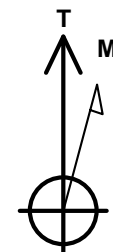
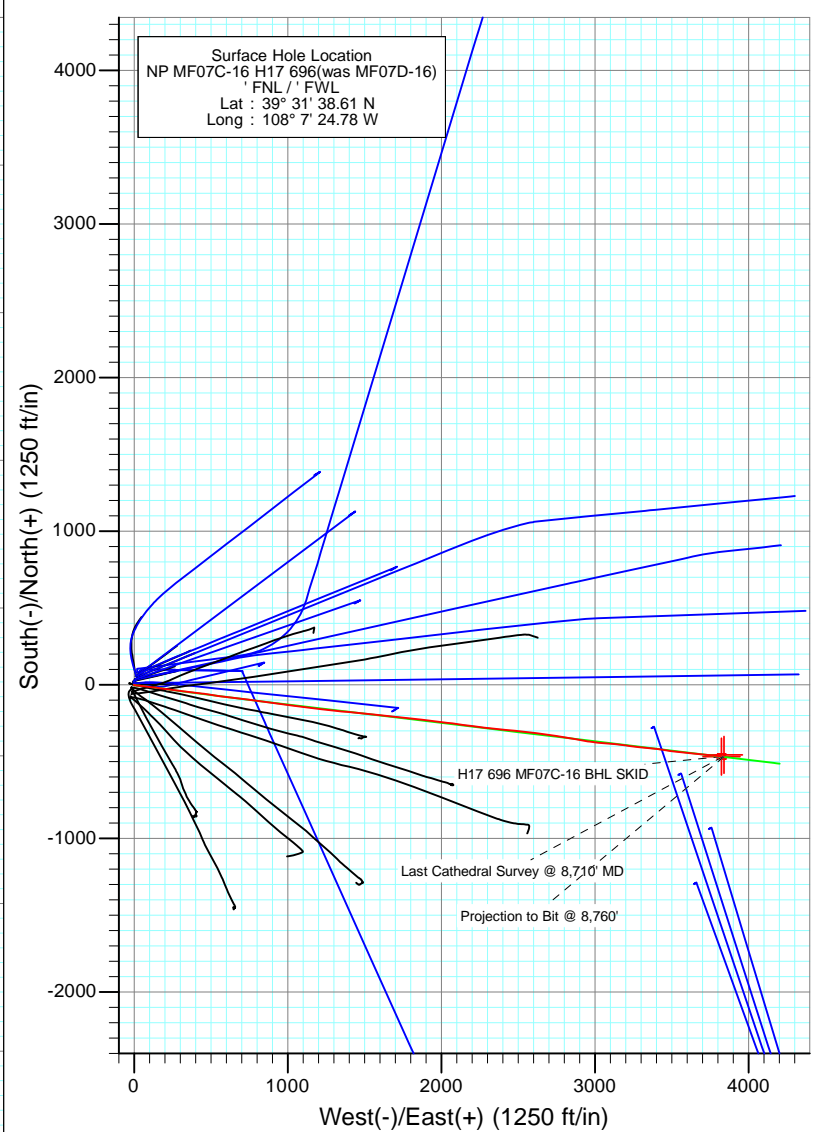
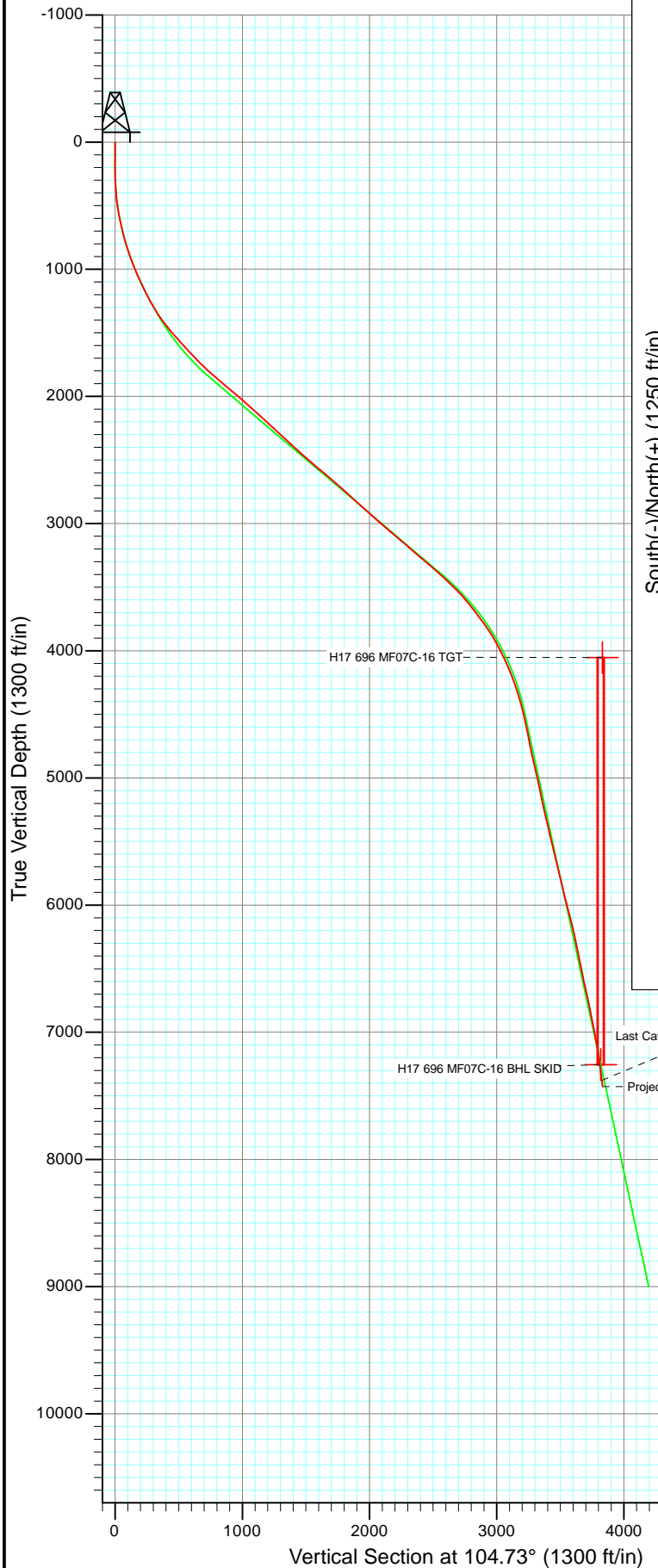




Project: North Piceance
 Site: H17 696 (S17-T6S-R96W)
 Well: NP MF07C-16 H17 696(was MF07D-16)
 Wellbore: DD
 Design: FINAL



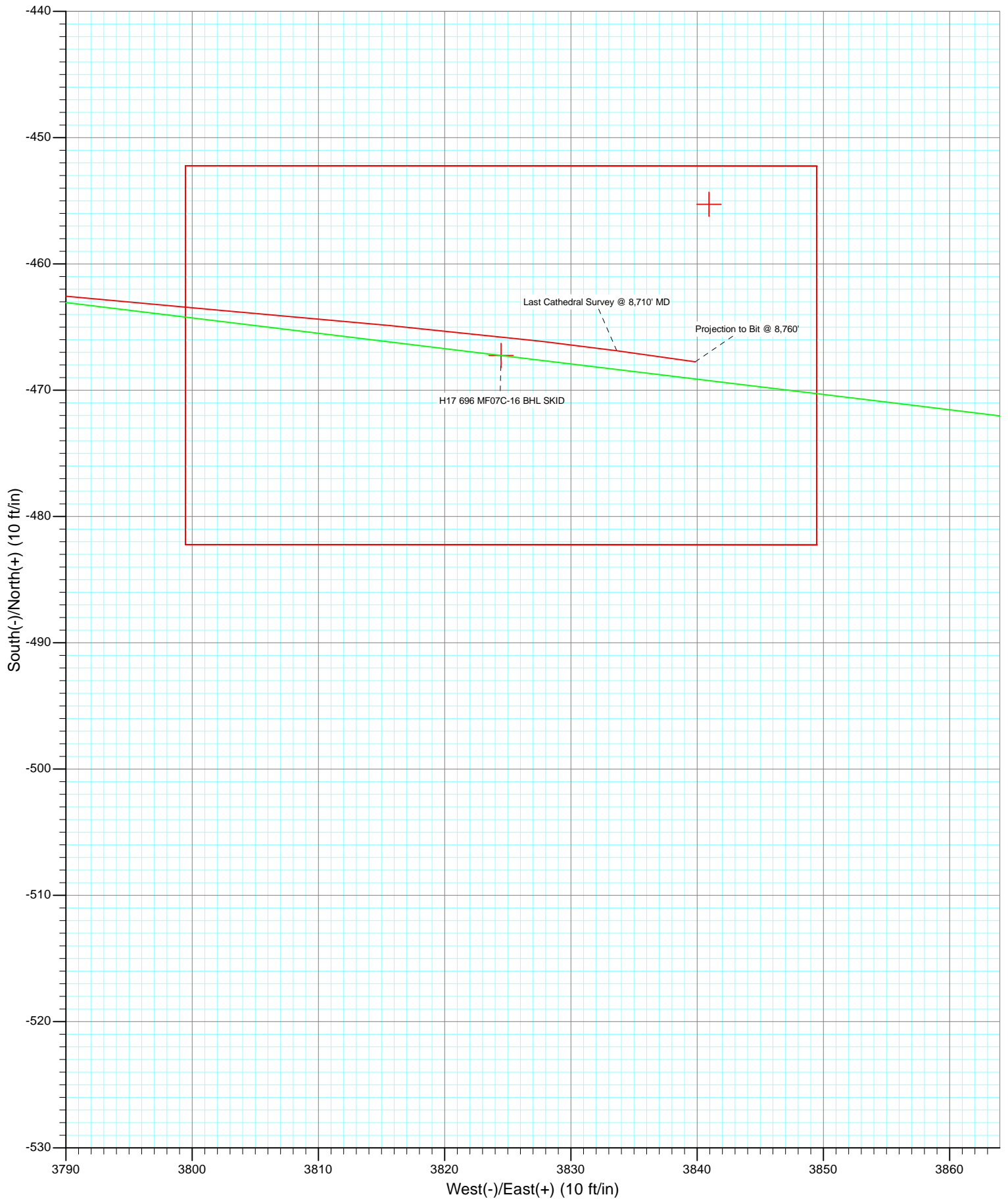
Azimuths to True North
 Magnetic North: 10.45°

Magnetic Field
 Strength: 52278.7snT
 Dip Angle: 65.75°
 Date: 3/14/2011
 Model: IGRF2010

DD						
NP MF07C-16 H17 696(was MF07D-16)						
115077, 115127: LR						
KB MF07D-16 @ 5674.0ft (Patterson 303)						
Ground Elevation 5652.0						
North American Datum 1983						
Well NP MF07C-16 H17 696(was MF07D-16), True North						
Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
Target	H17 696 MF07D-16 BHL SKID	104.73	Slot	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude		Longitude
H17 696 MF07C-16 TGT	4054.0	-455.3	3840.9	39° 31' 34.11 N	108° 6' 35.76 W	
H17 696 MF07C-16 BHL SKID	7254.0	-467.2	3824.5	39° 31' 33.99 N	108° 6' 35.97 W	



Project: North Piceance
Site: H17 696 (S17-T6S-R96W)
Well: NP MF07C-16 H17 696(was MF07D-16)
Wellbore: DD
Design: FINAL



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF07C-16 H17 696(was MF07D-16)
Project:	North Piceance	TVD Reference:	KB MF07D-16 @ 5674.0ft (Patterson 303)
Site:	H17 696 (S17-T6S-R96W)	MD Reference:	KB MF07D-16 @ 5674.0ft (Patterson 303)
Well:	NP MF07C-16 H17 696(was MF07D-16)	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 MF07C-16 H17 696(was MF07D-16)			
Well Position	+N/-S	0.0 ft	Northing:	1,627,669.23 ft
