



# **US ROCKIES REGION PLANNING**

COLORADO NORTHERN ZONE - 83

WELD\_BRYANT 37-30 PAD

P\_BRYANT 20-30

P\_BRYANT 20-30

Plan: PLAN #1 4-9-10 RHS

## **Standard Planning Report**

09 April, 2010

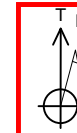




Project: COLORADO NORTHERN ZONE - 83  
 Site: WELD\_BRYANT 37-30 PAD  
 Well: P\_BRYANT 20-30  
 Wellbore: P\_BRYANT 20-30  
 Section: SECTION 30 T2N R68W  
 SHL: 284 FSL 1328 FEL  
 Design: PLAN #1 4-9-10 RHS  
 Latitude: 40° 6' 11.009 N  
 Longitude: 105° 2' 29.764 W  
 GL: 4928.00  
 KB: WELL @ 4943.00ft (Original Well Elev)



**Weatherford**



Azimuths to True North  
 Magnetic North: 9.14°

Magnetic Field  
 Strength: 53068.1snT  
 Dip Angle: 66.80°  
 Date: 4/9/2010  
 Model: IGRF2010

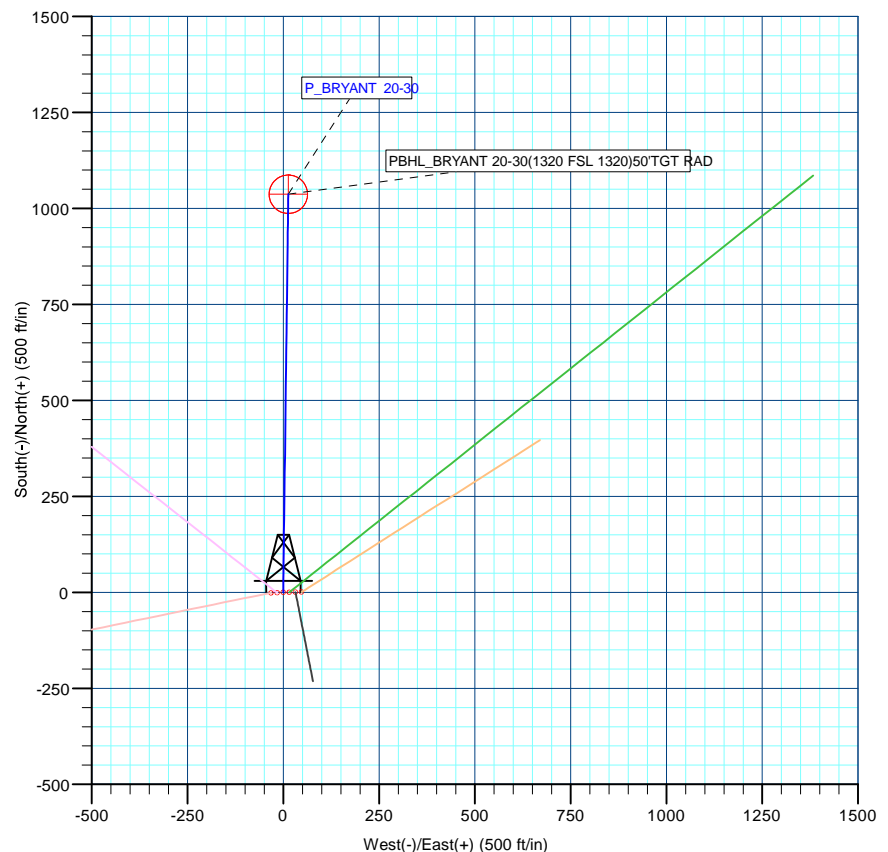
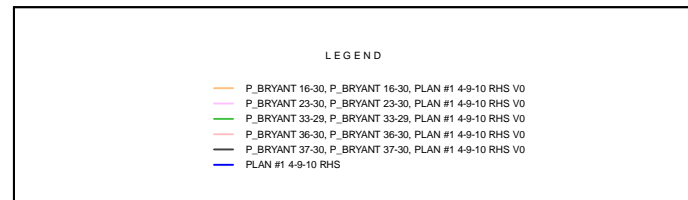
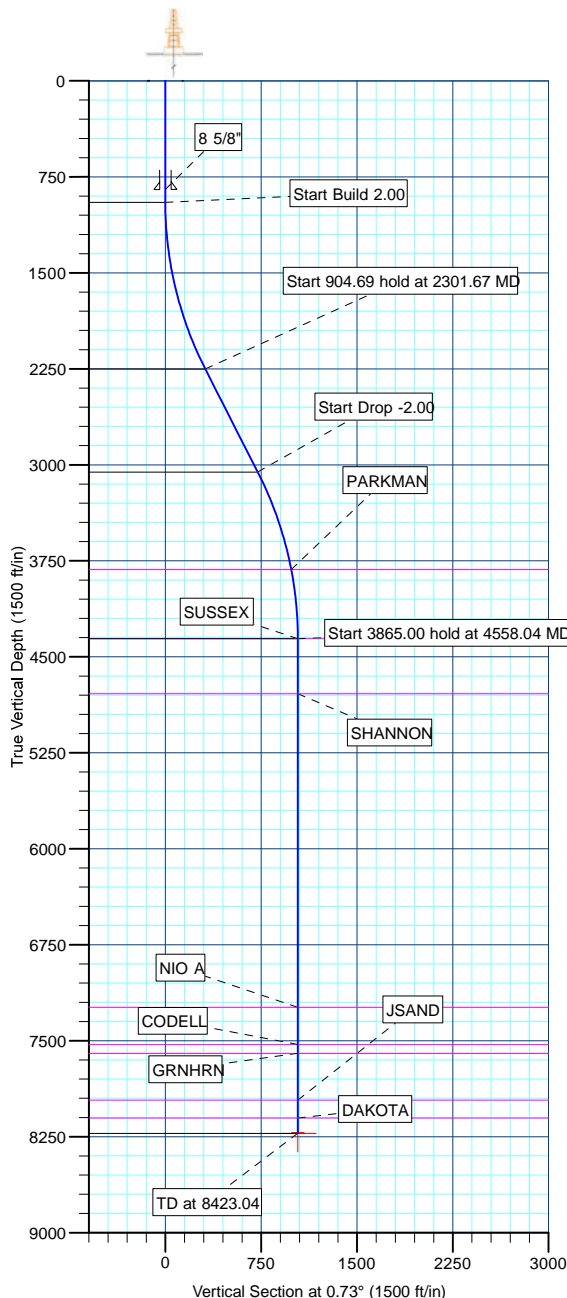
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3820.00	4014.79	PARKMAN
4360.00	4558.04	SUSSEX
4790.00	4988.04	SHANNON
7240.00	7438.04	NIO A
7530.00	7728.04	CODELL
7600.00	7798.04	GRNHRN
7965.00	8163.04	JSAND
8105.00	8303.04	DAKOTA

CASING DETAILS			
TVD	MD	Name	Size
850.00	850.00	8 5/8"	8.62

SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00	
2301.67	27.03	0.73	2252.08	312.98	3.97	2.00	0.73	313.00	Start 904.69 hold at 2301.67 MD	
3206.36	27.03	0.73	3057.92	724.14	9.18	0.00	0.00	724.19	Start Drop -2.00	
4558.04	0.00	0.00	4360.00	1037.11	13.15	2.00	180.00	1037.20	Start 3865.00 hold at 4558.04 MD	
8423.04	0.00	0.00	8225.00	1037.11	13.15	0.00	0.00	1037.20	TD at 8423.04	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)							
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape	
PBHL	8225.00	1037.11	13.15	40° 6' 21.258 N	105° 2' 29.594 W	Circle (Radius: 50.00)	

