



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_DRY CREEK PAD 6

P_DRY CREEK FEDERAL 41-27

P_DRY CREEK FEDERAL 41-27

Plan: PLAN #1 10-27-09 RHS

Standard Planning Report

18 November, 2009



**P_DRY CREEK FEDERAL 41-27
COLORADO NORTHERN ZONE - 83
SECTION 27 T1N R67W
502 FNL 783 FEL
LAT: 40° 1' 40.727 N
LONG: 104° 52' 12.212 W**

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------------|
| Database: | EDM 2003.21 Single User Db | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Project: | COLORADO NOTHERN ZONE - 83 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site: | WELD_DRY CREEK PAD 6 | North Reference: | True |
| Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | P_DRY CREEK FEDERAL 41-27 | | |
| Design: | PLAN #1 10-27-09 RHS | | |

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

| | | | | |
|------------------------------|---|---------------------|-----------------|-------------------------------------|
| Site | WELD_DRY CREEK PAD 6, SECTION 27 T1N R67W | | | |
| Site Position: | | Northing: | 1,253,701.87 ft | Latitude: 40° 1' 41.088 N |
| From: | Lat/Long | Easting: | 3,176,352.60 ft | Longitude: 104° 52' 12.900 W |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 0.00 in | Grid Convergence: 0.41 ° |

| | | | | |
|-----------------------------|---------------------------|-----------|----------------------------|-----------------|
| Well | P_DRY CREEK FEDERAL 41-27 | | | |
| Well Position | +N/-S | -36.48 ft | Northing: | 1,253,665.77 ft |
| | +E/-W | 53.55 ft | Easting: | 3,176,406.41 ft |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | ft |
| | | | Ground Level: | 4,993.01 ft |

| | | | | | |
|------------------|---------------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | P_DRY CREEK FEDERAL 41-27 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF200510 | 10/27/2009 | 9.07 | 66.79 | 53,114 |

| | | | | |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| Design | PLAN #1 10-27-09 RHS | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
| | 0.00 | 0.00 | 0.00 | 137.91 |

| Plan Sections | | | | | | | | | | |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|----------------|
| 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 | |
| 1,250.00 | 0.00 | 0.00 | 1,250.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,959.73 | 14.19 | 137.91 | 1,952.50 | -64.91 | 58.63 | 2.00 | 2.00 | 0.00 | 137.91 | |
| 5,710.27 | 14.19 | 137.91 | 5,588.52 | -747.40 | 675.10 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,420.00 | 0.00 | 0.00 | 6,291.01 | -812.31 | 733.73 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 7,980.00 | 0.00 | 0.00 | 7,851.02 | -812.31 | 733.73 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL_DRY CREEK |

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------------|
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| Company: | US ROCKIES REGION PLANNING | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Project: | COLORADO NOTHERN ZONE - 83 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site: | WELD_DRY CREEK PAD 6 | North Reference: | True |
| Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | P_DRY CREEK FEDERAL 41-27 | | |
| Design: | PLAN #1 10-27-09 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) |
| Start Build 2.00 | | | | | | | | | |
| 1,250.00 | 0.00 | 0.00 | 1,250.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,300.00 | 1.00 | 137.91 | 1,300.00 | -0.32 | 0.29 | 0.44 | 2.00 | 2.00 | 0.00 |
| 1,400.00 | 3.00 | 137.91 | 1,399.93 | -2.91 | 2.63 | 3.93 | 2.00 | 2.00 | 0.00 |
| 1,500.00 | 5.00 | 137.91 | 1,499.68 | -8.09 | 7.31 | 10.90 | 2.00 | 2.00 | 0.00 |
| 1,600.00 | 7.00 | 137.91 | 1,599.13 | -15.85 | 14.31 | 21.35 | 2.00 | 2.00 | 0.00 |
| 1,700.00 | 9.00 | 137.91 | 1,698.15 | -26.17 | 23.64 | 35.27 | 2.00 | 2.00 | 0.00 |
| 1,800.00 | 11.00 | 137.91 | 1,796.63 | -39.06 | 35.28 | 52.63 | 2.00 | 2.00 | 0.00 |
| 1,900.00 | 13.00 | 137.91 | 1,894.44 | -54.49 | 49.22 | 73.42 | 2.00 | 2.00 | 0.00 |
| Start 3750.5 hold at 1959.7 MD | | | | | | | | | |
| 1,959.73 | 14.19 | 137.91 | 1,952.50 | -64.91 | 58.63 | 87.47 | 2.00 | 2.00 | 0.00 |
| 2,000.00 | 14.19 | 137.91 | 1,991.53 | -72.24 | 65.25 | 97.34 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 14.19 | 137.91 | 2,088.48 | -90.43 | 81.68 | 121.86 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 14.19 | 137.91 | 2,185.43 | -108.63 | 98.12 | 146.38 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 14.19 | 137.91 | 2,282.37 | -126.83 | 114.56 | 170.91 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 14.19 | 137.91 | 2,379.32 | -145.02 | 130.99 | 195.43 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 14.19 | 137.91 | 2,476.27 | -163.22 | 147.43 | 219.95 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 14.19 | 137.91 | 2,573.21 | -181.42 | 163.87 | 244.47 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 14.19 | 137.91 | 2,670.16 | -199.62 | 180.31 | 268.99 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 14.19 | 137.91 | 2,767.11 | -217.81 | 196.74 | 293.51 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 14.19 | 137.91 | 2,864.05 | -236.01 | 213.18 | 318.04 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 14.19 | 137.91 | 2,961.00 | -254.21 | 229.62 | 342.56 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 14.19 | 137.91 | 3,057.95 | -272.41 | 246.05 | 367.08 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 14.19 | 137.91 | 3,154.89 | -290.60 | 262.49 | 391.60 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 14.19 | 137.91 | 3,251.84 | -308.80 | 278.93 | 416.12 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 14.19 | 137.91 | 3,348.79 | -327.00 | 295.36 | 440.64 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 14.19 | 137.91 | 3,445.74 | -345.19 | 311.80 | 465.17 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 14.19 | 137.91 | 3,542.68 | -363.39 | 328.24 | 489.69 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 14.19 | 137.91 | 3,639.63 | -381.59 | 344.67 | 514.21 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 14.19 | 137.91 | 3,736.58 | -399.79 | 361.11 | 538.73 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 14.19 | 137.91 | 3,833.52 | -417.98 | 377.55 | 563.25 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 14.19 | 137.91 | 3,930.47 | -436.18 | 393.98 | 587.77 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 14.19 | 137.91 | 4,027.42 | -454.38 | 410.42 | 612.29 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 14.19 | 137.91 | 4,124.36 | -472.58 | 426.86 | 636.82 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 14.19 | 137.91 | 4,221.31 | -490.77 | 443.29 | 661.34 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 14.19 | 137.91 | 4,318.26 | -508.97 | 459.73 | 685.86 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 14.19 | 137.91 | 4,415.20 | -527.17 | 476.17 | 710.38 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 14.19 | 137.91 | 4,512.15 | -545.36 | 492.61 | 734.90 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 14.19 | 137.91 | 4,609.10 | -563.56 | 509.04 | 759.42 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 14.19 | 137.91 | 4,706.04 | -581.76 | 525.48 | 783.95 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 14.19 | 137.91 | 4,802.99 | -599.96 | 541.92 | 808.47 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 14.19 | 137.91 | 4,899.94 | -618.15 | 558.35 | 832.99 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 14.19 | 137.91 | 4,996.88 | -636.35 | 574.79 | 857.51 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 14.19 | 137.91 | 5,093.83 | -654.55 | 591.23 | 882.03 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 14.19 | 137.91 | 5,190.78 | -672.75 | 607.66 | 906.55 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 14.19 | 137.91 | 5,287.73 | -690.94 | 624.10 | 931.08 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 14.19 | 137.91 | 5,384.67 | -709.14 | 640.54 | 955.60 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 14.19 | 137.91 | 5,481.62 | -727.34 | 656.97 | 980.12 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 14.19 | 137.91 | 5,578.57 | -745.53 | 673.41 | 1,004.64 | 0.00 | 0.00 | 0.00 |
| Start Drop -2.00 | | | | | | | | | |
| 5,710.27 | 14.19 | 137.91 | 5,588.52 | -747.40 | 675.10 | 1,007.16 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 12.40 | 137.91 | 5,675.84 | -762.72 | 688.93 | 1,027.80 | 2.00 | -2.00 | 0.00 |
| 5,900.00 | 10.40 | 137.91 | 5,773.87 | -777.39 | 702.18 | 1,047.56 | 2.00 | -2.00 | 0.00 |

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| Project: | COLORADO NOTHERN ZONE - 83 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site: | WELD_DRY CREEK PAD 6 | North Reference: | True |
| Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | P_DRY CREEK FEDERAL 41-27 | | |
| Design: | PLAN #1 10-27-09 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) |
| 6,000.00 | 8.40 | 137.91 | 5,872.52 | -789.51 | 713.13 | 1,063.89 | 2.00 | -2.00 | 0.00 |
| 6,100.00 | 6.40 | 137.91 | 5,971.68 | -799.06 | 721.76 | 1,076.77 | 2.00 | -2.00 | 0.00 |
| 6,200.00 | 4.40 | 137.91 | 6,071.23 | -806.05 | 728.07 | 1,086.18 | 2.00 | -2.00 | 0.00 |
| 6,300.00 | 2.40 | 137.91 | 6,171.05 | -810.45 | 732.04 | 1,092.11 | 2.00 | -2.00 | 0.00 |
| 6,400.00 | 0.40 | 137.91 | 6,271.01 | -812.26 | 733.68 | 1,094.56 | 2.00 | -2.00 | 0.00 |
| Start 1560.0 hold at 6420.0 MD | | | | | | | | | |
| 6,420.00 | 0.00 | 0.00 | 6,291.01 | -812.31 | 733.73 | 1,094.63 | 2.00 | -2.00 | 0.00 |
| 6,500.00 | 0.00 | 0.00 | 6,371.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 0.00 | 0.00 | 6,471.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 0.00 | 0.00 | 6,571.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 0.00 | 0.00 | 6,671.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 0.00 | 0.00 | 6,771.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 0.00 | 0.00 | 6,871.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 0.00 | 0.00 | 6,971.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 0.00 | 0.00 | 7,071.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 0.00 | 0.00 | 7,171.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 0.00 | 0.00 | 7,271.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 0.00 | 0.00 | 7,371.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 0.00 | 0.00 | 7,471.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 0.00 | 0.00 | 7,571.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 0.00 | 0.00 | 7,671.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 0.00 | 0.00 | 7,771.01 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |
| TD at 7980.0 | | | | | | | | | |
| 7,980.00 | 0.00 | 0.00 | 7,851.02 | -812.31 | 733.73 | 1,094.63 | 0.00 | 0.00 | 0.00 |

| Design Targets | | | | | | | | | |
|--|---------------|--------------|----------|------------|------------|---------------|--------------|-----------------|------------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | Longitude |
| - hit/miss target | | | | | | | | | |
| - Shape | | | | | | | | | |
| PBHL_DRY CREEK 4 | 0.00 | 0.00 | 7,851.02 | -812.27 | 733.38 | 1,252,858.73 | 3,177,145.54 | 40° 1' 32.700 N | 104° 52' 2.784 W |
| - plan misses target center by 0.34ft at 7980.00ft MD (7851.02 TVD, -812.31 N, 733.73 E) | | | | | | | | | |
| - Circle (radius 50.00) | | | | | | | | | |

| Casing Points | | | | | |
|---------------------|---------------------|--------|----------------------|--------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (in) | Hole Diameter (in) | |
| 1,150.00 | 1,150.00 | 8 5/8" | 8.62 | 11.00 | |

| Formations | | | | | |
|---------------------|---------------------|-------------|-----------|---------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| 3,150.60 | 3,107.01 | PARKMAN TOP | | | |
| 4,803.06 | 4,709.01 | SUSSEX TOP | | | |
| 7,420.00 | 7,291.01 | NIO TOP | | | |
| 7,820.00 | 7,691.02 | CODELL TOP | | | |

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------------|
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| Project: | COLORADO NOTHERN ZONE - 83 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site: | WELD_DRY CREEK PAD 6 | North Reference: | True |
| Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | P_DRY CREEK FEDERAL 41-27 | | |
| Design: | PLAN #1 10-27-09 RHS | | |

| Plan Annotations | | | | |
|---------------------|---------------------|-------------------|------------|--------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 1,250.00 | 1,250.00 | 0.00 | 0.00 | Start Build 2.00 |
| 1,959.73 | 1,952.50 | -64.91 | 58.63 | Start 3750.5 hold at 1959.7 MD |
| 5,710.27 | 5,588.52 | -747.40 | 675.10 | Start Drop -2.00 |
| 6,420.00 | 6,291.01 | -812.31 | 733.73 | Start 1560.0 hold at 6420.0 MD |
| 7,980.00 | 7,851.02 | -812.31 | 733.73 | TD at 7980.0 |



US ROCKIES REGION PLANNING

**COLORADO NOTHERN ZONE - 83
WELD_DRY CREEK PAD 6
P_DRY CREEK FEDERAL 41-27**

**P_DRY CREEK FEDERAL 41-27
PLAN #1 10-27-09 RHS**

Anticollision Report

18 November, 2009



| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | PLAN #1 10-27-09 RHS | | |
| Filter type: | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| Interpolation Method: | Stations | Error Model: | ISCWSA |
| Depth Range: | 0.00 to 20,000.00ft | Scan Method: | Closest Approach 3D |
| Results Limited by: | Maximum center-center distance of 10,000.00ft | Error Surface: | Elliptical Conic |
| Warning Levels Evaluated at: | 2.00 Sigma | | |

| | | | | |
|----------------------------|----------------|-----------------------------------|------------------|--------------------|
| Survey Tool Program | Date | 11/18/2009 | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 0.00 | 7,980.00 | PLAN #1 10-27-09 RHS (P_DRY CREEK | 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_DRY CREEK PAD 6 | | | | | | |
| HOWARD #1-27 EXISTING - HOWARD #1-27 EXISTING | 1,467.29 | 1,459.08 | 2.67 | -0.42 | 0.863 | Level 1, CC, ES, SF |
| P_DRY CREEK 21-27 - PLAN #1 10-27-09 RHS - PLAN | 1,250.00 | 1,250.00 | 49.15 | 43.79 | 9.168 | CC, ES |
| P_DRY CREEK 21-27 - PLAN #1 10-27-09 RHS - PLAN | 1,300.00 | 1,299.58 | 49.79 | 44.23 | 8.953 | SF |
| P_DRY CREEK 2-27 - P_DRY CREEK 2-27 - PLAN #1 1 | 1,250.00 | 1,250.00 | 64.80 | 59.44 | 12.087 | CC, ES |
| P_DRY CREEK 2-27 - P_DRY CREEK 2-27 - PLAN #1 1 | 1,300.00 | 1,299.19 | 65.53 | 59.97 | 11.782 | SF |
| P_DRY CREEK 27-27 - P_DRY CREEK 27-27 - PLAN # | 1,250.00 | 1,250.00 | 80.24 | 74.88 | 14.969 | CC, ES |
| P_DRY CREEK 27-27 - P_DRY CREEK 27-27 - PLAN # | 1,300.00 | 1,298.63 | 81.09 | 75.53 | 14.569 | SF |
| P_DRY CREEK 7-27 - P_DRY CREEK 7-27 - PLAN #1 1 | 200.00 | 200.00 | 31.39 | 30.75 | 49.007 | CC |
| P_DRY CREEK 7-27 - P_DRY CREEK 7-27 - PLAN #1 1 | 300.00 | 299.82 | 31.64 | 30.57 | 29.560 | ES |
| P_DRY CREEK 7-27 - P_DRY CREEK 7-27 - PLAN #1 1 | 500.00 | 497.31 | 40.14 | 38.11 | 19.811 | SF |
| P_DRY CREEK 8-27 - P_DRY CREEK 8-27 - PLAN #1 1 | 1,250.00 | 1,250.00 | 16.11 | 10.74 | 3.004 | CC |
| P_DRY CREEK 8-27 - P_DRY CREEK 8-27 - PLAN #1 1 | 1,300.00 | 1,300.15 | 16.28 | 10.72 | 2.929 | ES, SF |

