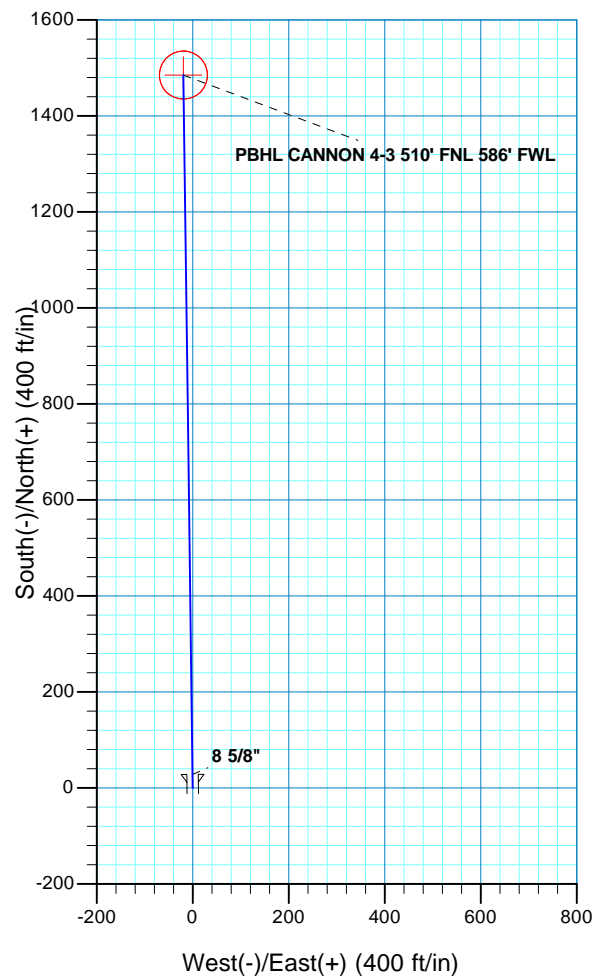
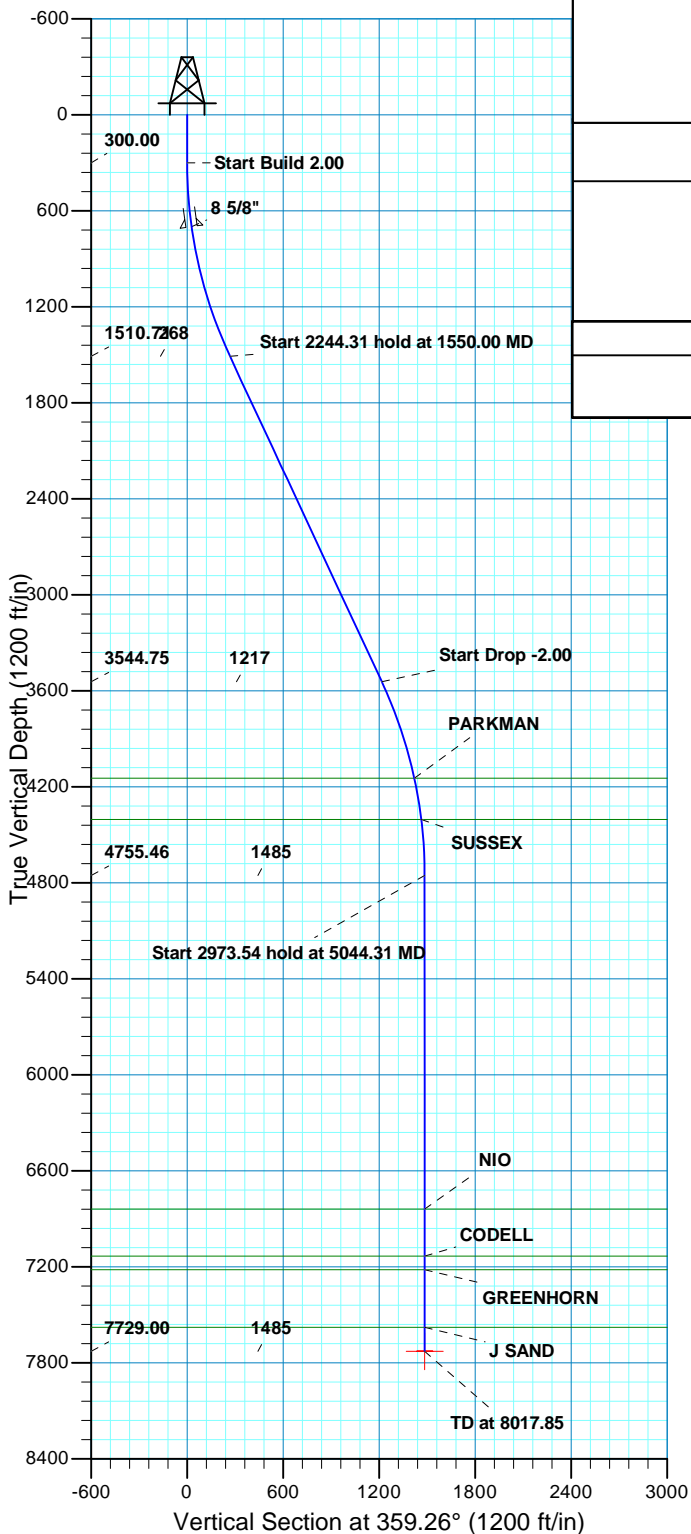


