

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

1N-67W-22 Wagner 8-22HZ Pad

WAGNER 27C-10HZ

Plan A

Plan: Permit Rev-1

Standard Survey Report

02 February, 2016

Project: WELD-NAD83-UTMFT13N
Site: 1N-67W-22 Wagner 8-22HZ Pad
Well: WAGNER 27C-10HZ
Wellbore: Plan A
Design: Permit Rev-1

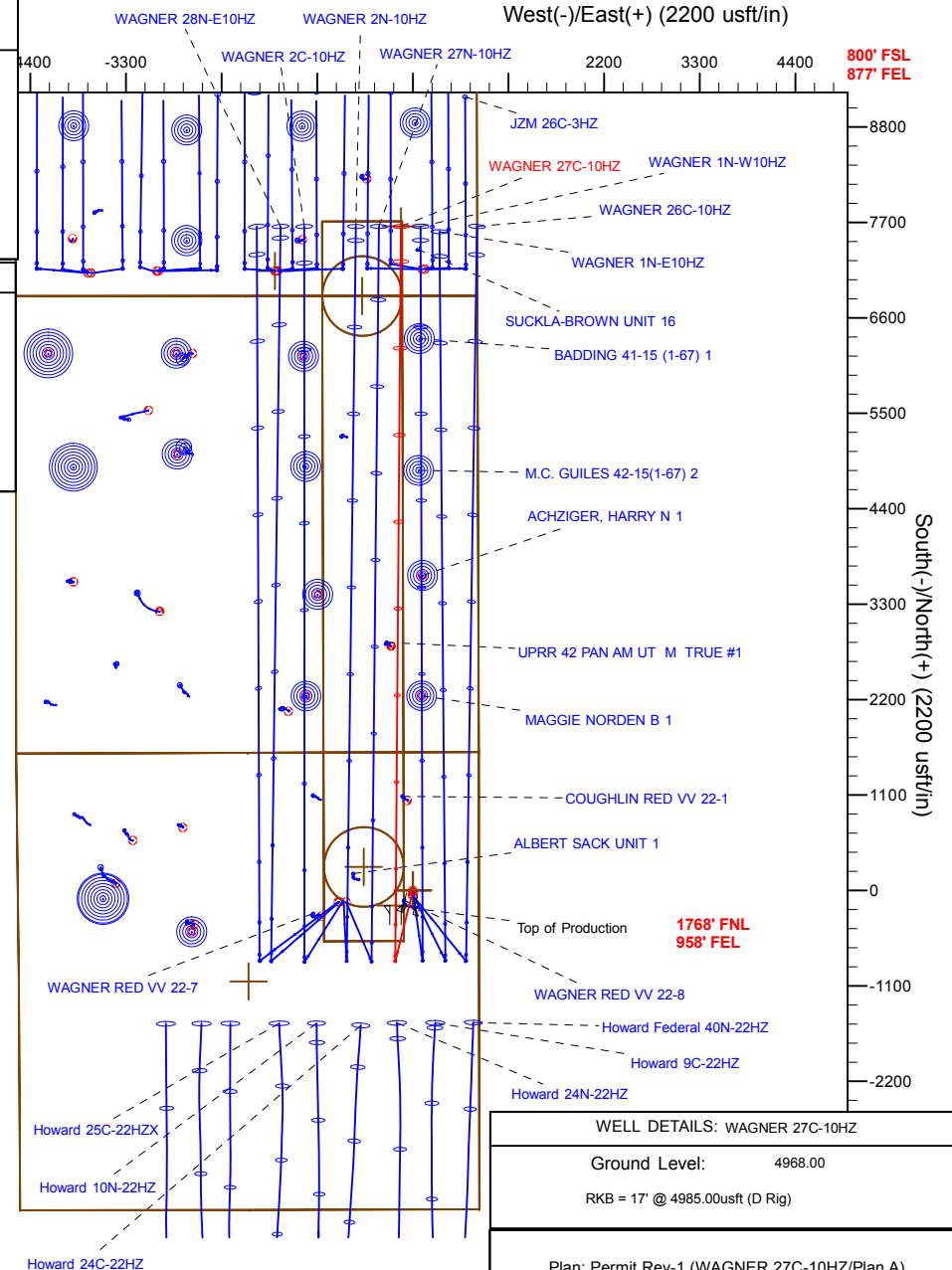
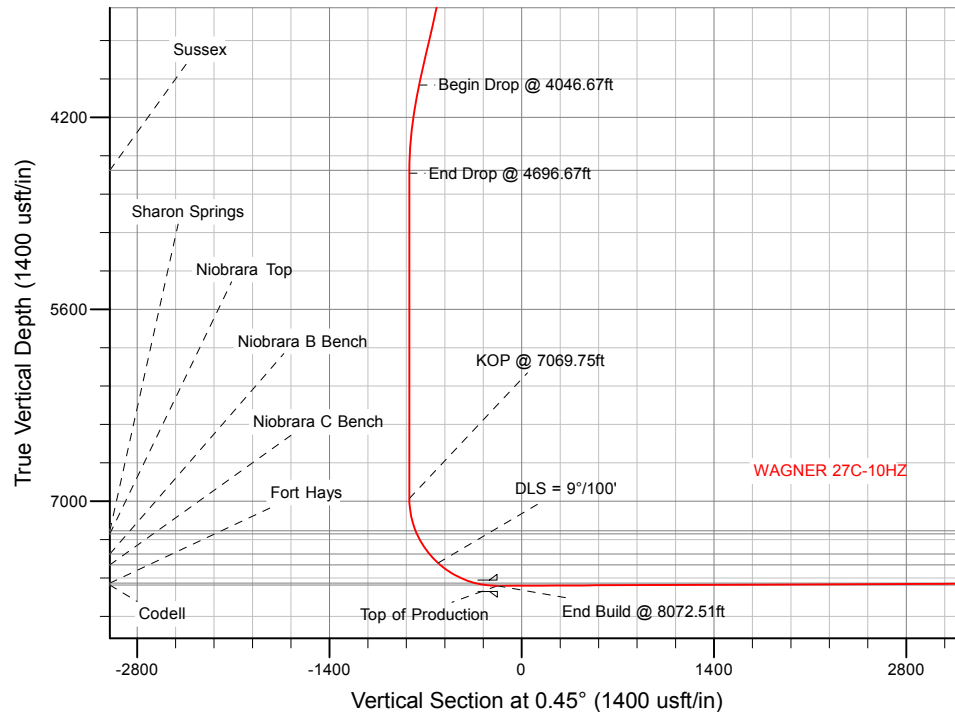
US ROCKIES WATTENBERG PLANNING

