

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 25-T3N-R68W

Barefoot 32N-25HZ

Plan B

Plan: Rev. B0 Permit

Sperry Drilling Services

Proposal Report

05 February, 2014

Well Coordinates: 1,314,565.26 N, 3,155,469.72 E (40° 11' 43.94" N, 104° 56' 36.44" W)

Ground Level: 4,871.00 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

Centered on Well Barefoot 32N-25HZ

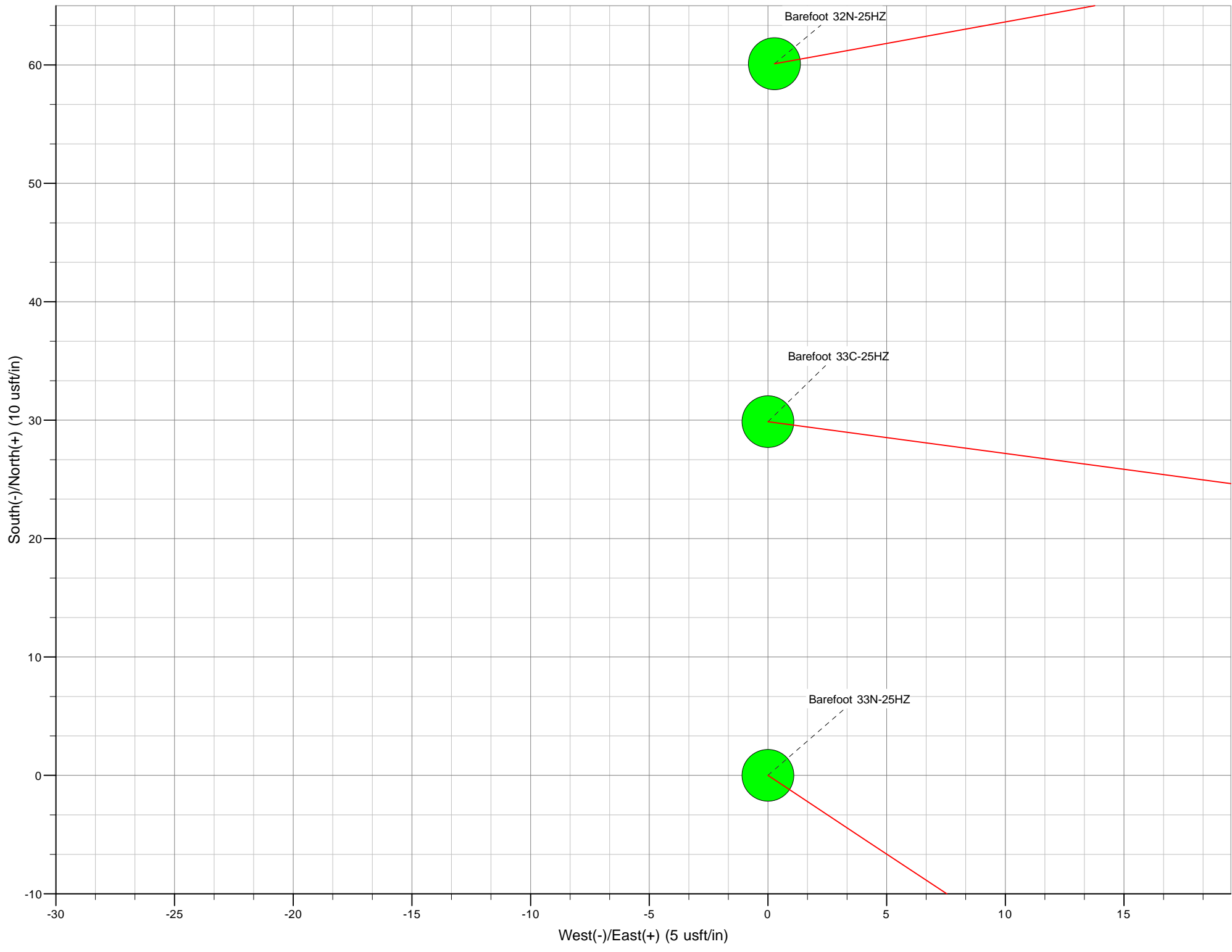
RKB=17' @ 4889.00usft (Drilling Rig)

N

True

Dec-Deg - API - US Survey Feet - Custom

HALLIBURTON



Project: Weld County, CO (NAD 83)
 Site: Sec. 25-T3N-R68W
 Well: Barefoot 32N-25HZ
 Wellbore: Plan B
 Design: Rev. B0 Permit

Anadarko Petroleum Corp.



