

# Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 25-T3N-R68W

Barefoot 33C-25HZ

Plan C

Plan: Rev C0 Permit

## Sperry Drilling Services

### Proposal Report

17 April, 2014

Well Coordinates: 1,314,535.03 N, 3,155,469.91 E (40° 11' 43.64" N, 104° 56' 36.44" W)

Ground Level: 4,871.00 usft

Local Coordinate Origin:

Centered on Well Barefoot 33C-25HZ

Viewing Datum:

RKB=17' @ 4889.00usft

TVDs to System:

N

North Reference:

True

Unit System:

Dec-Deg - API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

**HALLIBURTON**

Project: Weld County, CO (NAD 83)  
Site: Sec. 25-T3N-R68W  
Well: Barefoot 33C-25HZ  
Wellbore: Plan C  
Design: Rev C0 Permit

# Anadarko Petroleum Corp.

**HALLIBURTON**  
Sperry Drilling

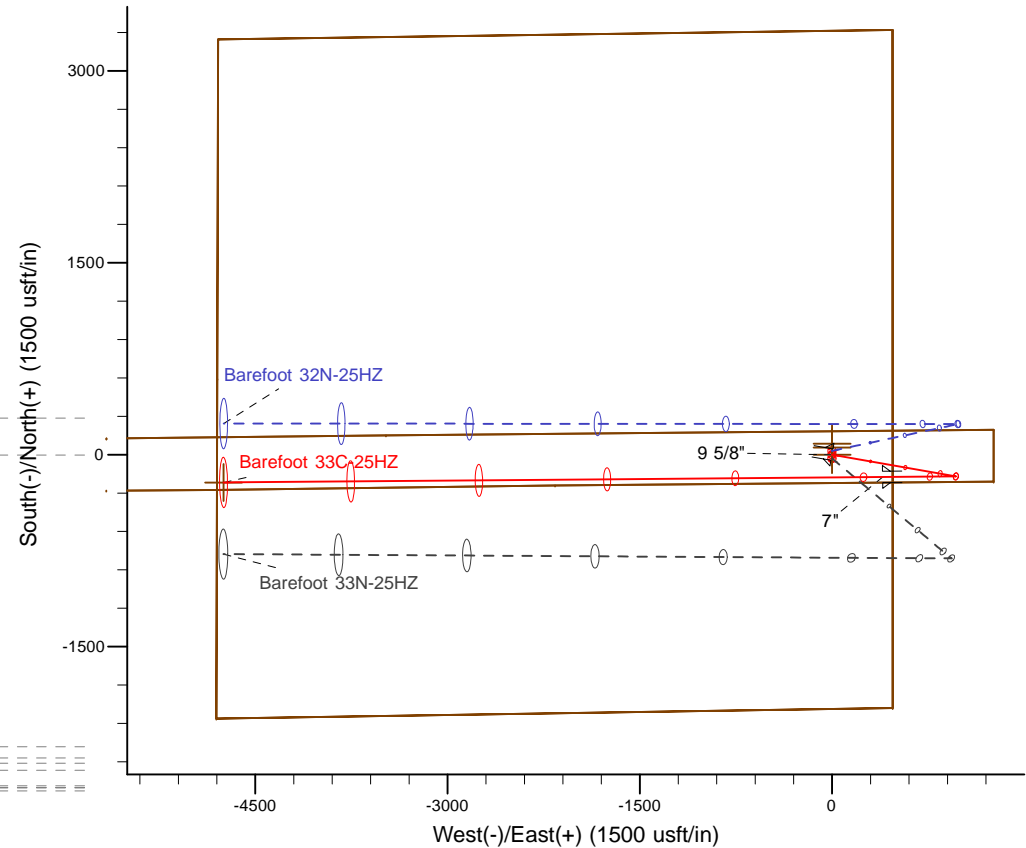
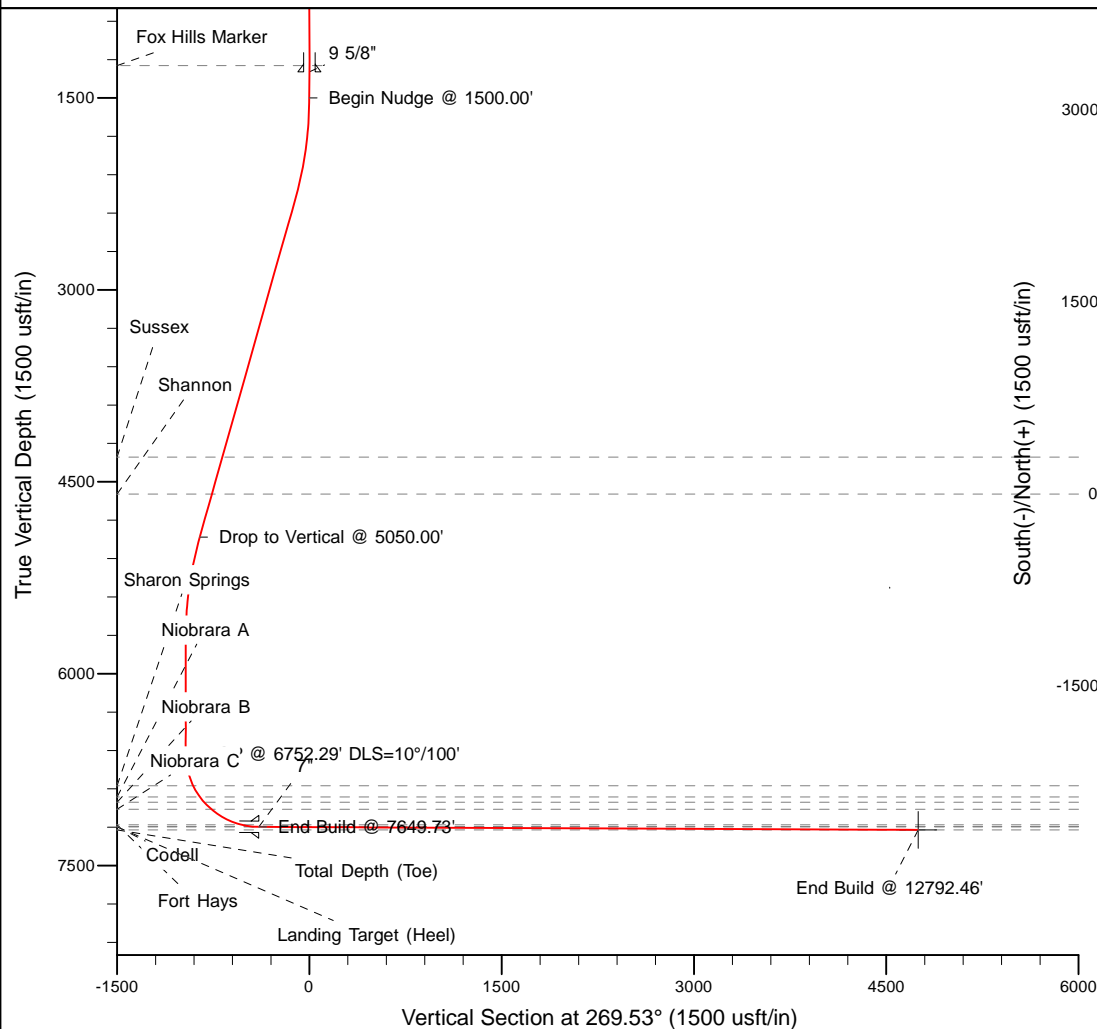
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Barefoot 32N-25HZ_Sec. Line	0.00	85.25	0.28	1314620.29	3155469.65	40.195690	-104.943455
Barefoot 33C-25HZ_LD Rev 2	0.00	55.01	0.00	1314590.04	3155469.56	40.195607	-104.943456
Barefoot 33C-25HZ_SHL	0.00	0.01	0.00	1314535.04	3155469.91	40.195456	-104.943456
Barefoot 33C-25HZ_BHL	7221.00	-217.02	-4747.81	1314288.23	3150723.76	40.194859	-104.960451

