# WPX Energy

**Eddy County, New Mexico NAD 83**
**C 17 State Pad**
**C 17 State 3H**
**API:**
**Wellbore #1**

**Plan: Plan #1**

# Standard Planning Report

**14 December, 2017**

Scientific Drilling

www.scientificdrilling.com

WPXENERGY

# C 17 State 3H
## Eddy County, New Mexico NAD 8
## Northing: 476120.00
## Easting: 580973.40
## Plan #1

Scientific Drilling

GL 3154 + KB 33 = @ 3187.00usft (Nabors X31)

*To convert Magnetic North to Grid, Add 7.30°*
*To convert True North to Grid, Subtract 0.07°*

Azimuths to Grid North
True North: -0.07°
Magnetic North: 7.30°

Magnetic Field
Strength: 48048.7snT
Dip Angle: 60.10°
Date: 12/14/2017
Model: HDGM

**WELL DETAILS** C 17 State 3H

Ground Level: 3154.00

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|
| 0.00 | 0.00 | 476120.00 | 580973.40 | 32.308862 | -104.205039 |

**SECTION DETAILS**

| MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSect |
|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2065.00 | 0.00 | 0.00 | 2065.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2618.94 | 11.08 | 158.46 | 2615.50 | -49.66 | 19.60 | 2.00 | 158.46 | -19.45 |
| 8016.58 | 11.08 | 158.46 | 7912.54 | -1014.44 | 400.40 | 0.00 | 0.00 | -397.21 |
| 8570.52 | 0.00 | 0.00 | 8463.04 | -1064.10 | 420.00 | 2.00 | 180.00 | -416.65 |
| 9470.52 | 90.00 | 269.82 | 9036.00 | -1065.89 | -152.95 | 10.00 | 269.82 | 156.30 |
| 13913.79 | 90.00 | 269.82 | 9036.00 | -1079.80 | -4596.20 | 0.00 | 0.00 | 4599.57 |

**SITE DETAILS:** C 17 State Pad

Site Centre Northing: 476120.00
Easting: 580948.40

Positional Uncertainity: 0.00
Convergence: 0.07
Local North: Grid

**PROJECT DETAILS:** Eddy County, New Mexico NAD 83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

**DESIGN TARGET DETAILS**

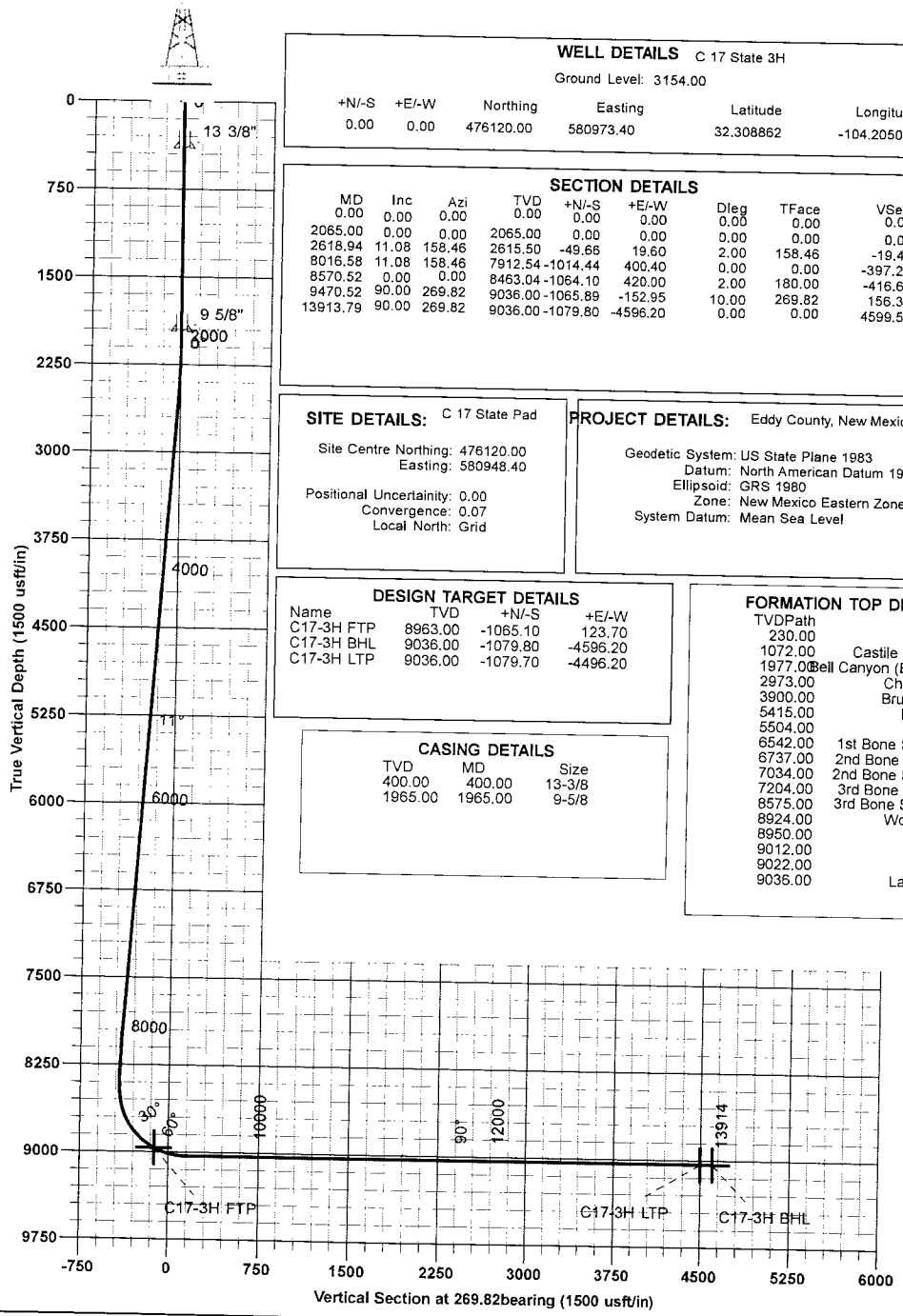
| Name | TVD | +N/-S | +E/-W |
|---|---|---|---|
| C17-3H FTP | 8963.00 | -1065.10 | 123.70 |
| C17-3H BHL | 9036.00 | -1079.80 | -4596.20 |
| C17-3H LTP | 9036.00 | -1079.70 | -4496.20 |

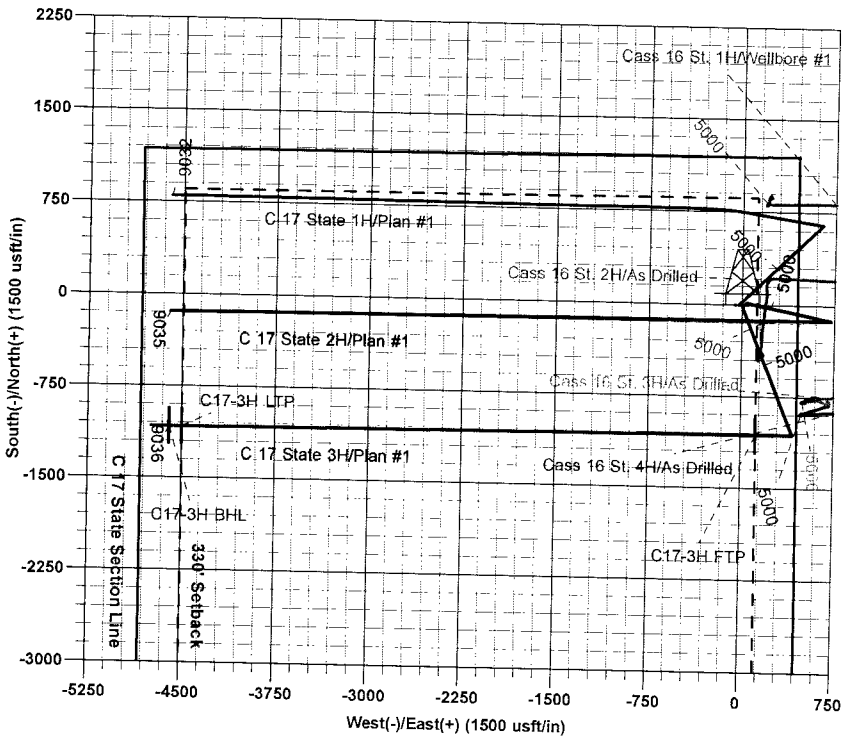
**CASING DETAILS**

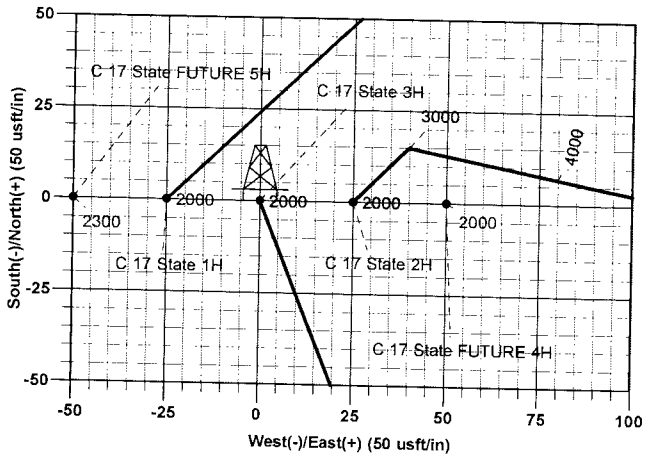
| TVD | MD | Size |
|---|---|---|
| 400.00 | 400.00 | 13-3/8 |
| 1965.00 | 1965.00 | 9-5/8 |

**FORMATION TOP DETAILS**

| TVDPath | Formation |
|---|---|
| 230.00 | Rustler |
| 1072.00 | Castile (Top of Salt) |
| 1977.00 | Bell Canyon (Base of Salt) |
| 2973.00 | Cherry Canyon |
| 3900.00 | Brushy Canyon |
| 5415.00 | Bone Spring |
| 5504.00 | Avalon |
| 6542.00 | 1st Bone Spring Sand |
| 6737.00 | 2nd Bone Spring Lime |
| 7034.00 | 2nd Bone Spring Sand |
| 7204.00 | 3rd Bone Spring Lime |
| 8575.00 | 3rd Bone Spring Sand |
| 8924.00 | Wolfcamp Top |
| 8950.00 | WC_X |
| 9012.00 | WC_Y |
| 9022.00 | Top Target |
| 9036.00 | Landing Point |





Bailey Fellows
9:05, December 14 2017
Scientific Drilling
325 S Faudree Rd.
Odessa, TX 79765

| | | | |
|---|---|---|---|
| **Database:** | Midland District | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Company:** | WPX Energy | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site:** | C 17 State Pad | **North Reference:** | Grid |
| **Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #1 | | |

| | | | |
|---|---|---|---|
| **Project** | Eddy County, New Mexico NAD 83 | | |
| **Map System:** | US State Plane 1983 | **System Datum:** | Mean Sea Level |
| **Geo Datum:** | North American Datum 1983 | | |
| **Map Zone:** | New Mexico Eastern Zone | | |

| | | | | | |
|---|---|---|---|---|---|
| **Site** | C 17 State Pad | | | | |
| **Site Position:** | | **Northing:** | 476,120.00 usft | **Latitude:** | 32.308862 |
| **From:** | Map | **Easting:** | 580,948.40 usft | **Longitude:** | -104.205120 |
| **Position Uncertainty:** | 0.00 usft | **Slot Radius:** | 13-3/16 " | **Grid Convergence:** | 0.07 ° |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well** | C 17 State 3H | | | | | |
| **Well Position** | **+N/-S** | 0.00 usft | **Northing:** | 476,120.00 usft | **Latitude:** | 32.308862 |
| | **+E/-W** | 25.00 usft | **Easting:** | 580,973.40 usft | **Longitude:** | -104.205039 |
| **Position Uncertainty** | | 0.00 usft | **Wellhead Elevation:** | 0.00 usft | **Ground Level:** | 3,154.00 usft |

| **Wellbore** | Wellbore #1 | | | | |
|---|---|---|---|---|---|
| **Magnetics** | **Model Name** | **Sample Date** | **Declination (°)** | **Dip Angle (°)** | **Field Strength (nT)** |
| | HDGM | 12/14/2017 | 7.37 | 60.10 | 48,049 |

| | | | | | |
|---|---|---|---|---|---|
| **Design** | Plan #1 | | | | |
| **Audit Notes:** | | | | | |
| **Version:** | | **Phase:** | PLAN | **Tie On Depth:** | 0.00 |
| **Vertical Section:** | **Depth From (TVD) (usft)** | **+N/-S (usft)** | **+E/-W (usft)** | **Direction (bearing)** | |
| | 0.00 | 0.00 | 0.00 | 269.82 | |

**Plan Sections**

| Measured Depth (usft) | Inclination (°) | Azimuth (bearing) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,065.00 | 0.00 | 0.00 | 2,065.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,618.94 | 11.08 | 158.46 | 2,615.50 | -49.66 | 19.60 | 2.00 | 2.00 | 0.00 | 158.46 | |
| 8,016.58 | 11.08 | 158.46 | 7,912.54 | -1,014.44 | 400.40 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8,570.52 | 0.00 | 0.00 | 8,463.04 | -1,064.10 | 420.00 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 9,470.52 | 90.00 | 269.82 | 9,036.00 | -1,065.89 | -152.95 | 10.00 | 10.00 | -10.02 | 269.82 | |
| 13,913.79 | 90.00 | 269.82 | 9,036.00 | -1,079.80 | -4,596.20 | 0.00 | 0.00 | 0.00 | 0.00 | C17-3H BHL |

| | | | |
|---|---|---|---|
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| **Site:** | C 17 State Pad | **North Reference:** | Grid |
| **Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (bearing) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 230.00 | 0.00 | 0.00 | 230.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Rustler** | | | | | | | | | |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.00 | 400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **13 3/8"** | | | | | | | | | |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 0.00 | 0.00 | 700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 900.00 | 0.00 | 0.00 | 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,072.00 | 0.00 | 0.00 | 1,072.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Castile (Top of Salt)** | | | | | | | | | |
| 1,100.00 | 0.00 | 0.00 | 1,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,200.00 | 0.00 | 0.00 | 1,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,300.00 | 0.00 | 0.00 | 1,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 0.00 | 0.00 | 1,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 0.00 | 0.00 | 1,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 0.00 | 0.00 | 1,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 0.00 | 0.00 | 1,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 0.00 | 0.00 | 1,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 0.00 | 0.00 | 1,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,965.00 | 0.00 | 0.00 | 1,965.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **9 5/8"** | | | | | | | | | |
| 1,977.00 | 0.00 | 0.00 | 1,977.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Bell Canyon (Base of Salt)** | | | | | | | | | |
| 2,000.00 | 0.00 | 0.00 | 2,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,065.00 | 0.00 | 0.00 | 2,065.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 0.70 | 158.46 | 2,100.00 | -0.20 | 0.08 | -0.08 | 2.00 | 2.00 | 0.00 |
| 2,200.00 | 2.70 | 158.46 | 2,199.95 | -2.96 | 1.17 | -1.16 | 2.00 | 2.00 | 0.00 |
| 2,300.00 | 4.70 | 158.46 | 2,299.74 | -8.96 | 3.54 | -3.51 | 2.00 | 2.00 | 0.00 |
| 2,400.00 | 6.70 | 158.46 | 2,399.24 | -18.20 | 7.18 | -7.13 | 2.00 | 2.00 | 0.00 |
| 2,500.00 | 8.70 | 158.46 | 2,498.33 | -30.66 | 12.10 | -12.01 | 2.00 | 2.00 | 0.00 |
| 2,600.00 | 10.70 | 158.46 | 2,596.90 | -46.33 | 18.29 | -18.14 | 2.00 | 2.00 | 0.00 |
| 2,618.94 | 11.08 | 158.46 | 2,615.50 | -49.66 | 19.60 | -19.45 | 2.00 | 2.00 | 0.00 |
| 2,700.00 | 11.08 | 158.46 | 2,695.04 | -64.15 | 25.32 | -25.12 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 11.08 | 158.46 | 2,793.18 | -82.02 | 32.37 | -32.12 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 11.08 | 158.46 | 2,891.32 | -99.90 | 39.43 | -39.12 | 0.00 | 0.00 | 0.00 |
| 2,983.23 | 11.08 | 158.46 | 2,973.00 | -114.77 | 45.30 | -44.94 | 0.00 | 0.00 | 0.00 |
| **Cherry Canyon** | | | | | | | | | |
| 3,000.00 | 11.08 | 158.46 | 2,989.45 | -117.77 | 46.48 | -46.11 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 11.08 | 158.46 | 3,087.59 | -135.65 | 53.54 | -53.11 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 11.08 | 158.46 | 3,185.73 | -153.52 | 60.59 | -60.11 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 11.08 | 158.46 | 3,283.86 | -171.39 | 67.65 | -67.11 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 11.08 | 158.46 | 3,382.00 | -189.27 | 74.70 | -74.11 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 11.08 | 158.46 | 3,480.13 | -207.14 | 81.76 | -81.11 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 11.08 | 158.46 | 3,578.27 | -225.02 | 88.81 | -88.11 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 11.08 | 158.46 | 3,676.41 | -242.89 | 95.87 | -95.11 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
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| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
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| **Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (bearing) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 3,800.00 | 11.08 | 158.46 | 3,774.54 | -260.76 | 102.92 | -102.10 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 11.08 | 158.46 | 3,872.68 | -278.64 | 109.98 | -109.10 | 0.00 | 0.00 | 0.00 |
| 3,927.84 | 11.08 | 158.46 | 3,900.00 | -283.61 | 111.94 | -111.05 | 0.00 | 0.00 | 0.00 |
| **Brushy Canyon** | | | | | | | | | |
| 4,000.00 | 11.08 | 158.46 | 3,970.82 | -296.51 | 117.03 | -116.10 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 11.08 | 158.46 | 4,068.95 | -314.39 | 124.09 | -123.10 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 11.08 | 158.46 | 4,167.09 | -332.26 | 131.14 | -130.10 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 11.08 | 158.46 | 4,265.23 | -350.13 | 138.20 | -137.10 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 11.08 | 158.46 | 4,363.36 | -368.01 | 145.25 | -144.10 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 11.08 | 158.46 | 4,461.50 | -385.88 | 152.31 | -151.09 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 11.08 | 158.46 | 4,559.63 | -403.76 | 159.36 | -158.09 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 11.08 | 158.46 | 4,657.77 | -421.63 | 166.42 | -165.09 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 11.08 | 158.46 | 4,755.91 | -439.50 | 173.47 | -172.09 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 11.08 | 158.46 | 4,854.04 | -457.38 | 180.53 | -179.09 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 11.08 | 158.46 | 4,952.18 | -475.25 | 187.58 | -186.09 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 11.08 | 158.46 | 5,050.32 | -493.13 | 194.64 | -193.09 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 11.08 | 158.46 | 5,148.45 | -511.00 | 201.69 | -200.09 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 11.08 | 158.46 | 5,246.59 | -528.88 | 208.75 | -207.08 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 11.08 | 158.46 | 5,344.73 | -546.75 | 215.80 | -214.08 | 0.00 | 0.00 | 0.00 |
| 5,471.61 | 11.08 | 158.46 | 5,415.00 | -559.55 | 220.85 | -219.09 | 0.00 | 0.00 | 0.00 |
| **Bone Spring** | | | | | | | | | |
| 5,500.00 | 11.08 | 158.46 | 5,442.86 | -564.62 | 222.86 | -221.08 | 0.00 | 0.00 | 0.00 |
| 5,562.30 | 11.08 | 158.46 | 5,504.00 | -575.76 | 227.25 | -225.44 | 0.00 | 0.00 | 0.00 |
| **Avalon** | | | | | | | | | |
| 5,600.00 | 11.08 | 158.46 | 5,541.00 | -582.50 | 229.91 | -228.08 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 11.08 | 158.46 | 5,639.13 | -600.37 | 236.97 | -235.08 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 11.08 | 158.46 | 5,737.27 | -618.25 | 244.02 | -242.08 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 11.08 | 158.46 | 5,835.41 | -636.12 | 251.08 | -249.08 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 11.08 | 158.46 | 5,933.54 | -653.99 | 258.13 | -256.08 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 11.08 | 158.46 | 6,031.68 | -671.87 | 265.19 | -263.07 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 11.08 | 158.46 | 6,129.82 | -689.74 | 272.24 | -270.07 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 11.08 | 158.46 | 6,227.95 | -707.62 | 279.30 | -277.07 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 11.08 | 158.46 | 6,326.09 | -725.49 | 286.35 | -284.07 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 11.08 | 158.46 | 6,424.23 | -743.36 | 293.41 | -291.07 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 11.08 | 158.46 | 6,522.36 | -761.24 | 300.46 | -298.07 | 0.00 | 0.00 | 0.00 |
| 6,620.01 | 11.08 | 158.46 | 6,542.00 | -764.82 | 301.87 | -299.47 | 0.00 | 0.00 | 0.00 |
| **1st Bone Spring Sand** | | | | | | | | | |
| 6,700.00 | 11.08 | 158.46 | 6,620.50 | -779.11 | 307.52 | -305.07 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 11.08 | 158.46 | 6,718.63 | -796.99 | 314.57 | -312.07 | 0.00 | 0.00 | 0.00 |
| 6,818.71 | 11.08 | 158.46 | 6,737.00 | -800.33 | 315.89 | -313.37 | 0.00 | 0.00 | 0.00 |
| **2nd Bone Spring Lime** | | | | | | | | | |
| 6,900.00 | 11.08 | 158.46 | 6,816.77 | -814.86 | 321.63 | -319.06 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 11.08 | 158.46 | 6,914.91 | -832.73 | 328.68 | -326.06 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 11.08 | 158.46 | 7,013.04 | -850.61 | 335.74 | -333.06 | 0.00 | 0.00 | 0.00 |
| 7,121.35 | 11.08 | 158.46 | 7,034.00 | -854.43 | 337.24 | -334.56 | 0.00 | 0.00 | 0.00 |
| **2nd Bone Spring Sand** | | | | | | | | | |
| 7,200.00 | 11.08 | 158.46 | 7,111.18 | -868.48 | 342.79 | -340.06 | 0.00 | 0.00 | 0.00 |
| 7,294.58 | 11.08 | 158.46 | 7,204.00 | -885.39 | 349.46 | -346.68 | 0.00 | 0.00 | 0.00 |
| **3rd Bone Spring Lime** | | | | | | | | | |
| 7,300.00 | 11.08 | 158.46 | 7,209.32 | -886.36 | 349.84 | -347.06 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 11.08 | 158.46 | 7,307.45 | -904.23 | 356.90 | -354.06 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 11.08 | 158.46 | 7,405.59 | -922.11 | 363.95 | -361.06 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | Midland District | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Company:** | WPX Energy | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site:** | C 17 State Pad | **North Reference:** | Grid |
| **Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (bearing) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 7,600.00 | 11.08 | 158.46 | 7,503.73 | -939.98 | 371.01 | -368.05 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 11.08 | 158.46 | 7,601.86 | -957.85 | 378.06 | -375.05 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 11.08 | 158.46 | 7,700.00 | -975.73 | 385.12 | -382.05 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 11.08 | 158.46 | 7,798.13 | -993.60 | 392.17 | -389.05 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 11.08 | 158.46 | 7,896.27 | -1,011.48 | 399.23 | -396.05 | 0.00 | 0.00 | 0.00 |
| 8,016.58 | 11.08 | 158.46 | 7,912.54 | -1,014.44 | 400.40 | -397.21 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 9.41 | 158.46 | 7,994.63 | -1,028.24 | 405.85 | -402.61 | 2.00 | -2.00 | 0.00 |
| 8,200.00 | 7.41 | 158.46 | 8,093.55 | -1,041.84 | 411.22 | -407.94 | 2.00 | -2.00 | 0.00 |
| 8,300.00 | 5.41 | 158.46 | 8,192.92 | -1,052.23 | 415.31 | -412.01 | 2.00 | -2.00 | 0.00 |
| 8,400.00 | 3.41 | 158.46 | 8,292.62 | -1,059.38 | 418.14 | -414.81 | 2.00 | -2.00 | 0.00 |
| 8,500.00 | 1.41 | 158.46 | 8,392.52 | -1,063.29 | 419.68 | -416.34 | 2.00 | -2.00 | 0.00 |
| 8,570.52 | 0.00 | 0.00 | 8,463.04 | -1,064.10 | 420.00 | -416.65 | 2.00 | -2.00 | 0.00 |
| 8,600.00 | 2.95 | 269.82 | 8,492.50 | -1,064.10 | 419.24 | -415.90 | 10.00 | 10.00 | 0.00 |
| 8,650.00 | 7.95 | 269.82 | 8,542.26 | -1,064.12 | 414.50 | -411.15 | 10.00 | 10.00 | 0.00 |
| 8,683.21 | 11.27 | 269.82 | 8,575.00 | -1,064.13 | 408.95 | -405.61 | 10.00 | 10.00 | 0.00 |
| **3rd Bone Spring Sand** | | | | | | | | | |
| 8,700.00 | 12.95 | 269.82 | 8,591.42 | -1,064.15 | 405.43 | -402.09 | 10.00 | 10.00 | 0.00 |
| 8,750.00 | 17.95 | 269.82 | 8,639.60 | -1,064.19 | 392.12 | -388.77 | 10.00 | 10.00 | 0.00 |
| 8,800.00 | 22.95 | 269.82 | 8,686.43 | -1,064.24 | 374.66 | -371.31 | 10.00 | 10.00 | 0.00 |
| 8,850.00 | 27.95 | 269.82 | 8,731.57 | -1,064.31 | 353.18 | -349.83 | 10.00 | 10.00 | 0.00 |
| 8,900.00 | 32.95 | 269.82 | 8,774.66 | -1,064.39 | 327.85 | -324.50 | 10.00 | 10.00 | 0.00 |
| 8,950.00 | 37.95 | 269.82 | 8,815.38 | -1,064.48 | 298.86 | -295.52 | 10.00 | 10.00 | 0.00 |
| 9,000.00 | 42.95 | 269.82 | 8,853.41 | -1,064.58 | 266.43 | -263.09 | 10.00 | 10.00 | 0.00 |
| 9,050.00 | 47.95 | 269.82 | 8,888.48 | -1,064.69 | 230.82 | -227.47 | 10.00 | 10.00 | 0.00 |
| 9,100.00 | 52.95 | 269.82 | 8,920.31 | -1,064.81 | 192.28 | -188.93 | 10.00 | 10.00 | 0.00 |
| 9,106.17 | 53.56 | 269.82 | 8,924.00 | -1,064.83 | 187.33 | -183.99 | 10.00 | 10.00 | 0.00 |
| **Wolfcamp Top** | | | | | | | | | |
| 9,150.00 | 57.95 | 269.82 | 8,948.66 | -1,064.94 | 151.11 | -147.76 | 10.00 | 10.00 | 0.00 |
| 9,152.54 | 58.20 | 269.82 | 8,950.00 | -1,064.95 | 148.96 | -145.61 | 10.00 | 10.00 | 0.00 |
| **WC_X** | | | | | | | | | |
| 9,200.00 | 62.95 | 269.82 | 8,973.31 | -1,065.08 | 107.63 | -104.28 | 10.00 | 10.00 | 0.00 |
| 9,250.00 | 67.95 | 269.82 | 8,994.08 | -1,065.22 | 62.16 | -58.82 | 10.00 | 10.00 | 0.00 |
| 9,300.00 | 72.95 | 269.82 | 9,010.81 | -1,065.37 | 15.06 | -11.71 | 10.00 | 10.00 | 0.00 |
| 9,304.11 | 73.36 | 269.82 | 9,012.00 | -1,065.38 | 11.13 | -7.78 | 10.00 | 10.00 | 0.00 |
| **WC_Y** | | | | | | | | | |
| 9,343.61 | 77.31 | 269.82 | 9,022.00 | -1,065.50 | -27.08 | 30.43 | 10.00 | 10.00 | 0.00 |
| **Top Target** | | | | | | | | | |
| 9,350.00 | 77.95 | 269.82 | 9,023.37 | -1,065.52 | -33.32 | 36.67 | 10.00 | 10.00 | 0.00 |
| 9,400.00 | 82.95 | 269.82 | 9,031.66 | -1,065.67 | -82.61 | 85.96 | 10.00 | 10.00 | 0.00 |
| 9,450.00 | 87.95 | 269.82 | 9,035.63 | -1,065.83 | -132.44 | 135.78 | 10.00 | 10.00 | 0.00 |
| 9,470.52 | 90.00 | 269.82 | 9,036.00 | -1,065.89 | -152.95 | 156.30 | 10.00 | 10.00 | 0.00 |
| **Landing Point** | | | | | | | | | |
| 9,500.00 | 90.00 | 269.82 | 9,036.00 | -1,065.99 | -182.43 | 185.78 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.00 | 269.82 | 9,036.00 | -1,066.30 | -282.43 | 285.78 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.00 | 269.82 | 9,036.00 | -1,066.61 | -382.43 | 385.78 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.00 | 269.82 | 9,036.00 | -1,066.92 | -482.43 | 485.78 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.00 | 269.82 | 9,036.00 | -1,067.24 | -582.43 | 585.78 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.00 | 269.82 | 9,036.00 | -1,067.55 | -682.43 | 685.78 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.00 | 269.82 | 9,036.00 | -1,067.86 | -782.43 | 785.78 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.00 | 269.82 | 9,036.00 | -1,068.18 | -882.43 | 885.78 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.00 | 269.82 | 9,036.00 | -1,068.49 | -982.43 | 985.78 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | Midland District | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Company:** | WPX Energy | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site:** | C 17 State Pad | **North Reference:** | Grid |
| **Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (usft) | Inclination (°) | Azimuth (bearing) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---|---|---|---|---|---|---|---|---|---|
| 10,400.00 | 90.00 | 269.82 | 9,036.00 | -1,068.80 | -1,082.43 | 1,085.78 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.00 | 269.82 | 9,036.00 | -1,069.12 | -1,182.43 | 1,185.78 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.00 | 269.82 | 9,036.00 | -1,069.43 | -1,282.43 | 1,285.78 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.00 | 269.82 | 9,036.00 | -1,069.74 | -1,382.43 | 1,385.78 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.00 | 269.82 | 9,036.00 | -1,070.05 | -1,482.43 | 1,485.78 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.00 | 269.82 | 9,036.00 | -1,070.37 | -1,582.42 | 1,585.78 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.00 | 269.82 | 9,036.00 | -1,070.68 | -1,682.42 | 1,685.78 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.00 | 269.82 | 9,036.00 | -1,070.99 | -1,782.42 | 1,785.78 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.00 | 269.82 | 9,036.00 | -1,071.31 | -1,882.42 | 1,885.78 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.00 | 269.82 | 9,036.00 | -1,071.62 | -1,982.42 | 1,985.78 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 269.82 | 9,036.00 | -1,071.93 | -2,082.42 | 2,085.78 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 269.82 | 9,036.00 | -1,072.25 | -2,182.42 | 2,185.78 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 269.82 | 9,036.00 | -1,072.56 | -2,282.42 | 2,285.78 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 269.82 | 9,036.00 | -1,072.87 | -2,382.42 | 2,385.78 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 269.82 | 9,036.00 | -1,073.18 | -2,482.42 | 2,485.78 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 269.82 | 9,036.00 | -1,073.50 | -2,582.42 | 2,585.78 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 269.82 | 9,036.00 | -1,073.81 | -2,682.42 | 2,685.78 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 269.82 | 9,036.00 | -1,074.12 | -2,782.42 | 2,785.78 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.00 | 269.82 | 9,036.00 | -1,074.44 | -2,882.42 | 2,885.78 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.00 | 269.82 | 9,036.00 | -1,074.75 | -2,982.42 | 2,985.78 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 269.82 | 9,036.00 | -1,075.06 | -3,082.42 | 3,085.78 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 269.82 | 9,036.00 | -1,075.38 | -3,182.42 | 3,185.78 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 269.82 | 9,036.00 | -1,075.69 | -3,282.42 | 3,285.78 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 269.82 | 9,036.00 | -1,076.00 | -3,382.42 | 3,385.78 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 269.82 | 9,036.00 | -1,076.31 | -3,482.42 | 3,485.78 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 269.82 | 9,036.00 | -1,076.63 | -3,582.41 | 3,585.78 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 269.82 | 9,036.00 | -1,076.94 | -3,682.41 | 3,685.78 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 269.82 | 9,036.00 | -1,077.25 | -3,782.41 | 3,785.78 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 269.82 | 9,036.00 | -1,077.57 | -3,882.41 | 3,885.78 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 269.82 | 9,036.00 | -1,077.88 | -3,982.41 | 3,985.78 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 269.82 | 9,036.00 | -1,078.19 | -4,082.41 | 4,085.78 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 269.82 | 9,036.00 | -1,078.50 | -4,182.41 | 4,185.78 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 269.82 | 9,036.00 | -1,078.82 | -4,282.41 | 4,285.78 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 269.82 | 9,036.00 | -1,079.13 | -4,382.41 | 4,385.78 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 269.82 | 9,036.00 | -1,079.44 | -4,482.41 | 4,485.78 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 269.82 | 9,036.00 | -1,079.76 | -4,582.41 | 4,585.78 | 0.00 | 0.00 | 0.00 |
| 13,913.79 | 90.00 | 269.82 | 9,036.00 | -1,079.80 | -4,596.20 | 4,599.57 | 0.00 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Database:** | Midland District | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Company:** | WPX Energy | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Project:** | Eddy County, New Mexico NAD 83 | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site:** | C 17 State Pad | **North Reference:** | Grid |
| **Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Wellbore #1 | | |
| **Design:** | Plan #1 | | |

**Design Targets**

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (bearing | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| C17-3H FTP<br>- plan misses target center by 1.56usft at 9180.93usft MD (8964.36 TVD, -1065.02 N, 124.46 E)<br>- Point | 0.00 | 0.00 | 8,963.00 | -1,065.10 | 123.70 | 475,054.90 | 581,097.10 | 32.305934 | -104.204643 |
| C17-3H BHL<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 9,036.00 | -1,079.80 | -4,596.20 | 475,040.20 | 576,377.20 | 32.305908 | -104.219920 |
| C17-3H LTP<br>- plan misses target center by 0.21usft at 13813.79usft MD (9036.00 TVD, -1079.49 N, -4496.20 E)<br>- Point | 0.00 | 0.00 | 9,036.00 | -1,079.70 | -4,496.20 | 475,040.30 | 576,477.20 | 32.305908 | -104.219596 |

**Casing Points**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|---|---|---|---|---|
| 400.00 | 400.00 | 13 3/8" | 13-3/8 | 17-1/2 |
| 1,965.00 | 1,965.00 | 9 5/8" | 9-5/8 | 12-1/4 |

**Formations**

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (bearing) |
|---|---|---|---|---|---|
| 230.00 | 230.00 | Rustler | | | |
| 1,072.00 | 1,072.00 | Castile (Top of Salt) | | | |
| 1,977.00 | 1,977.00 | Bell Canyon (Base of Salt) | | | |
| 2,983.23 | 2,973.00 | Cherry Canyon | | | |
| 3,927.84 | 3,900.00 | Brushy Canyon | | | |
| 5,471.61 | 5,415.00 | Bone Spring | | | |
| 5,562.30 | 5,504.00 | Avalon | | | |
| 6,620.01 | 6,542.00 | 1st Bone Spring Sand | | | |
| 6,818.71 | 6,737.00 | 2nd Bone Spring Lime | | | |
| 7,121.35 | 7,034.00 | 2nd Bone Spring Sand | | | |
| 7,294.58 | 7,204.00 | 3rd Bone Spring Lime | | | |
| 8,683.21 | 8,575.00 | 3rd Bone Spring Sand | | | |
| 9,106.17 | 8,924.00 | Wolfcamp Top | | | |
| 9,152.54 | 8,950.00 | WC_X | | | |
| 9,304.11 | 9,012.00 | WC_Y | | | |
| 9,343.61 | 9,022.00 | Top Target | | | |
| 9,470.52 | 9,036.00 | Landing Point | | | |

