

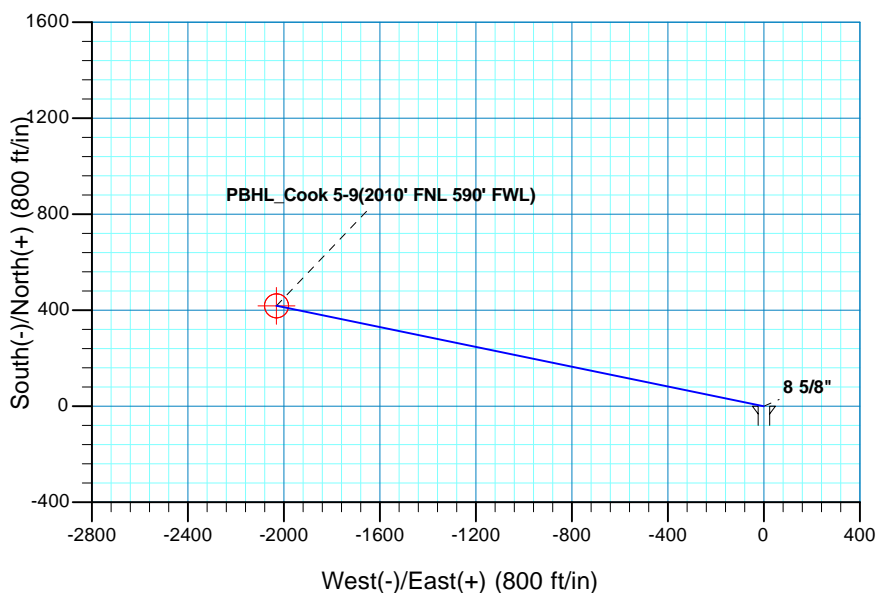
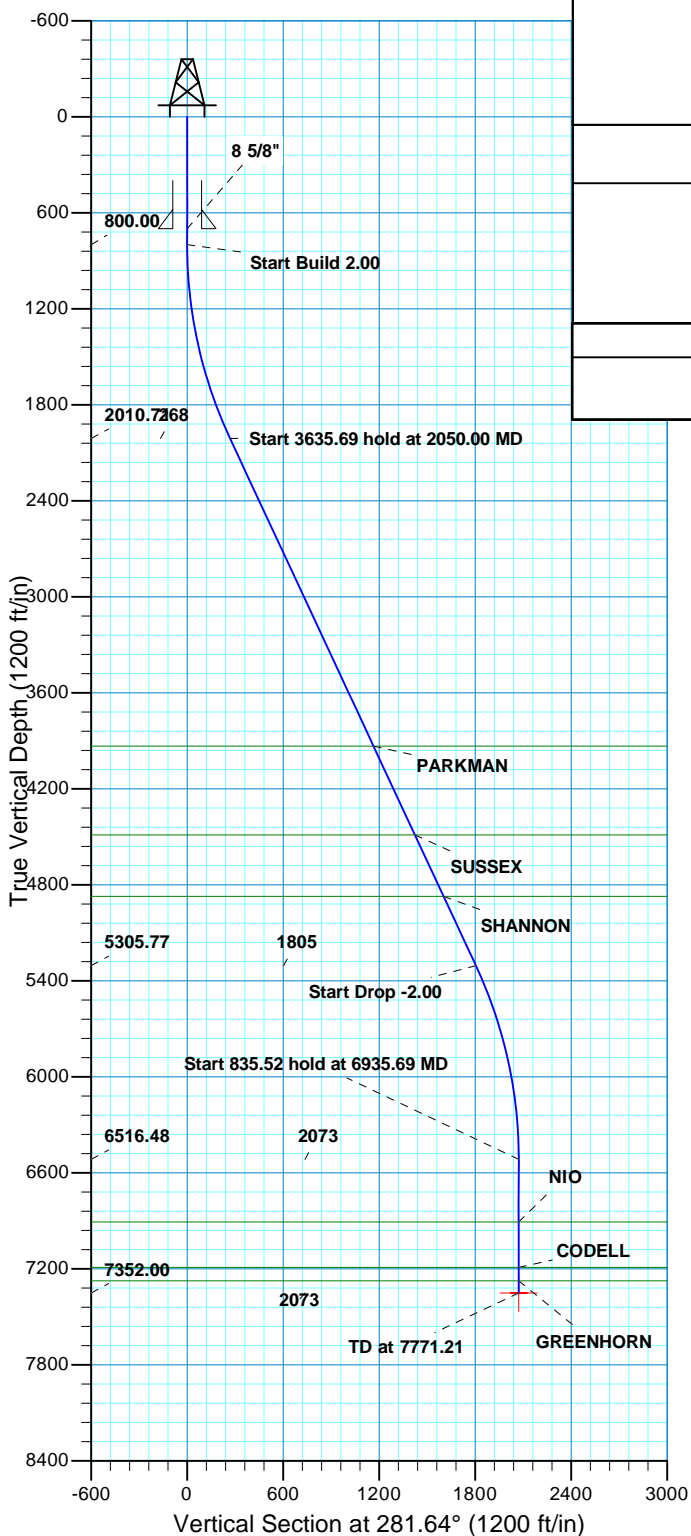
WELL DETAILS: P_Cook 5-9					
GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1299985.25	3232299.94	40° 9' 13.917 N	104° 40' 8.130 W

