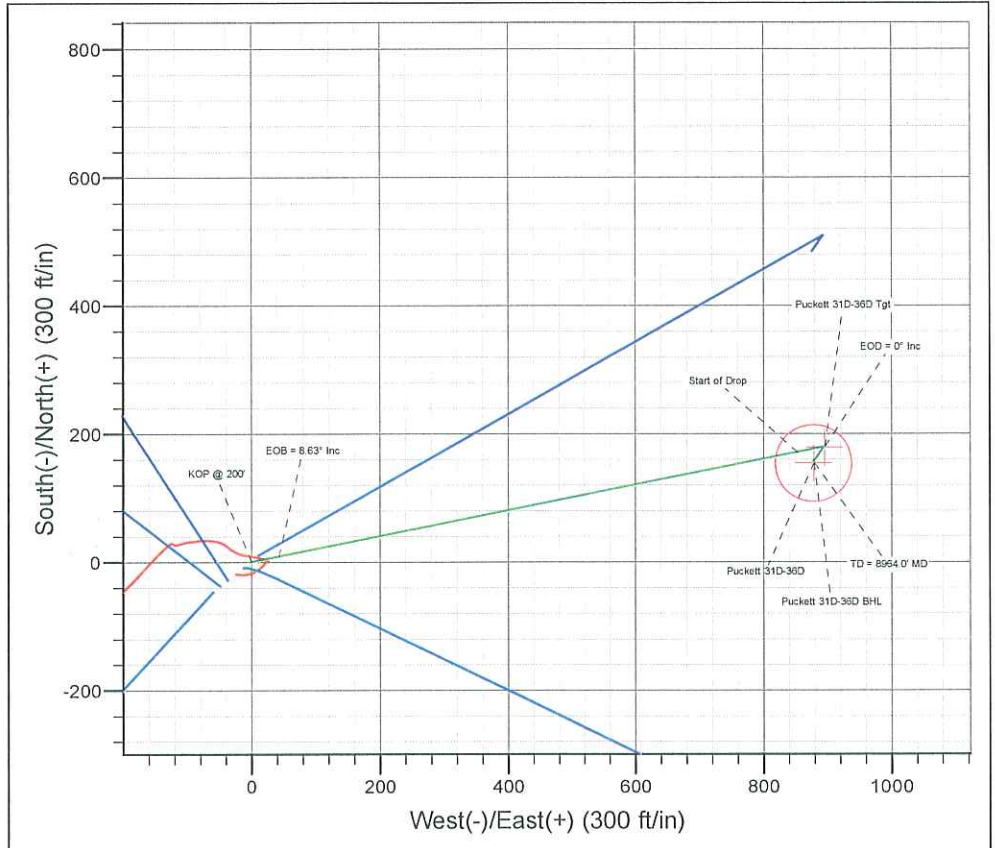
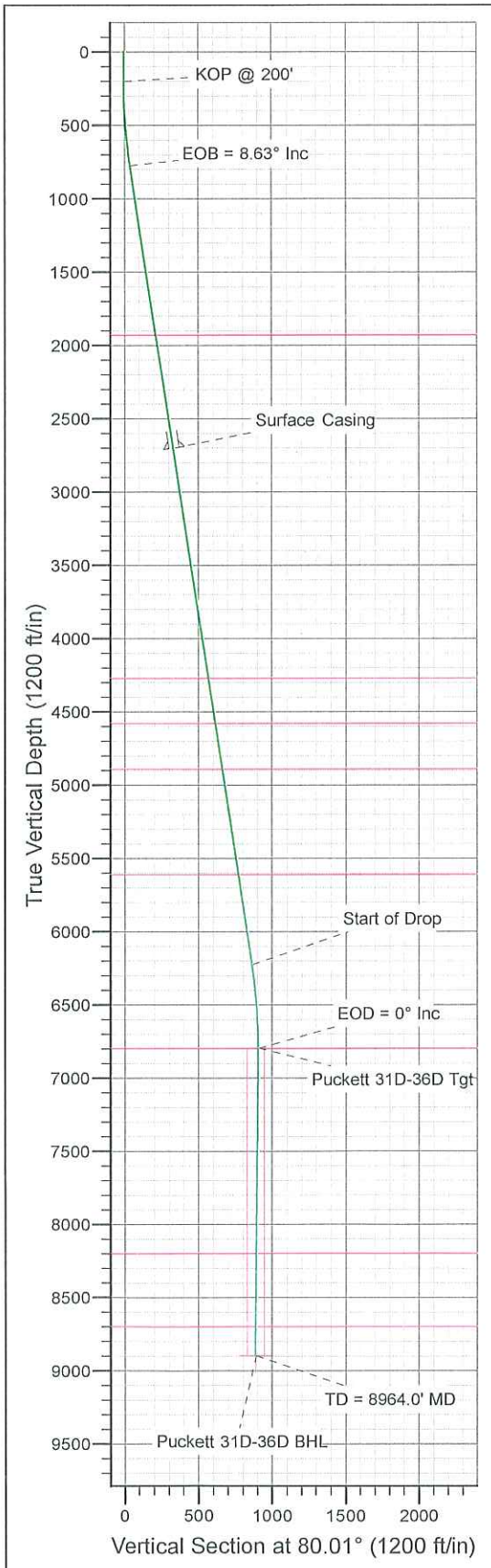




