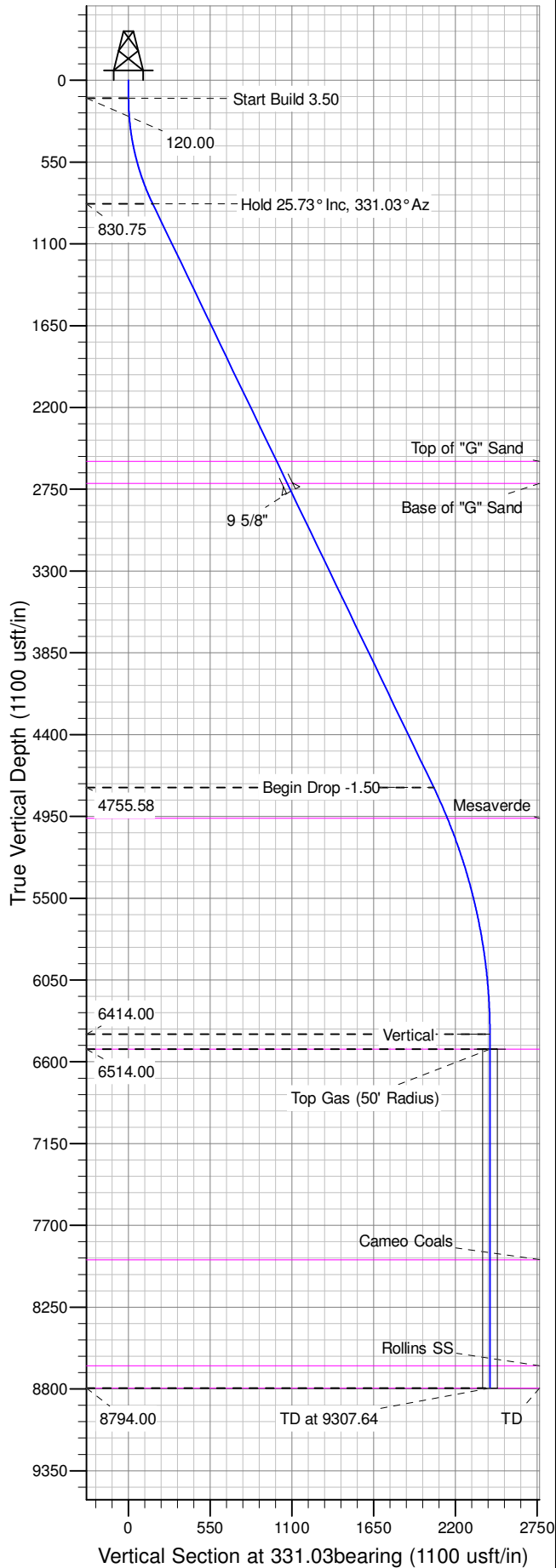
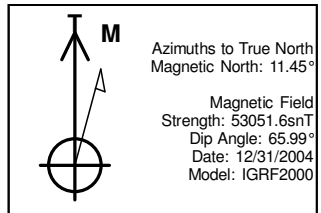
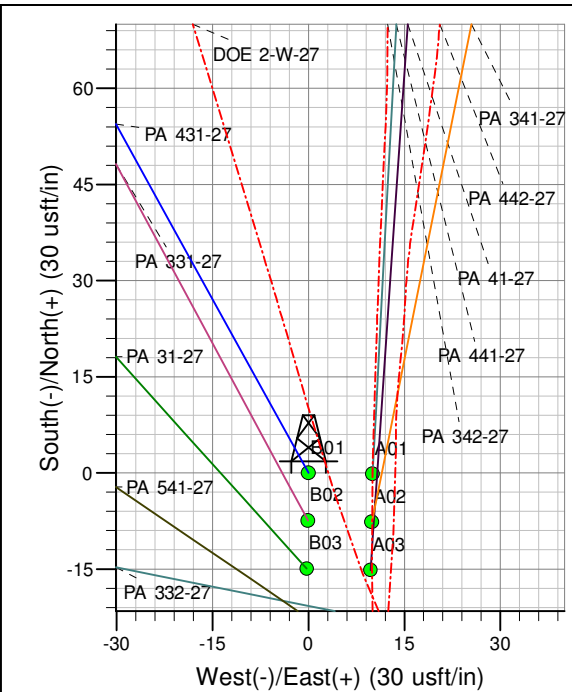
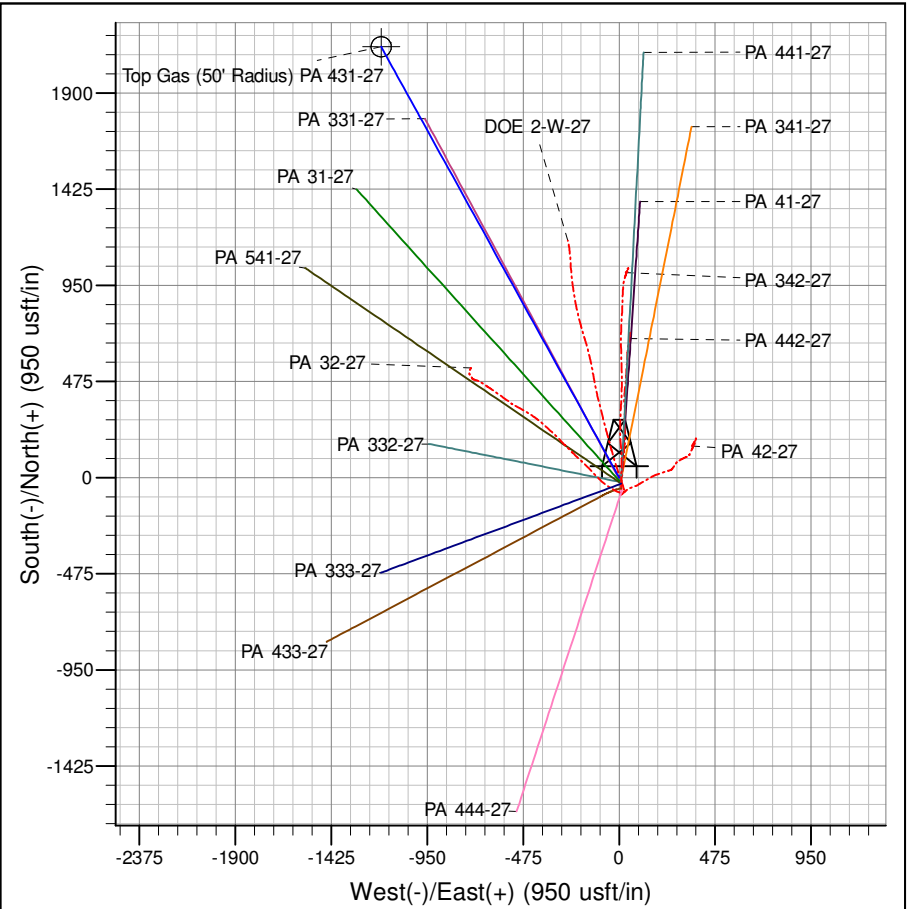




