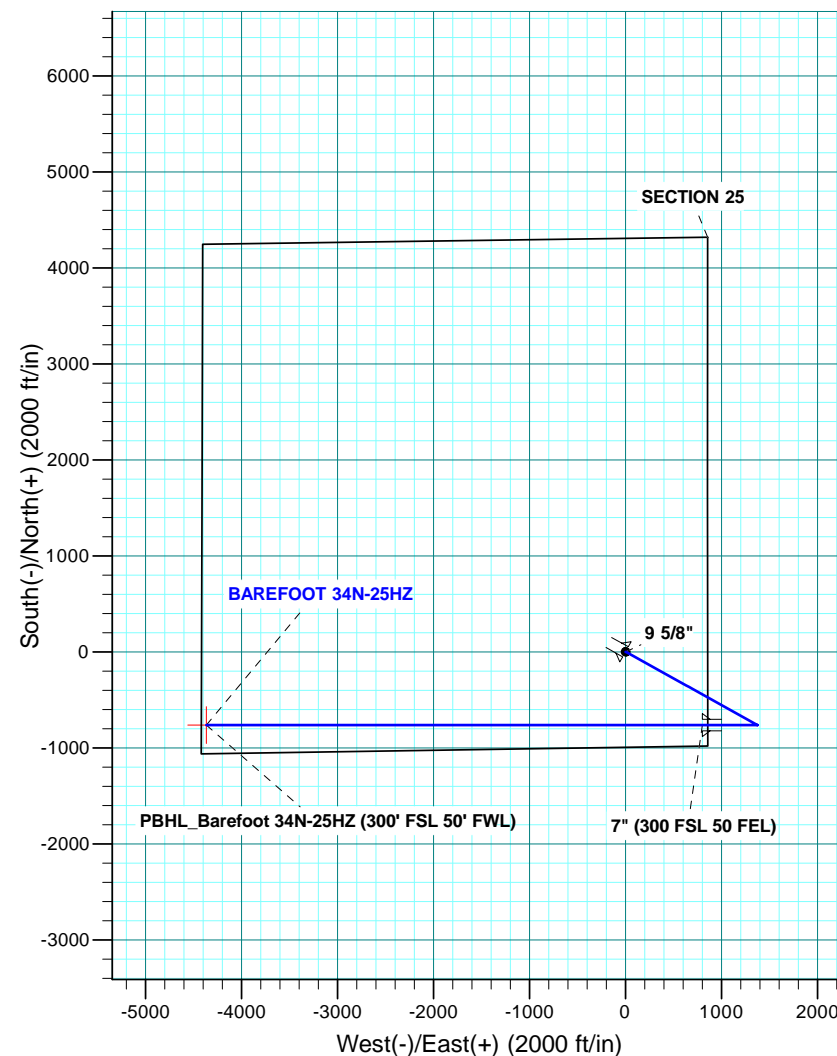
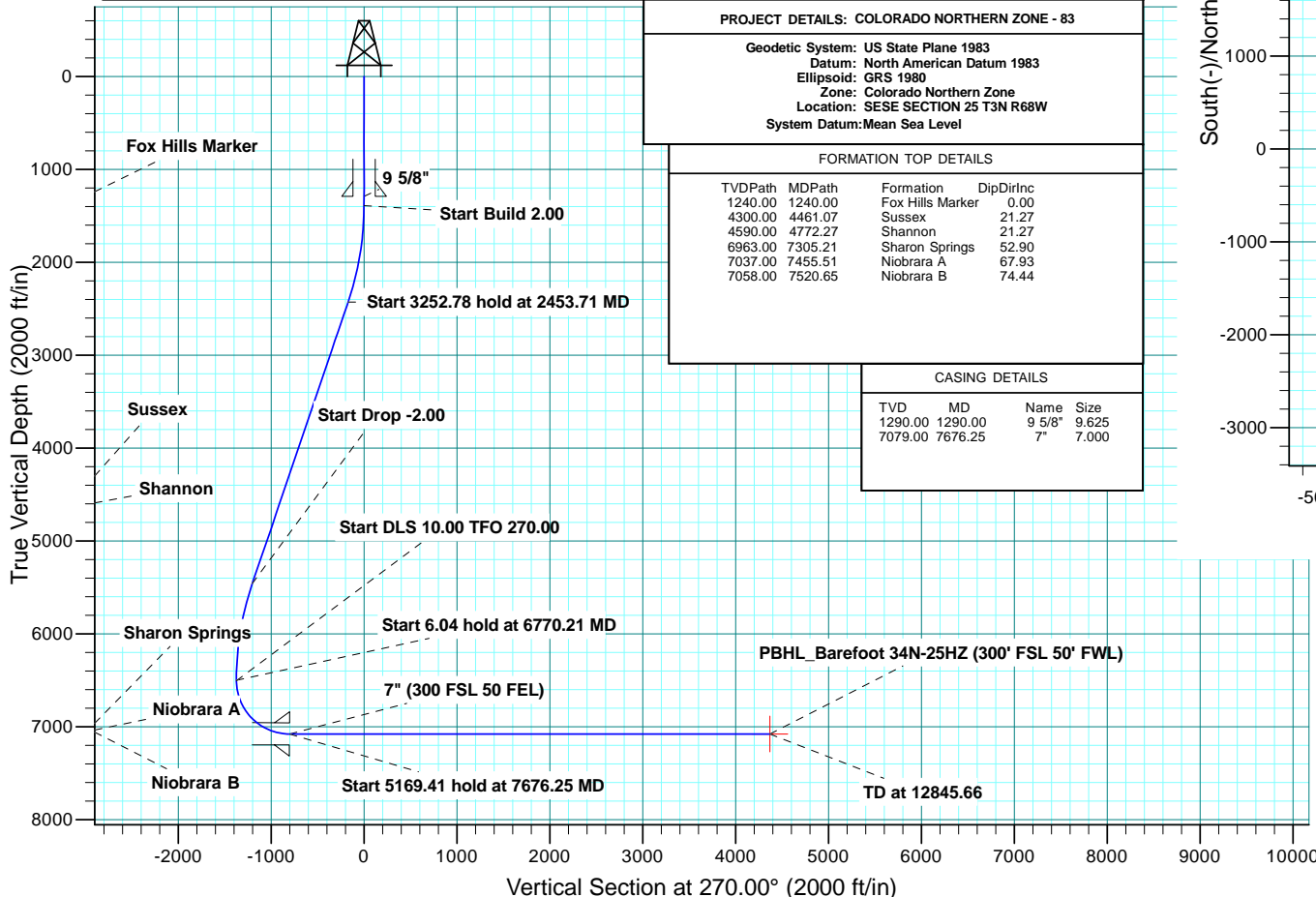


