

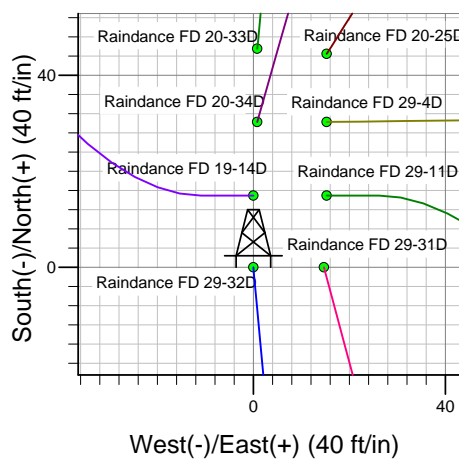
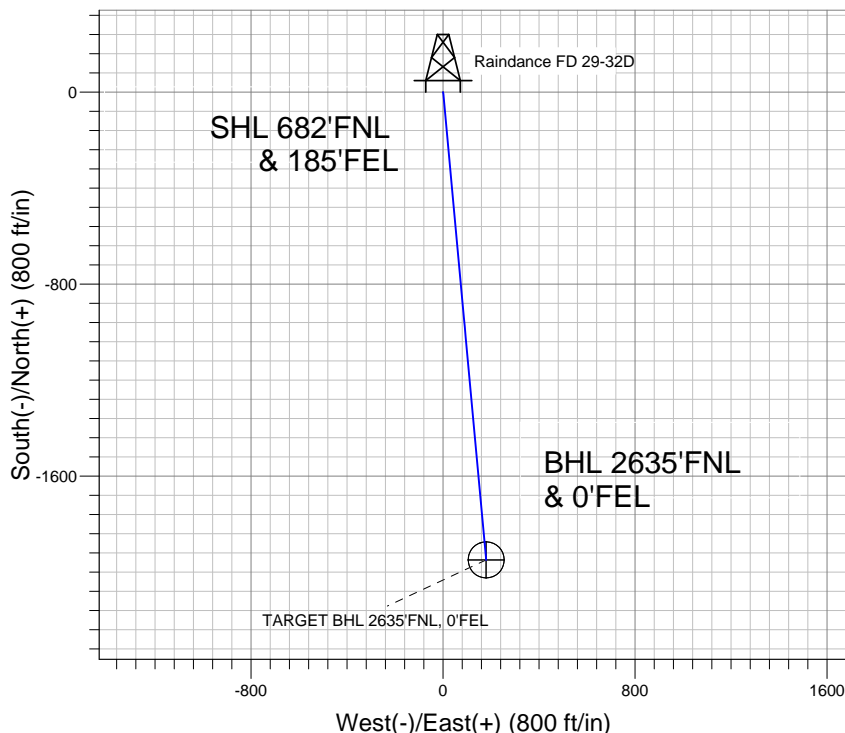
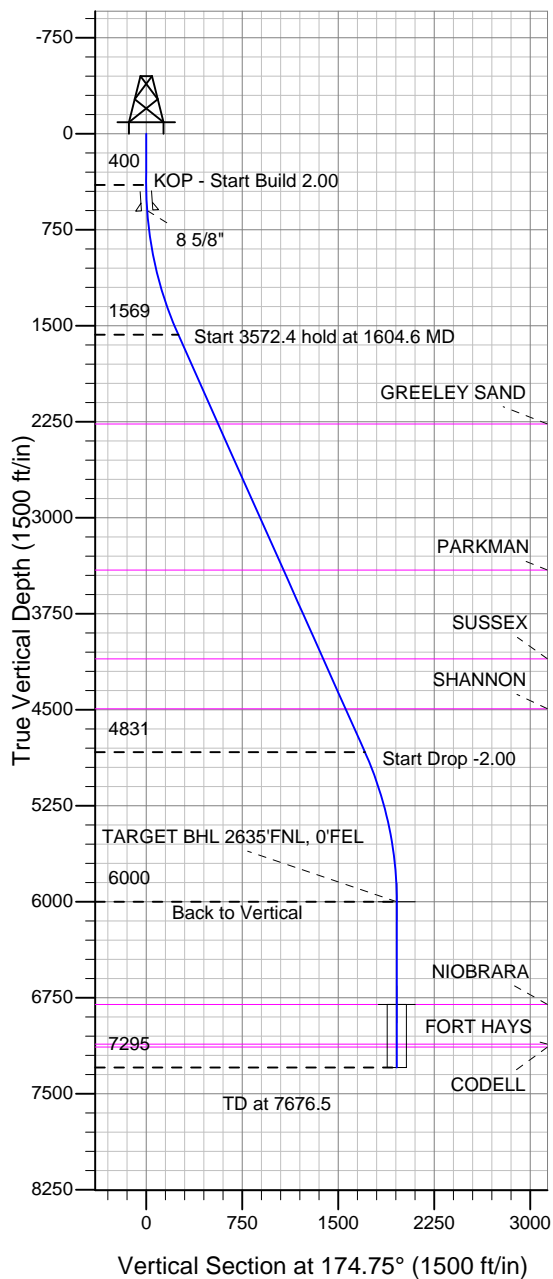
Well Name: Raindance FD 29-32D

Surface Location: Raindance FD West Row Pad Sec.30-T6N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4782.6

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|---|-------|------------|------------|-----------|-------------|------|
| 0.0 | 0.0 | 1412068.78 | 3159402.80 | 40.463117 | -104.927122 | |
| Original Well Elev WELL @ 4796.6ft (Original Well Elev) | | | | | | |

Great Western



Raindance FD West Row Pad Sec.30-T6N-R67W
Raindance FD 29-32D
Plan #1 (10-18-12)
12:18, October 22 2012



Azimuths to True North
Magnetic North: 8.78°

Magnetic Field
Strength: 53005.8snT
Dip Angle: 67.03°
Date: 10/18/2012
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|--------------------------------|--------|---------|-------|-----------|-------------|-----------------------|
| TARGET BHL 2635'FNL, 0'FEL | 6000.0 | -1949.1 | 179.2 | 40.457767 | -104.926478 | Point |
| TARGET CIRCLE 2635'FNL & 0'FEL | 6802.0 | -1949.1 | 179.2 | 40.457767 | -104.926478 | Circle (Radius: 75.0) |

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Target |
|-----|--------|-------|--------|--------|---------|-------|------|--------|--------|----------------------------|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 1604.6 | 24.09 | 174.75 | 1569.4 | -248.5 | 22.8 | 2.00 | 174.75 | 249.5 | |
| 4 | 5177.0 | 24.09 | 174.75 | 4830.6 | -1700.6 | 156.4 | 0.00 | 0.00 | 1707.8 | |
| 5 | 6381.5 | 0.00 | 0.00 | 6000.0 | -1949.1 | 179.2 | 2.00 | 180.00 | 1957.3 | TARGET BHL 2635'FNL, 0'FEL |
| 6 | 7676.5 | 0.00 | 0.00 | 7295.0 | -1949.1 | 179.2 | 0.00 | 0.00 | 1957.3 | |



Great Western

SEC.30-T6N-R67W

Raindance FD West Row Pad Sec.30-T6N-R67W

Raindance FD 29-32D

Wellbore #1

Plan: Plan #1 (10-18-12)

Standard Planning Report

22 October, 2012

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Company: | Great Western | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Project: | SEC.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | North Reference: | True |
| Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (10-18-12) | | |

| | | | |
|--------------------|--|----------------------|-----------------------------|
| Project | SEC.30-T6N-R67W, Weld County, Colorado | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | Using Well Reference Point |
| Map Zone: | Colorado Northern Zone | | Using geodetic scale factor |

| Site | | | | | | Raindance FD West Row Pad Sec.30-T6N-R67W | | | | | | | | | | | |
|-----------------------|--|--|----------|--|--|---|--|--|-----------------|--|--|-------------------|--|--|-------------|--|--|
| Site Position: | | | | | | Northing: | | | 1,412,129.27 ft | | | Latitude: | | | 40.463283 | | |
| From: | | | Lat/Long | | | Easting: | | | 3,159,403.24 ft | | | Longitude: | | | -104.927119 | | |
| Position Uncertainty: | | | 0.0 ft | | | Slot Radius: | | | " | | | Grid Convergence: | | | 0.37 ° | | |

| Well | Raindance FD 29-32D | | | | | |
|----------------------|---------------------|----------|---------------------|-----------------|---------------|-------------|
| Well Position | +N/-S | -60.5 ft | Northing: | 1,412,068.78 ft | Latitude: | 40.463117 |
| | +E/-W | -0.8 ft | Easting: | 3,159,402.80 ft | Longitude: | -104.927122 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 4,782.6 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 10/18/2012 | 8.78 | 67.03 | 53,006 |

| | | | | |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| Design | Plan #1 (10-18-12) | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
| | 0.0 | 0.0 | 0.0 | 174.75 |

| 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 |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,604.6 | 24.09 | 174.75 | 1,569.4 | -248.5 | 22.8 | 2.00 | 2.00 | 0.00 | 174.75 | |
| 5,177.0 | 24.09 | 174.75 | 4,830.6 | -1,700.6 | 156.4 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,381.5 | 0.00 | 0.00 | 6,000.0 | -1,949.1 | 179.2 | 2.00 | -2.00 | 0.00 | 180.00 | TARGET BHL 2635 |
| 7,676.5 | 0.00 | 0.00 | 7,295.0 | -1,949.1 | 179.2 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Company: | Great Western | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Project: | SEC.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | North Reference: | True |
| Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (10-18-12) | | |

Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---------------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 40.0 | 0.00 | 0.00 | 40.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 80.0 | 0.00 | 0.00 | 80.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 120.0 | 0.00 | 0.00 | 120.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 160.0 | 0.00 | 0.00 | 160.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 240.0 | 0.00 | 0.00 | 240.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 280.0 | 0.00 | 0.00 | 280.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 320.0 | 0.00 | 0.00 | 320.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 360.0 | 0.00 | 0.00 | 360.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| KOP - Start Build 2.00 | | | | | | | | | |
| 440.0 | 0.80 | 174.75 | 440.0 | -0.3 | 0.0 | 0.3 | 2.00 | 2.00 | 0.00 |
| 480.0 | 1.60 | 174.75 | 480.0 | -1.1 | 0.1 | 1.1 | 2.00 | 2.00 | 0.00 |
| 520.0 | 2.40 | 174.75 | 520.0 | -2.5 | 0.2 | 2.5 | 2.00 | 2.00 | 0.00 |
| 560.0 | 3.20 | 174.75 | 559.9 | -4.4 | 0.4 | 4.5 | 2.00 | 2.00 | 0.00 |
| 600.0 | 4.00 | 174.75 | 599.8 | -6.9 | 0.6 | 7.0 | 2.00 | 2.00 | 0.00 |
| 600.2 | 4.00 | 174.75 | 600.0 | -7.0 | 0.6 | 7.0 | 0.00 | 0.00 | 0.00 |
| 8 5/8" | | | | | | | | | |
| 640.0 | 4.80 | 174.75 | 639.7 | -10.0 | 0.9 | 10.0 | 2.01 | 2.01 | 0.00 |
| 680.0 | 5.60 | 174.75 | 679.6 | -13.6 | 1.3 | 13.7 | 2.00 | 2.00 | 0.00 |
| 720.0 | 6.40 | 174.75 | 719.3 | -17.8 | 1.6 | 17.9 | 2.00 | 2.00 | 0.00 |
| 760.0 | 7.20 | 174.75 | 759.1 | -22.5 | 2.1 | 22.6 | 2.00 | 2.00 | 0.00 |
| 800.0 | 8.00 | 174.75 | 798.7 | -27.8 | 2.6 | 27.9 | 2.00 | 2.00 | 0.00 |
| 840.0 | 8.80 | 174.75 | 838.3 | -33.6 | 3.1 | 33.7 | 2.00 | 2.00 | 0.00 |
| 880.0 | 9.60 | 174.75 | 877.8 | -39.9 | 3.7 | 40.1 | 2.00 | 2.00 | 0.00 |
| 920.0 | 10.40 | 174.75 | 917.1 | -46.9 | 4.3 | 47.1 | 2.00 | 2.00 | 0.00 |
| 960.0 | 11.20 | 174.75 | 956.4 | -54.3 | 5.0 | 54.6 | 2.00 | 2.00 | 0.00 |
| 1,000.0 | 12.00 | 174.75 | 995.6 | -62.3 | 5.7 | 62.6 | 2.00 | 2.00 | 0.00 |
| 1,040.0 | 12.80 | 174.75 | 1,034.7 | -70.9 | 6.5 | 71.2 | 2.00 | 2.00 | 0.00 |
| 1,080.0 | 13.60 | 174.75 | 1,073.6 | -80.0 | 7.4 | 80.3 | 2.00 | 2.00 | 0.00 |
| 1,120.0 | 14.40 | 174.75 | 1,112.4 | -89.6 | 8.2 | 90.0 | 2.00 | 2.00 | 0.00 |
| 1,160.0 | 15.20 | 174.75 | 1,151.1 | -99.8 | 9.2 | 100.2 | 2.00 | 2.00 | 0.00 |
| 1,200.0 | 16.00 | 174.75 | 1,189.6 | -110.5 | 10.2 | 111.0 | 2.00 | 2.00 | 0.00 |
| 1,240.0 | 16.80 | 174.75 | 1,228.0 | -121.8 | 11.2 | 122.3 | 2.00 | 2.00 | 0.00 |
| 1,280.0 | 17.60 | 174.75 | 1,266.2 | -133.5 | 12.3 | 134.1 | 2.00 | 2.00 | 0.00 |
| 1,320.0 | 18.40 | 174.75 | 1,304.3 | -145.8 | 13.4 | 146.5 | 2.00 | 2.00 | 0.00 |
| 1,360.0 | 19.20 | 174.75 | 1,342.1 | -158.7 | 14.6 | 159.3 | 2.00 | 2.00 | 0.00 |
| 1,400.0 | 20.00 | 174.75 | 1,379.8 | -172.0 | 15.8 | 172.8 | 2.00 | 2.00 | 0.00 |
| 1,440.0 | 20.80 | 174.75 | 1,417.3 | -185.9 | 17.1 | 186.7 | 2.00 | 2.00 | 0.00 |
| 1,480.0 | 21.60 | 174.75 | 1,454.6 | -200.3 | 18.4 | 201.2 | 2.00 | 2.00 | 0.00 |
| 1,520.0 | 22.40 | 174.75 | 1,491.7 | -215.3 | 19.8 | 216.2 | 2.00 | 2.00 | 0.00 |
| 1,560.0 | 23.20 | 174.75 | 1,528.6 | -230.7 | 21.2 | 231.7 | 2.00 | 2.00 | 0.00 |
| 1,600.0 | 24.00 | 174.75 | 1,565.2 | -246.6 | 22.7 | 247.7 | 2.00 | 2.00 | 0.00 |
| 1,604.6 | 24.09 | 174.75 | 1,569.4 | -248.5 | 22.8 | 249.5 | 2.00 | 2.00 | 0.00 |
| Start 3572.4 hold at 1604.6 MD | | | | | | | | | |
| 1,640.0 | 24.09 | 174.75 | 1,601.7 | -262.9 | 24.2 | 264.0 | 0.00 | 0.00 | 0.00 |
| 1,680.0 | 24.09 | 174.75 | 1,638.2 | -279.1 | 25.7 | 280.3 | 0.00 | 0.00 | 0.00 |
| 1,720.0 | 24.09 | 174.75 | 1,674.8 | -295.4 | 27.2 | 296.7 | 0.00 | 0.00 | 0.00 |
| 1,760.0 | 24.09 | 174.75 | 1,711.3 | -311.7 | 28.7 | 313.0 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 24.09 | 174.75 | 1,747.8 | -327.9 | 30.2 | 329.3 | 0.00 | 0.00 | 0.00 |
| 1,840.0 | 24.09 | 174.75 | 1,784.3 | -344.2 | 31.6 | 345.6 | 0.00 | 0.00 | 0.00 |
| 1,880.0 | 24.09 | 174.75 | 1,820.8 | -360.4 | 33.1 | 362.0 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Company: | Great Western | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Project: | SEC.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | North Reference: | True |
| Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (10-18-12) | | |

