

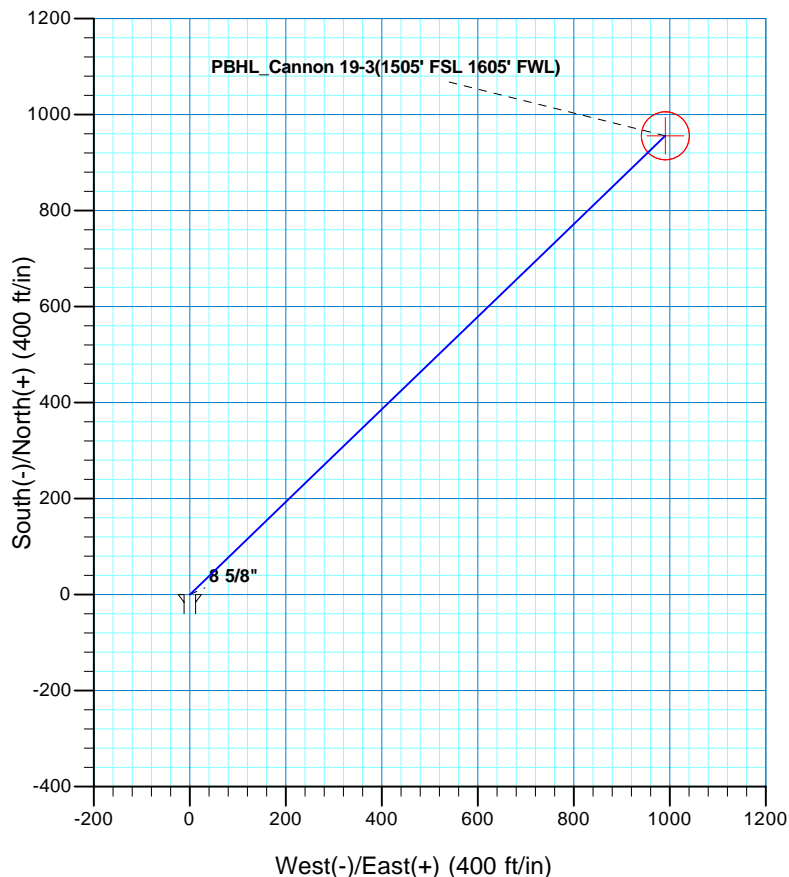
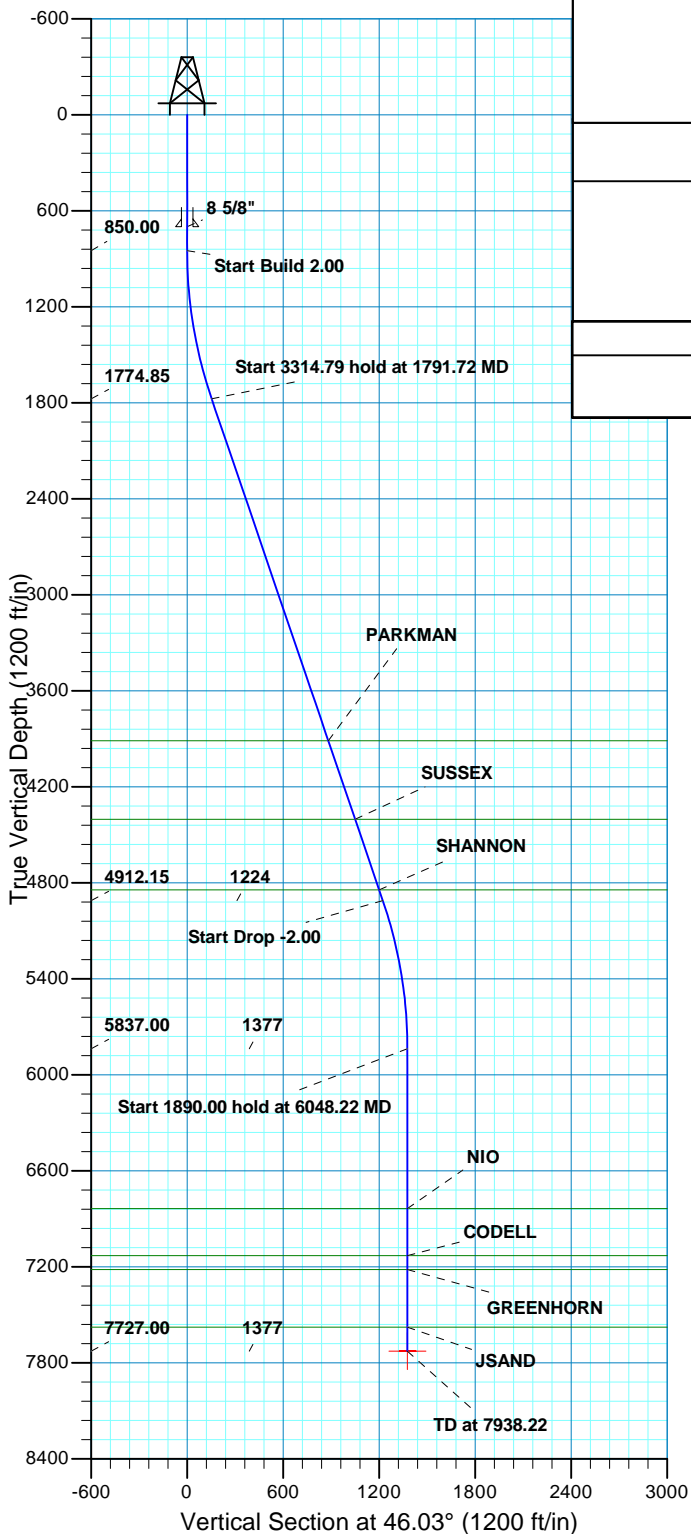
WELL DETAILS: P_Cannon 19-3					
GL 4852' & RKB 15' @ 4867.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1302979.10	3235584.80	40° 9' 43.196 N	104° 39' 25.459 W