WELL DETAILS: BAREFOOT 34N-25HZ										
GL 4864 & KB 17 @ 4881.00ft (ASSUMED)										
		+N/-S 0.00	+E/-W 0.00	Northing 1313533.07	Easting 3155094.02	Latitude 40.1927120	Longitude -104.9448240			
SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
1390.00	0.00	0.00	1390.00	0.00	0.00	0.00	0.00	0.00		Start Build 2.00
2453.71	21.27	119.05	2429.44	-94.81	170.65	2.00	119.05	-170.65		Start 3252.78 hold at 2453.71 MD
5706.50	21.27	119.05	5460.56	-667.98	1202.35	0.00	0.00	-1202.35		Start Drop -2.00
6770.21	0.00	0.00	6500.00	-762.78	1373.00	2.00	180.00	-1373.00		Start 6.04 hold at 6770.21 MD
6776.25	0.00	0.00	6506.04	-762.78	1373.00	0.00	0.00	-1373.00		Start DLS 10.00 TFO 270.00
7676.25	90.00	270.00	7079.00	-762.78	800.04	10.00	270.00	-800.04		Start 5169.41 hold at 7676.25 MD
12845.66	90.00	270.00	7079.00	-762.78	-4369.36	0.00	0.00	4369.36	PBHL_Barefoot 34N-25HZ	TD at 12845.66
DESIGN TARGET DETAILS										
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape		
PBHL	7079.00	-762.78	-4369.36	1312742.95	3150729.53	40.1906170	-104.9604640	Point		

