

# **PICEANCE VLY NAD 83**

**PA 29-06S-095W**

**DOE 3-W-29 Pad**

**PA 423-29 - Slot A2**

**Wellbore #1**

**Plan: Plan #1 05Feb09 kjs**

## **Standard Planning Report - Geographic**

**07 August, 2009**

# Williams Production RMT Company

## Planning Report - Geographic

<b>Database:</b> EDMDB_COMPASS	<b>Local Co-ordinate Reference:</b> Well PA 423-29 - Slot A2
<b>Company:</b> PICEANCE VLY NAD 83	<b>TVD Reference:</b> WELL @ 5702.0ft (Nabors 577 (26') kjs)
<b>Project:</b> PA 29-06S-095W	<b>MD Reference:</b> WELL @ 5702.0ft (Nabors 577 (26') kjs)
<b>Site:</b> DOE 3-W-29 Pad	<b>North Reference:</b> True
<b>Well:</b> PA 423-29	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> Wellbore #1	
<b>Design:</b> Plan #1 05Feb09 kjs	

<b>Project</b> PA 29-06S-095W, Garfield County, CO			
<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> DOE 3-W-29 Pad			
<b>Site Position:</b>	<b>Northing:</b> 1,613,247.00 ft	<b>Latitude:</b> 39° 29' 23.965 N	
<b>From:</b> Map	<b>Easting:</b> 2,287,962.20 ft	<b>Longitude:</b> 108° 1' 23.779 W	
<b>Position Uncertainty:</b> 0.0 ft	<b>Slot Radius:</b> in	<b>Grid Convergence:</b> -1.59 °	

<b>Well</b> PA 423-29 - Slot A2					
<b>Well Position</b>	<b>+N/-S</b> 0.0 ft	<b>Northing:</b> 1,613,210.15 ft	<b>Latitude:</b> 39° 29' 23.617 N		
	<b>+E/-W</b> 0.0 ft	<b>Easting:</b> 2,288,018.75 ft	<b>Longitude:</b> 108° 1' 23.045 W		
<b>Position Uncertainty</b>	0.0 ft	<b>Wellhead Elevation:</b> ft	<b>Ground Level:</b> 5,676.0 ft		

<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</b>
	IGRF2000	12/31/2004	(°) 11.47	(°) 65.98	(nT) 53,090

<b>Design</b> Plan #1 05Feb09 kjs				
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b> PLAN	<b>Tie On Depth:</b> 0.0		
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	355.39

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.00	
875.4	18.89	355.39	861.8	123.0	-9.9	2.50	2.50	0.00	355.39	
4,425.3	18.89	355.39	4,220.6	1,268.3	-102.2	0.00	0.00	0.00	0.00	
5,684.4	0.00	0.00	5,457.0	1,473.3	-118.7	1.50	-1.50	0.00	180.00	Top Gas (25' Radius)
7,834.4	0.00	0.00	7,607.0	1,473.3	-118.7	0.00	0.00	0.00	0.00	

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<b>Wellbore:</b> Wellbore #1	
<b>Design:</b> Plan #1 05Feb09 kjs	

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
0.0	0.00	0.00	0.0	0.0	0.0	1,613,210.15	2,288,018.75	39° 29' 23.617 N	108° 1' 23.045 W	
120.0	0.00	0.00	120.0	0.0	0.0	1,613,210.15	2,288,018.75	39° 29' 23.617 N	108° 1' 23.045 W	
875.4	18.89	355.39	861.8	123.0	-9.9	1,613,333.35	2,288,012.26	39° 29' 24.832 N	108° 1' 23.172 W	
2,038.2	18.89	355.39	1,962.0	498.1	-40.1	1,613,709.19	2,287,992.46	39° 29' 28.540 N	108° 1' 23.557 W	
<b>Top of "G" Sand</b>										
2,143.9	18.89	355.39	2,062.0	532.2	-42.9	1,613,743.35	2,287,990.66	39° 29' 28.877 N	108° 1' 23.592 W	
<b>Base of "G" Sand</b>										
2,249.6	18.89	355.39	2,162.0	566.3	-45.6	1,613,777.51	2,287,988.86	39° 29' 29.214 N	108° 1' 23.627 W	
<b>9 5/8"</b>										
4,273.5	18.89	355.39	4,077.0	1,219.3	-98.2	1,614,431.70	2,287,954.40	39° 29' 35.668 N	108° 1' 24.299 W	
<b>Mesaverde</b>										
4,425.3	18.89	355.39	4,220.6	1,268.3	-102.2	1,614,480.76	2,287,951.82	39° 29' 36.152 N	108° 1' 24.349 W	
5,684.4	0.00	0.00	5,457.0	1,473.3	-118.7	1,614,686.10	2,287,941.00	39° 29' 38.177 N	108° 1' 24.560 W	
<b>Approx. Top Gas</b>										
7,109.4	0.00	0.00	6,882.0	1,473.3	-118.7	1,614,686.10	2,287,941.00	39° 29' 38.177 N	108° 1' 24.560 W	
<b>Cameo Coals</b>										
7,684.4	0.00	0.00	7,457.0	1,473.3	-118.7	1,614,686.10	2,287,941.00	39° 29' 38.177 N	108° 1' 24.560 W	
<b>Rollins SS</b>										
7,834.4	0.00	0.00	7,607.0	1,473.3	-118.7	1,614,686.10	2,287,941.00	39° 29' 38.177 N	108° 1' 24.560 W	
<b>TD</b>										

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
Top Gas (25' Radius) P/	0.00	0.00	5,457.0	1,473.3	-118.7	1,614,686.10	2,287,941.00	39° 29' 38.177 N	108° 1' 24.560 W	
- hit/miss target										
- Shape										
- plan hits target										
- Circle (radius 25.0)										

Casing Points										
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)						
2,249.6	2,162.0	9 5/8"	9.625	12.250						

Formations										
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)					
2,038.2	1,962.00	Top of "G" Sand								
2,143.9	2,062.00	Base of "G" Sand								
4,273.5	4,077.00	Mesaverde								
5,684.4	5,457.00	Approx. Top Gas								
7,109.4	6,882.00	Cameo Coals								
7,684.4	7,457.00	Rollins SS								
7,834.4	7,607.00	TD								

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### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
120.0	120.0	0.0	0.0	Start Build 2.50
875.4	861.8	123.0	-9.9	Hold 18.88 Inclination
4,425.3	4,220.6	1,268.3	-102.2	Start Drop -1.50
5,684.4	5,457.0	1,473.3	-118.7	Top Gas
7,834.4	7,607.0	1,473.3	-118.7	TD at 7834.4