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL	7727.00	955.90	991.03	1303944.37	3236566.69	40° 9' 52.643 N	104° 39' 12.694 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	
1791.72	18.83	46.03	1774.85	106.49	110.40	2.00	46.03	153.39	
5106.51	18.83	46.03	4912.15	849.41	880.62	0.00	0.00	1223.52	
6048.22	0.00	0.00	5837.00	955.90	991.03	2.00	180.00	1376.91	
7938.22	0.00	0.00	7727.00	955.90	991.03	0.00	0.00	1376.91	PBHL_Cannon 19-3(1505' FSL 1605' FWL)

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83			FORMATION TOP DETAILS		
Geodetic System: US State Plane 1983			TVDPath	MDPath	Formation
Datum: North American Datum 1983			3912.00	4049.77	PARKMAN
Ellipsoid: GRS 1980			4403.00	4568.55	SUSSEX
Zone: Colorado Northern Zone			4845.00	5035.56	SHANNON
Location: SECTION 3 T2N R65W			6837.00	7048.22	NIO
System Datum: Mean Sea Level			7131.00	7342.22	CODELL
			7217.00	7428.22	GREENHORN
			7577.00	7788.22	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 13-3 Pad

P_Cannon 19-3

P_Cannon 19-3

Plan: PLAN #1 8-18-10 RHS

Standard Planning Report

18 August, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 19-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4852' & RKB 15' @ 4867.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4852' & RKB 15' @ 4867.00ft (ASSUMED)
Site:	WELD_CANNON 13-3 Pad	North Reference:	True
Well:	P_Cannon 19-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 19-3		
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 13-3 Pad, SECTION 3 T2N R65W			
Site Position:		Northing:	1,302,979.10 usft	Latitude:	40° 9' 43.196 N
From:	Lat/Long	Easting:	3,235,584.80 usft	Longitude:	104° 39' 25.459 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.54 °

Well	P_Cannon 19-3, 550' FSL 623' FWL					
Well Position	+N/-S	0.00 ft	Northing:	1,302,979.10 usft	Latitude:	40° 9' 43.196 N
	+E/-W	0.00 ft	Easting:	3,235,584.80 usft	Longitude:	104° 39' 25.459 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,852.00 ft

Wellbore	P_Cannon 19-3				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/18/2010	8.90	66.90	53,105

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	46.03

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	
1,791.72	18.83	46.03	1,774.85	106.49	110.40	2.00	2.00	0.00	46.03	
5,106.51	18.83	46.03	4,912.15	849.41	880.62	0.00	0.00	0.00	0.00	
6,048.22	0.00	0.00	5,837.00	955.90	991.03	2.00	-2.00	0.00	180.00	
7,938.22	0.00	0.00	7,727.00	955.90	991.03	0.00	0.00	0.00	0.00	PBHL_Cannon 19-3(1

