



PICEANCE VLY NAD 83

PA 11-07S-095W

PA 22-11 Pad

PA 412-11 - Slot A5

Wellbore #1

Plan: Plan #2 23Oct12 kjs

Standard Planning Report - Geographic

29 October, 2012



WPX Energy
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 412-11 - Slot A5
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6300.0usft (Nabors 577 (26' RKB))
Project:	PA 11-07S-095W	MD Reference:	KELLY BUSHING @ 6300.0usft (Nabors 577 (26' RKB))
Site:	PA 22-11 Pad	North Reference:	True
Well:	PA 412-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 23Oct12 kjs		

Project	PA 11-07S-095W, Garfield County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	PA 22-11 Pad		
Site Position:		Northing:	1,599,302.80 usft
From:	Map	Easting:	2,303,403.20 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	39° 27' 10.388 N
		Longitude:	107° 58' 2.060 W
		Grid Convergence:	-1.56 °

Well	PA 412-11 - Slot A5					
Well Position	+N/-S	0.0 usft	Northing:	1,599,304.49 usft	Latitude:	39° 27' 10.393 N
	+E/-W	0.0 usft	Easting:	2,303,358.24 usft	Longitude:	107° 58' 2.633 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	6,274.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	5/26/2009	10.58	65.77	52,461

Design	Plan #2 23Oct12 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	0.00

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,047.7	18.55	283.48	1,031.5	34.7	-144.8	2.00	2.00	0.00	283.48	
4,484.3	18.55	283.48	4,289.6	289.5	-1,208.2	0.00	0.00	0.00	0.00	
5,721.2	0.00	0.00	5,505.0	335.8	-1,401.3	1.50	-1.50	0.00	180.00	
5,821.2	0.00	0.00	5,605.0	335.8	-1,401.3	0.00	0.00	0.00	0.00	Top Gas (25' Radius)
7,971.2	0.00	0.00	7,755.0	335.8	-1,401.3	0.00	0.00	0.00	0.00	



