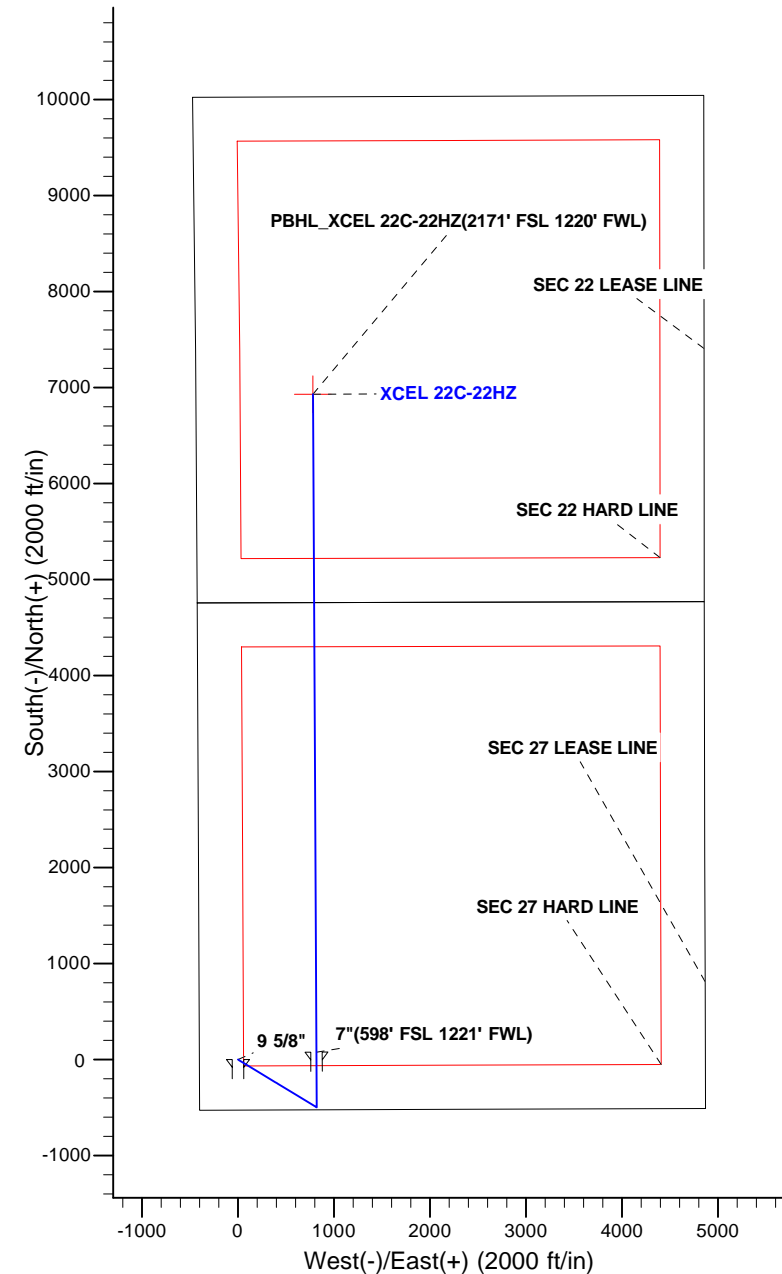
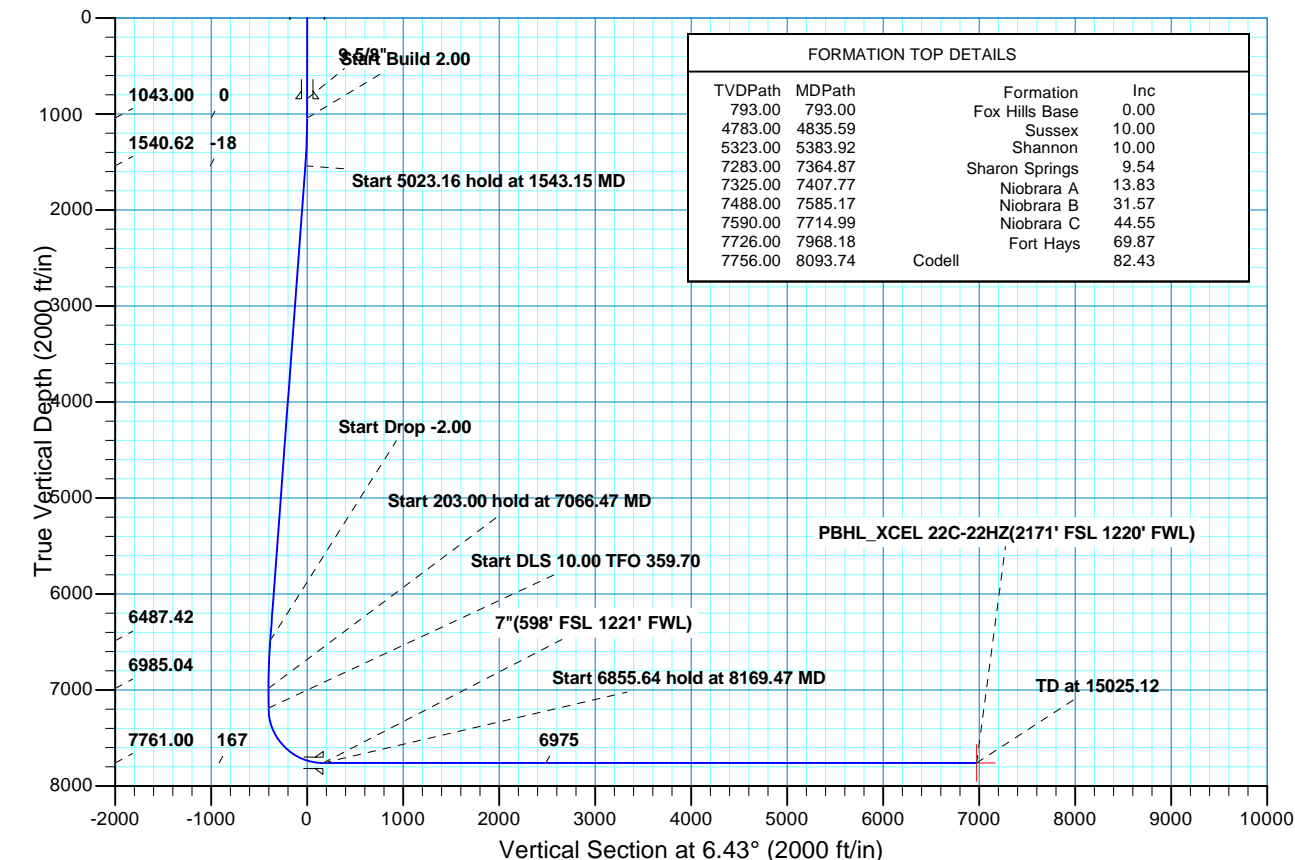


