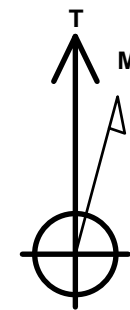
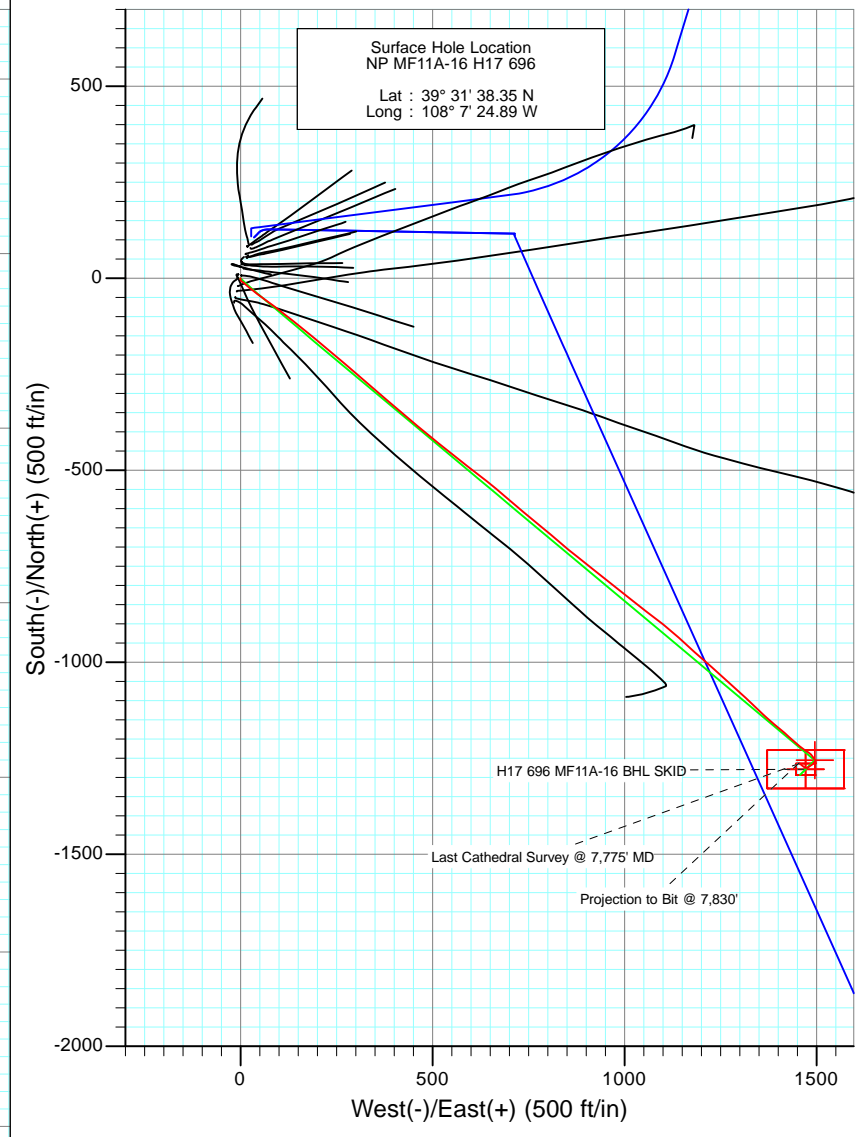
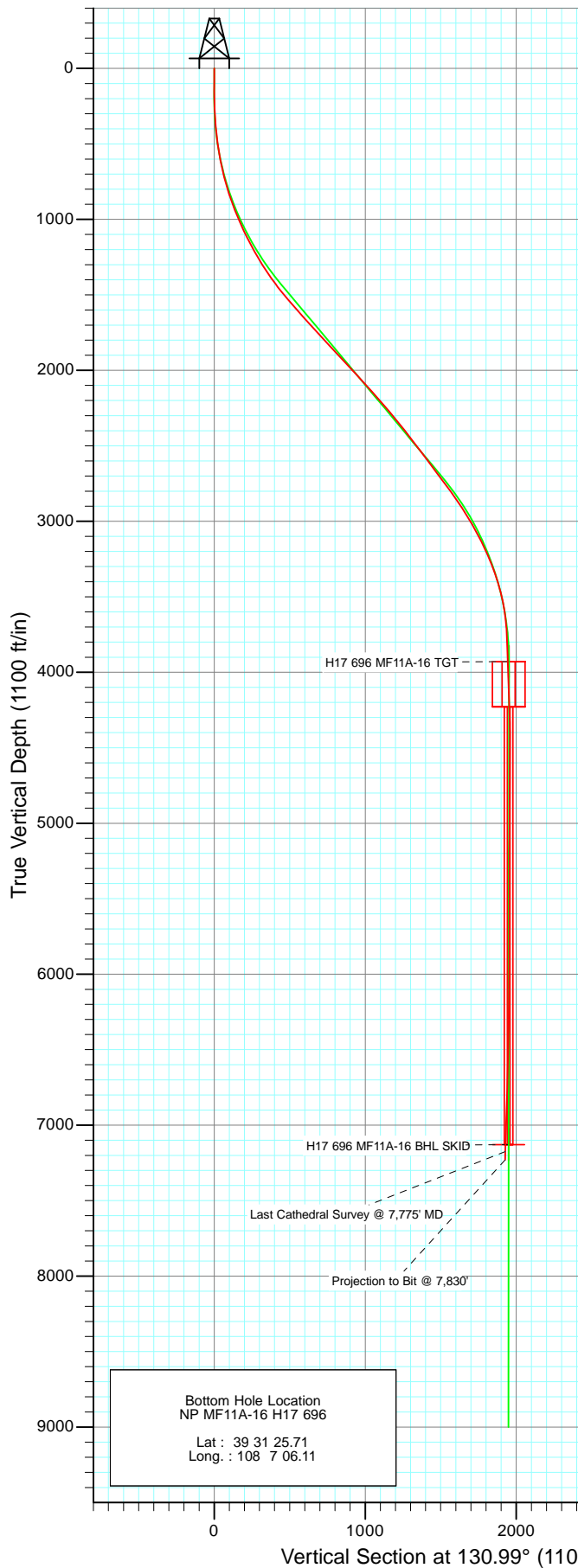




