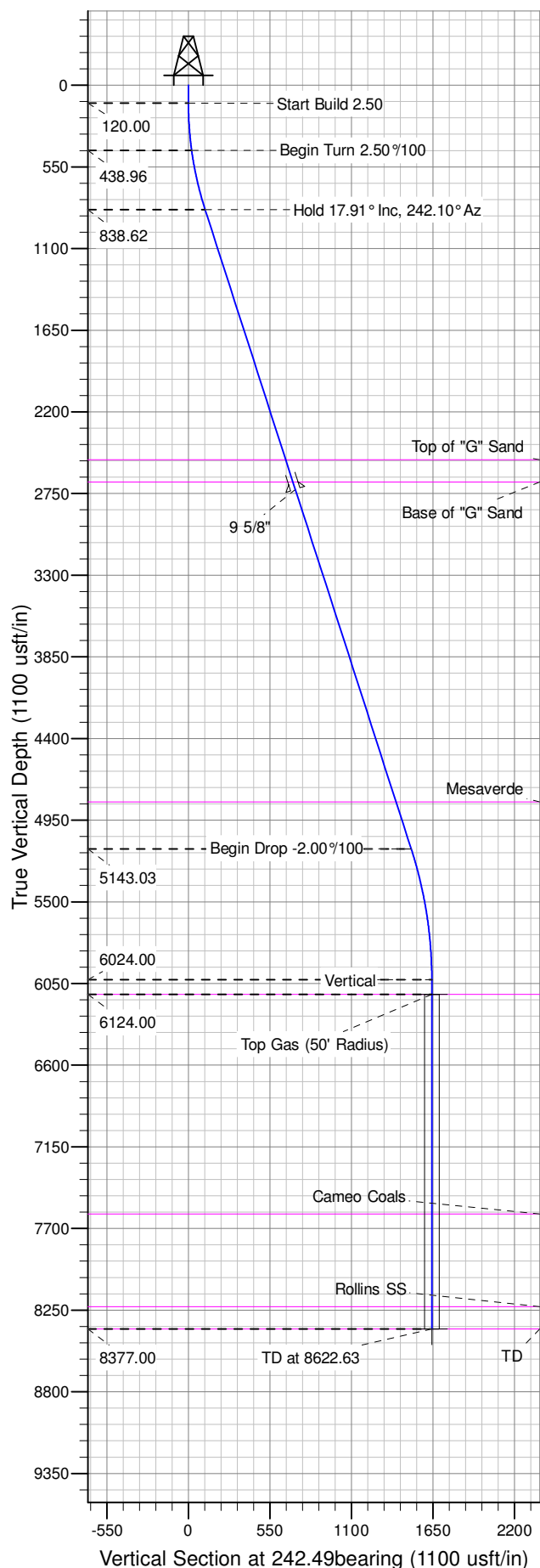
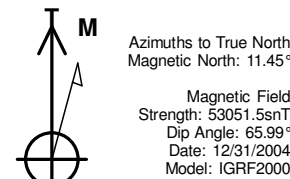
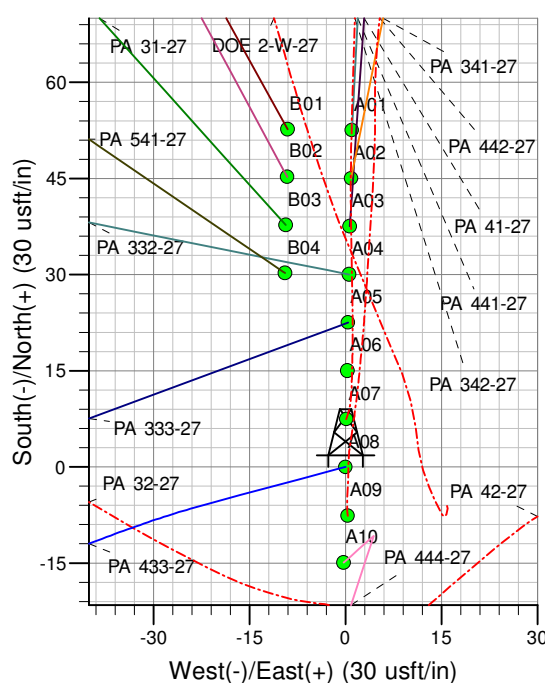
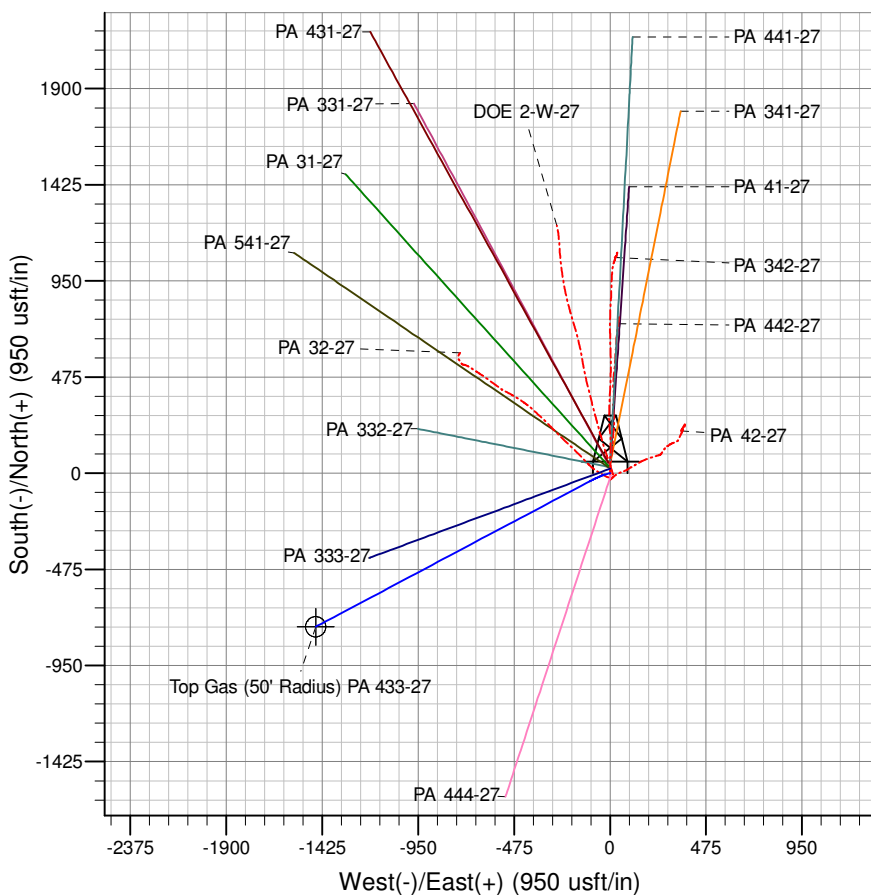