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 19-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4852' & RKB 15' @ 4867.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4852' & RKB 15' @ 4867.00ft (ASSUMED)
Site:	WELD_CANNON 13-3 Pad	North Reference:	True
Well:	P_Cannon 19-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 19-3		
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	46.03	900.00	0.30	0.31	0.44	2.00	2.00	0.00
1,000.00	3.00	46.03	999.93	2.73	2.83	3.93	2.00	2.00	0.00
1,100.00	5.00	46.03	1,099.68	7.57	7.85	10.90	2.00	2.00	0.00
1,200.00	7.00	46.03	1,199.13	14.82	15.37	21.35	2.00	2.00	0.00
1,300.00	9.00	46.03	1,298.15	24.49	25.39	35.27	2.00	2.00	0.00
1,400.00	11.00	46.03	1,396.63	36.54	37.88	52.63	2.00	2.00	0.00
1,500.00	13.00	46.03	1,494.44	50.97	52.85	73.42	2.00	2.00	0.00
1,600.00	15.00	46.03	1,591.46	67.77	70.26	97.62	2.00	2.00	0.00
1,700.00	17.00	46.03	1,687.58	86.90	90.10	125.18	2.00	2.00	0.00
1,791.72	18.83	46.03	1,774.85	106.49	110.40	153.39	2.00	2.00	0.00
Start 3314.79 hold at 1791.72 MD									
1,800.00	18.83	46.03	1,782.69	108.35	112.33	156.07	0.00	0.00	0.00
1,900.00	18.83	46.03	1,877.33	130.76	135.56	188.35	0.00	0.00	0.00
2,000.00	18.83	46.03	1,971.98	153.17	158.80	220.63	0.00	0.00	0.00
2,100.00	18.83	46.03	2,066.62	175.58	182.04	252.92	0.00	0.00	0.00
2,200.00	18.83	46.03	2,161.27	198.00	205.27	285.20	0.00	0.00	0.00
2,300.00	18.83	46.03	2,255.92	220.41	228.51	317.48	0.00	0.00	0.00
2,400.00	18.83	46.03	2,350.56	242.82	251.74	349.77	0.00	0.00	0.00
2,500.00	18.83	46.03	2,445.21	265.23	274.98	382.05	0.00	0.00	0.00
2,600.00	18.83	46.03	2,539.85	287.64	298.22	414.33	0.00	0.00	0.00
2,700.00	18.83	46.03	2,634.50	310.06	321.45	446.62	0.00	0.00	0.00
2,800.00	18.83	46.03	2,729.14	332.47	344.69	478.90	0.00	0.00	0.00
2,900.00	18.83	46.03	2,823.79	354.88	367.92	511.18	0.00	0.00	0.00
3,000.00	18.83	46.03	2,918.44	377.29	391.16	543.47	0.00	0.00	0.00
3,100.00	18.83	46.03	3,013.08	399.70	414.40	575.75	0.00	0.00	0.00
3,200.00	18.83	46.03	3,107.73	422.12	437.63	608.03	0.00	0.00	0.00
3,300.00	18.83	46.03	3,202.37	444.53	460.87	640.32	0.00	0.00	0.00
3,400.00	18.83	46.03	3,297.02	466.94	484.10	672.60	0.00	0.00	0.00
3,500.00	18.83	46.03	3,391.66	489.35	507.34	704.88	0.00	0.00	0.00
3,600.00	18.83	46.03	3,486.31	511.76	530.57	737.17	0.00	0.00	0.00
3,700.00	18.83	46.03	3,580.95	534.18	553.81	769.45	0.00	0.00	0.00
3,800.00	18.83	46.03	3,675.60	556.59	577.05	801.73	0.00	0.00	0.00
3,900.00	18.83	46.03	3,770.25	579.00	600.28	834.02	0.00	0.00	0.00
4,000.00	18.83	46.03	3,864.89	601.41	623.52	866.30	0.00	0.00	0.00
4,049.77	18.83	46.03	3,912.00	612.57	635.08	882.37	0.00	0.00	0.00
PARKMAN									
4,100.00	18.83	46.03	3,959.54	623.83	646.75	898.58	0.00	0.00	0.00
4,200.00	18.83	46.03	4,054.18	646.24	669.99	930.86	0.00	0.00	0.00
4,300.00	18.83	46.03	4,148.83	668.65	693.23	963.15	0.00	0.00	0.00
4,400.00	18.83	46.03	4,243.47	691.06	716.46	995.43	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 19-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4852' & RKB 15' @ 4867.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4852' & RKB 15' @ 4867.00ft (ASSUMED)
Site:	WELD_CANNON 13-3 Pad	North Reference:	True
Well:	P_Cannon 19-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 19-3		
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)	
4,500.00	18.83	46.03	4,338.12	713.47	739.70	1,027.71	0.00	0.00	0.00	
4,568.55	18.83	46.03	4,403.00	728.84	755.63	1,049.85	0.00	0.00	0.00	
SUSSEX										
4,600.00	18.83	46.03	4,432.77	735.89	762.93	1,060.00	0.00	0.00	0.00	
4,700.00	18.83	46.03	4,527.41	758.30	786.17	1,092.28	0.00	0.00	0.00	
4,800.00	18.83	46.03	4,622.06	780.71	809.40	1,124.56	0.00	0.00	0.00	
4,900.00	18.83	46.03	4,716.70	803.12	832.64	1,156.85	0.00	0.00	0.00	
5,000.00	18.83	46.03	4,811.35	825.53	855.88	1,189.13	0.00	0.00	0.00	
