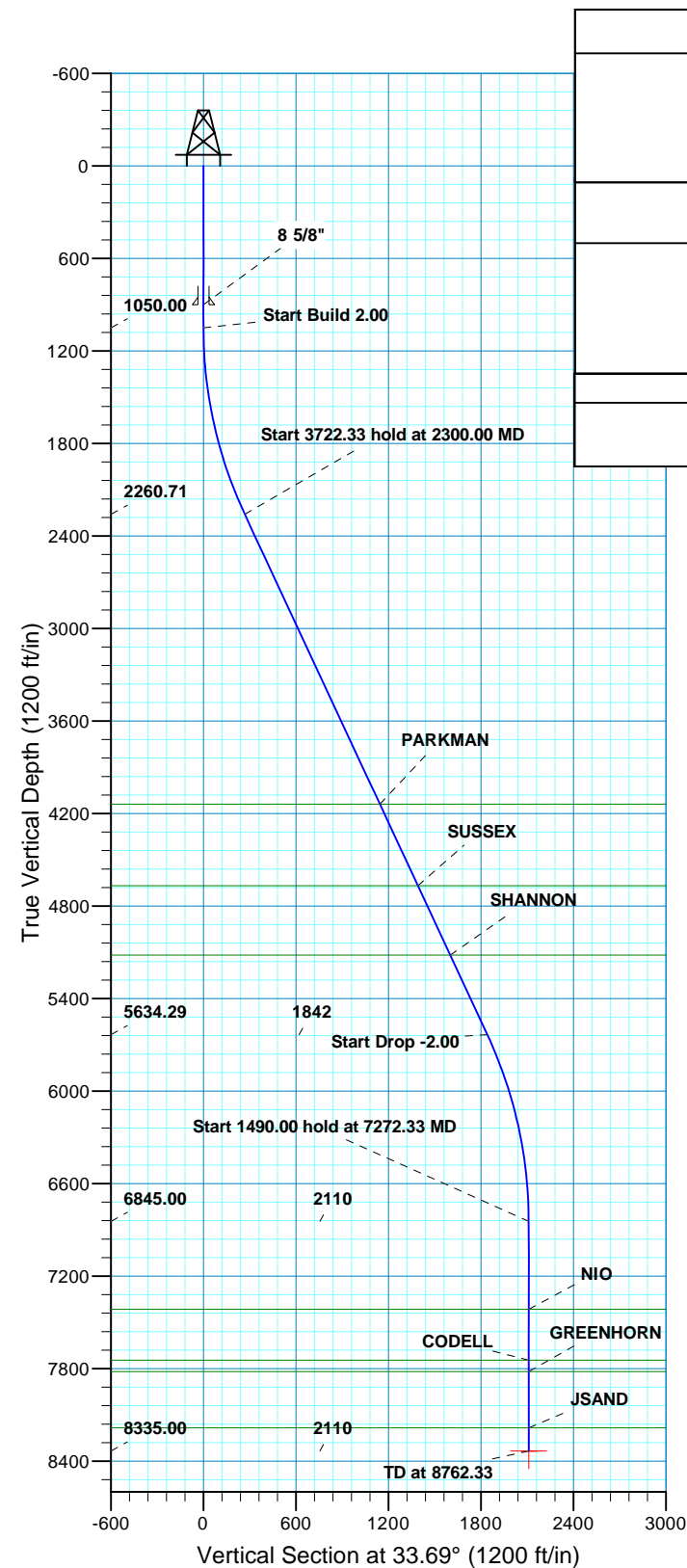


WELL DETAILS: P_Pinnacle 9-2					
GL 5005' & RKB 15' @ 5020.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1270310.24	3148812.69	40° 4' 27.001 N	104° 58' 5.650 W