| Offset Design | | WELD_DRY CREEK PAD 6 - HOWARD #1-27 EXISTING - HOWARD #1-27 EXISTING - HOWARD #1- | | | | | | | | | | Offset Site Error: | | 0.00 ft | |
|---------------------|---------------------|---|---------------------|-----------------|-------------|-----------------------|------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|---------|--|
| Survey Program: 0- | | | | | | | | | | | | Offset Well Error: | | 0.00 ft | |
| Reference | | Offset | | Semi Major Axis | | Highside Toolface (°) | Offset Wellbore Centre | | Distance | | Minimum Separation (ft) | Separation Factor | Warning | | |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | | +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | | | | | |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 119.98 | -4.33 | 7.50 | 11.79 | | | | | | |
| 100.00 | 100.00 | 92.00 | 92.00 | 0.10 | | 119.98 | -4.33 | 7.50 | 8.66 | 8.56 | 0.10 | 90.435 | | | |
| 200.00 | 200.00 | 192.00 | 192.00 | 0.32 | | 119.98 | -4.33 | 7.50 | 8.66 | 8.34 | 0.32 | 27.011 | | | |
| 300.00 | 300.00 | 292.00 | 292.00 | 0.55 | | 119.98 | -4.33 | 7.50 | 8.66 | 8.11 | 0.55 | 15.877 | | | |
| 400.00 | 400.00 | 392.00 | 392.00 | 0.77 | | 119.98 | -4.33 | 7.50 | 8.66 | 7.89 | 0.77 | 11.242 | | | |
| 500.00 | 500.00 | 492.00 | 492.00 | 0.99 | | 119.98 | -4.33 | 7.50 | 8.66 | 7.66 | 0.99 | 8.702 | | | |
| 600.00 | 600.00 | 592.00 | 592.00 | 1.22 | | 119.98 | -4.33 | 7.50 | 8.66 | 7.44 | 1.22 | 7.098 | | | |
| 700.00 | 700.00 | 692.00 | 692.00 | 1.44 | | 119.98 | -4.33 | 7.50 | 8.66 | 7.21 | 1.44 | 5.994 | | | |
| 800.00 | 800.00 | 792.00 | 792.00 | 1.67 | | 119.98 | -4.33 | 7.50 | 8.66 | 6.99 | 1.67 | 5.187 | | | |
| 900.00 | 900.00 | 892.00 | 892.00 | 1.89 | | 119.98 | -4.33 | 7.50 | 8.66 | 6.76 | 1.89 | 4.571 | | | |
| 1,000.00 | 1,000.00 | 992.00 | 992.00 | 2.12 | | 119.98 | -4.33 | 7.50 | 8.66 | 6.54 | 2.12 | 4.086 | | | |
| 1,100.00 | 1,100.00 | 1,092.00 | 1,092.00 | 2.34 | | 119.98 | -4.33 | 7.50 | 8.66 | 6.31 | 2.34 | 3.694 | | | |
| 1,200.00 | 1,200.00 | 1,192.00 | 1,192.00 | 2.57 | | 119.98 | -4.33 | 7.50 | 8.66 | 6.09 | 2.57 | 3.371 | | | |
| 1,250.00 | 1,250.00 | 1,242.00 | 1,242.00 | 2.68 | | 119.98 | -4.33 | 7.50 | 8.66 | 5.98 | 2.68 | 3.230 | | | |
| 1,300.00 | 1,300.00 | 1,292.00 | 1,292.00 | 2.78 | | -18.87 | -4.33 | 7.50 | 8.24 | 5.46 | 2.78 | 2.965 | | | |
| 1,400.00 | 1,399.93 | 1,391.93 | 1,391.93 | 2.96 | | -31.77 | -4.33 | 7.50 | 5.07 | 2.11 | 2.96 | 1.715 | | | |

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

| | | | |
|---------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NORTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.00 ft |
|---------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------------------|
| Survey Program: 0- | | | | | | | | | | | | 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 |
| 1,467.29 | 1,467.08 | 1,459.08 | 1,459.08 | 3.09 | | -90.00 | -4.33 | 7.50 | 2.67 | -0.42 | 3.09 | 0.863 | Level 1, CC, ES, SF |
| 1,500.00 | 1,499.68 | 1,491.68 | 1,491.68 | 3.15 | | -134.88 | -4.33 | 7.50 | 3.77 | 0.61 | 3.16 | 1.193 | Level 2 |
| 1,600.00 | 1,599.13 | 1,591.13 | 1,591.13 | 3.36 | | -168.43 | -4.33 | 7.50 | 13.39 | 10.04 | 3.35 | 3.997 | |
| 1,700.00 | 1,698.15 | 1,690.15 | 1,690.15 | 3.59 | | -174.30 | -4.33 | 7.50 | 27.16 | 23.62 | 3.54 | 7.665 | |
| 1,800.00 | 1,796.63 | 1,788.63 | 1,788.63 | 3.86 | | -176.50 | -4.33 | 7.50 | 44.48 | 40.73 | 3.74 | 11.879 | |
| 1,900.00 | 1,894.44 | 1,886.44 | 1,886.44 | 4.17 | | -177.60 | -4.33 | 7.50 | 65.24 | 61.29 | 3.95 | 16.514 | |
| 1,959.73 | 1,952.50 | 1,944.50 | 1,944.50 | 4.38 | | -178.01 | -4.33 | 7.50 | 79.28 | 75.20 | 4.08 | 19.444 | |
| 2,000.00 | 1,991.53 | 1,983.53 | 1,983.53 | 4.53 | | -178.23 | -4.33 | 7.50 | 89.14 | 84.98 | 4.17 | 21.390 | |
| 2,100.00 | 2,088.48 | 2,080.48 | 2,080.48 | 4.93 | | -178.61 | -4.33 | 7.50 | 113.66 | 109.26 | 4.40 | 25.846 | |
| 2,200.00 | 2,185.43 | 2,177.43 | 2,177.43 | 5.35 | | -178.86 | -4.33 | 7.50 | 138.17 | 133.54 | 4.63 | 29.821 | |
| 2,300.00 | 2,282.37 | 2,274.37 | 2,274.37 | 5.79 | | -179.03 | -4.33 | 7.50 | 162.69 | 157.82 | 4.87 | 33.374 | |
| 2,400.00 | 2,379.32 | 2,371.32 | 2,371.32 | 6.24 | | -179.16 | -4.33 | 7.50 | 187.21 | 182.09 | 5.12 | 36.560 | |
| 2,500.00 | 2,476.27 | 2,468.27 | 2,468.27 | 6.70 | | -179.26 | -4.33 | 7.50 | 211.73 | 206.36 | 5.37 | 39.425 | |
| 2,600.00 | 2,573.21 | 2,565.21 | 2,565.21 | 7.17 | | -179.33 | -4.33 | 7.50 | 236.25 | 230.63 | 5.62 | 42.011 | |
| 2,700.00 | 2,670.16 | 2,662.16 | 2,662.16 | 7.65 | | -179.40 | -4.33 | 7.50 | 260.77 | 254.89 | 5.88 | 44.352 | |
| 2,800.00 | 2,767.11 | 2,759.11 | 2,759.11 | 8.14 | | -179.45 | -4.33 | 7.50 | 285.29 | 279.15 | 6.14 | 46.478 | |
| 2,900.00 | 2,864.05 | 2,856.05 | 2,856.05 | 8.63 | | -179.49 | -4.33 | 7.50 | 309.81 | 303.41 | 6.40 | 48.416 | |
| 3,000.00 | 2,961.00 | 2,953.00 | 2,953.00 | 9.13 | | -179.53 | -4.33 | 7.50 | 334.33 | 327.67 | 6.66 | 50.187 | |
| 3,100.00 | 3,057.95 | 3,049.95 | 3,049.95 | 9.63 | | -179.56 | -4.33 | 7.50 | 358.85 | 351.93 | 6.93 | 51.811 | |
| 3,200.00 | 3,154.89 | 3,146.89 | 3,146.89 | 10.13 | | -179.59 | -4.33 | 7.50 | 383.37 | 376.18 | 7.19 | 53.303 | |
| 3,300.00 | 3,251.84 | 3,243.84 | 3,243.84 | 10.63 | | -179.61 | -4.33 | 7.50 | 407.89 | 400.43 | 7.46 | 54.679 | |
| 3,400.00 | 3,348.79 | 3,340.79 | 3,340.79 | 11.14 | | -179.64 | -4.33 | 7.50 | 432.42 | 424.69 | 7.73 | 55.951 | |
| 3,500.00 | 3,445.74 | 3,437.74 | 3,437.74 | 11.65 | | -179.66 | -4.33 | 7.50 | 456.94 | 448.94 | 8.00 | 57.130 | |
| 3,600.00 | 3,542.68 | 3,534.68 | 3,534.68 | 12.16 | | -179.67 | -4.33 | 7.50 | 481.46 | 473.19 | 8.27 | 58.224 | |
| 3,700.00 | 3,639.63 | 3,631.63 | 3,631.63 | 12.67 | | -179.69 | -4.33 | 7.50 | 505.98 | 497.44 | 8.54 | 59.243 | |
| 3,800.00 | 3,736.58 | 3,728.58 | 3,728.58 | 13.19 | | -179.70 | -4.33 | 7.50 | 530.50 | 521.69 | 8.81 | 60.194 | |
| 3,900.00 | 3,833.52 | 3,825.52 | 3,825.52 | 13.70 | | -179.72 | -4.33 | 7.50 | 555.02 | 545.94 | 9.09 | 61.082 | |
| 4,000.00 | 3,930.47 | 3,922.47 | 3,922.47 | 14.22 | | -179.73 | -4.33 | 7.50 | 579.54 | 570.18 | 9.36 | 61.914 | |
| 4,100.00 | 4,027.42 | 4,019.42 | 4,019.42 | 14.74 | | -179.74 | -4.33 | 7.50 | 604.06 | 594.43 | 9.63 | 62.695 | |
| 4,200.00 | 4,124.36 | 4,116.36 | 4,116.36 | 15.25 | | -179.75 | -4.33 | 7.50 | 628.59 | 618.68 | 9.91 | 63.429 | |
| 4,300.00 | 4,221.31 | 4,213.31 | 4,213.31 | 15.77 | | -179.76 | -4.33 | 7.50 | 653.11 | 642.92 | 10.19 | 64.120 | |
| 4,400.00 | 4,318.26 | 4,310.26 | 4,310.26 | 16.29 | | -179.77 | -4.33 | 7.50 | 677.63 | 667.17 | 10.46 | 64.772 | |
| 4,500.00 | 4,415.20 | 4,407.20 | 4,407.20 | 16.81 | | -179.78 | -4.33 | 7.50 | 702.15 | 691.41 | 10.74 | 65.387 | |
| 4,600.00 | 4,512.15 | 4,504.15 | 4,504.15 | 17.33 | | -179.78 | -4.33 | 7.50 | 726.67 | 715.66 | 11.02 | 65.969 | |
| 4,700.00 | 4,609.10 | 4,601.10 | 4,601.10 | 17.86 | | -179.79 | -4.33 | 7.50 | 751.19 | 739.90 | 11.29 | 66.520 | |
| 4,800.00 | 4,706.04 | 4,698.04 | 4,698.04 | 18.38 | | -179.80 | -4.33 | 7.50 | 775.71 | 764.14 | 11.57 | 67.043 | |
| 4,900.00 | 4,802.99 | 4,794.99 | 4,794.99 | 18.90 | | -179.80 | -4.33 | 7.50 | 800.24 | 788.39 | 11.85 | 67.539 | |
| 5,000.00 | 4,899.94 | 4,891.94 | 4,891.94 | 19.42 | | -179.81 | -4.33 | 7.50 | 824.76 | 812.63 | 12.13 | 68.011 | |
| 5,100.00 | 4,996.88 | 4,988.88 | 4,988.88 | 19.94 | | -179.81 | -4.33 | 7.50 | 849.28 | 836.87 | 12.41 | 68.461 | |
| 5,200.00 | 5,093.83 | 5,085.83 | 5,085.83 | 20.47 | | -179.82 | -4.33 | 7.50 | 873.80 | 861.12 | 12.68 | 68.889 | |
| 5,300.00 | 5,190.78 | 5,182.78 | 5,182.78 | 20.99 | | -179.82 | -4.33 | 7.50 | 898.32 | 885.36 | 12.96 | 69.297 | |
| 5,400.00 | 5,287.73 | 5,279.73 | 5,279.73 | 21.52 | | -179.83 | -4.33 | 7.50 | 922.84 | 909.60 | 13.24 | 69.687 | |
| 5,500.00 | 5,384.67 | 5,376.67 | 5,376.67 | 22.04 | | -179.83 | -4.33 | 7.50 | 947.37 | 933.84 | 13.52 | 70.059 | |
| 5,600.00 | 5,481.62 | 5,473.62 | 5,473.62 | 22.56 | | -179.84 | -4.33 | 7.50 | 971.89 | 958.08 | 13.80 | 70.416 | |
| 5,700.00 | 5,578.57 | 5,570.57 | 5,570.57 | 23.09 | | -179.84 | -4.33 | 7.50 | 996.41 | 982.33 | 14.08 | 70.757 | |
| 5,710.27 | 5,588.52 | 5,580.52 | 5,580.52 | 23.14 | | -179.84 | -4.33 | 7.50 | 998.93 | 984.81 | 14.11 | 70.791 | |
| 5,800.00 | 5,675.84 | 5,667.84 | 5,667.84 | 23.54 | | -179.85 | -4.33 | 7.50 | 1,019.56 | 1,005.29 | 14.27 | 71.433 | |
| 5,900.00 | 5,773.87 | 5,765.87 | 5,765.87 | 23.87 | | -179.85 | -4.33 | 7.50 | 1,039.33 | 1,024.82 | 14.50 | 71.658 | |
| 6,000.00 | 5,872.52 | 5,864.52 | 5,864.52 | 24.16 | | -179.85 | -4.33 | 7.50 | 1,055.66 | 1,040.95 | 14.71 | 71.782 | |
| 6,100.00 | 5,971.68 | 5,963.68 | 5,963.68 | 24.41 | | -179.86 | -4.33 | 7.50 | 1,068.54 | 1,053.66 | 14.88 | 71.811 | |
| 6,200.00 | 6,071.23 | 6,063.23 | 6,063.23 | 24.62 | | -179.86 | -4.33 | 7.50 | 1,077.95 | 1,062.93 | 15.02 | 71.749 | |
| 6,300.00 | 6,171.05 | 6,163.05 | 6,163.05 | 24.79 | | -179.86 | -4.33 | 7.50 | 1,083.88 | 1,068.74 | 15.14 | 71.598 | |

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

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | | Offset Site Error: | 0.00 ft |
|---------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|---------|
| Survey Program: 0- | | | | | | | | | | | | | 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 | |
| 6,400.00 | 6,271.01 | 6,263.01 | 6,263.01 | 24.91 | | -179.86 | -4.33 | 7.50 | 1,086.32 | 1,071.10 | 15.22 | 71.359 | | |
| 6,420.00 | 6,291.01 | 6,283.01 | 6,283.01 | 24.94 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,071.15 | 15.24 | 71.292 | | |
| 6,500.00 | 6,371.01 | 6,363.01 | 6,363.01 | 25.02 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,071.01 | 15.38 | 70.639 | | |
| 6,600.00 | 6,471.01 | 6,463.01 | 6,463.01 | 25.13 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,070.84 | 15.55 | 69.863 | | |
| 6,700.00 | 6,571.01 | 6,563.01 | 6,563.01 | 25.24 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,070.67 | 15.72 | 69.097 | | |
| 6,800.00 | 6,671.01 | 6,663.01 | 6,663.01 | 25.35 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,070.50 | 15.90 | 68.343 | | |
| 6,900.00 | 6,771.01 | 6,763.01 | 6,763.01 | 25.46 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,070.32 | 16.07 | 67.599 | | |
| 7,000.00 | 6,871.01 | 6,863.01 | 6,863.01 | 25.58 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,070.14 | 16.25 | 66.867 | | |
| 7,100.00 | 6,971.01 | 6,963.01 | 6,963.01 | 25.69 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,069.97 | 16.42 | 66.145 | | |
| 7,200.00 | 7,071.01 | 7,063.01 | 7,063.01 | 25.81 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,069.79 | 16.60 | 65.435 | | |
| 7,300.00 | 7,171.01 | 7,163.01 | 7,163.01 | 25.93 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,069.61 | 16.78 | 64.735 | | |
| 7,400.00 | 7,271.01 | 7,263.01 | 7,263.01 | 26.05 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,069.43 | 16.96 | 64.045 | | |
| 7,500.00 | 7,371.01 | 7,363.01 | 7,363.01 | 26.17 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,069.25 | 17.14 | 63.367 | | |
| 7,600.00 | 7,471.01 | 7,463.01 | 7,463.01 | 26.29 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,069.06 | 17.33 | 62.699 | | |
| 7,700.00 | 7,571.01 | 7,563.01 | 7,563.01 | 26.41 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,068.88 | 17.51 | 62.041 | | |
| 7,800.00 | 7,671.01 | 7,663.01 | 7,663.01 | 26.54 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,068.70 | 17.70 | 61.394 | | |
| 7,900.00 | 7,771.01 | 7,763.01 | 7,763.01 | 26.66 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,068.51 | 17.88 | 60.757 | | |
| 7,980.00 | 7,851.02 | 7,843.02 | 7,843.02 | 26.76 | | -41.95 | -4.33 | 7.50 | 1,086.39 | 1,068.36 | 18.03 | 60.255 | | |