| WELL DETAILS: XCEL 22C-22HZ | | | | | | | | | |
|---|---------|---------|------------|------------|------------|--------------|----------------|---|--------|
| GL 5026' & KB 17' @ 5043.00ft (ASSUMED) | | | | | | | | | |
| | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | | | |
| | 0.00 | 0.00 | 1249370.91 | 3172361.21 | 40.0162680 | -104.8846100 | | | |
| SECTION DETAILS | | | | | | | | | |
| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Target |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1043.00 | 0.00 | 0.00 | 1043.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1543.15 | 10.00 | 121.22 | 1540.62 | -22.57 | 37.24 | 2.00 | 121.22 | -18.26 | |
| 6566.32 | 10.00 | 121.22 | 6487.42 | -474.83 | 783.42 | 0.00 | 0.00 | -384.09 | |
| 7066.47 | 0.00 | 0.00 | 6985.04 | -497.40 | 820.66 | 2.00 | 180.00 | -402.35 | |
| 7269.47 | 0.00 | 0.00 | 7188.04 | -497.40 | 820.66 | 0.00 | 0.00 | -402.35 | |
| 8169.47 | 90.00 | 359.70 | 7761.00 | 75.55 | 817.62 | 10.00 | 359.70 | 166.65 | |
| 15025.12 | 90.00 | 359.70 | 7761.00 | 6931.10 | 781.23 | 0.00 | 0.006974.98 | PBHL_XCEL 22C-22HZ(2171' FSL 1220' FWL) | |
| | | | | | | | CASING DETAILS | | |
| | TVD | MD | Name | Size | | | | | |
| | 843.00 | 843.00 | 9 5/8" | 9.625 | | | | | |
| | 7761.00 | 8169.47 | 7" | 7.000 | | | | | |





Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

XCEL 12N-22HZ 1N67W27 Pad

XCEL 22C-22HZ

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

30 May, 2013

| | | | |
|------------------|-----------------------------|-------------------------------------|---|
| Database: | EDM5000-RobertS-Local | Local Co-ordinate Reference: | Well XCEL 22C-22HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Site: | XCEL 12N-22HZ 1N67W27 Pad | North Reference: | True |
| Well: | XCEL 22C-22HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PLAN #1 PRELIMINARY | | |