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00
2300.00	16.00	100.00	2289.64	-19.27	109.29	2.00	-109.13
5050.00	16.00	100.00	4933.11	-150.90	855.78	0.00	-854.51
5850.00	0.00	0.00	5722.76	-170.17	965.07	2.00	-963.64
6752.29	0.00	0.00	6625.05	-170.17	965.07	0.00	-963.64
7649.73	89.74	269.53	7198.00	-174.85	394.69	10.00	-393.25
12792.46	89.74	269.53	7221.00	-217.02	-4747.81	0.00	4749.43

SHL: 470' FEL', 1989' FSL

BHL: 50' FWL, 1845' FSL

~7" Casing: 72' FEL', 1857' FSL



WELL DETAILS: Barefoot 33C-25HZ

Ground Level: 4871.00  
RKB=17' @ 4889.00usft

Plan: Rev C0 Permit (Barefoot 33C-25HZ/Plan C)

Created By: Pari Amanlou

Date: 4-17-2014

**Plan Report for Barefoot 33C-25HZ - Rev C0 Permit**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
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
1,247.00	0.00	0.00	1,247.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Marker</b>										
1,297.00	0.00	0.00	1,297.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</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
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Begin Nudge @ 1500.00'</b>										
1,600.00	2.00	100.00	1,599.98	-0.30	1.72	-1.72	2.00	2.00	0.00	100.00
1,700.00	4.00	100.00	1,699.84	-1.21	6.87	-6.86	2.00	2.00	0.00	0.00
1,800.00	6.00	100.00	1,799.45	-2.73	15.46	-15.43	2.00	2.00	0.00	0.00
1,900.00	8.00	100.00	1,898.70	-4.84	27.46	-27.42	2.00	2.00	0.00	0.00
2,000.00	10.00	100.00	1,997.47	-7.56	42.86	-42.80	2.00	2.00	0.00	0.00
2,100.00	12.00	100.00	2,095.62	-10.87	61.65	-61.56	2.00	2.00	0.00	0.00
2,200.00	14.00	100.00	2,193.06	-14.78	83.80	-83.68	2.00	2.00	0.00	0.00
2,300.00	16.00	100.00	2,289.64	-19.27	109.29	-109.13	2.00	2.00	0.00	0.00
2,400.00	16.00	100.00	2,385.77	-24.06	136.44	-136.23	0.00	0.00	0.00	0.00
2,500.00	16.00	100.00	2,481.90	-28.84	163.58	-163.34	0.00	0.00	0.00	0.00
2,600.00	16.00	100.00	2,578.02	-33.63	190.73	-190.44	0.00	0.00	0.00	0.00
2,700.00	16.00	100.00	2,674.15	-38.42	217.87	-217.55	0.00	0.00	0.00	0.00
2,800.00	16.00	100.00	2,770.27	-43.20	245.02	-244.65	0.00	0.00	0.00	0.00
2,900.00	16.00	100.00	2,866.40	-47.99	272.16	-271.76	0.00	0.00	0.00	0.00
3,000.00	16.00	100.00	2,962.53	-52.78	299.31	-298.86	0.00	0.00	0.00	0.00
3,100.00	16.00	100.00	3,058.65	-57.56	326.45	-325.97	0.00	0.00	0.00	0.00
3,200.00	16.00	100.00	3,154.78	-62.35	353.60	-353.07	0.00	0.00	0.00	0.00
3,300.00	16.00	100.00	3,250.90	-67.13	380.74	-380.18	0.00	0.00	0.00	0.00
3,400.00	16.00	100.00	3,347.03	-71.92	407.89	-407.28	0.00	0.00	0.00	0.00
3,500.00	16.00	100.00	3,443.16	-76.71	435.03	-434.39	0.00	0.00	0.00	0.00
3,600.00	16.00	100.00	3,539.28	-81.49	462.18	-461.49	0.00	0.00	0.00	0.00
3,700.00	16.00	100.00	3,635.41	-86.28	489.32	-488.60	0.00	0.00	0.00	0.00
3,800.00	16.00	100.00	3,731.54	-91.07	516.47	-515.70	0.00	0.00	0.00	0.00
3,900.00	16.00	100.00	3,827.66	-95.85	543.61	-542.81	0.00	0.00	0.00	0.00
4,000.00	16.00	100.00	3,923.79	-100.64	570.76	-569.91	0.00	0.00	0.00	0.00
4,100.00	16.00	100.00	4,019.91	-105.43	597.90	-597.02	0.00	0.00	0.00	0.00
4,200.00	16.00	100.00	4,116.04	-110.21	625.05	-624.12	0.00	0.00	0.00	0.00
4,300.00	16.00	100.00	4,212.17	-115.00	652.19	-651.23	0.00	0.00	0.00	0.00
4,398.66	16.00	100.00	4,307.00	-119.72	678.97	-677.97	0.00	0.00	0.00	0.00
<b>Sussex</b>										
4,400.00	16.00	100.00	4,308.29	-119.79	679.34	-678.33	0.00	0.00	0.00	0.00
4,500.00	16.00	100.00	4,404.42	-124.57	706.48	-705.44	0.00	0.00	0.00	0.00
4,600.00	16.00	100.00	4,500.54	-129.36	733.63	-732.54	0.00	0.00	0.00	0.00
4,700.00	16.00	100.00	4,596.67	-134.14	760.77	-759.64	0.00	0.00	0.00	0.00
4,700.34	16.00	100.00	4,597.00	-134.16	760.86	-759.74	0.00	0.00	0.00	0.00
<b>Shannon</b>										
4,800.00	16.00	100.00	4,692.80	-138.93	787.92	-786.75	0.00	0.00	0.00	0.00

