |             |                     |            |            |                       |                       |                      |                     |
| 6,900.00  | 9.32            | 205.05      | 6,827.53            | -846.14    | -394.07    | 930.86                | 1.00                  | -1.00                | 0.00                |
| 7,000.00  | 8.32            | 205.05      | 6,926.35            | -860.03    | -400.56    | 946.15                | 1.00                  | -1.00                | 0.00                |
| 7,100.00  | 7.32            | 205.05      | 7,025.42            | -872.35    | -406.31    | 959.71                | 1.00                  | -1.00                | 0.00                |
| 7,200.00  | 6.32            | 205.05      | 7,124.71            | -883.10    | -411.34    | 971.55                | 1.00                  | -1.00                | 0.00                |
| 7,300.00  | 5.32            | 205.05      | 7,224.20            | -892.28    | -415.63    | 981.65                | 1.00                  | -1.00                | 0.00                |
| 7,400.00  | 4.32            | 205.05      | 7,323.84            | -899.88    | -419.18    | 990.03                | 1.00                  | -1.00                | 0.00                |
| 7,500.00  | 3.32            | 205.05      | 7,423.62            | -905.91    | -422.00    | 996.66                | 1.00                  | -1.00                | 0.00                |
| 7,600.00  | 2.32            | 205.05      | 7,523.50            | -910.36    | -424.08    | 1,001.56              | 1.00                  | -1.00                | 0.00                |
| 7,700.00  | 1.32            | 205.05      | 7,623.45            | -913.23    | -425.42    | 1,004.72              | 1.00                  | -1.00                | 0.00                |
| 7,800.00  | 0.32            | 205.05      | 7,723.43            | -914.52    | -426.03    | 1,006.14              | 1.00                  | -1.00                | 0.00                |
| 7,831.57  | 0.00            | 0.00        | 7,755.00            | -914.60    | -426.06    | 1,006.23              | 1.00                  | -1.00                | 490.87              |
| <b>DRIFT - Plan @ 7755.00 (GRANLEE OM10B OM10B PLAN #1)</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,900.00  | 0.68            | 240.00      | 7,823.43            | -914.80    | -426.42    | 1,006.58              | 1.00                  | 1.00                 | -175.35             |
| 7,931.57  | 1.00            | 240.00      | 7,855.00            | -915.04    | -426.82    | 1,006.98              | 1.00                  | 1.00                 | 0.00                |
| <b>Ohio Creek</b>   |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,000.00  | 1.68            | 240.00      | 7,923.41            | -915.84    | -428.21    | 1,008.36              | 1.00                  | 1.00                 | 0.00                |
| 8,081.56  | 2.50            | 240.00      | 8,004.92            | -917.33    | -430.79    | 1,010.91              | 1.00                  | 1.00                 | 0.00                |
| <b>TREND</b>  |                 |             |                     |            |            |                       |                       |                      |                     |



|                  |                            |                                     |                                       |
|------------------|----------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Company:</b>  | BERRY PETROLEUM COMPANY    | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Project:</b>  | GARFIELD COUNTY, COLORADO  | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site:</b>     | OM G03 696 PAD             | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | GRANLEE OM10B              | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | OM10B                      |                                     |                                       |
| <b>Design:</b>   | PLAN #1                    |                                     |                                       |

## 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) |
|---------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 8,100.00                  | 2.50            | 240.00      | 8,023.34            | -917.73    | -431.48    | 1,011.60              | 0.00                  | 0.00                 | 0.00                |
| 8,131.69                  | 2.50            | 240.00      | 8,055.00            | -918.42    | -432.68    | 1,012.79              | 0.00                  | 0.00                 | 0.00                |
| <b>Mesaverde</b>          |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,200.00                  | 2.50            | 240.00      | 8,123.24            | -919.91    | -435.26    | 1,015.35              | 0.00                  | 0.00                 | 0.00                |
| 8,211.77                  | 2.50            | 240.00      | 8,135.00            | -920.17    | -435.71    | 1,015.79              | 0.00                  | 0.00                 | 0.00                |
| <b>Approx. Top Gas</b>    |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,300.00                  | 2.50            | 240.00      | 8,223.15            | -922.09    | -439.04    | 1,019.10              | 0.00                  | 0.00                 | 0.00                |
| 8,400.00                  | 2.50            | 240.00      | 8,323.05            | -924.27    | -442.82    | 1,022.84              | 0.00                  | 0.00                 | 0.00                |
| 8,500.00                  | 2.50            | 240.00      | 8,422.96            | -926.45    | -446.59    | 1,026.59              | 0.00                  | 0.00                 | 0.00                |
| 8,600.00                  | 2.50            | 240.00      | 8,522.86            | -928.63    | -450.37    | 1,030.34              | 0.00                  | 0.00                 | 0.00                |
| 8,700.00                  | 2.50            | 240.00      | 8,622.77            | -930.81    | -454.15    | 1,034.09              | 0.00                  | 0.00                 | 0.00                |
| 8,800.00                  | 2.50            | 240.00      | 8,722.67            | -932.99    | -457.93    | 1,037.83              | 0.00                  | 0.00                 | 0.00                |
| 8,900.00                  | 2.50            | 240.00      | 8,822.58            | -935.18    | -461.70    | 1,041.58              | 0.00                  | 0.00                 | 0.00                |
| 9,000.00                  | 2.50            | 240.00      | 8,922.48            | -937.36    | -465.48    | 1,045.33              | 0.00                  | 0.00                 | 0.00                |
| 9,100.00                  | 2.50            | 240.00      | 9,022.38            | -939.54    | -469.26    | 1,049.07              | 0.00                  | 0.00                 | 0.00                |
| 9,200.00                  | 2.50            | 240.00      | 9,122.29            | -941.72    | -473.04    | 1,052.82              | 0.00                  | 0.00                 | 0.00                |
| 9,300.00                  | 2.50            | 240.00      | 9,222.19            | -943.90    | -476.81    | 1,056.57              | 0.00                  | 0.00                 | 0.00                |
| 9,400.00                  | 2.50            | 240.00      | 9,322.10            | -946.08    | -480.59    | 1,060.31              | 0.00                  | 0.00                 | 0.00                |
| 9,500.00                  | 2.50            | 240.00      | 9,422.00            | -948.26    | -484.37    | 1,064.06              | 0.00                  | 0.00                 | 0.00                |
| 9,600.00                  | 2.50            | 240.00      | 9,521.91            | -950.44    | -488.15    | 1,067.81              | 0.00                  | 0.00                 | 0.00                |
| 9,700.00                  | 2.50            | 240.00      | 9,621.81            | -952.62    | -491.92    | 1,071.55              | 0.00                  | 0.00                 | 0.00                |
| 9,800.00                  | 2.50            | 240.00      | 9,721.72            | -954.80    | -495.70    | 1,075.30              | 0.00                  | 0.00                 | 0.00                |
| 9,900.00                  | 2.50            | 240.00      | 9,821.62            | -956.99    | -499.48    | 1,079.05              | 0.00                  | 0.00                 | 0.00                |
| 10,000.00                 | 2.50            | 240.00      | 9,921.53            | -959.17    | -503.26    | 1,082.79              | 0.00                  | 0.00                 | 0.00                |
| 10,100.00                 | 2.50            | 240.00      | 10,021.43           | -961.35    | -507.03    | 1,086.54              | 0.00                  | 0.00                 | 0.00                |
| 10,200.00                 | 2.50            | 240.00      | 10,121.34           | -963.53    | -510.81    | 1,090.29              | 0.00                  | 0.00                 | 0.00                |
| 10,300.00                 | 2.50            | 240.00      | 10,221.24           | -965.71    | -514.59    | 1,094.04              | 0.00                  | 0.00                 | 0.00                |
| 10,400.00                 | 2.50            | 240.00      | 10,321.15           | -967.89    | -518.37    | 1,097.78              | 0.00                  | 0.00                 | 0.00                |
| 10,500.00                 | 2.50            | 240.00      | 10,421.05           | -970.07    | -522.14    | 1,101.53              | 0.00                  | 0.00                 | 0.00                |
| 10,600.00                 | 2.50            | 240.00      | 10,520.96           | -972.25    | -525.92    | 1,105.28              | 0.00                  | 0.00                 | 0.00                |
| 10,684.12                 | 2.50            | 240.00      | 10,605.00           | -974.09    | -529.10    | 1,108.43              | 0.00                  | 0.00                 | 0.00                |
| <b>Cameo</b>              |                 |             |                     |            |            |                       |                       |                      |                     |
| 10,700.00                 | 2.50            | 240.00      | 10,620.86           | -974.43    | -529.70    | 1,109.02              | 0.00                  | 0.00                 | 0.00                |
| 10,800.00                 | 2.50            | 240.00      | 10,720.77           | -976.61    | -533.48    | 1,112.77              | 0.00                  | 0.00                 | 0.00                |
| 10,900.00                 | 2.50            | 240.00      | 10,820.67           | -978.80    | -537.25    | 1,116.52              | 0.00                  | 0.00                 | 0.00                |
| 11,000.00                 | 2.50            | 240.00      | 10,920.58           | -980.98    | -541.03    | 1,120.26              | 0.00                  | 0.00                 | 0.00                |
| 11,100.00                 | 2.50            | 240.00      | 11,020.48           | -983.16    | -544.81    | 1,124.01              | 0.00                  | 0.00                 | 0.00                |
| 11,134.55                 | 2.50            | 240.00      | 11,055.00           | -983.91    | -546.11    | 1,125.30              | 0.00                  | 0.00                 | 0.00                |
| <b>Rollins SS</b>         |                 |             |                     |            |            |                       |                       |                      |                     |
| 11,200.00                 | 2.50            | 240.00      | 11,120.39           | -985.34    | -548.59    | 1,127.76              | 0.00                  | 0.00                 | 0.00                |
| 11,282.04                 | 2.50            | 240.00      | 11,202.35           | -987.13    | -551.69    | 1,130.83              | 0.00                  | 0.00                 | 0.00                |
| <b>PBHL_OM10B-G03-695</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 11,284.69                 | 2.50            | 240.00      | 11,205.00           | -987.19    | -551.79    | 1,130.93              | 0.00                  | 0.00                 | 0.00                |
| <b>ASSUMED DRIFT PBHL</b> |                 |             |                     |            |            |                       |                       |                      |                     |