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

| | | | | |
|------------------------------|--|---------------------|-------------------|---------------------------------|
| Site | XCEL 12N-22HZ 1N67W27 Pad, SECTION 27 T1N R67W | | | |
| Site Position: | | Northing: | 1,249,341.05 usft | Latitude: 40.0161860 |
| From: | Lat/Long | Easting: | 3,172,361.42 usft | Longitude: -104.8846100 |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 13.200 in | Grid Convergence: 0.40 ° |

| | | | | |
|-----------------------------|----------------------------------|----------|----------------------------|----------------------------------|
| Well | XCEL 22C-22HZ, 526' FSL 403' FWL | | | |
| Well Position | +N/-S | 29.86 ft | Northing: | 1,249,370.91 usft |
| | +E/-W | 0.00 ft | Easting: | 3,172,361.21 usft |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | Ground Level: 5,026.00 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | BGGM2012 | 2013/05/29 | 8.69 | 66.63 | 52,609 |

| | | | | |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| Design | PLAN #1 PRELIMINARY | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
| | 0.00 | 0.00 | 0.00 | 6.43 |

| Plan Sections | | | | | | | | | | |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|-------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,043.00 | 0.00 | 0.00 | 1,043.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,543.16 | 10.00 | 121.22 | 1,540.62 | -22.57 | 37.24 | 2.00 | 2.00 | 0.00 | 121.22 | |
| 6,566.32 | 10.00 | 121.22 | 6,487.42 | -474.83 | 783.42 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,066.47 | 0.00 | 0.00 | 6,985.04 | -497.40 | 820.66 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 7,269.47 | 0.00 | 0.00 | 7,188.04 | -497.40 | 820.66 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 8,169.47 | 90.00 | 359.70 | 7,761.00 | 75.55 | 817.62 | 10.00 | 10.00 | -0.03 | 359.70 | |
| 15,025.12 | 90.00 | 359.70 | 7,761.00 | 6,931.10 | 781.23 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL_XCEL 22C-22H |

| | | | |
|------------------|-----------------------------|-------------------------------------|---|
| Database: | EDM5000-RobertS-Local | Local Co-ordinate Reference: | Well XCEL 22C-22HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Site: | XCEL 12N-22HZ 1N67W27 Pad | North Reference: | True |
| Well: | XCEL 22C-22HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PLAN #1 PRELIMINARY | | |

| Planned Survey | | | | | | | | | |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 0.00 | 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 |
| 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 |
| 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 |
| 793.00 | 0.00 | 0.00 | 793.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fox Hills Base | | | | | | | | | |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 843.00 | 0.00 | 0.00 | 843.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 5/8" | | | | | | | | | |
| 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 |
| 1,043.00 | 0.00 | 0.00 | 1,043.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start Build 2.00 | | | | | | | | | |
| 1,100.00 | 1.14 | 121.22 | 1,100.00 | -0.29 | 0.48 | -0.24 | 2.00 | 2.00 | 0.00 |
| 1,200.00 | 3.14 | 121.22 | 1,199.92 | -2.23 | 3.68 | -1.80 | 2.00 | 2.00 | 0.00 |
| 1,300.00 | 5.14 | 121.22 | 1,299.66 | -5.97 | 9.85 | -4.83 | 2.00 | 2.00 | 0.00 |
| 1,400.00 | 7.14 | 121.22 | 1,399.08 | -11.51 | 19.00 | -9.31 | 2.00 | 2.00 | 0.00 |
| 1,500.00 | 9.14 | 121.22 | 1,498.06 | -18.85 | 31.11 | -15.25 | 2.00 | 2.00 | 0.00 |
| 1,543.16 | 10.00 | 121.22 | 1,540.62 | -22.57 | 37.24 | -18.26 | 2.00 | 2.00 | 0.00 |
