

# **PICEANCE VLY NAD 83**

**RU 06-07S-093W**

**RU 13-6 Pad**

**RU 412-6 - Slot B10**

**Wellbore #1**

**Plan: Design #2 2Nov15 sam**

## **Standard Planning Report**

**09 November, 2015**

# WPX

## Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well RU 412-6 (B10) - Slot B10
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KB @ 7009.00usft (HP 318)
<b>Project:</b>	RU 06-07S-093W	<b>MD Reference:</b>	KB @ 7009.00usft (HP 318)
<b>Site:</b>	RU 13-6 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 412-6	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 2Nov15 sam		

<b>Project</b>	RU 06-07S-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		Using geodetic scale factor

<b>Site</b>	RU 13-6 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,603,405.40 usft	<b>Latitude:</b> 39.467067
<b>From:</b> Map		<b>Easting:</b>	2,343,761.30 usft	<b>Longitude:</b> -107.824733
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.47 °

<b>Well</b>	RU 412-6 - Slot B10			
<b>Well Position</b>	<b>+N/-S</b>	63.91 usft	<b>Northing:</b>	1,603,469.90 usft
	<b>+E/-W</b>	-23.94 usft	<b>Easting:</b>	2,343,739.00 usft
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	6,985.00 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	7/17/2014	9.87	65.66	51,937

<b>Design</b>	Design #2 2Nov15 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	346.25

<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	
154.00	0.00	0.00	154.00	0.00	0.00	0.00	0.00	0.00	0.00	
692.58	16.16	346.25	685.47	73.28	-17.93	3.00	3.00	0.00	346.25	
5,442.80	16.16	346.25	5,248.06	1,357.29	-332.06	0.00	0.00	0.00	0.00	
6,519.96	0.00	0.00	6,311.00	1,503.84	-367.92	1.50	-1.50	0.00	180.00	
7,219.96	0.00	0.00	7,011.00	1,503.84	-367.92	0.00	0.00	0.00	0.00	RU 412-6 Top Gas 50
9,424.96	0.00	0.00	9,216.00	1,503.84	-367.92	0.00	0.00	0.00	0.00	

