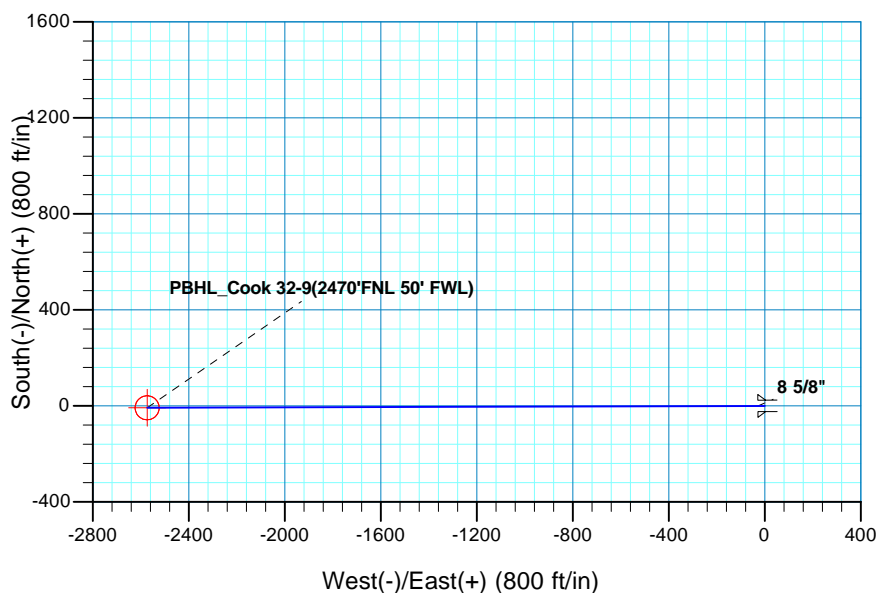
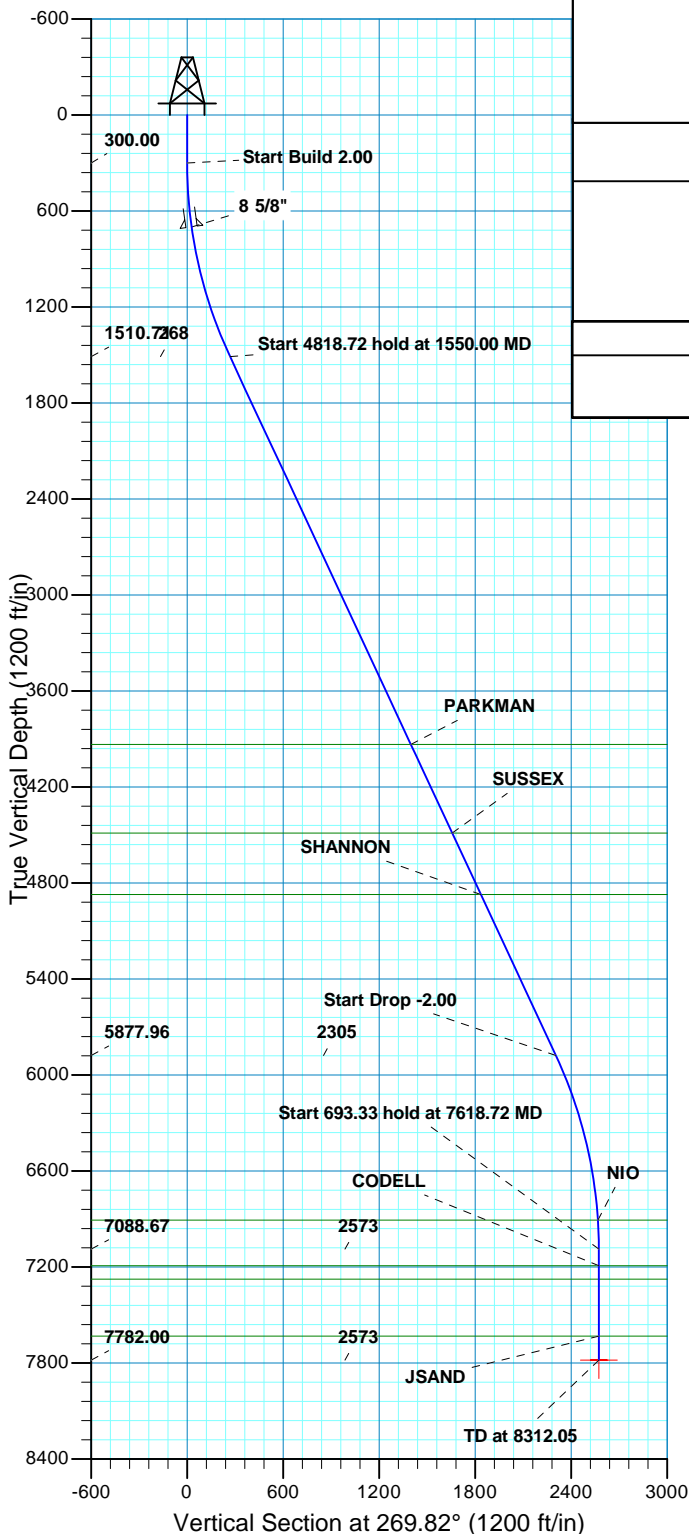


