

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

**1N-66W-08 Gabel 37-8HZ Pad**

**Gabel 28N2-5HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**15 July, 2016**



Azimuths to True North  
Magnetic North: 8.17°

Magnetic Field  
Strength: 52421.6snT  
Dip Angle: 66.60°  
Date: 7/5/2016  
Model: IGRF2010

SITE: 1N-66W-08 Gabel 37-8HZ Pad

Well: Gabel 28N2-5HZ  
Wellbore: Plan A  
Design: Permit Rev-1

#### FORMATION TOP DETAILS

| TVDPath | MDPath  | Formation      |
|---------|---------|----------------|
| 1400.00 | 1416.63 | Fox Hills      |
| 4206.00 | 4313.68 | Parkman        |
| 4632.00 | 4744.94 | Sussex         |
| 7124.00 | 7303.87 | Sharon Springs |
| 7168.00 | 7376.85 | Niobrara       |
| 7268.00 | 7653.47 | Nio B          |

#### WELL DETAILS: Gabel 28N2-5HZ

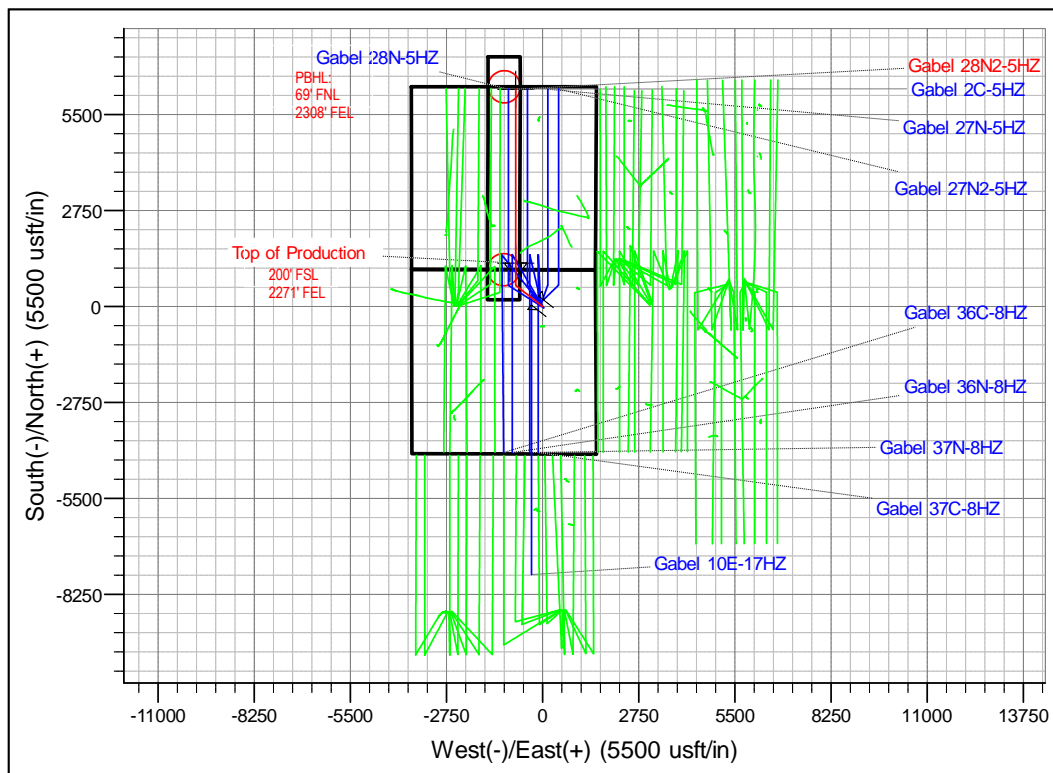
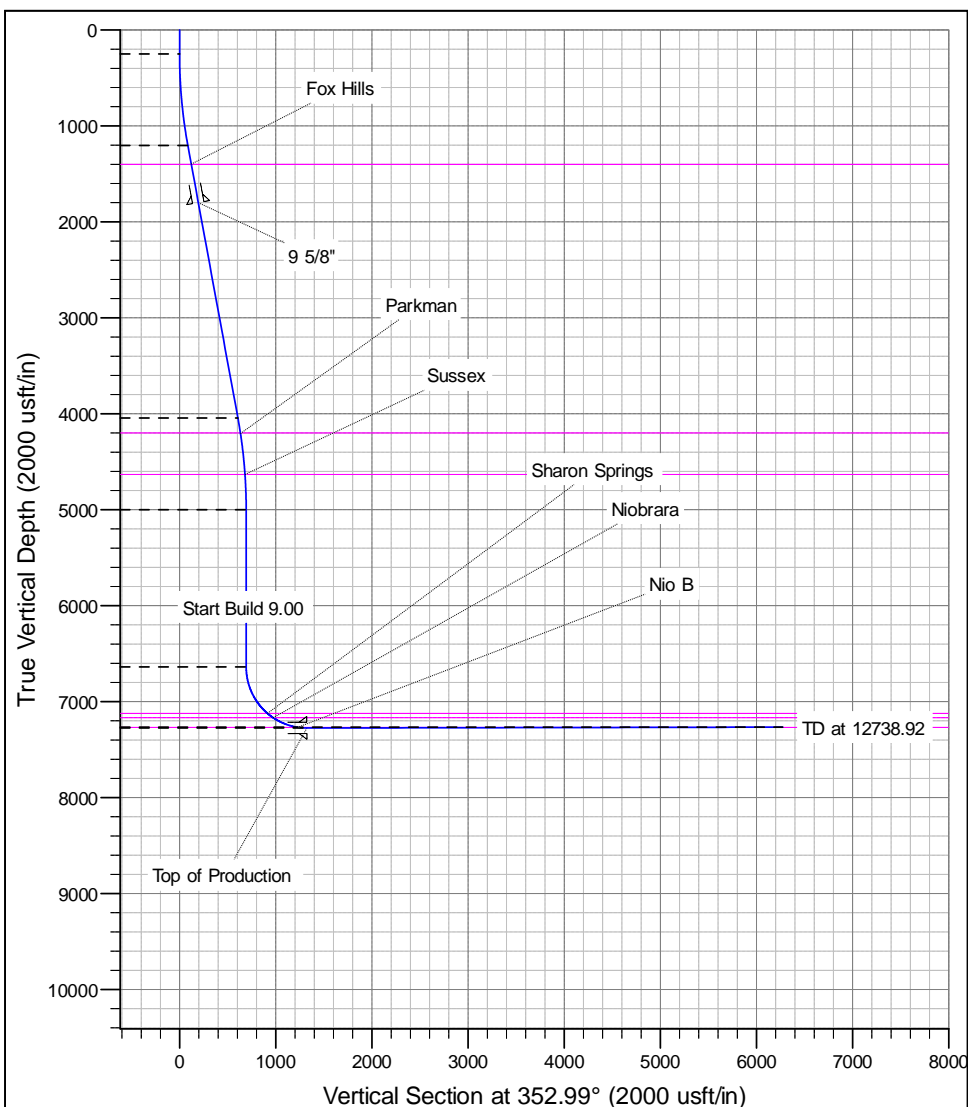
| +N/-S | +E/-W | GL: 4941.00             | RKB @ 4958.00usft (D Rig) | Longitude             | Slot |
|-------|-------|-------------------------|---------------------------|-----------------------|------|
| 0.00  | 0.00  | Northing<br>14552311.83 | Easting<br>1697181.19     | Latitude<br>40.070065 |      |