## Casing Points

| Measured Depth (ft) | Vertical Depth (ft) | Name   | Casing Diameter (in) | Hole Diameter (in) |
|---------------------|---------------------|--------|----------------------|--------------------|
| 3,000.00            | 2,980.30            | 9 5/8" | 9.62                 | 12.25              |



|                  |                            |                                     |                                       |
|------------------|----------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Company:</b>  | BERRY PETROLEUM COMPANY    | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Project:</b>  | GARFIELD COUNTY, COLORADO  | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site:</b>     | OM G03 696 PAD             | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | GRANLEE OM10B              | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | OM10B                      |                                     |                                       |
| <b>Design:</b>   | PLAN #1                    |                                     |                                       |

**Formations**

| Measured Depth (ft) | Vertical Depth (ft) | Name            | Lithology | Dip (°) | Dip Direction (°) |
|---------------------|---------------------|-----------------|-----------|---------|-------------------|
| 4,423.97            | 4,385.00            | Wasatch         |           | 0.00    |                   |
| 6,187.83            | 6,125.00            | Fort Union      |           | 0.00    |                   |
| 6,694.69            | 6,625.00            | Base Ft Union   |           | 0.00    |                   |
| 7,931.57            | 7,855.00            | Ohio Creek      |           | 0.00    |                   |
| 8,131.69            | 8,055.00            | Mesaverde       |           | 0.00    |                   |
| 8,211.77            | 8,135.00            | Approx. Top Gas |           | 0.00    |                   |
| 10,684.12           | 10,605.00           | Cameo           |           | 0.00    |                   |
| 11,134.55           | 11,055.00           | Rollins SS      |           | 0.00    |                   |

**Plan Annotations**

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            | Comment                          |
|---------------------|---------------------|-------------------|------------|----------------------------------|
|                     |                     | +N/-S (ft)        | +E/-W (ft) |                                  |
| 160.00              | 160.00              | 0.00              | 0.00       | Start Build 2.00                 |
| 310.00              | 309.93              | -3.87             | -0.68      | Start Turn 38.25                 |
| 349.35              | 349.22              | -5.82             | -1.30      | Start 1150.42 hold at 349.35 MD  |
| 1,499.76            | 1,498.07            | -60.37            | -26.79     | Start DLS 2.00 TFO 0.00          |
| 1,821.54            | 1,817.78            | -91.93            | -41.54     | Start 5066.47 hold at 1821.54 MD |
| 6,888.01            | 6,815.71            | -844.37           | -393.24    | Start Drop -1.00                 |
| 7,831.56            | 7,755.00            | -914.60           | -426.06    | DRIFT                            |
| 8,081.56            | 8,004.92            | -917.33           | -430.79    | TREND                            |
| 11,284.69           | 11,205.00           | -987.19           | -551.79    | ASSUMED DRIFT PBHL               |



Berry Petroleum Company

# **BERRY PETROLEUM COMPANY**

**GARFIELD COUNTY, COLORADO  
OM G03 696 PAD  
GRANLEE OM10B**

**OM10B  
PLAN #1**

## **Anticollision Report**

**08 September, 2008**



**Weatherford®**

|                           |                           |                                     |                                       |
|---------------------------|---------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | BERRY PETROLEUM COMPANY   | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Project:</b>           | GARFIELD COUNTY, COLORADO | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Reference Site:</b>    | OM G03 696 PAD            | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                    | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | GRANLEE OM10B             | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                    | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | OM10B                     | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1                   | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Reference                    | PLAN #1   |                |                     |
|------------------------------|---|----------------|---------------------|
| Filter type:                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |                |                     |
| Interpolation Method:        | Stations  | Error Model:   | ISCWSA              |
| Depth Range:                 | 0.00 to 20,000.00ft   | Scan Method:   | Closest Approach 3D |
| Results Limited by:          | Maximum center-center distance of 10,000.00ft                       | Error Surface: | Elliptical Conic    |
| Warning Levels Evaluated at: | 2.00 Sigma  |                |                     |

| Survey Tool Program |            | Date              | 9/8/2008  |                |  |
|---------------------|------------|-------------------|-----------|----------------|--|
| From<br>(ft)        | To<br>(ft) | Survey (Wellbore) | Tool Name | Description    |  |
| 0.00                | 11,284.69  | PLAN #1 (OM10B)   | MWD       | MWD - Standard |  |

| Summary                         |                               |                            |                               |                                |                   |         |
|---------------------------------|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|---------|
| Site Name                       | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design |                               |                            |                               |                                |                   |         |
| OM G03 696 PAD                  |                               |                            |                               |                                |                   |         |
| GRANLEE OM07A - OM07A - PLAN #1 | 160.00                        | 160.00                     | 15.49                         | 15.05                          | 34.807            | CC      |
| GRANLEE OM07A - OM07A - PLAN #1 | 200.00                        | 200.04                     | 15.64                         | 15.03                          | 25.467            | ES      |
| GRANLEE OM07A - OM07A - PLAN #1 | 400.00                        | 399.51                     | 24.69                         | 23.18                          | 16.395            | SF      |
| GRANLEE OM07B - OM07B - PLAN #1 | 160.00                        | 160.00                     | 14.92                         | 14.48                          | 33.527            | CC      |
| GRANLEE OM07B - OM07B - PLAN #1 | 200.00                        | 199.85                     | 14.94                         | 14.33                          | 24.453            | ES      |
| GRANLEE OM07B - OM07B - PLAN #1 | 600.00                        | 598.61                     | 27.74                         | 25.32                          | 11.486            | SF      |

| <b>Offset Design</b> OM G03 696 PAD - GRANLEE OM07A - OM07A - PLAN #1 |                     |                     |                     |           |        |                       |                                   |                                   |                               |                                |                         |                   | <b>Offset Site Error:</b> | 0.00 ft |
|---|---------------------|---------------------|---------------------|-----------|--------|-----------------------|-----------------------------------|-----------------------------------|-------------------------------|--------------------------------|-------------------------|-------------------|---------------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |           |        |                       |                                   |                                   |                               |                                |                         |                   | <b>Offset Well Error:</b> | 0.00 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) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning                   |         |
| 0.00  | 0.00                | 0.00                | 0.00                | 0.00      | 0.00   | 53.99                 | 9.11                              | 12.53                             | 15.49                         |                                |                         |                   |                           |         |
| 100.00  | 100.00              | 100.00              | 100.00              | 0.09      | 0.09   | 53.99                 | 9.11                              | 12.53                             | 15.49                         | 15.32                          | 0.18                    | 88.357            |                           |         |
| 160.00  | 160.00              | 160.00              | 160.00              | 0.22      | 0.22   | 53.99                 | 9.11                              | 12.53                             | 15.49                         | 15.05                          | 0.45                    | 34.807            | CC                        |         |
| 200.00  | 200.00              | 200.04              | 200.04              | 0.30      | 0.31   | -137.72               | 9.29                              | 12.32                             | 15.64                         | 15.03                          | 0.61                    | 25.467            | ES                        |         |
| 310.00  | 309.93              | 309.85              | 309.78              | 0.53      | 0.56   | -156.50               | 11.75                             | 9.64                              | 18.72                         | 17.62                          | 1.10                    | 17.039            |                           |         |
| 349.35  | 349.22              | 349.04              | 348.92              | 0.62      | 0.65   | -178.62               | 13.13                             | 8.12                              | 21.17                         | 19.89                          | 1.28                    | 16.565            |                           |         |
| 400.00  | 399.81              | 399.51              | 399.32              | 0.73      | 0.77   | 175.32                | 14.91                             | 6.17                              | 24.69                         | 23.18                          | 1.51                    | 16.395            | SF                        |         |
| 500.00  | 499.67              | 499.16              | 498.83              | 0.97      | 1.01   | 167.41                | 18.43                             | 2.32                              | 32.17                         | 30.21                          | 1.96                    | 16.432            |                           |         |
| 600.00  | 599.53              | 598.80              | 598.34              | 1.21      | 1.25   | 162.55                | 21.94                             | -1.53                             | 40.03                         | 37.61                          | 2.41                    | 16.582            |                           |         |
| 700.00  | 699.40              | 698.45              | 697.85              | 1.45      | 1.49   | 159.29                | 25.46                             | -5.38                             | 48.08                         | 45.20                          | 2.87                    | 16.733            |                           |         |
| 800.00  | 799.26              | 798.09              | 797.35              | 1.70      | 1.73   | 156.97                | 28.97                             | -9.24                             | 56.24                         | 52.90                          | 3.33                    | 16.863            |                           |         |
| 900.00  | 899.12              | 896.39              | 895.41              | 1.94      | 1.98   | 154.22                | 33.52                             | -14.22                            | 65.57                         | 61.76                          | 3.81                    | 17.229            |                           |         |
| 1,000.00  | 998.99              | 995.78              | 994.46              | 2.19      | 2.24   | 151.37                | 39.07                             | -20.30                            | 76.02                         | 71.74                          | 4.28                    | 17.757            |                           |         |
| 1,100.00  | 1,098.85            | 1,095.17            | 1,093.51            | 2.43      | 2.50   | 149.22                | 44.62                             | -26.37                            | 86.61                         | 81.85                          | 4.76                    | 18.210            |                           |         |
| 1,200.00  | 1,198.71            | 1,194.56            | 1,192.56            | 2.68      | 2.77   | 147.54                | 50.16                             | -32.45                            | 97.30                         | 92.07                          | 5.23                    | 18.598            |                           |         |
| 1,300.00  | 1,298.57            | 1,293.95            | 1,291.61            | 2.93      | 3.03   | 146.19                | 55.71                             | -38.53                            | 108.05                        | 102.34                         | 5.71                    | 18.932            |                           |         |
| 1,400.00  | 1,398.44            | 1,393.34            | 1,390.66            | 3.17      | 3.30   | 145.08                | 61.26                             | -44.60                            | 118.85                        | 112.67                         | 6.18                    | 19.221            |                           |         |
| 1,500.00  | 1,498.30            | 1,492.73            | 1,489.71            | 3.42      | 3.56   | 144.16                | 66.80                             | -50.68                            | 129.69                        | 123.03                         | 6.66                    | 19.474            |                           |         |
| 1,600.00  | 1,598.05            | 1,591.97            | 1,588.61            | 3.68      | 3.83   | 143.66                | 72.34                             | -56.75                            | 141.95                        | 134.82                         | 7.14                    | 19.894            |                           |         |
| 1,700.00  | 1,697.50            | 1,690.82            | 1,687.12            | 3.97      | 4.09   | 143.95                | 77.86                             | -62.79                            | 157.00                        | 149.39                         | 7.62                    | 20.614            |                           |         |
| 1,800.00  | 1,796.52            | 1,789.16            | 1,785.12            | 4.28      | 4.36   | 144.80                | 83.34                             | -68.80                            | 174.87                        | 166.77                         | 8.10                    | 21.584            |                           |         |

