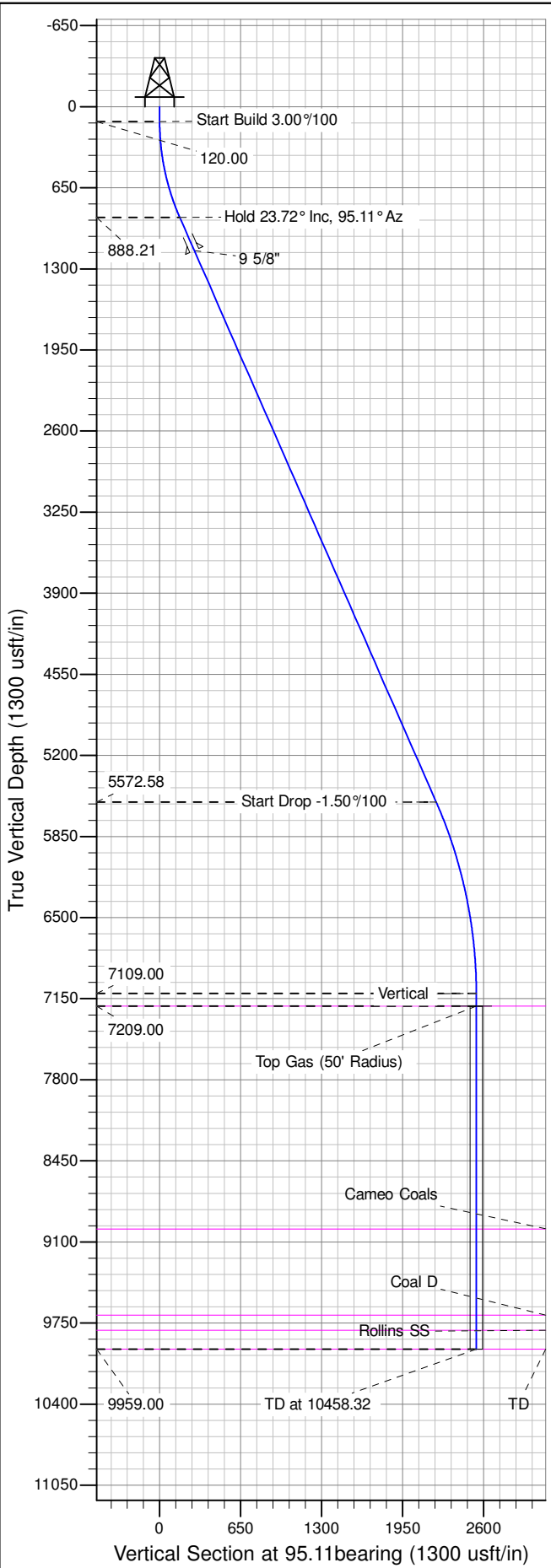
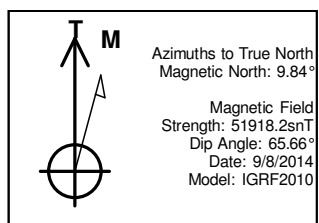
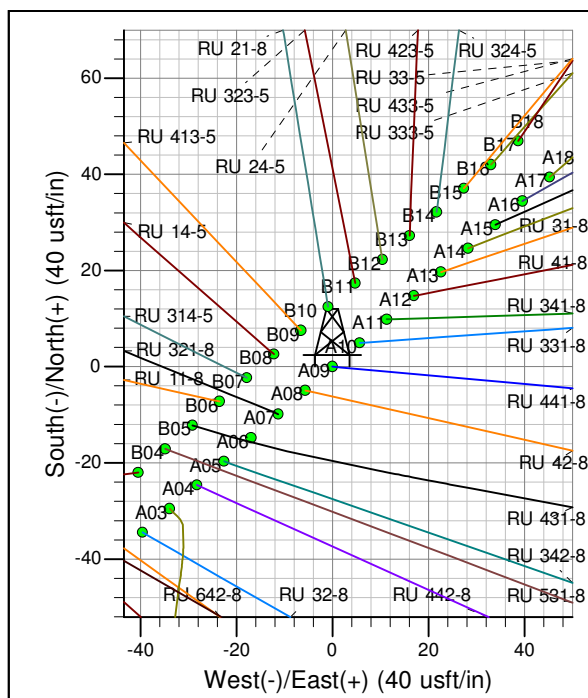
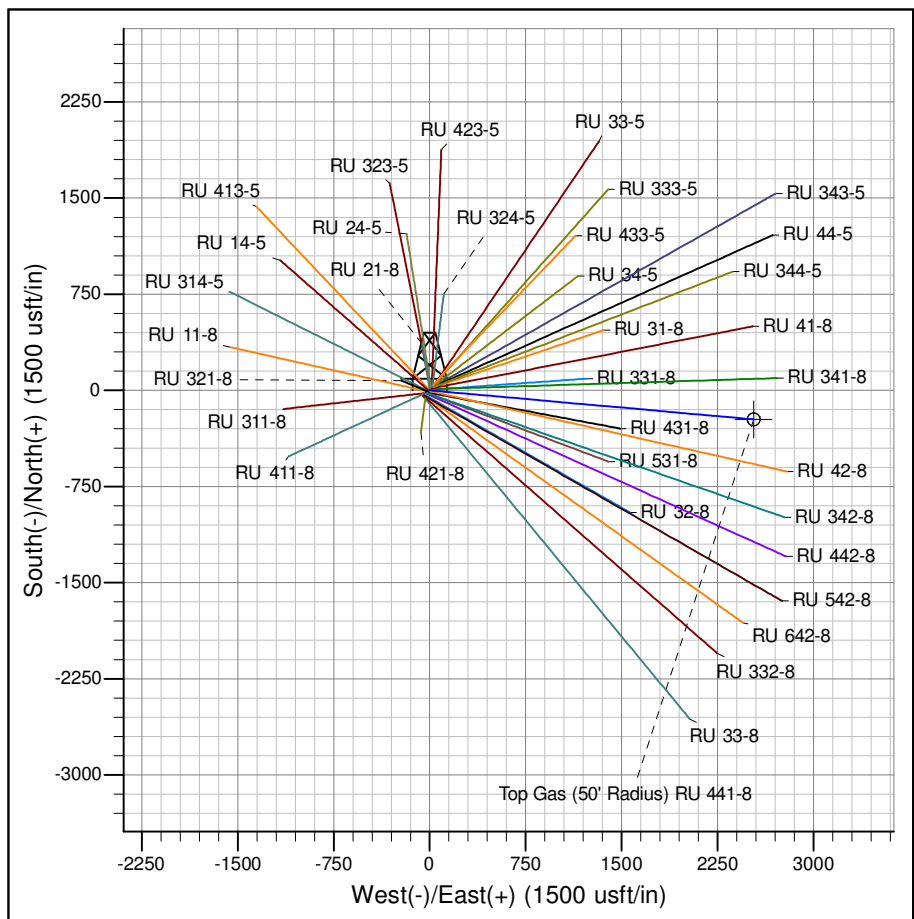




