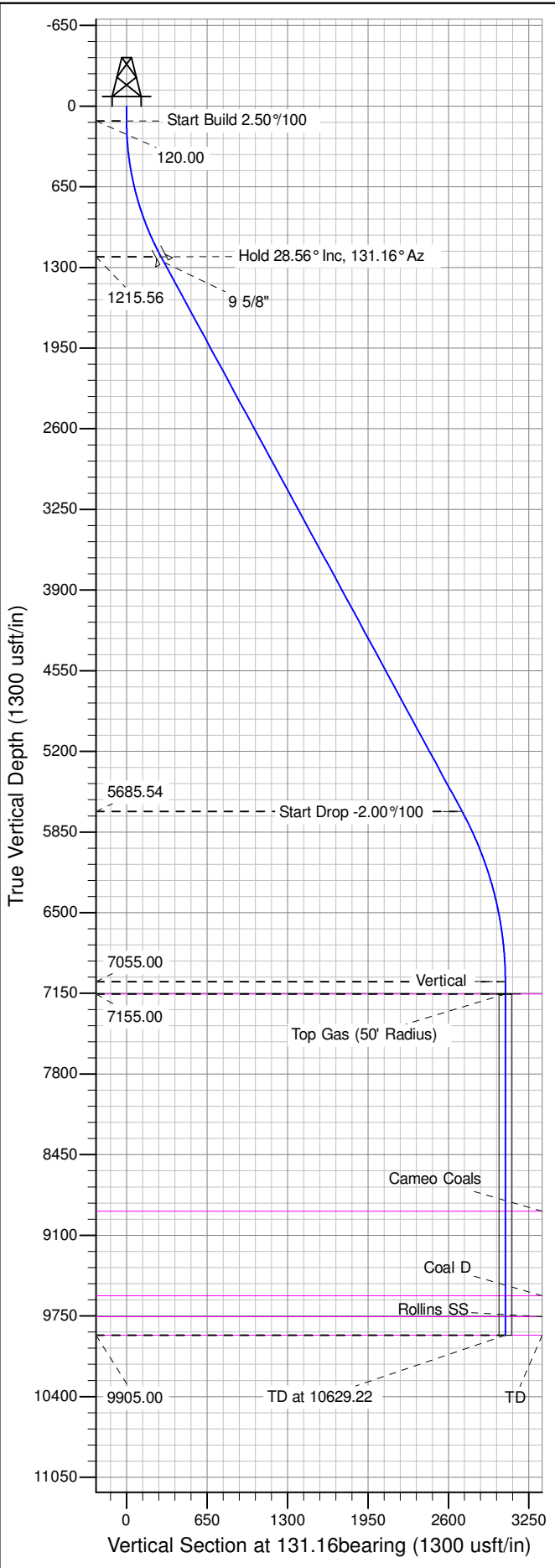




Well Name: RU 332-8
 Surface Location: RU 21-8 Pad
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
 Ground Elevation: 7736.00