WELL DETAILS: P_CANNON 4-3					
GL 4847' & KB 15' @ 4862.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1305592.91	3235581.75	40° 10' 9.026 N	104° 39' 25.178 W

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL	7729.00	1485.18	-19.28	1307077.83	3235548.35	40° 10' 23.704 N	104° 39' 25.427 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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
1550.00	25.00	359.26	1510.71	268.39	-3.48	2.00	359.26	268.41	
3794.31	25.00	359.26	3544.75	1216.79	-15.80	0.00	0.00	1216.90	
5044.31	0.00	0.00	4755.46	1485.18	-19.28	2.00	180.00	1485.30	
8017.85	0.00	0.00	7729.00	1485.18	-19.28	0.00	0.00	1485.30	PBHL CANNON 4-3 510' FNL 586' FWL
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 T 2N R65W System Datum: Mean Sea Level						4147.00	4431.18	PARKMAN	
						4405.00	4692.97	SUSSEX	
						6839.00	7127.85	NIO	
						7133.00	7421.85	CODELL	
						7219.00	7507.85	GREENHORN	
						7579.00	7867.85	J SAND	
						CASING DETAILS			
			TVD	MD	Name	Size			
			700.00	701.31	8 5/8"	8.625			



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_CANNON 5-3 PAD

P_CANNON 4-3

P_CANNON 4-3

Plan: PLAN #1 9-13-10 RHS

Standard Planning Report

13 September, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 4-3
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 4-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 4-3		
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	Latitude: 40° 10' 9.026 N
From:	Lat/Long	Easting:	3,235,581.75 usft	Longitude: 104° 39' 25.178 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.54 °

Well	P_CANNON 4-3, 1995' FNL, 620' FWL			
Well Position	+N/-S	0.00 ft	Northing:	1,305,592.91 usft
	+E/-W	0.00 ft	Easting:	3,235,581.75 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level: 4,847.00 ft

Wellbore	P_CANNON 4-3				
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	359.26

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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,550.00	25.00	359.26	1,510.71	268.39	-3.48	2.00	2.00	0.00	359.26	
3,794.31	25.00	359.26	3,544.75	1,216.79	-15.80	0.00	0.00	0.00	0.00	
5,044.31	0.00	0.00	4,755.46	1,485.18	-19.28	2.00	-2.00	0.00	180.00	
8,017.85	0.00	0.00	7,729.00	1,485.18	-19.28	0.00	0.00	0.00	0.00	PBHL CANNON 4-3 5

