

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 22 T2N-R66W

Gobbler 36N-27HZ

Plan B Rev 0

Plan: Plan B Rev 0 Permit

Sperry Drilling Services

Proposal Report

09 October, 2012

Well Coordinates: 1,286,942.93 N, 3,206,415.74 E (40° 07' 07.29" N, 104° 45' 42.88" W)

Ground Level: 5,051.00 ft

Local Coordinate Origin:	Centered on Well Gobbler 36N-27HZ
Viewing Datum:	RKB=17 @ 5068.00ft (Drilling Rig)
TVDs to System:	N
North Reference:	True
Unit System:	API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 431

HALLIBURTON

Project: Weld County, CO (NAD 83)
 Site: Sec. 22 T2N-R66W
 Well: Gobbler 36N-27HZ
 Wellbore: Plan B Rev 0
 Design: Plan B Rev 0 Permit

Anadarko Petroleum Corp.



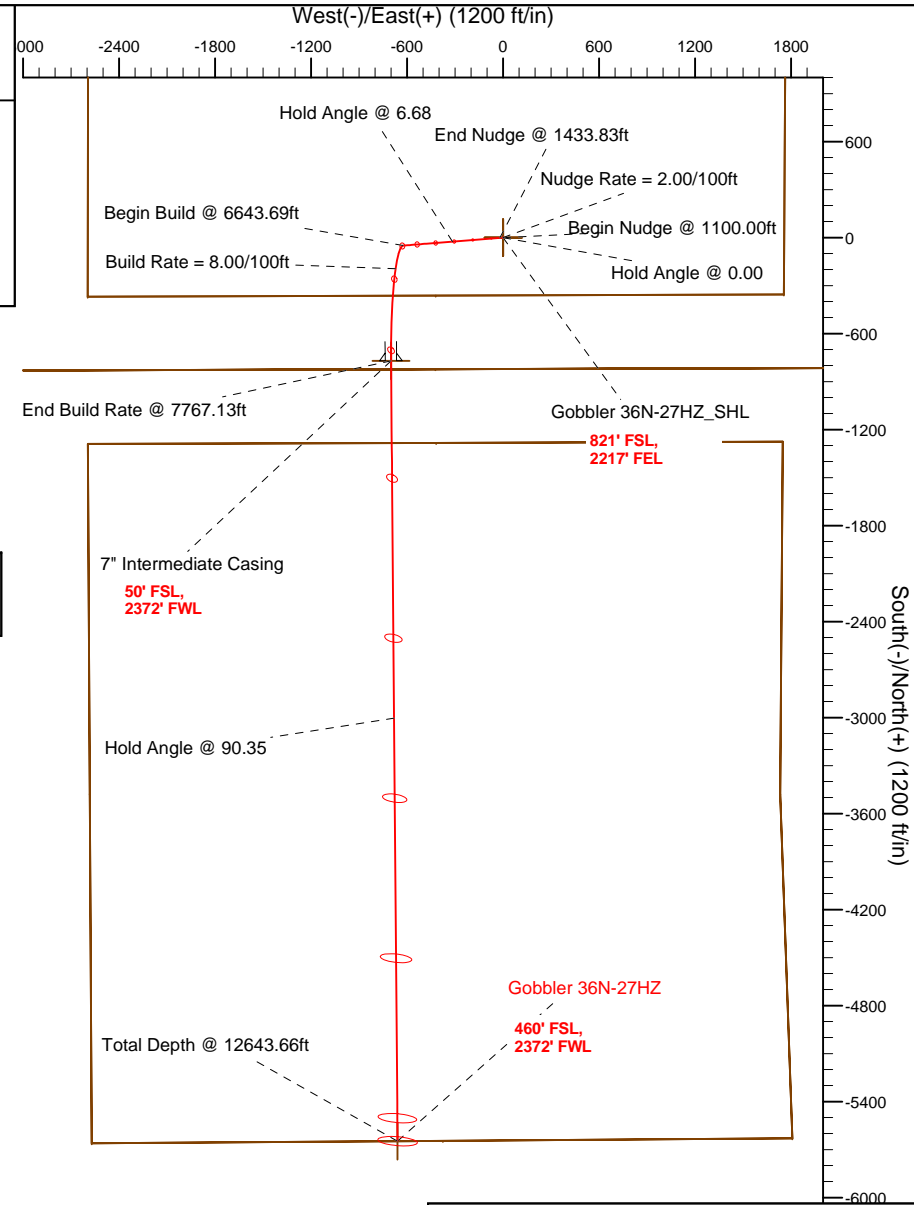
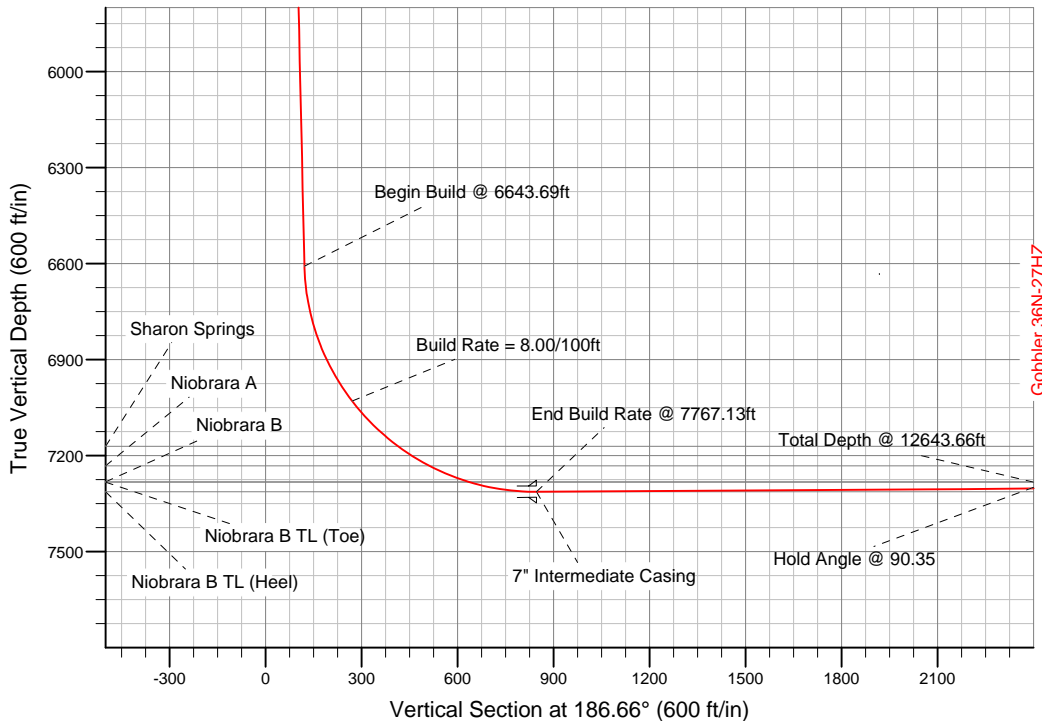
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	