Well Name: PA 431-27
Surface Location: DOE 2-W-27 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 5856.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1615110.72336 2300856.48418 39.49608 -107.97778 B01
KELLY BUSHING @ 5882.00usft (Nabors 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	3.50
830.75	855.22	25.73	331.03	142.03	-78.63	162.34	162.34	Hold 25.73° Inc,	331.03° Az
4755.58	5212.13	25.73	331.03	1796.97	-994.88	2054.00	2054.00	Begin Drop	-1.50
6414.00	6927.64	0.00	0.00	2128.37	-1178.36	2432.80	2432.80	Vertical	
6514.00	7027.64	0.00	0.00	2128.37	-1178.36	2432.80	2432.80	Top Gas	
8794.00	9307.64	0.00	0.00	2128.37	-1178.36	2432.80	2432.80	TD at 9307.64	



Project: PA 27-06S-095W
Site: DOE 2-W-27 Pad
Well: PA 431-27
Design #2 24Apr14 mab

PICEANCE VLY NAD 83

PA 27-06S-095W

DOE 2-W-27 Pad

PA 431-27 - Slot B01

Wellbore #1

Plan: Design #2 24Apr14 mab

Standard Planning Report - Geographic

03 June, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 431-27 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 431-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 mab		

Project	PA 27-06S-095W, Garfield County, CO, 27-06S-095W		
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	DOE 2-W-27 Pad			
Site Position:		Northing:	1,615,065.30000 usft	Latitude: 39.49596
From: Map		Easting:	2,300,864.40000 usft	Longitude: -107.97775
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: -1.56 °

Well	PA 431-27 - Slot B01			
Well Position	+N/-S	0.00 usft	Northing:	1,615,110.72336 usft
	+E/-W	0.00 usft	Easting:	2,300,856.48418 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	
			Ground Level:	5,856.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2000	12/31/2004	11.45	65.99	53,052

Design	Design #2 24Apr14 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	331.03

