

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
2N-67W-10 Butterball 1-10HZ Pad
BUTTERBALL 40N-34HZ**

Plan A

Plan: Permit Rev-1

Standard Planning Report

13 October, 2016



Azimuths to True North
Magnetic North: 8.18°

Magnetic Field
Strength: 52432.0snT
Dip Angle: 66.65°
Date: 10/13/2016
Model: IGRF2010

SITE: 2N-67W-10 Butterball 1-10HZ Pad

Well: BUTTERBALL 40N-34HZ
Wellbore: Plan A
Design: Permit Rev-1

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---------|---------|----------------|
| 1014.00 | 1017.81 | Fox Hills |
| 3960.00 | 3983.13 | Parkman |
| 4384.00 | 4407.13 | Sussex |
| 7100.00 | 7183.13 | Sharon Springs |
| 7183.00 | 7325.87 | Niobrara |
| 7239.00 | 7471.53 | Nio B |

WELL DETAILS: BUTTERBALL 40N-34HZ

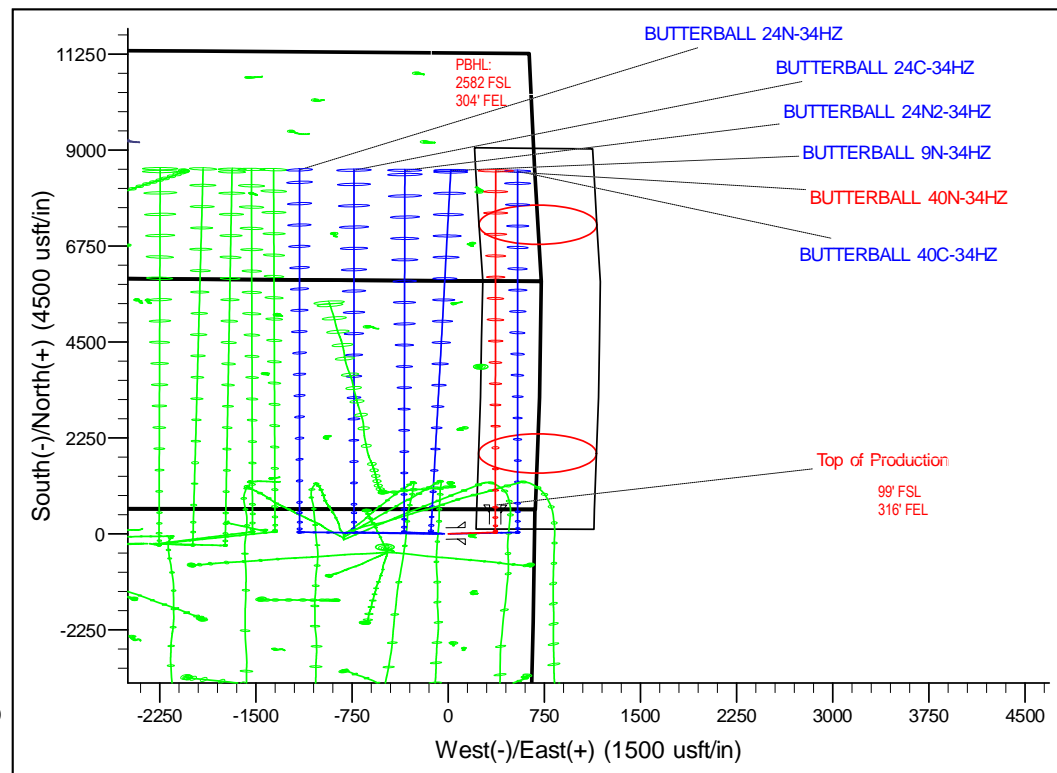