3	1433.83	6.68	265.43	1433.08	-1.55	-19.37	2.00	265.43	3.78	
4	6643.69	6.68	265.43	6607.60	-49.78	-623.17	0.00	0.00	121.68	
5	7767.13	90.35	179.52	7313.00	-771.00	-700.00	8.00	-85.90	846.95	Gobbler 36N-27HZ_Casing Point
6	12643.66	90.35	179.52	7283.00	-5647.27	-659.07	0.00	0.00	5685.59	Gobbler 36N-27HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Gobbler 36N-27HZ_22-Setback Line	0.00	0.00	0.00	40.118693	-104.761912	Polygon
Gobbler 36N-27HZ_27-Setback Line	0.00	0.00	0.00	40.118693	-104.761912	Polygon
Gobbler 36N-27HZ_Sec 22/27 Line	0.00	0.00	0.00	40.118693	-104.761912	Polygon
Gobbler 36N-27HZ_Section Line	0.00	0.00	0.00	40.118693	-104.761912	Polygon
Gobbler 36N-27HZ_SHL	0.00	0.00	0.00	40.118693	-104.761912	Point
Gobbler 36N-27HZ_BHL	7283.00	-5647.27	-659.07	40.103191	-104.764268	Point
Gobbler 36N-27HZ_Casing Point	7313.00	-771.00	-700.00	40.116577	-104.764415	Point

