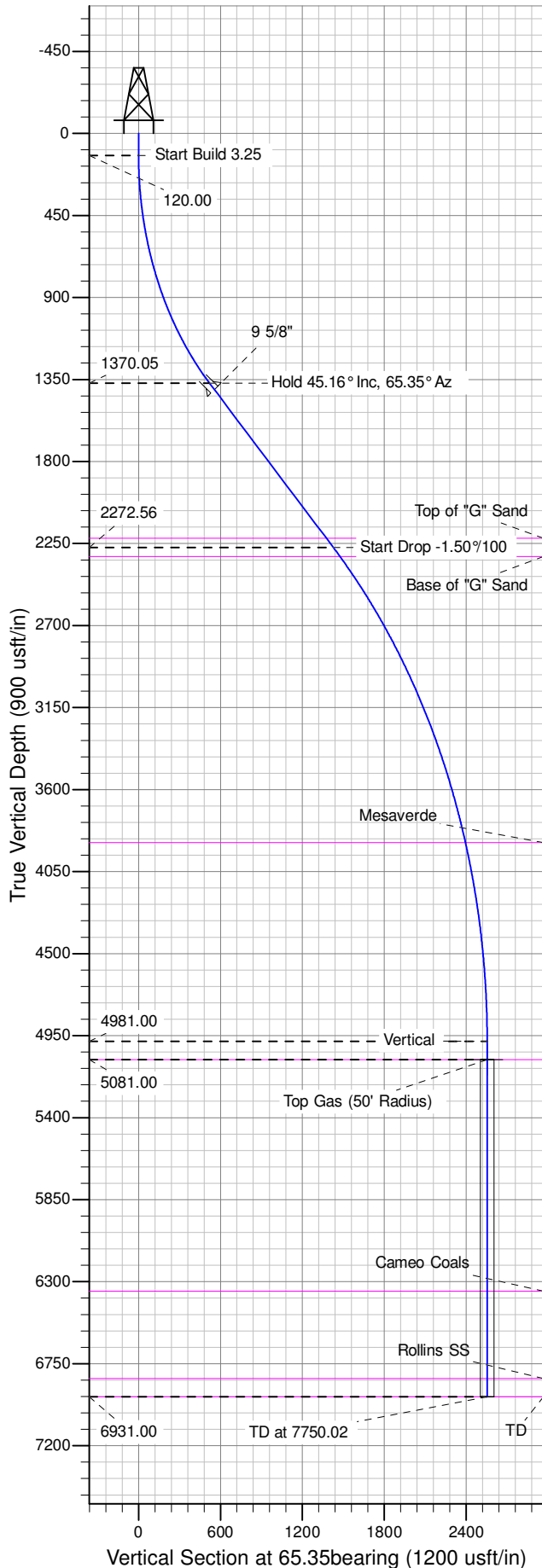
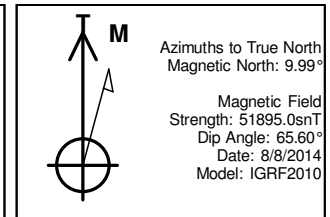
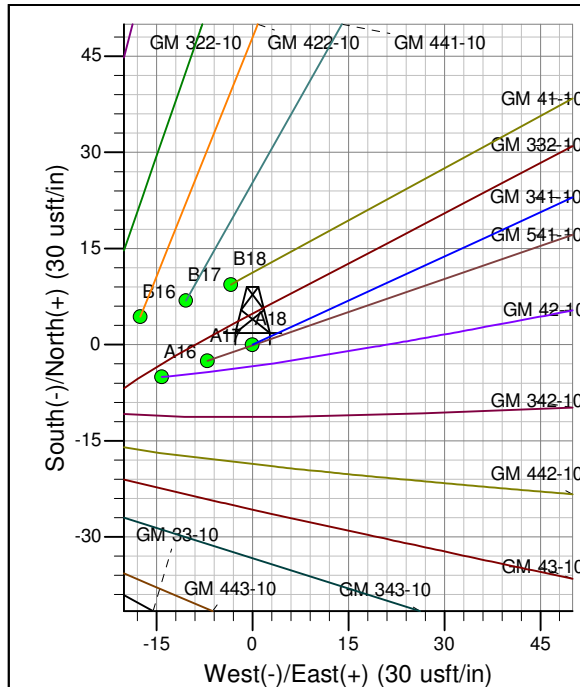
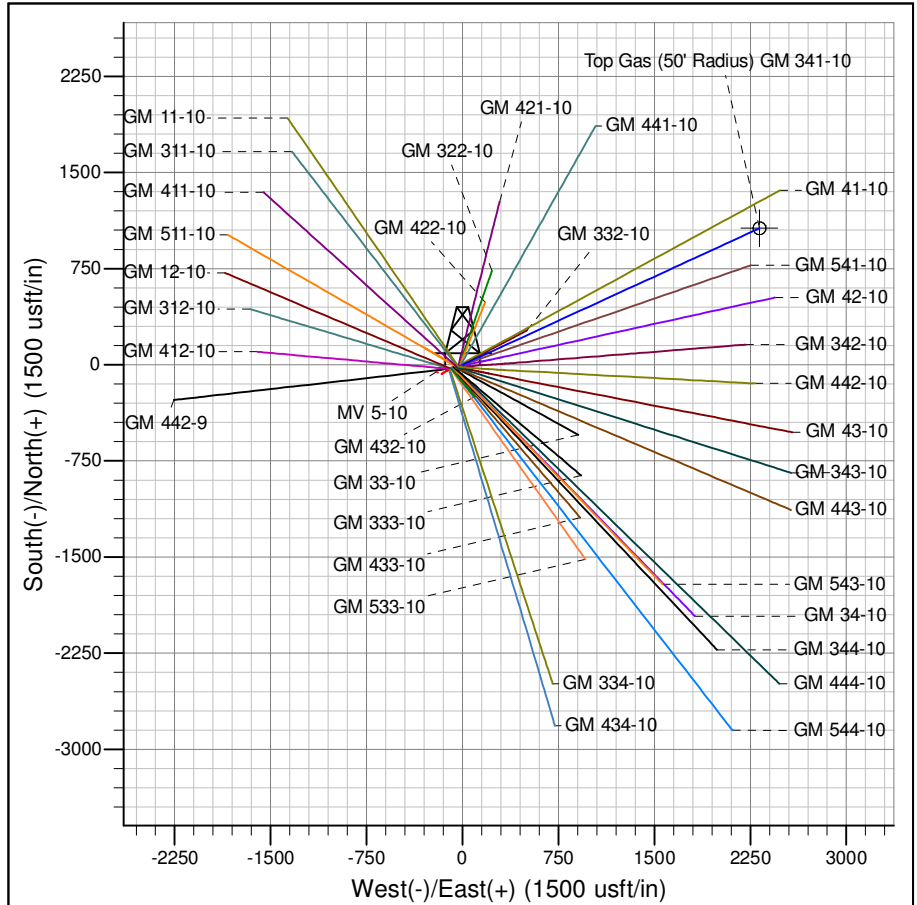




