

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 34-T3N-R66W

Rattler 14N-3HZ

Plan A Rev 0

Plan: Plan A Rev 0 Permit

Sperry Drilling Services

Proposal Report

25 October, 2012

Well Coordinates: 1,307,418.33 N, 3,205,358.07 E (40° 10' 29.72" N, 104° 45' 54.31" W)

Ground Level: 4,991.00 ft

Local Coordinate Origin:

Centered on Well Rattler 14N-3HZ

Viewing Datum:

RKB=17 @ 5008.00ft (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 14N-3HZ
Wellbore: Plan A Rev 0
Design: Plan A Rev 0 Permit

Anadarko Petroleum Corp.

HALLIBURTON
Sperry Drilling

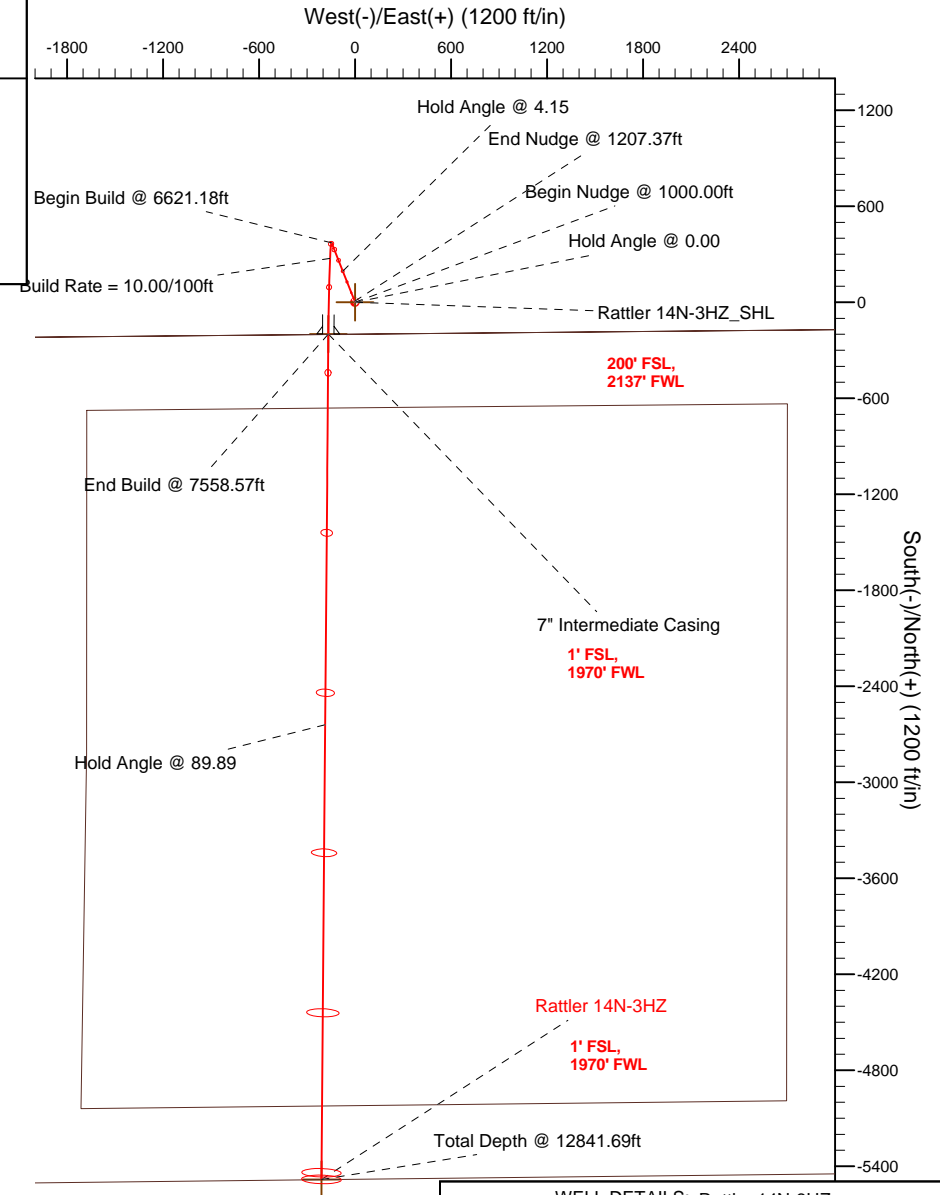
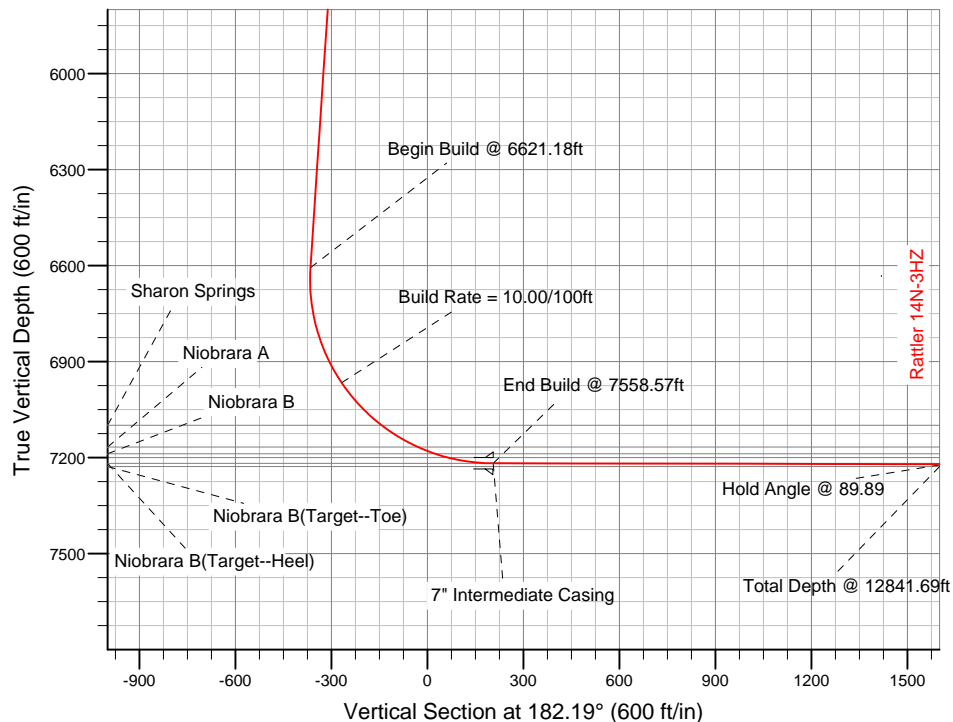
SECTION DETAILS