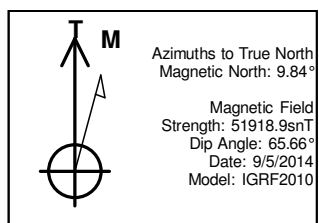
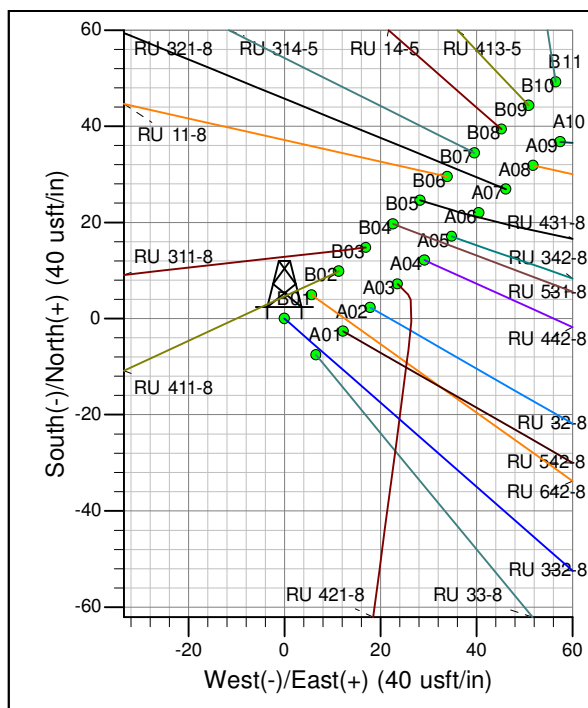
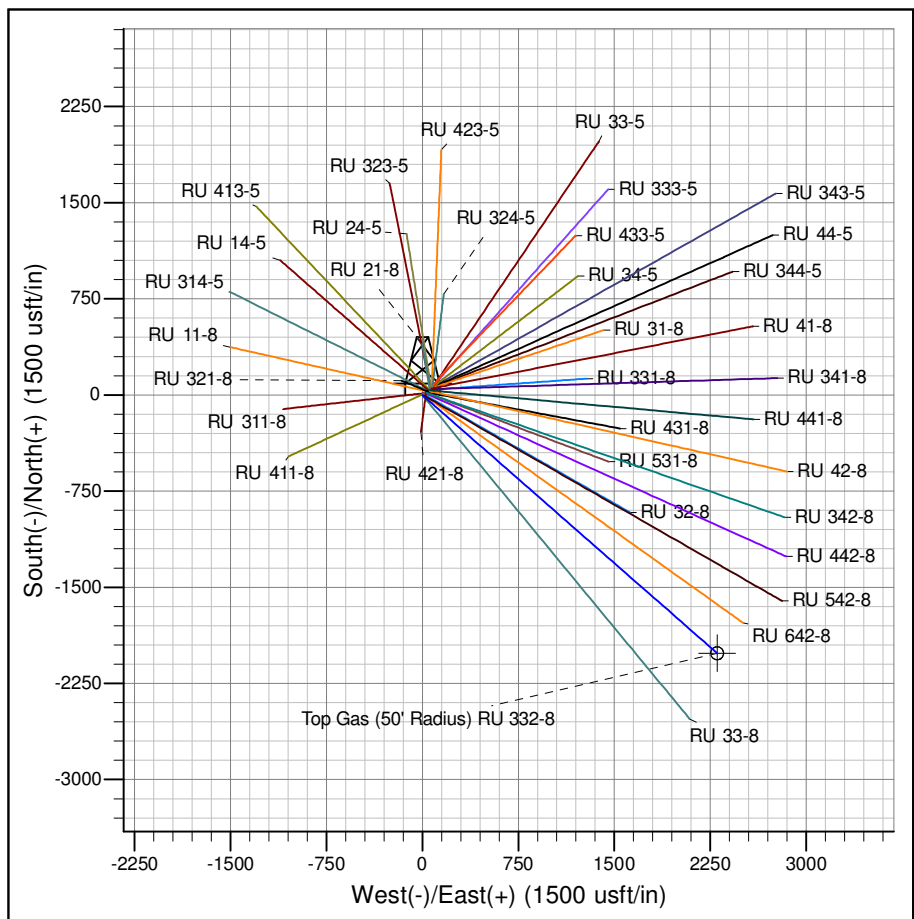
+N/-S 0.00 +E/-W 0.00 Northing 1602634.13 Easting 2350450.99 Latitude 39.46542 Longitude -107.80098 Slot B01