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.00 ft |
|------------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWMD | | | | | | | | | | | | 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 | -53.58 | 29.18 | -39.55 | 49.15 | | | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.10 | 0.10 | -53.58 | 29.18 | -39.55 | 49.15 | 48.96 | 0.19 | 257.247 | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.32 | 0.32 | -53.58 | 29.18 | -39.55 | 49.15 | 48.51 | 0.64 | 76.723 | |
| 300.00 | 300.00 | 300.00 | 300.00 | 0.55 | 0.55 | -53.58 | 29.18 | -39.55 | 49.15 | 48.06 | 1.09 | 45.085 | |
| 400.00 | 400.00 | 400.00 | 400.00 | 0.77 | 0.77 | -53.58 | 29.18 | -39.55 | 49.15 | 47.61 | 1.54 | 31.921 | |
| 500.00 | 500.00 | 500.00 | 500.00 | 0.99 | 0.99 | -53.58 | 29.18 | -39.55 | 49.15 | 47.16 | 1.99 | 24.707 | |
| 600.00 | 600.00 | 600.00 | 600.00 | 1.22 | 1.22 | -53.58 | 29.18 | -39.55 | 49.15 | 46.71 | 2.44 | 20.153 | |
| 700.00 | 700.00 | 700.00 | 700.00 | 1.44 | 1.44 | -53.58 | 29.18 | -39.55 | 49.15 | 46.26 | 2.89 | 17.016 | |
| 800.00 | 800.00 | 800.00 | 800.00 | 1.67 | 1.67 | -53.58 | 29.18 | -39.55 | 49.15 | 45.81 | 3.34 | 14.725 | |
| 900.00 | 900.00 | 900.00 | 900.00 | 1.89 | 1.89 | -53.58 | 29.18 | -39.55 | 49.15 | 45.36 | 3.79 | 12.977 | |
| 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 2.12 | 2.12 | -53.58 | 29.18 | -39.55 | 49.15 | 44.91 | 4.24 | 11.600 | |
| 1,100.00 | 1,100.00 | 1,100.00 | 1,100.00 | 2.34 | 2.34 | -53.58 | 29.18 | -39.55 | 49.15 | 44.46 | 4.69 | 10.487 | |
| 1,200.00 | 1,200.00 | 1,200.00 | 1,200.00 | 2.57 | 2.57 | -53.58 | 29.18 | -39.55 | 49.15 | 44.01 | 5.14 | 9.569 | |
| 1,250.00 | 1,250.00 | 1,250.00 | 1,250.00 | 2.68 | 2.68 | -53.58 | 29.18 | -39.55 | 49.15 | 43.79 | 5.36 | 9.168 CC, ES | |
| 1,300.00 | 1,300.00 | 1,299.58 | 1,299.57 | 2.78 | 2.78 | 168.18 | 29.00 | -39.94 | 49.79 | 44.23 | 5.56 | 8.953 SF | |
| 1,400.00 | 1,399.93 | 1,398.50 | 1,398.43 | 2.96 | 2.97 | 165.78 | 27.58 | -43.05 | 54.94 | 49.03 | 5.92 | 9.284 | |
| 1,500.00 | 1,499.68 | 1,496.73 | 1,496.42 | 3.15 | 3.17 | 162.13 | 24.77 | -49.21 | 65.46 | 59.17 | 6.28 | 10.421 | |
| 1,600.00 | 1,599.13 | 1,593.81 | 1,592.99 | 3.36 | 3.38 | 158.42 | 20.63 | -58.30 | 81.49 | 74.83 | 6.65 | 12.249 | |
| 1,700.00 | 1,698.15 | 1,689.34 | 1,687.62 | 3.59 | 3.60 | 155.25 | 15.22 | -70.14 | 103.05 | 96.01 | 7.04 | 14.645 | |
| 1,800.00 | 1,796.63 | 1,782.91 | 1,779.84 | 3.86 | 3.86 | 152.73 | 8.67 | -84.51 | 130.04 | 122.60 | 7.44 | 17.479 | |
| 1,900.00 | 1,894.44 | 1,874.18 | 1,869.25 | 4.17 | 4.14 | 150.74 | 1.07 | -101.17 | 162.28 | 154.41 | 7.87 | 20.618 | |
| 1,959.73 | 1,952.50 | 1,927.47 | 1,921.17 | 4.38 | 4.33 | 149.75 | -3.91 | -112.09 | 183.97 | 175.83 | 8.14 | 22.592 | |
| 2,000.00 | 1,991.53 | 1,962.91 | 1,955.58 | 4.53 | 4.46 | 149.28 | -7.45 | -119.84 | 199.36 | 191.01 | 8.35 | 23.866 | |
| 2,100.00 | 2,088.48 | 2,049.66 | 2,039.32 | 4.93 | 4.81 | 148.05 | -16.84 | -140.43 | 239.10 | 230.20 | 8.90 | 26.868 | |
| 2,200.00 | 2,185.43 | 2,134.50 | 2,120.52 | 5.35 | 5.19 | 146.80 | -27.04 | -162.79 | 280.97 | 271.49 | 9.48 | 29.648 | |
| 2,300.00 | 2,282.37 | 2,217.36 | 2,199.08 | 5.79 | 5.62 | 145.57 | -37.97 | -186.73 | 324.98 | 314.89 | 10.08 | 32.228 | |
| 2,400.00 | 2,379.32 | 2,300.00 | 2,276.65 | 6.24 | 6.09 | 144.36 | -49.79 | -212.66 | 371.09 | 360.37 | 10.72 | 34.609 | |
| 2,500.00 | 2,476.27 | 2,376.86 | 2,348.02 | 6.70 | 6.58 | 143.26 | -61.62 | -238.59 | 419.27 | 407.89 | 11.38 | 36.858 | |
| 2,600.00 | 2,573.21 | 2,453.43 | 2,418.34 | 7.17 | 7.11 | 142.19 | -74.19 | -266.15 | 469.47 | 457.41 | 12.05 | 38.955 | |
| 2,700.00 | 2,670.16 | 2,527.84 | 2,485.89 | 7.65 | 7.66 | 141.18 | -87.16 | -294.56 | 521.63 | 508.89 | 12.74 | 40.941 | |
| 2,800.00 | 2,767.11 | 2,600.01 | 2,550.59 | 8.14 | 8.24 | 140.24 | -100.42 | -323.63 | 575.71 | 562.27 | 13.44 | 42.838 | |
| 2,900.00 | 2,864.05 | 2,670.19 | 2,612.73 | 8.63 | 8.85 | 139.35 | -113.96 | -353.31 | 631.64 | 617.49 | 14.15 | 44.624 | |
| 3,000.00 | 2,961.00 | 2,738.15 | 2,672.12 | 9.13 | 9.46 | 138.52 | -127.67 | -383.37 | 689.35 | 674.48 | 14.87 | 46.356 | |
| 3,100.00 | 3,057.95 | 2,812.59 | 2,736.45 | 9.63 | 10.17 | 137.66 | -143.21 | -417.44 | 748.51 | 732.88 | 15.63 | 47.884 | |
| 3,200.00 | 3,154.89 | 2,892.55 | 2,805.49 | 10.13 | 10.95 | 136.86 | -159.96 | -454.15 | 807.92 | 791.49 | 16.43 | 49.187 | |
| 3,300.00 | 3,251.84 | 2,972.51 | 2,874.52 | 10.63 | 11.75 | 136.16 | -176.71 | -490.86 | 867.41 | 850.18 | 17.22 | 50.363 | |
| 3,400.00 | 3,348.79 | 3,052.48 | 2,943.56 | 11.14 | 12.55 | 135.56 | -193.45 | -527.57 | 926.97 | 908.95 | 18.02 | 51.430 | |
| 3,500.00 | 3,445.74 | 3,132.44 | 3,012.59 | 11.65 | 13.35 | 135.03 | -210.20 | -564.29 | 986.59 | 967.77 | 18.83 | 52.404 | |
| 3,600.00 | 3,542.68 | 3,212.40 | 3,081.62 | 12.16 | 14.17 | 134.56 | -226.95 | -601.00 | 1,046.26 | 1,026.63 | 19.63 | 53.294 | |
| 3,700.00 | 3,639.63 | 3,292.37 | 3,150.66 | 12.67 | 14.98 | 134.14 | -243.70 | -637.71 | 1,105.98 | 1,085.54 | 20.44 | 54.111 | |
| 3,800.00 | 3,736.58 | 3,372.33 | 3,219.69 | 13.19 | 15.81 | 133.76 | -260.45 | -674.42 | 1,165.72 | 1,144.48 | 21.25 | 54.861 | |
| 3,900.00 | 3,833.52 | 3,452.29 | 3,288.73 | 13.70 | 16.63 | 133.42 | -277.19 | -711.13 | 1,225.50 | 1,203.44 | 22.06 | 55.555 | |
| 4,000.00 | 3,930.47 | 3,532.25 | 3,357.76 | 14.22 | 17.46 | 133.11 | -293.94 | -747.85 | 1,285.30 | 1,262.43 | 22.87 | 56.198 | |
| 4,100.00 | 4,027.42 | 3,612.22 | 3,426.80 | 14.74 | 18.29 | 132.83 | -310.69 | -784.56 | 1,345.13 | 1,321.44 | 23.68 | 56.795 | |
| 4,200.00 | 4,124.36 | 3,692.18 | 3,495.83 | 15.25 | 19.13 | 132.57 | -327.44 | -821.27 | 1,404.97 | 1,380.47 | 24.50 | 57.352 | |
| 4,300.00 | 4,221.31 | 3,772.14 | 3,564.87 | 15.77 | 19.96 | 132.33 | -344.18 | -857.98 | 1,464.83 | 1,439.52 | 25.31 | 57.871 | |
| 4,400.00 | 4,318.26 | 3,852.10 | 3,633.90 | 16.29 | 20.80 | 132.11 | -360.93 | -894.69 | 1,524.71 | 1,498.58 | 26.13 | 58.357 | |
| 4,500.00 | 4,415.20 | 3,932.07 | 3,702.93 | 16.81 | 21.64 | 131.91 | -377.68 | -931.41 | 1,584.59 | 1,557.65 | 26.94 | 58.814 | |
| 4,600.00 | 4,512.15 | 4,012.03 | 3,771.97 | 17.33 | 22.48 | 131.72 | -394.43 | -968.12 | 1,644.49 | 1,616.74 | 27.76 | 59.243 | |
| 4,700.00 | 4,609.10 | 4,091.99 | 3,841.00 | 17.86 | 23.32 | 131.55 | -411.17 | -1,004.83 | 1,704.41 | 1,675.83 | 28.57 | 59.648 | |
| 4,800.00 | 4,706.04 | 4,171.95 | 3,910.04 | 18.38 | 24.17 | 131.38 | -427.92 | -1,041.54 | 1,764.33 | 1,734.93 | 29.39 | 60.030 | |
| 4,900.00 | 4,802.99 | 4,251.92 | 3,979.07 | 18.90 | 25.01 | 131.23 | -444.67 | -1,078.25 | 1,824.25 | 1,794.05 | 30.21 | 60.392 | |

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

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design WELD_DRY CREEK PAD 6 - P_DRY CREEK 21-27 - PLAN #1 10-27-09 RHS - PLAN #1 10-27-09 RH | | | | | | | | | | | | 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 | 4,899.94 | 4,331.88 | 4,048.11 | 19.42 | 25.85 | 131.09 | -461.42 | -1,114.97 | 1,884.19 | 1,853.17 | 31.02 | 60.735 | |
| 5,100.00 | 4,996.88 | 4,411.84 | 4,117.14 | 19.94 | 26.70 | 130.96 | -478.16 | -1,151.68 | 1,944.13 | 1,912.29 | 31.84 | 61.060 | |
| 5,200.00 | 5,093.83 | 4,491.80 | 4,186.18 | 20.47 | 27.55 | 130.83 | -494.91 | -1,188.39 | 2,004.08 | 1,971.43 | 32.66 | 61.370 | |
| 5,300.00 | 5,190.78 | 4,571.77 | 4,255.21 | 20.99 | 28.39 | 130.71 | -511.66 | -1,225.10 | 2,064.04 | 2,030.57 | 33.47 | 61.665 | |
| 5,400.00 | 5,287.73 | 4,651.73 | 4,324.25 | 21.52 | 29.24 | 130.60 | -528.41 | -1,261.81 | 2,124.00 | 2,089.71 | 34.29 | 61.947 | |
| 5,500.00 | 5,384.67 | 4,731.69 | 4,393.28 | 22.04 | 30.09 | 130.50 | -545.16 | -1,298.52 | 2,183.97 | 2,148.86 | 35.10 | 62.216 | |
| 5,600.00 | 5,481.62 | 4,811.65 | 4,462.31 | 22.56 | 30.94 | 130.40 | -561.90 | -1,335.24 | 2,243.94 | 2,208.02 | 35.92 | 62.474 | |
| 5,700.00 | 5,578.57 | 4,891.62 | 4,531.35 | 23.09 | 31.79 | 130.30 | -578.65 | -1,371.95 | 2,303.91 | 2,267.18 | 36.73 | 62.721 | |
| 5,710.27 | 5,588.52 | 4,899.83 | 4,538.44 | 23.14 | 31.87 | 130.29 | -580.37 | -1,375.72 | 2,310.07 | 2,273.25 | 36.82 | 62.746 | |
| 5,800.00 | 5,675.84 | 4,972.07 | 4,600.81 | 23.54 | 32.64 | 131.18 | -595.50 | -1,408.89 | 2,363.15 | 2,325.30 | 37.85 | 62.434 | |
| 5,900.00 | 5,773.87 | 5,053.69 | 4,671.27 | 23.87 | 33.51 | 132.03 | -612.60 | -1,446.36 | 2,420.55 | 2,381.65 | 38.91 | 62.214 | |
| 6,000.00 | 5,872.52 | 5,136.37 | 4,742.65 | 24.16 | 34.39 | 132.76 | -629.91 | -1,484.32 | 2,476.05 | 2,436.14 | 39.91 | 62.036 | |
| 6,100.00 | 5,971.68 | 5,220.02 | 4,814.87 | 24.41 | 35.28 | 133.38 | -647.43 | -1,522.72 | 2,529.60 | 2,488.74 | 40.86 | 61.903 | |
| 6,200.00 | 6,071.23 | 5,322.74 | 4,903.59 | 24.62 | 36.34 | 133.81 | -668.92 | -1,569.81 | 2,581.17 | 2,539.35 | 41.82 | 61.718 | |
| 6,300.00 | 6,171.05 | 5,400.92 | 5,373.80 | 24.79 | 40.07 | 132.69 | -758.60 | -1,766.40 | 2,623.07 | 2,579.25 | 43.82 | 59.858 | |
| 6,400.00 | 6,271.01 | 6,440.89 | 5,956.13 | 24.91 | 42.50 | 131.96 | -816.62 | -1,893.58 | 2,646.07 | 2,600.75 | 45.31 | 58.394 | |
| 6,420.00 | 6,291.01 | 6,567.18 | 6,081.66 | 24.94 | 42.77 | -90.22 | -822.31 | -1,906.06 | 2,648.09 | 2,602.56 | 45.54 | 58.154 | |
| 6,500.00 | 6,371.01 | 6,856.84 | 6,371.01 | 25.02 | 43.10 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,603.68 | 45.96 | 57.646 | |
| 6,600.00 | 6,471.01 | 6,956.84 | 6,471.01 | 25.13 | 43.17 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,603.45 | 46.19 | 57.362 | |
| 6,700.00 | 6,571.01 | 7,056.84 | 6,571.01 | 25.24 | 43.23 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,603.22 | 46.42 | 57.077 | |
| 6,800.00 | 6,671.01 | 7,156.84 | 6,671.01 | 25.35 | 43.30 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,602.98 | 46.66 | 56.791 | |
| 6,900.00 | 6,771.01 | 7,256.84 | 6,771.01 | 25.46 | 43.37 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,602.75 | 46.89 | 56.504 | |
| 7,000.00 | 6,871.01 | 7,356.84 | 6,871.01 | 25.58 | 43.45 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,602.51 | 47.13 | 56.216 | |
| 7,100.00 | 6,971.01 | 7,456.84 | 6,971.01 | 25.69 | 43.52 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,602.26 | 47.38 | 55.928 | |
| 7,200.00 | 7,071.01 | 7,556.84 | 7,071.01 | 25.81 | 43.59 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,602.02 | 47.62 | 55.639 | |
| 7,300.00 | 7,171.01 | 7,656.84 | 7,171.01 | 25.93 | 43.67 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,601.77 | 47.87 | 55.350 | |
| 7,400.00 | 7,271.01 | 7,756.84 | 7,271.01 | 26.05 | 43.74 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,601.52 | 48.12 | 55.060 | |
| 7,500.00 | 7,371.01 | 7,856.84 | 7,371.01 | 26.17 | 43.82 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,601.26 | 48.38 | 54.770 | |
| 7,600.00 | 7,471.01 | 7,956.84 | 7,471.01 | 26.29 | 43.90 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,601.00 | 48.64 | 54.480 | |
| 7,700.00 | 7,571.01 | 8,056.84 | 7,571.01 | 26.41 | 43.97 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,600.74 | 48.90 | 54.190 | |
| 7,800.00 | 7,671.01 | 8,156.84 | 7,671.01 | 26.54 | 44.05 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,600.48 | 49.16 | 53.900 | |
| 7,900.00 | 7,771.01 | 8,256.84 | 7,771.01 | 26.66 | 44.13 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,600.21 | 49.42 | 53.610 | |
| 7,980.00 | 7,851.02 | 8,336.84 | 7,851.02 | 26.76 | 44.20 | -90.31 | -826.78 | -1,915.87 | 2,649.64 | 2,600.00 | 49.64 | 53.378 | |