WELL DETAILS: P_Cook 32-9					
GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1299953.20	3232299.96	40° 9' 13.601 N	104° 40' 8.134 W

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL	7782.00	-7.87	-2573.28	1299921.21	3229726.87	40° 9' 13.522 N	104° 40' 41.275 W
- plan hits target center							
Shape							
Circle (Radius: 50.00)							

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	
1550.00	25.00	269.82	1510.71	-0.82	-268.41	2.00	269.82	268.41	
6368.72	25.00	269.82	5877.96	-7.05	-2304.88	0.00	0.00	2304.89	
7618.72	0.00	0.00	7088.67	-7.87	-2573.28	2.00	180.00	2573.30	
8312.05	0.00	0.00	7782.00	-7.87	-2573.28	0.00	0.00	2573.30	PBHL_Cook 32-9(2470'FNL 50' 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 9 T2N R65W System Datum: Mean Sea Level							TVDPath	MDPath	Formation
							3934.00	4223.80	PARKMAN
							4488.00	4835.07	SUSSEX
							4872.00	5258.77	SHANNON
							6908.00	7437.93	NIO
							7192.00	7722.05	CODELL
							7276.00	7806.05	GREENHORN
							7632.00	8162.05	JSAND
CASING DETAILS									
TVD	MD	Name	Size						
700.00	701.31	8 5/8"	8.625						



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_COOK 25-9 PAD

P_Cook 32-9

P_Cook 32-9

Plan: PLAN #1 8-16-10 RHS

Standard Planning Report

16 August, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 32-9
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 32-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 32-9		
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 32-9, 2454' FNL 2623' FWL					
Well Position	+N/-S	-48.09 ft	Northing:	1,299,953.20 usft	Latitude:	40° 9' 13.601 N
	+E/-W	-0.56 ft	Easting:	3,232,299.96 usft	Longitude:	104° 40' 8.134 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,873.00 ft

Wellbore	P_Cook 32-9				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/16/2010	8.90	66.90	53,100

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	269.82

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	
1,550.00	25.00	269.82	1,510.71	-0.82	-268.41	2.00	2.00	0.00	269.82	
6,368.72	25.00	269.82	5,877.96	-7.05	-2,304.88	0.00	0.00	0.00	0.00	
7,618.72	0.00	0.00	7,088.67	-7.87	-2,573.28	2.00	-2.00	0.00	180.00	
8,312.05	0.00	0.00	7,782.00	-7.87	-2,573.28	0.00	0.00	0.00	0.00	PBHL_Cook 32-9(247

