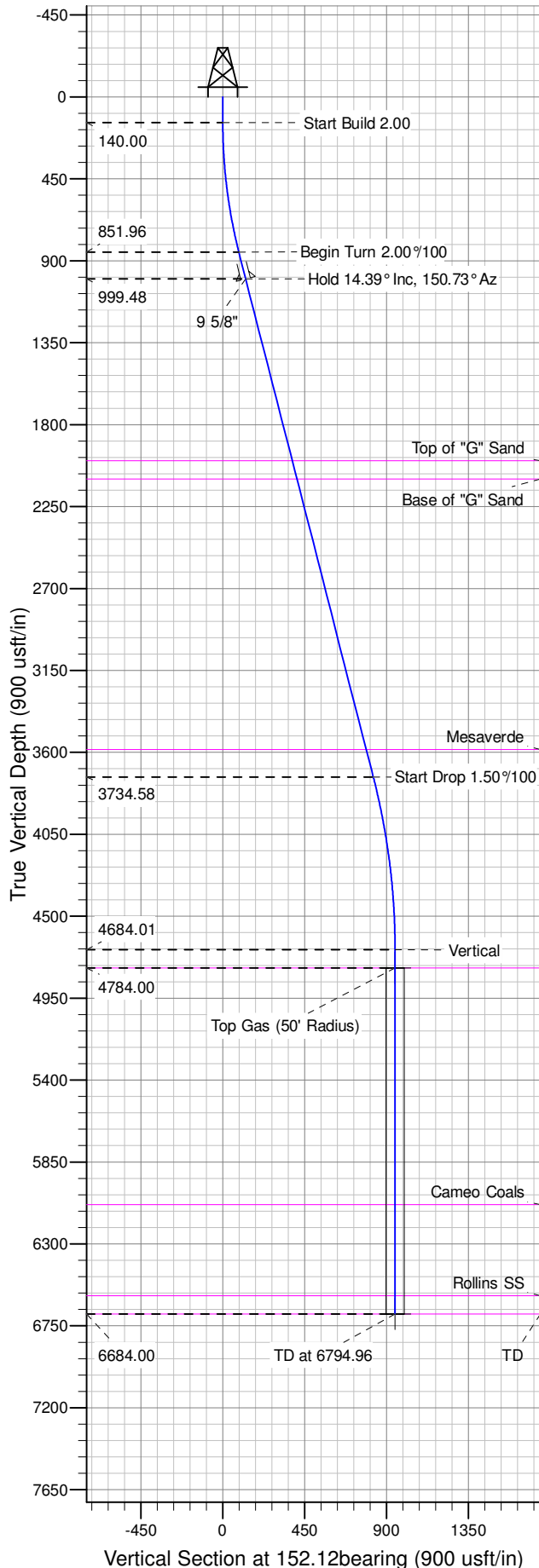
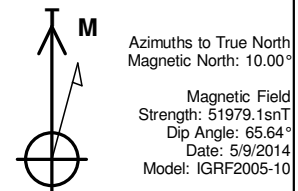
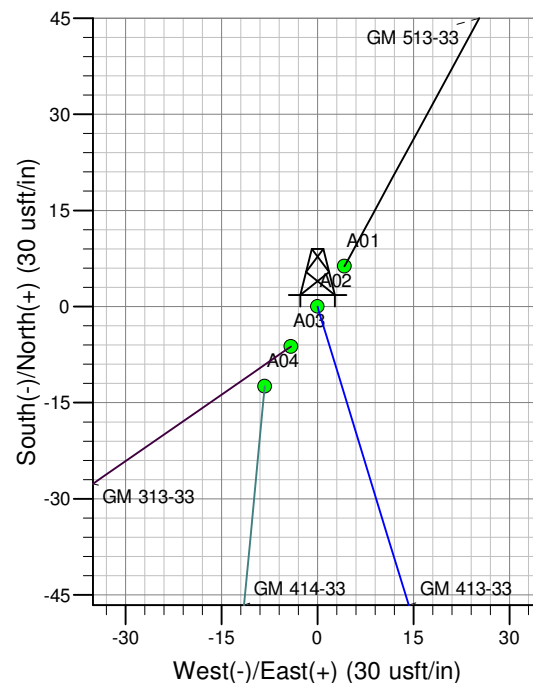
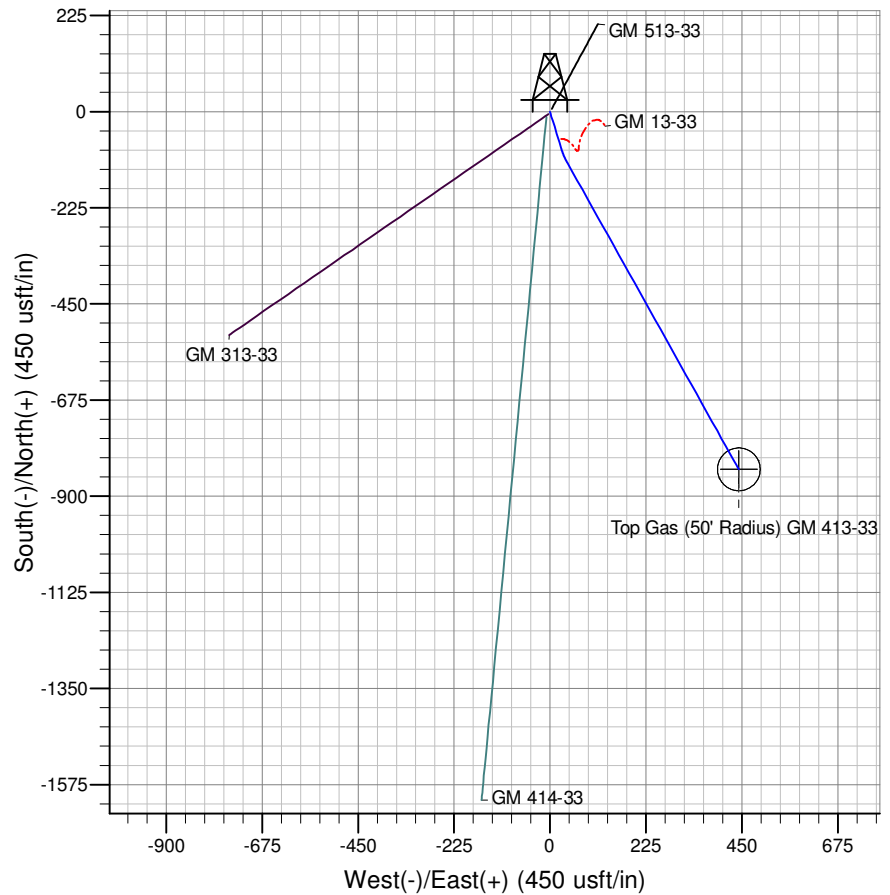