Well Name: GM 341-10  
Surface Location: MV 5-10 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 6148.00  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.00 0.00 1600379.63292 2266988.61293 39.45306 -108.09625 A18  
KELLY BUSHING @ 6174.00usft (Nabors (26' 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 3.25	
1370.05	1509.51	45.16	65.35	216.82	472.45	519.82	519.82	Hold 45.16° Inc, 65.35° Az	
2272.56	2789.42	45.16	65.35	595.35	1297.27	1427.36	1427.36	Start Drop -1.50°/100	
4981.00	5800.02	0.00	0.00	1065.12	2320.91	2553.64	2553.64	Vertical	
5081.00	5900.02	0.00	0.00	1065.12	2320.91	2553.64	2553.64	Top Gas	
6931.00	7750.02	0.00	0.00	1065.12	2320.91	2553.64	2553.64	TD at 7750.02	



Azimuths to True North  
Magnetic North: 9.99°  
Magnetic Field  
Strength: 51895.0snT  
Dip Angle: 65.60°  
Date: 8/8/2014  
Model: IGRF2010  
Project: GV 10-07S-096W  
Site: MV 5-10 Pad  
Well: GM 341-10  
Design #1 08Aug14 mab

# **PICEANCE VLY NAD 83**

**GV 10-07S-096W**

**MV 5-10 Pad**

**GM 341-10 - Slot A18**

**Wellbore #1**

**Plan: Design #1 08Aug14 mab**

## **Standard Planning Report - Geographic**

**13 October, 2014**

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 341-10 - Slot A18
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
<b>Project:</b>	GV 10-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
<b>Site:</b>	MV 5-10 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 341-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 08Aug14 mab		