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Target |
|-----|----------|-------|--------|---------|---------|---------|------|--------|---------|---------------------|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2 | 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 | 1066.67 | 13.00 | 194.00 | 1059.25 | -94.99 | -23.68 | 1.50 | 194.00 | -95.17 | |
| 4 | 4046.67 | 13.00 | 194.00 | 3962.87 | -745.43 | -185.86 | 0.00 | 0.00 | -746.87 | |
| 5 | 4696.67 | 0.00 | 0.00 | 4607.31 | -816.68 | -203.62 | 2.00 | 180.00 | -818.25 | |
| 6 | 7069.75 | 0.00 | 0.00 | 6980.39 | -816.68 | -203.62 | 0.00 | 0.00 | -818.25 | |
| 7 | 8072.51 | 90.25 | 0.45 | 7617.00 | -177.31 | -198.63 | 9.00 | 0.45 | -178.87 | |
| 8 | 15904.45 | 90.25 | 0.45 | 7583.00 | 7654.31 | -137.47 | 0.00 | 0.00 | 7652.99 | WAGNER 27C-10HZ_Toe |

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|---------------------|---------|---------|---------|-----------|-------------|-------|
| WAGNER 27C-10HZ_SHL | 0.00 | 0.00 | 0.00 | 40.039455 | -104.869994 | Point |
| WAGNER 27C-10HZ_Toe | 7583.00 | 7654.31 | -137.47 | 40.060475 | -104.870485 | Point |



WELL DETAILS: WAGNER 27C-10HZ

Ground Level: 4968.00

RKB = 17' @ 4985.00usft (D Rig)

Plan: Permit Rev-1 (WAGNER 27C-10HZ/Plan A)

Created By: Clint Eshelman

Date: 2/3/2016

Reviewed: _____

Date: _____

Anadarko

Survey Report

| | | | |
|------------------|--------------------------------|-------------------------------------|---------------------------------|
| Company: | US ROCKIES WATTENBERG PLANNING | Local Co-ordinate Reference: | Well WAGNER 27C-10HZ |
| Project: | WELD-NAD83-UTMFT13N | TVD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Site: | 1N-67W-22 Wagner 8-22HZ Pad | MD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Well: | WAGNER 27C-10HZ | North Reference: | True |
| Wellbore: | Plan A | Survey Calculation Method: | Minimum Curvature |
| Design: | Permit Rev-1 | Database: | PLANNING |

| | | | |
|--------------------|--|----------------------|----------------|
| 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 | | 1N-67W-22 Wagner 8-22HZ Pad | | | | | | |
| Site Position: | | Northing: | 14,541,127.24 | usft | Latitude: | 40.039455 | | |
| From: | Lat/Long | Easting: | 1,676,804.01 | usft | Longitude: | -104.869994 | | |
| Position Uncertainty: | 0.00 | usft | Slot Radius: | 13-3/16 | " | Grid Convergence: | 0.08 | ° |

| Well | | WAGNER 27C-10HZ | | | | |
|----------------------|-------|-----------------|---------------------|--------------------|---------------|---------------|
| Well Position | +N/-S | 0.00 usft | Northing: | 14,541,127.24 usft | Latitude: | 40.039455 |
| | +E/-W | 0.00 usft | Easting: | 1,676,804.01 usft | Longitude: | -104.869994 |
| Position Uncertainty | | 3.28 usft | Wellhead Elevation: | 0.00 usft | Ground Level: | 4,968.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Plan A | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 1/29/2016 | 8.27 | 66.58 | 52,443 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|--|
| 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 | 0.45 | |

| | | | | | |
|----------------------------|------------------|--------------------------|-----------------------|---|--|
| Survey Tool Program | Date | 2/2/2016 | | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 0.00 | 1,800.00 | Permit Rev-1 (Plan A) | APC_ISCWSA REV 2 MWD | Fixed:v2:standard declination | |
| 1,800.00 | 15,904.45 | Permit Rev-1 (Plan A) | APC_ISCWSA REV 2 MWD+ | Fixed:v2:Rockies, crustal dec + 3-axis correction | |

| | | | | | | | | | | |
|-------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| 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 | |
| Begin Nudge @ 200.00ft | | | | | | | | | | |
| 300.00 | 1.50 | 194.00 | 299.99 | -1.27 | -0.32 | -1.27 | 1.50 | 1.50 | 0.00 | |
| 400.00 | 3.00 | 194.00 | 399.91 | -5.08 | -1.27 | -5.09 | 1.50 | 1.50 | 0.00 | |
| 500.00 | 4.50 | 194.00 | 499.69 | -11.43 | -2.85 | -11.45 | 1.50 | 1.50 | 0.00 | |
| 600.00 | 6.00 | 194.00 | 599.27 | -20.30 | -5.06 | -20.34 | 1.50 | 1.50 | 0.00 | |
| 700.00 | 7.50 | 194.00 | 698.57 | -31.71 | -7.91 | -31.77 | 1.50 | 1.50 | 0.00 | |
| 800.00 | 9.00 | 194.00 | 797.54 | -45.63 | -11.38 | -45.72 | 1.50 | 1.50 | 0.00 | |