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design WELD_DRY CREEK PAD 6 - P_DRY CREEK 2-27 - P_DRY CREEK 2-27 - PLAN #1 10-27-09 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 | -55.73 | 36.48 | -53.55 | 64.80 | | | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.10 | 0.10 | -55.73 | 36.48 | -53.55 | 64.80 | 64.60 | 0.19 | 339.154 | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.32 | 0.32 | -55.73 | 36.48 | -53.55 | 64.80 | 64.16 | 0.64 | 101.151 | |
| 300.00 | 300.00 | 300.00 | 300.00 | 0.55 | 0.55 | -55.73 | 36.48 | -53.55 | 64.80 | 63.71 | 1.09 | 59.439 | |
| 400.00 | 400.00 | 400.00 | 400.00 | 0.77 | 0.77 | -55.73 | 36.48 | -53.55 | 64.80 | 63.26 | 1.54 | 42.085 | |
| 500.00 | 500.00 | 500.00 | 500.00 | 0.99 | 0.99 | -55.73 | 36.48 | -53.55 | 64.80 | 62.81 | 1.99 | 32.574 | |
| 600.00 | 600.00 | 600.00 | 600.00 | 1.22 | 1.22 | -55.73 | 36.48 | -53.55 | 64.80 | 62.36 | 2.44 | 26.570 | |
| 700.00 | 700.00 | 700.00 | 700.00 | 1.44 | 1.44 | -55.73 | 36.48 | -53.55 | 64.80 | 61.91 | 2.89 | 22.434 | |
| 800.00 | 800.00 | 800.00 | 800.00 | 1.67 | 1.67 | -55.73 | 36.48 | -53.55 | 64.80 | 61.46 | 3.34 | 19.413 | |
| 900.00 | 900.00 | 900.00 | 900.00 | 1.89 | 1.89 | -55.73 | 36.48 | -53.55 | 64.80 | 61.01 | 3.79 | 17.109 | |
| 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 2.12 | 2.12 | -55.73 | 36.48 | -53.55 | 64.80 | 60.56 | 4.24 | 15.293 | |
| 1,100.00 | 1,100.00 | 1,100.00 | 1,100.00 | 2.34 | 2.34 | -55.73 | 36.48 | -53.55 | 64.80 | 60.11 | 4.69 | 13.826 | |
| 1,200.00 | 1,200.00 | 1,200.00 | 1,200.00 | 2.57 | 2.57 | -55.73 | 36.48 | -53.55 | 64.80 | 59.66 | 5.14 | 12.616 | |
| 1,250.00 | 1,250.00 | 1,250.00 | 1,250.00 | 2.68 | 2.68 | -55.73 | 36.48 | -53.55 | 64.80 | 59.44 | 5.36 | 12.087 CC, ES | |
| 1,300.00 | 1,300.00 | 1,299.19 | 1,299.19 | 2.78 | 2.78 | 166.18 | 36.41 | -53.97 | 65.53 | 59.97 | 5.56 | 11.782 SF | |
| 1,400.00 | 1,399.93 | 1,397.30 | 1,397.23 | 2.96 | 2.98 | 164.94 | 35.84 | -57.28 | 71.40 | 65.48 | 5.92 | 12.053 | |
| 1,500.00 | 1,499.68 | 1,494.60 | 1,494.30 | 3.15 | 3.18 | 162.97 | 34.71 | -63.83 | 83.20 | 76.91 | 6.29 | 13.227 | |
| 1,600.00 | 1,599.13 | 1,590.59 | 1,589.79 | 3.36 | 3.39 | 160.86 | 33.05 | -73.48 | 100.92 | 94.26 | 6.66 | 15.155 | |
| 1,700.00 | 1,698.15 | 1,684.77 | 1,683.11 | 3.59 | 3.62 | 158.96 | 30.90 | -86.00 | 124.52 | 117.48 | 7.03 | 17.700 | |
| 1,800.00 | 1,796.63 | 1,776.72 | 1,773.75 | 3.86 | 3.87 | 157.36 | 28.29 | -101.13 | 153.84 | 146.43 | 7.42 | 20.738 | |
| 1,900.00 | 1,894.44 | 1,866.02 | 1,861.28 | 4.17 | 4.15 | 156.03 | 25.29 | -118.57 | 188.72 | 180.91 | 7.81 | 24.153 | |
| 1,959.73 | 1,952.50 | 1,917.95 | 1,911.92 | 4.38 | 4.33 | 155.35 | 23.33 | -129.94 | 212.11 | 204.06 | 8.06 | 26.326 | |
| 2,000.00 | 1,991.53 | 1,952.43 | 1,945.41 | 4.53 | 4.46 | 155.05 | 21.95 | -137.99 | 228.70 | 220.45 | 8.25 | 27.722 | |
| 2,100.00 | 2,088.48 | 2,039.43 | 2,029.54 | 4.93 | 4.80 | 154.25 | 18.19 | -159.82 | 271.29 | 262.54 | 8.75 | 31.014 | |
| 2,200.00 | 2,185.43 | 2,129.66 | 2,116.69 | 5.35 | 5.18 | 153.59 | 14.22 | -182.87 | 314.28 | 305.01 | 9.28 | 33.882 | |
| 2,300.00 | 2,282.37 | 2,219.90 | 2,203.84 | 5.79 | 5.58 | 153.10 | 10.25 | -205.93 | 357.31 | 347.48 | 9.82 | 36.378 | |
| 2,400.00 | 2,379.32 | 2,310.13 | 2,290.99 | 6.24 | 6.00 | 152.70 | 6.28 | -228.98 | 400.35 | 389.96 | 10.38 | 38.558 | |
| 2,500.00 | 2,476.27 | 2,400.36 | 2,378.14 | 6.70 | 6.43 | 152.39 | 2.31 | -252.03 | 443.40 | 432.44 | 10.96 | 40.471 | |
| 2,600.00 | 2,573.21 | 2,490.60 | 2,465.29 | 7.17 | 6.87 | 152.13 | -1.65 | -275.08 | 486.46 | 474.92 | 11.54 | 42.155 | |
| 2,700.00 | 2,670.16 | 2,580.83 | 2,552.44 | 7.65 | 7.32 | 151.91 | -5.62 | -298.14 | 529.53 | 517.40 | 12.13 | 43.646 | |
| 2,800.00 | 2,767.11 | 2,671.07 | 2,639.59 | 8.14 | 7.77 | 151.73 | -9.59 | -321.19 | 572.60 | 559.87 | 12.73 | 44.973 | |
| 2,900.00 | 2,864.05 | 2,761.30 | 2,726.74 | 8.63 | 8.23 | 151.57 | -13.56 | -344.24 | 615.68 | 602.34 | 13.34 | 46.160 | |
| 3,000.00 | 2,961.00 | 2,851.53 | 2,813.89 | 9.13 | 8.70 | 151.43 | -17.53 | -367.29 | 658.76 | 644.81 | 13.95 | 47.225 | |
| 3,100.00 | 3,057.95 | 2,941.77 | 2,901.03 | 9.63 | 9.17 | 151.31 | -21.49 | -390.35 | 701.84 | 687.28 | 14.57 | 48.186 | |
| 3,200.00 | 3,154.89 | 3,032.00 | 2,988.18 | 10.13 | 9.64 | 151.20 | -25.46 | -413.40 | 744.93 | 729.74 | 15.18 | 49.057 | |
| 3,300.00 | 3,251.84 | 3,122.23 | 3,075.33 | 10.63 | 10.11 | 151.10 | -29.43 | -436.45 | 788.01 | 772.21 | 15.81 | 49.849 | |
| 3,400.00 | 3,348.79 | 3,212.47 | 3,162.48 | 11.14 | 10.59 | 151.02 | -33.40 | -459.50 | 831.10 | 814.67 | 16.43 | 50.573 | |
| 3,500.00 | 3,445.74 | 3,302.70 | 3,249.63 | 11.65 | 11.07 | 150.94 | -37.37 | -482.56 | 874.19 | 857.13 | 17.06 | 51.236 | |
| 3,600.00 | 3,542.68 | 3,392.94 | 3,336.78 | 12.16 | 11.55 | 150.87 | -41.34 | -505.61 | 917.29 | 899.59 | 17.69 | 51.846 | |
| 3,700.00 | 3,639.63 | 3,483.17 | 3,423.93 | 12.67 | 12.03 | 150.81 | -45.30 | -528.66 | 960.38 | 942.05 | 18.32 | 52.409 | |
| 3,800.00 | 3,736.58 | 3,573.40 | 3,511.08 | 13.19 | 12.52 | 150.75 | -49.27 | -551.71 | 1,003.47 | 984.51 | 18.96 | 52.930 | |
| 3,900.00 | 3,833.52 | 3,663.64 | 3,598.23 | 13.70 | 13.00 | 150.70 | -53.24 | -574.77 | 1,046.57 | 1,026.97 | 19.60 | 53.405 | |
| 4,000.00 | 3,930.47 | 3,753.87 | 3,685.38 | 14.22 | 13.49 | 150.65 | -57.21 | -597.82 | 1,089.66 | 1,069.42 | 20.24 | 53.831 | |
| 4,100.00 | 4,027.42 | 3,844.10 | 3,772.53 | 14.74 | 13.98 | 150.60 | -61.18 | -620.87 | 1,132.76 | 1,111.87 | 20.89 | 54.226 | |
| 4,200.00 | 4,124.36 | 3,934.34 | 3,859.68 | 15.25 | 14.47 | 150.56 | -65.15 | -643.92 | 1,175.85 | 1,154.31 | 21.54 | 54.593 | |
| 4,300.00 | 4,221.31 | 4,024.57 | 3,946.82 | 15.77 | 14.96 | 150.52 | -69.11 | -666.98 | 1,218.95 | 1,196.76 | 22.19 | 54.935 | |
| 4,400.00 | 4,318.26 | 4,114.81 | 4,033.97 | 16.29 | 15.45 | 150.48 | -73.08 | -690.03 | 1,262.05 | 1,239.21 | 22.84 | 55.255 | |
| 4,500.00 | 4,415.20 | 4,205.04 | 4,121.12 | 16.81 | 15.94 | 150.45 | -77.05 | -713.08 | 1,305.14 | 1,281.65 | 23.49 | 55.553 | |
| 4,600.00 | 4,512.15 | 4,295.27 | 4,208.27 | 17.33 | 16.43 | 150.42 | -81.02 | -736.13 | 1,348.24 | 1,324.09 | 24.15 | 55.833 | |
| 4,700.00 | 4,609.10 | 4,385.51 | 4,295.42 | 17.86 | 16.92 | 150.39 | -84.99 | -759.19 | 1,391.34 | 1,366.54 | 24.80 | 56.096 | |
| 4,800.00 | 4,706.04 | 4,475.74 | 4,382.57 | 18.38 | 17.42 | 150.36 | -88.96 | -782.24 | 1,434.44 | 1,408.98 | 25.46 | 56.343 | |
| 4,900.00 | 4,802.99 | 4,565.98 | 4,469.72 | 18.90 | 17.91 | 150.33 | -92.92 | -805.29 | 1,477.54 | 1,451.42 | 26.12 | 56.576 | |

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

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.00 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD | | | | | | | | | | | | Offset Well Error: | 0.00 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | Warning |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | |
| 5,000.00 | 4,899.94 | 4,656.21 | 4,556.87 | 19.42 | 18.40 | 150.31 | -96.89 | -828.34 | 1,520.64 | 1,493.86 | 26.77 | 56.795 | |
| 5,100.00 | 4,996.88 | 4,746.44 | 4,644.02 | 19.94 | 18.90 | 150.29 | -100.86 | -851.39 | 1,563.73 | 1,536.30 | 27.43 | 57.003 | |
| 5,200.00 | 5,093.83 | 4,836.68 | 4,731.17 | 20.47 | 19.39 | 150.26 | -104.83 | -874.45 | 1,606.83 | 1,578.74 | 28.09 | 57.199 | |
| 5,300.00 | 5,190.78 | 4,926.91 | 4,818.32 | 20.99 | 19.89 | 150.24 | -108.80 | -897.50 | 1,649.93 | 1,621.18 | 28.75 | 57.385 | |
| 5,400.00 | 5,287.73 | 5,017.14 | 4,905.47 | 21.52 | 20.38 | 150.22 | -112.76 | -920.55 | 1,693.03 | 1,663.62 | 29.41 | 57.561 | |
| 5,500.00 | 5,384.67 | 5,107.38 | 4,992.61 | 22.04 | 20.88 | 150.20 | -116.73 | -943.60 | 1,736.13 | 1,706.06 | 30.07 | 57.729 | |
| 5,600.00 | 5,481.62 | 5,197.61 | 5,079.76 | 22.56 | 21.38 | 150.19 | -120.70 | -966.66 | 1,779.23 | 1,748.50 | 30.74 | 57.888 | |
| 5,700.00 | 5,578.57 | 5,287.85 | 5,166.91 | 23.09 | 21.87 | 150.17 | -124.67 | -989.71 | 1,822.33 | 1,790.94 | 31.40 | 58.040 | |
| 5,710.27 | 5,588.52 | 5,297.11 | 5,175.86 | 23.14 | 21.92 | 150.17 | -125.08 | -992.08 | 1,826.76 | 1,795.29 | 31.47 | 58.055 | |
| 5,800.00 | 5,675.84 | 5,378.59 | 5,254.55 | 23.54 | 22.37 | 150.54 | -128.66 | -1,012.89 | 1,864.33 | 1,832.14 | 32.19 | 57.920 | |
| 5,900.00 | 5,773.87 | 5,470.52 | 5,343.34 | 23.87 | 22.88 | 150.86 | -132.70 | -1,036.38 | 1,903.56 | 1,870.64 | 32.92 | 57.816 | |
| 6,000.00 | 5,872.52 | 5,563.54 | 5,433.18 | 24.16 | 23.39 | 151.09 | -136.79 | -1,060.14 | 1,939.98 | 1,906.36 | 33.62 | 57.695 | |
| 6,100.00 | 5,971.68 | 5,657.52 | 5,523.95 | 24.41 | 23.91 | 151.25 | -140.93 | -1,084.15 | 1,973.56 | 1,939.27 | 34.29 | 57.562 | |
| 6,200.00 | 6,071.23 | 5,806.90 | 5,668.57 | 24.62 | 24.65 | 151.19 | -147.27 | -1,121.00 | 2,003.79 | 1,968.74 | 35.05 | 57.168 | |
| 6,300.00 | 6,171.05 | 6,061.66 | 5,918.82 | 24.79 | 25.46 | 150.95 | -155.29 | -1,167.59 | 2,025.21 | 1,989.33 | 35.88 | 56.444 | |
| 6,400.00 | 6,271.01 | 6,325.26 | 6,181.10 | 24.91 | 26.01 | 150.80 | -159.59 | -1,192.55 | 2,035.79 | 1,999.24 | 36.54 | 55.707 | |
| 6,420.00 | 6,291.01 | 6,378.53 | 6,234.33 | 24.94 | 26.09 | -71.31 | -159.96 | -1,194.70 | 2,036.57 | 1,999.91 | 36.66 | 55.556 | |
| 6,500.00 | 6,371.01 | 6,515.23 | 6,371.01 | 25.02 | 26.24 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 2,000.07 | 36.98 | 55.091 | |
| 6,600.00 | 6,471.01 | 6,615.23 | 6,471.01 | 25.13 | 26.36 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,999.78 | 37.27 | 54.663 | |
| 6,700.00 | 6,571.01 | 6,715.23 | 6,571.01 | 25.24 | 26.47 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,999.49 | 37.56 | 54.237 | |
| 6,800.00 | 6,671.01 | 6,815.23 | 6,671.01 | 25.35 | 26.59 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,999.19 | 37.85 | 53.814 | |
| 6,900.00 | 6,771.01 | 6,915.23 | 6,771.01 | 25.46 | 26.70 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,998.89 | 38.15 | 53.392 | |
| 7,000.00 | 6,871.01 | 7,015.23 | 6,871.01 | 25.58 | 26.82 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,998.59 | 38.45 | 52.974 | |
| 7,100.00 | 6,971.01 | 7,115.23 | 6,971.01 | 25.69 | 26.94 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,998.28 | 38.76 | 52.557 | |
| 7,200.00 | 7,071.01 | 7,215.23 | 7,071.01 | 25.81 | 27.06 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,997.98 | 39.07 | 52.144 | |
| 7,300.00 | 7,171.01 | 7,315.23 | 7,171.01 | 25.93 | 27.18 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,997.67 | 39.38 | 51.733 | |
| 7,400.00 | 7,271.01 | 7,415.23 | 7,271.01 | 26.05 | 27.31 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,997.35 | 39.69 | 51.326 | |
| 7,500.00 | 7,371.01 | 7,515.23 | 7,371.01 | 26.17 | 27.43 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,997.04 | 40.00 | 50.921 | |
| 7,600.00 | 7,471.01 | 7,615.23 | 7,471.01 | 26.29 | 27.56 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,996.72 | 40.32 | 50.520 | |
| 7,700.00 | 7,571.01 | 7,715.23 | 7,571.01 | 26.41 | 27.69 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,996.40 | 40.64 | 50.121 | |
| 7,800.00 | 7,671.01 | 7,815.23 | 7,671.01 | 26.54 | 27.81 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,996.08 | 40.96 | 49.726 | |
| 7,900.00 | 7,771.01 | 7,915.23 | 7,771.01 | 26.66 | 27.94 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,995.75 | 41.29 | 49.335 | |
| 7,980.00 | 7,851.02 | 7,995.23 | 7,851.02 | 26.76 | 28.05 | -71.33 | -160.20 | -1,196.12 | 2,037.04 | 1,995.49 | 41.55 | 49.024 | |

