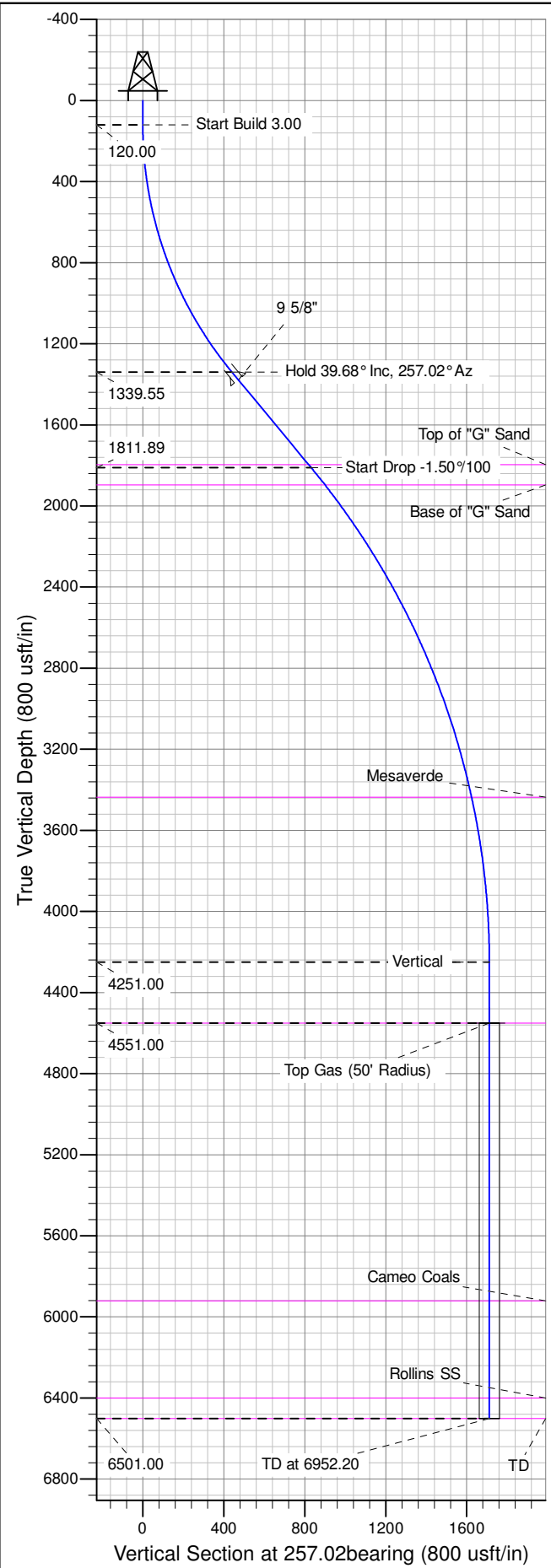
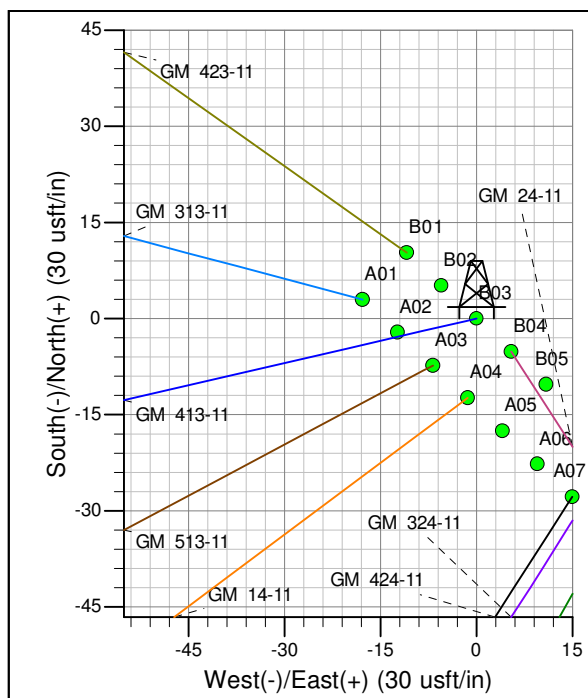
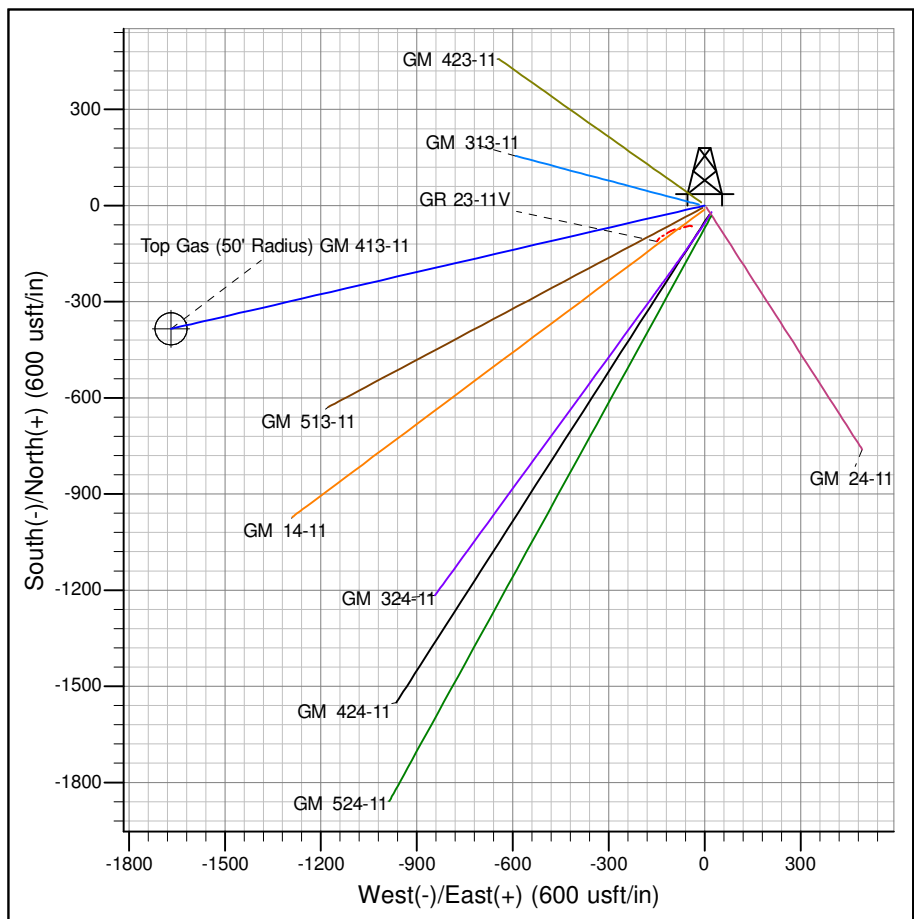