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	1207.37	4.15	338.56	1207.19	6.98	-2.74	2.00	338.56	-6.87	
4	6621.18	4.15	338.56	6606.82	371.43	-145.86	0.00	0.00	-365.58	
5	7558.57	89.89	180.47	7218.00	-199.00	-167.00	10.00	-158.05	205.24	Rattler 14N-3HZ_Casing Point
6	12841.69	89.89	180.47	7228.00	-5481.94	-209.91	0.00	0.00	5485.95	Rattler 14N-3HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Rattler 14N-3HZ_SHL	0.00	0.00	0.00	40.174923	-104.765087	Point
Rattler 14N-3HZ_Casing Point	7218.00	-199.00	-167.00	40.174377	-104.765685	Point
Rattler 14N-3HZ_BHL	7228.00	-5481.94	-209.91	40.159875	-104.765838	Point

Target Line:
7217.58' TVDkb @ 0' VS Drilling 89.89°



WELL DETAILS: Rattler 14N-3HZ

Ground Level: 4991.00 RKB=17 @ 5008.00ft (Drilling Rig)

Plan: Plan A Rev 0 Permit (Rattler 14N-3HZ/Plan A Rev 0)

Created By: Fred Hartmann Date: 10/25/2012
Reviewed: Date:

Plan Report for Rattler 14N-3HZ - Plan A 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
Hold Angle @ 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
Begin Nudge @ 1000.00ft										
1,100.00	2.00	338.56	1,099.98	1.62	-0.64	-1.60	2.00	2.00	0.00	338.56
1,200.00	4.00	338.56	1,199.84	6.50	-2.55	-6.39	2.00	2.00	0.00	0.00
1,207.37	4.15	338.56	1,207.19	6.98	-2.74	-6.87	2.00	2.00	0.00	0.00
End Nudge @ 1207.37ft										
1,300.00	4.15	338.56	1,299.58	13.22	-5.19	-13.01	0.00	0.00	0.00	0.00
1,400.00	4.15	338.56	1,399.31	19.95	-7.83	-19.64	0.00	0.00	0.00	0.00
1,500.00	4.15	338.56	1,499.05	26.68	-10.48	-26.26	0.00	0.00	0.00	0.00
1,600.00	4.15	338.56	1,598.79	33.41	-13.12	-32.89	0.00	0.00	0.00	0.00
1,700.00	4.15	338.56	1,698.53	40.15	-15.77	-39.51	0.00	0.00	0.00	0.00
1,800.00	4.15	338.56	1,798.27	46.88	-18.41	-46.14	0.00	0.00	0.00	0.00
1,900.00	4.15	338.56	1,898.01	53.61	-21.05	-52.76	0.00	0.00	0.00	0.00
2,000.00	4.15	338.56	1,997.74	60.34	-23.70	-59.39	0.00	0.00	0.00	0.00
2,100.00	4.15	338.56	2,097.48	67.07	-26.34	-66.02	0.00	0.00	0.00	0.00
2,200.00	4.15	338.56	2,197.22	73.80	-28.98	-72.64	0.00	0.00	0.00	0.00
2,300.00	4.15	338.56	2,296.96	80.54	-31.63	-79.27	0.00	0.00	0.00	0.00
2,400.00	4.15	338.56	2,396.70	87.27	-34.27	-85.89	0.00	0.00	0.00	0.00
2,500.00	4.15	338.56	2,496.43	94.00	-36.91	-92.52	0.00	0.00	0.00	0.00
2,600.00	4.15	338.56	2,596.17	100.73	-39.56	-99.14	0.00	0.00	0.00	0.00
2,700.00	4.15	338.56	2,695.91	107.46	-42.20	-105.77	0.00	0.00	0.00	0.00
2,800.00	4.15	338.56	2,795.65	114.20	-44.85	-112.40	0.00	0.00	0.00	0.00
2,900.00	4.15	338.56	2,895.39	120.93	-47.49	-119.02	0.00	0.00	0.00	0.00
3,000.00	4.15	338.56	2,995.12	127.66	-50.13	-125.65	0.00	0.00	0.00	0.00
3,100.00	4.15	338.56	3,094.86	134.39	-52.78	-132.27	0.00	0.00	0.00	0.00
3,200.00	4.15	338.56	3,194.60	141.12	-55.42	-138.90	0.00	0.00	0.00	0.00
3,300.00	4.15	338.56	3,294.34	147.85	-58.06	-145.52	0.00	0.00	0.00	0.00
3,400.00	4.15	338.56	3,394.08	154.59	-60.71	-152.15	0.00	0.00	0.00	0.00
3,500.00	4.15	338.56	3,493.82	161.32	-63.35	-158.78	0.00	0.00	0.00	0.00
3,600.00	4.15	338.56	3,593.55	168.05	-65.99	-165.40	0.00	0.00	0.00	0.00
3,700.00	4.15	338.56	3,693.29	174.78	-68.64	-172.03	0.00	0.00	0.00	0.00
3,800.00	4.15	338.56	3,793.03	181.51	-71.28	-178.65	0.00	0.00	0.00	0.00
3,900.00	4.15	338.56	3,892.77	188.25	-73.93	-185.28	0.00	0.00	0.00	0.00
4,000.00	4.15	338.56	3,992.51	194.98	-76.57	-191.90	0.00	0.00	0.00	0.00
Hold Angle @ 4.15										
4,100.00	4.15	338.56	4,092.24	201.71	-79.21	-198.53	0.00	0.00	0.00	0.00
4,176.96	4.15	338.56	4,169.00	206.89	-81.25	-203.63	0.00	0.00	0.00	0.00
Parkman										
4,200.00	4.15	338.56	4,191.98	208.44	-81.86	-205.16	0.00	0.00	0.00	0.00
4,300.00	4.15	338.56	4,291.72	215.17	-84.50	-211.78	0.00	0.00	0.00	0.00
4,400.00	4.15	338.56	4,391.46	221.90	-87.14	-218.41	0.00	0.00	0.00	0.00
4,413.58	4.15	338.56	4,405.00	222.82	-87.50	-219.31	0.00	0.00	0.00	0.00
Sussex										
4,500.00	4.15	338.56	4,491.20	228.64	-89.79	-225.03	0.00	0.00	0.00	0.00
4,600.00	4.15	338.56	4,590.93	235.37	-92.43	-231.66	0.00	0.00	0.00	0.00
4,700.00	4.15	338.56	4,690.67	242.10	-95.07	-238.28	0.00	0.00	0.00	0.00
4,800.00	4.15	338.56	4,790.41	248.83	-97.72	-244.91	0.00	0.00	0.00	0.00