Azimuths to True North
 Magnetic North: 10.57°
 Magnetic Field
 Strength: 52314.0snT
 Dip Angle: 65.73°
 Date: 2010/05/07
 Model: IGRF2010-14

WELL DETAILS: Puckett 31D-36D

+N/-S 0.0 +E/-W 0.0 Northing 1612115.41 Ground Level: 8203.0
 Easting 2246623.97 Latitude 39° 29' 1.110 N Longitude 108° 10' 10.430 W Slot



ANNOTATIONS

| TVD | MD | Annotation |
|--------|--------|-----------------|
| 200.0 | 200.0 | KOP @ 200' |
| 773.2 | 775.4 | EOB = 8.63° Inc |
| 6223.8 | 6288.4 | Start of Drop |
| 6797.0 | 6863.8 | EOD = 0° Inc |
| 8897.0 | 8964.0 | TD = 8964.0' MD |

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---------|--------|-----------------------|
| 1927.0 | 1942.4 | Wasatch |
| 4267.0 | 4309.2 | Wasatch "G" Sand |
| 4577.0 | 4622.7 | Fort Union |
| 4887.0 | 4936.3 | Base Fort Union |
| 5607.0 | 5664.5 | Mesaverde/Williams Fk |
| 6797.0 | 6863.8 | Top Gas Cell |
| 8197.0 | 8263.9 | Cameo |
| 8697.0 | 8764.0 | Rollins |

WELL ON DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Target |
|-----|--------|------|--------|--------|-------|-------|------|--------|-------|---------------------|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 775.4 | 8.63 | 78.68 | 773.2 | 8.5 | 42.4 | 1.50 | 78.68 | 43.2 | |
| 4 | 6288.4 | 8.63 | 78.68 | 6223.8 | 170.9 | 853.7 | 0.00 | 0.00 | 870.4 | |
| 5 | 6863.8 | 0.00 | 0.00 | 6797.0 | 179.4 | 896.1 | 1.50 | 180.00 | 913.6 | Puckett 31D-36D Tgt |
| 6 | 7221.7 | 0.89 | 215.00 | 7154.9 | 177.1 | 894.5 | 0.25 | 215.00 | 911.7 | |
| 7 | 8964.0 | 0.89 | 215.00 | 8897.0 | 154.8 | 878.9 | 0.00 | 0.00 | 892.4 | Puckett 31D-36D BHL |

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|---------------------|--------|-------|-------|-----------------|------------------|-----------------------|
| Puckett 31D-36D Tgt | 6797.0 | 179.4 | 896.1 | 39° 29' 2.883 N | 108° 9' 59.001 W | Point |
| Puckett 31D-36D BHL | 8897.0 | 154.8 | 878.9 | 39° 29' 2.640 N | 108° 9' 59.220 W | Circle (Radius: 60.0) |