Well Name: GM 413-11  
Surface Location: GR 23-11V Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 5793.00  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.00 0.00 1599236.00000 2271917.50000 39.450302 -108.078691 B03  
KELLY BUSHING @ 5817.00usft (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	
1339.55	1442.81	39.68	257.02	-98.83	-428.84	440.08	440.08	Hold 39.68° Inc, 257.02° Az	
1811.89	2056.57	39.68	257.02	-186.85	-810.75	832.00	832.00	Start Drop -1.50°/100	
4251.00	4702.20	0.00	0.00	-384.52	-1668.43	1712.16	1712.16	Vertical	
4551.00	5002.20	0.00	0.00	-384.52	-1668.43	1712.16	1712.16	Top Gas	
6501.00	6952.20	0.00	0.00	-384.52	-1668.43	1712.16	1712.16	TD at 6952.20	



Azimuths to True North  
Magnetic North: 10.37°

Magnetic Field  
Strength: 52255.3snT  
Dip Angle: 65.70°  
Date: 5/23/2011  
Model: IGRF2005-10

Project: GV 11-07S-096W  
Site: GR 23-11V Pad  
Well: GM 413-11  
Design #2 22Jul14 mab

# **PICEANCE VLY NAD 83**

**GV 11-07S-096W**

**GR 23-11V Pad**

**GM 413-11 - Slot B03**

**Wellbore #1**

**Plan: Design #2 22Jul14 mab**

## **Standard Planning Report - Geographic**

**11 September, 2014**

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 413-11 - Slot B03
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5817.00usft (H&P 318 (24' RKB) mab)
<b>Project:</b>	GV 11-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5817.00usft (H&P 318 (24' RKB) mab)
<b>Site:</b>	GR 23-11V Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 413-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 22Jul14 mab		

