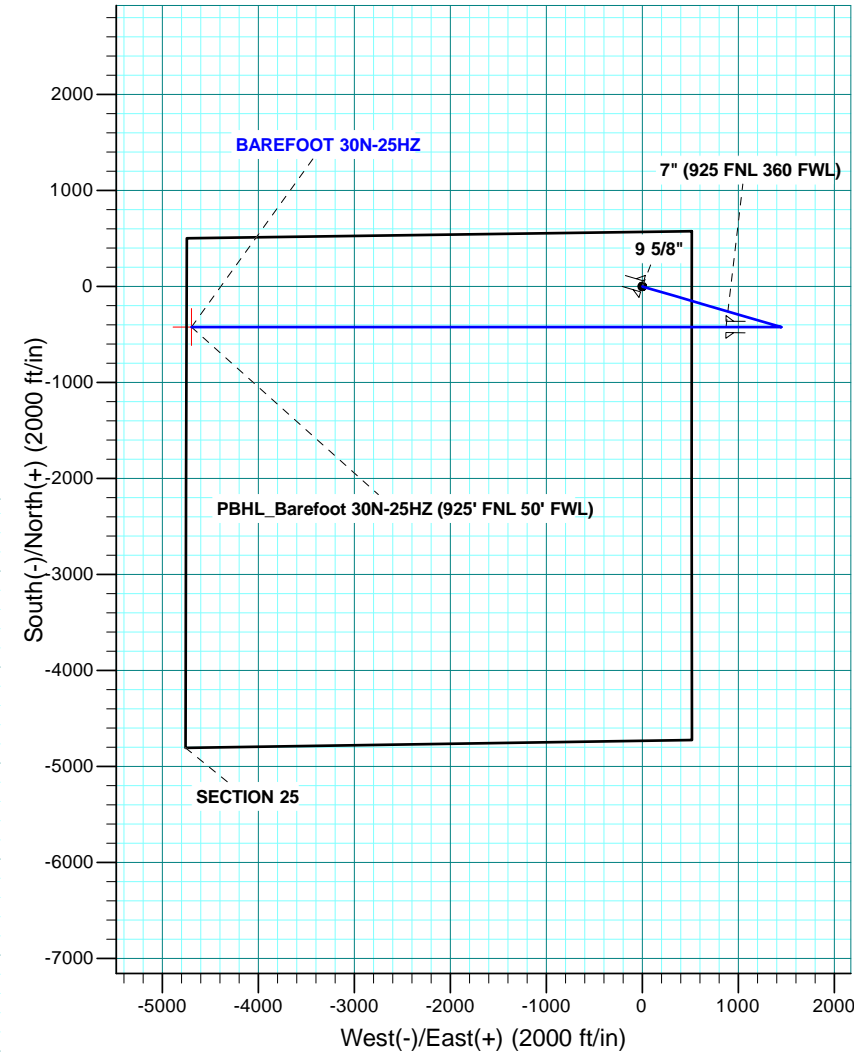
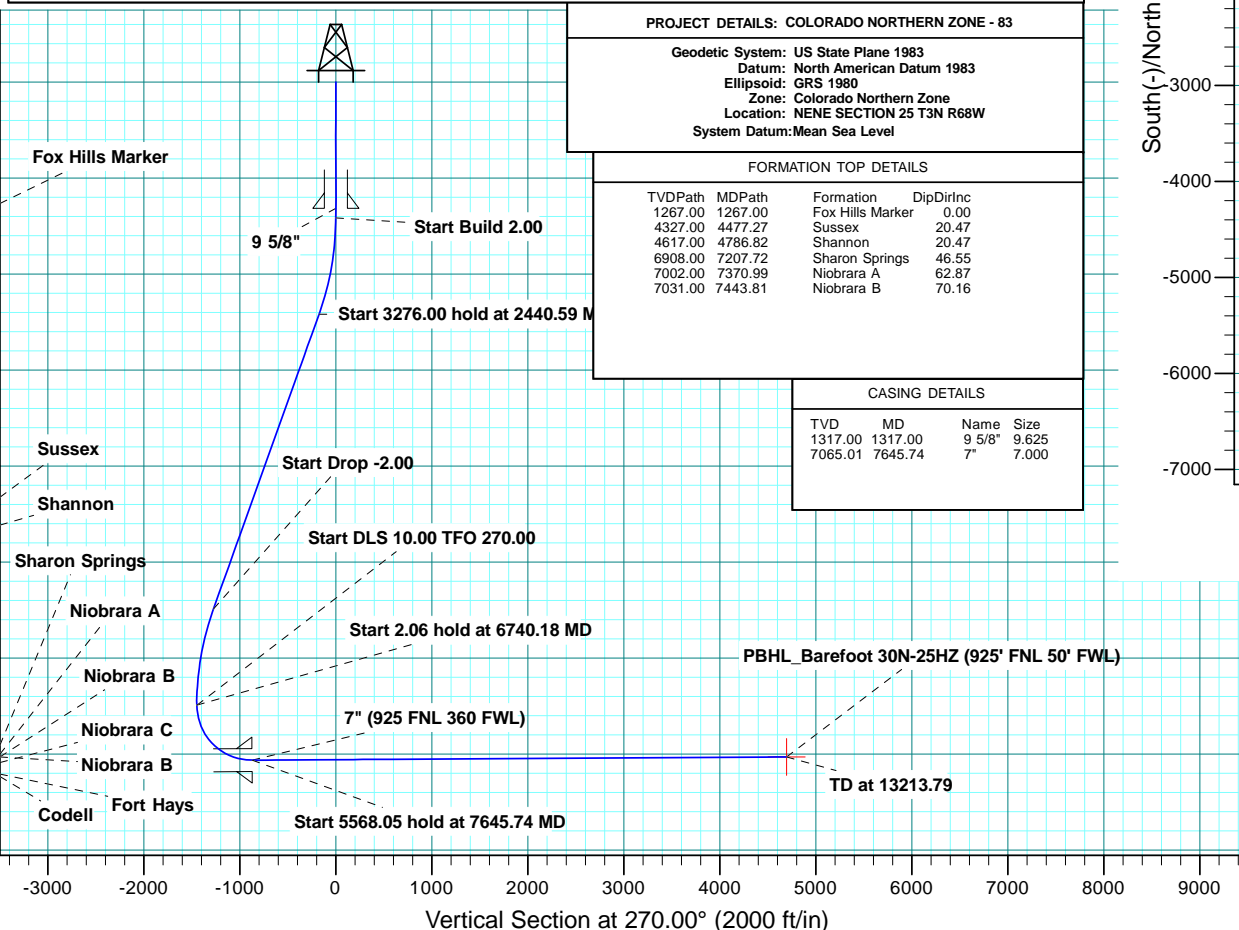


