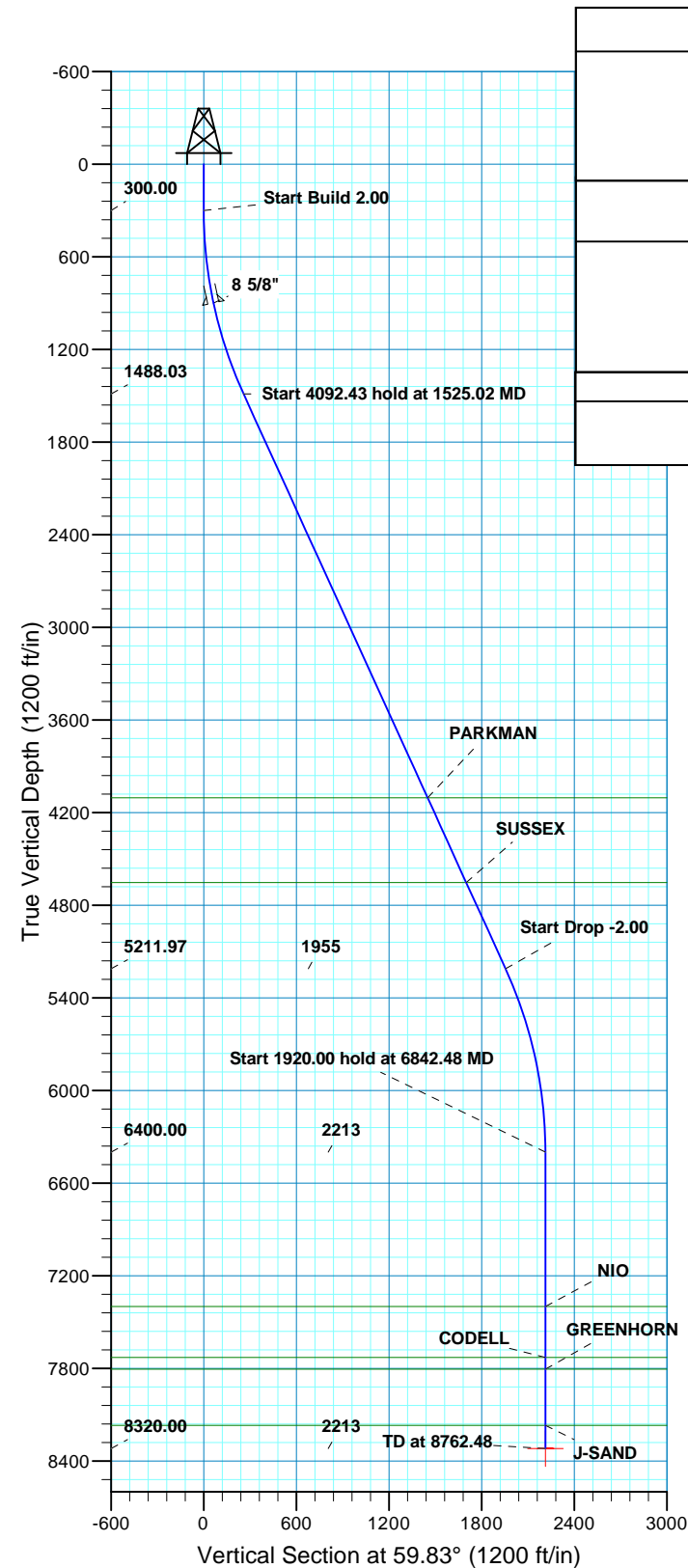
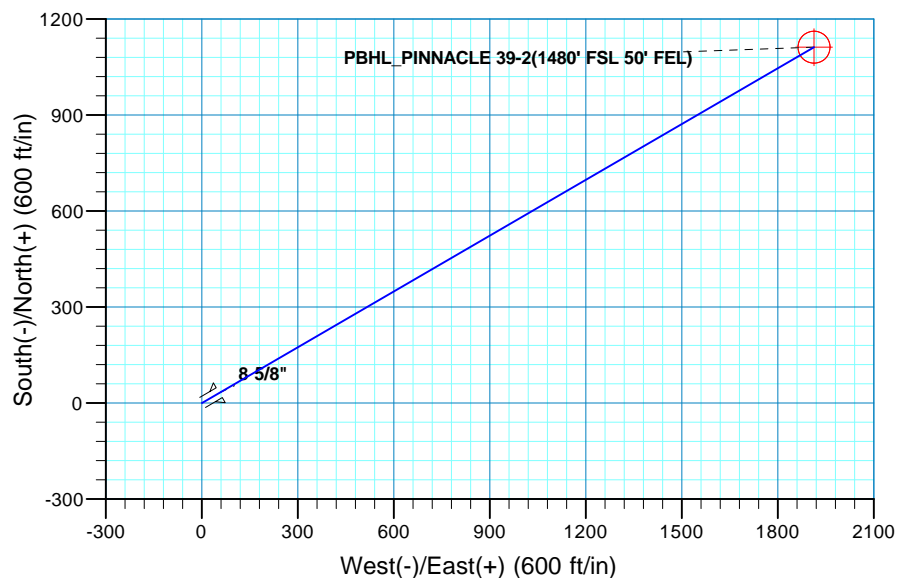


