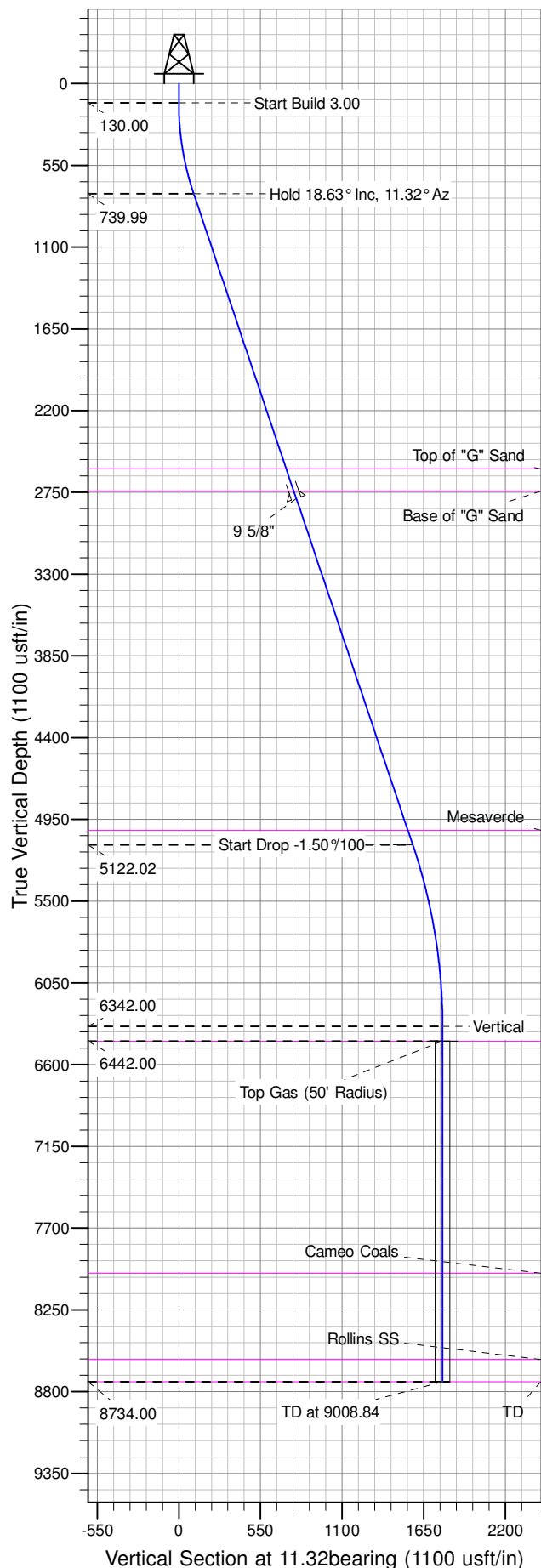
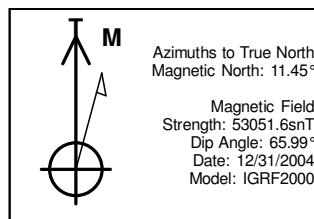
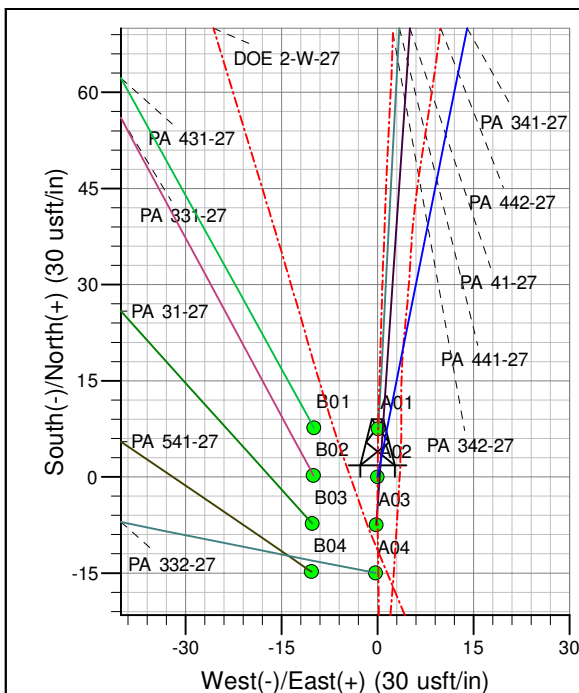
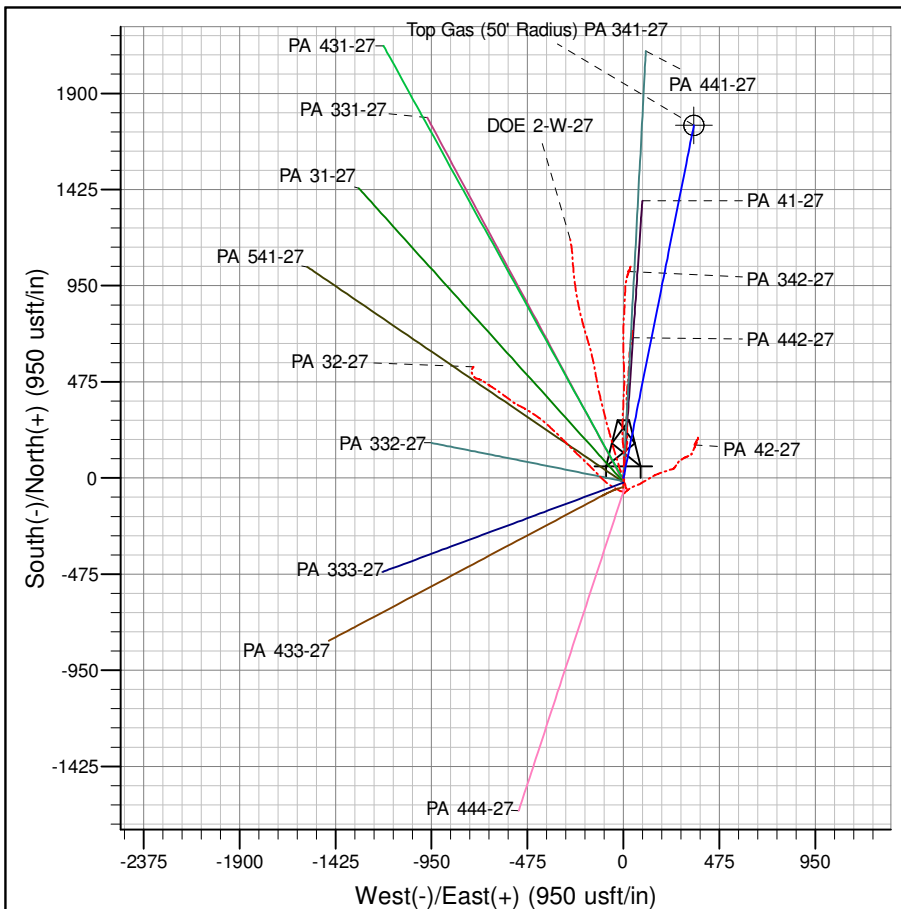