Anadarko

Survey Report

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|------------------|--------------------------------|-------------------------------------|---------------------------------|
| Company: | US ROCKIES WATTENBERG PLANNING | Local Co-ordinate Reference: | Well WAGNER 27C-10HZ |
| Project: | WELD-NAD83-UTMFT13N | TVD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Site: | 1N-67W-22 Wagner 8-22HZ Pad | MD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Well: | WAGNER 27C-10HZ | North Reference: | True |
| Wellbore: | Plan A | Survey Calculation Method: | Minimum Curvature |
| Design: | Permit Rev-1 | Database: | PLANNING |

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) |
|-------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 900.00 | 10.50 | 194.00 | 896.09 | -62.06 | -15.47 | -62.18 | 1.50 | 1.50 | 0.00 |
| 1,000.00 | 12.00 | 194.00 | 994.16 | -80.99 | -20.19 | -81.15 | 1.50 | 1.50 | 0.00 |
| 1,066.67 | 13.00 | 194.00 | 1,059.25 | -94.99 | -23.68 | -95.17 | 1.50 | 1.50 | 0.00 |
| End Nudge @ 1066.67ft | | | | | | | | | |
| 1,100.00 | 13.00 | 194.00 | 1,091.73 | -102.27 | -25.50 | -102.46 | 0.00 | 0.00 | 0.00 |
| 1,200.00 | 13.00 | 194.00 | 1,189.17 | -124.09 | -30.94 | -124.33 | 0.00 | 0.00 | 0.00 |
| 1,300.00 | 13.00 | 194.00 | 1,286.60 | -145.92 | -36.38 | -146.20 | 0.00 | 0.00 | 0.00 |
| 1,364.04 | 13.00 | 194.00 | 1,349.00 | -159.90 | -39.87 | -160.21 | 0.00 | 0.00 | 0.00 |
| Fox Hills | | | | | | | | | |
| 1,400.00 | 13.00 | 194.00 | 1,384.04 | -167.75 | -41.82 | -168.07 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 13.00 | 194.00 | 1,481.48 | -189.57 | -47.27 | -189.94 | 0.00 | 0.00 | 0.00 |
| 1,600.00 | 13.00 | 194.00 | 1,578.91 | -211.40 | -52.71 | -211.81 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 13.00 | 194.00 | 1,676.35 | -233.23 | -58.15 | -233.68 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 13.00 | 194.00 | 1,773.79 | -255.06 | -63.59 | -255.55 | 0.00 | 0.00 | 0.00 |
| 1,826.90 | 13.00 | 194.00 | 1,800.00 | -260.93 | -65.06 | -261.43 | 0.00 | 0.00 | 0.00 |
| 9 5/8" | | | | | | | | | |
| 1,900.00 | 13.00 | 194.00 | 1,871.22 | -276.88 | -69.03 | -277.42 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 13.00 | 194.00 | 1,968.66 | -298.71 | -74.48 | -299.28 | 0.00 | 0.00 | 0.00 |
| 2,100.00 | 13.00 | 194.00 | 2,066.10 | -320.54 | -79.92 | -321.15 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 13.00 | 194.00 | 2,163.54 | -342.36 | -85.36 | -343.02 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 13.00 | 194.00 | 2,260.97 | -364.19 | -90.80 | -364.89 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 13.00 | 194.00 | 2,358.41 | -386.02 | -96.24 | -386.76 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 13.00 | 194.00 | 2,455.85 | -407.84 | -101.69 | -408.63 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 13.00 | 194.00 | 2,553.28 | -429.67 | -107.13 | -430.50 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 13.00 | 194.00 | 2,650.72 | -451.50 | -112.57 | -452.37 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 13.00 | 194.00 | 2,748.16 | -473.32 | -118.01 | -474.24 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 13.00 | 194.00 | 2,845.59 | -495.15 | -123.46 | -496.11 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 13.00 | 194.00 | 2,943.03 | -516.98 | -128.90 | -517.97 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 13.00 | 194.00 | 3,040.47 | -538.80 | -134.34 | -539.84 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 13.00 | 194.00 | 3,137.91 | -560.63 | -139.78 | -561.71 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 13.00 | 194.00 | 3,235.34 | -582.46 | -145.22 | -583.58 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 13.00 | 194.00 | 3,332.78 | -604.29 | -150.67 | -605.45 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 13.00 | 194.00 | 3,430.22 | -626.11 | -156.11 | -627.32 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 13.00 | 194.00 | 3,527.65 | -647.94 | -161.55 | -649.19 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 13.00 | 194.00 | 3,625.09 | -669.77 | -166.99 | -671.06 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 13.00 | 194.00 | 3,722.53 | -691.59 | -172.43 | -692.93 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 13.00 | 194.00 | 3,819.97 | -713.42 | -177.88 | -714.80 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 13.00 | 194.00 | 3,917.40 | -735.25 | -183.32 | -736.66 | 0.00 | 0.00 | 0.00 |
| 4,046.67 | 13.00 | 194.00 | 3,962.88 | -745.43 | -185.86 | -746.87 | 0.00 | 0.00 | 0.00 |
| Begin Drop @ 4046.67ft | | | | | | | | | |
| 4,100.00 | 11.93 | 194.00 | 4,014.95 | -756.60 | -188.64 | -758.06 | 2.00 | -2.00 | 0.00 |
| 4,200.00 | 9.93 | 194.00 | 4,113.13 | -775.01 | -193.23 | -776.50 | 2.00 | -2.00 | 0.00 |
| 4,300.00 | 7.93 | 194.00 | 4,211.91 | -790.07 | -196.99 | -791.60 | 2.00 | -2.00 | 0.00 |
| 4,400.00 | 5.93 | 194.00 | 4,311.17 | -801.78 | -199.91 | -803.33 | 2.00 | -2.00 | 0.00 |

