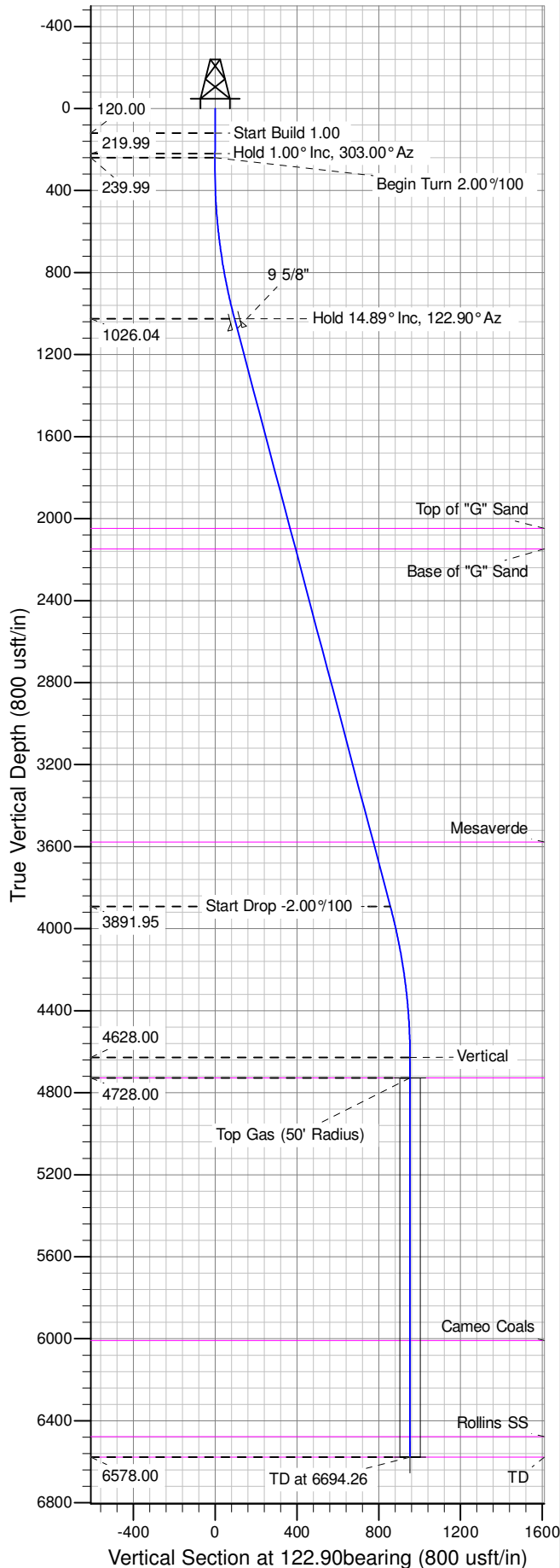
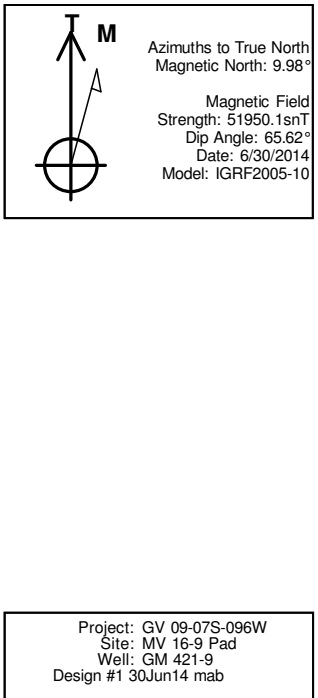
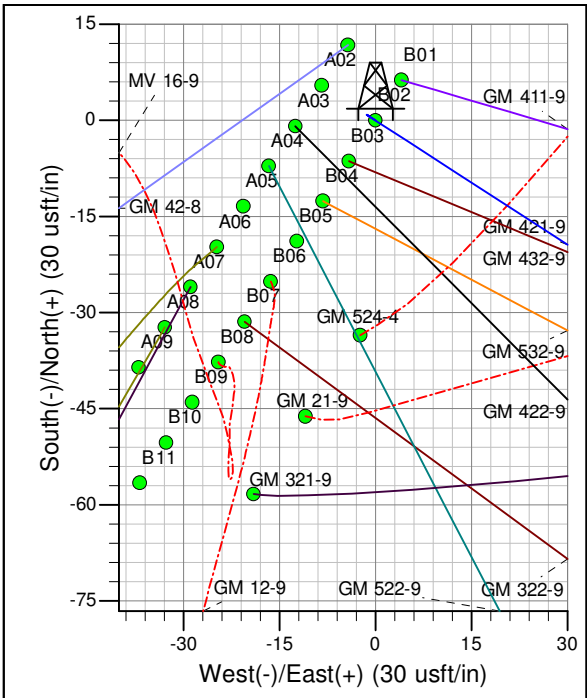
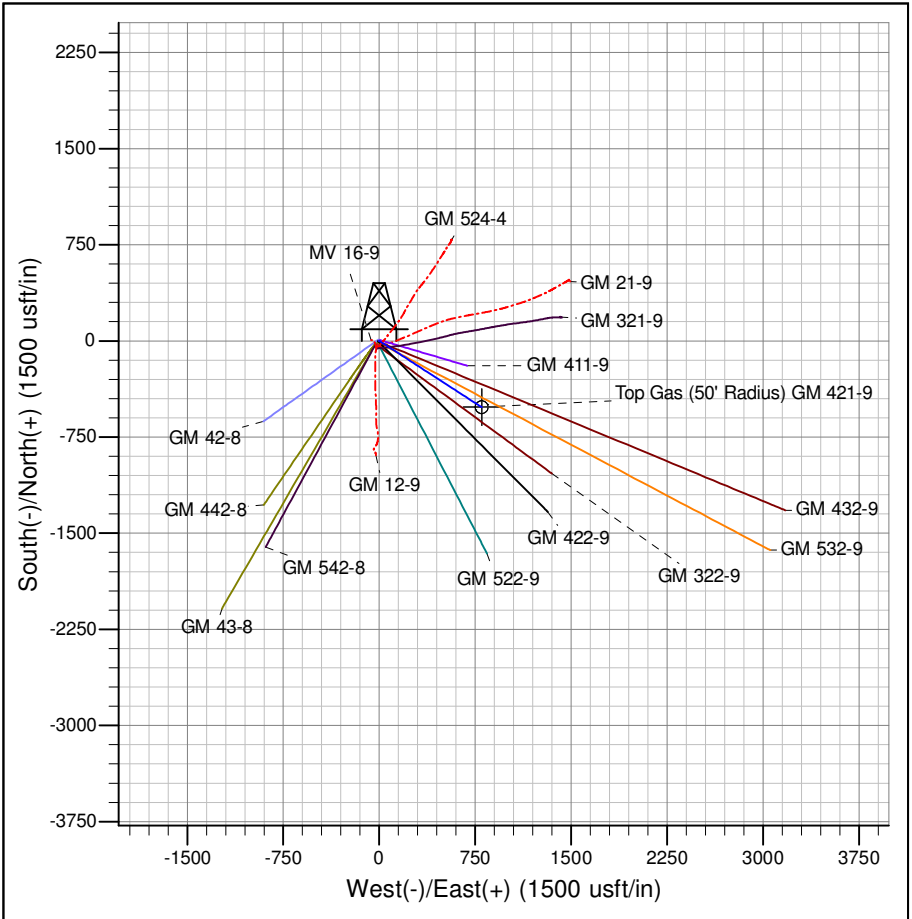




