

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 36-T4N-R66W

Rissler State 4N-36HZ

Plan A

Plan: Rev A0 Permit

Sperry Drilling Services

Proposal Report

28 May, 2014

Well Coordinates: 1,339,704.90 N, 3,215,474.26 E (40° 15' 47.93" N, 104° 43' 40.37" W)

Ground Level: 4,860.00 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 Rissler State 4N-36HZ

RKB = 17' @ 4877.00usft (Drilling Rig)

N

True

API - US Survey Feet - Custom

HALLIBURTON

Project: Weld County, CO (NAD 83)
Site: Sec. 36-T4N-R66W
Well: Rissler State 4N-36HZ
Wellbore: Plan A
Design: Rev A0 Permit

Anadarko Petroleum Corp.

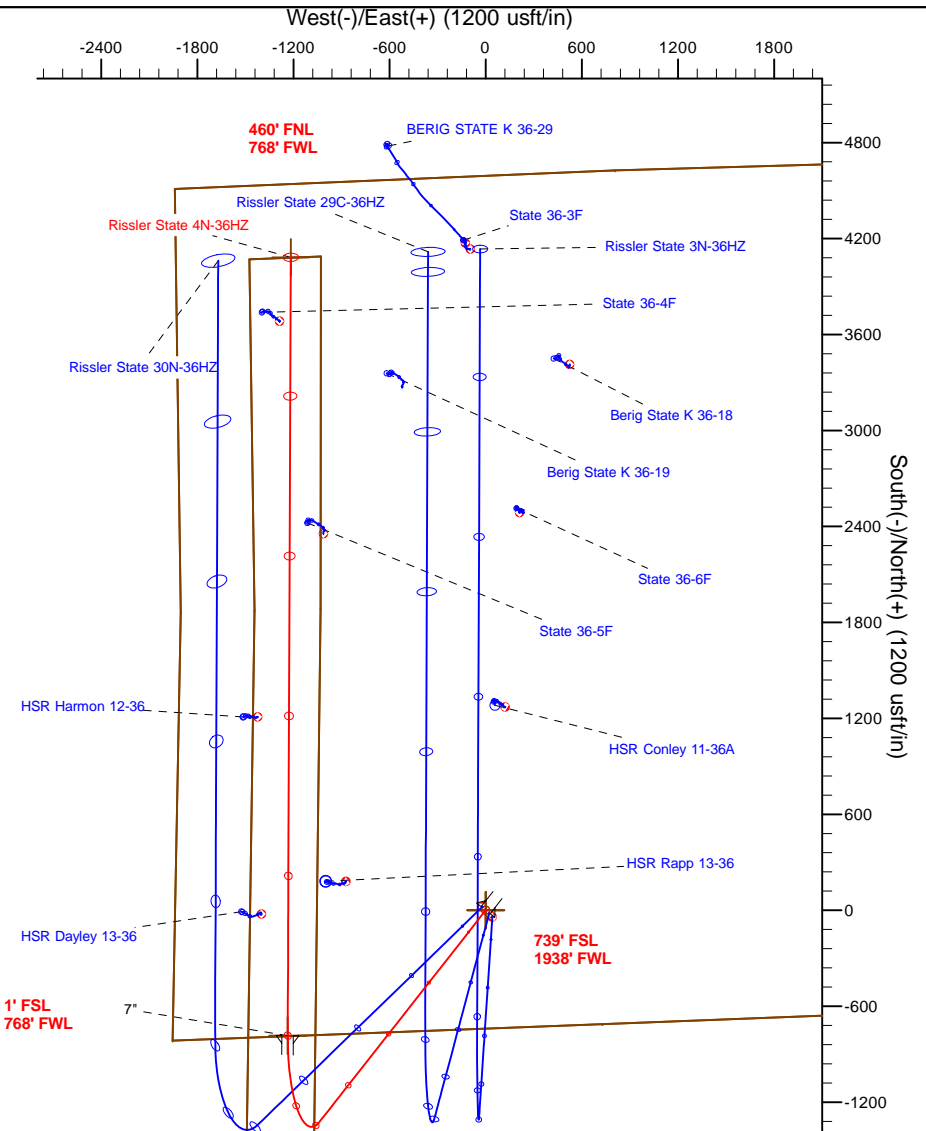
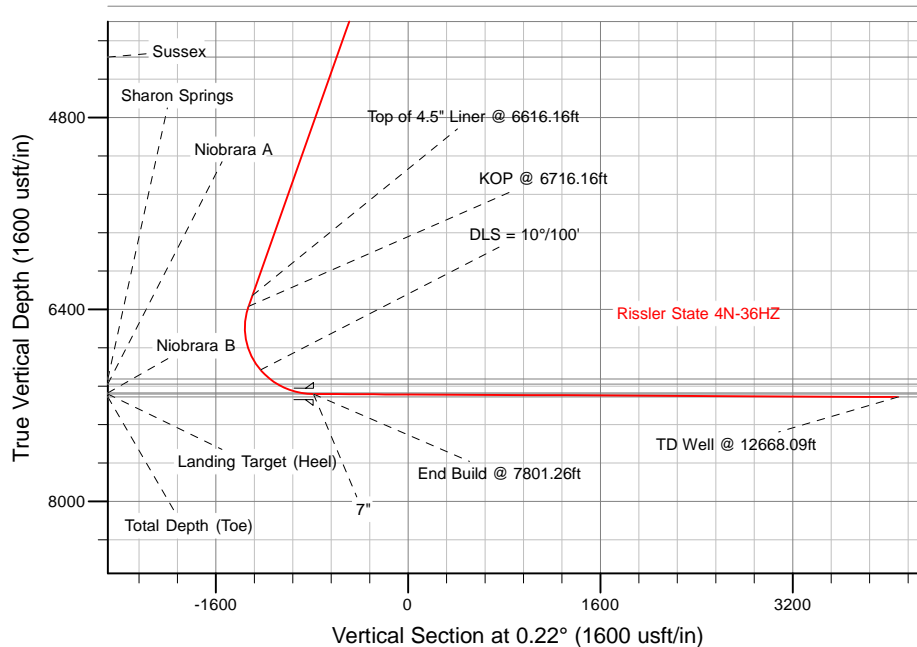
HALLIBURTON
Sperry Drilling

