

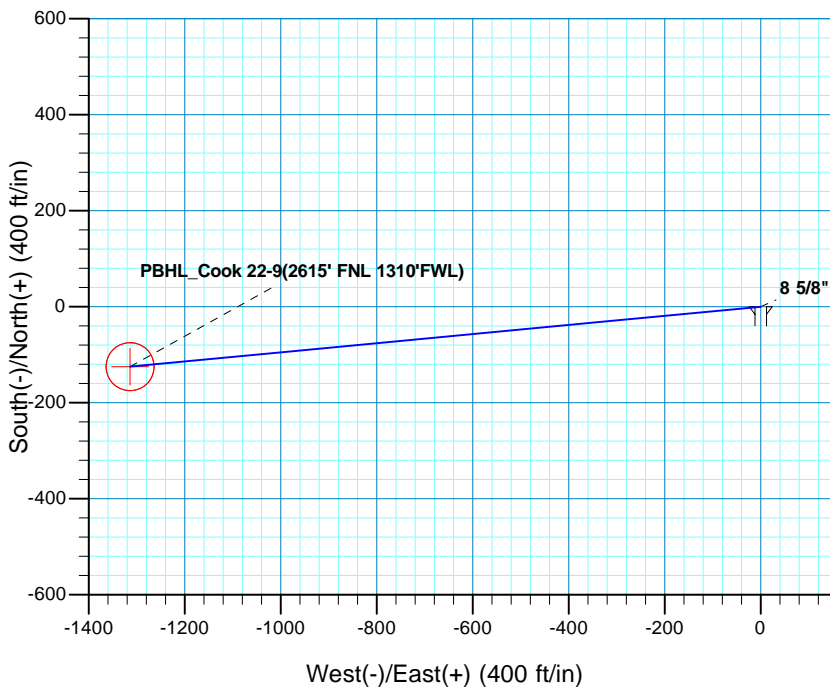
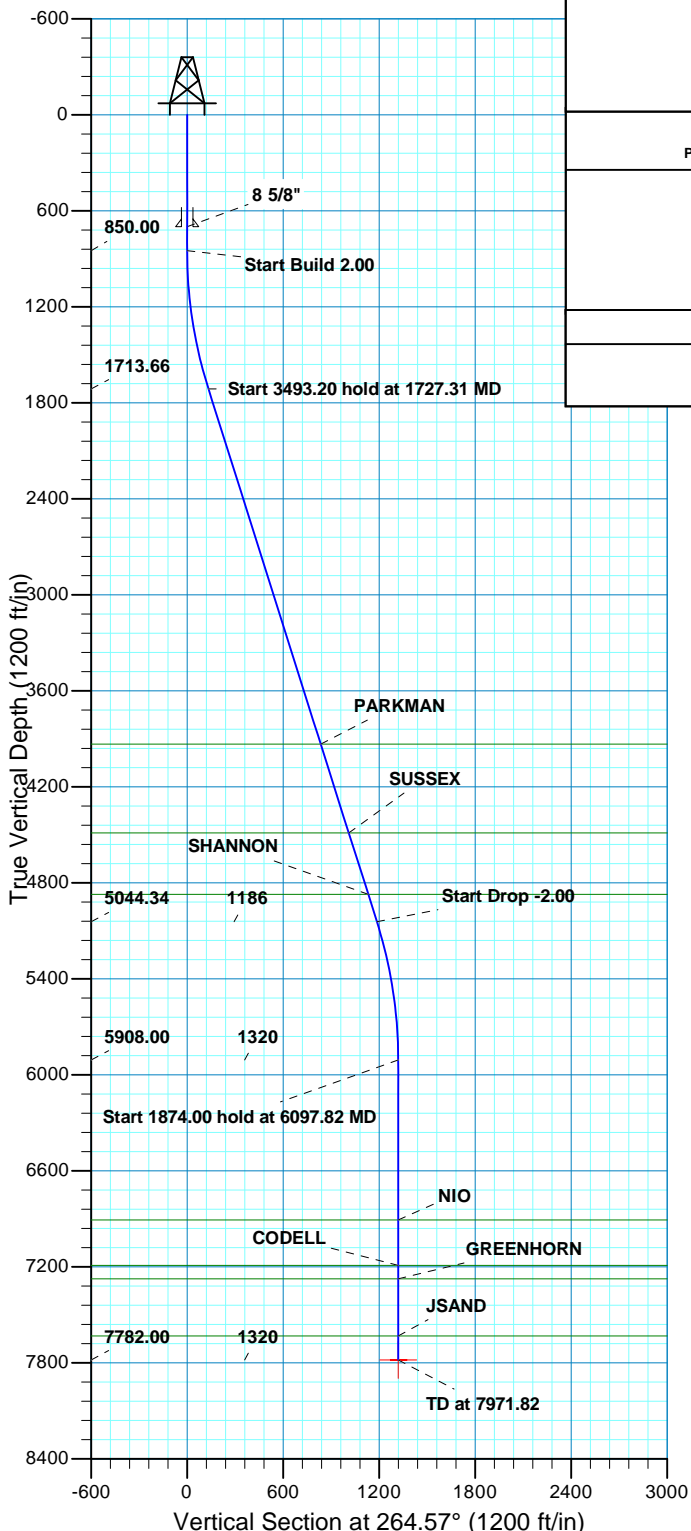
WELL DETAILS: P_Cook 22-9					
GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1299921.14	3232299.98	40° 9' 13.284 N	104° 40' 8.137 W

