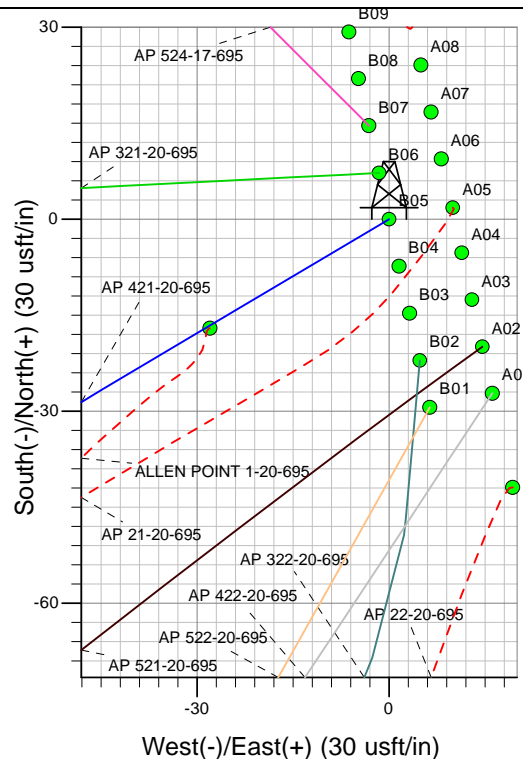
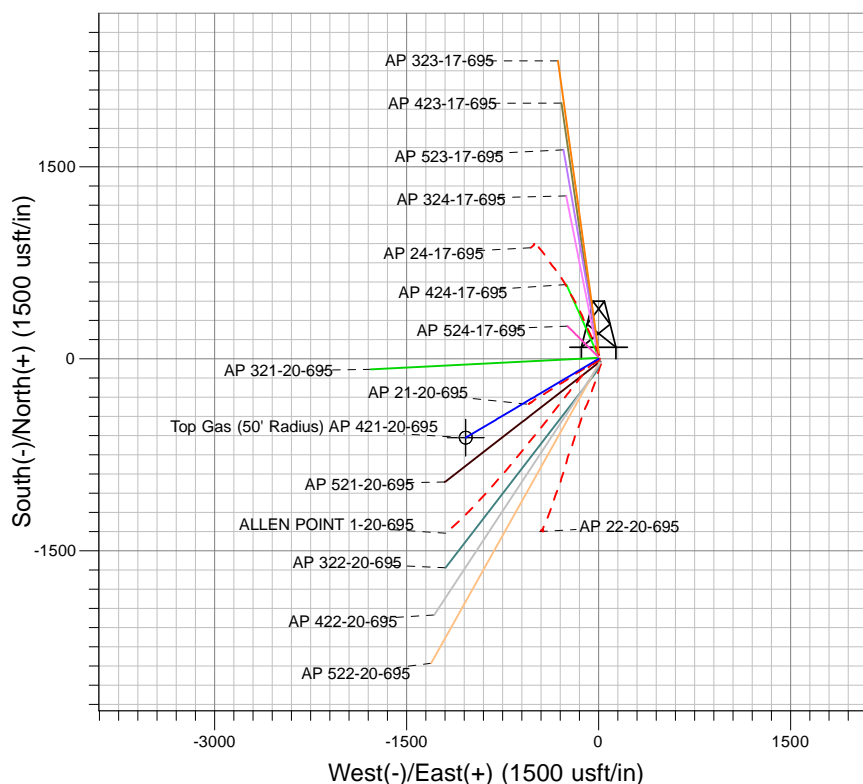
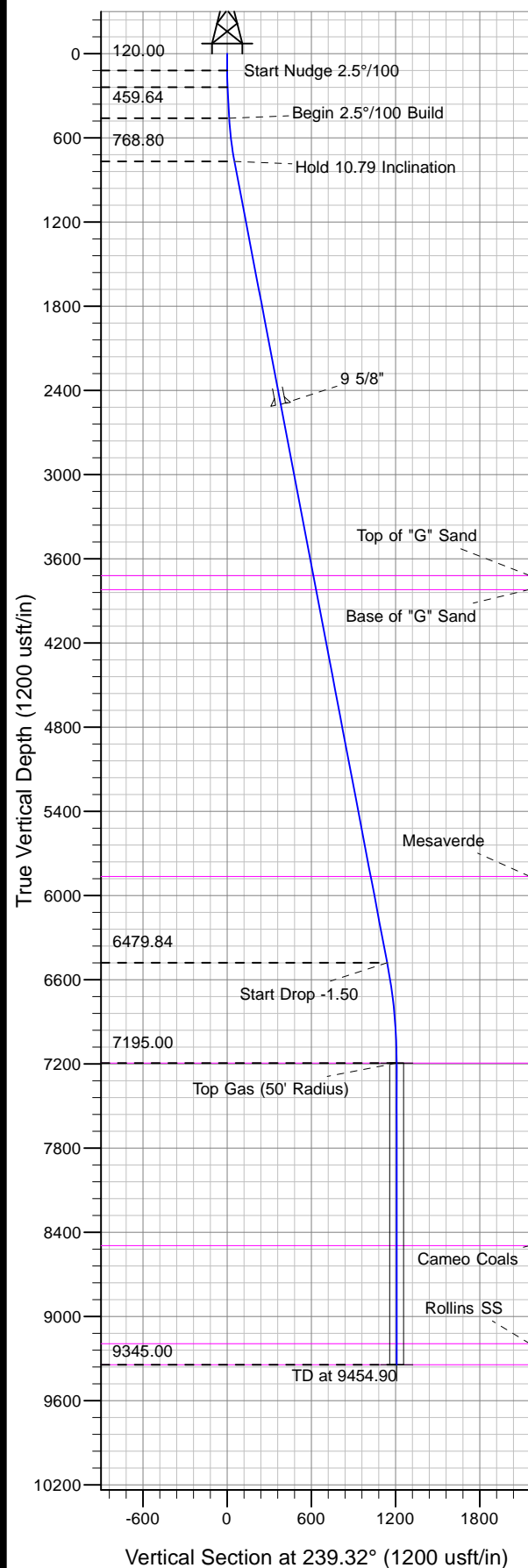