| Start 5023.16 hold at 1543.15 MD | | | | | | | | | |
| 1,600.00 | 10.00 | 121.22 | 1,596.60 | -27.69 | 45.69 | -22.40 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 10.00 | 121.22 | 1,695.08 | -36.69 | 60.54 | -29.68 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 10.00 | 121.22 | 1,793.56 | -45.70 | 75.40 | -36.97 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 10.00 | 121.22 | 1,892.04 | -54.70 | 90.25 | -44.25 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 10.00 | 121.22 | 1,990.52 | -63.70 | 105.11 | -51.53 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 10.00 | 121.22 | 2,089.00 | -72.71 | 119.96 | -58.81 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 10.00 | 121.22 | 2,187.48 | -81.71 | 134.81 | -66.10 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 10.00 | 121.22 | 2,285.96 | -90.71 | 149.67 | -73.38 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 10.00 | 121.22 | 2,384.44 | -99.72 | 164.52 | -80.66 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 10.00 | 121.22 | 2,482.92 | -108.72 | 179.38 | -87.95 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 10.00 | 121.22 | 2,581.40 | -117.72 | 194.23 | -95.23 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 10.00 | 121.22 | 2,679.88 | -126.73 | 209.09 | -102.51 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 10.00 | 121.22 | 2,778.36 | -135.73 | 223.94 | -109.79 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 10.00 | 121.22 | 2,876.84 | -144.73 | 238.80 | -117.08 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 10.00 | 121.22 | 2,975.32 | -153.74 | 253.65 | -124.36 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 10.00 | 121.22 | 3,073.80 | -162.74 | 268.51 | -131.64 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 10.00 | 121.22 | 3,172.28 | -171.74 | 283.36 | -138.93 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 10.00 | 121.22 | 3,270.76 | -180.75 | 298.22 | -146.21 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 10.00 | 121.22 | 3,369.24 | -189.75 | 313.07 | -153.49 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 10.00 | 121.22 | 3,467.72 | -198.75 | 327.93 | -160.78 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 10.00 | 121.22 | 3,566.20 | -207.76 | 342.78 | -168.06 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 10.00 | 121.22 | 3,664.68 | -216.76 | 357.63 | -175.34 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 10.00 | 121.22 | 3,763.16 | -225.77 | 372.49 | -182.62 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 10.00 | 121.22 | 3,861.64 | -234.77 | 387.34 | -189.91 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 10.00 | 121.22 | 3,960.12 | -243.77 | 402.20 | -197.19 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 10.00 | 121.22 | 4,058.59 | -252.78 | 417.05 | -204.47 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 10.00 | 121.22 | 4,157.07 | -261.78 | 431.91 | -211.76 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 10.00 | 121.22 | 4,255.55 | -270.78 | 446.76 | -219.04 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 10.00 | 121.22 | 4,354.03 | -279.79 | 461.62 | -226.32 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 10.00 | 121.22 | 4,452.51 | -288.79 | 476.47 | -233.60 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|-----------------------------|-------------------------------------|---|
| Database: | EDM5000-RobertS-Local | Local Co-ordinate Reference: | Well XCEL 22C-22HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Site: | XCEL 12N-22HZ 1N67W27 Pad | North Reference: | True |
| Well: | XCEL 22C-22HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PLAN #1 PRELIMINARY | | |

