

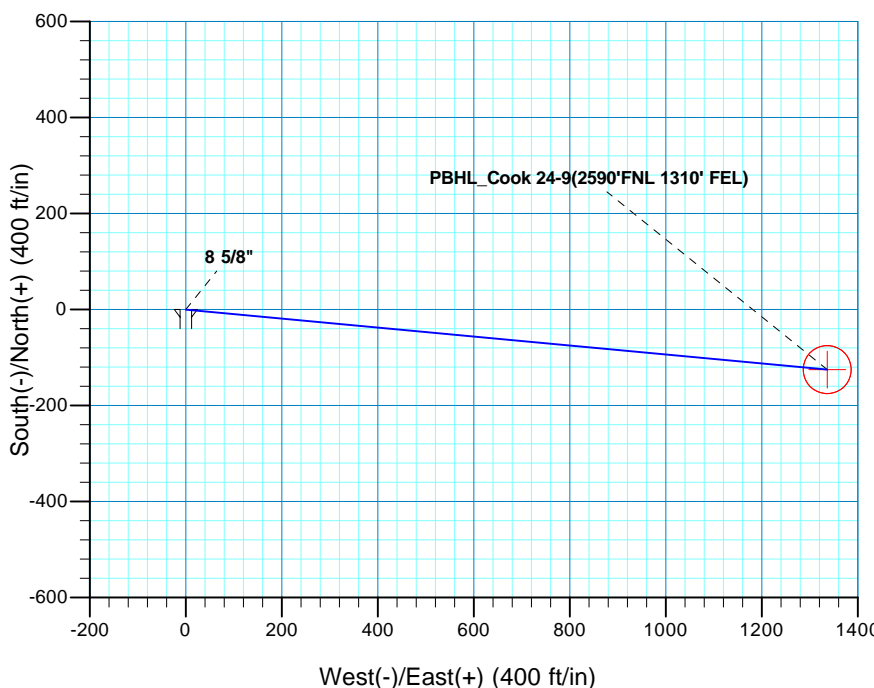
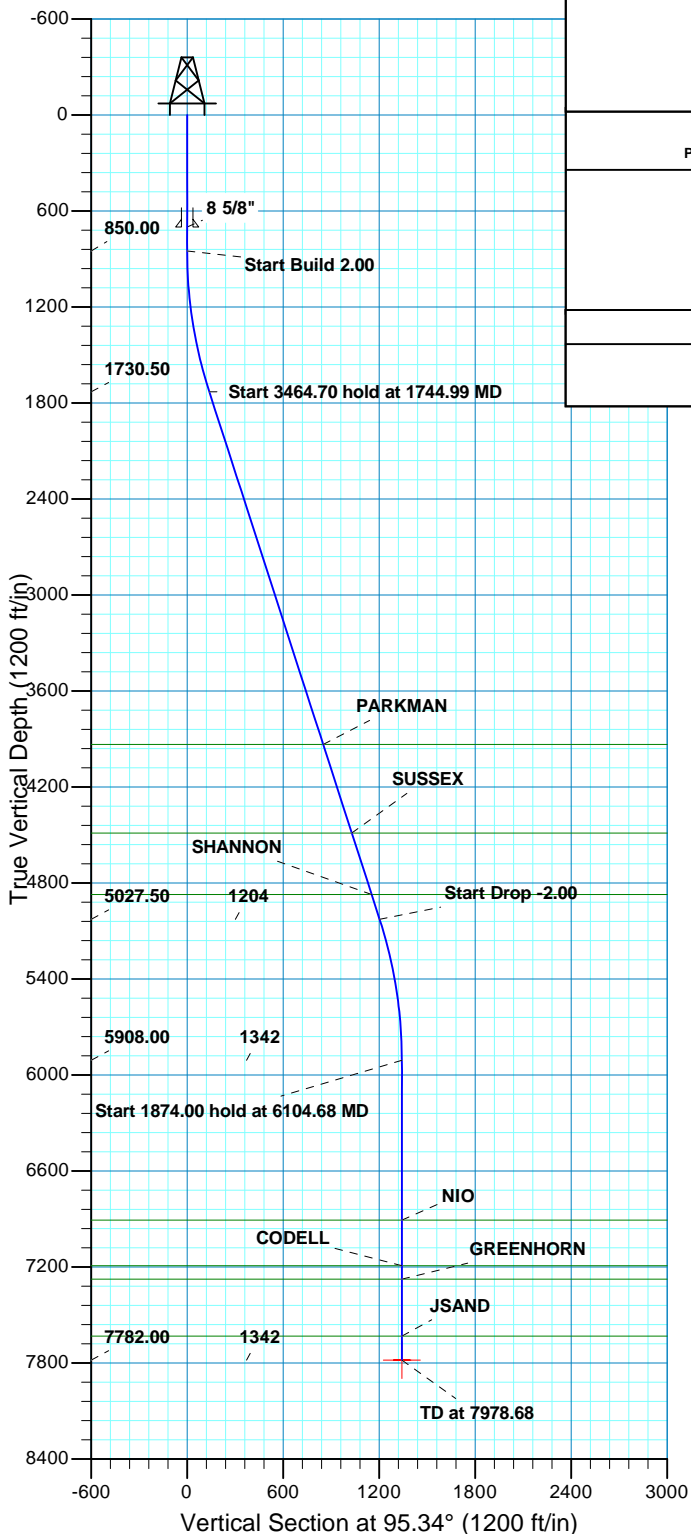
WELL DETAILS: P_Cook 24-9					
GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1299937.16	3232299.83	40° 9' 13.442 N	104° 40' 8.137 W