Plan Report for Rattler 14N-3HZ - Plan A 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 (°)
4,900.00	4.15	338.56	4,890.15	255.56	-100.36	-251.54	0.00	0.00	0.00	0.00
5,000.00	4.15	338.56	4,989.89	262.30	-103.01	-258.16	0.00	0.00	0.00	0.00
5,100.00	4.15	338.56	5,089.63	269.03	-105.65	-264.79	0.00	0.00	0.00	0.00
5,200.00	4.15	338.56	5,189.36	275.76	-108.29	-271.41	0.00	0.00	0.00	0.00
5,300.00	4.15	338.56	5,289.10	282.49	-110.94	-278.04	0.00	0.00	0.00	0.00
5,400.00	4.15	338.56	5,388.84	289.22	-113.58	-284.66	0.00	0.00	0.00	0.00
5,500.00	4.15	338.56	5,488.58	295.95	-116.22	-291.29	0.00	0.00	0.00	0.00
5,600.00	4.15	338.56	5,588.32	302.69	-118.87	-297.92	0.00	0.00	0.00	0.00
5,700.00	4.15	338.56	5,688.05	309.42	-121.51	-304.54	0.00	0.00	0.00	0.00
5,800.00	4.15	338.56	5,787.79	316.15	-124.15	-311.17	0.00	0.00	0.00	0.00
5,900.00	4.15	338.56	5,887.53	322.88	-126.80	-317.79	0.00	0.00	0.00	0.00
6,000.00	4.15	338.56	5,987.27	329.61	-129.44	-324.42	0.00	0.00	0.00	0.00
6,100.00	4.15	338.56	6,087.01	336.34	-132.09	-331.04	0.00	0.00	0.00	0.00
6,200.00	4.15	338.56	6,186.74	343.08	-134.73	-337.67	0.00	0.00	0.00	0.00
6,300.00	4.15	338.56	6,286.48	349.81	-137.37	-344.30	0.00	0.00	0.00	0.00
6,400.00	4.15	338.56	6,386.22	356.54	-140.02	-350.92	0.00	0.00	0.00	0.00
6,500.00	4.15	338.56	6,485.96	363.27	-142.66	-357.55	0.00	0.00	0.00	0.00
6,600.00	4.15	338.56	6,585.70	370.00	-145.30	-364.17	0.00	0.00	0.00	0.00
6,621.18	4.15	338.56	6,606.82	371.43	-145.86	-365.58	0.00	0.00	0.00	0.00
Begin Build @ 6621.18ft										
6,700.00	4.32	201.44	6,685.55	371.32	-147.99	-365.38	10.00	0.22	-173.97	-158.05
6,800.00	14.12	186.64	6,784.15	355.66	-150.79	-349.63	10.00	9.80	-14.80	-21.03
6,900.00	24.08	183.93	6,878.53	323.11	-153.60	-316.99	10.00	9.96	-2.70	-6.36
7,000.00	34.07	182.76	6,965.82	274.65	-156.36	-268.47	10.00	9.98	-1.18	-3.80
Build Rate = 10.00/100ft										
7,100.00	44.06	182.06	7,043.37	211.77	-158.96	-205.54	10.00	9.99	-0.69	-2.77
7,183.60	52.41	181.66	7,099.00	149.51	-160.97	-143.24	10.00	9.99	-0.49	-2.23
Sharon Springs										
7,200.00	54.05	181.59	7,108.82	136.38	-161.34	-130.10	10.00	9.99	-0.42	-1.96
7,300.00	64.04	181.22	7,160.19	50.75	-163.42	-44.46	10.00	10.00	-0.37	-1.91
