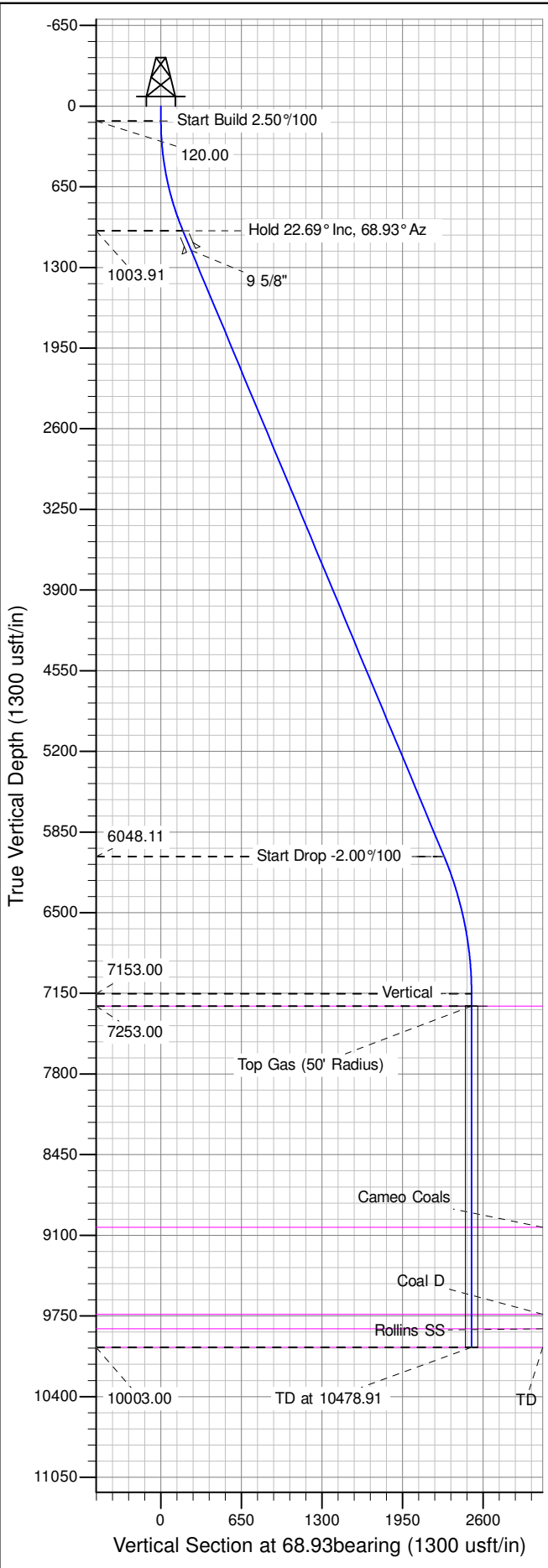
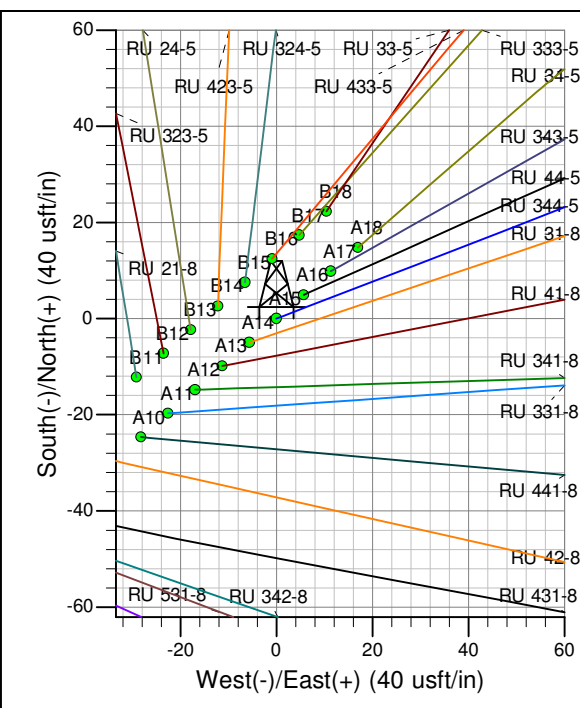
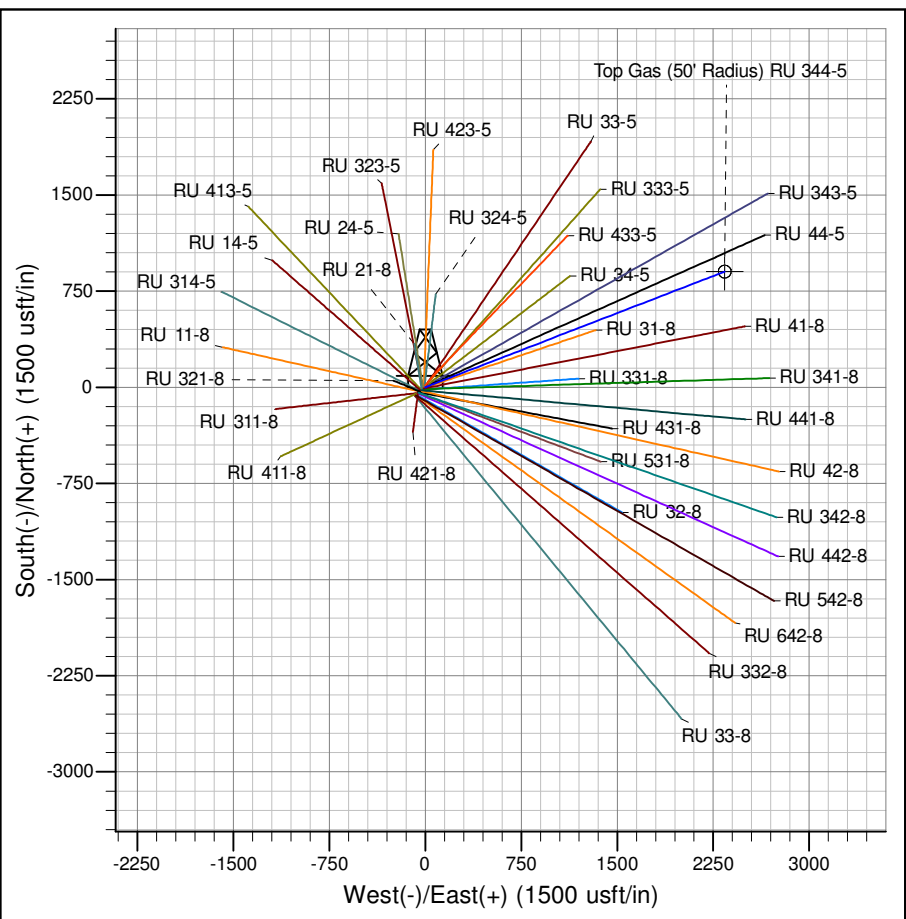




