

Anadarko Petroleum Corporation

Weld County, CO (NAD 83)

Sec. 15-T3N-R68W

RMF 5N-15HZ

Plan B

Plan: Permit Rev-2

Sperry Drilling Services

Proposal Report

11 December, 2014

Well Coordinates: 1,327,102.71 N, 3,144,776.16 E (40° 13' 48.48" N, 104° 58' 53.30" W)

Ground Level: 4,967.00 usft

Local Coordinate Origin:

Centered on Well RMF 5N-15HZ

Viewing Datum:

RKB = 17' @ 4984.00usft (Drilling Rig)

TVDs to System:

N

North Reference:

True

Unit System:

Dec-Deg - API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

HALLIBURTON

Project: Weld County, CO (NAD 83)
Site: Sec. 15-T3N-R68W
Well: RMF 5N-15HZ
Wellbore: Plan B
Design: Permit Rev-2

Anadarko Petroleum Corporation

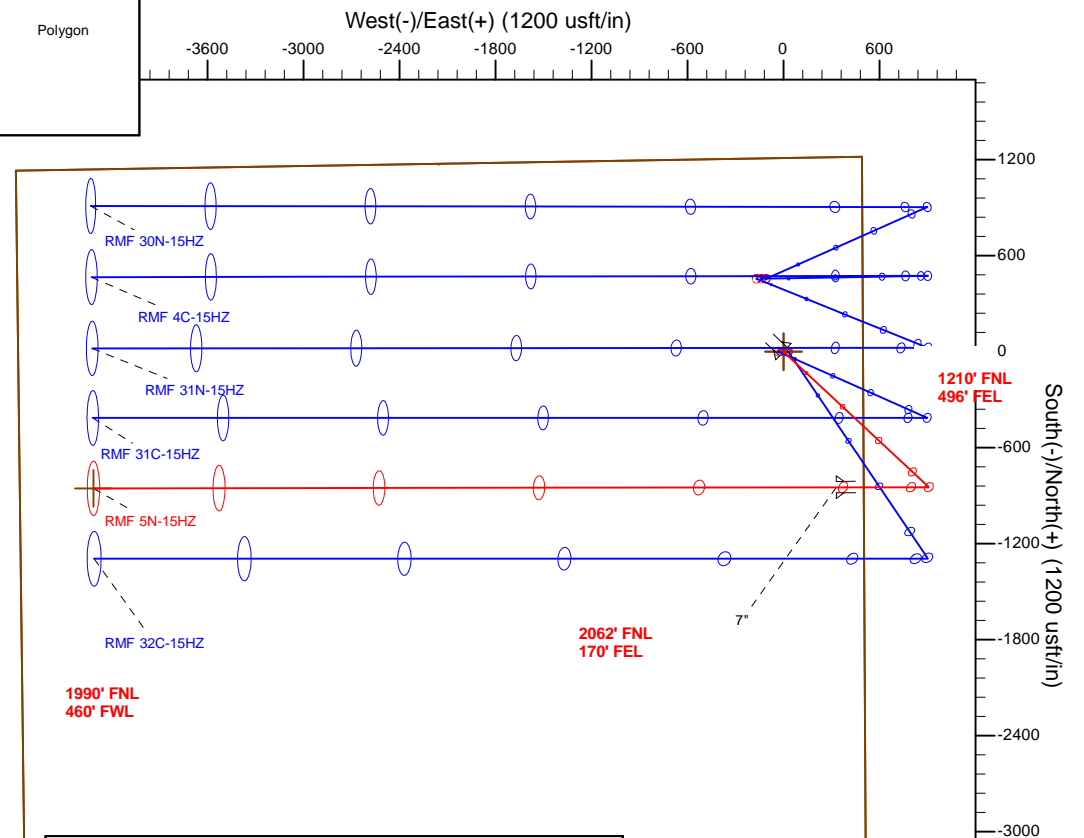
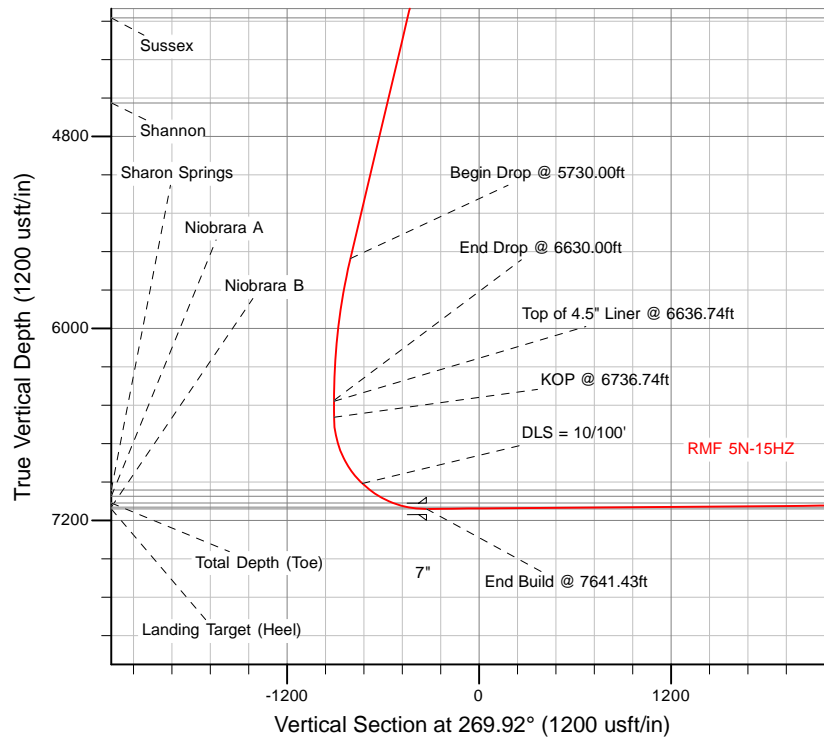
HALLIBURTON
Sperry Drilling