WELL DETAILS: P_BRYANT 20-30							
+N/-S	+E/-W	Northing	Ground Level:	4928.00	Latitude	Longitude	Slot
0.00	0.00	1280719.80	Easting	3128227.49	40° 6' 11.009 N	105° 2' 29.764 W	



Plan: PLAN #1 4-9-10 RHS (P_BRYANT 20-30/P_BRYANT 20-30)	
Created By: Robert H. Scott	Date: 15:18, April 09 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_BRYANT 20-30
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4943.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4943.00ft (Original Well Elev)
Site:	WELD_BRYANT 37-30 PAD	North Reference:	True
Well:	P_BRYANT 20-30	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_BRYANT 20-30		
Design:	PLAN #1 4-9-10 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_BRYANT 37-30 PAD, SECTION 30 T2N R68W			
Site Position:		Northing:	1,280,720.26ft	Latitude:	40° 6' 11.012 N
From:	Lat/Long	Easting:	3,128,243.43ft	Longitude:	105° 2' 29.558 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.30 °

Well	P_BRYANT 20-30					
Well Position	+N/-S	-0.38 ft	Northing:	1,280,719.80 ft	Latitude:	40° 6' 11.009 N
	+E/-W	-15.94 ft	Easting:	3,128,227.49 ft	Longitude:	105° 2' 29.764 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,928.00 ft

Wellbore	P_BRYANT 20-30				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/9/2010	9.14	66.80	53,068

Design	PLAN #1 4-9-10 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	0.73

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	
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,301.67	27.03	0.73	2,252.08	312.98	3.97	2.00	2.00	0.00	0.73	
3,206.36	27.03	0.73	3,057.92	724.14	9.18	0.00	0.00	0.00	0.00	
4,558.04	0.00	0.00	4,360.00	1,037.11	13.15	2.00	-2.00	0.00	180.00	
8,423.04	0.00	0.00	8,225.00	1,037.11	13.15	0.00	0.00	0.00	0.00	PBHL_BRYANT 20