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83				
Geodetic System: US State Plane 1983				
Datum: North American Datum 1983				
Ellipsoid: GRS 1980				
Zone: Colorado Northern Zone				
Location: SESE SECTION 25 T3N R68W				
System Datum: Mean Sea Level				
FORMATION TOP DETAILS				
TVDPath	MDPath	Formation	DipDir	Inc
1240.00	1240.00	Fox Hills Marker		0.00
4300.00	4461.07	Sussex		21.27
4590.00	4772.27	Shannon		21.27
6963.00	7305.21	Sharon Springs		52.90
7037.00	7455.51	Niobrara A		67.93
7058.00	7520.65	Niobrara B		74.44
CASING DETAILS				
TVD	MD	Name	Size	
1290.00	1290.00	9 5/8"	9.625	
7079.00	7676.25	7"	7.000	





Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

BAREFOOT 16-25HZ PAD

BAREFOOT 34N-25HZ

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

25 February, 2014

Database:	Denver Sales Office	Local Co-ordinate Reference:	Well BAREFOOT 34N-25HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4864 & KB 17 @ 4881.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4864 & KB 17 @ 4881.00ft (ASSUMED)
Site:	BAREFOOT 16-25HZ PAD	North Reference:	True
Well:	BAREFOOT 34N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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	BAREFOOT 16-25HZ PAD, SESE SECTION 25 T3N R68W			
Site Position:		Northing:	1,313,563.31 usft	Latitude: 40.1927950
From:	Lat/Long	Easting:	3,155,093.84 usft	Longitude: -104.9448240
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.36 °

Well	BAREFOOT 34N-25HZ, 997 FSL 854 FEL					
Well Position	+N/-S	-30.24 ft	Northing:	1,313,533.07 usft	Latitude:	40.1927120
	+E/-W	0.00 ft	Easting:	3,155,094.02 usft	Longitude:	-104.9448240
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,864.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	2/6/2014	8.63	66.75	52,646

Design	PLAN #1 PRELIMINARY			
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	270.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,390.00	0.00	0.00	1,390.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,453.71	21.27	119.05	2,429.44	-94.81	170.65	2.00	2.00	0.00	119.05	
5,706.50	21.27	119.05	5,460.56	-667.98	1,202.35	0.00	0.00	0.00	0.00	
6,770.21	0.00	0.00	6,500.00	-762.78	1,373.00	2.00	-2.00	0.00	180.00	
6,776.25	0.00	0.00	6,506.04	-762.78	1,373.00	0.00	0.00	0.00	0.00	
7,676.25	90.00	270.00	7,079.00	-762.78	800.04	10.00	10.00	-10.00	270.00	
12,845.66	90.00	270.00	7,079.00	-762.78	-4,369.36	0.00	0.00	0.00	0.00	PBHL_Barefoot 34N-4