**Plan Report for Barefoot 33C-25HZ - Rev C0 Permit**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
4,900.00	16.00	100.00	4,788.92	-143.72	815.06	-813.85	0.00	0.00	0.00	0.00
5,000.00	16.00	100.00	4,885.05	-148.50	842.21	-840.96	0.00	0.00	0.00	0.00
5,050.00	16.00	100.00	4,933.11	-150.90	855.78	-854.51	0.00	0.00	0.00	0.00
<b>Drop to Vertical @ 5050.00'</b>										
5,100.00	15.00	100.00	4,981.29	-153.22	868.94	-867.65	2.00	-2.00	0.00	180.00
5,200.00	13.00	100.00	5,078.32	-157.42	892.76	-891.44	2.00	-2.00	0.00	180.00
5,300.00	11.00	100.00	5,176.13	-161.03	913.23	-911.88	2.00	-2.00	0.00	180.00
5,400.00	9.00	100.00	5,274.60	-164.04	930.33	-928.96	2.00	-2.00	0.00	180.00
5,500.00	7.00	100.00	5,373.63	-166.46	944.04	-942.64	2.00	-2.00	0.00	180.00
5,600.00	5.00	100.00	5,473.07	-168.27	954.33	-952.92	2.00	-2.00	0.00	180.00
5,700.00	3.00	100.00	5,572.82	-169.49	961.20	-959.78	2.00	-2.00	0.00	180.00
5,800.00	1.00	100.00	5,672.76	-170.09	964.64	-963.21	2.00	-2.00	0.00	180.00
5,850.00	0.00	0.00	5,722.76	-170.17	965.07	-963.64	2.00	-2.00	0.00	-180.00
5,900.00	0.00	0.00	5,772.76	-170.17	965.07	-963.64	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,872.76	-170.17	965.07	-963.64	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	5,972.76	-170.17	965.07	-963.64	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,072.76	-170.17	965.07	-963.64	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,172.76	-170.17	965.07	-963.64	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,272.76	-170.17	965.07	-963.64	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,372.76	-170.17	965.07	-963.64	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,472.76	-170.17	965.07	-963.64	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,572.76	-170.17	965.07	-963.64	0.00	0.00	0.00	0.00
6,752.29	0.00	0.00	6,625.05	-170.17	965.07	-963.64	0.00	0.00	0.00	0.00
<b>KOP @ 6752.29' DLS=10°/100'</b>										
6,800.00	4.77	269.53	6,672.70	-170.18	963.08	-961.66	10.00	10.00	0.00	269.53
6,900.00	14.77	269.53	6,771.12	-170.32	946.14	-944.71	10.00	10.00	0.00	0.00