Project: North Piceance
 Site: H17 696 (S17-T6S-R96W)
 Well: NP MF11A-16 H17 696
 Wellbore: DD
 Design: FINAL



Azimuths to True North
 Magnetic North: 10.46°

Magnetic Field
 Strength: 52286.4snT
 Dip Angle: 65.75°
 Date: 2/14/2011
 Model: IGRF2010

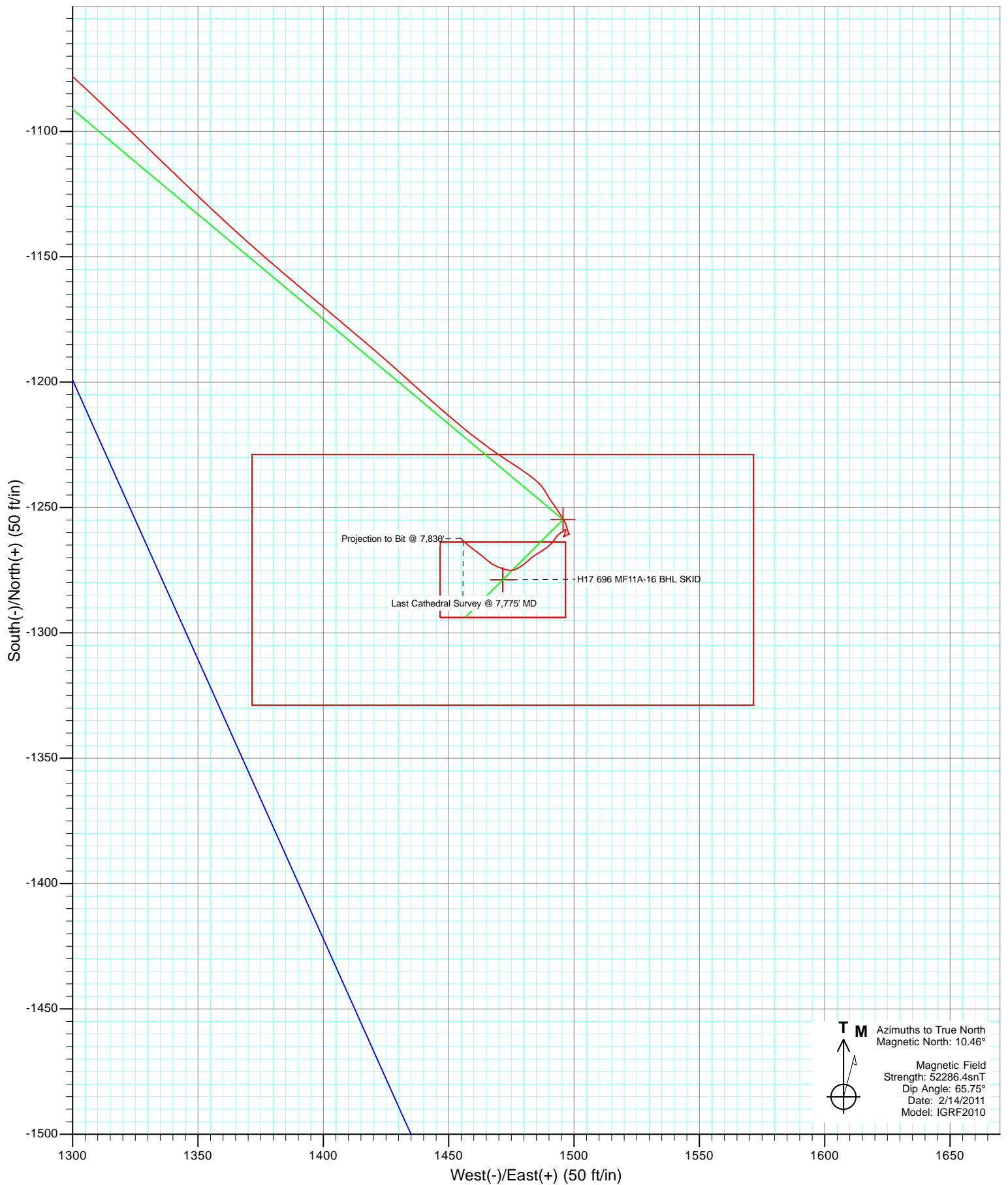
DESIGN DETAILS: DD

115089 (SH): LR
 KB MF11A-16 @ 5674.0ft (Patterson 303)

Target	Azimuth	Origin	N/S	E/W	From TVD
H17 696 MF11A-16 BHL SKID	30.99	Slot	0.0	0.0	0.0



Project: North Piceance
Site: H17 696 (S17-T6S-R96W)
Well: NP MF11A-16 H17 696
Wellbore: DD
Design: FINAL



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF11A-16 H17 696
Project:	North Piceance	TVD Reference:	KB MF11A-16 @ 5674.0ft (Patterson 303)
Site:	H17 696 (S17-T6S-R96W)	MD Reference:	KB MF11A-16 @ 5674.0ft (Patterson 303)
Well:	NP MF11A-16 H17 696	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Project	North Piceance		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	H17 696 (S17-T6S-R96W)			
Site Position:		Northing:	1,627,645.46 ft	Latitude: 39° 31' 38.37 N
From:	Lat/Long	Easting:	2,260,053.39 ft	Longitude: 108° 7' 24.99 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: -1.65 °

Well	NP MF11A-16 H17 696			
Well Position	+N/-S	0.0 ft	Northing:	1,627,643.19 ft
	+E/-W	0.0 ft	Easting:	2,260,061.17 ft
Position Uncertainty	0.0 ft		Wellhead Elevation:	ft
			Ground Level:	5,652.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/14/2011	10.46	65.75	52,286

Design	DD			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	130.99

Survey Program	Date	2/22/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
30.0	140.0	Survey #1 (DD)	Gyro	Gyro
201.0	7,830.0	Survey #2 (DD)	MWD	Geolink MWD