#### SECTION DETAILS

| MD       | Inc   | Azi    | TVD     | +N/-S   | +E/-W   | Dleg | Vsect   |
|----------|-------|--------|---------|---------|---------|------|---------|
| 0.00     | 0.00  | 0.00   | 0.00    | 0.00    | 0.00    | 0.00 | 0.00    |
| 250.00   | 0.00  | 0.00   | 250.00  | 0.00    | 0.00    | 0.00 | 0.00    |
| 1214.63  | 14.47 | 308.26 | 1204.41 | 75.02   | -95.14  | 1.50 | 86.07   |
| 4148.88  | 14.47 | 308.26 | 4045.59 | 528.98  | -670.85 | 0.00 | 606.93  |
| 5113.51  | 0.00  | 0.00   | 5000.00 | 604.00  | -765.99 | 1.50 | 693.00  |
| 6752.59  | 0.00  | 0.00   | 6639.08 | 604.00  | -765.99 | 0.00 | 693.00  |
| 7753.71  | 90.10 | 360.00 | 7275.70 | 1241.73 | -765.99 | 9.00 | 1325.96 |
| 12738.92 | 90.10 | 360.00 | 7267.00 | 6226.93 | -765.99 | 0.00 | 6273.87 |

#### DESIGN TARGET DETAILS

| Name                | TVD     | +N/-S   | +E/-W   | Northing    | Easting    | Latitude  | Longitude   |
|---------------------|---------|---------|---------|-------------|------------|-----------|-------------|
| GABEL 28N2-5HZ_PBHL | 7267.00 | 6226.93 | -765.99 | 14558537.00 | 1696401.00 | 40.087165 | -104.799838 |



# Anadarko

## Planning Report

|                  |                                |                                     |                           |
|------------------|--------------------------------|-------------------------------------|---------------------------|
| <b>Database:</b> | PLANNING                       | <b>Local Co-ordinate Reference:</b> | Well Gabel 28N2-5HZ       |
| <b>Company:</b>  | US ROCKIES WATTENBERG PLANNING | <b>TVD Reference:</b>               | RKB @ 4958.00usft (D Rig) |
| <b>Project:</b>  | WELD-NAD83-UTMFT13N            | <b>MD Reference:</b>                | RKB @ 4958.00usft (D Rig) |
| <b>Site:</b>     | 1N-66W-08 Gabel 37-8HZ Pad     | <b>North Reference:</b>             | True                      |
| <b>Well:</b>     | Gabel 28N2-5HZ                 | <b>Survey Calculation Method:</b>   | Minimum Curvature         |
| <b>Wellbore:</b> | Plan A                         |                                     |                           |
| <b>Design:</b>   | Permit Rev-1                   |                                     |                           |

|                    |  |                      |                |
|--------------------|--|----------------------|----------------|
| <b>Project</b>     | WELD-NAD83-UTMFT13N                            |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator (US Survey Feet) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983                      |                      |                |
| <b>Map Zone:</b>   | Zone 13N (108 W to 102 W)                      |                      |                |

