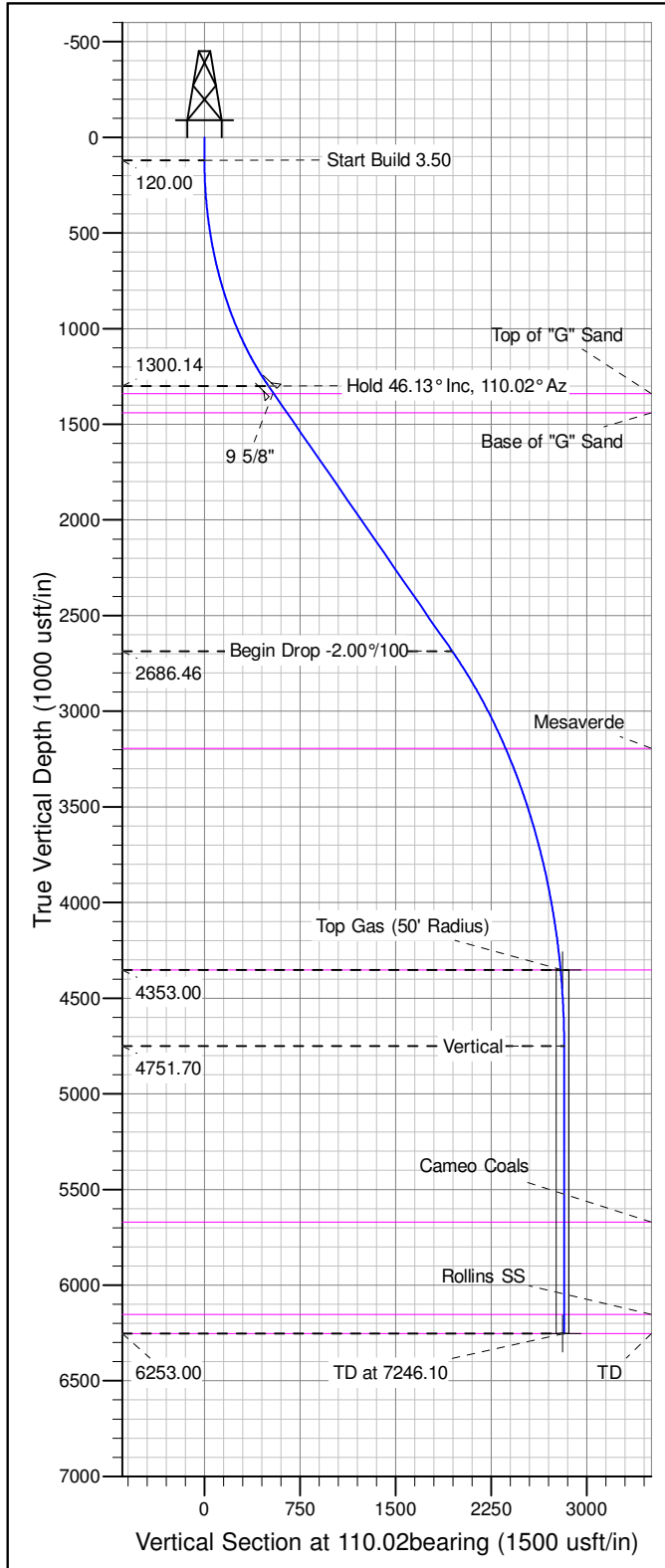
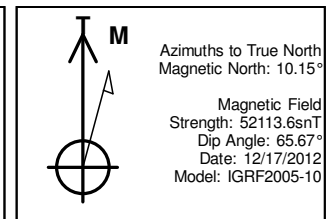
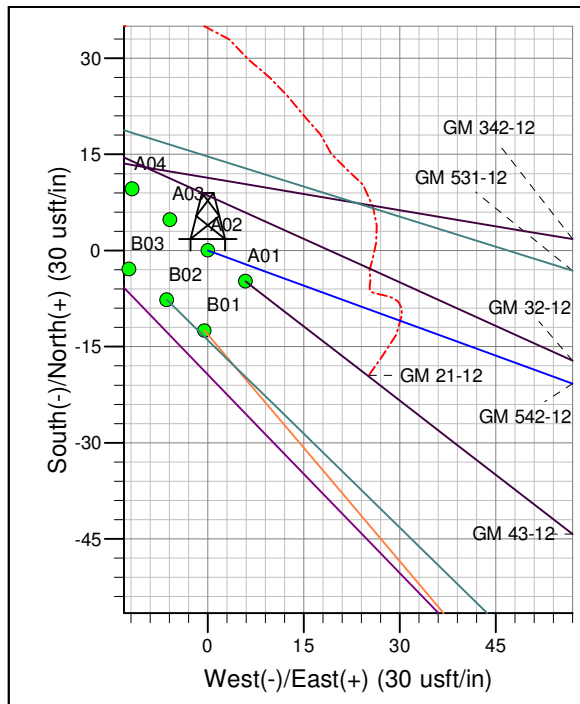
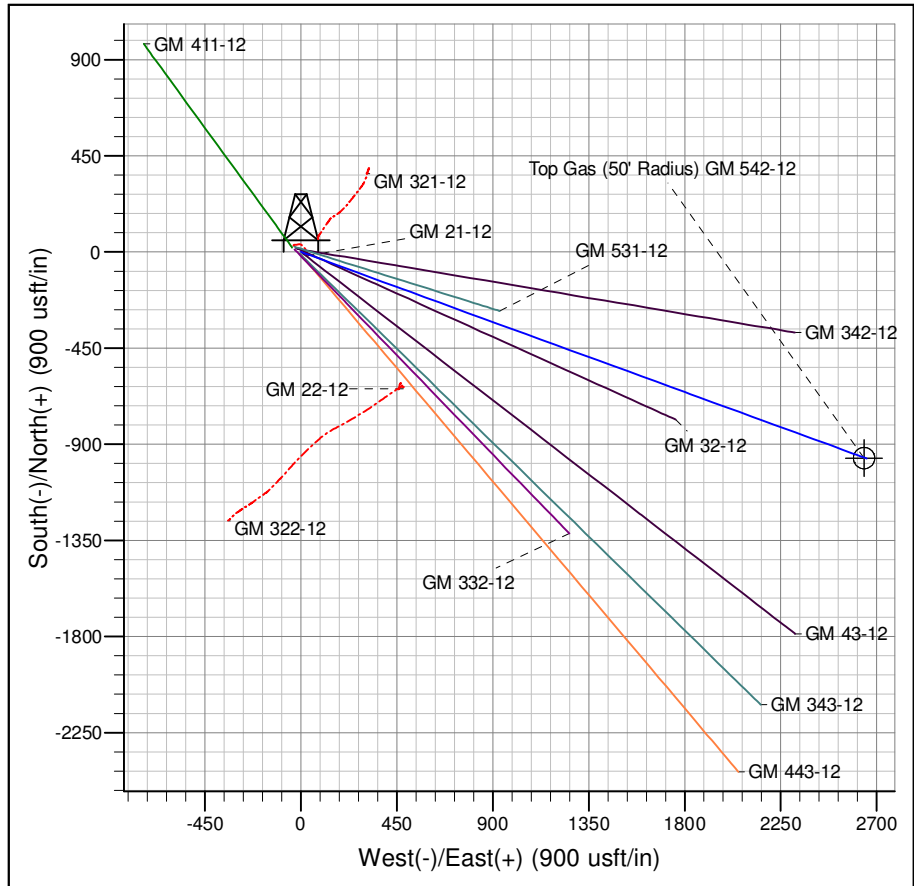