Well Name: AP 421-20-695  
Surface Location: AP 21-20-695 Pad  
North American Datum 1983 , US State Plane 1983, Colorado Central Zone  
Ground Elevation: 6909.00

| +N/-S | +E/-W | Northing   | Easting    | Latitude | Longitude  | Slot |
|-------|-------|------------|------------|----------|------------|------|
| 0.00  | 0.00  | 1623257.22 | 2288332.20 | 39.51749 | -108.02295 | B05  |

KELLY BUSHING @ 6935.00usft (Nabors 573 (26' RKB) kjs)



Project: AP 20-06S-095W  
Site: AP 21-20-695 Pad  
Well: AP 421-20-695  
Plan 3 29Aug13 kjs

Azimuths to True North  
Magnetic North: 10.46°  
Magnetic Field  
Strength: 52373.1snT  
Dip Angle: 65.79°  
Date: 7/16/2010  
Model: IGRF2005-10

#### ANNOTATIONS

| TVD     | MD      | Inc   | Azi    | +N/-S   | +E/-W    | Vsect   | Departure | Annotation             |
|---------|---------|-------|--------|---------|----------|---------|-----------|------------------------|
| 120.00  | 120.00  | 0.00  | 0.00   | 0.00    | 0.00     | 0.00    | 0.00      | Start Nudge 2.5°/100   |
| 239.95  | 240.00  | 3.00  | 239.32 | -1.60   | -2.70    | 3.14    | 3.14      | Hold 3.00 Inclination  |
| 459.64  | 460.00  | 3.00  | 239.32 | -7.48   | -12.60   | 14.65   | 14.65     | Begin 2.5°/100 Build   |
| 768.80  | 771.64  | 10.79 | 239.32 | -26.55  | -44.76   | 52.04   | 52.04     | Hold 10.79 Inclination |
| 6479.84 | 6585.50 | 10.79 | 239.32 | -581.89 | -980.96  | 1140.56 | 1140.56   | Start Drop -1.50       |
| 7195.00 | 7304.90 | 0.00  | 0.00   | -616.35 | -1039.06 | 1208.11 | 1208.11   | Top Gas                |
| 9345.00 | 9454.90 | 0.00  | 0.00   | -616.35 | -1039.06 | 1208.11 | 1208.11   | TD at 9454.90          |