Well Name: PA 433-27
Surface Location: DOE 2-W-27 Pad
North American Datum 1983 , US State Plane 1983 , Colorado Central Zone
Ground Elevation: 5856.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1615057.82762 2300864.07490 39.49593 -107.97775 A08
KELLY BUSHING @ 5882.00usft (Nabors 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 2.50	
438.96	440.00	8.00	255.00	-5.77	-21.54	21.77	22.30	Begin Turn 2.50°/100	
838.62	850.53	17.91	242.10	-42.80	-105.15	113.03	113.91	Hold 17.91° Inc, 242.10° Az	
5143.03	5374.15	17.91	242.10	-693.78	-1334.52	1504.09	1505.00	Begin Drop -2.00°/100	
6024.00	6269.63	0.00	0.00	-758.74	-1457.20	1642.90	1643.82	Vertical	
6124.00	6369.63	0.00	0.00	-758.74	-1457.20	1642.90	1643.82	Top Gas	
8377.00	8622.63	0.00	0.00	-758.74	-1457.20	1642.90	1643.82	TD at 8622.63	



Project: PA 27-06S-095W
Site: DOE 2-W-27 Pad
Well: PA 433-27
Design #1 24Apr14 mab

PICEANCE VLY NAD 83

PA 27-06S-095W

DOE 2-W-27 Pad

PA 433-27 - Slot A08

Wellbore #1

Plan: Design #1 24Apr14 mab

Standard Planning Report - Geographic

03 June, 2014

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 433-27 - Slot A08
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 433-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 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 433-27 - Slot A08			
Well Position	+N/-S	0.00 usft	Northing:	1,615,057.82762 usft
	+E/-W	0.00 usft	Easting:	2,300,864.07490 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			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 #1 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	242.49

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	
440.00	8.00	255.00	438.96	-5.77	-21.54	2.50	2.50	0.00	255.00	
850.53	17.91	242.10	838.61	-42.80	-105.15	2.50	2.41	-3.14	-22.67	
5,374.15	17.91	242.10	5,143.03	-693.78	-1,334.52	0.00	0.00	0.00	0.00	
6,269.63	0.00	0.00	6,024.00	-758.74	-1,457.20	2.00	-2.00	0.00	180.00	
8,622.63	0.00	0.00	8,377.00	-758.74	-1,457.20	0.00	0.00	0.00	0.00	TD / PBHL PA 433-27