Anadarko

Survey Report

| | | | |
|------------------|--------------------------------|-------------------------------------|---------------------------------|
| Company: | US ROCKIES WATTENBERG PLANNING | Local Co-ordinate Reference: | Well WAGNER 27C-10HZ |
| Project: | WELD-NAD83-UTMFT13N | TVD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Site: | 1N-67W-22 Wagner 8-22HZ Pad | MD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Well: | WAGNER 27C-10HZ | North Reference: | True |
| Wellbore: | Plan A | Survey Calculation Method: | Minimum Curvature |
| Design: | Permit Rev-1 | Database: | PLANNING |

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) |
|-----------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 4,500.00 | 3.93 | 194.00 | 4,410.80 | -810.13 | -201.99 | -811.69 | 2.00 | -2.00 | 0.00 |
| 4,600.00 | 1.93 | 194.00 | 4,510.66 | -815.09 | -203.23 | -816.66 | 2.00 | -2.00 | 0.00 |
| 4,675.36 | 0.43 | 194.00 | 4,586.00 | -816.60 | -203.60 | -818.17 | 2.00 | -2.00 | 0.00 |
| Sussex | | | | | | | | | |
| 4,696.67 | 0.00 | 0.00 | 4,607.31 | -816.68 | -203.62 | -818.25 | 2.00 | -2.00 | 0.00 |
| End Drop @ 4696.67ft | | | | | | | | | |
| 4,700.00 | 0.00 | 0.00 | 4,610.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 0.00 | 0.00 | 4,710.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 0.00 | 0.00 | 4,810.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 0.00 | 0.00 | 4,910.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 0.00 | 0.00 | 5,010.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 0.00 | 0.00 | 5,110.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 0.00 | 0.00 | 5,210.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 0.00 | 0.00 | 5,310.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 0.00 | 0.00 | 5,410.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 0.00 | 0.00 | 5,510.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 0.00 | 0.00 | 5,610.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 0.00 | 0.00 | 5,710.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 0.00 | 0.00 | 5,810.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 0.00 | 0.00 | 5,910.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 6,100.00 | 0.00 | 0.00 | 6,010.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 0.00 | 0.00 | 6,110.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 0.00 | 0.00 | 6,210.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 6,400.00 | 0.00 | 0.00 | 6,310.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 6,500.00 | 0.00 | 0.00 | 6,410.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 6,600.00 | 0.00 | 0.00 | 6,510.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 6,700.00 | 0.00 | 0.00 | 6,610.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 6,800.00 | 0.00 | 0.00 | 6,710.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 6,900.00 | 0.00 | 0.00 | 6,810.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 0.00 | 0.00 | 6,910.64 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| 7,069.75 | 0.00 | 0.00 | 6,980.39 | -816.68 | -203.62 | -818.25 | 0.00 | 0.00 | 0.00 |
| KOP @ 7069.75ft | | | | | | | | | |
| 7,100.00 | 2.72 | 0.45 | 7,010.63 | -815.96 | -203.61 | -817.53 | 9.00 | 9.00 | 0.00 |
| 7,200.00 | 11.72 | 0.45 | 7,109.74 | -803.40 | -203.52 | -804.97 | 9.00 | 9.00 | 0.00 |
| 7,300.00 | 20.72 | 0.45 | 7,205.66 | -775.49 | -203.30 | -777.06 | 9.00 | 9.00 | 0.00 |
| 7,310.67 | 21.68 | 0.45 | 7,215.60 | -771.63 | -203.27 | -773.21 | 9.00 | 9.00 | 0.00 |
| Sharon Springs | | | | | | | | | |
| 7,335.62 | 23.93 | 0.45 | 7,238.60 | -761.96 | -203.19 | -763.53 | 9.00 | 9.00 | 0.00 |
| Niobrara Top | | | | | | | | | |
| 7,400.00 | 29.72 | 0.45 | 7,296.03 | -732.92 | -202.97 | -734.49 | 9.00 | 9.00 | 0.00 |
| 7,500.00 | 38.72 | 0.45 | 7,378.63 | -676.74 | -202.53 | -678.31 | 9.00 | 9.00 | 0.00 |
| 7,507.56 | 39.40 | 0.45 | 7,384.50 | -671.98 | -202.49 | -673.54 | 9.00 | 9.00 | 0.00 |
| Niobrara B Bench | | | | | | | | | |
| 7,600.00 | 47.72 | 0.45 | 7,451.42 | -608.33 | -201.99 | -609.90 | 9.00 | 9.00 | 0.00 |

Anadarko

Survey Report

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|------------------|--------------------------------|-------------------------------------|---------------------------------|
| Company: | US ROCKIES WATTENBERG PLANNING | Local Co-ordinate Reference: | Well WAGNER 27C-10HZ |
| Project: | WELD-NAD83-UTMFT13N | TVD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Site: | 1N-67W-22 Wagner 8-22HZ Pad | MD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Well: | WAGNER 27C-10HZ | North Reference: | True |
| Wellbore: | Plan A | Survey Calculation Method: | Minimum Curvature |
| Design: | Permit Rev-1 | Database: | PLANNING |