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1720.00	0.00	0.00	1720.00	0.00	0.00	0.00	0.00	0.00	
3	2620.00	18.00	133.00	2605.27	-95.62	102.55	2.00	133.00	-102.41	
4	5730.00	18.00	133.00	5563.05	-751.05	805.41	0.00	0.00	-804.36	
5	6630.00	0.00	0.00	6448.32	-846.68	997.95	2.00	180.00	-906.77	
6	6736.74	0.00	0.00	6555.06	-846.68	907.95	0.00	0.00	-906.77	
7	7641.43	90.47	269.92	7128.00	-847.48	330.31	10.00	269.92	-329.12	
8	12284.60	90.47	269.92	7090.00	-853.90	-4312.71	0.00	0.00	4313.89	RMF 5N-15HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Polygon
RMF 5N-15HZ_SEC	0.00	0.00	0.00	40.230133	-104.981473	
RMF 5N-15HZ_SHL	0.00	0.00	0.00	40.230133	-104.981473	
RMF 5N-15HZ_BHL	7090.00	-853.90	-4312.71	40.227788	-104.996918	



TVD MD

6455.06 6636.74 Top of 4.5" Liner @ 6636.74ft
6555.06 6736.74 KOP @ 6736.74ft

WELL DETAILS: RMF 5N-15HZ

Ground Level: 4967.00

RKB = 17" @ 4984.00usft (Drilling Rig)

Plan: Permit Rev-2 (RMF 5N-15HZ/Plan B)

Created By: Clint Eshelman

Reviewed:

Date: 12/11/2014

Date:

Plan Report for RMF 5N-15HZ - Permit Rev-2

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
RMF 5N-15HZ_SHL - RMF 5N-15HZ_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
1,015.00	0.00	0.00	1,015.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Base										
1,065.00	0.00	0.00	1,065.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"										
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
1,720.00	0.00	0.00	1,720.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 1720.00ft										
1,800.00	1.60	133.00	1,799.99	-0.76	0.82	-0.82	2.00	2.00	0.00	133.00
1,900.00	3.60	133.00	1,899.88	-3.86	4.13	-4.13	2.00	2.00	0.00	0.00
2,000.00	5.60	133.00	1,999.55	-9.32	10.00	-9.99	2.00	2.00	0.00	0.00
2,100.00	7.60	133.00	2,098.89	-17.16	18.40	-18.38	2.00	2.00	0.00	0.00
2,200.00	9.60	133.00	2,197.76	-27.36	29.34	-29.30	2.00	2.00	0.00	0.00
2,300.00	11.60	133.00	2,296.05	-39.91	42.79	-42.74	2.00	2.00	0.00	0.00
2,400.00	13.60	133.00	2,393.63	-54.78	58.75	-58.67	2.00	2.00	0.00	0.00
2,500.00	15.60	133.00	2,490.40	-71.97	77.18	-77.08	2.00	2.00	0.00	0.00
2,600.00	17.60	133.00	2,586.23	-91.46	98.07	-97.95	2.00	2.00	0.00	0.00
2,620.00	18.00	133.00	2,605.27	-95.62	102.55	-102.41	2.00	2.00	0.00	0.00
End Nudge @ 2620.00ft										
2,700.00	18.00	133.00	2,681.35	-112.48	120.63	-120.47	0.00	0.00	0.00	0.00
2,800.00	18.00	133.00	2,776.46	-133.56	143.23	-143.04	0.00	0.00	0.00	0.00
2,900.00	18.00	133.00	2,871.56	-154.63	165.83	-165.61	0.00	0.00	0.00	0.00
3,000.00	18.00	133.00	2,966.67	-175.71	188.43	-188.18	0.00	0.00	0.00	0.00
3,100.00	18.00	133.00	3,061.78	-196.78	211.03	-210.75	0.00	0.00	0.00	0.00
3,200.00	18.00	133.00	3,156.88	-217.86	233.63	-233.32	0.00	0.00	0.00	0.00
3,300.00	18.00	133.00	3,251.99	-238.93	256.23	-255.89	0.00	0.00	0.00	0.00
3,400.00	18.00	133.00	3,347.09	-260.01	278.83	-278.46	0.00	0.00	0.00	0.00
3,500.00	18.00	133.00	3,442.20	-281.08	301.43	-301.03	0.00	0.00	0.00	0.00
3,600.00	18.00	133.00	3,537.30	-302.16	324.03	-323.60	0.00	0.00	0.00	0.00
3,700.00	18.00	133.00	3,632.41	-323.23	346.63	-346.17	0.00	0.00	0.00	0.00
3,800.00	18.00	133.00	3,727.52	-344.31	369.23	-368.74	0.00	0.00	0.00	0.00
3,900.00	18.00	133.00	3,822.62	-365.38	391.83	-391.32	0.00	0.00	0.00	0.00
4,000.00	18.00	133.00	3,917.73	-386.46	414.43	-413.89	0.00	0.00	0.00	0.00
4,100.00	18.00	133.00	4,012.83	-407.53	437.03	-436.46	0.00	0.00	0.00	0.00
4,148.54	18.00	133.00	4,059.00	-417.76	448.00	-447.41	0.00	0.00	0.00	0.00
Sussex										
4,200.00	18.00	133.00	4,107.94	-428.61	459.63	-459.03	0.00	0.00	0.00	0.00
4,300.00	18.00	133.00	4,203.04	-449.68	482.23	-481.60	0.00	0.00	0.00	0.00
4,400.00	18.00	133.00	4,298.15	-470.76	504.83	-504.17	0.00	0.00	0.00	0.00
4,500.00	18.00	133.00	4,393.25	-491.83	527.43	-526.74	0.00	0.00	0.00	0.00
4,600.00	18.00	133.00	4,488.36	-512.91	550.03	-549.31	0.00	0.00	0.00	0.00

