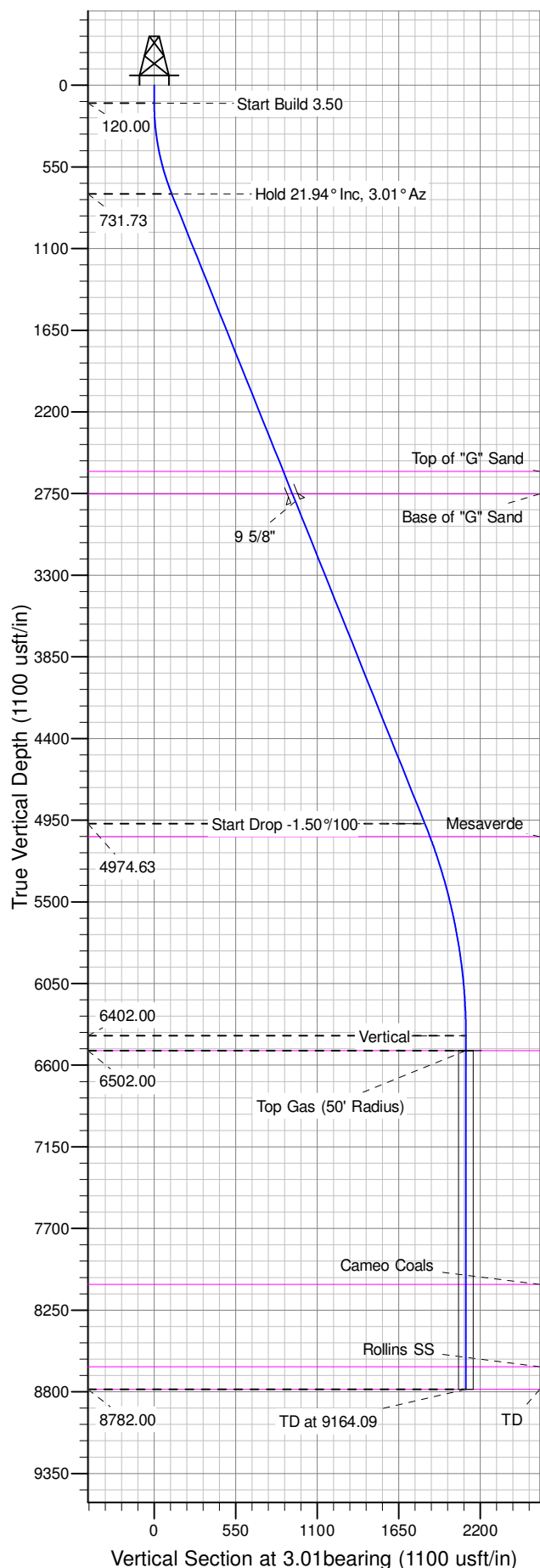
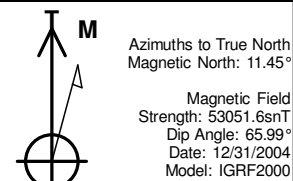
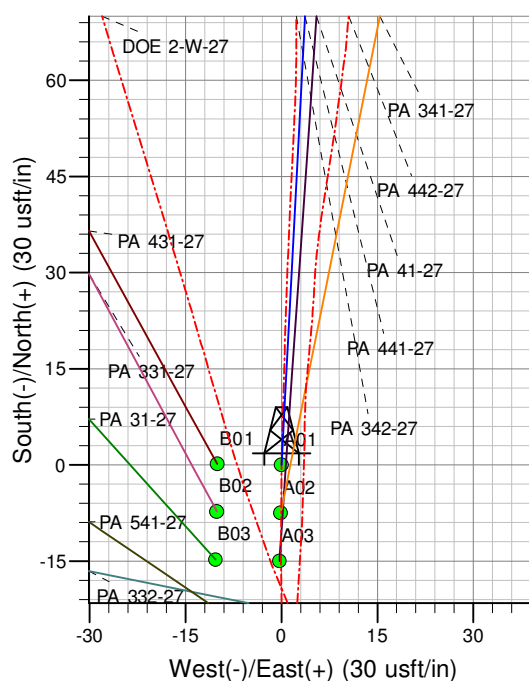
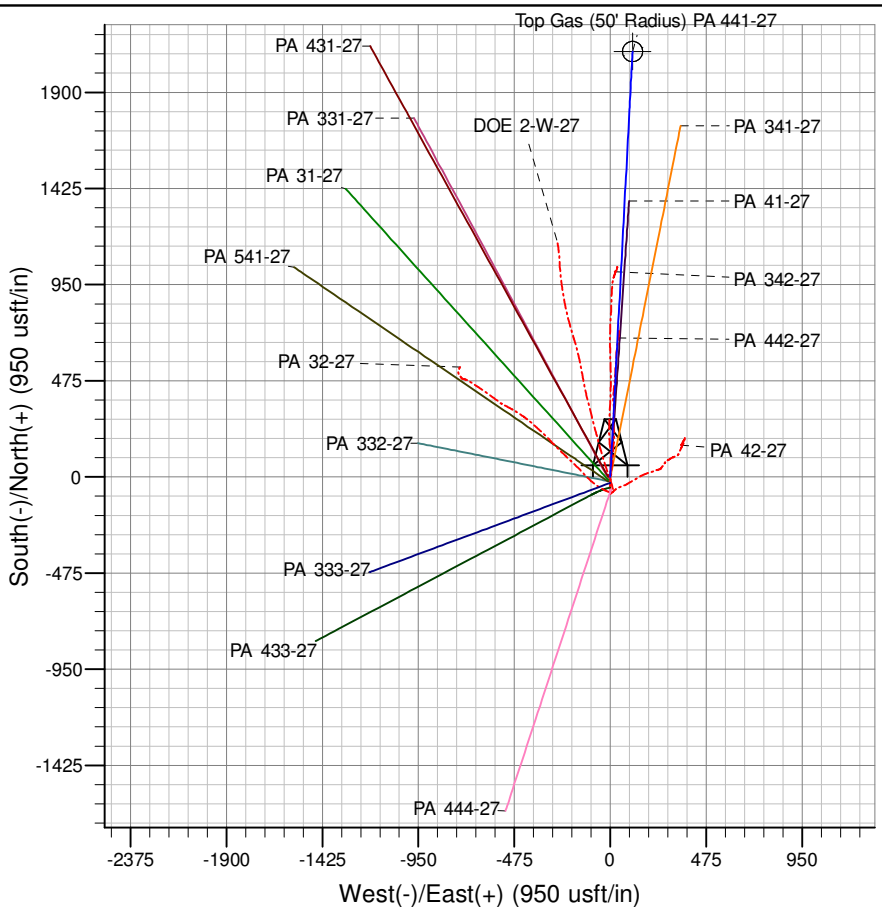