7,000.00	24.77	269.53	6,865.11	-170.60	912.35	-910.92	10.00	10.00	0.00	0.00
7,012.05	25.98	269.53	6,876.00	-170.64	907.19	-905.76	10.00	10.00	0.00	0.00
<b>Sharon Springs</b>										
7,100.00	34.77	269.53	6,951.80	-171.01	862.77	-861.33	10.00	10.00	0.00	0.00
7,113.75	36.15	269.53	6,963.00	-171.07	854.79	-853.36	10.00	10.00	0.00	0.00
<b>Niobrara A</b>										
7,167.69	41.54	269.53	7,005.00	-171.35	820.97	-819.54	10.00	10.00	0.00	0.00
<b>Niobrara B</b>										
7,200.00	44.77	269.53	7,028.57	-171.53	798.88	-797.44	10.00	10.00	0.00	0.00
7,244.64	49.23	269.53	7,059.00	-171.80	766.24	-764.81	10.00	10.00	0.00	0.00
<b>Niobrara C</b>										
7,300.00	54.77	269.53	7,093.07	-172.16	722.63	-721.20	10.00	10.00	0.00	0.00
7,400.00	64.77	269.53	7,143.35	-172.86	636.34	-634.90	10.00	10.00	0.00	0.00
7,500.00	74.77	269.53	7,177.89	-173.63	542.63	-541.19	10.00	10.00	0.00	0.00
7,512.34	76.00	269.53	7,181.00	-173.73	530.69	-529.25	10.00	10.00	0.00	0.00
<b>Fort Hays</b>										
7,584.49	83.22	269.53	7,194.00	-174.31	459.78	-458.33	10.00	10.00	0.00	0.00
<b>Codell</b>										
7,600.00	84.77	269.53	7,195.62	-174.44	444.35	-442.91	10.00	10.00	0.00	0.00
7,649.73	89.74	269.53	7,198.00	-174.85	394.70	-393.25	10.00	10.00	0.00	0.00
<b>End Build @ 7649.73' - Landing Target (Heel) - 7"</b>										
7,700.00	89.74	269.53	7,198.23	-175.26	344.43	-342.98	0.00	0.00	0.00	0.00
7,800.00	89.74	269.53	7,198.67	-176.08	244.43	-242.98	0.00	0.00	0.00	0.00
7,900.00	89.74	269.53	7,199.12	-176.90	144.44	-142.98	0.00	0.00	0.00	0.00
8,000.00	89.74	269.53	7,199.57	-177.72	44.44	-42.98	0.00	0.00	0.00	0.00
8,100.00	89.74	269.53	7,200.02	-178.54	-55.56	57.02	0.00	0.00	0.00	0.00
8,200.00	89.74	269.53	7,200.46	-179.36	-155.55	157.02	0.00	0.00	0.00	0.00
8,300.00	89.74	269.53	7,200.91	-180.18	-255.55	257.02	0.00	0.00	0.00	0.00
8,400.00	89.74	269.53	7,201.36	-181.00	-355.54	357.01	0.00	0.00	0.00	0.00
8,500.00	89.74	269.53	7,201.80	-181.82	-455.54	457.01	0.00	0.00	0.00	0.00
8,600.00	89.74	269.53	7,202.25	-182.64	-555.53	557.01	0.00	0.00	0.00	0.00
8,700.00	89.74	269.53	7,202.70	-183.46	-655.53	657.01	0.00	0.00	0.00	0.00