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 32-9
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 32-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 32-9		
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
Start Build 2.00									
400.00	2.00	269.82	399.98	-0.01	-1.75	1.75	2.00	2.00	0.00
500.00	4.00	269.82	499.84	-0.02	-6.98	6.98	2.00	2.00	0.00
600.00	6.00	269.82	599.45	-0.05	-15.69	15.69	2.00	2.00	0.00
700.00	8.00	269.82	698.70	-0.09	-27.88	27.88	2.00	2.00	0.00
701.31	8.03	269.82	700.00	-0.09	-28.06	28.06	2.00	2.00	0.00
8 5/8"									
800.00	10.00	269.82	797.47	-0.13	-43.52	43.52	2.00	2.00	0.00
900.00	12.00	269.82	895.62	-0.19	-62.60	62.60	2.00	2.00	0.00
1,000.00	14.00	269.82	993.06	-0.26	-85.10	85.10	2.00	2.00	0.00
1,100.00	16.00	269.82	1,089.64	-0.34	-110.98	110.98	2.00	2.00	0.00
1,200.00	18.00	269.82	1,185.27	-0.43	-140.21	140.21	2.00	2.00	0.00
1,300.00	20.00	269.82	1,279.82	-0.53	-172.77	172.77	2.00	2.00	0.00
1,400.00	22.00	269.82	1,373.17	-0.64	-208.60	208.60	2.00	2.00	0.00
1,500.00	24.00	269.82	1,465.21	-0.76	-247.67	247.67	2.00	2.00	0.00
1,550.00	25.00	269.82	1,510.71	-0.82	-268.41	268.41	2.00	2.00	0.00
Start 4818.72 hold at 1550.00 MD									
1,600.00	25.00	269.82	1,556.03	-0.89	-289.54	289.54	0.00	0.00	0.00
1,700.00	25.00	269.82	1,646.66	-1.02	-331.80	331.80	0.00	0.00	0.00
1,800.00	25.00	269.82	1,737.29	-1.14	-374.06	374.06	0.00	0.00	0.00
1,900.00	25.00	269.82	1,827.92	-1.27	-416.32	416.32	0.00	0.00	0.00
2,000.00	25.00	269.82	1,918.55	-1.40	-458.58	458.59	0.00	0.00	0.00
2,100.00	25.00	269.82	2,009.18	-1.53	-500.85	500.85	0.00	0.00	0.00
2,200.00	25.00	269.82	2,099.81	-1.66	-543.11	543.11	0.00	0.00	0.00
2,300.00	25.00	269.82	2,190.44	-1.79	-585.37	585.37	0.00	0.00	0.00
2,400.00	25.00	269.82	2,281.07	-1.92	-627.63	627.63	0.00	0.00	0.00
2,500.00	25.00	269.82	2,371.70	-2.05	-669.89	669.90	0.00	0.00	0.00
2,600.00	25.00	269.82	2,462.34	-2.18	-712.15	712.16	0.00	0.00	0.00
2,700.00	25.00	269.82	2,552.97	-2.31	-754.42	754.42	0.00	0.00	0.00
2,800.00	25.00	269.82	2,643.60	-2.44	-796.68	796.68	0.00	0.00	0.00
2,900.00	25.00	269.82	2,734.23	-2.57	-838.94	838.94	0.00	0.00	0.00
3,000.00	25.00	269.82	2,824.86	-2.70	-881.20	881.20	0.00	0.00	0.00
3,100.00	25.00	269.82	2,915.49	-2.83	-923.46	923.47	0.00	0.00	0.00
3,200.00	25.00	269.82	3,006.12	-2.95	-965.72	965.73	0.00	0.00	0.00
3,300.00	25.00	269.82	3,096.75	-3.08	-1,007.99	1,007.99	0.00	0.00	0.00
3,400.00	25.00	269.82	3,187.38	-3.21	-1,050.25	1,050.25	0.00	0.00	0.00
3,500.00	25.00	269.82	3,278.01	-3.34	-1,092.51	1,092.51	0.00	0.00	0.00
3,600.00	25.00	269.82	3,368.64	-3.47	-1,134.77	1,134.78	0.00	0.00	0.00
3,700.00	25.00	269.82	3,459.27	-3.60	-1,177.03	1,177.04	0.00	0.00	0.00
3,800.00	25.00	269.82	3,549.90	-3.73	-1,219.29	1,219.30	0.00	0.00	0.00
3,900.00	25.00	269.82	3,640.54	-3.86	-1,261.56	1,261.56	0.00	0.00	0.00
4,000.00	25.00	269.82	3,731.17	-3.99	-1,303.82	1,303.82	0.00	0.00	0.00
4,100.00	25.00	269.82	3,821.80	-4.12	-1,346.08	1,346.09	0.00	0.00	0.00
4,200.00	25.00	269.82	3,912.43	-4.25	-1,388.34	1,388.35	0.00	0.00	0.00
4,223.80	25.00	269.82	3,934.00	-4.28	-1,398.40	1,398.41	0.00	0.00	0.00
PARKMAN									
4,300.00	25.00	269.82	4,003.06	-4.38	-1,430.60	1,430.61	0.00	0.00	0.00
4,400.00	25.00	269.82	4,093.69	-4.51	-1,472.86	1,472.87	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 32-9
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 32-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 32-9		