Well Name: PA 441-27
Surface Location: DOE 2-W-27 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 5856.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1615110.30000 2300866.50000 39.49608 -107.97775 A01
KELLY BUSHING @ 5882.00usft (Nabors 576 (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 3.50	
731.73	746.94	21.94	3.01	118.43	6.22	118.59	118.59	Hold 21.94° Inc, 3.01° Az	
4974.63	5321.22	21.94	3.01	1825.41	95.93	1827.93	1827.93	Start Drop -1.50°/100'	
6402.00	6784.09	0.00	0.00	2101.75	110.45	2104.65	2104.65	Vertical	
6502.00	6884.09	0.00	0.00	2101.75	110.45	2104.65	2104.65	Top Gas	
8782.00	9164.09	0.00	0.00	2101.75	110.45	2104.65	2104.65	TD at 9164.09	



Project: PA 27-06S-095W
Site: DOE 2-W-27 Pad
Well: PA 441-27
Design #2 24Apr14 mab

PICEANCE VLY NAD 83

PA 27-06S-095W

DOE 2-W-27 Pad

PA 441-27 - Slot A01

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 441-27 - Slot A01
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 441-27	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 441-27 - Slot A01			
Well Position	+N/-S	0.00 usft	Northing:	1,615,110.30000 usft
	+E/-W	0.00 usft	Easting:	2,300,866.50000 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	3.01

