

# **PICEANCE HL NAD 83**

**TR 21-05S-097W**

**TR 32-21-597 Pad**

**TR 442-21-597 - Slot A03**

**Wellbore #1**

**Plan: Plan #1 31Jan16 sam**

## **Standard Planning Report**

**11 March, 2016**

# WPX

## Planning Report

<b>Database:</b>	COMPASS	<b>Local Co-ordinate Reference:</b>	Well TR 442-21-597 (A03) - Slot A03
<b>Company:</b>	PICEANCE HL NAD 83	<b>TVD Reference:</b>	KB @ 8601.00usft (HP 318)
<b>Project:</b>	TR 21-05S-097W	<b>MD Reference:</b>	KB @ 8601.00usft (HP 318)
<b>Site:</b>	TR 32-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 442-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 31Jan16 sam		

<b>Project</b>	TR 21-05S-097W, Garfield County, CO, TR 21-05S-097W		
<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		TR 32-21-597 Pad			
Site Position:		Northing:	1,656,389.83 usft	Latitude:	39.602628
From:	Map	Easting:	2,216,147.65 usft	Longitude:	-108.282293
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.75 °

Well	TR 442-21-597 - Slot A03					
Well Position	+N/-S	3.25 usft	Northing:	1,656,392.70 usft	Latitude:	39.602637
	+E/-W	12.66 usft	Easting:	2,216,160.40 usft	Longitude:	-108.282248
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	8,577.00 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	1/31/2016	9.98	65.65	51,682

<b>Design</b>	Plan #1 31Jan16 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	132.85

<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	
144.00	0.00	0.00	144.00	0.00	0.00	0.00	0.00	0.00	0.00	
735.32	17.74	132.85	725.92	-61.76	66.58	3.00	3.00	0.00	132.85	
5,164.15	17.74	132.85	4,944.17	-979.49	1,055.88	0.00	0.00	0.00	0.00	
6,346.79	0.00	0.00	6,108.00	-1,103.01	1,189.03	1.50	-1.50	0.00	180.00	TR 442-21-597 MVR
9,304.79	0.00	0.00	9,066.00	-1,103.01	1,189.03	0.00	0.00	0.00	0.00	

