

# Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 34-T3N-R66W

Rattler 34N-3HZ

Plan B Rev 0

Plan: Plan B Rev 0 Permit

## Sperry Drilling Services

## Proposal Report

28 February, 2013

Well Coordinates: 1,307,475.81 N, 3,203,981.89 E (40° 10' 30.40" N, 104° 46' 12.04" W)

Ground Level: 4,970.00 ft

Local Coordinate Origin:

Centered on Well Rattler 34N-3HZ

Viewing Datum:

RKB=17 @ 4987.00ft (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. 34-T3N-R66W  
 Well: Rattler 34N-3HZ  
 Wellbore: Plan B Rev 0  
 Design: Plan B Rev 0 Permit

# Anadarko Petroleum Corp.

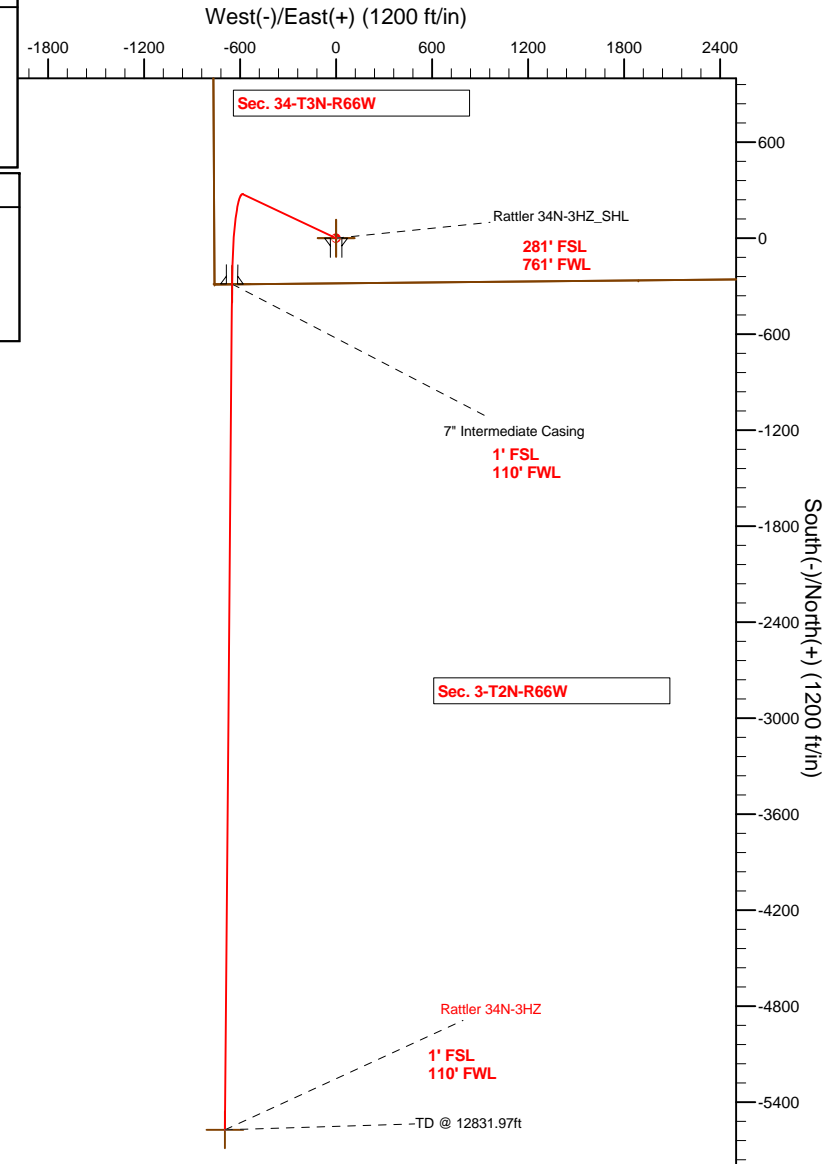
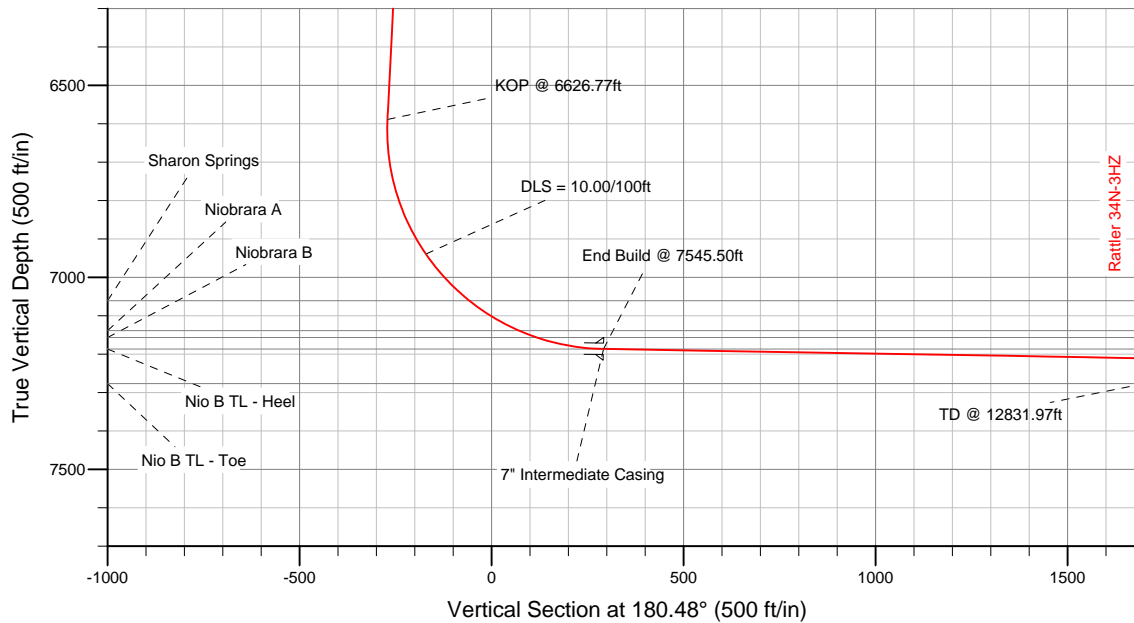
**HALLIBURTON**  
 Sperry Drilling