|                       |          |                            |                    |            |                   |        |
|-----------------------|----------|----------------------------|--------------------|------------|-------------------|--------|
| Site                  |          | 1N-66W-08 Gabel 37-8HZ Pad |                    |            |                   |        |
| Site Position:        |          | Northing:                  | 14,552,276.56 usft | Latitude:  | 40.069968         |        |
| From:                 | Lat/Long | Easting:                   | 1,697,208.96 usft  | Longitude: | -104.797000       |        |
| Position Uncertainty: |          | 0.00 usft                  | Slot Radius:       | 13-3/16 "  | Grid Convergence: | 0.13 ° |

| Well                 | Gabel 28N2-5HZ |             |                     |                    |               |               |
|----------------------|----------------|-------------|---------------------|--------------------|---------------|---------------|
| Well Position        | +N-S           | 35.32 usft  | Northing:           | 14,552,311.82 usft | Latitude:     | 40.070065     |
|                      | +E-W           | -27.70 usft | Easting:            | 1,697,181.18 usft  | Longitude:    | -104.797099   |
| Position Uncertainty |                | 3.28 usft   | Wellhead Elevation: | 0.00 usft          | Ground Level: | 4,941.00 usft |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Plan A            |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 7/5/2016           | 8.17                   | 66.60                | 52,422                     |

|                          |                                |                     |                      |                      |  |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|--|
| <b>Design</b>            | Permit Rev-1                   |                     |                      |                      |  |
| <b>Audit Notes:</b>      |                                |                     |                      |                      |  |
| <b>Version:</b>          | <b>Phase:</b>                  | PROTOTYPE           | <b>Tie On Depth:</b> | 0.00                 |  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b>  | <b>Direction (°)</b> |  |
|                          | 0.00                           | 0.00                | 0.00                 | 352.99               |  |

| <b>Plan Sections</b>  |                 |             |                       |              |              |                         |                        |                       |         |                 |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|-----------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | 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    |                 |
| 250.00                | 0.00            | 0.00        | 250.00                | 0.00         | 0.00         | 0.00                    | 0.00                   | 0.00                  | 0.00    |                 |
| 1,214.63              | 14.47           | 308.26      | 1,204.41              | 75.02        | -95.14       | 1.50                    | 1.50                   | 0.00                  | 308.26  |                 |
| 4,148.88              | 14.47           | 308.26      | 4,045.59              | 528.98       | -670.85      | 0.00                    | 0.00                   | 0.00                  | 0.00    |                 |
| 5,113.51              | 0.00            | 0.00        | 5,000.00              | 604.00       | -765.99      | 1.50                    | -1.50                  | 0.00                  | 180.00  |                 |
| 6,752.59              | 0.00            | 0.00        | 6,639.08              | 604.00       | -765.99      | 0.00                    | 0.00                   | 0.00                  | 0.00    |                 |
| 7,753.71              | 90.10           | 360.00      | 7,275.70              | 1,241.73     | -765.99      | 9.00                    | 9.00                   | 0.00                  | 360.00  |                 |
| 12,738.92             | 90.10           | 360.00      | 7,267.00              | 6,226.93     | -765.99      | 0.00                    | 0.00                   | 0.00                  | 0.00    | GABEL 28N2-5HZ_ |

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## Planning Report

|                  |                                |                                     |                           |
|------------------|--------------------------------|-------------------------------------|---------------------------|
| <b>Database:</b> | PLANNING                       | <b>Local Co-ordinate Reference:</b> | Well Gabel 28N2-5HZ       |
| <b>Company:</b>  | US ROCKIES WATTENBERG PLANNING | <b>TVD Reference:</b>               | RKB @ 4958.00usft (D Rig) |
| <b>Project:</b>  | WELD-NAD83-UTMFT13N            | <b>MD Reference:</b>                | RKB @ 4958.00usft (D Rig) |
| <b>Site:</b>     | 1N-66W-08 Gabel 37-8HZ Pad     | <b>North Reference:</b>             | True                      |
| <b>Well:</b>     | Gabel 28N2-5HZ                 | <b>Survey Calculation Method:</b>   | Minimum Curvature         |
| <b>Wellbore:</b> | Plan A                         |                                     |                           |
| <b>Design:</b>   | Permit Rev-1                   |                                     |                           |

