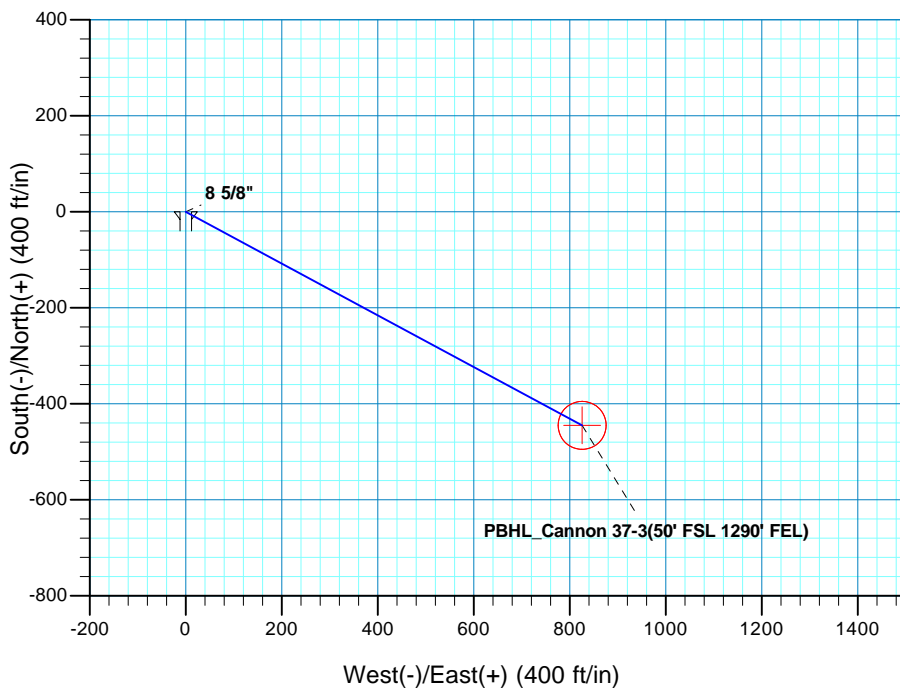
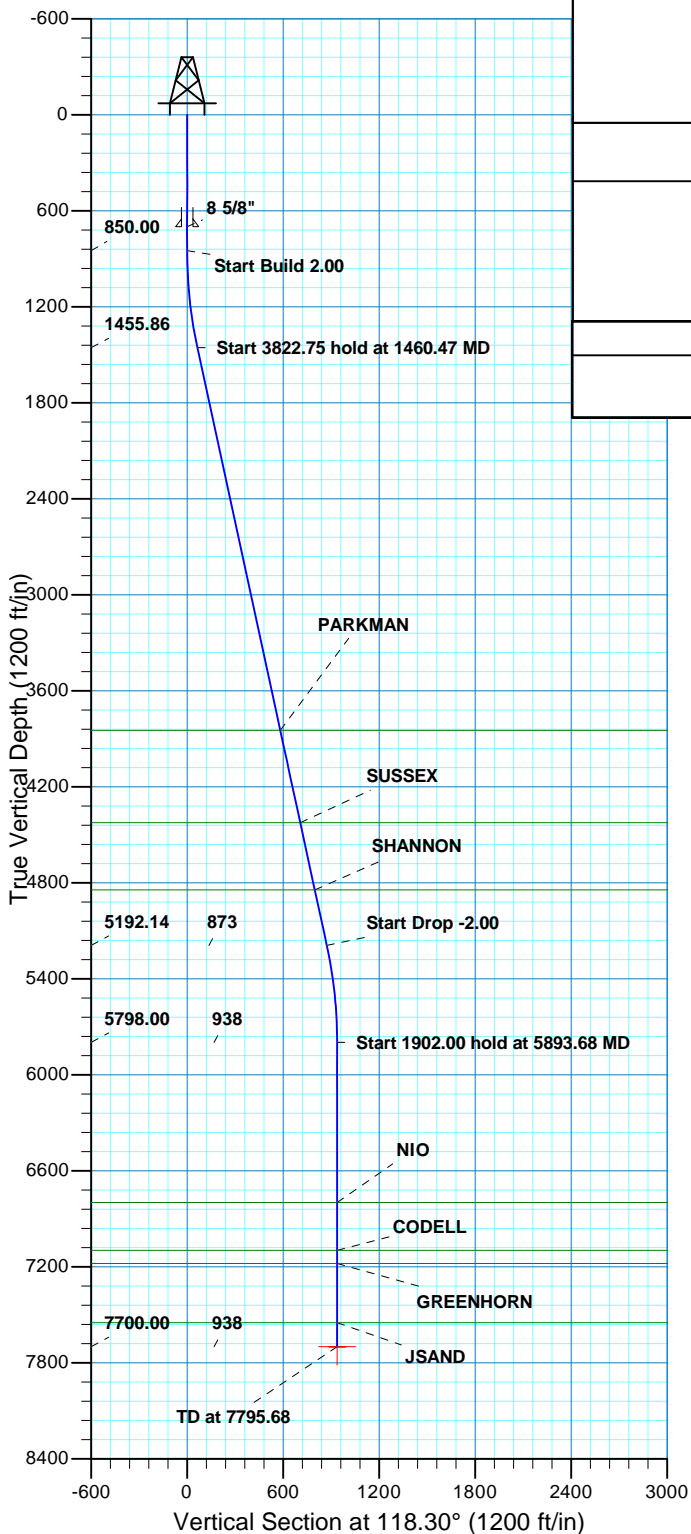