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7352.00	418.29	-2030.69	1300384.49	3230265.42	40° 9' 18.050 N	104° 40' 34.284 W	Circle (Radius: 50.00)
- plan hits target center								

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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	
2050.00	25.00	281.64	2010.71	54.15	-262.89	2.00	281.64	268.41	
5685.69	25.00	281.64	5305.77	364.14	-1767.80	0.00	0.00	1804.92	
6935.69	0.00	0.00	6516.48	418.29	-2030.69	2.00	180.00	2073.33	
7771.21	0.00	0.00	7352.00	418.29	-2030.69	0.00	0.00	2073.33	PBHL_Cook 5-9(2010' FNL 590' FWL)

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83				FORMATION TOP DETAILS		
Geodetic System: US State Plane 1983				TVDPath	MDPath	Formation
Datum: North American Datum 1983				3934.00	4172.11	PARKMAN
Ellipsoid: GRS 1980				4488.00	4783.38	SUSSEX
Zone: Colorado Northern Zone				4872.00	5207.08	SHANNON
Location: SECTION 9 T2N R65W				6908.00	7327.21	NIO
System Datum: Mean Sea Level				7192.00	7611.21	CODELL
				7276.00	7695.21	GREENHORN

CASING DETAILS				
TVD	MD	Name	Size	
700.00	700.00	8 5/8"	8.625	





Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_COOK 25-9 PAD

P_Cook 5-9

P_Cook 5-9

Plan: PLAN #1 8-16-10 RHS

Standard Planning Report

16 August, 2010



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 5-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Site:	WELD_COOK 25-9 PAD	North Reference:	True
Well:	P_Cook 5-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 5-9		
Design:	PLAN #1 8-16-10 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_COOK 25-9 PAD, SECTION 9 T2N R65W				
Site Position:		Northing:	1,300,001.29 usft	Latitude:	40° 9' 14.076 N
From:	Lat/Long	Easting:	3,232,300.07 usft	Longitude:	104° 40' 8.126 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.54 °

Well	P_Cook 5-9, 2442' FNL 2623' FWL					
Well Position	+N/-S	-16.04 ft	Northing:	1,299,985.25 usft	Latitude:	40° 9' 13.917 N
	+E/-W	-0.28 ft	Easting:	3,232,299.94 usft	Longitude:	104° 40' 8.130 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,873.00 ft