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
30.0	0.49	29.72	30.0	0.1	0.1	0.0	1.63	1.63	
60.0	0.12	101.71	60.0	0.2	0.2	0.0	1.56	-1.23	
90.0	0.09	119.78	90.0	0.2	0.2	0.0	0.15	-0.10	
120.0	0.20	297.33	120.0	0.2	0.2	0.0	0.97	0.37	
140.0	0.30	258.08	140.0	0.2	0.1	-0.1	0.96	0.50	Last Gyro Survey @ 140' MD
201.0	1.70	188.50	201.0	-0.7	-0.2	0.3	2.66	2.30	
231.0	2.80	169.80	231.0	-1.9	-0.1	1.1	4.36	3.67	
262.0	3.00	164.10	261.9	-3.4	0.2	2.4	1.13	0.65	
292.0	3.60	158.60	291.9	-5.0	0.8	3.9	2.26	2.00	
323.0	3.80	148.20	322.8	-6.8	1.7	5.7	2.26	0.65	
353.0	4.40	124.60	352.7	-8.3	3.2	7.8	5.92	2.00	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF11A-16 H17 696
Project:	North Piceance	TVD Reference:	KB MF11A-16 @ 5674.0ft (Patterson 303)
Site:	H17 696 (S17-T6S-R96W)	MD Reference:	KB MF11A-16 @ 5674.0ft (Patterson 303)
Well:	NP MF11A-16 H17 696	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
384.0	5.00	119.40	383.6	-9.6	5.3	10.3	2.37	1.94	
414.0	5.50	126.10	413.5	-11.1	7.6	13.1	2.63	1.67	
445.0	6.40	134.60	444.3	-13.2	10.0	16.3	4.06	2.90	
476.0	7.50	129.00	475.1	-15.7	12.8	20.0	4.16	3.55	
507.0	8.10	134.20	505.8	-18.5	16.0	24.2	2.99	1.94	
555.0	9.40	131.00	553.3	-23.4	21.4	31.5	2.89	2.71	
601.0	10.60	125.20	598.6	-28.3	27.7	39.5	3.40	2.61	
647.0	11.60	128.80	643.7	-33.7	34.7	48.3	2.64	2.17	
693.0	13.00	126.90	688.7	-39.7	42.5	58.1	3.17	3.04	
738.0	14.90	128.20	732.3	-46.3	51.1	68.9	4.28	4.22	
784.0	16.80	124.90	776.6	-53.8	61.2	81.4	4.57	4.13	
830.0	18.00	125.30	820.5	-61.7	72.4	95.1	2.62	2.61	
876.0	19.10	126.20	864.1	-70.2	84.3	109.7	2.47	2.39	
922.0	20.50	128.80	907.4	-79.7	96.6	125.2	3.59	3.04	
968.0	21.80	126.50	950.3	-89.8	109.8	141.8	3.35	2.83	
1,014.0	22.90	129.80	992.8	-100.7	123.5	159.3	3.63	2.39	
1,059.0	24.30	127.50	1,034.0	-111.9	137.6	177.3	3.72	3.11	
1,105.0	25.20	129.10	1,075.8	-123.8	152.7	196.5	2.44	1.96	
1,151.0	26.50	127.60	1,117.2	-136.3	168.4	216.5	3.16	2.83	
1,197.0	27.50	130.70	1,158.2	-149.5	184.6	237.4	3.75	2.17	
1,242.0	28.30	129.60	1,198.0	-163.0	200.7	258.4	2.11	1.78	
1,288.0	30.00	129.70	1,238.1	-177.3	218.0	280.8	3.70	3.70	
1,334.0	31.00	131.00	1,277.8	-192.5	235.8	304.2	2.60	2.17	
1,380.0	33.40	129.30	1,316.7	-208.2	254.5	328.7	5.58	5.22	
1,425.0	34.40	129.50	1,354.0	-224.2	273.9	353.8	2.24	2.22	
1,517.0	36.30	132.10	1,429.1	-259.0	314.2	407.0	2.63	2.07	
1,609.0	39.60	130.40	1,501.6	-296.2	356.7	463.6	3.76	3.59	