| Planned Survey        |                 |             |                       |              |              |                         |                         |                        |                       |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | 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                  |
| 250.00                | 0.00            | 0.00        | 250.00                | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |
| 300.00                | 0.75            | 308.26      | 300.00                | 0.20         | -0.26        | 0.23                    | 1.50                    | 1.50                   | 0.00                  |
| 400.00                | 2.25            | 308.26      | 399.96                | 1.82         | -2.31        | 2.09                    | 1.50                    | 1.50                   | 0.00                  |
| 500.00                | 3.75            | 308.26      | 499.82                | 5.06         | -6.42        | 5.81                    | 1.50                    | 1.50                   | 0.00                  |
| 600.00                | 5.25            | 308.26      | 599.51                | 9.92         | -12.58       | 11.38                   | 1.50                    | 1.50                   | 0.00                  |
| 700.00                | 6.75            | 308.26      | 698.96                | 16.39        | -20.79       | 18.81                   | 1.50                    | 1.50                   | 0.00                  |
| 800.00                | 8.25            | 308.26      | 798.10                | 24.48        | -31.04       | 28.08                   | 1.50                    | 1.50                   | 0.00                  |
| 900.00                | 9.75            | 308.26      | 896.87                | 34.16        | -43.32       | 39.20                   | 1.50                    | 1.50                   | 0.00                  |
| 1,000.00              | 11.25           | 308.26      | 995.19                | 45.44        | -57.63       | 52.14                   | 1.50                    | 1.50                   | 0.00                  |
| 1,100.00              | 12.75           | 308.26      | 1,093.00              | 58.32        | -73.96       | 66.91                   | 1.50                    | 1.50                   | 0.00                  |
| 1,200.00              | 14.25           | 308.26      | 1,190.24              | 72.77        | -92.29       | 83.50                   | 1.50                    | 1.50                   | 0.00                  |
| 1,214.63              | 14.47           | 308.26      | 1,204.41              | 75.02        | -95.14       | 86.07                   | 1.50                    | 1.50                   | 0.00                  |
| 1,300.00              | 14.47           | 308.26      | 1,287.07              | 88.23        | -111.89      | 101.23                  | 0.00                    | 0.00                   | 0.00                  |
| 1,400.00              | 14.47           | 308.26      | 1,383.90              | 103.70       | -131.51      | 118.98                  | 0.00                    | 0.00                   | 0.00                  |
| 1,416.63              | 14.47           | 308.26      | 1,400.00              | 106.27       | -134.77      | 121.93                  | 0.00                    | 0.00                   | 0.00                  |
| <b>Fox Hills</b>      |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,500.00              | 14.47           | 308.26      | 1,480.73              | 119.17       | -151.13      | 136.73                  | 0.00                    | 0.00                   | 0.00                  |
| 1,600.00              | 14.47           | 308.26      | 1,577.56              | 134.64       | -170.75      | 154.48                  | 0.00                    | 0.00                   | 0.00                  |
| 1,700.00              | 14.47           | 308.26      | 1,674.38              | 150.11       | -190.37      | 172.23                  | 0.00                    | 0.00                   | 0.00                  |
| 1,800.00              | 14.47           | 308.26      | 1,771.21              | 165.58       | -209.99      | 189.98                  | 0.00                    | 0.00                   | 0.00                  |
| 1,829.73              | 14.47           | 308.26      | 1,800.00              | 170.18       | -215.82      | 195.26                  | 0.00                    | 0.00                   | 0.00                  |
| <b>9 5/8"</b>         |                 |             |                       |              |              |                         |                         |                        |                       |
| 1,900.00              | 14.47           | 308.26      | 1,868.04              | 181.05       | -229.61      | 207.73                  | 0.00                    | 0.00                   | 0.00                  |
| 2,000.00              | 14.47           | 308.26      | 1,964.87              | 196.52       | -249.23      | 225.48                  | 0.00                    | 0.00                   | 0.00                  |
| 2,100.00              | 14.47           | 308.26      | 2,061.70              | 212.00       | -268.85      | 243.23                  | 0.00                    | 0.00                   | 0.00                  |
| 2,200.00              | 14.47           | 308.26      | 2,158.52              | 227.47       | -288.47      | 260.99                  | 0.00                    | 0.00                   | 0.00                  |
| 2,300.00              | 14.47           | 308.26      | 2,255.35              | 242.94       | -308.09      | 278.74                  | 0.00                    | 0.00                   | 0.00                  |
| 2,400.00              | 14.47           | 308.26      | 2,352.18              | 258.41       | -327.71      | 296.49                  | 0.00                    | 0.00                   | 0.00                  |
| 2,500.00              | 14.47           | 308.26      | 2,449.01              | 273.88       | -347.33      | 314.24                  | 0.00                    | 0.00                   | 0.00                  |
| 2,600.00              | 14.47           | 308.26      | 2,545.84              | 289.35       | -366.95      | 331.99                  | 0.00                    | 0.00                   | 0.00                  |
| 2,700.00              | 14.47           | 308.26      | 2,642.66              | 304.82       | -386.57      | 349.74                  | 0.00                    | 0.00                   | 0.00                  |
| 2,800.00              | 14.47           | 308.26      | 2,739.49              | 320.29       | -406.19      | 367.49                  | 0.00                    | 0.00                   | 0.00                  |
| 2,900.00              | 14.47           | 308.26      | 2,836.32              | 335.76       | -425.82      | 385.24                  | 0.00                    | 0.00                   | 0.00                  |
| 3,000.00              | 14.47           | 308.26      | 2,933.15              | 351.24       | -445.44      | 402.99                  | 0.00                    | 0.00                   | 0.00                  |
| 3,100.00              | 14.47           | 308.26      | 3,029.98              | 366.71       | -465.06      | 420.74                  | 0.00                    | 0.00                   | 0.00                  |
| 3,200.00              | 14.47           | 308.26      | 3,126.81              | 382.18       | -484.68      | 438.49                  | 0.00                    | 0.00                   | 0.00                  |
| 3,300.00              | 14.47           | 308.26      | 3,223.63              | 397.65       | -504.30      | 456.25                  | 0.00                    | 0.00                   | 0.00                  |
| 3,400.00              | 14.47           | 308.26      | 3,320.46              | 413.12       | -523.92      | 474.00                  | 0.00                    | 0.00                   | 0.00                  |
| 3,500.00              | 14.47           | 308.26      | 3,417.29              | 428.59       | -543.54      | 491.75                  | 0.00                    | 0.00                   | 0.00                  |
| 3,600.00              | 14.47           | 308.26      | 3,514.12              | 444.06       | -563.16      | 509.50                  | 0.00                    | 0.00                   | 0.00                  |
| 3,700.00              | 14.47           | 308.26      | 3,610.95              | 459.53       | -582.78      | 527.25                  | 0.00                    | 0.00                   | 0.00                  |
| 3,800.00              | 14.47           | 308.26      | 3,707.77              | 475.01       | -602.40      | 545.00                  | 0.00                    | 0.00                   | 0.00                  |
| 3,900.00              | 14.47           | 308.26      | 3,804.60              | 490.48       | -622.02      | 562.75                  | 0.00                    | 0.00                   | 0.00                  |
| 4,000.00              | 14.47           | 308.26      | 3,901.43              | 505.95       | -641.64      | 580.50                  | 0.00                    | 0.00                   | 0.00                  |
| 4,100.00              | 14.47           | 308.26      | 3,998.26              | 521.42       | -661.26      | 598.25                  | 0.00                    | 0.00                   | 0.00                  |
| 4,148.88              | 14.47           | 308.26      | 4,045.59              | 528.98       | -670.85      | 606.93                  | 0.00                    | 0.00                   | 0.00                  |
| 4,200.00              | 13.70           | 308.26      | 4,095.17              | 536.68       | -680.62      | 615.77                  | 1.50                    | -1.50                  | 0.00                  |
| 4,300.00              | 12.20           | 308.26      | 4,192.62              | 550.56       | -698.22      | 631.69                  | 1.50                    | -1.50                  | 0.00                  |
| 4,313.68              | 12.00           | 308.26      | 4,206.00              | 552.34       | -700.47      | 633.73                  | 1.50                    | -1.50                  | 0.00                  |
| <b>Parkman</b>        |                 |             |                       |              |              |                         |                         |                        |                       |