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	25.00	269.82	4,184.32	-4.64	-1,515.13	1,515.13	0.00	0.00	0.00	
4,600.00	25.00	269.82	4,274.95	-4.76	-1,557.39	1,557.39	0.00	0.00	0.00	
4,700.00	25.00	269.82	4,365.58	-4.89	-1,599.65	1,599.66	0.00	0.00	0.00	
4,800.00	25.00	269.82	4,456.21	-5.02	-1,641.91	1,641.92	0.00	0.00	0.00	
4,835.07	25.00	269.82	4,488.00	-5.07	-1,656.73	1,656.74	0.00	0.00	0.00	
SUSSEX										
4,900.00	25.00	269.82	4,546.84	-5.15	-1,684.17	1,684.18	0.00	0.00	0.00	
5,000.00	25.00	269.82	4,637.47	-5.28	-1,726.43	1,726.44	0.00	0.00	0.00	
5,100.00	25.00	269.82	4,728.10	-5.41	-1,768.70	1,768.70	0.00	0.00	0.00	
5,200.00	25.00	269.82	4,818.74	-5.54	-1,810.96	1,810.97	0.00	0.00	0.00	
5,258.77	25.00	269.82	4,872.00	-5.62	-1,835.79	1,835.80	0.00	0.00	0.00	
SHANNON										
5,300.00	25.00	269.82	4,909.37	-5.67	-1,853.22	1,853.23	0.00	0.00	0.00	
5,400.00	25.00	269.82	5,000.00	-5.80	-1,895.48	1,895.49	0.00	0.00	0.00	
5,500.00	25.00	269.82	5,090.63	-5.93	-1,937.74	1,937.75	0.00	0.00	0.00	
5,600.00	25.00	269.82	5,181.26	-6.06	-1,980.00	1,980.01	0.00	0.00	0.00	
5,700.00	25.00	269.82	5,271.89	-6.19	-2,022.26	2,022.27	0.00	0.00	0.00	
5,800.00	25.00	269.82	5,362.52	-6.32	-2,064.53	2,064.54	0.00	0.00	0.00	
5,900.00	25.00	269.82	5,453.15	-6.45	-2,106.79	2,106.80	0.00	0.00	0.00	
6,000.00	25.00	269.82	5,543.78	-6.57	-2,149.05	2,149.06	0.00	0.00	0.00	
6,100.00	25.00	269.82	5,634.41	-6.70	-2,191.31	2,191.32	0.00	0.00	0.00	
6,200.00	25.00	269.82	5,725.04	-6.83	-2,233.57	2,233.58	0.00	0.00	0.00	
6,300.00	25.00	269.82	5,815.67	-6.96	-2,275.83	2,275.85	0.00	0.00	0.00	
6,368.72	25.00	269.82	5,877.96	-7.05	-2,304.88	2,304.89	0.00	0.00	0.00	
Start Drop -2.00										
6,400.00	24.37	269.82	5,906.38	-7.09	-2,317.94	2,317.95	2.00	-2.00	0.00	
6,500.00	22.37	269.82	5,998.17	-7.21	-2,357.61	2,357.62	2.00	-2.00	0.00	
6,600.00	20.37	269.82	6,091.28	-7.32	-2,394.06	2,394.07	2.00	-2.00	0.00	
6,700.00	18.37	269.82	6,185.61	-7.43	-2,427.23	2,427.24	2.00	-2.00	0.00	
6,800.00	16.37	269.82	6,281.05	-7.52	-2,457.09	2,457.10	2.00	-2.00	0.00	
6,900.00	14.37	269.82	6,377.46	-7.60	-2,483.60	2,483.61	2.00	-2.00	0.00	
7,000.00	12.37	269.82	6,474.75	-7.67	-2,506.73	2,506.74	2.00	-2.00	0.00	
7,100.00	10.37	269.82	6,572.78	-7.73	-2,526.45	2,526.46	2.00	-2.00	0.00	
7,200.00	8.37	269.82	6,671.44	-7.78	-2,542.74	2,542.75	2.00	-2.00	0.00	
7,300.00	6.37	269.82	6,770.60	-7.82	-2,555.57	2,555.59	2.00	-2.00	0.00	
7,400.00	4.37	269.82	6,870.16	-7.85	-2,564.94	2,564.95	2.00	-2.00	0.00	
7,437.93	3.62	269.82	6,908.00	-7.85	-2,567.58	2,567.59	2.00	-2.00	0.00	
NIO										
7,500.00	2.37	269.82	6,969.98	-7.86	-2,570.82	2,570.84	2.00	-2.00	0.00	
7,600.00	0.37	269.82	7,069.95	-7.87	-2,573.22	2,573.24	2.00	-2.00	0.00	
7,618.72	0.00	0.00	7,088.67	-7.87	-2,573.28	2,573.30	2.00	-2.00	0.00	
Start 693.33 hold at 7618.72 MD										
7,700.00	0.00	0.00	7,169.95	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00	
7,722.05	0.00	0.00	7,192.00	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00	
CODELL										
7,800.00	0.00	0.00	7,269.95	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00	
7,806.05	0.00	0.00	7,276.00	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00	
GREENHORN										
7,900.00	0.00	0.00	7,369.95	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,469.95	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,569.95	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00	