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 433-27 - Slot A08
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 433-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 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	1,615,057.82762	2,300,864.07490	39.49594	-107.97775	
120.00	0.00	0.00	120.00	0.00	0.00	1,615,057.82762	2,300,864.07490	39.49594	-107.97775	
Start Build 2.50										
200.00	2.00	255.00	199.98	-0.36	-1.35	1,615,057.50320	2,300,862.71706	39.49593	-107.97776	
400.00	7.00	255.00	399.30	-4.42	-16.50	1,615,053.85802	2,300,847.46026	39.49592	-107.97781	
440.00	8.00	255.00	438.96	-5.77	-21.54	1,615,052.64481	2,300,842.38241	39.49592	-107.97783	
Begin Turn 2.50°/100										
600.00	11.79	247.44	596.56	-14.93	-47.41	1,615,044.19666	2,300,816.28115	39.49589	-107.97792	
800.00	16.67	242.87	790.37	-35.86	-91.83	1,615,024.48293	2,300,771.30413	39.49584	-107.97808	
850.53	17.91	242.10	838.62	-42.80	-105.15	1,615,017.90796	2,300,757.80472	39.49582	-107.97812	
Hold 17.91° Inc, 242.10° Az										
1,000.00	17.91	242.10	980.84	-64.31	-145.77	1,614,997.51490	2,300,716.61375	39.49576	-107.97827	
1,200.00	17.91	242.10	1,171.15	-93.10	-200.12	1,614,970.22774	2,300,661.49770	39.49568	-107.97846	
1,400.00	17.91	242.10	1,361.46	-121.88	-254.47	1,614,942.94059	2,300,606.38165	39.49560	-107.97865	
1,600.00	17.91	242.10	1,551.77	-150.66	-308.83	1,614,915.65343	2,300,551.26561	39.49552	-107.97885	
1,800.00	17.91	242.10	1,742.08	-179.44	-363.18	1,614,888.36627	2,300,496.14956	39.49544	-107.97904	
2,000.00	17.91	242.10	1,932.39	-208.22	-417.54	1,614,861.07913	2,300,441.03353	39.49536	-107.97923	
2,200.00	17.91	242.10	2,122.69	-237.00	-471.89	1,614,833.79197	2,300,385.91748	39.49529	-107.97942	
2,400.00	17.91	242.10	2,313.00	-265.78	-526.24	1,614,806.50482	2,300,330.80143	39.49521	-107.97962	
2,600.00	17.91	242.10	2,503.31	-294.56	-580.60	1,614,779.21766	2,300,275.68539	39.49513	-107.97981	
2,619.64	17.91	242.10	2,522.00	-297.39	-585.93	1,614,776.53799	2,300,270.27285	39.49512	-107.97983	
Top of "G" Sand										
2,777.28	17.91	242.10	2,672.00	-320.08	-628.78	1,614,755.03042	2,300,226.83072	39.49506	-107.97998	
Base of "G" Sand										
2,800.00	17.91	242.10	2,693.62	-323.35	-634.95	1,614,751.93050	2,300,220.56934	39.49505	-107.98000	
2,829.83	17.91	242.10	2,722.00	-327.64	-643.06	1,614,747.86123	2,300,212.35001	39.49504	-107.98003	
9 5/8"										
3,000.00	17.91	242.10	2,883.93	-352.13	-689.30	1,614,724.64335	2,300,165.45330	39.49497	-107.98019	
3,200.00	17.91	242.10	3,074.24	-380.91	-743.66	1,614,697.35619	2,300,110.33725	39.49489	-107.98039	
3,400.00	17.91	242.10	3,264.55	-409.69	-798.01	1,614,670.06903	2,300,055.22121	39.49481	-107.98058	
3,600.00	17.91	242.10	3,454.85	-438.47	-852.36	1,614,642.78188	2,300,000.10517	39.49473	-107.98077	
3,800.00	17.91	242.10	3,645.16	-467.25	-906.72	1,614,615.49472	2,299,944.98912	39.49465	-107.98096	
4,000.00	17.91	242.10	3,835.47	-496.03	-961.07	1,614,588.20756	2,299,889.87308	39.49457	-107.98116	
4,200.00	17.91	242.10	4,025.78	-524.81	-1,015.43	1,614,560.92041	2,299,834.75703	39.49449	-107.98135	
4,400.00	17.91	242.10	4,216.09	-553.60	-1,069.78	1,614,533.63325	2,299,779.64098	39.49442	-107.98154	
4,600.00	17.91	242.10	4,406.40	-582.38	-1,124.13	1,614,506.34609	2,299,724.52494	39.49434	-107.98174	
4,800.00	17.91	242.10	4,596.70	-611.16	-1,178.49	1,614,479.05894	2,299,669.40890	39.49426	-107.98193	
5,000.00	17.91	242.10	4,787.01	-639.94	-1,232.84	1,614,451.77179	2,299,614.29286	39.49418	-107.98212	
5,042.02	17.91	242.10	4,827.00	-645.99	-1,244.26	1,614,446.03834	2,299,602.71213	39.49416	-107.98216	
Mesaverde										
5,200.00	17.91	242.10	4,977.32	-668.72	-1,287.19	1,614,424.48463	2,299,559.17681	39.49410	-107.98231	
5,374.15	17.91	242.10	5,143.03	-693.78	-1,334.52	1,614,400.72435	2,299,511.18452	39.49403	-107.98248	
Begin Drop -2.00°/100										
5,400.00	17.39	242.10	5,167.67	-697.45	-1,341.45	1,614,397.24679	2,299,504.16036	39.49402	-107.98251	
5,600.00	13.39	242.10	5,360.45	-722.29	-1,388.35	1,614,373.69887	2,299,456.59703	39.49395	-107.98267	
5,800.00	9.39	242.10	5,556.47	-740.77	-1,423.26	1,614,356.17483	2,299,421.20105	39.49390	-107.98279	
6,000.00	5.39	242.10	5,754.77	-752.81	-1,446.00	1,614,344.76005	2,299,398.14486	39.49387	-107.98288	
6,200.00	1.39	242.10	5,954.38	-758.35	-1,456.45	1,614,339.51013	2,299,387.54079	39.49385	-107.98291	
6,269.63	0.00	0.00	6,024.00	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292	
Vertical										