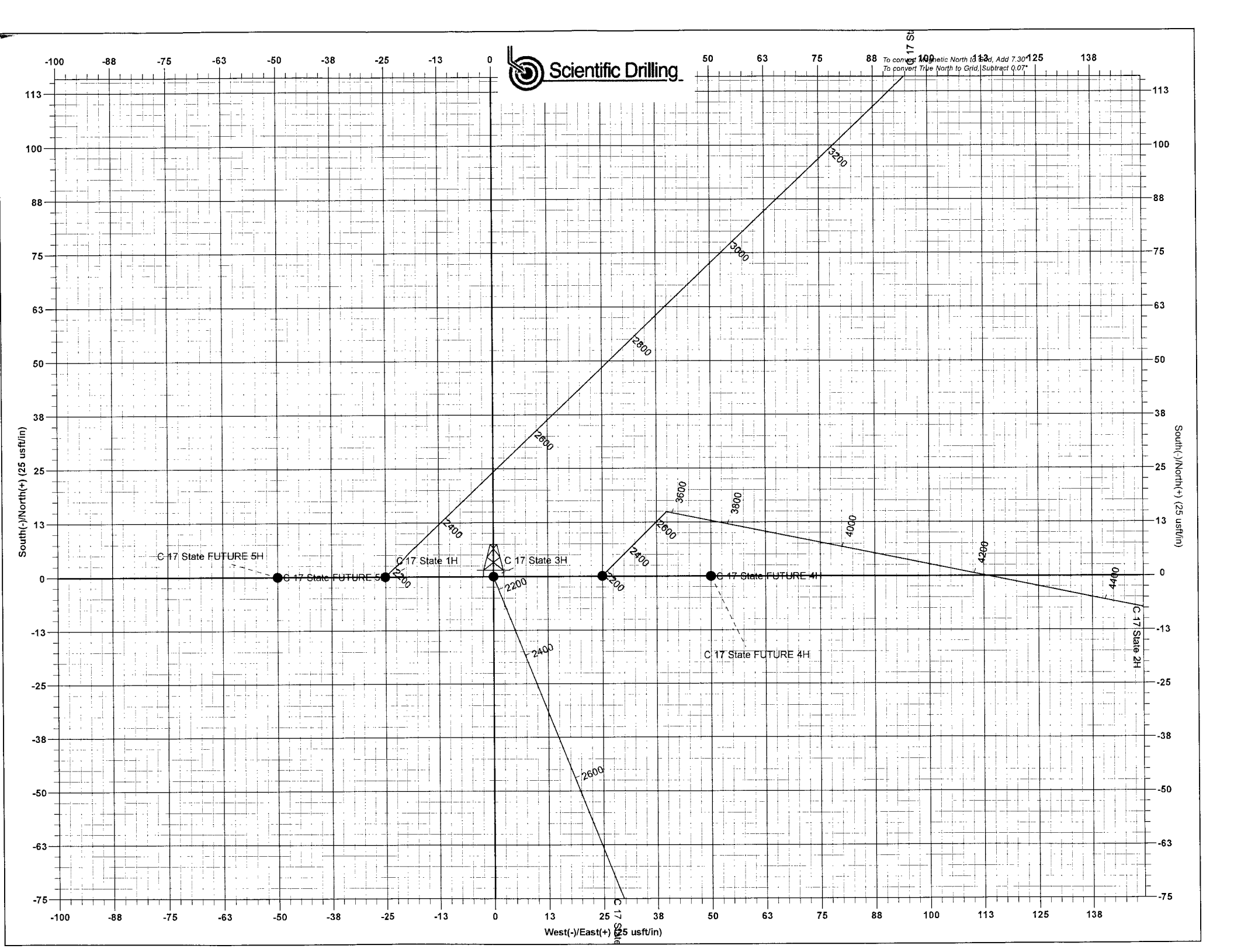
# WPX Energy

**Eddy County, New Mexico NAD 83**
**C 17 State Pad**
**C 17 State 3H**
**API:**
***Wellbore #1***
**Plan #1**

# Anticollision Report

**14 December, 2017**

Scientific Drilling


Scientific Drilling
To convert Magnetic North to Grid, Add 7.30°
To convert True North to Grid, Subtract 0.07°
C 17 State 2H
C 17 State FUTURE 5H
C 17 State FUTURE 5H
C 17 State 1H
C 17 State 3H
C 17 State FUTURE 4H
C 17 State FUTURE 4H
2200
2400
2600
2800
3000
3200
3600
3800
4000
4200
4400
South(-)/North(+) (25 usft/in)
West(-)/East(+) (25 usft/in)

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

| | | | |
|---|---|---|---|
| **Reference** | Plan #1 | | |
| **Filter type:** | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| **Interpolation Method:** | MD Interval 100.00usft | **Error Model:** | ISCWSA |
| **Depth Range:** | Unlimited | **Scan Method:** | Closest Approach 3D |
| **Results Limited by:** | Maximum center-center distance of 9,999.98 usft | **Error Surface:** | Elliptical Conic |
| **Warning Levels Evaluated at:** | 2.00 **Sigma** | **Casing Method:** | Not applied |

**Survey Tool Program** **Date** 12/14/2017

| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 0.00 | 8,400.00 | Plan #1 (Wellbore #1) | MWD+HDGM | OWSG MWD + HDGM |
| 8,400.00 | 13,913.79 | Plan #1 (Wellbore #1) | MWD+HDGM | OWSG MWD + HDGM |

**Summary**

| Site Name<br>Offset Well - Wellbore - Design | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|
| C 17 State Pad | | | | | | |
| C 17 State 1H - Wellbore #1 - Plan #1 | 2,200.07 | 2,200.71 | 24.43 | 9.18 | 1.602 | CC, ES, SF |
| C 17 State 2H - Wellbore #1 - Plan #1 | 2,077.21 | 2,077.17 | 24.88 | 10.47 | 1.727 | CC |
| C 17 State 2H - Wellbore #1 - Plan #1 | 2,200.00 | 2,199.48 | 25.30 | 10.05 | 1.659 | ES, SF |
| C 17 State FUTURE 4H - Wellbore #1 - Plan #1 FUTURE | 2,300.98 | 2,300.00 | 47.31 | 31.37 | 2.968 | CC, ES, SF |
| C 17 State FUTURE 5H - Wellbore #1 - Plan #1 FUTURE | 2,000.00 | 2,000.00 | 50.00 | 36.14 | 3.607 | CC |
| C 17 State FUTURE 5H - Wellbore #1 - Plan #1 FUTURE | 2,100.00 | 2,100.00 | 50.08 | 35.51 | 3.437 | ES |
| C 17 State FUTURE 5H - Wellbore #1 - Plan #1 FUTURE | 2,200.00 | 2,199.95 | 51.25 | 36.00 | 3.360 | SF |
| Cass 16 St. 1H - Wellbore #1 - Wellbore #1 | 0.00 | 0.00 | 890.54 | | | |
| Cass 16 St. 1H - Wellbore #1 - Wellbore #1 | 2,100.00 | 2,100.79 | 897.33 | 884.00 | 67.312 | ES |
| Cass 16 St. 1H - Wellbore #1 - Wellbore #1 | 11,100.00 | 8,990.00 | 2,743.81 | 2,648.64 | 28.831 | SF |
| Cass 16 St. 2H - Wellbore #1 - As Drilled | 3,848.19 | 3,832.64 | 62.54 | 35.10 | 2.279 | CC, ES, SF |
| Cass 16 St. 3H - Wellbore #1 - As Drilled | 7,366.76 | 7,294.76 | 196.01 | 141.84 | 3.619 | CC |
| Cass 16 St. 3H - Wellbore #1 - As Drilled | 7,400.00 | 7,326.89 | 196.15 | 141.77 | 3.607 | ES, SF |
| Cass 16 St. 4H - Wellbore #1 - As Drilled | 6,758.01 | 6,656.26 | 213.42 | 165.57 | 4.459 | CC, ES |
| Cass 16 St. 4H - Wellbore #1 - As Drilled | 6,800.00 | 6,687.69 | 214.58 | 166.37 | 4.451 | SF |

**Offset Design** C 17 State Pad - C 17 State 1H - Wellbore #1 - Plan #1

**Survey Program:** 0-MWD+HDGM, 8400-MWD+HDGM

**Offset Site Error:** 0.00 usft

**Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -90.00 | 0.00 | -25.00 | 25.00 | | | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.12 | 0.12 | -90.00 | 0.00 | -25.00 | 25.00 | 24.76 | 0.24 | 104.090 | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.48 | 0.48 | -90.00 | 0.00 | -25.00 | 25.00 | 24.04 | 0.96 | 26.120 | |
| 300.00 | 300.00 | 300.00 | 300.00 | 0.84 | 0.84 | -90.00 | 0.00 | -25.00 | 25.00 | 23.33 | 1.67 | 14.934 | |
| 400.00 | 400.00 | 400.00 | 400.00 | 1.20 | 1.20 | -90.00 | 0.00 | -25.00 | 25.00 | 22.61 | 2.39 | 10.456 | |
| 500.00 | 500.00 | 500.00 | 500.00 | 1.55 | 1.55 | -90.00 | 0.00 | -25.00 | 25.00 | 21.89 | 3.11 | 8.044 | |
| 600.00 | 600.00 | 600.00 | 600.00 | 1.91 | 1.91 | -90.00 | 0.00 | -25.00 | 25.00 | 21.18 | 3.82 | 6.536 | |
| 700.00 | 700.00 | 700.00 | 700.00 | 2.27 | 2.27 | -90.00 | 0.00 | -25.00 | 25.00 | 20.46 | 4.54 | 5.504 | |
| 800.00 | 800.00 | 800.00 | 800.00 | 2.63 | 2.63 | -90.00 | 0.00 | -25.00 | 25.00 | 19.74 | 5.26 | 4.754 | |
| 900.00 | 900.00 | 900.00 | 900.00 | 2.99 | 2.99 | -90.00 | 0.00 | -25.00 | 25.00 | 19.02 | 5.98 | 4.184 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | *Minimum Curvature* |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State 1H - Wellbore #1 - Plan #1 — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM, 8400-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 3.35 | 3.35 | -90.00 | 0.00 | -25.00 | 25.00 | 18.31 | 6.69 | 3.735 | |
| 1,100.00 | 1,100.00 | 1,100.00 | 1,100.00 | 3.70 | 3.70 | -90.00 | 0.00 | -25.00 | 25.00 | 17.59 | 7.41 | 3.374 | |
| 1,200.00 | 1,200.00 | 1,200.00 | 1,200.00 | 4.06 | 4.06 | -90.00 | 0.00 | -25.00 | 25.00 | 16.87 | 8.13 | 3.076 | |
| 1,300.00 | 1,300.00 | 1,300.00 | 1,300.00 | 4.42 | 4.42 | -90.00 | 0.00 | -25.00 | 25.00 | 16.16 | 8.84 | 2.827 | |
| 1,400.00 | 1,400.00 | 1,400.00 | 1,400.00 | 4.78 | 4.78 | -90.00 | 0.00 | -25.00 | 25.00 | 15.44 | 9.56 | 2.615 | |
| 1,500.00 | 1,500.00 | 1,500.00 | 1,500.00 | 5.14 | 5.14 | -90.00 | 0.00 | -25.00 | 25.00 | 14.72 | 10.28 | 2.433 | |
| 1,600.00 | 1,600.00 | 1,600.00 | 1,600.00 | 5.50 | 5.50 | -90.00 | 0.00 | -25.00 | 25.00 | 14.01 | 10.99 | 2.274 | |
| 1,700.00 | 1,700.00 | 1,700.00 | 1,700.00 | 5.86 | 5.86 | -90.00 | 0.00 | -25.00 | 25.00 | 13.29 | 11.71 | 2.135 | |
| 1,800.00 | 1,800.00 | 1,800.00 | 1,800.00 | 6.21 | 6.21 | -90.00 | 0.00 | -25.00 | 25.00 | 12.57 | 12.43 | 2.012 | |
| 1,900.00 | 1,900.00 | 1,900.00 | 1,900.00 | 6.57 | 6.57 | -90.00 | 0.00 | -25.00 | 25.00 | 11.85 | 13.15 | 1.902 | |
| 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 6.93 | 6.93 | -90.00 | 0.00 | -25.00 | 25.00 | 11.14 | 13.86 | 1.803 | |
| 2,100.00 | 2,100.00 | 2,100.22 | 2,100.22 | 7.28 | 7.29 | 112.35 | 0.15 | -24.84 | 24.93 | 10.35 | 14.57 | 1.711 | |
| 2,200.00 | 2,199.95 | 2,200.64 | 2,200.59 | 7.61 | 7.64 | 123.84 | 2.23 | -22.69 | 24.43 | 9.18 | 15.25 | 1.602 | |
| 2,200.07 | 2,200.02 | 2,200.71 | 2,200.66 | 7.61 | 7.64 | 123.86 | 2.24 | -22.69 | 24.43 | 9.18 | 15.25 | 1.602 | CC, ES, SF |
| 2,300.00 | 2,299.74 | 2,300.38 | 2,300.12 | 7.94 | 8.00 | 147.48 | 6.72 | -18.06 | 26.69 | 10.79 | 15.90 | 1.679 | |
| 2,400.00 | 2,399.24 | 2,398.94 | 2,398.19 | 8.27 | 8.35 | 171.59 | 13.52 | -11.03 | 36.59 | 20.08 | 16.51 | 2.216 | |
| 2,500.00 | 2,498.33 | 2,495.86 | 2,494.24 | 8.60 | 8.70 | -172.92 | 22.49 | -1.76 | 55.08 | 37.97 | 17.12 | 3.218 | |
| 2,600.00 | 2,596.90 | 2,592.08 | 2,589.30 | 8.95 | 9.04 | -164.67 | 32.85 | 8.94 | 80.10 | 62.39 | 17.71 | 4.523 | |
| 2,700.00 | 2,695.04 | 2,687.90 | 2,683.95 | 9.30 | 9.40 | -160.79 | 43.20 | 19.63 | 108.07 | 89.70 | 18.37 | 5.881 | |
| 2,800.00 | 2,793.18 | 2,783.70 | 2,778.59 | 9.66 | 9.75 | -158.53 | 53.54 | 30.32 | 136.37 | 117.30 | 19.06 | 7.154 | |
| 2,900.00 | 2,891.32 | 2,879.50 | 2,873.24 | 10.03 | 10.11 | -157.05 | 63.89 | 41.00 | 164.79 | 145.04 | 19.75 | 8.343 | |
| 3,000.00 | 2,989.45 | 2,975.31 | 2,967.88 | 10.40 | 10.47 | -156.01 | 74.23 | 51.69 | 193.28 | 172.84 | 20.45 | 9.453 | |
| 3,100.00 | 3,087.59 | 3,071.11 | 3,062.52 | 10.78 | 10.83 | -155.23 | 84.58 | 62.38 | 221.82 | 200.68 | 21.15 | 10.490 | |
| 3,200.00 | 3,185.73 | 3,166.91 | 3,157.16 | 11.17 | 11.20 | -154.63 | 94.92 | 73.06 | 250.39 | 228.54 | 21.85 | 11.461 | |
| 3,300.00 | 3,283.86 | 3,262.72 | 3,251.80 | 11.56 | 11.56 | -154.15 | 105.27 | 83.75 | 278.98 | 256.43 | 22.55 | 12.370 | |
| 3,400.00 | 3,382.00 | 3,358.52 | 3,346.44 | 11.95 | 11.93 | -153.76 | 115.61 | 94.44 | 307.58 | 284.32 | 23.26 | 13.222 | |
| 3,500.00 | 3,480.13 | 3,454.32 | 3,441.09 | 12.35 | 12.30 | -153.44 | 125.96 | 105.13 | 336.19 | 312.22 | 23.98 | 14.023 | |
| 3,600.00 | 3,578.27 | 3,550.13 | 3,535.73 | 12.75 | 12.68 | -153.17 | 136.30 | 115.81 | 364.82 | 340.13 | 24.69 | 14.776 | |
| 3,700.00 | 3,676.41 | 3,645.93 | 3,630.37 | 13.16 | 13.05 | -152.94 | 146.65 | 126.50 | 393.44 | 368.04 | 25.41 | 15.485 | |
| 3,800.00 | 3,774.54 | 3,741.73 | 3,725.01 | 13.57 | 13.43 | -152.74 | 156.99 | 137.19 | 422.08 | 395.95 | 26.13 | 16.154 | |
| 3,900.00 | 3,872.68 | 3,837.54 | 3,819.65 | 13.98 | 13.80 | -152.56 | 167.34 | 147.87 | 450.71 | 423.86 | 26.85 | 16.786 | |
| 4,000.00 | 3,970.82 | 3,933.34 | 3,914.29 | 14.39 | 14.18 | -152.41 | 177.68 | 158.56 | 479.36 | 451.78 | 27.58 | 17.383 | |
| 4,100.00 | 4,068.95 | 4,029.14 | 4,008.94 | 14.80 | 14.56 | -152.27 | 188.03 | 169.25 | 508.00 | 479.70 | 28.30 | 17.949 | |
| 4,200.00 | 4,167.09 | 4,124.95 | 4,103.58 | 15.22 | 14.94 | -152.15 | 198.37 | 179.94 | 536.64 | 507.61 | 29.03 | 18.486 | |
| 4,300.00 | 4,265.23 | 4,220.75 | 4,198.22 | 15.64 | 15.32 | -152.04 | 208.72 | 190.62 | 565.29 | 535.53 | 29.76 | 18.995 | |
| 4,400.00 | 4,363.36 | 4,316.55 | 4,292.86 | 16.06 | 15.70 | -151.94 | 219.06 | 201.31 | 593.94 | 563.45 | 30.49 | 19.479 | |
| 4,500.00 | 4,461.50 | 4,412.36 | 4,387.50 | 16.48 | 16.08 | -151.85 | 229.41 | 212.00 | 622.59 | 591.37 | 31.23 | 19.939 | |
| 4,600.00 | 4,559.63 | 4,508.16 | 4,482.14 | 16.91 | 16.46 | -151.77 | 239.75 | 222.68 | 651.25 | 619.29 | 31.96 | 20.377 | |
| 4,700.00 | 4,657.77 | 4,603.96 | 4,576.79 | 17.33 | 16.85 | -151.69 | 250.10 | 233.37 | 679.90 | 647.20 | 32.70 | 20.795 | |
| 4,800.00 | 4,755.91 | 4,699.77 | 4,671.43 | 17.76 | 17.23 | -151.62 | 260.44 | 244.06 | 708.55 | 675.12 | 33.43 | 21.194 | |
| 4,900.00 | 4,854.04 | 4,795.57 | 4,766.07 | 18.19 | 17.61 | -151.56 | 270.79 | 254.75 | 737.21 | 703.04 | 34.17 | 21.575 | |
| 5,000.00 | 4,952.18 | 4,891.37 | 4,860.71 | 18.62 | 18.00 | -151.50 | 281.13 | 265.43 | 765.86 | 730.96 | 34.91 | 21.939 | |
| 5,100.00 | 5,050.32 | 4,987.18 | 4,955.35 | 19.05 | 18.38 | -151.45 | 291.48 | 276.12 | 794.52 | 758.87 | 35.65 | 22.287 | |
| 5,200.00 | 5,148.45 | 5,082.98 | 5,049.99 | 19.48 | 18.77 | -151.39 | 301.82 | 286.81 | 823.18 | 786.79 | 36.39 | 22.621 | |
| 5,300.00 | 5,246.59 | 5,178.78 | 5,144.64 | 19.91 | 19.16 | -151.35 | 312.17 | 297.49 | 851.84 | 814.70 | 37.13 | 22.941 | |
| 5,400.00 | 5,344.73 | 5,274.59 | 5,239.28 | 20.34 | 19.54 | -151.30 | 322.51 | 308.18 | 880.50 | 842.62 | 37.87 | 23.248 | |
| 5,500.00 | 5,442.86 | 5,370.39 | 5,333.92 | 20.77 | 19.93 | -151.26 | 332.86 | 318.87 | 909.15 | 870.54 | 38.62 | 23.542 | |
| 5,600.00 | 5,541.00 | 5,466.19 | 5,428.56 | 21.21 | 20.32 | -151.22 | 343.20 | 329.56 | 937.81 | 898.45 | 39.36 | 23.825 | |
| 5,700.00 | 5,639.13 | 5,562.00 | 5,523.20 | 21.64 | 20.71 | -151.18 | 353.55 | 340.24 | 966.47 | 926.37 | 40.11 | 24.097 | |
| 5,800.00 | 5,737.27 | 5,657.80 | 5,617.84 | 22.08 | 21.09 | -151.15 | 363.89 | 350.93 | 995.13 | 954.28 | 40.85 | 24.359 | |
| 5,900.00 | 5,835.41 | 5,753.60 | 5,712.49 | 22.51 | 21.48 | -151.12 | 374.24 | 361.62 | 1,023.79 | 982.19 | 41.60 | 24.611 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| ***Reference Site:*** | C 17 State Pad | ***MD Reference:*** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State 1H - Wellbore #1 - Plan #1 — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM, 8400-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6,000.00 | 5,933.54 | 5,849.41 | 5,807.13 | 22.95 | 21.87 | -151.09 | 384.58 | 372.30 | 1,052.45 | 1,010.11 | 42.35 | 24.854 | |
| 6,100.00 | 6,031.68 | 5,945.21 | 5,901.77 | 23.39 | 22.26 | -151.06 | 394.93 | 382.99 | 1,081.12 | 1,038.02 | 43.09 | 25.088 | |
| 6,200.00 | 6,129.82 | 6,041.01 | 5,996.41 | 23.82 | 22.65 | -151.03 | 405.27 | 393.68 | 1,109.78 | 1,065.94 | 43.84 | 25.313 | |
| 6,300.00 | 6,227.95 | 6,136.82 | 6,091.05 | 24.26 | 23.04 | -151.00 | 415.62 | 404.37 | 1,138.44 | 1,093.85 | 44.59 | 25.531 | |
| 6,400.00 | 6,326.09 | 6,232.62 | 6,185.69 | 24.70 | 23.43 | -150.98 | 425.96 | 415.05 | 1,167.10 | 1,121.76 | 45.34 | 25.741 | |
| 6,500.00 | 6,424.23 | 6,328.42 | 6,280.34 | 25.14 | 23.82 | -150.95 | 436.31 | 425.74 | 1,195.76 | 1,149.67 | 46.09 | 25.945 | |
| 6,600.00 | 6,522.36 | 6,424.23 | 6,374.98 | 25.58 | 24.21 | -150.93 | 446.65 | 436.43 | 1,224.42 | 1,177.58 | 46.84 | 26.141 | |
| 6,700.00 | 6,620.50 | 6,520.03 | 6,469.62 | 26.02 | 24.60 | -150.91 | 457.00 | 447.12 | 1,253.09 | 1,205.50 | 47.59 | 26.331 | |
| 6,800.00 | 6,718.63 | 6,615.83 | 6,564.26 | 26.46 | 24.99 | -150.89 | 467.34 | 457.80 | 1,281.75 | 1,233.41 | 48.34 | 26.515 | |
| 6,900.00 | 6,816.77 | 6,711.64 | 6,658.90 | 26.90 | 25.38 | -150.87 | 477.69 | 468.49 | 1,310.41 | 1,261.32 | 49.09 | 26.693 | |
| 7,000.00 | 6,914.91 | 6,807.44 | 6,753.54 | 27.34 | 25.77 | -150.85 | 488.03 | 479.18 | 1,339.07 | 1,289.23 | 49.84 | 26.866 | |
| 7,100.00 | 7,013.04 | 6,903.24 | 6,848.19 | 27.78 | 26.16 | -150.83 | 498.38 | 489.86 | 1,367.74 | 1,317.14 | 50.60 | 27.033 | |
| 7,200.00 | 7,111.18 | 6,999.05 | 6,942.83 | 28.22 | 26.56 | -150.81 | 508.72 | 500.55 | 1,396.40 | 1,345.05 | 51.35 | 27.195 | |
| 7,300.00 | 7,209.32 | 7,094.85 | 7,037.47 | 28.66 | 26.95 | -150.80 | 519.07 | 511.24 | 1,425.06 | 1,372.96 | 52.10 | 27.352 | |
| 7,400.00 | 7,307.45 | 7,190.65 | 7,132.11 | 29.10 | 27.34 | -150.78 | 529.41 | 521.93 | 1,453.73 | 1,400.87 | 52.85 | 27.504 | |
| 7,500.00 | 7,405.59 | 7,286.46 | 7,226.75 | 29.55 | 27.73 | -150.77 | 539.76 | 532.61 | 1,482.39 | 1,428.78 | 53.61 | 27.652 | |
| 7,600.00 | 7,503.73 | 7,382.26 | 7,321.39 | 29.99 | 28.12 | -150.75 | 550.10 | 543.30 | 1,511.05 | 1,456.69 | 54.36 | 27.796 | |
| 7,700.00 | 7,601.86 | 7,478.06 | 7,416.04 | 30.43 | 28.51 | -150.74 | 560.45 | 553.99 | 1,539.71 | 1,484.60 | 55.12 | 27.936 | |
| 7,800.00 | 7,700.00 | 7,573.87 | 7,510.68 | 30.87 | 28.91 | -150.72 | 570.79 | 564.67 | 1,568.38 | 1,512.51 | 55.87 | 28.071 | |
| 7,900.00 | 7,798.13 | 7,669.67 | 7,605.32 | 31.32 | 29.30 | -150.71 | 581.14 | 575.36 | 1,597.04 | 1,540.42 | 56.63 | 28.203 | |
| 8,000.00 | 7,896.27 | 7,765.47 | 7,699.96 | 31.76 | 29.69 | -150.70 | 591.48 | 586.05 | 1,625.71 | 1,568.32 | 57.38 | 28.332 | |
| 8,100.00 | 7,994.63 | 7,861.57 | 7,794.89 | 32.20 | 30.09 | -150.90 | 601.86 | 596.77 | 1,653.35 | 1,595.03 | 58.32 | 28.350 | |
| 8,200.00 | 8,093.55 | 7,958.42 | 7,890.56 | 32.61 | 30.48 | -151.05 | 612.32 | 607.57 | 1,678.10 | 1,618.85 | 59.25 | 28.324 | |
| 8,300.00 | 8,192.92 | 8,055.92 | 7,986.88 | 33.00 | 30.88 | -151.12 | 622.85 | 618.45 | 1,699.88 | 1,639.76 | 60.12 | 28.274 | |
| 8,400.00 | 8,292.62 | 8,216.12 | 8,145.57 | 33.20 | 31.52 | -151.02 | 638.04 | 634.14 | 1,717.41 | 1,656.41 | 61.00 | 28.155 | |
| 8,500.00 | 8,392.52 | 8,404.12 | 8,332.98 | 33.23 | 32.04 | -150.95 | 648.07 | 644.51 | 1,727.09 | 1,665.56 | 61.53 | 28.069 | |
| 8,600.00 | 8,492.50 | 8,561.28 | 8,490.09 | 33.24 | 32.05 | 97.69 | 650.13 | 645.67 | 1,729.13 | 1,667.58 | 61.55 | 28.095 | |
| 8,700.00 | 8,591.42 | 8,654.03 | 8,581.89 | 33.23 | 32.03 | 97.48 | 652.08 | 633.34 | 1,731.32 | 1,669.83 | 61.49 | 28.156 | |
| 8,800.00 | 8,686.43 | 8,746.80 | 8,670.50 | 33.20 | 31.98 | 97.04 | 656.33 | 606.55 | 1,736.20 | 1,674.85 | 61.35 | 28.302 | |
| *8,900.00* | *8,774.66* | *8,839.67* | *8,753.66* | *33.16* | *31.90* | *96.38* | *662.76* | *565.95* | *1,743.61* | *1,682.44* | *61.17* | *28.505* | |
| 9,000.00 | 8,853.41 | 8,932.76 | 8,829.27 | 33.11 | 31.82 | 95.52 | 671.23 | 512.49 | 1,753.32 | 1,692.28 | 61.04 | 28.724 | |
| 9,100.00 | 8,920.31 | 9,026.21 | 8,895.36 | 33.08 | 31.75 | 94.49 | 681.54 | 447.38 | 1,765.06 | 1,703.98 | 61.08 | 28.899 | |
| *9,200.00* | *8,973.31* | *9,120.21* | *8,950.16* | *33.06* | *31.69* | *93.33* | *693.47* | *372.07* | *1,778.47* | *1,717.07* | *61.40* | *28.966* | |
| 9,300.00 | 9,010.81 | 9,214.96 | 8,992.04 | 33.04 | 31.66 | 92.06 | 706.74 | 288.24 | 1,793.14 | 1,731.03 | 62.11 | 28.871 | |
| 9,400.00 | 9,031.66 | 9,310.70 | 9,019.58 | 33.06 | 31.73 | 90.74 | 721.07 | 197.79 | 1,808.65 | 1,745.38 | 63.27 | 28.586 | |
| 9,500.00 | 9,036.00 | 9,407.72 | 9,031.56 | 33.21 | 32.33 | 89.86 | 736.11 | 102.82 | 1,824.54 | 1,759.64 | 64.90 | 28.115 | |
| 9,600.00 | 9,036.00 | 9,642.52 | 9,032.00 | 34.03 | 35.04 | 89.87 | 765.05 | -130.13 | 1,837.67 | 1,769.07 | 68.60 | 26.787 | |
| 9,700.00 | 9,036.00 | 9,884.09 | 9,032.00 | 35.35 | 38.78 | 89.88 | 774.97 | -371.43 | 1,841.62 | 1,768.03 | 73.60 | 25.023 | |
| 9,800.00 | 9,036.00 | 9,984.09 | 9,032.00 | 36.87 | 40.55 | 89.88 | 775.57 | -471.42 | 1,842.53 | 1,765.64 | 76.90 | 23.961 | |
| *9,900.00* | *9,036.00* | *10,084.08* | *9,032.00* | *38.55* | *42.44* | *89.88* | *776.17* | *-571.42* | *1,843.44* | *1,762.99* | *80.46* | *22.912* | |
| 10,000.00 | 9,036.00 | 10,184.08 | 9,032.00 | 40.36 | 44.42 | 89.88 | 776.77 | -671.41 | 1,844.35 | 1,760.10 | 84.25 | 21.891 | |
| 10,100.00 | 9,036.00 | 10,284.08 | 9,032.00 | 42.29 | 46.49 | 89.88 | 777.36 | -771.41 | 1,845.26 | 1,757.01 | 88.26 | 20.908 | |
| *10,200.00* | *9,036.00* | *10,384.07* | *9,032.00* | *44.31* | *48.65* | *89.88* | *777.96* | *-871.40* | *1,846.18* | *1,753.74* | *92.44* | *19.972* | |
| 10,300.00 | 9,036.00 | 10,484.07 | 9,032.00 | 46.43 | 50.86 | 89.88 | 778.56 | -971.39 | 1,847.09 | 1,750.31 | 96.77 | 19.086 | |
| 10,400.00 | 9,036.00 | 10,584.06 | 9,032.00 | 48.61 | 53.14 | 89.88 | 779.16 | -1,071.39 | 1,848.00 | 1,746.75 | 101.25 | 18.252 | |
| 10,500.00 | 9,036.00 | 10,684.06 | 9,032.00 | 50.86 | 55.47 | 89.88 | 779.75 | -1,171.38 | 1,848.91 | 1,743.07 | 105.84 | 17.469 | |
| 10,600.00 | 9,036.00 | 10,784.06 | 9,032.00 | 53.17 | 57.85 | 89.88 | 780.35 | -1,271.38 | 1,849.82 | 1,739.28 | 110.53 | 16.735 | |
| 10,700.00 | 9,036.00 | 10,884.05 | 9,032.00 | 55.53 | 60.27 | 89.88 | 780.95 | -1,371.37 | 1,850.73 | 1,735.41 | 115.32 | 16.049 | |
| 10,800.00 | 9,036.00 | 10,984.05 | 9,032.00 | 57.94 | 62.72 | 89.88 | 781.55 | -1,471.36 | 1,851.64 | 1,731.45 | 120.19 | 15.406 | |
| 10,900.00 | 9,036.00 | 11,084.04 | 9,032.00 | 60.38 | 65.21 | 89.88 | 782.14 | -1,571.36 | 1,852.55 | 1,727.42 | 125.12 | 14.806 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State 1H - Wellbore #1 - Plan #1 — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM, 8400-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11,000.00 | 9,036.00 | 11,184.04 | 9,032.00 | 62.85 | 67.72 | 89.88 | 782.74 | -1,671.35 | 1,853.46 | 1,723.34 | 130.12 | 14.244 | |
| 11,100.00 | 9,036.00 | 11,284.03 | 9,032.00 | 65.36 | 70.26 | 89.88 | 783.34 | -1,771.35 | 1,854.37 | 1,719.19 | 135.18 | 13.718 | |
| 11,200.00 | 9,036.00 | 11,384.03 | 9,032.00 | 67.89 | 72.82 | 89.88 | 783.93 | -1,871.34 | 1,855.28 | 1,715.00 | 140.28 | 13.226 | |
| 11,300.00 | 9,036.00 | 11,484.03 | 9,032.00 | 70.45 | 75.41 | 89.88 | 784.53 | -1,971.34 | 1,856.19 | 1,710.76 | 145.43 | 12.764 | |
| 11,400.00 | 9,036.00 | 11,584.02 | 9,032.00 | 73.02 | 78.01 | 89.88 | 785.13 | -2,071.33 | 1,857.10 | 1,706.48 | 150.62 | 12.330 | |
| 11,500.00 | 9,036.00 | 11,684.02 | 9,032.00 | 75.62 | 80.62 | 89.88 | 785.73 | -2,171.32 | 1,858.01 | 1,702.17 | 155.84 | 11.922 | |
| 11,600.00 | 9,036.00 | 11,784.01 | 9,032.00 | 78.24 | 83.26 | 89.88 | 786.32 | -2,271.32 | 1,858.92 | 1,697.82 | 161.10 | 11.539 | |
| 11,700.00 | 9,036.00 | 11,884.01 | 9,032.00 | 80.87 | 85.91 | 89.88 | 786.92 | -2,371.31 | 1,859.83 | 1,693.45 | 166.38 | 11.178 | |
| 11,800.00 | 9,036.00 | 11,984.01 | 9,032.00 | 83.51 | 88.56 | 89.88 | 787.52 | -2,471.31 | 1,860.74 | 1,689.05 | 171.70 | 10.837 | |
| 11,900.00 | 9,036.00 | 12,084.00 | 9,032.00 | 86.17 | 91.24 | 89.88 | 788.12 | -2,571.30 | 1,861.65 | 1,684.62 | 177.03 | 10.516 | |
| 12,000.00 | 9,036.00 | 12,184.00 | 9,032.00 | 88.84 | 93.92 | 89.88 | 788.71 | -2,671.29 | 1,862.56 | 1,680.17 | 182.39 | 10.212 | |
| 12,100.00 | 9,036.00 | 12,283.99 | 9,032.00 | 91.52 | 96.61 | 89.88 | 789.31 | -2,771.29 | 1,863.47 | 1,675.70 | 187.77 | 9.924 | |
| 12,200.00 | 9,036.00 | 12,383.99 | 9,032.00 | 94.21 | 99.31 | 89.88 | 789.91 | -2,871.28 | 1,864.38 | 1,671.22 | 193.16 | 9.652 | |
| 12,300.00 | 9,036.00 | 12,483.98 | 9,032.00 | 96.91 | 102.02 | 89.88 | 790.50 | -2,971.28 | 1,865.29 | 1,666.71 | 198.58 | 9.393 | |
| 12,400.00 | 9,036.00 | 12,583.98 | 9,032.00 | 99.61 | 104.73 | 89.88 | 791.10 | -3,071.27 | 1,866.20 | 1,662.19 | 204.01 | 9.148 | |
| 12,500.00 | 9,036.00 | 12,683.98 | 9,032.00 | 102.33 | 107.46 | 89.88 | 791.70 | -3,171.26 | 1,867.11 | 1,657.66 | 209.45 | 8.914 | |
| 12,600.00 | 9,036.00 | 12,783.97 | 9,032.00 | 105.05 | 110.19 | 89.88 | 792.30 | -3,271.26 | 1,868.02 | 1,653.11 | 214.91 | 8.692 | |
| 12,700.00 | 9,036.00 | 12,883.97 | 9,032.00 | 107.78 | 112.92 | 89.88 | 792.89 | -3,371.25 | 1,868.93 | 1,648.56 | 220.38 | 8.481 | |
| 12,800.00 | 9,036.00 | 12,983.96 | 9,032.00 | 110.51 | 115.66 | 89.88 | 793.49 | -3,471.25 | 1,869.84 | 1,643.99 | 225.86 | 8.279 | |
| 12,900.00 | 9,036.00 | 13,083.96 | 9,032.00 | 113.25 | 118.41 | 89.88 | 794.09 | -3,571.24 | 1,870.75 | 1,639.41 | 231.35 | 8.086 | |
| 13,000.00 | 9,036.00 | 13,183.96 | 9,032.00 | 116.00 | 121.16 | 89.88 | 794.69 | -3,671.23 | 1,871.66 | 1,634.81 | 236.85 | 7.902 | |
| 13,100.00 | 9,036.00 | 13,283.95 | 9,032.00 | 118.75 | 123.91 | 89.88 | 795.28 | -3,771.23 | 1,872.57 | 1,630.21 | 242.36 | 7.726 | |
| 13,200.00 | 9,036.00 | 13,383.95 | 9,032.00 | 121.50 | 126.67 | 89.88 | 795.88 | -3,871.22 | 1,873.48 | 1,625.61 | 247.88 | 7.558 | |
| 13,300.00 | 9,036.00 | 13,483.94 | 9,032.00 | 124.26 | 129.44 | 89.88 | 796.48 | -3,971.22 | 1,874.39 | 1,620.99 | 253.40 | 7.397 | |
| 13,400.00 | 9,036.00 | 13,583.94 | 9,032.00 | 127.03 | 132.20 | 89.88 | 797.08 | -4,071.21 | 1,875.31 | 1,616.37 | 258.94 | 7.242 | |
| 13,500.00 | 9,036.00 | 13,683.94 | 9,032.00 | 129.79 | 134.97 | 89.88 | 797.67 | -4,171.20 | 1,876.22 | 1,611.74 | 264.48 | 7.094 | |
| 13,600.00 | 9,036.00 | 13,783.93 | 9,032.00 | 132.56 | 137.75 | 89.88 | 798.27 | -4,271.20 | 1,877.13 | 1,607.10 | 270.03 | 6.952 | |
| 13,700.00 | 9,036.00 | 13,883.93 | 9,032.00 | 135.34 | 140.52 | 89.88 | 798.87 | -4,371.19 | 1,878.04 | 1,602.45 | 275.58 | 6.815 | |
| 13,800.00 | 9,036.00 | 13,983.92 | 9,032.00 | 138.11 | 143.30 | 89.88 | 799.46 | -4,471.19 | 1,878.95 | 1,597.81 | 281.14 | 6.683 | |
| 13,900.00 | 9,036.00 | 14,083.92 | 9,032.00 | 140.89 | 146.09 | 89.88 | 800.06 | -4,571.18 | 1,879.86 | 1,593.15 | 286.71 | 6.557 | |
| 13,913.79 | 9,036.00 | 14,097.71 | 9,032.00 | 141.27 | 146.47 | 89.88 | 800.14 | -4,584.97 | 1,879.98 | 1,592.51 | 287.47 | 6.540 | |