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7782.00	-124.90	1336.40	1299824.79	3233637.34	40° 9' 12.208 N	104° 39' 50.926 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	850.00	0.00	0.00	0.00	0.00	0.00		
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00		
1744.99	17.90	95.34	1730.50	-12.90	138.07	2.00	95.34	138.67		
5209.69	17.90	95.34	5027.50	-112.00	1198.34	0.00	0.00	1203.56		
6104.68	0.00	0.00	5908.00	-124.90	1336.40	2.00	180.00	1342.23		
7978.68	0.00	0.00	7782.00	-124.90	1336.40	0.00	0.00	1342.23	PBHL_Cook 24-9(2590'FNL 1310' FEL)	

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83				FORMATION TOP DETAILS		
Geodetic System: US State Plane 1983				TVDPath	MDPath	Formation
Datum: North American Datum 1983				4488.00	4060.57	PARKMAN
Ellipsoid: GRS 1980				4872.00	5046.29	SUSSEX
Zone: Colorado Northern Zone				6908.00	7104.68	SHANNON
Location: SECTION 9 T2N R65W				7192.00	7388.68	NIO
System Datum: Mean Sea Level				7276.00	7472.68	CODELL
				7632.00	7828.68	GREENHORN
						JSAND

CASING DETAILS					
TVD	MD	Name	Size		
700.00	700.00	8 5/8"	8.625		





Scientific Drilling
Rocky Mountain Operations

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_COOK 25-9 PAD

P_Cook 24-9

P_Cook 24-9

Plan: PLAN #1 8-16-10 RHS

Standard Planning Report

16 August, 2010



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 24-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Site:	WELD_COOK 25-9 PAD	North Reference:	True
Well:	P_Cook 24-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 24-9		
Design:	PLAN #1 8-16-10 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_COOK 25-9 PAD, SECTION 9 T2N R65W				
Site Position:		Northing:	1,300,001.29 usft	Latitude:	40° 9' 14.076 N
From:	Lat/Long	Easting:	3,232,300.07 usft	Longitude:	104° 40' 8.126 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.54 °

Well	P_Cook 24-9, 2470' FNL 2623' FWL					
Well Position	+N/-S	-64.13 ft	Northing:	1,299,937.16 usft	Latitude:	40° 9' 13.442 N
	+E/-W	-0.84 ft	Easting:	3,232,299.83 usft	Longitude:	104° 40' 8.137 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,873.00 ft

Wellbore	P_Cook 24-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/16/2010	8.90	66.90	53,099

Design	PLAN #1 8-16-10 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	95.34

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	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,744.99	17.90	95.34	1,730.50	-12.90	138.07	2.00	2.00	0.00	95.34	
5,209.69	17.90	95.34	5,027.50	-112.00	1,198.34	0.00	0.00	0.00	0.00	
6,104.68	0.00	0.00	5,908.00	-124.90	1,336.40	2.00	-2.00	0.00	180.00	
7,978.68	0.00	0.00	7,782.00	-124.90	1,336.40	0.00	0.00	0.00	0.00	PBHL_Cook 24-9(259

