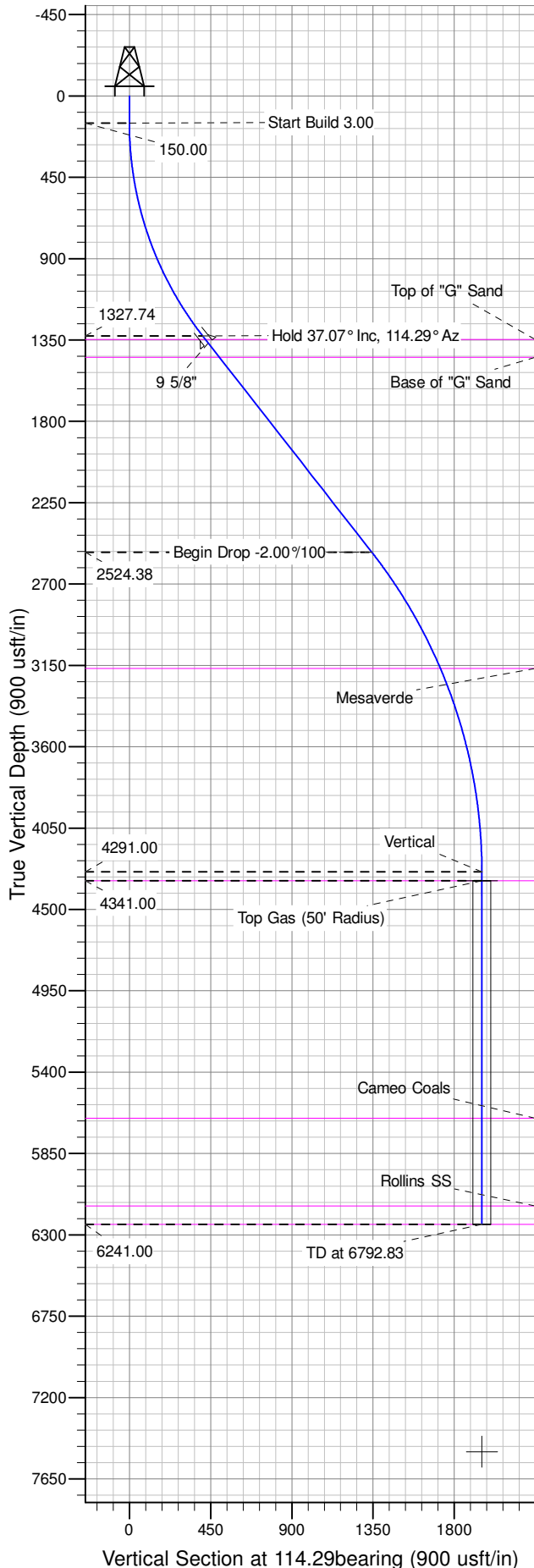
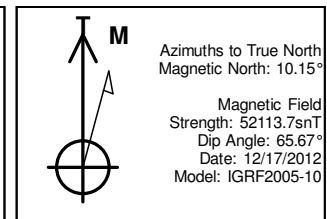
