



## **PICEANCE VLY NAD 83**

**PA 21-06S-095W**

**PA 22-21 Pad**

**PA 442-21 - Slot 2B2**

**Wellbore #1**

**Plan: Design #2 07Nov12 kjs**

## **Standard Planning Report - Geographic**

**13 March, 2013**



**WPX Energy**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well PA 442-21 - Slot 2B2
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6056.00usft (Nabors 26')
<b>Project:</b>	PA 21-06S-095W	<b>MD Reference:</b>	KELLY BUSHING @ 6056.00usft (Nabors 26')
<b>Site:</b>	PA 22-21 Pad	<b>North Reference:</b>	True
<b>Well:</b>	PA 442-21	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 07Nov12 kjs		

<b>Project</b>	PA 21-06S-095W, Garfield County, CO, 21-06S-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>	PA 22-21 Pad		
<b>Site Position:</b>		<b>Northing:</b>	1,620,701.00 usft
<b>From:</b>	Map	<b>Easting:</b>	2,292,437.50 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	39.51079
		<b>Longitude:</b>	-108.00815
		<b>Grid Convergence:</b>	-1.58 °

Well	PA 442-21 - Slot 2B2					
Well Position	+N/-S	0.00 usft	Northing:	1,620,589.40 usft	Latitude:	39.51049
	+E/-W	0.00 usft	Easting:	2,292,501.70 usft	Longitude:	-108.00791
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	6,030.00 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>
	IGRF2010	6/6/2012	10.23	65.72	52,157

<b>Design</b>	Design #2 07Nov12 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	84.86

<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	0.00	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,272.61	43.05	84.86	2,075.69	69.04	768.30	2.00	2.00	0.00	84.86	
4,825.84	43.05	84.86	3,941.42	225.05	2,504.30	0.00	0.00	0.00	0.00	
7,695.98	0.00	0.00	6,549.00	317.11	3,528.70	1.50	-1.50	0.00	180.00	
7,795.98	0.00	0.00	6,649.00	317.11	3,528.70	0.00	0.00	0.00	0.00	Top Gas (25' Radius)
9,895.98	0.00	0.00	8,749.00	317.11	3,528.70	0.00	0.00	0.00	0.00	