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 24-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Site:	WELD_COOK 25-9 PAD	North Reference:	True
Well:	P_Cook 24-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 24-9		
Design:	PLAN #1 8-16-10 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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	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	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8 5/8"										
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00										
900.00	1.00	95.34	900.00	-0.04	0.43	0.44	2.00	2.00	0.00	0.00
1,000.00	3.00	95.34	999.93	-0.37	3.91	3.93	2.00	2.00	0.00	0.00
1,100.00	5.00	95.34	1,099.68	-1.01	10.85	10.90	2.00	2.00	0.00	0.00
1,200.00	7.00	95.34	1,199.13	-1.99	21.26	21.35	2.00	2.00	0.00	0.00
1,300.00	9.00	95.34	1,298.15	-3.28	35.12	35.27	2.00	2.00	0.00	0.00
1,400.00	11.00	95.34	1,396.63	-4.90	52.41	52.63	2.00	2.00	0.00	0.00
1,500.00	13.00	95.34	1,494.44	-6.83	73.11	73.42	2.00	2.00	0.00	0.00
1,600.00	15.00	95.34	1,591.46	-9.08	97.19	97.62	2.00	2.00	0.00	0.00
1,700.00	17.00	95.34	1,687.58	-11.65	124.63	125.18	2.00	2.00	0.00	0.00
1,744.99	17.90	95.34	1,730.50	-12.90	138.07	138.67	2.00	2.00	0.00	0.00
Start 3464.70 hold at 1744.99 MD										
1,800.00	17.90	95.34	1,782.85	-14.48	154.90	155.58	0.00	0.00	0.00	0.00
1,900.00	17.90	95.34	1,878.01	-17.34	185.50	186.31	0.00	0.00	0.00	0.00
2,000.00	17.90	95.34	1,973.17	-20.20	216.11	217.05	0.00	0.00	0.00	0.00
2,100.00	17.90	95.34	2,068.33	-23.06	246.71	247.78	0.00	0.00	0.00	0.00
2,200.00	17.90	95.34	2,163.49	-25.92	277.31	278.52	0.00	0.00	0.00	0.00
2,300.00	17.90	95.34	2,258.65	-28.78	307.91	309.25	0.00	0.00	0.00	0.00
2,400.00	17.90	95.34	2,353.81	-31.64	338.51	339.99	0.00	0.00	0.00	0.00
2,500.00	17.90	95.34	2,448.97	-34.50	369.12	370.72	0.00	0.00	0.00	0.00
2,600.00	17.90	95.34	2,544.13	-37.36	399.72	401.46	0.00	0.00	0.00	0.00
2,700.00	17.90	95.34	2,639.29	-40.22	430.32	432.19	0.00	0.00	0.00	0.00
2,800.00	17.90	95.34	2,734.44	-43.08	460.92	462.93	0.00	0.00	0.00	0.00
2,900.00	17.90	95.34	2,829.60	-45.94	491.52	493.67	0.00	0.00	0.00	0.00
3,000.00	17.90	95.34	2,924.76	-48.80	522.13	524.40	0.00	0.00	0.00	0.00
3,100.00	17.90	95.34	3,019.92	-51.66	552.73	555.14	0.00	0.00	0.00	0.00
3,200.00	17.90	95.34	3,115.08	-54.52	583.33	585.87	0.00	0.00	0.00	0.00
3,300.00	17.90	95.34	3,210.24	-57.38	613.93	616.61	0.00	0.00	0.00	0.00
3,400.00	17.90	95.34	3,305.40	-60.24	644.53	647.34	0.00	0.00	0.00	0.00
3,500.00	17.90	95.34	3,400.56	-63.10	675.14	678.08	0.00	0.00	0.00	0.00
3,600.00	17.90	95.34	3,495.72	-65.96	705.74	708.81	0.00	0.00	0.00	0.00
3,700.00	17.90	95.34	3,590.88	-68.82	736.34	739.55	0.00	0.00	0.00	0.00
3,800.00	17.90	95.34	3,686.04	-71.68	766.94	770.28	0.00	0.00	0.00	0.00
3,900.00	17.90	95.34	3,781.20	-74.54	797.54	801.02	0.00	0.00	0.00	0.00
4,000.00	17.90	95.34	3,876.36	-77.40	828.15	831.76	0.00	0.00	0.00	0.00
4,060.57	17.90	95.34	3,934.00	-79.13	846.68	850.37	0.00	0.00	0.00	0.00
PARKMAN										
4,100.00	17.90	95.34	3,971.52	-80.26	858.75	862.49	0.00	0.00	0.00	0.00
4,200.00	17.90	95.34	4,066.68	-83.12	889.35	893.23	0.00	0.00	0.00	0.00
4,300.00	17.90	95.34	4,161.84	-85.98	919.95	923.96	0.00	0.00	0.00	0.00
4,400.00	17.90	95.34	4,257.00	-88.84	950.55	954.70	0.00	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 24-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Site:	WELD_COOK 25-9 PAD	North Reference:	True
Well:	P_Cook 24-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 24-9		
Design:	PLAN #1 8-16-10 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	17.90	95.34	4,352.16	-91.70	981.16	985.43	0.00	0.00	0.00	
4,600.00	17.90	95.34	4,447.32	-94.56	1,011.76	1,016.17	0.00	0.00	0.00	
4,642.75	17.90	95.34	4,488.00	-95.78	1,024.84	1,029.31	0.00	0.00	0.00	
SUSSEX										
4,700.00	17.90	95.34	4,542.48	-97.42	1,042.36	1,046.90	0.00	0.00	0.00	
4,800.00	17.90	95.34	4,637.64	-100.28	1,072.96	1,077.64	0.00	0.00	0.00	
4,900.00	17.90	95.34	4,732.79	-103.14	1,103.56	1,108.37	0.00	0.00	0.00	
