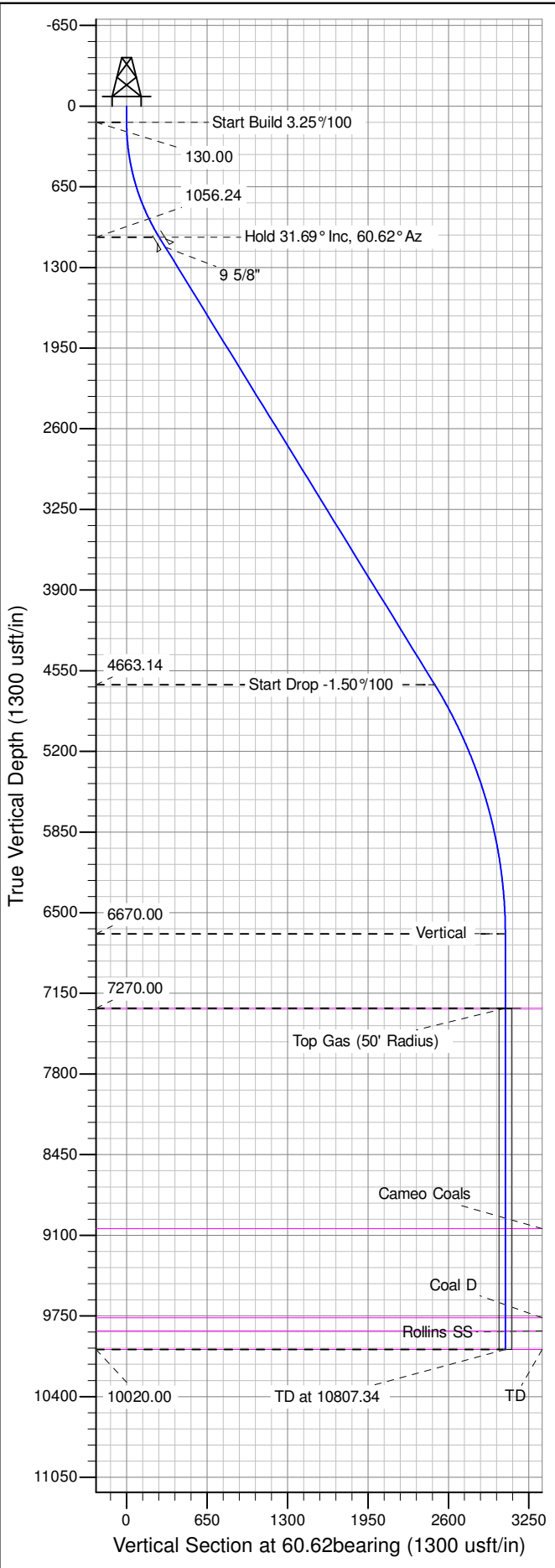
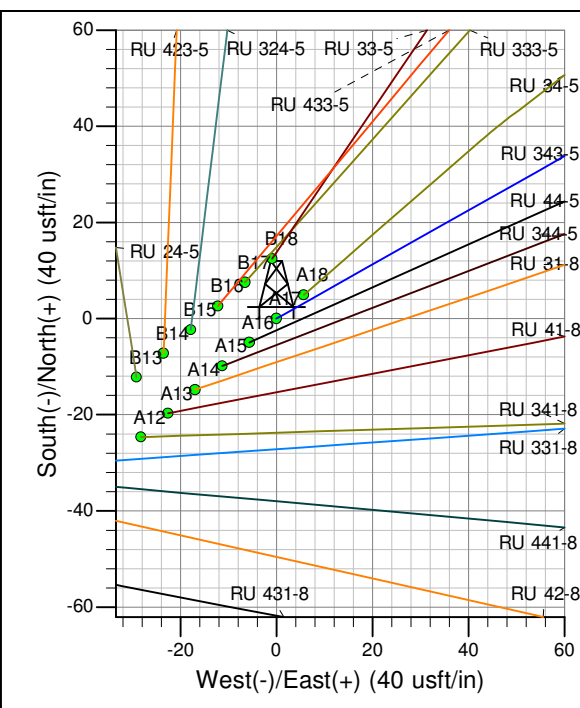
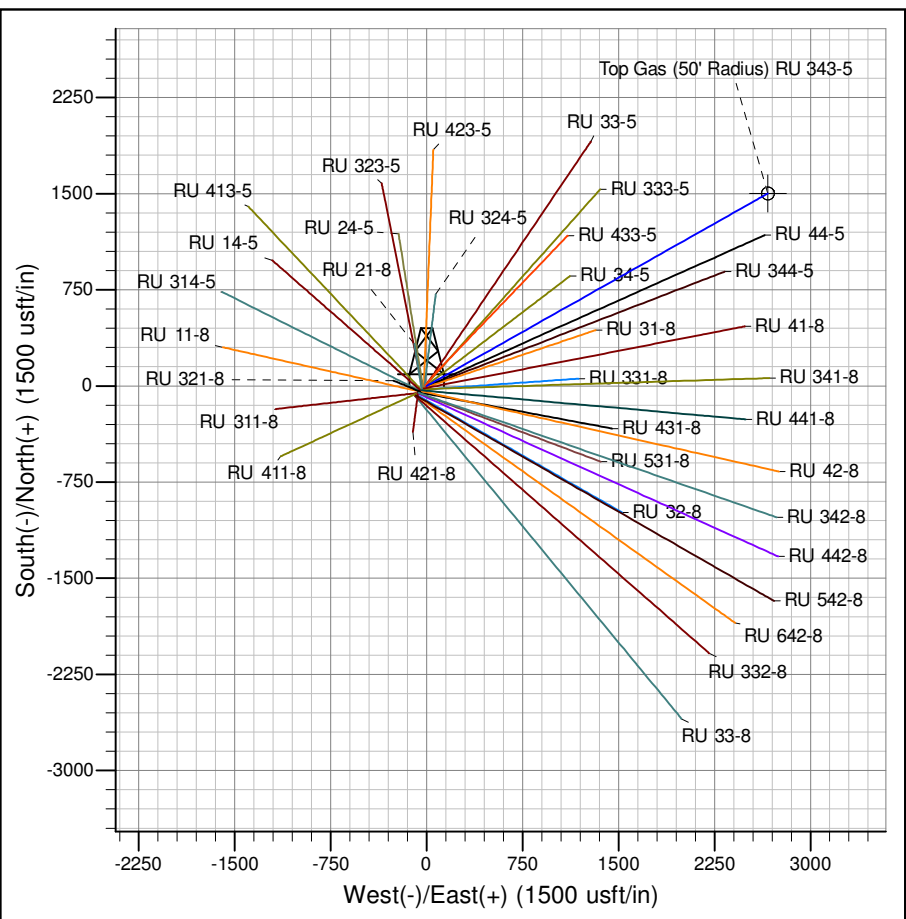