CASING DETAILS

| TVD | MD | Name | Size |
|--------|--------|----------------|------|
| 2700.0 | 2724.2 | Surface Casing | |

Plan: Plan #1 (Puckett 31D-36D/DD)

Created By: Jon Schweigert Date: 10:00, May 11 2010
 Checked: _____ Date: _____
 Reviewed: _____ Date: _____
 Approved: _____ Date: _____





| | | | |
|-----------|-----------------------------|------------------------------|--|
| Database: | RMR1 Database | Local Co-ordinate Reference: | Well Puckett 31D-36D |
| Company: | Petroleum Development Corp. | TVD Reference: | Puckett 31D-36D KBE @ 8227.0ft (H&P 318) |
| Project: | Mesa | MD Reference: | Puckett 31D-36D KBE @ 8227.0ft (H&P 318) |
| Site: | NESW Sec 36-T6S-R97W | North Reference: | True |
| Well: | Puckett 31D-36D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | DD | | |
| Design: | Plan #1 | | |

| | | | |
|-------------|---------------------------|---------------|----------------|
| Project | Mesa | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Central Zone | | |

| | | | | | |
|-----------------------|----------------------|--------------|-----------------|-------------------|-------------------|
| Site | NESW Sec 36-T6S-R97W | | | | |
| Site Position: | | Northing: | 1,612,095.79 ft | Latitude: | 39° 29' 0.904 N |
| From: | Lat/Long | Easting: | 2,246,581.45 ft | Longitude: | 108° 10' 10.965 W |
| Position Uncertainty: | 0.0 ft | Slot Radius: | | Grid Convergence: | -1.68 ° |

| | | | | | | |
|----------------------|-----------------|---------|---------------------|-----------------|---------------|-------------------|
| Well | Puckett 31D-36D | | | | | |
| Well Position | +N/-S | 20.9 ft | Northing: | 1,612,115.41 ft | Latitude: | 39° 29' 1.110 N |
| | +E/-W | 41.9 ft | Easting: | 2,246,623.97 ft | Longitude: | 108° 10' 10.430 W |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | | Ground Level: | 8,203.0 ft |

| | | | | | |
|-----------|-------------|-------------|-----------------|---------------|---------------------|
| Wellbore | DD | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010-14 | 2010/05/07 | 10.57 | 65.73 | 52,314 |

| | | | | |
|-------------------|--------------------------|---------------|---------------|------------------|
| Design | Plan #1 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
| | 0.0 | 0.0 | 0.0 | 80.01 |

| Plan Sections | | | | | | | | | | |
|---------------|-------------|---------|------------|-------|-------|----------------|----------------|----------------|--------|---------------------|
| Measured | Inclination | Azimuth | Vertical | +N/-S | +E/-W | Dogleg | Build | Turn | TFO | Target |
| Depth (ft) | (°) | (°) | Depth (ft) | (ft) | (ft) | Rate (°/100ft) | Rate (°/100ft) | Rate (°/100ft) | (°) | |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 775.4 | 8.63 | 78.68 | 773.2 | 8.5 | 42.4 | 1.50 | 1.50 | 0.00 | 78.68 | |
| 6,288.4 | 8.63 | 78.68 | 6,223.8 | 170.9 | 853.7 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,863.8 | 0.00 | 0.00 | 6,797.0 | 179.4 | 896.1 | 1.50 | -1.50 | 0.00 | 180.00 | Puckett 31D-36D Tgt |
| 7,221.7 | 0.89 | 215.00 | 7,154.9 | 177.1 | 894.5 | 0.25 | 0.25 | -40.52 | 215.00 | |
| 8,964.0 | 0.89 | 215.00 | 8,897.0 | 154.8 | 878.9 | 0.00 | 0.00 | 0.00 | 0.00 | Puckett 31D-36D BHL |

| | | | |
|------------------|-----------------------------|-------------------------------------|--|
| Database: | RMR1 Database | Local Co-ordinate Reference: | Well Puckett 31D-36D |
| Company: | Petroleum Development Corp. | TVD Reference: | Puckett 31D-36D KBE @ 8227.0ft (H&P 318) |
| Project: | Mesa | MD Reference: | Puckett 31D-36D KBE @ 8227.0ft (H&P 318) |
| Site: | NESW Sec 36-T6S-R97W | North Reference: | True |
| Well: | Puckett 31D-36D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | DD | | |
| Design: | Plan #1 | | |

Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | Subsea Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|-------------------------|-----------------|-------------|---------------------|-------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 0.0 | 0.00 | 0.00 | 0.0 | -8,227.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 100.0 | 0.00 | 0.00 | 100.0 | -8,127.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| KOP @ 200' | | | | | | | | | | |
| 200.0 | 0.00 | 0.00 | 200.0 | -8,027.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 1.50 | 78.68 | 300.0 | -7,927.0 | 0.3 | 1.3 | 1.3 | 1.50 | 1.50 | 0.00 |
| 400.0 | 3.00 | 78.68 | 399.9 | -7,827.1 | 1.0 | 5.1 | 5.2 | 1.50 | 1.50 | 0.00 |
| 500.0 | 4.50 | 78.68 | 499.7 | -7,727.3 | 2.3 | 11.5 | 11.8 | 1.50 | 1.50 | 0.00 |
| 600.0 | 6.00 | 78.68 | 599.3 | -7,627.7 | 4.1 | 20.5 | 20.9 | 1.50 | 1.50 | 0.00 |
| 700.0 | 7.50 | 78.68 | 698.6 | -7,528.4 | 6.4 | 32.0 | 32.7 | 1.50 | 1.50 | 0.00 |
| EOB = 8.63° Inc | | | | | | | | | | |
| 775.4 | 8.63 | 78.68 | 773.2 | -7,453.8 | 8.5 | 42.4 | 43.2 | 1.50 | 1.50 | 0.00 |
| 800.0 | 8.63 | 78.68 | 797.5 | -7,429.5 | 9.2 | 46.0 | 46.9 | 0.00 | 0.00 | 0.00 |
| 900.0 | 8.63 | 78.68 | 896.4 | -7,330.6 | 12.2 | 60.8 | 61.9 | 0.00 | 0.00 | 0.00 |
| 1,000.0 | 8.63 | 78.68 | 995.3 | -7,231.7 | 15.1 | 75.5 | 76.9 | 0.00 | 0.00 | 0.00 |
| 1,100.0 | 8.63 | 78.68 | 1,094.1 | -7,132.8 | 18.1 | 90.2 | 91.9 | 0.00 | 0.00 | 0.00 |
| 1,200.0 | 8.63 | 78.68 | 1,193.0 | -7,034.0 | 21.0 | 104.9 | 107.0 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 8.63 | 78.68 | 1,291.9 | -6,935.1 | 23.9 | 119.6 | 122.0 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 8.63 | 78.68 | 1,390.8 | -6,836.2 | 26.9 | 134.3 | 137.0 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 8.63 | 78.68 | 1,489.6 | -6,737.4 | 29.8 | 149.0 | 152.0 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 8.63 | 78.68 | 1,588.5 | -6,638.5 | 32.8 | 163.8 | 167.0 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 8.63 | 78.68 | 1,687.4 | -6,539.6 | 35.7 | 178.5 | 182.0 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 8.63 | 78.68 | 1,786.2 | -6,440.8 | 38.7 | 193.2 | 197.0 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 8.63 | 78.68 | 1,885.1 | -6,341.9 | 41.6 | 207.9 | 212.0 | 0.00 | 0.00 | 0.00 |
| Wasatch | | | | | | | | | | |
| 1,942.4 | 8.63 | 78.68 | 1,927.0 | -6,300.0 | 42.9 | 214.1 | 218.3 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 8.63 | 78.68 | 1,984.0 | -6,243.0 | 44.6 | 222.6 | 227.0 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 8.63 | 78.68 | 2,082.8 | -6,144.2 | 47.5 | 237.3 | 242.0 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 8.63 | 78.68 | 2,181.7 | -6,045.3 | 50.5 | 252.1 | 257.0 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 8.63 | 78.68 | 2,280.6 | -5,946.4 | 53.4 | 266.8 | 272.0 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 8.63 | 78.68 | 2,379.4 | -5,847.6 | 56.4 | 281.5 | 287.0 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 8.63 | 78.68 | 2,478.3 | -5,748.7 | 59.3 | 296.2 | 302.0 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 8.63 | 78.68 | 2,577.2 | -5,649.8 | 62.2 | 310.9 | 317.0 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 8.63 | 78.68 | 2,676.0 | -5,551.0 | 65.2 | 325.6 | 332.0 | 0.00 | 0.00 | 0.00 |
| Surface Casing | | | | | | | | | | |
| 2,724.2 | 8.63 | 78.68 | 2,700.0 | -5,527.0 | 65.9 | 329.2 | 335.6 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 8.63 | 78.68 | 2,774.9 | -5,452.1 | 68.1 | 340.3 | 347.0 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 8.63 | 78.68 | 2,873.8 | -5,353.2 | 71.1 | 355.1 | 362.0 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 8.63 | 78.68 | 2,972.6 | -5,254.4 | 74.0 | 369.8 | 377.0 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 8.63 | 78.68 | 3,071.5 | -5,155.5 | 77.0 | 384.5 | 392.0 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 8.63 | 78.68 | 3,170.4 | -5,056.6 | 79.9 | 399.2 | 407.0 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 8.63 | 78.68 | 3,269.2 | -4,957.8 | 82.9 | 413.9 | 422.0 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 8.63 | 78.68 | 3,368.1 | -4,858.9 | 85.8 | 428.6 | 437.0 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 8.63 | 78.68 | 3,467.0 | -4,760.0 | 88.8 | 443.4 | 452.0 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 8.63 | 78.68 | 3,565.8 | -4,661.2 | 91.7 | 458.1 | 467.0 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 8.63 | 78.68 | 3,664.7 | -4,562.3 | 94.7 | 472.8 | 482.0 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 8.63 | 78.68 | 3,763.6 | -4,463.4 | 97.6 | 487.5 | 497.0 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 8.63 | 78.68 | 3,862.4 | -4,364.6 | 100.5 | 502.2 | 512.0 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 8.63 | 78.68 | 3,961.3 | -4,265.7 | 103.5 | 516.9 | 527.1 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 8.63 | 78.68 | 4,060.2 | -4,166.8 | 106.4 | 531.7 | 542.1 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 8.63 | 78.68 | 4,159.0 | -4,068.0 | 109.4 | 546.4 | 557.1 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 8.63 | 78.68 | 4,257.9 | -3,969.1 | 112.3 | 561.1 | 572.1 | 0.00 | 0.00 | 0.00 |
| Wasatch "G" Sand | | | | | | | | | | |
| 4,309.2 | 8.63 | 78.68 | 4,267.0 | -3,960.0 | 112.6 | 562.4 | 573.4 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 8.63 | 78.68 | 4,356.8 | -3,870.2 | 115.3 | 575.8 | 587.1 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|-----------------------------|-------------------------------------|--|
| Database: | RMR1 Database | Local Co-ordinate Reference: | Well Puckett 31D-36D |
| Company: | Petroleum Development Corp. | TVD Reference: | Puckett 31D-36D KBE @ 8227.0ft (H&P 318) |
| Project: | Mesa | MD Reference: | Puckett 31D-36D KBE @ 8227.0ft (H&P 318) |
| Site: | NESW Sec 36-T6S-R97W | North Reference: | True |
| Well: | Puckett 31D-36D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | DD | | |
| Design: | Plan #1 | | |