Plan Report for RMF 5N-15HZ - Permit Rev-2

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 (°)
4,700.00	18.00	133.00	4,583.47	-533.98	572.63	-571.88	0.00	0.00	0.00	0.00
4,707.92	18.00	133.00	4,591.00	-535.65	574.42	-573.67	0.00	0.00	0.00	0.00
Shannon										
4,800.00	18.00	133.00	4,678.57	-555.06	595.23	-594.45	0.00	0.00	0.00	0.00
4,900.00	18.00	133.00	4,773.68	-576.13	617.83	-617.02	0.00	0.00	0.00	0.00
5,000.00	18.00	133.00	4,868.78	-597.21	640.43	-639.59	0.00	0.00	0.00	0.00
5,100.00	18.00	133.00	4,963.89	-618.28	663.03	-662.16	0.00	0.00	0.00	0.00
5,200.00	18.00	133.00	5,058.99	-639.36	685.63	-684.73	0.00	0.00	0.00	0.00
5,300.00	18.00	133.00	5,154.10	-660.43	708.23	-707.30	0.00	0.00	0.00	0.00
5,400.00	18.00	133.00	5,249.21	-681.51	730.83	-729.87	0.00	0.00	0.00	0.00
5,500.00	18.00	133.00	5,344.31	-702.58	753.43	-752.45	0.00	0.00	0.00	0.00
5,600.00	18.00	133.00	5,439.42	-723.66	776.03	-775.02	0.00	0.00	0.00	0.00
5,700.00	18.00	133.00	5,534.52	-744.73	798.63	-797.59	0.00	0.00	0.00	0.00
5,730.00	18.00	133.00	5,563.05	-751.05	805.41	-804.36	0.00	0.00	0.00	0.00
Begin Drop @ 5730.00ft										
5,800.00	16.60	133.00	5,629.89	-765.25	820.63	-819.56	2.00	-2.00	0.00	180.00
5,900.00	14.60	133.00	5,726.20	-783.59	840.30	-839.20	2.00	-2.00	0.00	180.00
6,000.00	12.60	133.00	5,823.39	-799.63	857.49	-856.38	2.00	-2.00	0.00	180.00
6,100.00	10.60	133.00	5,921.34	-813.34	872.20	-871.06	2.00	-2.00	0.00	180.00
6,200.00	8.60	133.00	6,019.94	-824.71	884.40	-883.24	2.00	-2.00	0.00	180.00
6,300.00	6.60	133.00	6,119.05	-833.73	894.07	-892.90	2.00	-2.00	0.00	180.00
6,400.00	4.60	133.00	6,218.57	-840.39	901.20	-900.03	2.00	-2.00	0.00	180.00
6,500.00	2.60	133.00	6,318.37	-844.67	905.80	-904.62	2.00	-2.00	0.00	180.00
6,600.00	0.60	133.00	6,418.32	-846.57	907.84	-906.65	2.00	-2.00	0.00	180.00
6,630.00	0.00	0.00	6,448.32	-846.68	907.95	-906.77	2.00	-2.00	-443.33	-180.00
End Drop @ 6630.00ft										
6,636.74	0.00	0.00	6,455.06	-846.68	907.95	-906.77	0.00	0.00	0.00	180.00
Top of 4.5" Liner @ 6636.74ft										
6,700.00	0.00	0.00	6,518.32	-846.68	907.95	-906.77	0.00	0.00	0.00	0.00
6,736.74	0.00	0.00	6,555.06	-846.68	907.95	-906.77	0.00	0.00	0.00	0.00
KOP @ 6736.74ft										
6,800.00	6.33	269.92	6,618.19	-846.68	904.46	-903.28	10.00	10.00	0.00	269.92
6,900.00	16.33	269.92	6,716.12	-846.71	884.85	-883.67	10.00	10.00	0.00	0.00
7,000.00	26.33	269.92	6,809.16	-846.76	848.53	-847.35	10.00	10.00	0.00	0.00
7,100.00	36.33	269.92	6,894.47	-846.83	796.60	-795.42	10.00	10.00	0.00	0.00
7,200.00	46.33	269.92	6,969.47	-846.92	730.65	-729.47	10.00	10.00	0.00	0.00
DLS = 10/100'										
7,262.36	52.56	269.92	7,010.00	-846.99	683.29	-682.11	10.00	10.00	0.00	0.00
Sharon Springs										
7,300.00	56.33	269.92	7,031.88	-847.03	652.68	-651.50	10.00	10.00	0.00	0.00
7,330.29	59.35	269.92	7,048.00	-847.07	627.05	-625.86	10.00	10.00	0.00	0.00
Niobrara A										
7,400.00	66.33	269.92	7,079.80	-847.15	565.06	-563.87	10.00	10.00	0.00	0.00
7,500.00	76.33	269.92	7,111.78	-847.28	470.44	-469.26	10.00	10.00	0.00	0.00
7,524.18	78.74	269.92	7,117.00	-847.32	446.83	-445.65	10.00	10.00	0.00	0.00
Niobrara B										
7,600.00	86.33	269.92	7,126.84	-847.42	371.71	-370.53	10.00	10.00	0.00	0.00
7,641.43	90.47	269.92	7,128.00	-847.48	330.31	-329.12	10.00	10.00	0.00	0.00
End Build @ 7641.43ft - Landing Target (Heel) - 7"										
7,700.00	90.47	269.92	7,127.52	-847.56	271.74	-270.55	0.00	0.00	0.00	0.00
7,800.00	90.47	269.92	7,126.70	-847.70	171.74	-170.56	0.00	0.00	0.00	0.00
7,900.00	90.47	269.92	7,125.89	-847.84	71.74	-70.56	0.00	0.00	0.00	0.00
8,000.00	90.47	269.92	7,125.07	-847.97	-28.25	29.44	0.00	0.00	0.00	0.00
8,100.00	90.47	269.92	7,124.25	-848.11	-128.25	129.43	0.00	0.00	0.00	0.00
8,200.00	90.47	269.92	7,123.43	-848.25	-228.25	229.43	0.00	0.00	0.00	0.00
8,300.00	90.47	269.92	7,122.61	-848.39	-328.24	329.43	0.00	0.00	0.00	0.00
8,400.00	90.47	269.92	7,121.79	-848.53	-428.24	429.42	0.00	0.00	0.00	0.00
8,500.00	90.47	269.92	7,120.97	-848.67	-528.24	529.42	0.00	0.00	0.00	0.00