WELL DETAILS: BAREFOOT 30N-25HZ										
GL 4891 & KB 17 @ 4908.00ft (ASSUMED)										
	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
	0.00	0.00	1317278.49	3155408.84	40.2029880	-104.9436130				
SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
1417.00	0.00	0.00	1417.00	0.00	0.00	0.00	0.00	0.00		
2440.59	20.47	106.30	2418.95	-50.79	173.65	2.00	106.30	-173.65		Start Build 2.00
5716.59	20.47	106.30	5488.05	-372.42	1273.35	0.00	0.00	-1273.35		Start 3276.00 hold at 2440.59 MD
6740.18	0.00	0.00	6490.00	-423.21	1447.00	2.00	180.00	-1447.00		Start Drop -2.00
6742.24	0.00	0.00	6492.06	-423.21	1447.00	0.00	0.00	-1447.00		Start 2.06 hold at 6740.18 MD
7645.74	90.35	270.00	7065.01	-423.21	870.54	10.00	270.00	-870.54		Start DLS 10.00 TFO 270.00
13213.79	90.35	270.00	7031.00	-423.21	-4697.41	0.00	0.00	4697.41	PBHL_Barefoot 30N-25HZ	Start 5568.05 hold at 7645.74 MD
										TD at 13213.79
DESIGN TARGET DETAILS										
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape		
PBHL 7031.00	-423.21	-4697.41	1316825.81	3150714.19	40.2018250	-104.9604300		Point		





**Scientific Drilling**

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**BAREFOOT 1-25HZ PAD**

**BAREFOOT 30N-25HZ**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**25 February, 2014**



<b>Database:</b>	Denver Sales Office	<b>Local Co-ordinate Reference:</b>	Well BAREFOOT 30N-25HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4891 & KB 17 @ 4908.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4891 & KB 17 @ 4908.00ft (ASSUMED)
<b>Site:</b>	BAREFOOT 1-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BAREFOOT 30N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