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_BRYANT 20-30
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4943.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4943.00ft (Original Well Elev)
Site:	WELD_BRYANT 37-30 PAD	North Reference:	True
Well:	P_BRYANT 20-30	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_BRYANT 20-30		
Design:	PLAN #1 4-9-10 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)
Start Build 2.00									
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	1.00	0.73	1,000.00	0.44	0.01	0.44	2.00	2.00	0.00
1,100.00	3.00	0.73	1,099.93	3.93	0.05	3.93	2.00	2.00	0.00
1,200.00	5.00	0.73	1,199.68	10.90	0.14	10.90	2.00	2.00	0.00
1,300.00	7.00	0.73	1,299.13	21.35	0.27	21.35	2.00	2.00	0.00
1,400.00	9.00	0.73	1,398.15	35.27	0.45	35.27	2.00	2.00	0.00
1,500.00	11.00	0.73	1,496.63	52.63	0.67	52.63	2.00	2.00	0.00
1,600.00	13.00	0.73	1,594.44	73.42	0.93	73.42	2.00	2.00	0.00
1,700.00	15.00	0.73	1,691.46	97.61	1.24	97.62	2.00	2.00	0.00
1,800.00	17.00	0.73	1,787.58	125.17	1.59	125.18	2.00	2.00	0.00
1,900.00	19.00	0.73	1,882.68	156.07	1.98	156.08	2.00	2.00	0.00
2,000.00	21.00	0.73	1,976.65	190.26	2.41	190.28	2.00	2.00	0.00
2,100.00	23.00	0.73	2,069.36	227.72	2.89	227.74	2.00	2.00	0.00
2,200.00	25.00	0.73	2,160.71	268.39	3.40	268.41	2.00	2.00	0.00
2,300.00	27.00	0.73	2,250.59	312.22	3.96	312.24	2.00	2.00	0.00
Start 904.69 hold at 2301.67 MD									
2,301.67	27.03	0.73	2,252.08	312.98	3.97	313.00	2.00	2.00	0.00
2,400.00	27.03	0.73	2,339.66	357.67	4.53	357.69	0.00	0.00	0.00
2,500.00	27.03	0.73	2,428.74	403.11	5.11	403.14	0.00	0.00	0.00
2,600.00	27.03	0.73	2,517.81	448.56	5.69	448.60	0.00	0.00	0.00
2,700.00	27.03	0.73	2,606.88	494.01	6.26	494.05	0.00	0.00	0.00
2,800.00	27.03	0.73	2,695.96	539.45	6.84	539.50	0.00	0.00	0.00
2,900.00	27.03	0.73	2,785.03	584.90	7.41	584.95	0.00	0.00	0.00
3,000.00	27.03	0.73	2,874.11	630.35	7.99	630.40	0.00	0.00	0.00
3,100.00	27.03	0.73	2,963.18	675.80	8.57	675.85	0.00	0.00	0.00
3,200.00	27.03	0.73	3,052.25	721.24	9.14	721.30	0.00	0.00	0.00
Start Drop -2.00									
3,206.36	27.03	0.73	3,057.92	724.14	9.18	724.19	0.00	0.00	0.00
3,300.00	25.16	0.73	3,142.01	765.32	9.70	765.38	2.00	-2.00	0.00
3,400.00	23.16	0.73	3,233.24	806.25	10.22	806.31	2.00	-2.00	0.00
3,500.00	21.16	0.73	3,325.85	843.96	10.70	844.03	2.00	-2.00	0.00
3,600.00	19.16	0.73	3,419.72	878.42	11.14	878.49	2.00	-2.00	0.00
3,700.00	17.16	0.73	3,514.73	909.59	11.53	909.66	2.00	-2.00	0.00
3,800.00	15.16	0.73	3,610.78	937.42	11.88	937.49	2.00	-2.00	0.00
3,900.00	13.16	0.73	3,707.73	961.88	12.19	961.95	2.00	-2.00	0.00
4,000.00	11.16	0.73	3,805.49	982.94	12.46	983.02	2.00	-2.00	0.00
PARKMAN									
4,014.79	10.86	0.73	3,820.00	985.76	12.50	985.84	2.00	-2.00	0.00
4,100.00	9.16	0.73	3,903.91	1,000.58	12.68	1,000.66	2.00	-2.00	0.00
4,200.00	7.16	0.73	4,002.89	1,014.77	12.86	1,014.85	2.00	-2.00	0.00
4,300.00	5.16	0.73	4,102.31	1,025.50	13.00	1,025.58	2.00	-2.00	0.00
4,400.00	3.16	0.73	4,202.04	1,032.76	13.09	1,032.84	2.00	-2.00	0.00
4,500.00	1.16	0.73	4,301.97	1,036.53	13.14	1,036.61	2.00	-2.00	0.00
Start 3865.00 hold at 4558.04 MD - SUSSEX									
4,558.04	0.00	0.00	4,360.00	1,037.11	13.15	1,037.20	2.00	-2.00	-1.25
4,600.00	0.00	0.00	4,401.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
4,700.00	0.00	0.00	4,501.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
4,800.00	0.00	0.00	4,601.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
4,900.00	0.00	0.00	4,701.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
SHANNON									
4,988.04	0.00	0.00	4,790.00	1,037.11	13.15	1,037.20	0.00	0.00	0.00