## **PICEANCE VLY NAD 83**

**AP 20-06S-095W**

**AP 21-20-695 Pad**

**AP 421-20-695 - Slot B05**

**Wellbore #1**

**Plan: Plan 3 29Aug13 kjs**

## **Standard Planning Report - Geographic**

**12 November, 2013**



IBM Global Services  
Planning Report - Geographic

|                  |                     |                                     |  |
|------------------|---------------------|-------------------------------------|--|
| <b>Database:</b> | COMPASS-PICEANCE    | <b>Local Co-ordinate Reference:</b> | Well AP 421-20-695 - Slot B05                          |
| <b>Company:</b>  | PICEANCE VLY NAD 83 | <b>TVD Reference:</b>               | KELLY BUSHING @ 6935.00usft (Nabors 573 (26' RKB) kjs) |
| <b>Project:</b>  | AP 20-06S-095W      | <b>MD Reference:</b>                | KELLY BUSHING @ 6935.00usft (Nabors 573 (26' RKB) kjs) |
| <b>Site:</b>     | AP 21-20-695 Pad    | <b>North Reference:</b>             | True   |
| <b>Well:</b>     | AP 421-20-695       | <b>Survey Calculation Method:</b>   | Minimum Curvature                                      |
| <b>Wellbore:</b> | Wellbore #1         |                                     |  |
| <b>Design:</b>   | Plan 3 29Aug13 kjs  |                                     |  |

|                    |  |                      |                             |
|--------------------|--|----------------------|-----------------------------|
| <b>Project</b>     | AP 20-06S-095W, Garfield County, CO, 20-06S-095W |                      |                             |
| <b>Map System:</b> | US State Plane 1983                              | <b>System Datum:</b> | Mean Sea Level              |
| <b>Geo Datum:</b>  | North American Datum 1983                        |                      |                             |
| <b>Map Zone:</b>   | Colorado Central Zone                            |                      | Using geodetic scale factor |

|                              |                  |                     |                   |                                   |
|------------------------------|------------------|---------------------|-------------------|-----------------------------------|
| <b>Site</b>                  | AP 21-20-695 Pad |                     |                   |                                   |
| <b>Site Position:</b>        |                  | <b>Northing:</b>    | 1,623,258.80 usft | <b>Latitude:</b> 39.51750         |
| <b>From:</b> Map             |                  | <b>Easting:</b>     | 2,288,342.20 usft | <b>Longitude:</b> -108.02291      |
| <b>Position Uncertainty:</b> | 0.00 usft        | <b>Slot Radius:</b> | 13.200 in         | <b>Grid Convergence:</b> -1.591 ° |

|                             |                          |           |                            |                   |
|-----------------------------|--------------------------|-----------|----------------------------|-------------------|
| <b>Well</b>                 | AP 421-20-695 - Slot B05 |           |                            |                   |
| <b>Well Position</b>        | <b>+N/-S</b>             | 0.00 usft | <b>Northing:</b>           | 1,623,257.22 usft |
|                             | <b>+E/-W</b>             | 0.00 usft | <b>Easting:</b>            | 2,288,332.20 usft |
| <b>Position Uncertainty</b> | 0.00 usft                |           | <b>Wellhead Elevation:</b> |                   |
|                             |                          |           | <b>Ground Level:</b>       | 6,909.00 usft     |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2005-10       | 7/16/2010          | 10.461                 | 65.788               | 52,373                     |

|                          |                                |                     |                      |                      |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| <b>Design</b>            | Plan 3 29Aug13 kjs             |                     |                      |                      |
| <b>Audit Notes:</b>      |                                |                     |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                  | PLAN                | <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                 | 239.32               |

|                              |                        |                    |                              |                     |                     |                                |                               |                              |                |                      |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|-------------------------------|------------------------------|----------------|----------------------|
| <b>Plan Sections</b>         |                        |                    |                              |                     |                     |                                |                               |                              |                |                      |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> | <b>TFO (°)</b> | <b>Target</b>        |
| 0.00                         | 0.00                   | 0.00               | 0.00                         | 0.00                | 0.00                | 0.00                           | 0.00                          | 0.00                         | 0.000          |                      |
| 120.00                       | 0.00                   | 0.00               | 120.00                       | 0.00                | 0.00                | 0.00                           | 0.00                          | 0.00                         | 0.000          |                      |
| 240.00                       | 3.00                   | 239.32             | 239.95                       | -1.60               | -2.70               | 2.50                           | 2.50                          | 0.00                         | 239.320        |                      |
| 460.00                       | 3.00                   | 239.32             | 459.64                       | -7.48               | -12.60              | 0.00                           | 0.00                          | 0.00                         | 0.000          |                      |
| 771.64                       | 10.79                  | 239.32             | 768.80                       | -26.55              | -44.76              | 2.50                           | 2.50                          | 0.00                         | 0.006          |                      |
| 6,585.50                     | 10.79                  | 239.32             | 6,479.84                     | -581.89             | -980.96             | 0.00                           | 0.00                          | 0.00                         | 0.000          |                      |
| 7,304.91                     | 0.00                   | 0.00               | 7,195.00                     | -616.35             | -1,039.06           | 1.50                           | -1.50                         | 0.00                         | 180.000        | Top Gas (50' Radius) |
| 9,454.91                     | 0.00                   | 0.00               | 9,345.00                     | -616.35             | -1,039.06           | 0.00                           | 0.00                          | 0.00                         | 0.000          | TD / PBHL AP 421-20  |