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<b>Project:</b>	RU 06-07S-093W	<b>MD Reference:</b>	KB @ 7009.00usft (HP 318)
<b>Site:</b>	RU 13-6 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 412-6	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 2Nov15 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
154.00	0.00	0.00	154.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 3.00</b>									
500.00	10.38	346.25	498.11	30.36	-7.43	31.26	3.00	3.00	0.00
692.58	16.16	346.25	685.47	73.28	-17.93	75.44	3.00	3.00	0.00
<b>Hold 16.16 Inclination</b>									
1,000.00	16.16	346.25	980.75	156.37	-38.26	160.99	0.00	0.00	0.00
1,124.00	16.16	346.25	1,099.85	189.89	-46.46	195.49	0.00	0.00	0.00
<b>9 5/8"</b>									
1,500.00	16.16	346.25	1,461.00	291.53	-71.32	300.13	0.00	0.00	0.00
2,000.00	16.16	346.25	1,941.25	426.68	-104.39	439.26	0.00	0.00	0.00
2,500.00	16.16	346.25	2,421.50	561.83	-137.45	578.40	0.00	0.00	0.00
3,000.00	16.16	346.25	2,901.75	696.99	-170.52	717.54	0.00	0.00	0.00
3,025.25	16.16	346.25	2,926.00	703.81	-172.19	724.57	0.00	0.00	0.00
<b>Top of "G" Sand</b>									
3,129.36	16.16	346.25	3,026.00	731.95	-179.07	753.54	0.00	0.00	0.00
<b>Base of "G" Sand</b>									
3,500.00	16.16	346.25	3,382.00	832.14	-203.58	856.68	0.00	0.00	0.00
4,000.00	16.16	346.25	3,862.25	967.29	-236.65	995.82	0.00	0.00	0.00
4,500.00	16.16	346.25	4,342.50	1,102.45	-269.71	1,134.96	0.00	0.00	0.00
5,000.00	16.16	346.25	4,822.75	1,237.60	-302.78	1,274.10	0.00	0.00	0.00
5,442.80	16.16	346.25	5,248.06	1,357.29	-332.06	1,397.32	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
5,500.00	15.30	346.25	5,303.12	1,372.35	-335.75	1,412.83	1.50	-1.50	0.00
5,595.98	13.86	346.25	5,396.00	1,395.82	-341.49	1,436.98	1.50	-1.50	0.00
<b>Mesaverde</b>									
6,000.00	7.80	346.25	5,792.64	1,469.52	-359.52	1,512.86	1.50	-1.50	0.00
6,500.00	0.30	346.25	6,291.04	1,503.79	-367.90	1,548.14	1.50	-1.50	0.00
6,519.96	0.00	0.00	6,311.00	1,503.84	-367.92	1,548.20	1.50	-1.50	0.00
<b>Vertical</b>									
7,000.00	0.00	0.00	6,791.04	1,503.84	-367.92	1,548.20	0.00	0.00	0.00
7,219.96	0.00	0.00	7,011.00	1,503.84	-367.92	1,548.20	0.00	0.00	0.00
<b>Top of Target - Approx. Top Gas</b>									
7,500.00	0.00	0.00	7,291.04	1,503.84	-367.92	1,548.20	0.00	0.00	0.00
8,000.00	0.00	0.00	7,791.04	1,503.84	-367.92	1,548.20	0.00	0.00	0.00
8,384.96	0.00	0.00	8,176.00	1,503.84	-367.92	1,548.20	0.00	0.00	0.00
<b>Cameo Coals</b>									
8,500.00	0.00	0.00	8,291.04	1,503.84	-367.92	1,548.20	0.00	0.00	0.00
9,000.00	0.00	0.00	8,791.04	1,503.84	-367.92	1,548.20	0.00	0.00	0.00
9,119.96	0.00	0.00	8,911.00	1,503.84	-367.92	1,548.20	0.00	0.00	0.00
<b>Coal D</b>									
9,274.96	0.00	0.00	9,066.00	1,503.84	-367.92	1,548.20	0.00	0.00	0.00
<b>Rollins SS</b>									
9,424.96	0.00	0.00	9,216.00	1,503.84	-367.92	1,548.20	0.00	0.00	0.00
<b>TD at 9400.96 - TD</b>									

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<b>Project:</b>	RU 06-07S-093W	<b>MD Reference:</b>	KB @ 7009.00usft (HP 318)
<b>Site:</b>	RU 13-6 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 412-6	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 2Nov15 sam		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(bearing)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
RU 412-6 Top Gas 50' R	0.00	0.00	7,011.00	1,503.84	-367.92	1,604,982.60	2,343,409.70	39.471371	-107.826121
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(usft)	(usft)			(in)	(in)
1,124.00	1,099.85	9 5/8"		9.625	13.500

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(bearing)	
3,025.25	2,926.00	Top of "G" Sand		0.00		
3,129.36	3,026.00	Base of "G" Sand		0.00		
5,595.98	5,396.00	Mesaverde		0.00		
7,219.96	7,011.00	Approx. Top Gas		0.00		
8,384.96	8,176.00	Cameo Coals		0.00		
9,119.96	8,911.00	Coal D		0.00		
9,274.96	9,066.00	Rollins SS		0.00		
9,424.96	9,216.00	TD		0.00		

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)		
154.00	154.00	0.00	0.00	Start Build 3.00	
692.58	685.47	73.28	-17.93	Hold 16.16 Inclination	
5,442.80	5,248.06	1,357.29	-332.06	Start Drop -1.50	
6,519.96	6,311.00	1,503.84	-367.92	Vertical	
7,219.96	7,011.00	1,503.84	-367.92	Top of Target	
9,424.96	9,216.00	1,503.84	-367.92	TD at 9400.96	