



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_NRC 17-9 PAD**

**P\_NRC 2-9**

**P\_NRC 2-9**

**Plan: PLAN #1 1-5-10 RHS**

## **Standard Planning Report**

**04 February, 2010**





Azimuths to True North  
Magnetic North: 9.06°  
  
Magnetic Field  
Strength: 53112.7nT  
Dip Angle: 66.82°  
Date: 1/5/2010  
Model: IGRF200510

#### WELL DETAILS: P\_NRC 2-9

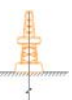
| +N/-S | +E/-W | Northing   | Easting    | Ground Level: | Latitude       | Longitude         | Slot |
|-------|-------|------------|------------|---------------|----------------|-------------------|------|
| 0.00  | 0.00  | 1268255.94 | 3170062.75 | 4997.00       | 40° 4' 5.351 N | 104° 53' 32.474 W |      |

#### FORMATION TOP DETAILS

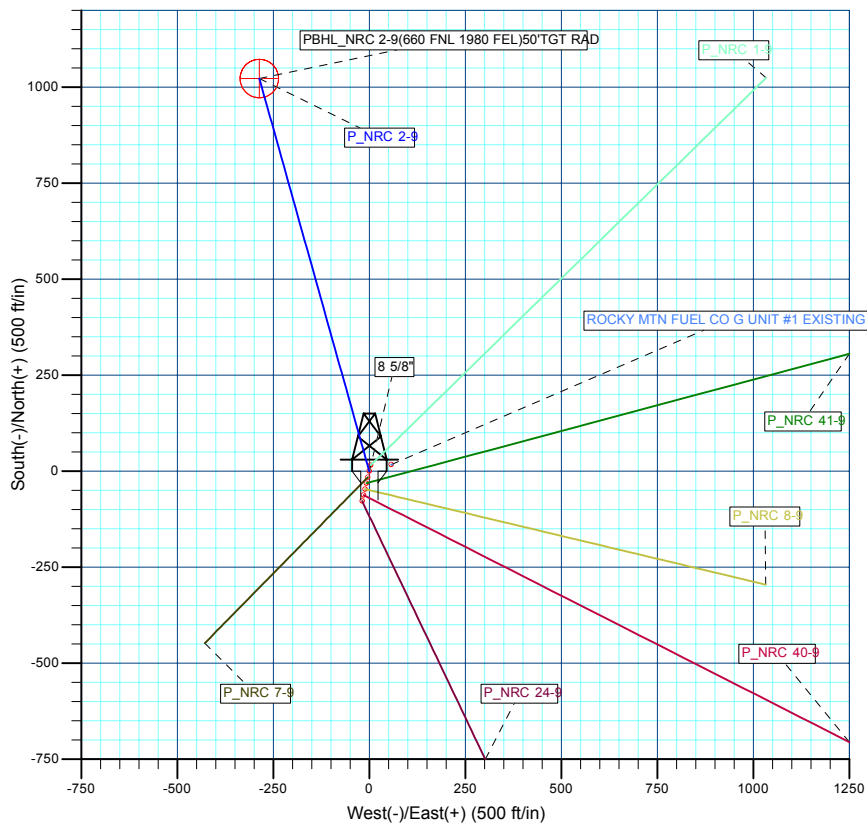
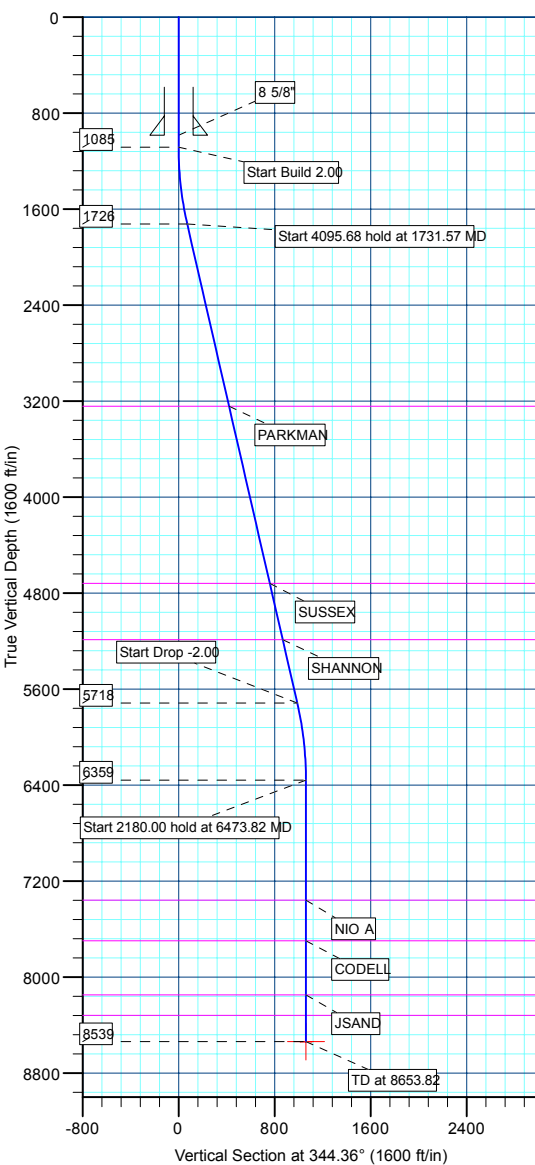
| TVDPath | MDPath  | Formation |
|---------|---------|-----------|
| 3244.00 | 3288.97 | PARKMAN   |
| 4719.00 | 4802.36 | SUSSEX    |
| 5189.00 | 5284.59 | SHANNON   |
| 7359.00 | 7473.82 | NIO A     |
| 7699.00 | 7813.82 | CODELL    |
| 8149.00 | 8263.82 | JSAND     |
| 8319.00 | 8433.82 | DAKOTA    |

#### SECTION DETAILS

| MD      | Inc   | Azi    | TVD     | +N/-S   | +E/-W   | DLeg | TFace  | VSec    | Target                                   |
|---------|-------|--------|---------|---------|---------|------|--------|---------|--|
| 0.00    | 0.00  | 0.00   | 0.00    | 0.00    | 0.00    | 0.00 | 0.00   | 0.00    |  |
| 1085.00 | 0.00  | 0.00   | 1085.00 | 0.00    | 0.00    | 0.00 | 0.00   | 0.00    |  |
| 1731.57 | 12.93 | 344.36 | 1726.10 | 69.97   | -19.59  | 2.00 | 344.36 | 72.66   |  |
| 5827.25 | 12.93 | 344.36 | 5717.90 | 952.58  | -266.71 | 0.00 | 0.00   | 989.21  |  |
| 6473.82 | 0.00  | 0.00   | 6359.00 | 1022.54 | -286.30 | 2.00 | 180.00 | 1061.86 |  |
| 8653.82 | 0.00  | 0.00   | 8539.00 | 1022.54 | -286.30 | 0.00 | 0.00   | 1061.86 | PBHL_NRC 2-9(660 FNL 1980 FEL)50°TGT RAD |



B ELEV:WELL @ 5012.00ft (Original Well Elev)  
GRD ELEV: 4997.00



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

| Name | TVD     | +N/-S   | +E/-W   | Northing   | Easting    | Latitude                          | Longitude | Shape                  |
|------|---------|---------|---------|------------|------------|-----------------------------------|-----------|------------------------|
| PBHL | 8539.00 | 1022.54 | -286.30 | 1269276.50 | 3169769.46 | 40° 4' 15.456 N 104° 53' 36.157 W |           | Circle (Radius: 50.00) |

Plan: PLAN #1 1-5-10 RHS (P\_NRC 2-9/P\_NRC 2-9)

Created By: Robert H. Scott

|                  |                             |                                     |                                       |
|------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Company:</b>  | US ROCKIES REGION PLANNING  | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Project:</b>  | COLORADO NORTHERN ZONE - 83 | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site:</b>     | WELD_NRC 17-9 PAD           | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | P_NRC 2-9                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | P_NRC 2-9                   |                                     |                                       |
| <b>Design:</b>   | PLAN #1 1-5-10 RHS          |                                     |                                       |

|                    |  |                      |                |
|--------------------|--|----------------------|----------------|
| <b>Project</b>     | COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP |                      |                |
| <b>Map System:</b> | US State Plane 1983  | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983                                    |                      |                |
| <b>Map Zone:</b>   | Colorado Northern Zone                                       |                      |                |

|                       |  |  |          |  |  |                                       |  |  |                 |  |  |                   |  |  |                   |  |  |
|-----------------------|--|--|----------|--|--|---------------------------------------|--|--|-----------------|--|--|-------------------|--|--|-------------------|--|--|
| Site                  |  |  |          |  |  | WELD_NRC 17-9 PAD, SECTION 9 T1N R67W |  |  |                 |  |  |                   |  |  |                   |  |  |
| Site Position:        |  |  |          |  |  | Northing:                             |  |  | 1,268,271.65 ft |  |  | Latitude:         |  |  | 40° 4' 5.506 N    |  |  |
| From:                 |  |  | Lat/Long |  |  | Easting:                              |  |  | 3,170,066.29 ft |  |  | Longitude:        |  |  | 104° 53' 32.428 W |  |  |
| Position Uncertainty: |  |  | 0.00 ft  |  |  | Slot Radius:                          |  |  | in              |  |  | Grid Convergence: |  |  | 0.39 °            |  |  |

| Well                 | P_NRC 2-9 |           |                     |                 |               |                   |
|----------------------|-----------|-----------|---------------------|-----------------|---------------|-------------------|
| Well Position        | +N/-S     | -15.68 ft | Northing:           | 1,268,255.94 ft | Latitude:     | 40° 4' 5.351 N    |
|                      | +E/-W     | -3.64 ft  | Easting:            | 3,170,062.75 ft | Longitude:    | 104° 53' 32.474 W |
| Position Uncertainty |           | 0.00 ft   | Wellhead Elevation: | ft              | Ground Level: | 4,997.00 ft       |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | P_NRC 2-9         |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF200510        | 1/5/2010           | 9.06                   | 66.82                | 53,113                     |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | PLAN #1 1-5-10 RHS           |                   |                      |                      |
| <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                 | 344.36               |

| <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    |                  |
| 1,085.00             | 0.00            | 0.00        | 1,085.00            | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                  |
| 1,731.57             | 12.93           | 344.36      | 1,726.10            | 69.97      | -19.59     | 2.00                  | 2.00                 | 0.00                | 344.36  |                  |
| 5,827.25             | 12.93           | 344.36      | 5,717.90            | 952.58     | -266.71    | 0.00                  | 0.00                 | 0.00                | 0.00    |                  |
| 6,473.82             | 0.00            | 0.00        | 6,359.00            | 1,022.54   | -286.30    | 2.00                  | -2.00                | 0.00                | 180.00  |                  |
| 8,653.82             | 0.00            | 0.00        | 8,539.00            | 1,022.54   | -286.30    | 0.00                  | 0.00                 | 0.00                | 0.00    | PBHL_NRC 2-9(66) |

|                  |                             |                                     |                                       |
|------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Company:</b>  | US ROCKIES REGION PLANNING  | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Project:</b>  | COLORADO NORTHERN ZONE - 83 | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site:</b>     | WELD_NRC 17-9 PAD           | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | P_NRC 2-9                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | P_NRC 2-9                   |                                     |                                       |
| <b>Design:</b>   | PLAN #1 1-5-10 RHS          |                                     |                                       |

| 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) |
| <b>Start Build 2.00</b>                 |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,085.00                                | 0.00            | 0.00        | 1,085.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 1,100.00                                | 0.30            | 344.36      | 1,100.00            | 0.04       | -0.01      | 0.04                  | 2.00                  | 2.00                 | 0.00                |
| 1,200.00                                | 2.30            | 344.36      | 1,199.97            | 2.22       | -0.62      | 2.31                  | 2.00                  | 2.00                 | 0.00                |
| 1,300.00                                | 4.30            | 344.36      | 1,299.80            | 7.77       | -2.17      | 8.06                  | 2.00                  | 2.00                 | 0.00                |
| 1,400.00                                | 6.30            | 344.36      | 1,399.37            | 16.66      | -4.66      | 17.30                 | 2.00                  | 2.00                 | 0.00                |
| 1,500.00                                | 8.30            | 344.36      | 1,498.55            | 28.90      | -8.09      | 30.01                 | 2.00                  | 2.00                 | 0.00                |
| 1,600.00                                | 10.30           | 344.36      | 1,597.23            | 44.46      | -12.45     | 46.17                 | 2.00                  | 2.00                 | 0.00                |
| 1,700.00                                | 12.30           | 344.36      | 1,695.29            | 63.32      | -17.73     | 65.76                 | 2.00                  | 2.00                 | 0.00                |
| <b>Start 4095.68 hold at 1731.57 MD</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 1,731.57                                | 12.93           | 344.36      | 1,726.10            | 69.97      | -19.59     | 72.66                 | 2.00                  | 2.00                 | 0.00                |
| 1,800.00                                | 12.93           | 344.36      | 1,792.79            | 84.71      | -23.72     | 87.97                 | 0.00                  | 0.00                 | 0.00                |
| 1,900.00                                | 12.93           | 344.36      | 1,890.25            | 106.26     | -29.75     | 110.35                | 0.00                  | 0.00                 | 0.00                |
| 2,000.00                                | 12.93           | 344.36      | 1,987.72            | 127.81     | -35.79     | 132.73                | 0.00                  | 0.00                 | 0.00                |
| 2,100.00                                | 12.93           | 344.36      | 2,085.18            | 149.36     | -41.82     | 155.10                | 0.00                  | 0.00                 | 0.00                |
| 2,200.00                                | 12.93           | 344.36      | 2,182.64            | 170.91     | -47.85     | 177.48                | 0.00                  | 0.00                 | 0.00                |
| 2,300.00                                | 12.93           | 344.36      | 2,280.11            | 192.46     | -53.89     | 199.86                | 0.00                  | 0.00                 | 0.00                |
| 2,400.00                                | 12.93           | 344.36      | 2,377.57            | 214.01     | -59.92     | 222.24                | 0.00                  | 0.00                 | 0.00                |
| 2,500.00                                | 12.93           | 344.36      | 2,475.04            | 235.56     | -65.95     | 244.62                | 0.00                  | 0.00                 | 0.00                |
| 2,600.00                                | 12.93           | 344.36      | 2,572.50            | 257.11     | -71.99     | 267.00                | 0.00                  | 0.00                 | 0.00                |
| 2,700.00                                | 12.93           | 344.36      | 2,669.96            | 278.66     | -78.02     | 289.38                | 0.00                  | 0.00                 | 0.00                |
| 2,800.00                                | 12.93           | 344.36      | 2,767.43            | 300.21     | -84.05     | 311.75                | 0.00                  | 0.00                 | 0.00                |
| 2,900.00                                | 12.93           | 344.36      | 2,864.89            | 321.76     | -90.09     | 334.13                | 0.00                  | 0.00                 | 0.00                |
| 3,000.00                                | 12.93           | 344.36      | 2,962.36            | 343.31     | -96.12     | 356.51                | 0.00                  | 0.00                 | 0.00                |
| 3,100.00                                | 12.93           | 344.36      | 3,059.82            | 364.86     | -102.16    | 378.89                | 0.00                  | 0.00                 | 0.00                |
| 3,200.00                                | 12.93           | 344.36      | 3,157.28            | 386.41     | -108.19    | 401.27                | 0.00                  | 0.00                 | 0.00                |
| <b>PARKMAN</b>                          |                 |             |                     |            |            |                       |                       |                      |                     |
| 3,288.97                                | 12.93           | 344.36      | 3,244.00            | 405.58     | -113.56    | 421.18                | 0.00                  | 0.00                 | 0.00                |
| 3,300.00                                | 12.93           | 344.36      | 3,254.75            | 407.96     | -114.22    | 423.65                | 0.00                  | 0.00                 | 0.00                |
| 3,400.00                                | 12.93           | 344.36      | 3,352.21            | 429.51     | -120.26    | 446.03                | 0.00                  | 0.00                 | 0.00                |
| 3,500.00                                | 12.93           | 344.36      | 3,449.67            | 451.06     | -126.29    | 468.40                | 0.00                  | 0.00                 | 0.00                |
| 3,600.00                                | 12.93           | 344.36      | 3,547.14            | 472.61     | -132.32    | 490.78                | 0.00                  | 0.00                 | 0.00                |
| 3,700.00                                | 12.93           | 344.36      | 3,644.60            | 494.16     | -138.36    | 513.16                | 0.00                  | 0.00                 | 0.00                |
| 3,800.00                                | 12.93           | 344.36      | 3,742.07            | 515.71     | -144.39    | 535.54                | 0.00                  | 0.00                 | 0.00                |
| 3,900.00                                | 12.93           | 344.36      | 3,839.53            | 537.26     | -150.43    | 557.92                | 0.00                  | 0.00                 | 0.00                |
| 4,000.00                                | 12.93           | 344.36      | 3,936.99            | 558.81     | -156.46    | 580.30                | 0.00                  | 0.00                 | 0.00                |
| 4,100.00                                | 12.93           | 344.36      | 4,034.46            | 580.36     | -162.49    | 602.68                | 0.00                  | 0.00                 | 0.00                |
| 4,200.00                                | 12.93           | 344.36      | 4,131.92            | 601.91     | -168.53    | 625.05                | 0.00                  | 0.00                 | 0.00                |
| 4,300.00                                | 12.93           | 344.36      | 4,229.39            | 623.46     | -174.56    | 647.43                | 0.00                  | 0.00                 | 0.00                |
| 4,400.00                                | 12.93           | 344.36      | 4,326.85            | 645.01     | -180.59    | 669.81                | 0.00                  | 0.00                 | 0.00                |
| 4,500.00                                | 12.93           | 344.36      | 4,424.31            | 666.56     | -186.63    | 692.19                | 0.00                  | 0.00                 | 0.00                |
| 4,600.00                                | 12.93           | 344.36      | 4,521.78            | 688.11     | -192.66    | 714.57                | 0.00                  | 0.00                 | 0.00                |
| 4,700.00                                | 12.93           | 344.36      | 4,619.24            | 709.66     | -198.70    | 736.95                | 0.00                  | 0.00                 | 0.00                |
| 4,800.00                                | 12.93           | 344.36      | 4,716.70            | 731.21     | -204.73    | 759.33                | 0.00                  | 0.00                 | 0.00                |
| <b>SUSSEX</b>                           |                 |             |                     |            |            |                       |                       |                      |                     |
| 4,802.36                                | 12.93           | 344.36      | 4,719.00            | 731.71     | -204.87    | 759.85                | 0.00                  | 0.00                 | 0.00                |
| 4,900.00                                | 12.93           | 344.36      | 4,814.17            | 752.76     | -210.76    | 781.70                | 0.00                  | 0.00                 | 0.00                |
| 5,000.00                                | 12.93           | 344.36      | 4,911.63            | 774.30     | -216.80    | 804.08                | 0.00                  | 0.00                 | 0.00                |
| 5,100.00                                | 12.93           | 344.36      | 5,009.10            | 795.85     | -222.83    | 826.46                | 0.00                  | 0.00                 | 0.00                |
| 5,200.00                                | 12.93           | 344.36      | 5,106.56            | 817.40     | -228.86    | 848.84                | 0.00                  | 0.00                 | 0.00                |
| <b>SHANNON</b>                          |                 |             |                     |            |            |                       |                       |                      |                     |
| 5,284.59                                | 12.93           | 344.36      | 5,189.00            | 835.63     | -233.97    | 867.77                | 0.00                  | 0.00                 | 0.00                |
| 5,300.00                                | 12.93           | 344.36      | 5,204.02            | 838.95     | -234.90    | 871.22                | 0.00                  | 0.00                 | 0.00                |

|                  |                             |                                     |                                       |
|------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Company:</b>  | US ROCKIES REGION PLANNING  | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Project:</b>  | COLORADO NORTHERN ZONE - 83 | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site:</b>     | WELD_NRC 17-9 PAD           | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | P_NRC 2-9                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | P_NRC 2-9                   |                                     |                                       |
| <b>Design:</b>   | PLAN #1 1-5-10 RHS          |                                     |                                       |

| 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) |
| 5,400.00  | 12.93           | 344.36      | 5,301.49            | 860.50     | -240.93    | 893.60                | 0.00                  | 0.00                 | 0.00                |
| 5,500.00  | 12.93           | 344.36      | 5,398.95            | 882.05     | -246.96    | 915.98                | 0.00                  | 0.00                 | 0.00                |
| 5,600.00  | 12.93           | 344.36      | 5,496.42            | 903.60     | -253.00    | 938.35                | 0.00                  | 0.00                 | 0.00                |
| 5,700.00  | 12.93           | 344.36      | 5,593.88            | 925.15     | -259.03    | 960.73                | 0.00                  | 0.00                 | 0.00                |
| 5,800.00  | 12.93           | 344.36      | 5,691.34            | 946.70     | -265.07    | 983.11                | 0.00                  | 0.00                 | 0.00                |
| <b>Start Drop -2.00</b>                         |                 |             |                     |            |            |                       |                       |                      |                     |
| 5,827.25  | 12.93           | 344.36      | 5,717.90            | 952.58     | -266.71    | 989.21                | 0.00                  | 0.00                 | 0.00                |
| 5,900.00  | 11.48           | 344.36      | 5,789.01            | 967.38     | -270.86    | 1,004.59              | 2.00                  | -2.00                | 0.00                |
| 6,000.00  | 9.48            | 344.36      | 5,887.33            | 984.89     | -275.76    | 1,022.77              | 2.00                  | -2.00                | 0.00                |
| 6,100.00  | 7.48            | 344.36      | 5,986.24            | 999.09     | -279.73    | 1,037.51              | 2.00                  | -2.00                | 0.00                |
| 6,200.00  | 5.48            | 344.36      | 6,085.59            | 1,009.95   | -282.77    | 1,048.79              | 2.00                  | -2.00                | 0.00                |
| 6,300.00  | 3.48            | 344.36      | 6,185.28            | 1,017.46   | -284.88    | 1,056.59              | 2.00                  | -2.00                | 0.00                |
| 6,400.00  | 1.48            | 344.36      | 6,285.18            | 1,021.62   | -286.04    | 1,060.91              | 2.00                  | -2.00                | 0.00                |
| <b>Start 2180.00 hold at 6473.82 MD</b>         |                 |             |                     |            |            |                       |                       |                      |                     |
| 6,473.82  | 0.00            | 0.00        | 6,359.00            | 1,022.54   | -286.30    | 1,061.86              | 2.00                  | -2.00                | 21.19               |
| 6,500.00  | 0.00            | 0.00        | 6,385.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 6,600.00  | 0.00            | 0.00        | 6,485.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 6,700.00  | 0.00            | 0.00        | 6,585.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 6,800.00  | 0.00            | 0.00        | 6,685.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 6,900.00  | 0.00            | 0.00        | 6,785.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 7,000.00  | 0.00            | 0.00        | 6,885.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 7,100.00  | 0.00            | 0.00        | 6,985.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 7,200.00  | 0.00            | 0.00        | 7,085.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 7,300.00  | 0.00            | 0.00        | 7,185.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 7,400.00  | 0.00            | 0.00        | 7,285.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| <b>NIO A</b>                                    |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,473.82  | 0.00            | 0.00        | 7,359.00            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 7,500.00  | 0.00            | 0.00        | 7,385.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 7,600.00  | 0.00            | 0.00        | 7,485.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 7,700.00  | 0.00            | 0.00        | 7,585.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 7,800.00  | 0.00            | 0.00        | 7,685.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| <b>CODELL</b>                                   |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,813.82  | 0.00            | 0.00        | 7,699.00            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 7,900.00  | 0.00            | 0.00        | 7,785.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 8,000.00  | 0.00            | 0.00        | 7,885.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 8,100.00  | 0.00            | 0.00        | 7,985.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 8,200.00  | 0.00            | 0.00        | 8,085.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| <b>JSAND</b>                                    |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,263.82  | 0.00            | 0.00        | 8,149.00            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 8,300.00  | 0.00            | 0.00        | 8,185.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 8,400.00  | 0.00            | 0.00        | 8,285.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| <b>DAKOTA</b>                                   |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,433.82  | 0.00            | 0.00        | 8,319.00            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 8,500.00  | 0.00            | 0.00        | 8,385.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| 8,600.00  | 0.00            | 0.00        | 8,485.18            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |
| <b>PBHL_NRC 2-9(660 FNL 1980 FEL)50'TGT RAD</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 8,653.82  | 0.00            | 0.00        | 8,539.00            | 1,022.54   | -286.30    | 1,061.86              | 0.00                  | 0.00                 | 0.00                |