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

|                           |                           |                                     |                                       |
|---------------------------|---------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | BERRY PETROLEUM COMPANY   | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Project:</b>           | GARFIELD COUNTY, COLORADO | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Reference Site:</b>    | OM G03 696 PAD            | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                    | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | GRANLEE OM10B             | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                    | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | OM10B                     | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1                   | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design OM G03 696 PAD - GRANLEE OM07A - OM07A - PLAN #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 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) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |         |
| 1,821.79   | 1,818.03            | 1,810.51            | 1,806.40            | 4.36            | 4.41        | 145.04                | 84.54                             | -70.11     | 179.15               | 170.94                | 8.21                    | 21.825             |         |
| 1,900.00   | 1,895.18            | 1,887.08            | 1,882.70            | 4.63            | 4.62        | 146.02                | 88.81                             | -74.79     | 194.76               | 186.15                | 8.61                    | 22.626             |         |
| 2,000.00   | 1,993.83            | 1,984.98            | 1,980.27            | 4.98            | 4.88        | 147.07                | 94.27                             | -80.78     | 214.80               | 205.67                | 9.12                    | 23.551             |         |
| 2,100.00   | 2,092.48            | 2,082.89            | 2,077.84            | 5.33            | 5.15        | 147.94                | 99.74                             | -86.76     | 234.89               | 225.25                | 9.63                    | 24.380             |         |
| 2,200.00   | 2,191.12            | 2,180.79            | 2,175.41            | 5.69            | 5.41        | 148.68                | 105.20                            | -92.75     | 255.02               | 244.87                | 10.15                   | 25.128             |         |
| 2,300.00   | 2,289.77            | 2,278.69            | 2,272.98            | 6.05            | 5.68        | 149.30                | 110.66                            | -98.73     | 275.19               | 264.52                | 10.66                   | 25.804             |         |
| 2,400.00   | 2,388.42            | 2,376.60            | 2,370.54            | 6.42            | 5.94        | 149.84                | 116.13                            | -104.72    | 295.38               | 284.20                | 11.18                   | 26.419             |         |
| 2,500.00   | 2,487.06            | 2,474.50            | 2,468.11            | 6.78            | 6.20        | 150.31                | 121.59                            | -110.70    | 315.60               | 303.90                | 11.70                   | 26.980             |         |
| 2,600.00   | 2,585.71            | 2,572.41            | 2,565.68            | 7.15            | 6.47        | 150.73                | 127.05                            | -116.69    | 335.83               | 323.62                | 12.21                   | 27.494             |         |
| 2,700.00   | 2,684.36            | 2,670.31            | 2,663.25            | 7.52            | 6.73        | 151.10                | 132.52                            | -122.68    | 356.08               | 343.35                | 12.73                   | 27.966             |         |
| 2,800.00   | 2,783.00            | 2,768.21            | 2,760.82            | 7.89            | 7.00        | 151.42                | 137.98                            | -128.66    | 376.35               | 363.10                | 13.25                   | 28.402             |         |
| 2,900.00   | 2,881.65            | 2,866.12            | 2,858.38            | 8.27            | 7.26        | 151.72                | 143.44                            | -134.65    | 396.62               | 382.85                | 13.77                   | 28.804             |         |
| 3,000.00   | 2,980.30            | 2,964.02            | 2,955.95            | 8.64            | 7.52        | 151.99                | 148.91                            | -140.63    | 416.90               | 402.61                | 14.29                   | 29.177             |         |
| 3,100.00   | 3,078.95            | 3,061.93            | 3,053.52            | 9.02            | 7.79        | 152.23                | 154.37                            | -146.62    | 437.19               | 422.39                | 14.81                   | 29.524             |         |
| 3,200.00   | 3,177.59            | 3,159.83            | 3,151.09            | 9.39            | 8.05        | 152.45                | 159.83                            | -152.61    | 457.49               | 442.16                | 15.33                   | 29.847             |         |
| 3,300.00   | 3,276.24            | 3,257.73            | 3,248.66            | 9.77            | 8.32        | 152.65                | 165.30                            | -158.59    | 477.79               | 461.95                | 15.85                   | 30.149             |         |
| 3,400.00   | 3,374.89            | 3,355.64            | 3,346.22            | 10.15           | 8.58        | 152.83                | 170.76                            | -164.58    | 498.10               | 481.73                | 16.37                   | 30.432             |         |
| 3,500.00   | 3,473.53            | 3,453.54            | 3,443.79            | 10.52           | 8.85        | 153.00                | 176.22                            | -170.56    | 518.41               | 501.53                | 16.89                   | 30.697             |         |
| 3,600.00   | 3,572.18            | 3,551.45            | 3,541.36            | 10.90           | 9.11        | 153.16                | 181.69                            | -176.55    | 538.73               | 521.32                | 17.41                   | 30.946             |         |
| 3,700.00   | 3,670.83            | 3,649.35            | 3,638.93            | 11.28           | 9.38        | 153.31                | 187.15                            | -182.53    | 559.05               | 541.12                | 17.93                   | 31.181             |         |
| 3,800.00   | 3,769.47            | 3,747.25            | 3,736.50            | 11.66           | 9.64        | 153.44                | 192.61                            | -188.52    | 579.38               | 560.93                | 18.45                   | 31.402             |         |
| 3,900.00   | 3,868.12            | 3,845.16            | 3,834.06            | 12.04           | 9.91        | 153.57                | 198.08                            | -194.51    | 599.70               | 580.73                | 18.97                   | 31.611             |         |
| 4,000.00   | 3,966.77            | 3,943.06            | 3,931.63            | 12.42           | 10.17       | 153.69                | 203.54                            | -200.49    | 620.03               | 600.54                | 19.49                   | 31.809             |         |
| 4,100.00   | 4,065.41            | 4,040.97            | 4,029.20            | 12.80           | 10.44       | 153.80                | 209.00                            | -206.48    | 640.36               | 620.35                | 20.01                   | 31.997             |         |
| 4,200.00   | 4,164.06            | 4,138.87            | 4,126.77            | 13.18           | 10.70       | 153.90                | 214.47                            | -212.46    | 660.70               | 640.16                | 20.53                   | 32.174             |         |
| 4,300.00   | 4,262.71            | 4,236.77            | 4,224.34            | 13.56           | 10.96       | 154.00                | 219.93                            | -218.45    | 681.03               | 659.98                | 21.06                   | 32.343             |         |
| 4,400.00   | 4,361.36            | 4,334.68            | 4,321.90            | 13.94           | 11.23       | 154.09                | 225.39                            | -224.44    | 701.37               | 679.79                | 21.58                   | 32.504             |         |
| 4,500.00   | 4,460.00            | 4,432.58            | 4,419.47            | 14.33           | 11.49       | 154.18                | 230.86                            | -230.42    | 721.71               | 699.61                | 22.10                   | 32.657             |         |
| 4,600.00   | 4,558.65            | 4,530.49            | 4,517.04            | 14.71           | 11.76       | 154.26                | 236.32                            | -236.41    | 742.05               | 719.43                | 22.62                   | 32.803             |         |
| 4,700.00   | 4,657.30            | 4,628.39            | 4,614.61            | 15.09           | 12.02       | 154.34                | 241.78                            | -242.39    | 762.39               | 739.25                | 23.14                   | 32.942             |         |
| 4,800.00   | 4,755.94            | 4,726.30            | 4,712.18            | 15.47           | 12.29       | 154.41                | 247.25                            | -248.38    | 782.73               | 759.07                | 23.67                   | 33.076             |         |
| 4,900.00   | 4,854.59            | 4,824.20            | 4,809.75            | 15.85           | 12.55       | 154.48                | 252.71                            | -254.36    | 803.08               | 778.89                | 24.19                   | 33.203             |         |
| 5,000.00   | 4,953.24            | 4,922.10            | 4,907.31            | 16.23           | 12.82       | 154.55                | 258.17                            | -260.35    | 823.42               | 798.72                | 24.71                   | 33.325             |         |
| 5,100.00   | 5,051.88            | 5,020.01            | 5,004.88            | 16.62           | 13.08       | 154.61                | 263.64                            | -266.34    | 843.77               | 818.54                | 25.23                   | 33.442             |         |
| 5,200.00   | 5,150.53            | 5,117.91            | 5,102.45            | 17.00           | 13.35       | 154.67                | 269.10                            | -272.32    | 864.12               | 838.37                | 25.75                   | 33.554             |         |
| 5,300.00   | 5,249.18            | 5,215.82            | 5,200.02            | 17.38           | 13.61       | 154.73                | 274.56                            | -278.31    | 884.47               | 858.19                | 26.28                   | 33.661             |         |
| 5,400.00   | 5,347.83            | 5,313.72            | 5,297.59            | 17.77           | 13.88       | 154.78                | 280.03                            | -284.29    | 904.82               | 878.02                | 26.80                   | 33.765             |         |
| 5,500.00   | 5,446.47            | 5,411.62            | 5,395.15            | 18.15           | 14.14       | 154.84                | 285.49                            | -290.28    | 925.17               | 897.85                | 27.32                   | 33.864             |         |
| 5,600.00   | 5,545.12            | 5,509.53            | 5,492.72            | 18.53           | 14.41       | 154.89                | 290.96                            | -296.27    | 945.52               | 917.67                | 27.84                   | 33.960             |         |
| 5,700.00   | 5,643.77            | 5,607.43            | 5,590.29            | 18.91           | 14.67       | 154.94                | 296.42                            | -302.25    | 965.87               | 937.50                | 28.36                   | 34.052             |         |
| 5,800.00   | 5,742.41            | 5,705.34            | 5,687.86            | 19.30           | 14.94       | 154.98                | 301.88                            | -308.24    | 986.22               | 957.33                | 28.89                   | 34.140             |         |
| 5,900.00   | 5,841.06            | 5,803.24            | 5,785.43            | 19.68           | 15.20       | 155.03                | 307.35                            | -314.22    | 1,006.57             | 977.16                | 29.41                   | 34.226             |         |
| 6,000.00   | 5,939.71            | 5,901.14            | 5,882.99            | 20.06           | 15.47       | 155.07                | 312.81                            | -320.21    | 1,026.93             | 996.99                | 29.93                   | 34.308             |         |
| 6,100.00   | 6,038.35            | 5,999.05            | 5,980.56            | 20.45           | 15.73       | 155.11                | 318.27                            | -326.19    | 1,047.28             | 1,016.82              | 30.45                   | 34.388             |         |
| 6,200.00   | 6,137.00            | 6,096.95            | 6,078.13            | 20.83           | 16.00       | 155.15                | 323.74                            | -332.18    | 1,067.63             | 1,036.66              | 30.98                   | 34.465             |         |
| 6,300.00   | 6,235.65            | 6,194.86            | 6,175.70            | 21.22           | 16.26       | 155.19                | 329.20                            | -338.17    | 1,087.99             | 1,056.49              | 31.50                   | 34.539             |         |
| 6,400.00   | 6,334.30            | 6,292.76            | 6,273.27            | 21.60           | 16.53       | 155.22                | 334.66                            | -344.15    | 1,108.34             | 1,076.32              | 32.02                   | 34.611             |         |
| 6,500.00   | 6,432.94            | 6,390.66            | 6,370.83            | 21.98           | 16.79       | 155.26                | 340.13                            | -350.14    | 1,128.70             | 1,096.15              | 32.55                   | 34.681             |         |
| 6,600.00   | 6,531.59            | 6,488.57            | 6,468.40            | 22.37           | 17.06       | 155.29                | 345.59                            | -356.12    | 1,149.05             | 1,115.99              | 33.07                   | 34.748             |         |
| 6,700.00   | 6,630.24            | 6,586.47            | 6,565.97            | 22.75           | 17.32       | 155.32                | 351.05                            | -362.11    | 1,169.41             | 1,135.82              | 33.59                   | 34.813             |         |
| 6,800.00   | 6,728.88            | 6,684.38            | 6,663.54            | 23.13           | 17.59       | 155.36                | 356.52                            | -368.10    | 1,189.77             | 1,155.65              | 34.11                   | 34.877             |         |
| 6,887.98   | 6,815.68            | 6,770.52            | 6,749.38            | 23.47           | 17.82       | 155.38                | 361.32                            | -373.36    | 1,207.68             | 1,173.10              | 34.57                   | 34.931             |         |