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) |
|--|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| DLS = 9°/100' | | | | | | | | | |
| 7,619.78 | 49.50 | 0.45 | 7,464.50 | -593.49 | -201.88 | -595.06 | 9.00 | 9.00 | 0.00 |
| Niobrara C Bench | | | | | | | | | |
| 7,700.00 | 56.72 | 0.45 | 7,512.62 | -529.37 | -201.38 | -530.94 | 9.00 | 9.00 | 0.00 |
| 7,800.00 | 65.72 | 0.45 | 7,560.71 | -441.82 | -200.69 | -443.38 | 9.00 | 9.00 | 0.00 |
| 7,900.00 | 74.72 | 0.45 | 7,594.51 | -347.81 | -199.96 | -349.37 | 9.00 | 9.00 | 0.00 |
| 7,915.86 | 76.15 | 0.45 | 7,598.50 | -332.47 | -199.84 | -334.03 | 9.00 | 9.00 | 0.00 |
| Fort Hays | | | | | | | | | |
| 7,991.44 | 82.95 | 0.45 | 7,612.20 | -258.18 | -199.26 | -259.74 | 9.00 | 9.00 | 0.00 |
| Codell | | | | | | | | | |
| 8,000.00 | 83.72 | 0.45 | 7,613.19 | -249.68 | -199.19 | -251.24 | 9.00 | 9.00 | 0.00 |
| 8,072.51 | 90.25 | 0.45 | 7,617.00 | -177.31 | -198.63 | -178.87 | 9.00 | 9.00 | 0.00 |
| End Build @ 8072.51ft - Top of Production | | | | | | | | | |
| 8,100.00 | 90.25 | 0.45 | 7,616.88 | -149.82 | -198.41 | -151.38 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.25 | 0.45 | 7,616.45 | -49.83 | -197.63 | -51.38 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 90.25 | 0.45 | 7,616.02 | 50.17 | -196.85 | 48.62 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.25 | 0.45 | 7,615.58 | 150.16 | -196.07 | 148.62 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.25 | 0.45 | 7,615.15 | 250.16 | -195.29 | 248.62 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 90.25 | 0.45 | 7,614.71 | 350.16 | -194.51 | 348.62 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.25 | 0.45 | 7,614.28 | 450.15 | -193.73 | 448.62 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.25 | 0.45 | 7,613.85 | 550.15 | -192.95 | 548.62 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.25 | 0.45 | 7,613.41 | 650.14 | -192.17 | 648.62 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 90.25 | 0.45 | 7,612.98 | 750.14 | -191.38 | 748.61 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.25 | 0.45 | 7,612.54 | 850.14 | -190.60 | 848.61 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.25 | 0.45 | 7,612.11 | 950.13 | -189.82 | 948.61 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.25 | 0.45 | 7,611.67 | 1,050.13 | -189.04 | 1,048.61 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 90.25 | 0.45 | 7,611.24 | 1,150.12 | -188.26 | 1,148.61 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.25 | 0.45 | 7,610.81 | 1,250.12 | -187.48 | 1,248.61 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.25 | 0.45 | 7,610.37 | 1,350.12 | -186.70 | 1,348.61 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.25 | 0.45 | 7,609.94 | 1,450.11 | -185.92 | 1,448.61 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.25 | 0.45 | 7,609.50 | 1,550.11 | -185.14 | 1,548.61 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.25 | 0.45 | 7,609.07 | 1,650.10 | -184.36 | 1,648.61 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.25 | 0.45 | 7,608.64 | 1,750.10 | -183.58 | 1,748.60 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.25 | 0.45 | 7,608.20 | 1,850.10 | -182.80 | 1,848.60 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.25 | 0.45 | 7,607.77 | 1,950.09 | -182.01 | 1,948.60 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.25 | 0.45 | 7,607.33 | 2,050.09 | -181.23 | 2,048.60 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.25 | 0.45 | 7,606.90 | 2,150.08 | -180.45 | 2,148.60 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.25 | 0.45 | 7,606.46 | 2,250.08 | -179.67 | 2,248.60 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.25 | 0.45 | 7,606.03 | 2,350.08 | -178.89 | 2,348.60 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.25 | 0.45 | 7,605.60 | 2,450.07 | -178.11 | 2,448.60 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.25 | 0.45 | 7,605.16 | 2,550.07 | -177.33 | 2,548.60 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.25 | 0.45 | 7,604.73 | 2,650.06 | -176.55 | 2,648.60 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.25 | 0.45 | 7,604.29 | 2,750.06 | -175.77 | 2,748.60 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.25 | 0.45 | 7,603.86 | 2,850.06 | -174.99 | 2,848.59 | 0.00 | 0.00 | 0.00 |

Anadarko

Survey Report

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|------------------|--------------------------------|-------------------------------------|---------------------------------|
| Company: | US ROCKIES WATTENBERG PLANNING | Local Co-ordinate Reference: | Well WAGNER 27C-10HZ |
| Project: | WELD-NAD83-UTMFT13N | TVD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Site: | 1N-67W-22 Wagner 8-22HZ Pad | MD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Well: | WAGNER 27C-10HZ | North Reference: | True |
| Wellbore: | Plan A | Survey Calculation Method: | Minimum Curvature |
| Design: | Permit Rev-1 | Database: | PLANNING |

