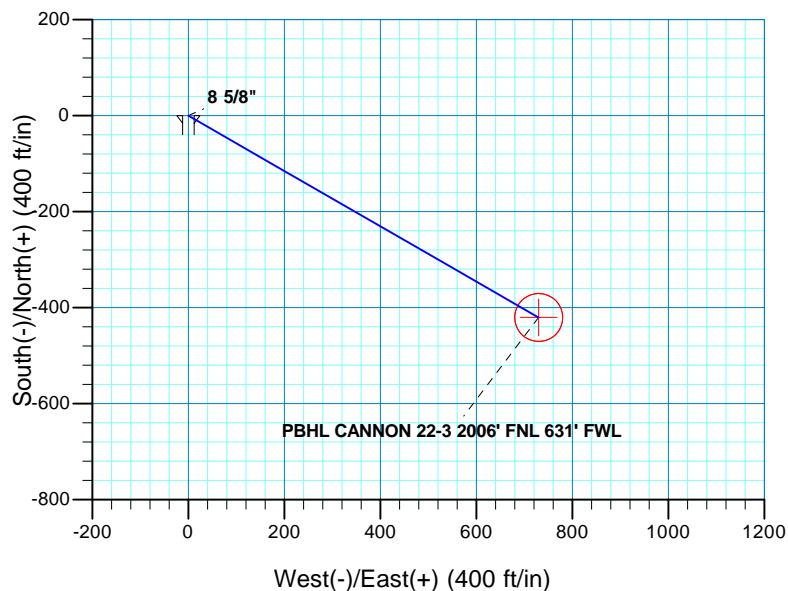
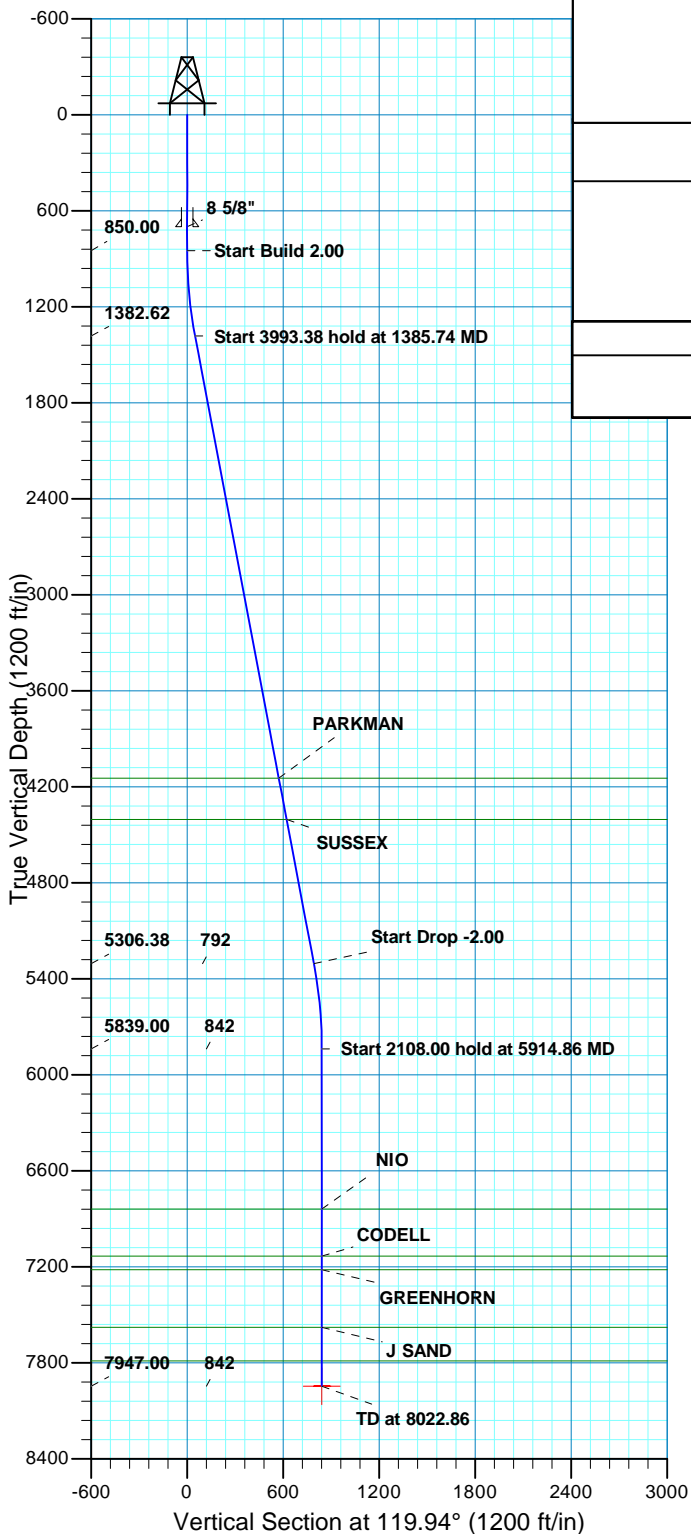