| 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) |
| 1,920.0 | 24.09 | 174.75 | 1,857.3 | -376.7 | 34.6 | 378.3 | 0.00 | 0.00 | 0.00 |
| 1,960.0 | 24.09 | 174.75 | 1,893.9 | -393.0 | 36.1 | 394.6 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 24.09 | 174.75 | 1,930.4 | -409.2 | 37.6 | 410.9 | 0.00 | 0.00 | 0.00 |
| 2,040.0 | 24.09 | 174.75 | 1,966.9 | -425.5 | 39.1 | 427.3 | 0.00 | 0.00 | 0.00 |
| 2,080.0 | 24.09 | 174.75 | 2,003.4 | -441.7 | 40.6 | 443.6 | 0.00 | 0.00 | 0.00 |
| 2,120.0 | 24.09 | 174.75 | 2,039.9 | -458.0 | 42.1 | 459.9 | 0.00 | 0.00 | 0.00 |
| 2,160.0 | 24.09 | 174.75 | 2,076.4 | -474.3 | 43.6 | 476.3 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 24.09 | 174.75 | 2,113.0 | -490.5 | 45.1 | 492.6 | 0.00 | 0.00 | 0.00 |
| 2,240.0 | 24.09 | 174.75 | 2,149.5 | -506.8 | 46.6 | 508.9 | 0.00 | 0.00 | 0.00 |
| 2,280.0 | 24.09 | 174.75 | 2,186.0 | -523.0 | 48.1 | 525.2 | 0.00 | 0.00 | 0.00 |
| 2,320.0 | 24.09 | 174.75 | 2,222.5 | -539.3 | 49.6 | 541.6 | 0.00 | 0.00 | 0.00 |
| 2,360.0 | 24.09 | 174.75 | 2,259.0 | -555.6 | 51.1 | 557.9 | 0.00 | 0.00 | 0.00 |
| 2,369.8 | 24.09 | 174.75 | 2,268.0 | -559.6 | 51.5 | 561.9 | 0.00 | 0.00 | 0.00 |
| GREELEY SAND | | | | | | | | | |
| 2,400.0 | 24.09 | 174.75 | 2,295.5 | -571.8 | 52.6 | 574.2 | 0.00 | 0.00 | 0.00 |
| 2,440.0 | 24.09 | 174.75 | 2,332.0 | -588.1 | 54.1 | 590.6 | 0.00 | 0.00 | 0.00 |
| 2,480.0 | 24.09 | 174.75 | 2,368.6 | -604.3 | 55.6 | 606.9 | 0.00 | 0.00 | 0.00 |
| 2,520.0 | 24.09 | 174.75 | 2,405.1 | -620.6 | 57.1 | 623.2 | 0.00 | 0.00 | 0.00 |
| 2,560.0 | 24.09 | 174.75 | 2,441.6 | -636.8 | 58.6 | 639.5 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 24.09 | 174.75 | 2,478.1 | -653.1 | 60.1 | 655.9 | 0.00 | 0.00 | 0.00 |
| 2,640.0 | 24.09 | 174.75 | 2,514.6 | -669.4 | 61.5 | 672.2 | 0.00 | 0.00 | 0.00 |
| 2,680.0 | 24.09 | 174.75 | 2,551.1 | -685.6 | 63.0 | 688.5 | 0.00 | 0.00 | 0.00 |
| 2,720.0 | 24.09 | 174.75 | 2,587.7 | -701.9 | 64.5 | 704.8 | 0.00 | 0.00 | 0.00 |
| 2,760.0 | 24.09 | 174.75 | 2,624.2 | -718.1 | 66.0 | 721.2 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 24.09 | 174.75 | 2,660.7 | -734.4 | 67.5 | 737.5 | 0.00 | 0.00 | 0.00 |
| 2,840.0 | 24.09 | 174.75 | 2,697.2 | -750.7 | 69.0 | 753.8 | 0.00 | 0.00 | 0.00 |
| 2,880.0 | 24.09 | 174.75 | 2,733.7 | -766.9 | 70.5 | 770.2 | 0.00 | 0.00 | 0.00 |
| 2,920.0 | 24.09 | 174.75 | 2,770.2 | -783.2 | 72.0 | 786.5 | 0.00 | 0.00 | 0.00 |
| 2,960.0 | 24.09 | 174.75 | 2,806.8 | -799.4 | 73.5 | 802.8 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 24.09 | 174.75 | 2,843.3 | -815.7 | 75.0 | 819.1 | 0.00 | 0.00 | 0.00 |
| 3,040.0 | 24.09 | 174.75 | 2,879.8 | -832.0 | 76.5 | 835.5 | 0.00 | 0.00 | 0.00 |
| 3,080.0 | 24.09 | 174.75 | 2,916.3 | -848.2 | 78.0 | 851.8 | 0.00 | 0.00 | 0.00 |
| 3,120.0 | 24.09 | 174.75 | 2,952.8 | -864.5 | 79.5 | 868.1 | 0.00 | 0.00 | 0.00 |
| 3,160.0 | 24.09 | 174.75 | 2,989.3 | -880.7 | 81.0 | 884.5 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 24.09 | 174.75 | 3,025.8 | -897.0 | 82.5 | 900.8 | 0.00 | 0.00 | 0.00 |
| 3,240.0 | 24.09 | 174.75 | 3,062.4 | -913.3 | 84.0 | 917.1 | 0.00 | 0.00 | 0.00 |
| 3,280.0 | 24.09 | 174.75 | 3,098.9 | -929.5 | 85.5 | 933.4 | 0.00 | 0.00 | 0.00 |
| 3,320.0 | 24.09 | 174.75 | 3,135.4 | -945.8 | 87.0 | 949.8 | 0.00 | 0.00 | 0.00 |
| 3,360.0 | 24.09 | 174.75 | 3,171.9 | -962.0 | 88.5 | 966.1 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 24.09 | 174.75 | 3,208.4 | -978.3 | 90.0 | 982.4 | 0.00 | 0.00 | 0.00 |
| 3,440.0 | 24.09 | 174.75 | 3,244.9 | -994.6 | 91.4 | 998.7 | 0.00 | 0.00 | 0.00 |
| 3,480.0 | 24.09 | 174.75 | 3,281.5 | -1,010.8 | 92.9 | 1,015.1 | 0.00 | 0.00 | 0.00 |
| 3,520.0 | 24.09 | 174.75 | 3,318.0 | -1,027.1 | 94.4 | 1,031.4 | 0.00 | 0.00 | 0.00 |
| 3,560.0 | 24.09 | 174.75 | 3,354.5 | -1,043.3 | 95.9 | 1,047.7 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 24.09 | 174.75 | 3,391.0 | -1,059.6 | 97.4 | 1,064.1 | 0.00 | 0.00 | 0.00 |
| 3,619.7 | 24.09 | 174.75 | 3,409.0 | -1,067.6 | 98.2 | 1,072.1 | 0.00 | 0.00 | 0.00 |
| PARKMAN | | | | | | | | | |
| 3,640.0 | 24.09 | 174.75 | 3,427.5 | -1,075.8 | 98.9 | 1,080.4 | 0.00 | 0.00 | 0.00 |
| 3,680.0 | 24.09 | 174.75 | 3,464.0 | -1,092.1 | 100.4 | 1,096.7 | 0.00 | 0.00 | 0.00 |
| 3,720.0 | 24.09 | 174.75 | 3,500.6 | -1,108.4 | 101.9 | 1,113.0 | 0.00 | 0.00 | 0.00 |
| 3,760.0 | 24.09 | 174.75 | 3,537.1 | -1,124.6 | 103.4 | 1,129.4 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 24.09 | 174.75 | 3,573.6 | -1,140.9 | 104.9 | 1,145.7 | 0.00 | 0.00 | 0.00 |
| 3,840.0 | 24.09 | 174.75 | 3,610.1 | -1,157.1 | 106.4 | 1,162.0 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Company: | Great Western | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Project: | SEC.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | North Reference: | True |
| Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (10-18-12) | | |

