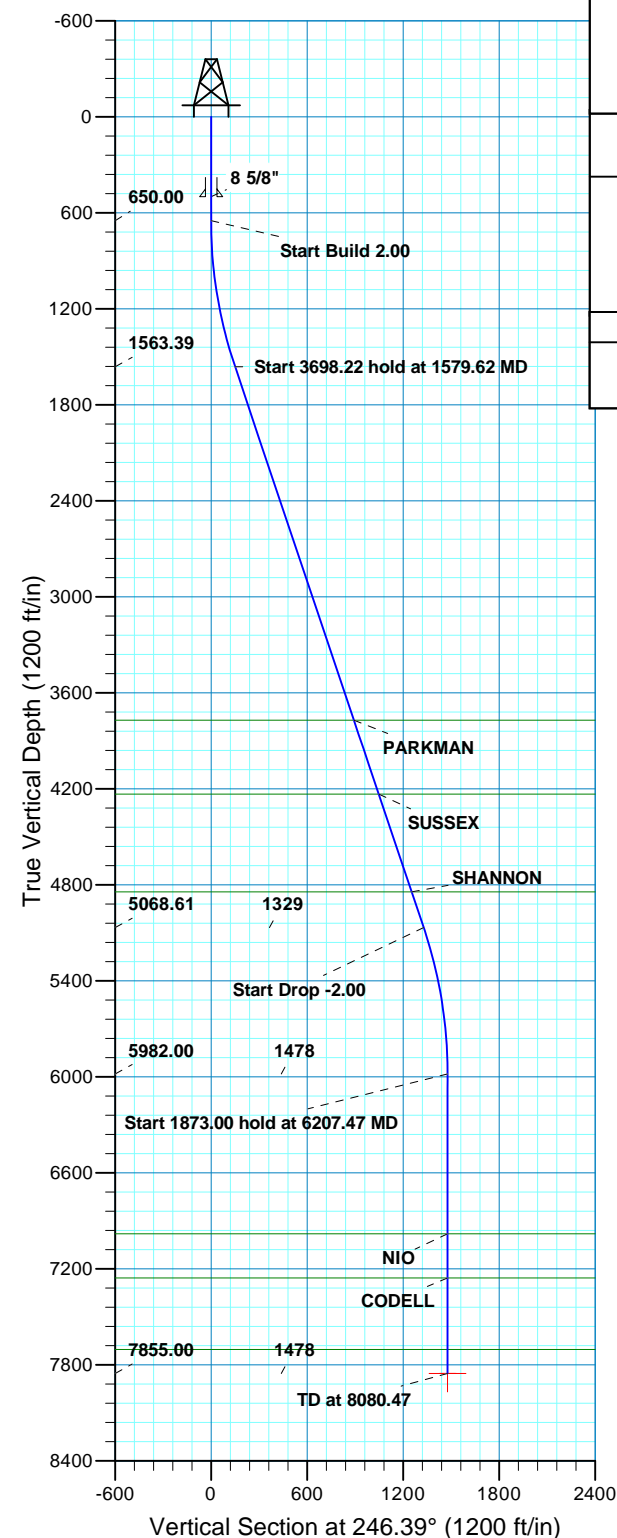


WELL DETAILS: P_Pierson 18-34						
GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	1343326.02	3205578.92	40° 16' 24.546 N	104° 45' 47.624 W	

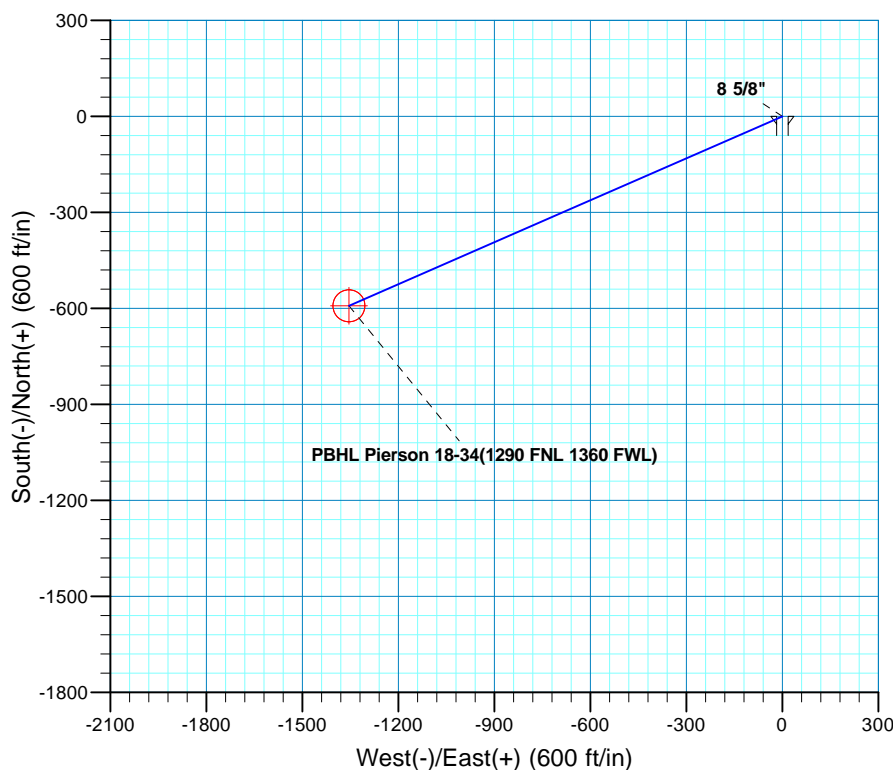
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7855.00	-591.93	-1354.45	1342722.86	3204229.44	40° 16' 18.696 N	104° 46' 5.099 W	Circle (Radius: 50.00)
- plan hits target center								