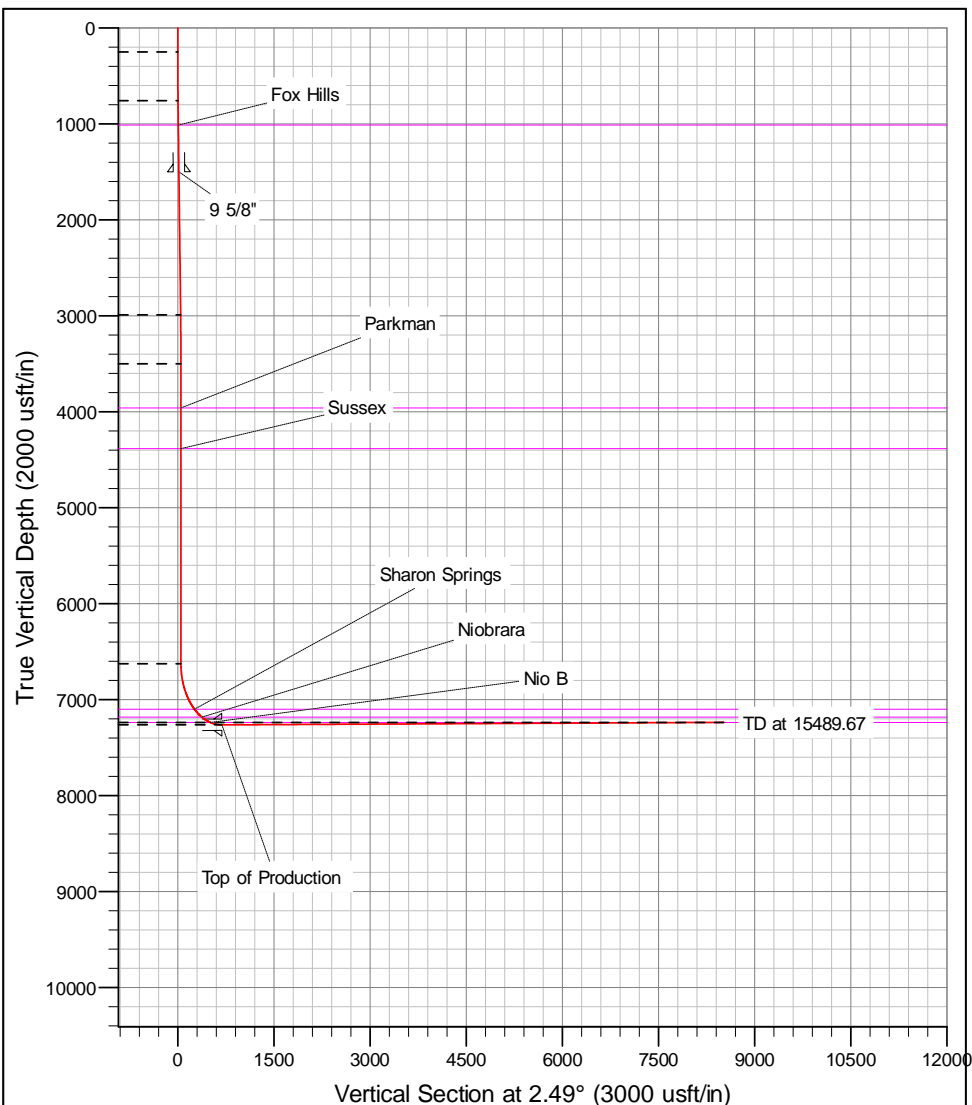
| +N/-S | +E/-W | GL: 4916.00 | RKB @ 4933.00usft (D Rig) | Longitude | Slot |
|-------|-------|-------------------------|---------------------------|-----------------------|------|
| 0.00 | 0.00 | Northing 14584392.80 | Easting 1676866.79 | Latitude 40.158268 | |

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 |
| 760.60 | 7.66 | 84.70 | 759.08 | 3.15 | 33.93 | 1.50 | 4.62 |
| 3012.53 | 7.66 | 84.70 | 2990.92 | 30.85 | 332.78 | 0.00 | 45.27 |
| 3523.13 | 0.00 | 0.00 | 3500.00 | 34.00 | 366.71 | 1.50 | 49.88 |
| 6650.50 | 0.00 | 0.00 | 6627.37 | 34.00 | 366.71 | 0.00 | 49.88 |
| 7652.61 | 90.19 | 0.02 | 7263.99 | 672.73 | 366.94 | 9.00 | 688.02 |
| 15489.67 | 90.19 | 0.02 | 7238.00 | 8509.74 | 369.71 | 0.00 | 8517.77 |