## 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	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	
3	1338.76	6.78	295.34	1337.97	8.56	-18.08	2.00	295.34	-8.41	
4	6626.77	6.78	295.34	6589.05	275.60	-581.89	0.00	0.00	-270.71	
5	7545.50	89.02	180.48	7187.00	-286.40	-650.00	10.00	-114.81	291.84	Rattler 34N-3HZ_CP
6	12831.97	89.02	180.48	7277.00	-5571.91	-694.58	0.00	0.00	5577.53	Rattler 34N-3HZ_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Rattler 34N-3HZ_Sec	0.00	0.00	0.00	40.175112	-104.770010	Polygon
Rattler 34N-3HZ_SHL	0.00	0.00	0.00	40.175112	-104.770010	Point
Rattler 34N-3HZ_CP	7187.00	-286.40	-650.00	40.174326	-104.772336	Point
Rattler 34N-3HZ_BHL	7277.00	-5571.91	-694.58	40.159817	-104.772495	Point



WELL DETAILS: Rattler 34N-3HZ

Ground Level: 4970.00  
 RKB=17 @ 4987.00ft (Drilling Rig)

Plan: Plan B Rev 0 Permit (Rattler 34N-3HZ/Plan B Rev 0)

Created By: Fred Hartmann Date: 02/07/2013  
 Reviewed: Date:

**Plan Report for Rattler 34N-3HZ - 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
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
<b>9 5/8" Surface Casing</b>										
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
<b>Begin Nudge @ 1000.00ft</b>										
1,100.00	2.00	295.34	1,099.98	0.75	-1.58	-0.73	2.00	2.00	0.00	295.34
1,200.00	4.00	295.34	1,199.84	2.99	-6.31	-2.93	2.00	2.00	0.00	0.00
1,300.00	6.00	295.34	1,299.45	6.72	-14.18	-6.60	2.00	2.00	0.00	0.00
1,338.76	6.78	295.34	1,337.97	8.56	-18.08	-8.41	2.00	2.00	0.00	0.00
<b>End Nudge @ 1338.76ft</b>										
1,400.00	6.78	295.34	1,398.78	11.66	-24.61	-11.45	0.00	0.00	0.00	0.00
1,500.00	6.78	295.34	1,498.09	16.71	-35.27	-16.41	0.00	0.00	0.00	0.00
1,600.00	6.78	295.34	1,597.39	21.76	-45.93	-21.37	0.00	0.00	0.00	0.00
1,700.00	6.78	295.34	1,696.69	26.81	-56.60	-26.33	0.00	0.00	0.00	0.00
1,800.00	6.78	295.34	1,795.99	31.86	-67.26	-31.29	0.00	0.00	0.00	0.00
1,900.00	6.78	295.34	1,895.29	36.91	-77.92	-36.25	0.00	0.00	0.00	0.00
2,000.00	6.78	295.34	1,994.59	41.95	-88.58	-41.21	0.00	0.00	0.00	0.00
2,100.00	6.78	295.34	2,093.90	47.00	-99.24	-46.17	0.00	0.00	0.00	0.00
2,200.00	6.78	295.34	2,193.20	52.05	-109.91	-51.13	0.00	0.00	0.00	0.00
2,300.00	6.78	295.34	2,292.50	57.10	-120.57	-56.09	0.00	0.00	0.00	0.00
2,400.00	6.78	295.34	2,391.80	62.15	-131.23	-61.05	0.00	0.00	0.00	0.00
2,500.00	6.78	295.34	2,491.10	67.20	-141.89	-66.01	0.00	0.00	0.00	0.00
2,600.00	6.78	295.34	2,590.40	72.25	-152.55	-70.97	0.00	0.00	0.00	0.00
2,700.00	6.78	295.34	2,689.71	77.30	-163.22	-75.93	0.00	0.00	0.00	0.00
2,800.00	6.78	295.34	2,789.01	82.35	-173.88	-80.89	0.00	0.00	0.00	0.00
2,900.00	6.78	295.34	2,888.31	87.40	-184.54	-85.85	0.00	0.00	0.00	0.00
3,000.00	6.78	295.34	2,987.61	92.45	-195.20	-90.81	0.00	0.00	0.00	0.00
3,100.00	6.78	295.34	3,086.91	97.50	-205.86	-95.77	0.00	0.00	0.00	0.00
3,200.00	6.78	295.34	3,186.21	102.55	-216.53	-100.74	0.00	0.00	0.00	0.00
3,300.00	6.78	295.34	3,285.52	107.60	-227.19	-105.70	0.00	0.00	0.00	0.00
3,400.00	6.78	295.34	3,384.82	112.65	-237.85	-110.66	0.00	0.00	0.00	0.00
3,500.00	6.78	295.34	3,484.12	117.70	-248.51	-115.62	0.00	0.00	0.00	0.00
3,600.00	6.78	295.34	3,583.42	122.75	-259.17	-120.58	0.00	0.00	0.00	0.00
3,700.00	6.78	295.34	3,682.72	127.80	-269.84	-125.54	0.00	0.00	0.00	0.00
3,800.00	6.78	295.34	3,782.02	132.85	-280.50	-130.50	0.00	0.00	0.00	0.00
3,900.00	6.78	295.34	3,881.33	137.90	-291.16	-135.46	0.00	0.00	0.00	0.00
4,000.00	6.78	295.34	3,980.63	142.95	-301.82	-140.42	0.00	0.00	0.00	0.00
4,100.00	6.78	295.34	4,079.93	148.00	-312.48	-145.38	0.00	0.00	0.00	0.00
4,200.00	6.78	295.34	4,179.23	153.05	-323.15	-150.34	0.00	0.00	0.00	0.00
4,300.00	6.78	295.34	4,278.53	158.10	-333.81	-155.30	0.00	0.00	0.00	0.00
4,400.00	6.78	295.34	4,377.83	163.15	-344.47	-160.26	0.00	0.00	0.00	0.00
4,412.25	6.78	295.34	4,390.00	163.77	-345.78	-160.87	0.00	0.00	0.00	0.00
<b>Parkman</b>										
4,500.00	6.78	295.34	4,477.14	168.20	-355.13	-165.22	0.00	0.00	0.00	0.00
4,600.00	6.78	295.34	4,576.44	173.25	-365.79	-170.18	0.00	0.00	0.00	0.00
4,700.00	6.78	295.34	4,675.74	178.30	-376.46	-175.14	0.00	0.00	0.00	0.00
4,800.00	6.78	295.34	4,775.04	183.35	-387.12	-180.10	0.00	0.00	0.00	0.00
4,900.00	6.78	295.34	4,874.34	188.40	-397.78	-185.06	0.00	0.00	0.00	0.00
4,912.75	6.78	295.34	4,887.00	189.04	-399.14	-185.69	0.00	0.00	0.00	0.00
<b>Sussex</b>										