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	
1579.62	18.59	246.39	1563.39	-59.87	-137.00	2.00	246.39	149.51	
5277.84	18.59	246.39	5068.61	-532.06	-1217.45	0.00	0.00	1328.63	
6207.47	0.00	0.00	5982.00	-591.93	-1354.45	2.00	180.00	1478.14	
8080.47	0.00	0.00	7855.00	-591.93	-1354.45	0.00	0.00	1478.14	PBHL Pierson 18-34(1290 FNL 1360 FWL)

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
				3772.00	3909.84	PARKMAN
				4234.00	4397.28	SUSSEX
				4845.00	5041.93	SHANNON
				6982.00	7207.47	NIO
				7258.00	7483.47	CODELL
				7705.00	7930.47	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 18-34

P_Pierson 18-34

Plan: PLAN #1 8-13-10 RHS

Standard Planning Report

13 August, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pierson 18-34
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
Site:	WELD_Pierson 21-34 Pad	North Reference:	True
Well:	P_Pierson 18-34	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pierson 18-34		
Design:	PLAN #1 8-13-10 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_Pierson 21-34 Pad, SECTION 34 T4N R66W			
Site Position:		Northing:	1,343,326.02 usft	Latitude:	40° 16' 24.546 N
From:	Lat/Long	Easting:	3,205,578.92 usft	Longitude:	104° 45' 47.624 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.48 °

Well	P_Pierson 18-34, 717 FNL 2613 FEL					
Well Position	+N/-S	0.00 ft	Northing:	1,343,326.02 usft	Latitude:	40° 16' 24.546 N
	+E/-W	0.00 ft	Easting:	3,205,578.92 usft	Longitude:	104° 45' 47.624 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,783.00 ft

Wellbore	P_Pierson 18-34				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/13/2010	8.97	66.98	53,154

Design	PLAN #1 8-13-10 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	246.39

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	
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,579.62	18.59	246.39	1,563.39	-59.87	-137.00	2.00	2.00	0.00	246.39	
5,277.84	18.59	246.39	5,068.61	-532.06	-1,217.45	0.00	0.00	0.00	0.00	
6,207.47	0.00	0.00	5,982.00	-591.93	-1,354.45	2.00	-2.00	0.00	180.00	
8,080.47	0.00	0.00	7,855.00	-591.93	-1,354.45	0.00	0.00	0.00	0.00	PBHL Pierson 18-34(