Well Name: RU 344-5  
Surface Location: RU 21-8 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 7736.00  
+N/-S 0.00 +E/-W 0.00 Northing 1602693.36 Easting 2350538.26 Latitude 39.46559 Longitude -107.80067 Slot A15  
KELLY BUSHING @ 7762.00usft (Nabors 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	2.50°/100
1003.91	1027.43	22.69	68.93	63.75	165.45	177.31	177.31	Hold	22.69° Inc, 68.93° Az
6048.11	6494.62	22.69	68.93	821.92	2133.00	2285.88	2285.88	Start Drop	-2.00°/100
7153.00	7628.91	0.00	0.00	901.62	2339.82	2507.52	2507.52	Vertical	
7253.00	7728.91	0.00	0.00	901.62	2339.82	2507.52	2507.52	Top Gas	
10003.00	10478.91	0.00	0.00	901.62	2339.82	2507.52	2507.52	TD at	10478.91



Azimuths to True North  
Magnetic North: 9.84°  
Magnetic Field  
Strength: 51918.2snT  
Dip Angle: 65.66°  
Date: 9/8/2014  
Model: IGRF2010

Project: RU 08-07S-093W  
Site: RU 21-8 Pad  
Well: RU 344-5  
Design #1 08Sep14 mab

# **PICEANCE VLY NAD 83**

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

**RU 21-8 Pad**

**RU 344-5 - Slot A15**

**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 344-5 - Slot A15
<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 344-5	<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 344-5 - Slot A15			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,602,693.35797 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,350,538.26344 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	68.93