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 433-27 - Slot A08
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 433-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 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
6,369.63	0.00	0.00	6,124.00	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
Top Gas - Approx. Top Gas									
6,400.00	0.00	0.00	6,154.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
6,600.00	0.00	0.00	6,354.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
6,800.00	0.00	0.00	6,554.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
7,000.00	0.00	0.00	6,754.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
7,200.00	0.00	0.00	6,954.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
7,400.00	0.00	0.00	7,154.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
7,600.00	0.00	0.00	7,354.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
7,800.00	0.00	0.00	7,554.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
7,847.63	0.00	0.00	7,602.00	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
Cameo Coals									
8,000.00	0.00	0.00	7,754.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
8,200.00	0.00	0.00	7,954.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
8,400.00	0.00	0.00	8,154.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
8,472.63	0.00	0.00	8,227.00	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
Rollins SS									
8,600.00	0.00	0.00	8,354.37	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
8,622.63	0.00	0.00	8,377.00	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
TD at 8622.63 - TD									

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) PA - plan hits target center - Circle (radius 50.00)	0.00	0.00	6,124.00	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292
TD / PBHL PA 433-27 - plan hits target center - Point	0.00	358.43	8,377.00	-758.74	-1,457.20	1,614,339.13473	2,299,386.78255	39.49385	-107.98292

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,829.83	2,722.00	9 5/8"	9.625	13.500	

WPX
Planning Report - Geographic

Database:	COMPASS-PICEANCE	Local Co-ordinate Reference:	Well PA 433-27 - Slot A08
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 433-27	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 24Apr14 mab		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)	
2,619.64	2,522.00	Top of "G" Sand		0.00		
2,777.28	2,672.00	Base of "G" Sand				
5,042.02	4,827.00	Mesaverde				
6,369.63	6,124.00	Approx. Top Gas				
7,847.63	7,602.00	Cameo Coals				
8,472.63	8,227.00	Rollins SS				
8,622.63	8,377.00	TD				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
120.00	120.00	0.00	0.00	Start Build 2.50	
440.00	438.96	-5.77	-21.54	Begin Turn 2.50°/100	
850.53	838.62	-42.80	-105.15	Hold 17.91° Inc, 242.10° Az	
5,374.15	5,143.03	-693.78	-1,334.52	Begin Drop -2.00°/100	
6,269.63	6,024.00	-758.74	-1,457.20	Vertical	
6,369.63	6,124.00	-758.74	-1,457.20	Top Gas	
8,622.63	8,377.00	-758.74	-1,457.20	TD at 8622.63	