Well Name: GM 421-9
Surface Location: MV 16-9 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 6087.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1601975.44125 2260356.25046 39.45691 -108.11990 B02
KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' 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 1.00	Start Build 1.00
219.99	220.00	1.00	303.00	0.48	-0.73	-0.87	0.87	Hold 1.00° Inc, 303.00° Az	Hold 1.00° Inc, 303.00° Az
239.99	240.00	1.00	303.00	0.67	-1.02	-1.22	1.22	Begin Turn 2.00°/100	Begin Turn 2.00°/100
1026.04	1034.40	14.89	122.90	-51.32	79.37	94.51	98.00	Hold 14.89° Inc, 122.90° Az	Hold 14.89° Inc, 122.90° Az
3891.95	3999.86	14.89	122.90	-465.13	719.11	856.43	859.92	Start Drop -2.00°/100	Start Drop -2.00°/100
4628.00	4744.26	0.00	0.00	-517.36	799.86	952.60	956.09	Vertical	Vertical
4728.00	4844.26	0.00	0.00	-517.36	799.86	952.60	956.09	Top Gas	Top Gas
6578.00	6694.26	0.00	0.00	-517.36	799.86	952.60	956.09	TD at 6694.26	TD at 6694.26



PICEANCE VLY NAD 83

GV 09-07S-096W

MV 16-9 Pad

GM 421-9 - Slot B02

Wellbore #1

Plan: Design #1 30Jun14 mab

Standard Planning Report - Geographic

04 August, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 421-9 - Slot B02
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Project:	GV 09-07S-096W	MD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Site:	MV 16-9 Pad	North Reference:	True
Well:	GM 421-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun14 mab		