# Scientific Drilling Int.

*Anticollision Report*

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State 2H - Wellbore #1 - Plan #1 — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM, 8400-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 89.77 | 0.10 | 25.00 | 25.00 | | | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.12 | 0.12 | 89.77 | 0.10 | 25.00 | 25.00 | 24.76 | 0.24 | 104.091 | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.48 | 0.48 | 89.77 | 0.10 | 25.00 | 25.00 | 24.04 | 0.96 | 26.120 | |
| 300.00 | 300.00 | 300.00 | 300.00 | 0.84 | 0.84 | 89.77 | 0.10 | 25.00 | 25.00 | 23.33 | 1.67 | 14.934 | |
| 400.00 | 400.00 | 400.00 | 400.00 | 1.20 | 1.20 | 89.77 | 0.10 | 25.00 | 25.00 | 22.61 | 2.39 | 10.456 | |
| 500.00 | 500.00 | 500.00 | 500.00 | 1.55 | 1.55 | 89.77 | 0.10 | 25.00 | 25.00 | 21.89 | 3.11 | 8.044 | |
| 600.00 | 600.00 | 600.00 | 600.00 | 1.91 | 1.91 | 89.77 | 0.10 | 25.00 | 25.00 | 21.18 | 3.82 | 6.536 | |
| 700.00 | 700.00 | 700.00 | 700.00 | 2.27 | 2.27 | 89.77 | 0.10 | 25.00 | 25.00 | 20.46 | 4.54 | 5.504 | |
| 800.00 | 800.00 | 800.00 | 800.00 | 2.63 | 2.63 | 89.77 | 0.10 | 25.00 | 25.00 | 19.74 | 5.26 | 4.754 | |
| 900.00 | 900.00 | 900.00 | 900.00 | 2.99 | 2.99 | 89.77 | 0.10 | 25.00 | 25.00 | 19.02 | 5.98 | 4.184 | |
| 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 3.35 | 3.35 | 89.77 | 0.10 | 25.00 | 25.00 | 18.31 | 6.69 | 3.735 | |
| 1,100.00 | 1,100.00 | 1,100.00 | 1,100.00 | 3.70 | 3.70 | 89.77 | 0.10 | 25.00 | 25.00 | 17.59 | 7.41 | 3.374 | |
| 1,200.00 | 1,200.00 | 1,200.00 | 1,200.00 | 4.06 | 4.06 | 89.77 | 0.10 | 25.00 | 25.00 | 16.87 | 8.13 | 3.076 | |
| 1,300.00 | 1,300.00 | 1,300.00 | 1,300.00 | 4.42 | 4.42 | 89.77 | 0.10 | 25.00 | 25.00 | 16.16 | 8.84 | 2.827 | |
| 1,400.00 | 1,400.00 | 1,400.00 | 1,400.00 | 4.78 | 4.78 | 89.77 | 0.10 | 25.00 | 25.00 | 15.44 | 9.56 | 2.615 | |
| 1,500.00 | 1,500.00 | 1,500.00 | 1,500.00 | 5.14 | 5.14 | 89.77 | 0.10 | 25.00 | 25.00 | 14.72 | 10.28 | 2.433 | |
| 1,600.00 | 1,600.00 | 1,600.00 | 1,600.00 | 5.50 | 5.50 | 89.77 | 0.10 | 25.00 | 25.00 | 14.01 | 10.99 | 2.274 | |
| 1,700.00 | 1,700.00 | 1,700.00 | 1,700.00 | 5.86 | 5.86 | 89.77 | 0.10 | 25.00 | 25.00 | 13.29 | 11.71 | 2.135 | |
| 1,800.00 | 1,800.00 | 1,800.00 | 1,800.00 | 6.21 | 6.21 | 89.77 | 0.10 | 25.00 | 25.00 | 12.57 | 12.43 | 2.012 | |
| 1,900.00 | 1,900.00 | 1,900.00 | 1,900.00 | 6.57 | 6.57 | 89.77 | 0.10 | 25.00 | 25.00 | 11.86 | 13.15 | 1.902 | |
| 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 6.93 | 6.93 | 89.77 | 0.10 | 25.00 | 25.00 | 11.14 | 13.86 | 1.803 | |
| 2,077.21 | 2,077.21 | 2,077.17 | 2,077.17 | 7.20 | 7.21 | -69.49 | 0.11 | 25.01 | 24.88 | 10.47 | 14.41 | 1.727 | CC |
| 2,100.00 | 2,100.00 | 2,099.89 | 2,099.89 | 7.28 | 7.29 | -69.32 | 0.18 | 25.08 | 25.00 | 10.43 | 14.57 | 1.716 | |
| 2,200.00 | 2,199.95 | 2,199.48 | 2,199.47 | 7.61 | 7.64 | -77.92 | 1.22 | 26.12 | 25.30 | 10.05 | 15.25 | 1.659 | ES, SF |
| 2,300.00 | 2,299.74 | 2,298.73 | 2,298.66 | 7.94 | 7.99 | -94.85 | 3.47 | 28.37 | 27.79 | 11.87 | 15.93 | 1.745 | |
| 2,400.00 | 2,399.24 | 2,397.58 | 2,397.40 | 8.27 | 8.34 | -113.55 | 6.86 | 31.76 | 35.14 | 18.55 | 16.59 | 2.118 | |
| 2,500.00 | 2,498.33 | 2,496.51 | 2,496.20 | 8.60 | 8.69 | -128.34 | 10.46 | 35.36 | 47.29 | 30.06 | 17.23 | 2.745 | |
| 2,600.00 | 2,596.90 | 2,595.63 | 2,595.24 | 8.95 | 9.05 | -139.41 | 13.14 | 38.04 | 62.68 | 44.86 | 17.82 | 3.517 | |
| 2,700.00 | 2,695.04 | 2,694.65 | 2,694.24 | 9.30 | 9.40 | -147.71 | 14.60 | 39.50 | 80.02 | 61.57 | 18.45 | 4.336 | |
| 2,800.00 | 2,793.18 | 2,793.59 | 2,793.18 | 9.66 | 9.75 | -153.65 | 14.91 | 39.81 | 97.21 | 78.10 | 19.12 | 5.086 | |
| 2,900.00 | 2,891.32 | 2,891.73 | 2,891.32 | 10.03 | 10.10 | -157.90 | 14.91 | 39.81 | 114.80 | 95.01 | 19.79 | 5.801 | |
| 3,000.00 | 2,989.45 | 2,989.86 | 2,989.45 | 10.40 | 10.45 | -161.01 | 14.91 | 39.81 | 132.84 | 112.37 | 20.47 | 6.490 | |
| 3,100.00 | 3,087.59 | 3,088.00 | 3,087.59 | 10.78 | 10.81 | -163.38 | 14.91 | 39.81 | 151.18 | 130.02 | 21.16 | 7.145 | |
| 3,200.00 | 3,185.73 | 3,186.14 | 3,185.73 | 11.17 | 11.16 | -165.23 | 14.91 | 39.81 | 169.70 | 147.85 | 21.85 | 7.767 | |
| 3,300.00 | 3,283.86 | 3,284.27 | 3,283.86 | 11.56 | 11.51 | -166.72 | 14.91 | 39.81 | 188.37 | 165.83 | 22.54 | 8.356 | |
| 3,400.00 | 3,382.00 | 3,382.41 | 3,382.00 | 11.95 | 11.86 | -167.94 | 14.91 | 39.81 | 207.13 | 183.89 | 23.24 | 8.913 | |
| 3,500.00 | 3,480.13 | 3,480.55 | 3,480.13 | 12.35 | 12.21 | -168.96 | 14.91 | 39.81 | 225.98 | 202.04 | 23.94 | 9.439 | |
| 3,600.00 | 3,578.27 | 3,580.87 | 3,580.45 | 12.75 | 12.57 | -169.67 | 14.76 | 40.55 | 244.59 | 219.95 | 24.65 | 9.925 | |
| 3,700.00 | 3,676.41 | 3,682.85 | 3,682.34 | 13.16 | 12.92 | -169.60 | 13.93 | 44.62 | 261.95 | 236.60 | 25.35 | 10.333 | |
| 3,800.00 | 3,774.54 | 3,785.18 | 3,784.37 | 13.57 | 13.27 | -168.84 | 12.38 | 52.28 | 277.97 | 251.91 | 26.07 | 10.664 | |
| 3,900.00 | 3,872.68 | 3,887.59 | 3,886.13 | 13.98 | 13.62 | -167.49 | 10.10 | 63.52 | 292.76 | 265.97 | 26.79 | 10.928 | |
| 4,000.00 | 3,970.82 | 3,988.57 | 3,986.04 | 14.39 | 13.98 | -165.69 | 7.20 | 77.87 | 306.60 | 279.08 | 27.52 | 11.142 | |
| 4,100.00 | 4,068.95 | 4,087.15 | 4,083.47 | 14.80 | 14.33 | -163.96 | 4.21 | 92.61 | 320.48 | 292.23 | 28.25 | 11.345 | |
| 4,200.00 | 4,167.09 | 4,185.74 | 4,180.90 | 15.22 | 14.68 | -162.37 | 1.23 | 107.34 | 334.62 | 305.64 | 28.98 | 11.546 | |
| 4,300.00 | 4,265.23 | 4,284.32 | 4,278.33 | 15.64 | 15.04 | -160.92 | -1.76 | 122.07 | 349.00 | 319.28 | 29.72 | 11.742 | |
| 4,400.00 | 4,363.36 | 4,382.91 | 4,375.76 | 16.06 | 15.40 | -159.57 | -4.74 | 136.81 | 363.58 | 333.11 | 30.47 | 11.934 | |
| 4,500.00 | 4,461.50 | 4,481.49 | 4,473.20 | 16.48 | 15.76 | -158.34 | -7.72 | 151.54 | 378.34 | 347.12 | 31.22 | 12.120 | |
| 4,600.00 | 4,559.63 | 4,580.08 | 4,570.63 | 16.91 | 16.13 | -157.19 | -10.71 | 166.27 | 393.26 | 361.29 | 31.97 | 12.301 | |
| 4,700.00 | 4,657.77 | 4,678.66 | 4,668.06 | 17.33 | 16.49 | -156.13 | -13.69 | 181.01 | 408.33 | 375.60 | 32.73 | 12.477 | |
| 4,800.00 | 4,755.91 | 4,777.24 | 4,765.49 | 17.76 | 16.86 | -155.14 | -16.67 | 195.74 | 423.52 | 390.04 | 33.49 | 12.647 | |
| 4,900.00 | 4,854.04 | 4,875.83 | 4,862.92 | 18.19 | 17.23 | -154.22 | -19.66 | 210.47 | 438.83 | 404.58 | 34.25 | 12.812 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | *Midland District* |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State 2H - Wellbore #1 - Plan #1 — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM, 8400-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,000.00 | 4,952.18 | 4,974.41 | 4,960.35 | 18.62 | 17.61 | -153.37 | -22.64 | 225.21 | 454.25 | 419.23 | 35.02 | 12.971 | |
| 5,100.00 | 5,050.32 | 5,073.00 | 5,057.78 | 19.05 | 17.98 | -152.57 | -25.63 | 239.94 | 469.75 | 433.96 | 35.79 | 13.125 | |
| 5,200.00 | 5,148.45 | 5,171.58 | 5,155.21 | 19.48 | 18.36 | -151.82 | -28.61 | 254.67 | 485.34 | 448.78 | 36.56 | 13.274 | |
| 5,300.00 | 5,246.59 | 5,270.16 | 5,252.65 | 19.91 | 18.74 | -151.12 | -31.59 | 269.41 | 501.00 | 463.67 | 37.34 | 13.418 | |
| 5,400.00 | 5,344.73 | 5,368.75 | 5,350.08 | 20.34 | 19.11 | -150.46 | -34.58 | 284.14 | 516.74 | 478.62 | 38.12 | 13.557 | |
| 5,500.00 | 5,442.86 | 5,467.33 | 5,447.51 | 20.77 | 19.49 | -149.84 | -37.56 | 298.87 | 532.54 | 493.64 | 38.90 | 13.691 | |
| 5,600.00 | 5,541.00 | 5,565.92 | 5,544.94 | 21.21 | 19.88 | -149.25 | -40.54 | 313.61 | 548.39 | 508.71 | 39.68 | 13.821 | |
| 5,700.00 | 5,639.13 | 5,664.50 | 5,642.37 | 21.64 | 20.26 | -148.70 | -43.53 | 328.34 | 564.30 | 523.84 | 40.46 | 13.946 | |
| 5,800.00 | 5,737.27 | 5,763.08 | 5,739.80 | 22.08 | 20.64 | -148.18 | -46.51 | 343.07 | 580.26 | 539.01 | 41.25 | 14.068 | |
| 5,900.00 | 5,835.41 | 5,861.67 | 5,837.23 | 22.51 | 21.03 | -147.68 | -49.50 | 357.81 | 596.26 | 554.22 | 42.04 | 14.185 | |
| 6,000.00 | 5,933.54 | 5,960.25 | 5,934.66 | 22.95 | 21.42 | -147.21 | -52.48 | 372.54 | 612.30 | 569.47 | 42.82 | 14.298 | |
| 6,100.00 | 6,031.68 | 6,058.84 | 6,032.10 | 23.39 | 21.80 | -146.77 | -55.46 | 387.27 | 628.38 | 584.76 | 43.62 | 14.407 | |
| 6,200.00 | 6,129.82 | 6,157.42 | 6,129.53 | 23.82 | 22.19 | -146.35 | -58.45 | 402.01 | 644.49 | 600.09 | 44.41 | 14.513 | |
| 6,300.00 | 6,227.95 | 6,256.00 | 6,226.96 | 24.26 | 22.58 | -145.95 | -61.43 | 416.74 | 660.64 | 615.44 | 45.20 | 14.616 | |
| 6,400.00 | 6,326.09 | 6,354.59 | 6,324.39 | 24.70 | 22.97 | -145.56 | -64.41 | 431.47 | 676.82 | 630.82 | 46.00 | 14.715 | |
| 6,500.00 | 6,424.23 | 6,453.17 | 6,421.82 | 25.14 | 23.36 | -145.20 | -67.40 | 446.21 | 693.03 | 646.23 | 46.79 | 14.811 | |
| 6,600.00 | 6,522.36 | 6,551.76 | 6,519.25 | 25.58 | 23.75 | -144.85 | -70.38 | 460.94 | 709.26 | 661.67 | 47.59 | 14.904 | |
| 6,700.00 | 6,620.50 | 6,650.34 | 6,616.68 | 26.02 | 24.14 | -144.52 | -73.37 | 475.67 | 725.51 | 677.13 | 48.39 | 14.994 | |
| 6,800.00 | 6,718.63 | 6,748.93 | 6,714.11 | 26.46 | 24.54 | -144.20 | -76.35 | 490.41 | 741.79 | 692.61 | 49.19 | 15.081 | |
| 6,900.00 | 6,816.77 | 6,847.51 | 6,811.55 | 26.90 | 24.93 | -143.89 | -79.33 | 505.14 | 758.09 | 708.11 | 49.99 | 15.166 | |
| 7,000.00 | 6,914.91 | 6,946.09 | 6,908.98 | 27.34 | 25.32 | -143.60 | -82.32 | 519.87 | 774.41 | 723.63 | 50.79 | 15.248 | |
| 7,100.00 | 7,013.04 | 7,044.68 | 7,006.41 | 27.78 | 25.72 | -143.32 | -85.30 | 534.61 | 790.75 | 739.16 | 51.59 | 15.328 | |
| 7,200.00 | 7,111.18 | 7,143.26 | 7,103.84 | 28.22 | 26.11 | -143.06 | -88.28 | 549.34 | 807.11 | 754.72 | 52.39 | 15.405 | |
| 7,300.00 | 7,209.32 | 7,241.85 | 7,201.27 | 28.66 | 26.51 | -142.80 | -91.27 | 564.07 | 823.48 | 770.29 | 53.20 | 15.480 | |
| 7,400.00 | 7,307.45 | 7,340.43 | 7,298.70 | 29.10 | 26.91 | -142.55 | -94.25 | 578.81 | 839.87 | 785.87 | 54.00 | 15.553 | |
| 7,500.00 | 7,405.59 | 7,439.01 | 7,396.13 | 29.55 | 27.30 | -142.31 | -97.24 | 593.54 | 856.28 | 801.47 | 54.81 | 15.623 | |
| 7,600.00 | 7,503.73 | 7,537.60 | 7,493.56 | 29.99 | 27.70 | -142.08 | -100.22 | 608.27 | 872.69 | 817.08 | 55.61 | 15.692 | |
| 7,700.00 | 7,601.86 | 7,636.18 | 7,591.00 | 30.43 | 28.10 | -141.86 | -103.20 | 623.01 | 889.12 | 832.70 | 56.42 | 15.759 | |
| 7,800.00 | 7,700.00 | 7,734.77 | 7,688.43 | 30.87 | 28.50 | -141.65 | -106.19 | 637.74 | 905.57 | 848.34 | 57.23 | 15.824 | |
| 7,900.00 | 7,798.13 | 7,833.35 | 7,785.86 | 31.32 | 28.89 | -141.44 | -109.17 | 652.47 | 922.02 | 863.99 | 58.04 | 15.887 | |
| 8,000.00 | 7,896.27 | 7,931.93 | 7,883.29 | 31.76 | 29.29 | -141.25 | -112.15 | 667.21 | 938.49 | 879.64 | 58.84 | 15.949 | |
| 8,100.00 | 7,994.63 | 8,030.64 | 7,980.84 | 32.20 | 29.69 | -141.17 | -115.14 | 681.96 | 954.03 | 894.27 | 59.76 | 15.965 | |
| 8,200.00 | 8,093.55 | 8,131.52 | 8,080.62 | 32.61 | 30.10 | -141.00 | -118.09 | 696.50 | 966.89 | 906.24 | 60.65 | 15.941 | |
| 8,300.00 | 8,192.92 | 8,234.52 | 8,182.93 | 33.00 | 30.50 | -140.85 | -120.44 | 708.14 | 976.76 | 915.27 | 61.49 | 15.884 | |
| 8,400.00 | 8,292.62 | 8,338.01 | 8,286.09 | 33.20 | 30.82 | -140.76 | -122.08 | 716.20 | 983.58 | 921.55 | 62.03 | 15.857 | |
| 8,500.00 | 8,392.52 | 8,441.82 | 8,389.79 | 33.23 | 30.94 | -140.70 | -122.97 | 720.61 | 987.31 | 925.16 | 62.15 | 15.887 | |
| 8,600.00 | 8,492.50 | 8,578.98 | 8,526.81 | 33.24 | 30.94 | 107.86 | -123.16 | 717.83 | 987.78 | 925.63 | 62.14 | 15.896 | |
| 8,700.00 | 8,591.42 | 8,784.05 | 8,722.14 | 33.23 | 30.79 | 106.55 | -123.35 | 659.06 | 983.12 | 921.22 | 61.89 | 15.884 | |
| 8,800.00 | 8,686.43 | 8,965.64 | 8,868.29 | 33.20 | 30.62 | 104.18 | -123.68 | 552.58 | 974.36 | 912.92 | 61.45 | 15.857 | |
| 8,900.00 | 8,774.66 | 9,119.78 | 8,961.06 | 33.16 | 30.67 | 101.41 | -124.06 | 430.07 | 964.06 | 902.83 | 61.23 | 15.745 | |
| 9,000.00 | 8,853.41 | 9,250.40 | 9,011.78 | 33.11 | 31.05 | 98.59 | -124.44 | 310.00 | 954.38 | 892.92 | 61.46 | 15.529 | |
| 9,100.00 | 8,920.31 | 9,363.21 | 9,032.74 | 33.08 | 31.74 | 95.82 | -124.79 | 199.34 | 946.75 | 884.61 | 62.15 | 15.234 | |
| 9,200.00 | 8,973.31 | 9,457.94 | 9,035.00 | 33.06 | 32.57 | 93.34 | -125.08 | 104.68 | 942.02 | 878.87 | 63.16 | 14.916 | |
| 9,300.00 | 9,010.81 | 9,550.50 | 9,035.00 | 33.04 | 33.57 | 91.41 | -125.37 | 12.12 | 940.31 | 875.77 | 64.55 | 14.568 | |
| 9,400.00 | 9,031.66 | 9,648.17 | 9,035.00 | 33.06 | 34.80 | 90.20 | -125.68 | -85.55 | 940.01 | 873.57 | 66.43 | 14.150 | |
| 9,439.04 | 9,035.52 | 9,687.02 | 9,035.00 | 33.08 | 35.33 | 89.97 | -125.80 | -124.40 | 940.00 | 872.68 | 67.32 | 13.963 | |
| 9,500.00 | 9,036.00 | 9,748.00 | 9,035.00 | 33.21 | 36.24 | 89.94 | -125.99 | -185.38 | 940.00 | 871.19 | 68.81 | 13.660 | |
| 9,600.00 | 9,036.00 | 9,848.00 | 9,035.00 | 34.03 | 37.84 | 89.94 | -126.30 | -285.37 | 940.00 | 868.42 | 71.58 | 13.131 | |
| 9,700.00 | 9,036.00 | 9,948.00 | 9,035.00 | 35.35 | 39.58 | 89.94 | -126.62 | -385.37 | 940.00 | 865.31 | 74.69 | 12.586 | |
| 9,800.00 | 9,036.00 | 10,048.00 | 9,035.00 | 36.87 | 41.45 | 89.94 | -126.93 | -485.37 | 940.00 | 861.91 | 78.09 | 12.038 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State 2H - Wellbore #1 - Plan #1 — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM, 8400-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9,900.00 | 9,036.00 | 10,148.00 | 9,035.00 | 38.55 | 43.42 | 89.94 | -127.24 | -585.37 | 940.00 | 858.26 | 81.74 | 11.499 | |
| 10,000.00 | 9,036.00 | 10,248.00 | 9,035.00 | 40.36 | 45.49 | 89.94 | -127.56 | -685.37 | 940.00 | 854.37 | 85.63 | 10.978 | |
| 10,100.00 | 9,036.00 | 10,348.00 | 9,035.00 | 42.29 | 47.63 | 89.94 | -127.87 | -785.37 | 940.00 | 850.30 | 89.70 | 10.479 | |
| 10,200.00 | 9,036.00 | 10,448.00 | 9,035.00 | 44.31 | 49.85 | 89.94 | -128.18 | -885.37 | 940.00 | 846.05 | 93.95 | 10.005 | |
| 10,300.00 | 9,036.00 | 10,548.00 | 9,035.00 | 46.43 | 52.13 | 89.94 | -128.50 | -985.37 | 940.00 | 841.66 | 98.34 | 9.558 | |
| 10,400.00 | 9,036.00 | 10,648.00 | 9,035.00 | 48.61 | 54.46 | 89.94 | -128.81 | -1,085.37 | 940.00 | 837.13 | 102.87 | 9.138 | |
| 10,500.00 | 9,036.00 | 10,748.00 | 9,035.00 | 50.86 | 56.84 | 89.94 | -129.12 | -1,185.37 | 940.00 | 832.50 | 107.50 | 8.744 | |
| 10,600.00 | 9,036.00 | 10,848.00 | 9,035.00 | 53.17 | 59.26 | 89.94 | -129.43 | -1,285.37 | 940.00 | 827.76 | 112.24 | 8.375 | |
| 10,700.00 | 9,036.00 | 10,948.00 | 9,035.00 | 55.53 | 61.72 | 89.94 | -129.75 | -1,385.37 | 940.00 | 822.94 | 117.06 | 8.030 | |
| 10,800.00 | 9,036.00 | 11,048.00 | 9,035.00 | 57.94 | 64.21 | 89.94 | -130.06 | -1,485.37 | 940.00 | 818.04 | 121.96 | 7.708 | |
| 10,900.00 | 9,036.00 | 11,148.00 | 9,035.00 | 60.38 | 66.73 | 89.94 | -130.37 | -1,585.37 | 940.00 | 813.08 | 126.92 | 7.406 | |
| 11,000.00 | 9,036.00 | 11,248.00 | 9,035.00 | 62.85 | 69.27 | 89.94 | -130.69 | -1,685.37 | 940.00 | 808.05 | 131.94 | 7.124 | |
| 11,100.00 | 9,036.00 | 11,348.00 | 9,035.00 | 65.36 | 71.84 | 89.94 | -131.00 | -1,785.37 | 940.00 | 802.98 | 137.02 | 6.860 | |
| 11,200.00 | 9,036.00 | 11,448.00 | 9,035.00 | 67.89 | 74.43 | 89.94 | -131.31 | -1,885.37 | 940.00 | 797.85 | 142.15 | 6.613 | |
| 11,300.00 | 9,036.00 | 11,548.00 | 9,035.00 | 70.45 | 77.03 | 89.94 | -131.63 | -1,985.37 | 940.00 | 792.69 | 147.31 | 6.381 | |
| 11,400.00 | 9,036.00 | 11,648.00 | 9,035.00 | 73.02 | 79.65 | 89.94 | -131.94 | -2,085.37 | 940.00 | 787.48 | 152.52 | 6.163 | |
| 11,500.00 | 9,036.00 | 11,748.00 | 9,035.00 | 75.62 | 82.29 | 89.94 | -132.25 | -2,185.37 | 940.00 | 782.24 | 157.76 | 5.959 | |
| 11,600.00 | 9,036.00 | 11,848.00 | 9,035.00 | 78.24 | 84.94 | 89.94 | -132.57 | -2,285.36 | 940.00 | 776.97 | 163.03 | 5.766 | |
| 11,700.00 | 9,036.00 | 11,948.00 | 9,035.00 | 80.87 | 87.61 | 89.94 | -132.88 | -2,385.36 | 940.00 | 771.67 | 168.32 | 5.584 | |
| 11,800.00 | 9,036.00 | 12,048.00 | 9,035.00 | 83.51 | 90.28 | 89.94 | -133.19 | -2,485.36 | 940.00 | 766.35 | 173.65 | 5.413 | |
| 11,900.00 | 9,036.00 | 12,148.00 | 9,035.00 | 86.17 | 92.97 | 89.94 | -133.51 | -2,585.36 | 940.00 | 761.00 | 178.99 | 5.252 | |
| 12,000.00 | 9,036.00 | 12,248.00 | 9,035.00 | 88.84 | 95.66 | 89.94 | -133.82 | -2,685.36 | 940.00 | 755.64 | 184.36 | 5.099 | |
| 12,100.00 | 9,036.00 | 12,348.00 | 9,035.00 | 91.52 | 98.36 | 89.94 | -134.13 | -2,785.36 | 940.00 | 750.25 | 189.75 | 4.954 | |
| 12,200.00 | 9,036.00 | 12,448.00 | 9,035.00 | 94.21 | 101.07 | 89.94 | -134.45 | -2,885.36 | 940.00 | 744.84 | 195.15 | 4.817 | |
| 12,300.00 | 9,036.00 | 12,548.00 | 9,035.00 | 96.91 | 103.79 | 89.94 | -134.76 | -2,985.36 | 940.00 | 739.42 | 200.57 | 4.687 | |
| 12,400.00 | 9,036.00 | 12,648.00 | 9,035.00 | 99.61 | 106.52 | 89.94 | -135.07 | -3,085.36 | 940.00 | 733.99 | 206.01 | 4.563 | |
| 12,500.00 | 9,036.00 | 12,748.00 | 9,035.00 | 102.33 | 109.25 | 89.94 | -135.38 | -3,185.36 | 940.00 | 728.54 | 211.46 | 4.445 | |
| 12,600.00 | 9,036.00 | 12,848.00 | 9,035.00 | 105.05 | 111.99 | 89.94 | -135.70 | -3,285.36 | 940.00 | 723.08 | 216.92 | 4.333 | |
| 12,700.00 | 9,036.00 | 12,948.00 | 9,035.00 | 107.78 | 114.73 | 89.94 | -136.01 | -3,385.36 | 940.00 | 717.60 | 222.39 | 4.227 | |
| 12,800.00 | 9,036.00 | 13,048.00 | 9,035.00 | 110.51 | 117.48 | 89.94 | -136.32 | -3,485.36 | 940.00 | 712.12 | 227.88 | 4.125 | |
| 12,900.00 | 9,036.00 | 13,148.00 | 9,035.00 | 113.25 | 120.23 | 89.94 | -136.64 | -3,585.36 | 939.99 | 706.62 | 233.37 | 4.028 | |
| 13,000.00 | 9,036.00 | 13,248.00 | 9,035.00 | 116.00 | 122.99 | 89.94 | -136.95 | -3,685.36 | 939.99 | 701.12 | 238.88 | 3.935 | |
| 13,100.00 | 9,036.00 | 13,348.00 | 9,035.00 | 118.75 | 125.75 | 89.94 | -137.26 | -3,785.36 | 939.99 | 695.60 | 244.39 | 3.846 | |
| 13,200.00 | 9,036.00 | 13,448.00 | 9,035.00 | 121.50 | 128.51 | 89.94 | -137.58 | -3,885.36 | 939.99 | 690.08 | 249.91 | 3.761 | |
| 13,300.00 | 9,036.00 | 13,548.00 | 9,035.00 | 124.26 | 131.28 | 89.94 | -137.89 | -3,985.36 | 939.99 | 684.55 | 255.44 | 3.680 | |
| 13,400.00 | 9,036.00 | 13,648.00 | 9,035.00 | 127.03 | 134.05 | 89.94 | -138.20 | -4,085.36 | 939.99 | 679.02 | 260.98 | 3.602 | |
| 13,500.00 | 9,036.00 | 13,748.00 | 9,035.00 | 129.79 | 136.83 | 89.94 | -138.52 | -4,185.36 | 939.99 | 673.47 | 266.52 | 3.527 | |
| 13,600.00 | 9,036.00 | 13,848.00 | 9,035.00 | 132.56 | 139.61 | 89.94 | -138.83 | -4,285.36 | 939.99 | 667.92 | 272.07 | 3.455 | |
| 13,700.00 | 9,036.00 | 13,948.00 | 9,035.00 | 135.34 | 142.39 | 89.94 | -139.14 | -4,385.35 | 939.99 | 662.37 | 277.63 | 3.386 | |
| 13,800.00 | 9,036.00 | 14,048.00 | 9,035.00 | 138.11 | 145.17 | 89.94 | -139.46 | -4,485.35 | 939.99 | 656.80 | 283.19 | 3.319 | |
| 13,900.00 | 9,036.00 | 14,148.00 | 9,035.00 | 140.89 | 147.96 | 89.94 | -139.77 | -4,585.35 | 939.99 | 651.24 | 288.75 | 3.255 | |
| 13,909.83 | 9,036.00 | 14,157.82 | 9,035.00 | 141.16 | 148.23 | 89.94 | -139.80 | -4,595.18 | 939.99 | 650.69 | 289.30 | 3.249 | |
| 13,913.79 | 9,036.00 | 14,157.94 | 9,035.00 | 141.27 | 148.23 | 89.94 | -139.80 | -4,595.30 | 940.00 | 650.59 | 289.42 | 3.248 | |