<b>Project</b>	GV 10-07S-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>	MV 5-10 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,600,354.00000 usft	<b>Latitude:</b> 39.45298
<b>From:</b> Map		<b>Easting:</b>	2,266,910.20000 usft	<b>Longitude:</b> -108.09653
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.64 °

<b>Well</b>	GM 341-10 - Slot A18			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,600,379.63292 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,266,988.61293 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	6,148.00 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	8/8/2014	9.99	65.60	51,895

<b>Design</b>	Design #1 08Aug14 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	65.35

<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	
1,509.51	45.16	65.35	1,370.05	216.82	472.45	3.25	3.25	0.00	65.35	
2,789.42	45.16	65.35	2,272.56	595.35	1,297.27	0.00	0.00	0.00	0.00	
5,800.02	0.00	0.00	4,981.00	1,065.12	2,320.91	1.50	-1.50	0.00	180.00	
5,900.02	0.00	0.00	5,081.00	1,065.12	2,320.91	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
7,750.02	0.00	0.00	6,931.00	1,065.12	2,320.91	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 341-10 - Slot A18
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
<b>Project:</b>	GV 10-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
<b>Site:</b>	MV 5-10 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 341-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 08Aug14 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	1,600,379.63292	2,266,988.61293	39.45306	-108.09626	
120.00	0.00	0.00	120.00	0.00	0.00	1,600,379.63292	2,266,988.61293	39.45306	-108.09626	
Start Build 3.25										
200.00	2.60	65.35	199.97	0.76	1.65	1,600,380.34241	2,266,990.28324	39.45306	-108.09625	
400.00	9.10	65.35	398.82	9.25	20.17	1,600,388.30739	2,267,009.03477	39.45308	-108.09619	
600.00	15.60	65.35	594.09	27.09	59.02	1,600,405.02146	2,267,048.38384	39.45313	-108.09605	
800.00	22.10	65.35	783.26	54.03	117.72	1,600,430.26974	2,267,107.82457	39.45320	-108.09584	
1,000.00	28.60	65.35	963.91	89.72	195.50	1,600,463.72763	2,267,186.59276	39.45330	-108.09556	
1,200.00	35.10	65.35	1,133.70	133.72	291.37	1,600,504.96500	2,267,283.67575	39.45342	-108.09523	
1,400.00	41.60	65.35	1,290.47	185.45	404.10	1,600,553.45167	2,267,397.82543	39.45357	-108.09483	
1,509.51	45.16	65.35	1,370.05	216.82	472.45	1,600,582.85110	2,267,467.03897	39.45365	-108.09458	
Hold 45.16° Inc, 65.35° Az										
1,559.51	45.16	65.35	1,405.31	231.60	504.67	1,600,596.71134	2,267,499.66942	39.45369	-108.09447	
9 5/8"										
1,600.00	45.16	65.35	1,433.86	243.58	530.76	1,600,607.93524	2,267,526.09328	39.45372	-108.09438	
1,800.00	45.16	65.35	1,574.88	302.73	659.65	1,600,663.37562	2,267,656.61372	39.45389	-108.09392	
2,000.00	45.16	65.35	1,715.91	361.88	788.54	1,600,718.81601	2,267,787.13417	39.45405	-108.09346	
2,200.00	45.16	65.35	1,856.94	421.03	917.43	1,600,774.25640	2,267,917.65462	39.45421	-108.09301	
2,400.00	45.16	65.35	1,997.97	480.18	1,046.32	1,600,829.69679	2,268,048.17506	39.45437	-108.09255	
2,600.00	45.16	65.35	2,139.00	539.33	1,175.21	1,600,885.13718	2,268,178.69551	39.45454	-108.09210	
2,716.29	45.16	65.35	2,221.00	573.72	1,250.15	1,600,917.37373	2,268,254.58834	39.45463	-108.09183	
Top of "G" Sand										
2,789.42	45.16	65.35	2,272.56	595.35	1,297.27	1,600,937.64410	2,268,302.30982	39.45469	-108.09166	
Start Drop -1.50°/100										
2,800.00	45.00	65.35	2,280.04	598.47	1,304.08	1,600,940.57353	2,268,309.20643	39.45470	-108.09164	
2,857.50	44.14	65.35	2,321.00	615.31	1,340.76	1,600,956.34889	2,268,346.34556	39.45475	-108.09151	
Base of "G" Sand										
3,000.00	42.00	65.35	2,425.09	655.89	1,429.19	1,600,994.38863	2,268,435.90053	39.45486	-108.09120	
3,200.00	39.00	65.35	2,577.16	710.06	1,547.23	1,601,045.16206	2,268,555.43383	39.45501	-108.09078	
3,400.00	36.00	65.35	2,735.81	760.84	1,657.88	1,601,092.75469	2,268,667.47869	39.45514	-108.09039	
3,600.00	33.00	65.35	2,900.61	808.08	1,760.82	1,601,137.03605	2,268,771.72801	39.45527	-108.09002	
3,800.00	30.00	65.35	3,071.12	851.66	1,855.79	1,601,177.88477	2,268,867.89603	39.45539	-108.08968	
4,000.00	27.00	65.35	3,246.86	891.46	1,942.52	1,601,215.18888	2,268,955.71919	39.45550	-108.08938	
4,200.00	24.00	65.35	3,427.36	927.37	2,020.76	1,601,248.84615	2,269,034.95675	39.45560	-108.08910	
4,400.00	21.00	65.35	3,612.12	959.29	2,090.32	1,601,278.76431	2,269,105.39154	39.45569	-108.08885	
4,600.00	18.00	65.35	3,800.62	987.14	2,150.99	1,601,304.86137	2,269,166.83049	39.45577	-108.08864	
4,694.66	16.58	65.35	3,891.00	998.87	2,176.56	1,601,315.85969	2,269,192.72327	39.45580	-108.08855	
Mesaverde										
4,800.00	15.00	65.35	3,992.36	1,010.83	2,202.61	1,601,327.06579	2,269,219.10519	39.45583	-108.08846	
5,000.00	12.00	65.35	4,186.81	1,030.30	2,245.04	1,601,345.31671	2,269,262.07239	39.45588	-108.08831	
5,200.00	9.00	65.35	4,383.44	1,045.50	2,278.16	1,601,359.56410	2,269,295.61431	39.45593	-108.08819	
5,400.00	6.00	65.35	4,581.71	1,056.39	2,301.89	1,601,369.76893	2,269,319.63900	39.45596	-108.08810	
5,600.00	3.00	65.35	4,781.07	1,062.93	2,316.15	1,601,375.90321	2,269,334.08062	39.45597	-108.08805	
5,800.00	0.00	65.35	4,980.98	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804	
5,800.02	0.00	0.00	4,981.00	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804	
Vertical										
5,900.02	0.00	0.00	5,081.00	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804	
Top Gas - Approx. Top Gas										
6,000.00	0.00	0.00	5,180.98	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804	
6,200.00	0.00	0.00	5,380.98	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804	
6,400.00	0.00	0.00	5,580.98	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804	
6,600.00	0.00	0.00	5,780.98	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804	