Well Name: GM 413-33  
Surface Location: GM 13-33 Pad  
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 5743.00  
+N/-S 0.00 +E/-W 0.00 Northing 1610229.10000 Easting 2260978.80000 Latitude 39.47961 Longitude -108.11853 Slot A02  
KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
140.00	140.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00	
851.96	859.50	14.39	163.00	-85.95	26.28	88.26	89.88	Begin Turn 2.00°/100	
999.48	1011.76	14.39	150.73	-120.56	41.07	125.77	127.63	Hold 14.39° Inc, 150.73° Az	
3734.58	3835.48	14.39	150.73	-732.78	384.27	827.41	829.48	Start Drop 1.50°/100	
4684.01	4794.96	0.00	0.00	-837.34	442.89	947.25	949.35	Vertical	
4784.00	4894.96	0.00	0.00	-837.34	442.89	947.25	949.35	Top Gas	
6684.00	6794.96	0.00	0.00	-837.34	442.89	947.25	949.35	TD at 6794.96	



Project: GV 33-06S-096W  
Site: GM 13-33 Pad  
Well: GM 413-33  
Design #1 09May14 mab

# **PICEANCE VLY NAD 83**

**GV 33-06S-096W**

**GM 13-33 Pad**

**GM 413-33 - Slot A02**

**Wellbore #1**

**Plan: Design #1 09May14 mab**

## **Standard Planning Report - Geographic**

**24 June, 2014**

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 413-33 - Slot A02
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Project:</b>	GV 33-06S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Site:</b>	GM 13-33 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 413-33	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 09May14 mab		

<b>Project</b>	GV 33-06S-096W, Garfield County, CO, 33-06S-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 13-33 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,610,235.30000 usft	<b>Latitude:</b> 39.47963
<b>From:</b> Map		<b>Easting:</b>	2,260,983.20000 usft	<b>Longitude:</b> -108.11852
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.65 °

<b>Well</b>	GM 413-33 - Slot A02			
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	1,610,229.10000 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>	2,260,978.80000 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	5,743.00 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	5/9/2014	10.00	65.64	51,979