WELL DETAILS: P_CANNON 22-3					
GL 4847' & KB 15' @ 4862.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1305581.71	3235593.03	40° 10' 8.915 N	104° 39' 25.034 W

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL	7947.00	-420.36	729.96	1305168.31	3236326.95	40° 10' 4.760 N	104° 39' 15.631 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		
1385.74	10.71	119.94	1382.62	-24.93	43.28	2.00	119.94	49.95		
5379.12	10.71	119.94	5306.38	-395.44	686.68	0.00	0.00	792.40		
5914.86	0.00	0.00	5839.00	-420.36	729.96	2.00	180.00	842.35		
8022.86	0.00	0.00	7947.00	-420.36	729.96	0.00	0.00	842.35	PBHL CANNON 22-3 2006' FNL 631' FWL	
PROJECT DETAILS: COLORADO NORTHERN ZONE - 83 Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Northern Zone Location: SECTION 3 T 2N R65W System Datum: Mean Sea Level						FORMATION TOP DETAILS				
						TVDPath	MDPath	Formation		
						4147.00	4199.17	PARKMAN		
						4405.00	4461.75	SUSSEX		
						6839.00	6914.86	NIO		
						7133.00	7208.86	CODELL		
						7219.00	7294.86	GREENHORN		
						7579.00	7654.86	J SAND		
						7788.00	7863.86	DAKOTA		
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 5-3 PAD

P_CANNON 22-3

P_CANNON 22-3

Plan: PLAN #1 9-13-10 RHS

Standard Planning Report

13 September, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 22-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Site:	WELD_CANNON 5-3 PAD	North Reference:	True
Well:	P_CANNON 22-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 22-3		
Design:	PLAN #1 9-13-10 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 5-3 PAD, SECTION 3 T 2N R65W		
Site Position:		Northing:	1,305,592.91 usft
From:	Lat/Long	Easting:	3,235,581.75 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Grid Convergence:	0.54 °

Well	P_CANNON 22-3, 2422' FNL 1365' FWL		
Well Position	+N/-S	-11.30 ft	Northing:
	+E/-W	11.18 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	
		Latitude:	40° 10' 9.026 N
		Longitude:	104° 39' 25.178 W
		Ground Level:	4,847.00 ft

Wellbore	P_CANNON 22-3				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/13/2010	8.89	66.91	53,101

Design	PLAN #1 9-13-10 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	119.94

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	
1,385.74	10.71	119.94	1,382.62	-24.93	43.28	2.00	2.00	0.00	119.94	
5,379.12	10.71	119.94	5,306.38	-395.44	686.68	0.00	0.00	0.00	0.00	
5,914.86	0.00	0.00	5,839.00	-420.36	729.96	2.00	-2.00	0.00	180.00	
8,022.86	0.00	0.00	7,947.00	-420.36	729.96	0.00	0.00	0.00	0.00	PBHL CANNON 22-3