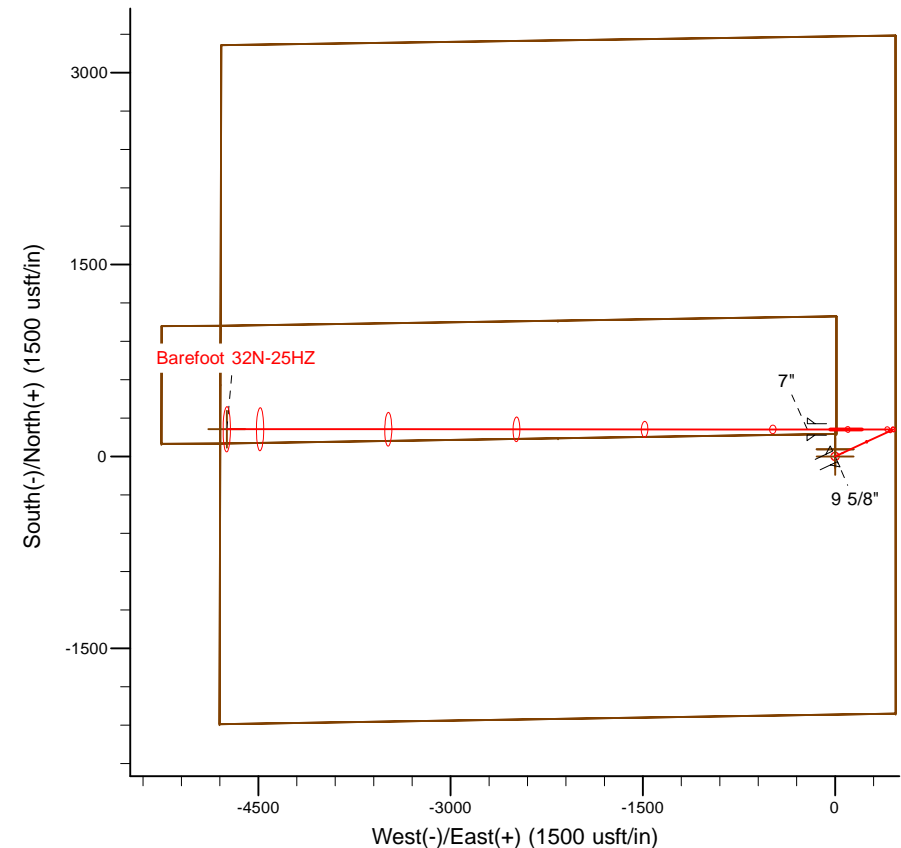
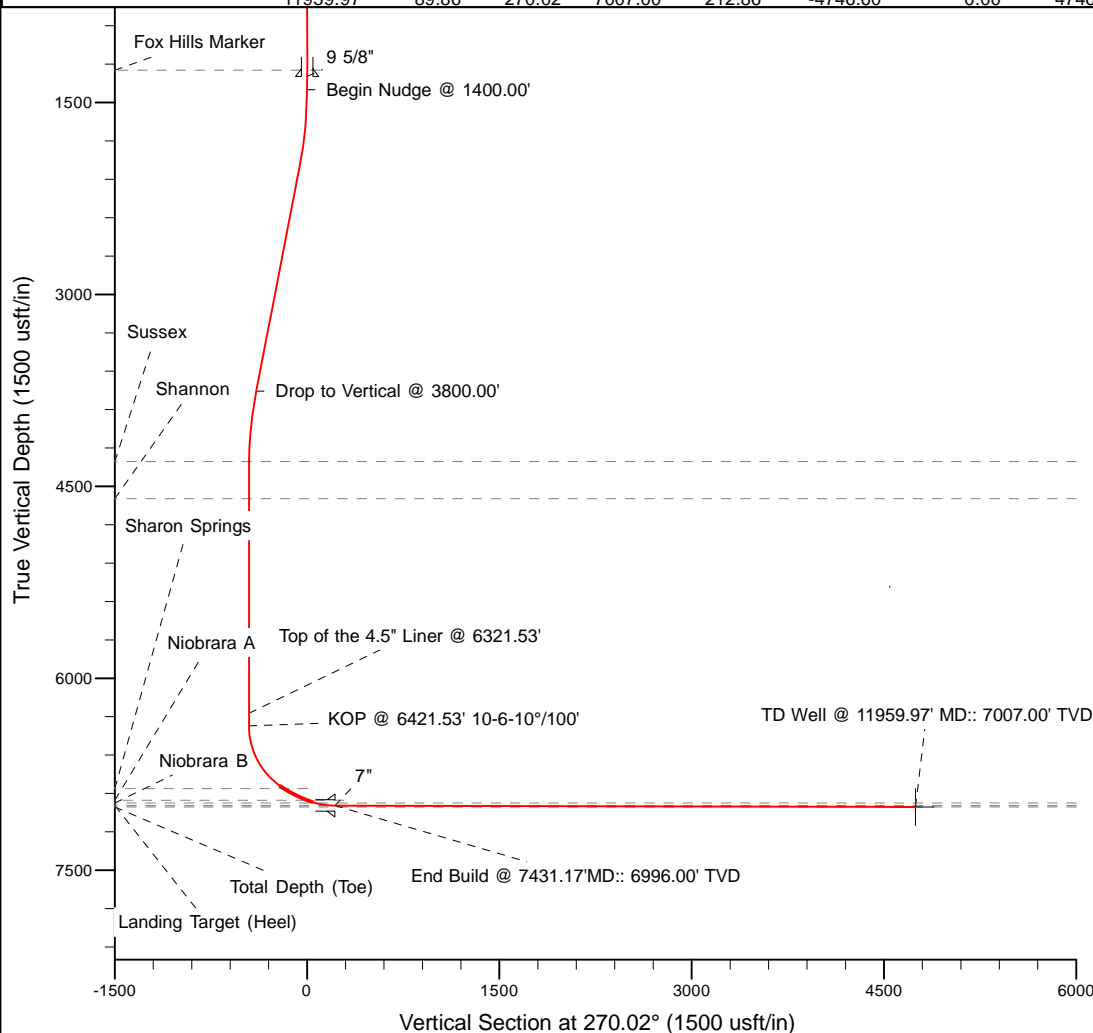
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Barefoot 32N-25HZ_LD	0.00	55.01	0.28	1314620.27	3155469.65	40.195690	-104.943455
Barefoot 32N-25HZ_Sec. Line	0.00	55.03	0.28	1314620.29	3155469.65	40.195690	-104.943455
Barefoot 32N-25HZ_SHL	0.00	0.00	0.00	1314565.27	3155469.72	40.195539	-104.943456
Barefoot 32N-25HZ_BHL	7007.00	212.86	-4746.60	1314748.32	3150722.08	40.196122	-104.960447