**Plan Report for Barefoot 33C-25HZ - Rev C0 Permit**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
8,800.00	89.74	269.53	7,203.15	-184.28	-755.52	757.01	0.00	0.00	0.00	0.00
8,900.00	89.74	269.53	7,203.59	-185.10	-855.52	857.01	0.00	0.00	0.00	0.00
9,000.00	89.74	269.53	7,204.04	-185.92	-955.52	957.01	0.00	0.00	0.00	0.00
9,100.00	89.74	269.53	7,204.49	-186.74	-1,055.51	1,057.01	0.00	0.00	0.00	0.00
9,200.00	89.74	269.53	7,204.93	-187.56	-1,155.51	1,157.01	0.00	0.00	0.00	0.00
9,300.00	89.74	269.53	7,205.38	-188.38	-1,255.50	1,257.01	0.00	0.00	0.00	0.00
9,400.00	89.74	269.53	7,205.83	-189.20	-1,355.50	1,357.00	0.00	0.00	0.00	0.00
9,500.00	89.74	269.53	7,206.28	-190.02	-1,455.49	1,457.00	0.00	0.00	0.00	0.00
9,600.00	89.74	269.53	7,206.72	-190.84	-1,555.49	1,557.00	0.00	0.00	0.00	0.00
9,700.00	89.74	269.53	7,207.17	-191.66	-1,655.49	1,657.00	0.00	0.00	0.00	0.00
9,800.00	89.74	269.53	7,207.62	-192.48	-1,755.48	1,757.00	0.00	0.00	0.00	0.00
9,900.00	89.74	269.53	7,208.07	-193.30	-1,855.48	1,857.00	0.00	0.00	0.00	0.00
10,000.00	89.74	269.53	7,208.51	-194.12	-1,955.47	1,957.00	0.00	0.00	0.00	0.00
10,100.00	89.74	269.53	7,208.96	-194.94	-2,055.47	2,057.00	0.00	0.00	0.00	0.00
10,200.00	89.74	269.53	7,209.41	-195.76	-2,155.46	2,157.00	0.00	0.00	0.00	0.00
10,300.00	89.74	269.53	7,209.85	-196.58	-2,255.46	2,257.00	0.00	0.00	0.00	0.00
10,400.00	89.74	269.53	7,210.30	-197.40	-2,355.45	2,356.99	0.00	0.00	0.00	0.00
10,500.00	89.74	269.53	7,210.75	-198.22	-2,455.45	2,456.99	0.00	0.00	0.00	0.00
10,600.00	89.74	269.53	7,211.20	-199.04	-2,555.45	2,556.99	0.00	0.00	0.00	0.00
10,700.00	89.74	269.53	7,211.64	-199.86	-2,655.44	2,656.99	0.00	0.00	0.00	0.00
10,800.00	89.74	269.53	7,212.09	-200.68	-2,755.44	2,756.99	0.00	0.00	0.00	0.00
10,900.00	89.74	269.53	7,212.54	-201.50	-2,855.43	2,856.99	0.00	0.00	0.00	0.00
11,000.00	89.74	269.53	7,212.98	-202.32	-2,955.43	2,956.99	0.00	0.00	0.00	0.00
11,100.00	89.74	269.53	7,213.43	-203.14	-3,055.42	3,056.99	0.00	0.00	0.00	0.00
11,200.00	89.74	269.53	7,213.88	-203.96	-3,155.42	3,156.99	0.00	0.00	0.00	0.00
11,300.00	89.74	269.53	7,214.33	-204.78	-3,255.42	3,256.99	0.00	0.00	0.00	0.00
11,400.00	89.74	269.53	7,214.77	-205.60	-3,355.41	3,356.98	0.00	0.00	0.00	0.00
11,500.00	89.74	269.53	7,215.22	-206.42	-3,455.41	3,456.98	0.00	0.00	0.00	0.00
11,600.00	89.74	269.53	7,215.67	-207.24	-3,555.40	3,556.98	0.00	0.00	0.00	0.00
11,700.00	89.74	269.53	7,216.11	-208.06	-3,655.40	3,656.98	0.00	0.00	0.00	0.00
11,800.00	89.74	269.53	7,216.56	-208.88	-3,755.39	3,756.98	0.00	0.00	0.00	0.00
11,900.00	89.74	269.53	7,217.01	-209.70	-3,855.39	3,856.98	0.00	0.00	0.00	0.00
12,000.00	89.74	269.53	7,217.46	-210.52	-3,955.39	3,956.98	0.00	0.00	0.00	0.00
12,100.00	89.74	269.53	7,217.90	-211.34	-4,055.38	4,056.98	0.00	0.00	0.00	0.00
12,200.00	89.74	269.53	7,218.35	-212.16	-4,155.38	4,156.98	0.00	0.00	0.00	0.00
12,300.00	89.74	269.53	7,218.80	-212.98	-4,255.37	4,256.98	0.00	0.00	0.00	0.00
12,400.00	89.74	269.53	7,219.24	-213.80	-4,355.37	4,356.97	0.00	0.00	0.00	0.00
12,500.00	89.74	269.53	7,219.69	-214.62	-4,455.36	4,456.97	0.00	0.00	0.00	0.00
12,600.00	89.74	269.53	7,220.14	-215.44	-4,555.36	4,556.97	0.00	0.00	0.00	0.00
12,700.00	89.74	269.53	7,220.59	-216.26	-4,655.35	4,656.97	0.00	0.00	0.00	0.00
12,792.46	89.74	269.53	7,221.00	-217.02	-4,747.81	4,749.43	0.00	0.00	0.00	0.00