Wellbore	P_Cook 5-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/16/2010	8.90	66.90	53,100

Design	PLAN #1 8-16-10 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	281.64

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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,050.00	25.00	281.64	2,010.71	54.15	-262.89	2.00	2.00	0.00	281.64	
5,685.69	25.00	281.64	5,305.77	364.14	-1,767.80	0.00	0.00	0.00	0.00	
6,935.69	0.00	0.00	6,516.48	418.29	-2,030.69	2.00	-2.00	0.00	180.00	
7,771.21	0.00	0.00	7,352.00	418.29	-2,030.69	0.00	0.00	0.00	0.00	PBHL_Cook 5-9(2010)

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 5-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Site:	WELD_COOK 25-9 PAD	North Reference:	True
Well:	P_Cook 5-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 5-9		
Design:	PLAN #1 8-16-10 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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	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	0.00
700.00	0.00	0.00	700.00	0.00	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	0.00
Start Build 2.00										
900.00	2.00	281.64	899.98	0.35	-1.71	1.75	2.00	2.00	2.00	0.00
1,000.00	4.00	281.64	999.84	1.41	-6.83	6.98	2.00	2.00	2.00	0.00
1,100.00	6.00	281.64	1,099.45	3.17	-15.37	15.69	2.00	2.00	2.00	0.00
1,200.00	8.00	281.64	1,198.70	5.62	-27.31	27.88	2.00	2.00	2.00	0.00
1,300.00	10.00	281.64	1,297.47	8.78	-42.63	43.52	2.00	2.00	2.00	0.00
1,400.00	12.00	281.64	1,395.62	12.63	-61.32	62.60	2.00	2.00	2.00	0.00
1,500.00	14.00	281.64	1,493.06	17.17	-83.35	85.10	2.00	2.00	2.00	0.00
1,600.00	16.00	281.64	1,589.64	22.39	-108.70	110.98	2.00	2.00	2.00	0.00
1,700.00	18.00	281.64	1,685.27	28.29	-137.33	140.21	2.00	2.00	2.00	0.00
1,800.00	20.00	281.64	1,779.82	34.86	-169.22	172.77	2.00	2.00	2.00	0.00
1,900.00	22.00	281.64	1,873.17	42.09	-204.31	208.60	2.00	2.00	2.00	0.00
2,000.00	24.00	281.64	1,965.21	49.97	-242.58	247.67	2.00	2.00	2.00	0.00
2,050.00	25.00	281.64	2,010.71	54.15	-262.89	268.41	2.00	2.00	2.00	0.00
Start 3635.69 hold at 2050.00 MD										
2,100.00	25.00	281.64	2,056.03	58.41	-283.59	289.54	0.00	0.00	0.00	0.00
2,200.00	25.00	281.64	2,146.66	66.94	-324.98	331.80	0.00	0.00	0.00	0.00
2,300.00	25.00	281.64	2,237.29	75.47	-366.37	374.06	0.00	0.00	0.00	0.00
2,400.00	25.00	281.64	2,327.92	83.99	-407.76	416.32	0.00	0.00	0.00	0.00
2,500.00	25.00	281.64	2,418.55	92.52	-449.16	458.59	0.00	0.00	0.00	0.00
2,600.00	25.00	281.64	2,509.18	101.05	-490.55	500.85	0.00	0.00	0.00	0.00
2,700.00	25.00	281.64	2,599.81	109.57	-531.94	543.11	0.00	0.00	0.00	0.00
2,800.00	25.00	281.64	2,690.44	118.10	-573.34	585.37	0.00	0.00	0.00	0.00
2,900.00	25.00	281.64	2,781.07	126.62	-614.73	627.63	0.00	0.00	0.00	0.00
3,000.00	25.00	281.64	2,871.70	135.15	-656.12	669.90	0.00	0.00	0.00	0.00
3,100.00	25.00	281.64	2,962.34	143.68	-697.51	712.16	0.00	0.00	0.00	0.00