<b>Project</b>	GV 11-07S-096W, Garfield County, CO, 11-07S-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>	GR 23-11V Pad		
<b>Site Position:</b>		<b>Northing:</b>	1,599,207.80000 usft
<b>From:</b>	Map	<b>Easting:</b>	2,271,931.70000 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	39.450226
		<b>Longitude:</b>	-108.078638
		<b>Grid Convergence:</b>	-1.63 °

<b>Well</b>	GM 413-11 - Slot B03		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 1,599,236.00000 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 2,271,917.50000 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	<b>Latitude:</b> 39.450302
			<b>Longitude:</b> -108.078691
			<b>Ground Level:</b> 5,793.00 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	5/23/2011	10.37	65.70	52,255

<b>Design</b>	Design #2 22Jul14 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	257.02	

<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	
1,442.81	39.68	257.02	1,339.55	-98.83	-428.84	3.00	3.00	0.00	257.02	
2,056.57	39.68	257.02	1,811.89	-186.85	-810.75	0.00	0.00	0.00	0.00	
4,702.20	0.00	0.00	4,251.00	-384.52	-1,668.43	1.50	-1.50	0.00	180.00	
5,002.20	0.00	0.00	4,551.00	-384.52	-1,668.43	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
6,952.20	0.00	0.00	6,501.00	-384.52	-1,668.43	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 413-11 - Slot B03
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5817.00usft (H&P 318 (24' RKB) mab)
<b>Project:</b>	GV 11-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5817.00usft (H&P 318 (24' RKB) mab)
<b>Site:</b>	GR 23-11V Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 413-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 22Jul14 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	1,599,236.00000	2,271,917.50000	39.450302	-108.078691
120.00	0.00	0.00	120.00	0.00	0.00	1,599,236.00000	2,271,917.50000	39.450302	-108.078691
<b>Start Build 3.00</b>									
200.00	2.40	257.02	199.98	-0.38	-1.63	1,599,235.67026	2,271,915.85758	39.450301	-108.078697
400.00	8.40	257.02	399.00	-4.60	-19.96	1,599,231.96734	2,271,897.41341	39.450289	-108.078762
600.00	14.40	257.02	594.96	-13.48	-58.47	1,599,224.19002	2,271,858.67479	39.450265	-108.078898
800.00	20.40	257.02	785.72	-26.90	-116.72	1,599,212.42352	2,271,800.06615	39.450228	-108.079105
1,000.00	26.40	257.02	969.19	-44.73	-194.09	1,599,196.79676	2,271,722.22963	39.450179	-108.079379
1,200.00	32.40	257.02	1,143.35	-66.77	-289.72	1,599,177.48094	2,271,626.01800	39.450119	-108.079717
1,400.00	38.40	257.02	1,306.30	-92.78	-402.56	1,599,154.68769	2,271,512.48541	39.450047	-108.080117
1,442.81	39.68	257.02	1,339.55	-98.83	-428.84	1,599,149.38018	2,271,486.04880	39.450031	-108.080210
<b>Hold 39.68° Inc, 257.02° Az</b>									
1,492.81	39.68	257.02	1,378.03	-106.01	-459.95	1,599,143.09595	2,271,454.74723	39.450011	-108.080320
<b>9 5/8"</b>									
1,600.00	39.68	257.02	1,460.52	-121.38	-526.65	1,599,129.62373	2,271,387.64242	39.449969	-108.080556
1,800.00	39.68	257.02	1,614.44	-150.06	-651.10	1,599,104.48664	2,271,262.43519	39.449890	-108.080997
2,000.00	39.68	257.02	1,768.35	-178.74	-775.55	1,599,079.34955	2,271,137.22798	39.449811	-108.081438
2,035.92	39.68	257.02	1,796.00	-183.89	-797.90	1,599,074.83432	2,271,114.73771	39.449797	-108.081517
<b>Top of "G" Sand</b>									
2,056.57	39.68	257.02	1,811.89	-186.85	-810.75	1,599,072.23895	2,271,101.81024	39.449789	-108.081562
<b>Start Drop -1.50°/100</b>									
2,164.61	38.06	257.02	1,896.00	-202.08	-876.82	1,599,058.89326	2,271,035.33570	39.449747	-108.081796
<b>Base of "G" Sand</b>									
2,200.00	37.53	257.02	1,923.96	-206.95	-897.96	1,599,054.62452	2,271,014.07322	39.449734	-108.081871
2,400.00	34.53	257.02	2,085.68	-233.37	-1,012.59	1,599,031.47044	2,270,898.74328	39.449661	-108.082277
2,600.00	31.53	257.02	2,253.33	-257.85	-1,118.81	1,599,010.01396	2,270,791.86907	39.449594	-108.082653
2,800.00	28.53	257.02	2,426.46	-280.33	-1,216.35	1,598,990.31390	2,270,693.74354	39.449532	-108.082998
3,000.00	25.53	257.02	2,604.59	-300.74	-1,304.91	1,598,972.42424	2,270,604.63561	39.449476	-108.083312