| Planned Survey | | | | | | | | | |
|--|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 4,600.00 | 10.00 | 121.22 | 4,550.99 | -297.79 | 491.33 | -240.89 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 10.00 | 121.22 | 4,649.47 | -306.80 | 506.18 | -248.17 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 10.00 | 121.22 | 4,747.95 | -315.80 | 521.04 | -255.45 | 0.00 | 0.00 | 0.00 |
| 4,835.59 | 10.00 | 121.22 | 4,783.00 | -319.00 | 526.32 | -258.05 | 0.00 | 0.00 | 0.00 |
| Sussex | | | | | | | | | |
| 4,900.00 | 10.00 | 121.22 | 4,846.43 | -324.80 | 535.89 | -262.74 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 10.00 | 121.22 | 4,944.91 | -333.81 | 550.75 | -270.02 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 10.00 | 121.22 | 5,043.39 | -342.81 | 565.60 | -277.30 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 10.00 | 121.22 | 5,141.87 | -351.81 | 580.45 | -284.59 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 10.00 | 121.22 | 5,240.35 | -360.82 | 595.31 | -291.87 | 0.00 | 0.00 | 0.00 |
| 5,383.92 | 10.00 | 121.22 | 5,323.00 | -368.37 | 607.78 | -297.98 | 0.00 | 0.00 | 0.00 |
| Shannon | | | | | | | | | |
| 5,400.00 | 10.00 | 121.22 | 5,338.83 | -369.82 | 610.16 | -299.15 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 10.00 | 121.22 | 5,437.31 | -378.82 | 625.02 | -306.43 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 10.00 | 121.22 | 5,535.79 | -387.83 | 639.87 | -313.72 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 10.00 | 121.22 | 5,634.27 | -396.83 | 654.73 | -321.00 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 10.00 | 121.22 | 5,732.75 | -405.83 | 669.58 | -328.28 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 10.00 | 121.22 | 5,831.23 | -414.84 | 684.44 | -335.57 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 10.00 | 121.22 | 5,929.71 | -423.84 | 699.29 | -342.85 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 10.00 | 121.22 | 6,028.19 | -432.84 | 714.15 | -350.13 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 10.00 | 121.22 | 6,126.67 | -441.85 | 729.00 | -357.41 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 10.00 | 121.22 | 6,225.15 | -450.85 | 743.86 | -364.70 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 10.00 | 121.22 | 6,323.63 | -459.85 | 758.71 | -371.98 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 10.00 | 121.22 | 6,422.11 | -468.86 | 773.57 | -379.26 | 0.00 | 0.00 | 0.00 |
| 6,566.32 | 10.00 | 121.22 | 6,487.42 | -474.83 | 783.42 | -384.09 | 0.00 | 0.00 | 0.00 |
| Start Drop -2.00 | | | | | | | | | |
| 6,600.00 | 9.33 | 121.22 | 6,520.62 | -477.76 | 788.25 | -386.46 | 2.00 | -2.00 | 0.00 |
| 6,700.00 | 7.33 | 121.22 | 6,619.56 | -485.27 | 800.64 | -392.54 | 2.00 | -2.00 | 0.00 |
| 6,800.00 | 5.33 | 121.22 | 6,718.95 | -490.98 | 810.07 | -397.16 | 2.00 | -2.00 | 0.00 |
| 6,900.00 | 3.33 | 121.22 | 6,818.66 | -494.89 | 816.52 | -400.33 | 2.00 | -2.00 | 0.00 |
| 7,000.00 | 1.33 | 121.22 | 6,918.57 | -497.00 | 820.00 | -402.03 | 2.00 | -2.00 | 0.00 |
| 7,066.47 | 0.00 | 0.00 | 6,985.04 | -497.40 | 820.66 | -402.35 | 2.00 | -2.00 | 0.00 |
| Start 203.00 hold at 7066.47 MD | | | | | | | | | |
| 7,100.00 | 0.00 | 0.00 | 7,018.57 | -497.40 | 820.66 | -402.35 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 0.00 | 0.00 | 7,118.57 | -497.40 | 820.66 | -402.35 | 0.00 | 0.00 | 0.00 |
| 7,269.47 | 0.00 | 0.00 | 7,188.04 | -497.40 | 820.66 | -402.35 | 0.00 | 0.00 | 0.00 |
| Start DLS 10.00 TFO 359.70 | | | | | | | | | |
| 7,300.00 | 3.05 | 359.70 | 7,218.55 | -496.59 | 820.66 | -401.55 | 10.00 | 10.00 | 0.00 |
| 7,364.87 | 9.54 | 359.70 | 7,283.00 | -489.48 | 820.62 | -394.48 | 10.00 | 10.00 | 0.00 |
| Sharon Springs | | | | | | | | | |
| 7,400.00 | 13.05 | 359.70 | 7,317.44 | -482.60 | 820.58 | -387.65 | 10.00 | 10.00 | 0.00 |
| 7,407.77 | 13.83 | 359.70 | 7,325.00 | -480.79 | 820.57 | -385.86 | 10.00 | 10.00 | 0.00 |
| Niobrara A | | | | | | | | | |
| 7,500.00 | 23.05 | 359.70 | 7,412.40 | -451.65 | 820.42 | -356.92 | 10.00 | 10.00 | 0.00 |
| 7,585.17 | 31.57 | 359.70 | 7,488.00 | -412.61 | 820.21 | -318.15 | 10.00 | 10.00 | 0.00 |
| Niobrara B | | | | | | | | | |
| 7,600.00 | 33.05 | 359.70 | 7,500.54 | -404.68 | 820.17 | -310.27 | 10.00 | 10.00 | 0.00 |
| 7,700.00 | 43.05 | 359.70 | 7,579.18 | -343.12 | 819.84 | -249.14 | 10.00 | 10.00 | 0.00 |
| 7,714.99 | 44.55 | 359.70 | 7,590.00 | -332.74 | 819.79 | -238.83 | 10.00 | 10.00 | 0.00 |
| Niobrara C | | | | | | | | | |
| 7,800.00 | 53.05 | 359.70 | 7,645.94 | -268.84 | 819.45 | -175.37 | 10.00 | 10.00 | 0.00 |
| 7,900.00 | 63.05 | 359.70 | 7,698.79 | -184.10 | 819.00 | -91.21 | 10.00 | 10.00 | 0.00 |
| 7,968.18 | 69.87 | 359.70 | 7,726.00 | -121.63 | 818.67 | -29.17 | 10.00 | 10.00 | 0.00 |

