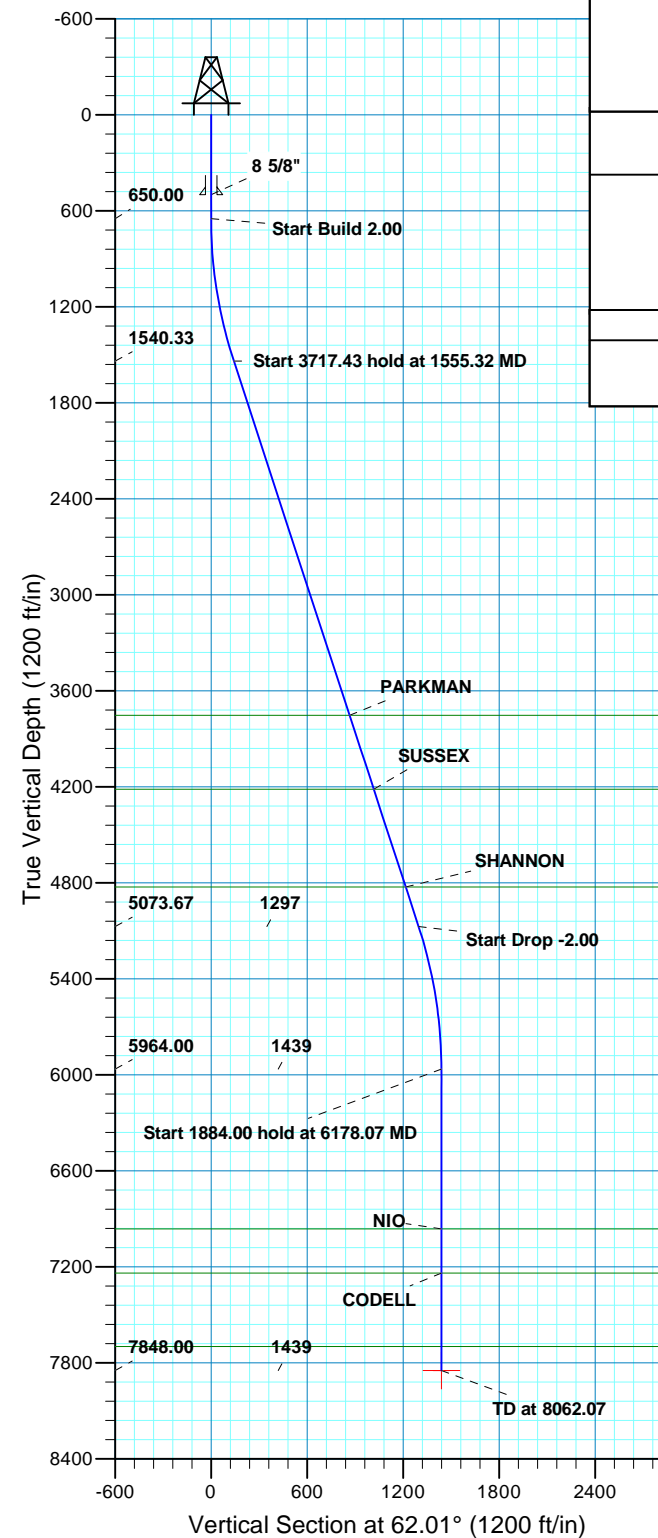


WELL DETAILS: P_Pierson 27-34					
GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1343327.76	3205658.71	40° 16' 24.557 N	104° 45' 46.595 W

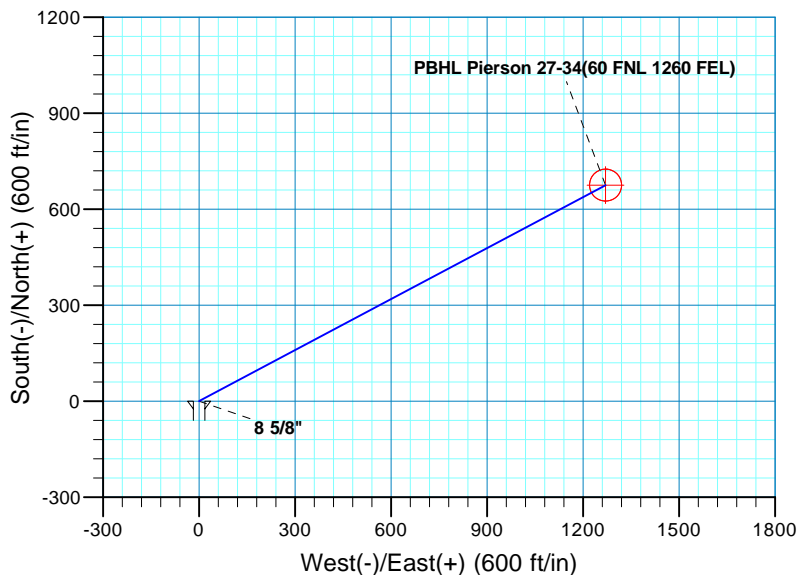
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7848.00	675.44	1270.67	1344013.74	3206923.72	40° 16' 31.231 N	104° 45' 30.200 W	Circle (Radius: 50.00)
- plan hits target center								