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	
855.22	25.73	331.03	830.75	142.03	-78.63	3.50	3.50	0.00	331.03	
5,212.13	25.73	331.03	4,755.58	1,796.97	-994.88	0.00	0.00	0.00	0.00	
6,927.64	0.00	0.00	6,414.00	2,128.38	-1,178.36	1.50	-1.50	0.00	180.00	
7,027.64	0.00	0.00	6,514.00	2,128.38	-1,178.36	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
9,307.64	0.00	0.00	8,794.00	2,128.38	-1,178.36	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 431-27 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 431-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 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	1,615,110.72336	2,300,856.48418	39.49608	-107.97778
120.00	0.00	0.00	120.00	0.00	0.00	1,615,110.72336	2,300,856.48418	39.49608	-107.97778
Start Build 3.50									
200.00	2.80	331.03	199.97	1.71	-0.95	1,615,112.45829	2,300,855.58457	39.49609	-107.97779
400.00	9.80	331.03	398.64	20.90	-11.57	1,615,131.92872	2,300,845.48855	39.49614	-107.97782
600.00	16.80	331.03	593.15	61.13	-33.84	1,615,172.74701	2,300,824.32301	39.49625	-107.97790
800.00	23.80	331.03	780.61	121.79	-67.43	1,615,234.30466	2,300,792.40348	39.49641	-107.97802
855.22	25.73	331.03	830.75	142.03	-78.63	1,615,254.83886	2,300,781.75586	39.49647	-107.97806
Hold 25.73° Inc, 331.03° Az									
1,000.00	25.73	331.03	961.17	197.02	-109.08	1,615,310.64026	2,300,752.82111	39.49662	-107.97817
1,200.00	25.73	331.03	1,141.34	272.99	-151.14	1,615,387.72461	2,300,712.85049	39.49683	-107.97832
1,400.00	25.73	331.03	1,321.51	348.96	-193.20	1,615,464.80896	2,300,672.87988	39.49704	-107.97847
1,600.00	25.73	331.03	1,501.67	424.93	-235.26	1,615,541.89331	2,300,632.90927	39.49725	-107.97862
1,800.00	25.73	331.03	1,681.84	500.90	-277.32	1,615,618.97766	2,300,592.93866	39.49746	-107.97877
2,000.00	25.73	331.03	1,862.00	576.87	-319.38	1,615,696.06200	2,300,552.96805	39.49766	-107.97892
2,200.00	25.73	331.03	2,042.17	652.84	-361.44	1,615,773.14635	2,300,512.99744	39.49787	-107.97906
2,400.00	25.73	331.03	2,222.33	728.80	-403.50	1,615,850.23070	2,300,473.02684	39.49808	-107.97921
2,600.00	25.73	331.03	2,402.50	804.77	-445.56	1,615,927.31505	2,300,433.05623	39.49829	-107.97936
2,777.06	25.73	331.03	2,562.00	872.03	-482.79	1,615,995.55727	2,300,397.67054	39.49847	-107.97949
Top of "G" Sand									
2,800.00	25.73	331.03	2,582.67	880.74	-487.62	1,616,004.39940	2,300,393.08561	39.49850	-107.97951
2,943.57	25.73	331.03	2,712.00	935.28	-517.81	1,616,059.73507	2,300,364.39236	39.49865	-107.97962
Base of "G" Sand									
2,999.08	25.73	331.03	2,762.00	956.36	-529.48	1,616,081.12768	2,300,353.29964	39.49871	-107.97966
9 5/8"									
3,000.00	25.73	331.03	2,762.83	956.71	-529.68	1,616,081.48374	2,300,353.11500	39.49871	-107.97966
3,200.00	25.73	331.03	2,943.00	1,032.68	-571.74	1,616,158.56810	2,300,313.14439	39.49892	-107.97981
3,400.00	25.73	331.03	3,123.16	1,108.65	-613.80	1,616,235.65245	2,300,273.17378	39.49912	-107.97996
3,600.00	25.73	331.03	3,303.33	1,184.62	-655.86	1,616,312.73680	2,300,233.20317	39.49933	-107.98011
3,800.00	25.73	331.03	3,483.50	1,260.59	-697.92	1,616,389.82115	2,300,193.23256	39.49954	-107.98026
4,000.00	25.73	331.03	3,663.66	1,336.55	-739.98	1,616,466.90549	2,300,153.26195	39.49975	-107.98041