| | | | |
|------------------|-----------------------------|-------------------------------------|---|
| Database: | EDM5000-RobertS-Local | Local Co-ordinate Reference: | Well XCEL 22C-22HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Site: | XCEL 12N-22HZ 1N67W27 Pad | North Reference: | True |
| Well: | XCEL 22C-22HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PLAN #1 PRELIMINARY | | |

| Planned Survey | | | | | | | | | | |
|--|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | |
| Fort Hays | | | | | | | | | | |
| 8,000.00 | 73.05 | 359.70 | 7,736.12 | -91.46 | 818.51 | 0.79 | 10.00 | 10.00 | 0.00 | |
| 8,093.74 | 82.43 | 359.70 | 7,756.00 | 0.04 | 818.02 | 91.66 | 10.00 | 10.00 | 0.00 | |
| Codell | | | | | | | | | | |
| 8,100.00 | 83.05 | 359.70 | 7,756.79 | 6.25 | 817.99 | 97.82 | 10.00 | 10.00 | 0.00 | |
| 8,169.47 | 90.00 | 359.70 | 7,761.00 | 75.55 | 817.62 | 166.65 | 10.00 | 10.00 | 0.00 | |
| Start 6855.64 hold at 8169.47 MD - 7"(598' FSL 1221' FWL) | | | | | | | | | | |
| 8,200.00 | 90.00 | 359.70 | 7,761.00 | 106.07 | 817.46 | 196.97 | 0.00 | 0.00 | 0.00 | |
| 8,300.00 | 90.00 | 359.70 | 7,761.00 | 206.07 | 816.93 | 296.28 | 0.00 | 0.00 | 0.00 | |
| 8,400.00 | 90.00 | 359.70 | 7,761.00 | 306.07 | 816.39 | 395.59 | 0.00 | 0.00 | 0.00 | |
| 8,500.00 | 90.00 | 359.70 | 7,761.00 | 406.07 | 815.86 | 494.90 | 0.00 | 0.00 | 0.00 | |
| 8,600.00 | 90.00 | 359.70 | 7,761.00 | 506.07 | 815.33 | 594.21 | 0.00 | 0.00 | 0.00 | |
| 8,700.00 | 90.00 | 359.70 | 7,761.00 | 606.07 | 814.80 | 693.52 | 0.00 | 0.00 | 0.00 | |
| 8,800.00 | 90.00 | 359.70 | 7,761.00 | 706.07 | 814.27 | 792.83 | 0.00 | 0.00 | 0.00 | |
| 8,900.00 | 90.00 | 359.70 | 7,761.00 | 806.07 | 813.74 | 892.14 | 0.00 | 0.00 | 0.00 | |
| 9,000.00 | 90.00 | 359.70 | 7,761.00 | 906.06 | 813.21 | 991.45 | 0.00 | 0.00 | 0.00 | |
| 9,100.00 | 90.00 | 359.70 | 7,761.00 | 1,006.06 | 812.68 | 1,090.76 | 0.00 | 0.00 | 0.00 | |
| 9,200.00 | 90.00 | 359.70 | 7,761.00 | 1,106.06 | 812.15 | 1,190.07 | 0.00 | 0.00 | 0.00 | |
| 9,300.00 | 90.00 | 359.70 | 7,761.00 | 1,206.06 | 811.62 | 1,289.38 | 0.00 | 0.00 | 0.00 | |
| 9,400.00 | 90.00 | 359.70 | 7,761.00 | 1,306.06 | 811.09 | 1,388.68 | 0.00 | 0.00 | 0.00 | |
| 9,500.00 | 90.00 | 359.70 | 7,761.00 | 1,406.06 | 810.56 | 1,487.99 | 0.00 | 0.00 | 0.00 | |
| 9,600.00 | 90.00 | 359.70 | 7,761.00 | 1,506.06 | 810.02 | 1,587.30 | 0.00 | 0.00 | 0.00 | |
| 9,700.00 | 90.00 | 359.70 | 7,761.00 | 1,606.05 | 809.49 | 1,686.61 | 0.00 | 0.00 | 0.00 | |
| 9,800.00 | 90.00 | 359.70 | 7,761.00 | 1,706.05 | 808.96 | 1,785.92 | 0.00 | 0.00 | 0.00 | |
| 9,900.00 | 90.00 | 359.70 | 7,761.00 | 1,806.05 | 808.43 | 1,885.23 | 0.00 | 0.00 | 0.00 | |