WELL DETAILS: P_Pinnacle 39-2					
GL 5005' & RKB 15' @ 5020.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1270310.71	3148832.55	40° 4' 27.005 N	104° 58' 5.394 W

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	8320.00	1112.22	1913.25	1271434.39	3150739.09	40° 4' 37.996 N	104° 57' 40.781 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		
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00		
1525.02	24.50	59.83	1488.03	129.64	223.01	2.00	59.83	257.95		
5617.45	24.50	59.83	5211.97	982.58	1690.24	0.00	0.00	1955.09		
6842.48	0.00	0.00	6400.00	1112.22	1913.25	2.00	180.00	2213.04		
8762.48	0.00	0.00	8320.00	1112.22	1913.25	0.00	0.00	2213.04	PBHL_PINNACLE 39-2(1480' FSL 50' FEL)	
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 2 T1N R68W System Datum: Mean Sea Level						4105.00	4400.95	PARKMAN		
						4654.00	5004.27	SUSSEX		
						7400.00	7842.48	NIO		
						7730.00	8172.48	CODELL		
						7805.00	8247.48	GREENHORN		
						8170.00	8612.48	J-SAND		
						CASING DETAILS				
TVD			MD		Name		Size			
900.00			904.48		8 5/8"		8.625			



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_Pinnacle 15-2 Pad

P_Pinnacle 39-2

P_Pinnacle 39-2

Plan: PLAN #1 9-10-10

Standard Planning Report

10 September, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 39-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5005' & RKB 15' @ 5020.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5005' & RKB 15' @ 5020.00ft (ASSUMED)
Site:	WELD_Pinnacle 15-2 Pad	North Reference:	True
Well:	P_Pinnacle 39-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 39-2		
Design:	PLAN #1 9-10-10		

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 15-2 Pad, SECTION 2 T1N R68W			
Site Position:		Northing:	1,270,310.23 usft	Latitude:	40° 4' 27.001 N
From:	Lat/Long	Easting:	3,148,812.69 usft	Longitude:	104° 58' 5.650 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.34 °

Well	P_Pinnacle 39-2, 386' FSL 1968' FEL					
Well Position	+N/-S	0.36 ft	Northing:	1,270,310.71 usft	Latitude:	40° 4' 27.005 N
	+E/-W	19.87 ft	Easting:	3,148,832.55 usft	Longitude:	104° 58' 5.394 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,005.00 ft

Wellbore	P_Pinnacle 39-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/10/2010	9.04	66.78	53,016

Design	PLAN #1 9-10-10			
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	59.83