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

|                           |                           |                                     |                                       |
|---------------------------|---------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | BERRY PETROLEUM COMPANY   | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Project:</b>           | GARFIELD COUNTY, COLORADO | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Reference Site:</b>    | OM G03 696 PAD            | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                    | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | GRANLEE OM10B             | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                    | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | OM10B                     | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1                   | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design         |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 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) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |         |
| 6,900.00              | 6,827.53            | 6,782.28            | 6,761.11            | 23.51           | 17.85       | 155.40                | 361.98                            | -374.08    | 1,210.11             | 1,175.47              | 34.64                   | 34.935             |         |
| 7,000.00              | 6,926.35            | 6,880.38            | 6,858.87            | 23.77           | 18.12       | 155.49                | 367.45                            | -380.08    | 1,229.51             | 1,194.36              | 35.14                   | 34.985             |         |
| 7,100.00              | 7,025.42            | 6,978.78            | 6,956.93            | 24.01           | 18.38       | 155.54                | 372.94                            | -386.09    | 1,247.34             | 1,211.70              | 35.64                   | 34.999             |         |
| 7,200.00              | 7,124.71            | 7,077.44            | 7,055.25            | 24.23           | 18.65       | 155.55                | 378.45                            | -392.13    | 1,263.60             | 1,227.48              | 36.12                   | 34.980             |         |
| 7,300.00              | 7,224.20            | 7,176.33            | 7,153.80            | 24.44           | 18.92       | 155.52                | 383.97                            | -398.17    | 1,278.30             | 1,241.71              | 36.60                   | 34.928             |         |
| 7,400.00              | 7,323.84            | 7,275.43            | 7,252.56            | 24.64           | 19.18       | 155.45                | 389.50                            | -404.23    | 1,291.44             | 1,254.38              | 37.06                   | 34.846             |         |
| 7,500.00              | 7,423.62            | 7,374.70            | 7,351.49            | 24.81           | 19.45       | 155.35                | 395.04                            | -410.30    | 1,303.00             | 1,265.49              | 37.51                   | 34.735             |         |
| 7,600.00              | 7,523.50            | 7,485.02            | 7,461.47            | 24.98           | 19.72       | 155.21                | 400.90                            | -416.72    | 1,312.75             | 1,274.79              | 37.95                   | 34.589             |         |
| 7,700.00              | 7,623.45            | 7,602.93            | 7,579.16            | 25.12           | 19.95       | 155.07                | 405.68                            | -421.96    | 1,319.66             | 1,281.32              | 38.34                   | 34.423             |         |
| 7,800.00              | 7,723.43            | 7,721.19            | 7,697.33            | 25.25           | 20.16       | 154.97                | 408.84                            | -425.42    | 1,323.62             | 1,284.93              | 38.69                   | 34.212             |         |
| 7,831.57              | 7,755.00            | 7,758.57            | 7,734.69            | 25.29           | 20.22       | 0.00                  | 409.49                            | -426.14    | 1,324.25             | 1,280.38              | 43.87                   | 30.186             |         |
| 7,900.00              | 7,823.43            | 7,839.63            | 7,815.75            | 25.40           | 20.35       | 119.97                | 410.35                            | -427.08    | 1,325.17             | 1,286.11              | 39.07                   | 33.919             |         |
| 8,000.00              | 7,923.41            | 7,954.95            | 7,931.06            | 25.57           | 20.54       | 120.03                | 410.30                            | -427.56    | 1,326.16             | 1,286.68              | 39.48                   | 33.594             |         |
| 8,081.57              | 8,004.92            | 8,047.20            | 8,023.29            | 25.73           | 20.71       | 120.08                | 409.40                            | -429.13    | 1,326.85             | 1,287.02              | 39.83                   | 33.311             |         |
| 8,100.00              | 8,023.34            | 8,068.05            | 8,044.14            | 25.77           | 20.74       | 120.09                | 409.09                            | -429.66    | 1,326.98             | 1,287.07              | 39.91                   | 33.246             |         |
| 8,200.00              | 8,123.24            | 8,176.28            | 8,152.28            | 25.97           | 20.94       | 120.11                | 406.95                            | -433.37    | 1,327.18             | 1,286.82              | 40.36                   | 32.886             |         |
| 8,300.00              | 8,223.15            | 8,276.28            | 8,252.18            | 26.17           | 21.13       | 120.11                | 404.77                            | -437.14    | 1,327.18             | 1,286.39              | 40.79                   | 32.539             |         |
| 8,400.00              | 8,323.05            | 8,376.28            | 8,352.09            | 26.37           | 21.32       | 120.11                | 402.59                            | -440.92    | 1,327.18             | 1,285.96              | 41.22                   | 32.198             |         |
| 8,500.00              | 8,422.96            | 8,476.28            | 8,451.99            | 26.58           | 21.51       | 120.11                | 400.41                            | -444.70    | 1,327.18             | 1,285.52              | 41.65                   | 31.863             |         |
| 8,600.00              | 8,522.86            | 8,576.28            | 8,551.90            | 26.78           | 21.70       | 120.11                | 398.23                            | -448.48    | 1,327.18             | 1,285.09              | 42.09                   | 31.534             |         |
| 8,700.00              | 8,622.77            | 8,676.28            | 8,651.80            | 26.98           | 21.89       | 120.11                | 396.04                            | -452.25    | 1,327.18             | 1,284.66              | 42.52                   | 31.212             |         |
| 8,800.00              | 8,722.67            | 8,776.28            | 8,751.71            | 27.19           | 22.08       | 120.11                | 393.86                            | -456.03    | 1,327.18             | 1,284.22              | 42.96                   | 30.896             |         |
| 8,900.00              | 8,822.58            | 8,876.28            | 8,851.61            | 27.40           | 22.28       | 120.11                | 391.68                            | -459.81    | 1,327.18             | 1,283.78              | 43.39                   | 30.585             |         |
| 9,000.00              | 8,922.48            | 8,976.28            | 8,951.52            | 27.60           | 22.47       | 120.11                | 389.50                            | -463.59    | 1,327.18             | 1,283.35              | 43.83                   | 30.280             |         |
| 9,100.00              | 9,022.38            | 9,076.28            | 9,051.42            | 27.81           | 22.66       | 120.11                | 387.32                            | -467.36    | 1,327.18             | 1,282.91              | 44.27                   | 29.981             |         |
| 9,200.00              | 9,122.29            | 9,176.28            | 9,151.33            | 28.02           | 22.86       | 120.11                | 385.14                            | -471.14    | 1,327.18             | 1,282.47              | 44.71                   | 29.687             |         |
| 9,300.00              | 9,222.19            | 9,276.28            | 9,251.23            | 28.22           | 23.06       | 120.11                | 382.96                            | -474.92    | 1,327.18             | 1,282.03              | 45.15                   | 29.398             |         |
| 9,400.00              | 9,322.10            | 9,376.28            | 9,351.14            | 28.43           | 23.25       | 120.11                | 380.78                            | -478.70    | 1,327.18             | 1,281.59              | 45.59                   | 29.114             |         |
| 9,500.00              | 9,422.00            | 9,476.28            | 9,451.04            | 28.64           | 23.45       | 120.11                | 378.60                            | -482.47    | 1,327.18             | 1,281.15              | 46.03                   | 28.835             |         |
| 9,600.00              | 9,521.91            | 9,576.28            | 9,550.95            | 28.85           | 23.65       | 120.11                | 376.42                            | -486.25    | 1,327.18             | 1,280.71              | 46.47                   | 28.562             |         |
| 9,700.00              | 9,621.81            | 9,676.28            | 9,650.85            | 29.06           | 23.85       | 120.11                | 374.23                            | -490.03    | 1,327.18             | 1,280.27              | 46.91                   | 28.293             |         |
| 9,800.00              | 9,721.72            | 9,776.28            | 9,750.76            | 29.27           | 24.05       | 120.11                | 372.05                            | -493.81    | 1,327.18             | 1,279.83              | 47.35                   | 28.028             |         |
| 9,900.00              | 9,821.62            | 9,876.28            | 9,850.66            | 29.48           | 24.25       | 120.11                | 369.87                            | -497.59    | 1,327.18             | 1,279.38              | 47.79                   | 27.769             |         |
| 10,000.00             | 9,921.53            | 9,976.28            | 9,950.57            | 29.69           | 24.45       | 120.11                | 367.69                            | -501.36    | 1,327.18             | 1,278.94              | 48.24                   | 27.513             |         |
| 10,100.00             | 10,021.43           | 10,076.28           | 10,050.47           | 29.91           | 24.65       | 120.11                | 365.51                            | -505.14    | 1,327.18             | 1,278.50              | 48.68                   | 27.262             |         |
| 10,200.00             | 10,121.34           | 10,176.28           | 10,150.38           | 30.12           | 24.85       | 120.11                | 363.33                            | -508.92    | 1,327.18             | 1,278.05              | 49.13                   | 27.015             |         |
| 10,300.00             | 10,221.24           | 10,276.28           | 10,250.28           | 30.33           | 25.06       | 120.11                | 361.15                            | -512.70    | 1,327.18             | 1,277.61              | 49.57                   | 26.773             |         |
| 10,400.00             | 10,321.15           | 10,376.28           | 10,350.19           | 30.54           | 25.26       | 120.11                | 358.97                            | -516.47    | 1,327.18             | 1,277.16              | 50.02                   | 26.534             |         |
| 10,500.00             | 10,421.05           | 10,476.28           | 10,450.09           | 30.76           | 25.47       | 120.11                | 356.79                            | -520.25    | 1,327.18             | 1,276.71              | 50.46                   | 26.300             |         |
| 10,600.00             | 10,520.96           | 10,576.28           | 10,549.99           | 30.97           | 25.67       | 120.11                | 354.61                            | -524.03    | 1,327.18             | 1,276.27              | 50.91                   | 26.069             |         |
| 10,700.00             | 10,620.86           | 10,676.28           | 10,649.90           | 31.19           | 25.88       | 120.11                | 352.43                            | -527.81    | 1,327.18             | 1,275.82              | 51.36                   | 25.842             |         |
| 10,800.00             | 10,720.77           | 10,776.28           | 10,749.80           | 31.40           | 26.08       | 120.11                | 350.24                            | -531.58    | 1,327.18             | 1,275.37              | 51.81                   | 25.619             |         |
| 10,900.00             | 10,820.67           | 10,876.28           | 10,849.71           | 31.62           | 26.29       | 120.11                | 348.06                            | -535.36    | 1,327.18             | 1,274.92              | 52.25                   | 25.399             |         |
| 11,000.00             | 10,920.58           | 10,976.28           | 10,949.61           | 31.83           | 26.50       | 120.11                | 345.88                            | -539.14    | 1,327.18             | 1,274.48              | 52.70                   | 25.183             |         |
| 11,100.00             | 11,020.48           | 11,076.28           | 11,049.52           | 32.05           | 26.70       | 120.11                | 343.70                            | -542.92    | 1,327.18             | 1,274.03              | 53.15                   | 24.970             |         |
| 11,200.00             | 11,120.39           | 11,176.28           | 11,149.42           | 32.26           | 26.91       | 120.11                | 341.52                            | -546.69    | 1,327.18             | 1,273.58              | 53.60                   | 24.761             |         |
| 11,284.69             | 11,205.00           | 11,260.97           | 11,234.04           | 32.45           | 27.09       | 120.11                | 339.67                            | -549.89    | 1,327.18             | 1,273.20              | 53.98                   | 24.586             |         |