<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	
1,027.43	22.69	68.93	1,003.91	63.75	165.45	2.50	2.50	0.00	68.93	
6,494.62	22.69	68.93	6,048.12	821.92	2,133.00	0.00	0.00	0.00	0.00	
7,628.91	0.00	0.00	7,153.00	901.62	2,339.82	2.00	-2.00	0.00	180.00	
7,728.91	0.00	0.00	7,253.00	901.62	2,339.82	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
10,478.91	0.00	0.00	10,003.00	901.62	2,339.82	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 344-5 - Slot A15
<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 344-5	<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	1,602,693.35797	2,350,538.26344	39.46559	-107.80067	
120.00	0.00	0.00	120.00	0.00	0.00	1,602,693.35797	2,350,538.26344	39.46559	-107.80067	
Start Build 2.50°/100										
200.00	2.00	68.93	199.98	0.50	1.30	1,602,693.82682	2,350,539.57849	39.46559	-107.80067	
400.00	7.00	68.93	399.30	6.14	15.94	1,602,699.09478	2,350,554.35433	39.46560	-107.80062	
600.00	12.00	68.93	596.50	18.01	46.73	1,602,710.17654	2,350,585.43699	39.46564	-107.80051	
800.00	17.00	68.93	790.07	36.01	93.44	1,602,726.98776	2,350,632.58991	39.46569	-107.80034	
1,000.00	22.00	68.93	978.54	60.00	155.72	1,602,749.40049	2,350,695.45423	39.46575	-107.80012	
1,027.43	22.69	68.93	1,003.91	63.75	165.45	1,602,752.90258	2,350,705.27704	39.46576	-107.80009	
Hold 22.69° Inc, 68.93° Az										
1,200.00	22.69	68.93	1,163.12	87.69	227.56	1,602,775.25324	2,350,767.96726	39.46583	-107.79987	
9 5/8"										
1,400.00	22.69	68.93	1,347.65	115.42	299.53	1,602,801.15695	2,350,840.62322	39.46590	-107.79961	
1,600.00	22.69	68.93	1,532.18	143.16	371.51	1,602,827.06065	2,350,913.27918	39.46598	-107.79936	
1,800.00	22.69	68.93	1,716.70	170.89	443.49	1,602,852.96435	2,350,985.93514	39.46606	-107.79910	
2,000.00	22.69	68.93	1,901.23	198.63	515.46	1,602,878.86806	2,351,058.59110	39.46613	-107.79885	
2,200.00	22.69	68.93	2,085.76	226.36	587.44	1,602,904.77176	2,351,131.24707	39.46621	-107.79859	
2,400.00	22.69	68.93	2,270.28	254.10	659.42	1,602,930.67546	2,351,203.90302	39.46629	-107.79834	
2,600.00	22.69	68.93	2,454.81	281.83	731.39	1,602,956.57917	2,351,276.55898	39.46636	-107.79808	
2,800.00	22.69	68.93	2,639.34	309.57	803.37	1,602,982.48287	2,351,349.21494	39.46644	-107.79783	
3,000.00	22.69	68.93	2,823.87	337.30	875.35	1,603,008.38656	2,351,421.87090	39.46651	-107.79757	
3,200.00	22.69	68.93	3,008.39	365.04	947.32	1,603,034.29027	2,351,494.52686	39.46659	-107.79732	
3,400.00	22.69	68.93	3,192.92	392.77	1,019.30	1,603,060.19397	2,351,567.18281	39.46667	-107.79706	
3,600.00	22.69	68.93	3,377.45	420.51	1,091.28	1,603,086.09767	2,351,639.83877	39.46674	-107.79681	
3,800.00	22.69	68.93	3,561.97	448.24	1,163.25	1,603,112.00138	2,351,712.49473	39.46682	-107.79655	
4,000.00	22.69	68.93	3,746.50	475.98	1,235.23	1,603,137.90508	2,351,785.15069	39.46689	-107.79630	
4,200.00	22.69	68.93	3,931.03	503.71	1,307.21	1,603,163.80878	2,351,857.80666	39.46697	-107.79604	
4,400.00	22.69	68.93	4,115.55	531.45	1,379.18	1,603,189.71249	2,351,930.46262	39.46705	-107.79579	
4,600.00	22.69	68.93	4,300.08	559.18	1,451.16	1,603,215.61619	2,352,003.11857	39.46712	-107.79553	
4,800.00	22.69	68.93	4,484.61	586.92	1,523.14	1,603,241.51989	2,352,075.77453	39.46720	-107.79528	
5,000.00	22.69	68.93	4,669.13	614.65	1,595.11	1,603,267.42360	2,352,148.43049	39.46728	-107.79502	
5,200.00	22.69	68.93	4,853.66	642.39	1,667.09	1,603,293.32730	2,352,221.08645	39.46735	-107.79477	
5,400.00	22.69	68.93	5,038.19	670.12	1,739.07	1,603,319.23101	2,352,293.74241	39.46743	-107.79451	
5,600.00	22.69	68.93	5,222.71	697.86	1,811.04	1,603,345.13471	2,352,366.39836	39.46750	-107.79426	
5,800.00	22.69	68.93	5,407.24	725.60	1,883.02	1,603,371.03841	2,352,439.05432	39.46758	-107.79400	
6,000.00	22.69	68.93	5,591.77	753.33	1,955.00	1,603,396.94211	2,352,511.71028	39.46766	-107.79375	