Well Name: RU 441-8  
Surface Location: RU 21-8 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 7736.00  
+N/-S      +E/-W      Northing      Easting      Latitude      Longitude      Slot  
0.00      0.00      1602669.45      2350509.37      39.46552      -107.80077      A10  
KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
120.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00%/100	
888.21	910.60	23.72	95.11	-14.37	160.67	161.31	161.31	Hold 23.72° Inc, 95.11° Az	
5572.58	6027.13	23.72	95.11	-197.70	2210.53	2219.35	2219.35	Hold Drop -1.50%/100	
7109.00	7608.32	0.00	0.00	-226.44	2531.87	2541.97	2541.97	Vertical	
7209.00	7708.32	0.00	0.00	-226.44	2531.87	2541.97	2541.97	Top Gas	
9959.00	10458.32	0.00	0.00	-226.44	2531.87	2541.97	2541.97	TD at 10458.32	



Project: RU 08-07S-093W  
Site: RU 21-8 Pad  
Well: RU 441-8  
Design #1 08Sep14 mab

# **PICEANCE VLY NAD 83**

**RU 08-07S-093W**

**RU 21-8 Pad**

**RU 441-8 - Slot A10**

**Wellbore #1**

**Plan: Design #1 08Sep14 mab**

## **Standard Planning Report - Geographic**

**04 November, 2014**

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 441-8 - Slot A10
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Project:</b>	RU 08-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Site:</b>	RU 21-8 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 441-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 08Sep14 mab		

<b>Project</b>	RU 08-07S-093W		
<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>	RU 21-8 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,602,707.70000 usft	<b>Latitude:</b> 39.46563
<b>From:</b> Map		<b>Easting:</b>	2,350,555.60000 usft	<b>Longitude:</b> -107.80061
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.45 °

<b>Well</b>	RU 441-8 - Slot A10			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,602,669.45464 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,350,509.36914 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	7,736.00 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	9/8/2014	9.84	65.66	51,918

<b>Design</b>	Design #1 08Sep14 mab			
<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	95.11