Planned Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | Subsea Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|--|-----------------|-------------|---------------------|-------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 4,500.0 | 8.63 | 78.68 | 4,455.6 | -3,771.4 | 118.2 | 590.5 | 602.1 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 8.63 | 78.68 | 4,554.5 | -3,672.5 | 121.2 | 605.2 | 617.1 | 0.00 | 0.00 | 0.00 |
| Fort Union | | | | | | | | | | |
| 4,622.7 | 8.63 | 78.68 | 4,577.0 | -3,650.0 | 121.8 | 608.6 | 620.5 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 8.63 | 78.68 | 4,653.4 | -3,573.6 | 124.1 | 619.9 | 632.1 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 8.63 | 78.68 | 4,752.2 | -3,474.8 | 127.1 | 634.7 | 647.1 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 8.63 | 78.68 | 4,851.1 | -3,375.9 | 130.0 | 649.4 | 662.1 | 0.00 | 0.00 | 0.00 |
| Base Fort Union | | | | | | | | | | |
| 4,936.3 | 8.63 | 78.68 | 4,887.0 | -3,340.0 | 131.1 | 654.7 | 667.5 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 8.63 | 78.68 | 4,950.0 | -3,277.0 | 133.0 | 664.1 | 677.1 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 8.63 | 78.68 | 5,048.8 | -3,178.2 | 135.9 | 678.8 | 692.1 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 8.63 | 78.68 | 5,147.7 | -3,079.3 | 138.8 | 693.5 | 707.1 | 0.00 | 0.00 | 0.00 |
| 5,300.0 | 8.63 | 78.68 | 5,246.6 | -2,980.4 | 141.8 | 708.2 | 722.1 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 8.63 | 78.68 | 5,345.5 | -2,881.5 | 144.7 | 723.0 | 737.1 | 0.00 | 0.00 | 0.00 |
| 5,500.0 | 8.63 | 78.68 | 5,444.3 | -2,782.7 | 147.7 | 737.7 | 752.1 | 0.00 | 0.00 | 0.00 |
| 5,600.0 | 8.63 | 78.68 | 5,543.2 | -2,683.8 | 150.6 | 752.4 | 767.1 | 0.00 | 0.00 | 0.00 |
| Mesaverde/Williams Fk * | | | | | | | | | | |
| 5,664.5 | 8.63 | 78.68 | 5,607.0 | -2,620.0 | 152.5 | 761.9 | 776.8 | 0.00 | 0.00 | 0.00 |
| 5,700.0 | 8.63 | 78.68 | 5,642.1 | -2,584.9 | 153.6 | 767.1 | 782.1 | 0.00 | 0.00 | 0.00 |
| 5,800.0 | 8.63 | 78.68 | 5,740.9 | -2,486.1 | 156.5 | 781.8 | 797.1 | 0.00 | 0.00 | 0.00 |
| 5,900.0 | 8.63 | 78.68 | 5,839.8 | -2,387.2 | 159.5 | 796.5 | 812.1 | 0.00 | 0.00 | 0.00 |
| 6,000.0 | 8.63 | 78.68 | 5,938.7 | -2,288.3 | 162.4 | 811.2 | 827.1 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 8.63 | 78.68 | 6,037.5 | -2,189.5 | 165.4 | 826.0 | 842.1 | 0.00 | 0.00 | 0.00 |
| 6,200.0 | 8.63 | 78.68 | 6,136.4 | -2,090.6 | 168.3 | 840.7 | 857.1 | 0.00 | 0.00 | 0.00 |
| Start of Drop | | | | | | | | | | |
| 6,288.4 | 8.63 | 78.68 | 6,223.8 | -2,003.2 | 170.9 | 853.7 | 870.4 | 0.00 | 0.00 | 0.00 |