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 341-10 - Slot A18
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
<b>Project:</b>	GV 10-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
<b>Site:</b>	MV 5-10 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 341-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 08Aug14 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	5,980.98	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804
7,000.00	0.00	0.00	6,180.98	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804
7,170.02	0.00	0.00	6,351.00	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804
<b>Cameo Coals</b>									
7,200.00	0.00	0.00	6,380.98	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804
7,400.00	0.00	0.00	6,580.98	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804
7,600.00	0.00	0.00	6,780.98	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804
7,650.02	0.00	0.00	6,831.00	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804
<b>Rollins SS</b>									
7,750.02	0.00	0.00	6,931.00	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804
<b>TD at 7750.02 - 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	0.00	5,081.00	1,065.12	2,320.91	1,601,377.95013	2,269,338.89959	39.45598	-108.08804
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,559.51	1,405.31	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,716.29	2,221.00	Top of "G" Sand				
2,857.50	2,321.00	Base of "G" Sand				
4,694.66	3,891.00	Mesaverde				
5,900.02	5,081.00	Approx. Top Gas				
7,170.02	6,351.00	Cameo Coals				
7,650.02	6,831.00	Rollins SS				
7,750.02	6,931.00	TD				

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 341-10 - Slot A18
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
<b>Project:</b>	GV 10-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 6174.00usft (Nabors _ (26' RKB) mab)
<b>Site:</b>	MV 5-10 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 341-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 08Aug14 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 3.25
1,509.51	1,370.05	216.82	472.45	Hold 45.16° Inc, 65.35° Az
2,789.42	2,272.56	595.35	1,297.27	Start Drop -1.50°/100
5,800.02	4,981.00	1,065.12	2,320.91	Vertical
5,900.02	5,081.00	1,065.12	2,320.91	Top Gas
7,750.02	6,931.00	1,065.12	2,320.91	TD at 7750.02