DESIGN TARGET DETAILS

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|--------------------------|---------|---------|--------|-------------|------------|-----------|-------------|
| BUTTERBALL 40N-34HZ_PBHL | 7238.00 | 8509.74 | 369.71 | 14592903.08 | 1677224.00 | 40.181637 | -104.868219 |



Corporate Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well BUTTERBALL 40N-34HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4933.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4933.00usft (D Rig) |
| Site: | 2N-67W-10 Butterball 1-10HZ Pad | North Reference: | True |
| Well: | BUTTERBALL 40N-34HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | Permit Rev-1 | | |

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

| Site | | | | | | 2N-67W-10 Butterball 1-10HZ Pad | | | | | | | | | | | |
|-----------------------|--|--|-----------|--|--|---------------------------------|--|--|-------------------|--|--|-------------------|--|--|-------------|--|--|
| Site Position: | | | Northing: | | | 14,584,393.39 usft | | | Latitude: | | | 40.158270 | | | | | |
| From: | | | Lat/Long | | | Easting: | | | 1,676,776.82 usft | | | Longitude: | | | -104.869865 | | |
| Position Uncertainty: | | | 0.00 usft | | | Slot Radius: | | | 13-3/16 " | | | Grid Convergence: | | | 0.08 | | |

| Well | BUTTERBALL 40N-34HZ | | | | | |
|----------------------|---------------------|------------|---------------------|--------------------|---------------|---------------|
| Well Position | +N/-S | -0.73 usft | Northing: | 14,584,392.80 usft | Latitude: | 40.158268 |
| | +E/-W | 89.97 usft | Easting: | 1,676,866.79 usft | Longitude: | -104.869543 |
| Position Uncertainty | | 3.28 usft | Wellhead Elevation: | 0.00 usft | Ground Level: | 4,916.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Plan A | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 10/13/2016 | 8.18 | 66.65 | 52,432 |

| | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| Design | Permit Rev-1 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
| | 0.00 | 0.00 | 0.00 | 2.49 |

| Plan Sections | | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|-----------------|
| 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 | |
| 760.60 | 7.66 | 84.70 | 759.08 | 3.15 | 33.93 | 1.50 | 1.50 | 0.00 | 84.70 | |
| 3,012.53 | 7.66 | 84.70 | 2,990.92 | 30.85 | 332.78 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,523.13 | 0.00 | 0.00 | 3,500.00 | 34.00 | 366.71 | 1.50 | -1.50 | 0.00 | 180.00 | |
| 6,650.50 | 0.00 | 0.00 | 6,627.37 | 34.00 | 366.71 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,652.61 | 90.19 | 0.02 | 7,263.99 | 672.73 | 366.94 | 9.00 | 9.00 | 0.00 | 0.02 | |
| 15,489.67 | 90.19 | 0.02 | 7,238.00 | 8,509.74 | 369.71 | 0.00 | 0.00 | 0.00 | 0.00 | BUTTERBALL 40N- |