# Scientific Drilling Int.

*Anticollision Report*

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | ***Output errors are at*** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State FUTURE 4H - Wellbore #1 - Plan #1 FUTURE — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 90.00 | 0.00 | 50.00 | 50.00 | | | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.12 | 0.12 | 90.00 | 0.00 | 50.00 | 50.00 | 49.76 | 0.24 | 208.180 | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.48 | 0.48 | 90.00 | 0.00 | 50.00 | 50.00 | 49.04 | 0.96 | 52.240 | |
| 300.00 | 300.00 | 300.00 | 300.00 | 0.84 | 0.84 | 90.00 | 0.00 | 50.00 | 50.00 | 48.33 | 1.67 | 29.867 | |
| 400.00 | 400.00 | 400.00 | 400.00 | 1.20 | 1.20 | 90.00 | 0.00 | 50.00 | 50.00 | 47.61 | 2.39 | 20.912 | |
| 500.00 | 500.00 | 500.00 | 500.00 | 1.55 | 1.55 | 90.00 | 0.00 | 50.00 | 50.00 | 46.89 | 3.11 | 16.088 | |
| 600.00 | 600.00 | 600.00 | 600.00 | 1.91 | 1.91 | 90.00 | 0.00 | 50.00 | 50.00 | 46.18 | 3.82 | 13.072 | |
| 700.00 | 700.00 | 700.00 | 700.00 | 2.27 | 2.27 | 90.00 | 0.00 | 50.00 | 50.00 | 45.46 | 4.54 | 11.009 | |
| 800.00 | 800.00 | 800.00 | 800.00 | 2.63 | 2.63 | 90.00 | 0.00 | 50.00 | 50.00 | 44.74 | 5.26 | 9.508 | |
| 900.00 | 900.00 | 900.00 | 900.00 | 2.99 | 2.99 | 90.00 | 0.00 | 50.00 | 50.00 | 44.02 | 5.98 | 8.367 | |
| 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 3.35 | 3.35 | 90.00 | 0.00 | 50.00 | 50.00 | 43.31 | 6.69 | 7.471 | |
| 1,100.00 | 1,100.00 | 1,100.00 | 1,100.00 | 3.70 | 3.70 | 90.00 | 0.00 | 50.00 | 50.00 | 42.59 | 7.41 | 6.748 | |
| 1,200.00 | 1,200.00 | 1,200.00 | 1,200.00 | 4.06 | 4.06 | 90.00 | 0.00 | 50.00 | 50.00 | 41.87 | 8.13 | 6.153 | |
| 1,300.00 | 1,300.00 | 1,300.00 | 1,300.00 | 4.42 | 4.42 | 90.00 | 0.00 | 50.00 | 50.00 | 41.16 | 8.84 | 5.654 | |
| 1,400.00 | 1,400.00 | 1,400.00 | 1,400.00 | 4.78 | 4.78 | 90.00 | 0.00 | 50.00 | 50.00 | 40.44 | 9.56 | 5.230 | |
| 1,500.00 | 1,500.00 | 1,500.00 | 1,500.00 | 5.14 | 5.14 | 90.00 | 0.00 | 50.00 | 50.00 | 39.72 | 10.28 | 4.865 | |
| 1,600.00 | 1,600.00 | 1,600.00 | 1,600.00 | 5.50 | 5.50 | 90.00 | 0.00 | 50.00 | 50.00 | 39.01 | 10.99 | 4.548 | |
| 1,700.00 | 1,700.00 | 1,700.00 | 1,700.00 | 5.86 | 5.86 | 90.00 | 0.00 | 50.00 | 50.00 | 38.29 | 11.71 | 4.269 | |
| 1,800.00 | 1,800.00 | 1,800.00 | 1,800.00 | 6.21 | 6.21 | 90.00 | 0.00 | 50.00 | 50.00 | 37.57 | 12.43 | 4.023 | |
| 1,900.00 | 1,900.00 | 1,900.00 | 1,900.00 | 6.57 | 6.57 | 90.00 | 0.00 | 50.00 | 50.00 | 36.85 | 13.15 | 3.804 | |
| 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 6.93 | 6.93 | 90.00 | 0.00 | 50.00 | 50.00 | 36.14 | 13.86 | 3.607 | |
| 2,100.00 | 2,100.00 | 2,100.00 | 2,100.00 | 7.28 | 7.29 | -68.69 | 0.00 | 50.00 | 49.92 | 35.35 | 14.57 | 3.426 | |
| 2,200.00 | 2,199.95 | 2,199.95 | 2,199.95 | 7.61 | 7.65 | -71.95 | 0.00 | 50.00 | 48.92 | 33.67 | 15.25 | 3.207 | |
| 2,300.00 | 2,299.74 | 2,299.74 | 2,299.74 | 7.94 | 8.01 | -79.41 | 0.00 | 50.00 | 47.32 | 31.38 | 15.94 | 2.969 | |
| 2,300.98 | 2,300.71 | 2,300.00 | 2,300.00 | 7.94 | 8.01 | -79.44 | 0.00 | 50.00 | 47.31 | 31.37 | 15.94 | 2.968 | CC, ES, SF |
| 2,400.00 | 2,399.24 | 2,300.00 | 2,300.00 | 8.27 | 8.01 | -77.42 | 0.00 | 50.00 | 109.60 | 93.34 | 16.27 | 6.738 | |
| 2,500.00 | 2,498.33 | 2,300.00 | 2,300.00 | 8.60 | 8.01 | -71.50 | 0.00 | 50.00 | 204.23 | 187.64 | 16.59 | 12.311 | |
| 2,600.00 | 2,596.90 | 2,300.00 | 2,300.00 | 8.95 | 8.01 | -62.49 | 0.00 | 50.00 | 302.16 | 285.27 | 16.89 | 17.889 | |
| 2,700.00 | 2,695.04 | 2,300.00 | 2,300.00 | 9.30 | 8.01 | -60.56 | 0.00 | 50.00 | 400.98 | 383.75 | 17.23 | 23.276 | |
| 2,800.00 | 2,793.18 | 2,300.00 | 2,300.00 | 9.66 | 8.01 | -60.56 | 0.00 | 50.00 | 500.27 | 482.68 | 17.58 | 28.453 | |
| 2,900.00 | 2,891.32 | 2,300.00 | 2,300.00 | 10.03 | 8.01 | -60.56 | 0.00 | 50.00 | 599.79 | 581.84 | 17.94 | 33.425 | |
| 3,000.00 | 2,989.45 | 2,300.00 | 2,300.00 | 10.40 | 8.01 | -60.56 | 0.00 | 50.00 | 699.45 | 681.14 | 18.31 | 38.196 | |
| 3,100.00 | 3,087.59 | 2,300.00 | 2,300.00 | 10.78 | 8.01 | -60.56 | 0.00 | 50.00 | 799.19 | 780.51 | 18.68 | 42.773 | |
| 3,200.00 | 3,185.73 | 2,300.00 | 2,300.00 | 11.17 | 8.01 | -60.56 | 0.00 | 50.00 | 898.99 | 879.93 | 19.06 | 47.161 | |
| 3,300.00 | 3,283.86 | 2,300.00 | 2,300.00 | 11.56 | 8.01 | -60.56 | 0.00 | 50.00 | 998.84 | 979.39 | 19.44 | 51.370 | |
| 3,400.00 | 3,382.00 | 2,300.00 | 2,300.00 | 11.95 | 8.01 | -60.56 | 0.00 | 50.00 | 1,098.71 | 1,078.88 | 19.83 | 55.408 | |
| 3,500.00 | 3,480.13 | 2,300.00 | 2,300.00 | 12.35 | 8.01 | -60.56 | 0.00 | 50.00 | 1,198.60 | 1,178.38 | 20.22 | 59.283 | |
| 3,600.00 | 3,578.27 | 2,300.00 | 2,300.00 | 12.75 | 8.01 | -60.56 | 0.00 | 50.00 | 1,298.51 | 1,277.90 | 20.61 | 63.003 | |
| 3,700.00 | 3,676.41 | 2,300.00 | 2,300.00 | 13.16 | 8.01 | -60.56 | 0.00 | 50.00 | 1,398.43 | 1,377.42 | 21.00 | 66.576 | |
| 3,800.00 | 3,774.54 | 2,300.00 | 2,300.00 | 13.57 | 8.01 | -60.56 | 0.00 | 50.00 | 1,498.36 | 1,476.96 | 21.40 | 70.009 | |
| 3,900.00 | 3,872.68 | 2,300.00 | 2,300.00 | 13.98 | 8.01 | -60.56 | 0.00 | 50.00 | 1,598.30 | 1,576.50 | 21.80 | 73.310 | |
| 4,000.00 | 3,970.82 | 2,300.00 | 2,300.00 | 14.39 | 8.01 | -60.56 | 0.00 | 50.00 | 1,698.25 | 1,676.04 | 22.20 | 76.484 | |
| 4,100.00 | 4,068.95 | 2,300.00 | 2,300.00 | 14.80 | 8.01 | -60.56 | 0.00 | 50.00 | 1,798.20 | 1,775.59 | 22.61 | 79.539 | |
| 4,200.00 | 4,167.09 | 2,300.00 | 2,300.00 | 15.22 | 8.01 | -60.56 | 0.00 | 50.00 | 1,898.16 | 1,875.14 | 23.01 | 82.480 | |
| 4,300.00 | 4,265.23 | 2,300.00 | 2,300.00 | 15.64 | 8.01 | -60.56 | 0.00 | 50.00 | 1,998.12 | 1,974.70 | 23.42 | 85.313 | |
| 4,400.00 | 4,363.36 | 2,300.00 | 2,300.00 | 16.06 | 8.01 | -60.56 | 0.00 | 50.00 | 2,098.09 | 2,074.26 | 23.83 | 88.044 | |
| 4,500.00 | 4,461.50 | 2,300.00 | 2,300.00 | 16.48 | 8.01 | -60.56 | 0.00 | 50.00 | 2,198.06 | 2,173.82 | 24.24 | 90.678 | |
| 4,600.00 | 4,559.63 | 2,300.00 | 2,300.00 | 16.91 | 8.01 | -60.56 | 0.00 | 50.00 | 2,298.03 | 2,273.38 | 24.65 | 93.219 | |
| 4,700.00 | 4,657.77 | 2,300.00 | 2,300.00 | 17.33 | 8.01 | -60.56 | 0.00 | 50.00 | 2,398.00 | 2,372.94 | 25.06 | 95.672 | |
| 4,800.00 | 4,755.91 | 2,300.00 | 2,300.00 | 17.76 | 8.01 | -60.56 | 0.00 | 50.00 | 2,497.98 | 2,472.50 | 25.48 | 98.041 | |
| 4,900.00 | 4,854.04 | 2,300.00 | 2,300.00 | 18.19 | 8.01 | -60.56 | 0.00 | 50.00 | 2,597.96 | 2,572.06 | 25.89 | 100.330 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State FUTURE 4H - Wellbore #1 - Plan #1 FUTURE — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,000.00 | 4,952.18 | 2,300.00 | 2,300.00 | 18.62 | 8.01 | -60.56 | 0.00 | 50.00 | 2,697.94 | 2,671.62 | 26.31 | 102.543 | |
| 5,100.00 | 5,050.32 | 2,300.00 | 2,300.00 | 19.05 | 8.01 | -60.56 | 0.00 | 50.00 | 2,797.92 | 2,771.19 | 26.73 | 104.684 | |
| 5,200.00 | 5,148.45 | 2,300.00 | 2,300.00 | 19.48 | 8.01 | -60.56 | 0.00 | 50.00 | 2,897.90 | 2,870.75 | 27.15 | 106.755 | |
| 5,300.00 | 5,246.59 | 2,300.00 | 2,300.00 | 19.91 | 8.01 | -60.56 | 0.00 | 50.00 | 2,997.88 | 2,970.32 | 27.56 | 108.761 | |
| 5,400.00 | 5,344.73 | 2,300.00 | 2,300.00 | 20.34 | 8.01 | -60.56 | 0.00 | 50.00 | 3,097.87 | 3,069.88 | 27.98 | 110.703 | |
| 5,500.00 | 5,442.86 | 2,300.00 | 2,300.00 | 20.77 | 8.01 | -60.56 | 0.00 | 50.00 | 3,197.85 | 3,169.45 | 28.40 | 112.585 | |
| 5,600.00 | 5,541.00 | 2,300.00 | 2,300.00 | 21.21 | 8.01 | -60.56 | 0.00 | 50.00 | 3,297.84 | 3,269.01 | 28.82 | 114.410 | |
| 5,700.00 | 5,639.13 | 2,300.00 | 2,300.00 | 21.64 | 8.01 | -60.56 | 0.00 | 50.00 | 3,397.83 | 3,368.58 | 29.25 | 116.180 | |
| 5,800.00 | 5,737.27 | 2,300.00 | 2,300.00 | 22.08 | 8.01 | -60.56 | 0.00 | 50.00 | 3,497.81 | 3,468.15 | 29.67 | 117.897 | |
| 5,900.00 | 5,835.41 | 2,300.00 | 2,300.00 | 22.51 | 8.01 | -60.56 | 0.00 | 50.00 | 3,597.80 | 3,567.71 | 30.09 | 119.564 | |
| 6,000.00 | 5,933.54 | 2,300.00 | 2,300.00 | 22.95 | 8.01 | -60.56 | 0.00 | 50.00 | 3,697.79 | 3,667.28 | 30.51 | 121.183 | |
| 6,100.00 | 6,031.68 | 2,300.00 | 2,300.00 | 23.39 | 8.01 | -60.56 | 0.00 | 50.00 | 3,797.78 | 3,766.84 | 30.94 | 122.755 | |
| 6,200.00 | 6,129.82 | 2,300.00 | 2,300.00 | 23.82 | 8.01 | -60.56 | 0.00 | 50.00 | 3,897.77 | 3,866.41 | 31.36 | 124.283 | |
| 6,300.00 | 6,227.95 | 2,300.00 | 2,300.00 | 24.26 | 8.01 | -60.56 | 0.00 | 50.00 | 3,997.76 | 3,965.98 | 31.79 | 125.769 | |
| 6,400.00 | 6,326.09 | 2,300.00 | 2,300.00 | 24.70 | 8.01 | -60.56 | 0.00 | 50.00 | 4,097.75 | 4,065.54 | 32.21 | 127.213 | |
| 6,500.00 | 6,424.23 | 2,300.00 | 2,300.00 | 25.14 | 8.01 | -60.56 | 0.00 | 50.00 | 4,197.75 | 4,165.11 | 32.64 | 128.619 | |
| 6,600.00 | 6,522.36 | 2,300.00 | 2,300.00 | 25.58 | 8.01 | -60.56 | 0.00 | 50.00 | 4,297.74 | 4,264.68 | 33.06 | 129.987 | |
| 6,700.00 | 6,620.50 | 2,300.00 | 2,300.00 | 26.02 | 8.01 | -60.56 | 0.00 | 50.00 | 4,397.73 | 4,364.24 | 33.49 | 131.318 | |
| 6,800.00 | 6,718.63 | 2,300.00 | 2,300.00 | 26.46 | 8.01 | -60.56 | 0.00 | 50.00 | 4,497.72 | 4,463.81 | 33.92 | 132.615 | |
| 6,900.00 | 6,816.77 | 2,300.00 | 2,300.00 | 26.90 | 8.01 | -60.56 | 0.00 | 50.00 | 4,597.72 | 4,563.37 | 34.34 | 133.878 | |
| 7,000.00 | 6,914.91 | 2,300.00 | 2,300.00 | 27.34 | 8.01 | -60.56 | 0.00 | 50.00 | 4,697.71 | 4,662.94 | 34.77 | 135.109 | |
| 7,100.00 | 7,013.04 | 2,300.00 | 2,300.00 | 27.78 | 8.01 | -60.56 | 0.00 | 50.00 | 4,797.70 | 4,762.51 | 35.20 | 136.309 | |
| 7,200.00 | 7,111.18 | 2,300.00 | 2,300.00 | 28.22 | 8.01 | -60.56 | 0.00 | 50.00 | 4,897.70 | 4,862.07 | 35.62 | 137.480 | |
| 7,300.00 | 7,209.32 | 2,300.00 | 2,300.00 | 28.66 | 8.01 | -60.56 | 0.00 | 50.00 | 4,997.69 | 4,961.64 | 36.05 | 138.621 | |
| 7,400.00 | 7,307.45 | 2,300.00 | 2,300.00 | 29.10 | 8.01 | -60.56 | 0.00 | 50.00 | 5,097.69 | 5,061.21 | 36.48 | 139.735 | |
| 7,500.00 | 7,405.59 | 2,300.00 | 2,300.00 | 29.55 | 8.01 | -60.56 | 0.00 | 50.00 | 5,197.68 | 5,160.77 | 36.91 | 140.822 | |
| 7,600.00 | 7,503.73 | 2,300.00 | 2,300.00 | 29.99 | 8.01 | -60.56 | 0.00 | 50.00 | 5,297.68 | 5,260.34 | 37.34 | 141.883 | |
| 7,700.00 | 7,601.86 | 2,300.00 | 2,300.00 | 30.43 | 8.01 | -60.56 | 0.00 | 50.00 | 5,397.67 | 5,359.90 | 37.77 | 142.919 | |
| 7,800.00 | 7,700.00 | 2,300.00 | 2,300.00 | 30.87 | 8.01 | -60.56 | 0.00 | 50.00 | 5,497.67 | 5,459.47 | 38.20 | 143.931 | |
| 7,900.00 | 7,798.13 | 2,300.00 | 2,300.00 | 31.32 | 8.01 | -60.56 | 0.00 | 50.00 | 5,597.66 | 5,559.04 | 38.63 | 144.919 | |
| 8,000.00 | 7,896.27 | 2,300.00 | 2,300.00 | 31.76 | 8.01 | -60.56 | 0.00 | 50.00 | 5,697.66 | 5,658.60 | 39.06 | 145.886 | |
| 8,100.00 | 7,994.63 | 2,300.00 | 2,300.00 | 32.20 | 8.01 | -161.79 | 0.00 | 50.00 | 5,797.65 | 5,760.31 | 37.34 | 155.261 | |
| 8,200.00 | 8,093.55 | 2,300.00 | 2,300.00 | 32.61 | 8.01 | -172.33 | 0.00 | 50.00 | 5,897.55 | 5,860.05 | 37.50 | 157.248 | |
| 8,300.00 | 8,192.92 | 2,300.00 | 2,300.00 | 33.00 | 8.01 | -175.19 | 0.00 | 50.00 | 5,997.26 | 5,959.42 | 37.84 | 158.490 | |
| 8,400.00 | 8,292.62 | 2,300.00 | 2,300.00 | 33.20 | 8.01 | -176.51 | 0.00 | 50.00 | 6,096.66 | 6,058.69 | 37.97 | 160.566 | |
| 8,500.00 | 8,392.52 | 2,300.00 | 2,300.00 | 33.23 | 8.01 | -177.27 | 0.00 | 50.00 | 6,195.65 | 6,157.77 | 37.88 | 163.542 | |
| 8,600.00 | 8,492.50 | 2,300.00 | 2,300.00 | 33.24 | 8.01 | 57.30 | 0.00 | 50.00 | 6,294.10 | 6,256.27 | 37.84 | 166.350 | |
| 8,700.00 | 8,591.42 | 2,300.00 | 2,300.00 | 33.23 | 8.01 | 31.29 | 0.00 | 50.00 | 6,390.67 | 6,352.76 | 37.92 | 168.552 | |
| 8,800.00 | 8,686.43 | 2,300.00 | 2,300.00 | 33.20 | 8.01 | 20.93 | 0.00 | 50.00 | 6,482.63 | 6,446.24 | 36.39 | 178.153 | |
| 8,900.00 | 8,774.66 | 2,300.00 | 2,300.00 | 33.16 | 8.01 | 15.85 | 0.00 | 50.00 | 6,567.44 | 6,533.86 | 33.58 | 195.549 | |
| 9,000.00 | 8,853.41 | 2,300.00 | 2,300.00 | 33.11 | 8.01 | 12.98 | 0.00 | 50.00 | 6,642.85 | 6,613.00 | 29.85 | 222.551 | |
| 9,100.00 | 8,920.31 | 2,300.00 | 2,300.00 | 33.08 | 8.01 | 11.23 | 0.00 | 50.00 | 6,706.90 | 6,681.42 | 25.49 | 263.128 | |
| 9,200.00 | 8,973.31 | 2,300.00 | 2,300.00 | 33.06 | 8.01 | 10.12 | 0.00 | 50.00 | 6,758.02 | 6,737.10 | 20.91 | 323.130 | |
| 9,300.00 | 9,010.81 | 2,300.00 | 2,300.00 | 33.04 | 8.01 | 9.44 | 0.00 | 50.00 | 6,794.94 | 6,778.14 | 16.79 | 404.593 | |
| 9,400.00 | 9,031.66 | 2,300.00 | 2,300.00 | 33.06 | 8.01 | 9.08 | 0.00 | 50.00 | 6,816.78 | 6,802.51 | 14.27 | 477.604 | |
| 9,500.00 | 9,036.00 | 2,300.00 | 2,300.00 | 33.21 | 8.01 | 8.99 | 0.00 | 50.00 | 6,823.78 | 6,809.53 | 14.25 | 478.715 | |
| 9,600.00 | 9,036.00 | 2,300.00 | 2,300.00 | 34.03 | 8.01 | 8.99 | 0.00 | 50.00 | 6,827.97 | 6,813.36 | 14.61 | 467.350 | |
| 9,700.00 | 9,036.00 | 2,300.00 | 2,300.00 | 35.35 | 8.01 | 8.99 | 0.00 | 50.00 | 6,833.62 | 6,818.60 | 15.02 | 454.938 | |
| 9,800.00 | 9,036.00 | 2,300.00 | 2,300.00 | 36.87 | 8.01 | 8.99 | 0.00 | 50.00 | 6,840.72 | 6,825.24 | 15.48 | 441.851 | |
| 9,900.00 | 9,036.00 | 2,300.00 | 2,300.00 | 38.55 | 8.01 | 8.99 | 0.00 | 50.00 | 6,849.28 | 6,833.29 | 15.99 | 428.409 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State FUTURE 4H - Wellbore #1 - Plan #1 FUTURE

**Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM

**Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10,000.00 | 9,036.00 | 2,300.00 | 2,300.00 | 40.36 | 8.01 | 8.99 | 0.00 | 50.00 | 6,859.28 | 6,842.75 | 16.53 | 414.878 | |
| 10,100.00 | 9,036.00 | 2,300.00 | 2,300.00 | 42.29 | 8.01 | 8.99 | 0.00 | 50.00 | 6,870.73 | 6,853.62 | 17.11 | 401.466 | |
| 10,200.00 | 9,036.00 | 2,300.00 | 2,300.00 | 44.31 | 8.01 | 8.99 | 0.00 | 50.00 | 6,883.61 | 6,865.88 | 17.73 | 388.332 | |
| 10,300.00 | 9,036.00 | 2,300.00 | 2,300.00 | 46.43 | 8.01 | 8.99 | 0.00 | 50.00 | 6,897.92 | 6,879.55 | 18.37 | 375.589 | |
| 10,400.00 | 9,036.00 | 2,300.00 | 2,300.00 | 48.61 | 8.01 | 8.99 | 0.00 | 50.00 | 6,913.64 | 6,894.61 | 19.03 | 363.316 | |
| 10,500.00 | 9,036.00 | 2,300.00 | 2,300.00 | 50.86 | 8.01 | 8.99 | 0.00 | 50.00 | 6,930.77 | 6,911.05 | 19.71 | 351.559 | |
| 10,600.00 | 9,036.00 | 2,300.00 | 2,300.00 | 53.17 | 8.01 | 8.99 | 0.00 | 50.00 | 6,949.30 | 6,928.88 | 20.42 | 340.345 | |
| 10,700.00 | 9,036.00 | 2,300.00 | 2,300.00 | 55.53 | 8.01 | 8.99 | 0.00 | 50.00 | 6,969.21 | 6,948.07 | 21.14 | 329.683 | |
| 10,800.00 | 9,036.00 | 2,300.00 | 2,300.00 | 57.94 | 8.01 | 8.99 | 0.00 | 50.00 | 6,990.50 | 6,968.62 | 21.87 | 319.570 | |
| 10,900.00 | 9,036.00 | 2,300.00 | 2,300.00 | 60.38 | 8.01 | 8.99 | 0.00 | 50.00 | 7,013.14 | 6,990.52 | 22.62 | 309.995 | |
| 11,000.00 | 9,036.00 | 2,300.00 | 2,300.00 | 62.85 | 8.01 | 8.99 | 0.00 | 50.00 | 7,037.14 | 7,013.76 | 23.38 | 300.940 | |
| 11,100.00 | 9,036.00 | 2,300.00 | 2,300.00 | 65.36 | 8.01 | 8.99 | 0.00 | 50.00 | 7,062.47 | 7,038.32 | 24.15 | 292.383 | |
| 11,200.00 | 9,036.00 | 2,300.00 | 2,300.00 | 67.89 | 8.01 | 8.99 | 0.00 | 50.00 | 7,089.12 | 7,064.19 | 24.94 | 284.302 | |
| 11,300.00 | 9,036.00 | 2,300.00 | 2,300.00 | 70.45 | 8.01 | 8.99 | 0.00 | 50.00 | 7,117.08 | 7,091.35 | 25.72 | 276.671 | |
| 11,400.00 | 9,036.00 | 2,300.00 | 2,300.00 | 73.02 | 8.01 | 8.99 | 0.00 | 50.00 | 7,146.32 | 7,119.80 | 26.52 | 269.465 | |
| 11,500.00 | 9,036.00 | 2,300.00 | 2,300.00 | 75.62 | 8.01 | 8.99 | 0.00 | 50.00 | 7,176.84 | 7,149.52 | 27.32 | 262.661 | |
| 11,600.00 | 9,036.00 | 2,300.00 | 2,300.00 | 78.24 | 8.01 | 8.99 | 0.00 | 50.00 | 7,208.62 | 7,180.49 | 28.13 | 256.233 | |
| 11,700.00 | 9,036.00 | 2,300.00 | 2,300.00 | 80.87 | 8.01 | 8.99 | 0.00 | 50.00 | 7,241.64 | 7,212.70 | 28.95 | 250.159 | |
| 11,800.00 | 9,036.00 | 2,300.00 | 2,300.00 | 83.51 | 8.01 | 8.99 | 0.00 | 50.00 | 7,275.89 | 7,246.12 | 29.77 | 244.417 | |
| 11,900.00 | 9,036.00 | 2,300.00 | 2,300.00 | 86.17 | 8.01 | 8.99 | 0.00 | 50.00 | 7,311.34 | 7,280.75 | 30.59 | 238.986 | |
| 12,000.00 | 9,036.00 | 2,300.00 | 2,300.00 | 88.84 | 8.01 | 8.99 | 0.00 | 50.00 | 7,347.98 | 7,316.56 | 31.42 | 233.846 | |
| 12,100.00 | 9,036.00 | 2,300.00 | 2,300.00 | 91.52 | 8.01 | 8.99 | 0.00 | 50.00 | 7,385.80 | 7,353.54 | 32.26 | 228.980 | |
| 12,200.00 | 9,036.00 | 2,300.00 | 2,300.00 | 94.21 | 8.01 | 8.99 | 0.00 | 50.00 | 7,424.77 | 7,391.68 | 33.09 | 224.368 | |
| 12,300.00 | 9,036.00 | 2,300.00 | 2,300.00 | 96.91 | 8.01 | 8.99 | 0.00 | 50.00 | 7,464.87 | 7,430.94 | 33.93 | 219.997 | |
| 12,400.00 | 9,036.00 | 2,300.00 | 2,300.00 | 99.61 | 8.01 | 8.99 | 0.00 | 50.00 | 7,506.10 | 7,471.32 | 34.77 | 215.850 | |
| 12,500.00 | 9,036.00 | 2,300.00 | 2,300.00 | 102.33 | 8.01 | 8.99 | 0.00 | 50.00 | 7,548.42 | 7,512.80 | 35.62 | 211.913 | |
| 12,600.00 | 9,036.00 | 2,300.00 | 2,300.00 | 105.05 | 8.01 | 8.99 | 0.00 | 50.00 | 7,591.82 | 7,555.36 | 36.47 | 208.174 | |
| 12,700.00 | 9,036.00 | 2,300.00 | 2,300.00 | 107.78 | 8.01 | 8.99 | 0.00 | 50.00 | 7,636.29 | 7,598.97 | 37.32 | 204.620 | |
| 12,800.00 | 9,036.00 | 2,300.00 | 2,300.00 | 110.51 | 8.01 | 8.99 | 0.00 | 50.00 | 7,681.80 | 7,643.63 | 38.17 | 201.241 | |
| 12,900.00 | 9,036.00 | 2,300.00 | 2,300.00 | 113.25 | 8.01 | 8.99 | 0.00 | 50.00 | 7,728.34 | 7,689.31 | 39.03 | 198.024 | |
| 13,000.00 | 9,036.00 | 2,300.00 | 2,300.00 | 116.00 | 8.01 | 8.99 | 0.00 | 50.00 | 7,775.89 | 7,736.00 | 39.88 | 194.962 | |
| 13,100.00 | 9,036.00 | 2,300.00 | 2,300.00 | 118.75 | 8.01 | 8.99 | 0.00 | 50.00 | 7,824.42 | 7,783.68 | 40.74 | 192.044 | |
| 13,200.00 | 9,036.00 | 2,300.00 | 2,300.00 | 121.50 | 8.01 | 8.99 | 0.00 | 50.00 | 7,873.93 | 7,832.32 | 41.60 | 189.262 | |
| 13,300.00 | 9,036.00 | 2,300.00 | 2,300.00 | 124.26 | 8.01 | 8.99 | 0.00 | 50.00 | 7,924.38 | 7,881.92 | 42.47 | 186.609 | |
| 13,400.00 | 9,036.00 | 2,300.00 | 2,300.00 | 127.03 | 8.01 | 8.99 | 0.00 | 50.00 | 7,975.78 | 7,932.45 | 43.33 | 184.077 | |
| 13,500.00 | 9,036.00 | 2,300.00 | 2,300.00 | 129.79 | 8.01 | 8.99 | 0.00 | 50.00 | 8,028.09 | 7,983.89 | 44.19 | 181.658 | |
| 13,600.00 | 9,036.00 | 2,300.00 | 2,300.00 | 132.56 | 8.01 | 8.99 | 0.00 | 50.00 | 8,081.30 | 8,036.24 | 45.06 | 179.348 | |
| 13,700.00 | 9,036.00 | 2,300.00 | 2,300.00 | 135.34 | 8.01 | 8.99 | 0.00 | 50.00 | 8,135.38 | 8,089.46 | 45.93 | 177.138 | |
| 13,800.00 | 9,036.00 | 2,300.00 | 2,300.00 | 138.11 | 8.01 | 8.99 | 0.00 | 50.00 | 8,190.34 | 8,143.54 | 46.80 | 175.025 | |
| 13,900.00 | 9,036.00 | 2,300.00 | 2,300.00 | 140.89 | 8.01 | 8.99 | 0.00 | 50.00 | 8,246.14 | 8,198.47 | 47.66 | 173.003 | |
| 13,913.79 | 9,036.00 | 2,300.00 | 2,300.00 | 141.27 | 8.01 | 8.99 | 0.00 | 50.00 | 8,253.90 | 8,206.11 | 47.78 | 172.731 | |

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | *Wellbore #1* | ***Database:*** | *Midland District* |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State *FUTURE* 5H - Wellbore #1 - Plan #1 *FUTURE*

**Survey Program:** 0-MWD+HDGM

***Offset Site Error:*** 0.00 usft

**Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -90.00 | 0.00 | -50.00 | 50.00 | | | | |
| 100.00 | 100.00 | 100.00 | 100.00 | 0.12 | 0.12 | -90.00 | 0.00 | -50.00 | 50.00 | 49.76 | 0.24 | 208.180 | |
| 200.00 | 200.00 | 200.00 | 200.00 | 0.48 | 0.48 | -90.00 | 0.00 | -50.00 | 50.00 | 49.04 | 0.96 | 52.240 | |
| 300.00 | 300.00 | 300.00 | 300.00 | 0.84 | 0.84 | -90.00 | 0.00 | -50.00 | 50.00 | 48.33 | 1.67 | 29.867 | |
| 400.00 | 400.00 | 400.00 | 400.00 | 1.20 | 1.20 | -90.00 | 0.00 | -50.00 | 50.00 | 47.61 | 2.39 | 20.912 | |
| 500.00 | 500.00 | 500.00 | 500.00 | 1.55 | 1.55 | -90.00 | 0.00 | -50.00 | 50.00 | 46.89 | 3.11 | 16.088 | |
| 600.00 | 600.00 | 600.00 | 600.00 | 1.91 | 1.91 | -90.00 | 0.00 | -50.00 | 50.00 | 46.18 | 3.82 | 13.072 | |
| 700.00 | 700.00 | 700.00 | 700.00 | 2.27 | 2.27 | -90.00 | 0.00 | -50.00 | 50.00 | 45.46 | 4.54 | 11.009 | |
| 800.00 | 800.00 | 800.00 | 800.00 | 2.63 | 2.63 | -90.00 | 0.00 | -50.00 | 50.00 | 44.74 | 5.26 | 9.508 | |
| 900.00 | 900.00 | 900.00 | 900.00 | 2.99 | 2.99 | -90.00 | 0.00 | -50.00 | 50.00 | 44.02 | 5.98 | 8.367 | |
| 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 3.35 | 3.35 | -90.00 | 0.00 | -50.00 | 50.00 | 43.31 | 6.69 | 7.471 | |
| 1,100.00 | 1,100.00 | 1,100.00 | 1,100.00 | 3.70 | 3.70 | -90.00 | 0.00 | -50.00 | 50.00 | 42.59 | 7.41 | 6.748 | |
| 1,200.00 | 1,200.00 | 1,200.00 | 1,200.00 | 4.06 | 4.06 | -90.00 | 0.00 | -50.00 | 50.00 | 41.87 | 8.13 | 6.153 | |
| 1,300.00 | 1,300.00 | 1,300.00 | 1,300.00 | 4.42 | 4.42 | -90.00 | 0.00 | -50.00 | 50.00 | 41.16 | 8.84 | 5.654 | |
| 1,400.00 | 1,400.00 | 1,400.00 | 1,400.00 | 4.78 | 4.78 | -90.00 | 0.00 | -50.00 | 50.00 | 40.44 | 9.56 | 5.230 | |
| 1,500.00 | 1,500.00 | 1,500.00 | 1,500.00 | 5.14 | 5.14 | -90.00 | 0.00 | -50.00 | 50.00 | 39.72 | 10.28 | 4.865 | |
| 1,600.00 | 1,600.00 | 1,600.00 | 1,600.00 | 5.50 | 5.50 | -90.00 | 0.00 | -50.00 | 50.00 | 39.01 | 10.99 | 4.548 | |
| 1,700.00 | 1,700.00 | 1,700.00 | 1,700.00 | 5.86 | 5.86 | -90.00 | 0.00 | -50.00 | 50.00 | 38.29 | 11.71 | 4.269 | |
| 1,800.00 | 1,800.00 | 1,800.00 | 1,800.00 | 6.21 | 6.21 | -90.00 | 0.00 | -50.00 | 50.00 | 37.57 | 12.43 | 4.023 | |
| 1,900.00 | 1,900.00 | 1,900.00 | 1,900.00 | 6.57 | 6.57 | -90.00 | 0.00 | -50.00 | 50.00 | 36.85 | 13.15 | 3.804 | |
| 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 6.93 | 6.93 | -90.00 | 0.00 | -50.00 | 50.00 | 36.14 | 13.86 | 3.607 CC | |
| 2,043.30 | 2,043.30 | 2,043.30 | 2,043.30 | 7.08 | 7.09 | 111.66 | 0.00 | -50.00 | 50.04 | 35.87 | 14.17 | 3.532 | |
| 2,100.00 | 2,100.00 | 2,100.00 | 2,100.00 | 7.28 | 7.29 | 111.77 | 0.00 | -50.00 | 50.08 | 35.51 | 14.57 | 3.437 ES | |
| 2,200.00 | 2,199.95 | 2,199.95 | 2,199.95 | 7.61 | 7.65 | 114.82 | 0.00 | -50.00 | 51.25 | 36.00 | 15.25 | 3.360 SF | |
| 2,300.00 | 2,299.74 | 2,299.74 | 2,299.74 | 7.94 | 8.01 | 120.96 | 0.00 | -50.00 | 54.28 | 38.35 | 15.93 | 3.408 | |
| 2,400.00 | 2,399.24 | 2,300.00 | 2,300.00 | 8.27 | 8.01 | 119.29 | 0.00 | -50.00 | 115.97 | 99.72 | 16.25 | 7.138 | |
| 2,500.00 | 2,498.33 | 2,300.00 | 2,300.00 | 8.60 | 8.01 | 114.02 | 0.00 | -50.00 | 210.08 | 193.50 | 16.58 | 12.672 | |
| 2,600.00 | 2,596.90 | 2,300.00 | 2,300.00 | 8.95 | 8.01 | 104.30 | 0.00 | -50.00 | 308.15 | 291.22 | 16.93 | 18.198 | |
| 2,700.00 | 2,695.04 | 2,300.00 | 2,300.00 | 9.30 | 8.01 | 101.88 | 0.00 | -50.00 | 407.24 | 389.95 | 17.29 | 23.555 | |
| 2,800.00 | 2,793.18 | 2,300.00 | 2,300.00 | 9.66 | 8.01 | 101.88 | 0.00 | -50.00 | 506.70 | 489.05 | 17.65 | 28.709 | |
| 2,900.00 | 2,891.32 | 2,300.00 | 2,300.00 | 10.03 | 8.01 | 101.88 | 0.00 | -50.00 | 606.33 | 588.31 | 18.02 | 33.655 | |
| 3,000.00 | 2,989.45 | 2,300.00 | 2,300.00 | 10.40 | 8.01 | 101.88 | 0.00 | -50.00 | 706.06 | 687.67 | 18.39 | 38.395 | |
| 3,100.00 | 3,087.59 | 2,300.00 | 2,300.00 | 10.78 | 8.01 | 101.88 | 0.00 | -50.00 | 805.86 | 787.10 | 18.77 | 42.937 | |
| 3,200.00 | 3,185.73 | 2,300.00 | 2,300.00 | 11.17 | 8.01 | 101.88 | 0.00 | -50.00 | 905.71 | 886.56 | 19.15 | 47.289 | |
| 3,300.00 | 3,283.86 | 2,300.00 | 2,300.00 | 11.56 | 8.01 | 101.88 | 0.00 | -50.00 | 1,005.59 | 986.04 | 19.54 | 51.459 | |
| 3,400.00 | 3,382.00 | 2,300.00 | 2,300.00 | 11.95 | 8.01 | 101.88 | 0.00 | -50.00 | 1,105.48 | 1,085.55 | 19.93 | 55.456 | |
| 3,500.00 | 3,480.13 | 2,300.00 | 2,300.00 | 12.35 | 8.01 | 101.88 | 0.00 | -50.00 | 1,205.40 | 1,185.07 | 20.33 | 59.288 | |
| 3,600.00 | 3,578.27 | 2,300.00 | 2,300.00 | 12.75 | 8.01 | 101.88 | 0.00 | -50.00 | 1,305.33 | 1,284.60 | 20.73 | 62.963 | |
| 3,700.00 | 3,676.41 | 2,300.00 | 2,300.00 | 13.16 | 8.01 | 101.88 | 0.00 | -50.00 | 1,405.27 | 1,384.13 | 21.13 | 66.490 | |
| 3,800.00 | 3,774.54 | 2,300.00 | 2,300.00 | 13.57 | 8.01 | 101.88 | 0.00 | -50.00 | 1,505.21 | 1,483.67 | 21.54 | 69.876 | |
| 3,900.00 | 3,872.68 | 2,300.00 | 2,300.00 | 13.98 | 8.01 | 101.88 | 0.00 | -50.00 | 1,605.17 | 1,583.22 | 21.95 | 73.129 | |
| 4,000.00 | 3,970.82 | 2,300.00 | 2,300.00 | 14.39 | 8.01 | 101.88 | 0.00 | -50.00 | 1,705.12 | 1,682.76 | 22.36 | 76.254 | |
| 4,100.00 | 4,068.95 | 2,300.00 | 2,300.00 | 14.80 | 8.01 | 101.88 | 0.00 | -50.00 | 1,805.09 | 1,782.31 | 22.77 | 79.259 | |
| 4,200.00 | 4,167.09 | 2,300.00 | 2,300.00 | 15.22 | 8.01 | 101.88 | 0.00 | -50.00 | 1,905.05 | 1,881.86 | 23.19 | 82.151 | |
| 4,300.00 | 4,265.23 | 2,300.00 | 2,300.00 | 15.64 | 8.01 | 101.88 | 0.00 | -50.00 | 2,005.02 | 1,981.42 | 23.61 | 84.934 | |
| 4,400.00 | 4,363.36 | 2,300.00 | 2,300.00 | 16.06 | 8.01 | 101.88 | 0.00 | -50.00 | 2,105.00 | 2,080.97 | 24.03 | 87.614 | |
| 4,500.00 | 4,461.50 | 2,300.00 | 2,300.00 | 16.48 | 8.01 | 101.88 | 0.00 | -50.00 | 2,204.97 | 2,180.53 | 24.45 | 90.197 | |
| 4,600.00 | 4,559.63 | 2,300.00 | 2,300.00 | 16.91 | 8.01 | 101.88 | 0.00 | -50.00 | 2,304.95 | 2,280.08 | 24.87 | 92.687 | |
| 4,700.00 | 4,657.77 | 2,300.00 | 2,300.00 | 17.33 | 8.01 | 101.88 | 0.00 | -50.00 | 2,404.93 | 2,379.64 | 25.29 | 95.089 | |
| 4,800.00 | 4,755.91 | 2,300.00 | 2,300.00 | 17.76 | 8.01 | 101.88 | 0.00 | -50.00 | 2,504.91 | 2,479.20 | 25.72 | 97.408 | |
| 4,900.00 | 4,854.04 | 2,300.00 | 2,300.00 | 18.19 | 8.01 | 101.88 | 0.00 | -50.00 | 2,604.90 | 2,578.75 | 26.14 | 99.646 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State FUTURE 5H - Wellbore #1 - Plan #1 FUTURE — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,000.00 | 4,952.18 | 2,300.00 | 2,300.00 | 18.62 | 8.01 | 101.88 | 0.00 | -50.00 | 2,704.88 | 2,678.31 | 26.57 | 101.809 | |
| 5,100.00 | 5,050.32 | 2,300.00 | 2,300.00 | 19.05 | 8.01 | 101.88 | 0.00 | -50.00 | 2,804.86 | 2,777.87 | 27.00 | 103.900 | |
| 5,200.00 | 5,148.45 | 2,300.00 | 2,300.00 | 19.48 | 8.01 | 101.88 | 0.00 | -50.00 | 2,904.85 | 2,877.43 | 27.42 | 105.922 | |
| 5,300.00 | 5,246.59 | 2,300.00 | 2,300.00 | 19.91 | 8.01 | 101.88 | 0.00 | -50.00 | 3,004.84 | 2,976.98 | 27.85 | 107.878 | |
| 5,400.00 | 5,344.73 | 2,300.00 | 2,300.00 | 20.34 | 8.01 | 101.88 | 0.00 | -50.00 | 3,104.83 | 3,076.54 | 28.28 | 109.772 | |
| 5,500.00 | 5,442.86 | 2,300.00 | 2,300.00 | 20.77 | 8.01 | 101.88 | 0.00 | -50.00 | 3,204.81 | 3,176.10 | 28.72 | 111.606 | |
| 5,600.00 | 5,541.00 | 2,300.00 | 2,300.00 | 21.21 | 8.01 | 101.88 | 0.00 | -50.00 | 3,304.80 | 3,275.66 | 29.15 | 113.383 | |
| 5,700.00 | 5,639.13 | 2,300.00 | 2,300.00 | 21.64 | 8.01 | 101.88 | 0.00 | -50.00 | 3,404.79 | 3,375.21 | 29.58 | 115.105 | |
| 5,800.00 | 5,737.27 | 2,300.00 | 2,300.00 | 22.08 | 8.01 | 101.88 | 0.00 | -50.00 | 3,504.78 | 3,474.77 | 30.01 | 116.776 | |
| 5,900.00 | 5,835.41 | 2,300.00 | 2,300.00 | 22.51 | 8.01 | 101.88 | 0.00 | -50.00 | 3,604.77 | 3,574.33 | 30.45 | 118.396 | |
| 6,000.00 | 5,933.54 | 2,300.00 | 2,300.00 | 22.95 | 8.01 | 101.88 | 0.00 | -50.00 | 3,704.77 | 3,673.89 | 30.88 | 119.969 | |
| 6,100.00 | 6,031.68 | 2,300.00 | 2,300.00 | 23.39 | 8.01 | 101.88 | 0.00 | -50.00 | 3,804.76 | 3,773.44 | 31.32 | 121.496 | |
| 6,200.00 | 6,129.82 | 2,300.00 | 2,300.00 | 23.82 | 8.01 | 101.88 | 0.00 | -50.00 | 3,904.75 | 3,873.00 | 31.75 | 122.979 | |
| 6,300.00 | 6,227.95 | 2,300.00 | 2,300.00 | 24.26 | 8.01 | 101.88 | 0.00 | -50.00 | 4,004.74 | 3,972.56 | 32.19 | 124.421 | |
| 6,400.00 | 6,326.09 | 2,300.00 | 2,300.00 | 24.70 | 8.01 | 101.88 | 0.00 | -50.00 | 4,104.74 | 4,072.11 | 32.62 | 125.822 | |
| 6,500.00 | 6,424.23 | 2,300.00 | 2,300.00 | 25.14 | 8.01 | 101.88 | 0.00 | -50.00 | 4,204.73 | 4,171.67 | 33.06 | 127.184 | |
| 6,600.00 | 6,522.36 | 2,300.00 | 2,300.00 | 25.58 | 8.01 | 101.88 | 0.00 | -50.00 | 4,304.72 | 4,271.23 | 33.50 | 128.510 | |
| 6,700.00 | 6,620.50 | 2,300.00 | 2,300.00 | 26.02 | 8.01 | 101.88 | 0.00 | -50.00 | 4,404.72 | 4,370.78 | 33.93 | 129.799 | |
| 6,800.00 | 6,718.63 | 2,300.00 | 2,300.00 | 26.46 | 8.01 | 101.88 | 0.00 | -50.00 | 4,504.71 | 4,470.34 | 34.37 | 131.055 | |
| 6,900.00 | 6,816.77 | 2,300.00 | 2,300.00 | 26.90 | 8.01 | 101.88 | 0.00 | -50.00 | 4,604.71 | 4,569.90 | 34.81 | 132.277 | |
| 7,000.00 | 6,914.91 | 2,300.00 | 2,300.00 | 27.34 | 8.01 | 101.88 | 0.00 | -50.00 | 4,704.70 | 4,669.45 | 35.25 | 133.468 | |
| 7,100.00 | 7,013.04 | 2,300.00 | 2,300.00 | 27.78 | 8.01 | 101.88 | 0.00 | -50.00 | 4,804.70 | 4,769.01 | 35.69 | 134.629 | |
| 7,200.00 | 7,111.18 | 2,300.00 | 2,300.00 | 28.22 | 8.01 | 101.88 | 0.00 | -50.00 | 4,904.69 | 4,868.56 | 36.13 | 135.760 | |
| 7,300.00 | 7,209.32 | 2,300.00 | 2,300.00 | 28.66 | 8.01 | 101.88 | 0.00 | -50.00 | 5,004.69 | 4,968.12 | 36.57 | 136.863 | |
| 7,400.00 | 7,307.45 | 2,300.00 | 2,300.00 | 29.10 | 8.01 | 101.88 | 0.00 | -50.00 | 5,104.68 | 5,067.68 | 37.01 | 137.938 | |
| 7,500.00 | 7,405.59 | 2,300.00 | 2,300.00 | 29.55 | 8.01 | 101.88 | 0.00 | -50.00 | 5,204.68 | 5,167.23 | 37.45 | 138.988 | |
| 7,600.00 | 7,503.73 | 2,300.00 | 2,300.00 | 29.99 | 8.01 | 101.88 | 0.00 | -50.00 | 5,304.67 | 5,266.79 | 37.89 | 140.012 | |
| 7,700.00 | 7,601.86 | 2,300.00 | 2,300.00 | 30.43 | 8.01 | 101.88 | 0.00 | -50.00 | 5,404.67 | 5,366.34 | 38.33 | 141.012 | |
| 7,800.00 | 7,700.00 | 2,300.00 | 2,300.00 | 30.87 | 8.01 | 101.88 | 0.00 | -50.00 | 5,504.67 | 5,465.90 | 38.77 | 141.988 | |
| 7,900.00 | 7,798.13 | 2,300.00 | 2,300.00 | 31.32 | 8.01 | 101.88 | 0.00 | -50.00 | 5,604.66 | 5,565.45 | 39.21 | 142.941 | |
| 8,000.00 | 7,896.27 | 2,300.00 | 2,300.00 | 31.76 | 8.01 | 101.88 | 0.00 | -50.00 | 5,704.66 | 5,665.01 | 39.65 | 143.873 | |
| 8,100.00 | 7,994.63 | 2,300.00 | 2,300.00 | 32.20 | 8.01 | 165.32 | 0.00 | -50.00 | 5,804.64 | 5,767.37 | 37.27 | 155.744 | |
| 8,200.00 | 8,093.55 | 2,300.00 | 2,300.00 | 32.61 | 8.01 | 173.05 | 0.00 | -50.00 | 5,904.52 | 5,867.01 | 37.51 | 157.399 | |
| 8,300.00 | 8,192.92 | 2,300.00 | 2,300.00 | 33.00 | 8.01 | 175.48 | 0.00 | -50.00 | 6,004.18 | 5,966.33 | 37.85 | 158.634 | |
| 8,400.00 | 8,292.62 | 2,300.00 | 2,300.00 | 33.20 | 8.01 | 176.67 | 0.00 | -50.00 | 6,103.52 | 6,065.54 | 37.98 | 160.713 | |
| 8,500.00 | 8,392.52 | 2,300.00 | 2,300.00 | 33.23 | 8.01 | 177.37 | 0.00 | -50.00 | 6,202.42 | 6,164.53 | 37.89 | 163.694 | |
| 8,600.00 | 8,492.50 | 2,300.00 | 2,300.00 | 33.24 | 8.01 | 53.67 | 0.00 | -50.00 | 6,300.76 | 6,262.83 | 37.93 | 166.110 | |
| 8,700.00 | 8,591.42 | 2,300.00 | 2,300.00 | 33.23 | 8.01 | 29.94 | 0.00 | -50.00 | 6,397.01 | 6,359.03 | 37.98 | 168.435 | |
| 8,800.00 | 8,686.43 | 2,300.00 | 2,300.00 | 33.20 | 8.01 | 20.32 | 0.00 | -50.00 | 6,488.41 | 6,452.00 | 36.41 | 178.201 | |
| 8,900.00 | 8,774.66 | 2,300.00 | 2,300.00 | 33.16 | 8.01 | 15.53 | 0.00 | -50.00 | 6,572.43 | 6,538.84 | 33.59 | 195.655 | |
| 9,000.00 | 8,853.41 | 2,300.00 | 2,300.00 | 33.11 | 8.01 | 12.79 | 0.00 | -50.00 | 6,646.86 | 6,617.01 | 29.85 | 222.679 | |
| 9,100.00 | 8,920.31 | 2,300.00 | 2,300.00 | 33.08 | 8.01 | 11.11 | 0.00 | -50.00 | 6,709.77 | 6,684.28 | 25.49 | 263.260 | |
| 9,200.00 | 8,973.31 | 2,300.00 | 2,300.00 | 33.06 | 8.01 | 10.05 | 0.00 | -50.00 | 6,759.61 | 6,738.70 | 20.91 | 323.253 | |
| 9,300.00 | 9,010.81 | 2,300.00 | 2,300.00 | 33.04 | 8.01 | 9.40 | 0.00 | -50.00 | 6,795.16 | 6,778.37 | 16.79 | 404.677 | |
| 9,400.00 | 9,031.66 | 2,300.00 | 2,300.00 | 33.06 | 8.01 | 9.07 | 0.00 | -50.00 | 6,815.57 | 6,801.30 | 14.27 | 477.568 | |
| 9,500.00 | 9,036.00 | 2,300.00 | 2,300.00 | 33.21 | 8.01 | 8.99 | 0.00 | -50.00 | 6,821.11 | 6,806.85 | 14.25 | 478.518 | |
| 9,600.00 | 9,036.00 | 2,300.00 | 2,300.00 | 34.03 | 8.01 | 8.99 | 0.00 | -50.00 | 6,823.83 | 6,809.22 | 14.61 | 467.055 | |
| 9,700.00 | 9,036.00 | 2,300.00 | 2,300.00 | 35.35 | 8.01 | 8.99 | 0.00 | -50.00 | 6,828.02 | 6,813.00 | 15.02 | 454.554 | |
| 9,800.00 | 9,036.00 | 2,300.00 | 2,300.00 | 36.87 | 8.01 | 8.99 | 0.00 | -50.00 | 6,833.67 | 6,818.18 | 15.48 | 441.383 | |
| 9,900.00 | 9,036.00 | 2,300.00 | 2,300.00 | 38.55 | 8.01 | 8.99 | 0.00 | -50.00 | 6,840.77 | 6,824.78 | 15.99 | 427.864 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - C 17 State FUTURE 5H - Wellbore #1 - Plan #1 FUTURE — **Offset Site Error:** 0.00 usft