<b>Design</b>	Design #1 09May14 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	152.12

<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	
140.00	0.00	0.00	140.00	0.00	0.00	0.00	0.00	0.00	0.00	
859.50	14.39	163.00	851.96	-85.95	26.28	2.00	2.00	0.00	163.00	
1,011.76	14.39	150.73	999.48	-120.56	41.07	2.00	0.00	-8.06	-95.91	
3,835.48	14.39	150.73	3,734.59	-732.78	384.27	0.00	0.00	0.00	0.00	
4,794.96	0.00	0.00	4,684.00	-837.34	442.89	1.50	-1.50	0.00	180.00	
6,794.96	0.00	0.00	6,684.00	-837.34	442.89	0.00	0.00	0.00	0.00	TD / PBHL GM 413-3:

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 413-33 - Slot A02
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Project:</b>	GV 33-06S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Site:</b>	GM 13-33 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 413-33	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 09May14 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	1,610,229.10000	2,260,978.80000	39.47961	-108.11854	
140.00	0.00	0.00	140.00	0.00	0.00	1,610,229.10000	2,260,978.80000	39.47961	-108.11854	
Start Build 2.00										
200.00	1.20	163.00	200.00	-0.60	0.18	1,610,228.49414	2,260,978.96629	39.47961	-108.11854	
400.00	5.20	163.00	399.64	-11.28	3.45	1,610,217.73067	2,260,981.92064	39.47958	-108.11852	
600.00	9.20	163.00	598.03	-35.24	10.77	1,610,193.56399	2,260,988.55390	39.47952	-108.11850	
800.00	13.20	163.00	794.18	-72.38	22.13	1,610,156.11184	2,260,998.83375	39.47941	-108.11846	
859.50	14.39	163.00	851.96	-85.95	26.28	1,610,142.43098	2,261,002.58886	39.47938	-108.11844	
Begin Turn 2.00°/100										
1,000.00	14.37	151.67	988.09	-118.00	39.66	1,610,110.01211	2,261,015.04009	39.47929	-108.11840	
1,011.76	14.39	150.73	999.48	-120.56	41.07	1,610,107.41341	2,261,016.37289	39.47928	-108.11839	
Hold 14.39° Inc, 150.73° Az										
1,012.30	14.39	150.73	1,000.00	-120.68	41.13	1,610,107.29447	2,261,016.43513	39.47928	-108.11839	
9 5/8"										
1,200.00	14.39	150.73	1,181.81	-161.37	63.95	1,610,065.96001	2,261,038.06543	39.47917	-108.11831	
1,400.00	14.39	150.73	1,375.53	-204.73	88.25	1,610,021.91687	2,261,061.11318	39.47905	-108.11822	
1,600.00	14.39	150.73	1,569.26	-248.10	112.56	1,609,977.87374	2,261,084.16092	39.47893	-108.11814	
1,800.00	14.39	150.73	1,762.98	-291.46	136.87	1,609,933.83060	2,261,107.20867	39.47881	-108.11805	
2,000.00	14.39	150.73	1,956.70	-334.82	161.18	1,609,889.78747	2,261,130.25641	39.47869	-108.11797	
2,043.67	14.39	150.73	1,999.00	-344.29	166.49	1,609,880.17132	2,261,135.28854	39.47867	-108.11795	
Top of "G" Sand										
2,146.91	14.39	150.73	2,099.00	-366.67	179.03	1,609,857.43627	2,261,147.18577	39.47861	-108.11790	
Base of "G" Sand										
2,200.00	14.39	150.73	2,150.43	-378.18	185.49	1,609,845.74433	2,261,153.30416	39.47857	-108.11788	
2,400.00	14.39	150.73	2,344.15	-421.55	209.80	1,609,801.70119	2,261,176.35190	39.47846	-108.11779	
2,600.00	14.39	150.73	2,537.87	-464.91	234.10	1,609,757.65806	2,261,199.39965	39.47834	-108.11771	
2,800.00	14.39	150.73	2,731.60	-508.27	258.41	1,609,713.61493	2,261,222.44739	39.47822	-108.11762	
3,000.00	14.39	150.73	2,925.32	-551.63	282.72	1,609,669.57180	2,261,245.49514	39.47810	-108.11754	
3,200.00	14.39	150.73	3,119.04	-595.00	307.03	1,609,625.52866	2,261,268.54288	39.47798	-108.11745	
3,400.00	14.39	150.73	3,312.77	-638.36	331.34	1,609,581.48552	2,261,291.59062	39.47786	-108.11736	
3,600.00	14.39	150.73	3,506.49	-681.72	355.65	1,609,537.44239	2,261,314.63837	39.47774	-108.11728	
3,680.02	14.39	150.73	3,584.00	-699.07	365.37	1,609,519.82078	2,261,323.85975	39.47769	-108.11724	
Mesaverde										
3,800.00	14.39	150.73	3,700.22	-725.08	379.96	1,609,493.39925	2,261,337.68611	39.47762	-108.11719	
3,835.48	14.39	150.73	3,734.58	-732.78	384.27	1,609,485.58600	2,261,341.77478	39.47760	-108.11718	
Start Drop 1.50°/100										
4,000.00	11.92	150.73	3,894.77	-765.44	402.58	1,609,452.40725	2,261,359.13720	39.47751	-108.11711	
4,200.00	8.92	150.73	4,091.45	-797.00	420.27	1,609,420.34958	2,261,375.91296	39.47742	-108.11705	
4,400.00	5.92	150.73	4,289.75	-819.54	432.91	1,609,397.45545	2,261,387.89344	39.47736	-108.11700	
4,600.00	2.92	150.73	4,489.13	-833.00	440.45	1,609,383.78762	2,261,395.04581	39.47733	-108.11698	
4,794.96	0.00	0.00	4,684.00	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697	
4,794.96	0.00	0.00	4,684.01	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697	
Vertical										
4,800.00	0.00	0.00	4,689.04	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697	
4,894.96	0.00	0.00	4,784.00	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697	
Top Gas - Approx. Top Gas										
5,000.00	0.00	0.00	4,889.04	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697	
5,200.00	0.00	0.00	5,089.04	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697	
5,400.00	0.00	0.00	5,289.04	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697	
5,600.00	0.00	0.00	5,489.04	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697	
5,800.00	0.00	0.00	5,689.04	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697	

