

PICEANCE HL NAD 83

TR 21-05S-097W

TR 32-21-597 Pad

TR 441-21-597 - Slot A11

Wellbore #1

Plan: Plan #1 31Jan16 sam

Standard Planning Report

11 March, 2016

WPX

Planning Report

| | | | |
|------------------|---------------------|-------------------------------------|-------------------------------------|
| Database: | COMPASS | Local Co-ordinate Reference: | Well TR 441-21-597 (A11) - Slot A11 |
| Company: | PICEANCE HL NAD 83 | TVD Reference: | KB @ 8601.00usft (HP 318) |
| Project: | TR 21-05S-097W | MD Reference: | KB @ 8601.00usft (HP 318) |
| Site: | TR 32-21-597 Pad | North Reference: | True |
| Well: | TR 441-21-597 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 31Jan16 sam | | |

| | | | |
|--------------------|---|----------------------|----------------|
| Project | TR 21-05S-097W, Garfield County, CO, TR 21-05S-097W | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Central Zone | | |

| | | | | | |
|-----------------------|-----------|------------------|-------------------|-------------------|-------------|
| Site | | TR 32-21-597 Pad | | | |
| Site Position: | | Northing: | 1,656,389.83 usft | Latitude: | 39.602628 |
| From: | Map | Easting: | 2,216,147.65 usft | Longitude: | -108.282293 |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13.200 in | Grid Convergence: | -1.75 ° |

| | | | | | | |
|----------------------|--------------------------|------------|---------------------|-------------------|---------------|---------------|
| Well | TR 441-21-597 - Slot A11 | | | | | |
| Well Position | +N/-S | 59.15 usft | Northing: | 1,656,447.90 usft | Latitude: | 39.602790 |
| | +E/-W | 34.56 usft | Easting: | 2,216,184.00 usft | Longitude: | -108.282171 |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | | Ground Level: | 8,577.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2015 | 1/31/2016 | 9.98 | 65.65 | 51,682 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------------|--|
| Design | Plan #1 31Jan16 sam | | | | |
| Audit Notes: | | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.00 | |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (bearing) | |
| | 0.00 | 0.00 | 0.00 | 73.10 | |

| Plan Sections | | | | | | | | | | |
|-----------------------|-----------------|-------------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|---------|--------|
| Measured Depth (usft) | Inclination (°) | Azimuth (bearing) | 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 | |
| 144.00 | 0.00 | 0.00 | 144.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 742.09 | 17.94 | 73.10 | 732.36 | 27.00 | 88.88 | 3.00 | 3.00 | 0.00 | 73.10 | |
| 5,510.93 | 17.94 | 73.10 | 5,269.27 | 453.99 | 1,494.58 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,707.12 | 0.00 | 0.00 | 6,446.00 | 507.99 | 1,672.33 | 1.50 | -1.50 | 0.00 | 180.00 | |
| 9,397.12 | 0.00 | 0.00 | 9,136.00 | 507.99 | 1,672.33 | 0.00 | 0.00 | 0.00 | 0.00 | |

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| Company: | PICEANCE HL NAD 83 | TVD Reference: | KB @ 8601.00usft (HP 318) |
| Project: | TR 21-05S-097W | MD Reference: | KB @ 8601.00usft (HP 318) |
| Site: | TR 32-21-597 Pad | North Reference: | True |
| Well: | TR 441-21-597 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 31Jan16 sam | | |