|                           |                           |                                     |                                       |
|---------------------------|---------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | BERRY PETROLEUM COMPANY   | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Project:</b>           | GARFIELD COUNTY, COLORADO | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Reference Site:</b>    | OM G03 696 PAD            | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                    | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | GRANLEE OM10B             | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                    | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | OM10B                     | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1                   | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| <b>Offset Design</b> OM G03 696 PAD - GRANLEE OM07B - OM07B - PLAN #1 |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | <b>Offset Site Error:</b> | 0.00 ft |
|---|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | <b>Offset Well Error:</b> | 0.00 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) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor         |         |
| 0.00  | 0.00                | 0.00                | 0.00                | 0.00           | 0.00        | -122.87               | -8.10                             | -12.53     | 14.92                |                       |                         |                           |         |
| 100.00  | 100.00              | 100.00              | 100.00              | 0.09           | 0.09        | -122.87               | -8.10                             | -12.53     | 14.92                | 14.75                 | 0.18                    | 85.106                    |         |
| 160.00  | 160.00              | 160.00              | 160.00              | 0.22           | 0.22        | -122.87               | -8.10                             | -12.53     | 14.92                | 14.48                 | 0.45                    | 33.527 CC                 |         |
| 200.00  | 200.00              | 199.85              | 199.84              | 0.30           | 0.31        | 48.64                 | -8.05                             | -12.80     | 14.94                | 14.33                 | 0.61                    | 24.453 ES                 |         |
| 310.00  | 309.93              | 309.23              | 309.16              | 0.53           | 0.55        | 67.28                 | -7.37                             | -16.35     | 16.07                | 15.00                 | 1.07                    | 14.964                    |         |
| 349.35  | 349.22              | 348.48              | 348.36              | 0.62           | 0.64        | 60.95                 | -6.99                             | -18.37     | 17.13                | 15.88                 | 1.25                    | 13.699                    |         |
| 400.00  | 399.81              | 399.03              | 398.84              | 0.73           | 0.76        | 70.16                 | -6.50                             | -20.97     | 18.65                | 17.17                 | 1.48                    | 12.588                    |         |
| 500.00  | 499.67              | 498.82              | 498.49              | 0.97           | 1.00        | 83.95                 | -5.52                             | -26.10     | 22.74                | 20.80                 | 1.94                    | 11.696                    |         |
| 600.00  | 599.53              | 598.61              | 598.15              | 1.21           | 1.24        | 93.17                 | -4.54                             | -31.23     | 27.74                | 25.32                 | 2.41                    | 11.486 SF                 |         |
| 700.00  | 699.40              | 698.41              | 697.81              | 1.45           | 1.48        | 99.48                 | -3.57                             | -36.36     | 33.22                | 30.33                 | 2.89                    | 11.501                    |         |
| 800.00  | 799.26              | 798.20              | 797.46              | 1.70           | 1.73        | 103.96                | -2.59                             | -41.49     | 38.99                | 35.63                 | 3.36                    | 11.592                    |         |
| 900.00  | 899.12              | 898.00              | 897.12              | 1.94           | 1.97        | 107.27                | -1.62                             | -46.62     | 44.94                | 41.10                 | 3.84                    | 11.702                    |         |
| 1,000.00  | 998.99              | 997.79              | 996.78              | 2.19           | 2.21        | 109.80                | -0.64                             | -51.75     | 51.01                | 46.69                 | 4.32                    | 11.813                    |         |
| 1,100.00  | 1,098.85            | 1,097.58            | 1,096.43            | 2.43           | 2.46        | 111.79                | 0.33                              | -56.88     | 57.15                | 52.35                 | 4.80                    | 11.916                    |         |
| 1,200.00  | 1,198.71            | 1,197.38            | 1,196.09            | 2.68           | 2.70        | 113.40                | 1.31                              | -62.01     | 63.34                | 58.07                 | 5.27                    | 12.011                    |         |
| 1,300.00  | 1,298.57            | 1,297.17            | 1,295.75            | 2.93           | 2.94        | 114.71                | 2.29                              | -67.14     | 69.58                | 63.83                 | 5.75                    | 12.096                    |         |
| 1,400.00  | 1,398.44            | 1,396.96            | 1,395.41            | 3.17           | 3.19        | 115.81                | 3.26                              | -72.27     | 75.85                | 69.62                 | 6.23                    | 12.173                    |         |
| 1,500.00  | 1,498.30            | 1,496.76            | 1,495.06            | 3.42           | 3.43        | 116.75                | 4.24                              | -77.41     | 82.14                | 75.43                 | 6.71                    | 12.243                    |         |
| 1,600.00  | 1,598.05            | 1,596.46            | 1,594.63            | 3.68           | 3.68        | 118.41                | 5.21                              | -82.53     | 89.27                | 82.07                 | 7.20                    | 12.406                    |         |
| 1,700.00  | 1,697.50            | 1,695.91            | 1,693.94            | 3.97           | 3.92        | 121.55                | 6.18                              | -87.64     | 98.25                | 90.55                 | 7.70                    | 12.765                    |         |
| 1,800.00  | 1,796.52            | 1,794.97            | 1,792.87            | 4.28           | 4.16        | 125.60                | 7.15                              | -92.74     | 109.50               | 101.29                | 8.21                    | 13.342                    |         |
| 1,821.79  | 1,818.03            | 1,816.11            | 1,813.97            | 4.36           | 4.22        | 126.52                | 7.37                              | -93.87     | 112.32               | 104.00                | 8.32                    | 13.503                    |         |
| 1,900.00  | 1,895.18            | 1,893.15            | 1,890.88            | 4.63           | 4.41        | 129.60                | 8.23                              | -98.41     | 123.13               | 114.40                | 8.73                    | 14.105                    |         |
| 2,000.00  | 1,993.83            | 1,991.86            | 1,989.41            | 4.98           | 4.66        | 132.83                | 9.34                              | -104.25    | 137.37               | 128.12                | 9.25                    | 14.848                    |         |
| 2,100.00  | 2,092.48            | 2,090.58            | 2,087.94            | 5.33           | 4.90        | 135.45                | 10.45                             | -110.08    | 151.97               | 142.20                | 9.77                    | 15.550                    |         |
| 2,200.00  | 2,191.12            | 2,189.29            | 2,186.48            | 5.69           | 5.15        | 137.61                | 11.56                             | -115.91    | 166.82               | 156.53                | 10.29                   | 16.210                    |         |
| 2,300.00  | 2,289.77            | 2,288.00            | 2,285.01            | 6.05           | 5.40        | 139.42                | 12.67                             | -121.74    | 181.87               | 171.06                | 10.81                   | 16.825                    |         |
| 2,400.00  | 2,388.42            | 2,386.71            | 2,383.54            | 6.42           | 5.64        | 140.95                | 13.78                             | -127.58    | 197.07               | 185.74                | 11.33                   | 17.399                    |         |
| 2,500.00  | 2,487.06            | 2,485.42            | 2,482.08            | 6.78           | 5.89        | 142.26                | 14.88                             | -133.41    | 212.39               | 200.54                | 11.84                   | 17.933                    |         |
| 2,600.00  | 2,585.71            | 2,584.13            | 2,580.61            | 7.15           | 6.14        | 143.39                | 15.99                             | -139.24    | 227.80               | 215.44                | 12.36                   | 18.431                    |         |
| 2,700.00  | 2,684.36            | 2,682.85            | 2,679.14            | 7.52           | 6.39        | 144.38                | 17.10                             | -145.07    | 243.28               | 230.41                | 12.88                   | 18.894                    |         |
| 2,800.00  | 2,783.00            | 2,781.56            | 2,777.68            | 7.89           | 6.63        | 145.26                | 18.21                             | -150.90    | 258.83               | 245.44                | 13.39                   | 19.327                    |         |
| 2,900.00  | 2,881.65            | 2,880.27            | 2,876.21            | 8.27           | 6.88        | 146.03                | 19.32                             | -156.74    | 274.43               | 260.52                | 13.91                   | 19.732                    |         |
| 3,000.00  | 2,980.30            | 2,978.98            | 2,974.74            | 8.64           | 7.13        | 146.72                | 20.43                             | -162.57    | 290.07               | 275.65                | 14.42                   | 20.110                    |         |
| 3,100.00  | 3,078.95            | 3,077.69            | 3,073.27            | 9.02           | 7.38        | 147.34                | 21.54                             | -168.40    | 305.76               | 290.81                | 14.94                   | 20.465                    |         |
| 3,200.00  | 3,177.59            | 3,176.41            | 3,171.81            | 9.39           | 7.63        | 147.90                | 22.65                             | -174.23    | 321.47               | 306.01                | 15.46                   | 20.798                    |         |
| 3,300.00  | 3,276.24            | 3,275.12            | 3,270.34            | 9.77           | 7.87        | 148.40                | 23.76                             | -180.07    | 337.21               | 321.23                | 15.97                   | 21.111                    |         |
| 3,400.00  | 3,374.89            | 3,373.83            | 3,368.87            | 10.15          | 8.12        | 148.86                | 24.87                             | -185.90    | 352.97               | 336.48                | 16.49                   | 21.406                    |         |
| 3,500.00  | 3,473.53            | 3,472.54            | 3,467.41            | 10.52          | 8.37        | 149.29                | 25.97                             | -191.73    | 368.75               | 351.75                | 17.01                   | 21.684                    |         |
| 3,600.00  | 3,572.18            | 3,571.25            | 3,565.94            | 10.90          | 8.62        | 149.67                | 27.08                             | -197.56    | 384.55               | 367.03                | 17.52                   | 21.946                    |         |
| 3,700.00  | 3,670.83            | 3,669.96            | 3,664.47            | 11.28          | 8.86        | 150.03                | 28.19                             | -203.40    | 400.37               | 382.33                | 18.04                   | 22.194                    |         |
| 3,800.00  | 3,769.47            | 3,768.68            | 3,763.01            | 11.66          | 9.11        | 150.36                | 29.30                             | -209.23    | 416.20               | 397.65                | 18.56                   | 22.430                    |         |
| 3,900.00  | 3,868.12            | 3,867.39            | 3,861.54            | 12.04          | 9.36        | 150.66                | 30.41                             | -215.06    | 432.05               | 412.97                | 19.07                   | 22.652                    |         |
| 4,000.00  | 3,966.77            | 3,966.10            | 3,960.07            | 12.42          | 9.61        | 150.95                | 31.52                             | -220.89    | 447.90               | 428.31                | 19.59                   | 22.864                    |         |
| 4,100.00  | 4,065.41            | 4,064.81            | 4,058.61            | 12.80          | 9.86        | 151.21                | 32.63                             | -226.72    | 463.76               | 443.66                | 20.11                   | 23.065                    |         |
| 4,200.00  | 4,164.06            | 4,163.52            | 4,157.14            | 13.18          | 10.10       | 151.46                | 33.74                             | -232.56    | 479.64               | 459.01                | 20.62                   | 23.257                    |         |
| 4,300.00  | 4,262.71            | 4,262.23            | 4,255.67            | 13.56          | 10.35       | 151.69                | 34.85                             | -238.39    | 495.52               | 474.38                | 21.14                   | 23.439                    |         |
| 4,400.00  | 4,361.36            | 4,360.95            | 4,354.20            | 13.94          | 10.60       | 151.91                | 35.95                             | -244.22    | 511.41               | 489.75                | 21.66                   | 23.613                    |         |
| 4,500.00  | 4,460.00            | 4,459.66            | 4,452.74            | 14.33          | 10.85       | 152.11                | 37.06                             | -250.05    | 527.30               | 505.13                | 22.17                   | 23.779                    |         |
| 4,600.00  | 4,558.65            | 4,558.37            | 4,551.27            | 14.71          | 11.09       | 152.30                | 38.17                             | -255.89    | 543.21               | 520.51                | 22.69                   | 23.938                    |         |
| 4,700.00  | 4,657.30            | 4,657.08            | 4,649.80            | 15.09          | 11.34       | 152.48                | 39.28                             | -261.72    | 559.11               | 535.90                | 23.21                   | 24.090                    |         |
| 4,800.00  | 4,755.94            | 4,755.79            | 4,748.34            | 15.47          | 11.59       | 152.65                | 40.39                             | -267.55    | 575.03               | 551.30                | 23.73                   | 24.235                    |         |