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7782.00	-124.90	-1313.76	1299783.93	3230987.45	40° 9' 12.049 N	104° 40' 25.057 W	Circle (Radius: 50.00)
- plan hits target center								

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Ddeg	TFace	Vsect	Target
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	
1727.31	17.55	264.57	1713.66	-12.61	-132.69	2.00	264.57	133.29	
5220.51	17.55	264.57	5044.34	-112.29	-1181.07	0.00	0.00	1186.40	
6097.82	0.00	0.00	5908.00	-124.90	-1313.76	2.00	180.00	1319.69	
7971.82	0.00	0.00	7782.00	-124.90	-1313.76	0.00	0.00	1319.69	PBHL_Cook 22-9(2615' FNL 1310'FWL)

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83			FORMATION TOP DETAILS				
Geodetic System:	US State Plane 1983	TVDPATH	3934.00	MDPATH	4055.99	FORMATION	PARKMAN
Datum:	North American Datum 1983	4488.00	4637.03	4872.00	5039.76	SUSSEX	SHANNON
Ellipsoid:	GRS 1980	6908.00	7097.82	7192.00	7381.82	NIO	CODELL
Zone:	Colorado Northern Zone	7276.00	7465.82	7782.00	7821.82	GREENHORN	JSAND
Location:	SECTION 9 T2N R65W						
System Datum:	Mean Sea Level						

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 22-9

P_Cook 22-9

Plan: PLAN #1 8-16-10 RHS

Standard Planning Report

16 August, 2010



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 22-9
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 22-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 22-9		
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 22-9, 2486' FNL 2623' FWL					
Well Position	+N/-S	-80.15 ft	Northing:	1,299,921.14 usft	Latitude:	40° 9' 13.284 N
	+E/-W	-0.84 ft	Easting:	3,232,299.98 usft	Longitude:	104° 40' 8.137 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,873.00 ft

Wellbore	P_Cook 22-9				
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	264.57

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	
1,727.31	17.55	264.57	1,713.66	-12.61	-132.69	2.00	2.00	0.00	264.57	
5,220.51	17.55	264.57	5,044.34	-112.29	-1,181.07	0.00	0.00	0.00	0.00	
6,097.82	0.00	0.00	5,908.00	-124.90	-1,313.76	2.00	-2.00	0.00	180.00	
7,971.82	0.00	0.00	7,782.00	-124.90	-1,313.76	0.00	0.00	0.00	0.00	PBHL_Cook 22-9(261)