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	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	3204.40	24.09	218.10	3169.23	-196.32	-153.92	2.00	218.10	-196.91	
4	6716.16	24.09	218.10	6375.19	-1324.28	-1038.23	0.00	0.00	-1328.26	
5	7801.26	89.71	0.22	7106.00	-783.94	-1235.59	10.00	139.65	-788.68	Rissler State 4N-36HZ_CP
6	12668.09	89.71	0.22	7131.00	4082.78	-1216.66	0.00	0.00	4078.08	Rissler State 4N-36HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Polygon
Rissler State 4N-36HZ_LD	0.00	0.00	0.00	40° 15' 47.930 N	104° 43' 40.368 W	Polygon
Rissler State 4N-36HZ_SEC	0.00	0.00	0.00	40° 15' 47.930 N	104° 43' 40.368 W	Polygon
Rissler State 4N-36HZ_SHL	0.00	0.00	0.00	40° 15' 47.930 N	104° 43' 40.368 W	Polygon
Rissler State 4N-36HZ_CP	7106.00	-783.94	-1235.59	40° 15' 40.183 N	104° 43' 56.306 W	Point
Rissler State 4N-36HZ_BHL	7131.00	4082.78	-1216.66	40° 16' 28.276 N	104° 43' 56.065 W	Point



TVD MD

6283.90 6616.16 Top of 4.5" Liner @ 6616.16ft
6375.19 6716.16 KOP @ 6716.16ft

WELL DETAILS: Rissler State 4N-36HZ

Ground Level: 4860.00
RKB = 17' @ 4877.00usft (Drilling Rig)

Plan: Rev A0 Permit (Rissler State 4N-36HZ/Plan A)