3,200.00	25.00	281.64	3,052.97	152.20	-738.91	754.42	0.00	0.00	0.00	0.00
3,300.00	25.00	281.64	3,143.60	160.73	-780.30	796.68	0.00	0.00	0.00	0.00
3,400.00	25.00	281.64	3,234.23	169.26	-821.69	838.94	0.00	0.00	0.00	0.00
3,500.00	25.00	281.64	3,324.86	177.78	-863.09	881.20	0.00	0.00	0.00	0.00
3,600.00	25.00	281.64	3,415.49	186.31	-904.48	923.47	0.00	0.00	0.00	0.00
3,700.00	25.00	281.64	3,506.12	194.83	-945.87	965.73	0.00	0.00	0.00	0.00
3,800.00	25.00	281.64	3,596.75	203.36	-987.26	1,007.99	0.00	0.00	0.00	0.00
3,900.00	25.00	281.64	3,687.38	211.89	-1,028.66	1,050.25	0.00	0.00	0.00	0.00
4,000.00	25.00	281.64	3,778.01	220.41	-1,070.05	1,092.51	0.00	0.00	0.00	0.00
4,100.00	25.00	281.64	3,868.64	228.94	-1,111.44	1,134.78	0.00	0.00	0.00	0.00
4,172.11	25.00	281.64	3,934.00	235.09	-1,141.29	1,165.25	0.00	0.00	0.00	0.00
PARKMAN										
4,200.00	25.00	281.64	3,959.27	237.47	-1,152.83	1,177.04	0.00	0.00	0.00	0.00
4,300.00	25.00	281.64	4,049.90	245.99	-1,194.23	1,219.30	0.00	0.00	0.00	0.00
4,400.00	25.00	281.64	4,140.54	254.52	-1,235.62	1,261.56	0.00	0.00	0.00	0.00
4,500.00	25.00	281.64	4,231.17	263.04	-1,277.01	1,303.82	0.00	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 5-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Site:	WELD_COOK 25-9 PAD	North Reference:	True
Well:	P_Cook 5-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 5-9		
Design:	PLAN #1 8-16-10 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)	
4,600.00	25.00	281.64	4,321.80	271.57	-1,318.41	1,346.09	0.00	0.00	0.00	
4,700.00	25.00	281.64	4,412.43	280.10	-1,359.80	1,388.35	0.00	0.00	0.00	
4,783.38	25.00	281.64	4,488.00	287.21	-1,394.31	1,423.59	0.00	0.00	0.00	
SUSSEX										
4,800.00	25.00	281.64	4,503.06	288.62	-1,401.19	1,430.61	0.00	0.00	0.00	
4,900.00	25.00	281.64	4,593.69	297.15	-1,442.58	1,472.87	0.00	0.00	0.00	
5,000.00	25.00	281.64	4,684.32	305.68	-1,483.98	1,515.13	0.00	0.00	0.00	
5,100.00	25.00	281.64	4,774.95	314.20	-1,525.37	1,557.39	0.00	0.00	0.00	
5,200.00	25.00	281.64	4,865.58	322.73	-1,566.76	1,599.66	0.00	0.00	0.00	
5,207.08	25.00	281.64	4,872.00	323.33	-1,569.69	1,602.65	0.00	0.00	0.00	
SHANNON										
5,300.00	25.00	281.64	4,956.21	331.25	-1,608.16	1,641.92	0.00	0.00	0.00	
5,400.00	25.00	281.64	5,046.84	339.78	-1,649.55	1,684.18	0.00	0.00	0.00	
5,500.00	25.00	281.64	5,137.47	348.31	-1,690.94	1,726.44	0.00	0.00	0.00	
5,600.00	25.00	281.64	5,228.10	356.83	-1,732.33	1,768.70	0.00	0.00	0.00	
5,685.69	25.00	281.64	5,305.77	364.14	-1,767.80	1,804.92	0.00	0.00	0.00	
Start Drop -2.00										
5,700.00	24.71	281.64	5,318.75	365.35	-1,773.70	1,810.93	2.00	-2.00	0.00	
5,800.00	22.71	281.64	5,410.30	373.47	-1,813.08	1,851.15	2.00	-2.00	0.00	
5,900.00	20.71	281.64	5,503.20	380.93	-1,849.32	1,888.14	2.00	-2.00	0.00	
6,000.00	18.71	281.64	5,597.34	387.74	-1,882.35	1,921.87	2.00	-2.00	0.00	