| 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) |
| 3,880.0 | 24.09 | 174.75 | 3,646.6 | -1,173.4 | 107.9 | 1,178.4 | 0.00 | 0.00 | 0.00 |
| 3,920.0 | 24.09 | 174.75 | 3,683.1 | -1,189.7 | 109.4 | 1,194.7 | 0.00 | 0.00 | 0.00 |
| 3,960.0 | 24.09 | 174.75 | 3,719.6 | -1,205.9 | 110.9 | 1,211.0 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 24.09 | 174.75 | 3,756.2 | -1,222.2 | 112.4 | 1,227.3 | 0.00 | 0.00 | 0.00 |
| 4,040.0 | 24.09 | 174.75 | 3,792.7 | -1,238.4 | 113.9 | 1,243.7 | 0.00 | 0.00 | 0.00 |
| 4,080.0 | 24.09 | 174.75 | 3,829.2 | -1,254.7 | 115.4 | 1,260.0 | 0.00 | 0.00 | 0.00 |
| 4,120.0 | 24.09 | 174.75 | 3,865.7 | -1,271.0 | 116.9 | 1,276.3 | 0.00 | 0.00 | 0.00 |
| 4,160.0 | 24.09 | 174.75 | 3,902.2 | -1,287.2 | 118.4 | 1,292.6 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 24.09 | 174.75 | 3,938.7 | -1,303.5 | 119.9 | 1,309.0 | 0.00 | 0.00 | 0.00 |
| 4,240.0 | 24.09 | 174.75 | 3,975.3 | -1,319.7 | 121.3 | 1,325.3 | 0.00 | 0.00 | 0.00 |
| 4,280.0 | 24.09 | 174.75 | 4,011.8 | -1,336.0 | 122.8 | 1,341.6 | 0.00 | 0.00 | 0.00 |
| 4,320.0 | 24.09 | 174.75 | 4,048.3 | -1,352.3 | 124.3 | 1,358.0 | 0.00 | 0.00 | 0.00 |
| 4,360.0 | 24.09 | 174.75 | 4,084.8 | -1,368.5 | 125.8 | 1,374.3 | 0.00 | 0.00 | 0.00 |
| 4,378.8 | 24.09 | 174.75 | 4,102.0 | -1,376.2 | 126.5 | 1,382.0 | 0.00 | 0.00 | 0.00 |
| SUSSEX | | | | | | | | | |
| 4,400.0 | 24.09 | 174.75 | 4,121.3 | -1,384.8 | 127.3 | 1,390.6 | 0.00 | 0.00 | 0.00 |
| 4,440.0 | 24.09 | 174.75 | 4,157.8 | -1,401.0 | 128.8 | 1,406.9 | 0.00 | 0.00 | 0.00 |
| 4,480.0 | 24.09 | 174.75 | 4,194.4 | -1,417.3 | 130.3 | 1,423.3 | 0.00 | 0.00 | 0.00 |
| 4,520.0 | 24.09 | 174.75 | 4,230.9 | -1,433.5 | 131.8 | 1,439.6 | 0.00 | 0.00 | 0.00 |
| 4,560.0 | 24.09 | 174.75 | 4,267.4 | -1,449.8 | 133.3 | 1,455.9 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 24.09 | 174.75 | 4,303.9 | -1,466.1 | 134.8 | 1,472.3 | 0.00 | 0.00 | 0.00 |
| 4,640.0 | 24.09 | 174.75 | 4,340.4 | -1,482.3 | 136.3 | 1,488.6 | 0.00 | 0.00 | 0.00 |
| 4,680.0 | 24.09 | 174.75 | 4,376.9 | -1,498.6 | 137.8 | 1,504.9 | 0.00 | 0.00 | 0.00 |
| 4,720.0 | 24.09 | 174.75 | 4,413.5 | -1,514.8 | 139.3 | 1,521.2 | 0.00 | 0.00 | 0.00 |
| 4,760.0 | 24.09 | 174.75 | 4,450.0 | -1,531.1 | 140.8 | 1,537.6 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 24.09 | 174.75 | 4,486.5 | -1,547.4 | 142.3 | 1,553.9 | 0.00 | 0.00 | 0.00 |
| 4,806.0 | 24.09 | 174.75 | 4,492.0 | -1,549.8 | 142.5 | 1,556.4 | 0.00 | 0.00 | 0.00 |
| SHANNON | | | | | | | | | |
| 4,840.0 | 24.09 | 174.75 | 4,523.0 | -1,563.6 | 143.8 | 1,570.2 | 0.00 | 0.00 | 0.00 |
| 4,880.0 | 24.09 | 174.75 | 4,559.5 | -1,579.9 | 145.3 | 1,586.5 | 0.00 | 0.00 | 0.00 |
| 4,920.0 | 24.09 | 174.75 | 4,596.0 | -1,596.1 | 146.8 | 1,602.9 | 0.00 | 0.00 | 0.00 |
| 4,960.0 | 24.09 | 174.75 | 4,632.5 | -1,612.4 | 148.3 | 1,619.2 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 24.09 | 174.75 | 4,669.1 | -1,628.7 | 149.8 | 1,635.5 | 0.00 | 0.00 | 0.00 |
| 5,040.0 | 24.09 | 174.75 | 4,705.6 | -1,644.9 | 151.2 | 1,651.9 | 0.00 | 0.00 | 0.00 |
| 5,080.0 | 24.09 | 174.75 | 4,742.1 | -1,661.2 | 152.7 | 1,668.2 | 0.00 | 0.00 | 0.00 |
| 5,120.0 | 24.09 | 174.75 | 4,778.6 | -1,677.4 | 154.2 | 1,684.5 | 0.00 | 0.00 | 0.00 |
| 5,160.0 | 24.09 | 174.75 | 4,815.1 | -1,693.7 | 155.7 | 1,700.8 | 0.00 | 0.00 | 0.00 |
| 5,177.0 | 24.09 | 174.75 | 4,830.6 | -1,700.6 | 156.4 | 1,707.8 | 0.00 | 0.00 | 0.00 |
| Start Drop -2.00 | | | | | | | | | |
| 5,200.0 | 23.63 | 174.75 | 4,851.7 | -1,709.9 | 157.2 | 1,717.1 | 2.00 | -2.00 | 0.00 |
| 5,240.0 | 22.83 | 174.75 | 4,888.4 | -1,725.6 | 158.7 | 1,732.9 | 2.00 | -2.00 | 0.00 |
| 5,280.0 | 22.03 | 174.75 | 4,925.4 | -1,740.8 | 160.1 | 1,748.1 | 2.00 | -2.00 | 0.00 |
| 5,320.0 | 21.23 | 174.75 | 4,962.6 | -1,755.5 | 161.4 | 1,762.9 | 2.00 | -2.00 | 0.00 |
| 5,360.0 | 20.43 | 174.75 | 5,000.0 | -1,769.6 | 162.7 | 1,777.1 | 2.00 | -2.00 | 0.00 |
| 5,400.0 | 19.63 | 174.75 | 5,037.6 | -1,783.3 | 164.0 | 1,790.8 | 2.00 | -2.00 | 0.00 |
| 5,440.0 | 18.83 | 174.75 | 5,075.3 | -1,796.4 | 165.2 | 1,804.0 | 2.00 | -2.00 | 0.00 |
| 5,480.0 | 18.03 | 174.75 | 5,113.3 | -1,809.0 | 166.3 | 1,816.6 | 2.00 | -2.00 | 0.00 |
| 5,520.0 | 17.23 | 174.75 | 5,151.4 | -1,821.0 | 167.4 | 1,828.7 | 2.00 | -2.00 | 0.00 |
| 5,560.0 | 16.43 | 174.75 | 5,189.7 | -1,832.6 | 168.5 | 1,840.3 | 2.00 | -2.00 | 0.00 |
| 5,600.0 | 15.63 | 174.75 | 5,228.1 | -1,843.6 | 169.5 | 1,851.4 | 2.00 | -2.00 | 0.00 |
| 5,640.0 | 14.83 | 174.75 | 5,266.7 | -1,854.0 | 170.5 | 1,861.9 | 2.00 | -2.00 | 0.00 |
| 5,680.0 | 14.03 | 174.75 | 5,305.5 | -1,864.0 | 171.4 | 1,871.8 | 2.00 | -2.00 | 0.00 |
| 5,720.0 | 13.23 | 174.75 | 5,344.3 | -1,873.4 | 172.3 | 1,881.3 | 2.00 | -2.00 | 0.00 |

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Company: | Great Western | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Project: | SEC.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | North Reference: | True |
| Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 (10-18-12) | | |

Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|--|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-----------------------------|----------------------------|---------------------------|
| 5,760.0 | 12.43 | 174.75 | 5,383.3 | -1,882.2 | 173.1 | 1,890.1 | 2.00 | -2.00 | 0.00 |
| 5,800.0 | 11.63 | 174.75 | 5,422.5 | -1,890.5 | 173.8 | 1,898.5 | 2.00 | -2.00 | 0.00 |
| 5,840.0 | 10.83 | 174.75 | 5,461.7 | -1,898.3 | 174.5 | 1,906.3 | 2.00 | -2.00 | 0.00 |
| 5,880.0 | 10.03 | 174.75 | 5,501.0 | -1,905.5 | 175.2 | 1,913.5 | 2.00 | -2.00 | 0.00 |
| 5,920.0 | 9.23 | 174.75 | 5,540.5 | -1,912.1 | 175.8 | 1,920.2 | 2.00 | -2.00 | 0.00 |
| 5,960.0 | 8.43 | 174.75 | 5,580.0 | -1,918.2 | 176.4 | 1,926.3 | 2.00 | -2.00 | 0.00 |
| 6,000.0 | 7.63 | 174.75 | 5,619.6 | -1,923.8 | 176.9 | 1,931.9 | 2.00 | -2.00 | 0.00 |
| 6,040.0 | 6.83 | 174.75 | 5,659.3 | -1,928.8 | 177.4 | 1,937.0 | 2.00 | -2.00 | 0.00 |
| 6,080.0 | 6.03 | 174.75 | 5,699.0 | -1,933.3 | 177.8 | 1,941.4 | 2.00 | -2.00 | 0.00 |
| 6,120.0 | 5.23 | 174.75 | 5,738.8 | -1,937.2 | 178.1 | 1,945.4 | 2.00 | -2.00 | 0.00 |
| 6,160.0 | 4.43 | 174.75 | 5,778.7 | -1,940.6 | 178.4 | 1,948.7 | 2.00 | -2.00 | 0.00 |
| 6,200.0 | 3.63 | 174.75 | 5,818.6 | -1,943.4 | 178.7 | 1,951.5 | 2.00 | -2.00 | 0.00 |
| 6,240.0 | 2.83 | 174.75 | 5,858.5 | -1,945.6 | 178.9 | 1,953.8 | 2.00 | -2.00 | 0.00 |
| 6,280.0 | 2.03 | 174.75 | 5,898.5 | -1,947.3 | 179.0 | 1,955.5 | 2.00 | -2.00 | 0.00 |
| 6,320.0 | 1.23 | 174.75 | 5,938.5 | -1,948.4 | 179.2 | 1,956.6 | 2.00 | -2.00 | 0.00 |
| 6,360.0 | 0.43 | 174.75 | 5,978.5 | -1,949.0 | 179.2 | 1,957.2 | 2.00 | -2.00 | 0.00 |
| 6,381.5 | 0.00 | 0.00 | 6,000.0 | -1,949.1 | 179.2 | 1,957.3 | 2.00 | -2.00 | 0.00 |
| Back to Vertical - TARGET BHL 2635'FNL, 0'FEL | | | | | | | | | |
| 6,400.0 | 0.00 | 0.00 | 6,018.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,440.0 | 0.00 | 0.00 | 6,058.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,480.0 | 0.00 | 0.00 | 6,098.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,520.0 | 0.00 | 0.00 | 6,138.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,560.0 | 0.00 | 0.00 | 6,178.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 0.00 | 0.00 | 6,218.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,640.0 | 0.00 | 0.00 | 6,258.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,680.0 | 0.00 | 0.00 | 6,298.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,720.0 | 0.00 | 0.00 | 6,338.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,760.0 | 0.00 | 0.00 | 6,378.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 0.00 | 0.00 | 6,418.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,840.0 | 0.00 | 0.00 | 6,458.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,880.0 | 0.00 | 0.00 | 6,498.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,920.0 | 0.00 | 0.00 | 6,538.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 6,960.0 | 0.00 | 0.00 | 6,578.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 0.00 | 0.00 | 6,618.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,040.0 | 0.00 | 0.00 | 6,658.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,080.0 | 0.00 | 0.00 | 6,698.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,120.0 | 0.00 | 0.00 | 6,738.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,160.0 | 0.00 | 0.00 | 6,778.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,183.5 | 0.00 | 0.00 | 6,802.0 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| NIORARA - TARGET CIRCLE 2635'FNL & 0'FEL | | | | | | | | | |
| 7,200.0 | 0.00 | 0.00 | 6,818.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,240.0 | 0.00 | 0.00 | 6,858.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,280.0 | 0.00 | 0.00 | 6,898.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,320.0 | 0.00 | 0.00 | 6,938.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,360.0 | 0.00 | 0.00 | 6,978.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 0.00 | 0.00 | 7,018.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,440.0 | 0.00 | 0.00 | 7,058.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,480.0 | 0.00 | 0.00 | 7,098.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 7,494.5 | 0.00 | 0.00 | 7,113.0 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| FORT HAYS | | | | | | | | | |
| 7,516.5 | 0.00 | 0.00 | 7,135.0 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| CODELL | | | | | | | | | |
| 7,520.0 | 0.00 | 0.00 | 7,138.5 | -1,949.1 | 179.2 | 1,957.3 | 0.00 | 0.00 | 0.00 |

| Plan Annotations | | | | | |
|------------------|---------------------------|---------------------------|-------------------|---------------|--------------------------------|
| | Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | | +N/-S (ft) | +E/-W (ft) | |
| | 400.0 | 400.0 | 0.0 | 0.0 | KOP - Start Build 2.00 |
| | 1,604.6 | 1,569.4 | -248.5 | 22.8 | Start 3572.4 hold at 1604.6 MD |
| | 5,177.0 | 4,830.6 | -1,700.6 | 156.4 | Start Drop -2.00 |
| | 6,381.5 | 6,000.0 | -1,949.1 | 179.2 | Back to Vertical |
| | 7,676.5 | 7,295.0 | -1,949.1 | 179.2 | TD at 7676.5 |



Great Western

SEC.30-T6N-R67W

Raindance FD West Row Pad Sec.30-T6N-R67W

Raindance FD 29-32D

Wellbore #1

Plan #1 (10-18-12)

