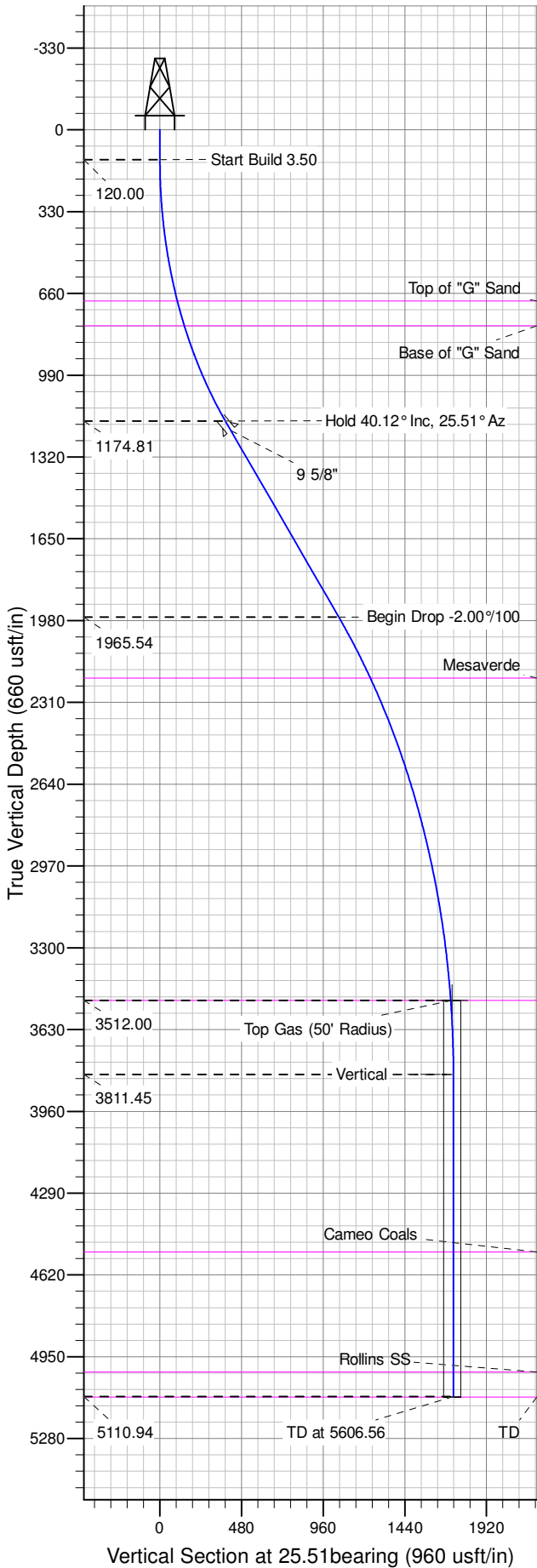
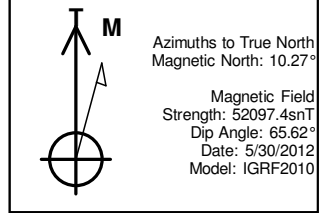
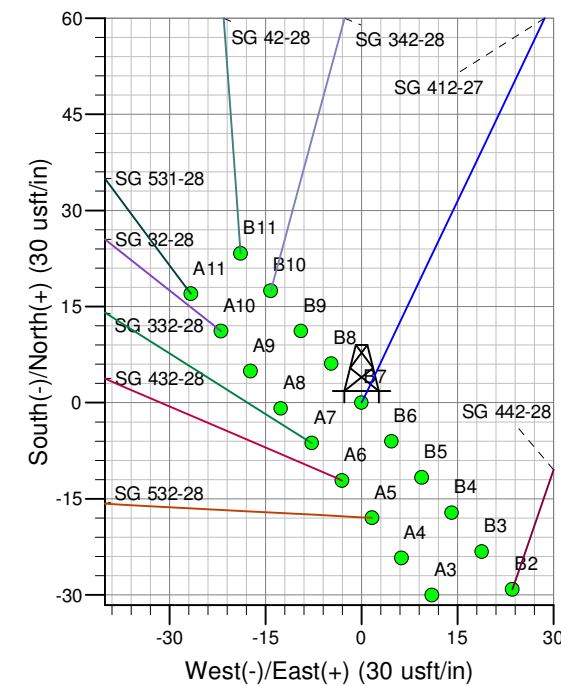
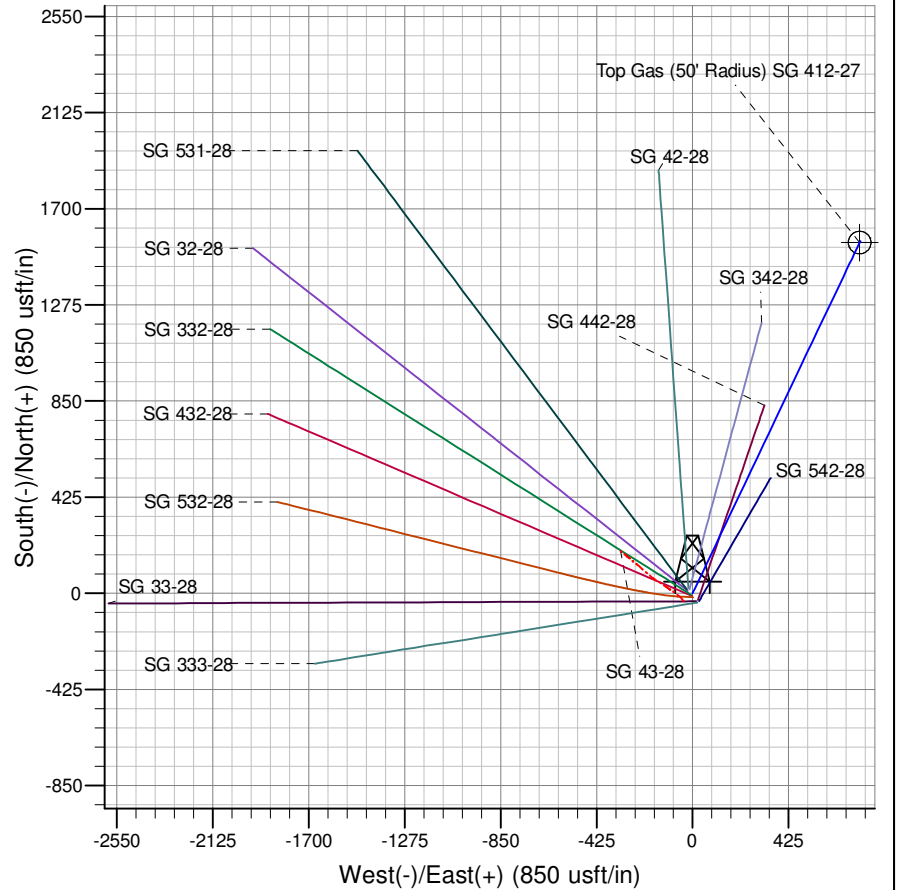




