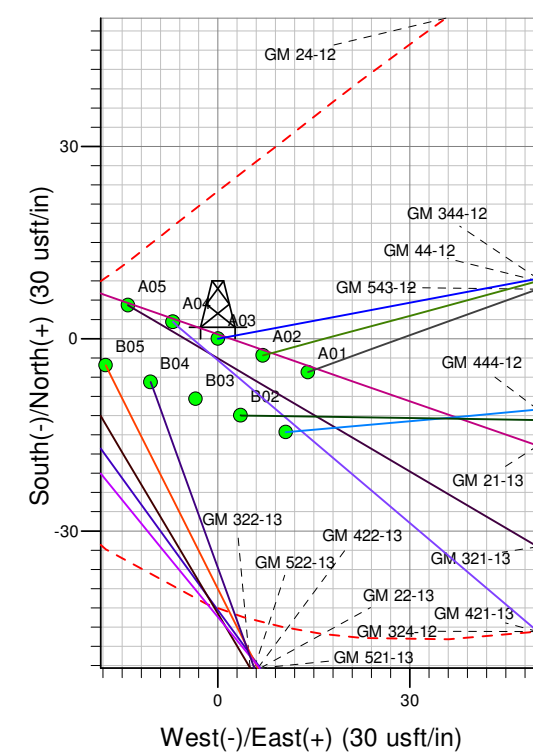
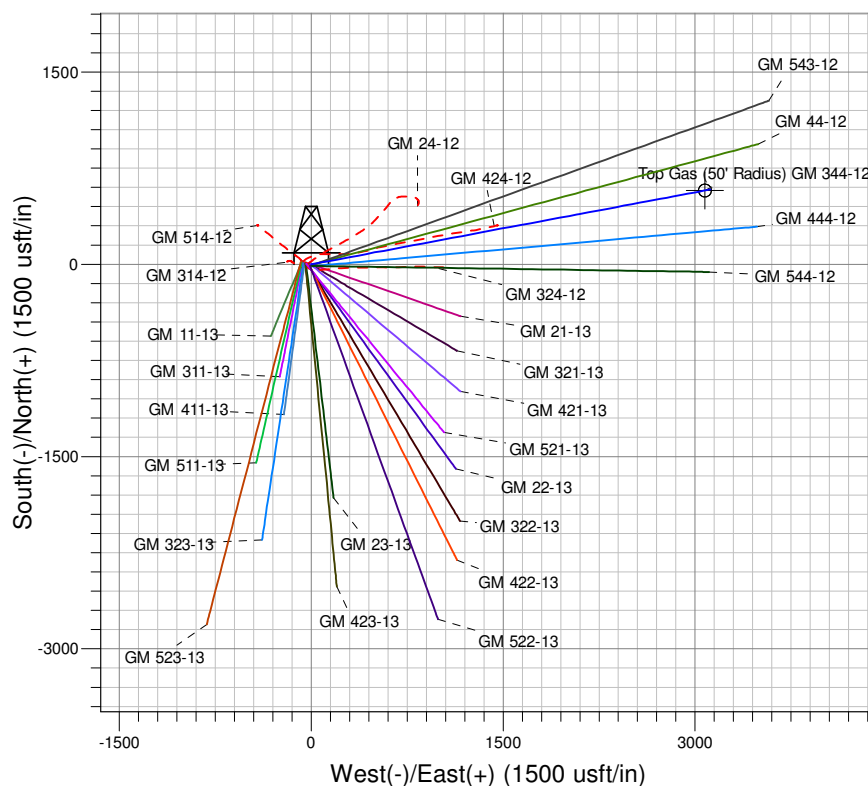
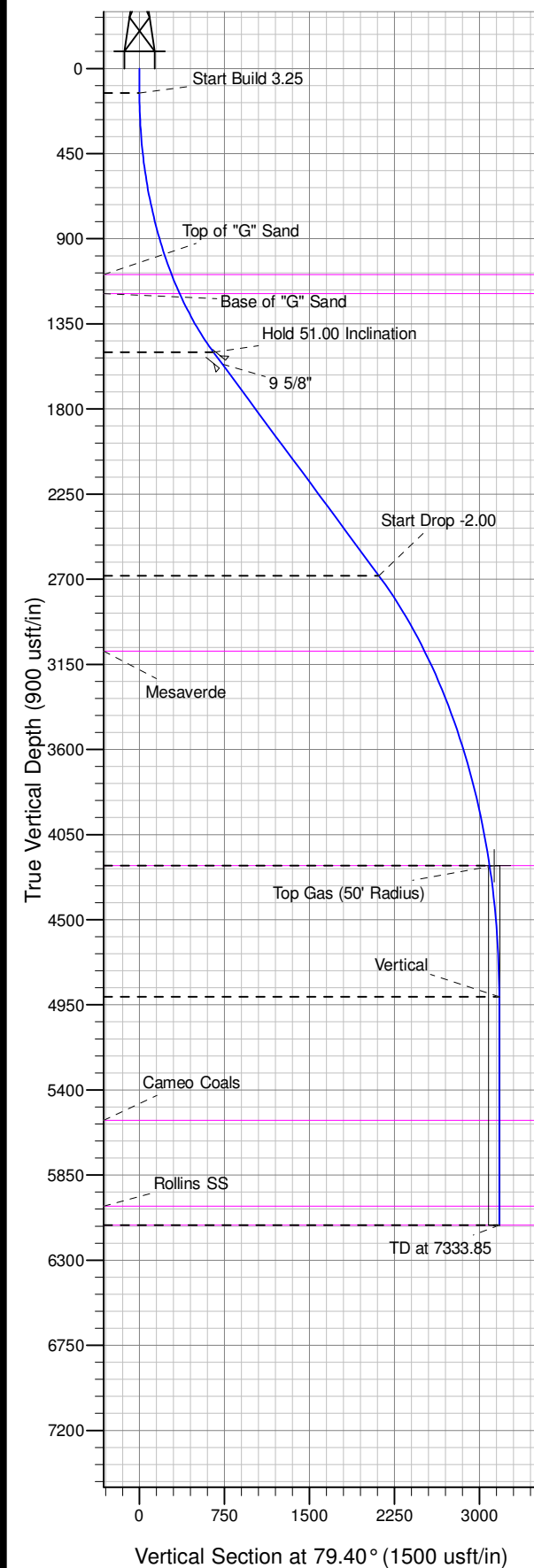