|                  |                             |                                     |                                       |
|------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Database:</b> | EDM 2003.21 Single User Db  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Company:</b>  | US ROCKIES REGION PLANNING  | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Project:</b>  | COLORADO NORTHERN ZONE - 83 | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site:</b>     | WELD_NRC 17-9 PAD           | <b>North Reference:</b>             | True                                  |
| <b>Well:</b>     | P_NRC 2-9                   | <b>Survey Calculation Method:</b>   | Minimum Curvature                     |
| <b>Wellbore:</b> | P_NRC 2-9                   |                                     |                                       |
| <b>Design:</b>   | PLAN #1 1-5-10 RHS          |                                     |                                       |

| Design Targets   |           |          |          |          |         |              |              |                 |                   |
|--|-----------|----------|----------|----------|---------|--------------|--------------|-----------------|-------------------|
| Target Name  |           |          |          |          |         |              |              |                 |                   |
| - hit/miss target  | Dip Angle | Dip Dir. | TVD      | +N/-S    | +E/-W   | Northing     | Easting      | Latitude        | Longitude         |
| - Shape  | (°)       | (°)      | (ft)     | (ft)     | (ft)    | (ft)         | (ft)         |                 |                   |
| PBHL_NRC 2-9(660 F<br>- plan hits target center<br>- Circle (radius 50.00) | 0.00      | 0.00     | 8,539.00 | 1,022.54 | -286.30 | 1,269,276.50 | 3,169,769.46 | 40° 4' 15.456 N | 104° 53' 36.157 W |

| Casing Points |                |                |        |                 |               |
|---------------|----------------|----------------|--------|-----------------|---------------|
|               | Measured Depth | Vertical Depth |        | Casing Diameter | Hole Diameter |
|               | (ft)           | (ft)           | Name   | (in)            | (in)          |
|               | 985.00         | 985.00         | 8 5/8" | 8.62            | 11.00         |

| Formations |                |                |         |           |      |               |
|------------|----------------|----------------|---------|-----------|------|---------------|
|            | Measured Depth | Vertical Depth |         |           | Dip  | Dip Direction |
|            | (ft)           | (ft)           | Name    | Lithology | (°)  | (°)           |
|            | 3,288.97       | 3,244.00       | PARKMAN |           |      |               |
|            | 4,802.36       | 4,719.00       | SUSSEX  |           |      |               |
|            | 5,284.59       | 5,189.00       | SHANNON |           |      |               |
|            | 7,473.82       | 7,359.00       | NIO A   |           |      |               |
|            | 7,813.82       | 7,699.00       | CODELL  |           |      |               |
|            | 8,263.82       | 8,149.00       | JSAND   |           |      |               |
|            | 8,433.82       | 8,319.00       | DAKOTA  |           | 0.00 |               |

| Plan Annotations |                |                |                   |            |                                  |
|------------------|----------------|----------------|-------------------|------------|----------------------------------|
|                  | Measured Depth | Vertical Depth | Local Coordinates |            |                                  |
|                  | (ft)           | (ft)           | +N/-S (ft)        | +E/-W (ft) | Comment                          |
|                  | 1,085.00       | 1,085.00       | 0.00              | 0.00       | Start Build 2.00                 |
|                  | 1,731.57       | 1,726.10       | 69.97             | -19.59     | Start 4095.68 hold at 1731.57 MD |
|                  | 5,827.25       | 5,717.90       | 952.58            | -266.71    | Start Drop -2.00                 |
|                  | 6,473.82       | 6,359.00       | 1,022.54          | -286.30    | Start 2180.00 hold at 6473.82 MD |
|                  | 8,653.82       | 8,539.00       | 1,022.54          | -286.30    | TD at 8653.82                    |



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83  
WELD\_NRC 17-9 PAD  
P\_NRC 2-9**

**P\_NRC 2-9  
PLAN #1 1-5-10 RHS**

## **Anticollision Report**

**04 February, 2010**



|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

|                                     |   |                       |                     |
|-------------------------------------|---|-----------------------|---------------------|
| <b>Reference</b>                    | PLAN #1 1-5-10 RHS  |                       |                     |
| <b>Filter type:</b>                 | NO GLOBAL FILTER: Using user defined selection & filtering criteria |                       |                     |
| <b>Interpolation Method:</b>        | Stations  | <b>Error Model:</b>   | ISCWSA              |
| <b>Depth Range:</b>                 | 0.00 to 20,000.00ft   | <b>Scan Method:</b>   | Closest Approach 3D |
| <b>Results Limited by:</b>          | Maximum center-center distance of 10,000.00ft                       | <b>Error Surface:</b> | Elliptical Conic    |
| <b>Warning Levels Evaluated at:</b> | 2.00 Sigma  |                       |                     |

|                            |                      |                                |                  |                    |
|----------------------------|----------------------|--------------------------------|------------------|--------------------|
| <b>Survey Tool Program</b> | <b>Date</b> 2/4/2010 |                                |                  |                    |
| <b>From (ft)</b>           | <b>To (ft)</b>       | <b>Survey (Wellbore)</b>       | <b>Tool Name</b> | <b>Description</b> |
| 0.00                       | 8,653.82             | PLAN #1 1-5-10 RHS (P_NRC 2-9) | 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              |                               |                            |                               |                                |                   |             |
| WELD_NRC 17-9 PAD                            |                               |                            |                               |                                |                   |             |
| P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS   | 1,143.34                      | 1,143.06                   | 16.08                         | 11.21                          | 3.298             | CC          |
| P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS   | 1,200.00                      | 1,199.41                   | 16.18                         | 11.05                          | 3.157             | ES, SF      |
| P_NRC 24-9 - P_NRC 24-9 - PLAN #1 1-5-10 RHS | 1,085.00                      | 1,085.00                   | 80.12                         | 75.50                          | 17.346            | CC, ES      |
| P_NRC 24-9 - P_NRC 24-9 - PLAN #1 1-5-10 RHS | 1,200.00                      | 1,197.37                   | 83.94                         | 78.86                          | 16.548            | SF          |
| P_NRC 40-9 - P_NRC 40-9 - PLAN #1 1-5-10 RHS | 1,085.00                      | 1,085.00                   | 64.04                         | 59.42                          | 13.864            | CC          |
| P_NRC 40-9 - P_NRC 40-9 - PLAN #1 1-5-10 RHS | 1,100.00                      | 1,099.92                   | 64.08                         | 59.40                          | 13.684            | ES          |
| P_NRC 40-9 - P_NRC 40-9 - PLAN #1 1-5-10 RHS | 1,200.00                      | 1,199.25                   | 66.68                         | 61.59                          | 13.100            | SF          |
| P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS | 1,085.00                      | 1,085.00                   | 32.16                         | 27.54                          | 6.963             | CC          |
| P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS | 1,100.00                      | 1,100.08                   | 32.18                         | 27.49                          | 6.869             | ES          |
| P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS | 1,200.00                      | 1,200.52                   | 33.25                         | 28.13                          | 6.502             | SF          |
| P_NRC 7-9 - P_NRC 7-9 - Design #1            | 1,085.00                      | 1,085.00                   | 16.09                         | 11.47                          | 3.482             | CC, ES      |
| P_NRC 7-9 - P_NRC 7-9 - Design #1            | 1,100.00                      | 1,099.93                   | 16.15                         | 11.47                          | 3.450             | SF          |
| P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS   | 1,085.00                      | 1,085.00                   | 47.89                         | 43.27                          | 10.378            | CC          |
| P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS   | 1,100.00                      | 1,100.00                   | 47.92                         | 43.24                          | 10.242            | ES          |
| P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS   | 1,200.00                      | 1,199.85                   | 50.04                         | 44.94                          | 9.824             | SF          |
| ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY | 1,164.15                      | 1,145.14                   | 59.60                         | 13.30                          | 1.287             | Level 3, CC |
| ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY | 1,400.00                      | 1,380.37                   | 61.76                         | 5.55                           | 1.099             | Level 2, ES |
| ROCKY MTN FUEL CO G UNIT #1 EXISTING - ROCKY | 1,500.00                      | 1,479.55                   | 66.24                         | 5.91                           | 1.098             | Level 2, SF |

|   |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |
|---|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|
| <b>Offset Design</b> WELD_NRC 17-9 PAD - P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |
| Survey Program: 0-MWD   |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         |
| 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) |
| 0.00  | 0.00                | 0.00                | 0.00                | 0.00           | 0.00        | 13.07                 | 15.68                             | 3.64       | 16.09                |                       |                         |
| 100.00  | 100.00              | 100.00              | 100.00              | 0.10           | 0.10        | 13.07                 | 15.68                             | 3.64       | 16.09                | 15.90                 | 0.19                    |
| 200.00  | 200.00              | 200.00              | 200.00              | 0.32           | 0.32        | 13.07                 | 15.68                             | 3.64       | 16.09                | 15.45                 | 0.64                    |
| 300.00  | 300.00              | 300.00              | 300.00              | 0.55           | 0.55        | 13.07                 | 15.68                             | 3.64       | 16.09                | 15.00                 | 1.09                    |
| 400.00  | 400.00              | 400.00              | 400.00              | 0.77           | 0.77        | 13.07                 | 15.68                             | 3.64       | 16.09                | 14.55                 | 1.54                    |
| 500.00  | 500.00              | 500.00              | 500.00              | 0.99           | 0.99        | 13.07                 | 15.68                             | 3.64       | 16.09                | 14.10                 | 1.99                    |
| 600.00  | 600.00              | 600.00              | 600.00              | 1.22           | 1.22        | 13.07                 | 15.68                             | 3.64       | 16.09                | 13.65                 | 2.44                    |
| 700.00  | 700.00              | 700.00              | 700.00              | 1.44           | 1.44        | 13.07                 | 15.68                             | 3.64       | 16.09                | 13.20                 | 2.89                    |
| 800.00  | 800.00              | 800.00              | 800.00              | 1.67           | 1.67        | 13.07                 | 15.68                             | 3.64       | 16.09                | 12.76                 | 3.34                    |
| 900.00  | 900.00              | 900.00              | 900.00              | 1.89           | 1.89        | 13.07                 | 15.68                             | 3.64       | 16.09                | 12.31                 | 3.79                    |

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



|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|--|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 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 |
| 1,000.00   | 1,000.00            | 1,000.00            | 1,000.00            | 2.12           | 2.12        | 13.07                 | 15.68                             | 3.64       | 16.09                | 11.86                 | 4.24                    | 3.798              |         |
| 1,085.00   | 1,085.00            | 1,085.00            | 1,085.00            | 2.31           | 2.31        | 13.07                 | 15.68                             | 3.64       | 16.09                | 11.47                 | 4.62                    | 3.484              |         |
| 1,100.00   | 1,100.00            | 1,099.93            | 1,099.93            | 2.34           | 2.34        | 28.85                 | 15.70                             | 3.67       | 16.09                | 11.41                 | 4.69                    | 3.434              |         |
| 1,143.34   | 1,143.34            | 1,143.06            | 1,143.06            | 2.44           | 2.44        | 30.85                 | 16.09                             | 4.06       | 16.08                | 11.21                 | 4.88                    | 3.298 CC           |         |
| 1,200.00   | 1,199.97            | 1,199.41            | 1,199.38            | 2.57           | 2.56        | 36.99                 | 17.27                             | 5.27       | 16.18                | 11.05                 | 5.12                    | 3.157 ES, SF       |         |
| 1,300.00   | 1,299.80            | 1,298.68            | 1,298.48            | 2.79           | 2.78        | 55.92                 | 21.25                             | 9.33       | 17.77                | 12.21                 | 5.56                    | 3.195              |         |
| 1,400.00   | 1,399.37            | 1,397.55            | 1,396.93            | 3.02           | 3.01        | 76.96                 | 27.59                             | 15.81      | 23.34                | 17.33                 | 6.01                    | 3.882              |         |
| 1,500.00   | 1,498.55            | 1,495.84            | 1,494.43            | 3.27           | 3.25        | 91.93                 | 36.25                             | 24.65      | 33.81                | 27.33                 | 6.48                    | 5.218              |         |
| 1,600.00   | 1,597.23            | 1,593.38            | 1,590.71            | 3.54           | 3.51        | 100.88                | 47.16                             | 35.78      | 48.74                | 41.76                 | 6.98                    | 6.985              |         |
| 1,700.00   | 1,695.29            | 1,690.00            | 1,685.52            | 3.85           | 3.81        | 106.20                | 60.21                             | 49.11      | 67.62                | 60.10                 | 7.52                    | 8.989              |         |
| 1,731.57   | 1,726.10            | 1,720.30            | 1,715.10            | 3.95           | 3.91        | 107.40                | 64.76                             | 53.76      | 74.35                | 66.64                 | 7.71                    | 9.646              |         |
| 1,800.00   | 1,792.79            | 1,785.65            | 1,778.69            | 4.19           | 4.14        | 109.28                | 75.33                             | 64.55      | 89.87                | 81.75                 | 8.13                    | 11.059             |         |
| 1,900.00   | 1,890.25            | 1,880.43            | 1,870.25            | 4.56           | 4.52        | 110.02                | 92.45                             | 82.02      | 114.39               | 105.61                | 8.78                    | 13.023             |         |
| 2,000.00   | 1,987.72            | 1,974.15            | 1,959.95            | 4.95           | 4.95        | 109.49                | 111.45                            | 101.43     | 140.95               | 131.46                | 9.48                    | 14.860             |         |
| 2,100.00   | 2,085.18            | 2,069.13            | 2,050.13            | 5.35           | 5.42        | 108.48                | 132.29                            | 122.70     | 169.08               | 158.85                | 10.23                   | 16.532             |         |
| 2,200.00   | 2,182.64            | 2,165.02            | 2,141.14            | 5.76           | 5.93        | 107.72                | 153.43                            | 144.29     | 197.35               | 186.35                | 11.00                   | 17.939             |         |
| 2,300.00   | 2,280.11            | 2,260.91            | 2,232.15            | 6.18           | 6.45        | 107.15                | 174.57                            | 165.87     | 225.64               | 213.84                | 11.80                   | 19.129             |         |
| 2,400.00   | 2,377.57            | 2,356.81            | 2,323.16            | 6.60           | 6.99        | 106.70                | 195.71                            | 187.45     | 253.95               | 241.34                | 12.61                   | 20.145             |         |
| 2,500.00   | 2,475.04            | 2,452.70            | 2,414.17            | 7.04           | 7.54        | 106.35                | 216.85                            | 209.03     | 282.26               | 268.83                | 13.43                   | 21.017             |         |
| 2,600.00   | 2,572.50            | 2,548.59            | 2,505.18            | 7.47           | 8.10        | 106.06                | 237.99                            | 230.62     | 310.59               | 296.33                | 14.27                   | 21.771             |         |
| 2,700.00   | 2,669.96            | 2,644.49            | 2,596.19            | 7.92           | 8.67        | 105.82                | 259.12                            | 252.20     | 338.92               | 323.81                | 15.11                   | 22.428             |         |
| 2,800.00   | 2,767.43            | 2,740.38            | 2,687.20            | 8.36           | 9.24        | 105.61                | 280.26                            | 273.78     | 367.26               | 351.30                | 15.96                   | 23.004             |         |
| 2,900.00   | 2,864.89            | 2,836.27            | 2,778.21            | 8.81           | 9.82        | 105.44                | 301.40                            | 295.36     | 395.60               | 378.78                | 16.82                   | 23.513             |         |
| 3,000.00   | 2,962.36            | 2,932.17            | 2,869.22            | 9.26           | 10.40       | 105.29                | 322.54                            | 316.95     | 423.95               | 406.26                | 17.69                   | 23.965             |         |
| 3,100.00   | 3,059.82            | 3,028.06            | 2,960.23            | 9.71           | 10.98       | 105.16                | 343.68                            | 338.53     | 452.29               | 433.73                | 18.56                   | 24.368             |         |
| 3,200.00   | 3,157.28            | 3,123.95            | 3,051.24            | 10.16          | 11.57       | 105.04                | 364.82                            | 360.11     | 480.64               | 461.21                | 19.44                   | 24.729             |         |
| 3,300.00   | 3,254.75            | 3,219.85            | 3,142.25            | 10.62          | 12.16       | 104.93                | 385.95                            | 381.69     | 508.99               | 488.68                | 20.31                   | 25.055             |         |
| 3,400.00   | 3,352.21            | 3,315.74            | 3,233.26            | 11.08          | 12.75       | 104.84                | 407.09                            | 403.28     | 537.34               | 516.15                | 21.20                   | 25.350             |         |
| 3,500.00   | 3,449.67            | 3,411.63            | 3,324.27            | 11.53          | 13.35       | 104.76                | 428.23                            | 424.86     | 565.70               | 543.62                | 22.08                   | 25.618             |         |
| 3,600.00   | 3,547.14            | 3,507.53            | 3,415.28            | 11.99          | 13.94       | 104.68                | 449.37                            | 446.44     | 594.05               | 571.08                | 22.97                   | 25.863             |         |
| 3,700.00   | 3,644.60            | 3,603.42            | 3,506.29            | 12.45          | 14.54       | 104.61                | 470.51                            | 468.03     | 622.41               | 598.55                | 23.86                   | 26.087             |         |
| 3,800.00   | 3,742.07            | 3,699.31            | 3,597.30            | 12.91          | 15.14       | 104.55                | 491.65                            | 489.61     | 650.76               | 626.01                | 24.75                   | 26.293             |         |
| 3,900.00   | 3,839.53            | 3,795.21            | 3,688.32            | 13.38          | 15.73       | 104.49                | 512.79                            | 511.19     | 679.12               | 653.47                | 25.64                   | 26.482             |         |
| 4,000.00   | 3,936.99            | 3,891.10            | 3,779.33            | 13.84          | 16.34       | 104.44                | 533.92                            | 532.77     | 707.47               | 680.93                | 26.54                   | 26.657             |         |
| 4,100.00   | 4,034.46            | 3,986.99            | 3,870.34            | 14.30          | 16.94       | 104.39                | 555.06                            | 554.36     | 735.83               | 708.39                | 27.44                   | 26.820             |         |
| 4,200.00   | 4,131.92            | 4,082.89            | 3,961.35            | 14.77          | 17.54       | 104.35                | 576.20                            | 575.94     | 764.19               | 735.85                | 28.33                   | 26.971             |         |
| 4,300.00   | 4,229.39            | 4,178.78            | 4,052.36            | 15.23          | 18.14       | 104.30                | 597.34                            | 597.52     | 792.55               | 763.31                | 29.23                   | 27.111             |         |
| 4,400.00   | 4,326.85            | 4,274.67            | 4,143.37            | 15.69          | 18.74       | 104.27                | 618.48                            | 619.10     | 820.91               | 790.77                | 30.13                   | 27.242             |         |
| 4,500.00   | 4,424.31            | 4,370.57            | 4,234.38            | 16.16          | 19.35       | 104.23                | 639.62                            | 640.69     | 849.26               | 818.23                | 31.03                   | 27.365             |         |
| 4,600.00   | 4,521.78            | 4,466.46            | 4,325.39            | 16.63          | 19.95       | 104.20                | 660.76                            | 662.27     | 877.62               | 845.69                | 31.94                   | 27.480             |         |
| 4,700.00   | 4,619.24            | 4,562.35            | 4,416.40            | 17.09          | 20.56       | 104.16                | 681.89                            | 683.85     | 905.98               | 873.14                | 32.84                   | 27.588             |         |
| 4,800.00   | 4,716.70            | 4,658.25            | 4,507.41            | 17.56          | 21.16       | 104.13                | 703.03                            | 705.43     | 934.34               | 900.60                | 33.74                   | 27.689             |         |
| 4,900.00   | 4,814.17            | 4,754.14            | 4,598.42            | 18.02          | 21.77       | 104.10                | 724.17                            | 727.02     | 962.70               | 928.05                | 34.65                   | 27.785             |         |
| 5,000.00   | 4,911.63            | 4,850.03            | 4,689.43            | 18.49          | 22.37       | 104.08                | 745.31                            | 748.60     | 991.06               | 955.51                | 35.55                   | 27.875             |         |
| 5,100.00   | 5,009.10            | 4,945.93            | 4,780.44            | 18.96          | 22.98       | 104.05                | 766.45                            | 770.18     | 1,019.42             | 982.96                | 36.46                   | 27.960             |         |
| 5,200.00   | 5,106.56            | 5,041.82            | 4,871.45            | 19.43          | 23.58       | 104.03                | 787.59                            | 791.76     | 1,047.78             | 1,010.42              | 37.37                   | 28.041             |         |
| 5,300.00   | 5,204.02            | 5,137.71            | 4,962.46            | 19.89          | 24.19       | 104.01                | 808.73                            | 813.35     | 1,076.14             | 1,037.87              | 38.27                   | 28.118             |         |
| 5,400.00   | 5,301.49            | 5,233.61            | 5,053.47            | 20.36          | 24.80       | 103.99                | 829.86                            | 834.93     | 1,104.50             | 1,065.32              | 39.18                   | 28.190             |         |
| 5,500.00   | 5,398.95            | 5,329.50            | 5,144.48            | 20.83          | 25.40       | 103.97                | 851.00                            | 856.51     | 1,132.86             | 1,092.78              | 40.09                   | 28.260             |         |
| 5,600.00   | 5,496.42            | 5,425.39            | 5,235.49            | 21.30          | 26.01       | 103.95                | 872.14                            | 878.09     | 1,161.22             | 1,120.23              | 41.00                   | 28.325             |         |
| 5,700.00   | 5,593.88            | 5,521.29            | 5,326.50            | 21.77          | 26.62       | 103.93                | 893.28                            | 899.68     | 1,189.59             | 1,147.68              | 41.90                   | 28.388             |         |
| 5,800.00   | 5,691.34            | 5,617.18            | 5,417.51            | 22.23          | 27.23       | 103.91                | 914.42                            | 921.26     | 1,217.95             | 1,175.13              | 42.81                   | 28.448             |         |