Corporate Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well BUTTERBALL 40N-34HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4933.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4933.00usft (D Rig) |
| Site: | 2N-67W-10 Butterball 1-10HZ Pad | North Reference: | True |
| Well: | BUTTERBALL 40N-34HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | 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 | 84.70 | 300.00 | 0.03 | 0.33 | 0.04 | 1.50 | 1.50 | 0.00 |
| 400.00 | 2.25 | 84.70 | 399.96 | 0.27 | 2.93 | 0.40 | 1.50 | 1.50 | 0.00 |
| 500.00 | 3.75 | 84.70 | 499.82 | 0.76 | 8.14 | 1.11 | 1.50 | 1.50 | 0.00 |
| 600.00 | 5.25 | 84.70 | 599.51 | 1.48 | 15.96 | 2.17 | 1.50 | 1.50 | 0.00 |
| 700.00 | 6.75 | 84.70 | 698.96 | 2.44 | 26.36 | 3.59 | 1.50 | 1.50 | 0.00 |
| 760.60 | 7.66 | 84.70 | 759.08 | 3.15 | 33.93 | 4.62 | 1.50 | 1.50 | 0.00 |
| 800.00 | 7.66 | 84.70 | 798.13 | 3.63 | 39.16 | 5.33 | 0.00 | 0.00 | 0.00 |
| 900.00 | 7.66 | 84.70 | 897.24 | 4.86 | 52.43 | 7.13 | 0.00 | 0.00 | 0.00 |
| 1,000.00 | 7.66 | 84.70 | 996.35 | 6.09 | 65.70 | 8.94 | 0.00 | 0.00 | 0.00 |
| 1,017.81 | 7.66 | 84.70 | 1,014.00 | 6.31 | 68.07 | 9.26 | 0.00 | 0.00 | 0.00 |
| Fox Hills | | | | | | | | | |
| 1,100.00 | 7.66 | 84.70 | 1,095.45 | 7.32 | 78.97 | 10.74 | 0.00 | 0.00 | 0.00 |
| 1,200.00 | 7.66 | 84.70 | 1,194.56 | 8.55 | 92.24 | 12.55 | 0.00 | 0.00 | 0.00 |
| 1,300.00 | 7.66 | 84.70 | 1,293.67 | 9.78 | 105.51 | 14.35 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 7.66 | 84.70 | 1,392.78 | 11.01 | 118.78 | 16.16 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 7.66 | 84.70 | 1,491.88 | 12.24 | 132.05 | 17.96 | 0.00 | 0.00 | 0.00 |
| 1,508.19 | 7.66 | 84.70 | 1,500.00 | 12.34 | 133.14 | 18.11 | 0.00 | 0.00 | 0.00 |
| 9 5/8" | | | | | | | | | |
| 1,600.00 | 7.66 | 84.70 | 1,590.99 | 13.47 | 145.33 | 19.77 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 7.66 | 84.70 | 1,690.10 | 14.70 | 158.60 | 21.57 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 7.66 | 84.70 | 1,789.21 | 15.93 | 171.87 | 23.38 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 7.66 | 84.70 | 1,888.32 | 17.17 | 185.14 | 25.18 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 7.66 | 84.70 | 1,987.42 | 18.40 | 198.41 | 26.99 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 