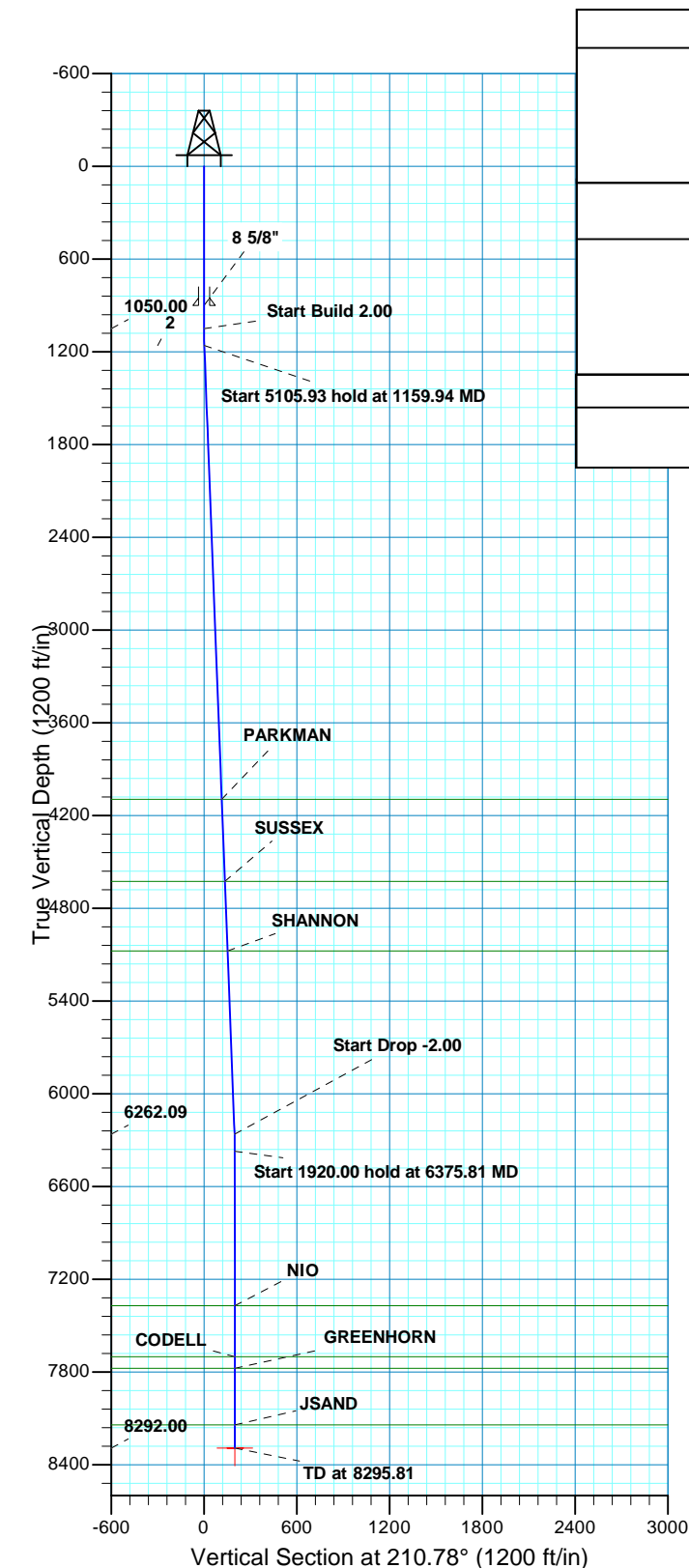
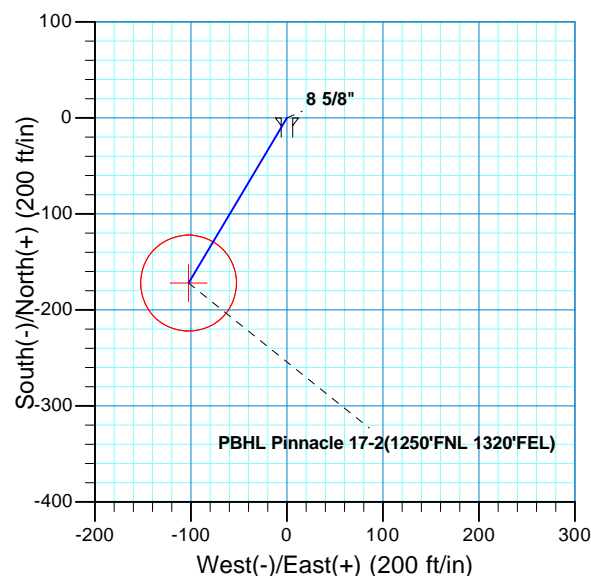