Created By: Clint Eshelman Date: 5/28/2014
Reviewed: _____ Date: _____

Plan Report for Rissler State 4N-36HZ - Rev A0 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
Rissler State 4N-36HZ_LD - Rissler State 4N-36HZ_SHL - Rissler State 4N-36HZ_SEC										
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
1,043.00	0.00	0.00	1,043.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Marker										
1,093.00	0.00	0.00	1,093.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10 3/4"										
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
1,300.00	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
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 2000.00ft										
2,100.00	2.00	218.10	2,099.98	-1.37	-1.08	-1.38	2.00	2.00	0.00	218.10
2,200.00	4.00	218.10	2,199.84	-5.49	-4.31	-5.51	2.00	2.00	0.00	0.00
2,300.00	6.00	218.10	2,299.45	-12.35	-9.68	-12.39	2.00	2.00	0.00	0.00
2,400.00	8.00	218.10	2,398.70	-21.94	-17.20	-22.01	2.00	2.00	0.00	0.00
2,500.00	10.00	218.10	2,497.47	-34.25	-26.85	-34.35	2.00	2.00	0.00	0.00
2,600.00	12.00	218.10	2,595.62	-49.27	-38.62	-49.41	2.00	2.00	0.00	0.00
2,700.00	14.00	218.10	2,693.06	-66.97	-52.50	-67.17	2.00	2.00	0.00	0.00
2,800.00	16.00	218.10	2,789.64	-87.34	-68.47	-87.60	2.00	2.00	0.00	0.00
2,900.00	18.00	218.10	2,885.27	-110.34	-86.51	-110.68	2.00	2.00	0.00	0.00
3,000.00	20.00	218.10	2,979.82	-135.96	-106.60	-136.37	2.00	2.00	0.00	0.00
3,100.00	22.00	218.10	3,073.17	-164.17	-128.70	-164.66	2.00	2.00	0.00	0.00
3,200.00	24.00	218.10	3,165.21	-194.91	-152.81	-195.50	2.00	2.00	0.00	0.00
3,204.40	24.09	218.10	3,169.23	-196.32	-153.92	-196.91	2.00	2.00	0.00	0.00
End Nudge @ 3204.40ft										
3,300.00	24.09	218.10	3,256.51	-227.03	-177.99	-227.71	0.00	0.00	0.00	0.00
3,400.00	24.09	218.10	3,347.80	-259.15	-203.17	-259.93	0.00	0.00	0.00	0.00
3,500.00	24.09	218.10	3,439.09	-291.27	-228.35	-292.14	0.00	0.00	0.00	0.00
3,600.00	24.09	218.10	3,530.38	-323.39	-253.54	-324.36	0.00	0.00	0.00	0.00
3,700.00	24.09	218.10	3,621.68	-355.51	-278.72	-356.58	0.00	0.00	0.00	0.00
3,800.00	24.09	218.10	3,712.97	-387.63	-303.90	-388.79	0.00	0.00	0.00	0.00
3,900.00	24.09	218.10	3,804.26	-419.75	-329.08	-421.01	0.00	0.00	0.00	0.00
3,973.11	24.09	218.10	3,871.00	-443.23	-347.49	-444.56	0.00	0.00	0.00	0.00
Parkman										
4,000.00	24.09	218.10	3,895.55	-451.87	-354.26	-453.22	0.00	0.00	0.00	0.00
4,100.00	24.09	218.10	3,986.84	-483.99	-379.44	-485.44	0.00	0.00	0.00	0.00
4,200.00	24.09	218.10	4,078.14	-516.11	-404.62	-517.66	0.00	0.00	0.00	0.00
4,300.00	24.09	218.10	4,169.43	-548.23	-429.81	-549.87	0.00	0.00	0.00	0.00
4,400.00	24.09	218.10	4,260.72	-580.34	-454.99	-582.09	0.00	0.00	0.00	0.00
4,438.65	24.09	218.10	4,296.00	-592.76	-464.72	-594.54	0.00	0.00	0.00	0.00
Sussex										