Database:	Denver Sales Office	Local Co-ordinate Reference:	Well BAREFOOT 34N-25HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4864 & KB 17 @ 4881.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4864 & KB 17 @ 4881.00ft (ASSUMED)
Site:	BAREFOOT 16-25HZ PAD	North Reference:	True
Well:	BAREFOOT 34N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,240.00	0.00	0.00	1,240.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Marker									
1,290.00	0.00	0.00	1,290.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,390.00	0.00	0.00	1,390.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,400.00	0.20	119.05	1,400.00	-0.01	0.02	-0.02	2.00	2.00	0.00
1,500.00	2.20	119.05	1,499.97	-1.03	1.85	-1.85	2.00	2.00	0.00
1,600.00	4.20	119.05	1,599.81	-3.74	6.73	-6.73	2.00	2.00	0.00
1,700.00	6.20	119.05	1,699.40	-8.14	14.65	-14.65	2.00	2.00	0.00
1,800.00	8.20	119.05	1,798.60	-14.22	25.60	-25.60	2.00	2.00	0.00
1,900.00	10.20	119.05	1,897.31	-21.99	39.58	-39.58	2.00	2.00	0.00
2,000.00	12.20	119.05	1,995.40	-31.42	56.56	-56.56	2.00	2.00	0.00
2,100.00	14.20	119.05	2,092.75	-42.51	76.52	-76.52	2.00	2.00	0.00
2,200.00	16.20	119.05	2,189.25	-55.24	99.44	-99.44	2.00	2.00	0.00
2,300.00	18.20	119.05	2,284.77	-69.60	125.28	-125.28	2.00	2.00	0.00
2,400.00	20.20	119.05	2,379.21	-85.57	154.03	-154.03	2.00	2.00	0.00
2,453.71	21.27	119.05	2,429.44	-94.81	170.65	-170.65	2.00	2.00	0.00
Start 3252.78 hold at 2453.71 MD									
2,500.00	21.27	119.05	2,472.57	-102.97	185.34	-185.34	0.00	0.00	0.00
2,600.00	21.27	119.05	2,565.76	-120.59	217.05	-217.05	0.00	0.00	0.00
2,700.00	21.27	119.05	2,658.94	-138.21	248.77	-248.77	0.00	0.00	0.00
2,800.00	21.27	119.05	2,752.13	-155.83	280.49	-280.49	0.00	0.00	0.00
2,900.00	21.27	119.05	2,845.31	-173.45	312.20	-312.20	0.00	0.00	0.00
3,000.00	21.27	119.05	2,938.50	-191.07	343.92	-343.92	0.00	0.00	0.00
3,100.00	21.27	119.05	3,031.68	-208.69	375.64	-375.64	0.00	0.00	0.00
3,200.00	21.27	119.05	3,124.87	-226.31	407.36	-407.36	0.00	0.00	0.00
3,300.00	21.27	119.05	3,218.06	-243.93	439.07	-439.07	0.00	0.00	0.00
3,400.00	21.27	119.05	3,311.24	-261.55	470.79	-470.79	0.00	0.00	0.00
3,500.00	21.27	119.05	3,404.43	-279.17	502.51	-502.51	0.00	0.00	0.00
3,600.00	21.27	119.05	3,497.61	-296.79	534.22	-534.22	0.00	0.00	0.00
3,700.00	21.27	119.05	3,590.80	-314.41	565.94	-565.94	0.00	0.00	0.00
3,800.00	21.27	119.05	3,683.98	-332.04	597.66	-597.66	0.00	0.00	0.00
3,900.00	21.27	119.05	3,777.17	-349.66	629.38	-629.38	0.00	0.00	0.00
4,000.00	21.27	119.05	3,870.35	-367.28	661.09	-661.09	0.00	0.00	0.00
4,100.00	21.27	119.05	3,963.54	-384.90	692.81	-692.81	0.00	0.00	0.00
4,200.00	21.27	119.05	4,056.72	-402.52	724.53	-724.53	0.00	0.00	0.00
4,300.00	21.27	119.05	4,149.91	-420.14	756.24	-756.24	0.00	0.00	0.00
4,400.00	21.27	119.05	4,243.10	-437.76	787.96	-787.96	0.00	0.00	0.00
4,461.07	21.27	119.05	4,300.00	-448.52	807.33	-807.33	0.00	0.00	0.00