Well Name: GM 542-12  
Surface Location: GM 21-12 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 5125.00  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.00 0.00 1601310.83 2276865.36 39.45638 -108.06138 A02  
KELLY BUSHING @ 5151.00usft (Nabors (26' RKB))



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	V Sect	Departure	Annotation	
120.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.50	
1300.14	1437.98	46.13	110.02	-172.06	472.13	502.51	502.51	Hold 46.13° Inc, 110.02° Az	
2686.46	3438.35	46.13	110.02	-665.84	1827.04	1944.58	1944.58	Begin Drop -2.00%/100	
4353.00	5344.81	8.00	110.02	-957.40	2627.07	2796.09	2796.09	Top Gas	
4751.70	5744.81	0.00	0.00	-966.95	2653.27	2823.97	2823.97	Vertical	
6253.00	7246.10	0.00	0.00	-966.95	2653.27	2823.97	2823.97	TD at 7246.10	



Project: GV 12-07S-096W  
Site: GM 21-12 Pad  
Well: GM 542-12  
Design #3 15Apr14 mab

# **PICEANCE VLY NAD 83**

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

**GM 21-12 Pad**

**GM 542-12 - Slot A02**

**Wellbore #1**

**Plan: Design #3 15Apr14 mab**

## **Standard Planning Report - Geographic**

**07 May, 2014**

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 542-12 - Slot A02
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5151.00usft (Nabors (26' RKB))
<b>Project:</b>	GV 12-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5151.00usft (Nabors (26' RKB))
<b>Site:</b>	GM 21-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 542-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3 15Apr14 mab		

<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 21-12 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,601,340.21 usft	<b>Latitude:</b> 39.45646
<b>From:</b> Map		<b>Easting:</b>	2,276,830.88 usft	<b>Longitude:</b> -108.06151
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.62 °