WELL DETAILS: P_Pinnacle 17-2					
GL 4982' & RKB 15' @ 4997.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1274170.20	3149544.19	40° 5' 5.103 N	104° 57' 55.940 W

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8292.00	-171.93	-102.41	1273997.66	3149442.82	40° 5' 3.404 N	104° 57' 57.258 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		
1050.00	0.00	0.00	1050.00	0.00	0.00	0.00	0.00	0.00		
1159.94	2.20	210.78	1159.91	-1.81	-1.08	2.00	210.78	2.11		
6265.87	2.20	210.78	6262.09	-170.11	-101.33	0.00	0.00	198.01		
6375.81	0.00	0.00	6372.00	-171.93	-102.41	2.00	180.00	200.12		
8295.81	0.00	0.00	8292.00	-171.93	-102.41	0.00	0.00	200.12		PBHL
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 2 T1N R68W System Datum: Mean Sea Level						FORMATION TOP DETAILS				
						TVDPath	MDPath	Formation		
						4096.00	4098.19	PARKMAN		
						4626.00	4628.58	SUSSEX		
						5076.00	5078.91	SHANNON		
						7372.00	7375.81	NIO		
						7702.00	7705.81	CODELL		
						7777.00	7780.81	GREENHORN		
						8142.00	8145.81	JSAND		
CASING DETAILS										
			TVD	MD	Name	Size				
			900.00	900.00	8 5/8"	8.625				



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_Pinnacle 17-2 Pad

P_Pinnacle 17-2

P_Pinnacle 17-2

Plan: Plan #2 9-8-10 RHS

Standard Planning Report

08 September, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 17-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4982' & RKB 15' @ 4997.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4982' & RKB 15' @ 4997.00ft (ASSUMED)
Site:	WELD_Pinnacle 17-2 Pad	North Reference:	True
Well:	P_Pinnacle 17-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 17-2		
Design:	Plan #2 9-8-10 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_Pinnacle 17-2 Pad, SECTION 2 T1N R68W		
Site Position:		Northing:	1,274,189.01 usft
From:	Lat/Long	Easting:	3,149,520.85 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Grid Convergence:	0.35 °

Well	P_Pinnacle 17-2, 1078' FNL 1217' FEL		
Well Position	+N/-S	-18.96 ft	Northing: 1,274,170.20 usft
	+E/-W	23.22 ft	Easting: 3,149,544.19 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	
		Latitude:	40° 5' 5.291 N
		Longitude:	104° 57' 56.239 W
		Ground Level:	4,982.00 ft

Wellbore	P_Pinnacle 17-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/17/2010	9.05	66.79	53,029

Design	Plan #2 9-8-10 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	210.78

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	
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,159.94	2.20	210.78	1,159.91	-1.81	-1.08	2.00	2.00	0.00	210.78	
6,265.87	2.20	210.78	6,262.09	-170.11	-101.33	0.00	0.00	0.00	0.00	
6,375.81	0.00	0.00	6,372.00	-171.93	-102.41	2.00	-2.00	0.00	180.00	
8,295.81	0.00	0.00	8,292.00	-171.93	-102.41	0.00	0.00	0.00	0.00	PBHL Pinnacle 17-2(