Database:	Denver Sales Office	Local Co-ordinate Reference:	Well BAREFOOT 34N-25HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4864 & KB 17 @ 4881.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4864 & KB 17 @ 4881.00ft (ASSUMED)
Site:	BAREFOOT 16-25HZ PAD	North Reference:	True
Well:	BAREFOOT 34N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Sussex									
4,500.00	21.27	119.05	4,336.28	-455.38	819.68	-819.68	0.00	0.00	0.00
4,600.00	21.27	119.05	4,429.47	-473.00	851.40	-851.40	0.00	0.00	0.00
4,700.00	21.27	119.05	4,522.65	-490.62	883.11	-883.11	0.00	0.00	0.00
4,772.27	21.27	119.05	4,590.00	-503.36	906.04	-906.04	0.00	0.00	0.00
Shannon									
4,800.00	21.27	119.05	4,615.84	-508.24	914.83	-914.83	0.00	0.00	0.00
4,900.00	21.27	119.05	4,709.02	-525.86	946.55	-946.55	0.00	0.00	0.00
5,000.00	21.27	119.05	4,802.21	-543.48	978.26	-978.26	0.00	0.00	0.00
5,100.00	21.27	119.05	4,895.39	-561.11	1,009.98	-1,009.98	0.00	0.00	0.00
5,200.00	21.27	119.05	4,988.58	-578.73	1,041.70	-1,041.70	0.00	0.00	0.00
5,300.00	21.27	119.05	5,081.76	-596.35	1,073.42	-1,073.42	0.00	0.00	0.00
5,400.00	21.27	119.05	5,174.95	-613.97	1,105.13	-1,105.13	0.00	0.00	0.00
5,500.00	21.27	119.05	5,268.14	-631.59	1,136.85	-1,136.85	0.00	0.00	0.00
5,600.00	21.27	119.05	5,361.32	-649.21	1,168.57	-1,168.57	0.00	0.00	0.00
5,700.00	21.27	119.05	5,454.51	-666.83	1,200.28	-1,200.28	0.00	0.00	0.00
5,706.50	21.27	119.05	5,460.56	-667.98	1,202.35	-1,202.35	0.00	0.00	0.00
Start Drop -2.00									
5,800.00	19.40	119.05	5,548.23	-683.76	1,230.75	-1,230.75	2.00	-2.00	0.00
5,900.00	17.40	119.05	5,643.11	-699.09	1,258.35	-1,258.35	2.00	-2.00	0.00
6,000.00	15.40	119.05	5,739.04	-712.80	1,283.04	-1,283.04	2.00	-2.00	0.00
6,100.00	13.40	119.05	5,835.89	-724.88	1,304.78	-1,304.78	2.00	-2.00	0.00
6,200.00	11.40	119.05	5,933.55	-735.32	1,323.56	-1,323.56	2.00	-2.00	0.00
6,300.00	9.40	119.05	6,031.90	-744.09	1,339.34	-1,339.34	2.00	-2.00	0.00
6,400.00	7.40	119.05	6,130.82	-751.18	1,352.12	-1,352.12	2.00	-2.00	0.00
6,500.00	5.40	119.05	6,230.19	-756.60	1,361.87	-1,361.87	2.00	-2.00	0.00
6,600.00	3.40	119.05	6,329.89	-760.33	1,368.58	-1,368.58	2.00	-2.00	0.00
6,700.00	1.40	119.05	6,429.80	-762.37	1,372.25	-1,372.25	2.00	-2.00	0.00
6,770.21	0.00	0.00	6,500.00	-762.78	1,373.00	-1,373.00	2.00	-2.00	0.00
Start 6.04 hold at 6770.21 MD									
6,776.25	0.00	0.00	6,506.04	-762.78	1,373.00	-1,373.00	0.00	0.00	0.00
Start DLS 10.00 TFO 270.00									
6,800.00	2.37	270.00	6,529.78	-762.78	1,372.51	-1,372.51	10.00	10.00	0.00
6,900.00	12.37	270.00	6,628.83	-762.78	1,359.69	-1,359.69	10.00	10.00	0.00
7,000.00	22.37	270.00	6,724.15	-762.78	1,329.86	-1,329.86	10.00	10.00	0.00
7,100.00	32.37	270.00	6,812.84	-762.78	1,283.94	-1,283.94	10.00	10.00	0.00
7,200.00	42.37	270.00	6,892.20	-762.78	1,223.31	-1,223.31	10.00	10.00	0.00
7,300.00	52.37	270.00	6,959.84	-762.78	1,149.83	-1,149.83	10.00	10.00	0.00
7,305.21	52.90	270.00	6,963.00	-762.78	1,145.68	-1,145.68	10.00	10.00	0.00
Sharon Springs									
7,400.00	62.37	270.00	7,013.68	-762.78	1,065.71	-1,065.71	10.00	10.00	0.00
7,455.51	67.93	270.00	7,037.00	-762.78	1,015.36	-1,015.36	10.00	10.00	0.00
Niobrara A									
7,500.00	72.37	270.00	7,052.10	-762.78	973.53	-973.53	10.00	10.00	0.00
7,520.65	74.44	270.00	7,058.00	-762.78	953.74	-953.74	10.00	10.00	0.00
Niobrara B									
7,600.00	82.37	270.00	7,073.93	-762.78	876.07	-876.07	10.00	10.00	0.00
7,676.25	90.00	270.00	7,079.00	-762.78	800.04	-800.04	10.00	10.00	0.00
Start 5169.41 hold at 7676.25 MD - 7" (300 FSL 50 FEL)									
7,700.00	90.00	270.00	7,079.00	-762.78	776.29	-776.29	0.00	0.00	0.00
7,800.00	90.00	270.00	7,079.00	-762.78	676.29	-676.29	0.00	0.00	0.00
7,900.00	90.00	270.00	7,079.00	-762.78	576.29	-576.29	0.00	0.00	0.00
8,000.00	90.00	270.00	7,079.00	-762.78	476.29	-476.29	0.00	0.00	0.00