	+E/-W	0.0 ft	Easting:	2,260,070.54 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	3/14/2011	10.45	65.75	52,279

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	104.73

Survey Program	Date	3/21/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
30.0	144.0	Survey #1 (DD)	Gyro	Gyro
201.0	8,760.0	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	0.30	354.12	30.0	0.1	0.0	0.0	1.00	1.00	
60.0	0.43	237.43	60.0	0.1	-0.1	-0.1	2.08	0.43	
90.0	0.17	122.58	90.0	0.0	-0.2	-0.2	1.75	-0.87	
120.0	0.05	94.79	120.0	0.0	-0.1	-0.1	0.43	-0.40	
144.0	0.26	228.40	144.0	-0.1	-0.1	-0.1	1.24	0.87	Last Gyro Survey @ 144' MD
201.0	0.40	248.50	201.0	-0.2	-0.4	-0.4	0.32	0.25	
231.0	0.40	243.00	231.0	-0.3	-0.6	-0.5	0.13	0.00	
262.0	0.50	157.30	262.0	-0.5	-0.7	-0.5	1.99	0.32	
292.0	1.60	116.50	292.0	-0.8	-0.2	0.0	4.21	3.67	
323.0	3.00	109.30	323.0	-1.2	0.9	1.2	4.60	4.52	
353.0	4.20	104.70	352.9	-1.8	2.7	3.1	4.11	4.00	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF07C-16 H17 696(was MF07D-16)
Project:	North Piceance	TVD Reference:	KB MF07D-16 @ 5674.0ft (Patterson 303)
Site:	H17 696 (S17-T6S-R96W)	MD Reference:	KB MF07D-16 @ 5674.0ft (Patterson 303)
Well:	NP MF07C-16 H17 696(was MF07D-16)	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
383.0	4.60	99.40	382.8	-2.3	5.0	5.4	1.90	1.33	
414.0	5.20	99.90	413.7	-2.7	7.6	8.0	1.94	1.94	
445.0	6.50	98.80	444.5	-3.2	10.7	11.2	4.21	4.19	
476.0	7.70	97.60	475.3	-3.7	14.5	15.0	3.90	3.87	
506.0	8.70	93.10	505.0	-4.1	18.7	19.2	3.96	3.33	
