

# **PICEANCE VLY NAD 83**

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

**RU 22-7 Pad**

**RU 323-7 - Slot A4**

**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 323-7 (A4) - Slot A4
<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 323-7	<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

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

Well	RU 323-7 - Slot A4					
Well Position	+N/-S	14.32 usft	Northing:	1,599,687.80 usft	Latitude:	39.456957
	+E/-W	4.50 usft	Easting:	2,345,090.86 usft	Longitude:	-107.819689
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	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	3/9/2016	9.75	65.61	51,661

<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	139.63

<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	
121.00	0.00	0.00	121.00	0.00	0.00	0.00	0.00	0.00	0.00	
554.57	13.01	139.63	550.85	-37.33	31.74	3.00	3.00	0.00	139.63	
4,833.80	13.01	139.63	4,720.29	-771.09	655.62	0.00	0.00	0.00	0.00	
5,700.94	0.00	0.00	5,580.00	-845.75	719.10	1.50	-1.50	0.00	180.00	
5,800.94	0.00	0.00	5,680.00	-845.75	719.10	0.00	0.00	0.00	0.00	10 acre RU 323-7 MV
9,505.94	0.00	0.00	9,385.00	-845.75	719.10	0.00	0.00	0.00	0.00	

**WPX**  
Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well RU 323-7 (A4) - Slot A4
<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 323-7	<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
121.00	0.00	0.00	121.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 3.00</b>									
500.00	11.37	139.63	497.52	-28.56	24.28	37.48	3.00	3.00	0.00
554.57	13.01	139.63	550.85	-37.33	31.74	49.00	3.00	3.00	0.00
<b>Hold 13.01 Inclination</b>									
1,000.00	13.01	139.63	984.86	-113.71	96.68	149.26	0.00	0.00	0.00
1,124.00	13.01	139.63	1,105.68	-134.97	114.76	177.16	0.00	0.00	0.00
<b>9 5/8"</b>									
1,500.00	13.01	139.63	1,472.03	-199.45	169.58	261.79	0.00	0.00	0.00
2,000.00	13.01	139.63	1,959.20	-285.18	242.47	374.33	0.00	0.00	0.00
2,500.00	13.01	139.63	2,446.37	-370.91	315.37	486.86	0.00	0.00	0.00
3,000.00	13.01	139.63	2,933.54	-456.65	388.26	599.40	0.00	0.00	0.00
3,282.71	13.01	139.63	3,209.00	-505.13	429.48	663.03	0.00	0.00	0.00
<b>Top of "G" Sand</b>									
3,354.56	13.01	139.63	3,279.00	-517.44	439.95	679.20	0.00	0.00	0.00
<b>Base of "G" Sand</b>									
3,500.00	13.01	139.63	3,420.71	-542.38	461.16	711.93	0.00	0.00	0.00
4,000.00	13.01	139.63	3,907.88	-628.12	534.05	824.47	0.00	0.00	0.00
4,500.00	13.01	139.63	4,395.06	-713.85	606.95	937.00	0.00	0.00	0.00
4,833.80	13.01	139.63	4,720.29	-771.09	655.62	1,012.13	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
5,000.00	10.51	139.63	4,882.99	-796.90	677.56	1,046.00	1.50	-1.50	0.00
5,500.00	3.01	139.63	5,379.15	-841.73	715.68	1,104.85	1.50	-1.50	0.00
5,700.94	0.00	0.00	5,580.00	-845.75	719.10	1,110.14	1.50	-1.50	0.00
<b>Vertical</b>									
5,800.94	0.00	0.00	5,680.00	-845.75	719.10	1,110.14	0.00	0.00	0.00
<b>MVRD target - Mesaverde</b>									
6,000.00	0.00	0.00	5,879.06	-845.75	719.10	1,110.14	0.00	0.00	0.00
6,500.00	0.00	0.00	6,379.06	-845.75	719.10	1,110.14	0.00	0.00	0.00
7,000.00	0.00	0.00	6,879.06	-845.75	719.10	1,110.14	0.00	0.00	0.00
7,336.94	0.00	0.00	7,216.00	-845.75	719.10	1,110.14	0.00	0.00	0.00
<b>Approx. Top Gas</b>									
7,500.00	0.00	0.00	7,379.06	-845.75	719.10	1,110.14	0.00	0.00	0.00
8,000.00	0.00	0.00	7,879.06	-845.75	719.10	1,110.14	0.00	0.00	0.00
8,500.00	0.00	0.00	8,379.06	-845.75	719.10	1,110.14	0.00	0.00	0.00
8,517.94	0.00	0.00	8,397.00	-845.75	719.10	1,110.14	0.00	0.00	0.00
<b>Cameo</b>									
9,000.00	0.00	0.00	8,879.06	-845.75	719.10	1,110.14	0.00	0.00	0.00
9,264.94	0.00	0.00	9,144.00	-845.75	719.10	1,110.14	0.00	0.00	0.00
<b>Coal D</b>									
9,355.94	0.00	0.00	9,235.00	-845.75	719.10	1,110.14	0.00	0.00	0.00
<b>Rollins</b>									
9,500.00	0.00	0.00	9,379.06	-845.75	719.10	1,110.14	0.00	0.00	0.00
9,505.94	0.00	0.00	9,385.00	-845.75	719.10	1,110.14	0.00	0.00	0.00
<b>9505.94 Measured depth - TD</b>									

**WPX**  
Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well RU 323-7 (A4) - Slot A4
<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 323-7	<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 323-7 MVRD - plan hits target center - Circle (radius 50.00)	0.00	0.00	5,680.00	-845.75	719.10	1,598,824.00	2,345,788.10	39.454636	-107.817142

Casing Points				
Measured Depth	Vertical Depth	Name		
(usft)	(usft)			
		Casing Diameter	Hole Diameter	
		(in)	(in)	
1,124.00	1,105.68	9 5/8"	9.625	13.500

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(bearing)
3,282.71	3,209.00	Top of "G" Sand		0.00	
3,354.56	3,279.00	Base of "G" Sand		0.00	
5,800.94	5,680.00	Mesaverde		0.00	
7,336.94	7,216.00	Approx. Top Gas		0.00	
8,517.94	8,397.00	Cameo		0.00	
9,264.94	9,144.00	Coal D		0.00	
9,355.94	9,235.00	Rollins		0.00	
9,505.94	9,385.00	TD		0.00	

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		
(usft)	(usft)	+N/-S	+E/-W	Comment
		(usft)	(usft)	
121.00	121.00	0.00	0.00	Start Build 3.00
554.57	550.85	-37.33	31.74	Hold 13.01 Inclination
4,833.80	4,720.29	-771.09	655.62	Start Drop -1.50
5,700.94	5,580.00	-845.75	719.10	Vertical
5,800.94	5,680.00	-845.75	719.10	MVRD target
9,505.94	9,385.00	-845.75	719.10	9505.94 Measured depth