Database:	Denver Sales Office	Local Co-ordinate Reference:	Well BAREFOOT 34N-25HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4864 & KB 17 @ 4881.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4864 & KB 17 @ 4881.00ft (ASSUMED)
Site:	BAREFOOT 16-25HZ PAD	North Reference:	True
Well:	BAREFOOT 34N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,100.00	90.00	270.00	7,079.00	-762.78	376.29	-376.29	0.00	0.00	0.00
8,200.00	90.00	270.00	7,079.00	-762.78	276.29	-276.29	0.00	0.00	0.00
8,300.00	90.00	270.00	7,079.00	-762.78	176.29	-176.29	0.00	0.00	0.00
8,400.00	90.00	270.00	7,079.00	-762.78	76.29	-76.29	0.00	0.00	0.00
8,500.00	90.00	270.00	7,079.00	-762.78	-23.71	23.71	0.00	0.00	0.00
8,600.00	90.00	270.00	7,079.00	-762.78	-123.71	123.71	0.00	0.00	0.00
8,700.00	90.00	270.00	7,079.00	-762.78	-223.71	223.71	0.00	0.00	0.00
8,800.00	90.00	270.00	7,079.00	-762.78	-323.71	323.71	0.00	0.00	0.00
8,900.00	90.00	270.00	7,079.00	-762.78	-423.71	423.71	0.00	0.00	0.00
9,000.00	90.00	270.00	7,079.00	-762.78	-523.71	523.71	0.00	0.00	0.00
9,100.00	90.00	270.00	7,079.00	-762.78	-623.71	623.71	0.00	0.00	0.00
9,200.00	90.00	270.00	7,079.00	-762.78	-723.71	723.71	0.00	0.00	0.00
9,300.00	90.00	270.00	7,079.00	-762.78	-823.71	823.71	0.00	0.00	0.00
9,400.00	90.00	270.00	7,079.00	-762.78	-923.71	923.71	0.00	0.00	0.00
9,500.00	90.00	270.00	7,079.00	-762.78	-1,023.71	1,023.71	0.00	0.00	0.00
9,600.00	90.00	270.00	7,079.00	-762.78	-1,123.71	1,123.71	0.00	0.00	0.00
9,700.00	90.00	270.00	7,079.00	-762.78	-1,223.71	1,223.71	0.00	0.00	0.00
9,800.00	90.00	270.00	7,079.00	-762.78	-1,323.71	1,323.71	0.00	0.00	0.00
9,900.00	90.00	270.00	7,079.00	-762.78	-1,423.71	1,423.71	0.00	0.00	0.00
10,000.00	90.00	270.00	7,079.00	-762.78	-1,523.71	1,523.71	0.00	0.00	0.00
10,100.00	90.00	270.00	7,079.00	-762.78	-1,623.71	1,623.71	0.00	0.00	0.00
10,200.00	90.00	270.00	7,079.00	-762.78	-1,723.71	1,723.71	0.00	0.00	0.00
10,300.00	90.00	270.00	7,079.00	-762.78	-1,823.71	1,823.71	0.00	0.00	0.00
10,400.00	90.00	270.00	7,079.00	-762.78	-1,923.71	1,923.71	0.00	0.00	0.00
10,500.00	90.00	270.00	7,079.00	-762.78	-2,023.71	2,023.71	0.00	0.00	0.00
10,600.00	90.00	270.00	7,079.00	-762.78	-2,123.71	2,123.71	0.00	0.00	0.00
10,700.00	90.00	270.00	7,079.00	-762.78	-2,223.71	2,223.71	0.00	0.00	0.00
10,800.00	90.00	270.00	7,079.00	-762.78	-2,323.71	2,323.71	0.00	0.00	0.00
10,900.00	90.00	270.00	7,079.00	-762.78	-2,423.71	2,423.71	0.00	0.00	0.00
11,000.00	90.00	270.00	7,079.00	-762.78	-2,523.71	2,523.71	0.00	0.00	0.00
11,100.00	90.00	270.00	7,079.00	-762.78	-2,623.71	2,623.71	0.00	0.00	0.00
11,200.00	90.00	270.00	7,079.00	-762.78	-2,723.71	2,723.71	0.00	0.00	0.00
11,300.00	90.00	270.00	7,079.00	-762.78	-2,823.71	2,823.71	0.00	0.00	0.00
11,400.00	90.00	270.00	7,079.00	-762.78	-2,923.71	2,923.71	0.00	0.00	0.00
11,500.00	90.00	270.00	7,079.00	-762.78	-3,023.71	3,023.71	0.00	0.00	0.00
11,600.00	90.00	270.00	7,079.00	-762.78	-3,123.71	3,123.71	0.00	0.00	0.00
11,700.00	90.00	270.00	7,079.00	-762.78	-3,223.71	3,223.71	0.00	0.00	0.00
11,800.00	90.00	270.00	7,079.00	-762.78	-3,323.71	3,323.71	0.00	0.00	0.00
11,900.00	90.00	270.00	7,079.00	-762.78	-3,423.71	3,423.71	0.00	0.00	0.00
12,000.00	90.00	270.00	7,079.00	-762.78	-3,523.71	3,523.71	0.00	0.00	0.00
12,100.00	90.00	270.00	7,079.00	-762.78	-3,623.71	3,623.71	0.00	0.00	0.00
12,200.00	90.00	270.00	7,079.00	-762.78	-3,723.71	3,723.71	0.00	0.00	0.00
12,300.00	90.00	270.00	7,079.00	-762.78	-3,823.71	3,823.71	0.00	0.00	0.00
12,400.00	90.00	270.00	7,079.00	-762.78	-3,923.71	3,923.71	0.00	0.00	0.00
12,500.00	90.00	270.00	7,079.00	-762.78	-4,023.71	4,023.71	0.00	0.00	0.00
12,600.00	90.00	270.00	7,079.00	-762.78	-4,123.71	4,123.71	0.00	0.00	0.00
12,700.00	90.00	270.00	7,079.00	-762.78	-4,223.71	4,223.71	0.00	0.00	0.00
12,800.00	90.00	270.00	7,079.00	-762.78	-4,323.71	4,323.71	0.00	0.00	0.00
12,845.66	90.00	270.00	7,079.00	-762.78	-4,369.36	4,369.36	0.00	0.00	0.00
TD at 12845.66 - PBHL_Barefoot 34N-25HZ (300' FSL 50' FWL)									