555.0	10.20	96.00	553.3	-4.8	26.8	27.1	3.21	3.06	
601.0	11.30	96.30	598.5	-5.7	35.3	35.6	2.39	2.39	
647.0	12.70	95.80	643.5	-6.7	44.8	45.0	3.05	3.04	
693.0	13.50	96.30	688.3	-7.8	55.2	55.3	1.76	1.74	
738.0	14.70	97.00	732.0	-9.1	66.1	66.2	2.69	2.67	
784.0	15.50	96.70	776.4	-10.5	78.0	78.1	1.75	1.74	
830.0	17.00	96.50	820.5	-12.0	90.7	90.8	3.26	3.26	
876.0	18.50	96.80	864.3	-13.6	104.7	104.7	3.27	3.26	
922.0	20.40	96.40	907.7	-15.4	119.9	119.9	4.14	4.13	
968.0	21.60	96.80	950.7	-17.3	136.3	136.2	2.63	2.61	
1,013.0	22.40	97.50	992.4	-19.4	153.0	152.9	1.87	1.78	
1,059.0	23.50	96.80	1,034.7	-21.6	170.8	170.7	2.46	2.39	
1,105.0	24.30	97.40	1,076.8	-23.9	189.3	189.1	1.82	1.74	
1,151.0	25.60	98.90	1,118.5	-26.7	208.5	208.4	3.14	2.83	
1,197.0	26.70	98.40	1,159.8	-29.7	228.5	228.6	2.44	2.39	
1,242.0	27.70	99.10	1,199.8	-32.8	248.9	249.0	2.33	2.22	
1,290.0	29.10	97.80	1,242.0	-36.2	271.4	271.7	3.19	2.92	
1,340.0	29.30	94.60	1,285.7	-38.8	295.7	295.8	3.15	0.40	
1,431.0	34.30	97.30	1,363.0	-43.9	343.3	343.2	5.71	5.49	
1,523.0	38.10	97.00	1,437.2	-50.6	397.2	397.1	4.13	4.13	
1,615.0	41.40	98.30	1,508.0	-58.5	455.5	455.4	3.70	3.59	
1,706.0	42.10	98.10	1,575.9	-67.1	515.5	515.6	0.78	0.77	
1,798.0	43.20	97.10	1,643.5	-75.4	577.3	577.5	1.40	1.20	
1,889.0	44.00	96.60	1,709.4	-82.8	639.6	639.6	0.96	0.88	
1,981.0	47.50	98.40	1,773.6	-91.5	704.9	705.0	4.05	3.80	
2,072.0	48.90	96.90	1,834.3	-100.5	772.1	772.3	1.97	1.54	
2,164.0	49.70	98.00	1,894.3	-109.5	841.3	841.5	1.26	0.87	
2,255.0	50.70	97.50	1,952.5	-119.0	910.6	910.9	1.18	1.10	