| 6,300.0 | 8.46 | 78.68 | 6,235.3 | -1,991.7 | 171.2 | 855.4 | 872.1 | 1.50 | -1.50 | 0.00 |
| 6,400.0 | 6.96 | 78.68 | 6,334.4 | -1,892.6 | 173.9 | 868.5 | 885.5 | 1.50 | -1.50 | 0.00 |
| 6,500.0 | 5.46 | 78.68 | 6,433.8 | -1,793.2 | 176.0 | 879.1 | 896.3 | 1.50 | -1.50 | 0.00 |
| 6,600.0 | 3.96 | 78.68 | 6,533.4 | -1,693.6 | 177.6 | 887.2 | 904.5 | 1.50 | -1.50 | 0.00 |
| 6,700.0 | 2.46 | 78.68 | 6,633.3 | -1,593.7 | 178.7 | 892.7 | 910.1 | 1.50 | -1.50 | 0.00 |
| 6,800.0 | 0.96 | 78.68 | 6,733.2 | -1,493.8 | 179.3 | 895.6 | 913.1 | 1.50 | -1.50 | 0.00 |
| EOD = 0° Inc - Top Gas Cell - Puckett 31D-36D Tgt | | | | | | | | | | |
| 6,863.8 | 0.00 | 0.00 | 6,797.0 | -1,430.0 | 179.4 | 896.1 | 913.6 | 1.50 | -1.50 | 0.00 |
| 6,900.0 | 0.09 | 215.00 | 6,833.2 | -1,393.8 | 179.4 | 896.1 | 913.6 | 0.25 | 0.25 | 0.00 |
| 7,000.0 | 0.34 | 215.00 | 6,933.2 | -1,293.8 | 179.1 | 895.9 | 913.3 | 0.25 | 0.25 | 0.00 |
| 7,100.0 | 0.59 | 215.00 | 7,033.2 | -1,193.8 | 178.4 | 895.4 | 912.8 | 0.25 | 0.25 | 0.00 |
| 7,200.0 | 0.84 | 215.00 | 7,133.2 | -1,093.8 | 177.4 | 894.7 | 911.9 | 0.25 | 0.25 | 0.00 |
| 7,221.7 | 0.89 | 215.00 | 7,154.9 | -1,072.1 | 177.1 | 894.5 | 911.7 | 0.25 | 0.25 | 0.00 |
| 7,300.0 | 0.89 | 215.00 | 7,233.2 | -993.8 | 176.1 | 893.8 | 910.8 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 0.89 | 215.00 | 7,333.2 | -893.8 | 174.8 | 892.9 | 909.7 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 0.89 | 215.00 | 7,433.2 | -793.8 | 173.6 | 892.0 | 908.6 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 0.89 | 215.00 | 7,533.2 | -693.8 | 172.3 | 891.1 | 907.5 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 0.89 | 215.00 | 7,633.1 | -593.9 | 171.0 | 890.2 | 906.4 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 0.89 | 215.00 | 7,733.1 | -493.9 | 169.7 | 889.3 | 905.3 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 0.89 | 215.00 | 7,833.1 | -393.9 | 168.4 | 888.4 | 904.2 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 0.89 | 215.00 | 7,933.1 | -293.9 | 167.2 | 887.5 | 903.1 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 0.89 | 215.00 | 8,033.1 | -193.9 | 165.9 | 886.6 | 902.0 | 0.00 | 0.00 | 0.00 |
| 8,200.0 | 0.89 | 215.00 | 8,133.1 | -93.9 | 164.6 | 885.7 | 900.9 | 0.00 | 0.00 | 0.00 |
| Cameo | | | | | | | | | | |
| 8,263.9 | 0.89 | 215.00 | 8,197.0 | -30.0 | 163.8 | 885.2 | 900.2 | 0.00 | 0.00 | 0.00 |
| 8,300.0 | 0.89 | 215.00 | 8,233.1 | 6.1 | 163.3 | 884.8 | 899.8 | 0.00 | 0.00 | 0.00 |
| 8,400.0 | 0.89 | 215.00 | 8,333.1 | 106.1 | 162.0 | 883.9 | 898.7 | 0.00 | 0.00 | 0.00 |