**Plan Report for Rattler 34N-3HZ - 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 (°)
5,000.00	6.78	295.34	4,973.64	193.45	-408.44	-190.02	0.00	0.00	0.00	0.00
5,100.00	6.78	295.34	5,072.95	198.50	-419.10	-194.98	0.00	0.00	0.00	0.00
5,200.00	6.78	295.34	5,172.25	203.55	-429.77	-199.94	0.00	0.00	0.00	0.00
5,300.00	6.78	295.34	5,271.55	208.60	-440.43	-204.90	0.00	0.00	0.00	0.00
5,400.00	6.78	295.34	5,370.85	213.65	-451.09	-209.86	0.00	0.00	0.00	0.00
5,500.00	6.78	295.34	5,470.15	218.70	-461.75	-214.82	0.00	0.00	0.00	0.00
5,600.00	6.78	295.34	5,569.45	223.75	-472.41	-219.78	0.00	0.00	0.00	0.00
5,700.00	6.78	295.34	5,668.76	228.80	-483.08	-224.74	0.00	0.00	0.00	0.00
5,800.00	6.78	295.34	5,768.06	233.85	-493.74	-229.70	0.00	0.00	0.00	0.00
5,900.00	6.78	295.34	5,867.36	238.90	-504.40	-234.66	0.00	0.00	0.00	0.00
6,000.00	6.78	295.34	5,966.66	243.95	-515.06	-239.62	0.00	0.00	0.00	0.00
6,100.00	6.78	295.34	6,065.96	249.00	-525.72	-244.58	0.00	0.00	0.00	0.00
6,200.00	6.78	295.34	6,165.26	254.05	-536.39	-249.55	0.00	0.00	0.00	0.00
6,300.00	6.78	295.34	6,264.57	259.10	-547.05	-254.51	0.00	0.00	0.00	0.00
6,400.00	6.78	295.34	6,363.87	264.15	-557.71	-259.47	0.00	0.00	0.00	0.00
6,500.00	6.78	295.34	6,463.17	269.20	-568.37	-264.43	0.00	0.00	0.00	0.00
6,600.00	6.78	295.34	6,562.47	274.25	-579.03	-269.39	0.00	0.00	0.00	0.00
6,626.77	6.78	295.34	6,589.05	275.60	-581.89	-270.71	0.00	0.00	0.00	0.00
<b>KOP @ 6626.77ft</b>										
6,700.00	7.59	234.26	6,661.81	274.62	-589.73	-269.67	10.00	1.12	-83.42	-114.81
6,800.00	15.69	202.92	6,759.75	258.26	-600.39	-253.22	10.00	8.10	-31.34	-54.12
6,900.00	25.18	193.62	6,853.37	225.04	-610.69	-219.92	10.00	9.49	-9.30	-23.32
7,000.00	34.95	189.24	6,939.82	175.97	-620.33	-170.77	10.00	9.76	-4.38	-14.58
<b>DLS = 10.00/100ft</b>										
7,100.00	44.80	186.60	7,016.48	112.54	-629.00	-107.27	10.00	9.86	-2.64	-10.77
7,166.70	51.40	185.31	7,061.00	63.18	-634.12	-57.87	10.00	9.90	-1.94	-8.74
<b>Sharon Springs</b>										
7,200.00	54.70	184.75	7,081.01	36.68	-636.45	-31.35	10.00	9.91	-1.68	-7.88
7,300.00	64.63	183.31	7,131.46	-49.31	-642.45	54.69	10.00	9.92	-1.44	-7.54
7,318.21	66.43	183.07	7,139.00	-65.86	-643.37	71.25	10.00	9.93	-1.29	-6.81