2,347.0	49.50	96.90	2,011.5	-127.8	980.6	980.9	1.40	-1.30	
2,439.0	48.00	98.30	2,072.2	-137.0	1,049.2	1,049.5	1.99	-1.63	
2,530.0	48.60	97.40	2,132.7	-146.2	1,116.5	1,116.9	0.99	0.66	
2,622.0	47.90	96.70	2,194.0	-154.7	1,184.6	1,185.0	0.95	-0.76	
2,713.0	47.50	96.20	2,255.2	-162.2	1,251.5	1,251.6	0.60	-0.44	
2,805.0	47.20	96.20	2,317.6	-169.5	1,318.7	1,318.5	0.33	-0.33	
2,897.0	48.10	95.10	2,379.5	-176.2	1,386.4	1,385.6	1.32	0.98	
2,988.0	48.40	94.50	2,440.1	-181.9	1,454.0	1,452.5	0.59	0.33	
3,079.0	49.20	96.90	2,500.1	-188.7	1,522.2	1,520.1	2.17	0.88	
3,171.0	49.90	96.50	2,559.8	-196.9	1,591.7	1,589.4	0.83	0.76	
3,263.0	50.30	94.70	2,618.8	-203.8	1,661.9	1,659.1	1.56	0.43	
3,354.0	49.40	97.30	2,677.5	-211.0	1,731.1	1,727.9	2.40	-0.99	
3,445.0	49.30	95.20	2,736.7	-218.5	1,799.7	1,796.1	1.75	-0.11	
3,537.0	48.30	96.30	2,797.3	-225.5	1,868.6	1,864.5	1.41	-1.09	
3,628.0	47.90	98.10	2,858.1	-233.9	1,935.8	1,931.6	1.54	-0.44	
3,720.0	47.90	96.50	2,919.8	-242.6	2,003.5	1,999.3	1.29	0.00	
3,812.0	48.90	97.60	2,980.9	-251.1	2,071.8	2,067.5	1.41	1.09	
3,903.0	49.90	97.60	3,040.1	-260.2	2,140.2	2,136.1	1.10	1.10	
3,995.0	50.60	97.20	3,098.9	-269.3	2,210.4	2,206.2	0.83	0.76	
4,086.0	49.20	96.80	3,157.5	-277.8	2,279.5	2,275.2	1.57	-1.54	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF07C-16 H17 696(was MF07D-16)
Project:	North Piceance	TVD Reference:	KB MF07D-16 @ 5674.0ft (Patterson 303)
Site:	H17 696 (S17-T6S-R96W)	MD Reference:	KB MF07D-16 @ 5674.0ft (Patterson 303)