Anticollision Report

22 October, 2012

| | | | |
|---------------------------|--|-------------------------------------|--------------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Project: | SEC.30-T6N-R67W | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Reference Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-18-12) | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | Plan #1 (10-18-12) | | |
| Filter type: | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| Interpolation Method: | Stations | Error Model: | ISCWSA |
| Depth Range: | Unlimited | Scan Method: | Closest Approach 3D |
| Results Limited by: | Maximum center-center distance of 10,000.0ft | Error Surface: | Elliptical Conic |
| Warning Levels Evaluated at: | 2.00 Sigma | | |

| | | | | |
|----------------------------|----------------|----------------------------------|------------------|--------------------|
| Survey Tool Program | Date | 10/19/2012 | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 0.0 | 7,676.5 | Plan #1 (10-18-12) (Wellbore #1) | MWD | MWD - Standard |

| Summary | | | | | | |
|--|-------------------------------|----------------------------|-------------------------------|-----------------------|-------------------|---------|
| Site Name | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Between Ellipses (ft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| Raindance FD East Row Pad Sec.30-T6N-R67W | | | | | | |
| Raindance FD 29-11D - Wellbore #1 - Plan #1 (10-18-12) | 366.5 | 367.1 | 21.4 | 20.0 | 15.020 | CC |
| Raindance FD 29-11D - Wellbore #1 - Plan #1 (10-18-12) | 400.0 | 400.6 | 21.4 | 19.8 | 13.583 | ES |
| Raindance FD 29-11D - Wellbore #1 - Plan #1 (10-18-12) | 500.0 | 500.0 | 23.7 | 21.8 | 11.947 | SF |
| Raindance FD 29-31D - Wellbore #1 - Plan #1 (10-18-12) | 487.8 | 487.6 | 14.7 | 12.7 | 7.555 | CC |
| Raindance FD 29-31D - Wellbore #1 - Plan #1 (10-18-12) | 500.0 | 499.8 | 14.7 | 12.7 | 7.363 | ES |
| Raindance FD 29-31D - Wellbore #1 - Plan #1 (10-18-12) | 600.0 | 599.6 | 15.7 | 13.3 | 6.523 | SF |
| Raindance FD West Row Pad Sec.30-T6N-R67W | | | | | | |
| Raindance FD 19-14D - Wellbore #1 - Plan #1 (10-18-12) | 200.0 | 199.5 | 14.9 | 14.3 | 22.195 | CC |
| Raindance FD 19-14D - Wellbore #1 - Plan #1 (10-18-12) | 300.0 | 299.5 | 15.0 | 13.9 | 13.518 | ES |
| Raindance FD 19-14D - Wellbore #1 - Plan #1 (10-18-12) | 400.0 | 399.2 | 16.5 | 14.9 | 10.556 | SF |

| Offset Design | Raindance FD East Row Pad Sec.30-T6N-R67W - Raindance FD 29-11D - Wellbore #1 - Plan #1 (10-1 | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|------------------------|---|---------------------|---------------------|----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|---------------------------|--------|
| Survey Program: | 0-MWD | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | Offset | Semi Major Axis | | Distance | | Minimum Separation | | 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 | | |
| 0.0 | 0.0 | 0.6 | 0.6 | 0.0 | 0.0 | 45.69 | 14.9 | 15.3 | 21.4 | 21.4 | 0.00 | N/A | | |
| 100.0 | 100.0 | 100.6 | 100.6 | 0.1 | 0.1 | 45.69 | 14.9 | 15.3 | 21.4 | 21.2 | 0.23 | 94.590 | | |
| 200.0 | 200.0 | 200.6 | 200.6 | 0.3 | 0.3 | 45.69 | 14.9 | 15.3 | 21.4 | 20.7 | 0.68 | 31.656 | | |
| 300.0 | 300.0 | 300.6 | 300.6 | 0.6 | 0.6 | 45.69 | 14.9 | 15.3 | 21.4 | 20.3 | 1.13 | 19.009 | | |
| 366.5 | 366.5 | 367.1 | 367.1 | 0.7 | 0.7 | 45.69 | 14.9 | 15.3 | 21.4 | 20.0 | 1.42 | 15.020 | CC | |
| 400.0 | 400.0 | 400.6 | 400.6 | 0.8 | 0.8 | 45.69 | 14.9 | 15.3 | 21.4 | 19.8 | 1.57 | 13.583 | ES | |
| 500.0 | 500.0 | 500.0 | 500.0 | 1.0 | 1.0 | -129.33 | 14.9 | 17.0 | 23.7 | 21.8 | 1.99 | 11.947 | SF | |
| 600.0 | 599.8 | 599.1 | 598.9 | 1.2 | 1.2 | -129.94 | 14.9 | 22.2 | 30.8 | 28.4 | 2.40 | 12.841 | | |
| 700.0 | 699.5 | 698.4 | 697.8 | 1.4 | 1.4 | -130.39 | 14.6 | 30.5 | 42.0 | 39.1 | 2.84 | 14.795 | | |
| 800.0 | 798.7 | 798.4 | 797.4 | 1.7 | 1.7 | -130.23 | 11.3 | 40.3 | 54.3 | 51.0 | 3.30 | 16.487 | | |
| 900.0 | 897.5 | 898.6 | 896.7 | 2.0 | 1.9 | -129.72 | 4.7 | 51.1 | 67.2 | 63.4 | 3.82 | 17.621 | | |
| 1,000.0 | 995.6 | 998.9 | 995.8 | 2.3 | 2.2 | -129.03 | -5.3 | 62.9 | 80.7 | 76.3 | 4.42 | 18.284 | | |
| 1,100.0 | 1,093.1 | 1,099.3 | 1,094.5 | 2.7 | 2.6 | -128.25 | -18.6 | 75.7 | 94.8 | 89.7 | 5.11 | 18.567 | | |
| 1,200.0 | 1,189.6 | 1,199.8 | 1,192.7 | 3.2 | 3.0 | -127.42 | -35.2 | 89.5 | 109.4 | 103.5 | 5.90 | 18.556 | | |
| 1,300.0 | 1,285.3 | 1,300.5 | 1,290.2 | 3.8 | 3.4 | -126.56 | -55.2 | 104.4 | 124.6 | 117.8 | 6.80 | 18.330 | | |
| 1,400.0 | 1,379.8 | 1,401.3 | 1,387.0 | 4.4 | 3.9 | -125.69 | -78.5 | 120.2 | 140.3 | 132.5 | 7.81 | 17.959 | | |

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

| | | | |
|---------------------------|--|-------------------------------------|--------------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Project: | SEC.30-T6N-R67W | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Reference Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-18-12) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|-----------------------|---------------------|---------------------|---------------------|-----------------|-------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Reference | | Offset | | Semi Major Axis | | | Distance | | | | | | |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference (ft) | Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning |
| 1,500.0 | 1,473.2 | 1,502.2 | 1,482.8 | 5.0 | 4.5 | -124.82 | -105.1 | 136.9 | 156.5 | 147.6 | 8.95 | 17.499 | |
| 1,604.6 | 1,569.4 | 1,605.9 | 1,580.5 | 5.8 | 5.2 | -124.22 | -134.9 | 154.9 | 174.5 | 164.2 | 10.23 | 17.056 | |
| 1,700.0 | 1,656.5 | 1,699.7 | 1,668.9 | 6.5 | 5.8 | -124.39 | -162.1 | 171.2 | 191.8 | 180.3 | 11.45 | 16.753 | |
| 1,800.0 | 1,747.8 | 1,798.1 | 1,761.5 | 7.3 | 6.4 | -124.54 | -190.5 | 188.2 | 209.9 | 197.1 | 12.74 | 16.474 | |
| 1,900.0 | 1,839.1 | 1,896.4 | 1,854.0 | 8.1 | 7.1 | -124.67 | -219.0 | 205.3 | 228.0 | 213.9 | 14.05 | 16.232 | |
| 2,000.0 | 1,930.4 | 1,994.8 | 1,946.6 | 8.9 | 7.7 | -124.78 | -247.4 | 222.4 | 246.1 | 230.7 | 15.36 | 16.020 | |
| 2,100.0 | 2,021.7 | 2,093.1 | 2,039.2 | 9.7 | 8.4 | -124.87 | -275.9 | 239.4 | 264.2 | 247.5 | 16.68 | 15.835 | |
| 2,200.0 | 2,113.0 | 2,191.4 | 2,131.8 | 10.5 | 9.1 | -124.95 | -304.3 | 256.5 | 282.3 | 264.3 | 18.01 | 15.672 | |
| 2,300.0 | 2,204.2 | 2,289.8 | 2,224.4 | 11.3 | 9.8 | -125.02 | -332.7 | 273.6 | 300.4 | 281.1 | 19.35 | 15.528 | |
| 2,400.0 | 2,295.5 | 2,388.1 | 2,317.0 | 12.1 | 10.4 | -125.09 | -361.2 | 290.6 | 318.5 | 297.9 | 20.69 | 15.399 | |
| 2,500.0 | 2,386.8 | 2,486.5 | 2,409.5 | 12.9 | 11.1 | -125.14 | -389.6 | 307.7 | 336.7 | 314.6 | 22.03 | 15.284 | |
| 2,600.0 | 2,478.1 | 2,584.8 | 2,502.1 | 13.7 | 11.8 | -125.19 | -418.1 | 324.8 | 354.8 | 331.4 | 23.37 | 15.181 | |
| 2,700.0 | 2,569.4 | 2,683.2 | 2,594.7 | 14.5 | 12.5 | -125.24 | -446.5 | 341.8 | 372.9 | 348.2 | 24.71 | 15.088 | |
| 2,800.0 | 2,660.7 | 2,781.5 | 2,687.3 | 15.3 | 13.2 | -125.28 | -475.0 | 358.9 | 391.0 | 364.9 | 26.06 | 15.004 | |
| 2,900.0 | 2,752.0 | 2,879.9 | 2,779.9 | 16.1 | 13.9 | -125.32 | -503.4 | 376.0 | 409.1 | 381.7 | 27.41 | 14.926 | |
| 3,000.0 | 2,843.3 | 2,978.2 | 2,872.4 | 16.9 | 14.5 | -125.35 | -531.8 | 393.0 | 427.2 | 398.5 | 28.76 | 14.856 | |
| 3,100.0 | 2,934.6 | 3,076.5 | 2,965.0 | 17.7 | 15.2 | -125.39 | -560.3 | 410.1 | 445.4 | 415.2 | 30.11 | 14.791 | |
| 3,200.0 | 3,025.8 | 3,174.9 | 3,057.6 | 18.6 | 15.9 | -125.41 | -588.7 | 427.2 | 463.5 | 432.0 | 31.46 | 14.732 | |
| 3,300.0 | 3,117.1 | 3,273.2 | 3,150.2 | 19.4 | 16.6 | -125.44 | -617.2 | 444.2 | 481.6 | 448.8 | 32.81 | 14.677 | |
| 3,400.0 | 3,208.4 | 3,371.6 | 3,242.8 | 20.2 | 17.3 | -125.47 | -645.6 | 461.3 | 499.7 | 465.5 | 34.17 | 14.626 | |
| 3,500.0 | 3,299.7 | 3,469.9 | 3,335.4 | 21.0 | 18.0 | -125.49 | -674.1 | 478.4 | 517.8 | 482.3 | 35.52 | 14.578 | |
| 3,600.0 | 3,391.0 | 3,568.3 | 3,427.9 | 21.8 | 18.7 | -125.51 | -702.5 | 495.4 | 535.9 | 499.1 | 36.87 | 14.534 | |
| 3,700.0 | 3,482.3 | 3,666.6 | 3,520.5 | 22.6 | 19.4 | -125.53 | -731.0 | 512.5 | 554.1 | 515.8 | 38.23 | 14.493 | |
| 3,800.0 | 3,573.6 | 3,765.0 | 3,613.1 | 23.4 | 20.1 | -125.55 | -759.4 | 529.6 | 572.2 | 532.6 | 39.58 | 14.455 | |
| 3,900.0 | 3,664.9 | 3,863.3 | 3,705.7 | 24.2 | 20.7 | -125.57 | -787.8 | 546.6 | 590.3 | 549.4 | 40.94 | 14.418 | |
| 4,000.0 | 3,756.2 | 3,961.7 | 3,798.3 | 25.0 | 21.4 | -125.59 | -816.3 | 563.7 | 608.4 | 566.1 | 42.30 | 14.385 | |
| 4,100.0 | 3,847.5 | 4,060.0 | 3,890.9 | 25.9 | 22.1 | -125.60 | -844.7 | 580.8 | 626.5 | 582.9 | 43.65 | 14.353 | |
| 4,200.0 | 3,938.7 | 4,158.3 | 3,983.4 | 26.7 | 22.8 | -125.62 | -873.2 | 597.8 | 644.6 | 599.6 | 45.01 | 14.323 | |
| 4,300.0 | 4,030.0 | 4,256.7 | 4,076.0 | 27.5 | 23.5 | -125.63 | -901.6 | 614.9 | 662.8 | 616.4 | 46.37 | 14.294 | |
| 4,400.0 | 4,121.3 | 4,355.0 | 4,168.6 | 28.3 | 24.2 | -125.65 | -930.1 | 632.0 | 680.9 | 633.2 | 47.72 | 14.267 | |
| 4,500.0 | 4,212.6 | 4,453.4 | 4,261.2 | 29.1 | 24.9 | -125.66 | -958.5 | 649.0 | 699.0 | 649.9 | 49.08 | 14.242 | |
| 4,600.0 | 4,303.9 | 4,551.7 | 4,353.8 | 29.9 | 25.6 | -125.67 | -986.9 | 666.1 | 717.1 | 666.7 | 50.44 | 14.218 | |
| 4,700.0 | 4,395.2 | 4,650.1 | 4,446.3 | 30.7 | 26.3 | -125.68 | -1,015.4 | 683.2 | 735.2 | 683.4 | 51.80 | 14.195 | |
| 4,800.0 | 4,486.5 | 4,748.4 | 4,538.9 | 31.5 | 27.0 | -125.69 | -1,043.8 | 700.2 | 753.4 | 700.2 | 53.16 | 14.173 | |
| 4,900.0 | 4,577.8 | 4,846.8 | 4,631.5 | 32.4 | 27.7 | -125.70 | -1,072.3 | 717.3 | 771.5 | 717.0 | 54.51 | 14.152 | |
| 5,000.0 | 4,669.1 | 4,945.1 | 4,724.1 | 33.2 | 28.4 | -125.71 | -1,100.7 | 734.4 | 789.6 | 733.7 | 55.87 | 14.132 | |
| 5,100.0 | 4,760.4 | 5,043.4 | 4,816.7 | 34.0 | 29.1 | -125.72 | -1,129.2 | 751.4 | 807.7 | 750.5 | 57.23 | 14.113 | |
| 5,177.0 | 4,830.6 | 5,115.9 | 4,885.1 | 34.6 | 29.5 | -125.77 | -1,149.7 | 763.8 | 821.8 | 763.6 | 58.17 | 14.127 | |
| 5,200.0 | 4,851.7 | 5,137.3 | 4,905.4 | 34.8 | 29.6 | -125.87 | -1,155.5 | 767.2 | 826.0 | 767.6 | 58.40 | 14.143 | |
| 5,300.0 | 4,944.0 | 5,230.1 | 4,994.0 | 35.3 | 30.0 | -126.29 | -1,179.1 | 781.4 | 843.5 | 784.2 | 59.27 | 14.232 | |
| 5,400.0 | 5,037.6 | 5,323.0 | 5,083.5 | 35.8 | 30.4 | -126.71 | -1,200.3 | 794.1 | 859.6 | 799.6 | 60.06 | 14.314 | |
| 5,500.0 | 5,132.3 | 5,415.9 | 5,173.8 | 36.3 | 30.8 | -127.12 | -1,219.0 | 805.3 | 874.4 | 813.7 | 60.77 | 14.390 | |
| 5,600.0 | 5,228.1 | 5,508.8 | 5,264.8 | 36.7 | 31.1 | -127.52 | -1,235.1 | 815.0 | 887.8 | 826.4 | 61.39 | 14.462 | |
| 5,700.0 | 5,324.9 | 5,600.0 | 5,354.6 | 37.1 | 31.4 | -127.91 | -1,248.5 | 823.0 | 899.8 | 837.9 | 61.92 | 14.531 | |
| 5,800.0 | 5,422.5 | 5,694.5 | 5,448.2 | 37.5 | 31.6 | -128.30 | -1,259.8 | 829.8 | 910.4 | 848.0 | 62.36 | 14.598 | |
| 5,900.0 | 5,520.7 | 5,787.2 | 5,540.4 | 37.8 | 31.8 | -128.68 | -1,268.3 | 834.9 | 919.5 | 856.8 | 62.71 | 14.663 | |
| 6,000.0 | 5,619.6 | 5,879.9 | 5,632.9 | 38.0 | 31.9 | -129.06 | -1,274.2 | 838.4 | 927.3 | 864.3 | 62.97 | 14.727 | |
| 6,100.0 | 5,718.9 | 5,972.5 | 5,725.3 | 38.3 | 32.1 | -129.43 | -1,277.5 | 840.4 | 933.6 | 870.5 | 63.13 | 14.790 | |
| 6,200.0 | 5,818.6 | 6,066.4 | 5,819.2 | 38.4 | 32.1 | -129.81 | -1,278.4 | 840.9 | 938.5 | 875.3 | 63.20 | 14.849 | |
| 6,300.0 | 5,918.5 | 6,166.2 | 5,919.1 | 38.5 | 32.2 | -130.07 | -1,278.4 | 840.9 | 941.5 | 878.2 | 63.26 | 14.883 | |
| 6,381.5 | 6,000.0 | 6,247.8 | 6,000.6 | 38.6 | 32.3 | 44.61 | -1,278.4 | 840.9 | 942.2 | 878.9 | 63.33 | 14.878 | |