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 22-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Site:	WELD_CANNON 5-3 PAD	North Reference:	True
Well:	P_CANNON 22-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 22-3		
Design:	PLAN #1 9-13-10 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	119.94	900.00	-0.22	0.38	0.44	2.00	2.00	0.00	
1,000.00	3.00	119.94	999.93	-1.96	3.40	3.93	2.00	2.00	0.00	
1,100.00	5.00	119.94	1,099.68	-5.44	9.45	10.90	2.00	2.00	0.00	
1,200.00	7.00	119.94	1,199.13	-10.66	18.50	21.35	2.00	2.00	0.00	
1,300.00	9.00	119.94	1,298.15	-17.60	30.56	35.27	2.00	2.00	0.00	
1,385.74	10.71	119.94	1,382.62	-24.93	43.28	49.95	2.00	2.00	0.00	
Start 3993.38 hold at 1385.74 MD										
1,400.00	10.71	119.94	1,396.63	-26.25	45.58	52.60	0.00	0.00	0.00	
1,500.00	10.71	119.94	1,494.89	-35.53	61.69	71.19	0.00	0.00	0.00	
1,600.00	10.71	119.94	1,593.15	-44.81	77.80	89.78	0.00	0.00	0.00	
1,700.00	10.71	119.94	1,691.40	-54.08	93.92	108.38	0.00	0.00	0.00	
1,800.00	10.71	119.94	1,789.66	-63.36	110.03	126.97	0.00	0.00	0.00	
1,900.00	10.71	119.94	1,887.92	-72.64	126.14	145.56	0.00	0.00	0.00	
2,000.00	10.71	119.94	1,986.17	-81.92	142.25	164.15	0.00	0.00	0.00	
2,100.00	10.71	119.94	2,084.43	-91.20	158.36	182.74	0.00	0.00	0.00	
2,200.00	10.71	119.94	2,182.69	-100.47	174.47	201.34	0.00	0.00	0.00	
2,300.00	10.71	119.94	2,280.94	-109.75	190.58	219.93	0.00	0.00	0.00	
2,400.00	10.71	119.94	2,379.20	-119.03	206.70	238.52	0.00	0.00	0.00	
2,500.00	10.71	119.94	2,477.46	-128.31	222.81	257.11	0.00	0.00	0.00	
2,600.00	10.71	119.94	2,575.71	-137.59	238.92	275.70	0.00	0.00	0.00	
2,700.00	10.71	119.94	2,673.97	-146.86	255.03	294.30	0.00	0.00	0.00	
2,800.00	10.71	119.94	2,772.23	-156.14	271.14	312.89	0.00	0.00	0.00	
2,900.00	10.71	119.94	2,870.48	-165.42	287.25	331.48	0.00	0.00	0.00	
3,000.00	10.71	119.94	2,968.74	-174.70	303.37	350.07	0.00	0.00	0.00	
3,100.00	10.71	119.94	3,066.99	-183.98	319.48	368.66	0.00	0.00	0.00	
3,200.00	10.71	119.94	3,165.25	-193.26	335.59	387.26	0.00	0.00	0.00	
3,300.00	10.71	119.94	3,263.51	-202.53	351.70	405.85	0.00	0.00	0.00	
3,400.00	10.71	119.94	3,361.76	-211.81	367.81	424.44	0.00	0.00	0.00	
3,500.00	10.71	119.94	3,460.02	-221.09	383.92	443.03	0.00	0.00	0.00	
3,600.00	10.71	119.94	3,558.28	-230.37	400.03	461.62	0.00	0.00	0.00	
3,700.00	10.71	119.94	3,656.53	-239.65	416.15	480.22	0.00	0.00	0.00	
3,800.00	10.71	119.94	3,754.79	-248.92	432.26	498.81	0.00	0.00	0.00	
3,900.00	10.71	119.94	3,853.05	-258.20	448.37	517.40	0.00	0.00	0.00	
4,000.00	10.71	119.94	3,951.30	-267.48	464.48	535.99	0.00	0.00	0.00	
4,100.00	10.71	119.94	4,049.56	-276.76	480.59	554.58	0.00	0.00	0.00	
4,199.17	10.71	119.94	4,147.00	-285.96	496.57	573.02	0.00	0.00	0.00	
PARKMAN										
4,200.00	10.71	119.94	4,147.82	-286.04	496.70	573.18	0.00	0.00	0.00	
4,300.00	10.71	119.94	4,246.07	-295.31	512.81	591.77	0.00	0.00	0.00	
4,400.00	10.71	119.94	4,344.33	-304.59	528.93	610.36	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 22-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Site:	WELD_CANNON 5-3 PAD	North Reference:	True
Well:	P_CANNON 22-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 22-3		
Design:	PLAN #1 9-13-10 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)
4,461.75	10.71	119.94	4,405.00	-310.32	538.87	621.84	0.00	0.00	0.00
SUSSEX									
4,500.00	10.71	119.94	4,442.59	-313.87	545.04	628.95	0.00	0.00	0.00
4,600.00	10.71	119.94	4,540.84	-323.15	561.15	647.54	0.00	0.00	0.00
4,700.00	10.71	119.94	4,639.10	-332.43	577.26	666.14	0.00	0.00	0.00
4,800.00	10.71	119.94	4,737.35	-341.71	593.37	684.73	0.00	0.00	0.00
4,900.00	10.71	119.94	4,835.61	-350.98	609.48	703.32	0.00	0.00	0.00
5,000.00	10.71	119.94	4,933.87	-360.26	625.59	721.91	0.00	0.00	0.00
5,100.00	10.71	119.94	5,032.12	-369.54	641.71	740.50	0.00	0.00	0.00
