



# **PICEANCE VLY NAD 83**

**RU 07-07S-093W**

**RU 44-7 Pad**

**RU 34-7 - Slot A08**

**Wellbore #1**

**Plan: Design #2 28May14 mab**

## **Standard Planning Report - Geographic**

**12 June, 2014**

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 34-7 - Slot A08
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 7943.00usft (Nabors 576 (26' RKB) kjs)
<b>Project:</b>	RU 07-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7943.00usft (Nabors 576 (26' RKB) kjs)
<b>Site:</b>	RU 44-7 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 34-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 28May14 mab		

<b>Project</b>	RU 07-07S-093W, 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>	RU 44-7 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,598,795.70000 usft	<b>Latitude:</b> 39.45468
<b>From:</b> Map		<b>Easting:</b>	2,347,575.10000 usft	<b>Longitude:</b> -107.81082
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.46 °

<b>Well</b>	RU 34-7 - Slot A08			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,598,823.80000 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,347,566.90000 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	7,917.00 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>
	IGRF200510	3/12/2014	9.87	65.68	52,002

<b>Design</b>	Design #2 28May14 mab			
<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 (bearing)</b>
	0.00	0.00	0.00	263.26

<b>Plan Sections</b>										
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	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
401.29	9.85	263.26	399.91	-2.83	-23.94	3.50	3.50	0.00	263.26	
6,746.99	9.85	263.26	6,652.16	-130.08	-1,101.49	0.00	0.00	0.00	0.00	
7,239.25	0.00	0.00	7,142.00	-135.03	-1,143.39	2.00	-2.00	0.00	180.00	
7,339.25	0.00	0.00	7,242.00	-135.03	-1,143.39	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
10,089.25	0.00	0.00	9,992.00	-135.03	-1,143.39	0.00	0.00	0.00	0.00	

