



## **PICEANCE HL NAD 83**

**RG 26-01S-098W**

**RGU 42-26-198**

**RGU 313-25-198 - Slot A6**

**Wellbore #1**

**Plan: Design #1 24Jan13 kjs**

## **Standard Planning Report - Geographic**

**09 April, 2013**



**WPX Energy**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RGU 313-25-198 - Slot A6
<b>Company:</b>	PICEANCE HL NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6643.00usft (Cyclone 29 (21' RKB) kjs)
<b>Project:</b>	RG 26-01S-098W	<b>MD Reference:</b>	KELLY BUSHING @ 6643.00usft (Cyclone 29 (21' RKB) kjs)
<b>Site:</b>	RGU 42-26-198	<b>North Reference:</b>	True
<b>Well:</b>	RGU 313-25-198	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 24Jan13 kjs		

<b>Project</b>	RG 26-01S-098W, Rio Blanco 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		

<b>Site</b>	RGU 42-26-198			
<b>Site Position:</b>		<b>Northing:</b>	1,778,121.90 usft	<b>Latitude:</b> 39.93524
<b>From:</b> Map		<b>Easting:</b>	2,199,615.70 usft	<b>Longitude:</b> -108.35451
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.8003 °

<b>Well</b>	RGU 313-25-198 - Slot A6			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,778,085.30 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,199,602.80 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	
			<b>Ground Level:</b>	6,622.00 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	1/24/2013	10.3617	65.9893	52,274

<b>Design</b>	Design #1 24Jan13 kjs			
<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 (°)</b>
	0.00	0.00	0.00	113.21

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0000	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.0000	
350.00	6.90	113.21	349.44	-5.45	12.71	3.00	3.00	0.00	113.2100	
3,523.54	6.90	113.21	3,500.00	-155.71	363.12	0.00	0.00	0.00	0.0000	
3,774.09	14.42	113.21	3,746.05	-173.95	405.68	3.00	3.00	0.00	0.0000	
7,030.33	14.42	113.21	6,899.75	-493.41	1,150.79	0.00	0.00	0.00	0.0000	
7,751.16	0.00	0.00	7,613.00	-528.96	1,233.70	2.00	-2.00	0.00	180.0000	
7,851.16	0.00	0.00	7,713.00	-528.96	1,233.70	0.00	0.00	0.00	0.0000	Mesaverde (25' Radiu
12,731.16	0.00	0.00	12,593.00	-528.96	1,233.70	0.00	0.00	0.00	0.0000	