Target Line:
7317.68' TVDkb @ 0' VS Drilling 90.35°



WELL DETAILS: Gobbler 36N-27HZ	
Ground Level: 5051.00RKB=17 @ 5068.00ft (Drilling Rig)	
Plan: Plan B Rev 0 Permit (Gobbler 36N-27HZ/Plan B Rev 0)	
Created By: Fred Hartmann	Date: 10/08/2012
Reviewed: _____	Date: _____

Plan Report for Gobbler 36N-27HZ - Plan B Rev 0 Permit

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)	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
Hold Angle @ 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
Begin Nudge @ 1100.00ft										
1,200.00	2.00	265.43	1,199.98	-0.14	-1.74	0.34	2.00	2.00	0.00	265.43
Nudge Rate = 2.00/100ft										
1,300.00	4.00	265.43	1,299.84	-0.56	-6.96	1.36	2.00	2.00	0.00	0.00
1,400.00	6.00	265.43	1,399.45	-1.25	-15.64	3.05	2.00	2.00	0.00	0.00
1,433.83	6.68	265.43	1,433.08	-1.55	-19.37	3.78	2.00	2.00	0.00	0.00
End Nudge @ 1433.83ft										
1,500.00	6.68	265.43	1,498.80	-2.16	-27.04	5.28	0.00	0.00	0.00	0.00
1,600.00	6.68	265.43	1,598.12	-3.09	-38.63	7.54	0.00	0.00	0.00	0.00
1,700.00	6.68	265.43	1,697.44	-4.01	-50.21	9.81	0.00	0.00	0.00	0.00
1,800.00	6.68	265.43	1,796.76	-4.94	-61.80	12.07	0.00	0.00	0.00	0.00
1,900.00	6.68	265.43	1,896.08	-5.86	-73.39	14.33	0.00	0.00	0.00	0.00
2,000.00	6.68	265.43	1,995.41	-6.79	-84.98	16.59	0.00	0.00	0.00	0.00
2,100.00	6.68	265.43	2,094.73	-7.71	-96.57	18.86	0.00	0.00	0.00	0.00
2,200.00	6.68	265.43	2,194.05	-8.64	-108.16	21.12	0.00	0.00	0.00	0.00
2,300.00	6.68	265.43	2,293.37	-9.57	-119.75	23.38	0.00	0.00	0.00	0.00
2,400.00	6.68	265.43	2,392.69	-10.49	-131.34	25.65	0.00	0.00	0.00	0.00
2,500.00	6.68	265.43	2,492.01	-11.42	-142.93	27.91	0.00	0.00	0.00	0.00
2,600.00	6.68	265.43	2,591.34	-12.34	-154.52	30.17	0.00	0.00	0.00	0.00
2,700.00	6.68	265.43	2,690.66	-13.27	-166.11	32.44	0.00	0.00	0.00	0.00
2,800.00	6.68	265.43	2,789.98	-14.20	-177.70	34.70	0.00	0.00	0.00	0.00
2,900.00	6.68	265.43	2,889.30	-15.12	-189.29	36.96	0.00	0.00	0.00	0.00
3,000.00	6.68	265.43	2,988.62	-16.05	-200.88	39.22	0.00	0.00	0.00	0.00
3,100.00	6.68	265.43	3,087.95	-16.97	-212.47	41.49	0.00	0.00	0.00	0.00
3,200.00	6.68	265.43	3,187.27	-17.90	-224.06	43.75	0.00	0.00	0.00	0.00
3,300.00	6.68	265.43	3,286.59	-18.82	-235.65	46.01	0.00	0.00	0.00	0.00
3,400.00	6.68	265.43	3,385.91	-19.75	-247.24	48.28	0.00	0.00	0.00	0.00
3,500.00	6.68	265.43	3,485.23	-20.68	-258.83	50.54	0.00	0.00	0.00	0.00
3,600.00	6.68	265.43	3,584.55	-21.60	-270.42	52.80	0.00	0.00	0.00	0.00
3,700.00	6.68	265.43	3,683.88	-22.53	-282.01	55.07	0.00	0.00	0.00	0.00
3,800.00	6.68	265.43	3,783.20	-23.45	-293.60	57.33	0.00	0.00	0.00	0.00
3,900.00	6.68	265.43	3,882.52	-24.38	-305.19	59.59	0.00	0.00	0.00	0.00
4,000.00	6.68	265.43	3,981.84	-25.31	-316.78	61.86	0.00	0.00	0.00	0.00
Hold Angle @ 6.68										
4,100.00	6.68	265.43	4,081.16	-26.23	-328.37	64.12	0.00	0.00	0.00	0.00
4,200.00	6.68	265.43	4,180.49	-27.16	-339.96	66.38	0.00	0.00	0.00	0.00
4,213.61	6.68	265.43	4,194.00	-27.28	-341.53	66.69	0.00	0.00	0.00	0.00
Parkman										
4,300.00	6.68	265.43	4,279.81	-28.08	-351.55	68.64	0.00	0.00	0.00	0.00
4,400.00	6.68	265.43	4,379.13	-29.01	-363.14	70.91	0.00	0.00	0.00	0.00
4,500.00	6.68	265.43	4,478.45	-29.93	-374.73	73.17	0.00	0.00	0.00	0.00
4,600.00	6.68	265.43	4,577.77	-30.86	-386.32	75.43	0.00	0.00	0.00	0.00
4,602.24	6.68	265.43	4,580.00	-30.88	-386.58	75.48	0.00	0.00	0.00	0.00
Sussex										