1,700.0	41.40	130.50	1,570.8	-334.6	401.7	522.7	1.98	1.98	
1,792.0	41.90	129.70	1,639.6	-374.0	448.4	583.8	0.79	0.54	
1,883.0	42.10	129.30	1,707.2	-412.7	495.4	644.7	0.37	0.22	
1,975.0	42.70	128.70	1,775.1	-451.7	543.6	706.7	0.79	0.65	
2,066.0	43.30	127.60	1,841.7	-490.1	592.5	768.6	1.06	0.66	
2,158.0	42.70	128.60	1,909.0	-528.8	641.8	831.3	0.99	-0.65	
2,250.0	42.60	130.90	1,976.6	-568.6	689.7	893.6	1.70	-0.11	
2,341.0	42.80	129.90	2,043.5	-608.6	736.7	955.3	0.78	0.22	
2,433.0	42.30	129.50	2,111.3	-648.4	784.6	1,017.5	0.62	-0.54	
2,524.0	41.50	130.60	2,179.0	-687.5	831.1	1,078.3	1.19	-0.88	
2,616.0	40.60	128.40	2,248.4	-725.9	877.7	1,138.7	1.85	-0.98	
2,708.0	38.90	128.50	2,319.1	-762.5	923.8	1,197.4	1.85	-1.85	
2,799.0	38.30	128.70	2,390.3	-797.9	968.2	1,254.2	0.67	-0.66	
2,891.0	37.60	128.10	2,462.8	-833.0	1,012.5	1,310.7	0.86	-0.76	
2,982.0	37.80	127.80	2,534.8	-867.3	1,056.4	1,366.3	0.30	0.22	
3,074.0	36.30	128.30	2,608.2	-901.4	1,100.0	1,421.6	1.66	-1.63	
3,165.0	36.80	131.60	2,681.3	-936.2	1,141.6	1,475.8	2.23	0.55	
3,257.0	36.40	132.70	2,755.2	-973.0	1,182.2	1,530.6	0.83	-0.43	
3,348.0	35.70	130.30	2,828.8	-1,008.5	1,222.3	1,584.2	1.73	-0.77	
3,440.0	33.40	132.50	2,904.5	-1,043.0	1,261.5	1,636.3	2.84	-2.50	
3,531.0	31.50	132.30	2,981.3	-1,075.9	1,297.5	1,685.1	2.09	-2.09	
3,623.0	28.20	134.50	3,061.1	-1,107.3	1,330.8	1,730.9	3.78	-3.59	
3,714.0	25.90	132.60	3,142.2	-1,135.9	1,360.8	1,772.2	2.70	-2.53	
3,806.0	24.20	129.90	3,225.5	-1,161.6	1,390.1	1,811.1	2.23	-1.85	
3,897.0	20.70	130.60	3,309.6	-1,184.0	1,416.6	1,845.9	3.86	-3.85	
3,989.0	17.00	132.20	3,396.7	-1,203.6	1,438.9	1,875.6	4.06	-4.02	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF11A-16 H17 696
Project:	North Piceance	TVD Reference:	KB MF11A-16 @ 5674.0ft (Patterson 303)
Site:	H17 696 (S17-T6S-R96W)	MD Reference:	KB MF11A-16 @ 5674.0ft (Patterson 303)
Well:	NP MF11A-16 H17 696	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
4,080.0	14.10	128.80	3,484.3	-1,219.5	1,457.4	1,900.0	3.34	-3.19	
4,172.0	10.00	122.60	3,574.3	-1,230.8	1,472.9	1,919.1	4.67	-4.46	
4,264.0	5.40	128.20	3,665.4	-1,237.8	1,483.0	1,931.3	5.06	-5.00	
4,355.0	2.40	143.00	3,756.2	-1,242.0	1,487.5	1,937.5	3.45	-3.30	
4,447.0	2.10	155.00	3,848.1	-1,245.1	1,489.4	1,940.9	0.61	-0.33	
4,538.0	2.30	140.10	3,939.1	-1,248.0	1,491.3	1,944.2	0.66	0.22	
4,630.0	2.20	149.50	4,031.0	-1,250.9	1,493.3	1,947.7	0.42	-0.11	