Well Name: GM 344-12  
Surface Location: GM 24-12 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 5141.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1597412.79	2275894.01	39.44561	-108.06443	A03

KELLY BUSHING @ 5165.00usft (H&P 318 (24' RKB) kjs)



Project: GV 12-07S-096W  
Site: GM 24-12 Pad  
Well: GM 344-12  
Design #1 03Mar14 kjs



Azimuths to True North  
Magnetic North: 10.03°  
Magnetic Field  
Strength: 51946.6snT  
Dip Angle: 65.61°  
Date: 3/3/2014  
Model: IGRF2010

#### ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
130.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.25
1500.09	1699.26	51.00	79.40	120.26	642.35	653.51	653.51	Hold 51.00 Inclination
2681.66	3576.85	51.00	79.40	388.79	2076.61	2112.69	2112.69	Start Drop -2.00
4215.00	5426.90	14.00	79.40	568.56	3036.79	3089.56	3089.56	Top Gas
4908.06	6126.90	0.00	0.00	584.22	3120.43	3174.65	3174.65	Vertical
6115.00	7333.85	0.00	0.00	584.22	3120.43	3174.65	3174.65	TD at 7333.85

# **PICEANCE VLY NAD 83**

**GV 12-07S-096W**

**GM 24-12 Pad**

**GM 344-12 - Slot A03**

**Wellbore #1**

**Plan: Design #1 03Mar14 kjs**

## **Standard Planning Report - Geographic**

**11 March, 2014**

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 344-12 - Slot A03
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5165.00usft (H&P 318 (24' RKB) kjs)
<b>Project:</b>	GV 12-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5165.00usft (H&P 318 (24' RKB) kjs)
<b>Site:</b>	GM 24-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 344-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 03Mar14 kjs		

<b>Project</b>	GV 12-07S-096W, Garfield County CO, GV 12-07W-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 24-12 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,597,443.66 usft	<b>Latitude:</b> 39.44569
<b>From:</b> Map		<b>Easting:</b>	2,275,817.52 usft	<b>Longitude:</b> -108.06471
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.618 °

<b>Well</b>	GM 344-12 - Slot A03			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,597,412.79 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,275,894.01 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	5,141.00 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	3/3/2014	10.028	65.611	51,947

<b>Design</b>	Design #1 03Mar14 kjs			
<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 (°)</b>
	0.00	0.00	0.00	79.40

