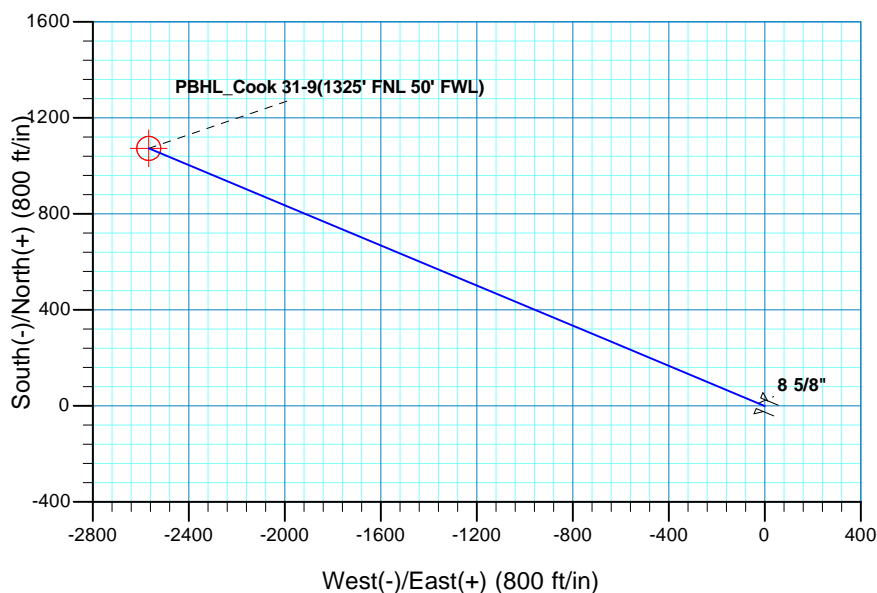
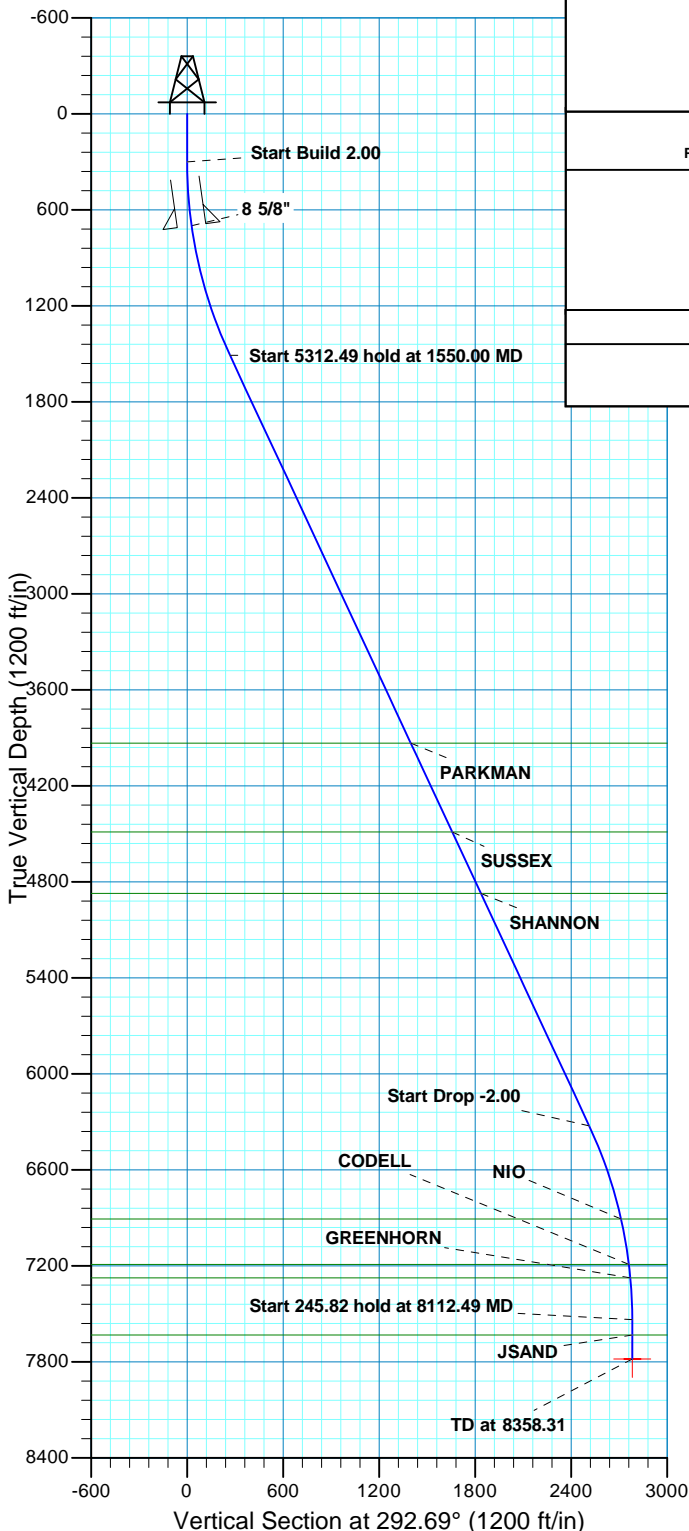