Plan Report for Rissler State 4N-36HZ - Rev A0 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 (°)
4,500.00	24.09	218.10	4,352.01	-612.46	-480.17	-614.30	0.00	0.00	0.00	0.00
4,600.00	24.09	218.10	4,443.30	-644.58	-505.35	-646.52	0.00	0.00	0.00	0.00
4,700.00	24.09	218.10	4,534.60	-676.70	-530.53	-678.74	0.00	0.00	0.00	0.00
4,800.00	24.09	218.10	4,625.89	-708.82	-555.71	-710.95	0.00	0.00	0.00	0.00
4,900.00	24.09	218.10	4,717.18	-740.94	-580.89	-743.17	0.00	0.00	0.00	0.00
5,000.00	24.09	218.10	4,808.47	-773.06	-606.08	-775.38	0.00	0.00	0.00	0.00
5,100.00	24.09	218.10	4,899.76	-805.18	-631.26	-807.60	0.00	0.00	0.00	0.00
5,200.00	24.09	218.10	4,991.06	-837.30	-656.44	-839.82	0.00	0.00	0.00	0.00
5,300.00	24.09	218.10	5,082.35	-869.42	-681.62	-872.03	0.00	0.00	0.00	0.00
5,400.00	24.09	218.10	5,173.64	-901.54	-706.80	-904.25	0.00	0.00	0.00	0.00
5,500.00	24.09	218.10	5,264.93	-933.66	-731.98	-936.46	0.00	0.00	0.00	0.00
5,600.00	24.09	218.10	5,356.22	-965.78	-757.17	-968.68	0.00	0.00	0.00	0.00
5,700.00	24.09	218.10	5,447.52	-997.90	-782.35	-1,000.90	0.00	0.00	0.00	0.00
5,800.00	24.09	218.10	5,538.81	-1,030.02	-807.53	-1,033.11	0.00	0.00	0.00	0.00
5,900.00	24.09	218.10	5,630.10	-1,062.14	-832.71	-1,065.33	0.00	0.00	0.00	0.00
6,000.00	24.09	218.10	5,721.39	-1,094.26	-857.89	-1,097.54	0.00	0.00	0.00	0.00
6,100.00	24.09	218.10	5,812.68	-1,126.38	-883.07	-1,129.76	0.00	0.00	0.00	0.00
6,200.00	24.09	218.10	5,903.98	-1,158.50	-908.25	-1,161.97	0.00	0.00	0.00	0.00
6,300.00	24.09	218.10	5,995.27	-1,190.62	-933.44	-1,194.19	0.00	0.00	0.00	0.00
6,400.00	24.09	218.10	6,086.56	-1,222.73	-958.62	-1,226.41	0.00	0.00	0.00	0.00
6,500.00	24.09	218.10	6,177.85	-1,254.85	-983.80	-1,258.62	0.00	0.00	0.00	0.00
6,600.00	24.09	218.10	6,269.14	-1,286.97	-1,008.98	-1,290.84	0.00	0.00	0.00	0.00
6,616.16	24.09	218.10	6,283.90	-1,292.16	-1,013.05	-1,296.04	0.00	0.00	0.00	0.00
Top of 4.5" Liner @ 6616.16ft										
6,700.00	24.09	218.10	6,360.44	-1,319.09	-1,034.16	-1,323.05	0.00	0.00	0.00	0.00
6,716.16	24.09	218.10	6,375.19	-1,324.28	-1,038.23	-1,328.26	0.00	0.00	0.00	0.00
KOP @ 6716.16ft										
6,800.00	18.46	235.44	6,453.36	-1,345.32	-1,059.76	-1,349.38	10.00	-6.71	20.68	139.65