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

| | | | |
|---------------------------|--|-------------------------------------|--------------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Project: | SEC.30-T6N-R67W | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Reference Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-18-12) | Offset TVD Reference: | Offset Datum |

| Offset Design | | | | | | | | | | Offset Site Error: | | 0.0 ft | |
|-----------------------|----------------|----------------|----------------|-----------------|--------|-------------------|------------------------|-----------------|------------------|--------------------|-------------------|---------|--|
| Survey Program: 0-MWD | | | | | | | | | | Offset Well Error: | | 0.0 ft | |
| Reference | | Offset | | Semi Major Axis | | Distance | | | | | | Warning | |
| Measured Depth | Vertical Depth | Measured Depth | Vertical Depth | Reference | Offset | Highside Toolface | Offset Wellbore Centre | Between Centres | Between Ellipses | Minimum Separation | Separation Factor | | |
| (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (°) | +N/-S (ft) | +E/-W (ft) | (ft) | (ft) | (ft) | | |
| 6,400.0 | 6,018.5 | 6,266.2 | 6,019.1 | 38.6 | 32.3 | 44.61 | -1,278.4 | 840.9 | 942.2 | 878.9 | 63.36 | 14.871 | |
| 6,500.0 | 6,118.5 | 6,366.2 | 6,119.1 | 38.7 | 32.4 | 44.61 | -1,278.4 | 840.9 | 942.2 | 878.7 | 63.51 | 14.836 | |
| 6,600.0 | 6,218.5 | 6,466.2 | 6,219.1 | 38.7 | 32.4 | 44.61 | -1,278.4 | 840.9 | 942.2 | 878.5 | 63.66 | 14.800 | |
| 6,700.0 | 6,318.5 | 6,566.2 | 6,319.1 | 38.8 | 32.5 | 44.61 | -1,278.4 | 840.9 | 942.2 | 878.4 | 63.82 | 14.764 | |
| 6,800.0 | 6,418.5 | 6,666.2 | 6,419.1 | 38.9 | 32.6 | 44.61 | -1,278.4 | 840.9 | 942.2 | 878.2 | 63.98 | 14.728 | |
| 6,900.0 | 6,518.5 | 6,766.2 | 6,519.1 | 38.9 | 32.7 | 44.61 | -1,278.4 | 840.9 | 942.2 | 878.1 | 64.14 | 14.691 | |
| | | | | | | | | | | | | | |
| 7,000.0 | 6,618.5 | 6,866.2 | 6,619.1 | 39.0 | 32.8 | 44.61 | -1,278.4 | 840.9 | 942.2 | 877.9 | 64.30 | 14.653 | |
| 7,100.0 | 6,718.5 | 6,966.2 | 6,719.1 | 39.1 | 32.8 | 44.61 | -1,278.4 | 840.9 | 942.2 | 877.7 | 64.47 | 14.615 | |
| 7,200.0 | 6,818.5 | 7,066.2 | 6,819.1 | 39.1 | 32.9 | 44.61 | -1,278.4 | 840.9 | 942.2 | 877.6 | 64.64 | 14.577 | |
| 7,300.0 | 6,918.5 | 7,166.2 | 6,919.1 | 39.2 | 33.0 | 44.61 | -1,278.4 | 840.9 | 942.2 | 877.4 | 64.81 | 14.538 | |
| 7,400.0 | 7,018.5 | 7,266.2 | 7,019.1 | 39.3 | 33.1 | 44.61 | -1,278.4 | 840.9 | 942.2 | 877.2 | 64.98 | 14.499 | |
| | | | | | | | | | | | | | |
| 7,500.0 | 7,118.5 | 7,366.2 | 7,119.1 | 39.3 | 33.2 | 44.61 | -1,278.4 | 840.9 | 942.2 | 877.0 | 65.16 | 14.460 | |
| 7,600.0 | 7,218.5 | 7,466.2 | 7,219.1 | 39.4 | 33.3 | 44.61 | -1,278.4 | 840.9 | 942.2 | 876.9 | 65.34 | 14.420 | |
| 7,676.5 | 7,295.0 | 7,542.8 | 7,295.6 | 39.5 | 33.3 | 44.61 | -1,278.4 | 840.9 | 942.2 | 876.7 | 65.48 | 14.389 | |

| | | | |
|---------------------------|--|-------------------------------------|--------------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Project: | SEC.30-T6N-R67W | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Reference Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-18-12) | Offset TVD Reference: | Offset Datum |