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 17-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4982' & RKB 15' @ 4997.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4982' & RKB 15' @ 4997.00ft (ASSUMED)
Site:	WELD_Pinnacle 17-2 Pad	North Reference:	True
Well:	P_Pinnacle 17-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 17-2		
Design:	Plan #2 9-8-10 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
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
8 5/8"									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,100.00	1.00	210.78	1,100.00	-0.37	-0.22	0.44	2.00	2.00	0.00
1,159.94	2.20	210.78	1,159.91	-1.81	-1.08	2.11	2.00	2.00	0.00
Start 5105.93 hold at 1159.94 MD									
1,200.00	2.20	210.78	1,199.94	-3.13	-1.87	3.65	0.00	0.00	0.00
1,300.00	2.20	210.78	1,299.87	-6.43	-3.83	7.48	0.00	0.00	0.00
1,400.00	2.20	210.78	1,399.80	-9.73	-5.79	11.32	0.00	0.00	0.00
1,500.00	2.20	210.78	1,499.72	-13.02	-7.76	15.16	0.00	0.00	0.00
1,600.00	2.20	210.78	1,599.65	-16.32	-9.72	18.99	0.00	0.00	0.00
1,700.00	2.20	210.78	1,699.58	-19.61	-11.68	22.83	0.00	0.00	0.00
1,800.00	2.20	210.78	1,799.50	-22.91	-13.65	26.67	0.00	0.00	0.00
1,900.00	2.20	210.78	1,899.43	-26.21	-15.61	30.50	0.00	0.00	0.00
2,000.00	2.20	210.78	1,999.35	-29.50	-17.57	34.34	0.00	0.00	0.00
2,100.00	2.20	210.78	2,099.28	-32.80	-19.54	38.18	0.00	0.00	0.00
2,200.00	2.20	210.78	2,199.21	-36.09	-21.50	42.01	0.00	0.00	0.00
2,300.00	2.20	210.78	2,299.13	-39.39	-23.46	45.85	0.00	0.00	0.00
2,400.00	2.20	210.78	2,399.06	-42.69	-25.43	49.69	0.00	0.00	0.00
2,500.00	2.20	210.78	2,498.99	-45.98	-27.39	53.52	0.00	0.00	0.00
2,600.00	2.20	210.78	2,598.91	-49.28	-29.35	57.36	0.00	0.00	0.00
2,700.00	2.20	210.78	2,698.84	-52.58	-31.32	61.20	0.00	0.00	0.00
2,800.00	2.20	210.78	2,798.77	-55.87	-33.28	65.03	0.00	0.00	0.00
2,900.00	2.20	210.78	2,898.69	-59.17	-35.24	68.87	0.00	0.00	0.00
3,000.00	2.20	210.78	2,998.62	-62.46	-37.21	72.71	0.00	0.00	0.00
3,100.00	2.20	210.78	3,098.54	-65.76	-39.17	76.54	0.00	0.00	0.00
3,200.00	2.20	210.78	3,198.47	-69.06	-41.13	80.38	0.00	0.00	0.00
3,300.00	2.20	210.78	3,298.40	-72.35	-43.10	84.22	0.00	0.00	0.00
3,400.00	2.20	210.78	3,398.32	-75.65	-45.06	88.05	0.00	0.00	0.00
3,500.00	2.20	210.78	3,498.25	-78.95	-47.02	91.89	0.00	0.00	0.00
3,600.00	2.20	210.78	3,598.18	-82.24	-48.99	95.73	0.00	0.00	0.00
3,700.00	2.20	210.78	3,698.10	-85.54	-50.95	99.56	0.00	0.00	0.00
3,800.00	2.20	210.78	3,798.03	-88.83	-52.91	103.40	0.00	0.00	0.00
3,900.00	2.20	210.78	3,897.96	-92.13	-54.88	107.24	0.00	0.00	0.00
4,000.00	2.20	210.78	3,997.88	-95.43	-56.84	111.07	0.00	0.00	0.00
4,098.19	2.20	210.78	4,096.00	-98.66	-58.77	114.84	0.00	0.00	0.00