**WPX Energy**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RGU 313-25-198 - Slot A6
<b>Company:</b>	PICEANCE HL NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6643.00usft (Cyclone 29 (21' RKB) kjs)
<b>Project:</b>	RG 26-01S-098W	<b>MD Reference:</b>	KELLY BUSHING @ 6643.00usft (Cyclone 29 (21' RKB) kjs)
<b>Site:</b>	RGU 42-26-198	<b>North Reference:</b>	True
<b>Well:</b>	RGU 313-25-198	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 24Jan13 kjs		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	1,778,085.30	2,199,602.80	39.93514	-108.35455	
120.00	0.00	0.00	120.00	0.00	0.00	1,778,085.30	2,199,602.80	39.93514	-108.35455	
Start Build 3.00										
350.00	6.90	113.21	349.44	-5.45	12.71	1,778,079.45	2,199,615.33	39.93512	-108.35451	
Hold 6.90 Inc, 113.21° azi										
500.00	6.90	113.21	498.36	-12.55	29.28	1,778,071.83	2,199,631.67	39.93510	-108.35445	
1,000.00	6.90	113.21	994.74	-36.23	84.48	1,778,046.44	2,199,686.10	39.93504	-108.35425	
1,234.97	6.90	113.21	1,228.00	-47.35	110.43	1,778,034.50	2,199,711.68	39.93501	-108.35416	
Green River Fm										
1,416.28	6.90	113.21	1,408.00	-55.94	130.44	1,778,025.29	2,199,731.42	39.93498	-108.35409	
A Groove										
1,500.00	6.90	113.21	1,491.12	-59.90	139.69	1,778,021.04	2,199,740.54	39.93497	-108.35405	
1,622.77	6.90	113.21	1,613.00	-65.71	153.24	1,778,014.81	2,199,753.90	39.93496	-108.35401	
B Groove										
1,909.85	6.90	113.21	1,898.00	-79.30	184.94	1,778,000.22	2,199,785.16	39.93492	-108.35389	
Dissolution Surface										
2,000.00	6.90	113.21	1,987.49	-83.57	194.90	1,777,995.65	2,199,794.97	39.93491	-108.35386	
2,500.00	6.90	113.21	2,483.87	-107.25	250.10	1,777,970.25	2,199,849.41	39.93484	-108.35366	
3,000.00	6.90	113.21	2,980.25	-130.92	305.31	1,777,944.85	2,199,903.84	39.93478	-108.35346	
3,002.77	6.90	113.21	2,983.00	-131.05	305.62	1,777,944.71	2,199,904.15	39.93478	-108.35346	
Garden Gulch										
3,184.08	6.90	113.21	3,163.00	-139.63	325.63	1,777,935.50	2,199,923.89	39.93475	-108.35339	
Orange Marker										
3,400.65	6.90	113.21	3,378.00	-149.89	349.55	1,777,924.50	2,199,947.46	39.93473	-108.35331	
Wasatch										
3,500.00	6.90	113.21	3,476.63	-154.59	360.52	1,777,919.46	2,199,958.28	39.93471	-108.35327	
3,523.54	6.90	113.21	3,500.00	-155.71	363.12	1,777,918.26	2,199,960.84	39.93471	-108.35326	
Start Build 3.00										
3,774.09	14.42	113.21	3,746.05	-173.95	405.68	1,777,898.69	2,200,002.81	39.93466	-108.35311	
Hold 14.42 Inclination										
3,910.33	14.42	113.21	3,878.00	-187.32	436.85	1,777,884.35	2,200,033.55	39.93462	-108.35299	
9 5/8"										
4,000.00	14.42	113.21	3,964.85	-196.12	457.37	1,777,874.91	2,200,053.78	39.93460	-108.35292	
4,500.00	14.42	113.21	4,449.10	-245.17	571.78	1,777,822.29	2,200,166.60	39.93446	-108.35251	
5,000.00	14.42	113.21	4,933.36	-294.22	686.19	1,777,769.66	2,200,279.41	39.93433	-108.35211	
5,500.00	14.42	113.21	5,417.61	-343.28	800.61	1,777,717.04	2,200,392.23	39.93419	-108.35170	
5,774.02	14.42	113.21	5,683.00	-370.16	863.31	1,777,688.20	2,200,454.05	39.93412	-108.35147	
Top of "G" Sand										
6,000.00	14.42	113.21	5,901.87	-392.33	915.02	1,777,664.42	2,200,505.04	39.93406	-108.35129	
6,140.56	14.42	113.21	6,038.00	-406.12	947.18	1,777,649.62	2,200,536.76	39.93402	-108.35117	
Fort Union										
6,500.00	14.42	113.21	6,386.12	-441.38	1,029.43	1,777,611.79	2,200,617.86	39.93392	-108.35088	
7,000.00	14.42	113.21	6,870.38	-490.44	1,143.85	1,777,559.17	2,200,730.67	39.93379	-108.35047	
7,030.33	14.42	113.21	6,899.75	-493.41	1,150.79	1,777,555.98	2,200,737.52	39.93378	-108.35045	
Start Drop -2.00										
7,500.00	5.02	113.21	7,362.16	-524.62	1,223.58	1,777,522.49	2,200,809.30	39.93370	-108.35019	
7,586.07	3.30	113.21	7,448.00	-527.09	1,229.33	1,777,519.85	2,200,814.96	39.93369	-108.35017	
Ohio Creek										
7,751.16	0.00	0.00	7,613.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015	
Vertical										