| Planned Survey | | | | | | | | | |
|-------------------------------|-----------------|-------------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (bearing) | 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 |
| 144.00 | 0.00 | 0.00 | 144.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Start Build 3.00 | | | | | | | | | |
| 500.00 | 10.68 | 73.10 | 497.94 | 9.62 | 31.66 | 33.08 | 3.00 | 3.00 | 0.00 |
| 742.09 | 17.94 | 73.10 | 732.36 | 27.00 | 88.88 | 92.89 | 3.00 | 3.00 | 0.00 |
| Hold 17.94 Inclination | | | | | | | | | |
| 1,000.00 | 17.94 | 73.10 | 977.73 | 50.09 | 164.90 | 172.34 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 17.94 | 73.10 | 1,453.41 | 94.86 | 312.28 | 326.37 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 17.94 | 73.10 | 1,929.09 | 139.63 | 459.67 | 480.41 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 17.94 | 73.10 | 2,404.78 | 184.40 | 607.05 | 634.44 | 0.00 | 0.00 | 0.00 |
| 2,748.30 | 17.94 | 73.10 | 2,641.00 | 206.63 | 680.24 | 710.93 | 0.00 | 0.00 | 0.00 |
| Wasatch | | | | | | | | | |
| 3,000.00 | 17.94 | 73.10 | 2,880.46 | 229.17 | 754.44 | 788.47 | 0.00 | 0.00 | 0.00 |
| 3,011.08 | 17.94 | 73.10 | 2,891.00 | 230.16 | 757.70 | 791.89 | 0.00 | 0.00 | 0.00 |
| 9 5/8" | | | | | | | | | |
| 3,500.00 | 17.94 | 73.10 | 3,356.14 | 273.94 | 901.82 | 942.51 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 17.94 | 73.10 | 3,831.82 | 318.71 | 1,049.20 | 1,096.54 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 17.94 | 73.10 | 4,307.50 | 363.48 | 1,196.59 | 1,250.57 | 0.00 | 0.00 | 0.00 |
| 4,692.88 | 17.94 | 73.10 | 4,491.00 | 380.75 | 1,253.44 | 1,309.99 | 0.00 | 0.00 | 0.00 |
| Top of "G" Sand | | | | | | | | | |
| 4,745.43 | 17.94 | 73.10 | 4,541.00 | 385.45 | 1,268.93 | 1,326.18 | 0.00 | 0.00 | 0.00 |
| Base of "G" Sand | | | | | | | | | |
| 4,909.41 | 17.94 | 73.10 | 4,697.00 | 400.13 | 1,317.27 | 1,376.70 | 0.00 | 0.00 | 0.00 |
| Fort Union | | | | | | | | | |
| 5,000.00 | 17.94 | 73.10 | 4,783.19 | 408.24 | 1,343.97 | 1,404.61 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 17.94 | 73.10 | 5,258.87 | 453.01 | 1,491.36 | 1,558.64 | 0.00 | 0.00 | 0.00 |
| 5,510.93 | 17.94 | 73.10 | 5,269.27 | 453.99 | 1,494.58 | 1,562.01 | 0.00 | 0.00 | 0.00 |
| Start Drop -1.50 | | | | | | | | | |
| 6,000.00 | 10.61 | 73.10 | 5,742.91 | 489.02 | 1,609.88 | 1,682.52 | 1.50 | -1.50 | 0.00 |
| 6,405.81 | 4.52 | 73.10 | 6,145.00 | 504.54 | 1,660.97 | 1,735.90 | 1.50 | -1.50 | 0.00 |
| Mesaverde | | | | | | | | | |
| 6,500.00 | 3.11 | 73.10 | 6,238.98 | 506.36 | 1,666.96 | 1,742.17 | 1.50 | -1.50 | 0.00 |
| 6,707.12 | 0.00 | 0.00 | 6,446.00 | 507.99 | 1,672.33 | 1,747.78 | 1.50 | -1.50 | -35.30 |
| Vertical | | | | | | | | | |
| 7,000.00 | 0.00 | 0.00 | 6,738.88 | 507.99 | 1,672.33 | 1,747.78 | 0.00 | 0.00 | 0.00 |
| 7,333.12 | 0.00 | 0.00 | 7,072.00 | 507.99 | 1,672.33 | 1,747.78 | 0.00 | 0.00 | 0.00 |
| Approx. Top Gas | | | | | | | | | |
| 7,500.00 | 0.00 | 0.00 | 7,238.88 | 507.99 | 1,672.33 | 1,747.78 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 0.00 | 0.00 | 7,738.88 | 507.99 | 1,672.33 | 1,747.78 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 0.00 | 0.00 | 8,238.88 | 507.99 | 1,672.33 | 1,747.78 | 0.00 | 0.00 | 0.00 |
| 8,835.12 | 0.00 | 0.00 | 8,574.00 | 507.99 | 1,672.33 | 1,747.78 | 0.00 | 0.00 | 0.00 |
| Cameo Coals | | | | | | | | | |
| 9,000.00 | 0.00 | 0.00 | 8,738.88 | 507.99 | 1,672.33 | 1,747.78 | 0.00 | 0.00 | 0.00 |
| 9,247.12 | 0.00 | 0.00 | 8,986.00 | 507.99 | 1,672.33 | 1,747.78 | 0.00 | 0.00 | 0.00 |
| Rollins SS | | | | | | | | | |
| 9,397.12 | 0.00 | 0.00 | 9,136.00 | 507.99 | 1,672.33 | 1,747.78 | 0.00 | 0.00 | 0.00 |
| TD at 9397.12 - TD | | | | | | | | | |

