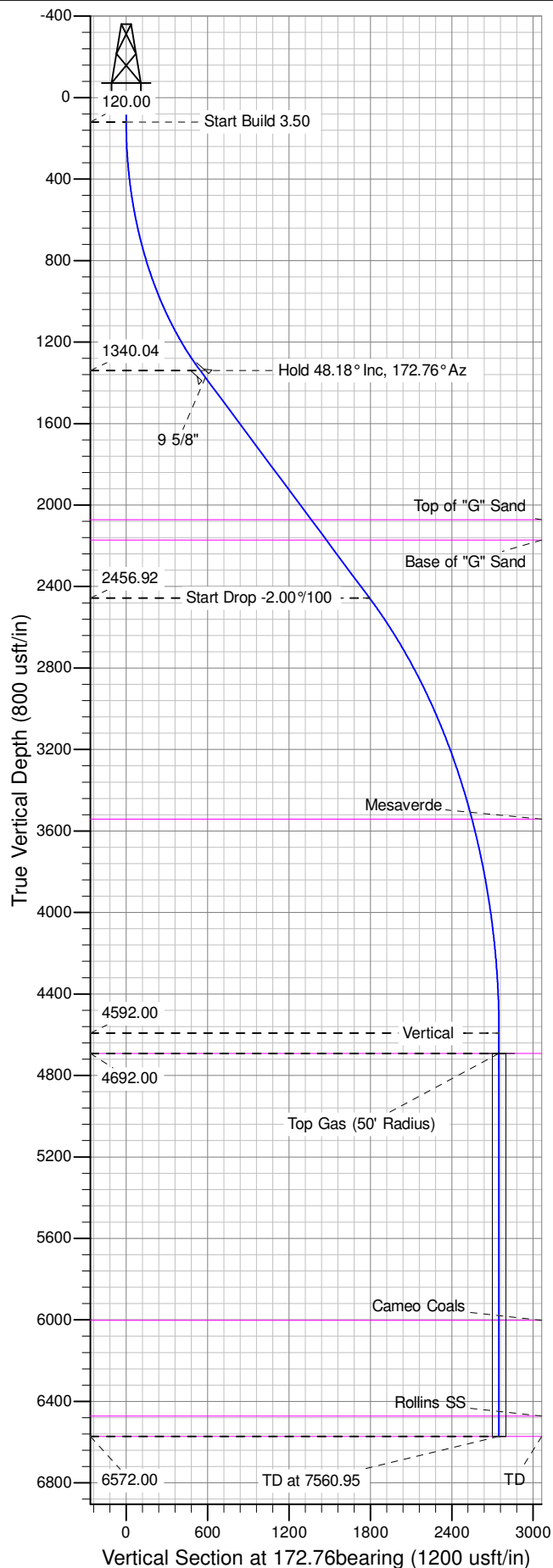
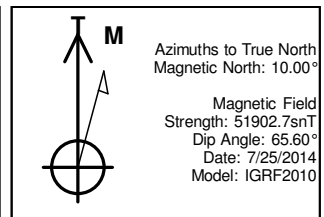