5,200.00	10.71	119.94	5,130.38	-378.82	657.82	759.10	0.00	0.00	0.00
5,300.00	10.71	119.94	5,228.64	-388.10	673.93	777.69	0.00	0.00	0.00
5,379.12	10.71	119.94	5,306.38	-395.44	686.68	792.40	0.00	0.00	0.00
Start Drop -2.00									
5,400.00	10.30	119.94	5,326.91	-397.34	689.98	796.20	2.00	-2.00	0.00
5,500.00	8.30	119.94	5,425.59	-405.40	703.97	812.36	2.00	-2.00	0.00
5,600.00	6.30	119.94	5,524.77	-411.74	714.98	825.06	2.00	-2.00	0.00
5,700.00	4.30	119.94	5,624.34	-416.34	722.98	834.29	2.00	-2.00	0.00
5,800.00	2.30	119.94	5,724.17	-419.21	727.97	840.04	2.00	-2.00	0.00
5,900.00	0.30	119.94	5,824.14	-420.34	729.93	842.31	2.00	-2.00	0.00
5,914.86	0.00	0.00	5,839.00	-420.36	729.96	842.35	2.00	-2.00	0.00
Start 2108.00 hold at 5914.86 MD									
6,000.00	0.00	0.00	5,924.14	-420.36	729.96	842.35	0.00	0.00	0.00
6,100.00	0.00	0.00	6,024.14	-420.36	729.96	842.35	0.00	0.00	0.00
6,200.00	0.00	0.00	6,124.14	-420.36	729.96	842.35	0.00	0.00	0.00
6,300.00	0.00	0.00	6,224.14	-420.36	729.96	842.35	0.00	0.00	0.00
6,400.00	0.00	0.00	6,324.14	-420.36	729.96	842.35	0.00	0.00	0.00
6,500.00	0.00	0.00	6,424.14	-420.36	729.96	842.35	0.00	0.00	0.00
6,600.00	0.00	0.00	6,524.14	-420.36	729.96	842.35	0.00	0.00	0.00
6,700.00	0.00	0.00	6,624.14	-420.36	729.96	842.35	0.00	0.00	0.00
6,800.00	0.00	0.00	6,724.14	-420.36	729.96	842.35	0.00	0.00	0.00
6,900.00	0.00	0.00	6,824.14	-420.36	729.96	842.35	0.00	0.00	0.00
6,914.86	0.00	0.00	6,839.00	-420.36	729.96	842.35	0.00	0.00	0.00
NIO									
7,000.00	0.00	0.00	6,924.14	-420.36	729.96	842.35	0.00	0.00	0.00
7,100.00	0.00	0.00	7,024.14	-420.36	729.96	842.35	0.00	0.00	0.00
7,200.00	0.00	0.00	7,124.14	-420.36	729.96	842.35	0.00	0.00	0.00
7,208.86	0.00	0.00	7,133.00	-420.36	729.96	842.35	0.00	0.00	0.00
CODELL									
7,294.86	0.00	0.00	7,219.00	-420.36	729.96	842.35	0.00	0.00	0.00
GREENHORN									
7,300.00	0.00	0.00	7,224.14	-420.36	729.96	842.35	0.00	0.00	0.00
7,400.00	0.00	0.00	7,324.14	-420.36	729.96	842.35	0.00	0.00	0.00
7,500.00	0.00	0.00	7,424.14	-420.36	729.96	842.35	0.00	0.00	0.00
7,600.00	0.00	0.00	7,524.14	-420.36	729.96	842.35	0.00	0.00	0.00
7,654.86	0.00	0.00	7,579.00	-420.36	729.96	842.35	0.00	0.00	0.00
J SAND									
7,700.00	0.00	0.00	7,624.14	-420.36	729.96	842.35	0.00	0.00	0.00
7,800.00	0.00	0.00	7,724.14	-420.36	729.96	842.35	0.00	0.00	0.00
7,863.86	0.00	0.00	7,788.00	-420.36	729.96	842.35	0.00	0.00	0.00
DAKOTA									
7,900.00	0.00	0.00	7,824.14	-420.36	729.96	842.35	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 22-3
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4847' & KB 15' @ 4862.00ft (ASSUMED)
Site:	WELD_CANNON 5-3 PAD	North Reference:	True
Well:	P_CANNON 22-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 22-3		
Design:	PLAN #1 9-13-10 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)
8,000.00	0.00	0.00	7,924.14	-420.36	729.96	842.35	0.00	0.00	0.00
8,022.86	0.00	0.00	7,947.00	-420.36	729.96	842.35	0.00	0.00	0.00
PBHL CANNON 22-3 2006' FNL 631' FWL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL CANNON 22-3 2C	0.00	0.00	7,947.00	-420.36	729.96	1,305,168.31	3,236,326.96	40° 10' 4.760 N	104° 39' 15.631 W
- plan hits target center									
- Circle (radius 50.00)									

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

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,199.17	4,131.00	PARKMAN				
4,461.75	4,389.00	SUSSEX				
6,914.86	6,823.00	NIO				
7,208.86	7,117.00	CODELL				
7,294.86	7,203.00	GREENHORN				
7,654.86	7,563.00	J SAND				
7,863.86	7,772.00	DAKOTA				

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
1,385.74	1,382.62	-24.93	43.28	Start 3993.38 hold at 1385.74 MD
5,379.12	5,306.38	-395.44	686.68	Start Drop -2.00
5,914.86	5,839.00	-420.36	729.96	Start 2108.00 hold at 5914.86 MD
8,022.86	7,947.00	-420.36	729.96	TD at 8022.86