6,900.00	15.33	268.67	6,549.25	-1,354.63	-1,086.08	-1,358.79	10.00	-3.14	33.23	123.46
7,000.00	18.00	302.84	6,645.27	-1,346.54	-1,112.34	-1,350.80	10.00	2.68	34.17	91.57
7,100.00	24.67	323.68	6,738.50	-1,321.28	-1,137.75	-1,325.64	10.00	6.66	20.84	58.75
7,200.00	32.98	335.33	6,826.10	-1,279.63	-1,161.53	-1,284.08	10.00	8.31	11.65	39.28
7,300.00	41.97	342.57	6,905.42	-1,222.85	-1,182.96	-1,227.38	10.00	8.99	7.24	29.04
DLS = 10°/100'										
7,400.00	51.28	347.62	6,974.04	-1,152.66	-1,201.39	-1,157.27	10.00	9.31	5.04	23.27
7,409.63	52.19	348.03	6,980.00	-1,145.27	-1,202.98	-1,149.88	10.00	9.42	4.29	19.80
Sharon Springs										
7,486.20	59.44	351.00	7,023.00	-1,083.03	-1,214.43	-1,087.69	10.00	9.47	3.87	19.54
Niobrara A										
7,500.00	60.76	351.48	7,029.88	-1,071.21	-1,216.26	-1,075.87	10.00	9.52	3.52	17.87
7,600.00	70.33	354.68	7,071.24	-980.95	-1,227.11	-985.66	10.00	9.57	3.20	17.63
7,700.00	79.94	357.52	7,096.87	-884.64	-1,233.62	-889.37	10.00	9.62	2.84	16.30
7,700.72	80.01	357.54	7,097.00	-883.93	-1,233.65	-888.66	10.00	9.63	2.72	15.57
Niobrara B										
7,800.00	89.58	0.19	7,105.99	-785.21	-1,235.59	-789.95	10.00	9.64	2.67	15.56
7,801.26	89.71	0.22	7,106.00	-783.94	-1,235.59	-788.68	9.97	9.61	2.63	15.32
End Build @ 7801.26ft - Landing Target (Heel) - 7" - Rissler State 4N-36HZ_CP										
7,900.00	89.71	0.22	7,106.51	-685.21	-1,235.21	-689.95	0.00	0.00	0.00	15.32
8,000.00	89.71	0.22	7,107.02	-585.21	-1,234.82	-589.95	0.00	0.00	0.00	0.00
8,100.00	89.71	0.22	7,107.53	-485.21	-1,234.43	-489.95	0.00	0.00	0.00	0.00
8,200.00	89.71	0.22	7,108.05	-385.21	-1,234.04	-389.95	0.00	0.00	0.00	0.00
8,300.00	89.71	0.22	7,108.56	-285.22	-1,233.65	-289.95	0.00	0.00	0.00	0.00
8,400.00	89.71	0.22	7,109.08	-185.22	-1,233.26	-189.95	0.00	0.00	0.00	0.00
8,500.00	89.71	0.22	7,109.59	-85.22	-1,232.87	-89.95	0.00	0.00	0.00	0.00
8,600.00	89.71	0.22	7,110.10	14.78	-1,232.48	10.04	0.00	0.00	0.00	0.00
8,700.00	89.71	0.22	7,110.62	114.77	-1,232.09	110.04	0.00	0.00	0.00	0.00
8,800.00	89.71	0.22	7,111.13	214.77	-1,231.71	210.04	0.00	0.00	0.00	0.00
8,900.00	89.71	0.22	7,111.64	314.77	-1,231.32	310.04	0.00	0.00	0.00	0.00
9,000.00	89.71	0.22	7,112.16	414.77	-1,230.93	410.04	0.00	0.00	0.00	0.00