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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 11,200.00 | 90.25 | 0.45 | 7,603.43 | 2,950.05 | -174.21 | 2,948.59 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.25 | 0.45 | 7,602.99 | 3,050.05 | -173.42 | 3,048.59 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.25 | 0.45 | 7,602.56 | 3,150.04 | -172.64 | 3,148.59 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.25 | 0.45 | 7,602.12 | 3,250.04 | -171.86 | 3,248.59 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.25 | 0.45 | 7,601.69 | 3,350.04 | -171.08 | 3,348.59 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.25 | 0.45 | 7,601.25 | 3,450.03 | -170.30 | 3,448.59 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.25 | 0.45 | 7,600.82 | 3,550.03 | -169.52 | 3,548.59 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.25 | 0.45 | 7,600.39 | 3,650.02 | -168.74 | 3,648.59 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.25 | 0.45 | 7,599.95 | 3,750.02 | -167.96 | 3,748.59 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.25 | 0.45 | 7,599.52 | 3,850.02 | -167.18 | 3,848.58 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.25 | 0.45 | 7,599.08 | 3,950.01 | -166.40 | 3,948.58 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.25 | 0.45 | 7,598.65 | 4,050.01 | -165.62 | 4,048.58 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.25 | 0.45 | 7,598.22 | 4,150.00 | -164.84 | 4,148.58 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.25 | 0.45 | 7,597.78 | 4,250.00 | -164.05 | 4,248.58 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.25 | 0.45 | 7,597.35 | 4,350.00 | -163.27 | 4,348.58 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.25 | 0.45 | 7,596.91 | 4,449.99 | -162.49 | 4,448.58 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.25 | 0.45 | 7,596.48 | 4,549.99 | -161.71 | 4,548.58 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.25 | 0.45 | 7,596.04 | 4,649.98 | -160.93 | 4,648.58 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.25 | 0.45 | 7,595.61 | 4,749.98 | -160.15 | 4,748.58 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.25 | 0.45 | 7,595.18 | 4,849.98 | -159.37 | 4,848.58 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.25 | 0.45 | 7,594.74 | 4,949.97 | -158.59 | 4,948.57 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.25 | 0.45 | 7,594.31 | 5,049.97 | -157.81 | 5,048.57 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.25 | 0.45 | 7,593.87 | 5,149.96 | -157.03 | 5,148.57 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.25 | 0.45 | 7,593.44 | 5,249.96 | -156.25 | 5,248.57 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.25 | 0.45 | 7,593.01 | 5,349.96 | -155.46 | 5,348.57 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.25 | 0.45 | 7,592.57 | 5,449.95 | -154.68 | 5,448.57 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.25 | 0.45 | 7,592.14 | 5,549.95 | -153.90 | 5,548.57 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.25 | 0.45 | 7,591.70 | 5,649.94 | -153.12 | 5,648.57 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.25 | 0.45 | 7,591.27 | 5,749.94 | -152.34 | 5,748.57 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.25 | 0.45 | 7,590.83 | 5,849.94 | -151.56 | 5,848.57 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.25 | 0.45 | 7,590.40 | 5,949.93 | -150.78 | 5,948.57 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.25 | 0.45 | 7,589.97 | 6,049.93 | -150.00 | 6,048.56 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.25 | 0.45 | 7,589.53 | 6,149.92 | -149.22 | 6,148.56 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.25 | 0.45 | 7,589.10 | 6,249.92 | -148.44 | 6,248.56 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.25 | 0.45 | 7,588.66 | 6,349.92 | -147.66 | 6,348.56 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.25 | 0.45 | 7,588.23 | 6,449.91 | -146.88 | 6,448.56 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.25 | 0.45 | 7,587.80 | 6,549.91 | -146.09 | 6,548.56 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.25 | 0.45 | 7,587.36 | 6,649.91 | -145.31 | 6,648.56 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.25 | 0.45 | 7,586.93 | 6,749.90 | -144.53 | 6,748.56 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.25 | 0.45 | 7,586.49 | 6,849.90 | -143.75 | 6,848.56 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.25 | 0.45 | 7,586.06 | 6,949.89 | -142.97 | 6,948.56 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.25 | 0.45 | 7,585.62 | 7,049.89 | -142.19 | 7,048.55 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.25 | 0.45 | 7,585.19 | 7,149.89 | -141.41 | 7,148.55 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.25 | 0.45 | 7,584.76 | 7,249.88 | -140.63 | 7,248.55 | 0.00 | 0.00 | 0.00 |

Anadarko

Survey Report

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|------------------|--------------------------------|-------------------------------------|---------------------------------|
| Company: | US ROCKIES WATTENBERG PLANNING | Local Co-ordinate Reference: | Well WAGNER 27C-10HZ |
| Project: | WELD-NAD83-UTMFT13N | TVD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Site: | 1N-67W-22 Wagner 8-22HZ Pad | MD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Well: | WAGNER 27C-10HZ | North Reference: | True |
| Wellbore: | Plan A | Survey Calculation Method: | Minimum Curvature |
| Design: | Permit Rev-1 | Database: | PLANNING |

| 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) |
| 15,600.00 | 90.25 | 0.45 | 7,584.32 | 7,349.88 | -139.85 | 7,348.55 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.25 | 0.45 | 7,583.89 | 7,449.87 | -139.07 | 7,448.55 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.25 | 0.45 | 7,583.45 | 7,549.87 | -138.29 | 7,548.55 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.25 | 0.45 | 7,583.02 | 7,649.87 | -137.50 | 7,648.55 | 0.00 | 0.00 | 0.00 |
| 15,904.45 | 90.25 | 0.45 | 7,583.00 | 7,654.31 | -137.47 | 7,652.99 | 0.00 | 0.00 | 0.00 |
| TD Well @ 15904.45ft | | | | | | | | | |