Well:	NP MF07C-16 H17 696(was MF07D-16)	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
4,178.0	49.40	96.30	3,217.5	-285.8	2,348.8	2,344.2	0.47	0.22	
4,269.0	50.20	96.10	3,276.3	-293.3	2,417.9	2,413.0	0.90	0.88	
4,361.0	49.90	95.20	3,335.3	-300.2	2,488.1	2,482.6	0.82	-0.33	
4,453.0	47.80	96.90	3,395.9	-307.5	2,556.9	2,551.1	2.67	-2.28	
4,544.0	47.40	96.20	3,457.2	-315.2	2,623.7	2,617.6	0.72	-0.44	
4,636.0	44.70	98.50	3,521.1	-323.6	2,689.4	2,683.3	3.44	-2.93	
4,727.0	40.90	99.70	3,587.9	-333.4	2,750.4	2,744.8	4.27	-4.18	
4,819.0	37.80	99.50	3,659.0	-343.1	2,807.9	2,802.9	3.37	-3.37	
4,910.0	38.00	99.60	3,730.8	-352.4	2,863.0	2,858.5	0.23	0.22	
5,002.0	35.40	99.70	3,804.5	-361.6	2,917.2	2,913.3	2.83	-2.83	
5,093.0	31.50	98.70	3,880.5	-369.6	2,966.7	2,963.2	4.33	-4.29	
5,185.0	27.80	95.30	3,960.4	-375.2	3,011.9	3,008.3	4.42	-4.02	
5,276.0	26.30	95.40	4,041.5	-379.1	3,053.1	3,049.1	1.65	-1.65	
5,368.0	23.60	94.20	4,124.9	-382.4	3,091.8	3,087.4	2.99	-2.93	
5,459.0	21.90	95.30	4,208.8	-385.3	3,126.8	3,122.0	1.93	-1.87	
5,551.0	18.60	97.90	4,295.1	-388.9	3,158.4	3,153.5	3.72	-3.59	
5,642.0	15.90	96.60	4,382.0	-392.3	3,185.2	3,180.3	3.00	-2.97	
5,734.0	13.20	99.10	4,471.0	-395.4	3,208.1	3,203.2	3.01	-2.93	
5,825.0	12.60	98.10	4,559.7	-398.4	3,228.2	3,223.4	0.70	-0.66	
5,917.0	12.00	97.20	4,649.6	-401.1	3,247.6	3,242.9	0.68	-0.65	
6,009.0	11.30	97.80	4,739.7	-403.5	3,266.0	3,261.3	0.77	-0.76	
6,100.0	12.30	95.30	4,828.8	-405.6	3,284.5	3,279.7	1.23	1.10	
6,192.0	14.20	94.30	4,918.3	-407.3	3,305.5	3,300.5	2.08	2.07	