4,200.00	25.73	331.03	3,843.83	1,412.52	-782.03	1,616,543.98984	2,300,113.29134	39.49996	-107.98056
4,400.00	25.73	331.03	4,023.99	1,488.49	-824.09	1,616,621.07419	2,300,073.32074	39.50017	-107.98070
4,600.00	25.73	331.03	4,204.16	1,564.46	-866.15	1,616,698.15854	2,300,033.35012	39.50038	-107.98085
4,800.00	25.73	331.03	4,384.33	1,640.43	-908.21	1,616,775.24289	2,299,993.37951	39.50058	-107.98100
5,000.00	25.73	331.03	4,564.49	1,716.40	-950.27	1,616,852.32723	2,299,953.40890	39.50079	-107.98115
5,200.00	25.73	331.03	4,744.66	1,792.37	-992.33	1,616,929.41158	2,299,913.43829	39.50100	-107.98130
5,212.13	25.73	331.03	4,755.58	1,796.97	-994.88	1,616,934.08526	2,299,911.01484	39.50101	-107.98131
Begin Drop -1.50									
5,400.00	22.91	331.03	4,926.76	1,864.67	-1,032.36	1,617,002.77271	2,299,875.39828	39.50120	-107.98144
5,438.18	22.34	331.03	4,962.00	1,877.52	-1,039.48	1,617,015.81262	2,299,868.63669	39.50123	-107.98147
Mesaverde									
5,600.00	19.91	331.03	5,112.93	1,928.54	-1,067.73	1,617,067.58866	2,299,841.78922	39.50137	-107.98157
5,800.00	16.91	331.03	5,302.67	1,983.81	-1,098.32	1,617,123.66637	2,299,812.71119	39.50153	-107.98168
6,000.00	13.91	331.03	5,495.45	2,030.31	-1,124.07	1,617,170.85215	2,299,788.24391	39.50165	-107.98177
6,200.00	10.91	331.03	5,690.75	2,067.92	-1,144.89	1,617,209.01666	2,299,768.45444	39.50176	-107.98184
6,400.00	7.91	331.03	5,888.04	2,096.54	-1,160.74	1,617,238.05530	2,299,753.39701	39.50184	-107.98190
6,600.00	4.91	331.03	6,086.76	2,116.09	-1,171.56	1,617,257.88846	2,299,743.11290	39.50189	-107.98194
6,800.00	1.91	331.03	6,286.38	2,126.51	-1,177.33	1,617,268.46179	2,299,737.63030	39.50192	-107.98196
6,927.64	0.00	0.00	6,414.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
Vertical									
7,000.00	0.00	0.00	6,486.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 431-27 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 431-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 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
7,027.64	0.00	0.00	6,514.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
Top Gas - Approx. Top Gas									
7,200.00	0.00	0.00	6,686.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
7,400.00	0.00	0.00	6,886.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
7,600.00	0.00	0.00	7,086.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
7,800.00	0.00	0.00	7,286.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
8,000.00	0.00	0.00	7,486.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
8,200.00	0.00	0.00	7,686.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
8,400.00	0.00	0.00	7,886.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
8,445.64	0.00	0.00	7,932.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
Cameo Coals									
8,600.00	0.00	0.00	8,086.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
8,800.00	0.00	0.00	8,286.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
9,000.00	0.00	0.00	8,486.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
9,157.64	0.00	0.00	8,644.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
Rollins SS									
9,200.00	0.00	0.00	8,686.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
9,307.64	0.00	0.00	8,794.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
TD at 9307.64									