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 22-9
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 22-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 22-9		
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	
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	
8 5/8"										
800.00	0.00	0.00	800.00	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	
Start Build 2.00										
900.00	1.00	264.57	900.00	-0.04	-0.43	0.44	2.00	2.00	0.00	
1,000.00	3.00	264.57	999.93	-0.37	-3.91	3.93	2.00	2.00	0.00	
1,100.00	5.00	264.57	1,099.68	-1.03	-10.85	10.90	2.00	2.00	0.00	
1,200.00	7.00	264.57	1,199.13	-2.02	-21.26	21.35	2.00	2.00	0.00	
1,300.00	9.00	264.57	1,298.15	-3.34	-35.11	35.27	2.00	2.00	0.00	
1,400.00	11.00	264.57	1,396.63	-4.98	-52.40	52.63	2.00	2.00	0.00	
1,500.00	13.00	264.57	1,494.44	-6.95	-73.09	73.42	2.00	2.00	0.00	
1,600.00	15.00	264.57	1,591.46	-9.24	-97.18	97.62	2.00	2.00	0.00	
1,700.00	17.00	264.57	1,687.58	-11.85	-124.62	125.18	2.00	2.00	0.00	
1,727.31	17.55	264.57	1,713.66	-12.61	-132.69	133.29	2.00	2.00	0.00	
Start 3493.20 hold at 1727.31 MD										
1,800.00	17.55	264.57	1,782.97	-14.69	-154.50	155.20	0.00	0.00	0.00	
1,900.00	17.55	264.57	1,878.32	-17.54	-184.52	185.35	0.00	0.00	0.00	
2,000.00	17.55	264.57	1,973.66	-20.40	-214.53	215.50	0.00	0.00	0.00	
2,100.00	17.55	264.57	2,069.01	-23.25	-244.54	245.64	0.00	0.00	0.00	
2,200.00	17.55	264.57	2,164.36	-26.10	-274.55	275.79	0.00	0.00	0.00	
2,300.00	17.55	264.57	2,259.71	-28.96	-304.57	305.94	0.00	0.00	0.00	
2,400.00	17.55	264.57	2,355.05	-31.81	-334.58	336.09	0.00	0.00	0.00	
2,500.00	17.55	264.57	2,450.40	-34.66	-364.59	366.23	0.00	0.00	0.00	
2,600.00	17.55	264.57	2,545.75	-37.52	-394.60	396.38	0.00	0.00	0.00	
2,700.00	17.55	264.57	2,641.10	-40.37	-424.61	426.53	0.00	0.00	0.00	
2,800.00	17.55	264.57	2,736.44	-43.22	-454.63	456.68	0.00	0.00	0.00	
2,900.00	17.55	264.57	2,831.79	-46.08	-484.64	486.82	0.00	0.00	0.00	
3,000.00	17.55	264.57	2,927.14	-48.93	-514.65	516.97	0.00	0.00	0.00	
3,100.00	17.55	264.57	3,022.49	-51.78	-544.66	547.12	0.00	0.00	0.00	
3,200.00	17.55	264.57	3,117.83	-54.64	-574.68	577.27	0.00	0.00	0.00	
3,300.00	17.55	264.57	3,213.18	-57.49	-604.69	607.41	0.00	0.00	0.00	
3,400.00	17.55	264.57	3,308.53	-60.34	-634.70	637.56	0.00	0.00	0.00	
3,500.00	17.55	264.57	3,403.88	-63.19	-664.71	667.71	0.00	0.00	0.00	
3,600.00	17.55	264.57	3,499.22	-66.05	-694.72	697.86	0.00	0.00	0.00	
3,700.00	17.55	264.57	3,594.57	-68.90	-724.74	728.00	0.00	0.00	0.00	
3,800.00	17.55	264.57	3,689.92	-71.75	-754.75	758.15	0.00	0.00	0.00	
3,900.00	17.55	264.57	3,785.26	-74.61	-784.76	788.30	0.00	0.00	0.00	
4,000.00	17.55	264.57	3,880.61	-77.46	-814.77	818.45	0.00	0.00	0.00	
4,055.99	17.55	264.57	3,934.00	-79.06	-831.58	835.33	0.00	0.00	0.00	
PARKMAN										
4,100.00	17.55	264.57	3,975.96	-80.31	-844.79	848.59	0.00	0.00	0.00	
4,200.00	17.55	264.57	4,071.31	-83.17	-874.80	878.74	0.00	0.00	0.00	
4,300.00	17.55	264.57	4,166.65	-86.02	-904.81	908.89	0.00	0.00	0.00	
4,400.00	17.55	264.57	4,262.00	-88.87	-934.82	939.04	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 22-9
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 22-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 22-9		
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	17.55	264.57	4,357.35	-91.73	-964.83	969.18	0.00	0.00	0.00	
4,600.00	17.55	264.57	4,452.70	-94.58	-994.85	999.33	0.00	0.00	0.00	
4,637.03	17.55	264.57	4,488.00	-95.64	-1,005.96	1,010.49	0.00	0.00	0.00	
SUSSEX										
4,700.00	17.55	264.57	4,548.04	-97.43	-1,024.86	1,029.48	0.00	0.00	0.00	
4,800.00	17.55	264.57	4,643.39	-100.29	-1,054.87	1,059.63	0.00	0.00	0.00	
4,900.00	17.55	264.57	4,738.74	-103.14	-1,084.88	1,089.77	0.00	0.00	0.00	
5,000.00	17.55	264.57	4,834.09	-105.99	-1,114.89	1,119.92	0.00	0.00	0.00	