<b>Niobrara A</b>										
7,368.28	71.41	182.45	7,157.00	-112.51	-645.62	117.91	10.00	9.93	-1.23	-6.71
<b>Niobrara B</b>										
7,400.00	74.56	182.08	7,166.28	-142.81	-646.82	148.22	10.00	9.94	-1.17	-6.49
7,500.00	84.50	180.97	7,184.43	-240.99	-649.42	246.42	10.00	9.94	-1.11	-6.38
7,545.50	89.02	180.48	7,187.00	-286.40	-650.00	291.84	10.00	9.94	-1.07	-6.18
<b>End Build @ 7545.50ft - Nio B TL - Heel - 7" Intermediate Casing - Rattler 34N-3HZ_CP</b>										
7,600.00	89.02	180.48	7,187.93	-340.89	-650.46	346.33	0.00	0.00	0.00	-6.15
7,700.00	89.02	180.48	7,189.63	-440.87	-651.30	446.31	0.00	0.00	0.00	0.00
7,800.00	89.02	180.48	7,191.33	-540.85	-652.15	546.30	0.00	0.00	0.00	0.00
7,900.00	89.02	180.48	7,193.04	-640.83	-652.99	646.28	0.00	0.00	0.00	0.00
8,000.00	89.02	180.48	7,194.74	-740.82	-653.83	746.27	0.00	0.00	0.00	0.00
8,100.00	89.02	180.48	7,196.44	-840.80	-654.68	846.25	0.00	0.00	0.00	0.00
8,200.00	89.02	180.48	7,198.14	-940.78	-655.52	946.24	0.00	0.00	0.00	0.00
8,300.00	89.02	180.48	7,199.85	-1,040.76	-656.36	1,046.22	0.00	0.00	0.00	0.00
8,400.00	89.02	180.48	7,201.55	-1,140.74	-657.21	1,146.21	0.00	0.00	0.00	0.00
8,500.00	89.02	180.48	7,203.25	-1,240.73	-658.05	1,246.20	0.00	0.00	0.00	0.00
8,600.00	89.02	180.48	7,204.95	-1,340.71	-658.89	1,346.18	0.00	0.00	0.00	0.00
8,700.00	89.02	180.48	7,206.65	-1,440.69	-659.74	1,446.17	0.00	0.00	0.00	0.00
8,800.00	89.02	180.48	7,208.36	-1,540.67	-660.58	1,546.15	0.00	0.00	0.00	0.00
8,900.00	89.02	180.48	7,210.06	-1,640.65	-661.42	1,646.14	0.00	0.00	0.00	0.00
9,000.00	89.02	180.48	7,211.76	-1,740.64	-662.27	1,746.12	0.00	0.00	0.00	0.00
9,100.00	89.02	180.48	7,213.46	-1,840.62	-663.11	1,846.11	0.00	0.00	0.00	0.00
9,200.00	89.02	180.48	7,215.17	-1,940.60	-663.95	1,946.09	0.00	0.00	0.00	0.00
9,300.00	89.02	180.48	7,216.87	-2,040.58	-664.80	2,046.08	0.00	0.00	0.00	0.00
9,400.00	89.02	180.48	7,218.57	-2,140.56	-665.64	2,146.06	0.00	0.00	0.00	0.00
9,500.00	89.02	180.48	7,220.27	-2,240.55	-666.48	2,246.05	0.00	0.00	0.00	0.00
9,600.00	89.02	180.48	7,221.98	-2,340.53	-667.33	2,346.04	0.00	0.00	0.00	0.00
9,700.00	89.02	180.48	7,223.68	-2,440.51	-668.17	2,446.02	0.00	0.00	0.00	0.00