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
1215.56	1262.27	28.56	131.16	-183.49	209.93	278.82	278.82	Hold 28.56° Inc, 131.16° Az
5685.54	6351.38	28.56	131.16	-1784.50	2041.60	2711.56	2711.56	Start Drop -2.00%/100
7055.00	7779.22	0.00	0.00	-2013.86	2304.01	3060.08	3060.08	Vertical
7155.00	7879.22	0.00	0.00	-2013.86	2304.01	3060.08	3060.08	Top Gas
9905.00	10629.22	0.00	0.00	-2013.86	2304.01	3060.08	3060.08	TD at 10629.22



Project: RU 08-07S-093W
 Site: RU 21-8 Pad
 Well: RU 332-8
 Design #1 05Sep14 mab

PICEANCE VLY NAD 83

RU 08-07S-093W

RU 21-8 Pad

RU 332-8 - Slot B01

Wellbore #1

Plan: Design #1 05Sep14 mab

Standard Planning Report - Geographic

04 November, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 332-8 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Project:	RU 08-07S-093W	MD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Site:	RU 21-8 Pad	North Reference:	True
Well:	RU 332-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 05Sep14 mab		

Project	RU 08-07S-093W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	RU 21-8 Pad				
Site Position:		Northing:	1,602,707.70000 usft	Latitude:	39.46563
From:	Map	Easting:	2,350,555.60000 usft	Longitude:	-107.80061
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	-1.45 °

Well	RU 332-8 - Slot B01					
Well Position	+N/-S	0.00 usft	Northing:	1,602,634.13399 usft	Latitude:	39.46542
	+E/-W	0.00 usft	Easting:	2,350,450.98502 usft	Longitude:	-107.80098
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft	Ground Level:	7,736.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/5/2014	9.84	65.66	51,919

Design	Design #1 05Sep14 mab			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (bearing)
	0.00	0.00	0.00	131.16