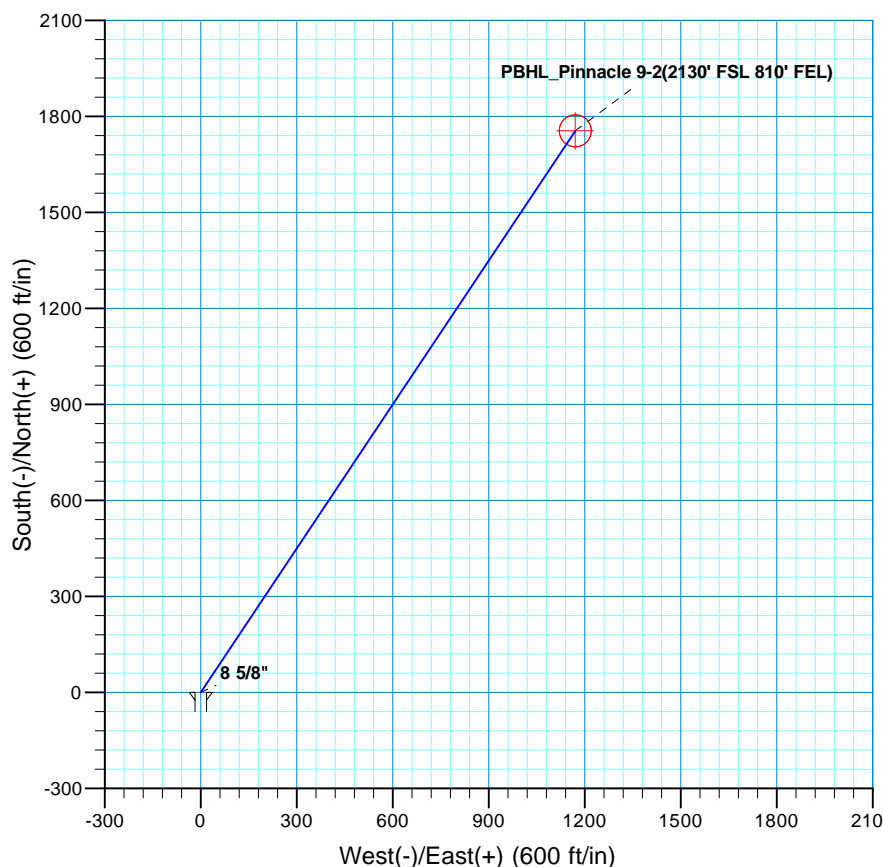
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8335.00	1755.48	1170.53	1272072.70	3149972.66	40° 4' 44.350 N	104° 57' 50.591 W	Circle (Radius: 50.00)
- plan hits target center								



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			
1050.00	0.00	0.00	1050.00	0.00	0.00	0.00	0.00	0.00			
2300.00	25.00	33.69	2260.71	223.32	148.90	2.00	33.69	268.41			
6022.33	25.00	33.69	5634.29	1532.16	1021.62	0.00	0.00	1841.53			
7272.33	0.00	0.00	6845.00	1755.48	1170.53	2.00	180.00	2109.94			
8762.33	0.00	0.00	8335.00	1755.48	1170.53	0.00	0.00	2109.94	PBHL_Pinnacle 9-2(2130' FSL 810' FEL)		

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83						FORMATION TOP DETAILS					
Geodetic System: US State Plane 1983						TVDPath	MDPath	Formation			
Datum: North American Datum 1983						4139.00	4372.46	PARKMAN			
Ellipsoid: GRS 1980						4669.00	4957.25	SUSSEX			
Zone: Colorado Northern Zone						5119.00	5453.77	SHANNON			
Location: SECTION 2 T1N R68W						7415.00	7842.33	NIO			
System Datum: Mean Sea Level						7745.00	8172.33	CODELL			
						7820.00	8247.33	GREENHORN			
						8185.00	8612.33	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 15-2 Pad