WELL DETAILS: P_Cannon 37-3					
GL 4853' & RKB 15' @ 4868.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1302950.45	3238115.95	40° 9' 42.674 N	104° 38' 52.861 W

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL	7700.00	-444.76	825.91	1302513.65	3238946.09	40° 9' 38.279 N	104° 38' 42.223 W
- plan hits target center							
Shape							
Circle (Radius: 50.00)							

SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00		
1460.47	12.21	118.30	1455.86	-30.72	57.05	2.00	118.30	64.80		
5283.22	12.21	118.30	5192.14	-414.04	768.85	0.00	0.00	873.25		
5893.68	0.00	0.00	5798.00	-444.76	825.91	2.00	180.00	938.05		
7795.68	0.00	0.00	7700.00	-444.76	825.91	0.00	0.00	938.05	PBHL_Cannon 37-3(50' FSL 1290' FEL)	
PROJECT DETAILS: COLORADO NORTHERN ZONE - 83						FORMATION TOP DETAILS				
						TVDPath	MDPath	Formation		
Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Northern Zone Location: SECTION 3 T2N R65W System Datum: Mean Sea Level						3848.00	3907.97	PARKMAN		
						4425.00	4498.32	SUSSEX		
						4845.00	4928.04	SHANNON		
						6798.00	6893.68	NIO		
						7097.00	7192.68	CODELL		
						7180.00	7275.68	GREENHORN		
						7550.00	7645.68	JSAND		
CASING DETAILS										
			TVD	MD	Name	Size				
			700.00	700.00	8 5/8"	8.625				



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_CANNON 15-3 PAD

P_Cannon 37-3

P_Cannon 37-3

Plan: PLAN #1 8-18-10 RHS

Standard Planning Report

18 August, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 37-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4853' & RKB 15' @ 4868.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4853' & RKB 15' @ 4868.00ft (ASSUMED)
Site:	WELD_CANNON 15-3 PAD	North Reference:	True
Well:	P_Cannon 37-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 37-3		
Design:	PLAN #1 8-18-10 RHS		

Project	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		WELD_CANNON 15-3 PAD, SECTION 3 T2N R65W			
Site Position:		Northing:	1,302,962.02 usft	Latitude:	40° 9' 42.790 N
From:	Lat/Long	Easting:	3,238,104.66 usft	Longitude:	104° 38' 53.005 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.55 °

