

PICEANCE VLY NAD 83

RU 31-06S-094W

RWF 13-31 Pad

RWF 14-31 - Slot B1

Wellbore #1

Plan: Plan #2 09Apr10 kjs

Standard Planning Report - Geographic

12 April, 2010

Williams
Planning Report - Geographic

| | | | |
|------------------|------------------------|-------------------------------------|---------------------------|
| Database: | Compass R5000 WIN AUTH | Local Co-ordinate Reference: | Well RWF 14-31 - Slot B1 |
| Company: | PICEANCE VLY NAD 83 | TVD Reference: | KB H&P @ 5382.0usft (H&P) |
| Project: | RU 31-06S-094W | MD Reference: | KB H&P @ 5382.0usft (H&P) |
| Site: | RWF 13-31 Pad | North Reference: | True |
| Well: | RWF 14-31 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #2 09Apr10 kjs | | |

| | | | |
|--------------------|-----------------------------|----------------------|----------------|
| Project | RU 31-06S-094W, 31-06S-094W | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Central Zone | | |

| | | | | | |
|-----------------------|----------|---------------|-------------------|-------------------|------------------|
| Site | | RWF 13-31 Pad | | | |
| Site Position: | | Northing: | 1,608,890.20 usft | Latitude: | 39° 28' 47.650 N |
| From: | Map | Easting: | 2,312,921.60 usft | Longitude: | 107° 56' 4.027 W |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13.200 in | Grid Convergence: | -1.535 ° |

| Well | RWF 14-31 - Slot B1 | | | | | |
|----------------------|---------------------|----------|---------------------|-------------------|---------------|------------------|
| Well Position | +N/-S | 0.0 usft | Northing: | 1,608,899.02 usft | Latitude: | 39° 28' 47.736 N |
| | +E/-W | 0.0 usft | Easting: | 2,312,916.89 usft | Longitude: | 107° 56' 4.091 W |
| Position Uncertainty | | 0.0 usft | Wellhead Elevation: | | Ground Level: | 5,358.0 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF200510 | 11/24/2008 | 10.632 | 65.816 | 52,537 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|-----|
| Design | Plan #2 09Apr10 kjs | | | | |
| Audit Notes: | | | | | |
| Version: | | Phase: | PLAN | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) | |
| | 0.0 | 0.0 | 0.0 | 188.41 | |

| 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 |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.000 | |
| 120.0 | 0.00 | 0.00 | 120.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.000 | |
| 386.7 | 8.00 | 188.46 | 385.8 | -18.4 | -2.7 | 3.00 | 3.00 | 0.00 | 188.460 | |
| 2,134.9 | 8.00 | 188.46 | 2,117.0 | -259.0 | -38.5 | 0.00 | 0.00 | 0.00 | 0.000 | |
| 2,478.0 | 18.29 | 188.39 | 2,450.7 | -336.1 | -49.9 | 3.00 | 3.00 | -0.02 | -0.124 | |
| 4,165.7 | 18.29 | 188.39 | 4,053.1 | -860.2 | -127.2 | 0.00 | 0.00 | 0.00 | 0.000 | |
| 5,385.2 | 0.00 | 0.00 | 5,252.0 | -1,051.2 | -155.4 | 1.50 | -1.50 | 0.00 | 180.000 | Top Gas (25' Radius) |
| 7,935.2 | 0.00 | 0.00 | 7,802.0 | -1,051.2 | -155.4 | 0.00 | 0.00 | 0.00 | 0.000 | |

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| Company: | PICEANCE VLY NAD 83 | TVD Reference: | KB H&P @ 5382.0usft (H&P) |
| Project: | RU 31-06S-094W | MD Reference: | KB H&P @ 5382.0usft (H&P) |
| Site: | RWF 13-31 Pad | North Reference: | True |
| Well: | RWF 14-31 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #2 09Apr10 kjs | | |