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		
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00		
1555.32	18.11	62.01	1540.33	66.58	125.26	2.00	62.01	141.86		
5272.75	18.11	62.01	5073.67	608.85	1145.41	0.00	0.00	1297.17		
6178.07	0.00	0.00	5964.00	675.44	1270.67	2.00	180.00	1439.03		
8062.07	0.00	0.00	7848.00	675.44	1270.67	0.00	0.00	1439.03	PBHL Pierson 27-34(60 FNL 1260 FEL)	

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83				FORMATION TOP DETAILS		
Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: Colorado Northern Zone Location: SECTION 34 T4N R66W System Datum: Mean Sea Level				TVDPath	MDPath	Formation
				3754.00	3884.32	PARKMAN
				4216.00	4370.39	SUSSEX
				4827.00	5013.22	SHANNON
				6964.00	7178.07	NIO
				7240.00	7454.07	CODELL
				7698.00	7912.07	JSAND

CASING DETAILS			
TVD	MD	Name	Size
500.00	500.00	8 5/8"	8.625



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_Pierson 21-34 Pad**

**P\_Pierson 27-34**

**P\_Pierson 27-34**

**Plan: PLAN #1 8-13-10 RHS**

## **Standard Planning Report**

**13 August, 2010**

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_Pierson 27-34
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
<b>Site:</b>	WELD_Pierson 21-34 Pad	<b>North Reference:</b>	True
<b>Well:</b>	P_Pierson 27-34	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Pierson 27-34		
<b>Design:</b>	PLAN #1 8-13-10 RHS		

<b>Project</b>	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	WELD_Pierson 21-34 Pad, SECTION 34 T4N R66W		
<b>Site Position:</b>		<b>Northing:</b>	1,343,326.02 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,205,578.92 usft
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in
		<b>Latitude:</b>	40° 16' 24.546 N
		<b>Longitude:</b>	104° 45' 47.624 W
		<b>Grid Convergence:</b>	0.48 °

<b>Well</b>	P_Pierson 27-34, 60 FNL 1260 FEL		
<b>Well Position</b>	<b>+N/-S</b>	1.08 ft	<b>Northing:</b>
	<b>+E/-W</b>	79.80 ft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 ft		<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<b>Wellbore</b>	P_Pierson 27-34				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	08/13/2010	8.97	66.98	53,154

<b>Design</b>	PLAN #1 8-13-10 RHS			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	62.01

<b>Plan Sections</b>										
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	
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,555.32	18.11	62.01	1,540.33	66.58	125.26	2.00	2.00	0.00	62.01	
5,272.75	18.11	62.01	5,073.67	608.85	1,145.41	0.00	0.00	0.00	0.00	
6,178.07	0.00	0.00	5,964.00	675.44	1,270.67	2.00	-2.00	0.00	180.00	
8,062.07	0.00	0.00	7,848.00	675.44	1,270.67	0.00	0.00	0.00	0.00	PBHL Pierson 27-34(I