5,000.00	17.90	95.34	4,827.95	-106.00	1,134.17	1,139.11	0.00	0.00	0.00	
5,046.29	17.90	95.34	4,872.00	-107.32	1,148.33	1,153.34	0.00	0.00	0.00	
SHANNON										
5,100.00	17.90	95.34	4,923.11	-108.86	1,164.77	1,169.84	0.00	0.00	0.00	
5,200.00	17.90	95.34	5,018.27	-111.72	1,195.37	1,200.58	0.00	0.00	0.00	
5,209.69	17.90	95.34	5,027.50	-112.00	1,198.34	1,203.56	0.00	0.00	0.00	
Start Drop -2.00										
5,300.00	16.09	95.34	5,113.86	-114.45	1,224.62	1,229.96	2.00	-2.00	0.00	
5,400.00	14.09	95.34	5,210.40	-116.88	1,250.55	1,255.99	2.00	-2.00	0.00	
5,500.00	12.09	95.34	5,307.80	-118.98	1,273.10	1,278.65	2.00	-2.00	0.00	
5,600.00	10.09	95.34	5,405.92	-120.77	1,292.26	1,297.89	2.00	-2.00	0.00	
5,700.00	8.09	95.34	5,504.66	-122.24	1,307.99	1,313.69	2.00	-2.00	0.00	
5,800.00	6.09	95.34	5,603.89	-123.39	1,320.29	1,326.04	2.00	-2.00	0.00	
5,900.00	4.09	95.34	5,703.49	-124.22	1,329.13	1,334.92	2.00	-2.00	0.00	
6,000.00	2.09	95.34	5,803.34	-124.72	1,334.50	1,340.32	2.00	-2.00	0.00	
6,100.00	0.09	95.34	5,903.32	-124.90	1,336.40	1,342.22	2.00	-2.00	0.00	
6,104.68	0.00	0.00	5,908.00	-124.90	1,336.40	1,342.23	2.00	-2.00	-2,035.64	
Start 1874.00 hold at 6104.68 MD										
6,200.00	0.00	0.00	6,003.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,103.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,203.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,303.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,403.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,503.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,603.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,703.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,803.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
7,100.00	0.00	0.00	6,903.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
7,104.68	0.00	0.00	6,908.00	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
NIO										
7,200.00	0.00	0.00	7,003.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,103.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
7,388.68	0.00	0.00	7,192.00	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
CODELL										
7,400.00	0.00	0.00	7,203.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
7,472.68	0.00	0.00	7,276.00	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
GREENHORN										
7,500.00	0.00	0.00	7,303.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,403.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,503.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,603.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
7,828.68	0.00	0.00	7,632.00	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
JSAND										
7,900.00	0.00	0.00	7,703.32	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 24-9
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)
Site:	WELD_COOK 25-9 PAD	North Reference:	True
Well:	P_Cook 24-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 24-9		
Design:	PLAN #1 8-16-10 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)	
7,978.68	0.00	0.00	7,782.00	-124.90	1,336.40	1,342.23	0.00	0.00	0.00	
PBHL_Cook 24-9(2590'FNL 1310' FEL)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL_Cook 24-9(2590'f - hit/miss target - Shape - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,782.00	-124.90	1,336.40	1,299,824.79	3,233,637.34	40° 9' 12.208 N	104° 39' 50.926 W	

Casing Points							
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)			
700.00	700.00	8 5/8"	8.625	11.000			

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,060.57	3,934.00	PARKMAN				
4,642.75	4,488.00	SUSSEX				
5,046.29	4,872.00	SHANNON				
7,104.68	6,908.00	NIO				
7,388.68	7,192.00	CODELL				
7,472.68	7,276.00	GREENHORN				
7,828.68	7,632.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
850.00	850.00	0.00	0.00	Start Build 2.00	
1,744.99	1,730.50	-12.90	138.07	Start 3464.70 hold at 1744.99 MD	
5,209.69	5,027.50	-112.00	1,198.34	Start Drop -2.00	
6,104.68	5,908.00	-124.90	1,336.40	Start 1874.00 hold at 6104.68 MD	
7,978.68	7,782.00	-124.90	1,336.40	TD at 7978.68	