# Anadarko

## Planning Report

|                  |                                |                                     |                           |
|------------------|--------------------------------|-------------------------------------|---------------------------|
| <b>Database:</b> | PLANNING                       | <b>Local Co-ordinate Reference:</b> | Well Gabel 28N2-5HZ       |
| <b>Company:</b>  | US ROCKIES WATTENBERG PLANNING | <b>TVD Reference:</b>               | RKB @ 4958.00usft (D Rig) |
| <b>Project:</b>  | WELD-NAD83-UTMFT13N            | <b>MD Reference:</b>                | RKB @ 4958.00usft (D Rig) |
| <b>Site:</b>     | 1N-66W-08 Gabel 37-8HZ Pad     | <b>North Reference:</b>             | True                      |
| <b>Well:</b>     | Gabel 28N2-5HZ                 | <b>Survey Calculation Method:</b>   | Minimum Curvature         |
| <b>Wellbore:</b> | Plan A                         |                                     |                           |
| <b>Design:</b>   | Permit Rev-1                   |                                     |                           |

| Planned Survey                                |                 |             |                       |              |              |                         |                         |                        |                       |
|---|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)                         | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 4,400.00                                      | 10.70           | 308.26      | 4,290.63              | 562.86       | -713.81      | 645.80                  | 1.50                    | -1.50                  | 0.00                  |
| 4,500.00                                      | 9.20            | 308.26      | 4,389.12              | 573.56       | -727.38      | 658.08                  | 1.50                    | -1.50                  | 0.00                  |
| 4,600.00                                      | 7.70            | 308.26      | 4,488.03              | 582.66       | -738.93      | 668.52                  | 1.50                    | -1.50                  | 0.00                  |
| 4,700.00                                      | 6.20            | 308.26      | 4,587.29              | 590.15       | -748.43      | 677.12                  | 1.50                    | -1.50                  | 0.00                  |
| 4,744.94                                      | 5.53            | 308.26      | 4,632.00              | 593.00       | -752.04      | 680.38                  | 1.50                    | -1.50                  | 0.00                  |
| <b>Sussex</b>                                 |                 |             |                       |              |              |                         |                         |                        |                       |
| 4,800.00                                      | 4.70            | 308.26      | 4,686.84              | 596.04       | -755.89      | 683.87                  | 1.50                    | -1.50                  | 0.00                  |
| 4,900.00                                      | 3.20            | 308.26      | 4,786.60              | 600.31       | -761.31      | 688.76                  | 1.50                    | -1.50                  | 0.00                  |
| 5,000.00                                      | 1.70            | 308.26      | 4,886.50              | 602.96       | -764.67      | 691.80                  | 1.50                    | -1.50                  | 0.00                  |
| 5,100.00                                      | 0.20            | 308.26      | 4,986.49              | 603.99       | -765.97      | 692.99                  | 1.50                    | -1.50                  | 0.00                  |
| 5,113.51                                      | 0.00            | 0.00        | 5,000.00              | 604.00       | -765.99      | 693.00                  | 1.50                    | -1.50                  | 0.00                  |
| 5,200.00                                      | 0.00            | 0.00        | 5,086.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,300.00                                      | 0.00            | 0.00        | 5,186.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,400.00                                      | 0.00            | 0.00        | 5,286.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,500.00                                      | 0.00            | 0.00        | 5,386.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,600.00                                      | 0.00            | 0.00        | 5,486.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,700.00                                      | 0.00            | 0.00        | 5,586.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,800.00                                      | 0.00            | 0.00        | 5,686.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 5,900.00                                      | 0.00            | 0.00        | 5,786.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,000.00                                      | 0.00            | 0.00        | 5,886.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,100.00                                      | 0.00            | 0.00        | 5,986.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,200.00                                      | 0.00            | 0.00        | 6,086.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,300.00                                      | 0.00            | 0.00        | 6,186.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,400.00                                      | 0.00            | 0.00        | 6,286.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,500.00                                      | 0.00            | 0.00        | 6,386.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,600.00                                      | 0.00            | 0.00        | 6,486.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,700.00                                      | 0.00            | 0.00        | 6,586.49              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,752.59                                      | 0.00            | 0.00        | 6,639.08              | 604.00       | -765.99      | 693.00                  | 0.00                    | 0.00                   | 0.00                  |