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_Pierson 27-34
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
<b>Site:</b>	WELD_Pierson 21-34 Pad	<b>North Reference:</b>	True
<b>Well:</b>	P_Pierson 27-34	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Pierson 27-34		
<b>Design:</b>	PLAN #1 8-13-10 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	
<b>8 5/8"</b>										
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Start Build 2.00</b>										
700.00	1.00	62.01	700.00	0.20	0.39	0.44	2.00	2.00	0.00	
800.00	3.00	62.01	799.93	1.84	3.47	3.93	2.00	2.00	0.00	
900.00	5.00	62.01	899.68	5.12	9.63	10.90	2.00	2.00	0.00	
1,000.00	7.00	62.01	999.13	10.02	18.86	21.35	2.00	2.00	0.00	
1,100.00	9.00	62.01	1,098.15	16.55	31.14	35.27	2.00	2.00	0.00	
1,200.00	11.00	62.01	1,196.63	24.70	46.48	52.63	2.00	2.00	0.00	
1,300.00	13.00	62.01	1,294.44	34.46	64.83	73.42	2.00	2.00	0.00	
1,400.00	15.00	62.01	1,391.46	45.82	86.19	97.62	2.00	2.00	0.00	
1,500.00	17.00	62.01	1,487.58	58.75	110.53	125.18	2.00	2.00	0.00	
1,555.32	18.11	62.01	1,540.33	66.58	125.26	141.86	2.00	2.00	0.00	
<b>Start 3717.43 hold at 1555.32 MD</b>										
1,600.00	18.11	62.01	1,582.79	73.10	137.53	155.75	0.00	0.00	0.00	
1,700.00	18.11	62.01	1,677.84	87.69	164.97	186.83	0.00	0.00	0.00	
1,800.00	18.11	62.01	1,772.89	102.28	192.41	217.90	0.00	0.00	0.00	
1,900.00	18.11	62.01	1,867.94	116.86	219.85	248.98	0.00	0.00	0.00	
2,000.00	18.11	62.01	1,962.99	131.45	247.29	280.06	0.00	0.00	0.00	
2,100.00	18.11	62.01	2,058.03	146.04	274.74	311.14	0.00	0.00	0.00	
2,200.00	18.11	62.01	2,153.08	160.63	302.18	342.22	0.00	0.00	0.00	
2,300.00	18.11	62.01	2,248.13	175.21	329.62	373.29	0.00	0.00	0.00	
2,400.00	18.11	62.01	2,343.18	189.80	357.06	404.37	0.00	0.00	0.00	
2,500.00	18.11	62.01	2,438.23	204.39	384.50	435.45	0.00	0.00	0.00	
2,600.00	18.11	62.01	2,533.28	218.97	411.95	466.53	0.00	0.00	0.00	
2,700.00	18.11	62.01	2,628.32	233.56	439.39	497.61	0.00	0.00	0.00	
2,800.00	18.11	62.01	2,723.37	248.15	466.83	528.69	0.00	0.00	0.00	
2,900.00	18.11	62.01	2,818.42	262.74	494.27	559.76	0.00	0.00	0.00	
3,000.00	18.11	62.01	2,913.47	277.32	521.72	590.84	0.00	0.00	0.00	
3,100.00	18.11	62.01	3,008.52	291.91	549.16	621.92	0.00	0.00	0.00	
3,200.00	18.11	62.01	3,103.56	306.50	576.60	653.00	0.00	0.00	0.00	
3,300.00	18.11	62.01	3,198.61	321.08	604.04	684.08	0.00	0.00	0.00	
3,400.00	18.11	62.01	3,293.66	335.67	631.48	715.16	0.00	0.00	0.00	
3,500.00	18.11	62.01	3,388.71	350.26	658.93	746.23	0.00	0.00	0.00	
3,600.00	18.11	62.01	3,483.76	364.84	686.37	777.31	0.00	0.00	0.00	
3,700.00	18.11	62.01	3,578.80	379.43	713.81	808.39	0.00	0.00	0.00	
3,800.00	18.11	62.01	3,673.85	394.02	741.25	839.47	0.00	0.00	0.00	
3,884.32	18.11	62.01	3,754.00	406.32	764.39	865.67	0.00	0.00	0.00	
<b>PARKMAN</b>										
3,900.00	18.11	62.01	3,768.90	408.61	768.69	870.55	0.00	0.00	0.00	
4,000.00	18.11	62.01	3,863.95	423.19	796.14	901.62	0.00	0.00	0.00	
4,100.00	18.11	62.01	3,959.00	437.78	823.58	932.70	0.00	0.00	0.00	
4,200.00	18.11	62.01	4,054.05	452.37	851.02	963.78	0.00	0.00	0.00	
4,300.00	18.11	62.01	4,149.09	466.95	878.46	994.86	0.00	0.00	0.00	
4,370.39	18.11	62.01	4,216.00	477.22	897.78	1,016.74	0.00	0.00	0.00	