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Planning Report - Geographic

|                  |                     |                                     |  |
|------------------|---------------------|-------------------------------------|--|
| <b>Database:</b> | COMPASS-PICEANCE    | <b>Local Co-ordinate Reference:</b> | Well AP 421-20-695 - Slot B05                          |
| <b>Company:</b>  | PICEANCE VLY NAD 83 | <b>TVD Reference:</b>               | KELLY BUSHING @ 6935.00usft (Nabors 573 (26' RKB) kjs) |
| <b>Project:</b>  | AP 20-06S-095W      | <b>MD Reference:</b>                | KELLY BUSHING @ 6935.00usft (Nabors 573 (26' RKB) kjs) |
| <b>Site:</b>     | AP 21-20-695 Pad    | <b>North Reference:</b>             | True   |
| <b>Well:</b>     | AP 421-20-695       | <b>Survey Calculation Method:</b>   | Minimum Curvature                                      |
| <b>Wellbore:</b> | Wellbore #1         |                                     |  |
| <b>Design:</b>   | Plan 3 29Aug13 kjs  |                                     |  |

| Planned Survey              |                    |                |                             |                 |                 |                           |                          |          |            |  |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|---------------------------|--------------------------|----------|------------|--|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude | Longitude  |  |
| 0.00                        | 0.00               | 0.00           | 0.00                        | 0.00            | 0.00            | 1,623,257.22              | 2,288,332.20             | 39.51749 | -108.02295 |  |
| 120.00                      | 0.00               | 0.00           | 120.00                      | 0.00            | 0.00            | 1,623,257.22              | 2,288,332.20             | 39.51749 | -108.02295 |  |
| Start Nudge 2.5°/100        |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 240.00                      | 3.00               | 239.32         | 239.95                      | -1.60           | -2.70           | 1,623,255.69              | 2,288,329.46             | 39.51749 | -108.02296 |  |
| Hold 3.00 Inclination       |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 460.00                      | 3.00               | 239.32         | 459.64                      | -7.48           | -12.60          | 1,623,250.09              | 2,288,319.40             | 39.51747 | -108.02299 |  |
| Begin 2.5°/100 Build        |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 500.00                      | 4.00               | 239.32         | 499.57                      | -8.72           | -14.70          | 1,623,248.90              | 2,288,317.26             | 39.51747 | -108.02300 |  |
| 771.64                      | 10.79              | 239.32         | 768.80                      | -26.55          | -44.76          | 1,623,231.92              | 2,288,286.72             | 39.51742 | -108.02311 |  |
| Hold 10.79 Inclination      |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 1,000.00                    | 10.79              | 239.32         | 993.11                      | -48.36          | -81.53          | 1,623,211.14              | 2,288,249.36             | 39.51736 | -108.02324 |  |
| 1,500.00                    | 10.79              | 239.32         | 1,484.27                    | -96.12          | -162.05         | 1,623,165.63              | 2,288,167.55             | 39.51723 | -108.02352 |  |
| 2,000.00                    | 10.79              | 239.32         | 1,975.43                    | -143.88         | -242.56         | 1,623,120.13              | 2,288,085.75             | 39.51710 | -108.02381 |  |
| 2,500.00                    | 10.79              | 239.32         | 2,466.59                    | -191.64         | -323.08         | 1,623,074.62              | 2,288,003.94             | 39.51697 | -108.02409 |  |
| 2,534.01                    | 10.79              | 239.32         | 2,500.00                    | -194.89         | -328.55         | 1,623,071.53              | 2,287,998.38             | 39.51696 | -108.02411 |  |
| 9 5/8"                      |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 3,000.00                    | 10.79              | 239.32         | 2,957.75                    | -239.40         | -403.59         | 1,623,029.12              | 2,287,922.13             | 39.51683 | -108.02438 |  |
| 3,500.00                    | 10.79              | 239.32         | 3,448.90                    | -287.16         | -484.11         | 1,622,983.62              | 2,287,840.33             | 39.51670 | -108.02467 |  |
| 3,775.98                    | 10.79              | 239.32         | 3,720.00                    | -313.53         | -528.55         | 1,622,958.50              | 2,287,795.17             | 39.51663 | -108.02482 |  |