PARKMAN									
4,100.00	2.20	210.78	4,097.81	-98.72	-58.81	114.91	0.00	0.00	0.00
4,200.00	2.20	210.78	4,197.73	-102.02	-60.77	118.75	0.00	0.00	0.00
4,300.00	2.20	210.78	4,297.66	-105.32	-62.73	122.58	0.00	0.00	0.00
4,400.00	2.20	210.78	4,397.59	-108.61	-64.70	126.42	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 17-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4982' & RKB 15' @ 4997.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4982' & RKB 15' @ 4997.00ft (ASSUMED)
Site:	WELD_Pinnacle 17-2 Pad	North Reference:	True
Well:	P_Pinnacle 17-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 17-2		
Design:	Plan #2 9-8-10 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	2.20	210.78	4,497.51	-111.91	-66.66	130.26	0.00	0.00	0.00
4,600.00	2.20	210.78	4,597.44	-115.20	-68.62	134.09	0.00	0.00	0.00
4,628.58	2.20	210.78	4,626.00	-116.15	-69.18	135.19	0.00	0.00	0.00
SUSSEX									
4,700.00	2.20	210.78	4,697.37	-118.50	-70.59	137.93	0.00	0.00	0.00
4,800.00	2.20	210.78	4,797.29	-121.80	-72.55	141.77	0.00	0.00	0.00
4,900.00	2.20	210.78	4,897.22	-125.09	-74.51	145.60	0.00	0.00	0.00
5,000.00	2.20	210.78	4,997.15	-128.39	-76.48	149.44	0.00	0.00	0.00
5,078.91	2.20	210.78	5,076.00	-130.99	-78.03	152.47	0.00	0.00	0.00
SHANNON									
5,100.00	2.20	210.78	5,097.07	-131.68	-78.44	153.28	0.00	0.00	0.00
5,200.00	2.20	210.78	5,197.00	-134.98	-80.40	157.11	0.00	0.00	0.00
5,300.00	2.20	210.78	5,296.92	-138.28	-82.37	160.95	0.00	0.00	0.00
5,400.00	2.20	210.78	5,396.85	-141.57	-84.33	164.79	0.00	0.00	0.00
5,500.00	2.20	210.78	5,496.78	-144.87	-86.29	168.62	0.00	0.00	0.00
5,600.00	2.20	210.78	5,596.70	-148.17	-88.26	172.46	0.00	0.00	0.00
5,700.00	2.20	210.78	5,696.63	-151.46	-90.22	176.30	0.00	0.00	0.00
5,800.00	2.20	210.78	5,796.56	-154.76	-92.18	180.13	0.00	0.00	0.00
5,900.00	2.20	210.78	5,896.48	-158.05	-94.15	183.97	0.00	0.00	0.00
6,000.00	2.20	210.78	5,996.41	-161.35	-96.11	187.81	0.00	0.00	0.00
6,100.00	2.20	210.78	6,096.34	-164.65	-98.07	191.64	0.00	0.00	0.00
6,200.00	2.20	210.78	6,196.26	-167.94	-100.04	195.48	0.00	0.00	0.00
6,265.87	2.20	210.78	6,262.09	-170.11	-101.33	198.01	0.00	0.00	0.00
Start Drop -2.00									
6,300.00	1.52	210.78	6,296.20	-171.06	-101.90	199.11	2.00	-2.00	0.00
6,375.81	0.00	0.00	6,372.00	-171.93	-102.41	200.12	2.00	-2.00	196.82
Start 1920.00 hold at 6375.81 MD									
6,400.00	0.00	0.00	6,396.19	-171.93	-102.41	200.12	0.00	0.00	0.00
6,500.00	0.00	0.00	6,496.19	-171.93	-102.41	200.12	0.00	0.00	0.00
6,600.00	0.00	0.00	6,596.19	-171.93	-102.41	200.12	0.00	0.00	0.00
6,700.00	0.00	0.00	6,696.19	-171.93	-102.41	200.12	0.00	0.00	0.00
6,800.00	0.00	0.00	6,796.19	-171.93	-102.41	200.12	0.00	0.00	0.00