Well Name: PA 341-27
Surface Location: DOE 2-W-27 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 5856.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1615102.80704 2300866.17713 39.49606 -107.97775 A02
KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
130.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00	
739.99	750.87	18.63	11.32	98.09	19.63	100.03	100.03	Hold 18.63° Inc, 11.32° Az	
5122.02	5375.10	18.63	11.32	1546.31	309.42	1576.97	1576.97	Start Drop -1.50°/100	
6342.00	6616.84	0.00	0.00	1742.49	348.67	1777.03	1777.03	Vertical	
6442.00	6716.84	0.00	0.00	1742.49	348.67	1777.03	1777.03	Top Gas	
8734.00	9008.84	0.00	0.00	1742.49	348.67	1777.03	1777.03	TD at 9008.84	



Project: PA 27-06S-095W
Site: DOE 2-W-27 Pad
Well: PA 341-27
Design #2 24Apr14 mab

PICEANCE VLY NAD 83

PA 27-06S-095W

DOE 2-W-27 Pad

PA 341-27 - Slot A02

Wellbore #1

Plan: Design #2 24Apr14 mab

Standard Planning Report - Geographic

03 June, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 341-27 - Slot A02
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 341-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 mab		

Project	PA 27-06S-095W, Garfield County, CO, 27-06S-095W		
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	DOE 2-W-27 Pad			
Site Position:		Northing:	1,615,065.30000 usft	Latitude: 39.49596
From: Map		Easting:	2,300,864.40000 usft	Longitude: -107.97775
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: -1.56 °

Well	PA 341-27 - Slot A02			
Well Position	+N/-S	0.00 usft	Northing:	1,615,102.80704 usft
	+E/-W	0.00 usft	Easting:	2,300,866.17713 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	
			Ground Level:	5,856.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2000	12/31/2004	11.44	65.99	53,052

Design	Design #2 24Apr14 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	11.32