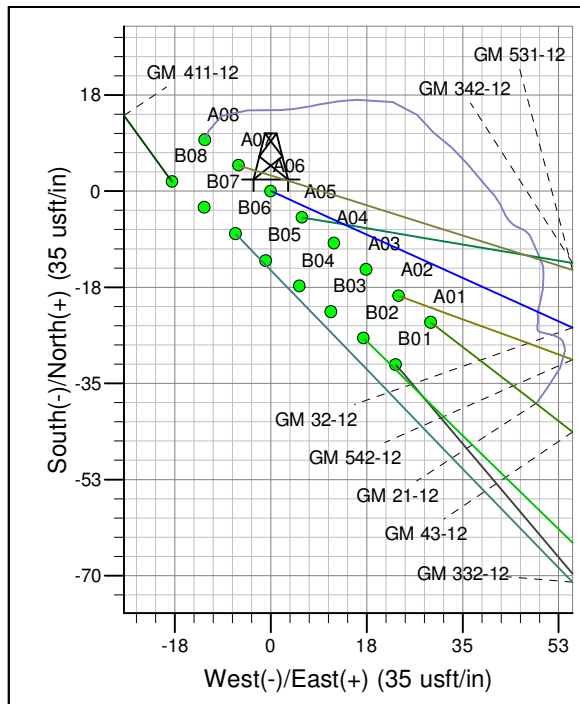
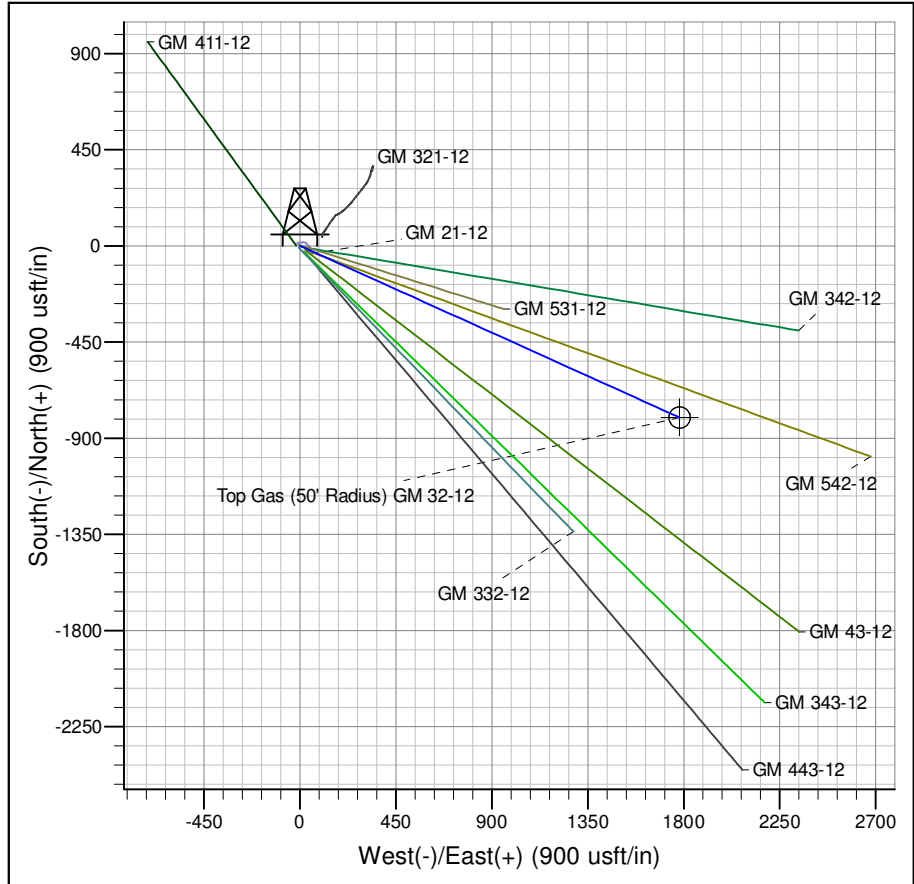