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

|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 1-9 - P_NRC 1-9 - PLAN #1 1-5-10 RHS |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|--|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 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 |
| 5,827.25   | 5,717.90            | 5,643.31            | 5,442.31            | 22.36          | 27.39       | 103.91                | 920.18                            | 927.14     | 1,225.67             | 1,182.61              | 43.06                   | 28.463             |         |
| 5,900.00   | 5,789.01            | 5,740.21            | 5,534.69            | 22.66          | 27.90       | 104.27                | 940.65                            | 948.05     | 1,245.44             | 1,201.61              | 43.83                   | 28.415             |         |
| 6,000.00   | 5,887.33            | 5,881.77            | 5,671.28            | 22.98          | 28.51       | 104.69                | 966.63                            | 974.56     | 1,268.98             | 1,224.24              | 44.75                   | 28.359             |         |
| 6,100.00   | 5,986.24            | 6,025.88            | 5,812.04            | 23.26          | 29.03       | 105.02                | 988.18                            | 996.57     | 1,288.19             | 1,242.63              | 45.56                   | 28.277             |         |
| 6,200.00   | 6,085.59            | 6,172.05            | 5,956.21            | 23.50          | 29.47       | 105.27                | 1,004.96                          | 1,013.71   | 1,302.93             | 1,256.68              | 46.25                   | 28.171             |         |
| 6,300.00   | 6,185.28            | 6,319.78            | 6,102.97            | 23.70          | 29.82       | 105.44                | 1,016.67                          | 1,025.66   | 1,313.12             | 1,266.30              | 46.82                   | 28.045             |         |
| 6,400.00   | 6,285.18            | 6,468.50            | 6,251.39            | 23.85          | 30.07       | 105.54                | 1,023.10                          | 1,032.22   | 1,318.70             | 1,271.43              | 47.26                   | 27.902             |         |
| 6,473.82   | 6,359.00            | 6,576.13            | 6,359.00            | 23.94          | 30.19       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,272.33              | 47.51                   | 27.782             |         |
| 6,500.00   | 6,385.18            | 6,602.30            | 6,385.18            | 23.97          | 30.21       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,272.27              | 47.57                   | 27.747             |         |
| 6,600.00   | 6,485.18            | 6,702.30            | 6,485.18            | 24.10          | 30.31       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,272.02              | 47.81                   | 27.603             |         |
| 6,700.00   | 6,585.18            | 6,802.30            | 6,585.18            | 24.23          | 30.41       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,271.77              | 48.06                   | 27.460             |         |
| 6,800.00   | 6,685.18            | 6,902.30            | 6,685.18            | 24.36          | 30.52       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,271.52              | 48.32                   | 27.316             |         |
| 6,900.00   | 6,785.18            | 7,002.30            | 6,785.18            | 24.48          | 30.62       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,271.26              | 48.57                   | 27.173             |         |
| 7,000.00   | 6,885.18            | 7,102.30            | 6,885.18            | 24.62          | 30.72       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,271.00              | 48.83                   | 27.029             |         |
| 7,100.00   | 6,985.18            | 7,202.30            | 6,985.18            | 24.75          | 30.83       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,270.74              | 49.09                   | 26.885             |         |
| 7,200.00   | 7,085.18            | 7,302.30            | 7,085.18            | 24.88          | 30.94       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,270.48              | 49.36                   | 26.741             |         |
| 7,300.00   | 7,185.18            | 7,402.30            | 7,185.18            | 25.02          | 31.05       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,270.21              | 49.62                   | 26.598             |         |
| 7,400.00   | 7,285.18            | 7,502.30            | 7,285.18            | 25.15          | 31.16       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,269.94              | 49.89                   | 26.454             |         |
| 7,500.00   | 7,385.18            | 7,602.30            | 7,385.18            | 25.29          | 31.27       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,269.67              | 50.16                   | 26.311             |         |
| 7,600.00   | 7,485.18            | 7,702.30            | 7,485.18            | 25.43          | 31.38       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,269.40              | 50.44                   | 26.168             |         |
| 7,700.00   | 7,585.18            | 7,802.30            | 7,585.18            | 25.57          | 31.49       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,269.12              | 50.71                   | 26.025             |         |
| 7,800.00   | 7,685.18            | 7,902.30            | 7,685.18            | 25.71          | 31.61       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,268.84              | 50.99                   | 25.883             |         |
| 7,900.00   | 7,785.18            | 8,002.30            | 7,785.18            | 25.86          | 31.72       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,268.56              | 51.27                   | 25.741             |         |
| 8,000.00   | 7,885.18            | 8,102.30            | 7,885.18            | 26.00          | 31.84       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,268.28              | 51.56                   | 25.599             |         |
| 8,100.00   | 7,985.18            | 8,202.30            | 7,985.18            | 26.14          | 31.96       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,267.99              | 51.84                   | 25.458             |         |
| 8,200.00   | 8,085.18            | 8,302.30            | 8,085.18            | 26.29          | 32.08       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,267.70              | 52.13                   | 25.317             |         |
| 8,300.00   | 8,185.18            | 8,402.30            | 8,185.18            | 26.44          | 32.20       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,267.41              | 52.42                   | 25.176             |         |
| 8,400.00   | 8,285.18            | 8,502.30            | 8,285.18            | 26.59          | 32.32       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,267.12              | 52.72                   | 25.036             |         |
| 8,500.00   | 8,385.18            | 8,602.30            | 8,385.18            | 26.73          | 32.44       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,266.82              | 53.01                   | 24.897             |         |
| 8,600.00   | 8,485.18            | 8,702.30            | 8,485.18            | 26.88          | 32.56       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,266.52              | 53.31                   | 24.758             |         |
| 8,634.05   | 8,519.22            | 8,736.35            | 8,519.22            | 26.94          | 32.61       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.83             | 1,266.42              | 53.41                   | 24.711             |         |
| 8,653.82   | 8,539.00            | 8,751.13            | 8,534.00            | 26.97          | 32.62       | 89.92                 | 1,024.38                          | 1,033.53   | 1,319.84             | 1,266.38              | 53.46                   | 24.687             |         |

|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 24-9 - P_NRC 24-9 - PLAN #1 1-5-10 RHS |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|--|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Measured Depth (ft)  | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 0.00   | 0.00                | 0.00                | 0.00                | 0.00           | 0.00        | -166.67               | -77.96                            | -18.47     | 80.12                |                       |                         |                    |         |
| 100.00   | 100.00              | 100.00              | 100.00              | 0.10           | 0.10        | -166.67               | -77.96                            | -18.47     | 80.12                | 79.93                 | 0.19                    | 419.375            |         |
| 200.00   | 200.00              | 200.00              | 200.00              | 0.32           | 0.32        | -166.67               | -77.96                            | -18.47     | 80.12                | 79.48                 | 0.64                    | 125.077            |         |
| 300.00   | 300.00              | 300.00              | 300.00              | 0.55           | 0.55        | -166.67               | -77.96                            | -18.47     | 80.12                | 79.03                 | 1.09                    | 73.499             |         |
| 400.00   | 400.00              | 400.00              | 400.00              | 0.77           | 0.77        | -166.67               | -77.96                            | -18.47     | 80.12                | 78.58                 | 1.54                    | 52.039             |         |
| 500.00   | 500.00              | 500.00              | 500.00              | 0.99           | 0.99        | -166.67               | -77.96                            | -18.47     | 80.12                | 78.13                 | 1.99                    | 40.279             |         |
| 600.00   | 600.00              | 600.00              | 600.00              | 1.22           | 1.22        | -166.67               | -77.96                            | -18.47     | 80.12                | 77.68                 | 2.44                    | 32.854             |         |
| 700.00   | 700.00              | 700.00              | 700.00              | 1.44           | 1.44        | -166.67               | -77.96                            | -18.47     | 80.12                | 77.23                 | 2.89                    | 27.741             |         |
| 800.00   | 800.00              | 800.00              | 800.00              | 1.67           | 1.67        | -166.67               | -77.96                            | -18.47     | 80.12                | 76.78                 | 3.34                    | 24.005             |         |
| 900.00   | 900.00              | 900.00              | 900.00              | 1.89           | 1.89        | -166.67               | -77.96                            | -18.47     | 80.12                | 76.33                 | 3.79                    | 21.155             |         |
| 1,000.00   | 1,000.00            | 1,000.00            | 1,000.00            | 2.12           | 2.12        | -166.67               | -77.96                            | -18.47     | 80.12                | 75.89                 | 4.24                    | 18.911             |         |
| 1,085.00   | 1,085.00            | 1,085.00            | 1,085.00            | 2.31           | 2.31        | -166.67               | -77.96                            | -18.47     | 80.12                | 75.50                 | 4.62                    | 17.346 CC, ES      |         |
| 1,100.00   | 1,100.00            | 1,099.68            | 1,099.68            | 2.34           | 2.34        | -151.06               | -78.00                            | -18.46     | 80.19                | 75.50                 | 4.68                    | 17.129             |         |
| 1,200.00   | 1,199.97            | 1,197.37            | 1,197.34            | 2.57           | 2.51        | -152.68               | -79.95                            | -17.52     | 83.94                | 78.86                 | 5.07                    | 16.548 SF          |         |
| 1,300.00   | 1,299.80            | 1,294.28            | 1,294.09            | 2.79           | 2.69        | -156.20               | -84.86                            | -15.18     | 93.71                | 88.24                 | 5.47                    | 17.146             |         |
| 1,400.00   | 1,399.37            | 1,389.73            | 1,389.15            | 3.02           | 2.88        | -160.47               | -92.58                            | -11.50     | 109.93               | 104.07                | 5.86                    | 18.769             |         |
| 1,500.00   | 1,498.55            | 1,483.10            | 1,481.82            | 3.27           | 3.08        | -164.58               | -102.89                           | -6.59      | 132.85               | 126.61                | 6.24                    | 21.279             |         |
| 1,600.00   | 1,597.23            | 1,573.84            | 1,571.47            | 3.54           | 3.31        | -168.08               | -115.52                           | -0.57      | 162.47               | 155.85                | 6.62                    | 24.536             |         |
| 1,700.00   | 1,695.29            | 1,662.89            | 1,658.99            | 3.85           | 3.56        | -170.92               | -130.31                           | 6.49       | 198.49               | 191.50                | 6.99                    | 28.388             |         |
| 1,731.57   | 1,726.10            | 1,691.82            | 1,687.38            | 3.95           | 3.65        | -171.70               | -135.33                           | 8.88       | 210.85               | 203.74                | 7.11                    | 29.657             |         |
| 1,800.00   | 1,792.79            | 1,754.36            | 1,748.76            | 4.19           | 3.85        | -173.19               | -146.19                           | 14.06      | 238.08               | 230.68                | 7.40                    | 32.165             |         |
| 1,900.00   | 1,890.25            | 1,845.76            | 1,838.46            | 4.56           | 4.16        | -174.85               | -162.06                           | 21.62      | 278.06               | 270.22                | 7.83                    | 35.495             |         |
| 2,000.00   | 1,987.72            | 1,937.17            | 1,928.16            | 4.95           | 4.48        | -176.09               | -177.92                           | 29.18      | 318.19               | 309.91                | 8.27                    | 38.463             |         |
| 2,100.00   | 2,085.18            | 2,028.57            | 2,017.86            | 5.35           | 4.81        | -177.05               | -193.79                           | 36.75      | 358.41               | 349.69                | 8.72                    | 41.114             |         |
| 2,200.00   | 2,182.64            | 2,119.98            | 2,107.55            | 5.76           | 5.15        | -177.82               | -209.66                           | 44.31      | 398.70               | 389.54                | 9.17                    | 43.491             |         |
| 2,300.00   | 2,280.11            | 2,211.38            | 2,197.25            | 6.18           | 5.50        | -178.45               | -225.52                           | 51.88      | 439.05               | 429.42                | 9.62                    | 45.630             |         |
| 2,400.00   | 2,377.57            | 2,302.79            | 2,286.95            | 6.60           | 5.85        | -178.98               | -241.39                           | 59.44      | 479.42               | 469.34                | 10.08                   | 47.560             |         |
| 2,500.00   | 2,475.04            | 2,394.19            | 2,376.65            | 7.04           | 6.21        | -179.42               | -257.26                           | 67.01      | 519.83               | 509.29                | 10.54                   | 49.308             |         |
| 2,600.00   | 2,572.50            | 2,485.60            | 2,466.35            | 7.47           | 6.58        | -179.80               | -273.12                           | 74.57      | 560.26               | 549.25                | 11.01                   | 50.896             |         |
| 2,700.00   | 2,669.96            | 2,577.00            | 2,556.05            | 7.92           | 6.95        | -179.88               | -288.99                           | 82.14      | 600.71               | 589.23                | 11.48                   | 52.346             |         |
| 2,800.00   | 2,767.43            | 2,668.41            | 2,645.75            | 8.36           | 7.32        | -179.59               | -304.86                           | 89.70      | 641.17               | 629.22                | 11.95                   | 53.672             |         |
| 2,900.00   | 2,864.89            | 2,759.81            | 2,735.45            | 8.81           | 7.69        | -179.34               | -320.72                           | 97.26      | 681.64               | 669.23                | 12.42                   | 54.889             |         |
| 3,000.00   | 2,962.36            | 2,851.22            | 2,825.14            | 9.26           | 8.07        | -179.12               | -336.59                           | 104.83     | 722.13               | 709.23                | 12.89                   | 56.010             |         |
| 3,100.00   | 3,059.82            | 2,942.62            | 2,914.84            | 9.71           | 8.45        | -178.92               | -352.46                           | 112.39     | 762.62               | 749.25                | 13.37                   | 57.044             |         |
| 3,200.00   | 3,157.28            | 3,034.03            | 3,004.54            | 10.16          | 8.83        | -178.74               | -368.32                           | 119.96     | 803.12               | 789.27                | 13.85                   | 58.002             |         |
| 3,300.00   | 3,254.75            | 3,125.43            | 3,094.24            | 10.62          | 9.21        | -178.57               | -384.19                           | 127.52     | 843.62               | 829.30                | 14.33                   | 58.890             |         |
| 3,400.00   | 3,352.21            | 3,216.83            | 3,183.94            | 11.08          | 9.59        | -178.42               | -400.05                           | 135.09     | 884.13               | 869.33                | 14.81                   | 59.716             |         |
| 3,500.00   | 3,449.67            | 3,308.24            | 3,273.64            | 11.53          | 9.98        | -178.29               | -415.92                           | 142.65     | 924.65               | 909.36                | 15.29                   | 60.486             |         |
| 3,600.00   | 3,547.14            | 3,399.64            | 3,363.34            | 11.99          | 10.36       | -178.17               | -431.79                           | 150.22     | 965.16               | 949.40                | 15.77                   | 61.205             |         |
| 3,700.00   | 3,644.60            | 3,491.05            | 3,453.03            | 12.45          | 10.75       | -178.05               | -447.65                           | 157.78     | 1,005.69             | 989.43                | 16.25                   | 61.878             |         |
| 3,800.00   | 3,742.07            | 3,582.45            | 3,542.73            | 12.91          | 11.14       | -177.95               | -463.52                           | 165.34     | 1,046.21             | 1,029.47              | 16.74                   | 62.509             |         |
| 3,900.00   | 3,839.53            | 3,673.86            | 3,632.43            | 13.38          | 11.52       | -177.85               | -479.39                           | 172.91     | 1,086.74             | 1,069.52              | 17.22                   | 63.101             |         |
| 4,000.00   | 3,936.99            | 3,765.26            | 3,722.13            | 13.84          | 11.91       | -177.76               | -495.25                           | 180.47     | 1,127.27             | 1,109.56              | 17.71                   | 63.659             |         |
| 4,100.00   | 4,034.46            | 3,856.67            | 3,811.83            | 14.30          | 12.30       | -177.68               | -511.12                           | 188.04     | 1,167.80             | 1,149.61              | 18.19                   | 64.185             |         |
| 4,200.00   | 4,131.92            | 3,948.07            | 3,901.53            | 14.77          | 12.69       | -177.60               | -526.99                           | 195.60     | 1,208.33             | 1,189.65              | 18.68                   | 64.681             |         |
| 4,300.00   | 4,229.39            | 4,039.48            | 3,991.23            | 15.23          | 13.08       | -177.53               | -542.85                           | 203.17     | 1,248.87             | 1,229.70              | 19.17                   | 65.150             |         |
| 4,400.00   | 4,326.85            | 4,130.88            | 4,080.93            | 15.69          | 13.47       | -177.46               | -558.72                           | 210.73     | 1,289.41             | 1,269.75              | 19.66                   | 65.594             |         |
| 4,500.00   | 4,424.31            | 4,222.29            | 4,170.62            | 16.16          | 13.86       | -177.39               | -574.59                           | 218.30     | 1,329.95             | 1,309.80              | 20.15                   | 66.015             |         |
| 4,600.00   | 4,521.78            | 4,313.69            | 4,260.32            | 16.63          | 14.25       | -177.33               | -590.45                           | 225.86     | 1,370.49             | 1,349.85              | 20.64                   | 66.415             |         |
| 4,700.00   | 4,619.24            | 4,405.10            | 4,350.02            | 17.09          | 14.65       | -177.28               | -606.32                           | 233.42     | 1,411.03             | 1,389.90              | 21.12                   | 66.795             |         |
| 4,800.00   | 4,716.70            | 4,496.50            | 4,439.72            | 17.56          | 15.04       | -177.22               | -622.19                           | 240.99     | 1,451.57             | 1,429.95              | 21.61                   | 67.156             |         |
| 4,900.00   | 4,814.17            | 4,587.90            | 4,529.42            | 18.02          | 15.43       | -177.17               | -638.05                           | 248.55     | 1,492.11             | 1,470.01              | 22.11                   | 67.501             |         |

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

|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 24-9 - P_NRC 24-9 - PLAN #1 1-5-10 RHS |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 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 |
| 5,000.00   | 4,911.63            | 4,679.31            | 4,619.12            | 18.49           | 15.82       | 177.12                | -653.92                           | 256.12     | 1,532.66             | 1,510.06              | 22.60                   | 67.829             |         |
| 5,100.00   | 5,009.10            | 4,770.71            | 4,708.82            | 18.96           | 16.22       | 177.08                | -669.78                           | 263.68     | 1,573.20             | 1,550.11              | 23.09                   | 68.143             |         |
| 5,200.00   | 5,106.56            | 4,862.12            | 4,798.51            | 19.43           | 16.61       | 177.03                | -685.65                           | 271.25     | 1,613.75             | 1,590.17              | 23.58                   | 68.442             |         |
| 5,300.00   | 5,204.02            | 4,953.52            | 4,888.21            | 19.89           | 17.00       | 176.99                | -701.52                           | 278.81     | 1,654.29             | 1,630.22              | 24.07                   | 68.729             |         |
| 5,400.00   | 5,301.49            | 5,044.93            | 4,977.91            | 20.36           | 17.40       | 176.95                | -717.38                           | 286.38     | 1,694.84             | 1,670.28              | 24.56                   | 69.003             |         |
| 5,500.00   | 5,398.95            | 5,136.33            | 5,067.61            | 20.83           | 17.79       | 176.92                | -733.25                           | 293.94     | 1,735.39             | 1,710.33              | 25.05                   | 69.266             |         |
| 5,600.00   | 5,496.42            | 5,227.74            | 5,157.31            | 21.30           | 18.18       | 176.88                | -749.12                           | 301.50     | 1,775.94             | 1,750.39              | 25.55                   | 69.518             |         |
| 5,700.00   | 5,593.88            | 5,319.14            | 5,247.01            | 21.77           | 18.58       | 176.85                | -764.98                           | 309.07     | 1,816.49             | 1,790.45              | 26.04                   | 69.760             |         |
| 5,800.00   | 5,691.34            | 5,410.55            | 5,336.71            | 22.23           | 18.97       | 176.81                | -780.85                           | 316.63     | 1,857.04             | 1,830.50              | 26.53                   | 69.993             |         |
| 5,827.25   | 5,717.90            | 5,435.45            | 5,361.15            | 22.36           | 19.08       | 176.80                | -785.17                           | 318.69     | 1,868.09             | 1,841.42              | 26.67                   | 70.054             |         |
| 5,900.00   | 5,789.01            | 5,502.32            | 5,426.76            | 22.66           | 19.37       | 176.81                | -796.78                           | 324.23     | 1,896.74             | 1,869.61              | 27.13                   | 69.912             |         |
| 6,000.00   | 5,887.33            | 5,595.37            | 5,518.08            | 22.98           | 19.77       | 176.82                | -812.93                           | 331.93     | 1,933.34             | 1,905.63              | 27.72                   | 69.757             |         |
| 6,100.00   | 5,986.24            | 5,689.63            | 5,610.58            | 23.26           | 20.18       | 176.82                | -829.29                           | 339.73     | 1,966.68             | 1,938.41              | 28.27                   | 69.578             |         |
| 6,200.00   | 6,085.59            | 5,784.99            | 5,704.17            | 23.50           | 20.59       | 176.81                | -845.85                           | 347.62     | 1,996.71             | 1,967.93              | 28.78                   | 69.378             |         |
| 6,300.00   | 6,185.28            | 5,942.74            | 5,859.21            | 23.70           | 21.18       | 176.76                | -872.04                           | 360.11     | 2,023.01             | 1,993.63              | 29.39                   | 68.841             |         |
| 6,400.00   | 6,285.18            | 6,277.22            | 6,191.67            | 23.85           | 21.92       | 176.68                | -903.55                           | 375.13     | 2,037.69             | 2,007.45              | 30.24                   | 67.381             |         |
| 6,473.82   | 6,359.00            | 6,444.59            | 6,359.00            | 23.94           | 22.15       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,008.87              | 30.66                   | 66.512             |         |
| 6,500.00   | 6,385.18            | 6,470.77            | 6,385.18            | 23.97           | 22.19       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,008.77              | 30.76                   | 66.311             |         |
| 6,600.00   | 6,485.18            | 6,570.77            | 6,485.18            | 24.10           | 22.30       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,008.40              | 31.13                   | 65.525             |         |
| 6,700.00   | 6,585.18            | 6,670.77            | 6,585.18            | 24.23           | 22.42       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,008.04              | 31.49                   | 64.761             |         |
| 6,800.00   | 6,685.18            | 6,770.77            | 6,685.18            | 24.36           | 22.54       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,007.67              | 31.86                   | 64.010             |         |
| 6,900.00   | 6,785.18            | 6,870.77            | 6,785.18            | 24.48           | 22.66       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,007.30              | 32.23                   | 63.272             |         |
| 7,000.00   | 6,885.18            | 6,970.77            | 6,885.18            | 24.62           | 22.78       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,006.92              | 32.61                   | 62.547             |         |
| 7,100.00   | 6,985.18            | 7,070.77            | 6,985.18            | 24.75           | 22.90       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,006.55              | 32.98                   | 61.836             |         |
| 7,200.00   | 7,085.18            | 7,170.77            | 7,085.18            | 24.88           | 23.03       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,006.17              | 33.36                   | 61.136             |         |
| 7,300.00   | 7,185.18            | 7,270.77            | 7,185.18            | 25.02           | 23.15       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,005.79              | 33.74                   | 60.450             |         |
| 7,400.00   | 7,285.18            | 7,370.77            | 7,285.18            | 25.15           | 23.28       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,005.41              | 34.12                   | 59.775             |         |
| 7,500.00   | 7,385.18            | 7,470.77            | 7,385.18            | 25.29           | 23.41       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,005.03              | 34.50                   | 59.113             |         |
| 7,600.00   | 7,485.18            | 7,570.77            | 7,485.18            | 25.43           | 23.54       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,004.64              | 34.89                   | 58.462             |         |
| 7,700.00   | 7,585.18            | 7,670.77            | 7,585.18            | 25.57           | 23.67       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,004.26              | 35.27                   | 57.823             |         |
| 7,800.00   | 7,685.18            | 7,770.77            | 7,685.18            | 25.71           | 23.80       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,003.87              | 35.66                   | 57.195             |         |
| 7,900.00   | 7,785.18            | 7,870.77            | 7,785.18            | 25.86           | 23.93       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,003.48              | 36.05                   | 56.579             |         |
| 8,000.00   | 7,885.18            | 7,970.77            | 7,885.18            | 26.00           | 24.07       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,003.09              | 36.44                   | 55.974             |         |
| 8,100.00   | 7,985.18            | 8,070.77            | 7,985.18            | 26.14           | 24.21       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,002.70              | 36.83                   | 55.379             |         |
| 8,200.00   | 8,085.18            | 8,170.77            | 8,085.18            | 26.29           | 24.35       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,002.31              | 37.22                   | 54.795             |         |
| 8,300.00   | 8,185.18            | 8,270.77            | 8,185.18            | 26.44           | 24.48       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,001.91              | 37.62                   | 54.221             |         |
| 8,347.77   | 8,232.95            | 8,318.54            | 8,232.95            | 26.51           | 24.55       | 161.04                | -906.31                           | 376.45     | 2,039.53             | 2,001.73              | 37.80                   | 53.951             |         |
| 8,400.00   | 8,285.18            | 8,334.59            | 8,249.00            | 26.59           | 24.57       | 161.04                | -906.31                           | 376.45     | 2,039.85             | 2,001.91              | 37.94                   | 53.764             |         |
| 8,500.00   | 8,385.18            | 8,334.59            | 8,249.00            | 26.73           | 24.57       | 161.04                | -906.31                           | 376.45     | 2,044.07             | 2,005.92              | 38.15                   | 53.585             |         |
| 8,600.00   | 8,485.18            | 8,334.59            | 8,249.00            | 26.88           | 24.57       | 161.04                | -906.31                           | 376.45     | 2,053.16             | 2,014.81              | 38.35                   | 53.534             |         |
| 8,653.82   | 8,539.00            | 8,334.59            | 8,249.00            | 26.97           | 24.57       | 161.04                | -906.31                           | 376.45     | 2,060.04             | 2,021.58              | 38.46                   | 53.559             |         |