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
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00
2000.00	12.00	65.00	1995.62	26.46	56.74	2.00	-56.73
3800.00	12.00	65.00	3756.29	184.62	395.91	0.00	-395.85
4400.00	0.00	0.00	4351.91	211.08	452.65	2.00	-452.58
6421.53	0.00	0.00	6373.44	211.08	452.65	0.00	-452.58
6971.91	55.04	270.01	6843.00	211.12	208.01	10.00	-207.94
7249.50	71.69	270.01	6967.00	211.16	-39.24	6.00	39.31
7431.17	89.86	270.02	6996.00	211.21	-217.82	10.00	217.89
11959.97	89.86	270.02	7007.00	212.86	-4746.60	0.00	4746.68

SHL: 470' FEL', 2019' FSL

BHL: 50' FWL, 2305' FSL

~7" Casing: 689' FEL', 2223' FSL



WELL DETAILS: Barefoot 32N-25HZ	
Ground Level:	4871.00
RKB=17' @ 4889.00usft (Drilling Rig)	
Plan: Rev. B0 Permit (Barefoot 32N-25HZ/Plan B)	
Created By: Pari Amanlou	Date: 1-07-2014

Plan Report for Barefoot 32N-25HZ - Rev. B0 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
Fox Hills Marker										
1,297.00	0.00	0.00	1,297.00	0.00	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	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
Begin Nudge @ 1400.00'										
1,500.00	2.00	65.00	1,499.98	0.74	1.58	-1.58	2.00	2.00	0.00	65.00
1,600.00	4.00	65.00	1,599.84	2.95	6.32	-6.32	2.00	2.00	0.00	0.00
1,700.00	6.00	65.00	1,699.45	6.63	14.22	-14.22	2.00	2.00	0.00	0.00
1,800.00	8.00	65.00	1,798.70	11.78	25.27	-25.26	2.00	2.00	0.00	0.00
1,900.00	10.00	65.00	1,897.47	18.39	39.44	-39.44	2.00	2.00	0.00	0.00
2,000.00	12.00	65.00	1,995.62	26.46	56.74	-56.73	2.00	2.00	0.00	0.00
2,100.00	12.00	65.00	2,093.44	35.24	75.58	-75.57	0.00	0.00	0.00	0.00
2,200.00	12.00	65.00	2,191.25	44.03	94.42	-94.41	0.00	0.00	0.00	0.00
2,300.00	12.00	65.00	2,289.07	52.82	113.27	-113.25	0.00	0.00	0.00	0.00
2,400.00	12.00	65.00	2,386.88	61.60	132.11	-132.09	0.00	0.00	0.00	0.00
2,500.00	12.00	65.00	2,484.70	70.39	150.95	-150.93	0.00	0.00	0.00	0.00
2,600.00	12.00	65.00	2,582.51	79.18	169.80	-169.77	0.00	0.00	0.00	0.00
2,700.00	12.00	65.00	2,680.33	87.96	188.64	-188.61	0.00	0.00	0.00	0.00
2,800.00	12.00	65.00	2,778.14	96.75	207.48	-207.45	0.00	0.00	0.00	0.00
2,900.00	12.00	65.00	2,875.96	105.54	226.33	-226.29	0.00	0.00	0.00	0.00
3,000.00	12.00	65.00	2,973.77	114.32	245.17	-245.13	0.00	0.00	0.00	0.00
3,100.00	12.00	65.00	3,071.59	123.11	264.01	-263.97	0.00	0.00	0.00	0.00
3,200.00	12.00	65.00	3,169.40	131.90	282.86	-282.81	0.00	0.00	0.00	0.00
3,300.00	12.00	65.00	3,267.22	140.68	301.70	-301.65	0.00	0.00	0.00	0.00
3,400.00	12.00	65.00	3,365.03	149.47	320.54	-320.49	0.00	0.00	0.00	0.00
3,500.00	12.00	65.00	3,462.84	158.26	339.39	-339.33	0.00	0.00	0.00	0.00
3,600.00	12.00	65.00	3,560.66	167.04	358.23	-358.17	0.00	0.00	0.00	0.00
3,700.00	12.00	65.00	3,658.47	175.83	377.07	-377.01	0.00	0.00	0.00	0.00
3,800.00	12.00	65.00	3,756.29	184.62	395.91	-395.85	0.00	0.00	0.00	0.00
Drop to Vertical @ 3800.00'										
3,900.00	10.00	65.00	3,854.45	192.68	413.21	-413.14	2.00	-2.00	0.00	180.00
4,000.00	8.00	65.00	3,953.21	199.29	427.38	-427.31	2.00	-2.00	0.00	180.00
4,100.00	6.00	65.00	4,052.46	204.44	438.43	-438.36	2.00	-2.00	0.00	180.00
4,200.00	4.00	65.00	4,152.07	208.13	446.33	-446.25	2.00	-2.00	0.00	180.00
4,300.00	2.00	65.00	4,251.93	210.34	451.07	-451.00	2.00	-2.00	0.00	180.00
4,355.09	0.90	65.00	4,307.00	210.93	452.33	-452.26	2.00	-2.00	0.00	180.00
Sussex										
4,400.00	0.00	0.00	4,351.91	211.08	452.65	-452.58	2.00	-2.00	0.00	-180.00
4,500.00	0.00	0.00	4,451.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,551.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
4,645.09	0.00	0.00	4,597.00	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
Shannon										
4,700.00	0.00	0.00	4,651.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00