Well	P_Cannon 37-3, 495' FSL 2121' FEL					
Well Position	+N/-S	-11.67 ft	Northing:	1,302,950.45 usft	Latitude:	40° 9' 42.674 N
	+E/-W	11.18 ft	Easting:	3,238,115.95 usft	Longitude:	104° 38' 52.861 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,853.00 ft

Wellbore	P_Cannon 37-3				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/18/2010	8.89	66.91	53,106

Design	PLAN #1 8-18-10 RHS			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	118.30

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,460.47	12.21	118.30	1,455.86	-30.72	57.05	2.00	2.00	0.00	118.30	
5,283.22	12.21	118.30	5,192.14	-414.04	768.85	0.00	0.00	0.00	0.00	
5,893.68	0.00	0.00	5,798.00	-444.76	825.91	2.00	-2.00	0.00	180.00	
7,795.68	0.00	0.00	7,700.00	-444.76	825.91	0.00	0.00	0.00	0.00	PBHL_Cannon 37-3(£

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 37-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4853' & RKB 15' @ 4868.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4853' & RKB 15' @ 4868.00ft (ASSUMED)
Site:	WELD_CANNON 15-3 PAD	North Reference:	True
Well:	P_Cannon 37-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 37-3		
Design:	PLAN #1 8-18-10 RHS		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
8 5/8"									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
900.00	1.00	118.30	900.00	-0.21	0.38	0.44	2.00	2.00	0.00
1,000.00	3.00	118.30	999.93	-1.86	3.46	3.93	2.00	2.00	0.00
1,100.00	5.00	118.30	1,099.68	-5.17	9.60	10.90	2.00	2.00	0.00
1,200.00	7.00	118.30	1,199.13	-10.12	18.80	21.35	2.00	2.00	0.00
1,300.00	9.00	118.30	1,298.15	-16.72	31.05	35.27	2.00	2.00	0.00
1,400.00	11.00	118.30	1,396.63	-24.96	46.34	52.63	2.00	2.00	0.00
1,460.47	12.21	118.30	1,455.86	-30.72	57.05	64.80	2.00	2.00	0.00
Start 3822.75 hold at 1460.47 MD									
1,500.00	12.21	118.30	1,494.50	-34.69	64.41	73.16	0.00	0.00	0.00
1,600.00	12.21	118.30	1,592.23	-44.71	83.03	94.31	0.00	0.00	0.00
1,700.00	12.21	118.30	1,689.97	-54.74	101.65	115.45	0.00	0.00	0.00
1,800.00	12.21	118.30	1,787.71	-64.77	120.27	136.60	0.00	0.00	0.00
1,900.00	12.21	118.30	1,885.45	-74.80	138.89	157.75	0.00	0.00	0.00
2,000.00	12.21	118.30	1,983.19	-84.82	157.51	178.90	0.00	0.00	0.00
2,100.00	12.21	118.30	2,080.93	-94.85	176.13	200.05	0.00	0.00	0.00
2,200.00	12.21	118.30	2,178.66	-104.88	194.75	221.20	0.00	0.00	0.00
2,300.00	12.21	118.30	2,276.40	-114.90	213.37	242.35	0.00	0.00	0.00
2,400.00	12.21	118.30	2,374.14	-124.93	231.99	263.49	0.00	0.00	0.00
2,500.00	12.21	118.30	2,471.88	-134.96	250.61	284.64	0.00	0.00	0.00
2,600.00	12.21	118.30	2,569.62	-144.99	269.23	305.79	0.00	0.00	0.00
2,700.00	12.21	118.30	2,667.35	-155.01	287.85	326.94	0.00	0.00	0.00
2,800.00	12.21	118.30	2,765.09	-165.04	306.47	348.09	0.00	0.00	0.00
2,900.00	12.21	118.30	2,862.83	-175.07	325.09	369.24	0.00	0.00	0.00
3,000.00	12.21	118.30	2,960.57	-185.10	343.72	390.38	0.00	0.00	0.00