Plan Report for Rissler State 4N-36HZ - Rev A0 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	89.71	0.22	7,112.67	514.77	-1,230.54	510.04	0.00	0.00	0.00	0.00
9,200.00	89.71	0.22	7,113.19	614.76	-1,230.15	610.04	0.00	0.00	0.00	0.00
9,300.00	89.71	0.22	7,113.70	714.76	-1,229.76	710.04	0.00	0.00	0.00	0.00
9,400.00	89.71	0.22	7,114.21	814.76	-1,229.37	810.03	0.00	0.00	0.00	0.00
9,500.00	89.71	0.22	7,114.73	914.76	-1,228.98	910.03	0.00	0.00	0.00	0.00
9,600.00	89.71	0.22	7,115.24	1,014.76	-1,228.59	1,010.03	0.00	0.00	0.00	0.00
9,700.00	89.71	0.22	7,115.75	1,114.75	-1,228.20	1,110.03	0.00	0.00	0.00	0.00
9,800.00	89.71	0.22	7,116.27	1,214.75	-1,227.82	1,210.03	0.00	0.00	0.00	0.00
9,900.00	89.71	0.22	7,116.78	1,314.75	-1,227.43	1,310.03	0.00	0.00	0.00	0.00
10,000.00	89.71	0.22	7,117.29	1,414.75	-1,227.04	1,410.03	0.00	0.00	0.00	0.00
10,100.00	89.71	0.22	7,117.81	1,514.75	-1,226.65	1,510.02	0.00	0.00	0.00	0.00
10,200.00	89.71	0.22	7,118.32	1,614.74	-1,226.26	1,610.02	0.00	0.00	0.00	0.00
10,300.00	89.71	0.22	7,118.84	1,714.74	-1,225.87	1,710.02	0.00	0.00	0.00	0.00
10,400.00	89.71	0.22	7,119.35	1,814.74	-1,225.48	1,810.02	0.00	0.00	0.00	0.00
10,500.00	89.71	0.22	7,119.86	1,914.74	-1,225.09	1,910.02	0.00	0.00	0.00	0.00
10,600.00	89.71	0.22	7,120.38	2,014.74	-1,224.70	2,010.02	0.00	0.00	0.00	0.00
10,700.00	89.71	0.22	7,120.89	2,114.73	-1,224.32	2,110.02	0.00	0.00	0.00	0.00
10,800.00	89.71	0.22	7,121.40	2,214.73	-1,223.93	2,210.02	0.00	0.00	0.00	0.00
10,900.00	89.71	0.22	7,121.92	2,314.73	-1,223.54	2,310.01	0.00	0.00	0.00	0.00
11,000.00	89.71	0.22	7,122.43	2,414.73	-1,223.15	2,410.01	0.00	0.00	0.00	0.00
11,100.00	89.71	0.22	7,122.95	2,514.72	-1,222.76	2,510.01	0.00	0.00	0.00	0.00
11,200.00	89.71	0.22	7,123.46	2,614.72	-1,222.37	2,610.01	0.00	0.00	0.00	0.00
11,300.00	89.71	0.22	7,123.97	2,714.72	-1,221.98	2,710.01	0.00	0.00	0.00	0.00
11,400.00	89.71	0.22	7,124.49	2,814.72	-1,221.59	2,810.01	0.00	0.00	0.00	0.00
11,500.00	89.71	0.22	7,125.00	2,914.72	-1,221.20	2,910.01	0.00	0.00	0.00	0.00
11,600.00	89.71	0.22	7,125.51	3,014.71	-1,220.81	3,010.00	0.00	0.00	0.00	0.00
11,700.00	89.71	0.22	7,126.03	3,114.71	-1,220.43	3,110.00	0.00	0.00	0.00	0.00
11,800.00	89.71	0.22	7,126.54	3,214.71	-1,220.04	3,210.00	0.00	0.00	0.00	0.00
11,900.00	89.71	0.22	7,127.05	3,314.71	-1,219.65	3,310.00	0.00	0.00	0.00	0.00
12,000.00	89.71	0.22	7,127.57	3,414.71	-1,219.26	3,410.00	0.00	0.00	0.00	0.00
12,100.00	89.71	0.22	7,128.08	3,514.70	-1,218.87	3,510.00	0.00	0.00	0.00	0.00
12,200.00	89.71	0.22	7,128.60	3,614.70	-1,218.48	3,610.00	0.00	0.00	0.00	0.00
12,300.00	89.71	0.22	7,129.11	3,714.70	-1,218.09	3,710.00	0.00	0.00	0.00	0.00
12,400.00	89.71	0.22	7,129.62	3,814.70	-1,217.70	3,809.99	0.00	0.00	0.00	0.00
12,500.00	89.71	0.22	7,130.14	3,914.70	-1,217.31	3,909.99	0.00	0.00	0.00	0.00
12,600.00	89.71	0.22	7,130.65	4,014.69	-1,216.92	4,009.99	0.00	0.00	0.00	0.00
12,668.08	89.71	0.22	7,131.00	4,082.77	-1,216.66	4,078.07	0.00	0.00	0.00	0.00
Total Depth (Toe)										
12,668.09	89.71	0.22	7,131.00	4,082.78	-1,216.66	4,078.08	0.00	0.00	0.00	0.00
TD Well @ 12668.09ft - Rissler State 4N-36HZ_BHL										