|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 40-9 - P_NRC 40-9 - PLAN #1 1-5-10 RHS |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | 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  |         |
| 0.00   | 0.00                | 0.00                | 0.00                | 0.00           | 0.00        | -166.61               | -62.30                            | -14.83     | 64.04                |                       |                         |                    |         |
| 100.00   | 100.00              | 100.00              | 100.00              | 0.10           | 0.10        | -166.61               | -62.30                            | -14.83     | 64.04                | 63.85                 | 0.19                    | 335.184            |         |
| 200.00   | 200.00              | 200.00              | 200.00              | 0.32           | 0.32        | -166.61               | -62.30                            | -14.83     | 64.04                | 63.40                 | 0.64                    | 99.967             |         |
| 300.00   | 300.00              | 300.00              | 300.00              | 0.55           | 0.55        | -166.61               | -62.30                            | -14.83     | 64.04                | 62.95                 | 1.09                    | 58.744             |         |
| 400.00   | 400.00              | 400.00              | 400.00              | 0.77           | 0.77        | -166.61               | -62.30                            | -14.83     | 64.04                | 62.50                 | 1.54                    | 41.592             |         |
| 500.00   | 500.00              | 500.00              | 500.00              | 0.99           | 0.99        | -166.61               | -62.30                            | -14.83     | 64.04                | 62.05                 | 1.99                    | 32.193             |         |
| 600.00   | 600.00              | 600.00              | 600.00              | 1.22           | 1.22        | -166.61               | -62.30                            | -14.83     | 64.04                | 61.60                 | 2.44                    | 26.259             |         |
| 700.00   | 700.00              | 700.00              | 700.00              | 1.44           | 1.44        | -166.61               | -62.30                            | -14.83     | 64.04                | 61.15                 | 2.89                    | 22.172             |         |
| 800.00   | 800.00              | 800.00              | 800.00              | 1.67           | 1.67        | -166.61               | -62.30                            | -14.83     | 64.04                | 60.70                 | 3.34                    | 19.186             |         |
| 900.00   | 900.00              | 900.00              | 900.00              | 1.89           | 1.89        | -166.61               | -62.30                            | -14.83     | 64.04                | 60.25                 | 3.79                    | 16.908             |         |
| 1,000.00   | 1,000.00            | 1,000.00            | 1,000.00            | 2.12           | 2.12        | -166.61               | -62.30                            | -14.83     | 64.04                | 59.80                 | 4.24                    | 15.114             |         |
| 1,085.00   | 1,085.00            | 1,085.00            | 1,085.00            | 2.31           | 2.31        | -166.61               | -62.30                            | -14.83     | 64.04                | 59.42                 | 4.62                    | 13.864 CC          |         |
| 1,100.00   | 1,100.00            | 1,099.92            | 1,099.92            | 2.34           | 2.34        | -151.02               | -62.31                            | -14.80     | 64.08                | 59.40                 | 4.68                    | 13.684 ES          |         |
| 1,200.00   | 1,199.97            | 1,199.25            | 1,199.22            | 2.57           | 2.53        | -153.80               | -63.33                            | -12.80     | 66.68                | 61.59                 | 5.09                    | 13.100 SF          |         |
| 1,300.00   | 1,299.80            | 1,297.88            | 1,297.69            | 2.79           | 2.72        | -159.91               | -65.88                            | -7.79      | 73.89                | 68.39                 | 5.50                    | 13.434             |         |
| 1,400.00   | 1,399.37            | 1,395.24            | 1,394.64            | 3.02           | 2.93        | -167.38               | -69.90                            | 0.13       | 86.82                | 80.91                 | 5.91                    | 14.689             |         |
| 1,500.00   | 1,498.55            | 1,490.78            | 1,489.42            | 3.27           | 3.15        | -174.48               | -75.30                            | 10.74      | 106.27               | 99.95                 | 6.32                    | 16.816             |         |
| 1,600.00   | 1,597.23            | 1,583.98            | 1,581.46            | 3.54           | 3.40        | 179.62                | -81.94                            | 23.81      | 132.44               | 125.71                | 6.73                    | 19.691             |         |
| 1,700.00   | 1,695.29            | 1,674.41            | 1,670.26            | 3.85           | 3.68        | 175.01                | -89.68                            | 39.02      | 165.10               | 157.97                | 7.13                    | 23.159             |         |
| 1,731.57   | 1,726.10            | 1,702.31            | 1,697.55            | 3.95           | 3.77        | 173.79                | -92.32                            | 44.23      | 176.71               | 169.45                | 7.25                    | 24.363             |         |
| 1,800.00   | 1,792.79            | 1,761.95            | 1,755.67            | 4.19           | 3.98        | 171.51                | -98.38                            | 56.13      | 203.16               | 195.59                | 7.57                    | 26.838             |         |
| 1,900.00   | 1,890.25            | 1,847.29            | 1,838.33            | 4.56           | 4.32        | 168.75                | -107.99                           | 75.04      | 244.09               | 236.05                | 8.04                    | 30.363             |         |
| 2,000.00   | 1,987.72            | 1,930.42            | 1,918.20            | 4.95           | 4.69        | 166.49                | -118.42                           | 95.56      | 287.60               | 279.08                | 8.52                    | 33.760             |         |
| 2,100.00   | 2,085.18            | 2,011.29            | 1,995.23            | 5.35           | 5.10        | 164.58                | -129.58                           | 117.50     | 333.58               | 324.57                | 9.01                    | 37.032             |         |
| 2,200.00   | 2,182.64            | 2,089.86            | 2,069.38            | 5.76           | 5.54        | 162.94                | -141.35                           | 140.66     | 381.93               | 372.42                | 9.51                    | 40.170             |         |
| 2,300.00   | 2,280.11            | 2,166.12            | 2,140.64            | 6.18           | 6.01        | 161.52                | -153.66                           | 164.86     | 432.55               | 422.53                | 10.02                   | 43.175             |         |
| 2,400.00   | 2,377.57            | 2,240.06            | 2,209.02            | 6.60           | 6.51        | 160.27                | -166.41                           | 189.94     | 485.34               | 474.81                | 10.53                   | 46.079             |         |
| 2,500.00   | 2,475.04            | 2,311.71            | 2,274.56            | 7.04           | 7.03        | 159.17                | -179.52                           | 215.73     | 540.21               | 529.16                | 11.05                   | 48.897             |         |
| 2,600.00   | 2,572.50            | 2,388.17            | 2,343.84            | 7.47           | 7.63        | 158.10                | -194.18                           | 244.57     | 596.79               | 585.20                | 11.59                   | 51.475             |         |
| 2,700.00   | 2,669.96            | 2,469.94            | 2,417.85            | 7.92           | 8.29        | 157.14                | -209.94                           | 275.57     | 653.69               | 641.53                | 12.17                   | 53.729             |         |
| 2,800.00   | 2,767.43            | 2,551.72            | 2,491.87            | 8.36           | 8.96        | 156.33                | -225.70                           | 306.56     | 710.70               | 697.96                | 12.74                   | 55.770             |         |
| 2,900.00   | 2,864.89            | 2,633.49            | 2,565.88            | 8.81           | 9.64        | 155.64                | -241.46                           | 337.56     | 767.79               | 754.47                | 13.33                   | 57.619             |         |
| 3,000.00   | 2,962.36            | 2,715.27            | 2,639.89            | 9.26           | 10.33       | 155.04                | -257.22                           | 368.55     | 824.95               | 811.04                | 13.91                   | 59.300             |         |
| 3,100.00   | 3,059.82            | 2,797.04            | 2,713.91            | 9.71           | 11.03       | 154.52                | -272.98                           | 399.55     | 882.16               | 867.65                | 14.50                   | 60.830             |         |
| 3,200.00   | 3,157.28            | 2,878.81            | 2,787.92            | 10.16          | 11.73       | 154.07                | -288.74                           | 430.54     | 939.41               | 924.31                | 15.10                   | 62.224             |         |
| 3,300.00   | 3,254.75            | 2,960.59            | 2,861.93            | 10.62          | 12.43       | 153.67                | -304.50                           | 461.54     | 996.69               | 981.00                | 15.70                   | 63.503             |         |
| 3,400.00   | 3,352.21            | 3,042.36            | 2,935.94            | 11.08          | 13.14       | 153.31                | -320.25                           | 492.53     | 1,054.01             | 1,037.71              | 16.30                   | 64.680             |         |
| 3,500.00   | 3,449.67            | 3,124.13            | 3,009.96            | 11.53          | 13.86       | 152.98                | -336.01                           | 523.53     | 1,111.35             | 1,094.45              | 16.90                   | 65.765             |         |
| 3,600.00   | 3,547.14            | 3,205.91            | 3,083.97            | 11.99          | 14.57       | 152.69                | -351.77                           | 554.52     | 1,168.71             | 1,151.21              | 17.50                   | 66.768             |         |
| 3,700.00   | 3,644.60            | 3,287.68            | 3,157.98            | 12.45          | 15.29       | 152.43                | -367.53                           | 585.52     | 1,226.09             | 1,207.98              | 18.11                   | 67.696             |         |
| 3,800.00   | 3,742.07            | 3,369.46            | 3,232.00            | 12.91          | 16.01       | 152.19                | -383.29                           | 616.51     | 1,283.49             | 1,264.77              | 18.72                   | 68.557             |         |
| 3,900.00   | 3,839.53            | 3,451.23            | 3,306.01            | 13.38          | 16.73       | 151.97                | -399.05                           | 647.51     | 1,340.90             | 1,321.57              | 19.33                   | 69.358             |         |
| 4,000.00   | 3,936.99            | 3,533.00            | 3,380.02            | 13.84          | 17.45       | 151.77                | -414.81                           | 678.51     | 1,398.32             | 1,378.38              | 19.95                   | 70.106             |         |
| 4,100.00   | 4,034.46            | 3,614.78            | 3,454.03            | 14.30          | 18.18       | 151.58                | -430.57                           | 709.50     | 1,455.76             | 1,435.20              | 20.56                   | 70.806             |         |
| 4,200.00   | 4,131.92            | 3,696.55            | 3,528.05            | 14.77          | 18.90       | 151.41                | -446.33                           | 740.50     | 1,513.20             | 1,492.03              | 21.18                   | 71.460             |         |
| 4,300.00   | 4,229.39            | 3,778.33            | 3,602.06            | 15.23          | 19.63       | 151.25                | -462.08                           | 771.49     | 1,570.65             | 1,548.86              | 21.79                   | 72.073             |         |
| 4,400.00   | 4,326.85            | 3,860.10            | 3,676.07            | 15.69          | 20.36       | 151.10                | -477.84                           | 802.49     | 1,628.11             | 1,605.70              | 22.41                   | 72.649             |         |
| 4,500.00   | 4,424.31            | 3,941.87            | 3,750.09            | 16.16          | 21.08       | 150.96                | -493.60                           | 833.48     | 1,685.58             | 1,662.55              | 23.03                   | 73.192             |         |
| 4,600.00   | 4,521.78            | 4,023.65            | 3,824.10            | 16.63          | 21.81       | 150.83                | -509.36                           | 864.48     | 1,743.05             | 1,719.40              | 23.65                   | 73.704             |         |
| 4,700.00   | 4,619.24            | 4,105.42            | 3,898.11            | 17.09          | 22.54       | 150.71                | -525.12                           | 895.47     | 1,800.53             | 1,776.26              | 24.27                   | 74.187             |         |
| 4,800.00   | 4,716.70            | 4,187.19            | 3,972.12            | 17.56          | 23.27       | 150.60                | -540.88                           | 926.47     | 1,858.01             | 1,833.12              | 24.89                   | 74.643             |         |
| 4,900.00   | 4,814.17            | 4,268.97            | 4,046.14            | 18.02          | 24.01       | 150.49                | -556.64                           | 957.46     | 1,915.50             | 1,889.98              | 25.51                   | 75.075             |         |

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

|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 40-9 - P_NRC 40-9 - PLAN #1 1-5-10 RHS |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|--|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 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 |
| 5,000.00   | 4,911.63            | 4,350.74            | 4,120.15            | 18.49           | 24.74       | 150.39                | -572.40                           | 988.46     | 1,972.99             | 1,946.85              | 26.14                   | 75.485             |         |
| 5,100.00   | 5,009.10            | 4,432.52            | 4,194.16            | 18.96           | 25.47       | 150.30                | -588.16                           | 1,019.45   | 2,030.49             | 2,003.72              | 26.76                   | 75.874             |         |
| 5,200.00   | 5,106.56            | 4,514.29            | 4,268.18            | 19.43           | 26.20       | 150.21                | -603.91                           | 1,050.45   | 2,087.98             | 2,060.60              | 27.39                   | 76.244             |         |
| 5,300.00   | 5,204.02            | 4,596.06            | 4,342.19            | 19.89           | 26.93       | 150.13                | -619.67                           | 1,081.44   | 2,145.49             | 2,117.48              | 28.01                   | 76.596             |         |
| 5,400.00   | 5,301.49            | 4,677.84            | 4,416.20            | 20.36           | 27.67       | 150.04                | -635.43                           | 1,112.44   | 2,202.99             | 2,174.36              | 28.64                   | 76.931             |         |
| 5,500.00   | 5,398.95            | 4,759.61            | 4,490.22            | 20.83           | 28.40       | 149.97                | -651.19                           | 1,143.44   | 2,260.50             | 2,231.24              | 29.26                   | 77.251             |         |
| 5,600.00   | 5,496.42            | 4,841.39            | 4,564.23            | 21.30           | 29.14       | 149.90                | -666.95                           | 1,174.43   | 2,318.01             | 2,288.12              | 29.89                   | 77.556             |         |
| 5,700.00   | 5,593.88            | 4,923.16            | 4,638.24            | 21.77           | 29.87       | 149.83                | -682.71                           | 1,205.43   | 2,375.52             | 2,345.01              | 30.52                   | 77.847             |         |
| 5,800.00   | 5,691.34            | 5,004.93            | 4,712.25            | 22.23           | 30.60       | 149.76                | -698.47                           | 1,236.42   | 2,433.04             | 2,401.89              | 31.14                   | 78.126             |         |
| 5,827.25   | 5,717.90            | 5,027.22            | 4,732.42            | 22.36           | 30.80       | 149.74                | -702.76                           | 1,244.87   | 2,448.71             | 2,417.40              | 31.31                   | 78.200             |         |
| 5,900.00   | 5,789.01            | 5,087.15            | 4,786.66            | 22.66           | 31.34       | 150.19                | -714.31                           | 1,267.58   | 2,489.90             | 2,457.91              | 31.98                   | 77.849             |         |
| 6,000.00   | 5,887.33            | 5,170.91            | 4,862.48            | 22.98           | 32.10       | 150.71                | -730.45                           | 1,299.33   | 2,544.34             | 2,511.49              | 32.85                   | 77.460             |         |
| 6,100.00   | 5,986.24            | 5,256.19            | 4,939.66            | 23.26           | 32.86       | 151.14                | -746.89                           | 1,331.66   | 2,596.21             | 2,562.54              | 33.67                   | 77.102             |         |
| 6,200.00   | 6,085.59            | 5,342.87            | 5,018.11            | 23.50           | 33.64       | 151.49                | -763.59                           | 1,364.51   | 2,645.47             | 2,611.01              | 34.45                   | 76.782             |         |
| 6,300.00   | 6,185.28            | 5,430.85            | 5,097.75            | 23.70           | 34.43       | 151.77                | -780.55                           | 1,397.86   | 2,692.06             | 2,656.87              | 35.19                   | 76.503             |         |
| 6,400.00   | 6,285.18            | 5,518.75            | 5,177.65            | 23.85           | 35.21       | 152.04                | -797.51                           | 1,431.17   | 2,739.44             | 2,704.05              | 35.94                   | 76.224             |         |
| 6,473.82   | 6,359.00            | 5,602.64            | 5,258.55            | 23.94           | 35.96       | 152.29                | -814.48                           | 1,465.42   | 2,787.81             | 2,751.21              | 36.69                   | 75.945             |         |
| 6,500.00   | 6,385.18            | 5,678.67            | 5,338.73            | 23.97           | 36.71       | 152.54                | -831.79                           | 1,499.63   | 2,836.18             | 2,800.38              | 37.44                   | 75.666             |         |
| 6,600.00   | 6,485.18            | 5,758.67            | 5,418.73            | 24.10           | 37.45       | 152.99                | -849.10                           | 1,533.80   | 2,884.55             | 2,848.75              | 38.19                   | 75.387             |         |
| 6,700.00   | 6,585.18            | 5,838.67            | 5,498.73            | 24.23           | 38.19       | 153.44                | -866.41                           | 1,567.97   | 2,932.92             | 2,897.12              | 38.94                   | 75.108             |         |
| 6,800.00   | 6,685.18            | 5,918.67            | 5,578.73            | 24.36           | 38.93       | 153.89                | -883.72                           | 1,602.13   | 2,981.29             | 2,945.49              | 39.69                   | 74.829             |         |
| 6,900.00   | 6,785.18            | 6,000.00            | 5,658.73            | 24.48           | 39.68       | 154.34                | -901.03                           | 1,636.29   | 3,029.66             | 2,993.86              | 40.44                   | 74.550             |         |
| 7,000.00   | 6,885.18            | 6,081.33            | 5,738.73            | 24.62           | 40.42       | 154.79                | -918.34                           | 1,670.46   | 3,078.03             | 3,042.23              | 41.19                   | 74.271             |         |
| 7,100.00   | 6,985.18            | 6,162.66            | 5,818.73            | 24.75           | 41.16       | 155.24                | -935.65                           | 1,704.62   | 3,126.40             | 3,090.60              | 41.94                   | 73.992             |         |
| 7,200.00   | 7,085.18            | 6,243.99            | 5,898.73            | 24.88           | 41.90       | 155.69                | -952.96                           | 1,738.79   | 3,174.77             | 3,138.97              | 42.69                   | 73.713             |         |
| 7,300.00   | 7,185.18            | 6,325.32            | 5,978.73            | 25.02           | 42.64       | 156.14                | -970.27                           | 1,772.95   | 3,223.14             | 3,187.34              | 43.44                   | 73.434             |         |
| 7,400.00   | 7,285.18            | 6,406.65            | 6,058.73            | 25.15           | 43.38       | 156.59                | -987.58                           | 1,807.12   | 3,271.51             | 3,235.71              | 44.19                   | 73.155             |         |
| 7,500.00   | 7,385.18            | 6,487.98            | 6,138.73            | 25.29           | 44.12       | 157.04                | -1004.89                          | 1,841.28   | 3,319.88             | 3,284.08              | 44.94                   | 72.876             |         |
| 7,600.00   | 7,485.18            | 6,569.31            | 6,218.73            | 25.43           | 44.86       | 157.49                | -1022.20                          | 1,875.45   | 3,368.25             | 3,332.45              | 45.69                   | 72.597             |         |
| 7,700.00   | 7,585.18            | 6,650.64            | 6,298.73            | 25.57           | 45.60       | 157.94                | -1039.51                          | 1,909.61   | 3,416.62             | 3,380.82              | 46.44                   | 72.318             |         |
| 7,800.00   | 7,685.18            | 6,731.97            | 6,378.73            | 25.71           | 46.34       | 158.39                | -1056.82                          | 1,943.78   | 3,464.99             | 3,429.19              | 47.19                   | 72.039             |         |
| 7,900.00   | 7,785.18            | 6,813.30            | 6,458.73            | 25.86           | 47.08       | 158.84                | -1074.13                          | 1,977.94   | 3,513.36             | 3,477.56              | 47.94                   | 71.760             |         |
| 8,000.00   | 7,885.18            | 6,894.63            | 6,538.73            | 26.00           | 47.82       | 159.29                | -1091.44                          | 2,012.11   | 3,561.73             | 3,525.93              | 48.69                   | 71.481             |         |
| 8,100.00   | 7,985.18            | 6,975.96            | 6,618.73            | 26.14           | 48.56       | 159.74                | -1108.75                          | 2,046.27   | 3,610.10             | 3,574.30              | 49.44                   | 71.202             |         |
| 8,200.00   | 8,085.18            | 7,057.29            | 6,698.73            | 26.29           | 49.30       | 160.19                | -1126.06                          | 2,080.44   | 3,658.47             | 3,622.67              | 50.19                   | 70.923             |         |
| 8,300.00   | 8,185.18            | 7,138.62            | 6,778.73            | 26.44           | 50.04       | 160.64                | -1143.37                          | 2,114.60   | 3,706.84             | 3,671.04              | 50.94                   | 70.644             |         |
| 8,343.33   | 8,228.51            | 7,179.95            | 6,818.73            | 26.50           | 50.78       | 161.09                | -1160.68                          | 2,148.77   | 3,755.21             | 3,719.41              | 51.69                   | 70.365             |         |
| 8,400.00   | 8,285.18            | 7,261.28            | 6,898.73            | 26.59           | 51.52       | 161.54                | -1177.99                          | 2,182.93   | 3,803.58             | 3,767.78              | 52.44                   | 70.086             |         |
| 8,500.00   | 8,385.18            | 7,342.61            | 6,978.73            | 26.73           | 52.26       | 161.99                | -1195.30                          | 2,217.10   | 3,851.95             | 3,816.15              | 53.19                   | 69.807             |         |
| 8,600.00   | 8,485.18            | 7,423.94            | 7,058.73            | 26.88           | 53.00       | 162.44                | -1212.61                          | 2,251.26   | 3,900.32             | 3,864.52              | 53.94                   | 69.528             |         |
| 8,653.82   | 8,539.00            | 7,465.27            | 7,098.73            | 26.97           | 53.74       | 162.89                | -1229.92                          | 2,285.43   | 3,948.69             | 3,912.89              | 54.69                   | 69.249             |         |