| 6,800.00                                      | 4.27            | 360.00      | 6,686.44              | 605.76       | -765.99      | 694.75                  | 9.00                    | 9.00                   | 0.00                  |
| 6,900.00                                      | 13.27           | 360.00      | 6,785.17              | 620.99       | -765.99      | 709.86                  | 9.00                    | 9.00                   | 0.00                  |
| 7,000.00                                      | 22.27           | 360.00      | 6,880.31              | 651.47       | -765.99      | 740.12                  | 9.00                    | 9.00                   | 0.00                  |
| 7,100.00                                      | 31.27           | 360.00      | 6,969.50              | 696.46       | -765.99      | 784.77                  | 9.00                    | 9.00                   | 0.00                  |
| 7,200.00                                      | 40.27           | 360.00      | 7,050.56              | 754.85       | -765.99      | 842.72                  | 9.00                    | 9.00                   | 0.00                  |
| 7,300.00                                      | 49.27           | 360.00      | 7,121.48              | 825.20       | -765.99      | 912.55                  | 9.00                    | 9.00                   | 0.00                  |
| 7,303.87                                      | 49.61           | 360.00      | 7,124.00              | 828.14       | -765.99      | 915.47                  | 9.00                    | 9.00                   | 0.00                  |
| <b>Sharon Springs</b>                         |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,376.85                                      | 56.18           | 360.00      | 7,168.00              | 886.32       | -765.99      | 973.21                  | 9.00                    | 9.00                   | 0.00                  |
| <b>Niobrara</b>                               |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,400.00                                      | 58.27           | 360.00      | 7,180.53              | 905.78       | -765.99      | 992.52                  | 9.00                    | 9.00                   | 0.00                  |
| 7,500.00                                      | 67.27           | 360.00      | 7,226.24              | 994.60       | -765.99      | 1,080.68                | 9.00                    | 9.00                   | 0.00                  |
| 7,600.00                                      | 76.27           | 360.00      | 7,257.50              | 1,089.48     | -765.99      | 1,174.85                | 9.00                    | 9.00                   | 0.00                  |
| 7,653.47                                      | 81.08           | 360.00      | 7,268.00              | 1,141.89     | -765.99      | 1,226.87                | 9.00                    | 9.00                   | 0.00                  |
| <b>Nio B</b>                                  |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,700.00                                      | 85.27           | 360.00      | 7,273.53              | 1,188.08     | -765.99      | 1,272.72                | 9.00                    | 9.00                   | 0.00                  |
| 7,753.71                                      | 90.10           | 360.00      | 7,275.70              | 1,241.73     | -765.99      | 1,325.97                | 9.00                    | 9.00                   | 0.00                  |
| <b>Top of Production - GABEL 28N2-5HZ_PHL</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 7,800.00                                      | 90.10           | 360.00      | 7,275.62              | 1,288.02     | -765.99      | 1,371.91                | 0.00                    | 0.00                   | 0.00                  |
| 7,900.00                                      | 90.10           | 360.00      | 7,275.45              | 1,388.02     | -765.99      | 1,471.16                | 0.00                    | 0.00                   | 0.00                  |
| 8,000.00                                      | 90.10           | 360.00      | 7,275.27              | 1,488.02     | -765.99      | 1,570.41                | 0.00                    | 0.00                   | 0.00                  |
| 8,100.00                                      | 90.10           | 360.00      | 7,275.10              | 1,588.02     | -765.99      | 1,669.67                | 0.00                    | 0.00                   | 0.00                  |
| 8,200.00                                      | 90.10           | 360.00      | 7,274.92              | 1,688.02     | -765.99      | 1,768.92                | 0.00                    | 0.00                   | 0.00                  |
| 8,300.00                                      | 90.10           | 360.00      | 7,274.75              | 1,788.02     | -765.99      | 1,868.17                | 0.00                    | 0.00                   | 0.00                  |
| 8,400.00                                      | 90.10           | 360.00      | 7,274.57              | 1,888.02     | -765.99      | 1,967.42                | 0.00                    | 0.00                   | 0.00                  |
| 8,500.00                                      | 90.10           | 360.00      | 7,274.40              | 1,988.02     | -765.99      | 2,066.67                | 0.00                    | 0.00                   | 0.00                  |

