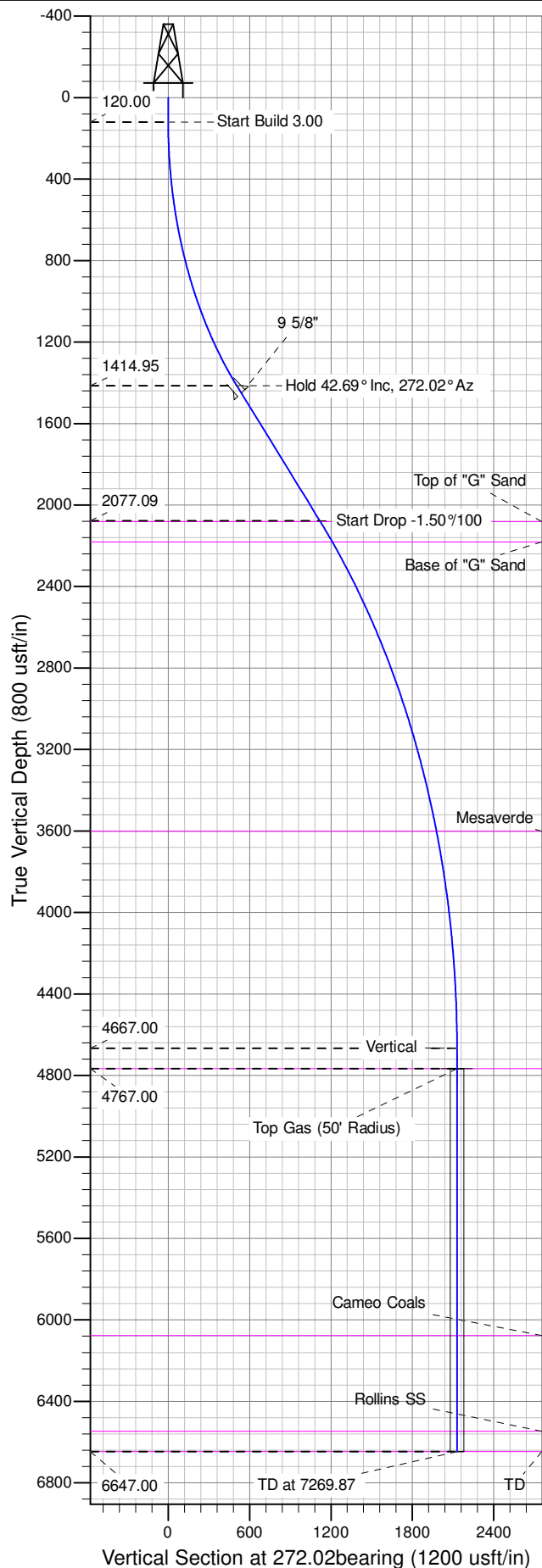
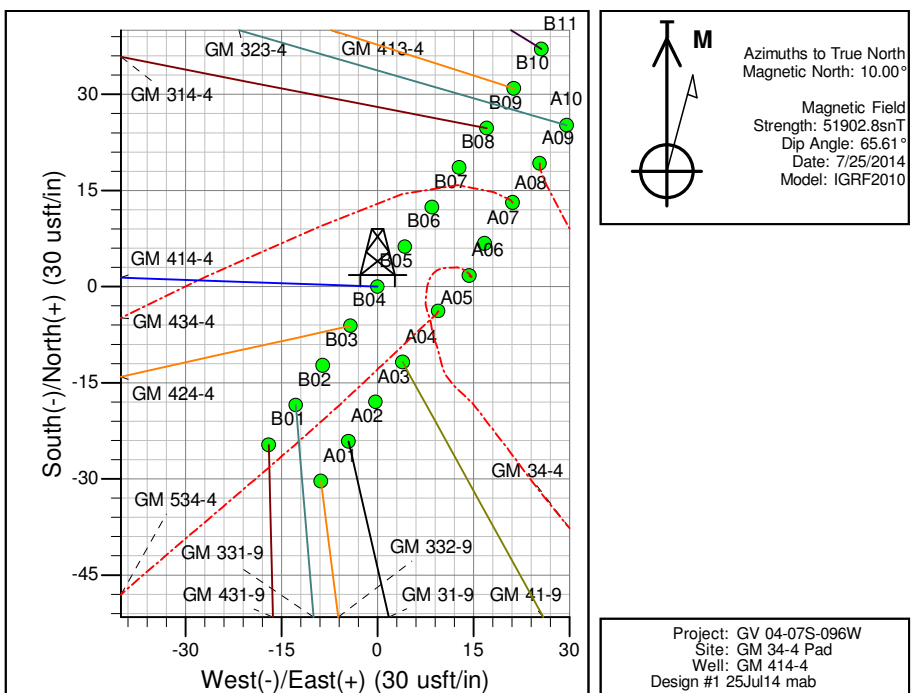
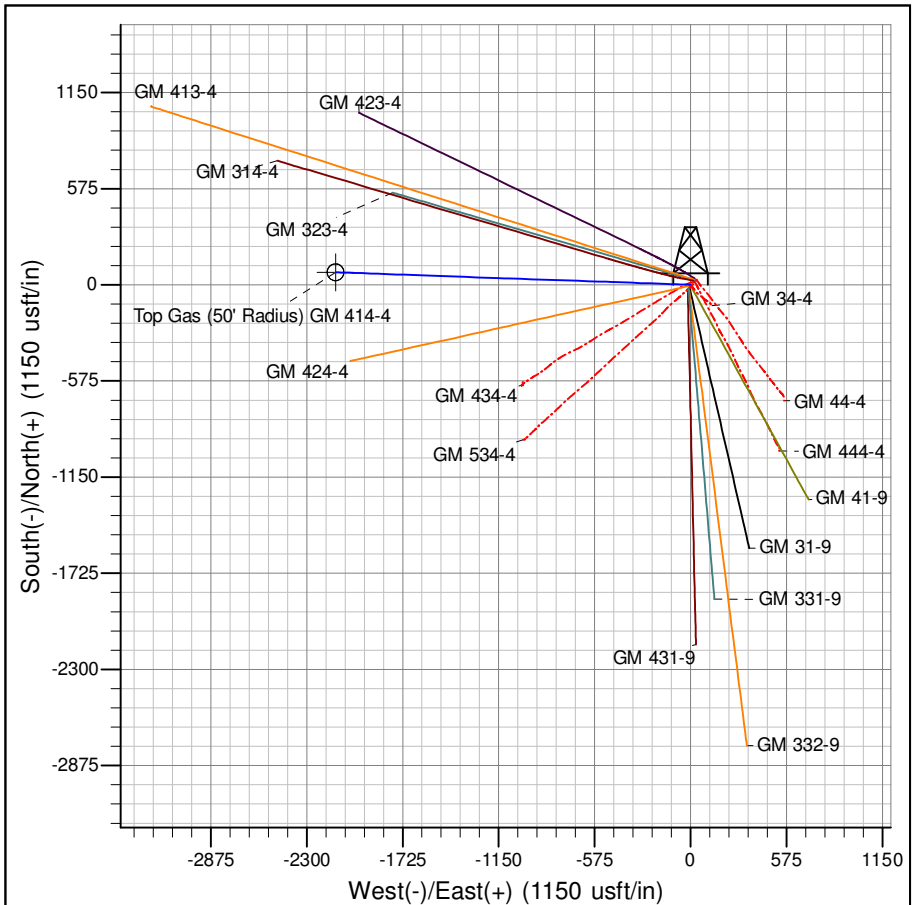