|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <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                          |            |                      |                       |                         |                    |         |
| 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 |
| 0.00                  | 0.00                | 0.00                | 0.00                | 0.00            | 0.00        | -166.92               | -31.33                            | -7.28      | 32.16                |                       |                         |                    |         |
| 100.00                | 100.00              | 100.00              | 100.00              | 0.10            | 0.10        | -166.92               | -31.33                            | -7.28      | 32.16                | 31.97                 | 0.19                    | 168.341            |         |
| 200.00                | 200.00              | 200.00              | 200.00              | 0.32            | 0.32        | -166.92               | -31.33                            | -7.28      | 32.16                | 31.52                 | 0.64                    | 50.207             |         |
| 300.00                | 300.00              | 300.00              | 300.00              | 0.55            | 0.55        | -166.92               | -31.33                            | -7.28      | 32.16                | 31.07                 | 1.09                    | 29.503             |         |
| 400.00                | 400.00              | 400.00              | 400.00              | 0.77            | 0.77        | -166.92               | -31.33                            | -7.28      | 32.16                | 30.62                 | 1.54                    | 20.889             |         |
| 500.00                | 500.00              | 500.00              | 500.00              | 0.99            | 0.99        | -166.92               | -31.33                            | -7.28      | 32.16                | 30.17                 | 1.99                    | 16.168             |         |
| 600.00                | 600.00              | 600.00              | 600.00              | 1.22            | 1.22        | -166.92               | -31.33                            | -7.28      | 32.16                | 29.72                 | 2.44                    | 13.188             |         |
| 700.00                | 700.00              | 700.00              | 700.00              | 1.44            | 1.44        | -166.92               | -31.33                            | -7.28      | 32.16                | 29.27                 | 2.89                    | 11.135             |         |
| 800.00                | 800.00              | 800.00              | 800.00              | 1.67            | 1.67        | -166.92               | -31.33                            | -7.28      | 32.16                | 28.82                 | 3.34                    | 9.636              |         |
| 900.00                | 900.00              | 900.00              | 900.00              | 1.89            | 1.89        | -166.92               | -31.33                            | -7.28      | 32.16                | 28.37                 | 3.79                    | 8.492              |         |
| 1,000.00              | 1,000.00            | 1,000.00            | 1,000.00            | 2.12            | 2.12        | -166.92               | -31.33                            | -7.28      | 32.16                | 27.93                 | 4.24                    | 7.591              |         |
| 1,085.00              | 1,085.00            | 1,085.00            | 1,085.00            | 2.31            | 2.31        | -166.92               | -31.33                            | -7.28      | 32.16                | 27.54                 | 4.62                    | 6.963 CC           |         |
| 1,100.00              | 1,100.00            | 1,100.08            | 1,100.08            | 2.34            | 2.34        | -151.38               | -31.32                            | -7.24      | 32.18                | 27.49                 | 4.68                    | 6.869 ES           |         |
| 1,200.00              | 1,199.97            | 1,200.52            | 1,200.48            | 2.57            | 2.55        | -156.74               | -30.73                            | -5.03      | 33.25                | 28.13                 | 5.11                    | 6.502 SF           |         |
| 1,300.00              | 1,299.80            | 1,300.52            | 1,300.32            | 2.79            | 2.76        | -168.55               | -29.23                            | 0.55       | 37.10                | 31.56                 | 5.54                    | 6.695              |         |
| 1,400.00              | 1,399.37            | 1,399.74            | 1,399.11            | 3.02            | 2.99        | 177.71                | -26.86                            | 9.41       | 45.74                | 39.77                 | 5.97                    | 7.660              |         |
| 1,500.00              | 1,498.55            | 1,497.82            | 1,496.39            | 3.27            | 3.23        | 166.12                | -23.65                            | 21.40      | 60.29                | 53.89                 | 6.41                    | 9.409              |         |
| 1,600.00              | 1,597.23            | 1,594.42            | 1,591.74            | 3.54            | 3.50        | 157.77                | -19.64                            | 36.36      | 80.75                | 73.89                 | 6.86                    | 11.769             |         |
| 1,700.00              | 1,695.29            | 1,689.25            | 1,684.77            | 3.85            | 3.79        | 151.98                | -14.90                            | 54.05      | 106.69               | 99.35                 | 7.34                    | 14.534             |         |
| 1,731.57              | 1,726.10            | 1,718.77            | 1,713.61            | 3.95            | 3.89        | 150.55                | -13.27                            | 60.16      | 115.95               | 108.45                | 7.50                    | 15.461             |         |
| 1,800.00              | 1,792.79            | 1,782.20            | 1,775.34            | 4.19            | 4.12        | 147.97                | -9.49                             | 74.27      | 137.04               | 129.16                | 7.88                    | 17.387             |         |
| 1,900.00              | 1,890.25            | 1,873.63            | 1,863.71            | 4.56            | 4.49        | 144.65                | -3.42                             | 96.92      | 169.65               | 161.17                | 8.47                    | 20.024             |         |
| 2,000.00              | 1,987.72            | 1,963.43            | 1,949.73            | 4.95            | 4.91        | 141.74                | 3.24                              | 121.80     | 204.43               | 195.34                | 9.10                    | 22.473             |         |
| 2,100.00              | 2,085.18            | 2,051.46            | 2,033.23            | 5.35            | 5.37        | 139.14                | 10.45                             | 148.71     | 241.44               | 231.69                | 9.75                    | 24.759             |         |
| 2,200.00              | 2,182.64            | 2,137.62            | 2,114.09            | 5.76            | 5.87        | 136.81                | 18.14                             | 177.43     | 280.70               | 270.26                | 10.43                   | 26.906             |         |
| 2,300.00              | 2,280.11            | 2,222.10            | 2,192.48            | 6.18            | 6.40        | 134.70                | 26.29                             | 207.86     | 322.19               | 311.05                | 11.13                   | 28.942             |         |
| 2,400.00              | 2,377.57            | 2,311.94            | 2,275.38            | 6.60            | 7.01        | 132.81                | 35.25                             | 241.30     | 364.88               | 353.00                | 11.88                   | 30.715             |         |
| 2,500.00              | 2,475.04            | 2,401.78            | 2,358.28            | 7.04            | 7.64        | 131.31                | 44.20                             | 274.74     | 407.83               | 395.19                | 12.64                   | 32.272             |         |
| 2,600.00              | 2,572.50            | 2,491.62            | 2,441.18            | 7.47            | 8.29        | 130.10                | 53.16                             | 308.18     | 450.97               | 437.56                | 13.40                   | 33.643             |         |
| 2,700.00              | 2,669.96            | 2,581.46            | 2,524.08            | 7.92            | 8.95        | 129.09                | 62.12                             | 341.62     | 494.24               | 480.06                | 14.18                   | 34.856             |         |
| 2,800.00              | 2,767.43            | 2,671.30            | 2,606.98            | 8.36            | 9.62        | 128.25                | 71.07                             | 375.06     | 537.62               | 522.66                | 14.96                   | 35.934             |         |
| 2,900.00              | 2,864.89            | 2,761.14            | 2,689.88            | 8.81            | 10.29       | 127.53                | 80.03                             | 408.51     | 581.08               | 565.33                | 15.75                   | 36.898             |         |
| 3,000.00              | 2,962.36            | 2,850.97            | 2,772.79            | 9.26            | 10.97       | 126.91                | 88.98                             | 441.95     | 624.61               | 608.07                | 16.54                   | 37.762             |         |
| 3,100.00              | 3,059.82            | 2,940.81            | 2,855.69            | 9.71            | 11.65       | 126.37                | 97.94                             | 475.39     | 668.18               | 650.85                | 17.34                   | 38.541             |         |
| 3,200.00              | 3,157.28            | 3,030.65            | 2,938.59            | 10.16           | 12.34       | 125.90                | 106.90                            | 508.83     | 711.80               | 693.67                | 18.14                   | 39.246             |         |
| 3,300.00              | 3,254.75            | 3,120.49            | 3,021.49            | 10.62           | 13.03       | 125.48                | 115.85                            | 542.27     | 755.46               | 736.52                | 18.94                   | 39.886             |         |
| 3,400.00              | 3,352.21            | 3,210.33            | 3,104.39            | 11.08           | 13.73       | 125.11                | 124.81                            | 575.71     | 799.14               | 779.39                | 19.75                   | 40.470             |         |
| 3,500.00              | 3,449.67            | 3,300.17            | 3,187.29            | 11.53           | 14.42       | 124.77                | 133.76                            | 609.15     | 842.85               | 822.29                | 20.56                   | 41.004             |         |
| 3,600.00              | 3,547.14            | 3,390.01            | 3,270.19            | 11.99           | 15.12       | 124.47                | 142.72                            | 642.59     | 886.57               | 865.21                | 21.37                   | 41.494             |         |
| 3,700.00              | 3,644.60            | 3,479.85            | 3,353.10            | 12.45           | 15.82       | 124.20                | 151.68                            | 676.03     | 930.32               | 908.14                | 22.18                   | 41.945             |         |
| 3,800.00              | 3,742.07            | 3,569.69            | 3,436.00            | 12.91           | 16.53       | 123.95                | 160.63                            | 709.47     | 974.08               | 951.09                | 22.99                   | 42.361             |         |
| 3,900.00              | 3,839.53            | 3,659.53            | 3,518.90            | 13.38           | 17.23       | 123.72                | 169.59                            | 742.91     | 1,017.86             | 994.05                | 23.81                   | 42.746             |         |
| 4,000.00              | 3,936.99            | 3,749.37            | 3,601.80            | 13.84           | 17.93       | 123.52                | 178.54                            | 776.35     | 1,061.65             | 1,037.02              | 24.63                   | 43.104             |         |
| 4,100.00              | 4,034.46            | 3,839.21            | 3,684.70            | 14.30           | 18.64       | 123.32                | 187.50                            | 809.79     | 1,105.44             | 1,079.99              | 25.45                   | 43.437             |         |
| 4,200.00              | 4,131.92            | 3,929.05            | 3,767.60            | 14.77           | 19.35       | 123.15                | 196.46                            | 843.23     | 1,149.25             | 1,122.98              | 26.27                   | 43.748             |         |
| 4,300.00              | 4,229.39            | 4,018.89            | 3,850.50            | 15.23           | 20.05       | 122.98                | 205.41                            | 876.67     | 1,193.06             | 1,165.97              | 27.09                   | 44.038             |         |
| 4,400.00              | 4,326.85            | 4,108.73            | 3,933.40            | 15.69           | 20.76       | 122.83                | 214.37                            | 910.11     | 1,236.89             | 1,208.97              | 27.91                   | 44.310             |         |
| 4,500.00              | 4,424.31            | 4,198.57            | 4,016.31            | 16.16           | 21.47       | 122.69                | 223.33                            | 943.55     | 1,280.72             | 1,251.98              | 28.74                   | 44.565             |         |
| 4,600.00              | 4,521.78            | 4,288.40            | 4,099.21            | 16.63           | 22.18       | 122.55                | 232.28                            | 976.99     | 1,324.55             | 1,294.99              | 29.56                   | 44.804             |         |
| 4,700.00              | 4,619.24            | 4,378.24            | 4,182.11            | 17.09           | 22.89       | 122.43                | 241.24                            | 1,010.44   | 1,368.39             | 1,338.00              | 30.39                   | 45.030             |         |
| 4,800.00              | 4,716.70            | 4,468.08            | 4,265.01            | 17.56           | 23.60       | 122.31                | 250.19                            | 1,043.88   | 1,412.24             | 1,381.02              | 31.21                   | 45.242             |         |
| 4,900.00              | 4,814.17            | 4,557.92            | 4,347.91            | 18.02           | 24.32       | 122.20                | 259.15                            | 1,077.32   | 1,456.09             | 1,424.05              | 32.04                   | 45.443             |         |

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

|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 41-9 - P_NRC 41-9 - PLAN #1 1-5-10 RHS |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | 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  |         |
| 5,000.00   | 4,911.63            | 4,647.76            | 4,430.81            | 18.49           | 25.03       | 122.10                | 268.11                            | 1,110.76   | 1,499.94             | 1,467.07              | 32.87                   | 45.634             |         |
| 5,100.00   | 5,009.10            | 4,737.60            | 4,513.71            | 18.96           | 25.74       | 122.00                | 277.06                            | 1,144.20   | 1,543.80             | 1,510.10              | 33.70                   | 45.814             |         |
| 5,200.00   | 5,106.56            | 4,827.44            | 4,596.62            | 19.43           | 26.45       | 121.91                | 286.02                            | 1,177.64   | 1,587.66             | 1,553.13              | 34.53                   | 45.985             |         |
| 5,300.00   | 5,204.02            | 4,917.28            | 4,679.52            | 19.89           | 27.17       | 121.82                | 294.97                            | 1,211.08   | 1,631.52             | 1,596.17              | 35.36                   | 46.147             |         |
| 5,400.00   | 5,301.49            | 5,007.12            | 4,762.42            | 20.36           | 27.88       | 121.74                | 303.93                            | 1,244.52   | 1,675.39             | 1,639.21              | 36.18                   | 46.301             |         |
| 5,500.00   | 5,398.95            | 5,096.96            | 4,845.32            | 20.83           | 28.59       | 121.66                | 312.89                            | 1,277.96   | 1,719.26             | 1,682.25              | 37.01                   | 46.448             |         |
| 5,600.00   | 5,496.42            | 5,186.80            | 4,928.22            | 21.30           | 29.31       | 121.59                | 321.84                            | 1,311.40   | 1,763.13             | 1,725.29              | 37.84                   | 46.588             |         |
| 5,700.00   | 5,593.88            | 5,276.64            | 5,011.12            | 21.77           | 30.02       | 121.52                | 330.80                            | 1,344.84   | 1,807.01             | 1,768.33              | 38.68                   | 46.722             |         |
| 5,800.00   | 5,691.34            | 5,366.48            | 5,094.02            | 22.23           | 30.74       | 121.45                | 339.76                            | 1,378.28   | 1,850.88             | 1,811.38              | 39.51                   | 46.850             |         |
| 5,827.25   | 5,717.90            | 5,390.96            | 5,116.61            | 22.36           | 30.93       | 121.43                | 342.20                            | 1,387.39   | 1,862.84             | 1,823.11              | 39.73                   | 46.883             |         |
| 5,900.00   | 5,789.01            | 5,456.50            | 5,177.10            | 22.66           | 31.45       | 121.96                | 348.73                            | 1,411.79   | 1,894.33             | 1,853.83              | 40.50                   | 46.773             |         |
| 6,000.00   | 5,887.33            | 5,604.99            | 5,314.79            | 22.98           | 32.52       | 122.45                | 363.10                            | 1,465.44   | 1,935.51             | 1,893.83              | 41.68                   | 46.439             |         |
| 6,100.00   | 5,986.24            | 5,824.56            | 5,523.05            | 23.26           | 33.67       | 122.72                | 381.05                            | 1,532.48   | 1,969.93             | 1,927.02              | 42.91                   | 45.912             |         |
| 6,200.00   | 6,085.59            | 6,055.53            | 5,747.17            | 23.50           | 34.62       | 122.93                | 395.43                            | 1,586.16   | 1,996.26             | 1,952.28              | 43.98                   | 45.391             |         |
| 6,300.00   | 6,185.28            | 6,295.28            | 5,983.75            | 23.70           | 35.32       | 123.09                | 405.36                            | 1,623.25   | 2,014.01             | 1,969.15              | 44.86                   | 44.894             |         |
| 6,400.00   | 6,285.18            | 6,540.48            | 6,228.16            | 23.85           | 35.74       | 123.20                | 410.19                            | 1,641.29   | 2,022.79             | 1,977.28              | 45.52                   | 44.439             |         |
| 6,473.82   | 6,359.00            | 6,671.33            | 6,359.00            | 23.94           | 35.87       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,978.05              | 45.82                   | 44.174             |         |
| 6,500.00   | 6,385.18            | 6,697.51            | 6,385.18            | 23.97           | 35.89       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,977.98              | 45.88                   | 44.114             |         |
| 6,600.00   | 6,485.18            | 6,797.51            | 6,485.18            | 24.10           | 35.97       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,977.73              | 46.13                   | 43.872             |         |
| 6,700.00   | 6,585.18            | 6,897.51            | 6,585.18            | 24.23           | 36.06       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,977.47              | 46.39                   | 43.629             |         |
| 6,800.00   | 6,685.18            | 6,997.51            | 6,685.18            | 24.36           | 36.15       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,977.21              | 46.65                   | 43.386             |         |
| 6,900.00   | 6,785.18            | 7,097.51            | 6,785.18            | 24.48           | 36.24       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,976.95              | 46.91                   | 43.143             |         |
| 7,000.00   | 6,885.18            | 7,197.51            | 6,885.18            | 24.62           | 36.33       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,976.69              | 47.18                   | 42.900             |         |
| 7,100.00   | 6,985.18            | 7,297.51            | 6,985.18            | 24.75           | 36.42       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,976.42              | 47.44                   | 42.658             |         |
| 7,200.00   | 7,085.18            | 7,397.51            | 7,085.18            | 24.88           | 36.51       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,976.15              | 47.72                   | 42.416             |         |
| 7,300.00   | 7,185.18            | 7,497.51            | 7,185.18            | 25.02           | 36.60       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,975.87              | 47.99                   | 42.174             |         |
| 7,400.00   | 7,285.18            | 7,597.51            | 7,285.18            | 25.15           | 36.70       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,975.60              | 48.26                   | 41.932             |         |
| 7,500.00   | 7,385.18            | 7,697.51            | 7,385.18            | 25.29           | 36.79       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,975.32              | 48.54                   | 41.692             |         |
| 7,600.00   | 7,485.18            | 7,797.51            | 7,485.18            | 25.43           | 36.89       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,975.04              | 48.82                   | 41.451             |         |
| 7,700.00   | 7,585.18            | 7,897.51            | 7,585.18            | 25.57           | 36.99       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,974.75              | 49.11                   | 41.212             |         |
| 7,800.00   | 7,685.18            | 7,997.51            | 7,685.18            | 25.71           | 37.09       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,974.47              | 49.39                   | 40.973             |         |
| 7,900.00   | 7,785.18            | 8,097.51            | 7,785.18            | 25.86           | 37.19       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,974.18              | 49.68                   | 40.735             |         |
| 8,000.00   | 7,885.18            | 8,197.51            | 7,885.18            | 26.00           | 37.29       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,973.89              | 49.97                   | 40.498             |         |
| 8,100.00   | 7,985.18            | 8,297.51            | 7,985.18            | 26.14           | 37.39       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,973.59              | 50.27                   | 40.262             |         |
| 8,200.00   | 8,085.18            | 8,397.51            | 8,085.18            | 26.29           | 37.50       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,973.30              | 50.56                   | 40.026             |         |
| 8,300.00   | 8,185.18            | 8,497.51            | 8,185.18            | 26.44           | 37.60       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,973.00              | 50.86                   | 39.792             |         |
| 8,347.77   | 8,232.95            | 8,545.28            | 8,232.95            | 26.51           | 37.65       | 107.60                | 410.61                            | 1,642.83   | 2,023.86             | 1,972.86              | 51.00                   | 39.680             |         |
| 8,400.00   | 8,285.18            | 8,561.33            | 8,249.00            | 26.59           | 37.67       | 107.60                | 410.61                            | 1,642.83   | 2,024.19             | 1,973.08              | 51.11                   | 39.604             |         |
| 8,500.00   | 8,385.18            | 8,561.33            | 8,249.00            | 26.73           | 37.67       | 107.60                | 410.61                            | 1,642.83   | 2,028.44             | 1,977.17              | 51.27                   | 39.563             |         |
| 8,600.00   | 8,485.18            | 8,561.33            | 8,249.00            | 26.88           | 37.67       | 107.60                | 410.61                            | 1,642.83   | 2,037.60             | 1,986.16              | 51.43                   | 39.617             |         |
| 8,653.82   | 8,539.00            | 8,561.33            | 8,249.00            | 26.97           | 37.67       | 107.60                | 410.61                            | 1,642.83   | 2,044.53             | 1,993.01              | 51.52                   | 39.685             |         |



