

# **PICEANCE VLY NAD 83**

**RU 08-07S-093W**

**RU 21-8 Pad**

**RU 542-8 - Slot A02**

**Wellbore #1**

**Plan: Design #2 14May15 sam**

## **Standard Planning Report**

**18 May, 2015**

# WPX

## Planning Report

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 542-8 (A02) - Slot A02
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Project:</b>	RU 08-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Site:</b>	RU 21-8 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 542-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 14May15 sam		

<b>Project</b>	RU 08-07S-093W		
<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		

Site	RU 21-8 Pad				
Site Position:		Northing:	1,602,707.70 usft	Latitude:	39.465627
From:	Map	Easting:	2,350,555.60 usft	Longitude:	-107.800612
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.45

Well	RU 542-8 - Slot A02					
Well Position	+N/-S	-78.81 usft	Northing:	1,602,631.21 usft	Latitude:	39.465411
	+E/-W	-90.50 usft	Easting:	2,350,463.14 usft	Longitude:	-107.800932
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,736.00 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	9/8/2014	9.84	65.66	51,918

<b>Design</b>	Design #2 14May15 sam			
<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	131.84

<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	
1,162.75	31.28	131.84	1,111.71	-185.23	206.85	3.00	3.00	0.00	131.84	
6,482.94	31.28	131.84	5,658.43	-2,028.18	2,264.82	0.00	0.00	0.00	0.00	
8,047.07	0.00	0.00	7,146.00	-2,306.03	2,575.09	2.00	-2.00	0.00	180.00	RU 542-8 TOP GAS 5
10,797.07	0.00	0.00	9,896.00	-2,306.03	2,575.09	0.00	0.00	0.00	0.00	

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Planning Report

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 542-8 (A02) - Slot A02
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Project:</b>	RU 08-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Site:</b>	RU 21-8 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 542-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 14May15 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
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 3.00</b>									
500.00	11.40	131.84	497.50	-25.14	28.07	37.68	3.00	3.00	0.00
1,000.00	26.40	131.84	969.19	-132.87	148.38	199.18	3.00	3.00	0.00
1,162.75	31.28	131.84	1,111.71	-185.23	206.85	277.66	3.00	3.00	0.00
<b>Hold 31.28 Inclination</b>									
1,300.00	31.28	131.84	1,229.01	-232.78	259.94	348.93	0.00	0.00	0.00
<b>9 5/8"</b>									
1,500.00	31.28	131.84	1,399.93	-302.06	337.30	452.78	0.00	0.00	0.00
2,000.00	31.28	131.84	1,827.24	-475.26	530.71	712.41	0.00	0.00	0.00
2,500.00	31.28	131.84	2,254.55	-648.47	724.12	972.04	0.00	0.00	0.00
3,000.00	31.28	131.84	2,681.85	-821.67	917.54	1,231.67	0.00	0.00	0.00
3,500.00	31.28	131.84	3,109.16	-994.87	1,110.95	1,491.30	0.00	0.00	0.00
4,000.00	31.28	131.84	3,536.47	-1,168.08	1,304.36	1,750.93	0.00	0.00	0.00
4,500.00	31.28	131.84	3,963.78	-1,341.28	1,497.77	2,010.56	0.00	0.00	0.00
4,713.22	31.28	131.84	4,146.00	-1,415.14	1,580.25	2,121.28	0.00	0.00	0.00
<b>Top of "G" Sand</b>									
4,848.95	31.28	131.84	4,262.00	-1,462.16	1,632.76	2,191.76	0.00	0.00	0.00
<b>Base of "G" Sand</b>									
5,000.00	31.28	131.84	4,391.09	-1,514.48	1,691.18	2,270.19	0.00	0.00	0.00
5,500.00	31.28	131.84	4,818.39	-1,687.69	1,884.60	2,529.82	0.00	0.00	0.00
6,000.00	31.28	131.84	5,245.70	-1,860.89	2,078.01	2,789.45	0.00	0.00	0.00
6,482.94	31.28	131.84	5,658.43	-2,028.18	2,264.82	3,040.22	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,500.00	30.94	131.84	5,673.04	-2,034.07	2,271.39	3,049.04	2.00	-2.00	0.00
7,000.00	20.94	131.84	6,122.09	-2,179.80	2,434.12	3,267.49	2.00	-2.00	0.00
7,500.00	10.94	131.84	6,602.25	-2,271.29	2,536.29	3,404.64	2.00	-2.00	0.00
7,825.85	4.42	131.84	6,925.00	-2,300.34	2,568.73	3,448.18	2.00	-2.00	0.00
<b>Mesaverde</b>									
8,000.00	0.94	131.84	7,098.93	-2,305.78	2,574.80	3,456.33	2.00	-2.00	0.00
8,047.07	0.00	0.00	7,146.00	-2,306.03	2,575.09	3,456.71	2.00	-2.00	-280.11
<b>Top Gas Target - Approx. Top Gas</b>									
8,500.00	0.00	0.00	7,598.93	-2,306.03	2,575.09	3,456.71	0.00	0.00	0.00
9,000.00	0.00	0.00	8,098.93	-2,306.03	2,575.09	3,456.71	0.00	0.00	0.00
9,500.00	0.00	0.00	8,598.93	-2,306.03	2,575.09	3,456.71	0.00	0.00	0.00
9,817.07	0.00	0.00	8,916.00	-2,306.03	2,575.09	3,456.71	0.00	0.00	0.00
<b>Cameo Coals</b>									
10,000.00	0.00	0.00	9,098.93	-2,306.03	2,575.09	3,456.71	0.00	0.00	0.00
10,497.07	0.00	0.00	9,596.00	-2,306.03	2,575.09	3,456.71	0.00	0.00	0.00
<b>Coal D</b>									
10,500.00	0.00	0.00	9,598.93	-2,306.03	2,575.09	3,456.71	0.00	0.00	0.00
10,647.07	0.00	0.00	9,746.00	-2,306.03	2,575.09	3,456.71	0.00	0.00	0.00
<b>Rollins SS</b>									
10,797.07	0.00	0.00	9,896.00	-2,306.03	2,575.09	3,456.71	0.00	0.00	0.00
<b>TD at 10797.07</b>									

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<b>Project:</b>	RU 08-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Site:</b>	RU 21-8 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 542-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 14May15 sam		

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
RU 542-8 TOP GAS 50' - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,146.00	-2,306.03	2,575.09	1,600,260.70	2,352,979.00	39.459079	-107.791812

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,300.00	1,229.01	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
4,713.22	4,146.00	Top of "G" Sand		0.00		
4,848.95	4,262.00	Base of "G" Sand		0.00		
7,825.85	6,925.00	Mesaverde		0.00		
8,047.07	7,146.00	Approx. Top Gas		0.00		
9,817.07	8,916.00	Cameo Coals		0.00		
10,497.07	9,596.00	Coal D		0.00		
10,647.07	9,746.00	Rollins SS		0.00		
10,797.07	9,896.00	TD		0.00		

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 3.00	
1,162.75	1,111.71	-185.23	206.85	Hold 31.28 Inclination	
6,482.94	5,658.43	-2,028.18	2,264.82	Start Drop -2.00	
8,047.07	7,146.00	-2,306.03	2,575.09	Top Gas Target	
10,797.07	9,896.00	-2,306.03	2,575.09	TD at 10797.07	