Plan Sections										
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	
1,262.27	28.56	131.16	1,215.56	-183.49	209.93	2.50	2.50	0.00	131.16	
6,351.38	28.56	131.16	5,685.54	-1,784.50	2,041.60	0.00	0.00	0.00	0.00	
7,779.22	0.00	0.00	7,055.00	-2,013.86	2,304.01	2.00	-2.00	0.00	180.00	
7,879.22	0.00	0.00	7,155.00	-2,013.86	2,304.01	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
10,629.22	0.00	0.00	9,905.00	-2,013.86	2,304.01	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 332-8 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Project:	RU 08-07S-093W	MD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Site:	RU 21-8 Pad	North Reference:	True
Well:	RU 332-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	1,602,634.13399	2,350,450.98502	39.46542	-107.80098	
120.00	0.00	0.00	120.00	0.00	0.00	1,602,634.13399	2,350,450.98502	39.46542	-107.80098	
Start Build 2.50°/100										
200.00	2.00	131.16	199.98	-0.92	1.05	1,602,633.18886	2,350,452.01259	39.46542	-107.80097	
400.00	7.00	131.16	399.30	-11.24	12.86	1,602,622.56943	2,350,463.55835	39.46539	-107.80093	
600.00	12.00	131.16	596.50	-32.96	37.71	1,602,600.23024	2,350,487.84617	39.46533	-107.80084	
800.00	17.00	131.16	790.07	-65.90	75.40	1,602,566.34133	2,350,524.69120	39.46524	-107.80071	
1,000.00	22.00	131.16	978.54	-109.83	125.65	1,602,521.16059	2,350,573.81302	39.46512	-107.80053	
1,200.00	27.00	131.16	1,160.47	-164.39	188.08	1,602,465.03189	2,350,634.83780	39.46497	-107.80031	
1,262.27	28.56	131.16	1,215.56	-183.49	209.93	1,602,445.38523	2,350,656.19823	39.46492	-107.80023	
Hold 28.56° Inc, 131.16° Az										
1,312.27	28.56	131.16	1,259.48	-199.22	227.92	1,602,429.20576	2,350,673.78902	39.46487	-107.80017	
9 5/8"										
1,400.00	28.56	131.16	1,336.54	-226.82	259.50	1,602,400.81550	2,350,704.65574	39.46480	-107.80006	
1,600.00	28.56	131.16	1,512.20	-289.74	331.48	1,602,336.09361	2,350,775.02327	39.46462	-107.79980	
1,800.00	28.56	131.16	1,687.87	-352.66	403.47	1,602,271.37172	2,350,845.39081	39.46445	-107.79955	
2,000.00	28.56	131.16	1,863.54	-415.58	475.45	1,602,206.64983	2,350,915.75835	39.46428	-107.79929	
2,200.00	28.56	131.16	2,039.21	-478.50	547.43	1,602,141.92794	2,350,986.12589	39.46411	-107.79904	
2,400.00	28.56	131.16	2,214.88	-541.41	619.42	1,602,077.20605	2,351,056.49342	39.46393	-107.79878	
2,600.00	28.56	131.16	2,390.55	-604.33	691.40	1,602,012.48416	2,351,126.86096	39.46376	-107.79853	
2,800.00	28.56	131.16	2,566.22	-667.25	763.39	1,601,947.76227	2,351,197.22849	39.46359	-107.79827	
3,000.00	28.56	131.16	2,741.89	-730.17	835.37	1,601,883.04038	2,351,267.59603	39.46341	-107.79802	
3,200.00	28.56	131.16	2,917.55	-793.09	907.35	1,601,818.31848	2,351,337.96357	39.46324	-107.79776	
3,400.00	28.56	131.16	3,093.22	-856.01	979.34	1,601,753.59660	2,351,408.33111	39.46307	-107.79751	
3,600.00	28.56	131.16	3,268.89	-918.93	1,051.32	1,601,688.87471	2,351,478.69865	39.46290	-107.79725	
3,800.00	28.56	131.16	3,444.56	-981.85	1,123.31	1,601,624.15282	2,351,549.06618	39.46272	-107.79700	
4,000.00	28.56	131.16	3,620.23	-1,044.77	1,195.29	1,601,559.43092	2,351,619.43372	39.46255	-107.79674	
4,200.00	28.56	131.16	3,795.90	-1,107.69	1,267.28	1,601,494.70903	2,351,689.80126	39.46238	-107.79649	
4,400.00	28.56	131.16	3,971.57	-1,170.60	1,339.26	1,601,429.98714	2,351,760.16880	39.46221	-107.79623	
4,600.00	28.56	131.16	4,147.23	-1,233.52	1,411.24	1,601,365.26526	2,351,830.53634	39.46203	-107.79598	
4,800.00	28.56	131.16	4,322.90	-1,296.44	1,483.23	1,601,300.54337	2,351,900.90388	39.46186	-107.79572	
5,000.00	28.56	131.16	4,498.57	-1,359.36	1,555.21	1,601,235.82147	2,351,971.27141	39.46169	-107.79547	
5,200.00	28.56	131.16	4,674.24	-1,422.28	1,627.20	1,601,171.09958	2,352,041.63895	39.46151	-107.79521	
5,400.00	28.56	131.16	4,849.91	-1,485.20	1,699.18	1,601,106.37769	2,352,112.00649	39.46134	-107.79496	
5,600.00	28.56	131.16	5,025.58	-1,548.12	1,771.16	1,601,041.65580	2,352,182.37402	39.46117	-107.79470	
5,800.00	28.56	131.16	5,201.25	-1,611.04	1,843.15	1,600,976.93392	2,352,252.74156	39.46100	-107.79445	
6,000.00	28.56	131.16	5,376.92	-1,673.96	1,915.13	1,600,912.21202	2,352,323.10910	39.46082	-107.79420	
6,200.00	28.56	131.16	5,552.58	-1,736.88	1,987.12	1,600,847.49013	2,352,393.47663	39.46065	-107.79394	
6,351.38	28.56	131.16	5,685.54	-1,784.50	2,041.60	1,600,798.50344	2,352,446.73640	39.46052	-107.79375	
Start Drop -2.00°/100										
6,400.00	27.58	131.16	5,728.45	-1,799.56	2,058.83	1,600,783.01435	2,352,463.57659	39.46048	-107.79369	
6,600.00	23.58	131.16	5,908.80	-1,856.38	2,123.84	1,600,724.55824	2,352,527.13179	39.46032	-107.79346	
6,800.00	19.58	131.16	6,094.74	-1,904.79	2,179.23	1,600,674.76130	2,352,581.27249	39.46019	-107.79326	
7,000.00	15.58	131.16	6,285.36	-1,944.55	2,224.71	1,600,633.86613	2,352,625.73492	39.46008	-107.79310	
7,200.00	11.58	131.16	6,479.72	-1,975.46	2,260.07	1,600,602.07197	2,352,660.30246	39.46000	-107.79297	
7,400.00	7.58	131.16	6,676.89	-1,997.37	2,285.14	1,600,579.53372	2,352,684.80672	39.45994	-107.79288	
7,600.00	3.58	131.16	6,875.90	-2,010.17	2,299.79	1,600,566.36117	2,352,699.12829	39.45990	-107.79283	
7,779.22	0.00	0.00	7,055.00	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
Vertical										
7,800.00	0.00	0.00	7,075.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
7,879.22	0.00	0.00	7,155.00	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
Top Gas - Approx. Top Gas										