Plan Report for Gobbler 36N-27HZ - Plan B Rev 0 Permit

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)	Toolface Azimuth (°)
4,700.00	6.68	265.43	4,677.09	-31.79	-397.91	77.70	0.00	0.00	0.00	0.00
4,800.00	6.68	265.43	4,776.42	-32.71	-409.50	79.96	0.00	0.00	0.00	0.00
4,900.00	6.68	265.43	4,875.74	-33.64	-421.09	82.22	0.00	0.00	0.00	0.00
5,000.00	6.68	265.43	4,975.06	-34.56	-432.67	84.49	0.00	0.00	0.00	0.00
5,100.00	6.68	265.43	5,074.38	-35.49	-444.26	86.75	0.00	0.00	0.00	0.00
5,200.00	6.68	265.43	5,173.70	-36.42	-455.85	89.01	0.00	0.00	0.00	0.00
5,300.00	6.68	265.43	5,273.03	-37.34	-467.44	91.27	0.00	0.00	0.00	0.00
5,400.00	6.68	265.43	5,372.35	-38.27	-479.03	93.54	0.00	0.00	0.00	0.00
5,500.00	6.68	265.43	5,471.67	-39.19	-490.62	95.80	0.00	0.00	0.00	0.00
5,600.00	6.68	265.43	5,570.99	-40.12	-502.21	98.06	0.00	0.00	0.00	0.00
5,700.00	6.68	265.43	5,670.31	-41.04	-513.80	100.33	0.00	0.00	0.00	0.00
5,800.00	6.68	265.43	5,769.63	-41.97	-525.39	102.59	0.00	0.00	0.00	0.00
5,900.00	6.68	265.43	5,868.96	-42.90	-536.98	104.85	0.00	0.00	0.00	0.00
6,000.00	6.68	265.43	5,968.28	-43.82	-548.57	107.12	0.00	0.00	0.00	0.00
6,100.00	6.68	265.43	6,067.60	-44.75	-560.16	109.38	0.00	0.00	0.00	0.00
6,200.00	6.68	265.43	6,166.92	-45.67	-571.75	111.64	0.00	0.00	0.00	0.00
6,300.00	6.68	265.43	6,266.24	-46.60	-583.34	113.91	0.00	0.00	0.00	0.00
6,400.00	6.68	265.43	6,365.56	-47.52	-594.93	116.17	0.00	0.00	0.00	0.00
6,500.00	6.68	265.43	6,464.89	-48.45	-606.52	118.43	0.00	0.00	0.00	0.00
6,600.00	6.68	265.43	6,564.21	-49.38	-618.11	120.69	0.00	0.00	0.00	0.00
6,643.69	6.68	265.43	6,607.60	-49.78	-623.17	121.68	0.00	0.00	0.00	0.00
Begin Build @ 6643.69ft										
6,700.00	8.31	232.62	6,663.45	-52.51	-629.67	125.15	8.00	2.90	-58.28	-85.90
6,800.00	14.57	206.26	6,761.48	-68.21	-641.00	142.05	8.00	6.25	-26.36	-53.35
6,900.00	21.97	196.38	6,856.40	-97.48	-651.86	172.38	8.00	7.40	-9.88	-27.46
7,000.00	29.67	191.38	6,946.36	-139.76	-662.04	215.56	8.00	7.70	-5.00	-18.06
7,100.00	37.49	188.31	7,029.60	-194.23	-671.34	270.74	8.00	7.82	-3.07	-13.55
Build Rate = 8.00/100ft										
7,200.00	45.37	186.18	7,104.52	-259.83	-679.58	336.85	8.00	7.88	-2.14	-10.98