Plan Report for RMF 5N-15HZ - Permit Rev-2

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 (°)
8,600.00	90.47	269.92	7,120.16	-848.80	-628.23	629.42	0.00	0.00	0.00	0.00
8,700.00	90.47	269.92	7,119.34	-848.94	-728.23	729.41	0.00	0.00	0.00	0.00
8,800.00	90.47	269.92	7,118.52	-849.08	-828.22	829.41	0.00	0.00	0.00	0.00
8,900.00	90.47	269.92	7,117.70	-849.22	-928.22	929.41	0.00	0.00	0.00	0.00
9,000.00	90.47	269.92	7,116.88	-849.36	-1,028.22	1,029.40	0.00	0.00	0.00	0.00
9,100.00	90.47	269.92	7,116.06	-849.50	-1,128.21	1,129.40	0.00	0.00	0.00	0.00
9,200.00	90.47	269.92	7,115.25	-849.63	-1,228.21	1,229.40	0.00	0.00	0.00	0.00
9,300.00	90.47	269.92	7,114.43	-849.77	-1,328.21	1,329.39	0.00	0.00	0.00	0.00
9,400.00	90.47	269.92	7,113.61	-849.91	-1,428.20	1,429.39	0.00	0.00	0.00	0.00
9,500.00	90.47	269.92	7,112.79	-850.05	-1,528.20	1,529.39	0.00	0.00	0.00	0.00
9,600.00	90.47	269.92	7,111.97	-850.19	-1,628.20	1,629.38	0.00	0.00	0.00	0.00
9,700.00	90.47	269.92	7,111.15	-850.33	-1,728.19	1,729.38	0.00	0.00	0.00	0.00
9,800.00	90.47	269.92	7,110.33	-850.46	-1,828.19	1,829.38	0.00	0.00	0.00	0.00
9,900.00	90.47	269.92	7,109.52	-850.60	-1,928.19	1,929.37	0.00	0.00	0.00	0.00
10,000.00	90.47	269.92	7,108.70	-850.74	-2,028.18	2,029.37	0.00	0.00	0.00	0.00
10,100.00	90.47	269.92	7,107.88	-850.88	-2,128.18	2,129.37	0.00	0.00	0.00	0.00
10,200.00	90.47	269.92	7,107.06	-851.02	-2,228.18	2,229.36	0.00	0.00	0.00	0.00
10,300.00	90.47	269.92	7,106.24	-851.16	-2,328.17	2,329.36	0.00	0.00	0.00	0.00
10,400.00	90.47	269.92	7,105.42	-851.29	-2,428.17	2,429.36	0.00	0.00	0.00	0.00
10,500.00	90.47	269.92	7,104.61	-851.43	-2,528.17	2,529.35	0.00	0.00	0.00	0.00
10,600.00	90.47	269.92	7,103.79	-851.57	-2,628.16	2,629.35	0.00	0.00	0.00	0.00
10,700.00	90.47	269.92	7,102.97	-851.71	-2,728.16	2,729.35	0.00	0.00	0.00	0.00
10,800.00	90.47	269.92	7,102.15	-851.85	-2,828.16	2,829.34	0.00	0.00	0.00	0.00
10,900.00	90.47	269.92	7,101.33	-851.99	-2,928.15	2,929.34	0.00	0.00	0.00	0.00
11,000.00	90.47	269.92	7,100.51	-852.12	-3,028.15	3,029.34	0.00	0.00	0.00	0.00
11,100.00	90.47	269.92	7,099.70	-852.26	-3,128.15	3,129.33	0.00	0.00	0.00	0.00
11,200.00	90.47	269.92	7,098.88	-852.40	-3,228.14	3,229.33	0.00	0.00	0.00	0.00
11,300.00	90.47	269.92	7,098.06	-852.54	-3,328.14	3,329.33	0.00	0.00	0.00	0.00
11,400.00	90.47	269.92	7,097.24	-852.68	-3,428.14	3,429.32	0.00	0.00	0.00	0.00
11,500.00	90.47	269.92	7,096.42	-852.82	-3,528.13	3,529.32	0.00	0.00	0.00	0.00
11,600.00	90.47	269.92	7,095.60	-852.95	-3,628.13	3,629.32	0.00	0.00	0.00	0.00
11,700.00	90.47	269.92	7,094.78	-853.09	-3,728.12	3,729.31	0.00	0.00	0.00	0.00
11,800.00	90.47	269.92	7,093.97	-853.23	-3,828.12	3,829.31	0.00	0.00	0.00	0.00
11,900.00	90.47	269.92	7,093.15	-853.37	-3,928.12	3,929.31	0.00	0.00	0.00	0.00
12,000.00	90.47	269.92	7,092.33	-853.51	-4,028.11	4,029.30	0.00	0.00	0.00	0.00
12,100.00	90.47	269.92	7,091.51	-853.65	-4,128.11	4,129.30	0.00	0.00	0.00	0.00
12,200.00	90.47	269.92	7,090.69	-853.78	-4,228.11	4,229.30	0.00	0.00	0.00	0.00
12,284.60	90.47	269.92	7,090.00	-853.90	-4,312.70	4,313.89	0.00	0.00	0.00	0.00