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| Project: | TR 21-05S-097W | MD Reference: | KB @ 8601.00usft (HP 318) |
| Site: | TR 32-21-597 Pad | North Reference: | True |
| Well: | TR 441-21-597 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Plan #1 31Jan16 sam | | |

| Design Targets | | | | | | | | | |
|---|-----------|-----------|----------|--------|----------|--------------|--------------|-----------|-------------|
| Target Name | | | | | | | | | |
| - hit/miss target | Dip Angle | Dip Dir. | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
| - Shape | (°) | (bearing) | (usft) | (usft) | (usft) | (usft) | (usft) | | |
| TR 441-21-597 MVRD 5 | 0.00 | 0.00 | 6,146.00 | 507.85 | 1,672.43 | 1,656,904.30 | 2,217,871.20 | 39.604185 | -108.276235 |
| - plan misses target center by 11.82usft at 6407.60usft MD (6146.79 TVD, 504.58 N, 1661.10 E) | | | | | | | | | |
| - Circle (radius 50.00) | | | | | | | | | |

| Casing Points | | | | | |
|----------------|----------------|--------|------|-----------------|---------------|
| Measured Depth | Vertical Depth | | | Casing Diameter | Hole Diameter |
| (usft) | (usft) | | Name | (in) | (in) |
| 3,011.08 | 2,891.00 | 9 5/8" | | 9.625 | 13.500 |

| Formations | | | | | | |
|----------------|----------------|------------------|------|-----------|------|---------------|
| Measured Depth | Vertical Depth | | | | Dip | Dip Direction |
| (usft) | (usft) | | Name | Lithology | (°) | (bearing) |
| 2,748.30 | 2,641.00 | Wasatch | | | 0.00 | |
| 4,692.88 | 4,491.00 | Top of "G" Sand | | | 0.00 | |
| 4,745.43 | 4,541.00 | Base of "G" Sand | | | 0.00 | |
| 4,909.41 | 4,697.00 | Fort Union | | | 0.00 | |
| 6,405.81 | 6,145.00 | Mesaverde | | | 0.00 | |
| 7,333.12 | 7,072.00 | Approx. Top Gas | | | 0.00 | |
| 8,835.12 | 8,574.00 | Cameo Coals | | | 0.00 | |
| 9,247.12 | 8,986.00 | Rollins SS | | | 0.00 | |
| 9,397.12 | 9,136.00 | TD | | | 0.00 | |

| Plan Annotations | | | | | |
|------------------|----------------|-------------------|----------|------------------------|--|
| Measured Depth | Vertical Depth | Local Coordinates | | | |
| (usft) | (usft) | +N/-S | +E/-W | Comment | |
| (usft) | (usft) | (usft) | (usft) | | |
| 144.00 | 144.00 | 0.00 | 0.00 | Start Build 3.00 | |
| 742.09 | 732.36 | 27.00 | 88.88 | Hold 17.94 Inclination | |
| 5,510.93 | 5,269.27 | 453.99 | 1,494.58 | Start Drop -1.50 | |
| 6,707.12 | 6,446.00 | 507.99 | 1,672.33 | Vertical | |
| 9,397.12 | 9,136.00 | 507.99 | 1,672.33 | TD at 9397.12 | |