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 32-9
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 32-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 32-9		
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)
8,162.05	0.00	0.00	7,632.00	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00
JSAND									
8,200.00	0.00	0.00	7,669.95	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00
8,300.00	0.00	0.00	7,769.95	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00
8,312.05	0.00	0.00	7,782.00	-7.87	-2,573.28	2,573.30	0.00	0.00	0.00
PBHL_Cook 32-9(2470'FNL 50' FWL)									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_Cook 32-9(2470' - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,782.00	-7.87	-2,573.28	1,299,921.21	3,229,726.87	40° 9' 13.522 N	104° 40' 41.275 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
701.31	700.00	8 5/8"	8.625	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,223.80	3,934.00	PARKMAN				
4,835.07	4,488.00	SUSSEX				
5,258.77	4,872.00	SHANNON				
7,437.93	6,908.00	NIO				
7,722.05	7,192.00	CODELL				
7,806.05	7,276.00	GREENHORN				
8,162.05	7,632.00	JSAND				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
1,550.00	1,510.71	-0.82	-268.41	Start 4818.72 hold at 1550.00 MD	
6,368.72	5,877.96	-7.05	-2,304.88	Start Drop -2.00	
7,618.72	7,088.67	-7.87	-2,573.28	Start 693.33 hold at 7618.72 MD	
8,312.05	7,782.00	-7.87	-2,573.28	TD at 8312.05	