



# **PICEANCE VLY NAD 83**

**GV 33-06S-096W**

**GM 13-33 Pad**

**GM 513-33 - Slot A01**

**Wellbore #1**

**Plan: Design #1 09May14 mab**

## **Standard Planning Report - Geographic**

**24 June, 2014**

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 513-33 - Slot A01
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Project:</b>	GV 33-06S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Site:</b>	GM 13-33 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 513-33	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 09May14 mab		

<b>Project</b>	GV 33-06S-096W, Garfield County, CO, 33-06S-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>	GM 13-33 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,610,235.30000 usft	<b>Latitude:</b> 39.47963
<b>From:</b> Map		<b>Easting:</b>	2,260,983.20000 usft	<b>Longitude:</b> -108.11852
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.65 °

<b>Well</b>	GM 513-33 - Slot A01			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,610,235.30000 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,260,983.20000 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	5,743.00 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>
	IGRF2005-10	5/9/2014	10.00	65.64	51,979

<b>Design</b>	Design #1 09May14 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	28.57

<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	
320.00	5.00	28.57	319.75	7.66	4.17	2.50	2.50	0.00	28.57	
2,641.82	5.00	28.57	2,632.73	185.38	100.95	0.00	0.00	0.00	0.00	
2,975.15	0.00	0.00	2,965.64	198.14	107.90	1.50	-1.50	0.00	180.00	
4,838.51	0.00	0.00	4,829.00	198.14	107.90	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
6,738.51	0.00	0.00	6,729.00	198.14	107.90	0.00	0.00	0.00	0.00	

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 513-33 - Slot A01
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Project:</b>	GV 33-06S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Site:</b>	GM 13-33 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 513-33	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 09May14 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	1,610,235.30000	2,260,983.20000	39.47963	-108.11852	
120.00	0.00	0.00	120.00	0.00	0.00	1,610,235.30000	2,260,983.20000	39.47963	-108.11852	
Start Build 2.50										
200.00	2.00	28.57	199.98	1.23	0.67	1,610,236.50630	2,260,983.90273	39.47963	-108.11852	
320.00	5.00	28.57	319.75	7.66	4.17	1,610,242.83536	2,260,987.58972	39.47965	-108.11851	
Hold 5.00° Inc, 28.57° Az										
400.00	5.00	28.57	399.44	13.78	7.51	1,610,248.85982	2,260,991.09926	39.47967	-108.11850	
600.00	5.00	28.57	598.68	29.09	15.84	1,610,263.92098	2,260,999.87313	39.47971	-108.11847	
800.00	5.00	28.57	797.92	44.40	24.18	1,610,278.98214	2,261,008.64700	39.47975	-108.11844	
1,000.00	5.00	28.57	997.16	59.71	32.52	1,610,294.04330	2,261,017.42087	39.47979	-108.11841	
1,002.85	5.00	28.57	1,000.00	59.93	32.63	1,610,294.25809	2,261,017.54599	39.47979	-108.11841	
9 5/8"										
1,200.00	5.00	28.57	1,196.40	75.02	40.85	1,610,309.10446	2,261,026.19474	39.47984	-108.11838	
1,400.00	5.00	28.57	1,395.64	90.32	49.19	1,610,324.16561	2,261,034.96861	39.47988	-108.11835	
1,600.00	5.00	28.57	1,594.88	105.63	57.52	1,610,339.22677	2,261,043.74247	39.47992	-108.11832	
1,800.00	5.00	28.57	1,794.11	120.94	65.86	1,610,354.28793	2,261,052.51634	39.47996	-108.11829	
2,000.00	5.00	28.57	1,993.35	136.25	74.20	1,610,369.34909	2,261,061.29021	39.48000	-108.11826	
2,010.69	5.00	28.57	2,004.00	137.07	74.64	1,610,370.15391	2,261,061.75906	39.48001	-108.11826	
Top of "G" Sand										
2,111.07	5.00	28.57	2,104.00	144.75	78.83	1,610,377.71325	2,261,066.16275	39.48003	-108.11824	
Base of "G" Sand										
2,200.00	5.00	28.57	2,192.59	151.56	82.53	1,610,384.41025	2,261,070.06408	39.48005	-108.11823	
2,400.00	5.00	28.57	2,391.83	166.87	90.87	1,610,399.47140	2,261,078.83795	39.48009	-108.11820	
2,600.00	5.00	28.57	2,591.07	182.17	99.21	1,610,414.53256	2,261,087.61181	39.48013	-108.11817	
2,641.82	5.00	28.57	2,632.73	185.38	100.95	1,610,417.68163	2,261,089.44630	39.48014	-108.11816	
Start Drop -1.50°/100										
2,800.00	2.63	28.57	2,790.55	194.61	105.98	1,610,426.77146	2,261,094.74158	39.48016	-108.11815	
2,975.15	0.00	0.00	2,965.64	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
Vertical										
3,000.00	0.00	0.00	2,990.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
3,200.00	0.00	0.00	3,190.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
3,400.00	0.00	0.00	3,390.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
3,600.00	0.00	0.00	3,590.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
3,613.51	0.00	0.00	3,604.00	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
Mesaverde										
3,800.00	0.00	0.00	3,790.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
4,000.00	0.00	0.00	3,990.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
4,200.00	0.00	0.00	4,190.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
4,400.00	0.00	0.00	4,390.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
4,600.00	0.00	0.00	4,590.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
4,800.00	0.00	0.00	4,790.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
4,838.51	0.00	0.00	4,829.00	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
Top Gas - Approx. Top Gas										
5,000.00	0.00	0.00	4,990.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
5,200.00	0.00	0.00	5,190.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
5,400.00	0.00	0.00	5,390.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
5,600.00	0.00	0.00	5,590.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
5,800.00	0.00	0.00	5,790.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
6,000.00	0.00	0.00	5,990.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
6,143.51	0.00	0.00	6,134.00	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814	
Cameo Coals										

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<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Project:</b>	GV 33-06S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Site:</b>	GM 13-33 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 513-33	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 09May14 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
6,200.00	0.00	0.00	6,190.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814
6,400.00	0.00	0.00	6,390.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814
6,600.00	0.00	0.00	6,590.49	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814
6,638.51	0.00	0.00	6,629.00	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814
<b>Rollins SS</b>									
6,738.51	0.00	0.00	6,729.00	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814
<b>TD at 6738.51 - TD</b>									

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) G1	0.00	358.35	4,829.00	198.14	107.90	1,610,430.24056	2,261,096.76250	39.48017	-108.11814
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,002.85	1,000.00	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,010.69	2,004.00	Top of "G" Sand				
2,111.07	2,104.00	Base of "G" Sand				
3,613.51	3,604.00	Mesaverde				
4,838.51	4,829.00	Approx. Top Gas				
6,143.51	6,134.00	Cameo Coals				
6,638.51	6,629.00	Rollins SS				
6,738.51	6,729.00	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
120.00	120.00	0.00	0.00	Start Build 2.50	
320.00	319.75	7.66	4.17	Hold 5.00° Inc, 28.57° Az	
2,641.82	2,632.73	185.38	100.95	Start Drop -1.50°/100	
2,975.15	2,965.64	198.14	107.90	Vertical	
4,838.51	4,829.00	198.14	107.90	Top Gas	
6,738.51	6,729.00	198.14	107.90	TD at 6738.51	