Project	GV 09-07S-096W, Garfield County, CO, 09-07S-096W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	MV 16-9 Pad			
Site Position:		Northing:	1,601,987.30000 usft	Latitude: 39.45695
From: Map		Easting:	2,260,352.30000 usft	Longitude: -108.11991
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: -1.65 °

Well	GM 421-9 - Slot B02			
Well Position	+N/-S	0.00 usft	Northing:	1,601,975.44125 usft
	+E/-W	0.00 usft	Easting:	2,260,356.25046 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	6,087.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	6/30/2014	9.98	65.62	51,950

Design	Design #1 30Jun14 mab			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (bearing)
	0.00	0.00	0.00	122.90

Plan Sections										
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	
220.00	1.00	303.00	219.99	0.48	-0.73	1.00	1.00	0.00	303.00	
240.00	1.00	303.00	239.99	0.67	-1.02	0.00	0.00	0.00	0.00	
1,034.40	14.89	122.90	1,026.04	-51.32	79.37	2.00	1.75	22.65	179.90	
3,999.86	14.89	122.90	3,891.95	-465.13	719.11	0.00	0.00	0.00	0.00	
4,744.26	0.00	0.00	4,628.00	-517.36	799.86	2.00	-2.00	0.00	180.00	
6,694.26	0.00	0.00	6,578.00	-517.36	799.86	0.00	0.00	0.00	0.00	TD / PBHL GM 421-9

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 421-9 - Slot B02
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Project:	GV 09-07S-096W	MD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Site:	MV 16-9 Pad	North Reference:	True
Well:	GM 421-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun14 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	1,601,975.44125	2,260,356.25046	39.45691	-108.11990	
120.00	0.00	0.00	120.00	0.00	0.00	1,601,975.44125	2,260,356.25046	39.45691	-108.11990	
Start Build 1.00										
200.00	0.80	303.00	200.00	0.30	-0.47	1,601,975.75880	2,260,355.79105	39.45691	-108.11990	
220.00	1.00	303.00	219.99	0.48	-0.73	1,601,975.93741	2,260,355.53264	39.45691	-108.11990	
Hold 1.00° Inc, 303.00° Az										
240.00	1.00	303.00	239.99	0.67	-1.02	1,601,976.13587	2,260,355.24552	39.45691	-108.11990	
Begin Turn 2.00°/100										
400.00	2.20	122.86	399.96	-0.24	0.38	1,601,975.18962	2,260,356.62788	39.45691	-108.11990	
600.00	6.20	122.89	599.38	-8.19	12.68	1,601,966.88851	2,260,368.69182	39.45689	-108.11985	
800.00	10.20	122.89	797.30	-23.68	36.63	1,601,950.71770	2,260,392.18272	39.45685	-108.11977	
1,000.00	14.20	122.90	992.74	-46.63	72.11	1,601,926.75599	2,260,426.98614	39.45678	-108.11964	
1,034.40	14.89	122.90	1,026.04	-51.32	79.37	1,601,921.85762	2,260,434.10047	39.45677	-108.11962	
Hold 14.89° Inc, 122.90° Az										
1,084.40	14.89	122.90	1,074.36	-58.30	90.15	1,601,914.57233	2,260,444.68149	39.45675	-108.11958	
9 5/8"										
1,200.00	14.89	122.90	1,186.08	-74.43	115.09	1,601,897.72955	2,260,469.14360	39.45671	-108.11949	
1,400.00	14.89	122.90	1,379.37	-102.34	158.24	1,601,868.58980	2,260,511.46558	39.45663	-108.11934	
1,600.00	14.89	122.90	1,572.65	-130.24	201.39	1,601,839.45005	2,260,553.78757	39.45656	-108.11918	
1,800.00	14.89	122.90	1,765.94	-158.15	244.53	1,601,810.31030	2,260,596.10955	39.45648	-108.11903	
2,000.00	14.89	122.90	1,959.23	-186.06	287.68	1,601,781.17056	2,260,638.43154	39.45640	-108.11888	
2,091.86	14.89	122.90	2,048.00	-198.88	307.50	1,601,767.78695	2,260,657.86961	39.45637	-108.11881	
Top of "G" Sand										
2,195.33	14.89	122.90	2,148.00	-213.32	329.82	1,601,752.71098	2,260,679.76566	39.45633	-108.11873	
Base of "G" Sand										
2,200.00	14.89	122.90	2,152.51	-213.97	330.82	1,601,752.03080	2,260,680.75353	39.45633	-108.11873	
2,400.00	14.89	122.90	2,345.80	-241.88	373.97	1,601,722.89105	2,260,723.07551	39.45625	-108.11857	
2,600.00	14.89	122.90	2,539.08	-269.79	417.12	1,601,693.75130	2,260,765.39750	39.45617	-108.11842	
2,800.00	14.89	122.90	2,732.37	-297.70	460.26	1,601,664.61155	2,260,807.71949	39.45610	-108.11827	
3,000.00	14.89	122.90	2,925.66	-325.60	503.41	1,601,635.47180	2,260,850.04147	39.45602	-108.11812	
3,200.00	14.89	122.90	3,118.94	-353.51	546.56	1,601,606.33205	2,260,892.36346	39.45594	-108.11796	
3,400.00	14.89	122.90	3,312.23	-381.42	589.70	1,601,577.19230	2,260,934.68544	39.45587	-108.11781	
3,600.00	14.89	122.90	3,505.51	-409.33	632.85	1,601,548.05255	2,260,977.00743	39.45579	-108.11766	
3,675.00	14.89	122.90	3,578.00	-419.80	649.03	1,601,537.12455	2,260,992.87903	39.45576	-108.11760	
Mesaverde										
3,800.00	14.89	122.90	3,698.80	-437.24	676.00	1,601,518.91280	2,261,019.32941	39.45571	-108.11750	
3,999.86	14.89	122.90	3,891.95	-465.13	719.11	1,601,489.79338	2,261,061.62186	39.45564	-108.11735	
Start Drop -2.00°/100										
4,000.00	14.89	122.90	3,892.09	-465.15	719.14	1,601,489.77306	2,261,061.65138	39.45564	-108.11735	
4,200.00	10.89	122.90	4,087.01	-489.36	756.58	1,601,464.48684	2,261,098.37657	39.45557	-108.11722	
4,400.00	6.89	122.90	4,284.57	-506.14	782.52	1,601,446.97289	2,261,123.81348	39.45552	-108.11713	
4,600.00	2.89	122.90	4,483.80	-515.39	796.82	1,601,437.31653	2,261,137.83819	39.45550	-108.11708	
4,744.26	0.00	0.00	4,628.00	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707	
Vertical										
4,800.00	0.00	0.00	4,683.74	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707	
4,844.26	0.00	0.00	4,728.00	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707	
Top Gas - Approx. Top Gas										
5,000.00	0.00	0.00	4,883.74	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707	
5,200.00	0.00	0.00	5,083.74	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707	
5,400.00	0.00	0.00	5,283.74	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707	
5,600.00	0.00	0.00	5,483.74	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 421-9 - Slot B02
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Project:	GV 09-07S-096W	MD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Site:	MV 16-9 Pad	North Reference:	True
Well:	GM 421-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun14 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
5,800.00	0.00	0.00	5,683.74	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707
6,000.00	0.00	0.00	5,883.74	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707
6,124.26	0.00	0.00	6,008.00	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707
Cameo Coals									
6,200.00	0.00	0.00	6,083.74	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707
6,400.00	0.00	0.00	6,283.74	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707
6,594.26	0.00	0.00	6,478.00	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707
Rollins SS									
6,600.00	0.00	0.00	6,483.74	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707
6,694.26	0.00	0.00	6,578.00	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707
TD at 6694.26 - TD									