**Plan Report for Rattler 34N-3HZ - 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 (°)
9,800.00	89.02	180.48	7,225.38	-2,540.49	-669.01	2,546.01	0.00	0.00	0.00	0.00
9,900.00	89.02	180.48	7,227.08	-2,640.47	-669.85	2,645.99	0.00	0.00	0.00	0.00
10,000.00	89.02	180.48	7,228.79	-2,740.46	-670.70	2,745.98	0.00	0.00	0.00	0.00
10,100.00	89.02	180.48	7,230.49	-2,840.44	-671.54	2,845.96	0.00	0.00	0.00	0.00
10,200.00	89.02	180.48	7,232.19	-2,940.42	-672.38	2,945.95	0.00	0.00	0.00	0.00
10,300.00	89.02	180.48	7,233.89	-3,040.40	-673.23	3,045.93	0.00	0.00	0.00	0.00
10,400.00	89.02	180.48	7,235.60	-3,140.38	-674.07	3,145.92	0.00	0.00	0.00	0.00
10,500.00	89.02	180.48	7,237.30	-3,240.36	-674.91	3,245.91	0.00	0.00	0.00	0.00
10,600.00	89.02	180.48	7,239.00	-3,340.35	-675.76	3,345.89	0.00	0.00	0.00	0.00
10,700.00	89.02	180.48	7,240.70	-3,440.33	-676.60	3,445.88	0.00	0.00	0.00	0.00
10,800.00	89.02	180.48	7,242.41	-3,540.31	-677.44	3,545.86	0.00	0.00	0.00	0.00
10,900.00	89.02	180.48	7,244.11	-3,640.29	-678.29	3,645.85	0.00	0.00	0.00	0.00
11,000.00	89.02	180.48	7,245.81	-3,740.27	-679.13	3,745.83	0.00	0.00	0.00	0.00
11,100.00	89.02	180.48	7,247.51	-3,840.26	-679.97	3,845.82	0.00	0.00	0.00	0.00
11,200.00	89.02	180.48	7,249.22	-3,940.24	-680.82	3,945.80	0.00	0.00	0.00	0.00
11,300.00	89.02	180.48	7,250.92	-4,040.22	-681.66	4,045.79	0.00	0.00	0.00	0.00
11,400.00	89.02	180.48	7,252.62	-4,140.20	-682.50	4,145.77	0.00	0.00	0.00	0.00
11,500.00	89.02	180.48	7,254.32	-4,240.18	-683.35	4,245.76	0.00	0.00	0.00	0.00
11,600.00	89.02	180.48	7,256.03	-4,340.17	-684.19	4,345.75	0.00	0.00	0.00	0.00
11,700.00	89.02	180.48	7,257.73	-4,440.15	-685.03	4,445.73	0.00	0.00	0.00	0.00
11,800.00	89.02	180.48	7,259.43	-4,540.13	-685.88	4,545.72	0.00	0.00	0.00	0.00
11,900.00	89.02	180.48	7,261.13	-4,640.11	-686.72	4,645.70	0.00	0.00	0.00	0.00
12,000.00	89.02	180.48	7,262.84	-4,740.09	-687.56	4,745.69	0.00	0.00	0.00	0.00
12,100.00	89.02	180.48	7,264.54	-4,840.08	-688.41	4,845.67	0.00	0.00	0.00	0.00
12,200.00	89.02	180.48	7,266.24	-4,940.06	-689.25	4,945.66	0.00	0.00	0.00	0.00
12,300.00	89.02	180.48	7,267.94	-5,040.04	-690.09	5,045.64	0.00	0.00	0.00	0.00
12,400.00	89.02	180.48	7,269.65	-5,140.02	-690.94	5,145.63	0.00	0.00	0.00	0.00
12,500.00	89.02	180.48	7,271.35	-5,240.00	-691.78	5,245.62	0.00	0.00	0.00	0.00
12,600.00	89.02	180.48	7,273.05	-5,339.99	-692.62	5,345.60	0.00	0.00	0.00	0.00
12,700.00	89.02	180.48	7,274.75	-5,439.97	-693.47	5,445.59	0.00	0.00	0.00	0.00
12,800.00	89.02	180.48	7,276.46	-5,539.95	-694.31	5,545.57	0.00	0.00	0.00	0.00
12,831.97	89.02	180.48	7,277.00	-5,571.91	-694.58	5,577.53	0.00	0.00	0.00	0.00