5,000.00	0.00	0.00	4,801.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4943.00ft (Original Well Elev)
Site:	WELD_BRYANT 37-30 PAD	North Reference:	True
Well:	P_BRYANT 20-30	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_BRYANT 20-30		
Design:	PLAN #1 4-9-10 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)
5,100.00	0.00	0.00	4,901.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
5,200.00	0.00	0.00	5,001.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
5,300.00	0.00	0.00	5,101.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
5,400.00	0.00	0.00	5,201.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
5,500.00	0.00	0.00	5,301.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
5,600.00	0.00	0.00	5,401.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
5,700.00	0.00	0.00	5,501.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
5,800.00	0.00	0.00	5,601.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
5,900.00	0.00	0.00	5,701.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
6,000.00	0.00	0.00	5,801.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
6,100.00	0.00	0.00	5,901.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
6,200.00	0.00	0.00	6,001.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
6,300.00	0.00	0.00	6,101.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
6,400.00	0.00	0.00	6,201.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
6,500.00	0.00	0.00	6,301.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
6,600.00	0.00	0.00	6,401.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
6,700.00	0.00	0.00	6,501.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
6,800.00	0.00	0.00	6,601.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
6,900.00	0.00	0.00	6,701.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
7,000.00	0.00	0.00	6,801.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
7,100.00	0.00	0.00	6,901.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
7,200.00	0.00	0.00	7,001.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
7,300.00	0.00	0.00	7,101.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
7,400.00	0.00	0.00	7,201.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
NIO A									
7,438.04	0.00	0.00	7,240.00	1,037.11	13.15	1,037.20	0.00	0.00	0.00
7,500.00	0.00	0.00	7,301.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
7,600.00	0.00	0.00	7,401.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
7,700.00	0.00	0.00	7,501.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
CODELL									
7,728.04	0.00	0.00	7,530.00	1,037.11	13.15	1,037.20	0.00	0.00	0.00
GRNHRN									
7,798.04	0.00	0.00	7,600.00	1,037.11	13.15	1,037.20	0.00	0.00	0.00
7,800.00	0.00	0.00	7,601.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
7,900.00	0.00	0.00	7,701.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
8,000.00	0.00	0.00	7,801.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
8,100.00	0.00	0.00	7,901.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
JSAND									
8,163.04	0.00	0.00	7,965.00	1,037.11	13.15	1,037.20	0.00	0.00	0.00
8,200.00	0.00	0.00	8,001.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
8,300.00	0.00	0.00	8,101.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
DAKOTA									
8,303.04	0.00	0.00	8,105.00	1,037.11	13.15	1,037.20	0.00	0.00	0.00
8,400.00	0.00	0.00	8,201.96	1,037.11	13.15	1,037.20	0.00	0.00	0.00
PBHL_BRYANT 20-30(1320 FSL 1320)50'TGT RAD									
8,423.04	0.00	0.00	8,225.00	1,037.11	13.15	1,037.20	0.00	0.00	0.00