<b>Project</b>	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

<b>Site</b>	BAREFOOT 1-25HZ PAD, NENE SECTION 25 T3N R68W				
<b>Site Position:</b>	<b>Northing:</b>	1,317,308.36 usft	<b>Latitude:</b>	40.2030700	
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,155,408.65 usft	<b>Longitude:</b>	-104.9436130
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.36 °

<b>Well</b>	BAREFOOT 30N-25HZ, 569' FNL 514' FEL					
<b>Well Position</b>	<b>+N/-S</b>	-29.88 ft	<b>Northing:</b>	1,317,278.49 usft	<b>Latitude:</b>	40.2029880
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	3,155,408.84 usft	<b>Longitude:</b>	-104.9436130
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft	<b>Ground Level:</b>	4,891.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2013	2/5/2014	8.63	66.76	52,652

<b>Design</b>	PLAN #1 PRELIMINARY			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	270.00

<b>Plan Sections</b>										
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	
1,417.00	0.00	0.00	1,417.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,440.59	20.47	106.30	2,418.95	-50.79	173.65	2.00	2.00	0.00	106.30	
5,716.59	20.47	106.30	5,488.05	-372.42	1,273.35	0.00	0.00	0.00	0.00	
6,740.18	0.00	0.00	6,490.00	-423.21	1,447.00	2.00	-2.00	0.00	180.00	
6,742.24	0.00	0.00	6,492.06	-423.21	1,447.00	0.00	0.00	0.00	0.00	
7,645.74	90.35	270.00	7,065.01	-423.21	870.54	10.00	10.00	-9.96	270.00	
13,213.79	90.35	270.00	7,031.00	-423.21	-4,697.41	0.00	0.00	0.00	0.00	PBHL_Barefoot 30N-;