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

|                           |                           |                                     |                                       |
|---------------------------|---------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | BERRY PETROLEUM COMPANY   | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Project:</b>           | GARFIELD COUNTY, COLORADO | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Reference Site:</b>    | OM G03 696 PAD            | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                    | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | GRANLEE OM10B             | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                    | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | OM10B                     | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1                   | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design OM G03 696 PAD - GRANLEE OM07B - OM07B - PLAN #1 |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 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) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  |         |
| 4,900.00   | 4,854.59            | 4,854.50            | 4,846.87            | 15.85           | 11.84       | 152.82                | 41.50                             | -273.38    | 590.94               | 566.70                | 24.24                   | 24.375             |         |
| 5,000.00   | 4,953.24            | 4,953.22            | 4,945.40            | 16.23           | 12.09       | 152.97                | 42.61                             | -279.21    | 606.86               | 582.10                | 24.76                   | 24.508             |         |
| 5,100.00   | 5,051.88            | 5,051.93            | 5,043.94            | 16.62           | 12.33       | 153.11                | 43.72                             | -285.05    | 622.79               | 597.51                | 25.28                   | 24.637             |         |
| 5,200.00   | 5,150.53            | 5,150.64            | 5,142.47            | 17.00           | 12.58       | 153.25                | 44.83                             | -290.88    | 638.72               | 612.92                | 25.80                   | 24.760             |         |
| 5,300.00   | 5,249.18            | 5,249.35            | 5,241.00            | 17.38           | 12.83       | 153.38                | 45.93                             | -296.71    | 654.65               | 628.34                | 26.31                   | 24.879             |         |
| 5,400.00   | 5,347.83            | 5,348.06            | 5,339.53            | 17.77           | 13.08       | 153.51                | 47.04                             | -302.54    | 670.59               | 643.76                | 26.83                   | 24.993             |         |
| 5,500.00   | 5,446.47            | 5,446.77            | 5,438.07            | 18.15           | 13.33       | 153.63                | 48.15                             | -308.38    | 686.53               | 659.18                | 27.35                   | 25.102             |         |
| 5,600.00   | 5,545.12            | 5,545.49            | 5,536.60            | 18.53           | 13.57       | 153.74                | 49.26                             | -314.21    | 702.47               | 674.60                | 27.87                   | 25.208             |         |
| 5,700.00   | 5,643.77            | 5,644.20            | 5,635.13            | 18.91           | 13.82       | 153.85                | 50.37                             | -320.04    | 718.41               | 690.03                | 28.38                   | 25.310             |         |
| 5,800.00   | 5,742.41            | 5,742.91            | 5,733.67            | 19.30           | 14.07       | 153.96                | 51.48                             | -325.87    | 734.36               | 705.46                | 28.90                   | 25.409             |         |
| 5,900.00   | 5,841.06            | 5,841.62            | 5,832.20            | 19.68           | 14.32       | 154.06                | 52.59                             | -331.71    | 750.31               | 720.89                | 29.42                   | 25.504             |         |
| 6,000.00   | 5,939.71            | 5,940.33            | 5,930.73            | 20.06           | 14.57       | 154.15                | 53.70                             | -337.54    | 766.26               | 736.32                | 29.94                   | 25.595             |         |
| 6,100.00   | 6,038.35            | 6,039.05            | 6,029.27            | 20.45           | 14.81       | 154.24                | 54.81                             | -343.37    | 782.21               | 751.76                | 30.46                   | 25.684             |         |
| 6,200.00   | 6,137.00            | 6,137.76            | 6,127.80            | 20.83           | 15.06       | 154.33                | 55.92                             | -349.20    | 798.17               | 767.19                | 30.97                   | 25.770             |         |
| 6,300.00   | 6,235.65            | 6,236.47            | 6,226.33            | 21.22           | 15.31       | 154.42                | 57.02                             | -355.03    | 814.12               | 782.63                | 31.49                   | 25.853             |         |
| 6,400.00   | 6,334.30            | 6,335.18            | 6,324.87            | 21.60           | 15.56       | 154.50                | 58.13                             | -360.87    | 830.08               | 798.07                | 32.01                   | 25.933             |         |
| 6,500.00   | 6,432.94            | 6,433.89            | 6,423.40            | 21.98           | 15.81       | 154.57                | 59.24                             | -366.70    | 846.04               | 813.52                | 32.53                   | 26.011             |         |
| 6,600.00   | 6,531.59            | 6,532.60            | 6,521.93            | 22.37           | 16.05       | 154.65                | 60.35                             | -372.53    | 862.00               | 828.96                | 33.04                   | 26.086             |         |
| 6,700.00   | 6,630.24            | 6,631.32            | 6,620.46            | 22.75           | 16.30       | 154.72                | 61.46                             | -378.36    | 877.97               | 844.40                | 33.56                   | 26.159             |         |
| 6,800.00   | 6,728.88            | 6,730.03            | 6,719.00            | 23.13           | 16.55       | 154.79                | 62.57                             | -384.20    | 893.93               | 859.85                | 34.08                   | 26.230             |         |
| 6,887.98   | 6,815.68            | 6,816.88            | 6,805.69            | 23.47           | 16.77       | 154.85                | 63.54                             | -389.33    | 907.98               | 873.44                | 34.54                   | 26.291             |         |
| 6,900.00   | 6,827.53            | 6,828.74            | 6,817.53            | 23.51           | 16.80       | 154.87                | 63.68                             | -390.03    | 909.88               | 875.29                | 34.60                   | 26.298             |         |
| 7,000.00   | 6,926.35            | 6,927.61            | 6,916.22            | 23.77           | 17.05       | 154.97                | 64.79                             | -395.87    | 924.88               | 889.80                | 35.09                   | 26.360             |         |
| 7,100.00   | 7,025.42            | 7,026.70            | 7,015.13            | 24.01           | 17.29       | 155.02                | 65.90                             | -401.72    | 939.82               | 902.75                | 35.57                   | 26.381             |         |