6,200.00	22.69	68.93	5,776.29	781.07	2,026.97	1,603,422.84581	2,352,584.36625	39.46773	-107.79349	
6,400.00	22.69	68.93	5,960.82	808.80	2,098.95	1,603,448.74951	2,352,657.02221	39.46781	-107.79324	
6,494.62	22.69	68.93	6,048.12	821.92	2,133.00	1,603,461.00401	2,352,691.39421	39.46784	-107.79312	
Start Drop -2.00°/100										
6,600.00	20.58	68.93	6,146.07	835.89	2,169.25	1,603,474.04963	2,352,727.98521	39.46788	-107.79299	
6,800.00	16.58	68.93	6,335.61	858.80	2,228.70	1,603,495.44361	2,352,787.99207	39.46795	-107.79278	
7,000.00	12.58	68.93	6,529.13	876.89	2,275.66	1,603,512.34539	2,352,835.39900	39.46799	-107.79261	
7,200.00	8.58	68.93	6,725.69	890.09	2,309.91	1,603,524.67262	2,352,869.97501	39.46803	-107.79249	
7,400.00	4.58	68.93	6,924.34	898.33	2,331.29	1,603,532.36525	2,352,891.55166	39.46805	-107.79242	
7,600.00	0.58	68.93	7,124.09	901.56	2,339.68	1,603,535.38579	2,352,900.02383	39.46806	-107.79239	
7,628.91	0.00	0.00	7,153.00	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
Vertical										
7,728.91	0.00	0.00	7,253.00	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
Top Gas - Approx. Top Gas										
7,800.00	0.00	0.00	7,324.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
8,000.00	0.00	0.00	7,524.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 344-5 - Slot A15
<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 344-5	<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	7,724.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
8,400.00	0.00	0.00	7,924.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
8,600.00	0.00	0.00	8,124.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
8,800.00	0.00	0.00	8,324.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
9,000.00	0.00	0.00	8,524.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
9,200.00	0.00	0.00	8,724.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
9,400.00	0.00	0.00	8,924.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
9,511.91	0.00	0.00	9,036.00	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
Cameo Coals										
9,600.00	0.00	0.00	9,124.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
9,800.00	0.00	0.00	9,324.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
10,000.00	0.00	0.00	9,524.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
10,200.00	0.00	0.00	9,724.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
10,211.91	0.00	0.00	9,736.00	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
Coal D										
10,328.91	0.00	0.00	9,853.00	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
Rollins SS										
10,400.00	0.00	0.00	9,924.09	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
10,478.90	0.00	0.00	10,002.99	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
TD										
10,478.91	0.00	0.00	10,003.00	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
TD at 10478.91										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Top Gas (50' Radius) RL	0.00	358.55	7,253.00	901.62	2,339.82	1,603,535.43477	2,352,900.16120	39.46806	-107.79239	
- plan hits target center										
- Circle (radius 50.00)										

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (in)	Hole Diameter (in)	
1,200.00	1,163.12	9 5/8"		9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
7,728.91	7,253.00	Approx. Top Gas				
9,511.91	9,036.00	Cameo Coals				
10,211.91	9,736.00	Coal D				
10,328.91	9,853.00	Rollins SS				
10,478.90	10,002.99	TD		0.00		

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well RU 344-5 - Slot A15
<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 344-5	<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 2.50°/100
1,027.43	1,003.91	63.75	165.45	Hold 22.69° Inc, 68.93° Az
6,494.62	6,048.12	821.92	2,133.00	Start Drop -2.00°/100
7,628.91	7,153.00	901.62	2,339.82	Vertical
7,728.91	7,253.00	901.62	2,339.82	Top Gas
10,478.91	10,003.00	901.62	2,339.82	TD at 10478.91