Well Name: GM 32-12  
Surface Location: GM 21-12 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 5125.00  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.00 0.00 1601330.58 2276842.61 39.45643 -108.06147 A06  
KELLY BUSHING @ 5151.00usft (Nabors (26' RKB))



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
150.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
1327.74	1419.10	38.07	114.29	-167.19	370.38	406.37	406.37	406.37	Hold 37.07° Inc, 114.29° Az
2524.38	2939.17	38.07	114.29	-552.86	1224.75	1343.75	1343.75	1343.75	Begin Drop -2.00%/100
4291.00	4842.83	0.00	0.00	-803.64	1780.32	1953.30	1953.30	1953.30	Vertical
4341.00	4892.83	0.00	0.00	-803.64	1780.32	1953.30	1953.30	1953.30	Top Gas
6241.00	6792.83	0.00	0.00	-803.64	1780.32	1953.30	1953.30	1953.30	TD at 6792.83



Project: GV 12-07S-096W  
Site: GM 21-12 Pad  
Well: GM 32-12  
Design #3 15Apr14 mab

# **PICEANCE VLY NAD 83**

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

**GM 21-12 Pad**

**GM 32-12 - Slot A06**

**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 32-12 - Slot A06
<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 32-12	<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 32-12 - Slot A06			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,601,330.58 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,276,842.61 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	114.29

<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	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,419.10	38.07	114.29	1,327.74	-167.19	370.38	3.00	3.00	0.00	114.29	
2,939.17	38.07	114.29	2,524.38	-552.86	1,224.75	0.00	0.00	0.00	0.00	
4,842.83	0.00	0.00	4,291.00	-803.64	1,780.32	2.00	-2.00	0.00	180.00	
4,892.83	0.00	0.00	4,341.00	-803.64	1,780.32	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
6,792.83	0.00	0.00	6,241.00	-803.64	1,780.32	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 32-12 - Slot A06
<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 32-12	<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	1,601,330.58	2,276,842.61	39.45643	-108.06147
150.00	0.00	0.00	150.00	0.00	0.00	1,601,330.58	2,276,842.61	39.45643	-108.06147
Start Build 3.00									
200.00	1.50	114.29	199.99	-0.27	0.60	1,601,330.29	2,276,843.20	39.45643	-108.06147
400.00	7.50	114.29	399.29	-6.72	14.89	1,601,323.44	2,276,857.31	39.45642	-108.06142
600.00	13.50	114.29	595.85	-21.71	48.10	1,601,307.52	2,276,890.07	39.45637	-108.06130
800.00	19.50	114.29	787.52	-45.07	99.85	1,601,282.71	2,276,941.14	39.45631	-108.06111
1,000.00	25.50	114.29	972.22	-76.55	169.57	1,601,249.29	2,277,009.95	39.45622	-108.06087
1,200.00	31.50	114.29	1,147.90	-115.79	256.51	1,601,207.61	2,277,095.75	39.45612	-108.06056
1,400.00	37.50	114.29	1,312.65	-162.38	359.72	1,601,158.13	2,277,197.59	39.45599	-108.06019
1,419.10	38.07	114.29	1,327.74	-167.19	370.38	1,601,153.02	2,277,208.12	39.45597	-108.06016
Hold 37.07° Inc, 114.29° Az									
1,442.29	38.07	114.29	1,346.00	-173.08	383.42	1,601,146.77	2,277,220.98	39.45596	-108.06011
Top of "G" Sand									
1,469.10	38.07	114.29	1,367.10	-179.88	398.48	1,601,139.55	2,277,235.85	39.45594	-108.06006
9 5/8"									
1,569.32	38.07	114.29	1,446.00	-205.30	454.81	1,601,112.54	2,277,291.43	39.45587	-108.05986
Base of "G" Sand									
1,600.00	38.07	114.29	1,470.15	-213.09	472.06	1,601,104.28	2,277,308.45	39.45585	-108.05980
1,800.00	38.07	114.29	1,627.60	-263.83	584.47	1,601,050.39	2,277,419.38	39.45571	-108.05940
2,000.00	38.07	114.29	1,785.04	-314.57	696.88	1,600,996.50	2,277,530.31	39.45557	-108.05900
2,200.00	38.07	114.29	1,942.49	-365.32	809.29	1,600,942.61	2,277,641.24	39.45543	-108.05860
2,400.00	38.07	114.29	2,099.93	-416.06	921.70	1,600,888.72	2,277,752.17	39.45529	-108.05820
2,600.00	38.07	114.29	2,257.38	-466.80	1,034.11	1,600,834.83	2,277,863.11	39.45515	-108.05781