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pierson 18-34
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
Site:	WELD_Pierson 21-34 Pad	North Reference:	True
Well:	P_Pierson 18-34	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pierson 18-34		
Design:	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	
8 5/8"										
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	
Start Build 2.00										
700.00	1.00	246.39	700.00	-0.17	-0.40	0.44	2.00	2.00	0.00	
800.00	3.00	246.39	799.93	-1.57	-3.60	3.93	2.00	2.00	0.00	
900.00	5.00	246.39	899.68	-4.37	-9.99	10.90	2.00	2.00	0.00	
1,000.00	7.00	246.39	999.13	-8.55	-19.57	21.35	2.00	2.00	0.00	
1,100.00	9.00	246.39	1,098.15	-14.12	-32.32	35.27	2.00	2.00	0.00	
1,200.00	11.00	246.39	1,196.63	-21.08	-48.23	52.63	2.00	2.00	0.00	
1,300.00	13.00	246.39	1,294.44	-29.40	-67.28	73.42	2.00	2.00	0.00	
1,400.00	15.00	246.39	1,391.46	-39.09	-89.45	97.62	2.00	2.00	0.00	
1,500.00	17.00	246.39	1,487.58	-50.13	-114.70	125.18	2.00	2.00	0.00	
1,579.62	18.59	246.39	1,563.39	-59.87	-137.00	149.51	2.00	2.00	0.00	
Start 3698.22 hold at 1579.62 MD										
1,600.00	18.59	246.39	1,582.71	-62.47	-142.95	156.01	0.00	0.00	0.00	
1,700.00	18.59	246.39	1,677.49	-75.24	-172.17	187.89	0.00	0.00	0.00	
1,800.00	18.59	246.39	1,772.27	-88.01	-201.38	219.78	0.00	0.00	0.00	
1,900.00	18.59	246.39	1,867.05	-100.78	-230.60	251.66	0.00	0.00	0.00	
2,000.00	18.59	246.39	1,961.83	-113.55	-259.81	283.54	0.00	0.00	0.00	
2,100.00	18.59	246.39	2,056.61	-126.31	-289.03	315.43	0.00	0.00	0.00	
2,200.00	18.59	246.39	2,151.39	-139.08	-318.25	347.31	0.00	0.00	0.00	
2,300.00	18.59	246.39	2,246.17	-151.85	-347.46	379.19	0.00	0.00	0.00	
2,400.00	18.59	246.39	2,340.96	-164.62	-376.68	411.08	0.00	0.00	0.00	
2,500.00	18.59	246.39	2,435.74	-177.39	-405.89	442.96	0.00	0.00	0.00	
2,600.00	18.59	246.39	2,530.52	-190.15	-435.11	474.84	0.00	0.00	0.00	
2,700.00	18.59	246.39	2,625.30	-202.92	-464.32	506.73	0.00	0.00	0.00	
2,800.00	18.59	246.39	2,720.08	-215.69	-493.54	538.61	0.00	0.00	0.00	
2,900.00	18.59	246.39	2,814.86	-228.46	-522.75	570.49	0.00	0.00	0.00	
3,000.00	18.59	246.39	2,909.64	-241.23	-551.97	602.38	0.00	0.00	0.00	
3,100.00	18.59	246.39	3,004.42	-253.99	-581.18	634.26	0.00	0.00	0.00	
3,200.00	18.59	246.39	3,099.20	-266.76	-610.40	666.14	0.00	0.00	0.00	
3,300.00	18.59	246.39	3,193.99	-279.53	-639.61	698.03	0.00	0.00	0.00	
3,400.00	18.59	246.39	3,288.77	-292.30	-668.83	729.91	0.00	0.00	0.00	
3,500.00	18.59	246.39	3,383.55	-305.07	-698.04	761.79	0.00	0.00	0.00	
3,600.00	18.59	246.39	3,478.33	-317.83	-727.26	793.68	0.00	0.00	0.00	
3,700.00	18.59	246.39	3,573.11	-330.60	-756.47	825.56	0.00	0.00	0.00	
3,800.00	18.59	246.39	3,667.89	-343.37	-785.69	857.44	0.00	0.00	0.00	
3,900.00	18.59	246.39	3,762.67	-356.14	-814.91	889.33	0.00	0.00	0.00	
3,909.84	18.59	246.39	3,772.00	-357.39	-817.78	892.47	0.00	0.00	0.00	
PARKMAN										
4,000.00	18.59	246.39	3,857.45	-368.90	-844.12	921.21	0.00	0.00	0.00	
4,100.00	18.59	246.39	3,952.23	-381.67	-873.34	953.09	0.00	0.00	0.00	
4,200.00	18.59	246.39	4,047.01	-394.44	-902.55	984.98	0.00	0.00	0.00	
4,300.00	18.59	246.39	4,141.80	-407.21	-931.77	1,016.86	0.00	0.00	0.00	
4,397.28	18.59	246.39	4,234.00	-419.63	-960.19	1,047.88	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pierson 18-34
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
Site:	WELD_Pierson 21-34 Pad	North Reference:	True
Well:	P_Pierson 18-34	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pierson 18-34		
Design:	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)
SUSSEX									
4,400.00	18.59	246.39	4,236.58	-419.98	-960.98	1,048.75	0.00	0.00	0.00
4,500.00	18.59	246.39	4,331.36	-432.74	-990.20	1,080.63	0.00	0.00	0.00
4,600.00	18.59	246.39	4,426.14	-445.51	-1,019.41	1,112.51	0.00	0.00	0.00
4,700.00	18.59	246.39	4,520.92	-458.28	-1,048.63	1,144.40	0.00	0.00	0.00
4,800.00	18.59	246.39	4,615.70	-471.05	-1,077.84	1,176.28	0.00	0.00	0.00
4,900.00	18.59	246.39	4,710.48	-483.82	-1,107.06	1,208.16	0.00	0.00	0.00
5,000.00	18.59	246.39	4,805.26	-496.58	-1,136.27	1,240.05	0.00	0.00	0.00
5,041.93	18.59	246.39	4,845.00	-501.94	-1,148.52	1,253.41	0.00	0.00	0.00