<b>Well</b>	GM 542-12 - Slot A02			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,601,310.83 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,276,865.36 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	
			<b>Ground Level:</b>	5,125.00 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	12/17/2012	10.15	65.67	52,114

<b>Design</b>	Design #3 15Apr14 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	110.02

<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	
1,437.98	46.13	110.02	1,300.14	-172.06	472.13	3.50	3.50	0.00	110.02	
3,438.35	46.13	110.02	2,686.46	-665.84	1,827.04	0.00	0.00	0.00	0.00	
5,344.81	8.00	110.02	4,353.00	-957.40	2,627.07	2.00	-2.00	0.00	180.00	Top Gas (50' Radius)
5,744.81	0.00	0.00	4,751.70	-966.95	2,653.27	2.00	-2.00	-27.51	180.00	
7,246.10	0.00	0.00	6,253.00	-966.95	2,653.27	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 542-12 - Slot A02
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5151.00usft (Nabors (26' RKB))
<b>Project:</b>	GV 12-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5151.00usft (Nabors (26' RKB))
<b>Site:</b>	GM 21-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 542-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3 15Apr14 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	1,601,310.83	2,276,865.36	39.45638	-108.06139
120.00	0.00	0.00	120.00	0.00	0.00	1,601,310.83	2,276,865.36	39.45638	-108.06139
<b>Start Build 3.50</b>									
200.00	2.80	110.02	199.97	-0.67	1.84	1,601,310.11	2,276,867.18	39.45638	-108.06138
400.00	9.80	110.02	398.64	-8.18	22.44	1,601,302.02	2,276,887.56	39.45636	-108.06131
600.00	16.80	110.02	593.15	-23.92	65.65	1,601,285.07	2,276,930.30	39.45632	-108.06115
800.00	23.80	110.02	780.61	-47.67	130.80	1,601,259.50	2,276,994.76	39.45625	-108.06092
1,000.00	30.80	110.02	958.23	-79.06	216.93	1,601,225.69	2,277,079.97	39.45616	-108.06062
1,200.00	37.80	110.02	1,123.34	-117.62	322.76	1,601,184.16	2,277,184.66	39.45606	-108.06024
1,400.00	44.80	110.02	1,273.50	-162.79	446.70	1,601,135.52	2,277,307.27	39.45593	-108.05980
1,437.98	46.13	110.02	1,300.14	-172.06	472.13	1,601,125.53	2,277,332.43	39.45591	-108.05971
<b>Hold 46.13° Inc, 110.02° Az</b>									
1,487.98	46.13	110.02	1,334.79	-184.41	506.00	1,601,112.24	2,277,365.94	39.45588	-108.05959
<b>9 5/8"</b>									
1,496.94	46.13	110.02	1,341.00	-186.62	512.07	1,601,109.86	2,277,371.95	39.45587	-108.05957
<b>Top of "G" Sand</b>									
1,600.00	46.13	110.02	1,412.42	-212.06	581.88	1,601,082.46	2,277,441.00	39.45580	-108.05933
1,641.23	46.13	110.02	1,441.00	-222.24	609.80	1,601,071.50	2,277,468.63	39.45577	-108.05923
<b>Base of "G" Sand</b>									
1,800.00	46.13	110.02	1,551.03	-261.43	717.34	1,601,029.30	2,277,575.02	39.45566	-108.05885
2,000.00	46.13	110.02	1,689.64	-310.79	852.81	1,600,976.13	2,277,709.03	39.45553	-108.05837
2,200.00	46.13	110.02	1,828.25	-360.16	988.27	1,600,922.97	2,277,843.04	39.45539	-108.05789
2,400.00	46.13	110.02	1,966.85	-409.53	1,123.74	1,600,869.80	2,277,977.06	39.45526	-108.05741
2,600.00	46.13	110.02	2,105.46	-458.90	1,259.20	1,600,816.64	2,278,111.07	39.45512	-108.05693
2,800.00	46.13	110.02	2,244.07	-508.27	1,394.67	1,600,763.47	2,278,245.08	39.45499	-108.05645
3,000.00	46.13	110.02	2,382.67	-557.64	1,530.13	1,600,710.31	2,278,379.10	39.45485	-108.05597
3,200.00	46.13	110.02	2,521.28	-607.01	1,665.60	1,600,657.14	2,278,513.11	39.45471	-108.05549
3,400.00	46.13	110.02	2,659.89	-656.37	1,801.06	1,600,603.97	2,278,647.12	39.45458	-108.05501
3,438.35	46.13	110.02	2,686.46	-665.84	1,827.04	1,600,593.78	2,278,672.82	39.45455	-108.05492
<b>Begin Drop -2.00°/100</b>									
3,600.00	42.90	110.02	2,801.72	-704.64	1,933.50	1,600,552.00	2,278,778.14	39.45445	-108.05454
3,800.00	38.90	110.02	2,952.87	-749.47	2,056.50	1,600,503.72	2,278,899.82	39.45432	-108.05410
4,000.00	34.90	110.02	3,112.78	-790.57	2,169.29	1,600,459.46	2,279,011.41	39.45421	-108.05370
4,097.87	32.94	110.02	3,194.00	-809.27	2,220.60	1,600,439.32	2,279,062.17	39.45416	-108.05352