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Site:	PA 22-11 Pad	North Reference:	True
Well:	PA 412-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 23Oct12 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	
0.0	0.00	0.00	0.0	0.0	0.0	1,599,304.49	2,303,358.24	39° 27' 10.393 N	107° 58' 2.633 W	
120.0	0.00	0.00	120.0	0.0	0.0	1,599,304.49	2,303,358.24	39° 27' 10.393 N	107° 58' 2.633 W	
Start Build 2.00										
500.0	7.60	283.48	498.9	5.9	-24.5	1,599,311.02	2,303,333.93	39° 27' 10.451 N	107° 58' 2.945 W	
1,000.0	17.60	283.48	986.2	31.3	-130.4	1,599,339.27	2,303,228.73	39° 27' 10.702 N	107° 58' 4.296 W	
1,047.7	18.55	283.48	1,031.5	34.7	-144.8	1,599,343.11	2,303,214.45	39° 27' 10.736 N	107° 58' 4.479 W	
Hold 18.55 Inclination										
1,148.0	18.55	283.48	1,126.7	42.1	-175.8	1,599,351.39	2,303,183.62	39° 27' 10.810 N	107° 58' 4.875 W	
9 5/8"										
1,500.0	18.55	283.48	1,460.4	68.2	-284.8	1,599,380.44	2,303,075.45	39° 27' 11.068 N	107° 58' 6.264 W	
2,000.0	18.55	283.48	1,934.4	105.3	-439.5	1,599,421.70	2,302,921.81	39° 27' 11.434 N	107° 58' 8.236 W	
2,500.0	18.55	283.48	2,408.4	142.4	-594.2	1,599,462.96	2,302,768.16	39° 27' 11.800 N	107° 58' 10.208 W	
3,000.0	18.55	283.48	2,882.4	179.5	-748.9	1,599,504.22	2,302,614.52	39° 27' 12.167 N	107° 58' 12.181 W	
3,500.0	18.55	283.48	3,356.4	216.5	-903.6	1,599,545.48	2,302,460.88	39° 27' 12.533 N	107° 58' 14.153 W	
4,000.0	18.55	283.48	3,830.4	253.6	-1,058.3	1,599,586.75	2,302,307.23	39° 27' 12.900 N	107° 58' 16.126 W	
4,207.3	18.55	283.48	4,027.0	269.0	-1,122.5	1,599,603.86	2,302,243.52	39° 27' 13.051 N	107° 58' 16.943 W	
Top of "G" Sand										
4,312.8	18.55	283.48	4,127.0	276.8	-1,155.1	1,599,612.56	2,302,211.10	39° 27' 13.129 N	107° 58' 17.360 W	
Base of "G" Sand										
4,484.3	18.55	283.48	4,289.6	289.5	-1,208.2	1,599,626.72	2,302,158.40	39° 27' 13.254 N	107° 58' 18.036 W	
Start Drop -1.50										
4,500.0	18.32	283.48	4,304.5	290.7	-1,213.0	1,599,628.00	2,302,153.62	39° 27' 13.266 N	107° 58' 18.098 W	
4,539.5	17.73	283.48	4,342.0	293.5	-1,224.9	1,599,631.17	2,302,141.82	39° 27' 13.294 N	107° 58' 18.249 W	
Mesaverde										
5,000.0	10.82	283.48	4,788.0	320.0	-1,335.2	1,599,660.60	2,302,032.24	39° 27' 13.555 N	107° 58' 19.656 W	
5,500.0	3.32	283.48	5,283.9	334.3	-1,395.0	1,599,676.54	2,301,972.87	39° 27' 13.697 N	107° 58' 20.418 W	
5,721.2	0.00	0.00	5,505.0	335.8	-1,401.3	1,599,678.21	2,301,966.68	39° 27' 13.712 N	107° 58' 20.497 W	
Vertical										
5,821.2	0.00	0.00	5,605.0	335.8	-1,401.3	1,599,678.21	2,301,966.68	39° 27' 13.712 N	107° 58' 20.497 W	
Top Gas - Approx. Top Gas										
6,000.0	0.00	0.00	5,783.8	335.8	-1,401.3	1,599,678.21	2,301,966.68	39° 27' 13.712 N	107° 58' 20.497 W	
6,500.0	0.00	0.00	6,283.8	335.8	-1,401.3	1,599,678.21	2,301,966.68	39° 27' 13.712 N	107° 58' 20.497 W	
6,874.2	0.00	0.00	6,658.0	335.8	-1,401.3	1,599,678.21	2,301,966.68	39° 27' 13.712 N	107° 58' 20.497 W	
Cameo Coals										
7,000.0	0.00	0.00	6,783.8	335.8	-1,401.3	1,599,678.21	2,301,966.68	39° 27' 13.712 N	107° 58' 20.497 W	
7,500.0	0.00	0.00	7,283.8	335.8	-1,401.3	1,599,678.21	2,301,966.68	39° 27' 13.712 N	107° 58' 20.497 W	
7,821.2	0.00	0.00	7,605.0	335.8	-1,401.3	1,599,678.21	2,301,966.68	39° 27' 13.712 N	107° 58' 20.497 W	
Rollins SS										
7,971.2	0.00	0.00	7,755.0	335.8	-1,401.3	1,599,678.21	2,301,966.68	39° 27' 13.712 N	107° 58' 20.497 W	
TD at 7971.2 - TD										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Top Gas (25' Radius) P/ - plan hits target center - Circle (radius 25.0)	0.00	0.00	5,605.0	335.8	-1,401.3	1,599,678.21	2,301,966.68	39° 27' 13.712 N	107° 58' 20.497 W	



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Project:	PA 11-07S-095W	MD Reference:	KELLY BUSHING @ 6300.0usft (Nabors 577 (26' RKB))
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Wellbore:	Wellbore #1		
Design:	Plan #2 23Oct12 kjs		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,148.0	1,126.7	9 5/8"	9-5/8	14-3/4	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,207.3	4,027.0	Top of "G" Sand				
4,312.8	4,127.0	Base of "G" Sand				
4,539.5	4,342.0	Mesaverde				
5,821.2	5,605.0	Approx. Top Gas				
6,874.2	6,658.0	Cameo Coals				
7,821.2	7,605.0	Rollins SS				
7,971.2	7,755.0	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
120.0	120.0	0.0	0.0	Start Build 2.00	
1,047.7	1,031.5	34.7	-144.8	Hold 18.55 Inclination	
4,484.3	4,289.6	289.5	-1,208.2	Start Drop -1.50	
5,721.2	5,505.0	335.8	-1,401.3	Vertical	
5,821.2	5,605.0	335.8	-1,401.3	Top Gas	
7,971.2	7,755.0	335.8	-1,401.3	TD at 7971.2	