Well Name: SG 412-27  
 Surface Location: SG 43-28 Pad  
 North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
 Ground Elevation: 5119.00  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1583872.16000 2263456.44000 39.40747 -108.10708 B7  
 KELLY BUSHING @ 5145.00usft (Nabors 573 (26' RKB) kjs)



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	0.00	Start Build 3.50
1174.81	1266.19	40.12	25.51	347.59	165.85	385.13	385.13	Hold 40.12° Inc, 25.51° Az	
1965.54	2300.18	40.12	25.51	948.90	452.76	1051.38	1051.38	Begin Drop -2.00%/100	
3512.00	4006.01	6.00	25.51	1543.03	736.25	1709.68	1709.68	Top Gas	
3811.45	4306.01	0.00	0.00	1557.19	743.01	1725.37	1725.37	Vertical	
5110.94	5605.50	0.00	0.00	1557.19	743.01	1725.37	1725.37	TD at 5606.56	



Project: SG 28-07S-096W  
 Site: SG 43-28 Pad  
 Well: SG 412-27  
 Design #3 16Apr14 mab

# **PICEANCE VLY NAD 83**

**SG 28-07S-096W**

**SG 43-28 Pad**

**SG 412-27 - Slot B7**

**Wellbore #1**

**Plan: Design #3 16Apr14 mab**

## **Standard Planning Report - Geographic**

**29 May, 2014**

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well SG 412-27 - Slot B7
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5145.00usft (Nabors 573 (26' RKB) kjs)
<b>Project:</b>	SG 28-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5145.00usft (Nabors 573 (26' RKB) kjs)
<b>Site:</b>	SG 43-28 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SG 412-27	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3 16Apr14 mab		

<b>Project</b>	SG 28-07S-096W, Garfield County, CO, 28-07S-096W		
<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		Using geodetic scale factor

<b>Site</b>	SG 43-28 Pad		
<b>Site Position:</b>		<b>Northing:</b>	1,583,837.93900 usft
<b>From:</b>	Map	<b>Easting:</b>	2,263,416.17600 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	39.40738
		<b>Longitude:</b>	-108.10722
		<b>Grid Convergence:</b>	-1.64 °