<b>Mesaverde</b>									
4,200.00	30.90	110.02	3,280.68	-827.76	2,271.33	1,600,419.41	2,279,112.35	39.45411	-108.05334
4,400.00	26.90	110.02	3,455.74	-860.84	2,362.11	1,600,383.78	2,279,202.16	39.45402	-108.05302
4,600.00	22.90	110.02	3,637.12	-889.67	2,441.20	1,600,352.74	2,279,280.40	39.45394	-108.05274
4,800.00	18.90	110.02	3,823.93	-914.09	2,508.21	1,600,326.44	2,279,346.69	39.45387	-108.05250
5,000.00	14.90	110.02	4,015.26	-933.98	2,562.81	1,600,305.01	2,279,400.71	39.45382	-108.05231
5,200.00	10.90	110.02	4,210.17	-949.27	2,604.74	1,600,288.56	2,279,442.19	39.45377	-108.05216
5,344.81	8.00	110.02	4,353.00	-957.40	2,627.07	1,600,279.79	2,279,464.28	39.45375	-108.05208
<b>Top Gas - Approx. Top Gas</b>									
5,400.00	6.90	110.02	4,407.73	-959.85	2,633.80	1,600,277.15	2,279,470.93	39.45375	-108.05206
5,600.00	2.90	110.02	4,606.96	-965.70	2,649.83	1,600,270.86	2,279,486.80	39.45373	-108.05200
5,744.81	0.00	0.00	4,751.70	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
<b>Vertical</b>									
5,800.00	0.00	0.00	4,806.90	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
6,000.00	0.00	0.00	5,006.90	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
6,200.00	0.00	0.00	5,206.90	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
6,400.00	0.00	0.00	5,406.90	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 542-12 - Slot A02
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5151.00usft (Nabors (26' RKB))
<b>Project:</b>	GV 12-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5151.00usft (Nabors (26' RKB))
<b>Site:</b>	GM 21-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 542-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3 15Apr14 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
6,600.00	0.00	0.00	5,606.90	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
6,663.10	0.00	0.00	5,670.00	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
<b>Cameo Coals</b>									
6,800.00	0.00	0.00	5,806.90	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
7,000.00	0.00	0.00	6,006.90	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
7,146.10	0.00	0.00	6,153.00	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
<b>Rollins SS</b>									
7,200.00	0.00	0.00	6,206.90	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
7,246.10	0.00	0.00	6,253.00	-966.95	2,653.27	1,600,269.51	2,279,490.20	39.45373	-108.05199
<b>TD at 7246.10 - 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) GM - plan misses target center by 15.71usft at 5346.84usft MD (4355.01 TVD, -957.50 N, 2627.34 E) - Circle (radius 50.00)	0.00	0.00	4,353.00	-964.91	2,641.04	1,600,271.89	2,279,478.03	39.45373	-108.05203
TD / PBHL GM 542-12 - plan misses target center by 12.40usft at 7246.10usft MD (6253.00 TVD, -966.95 N, 2653.27 E) - Point	0.00	0.00	6,253.00	-964.91	2,641.04	1,600,271.89	2,279,478.03	39.45373	-108.05203

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,487.98	1,334.79	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
1,496.94	1,341.00	Top of "G" Sand				
1,641.23	1,441.00	Base of "G" Sand				
4,097.87	3,194.00	Mesaverde				
5,344.81	4,353.00	Approx. Top Gas				
6,663.10	5,670.00	Cameo Coals				
7,146.10	6,153.00	Rollins SS				
7,246.10	6,253.00	TD				

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 542-12 - Slot A02
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5151.00usft (Nabors (26' RKB))
<b>Project:</b>	GV 12-07S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5151.00usft (Nabors (26' RKB))
<b>Site:</b>	GM 21-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 542-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #3 15Apr14 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
1,437.98	1,300.14	-172.06	472.13	Hold 46.13° Inc, 110.02° Az
3,438.35	2,686.46	-665.84	1,827.04	Begin Drop -2.00°/100
5,344.81	4,353.00	-957.40	2,627.07	Top Gas
5,744.81	4,751.70	-966.95	2,653.27	Vertical
7,246.10	6,253.00	-966.95	2,653.27	TD at 7246.10