<b>Plan Sections</b>										
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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.000	
1,699.26	51.00	79.40	1,500.09	120.26	642.35	3.25	3.25	0.00	79.396	
3,576.85	51.00	79.40	2,681.66	388.79	2,076.61	0.00	0.00	0.00	0.000	
5,426.90	14.00	79.40	4,215.00	568.56	3,036.79	2.00	-2.00	0.00	180.000	Top Gas (50' Radius)
6,126.90	0.00	0.00	4,908.06	584.22	3,120.43	2.00	-2.00	-11.34	180.000	
7,333.85	0.00	0.00	6,115.00	584.22	3,120.43	0.00	0.00	0.00	0.000	

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 344-12 - Slot A03
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5165.00usft (H&P 318 (24' RKB) kjs)
<b>Project:</b>	GV 12-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5165.00usft (H&P 318 (24' RKB) kjs)
<b>Site:</b>	GM 24-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 344-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 03Mar14 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	
0.00	0.00	0.00	0.00	0.00	0.00	1,597,412.79	2,275,894.01	39.44561	-108.06444	
100.00	0.00	0.00	100.00	0.00	0.00	1,597,412.79	2,275,894.01	39.44561	-108.06444	
130.00	0.00	0.00	130.00	0.00	0.00	1,597,412.79	2,275,894.01	39.44561	-108.06444	
Start Build 3.25										
200.00	2.28	79.40	199.98	0.26	1.37	1,597,413.01	2,275,895.39	39.44561	-108.06443	
300.00	5.53	79.40	299.74	1.51	8.05	1,597,414.07	2,275,902.10	39.44561	-108.06441	
400.00	8.78	79.40	398.95	3.80	20.28	1,597,416.01	2,275,914.40	39.44562	-108.06436	
500.00	12.03	79.40	497.29	7.12	38.02	1,597,418.83	2,275,932.22	39.44563	-108.06430	
600.00	15.28	79.40	594.45	11.46	61.22	1,597,422.52	2,275,955.53	39.44564	-108.06422	
700.00	18.53	79.40	690.12	16.81	89.79	1,597,427.06	2,275,984.24	39.44565	-108.06412	
800.00	21.78	79.40	783.99	23.15	123.64	1,597,432.44	2,276,018.25	39.44567	-108.06400	
900.00	25.03	79.40	875.75	30.46	162.67	1,597,438.64	2,276,057.47	39.44569	-108.06386	
1,000.00	28.28	79.40	965.12	38.71	206.76	1,597,445.65	2,276,101.77	39.44571	-108.06370	
1,100.00	31.53	79.40	1,051.79	47.88	255.75	1,597,453.43	2,276,151.00	39.44574	-108.06353	
1,145.18	32.99	79.40	1,090.00	52.32	279.45	1,597,457.20	2,276,174.82	39.44575	-108.06345	
Top of "G" Sand										
1,200.00	34.78	79.40	1,135.51	57.94	309.49	1,597,461.97	2,276,205.00	39.44577	-108.06334	
1,267.25	36.96	79.40	1,190.00	65.19	348.22	1,597,468.13	2,276,243.91	39.44579	-108.06320	
Base of "G" Sand										
1,300.00	38.03	79.40	1,215.98	68.86	367.81	1,597,471.24	2,276,263.60	39.44580	-108.06313	
1,400.00	41.28	79.40	1,292.97	80.60	430.52	1,597,481.21	2,276,326.62	39.44583	-108.06291	
1,500.00	44.53	79.40	1,366.21	93.13	497.42	1,597,491.84	2,276,393.84	39.44586	-108.06267	
1,600.00	47.78	79.40	1,435.48	106.40	568.30	1,597,503.10	2,276,465.06	39.44590	-108.06242	
1,699.26	51.00	79.40	1,500.09	120.26	642.35	1,597,514.87	2,276,539.48	39.44594	-108.06216	
Hold 51.00 Inclination										
1,700.00	51.00	79.40	1,500.55	120.37	642.92	1,597,514.96	2,276,540.04	39.44594	-108.06216	
1,800.00	51.00	79.40	1,563.48	134.67	719.30	1,597,527.10	2,276,616.80	39.44598	-108.06189	
9 5/8"										
1,900.00	51.00	79.40	1,626.41	148.97	795.69	1,597,539.24	2,276,693.56	39.44602	-108.06162	
2,000.00	51.00	79.40	1,689.34	163.27	872.08	1,597,551.38	2,276,770.32	39.44606	-108.06135	
2,100.00	51.00	79.40	1,752.27	177.58	948.47	1,597,563.52	2,276,847.07	39.44610	-108.06108	
2,200.00	51.00	79.40	1,815.20	191.88	1,024.86	1,597,575.66	2,276,923.83	39.44614	-108.06081	
2,300.00	51.00	79.40	1,878.13	206.18	1,101.25	1,597,587.79	2,277,000.59	39.44617	-108.06054	
2,400.00	51.00	79.40	1,941.07	220.48	1,177.63	1,597,599.93	2,277,077.35	39.44621	-108.06027	
2,500.00	51.00	79.40	2,004.00	234.78	1,254.02	1,597,612.07	2,277,154.11	39.44625	-108.05999	
2,600.00	51.00	79.40	2,066.93	249.08	1,330.41	1,597,624.21	2,277,230.86	39.44629	-108.05972	
2,700.00	51.00	79.40	2,129.86	263.39	1,406.80	1,597,636.35	2,277,307.62	39.44633	-108.05945	
2,800.00	51.00	79.40	2,192.79	277.69	1,483.19	1,597,648.49	2,277,384.38	39.44637	-108.05918	
2,900.00	51.00	79.40	2,255.72	291.99	1,559.58	1,597,660.63	2,277,461.14	39.44641	-108.05891	
3,000.00	51.00	79.40	2,318.65	306.29	1,635.97	1,597,672.77	2,277,537.90	39.44645	-108.05864	
3,100.00	51.00	79.40	2,381.58	320.59	1,712.35	1,597,684.91	2,277,614.66	39.44649	-108.05837	
3,200.00	51.00	79.40	2,444.51	334.89	1,788.74	1,597,697.05	2,277,691.41	39.44653	-108.05810	
3,300.00	51.00	79.40	2,507.44	349.20	1,865.13	1,597,709.19	2,277,768.17	39.44657	-108.05783	
3,400.00	51.00	79.40	2,570.37	363.50	1,941.52	1,597,721.33	2,277,844.93	39.44661	-108.05756	
3,500.00	51.00	79.40	2,633.30	377.80	2,017.91	1,597,733.47	2,277,921.69	39.44665	-108.05729	
3,576.85	51.00	79.40	2,681.66	388.79	2,076.61	1,597,742.80	2,277,980.67	39.44668	-108.05708	
Start Drop -2.00										
3,600.00	50.54	79.40	2,696.31	392.09	2,094.24	1,597,745.60	2,277,998.39	39.44668	-108.05702	
3,700.00	48.54	79.40	2,761.20	406.09	2,169.02	1,597,757.48	2,278,073.53	39.44672	-108.05675	
3,800.00	46.54	79.40	2,828.70	419.67	2,241.53	1,597,769.00	2,278,146.39	39.44676	-108.05650	
3,900.00	44.54	79.40	2,898.74	432.80	2,311.68	1,597,780.15	2,278,216.88	39.44680	-108.05625	
4,000.00	42.54	79.40	2,971.23	445.48	2,379.38	1,597,790.91	2,278,284.91	39.44683	-108.05601	