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) PA - plan hits target center - Circle (radius 50.00)	0.00	0.00	6,514.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,999.08	2,762.00	9 5/8"	9.625	13.500		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,777.06	2,562.00	Top of "G" Sand				
2,943.57	2,712.00	Base of "G" Sand		0.00		
5,438.18	4,962.00	Mesaverde				
7,027.64	6,514.00	Approx. Top Gas				
8,445.64	7,932.00	Cameo Coals				
9,157.64	8,644.00	Rollins SS				
9,307.64	8,794.00	TD				

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 431-27 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 431-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 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 3.50
855.22	830.75	142.03	-78.63	Hold 25.73° Inc, 331.03° Az
5,212.13	4,755.58	1,796.97	-994.88	Begin Drop -1.50
6,927.64	6,414.00	2,128.38	-1,178.36	Vertical
7,027.64	6,514.00	2,128.38	-1,178.36	Top Gas
9,307.64	8,794.00	2,128.38	-1,178.36	TD at 9307.64

PICEANCE VLY NAD 83

PA 27-06S-095W

DOE 2-W-27 Pad

PA 431-27 - Slot B01

Wellbore #1

Plan: Design #2 24Apr14 mab

Standard Planning Report - Geographic

03 June, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 431-27 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 431-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 mab		

Project	PA 27-06S-095W, Garfield County, CO, 27-06S-095W		
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	DOE 2-W-27 Pad			
Site Position:		Northing:	1,615,065.30000 usft	Latitude: 39.49596
From: Map		Easting:	2,300,864.40000 usft	Longitude: -107.97775
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: -1.56 °

Well	PA 431-27 - Slot B01			
Well Position	+N/-S	0.00 usft	Northing:	1,615,110.72336 usft
	+E/-W	0.00 usft	Easting:	2,300,856.48418 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	
			Ground Level:	5,856.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2000	12/31/2004	11.45	65.99	53,052

Design	Design #2 24Apr14 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	331.03