| | | | |
|-----------|-----------------------------|------------------------------|--|
| Database: | RMR1 Database | Local Co-ordinate Reference: | Well Puckett 31D-36D |
| Company: | Petroleum Development Corp. | TVD Reference: | Puckett 31D-36D KBE @ 8227.0ft (H&P 318) |
| Project: | Mesa | MD Reference: | Puckett 31D-36D KBE @ 8227.0ft (H&P 318) |
| Site: | NESW Sec 36-T6S-R97W | North Reference: | True |
| Well: | Puckett 31D-36D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | DD | | |
| Design: | Plan #1 | | |

| Planned Survey | | | | | | | | | | | |
|--|-----------------|-------------|---------------------|-------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | Subsea Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | |
| 8,500.0 | 0.89 | 215.00 | 8,433.0 | 206.0 | 160.8 | 883.0 | 897.5 | 0.00 | 0.00 | 0.00 | |
| 8,600.0 | 0.89 | 215.00 | 8,533.0 | 306.0 | 159.5 | 882.2 | 896.4 | 0.00 | 0.00 | 0.00 | |
| 8,700.0 | 0.89 | 215.00 | 8,633.0 | 406.0 | 158.2 | 881.3 | 895.3 | 0.00 | 0.00 | 0.00 | |
| Rollins | | | | | | | | | | | |
| 8,764.0 | 0.89 | 215.00 | 8,697.0 | 470.0 | 157.4 | 880.7 | 894.6 | 0.00 | 0.00 | 0.00 | |
| 8,800.0 | 0.89 | 215.00 | 8,733.0 | 506.0 | 156.9 | 880.4 | 894.2 | 0.00 | 0.00 | 0.00 | |
| 8,900.0 | 0.89 | 215.00 | 8,833.0 | 606.0 | 155.6 | 879.5 | 893.1 | 0.00 | 0.00 | 0.00 | |
| TD = 8964.0' MD - Puckett 31D-36D BHL | | | | | | | | | | | |
| 8,964.0 | 0.89 | 215.00 | 8,897.0 | 670.0 | 154.8 | 878.9 | 892.4 | 0.00 | 0.00 | 0.00 | |