P_Pinnacle 9-2

P_Pinnacle 9-2

Plan: PLAN #1 8-17-10 RHS

Standard Planning Report

10 September, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 9-2
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 9-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 9-2		
Design:	PLAN #1 8-17-10 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 15-2 Pad, SECTION 2 T1N R68W		
Site Position:		Northing:	1,270,310.23 usft
From:	Lat/Long	Easting:	3,148,812.69 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Grid Convergence:	0.34 °

Well	P_Pinnacle 9-2, 386' FSL 1988' FEL		
Well Position	+N/-S	0.00 ft	Northing: 1,270,310.23 usft
	+E/-W	0.00 ft	Easting: 3,148,812.69 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	Latitude: 40° 4' 27.001 N
			Longitude: 104° 58' 5.650 W
			Ground Level: 5,005.00 ft

Wellbore	P_Pinnacle 9-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/17/2010	9.05	66.78	53,023

Design	PLAN #1 8-17-10 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	33.69

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	
2,300.00	25.00	33.69	2,260.71	223.32	148.90	2.00	2.00	0.00	33.69	
6,022.33	25.00	33.69	5,634.29	1,532.16	1,021.62	0.00	0.00	0.00	0.00	
7,272.33	0.00	0.00	6,845.00	1,755.48	1,170.53	2.00	-2.00	0.00	180.00	
8,762.33	0.00	0.00	8,335.00	1,755.48	1,170.53	0.00	0.00	0.00	0.00	PBHL_Pinnacle 9-2(2