Anadarko

Survey Report

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|------------------|--------------------------------|-------------------------------------|---------------------------------|
| Company: | US ROCKIES WATTENBERG PLANNING | Local Co-ordinate Reference: | Well WAGNER 27C-10HZ |
| Project: | WELD-NAD83-UTMFT13N | TVD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Site: | 1N-67W-22 Wagner 8-22HZ Pad | MD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Well: | WAGNER 27C-10HZ | North Reference: | True |
| Wellbore: | Plan A | Survey Calculation Method: | Minimum Curvature |
| Design: | Permit Rev-1 | Database: | PLANNING |

Design Targets

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|--|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|-----------|-------------|
| WAGNER 27C-10HZ_SI - plan hits target center - Point | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14,541,127.24 | 1,676,804.01 | 40.039455 | -104.869994 |
| WAGNER 27C-10HZ_4€ - plan misses target center by 6876.99usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Circle (radius 460.00) | 0.00 | 0.00 | 0.00 | 6,852.22 | -583.21 | 14,547,978.60 | 1,676,210.80 | 40.058272 | -104.872079 |
| 1N-R67W-Sec. 22_Secti - plan misses target center by 2161.73usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Polygon | 0.00 | 0.00 | 0.00 | -1,049.70 | -1,889.76 | 14,540,074.78 | 1,674,915.79 | 40.036572 | -104.876746 |
| Point 1 | | 0.00 | 2,627.78 | -2,674.22 | | 14,542,698.65 | 1,672,237.74 | | |
| Point 2 | | 0.00 | 2,636.63 | -12.49 | | 14,542,711.39 | 1,674,899.45 | | |
| Point 3 | | 0.00 | 2,645.60 | 2,649.28 | | 14,542,724.24 | 1,677,561.21 | | |
| Point 4 | | 0.00 | 9.73 | 2,650.67 | | 14,540,088.38 | 1,677,566.44 | | |
| Point 5 | | 0.00 | -2,626.39 | 2,652.38 | | 14,537,452.26 | 1,677,572.00 | | |
| Point 6 | | 0.00 | -2,631.96 | 12.48 | | 14,537,442.84 | 1,674,932.11 | | |
| Point 7 | | 0.00 | -2,637.68 | -2,626.99 | | 14,537,433.27 | 1,672,292.65 | | |
| Point 8 | | 0.00 | -9.70 | -2,642.90 | | 14,540,061.22 | 1,672,272.91 | | |
| 1N-R67W-Sec. 15_Secti - plan hits target center - Polygon | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14,541,127.24 | 1,676,804.01 | 40.039455 | -104.869994 |
| Point 1 | | 0.00 | 6,851.58 | -4,568.26 | | 14,547,972.15 | 1,672,225.76 | | |
| Point 2 | | 0.00 | 6,853.93 | -1,913.35 | | 14,547,978.37 | 1,674,880.66 | | |
| Point 3 | | 0.00 | 6,855.16 | 741.27 | | 14,547,983.48 | 1,677,535.27 | | |
| Point 4 | | 0.00 | 4,225.46 | 750.46 | | 14,545,353.79 | 1,677,548.30 | | |
| Point 5 | | 0.00 | 1,595.89 | 759.53 | | 14,542,724.24 | 1,677,561.21 | | |
| Point 6 | | 0.00 | 1,586.93 | -1,902.25 | | 14,542,711.39 | 1,674,899.45 | | |
| Point 7 | | 0.00 | 1,578.07 | -4,563.97 | | 14,542,698.65 | 1,672,237.74 | | |
| Point 8 | | 0.00 | 4,213.91 | -4,566.57 | | 14,545,334.48 | 1,672,231.30 | | |
| WAGNER 27C-10HZ_4€ - plan misses target center by 1187.22usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Circle (radius 460.00) | 0.00 | 0.00 | 0.00 | -1,046.02 | -561.54 | 14,540,080.40 | 1,676,244.00 | 40.036583 | -104.872000 |
| WAGNER 27C-10HZ_H€ - plan misses target center by 261.21usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point | 0.00 | 0.00 | 0.00 | -173.70 | -195.08 | 14,540,953.26 | 1,676,609.18 | 40.038978 | -104.870691 |
| WAGNER 27C-10HZ_L€ - plan hits target center - Polygon | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 14,541,127.24 | 1,676,804.01 | 40.039455 | -104.869994 |
| Point 1 | | 0.00 | 7,713.25 | -124.65 | | 14,548,840.30 | 1,676,668.10 | | |
| Point 2 | | 0.00 | 6,852.45 | -123.21 | | 14,547,979.50 | 1,676,670.80 | | |
| Point 3 | | 0.00 | 5,542.64 | -119.82 | | 14,546,669.70 | 1,676,676.10 | | |
| Point 4 | | 0.00 | 4,233.03 | -116.73 | | 14,545,360.10 | 1,676,681.10 | | |
| Point 5 | | 0.00 | 2,907.63 | -113.57 | | 14,544,034.70 | 1,676,686.20 | | |
| Point 6 | | 0.00 | 1,590.62 | -108.49 | | 14,542,717.70 | 1,676,693.20 | | |
| Point 7 | | 0.00 | 273.71 | -105.71 | | 14,541,400.80 | 1,676,697.90 | | |
| Point 8 | | 0.00 | -1,043.19 | -102.94 | | 14,540,083.90 | 1,676,702.60 | | |
| Point 9 | | 0.00 | -1,901.70 | -100.19 | | 14,539,225.40 | 1,676,706.60 | | |
| Point 10 | | 0.00 | -1,903.03 | -560.19 | | 14,539,223.40 | 1,676,246.60 | | |
| Point 11 | | 0.00 | -1,904.35 | -1,020.19 | | 14,539,221.40 | 1,675,786.60 | | |
| Point 12 | | 0.00 | -1,046.55 | -1,022.94 | | 14,540,079.20 | 1,675,782.60 | | |
| Point 13 | | 0.00 | 270.56 | -1,025.72 | | 14,541,396.30 | 1,675,777.90 | | |
| Point 14 | | 0.00 | 1,587.56 | -1,028.50 | | 14,542,713.30 | 1,675,773.20 | | |
| Point 15 | | 0.00 | 2,904.37 | -1,033.57 | | 14,544,030.10 | 1,675,766.20 | | |
| Point 16 | | 0.00 | 4,225.28 | -1,036.75 | | 14,545,351.00 | 1,675,761.10 | | |
| Point 17 | | 0.00 | 5,538.58 | -1,039.83 | | 14,546,664.30 | 1,675,756.10 | | |
| Point 18 | | 0.00 | 6,851.99 | -1,043.21 | | 14,547,977.70 | 1,675,750.80 | | |