| 7,200.00   | 7,124.71            | 7,125.99            | 7,114.24            | 24.23           | 17.54       | 155.01                | 67.02                             | -407.59    | 950.18               | 914.14                | 36.04                   | 26.364             |         |
| 7,300.00   | 7,224.20            | 7,225.44            | 7,213.52            | 24.44           | 17.79       | 154.96                | 68.13                             | -413.47    | 960.47               | 923.97                | 36.51                   | 26.311             |         |
| 7,400.00   | 7,323.84            | 7,325.03            | 7,312.92            | 24.64           | 18.04       | 154.86                | 69.25                             | -419.35    | 969.20               | 932.24                | 36.96                   | 26.223             |         |
| 7,500.00   | 7,423.62            | 7,424.73            | 7,412.44            | 24.81           | 18.29       | 154.71                | 70.37                             | -425.24    | 976.35               | 938.95                | 37.41                   | 26.101             |         |
| 7,600.00   | 7,523.50            | 7,524.90            | 7,512.43            | 24.98           | 18.54       | 154.51                | 71.50                             | -431.15    | 981.94               | 944.11                | 37.84                   | 25.951             |         |
| 7,700.00   | 7,623.45            | 7,628.24            | 7,615.65            | 25.12           | 18.75       | 154.32                | 72.44                             | -436.13    | 985.76               | 947.55                | 38.22                   | 25.794             |         |
| 7,800.00   | 7,723.43            | 7,731.74            | 7,719.09            | 25.25           | 18.93       | 154.18                | 73.04                             | -439.28    | 987.66               | 949.12                | 38.54                   | 25.626             |         |
| 7,831.57   | 7,755.00            | 7,764.43            | 7,751.78            | 25.29           | 18.98       | -0.80                 | 73.16                             | -439.89    | 987.86               | 944.26                | 43.60                   | 22.657             |         |
| 7,900.00   | 7,823.43            | 7,835.31            | 7,822.66            | 25.40           | 19.10       | 119.18                | 73.29                             | -440.59    | 988.20               | 949.30                | 38.90                   | 25.403             |         |
| 8,000.00   | 7,923.41            | 7,943.29            | 7,930.63            | 25.57           | 19.30       | 119.25                | 72.98                             | -441.19    | 988.93               | 949.61                | 39.32                   | 25.153             |         |
| 8,081.57   | 8,004.92            | 8,032.37            | 8,019.69            | 25.73           | 19.49       | 119.31                | 71.97                             | -442.94    | 989.48               | 949.79                | 39.68                   | 24.933             |         |
| 8,100.00   | 8,023.34            | 8,052.50            | 8,039.81            | 25.77           | 19.53       | 119.32                | 71.64                             | -443.51    | 989.58               | 949.81                | 39.77                   | 24.883             |         |
| 8,200.00   | 8,123.24            | 8,157.17            | 8,144.39            | 25.97           | 19.76       | 119.33                | 69.49                             | -447.23    | 989.70               | 949.48                | 40.22                   | 24.605             |         |
| 8,300.00   | 8,223.15            | 8,257.17            | 8,244.29            | 26.17           | 19.99       | 119.33                | 67.31                             | -451.01    | 989.70               | 949.03                | 40.67                   | 24.334             |         |
| 8,400.00   | 8,323.05            | 8,357.17            | 8,344.20            | 26.37           | 20.21       | 119.33                | 65.13                             | -454.79    | 989.70               | 948.58                | 41.12                   | 24.068             |         |
| 8,500.00   | 8,422.96            | 8,457.17            | 8,444.10            | 26.58           | 20.44       | 119.33                | 62.95                             | -458.56    | 989.70               | 948.13                | 41.57                   | 23.807             |         |
| 8,600.00   | 8,522.86            | 8,557.17            | 8,544.01            | 26.78           | 20.66       | 119.33                | 60.77                             | -462.34    | 989.70               | 947.68                | 42.02                   | 23.552             |         |
| 8,700.00   | 8,622.77            | 8,657.17            | 8,643.91            | 26.98           | 20.89       | 119.33                | 58.59                             | -466.12    | 989.70               | 947.23                | 42.47                   | 23.302             |         |
| 8,800.00   | 8,722.67            | 8,757.17            | 8,743.82            | 27.19           | 21.11       | 119.33                | 56.41                             | -469.90    | 989.70               | 946.78                | 42.92                   | 23.057             |         |
| 8,900.00   | 8,822.58            | 8,857.17            | 8,843.72            | 27.40           | 21.34       | 119.33                | 54.23                             | -473.67    | 989.70               | 946.32                | 43.38                   | 22.817             |         |
| 9,000.00   | 8,922.48            | 8,957.17            | 8,943.63            | 27.60           | 21.57       | 119.33                | 52.05                             | -477.45    | 989.70               | 945.87                | 43.83                   | 22.581             |         |
| 9,100.00   | 9,022.38            | 9,057.17            | 9,043.53            | 27.81           | 21.79       | 119.33                | 49.86                             | -481.23    | 989.70               | 945.42                | 44.28                   | 22.350             |         |
| 9,200.00   | 9,122.29            | 9,157.17            | 9,143.44            | 28.02           | 22.02       | 119.33                | 47.68                             | -485.01    | 989.70               | 944.97                | 44.73                   | 22.124             |         |
| 9,300.00   | 9,222.19            | 9,257.17            | 9,243.34            | 28.22           | 22.25       | 119.33                | 45.50                             | -488.78    | 989.70               | 944.51                | 45.19                   | 21.902             |         |
| 9,400.00   | 9,322.10            | 9,357.17            | 9,343.25            | 28.43           | 22.48       | 119.33                | 43.32                             | -492.56    | 989.70               | 944.06                | 45.64                   | 21.684             |         |
| 9,500.00   | 9,422.00            | 9,457.17            | 9,443.15            | 28.64           | 22.71       | 119.33                | 41.14                             | -496.34    | 989.70               | 943.60                | 46.10                   | 21.470             |         |
| 9,600.00   | 9,521.91            | 9,557.17            | 9,543.06            | 28.85           | 22.93       | 119.33                | 38.96                             | -500.12    | 989.70               | 943.15                | 46.55                   | 21.260             |         |
| 9,700.00   | 9,621.81            | 9,657.17            | 9,642.96            | 29.06           | 23.16       | 119.33                | 36.78                             | -503.89    | 989.70               | 942.69                | 47.01                   | 21.054             |         |

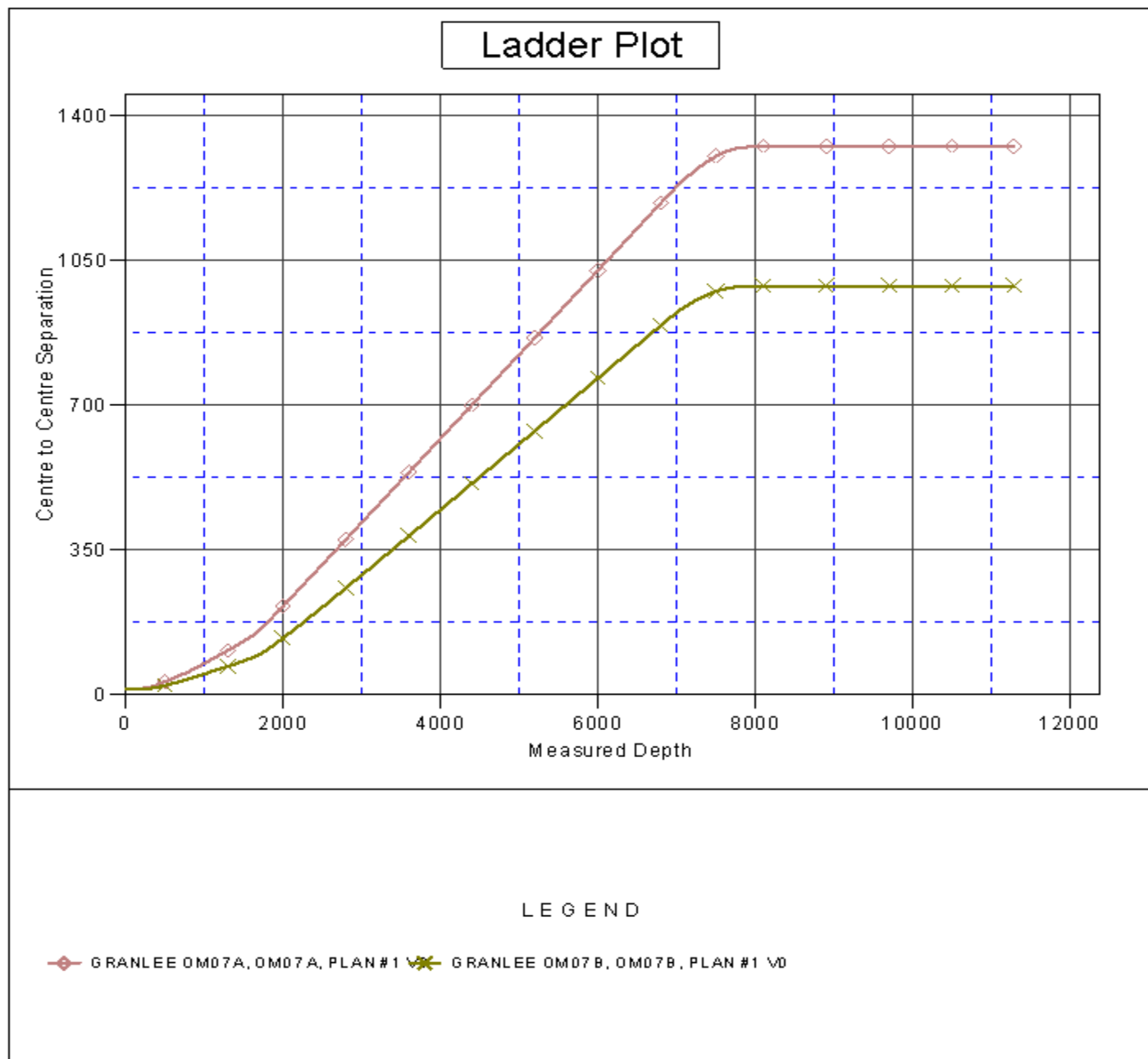
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