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design WELD_DRY CREEK PAD 6 - P_DRY CREEK 27-27 - P_DRY CREEK 27-27 - PLAN #1 10-27-09 RHS | | | | | | | | | | | | Offset Site Error: | 0.00 ft |
|---|---------------------|---------------------|---------------------|----------------|-------------|--|---|---------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWMD | | | | | | | | | | | | Offset Well Error: | 0.00 ft |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Semi Major Axis Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) +E/-W (ft) | | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -53.80 | 47.39 | -64.75 | 80.24 | | | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.10 | 0.10 | -53.80 | 47.39 | -64.75 | 80.24 | 80.05 | 0.19 | 420.004 | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.32 | 0.32 | -53.80 | 47.39 | -64.75 | 80.24 | 79.60 | 0.64 | 125.265 | |
| 300.00 | 300.00 | 300.00 | 300.00 | 0.55 | 0.55 | -53.80 | 47.39 | -64.75 | 80.24 | 79.15 | 1.09 | 73.609 | |
| 400.00 | 400.00 | 400.00 | 400.00 | 0.77 | 0.77 | -53.80 | 47.39 | -64.75 | 80.24 | 78.70 | 1.54 | 52.117 | |
| 500.00 | 500.00 | 500.00 | 500.00 | 0.99 | 0.99 | -53.80 | 47.39 | -64.75 | 80.24 | 78.25 | 1.99 | 40.339 | |
| 600.00 | 600.00 | 600.00 | 600.00 | 1.22 | 1.22 | -53.80 | 47.39 | -64.75 | 80.24 | 77.80 | 2.44 | 32.904 | |
| 700.00 | 700.00 | 700.00 | 700.00 | 1.44 | 1.44 | -53.80 | 47.39 | -64.75 | 80.24 | 77.35 | 2.89 | 27.782 | |
| 800.00 | 800.00 | 800.00 | 800.00 | 1.67 | 1.67 | -53.80 | 47.39 | -64.75 | 80.24 | 76.90 | 3.34 | 24.041 | |
| 900.00 | 900.00 | 900.00 | 900.00 | 1.89 | 1.89 | -53.80 | 47.39 | -64.75 | 80.24 | 76.46 | 3.79 | 21.187 | |
| 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 2.12 | 2.12 | -53.80 | 47.39 | -64.75 | 80.24 | 76.01 | 4.24 | 18.939 | |
| 1,100.00 | 1,100.00 | 1,100.00 | 1,100.00 | 2.34 | 2.34 | -53.80 | 47.39 | -64.75 | 80.24 | 75.56 | 4.69 | 17.122 | |
| 1,200.00 | 1,200.00 | 1,200.00 | 1,200.00 | 2.57 | 2.57 | -53.80 | 47.39 | -64.75 | 80.24 | 75.11 | 5.14 | 15.624 | |
| 1,250.00 | 1,250.00 | 1,250.00 | 1,250.00 | 2.68 | 2.68 | -53.80 | 47.39 | -64.75 | 80.24 | 74.88 | 5.36 | 14.969 CC, ES | |
| 1,300.00 | 1,300.00 | 1,298.63 | 1,298.62 | 2.78 | 2.79 | 168.37 | 47.66 | -65.07 | 81.09 | 75.53 | 5.57 | 14.569 SF | |
| 1,400.00 | 1,399.93 | 1,395.54 | 1,395.48 | 2.96 | 3.00 | 168.94 | 49.78 | -67.57 | 87.89 | 81.95 | 5.95 | 14.782 | |
| 1,500.00 | 1,499.68 | 1,491.43 | 1,491.15 | 3.15 | 3.21 | 169.83 | 53.95 | -72.52 | 101.46 | 95.14 | 6.32 | 16.048 | |
| 1,600.00 | 1,599.13 | 1,585.67 | 1,584.90 | 3.36 | 3.43 | 170.79 | 60.07 | -79.76 | 121.72 | 115.02 | 6.69 | 18.185 | |
| 1,700.00 | 1,698.15 | 1,680.02 | 1,678.46 | 3.59 | 3.67 | 171.67 | 67.92 | -89.06 | 148.13 | 141.07 | 7.06 | 20.977 | |
| 1,800.00 | 1,796.63 | 1,775.33 | 1,772.93 | 3.86 | 3.92 | 172.43 | 76.09 | -98.74 | 178.28 | 170.85 | 7.43 | 23.996 | |
| 1,900.00 | 1,894.44 | 1,869.53 | 1,866.29 | 4.17 | 4.17 | 173.06 | 84.17 | -108.31 | 211.74 | 203.95 | 7.79 | 27.171 | |
| 1,959.73 | 1,952.50 | 1,925.23 | 1,921.49 | 4.38 | 4.33 | 173.39 | 88.95 | -113.97 | 233.29 | 225.28 | 8.01 | 29.134 | |
| 2,000.00 | 1,991.53 | 1,962.62 | 1,958.55 | 4.53 | 4.43 | 173.62 | 92.16 | -117.76 | 248.21 | 240.03 | 8.18 | 30.349 | |
| 2,100.00 | 2,088.48 | 2,055.47 | 2,050.58 | 4.93 | 4.70 | 174.09 | 100.12 | -127.20 | 285.27 | 276.66 | 8.61 | 33.137 | |
| 2,200.00 | 2,185.43 | 2,148.33 | 2,142.61 | 5.35 | 4.97 | 174.45 | 108.09 | -136.63 | 322.34 | 313.30 | 9.05 | 35.632 | |
| 2,300.00 | 2,282.37 | 2,241.18 | 2,234.64 | 5.79 | 5.24 | 174.74 | 116.05 | -146.06 | 359.43 | 349.94 | 9.49 | 37.872 | |
| 2,400.00 | 2,379.32 | 2,334.04 | 2,326.68 | 6.24 | 5.52 | 174.97 | 124.02 | -155.49 | 396.52 | 386.58 | 9.94 | 39.891 | |
| 2,500.00 | 2,476.27 | 2,426.89 | 2,418.71 | 6.70 | 5.81 | 175.17 | 131.98 | -164.92 | 433.62 | 423.22 | 10.39 | 41.716 | |
| 2,600.00 | 2,573.21 | 2,519.75 | 2,510.74 | 7.17 | 6.09 | 175.33 | 139.95 | -174.35 | 470.72 | 459.86 | 10.85 | 43.373 | |
| 2,700.00 | 2,670.16 | 2,612.61 | 2,602.77 | 7.65 | 6.38 | 175.47 | 147.91 | -183.79 | 507.82 | 496.50 | 11.31 | 44.881 | |
| 2,800.00 | 2,767.11 | 2,705.46 | 2,694.80 | 8.14 | 6.67 | 175.59 | 155.88 | -193.22 | 544.92 | 533.14 | 11.78 | 46.259 | |
| 2,900.00 | 2,864.05 | 2,798.32 | 2,786.83 | 8.63 | 6.96 | 175.70 | 163.84 | -202.65 | 582.03 | 569.78 | 12.25 | 47.521 | |
| 3,000.00 | 2,961.00 | 2,891.17 | 2,878.87 | 9.13 | 7.25 | 175.79 | 171.80 | -212.08 | 619.14 | 606.42 | 12.72 | 48.682 | |
| 3,100.00 | 3,057.95 | 2,984.03 | 2,970.90 | 9.63 | 7.55 | 175.87 | 179.77 | -221.51 | 656.25 | 643.06 | 13.19 | 49.751 | |
| 3,200.00 | 3,154.89 | 3,076.89 | 3,062.93 | 10.13 | 7.84 | 175.94 | 187.73 | -230.95 | 693.36 | 679.69 | 13.66 | 50.740 | |
| 3,300.00 | 3,251.84 | 3,169.74 | 3,154.96 | 10.63 | 8.14 | 176.01 | 195.70 | -240.38 | 730.47 | 716.33 | 14.14 | 51.656 | |
| 3,400.00 | 3,348.79 | 3,262.60 | 3,246.99 | 11.14 | 8.44 | 176.07 | 203.66 | -249.81 | 767.58 | 752.96 | 14.62 | 52.507 | |
| 3,500.00 | 3,445.74 | 3,355.45 | 3,339.02 | 11.65 | 8.73 | 176.12 | 211.63 | -259.24 | 804.69 | 789.59 | 15.10 | 53.299 | |
| 3,600.00 | 3,542.68 | 3,448.31 | 3,431.05 | 12.16 | 9.03 | 176.17 | 219.59 | -268.67 | 841.80 | 826.23 | 15.58 | 54.038 | |
| 3,700.00 | 3,639.63 | 3,541.16 | 3,523.09 | 12.67 | 9.33 | 176.22 | 227.56 | -278.11 | 878.92 | 862.86 | 16.06 | 54.729 | |
| 3,800.00 | 3,736.58 | 3,634.02 | 3,615.12 | 13.19 | 9.63 | 176.26 | 235.52 | -287.54 | 916.03 | 899.49 | 16.54 | 55.377 | |
| 3,900.00 | 3,833.52 | 3,726.88 | 3,707.15 | 13.70 | 9.94 | 176.30 | 243.49 | -296.97 | 953.14 | 936.12 | 17.03 | 55.985 | |
| 4,000.00 | 3,930.47 | 3,819.73 | 3,799.18 | 14.22 | 10.24 | 176.33 | 251.45 | -306.40 | 990.26 | 972.75 | 17.51 | 56.556 | |
| 4,100.00 | 4,027.42 | 3,912.59 | 3,891.21 | 14.74 | 10.54 | 176.36 | 259.42 | -315.83 | 1,027.37 | 1,009.38 | 17.99 | 57.095 | |
| 4,200.00 | 4,124.36 | 4,005.44 | 3,983.24 | 15.25 | 10.84 | 176.39 | 267.38 | -325.27 | 1,064.49 | 1,046.01 | 18.48 | 57.602 | |
| 4,300.00 | 4,221.31 | 4,098.30 | 4,075.28 | 15.77 | 11.15 | 176.42 | 275.34 | -334.70 | 1,101.60 | 1,082.64 | 18.97 | 58.082 | |
| 4,400.00 | 4,318.26 | 4,191.16 | 4,167.31 | 16.29 | 11.45 | 176.45 | 283.31 | -344.13 | 1,138.72 | 1,119.27 | 19.45 | 58.536 | |
| 4,500.00 | 4,415.20 | 4,284.01 | 4,259.34 | 16.81 | 11.75 | 176.47 | 291.27 | -353.56 | 1,175.84 | 1,155.89 | 19.94 | 58.966 | |
| 4,600.00 | 4,512.15 | 4,376.87 | 4,351.37 | 17.33 | 12.06 | 176.50 | 299.24 | -362.99 | 1,212.95 | 1,192.52 | 20.43 | 59.374 | |
| 4,700.00 | 4,609.10 | 4,469.72 | 4,443.40 | 17.86 | 12.36 | 176.52 | 307.20 | -372.42 | 1,250.07 | 1,229.15 | 20.92 | 59.761 | |
| 4,800.00 | 4,706.04 | 4,562.58 | 4,535.43 | 18.38 | 12.67 | 176.54 | 315.17 | -381.86 | 1,287.18 | 1,265.78 | 21.41 | 60.130 | |
| 4,900.00 | 4,802.99 | 4,655.43 | 4,627.47 | 18.90 | 12.97 | 176.56 | 323.13 | -391.29 | 1,324.30 | 1,302.40 | 21.90 | 60.481 | |