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	
855.22	25.73	331.03	830.75	142.03	-78.63	3.50	3.50	0.00	331.03	
5,212.13	25.73	331.03	4,755.58	1,796.97	-994.88	0.00	0.00	0.00	0.00	
6,927.64	0.00	0.00	6,414.00	2,128.38	-1,178.36	1.50	-1.50	0.00	180.00	
7,027.64	0.00	0.00	6,514.00	2,128.38	-1,178.36	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
9,307.64	0.00	0.00	8,794.00	2,128.38	-1,178.36	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 431-27 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 431-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 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	1,615,110.72336	2,300,856.48418	39.49608	-107.97778
120.00	0.00	0.00	120.00	0.00	0.00	1,615,110.72336	2,300,856.48418	39.49608	-107.97778
Start Build 3.50									
200.00	2.80	331.03	199.97	1.71	-0.95	1,615,112.45829	2,300,855.58457	39.49609	-107.97779
400.00	9.80	331.03	398.64	20.90	-11.57	1,615,131.92872	2,300,845.48855	39.49614	-107.97782
600.00	16.80	331.03	593.15	61.13	-33.84	1,615,172.74701	2,300,824.32301	39.49625	-107.97790
800.00	23.80	331.03	780.61	121.79	-67.43	1,615,234.30466	2,300,792.40348	39.49641	-107.97802
855.22	25.73	331.03	830.75	142.03	-78.63	1,615,254.83886	2,300,781.75586	39.49647	-107.97806
Hold 25.73° Inc, 331.03° Az									
1,000.00	25.73	331.03	961.17	197.02	-109.08	1,615,310.64026	2,300,752.82111	39.49662	-107.97817
1,200.00	25.73	331.03	1,141.34	272.99	-151.14	1,615,387.72461	2,300,712.85049	39.49683	-107.97832
1,400.00	25.73	331.03	1,321.51	348.96	-193.20	1,615,464.80896	2,300,672.87988	39.49704	-107.97847
1,600.00	25.73	331.03	1,501.67	424.93	-235.26	1,615,541.89331	2,300,632.90927	39.49725	-107.97862
1,800.00	25.73	331.03	1,681.84	500.90	-277.32	1,615,618.97766	2,300,592.93866	39.49746	-107.97877
2,000.00	25.73	331.03	1,862.00	576.87	-319.38	1,615,696.06200	2,300,552.96805	39.49766	-107.97892
2,200.00	25.73	331.03	2,042.17	652.84	-361.44	1,615,773.14635	2,300,512.99744	39.49787	-107.97906
2,400.00	25.73	331.03	2,222.33	728.80	-403.50	1,615,850.23070	2,300,473.02684	39.49808	-107.97921
2,600.00	25.73	331.03	2,402.50	804.77	-445.56	1,615,927.31505	2,300,433.05623	39.49829	-107.97936
2,777.06	25.73	331.03	2,562.00	872.03	-482.79	1,615,995.55727	2,300,397.67054	39.49847	-107.97949
Top of "G" Sand									
2,800.00	25.73	331.03	2,582.67	880.74	-487.62	1,616,004.39940	2,300,393.08561	39.49850	-107.97951
2,943.57	25.73	331.03	2,712.00	935.28	-517.81	1,616,059.73507	2,300,364.39236	39.49865	-107.97962
Base of "G" Sand									
2,999.08	25.73	331.03	2,762.00	956.36	-529.48	1,616,081.12768	2,300,353.29964	39.49871	-107.97966
9 5/8"									
3,000.00	25.73	331.03	2,762.83	956.71	-529.68	1,616,081.48374	2,300,353.11500	39.49871	-107.97966
3,200.00	25.73	331.03	2,943.00	1,032.68	-571.74	1,616,158.56810	2,300,313.14439	39.49892	-107.97981
3,400.00	25.73	331.03	3,123.16	1,108.65	-613.80	1,616,235.65245	2,300,273.17378	39.49912	-107.97996
3,600.00	25.73	331.03	3,303.33	1,184.62	-655.86	1,616,312.73680	2,300,233.20317	39.49933	-107.98011
3,800.00	25.73	331.03	3,483.50	1,260.59	-697.92	1,616,389.82115	2,300,193.23256	39.49954	-107.98026
4,000.00	25.73	331.03	3,663.66	1,336.55	-739.98	1,616,466.90549	2,300,153.26195	39.49975	-107.98041
4,200.00	25.73	331.03	3,843.83	1,412.52	-782.03	1,616,543.98984	2,300,113.29134	39.49996	-107.98056
4,400.00	25.73	331.03	4,023.99	1,488.49	-824.09	1,616,621.07419	2,300,073.32074	39.50017	-107.98070
4,600.00	25.73	331.03	4,204.16	1,564.46	-866.15	1,616,698.15854	2,300,033.35012	39.50038	-107.98085
4,800.00	25.73	331.03	4,384.33	1,640.43	-908.21	1,616,775.24289	2,299,993.37951	39.50058	-107.98100
5,000.00	25.73	331.03	4,564.49	1,716.40	-950.27	1,616,852.32723	2,299,953.40890	39.50079	-107.98115
5,200.00	25.73	331.03	4,744.66	1,792.37	-992.33	1,616,929.41158	2,299,913.43829	39.50100	-107.98130