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	
1,525.02	24.50	59.83	1,488.03	129.64	223.01	2.00	2.00	0.00	59.83	
5,617.45	24.50	59.83	5,211.97	982.58	1,690.24	0.00	0.00	0.00	0.00	
6,842.48	0.00	0.00	6,400.00	1,112.22	1,913.25	2.00	-2.00	0.00	180.00	
8,762.48	0.00	0.00	8,320.00	1,112.22	1,913.25	0.00	0.00	0.00	0.00	PBHL_PINNACLE 39

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 39-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5005' & RKB 15' @ 5020.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5005' & RKB 15' @ 5020.00ft (ASSUMED)
Site:	WELD_Pinnacle 15-2 Pad	North Reference:	True
Well:	P_Pinnacle 39-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 39-2		
Design:	PLAN #1 9-10-10		

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	59.83	399.98	0.88	1.51	1.75	2.00	2.00	0.00
500.00	4.00	59.83	499.84	3.51	6.03	6.98	2.00	2.00	0.00
600.00	6.00	59.83	599.45	7.89	13.57	15.69	2.00	2.00	0.00
700.00	8.00	59.83	698.70	14.01	24.10	27.88	2.00	2.00	0.00
800.00	10.00	59.83	797.47	21.87	37.63	43.52	2.00	2.00	0.00
900.00	12.00	59.83	895.62	31.46	54.12	62.60	2.00	2.00	0.00
904.48	12.09	59.83	900.00	31.93	54.93	63.54	2.00	2.00	0.00
8 5/8"									
1,000.00	14.00	59.83	993.06	42.77	73.57	85.10	2.00	2.00	0.00
1,100.00	16.00	59.83	1,089.64	55.77	95.94	110.98	2.00	2.00	0.00
1,200.00	18.00	59.83	1,185.27	70.47	121.22	140.21	2.00	2.00	0.00
1,300.00	20.00	59.83	1,279.82	86.83	149.36	172.77	2.00	2.00	0.00
1,400.00	22.00	59.83	1,373.17	104.84	180.34	208.60	2.00	2.00	0.00
1,500.00	24.00	59.83	1,465.21	124.48	214.12	247.67	2.00	2.00	0.00
1,525.02	24.50	59.83	1,488.03	129.64	223.01	257.95	2.00	2.00	0.00
Start 4092.43 hold at 1525.02 MD									
1,600.00	24.50	59.83	1,556.26	145.27	249.89	289.04	0.00	0.00	0.00
1,700.00	24.50	59.83	1,647.25	166.11	285.74	330.51	0.00	0.00	0.00
1,800.00	24.50	59.83	1,738.25	186.95	321.59	371.98	0.00	0.00	0.00
1,900.00	24.50	59.83	1,829.24	207.79	357.45	413.45	0.00	0.00	0.00
2,000.00	24.50	59.83	1,920.24	228.63	393.30	454.92	0.00	0.00	0.00
2,100.00	24.50	59.83	2,011.23	249.48	429.15	496.40	0.00	0.00	0.00
2,200.00	24.50	59.83	2,102.23	270.32	465.00	537.87	0.00	0.00	0.00
2,300.00	24.50	59.83	2,193.23	291.16	500.85	579.34	0.00	0.00	0.00
2,400.00	24.50	59.83	2,284.22	312.00	536.71	620.81	0.00	0.00	0.00
2,500.00	24.50	59.83	2,375.22	332.84	572.56	662.28	0.00	0.00	0.00
2,600.00	24.50	59.83	2,466.21	353.69	608.41	703.75	0.00	0.00	0.00
2,700.00	24.50	59.83	2,557.21	374.53	644.26	745.22	0.00	0.00	0.00
2,800.00	24.50	59.83	2,648.20	395.37	680.12	786.69	0.00	0.00	0.00
2,900.00	24.50	59.83	2,739.20	416.21	715.97	828.16	0.00	0.00	0.00
3,000.00	24.50	59.83	2,830.20	437.05	751.82	869.63	0.00	0.00	0.00
3,100.00	24.50	59.83	2,921.19	457.90	787.67	911.10	0.00	0.00	0.00
3,200.00	24.50	59.83	3,012.19	478.74	823.52	952.57	0.00	0.00	0.00
3,300.00	24.50	59.83	3,103.18	499.58	859.38	994.04	0.00	0.00	0.00
3,400.00	24.50	59.83	3,194.18	520.42	895.23	1,035.51	0.00	0.00	0.00
3,500.00	24.50	59.83	3,285.18	541.26	931.08	1,076.98	0.00	0.00	0.00
3,600.00	24.50	59.83	3,376.17	562.11	966.93	1,118.45	0.00	0.00	0.00
3,700.00	24.50	59.83	3,467.17	582.95	1,002.79	1,159.92	0.00	0.00	0.00
3,800.00	24.50	59.83	3,558.16	603.79	1,038.64	1,201.39	0.00	0.00	0.00
3,900.00	24.50	59.83	3,649.16	624.63	1,074.49	1,242.86	0.00	0.00	0.00
4,000.00	24.50	59.83	3,740.15	645.47	1,110.34	1,284.33	0.00	0.00	0.00
4,100.00	24.50	59.83	3,831.15	666.31	1,146.20	1,325.80	0.00	0.00	0.00
4,200.00	24.50	59.83	3,922.15	687.16	1,182.05	1,367.27	0.00	0.00	0.00
4,300.00	24.50	59.83	4,013.14	708.00	1,217.90	1,408.74	0.00	0.00	0.00
4,400.00	24.50	59.83	4,104.14	728.84	1,253.75	1,450.21	0.00	0.00	0.00
4,400.95	24.50	59.83	4,105.00	729.04	1,254.09	1,450.60	0.00	0.00	0.00
PARKMAN									