|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 7-9 - P_NRC 7-9 - Design #1 |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|---|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD   |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 0.00 ft |
| Measured Depth (ft)   | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor  | Warning |
| 0.00  | 0.00                | 0.00                | 0.00                | 0.00           | 0.00        | -166.93               | -15.67                            | -3.64      | 16.09                |                       |                         |                    |         |
| 100.00  | 100.00              | 100.00              | 100.00              | 0.10           | 0.10        | -166.93               | -15.67                            | -3.64      | 16.09                | 15.89                 | 0.19                    | 84.192             |         |
| 200.00  | 200.00              | 200.00              | 200.00              | 0.32           | 0.32        | -166.93               | -15.67                            | -3.64      | 16.09                | 15.44                 | 0.64                    | 25.110             |         |
| 300.00  | 300.00              | 300.00              | 300.00              | 0.55           | 0.55        | -166.93               | -15.67                            | -3.64      | 16.09                | 14.99                 | 1.09                    | 14.755             |         |
| 400.00  | 400.00              | 400.00              | 400.00              | 0.77           | 0.77        | -166.93               | -15.67                            | -3.64      | 16.09                | 14.55                 | 1.54                    | 10.447             |         |
| 500.00  | 500.00              | 500.00              | 500.00              | 0.99           | 0.99        | -166.93               | -15.67                            | -3.64      | 16.09                | 14.10                 | 1.99                    | 8.086              |         |
| 600.00  | 600.00              | 600.00              | 600.00              | 1.22           | 1.22        | -166.93               | -15.67                            | -3.64      | 16.09                | 13.65                 | 2.44                    | 6.596              |         |
| 700.00  | 700.00              | 700.00              | 700.00              | 1.44           | 1.44        | -166.93               | -15.67                            | -3.64      | 16.09                | 13.20                 | 2.89                    | 5.569              |         |
| 800.00  | 800.00              | 800.00              | 800.00              | 1.67           | 1.67        | -166.93               | -15.67                            | -3.64      | 16.09                | 12.75                 | 3.34                    | 4.819              |         |
| 900.00  | 900.00              | 900.00              | 900.00              | 1.89           | 1.89        | -166.93               | -15.67                            | -3.64      | 16.09                | 12.30                 | 3.79                    | 4.247              |         |
| 1,000.00  | 1,000.00            | 1,000.00            | 1,000.00            | 2.12           | 2.12        | -166.93               | -15.67                            | -3.64      | 16.09                | 11.85                 | 4.24                    | 3.796              |         |
| 1,085.00  | 1,085.00            | 1,085.00            | 1,085.00            | 2.31           | 2.31        | -166.93               | -15.67                            | -3.64      | 16.09                | 11.47                 | 4.62                    | 3.482 CC, ES       |         |
| 1,100.00  | 1,100.00            | 1,099.93            | 1,099.93            | 2.34           | 2.34        | -151.28               | -15.70                            | -3.67      | 16.15                | 11.47                 | 4.68                    | 3.450 SF           |         |
| 1,200.00  | 1,199.97            | 1,199.31            | 1,199.28            | 2.57           | 2.52        | -151.00               | -17.29                            | -5.24      | 20.07                | 14.99                 | 5.08                    | 3.949              |         |
| 1,300.00  | 1,299.80            | 1,298.08            | 1,297.89            | 2.79           | 2.70        | -150.59               | -21.32                            | -9.19      | 29.98                | 24.49                 | 5.48                    | 5.467              |         |
| 1,400.00  | 1,399.37            | 1,395.71            | 1,395.10            | 3.02           | 2.90        | -150.26               | -27.67                            | -15.44     | 45.82                | 39.93                 | 5.89                    | 7.781              |         |
| 1,500.00  | 1,498.55            | 1,492.77            | 1,491.46            | 3.27           | 3.12        | -150.22               | -35.97                            | -23.59     | 67.07                | 60.77                 | 6.30                    | 10.644             |         |
| 1,600.00  | 1,597.23            | 1,589.71            | 1,587.66            | 3.54           | 3.36        | -151.07               | -44.49                            | -31.96     | 91.56                | 84.84                 | 6.72                    | 13.623             |         |
| 1,700.00  | 1,695.29            | 1,685.81            | 1,683.03            | 3.85           | 3.61        | -152.25               | -52.93                            | -40.26     | 119.05               | 111.91                | 7.15                    | 16.659             |         |
| 1,731.57  | 1,726.10            | 1,715.97            | 1,712.96            | 3.95           | 3.69        | -152.65               | -55.58                            | -42.86     | 128.36               | 121.08                | 7.28                    | 17.627             |         |
| 1,800.00  | 1,792.79            | 1,781.21            | 1,777.71            | 4.19           | 3.86        | -153.56               | -61.31                            | -48.50     | 148.88               | 141.27                | 7.61                    | 19.571             |         |
| 1,900.00  | 1,890.25            | 1,876.56            | 1,872.33            | 4.56           | 4.12        | -154.52               | -69.69                            | -56.73     | 178.91               | 170.82                | 8.09                    | 22.109             |         |
| 2,000.00  | 1,987.72            | 1,971.91            | 1,966.95            | 4.95           | 4.39        | -155.20               | -78.07                            | -64.96     | 208.97               | 200.38                | 8.59                    | 24.336             |         |
| 2,100.00  | 2,085.18            | 2,067.26            | 2,061.57            | 5.35           | 4.67        | -155.71               | -86.44                            | -73.20     | 239.05               | 229.96                | 9.09                    | 26.299             |         |
| 2,200.00  | 2,182.64            | 2,162.61            | 2,156.20            | 5.76           | 4.95        | -156.10               | -94.82                            | -81.43     | 269.15               | 259.55                | 9.60                    | 28.037             |         |
| 2,300.00  | 2,280.11            | 2,257.96            | 2,250.82            | 6.18           | 5.23        | -156.42               | -103.20                           | -89.66     | 299.25               | 289.14                | 10.12                   | 29.585             |         |
| 2,400.00  | 2,377.57            | 2,353.31            | 2,345.44            | 6.60           | 5.52        | -156.68               | -111.58                           | -97.90     | 329.36               | 318.73                | 10.64                   | 30.969             |         |
| 2,500.00  | 2,475.04            | 2,448.66            | 2,440.07            | 7.04           | 5.81        | -156.89               | -119.95                           | -106.13    | 359.48               | 348.32                | 11.16                   | 32.212             |         |
| 2,600.00  | 2,572.50            | 2,544.01            | 2,534.69            | 7.47           | 6.10        | -157.07               | -128.33                           | -114.36    | 389.60               | 377.91                | 11.69                   | 33.334             |         |
| 2,700.00  | 2,669.96            | 2,639.35            | 2,629.31            | 7.92           | 6.39        | -157.23               | -136.71                           | -122.59    | 419.72               | 407.51                | 12.22                   | 34.350             |         |
| 2,800.00  | 2,767.43            | 2,734.70            | 2,723.94            | 8.36           | 6.69        | -157.36               | -145.08                           | -130.83    | 449.85               | 437.10                | 12.75                   | 35.274             |         |
| 2,900.00  | 2,864.89            | 2,830.05            | 2,818.56            | 8.81           | 6.98        | -157.48               | -153.46                           | -139.06    | 479.98               | 466.69                | 13.29                   | 36.118             |         |
| 3,000.00  | 2,962.36            | 2,925.40            | 2,913.18            | 9.26           | 7.28        | -157.58               | -161.84                           | -147.29    | 510.11               | 496.28                | 13.83                   | 36.890             |         |
| 3,100.00  | 3,059.82            | 3,020.75            | 3,007.80            | 9.71           | 7.58        | -157.68               | -170.22                           | -155.53    | 540.24               | 525.87                | 14.37                   | 37.600             |         |
| 3,200.00  | 3,157.28            | 3,116.10            | 3,102.43            | 10.16          | 7.88        | -157.76               | -178.59                           | -163.76    | 570.37               | 555.46                | 14.91                   | 38.254             |         |
| 3,300.00  | 3,254.75            | 3,211.45            | 3,197.05            | 10.62          | 8.19        | -157.83               | -186.97                           | -171.99    | 600.50               | 585.05                | 15.45                   | 38.859             |         |
| 3,400.00  | 3,352.21            | 3,306.80            | 3,291.67            | 11.08          | 8.49        | -157.90               | -195.35                           | -180.23    | 630.64               | 614.64                | 16.00                   | 39.419             |         |
| 3,500.00  | 3,449.67            | 3,402.15            | 3,386.30            | 11.53          | 8.79        | -157.96               | -203.72                           | -188.46    | 660.77               | 644.23                | 16.54                   | 39.939             |         |
| 3,600.00  | 3,547.14            | 3,497.50            | 3,480.92            | 11.99          | 9.10        | -158.02               | -212.10                           | -196.69    | 690.91               | 673.82                | 17.09                   | 40.424             |         |
| 3,700.00  | 3,644.60            | 3,592.85            | 3,575.54            | 12.45          | 9.40        | -158.07               | -220.48                           | -204.92    | 721.04               | 703.40                | 17.64                   | 40.876             |         |
| 3,800.00  | 3,742.07            | 3,688.20            | 3,670.17            | 12.91          | 9.71        | -158.12               | -228.86                           | -213.16    | 751.18               | 732.99                | 18.19                   | 41.299             |         |
| 3,900.00  | 3,839.53            | 3,783.55            | 3,764.79            | 13.38          | 10.01       | -158.16               | -237.23                           | -221.39    | 781.32               | 762.58                | 18.74                   | 41.695             |         |
| 4,000.00  | 3,936.99            | 3,878.89            | 3,859.41            | 13.84          | 10.32       | -158.20               | -245.61                           | -229.62    | 811.45               | 792.17                | 19.29                   | 42.067             |         |
| 4,100.00  | 4,034.46            | 3,974.24            | 3,954.03            | 14.30          | 10.63       | -158.24               | -253.99                           | -237.86    | 841.59               | 821.75                | 19.84                   | 42.417             |         |
| 4,200.00  | 4,131.92            | 4,069.59            | 4,048.66            | 14.77          | 10.93       | -158.27               | -262.36                           | -246.09    | 871.73               | 851.34                | 20.39                   | 42.747             |         |
| 4,300.00  | 4,229.39            | 4,164.94            | 4,143.28            | 15.23          | 11.24       | -158.30               | -270.74                           | -254.32    | 901.87               | 880.92                | 20.95                   | 43.059             |         |
| 4,400.00  | 4,326.85            | 4,260.29            | 4,237.90            | 15.69          | 11.55       | -158.33               | -279.12                           | -262.55    | 932.01               | 910.51                | 21.50                   | 43.353             |         |
| 4,500.00  | 4,424.31            | 4,355.64            | 4,332.53            | 16.16          | 11.86       | -158.36               | -287.50                           | -270.79    | 962.14               | 940.09                | 22.05                   | 43.631             |         |
| 4,600.00  | 4,521.78            | 4,450.99            | 4,427.15            | 16.63          | 12.16       | -158.39               | -295.87                           | -279.02    | 992.28               | 969.68                | 22.61                   | 43.895             |         |
| 4,700.00  | 4,619.24            | 4,546.34            | 4,521.77            | 17.09          | 12.47       | -158.41               | -304.25                           | -287.25    | 1,022.42             | 999.26                | 23.16                   | 44.145             |         |
| 4,800.00  | 4,716.70            | 4,641.69            | 4,616.40            | 17.56          | 12.78       | -158.44               | -312.63                           | -295.49    | 1,052.56             | 1,028.85              | 23.72                   | 44.383             |         |
| 4,900.00  | 4,814.17            | 4,737.04            | 4,711.02            | 18.02          | 13.09       | -158.46               | -321.00                           | -303.72    | 1,082.70             | 1,058.43              | 24.27                   | 44.610             |         |

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

|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 7-9 - P_NRC 7-9 - Design #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  |         |
| 5,000.00  | 4,911.63            | 4,832.39            | 4,805.64            | 18.49           | 13.40       | -158.48               | -329.38                           | -311.95    | 1,112.84             | 1,088.01              | 24.83                   | 44.826             |         |
| 5,100.00  | 5,009.10            | 4,927.74            | 4,900.26            | 18.96           | 13.71       | -158.50               | -337.76                           | -320.19    | 1,142.98             | 1,117.60              | 25.38                   | 45.031             |         |
| 5,200.00  | 5,106.56            | 5,023.08            | 4,994.89            | 19.43           | 14.02       | -158.52               | -346.14                           | -328.42    | 1,173.12             | 1,147.18              | 25.94                   | 45.228             |         |
| 5,300.00  | 5,204.02            | 5,118.43            | 5,089.51            | 19.89           | 14.33       | -158.54               | -354.51                           | -336.65    | 1,203.26             | 1,176.76              | 26.49                   | 45.415             |         |
| 5,400.00  | 5,301.49            | 5,213.78            | 5,184.13            | 20.36           | 14.64       | -158.56               | -362.89                           | -344.88    | 1,233.40             | 1,206.35              | 27.05                   | 45.595             |         |
| 5,500.00  | 5,398.95            | 5,309.13            | 5,278.76            | 20.83           | 14.95       | -158.57               | -371.27                           | -353.12    | 1,263.54             | 1,235.93              | 27.61                   | 45.767             |         |
| 5,600.00  | 5,496.42            | 5,404.48            | 5,373.38            | 21.30           | 15.26       | -158.59               | -379.64                           | -361.35    | 1,293.68             | 1,265.51              | 28.17                   | 45.931             |         |
| 5,700.00  | 5,593.88            | 5,499.83            | 5,468.00            | 21.77           | 15.57       | -158.60               | -388.02                           | -369.58    | 1,323.82             | 1,295.10              | 28.72                   | 46.089             |         |
| 5,800.00  | 5,691.34            | 5,595.18            | 5,562.63            | 22.23           | 15.88       | -158.62               | -396.40                           | -377.82    | 1,353.96             | 1,324.68              | 29.28                   | 46.241             |         |
| 5,827.25  | 5,717.90            | 5,621.16            | 5,588.41            | 22.36           | 15.97       | -158.62               | -398.68                           | -380.06    | 1,362.17             | 1,332.74              | 29.43                   | 46.281             |         |
| 5,900.00  | 5,789.01            | 5,690.78            | 5,657.50            | 22.66           | 16.19       | -158.78               | -404.80                           | -386.07    | 1,383.28             | 1,353.38              | 29.90                   | 46.262             |         |
| 6,000.00  | 5,887.33            | 5,787.25            | 5,753.23            | 22.98           | 16.51       | -158.92               | -413.27                           | -394.40    | 1,409.58             | 1,379.10              | 30.48                   | 46.240             |         |
| 6,100.00  | 5,986.24            | 5,884.49            | 5,849.73            | 23.26           | 16.83       | -158.99               | -421.82                           | -402.80    | 1,432.74             | 1,401.71              | 31.03                   | 46.169             |         |
| 6,200.00  | 6,085.59            | 5,982.40            | 5,946.90            | 23.50           | 17.15       | -158.99               | -430.42                           | -411.25    | 1,452.72             | 1,421.18              | 31.54                   | 46.055             |         |
| 6,300.00  | 6,185.28            | 6,133.20            | 6,096.87            | 23.70           | 17.54       | -158.87               | -441.53                           | -422.17    | 1,468.10             | 1,436.01              | 32.10                   | 45.741             |         |
| 6,400.00  | 6,285.18            | 6,299.14            | 6,262.60            | 23.85           | 17.83       | -158.83               | -447.28                           | -427.83    | 1,475.91             | 1,443.36              | 32.55                   | 45.338             |         |
| 6,473.82  | 6,359.00            | 6,395.55            | 6,359.00            | 23.94           | 17.98       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,444.25              | 32.80                   | 45.027             |         |
| 6,500.00  | 6,385.18            | 6,421.73            | 6,385.18            | 23.97           | 18.02       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,444.16              | 32.89                   | 44.909             |         |
| 6,600.00  | 6,485.18            | 6,521.73            | 6,485.18            | 24.10           | 18.16       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,443.82              | 33.24                   | 44.438             |         |
| 6,700.00  | 6,585.18            | 6,621.73            | 6,585.18            | 24.23           | 18.31       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,443.46              | 33.59                   | 43.973             |         |
| 6,800.00  | 6,685.18            | 6,721.73            | 6,685.18            | 24.36           | 18.46       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,443.11              | 33.94                   | 43.515             |         |
| 6,900.00  | 6,785.18            | 6,821.73            | 6,785.18            | 24.48           | 18.61       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,442.76              | 34.30                   | 43.064             |         |
| 7,000.00  | 6,885.18            | 6,921.73            | 6,885.18            | 24.62           | 18.76       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,442.40              | 34.66                   | 42.619             |         |
| 7,100.00  | 6,985.18            | 7,021.73            | 6,985.18            | 24.75           | 18.91       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,442.04              | 35.02                   | 42.181             |         |
| 7,200.00  | 7,085.18            | 7,121.73            | 7,085.18            | 24.88           | 19.07       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,441.68              | 35.38                   | 41.749             |         |
| 7,300.00  | 7,185.18            | 7,221.73            | 7,185.18            | 25.02           | 19.22       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,441.31              | 35.74                   | 41.324             |         |
| 7,400.00  | 7,285.18            | 7,321.73            | 7,285.18            | 25.15           | 19.38       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,440.94              | 36.11                   | 40.905             |         |
| 7,500.00  | 7,385.18            | 7,421.73            | 7,385.18            | 25.29           | 19.54       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,440.58              | 36.48                   | 40.492             |         |
| 7,600.00  | 7,485.18            | 7,521.73            | 7,485.18            | 25.43           | 19.70       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,440.21              | 36.85                   | 40.086             |         |
| 7,700.00  | 7,585.18            | 7,621.73            | 7,585.18            | 25.57           | 19.86       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,439.84              | 37.22                   | 39.685             |         |
| 7,800.00  | 7,685.18            | 7,721.73            | 7,685.18            | 25.71           | 20.02       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,439.46              | 37.59                   | 39.291             |         |
| 7,900.00  | 7,785.18            | 7,821.73            | 7,785.18            | 25.86           | 20.19       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,439.09              | 37.97                   | 38.903             |         |
| 8,000.00  | 7,885.18            | 7,921.73            | 7,885.18            | 26.00           | 20.35       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,438.71              | 38.34                   | 38.521             |         |
| 8,100.00  | 7,985.18            | 8,021.73            | 7,985.18            | 26.14           | 20.52       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,438.33              | 38.72                   | 38.145             |         |
| 8,200.00  | 8,085.18            | 8,121.73            | 8,085.18            | 26.29           | 20.68       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,437.95              | 39.10                   | 37.775             |         |
| 8,300.00  | 8,185.18            | 8,221.73            | 8,185.18            | 26.44           | 20.85       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,437.57              | 39.48                   | 37.410             |         |
| 8,400.00  | 8,285.18            | 8,321.73            | 8,285.18            | 26.59           | 21.02       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,437.19              | 39.87                   | 37.051             |         |
| 8,500.00  | 8,385.18            | 8,421.73            | 8,385.18            | 26.73           | 21.19       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,436.81              | 40.25                   | 36.698             |         |
| 8,600.00  | 8,485.18            | 8,521.73            | 8,485.18            | 26.88           | 21.36       | -174.49               | -447.68                           | -428.22    | 1,477.05             | 1,436.42              | 40.63                   | 36.350             |         |
| 8,653.82  | 8,539.00            | 8,535.55            | 8,499.00            | 26.97           | 21.39       | -174.49               | -447.68                           | -428.22    | 1,477.60             | 1,436.83              | 40.77                   | 36.246             |         |