7,300.00	53.28	184.56	7,169.65	-335.27	-686.61	412.60	8.00	7.91	-1.62	-9.38
7,302.26	53.45	184.52	7,171.00	-337.08	-686.75	414.41	8.00	7.92	-1.44	-8.32
Sharon Springs										
7,400.00	61.20	183.24	7,223.73	-419.10	-692.28	496.53	8.00	7.92	-1.31	-8.30
7,417.56	62.59	183.03	7,232.00	-434.57	-693.12	511.99	8.00	7.93	-1.19	-7.60
Niobrara A										
7,500.00	69.13	182.11	7,265.70	-509.68	-696.48	586.98	8.00	7.94	-1.12	-7.51
7,550.44	73.14	181.59	7,282.00	-557.38	-698.02	634.53	8.00	7.94	-1.04	-7.13
Niobrara B										
7,600.00	77.07	181.10	7,294.74	-605.25	-699.14	682.22	8.00	7.94	-0.99	-6.96
7,700.00	85.02	180.14	7,310.29	-703.95	-700.20	780.37	8.00	7.94	-0.95	-6.83
7,767.13	90.35	179.52	7,313.00	-771.00	-700.00	846.95	8.00	7.95	-0.93	-6.68
End Build Rate @ 7767.13ft - Niobrara B TL (Heel) - 7" Intermediate Casing - Gobbler 36N-27HZ_Casing Point										
7,800.00	90.35	179.52	7,312.80	-803.87	-699.72	879.56	0.00	0.00	0.00	-6.66
7,900.00	90.35	179.52	7,312.18	-903.86	-698.88	978.78	0.00	0.00	0.00	0.00
8,000.00	90.35	179.52	7,311.57	-1,003.86	-698.05	1,078.01	0.00	0.00	0.00	0.00
8,100.00	90.35	179.52	7,310.95	-1,103.85	-697.21	1,177.23	0.00	0.00	0.00	0.00
8,200.00	90.35	179.52	7,310.34	-1,203.84	-696.37	1,276.45	0.00	0.00	0.00	0.00
8,300.00	90.35	179.52	7,309.72	-1,303.84	-695.53	1,375.67	0.00	0.00	0.00	0.00
8,400.00	90.35	179.52	7,309.11	-1,403.83	-694.69	1,474.90	0.00	0.00	0.00	0.00
8,500.00	90.35	179.52	7,308.49	-1,503.83	-693.85	1,574.12	0.00	0.00	0.00	0.00
8,600.00	90.35	179.52	7,307.88	-1,603.82	-693.01	1,673.34	0.00	0.00	0.00	0.00
8,700.00	90.35	179.52	7,307.26	-1,703.82	-692.17	1,772.57	0.00	0.00	0.00	0.00
8,800.00	90.35	179.52	7,306.65	-1,803.81	-691.33	1,871.79	0.00	0.00	0.00	0.00
8,900.00	90.35	179.52	7,306.03	-1,903.81	-690.49	1,971.01	0.00	0.00	0.00	0.00
9,000.00	90.35	179.52	7,305.42	-2,003.80	-689.65	2,070.24	0.00	0.00	0.00	0.00
9,100.00	90.35	179.52	7,304.80	-2,103.80	-688.81	2,169.46	0.00	0.00	0.00	0.00
9,200.00	90.35	179.52	7,304.19	-2,203.79	-687.97	2,268.68	0.00	0.00	0.00	0.00
9,300.00	90.35	179.52	7,303.57	-2,303.79	-687.13	2,367.91	0.00	0.00	0.00	0.00
9,400.00	90.35	179.52	7,302.95	-2,403.78	-686.29	2,467.13	0.00	0.00	0.00	0.00