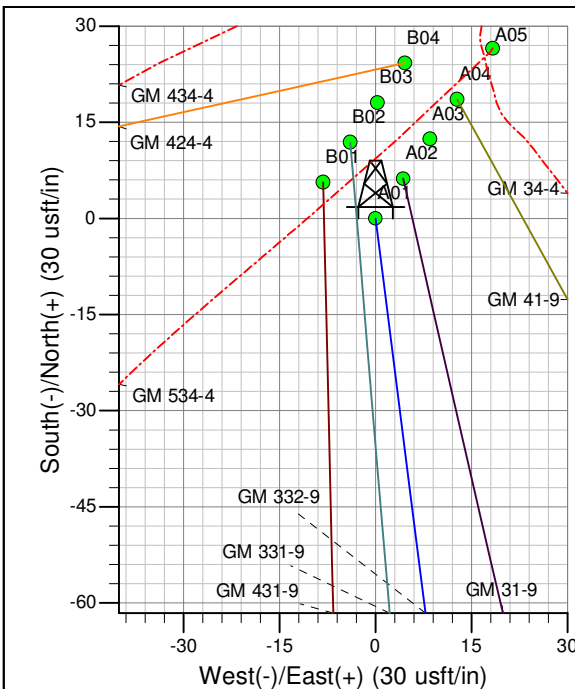
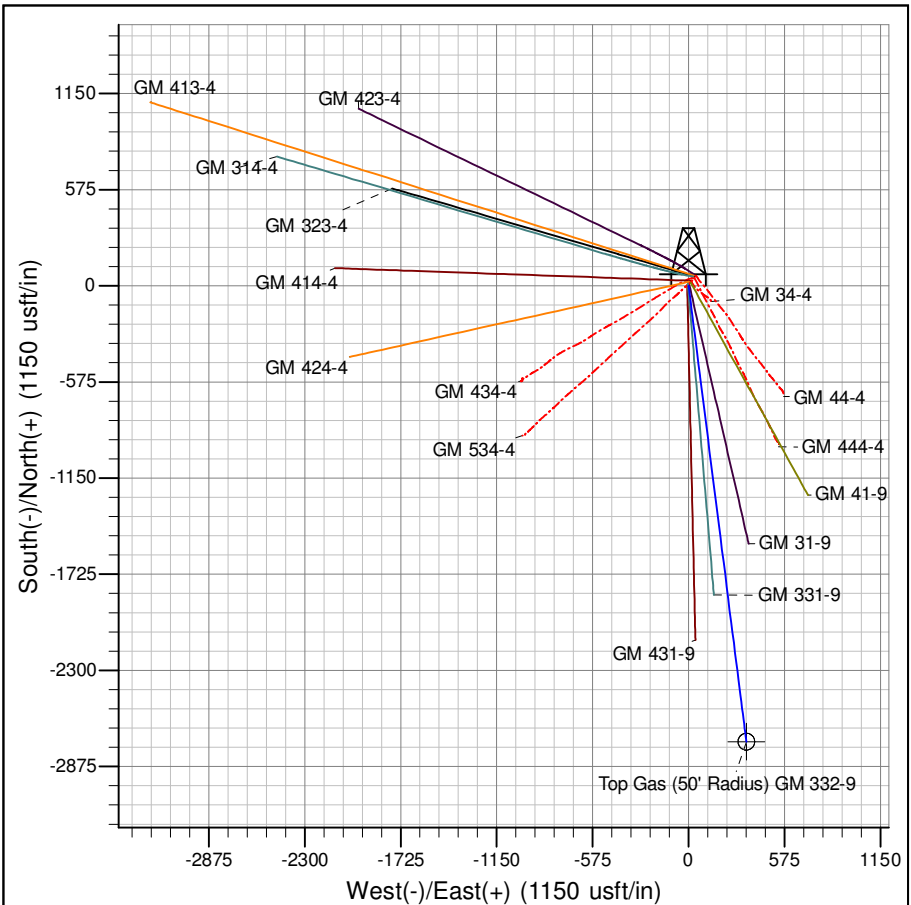