7,316.03	65.65	181.16	7,167.00	36.25	-163.72	-29.96	10.00	10.00	-0.33	-1.72
Niobrara A										
7,373.39	71.38	180.98	7,188.00	-17.09	-164.72	23.38	10.00	10.00	-0.31	-1.70
Niobrara B										
7,400.00	74.04	180.91	7,195.91	-42.50	-165.14	48.79	10.00	10.00	-0.30	-1.64
7,500.00	84.04	180.62	7,214.90	-140.54	-166.44	146.81	10.00	10.00	-0.28	-1.61
7,558.57	89.89	180.47	7,218.00	-199.00	-167.00	205.24	10.00	10.00	-0.27	-1.56
End Build @ 7558.57ft - Niobrara B(Target--Heel) - 7" Intermediate Casing - Rattler 14N-3HZ_Casing Point										
7,600.00	89.89	180.47	7,218.08	-240.43	-167.34	246.66	0.00	0.00	0.00	-1.55
7,700.00	89.89	180.47	7,218.27	-340.43	-168.15	346.61	0.00	0.00	0.00	0.00
7,800.00	89.89	180.47	7,218.46	-440.42	-168.96	446.56	0.00	0.00	0.00	0.00
7,900.00	89.89	180.47	7,218.65	-540.42	-169.77	546.52	0.00	0.00	0.00	0.00
8,000.00	89.89	180.47	7,218.84	-640.42	-170.59	646.47	0.00	0.00	0.00	0.00
8,100.00	89.89	180.47	7,219.02	-740.41	-171.40	746.43	0.00	0.00	0.00	0.00
8,200.00	89.89	180.47	7,219.21	-840.41	-172.21	846.38	0.00	0.00	0.00	0.00
8,300.00	89.89	180.47	7,219.40	-940.41	-173.02	946.34	0.00	0.00	0.00	0.00
8,400.00	89.89	180.47	7,219.59	-1,040.40	-173.83	1,046.29	0.00	0.00	0.00	0.00
8,500.00	89.89	180.47	7,219.78	-1,140.40	-174.65	1,146.25	0.00	0.00	0.00	0.00
8,600.00	89.89	180.47	7,219.97	-1,240.39	-175.46	1,246.20	0.00	0.00	0.00	0.00
8,700.00	89.89	180.47	7,220.16	-1,340.39	-176.27	1,346.15	0.00	0.00	0.00	0.00
8,800.00	89.89	180.47	7,220.35	-1,440.39	-177.08	1,446.11	0.00	0.00	0.00	0.00
8,900.00	89.89	180.47	7,220.54	-1,540.38	-177.90	1,546.06	0.00	0.00	0.00	0.00
9,000.00	89.89	180.47	7,220.73	-1,640.38	-178.71	1,646.02	0.00	0.00	0.00	0.00
9,100.00	89.89	180.47	7,220.92	-1,740.38	-179.52	1,745.97	0.00	0.00	0.00	0.00
9,200.00	89.89	180.47	7,221.11	-1,840.37	-180.33	1,845.93	0.00	0.00	0.00	0.00
9,300.00	89.89	180.47	7,221.30	-1,940.37	-181.14	1,945.88	0.00	0.00	0.00	0.00
9,400.00	89.89	180.47	7,221.49	-2,040.37	-181.96	2,045.83	0.00	0.00	0.00	0.00
9,500.00	89.89	180.47	7,221.67	-2,140.36	-182.77	2,145.79	0.00	0.00	0.00	0.00
9,600.00	89.89	180.47	7,221.86	-2,240.36	-183.58	2,245.74	0.00	0.00	0.00	0.00