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,000.00	2,000.00	0.00	0.00	Begin Nudge @ 2000.00ft
3,204.40	3,169.23	-196.32	-153.92	End Nudge @ 3204.40ft
6,616.16	6,283.90	-1,292.16	-1,013.05	Top of 4.5" Liner @ 6616.16ft
6,716.16	6,375.19	-1,324.28	-1,038.23	KOP @ 6716.16ft
7,300.00	6,905.42	-1,222.85	-1,182.96	DLS = 10°/100'
7,801.26	7,106.00	-783.95	-1,235.59	End Build @ 7801.26ft
12,668.09	7,131.00	4,082.78	-1,216.66	TD Well @ 12668.09ft

Plan Report for Rissler State 4N-36HZ - Rev A0 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)	0.22	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,801.26	Rev A0 Permit	MWD+IFR1+SC
7,801.26	12,668.09	Rev A0 Permit	MWD+IFR1+SC

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,093.00	1,093.00	10 3/4"	10-3/4	13-1/2
7,801.26	7,106.00	7"	7	8-3/4

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,043.00	1,043.00	Fox Hills Marker		0.00	
3,973.11	3,871.00	Parkman		0.00	
4,438.65	4,296.00	Sussex		0.00	
7,409.63	6,980.00	Sharon Springs		0.00	
7,486.20	7,023.00	Niobrara A		0.00	
7,700.72	7,097.00	Niobrara B		0.00	
7,801.26	7,106.00	Landing Target (Heel)		0.00	
12,668.08	7,131.00	Total Depth (Toe)		0.00	

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Rissler State 4N-36HZ_LD	0.00	0.00	0.00	Polygon
Rissler State 4N-36HZ_SHL	0.00	0.00	0.00	Point
Rissler State 4N-36HZ_SEC	0.00	0.00	0.00	Polygon
Rissler State 4N-36HZ_CP	7,106.00	-783.94	-1,235.59	Point
Rissler State 4N-36HZ_BHL	7,131.00	4,082.78	-1,216.66	Point

Directional Difficulty Index

Average Dogleg over Survey:	1.05 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 7,803.31 usft
Net Tortousity applicable to Plans:	1.05 °/100usft	Directional Difficulty Index:	6.374

Plan Report for Rissler State 4N-36HZ - Rev A0 Permit

Audit Info

North Reference Sheet for Sec. 36-T4N-R66W - Rissler State 4N-36HZ - Plan A

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' @ 4877.00usft (Drilling Rig). Northing and Easting are relative to Rissler State 4N-36HZ
 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° 0' 0.000 E°, Latitude Origin:40° 47' 0.000 N°
 False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99995687

Grid Coordinates of Well: 1,339,704.90 usft N, 3,215,474.26 usft E
 Geographical Coordinates of Well: 40° 15' 47.93" N, 104° 43' 40.37" W
 Grid Convergence at Surface is: 0.50°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,668.09usft
 the Bottom Hole Displacement is 4,260.21usft in the Direction of 343.41° (True).
 Magnetic Convergence at surface is: -7.98° (22 May 2014, , BGGM2013)