Well Name: RU 343-5  
Surface Location: RU 21-8 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 7736.00  
+N/-S      +E/-W      Northing      Easting      Latitude      Longitude      Slot  
0.00      0.00      1602702.92      2350549.82      39.46561      -107.80063      A17  
KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
130.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build	3.25%/100
1056.24	1105.23	31.69	60.62	129.01	229.10	262.93	262.93	Hold	31.69° Inc, 60.62° Az
4663.14	5344.35	31.69	60.62	1221.85	2169.77	2490.14	2490.14	Start Drop	-1.50%/100
6670.00	7457.34	0.00	0.00	1501.38	2666.15	3059.82	3059.82	Vertical	
7270.00	8057.34	0.00	0.00	1501.38	2666.15	3059.82	3059.82	Top Gas	
10020.00	10807.34	0.00	0.00	1501.38	2666.15	3059.82	3059.82	TD at	10807.34



Azimuths to True North  
Magnetic North: 9.84°

Magnetic Field  
Strength: 51919.0snT  
Dip Angle: 65.66°  
Date: 9/5/2014  
Model: IGRF2010

Project: RU 08-07S-093W  
Site: RU 21-8 Pad  
Well: RU 343-5  
Design #1 05Sep14 mab

# **PICEANCE VLY NAD 83**

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

**RU 21-8 Pad**

**RU 343-5 - Slot A17**

**Wellbore #1**

**Plan: Design #1 05Sep14 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 343-5 - Slot A17
<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 343-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 05Sep14 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 343-5 - Slot A17			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,602,702.91932 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,350,549.82115 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	9/5/2014	9.84	65.66	51,919

<b>Design</b>	Design #1 05Sep14 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	60.62