SHANNON									
5,100.00	18.59	246.39	4,900.04	-509.35	-1,165.49	1,271.93	0.00	0.00	0.00
5,200.00	18.59	246.39	4,994.83	-522.12	-1,194.70	1,303.81	0.00	0.00	0.00
5,277.84	18.59	246.39	5,068.61	-532.06	-1,217.45	1,328.63	0.00	0.00	0.00
Start Drop -2.00									
5,300.00	18.15	246.39	5,089.63	-534.85	-1,223.85	1,335.61	2.00	-2.00	0.00
5,400.00	16.15	246.39	5,185.18	-546.66	-1,250.86	1,365.10	2.00	-2.00	0.00
5,500.00	14.15	246.39	5,281.70	-557.13	-1,274.81	1,391.23	2.00	-2.00	0.00
5,600.00	12.15	246.39	5,379.08	-566.24	-1,295.65	1,413.98	2.00	-2.00	0.00
5,700.00	10.15	246.39	5,477.18	-573.98	-1,313.37	1,433.32	2.00	-2.00	0.00
5,800.00	8.15	246.39	5,575.91	-580.35	-1,327.94	1,449.22	2.00	-2.00	0.00
5,900.00	6.15	246.39	5,675.12	-585.33	-1,339.34	1,461.66	2.00	-2.00	0.00
6,000.00	4.15	246.39	5,774.71	-588.92	-1,347.57	1,470.64	2.00	-2.00	0.00
6,100.00	2.15	246.39	5,874.56	-591.12	-1,352.60	1,476.13	2.00	-2.00	0.00
6,200.00	0.15	246.39	5,974.53	-591.93	-1,354.44	1,478.13	2.00	-2.00	0.00
6,207.47	0.00	0.00	5,982.00	-591.93	-1,354.45	1,478.14	2.00	-2.00	1,521.49
Start 1873.00 hold at 6207.47 MD									
6,300.00	0.00	0.00	6,074.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
6,400.00	0.00	0.00	6,174.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
6,500.00	0.00	0.00	6,274.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
6,600.00	0.00	0.00	6,374.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
6,700.00	0.00	0.00	6,474.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
6,800.00	0.00	0.00	6,574.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
6,900.00	0.00	0.00	6,674.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,000.00	0.00	0.00	6,774.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,100.00	0.00	0.00	6,874.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,200.00	0.00	0.00	6,974.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,207.47	0.00	0.00	6,982.00	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
NIO									
7,300.00	0.00	0.00	7,074.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,400.00	0.00	0.00	7,174.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,483.47	0.00	0.00	7,258.00	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
CODELL									
7,500.00	0.00	0.00	7,274.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,600.00	0.00	0.00	7,374.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,700.00	0.00	0.00	7,474.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,800.00	0.00	0.00	7,574.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,900.00	0.00	0.00	7,674.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
7,930.47	0.00	0.00	7,705.00	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
JSAND									
8,000.00	0.00	0.00	7,774.53	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00
8,080.47	0.00	0.00	7,855.00	-591.93	-1,354.45	1,478.14	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pierson 18-34
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4783' & RKB 15' @ 4798.00ft (ASSUMED)
Site:	WELD_Pierson 21-34 Pad	North Reference:	True
Well:	P_Pierson 18-34	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pierson 18-34		
Design:	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 18-34(1290 FNL 1360 FWL)									

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 Pierson 18-34(1290 FNL 1360 FWL)	0.00	0.00	7,855.00	-591.93	-1,354.45	1,342,722.86	3,204,229.44	40° 16' 18.696 N	104° 46' 5.099 W
- plan hits target center									
- Circle (radius 50.00)									

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 (°)	
3,909.84	3,772.00	PARKMAN				
4,397.28	4,234.00	SUSSEX				
5,041.93	4,845.00	SHANNON				
7,207.47	6,982.00	NIO				
7,483.47	7,258.00	CODELL				
7,930.47	7,705.00	JSAND		0.00		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
650.00	650.00	0.00	0.00	Start Build 2.00
1,579.62	1,563.39	-59.87	-137.00	Start 3698.22 hold at 1579.62 MD
5,277.84	5,068.61	-532.06	-1,217.45	Start Drop -2.00
6,207.47	5,982.00	-591.93	-1,354.45	Start 1873.00 hold at 6207.47 MD
8,080.47	7,855.00	-591.93	-1,354.45	TD at 8080.47