

# **PICEANCE VLY NAD 83**

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

**RU 22-7 Pad**

**RU 23-7 - Slot B2**

**Wellbore #1**

**Plan: Design #2 28Mar16 sam**

## **Standard Planning Report**

**13 April, 2016**

# WPX

## Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well RU 23-7 (B2) - Slot B2
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KB @ 7363.00usft (HP 318)
<b>Project:</b>	RU 07-07S-093W	<b>MD Reference:</b>	KB @ 7363.00usft (HP 318)
<b>Site:</b>	RU 22-7 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 23-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 28Mar16 sam		

<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 22-7 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,599,673.60 usft	<b>Latitude:</b> 39.456918
<b>From:</b> Map		<b>Easting:</b>	2,345,086.00 usft	<b>Longitude:</b> -107.819705
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.46 °

<b>Well</b>	RU 23-7 - Slot B2			
<b>Well Position</b>	<b>+N/-S</b>	3.05 usft	<b>Northing:</b>	1,599,676.89 usft
	<b>+E/-W</b>	-9.58 usft	<b>Easting:</b>	2,345,076.50 usft
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	7,339.00 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>
	IGRF2015	3/28/2016	9.74	65.61	51,655

<b>Design</b>	Design #2 28Mar16 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	200.35

<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	
145.00	0.00	0.00	145.00	0.00	0.00	0.00	0.00	0.00	0.00	
459.10	9.42	200.35	457.68	-24.16	-8.96	3.00	3.00	0.00	200.35	
5,003.36	9.42	200.35	4,940.63	-721.74	-267.63	0.00	0.00	0.00	0.00	
5,631.56	0.00	0.00	5,566.00	-770.07	-285.55	1.50	-1.50	0.00	180.00	
5,731.56	0.00	0.00	5,666.00	-770.07	-285.55	0.00	0.00	0.00	0.00	10 acre RU 23-7 MVF
9,451.56	0.00	0.00	9,386.00	-770.07	-285.55	0.00	0.00	0.00	0.00	

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<b>Project:</b>	RU 07-07S-093W	<b>MD Reference:</b>	KB @ 7363.00usft (HP 318)
<b>Site:</b>	RU 22-7 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 23-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 28Mar16 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
145.00	0.00	0.00	145.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 3.00</b>									
459.10	9.42	200.35	457.68	-24.16	-8.96	25.77	3.00	3.00	0.00
<b>Hold 9.42 Inclination</b>									
500.00	9.42	200.35	498.03	-30.44	-11.29	32.47	0.00	0.00	0.00
1,000.00	9.42	200.35	991.29	-107.20	-39.75	114.33	0.00	0.00	0.00
1,124.00	9.42	200.35	1,113.61	-126.23	-46.81	134.63	0.00	0.00	0.00
<b>9 5/8"</b>									
1,500.00	9.42	200.35	1,484.54	-183.95	-68.21	196.19	0.00	0.00	0.00
2,000.00	9.42	200.35	1,977.79	-260.70	-96.67	278.05	0.00	0.00	0.00
2,500.00	9.42	200.35	2,471.05	-337.46	-125.13	359.91	0.00	0.00	0.00
3,000.00	9.42	200.35	2,964.30	-414.21	-153.59	441.77	0.00	0.00	0.00
3,258.18	9.42	200.35	3,219.00	-453.84	-168.29	484.04	0.00	0.00	0.00
<b>Top of "G" Sand</b>									
3,308.87	9.42	200.35	3,269.00	-461.62	-171.17	492.34	0.00	0.00	0.00
<b>Base of "G" Sand</b>									
3,500.00	9.42	200.35	3,457.55	-490.96	-182.05	523.63	0.00	0.00	0.00
4,000.00	9.42	200.35	3,950.81	-567.72	-210.51	605.49	0.00	0.00	0.00
4,500.00	9.42	200.35	4,444.06	-644.47	-238.97	687.35	0.00	0.00	0.00
5,000.00	9.42	200.35	4,937.31	-721.22	-267.43	769.21	0.00	0.00	0.00
5,003.36	9.42	200.35	4,940.63	-721.74	-267.63	769.76	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
5,500.00	1.97	200.35	5,434.47	-767.94	-284.76	819.04	1.50	-1.50	0.00
5,631.56	0.00	0.00	5,566.00	-770.07	-285.55	821.30	1.50	-1.50	0.00
<b>Vertical</b>									
5,731.56	0.00	0.00	5,666.00	-770.07	-285.55	821.30	0.00	0.00	0.00
<b>MVRD target - Mesaverde</b>									
6,000.00	0.00	0.00	5,934.44	-770.07	-285.55	821.30	0.00	0.00	0.00
6,500.00	0.00	0.00	6,434.44	-770.07	-285.55	821.30	0.00	0.00	0.00
7,000.00	0.00	0.00	6,934.44	-770.07	-285.55	821.30	0.00	0.00	0.00
7,327.56	0.00	0.00	7,262.00	-770.07	-285.55	821.30	0.00	0.00	0.00
<b>Approx. Top Gas</b>									
7,500.00	0.00	0.00	7,434.44	-770.07	-285.55	821.30	0.00	0.00	0.00
8,000.00	0.00	0.00	7,934.44	-770.07	-285.55	821.30	0.00	0.00	0.00
8,460.56	0.00	0.00	8,395.00	-770.07	-285.55	821.30	0.00	0.00	0.00
<b>Cameo Coals</b>									
8,500.00	0.00	0.00	8,434.44	-770.07	-285.55	821.30	0.00	0.00	0.00
9,000.00	0.00	0.00	8,934.44	-770.07	-285.55	821.30	0.00	0.00	0.00
9,187.56	0.00	0.00	9,122.00	-770.07	-285.55	821.30	0.00	0.00	0.00
<b>Coal D</b>									
9,301.56	0.00	0.00	9,236.00	-770.07	-285.55	821.30	0.00	0.00	0.00
<b>Rollins</b>									
9,451.56	0.00	0.00	9,386.00	-770.07	-285.55	821.30	0.00	0.00	0.00
<b>9451.56 Measured depth - TD</b>									

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<b>Project:</b>	RU 07-07S-093W	<b>MD Reference:</b>	KB @ 7363.00usft (HP 318)
<b>Site:</b>	RU 22-7 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 23-7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 28Mar16 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									
10 acre RU 23-7 MVRD	0.00	0.00	5,666.00	-770.07	-285.55	1,598,914.40	2,344,771.40	39.454812	-107.820750
- 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	1,113.61	9 5/8"		9.625	13.500

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(bearing)	
3,258.18	3,219.00	Top of "G" Sand		0.00		
3,308.87	3,269.00	Base of "G" Sand		0.00		
5,731.56	5,666.00	Mesaverde		0.00		
7,327.56	7,262.00	Approx. Top Gas		0.00		
8,460.56	8,395.00	Cameo Coals		0.00		
9,187.56	9,122.00	Coal D		0.00		
9,301.56	9,236.00	Rollins		0.00		
9,451.56	9,386.00	TD		0.00		

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)		
145.00	145.00	0.00	0.00	Start Build 3.00	
459.10	457.68	-24.16	-8.96	Hold 9.42 Inclination	
5,003.36	4,940.63	-721.74	-267.63	Start Drop -1.50	
5,631.56	5,566.00	-770.07	-285.55	Vertical	
5,731.56	5,666.00	-770.07	-285.55	MVRD target	
9,451.56	9,386.00	-770.07	-285.55	9451.56 Measured depth	