2,800.00	38.07	114.29	2,414.82	-517.55	1,146.52	1,600,780.94	2,277,974.04	39.45501	-108.05741
2,939.17	38.07	114.29	2,524.38	-552.86	1,224.75	1,600,743.44	2,278,051.23	39.45492	-108.05713
Begin Drop -2.00°/100									
3,000.00	36.86	114.29	2,572.66	-568.08	1,258.47	1,600,727.27	2,278,084.51	39.45487	-108.05701
3,200.00	32.86	114.29	2,736.75	-615.10	1,362.63	1,600,677.34	2,278,187.30	39.45475	-108.05664
3,400.00	28.86	114.29	2,908.40	-657.29	1,456.10	1,600,632.53	2,278,279.54	39.45463	-108.05631
3,600.00	24.86	114.29	3,086.79	-694.46	1,538.44	1,600,593.06	2,278,360.79	39.45453	-108.05602
3,687.79	23.10	114.29	3,167.00	-709.13	1,570.95	1,600,577.47	2,278,392.88	39.45449	-108.05591
Mesaverde									
3,800.00	20.86	114.29	3,271.05	-726.41	1,609.23	1,600,559.12	2,278,430.65	39.45444	-108.05577
4,000.00	16.86	114.29	3,460.28	-753.00	1,668.13	1,600,530.88	2,278,488.78	39.45437	-108.05556
4,200.00	12.86	114.29	3,653.56	-774.10	1,714.86	1,600,508.48	2,278,534.89	39.45431	-108.05540
4,400.00	8.86	114.29	3,849.94	-789.59	1,749.19	1,600,492.03	2,278,568.77	39.45427	-108.05527
4,600.00	4.86	114.29	4,048.47	-799.41	1,770.95	1,600,481.60	2,278,590.24	39.45424	-108.05520
4,800.00	0.86	114.29	4,248.18	-803.51	1,780.03	1,600,477.24	2,278,599.20	39.45423	-108.05516
4,842.83	0.00	0.00	4,291.00	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
Vertical									
4,892.83	0.00	0.00	4,341.00	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
Top Gas - Approx. Top Gas									
5,000.00	0.00	0.00	4,448.18	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
5,200.00	0.00	0.00	4,648.18	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
5,400.00	0.00	0.00	4,848.18	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
5,600.00	0.00	0.00	5,048.18	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
5,800.00	0.00	0.00	5,248.18	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
6,000.00	0.00	0.00	5,448.18	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
6,200.00	0.00	0.00	5,648.18	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 32-12 - Slot A06
<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 32-12	<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
6,206.83	0.00	0.00	5,655.00	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
<b>Cameo Coals</b>									
6,400.00	0.00	0.00	5,848.18	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
6,600.00	0.00	0.00	6,048.18	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
6,692.83	0.00	0.00	6,141.00	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
<b>Rollins SS</b>									
6,792.83	0.00	0.00	6,241.00	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
<b>TD at 6792.83</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 hits target center - Circle (radius 50.00)	0.00	0.00	4,341.00	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516
TD / PBHL GM 32-12 - plan misses target center by 1259.00usft at 6792.83usft MD (6241.00 TVD, -803.64 N, 1780.32 E) - Point	0.00	0.00	7,500.00	-803.64	1,780.32	1,600,477.10	2,278,599.49	39.45423	-108.05516

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,469.10	1,367.10	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
1,442.29	1,346.00	Top of "G" Sand				
1,569.32	1,446.00	Base of "G" Sand				
3,687.79	3,167.00	Mesaverde				
4,892.83	4,341.00	Approx. Top Gas				
6,206.83	5,655.00	Cameo Coals				
6,692.83	6,141.00	Rollins SS				
6,792.83	6,241.00	TD				

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 32-12 - Slot A06
<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 32-12	<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)	
150.00	150.00	0.00	0.00	Start Build 3.00
1,419.10	1,327.74	-167.19	370.38	Hold 37.07° Inc, 114.29° Az
2,939.17	2,524.38	-552.86	1,224.75	Begin Drop -2.00°/100
4,842.83	4,291.00	-803.64	1,780.32	Vertical
4,892.83	4,341.00	-803.64	1,780.32	Top Gas
6,792.83	6,241.00	-803.64	1,780.32	TD at 6792.83