|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|--|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD  |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 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 |
| 0.00   | 0.00                | 0.00                | 0.00                | 0.00           | 0.00        | -166.82               | -46.63                            | -10.92     | 47.89                |                       |                         |                    |         |
| 100.00   | 100.00              | 100.00              | 100.00              | 0.10           | 0.09        | -166.82               | -46.63                            | -10.92     | 47.89                | 47.70                 | 0.19                    | 256.695            |         |
| 200.00   | 200.00              | 200.00              | 200.00              | 0.32           | 0.32        | -166.82               | -46.63                            | -10.92     | 47.89                | 47.25                 | 0.64                    | 75.285             |         |
| 300.00   | 300.00              | 300.00              | 300.00              | 0.55           | 0.54        | -166.82               | -46.63                            | -10.92     | 47.89                | 46.80                 | 1.09                    | 44.111             |         |
| 400.00   | 400.00              | 400.00              | 400.00              | 0.77           | 0.77        | -166.82               | -46.63                            | -10.92     | 47.89                | 46.35                 | 1.54                    | 31.194             |         |
| 500.00   | 500.00              | 500.00              | 500.00              | 0.99           | 0.99        | -166.82               | -46.63                            | -10.92     | 47.89                | 45.90                 | 1.98                    | 24.129             |         |
| 600.00   | 600.00              | 600.00              | 600.00              | 1.22           | 1.21        | -166.82               | -46.63                            | -10.92     | 47.89                | 45.45                 | 2.43                    | 19.673             |         |
| 700.00   | 700.00              | 700.00              | 700.00              | 1.44           | 1.44        | -166.82               | -46.63                            | -10.92     | 47.89                | 45.00                 | 2.88                    | 16.606             |         |
| 800.00   | 800.00              | 800.00              | 800.00              | 1.67           | 1.66        | -166.82               | -46.63                            | -10.92     | 47.89                | 44.55                 | 3.33                    | 14.367             |         |
| 900.00   | 900.00              | 900.00              | 900.00              | 1.89           | 1.89        | -166.82               | -46.63                            | -10.92     | 47.89                | 44.11                 | 3.78                    | 12.659             |         |
| 1,000.00   | 1,000.00            | 1,000.00            | 1,000.00            | 2.12           | 2.11        | -166.82               | -46.63                            | -10.92     | 47.89                | 43.66                 | 4.23                    | 11.315             |         |
| 1,085.00   | 1,085.00            | 1,085.00            | 1,085.00            | 2.31           | 2.30        | -166.82               | -46.63                            | -10.92     | 47.89                | 43.27                 | 4.61                    | 10.378 CC          |         |
| 1,100.00   | 1,100.00            | 1,100.00            | 1,100.00            | 2.34           | 2.34        | -151.25               | -46.64                            | -10.88     | 47.92                | 43.24                 | 4.68                    | 10.242 ES          |         |
| 1,200.00   | 1,199.97            | 1,199.85            | 1,199.82            | 2.57           | 2.53        | -155.08               | -47.16                            | -8.68      | 50.04                | 44.94                 | 5.09                    | 9.824 SF           |         |
| 1,300.00   | 1,299.80            | 1,299.09            | 1,298.89            | 2.79           | 2.73        | -163.31               | -48.48                            | -3.14      | 56.26                | 50.75                 | 5.51                    | 10.212             |         |
| 1,400.00   | 1,399.37            | 1,397.18            | 1,396.57            | 3.02           | 2.95        | -172.98               | -50.57                            | 5.61       | 68.07                | 62.14                 | 5.93                    | 11.485             |         |
| 1,500.00   | 1,498.55            | 1,493.63            | 1,492.25            | 3.27           | 3.18        | 178.40                | -53.38                            | 17.39      | 86.36                | 80.01                 | 6.34                    | 13.613             |         |
| 1,600.00   | 1,597.23            | 1,587.98            | 1,585.40            | 3.54           | 3.43        | 171.70                | -56.84                            | 31.93      | 111.22               | 104.46                | 6.76                    | 16.448             |         |
| 1,700.00   | 1,695.29            | 1,679.82            | 1,675.55            | 3.85           | 3.72        | 166.73                | -60.90                            | 48.94      | 142.36               | 135.17                | 7.19                    | 19.811             |         |
| 1,731.57   | 1,726.10            | 1,708.23            | 1,703.33            | 3.95           | 3.81        | 165.46                | -62.29                            | 54.77      | 153.43               | 146.11                | 7.32                    | 20.963             |         |
| 1,800.00   | 1,792.79            | 1,770.10            | 1,763.62            | 4.19           | 4.03        | 163.13                | -65.52                            | 68.29      | 178.56               | 170.91                | 7.65                    | 23.328             |         |
| 1,900.00   | 1,890.25            | 1,862.51            | 1,853.58            | 4.56           | 4.38        | 160.58                | -70.41                            | 88.82      | 215.91               | 207.74                | 8.17                    | 26.439             |         |
| 2,000.00   | 1,987.72            | 1,954.91            | 1,943.54            | 4.95           | 4.75        | 158.78                | -75.31                            | 109.35     | 253.52               | 244.83                | 8.69                    | 29.168             |         |
| 2,100.00   | 2,085.18            | 2,047.32            | 2,033.50            | 5.35           | 5.14        | 157.44                | -80.20                            | 129.88     | 291.29               | 282.06                | 9.23                    | 31.560             |         |
| 2,200.00   | 2,182.64            | 2,139.72            | 2,123.47            | 5.76           | 5.53        | 156.41                | -85.10                            | 150.41     | 329.17               | 319.39                | 9.78                    | 33.662             |         |
| 2,300.00   | 2,280.11            | 2,232.13            | 2,213.43            | 6.18           | 5.93        | 155.59                | -90.00                            | 170.94     | 367.12               | 356.78                | 10.34                   | 35.515             |         |
| 2,400.00   | 2,377.57            | 2,324.53            | 2,303.39            | 6.60           | 6.35        | 154.93                | -94.89                            | 191.47     | 405.12               | 394.21                | 10.90                   | 37.156             |         |
| 2,500.00   | 2,475.04            | 2,416.94            | 2,393.36            | 7.04           | 6.76        | 154.37                | -99.79                            | 212.00     | 443.16               | 431.68                | 11.48                   | 38.616             |         |
| 2,600.00   | 2,572.50            | 2,509.35            | 2,483.32            | 7.47           | 7.19        | 153.91                | -104.69                           | 232.53     | 481.23               | 469.17                | 12.05                   | 39.920             |         |
| 2,700.00   | 2,669.96            | 2,601.75            | 2,573.28            | 7.92           | 7.61        | 153.51                | -109.58                           | 253.06     | 519.32               | 506.68                | 12.64                   | 41.090             |         |
| 2,800.00   | 2,767.43            | 2,694.16            | 2,663.24            | 8.36           | 8.04        | 153.17                | -114.48                           | 273.59     | 557.43               | 544.20                | 13.23                   | 42.144             |         |
| 2,900.00   | 2,864.89            | 2,786.56            | 2,753.21            | 8.81           | 8.48        | 152.87                | -119.37                           | 294.12     | 595.55               | 581.74                | 13.82                   | 43.097             |         |
| 3,000.00   | 2,962.36            | 2,878.97            | 2,843.17            | 9.26           | 8.91        | 152.61                | -124.27                           | 314.65     | 633.69               | 619.28                | 14.41                   | 43.962             |         |
| 3,100.00   | 3,059.82            | 2,971.37            | 2,933.13            | 9.71           | 9.35        | 152.38                | -129.17                           | 335.18     | 671.84               | 656.83                | 15.01                   | 44.751             |         |
| 3,200.00   | 3,157.28            | 3,063.78            | 3,023.09            | 10.16          | 9.79        | 152.17                | -134.06                           | 355.71     | 710.00               | 694.38                | 15.61                   | 45.472             |         |
| 3,300.00   | 3,254.75            | 3,156.18            | 3,113.06            | 10.62          | 10.23       | 151.98                | -138.96                           | 376.24     | 748.16               | 731.94                | 16.22                   | 46.134             |         |
| 3,400.00   | 3,352.21            | 3,248.59            | 3,203.02            | 11.08          | 10.68       | 151.81                | -143.85                           | 396.77     | 786.33               | 769.51                | 16.82                   | 46.742             |         |
| 3,500.00   | 3,449.67            | 3,340.99            | 3,292.98            | 11.53          | 11.12       | 151.66                | -148.75                           | 417.30     | 824.51               | 807.08                | 17.43                   | 47.304             |         |
| 3,600.00   | 3,547.14            | 3,433.40            | 3,382.94            | 11.99          | 11.57       | 151.52                | -153.65                           | 437.83     | 862.69               | 844.65                | 18.04                   | 47.824             |         |
| 3,700.00   | 3,644.60            | 3,525.80            | 3,472.91            | 12.45          | 12.01       | 151.39                | -158.54                           | 458.36     | 900.87               | 882.22                | 18.65                   | 48.306             |         |
| 3,800.00   | 3,742.07            | 3,618.21            | 3,562.87            | 12.91          | 12.46       | 151.28                | -163.44                           | 478.89     | 939.06               | 919.79                | 19.26                   | 48.754             |         |
| 3,900.00   | 3,839.53            | 3,710.61            | 3,652.83            | 13.38          | 12.91       | 151.17                | -168.33                           | 499.42     | 977.25               | 957.37                | 19.87                   | 49.171             |         |
| 4,000.00   | 3,936.99            | 3,803.02            | 3,742.79            | 13.84          | 13.36       | 151.07                | -173.23                           | 519.95     | 1,015.44             | 994.95                | 20.49                   | 49.561             |         |
| 4,100.00   | 4,034.46            | 3,895.42            | 3,832.76            | 14.30          | 13.81       | 150.98                | -178.13                           | 540.48     | 1,053.63             | 1,032.53              | 21.10                   | 49.926             |         |
| 4,200.00   | 4,131.92            | 3,987.83            | 3,922.72            | 14.77          | 14.26       | 150.89                | -183.02                           | 561.01     | 1,091.83             | 1,070.11              | 21.72                   | 50.268             |         |
| 4,300.00   | 4,229.39            | 4,080.23            | 4,012.68            | 15.23          | 14.71       | 150.81                | -187.92                           | 581.54     | 1,130.03             | 1,107.69              | 22.34                   | 50.590             |         |
| 4,400.00   | 4,326.85            | 4,172.64            | 4,102.64            | 15.69          | 15.16       | 150.73                | -192.82                           | 602.07     | 1,168.23             | 1,145.28              | 22.96                   | 50.892             |         |
| 4,500.00   | 4,424.31            | 4,265.04            | 4,192.61            | 16.16          | 15.61       | 150.66                | -197.71                           | 622.60     | 1,206.44             | 1,182.86              | 23.57                   | 51.177             |         |
| 4,600.00   | 4,521.78            | 4,357.45            | 4,282.57            | 16.63          | 16.06       | 150.60                | -202.61                           | 643.13     | 1,244.64             | 1,220.45              | 24.19                   | 51.446             |         |
| 4,700.00   | 4,619.24            | 4,449.85            | 4,372.53            | 17.09          | 16.51       | 150.54                | -207.50                           | 663.66     | 1,282.85             | 1,258.03              | 24.81                   | 51.701             |         |
| 4,800.00   | 4,716.70            | 4,542.26            | 4,462.50            | 17.56          | 16.97       | 150.48                | -212.40                           | 684.19     | 1,321.05             | 1,295.62              | 25.43                   | 51.941             |         |
| 4,900.00   | 4,814.17            | 4,634.66            | 4,552.46            | 18.02          | 17.42       | 150.42                | -217.30                           | 704.72     | 1,359.26             | 1,333.21              | 26.05                   | 52.170             |         |

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

|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design WELD_NRC 17-9 PAD - P_NRC 8-9 - P_NRC 8-9 - PLAN #1 1-5-10 RHS |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | 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  |         |
| 5,000.00   | 4,911.63            | 4,727.07            | 4,642.42            | 18.49           | 17.87       | 150.37                | -222.19                           | 725.25     | 1,397.47             | 1,370.79              | 26.68                   | 52.386             |         |
| 5,100.00   | 5,009.10            | 4,819.47            | 4,732.38            | 18.96           | 18.33       | 150.32                | -227.09                           | 745.78     | 1,435.68             | 1,408.38              | 27.30                   | 52.592             |         |
| 5,200.00   | 5,106.56            | 4,911.88            | 4,822.35            | 19.43           | 18.78       | 150.27                | -231.98                           | 766.30     | 1,473.89             | 1,445.97              | 27.92                   | 52.789             |         |
| 5,300.00   | 5,204.02            | 5,004.29            | 4,912.31            | 19.89           | 19.23       | 150.23                | -236.88                           | 786.83     | 1,512.10             | 1,483.56              | 28.54                   | 52.975             |         |
| 5,400.00   | 5,301.49            | 5,096.69            | 5,002.27            | 20.36           | 19.69       | 150.19                | -241.78                           | 807.36     | 1,550.32             | 1,521.15              | 29.17                   | 53.153             |         |
| 5,500.00   | 5,398.95            | 5,189.10            | 5,092.23            | 20.83           | 20.14       | 150.15                | -246.67                           | 827.89     | 1,588.53             | 1,558.74              | 29.79                   | 53.323             |         |
| 5,600.00   | 5,496.42            | 5,281.50            | 5,182.20            | 21.30           | 20.60       | 150.11                | -251.57                           | 848.42     | 1,626.74             | 1,596.33              | 30.41                   | 53.486             |         |
| 5,700.00   | 5,593.88            | 5,373.91            | 5,272.16            | 21.77           | 21.05       | 150.07                | -256.47                           | 868.95     | 1,664.96             | 1,633.92              | 31.04                   | 53.641             |         |
| 5,800.00   | 5,691.34            | 5,466.31            | 5,362.12            | 22.23           | 21.51       | 150.04                | -261.36                           | 889.48     | 1,703.17             | 1,671.51              | 31.66                   | 53.790             |         |
| 5,827.25   | 5,717.90            | 5,491.49            | 5,386.64            | 22.36           | 21.63       | 150.03                | -262.70                           | 895.08     | 1,713.59             | 1,681.75              | 31.83                   | 53.829             |         |
| 5,900.00   | 5,789.01            | 5,559.01            | 5,452.37            | 22.66           | 21.96       | 150.28                | -266.27                           | 910.08     | 1,740.64             | 1,708.25              | 32.39                   | 53.740             |         |
| 6,000.00   | 5,887.33            | 5,652.72            | 5,543.60            | 22.98           | 22.43       | 150.54                | -271.24                           | 930.90     | 1,775.40             | 1,742.31              | 33.09                   | 53.647             |         |
| 6,100.00   | 5,986.24            | 5,747.38            | 5,635.76            | 23.26           | 22.89       | 150.71                | -276.25                           | 951.93     | 1,807.30             | 1,773.54              | 33.76                   | 53.540             |         |
| 6,200.00   | 6,085.59            | 5,921.65            | 5,806.20            | 23.50           | 23.54       | 150.67                | -284.66                           | 987.18     | 1,834.90             | 1,800.36              | 34.54                   | 53.123             |         |
| 6,300.00   | 6,185.28            | 6,138.83            | 6,021.14            | 23.70           | 24.12       | 150.60                | -291.79                           | 1,017.08   | 1,853.70             | 1,818.42              | 35.28                   | 52.538             |         |
| 6,400.00   | 6,285.18            | 6,361.39            | 6,243.17            | 23.85           | 24.51       | 150.61                | -295.16                           | 1,031.21   | 1,863.02             | 1,827.14              | 35.88                   | 51.921             |         |
| 6,473.82   | 6,359.00            | 6,477.23            | 6,359.00            | 23.94           | 24.65       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,828.06              | 36.17                   | 51.540             |         |
| 6,500.00   | 6,385.18            | 6,503.41            | 6,385.18            | 23.97           | 24.68       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,827.98              | 36.25                   | 51.428             |         |
| 6,600.00   | 6,485.18            | 6,603.41            | 6,485.18            | 24.10           | 24.80       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,827.66              | 36.57                   | 50.976             |         |
| 6,700.00   | 6,585.18            | 6,703.41            | 6,585.18            | 24.23           | 24.92       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,827.34              | 36.90                   | 50.528             |         |
| 6,800.00   | 6,685.18            | 6,803.41            | 6,685.18            | 24.36           | 25.04       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,827.01              | 37.22                   | 50.084             |         |
| 6,900.00   | 6,785.18            | 6,903.41            | 6,785.18            | 24.48           | 25.17       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,826.68              | 37.55                   | 49.645             |         |
| 7,000.00   | 6,885.18            | 7,003.41            | 6,885.18            | 24.62           | 25.29       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,826.35              | 37.88                   | 49.210             |         |
| 7,100.00   | 6,985.18            | 7,103.41            | 6,985.18            | 24.75           | 25.42       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,826.02              | 38.22                   | 48.780             |         |
| 7,200.00   | 7,085.18            | 7,203.41            | 7,085.18            | 24.88           | 25.54       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,825.68              | 38.55                   | 48.354             |         |
| 7,300.00   | 7,185.18            | 7,303.41            | 7,185.18            | 25.02           | 25.67       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,825.34              | 38.89                   | 47.933             |         |
| 7,400.00   | 7,285.18            | 7,403.41            | 7,285.18            | 25.15           | 25.80       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,825.00              | 39.23                   | 47.516             |         |
| 7,500.00   | 7,385.18            | 7,503.41            | 7,385.18            | 25.29           | 25.93       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,824.66              | 39.58                   | 47.104             |         |
| 7,600.00   | 7,485.18            | 7,603.41            | 7,485.18            | 25.43           | 26.07       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,824.31              | 39.92                   | 46.696             |         |
| 7,700.00   | 7,585.18            | 7,703.41            | 7,585.18            | 25.57           | 26.20       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,823.96              | 40.27                   | 46.294             |         |
| 7,800.00   | 7,685.18            | 7,803.41            | 7,685.18            | 25.71           | 26.34       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,823.61              | 40.62                   | 45.895             |         |
| 7,900.00   | 7,785.18            | 7,903.41            | 7,785.18            | 25.86           | 26.47       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,823.26              | 40.97                   | 45.502             |         |
| 8,000.00   | 7,885.18            | 8,003.41            | 7,885.18            | 26.00           | 26.61       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,822.91              | 41.32                   | 45.113             |         |
| 8,100.00   | 7,985.18            | 8,103.41            | 7,985.18            | 26.14           | 26.75       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,822.55              | 41.68                   | 44.729             |         |
| 8,200.00   | 8,085.18            | 8,203.41            | 8,085.18            | 26.29           | 26.89       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,822.20              | 42.04                   | 44.349             |         |
| 8,300.00   | 8,185.18            | 8,303.41            | 8,185.18            | 26.44           | 27.03       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,821.84              | 42.39                   | 43.974             |         |
| 8,400.00   | 8,285.18            | 8,403.41            | 8,285.18            | 26.59           | 27.17       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,821.48              | 42.75                   | 43.603             |         |
| 8,500.00   | 8,385.18            | 8,503.41            | 8,385.18            | 26.73           | 27.31       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,821.12              | 43.12                   | 43.237             |         |
| 8,600.00   | 8,485.18            | 8,603.41            | 8,485.18            | 26.88           | 27.46       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,820.75              | 43.48                   | 42.875             |         |
| 8,626.87   | 8,512.04            | 8,630.28            | 8,512.04            | 26.93           | 27.50       | 134.99                | -295.39                           | 1,032.19   | 1,864.23             | 1,820.65              | 43.58                   | 42.779             |         |
| 8,653.82   | 8,539.00            | 8,639.23            | 8,521.00            | 26.97           | 27.51       | 134.99                | -295.39                           | 1,032.19   | 1,864.32             | 1,820.67              | 43.64                   | 42.716             |         |

|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design             |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft     |
|---------------------------|---------------------|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|-------------|
| Survey Program: 0-UNKNOWN |                     |                     |                     |                |             |                       |                                   |            |                      |                       |                         | 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  |             |
| 0.00                      | 0.00                | 0.00                | 0.00                | 0.00           | 0.00        | 73.31                 | 17.12                             | 57.09      | 62.56                |                       |                         |                    |             |
| 100.00                    | 100.00              | 81.00               | 81.00               | 0.10           | 1.62        | 73.31                 | 17.12                             | 57.09      | 59.61                | 57.89                 | 1.72                    | 34.744             |             |
| 200.00                    | 200.00              | 181.00              | 181.00              | 0.32           | 5.24        | 73.31                 | 17.12                             | 57.09      | 59.61                | 54.05                 | 5.56                    | 10.720             |             |
| 300.00                    | 300.00              | 281.00              | 281.00              | 0.55           | 9.24        | 73.31                 | 17.12                             | 57.09      | 59.61                | 49.82                 | 9.79                    | 6.092              |             |
| 400.00                    | 400.00              | 381.00              | 381.00              | 0.77           | 13.24       | 73.31                 | 17.12                             | 57.09      | 59.61                | 45.60                 | 14.01                   | 4.255              |             |
| 500.00                    | 500.00              | 481.00              | 481.00              | 0.99           | 17.24       | 73.31                 | 17.12                             | 57.09      | 59.61                | 41.37                 | 18.23                   | 3.269              |             |
| 600.00                    | 600.00              | 581.00              | 581.00              | 1.22           | 21.24       | 73.31                 | 17.12                             | 57.09      | 59.61                | 37.15                 | 22.46                   | 2.654              |             |
| 700.00                    | 700.00              | 681.00              | 681.00              | 1.44           | 25.24       | 73.31                 | 17.12                             | 57.09      | 59.61                | 32.92                 | 26.68                   | 2.234              |             |
| 800.00                    | 800.00              | 781.00              | 781.00              | 1.67           | 29.24       | 73.31                 | 17.12                             | 57.09      | 59.61                | 28.70                 | 30.91                   | 1.928              |             |
| 900.00                    | 900.00              | 881.00              | 881.00              | 1.89           | 33.24       | 73.31                 | 17.12                             | 57.09      | 59.61                | 24.47                 | 35.13                   | 1.697              |             |
| 1,000.00                  | 1,000.00            | 981.00              | 981.00              | 2.12           | 37.24       | 73.31                 | 17.12                             | 57.09      | 59.61                | 20.25                 | 39.36                   | 1.514              |             |
| 1,085.00                  | 1,085.00            | 1,066.00            | 1,066.00            | 2.31           | 40.64       | 73.31                 | 17.12                             | 57.09      | 59.61                | 16.66                 | 42.95                   | 1.388              | Level 3     |
| 1,100.00                  | 1,100.00            | 1,081.00            | 1,081.00            | 2.34           | 41.24       | 88.99                 | 17.12                             | 57.09      | 59.61                | 16.02                 | 43.58                   | 1.368              | Level 3     |
| 1,164.15                  | 1,164.14            | 1,145.14            | 1,145.14            | 2.49           | 43.81       | 90.00                 | 17.12                             | 57.09      | 59.60                | 13.30                 | 46.29                   | 1.287              | Level 3, CC |
| 1,200.00                  | 1,199.97            | 1,180.97            | 1,180.97            | 2.57           | 45.24       | 91.17                 | 17.12                             | 57.09      | 59.61                | 11.80                 | 47.80                   | 1.247              | Level 2     |
| 1,300.00                  | 1,299.80            | 1,280.80            | 1,280.80            | 2.79           | 49.23       | 96.65                 | 17.12                             | 57.09      | 60.00                | 7.98                  | 52.02                   | 1.153              | Level 2     |
| 1,400.00                  | 1,399.37            | 1,380.37            | 1,380.37            | 3.02           | 53.21       | 105.13                | 17.12                             | 57.09      | 61.76                | 5.55                  | 56.21                   | 1.099              | Level 2, ES |
| 1,500.00                  | 1,498.55            | 1,479.55            | 1,479.55            | 3.27           | 57.18       | 115.64                | 17.12                             | 57.09      | 66.24                | 5.91                  | 60.33                   | 1.098              | Level 2, SF |
| 1,600.00                  | 1,597.23            | 1,578.23            | 1,578.23            | 3.54           | 61.13       | 126.65                | 17.12                             | 57.09      | 74.72                | 10.43                 | 64.29                   | 1.162              | Level 2     |
| 1,700.00                  | 1,695.29            | 1,676.29            | 1,676.29            | 3.85           | 65.05       | 136.67                | 17.12                             | 57.09      | 87.94                | 19.92                 | 68.02                   | 1.293              | Level 3     |
| 1,731.57                  | 1,726.10            | 1,707.10            | 1,707.10            | 3.95           | 66.28       | 139.49                | 17.12                             | 57.09      | 93.13                | 23.98                 | 69.15                   | 1.347              | Level 3     |
| 1,800.00                  | 1,792.79            | 1,773.79            | 1,773.79            | 4.19           | 68.95       | 144.86                | 17.12                             | 57.09      | 105.35               | 33.56                 | 71.79                   | 1.468              | Level 3     |
| 1,900.00                  | 1,890.25            | 1,871.25            | 1,871.25            | 4.56           | 72.85       | 150.77                | 17.12                             | 57.09      | 124.45               | 48.76                 | 75.70                   | 1.644              |             |
| 2,000.00                  | 1,987.72            | 1,968.72            | 1,968.72            | 4.95           | 76.75       | 155.08                | 17.12                             | 57.09      | 144.49               | 64.85                 | 79.65                   | 1.814              |             |
| 2,100.00                  | 2,085.18            | 2,066.18            | 2,066.18            | 5.35           | 80.65       | 158.35                | 17.12                             | 57.09      | 165.14               | 81.51                 | 83.63                   | 1.975              |             |
| 2,200.00                  | 2,182.64            | 2,163.64            | 2,163.64            | 5.76           | 84.55       | 160.88                | 17.12                             | 57.09      | 186.19               | 98.56                 | 87.63                   | 2.125              |             |
| 2,300.00                  | 2,280.11            | 2,261.11            | 2,261.11            | 6.18           | 88.44       | 162.90                | 17.12                             | 57.09      | 207.51               | 115.86                | 91.65                   | 2.264              |             |
| 2,400.00                  | 2,377.57            | 2,358.57            | 2,358.57            | 6.60           | 92.34       | 164.54                | 17.12                             | 57.09      | 229.04               | 133.36                | 95.67                   | 2.394              |             |
| 2,500.00                  | 2,475.04            | 2,456.04            | 2,456.04            | 7.04           | 96.24       | 165.90                | 17.12                             | 57.09      | 250.71               | 151.00                | 99.71                   | 2.514              |             |
| 2,600.00                  | 2,572.50            | 2,553.50            | 2,553.50            | 7.47           | 100.14      | 167.05                | 17.12                             | 57.09      | 272.50               | 168.75                | 103.75                  | 2.627              |             |
| 2,700.00                  | 2,669.96            | 2,650.96            | 2,650.96            | 7.92           | 104.04      | 168.02                | 17.12                             | 57.09      | 294.38               | 186.58                | 107.79                  | 2.731              |             |
| 2,800.00                  | 2,767.43            | 2,748.43            | 2,748.43            | 8.36           | 107.94      | 168.86                | 17.12                             | 57.09      | 316.33               | 204.48                | 111.84                  | 2.828              |             |
| 2,900.00                  | 2,864.89            | 2,845.89            | 2,845.89            | 8.81           | 111.84      | 169.60                | 17.12                             | 57.09      | 338.33               | 222.44                | 115.89                  | 2.919              |             |
| 3,000.00                  | 2,962.36            | 2,943.36            | 2,943.36            | 9.26           | 115.73      | 170.24                | 17.12                             | 57.09      | 360.38               | 240.43                | 119.95                  | 3.004              |             |
| 3,100.00                  | 3,059.82            | 3,040.82            | 3,040.82            | 9.71           | 119.63      | 170.81                | 17.12                             | 57.09      | 382.47               | 258.46                | 124.00                  | 3.084              |             |
| 3,200.00                  | 3,157.28            | 3,138.28            | 3,138.28            | 10.16          | 123.53      | 171.31                | 17.12                             | 57.09      | 404.59               | 276.53                | 128.06                  | 3.159              |             |
| 3,300.00                  | 3,254.75            | 3,235.75            | 3,235.75            | 10.62          | 127.43      | 171.77                | 17.12                             | 57.09      | 426.74               | 294.61                | 132.12                  | 3.230              |             |
| 3,400.00                  | 3,352.21            | 3,333.21            | 3,333.21            | 11.08          | 131.33      | 172.17                | 17.12                             | 57.09      | 448.91               | 312.72                | 136.18                  | 3.296              |             |
| 3,500.00                  | 3,449.67            | 3,430.67            | 3,430.67            | 11.53          | 135.23      | 172.55                | 17.12                             | 57.09      | 471.10               | 330.85                | 140.25                  | 3.359              |             |
| 3,600.00                  | 3,547.14            | 3,528.14            | 3,528.14            | 11.99          | 139.13      | 172.88                | 17.12                             | 57.09      | 493.30               | 348.99                | 144.31                  | 3.418              |             |
| 3,700.00                  | 3,644.60            | 3,625.60            | 3,625.60            | 12.45          | 143.02      | 173.19                | 17.12                             | 57.09      | 515.52               | 367.15                | 148.37                  | 3.475              |             |
| 3,800.00                  | 3,742.07            | 3,723.07            | 3,723.07            | 12.91          | 146.92      | 173.47                | 17.12                             | 57.09      | 537.76               | 385.32                | 152.44                  | 3.528              |             |
| 3,900.00                  | 3,839.53            | 3,820.53            | 3,820.53            | 13.38          | 150.82      | 173.73                | 17.12                             | 57.09      | 560.01               | 403.50                | 156.50                  | 3.578              |             |
| 4,000.00                  | 3,936.99            | 3,917.99            | 3,917.99            | 13.84          | 154.72      | 173.97                | 17.12                             | 57.09      | 582.26               | 421.69                | 160.57                  | 3.626              |             |
| 4,100.00                  | 4,034.46            | 4,015.46            | 4,015.46            | 14.30          | 158.62      | 174.20                | 17.12                             | 57.09      | 604.53               | 439.89                | 164.64                  | 3.672              |             |
| 4,200.00                  | 4,131.92            | 4,112.92            | 4,112.92            | 14.77          | 162.52      | 174.40                | 17.12                             | 57.09      | 626.80               | 458.10                | 168.70                  | 3.715              |             |
| 4,300.00                  | 4,229.39            | 4,210.39            | 4,210.39            | 15.23          | 166.42      | 174.60                | 17.12                             | 57.09      | 649.08               | 476.31                | 172.77                  | 3.757              |             |
| 4,400.00                  | 4,326.85            | 4,307.85            | 4,307.85            | 15.69          | 170.31      | 174.78                | 17.12                             | 57.09      | 671.37               | 494.53                | 176.84                  | 3.796              |             |
| 4,500.00                  | 4,424.31            | 4,405.31            | 4,405.31            | 16.16          | 174.21      | 174.94                | 17.12                             | 57.09      | 693.66               | 512.75                | 180.91                  | 3.834              |             |
| 4,600.00                  | 4,521.78            | 4,502.78            | 4,502.78            | 16.63          | 178.11      | 175.10                | 17.12                             | 57.09      | 715.96               | 530.98                | 184.98                  | 3.871              |             |
| 4,700.00                  | 4,619.24            | 4,600.24            | 4,600.24            | 17.09          | 182.01      | 175.25                | 17.12                             | 57.09      | 738.26               | 549.22                | 189.05                  | 3.905              |             |
| 4,800.00                  | 4,716.70            | 4,697.70            | 4,697.70            | 17.56          | 185.91      | 175.39                | 17.12                             | 57.09      | 760.57               | 567.45                | 193.12                  | 3.938              |             |