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 4-3
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 4-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 4-3		
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
Start Build 2.00									
400.00	2.00	359.26	399.98	1.75	-0.02	1.75	2.00	2.00	0.00
500.00	4.00	359.26	499.84	6.98	-0.09	6.98	2.00	2.00	0.00
600.00	6.00	359.26	599.45	15.69	-0.20	15.69	2.00	2.00	0.00
700.00	8.00	359.26	698.70	27.88	-0.36	27.88	2.00	2.00	0.00
701.31	8.03	359.26	700.00	28.06	-0.36	28.06	2.00	2.00	0.00
8 5/8"									
800.00	10.00	359.26	797.47	43.52	-0.56	43.52	2.00	2.00	0.00
900.00	12.00	359.26	895.62	62.60	-0.81	62.60	2.00	2.00	0.00
1,000.00	14.00	359.26	993.06	85.09	-1.10	85.10	2.00	2.00	0.00
1,100.00	16.00	359.26	1,089.64	110.97	-1.44	110.98	2.00	2.00	0.00
1,200.00	18.00	359.26	1,185.27	140.20	-1.82	140.21	2.00	2.00	0.00
1,300.00	20.00	359.26	1,279.82	172.75	-2.24	172.77	2.00	2.00	0.00
1,400.00	22.00	359.26	1,373.17	208.59	-2.71	208.60	2.00	2.00	0.00
1,500.00	24.00	359.26	1,465.21	247.65	-3.22	247.67	2.00	2.00	0.00
1,550.00	25.00	359.26	1,510.71	268.39	-3.48	268.41	2.00	2.00	0.00
Start 2244.31 hold at 1550.00 MD									
1,600.00	25.00	359.26	1,556.03	289.51	-3.76	289.54	0.00	0.00	0.00
1,700.00	25.00	359.26	1,646.66	331.77	-4.31	331.80	0.00	0.00	0.00
1,800.00	25.00	359.26	1,737.29	374.03	-4.86	374.06	0.00	0.00	0.00
1,900.00	25.00	359.26	1,827.92	416.29	-5.40	416.32	0.00	0.00	0.00
2,000.00	25.00	359.26	1,918.55	458.55	-5.95	458.59	0.00	0.00	0.00
2,100.00	25.00	359.26	2,009.18	500.81	-6.50	500.85	0.00	0.00	0.00
2,200.00	25.00	359.26	2,099.81	543.06	-7.05	543.11	0.00	0.00	0.00
2,300.00	25.00	359.26	2,190.44	585.32	-7.60	585.37	0.00	0.00	0.00
2,400.00	25.00	359.26	2,281.07	627.58	-8.15	627.63	0.00	0.00	0.00
2,500.00	25.00	359.26	2,371.70	669.84	-8.70	669.90	0.00	0.00	0.00
2,600.00	25.00	359.26	2,462.34	712.10	-9.24	712.16	0.00	0.00	0.00
2,700.00	25.00	359.26	2,552.97	754.36	-9.79	754.42	0.00	0.00	0.00
2,800.00	25.00	359.26	2,643.60	796.61	-10.34	796.68	0.00	0.00	0.00
2,900.00	25.00	359.26	2,734.23	838.87	-10.89	838.94	0.00	0.00	0.00
3,000.00	25.00	359.26	2,824.86	881.13	-11.44	881.20	0.00	0.00	0.00
3,100.00	25.00	359.26	2,915.49	923.39	-11.99	923.47	0.00	0.00	0.00
3,200.00	25.00	359.26	3,006.12	965.65	-12.54	965.73	0.00	0.00	0.00
3,300.00	25.00	359.26	3,096.75	1,007.91	-13.09	1,007.99	0.00	0.00	0.00
3,400.00	25.00	359.26	3,187.38	1,050.16	-13.63	1,050.25	0.00	0.00	0.00
3,500.00	25.00	359.26	3,278.01	1,092.42	-14.18	1,092.51	0.00	0.00	0.00
3,600.00	25.00	359.26	3,368.64	1,134.68	-14.73	1,134.78	0.00	0.00	0.00
3,700.00	25.00	359.26	3,459.27	1,176.94	-15.28	1,177.04	0.00	0.00	0.00
3,794.31	25.00	359.26	3,544.75	1,216.79	-15.80	1,216.90	0.00	0.00	0.00
Start Drop -2.00									
3,800.00	24.89	359.26	3,549.91	1,219.19	-15.83	1,219.29	2.00	-2.00	0.00
3,900.00	22.89	359.26	3,641.34	1,259.68	-16.35	1,259.78	2.00	-2.00	0.00
4,000.00	20.89	359.26	3,734.13	1,296.95	-16.84	1,297.06	2.00	-2.00	0.00
4,100.00	18.89	359.26	3,828.16	1,330.96	-17.28	1,331.07	2.00	-2.00	0.00
4,200.00	16.89	359.26	3,923.32	1,361.67	-17.68	1,361.78	2.00	-2.00	0.00
4,300.00	14.89	359.26	4,019.50	1,389.04	-18.03	1,389.16	2.00	-2.00	0.00
4,400.00	12.89	359.26	4,116.57	1,413.03	-18.34	1,413.15	2.00	-2.00	0.00
4,431.18	12.26	359.26	4,147.00	1,419.82	-18.43	1,419.94	2.00	-2.00	0.00
PARKMAN									