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_Pierson 27-34
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
<b>Site:</b>	WELD_Pierson 21-34 Pad	<b>North Reference:</b>	True
<b>Well:</b>	P_Pierson 27-34	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Pierson 27-34		
<b>Design:</b>	PLAN #1 8-13-10 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)
<b>SUSSEX</b>									
4,400.00	18.11	62.01	4,244.14	481.54	905.91	1,025.94	0.00	0.00	0.00
4,500.00	18.11	62.01	4,339.19	496.13	933.35	1,057.02	0.00	0.00	0.00
4,600.00	18.11	62.01	4,434.24	510.72	960.79	1,088.09	0.00	0.00	0.00
4,700.00	18.11	62.01	4,529.29	525.30	988.23	1,119.17	0.00	0.00	0.00
4,800.00	18.11	62.01	4,624.33	539.89	1,015.67	1,150.25	0.00	0.00	0.00
4,900.00	18.11	62.01	4,719.38	554.48	1,043.12	1,181.33	0.00	0.00	0.00
5,000.00	18.11	62.01	4,814.43	569.06	1,070.56	1,212.41	0.00	0.00	0.00
5,013.22	18.11	62.01	4,827.00	570.99	1,074.19	1,216.52	0.00	0.00	0.00
<b>SHANNON</b>									
5,100.00	18.11	62.01	4,909.48	583.65	1,098.00	1,243.48	0.00	0.00	0.00
5,200.00	18.11	62.01	5,004.53	598.24	1,125.44	1,274.56	0.00	0.00	0.00
5,272.75	18.11	62.01	5,073.67	608.85	1,145.41	1,297.17	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,300.00	17.56	62.01	5,099.61	612.77	1,152.78	1,305.52	2.00	-2.00	0.00
5,400.00	15.56	62.01	5,195.46	626.15	1,177.94	1,334.02	2.00	-2.00	0.00
5,500.00	13.56	62.01	5,292.24	637.95	1,200.14	1,359.16	2.00	-2.00	0.00
5,600.00	11.56	62.01	5,389.85	648.15	1,219.35	1,380.91	2.00	-2.00	0.00
5,700.00	9.56	62.01	5,488.15	656.76	1,235.53	1,399.24	2.00	-2.00	0.00
5,800.00	7.56	62.01	5,587.03	663.74	1,248.67	1,414.12	2.00	-2.00	0.00
5,900.00	5.56	62.01	5,686.37	669.11	1,258.76	1,425.55	2.00	-2.00	0.00
6,000.00	3.56	62.01	5,786.05	672.84	1,265.79	1,433.50	2.00	-2.00	0.00
6,100.00	1.56	62.01	5,885.94	674.94	1,269.73	1,437.97	2.00	-2.00	0.00
6,178.07	0.00	0.00	5,964.00	675.44	1,270.67	1,439.03	2.00	-2.00	-79.42
<b>Start 1884.00 hold at 6178.07 MD</b>									
6,200.00	0.00	0.00	5,985.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
6,300.00	0.00	0.00	6,085.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
6,400.00	0.00	0.00	6,185.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
6,500.00	0.00	0.00	6,285.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
6,600.00	0.00	0.00	6,385.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
6,700.00	0.00	0.00	6,485.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
6,800.00	0.00	0.00	6,585.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
6,900.00	0.00	0.00	6,685.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,000.00	0.00	0.00	6,785.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,100.00	0.00	0.00	6,885.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,178.07	0.00	0.00	6,964.00	675.44	1,270.67	1,439.03	0.00	0.00	0.00
<b>NIO</b>									
7,200.00	0.00	0.00	6,985.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,300.00	0.00	0.00	7,085.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,400.00	0.00	0.00	7,185.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,454.07	0.00	0.00	7,240.00	675.44	1,270.67	1,439.03	0.00	0.00	0.00
<b>CODELL</b>									
7,500.00	0.00	0.00	7,285.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,600.00	0.00	0.00	7,385.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,700.00	0.00	0.00	7,485.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,800.00	0.00	0.00	7,585.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,900.00	0.00	0.00	7,685.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
7,912.07	0.00	0.00	7,698.00	675.44	1,270.67	1,439.03	0.00	0.00	0.00
<b>JSAND</b>									
8,000.00	0.00	0.00	7,785.93	675.44	1,270.67	1,439.03	0.00	0.00	0.00
8,062.07	0.00	0.00	7,848.00	675.44	1,270.67	1,439.03	0.00	0.00	0.00

<b>Database:</b>	EDM5000-RobertS-Local	<b>Local Co-ordinate Reference:</b>	Well P_Pierson 27-34
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
<b>Site:</b>	WELD_Pierson 21-34 Pad	<b>North Reference:</b>	True
<b>Well:</b>	P_Pierson 27-34	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	P_Pierson 27-34		
<b>Design:</b>	PLAN #1 8-13-10 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)
PBHL Pierson 27-34(60 FNL 1260 FEL) - PBHL Pierson 28-34(50 FNL 2600 FWL)									

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 Pierson 27-34(60 - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,848.00	675.44	1,270.67	1,344,013.74	3,206,923.73	40° 16' 31.231 N	104° 45' 30.200 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
500.00	500.00	8 5/8"	8.625	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,884.32	3,754.00	PARKMAN				
4,370.39	4,216.00	SUSSEX				
5,013.22	4,827.00	SHANNON				
7,178.07	6,964.00	NIO				
7,454.07	7,240.00	CODELL				
7,912.07	7,698.00	JSAND				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
650.00	650.00	0.00	0.00	Start Build 2.00
1,555.32	1,540.33	66.58	125.26	Start 3717.43 hold at 1555.32 MD
5,272.75	5,073.67	608.85	1,145.41	Start Drop -2.00
6,178.07	5,964.00	675.44	1,270.67	Start 1884.00 hold at 6178.07 MD
8,062.07	7,848.00	675.44	1,270.67	TD at 8062.07