Plan Report for Rattler 14N-3HZ - Plan A 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 (°)
9,700.00	89.89	180.47	7,222.05	-2,340.36	-184.39	2,345.70	0.00	0.00	0.00	0.00
9,800.00	89.89	180.47	7,222.24	-2,440.35	-185.21	2,445.65	0.00	0.00	0.00	0.00
9,900.00	89.89	180.47	7,222.43	-2,540.35	-186.02	2,545.61	0.00	0.00	0.00	0.00
10,000.00	89.89	180.47	7,222.62	-2,640.35	-186.83	2,645.56	0.00	0.00	0.00	0.00
Hold Angle @ 89.89										
10,100.00	89.89	180.47	7,222.81	-2,740.34	-187.64	2,745.52	0.00	0.00	0.00	0.00
10,200.00	89.89	180.47	7,223.00	-2,840.34	-188.45	2,845.47	0.00	0.00	0.00	0.00
10,300.00	89.89	180.47	7,223.19	-2,940.34	-189.27	2,945.42	0.00	0.00	0.00	0.00
10,400.00	89.89	180.47	7,223.38	-3,040.33	-190.08	3,045.38	0.00	0.00	0.00	0.00
10,500.00	89.89	180.47	7,223.57	-3,140.33	-190.89	3,145.33	0.00	0.00	0.00	0.00
10,600.00	89.89	180.47	7,223.76	-3,240.33	-191.70	3,245.29	0.00	0.00	0.00	0.00
10,700.00	89.89	180.47	7,223.95	-3,340.32	-192.52	3,345.24	0.00	0.00	0.00	0.00
10,800.00	89.89	180.47	7,224.14	-3,440.32	-193.33	3,445.20	0.00	0.00	0.00	0.00
10,900.00	89.89	180.47	7,224.32	-3,540.31	-194.14	3,545.15	0.00	0.00	0.00	0.00
11,000.00	89.89	180.47	7,224.51	-3,640.31	-194.95	3,645.10	0.00	0.00	0.00	0.00
11,100.00	89.89	180.47	7,224.70	-3,740.31	-195.76	3,745.06	0.00	0.00	0.00	0.00
11,200.00	89.89	180.47	7,224.89	-3,840.30	-196.58	3,845.01	0.00	0.00	0.00	0.00
11,300.00	89.89	180.47	7,225.08	-3,940.30	-197.39	3,944.97	0.00	0.00	0.00	0.00
11,400.00	89.89	180.47	7,225.27	-4,040.30	-198.20	4,044.92	0.00	0.00	0.00	0.00
11,500.00	89.89	180.47	7,225.46	-4,140.29	-199.01	4,144.88	0.00	0.00	0.00	0.00
11,600.00	89.89	180.47	7,225.65	-4,240.29	-199.83	4,244.83	0.00	0.00	0.00	0.00
11,700.00	89.89	180.47	7,225.84	-4,340.29	-200.64	4,344.79	0.00	0.00	0.00	0.00
11,800.00	89.89	180.47	7,226.03	-4,440.28	-201.45	4,444.74	0.00	0.00	0.00	0.00
11,900.00	89.89	180.47	7,226.22	-4,540.28	-202.26	4,544.69	0.00	0.00	0.00	0.00
12,000.00	89.89	180.47	7,226.41	-4,640.28	-203.07	4,644.65	0.00	0.00	0.00	0.00
12,100.00	89.89	180.47	7,226.60	-4,740.27	-203.89	4,744.60	0.00	0.00	0.00	0.00
12,200.00	89.89	180.47	7,226.79	-4,840.27	-204.70	4,844.56	0.00	0.00	0.00	0.00
12,300.00	89.89	180.47	7,226.97	-4,940.27	-205.51	4,944.51	0.00	0.00	0.00	0.00
12,400.00	89.89	180.47	7,227.16	-5,040.26	-206.32	5,044.47	0.00	0.00	0.00	0.00
12,500.00	89.89	180.47	7,227.35	-5,140.26	-207.14	5,144.42	0.00	0.00	0.00	0.00
12,600.00	89.89	180.47	7,227.54	-5,240.26	-207.95	5,244.37	0.00	0.00	0.00	0.00
12,700.00	89.89	180.47	7,227.73	-5,340.25	-208.76	5,344.33	0.00	0.00	0.00	0.00
12,800.00	89.89	180.47	7,227.92	-5,440.25	-209.57	5,444.28	0.00	0.00	0.00	0.00
12,841.69	89.89	180.47	7,228.00	-5,481.94	-209.91	5,485.95	0.00	0.00	0.00	0.00
Niobrara B(Target--Toe) - Rattler 14N-3HZ_BHL										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
500.00	500.00	0.00	0.00	Hold Angle @ 0.00
1,000.00	1,000.00	0.00	0.00	Begin Nudge @ 1000.00ft
1,207.37	1,207.19	6.98	-2.74	End Nudge @ 1207.37ft
4,000.00	3,992.51	194.98	-76.57	Hold Angle @ 4.15
6,621.18	6,606.82	371.43	-145.86	Begin Build @ 6621.18ft
7,000.00	6,965.82	274.65	-156.36	Build Rate = 10.00/100ft
7,558.57	7,218.00	-199.00	-167.00	End Build @ 7558.57ft
10,000.00	7,222.62	-2,640.35	-186.83	Hold Angle @ 89.89
12,841.69	7,228.00	-5,481.94	-209.91	Total Depth @ 12841.69ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Rattler 14N-3HZ_BHL	182.19	Slot	0.00	0.00	7,228.00