<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	
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,105.23	31.69	60.62	1,056.24	129.01	229.10	3.25	3.25	0.00	60.62	
5,344.35	31.69	60.62	4,663.14	1,221.85	2,169.77	0.00	0.00	0.00	0.00	
7,457.34	0.00	0.00	6,670.00	1,501.38	2,666.15	1.50	-1.50	0.00	180.00	
8,057.34	0.00	0.00	7,270.00	1,501.38	2,666.15	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
10,807.34	0.00	0.00	10,020.00	1,501.38	2,666.15	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 343-5 - Slot A17
<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 343-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 05Sep14 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	1,602,702.91932	2,350,549.82115	39.46561	-107.80063
130.00	0.00	0.00	130.00	0.00	0.00	1,602,702.91932	2,350,549.82115	39.46561	-107.80063
Start Build 3.25°/100									
200.00	2.28	60.62	199.98	0.68	1.21	1,602,703.57025	2,350,551.04879	39.46562	-107.80063
400.00	8.78	60.62	398.95	10.13	17.98	1,602,712.58597	2,350,568.05212	39.46564	-107.80057
600.00	15.28	60.62	594.45	30.56	54.27	1,602,732.09491	2,350,604.84529	39.46570	-107.80044
800.00	21.78	60.62	783.99	61.72	109.61	1,602,761.84625	2,350,660.95526	39.46578	-107.80025
1,000.00	28.28	60.62	965.12	103.21	183.28	1,602,801.45749	2,350,735.66068	39.46590	-107.79999
1,105.23	31.69	60.62	1,056.24	129.01	229.10	1,602,826.08937	2,350,782.11552	39.46597	-107.79982
Hold 31.69° Inc, 60.62° Az									
1,200.00	31.69	60.62	1,136.88	153.45	272.49	1,602,849.41548	2,350,826.10774	39.46604	-107.79967
9 5/8"									
1,400.00	31.69	60.62	1,307.05	205.00	364.05	1,602,898.64018	2,350,918.94378	39.46618	-107.79934
1,600.00	31.69	60.62	1,477.23	256.56	455.61	1,602,947.86487	2,351,011.77983	39.46632	-107.79902
1,800.00	31.69	60.62	1,647.40	308.12	547.17	1,602,997.08956	2,351,104.61587	39.46646	-107.79870
2,000.00	31.69	60.62	1,817.57	359.68	638.73	1,603,046.31425	2,351,197.45190	39.46660	-107.79837
2,200.00	31.69	60.62	1,987.74	411.24	730.29	1,603,095.53895	2,351,290.28794	39.46674	-107.79805
2,400.00	31.69	60.62	2,157.91	462.80	821.85	1,603,144.76364	2,351,383.12398	39.46689	-107.79772
2,600.00	31.69	60.62	2,328.08	514.36	913.41	1,603,193.98834	2,351,475.96002	39.46703	-107.79740
2,800.00	31.69	60.62	2,498.26	565.92	1,004.97	1,603,243.21303	2,351,568.79605	39.46717	-107.79707
3,000.00	31.69	60.62	2,668.43	617.48	1,096.53	1,603,292.43773	2,351,661.63209	39.46731	-107.79675
3,200.00	31.69	60.62	2,838.60	669.04	1,188.09	1,603,341.66242	2,351,754.46813	39.46745	-107.79643
3,400.00	31.69	60.62	3,008.77	720.60	1,279.65	1,603,390.88711	2,351,847.30417	39.46759	-107.79610
3,600.00	31.69	60.62	3,178.94	772.16	1,371.21	1,603,440.11180	2,351,940.14020	39.46773	-107.79578
3,800.00	31.69	60.62	3,349.11	823.72	1,462.77	1,603,489.33650	2,352,032.97625	39.46788	-107.79545
4,000.00	31.69	60.62	3,519.29	875.28	1,554.33	1,603,538.56119	2,352,125.81229	39.46802	-107.79513
4,200.00	31.69	60.62	3,689.46	926.84	1,645.89	1,603,587.78589	2,352,218.64833	39.46816	-107.79480
4,400.00	31.69	60.62	3,859.63	978.40	1,737.45	1,603,637.01059	2,352,311.48437	39.46830	-107.79448
4,600.00	31.69	60.62	4,029.80	1,029.96	1,829.01	1,603,686.23528	2,352,404.32040	39.46844	-107.79416
4,800.00	31.69	60.62	4,199.97	1,081.52	1,920.57	1,603,735.45998	2,352,497.15644	39.46858	-107.79383
5,000.00	31.69	60.62	4,370.14	1,133.08	2,012.13	1,603,784.68466	2,352,589.99248	39.46873	-107.79351
5,200.00	31.69	60.62	4,540.32	1,184.64	2,103.68	1,603,833.90936	2,352,682.82852	39.46887	-107.79318
5,344.35	31.69	60.62	4,663.14	1,221.85	2,169.77	1,603,869.43746	2,352,749.83327	39.46897	-107.79295
Start Drop -1.50°/100									
5,400.00	30.86	60.62	4,710.70	1,236.03	2,194.94	1,603,882.97199	2,352,775.35891	39.46901	-107.79286
5,600.00	27.86	60.62	4,884.99	1,284.14	2,280.38	1,603,928.90307	2,352,861.98332	39.46914	-107.79256
5,800.00	24.86	60.62	5,064.17	1,327.71	2,357.75	1,603,970.49811	2,352,940.43009	39.46926	-107.79228
6,000.00	21.86	60.62	5,247.76	1,366.61	2,426.84	1,604,007.64310	2,353,010.48423	39.46937	-107.79204
6,200.00	18.86	60.62	5,435.24	1,400.75	2,487.46	1,604,040.23622	2,353,071.95371	39.46946	-107.79182
6,400.00	15.86	60.62	5,626.11	1,430.03	2,539.45	1,604,068.18815	2,353,124.67006	39.46954	-107.79164
6,600.00	12.86	60.62	5,819.84	1,454.37	2,582.67	1,604,091.42226	2,353,168.48877	39.46961	-107.79149
6,800.00	9.86	60.62	6,015.90	1,473.69	2,616.99	1,604,109.87488	2,353,203.28975	39.46966	-107.79136
7,000.00	6.86	60.62	6,213.75	1,487.96	2,642.33	1,604,123.49542	2,353,228.97762	39.46970	-107.79127
7,200.00	3.86	60.62	6,412.85	1,497.13	2,658.60	1,604,132.24656	2,353,245.48195	39.46972	-107.79122
7,400.00	0.86	60.62	6,612.66	1,501.17	2,665.78	1,604,136.10430	2,353,252.75752	39.46974	-107.79119
7,457.34	0.00	0.00	6,670.00	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119
Vertical									
7,600.00	0.00	0.00	6,812.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119
7,800.00	0.00	0.00	7,012.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119
8,000.00	0.00	0.00	7,212.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119
8,057.34	0.00	0.00	7,270.00	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119
Top Gas - Approx. Top Gas									