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

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.00 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD | | | | | | | | | | | | Offset Well Error: | 0.00 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | Warning |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | |
| 5,000.00 | 4,899.94 | 4,748.29 | 4,719.50 | 19.42 | 13.28 | 176.58 | 331.10 | -400.72 | 1,361.42 | 1,339.03 | 22.39 | 60.815 | |
| 5,100.00 | 4,996.88 | 4,841.15 | 4,811.53 | 19.94 | 13.58 | 176.60 | 339.06 | -410.15 | 1,398.53 | 1,375.66 | 22.88 | 61.135 | |
| 5,200.00 | 5,093.83 | 4,934.00 | 4,903.56 | 20.47 | 13.89 | 176.61 | 347.03 | -419.58 | 1,435.65 | 1,412.28 | 23.37 | 61.440 | |
| 5,300.00 | 5,190.78 | 5,026.86 | 4,995.59 | 20.99 | 14.20 | 176.63 | 354.99 | -429.02 | 1,472.77 | 1,448.91 | 23.86 | 61.731 | |
| 5,400.00 | 5,287.73 | 5,119.71 | 5,087.62 | 21.52 | 14.50 | 176.64 | 362.95 | -438.45 | 1,509.88 | 1,485.54 | 24.35 | 62.010 | |
| 5,500.00 | 5,384.67 | 5,212.57 | 5,179.65 | 22.04 | 14.81 | 176.66 | 370.92 | -447.88 | 1,547.00 | 1,522.16 | 24.84 | 62.277 | |
| 5,600.00 | 5,481.62 | 5,305.43 | 5,271.69 | 22.56 | 15.12 | 176.67 | 378.88 | -457.31 | 1,584.12 | 1,558.79 | 25.33 | 62.534 | |
| 5,700.00 | 5,578.57 | 5,398.28 | 5,363.72 | 23.09 | 15.42 | 176.68 | 386.85 | -466.74 | 1,621.24 | 1,595.41 | 25.82 | 62.780 | |
| 5,710.27 | 5,588.52 | 5,407.81 | 5,373.17 | 23.14 | 15.45 | 176.69 | 387.67 | -467.71 | 1,625.05 | 1,599.17 | 25.87 | 62.804 | |
| 5,800.00 | 5,675.84 | 5,491.64 | 5,456.25 | 23.54 | 15.73 | 176.73 | 394.86 | -476.23 | 1,657.04 | 1,630.61 | 26.43 | 62.685 | |
| 5,900.00 | 5,773.87 | 5,586.19 | 5,549.96 | 23.87 | 16.04 | 176.77 | 402.97 | -485.83 | 1,689.60 | 1,662.59 | 27.01 | 62.555 | |
| 6,000.00 | 5,872.52 | 5,681.82 | 5,644.74 | 24.16 | 16.36 | 176.80 | 411.17 | -495.54 | 1,718.83 | 1,691.28 | 27.55 | 62.391 | |
| 6,100.00 | 5,971.68 | 5,778.40 | 5,740.47 | 24.41 | 16.68 | 176.82 | 419.45 | -505.36 | 1,744.72 | 1,716.67 | 28.05 | 62.196 | |
| 6,200.00 | 6,071.23 | 5,875.83 | 5,837.03 | 24.62 | 17.00 | 176.83 | 427.81 | -515.25 | 1,767.23 | 1,738.71 | 28.52 | 61.974 | |
| 6,300.00 | 6,171.05 | 5,990.82 | 5,951.01 | 24.79 | 17.37 | 176.82 | 437.59 | -526.83 | 1,786.28 | 1,757.30 | 28.97 | 61.654 | |
| 6,400.00 | 6,271.01 | 6,255.02 | 6,214.32 | 24.91 | 17.91 | 176.79 | 450.83 | -542.51 | 1,796.46 | 1,766.87 | 29.59 | 60.709 | |
| 6,420.00 | 6,291.01 | 6,308.36 | 6,267.65 | 24.94 | 18.00 | -45.30 | 451.60 | -543.42 | 1,796.98 | 1,767.27 | 29.71 | 60.488 | |
| 6,500.00 | 6,371.01 | 6,411.73 | 6,371.01 | 25.02 | 18.16 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,767.03 | 30.04 | 59.827 | |
| 6,600.00 | 6,471.01 | 6,511.73 | 6,471.01 | 25.13 | 18.33 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,766.65 | 30.41 | 59.086 | |
| 6,700.00 | 6,571.01 | 6,611.73 | 6,571.01 | 25.24 | 18.50 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,766.27 | 30.79 | 58.359 | |
| 6,800.00 | 6,671.01 | 6,711.73 | 6,671.01 | 25.35 | 18.67 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,765.89 | 31.17 | 57.646 | |
| 6,900.00 | 6,771.01 | 6,811.73 | 6,771.01 | 25.46 | 18.84 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,765.51 | 31.56 | 56.947 | |
| 7,000.00 | 6,871.01 | 6,911.73 | 6,871.01 | 25.58 | 19.01 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,765.13 | 31.94 | 56.262 | |
| 7,100.00 | 6,971.01 | 7,011.73 | 6,971.01 | 25.69 | 19.19 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,764.74 | 32.33 | 55.591 | |
| 7,200.00 | 7,071.01 | 7,111.73 | 7,071.01 | 25.81 | 19.37 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,764.35 | 32.71 | 54.933 | |
| 7,300.00 | 7,171.01 | 7,211.73 | 7,171.01 | 25.93 | 19.54 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,763.97 | 33.10 | 54.287 | |
| 7,400.00 | 7,271.01 | 7,311.73 | 7,271.01 | 26.05 | 19.72 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,763.58 | 33.49 | 53.655 | |
| 7,500.00 | 7,371.01 | 7,411.73 | 7,371.01 | 26.17 | 19.90 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,763.18 | 33.88 | 53.034 | |
| 7,600.00 | 7,471.01 | 7,511.73 | 7,471.01 | 26.29 | 20.08 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,762.79 | 34.28 | 52.426 | |
| 7,700.00 | 7,571.01 | 7,611.73 | 7,571.01 | 26.41 | 20.26 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,762.40 | 34.67 | 51.830 | |
| 7,800.00 | 7,671.01 | 7,711.73 | 7,671.01 | 26.54 | 20.44 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,762.00 | 35.07 | 51.245 | |
| 7,900.00 | 7,771.01 | 7,811.73 | 7,771.01 | 26.66 | 20.63 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,761.60 | 35.47 | 50.671 | |
| 7,980.00 | 7,851.02 | 7,891.73 | 7,851.02 | 26.76 | 20.77 | -45.30 | 451.76 | -543.61 | 1,797.07 | 1,761.28 | 35.78 | 50.220 | |

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design WELD_DRY CREEK PAD 6 - P_DRY CREEK 7-27 - P_DRY CREEK 7-27 - PLAN #1 10-27-09 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 | -54.46 | 18.25 | -25.55 | 31.39 | | | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.10 | 0.10 | -54.46 | 18.25 | -25.55 | 31.39 | 31.20 | 0.19 | 164.319 | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.32 | 0.32 | -54.46 | 18.25 | -25.55 | 31.39 | 30.75 | 0.64 | 49.007 CC | |
| 300.00 | 300.00 | 299.82 | 299.78 | 0.55 | 0.53 | -59.18 | 16.21 | -27.17 | 31.64 | 30.57 | 1.07 | 29.560 ES | |
| 400.00 | 400.00 | 399.10 | 398.74 | 0.77 | 0.75 | -72.42 | 10.14 | -32.01 | 33.60 | 32.09 | 1.52 | 22.156 | |
| 500.00 | 500.00 | 497.31 | 496.11 | 0.99 | 1.03 | -89.72 | 0.19 | -39.95 | 40.14 | 38.11 | 2.03 | 19.811 SF | |
| 600.00 | 600.00 | 593.97 | 591.18 | 1.22 | 1.38 | -104.78 | -13.41 | -50.79 | 53.27 | 50.68 | 2.59 | 20.531 | |
| 700.00 | 700.00 | 688.62 | 683.30 | 1.44 | 1.81 | -115.26 | -30.35 | -64.31 | 73.05 | 69.84 | 3.20 | 22.819 | |
| 800.00 | 800.00 | 780.88 | 771.96 | 1.67 | 2.30 | -122.08 | -50.28 | -80.21 | 98.73 | 94.89 | 3.84 | 25.724 | |
| 900.00 | 900.00 | 870.42 | 856.74 | 1.89 | 2.85 | -126.56 | -72.80 | -98.17 | 129.65 | 125.15 | 4.50 | 28.787 | |
| 1,000.00 | 1,000.00 | 957.00 | 937.33 | 2.12 | 3.46 | -129.60 | -97.51 | -117.88 | 165.32 | 160.12 | 5.20 | 31.818 | |
| 1,100.00 | 1,100.00 | 1,040.41 | 1,013.55 | 2.34 | 4.12 | -131.73 | -123.99 | -139.00 | 205.35 | 199.44 | 5.91 | 34.747 | |
| 1,200.00 | 1,200.00 | 1,120.53 | 1,085.30 | 2.57 | 4.80 | -133.28 | -151.85 | -161.23 | 249.41 | 242.77 | 6.64 | 37.561 | |
| 1,250.00 | 1,250.00 | 1,159.33 | 1,119.50 | 2.68 | 5.16 | -133.90 | -166.18 | -172.66 | 272.87 | 265.86 | 7.02 | 38.897 | |
| 1,300.00 | 1,300.00 | 1,200.00 | 1,154.93 | 2.78 | 5.54 | 87.15 | -181.78 | -185.11 | 297.23 | 291.49 | 5.73 | 51.830 | |
| 1,400.00 | 1,399.93 | 1,270.88 | 1,215.65 | 2.96 | 6.26 | 85.65 | -210.37 | -207.91 | 348.32 | 342.18 | 6.14 | 56.714 | |
| 1,500.00 | 1,499.68 | 1,352.17 | 1,284.12 | 3.15 | 7.11 | 84.65 | -244.62 | -235.23 | 401.54 | 394.94 | 6.61 | 60.764 | |
| 1,600.00 | 1,599.13 | 1,436.80 | 1,355.35 | 3.36 | 8.01 | 84.11 | -280.33 | -263.72 | 454.62 | 447.51 | 7.11 | 63.907 | |
| 1,700.00 | 1,698.15 | 1,521.37 | 1,426.54 | 3.59 | 8.91 | 83.90 | -316.02 | -292.19 | 507.47 | 499.82 | 7.65 | 66.311 | |
| 1,800.00 | 1,796.63 | 1,605.78 | 1,497.60 | 3.86 | 9.81 | 83.90 | -351.64 | -320.60 | 560.16 | 551.93 | 8.23 | 68.038 | |
| 1,900.00 | 1,894.44 | 1,689.94 | 1,568.44 | 4.17 | 10.72 | 84.07 | -387.16 | -348.93 | 612.75 | 603.89 | 8.86 | 69.137 | |
| 1,959.73 | 1,952.50 | 1,740.04 | 1,610.62 | 4.38 | 11.26 | 84.23 | -408.30 | -365.80 | 644.16 | 634.89 | 9.27 | 69.517 | |
| 2,000.00 | 1,991.53 | 1,773.76 | 1,639.00 | 4.53 | 11.62 | 84.83 | -422.53 | -377.15 | 665.36 | 655.80 | 9.56 | 69.634 | |
| 2,100.00 | 2,088.48 | 1,857.52 | 1,709.51 | 4.93 | 12.52 | 86.16 | -457.88 | -405.34 | 718.21 | 707.91 | 10.30 | 69.707 | |
| 2,200.00 | 2,185.43 | 1,941.27 | 1,780.01 | 5.35 | 13.43 | 87.31 | -493.22 | -433.54 | 771.32 | 760.21 | 11.11 | 69.403 | |
| 2,300.00 | 2,282.37 | 2,025.03 | 1,850.51 | 5.79 | 14.33 | 88.32 | -528.57 | -461.73 | 824.63 | 812.67 | 11.96 | 68.966 | |
| 2,400.00 | 2,379.32 | 2,108.78 | 1,921.01 | 6.24 | 15.24 | 89.21 | -563.91 | -489.92 | 878.10 | 865.27 | 12.82 | 68.480 | |
| 2,500.00 | 2,476.27 | 2,192.53 | 1,991.52 | 6.70 | 16.14 | 89.99 | -599.26 | -518.12 | 931.70 | 917.99 | 13.71 | 67.977 | |
| 2,600.00 | 2,573.21 | 2,276.29 | 2,062.02 | 7.17 | 17.05 | 90.70 | -634.60 | -546.31 | 985.42 | 970.82 | 14.60 | 67.477 | |
| 2,700.00 | 2,670.16 | 2,360.04 | 2,132.52 | 7.65 | 17.95 | 91.33 | -669.95 | -574.51 | 1,039.23 | 1,023.72 | 15.51 | 66.992 | |
| 2,800.00 | 2,767.11 | 2,443.80 | 2,203.02 | 8.14 | 18.86 | 91.90 | -705.29 | -602.70 | 1,093.13 | 1,076.70 | 16.43 | 66.527 | |
| 2,900.00 | 2,864.05 | 2,527.55 | 2,273.53 | 8.63 | 19.77 | 92.41 | -740.64 | -630.89 | 1,147.10 | 1,129.74 | 17.36 | 66.086 | |
| 3,000.00 | 2,961.00 | 2,611.30 | 2,344.03 | 9.13 | 20.68 | 92.88 | -775.98 | -659.09 | 1,201.12 | 1,182.83 | 18.29 | 65.671 | |
| 3,100.00 | 3,057.95 | 2,695.06 | 2,414.53 | 9.63 | 21.58 | 93.31 | -811.33 | -687.28 | 1,255.20 | 1,235.97 | 19.23 | 65.281 | |
| 3,200.00 | 3,154.89 | 2,778.81 | 2,485.03 | 10.13 | 22.49 | 93.71 | -846.67 | -715.48 | 1,309.33 | 1,289.16 | 20.17 | 64.916 | |
| 3,300.00 | 3,251.84 | 2,862.57 | 2,555.54 | 10.63 | 23.40 | 94.07 | -882.02 | -743.67 | 1,363.50 | 1,342.38 | 21.12 | 64.574 | |
| 3,400.00 | 3,348.79 | 2,946.32 | 2,626.04 | 11.14 | 24.31 | 94.41 | -917.36 | -771.86 | 1,417.70 | 1,395.63 | 22.06 | 64.255 | |
| 3,500.00 | 3,445.74 | 3,030.07 | 2,696.54 | 11.65 | 25.22 | 94.72 | -952.70 | -800.06 | 1,471.93 | 1,448.92 | 23.01 | 63.957 | |
| 3,600.00 | 3,542.68 | 3,113.83 | 2,767.04 | 12.16 | 26.13 | 95.01 | -988.05 | -828.25 | 1,526.20 | 1,502.23 | 23.97 | 63.678 | |
| 3,700.00 | 3,639.63 | 3,197.58 | 2,837.55 | 12.67 | 27.03 | 95.28 | -1,023.39 | -856.45 | 1,580.49 | 1,555.56 | 24.92 | 63.417 | |
| 3,800.00 | 3,736.58 | 3,281.34 | 2,908.05 | 13.19 | 27.94 | 95.53 | -1,058.74 | -884.64 | 1,634.80 | 1,608.92 | 25.88 | 63.173 | |
| 3,900.00 | 3,833.52 | 3,365.09 | 2,978.55 | 13.70 | 28.85 | 95.77 | -1,094.08 | -912.83 | 1,689.13 | 1,662.30 | 26.84 | 62.944 | |
| 4,000.00 | 3,930.47 | 3,448.85 | 3,049.05 | 14.22 | 29.76 | 95.99 | -1,129.43 | -941.03 | 1,743.49 | 1,715.69 | 27.79 | 62.730 | |
| 4,100.00 | 4,027.42 | 3,532.60 | 3,119.56 | 14.74 | 30.67 | 96.20 | -1,164.77 | -969.22 | 1,797.86 | 1,769.10 | 28.75 | 62.530 | |
| 4,200.00 | 4,124.36 | 3,616.35 | 3,190.06 | 15.25 | 31.58 | 96.39 | -1,200.12 | -997.42 | 1,852.24 | 1,822.53 | 29.71 | 62.341 | |
| 4,300.00 | 4,221.31 | 3,700.11 | 3,260.56 | 15.77 | 32.49 | 96.58 | -1,235.46 | -1,025.61 | 1,906.64 | 1,875.97 | 30.67 | 62.164 | |
| 4,400.00 | 4,318.26 | 3,783.86 | 3,331.06 | 16.29 | 33.40 | 96.75 | -1,270.81 | -1,053.80 | 1,961.05 | 1,929.42 | 31.63 | 61.998 | |
| 4,500.00 | 4,415.20 | 3,867.62 | 3,401.57 | 16.81 | 34.31 | 96.92 | -1,306.15 | -1,082.00 | 2,015.48 | 1,982.89 | 32.59 | 61.841 | |
| 4,600.00 | 4,512.15 | 3,951.37 | 3,472.07 | 17.33 | 35.22 | 97.07 | -1,341.50 | -1,110.19 | 2,069.92 | 2,036.36 | 33.55 | 61.694 | |
| 4,700.00 | 4,609.10 | 4,449.20 | 3,915.36 | 17.86 | 36.13 | 97.22 | -1,376.83 | -1,138.50 | 2,124.35 | 2,093.85 | 34.51 | 61.557 | |
| 4,800.00 | 4,706.04 | 5,147.84 | 4,596.34 | 18.38 | 41.14 | 101.69 | -1,629.13 | -1,339.63 | 2,141.88 | 2,102.55 | 39.34 | 54.452 | |
| 4,900.00 | 4,802.99 | 5,354.56 | 4,802.99 | 18.90 | 41.29 | 102.98 | -1,631.87 | -1,341.82 | 2,147.86 | 2,107.32 | 40.53 | 52.990 | |