6,100.00	16.71	281.64	5,692.59	393.87	-1,912.15	1,952.30	2.00	-2.00	0.00	
6,200.00	14.71	281.64	5,788.85	399.34	-1,938.68	1,979.38	2.00	-2.00	0.00	
6,300.00	12.71	281.64	5,885.99	404.12	-1,961.90	2,003.09	2.00	-2.00	0.00	
6,400.00	10.71	281.64	5,983.90	408.22	-1,981.78	2,023.39	2.00	-2.00	0.00	
6,500.00	8.71	281.64	6,082.47	411.62	-1,998.31	2,040.26	2.00	-2.00	0.00	
6,600.00	6.71	281.64	6,181.56	414.33	-2,011.45	2,053.68	2.00	-2.00	0.00	
6,700.00	4.71	281.64	6,281.05	416.34	-2,021.20	2,063.64	2.00	-2.00	0.00	
6,800.00	2.71	281.64	6,380.84	417.64	-2,027.55	2,070.11	2.00	-2.00	0.00	
6,900.00	0.71	281.64	6,480.79	418.25	-2,030.48	2,073.10	2.00	-2.00	0.00	
6,935.69	0.00	0.00	6,516.48	418.29	-2,030.69	2,073.33	2.00	-2.00	0.00	
Start 835.52 hold at 6935.69 MD										
7,000.00	0.00	0.00	6,580.79	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,680.79	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
7,200.00	0.00	0.00	6,780.79	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
7,300.00	0.00	0.00	6,880.79	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
7,327.21	0.00	0.00	6,908.00	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
NIO										
7,400.00	0.00	0.00	6,980.79	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,080.79	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,180.79	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
7,611.21	0.00	0.00	7,192.00	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
CODELL										
7,695.21	0.00	0.00	7,276.00	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
GREENHORN										
7,700.00	0.00	0.00	7,280.79	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
7,771.21	0.00	0.00	7,352.00	418.29	-2,030.69	2,073.33	0.00	0.00	0.00	
TD at 7771.21 - PBHL_Cook 5-9(2010' FNL 590' FWL)										

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 5-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Site:	WELD_COOK 25-9 PAD	North Reference:	True
Well:	P_Cook 5-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 5-9		
Design:	PLAN #1 8-16-10 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_Cook 5-9(2010' F - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,352.00	418.29	-2,030.69	1,300,384.49	3,230,265.42	40° 9' 18.050 N	104° 40' 34.284 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 (°)
4,172.11	3,934.00	PARKMAN			
4,783.38	4,488.00	SUSSEX			
5,207.08	4,872.00	SHANNON			
7,327.21	6,908.00	NIO			
7,611.21	7,192.00	CODELL			
7,695.21	7,276.00	GREENHORN			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
800.00	800.00	0.00	0.00	Start Build 2.00	
2,050.00	2,010.71	54.15	-262.89	Start 3635.69 hold at 2050.00 MD	
5,685.69	5,305.77	364.14	-1,767.80	Start Drop -2.00	
6,935.69	6,516.48	418.29	-2,030.69	Start 835.52 hold at 6935.69 MD	
7,771.21	7,352.00	418.29	-2,030.69	TD at 7771.21	