5,039.76	17.55	264.57	4,872.00	-107.13	-1,126.83	1,131.91	0.00	0.00	0.00	
SHANNON										
5,100.00	17.55	264.57	4,929.43	-108.85	-1,144.91	1,150.07	0.00	0.00	0.00	
5,200.00	17.55	264.57	5,024.78	-111.70	-1,174.92	1,180.22	0.00	0.00	0.00	
5,220.51	17.55	264.57	5,044.34	-112.29	-1,181.07	1,186.40	0.00	0.00	0.00	
Start Drop -2.00										
5,300.00	15.96	264.57	5,120.45	-114.45	-1,203.88	1,209.31	2.00	-2.00	0.00	
5,400.00	13.96	264.57	5,217.06	-116.90	-1,229.57	1,235.12	2.00	-2.00	0.00	
5,500.00	11.96	264.57	5,314.51	-119.02	-1,251.89	1,257.54	2.00	-2.00	0.00	
5,600.00	9.96	264.57	5,412.68	-120.82	-1,270.81	1,276.54	2.00	-2.00	0.00	
5,700.00	7.96	264.57	5,511.46	-122.29	-1,286.31	1,292.11	2.00	-2.00	0.00	
5,800.00	5.96	264.57	5,610.71	-123.44	-1,298.37	1,304.22	2.00	-2.00	0.00	
5,900.00	3.96	264.57	5,710.34	-124.26	-1,306.97	1,312.86	2.00	-2.00	0.00	
6,000.00	1.96	264.57	5,810.20	-124.74	-1,312.10	1,318.02	2.00	-2.00	0.00	
6,097.82	0.00	0.00	5,908.00	-124.90	-1,313.76	1,319.69	2.00	-2.00	0.00	
Start 1874.00 hold at 6097.82 MD										
6,100.00	0.00	0.00	5,910.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,010.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,110.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,210.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,310.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,410.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,510.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,610.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,710.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,810.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
7,097.82	0.00	0.00	6,908.00	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
NIO										
7,100.00	0.00	0.00	6,910.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,010.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,110.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
7,381.82	0.00	0.00	7,192.00	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
CODELL										
7,400.00	0.00	0.00	7,210.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
7,465.82	0.00	0.00	7,276.00	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
GREENHORN										
7,500.00	0.00	0.00	7,310.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,410.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,510.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,610.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
7,821.82	0.00	0.00	7,632.00	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	
JSAND										
7,900.00	0.00	0.00	7,710.18	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 22-9
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 22-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 22-9		
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)
7,971.82	0.00	0.00	7,782.00	-124.90	-1,313.76	1,319.69	0.00	0.00	0.00
PBHL_Cook 22-9(2615' FNL 1310'FWL)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_Cook 22-9(2615' - hit/miss target - Shape - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,782.00	-124.90	-1,313.76	1,299,783.93	3,230,987.45	40° 9' 12.049 N	104° 40' 25.057 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 (°)	
4,055.99	3,934.00	PARKMAN				
4,637.03	4,488.00	SUSSEX				
5,039.76	4,872.00	SHANNON				
7,097.82	6,908.00	NIO				
7,381.82	7,192.00	CODELL				
7,465.82	7,276.00	GREENHORN				
7,821.82	7,632.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
850.00	850.00	0.00	0.00	Start Build 2.00	
1,727.31	1,713.66	-12.61	-132.69	Start 3493.20 hold at 1727.31 MD	
5,220.51	5,044.34	-112.29	-1,181.07	Start Drop -2.00	
6,097.82	5,908.00	-124.90	-1,313.76	Start 1874.00 hold at 6097.82 MD	
7,971.82	7,782.00	-124.90	-1,313.76	TD at 7971.82	