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 9-2
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 9-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 9-2		
Design:	PLAN #1 8-17-10 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	33.69	1,100.00	0.36	0.24	0.44	2.00	2.00	0.00
1,200.00	3.00	33.69	1,199.93	3.27	2.18	3.93	2.00	2.00	0.00
1,300.00	5.00	33.69	1,299.68	9.07	6.05	10.90	2.00	2.00	0.00
1,400.00	7.00	33.69	1,399.13	17.77	11.85	21.35	2.00	2.00	0.00
1,500.00	9.00	33.69	1,498.15	29.35	19.57	35.27	2.00	2.00	0.00
1,600.00	11.00	33.69	1,596.63	43.79	29.20	52.63	2.00	2.00	0.00
1,700.00	13.00	33.69	1,694.44	61.09	40.73	73.42	2.00	2.00	0.00
1,800.00	15.00	33.69	1,791.46	81.22	54.15	97.62	2.00	2.00	0.00
1,900.00	17.00	33.69	1,887.58	104.15	69.44	125.18	2.00	2.00	0.00
2,000.00	19.00	33.69	1,982.68	129.86	86.59	156.08	2.00	2.00	0.00
2,100.00	21.00	33.69	2,076.65	158.31	105.56	190.28	2.00	2.00	0.00
2,200.00	23.00	33.69	2,169.36	189.48	126.34	227.74	2.00	2.00	0.00
2,300.00	25.00	33.69	2,260.71	223.32	148.90	268.41	2.00	2.00	0.00
Start 3722.33 hold at 2300.00 MD									
2,400.00	25.00	33.69	2,351.34	258.48	172.35	310.67	0.00	0.00	0.00
2,500.00	25.00	33.69	2,441.97	293.64	195.80	352.93	0.00	0.00	0.00
2,600.00	25.00	33.69	2,532.60	328.80	219.24	395.19	0.00	0.00	0.00
2,700.00	25.00	33.69	2,623.24	363.97	242.69	437.46	0.00	0.00	0.00
2,800.00	25.00	33.69	2,713.87	399.13	266.13	479.72	0.00	0.00	0.00
2,900.00	25.00	33.69	2,804.50	434.29	289.58	521.98	0.00	0.00	0.00
3,000.00	25.00	33.69	2,895.13	469.45	313.02	564.24	0.00	0.00	0.00
3,100.00	25.00	33.69	2,985.76	504.61	336.47	606.50	0.00	0.00	0.00
3,200.00	25.00	33.69	3,076.39	539.78	359.91	648.76	0.00	0.00	0.00
3,300.00	25.00	33.69	3,167.02	574.94	383.36	691.03	0.00	0.00	0.00
3,400.00	25.00	33.69	3,257.65	610.10	406.80	733.29	0.00	0.00	0.00
3,500.00	25.00	33.69	3,348.28	645.26	430.25	775.55	0.00	0.00	0.00
3,600.00	25.00	33.69	3,438.91	680.42	453.70	817.81	0.00	0.00	0.00
3,700.00	25.00	33.69	3,529.54	715.59	477.14	860.07	0.00	0.00	0.00
3,800.00	25.00	33.69	3,620.17	750.75	500.59	902.34	0.00	0.00	0.00
3,900.00	25.00	33.69	3,710.80	785.91	524.03	944.60	0.00	0.00	0.00
4,000.00	25.00	33.69	3,801.44	821.07	547.48	986.86	0.00	0.00	0.00
4,100.00	25.00	33.69	3,892.07	856.23	570.92	1,029.12	0.00	0.00	0.00
4,200.00	25.00	33.69	3,982.70	891.40	594.37	1,071.38	0.00	0.00	0.00
4,300.00	25.00	33.69	4,073.33	926.56	617.81	1,113.64	0.00	0.00	0.00
4,372.46	25.00	33.69	4,139.00	952.04	634.80	1,144.27	0.00	0.00	0.00
PARKMAN									
4,400.00	25.00	33.69	4,163.96	961.72	641.26	1,155.91	0.00	0.00	0.00
4,500.00	25.00	33.69	4,254.59	996.88	664.71	1,198.17	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 9-2
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 9-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 9-2		
Design:	PLAN #1 8-17-10 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	33.69	4,345.22	1,032.04	688.15	1,240.43	0.00	0.00	0.00	
4,700.00	25.00	33.69	4,435.85	1,067.21	711.60	1,282.69	0.00	0.00	0.00	
4,800.00	25.00	33.69	4,526.48	1,102.37	735.04	1,324.95	0.00	0.00	0.00	
4,900.00	25.00	33.69	4,617.11	1,137.53	758.49	1,367.22	0.00	0.00	0.00	
4,957.25	25.00	33.69	4,669.00	1,157.66	771.91	1,391.41	0.00	0.00	0.00	
SUSSEX										
5,000.00	25.00	33.69	4,707.74	1,172.69	781.93	1,409.48	0.00	0.00	0.00	
5,100.00	25.00	33.69	4,798.37	1,207.85	805.38	1,451.74	0.00	0.00	0.00	
5,200.00	25.00	33.69	4,889.00	1,243.02	828.82	1,494.00	0.00	0.00	0.00	
5,300.00	25.00	33.69	4,979.64	1,278.18	852.27	1,536.26	0.00	0.00	0.00	
5,400.00	25.00	33.69	5,070.27	1,313.34	875.72	1,578.53	0.00	0.00	0.00	
5,453.77	25.00	33.69	5,119.00	1,332.25	888.32	1,601.25	0.00	0.00	0.00	
SHANNON										
5,500.00	25.00	33.69	5,160.90	1,348.50	899.16	1,620.79	0.00	0.00	0.00	
5,600.00	25.00	33.69	5,251.53	1,383.67	922.61	1,663.05	0.00	0.00	0.00	
5,700.00	25.00	33.69	5,342.16	1,418.83	946.05	1,705.31	0.00	0.00	0.00	
5,800.00	25.00	33.69	5,432.79	1,453.99	969.50	1,747.57	0.00	0.00	0.00	
5,900.00	25.00	33.69	5,523.42	1,489.15	992.94	1,789.83	0.00	0.00	0.00	
6,000.00	25.00	33.69	5,614.05	1,524.31	1,016.39	1,832.10	0.00	0.00	0.00	
6,022.33	25.00	33.69	5,634.29	1,532.16	1,021.62	1,841.53	0.00	0.00	0.00	
Start Drop -2.00										
6,100.00	23.45	33.69	5,705.12	1,558.68	1,039.30	1,873.40	2.00	-2.00	0.00	
6,200.00	21.45	33.69	5,797.54	1,590.44	1,060.48	1,911.58	2.00	-2.00	0.00	
6,300.00	19.45	33.69	5,891.23	1,619.51	1,079.86	1,946.51	2.00	-2.00	0.00	
6,400.00	17.45	33.69	5,986.09	1,645.83	1,097.42	1,978.15	2.00	-2.00	0.00	
6,500.00	15.45	33.69	6,081.99	1,669.39	1,113.12	2,006.46	2.00	-2.00	0.00	
6,600.00	13.45	33.69	6,178.83	1,690.14	1,126.96	2,031.41	2.00	-2.00	0.00	
6,700.00	11.45	33.69	6,276.47	1,708.07	1,138.92	2,052.96	2.00	-2.00	0.00	
6,800.00	9.45	33.69	6,374.81	1,723.16	1,148.98	2,071.09	2.00	-2.00	0.00	
6,900.00	7.45	33.69	6,473.72	1,735.38	1,157.12	2,085.78	2.00	-2.00	0.00	
7,000.00	5.45	33.69	6,573.08	1,744.72	1,163.35	2,097.01	2.00	-2.00	0.00	
7,100.00	3.45	33.69	6,672.78	1,751.17	1,167.65	2,104.76	2.00	-2.00	0.00	
7,200.00	1.45	33.69	6,772.68	1,754.72	1,170.02	2,109.03	2.00	-2.00	0.00	
7,272.33	0.00	0.00	6,845.00	1,755.48	1,170.53	2,109.94	2.00	-2.00	0.00	
Start 1490.00 hold at 7272.33 MD										
7,300.00	0.00	0.00	6,872.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
7,400.00	0.00	0.00	6,972.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,072.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,172.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,272.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,372.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
7,842.33	0.00	0.00	7,415.00	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
NIO										
7,900.00	0.00	0.00	7,472.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,572.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,672.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
8,172.33	0.00	0.00	7,745.00	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
CODELL										
8,200.00	0.00	0.00	7,772.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
8,247.33	0.00	0.00	7,820.00	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
GREENHORN										