3,100.00	12.21	118.30	3,058.31	-195.12	362.34	411.53	0.00	0.00	0.00
3,200.00	12.21	118.30	3,156.04	-205.15	380.96	432.68	0.00	0.00	0.00
3,300.00	12.21	118.30	3,253.78	-215.18	399.58	453.83	0.00	0.00	0.00
3,400.00	12.21	118.30	3,351.52	-225.20	418.20	474.98	0.00	0.00	0.00
3,500.00	12.21	118.30	3,449.26	-235.23	436.82	496.13	0.00	0.00	0.00
3,600.00	12.21	118.30	3,547.00	-245.26	455.44	517.28	0.00	0.00	0.00
3,700.00	12.21	118.30	3,644.74	-255.29	474.06	538.42	0.00	0.00	0.00
3,800.00	12.21	118.30	3,742.47	-265.31	492.68	559.57	0.00	0.00	0.00
3,900.00	12.21	118.30	3,840.21	-275.34	511.30	580.72	0.00	0.00	0.00
3,907.97	12.21	118.30	3,848.00	-276.14	512.78	582.41	0.00	0.00	0.00
PARKMAN									
4,000.00	12.21	118.30	3,937.95	-285.37	529.92	601.87	0.00	0.00	0.00
4,100.00	12.21	118.30	4,035.69	-295.39	548.54	623.02	0.00	0.00	0.00
4,200.00	12.21	118.30	4,133.43	-305.42	567.16	644.17	0.00	0.00	0.00
4,300.00	12.21	118.30	4,231.16	-315.45	585.78	665.31	0.00	0.00	0.00
4,400.00	12.21	118.30	4,328.90	-325.48	604.40	686.46	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 37-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4853' & RKB 15' @ 4868.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4853' & RKB 15' @ 4868.00ft (ASSUMED)
Site:	WELD_CANNON 15-3 PAD	North Reference:	True
Well:	P_Cannon 37-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 37-3		
Design:	PLAN #1 8-18-10 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,498.32	12.21	118.30	4,425.00	-335.34	622.71	707.26	0.00	0.00	0.00
SUSSEX									
4,500.00	12.21	118.30	4,426.64	-335.50	623.02	707.61	0.00	0.00	0.00
4,600.00	12.21	118.30	4,524.38	-345.53	641.64	728.76	0.00	0.00	0.00
4,700.00	12.21	118.30	4,622.12	-355.56	660.26	749.91	0.00	0.00	0.00
4,800.00	12.21	118.30	4,719.85	-365.59	678.88	771.06	0.00	0.00	0.00
4,900.00	12.21	118.30	4,817.59	-375.61	697.50	792.21	0.00	0.00	0.00
4,928.04	12.21	118.30	4,845.00	-378.42	702.72	798.14	0.00	0.00	0.00
SHANNON									
5,000.00	12.21	118.30	4,915.33	-385.64	716.12	813.35	0.00	0.00	0.00
5,100.00	12.21	118.30	5,013.07	-395.67	734.74	834.50	0.00	0.00	0.00
5,200.00	12.21	118.30	5,110.81	-405.69	753.36	855.65	0.00	0.00	0.00
5,283.22	12.21	118.30	5,192.14	-414.04	768.85	873.25	0.00	0.00	0.00
Start Drop -2.00									
5,300.00	11.87	118.30	5,208.56	-415.70	771.94	876.75	2.00	-2.00	0.00
5,400.00	9.87	118.30	5,306.76	-424.64	788.55	895.61	2.00	-2.00	0.00
5,500.00	7.87	118.30	5,405.55	-431.96	802.13	911.04	2.00	-2.00	0.00
5,600.00	5.87	118.30	5,504.83	-437.63	812.66	923.01	2.00	-2.00	0.00
5,700.00	3.87	118.30	5,604.46	-441.66	820.14	931.50	2.00	-2.00	0.00
5,800.00	1.87	118.30	5,704.33	-444.04	824.56	936.52	2.00	-2.00	0.00
5,893.68	0.00	0.00	5,798.00	-444.76	825.91	938.05	2.00	-2.00	0.00
Start 1902.00 hold at 5893.68 MD									
5,900.00	0.00	0.00	5,804.32	-444.76	825.91	938.05	0.00	0.00	0.00