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	
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	
750.87	18.63	11.32	739.99	98.09	19.63	3.00	3.00	0.00	11.32	
5,375.10	18.63	11.32	5,122.02	1,546.31	309.42	0.00	0.00	0.00	0.00	
6,616.84	0.00	0.00	6,342.00	1,742.49	348.67	1.50	-1.50	0.00	180.00	
6,716.84	0.00	0.00	6,442.00	1,742.49	348.67	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
9,008.84	0.00	0.00	8,734.00	1,742.49	348.67	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 341-27 - Slot A02
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 341-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 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	1,615,102.80704	2,300,866.17713	39.49606	-107.97775
130.00	0.00	0.00	130.00	0.00	0.00	1,615,102.80704	2,300,866.17713	39.49606	-107.97775
Start Build 3.00									
200.00	2.10	11.32	199.98	1.26	0.25	1,615,104.05740	2,300,866.46300	39.49606	-107.97775
400.00	8.10	11.32	399.10	18.68	3.74	1,615,121.38043	2,300,870.42357	39.49611	-107.97774
600.00	14.10	11.32	595.27	56.42	11.29	1,615,158.89763	2,300,879.00112	39.49621	-107.97771
750.87	18.63	11.32	739.99	98.09	19.63	1,615,200.31905	2,300,888.47130	39.49633	-107.97768
Hold 18.63° Inc, 11.32° Az									
800.00	18.63	11.32	786.55	113.47	22.71	1,615,215.61588	2,300,891.96862	39.49637	-107.97767
1,000.00	18.63	11.32	976.07	176.11	35.24	1,615,277.88462	2,300,906.20513	39.49654	-107.97762
1,200.00	18.63	11.32	1,165.60	238.75	47.77	1,615,340.15336	2,300,920.44164	39.49671	-107.97758
1,400.00	18.63	11.32	1,355.12	301.38	60.31	1,615,402.42210	2,300,934.67814	39.49689	-107.97754
1,600.00	18.63	11.32	1,544.65	364.02	72.84	1,615,464.69085	2,300,948.91465	39.49706	-107.97749
1,800.00	18.63	11.32	1,734.17	426.66	85.37	1,615,526.95959	2,300,963.15116	39.49723	-107.97745
2,000.00	18.63	11.32	1,923.70	489.29	97.91	1,615,589.22833	2,300,977.38767	39.49740	-107.97740
2,200.00	18.63	11.32	2,113.22	551.93	110.44	1,615,651.49708	2,300,991.62417	39.49757	-107.97736
2,400.00	18.63	11.32	2,302.75	614.57	122.98	1,615,713.76581	2,301,005.86068	39.49775	-107.97731
2,600.00	18.63	11.32	2,492.27	677.20	135.51	1,615,776.03455	2,301,020.09719	39.49792	-107.97727
2,705.24	18.63	11.32	2,592.00	710.16	142.10	1,615,808.80088	2,301,027.58856	39.49801	-107.97725
Top of "G" Sand									
2,800.00	18.63	11.32	2,681.80	739.84	148.04	1,615,838.30330	2,301,034.33370	39.49809	-107.97722
2,863.53	18.63	11.32	2,742.00	759.74	152.02	1,615,858.08371	2,301,038.85610	39.49815	-107.97721
Base of "G" Sand									
2,916.30	18.63	11.32	2,792.00	776.26	155.33	1,615,874.51132	2,301,042.61194	39.49819	-107.97720
9 5/8"									
3,000.00	18.63	11.32	2,871.32	802.47	160.58	1,615,900.57204	2,301,048.57021	39.49826	-107.97718
3,200.00	18.63	11.32	3,060.84	865.11	173.11	1,615,962.84078	2,301,062.80671	39.49843	-107.97714
3,400.00	18.63	11.32	3,250.37	927.75	185.64	1,616,025.10953	2,301,077.04322	39.49861	-107.97709
3,600.00	18.63	11.32	3,439.89	990.38	198.18	1,616,087.37826	2,301,091.27973	39.49878	-107.97705
3,800.00	18.63	11.32	3,629.42	1,053.02	210.71	1,616,149.64700	2,301,105.51624	39.49895	-107.97700
4,000.00	18.63	11.32	3,818.94	1,115.66	223.24	1,616,211.91575	2,301,119.75275	39.49912	-107.97696
4,200.00	18.63	11.32	4,008.47	1,178.29	235.78	1,616,274.18449	2,301,133.98925	39.49929	-107.97691
4,400.00	18.63	11.32	4,197.99	1,240.93	248.31	1,616,336.45323	2,301,148.22576	39.49947	-107.97687
4,600.00	18.63	11.32	4,387.52	1,303.57	260.85	1,616,398.72198	2,301,162.46227	39.49964	-107.97682
4,800.00	18.63	11.32	4,577.04	1,366.20	273.38	1,616,460.99071	2,301,176.69878	39.49981	-107.97678
5,000.00	18.63	11.32	4,766.57	1,428.84	285.91	1,616,523.25946	2,301,190.93528	39.49998	-107.97674
5,200.00	18.63	11.32	4,956.09	1,491.47	298.45	1,616,585.52820	2,301,205.17179	39.50015	-107.97669
5,269.55	18.63	11.32	5,022.00	1,513.26	302.80	1,616,607.18271	2,301,210.12266	39.50021	-107.97668
Mesaverde									
5,375.10	18.63	11.32	5,122.02	1,546.31	309.42	1,616,640.04428	2,301,217.63581	39.50030	-107.97665
Start Drop -1.50°/100									
5,400.00	18.25	11.32	5,145.64	1,554.04	310.96	1,616,647.72191	2,301,219.39115	39.50033	-107.97665
5,600.00	15.25	11.32	5,337.13	1,610.56	322.27	1,616,703.91091	2,301,232.23764	39.50048	-107.97661
5,800.00	12.25	11.32	5,531.38	1,657.17	331.60	1,616,750.25357	2,301,242.83297	39.50061	-107.97657
6,000.00	9.25	11.32	5,727.84	1,693.76	338.92	1,616,786.62289	2,301,251.14809	39.50071	-107.97655
6,200.00	6.25	11.32	5,925.99	1,720.21	344.22	1,616,812.91917	2,301,257.16021	39.50078	-107.97653
6,400.00	3.25	11.32	6,125.28	1,736.45	347.47	1,616,829.07034	2,301,260.85285	39.50083	-107.97652
6,600.00	0.25	11.32	6,325.16	1,742.45	348.67	1,616,835.03213	2,301,262.21590	39.50084	-107.97651
6,616.84	0.00	0.00	6,342.00	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
Vertical									
6,716.84	0.00	0.00	6,442.00	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
Top Gas - Approx. Top Gas									