Well Name: GM 414-4  
Surface Location: GM 34-4 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 6023.00  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.00 0.00 1603663.20000 2263159.70000 39.461765 -108.110142 B05  
KELLY BUSHING @ 6047.00usft (H&P 318 (24' 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 3.00	
1414.95	1543.01	42.69	272.02	17.86	-505.74	506.06	506.06	Hold 42.69° Inc, 272.02° Az	
2077.09	2443.85	42.69	272.02	39.42	-1116.16	1116.86	1116.86	Start Drop -1.50°/100	
4667.00	5289.87	0.00	0.00	75.14	-2127.65	2128.97	2128.97	Vertical	
4767.00	5389.87	0.00	0.00	75.14	-2127.65	2128.97	2128.97	Top Gas	
6647.00	7269.87	0.00	0.00	75.14	-2127.65	2128.97	2128.97	TD at 7269.87	



Project: GV 04-07S-096W  
Site: GM 34-4 Pad  
Well: GM 414-4  
Design #1 25Jul14 mab

# **PICEANCE VLY NAD 83**

**GV 04-07S-096W**

**GM 34-4 Pad**

**GM 414-4 - Slot B05**

**Wellbore #1**

**Plan: Design #1 25Jul14 mab**

## **Standard Planning Report - Geographic**

**25 September, 2014**

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 414-4 - Slot B05
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6047.00usft (H&P 318 (24' RKB) mab)
<b>Project:</b>	GV 04-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 6047.00usft (H&P 318 (24' RKB) mab)
<b>Site:</b>	GM 34-4 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 414-4	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 25Jul14 mab		

<b>Project</b>	GV 04-07S-096W, Garfield County, CO, 04-07S-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>	GM 34-4 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,603,693.60000 usft	<b>Latitude:</b> 39.461851
<b>From:</b> Map		<b>Easting:</b>	2,263,194.40000 usft	<b>Longitude:</b> -108.110023
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.65 °