5,212.13	25.73	331.03	4,755.58	1,796.97	-994.88	1,616,934.08526	2,299,911.01484	39.50101	-107.98131
Begin Drop -1.50									
5,400.00	22.91	331.03	4,926.76	1,864.67	-1,032.36	1,617,002.77271	2,299,875.39828	39.50120	-107.98144
5,438.18	22.34	331.03	4,962.00	1,877.52	-1,039.48	1,617,015.81262	2,299,868.63669	39.50123	-107.98147
Mesaverde									
5,600.00	19.91	331.03	5,112.93	1,928.54	-1,067.73	1,617,067.58866	2,299,841.78922	39.50137	-107.98157
5,800.00	16.91	331.03	5,302.67	1,983.81	-1,098.32	1,617,123.66637	2,299,812.71119	39.50153	-107.98168
6,000.00	13.91	331.03	5,495.45	2,030.31	-1,124.07	1,617,170.85215	2,299,788.24391	39.50165	-107.98177
6,200.00	10.91	331.03	5,690.75	2,067.92	-1,144.89	1,617,209.01666	2,299,768.45444	39.50176	-107.98184
6,400.00	7.91	331.03	5,888.04	2,096.54	-1,160.74	1,617,238.05530	2,299,753.39701	39.50184	-107.98190
6,600.00	4.91	331.03	6,086.76	2,116.09	-1,171.56	1,617,257.88846	2,299,743.11290	39.50189	-107.98194
6,800.00	1.91	331.03	6,286.38	2,126.51	-1,177.33	1,617,268.46179	2,299,737.63030	39.50192	-107.98196
6,927.64	0.00	0.00	6,414.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
Vertical									
7,000.00	0.00	0.00	6,486.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 431-27 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 431-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 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
7,027.64	0.00	0.00	6,514.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
Top Gas - Approx. Top Gas									
7,200.00	0.00	0.00	6,686.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
7,400.00	0.00	0.00	6,886.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
7,600.00	0.00	0.00	7,086.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
7,800.00	0.00	0.00	7,286.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
8,000.00	0.00	0.00	7,486.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
8,200.00	0.00	0.00	7,686.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
8,400.00	0.00	0.00	7,886.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
8,445.64	0.00	0.00	7,932.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
Cameo Coals									
8,600.00	0.00	0.00	8,086.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
8,800.00	0.00	0.00	8,286.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
9,000.00	0.00	0.00	8,486.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
9,157.64	0.00	0.00	8,644.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
Rollins SS									
9,200.00	0.00	0.00	8,686.36	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
9,307.64	0.00	0.00	8,794.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196
TD at 9307.64									

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) PA - plan hits target center - Circle (radius 50.00)	0.00	0.00	6,514.00	2,128.38	-1,178.36	1,617,270.35475	2,299,736.64875	39.50192	-107.98196

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,999.08	2,762.00	9 5/8"	9.625	13.500		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,777.06	2,562.00	Top of "G" Sand				
2,943.57	2,712.00	Base of "G" Sand		0.00		
5,438.18	4,962.00	Mesaverde				
7,027.64	6,514.00	Approx. Top Gas				
8,445.64	7,932.00	Cameo Coals				
9,157.64	8,644.00	Rollins SS				
9,307.64	8,794.00	TD				

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 431-27 - Slot B01
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 431-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 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 3.50
855.22	830.75	142.03	-78.63	Hold 25.73° Inc, 331.03° Az
5,212.13	4,755.58	1,796.97	-994.88	Begin Drop -1.50
6,927.64	6,414.00	2,128.38	-1,178.36	Vertical
7,027.64	6,514.00	2,128.38	-1,178.36	Top Gas
9,307.64	8,794.00	2,128.38	-1,178.36	TD at 9307.64