| Design Targets | | | | | | | | | | |
|--|---------------|--------------|----------|------------|------------|---------------|--------------|-----------------|------------------|--|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | Longitude | |
| Puckett 31D-36D Tgt - hit/miss target - Shape - Point | 0.00 | 0.00 | 6,797.0 | 179.4 | 896.1 | 1,612,268.40 | 2,247,524.96 | 39° 29' 2.883 N | 108° 9' 59.000 W | |
| Puckett 31D-36D BHL - plan hits target center - Circle (radius 60.0) | 0.00 | 0.00 | 8,897.0 | 154.8 | 878.9 | 1,612,244.34 | 2,247,507.03 | 39° 29' 2.640 N | 108° 9' 59.220 W | |

| Casing Points | | | | | |
|---------------------|---------------------|----------------|---------------------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 2,724.2 | 2,700.0 | Surface Casing | | | |

| Formations | | | | | | |
|---------------------|---------------------|-------------------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 1,942.4 | 1,927.0 | Wasatch | | | | |
| 4,309.2 | 4,267.0 | Wasatch "G" Sand | | | | |
| 4,622.7 | 4,577.0 | Fort Union | | | | |
| 4,936.3 | 4,887.0 | Base Fort Union | | | | |
| 5,664.5 | 5,607.0 | Mesaverde/Williams Fk * | | | | |
| 6,863.8 | 6,797.0 | Top Gas Cell | | | | |
| 8,263.9 | 8,197.0 | Cameo | | | | |
| 8,764.0 | 8,697.0 | Rollins | | | | |

| | | | |
|-----------|-----------------------------|------------------------------|--|
| Database: | RMR1 Database | Local Co-ordinate Reference: | Well Puckett 31D-36D |
| Company: | Petroleum Development Corp. | TVD Reference: | Puckett 31D-36D KBE @ 8227.0ft (H&P 318) |
| Project: | Mesa | MD Reference: | Puckett 31D-36D KBE @ 8227.0ft (H&P 318) |
| Site: | NESW Sec 36-T6S-R97W | North Reference: | True |
| Well: | Puckett 31D-36D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | DD | | |
| Design: | Plan #1 | | |

| Plan Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|-----------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment | |
| | | +N/-S (ft) | +E/-W (ft) | | |
| 200.0 | 200.0 | 0.0 | 0.0 | KOP @ 200' | |
| 775.4 | 773.2 | 8.5 | 42.4 | EOB = 8.63° Inc | |
| 6,288.4 | 6,223.8 | 170.9 | 853.7 | Start of Drop | |
| 6,863.8 | 6,797.0 | 179.4 | 896.1 | EOD = 0° Inc | |
| 8,964.0 | 8,897.0 | 154.8 | 878.9 | TD = 8964.0' MD | |