6,000.00	0.00	0.00	5,904.32	-444.76	825.91	938.05	0.00	0.00	0.00
6,100.00	0.00	0.00	6,004.32	-444.76	825.91	938.05	0.00	0.00	0.00
6,200.00	0.00	0.00	6,104.32	-444.76	825.91	938.05	0.00	0.00	0.00
6,300.00	0.00	0.00	6,204.32	-444.76	825.91	938.05	0.00	0.00	0.00
6,400.00	0.00	0.00	6,304.32	-444.76	825.91	938.05	0.00	0.00	0.00
6,500.00	0.00	0.00	6,404.32	-444.76	825.91	938.05	0.00	0.00	0.00
6,600.00	0.00	0.00	6,504.32	-444.76	825.91	938.05	0.00	0.00	0.00
6,700.00	0.00	0.00	6,604.32	-444.76	825.91	938.05	0.00	0.00	0.00
6,800.00	0.00	0.00	6,704.32	-444.76	825.91	938.05	0.00	0.00	0.00
6,893.68	0.00	0.00	6,798.00	-444.76	825.91	938.05	0.00	0.00	0.00
NIO									
6,900.00	0.00	0.00	6,804.32	-444.76	825.91	938.05	0.00	0.00	0.00
7,000.00	0.00	0.00	6,904.32	-444.76	825.91	938.05	0.00	0.00	0.00
7,100.00	0.00	0.00	7,004.32	-444.76	825.91	938.05	0.00	0.00	0.00
7,192.68	0.00	0.00	7,097.00	-444.76	825.91	938.05	0.00	0.00	0.00
CODELL									
7,200.00	0.00	0.00	7,104.32	-444.76	825.91	938.05	0.00	0.00	0.00
7,275.68	0.00	0.00	7,180.00	-444.76	825.91	938.05	0.00	0.00	0.00
GREENHORN									
7,300.00	0.00	0.00	7,204.32	-444.76	825.91	938.05	0.00	0.00	0.00
7,400.00	0.00	0.00	7,304.32	-444.76	825.91	938.05	0.00	0.00	0.00
7,500.00	0.00	0.00	7,404.32	-444.76	825.91	938.05	0.00	0.00	0.00
7,600.00	0.00	0.00	7,504.32	-444.76	825.91	938.05	0.00	0.00	0.00
7,645.68	0.00	0.00	7,550.00	-444.76	825.91	938.05	0.00	0.00	0.00
JSAND									
7,700.00	0.00	0.00	7,604.32	-444.76	825.91	938.05	0.00	0.00	0.00
7,795.68	0.00	0.00	7,700.00	-444.76	825.91	938.05	0.00	0.00	0.00
PBHL_Cannon 37-3(50' FSL 1290' FEL)									

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 37-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4853' & RKB 15' @ 4868.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4853' & RKB 15' @ 4868.00ft (ASSUMED)
Site:	WELD_CANNON 15-3 PAD	North Reference:	True
Well:	P_Cannon 37-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 37-3		
Design:	PLAN #1 8-18-10 RHS		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_Cannon 37-3(50' - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,700.00	-444.76	825.91	1,302,513.65	3,238,946.09	40° 9' 38.279 N	104° 38' 42.223 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
700.00	700.00	8 5/8"	8.625	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,907.97	3,848.00	PARKMAN				
4,498.32	4,425.00	SUSSEX				
4,928.04	4,845.00	SHANNON				
6,893.68	6,798.00	NIO				
7,192.68	7,097.00	CODELL				
7,275.68	7,180.00	GREENHORN				
7,645.68	7,550.00	JSAND				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
850.00	850.00	0.00	0.00	Start Build 2.00
1,460.47	1,455.86	-30.72	57.05	Start 3822.75 hold at 1460.47 MD
5,283.22	5,192.14	-414.04	768.85	Start Drop -2.00
5,893.68	5,798.00	-444.76	825.91	Start 1902.00 hold at 5893.68 MD
7,795.68	7,700.00	-444.76	825.91	TD at 7795.68