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 39-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5005' & RKB 15' @ 5020.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5005' & RKB 15' @ 5020.00ft (ASSUMED)
Site:	WELD_Pinnacle 15-2 Pad	North Reference:	True
Well:	P_Pinnacle 39-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 39-2		
Design:	PLAN #1 9-10-10		

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	24.50	59.83	4,195.13	749.68	1,289.60	1,491.68	0.00	0.00	0.00	
4,600.00	24.50	59.83	4,286.13	770.52	1,325.46	1,533.15	0.00	0.00	0.00	
4,700.00	24.50	59.83	4,377.12	791.37	1,361.31	1,574.62	0.00	0.00	0.00	
4,800.00	24.50	59.83	4,468.12	812.21	1,397.16	1,616.09	0.00	0.00	0.00	
4,900.00	24.50	59.83	4,559.12	833.05	1,433.01	1,657.56	0.00	0.00	0.00	
5,000.00	24.50	59.83	4,650.11	853.89	1,468.87	1,699.03	0.00	0.00	0.00	
5,004.27	24.50	59.83	4,654.00	854.78	1,470.40	1,700.80	0.00	0.00	0.00	
SUSSEX										
5,100.00	24.50	59.83	4,741.11	874.73	1,504.72	1,740.50	0.00	0.00	0.00	
5,200.00	24.50	59.83	4,832.10	895.58	1,540.57	1,781.97	0.00	0.00	0.00	
5,300.00	24.50	59.83	4,923.10	916.42	1,576.42	1,823.44	0.00	0.00	0.00	
5,400.00	24.50	59.83	5,014.09	937.26	1,612.27	1,864.91	0.00	0.00	0.00	
5,500.00	24.50	59.83	5,105.09	958.10	1,648.13	1,906.38	0.00	0.00	0.00	
5,600.00	24.50	59.83	5,196.09	978.94	1,683.98	1,947.85	0.00	0.00	0.00	
5,617.45	24.50	59.83	5,211.97	982.58	1,690.24	1,955.09	0.00	0.00	0.00	
Start Drop -2.00										
5,700.00	22.85	59.83	5,287.56	999.24	1,718.89	1,988.23	2.00	-2.00	0.00	
5,800.00	20.85	59.83	5,380.38	1,017.94	1,751.07	2,025.45	2.00	-2.00	0.00	
5,900.00	18.85	59.83	5,474.43	1,035.01	1,780.42	2,059.40	2.00	-2.00	0.00	
6,000.00	16.85	59.83	5,569.61	1,050.41	1,806.92	2,090.05	2.00	-2.00	0.00	
6,100.00	14.85	59.83	5,665.81	1,064.14	1,830.53	2,117.36	2.00	-2.00	0.00	
6,200.00	12.85	59.83	5,762.89	1,076.17	1,851.22	2,141.30	2.00	-2.00	0.00	
6,300.00	10.85	59.83	5,860.76	1,086.49	1,868.97	2,161.83	2.00	-2.00	0.00	
6,400.00	8.85	59.83	5,959.28	1,095.08	1,883.76	2,178.94	2.00	-2.00	0.00	
6,500.00	6.85	59.83	6,058.34	1,101.95	1,895.57	2,192.59	2.00	-2.00	0.00	
6,600.00	4.85	59.83	6,157.81	1,107.07	1,904.38	2,202.78	2.00	-2.00	0.00	
6,700.00	2.85	59.83	6,257.58	1,110.44	1,910.18	2,209.50	2.00	-2.00	0.00	
6,800.00	0.85	59.83	6,357.52	1,112.06	1,912.97	2,212.72	2.00	-2.00	0.00	
6,842.48	0.00	0.00	6,400.00	1,112.22	1,913.25	2,213.04	2.00	-2.00	0.00	
Start 1920.00 hold at 6842.48 MD										
6,900.00	0.00	0.00	6,457.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,557.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,657.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
7,200.00	0.00	0.00	6,757.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