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	
746.94	21.94	3.01	731.73	118.43	6.22	3.50	3.50	0.00	3.01	
5,321.22	21.94	3.01	4,974.63	1,825.41	95.93	0.00	0.00	0.00	0.00	
6,784.09	0.00	0.00	6,402.00	2,101.75	110.45	1.50	-1.50	0.00	180.00	
6,884.09	0.00	0.00	6,502.00	2,101.75	110.45	0.00	0.00	0.00	0.00	Top Gas (50' Radius)
9,164.09	0.00	0.00	8,782.00	2,101.75	110.45	0.00	0.00	0.00	0.00	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 441-27 - Slot A01
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 441-27	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	1,615,110.30000	2,300,866.50000	39.49608	-107.97775
120.00	0.00	0.00	120.00	0.00	0.00	1,615,110.30000	2,300,866.50000	39.49608	-107.97775
Start Build 3.50									
200.00	2.80	3.01	199.97	1.95	0.10	1,615,112.24809	2,300,866.65575	39.49609	-107.97775
400.00	9.80	3.01	398.64	23.85	1.25	1,615,134.11066	2,300,868.40358	39.49615	-107.97774
600.00	16.80	3.01	593.15	69.77	3.67	1,615,179.94391	2,300,872.06778	39.49627	-107.97774
746.94	21.94	3.01	731.73	118.43	6.22	1,615,228.51107	2,300,875.95053	39.49641	-107.97773
Hold 21.94° Inc, 3.01° Az									
800.00	21.94	3.01	780.94	138.23	7.26	1,615,248.27319	2,300,877.53044	39.49646	-107.97772
1,000.00	21.94	3.01	966.45	212.86	11.19	1,615,322.76949	2,300,883.48614	39.49666	-107.97771
1,200.00	21.94	3.01	1,151.96	287.50	15.11	1,615,397.26580	2,300,889.44184	39.49687	-107.97769
1,400.00	21.94	3.01	1,337.48	362.13	19.03	1,615,471.76210	2,300,895.39754	39.49707	-107.97768
1,600.00	21.94	3.01	1,522.99	436.76	22.95	1,615,546.25841	2,300,901.35324	39.49728	-107.97767
1,800.00	21.94	3.01	1,708.50	511.40	26.87	1,615,620.75472	2,300,907.30895	39.49748	-107.97765
2,000.00	21.94	3.01	1,894.01	586.03	30.80	1,615,695.25101	2,300,913.26465	39.49769	-107.97764
2,200.00	21.94	3.01	2,079.52	660.67	34.72	1,615,769.74732	2,300,919.22035	39.49789	-107.97763
2,400.00	21.94	3.01	2,265.03	735.30	38.64	1,615,844.24363	2,300,925.17605	39.49810	-107.97761
2,600.00	21.94	3.01	2,450.54	809.93	42.56	1,615,918.73993	2,300,931.13175	39.49830	-107.97760
2,763.29	21.94	3.01	2,602.00	870.87	45.76	1,615,979.56115	2,300,935.99418	39.49847	-107.97759
Top of "G" Sand									
2,800.00	21.94	3.01	2,636.05	884.57	46.48	1,615,993.23624	2,300,937.08746	39.49851	-107.97758
2,925.00	21.94	3.01	2,752.00	931.22	48.94	1,616,039.79714	2,300,940.80983	39.49864	-107.97757
Base of "G" Sand									
2,978.91	21.94	3.01	2,802.00	951.33	49.99	1,616,059.87579	2,300,942.41504	39.49869	-107.97757
9 5/8"									
3,000.00	21.94	3.01	2,821.56	959.20	50.41	1,616,067.73254	2,300,943.04316	39.49871	-107.97757
3,200.00	21.94	3.01	3,007.08	1,033.84	54.33	1,616,142.22884	2,300,948.99886	39.49892	-107.97756
3,400.00	21.94	3.01	3,192.59	1,108.47	58.25	1,616,216.72515	2,300,954.95456	39.49912	-107.97754
3,600.00	21.94	3.01	3,378.10	1,183.10	62.17	1,616,291.22146	2,300,960.91026	39.49933	-107.97753
3,800.00	21.94	3.01	3,563.61	1,257.74	66.10	1,616,365.71777	2,300,966.86597	39.49953	-107.97751
4,000.00	21.94	3.01	3,749.12	1,332.37	70.02	1,616,440.21407	2,300,972.82167	39.49974	-107.97750
4,200.00	21.94	3.01	3,934.63	1,407.01	73.94	1,616,514.71037	2,300,978.77737	39.49994	-107.97749
4,400.00	21.94	3.01	4,120.14	1,481.64	77.86	1,616,589.20668	2,300,984.73307	39.50015	-107.97747
4,600.00	21.94	3.01	4,305.65	1,556.27	81.78	1,616,663.70298	2,300,990.68877	39.50035	-107.97746
4,800.00	21.94	3.01	4,491.17	1,630.91	85.71	1,616,738.19929	2,300,996.64447	39.50056	-107.97744
5,000.00	21.94	3.01	4,676.68	1,705.54	89.63	1,616,812.69560	2,301,002.60018	39.50076	-107.97743