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 343-5 - Slot A17
<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 343-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 05Sep14 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	7,412.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
8,400.00	0.00	0.00	7,612.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
8,600.00	0.00	0.00	7,812.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
8,800.00	0.00	0.00	8,012.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
9,000.00	0.00	0.00	8,212.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
9,200.00	0.00	0.00	8,412.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
9,400.00	0.00	0.00	8,612.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
9,600.00	0.00	0.00	8,812.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
9,800.00	0.00	0.00	9,012.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
9,833.34	0.00	0.00	9,046.00	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
Cameo Coals										
10,000.00	0.00	0.00	9,212.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
10,200.00	0.00	0.00	9,412.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
10,400.00	0.00	0.00	9,612.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
10,553.34	0.00	0.00	9,766.00	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
Coal D										
10,600.00	0.00	0.00	9,812.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
10,657.34	0.00	0.00	9,870.00	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
Rollins SS										
10,800.00	0.00	0.00	10,012.66	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
10,807.33	0.00	0.00	10,019.99	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
TD										
10,807.34	0.00	0.00	10,020.00	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119	
TD at 10807.34										

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting		
- Shape	(°)	(bearing	(usft)	(usft)	(usft)	(usft)	(usft)	Latitude	Longitude
Top Gas (50' Radius) RL	0.00	358.55	7,270.00	1,501.38	2,666.15	1,604,136.30591	2,353,253.13776	39.46974	-107.79119
- plan hits target center									
- Circle (radius 50.00)									

Casing Points						Casing Diameter (in)	Hole Diameter (in)
Measured Depth (usft)	Vertical Depth (usft)	Name					
1,200.00	1,136.88	9 5/8"				9.625	13.500

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 343-5 - Slot A17
<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 343-5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 05Sep14 mab		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
8,057.34	7,270.00	Approx. Top Gas				
9,833.34	9,046.00	Cameo Coals				
10,553.34	9,766.00	Coal D				
10,657.34	9,870.00	Rollins SS				
10,807.33	10,019.99	TD		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
130.00	130.00	0.00	0.00	Start Build 3.25°/100	
1,105.23	1,056.24	129.01	229.10	Hold 31.69° Inc, 60.62° Az	
5,344.35	4,663.14	1,221.85	2,169.77	Start Drop -1.50°/100	
7,457.34	6,670.00	1,501.38	2,666.15	Vertical	
8,057.34	7,270.00	1,501.38	2,666.15	Top Gas	
10,807.34	10,020.00	1,501.38	2,666.15	TD at 10807.34	