<b>Well</b>	GM 414-4 - Slot B05			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,603,663.20000 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,263,159.70000 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	6,023.00 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	7/25/2014	10.00	65.61	51,903

<b>Design</b>	Design #1 25Jul14 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	272.02

<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	
1,543.01	42.69	272.02	1,414.95	17.86	-505.74	3.00	3.00	0.00	272.02	
2,443.85	42.69	272.02	2,077.09	39.42	-1,116.16	0.00	0.00	0.00	0.00	
5,289.87	0.00	0.00	4,667.00	75.14	-2,127.65	1.50	-1.50	0.00	180.00	
5,389.87	0.00	0.00	4,767.00	75.14	-2,127.65	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
7,269.87	0.00	0.00	6,647.00	75.14	-2,127.65	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 414-4 - Slot B05
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6047.00usft (H&P 318 (24' RKB) mab)
<b>Project:</b>	GV 04-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 6047.00usft (H&P 318 (24' RKB) mab)
<b>Site:</b>	GM 34-4 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 414-4	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 25Jul14 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	1,603,663.20000	2,263,159.70000	39.461765	-108.110143	
120.00	0.00	0.00	120.00	0.00	0.00	1,603,663.20000	2,263,159.70000	39.461765	-108.110143	
<b>Start Build 3.00</b>										
200.00	2.40	272.02	199.98	0.06	-1.67	1,603,663.30719	2,263,158.02824	39.461765	-108.110149	
400.00	8.40	272.02	399.00	0.72	-20.48	1,603,664.51095	2,263,139.25456	39.461767	-108.110215	
600.00	14.40	272.02	594.96	2.12	-59.96	1,603,667.03922	2,263,099.82387	39.461771	-108.110355	
800.00	20.40	272.02	785.72	4.23	-119.71	1,603,670.86431	2,263,040.16819	39.461777	-108.110567	
1,000.00	26.40	272.02	969.19	7.03	-199.05	1,603,675.94430	2,262,960.94111	39.461785	-108.110848	
1,200.00	32.40	272.02	1,143.35	10.49	-297.13	1,603,682.22353	2,262,863.01068	39.461794	-108.111195	
1,400.00	38.40	272.02	1,306.30	14.58	-412.86	1,603,689.63322	2,262,747.44981	39.461805	-108.111605	
1,543.01	42.69	272.02	1,414.95	17.86	-505.74	1,603,695.58015	2,262,654.70205	39.461814	-108.111934	
<b>Hold 42.69° Inc, 272.02° Az</b>										
1,593.01	42.69	272.02	1,451.70	19.06	-539.62	1,603,697.74931	2,262,620.87206	39.461818	-108.112054	
<b>9 5/8"</b>										
1,600.00	42.69	272.02	1,456.84	19.22	-544.36	1,603,698.05256	2,262,616.14251	39.461818	-108.112071	
1,800.00	42.69	272.02	1,603.85	24.01	-679.88	1,603,706.72940	2,262,480.81927	39.461831	-108.112551	
2,000.00	42.69	272.02	1,750.85	28.80	-815.40	1,603,715.40624	2,262,345.49603	39.461844	-108.113031	
2,200.00	42.69	272.02	1,897.86	33.58	-950.93	1,603,724.08308	2,262,210.17278	39.461857	-108.113511	
2,400.00	42.69	272.02	2,044.86	38.37	-1,086.45	1,603,732.75992	2,262,074.84955	39.461871	-108.113991	
2,443.85	42.69	272.02	2,077.09	39.42	-1,116.16	1,603,734.66226	2,262,045.18088	39.461873	-108.114096	
<b>Start Drop -1.50°/100</b>										
2,450.52	42.59	272.02	2,082.00	39.58	-1,120.68	1,603,734.95130	2,262,040.67300	39.461874	-108.114112	
<b>Top of "G" Sand</b>										
2,584.22	40.58	272.02	2,182.00	42.71	-1,209.37	1,603,740.62967	2,261,952.11363	39.461882	-108.114426	
<b>Base of "G" Sand</b>										
2,600.00	40.35	272.02	2,194.00	43.07	-1,219.60	1,603,741.28479	2,261,941.89653	39.461883	-108.114462	
2,800.00	37.35	272.02	2,349.75	47.50	-1,344.96	1,603,749.31090	2,261,816.72199	39.461896	-108.114906	
3,000.00	34.35	272.02	2,511.84	51.63	-1,462.00	1,603,756.80447	2,261,699.85297	39.461907	-108.115321	
3,200.00	31.35	272.02	2,679.85	55.46	-1,570.40	1,603,763.74495	2,261,591.60982	39.461917	-108.115705	
3,400.00	28.35	272.02	2,853.30	58.97	-1,669.87	1,603,770.11332	2,261,492.28921	39.461927	-108.116057	
3,600.00	25.35	272.02	3,031.72	62.16	-1,760.13	1,603,775.89213	2,261,402.16337	39.461936	-108.116377	
3,800.00	22.35	272.02	3,214.62	65.01	-1,840.93	1,603,781.06554	2,261,321.47933	39.461944	-108.116663	
4,000.00	19.35	272.02	3,401.50	67.52	-1,912.06	1,603,785.61936	2,261,250.45825	39.461950	-108.116915	
4,200.00	16.35	272.02	3,591.86	69.69	-1,973.31	1,603,789.54112	2,261,189.29478	39.461956	-108.117132	
4,210.57	16.19	272.02	3,602.00	69.79	-1,976.27	1,603,789.73052	2,261,186.34094	39.461957	-108.117142	
<b>Mesaverde</b>										
4,400.00	13.35	272.02	3,785.16	71.50	-2,024.52	1,603,792.82007	2,261,138.15657	39.461961	-108.117313	
4,600.00	10.35	272.02	3,980.87	72.94	-2,065.56	1,603,795.44722	2,261,097.18379	39.461965	-108.117458	
4,800.00	7.35	272.02	4,178.47	74.03	-2,096.30	1,603,797.41537	2,261,066.48874	39.461968	-108.117567	
5,000.00	4.35	272.02	4,377.41	74.75	-2,116.66	1,603,798.71912	2,261,046.15555	39.461970	-108.117639	
5,200.00	1.35	272.02	4,577.14	75.10	-2,126.59	1,603,799.35490	2,261,036.23996	39.461971	-108.117674	
5,289.87	0.00	0.00	4,667.00	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
<b>Vertical</b>										
5,389.87	0.00	0.00	4,767.00	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
<b>Top Gas - Approx. Top Gas</b>										
5,400.00	0.00	0.00	4,777.13	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
5,600.00	0.00	0.00	4,977.13	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
5,800.00	0.00	0.00	5,177.13	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
6,000.00	0.00	0.00	5,377.13	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
6,200.00	0.00	0.00	5,577.13	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
6,400.00	0.00	0.00	5,777.13	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
6,600.00	0.00	0.00	5,977.13	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 414-4 - Slot B05
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6047.00usft (H&P 318 (24' RKB) mab)
<b>Project:</b>	GV 04-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 6047.00usft (H&P 318 (24' RKB) mab)
<b>Site:</b>	GM 34-4 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 414-4	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 25Jul14 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	
6,699.87	0.00	0.00	6,077.00	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
Cameo Coals										
6,800.00	0.00	0.00	6,177.13	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
7,000.00	0.00	0.00	6,377.13	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
7,169.87	0.00	0.00	6,547.00	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
Rollins SS										
7,200.00	0.00	0.00	6,577.13	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
7,269.87	0.00	0.00	6,647.00	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	
TD at 7269.87 - TD										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Top Gas (50' Radius) G1 - plan hits target center - Circle (radius 50.00)	0.00	358.35	4,767.00	75.14	-2,127.65	1,603,799.42255	2,261,035.18497	39.461971	-108.117678	