**Survey Program:** 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10,000.00 | 9,036.00 | 2,300.00 | 2,300.00 | 40.36 | 8.01 | 8.99 | 0.00 | -50.00 | 6,849.33 | 6,832.79 | 16.53 | 414.262 | |
| 10,100.00 | 9,036.00 | 2,300.00 | 2,300.00 | 42.29 | 8.01 | 8.99 | 0.00 | -50.00 | 6,859.33 | 6,842.22 | 17.11 | 400.786 | |
| 10,200.00 | 9,036.00 | 2,300.00 | 2,300.00 | 44.31 | 8.01 | 8.99 | 0.00 | -50.00 | 6,870.78 | 6,853.05 | 17.73 | 387.594 | |
| 10,300.00 | 9,036.00 | 2,300.00 | 2,300.00 | 46.43 | 8.01 | 8.99 | 0.00 | -50.00 | 6,883.66 | 6,865.29 | 18.37 | 374.799 | |
| 10,400.00 | 9,036.00 | 2,300.00 | 2,300.00 | 48.61 | 8.01 | 8.99 | 0.00 | -50.00 | 6,897.96 | 6,878.93 | 19.03 | 362.477 | |
| 10,500.00 | 9,036.00 | 2,300.00 | 2,300.00 | 50.86 | 8.01 | 8.99 | 0.00 | -50.00 | 6,913.69 | 6,893.97 | 19.72 | 350.677 | |
| 10,600.00 | 9,036.00 | 2,300.00 | 2,300.00 | 53.17 | 8.01 | 8.99 | 0.00 | -50.00 | 6,930.82 | 6,910.40 | 20.42 | 339.425 | |
| 10,700.00 | 9,036.00 | 2,300.00 | 2,300.00 | 55.53 | 8.01 | 8.99 | 0.00 | -50.00 | 6,949.34 | 6,928.20 | 21.14 | 328.728 | |
| 10,800.00 | 9,036.00 | 2,300.00 | 2,300.00 | 57.94 | 8.01 | 8.99 | 0.00 | -50.00 | 6,969.26 | 6,947.38 | 21.88 | 318.584 | |
| 10,900.00 | 9,036.00 | 2,300.00 | 2,300.00 | 60.38 | 8.01 | 8.99 | 0.00 | -50.00 | 6,990.54 | 6,967.92 | 22.62 | 308.981 | |
| 11,000.00 | 9,036.00 | 2,300.00 | 2,300.00 | 62.85 | 8.01 | 8.99 | 0.00 | -50.00 | 7,013.19 | 6,989.81 | 23.39 | 299.901 | |
| 11,100.00 | 9,036.00 | 2,300.00 | 2,300.00 | 65.36 | 8.01 | 8.99 | 0.00 | -50.00 | 7,037.19 | 7,013.03 | 24.16 | 291.322 | |
| 11,200.00 | 9,036.00 | 2,300.00 | 2,300.00 | 67.89 | 8.01 | 8.99 | 0.00 | -50.00 | 7,062.52 | 7,037.58 | 24.94 | 283.220 | |
| 11,300.00 | 9,036.00 | 2,300.00 | 2,300.00 | 70.45 | 8.01 | 8.99 | 0.00 | -50.00 | 7,089.17 | 7,063.44 | 25.73 | 275.572 | |
| 11,400.00 | 9,036.00 | 2,300.00 | 2,300.00 | 73.02 | 8.01 | 8.99 | 0.00 | -50.00 | 7,117.12 | 7,090.60 | 26.52 | 268.350 | |
| 11,500.00 | 9,036.00 | 2,300.00 | 2,300.00 | 75.62 | 8.01 | 8.99 | 0.00 | -50.00 | 7,146.37 | 7,119.05 | 27.33 | 261.532 | |
| 11,600.00 | 9,036.00 | 2,300.00 | 2,300.00 | 78.24 | 8.01 | 8.99 | 0.00 | -50.00 | 7,176.89 | 7,148.76 | 28.13 | 255.092 | |
| 11,700.00 | 9,036.00 | 2,300.00 | 2,300.00 | 80.87 | 8.01 | 8.99 | 0.00 | -50.00 | 7,208.67 | 7,179.72 | 28.95 | 249.007 | |
| 11,800.00 | 9,036.00 | 2,300.00 | 2,300.00 | 83.51 | 8.01 | 8.99 | 0.00 | -50.00 | 7,241.69 | 7,211.92 | 29.77 | 243.255 | |
| 11,900.00 | 9,036.00 | 2,300.00 | 2,300.00 | 86.17 | 8.01 | 8.99 | 0.00 | -50.00 | 7,275.94 | 7,245.34 | 30.59 | 237.816 | |
| 12,000.00 | 9,036.00 | 2,300.00 | 2,300.00 | 88.84 | 8.01 | 8.99 | 0.00 | -50.00 | 7,311.39 | 7,279.96 | 31.42 | 232.669 | |
| 12,100.00 | 9,036.00 | 2,300.00 | 2,300.00 | 91.52 | 8.01 | 8.99 | 0.00 | -50.00 | 7,348.03 | 7,315.77 | 32.26 | 227.796 | |
| 12,200.00 | 9,036.00 | 2,300.00 | 2,300.00 | 94.21 | 8.01 | 8.99 | 0.00 | -50.00 | 7,385.84 | 7,352.75 | 33.09 | 223.180 | |
| 12,300.00 | 9,036.00 | 2,300.00 | 2,300.00 | 96.91 | 8.01 | 8.99 | 0.00 | -50.00 | 7,424.81 | 7,390.88 | 33.93 | 218.804 | |
| 12,400.00 | 9,036.00 | 2,300.00 | 2,300.00 | 99.61 | 8.01 | 8.99 | 0.00 | -50.00 | 7,464.92 | 7,430.14 | 34.78 | 214.653 | |
| 12,500.00 | 9,036.00 | 2,300.00 | 2,300.00 | 102.33 | 8.01 | 8.99 | 0.00 | -50.00 | 7,506.14 | 7,470.52 | 35.62 | 210.714 | |
| 12,600.00 | 9,036.00 | 2,300.00 | 2,300.00 | 105.05 | 8.01 | 8.99 | 0.00 | -50.00 | 7,548.46 | 7,511.99 | 36.47 | 206.973 | |
| 12,700.00 | 9,036.00 | 2,300.00 | 2,300.00 | 107.78 | 8.01 | 8.99 | 0.00 | -50.00 | 7,591.87 | 7,554.55 | 37.32 | 203.418 | |
| 12,800.00 | 9,036.00 | 2,300.00 | 2,300.00 | 110.51 | 8.01 | 8.99 | 0.00 | -50.00 | 7,636.34 | 7,598.16 | 38.17 | 200.038 | |
| 12,900.00 | 9,036.00 | 2,300.00 | 2,300.00 | 113.25 | 8.01 | 8.99 | 0.00 | -50.00 | 7,681.85 | 7,642.82 | 39.03 | 196.821 | |
| 13,000.00 | 9,036.00 | 2,300.00 | 2,300.00 | 116.00 | 8.01 | 8.99 | 0.00 | -50.00 | 7,728.38 | 7,688.50 | 39.89 | 193.759 | |
| 13,100.00 | 9,036.00 | 2,300.00 | 2,300.00 | 118.75 | 8.01 | 8.99 | 0.00 | -50.00 | 7,775.93 | 7,735.18 | 40.75 | 190.843 | |
| 13,200.00 | 9,036.00 | 2,300.00 | 2,300.00 | 121.50 | 8.01 | 8.99 | 0.00 | -50.00 | 7,824.46 | 7,782.86 | 41.61 | 188.062 | |
| 13,300.00 | 9,036.00 | 2,300.00 | 2,300.00 | 124.26 | 8.01 | 8.99 | 0.00 | -50.00 | 7,873.97 | 7,831.50 | 42.47 | 185.411 | |
| 13,400.00 | 9,036.00 | 2,300.00 | 2,300.00 | 127.03 | 8.01 | 8.99 | 0.00 | -50.00 | 7,924.43 | 7,881.10 | 43.33 | 182.881 | |
| 13,500.00 | 9,036.00 | 2,300.00 | 2,300.00 | 129.79 | 8.01 | 8.99 | 0.00 | -50.00 | 7,975.82 | 7,931.62 | 44.20 | 180.465 | |
| 13,600.00 | 9,036.00 | 2,300.00 | 2,300.00 | 132.56 | 8.01 | 8.99 | 0.00 | -50.00 | 8,028.13 | 7,983.07 | 45.06 | 178.157 | |
| 13,700.00 | 9,036.00 | 2,300.00 | 2,300.00 | 135.34 | 8.01 | 8.99 | 0.00 | -50.00 | 8,081.34 | 8,035.41 | 45.93 | 175.951 | |
| 13,800.00 | 9,036.00 | 2,300.00 | 2,300.00 | 138.11 | 8.01 | 8.99 | 0.00 | -50.00 | 8,135.43 | 8,088.63 | 46.80 | 173.841 | |
| 13,900.00 | 9,036.00 | 2,300.00 | 2,300.00 | 140.89 | 8.01 | 8.99 | 0.00 | -50.00 | 8,190.38 | 8,142.71 | 47.67 | 171.823 | |
| 13,913.79 | 9,036.00 | 2,300.00 | 2,300.00 | 141.27 | 8.01 | 8.99 | 0.00 | -50.00 | 8,198.02 | 8,150.24 | 47.79 | 171.552 | |

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 1H - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

**Survey Program:** 100-MWD, 480-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 13.54 | 865.81 | 208.44 | 890.54 | | | | |
| 100.00 | 100.00 | 93.29 | 93.29 | 0.12 | 0.13 | 13.56 | 866.09 | 208.86 | 890.95 | 890.70 | 0.25 | 3,607.125 | |
| 200.00 | 200.00 | 183.06 | 183.05 | 0.48 | 0.43 | 13.60 | 867.13 | 209.82 | 892.32 | 891.41 | 0.91 | 982.865 | |
| 300.00 | 300.00 | 267.72 | 267.67 | 0.84 | 0.73 | 13.66 | 869.18 | 211.25 | 895.08 | 893.51 | 1.57 | 569.717 | |
| 400.00 | 400.00 | 353.36 | 353.20 | 1.20 | 1.05 | 13.78 | 872.51 | 213.92 | 899.59 | 897.35 | 2.24 | 401.364 | |
| 500.00 | 500.00 | 444.30 | 443.95 | 1.55 | 1.25 | 13.94 | 876.98 | 217.67 | 905.36 | 902.55 | 2.81 | 322.374 | |
| 600.00 | 600.00 | 560.41 | 559.83 | 1.91 | 1.41 | 14.11 | 882.88 | 221.90 | 911.25 | 907.93 | 3.32 | 274.254 | |
| 700.00 | 700.00 | 706.45 | 705.83 | 2.27 | 1.67 | 14.17 | 885.25 | 223.44 | 913.03 | 909.10 | 3.93 | 232.460 | |
| 800.00 | 800.00 | 812.38 | 811.75 | 2.63 | 1.92 | 14.17 | 884.29 | 223.34 | 912.12 | 907.58 | 4.54 | 200.884 | |
| 900.00 | 900.00 | 917.25 | 916.60 | 2.99 | 2.19 | 14.21 | 882.59 | 223.46 | 910.59 | 905.42 | 5.17 | 176.127 | |
| 1,000.00 | 1,000.00 | 1,020.25 | 1,019.58 | 3.35 | 2.49 | 14.26 | 880.47 | 223.73 | 908.65 | 902.82 | 5.83 | 155.885 | |
| 1,100.00 | 1,100.00 | 1,120.44 | 1,119.74 | 3.70 | 2.79 | 14.32 | 878.10 | 224.20 | 906.47 | 899.98 | 6.49 | 139.588 | |
| 1,200.00 | 1,200.00 | 1,218.46 | 1,217.74 | 4.06 | 3.10 | 14.42 | 875.79 | 225.24 | 904.46 | 897.30 | 7.16 | 126.259 | |
| 1,300.00 | 1,300.00 | 1,315.27 | 1,314.51 | 4.42 | 3.42 | 14.53 | 873.71 | 226.52 | 902.71 | 894.87 | 7.84 | 115.170 | |
| 1,400.00 | 1,400.00 | 1,411.56 | 1,410.79 | 4.78 | 3.73 | 14.59 | 872.26 | 226.97 | 901.36 | 892.85 | 8.51 | 105.861 | |
| 1,500.00 | 1,500.00 | 1,508.62 | 1,507.84 | 5.14 | 4.06 | 14.62 | 871.21 | 227.27 | 900.39 | 891.20 | 9.20 | 97.887 | |
| 1,600.00 | 1,600.00 | 1,605.85 | 1,605.05 | 5.50 | 4.39 | 14.76 | 870.04 | 229.18 | 899.73 | 889.85 | 9.88 | 91.029 | |
| 1,700.00 | 1,700.00 | 1,703.56 | 1,702.72 | 5.86 | 4.71 | 14.91 | 869.07 | 231.43 | 899.36 | 888.79 | 10.57 | 85.098 | |
| 1,800.00 | 1,800.00 | 1,803.00 | 1,802.16 | 6.21 | 5.04 | 14.94 | 868.86 | 231.76 | 899.24 | 887.98 | 11.26 | 79.873 | |
| 1,900.00 | 1,900.00 | 1,909.28 | 1,908.43 | 6.57 | 5.40 | 14.90 | 868.56 | 231.05 | 898.80 | 886.83 | 11.97 | 75.059 | |
| 2,000.00 | 2,000.00 | 2,011.55 | 2,010.70 | 6.93 | 5.75 | 14.87 | 867.42 | 230.37 | 897.55 | 884.87 | 12.68 | 70.796 | |
| 2,063.16 | 2,063.16 | 2,067.00 | 2,066.14 | 7.15 | 5.94 | -143.64 | 867.26 | 229.70 | 897.36 | 884.27 | 13.09 | 68.561 | |
| 2,100.00 | 2,100.00 | 2,100.79 | 2,099.93 | 7.28 | 6.05 | -143.67 | 867.40 | 229.18 | 897.33 | 884.00 | 13.33 | 67.312 ES | |
| 2,200.00 | 2,199.95 | 2,215.37 | 2,214.49 | 7.61 | 6.43 | -143.90 | 867.71 | 227.20 | 899.64 | 885.60 | 14.03 | 64.102 | |
| 2,300.00 | 2,299.74 | 2,330.61 | 2,329.64 | 7.94 | 6.83 | -144.31 | 865.01 | 223.78 | 901.77 | 887.03 | 14.74 | 61.184 | |
| 2,400.00 | 2,399.24 | 2,427.93 | 2,426.89 | 8.27 | 7.17 | -144.78 | 862.68 | 220.55 | 906.76 | 891.39 | 15.37 | 58.978 | |
| 2,500.00 | 2,498.33 | 2,527.48 | 2,526.35 | 8.60 | 7.52 | -145.33 | 860.42 | 217.30 | 914.81 | 898.80 | 16.01 | 57.146 | |
| 2,600.00 | 2,596.90 | 2,626.61 | 2,625.40 | 8.95 | 7.86 | -145.97 | 858.09 | 213.96 | 925.77 | 909.14 | 16.63 | 55.670 | |
| 2,700.00 | 2,695.04 | 2,723.81 | 2,722.52 | 9.30 | 8.20 | -146.75 | 855.84 | 210.67 | 938.86 | 921.57 | 17.29 | 54.292 | |
| 2,800.00 | 2,793.18 | 2,820.67 | 2,819.30 | 9.66 | 8.54 | -147.55 | 853.76 | 207.23 | 952.33 | 934.35 | 17.97 | 52.990 | |
| 2,900.00 | 2,891.32 | 2,910.77 | 2,909.35 | 10.03 | 8.86 | -148.22 | 852.09 | 204.93 | 966.42 | 947.79 | 18.63 | 51.865 | |
| 3,000.00 | 2,989.45 | 3,009.67 | 3,008.23 | 10.40 | 9.21 | -148.83 | 850.43 | 204.29 | 981.15 | 961.82 | 19.33 | 50.760 | |
| 3,100.00 | 3,087.59 | 3,107.49 | 3,106.04 | 10.78 | 9.56 | -149.40 | 848.65 | 203.97 | 995.89 | 975.86 | 20.02 | 49.734 | |
| 3,200.00 | 3,185.73 | 3,208.02 | 3,206.55 | 11.17 | 9.91 | -149.98 | 846.79 | 203.48 | 1,010.67 | 989.94 | 20.73 | 48.750 | |
| 3,300.00 | 3,283.86 | 3,309.43 | 3,307.93 | 11.56 | 10.28 | -150.56 | 844.69 | 202.67 | 1,025.28 | 1,003.84 | 21.44 | 47.811 | |
| 3,400.00 | 3,382.00 | 3,407.15 | 3,405.62 | 11.95 | 10.62 | -151.03 | 842.39 | 203.04 | 1,039.87 | 1,017.72 | 22.15 | 46.956 | |
| 3,500.00 | 3,480.13 | 3,506.92 | 3,499.37 | 12.35 | 10.95 | -151.47 | 840.44 | 203.67 | 1,054.82 | 1,031.98 | 22.83 | 46.193 | |
| 3,600.00 | 3,578.27 | 3,597.61 | 3,596.04 | 12.75 | 11.29 | -151.93 | 838.80 | 203.76 | 1,070.14 | 1,046.61 | 23.54 | 45.467 | |
| 3,700.00 | 3,676.41 | 3,696.98 | 3,695.40 | 13.16 | 11.65 | -152.40 | 837.12 | 203.88 | 1,085.55 | 1,061.31 | 24.25 | 44.766 | |
| 3,800.00 | 3,774.54 | 3,795.31 | 3,793.71 | 13.57 | 12.00 | -152.84 | 835.42 | 204.07 | 1,100.99 | 1,076.03 | 24.96 | 44.111 | |
| 3,900.00 | 3,872.68 | 3,893.53 | 3,891.92 | 13.98 | 12.35 | -153.28 | 833.76 | 204.15 | 1,116.54 | 1,090.86 | 25.67 | 43.494 | |
| 4,000.00 | 3,970.82 | 3,992.19 | 3,990.57 | 14.39 | 12.70 | -153.70 | 832.05 | 204.26 | 1,132.09 | 1,105.71 | 26.39 | 42.906 | |
| 4,100.00 | 4,068.95 | 4,090.08 | 4,088.44 | 14.80 | 13.05 | -154.13 | 830.46 | 204.03 | 1,147.79 | 1,120.69 | 27.10 | 42.357 | |
| 4,200.00 | 4,167.09 | 4,188.40 | 4,186.74 | 15.22 | 13.40 | -154.56 | 828.81 | 203.51 | 1,163.49 | 1,135.67 | 27.81 | 41.832 | |
| 4,300.00 | 4,265.23 | 4,285.38 | 4,283.72 | 15.64 | 13.74 | -154.98 | 827.36 | 202.83 | 1,179.40 | 1,150.88 | 28.52 | 41.346 | |
| 4,400.00 | 4,363.36 | 4,382.78 | 4,381.11 | 16.06 | 14.09 | -155.39 | 825.90 | 202.21 | 1,195.39 | 1,166.15 | 29.24 | 40.884 | |
| 4,500.00 | 4,461.50 | 4,479.33 | 4,477.64 | 16.48 | 14.44 | -155.78 | 824.63 | 201.67 | 1,211.62 | 1,181.67 | 29.95 | 40.456 | |
| 4,600.00 | 4,559.63 | 4,576.04 | 4,574.35 | 16.91 | 14.78 | -156.18 | 823.44 | 200.95 | 1,227.99 | 1,197.33 | 30.66 | 40.050 | |
| 4,700.00 | 4,657.77 | 4,671.78 | 4,670.08 | 17.33 | 15.12 | -156.55 | 822.47 | 200.31 | 1,244.62 | 1,213.25 | 31.37 | 39.676 | |
| 4,800.00 | 4,755.91 | 4,769.39 | 4,767.67 | 17.76 | 15.47 | -156.93 | 821.61 | 199.50 | 1,261.44 | 1,229.35 | 32.08 | 39.316 | |
| 4,900.00 | 4,854.04 | 4,866.94 | 4,865.22 | 18.19 | 15.82 | -157.30 | 820.76 | 198.75 | 1,278.31 | 1,245.51 | 32.80 | 38.973 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| ***Site Error:*** | *0.00 usft* | **North Reference:** | *Grid* |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| ***Well Error:*** | *0.00 usft* | ***Output errors are at*** | *2.00 sigma* |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| ***Reference Design:*** | *Plan #1* | ***Offset TVD Reference:*** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 1H - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

**Survey Program:** 100-MWD, 480-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,000.00 | 4,952.18 | 4,963.37 | 4,961.65 | 18.62 | 16.16 | -157.66 | 820.03 | 197.90 | 1,295.36 | 1,261.85 | 33.51 | 38.655 | |
| 5,100.00 | 5,050.32 | 5,064.19 | 5,062.46 | 19.05 | 16.52 | -158.02 | 819.30 | 197.15 | 1,312.48 | 1,278.25 | 34.24 | 38.334 | |
| 5,200.00 | 5,148.45 | 5,163.36 | 5,161.63 | 19.48 | 16.87 | -158.35 | 818.34 | 196.53 | 1,329.42 | 1,294.45 | 34.96 | 38.026 | |
| 5,300.00 | 5,246.59 | 5,259.76 | 5,258.02 | 19.91 | 17.22 | -158.67 | 817.48 | 195.98 | 1,346.46 | 1,310.79 | 35.67 | 37.743 | |
| 5,400.00 | 5,344.73 | 5,358.17 | 5,356.42 | 20.34 | 17.57 | -158.99 | 816.69 | 195.47 | 1,363.64 | 1,327.24 | 36.40 | 37.468 | |
| 5,500.00 | 5,442.86 | 5,452.46 | 5,450.70 | 20.77 | 17.90 | -159.29 | 816.01 | 194.83 | 1,380.94 | 1,343.84 | 37.10 | 37.221 | |
| 5,600.00 | 5,541.00 | 5,545.05 | 5,543.30 | 21.21 | 18.23 | -159.58 | 815.69 | 194.23 | 1,398.64 | 1,360.84 | 37.80 | 37.002 | |
| 5,700.00 | 5,639.13 | 5,638.44 | 5,636.69 | 21.64 | 18.56 | -159.86 | 815.72 | 193.64 | 1,416.75 | 1,378.26 | 38.49 | 36.804 | |
| 5,800.00 | 5,737.27 | 5,740.49 | 5,738.73 | 22.08 | 18.91 | -160.17 | 815.82 | 192.73 | 1,434.98 | 1,395.76 | 39.22 | 36.589 | |
| 5,900.00 | 5,835.41 | 5,855.42 | 5,853.65 | 22.51 | 19.32 | -160.54 | 815.02 | 191.13 | 1,452.49 | 1,412.49 | 39.99 | 36.319 | |
| 6,000.00 | 5,933.54 | 5,961.86 | 5,960.06 | 22.95 | 19.70 | -160.85 | 813.54 | 189.97 | 1,469.34 | 1,428.60 | 40.74 | 36.064 | |
| 6,100.00 | 6,031.68 | 6,070.94 | 6,069.10 | 23.39 | 20.09 | -161.17 | 810.65 | 188.91 | 1,484.94 | 1,443.43 | 41.50 | 35.780 | |
| 6,200.00 | 6,129.82 | 6,150.36 | 6,148.50 | 23.82 | 20.37 | -161.39 | 809.20 | 188.12 | 1,501.41 | 1,459.25 | 42.16 | 35.612 | |
| 6,300.00 | 6,227.95 | 6,237.91 | 6,236.05 | 24.26 | 20.69 | -161.62 | 808.44 | 187.51 | 1,518.85 | 1,476.00 | 42.85 | 35.450 | |
| 6,400.00 | 6,326.09 | 6,331.19 | 6,329.33 | 24.70 | 21.02 | -161.86 | 808.12 | 186.95 | 1,536.84 | 1,493.29 | 43.55 | 35.290 | |
| 6,500.00 | 6,424.23 | 6,432.29 | 6,430.42 | 25.14 | 21.38 | -162.11 | 807.78 | 186.36 | 1,554.85 | 1,510.57 | 44.28 | 35.116 | |
| 6,600.00 | 6,522.36 | 6,533.70 | 6,531.84 | 25.58 | 21.73 | -162.33 | 807.41 | 186.39 | 1,572.82 | 1,527.81 | 45.01 | 34.947 | |
| 6,700.00 | 6,620.50 | 6,640.58 | 6,638.71 | 26.02 | 22.11 | -162.56 | 806.37 | 186.47 | 1,590.20 | 1,544.44 | 45.75 | 34.756 | |
| 6,800.00 | 6,718.63 | 6,733.88 | 6,732.01 | 26.46 | 22.43 | -162.73 | 805.48 | 187.17 | 1,607.58 | 1,561.12 | 46.45 | 34.607 | |
| 6,900.00 | 6,816.77 | 6,824.05 | 6,822.17 | 26.90 | 22.74 | -162.88 | 805.08 | 188.24 | 1,625.43 | 1,578.29 | 47.14 | 34.484 | |
| 7,000.00 | 6,914.91 | 6,916.12 | 6,914.22 | 27.34 | 23.05 | -163.01 | 805.13 | 189.78 | 1,643.74 | 1,595.92 | 47.82 | 34.372 | |
| 7,100.00 | 7,013.04 | 7,011.46 | 7,009.54 | 27.78 | 23.37 | -163.13 | 805.45 | 191.61 | 1,662.33 | 1,613.81 | 48.52 | 34.262 | |
| 7,200.00 | 7,111.18 | 7,109.25 | 7,107.32 | 28.22 | 23.70 | -163.26 | 805.86 | 193.31 | 1,681.01 | 1,631.79 | 49.22 | 34.152 | |
| 7,300.00 | 7,209.32 | 7,205.46 | 7,203.51 | 28.66 | 24.02 | -163.39 | 806.26 | 194.76 | 1,699.71 | 1,649.80 | 49.92 | 34.049 | |
| 7,400.00 | 7,307.45 | 7,299.11 | 7,297.16 | 29.10 | 24.34 | -163.54 | 806.80 | 195.48 | 1,718.66 | 1,668.06 | 50.61 | 33.960 | |
| 7,500.00 | 7,405.59 | 7,393.14 | 7,391.19 | 29.55 | 24.65 | -163.71 | 807.49 | 195.44 | 1,737.85 | 1,686.56 | 51.30 | 33.878 | |
| 7,600.00 | 7,503.73 | 7,488.98 | 7,487.02 | 29.99 | 24.98 | -163.90 | 808.34 | 194.73 | 1,757.27 | 1,705.28 | 52.00 | 33.796 | |
| 7,700.00 | 7,601.86 | 7,586.83 | 7,584.86 | 30.43 | 25.31 | -164.11 | 809.17 | 193.51 | 1,776.72 | 1,724.02 | 52.70 | 33.712 | |
| 7,800.00 | 7,700.00 | 7,670.14 | 7,668.16 | 30.87 | 25.59 | -164.28 | 810.07 | 192.65 | 1,796.43 | 1,743.06 | 53.36 | 33.665 | |
| 7,900.00 | 7,798.13 | 7,758.42 | 7,756.41 | 31.32 | 25.89 | -164.44 | 812.23 | 191.98 | 1,817.38 | 1,763.35 | 54.03 | 33.633 | |
| 8,000.00 | 7,896.27 | 7,883.44 | 7,881.40 | 31.76 | 26.31 | -164.59 | 813.97 | 193.65 | 1,837.05 | 1,782.22 | 54.83 | 33.505 | |
| 8,100.00 | 7,994.63 | 7,984.88 | 7,982.79 | 32.20 | 26.65 | -164.72 | 815.10 | 196.74 | 1,855.20 | 1,799.52 | 55.68 | 33.317 | |
| 8,200.00 | 8,093.55 | 8,109.52 | 8,107.38 | 32.61 | 27.08 | -164.84 | 815.55 | 200.01 | 1,869.41 | 1,812.82 | 56.59 | 33.033 | |
| 8,300.00 | 8,192.92 | 8,214.72 | 8,212.56 | 33.00 | 27.44 | -164.93 | 814.81 | 201.95 | 1,879.29 | 1,821.91 | 57.38 | 32.753 | |
| 8,400.00 | 8,292.62 | 8,311.14 | 8,308.97 | 33.20 | 27.78 | -164.98 | 814.09 | 203.58 | 1,885.78 | 1,827.89 | 57.89 | 32.574 | |
| 8,500.00 | 8,392.52 | 8,404.35 | 8,402.17 | 33.23 | 28.10 | -164.99 | 813.54 | 204.65 | 1,889.13 | 1,830.97 | 58.16 | 32.482 | |
| 8,600.00 | 8,492.50 | 8,489.94 | 8,487.76 | 33.24 | 28.39 | 83.67 | 813.52 | 205.13 | 1,889.80 | 1,831.44 | 58.36 | 32.381 | |
| 8,700.00 | 8,591.42 | 8,578.30 | 8,576.12 | 33.23 | 28.69 | 84.14 | 814.05 | 205.41 | 1,888.88 | 1,830.29 | 58.59 | 32.239 | |
| 8,800.00 | 8,686.43 | 8,668.11 | 8,665.92 | 33.20 | 28.99 | 85.18 | 814.96 | 205.68 | 1,886.90 | 1,828.05 | 58.86 | 32.060 | |
| 8,900.00 | 8,774.66 | 8,761.39 | 8,759.19 | 33.16 | 29.31 | 86.77 | 815.90 | 205.95 | 1,884.30 | 1,825.10 | 59.21 | 31.826 | |
| 9,000.00 | 8,853.41 | 8,841.14 | 8,838.94 | 33.11 | 29.58 | 88.48 | 816.57 | 206.24 | 1,882.17 | 1,822.59 | 59.58 | 31.590 | |
| 9,057.12 | 8,893.22 | 8,880.95 | 8,878.75 | 33.09 | 29.71 | 89.39 | 816.89 | 206.44 | 1,881.75 | 1,821.93 | 59.83 | 31.453 | |
| 9,100.00 | 8,920.31 | 8,907.86 | 8,905.66 | 33.08 | 29.81 | 90.00 | 817.10 | 206.59 | 1,882.03 | 1,822.04 | 59.99 | 31.371 | |
| 9,200.00 | 8,973.31 | 8,959.13 | 8,956.92 | 33.06 | 29.98 | 91.00 | 817.52 | 206.93 | 1,885.29 | 1,824.83 | 60.46 | 31.183 | |
| 9,300.00 | 9,010.81 | 8,992.31 | 8,990.10 | 33.04 | 30.09 | 91.15 | 817.83 | 207.22 | 1,893.10 | 1,832.06 | 61.03 | 31.017 | |
| 9,400.00 | 9,031.66 | 9,011.29 | 9,009.08 | 33.06 | 30.16 | 90.41 | 818.00 | 207.58 | 1,906.04 | 1,844.26 | 61.78 | 30.854 | |
| 9,500.00 | 9,036.00 | 9,012.78 | 9,010.57 | 33.21 | 30.16 | 89.21 | 818.02 | 207.62 | 1,924.13 | 1,861.47 | 62.66 | 30.707 | |
| 9,600.00 | 9,036.00 | 9,010.46 | 9,008.25 | 34.03 | 30.15 | 89.14 | 818.00 | 207.56 | 1,947.17 | 1,883.35 | 63.82 | 30.511 | |
| 9,700.00 | 9,036.00 | 9,008.42 | 9,006.21 | 35.35 | 30.15 | 89.08 | 817.98 | 207.51 | 1,975.00 | 1,909.83 | 65.17 | 30.305 | |
| 9,800.00 | 9,036.00 | 9,006.63 | 9,004.42 | 36.87 | 30.14 | 89.02 | 817.97 | 207.46 | 2,007.43 | 1,940.74 | 66.70 | 30.098 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | ***Output errors are at*** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | ***Offset TVD Reference:*** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 1H - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.00 usft