# Anadarko

## Planning Report

|                  |                                |                                     |                           |
|------------------|--------------------------------|-------------------------------------|---------------------------|
| <b>Database:</b> | PLANNING                       | <b>Local Co-ordinate Reference:</b> | Well Gabel 28N2-5HZ       |
| <b>Company:</b>  | US ROCKIES WATTENBERG PLANNING | <b>TVD Reference:</b>               | RKB @ 4958.00usft (D Rig) |
| <b>Project:</b>  | WELD-NAD83-UTMFT13N            | <b>MD Reference:</b>                | RKB @ 4958.00usft (D Rig) |
| <b>Site:</b>     | 1N-66W-08 Gabel 37-8HZ Pad     | <b>North Reference:</b>             | True                      |
| <b>Well:</b>     | Gabel 28N2-5HZ                 | <b>Survey Calculation Method:</b>   | Minimum Curvature         |
| <b>Wellbore:</b> | Plan A                         |                                     |                           |
| <b>Design:</b>   | Permit Rev-1                   |                                     |                           |

| Planned Survey        |                 |             |                       |              |              |                         |                         |                        |                       |  |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 8,600.00              | 90.10           | 360.00      | 7,274.22              | 2,088.02     | -765.99      | 2,165.92                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,700.00              | 90.10           | 360.00      | 7,274.05              | 2,188.02     | -765.99      | 2,265.18                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,800.00              | 90.10           | 360.00      | 7,273.87              | 2,288.02     | -765.99      | 2,364.43                | 0.00                    | 0.00                   | 0.00                  |  |
| 8,900.00              | 90.10           | 360.00      | 7,273.70              | 2,388.02     | -765.99      | 2,463.68                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,000.00              | 90.10           | 360.00      | 7,273.53              | 2,488.02     | -765.99      | 2,562.93                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,100.00              | 90.10           | 360.00      | 7,273.35              | 2,588.02     | -765.99      | 2,662.18                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,200.00              | 90.10           | 360.00      | 7,273.18              | 2,688.02     | -765.99      | 2,761.43                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,300.00              | 90.10           | 360.00      | 7,273.00              | 2,788.02     | -765.99      | 2,860.69                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,400.00              | 90.10           | 360.00      | 7,272.83              | 2,888.02     | -765.99      | 2,959.94                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,500.00              | 90.10           | 360.00      | 7,272.65              | 2,988.02     | -765.99      | 3,059.19                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,600.00              | 90.10           | 360.00      | 7,272.48              | 3,088.02     | -765.99      | 3,158.44                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,700.00              | 90.10           | 360.00      | 7,272.30              | 3,188.02     | -765.99      | 3,257.69                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,800.00              | 90.10           | 360.00      | 7,272.13              | 3,288.02     | -765.99      | 3,356.94                | 0.00                    | 0.00                   | 0.00                  |  |
| 9,900.00              | 90.10           | 360.00      | 7,271.96              | 3,388.02     | -765.99      | 3,456.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,000.00             | 90.10           | 360.00      | 7,271.78              | 3,488.02     | -765.99      | 3,555.45                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,100.00             | 90.10           | 360.00      | 7,271.61              | 3,588.02     | -765.99      | 3,654.70                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,200.00             | 90.10           | 360.00      | 7,271.43              | 3,688.02     | -765.99      | 3,753.95                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,300.00             | 90.10           | 360.00      | 7,271.26              | 3,788.02     | -765.99      | 3,853.20                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,400.00             | 90.10           | 360.00      | 7,271.08              | 3,888.02     | -765.99      | 3,952.46                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,500.00             | 90.10           | 360.00      | 7,270.91              | 3,988.02     | -765.99      | 4,051.71                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,600.00             | 90.10           | 360.00      | 7,270.73              | 4,088.02     | -765.99      | 4,150.96                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,700.00             | 90.10           | 360.00      | 7,270.56              | 4,188.02     | -765.99      | 4,250.21                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,800.00             | 90.10           | 360.00      | 7,270.38              | 4,288.02     | -765.99      | 4,349.46                | 0.00                    | 0.00                   | 0.00                  |  |
| 10,900.00             | 90.10           | 360.00      | 7,270.21              | 4,388.02     | -765.99      | 4,448.71                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,000.00             | 90.10           | 360.00      | 7,270.04              | 4,488.02     | -765.99      | 4,547.97                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,100.00             | 90.10           | 360.00      | 7,269.86              | 4,588.02     | -765.99      | 4,647.22                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,200.00             | 90.10           | 360.00      | 7,269.69              | 4,688.02     | -765.99      | 4,746.47                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,300.00             | 90.10           | 360.00      | 7,269.51              | 4,788.02     | -765.99      | 4,845.72                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,400.00             | 90.10           | 360.00      | 7,269.34              | 4,888.02     | -765.99      | 4,944.97                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,500.00             | 90.10           | 360.00      | 7,269.16              | 4,988.02     | -765.99      | 5,044.22                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,600.00             | 90.10           | 360.00      | 7,268.99              | 5,088.02     | -765.99      | 5,143.48                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,700.00             | 90.10           | 360.00      | 7,268.81              | 5,188.02     | -765.99      | 5,242.73                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,800.00             | 90.10           | 360.00      | 7,268.64              | 5,288.02     | -765.99      | 5,341.98                | 0.00                    | 0.00                   | 0.00                  |  |
| 11,900.00             | 90.10           | 360.00      | 7,268.46              | 5,388.02     | -765.99      | 5,441.23                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,000.00             | 90.10           | 360.00      | 7,268.29              | 5,488.02     | -765.99      | 5,540.48                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,100.00             | 90.10           | 360.00      | 7,268.12              | 5,588.02     | -765.99      | 5,639.73                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,200.00             | 90.10           | 360.00      | 7,267.94              | 5,688.02     | -765.99      | 5,738.99                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,300.00             | 90.10           | 360.00      | 7,267.77              | 5,788.02     | -765.99      | 5,838.24                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,400.00             | 90.10           | 360.00      | 7,267.59              | 5,888.02     | -765.99      | 5,937.49                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,500.00             | 90.10           | 360.00      | 7,267.42              | 5,988.02     | -765.99      | 6,036.74                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,600.00             | 90.10           | 360.00      | 7,267.24              | 6,088.02     | -765.99      | 6,135.99                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,700.00             | 90.10           | 360.00      | 7,267.07              | 6,188.02     | -765.99      | 6,235.25                | 0.00                    | 0.00                   | 0.00                  |  |
| 12,738.92             | 90.10           | 360.00      | 7,267.00              | 6,226.93     | -765.99      | 6,273.87                | 0.00                    | 0.00                   | 0.00                  |  |
| GABEL 28N2-5HZ_PBHL   |                 |             |                       |              |              |                         |                         |                        |                       |  |