4,721.0	2.10	145.30	4,121.9	-1,253.8	1,495.2	1,951.0	0.21	-0.11	
4,813.0	1.50	156.70	4,213.9	-1,256.3	1,496.6	1,953.7	0.76	-0.65	
4,904.0	2.10	165.90	4,304.8	-1,259.0	1,497.5	1,956.1	0.73	0.66	
4,996.0	0.30	94.50	4,396.8	-1,260.6	1,498.1	1,957.7	2.20	-1.96	
5,087.0	0.20	272.70	4,487.8	-1,260.6	1,498.2	1,957.8	0.55	-0.11	
5,179.0	0.20	280.50	4,579.8	-1,260.6	1,497.9	1,957.5	0.03	0.00	
5,270.0	0.70	239.60	4,670.8	-1,260.9	1,497.3	1,957.2	0.62	0.55	
5,362.0	1.00	235.80	4,762.8	-1,261.6	1,496.1	1,956.8	0.33	0.33	
5,453.0	0.60	34.50	4,853.8	-1,261.7	1,495.7	1,956.6	1.73	-0.44	
5,545.0	0.80	28.50	4,945.8	-1,260.7	1,496.3	1,956.4	0.23	0.22	
5,636.0	0.80	2.60	5,036.8	-1,259.5	1,496.6	1,955.8	0.39	0.00	
5,728.0	0.20	359.60	5,128.8	-1,258.7	1,496.7	1,955.3	0.65	-0.65	
5,819.0	0.50	213.10	5,219.8	-1,258.9	1,496.5	1,955.3	0.74	0.33	
5,911.0	0.80	241.00	5,311.8	-1,259.5	1,495.7	1,955.1	0.46	0.33	
6,002.0	0.70	237.10	5,402.8	-1,260.1	1,494.7	1,954.7	0.12	-0.11	
6,094.0	1.20	225.30	5,494.7	-1,261.1	1,493.5	1,954.5	0.58	0.54	
6,185.0	1.20	209.70	5,585.7	-1,262.6	1,492.3	1,954.6	0.36	0.00	
6,277.0	1.30	220.00	5,677.7	-1,264.2	1,491.2	1,954.8	0.27	0.11	
6,368.0	1.80	235.70	5,768.7	-1,265.8	1,489.4	1,954.5	0.72	0.55	
6,459.0	2.10	236.60	5,859.6	-1,267.6	1,486.8	1,953.7	0.33	0.33	
6,551.0	1.40	241.30	5,951.6	-1,269.0	1,484.4	1,952.8	0.78	-0.76	
6,643.0	1.80	224.90	6,043.5	-1,270.6	1,482.4	1,952.4	0.66	0.43	
6,734.0	1.50	230.90	6,134.5	-1,272.4	1,480.4	1,952.1	0.38	-0.33	
6,826.0	1.50	238.60	6,226.5	-1,273.7	1,478.5	1,951.5	0.22	0.00	
6,918.0	1.30	247.40	6,318.4	-1,274.8	1,476.5	1,950.7	0.32	-0.22	
7,009.0	1.30	270.10	6,409.4	-1,275.2	1,474.5	1,949.4	0.56	0.00	
7,101.0	1.40	295.10	6,501.4	-1,274.7	1,472.4	1,947.5	0.64	0.11	
7,192.0	2.10	285.70	6,592.4	-1,273.8	1,469.8	1,945.0	0.83	0.77	
7,284.0	1.90	307.90	6,684.3	-1,272.4	1,467.0	1,941.9	0.86	-0.22	
7,376.0	1.50	311.80	6,776.3	-1,270.6	1,464.9	1,939.2	0.45	-0.43	
7,467.0	1.60	308.80	6,867.2	-1,269.0	1,463.0	1,936.7	0.14	0.11	
7,559.0	1.70	303.80	6,959.2	-1,267.5	1,460.9	1,934.1	0.19	0.11	
7,651.0	1.80	312.90	7,051.1	-1,265.7	1,458.7	1,931.3	0.32	0.11	
7,742.0	1.70	305.30	7,142.1	-1,264.0	1,456.6	1,928.5	0.28	-0.11	
7,775.0	1.60	317.70	7,175.1	-1,263.4	1,455.8	1,927.6	1.12	-0.30	Last Cathedral Survey @ 7,775' MD
7,830.0	1.60	317.70	7,230.1	-1,262.2	1,454.8	1,926.1	0.00	0.00	Projection to Bit @ 7,830'