**Survey Program:** 100-MWD, 480-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9,900.00 | 9,036.00 | 9,005.03 | 9,002.82 | 38.55 | 30.14 | 88.98 | 817.95 | 207.43 | 2,044.25 | 1,975.87 | 68.37 | 29.899 | |
| 10,000.00 | 9,036.00 | 9,003.61 | 9,001.40 | 40.36 | 30.13 | 88.93 | 817.94 | 207.40 | 2,085.21 | 2,015.03 | 70.18 | 29.711 | |
| 10,100.00 | 9,036.00 | 9,002.32 | 9,000.11 | 42.29 | 30.13 | 88.89 | 817.93 | 207.37 | 2,130.08 | 2,057.97 | 72.11 | 29.540 | |
| 10,200.00 | 9,036.00 | 9,001.16 | 8,998.95 | 44.31 | 30.12 | 88.86 | 817.92 | 207.35 | 2,178.62 | 2,104.48 | 74.13 | 29.388 | |
| 10,300.00 | 9,036.00 | 8,990.00 | 8,987.79 | 46.43 | 30.08 | 88.52 | 817.81 | 207.19 | 2,230.62 | 2,154.44 | 76.19 | 29.278 | |
| 10,400.00 | 9,036.00 | 8,990.00 | 8,987.79 | 48.61 | 30.08 | 88.52 | 817.81 | 207.19 | 2,285.78 | 2,207.40 | 78.38 | 29.162 | |
| 10,500.00 | 9,036.00 | 8,990.00 | 8,987.79 | 50.86 | 30.08 | 88.52 | 817.81 | 207.19 | 2,343.91 | 2,263.26 | 80.64 | 29.066 | |
| 10,600.00 | 9,036.00 | 8,990.00 | 8,987.79 | 53.17 | 30.08 | 88.52 | 817.81 | 207.19 | 2,404.79 | 2,321.83 | 82.96 | 28.988 | |
| 10,700.00 | 9,036.00 | 8,990.00 | 8,987.79 | 55.53 | 30.08 | 88.52 | 817.81 | 207.19 | 2,468.22 | 2,382.90 | 85.32 | 28.928 | |
| 10,800.00 | 9,036.00 | 8,990.00 | 8,987.79 | 57.94 | 30.08 | 88.52 | 817.81 | 207.19 | 2,534.01 | 2,446.28 | 87.73 | 28.884 | |
| 10,900.00 | 9,036.00 | 8,990.00 | 8,987.79 | 60.38 | 30.08 | 88.52 | 817.81 | 207.19 | 2,601.98 | 2,511.80 | 90.18 | 28.854 | |
| 11,000.00 | 9,036.00 | 8,990.00 | 8,987.79 | 62.85 | 30.08 | 88.52 | 817.81 | 207.19 | 2,671.97 | 2,579.31 | 92.66 | 28.836 | |
| 11,100.00 | 9,036.00 | 8,990.00 | 8,987.79 | 65.36 | 30.08 | 88.52 | 817.81 | 207.19 | 2,743.81 | 2,648.64 | 95.17 | 28.831 SF | |
| 11,200.00 | 9,036.00 | 8,990.00 | 8,987.79 | 67.89 | 30.08 | 88.52 | 817.81 | 207.19 | 2,817.38 | 2,719.67 | 97.71 | 28.835 | |
| 11,300.00 | 9,036.00 | 8,990.00 | 8,987.79 | 70.45 | 30.08 | 88.52 | 817.81 | 207.19 | 2,892.53 | 2,792.26 | 100.27 | 28.847 | |
| 11,400.00 | 9,036.00 | 8,990.00 | 8,987.79 | 73.02 | 30.08 | 88.52 | 817.81 | 207.19 | 2,969.15 | 2,866.29 | 102.85 | 28.868 | |
| 11,500.00 | 9,036.00 | 8,990.00 | 8,987.79 | 75.62 | 30.08 | 88.52 | 817.81 | 207.19 | 3,047.12 | 2,941.66 | 105.45 | 28.895 | |
| 11,600.00 | 9,036.00 | 8,990.00 | 8,987.79 | 78.24 | 30.08 | 88.52 | 817.81 | 207.19 | 3,126.34 | 3,018.27 | 108.07 | 28.928 | |
| 11,700.00 | 9,036.00 | 8,990.00 | 8,987.79 | 80.87 | 30.08 | 88.52 | 817.81 | 207.19 | 3,206.73 | 3,096.02 | 110.71 | 28.966 | |
| 11,800.00 | 9,036.00 | 8,990.00 | 8,987.79 | 83.51 | 30.08 | 88.52 | 817.81 | 207.19 | 3,288.20 | 3,174.84 | 113.36 | 29.007 | |
| 11,900.00 | 9,036.00 | 8,990.00 | 8,987.79 | 86.17 | 30.08 | 88.52 | 817.81 | 207.19 | 3,370.66 | 3,254.64 | 116.02 | 29.053 | |
| 12,000.00 | 9,036.00 | 8,990.00 | 8,987.79 | 88.84 | 30.08 | 88.52 | 817.81 | 207.19 | 3,454.05 | 3,335.36 | 118.69 | 29.101 | |
| 12,100.00 | 9,036.00 | 8,990.00 | 8,987.79 | 91.52 | 30.08 | 88.52 | 817.81 | 207.19 | 3,538.30 | 3,416.92 | 121.37 | 29.152 | |
| 12,200.00 | 9,036.00 | 8,990.00 | 8,987.79 | 94.21 | 30.08 | 88.52 | 817.81 | 207.19 | 3,623.35 | 3,499.28 | 124.07 | 29.205 | |
| 12,300.00 | 9,036.00 | 8,990.00 | 8,987.79 | 96.91 | 30.08 | 88.52 | 817.81 | 207.19 | 3,709.15 | 3,582.38 | 126.77 | 29.259 | |
| 12,400.00 | 9,036.00 | 8,990.00 | 8,987.79 | 99.61 | 30.08 | 88.52 | 817.81 | 207.19 | 3,795.64 | 3,666.16 | 129.48 | 29.314 | |
| 12,500.00 | 9,036.00 | 8,990.00 | 8,987.79 | 102.33 | 30.08 | 88.52 | 817.81 | 207.19 | 3,882.78 | 3,750.58 | 132.20 | 29.371 | |
| 12,600.00 | 9,036.00 | 8,990.00 | 8,987.79 | 105.05 | 30.08 | 88.52 | 817.81 | 207.19 | 3,970.52 | 3,835.60 | 134.92 | 29.428 | |
| 12,700.00 | 9,036.00 | 8,990.00 | 8,987.79 | 107.78 | 30.08 | 88.52 | 817.81 | 207.19 | 4,058.84 | 3,921.19 | 137.65 | 29.486 | |
| 12,800.00 | 9,036.00 | 8,990.00 | 8,987.79 | 110.51 | 30.08 | 88.52 | 817.81 | 207.19 | 4,147.68 | 4,007.29 | 140.39 | 29.544 | |
| 12,900.00 | 9,036.00 | 8,990.00 | 8,987.79 | 113.25 | 30.08 | 88.52 | 817.81 | 207.19 | 4,237.02 | 4,093.89 | 143.13 | 29.602 | |
| 13,000.00 | 9,036.00 | 8,983.90 | 8,981.70 | 116.00 | 30.06 | 88.33 | 817.75 | 207.13 | 4,326.83 | 4,180.98 | 145.84 | 29.668 | |
| 13,100.00 | 9,036.00 | 8,983.24 | 8,981.03 | 118.75 | 30.06 | 88.31 | 817.74 | 207.13 | 4,417.07 | 4,268.48 | 148.59 | 29.726 | |
| 13,200.00 | 9,036.00 | 8,982.58 | 8,980.37 | 121.50 | 30.06 | 88.29 | 817.73 | 207.12 | 4,507.73 | 4,356.38 | 151.34 | 29.785 | |
| 13,300.00 | 9,036.00 | 8,981.93 | 8,979.72 | 124.26 | 30.06 | 88.27 | 817.73 | 207.12 | 4,598.77 | 4,444.67 | 154.10 | 29.843 | |
| 13,400.00 | 9,036.00 | 8,981.28 | 8,979.07 | 127.03 | 30.05 | 88.25 | 817.72 | 207.11 | 4,690.18 | 4,533.32 | 156.86 | 29.900 | |
| 13,500.00 | 9,036.00 | 8,980.64 | 8,978.43 | 129.79 | 30.05 | 88.23 | 817.71 | 207.11 | 4,781.93 | 4,622.31 | 159.62 | 29.957 | |
| 13,600.00 | 9,036.00 | 8,980.01 | 8,977.80 | 132.56 | 30.05 | 88.21 | 817.71 | 207.10 | 4,874.01 | 4,711.62 | 162.39 | 30.014 | |
| 13,700.00 | 9,036.00 | 8,979.38 | 8,977.18 | 135.34 | 30.05 | 88.20 | 817.70 | 207.09 | 4,966.39 | 4,801.23 | 165.16 | 30.070 | |
| 13,800.00 | 9,036.00 | 8,978.76 | 8,976.55 | 138.11 | 30.05 | 88.18 | 817.70 | 207.09 | 5,059.06 | 4,891.13 | 167.94 | 30.125 | |
| 13,900.00 | 9,036.00 | 8,978.15 | 8,975.94 | 140.89 | 30.04 | 88.16 | 817.69 | 207.08 | 5,152.01 | 4,981.30 | 170.71 | 30.180 | |
| 13,913.79 | 9,036.00 | 8,978.06 | 8,975.86 | 141.27 | 30.04 | 88.15 | 817.69 | 207.08 | 5,164.85 | 4,993.75 | 171.09 | 30.187 | |

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 2H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

**Survey Program:** 64-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 1.98 | 1.98 | 0.00 | 0.00 | 163.23 | -453.80 | 136.74 | 473.95 | | | | |
| 100.00 | 100.00 | 102.73 | 102.73 | 0.12 | 0.21 | 163.24 | -453.87 | 136.69 | 474.00 | 473.68 | 0.33 | 1,451.722 | |
| 200.00 | 200.00 | 213.02 | 213.01 | 0.48 | 0.60 | 163.26 | -452.76 | 136.19 | 472.92 | 471.85 | 1.08 | 439.836 | |
| 300.00 | 300.00 | 328.29 | 328.18 | 0.84 | 1.01 | 163.18 | -448.05 | 135.46 | 468.81 | 466.96 | 1.85 | 253.672 | |
| 400.00 | 400.00 | 429.94 | 429.62 | 1.20 | 1.38 | 163.00 | -441.67 | 135.06 | 462.68 | 460.11 | 2.57 | 179.841 | |
| 500.00 | 500.00 | 529.77 | 529.26 | 1.55 | 1.74 | 162.77 | -435.44 | 135.02 | 456.70 | 453.42 | 3.29 | 138.980 | |
| 600.00 | 600.00 | 627.79 | 627.10 | 1.91 | 2.10 | 162.54 | -429.49 | 135.05 | 450.92 | 446.92 | 3.99 | 112.876 | |
| 700.00 | 700.00 | 724.35 | 723.51 | 2.27 | 2.45 | 162.33 | -424.19 | 135.17 | 445.73 | 441.03 | 4.70 | 94.868 | |
| 800.00 | 800.00 | 821.14 | 820.20 | 2.63 | 2.80 | 162.13 | -419.59 | 135.29 | 441.24 | 435.84 | 5.40 | 81.666 | |
| 900.00 | 900.00 | 917.36 | 916.33 | 2.99 | 3.15 | 161.93 | -415.73 | 135.65 | 437.53 | 431.43 | 6.11 | 71.663 | |
| 1,000.00 | 1,000.00 | 1,014.09 | 1,013.02 | 3.35 | 3.50 | 161.74 | -412.66 | 136.14 | 434.68 | 427.87 | 6.81 | 63.834 | |
| 1,100.00 | 1,100.00 | 1,111.90 | 1,110.79 | 3.70 | 3.85 | 161.61 | -410.17 | 136.33 | 432.33 | 424.81 | 7.52 | 57.509 | |
| 1,200.00 | 1,200.00 | 1,207.20 | 1,206.07 | 4.06 | 4.19 | 161.47 | -408.47 | 136.88 | 430.81 | 422.60 | 8.21 | 52.445 | |
| 1,271.86 | 1,271.86 | 1,275.00 | 1,273.86 | 4.32 | 4.43 | 161.30 | -407.75 | 137.98 | 430.46 | 421.75 | 8.71 | 49.421 | |
| 1,300.00 | 1,300.00 | 1,301.27 | 1,300.13 | 4.42 | 4.52 | 161.22 | -407.60 | 138.60 | 430.52 | 421.62 | 8.90 | 48.365 | |
| 1,400.00 | 1,400.00 | 1,395.77 | 1,394.57 | 4.78 | 4.84 | 160.82 | -407.71 | 141.81 | 431.73 | 422.14 | 9.59 | 45.041 | |
| 1,500.00 | 1,500.00 | 1,493.70 | 1,492.41 | 5.14 | 5.17 | 160.32 | -408.19 | 146.00 | 433.63 | 423.34 | 10.28 | 42.176 | |
| 1,600.00 | 1,600.00 | 1,589.77 | 1,588.31 | 5.50 | 5.50 | 159.67 | -408.92 | 151.54 | 436.32 | 425.34 | 10.97 | 39.760 | |
| 1,700.00 | 1,700.00 | 1,686.48 | 1,684.84 | 5.86 | 5.83 | 159.03 | -410.41 | 157.29 | 439.85 | 428.18 | 11.67 | 37.691 | |
| 1,800.00 | 1,800.00 | 1,786.67 | 1,784.84 | 6.21 | 6.18 | 158.45 | -412.62 | 162.95 | 443.96 | 431.58 | 12.38 | 35.867 | |
| 1,900.00 | 1,900.00 | 1,891.17 | 1,889.24 | 6.57 | 6.54 | 158.07 | -414.69 | 166.98 | 447.23 | 434.13 | 13.10 | 34.138 | |
| 2,000.00 | 2,000.00 | 1,996.18 | 1,994.15 | 6.93 | 6.91 | 157.57 | -415.49 | 171.55 | 449.58 | 435.75 | 13.83 | 32.506 | |
| 2,100.00 | 2,100.00 | 2,120.06 | 2,117.82 | 7.28 | 7.35 | -1.77 | -412.14 | 177.54 | 448.82 | 434.18 | 14.63 | 30.672 | |
| 2,200.00 | 2,199.95 | 2,236.61 | 2,234.14 | 7.61 | 7.77 | -2.22 | -405.03 | 178.05 | 440.43 | 425.07 | 15.36 | 28.677 | |
| 2,300.00 | 2,299.74 | 2,344.59 | 2,341.70 | 7.94 | 8.15 | -2.20 | -396.55 | 173.82 | 425.23 | 409.20 | 16.03 | 26.533 | |
| 2,400.00 | 2,399.24 | 2,442.53 | 2,439.19 | 8.27 | 8.50 | -2.05 | -388.74 | 168.71 | 405.99 | 389.36 | 16.64 | 24.405 | |
| 2,500.00 | 2,498.33 | 2,538.57 | 2,534.81 | 8.60 | 8.84 | -1.89 | -381.27 | 163.70 | 383.53 | 366.31 | 17.22 | 22.278 | |
| 2,600.00 | 2,596.90 | 2,636.87 | 2,632.70 | 8.95 | 9.20 | -1.80 | -373.65 | 159.07 | 357.91 | 340.13 | 17.78 | 20.127 | |
| 2,700.00 | 2,695.04 | 2,733.93 | 2,729.28 | 9.30 | 9.56 | -2.16 | -364.33 | 156.59 | 329.21 | 310.77 | 18.43 | 17.861 | |
| 2,800.00 | 2,793.18 | 2,827.00 | 2,821.84 | 9.66 | 9.90 | -3.08 | -354.67 | 156.70 | 300.83 | 281.74 | 19.10 | 15.754 | |
| 2,900.00 | 2,891.32 | 2,922.09 | 2,916.39 | 10.03 | 10.26 | -4.64 | -344.77 | 158.94 | 273.45 | 253.68 | 19.78 | 13.827 | |
| 3,000.00 | 2,989.45 | 3,018.18 | 3,011.96 | 10.40 | 10.62 | -6.38 | -334.87 | 160.46 | 246.06 | 225.59 | 20.47 | 12.021 | |
| 3,100.00 | 3,087.59 | 3,114.31 | 3,107.60 | 10.78 | 10.99 | -8.46 | -325.22 | 161.72 | 219.01 | 197.84 | 21.17 | 10.347 | |
| 3,200.00 | 3,185.73 | 3,210.06 | 3,202.86 | 11.17 | 11.35 | -10.98 | -315.67 | 162.51 | 192.12 | 170.24 | 21.87 | 8.783 | |
| 3,300.00 | 3,283.86 | 3,305.88 | 3,298.24 | 11.56 | 11.71 | -14.15 | -306.53 | 163.10 | 165.91 | 143.32 | 22.59 | 7.344 | |
| 3,400.00 | 3,382.00 | 3,401.04 | 3,392.99 | 11.95 | 12.07 | -18.33 | -297.72 | 163.57 | 140.50 | 117.17 | 23.33 | 6.022 | |
| 3,500.00 | 3,480.13 | 3,496.60 | 3,488.13 | 12.35 | 12.43 | -24.71 | -288.87 | 165.25 | 116.99 | 92.87 | 24.12 | 4.851 | |
| 3,600.00 | 3,578.27 | 3,594.33 | 3,585.39 | 12.75 | 12.80 | -34.40 | -279.43 | 166.81 | 95.24 | 70.25 | 24.99 | 3.811 | |
| 3,700.00 | 3,676.41 | 3,690.67 | 3,681.18 | 13.16 | 13.17 | -49.04 | -269.13 | 166.95 | 75.82 | 49.85 | 25.97 | 2.919 | |
| 3,800.00 | 3,774.54 | 3,786.46 | 3,776.41 | 13.57 | 13.53 | -70.48 | -258.86 | 166.97 | 64.07 | 37.06 | 27.01 | 2.372 | |
| 3,848.19 | 3,821.84 | 3,832.64 | 3,822.32 | 13.76 | 13.71 | -82.73 | -253.82 | 166.88 | 62.54 | 35.10 | 27.44 | 2.279 | CC, ES, SF |
| 3,900.00 | 3,872.68 | 3,882.43 | 3,871.82 | 13.98 | 13.90 | -95.83 | -248.53 | 166.68 | 64.26 | 36.47 | 27.79 | 2.312 | |
| 4,000.00 | 3,970.82 | 3,977.38 | 3,966.25 | 14.39 | 14.26 | -116.72 | -238.54 | 166.45 | 76.46 | 48.21 | 28.25 | 2.706 | |
| 4,100.00 | 4,068.95 | 4,073.35 | 4,061.64 | 14.80 | 14.63 | -130.61 | -228.13 | 167.09 | 96.83 | 68.14 | 28.69 | 3.374 | |
| 4,200.00 | 4,167.09 | 4,170.38 | 4,158.19 | 15.22 | 15.00 | -139.61 | -218.43 | 167.40 | 119.96 | 90.74 | 29.22 | 4.105 | |
| 4,300.00 | 4,265.23 | 4,264.85 | 4,252.21 | 15.64 | 15.36 | -145.39 | -209.27 | 167.90 | 144.74 | 114.93 | 29.81 | 4.855 | |
| 4,400.00 | 4,363.36 | 4,360.49 | 4,347.31 | 16.06 | 15.73 | -149.31 | -199.17 | 169.23 | 171.49 | 141.03 | 30.45 | 5.631 | |
| 4,500.00 | 4,461.50 | 4,458.48 | 4,444.80 | 16.48 | 16.11 | -152.36 | -189.36 | 170.12 | 198.21 | 167.10 | 31.12 | 6.370 | |
| 4,600.00 | 4,559.63 | 4,556.41 | 4,542.33 | 16.91 | 16.48 | -154.91 | -180.54 | 170.01 | 224.31 | 192.52 | 31.79 | 7.056 | |
| 4,700.00 | 4,657.77 | 4,649.64 | 4,635.17 | 17.33 | 16.83 | -156.80 | -172.08 | 170.09 | 250.79 | 218.33 | 32.46 | 7.726 | |
| 4,800.00 | 4,755.91 | 4,746.64 | 4,731.71 | 17.76 | 17.20 | -158.18 | -162.60 | 171.19 | 278.15 | 244.99 | 33.16 | 8.389 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 2H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

**Survey Program:** 64-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4,900.00 | 4,854.04 | 4,845.87 | 4,830.53 | 18.19 | 17.58 | -159.33 | -153.74 | 172.31 | 304.82 | 270.96 | 33.86 | 9.001 | |
| 5,000.00 | 4,952.18 | 4,942.10 | 4,926.41 | 18.62 | 17.95 | -160.18 | -145.66 | 173.90 | 331.05 | 296.48 | 34.57 | 9.577 | |
| 5,100.00 | 5,050.32 | 5,039.84 | 5,023.78 | 19.05 | 18.32 | -160.77 | -137.51 | 176.44 | 357.22 | 321.94 | 35.28 | 10.126 | |
| 5,200.00 | 5,148.45 | 5,134.64 | 5,118.23 | 19.48 | 18.67 | -161.37 | -129.65 | 178.19 | 383.43 | 347.45 | 35.98 | 10.656 | |
| 5,300.00 | 5,246.59 | 5,235.14 | 5,218.40 | 19.91 | 19.05 | -162.08 | -121.62 | 178.99 | 409.45 | 372.75 | 36.70 | 11.156 | |
| 5,400.00 | 5,344.73 | 5,337.33 | 5,320.35 | 20.34 | 19.43 | -162.74 | -114.70 | 179.63 | 434.37 | 396.94 | 37.43 | 11.605 | |
| 5,500.00 | 5,442.86 | 5,436.92 | 5,419.78 | 20.77 | 19.80 | -163.36 | -109.08 | 180.06 | 458.23 | 420.09 | 38.15 | 12.012 | |
| 5,600.00 | 5,541.00 | 5,525.02 | 5,507.70 | 21.21 | 20.12 | -163.80 | -103.38 | 180.80 | 482.92 | 444.09 | 38.83 | 12.437 | |
| 5,700.00 | 5,639.13 | 5,611.00 | 5,593.35 | 21.64 | 20.45 | -164.18 | -95.91 | 181.42 | 509.76 | 470.25 | 39.51 | 12.903 | |
| 5,800.00 | 5,737.27 | 5,690.94 | 5,672.78 | 22.08 | 20.76 | -164.53 | -86.98 | 181.52 | 539.05 | 498.89 | 40.16 | 13.422 | |
| 5,900.00 | 5,835.41 | 5,782.74 | 5,763.81 | 22.51 | 21.12 | -164.89 | -75.13 | 181.50 | 570.05 | 529.19 | 40.86 | 13.951 | |
| 6,000.00 | 5,933.54 | 5,883.15 | 5,863.40 | 22.95 | 21.52 | -165.14 | -62.31 | 182.50 | 600.84 | 559.25 | 41.59 | 14.447 | |
| 6,100.00 | 6,031.68 | 5,991.02 | 5,970.51 | 23.39 | 21.94 | -165.21 | -49.93 | 185.51 | 630.20 | 587.85 | 42.35 | 14.882 | |
| 6,200.00 | 6,129.82 | 6,088.21 | 6,067.15 | 23.82 | 22.32 | -165.33 | -39.91 | 187.81 | 658.48 | 615.41 | 43.07 | 15.289 | |
| 6,300.00 | 6,227.95 | 6,195.66 | 6,174.08 | 24.26 | 22.73 | -165.49 | -29.49 | 189.85 | 686.28 | 642.46 | 43.83 | 15.659 | |
| 6,400.00 | 6,326.09 | 6,307.58 | 6,285.80 | 24.70 | 23.15 | -165.77 | -23.25 | 191.08 | 709.93 | 665.34 | 44.59 | 15.920 | |
| 6,500.00 | 6,424.23 | 6,370.17 | 6,348.16 | 25.14 | 23.38 | -165.92 | -17.92 | 191.46 | 736.72 | 691.53 | 45.19 | 16.302 | |
| 6,600.00 | 6,522.36 | 6,469.88 | 6,447.32 | 25.58 | 23.77 | -166.14 | -7.44 | 191.88 | 765.46 | 719.54 | 45.92 | 16.668 | |
| 6,700.00 | 6,620.50 | 6,571.75 | 6,548.69 | 26.02 | 24.16 | -166.36 | 2.58 | 192.32 | 793.57 | 746.91 | 46.66 | 17.008 | |
| 6,800.00 | 6,718.63 | 6,675.31 | 6,651.83 | 26.46 | 24.56 | -166.57 | 11.98 | 192.65 | 820.99 | 773.59 | 47.40 | 17.320 | |
| 6,900.00 | 6,816.77 | 6,781.50 | 6,757.67 | 26.90 | 24.96 | -166.71 | 20.37 | 194.22 | 847.10 | 798.95 | 48.15 | 17.591 | |
| 7,000.00 | 6,914.91 | 6,870.17 | 6,846.08 | 27.34 | 25.29 | -166.85 | 27.13 | 195.14 | 873.05 | 824.21 | 48.85 | 17.873 | |
| 7,100.00 | 7,013.04 | 6,946.39 | 6,921.95 | 27.78 | 25.58 | -166.96 | 34.33 | 195.62 | 900.79 | 851.29 | 49.50 | 18.199 | |
| 7,200.00 | 7,111.18 | 7,030.00 | 7,004.96 | 28.22 | 25.91 | -167.03 | 44.22 | 196.78 | 930.62 | 880.44 | 50.17 | 18.548 | |
| 7,300.00 | 7,209.32 | 7,125.00 | 7,099.22 | 28.66 | 26.29 | -167.07 | 55.92 | 198.46 | 960.92 | 910.03 | 50.89 | 18.882 | |
| 7,400.00 | 7,307.45 | 7,211.67 | 7,185.21 | 29.10 | 26.63 | -167.08 | 66.62 | 200.28 | 991.22 | 939.64 | 51.58 | 19.217 | |
| 7,500.00 | 7,405.59 | 7,325.28 | 7,297.96 | 29.55 | 27.08 | -167.11 | 80.32 | 202.59 | 1,021.23 | 968.86 | 52.37 | 19.502 | |
| 7,600.00 | 7,503.73 | 7,409.00 | 7,381.10 | 29.99 | 27.41 | -167.17 | 90.11 | 203.50 | 1,051.04 | 997.99 | 53.04 | 19.815 | |
| 7,700.00 | 7,601.86 | 7,524.84 | 7,496.29 | 30.43 | 27.86 | -167.38 | 102.35 | 202.82 | 1,079.96 | 1,026.13 | 53.83 | 20.063 | |
| 7,800.00 | 7,700.00 | 7,598.00 | 7,569.01 | 30.87 | 28.15 | -167.57 | 110.13 | 201.09 | 1,109.34 | 1,054.88 | 54.46 | 20.369 | |
| 7,900.00 | 7,798.13 | 7,655.91 | 7,626.38 | 31.32 | 28.38 | -167.69 | 117.87 | 199.88 | 1,141.29 | 1,086.24 | 55.05 | 20.733 | |
| 8,000.00 | 7,896.27 | 7,787.00 | 7,755.97 | 31.76 | 28.91 | -167.88 | 137.37 | 198.30 | 1,174.94 | 1,119.05 | 55.89 | 21.023 | |
| 8,100.00 | 7,994.63 | 7,854.78 | 7,823.19 | 32.20 | 29.18 | -168.10 | 146.03 | 197.22 | 1,205.20 | 1,148.49 | 56.71 | 21.251 | |
| 8,200.00 | 8,093.55 | 7,933.64 | 7,901.05 | 32.61 | 29.51 | -168.21 | 158.47 | 197.63 | 1,234.59 | 1,177.02 | 57.57 | 21.446 | |
| 8,300.00 | 8,192.92 | 8,078.26 | 8,043.81 | 33.00 | 30.11 | -168.02 | 180.75 | 203.54 | 1,260.13 | 1,201.53 | 58.60 | 21.503 | |
| 8,400.00 | 8,292.62 | 8,292.07 | 8,256.76 | 33.20 | 30.91 | -167.80 | 197.22 | 210.43 | 1,274.21 | 1,214.58 | 59.64 | 21.366 | |
| 8,500.00 | 8,392.52 | 8,404.60 | 8,369.24 | 33.23 | 31.30 | -167.77 | 200.32 | 212.25 | 1,280.78 | 1,220.72 | 60.06 | 21.325 | |
| 8,600.00 | 8,492.50 | 8,480.61 | 8,445.20 | 33.24 | 31.57 | 80.87 | 202.27 | 213.83 | 1,283.87 | 1,223.58 | 60.30 | 21.293 | |
| 8,700.00 | 8,591.42 | 8,542.00 | 8,506.09 | 33.23 | 31.80 | 81.20 | 206.95 | 219.63 | 1,287.57 | 1,227.12 | 60.45 | 21.300 | |
| 8,800.00 | 8,686.43 | 8,826.00 | 8,763.09 | 33.20 | 32.75 | 89.72 | 216.44 | 332.23 | 1,283.56 | 1,221.78 | 61.78 | 20.776 | |
| 8,890.49 | 8,766.64 | 8,844.96 | 8,778.00 | 33.16 | 32.80 | 90.79 | 216.11 | 343.93 | 1,280.56 | 1,218.71 | 61.86 | 20.703 | |
| 8,900.00 | 8,774.66 | 8,846.52 | 8,779.21 | 33.16 | 32.81 | 90.85 | 216.09 | 344.92 | 1,280.60 | 1,218.74 | 61.86 | 20.702 | |
| 9,000.00 | 8,853.41 | 8,856.86 | 8,787.12 | 33.11 | 32.84 | 90.84 | 216.03 | 351.57 | 1,285.25 | 1,223.36 | 61.89 | 20.768 | |
| 9,100.00 | 8,920.31 | 8,857.90 | 8,787.91 | 33.08 | 32.84 | 89.62 | 216.02 | 352.25 | 1,297.77 | 1,235.83 | 61.94 | 20.952 | |
| 9,200.00 | 8,973.31 | 8,851.89 | 8,783.34 | 33.06 | 32.82 | 87.33 | 216.05 | 348.36 | 1,317.61 | 1,255.55 | 62.06 | 21.233 | |
| 9,300.00 | 9,010.81 | 8,826.00 | 8,763.09 | 33.04 | 32.75 | 83.56 | 216.44 | 332.23 | 1,343.88 | 1,281.82 | 62.06 | 21.655 | |
| 9,400.00 | 9,031.66 | 8,826.00 | 8,763.09 | 33.06 | 32.75 | 80.38 | 216.44 | 332.23 | 1,374.46 | 1,312.19 | 62.26 | 22.075 | |
| 9,500.00 | 9,036.00 | 8,806.18 | 8,747.06 | 33.21 | 32.69 | 77.21 | 217.07 | 320.59 | 1,408.51 | 1,346.06 | 62.45 | 22.554 | |
| 9,600.00 | 9,036.00 | 8,779.00 | 8,724.47 | 34.03 | 32.62 | 76.27 | 218.42 | 305.54 | 1,447.24 | 1,383.96 | 63.28 | 22.872 | |
| 9,700.00 | 9,036.00 | 8,753.32 | 8,702.54 | 35.35 | 32.54 | 75.36 | 219.67 | 292.24 | 1,490.72 | 1,426.42 | 64.29 | 23.187 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 2H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