# Anadarko

## Planning Report

|                  |                                |                                     |                           |
|------------------|--------------------------------|-------------------------------------|---------------------------|
| <b>Database:</b> | PLANNING                       | <b>Local Co-ordinate Reference:</b> | Well Gabel 28N2-5HZ       |
| <b>Company:</b>  | US ROCKIES WATTENBERG PLANNING | <b>TVD Reference:</b>               | RKB @ 4958.00usft (D Rig) |
| <b>Project:</b>  | WELD-NAD83-UTMFT13N            | <b>MD Reference:</b>                | RKB @ 4958.00usft (D Rig) |
| <b>Site:</b>     | 1N-66W-08 Gabel 37-8HZ Pad     | <b>North Reference:</b>             | True                      |
| <b>Well:</b>     | Gabel 28N2-5HZ                 | <b>Survey Calculation Method:</b>   | Minimum Curvature         |
| <b>Wellbore:</b> | Plan A                         |                                     |                           |
| <b>Design:</b>   | Permit Rev-1                   |                                     |                           |

| Design Targets            |           |          |          |          |         |               |              |           |             |
|---------------------------|-----------|----------|----------|----------|---------|---------------|--------------|-----------|-------------|
| Target Name               |           |          |          |          |         |               |              |           |             |
| - hit/miss target         | Dip Angle | Dip Dir. | TVD      | +N/-S    | +E/-W   | Northing      | Easting      | Latitude  | Longitude   |
| - Shape                   | (°)       | (°)      | (usft)   | (usft)   | (usft)  | (usft)        | (usft)       |           |             |
| GABEL 28N2-5HZ_PE         | 0.00      | 0.00     | 7,267.00 | 6,226.93 | -765.99 | 14,558,537.00 | 1,696,401.00 | 40.087165 | -104.799838 |
| - plan hits target center |           |          |          |          |         |               |              |           |             |
| - Point                   |           |          |          |          |         |               |              |           |             |
| GABEL 28N2-5HZ_PL         | 0.00      | 0.00     | 7,275.70 | 1,241.73 | -765.99 | 14,553,551.81 | 1,696,412.36 | 40.073475 | -104.799837 |
| - plan hits target center |           |          |          |          |         |               |              |           |             |
| - Point                   |           |          |          |          |         |               |              |           |             |

| Casing Points |                |                |                   |                 |               |
|---------------|----------------|----------------|-------------------|-----------------|---------------|
|               | Measured Depth | Vertical Depth |                   | Casing Diameter | Hole Diameter |
|               | (usft)         | (usft)         | Name              | (")             | (")           |
|               | 1,829.73       | 1,800.00       | 9 5/8"            | 9-5/8           | 13-1/2        |
|               | 7,753.71       | 7,275.70       | Top of Production | 5-1/2           | 8-1/2         |

| Formations |                |                |                |           |     |               |
|------------|----------------|----------------|----------------|-----------|-----|---------------|
|            | Measured Depth | Vertical Depth |                |           | Dip | Dip Direction |
|            | (usft)         | (usft)         | Name           | Lithology | (°) | (°)           |
|            | 1,416.63       | 1,400.00       | Fox Hills      |           |     |               |
|            | 4,313.68       | 4,206.00       | Parkman        |           |     |               |
|            | 4,744.94       | 4,632.00       | Sussex         |           |     |               |
|            | 7,303.87       | 7,124.00       | Sharon Springs |           |     |               |
|            | 7,376.85       | 7,168.00       | Niobrara       |           |     |               |
|            | 7,653.47       | 7,268.00       | Nio B          |           |     |               |