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	4,728.00	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707
- plan hits target center									
- Circle (radius 50.00)									
TD / PBHL GM 421-9	0.00	0.00	6,578.00	-517.36	799.86	1,601,435.25729	2,261,140.82899	39.45549	-108.11707
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,084.40	1,074.36	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,091.86	2,048.00	Top of "G" Sand				
2,195.33	2,148.00	Base of "G" Sand				
3,675.00	3,578.00	Mesaverde				
4,844.26	4,728.00	Approx. Top Gas				
6,124.26	6,008.00	Cameo Coals				
6,594.26	6,478.00	Rollins SS				
6,694.26	6,578.00	TD				

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well GM 421-9 - Slot B02
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Project:	GV 09-07S-096W	MD Reference:	KELLY BUSHING @ 6108.00usft (Cyclone 17 (21' RKB) mab)
Site:	MV 16-9 Pad	North Reference:	True
Well:	GM 421-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 30Jun14 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 1.00
220.00	219.99	0.48	-0.73	Hold 1.00° Inc, 303.00° Az
240.00	239.99	0.67	-1.02	Begin Turn 2.00°/100
1,034.40	1,026.04	-51.32	79.37	Hold 14.89° Inc, 122.90° Az
3,999.86	3,891.95	-465.13	719.11	Start Drop -2.00°/100
4,744.26	4,628.00	-517.36	799.86	Vertical
4,844.26	4,728.00	-517.36	799.86	Top Gas
6,694.26	6,578.00	-517.36	799.86	TD at 6694.26