| Top of "G" Sand             |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 3,877.78                    | 10.79              | 239.32         | 3,820.00                    | -323.25         | -544.94         | 1,622,949.24              | 2,287,778.52             | 39.51660 | -108.02488 |  |
| Base of "G" Sand            |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 4,000.00                    | 10.79              | 239.32         | 3,940.06                    | -334.92         | -564.62         | 1,622,938.11              | 2,287,758.52             | 39.51657 | -108.02495 |  |
| 4,500.00                    | 10.79              | 239.32         | 4,431.22                    | -382.68         | -645.14         | 1,622,892.61              | 2,287,676.71             | 39.51644 | -108.02524 |  |
| 5,000.00                    | 10.79              | 239.32         | 4,922.38                    | -430.44         | -725.65         | 1,622,847.10              | 2,287,594.91             | 39.51631 | -108.02552 |  |
| 5,500.00                    | 10.79              | 239.32         | 5,413.54                    | -478.20         | -806.17         | 1,622,801.60              | 2,287,513.10             | 39.51618 | -108.02581 |  |
| 5,959.59                    | 10.79              | 239.32         | 5,865.00                    | -522.10         | -880.17         | 1,622,759.77              | 2,287,437.90             | 39.51606 | -108.02607 |  |
| Mesaverde                   |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 6,000.00                    | 10.79              | 239.32         | 5,904.69                    | -525.96         | -886.68         | 1,622,756.10              | 2,287,431.29             | 39.51605 | -108.02609 |  |
| 6,500.00                    | 10.79              | 239.32         | 6,395.85                    | -573.72         | -967.20         | 1,622,710.59              | 2,287,349.48             | 39.51592 | -108.02638 |  |
| 6,585.50                    | 10.79              | 239.32         | 6,479.84                    | -581.89         | -980.96         | 1,622,702.81              | 2,287,335.50             | 39.51589 | -108.02643 |  |
| Start Drop -1.50            |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 7,000.00                    | 4.57               | 239.32         | 6,890.42                    | -610.15         | -1,028.60       | 1,622,675.89              | 2,287,287.10             | 39.51582 | -108.02659 |  |
| 7,304.91                    | 0.00               | 0.00           | 7,195.00                    | -616.35         | -1,039.06       | 1,622,669.98              | 2,287,276.47             | 39.51580 | -108.02663 |  |
| Top Gas - Approx. Top Gas   |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 7,500.00                    | 0.00               | 0.00           | 7,390.10                    | -616.35         | -1,039.06       | 1,622,669.98              | 2,287,276.47             | 39.51580 | -108.02663 |  |
| 8,000.00                    | 0.00               | 0.00           | 7,890.10                    | -616.35         | -1,039.06       | 1,622,669.98              | 2,287,276.47             | 39.51580 | -108.02663 |  |
| 8,500.00                    | 0.00               | 0.00           | 8,390.10                    | -616.35         | -1,039.06       | 1,622,669.98              | 2,287,276.47             | 39.51580 | -108.02663 |  |
| 8,604.91                    | 0.00               | 0.00           | 8,495.00                    | -616.35         | -1,039.06       | 1,622,669.98              | 2,287,276.47             | 39.51580 | -108.02663 |  |
| Cameo Coals                 |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 9,000.00                    | 0.00               | 0.00           | 8,890.10                    | -616.35         | -1,039.06       | 1,622,669.98              | 2,287,276.47             | 39.51580 | -108.02663 |  |
| 9,304.91                    | 0.00               | 0.00           | 9,195.00                    | -616.35         | -1,039.06       | 1,622,669.98              | 2,287,276.47             | 39.51580 | -108.02663 |  |
| Rollins SS                  |                    |                |                             |                 |                 |                           |                          |          |            |  |
| 9,454.91                    | 0.00               | 0.00           | 9,345.00                    | -616.35         | -1,039.06       | 1,622,669.98              | 2,287,276.47             | 39.51580 | -108.02663 |  |
| TD                          |                    |                |                             |                 |                 |                           |                          |          |            |  |