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<b>Project:</b>	RG 26-01S-098W	<b>MD Reference:</b>	KELLY BUSHING @ 6643.00usft (Cyclone 29 (21' RKB) kjs)
<b>Site:</b>	RGU 42-26-198	<b>North Reference:</b>	True
<b>Well:</b>	RGU 313-25-198	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 24Jan13 kjs		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,851.16	0.00	0.00	7,713.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
<b>Mesaverde - Mesaverde</b>									
8,000.00	0.00	0.00	7,861.84	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
8,500.00	0.00	0.00	8,361.84	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
9,000.00	0.00	0.00	8,861.84	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
9,431.16	0.00	0.00	9,293.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
<b>Approx. Top Gas</b>									
9,500.00	0.00	0.00	9,361.84	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
10,000.00	0.00	0.00	9,861.84	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
10,500.00	0.00	0.00	10,361.84	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
10,936.16	0.00	0.00	10,798.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
<b>Cameo Coals</b>									
11,000.00	0.00	0.00	10,861.84	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
11,496.16	0.00	0.00	11,358.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
<b>Rollins SS</b>									
11,500.00	0.00	0.00	11,361.84	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
11,646.16	0.00	0.00	11,508.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
<b>Cozzette</b>									
11,866.16	0.00	0.00	11,728.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
<b>Corcoran</b>									
12,000.00	0.00	0.00	11,861.84	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
12,231.16	0.00	0.00	12,093.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
<b>Upper Sego</b>									
12,481.16	0.00	0.00	12,343.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
<b>Lower Sego</b>									
12,500.00	0.00	0.00	12,361.84	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
12,731.15	0.00	0.00	12,592.99	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
<b>TD</b>									
12,731.16	0.00	0.00	12,593.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
<b>TD at 12731.16</b>									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Mesaverde (25' Radius)	0.00	0.00	7,713.00	-528.96	1,233.70	1,777,517.84	2,200,819.27	39.93368	-108.35015
- plan hits target center									
- Circle (radius 25.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,910.33	3,878.00	9 5/8"	9.625	13.500	



**WPX Energy**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RGU 313-25-198 - Slot A6
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<b>Project:</b>	RG 26-01S-098W	<b>MD Reference:</b>	KELLY BUSHING @ 6643.00usft (Cyclone 29 (21' RKB) kjs)
<b>Site:</b>	RGU 42-26-198	<b>North Reference:</b>	True
<b>Well:</b>	RGU 313-25-198	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 24Jan13 kjs		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,234.97	1,228.00	Green River Fm				
1,416.28	1,408.00	A Groove				
1,622.77	1,613.00	B Groove				
1,909.85	1,898.00	Dissolution Surface				
3,002.77	2,983.00	Garden Gulch				
3,184.08	3,163.00	Orange Marker				
3,400.65	3,378.00	Wasatch				
5,774.02	5,683.00	Top of "G" Sand				
6,140.56	6,038.00	Fort Union				
7,586.07	7,448.00	Ohio Creek				
7,851.16	7,713.00	Mesaverde				
9,431.16	9,293.00	Approx. Top Gas				
10,936.16	10,798.00	Cameo Coals				
11,496.16	11,358.00	Rollins SS				
11,646.16	11,508.00	Cozzette				
11,866.16	11,728.00	Corcoran				
12,231.16	12,093.00	Upper Sego				
12,481.16	12,343.00	Lower Sego				
12,731.15	12,592.99	TD		0.0000		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
120.00	120.00	0.00	0.00	Start Build 3.00
350.00	349.44	-5.45	12.71	Hold 6.90 Inc, 113.21° azi
3,523.54	3,500.00	-155.71	363.12	Start Build 3.00
3,774.09	3,746.05	-173.95	405.68	Hold 14.42 Inclination
7,030.33	6,899.75	-493.41	1,150.79	Start Drop -2.00
7,751.16	7,613.00	-528.96	1,233.70	Vertical
7,851.16	7,713.00	-528.96	1,233.70	Mesaverde
12,731.16	12,593.00	-528.96	1,233.70	TD at 12731.16