|                           |                           |                                     |                                       |
|---------------------------|---------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | BERRY PETROLEUM COMPANY   | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Project:</b>           | GARFIELD COUNTY, COLORADO | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Reference Site:</b>    | OM G03 696 PAD            | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                    | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | GRANLEE OM10B             | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                    | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | OM10B                     | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1                   | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| <b>Offset Design</b> OM G03 696 PAD - GRANLEE OM07B - OM07B - PLAN #1 |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | <b>Offset Site Error:</b> | 0.00 ft |
|---|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|---------------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | <b>Offset Well Error:</b> | 0.00 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 |
| 9,800.00  | 9,721.72            | 9,757.17            | 9,742.87            | 29.27          | 23.39       | 119.33                | 34.60                             | -507.67    | 989.70               | 942.24                | 47.46                   | 20.852                    |         |
| 9,900.00  | 9,821.62            | 9,857.17            | 9,842.77            | 29.48          | 23.62       | 119.33                | 32.42                             | -511.45    | 989.70               | 941.78                | 47.92                   | 20.654                    |         |
| 10,000.00   | 9,921.53            | 9,957.17            | 9,942.67            | 29.69          | 23.85       | 119.33                | 30.24                             | -515.23    | 989.70               | 941.33                | 48.37                   | 20.459                    |         |
| 10,100.00   | 10,021.43           | 10,057.17           | 10,042.58           | 29.91          | 24.08       | 119.33                | 28.06                             | -519.00    | 989.70               | 940.87                | 48.83                   | 20.268                    |         |
| 10,200.00   | 10,121.34           | 10,157.17           | 10,142.48           | 30.12          | 24.31       | 119.33                | 25.87                             | -522.78    | 989.70               | 940.41                | 49.29                   | 20.080                    |         |
| 10,300.00   | 10,221.24           | 10,257.17           | 10,242.39           | 30.33          | 24.54       | 119.33                | 23.69                             | -526.56    | 989.70               | 939.96                | 49.75                   | 19.895                    |         |
| 10,400.00   | 10,321.15           | 10,357.17           | 10,342.29           | 30.54          | 24.77       | 119.33                | 21.51                             | -530.34    | 989.70               | 939.50                | 50.20                   | 19.714                    |         |
| 10,500.00   | 10,421.05           | 10,457.17           | 10,442.20           | 30.76          | 25.00       | 119.33                | 19.33                             | -534.11    | 989.70               | 939.04                | 50.66                   | 19.536                    |         |
| 10,600.00   | 10,520.96           | 10,557.17           | 10,542.10           | 30.97          | 25.23       | 119.33                | 17.15                             | -537.89    | 989.70               | 938.58                | 51.12                   | 19.361                    |         |
| 10,700.00   | 10,620.86           | 10,657.17           | 10,642.01           | 31.19          | 25.46       | 119.33                | 14.97                             | -541.67    | 989.70               | 938.12                | 51.58                   | 19.189                    |         |
| 10,800.00   | 10,720.77           | 10,757.17           | 10,741.91           | 31.40          | 25.69       | 119.33                | 12.79                             | -545.45    | 989.70               | 937.67                | 52.04                   | 19.020                    |         |
| 10,900.00   | 10,820.67           | 10,857.17           | 10,841.82           | 31.62          | 25.92       | 119.33                | 10.61                             | -549.22    | 989.70               | 937.21                | 52.49                   | 18.853                    |         |
| 11,000.00   | 10,920.58           | 10,957.17           | 10,941.72           | 31.83          | 26.16       | 119.33                | 8.43                              | -553.00    | 989.70               | 936.75                | 52.95                   | 18.690                    |         |
| 11,100.00   | 11,020.48           | 11,057.17           | 11,041.63           | 32.05          | 26.39       | 119.33                | 6.25                              | -556.78    | 989.70               | 936.29                | 53.41                   | 18.529                    |         |
| 11,200.00   | 11,120.39           | 11,157.17           | 11,141.53           | 32.26          | 26.62       | 119.33                | 4.06                              | -560.56    | 989.70               | 935.83                | 53.87                   | 18.371                    |         |
| 11,284.69   | 11,205.00           | 11,241.86           | 11,226.15           | 32.45          | 26.82       | 119.33                | 2.22                              | -563.76    | 989.70               | 935.44                | 54.26                   | 18.239                    |         |

|                           |                           |                                     |                                       |
|---------------------------|---------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | BERRY PETROLEUM COMPANY   | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Project:</b>           | GARFIELD COUNTY, COLORADO | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Reference Site:</b>    | OM G03 696 PAD            | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                    | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | GRANLEE OM10B             | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                    | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | OM10B                     | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1                   | <b>Offset TVD Reference:</b>        | Offset Datum                          |

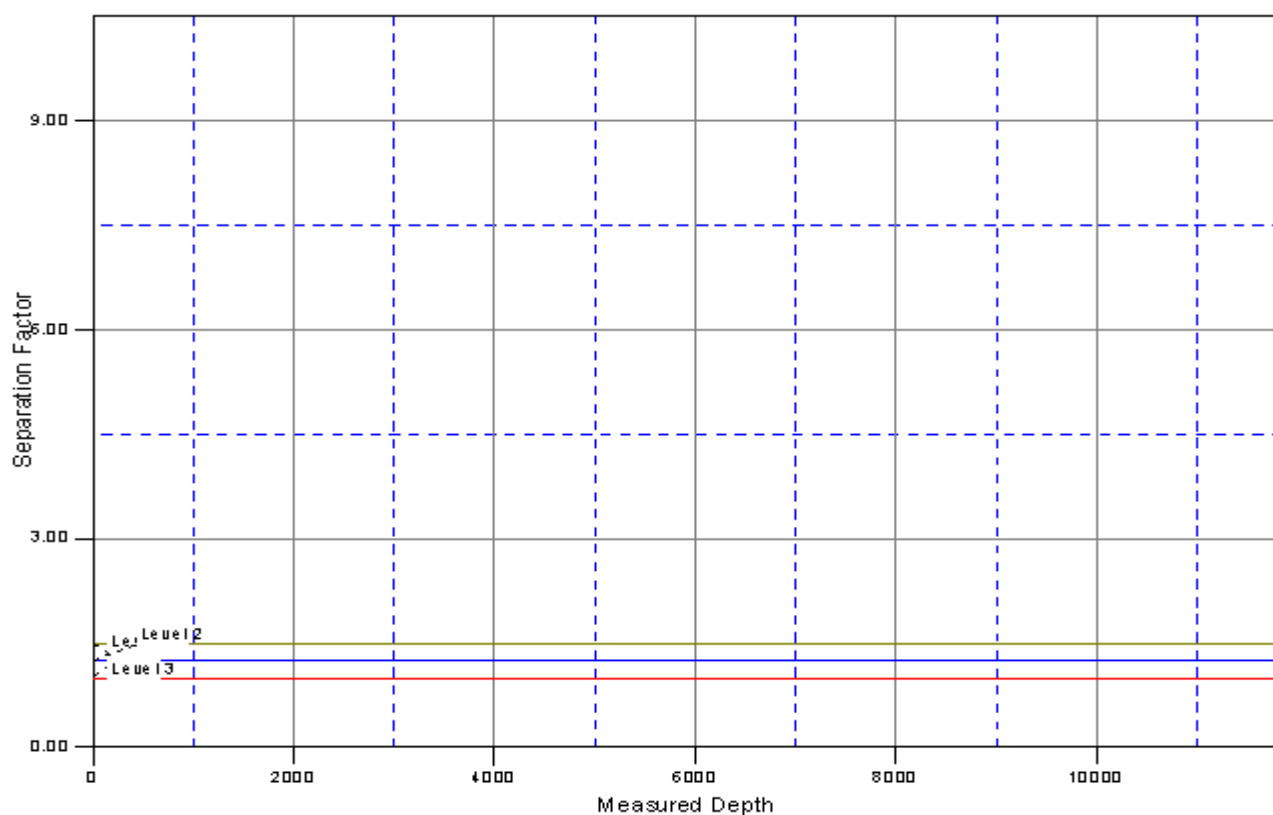
Reference Depths are relative to WELL @ 8185.50ft (Original Well Elev) Coordinates are relative to: GRANLEE OM10B  
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Central Zone  
Central Meridian is 105° 30' 0.0000 W ° Grid Convergence at Surface is: -1.63°



|                           |                           |                                     |                                       |
|---------------------------|---------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | BERRY PETROLEUM COMPANY   | <b>Local Co-ordinate Reference:</b> | Well GRANLEE OM10B                    |
| <b>Project:</b>           | GARFIELD COUNTY, COLORADO | <b>TVD Reference:</b>               | WELL @ 8185.50ft (Original Well Elev) |
| <b>Reference Site:</b>    | OM G03 696 PAD            | <b>MD Reference:</b>                | WELL @ 8185.50ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                    | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | GRANLEE OM10B             | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Well Error:</b>        | 0.00ft                    | <b>Output errors are at</b>         | 2.00 sigma                            |
| <b>Reference Wellbore</b> | OM10B                     | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1                   | <b>Offset TVD Reference:</b>        | Offset Datum                          |

Reference Depths are relative to WELL @ 8185.50ft (Original Well Elev) Coordinates are relative to: GRANLEE OM10B  
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Central Zone  
Central Meridian is 105° 30' 0.0000 W ° Grid Convergence at Surface is: -1.63°

## Separation Factor Plot



## LEGEND

— GRANLEE OM07A, OM07A, PLAN #1 — GRANLEE OM07B, OM07B, PLAN #1



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