3,200.00	22.53	257.02	2,787.23	-319.03	-1,384.28	1,598,956.39404	2,270,524.78955	39.449426	-108.083593
3,400.00	19.53	257.02	2,973.88	-335.15	-1,454.22	1,598,942.26721	2,270,454.42419	39.449382	-108.083841
3,600.00	16.53	257.02	3,164.04	-349.06	-1,514.54	1,598,930.08250	2,270,393.73243	39.449344	-108.084054
3,800.00	13.53	257.02	3,357.17	-360.71	-1,565.08	1,598,919.87328	2,270,342.88058	39.449312	-108.084233
3,880.88	12.32	257.02	3,436.00	-364.77	-1,582.71	1,598,916.31216	2,270,325.14272	39.449301	-108.084296
<b>Mesaverde</b>									
4,000.00	10.53	257.02	3,552.75	-370.07	-1,605.71	1,598,911.66755	2,270,302.00804	39.449286	-108.084377
4,200.00	7.53	257.02	3,750.25	-377.12	-1,636.30	1,598,905.48780	2,270,271.22685	39.449267	-108.084486
4,400.00	4.53	257.02	3,949.12	-381.84	-1,656.78	1,598,901.35096	2,270,250.62136	39.449254	-108.084558
4,600.00	1.53	257.02	4,148.82	-384.22	-1,667.10	1,598,899.26838	2,270,240.24806	39.449247	-108.084595
4,702.20	0.00	0.00	4,251.00	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
<b>Vertical</b>									
4,800.00	0.00	0.00	4,348.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
5,000.00	0.00	0.00	4,548.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
5,002.20	0.00	0.00	4,551.00	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
<b>Top Gas - Approx. Top Gas</b>									
5,200.00	0.00	0.00	4,748.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
5,400.00	0.00	0.00	4,948.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
5,600.00	0.00	0.00	5,148.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
5,800.00	0.00	0.00	5,348.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
6,000.00	0.00	0.00	5,548.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
6,200.00	0.00	0.00	5,748.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 413-11 - Slot B03
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5817.00usft (H&P 318 (24' RKB) mab)
<b>Project:</b>	GV 11-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5817.00usft (H&P 318 (24' RKB) mab)
<b>Site:</b>	GR 23-11V Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 413-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 22Jul14 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
6,372.20	0.00	0.00	5,921.00	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
<b>Cameo Coals</b>									
6,400.00	0.00	0.00	5,948.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
6,600.00	0.00	0.00	6,148.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
6,800.00	0.00	0.00	6,348.80	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
6,852.20	0.00	0.00	6,401.00	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
<b>Rollins SS</b>									
6,952.20	0.00	0.00	6,501.00	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599
<b>TD at 6952.20 - TD</b>									

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	0.00	4,551.00	-384.52	-1,668.43	1,598,898.99931	2,270,238.90784	39.449246	-108.084599

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,492.81	1,378.03	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,035.92	1,796.00	Top of "G" Sand				
2,164.61	1,896.00	Base of "G" Sand				
3,880.88	3,436.00	Mesaverde				
5,002.20	4,551.00	Approx. Top Gas				
6,372.20	5,921.00	Cameo Coals				
6,852.20	6,401.00	Rollins SS				
6,952.20	6,501.00	TD				

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 413-11 - Slot B03
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5817.00usft (H&P 318 (24' RKB) mab)
<b>Project:</b>	GV 11-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5817.00usft (H&P 318 (24' RKB) mab)
<b>Site:</b>	GR 23-11V Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 413-11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #2 22Jul14 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
1,442.81	1,339.55	-98.83	-428.84	Hold 39.68° Inc, 257.02° Az
2,056.57	1,811.89	-186.85	-810.75	Start Drop -1.50°/100
4,702.20	4,251.00	-384.52	-1,668.43	Vertical
5,002.20	4,551.00	-384.52	-1,668.43	Top Gas
6,952.20	6,501.00	-384.52	-1,668.43	TD at 6952.20