7,300.00	0.00	0.00	6,857.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
7,400.00	0.00	0.00	6,957.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,057.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,157.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,257.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,357.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
7,842.48	0.00	0.00	7,400.00	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
NIO										
7,900.00	0.00	0.00	7,457.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,557.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,657.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
8,172.48	0.00	0.00	7,730.00	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
CODELL										
8,200.00	0.00	0.00	7,757.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
8,247.48	0.00	0.00	7,805.00	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
GREENHORN										
8,300.00	0.00	0.00	7,857.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 39-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5005' & RKB 15' @ 5020.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5005' & RKB 15' @ 5020.00ft (ASSUMED)
Site:	WELD_Pinnacle 15-2 Pad	North Reference:	True
Well:	P_Pinnacle 39-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 39-2		
Design:	PLAN #1 9-10-10		

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)	
8,400.00	0.00	0.00	7,957.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,057.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,157.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
8,612.48	0.00	0.00	8,170.00	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
J-SAND										
8,700.00	0.00	0.00	8,257.52	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
8,762.48	0.00	0.00	8,320.00	1,112.22	1,913.25	2,213.04	0.00	0.00	0.00	
PBHL_PINNACLE 39-2(1480' FSL 50' FEL)										

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_PINNACLE 39-2(0.00	0.00	8,320.00	1,112.22	1,913.25	1,271,434.38	3,150,739.09	40° 4' 37.996 N	104° 57' 40.781 W	
- plan hits target center										
- Circle (radius 50.00)										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
904.48	900.00	8 5/8"	8.625	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,400.95	4,105.00	PARKMAN		0.00		
5,004.27	4,654.00	SUSSEX		0.00		
7,842.48	7,400.00	NIO		0.00		
8,172.48	7,730.00	CODELL		0.00		
8,247.48	7,805.00	GREENHORN		0.00		
8,612.48	8,170.00	J-SAND		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
1,525.02	1,488.03	129.64	223.01	Start 4092.43 hold at 1525.02 MD	
5,617.45	5,211.97	982.58	1,690.24	Start Drop -2.00	
6,842.48	6,400.00	1,112.22	1,913.25	Start 1920.00 hold at 6842.48 MD	
8,762.48	8,320.00	1,112.22	1,913.25	TD at 8762.48	