WELL DETAILS: P_Cook 31-9					
GL 4873' & RKB 15' @ 4888.00ft (ASSUMED)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1300017.31	3232300.20	40° 9' 14.234 N	104° 40' 8.123 W

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL	7782.00	1072.95	-2566.74	1301066.16	3229723.52	40° 9' 24.836 N	104° 40' 41.182 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	
	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
	1550.00	25.00	292.69	1510.71	103.52	-247.64	2.00	292.69	268.41	
	6862.49	25.00	292.69	6325.46	969.43	-2319.09	0.00	0.00	2513.56	
	8112.49	0.00	0.00	7536.18	1072.95	-2566.74	2.00	180.00	2781.97	
	8358.31	0.00	0.00	7782.00	1072.95	-2566.74	0.00	0.00	2781.97	PBHL_Cook 31-9(1325' FNL 50' FWL)
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 9 T2N R65W System Datum: Mean Sea Level							3934.00	4223.80	PARKMAN	
							4488.00	4835.07	SUSSEX	
							4872.00	5258.77	SHANNON	
							6908.00	7479.17	NIO	
							7192.00	7767.48	CODELL	
							7276.00	7851.96	GREENHORN	
							7632.00	8208.31	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 31-9

P_Cook 31-9

Plan: PLAN #1 8-16-10 RHS

Standard Planning Report

05 October, 2010

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 31-9
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 31-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 31-9		
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
From:	Lat/Long	Easting:	3,232,300.07 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Grid Convergence:	0.54 °

Well	P_Cook 31-9, 2390' FNL 2623' FWL		
Well Position	+N/-S	16.02 ft	Northing: 1,300,017.31 usft
	+E/-W	0.28 ft	Easting: 3,232,300.20 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	
		Latitude:	40° 9' 14.076 N
		Longitude:	104° 40' 8.126 W
		Ground Level:	4,873.00 ft

Wellbore	P_Cook 31-9				
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	292.69

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	
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	292.69	1,510.71	103.52	-247.64	2.00	2.00	0.00	292.69	
6,862.49	25.00	292.69	6,325.46	969.43	-2,319.09	0.00	0.00	0.00	0.00	
8,112.49	0.00	0.00	7,536.18	1,072.95	-2,566.74	2.00	-2.00	0.00	180.00	
8,358.31	0.00	0.00	7,782.00	1,072.95	-2,566.74	0.00	0.00	0.00	0.00	PBHL_Cook 31-9(132

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 31-9
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 31-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 31-9		
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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 2.00										
1,550.00	25.00	292.69	1,510.71	103.52	-247.64	268.41	2.00	2.00	0.00	
Start 5312.49 hold at 1550.00 MD										
6,862.49	25.00	292.69	6,325.46	969.43	-2,319.09	2,513.56	0.00	0.00	0.00	
Start Drop -2.00										
8,112.49	0.00	0.00	7,536.18	1,072.95	-2,566.74	2,781.97	2.00	-2.00	0.00	
Start 245.82 hold at 8112.49 MD										
8,358.31	0.00	0.00	7,782.00	1,072.95	-2,566.74	2,781.97	0.00	0.00	0.00	
TD at 8358.31										

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_Cook 31-9(1325'	0.00	0.00	7,782.00	1,072.95	-2,566.74	1,301,066.16	3,229,723.52	40° 9' 24.836 N		104° 40' 41.182 W
- plan hits target center										
- Circle (radius 50.00)										

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				
7,479.17	6,908.00	NIO				
7,767.48	7,192.00	CODELL				
7,851.96	7,276.00	GREENHORN				
8,208.31	7,632.00	JSAND				

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well P_Cook 31-9
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 31-9	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_Cook 31-9		
Design:	PLAN #1 8-16-10 RHS		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,550.00	1,510.71	103.52	-247.64	Start 5312.49 hold at 1550.00 MD
6,862.49	6,325.46	969.43	-2,319.09	Start Drop -2.00
8,112.49	7,536.18	1,072.95	-2,566.74	Start 245.82 hold at 8112.49 MD
8,358.31	7,782.00	1,072.95	-2,566.74	TD at 8358.31