<b>Database:</b>	Denver Sales Office	<b>Local Co-ordinate Reference:</b>	Well BAREFOOT 30N-25HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4891 & KB 17 @ 4908.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4891 & KB 17 @ 4908.00ft (ASSUMED)
<b>Site:</b>	BAREFOOT 1-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BAREFOOT 30N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	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
800.00	0.00	0.00	800.00	0.00	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	0.00
1,000.00	0.00	0.00	1,000.00	0.00	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	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,267.00	0.00	0.00	1,267.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Marker</b>										
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,317.00	0.00	0.00	1,317.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>										
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,417.00	0.00	0.00	1,417.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>										
1,500.00	1.66	106.30	1,499.99	-0.34	1.15	-1.15	2.00	2.00	0.00	0.00
1,600.00	3.66	106.30	1,599.88	-1.64	5.61	-5.61	2.00	2.00	0.00	0.00
1,700.00	5.66	106.30	1,699.54	-3.92	13.41	-13.41	2.00	2.00	0.00	0.00
1,800.00	7.66	106.30	1,798.86	-7.18	24.54	-24.54	2.00	2.00	0.00	0.00
1,900.00	9.66	106.30	1,897.72	-11.40	38.99	-38.99	2.00	2.00	0.00	0.00
2,000.00	11.66	106.30	1,995.98	-16.60	56.74	-56.74	2.00	2.00	0.00	0.00
2,100.00	13.66	106.30	2,093.55	-22.75	77.77	-77.77	2.00	2.00	0.00	0.00
2,200.00	15.66	106.30	2,190.29	-29.85	102.06	-102.06	2.00	2.00	0.00	0.00
2,300.00	17.66	106.30	2,286.09	-37.90	129.58	-129.58	2.00	2.00	0.00	0.00
2,400.00	19.66	106.30	2,380.82	-46.88	160.29	-160.29	2.00	2.00	0.00	0.00
2,440.59	20.47	106.30	2,418.95	-50.79	173.65	-173.65	2.00	2.00	0.00	0.00
<b>Start 3276.00 hold at 2440.59 MD</b>										
2,500.00	20.47	106.30	2,474.61	-56.62	193.60	-193.60	0.00	0.00	0.00	0.00
2,600.00	20.47	106.30	2,568.29	-66.44	227.16	-227.16	0.00	0.00	0.00	0.00
2,700.00	20.47	106.30	2,661.98	-76.26	260.73	-260.73	0.00	0.00	0.00	0.00
2,800.00	20.47	106.30	2,755.66	-86.08	294.30	-294.30	0.00	0.00	0.00	0.00
2,900.00	20.47	106.30	2,849.35	-95.89	327.87	-327.87	0.00	0.00	0.00	0.00
3,000.00	20.47	106.30	2,943.03	-105.71	361.44	-361.44	0.00	0.00	0.00	0.00
3,100.00	20.47	106.30	3,036.71	-115.53	395.00	-395.00	0.00	0.00	0.00	0.00
3,200.00	20.47	106.30	3,130.40	-125.35	428.57	-428.57	0.00	0.00	0.00	0.00
3,300.00	20.47	106.30	3,224.08	-135.17	462.14	-462.14	0.00	0.00	0.00	0.00
3,400.00	20.47	106.30	3,317.77	-144.98	495.71	-495.71	0.00	0.00	0.00	0.00
3,500.00	20.47	106.30	3,411.45	-154.80	529.28	-529.28	0.00	0.00	0.00	0.00
3,600.00	20.47	106.30	3,505.14	-164.62	562.85	-562.85	0.00	0.00	0.00	0.00
3,700.00	20.47	106.30	3,598.82	-174.44	596.41	-596.41	0.00	0.00	0.00	0.00
3,800.00	20.47	106.30	3,692.51	-184.25	629.98	-629.98	0.00	0.00	0.00	0.00
3,900.00	20.47	106.30	3,786.19	-194.07	663.55	-663.55	0.00	0.00	0.00	0.00
4,000.00	20.47	106.30	3,879.87	-203.89	697.12	-697.12	0.00	0.00	0.00	0.00
4,100.00	20.47	106.30	3,973.56	-213.71	730.69	-730.69	0.00	0.00	0.00	0.00
4,200.00	20.47	106.30	4,067.24	-223.53	764.26	-764.26	0.00	0.00	0.00	0.00
4,300.00	20.47	106.30	4,160.93	-233.34	797.82	-797.82	0.00	0.00	0.00	0.00
4,400.00	20.47	106.30	4,254.61	-243.16	831.39	-831.39	0.00	0.00	0.00	0.00
4,477.27	20.47	106.30	4,327.00	-250.75	857.33	-857.33	0.00	0.00	0.00	0.00