**End Build @ 12792.46'****Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,500.00	1,500.00	0.00	0.00	Begin Nudge @ 1500.00'
5,050.00	4,933.11	-150.90	855.78	Drop to Vertical @ 5050.00'
6,752.29	6,625.05	-170.17	965.07	KOP @ 6752.29' DLS=10°/100'
7,649.73	7,198.00	-174.85	394.70	End Build @ 7649.73'
12,792.46	7,221.00	-217.02	-4,747.81	End Build @ 12792.46'

## Plan Report for Barefoot 33C-25HZ - Rev C0 Permit

### Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	269.53	Slot	0.00	0.00	0.00

### Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	1,500.00	Rev C0 Permit	MWD
1,500.00	7,649.73	Rev C0 Permit	MWD
7,649.73	12,792.46	Rev C0 Permit	MWD

### Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,297.00	1,297.00	9 5/8"	9-5/8	12-3/4
7,649.73	7,198.00	7"	7	8-3/4

### Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,247.00	1,247.00	Fox Hills Marker		0.00	
4,398.66	4,307.00	Sussex		0.00	
4,700.34	4,597.00	Shannon		0.00	
7,012.05	6,876.00	Sharon Springs		0.00	
7,113.75	6,963.00	Niobrara A		0.00	
7,167.69	7,005.00	Niobrara B		0.00	
7,244.64	7,059.00	Niobrara C		0.00	
7,512.34	7,181.00	Fort Hays		0.00	
7,584.49	7,194.00	Codell		0.00	
7,649.73	7,198.00	Landing Target (Heel)		0.00	
12,792.46	7,221.00	Total Depth (Toe)		0.00	

### Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Barefoot 33C-25HZ_LD Rev 2	0.00	55.01	0.00	Polygon
Barefoot 32N-25HZ_Sec. Line	0.00	85.25	0.28	Polygon
Barefoot 33C-25HZ_SHL	0.00	0.01	0.00	Point
Barefoot 33C-25HZ_BHL	7,221.00	-217.02	-4,747.81	Point

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## Plan Report for Barefoot 33C-25HZ - Rev C0 Permit

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### Directional Difficulty Index

Average Dogleg over Survey:	0.95 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 7,649.73 usft
Net Tortosity applicable to Plans:	0.95 °/100usft	Directional Difficulty Index:	6.313

### Audit Info

North Reference Sheet for Sec. 25-T3N-R68W - Barefoot 33C-25HZ - Plan C

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference .  
Vertical Depths are relative to RKB=17' @ 4889.00usft. Northing and Easting are relative to Barefoot 33C-25HZ  
Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980  
Projection method is Lambert Conformal Conic (2 parallel)  
Central Meridian is -105.50°, Longitude Origin:0.000000°, Latitude Origin:40.783333°  
False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99995731

Grid Coordinates of Well: 1,314,535.03 usft N, 3,155,469.91 usft E  
Geographical Coordinates of Well: 40° 11' 43.64" N, 104° 56' 36.44" W  
Grid Convergence at Surface is: 0.36°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,792.46usft  
the Bottom Hole Displacement is 4,752.77usft in the Direction of 267.38° ( True).  
Magnetic Convergence at surface is: -8.28° ( 9 January 2014, , BGGM2013)