**Survey Program:** 64-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9,800.00 | 9,036.00 | 8,704.83 | 8,659.75 | 36.87 | 32.39 | 73.60 | 220.42 | 269.46 | 1,538.07 | 1,472.96 | 65.11 | 23.622 | |
| 9,900.00 | 9,036.00 | 8,656.29 | 8,615.40 | 38.55 | 32.23 | 71.77 | 218.69 | 249.86 | 1,588.99 | 1,523.01 | 65.98 | 24.081 | |
| 10,000.00 | 9,036.00 | 8,637.00 | 8,597.44 | 40.36 | 32.16 | 71.03 | 217.20 | 243.00 | 1,643.49 | 1,576.08 | 67.42 | 24.378 | |
| 10,100.00 | 9,036.00 | 8,616.41 | 8,578.04 | 42.29 | 32.09 | 70.23 | 215.23 | 236.38 | 1,701.72 | 1,632.81 | 68.91 | 24.696 | |
| 10,200.00 | 9,036.00 | 8,605.73 | 8,567.88 | 44.31 | 32.05 | 69.82 | 214.11 | 233.29 | 1,763.55 | 1,692.89 | 70.66 | 24.959 | |
| 10,300.00 | 9,036.00 | 8,589.00 | 8,551.84 | 46.43 | 31.98 | 69.16 | 212.23 | 228.92 | 1,828.65 | 1,756.30 | 72.35 | 25.275 | |
| 10,400.00 | 9,036.00 | 8,589.00 | 8,551.84 | 48.61 | 31.98 | 69.16 | 212.23 | 228.92 | 1,896.58 | 1,822.14 | 74.45 | 25.476 | |
| 10,500.00 | 9,036.00 | 8,589.00 | 8,551.84 | 50.86 | 31.98 | 69.16 | 212.23 | 228.92 | 1,967.26 | 1,890.66 | 76.60 | 25.682 | |
| 10,600.00 | 9,036.00 | 8,589.00 | 8,551.84 | 53.17 | 31.98 | 69.16 | 212.23 | 228.92 | 2,040.38 | 1,961.58 | 78.81 | 25.891 | |
| 10,700.00 | 9,036.00 | 8,589.00 | 8,551.84 | 55.53 | 31.98 | 69.16 | 212.23 | 228.92 | 2,115.71 | 2,034.66 | 81.06 | 26.102 | |
| 10,800.00 | 9,036.00 | 8,568.41 | 8,531.92 | 57.94 | 31.90 | 68.34 | 209.87 | 224.31 | 2,192.55 | 2,109.68 | 82.87 | 26.458 | |
| 10,900.00 | 9,036.00 | 8,564.36 | 8,527.98 | 60.38 | 31.89 | 68.18 | 209.41 | 223.50 | 2,271.41 | 2,186.33 | 85.08 | 26.696 | |
| 11,000.00 | 9,036.00 | 8,542.00 | 8,506.09 | 62.85 | 31.80 | 67.30 | 206.95 | 219.63 | 2,352.24 | 2,265.38 | 86.86 | 27.080 | |
| 11,100.00 | 9,036.00 | 8,542.00 | 8,506.09 | 65.36 | 31.80 | 67.30 | 206.95 | 219.63 | 2,433.98 | 2,344.76 | 89.22 | 27.281 | |
| 11,200.00 | 9,036.00 | 8,542.00 | 8,506.09 | 67.89 | 31.80 | 67.30 | 206.95 | 219.63 | 2,517.04 | 2,425.44 | 91.60 | 27.480 | |
| 11,300.00 | 9,036.00 | 8,542.00 | 8,506.09 | 70.45 | 31.80 | 67.30 | 206.95 | 219.63 | 2,601.28 | 2,507.29 | 94.00 | 27.674 | |
| 11,400.00 | 9,036.00 | 8,542.00 | 8,506.09 | 73.02 | 31.80 | 67.30 | 206.95 | 219.63 | 2,686.61 | 2,590.20 | 96.41 | 27.865 | |
| 11,500.00 | 9,036.00 | 8,542.00 | 8,506.09 | 75.62 | 31.80 | 67.30 | 206.95 | 219.63 | 2,772.92 | 2,674.07 | 98.85 | 28.052 | |
| 11,600.00 | 9,036.00 | 8,542.00 | 8,506.09 | 78.24 | 31.80 | 67.30 | 206.95 | 219.63 | 2,860.12 | 2,758.82 | 101.30 | 28.235 | |
| 11,700.00 | 9,036.00 | 8,542.00 | 8,506.09 | 80.87 | 31.80 | 67.30 | 206.95 | 219.63 | 2,948.14 | 2,844.37 | 103.76 | 28.413 | |
| 11,800.00 | 9,036.00 | 8,542.00 | 8,506.09 | 83.51 | 31.80 | 67.30 | 206.95 | 219.63 | 3,036.89 | 2,930.66 | 106.24 | 28.586 | |
| 11,900.00 | 9,036.00 | 8,542.00 | 8,506.09 | 86.17 | 31.80 | 67.30 | 206.95 | 219.63 | 3,126.33 | 3,017.60 | 108.72 | 28.755 | |
| 12,000.00 | 9,036.00 | 8,542.00 | 8,506.09 | 88.84 | 31.80 | 67.30 | 206.95 | 219.63 | 3,216.38 | 3,105.16 | 111.22 | 28.919 | |
| 12,100.00 | 9,036.00 | 8,542.00 | 8,506.09 | 91.52 | 31.80 | 67.30 | 206.95 | 219.63 | 3,307.01 | 3,193.29 | 113.73 | 29.079 | |
| 12,200.00 | 9,036.00 | 8,542.00 | 8,506.09 | 94.21 | 31.80 | 67.30 | 206.95 | 219.63 | 3,398.17 | 3,281.93 | 116.24 | 29.234 | |
| 12,300.00 | 9,036.00 | 8,542.00 | 8,506.09 | 96.91 | 31.80 | 67.30 | 206.95 | 219.63 | 3,489.81 | 3,371.05 | 118.76 | 29.385 | |
| 12,400.00 | 9,036.00 | 8,542.00 | 8,506.09 | 99.61 | 31.80 | 67.30 | 206.95 | 219.63 | 3,581.89 | 3,460.60 | 121.29 | 29.532 | |
| 12,500.00 | 9,036.00 | 8,542.00 | 8,506.09 | 102.33 | 31.80 | 67.30 | 206.95 | 219.63 | 3,674.39 | 3,550.57 | 123.82 | 29.674 | |
| 12,600.00 | 9,036.00 | 8,542.00 | 8,506.09 | 105.05 | 31.80 | 67.30 | 206.95 | 219.63 | 3,767.28 | 3,640.91 | 126.37 | 29.813 | |
| 12,700.00 | 9,036.00 | 8,542.00 | 8,506.09 | 107.78 | 31.80 | 67.30 | 206.95 | 219.63 | 3,860.52 | 3,731.60 | 128.91 | 29.947 | |
| 12,800.00 | 9,036.00 | 8,542.00 | 8,506.09 | 110.51 | 31.80 | 67.30 | 206.95 | 219.63 | 3,954.09 | 3,822.62 | 131.46 | 30.077 | |
| 12,900.00 | 9,036.00 | 8,542.00 | 8,506.09 | 113.25 | 31.80 | 67.30 | 206.95 | 219.63 | 4,047.96 | 3,913.94 | 134.02 | 30.204 | |
| 13,000.00 | 9,036.00 | 8,542.00 | 8,506.09 | 116.00 | 31.80 | 67.30 | 206.95 | 219.63 | 4,142.13 | 4,005.55 | 136.58 | 30.327 | |
| 13,100.00 | 9,036.00 | 8,520.12 | 8,484.51 | 118.75 | 31.72 | 66.44 | 204.84 | 216.77 | 4,235.99 | 4,097.70 | 138.29 | 30.631 | |
| 13,200.00 | 9,036.00 | 8,519.05 | 8,483.45 | 121.50 | 31.71 | 66.40 | 204.75 | 216.65 | 4,330.61 | 4,189.81 | 140.80 | 30.757 | |
| 13,300.00 | 9,036.00 | 8,518.02 | 8,482.43 | 124.26 | 31.71 | 66.36 | 204.66 | 216.54 | 4,425.47 | 4,282.16 | 143.32 | 30.879 | |
| 13,400.00 | 9,036.00 | 8,517.03 | 8,481.44 | 127.03 | 31.71 | 66.32 | 204.58 | 216.44 | 4,520.55 | 4,374.72 | 145.83 | 30.998 | |
| 13,500.00 | 9,036.00 | 8,495.00 | 8,459.55 | 129.79 | 31.62 | 65.47 | 203.03 | 214.61 | 4,616.36 | 4,468.90 | 147.46 | 31.306 | |
| 13,600.00 | 9,036.00 | 8,495.00 | 8,459.55 | 132.56 | 31.62 | 65.47 | 203.03 | 214.61 | 4,711.79 | 4,561.78 | 150.01 | 31.410 | |
| 13,700.00 | 9,036.00 | 8,495.00 | 8,459.55 | 135.34 | 31.62 | 65.47 | 203.03 | 214.61 | 4,807.41 | 4,654.85 | 152.56 | 31.512 | |
| 13,800.00 | 9,036.00 | 8,495.00 | 8,459.55 | 138.11 | 31.62 | 65.47 | 203.03 | 214.61 | 4,903.20 | 4,748.09 | 155.11 | 31.610 | |
| 13,900.00 | 9,036.00 | 8,495.00 | 8,459.55 | 140.89 | 31.62 | 65.47 | 203.03 | 214.61 | 4,999.16 | 4,841.49 | 157.67 | 31.706 | |
| 13,913.79 | 9,036.00 | 8,495.00 | 8,459.55 | 141.27 | 31.62 | 65.47 | 203.03 | 214.61 | 5,012.40 | 4,854.38 | 158.02 | 31.719 | |

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| ***Well Error:*** | *0.00 usft* | ***Output errors are at*** | *2.00 sigma* |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 3H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

**Survey Program:** 81-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 137.86 | -783.71 | 709.21 | 1,056.96 | | | | |
| 100.00 | 100.00 | 97.54 | 97.54 | 0.12 | 0.16 | 137.86 | -783.79 | 709.25 | 1,057.05 | 1,056.78 | 0.28 | 3,798.872 | |
| 200.00 | 200.00 | 201.92 | 201.91 | 0.48 | 0.52 | 137.83 | -783.19 | 709.40 | 1,056.72 | 1,055.72 | 1.00 | 1,055.738 | |
| 300.00 | 300.00 | 303.46 | 303.45 | 0.84 | 0.88 | 137.81 | -782.81 | 709.61 | 1,056.58 | 1,054.86 | 1.72 | 615.816 | |
| 400.00 | 400.00 | 414.90 | 414.89 | 1.20 | 1.27 | 137.85 | -782.20 | 708.10 | 1,055.23 | 1,052.77 | 2.46 | 428.538 | |
| 500.00 | 500.00 | 516.12 | 516.08 | 1.55 | 1.62 | 137.89 | -781.49 | 706.38 | 1,053.58 | 1,050.40 | 3.18 | 331.710 | |
| 600.00 | 600.00 | 615.23 | 615.18 | 1.91 | 1.97 | 137.93 | -780.74 | 704.73 | 1,051.91 | 1,048.02 | 3.89 | 270.707 | |
| 700.00 | 700.00 | 715.71 | 715.64 | 2.27 | 2.33 | 137.96 | -779.91 | 703.19 | 1,050.27 | 1,045.66 | 4.60 | 228.231 | |
| 800.00 | 800.00 | 816.74 | 816.66 | 2.63 | 2.69 | 137.95 | -778.48 | 702.09 | 1,048.48 | 1,043.16 | 5.32 | 197.071 | |
| 900.00 | 900.00 | 914.50 | 914.41 | 2.99 | 3.04 | 137.95 | -777.26 | 701.05 | 1,046.84 | 1,040.81 | 6.03 | 173.670 | |
| 1,000.00 | 1,000.00 | 1,013.80 | 1,013.69 | 3.35 | 3.40 | 137.95 | -776.11 | 700.02 | 1,045.28 | 1,038.54 | 6.74 | 155.062 | |
| 1,100.00 | 1,100.00 | 1,108.20 | 1,108.08 | 3.70 | 3.73 | 137.94 | -774.99 | 699.37 | 1,043.95 | 1,036.51 | 7.44 | 140.404 | |
| 1,182.56 | 1,182.56 | 1,180.38 | 1,180.26 | 4.00 | 3.99 | 137.90 | -774.32 | 699.56 | 1,043.53 | 1,035.54 | 7.98 | 130.692 | |
| 1,200.00 | 1,200.00 | 1,194.43 | 1,194.31 | 4.06 | 4.03 | 137.89 | -774.23 | 699.70 | 1,043.56 | 1,035.47 | 8.10 | 128.910 | |
| 1,300.00 | 1,300.00 | 1,275.91 | 1,275.77 | 4.42 | 4.31 | 137.83 | -774.19 | 701.30 | 1,044.84 | 1,036.11 | 8.73 | 119.647 | |
| 1,400.00 | 1,400.00 | 1,364.39 | 1,364.21 | 4.78 | 4.61 | 137.74 | -774.83 | 704.17 | 1,047.55 | 1,038.16 | 9.39 | 111.543 | |
| 1,500.00 | 1,500.00 | 1,465.16 | 1,464.91 | 5.14 | 4.96 | 137.66 | -776.19 | 707.33 | 1,050.66 | 1,040.56 | 10.09 | 104.096 | |
| 1,600.00 | 1,600.00 | 1,553.28 | 1,552.96 | 5.50 | 5.26 | 137.60 | -777.84 | 710.39 | 1,054.38 | 1,043.63 | 10.75 | 98.052 | |
| 1,700.00 | 1,700.00 | 1,648.60 | 1,648.18 | 5.86 | 5.59 | 137.54 | -780.34 | 713.99 | 1,058.87 | 1,047.43 | 11.44 | 92.560 | |
| 1,800.00 | 1,800.00 | 1,744.28 | 1,743.74 | 6.21 | 5.92 | 137.54 | -783.79 | 717.29 | 1,063.84 | 1,051.72 | 12.13 | 87.717 | |
| 1,900.00 | 1,900.00 | 1,867.27 | 1,866.62 | 6.57 | 6.34 | 137.63 | -788.50 | 719.23 | 1,067.71 | 1,054.80 | 12.91 | 82.702 | |
| 2,000.00 | 2,000.00 | 1,970.14 | 1,969.43 | 6.93 | 6.70 | 137.75 | -792.08 | 719.35 | 1,070.36 | 1,056.73 | 13.62 | 78.562 | |
| 2,100.00 | 2,100.00 | 2,105.92 | 2,105.15 | 7.28 | 7.17 | -20.54 | -795.85 | 718.45 | 1,071.99 | 1,057.55 | 14.45 | 74.206 | |
| 2,200.00 | 2,199.95 | 2,219.55 | 2,218.69 | 7.61 | 7.57 | -20.42 | -797.33 | 714.35 | 1,067.75 | 1,052.59 | 15.16 | 70.445 | |
| 2,300.00 | 2,299.74 | 2,319.01 | 2,318.07 | 7.94 | 7.91 | -20.40 | -798.28 | 710.42 | 1,059.77 | 1,043.96 | 15.81 | 67.050 | |
| 2,400.00 | 2,399.24 | 2,426.14 | 2,425.11 | 8.27 | 8.29 | -20.48 | -799.19 | 706.19 | 1,048.50 | 1,032.03 | 16.47 | 63.677 | |
| 2,500.00 | 2,498.33 | 2,539.85 | 2,538.69 | 8.60 | 8.69 | -20.71 | -798.20 | 700.86 | 1,032.14 | 1,015.00 | 17.13 | 60.245 | |
| 2,600.00 | 2,596.90 | 2,634.94 | 2,633.67 | 8.95 | 9.02 | -21.02 | -797.20 | 696.33 | 1,012.45 | 994.74 | 17.72 | 57.151 | |
| 2,700.00 | 2,695.04 | 2,743.37 | 2,741.96 | 9.30 | 9.41 | -21.30 | -796.10 | 690.94 | 990.56 | 972.14 | 18.41 | 53.802 | |
| 2,800.00 | 2,793.18 | 2,845.81 | 2,844.19 | 9.66 | 9.77 | -21.53 | -794.33 | 684.66 | 967.30 | 948.19 | 19.11 | 50.620 | |
| 2,900.00 | 2,891.32 | 2,943.20 | 2,941.37 | 10.03 | 10.12 | -21.75 | -792.63 | 678.61 | 944.00 | 924.21 | 19.79 | 47.694 | |
| 3,000.00 | 2,989.45 | 3,070.09 | 3,067.88 | 10.40 | 10.57 | -22.08 | -788.80 | 669.57 | 919.23 | 898.64 | 20.58 | 44.659 | |
| 3,100.00 | 3,087.59 | 3,168.92 | 3,166.28 | 10.78 | 10.93 | -22.36 | -784.39 | 661.54 | 892.78 | 871.50 | 21.28 | 41.956 | |
| 3,200.00 | 3,185.73 | 3,281.13 | 3,277.85 | 11.17 | 11.34 | -22.61 | -779.49 | 650.64 | 865.36 | 843.34 | 22.02 | 39.292 | |
| 3,300.00 | 3,283.86 | 3,389.81 | 3,385.47 | 11.56 | 11.74 | -22.63 | -775.48 | 636.10 | 835.94 | 813.18 | 22.76 | 36.727 | |
| 3,400.00 | 3,382.00 | 3,478.30 | 3,472.84 | 11.95 | 12.08 | -22.45 | -773.77 | 622.15 | 806.20 | 782.77 | 23.43 | 34.407 | |
| 3,500.00 | 3,480.13 | 3,557.21 | 3,550.71 | 12.35 | 12.38 | -22.16 | -774.38 | 609.45 | 778.13 | 754.06 | 24.07 | 32.326 | |
| 3,600.00 | 3,578.27 | 3,636.42 | 3,629.08 | 12.75 | 12.68 | -21.86 | -776.25 | 598.13 | 752.37 | 727.65 | 24.72 | 30.439 | |
| 3,700.00 | 3,676.41 | 3,729.90 | 3,721.89 | 13.16 | 13.03 | -21.66 | -777.83 | 587.12 | 727.83 | 702.42 | 25.42 | 28.635 | |
| 3,800.00 | 3,774.54 | 3,823.00 | 3,814.59 | 13.57 | 13.38 | -21.67 | -777.94 | 578.44 | 703.81 | 677.70 | 26.12 | 26.947 | |
| 3,900.00 | 3,872.68 | 3,918.24 | 3,909.49 | 13.98 | 13.74 | -21.76 | -777.71 | 570.48 | 680.18 | 653.35 | 26.83 | 25.354 | |
| 4,000.00 | 3,970.82 | 4,012.45 | 4,003.40 | 14.39 | 14.09 | -21.86 | -777.70 | 562.89 | 656.91 | 629.37 | 27.53 | 23.857 | |
| 4,100.00 | 4,068.95 | 4,106.53 | 4,097.22 | 14.80 | 14.44 | -22.01 | -777.78 | 555.89 | 634.12 | 605.88 | 28.24 | 22.452 | |
| 4,200.00 | 4,167.09 | 4,202.18 | 4,192.63 | 15.22 | 14.79 | -22.18 | -778.01 | 549.16 | 611.71 | 582.75 | 28.96 | 21.123 | |
| 4,300.00 | 4,265.23 | 4,297.69 | 4,287.92 | 15.64 | 15.14 | -22.38 | -778.39 | 542.71 | 589.61 | 559.93 | 29.68 | 19.868 | |
| 4,400.00 | 4,363.36 | 4,393.34 | 4,383.37 | 16.06 | 15.50 | -22.60 | -778.98 | 536.50 | 567.85 | 537.46 | 30.40 | 18.682 | |
| 4,500.00 | 4,461.50 | 4,488.61 | 4,478.43 | 16.48 | 15.85 | -22.82 | -779.83 | 530.41 | 546.37 | 515.25 | 31.12 | 17.559 | |
| 4,600.00 | 4,559.63 | 4,577.83 | 4,567.45 | 16.91 | 16.17 | -22.92 | -782.16 | 524.75 | 526.11 | 494.29 | 31.82 | 16.536 | |
| 4,700.00 | 4,657.77 | 4,686.90 | 4,676.22 | 17.33 | 16.58 | -23.02 | -784.84 | 517.20 | 505.36 | 472.77 | 32.59 | 15.507 | |
| 4,800.00 | 4,755.91 | 4,787.87 | 4,776.91 | 17.76 | 16.95 | -23.25 | -785.53 | 509.86 | 483.13 | 449.80 | 33.34 | 14.493 | |
| 4,900.00 | 4,854.04 | 4,883.20 | 4,872.03 | 18.19 | 17.30 | -23.58 | -785.70 | 503.52 | 461.00 | 426.94 | 34.06 | 13.534 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 3H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

**Survey Program:** 81-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,000.00 | 4,952.18 | 4,979.31 | 4,967.97 | 18.62 | 17.66 | -24.01 | -785.76 | 497.72 | 439.22 | 404.43 | 34.79 | 12.625 | |
| 5,100.00 | 5,050.32 | 5,072.88 | 5,061.40 | 19.05 | 18.00 | -24.51 | -785.93 | 492.58 | 417.93 | 382.42 | 35.51 | 11.768 | |
| 5,200.00 | 5,148.45 | 5,164.28 | 5,152.76 | 19.48 | 18.33 | -25.30 | -785.91 | 489.86 | 398.31 | 362.08 | 36.23 | 10.993 | |
| 5,300.00 | 5,246.59 | 5,259.92 | 5,248.37 | 19.91 | 18.67 | -26.28 | -785.97 | 487.84 | 379.48 | 342.51 | 36.97 | 10.266 | |
| 5,400.00 | 5,344.73 | 5,352.88 | 5,341.33 | 20.34 | 18.98 | -27.51 | -786.11 | 487.62 | 362.19 | 324.50 | 37.69 | 9.610 | |
| 5,500.00 | 5,442.86 | 5,452.66 | 5,441.11 | 20.77 | 19.31 | -29.06 | -785.99 | 487.95 | 345.37 | 306.93 | 38.44 | 8.985 | |
| 5,600.00 | 5,541.00 | 5,547.75 | 5,536.20 | 21.21 | 19.63 | -30.71 | -785.56 | 488.16 | 328.53 | 289.35 | 39.18 | 8.385 | |
| 5,700.00 | 5,639.13 | 5,637.77 | 5,626.18 | 21.64 | 19.93 | -32.44 | -786.53 | 490.37 | 314.62 | 274.71 | 39.92 | 7.882 | |
| 5,800.00 | 5,737.27 | 5,736.83 | 5,725.19 | 22.08 | 20.25 | -34.44 | -788.26 | 493.14 | 301.77 | 261.08 | 40.69 | 7.416 | |
| 5,900.00 | 5,835.41 | 5,833.96 | 5,822.26 | 22.51 | 20.57 | -36.67 | -789.73 | 496.40 | 289.67 | 248.19 | 41.48 | 6.984 | |
| 6,000.00 | 5,933.54 | 5,932.20 | 5,920.41 | 22.95 | 20.89 | -39.24 | -790.81 | 500.28 | 278.35 | 236.06 | 42.29 | 6.582 | |
| 6,100.00 | 6,031.68 | 6,033.79 | 6,021.92 | 23.39 | 21.23 | -42.02 | -792.21 | 503.86 | 267.41 | 224.29 | 43.12 | 6.201 | |
| 6,200.00 | 6,129.82 | 6,136.18 | 6,124.30 | 23.82 | 21.57 | -44.80 | -793.89 | 505.18 | 255.19 | 211.21 | 43.98 | 5.803 | |
| 6,300.00 | 6,227.95 | 6,232.23 | 6,220.33 | 24.26 | 21.89 | -47.94 | -794.29 | 506.62 | 243.35 | 198.52 | 44.83 | 5.428 | |
| 6,400.00 | 6,326.09 | 6,327.75 | 6,315.78 | 24.70 | 22.20 | -51.75 | -793.54 | 510.03 | 233.95 | 188.23 | 45.71 | 5.118 | |
| 6,500.00 | 6,424.23 | 6,426.20 | 6,414.14 | 25.14 | 22.53 | -56.08 | -792.50 | 514.05 | 226.19 | 179.56 | 46.63 | 4.851 | |
| 6,600.00 | 6,522.36 | 6,525.23 | 6,513.10 | 25.58 | 22.86 | -60.70 | -791.39 | 517.68 | 219.43 | 171.86 | 47.57 | 4.613 | |
| 6,700.00 | 6,620.50 | 6,623.84 | 6,611.64 | 26.02 | 23.19 | -65.69 | -789.75 | 521.04 | 213.90 | 165.39 | 48.51 | 4.409 | |
| 6,800.00 | 6,718.63 | 6,720.05 | 6,707.76 | 26.46 | 23.51 | -71.05 | -787.07 | 524.48 | 210.33 | 160.89 | 49.44 | 4.254 | |
| 6,900.00 | 6,816.77 | 6,820.21 | 6,807.80 | 26.90 | 23.85 | -76.73 | -784.39 | 528.34 | 209.07 | 158.70 | 50.37 | 4.151 | |
| 7,000.00 | 6,914.91 | 6,928.46 | 6,916.02 | 27.34 | 24.22 | -82.80 | -782.59 | 529.33 | 206.85 | 155.55 | 51.30 | 4.032 | |
| 7,100.00 | 7,013.04 | 7,030.25 | 7,017.77 | 27.78 | 24.59 | -88.53 | -782.40 | 526.52 | 202.73 | 150.57 | 52.16 | 3.887 | |
| 7,200.00 | 7,111.18 | 7,130.97 | 7,118.40 | 28.22 | 24.95 | -94.35 | -782.99 | 522.43 | 199.16 | 146.19 | 52.97 | 3.760 | |
| 7,300.00 | 7,209.32 | 7,230.09 | 7,217.39 | 28.66 | 25.30 | -100.19 | -784.20 | 517.51 | 196.59 | 142.89 | 53.71 | 3.661 | |
| 7,366.76 | 7,274.83 | 7,294.76 | 7,281.98 | 28.96 | 25.54 | -104.05 | -785.03 | 514.27 | 196.01 | 141.84 | 54.16 | 3.619 CC | |
| 7,400.00 | 7,307.45 | 7,326.89 | 7,314.07 | 29.10 | 25.65 | -105.97 | -785.42 | 512.74 | 196.15 | 141.77 | 54.38 | 3.607 ES, SF | |
| 7,500.00 | 7,405.59 | 7,423.12 | 7,410.20 | 29.55 | 26.00 | -111.58 | -786.45 | 508.72 | 198.51 | 143.50 | 55.00 | 3.609 | |
| 7,600.00 | 7,503.73 | 7,519.54 | 7,506.59 | 29.99 | 26.34 | -116.53 | -788.05 | 506.56 | 203.67 | 148.07 | 55.59 | 3.664 | |
| 7,700.00 | 7,601.86 | 7,617.38 | 7,604.40 | 30.43 | 26.68 | -121.05 | -789.90 | 505.26 | 210.73 | 154.56 | 56.17 | 3.752 | |
| 7,800.00 | 7,700.00 | 7,714.75 | 7,701.76 | 30.87 | 27.02 | -125.33 | -791.20 | 503.93 | 219.50 | 162.77 | 56.72 | 3.870 | |
| 7,900.00 | 7,798.13 | 7,813.10 | 7,800.08 | 31.32 | 27.37 | -129.60 | -791.82 | 501.64 | 229.59 | 172.33 | 57.26 | 4.010 | |
| 8,000.00 | 7,896.27 | 7,911.44 | 7,898.38 | 31.76 | 27.72 | -133.51 | -792.54 | 499.23 | 240.73 | 182.93 | 57.80 | 4.165 | |
| 8,100.00 | 7,994.63 | 8,009.97 | 7,996.86 | 32.20 | 28.07 | -137.17 | -792.98 | 496.23 | 252.05 | 193.63 | 58.42 | 4.314 | |
| 8,200.00 | 8,093.55 | 8,108.74 | 8,095.59 | 32.61 | 28.42 | -139.94 | -793.94 | 493.49 | 261.23 | 202.16 | 59.08 | 4.422 | |
| 8,300.00 | 8,192.92 | 8,205.19 | 8,192.03 | 33.00 | 28.76 | -141.56 | -794.75 | 493.03 | 268.95 | 209.22 | 59.74 | 4.502 | |
| 8,400.00 | 8,292.62 | 8,304.44 | 8,291.28 | 33.20 | 29.10 | -142.61 | -794.84 | 493.04 | 274.94 | 214.73 | 60.21 | 4.566 | |
| 8,500.00 | 8,392.52 | 8,406.33 | 8,393.17 | 33.23 | 29.46 | -143.28 | -795.36 | 492.40 | 277.64 | 217.13 | 60.51 | 4.589 | |
| 8,600.00 | 8,492.50 | 8,494.85 | 8,481.68 | 33.24 | 29.76 | 105.25 | -795.25 | 492.21 | 278.72 | 217.92 | 60.80 | 4.584 | |
| 8,700.00 | 8,591.42 | 8,566.86 | 8,553.47 | 33.23 | 30.01 | 106.45 | -791.04 | 495.49 | 289.81 | 228.70 | 61.11 | 4.742 | |
| 8,800.00 | 8,686.43 | 8,623.97 | 8,609.47 | 33.20 | 30.19 | 107.66 | -782.70 | 502.69 | 318.24 | 257.11 | 61.13 | 5.206 | |
| 8,900.00 | 8,774.66 | 8,677.42 | 8,660.59 | 33.16 | 30.35 | 108.31 | -772.55 | 514.39 | 364.04 | 303.14 | 60.90 | 5.978 | |
| 9,000.00 | 8,853.41 | 8,715.49 | 8,696.11 | 33.11 | 30.46 | 105.91 | -765.58 | 526.17 | 425.42 | 364.76 | 60.67 | 7.012 | |
| 9,100.00 | 8,920.31 | 8,736.93 | 8,715.70 | 33.08 | 30.52 | 98.44 | -761.87 | 534.06 | 499.64 | 438.76 | 60.88 | 8.206 | |
| 9,200.00 | 8,973.31 | 8,745.47 | 8,723.40 | 33.06 | 30.54 | 85.31 | -760.47 | 537.45 | 582.23 | 521.66 | 60.57 | 9.613 | |
| 9,300.00 | 9,010.81 | 8,743.56 | 8,721.68 | 33.04 | 30.54 | 68.19 | -760.78 | 536.68 | 668.81 | 612.13 | 56.68 | 11.800 | |
| 9,400.00 | 9,031.66 | 8,731.00 | 8,710.31 | 33.06 | 30.50 | 51.26 | -762.87 | 531.79 | 755.75 | 707.34 | 48.41 | 15.611 | |
| 9,500.00 | 9,036.00 | 8,720.29 | 8,700.52 | 33.21 | 30.47 | 41.88 | -764.73 | 527.86 | 840.52 | 797.76 | 42.75 | 19.659 | |
| 9,600.00 | 9,036.00 | 8,700.00 | 8,681.76 | 34.03 | 30.42 | 39.99 | -768.36 | 521.03 | 926.49 | 884.27 | 42.22 | 21.942 | |
| 9,700.00 | 9,036.00 | 8,700.00 | 8,681.76 | 35.35 | 30.42 | 39.99 | -768.36 | 521.03 | 1,014.53 | 971.31 | 43.22 | 23.474 | |
| 9,800.00 | 9,036.00 | 8,685.81 | 8,668.49 | 36.87 | 30.37 | 38.70 | -770.98 | 516.74 | 1,104.32 | 1,061.01 | 43.31 | 25.497 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 3H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

**Survey Program:** 81-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9,900.00 | 9,036.00 | 8,668.00 | 8,651.68 | 38.55 | 30.32 | 37.13 | -774.34 | 511.92 | 1,195.64 | 1,152.42 | 43.22 | 27.665 | |
| 10,000.00 | 9,036.00 | 8,668.00 | 8,651.68 | 40.36 | 30.32 | 37.13 | -774.34 | 511.92 | 1,287.87 | 1,243.41 | 44.46 | 28.969 | |
| 10,100.00 | 9,036.00 | 8,668.00 | 8,651.68 | 42.29 | 30.32 | 37.13 | -774.34 | 511.92 | 1,381.18 | 1,335.41 | 45.77 | 30.179 | |
| 10,200.00 | 9,036.00 | 8,668.00 | 8,651.68 | 44.31 | 30.32 | 37.13 | -774.34 | 511.92 | 1,475.37 | 1,428.23 | 47.14 | 31.300 | |
| 10,300.00 | 9,036.00 | 8,650.79 | 8,635.29 | 46.43 | 30.27 | 35.67 | -777.63 | 507.86 | 1,569.88 | 1,522.67 | 47.21 | 33.254 | |
| 10,400.00 | 9,036.00 | 8,636.00 | 8,621.09 | 48.61 | 30.23 | 34.46 | -780.46 | 504.85 | 1,665.25 | 1,617.78 | 47.48 | 35.076 | |
| 10,500.00 | 9,036.00 | 8,636.00 | 8,621.09 | 50.86 | 30.23 | 34.46 | -780.46 | 504.85 | 1,760.88 | 1,711.98 | 48.90 | 36.007 | |
| 10,600.00 | 9,036.00 | 8,636.00 | 8,621.09 | 53.17 | 30.23 | 34.46 | -780.46 | 504.85 | 1,856.97 | 1,806.61 | 50.36 | 36.871 | |
| 10,700.00 | 9,036.00 | 8,636.00 | 8,621.09 | 55.53 | 30.23 | 34.46 | -780.46 | 504.85 | 1,953.45 | 1,901.60 | 51.85 | 37.674 | |
| 10,800.00 | 9,036.00 | 8,636.00 | 8,621.09 | 57.94 | 30.23 | 34.46 | -780.46 | 504.85 | 2,050.27 | 1,996.91 | 53.36 | 38.421 | |
| 10,900.00 | 9,036.00 | 8,636.00 | 8,621.09 | 60.38 | 30.23 | 34.46 | -780.46 | 504.85 | 2,147.38 | 2,092.49 | 54.89 | 39.119 | |
| 11,000.00 | 9,036.00 | 8,621.73 | 8,607.30 | 62.85 | 30.18 | 33.34 | -783.11 | 502.32 | 2,244.52 | 2,189.35 | 55.17 | 40.687 | |
| 11,100.00 | 9,036.00 | 8,618.46 | 8,604.12 | 65.36 | 30.17 | 33.09 | -783.69 | 501.78 | 2,342.00 | 2,285.59 | 56.40 | 41.522 | |
| 11,200.00 | 9,036.00 | 8,605.00 | 8,591.01 | 67.89 | 30.13 | 32.10 | -785.97 | 499.77 | 2,439.77 | 2,383.04 | 56.73 | 43.003 | |
| 11,300.00 | 9,036.00 | 8,605.00 | 8,591.01 | 70.45 | 30.13 | 32.10 | -785.97 | 499.77 | 2,537.54 | 2,479.29 | 58.25 | 43.562 | |
| 11,400.00 | 9,036.00 | 8,605.00 | 8,591.01 | 73.02 | 30.13 | 32.10 | -785.97 | 499.77 | 2,635.47 | 2,575.69 | 59.78 | 44.088 | |
| 11,500.00 | 9,036.00 | 8,605.00 | 8,591.01 | 75.62 | 30.13 | 32.10 | -785.97 | 499.77 | 2,733.56 | 2,672.24 | 61.31 | 44.583 | |
| 11,600.00 | 9,036.00 | 8,605.00 | 8,591.01 | 78.24 | 30.13 | 32.10 | -785.97 | 499.77 | 2,831.77 | 2,768.91 | 62.86 | 45.050 | |
| 11,700.00 | 9,036.00 | 8,605.00 | 8,591.01 | 80.87 | 30.13 | 32.10 | -785.97 | 499.77 | 2,930.11 | 2,865.70 | 64.41 | 45.491 | |
| 11,800.00 | 9,036.00 | 8,605.00 | 8,591.01 | 83.51 | 30.13 | 32.10 | -785.97 | 499.77 | 3,028.56 | 2,962.59 | 65.97 | 45.908 | |
| 11,900.00 | 9,036.00 | 8,605.00 | 8,591.01 | 86.17 | 30.13 | 32.10 | -785.97 | 499.77 | 3,127.10 | 3,059.57 | 67.54 | 46.303 | |
| 12,000.00 | 9,036.00 | 8,605.00 | 8,591.01 | 88.84 | 30.13 | 32.10 | -785.97 | 499.77 | 3,225.74 | 3,156.63 | 69.11 | 46.677 | |
| 12,100.00 | 9,036.00 | 8,605.00 | 8,591.01 | 91.52 | 30.13 | 32.10 | -785.97 | 499.77 | 3,324.46 | 3,253.77 | 70.68 | 47.033 | |
| 12,200.00 | 9,036.00 | 8,605.00 | 8,591.01 | 94.21 | 30.13 | 32.10 | -785.97 | 499.77 | 3,423.25 | 3,350.98 | 72.26 | 47.371 | |
| 12,300.00 | 9,036.00 | 8,589.94 | 8,576.25 | 96.91 | 30.08 | 31.05 | -788.25 | 497.83 | 3,521.89 | 3,449.71 | 72.19 | 48.787 | |
| 12,400.00 | 9,036.00 | 8,588.18 | 8,574.52 | 99.61 | 30.08 | 30.93 | -788.50 | 497.63 | 3,620.77 | 3,547.21 | 73.55 | 49.227 | |
| 12,500.00 | 9,036.00 | 8,573.00 | 8,559.54 | 102.33 | 30.03 | 29.96 | -790.38 | 496.04 | 3,719.86 | 3,646.37 | 73.49 | 50.619 | |
| 12,600.00 | 9,036.00 | 8,573.00 | 8,559.54 | 105.05 | 30.03 | 29.96 | -790.38 | 496.04 | 3,818.80 | 3,743.79 | 75.01 | 50.911 | |
| 12,700.00 | 9,036.00 | 8,573.00 | 8,559.54 | 107.78 | 30.03 | 29.96 | -790.38 | 496.04 | 3,917.79 | 3,841.26 | 76.54 | 51.189 | |
| 12,800.00 | 9,036.00 | 8,573.00 | 8,559.54 | 110.51 | 30.03 | 29.96 | -790.38 | 496.04 | 4,016.83 | 3,938.77 | 78.06 | 51.456 | |
| 12,900.00 | 9,036.00 | 8,573.00 | 8,559.54 | 113.25 | 30.03 | 29.96 | -790.38 | 496.04 | 4,115.92 | 4,036.33 | 79.59 | 51.711 | |
| 13,000.00 | 9,036.00 | 8,573.00 | 8,559.54 | 116.00 | 30.03 | 29.96 | -790.38 | 496.04 | 4,215.06 | 4,133.93 | 81.13 | 51.956 | |
| 13,100.00 | 9,036.00 | 8,573.00 | 8,559.54 | 118.75 | 30.03 | 29.96 | -790.38 | 496.04 | 4,314.23 | 4,231.56 | 82.66 | 52.190 | |
| 13,200.00 | 9,036.00 | 8,573.00 | 8,559.54 | 121.50 | 30.03 | 29.96 | -790.38 | 496.04 | 4,413.44 | 4,329.24 | 84.20 | 52.415 | |
| 13,300.00 | 9,036.00 | 8,573.00 | 8,559.54 | 124.26 | 30.03 | 29.96 | -790.38 | 496.04 | 4,512.68 | 4,426.94 | 85.74 | 52.632 | |
| 13,400.00 | 9,036.00 | 8,573.00 | 8,559.54 | 127.03 | 30.03 | 29.96 | -790.38 | 496.04 | 4,611.96 | 4,524.68 | 87.28 | 52.840 | |
| 13,500.00 | 9,036.00 | 8,573.00 | 8,559.54 | 129.79 | 30.03 | 29.96 | -790.38 | 496.04 | 4,711.27 | 4,622.44 | 88.83 | 53.040 | |
| 13,600.00 | 9,036.00 | 8,573.00 | 8,559.54 | 132.56 | 30.03 | 29.96 | -790.38 | 496.04 | 4,810.60 | 4,720.23 | 90.37 | 53.232 | |
| 13,700.00 | 9,036.00 | 8,573.00 | 8,559.54 | 135.34 | 30.03 | 29.96 | -790.38 | 496.04 | 4,909.96 | 4,818.05 | 91.92 | 53.418 | |
| 13,800.00 | 9,036.00 | 8,573.00 | 8,559.54 | 138.11 | 30.03 | 29.96 | -790.38 | 496.04 | 5,009.35 | 4,915.89 | 93.46 | 53.597 | |
| 13,900.00 | 9,036.00 | 8,573.00 | 8,559.54 | 140.89 | 30.03 | 29.96 | -790.38 | 496.04 | 5,108.77 | 5,013.75 | 95.01 | 53.770 | |
| 13,913.79 | 9,036.00 | 8,573.00 | 8,559.54 | 141.27 | 30.03 | 29.96 | -790.38 | 496.04 | 5,122.48 | 5,027.25 | 95.23 | 53.793 | |