<b>Database:</b>	Denver Sales Office	<b>Local Co-ordinate Reference:</b>	Well BAREFOOT 30N-25HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4891 & KB 17 @ 4908.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4891 & KB 17 @ 4908.00ft (ASSUMED)
<b>Site:</b>	BAREFOOT 1-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BAREFOOT 30N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
<b>Sussex</b>									
4,500.00	20.47	106.30	4,348.30	-252.98	864.96	-864.96	0.00	0.00	0.00
4,600.00	20.47	106.30	4,441.98	-262.80	898.53	-898.53	0.00	0.00	0.00
4,700.00	20.47	106.30	4,535.67	-272.62	932.10	-932.10	0.00	0.00	0.00
4,786.82	20.47	106.30	4,617.00	-281.14	961.24	-961.24	0.00	0.00	0.00
<b>Shannon</b>									
4,800.00	20.47	106.30	4,629.35	-282.43	965.67	-965.67	0.00	0.00	0.00
4,900.00	20.47	106.30	4,723.03	-292.25	999.23	-999.23	0.00	0.00	0.00
5,000.00	20.47	106.30	4,816.72	-302.07	1,032.80	-1,032.80	0.00	0.00	0.00
5,100.00	20.47	106.30	4,910.40	-311.89	1,066.37	-1,066.37	0.00	0.00	0.00
5,200.00	20.47	106.30	5,004.09	-321.71	1,099.94	-1,099.94	0.00	0.00	0.00
5,300.00	20.47	106.30	5,097.77	-331.52	1,133.51	-1,133.51	0.00	0.00	0.00
5,400.00	20.47	106.30	5,191.46	-341.34	1,167.07	-1,167.07	0.00	0.00	0.00
5,500.00	20.47	106.30	5,285.14	-351.16	1,200.64	-1,200.64	0.00	0.00	0.00
5,600.00	20.47	106.30	5,378.83	-360.98	1,234.21	-1,234.21	0.00	0.00	0.00
5,700.00	20.47	106.30	5,472.51	-370.80	1,267.78	-1,267.78	0.00	0.00	0.00
5,716.59	20.47	106.30	5,488.05	-372.42	1,273.35	-1,273.35	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,800.00	18.80	106.30	5,566.61	-380.29	1,300.25	-1,300.25	2.00	-2.00	0.00
5,900.00	16.80	106.30	5,661.81	-388.88	1,329.60	-1,329.60	2.00	-2.00	0.00
6,000.00	14.80	106.30	5,758.03	-396.52	1,355.73	-1,355.73	2.00	-2.00	0.00
6,100.00	12.80	106.30	5,855.14	-403.22	1,378.63	-1,378.63	2.00	-2.00	0.00
6,200.00	10.80	106.30	5,953.02	-408.96	1,398.27	-1,398.27	2.00	-2.00	0.00
6,300.00	8.80	106.30	6,051.55	-413.74	1,414.61	-1,414.61	2.00	-2.00	0.00
6,400.00	6.80	106.30	6,150.62	-417.55	1,427.64	-1,427.64	2.00	-2.00	0.00
6,500.00	4.80	106.30	6,250.10	-420.39	1,437.34	-1,437.34	2.00	-2.00	0.00
6,600.00	2.80	106.30	6,349.88	-422.25	1,443.71	-1,443.71	2.00	-2.00	0.00
6,700.00	0.80	106.30	6,449.82	-423.13	1,446.73	-1,446.73	2.00	-2.00	0.00
6,740.18	0.00	0.00	6,490.00	-423.21	1,447.00	-1,447.00	2.00	-2.00	0.00
<b>Start 2.06 hold at 6740.18 MD</b>									
6,742.24	0.00	0.00	6,492.06	-423.21	1,447.00	-1,447.00	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 270.00</b>									
6,800.00	5.78	270.00	6,549.72	-423.21	1,444.09	-1,444.09	10.00	10.00	0.00
6,900.00	15.78	270.00	6,647.84	-423.21	1,425.42	-1,425.42	10.00	10.00	0.00
7,000.00	25.78	270.00	6,741.22	-423.21	1,389.99	-1,389.99	10.00	10.00	0.00
7,100.00	35.78	270.00	6,827.02	-423.21	1,338.89	-1,338.89	10.00	10.00	0.00
7,200.00	45.78	270.00	6,902.65	-423.21	1,273.66	-1,273.66	10.00	10.00	0.00
7,207.72	46.55	270.00	6,908.00	-423.21	1,268.09	-1,268.09	10.00	10.00	0.00
<b>Sharon Springs</b>									
7,300.00	55.78	270.00	6,965.81	-423.21	1,196.29	-1,196.29	10.00	10.00	0.00
7,370.99	62.87	270.00	7,002.00	-423.21	1,135.27	-1,135.27	10.00	10.00	0.00
<b>Niobrara A</b>									
7,400.00	65.78	270.00	7,014.57	-423.21	1,109.13	-1,109.13	10.00	10.00	0.00
7,443.81	70.16	270.00	7,031.00	-423.21	1,068.53	-1,068.53	10.00	10.00	0.00
<b>Niobrara B</b>									
7,500.00	75.78	270.00	7,047.45	-423.21	1,014.82	-1,014.82	10.00	10.00	0.00
7,600.00	85.78	270.00	7,063.46	-423.21	916.24	-916.24	10.00	10.00	0.00
7,645.74	90.35	270.00	7,065.01	-423.21	870.54	-870.54	10.00	10.00	0.00
<b>Start 5568.05 hold at 7645.74 MD - 7" (925 FNL 360 FWL)</b>									
7,700.00	90.35	270.00	7,064.68	-423.21	816.28	-816.28	0.00	0.00	0.00
7,800.00	90.35	270.00	7,064.07	-423.21	716.28	-716.28	0.00	0.00	0.00
7,900.00	90.35	270.00	7,063.46	-423.21	616.29	-616.29	0.00	0.00	0.00
8,000.00	90.35	270.00	7,062.84	-423.21	516.29	-516.29	0.00	0.00	0.00