| Offset Design Raindance FD East Row Pad Sec.30-T6N-R67W - Raindance FD 29-31D - Wellbore #1 - Plan #1 (10-1 | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------|--------|-----------------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|--------------------|---------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Semi Major Axis | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 89.98 | 89.98 | 0.0 | 14.7 | 14.7 | 14.7 | 0.00 | N/A | |
| 100.0 | 100.0 | 99.8 | 99.8 | 0.1 | 0.1 | 89.98 | 89.98 | 0.0 | 14.7 | 14.7 | 14.5 | 0.22 | 65.680 | |
| 200.0 | 200.0 | 199.8 | 199.8 | 0.3 | 0.3 | 89.98 | 89.98 | 0.0 | 14.7 | 14.7 | 14.1 | 0.67 | 21.886 | |
| 300.0 | 300.0 | 299.8 | 299.8 | 0.6 | 0.6 | 89.98 | 89.98 | 0.0 | 14.7 | 14.7 | 13.6 | 1.12 | 13.128 | |
| 400.0 | 400.0 | 399.8 | 399.8 | 0.8 | 0.8 | 89.98 | 89.98 | 0.0 | 14.7 | 14.7 | 13.2 | 1.57 | 9.376 | |
| 487.8 | 487.8 | 487.6 | 487.6 | 1.0 | 1.0 | -90.00 | -90.00 | 0.0 | 14.7 | 14.7 | 12.7 | 1.94 | 7.555 CC | |
| 500.0 | 500.0 | 499.8 | 499.8 | 1.0 | 1.0 | -91.55 | -91.55 | 0.0 | 14.7 | 14.7 | 12.7 | 2.00 | 7.363 ES | |
| 600.0 | 599.8 | 599.6 | 599.6 | 1.2 | 1.2 | -110.94 | -110.94 | 0.0 | 14.7 | 15.7 | 13.3 | 2.41 | 6.523 SF | |
| 700.0 | 699.5 | 699.3 | 699.3 | 1.4 | 1.5 | -134.17 | -134.17 | 0.0 | 14.7 | 20.5 | 17.7 | 2.85 | 7.204 | |
| 800.0 | 798.7 | 798.5 | 798.5 | 1.7 | 1.7 | -150.80 | -150.80 | 0.0 | 14.7 | 30.3 | 27.0 | 3.29 | 9.211 | |
| 900.0 | 897.5 | 897.3 | 897.3 | 2.0 | 1.9 | -160.53 | -160.53 | 0.0 | 14.7 | 44.7 | 40.9 | 3.73 | 11.961 | |
| 1,000.0 | 995.6 | 995.4 | 995.4 | 2.3 | 2.1 | -166.23 | -166.23 | 0.0 | 14.7 | 63.0 | 58.8 | 4.18 | 15.084 | |
| 1,100.0 | 1,093.1 | 1,092.9 | 1,092.9 | 2.7 | 2.3 | -169.76 | -169.76 | 0.0 | 14.7 | 85.0 | 80.4 | 4.62 | 18.402 | |
| 1,200.0 | 1,189.6 | 1,189.4 | 1,189.4 | 3.2 | 2.6 | -172.07 | -172.07 | 0.0 | 14.7 | 110.6 | 105.5 | 5.07 | 21.826 | |
| 1,300.0 | 1,285.3 | 1,285.1 | 1,285.1 | 3.8 | 2.8 | -173.65 | -173.65 | 0.0 | 14.7 | 139.6 | 134.1 | 5.52 | 25.308 | |
| 1,400.0 | 1,379.8 | 1,379.6 | 1,379.6 | 4.4 | 3.0 | -174.79 | -174.79 | 0.0 | 14.7 | 172.0 | 166.1 | 5.97 | 28.820 | |
| 1,500.0 | 1,473.2 | 1,473.0 | 1,473.0 | 5.0 | 3.2 | -175.63 | -175.63 | 0.0 | 14.7 | 207.8 | 201.4 | 6.42 | 32.341 | |
| 1,604.6 | 1,569.4 | 1,575.6 | 1,575.6 | 5.8 | 3.4 | -176.28 | -176.28 | -1.0 | 15.0 | 247.7 | 240.8 | 6.89 | 35.948 | |
| 1,700.0 | 1,656.5 | 1,673.1 | 1,673.0 | 6.5 | 3.6 | -176.63 | -176.63 | -5.0 | 16.1 | 282.9 | 275.6 | 7.35 | 38.502 | |
| 1,800.0 | 1,747.8 | 1,778.0 | 1,777.5 | 7.3 | 3.8 | -176.76 | -176.76 | -13.0 | 18.2 | 316.5 | 308.7 | 7.84 | 40.377 | |
| 1,900.0 | 1,839.1 | 1,885.4 | 1,884.3 | 8.1 | 4.0 | -176.72 | -176.72 | -25.0 | 21.4 | 346.8 | 338.4 | 8.35 | 41.504 | |
| 2,000.0 | 1,930.4 | 1,995.3 | 1,992.8 | 8.9 | 4.2 | -176.55 | -176.55 | -41.3 | 25.7 | 373.4 | 364.5 | 8.89 | 41.991 | |
| 2,100.0 | 2,021.7 | 2,097.5 | 2,093.3 | 9.7 | 4.5 | -176.30 | -176.30 | -59.4 | 30.5 | 397.2 | 387.8 | 9.44 | 42.091 | |
| 2,200.0 | 2,113.0 | 2,194.7 | 2,188.8 | 10.5 | 4.8 | -176.09 | -176.09 | -76.8 | 35.1 | 420.8 | 410.8 | 9.99 | 42.113 | |
| 2,300.0 | 2,204.2 | 2,291.8 | 2,284.3 | 11.3 | 5.1 | -175.89 | -175.89 | -94.2 | 39.7 | 444.3 | 433.8 | 10.55 | 42.099 | |
| 2,400.0 | 2,295.5 | 2,389.0 | 2,379.8 | 12.1 | 5.4 | -175.72 | -175.72 | -111.7 | 44.3 | 467.9 | 456.8 | 11.12 | 42.070 | |
| 2,500.0 | 2,386.8 | 2,486.2 | 2,475.2 | 12.9 | 5.7 | -175.57 | -175.57 | -129.1 | 48.9 | 491.5 | 479.8 | 11.70 | 42.005 | |
| 2,600.0 | 2,478.1 | 2,583.4 | 2,570.7 | 13.7 | 6.0 | -175.43 | -175.43 | -146.5 | 53.6 | 515.0 | 502.8 | 12.28 | 41.932 | |
| 2,700.0 | 2,569.4 | 2,680.5 | 2,666.2 | 14.5 | 6.4 | -175.30 | -175.30 | -164.0 | 58.2 | 538.6 | 525.8 | 12.87 | 41.850 | |
| 2,800.0 | 2,660.7 | 2,777.7 | 2,761.7 | 15.3 | 6.7 | -175.18 | -175.18 | -181.4 | 62.8 | 562.2 | 548.7 | 13.46 | 41.762 | |
| 2,900.0 | 2,752.0 | 2,874.9 | 2,857.2 | 16.1 | 7.1 | -175.07 | -175.07 | -198.8 | 67.4 | 585.8 | 571.7 | 14.06 | 41.670 | |
| 3,000.0 | 2,843.3 | 2,972.1 | 2,952.7 | 16.9 | 7.4 | -174.97 | -174.97 | -216.3 | 72.0 | 609.4 | 594.7 | 14.66 | 41.575 | |
| 3,100.0 | 2,934.6 | 3,069.2 | 3,048.2 | 17.7 | 7.8 | -174.88 | -174.88 | -233.7 | 76.7 | 633.0 | 617.7 | 15.26 | 41.480 | |
| 3,200.0 | 3,025.8 | 3,166.4 | 3,143.6 | 18.6 | 8.2 | -174.79 | -174.79 | -251.1 | 81.3 | 656.5 | 640.7 | 15.86 | 41.384 | |
| 3,300.0 | 3,117.1 | 3,263.6 | 3,239.1 | 19.4 | 8.6 | -174.71 | -174.71 | -268.6 | 85.9 | 680.1 | 663.7 | 16.47 | 41.290 | |
| 3,400.0 | 3,208.4 | 3,360.8 | 3,334.6 | 20.2 | 8.9 | -174.64 | -174.64 | -286.0 | 90.5 | 703.7 | 686.6 | 17.08 | 41.196 | |
| 3,500.0 | 3,299.7 | 3,457.9 | 3,430.1 | 21.0 | 9.3 | -174.57 | -174.57 | -303.5 | 95.1 | 727.3 | 709.6 | 17.69 | 41.105 | |
| 3,600.0 | 3,391.0 | 3,555.1 | 3,525.6 | 21.8 | 9.7 | -174.50 | -174.50 | -320.9 | 99.7 | 750.9 | 732.6 | 18.31 | 41.015 | |
| 3,700.0 | 3,482.3 | 3,652.3 | 3,621.1 | 22.6 | 10.1 | -174.44 | -174.44 | -338.3 | 104.4 | 774.5 | 755.6 | 18.92 | 40.927 | |
| 3,800.0 | 3,573.6 | 3,749.4 | 3,716.6 | 23.4 | 10.5 | -174.38 | -174.38 | -355.8 | 109.0 | 798.1 | 778.5 | 19.54 | 40.842 | |
| 3,900.0 | 3,664.9 | 3,846.6 | 3,812.0 | 24.2 | 10.9 | -174.33 | -174.33 | -373.2 | 113.6 | 821.7 | 801.5 | 20.16 | 40.759 | |
| 4,000.0 | 3,756.2 | 3,943.8 | 3,907.5 | 25.0 | 11.3 | -174.27 | -174.27 | -390.6 | 118.2 | 845.3 | 824.5 | 20.78 | 40.679 | |
| 4,100.0 | 3,847.5 | 4,041.0 | 4,003.0 | 25.9 | 11.7 | -174.23 | -174.23 | -408.1 | 122.8 | 868.9 | 847.5 | 21.40 | 40.601 | |
| 4,200.0 | 3,938.7 | 4,138.1 | 4,098.5 | 26.7 | 12.1 | -174.18 | -174.18 | -425.5 | 127.5 | 892.5 | 870.4 | 22.02 | 40.525 | |
| 4,300.0 | 4,030.0 | 4,235.3 | 4,194.0 | 27.5 | 12.4 | -174.14 | -174.14 | -442.9 | 132.1 | 916.1 | 893.4 | 22.65 | 40.451 | |
| 4,400.0 | 4,121.3 | 4,332.5 | 4,289.5 | 28.3 | 12.8 | -174.09 | -174.09 | -460.4 | 136.7 | 939.6 | 916.4 | 23.27 | 40.380 | |
| 4,500.0 | 4,212.6 | 4,429.7 | 4,384.9 | 29.1 | 13.2 | -174.05 | -174.05 | -477.8 | 141.3 | 963.2 | 939.3 | 23.90 | 40.311 | |
| 4,600.0 | 4,303.9 | 4,526.8 | 4,480.4 | 29.9 | 13.6 | -174.02 | -174.02 | -495.2 | 145.9 | 986.8 | 962.3 | 24.52 | 40.245 | |
| 4,700.0 | 4,395.2 | 4,624.0 | 4,575.9 | 30.7 | 14.0 | -173.98 | -173.98 | -512.7 | 150.5 | 1,010.4 | 985.3 | 25.15 | 40.180 | |
| 4,800.0 | 4,486.5 | 4,721.2 | 4,671.4 | 31.5 | 14.4 | -173.95 | -173.95 | -530.1 | 155.2 | 1,034.0 | 1,008.3 | 25.78 | 40.118 | |
| 4,900.0 | 4,577.8 | 4,818.4 | 4,766.9 | 32.4 | 14.8 | -173.91 | -173.91 | -547.5 | 159.8 | 1,057.6 | 1,031.2 | 26.40 | 40.057 | |

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

| | | | |
|---------------------------|--|-------------------------------------|--------------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Project: | SEC.30-T6N-R67W | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Reference Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-18-12) | Offset TVD Reference: | Offset Datum |

| Offset Design Raindance FD East Row Pad Sec.30-T6N-R67W - Raindance FD 29-31D - Wellbore #1 - Plan #1 (10-1 | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------|--------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning | |
| 5,000.0 | 4,669.1 | 4,915.5 | 4,862.4 | 33.2 | 15.2 | -173.88 | -565.0 | 164.4 | 1,081.2 | 1,054.2 | 27.03 | 39.998 | | |
| 5,100.0 | 4,760.4 | 5,012.7 | 4,957.9 | 34.0 | 15.6 | -173.85 | -582.4 | 169.0 | 1,104.8 | 1,077.2 | 27.66 | 39.941 | | |
| 5,177.0 | 4,830.6 | 5,069.9 | 5,014.1 | 34.6 | 15.9 | -173.84 | -592.3 | 171.6 | 1,123.5 | 1,095.4 | 28.09 | 39.995 | | |
| 5,200.0 | 4,851.7 | 5,086.1 | 5,030.1 | 34.8 | 15.9 | -173.85 | -594.9 | 172.3 | 1,129.3 | 1,101.0 | 28.24 | 39.992 | | |
| 5,300.0 | 4,944.0 | 5,156.1 | 5,099.3 | 35.3 | 16.1 | -173.91 | -605.2 | 175.1 | 1,153.6 | 1,124.8 | 28.81 | 40.036 | | |
| 5,400.0 | 5,037.6 | 5,226.0 | 5,168.6 | 35.8 | 16.3 | -173.97 | -613.8 | 177.3 | 1,176.8 | 1,147.5 | 29.34 | 40.113 | | |
| 5,500.0 | 5,132.3 | 5,300.0 | 5,242.2 | 36.3 | 16.5 | -174.04 | -621.2 | 179.3 | 1,199.0 | 1,169.2 | 29.82 | 40.208 | | |
| 5,600.0 | 5,228.1 | 5,365.1 | 5,307.1 | 36.7 | 16.6 | -174.11 | -626.2 | 180.6 | 1,220.0 | 1,189.8 | 30.23 | 40.363 | | |
| 5,700.0 | 5,324.9 | 5,434.4 | 5,376.3 | 37.1 | 16.7 | -174.19 | -629.9 | 181.6 | 1,240.0 | 1,209.4 | 30.59 | 40.537 | | |
| 5,800.0 | 5,422.5 | 5,500.0 | 5,441.9 | 37.5 | 16.8 | -174.27 | -631.9 | 182.1 | 1,258.8 | 1,227.9 | 30.89 | 40.750 | | |
| 5,900.0 | 5,520.7 | 5,578.7 | 5,520.5 | 37.8 | 16.9 | -174.36 | -632.4 | 182.3 | 1,276.4 | 1,245.3 | 31.16 | 40.958 | | |
| 6,000.0 | 5,619.6 | 5,677.5 | 5,619.4 | 38.0 | 17.1 | -174.46 | -632.4 | 182.3 | 1,291.4 | 1,260.0 | 31.42 | 41.103 | | |
| 6,100.0 | 5,718.9 | 5,776.9 | 5,718.7 | 38.3 | 17.2 | -174.53 | -632.4 | 182.3 | 1,302.9 | 1,271.3 | 31.63 | 41.195 | | |
| 6,200.0 | 5,818.6 | 5,876.5 | 5,818.4 | 38.4 | 17.4 | -174.58 | -632.4 | 182.3 | 1,310.9 | 1,279.1 | 31.79 | 41.234 | | |
| 6,300.0 | 5,918.5 | 5,976.4 | 5,918.3 | 38.5 | 17.5 | -174.61 | -632.4 | 182.3 | 1,315.5 | 1,283.6 | 31.91 | 41.222 | | |
| 6,381.5 | 6,000.0 | 6,057.9 | 5,999.8 | 38.6 | 17.6 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,284.7 | 31.99 | 41.164 | | |
| 6,400.0 | 6,018.5 | 6,076.4 | 6,018.3 | 38.6 | 17.6 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,284.6 | 32.04 | 41.088 | | |
| 6,500.0 | 6,118.5 | 6,176.4 | 6,118.3 | 38.7 | 17.8 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,284.3 | 32.36 | 40.691 | | |
| 6,600.0 | 6,218.5 | 6,276.4 | 6,218.3 | 38.7 | 17.9 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,284.0 | 32.67 | 40.298 | | |
| 6,700.0 | 6,318.5 | 6,376.4 | 6,318.3 | 38.8 | 18.1 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,283.6 | 32.99 | 39.909 | | |
| 6,800.0 | 6,418.5 | 6,476.4 | 6,418.3 | 38.9 | 18.2 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,283.3 | 33.31 | 39.524 | | |
| 6,900.0 | 6,518.5 | 6,576.4 | 6,518.3 | 38.9 | 18.4 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,283.0 | 33.64 | 39.143 | | |
| 7,000.0 | 6,618.5 | 6,676.4 | 6,618.3 | 39.0 | 18.5 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,282.7 | 33.96 | 38.767 | | |
| 7,100.0 | 6,718.5 | 6,776.4 | 6,718.3 | 39.1 | 18.7 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,282.3 | 34.29 | 38.394 | | |
| 7,200.0 | 6,818.5 | 6,876.4 | 6,818.3 | 39.1 | 18.8 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,282.0 | 34.62 | 38.026 | | |
| 7,300.0 | 6,918.5 | 6,976.4 | 6,918.3 | 39.2 | 19.0 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,281.7 | 34.96 | 37.663 | | |
| 7,400.0 | 7,018.5 | 7,076.4 | 7,018.3 | 39.3 | 19.1 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,281.3 | 35.30 | 37.304 | | |
| 7,500.0 | 7,118.5 | 7,176.4 | 7,118.3 | 39.3 | 19.3 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,281.0 | 35.63 | 36.949 | | |
| 7,600.0 | 7,218.5 | 7,276.4 | 7,218.3 | 39.4 | 19.4 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,280.7 | 35.98 | 36.598 | | |
| 7,650.8 | 7,269.2 | 7,327.2 | 7,269.0 | 39.4 | 19.5 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,280.5 | 36.15 | 36.422 | | |
| 7,676.5 | 7,295.0 | 7,352.1 | 7,294.0 | 39.5 | 19.6 | 0.13 | -632.4 | 182.3 | 1,316.6 | 1,280.4 | 36.24 | 36.335 | | |