<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	
910.60	23.72	95.11	888.21	-14.37	160.67	3.00	3.00	0.00	95.11	
6,027.13	23.72	95.11	5,572.58	-197.70	2,210.53	0.00	0.00	0.00	0.00	
7,608.32	0.00	0.00	7,109.00	-226.44	2,531.87	1.50	-1.50	0.00	180.00	
7,708.32	0.00	0.00	7,209.00	-226.44	2,531.87	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
10,458.32	0.00	0.00	9,959.00	-226.44	2,531.87	0.00	0.00	0.00	0.00	

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 441-8 - Slot A10
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Project:</b>	RU 08-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Site:</b>	RU 21-8 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 441-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 08Sep14 mab		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	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	1,602,669.45464	2,350,509.36914	39.46552	-107.80077	
120.00	0.00	0.00	120.00	0.00	0.00	1,602,669.45464	2,350,509.36914	39.46552	-107.80077	
<b>Start Build 3.00°/100</b>										
200.00	2.40	95.11	199.98	-0.15	1.67	1,602,669.26320	2,350,511.03343	39.46552	-107.80077	
400.00	8.40	95.11	399.00	-1.83	20.41	1,602,667.11337	2,350,529.72326	39.46552	-107.80070	
600.00	14.40	95.11	594.96	-5.34	59.76	1,602,662.59806	2,350,568.97783	39.46551	-107.80056	
800.00	20.40	95.11	785.72	-10.67	119.31	1,602,655.76672	2,350,628.36707	39.46549	-107.80035	
910.60	23.72	95.11	888.21	-14.37	160.67	1,602,651.02104	2,350,669.62433	39.46548	-107.80021	
<b>Hold 23.72° Inc, 95.11° Az</b>										
1,000.00	23.72	95.11	970.06	-17.57	196.49	1,602,646.91160	2,350,705.35036	39.46547	-107.80008	
1,200.00	23.72	95.11	1,153.17	-24.74	276.62	1,602,637.71872	2,350,785.26999	39.46545	-107.79979	
<b>9 5/8"</b>										
1,400.00	23.72	95.11	1,336.28	-31.91	356.74	1,602,628.52584	2,350,865.18963	39.46543	-107.79951	
1,600.00	23.72	95.11	1,519.38	-39.07	436.87	1,602,619.33296	2,350,945.10928	39.46541	-107.79923	
1,800.00	23.72	95.11	1,702.49	-46.24	517.00	1,602,610.14008	2,351,025.02892	39.46539	-107.79894	
2,000.00	23.72	95.11	1,885.60	-53.40	597.12	1,602,600.94720	2,351,104.94857	39.46537	-107.79866	
2,200.00	23.72	95.11	2,068.71	-60.57	677.25	1,602,591.75433	2,351,184.86820	39.46535	-107.79838	
2,400.00	23.72	95.11	2,251.81	-67.74	757.38	1,602,582.56145	2,351,264.78785	39.46533	-107.79809	
2,600.00	23.72	95.11	2,434.92	-74.90	837.50	1,602,573.36857	2,351,344.70749	39.46531	-107.79781	
2,800.00	23.72	95.11	2,618.03	-82.07	917.63	1,602,564.17569	2,351,424.62714	39.46529	-107.79752	
3,000.00	23.72	95.11	2,801.14	-89.23	997.76	1,602,554.98281	2,351,504.54678	39.46527	-107.79724	
3,200.00	23.72	95.11	2,984.24	-96.40	1,077.88	1,602,545.78993	2,351,584.46642	39.46526	-107.79696	
3,400.00	23.72	95.11	3,167.35	-103.57	1,158.01	1,602,536.59705	2,351,664.38606	39.46524	-107.79667	
3,600.00	23.72	95.11	3,350.46	-110.73	1,238.14	1,602,527.40417	2,351,744.30570	39.46522	-107.79639	
3,800.00	23.72	95.11	3,533.57	-117.90	1,318.26	1,602,518.21129	2,351,824.22535	39.46520	-107.79611	
4,000.00	23.72	95.11	3,716.67	-125.06	1,398.39	1,602,509.01841	2,351,904.14499	39.46518	-107.79582	
4,200.00	23.72	95.11	3,899.78	-132.23	1,478.52	1,602,499.82553	2,351,984.06463	39.46516	-107.79554	
4,400.00	23.72	95.11	4,082.89	-139.40	1,558.64	1,602,490.63265	2,352,063.98427	39.46514	-107.79525	
4,600.00	23.72	95.11	4,266.00	-146.56	1,638.77	1,602,481.43977	2,352,143.90392	39.46512	-107.79497	
4,800.00	23.72	95.11	4,449.10	-153.73	1,718.90	1,602,472.24689	2,352,223.82356	39.46510	-107.79469	
5,000.00	23.72	95.11	4,632.21	-160.89	1,799.03	1,602,463.05401	2,352,303.74321	39.46508	-107.79440	
5,200.00	23.72	95.11	4,815.32	-168.06	1,879.15	1,602,453.86113	2,352,383.66284	39.46506	-107.79412	
5,400.00	23.72	95.11	4,998.43	-175.23	1,959.28	1,602,444.66825	2,352,463.58248	39.46504	-107.79383	
5,600.00	23.72	95.11	5,181.53	-182.39	2,039.41	1,602,435.47537	2,352,543.50213	39.46502	-107.79355	
5,800.00	23.72	95.11	5,364.64	-189.56	2,119.53	1,602,426.28249	2,352,623.42177	39.46500	-107.79327	
6,000.00	23.72	95.11	5,547.75	-196.73	2,199.66	1,602,417.08962	2,352,703.34142	39.46498	-107.79298	
6,027.13	23.72	95.11	5,572.58	-197.70	2,210.53	1,602,415.84282	2,352,714.18063	39.46498	-107.79294	
<b>Start Drop -1.50°/100</b>										
6,200.00	21.12	95.11	5,732.38	-203.57	2,276.20	1,602,408.30866	2,352,779.67994	39.46496	-107.79271	
6,400.00	18.12	95.11	5,920.74	-209.55	2,343.09	1,602,400.63363	2,352,846.40394	39.46494	-107.79248	
6,600.00	15.12	95.11	6,112.35	-214.65	2,400.08	1,602,394.09562	2,352,903.24302	39.46493	-107.79227	
6,800.00	12.12	95.11	6,306.70	-218.85	2,447.00	1,602,388.71257	2,352,950.04140	39.46492	-107.79211	
7,000.00	9.12	95.11	6,503.25	-222.13	2,483.72	1,602,384.49922	2,352,986.67079	39.46491	-107.79198	
7,200.00	6.12	95.11	6,701.46	-224.49	2,510.15	1,602,381.46712	2,353,013.03080	39.46490	-107.79188	
7,400.00	3.12	95.11	6,900.79	-225.93	2,526.21	1,602,379.62458	2,353,029.04917	39.46490	-107.79183	
7,600.00	0.12	95.11	7,100.68	-226.44	2,531.86	1,602,378.97665	2,353,034.68201	39.46490	-107.79181	
7,608.32	0.00	0.00	7,109.00	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181	
<b>Vertical</b>										
7,708.32	0.00	0.00	7,209.00	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181	
<b>Top Gas - Approx. Top Gas</b>										
7,800.00	0.00	0.00	7,300.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181	
8,000.00	0.00	0.00	7,500.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181	