<b>Database:</b>	Denver Sales Office	<b>Local Co-ordinate Reference:</b>	Well BAREFOOT 30N-25HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4891 & KB 17 @ 4908.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4891 & KB 17 @ 4908.00ft (ASSUMED)
<b>Site:</b>	BAREFOOT 1-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BAREFOOT 30N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	90.35	270.00	7,062.23	-423.21	416.29	-416.29	0.00	0.00	0.00
8,200.00	90.35	270.00	7,061.62	-423.21	316.29	-316.29	0.00	0.00	0.00
8,300.00	90.35	270.00	7,061.01	-423.21	216.29	-216.29	0.00	0.00	0.00
8,400.00	90.35	270.00	7,060.40	-423.21	116.29	-116.29	0.00	0.00	0.00
8,500.00	90.35	270.00	7,059.79	-423.21	16.30	-16.30	0.00	0.00	0.00
8,600.00	90.35	270.00	7,059.18	-423.21	-83.70	83.70	0.00	0.00	0.00
8,700.00	90.35	270.00	7,058.57	-423.21	-183.70	183.70	0.00	0.00	0.00
8,800.00	90.35	270.00	7,057.96	-423.21	-283.70	283.70	0.00	0.00	0.00
8,900.00	90.35	270.00	7,057.35	-423.21	-383.70	383.70	0.00	0.00	0.00
9,000.00	90.35	270.00	7,056.74	-423.21	-483.69	483.69	0.00	0.00	0.00
9,100.00	90.35	270.00	7,056.13	-423.21	-583.69	583.69	0.00	0.00	0.00
9,200.00	90.35	270.00	7,055.52	-423.21	-683.69	683.69	0.00	0.00	0.00
9,300.00	90.35	270.00	7,054.90	-423.21	-783.69	783.69	0.00	0.00	0.00
9,400.00	90.35	270.00	7,054.29	-423.21	-883.69	883.69	0.00	0.00	0.00
9,500.00	90.35	270.00	7,053.68	-423.21	-983.68	983.68	0.00	0.00	0.00
9,600.00	90.35	270.00	7,053.07	-423.21	-1,083.68	1,083.68	0.00	0.00	0.00
9,700.00	90.35	270.00	7,052.46	-423.21	-1,183.68	1,183.68	0.00	0.00	0.00
9,800.00	90.35	270.00	7,051.85	-423.21	-1,283.68	1,283.68	0.00	0.00	0.00
9,900.00	90.35	270.00	7,051.24	-423.21	-1,383.68	1,383.68	0.00	0.00	0.00
10,000.00	90.35	270.00	7,050.63	-423.21	-1,483.68	1,483.68	0.00	0.00	0.00
10,100.00	90.35	270.00	7,050.02	-423.21	-1,583.67	1,583.67	0.00	0.00	0.00
10,200.00	90.35	270.00	7,049.41	-423.21	-1,683.67	1,683.67	0.00	0.00	0.00
10,300.00	90.35	270.00	7,048.80	-423.21	-1,783.67	1,783.67	0.00	0.00	0.00
10,400.00	90.35	270.00	7,048.19	-423.21	-1,883.67	1,883.67	0.00	0.00	0.00
10,500.00	90.35	270.00	7,047.58	-423.21	-1,983.67	1,983.67	0.00	0.00	0.00
10,600.00	90.35	270.00	7,046.96	-423.21	-2,083.66	2,083.66	0.00	0.00	0.00
10,700.00	90.35	270.00	7,046.35	-423.21	-2,183.66	2,183.66	0.00	0.00	0.00
10,800.00	90.35	270.00	7,045.74	-423.21	-2,283.66	2,283.66	0.00	0.00	0.00
10,900.00	90.35	270.00	7,045.13	-423.21	-2,383.66	2,383.66	0.00	0.00	0.00
11,000.00	90.35	270.00	7,044.52	-423.21	-2,483.66	2,483.66	0.00	0.00	0.00
11,100.00	90.35	270.00	7,043.91	-423.21	-2,583.65	2,583.65	0.00	0.00	0.00
11,200.00	90.35	270.00	7,043.30	-423.21	-2,683.65	2,683.65	0.00	0.00	0.00
11,300.00	90.35	270.00	7,042.69	-423.21	-2,783.65	2,783.65	0.00	0.00	0.00
11,400.00	90.35	270.00	7,042.08	-423.21	-2,883.65	2,883.65	0.00	0.00	0.00
11,500.00	90.35	270.00	7,041.47	-423.21	-2,983.65	2,983.65	0.00	0.00	0.00
11,600.00	90.35	270.00	7,040.86	-423.21	-3,083.65	3,083.65	0.00	0.00	0.00
11,700.00	90.35	270.00	7,040.25	-423.21	-3,183.64	3,183.64	0.00	0.00	0.00
11,800.00	90.35	270.00	7,039.64	-423.21	-3,283.64	3,283.64	0.00	0.00	0.00
11,900.00	90.35	270.00	7,039.02	-423.21	-3,383.64	3,383.64	0.00	0.00	0.00
12,000.00	90.35	270.00	7,038.41	-423.21	-3,483.64	3,483.64	0.00	0.00	0.00
12,100.00	90.35	270.00	7,037.80	-423.21	-3,583.64	3,583.64	0.00	0.00	0.00
12,200.00	90.35	270.00	7,037.19	-423.21	-3,683.63	3,683.63	0.00	0.00	0.00
12,300.00	90.35	270.00	7,036.58	-423.21	-3,783.63	3,783.63	0.00	0.00	0.00
12,400.00	90.35	270.00	7,035.97	-423.21	-3,883.63	3,883.63	0.00	0.00	0.00
12,500.00	90.35	270.00	7,035.36	-423.21	-3,983.63	3,983.63	0.00	0.00	0.00
12,600.00	90.35	270.00	7,034.75	-423.21	-4,083.63	4,083.63	0.00	0.00	0.00
12,700.00	90.35	270.00	7,034.14	-423.21	-4,183.63	4,183.63	0.00	0.00	0.00
12,800.00	90.35	270.00	7,033.53	-423.21	-4,283.62	4,283.62	0.00	0.00	0.00
12,900.00	90.35	270.00	7,032.92	-423.21	-4,383.62	4,383.62	0.00	0.00	0.00
13,000.00	90.35	270.00	7,032.31	-423.21	-4,483.62	4,483.62	0.00	0.00	0.00
13,100.00	90.35	270.00	7,031.70	-423.21	-4,583.62	4,583.62	0.00	0.00	0.00
13,200.00	90.35	270.00	7,031.08	-423.21	-4,683.62	4,683.62	0.00	0.00	0.00
13,213.79	90.35	270.00	7,031.00	-423.21	-4,697.41	4,697.41	0.00	0.00	0.00