| | | | |
|---------------------------|--|-------------------------------------|--------------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Project: | SEC.30-T6N-R67W | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Reference Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-18-12) | Offset TVD Reference: | Offset Datum |

| Offset Design Raindance FD West Row Pad Sec.30-T6N-R67W - Raindance FD 19-14D - Wellbore #1 - Plan #1 (10-1 | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------|--------|-----------------------|-----------------------------------|------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning | |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 14.9 | 0.0 | 14.9 | 14.9 | 0.00 | N/A | | |
| 100.0 | 100.0 | 99.5 | 99.5 | 0.1 | 0.1 | 0.00 | 14.9 | 0.0 | 14.9 | 14.7 | 0.22 | 66.640 | | |
| 200.0 | 200.0 | 199.5 | 199.5 | 0.3 | 0.3 | 0.00 | 14.9 | 0.0 | 14.9 | 14.3 | 0.67 | 22.195 CC | | |
| 227.9 | 227.9 | 227.4 | 227.4 | 0.4 | 0.4 | -0.50 | 14.9 | -0.1 | 14.9 | 14.1 | 0.80 | 18.777 | | |
| 300.0 | 300.0 | 299.5 | 299.4 | 0.6 | 0.6 | -6.59 | 14.9 | -1.7 | 15.0 | 13.9 | 1.11 | 13.518 ES | | |
| 400.0 | 400.0 | 399.2 | 399.0 | 0.8 | 0.8 | -24.86 | 14.9 | -6.9 | 16.5 | 14.9 | 1.56 | 10.556 SF | | |
| 500.0 | 500.0 | 498.3 | 497.8 | 1.0 | 1.0 | 143.22 | 15.3 | -15.2 | 23.0 | 21.0 | 2.01 | 11.439 | | |
| 600.0 | 599.8 | 596.6 | 595.6 | 1.2 | 1.3 | 140.67 | 18.6 | -24.3 | 35.9 | 33.5 | 2.45 | 14.671 | | |
| 700.0 | 699.5 | 693.6 | 691.9 | 1.4 | 1.6 | 143.80 | 25.2 | -33.8 | 54.4 | 51.4 | 2.91 | 18.687 | | |
| 800.0 | 798.7 | 788.6 | 785.9 | 1.7 | 1.8 | 147.83 | 34.7 | -43.6 | 78.6 | 75.2 | 3.38 | 23.239 | | |
| 900.0 | 897.5 | 880.9 | 876.9 | 2.0 | 2.2 | 151.41 | 46.8 | -53.6 | 108.9 | 105.0 | 3.86 | 28.176 | | |
| 1,000.0 | 995.6 | 970.2 | 964.4 | 2.3 | 2.5 | 154.33 | 61.4 | -63.7 | 145.2 | 140.8 | 4.35 | 33.388 | | |
| 1,100.0 | 1,093.1 | 1,055.8 | 1,047.8 | 2.7 | 2.9 | 156.62 | 77.9 | -73.8 | 187.4 | 182.5 | 4.83 | 38.783 | | |
| 1,200.0 | 1,189.6 | 1,137.6 | 1,126.9 | 3.2 | 3.2 | 158.42 | 95.9 | -83.8 | 235.2 | 229.9 | 5.31 | 44.293 | | |
| 1,300.0 | 1,285.3 | 1,215.1 | 1,201.3 | 3.8 | 3.6 | 159.82 | 115.1 | -93.5 | 288.4 | 282.6 | 5.78 | 49.855 | | |
| 1,400.0 | 1,379.8 | 1,288.1 | 1,271.0 | 4.4 | 4.0 | 160.91 | 135.0 | -102.9 | 346.6 | 340.3 | 6.25 | 55.418 | | |
| 1,500.0 | 1,473.2 | 1,356.6 | 1,335.8 | 5.0 | 4.4 | 161.74 | 155.2 | -112.0 | 409.5 | 402.8 | 6.72 | 60.975 | | |
| 1,604.6 | 1,569.4 | 1,423.3 | 1,398.3 | 5.8 | 4.8 | 162.38 | 176.4 | -121.0 | 479.9 | 472.8 | 7.19 | 66.750 | | |
| 1,700.0 | 1,656.5 | 1,480.6 | 1,451.8 | 6.5 | 5.2 | 163.32 | 195.8 | -129.0 | 547.0 | 539.4 | 7.67 | 71.299 | | |
| 1,800.0 | 1,747.8 | 1,538.3 | 1,505.1 | 7.3 | 5.6 | 164.11 | 216.4 | -137.1 | 618.8 | 610.7 | 8.17 | 75.760 | | |
| 1,900.0 | 1,839.1 | 1,600.0 | 1,561.5 | 8.1 | 6.1 | 164.82 | 239.5 | -145.9 | 692.0 | 683.4 | 8.67 | 79.828 | | |
| 2,000.0 | 1,930.4 | 1,646.8 | 1,604.0 | 8.9 | 6.5 | 165.29 | 257.9 | -152.7 | 766.5 | 757.4 | 9.15 | 83.780 | | |
| 2,100.0 | 2,021.7 | 1,700.0 | 1,651.9 | 9.7 | 6.9 | 165.76 | 279.7 | -160.6 | 842.2 | 832.6 | 9.64 | 87.386 | | |
| 2,200.0 | 2,113.0 | 1,746.6 | 1,693.5 | 10.5 | 7.3 | 166.13 | 299.4 | -167.6 | 919.1 | 909.0 | 10.12 | 90.833 | | |
| 2,300.0 | 2,204.2 | 1,800.0 | 1,740.8 | 11.3 | 7.7 | 166.52 | 322.9 | -175.6 | 997.0 | 986.4 | 10.61 | 93.979 | | |
| 2,400.0 | 2,295.5 | 1,838.5 | 1,774.7 | 12.1 | 8.1 | 166.77 | 340.4 | -181.5 | 1,076.0 | 1,064.9 | 11.07 | 97.156 | | |
| 2,500.0 | 2,386.8 | 1,881.8 | 1,812.3 | 12.9 | 8.5 | 167.03 | 360.5 | -188.2 | 1,155.8 | 1,144.3 | 11.55 | 100.098 | | |
| 2,600.0 | 2,478.1 | 1,923.4 | 1,848.3 | 13.7 | 8.9 | 167.27 | 380.4 | -194.7 | 1,236.6 | 1,224.6 | 12.02 | 102.908 | | |
| 2,700.0 | 2,569.4 | 1,963.3 | 1,882.5 | 14.5 | 9.3 | 167.48 | 400.1 | -201.0 | 1,318.2 | 1,305.8 | 12.48 | 105.600 | | |
| 2,800.0 | 2,660.7 | 2,000.0 | 1,913.7 | 15.3 | 9.6 | 167.66 | 418.5 | -206.8 | 1,400.6 | 1,387.7 | 12.94 | 108.222 | | |
| 2,900.0 | 2,752.0 | 2,038.7 | 1,946.2 | 16.1 | 10.0 | 167.84 | 438.4 | -213.0 | 1,483.8 | 1,470.4 | 13.41 | 110.681 | | |
| 3,000.0 | 2,843.3 | 2,074.2 | 1,976.0 | 16.9 | 10.4 | 168.00 | 457.0 | -218.8 | 1,567.6 | 1,553.8 | 13.86 | 113.084 | | |
| 3,100.0 | 2,934.6 | 2,100.0 | 1,997.4 | 17.7 | 10.7 | 168.10 | 470.8 | -222.9 | 1,652.2 | 1,637.9 | 14.30 | 115.533 | | |
| 3,200.0 | 3,025.8 | 2,141.4 | 2,031.5 | 18.6 | 11.1 | 168.27 | 493.3 | -229.7 | 1,737.3 | 1,722.5 | 14.77 | 117.640 | | |
| 3,300.0 | 3,117.1 | 2,182.6 | 2,065.0 | 19.4 | 11.6 | 168.43 | 516.1 | -236.5 | 1,823.0 | 1,807.8 | 15.23 | 119.674 | | |
| 3,400.0 | 3,208.4 | 2,217.9 | 2,093.7 | 20.2 | 12.0 | 168.55 | 535.9 | -242.3 | 1,909.1 | 1,893.4 | 15.69 | 121.684 | | |
| 3,500.0 | 3,299.7 | 2,268.5 | 2,134.8 | 21.0 | 12.5 | 168.72 | 564.3 | -250.7 | 1,995.3 | 1,979.1 | 16.16 | 123.434 | | |
| 3,600.0 | 3,391.0 | 2,319.2 | 2,175.9 | 21.8 | 13.1 | 168.88 | 592.7 | -259.1 | 2,081.5 | 2,064.8 | 16.64 | 125.079 | | |
| 3,700.0 | 3,482.3 | 2,369.8 | 2,217.0 | 22.6 | 13.7 | 169.02 | 621.1 | -267.4 | 2,167.6 | 2,150.5 | 17.12 | 126.614 | | |
| 3,800.0 | 3,573.6 | 2,420.5 | 2,258.0 | 23.4 | 14.3 | 169.15 | 649.5 | -275.8 | 2,253.8 | 2,236.2 | 17.60 | 128.061 | | |
| 3,900.0 | 3,664.9 | 2,471.1 | 2,299.1 | 24.2 | 14.8 | 169.27 | 677.9 | -284.2 | 2,340.0 | 2,321.9 | 18.08 | 129.417 | | |
| 4,000.0 | 3,756.2 | 2,521.8 | 2,340.2 | 25.0 | 15.4 | 169.38 | 706.3 | -292.5 | 2,426.2 | 2,407.6 | 18.56 | 130.697 | | |
| 4,100.0 | 3,847.5 | 2,572.4 | 2,381.3 | 25.9 | 16.0 | 169.49 | 734.7 | -300.9 | 2,512.4 | 2,493.3 | 19.05 | 131.902 | | |
| 4,200.0 | 3,938.7 | 2,623.1 | 2,422.4 | 26.7 | 16.6 | 169.59 | 763.1 | -309.3 | 2,598.6 | 2,579.1 | 19.53 | 133.041 | | |
| 4,300.0 | 4,030.0 | 2,673.7 | 2,463.5 | 27.5 | 17.1 | 169.68 | 791.5 | -317.7 | 2,684.8 | 2,664.8 | 20.02 | 134.117 | | |
| 4,400.0 | 4,121.3 | 2,724.4 | 2,504.6 | 28.3 | 17.7 | 169.77 | 819.9 | -326.0 | 2,771.0 | 2,750.5 | 20.51 | 135.136 | | |
| 4,500.0 | 4,212.6 | 2,775.0 | 2,545.7 | 29.1 | 18.3 | 169.85 | 848.3 | -334.4 | 2,857.2 | 2,836.2 | 20.99 | 136.102 | | |
| 4,600.0 | 4,303.9 | 2,825.7 | 2,586.8 | 29.9 | 18.9 | 169.92 | 876.7 | -342.8 | 2,943.4 | 2,921.9 | 21.48 | 137.018 | | |
| 4,700.0 | 4,395.2 | 2,876.3 | 2,627.9 | 30.7 | 19.5 | 170.00 | 905.1 | -351.1 | 3,029.6 | 3,007.6 | 21.97 | 137.888 | | |
| 4,800.0 | 4,486.5 | 2,927.0 | 2,669.0 | 31.5 | 20.0 | 170.06 | 933.5 | -359.5 | 3,115.8 | 3,093.3 | 22.46 | 138.715 | | |
| 4,900.0 | 4,577.8 | 2,977.6 | 2,710.1 | 32.4 | 20.6 | 170.13 | 962.0 | -367.9 | 3,202.0 | 3,179.0 | 22.95 | 139.502 | | |