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 332-8 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Project:	RU 08-07S-093W	MD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Site:	RU 21-8 Pad	North Reference:	True
Well:	RU 332-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	
8,000.00	0.00	0.00	7,275.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
8,200.00	0.00	0.00	7,475.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
8,400.00	0.00	0.00	7,675.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
8,600.00	0.00	0.00	7,875.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
8,800.00	0.00	0.00	8,075.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
9,000.00	0.00	0.00	8,275.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
9,200.00	0.00	0.00	8,475.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
9,400.00	0.00	0.00	8,675.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
9,600.00	0.00	0.00	8,875.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
9,630.22	0.00	0.00	8,906.00	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
Cameo Coals										
9,800.00	0.00	0.00	9,075.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
10,000.00	0.00	0.00	9,275.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
10,200.00	0.00	0.00	9,475.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
10,310.22	0.00	0.00	9,586.00	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
Coal D										
10,400.00	0.00	0.00	9,675.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
10,479.22	0.00	0.00	9,755.00	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
Rollins SS										
10,600.00	0.00	0.00	9,875.78	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
10,629.21	0.00	0.00	9,904.99	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
TD										
10,629.22	0.00	0.00	9,905.00	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	
TD at 10629.22										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Top Gas (50' Radius) RL - hit/miss target - Shape - plan hits target center - Circle (radius 50.00)	0.00	358.55	7,155.00	-2,013.86	2,304.01	1,600,562.56748	2,352,703.25290	39.45989	-107.79282	

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
1,312.27	1,259.48	9 5/8"	9.625	13.500		

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well RU 332-8 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Project:	RU 08-07S-093W	MD Reference:	KELLY BUSHING @ 7762.00usft (Nabors 576 (26' RKB) mab)
Site:	RU 21-8 Pad	North Reference:	True
Well:	RU 332-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 05Sep14 mab		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
7,879.22	7,155.00	Approx. Top Gas				
9,630.22	8,906.00	Cameo Coals				
10,310.22	9,586.00	Coal D				
10,479.22	9,755.00	Rollins SS				
10,629.21	9,904.99	TD		0.00		

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	
1,262.27	1,215.56	-183.49	209.93	Hold 28.56° Inc, 131.16° Az	
6,351.38	5,685.54	-1,784.50	2,041.60	Start Drop -2.00°/100	
7,779.22	7,055.00	-2,013.86	2,304.01	Vertical	
7,879.22	7,155.00	-2,013.86	2,304.01	Top Gas	
10,629.22	9,905.00	-2,013.86	2,304.01	TD at 10629.22	