6,900.00	0.00	0.00	6,896.19	-171.93	-102.41	200.12	0.00	0.00	0.00
7,000.00	0.00	0.00	6,996.19	-171.93	-102.41	200.12	0.00	0.00	0.00
7,100.00	0.00	0.00	7,096.19	-171.93	-102.41	200.12	0.00	0.00	0.00
7,200.00	0.00	0.00	7,196.19	-171.93	-102.41	200.12	0.00	0.00	0.00
7,300.00	0.00	0.00	7,296.19	-171.93	-102.41	200.12	0.00	0.00	0.00
7,375.81	0.00	0.00	7,372.00	-171.93	-102.41	200.12	0.00	0.00	0.00
NIO									
7,400.00	0.00	0.00	7,396.19	-171.93	-102.41	200.12	0.00	0.00	0.00
7,500.00	0.00	0.00	7,496.19	-171.93	-102.41	200.12	0.00	0.00	0.00
7,600.00	0.00	0.00	7,596.19	-171.93	-102.41	200.12	0.00	0.00	0.00
7,700.00	0.00	0.00	7,696.19	-171.93	-102.41	200.12	0.00	0.00	0.00
7,705.81	0.00	0.00	7,702.00	-171.93	-102.41	200.12	0.00	0.00	0.00
CODELL									
7,780.81	0.00	0.00	7,777.00	-171.93	-102.41	200.12	0.00	0.00	0.00
GREENHORN									
7,800.00	0.00	0.00	7,796.19	-171.93	-102.41	200.12	0.00	0.00	0.00
7,900.00	0.00	0.00	7,896.19	-171.93	-102.41	200.12	0.00	0.00	0.00
8,000.00	0.00	0.00	7,996.19	-171.93	-102.41	200.12	0.00	0.00	0.00
8,100.00	0.00	0.00	8,096.19	-171.93	-102.41	200.12	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 17-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4982' & RKB 15' @ 4997.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4982' & RKB 15' @ 4997.00ft (ASSUMED)
Site:	WELD_Pinnacle 17-2 Pad	North Reference:	True
Well:	P_Pinnacle 17-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 17-2		
Design:	Plan #2 9-8-10 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)
8,145.81	0.00	0.00	8,142.00	-171.93	-102.41	200.12	0.00	0.00	0.00
JSAND									
8,200.00	0.00	0.00	8,196.19	-171.93	-102.41	200.12	0.00	0.00	0.00
8,295.81	0.00	0.00	8,292.00	-171.93	-102.41	200.12	0.00	0.00	0.00
PBHL Pinnacle 17-2(1250'FNL 1320'FEL)									

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 Pinnacle 17-2(1250'FNL 1320'FEL) - plan hits target center - Circle (radius 50.00)	0.00	0.00	8,292.00	-171.93	-102.41	1,273,997.66	3,149,442.82	40° 5' 3.404 N	104° 57' 57.258 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
900.00	900.00	8 5/8"	8.625	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,098.19	4,096.00	PARKMAN				
4,628.58	4,626.00	SUSSEX				
5,078.91	5,076.00	SHANNON				
7,375.81	7,372.00	NIO				
7,705.81	7,702.00	CODELL				
7,780.81	7,777.00	GREENHORN				
8,145.81	8,142.00	JSAND				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,050.00	1,050.00	0.00	0.00	Start Build 2.00
1,159.94	1,159.91	-1.81	-1.08	Start 5105.93 hold at 1159.94 MD
6,265.87	6,262.09	-170.11	-101.33	Start Drop -2.00
6,375.81	6,372.00	-171.93	-102.41	Start 1920.00 hold at 6375.81 MD
8,295.81	8,292.00	-171.93	-102.41	TD at 8295.81