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 441-8 - Slot A10
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Project:</b>	RU 08-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Site:</b>	RU 21-8 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 441-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 08Sep14 mab		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,200.00	0.00	0.00	7,700.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
8,400.00	0.00	0.00	7,900.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
8,600.00	0.00	0.00	8,100.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
8,800.00	0.00	0.00	8,300.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
9,000.00	0.00	0.00	8,500.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
9,200.00	0.00	0.00	8,700.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
9,400.00	0.00	0.00	8,900.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
9,495.32	0.00	0.00	8,996.00	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
Cameo Coals									
9,600.00	0.00	0.00	9,100.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
9,800.00	0.00	0.00	9,300.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
10,000.00	0.00	0.00	9,500.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
10,185.32	0.00	0.00	9,686.00	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
Coal D									
10,200.00	0.00	0.00	9,700.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
10,308.32	0.00	0.00	9,809.00	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
Rollins SS									
10,400.00	0.00	0.00	9,900.68	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
10,458.32	0.00	0.00	9,959.00	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181
TD at 10458.32 - TD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Top Gas (50' Radius) RL - plan hits target center - Circle (radius 50.00)	0.00	358.55	7,209.00	-226.44	2,531.87	1,602,378.97562	2,353,034.69100	39.46490	-107.79181

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,200.00	1,153.17	9 5/8"	9.625	13.500	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)
7,708.32	7,209.00	Approx. Top Gas			
9,495.32	8,996.00	Cameo Coals			
10,185.32	9,686.00	Coal D			
10,308.32	9,809.00	Rollins SS			
10,458.32	9,959.00	TD			

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 441-8 - Slot A10
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Project:</b>	RU 08-07S-093W	<b>MD Reference:</b>	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
<b>Site:</b>	RU 21-8 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 441-8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 08Sep14 mab		

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°/100
910.60	888.21	-14.37	160.67	Hold 23.72° Inc, 95.11° Az
6,027.13	5,572.58	-197.70	2,210.53	Start Drop -1.50°/100
7,608.32	7,109.00	-226.44	2,531.87	Vertical
7,708.32	7,209.00	-226.44	2,531.87	Top Gas
10,458.32	9,959.00	-226.44	2,531.87	TD at 10458.32