7.66 | 84.70 | 2,086.53 | 19.63 | 211.68 | 28.80 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 7.66 | 84.70 | 2,185.64 | 20.86 | 224.95 | 30.60 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 7.66 | 84.70 | 2,284.75 | 22.09 | 238.22 | 32.41 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 7.66 | 84.70 | 2,383.86 | 23.32 | 251.49 | 34.21 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 7.66 | 84.70 | 2,482.96 | 24.55 | 264.76 | 36.02 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 7.66 | 84.70 | 2,582.07 | 25.78 | 278.03 | 37.82 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 7.66 | 84.70 | 2,681.18 | 27.01 | 291.30 | 39.63 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 7.66 | 84.70 | 2,780.29 | 28.24 | 304.57 | 41.43 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 7.66 | 84.70 | 2,879.39 | 29.47 | 317.85 | 43.24 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 7.66 | 84.70 | 2,978.50 | 30.70 | 331.12 | 45.04 | 0.00 | 0.00 | 0.00 |
| 3,012.53 | 7.66 | 84.70 | 2,990.92 | 30.85 | 332.78 | 45.27 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 6.35 | 84.70 | 3,077.74 | 31.84 | 343.40 | 46.71 | 1.50 | -1.50 | 0.00 |
| 3,200.00 | 4.85 | 84.70 | 3,177.26 | 32.74 | 353.11 | 48.03 | 1.50 | -1.50 | 0.00 |
| 3,300.00 | 3.35 | 84.70 | 3,277.00 | 33.40 | 360.22 | 49.00 | 1.50 | -1.50 | 0.00 |
| 3,400.00 | 1.85 | 84.70 | 3,376.89 | 33.82 | 364.73 | 49.62 | 1.50 | -1.50 | 0.00 |
| 3,500.00 | 0.35 | 84.70 | 3,476.87 | 33.99 | 366.64 | 49.88 | 1.50 | -1.50 | 0.00 |
| 3,523.13 | 0.00 | 0.00 | 3,500.00 | 34.00 | 366.71 | 49.88 | 1.50 | -1.50 | 0.00 |
| 3,600.00 | 0.00 | 0.00 | 3,576.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 0.00 | 0.00 | 3,676.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 0.00 | 0.00 | 3,776.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 0.00 | 0.00 | 3,876.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 3,983.13 | 0.00 | 0.00 | 3,960.00 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| Parkman | | | | | | | | | |
| 4,000.00 | 0.00 | 0.00 | 3,976.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 0.00 | 0.00 | 4,076.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 0.00 | 0.00 | 4,176.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |

Corporate Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well BUTTERBALL 40N-34HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4933.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4933.00usft (D Rig) |
| Site: | 2N-67W-10 Butterball 1-10HZ Pad | North Reference: | True |
| Well: | BUTTERBALL 40N-34HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | 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) |
| 4,300.00 | 0.00 | 0.00 | 4,276.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 0.00 | 0.00 | 4,376.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 4,407.13 | 0.00 | 0.00 | 4,384.00 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| Sussex | | | | | | | | | |
| 4,500.00 | 0.00 | 0.00 | 4,476.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 0.00 | 0.00 | 4,576.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 0.00 | 0.00 | 4,676.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 0.00 | 0.00 | 4,776.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 0.00 | 0.00 | 4,876.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 0.00 | 0.00 | 4,976.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 0.00 | 0.00 | 5,076.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 0.00 | 0.00 | 5,176.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 0.00 | 0.00 | 5,276.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 0.00 | 0.00 | 5,376.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 0.00 | 0.00 | 5,476.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 0.00 | 0.00 | 5,576.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 0.00 | 0.00 | 5,676.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 0.00 | 0.00 | 5,776.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 0.00 | 0.00 | 5,876.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 0.00 | 0.00 | 5,976.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 0.00 | 0.00 | 6,076.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 0.00 | 0.00 | 6,176.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 0.00 | 0.00 | 6,276.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 0.00 | 0.00 | 6,376.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 0.00 | 0.00 | 6,476.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 0.00 | 0.00 | 6,576.87 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 6,650.50 | 0.00 | 0.00 | 6,627.37 | 34.00 | 366.71 | 49.88 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 4.45 | 0.02 | 6,676.82 | 35.92 | 366.71 | 51.81 | 9.00 | 9.00 | 0.00 |
| 6,800.00 | 13.45 | 0.02 | 6,775.50 | 51.47 | 366.72 | 67.34 | 9.00 | 9.00 | 0.00 |
| 6,900.00 | 22.45 | 0.02 | 6,870.53 | 82.27 | 366.73 | 98.11 | 9.00 | 9.00 | 0.00 |
| 7,000.00 | 31.45 | 0.02 | 6,959.58 | 127.55 | 366.74 | 143.35 | 9.00 | 9.00 | 0.00 |
| 7,100.00 | 40.45 | 0.02 | 7,040.44 | 186.21 | 366.76 | 201.95 | 9.00 | 9.00 | 0.00 |
| 7,183.13 | 47.94 | 0.02 | 7,100.00 | 244.11 | 366.78 | 259.80 | 9.00 | 9.00 | 0.00 |
| Sharon Springs | | | | | | | | | |
| 7,200.00 | 49.45 | 0.02 | 7,111.14 | 256.79 | 366.79 | 272.47 | 9.00 | 9.00 | 0.00 |
| 7,300.00 | 58.45 | 0.02 | 7,169.92 | 337.56 | 366.82 | 353.16 | 9.00 | 9.00 | 0.00 |
| 7,325.87 | 60.78 | 0.02 | 7,183.00 | 359.87 | 366.83 | 375.46 | 9.00 | 9.00 | 0.00 |
| Niobrara | | | | | | | | | |
| 7,400.00 | 67.45 | 0.02 | 7,215.34 | 426.53 | 366.85 | 442.05 | 9.00 | 9.00 | 0.00 |
| 7,471.53 | 73.89 | 0.02 | 7,239.00 | 493.99 | 366.87 | 509.45 | 9.00 | 9.00 | 0.00 |
| Nio B | | | | | | | | | |
| 7,500.00 | 76.45 | 0.02 | 7,246.29 | 521.52 | 366.88 | 536.95 | 9.00 | 9.00 | 0.00 |
| 7,600.00 | 85.45 | 0.02 | 7,261.99 | 620.17 | 366.92 | 635.51 | 9.00 | 9.00 | 0.00 |
| 7,652.61 | 90.19 | 0.02 | 7,263.99 | 672.73 | 366.94 | 688.02 | 9.00 | 9.00 | 0.00 |
| Top of Production - BUTTERBALL 40N-34HZ_PHL | | | | | | | | | |
| 7,700.00 | 90.19 | 0.02 | 7,263.83 | 720.12 | 366.95 | 735.37 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 90.19 | 0.02 | 7,263.50 | 820.12 | 366.99 | 835.27 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 90.19 | 0.02 | 7,263.17 | 920.12 | 367.02 | 935.18 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 90.19 | 0.02 | 7,262.84 | 1,020.12 | 367.06 | 1,035.09 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 90.19 | 0.02 | 7,262.51 | 1,120.12 | 367.09 | 1,134.99 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.19 | 0.02 | 7,262.17 | 1,220.12 | 367.13 | 1,234.90 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 90.19 | 0.02 | 7,261.84 | 1,320.12 | 367.17 | 1,334.81 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.19 | 0.02 | 7,261.51 | 1,420.11 | 367.20 | 1,434.71 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.19 | 0.02 | 7,261.18 | 1,520.11 | 367.24 | 1,534.62 | 0.00 | 0.00 | 0.00 |