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 341-27 - Slot A02
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 341-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 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	6,525.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
7,000.00	0.00	0.00	6,725.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
7,200.00	0.00	0.00	6,925.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
7,400.00	0.00	0.00	7,125.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
7,600.00	0.00	0.00	7,325.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
7,800.00	0.00	0.00	7,525.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
8,000.00	0.00	0.00	7,725.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
8,200.00	0.00	0.00	7,925.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
8,276.84	0.00	0.00	8,002.00	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
Cameo Coals									
8,400.00	0.00	0.00	8,125.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
8,600.00	0.00	0.00	8,325.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
8,800.00	0.00	0.00	8,525.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
8,858.84	0.00	0.00	8,584.00	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
Rollins SS									
9,000.00	0.00	0.00	8,725.16	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
9,008.84	0.00	0.00	8,734.00	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651
TD at 9008.84									

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) PA	0.00	0.00	6,442.00	1,742.49	348.67	1,616,835.06829	2,301,262.22416	39.50084	-107.97651	
- plan hits target center										
- Circle (radius 50.00)										

Casing Points							Casing Diameter (in)	Hole Diameter (in)
Measured Depth (usft)	Vertical Depth (usft)	Name						
2,916.30	2,792.00	9 5/8"					9.625	13.500

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,705.24	2,592.00	Top of "G" Sand		0.00		
2,863.53	2,742.00	Base of "G" Sand				
5,269.55	5,022.00	Mesaverde				
6,716.84	6,442.00	Approx. Top Gas				
8,276.84	8,002.00	Cameo Coals				
8,858.84	8,584.00	Rollins SS				

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 341-27 - Slot A02
Company:	PICEANCE VLY NAD 83	TVD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Project:	PA 27-06S-095W	MD Reference:	KELLY BUSHING @ 5882.00usft (Nabors 576 (26' RKB) mab)
Site:	DOE 2-W-27 Pad	North Reference:	True
Well:	PA 341-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2 24Apr14 mab		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
130.00	130.00	0.00	0.00	Start Build 3.00
750.87	739.99	98.09	19.63	Hold 18.63° Inc, 11.32° Az
5,375.10	5,122.02	1,546.31	309.42	Start Drop -1.50°/100
6,616.84	6,342.00	1,742.49	348.67	Vertical
6,716.84	6,442.00	1,742.49	348.67	Top Gas
9,008.84	8,734.00	1,742.49	348.67	TD at 9008.84