Plan Report for Barefoot 32N-25HZ - Rev. B0 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 (°)
4,800.00	0.00	0.00	4,751.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,851.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	4,951.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,051.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,151.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,251.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,351.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,451.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,551.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,651.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,751.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,851.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,951.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,051.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,151.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,251.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
6,321.53	0.00	0.00	6,273.44	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
Top of the 4.5" Liner @ 6321.53'										
6,400.00	0.00	0.00	6,351.91	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
6,421.53	0.00	0.00	6,373.44	211.08	452.65	-452.58	0.00	0.00	0.00	0.00
KOP @ 6421.53' 10-6-10°/100'										
6,500.00	7.85	270.01	6,451.67	211.08	447.29	-447.21	10.00	10.00	0.00	270.01
6,600.00	17.85	270.01	6,549.04	211.08	425.08	-425.01	10.00	10.00	0.00	0.00
6,700.00	27.85	270.01	6,641.08	211.09	386.30	-386.23	10.00	10.00	0.00	0.00
6,800.00	37.85	270.01	6,724.98	211.10	332.13	-332.06	10.00	10.00	0.00	0.00
6,900.00	47.85	270.01	6,798.21	211.11	264.21	-264.14	10.00	10.00	0.00	0.00
6,971.91	55.04	270.01	6,843.00	211.12	208.01	-207.94	10.00	10.00	0.00	0.00
7,000.00	56.72	270.01	6,858.75	211.12	184.76	-184.69	6.00	6.00	0.00	0.00
7,007.79	57.19	270.01	6,863.00	211.12	178.23	-178.16	6.00	6.00	0.00	0.00
Sharon Springs										
7,100.00	62.72	270.01	6,909.15	211.14	98.44	-98.37	6.00	6.00	0.00	0.00
7,200.00	68.72	270.01	6,950.24	211.15	7.33	-7.25	6.00	6.00	0.00	0.00
7,210.50	69.35	270.01	6,954.00	211.15	-2.48	2.56	6.00	6.00	0.00	0.00
Niobrara A										
7,249.50	71.69	270.01	6,967.00	211.16	-39.24	39.31	6.00	6.00	0.00	0.00
7,280.74	74.82	270.01	6,976.00	211.17	-69.15	69.23	10.00	10.00	0.01	0.03
Niobrara B										
7,300.00	76.74	270.01	6,980.73	211.17	-87.83	87.90	10.00	10.00	0.01	0.03
7,400.00	86.74	270.02	6,995.07	211.20	-186.66	186.74	10.00	10.00	0.01	0.03
7,431.16	89.86	270.02	6,996.00	211.21	-217.81	217.88	10.00	10.00	0.01	0.03
Landing Target (Heel)										
7,431.17	89.86	270.02	6,996.00	211.21	-217.82	217.89	8.94	8.94	0.01	0.03
End Build @ 7431.17'MD:: 6996.00' TVD - 7"										
7,500.00	89.86	270.02	6,996.16	211.23	-286.65	286.72	0.00	0.00	0.00	0.00
7,600.00	89.86	270.02	6,996.41	211.27	-386.65	386.72	0.00	0.00	0.00	0.00
7,700.00	89.86	270.02	6,996.65	211.31	-486.65	486.72	0.00	0.00	0.00	0.00
7,800.00	89.86	270.02	6,996.89	211.34	-586.65	586.72	0.00	0.00	0.00	0.00
7,900.00	89.86	270.02	6,997.14	211.38	-686.65	686.72	0.00	0.00	0.00	0.00
8,000.00	89.86	270.02	6,997.38	211.42	-786.65	786.72	0.00	0.00	0.00	0.00
8,100.00	89.86	270.02	6,997.62	211.45	-886.64	886.72	0.00	0.00	0.00	0.00
8,200.00	89.86	270.02	6,997.86	211.49	-986.64	986.72	0.00	0.00	0.00	0.00
8,300.00	89.86	270.02	6,998.11	211.53	-1,086.64	1,086.72	0.00	0.00	0.00	0.00
8,400.00	89.86	270.02	6,998.35	211.56	-1,186.64	1,186.72	0.00	0.00	0.00	0.00
8,500.00	89.86	270.02	6,998.59	211.60	-1,286.64	1,286.72	0.00	0.00	0.00	0.00
8,600.00	89.86	270.02	6,998.84	211.63	-1,386.64	1,386.72	0.00	0.00	0.00	0.00
8,700.00	89.86	270.02	6,999.08	211.67	-1,486.64	1,486.72	0.00	0.00	0.00	0.00
8,800.00	89.86	270.02	6,999.32	211.71	-1,586.64	1,586.72	0.00	0.00	0.00	0.00
8,900.00	89.86	270.02	6,999.57	211.74	-1,686.64	1,686.72	0.00	0.00	0.00	0.00
9,000.00	89.86	270.02	6,999.81	211.78	-1,786.64	1,786.72	0.00	0.00	0.00	0.00