| Planned Survey | | | | | | | | | | |
|----------------------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude | |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 1,608,899.02 | 2,312,916.89 | 39° 28' 47.736 N | 107° 56' 4.091 W | |
| 120.0 | 0.00 | 0.00 | 120.0 | 0.0 | 0.0 | 1,608,899.02 | 2,312,916.89 | 39° 28' 47.736 N | 107° 56' 4.091 W | |
| Start Build 3.00 | | | | | | | | | | |
| 386.7 | 8.00 | 188.46 | 385.8 | -18.4 | -2.7 | 1,608,880.71 | 2,312,913.66 | 39° 28' 47.555 N | 107° 56' 4.125 W | |
| Hold 8.00 Inclination | | | | | | | | | | |
| 1,107.9 | 8.00 | 188.46 | 1,100.0 | -117.7 | -17.5 | 1,608,781.86 | 2,312,896.24 | 39° 28' 46.573 N | 107° 56' 4.314 W | |
| 9 5/8" | | | | | | | | | | |
| 1,932.9 | 8.00 | 188.46 | 1,917.0 | -231.2 | -34.4 | 1,608,668.78 | 2,312,876.31 | 39° 28' 45.451 N | 107° 56' 4.529 W | |
| Top of "G" Sand | | | | | | | | | | |
| 2,033.9 | 8.00 | 188.46 | 2,017.0 | -245.1 | -36.5 | 1,608,654.94 | 2,312,873.87 | 39° 28' 45.314 N | 107° 56' 4.556 W | |
| Base of "G" Sand | | | | | | | | | | |
| 2,134.9 | 8.00 | 188.46 | 2,117.0 | -259.0 | -38.5 | 1,608,641.10 | 2,312,871.43 | 39° 28' 45.176 N | 107° 56' 4.582 W | |
| Start Build DLS 3.00 | | | | | | | | | | |
| 2,477.9 | 18.29 | 188.39 | 2,450.6 | -336.1 | -49.9 | 1,608,564.36 | 2,312,857.98 | 39° 28' 44.414 N | 107° 56' 4.727 W | |
| Hold 18.29 Inclination | | | | | | | | | | |
| 2,478.0 | 18.29 | 188.39 | 2,450.7 | -336.1 | -49.9 | 1,608,564.34 | 2,312,857.97 | 39° 28' 44.414 N | 107° 56' 4.727 W | |
| 4,165.7 | 18.29 | 188.39 | 4,053.1 | -860.2 | -127.2 | 1,608,042.54 | 2,312,766.67 | 39° 28' 39.235 N | 107° 56' 5.713 W | |
| 4,165.8 | 18.29 | 188.39 | 4,053.2 | -860.2 | -127.2 | 1,608,042.50 | 2,312,766.67 | 39° 28' 39.234 N | 107° 56' 5.713 W | |
| Start Drop -1.50 | | | | | | | | | | |
| 4,413.8 | 14.57 | 188.39 | 4,291.0 | -929.6 | -137.5 | 1,607,973.42 | 2,312,754.58 | 39° 28' 38.548 N | 107° 56' 5.844 W | |
| Mesaverde | | | | | | | | | | |
| 5,385.2 | 0.00 | 0.00 | 5,252.0 | -1,051.2 | -155.4 | 1,607,852.40 | 2,312,733.40 | 39° 28' 37.347 N | 107° 56' 6.072 W | |
| Top Gas - Approx. Top Gas | | | | | | | | | | |
| 6,800.2 | 0.00 | 0.00 | 6,667.0 | -1,051.2 | -155.4 | 1,607,852.40 | 2,312,733.40 | 39° 28' 37.347 N | 107° 56' 6.072 W | |
| Cameo Coals | | | | | | | | | | |
| 7,625.2 | 0.00 | 0.00 | 7,492.0 | -1,051.2 | -155.4 | 1,607,852.40 | 2,312,733.40 | 39° 28' 37.347 N | 107° 56' 6.072 W | |
| Coal D | | | | | | | | | | |
| 7,695.2 | 0.00 | 0.00 | 7,562.0 | -1,051.2 | -155.4 | 1,607,852.40 | 2,312,733.40 | 39° 28' 37.347 N | 107° 56' 6.072 W | |
| Base L. Cameo Pay | | | | | | | | | | |
| 7,785.2 | 0.00 | 0.00 | 7,652.0 | -1,051.2 | -155.4 | 1,607,852.40 | 2,312,733.40 | 39° 28' 37.347 N | 107° 56' 6.072 W | |
| Rollins SS | | | | | | | | | | |
| 7,935.2 | 0.00 | 0.00 | 7,802.0 | -1,051.2 | -155.4 | 1,607,852.40 | 2,312,733.40 | 39° 28' 37.347 N | 107° 56' 6.072 W | |
| TD at 7935.2 | | | | | | | | | | |

| Design Targets | | | | | | | | | | |
|---------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|------------------|------------------|--|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude | |
| - hit/miss target | | | | | | | | | | |
| - Shape | | | | | | | | | | |
| Top Gas (25' Radius) R\ | 0.00 | 0.00 | 5,252.0 | -1,051.2 | -155.4 | 1,607,852.40 | 2,312,733.40 | 39° 28' 37.347 N | 107° 56' 6.072 W | |
| - plan hits target center | | | | | | | | | | |
| - Circle (radius 25.0) | | | | | | | | | | |

| Casing Points | | | | | |
|-----------------------|-----------------------|--------|----------------------|--------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (in) | Hole Diameter (in) | |
| 1,107.9 | 1,100.0 | 9 5/8" | 9.625 | 12.250 | |

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| Project: | RU 31-06S-094W | MD Reference: | KB H&P @ 5382.0usft (H&P) |
| Site: | RWF 13-31 Pad | North Reference: | True |
| Well: | RWF 14-31 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
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| Formations | | | | | | |
|-----------------------|-----------------------|-------------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 1,932.9 | 1,917.0 | Top of "G" Sand | | | | |
| 2,033.9 | 2,017.0 | Base of "G" Sand | | | | |
| 4,413.8 | 4,291.0 | Mesaverde | | | | |
| 5,385.2 | 5,252.0 | Approx. Top Gas | | | | |
| 6,800.2 | 6,667.0 | Cameo Coals | | | | |
| 7,625.2 | 7,492.0 | Coal D | | | | |
| 7,695.2 | 7,562.0 | Base L. Cameo Pay | | | | |
| 7,785.2 | 7,652.0 | Rollins SS | | | | |
| 7,935.2 | 7,802.0 | TD | | | | |

| Plan Annotations | | | | | |
|-----------------------|-----------------------|-------------------|--------------|------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | | |
| | | +N/-S (usft) | +E/-W (usft) | Comment | |
| 120.0 | 120.0 | 0.0 | 0.0 | Start Build 3.00 | |
| 386.7 | 385.8 | -18.4 | -2.7 | Hold 8.00 Inclination | |
| 2,134.9 | 2,117.0 | -259.0 | -38.5 | Start Build DLS 3.00 | |
| 2,477.9 | 2,450.6 | -336.1 | -49.9 | Hold 18.29 Inclination | |
| 4,165.8 | 4,053.2 | -860.2 | -127.2 | Start Drop -1.50 | |
| 5,385.2 | 5,252.0 | -1,051.2 | -155.4 | Top Gas | |
| 7,935.2 | 7,802.0 | -1,051.2 | -155.4 | TD at 7935.2 | |