Corporate Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well BUTTERBALL 40N-34HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4933.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4933.00usft (D Rig) |
| Site: | 2N-67W-10 Butterball 1-10HZ Pad | North Reference: | True |
| Well: | BUTTERBALL 40N-34HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | 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 | 90.19 | 0.02 | 7,260.85 | 1,620.11 | 367.27 | 1,634.53 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.19 | 0.02 | 7,260.52 | 1,720.11 | 367.31 | 1,734.43 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.19 | 0.02 | 7,260.18 | 1,820.11 | 367.34 | 1,834.34 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.19 | 0.02 | 7,259.85 | 1,920.11 | 367.38 | 1,934.25 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 90.19 | 0.02 | 7,259.52 | 2,020.11 | 367.41 | 2,034.16 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.19 | 0.02 | 7,259.19 | 2,120.11 | 367.45 | 2,134.06 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.19 | 0.02 | 7,258.86 | 2,220.11 | 367.48 | 2,233.97 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.19 | 0.02 | 7,258.53 | 2,320.11 | 367.52 | 2,333.88 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 90.19 | 0.02 | 7,258.19 | 2,420.11 | 367.55 | 2,433.78 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.19 | 0.02 | 7,257.86 | 2,520.11 | 367.59 | 2,533.69 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.19 | 0.02 | 7,257.53 | 2,620.11 | 367.63 | 2,633.60 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.19 | 0.02 | 7,257.20 | 2,720.11 | 367.66 | 2,733.50 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.19 | 0.02 | 7,256.87 | 2,820.11 | 367.70 | 2,833.41 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.19 | 0.02 | 7,256.54 | 2,920.11 | 367.73 | 2,933.32 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.19 | 0.02 | 7,256.20 | 3,020.11 | 367.77 | 3,033.22 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.19 | 0.02 | 7,255.87 | 3,120.11 | 367.80 | 3,133.13 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.19 | 0.02 | 7,255.54 | 3,220.10 | 367.84 | 3,233.04 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.19 | 0.02 | 7,255.21 | 3,320.10 | 367.87 | 3,332.94 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.19 | 0.02 | 7,254.88 | 3,420.10 | 367.91 | 3,432.85 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.19 | 0.02 | 7,254.55 | 3,520.10 | 367.94 | 3,532.76 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.19 | 0.02 | 7,254.21 | 3,620.10 | 367.98 | 3,632.66 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.19 | 0.02 | 7,253.88 | 3,720.10 | 368.01 | 3,732.57 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.19 | 0.02 | 7,253.55 | 3,820.10 | 368.05 | 3,832.48 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.19 | 0.02 | 7,253.22 | 3,920.10 | 368.09 | 3,932.38 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.19 | 0.02 | 7,252.89 | 4,020.10 | 368.12 | 4,032.29 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.19 | 0.02 | 7,252.56 | 4,120.10 | 368.16 | 4,132.20 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.19 | 0.02 | 7,252.23 | 4,220.10 | 368.19 | 4,232.10 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.19 | 0.02 | 7,251.89 | 4,320.10 | 368.23 | 4,332.01 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.19 | 0.02 | 7,251.56 | 4,420.10 | 368.26 | 4,431.92 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.19 | 0.02 | 7,251.23 | 4,520.10 | 368.30 | 4,531.82 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.19 | 0.02 | 7,250.90 | 4,620.10 | 368.33 | 4,631.73 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.19 | 0.02 | 7,250.57 | 4,720.10 | 368.37 | 4,731.64 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.19 | 0.02 | 7,250.24 | 4,820.10 | 368.40 | 4,831.54 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.19 | 0.02 | 7,249.90 | 4,920.10 | 368.44 | 4,931.45 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.19 | 0.02 | 7,249.57 | 5,020.09 | 368.47 | 5,031.36 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.19 | 0.02 | 7,249.24 | 5,120.09 | 368.51 | 5,131.26 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.19 | 0.02 | 7,248.91 | 5,220.09 | 368.55 | 5,231.17 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.19 | 0.02 | 7,248.58 | 5,320.09 | 368.58 | 5,331.08 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.19 | 0.02 | 7,248.25 | 5,420.09 | 368.62 | 5,430.98 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.19 | 0.02 | 7,247.91 | 5,520.09 | 368.65 | 5,530.89 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.19 | 0.02 | 7,247.58 | 5,620.09 | 368.69 | 5,630.80 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.19 | 0.02 | 7,247.25 | 5,720.09 | 368.72 | 5,730.70 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.19 | 0.02 | 7,246.92 | 5,820.09 | 368.76 | 5,830.61 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.19 | 0.02 | 7,246.59 | 5,920.09 | 368.79 | 5,930.52 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.19 | 0.02 | 7,246.26 | 6,020.09 | 368.83 | 6,030.42 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.19 | 0.02 | 7,245.92 | 6,120.09 | 368.86 | 6,130.33 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.19 | 0.02 | 7,245.59 | 6,220.09 | 368.90 | 6,230.24 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.19 | 0.02 | 7,245.26 | 6,320.09 | 368.93 | 6,330.14 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.19 | 0.02 | 7,244.93 | 6,420.09 | 368.97 | 6,430.05 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.19 | 0.02 | 7,244.60 | 6,520.09 | 369.01 | 6,529.96 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.19 | 0.02 | 7,244.27 | 6,620.09 | 369.04 | 6,629.87 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.19 | 0.02 | 7,243.93 | 6,720.09 | 369.08 | 6,729.77 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.19 | 0.02 | 7,243.60 | 6,820.08 | 369.11 | 6,829.68 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.19 | 0.02 | 7,243.27 | 6,920.08 | 369.15 | 6,929.59 | 0.00 | 0.00 | 0.00 |