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

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design WELD_DRY CREEK PAD 6 - P_DRY CREEK 7-27 - P_DRY CREEK 7-27 - PLAN #1 10-27-09 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 | 4,899.94 | 5,451.50 | 4,899.94 | 19.42 | 41.34 | 103.60 | -1,631.87 | -1,341.82 | 2,153.66 | 2,112.29 | 41.37 | 52.059 | |
| 5,100.00 | 4,996.88 | 5,548.45 | 4,996.88 | 19.94 | 41.38 | 104.21 | -1,631.87 | -1,341.82 | 2,159.73 | 2,117.53 | 42.20 | 51.173 | |
| 5,200.00 | 5,093.83 | 5,645.40 | 5,093.83 | 20.47 | 41.43 | 104.82 | -1,631.87 | -1,341.82 | 2,166.06 | 2,123.02 | 43.04 | 50.331 | |
| 5,300.00 | 5,190.78 | 5,742.34 | 5,190.78 | 20.99 | 41.48 | 105.43 | -1,631.87 | -1,341.82 | 2,172.65 | 2,128.78 | 43.86 | 49.531 | |
| 5,400.00 | 5,287.73 | 5,839.29 | 5,287.73 | 21.52 | 41.53 | 106.04 | -1,631.87 | -1,341.82 | 2,179.49 | 2,134.80 | 44.69 | 48.769 | |
| 5,500.00 | 5,384.67 | 5,936.24 | 5,384.67 | 22.04 | 41.58 | 106.64 | -1,631.87 | -1,341.82 | 2,186.59 | 2,141.07 | 45.51 | 48.045 | |
| 5,600.00 | 5,481.62 | 6,033.18 | 5,481.62 | 22.56 | 41.63 | 107.23 | -1,631.87 | -1,341.82 | 2,193.93 | 2,147.60 | 46.33 | 47.355 | |
| 5,700.00 | 5,578.57 | 6,130.13 | 5,578.57 | 23.09 | 41.68 | 107.83 | -1,631.87 | -1,341.82 | 2,201.53 | 2,154.39 | 47.14 | 46.700 | |
| 5,710.27 | 5,588.52 | 6,140.08 | 5,588.52 | 23.14 | 41.69 | 107.89 | -1,631.87 | -1,341.82 | 2,202.32 | 2,155.10 | 47.23 | 46.634 | |
| 5,800.00 | 5,675.84 | 6,227.41 | 5,675.84 | 23.54 | 41.74 | 108.51 | -1,631.87 | -1,341.82 | 2,208.93 | 2,160.90 | 48.03 | 45.990 | |
| 5,900.00 | 5,773.87 | 6,325.43 | 5,773.87 | 23.87 | 41.79 | 109.11 | -1,631.87 | -1,341.82 | 2,215.42 | 2,166.63 | 48.78 | 45.415 | |
| 6,000.00 | 5,872.52 | 6,424.08 | 5,872.52 | 24.16 | 41.85 | 109.60 | -1,631.87 | -1,341.82 | 2,220.89 | 2,171.45 | 49.45 | 44.915 | |
| 6,100.00 | 5,971.68 | 6,523.25 | 5,971.68 | 24.41 | 41.91 | 110.00 | -1,631.87 | -1,341.82 | 2,225.29 | 2,175.27 | 50.02 | 44.484 | |
| 6,200.00 | 6,071.23 | 6,622.80 | 6,071.23 | 24.62 | 41.97 | 110.28 | -1,631.87 | -1,341.82 | 2,228.54 | 2,178.03 | 50.51 | 44.119 | |
| 6,300.00 | 6,171.05 | 6,722.62 | 6,171.05 | 24.79 | 42.03 | 110.47 | -1,631.87 | -1,341.82 | 2,230.61 | 2,179.70 | 50.91 | 43.815 | |
| 6,400.00 | 6,271.01 | 6,822.58 | 6,271.01 | 24.91 | 42.09 | 110.54 | -1,631.87 | -1,341.82 | 2,231.47 | 2,180.25 | 51.22 | 43.566 | |
| 6,420.00 | 6,291.01 | 6,842.58 | 6,291.01 | 24.94 | 42.10 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,180.22 | 51.27 | 43.521 | |
| 6,500.00 | 6,371.01 | 6,922.58 | 6,371.01 | 25.02 | 42.15 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,180.05 | 51.44 | 43.379 | |
| 6,600.00 | 6,471.01 | 7,022.58 | 6,471.01 | 25.13 | 42.22 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,179.84 | 51.65 | 43.206 | |
| 6,700.00 | 6,571.01 | 7,122.58 | 6,571.01 | 25.24 | 42.28 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,179.64 | 51.86 | 43.032 | |
| 6,800.00 | 6,671.01 | 7,222.58 | 6,671.01 | 25.35 | 42.35 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,179.42 | 52.07 | 42.857 | |
| 6,900.00 | 6,771.01 | 7,322.58 | 6,771.01 | 25.46 | 42.42 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,179.21 | 52.28 | 42.680 | |
| 7,000.00 | 6,871.01 | 7,422.58 | 6,871.01 | 25.58 | 42.49 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,178.99 | 52.50 | 42.503 | |
| 7,100.00 | 6,971.01 | 7,522.58 | 6,971.01 | 25.69 | 42.55 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,178.77 | 52.72 | 42.324 | |
| 7,200.00 | 7,071.01 | 7,622.58 | 7,071.01 | 25.81 | 42.63 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,178.54 | 52.95 | 42.145 | |
| 7,300.00 | 7,171.01 | 7,722.58 | 7,171.01 | 25.93 | 42.70 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,178.32 | 53.17 | 41.965 | |
| 7,400.00 | 7,271.01 | 7,822.58 | 7,271.01 | 26.05 | 42.77 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,178.09 | 53.40 | 41.784 | |
| 7,500.00 | 7,371.01 | 7,922.58 | 7,371.01 | 26.17 | 42.84 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,177.85 | 53.64 | 41.603 | |
| 7,600.00 | 7,471.01 | 8,022.58 | 7,471.01 | 26.29 | 42.92 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,177.62 | 53.87 | 41.421 | |
| 7,700.00 | 7,571.01 | 8,122.58 | 7,571.01 | 26.41 | 43.00 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,177.38 | 54.11 | 41.239 | |
| 7,800.00 | 7,671.01 | 8,222.58 | 7,671.01 | 26.54 | 43.07 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,177.14 | 54.35 | 41.056 | |
| 7,900.00 | 7,771.01 | 8,322.58 | 7,771.01 | 26.66 | 43.15 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,176.90 | 54.60 | 40.872 | |
| 7,980.00 | 7,851.02 | 8,402.58 | 7,851.02 | 26.76 | 43.21 | -111.55 | -1,631.87 | -1,341.82 | 2,231.49 | 2,176.70 | 54.79 | 40.726 | |

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design WELD_DRY CREEK PAD 6 - P_DRY CREEK 8-27 - P_DRY CREEK 8-27 - PLAN #1 10-27-09 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) | Semi Major Axis Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -62.96 | 7.32 | -14.34 | 16.11 | | | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.10 | 0.10 | -62.96 | 7.32 | -14.34 | 16.11 | 15.91 | 0.19 | 84.298 | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.32 | 0.32 | -62.96 | 7.32 | -14.34 | 16.11 | 15.46 | 0.64 | 25.142 | |
| 300.00 | 300.00 | 300.00 | 300.00 | 0.55 | 0.55 | -62.96 | 7.32 | -14.34 | 16.11 | 15.02 | 1.09 | 14.774 | |
| 400.00 | 400.00 | 400.00 | 400.00 | 0.77 | 0.77 | -62.96 | 7.32 | -14.34 | 16.11 | 14.57 | 1.54 | 10.460 | |
| 500.00 | 500.00 | 500.00 | 500.00 | 0.99 | 0.99 | -62.96 | 7.32 | -14.34 | 16.11 | 14.12 | 1.99 | 8.096 | |
| 600.00 | 600.00 | 600.00 | 600.00 | 1.22 | 1.22 | -62.96 | 7.32 | -14.34 | 16.11 | 13.67 | 2.44 | 6.604 | |
| 700.00 | 700.00 | 700.00 | 700.00 | 1.44 | 1.44 | -62.96 | 7.32 | -14.34 | 16.11 | 13.22 | 2.89 | 5.576 | |
| 800.00 | 800.00 | 800.00 | 800.00 | 1.67 | 1.67 | -62.96 | 7.32 | -14.34 | 16.11 | 12.77 | 3.34 | 4.825 | |
| 900.00 | 900.00 | 900.00 | 900.00 | 1.89 | 1.89 | -62.96 | 7.32 | -14.34 | 16.11 | 12.32 | 3.79 | 4.252 | |
| 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 2.12 | 2.12 | -62.96 | 7.32 | -14.34 | 16.11 | 11.87 | 4.24 | 3.801 | |
| 1,100.00 | 1,100.00 | 1,100.00 | 1,100.00 | 2.34 | 2.34 | -62.96 | 7.32 | -14.34 | 16.11 | 11.42 | 4.69 | 3.437 | |
| 1,200.00 | 1,200.00 | 1,200.00 | 1,200.00 | 2.57 | 2.57 | -62.96 | 7.32 | -14.34 | 16.11 | 10.97 | 5.14 | 3.136 | |
| 1,250.00 | 1,250.00 | 1,250.00 | 1,250.00 | 2.68 | 2.68 | -62.96 | 7.32 | -14.34 | 16.11 | 10.74 | 5.36 | 3.004 CC | |
| 1,300.00 | 1,300.00 | 1,300.15 | 1,300.15 | 2.78 | 2.78 | 158.38 | 6.89 | -14.30 | 16.28 | 10.72 | 5.56 | 2.929 ES, SF | |
| 1,400.00 | 1,399.93 | 1,400.41 | 1,400.34 | 2.96 | 2.95 | 152.88 | 3.39 | -13.97 | 17.77 | 11.87 | 5.90 | 3.011 | |
| 1,500.00 | 1,499.68 | 1,500.57 | 1,500.25 | 3.15 | 3.13 | 144.40 | -3.58 | -13.32 | 21.12 | 14.86 | 6.26 | 3.374 | |
| 1,600.00 | 1,599.13 | 1,600.54 | 1,599.66 | 3.36 | 3.33 | 135.93 | -14.00 | -12.34 | 26.72 | 20.07 | 6.65 | 4.020 | |
| 1,700.00 | 1,698.15 | 1,700.26 | 1,698.41 | 3.59 | 3.55 | 129.06 | -27.83 | -11.03 | 34.71 | 27.63 | 7.08 | 4.902 | |
| 1,800.00 | 1,796.63 | 1,799.66 | 1,796.29 | 3.86 | 3.80 | 123.94 | -45.01 | -9.41 | 45.09 | 37.51 | 7.58 | 5.946 | |
| 1,900.00 | 1,894.44 | 1,898.67 | 1,893.14 | 4.17 | 4.10 | 120.21 | -65.48 | -7.49 | 57.77 | 49.60 | 8.17 | 7.071 | |
| 1,959.73 | 1,952.50 | 1,957.61 | 1,950.43 | 4.38 | 4.31 | 118.48 | -79.24 | -6.19 | 66.42 | 57.84 | 8.57 | 7.748 | |
| 2,000.00 | 1,991.53 | 1,997.25 | 1,988.80 | 4.53 | 4.45 | 117.38 | -89.15 | -5.25 | 72.55 | 63.70 | 8.86 | 8.191 | |
| 2,100.00 | 2,088.48 | 2,095.38 | 2,083.16 | 4.93 | 4.85 | 113.81 | -115.96 | -2.73 | 88.35 | 78.70 | 9.65 | 9.160 | |
| 2,200.00 | 2,185.43 | 2,192.87 | 2,175.94 | 5.35 | 5.30 | 109.55 | -145.76 | 0.08 | 105.27 | 94.76 | 10.51 | 10.017 | |
| 2,300.00 | 2,282.37 | 2,289.83 | 2,267.18 | 5.79 | 5.82 | 105.06 | -178.43 | 3.16 | 123.71 | 112.29 | 11.42 | 10.829 | |
| 2,400.00 | 2,379.32 | 2,387.56 | 2,358.79 | 6.24 | 6.38 | 101.33 | -212.30 | 6.35 | 143.12 | 130.75 | 12.37 | 11.573 | |
| 2,500.00 | 2,476.27 | 2,485.29 | 2,450.41 | 6.70 | 6.96 | 98.50 | -246.16 | 9.54 | 162.98 | 149.66 | 13.32 | 12.237 | |
| 2,600.00 | 2,573.21 | 2,583.01 | 2,542.03 | 7.17 | 7.56 | 96.28 | -280.03 | 12.73 | 183.14 | 168.86 | 14.28 | 12.826 | |
| 2,700.00 | 2,670.16 | 2,680.74 | 2,633.64 | 7.65 | 8.17 | 94.51 | -313.89 | 15.92 | 203.51 | 188.26 | 15.25 | 13.348 | |
| 2,800.00 | 2,767.11 | 2,778.47 | 2,725.26 | 8.14 | 8.80 | 93.05 | -347.76 | 19.11 | 224.03 | 207.81 | 16.22 | 13.811 | |
| 2,900.00 | 2,864.05 | 2,876.20 | 2,816.88 | 8.63 | 9.43 | 91.85 | -381.62 | 22.30 | 244.67 | 227.47 | 17.20 | 14.223 | |
| 3,000.00 | 2,961.00 | 2,973.92 | 2,908.49 | 9.13 | 10.07 | 90.83 | -415.49 | 25.49 | 265.40 | 247.21 | 18.19 | 14.592 | |
| 3,100.00 | 3,057.95 | 3,071.65 | 3,000.11 | 9.63 | 10.71 | 89.95 | -449.35 | 28.68 | 286.19 | 267.01 | 19.18 | 14.923 | |
| 3,200.00 | 3,154.89 | 3,169.38 | 3,091.73 | 10.13 | 11.36 | 89.20 | -483.22 | 31.87 | 307.04 | 286.87 | 20.17 | 15.222 | |
| 3,300.00 | 3,251.84 | 3,267.11 | 3,183.34 | 10.63 | 12.02 | 88.54 | -517.09 | 35.06 | 327.94 | 306.77 | 21.17 | 15.492 | |
| 3,400.00 | 3,348.79 | 3,364.83 | 3,274.96 | 11.14 | 12.67 | 87.96 | -550.95 | 38.25 | 348.87 | 326.70 | 22.17 | 15.738 | |
| 3,500.00 | 3,445.74 | 3,462.56 | 3,366.58 | 11.65 | 13.33 | 87.45 | -584.82 | 41.45 | 369.83 | 346.66 | 23.17 | 15.962 | |
| 3,600.00 | 3,542.68 | 3,560.29 | 3,458.19 | 12.16 | 13.99 | 86.99 | -618.68 | 44.64 | 390.82 | 366.65 | 24.17 | 16.167 | |
| 3,700.00 | 3,639.63 | 3,658.02 | 3,549.81 | 12.67 | 14.66 | 86.57 | -652.55 | 47.83 | 411.83 | 386.65 | 25.18 | 16.356 | |
| 3,800.00 | 3,736.58 | 3,755.74 | 3,641.42 | 13.19 | 15.33 | 86.20 | -686.41 | 51.02 | 432.86 | 406.67 | 26.19 | 16.530 | |
| 3,900.00 | 3,833.52 | 3,853.47 | 3,733.04 | 13.70 | 15.99 | 85.86 | -720.28 | 54.21 | 453.90 | 426.71 | 27.20 | 16.691 | |
| 4,000.00 | 3,930.47 | 3,951.20 | 3,824.66 | 14.22 | 16.66 | 85.56 | -754.15 | 57.40 | 474.96 | 446.76 | 28.20 | 16.840 | |
| 4,100.00 | 4,027.42 | 4,048.92 | 3,916.27 | 14.74 | 17.33 | 85.27 | -788.01 | 60.59 | 496.03 | 466.81 | 29.22 | 16.978 | |
| 4,200.00 | 4,124.36 | 4,146.65 | 4,007.89 | 15.25 | 18.00 | 85.02 | -821.88 | 63.78 | 517.11 | 486.88 | 30.23 | 17.106 | |
| 4,300.00 | 4,221.31 | 4,244.38 | 4,099.51 | 15.77 | 18.68 | 84.78 | -855.74 | 66.97 | 538.20 | 506.95 | 31.25 | 17.223 | |
| 4,400.00 | 4,318.26 | 4,342.11 | 4,191.12 | 16.29 | 19.35 | 84.56 | -889.61 | 70.16 | 559.30 | 527.03 | 32.27 | 17.332 | |
| 4,500.00 | 4,415.20 | 4,439.83 | 4,282.74 | 16.81 | 20.03 | 84.35 | -923.47 | 73.35 | 580.40 | 547.11 | 33.29 | 17.434 | |
| 4,600.00 | 4,512.15 | 4,537.56 | 4,374.36 | 17.33 | 20.70 | 84.16 | -957.34 | 76.54 | 601.51 | 567.20 | 34.31 | 17.530 | |
| 4,700.00 | 4,609.10 | 4,635.29 | 4,465.97 | 17.86 | 21.38 | 83.98 | -991.21 | 79.73 | 622.63 | 587.29 | 35.34 | 17.620 | |
| 4,800.00 | 4,706.04 | 4,733.02 | 4,557.59 | 18.38 | 22.05 | 83.82 | -1,025.07 | 82.92 | 643.75 | 607.39 | 36.36 | 17.705 | |
| 4,900.00 | 4,802.99 | 4,830.74 | 4,649.21 | 18.90 | 22.73 | 83.66 | -1,058.94 | 86.12 | 664.88 | 627.50 | 37.39 | 17.785 | |