**WPX Energy**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well PA 442-21 - Slot 2B2
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6056.00usft (Nabors 26')
<b>Project:</b>	PA 21-06S-095W	<b>MD Reference:</b>	KELLY BUSHING @ 6056.00usft (Nabors 26')
<b>Site:</b>	PA 22-21 Pad	<b>North Reference:</b>	True
<b>Well:</b>	PA 442-21	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 07Nov12 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	
0.00	0.00	0.00	0.00	0.00	0.00	1,620,589.40	2,292,501.70	39.51049	-108.00791	
120.00	0.00	0.00	120.00	0.00	0.00	1,620,589.40	2,292,501.70	39.51049	-108.00791	
<b>Start Build 2.00</b>										
500.00	7.60	84.86	498.89	2.25	25.06	1,620,590.96	2,292,526.82	39.51049	-108.00783	
1,000.00	17.60	84.86	986.23	12.00	133.56	1,620,597.71	2,292,635.54	39.51052	-108.00744	
1,500.00	27.60	84.86	1,447.25	29.18	324.69	1,620,609.60	2,292,827.06	39.51057	-108.00676	
2,000.00	37.60	84.86	1,867.94	53.26	592.66	1,620,626.28	2,293,095.58	39.51063	-108.00581	
2,272.61	43.05	84.86	2,075.69	69.04	768.30	1,620,637.21	2,293,271.58	39.51068	-108.00519	
<b>Hold 43.05 Inclination</b>										
2,373.00	43.05	84.86	2,149.05	75.18	836.56	1,620,641.45	2,293,339.98	39.51069	-108.00495	
<b>9 5/8"</b>										
2,500.00	43.05	84.86	2,241.85	82.94	922.91	1,620,646.83	2,293,426.51	39.51071	-108.00464	
3,000.00	43.05	84.86	2,607.22	113.49	1,262.87	1,620,667.98	2,293,767.17	39.51080	-108.00344	
3,330.88	43.05	84.86	2,849.00	133.71	1,487.84	1,620,681.98	2,293,992.61	39.51085	-108.00264	
<b>Top of "G" Sand</b>										
3,467.73	43.05	84.86	2,949.00	142.07	1,580.89	1,620,687.77	2,294,085.85	39.51088	-108.00231	
<b>Base of "G" Sand</b>										
3,500.00	43.05	84.86	2,972.58	144.04	1,602.83	1,620,689.14	2,294,107.84	39.51088	-108.00223	
4,000.00	43.05	84.86	3,337.95	174.59	1,942.79	1,620,710.29	2,294,448.50	39.51097	-108.00103	
4,500.00	43.05	84.86	3,703.32	205.14	2,282.75	1,620,731.45	2,294,789.16	39.51105	-107.99982	
4,825.84	43.05	84.86	3,941.42	225.05	2,504.30	1,620,745.23	2,295,011.16	39.51110	-107.99904	
<b>Start Drop -1.50</b>										
5,000.00	40.44	84.86	4,071.35	235.43	2,619.79	1,620,752.42	2,295,126.89	39.51113	-107.99863	
5,500.00	32.94	84.86	4,472.00	262.15	2,917.11	1,620,770.92	2,295,424.83	39.51121	-107.99758	
6,000.00	25.44	84.86	4,908.20	283.96	3,159.81	1,620,786.02	2,295,668.03	39.51127	-107.99672	
6,251.82	21.66	84.86	5,139.00	292.97	3,260.01	1,620,792.26	2,295,768.43	39.51129	-107.99636	
<b>Mesaverde</b>										
6,500.00	17.94	84.86	5,372.47	300.49	3,343.73	1,620,797.47	2,295,852.32	39.51131	-107.99606	
7,000.00	10.44	84.86	5,856.86	311.45	3,465.72	1,620,805.06	2,295,974.56	39.51134	-107.99563	
7,500.00	2.94	84.86	6,353.11	316.66	3,523.69	1,620,808.67	2,296,032.65	39.51136	-107.99543	
7,695.98	0.00	0.00	6,549.00	317.11	3,528.70	1,620,808.98	2,296,037.67	39.51136	-107.99541	
<b>Vertical</b>										
7,795.98	0.00	0.00	6,649.00	317.11	3,528.70	1,620,808.98	2,296,037.67	39.51136	-107.99541	
<b>Top Gas - Approx. Top Gas</b>										
8,000.00	0.00	0.00	6,853.02	317.11	3,528.70	1,620,808.98	2,296,037.67	39.51136	-107.99541	
8,500.00	0.00	0.00	7,353.02	317.11	3,528.70	1,620,808.98	2,296,037.67	39.51136	-107.99541	
9,000.00	0.00	0.00	7,853.02	317.11	3,528.70	1,620,808.98	2,296,037.67	39.51136	-107.99541	
9,055.98	0.00	0.00	7,909.00	317.11	3,528.70	1,620,808.98	2,296,037.67	39.51136	-107.99541	
<b>Cameo Coals</b>										
9,500.00	0.00	0.00	8,353.02	317.11	3,528.70	1,620,808.98	2,296,037.67	39.51136	-107.99541	
9,795.98	0.00	0.00	8,649.00	317.11	3,528.70	1,620,808.98	2,296,037.67	39.51136	-107.99541	
<b>Rollins SS</b>										
9,895.98	0.00	0.00	8,749.00	317.11	3,528.70	1,620,808.98	2,296,037.67	39.51136	-107.99541	
<b>TD at 9895.98 - TD</b>										



**WPX Energy**  
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<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6056.00usft (Nabors 26')
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<b>Site:</b>	PA 22-21 Pad	<b>North Reference:</b>	True
<b>Well:</b>	PA 442-21	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 07Nov12 kjs		

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
Top Gas (25' Radius) P/ - plan hits target center - Circle (radius 25.00)	0.00	0.00	6,649.00	317.11	3,528.70	1,620,808.98	2,296,037.67	39.51136	-107.99541

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,373.00	2,149.05	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,330.88	2,849.00	Top of "G" Sand				
3,467.73	2,949.00	Base of "G" Sand				
6,251.82	5,139.00	Mesaverde				
7,795.98	6,649.00	Approx. Top Gas				
9,055.98	7,909.00	Cameo Coals				
9,795.98	8,649.00	Rollins SS				
9,895.98	8,749.00	TD				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
120.00	120.00	0.00	0.00	Start Build 2.00
2,272.61	2,075.69	69.04	768.30	Hold 43.05 Inclination
4,825.84	3,941.42	225.05	2,504.30	Start Drop -1.50
7,695.98	6,549.00	317.11	3,528.70	Vertical
7,795.98	6,649.00	317.11	3,528.70	Top Gas
9,895.98	8,749.00	317.11	3,528.70	TD at 9895.98