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Planning Report - Geographic

|                  |                     |                                     |  |
|------------------|---------------------|-------------------------------------|--|
| <b>Database:</b> | COMPASS-PICEANCE    | <b>Local Co-ordinate Reference:</b> | Well AP 421-20-695 - Slot B05                          |
| <b>Company:</b>  | PICEANCE VLY NAD 83 | <b>TVD Reference:</b>               | KELLY BUSHING @ 6935.00usft (Nabors 573 (26' RKB) kjs) |
| <b>Project:</b>  | AP 20-06S-095W      | <b>MD Reference:</b>                | KELLY BUSHING @ 6935.00usft (Nabors 573 (26' RKB) kjs) |
| <b>Site:</b>     | AP 21-20-695 Pad    | <b>North Reference:</b>             | True   |
| <b>Well:</b>     | AP 421-20-695       | <b>Survey Calculation Method:</b>   | Minimum Curvature                                      |
| <b>Wellbore:</b> | Wellbore #1         |                                     |  |
| <b>Design:</b>   | Plan 3 29Aug13 kjs  |                                     |  |

| Design Targets  |                  |                 |               |                 |                 |                    |                   |          |            |
|---|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|----------|------------|
| Target Name<br>- hit/miss target<br>- Shape                                     | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Northing<br>(usft) | Easting<br>(usft) | Latitude | Longitude  |
| Top Gas (50' Radius) AF<br>- plan hits target center<br>- Circle (radius 50.00) | 0.00             | 0.00            | 7,195.00      | -616.35         | -1,039.06       | 1,622,669.98       | 2,287,276.47      | 39.51580 | -108.02663 |
| TD / PBHL AP 421-20-6<br>- plan hits target center<br>- Point                   | 0.00             | 0.00            | 9,345.00      | -616.35         | -1,039.06       | 1,622,669.98       | 2,287,276.47      | 39.51580 | -108.02663 |

| Casing Points            |                          |        |                         |                       |  |
|--------------------------|--------------------------|--------|-------------------------|-----------------------|--|
| Measured Depth<br>(usft) | Vertical Depth<br>(usft) | Name   | Casing Diameter<br>(in) | Hole Diameter<br>(in) |  |
| 2,534.01                 | 2,500.00                 | 9 5/8" | 9.625                   | 12.250                |  |

| Formations               |                          |                  |           |            |                      |  |
|--------------------------|--------------------------|------------------|-----------|------------|----------------------|--|
| Measured Depth<br>(usft) | Vertical Depth<br>(usft) | Name             | Lithology | Dip<br>(°) | Dip Direction<br>(°) |  |
| 3,775.98                 | 3,720.00                 | Top of "G" Sand  |           |            |                      |  |
| 3,877.78                 | 3,820.00                 | Base of "G" Sand |           |            |                      |  |
| 5,959.59                 | 5,865.00                 | Mesaverde        |           |            |                      |  |
| 7,304.91                 | 7,195.00                 | Approx. Top Gas  |           |            |                      |  |
| 8,604.91                 | 8,495.00                 | Cameo Coals      |           |            |                      |  |
| 9,304.91                 | 9,195.00                 | Rollins SS       |           |            |                      |  |
| 9,454.91                 | 9,345.00                 | TD               |           |            |                      |  |

| Plan Annotations         |                          |                   |                 |                        |  |
|--------------------------|--------------------------|-------------------|-----------------|------------------------|--|
| Measured Depth<br>(usft) | Vertical Depth<br>(usft) | Local Coordinates |                 |                        |  |
|                          |                          | +N/-S<br>(usft)   | +E/-W<br>(usft) | Comment                |  |
| 120.00                   | 120.00                   | 0.00              | 0.00            | Start Nudge 2.5°/100   |  |
| 240.00                   | 239.95                   | -1.60             | -2.70           | Hold 3.00 Inclination  |  |
| 460.00                   | 459.64                   | -7.48             | -12.60          | Begin 2.5°/100 Build   |  |
| 771.64                   | 768.80                   | -26.55            | -44.76          | Hold 10.79 Inclination |  |
| 6,585.50                 | 6,479.84                 | -581.89           | -980.96         | Start Drop -1.50       |  |
| 7,304.91                 | 7,195.00                 | -616.35           | -1,039.06       | Top Gas                |  |
| 9,454.91                 | 9,345.00                 | -616.35           | -1,039.06       | TD at 9454.90          |  |