Well Name: GM 332-9  
Surface Location: GM 34-4 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 6023.00  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.00 0.00 1603633.10000 2263150.00000 39.461682 -108.110174 A01  
KELLY BUSHING @ 6047.00usft (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 3.50	
1340.04	1496.67	48.18	172.76	-541.19	68.72	545.54	545.54	Hold 48.18° Inc, 172.76° Az	
2456.92	3171.78	48.18	172.76	-1779.68	225.99	1793.97	1793.97	Start Drop -2.00%/100	
4592.00	5580.95	0.00	0.00	-2726.77	346.25	2748.66	2748.66	Vertical	
4692.00	5680.95	0.00	0.00	-2726.77	346.25	2748.66	2748.66	Top Gas	
6572.00	7560.95	0.00	0.00	-2726.77	346.25	2748.66	2748.66	TD at 7560.95	



Project: GV 04-07S-096W  
Site: GM 34-4 Pad  
Well: GM 332-9  
Design #1 25Jul14 mab

# **PICEANCE VLY NAD 83**

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

**GM 34-4 Pad**

**GM 332-9 - Slot A01**

**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 332-9 - Slot A01
<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 332-9	<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 332-9 - Slot A01			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,603,633.10000 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,263,150.00000 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	65.60	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	172.76

<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	
1,496.67	48.18	172.76	1,340.04	-541.19	68.72	3.50	3.50	0.00	172.76	
3,171.78	48.18	172.76	2,456.92	-1,779.68	225.99	0.00	0.00	0.00	0.00	
5,580.95	0.00	0.00	4,592.00	-2,726.77	346.25	2.00	-2.00	0.00	180.00	
5,680.95	0.00	0.00	4,692.00	-2,726.77	346.25	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
7,560.95	0.00	0.00	6,572.00	-2,726.77	346.25	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 332-9 - Slot A01
<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 332-9	<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	1,603,633.10000	2,263,150.00000	39.461682	-108.110174
120.00	0.00	0.00	120.00	0.00	0.00	1,603,633.10000	2,263,150.00000	39.461682	-108.110174
<b>Start Build 3.50</b>									
200.00	2.80	172.76	199.97	-1.94	0.25	1,603,631.15500	2,263,150.19039	39.461677	-108.110173
400.00	9.80	172.76	398.64	-23.70	3.01	1,603,609.32708	2,263,152.32699	39.461617	-108.110163
600.00	16.80	172.76	593.15	-69.31	8.80	1,603,563.56648	2,263,156.80622	39.461492	-108.110143
800.00	23.80	172.76	780.61	-138.10	17.54	1,603,494.55538	2,263,163.56131	39.461303	-108.110112
1,000.00	30.80	172.76	958.23	-229.05	29.08	1,603,403.32259	2,263,172.49155	39.461053	-108.110071
1,200.00	37.80	172.76	1,123.34	-340.78	43.27	1,603,291.22818	2,263,183.46380	39.460746	-108.110021
1,400.00	44.80	172.76	1,273.50	-471.65	59.89	1,603,159.94321	2,263,196.31451	39.460387	-108.109962
1,496.67	48.18	172.76	1,340.04	-541.19	68.72	1,603,090.17975	2,263,203.14324	39.460196	-108.109931
<b>Hold 48.18° Inc, 172.76° Az</b>									
1,546.67	48.18	172.76	1,373.38	-578.16	73.42	1,603,053.09237	2,263,206.77350	39.460095	-108.109914
<b>9 5/8"</b>									
1,600.00	48.18	172.76	1,408.94	-617.59	78.42	1,603,013.53727	2,263,210.64531	39.459986	-108.109896
1,800.00	48.18	172.76	1,542.29	-765.46	97.20	1,602,865.19639	2,263,225.16552	39.459580	-108.109830
2,000.00	48.18	172.76	1,675.64	-913.33	115.98	1,602,716.85549	2,263,239.68573	39.459175	-108.109763
2,200.00	48.18	172.76	1,808.99	-1,061.20	134.75	1,602,568.51460	2,263,254.20594	39.458769	-108.109697
2,400.00	48.18	172.76	1,942.34	-1,209.07	153.53	1,602,420.17371	2,263,268.72614	39.458363	-108.109630
2,594.47	48.18	172.76	2,072.00	-1,352.85	171.79	1,602,275.93746	2,263,282.84456	39.457968	-108.109566
<b>Top of "G" Sand</b>									
2,600.00	48.18	172.76	2,075.69	-1,356.94	172.31	1,602,271.83281	2,263,283.24634	39.457957	-108.109564
2,744.45	48.18	172.76	2,172.00	-1,463.73	185.87	1,602,164.69555	2,263,293.73337	39.457663	-108.109516
<b>Base of "G" Sand</b>									
2,800.00	48.18	172.76	2,209.04	-1,504.81	191.08	1,602,123.49192	2,263,297.76655	39.457551	-108.109497