5,200.00	21.94	3.01	4,862.19	1,780.18	93.55	1,616,887.19189	2,301,008.55588	39.50097	-107.97742
5,321.22	21.94	3.01	4,974.63	1,825.41	95.93	1,616,932.34515	2,301,012.16571	39.50109	-107.97741
Start Drop -1.50°/100									
5,400.00	20.76	3.01	5,048.00	1,854.06	97.43	1,616,960.93508	2,301,014.45137	39.50117	-107.97740
5,414.96	20.54	3.01	5,062.00	1,859.33	97.71	1,616,966.19524	2,301,014.87190	39.50118	-107.97740
Mesaverde									
5,600.00	17.76	3.01	5,236.78	1,919.93	100.89	1,617,026.69080	2,301,019.70830	39.50135	-107.97739
5,800.00	14.76	3.01	5,428.76	1,975.85	103.83	1,617,082.50808	2,301,024.17068	39.50150	-107.97738
6,000.00	11.76	3.01	5,623.40	2,021.66	106.24	1,617,128.23393	2,301,027.82629	39.50163	-107.97737
6,200.00	8.76	3.01	5,820.18	2,057.24	108.11	1,617,163.74302	2,301,030.66511	39.50173	-107.97737
6,400.00	5.76	3.01	6,018.55	2,082.48	109.44	1,617,188.93801	2,301,032.67936	39.50180	-107.97736
6,600.00	2.76	3.01	6,217.98	2,097.32	110.22	1,617,203.74986	2,301,033.86351	39.50184	-107.97736
6,784.09	0.00	0.00	6,402.00	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
Vertical									
6,800.00	0.00	0.00	6,417.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 441-27 - Slot A01
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 441-27	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
6,884.09	0.00	0.00	6,502.00	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
Top Gas - Approx. Top Gas									
7,000.00	0.00	0.00	6,617.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
7,200.00	0.00	0.00	6,817.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
7,400.00	0.00	0.00	7,017.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
7,600.00	0.00	0.00	7,217.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
7,800.00	0.00	0.00	7,417.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
8,000.00	0.00	0.00	7,617.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
8,200.00	0.00	0.00	7,817.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
8,400.00	0.00	0.00	8,017.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
8,459.09	0.00	0.00	8,077.00	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
Cameo Coals									
8,600.00	0.00	0.00	8,217.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
8,800.00	0.00	0.00	8,417.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
9,000.00	0.00	0.00	8,617.91	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
9,014.09	0.00	0.00	8,632.00	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
Rollins SS									
9,164.09	0.00	0.00	8,782.00	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736
TD at 9164.09									

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 - plan hits target center - Circle (radius 50.00)	0.00	0.00	6,502.00	2,101.75	110.45	1,617,208.17097	2,301,034.21696	39.50185	-107.97736

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,978.91	2,802.00	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,763.29	2,602.00	Top of "G" Sand		0.00		
2,925.00	2,752.00	Base of "G" Sand				
5,414.96	5,062.00	Mesaverde				
6,884.09	6,502.00	Approx. Top Gas				
8,459.09	8,077.00	Cameo Coals				
9,014.09	8,632.00	Rollins SS				

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 441-27 - Slot A01
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 441-27	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)	
120.00	120.00	0.00	0.00	Start Build 3.50
746.94	731.73	118.43	6.22	Hold 21.94° Inc, 3.01° Az
5,321.22	4,974.63	1,825.41	95.93	Start Drop -1.50°/100
6,784.09	6,402.00	2,101.75	110.45	Vertical
6,884.09	6,502.00	2,101.75	110.45	Top Gas
9,164.09	8,782.00	2,101.75	110.45	TD at 9164.09