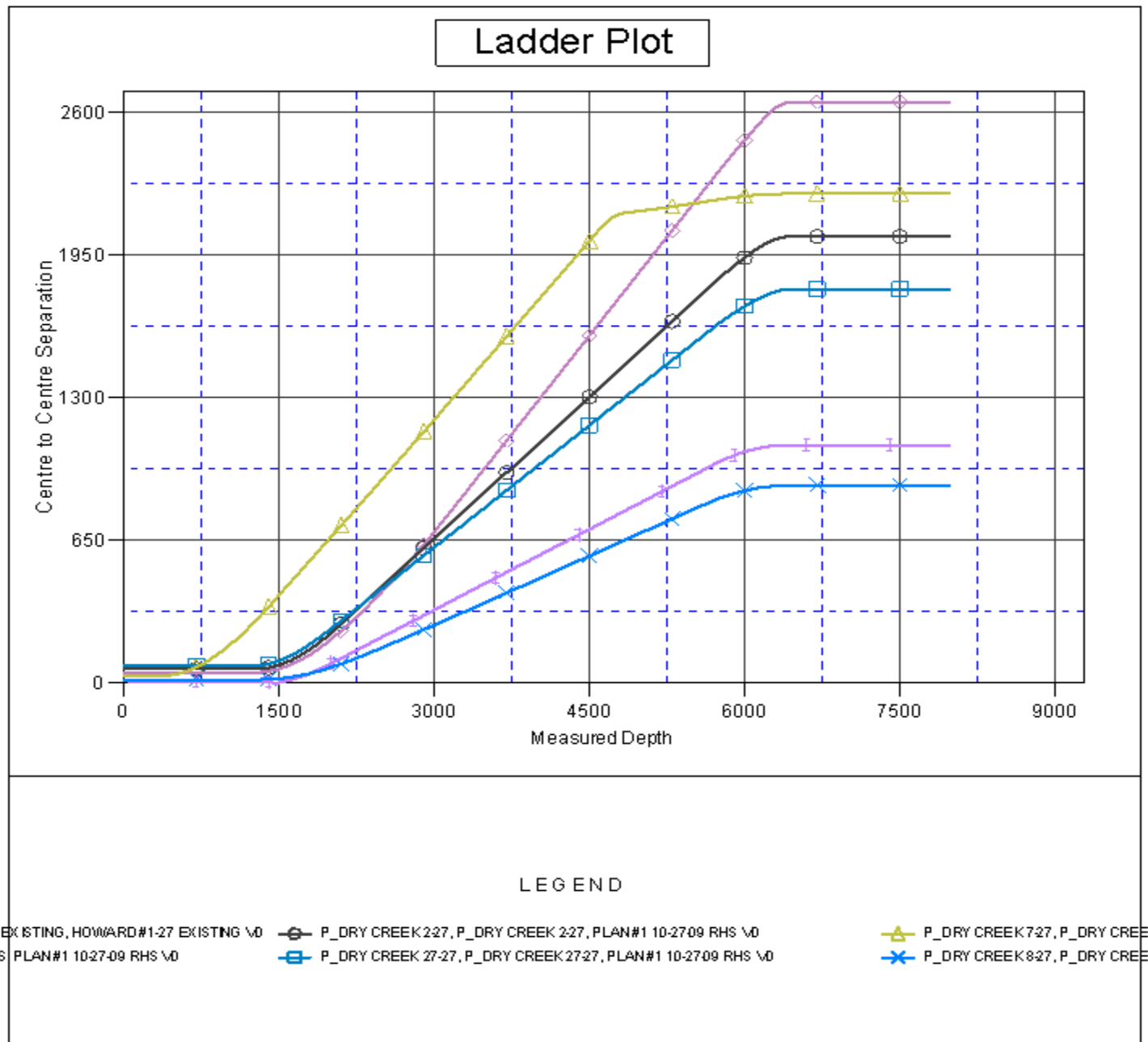
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

| Offset Design WELD_DRY CREEK PAD 6 - P_DRY CREEK 8-27 - P_DRY CREEK 8-27 - PLAN #1 10-27-09 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 | 4,899.94 | 4,928.47 | 4,740.82 | 19.42 | 23.41 | 83.52 | -1,092.80 | 89.31 | 686.01 | 647.60 | 38.41 | 17.860 | |
| 5,100.00 | 4,996.88 | 5,026.20 | 4,832.44 | 19.94 | 24.08 | 83.38 | -1,126.67 | 92.50 | 707.15 | 667.71 | 39.44 | 17.931 | |
| 5,200.00 | 5,093.83 | 5,123.93 | 4,924.05 | 20.47 | 24.76 | 83.25 | -1,160.53 | 95.69 | 728.29 | 687.82 | 40.46 | 17.999 | |
| 5,300.00 | 5,190.78 | 5,221.65 | 5,015.67 | 20.99 | 25.44 | 83.13 | -1,194.40 | 98.88 | 749.43 | 707.94 | 41.49 | 18.063 | |
| 5,400.00 | 5,287.73 | 5,319.38 | 5,107.29 | 21.52 | 26.12 | 83.02 | -1,228.26 | 102.07 | 770.58 | 728.06 | 42.52 | 18.123 | |
| 5,500.00 | 5,384.67 | 5,417.11 | 5,198.90 | 22.04 | 26.80 | 82.91 | -1,262.13 | 105.26 | 791.73 | 748.18 | 43.55 | 18.181 | |
| 5,600.00 | 5,481.62 | 5,514.83 | 5,290.52 | 22.56 | 27.48 | 82.80 | -1,296.00 | 108.45 | 812.88 | 768.30 | 44.57 | 18.236 | |
| 5,700.00 | 5,578.57 | 5,633.26 | 5,402.19 | 23.09 | 28.14 | 82.79 | -1,335.22 | 112.15 | 832.98 | 787.35 | 45.63 | 18.256 | |
| 5,710.27 | 5,588.52 | 5,645.81 | 5,414.12 | 23.14 | 28.20 | 82.80 | -1,339.11 | 112.51 | 834.89 | 789.16 | 45.73 | 18.256 | |
| 5,800.00 | 5,675.84 | 5,756.07 | 5,519.60 | 23.54 | 28.68 | 83.22 | -1,371.04 | 115.52 | 850.45 | 803.83 | 46.62 | 18.243 | |
| 5,900.00 | 5,773.87 | 5,879.93 | 5,639.47 | 23.87 | 29.17 | 83.61 | -1,402.06 | 118.44 | 865.46 | 818.01 | 47.45 | 18.239 | |
| 6,000.00 | 5,872.52 | 6,004.70 | 5,761.47 | 24.16 | 29.60 | 83.93 | -1,428.06 | 120.89 | 877.97 | 829.78 | 48.18 | 18.221 | |
| 6,100.00 | 5,971.68 | 6,130.23 | 5,885.24 | 24.41 | 29.96 | 84.17 | -1,448.86 | 122.85 | 887.92 | 839.11 | 48.81 | 18.193 | |
| 6,200.00 | 6,071.23 | 6,256.35 | 6,010.39 | 24.62 | 30.26 | 84.34 | -1,464.30 | 124.31 | 895.28 | 845.95 | 49.32 | 18.151 | |
| 6,300.00 | 6,171.05 | 6,382.89 | 6,136.53 | 24.79 | 30.49 | 84.43 | -1,474.26 | 125.25 | 900.02 | 850.29 | 49.73 | 18.097 | |
| 6,400.00 | 6,271.01 | 6,509.68 | 6,263.23 | 24.91 | 30.65 | 84.46 | -1,478.67 | 125.66 | 902.14 | 852.11 | 50.03 | 18.031 | |
| 6,420.00 | 6,291.01 | 6,535.05 | 6,288.59 | 24.94 | 30.68 | -137.63 | -1,478.89 | 125.68 | 902.25 | 852.16 | 50.08 | 18.016 | |
| 6,500.00 | 6,371.01 | 6,617.47 | 6,371.01 | 25.02 | 30.75 | -137.63 | -1,478.91 | 125.68 | 902.26 | 852.00 | 50.26 | 17.953 | |
| 6,600.00 | 6,471.01 | 6,717.47 | 6,471.01 | 25.13 | 30.83 | -137.63 | -1,478.91 | 125.68 | 902.26 | 851.79 | 50.47 | 17.878 | |
| 6,700.00 | 6,571.01 | 6,817.47 | 6,571.01 | 25.24 | 30.91 | -137.63 | -1,478.91 | 125.68 | 902.26 | 851.58 | 50.68 | 17.803 | |
| 6,800.00 | 6,671.01 | 6,917.47 | 6,671.01 | 25.35 | 31.00 | -137.63 | -1,478.91 | 125.68 | 902.26 | 851.36 | 50.89 | 17.728 | |
| 6,900.00 | 6,771.01 | 7,017.47 | 6,771.01 | 25.46 | 31.08 | -137.63 | -1,478.91 | 125.68 | 902.26 | 851.14 | 51.11 | 17.652 | |
| 7,000.00 | 6,871.01 | 7,117.47 | 6,871.01 | 25.58 | 31.17 | -137.63 | -1,478.91 | 125.68 | 902.26 | 850.92 | 51.34 | 17.576 | |
| 7,100.00 | 6,971.01 | 7,217.47 | 6,971.01 | 25.69 | 31.26 | -137.63 | -1,478.91 | 125.68 | 902.26 | 850.70 | 51.56 | 17.499 | |
| 7,200.00 | 7,071.01 | 7,317.47 | 7,071.01 | 25.81 | 31.35 | -137.63 | -1,478.91 | 125.68 | 902.26 | 850.47 | 51.79 | 17.422 | |
| 7,300.00 | 7,171.01 | 7,417.47 | 7,171.01 | 25.93 | 31.44 | -137.63 | -1,478.91 | 125.68 | 902.26 | 850.24 | 52.02 | 17.345 | |
| 7,400.00 | 7,271.01 | 7,517.47 | 7,271.01 | 26.05 | 31.53 | -137.63 | -1,478.91 | 125.68 | 902.26 | 850.01 | 52.25 | 17.267 | |
| 7,500.00 | 7,371.01 | 7,617.47 | 7,371.01 | 26.17 | 31.62 | -137.63 | -1,478.91 | 125.68 | 902.26 | 849.77 | 52.49 | 17.190 | |
| 7,600.00 | 7,471.01 | 7,717.47 | 7,471.01 | 26.29 | 31.72 | -137.63 | -1,478.91 | 125.68 | 902.26 | 849.53 | 52.73 | 17.112 | |
| 7,700.00 | 7,571.01 | 7,817.47 | 7,571.01 | 26.41 | 31.81 | -137.63 | -1,478.91 | 125.68 | 902.26 | 849.29 | 52.97 | 17.034 | |
| 7,800.00 | 7,671.01 | 7,917.47 | 7,671.01 | 26.54 | 31.91 | -137.63 | -1,478.91 | 125.68 | 902.26 | 849.04 | 53.21 | 16.955 | |
| 7,900.00 | 7,771.01 | 8,017.47 | 7,771.01 | 26.66 | 32.01 | -137.63 | -1,478.91 | 125.68 | 902.26 | 848.80 | 53.46 | 16.877 | |
| 7,980.00 | 7,851.02 | 8,097.47 | 7,851.02 | 26.76 | 32.09 | -137.63 | -1,478.91 | 125.68 | 902.26 | 848.60 | 53.66 | 16.814 | |

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

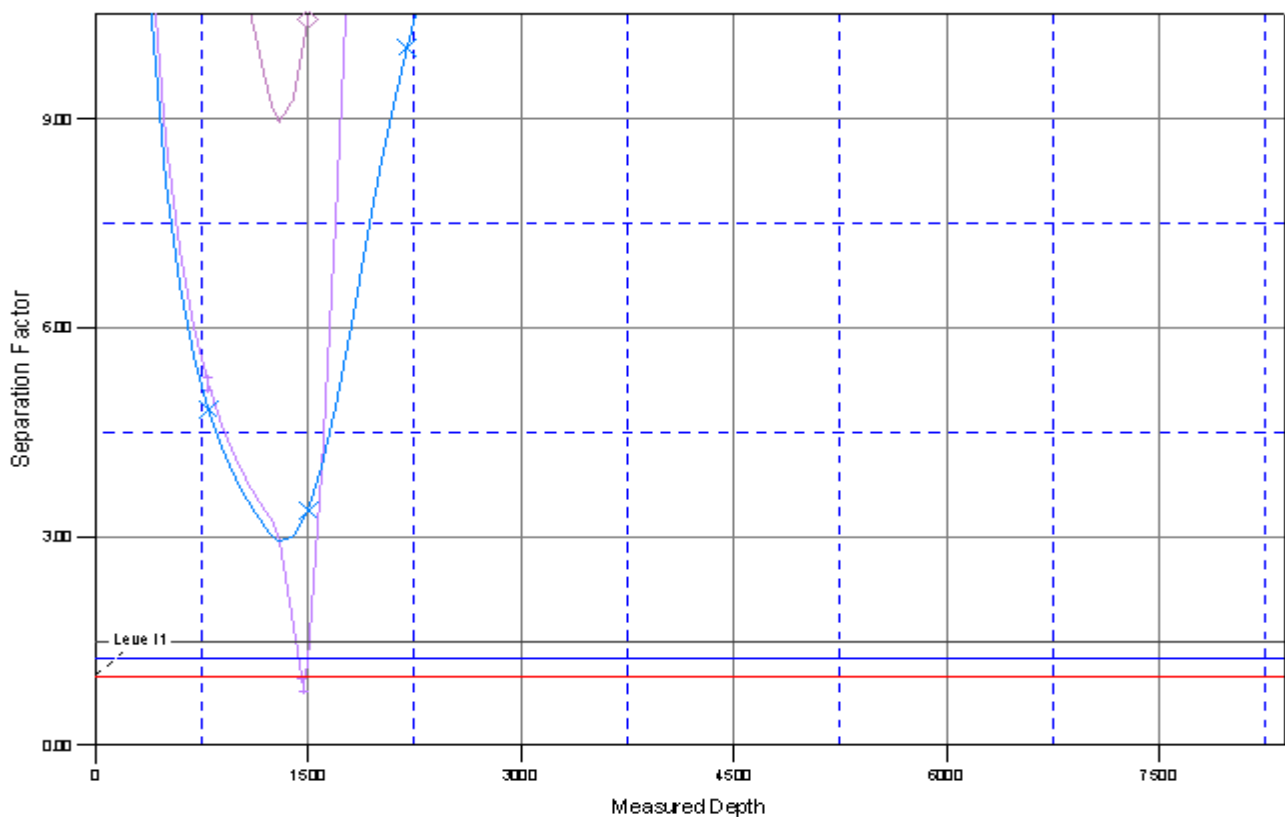
Reference Depths are relative to WELL @ 5008.01ft (Original Well Elev) Coordinates are relative to: P_DRY CREEK FEDERAL 41-27
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.41°



| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| Company: | US ROCKIES REGION PLANNING | Local Co-ordinate Reference: | Well P_DRY CREEK FEDERAL 41-27 |
| Project: | COLORADO NOTHERN ZONE - 83 | TVD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Reference Site: | WELD_DRY CREEK PAD 6 | MD Reference: | WELL @ 5008.01ft (Original Well Elev) |
| Site Error: | 0.00ft | North Reference: | True |
| Reference Well: | P_DRY CREEK FEDERAL 41-27 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | P_DRY CREEK FEDERAL 41-27 | Database: | EDM 2003.21 Single User Db |
| Reference Design: | PLAN #1 10-27-09 RHS | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 5008.01ft (Original Well Elev) Coordinates are relative to: P_DRY CREEK FEDERAL 41-27
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: 0.41°

Separation Factor Plot



LEGEND

7 EXISTING, HOWARD#1-27 EXISTING \0 P_DRY CREEK 2-27, P_DRY CREEK 2-27, PLAN#1 10-27-09 RHS \0 P_DRY CREEK 7-27, P_DRY CREEK 7-27, PLAN#1 10-27-09 RHS \0
4S PLAN#1 10-27-09 RHS \0 P_DRY CREEK 27-27, P_DRY CREEK 27-27, PLAN#1 10-27-09 RHS \0 P_DRY CREEK 8-27, P_DRY CREEK 8-27, PLAN#1 10-27-09 RHS \0