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF11A-16 H17 696
Project:	North Piceance	TVD Reference:	KB MF11A-16 @ 5674.0ft (Patterson 303)
Site:	H17 696 (S17-T6S-R96W)	MD Reference:	KB MF11A-16 @ 5674.0ft (Patterson 303)
Well:	NP MF11A-16 H17 696	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	EDM 5000.1 US Multi Users DB

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
H17 696 MF11A-16 TGT	0.00	0.00	3,929.0	-1,254.8	1,495.6	1,626,345.73	2,261,519.91	39° 31' 25.95 N	108° 7' 5.80 W
- actual wellpath misses target center by 8.5ft at 4528.3ft MD (3929.3 TVD, -1247.7 N, 1491.0 E)									
- Point									
H17 696 MF11A-16 BHL	0.00	0.00	7,129.0	-1,278.8	1,471.6	1,626,322.40	2,261,495.19	39° 31' 25.71 N	108° 7' 6.11 W
- actual wellpath misses target center by 20.7ft at 7728.3ft MD (7128.4 TVD, -1264.2 N, 1456.9 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
H17 696 MF11A-16 TOC	0.00	0.00	3,929.0	-1,278.8	1,471.6	1,626,322.40	2,261,495.19	39° 31' 25.71 N	108° 7' 6.11 W
- actual wellpath misses target center by 36.7ft at 4528.5ft MD (3929.6 TVD, -1247.7 N, 1491.0 E)									
- Rectangle (sides W100.0 H200.0 D300.0)									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
140.0	140.0	0.2	0.1	Last Gyro Survey @ 140' MD
7,775.0	7,175.1	-1,263.4	1,455.8	Last Cathedral Survey @ 7,775' MD
7,830.0	7,230.1	-1,262.2	1,454.8	Projection to Bit @ 7,830'

Checked By: _____ Approved By: _____ Date: _____