Plan Report for Rattler 14N-3HZ - Plan A Rev 0 Permit**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,558.57	Plan A Rev 0 Permit	MWD
7,558.57	12,841.69	Plan A Rev 0 Permit	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,558.57	7,218.00	7" Intermediate Casing	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,176.96	4,169.00	Parkman			
4,413.58	4,405.00	Sussex			
7,183.60	7,099.00	Sharon Springs			
7,316.03	7,167.00	Niobrara A			
7,373.39	7,188.00	Niobrara B			
7,558.57	7,218.00	Niobrara B(Target--Heel)			
12,841.69	7,228.00	Niobrara B(Target--Toe)			

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Rattler 14N-3HZ_BHL	7,228.00	-5,481.94	-209.91	Point
Rattler 14N-3HZ_Casing Point	7,218.00	-199.00	-167.00	Point
Rattler 14N-3HZ_SHL	0.00	0.00	0.00	Point

North Reference Sheet for Sec. 34-T3N-R66W - Rattler 14N-3HZ - Plan A 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 @ 5008.00ft (Drilling Rig). Northing and Easting are relative to Rattler 14N-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: 0.99995772

Grid Coordinates of Well: 1,307,418.33 ft N, 3,205,358.07 ft E
Geographical Coordinates of Well: 40° 10' 29.72" N, 104° 45' 54.31" W
Grid Convergence at Surface is: 0.47°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,841.69ft
the Bottom Hole Displacement is 5,485.95ft in the Direction of 182.19° (True).

Magnetic Convergence at surface is: -8.23° (25 October 2012, , BGGM2012)