Nio B TL - Toe - Rattler 34N-3HZ\_BHL

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.00	1,000.00	0.00	0.00	Begin Nudge @ 1000.00ft
1,338.76	1,337.97	8.56	-18.08	End Nudge @ 1338.76ft
6,626.77	6,589.05	275.60	-581.89	KOP @ 6626.77ft
7,000.00	6,939.82	175.97	-620.33	DLS = 10.00/100ft
7,545.50	7,187.00	-286.40	-650.00	End Build @ 7545.50ft
12,831.97	7,277.00	-5,571.91	-694.58	TD @ 12831.97ft

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
User	No Target (Freehand)	180.48	Slot	0.00	0.00	0.00

**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	12,831.97	Plan B Rev 0 Permit	MWD

## Plan Report for Rattler 34N-3HZ - Plan B Rev 0 Permit

### Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
800.00	800.00	9 5/8" Surface Casing	9-5/8	13-1/2
7,545.50	7,187.00	7" Intermediate Casing	7	8-3/4

### Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,412.25	4,390.00	Parkman		0.00	
4,912.75	4,887.00	Sussex		0.00	
7,166.70	7,061.00	Sharon Springs		0.00	
7,318.21	7,139.00	Niobrara A		0.00	
7,368.28	7,157.00	Niobrara B		0.00	
7,545.50	7,187.00	Nio B TL - Heel		0.00	
12,831.97	7,277.00	Nio B TL - Toe		0.00	

### *Targets associated with this wellbore*

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Rattler 34N-3HZ_SHL	0.00	0.00	0.00	Point
Rattler 34N-3HZ_BHL	7,277.00	-5,571.91	-694.58	Point
Rattler 34N-3HZ_Sec	0.00	0.00	0.00	Polygon
Rattler 34N-3HZ_CP	7,187.00	-286.40	-650.00	Point

## North Reference Sheet for Sec. 34-T3N-R66W - Rattler 34N-3HZ - 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 @ 4987.00ft (Drilling Rig). Northing and Easting are relative to Rattler 34N-3HZ  
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: 0.99995771

Grid Coordinates of Well: 1,307,475.81 ft N, 3,203,981.89 ft E  
Geographical Coordinates of Well: 40° 10' 30.40" N, 104° 46' 12.04" W  
Grid Convergence at Surface is: 0.47°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,831.97ft  
the Bottom Hole Displacement is 5,615.03ft in the Direction of 187.11° (True).

Magnetic Convergence at surface is: -8.20° (28 February 2013, , BGGM2012)