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

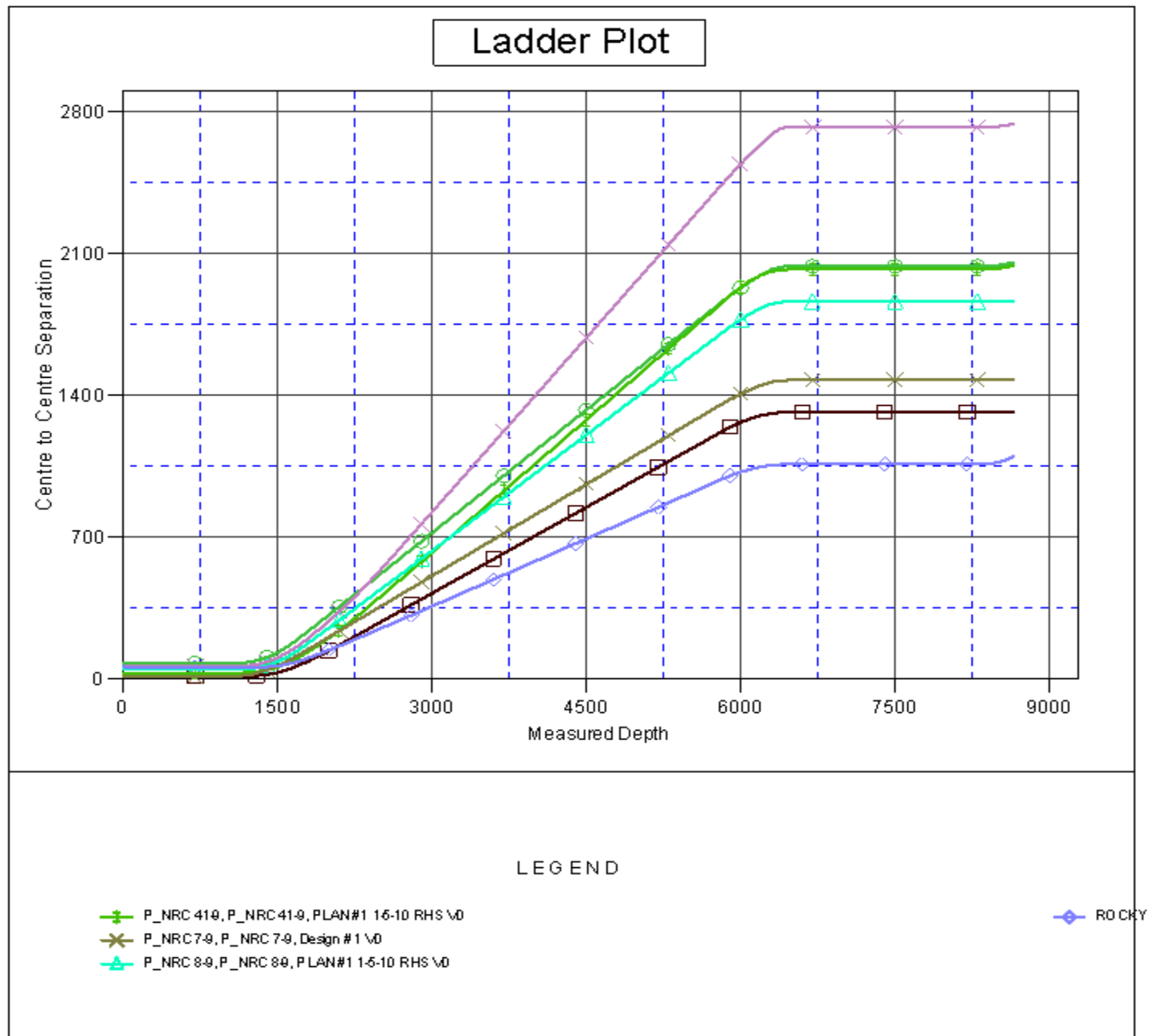
|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

| Offset Design             |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Site Error: | 0.00 ft |
|---------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-UNKNOWN |                     |                     |                     |                 |             |                       |                                   |            |                      |                       |                         | Offset Well Error: | 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 |
| 4,900.00                  | 4,814.17            | 4,795.17            | 4,795.17            | 18.02           | 189.81      | 175.52                | 17.12                             | 57.09      | 782.88               | 585.70                | 197.19                  | 3.970              |         |
| 5,000.00                  | 4,911.63            | 4,892.63            | 4,892.63            | 18.49           | 193.71      | 175.65                | 17.12                             | 57.09      | 805.20               | 603.94                | 201.26                  | 4.001              |         |
| 5,100.00                  | 5,009.10            | 4,990.10            | 4,990.10            | 18.96           | 197.60      | 175.76                | 17.12                             | 57.09      | 827.52               | 622.19                | 205.33                  | 4.030              |         |
| 5,200.00                  | 5,106.56            | 5,087.56            | 5,087.56            | 19.43           | 201.50      | 175.87                | 17.12                             | 57.09      | 849.84               | 640.44                | 209.40                  | 4.058              |         |
| 5,300.00                  | 5,204.02            | 5,185.02            | 5,185.02            | 19.89           | 205.40      | 175.98                | 17.12                             | 57.09      | 872.16               | 658.70                | 213.47                  | 4.086              |         |
| 5,400.00                  | 5,301.49            | 5,282.49            | 5,282.49            | 20.36           | 209.30      | 176.08                | 17.12                             | 57.09      | 894.49               | 676.95                | 217.54                  | 4.112              |         |
| 5,500.00                  | 5,398.95            | 5,379.95            | 5,379.95            | 20.83           | 213.20      | 176.18                | 17.12                             | 57.09      | 916.82               | 695.21                | 221.61                  | 4.137              |         |
| 5,600.00                  | 5,496.42            | 5,477.42            | 5,477.42            | 21.30           | 217.10      | 176.27                | 17.12                             | 57.09      | 939.15               | 713.47                | 225.68                  | 4.161              |         |
| 5,700.00                  | 5,593.88            | 5,574.88            | 5,574.88            | 21.77           | 221.00      | 176.35                | 17.12                             | 57.09      | 961.49               | 731.73                | 229.75                  | 4.185              |         |
| 5,800.00                  | 5,691.34            | 5,672.34            | 5,672.34            | 22.23           | 224.89      | 176.44                | 17.12                             | 57.09      | 983.82               | 750.00                | 233.82                  | 4.208              |         |
| 5,827.25                  | 5,717.90            | 5,698.90            | 5,698.90            | 22.36           | 225.96      | 176.46                | 17.12                             | 57.09      | 989.91               | 754.98                | 234.93                  | 4.214              |         |
| 5,900.00                  | 5,789.01            | 5,770.01            | 5,770.01            | 22.66           | 228.80      | 176.53                | 17.12                             | 57.09      | 1,005.26             | 766.17                | 239.09                  | 4.205              |         |
| 6,000.00                  | 5,887.33            | 5,868.33            | 5,868.33            | 22.98           | 232.73      | 176.62                | 17.12                             | 57.09      | 1,023.41             | 778.79                | 244.62                  | 4.184              |         |
| 6,100.00                  | 5,986.24            | 5,967.24            | 5,967.24            | 23.26           | 236.69      | 176.68                | 17.12                             | 57.09      | 1,038.13             | 788.21                | 249.92                  | 4.154              |         |
| 6,200.00                  | 6,085.59            | 6,066.59            | 6,066.59            | 23.50           | 240.66      | 176.73                | 17.12                             | 57.09      | 1,049.39             | 794.43                | 254.96                  | 4.116              |         |
| 6,300.00                  | 6,185.28            | 6,166.28            | 6,166.28            | 23.70           | 244.65      | 176.76                | 17.12                             | 57.09      | 1,057.18             | 797.47                | 259.71                  | 4.071              |         |
| 6,400.00                  | 6,285.18            | 6,266.18            | 6,266.18            | 23.85           | 248.65      | 176.78                | 17.12                             | 57.09      | 1,061.49             | 797.32                | 264.17                  | 4.018              |         |
| 6,473.82                  | 6,359.00            | 6,340.00            | 6,340.00            | 23.94           | 251.60      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 795.19                | 267.26                  | 3.975              |         |
| 6,500.00                  | 6,385.18            | 6,366.18            | 6,366.18            | 23.97           | 252.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 794.10                | 268.35                  | 3.959              |         |
| 6,600.00                  | 6,485.18            | 6,466.18            | 6,466.18            | 24.10           | 256.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 789.90                | 272.54                  | 3.898              |         |
| 6,700.00                  | 6,585.18            | 6,566.18            | 6,566.18            | 24.23           | 260.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 785.71                | 276.74                  | 3.839              |         |
| 6,800.00                  | 6,685.18            | 6,666.18            | 6,666.18            | 24.36           | 264.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 781.51                | 280.93                  | 3.782              |         |
| 6,900.00                  | 6,785.18            | 6,766.18            | 6,766.18            | 24.48           | 268.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 777.31                | 285.13                  | 3.726              |         |
| 7,000.00                  | 6,885.18            | 6,866.18            | 6,866.18            | 24.62           | 272.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 773.12                | 289.33                  | 3.672              |         |
| 7,100.00                  | 6,985.18            | 6,966.18            | 6,966.18            | 24.75           | 276.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 768.92                | 293.53                  | 3.620              |         |
| 7,200.00                  | 7,085.18            | 7,066.18            | 7,066.18            | 24.88           | 280.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 764.72                | 297.72                  | 3.569              |         |
| 7,300.00                  | 7,185.18            | 7,166.18            | 7,166.18            | 25.02           | 284.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 760.52                | 301.92                  | 3.519              |         |
| 7,400.00                  | 7,285.18            | 7,266.18            | 7,266.18            | 25.15           | 288.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 756.32                | 306.12                  | 3.471              |         |
| 7,500.00                  | 7,385.18            | 7,366.18            | 7,366.18            | 25.29           | 292.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 752.12                | 310.32                  | 3.424              |         |
| 7,600.00                  | 7,485.18            | 7,466.18            | 7,466.18            | 25.43           | 296.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 747.92                | 314.52                  | 3.378              |         |
| 7,700.00                  | 7,585.18            | 7,566.18            | 7,566.18            | 25.57           | 300.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 743.72                | 318.73                  | 3.333              |         |
| 7,800.00                  | 7,685.18            | 7,666.18            | 7,666.18            | 25.71           | 304.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 739.52                | 322.93                  | 3.290              |         |
| 7,900.00                  | 7,785.18            | 7,766.18            | 7,766.18            | 25.86           | 308.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 735.31                | 327.13                  | 3.248              |         |
| 8,000.00                  | 7,885.18            | 7,866.18            | 7,866.18            | 26.00           | 312.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 731.11                | 331.33                  | 3.207              |         |
| 8,100.00                  | 7,985.18            | 7,966.18            | 7,966.18            | 26.14           | 316.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 726.91                | 335.54                  | 3.166              |         |
| 8,200.00                  | 8,085.18            | 8,066.18            | 8,066.18            | 26.29           | 320.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 722.70                | 339.74                  | 3.127              |         |
| 8,300.00                  | 8,185.18            | 8,166.18            | 8,166.18            | 26.44           | 324.65      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 718.50                | 343.95                  | 3.089              |         |
| 8,348.58                  | 8,233.75            | 8,214.75            | 8,214.75            | 26.51           | 326.59      | 161.14                | 17.12                             | 57.09      | 1,062.44             | 716.46                | 345.99                  | 3.071              |         |
| 8,400.00                  | 8,285.18            | 8,231.00            | 8,231.00            | 26.59           | 327.24      | 161.14                | 17.12                             | 57.09      | 1,063.03             | 716.28                | 346.74                  | 3.066              |         |
| 8,500.00                  | 8,385.18            | 8,231.00            | 8,231.00            | 26.73           | 327.24      | 161.14                | 17.12                             | 57.09      | 1,071.01             | 724.06                | 346.95                  | 3.087              |         |
| 8,600.00                  | 8,485.18            | 8,231.00            | 8,231.00            | 26.88           | 327.24      | 161.14                | 17.12                             | 57.09      | 1,088.16             | 741.01                | 347.16                  | 3.135              |         |
| 8,653.82                  | 8,539.00            | 8,231.00            | 8,231.00            | 26.97           | 327.24      | 161.14                | 17.12                             | 57.09      | 1,101.05             | 753.78                | 347.27                  | 3.171              |         |



|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

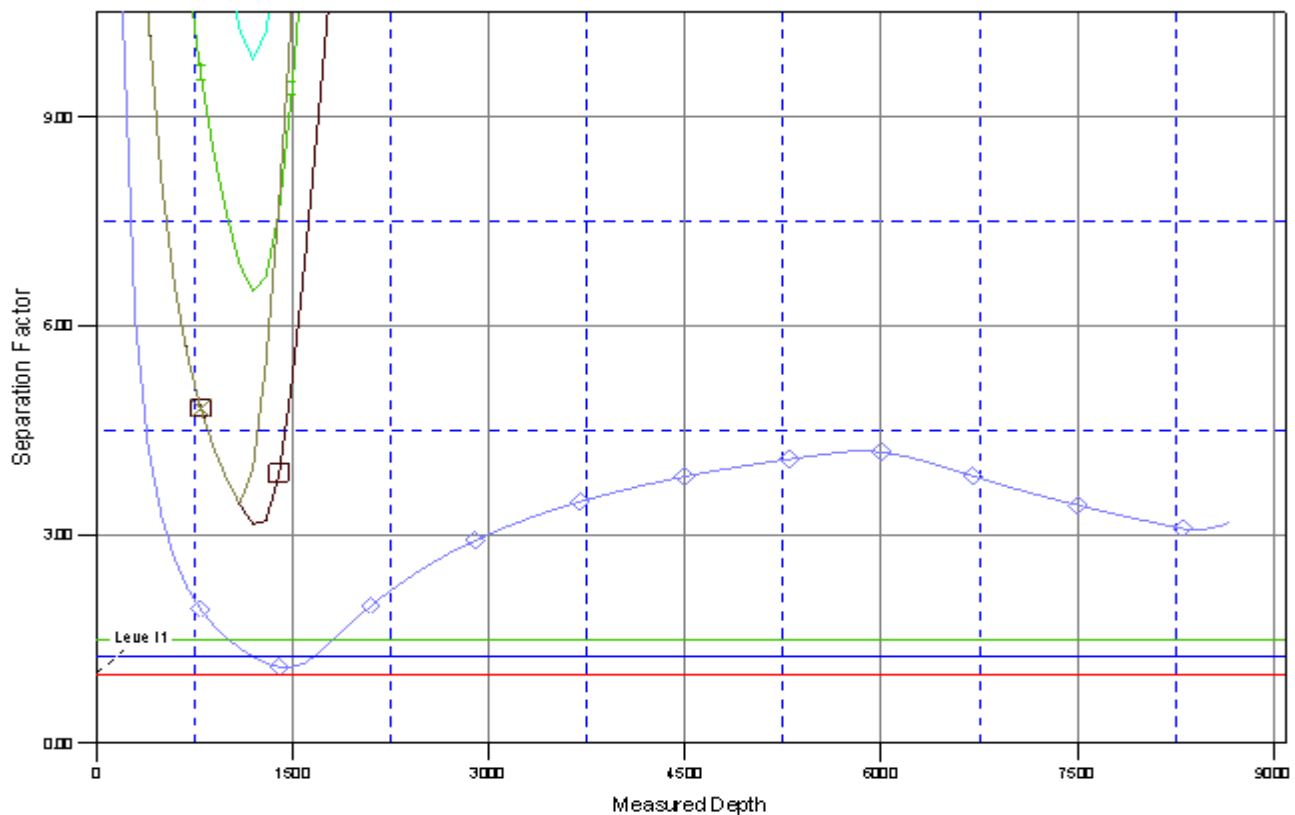
Reference Depths are relative to WELL @ 5012.00ft (Original Well Elev) Coordinates are relative to: P\_NRC 2-9  
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.39°



|                           |                             |                                     |                                       |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| <b>Company:</b>           | US ROCKIES REGION PLANNING  | <b>Local Co-ordinate Reference:</b> | Well P_NRC 2-9                        |
| <b>Project:</b>           | COLORADO NORTHERN ZONE - 83 | <b>TVD Reference:</b>               | WELL @ 5012.00ft (Original Well Elev) |
| <b>Reference Site:</b>    | WELD_NRC 17-9 PAD           | <b>MD Reference:</b>                | WELL @ 5012.00ft (Original Well Elev) |
| <b>Site Error:</b>        | 0.00ft                      | <b>North Reference:</b>             | True                                  |
| <b>Reference Well:</b>    | P_NRC 2-9                   | <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> | P_NRC 2-9                   | <b>Database:</b>                    | EDM 2003.21 Single User Db            |
| <b>Reference Design:</b>  | PLAN #1 1-5-10 RHS          | <b>Offset TVD Reference:</b>        | Offset Datum                          |

Reference Depths are relative to WELL @ 5012.00ft (Original Well Elev) Coordinates are relative to: P\_NRC 2-9  
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.39°

## Separation Factor Plot



### LEGEND

- P\_NRC 419, P\_NRC 41-9, PLAN#1 1-5-10 RHS \0
- P\_NRC 7-9, P\_NRC 7-9, Design #1 \0
- P\_NRC 8-9, P\_NRC 8-9, PLAN#1 1-5-10 RHS \0

ROCKY