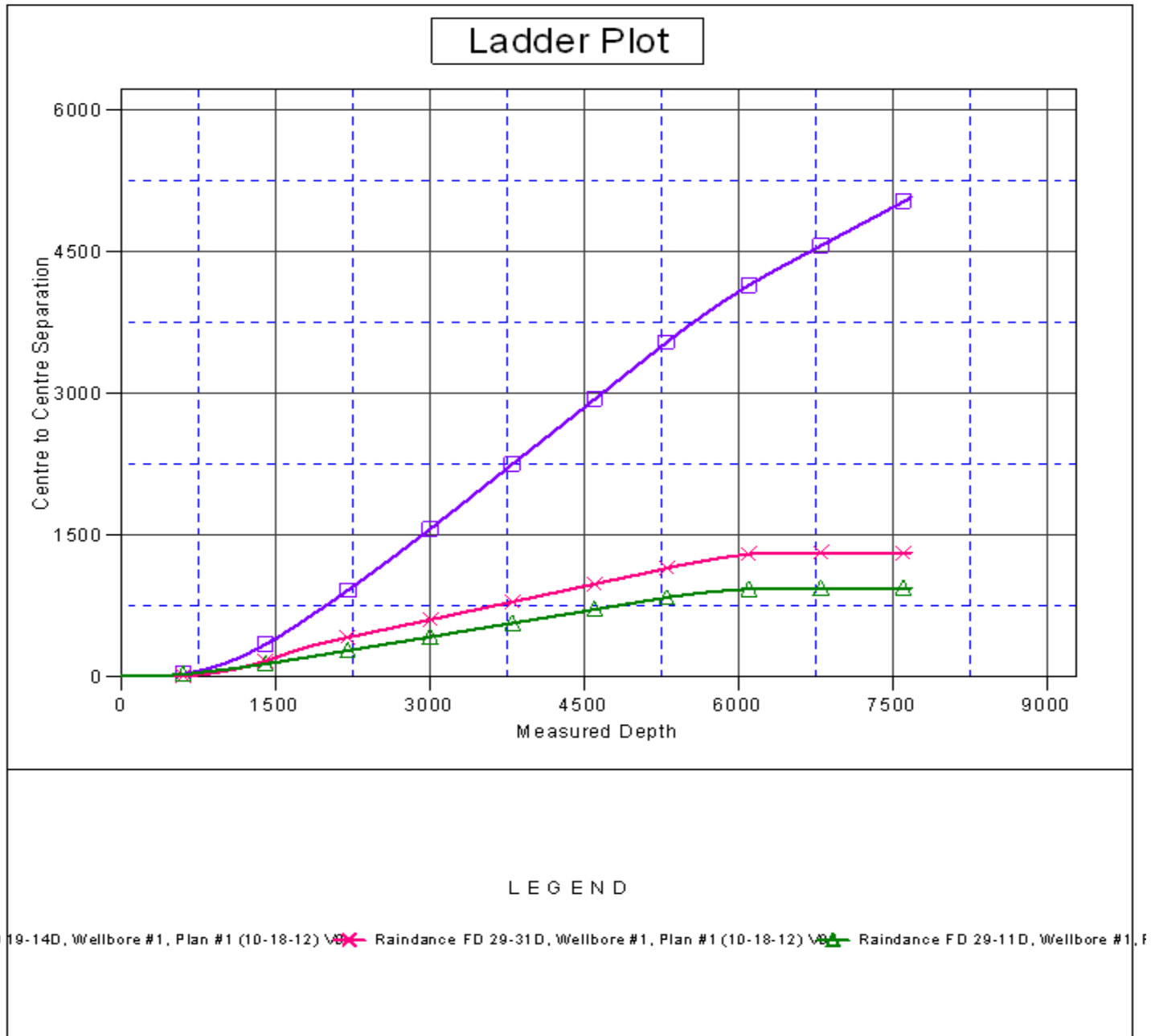
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---------------------------|--|-------------------------------------|--------------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Project: | SEC.30-T6N-R67W | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Reference Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-18-12) | Offset TVD Reference: | Offset Datum |

| Offset Design Raindance FD West Row Pad Sec.30-T6N-R67W - Raindance FD 19-14D - Wellbore #1 - Plan #1 (10-1 | | | | | | | | | | | | | Offset Site Error: | 0.0 ft |
|---|---------------------|---------------------|---------------------|-----------|--------|-----------------------|-----------------------------------|-----------------------------------|----------------------|-----------------------|-------------------------|-------------------|--------------------|--------|
| Survey Program: 0-MWD | | | | | | | | | | | | | Offset Well Error: | 0.0 ft |
| Measured Depth (ft) | Vertical Depth (ft) | Measured Depth (ft) | Vertical Depth (ft) | Reference | Offset | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Between Centres (ft) | Between Ellipses (ft) | Minimum Separation (ft) | Separation Factor | Warning | |
| 5,000.0 | 4,669.1 | 3,028.3 | 2,751.2 | 33.2 | 21.2 | 170.19 | 990.4 | -376.2 | 3,288.2 | 3,264.8 | 23.44 | 140.252 | | |
| 5,100.0 | 4,760.4 | 3,079.0 | 2,792.3 | 34.0 | 21.8 | 170.25 | 1,018.8 | -384.6 | 3,374.4 | 3,350.5 | 23.94 | 140.968 | | |
| 5,177.0 | 4,830.6 | 3,117.9 | 2,823.9 | 34.6 | 22.2 | 170.29 | 1,040.6 | -391.1 | 3,440.7 | 3,416.4 | 24.32 | 141.496 | | |
| 5,200.0 | 4,851.7 | 3,129.7 | 2,833.4 | 34.8 | 22.4 | 170.43 | 1,047.2 | -393.0 | 3,460.6 | 3,436.1 | 24.47 | 141.396 | | |
| 5,300.0 | 4,944.0 | 3,182.5 | 2,876.3 | 35.3 | 23.0 | 170.99 | 1,076.8 | -401.7 | 3,545.5 | 3,520.3 | 25.14 | 141.053 | | |
| 5,400.0 | 5,037.6 | 3,238.2 | 2,921.5 | 35.8 | 23.6 | 171.47 | 1,108.1 | -410.9 | 3,628.5 | 3,602.7 | 25.79 | 140.679 | | |
| 5,500.0 | 5,132.3 | 3,296.8 | 2,969.0 | 36.3 | 24.3 | 171.87 | 1,140.9 | -420.6 | 3,709.5 | 3,683.1 | 26.44 | 140.305 | | |
| 5,600.0 | 5,228.1 | 3,358.1 | 3,018.7 | 36.7 | 25.0 | 172.22 | 1,175.3 | -430.7 | 3,788.5 | 3,761.5 | 27.07 | 139.943 | | |
| 5,700.0 | 5,324.9 | 3,422.1 | 3,070.7 | 37.1 | 25.8 | 172.52 | 1,211.2 | -441.3 | 3,865.4 | 3,837.7 | 27.69 | 139.609 | | |
| 5,800.0 | 5,422.5 | 3,488.7 | 3,124.7 | 37.5 | 26.5 | 172.78 | 1,248.5 | -452.3 | 3,939.9 | 3,911.6 | 28.28 | 139.306 | | |
| 5,900.0 | 5,520.7 | 3,557.9 | 3,180.8 | 37.8 | 27.3 | 173.01 | 1,287.3 | -463.8 | 4,012.1 | 3,983.3 | 28.86 | 139.038 | | |
| 6,000.0 | 5,619.6 | 3,629.5 | 3,238.9 | 38.0 | 28.2 | 173.20 | 1,327.5 | -475.6 | 4,081.9 | 4,052.5 | 29.41 | 138.807 | | |
| 6,100.0 | 5,718.9 | 3,703.4 | 3,298.9 | 38.3 | 29.0 | 173.36 | 1,369.0 | -487.8 | 4,149.1 | 4,119.2 | 29.93 | 138.615 | | |
| 6,200.0 | 5,818.6 | 3,779.7 | 3,360.8 | 38.4 | 29.9 | 173.50 | 1,411.7 | -500.4 | 4,213.8 | 4,183.3 | 30.43 | 138.460 | | |
| 6,300.0 | 5,918.5 | 3,858.1 | 3,424.4 | 38.5 | 30.8 | 173.62 | 1,455.7 | -513.4 | 4,275.7 | 4,244.8 | 30.91 | 138.342 | | |
| 6,381.5 | 6,000.0 | 3,923.6 | 3,477.5 | 38.6 | 31.6 | -11.55 | 1,492.4 | -524.2 | 4,324.2 | 4,292.9 | 31.28 | 138.239 | | |
| 6,400.0 | 6,018.5 | 3,938.5 | 3,489.7 | 38.6 | 31.7 | -11.56 | 1,500.8 | -526.7 | 4,335.0 | 4,303.6 | 31.36 | 138.221 | | |
| 6,500.0 | 6,118.5 | 4,019.7 | 3,555.5 | 38.7 | 32.7 | -11.63 | 1,546.3 | -540.1 | 4,393.3 | 4,361.5 | 31.80 | 138.165 | | |
| 6,600.0 | 6,218.5 | 4,100.8 | 3,621.3 | 38.7 | 33.6 | -11.69 | 1,591.8 | -553.5 | 4,451.6 | 4,419.4 | 32.23 | 138.102 | | |
| 6,700.0 | 6,318.5 | 4,181.9 | 3,687.1 | 38.8 | 34.6 | -11.75 | 1,637.3 | -566.9 | 4,510.0 | 4,477.3 | 32.67 | 138.032 | | |
| 6,800.0 | 6,418.5 | 4,263.1 | 3,753.0 | 38.9 | 35.5 | -11.81 | 1,682.8 | -580.3 | 4,568.3 | 4,535.2 | 33.11 | 137.957 | | |
| 6,900.0 | 6,518.5 | 4,344.2 | 3,818.8 | 38.9 | 36.5 | -11.87 | 1,728.3 | -593.7 | 4,626.6 | 4,593.1 | 33.56 | 137.876 | | |
| 7,000.0 | 6,618.5 | 4,425.3 | 3,884.6 | 39.0 | 37.4 | -11.93 | 1,773.8 | -607.1 | 4,685.0 | 4,651.0 | 34.00 | 137.790 | | |
| 7,100.0 | 6,718.5 | 4,506.5 | 3,950.4 | 39.1 | 38.3 | -11.98 | 1,819.3 | -620.5 | 4,743.3 | 4,708.9 | 34.45 | 137.699 | | |
| 7,200.0 | 6,818.5 | 4,587.6 | 4,016.3 | 39.1 | 39.3 | -12.04 | 1,864.8 | -633.9 | 4,801.7 | 4,766.8 | 34.89 | 137.604 | | |
| 7,300.0 | 6,918.5 | 4,668.7 | 4,082.1 | 39.2 | 40.2 | -12.09 | 1,910.3 | -647.3 | 4,860.0 | 4,824.7 | 35.34 | 137.504 | | |
| 7,400.0 | 7,018.5 | 4,749.8 | 4,147.9 | 39.3 | 41.2 | -12.14 | 1,955.7 | -660.7 | 4,918.4 | 4,882.6 | 35.80 | 137.401 | | |
| 7,500.0 | 7,118.5 | 4,831.0 | 4,213.7 | 39.3 | 42.1 | -12.19 | 2,001.2 | -674.2 | 4,976.7 | 4,940.5 | 36.25 | 137.294 | | |
| 7,600.0 | 7,218.5 | 4,912.1 | 4,279.5 | 39.4 | 43.1 | -12.24 | 2,046.7 | -687.6 | 5,035.1 | 4,998.4 | 36.70 | 137.184 | | |
| 7,676.5 | 7,295.0 | 4,974.2 | 4,329.9 | 39.5 | 43.8 | -12.28 | 2,081.6 | -697.8 | 5,079.8 | 5,042.7 | 37.05 | 137.097 | | |

| | | | |
|---------------------------|--|-------------------------------------|--------------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Project: | SEC.30-T6N-R67W | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Reference Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-18-12) | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4796.6ft (Original Well Elev) Coordinates are relative to: Raindance FD 29-32D
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.37°



| | | | |
|---------------------------|--|-------------------------------------|--------------------------------------|
| Company: | Great Western | Local Co-ordinate Reference: | Well Raindance FD 29-32D |
| Project: | SEC.30-T6N-R67W | TVD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Reference Site: | Raindance FD West Row Pad Sec.30-T6N-R67W | MD Reference: | WELL @ 4796.6ft (Original Well Elev) |
| Site Error: | 0.0ft | North Reference: | True |
| Reference Well: | Raindance FD 29-32D | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wellbore #1 | Database: | Landmark |
| Reference Design: | Plan #1 (10-18-12) | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4796.6ft (Original Well Elev) Coordinates are relative to: Raindance FD 29-32D
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
 Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.37°