5,035.56	18.83	46.03	4,845.00	833.50	864.14	1,200.61	0.00	0.00	0.00	
SHANNON										
5,100.00	18.83	46.03	4,905.99	847.95	879.11	1,221.41	0.00	0.00	0.00	
5,106.51	18.83	46.03	4,912.15	849.41	880.62	1,223.52	0.00	0.00	0.00	
Start Drop -2.00										
5,200.00	16.96	46.03	5,001.12	869.35	901.31	1,252.25	2.00	-2.00	0.00	
5,300.00	14.96	46.03	5,097.25	888.45	921.10	1,279.75	2.00	-2.00	0.00	
5,400.00	12.96	46.03	5,194.29	905.20	938.47	1,303.88	2.00	-2.00	0.00	
5,500.00	10.96	46.03	5,292.12	919.59	953.39	1,324.61	2.00	-2.00	0.00	
5,600.00	8.96	46.03	5,390.60	931.60	965.84	1,341.91	2.00	-2.00	0.00	
5,700.00	6.96	46.03	5,489.63	941.22	975.81	1,355.77	2.00	-2.00	0.00	
5,800.00	4.96	46.03	5,589.09	948.43	983.29	1,366.16	2.00	-2.00	0.00	
5,900.00	2.96	46.03	5,688.84	953.23	988.27	1,373.07	2.00	-2.00	0.00	
6,000.00	0.96	46.03	5,788.78	955.61	990.74	1,376.50	2.00	-2.00	0.00	
6,048.22	0.00	0.00	5,837.00	955.90	991.03	1,376.91	2.00	-2.00	-95.46	
Start 1890.00 hold at 6048.22 MD										
6,100.00	0.00	0.00	5,888.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
6,200.00	0.00	0.00	5,988.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,088.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,188.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,288.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,388.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,488.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,588.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,688.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,788.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
7,048.22	0.00	0.00	6,837.00	955.90	991.03	1,376.91	0.00	0.00	0.00	
NIO										
7,100.00	0.00	0.00	6,888.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
7,200.00	0.00	0.00	6,988.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,088.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
7,342.22	0.00	0.00	7,131.00	955.90	991.03	1,376.91	0.00	0.00	0.00	
CODELL										
7,400.00	0.00	0.00	7,188.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
7,428.22	0.00	0.00	7,217.00	955.90	991.03	1,376.91	0.00	0.00	0.00	
GREENHORN										
7,500.00	0.00	0.00	7,288.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,388.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,488.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
7,788.22	0.00	0.00	7,577.00	955.90	991.03	1,376.91	0.00	0.00	0.00	
JSAND										
7,800.00	0.00	0.00	7,588.78	955.90	991.03	1,376.91	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,688.78	955.90	991.03	1,376.91	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cannon 19-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4852' & RKB 15' @ 4867.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4852' & RKB 15' @ 4867.00ft (ASSUMED)
Site:	WELD_CANNON 13-3 Pad	North Reference:	True
Well:	P_Cannon 19-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cannon 19-3		
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)
7,938.22	0.00	0.00	7,727.00	955.90	991.03	1,376.91	0.00	0.00	0.00
PBHL_Cannon 19-3(1505' FSL 1605' FWL)									

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 19-3(1505' FSL 1605' FWL) - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,727.00	955.90	991.03	1,303,944.37	3,236,566.69	40° 9' 52.643 N	104° 39' 12.694 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 (°)	
4,049.77	3,895.00	PARKMAN				
4,568.55	4,386.00	SUSSEX				
5,035.56	4,828.00	SHANNON				
7,048.22	6,820.00	NIO				
7,342.22	7,114.00	CODELL				
7,428.22	7,200.00	GREENHORN				
7,788.22	7,560.00	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	
1,791.72	1,774.85	106.49	110.40	Start 3314.79 hold at 1791.72 MD	
5,106.51	4,912.15	849.41	880.62	Start Drop -2.00	
6,048.22	5,837.00	955.90	991.03	Start 1890.00 hold at 6048.22 MD	
7,938.22	7,727.00	955.90	991.03	TD at 7938.22	