| 10,000.00 | 90.00 | 359.70 | 7,761.00 | 1,906.05 | 807.90 | 1,984.54 | 0.00 | 0.00 | 0.00 | |
| 10,100.00 | 90.00 | 359.70 | 7,761.00 | 2,006.05 | 807.37 | 2,083.85 | 0.00 | 0.00 | 0.00 | |
| 10,200.00 | 90.00 | 359.70 | 7,761.00 | 2,106.05 | 806.84 | 2,183.16 | 0.00 | 0.00 | 0.00 | |
| 10,300.00 | 90.00 | 359.70 | 7,761.00 | 2,206.05 | 806.31 | 2,282.47 | 0.00 | 0.00 | 0.00 | |
| 10,400.00 | 90.00 | 359.70 | 7,761.00 | 2,306.04 | 805.78 | 2,381.78 | 0.00 | 0.00 | 0.00 | |
| 10,500.00 | 90.00 | 359.70 | 7,761.00 | 2,406.04 | 805.25 | 2,481.09 | 0.00 | 0.00 | 0.00 | |
| 10,600.00 | 90.00 | 359.70 | 7,761.00 | 2,506.04 | 804.72 | 2,580.40 | 0.00 | 0.00 | 0.00 | |
| 10,700.00 | 90.00 | 359.70 | 7,761.00 | 2,606.04 | 804.19 | 2,679.71 | 0.00 | 0.00 | 0.00 | |
| 10,800.00 | 90.00 | 359.70 | 7,761.00 | 2,706.04 | 803.65 | 2,779.02 | 0.00 | 0.00 | 0.00 | |
| 10,900.00 | 90.00 | 359.70 | 7,761.00 | 2,806.04 | 803.12 | 2,878.33 | 0.00 | 0.00 | 0.00 | |
| 11,000.00 | 90.00 | 359.70 | 7,761.00 | 2,906.04 | 802.59 | 2,977.64 | 0.00 | 0.00 | 0.00 | |
| 11,100.00 | 90.00 | 359.70 | 7,761.00 | 3,006.03 | 802.06 | 3,076.95 | 0.00 | 0.00 | 0.00 | |
| 11,200.00 | 90.00 | 359.70 | 7,761.00 | 3,106.03 | 801.53 | 3,176.26 | 0.00 | 0.00 | 0.00 | |
| 11,300.00 | 90.00 | 359.70 | 7,761.00 | 3,206.03 | 801.00 | 3,275.57 | 0.00 | 0.00 | 0.00 | |
| 11,400.00 | 90.00 | 359.70 | 7,761.00 | 3,306.03 | 800.47 | 3,374.88 | 0.00 | 0.00 | 0.00 | |
| 11,500.00 | 90.00 | 359.70 | 7,761.00 | 3,406.03 | 799.94 | 3,474.19 | 0.00 | 0.00 | 0.00 | |
| 11,600.00 | 90.00 | 359.70 | 7,761.00 | 3,506.03 | 799.41 | 3,573.50 | 0.00 | 0.00 | 0.00 | |
| 11,700.00 | 90.00 | 359.70 | 7,761.00 | 3,606.03 | 798.88 | 3,672.81 | 0.00 | 0.00 | 0.00 | |
| 11,800.00 | 90.00 | 359.70 | 7,761.00 | 3,706.02 | 798.35 | 3,772.12 | 0.00 | 0.00 | 0.00 | |
| 11,900.00 | 90.00 | 359.70 | 7,761.00 | 3,806.02 | 797.82 | 3,871.43 | 0.00 | 0.00 | 0.00 | |
| 12,000.00 | 90.00 | 359.70 | 7,761.00 | 3,906.02 | 797.28 | 3,970.74 | 0.00 | 0.00 | 0.00 | |
| 12,100.00 | 90.00 | 359.70 | 7,761.00 | 4,006.02 | 796.75 | 4,070.05 | 0.00 | 0.00 | 0.00 | |
| 12,200.00 | 90.00 | 359.70 | 7,761.00 | 4,106.02 | 796.22 | 4,169.36 | 0.00 | 0.00 | 0.00 | |
| 12,300.00 | 90.00 | 359.70 | 7,761.00 | 4,206.02 | 795.69 | 4,268.67 | 0.00 | 0.00 | 0.00 | |
| 12,400.00 | 90.00 | 359.70 | 7,761.00 | 4,306.02 | 795.16 | 4,367.98 | 0.00 | 0.00 | 0.00 | |
| 12,500.00 | 90.00 | 359.70 | 7,761.00 | 4,406.01 | 794.63 | 4,467.29 | 0.00 | 0.00 | 0.00 | |
| 12,600.00 | 90.00 | 359.70 | 7,761.00 | 4,506.01 | 794.10 | 4,566.60 | 0.00 | 0.00 | 0.00 | |
| 12,700.00 | 90.00 | 359.70 | 7,761.00 | 4,606.01 | 793.57 | 4,665.91 | 0.00 | 0.00 | 0.00 | |