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Pinnacle 9-2
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 9-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Pinnacle 9-2		
Design:	PLAN #1 8-17-10 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)	
8,300.00	0.00	0.00	7,872.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
8,400.00	0.00	0.00	7,972.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,072.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,172.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
8,612.33	0.00	0.00	8,185.00	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
JSAND										
8,700.00	0.00	0.00	8,272.67	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
8,762.33	0.00	0.00	8,335.00	1,755.48	1,170.53	2,109.94	0.00	0.00	0.00	
TD at 8762.33 - PBHL_Pinnacle 9-2(2130' FSL 810' 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 9-2(213	0.00	0.00	8,335.00	1,755.48	1,170.53	1,272,072.70	3,149,972.66	40° 4' 44.350 N	104° 57' 50.591 W	
- plan hits target center										
- Circle (radius 50.00)										

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 (°)				
4,372.46	4,139.00	PARKMAN							
4,957.25	4,669.00	SUSSEX							
5,453.77	5,119.00	SHANNON							
7,842.33	7,415.00	NIO							
8,172.33	7,745.00	CODELL							
8,247.33	7,820.00	GREENHORN							
8,612.33	8,185.00	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	
2,300.00	2,260.71	223.32	148.90	Start 3722.33 hold at 2300.00 MD	
6,022.33	5,634.29	1,532.16	1,021.62	Start Drop -2.00	
7,272.33	6,845.00	1,755.48	1,170.53	Start 1490.00 hold at 7272.33 MD	
8,762.33	8,335.00	1,755.48	1,170.53	TD at 8762.33	