Plan Report for Barefoot 32N-25HZ - Rev. B0 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 (°)
9,100.00	89.86	270.02	7,000.05	211.82	-1,886.64	1,886.72	0.00	0.00	0.00	0.00
9,200.00	89.86	270.02	7,000.29	211.85	-1,986.64	1,986.72	0.00	0.00	0.00	0.00
9,300.00	89.86	270.02	7,000.54	211.89	-2,086.64	2,086.72	0.00	0.00	0.00	0.00
9,400.00	89.86	270.02	7,000.78	211.93	-2,186.64	2,186.71	0.00	0.00	0.00	0.00
9,500.00	89.86	270.02	7,001.02	211.96	-2,286.64	2,286.71	0.00	0.00	0.00	0.00
9,600.00	89.86	270.02	7,001.27	212.00	-2,386.64	2,386.71	0.00	0.00	0.00	0.00
9,700.00	89.86	270.02	7,001.51	212.03	-2,486.64	2,486.71	0.00	0.00	0.00	0.00
9,800.00	89.86	270.02	7,001.75	212.07	-2,586.64	2,586.71	0.00	0.00	0.00	0.00
9,900.00	89.86	270.02	7,001.99	212.11	-2,686.64	2,686.71	0.00	0.00	0.00	0.00
10,000.00	89.86	270.02	7,002.24	212.14	-2,786.64	2,786.71	0.00	0.00	0.00	0.00
10,100.00	89.86	270.02	7,002.48	212.18	-2,886.64	2,886.71	0.00	0.00	0.00	0.00
10,200.00	89.86	270.02	7,002.72	212.22	-2,986.64	2,986.71	0.00	0.00	0.00	0.00
10,300.00	89.86	270.02	7,002.97	212.25	-3,086.64	3,086.71	0.00	0.00	0.00	0.00
10,400.00	89.86	270.02	7,003.21	212.29	-3,186.64	3,186.71	0.00	0.00	0.00	0.00
10,500.00	89.86	270.02	7,003.45	212.33	-3,286.64	3,286.71	0.00	0.00	0.00	0.00
10,600.00	89.86	270.02	7,003.70	212.36	-3,386.64	3,386.71	0.00	0.00	0.00	0.00
10,700.00	89.86	270.02	7,003.94	212.40	-3,486.64	3,486.71	0.00	0.00	0.00	0.00
10,800.00	89.86	270.02	7,004.18	212.44	-3,586.64	3,586.71	0.00	0.00	0.00	0.00
10,900.00	89.86	270.02	7,004.42	212.47	-3,686.64	3,686.71	0.00	0.00	0.00	0.00
11,000.00	89.86	270.02	7,004.67	212.51	-3,786.64	3,786.71	0.00	0.00	0.00	0.00
11,100.00	89.86	270.02	7,004.91	212.54	-3,886.64	3,886.71	0.00	0.00	0.00	0.00
11,200.00	89.86	270.02	7,005.15	212.58	-3,986.64	3,986.71	0.00	0.00	0.00	0.00
11,300.00	89.86	270.02	7,005.40	212.62	-4,086.64	4,086.71	0.00	0.00	0.00	0.00
11,400.00	89.86	270.02	7,005.64	212.65	-4,186.63	4,186.71	0.00	0.00	0.00	0.00
11,500.00	89.86	270.02	7,005.88	212.69	-4,286.63	4,286.71	0.00	0.00	0.00	0.00
11,600.00	89.86	270.02	7,006.13	212.73	-4,386.63	4,386.71	0.00	0.00	0.00	0.00
11,700.00	89.86	270.02	7,006.37	212.76	-4,486.63	4,486.71	0.00	0.00	0.00	0.00
11,800.00	89.86	270.02	7,006.61	212.80	-4,586.63	4,586.71	0.00	0.00	0.00	0.00
11,900.00	89.86	270.02	7,006.85	212.84	-4,686.63	4,686.71	0.00	0.00	0.00	0.00
11,959.97	89.86	270.02	7,007.00	212.86	-4,746.60	4,746.68	0.00	0.00	0.00	0.00