**WPX**  
Planning Report - Geographic

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<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 7943.00usft (Nabors 576 (26' RKB) kjs)
<b>Project:</b>	RU 07-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7943.00usft (Nabors 576 (26' RKB) kjs)
<b>Site:</b>	RU 44-7 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 34-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 28May14 mab		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	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	1,598,823.80000	2,347,566.90000	39.45476	-107.81085
120.00	0.00	0.00	120.00	0.00	0.00	1,598,823.80000	2,347,566.90000	39.45476	-107.81085
<b>Start Build 3.50</b>									
200.00	2.80	263.26	199.97	-0.23	-1.94	1,598,823.62024	2,347,564.95400	39.45476	-107.81085
400.00	9.80	263.26	398.64	-2.80	-23.72	1,598,821.60281	2,347,543.11475	39.45475	-107.81093
401.29	9.85	263.26	399.91	-2.83	-23.94	1,598,821.58253	2,347,542.89517	39.45475	-107.81093
<b>Hold 9.85° Inc, 263.26° Az</b>									
600.00	9.85	263.26	595.69	-6.81	-57.68	1,598,818.45736	2,347,509.06426	39.45474	-107.81105
800.00	9.85	263.26	792.75	-10.82	-91.65	1,598,815.31186	2,347,475.01326	39.45473	-107.81117
1,000.00	9.85	263.26	989.80	-14.83	-125.61	1,598,812.16636	2,347,440.96226	39.45472	-107.81129
1,200.00	9.85	263.26	1,186.86	-18.84	-159.57	1,598,809.02086	2,347,406.91127	39.45471	-107.81141
1,314.84	9.85	263.26	1,300.00	-21.15	-179.07	1,598,807.21478	2,347,387.35990	39.45470	-107.81148
<b>9 5/8"</b>									
1,400.00	9.85	263.26	1,383.91	-22.86	-193.53	1,598,805.87536	2,347,372.86027	39.45470	-107.81153
1,600.00	9.85	263.26	1,580.96	-26.87	-227.49	1,598,802.72986	2,347,338.80927	39.45469	-107.81165
1,800.00	9.85	263.26	1,778.02	-30.88	-261.45	1,598,799.58436	2,347,304.75828	39.45468	-107.81177
2,000.00	9.85	263.26	1,975.07	-34.89	-295.41	1,598,796.43886	2,347,270.70728	39.45466	-107.81189
2,200.00	9.85	263.26	2,172.13	-38.90	-329.38	1,598,793.29336	2,347,236.65628	39.45465	-107.81201
2,400.00	9.85	263.26	2,369.18	-42.91	-363.34	1,598,790.14786	2,347,202.60529	39.45464	-107.81213
2,600.00	9.85	263.26	2,566.24	-46.92	-397.30	1,598,787.00236	2,347,168.55430	39.45463	-107.81225
2,800.00	9.85	263.26	2,763.29	-50.93	-431.26	1,598,783.85686	2,347,134.50330	39.45462	-107.81237
3,000.00	9.85	263.26	2,960.35	-54.94	-465.22	1,598,780.71136	2,347,100.45231	39.45461	-107.81249
3,200.00	9.85	263.26	3,157.40	-58.95	-499.18	1,598,777.56586	2,347,066.40131	39.45460	-107.81261
3,400.00	9.85	263.26	3,354.46	-62.96	-533.14	1,598,774.42036	2,347,032.35031	39.45459	-107.81274
3,600.00	9.85	263.26	3,551.51	-66.97	-567.11	1,598,771.27487	2,346,998.29931	39.45458	-107.81286
3,800.00	9.85	263.26	3,748.57	-70.98	-601.07	1,598,768.12937	2,346,964.24832	39.45457	-107.81298
3,844.08	9.85	263.26	3,792.00	-71.87	-608.55	1,598,767.43604	2,346,956.74287	39.45456	-107.81300
<b>Top of "G" Sand</b>									
3,945.58	9.85	263.26	3,892.00	-73.90	-625.79	1,598,765.83978	2,346,939.46290	39.45456	-107.81306
<b>Base of "G" Sand</b>									
4,000.00	9.85	263.26	3,945.62	-74.99	-635.03	1,598,764.98387	2,346,930.19732	39.45455	-107.81310
4,200.00	9.85	263.26	4,142.68	-79.01	-668.99	1,598,761.83837	2,346,896.14632	39.45454	-107.81322
4,400.00	9.85	263.26	4,339.73	-83.02	-702.95	1,598,758.69287	2,346,862.09533	39.45453	-107.81334
4,600.00	9.85	263.26	4,536.78	-87.03	-736.91	1,598,755.54737	2,346,828.04433	39.45452	-107.81346
4,800.00	9.85	263.26	4,733.84	-91.04	-770.88	1,598,752.40187	2,346,793.99333	39.45451	-107.81358
5,000.00	9.85	263.26	4,930.89	-95.05	-804.84	1,598,749.25637	2,346,759.94235	39.45450	-107.81370
5,200.00	9.85	263.26	5,127.95	-99.06	-838.80	1,598,746.11087	2,346,725.89135	39.45449	-107.81382
5,400.00	9.85	263.26	5,325.00	-103.07	-872.76	1,598,742.96537	2,346,691.84035	39.45448	-107.81394
5,600.00	9.85	263.26	5,522.06	-107.08	-906.72	1,598,739.81987	2,346,657.78936	39.45447	-107.81406
5,800.00	9.85	263.26	5,719.11	-111.09	-940.68	1,598,736.67437	2,346,623.73836	39.45446	-107.81418
6,000.00	9.85	263.26	5,916.17	-115.10	-974.64	1,598,733.52887	2,346,589.68736	39.45444	-107.81430
6,200.00	9.85	263.26	6,113.22	-119.11	-1,008.61	1,598,730.38337	2,346,555.63637	39.45443	-107.81442
6,330.70	9.85	263.26	6,242.00	-121.73	-1,030.80	1,598,728.32773	2,346,533.38344	39.45443	-107.81450
<b>Mesaverde</b>									
6,400.00	9.85	263.26	6,310.28	-123.12	-1,042.57	1,598,727.23787	2,346,521.58537	39.45442	-107.81454
6,600.00	9.85	263.26	6,507.33	-127.13	-1,076.53	1,598,724.09237	2,346,487.53437	39.45441	-107.81466
6,746.99	9.85	263.26	6,652.16	-130.08	-1,101.49	1,598,721.78058	2,346,462.50845	39.45440	-107.81475
<b>Begin Drop -2.00°/100</b>									
6,800.00	8.79	263.26	6,704.47	-131.09	-1,110.01	1,598,720.99137	2,346,453.96502	39.45440	-107.81478
7,000.00	4.79	263.26	6,903.03	-133.86	-1,133.47	1,598,718.81840	2,346,430.44202	39.45439	-107.81486
7,200.00	0.79	263.26	7,102.75	-135.00	-1,143.12	1,598,717.92473	2,346,420.76776	39.45439	-107.81490