Plan Report for Gobbler 36N-27HZ - Plan B Rev 0 Permit

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)	Toothface Azimuth (°)
9,500.00	90.35	179.52	7,302.34	-2,503.77	-685.46	2,566.35	0.00	0.00	0.00	0.00
9,600.00	90.35	179.52	7,301.72	-2,603.77	-684.62	2,665.58	0.00	0.00	0.00	0.00
9,700.00	90.35	179.52	7,301.11	-2,703.76	-683.78	2,764.80	0.00	0.00	0.00	0.00
9,800.00	90.35	179.52	7,300.49	-2,803.76	-682.94	2,864.02	0.00	0.00	0.00	0.00
9,900.00	90.35	179.52	7,299.88	-2,903.75	-682.10	2,963.25	0.00	0.00	0.00	0.00
10,000.00	90.35	179.52	7,299.26	-3,003.75	-681.26	3,062.47	0.00	0.00	0.00	0.00
Hold Angle @ 90.35										
10,100.00	90.35	179.52	7,298.65	-3,103.74	-680.42	3,161.69	0.00	0.00	0.00	0.00
10,200.00	90.35	179.52	7,298.03	-3,203.74	-679.58	3,260.92	0.00	0.00	0.00	0.00
10,300.00	90.35	179.52	7,297.42	-3,303.73	-678.74	3,360.14	0.00	0.00	0.00	0.00
10,400.00	90.35	179.52	7,296.80	-3,403.73	-677.90	3,459.36	0.00	0.00	0.00	0.00
10,500.00	90.35	179.52	7,296.19	-3,503.72	-677.06	3,558.58	0.00	0.00	0.00	0.00
10,600.00	90.35	179.52	7,295.57	-3,603.71	-676.22	3,657.81	0.00	0.00	0.00	0.00
10,700.00	90.35	179.52	7,294.96	-3,703.71	-675.38	3,757.03	0.00	0.00	0.00	0.00
10,800.00	90.35	179.52	7,294.34	-3,803.70	-674.54	3,856.25	0.00	0.00	0.00	0.00
10,900.00	90.35	179.52	7,293.73	-3,903.70	-673.70	3,955.48	0.00	0.00	0.00	0.00
11,000.00	90.35	179.52	7,293.11	-4,003.69	-672.87	4,054.70	0.00	0.00	0.00	0.00
11,100.00	90.35	179.52	7,292.50	-4,103.69	-672.03	4,153.92	0.00	0.00	0.00	0.00
11,200.00	90.35	179.52	7,291.88	-4,203.68	-671.19	4,253.15	0.00	0.00	0.00	0.00
11,300.00	90.35	179.52	7,291.27	-4,303.68	-670.35	4,352.37	0.00	0.00	0.00	0.00
11,400.00	90.35	179.52	7,290.65	-4,403.67	-669.51	4,451.59	0.00	0.00	0.00	0.00
11,500.00	90.35	179.52	7,290.04	-4,503.67	-668.67	4,550.82	0.00	0.00	0.00	0.00
11,600.00	90.35	179.52	7,289.42	-4,603.66	-667.83	4,650.04	0.00	0.00	0.00	0.00
11,700.00	90.35	179.52	7,288.81	-4,703.66	-666.99	4,749.26	0.00	0.00	0.00	0.00
11,800.00	90.35	179.52	7,288.19	-4,803.65	-666.15	4,848.49	0.00	0.00	0.00	0.00
11,900.00	90.35	179.52	7,287.57	-4,903.64	-665.31	4,947.71	0.00	0.00	0.00	0.00
12,000.00	90.35	179.52	7,286.96	-5,003.64	-664.47	5,046.93	0.00	0.00	0.00	0.00
12,100.00	90.35	179.52	7,286.34	-5,103.63	-663.63	5,146.16	0.00	0.00	0.00	0.00
12,200.00	90.35	179.52	7,285.73	-5,203.63	-662.79	5,245.38	0.00	0.00	0.00	0.00
12,300.00	90.35	179.52	7,285.11	-5,303.62	-661.95	5,344.60	0.00	0.00	0.00	0.00
12,400.00	90.35	179.52	7,284.50	-5,403.62	-661.11	5,443.83	0.00	0.00	0.00	0.00
12,500.00	90.35	179.52	7,283.88	-5,503.61	-660.28	5,543.05	0.00	0.00	0.00	0.00
12,600.00	90.35	179.52	7,283.27	-5,603.61	-659.44	5,642.27	0.00	0.00	0.00	0.00
12,643.65	90.35	179.52	7,283.00	-5,647.25	-659.07	5,685.58	0.00	0.00	0.00	0.00
Niobrara B TL (Toe)										
12,643.66	90.35	179.52	7,283.00	-5,647.26	-659.07	5,685.59	0.00	0.00	0.00	0.00
Total Depth @ 12643.66ft - Gobbler 36N-27HZ_BHL										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
600.00	600.00	0.00	0.00	Hold Angle @ 0.00
1,100.00	1,100.00	0.00	0.00	Begin Nudge @ 1100.00ft
1,200.00	1,199.98	-0.14	-1.74	Nudge Rate = 2.00/100ft
1,433.83	1,433.08	-1.55	-19.37	End Nudge @ 1433.83ft
4,000.00	3,981.84	-25.31	-316.78	Hold Angle @ 6.68
6,643.69	6,607.60	-49.78	-623.17	Begin Build @ 6643.69ft
7,100.00	7,029.60	-194.23	-671.34	Build Rate = 8.00/100ft
7,767.13	7,313.00	-771.00	-700.00	End Build Rate @ 7767.13ft
10,000.00	7,299.26	-3,003.75	-681.26	Hold Angle @ 90.35
12,643.66	7,283.00	-5,647.26	-659.07	Total Depth @ 12643.66ft