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_BRYANT 20-30
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4943.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4943.00ft (Original Well Elev)
Site:	WELD_BRYANT 37-30 PAD	North Reference:	True
Well:	P_BRYANT 20-30	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_BRYANT 20-30		
Design:	PLAN #1 4-9-10 RHS		

#### Design Targets

##### Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
PBHL_BRYANT 20-30	0.00	0.00	8,225.00	1,037.11	13.15	1,281,756.96	3,128,235.27	40° 6' 21.258 N	105° 2' 29.594 W
- plan hits target center									
- Circle (radius 50.00)									

#### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
850.00	850.00	8 5/8"	8.62	11.00

#### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,014.79	3,820.00	PARKMAN			
4,558.04	4,360.00	SUSSEX			
4,988.04	4,790.00	SHANNON			
7,438.04	7,240.00	NIO A			
7,728.04	7,530.00	CODELL			
7,798.04	7,600.00	GRNHRN			
8,163.04	7,965.00	JSAND			
8,303.04	8,105.00	DAKOTA			

#### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
950.00	950.00	0.00	0.00	Start Build 2.00
2,301.67	2,252.08	312.98	3.97	Start 904.69 hold at 2301.67 MD
3,206.36	3,057.92	724.14	9.18	Start Drop -2.00
4,558.04	4,360.00	1,037.11	13.15	Start 3865.00 hold at 4558.04 MD
8,423.04	8,225.00	1,037.11	13.15	TD at 8423.04