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 4-3
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 4-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 4-3		
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)
4,500.00	10.89	359.26	4,214.42	1,433.63	-18.61	1,433.75	2.00	-2.00	0.00
4,600.00	8.89	359.26	4,312.93	1,450.80	-18.84	1,450.92	2.00	-2.00	0.00
4,692.97	7.03	359.26	4,405.00	1,463.66	-19.00	1,463.79	2.00	-2.00	0.00
SUSSEX									
4,700.00	6.89	359.26	4,411.98	1,464.51	-19.01	1,464.64	2.00	-2.00	0.00
4,800.00	4.89	359.26	4,511.45	1,474.77	-19.15	1,474.89	2.00	-2.00	0.00
4,900.00	2.89	359.26	4,611.21	1,481.55	-19.23	1,481.67	2.00	-2.00	0.00
5,000.00	0.89	359.26	4,711.15	1,484.84	-19.28	1,484.96	2.00	-2.00	0.00
5,044.31	0.00	0.00	4,755.46	1,485.18	-19.28	1,485.30	2.00	-2.00	0.00
Start 2973.54 hold at 5044.31 MD									
5,100.00	0.00	0.00	4,811.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
5,200.00	0.00	0.00	4,911.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
5,300.00	0.00	0.00	5,011.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
5,400.00	0.00	0.00	5,111.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
5,500.00	0.00	0.00	5,211.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
5,600.00	0.00	0.00	5,311.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
5,700.00	0.00	0.00	5,411.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
5,800.00	0.00	0.00	5,511.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
5,900.00	0.00	0.00	5,611.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
6,000.00	0.00	0.00	5,711.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
6,100.00	0.00	0.00	5,811.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
6,200.00	0.00	0.00	5,911.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
6,300.00	0.00	0.00	6,011.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
6,400.00	0.00	0.00	6,111.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
6,500.00	0.00	0.00	6,211.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
6,600.00	0.00	0.00	6,311.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
6,700.00	0.00	0.00	6,411.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
6,800.00	0.00	0.00	6,511.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
6,900.00	0.00	0.00	6,611.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
7,000.00	0.00	0.00	6,711.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
7,100.00	0.00	0.00	6,811.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
7,127.85	0.00	0.00	6,839.00	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
NIO									
7,200.00	0.00	0.00	6,911.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
7,300.00	0.00	0.00	7,011.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
7,400.00	0.00	0.00	7,111.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
7,421.85	0.00	0.00	7,133.00	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
CODELL									
7,500.00	0.00	0.00	7,211.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
7,507.85	0.00	0.00	7,219.00	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
GREENHORN									
7,600.00	0.00	0.00	7,311.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
7,700.00	0.00	0.00	7,411.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
7,800.00	0.00	0.00	7,511.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
7,867.85	0.00	0.00	7,579.00	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
J SAND									
7,900.00	0.00	0.00	7,611.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
8,000.00	0.00	0.00	7,711.15	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
8,017.85	0.00	0.00	7,729.00	1,485.18	-19.28	1,485.30	0.00	0.00	0.00
PBHL CANNON 4-3 510' FNL 586' FWL									

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_CANNON 4-3
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 4-3	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_CANNON 4-3		
Design:	PLAN #1 9-13-10 RHS		

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 4-3 51C	0.00	0.00	7,729.00	1,485.18	-19.28	1,307,077.83	3,235,548.35	40° 10' 23.704 N	104° 39' 25.427 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
701.31	700.00	8 5/8"	8.625	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,431.18	4,147.00	PARKMAN				
4,692.97	4,405.00	SUSSEX				
7,127.85	6,839.00	NIO				
7,421.85	7,133.00	CODELL				
7,507.85	7,219.00	GREENHORN				
7,867.85	7,579.00	J SAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
1,550.00	1,510.71	268.39	-3.48	Start 2244.31 hold at 1550.00 MD	
3,794.31	3,544.75	1,216.79	-15.80	Start Drop -2.00	
5,044.31	4,755.46	1,485.18	-19.28	Start 2973.54 hold at 5044.31 MD	
8,017.85	7,729.00	1,485.18	-19.28	TD at 8017.85	