**WPX**  
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<b>Project:</b>	RU 07-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7943.00usft (Nabors 576 (26' RKB) kjs)
<b>Site:</b>	RU 44-7 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 34-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 28May14 mab		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
7,239.25	0.00	0.00	7,142.00	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
Vertical										
7,339.25	0.00	0.00	7,242.00	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
Top Gas - Approx. Top Gas										
7,400.00	0.00	0.00	7,302.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
7,600.00	0.00	0.00	7,502.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
7,800.00	0.00	0.00	7,702.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
8,000.00	0.00	0.00	7,902.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
8,200.00	0.00	0.00	8,102.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
8,400.00	0.00	0.00	8,302.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
8,600.00	0.00	0.00	8,502.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
8,800.00	0.00	0.00	8,702.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
9,000.00	0.00	0.00	8,902.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
9,077.25	0.00	0.00	8,980.00	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
Cameo Coals										
9,200.00	0.00	0.00	9,102.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
9,400.00	0.00	0.00	9,302.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
9,600.00	0.00	0.00	9,502.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
9,769.25	0.00	0.00	9,672.00	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
Coal D										
9,800.00	0.00	0.00	9,702.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
9,939.25	0.00	0.00	9,842.00	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
Rollins SS										
10,000.00	0.00	0.00	9,902.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
10,089.00	0.00	0.00	9,991.75	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
TD at 10089.25										
10,089.25	0.00	0.00	9,992.00	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	
TD										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Top Gas (50' Radius) RL - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,242.00	-135.03	-1,143.39	1,598,717.90000	2,346,420.50000	39.45439	-107.81490	

Casing Points										
Measured Depth (usft)	Vertical Depth (usft)	Name			Casing Diameter (in)	Hole Diameter (in)				
1,314.84	1,300.00	9 5/8"			9.625	13.500				

**WPX**  
Planning Report - Geographic

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<b>Project:</b>	RU 07-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7943.00usft (Nabors 576 (26' RKB) kjs)
<b>Site:</b>	RU 44-7 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 34-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 28May14 mab		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
3,844.08	3,792.00	Top of "G" Sand				
3,945.58	3,892.00	Base of "G" Sand				
6,330.70	6,242.00	Mesaverde				
7,339.25	7,242.00	Approx. Top Gas				
9,077.25	8,980.00	Cameo Coals				
9,769.25	9,672.00	Coal D				
9,939.25	9,842.00	Rollins SS				
10,089.25	9,992.00	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
120.00	120.00	0.00	0.00	Start Build 3.50	
401.29	399.91	-2.83	-23.94	Hold 9.85° Inc, 263.26° Az	
6,746.99	6,652.16	-130.08	-1,101.49	Begin Drop -2.00°/100	
7,239.25	7,142.00	-135.03	-1,143.39	Vertical	
7,339.25	7,242.00	-135.03	-1,143.39	Top Gas	
10,089.00	9,991.75	-135.03	-1,143.39	TD at 10089.25	