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 344-12 - Slot A03
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5165.00usft (H&P 318 (24' RKB) kjs)
<b>Project:</b>	GV 12-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5165.00usft (H&P 318 (24' RKB) kjs)
<b>Site:</b>	GM 24-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 344-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 03Mar14 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	
4,100.00	40.54	79.40	3,046.08	457.68	2,444.56	1,597,801.27	2,278,350.40	39.44686	-108.05578	
4,144.34	39.65	79.40	3,080.00	462.93	2,472.63	1,597,805.73	2,278,378.61	39.44688	-108.05568	
<b>Mesaverde</b>										
4,200.00	38.54	79.40	3,123.20	469.39	2,507.13	1,597,811.21	2,278,413.27	39.44690	-108.05556	
4,300.00	36.54	79.40	3,202.49	480.60	2,567.01	1,597,820.73	2,278,473.45	39.44693	-108.05535	
4,400.00	34.54	79.40	3,283.86	491.30	2,624.14	1,597,829.81	2,278,530.85	39.44696	-108.05514	
4,500.00	32.54	79.40	3,367.20	501.47	2,678.44	1,597,838.44	2,278,585.42	39.44698	-108.05495	
4,600.00	30.54	79.40	3,452.43	511.09	2,729.85	1,597,846.61	2,278,637.08	39.44701	-108.05477	
4,700.00	28.54	79.40	3,539.43	520.16	2,778.31	1,597,854.31	2,278,685.77	39.44704	-108.05460	
4,800.00	26.54	79.40	3,628.09	528.67	2,823.75	1,597,861.53	2,278,731.43	39.44706	-108.05444	
4,900.00	24.54	79.40	3,718.32	536.60	2,866.12	1,597,868.26	2,278,774.01	39.44708	-108.05429	
5,000.00	22.54	79.40	3,809.99	543.95	2,905.37	1,597,874.50	2,278,813.45	39.44710	-108.05415	
5,100.00	20.54	79.40	3,903.01	550.71	2,941.46	1,597,880.24	2,278,849.71	39.44712	-108.05402	
5,200.00	18.54	79.40	3,997.24	556.86	2,974.33	1,597,885.46	2,278,882.74	39.44714	-108.05390	
5,300.00	16.54	79.40	4,092.59	562.41	3,003.94	1,597,890.17	2,278,912.50	39.44715	-108.05380	
5,400.00	14.54	79.40	4,188.93	567.34	3,030.27	1,597,894.35	2,278,938.95	39.44717	-108.05371	
5,426.90	14.00	79.40	4,215.00	568.56	3,036.79	1,597,895.39	2,278,945.50	39.44717	-108.05368	
<b>Top Gas - Approx. Top Gas</b>										
5,500.00	12.54	79.40	4,286.15	571.65	3,053.28	1,597,898.01	2,278,962.07	39.44718	-108.05362	
5,600.00	10.54	79.40	4,384.12	575.33	3,072.94	1,597,901.13	2,278,981.83	39.44719	-108.05355	
5,700.00	8.54	79.40	4,482.73	578.38	3,089.23	1,597,903.72	2,278,998.19	39.44720	-108.05350	
5,800.00	6.54	79.40	4,581.86	580.79	3,102.12	1,597,905.77	2,279,011.15	39.44720	-108.05345	
5,900.00	4.54	79.40	4,681.39	582.57	3,111.61	1,597,907.28	2,279,020.68	39.44721	-108.05342	
6,000.00	2.54	79.40	4,781.20	583.70	3,117.67	1,597,908.24	2,279,026.77	39.44721	-108.05340	
6,100.00	0.54	79.40	4,881.16	584.19	3,120.31	1,597,908.66	2,279,029.43	39.44721	-108.05339	
6,126.90	0.00	0.00	4,908.06	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
<b>Vertical</b>										
6,200.00	0.00	0.00	4,981.15	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
6,300.00	0.00	0.00	5,081.15	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
6,400.00	0.00	0.00	5,181.15	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
6,500.00	0.00	0.00	5,281.15	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
6,600.00	0.00	0.00	5,381.15	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
6,700.00	0.00	0.00	5,481.15	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
6,778.85	0.00	0.00	5,560.00	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
<b>Cameo Coals</b>										
6,800.00	0.00	0.00	5,581.15	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
6,900.00	0.00	0.00	5,681.16	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
7,000.00	0.00	0.00	5,781.16	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
7,100.00	0.00	0.00	5,881.16	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
7,200.00	0.00	0.00	5,981.16	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
7,233.85	0.00	0.00	6,015.00	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
<b>Rollins SS</b>										
7,300.00	0.00	0.00	6,081.16	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
7,333.85	0.00	0.00	6,115.00	584.22	3,120.43	1,597,908.68	2,279,029.55	39.44721	-108.05339	
<b>TD at 7333.85 - TD</b>										