Database:	Denver Sales Office	Local Co-ordinate Reference:	Well BAREFOOT 34N-25HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4864 & KB 17 @ 4881.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4864 & KB 17 @ 4881.00ft (ASSUMED)
Site:	BAREFOOT 16-25HZ PAD	North Reference:	True
Well:	BAREFOOT 34N-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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_Barefoot 34N-25H	0.00	0.00	7,079.00	-762.78	-4,369.36	1,312,742.95	3,150,729.53	40.1906170	-104.9604640
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,290.00	1,290.00	9 5/8"	9.625	12.250	
7,676.25	7,079.00	7" (300 FSL 50 FEL)	7.000	7.500	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,240.00	1,240.00	Fox Hills Marker				
4,461.07	4,300.00	Sussex				
4,772.27	4,590.00	Shannon				
7,305.21	6,963.00	Sharon Springs				
7,455.51	7,037.00	Niobrara A				
7,520.65	7,058.00	Niobrara B				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,390.00	1,390.00	0.00	0.00	Start Build 2.00	
2,453.71	2,429.44	-94.81	170.65	Start 3252.78 hold at 2453.71 MD	
5,706.50	5,460.56	-667.98	1,202.35	Start Drop -2.00	
6,770.21	6,500.00	-762.78	1,373.00	Start 6.04 hold at 6770.21 MD	
6,776.25	6,506.04	-762.78	1,373.00	Start DLS 10.00 TFO 270.00	
7,676.25	7,079.00	-762.78	800.04	Start 5169.41 hold at 7676.25 MD	
12,845.66	7,079.00	-762.78	-4,369.36	TD at 12845.66	