Plan Report for Gobbler 36N-27HZ - Plan B Rev 0 Permit**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
Target	Gobbler 36N-27HZ_BHL	186.66	Slot	0.00	0.00	7,283.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,767.13	Plan B Rev 0 Permit	MWD
7,767.13	12,643.66	Plan B Rev 0 Permit	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,767.13	7,313.00	7" Intermediate Casing	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,213.61	4,194.00	Parkman		0.00	
4,602.24	4,580.00	Sussex		0.00	
7,302.26	7,171.00	Sharon Springs		0.00	
7,417.56	7,232.00	Niobrara A		0.00	
7,550.44	7,282.00	Niobrara B		0.00	
7,767.13	7,313.00	Niobrara B TL (Heel)		0.00	
12,643.65	7,283.00	Niobrara B TL (Toe)		0.00	

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Gobbler 36N-27HZ_22-Setback Line	0.00	0.00	0.00	Polygon
Gobbler 36N-27HZ_27-Setback Line	0.00	0.00	0.00	Polygon
Gobbler 36N-27HZ_Casing Point	7,313.00	-771.00	-700.00	Point
Gobbler 36N-27HZ_SHL	0.00	0.00	0.00	Point
Gobbler 36N-27HZ_Section Line	0.00	0.00	0.00	Polygon
Gobbler 36N-27HZ_Sec 22/27 Line	0.00	0.00	0.00	Polygon
Gobbler 36N-27HZ_BHL	7,283.00	-5,647.27	-659.07	Point

North Reference Sheet for Sec. 22 T2N-R66W - Gobbler 36N-27HZ - Plan B Rev 0

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 @ 5068.00ft (Drilling Rig). Northing and Easting are relative to Gobbler 36N-27HZ
 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: 3,000,000.00ft, False Northing: 1,000,000.00ft, Scale Reduction: 0.99995949

Grid Coordinates of Well: 1,286,942.93 ft N, 3,206,415.74 ft E
 Geographical Coordinates of Well: 40° 07' 07.29" N, 104° 45' 42.88" W
 Grid Convergence at Surface is: 0.48°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,643.66ft
 the Bottom Hole Displacement is 5,685.59ft in the Direction of 186.66° (True).
 Magnetic Convergence at surface is: -8.23° (9 October 2012, , BGGM2012)

Magnetic Model: BGGM 2012
 Date: 09-Oct-12
 Declination: 8.71°
 Inclination/Dip: 66.76°
 Field Strength: 52763

Grid North is 0.48° East of True North (Grid Convergence)
 Magnetic North is 8.71° East of True North (Magnetic Declination)
 Magnetic North is 8.23° East of Grid North (Magnetic Convergence)

To convert a True Direction to a Grid Direction, Subtract 0.48°
 To convert a Magnetic Direction to a True Direction, Add 8.71° East
 To convert a Magnetic Direction to a Grid Direction, Add 8.23°