| | | | |
|------------------|-----------------------------|-------------------------------------|---|
| Database: | EDM5000-RobertS-Local | Local Co-ordinate Reference: | Well XCEL 22C-22HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Site: | XCEL 12N-22HZ 1N67W27 Pad | North Reference: | True |
| Well: | XCEL 22C-22HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PLAN #1 PRELIMINARY | | |

| Planned Survey | | | | | | | | | |
|--|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 12,800.00 | 90.00 | 359.70 | 7,761.00 | 4,706.01 | 793.04 | 4,765.22 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 359.70 | 7,761.00 | 4,806.01 | 792.51 | 4,864.53 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 359.70 | 7,761.00 | 4,906.01 | 791.98 | 4,963.84 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 359.70 | 7,761.00 | 5,006.01 | 791.44 | 5,063.15 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 359.70 | 7,761.00 | 5,106.00 | 790.91 | 5,162.46 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 359.70 | 7,761.00 | 5,206.00 | 790.38 | 5,261.77 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 359.70 | 7,761.00 | 5,306.00 | 789.85 | 5,361.08 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 359.70 | 7,761.00 | 5,406.00 | 789.32 | 5,460.39 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 359.70 | 7,761.00 | 5,506.00 | 788.79 | 5,559.70 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 359.70 | 7,761.00 | 5,606.00 | 788.26 | 5,659.01 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 359.70 | 7,761.00 | 5,706.00 | 787.73 | 5,758.32 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 359.70 | 7,761.00 | 5,805.99 | 787.20 | 5,857.63 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.00 | 359.70 | 7,761.00 | 5,905.99 | 786.67 | 5,956.94 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.00 | 359.70 | 7,761.00 | 6,005.99 | 786.14 | 6,056.25 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.00 | 359.70 | 7,761.00 | 6,105.99 | 785.61 | 6,155.56 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.00 | 359.70 | 7,761.00 | 6,205.99 | 785.07 | 6,254.87 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.00 | 359.70 | 7,761.00 | 6,305.99 | 784.54 | 6,354.18 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.00 | 359.70 | 7,761.00 | 6,405.99 | 784.01 | 6,453.49 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.00 | 359.70 | 7,761.00 | 6,505.98 | 783.48 | 6,552.80 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.00 | 359.70 | 7,761.00 | 6,605.98 | 782.95 | 6,652.11 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.00 | 359.70 | 7,761.00 | 6,705.98 | 782.42 | 6,751.42 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.00 | 359.70 | 7,761.00 | 6,805.98 | 781.89 | 6,850.73 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.00 | 359.70 | 7,761.00 | 6,905.98 | 781.36 | 6,950.04 | 0.00 | 0.00 | 0.00 |
| 15,025.12 | 90.00 | 359.70 | 7,761.00 | 6,931.10 | 781.23 | 6,974.98 | 0.00 | 0.00 | 0.00 |
| TD at 15025.12 - PBHL_XCEL 22C-22HZ(2171' FSL 1220' FWL) | | | | | | | | | |

| Design Targets | | | | | | | | | |
|---------------------------|---------------|--------------|----------|------------|------------|-----------------|----------------|------------|--------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
| - hit/miss target | | | | | | | | | |
| - Shape | | | | | | | | | |
| PBHL_XCEL 22C-22HZ | 0.00 | 0.00 | 7,761.00 | 6,931.10 | 781.23 | 1,256,307.25 | 3,173,094.32 | 40.0352950 | -104.8818200 |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

| Casing Points | | | | | |
|---------------------|---------------------|------------------------|----------------------|--------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (in) | Hole Diameter (in) | |
| 843.00 | 843.00 | 9 5/8" | 9.625 | 12.250 | |
| 8,169.47 | 7,761.00 | 7"(598' FSL 1221' FWL) | 7.000 | 7.500 | |

| | | | |
|------------------|-----------------------------|-------------------------------------|---|
| Database: | EDM5000-RobertS-Local | Local Co-ordinate Reference: | Well XCEL 22C-22HZ |
| Company: | US ROCKIES REGION PLANNING | TVD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Project: | COLORADO NORTHERN ZONE - 83 | MD Reference: | GL 5026' & KB 17' @ 5043.00ft (ASSUMED) |
| Site: | XCEL 12N-22HZ 1N67W27 Pad | North Reference: | True |
| Well: | XCEL 22C-22HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | OH | | |
| Design: | PLAN #1 PRELIMINARY | | |

| Formations | | | | | |
|---------------------|---------------------|----------------|-----------|---------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| 793.00 | 793.00 | Fox Hills Base | | | |
| 4,835.59 | 4,783.00 | Sussex | | | |
| 5,383.92 | 5,323.00 | Shannon | | | |
| 7,364.87 | 7,283.00 | Sharon Springs | | | |
| 7,407.77 | 7,325.00 | Niobrara A | | | |
| 7,585.17 | 7,488.00 | Niobrara B | | | |
| 7,714.99 | 7,590.00 | Niobrara C | | | |
| 7,968.18 | 7,726.00 | Fort Hays | | | |
| 8,093.74 | 7,756.00 | Codell | | | |

| Plan Annotations | | | | |
|---------------------|---------------------|-------------------|------------|----------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 1,043.00 | 1,043.00 | 0.00 | 0.00 | Start Build 2.00 |
| 1,543.16 | 1,540.62 | -22.57 | 37.24 | Start 5023.16 hold at 1543.15 MD |
| 6,566.32 | 6,487.42 | -474.83 | 783.42 | Start Drop -2.00 |
| 7,066.47 | 6,985.04 | -497.40 | 820.66 | Start 203.00 hold at 7066.47 MD |
| 7,269.47 | 7,188.04 | -497.40 | 820.66 | Start DLS 10.00 TFO 359.70 |
| 8,169.47 | 7,761.00 | 75.55 | 817.62 | Start 6855.64 hold at 8169.47 MD |
| 15,025.12 | 7,761.00 | 6,931.10 | 781.23 | TD at 15025.12 |