Anadarko

Survey Report

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|------------------|--------------------------------|-------------------------------------|---------------------------------|
| Company: | US ROCKIES WATTENBERG PLANNING | Local Co-ordinate Reference: | Well WAGNER 27C-10HZ |
| Project: | WELD-NAD83-UTMFT13N | TVD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Site: | 1N-67W-22 Wagner 8-22HZ Pad | MD Reference: | RKB = 17' @ 4985.00usft (D Rig) |
| Well: | WAGNER 27C-10HZ | North Reference: | True |
| Wellbore: | Plan A | Survey Calculation Method: | Minimum Curvature |
| Design: | Permit Rev-1 | Database: | PLANNING |

| | | | | | | | |
|--|--------|----------|-----------|---------------|--------------|---------------|--------------|
| Point 19 | 0.00 | 7,712.69 | -1,044.65 | 14,548,838.40 | 1,675,748.10 | | |
| Point 20 | 0.00 | 7,713.02 | -584.65 | 14,548,839.40 | 1,676,208.10 | | |
| Point 21 | 0.00 | 7,713.25 | -124.65 | 14,548,840.30 | 1,676,668.10 | | |
| 1N-R67W-Sec. 10_Secti | 0.00 | 0.00 | -95.00 | 7,142.37 | -1,585.68 | 14,548,267.29 | 1,675,207.90 |
| - plan misses target center by 7316.89usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) | | | | | | | |
| - Polygon | | | | | | | |
| Point 1 | -95.00 | 4,992.86 | -2,976.12 | 14,553,255.80 | 1,672,224.50 | | |
| Point 2 | -95.00 | 4,994.59 | -331.69 | 14,553,261.39 | 1,674,868.92 | | |
| Point 3 | -95.00 | 4,996.25 | 2,313.07 | 14,553,266.91 | 1,677,513.68 | | |
| Point 4 | -95.00 | 2,354.63 | 2,320.05 | 14,550,625.30 | 1,677,524.51 | | |
| Point 5 | -95.00 | -287.06 | 2,326.97 | 14,547,983.63 | 1,677,535.29 | | |
| Point 6 | -95.00 | -288.46 | -327.65 | 14,547,978.35 | 1,674,880.67 | | |
| Point 7 | -95.00 | -290.97 | -2,982.55 | 14,547,971.97 | 1,672,225.78 | | |
| WAGNER 27C-10HZ_Tc | 0.00 | 0.00 | 7,583.00 | 7,654.31 | -137.47 | 14,548,781.34 | 1,676,655.37 |
| - plan hits target center | | | | | | | |
| - Point | | | | | | | |

| Casing Points | | | | | |
|-----------------------|-----------------------|-------------------|---------------------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 1,826.90 | 1,800.00 | 9 5/8" | 9-5/8 | 13-1/2 | |
| 8,072.51 | 7,617.00 | Top of Production | 5-1/2 | 7-7/8 | |

| Formations | | | | | |
|-----------------------|-----------------------|------------------|-----------|---------|-------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| 1,364.04 | 1,349.00 | Fox Hills | | | |
| 4,675.36 | 4,586.00 | Sussex | | | |
| 7,310.67 | 7,215.60 | Sharon Springs | | | |
| 7,335.62 | 7,238.60 | Niobrara Top | | | |
| 7,507.56 | 7,384.50 | Niobrara B Bench | | | |
| 7,619.78 | 7,464.50 | Niobrara C Bench | | | |
| 7,915.86 | 7,598.50 | Fort Hays | | | |
| 7,991.44 | 7,612.20 | Codell | | | |

| Plan Annotations | | | | | |
|-----------------------|-----------------------|-------------------|--------------|------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | | |
| | | +N/-S (usft) | +E/-W (usft) | Comment | |
| 200 | 200 | 0 | 0 | Begin Nudge @ 200.00ft | |
| 1067 | 1059 | -95 | -24 | End Nudge @ 1066.67ft | |
| 4047 | 3963 | -745 | -186 | Begin Drop @ 4046.67ft | |
| 4697 | 4607 | -817 | -204 | End Drop @ 4696.67ft | |
| 7070 | 6980 | -817 | -204 | KOP @ 7069.75ft | |
| 7600 | 7451 | -608 | -202 | DLS = 9°/100' | |
| 8073 | 7617 | -177 | -199 | End Build @ 8072.51ft | |
| 15,904 | 7583 | 7654 | -137 | TD Well @ 15904.45ft | |

Checked By: _____ Approved By: _____ Date: _____