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<b>Company:</b>	PICEANCE HL NAD 83	<b>TVD Reference:</b>	KB @ 8601.00usft (HP 318)
<b>Project:</b>	TR 21-05S-097W	<b>MD Reference:</b>	KB @ 8601.00usft (HP 318)
<b>Site:</b>	TR 32-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 442-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 31Jan16 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
144.00	0.00	0.00	144.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 3.00</b>									
500.00	10.68	132.85	497.94	-22.50	24.25	33.08	3.00	3.00	0.00
735.32	17.74	132.85	725.92	-61.76	66.58	90.81	3.00	3.00	0.00
<b>Hold 17.74 Inclination</b>									
1,000.00	17.74	132.85	978.01	-116.61	125.70	171.46	0.00	0.00	0.00
1,500.00	17.74	132.85	1,454.24	-220.21	237.39	323.80	0.00	0.00	0.00
2,000.00	17.74	132.85	1,930.46	-323.82	349.08	476.15	0.00	0.00	0.00
2,500.00	17.74	132.85	2,406.69	-427.43	460.77	628.49	0.00	0.00	0.00
2,756.51	17.74	132.85	2,651.00	-480.58	518.07	706.65	0.00	0.00	0.00
<b>Wasatch</b>									
3,000.00	17.74	132.85	2,882.92	-531.04	572.46	780.84	0.00	0.00	0.00
3,018.99	17.74	132.85	2,901.00	-534.97	576.70	786.62	0.00	0.00	0.00
<b>9 5/8"</b>									
3,500.00	17.74	132.85	3,359.14	-634.65	684.14	933.18	0.00	0.00	0.00
4,000.00	17.74	132.85	3,835.37	-738.26	795.83	1,085.53	0.00	0.00	0.00
4,500.00	17.74	132.85	4,311.59	-841.86	907.52	1,237.87	0.00	0.00	0.00
4,670.52	17.74	132.85	4,474.00	-877.20	945.61	1,289.83	0.00	0.00	0.00
<b>Top of "G" Sand</b>									
4,723.01	17.74	132.85	4,524.00	-888.08	957.34	1,305.82	0.00	0.00	0.00
<b>Base of "G" Sand</b>									
4,863.70	17.74	132.85	4,658.00	-917.23	988.77	1,348.69	0.00	0.00	0.00
<b>Fort Union</b>									
5,000.00	17.74	132.85	4,787.82	-945.47	1,019.21	1,390.22	0.00	0.00	0.00
5,164.15	17.74	132.85	4,944.17	-979.49	1,055.88	1,440.24	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
5,500.00	12.70	132.85	5,268.13	-1,039.43	1,120.50	1,528.38	1.50	-1.50	0.00
6,000.00	5.20	132.85	5,761.68	-1,092.31	1,177.50	1,606.13	1.50	-1.50	0.00
6,345.79	0.01	132.85	6,107.00	-1,103.01	1,189.03	1,621.86	1.50	-1.50	0.00
<b>Mesaverde</b>									
6,346.79	0.00	0.00	6,108.00	-1,103.01	1,189.03	1,621.86	1.50	-1.50	0.00
<b>Top MVRD</b>									
6,500.00	0.00	0.00	6,261.21	-1,103.01	1,189.03	1,621.86	0.00	0.00	0.00
7,000.00	0.00	0.00	6,761.21	-1,103.01	1,189.03	1,621.86	0.00	0.00	0.00
7,203.79	0.00	0.00	6,965.00	-1,103.01	1,189.03	1,621.86	0.00	0.00	0.00
<b>Approx. Top Gas</b>									
7,500.00	0.00	0.00	7,261.21	-1,103.01	1,189.03	1,621.86	0.00	0.00	0.00
8,000.00	0.00	0.00	7,761.21	-1,103.01	1,189.03	1,621.86	0.00	0.00	0.00
8,500.00	0.00	0.00	8,261.21	-1,103.01	1,189.03	1,621.86	0.00	0.00	0.00
8,763.79	0.00	0.00	8,525.00	-1,103.01	1,189.03	1,621.86	0.00	0.00	0.00
<b>Cameo Coals</b>									
9,000.00	0.00	0.00	8,761.21	-1,103.01	1,189.03	1,621.86	0.00	0.00	0.00
9,154.79	0.00	0.00	8,916.00	-1,103.01	1,189.03	1,621.86	0.00	0.00	0.00
<b>Rollins SS</b>									
9,304.79	0.00	0.00	9,066.00	-1,103.01	1,189.03	1,621.86	0.00	0.00	0.00
<b>TD at 9304.79</b>									

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<b>Project:</b>	TR 21-05S-097W	<b>MD Reference:</b>	KB @ 8601.00usft (HP 318)
<b>Site:</b>	TR 32-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 442-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 31Jan16 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									
TR 442-21-597 MVRD 5	0.00	0.00	6,108.00	-1,103.01	1,189.03	1,655,253.80	2,217,315.10	39.599609	-108.278029
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(usft)	(usft)			(in)	(in)
3,018.99	2,901.00	9 5/8"		9.625	13.500

Formations						
Measured Depth	Vertical Depth	Name		Lithology	Dip	Dip Direction
(usft)	(usft)				(°)	(bearing)
2,756.51	2,651.00	Wasatch			0.00	
4,670.52	4,474.00	Top of "G" Sand			0.00	
4,723.01	4,524.00	Base of "G" Sand			0.00	
4,863.70	4,658.00	Fort Union			0.00	
6,345.79	6,107.00	Mesaverde			0.00	
7,203.79	6,965.00	Approx. Top Gas			0.00	
8,763.79	8,525.00	Cameo Coals			0.00	
9,154.79	8,916.00	Rollins SS			0.00	

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)		
144.00	144.00	0.00	0.00	Start Build 3.00	
735.32	725.92	-61.76	66.58	Hold 17.74 Inclination	
5,164.15	4,944.17	-979.49	1,055.88	Start Drop -1.50	
6,346.79	6,108.00	-1,103.01	1,189.03	Top MVRD	
9,304.79	9,066.00	-1,103.01	1,189.03	TD at 9304.79	