<b>Database:</b>	Denver Sales Office	<b>Local Co-ordinate Reference:</b>	Well BAREFOOT 30N-25HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4891 & KB 17 @ 4908.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4891 & KB 17 @ 4908.00ft (ASSUMED)
<b>Site:</b>	BAREFOOT 1-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BAREFOOT 30N-25HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

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)
TD at 13213.79 - PBHL_Barefoot 30N-25HZ (925' FNL 50' FWL)									

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_Barefoot 30N-25H - hit/miss target - Shape - plan hits target center - Point	0.00	0.00	7,031.00	-423.21	-4,697.41	1,316,825.81	3,150,714.19	40.2018250	-104.9604300

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,317.00	1,317.00	9 5/8"	9.625	12.250
7,645.74	7,065.01	7" (925 FNL 360 FWL)	7.000	7.500

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,267.00	1,267.00	Fox Hills Marker			
4,477.27	4,327.00	Sussex			
4,786.82	4,617.00	Shannon			
7,207.72	6,908.00	Sharon Springs			
7,370.99	7,002.00	Niobrara A			
7,443.81	7,031.00	Niobrara B			

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
1,417.00	1,417.00	0.00	0.00	Start Build 2.00
2,440.59	2,418.95	-50.79	173.65	Start 3276.00 hold at 2440.59 MD
5,716.59	5,488.05	-372.42	1,273.35	Start Drop -2.00
6,740.18	6,490.00	-423.21	1,447.00	Start 2.06 hold at 6740.18 MD
6,742.24	6,492.06	-423.21	1,447.00	Start DLS 10.00 TFO 270.00
7,645.74	7,065.01	-423.21	870.54	Start 5568.05 hold at 7645.74 MD
13,213.79	7,031.00	-423.21	-4,697.41	TD at 13213.79