

# **PICEANCE VLY NAD 83**

**RU 12-07S-094W**

**RU 32-12 Pad**

**SR 321-12 - Slot A2**

**Wellbore #1**

**Plan: Design #1 27Apr16 sam**

## **Standard Planning Report**

**07 June, 2016**

# WPX

## Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well SR 321-12 (A2) - Slot A2
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KB @ 7278.00usft (HP 318)
<b>Project:</b>	RU 12-07S-094W	<b>MD Reference:</b>	KB @ 7278.00usft (HP 318)
<b>Site:</b>	RU 32-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 321-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 27Apr16 sam		

<b>Project</b>	RU 12-07S-094W		
<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 32-12 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,599,166.61 usft	<b>Latitude:</b> 39.455244
<b>From:</b> Map		<b>Easting:</b>	2,341,071.28 usft	<b>Longitude:</b> -107.833873
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.47 °

<b>Well</b>	SR 321-12 - Slot A2			
<b>Well Position</b>	<b>+N/-S</b>	64.35 usft	<b>Northing:</b>	1,599,231.40 usft
	<b>+E/-W</b>	-17.84 usft	<b>Easting:</b>	2,341,055.10 usft
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	7,254.00 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	4/27/2016	9.74	65.60	51,644

<b>Design</b>	Design #1 27Apr16 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	312.02

<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	
205.71	3.00	300.00	205.68	1.12	-1.94	3.50	3.50	0.00	300.00	
940.85	24.98	312.15	914.70	116.33	-135.32	3.00	2.99	1.65	13.70	
4,301.51	24.98	312.15	3,961.03	1,068.72	-1,187.39	0.00	0.00	0.00	0.00	
5,966.72	0.00	0.00	5,574.00	1,308.49	-1,452.26	1.50	-1.50	0.00	180.00	10 acre SR 321-12 M'
9,700.72	0.00	0.00	9,308.00	1,308.49	-1,452.26	0.00	0.00	0.00	0.00	

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Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well SR 321-12 (A2) - Slot A2
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KB @ 7278.00usft (HP 318)
<b>Project:</b>	RU 12-07S-094W	<b>MD Reference:</b>	KB @ 7278.00usft (HP 318)
<b>Site:</b>	RU 32-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 321-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 27Apr16 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 3.50</b>									
205.71	3.00	300.00	205.68	1.12	-1.94	2.19	3.50	3.50	0.00
<b>Start Turn DLS 3.00 TFO 13.70</b>									
500.00	11.76	310.27	497.25	24.41	-31.56	39.79	3.00	2.98	3.49
940.85	24.98	312.15	914.70	116.33	-135.32	178.40	3.00	3.00	0.43
<b>Hold 24.98 Inclination</b>									
1,000.00	24.98	312.15	968.32	133.10	-153.84	203.38	0.00	0.00	0.00
1,100.00	24.98	312.15	1,058.97	161.44	-185.15	245.61	0.00	0.00	0.00
<b>9 5/8"</b>									
1,500.00	24.98	312.15	1,421.55	274.79	-310.37	414.52	0.00	0.00	0.00
2,000.00	24.98	312.15	1,874.79	416.49	-466.90	625.66	0.00	0.00	0.00
2,500.00	24.98	312.15	2,328.02	558.19	-623.42	836.79	0.00	0.00	0.00
3,000.00	24.98	312.15	2,781.26	699.88	-779.95	1,047.93	0.00	0.00	0.00
3,435.47	24.98	312.15	3,176.00	823.29	-916.28	1,231.82	0.00	0.00	0.00
<b>Top of "G" Sand</b>									
3,488.43	24.98	312.15	3,224.00	838.30	-932.86	1,254.18	0.00	0.00	0.00
<b>Base of "G" Sand</b>									
3,500.00	24.98	312.15	3,234.49	841.58	-936.48	1,259.07	0.00	0.00	0.00
4,000.00	24.98	312.15	3,687.73	983.28	-1,093.01	1,470.20	0.00	0.00	0.00
4,301.51	24.98	312.15	3,961.03	1,068.72	-1,187.39	1,597.52	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
4,500.00	22.00	312.15	4,143.06	1,121.81	-1,246.04	1,676.63	1.50	-1.50	0.00
5,000.00	14.50	312.15	4,617.56	1,226.82	-1,362.05	1,833.10	1.50	-1.50	0.00
5,500.00	7.00	312.15	5,108.44	1,289.37	-1,431.14	1,926.31	1.50	-1.50	0.00
5,515.68	6.77	312.15	5,124.00	1,290.64	-1,432.54	1,928.19	1.50	-1.50	0.00
<b>Lower Wasatch</b>									
5,781.65	2.78	312.15	5,389.00	1,305.48	-1,448.93	1,950.30	1.50	-1.50	0.00
<b>Ohio Creek</b>									
5,966.72	0.00	0.00	5,574.00	1,308.49	-1,452.26	1,954.78	1.50	-1.50	0.00
<b>Top MVRD - Mesaverde</b>									
6,000.00	0.00	0.00	5,607.28	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
6,500.00	0.00	0.00	6,107.28	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
7,000.00	0.00	0.00	6,607.28	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
7,500.00	0.00	0.00	7,107.28	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
7,555.72	0.00	0.00	7,163.00	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
<b>Approx Top Gas</b>									
8,000.00	0.00	0.00	7,607.28	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
8,500.00	0.00	0.00	8,107.28	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
8,675.72	0.00	0.00	8,283.00	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
<b>Cameo</b>									
9,000.00	0.00	0.00	8,607.28	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
9,374.72	0.00	0.00	8,982.00	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
<b>Coal D</b>									
9,500.00	0.00	0.00	9,107.28	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
9,550.72	0.00	0.00	9,158.00	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
<b>Rollins</b>									
9,700.72	0.00	0.00	9,308.00	1,308.49	-1,452.26	1,954.78	0.00	0.00	0.00
<b>TD at 9700.72 - TD</b>									

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## Planning Report

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<b>Project:</b>	RU 12-07S-094W	<b>MD Reference:</b>	KB @ 7278.00usft (HP 318)
<b>Site:</b>	RU 32-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 321-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 27Apr16 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 SR 321-12 MVR	0.00	0.00	5,574.00	1,308.49	-1,452.26	1,600,576.70	2,339,637.00	39.459013	-107.839079
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(usft)	(usft)			(in)	(in)
1,100.00	1,058.97	9 5/8"		9.625	13.500

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(bearing)	
3,435.47	3,176.00	Top of "G" Sand		0.00		
3,488.43	3,224.00	Base of "G" Sand		0.00		
5,515.68	5,124.00	Lower Wasatch		0.00		
5,781.65	5,389.00	Ohio Creek		0.00		
5,966.72	5,574.00	Mesaverde		0.00		
7,555.72	7,163.00	Approx Top Gas		0.00		
8,675.72	8,283.00	Cameo		0.00		
9,374.72	8,982.00	Coal D		0.00		
9,550.72	9,158.00	Rollins		0.00		
9,700.72	9,308.00	TD		0.00		

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
120.00	120.00	0.00	0.00	Start Build 3.50
205.71	205.68	1.12	-1.94	Start Turn DLS 3.00 TFO 13.70
940.85	914.70	116.33	-135.32	Hold 24.98 Inclination
4,301.51	3,961.03	1,068.72	-1,187.39	Start Drop -1.50
5,966.72	5,574.00	1,308.49	-1,452.26	Top MVRD
9,700.72	9,308.00	1,308.49	-1,452.26	TD at 9700.72