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 4H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

**Survey Program:** 173-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 138.93 | -813.82 | 709.24 | 1,079.51 | | | | |
| 100.00 | 100.00 | 93.60 | 93.60 | 0.12 | 0.15 | 138.92 | -813.81 | 709.55 | 1,079.71 | 1,079.44 | 0.26 | 4,090.765 | |
| 200.00 | 200.00 | 209.86 | 209.85 | 0.48 | 0.40 | 138.86 | -813.36 | 710.64 | 1,080.14 | 1,079.26 | 0.88 | 1,233.061 | |
| 300.00 | 300.00 | 332.73 | 332.62 | 0.84 | 0.84 | 138.69 | -808.65 | 710.74 | 1,077.16 | 1,075.48 | 1.68 | 642.622 | |
| 400.00 | 400.00 | 435.45 | 435.25 | 1.20 | 1.20 | 138.54 | -804.26 | 710.46 | 1,073.77 | 1,071.37 | 2.40 | 447.720 | |
| 500.00 | 500.00 | 538.55 | 538.24 | 1.55 | 1.57 | 138.41 | -799.54 | 709.65 | 1,069.81 | 1,066.68 | 3.12 | 342.420 | |
| 600.00 | 600.00 | 626.39 | 626.03 | 1.91 | 1.89 | 138.33 | -796.45 | 708.97 | 1,066.66 | 1,062.86 | 3.80 | 281.055 | |
| 700.00 | 700.00 | 716.36 | 715.96 | 2.27 | 2.21 | 138.27 | -794.30 | 708.36 | 1,064.43 | 1,059.96 | 4.47 | 238.007 | |
| 800.00 | 800.00 | 800.37 | 799.97 | 2.63 | 2.50 | 138.27 | -793.70 | 707.88 | 1,063.51 | 1,058.39 | 5.12 | 207.623 | |
| 815.73 | 815.73 | 814.13 | 813.73 | 2.69 | 2.55 | 138.28 | -793.76 | 707.79 | 1,063.50 | 1,058.27 | 5.23 | 203.533 | |
| 900.00 | 900.00 | 888.72 | 888.30 | 2.99 | 2.80 | 138.35 | -794.92 | 707.05 | 1,063.91 | 1,058.14 | 5.78 | 184.096 | |
| 1,000.00 | 1,000.00 | 988.81 | 988.34 | 3.35 | 3.13 | 138.51 | -797.59 | 705.39 | 1,064.81 | 1,058.33 | 6.48 | 164.444 | |
| 1,100.00 | 1,100.00 | 1,086.85 | 1,086.34 | 3.70 | 3.47 | 138.66 | -800.16 | 703.95 | 1,065.80 | 1,058.63 | 7.17 | 148.681 | |
| 1,200.00 | 1,200.00 | 1,180.26 | 1,179.72 | 4.06 | 3.79 | 138.78 | -802.49 | 703.07 | 1,067.07 | 1,059.22 | 7.85 | 135.968 | |
| 1,300.00 | 1,300.00 | 1,262.62 | 1,262.04 | 4.42 | 4.07 | 138.85 | -804.94 | 703.51 | 1,069.65 | 1,061.16 | 8.49 | 125.992 | |
| 1,400.00 | 1,400.00 | 1,357.80 | 1,357.14 | 4.78 | 4.40 | 138.92 | -808.48 | 704.87 | 1,073.39 | 1,064.21 | 9.18 | 116.969 | |
| 1,500.00 | 1,500.00 | 1,494.35 | 1,493.63 | 5.14 | 4.88 | 139.07 | -812.20 | 704.28 | 1,075.03 | 1,065.02 | 10.01 | 107.380 | |
| 1,600.00 | 1,600.00 | 1,604.41 | 1,603.67 | 5.50 | 5.27 | 139.18 | -813.48 | 702.58 | 1,074.90 | 1,064.14 | 10.76 | 99.920 | |
| 1,700.00 | 1,700.00 | 1,711.15 | 1,710.38 | 5.86 | 5.64 | 139.31 | -814.32 | 700.23 | 1,074.05 | 1,062.56 | 11.49 | 93.446 | |
| 1,800.00 | 1,800.00 | 1,823.09 | 1,822.23 | 6.21 | 6.04 | 139.53 | -815.64 | 695.80 | 1,072.38 | 1,060.13 | 12.25 | 87.538 | |
| 1,900.00 | 1,900.00 | 1,928.92 | 1,927.90 | 6.57 | 6.42 | 139.80 | -816.86 | 690.19 | 1,069.82 | 1,056.84 | 12.99 | 82.375 | |
| 2,000.00 | 2,000.00 | 2,026.99 | 2,025.83 | 6.93 | 6.77 | 140.05 | -817.77 | 685.04 | 1,067.15 | 1,053.46 | 13.70 | 77.907 | |
| 2,100.00 | 2,100.00 | 2,133.08 | 2,131.62 | 7.28 | 7.15 | -18.03 | -820.00 | 677.41 | 1,063.95 | 1,049.51 | 14.43 | 73.712 | |
| 2,200.00 | 2,199.95 | 2,233.30 | 2,231.48 | 7.61 | 7.52 | -17.70 | -822.53 | 669.40 | 1,058.00 | 1,042.89 | 15.11 | 70.026 | |
| 2,300.00 | 2,299.74 | 2,330.08 | 2,327.93 | 7.94 | 7.87 | -17.45 | -824.86 | 661.70 | 1,048.70 | 1,032.95 | 15.76 | 66.556 | |
| 2,400.00 | 2,399.24 | 2,423.32 | 2,420.94 | 8.27 | 8.21 | -17.34 | -826.78 | 655.57 | 1,036.71 | 1,020.34 | 16.37 | 63.312 | |
| 2,500.00 | 2,498.33 | 2,519.64 | 2,517.07 | 8.60 | 8.56 | -17.33 | -828.74 | 649.81 | 1,021.79 | 1,004.80 | 16.99 | 60.157 | |
| 2,600.00 | 2,596.90 | 2,617.51 | 2,614.73 | 8.95 | 8.92 | -17.37 | -831.04 | 643.85 | 1,003.74 | 986.16 | 17.58 | 57.082 | |
| 2,700.00 | 2,695.04 | 2,714.31 | 2,711.13 | 9.30 | 9.28 | -17.21 | -834.90 | 635.97 | 983.50 | 965.24 | 18.25 | 53.879 | |
| 2,800.00 | 2,793.18 | 2,810.17 | 2,806.60 | 9.66 | 9.64 | -17.03 | -838.90 | 628.29 | 963.44 | 944.49 | 18.95 | 50.854 | |
| 2,900.00 | 2,891.32 | 2,908.84 | 2,904.92 | 10.03 | 10.01 | -16.86 | -842.73 | 620.89 | 943.47 | 923.82 | 19.65 | 48.013 | |
| 3,000.00 | 2,989.45 | 3,027.84 | 3,023.43 | 10.40 | 10.46 | -16.63 | -846.77 | 611.00 | 922.72 | 902.29 | 20.44 | 45.153 | |
| 3,100.00 | 3,087.59 | 3,128.33 | 3,123.35 | 10.78 | 10.84 | -16.35 | -849.39 | 600.64 | 900.10 | 878.94 | 21.16 | 42.542 | |
| 3,200.00 | 3,185.73 | 3,223.18 | 3,217.70 | 11.17 | 11.20 | -16.09 | -851.83 | 591.17 | 877.66 | 855.80 | 21.86 | 40.146 | |
| 3,300.00 | 3,283.86 | 3,320.69 | 3,314.71 | 11.56 | 11.57 | -15.83 | -854.31 | 581.70 | 855.40 | 832.82 | 22.58 | 37.887 | |
| 3,400.00 | 3,382.00 | 3,417.48 | 3,411.03 | 11.95 | 11.94 | -15.56 | -856.67 | 572.46 | 833.16 | 809.87 | 23.29 | 35.768 | |
| 3,500.00 | 3,480.13 | 3,515.13 | 3,508.22 | 12.35 | 12.31 | -15.29 | -859.03 | 563.23 | 810.97 | 786.96 | 24.01 | 33.770 | |
| 3,600.00 | 3,578.27 | 3,610.59 | 3,603.24 | 12.75 | 12.67 | -15.02 | -861.33 | 554.36 | 788.90 | 764.17 | 24.73 | 31.901 | |
| 3,700.00 | 3,676.41 | 3,705.16 | 3,697.37 | 13.16 | 13.04 | -14.72 | -863.96 | 545.62 | 767.16 | 741.72 | 25.44 | 30.151 | |
| 3,800.00 | 3,774.54 | 3,801.00 | 3,792.74 | 13.57 | 13.40 | -14.38 | -866.94 | 536.66 | 745.64 | 719.48 | 26.17 | 28.497 | |
| 3,900.00 | 3,872.68 | 3,896.00 | 3,887.29 | 13.98 | 13.77 | -14.03 | -870.01 | 528.01 | 724.40 | 697.51 | 26.89 | 26.943 | |
| 4,000.00 | 3,970.82 | 3,993.00 | 3,983.86 | 14.39 | 14.14 | -13.66 | -873.38 | 519.43 | 703.51 | 675.89 | 27.62 | 25.475 | |
| 4,100.00 | 4,068.95 | 4,089.50 | 4,079.96 | 14.80 | 14.51 | -13.31 | -876.62 | 511.34 | 682.82 | 654.48 | 28.34 | 24.092 | |
| 4,200.00 | 4,167.09 | 4,185.71 | 4,175.82 | 15.22 | 14.87 | -12.97 | -879.77 | 503.76 | 662.36 | 633.30 | 29.07 | 22.786 | |
| 4,300.00 | 4,265.23 | 4,283.52 | 4,273.30 | 15.64 | 15.24 | -12.63 | -882.93 | 496.33 | 642.05 | 612.25 | 29.80 | 21.545 | |
| 4,400.00 | 4,363.36 | 4,382.02 | 4,371.47 | 16.06 | 15.62 | -12.29 | -885.94 | 488.98 | 621.70 | 591.16 | 30.54 | 20.360 | |
| 4,500.00 | 4,461.50 | 4,477.65 | 4,466.90 | 16.48 | 15.97 | -12.09 | -887.96 | 483.19 | 601.35 | 570.09 | 31.25 | 19.240 | |
| 4,600.00 | 4,559.63 | 4,564.63 | 4,553.80 | 16.91 | 16.29 | -12.07 | -889.86 | 479.99 | 582.33 | 550.40 | 31.94 | 18.234 | |
| 4,700.00 | 4,657.77 | 4,662.36 | 4,651.48 | 17.33 | 16.64 | -12.14 | -892.20 | 477.58 | 564.16 | 531.51 | 32.65 | 17.277 | |
| 4,800.00 | 4,755.91 | 4,754.11 | 4,743.20 | 17.76 | 16.95 | -12.41 | -893.92 | 477.30 | 546.74 | 513.40 | 33.34 | 16.400 | |
| 4,900.00 | 4,854.04 | 4,850.58 | 4,839.63 | 18.19 | 17.26 | -13.03 | -894.71 | 479.91 | 530.13 | 496.11 | 34.02 | 15.583 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 4H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

**Survey Program:** 173-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,000.00 | 4,952.18 | 4,951.70 | 4,940.64 | 18.62 | 17.57 | -14.01 | -894.01 | 484.56 | 513.46 | 478.75 | 34.71 | 14.791 | |
| 5,100.00 | 5,050.32 | 5,050.85 | 5,039.66 | 19.05 | 17.88 | -15.11 | -892.61 | 489.54 | 496.62 | 461.21 | 35.41 | 14.027 | |
| 5,200.00 | 5,148.45 | 5,149.50 | 5,138.21 | 19.48 | 18.19 | -16.23 | -891.39 | 493.92 | 479.76 | 443.66 | 36.10 | 13.289 | |
| 5,300.00 | 5,246.59 | 5,246.61 | 5,235.23 | 19.91 | 18.50 | -17.32 | -890.65 | 497.82 | 463.18 | 426.38 | 36.80 | 12.587 | |
| 5,400.00 | 5,344.73 | 5,350.50 | 5,339.05 | 20.34 | 18.83 | -18.51 | -890.22 | 501.49 | 446.77 | 409.24 | 37.52 | 11.906 | |
| 5,500.00 | 5,442.86 | 5,459.80 | 5,448.32 | 20.77 | 19.19 | -19.73 | -887.96 | 502.61 | 427.63 | 389.35 | 38.28 | 11.172 | |
| 5,600.00 | 5,541.00 | 5,556.04 | 5,544.53 | 21.21 | 19.51 | -20.90 | -885.41 | 502.93 | 407.83 | 368.84 | 38.99 | 10.459 | |
| 5,700.00 | 5,639.13 | 5,652.12 | 5,640.58 | 21.64 | 19.83 | -22.21 | -883.26 | 503.90 | 388.96 | 349.25 | 39.71 | 9.794 | |
| 5,800.00 | 5,737.27 | 5,749.29 | 5,737.72 | 22.08 | 20.16 | -23.61 | -881.40 | 504.66 | 370.39 | 329.94 | 40.45 | 9.157 | |
| 5,900.00 | 5,835.41 | 5,849.17 | 5,837.60 | 22.51 | 20.50 | -24.95 | -880.57 | 504.42 | 352.08 | 310.88 | 41.20 | 8.545 | |
| 6,000.00 | 5,933.54 | 5,950.86 | 5,939.28 | 22.95 | 20.85 | -26.49 | -878.96 | 503.50 | 332.98 | 291.01 | 41.97 | 7.933 | |
| 6,100.00 | 6,031.68 | 6,052.39 | 6,040.74 | 23.39 | 21.21 | -27.82 | -878.16 | 500.26 | 312.95 | 270.20 | 42.75 | 7.320 | |
| 6,200.00 | 6,129.82 | 6,150.16 | 6,138.35 | 23.82 | 21.57 | -28.68 | -879.17 | 494.63 | 292.32 | 248.80 | 43.51 | 6.718 | |
| 6,300.00 | 6,227.95 | 6,241.97 | 6,230.05 | 24.26 | 21.90 | -29.72 | -880.32 | 490.43 | 272.80 | 228.54 | 44.26 | 6.163 | |
| 6,400.00 | 6,326.09 | 6,335.67 | 6,323.70 | 24.70 | 22.24 | -31.08 | -882.29 | 488.15 | 255.56 | 210.53 | 45.03 | 5.675 | |
| 6,500.00 | 6,424.23 | 6,432.46 | 6,420.44 | 25.14 | 22.58 | -32.70 | -884.94 | 486.80 | 239.68 | 193.86 | 45.82 | 5.231 | |
| 6,600.00 | 6,522.36 | 6,526.58 | 6,514.52 | 25.58 | 22.90 | -34.62 | -887.66 | 486.65 | 225.13 | 178.51 | 46.61 | 4.830 | |
| 6,700.00 | 6,620.50 | 6,608.76 | 6,596.54 | 26.02 | 23.18 | -37.06 | -890.02 | 490.38 | 214.99 | 167.61 | 47.38 | 4.538 | |
| 6,758.01 | 6,677.43 | 6,656.26 | 6,643.55 | 26.27 | 23.32 | -39.47 | -890.04 | 497.14 | 213.42 | 165.57 | 47.86 | 4.459 | CC, ES |
| 6,800.00 | 6,718.63 | 6,687.69 | 6,674.28 | 26.46 | 23.41 | -41.51 | -889.21 | 503.63 | 214.58 | 166.37 | 48.21 | 4.451 | SF |
| 6,900.00 | 6,816.77 | 6,761.05 | 6,744.51 | 26.90 | 23.62 | -46.88 | -886.60 | 524.59 | 226.45 | 177.38 | 49.07 | 4.615 | |
| 7,000.00 | 6,914.91 | 6,826.43 | 6,804.58 | 27.34 | 23.80 | -51.70 | -884.37 | 550.17 | 251.91 | 202.04 | 49.87 | 5.051 | |
| 7,100.00 | 7,013.04 | 6,887.00 | 6,857.16 | 27.78 | 23.97 | -55.94 | -881.66 | 580.07 | 290.42 | 239.78 | 50.63 | 5.736 | |
| 7,200.00 | 7,111.18 | 6,935.00 | 6,896.52 | 28.22 | 24.10 | -58.91 | -879.25 | 607.42 | 339.66 | 288.36 | 51.30 | 6.622 | |
| 7,300.00 | 7,209.32 | 6,992.30 | 6,940.55 | 28.66 | 24.29 | -61.92 | -876.21 | 643.92 | 397.18 | 345.21 | 51.97 | 7.643 | |
| 7,400.00 | 7,307.45 | 7,041.52 | 6,975.98 | 29.10 | 24.47 | -63.98 | -873.81 | 677.99 | 461.06 | 408.49 | 52.57 | 8.770 | |
| 7,500.00 | 7,405.59 | 7,087.15 | 7,007.03 | 29.55 | 24.67 | -65.51 | -871.96 | 711.37 | 529.60 | 476.46 | 53.14 | 9.966 | |
| 7,600.00 | 7,503.73 | 7,124.00 | 7,030.81 | 29.99 | 24.84 | -66.48 | -870.89 | 739.50 | 601.93 | 548.27 | 53.67 | 11.216 | |
| 7,700.00 | 7,601.86 | 7,171.00 | 7,059.12 | 30.43 | 25.11 | -67.44 | -870.08 | 777.00 | 677.68 | 623.48 | 54.20 | 12.502 | |
| 7,800.00 | 7,700.00 | 7,189.87 | 7,069.69 | 30.87 | 25.23 | -67.75 | -869.91 | 792.63 | 756.33 | 701.66 | 54.67 | 13.833 | |
| 7,900.00 | 7,798.13 | 7,219.00 | 7,084.87 | 31.32 | 25.43 | -68.14 | -869.84 | 817.49 | 837.92 | 782.76 | 55.16 | 15.191 | |
| 8,000.00 | 7,896.27 | 7,219.00 | 7,084.87 | 31.76 | 25.43 | -68.14 | -869.84 | 817.49 | 922.03 | 866.43 | 55.60 | 16.584 | |
| 8,100.00 | 7,994.63 | 7,249.97 | 7,099.38 | 32.20 | 25.67 | -71.09 | -869.97 | 844.84 | 1,007.80 | 951.62 | 56.17 | 17.940 | |
| 8,200.00 | 8,093.55 | 7,266.00 | 7,106.20 | 32.61 | 25.79 | -74.64 | -870.10 | 859.35 | 1,096.01 | 1,039.29 | 56.72 | 19.324 | |
| 8,300.00 | 8,192.92 | 7,266.00 | 7,106.20 | 33.00 | 25.79 | -78.70 | -870.10 | 859.35 | 1,186.15 | 1,128.94 | 57.22 | 20.731 | |
| 8,400.00 | 8,292.62 | 7,294.36 | 7,117.24 | 33.20 | 26.05 | -82.59 | -870.32 | 885.46 | 1,277.08 | 1,219.54 | 57.54 | 22.193 | |
| 8,500.00 | 8,392.52 | 7,313.00 | 7,123.87 | 33.23 | 26.22 | -86.79 | -870.40 | 902.88 | 1,369.34 | 1,311.65 | 57.69 | 23.737 | |
| 8,600.00 | 8,492.50 | 7,313.00 | 7,123.87 | 33.24 | 26.22 | 155.06 | -870.40 | 902.88 | 1,462.57 | 1,404.79 | 57.77 | 25.316 | |
| 8,700.00 | 8,591.42 | 7,313.00 | 7,123.87 | 33.23 | 26.22 | 129.25 | -870.40 | 902.88 | 1,559.75 | 1,502.28 | 57.46 | 27.144 | |
| 8,800.00 | 8,686.43 | 7,313.00 | 7,123.87 | 33.20 | 26.22 | 57.71 | -870.40 | 902.88 | 1,658.90 | 1,605.03 | 53.87 | 30.797 | |
| 8,900.00 | 8,774.66 | 7,313.00 | 7,123.87 | 33.16 | 26.22 | 24.92 | -870.40 | 902.88 | 1,756.92 | 1,708.61 | 48.32 | 36.363 | |
| 9,000.00 | 8,853.41 | 7,313.00 | 7,123.87 | 33.11 | 26.22 | 15.13 | -870.40 | 902.88 | 1,851.26 | 1,808.63 | 42.63 | 43.423 | |
| 9,100.00 | 8,920.31 | 7,313.00 | 7,123.87 | 33.08 | 26.22 | 10.84 | -870.40 | 902.88 | 1,939.78 | 1,903.56 | 36.22 | 53.557 | |
| 9,200.00 | 8,973.31 | 7,285.41 | 7,113.88 | 33.06 | 25.97 | 8.39 | -870.26 | 877.17 | 2,019.95 | 1,990.53 | 29.42 | 68.666 | |
| 9,300.00 | 9,010.81 | 7,266.00 | 7,106.20 | 33.04 | 25.79 | 6.99 | -870.10 | 859.35 | 2,090.67 | 2,067.55 | 23.12 | 90.439 | |
| 9,400.00 | 9,031.66 | 7,266.00 | 7,106.20 | 33.06 | 25.79 | 6.13 | -870.10 | 859.35 | 2,150.64 | 2,131.79 | 18.86 | 114.059 | |
| 9,500.00 | 9,036.00 | 7,219.00 | 7,084.87 | 33.21 | 25.43 | 5.66 | -869.84 | 817.49 | 2,199.41 | 2,181.20 | 18.21 | 120.777 | |
| 9,600.00 | 9,036.00 | 7,219.00 | 7,084.87 | 34.03 | 25.43 | 5.66 | -869.84 | 817.49 | 2,246.67 | 2,228.15 | 18.52 | 121.288 | |
| 9,700.00 | 9,036.00 | 7,219.00 | 7,084.87 | 35.35 | 25.43 | 5.66 | -869.84 | 817.49 | 2,297.31 | 2,278.43 | 18.89 | 121.644 | |
| 9,800.00 | 9,036.00 | 7,171.00 | 7,059.12 | 36.87 | 25.11 | 5.58 | -870.08 | 777.00 | 2,350.54 | 2,331.35 | 19.19 | 122.495 | |

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

# Scientific Drilling Int.

Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** C 17 State Pad - Cass 16 St. 4H - Wellbore #1 - As Drilled — **Offset Site Error:** 0.00 usft

**Survey Program:** 173-MWD — **Offset Well Error:** 0.00 usft

| Reference Measured Depth (usft) | Reference Vertical Depth (usft) | Offset Measured Depth (usft) | Offset Vertical Depth (usft) | Semi Major Axis Reference (usft) | Semi Major Axis Offset (usft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (usft) | Offset Wellbore Centre +E/-W (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Minimum Separation (usft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9,900.00 | 9,036.00 | 7,171.00 | 7,059.12 | 38.55 | 25.11 | 5.58 | -870.08 | 777.00 | 2,405.63 | 2,385.99 | 19.64 | 122.515 | |
| 10,000.00 | 9,036.00 | 7,171.00 | 7,059.12 | 40.36 | 25.11 | 5.58 | -870.08 | 777.00 | 2,463.55 | 2,443.43 | 20.12 | 122.451 | |
| 10,100.00 | 9,036.00 | 7,124.00 | 7,030.81 | 42.29 | 24.84 | 5.48 | -870.89 | 739.50 | 2,523.46 | 2,502.93 | 20.53 | 122.901 | |
| 10,200.00 | 9,036.00 | 7,124.00 | 7,030.81 | 44.31 | 24.84 | 5.48 | -870.89 | 739.50 | 2,585.03 | 2,563.95 | 21.08 | 122.653 | |
| 10,300.00 | 9,036.00 | 7,103.29 | 7,017.59 | 46.43 | 24.74 | 5.43 | -871.44 | 723.57 | 2,648.62 | 2,627.02 | 21.60 | 122.616 | |
| 10,400.00 | 9,036.00 | 7,076.00 | 6,999.60 | 48.61 | 24.61 | 5.36 | -872.38 | 703.07 | 2,713.91 | 2,691.78 | 22.13 | 122.625 | |
| 10,500.00 | 9,036.00 | 7,076.00 | 6,999.60 | 50.86 | 24.61 | 5.36 | -872.38 | 703.07 | 2,780.75 | 2,758.00 | 22.74 | 122.268 | |
| 10,600.00 | 9,036.00 | 7,049.03 | 6,981.22 | 53.17 | 24.50 | 5.28 | -873.48 | 683.37 | 2,848.98 | 2,825.66 | 23.31 | 122.198 | |
| 10,700.00 | 9,036.00 | 7,029.00 | 6,967.17 | 55.53 | 24.42 | 5.22 | -874.39 | 669.12 | 2,918.70 | 2,894.79 | 23.91 | 122.047 | |
| 10,800.00 | 9,036.00 | 7,029.00 | 6,967.17 | 57.94 | 24.42 | 5.22 | -874.39 | 669.12 | 2,989.86 | 2,965.28 | 24.57 | 121.673 | |
| 10,900.00 | 9,036.00 | 7,002.53 | 6,948.08 | 60.38 | 24.32 | 5.14 | -875.68 | 650.82 | 3,062.08 | 3,036.89 | 25.19 | 121.566 | |
| 11,000.00 | 9,036.00 | 6,982.00 | 6,932.88 | 62.85 | 24.25 | 5.08 | -876.76 | 637.07 | 3,135.66 | 3,109.83 | 25.83 | 121.415 | |
| 11,100.00 | 9,036.00 | 6,982.00 | 6,932.88 | 65.36 | 24.25 | 5.08 | -876.76 | 637.07 | 3,210.36 | 3,183.84 | 26.52 | 121.066 | |
| 11,200.00 | 9,036.00 | 6,982.00 | 6,932.88 | 67.89 | 24.25 | 5.08 | -876.76 | 637.07 | 3,286.40 | 3,259.18 | 27.22 | 120.742 | |
| 11,300.00 | 9,036.00 | 6,956.31 | 6,913.29 | 70.45 | 24.17 | 4.99 | -878.14 | 620.52 | 3,363.05 | 3,335.18 | 27.87 | 120.657 | |
| 11,400.00 | 9,036.00 | 6,935.00 | 6,896.52 | 73.02 | 24.10 | 4.93 | -879.25 | 607.42 | 3,441.10 | 3,412.56 | 28.54 | 120.560 | |
| 11,500.00 | 9,036.00 | 6,935.00 | 6,896.52 | 75.62 | 24.10 | 4.93 | -879.25 | 607.42 | 3,519.84 | 3,490.57 | 29.26 | 120.276 | |
| 11,600.00 | 9,036.00 | 6,935.00 | 6,896.52 | 78.24 | 24.10 | 4.93 | -879.25 | 607.42 | 3,599.63 | 3,569.64 | 29.99 | 120.015 | |
| 11,700.00 | 9,036.00 | 6,935.00 | 6,896.52 | 80.87 | 24.10 | 4.93 | -879.25 | 607.42 | 3,680.41 | 3,649.68 | 30.73 | 119.776 | |
| 11,800.00 | 9,036.00 | 6,911.90 | 6,877.84 | 83.51 | 24.04 | 4.85 | -880.42 | 593.87 | 3,761.62 | 3,730.20 | 31.41 | 119.743 | |
| 11,900.00 | 9,036.00 | 6,887.00 | 6,857.16 | 86.17 | 23.97 | 4.78 | -881.66 | 580.07 | 3,844.05 | 3,811.95 | 32.10 | 119.751 | |
| 12,000.00 | 9,036.00 | 6,887.00 | 6,857.16 | 88.84 | 23.97 | 4.78 | -881.66 | 580.07 | 3,926.75 | 3,893.90 | 32.85 | 119.547 | |
| 12,100.00 | 9,036.00 | 6,887.00 | 6,857.16 | 91.52 | 23.97 | 4.78 | -881.66 | 580.07 | 4,010.23 | 3,976.63 | 33.60 | 119.360 | |
| 12,200.00 | 9,036.00 | 6,887.00 | 6,857.16 | 94.21 | 23.97 | 4.78 | -881.66 | 580.07 | 4,094.46 | 4,060.10 | 34.35 | 119.190 | |
| 12,300.00 | 9,036.00 | 6,887.00 | 6,857.16 | 96.91 | 23.97 | 4.78 | -881.66 | 580.07 | 4,179.38 | 4,144.27 | 35.11 | 119.036 | |
| 12,400.00 | 9,036.00 | 6,887.00 | 6,857.16 | 99.61 | 23.97 | 4.78 | -881.66 | 580.07 | 4,264.95 | 4,229.08 | 35.87 | 118.896 | |
| 12,500.00 | 9,036.00 | 6,863.03 | 6,836.73 | 102.33 | 23.90 | 4.70 | -882.80 | 567.58 | 4,350.58 | 4,314.01 | 36.58 | 118.945 | |
| 12,600.00 | 9,036.00 | 6,840.00 | 6,816.63 | 105.05 | 23.84 | 4.64 | -883.82 | 556.39 | 4,437.33 | 4,400.05 | 37.29 | 119.007 | |
| 12,700.00 | 9,036.00 | 6,840.00 | 6,816.63 | 107.78 | 23.84 | 4.64 | -883.82 | 556.39 | 4,524.14 | 4,486.08 | 38.05 | 118.888 | |
| 12,800.00 | 9,036.00 | 6,840.00 | 6,816.63 | 110.51 | 23.84 | 4.64 | -883.82 | 556.39 | 4,611.47 | 4,572.65 | 38.82 | 118.780 | |
| 12,900.00 | 9,036.00 | 6,840.00 | 6,816.63 | 113.25 | 23.84 | 4.64 | -883.82 | 556.39 | 4,699.31 | 4,659.72 | 39.60 | 118.683 | |
| 13,000.00 | 9,036.00 | 6,840.00 | 6,816.63 | 116.00 | 23.84 | 4.64 | -883.82 | 556.39 | 4,787.63 | 4,747.26 | 40.37 | 118.595 | |
| 13,100.00 | 9,036.00 | 6,840.00 | 6,816.63 | 118.75 | 23.84 | 4.64 | -883.82 | 556.39 | 4,876.40 | 4,835.26 | 41.15 | 118.515 | |
| 13,200.00 | 9,036.00 | 6,840.00 | 6,816.63 | 121.50 | 23.84 | 4.64 | -883.82 | 556.39 | 4,965.60 | 4,923.68 | 41.92 | 118.444 | |
| 13,300.00 | 9,036.00 | 6,840.00 | 6,816.63 | 124.26 | 23.84 | 4.64 | -883.82 | 556.39 | 5,055.20 | 5,012.50 | 42.70 | 118.380 | |
| 13,400.00 | 9,036.00 | 6,840.00 | 6,816.63 | 127.03 | 23.84 | 4.64 | -883.82 | 556.39 | 5,145.19 | 5,101.70 | 43.48 | 118.323 | |
| 13,500.00 | 9,036.00 | 6,814.72 | 6,794.06 | 129.79 | 23.77 | 4.57 | -884.82 | 545.06 | 5,234.87 | 5,190.67 | 44.20 | 118.444 | |
| 13,600.00 | 9,036.00 | 6,793.00 | 6,774.25 | 132.56 | 23.71 | 4.51 | -885.57 | 536.20 | 5,325.68 | 5,280.76 | 44.92 | 118.555 | |
| 13,700.00 | 9,036.00 | 6,793.00 | 6,774.25 | 135.34 | 23.71 | 4.51 | -885.57 | 536.20 | 5,416.33 | 5,370.63 | 45.71 | 118.506 | |
| 13,800.00 | 9,036.00 | 6,793.00 | 6,774.25 | 138.11 | 23.71 | 4.51 | -885.57 | 536.20 | 5,507.31 | 5,460.82 | 46.49 | 118.462 | |
| 13,900.00 | 9,036.00 | 6,793.00 | 6,774.25 | 140.89 | 23.71 | 4.51 | -885.57 | 536.20 | 5,598.60 | 5,551.33 | 47.28 | 118.424 | |
| 13,913.79 | 9,036.00 | 6,793.00 | 6,774.25 | 141.27 | 23.71 | 4.51 | -885.57 | 536.20 | 5,611.21 | 5,563.83 | 47.38 | 118.419 | |

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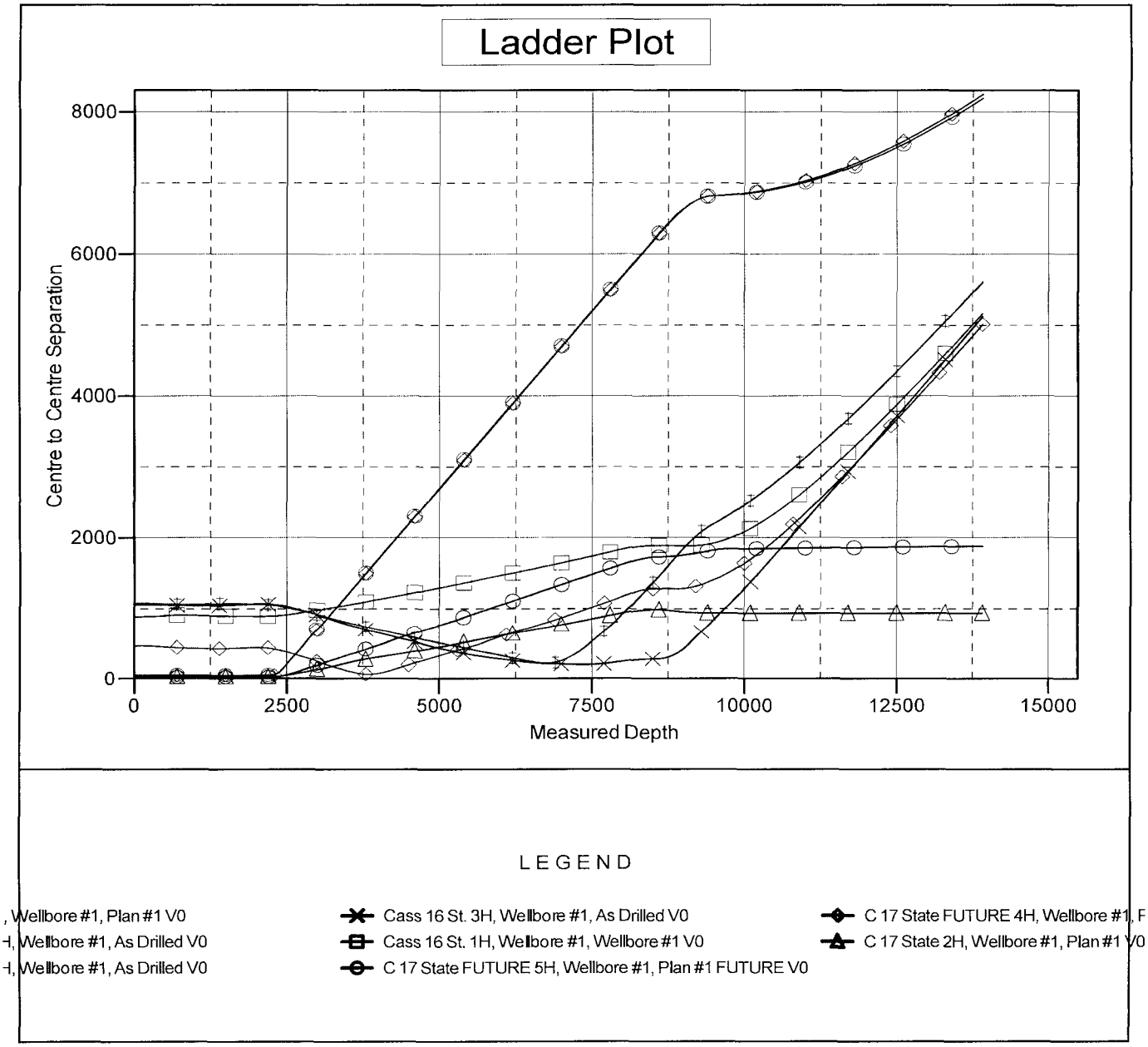
|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

| | |
|---|---|
| Reference Depths are relative to GL 3154 + KB 33 = @ 3187.00usft (N | Coordinates are relative to: C 17 State 3H |
| Offset Depths are relative to Offset Datum | Coordinate System is US State Plane 1983, New Mexico Eastern Zone |
| Central Meridian is -104.333334 | Grid Convergence at Surface is: 0.07° |



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|---|---|---|---|
| **Company:** | WPX Energy | **Local Co-ordinate Reference:** | Well C 17 State 3H |
| **Project:** | Eddy County, New Mexico NAD 83 | **TVD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Reference Site:** | C 17 State Pad | **MD Reference:** | GL 3154 + KB 33 = @ 3187.00usft (Nabors X31) |
| **Site Error:** | 0.00 usft | **North Reference:** | Grid |
| **Reference Well:** | C 17 State 3H | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.00 usft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Wellbore #1 | **Database:** | Midland District |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

| | |
|---|---|
| Reference Depths are relative to GL 3154 + KB 33 = @ 3187.00usft (N | Coordinates are relative to: C 17 State 3H |
| Offset Depths are relative to Offset Datum | Coordinate System is US State Plane 1983, New Mexico Eastern Zone |
| Central Meridian is -104.333334 | Grid Convergence at Surface is: 0.07° |