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 344-12 - Slot A03
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5165.00usft (H&P 318 (24' RKB) kjs)
<b>Project:</b>	GV 12-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5165.00usft (H&P 318 (24' RKB) kjs)
<b>Site:</b>	GM 24-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 344-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 03Mar14 kjs		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Top Gas (50' Radius) GM	0.00	0.00	4,215.00	576.18	3,077.50	1,597,901.85	2,278,986.40	39.44719	-108.05354
- plan misses target center by 40.20usft at 5436.41usft MD (4224.23 TVD, 568.98 N, 3039.04 E)									
- Circle (radius 50.00)									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(in)	(in)
	1,800.00	1,563.48	9 5/8"	9.625	12.250

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(usft)	(usft)	Name	Lithology	(°)	(°)
	1,145.18	1,090.00	Top of "G" Sand			
	1,267.25	1,190.00	Base of "G" Sand			
	4,144.34	3,080.00	Mesaverde			
	5,426.90	4,215.00	Approx. Top Gas			
	6,778.85	5,560.00	Cameo Coals			
	7,233.85	6,015.00	Rollins SS			
	7,333.85	6,115.00	TD			

Plan Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment
	130.00	130.00	0.00	0.00	Start Build 3.25
	1,699.26	1,500.09	120.26	642.35	Hold 51.00 Inclination
	3,576.85	2,681.66	388.79	2,076.61	Start Drop -2.00
	5,426.90	4,215.00	568.56	3,036.79	Top Gas
	6,126.90	4,908.06	584.22	3,120.43	Vertical
	7,333.85	6,115.00	584.22	3,120.43	TD at 7333.85