3,000.00	48.18	172.76	2,342.39	-1,652.68	209.86	1,601,975.15103	2,263,312.28676	39.457145	-108.109431
3,171.78	48.18	172.76	2,456.92	-1,779.68	225.99	1,601,847.74117	2,263,324.75815	39.456796	-108.109374
<b>Start Drop -2.00°/100</b>									
3,200.00	47.62	172.76	2,475.84	-1,800.45	228.62	1,601,826.90270	2,263,326.79791	39.456739	-108.109364
3,400.00	43.62	172.76	2,615.70	-1,942.23	246.63	1,601,684.67699	2,263,340.71954	39.456350	-108.109301
3,600.00	39.62	172.76	2,765.18	-2,073.98	263.36	1,601,552.50683	2,263,353.65689	39.455988	-108.109241
3,800.00	35.62	172.76	2,923.57	-2,195.06	278.73	1,601,431.03614	2,263,365.54693	39.455656	-108.109187
4,000.00	31.62	172.76	3,090.08	-2,304.89	292.68	1,601,320.85672	2,263,376.33174	39.455354	-108.109137
4,200.00	27.62	172.76	3,263.92	-2,402.93	305.13	1,601,222.50534	2,263,385.95877	39.455085	-108.109093
4,400.00	23.62	172.76	3,444.22	-2,488.70	316.02	1,601,136.46117	2,263,394.38112	39.454850	-108.109055
4,505.89	21.50	172.76	3,542.00	-2,529.00	321.13	1,601,096.03284	2,263,398.33841	39.454739	-108.109037
<b>Mesaverde</b>									
4,600.00	19.62	172.76	3,630.11	-2,561.78	325.30	1,601,063.14340	2,263,401.55776	39.454649	-108.109022
4,800.00	15.62	172.76	3,820.69	-2,621.83	332.92	1,601,002.90924	2,263,407.45373	39.454484	-108.108995
5,000.00	11.62	172.76	4,015.03	-2,668.53	338.85	1,600,956.05213	2,263,412.04029	39.454356	-108.108974
5,200.00	7.62	172.76	4,212.17	-2,701.68	343.06	1,600,922.80035	2,263,415.29511	39.454265	-108.108959
5,400.00	3.62	172.76	4,411.17	-2,721.10	345.53	1,600,903.31592	2,263,417.20232	39.454212	-108.108950
5,580.95	0.00	0.00	4,592.00	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
<b>Vertical</b>									
5,600.00	0.00	0.00	4,611.05	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
5,680.95	0.00	0.00	4,692.00	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
<b>Top Gas - Approx. Top Gas</b>									
5,800.00	0.00	0.00	4,811.05	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
6,000.00	0.00	0.00	5,011.05	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
6,200.00	0.00	0.00	5,211.05	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
6,400.00	0.00	0.00	5,411.05	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
6,600.00	0.00	0.00	5,611.05	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 332-9 - Slot A01
<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 332-9	<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
6,800.00	0.00	0.00	5,811.05	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
6,990.95	0.00	0.00	6,002.00	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
<b>Cameo Coals</b>									
7,000.00	0.00	0.00	6,011.05	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
7,200.00	0.00	0.00	6,211.05	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
7,400.00	0.00	0.00	6,411.05	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
7,460.95	0.00	0.00	6,472.00	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
<b>Rollins SS</b>									
7,560.95	0.00	0.00	6,572.00	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948
<b>TD at 7560.95 - 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	358.35	4,692.00	-2,726.77	346.25	1,600,897.63069	2,263,417.75882	39.454196	-108.108948

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,546.67	1,373.38	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,594.47	2,072.00	Top of "G" Sand				
2,744.45	2,172.00	Base of "G" Sand				
4,505.89	3,542.00	Mesaverde				
5,680.95	4,692.00	Approx. Top Gas				
6,990.95	6,002.00	Cameo Coals				
7,460.95	6,472.00	Rollins SS				
7,560.95	6,572.00	TD				

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 332-9 - Slot A01
<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 332-9	<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 3.50
1,496.67	1,340.04	-541.19	68.72	Hold 48.18° Inc, 172.76° Az
3,171.78	2,456.92	-1,779.68	225.99	Start Drop -2.00°/100
5,580.95	4,592.00	-2,726.77	346.25	Vertical
5,680.95	4,692.00	-2,726.77	346.25	Top Gas
7,560.95	6,572.00	-2,726.77	346.25	TD at 7560.95