TD Well @ 11959.97' MD:: 7007.00' TVD

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,400.00	1,400.00	0.00	0.00	Begin Nudge @ 1400.00'
3,800.00	3,756.29	184.62	395.91	Drop to Vertical @ 3800.00'
6,321.53	6,273.44	211.08	452.65	Top of the 4.5" Liner @ 6321.53'
6,421.53	6,373.44	211.08	452.65	KOP @ 6421.53' 10-6-10°/100'
7,431.17	6,996.00	211.21	-217.82	End Build @ 7431.17'MD:: 6996.00' TVD
11,959.97	7,007.00	212.86	-4,746.60	TD Well @ 11959.97' MD:: 7007.00' TVD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/_S (usft)	+E/-W (usft)	
User	No Target (Freehand)	270.02	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	1,297.00	Rev. B0 Permit	MWD
1,297.00	7,431.17	Rev. B0 Permit	MWD
7,431.17	11,959.97	Rev. B0 Permit	MWD

Plan Report for Barefoot 32N-25HZ - Rev. B0 Permit

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
7,431.17	6,996.00	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	
4,355.09	4,307.00	Sussex		0.00	
4,645.09	4,597.00	Shannon		0.00	
7,007.79	6,863.00	Sharon Springs		0.00	
7,210.50	6,954.00	Niobrara A		0.00	
7,280.74	6,976.00	Niobrara B		0.00	
7,431.16	6,996.00	Landing Target (Heel)		0.00	
11,959.97	7,007.00	Total Depth (Toe)		0.00	

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Barefoot 32N-25HZ_LD	0.00	55.01	0.28	Polygon
Barefoot 32N-25HZ_SHL	0.00	0.00	0.00	Point
Barefoot 32N-25HZ_Sec. Line	0.00	55.03	0.28	Polygon
Barefoot 32N-25HZ_BHL	7,007.00	212.86	-4,746.60	Point

Directional Difficulty Index

Average Dogleg over Survey:	0.95 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 6,971.91 usft
Net Tortousity applicable to Plans:	0.95 °/100usft	Directional Difficulty Index:	6.199

Audit Info

North Reference Sheet for Sec. 25-T3N-R68W - Barefoot 32N-25HZ - Plan B

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 (Drilling Rig). Northing and Easting are relative to Barefoot 32N-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: 1,314,565.26 usft N, 3,155,469.72 usft E
Geographical Coordinates of Well: 40° 11' 43.94" N, 104° 56' 36.44" W
Grid Convergence at Surface is: 0.36°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,959.97usft
the Bottom Hole Displacement is 4,751.37usft in the Direction of 272.57° (True).
Magnetic Convergence at surface is: -8.28° (9 January 2014, , BGGM2013)