<b>Well</b>	SG 412-27 - Slot B7		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 1,583,872.16000 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 2,263,456.44000 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	<b>Latitude:</b> 39.40748
			<b>Longitude:</b> -108.10708
			<b>Ground Level:</b> 5,119.00 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	5/30/2012	10.27	65.62	52,097

<b>Design</b>	Design #3 16Apr14 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	25.51

<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	
1,266.19	40.12	25.51	1,174.81	347.59	165.85	3.50	3.50	0.00	25.51	
2,300.18	40.12	25.51	1,965.54	948.90	452.76	0.00	0.00	0.00	0.00	
4,006.01	6.00	25.51	3,512.00	1,543.03	736.25	2.00	-2.00	0.00	180.00	Top Gas (50' Radius)
4,306.01	0.00	0.00	3,811.45	1,557.19	743.01	2.00	-2.00	-8.50	180.00	
5,606.56	0.00	0.00	5,112.00	1,557.19	743.01	0.00	0.00	0.00	0.00	

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well SG 412-27 - Slot B7
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5145.00usft (Nabors 573 (26' RKB) kjs)
<b>Project:</b>	SG 28-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5145.00usft (Nabors 573 (26' RKB) kjs)
<b>Site:</b>	SG 43-28 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SG 412-27	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3 16Apr14 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	1,583,872.16000	2,263,456.44000	39.40748	-108.10708
120.00	0.00	0.00	120.00	0.00	0.00	1,583,872.16000	2,263,456.44000	39.40748	-108.10708
<b>Start Build 3.50</b>									
200.00	2.80	25.51	199.97	1.76	0.84	1,583,873.89892	2,263,457.33185	39.40748	-108.10708
400.00	9.80	25.51	398.64	21.56	10.29	1,583,893.41405	2,263,467.34072	39.40754	-108.10705
600.00	16.80	25.51	593.15	63.06	30.09	1,583,934.32607	2,263,488.32357	39.40765	-108.10698
702.20	20.38	25.51	690.00	92.45	44.11	1,583,963.30650	2,263,503.18698	39.40773	-108.10693
<b>Top of "G" Sand</b>									
800.00	23.80	25.51	780.61	125.64	59.95	1,583,996.02505	2,263,519.96759	39.40782	-108.10687
810.27	24.16	25.51	790.00	129.41	61.75	1,583,999.74026	2,263,521.87304	39.40783	-108.10686
<b>Base of "G" Sand</b>									
1,000.00	30.80	25.51	958.23	208.38	99.43	1,584,077.59123	2,263,561.80104	39.40805	-108.10673
1,200.00	37.80	25.51	1,123.34	310.04	147.93	1,584,177.80863	2,263,613.20028	39.40833	-108.10656
1,266.19	40.12	25.51	1,174.81	347.59	165.85	1,584,214.83471	2,263,632.19012	39.40843	-108.10650
<b>Hold 40.12° Inc, 25.51° Az</b>									
1,316.19	40.12	25.51	1,213.05	376.67	179.73	1,584,243.50061	2,263,646.89220	39.40851	-108.10645
<b>9 5/8"</b>									
1,400.00	40.12	25.51	1,277.14	425.41	202.98	1,584,291.54956	2,263,671.53542	39.40864	-108.10636
1,600.00	40.12	25.51	1,430.08	541.72	258.48	1,584,406.21116	2,263,730.34277	39.40896	-108.10617
1,800.00	40.12	25.51	1,583.03	658.03	313.97	1,584,520.87278	2,263,789.15012	39.40928	-108.10597
2,000.00	40.12	25.51	1,735.98	774.33	369.47	1,584,635.53440	2,263,847.95747	39.40960	-108.10578
2,200.00	40.12	25.51	1,888.93	890.64	424.97	1,584,750.19602	2,263,906.76482	39.40992	-108.10558
2,300.18	40.12	25.51	1,965.54	948.90	452.76	1,584,807.63125	2,263,936.22206	39.41008	-108.10548
<b>Begin Drop -2.00°/100</b>									
2,400.00	38.12	25.51	2,042.98	1,005.74	479.88	1,584,863.66292	2,263,964.95944	39.41024	-108.10538
2,600.00	34.12	25.51	2,204.50	1,112.12	530.64	1,584,968.54027	2,264,018.74866	39.41053	-108.10521
2,609.05	33.94	25.51	2,212.00	1,116.69	532.83	1,584,973.04603	2,264,021.05956	39.41054	-108.10520
<b>Mesaverde</b>									
2,800.00	30.12	25.51	2,373.85	1,208.07	576.43	1,585,063.13702	2,264,067.26518	39.41079	-108.10504
3,000.00	26.12	25.51	2,550.21	1,293.13	617.01	1,585,146.99231	2,264,110.27267	39.41103	-108.10490
3,200.00	22.12	25.51	2,732.71	1,366.88	652.20	1,585,219.69760	2,264,147.56157	39.41123	-108.10477
3,400.00	18.12	25.51	2,920.47	1,428.96	681.82	1,585,280.89870	2,264,178.95023	39.41140	-108.10467
3,600.00	14.12	25.51	3,112.56	1,479.07	705.73	1,585,330.29742	2,264,204.28571	39.41154	-108.10459
3,800.00	10.12	25.51	3,308.07	1,516.96	723.81	1,585,367.65310	2,264,223.44460	39.41164	-108.10452
4,000.00	6.12	25.51	3,506.02	1,542.45	735.98	1,585,392.78376	2,264,236.33355	39.41171	-108.10448
4,006.01	6.00	25.51	3,512.00	1,543.03	736.25	1,585,393.34860	2,264,236.62324	39.41171	-108.10448
<b>Top Gas - Approx. Top Gas</b>									
4,200.00	2.12	25.51	3,705.46	1,555.42	742.16	1,585,405.56695	2,264,242.88975	39.41175	-108.10446
4,306.01	0.00	0.00	3,811.45	1,557.19	743.01	1,585,407.31204	2,264,243.78477	39.41175	-108.10445
<b>Vertical</b>									
4,400.00	0.00	0.00	3,905.44	1,557.19	743.01	1,585,407.31204	2,264,243.78477	39.41175	-108.10445
4,600.00	0.00	0.00	4,105.44	1,557.19	743.01	1,585,407.31204	2,264,243.78477	39.41175	-108.10445
4,800.00	0.00	0.00	4,305.44	1,557.19	743.01	1,585,407.31204	2,264,243.78477	39.41175	-108.10445
5,000.00	0.00	0.00	4,505.44	1,557.19	743.01	1,585,407.31205	2,264,243.78477	39.41175	-108.10445
5,021.56	0.00	0.00	4,527.00	1,557.19	743.01	1,585,407.31205	2,264,243.78477	39.41175	-108.10445
<b>Cameo Coals</b>									
5,200.00	0.00	0.00	4,705.44	1,557.19	743.01	1,585,407.31205	2,264,243.78477	39.41175	-108.10445
5,400.00	0.00	0.00	4,905.44	1,557.19	743.01	1,585,407.31205	2,264,243.78477	39.41175	-108.10445
5,506.56	0.00	0.00	5,012.00	1,557.19	743.01	1,585,407.31205	2,264,243.78477	39.41175	-108.10445
<b>Rollins SS</b>									
5,600.00	0.00	0.00	5,105.44	1,557.19	743.01	1,585,407.31206	2,264,243.78477	39.41175	-108.10445