Casing Points							Casing Diameter (in)	Hole Diameter (in)
Measured Depth (usft)	Vertical Depth (usft)	Name						
1,593.01	1,451.70	9 5/8"					9.625	13.500

Formations							Dip (°)	Dip Direction (bearing)
Measured Depth (usft)	Vertical Depth (usft)	Name		Lithology				
2,450.52	2,082.00	Top of "G" Sand						
2,584.22	2,182.00	Base of "G" Sand						
4,210.57	3,602.00	Mesaverde						
5,389.87	4,767.00	Approx. Top Gas						
6,699.87	6,077.00	Cameo Coals						
7,169.87	6,547.00	Rollins SS						
7,269.87	6,647.00	TD						

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 414-4 - Slot B05
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6047.00usft (H&P 318 (24' RKB) mab)
<b>Project:</b>	GV 04-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 6047.00usft (H&P 318 (24' RKB) mab)
<b>Site:</b>	GM 34-4 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 414-4	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 25Jul14 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 3.00
1,543.01	1,414.95	17.86	-505.74	Hold 42.69° Inc, 272.02° Az
2,443.85	2,077.09	39.42	-1,116.16	Start Drop -1.50°/100
5,289.87	4,667.00	75.14	-2,127.65	Vertical
5,389.87	4,767.00	75.14	-2,127.65	Top Gas
7,269.87	6,647.00	75.14	-2,127.65	TD at 7269.87