TD Well @ 12284.60ft - Total Depth (Toe) - RMF 5N-15HZ_BHL

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
1,720.00	1,720.00	0.00	0.00	Begin Nudge @ 1720.00ft
2,620.00	2,605.27	-95.62	102.55	End Nudge @ 2620.00ft
5,730.00	5,563.05	-751.05	805.41	Begin Drop @ 5730.00ft
6,630.00	6,448.32	-846.68	907.95	End Drop @ 6630.00ft
6,636.74	6,455.06	-846.68	907.95	Top of 4.5" Liner @ 6636.74ft
6,736.74	6,555.06	-846.68	907.95	KOP @ 6736.74ft
7,200.00	6,969.47	-846.92	730.65	DLS = 10/100'
7,641.43	7,128.00	-847.48	330.31	End Build @ 7641.43ft
12,284.60	7,090.00	-853.90	-4,312.70	TD Well @ 12284.60ft

Plan Report for RMF 5N-15HZ - Permit Rev-2

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	269.92	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,641.43	Permit Rev-2	MWD+IFR1
7,641.43	12,284.60	Permit Rev-2	MWD+IFR1

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,065.00	1,065.00	9 5/8"	9-5/8	13-1/2
7,641.43	7,128.00	7"	7	8-3/4

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,015.00	1,015.00	Fox Hills Base		0.00	
4,148.54	4,059.00	Sussex		0.00	
4,707.92	4,591.00	Shannon		0.00	
7,262.36	7,010.00	Sharon Springs		0.00	
7,330.29	7,048.00	Niobrara A		0.00	
7,524.18	7,117.00	Niobrara B		0.00	
7,641.43	7,128.00	Landing Target (Heel)		0.00	
12,284.60	7,090.00	Total Depth (Toe)		0.00	

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
RMF 5N-15HZ_SHL	0.00	0.00	0.00	Point
RMF 5N-15HZ_SEC	0.00	0.00	0.00	Polygon
RMF 5N-15HZ_BHL	7,090.00	-853.90	-4,312.71	Point

North Reference Sheet for Sec. 15-T3N-R68W - RMF 5N-15HZ - 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' @ 4984.00usft (Drilling Rig). Northing and Easting are relative to RMF 5N-15HZ

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: 0.99995691

Grid Coordinates of Well: 1,327,102.71 usft N, 3,144,776.16 usft E

Geographical Coordinates of Well: 40° 13' 48.48" N, 104° 58' 53.30" W

Grid Convergence at Surface is: 0.34°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,284.60usft
the Bottom Hole Displacement is 4,396.43usft in the Direction of 258.80° (True).

Magnetic Convergence at surface is: -8.35° (7 October 2013, , BGGM2013)