Corporate Planning Report

| | | | |
|------------------|---------------------------------|-------------------------------------|---------------------------|
| Database: | PLANNING | Local Co-ordinate Reference: | Well BUTTERBALL 40N-34HZ |
| Company: | US ROCKIES WATTENBERG PLANNING | TVD Reference: | RKB @ 4933.00usft (D Rig) |
| Project: | WELD-NAD83-UTMFT13N | MD Reference: | RKB @ 4933.00usft (D Rig) |
| Site: | 2N-67W-10 Butterball 1-10HZ Pad | North Reference: | True |
| Well: | BUTTERBALL 40N-34HZ | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Plan A | | |
| Design: | 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) |
| 14,000.00 | 90.19 | 0.02 | 7,242.94 | 7,020.08 | 369.18 | 7,029.49 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.19 | 0.02 | 7,242.61 | 7,120.08 | 369.22 | 7,129.40 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.19 | 0.02 | 7,242.28 | 7,220.08 | 369.25 | 7,229.31 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.19 | 0.02 | 7,241.95 | 7,320.08 | 369.29 | 7,329.21 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.19 | 0.02 | 7,241.61 | 7,420.08 | 369.32 | 7,429.12 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.19 | 0.02 | 7,241.28 | 7,520.08 | 369.36 | 7,529.03 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.19 | 0.02 | 7,240.95 | 7,620.08 | 369.40 | 7,628.93 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.19 | 0.02 | 7,240.62 | 7,720.08 | 369.43 | 7,728.84 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.19 | 0.02 | 7,240.29 | 7,820.08 | 369.47 | 7,828.75 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.19 | 0.02 | 7,239.96 | 7,920.08 | 369.50 | 7,928.65 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.19 | 0.02 | 7,239.62 | 8,020.08 | 369.54 | 8,028.56 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.19 | 0.02 | 7,239.29 | 8,120.08 | 369.57 | 8,128.47 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.19 | 0.02 | 7,238.96 | 8,220.08 | 369.61 | 8,228.37 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.19 | 0.02 | 7,238.63 | 8,320.08 | 369.64 | 8,328.28 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.19 | 0.02 | 7,238.30 | 8,420.08 | 369.68 | 8,428.19 | 0.00 | 0.00 | 0.00 |
| 15,489.67 | 90.19 | 0.02 | 7,238.00 | 8,509.74 | 369.71 | 8,517.77 | 0.00 | 0.00 | 0.00 |
| BUTTERBALL 40N-34HZ_PBHL | | | | | | | | | |

| Design Targets | | | | | | | | | |
|-------------------|---------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|-----------------------|
| Target Name | - hit/miss target | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | |
| | - Shape | | | | | | | | Latitude Longitude |
| BUTTERBALL 40N-34 | - plan hits target center | 0.00 | 0.00 | 7,238.00 | 8,509.74 | 369.71 | 14,592,903.07 | 1,677,224.00 | 40.181637 -104.868220 |
| | - Point | | | | | | | | |
| BUTTERBALL 40N-34 | - plan hits target center | 0.00 | 0.00 | 7,263.99 | 672.73 | 366.94 | 14,585,066.06 | 1,677,232.74 | 40.160115 -104.868230 |
| | - Point | | | | | | | | |

| Casing Points | | | | | |
|-----------------------|-----------------------|-------------------|---------------------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 1,508.19 | 1,500.00 | 9 5/8" | 9-5/8 | 13-1/2 | |
| 7,652.61 | 7,263.99 | Top of Production | 5-1/2 | 8-1/2 | |

| Formations | | | | | |
|-----------------------|-----------------------|----------------|-----------|---------|-------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| 1,017.81 | 1,014.00 | Fox Hills | | | |
| 3,983.13 | 3,960.00 | Parkman | | | |
| 4,407.13 | 4,384.00 | Sussex | | | |
| 7,183.13 | 7,100.00 | Sharon Springs | | | |
| 7,325.87 | 7,183.00 | Niobrara | | | |
| 7,471.53 | 7,239.00 | Nio B | | | |

Corporate

Planning Report

Database: PLANNING
Company: US ROCKIES WATTENBERG PLANNING
Project: WELD-NAD83-UTMFT13N
Site: 2N-67W-10 Butterball 1-10HZ Pad
Well: BUTTERBALL 40N-34HZ
Wellbore: Plan A
Design: Permit Rev-1

Local Co-ordinate Reference: Well BUTTERBALL 40N-34HZ
TVD Reference: RKB @ 4933.00usft (D Rig)
MD Reference: RKB @ 4933.00usft (D Rig)
North Reference: True
Survey Calculation Method: Minimum Curvature