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well SG 412-27 - Slot B7
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5145.00usft (Nabors 573 (26' RKB) kjs)
<b>Project:</b>	SG 28-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5145.00usft (Nabors 573 (26' RKB) kjs)
<b>Site:</b>	SG 43-28 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SG 412-27	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3 16Apr14 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
5,606.56	0.00	0.00	5,112.00	1,557.19	743.01	1,585,407.31206	2,264,243.78477	39.41175	-108.10445
TD at 5606.56 - TD									

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) SC	0.00	0.00	3,512.00	1,550.39	739.55	1,585,400.62000	2,264,240.13000	39.41173	-108.10447
- plan misses target center by 8.03usft at 4006.58usft MD (3512.57 TVD, 1543.08 N, 736.28 E)									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,316.19	1,213.05	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
702.20	690.00	Top of "G" Sand				
810.27	790.00	Base of "G" Sand				
2,609.05	2,212.00	Mesaverde				
4,006.01	3,512.00	Approx. Top Gas				
5,021.56	4,527.00	Cameo Coals				
5,506.56	5,012.00	Rollins SS				
5,606.56	5,112.00	TD				

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	
1,266.19	1,174.81	347.59	165.85	Hold 40.12° Inc, 25.51° Az	
2,300.18	1,965.54	948.90	452.76	Begin Drop -2.00°/100	
4,006.01	3,512.00	1,543.03	736.25	Top Gas	
4,306.01	3,811.45	1,557.19	743.01	Vertical	
5,606.56	5,112.00	1,557.19	743.01	TD at 5606.56	