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 413-33 - Slot A02
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Project:</b>	GV 33-06S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Site:</b>	GM 13-33 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 413-33	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 09May14 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
6,000.00	0.00	0.00	5,889.04	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697
6,194.96	0.00	0.00	6,084.00	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697
<b>Cameo Coals</b>									
6,200.00	0.00	0.00	6,089.04	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697
6,400.00	0.00	0.00	6,289.04	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697
6,600.00	0.00	0.00	6,489.04	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697
6,694.96	0.00	0.00	6,584.00	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697
<b>Rollins SS</b>									
6,794.96	0.00	0.00	6,684.00	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697
<b>TD at 6794.96 - 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 hits target center - Circle (radius 50.00)	0.00	0.00	4,784.00	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697
TD / PBHL GM 413-33 - plan hits target center - Point	0.00	358.35	6,684.00	-837.34	442.89	1,609,379.38061	2,261,397.35200	39.47731	-108.11697

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,012.30	1,000.00	9 5/8"	9.625	13.500	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,043.67	1,999.00	Top of "G" Sand				
2,146.91	2,099.00	Base of "G" Sand				
3,680.02	3,584.00	Mesaverde				
4,894.96	4,784.00	Approx. Top Gas				
6,194.96	6,084.00	Cameo Coals				
6,694.96	6,584.00	Rollins SS				
6,794.96	6,684.00	TD				

**WPX**  
Planning Report - Geographic

<b>Database:</b>	COMPASS-PICEANCE	<b>Local Co-ordinate Reference:</b>	Well GM 413-33 - Slot A02
<b>Company:</b>	PICEANCE VLY NAD 83	<b>TVD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Project:</b>	GV 33-06S-096W	<b>MD Reference:</b>	KELLY BUSHING @ 5764.00usft (Cyclone 17 (21' RKB) mab)
<b>Site:</b>	GM 13-33 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 413-33	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1 09May14 mab		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
140.00	140.00	0.00	0.00	Start Build 2.00
859.50	851.96	-85.95	26.28	Begin Turn 2.00°/100
1,011.76	999.48	-120.56	41.07	Hold 14.39° Inc, 150.73° Az
3,835.48	3,734.58	-732.78	384.27	Start Drop 1.50°/100
4,794.96	4,684.01	-837.34	442.89	Vertical
4,894.96	4,784.00	-837.34	442.89	Top Gas
6,794.96	6,684.00	-837.34	442.89	TD at 6794.96