6,283.0	12.30	93.90	5,006.9	-408.8	3,326.3	3,321.0	2.09	-2.09	
6,375.0	11.20	95.20	5,097.0	-410.3	3,345.0	3,339.4	1.23	-1.20	
6,466.0	12.20	96.90	5,186.1	-412.3	3,363.4	3,357.6	1.16	1.10	
6,557.0	13.50	97.60	5,274.8	-414.8	3,383.4	3,377.7	1.44	1.43	
6,649.0	13.20	98.40	5,364.3	-417.8	3,404.5	3,398.8	0.38	-0.33	
6,741.0	12.40	97.10	5,454.0	-420.5	3,424.7	3,419.0	0.92	-0.87	
6,833.0	14.60	98.70	5,543.5	-423.5	3,445.9	3,440.4	2.43	2.39	
6,924.0	13.90	99.10	5,631.7	-427.0	3,468.1	3,462.6	0.78	-0.77	
7,016.0	12.80	99.10	5,721.2	-430.3	3,489.0	3,483.8	1.20	-1.20	
7,108.0	14.40	96.00	5,810.6	-433.1	3,510.5	3,505.2	1.91	1.74	
7,199.0	12.80	95.70	5,899.1	-435.3	3,531.8	3,526.4	1.76	-1.76	
7,291.0	15.60	95.60	5,988.2	-437.5	3,554.2	3,548.7	3.04	3.04	
7,382.0	14.30	96.40	6,076.2	-440.0	3,577.6	3,571.9	1.45	-1.43	
7,474.0	13.80	97.90	6,165.4	-442.8	3,599.7	3,594.0	0.67	-0.54	
7,566.0	12.20	97.20	6,255.1	-445.5	3,620.2	3,614.5	1.75	-1.74	
7,657.0	12.30	93.60	6,344.0	-447.3	3,639.4	3,633.6	0.85	0.11	
7,749.0	10.60	94.00	6,434.1	-448.5	3,657.7	3,651.5	1.85	-1.85	
7,841.0	11.60	94.70	6,524.4	-449.9	3,675.3	3,668.9	1.10	1.09	
7,932.0	13.00	96.70	6,613.3	-451.8	3,694.6	3,688.1	1.61	1.54	
8,024.0	11.90	96.50	6,703.2	-454.1	3,714.3	3,707.7	1.20	-1.20	
8,115.0	13.00	95.40	6,792.0	-456.1	3,733.8	3,727.1	1.24	1.21	
8,207.0	11.00	95.60	6,882.0	-457.9	3,752.9	3,746.0	2.17	-2.17	
8,298.0	10.80	99.00	6,971.4	-460.1	3,769.9	3,763.0	0.74	-0.22	
8,390.0	10.30	95.50	7,061.8	-462.3	3,786.6	3,779.7	0.88	-0.54	
8,481.0	9.30	94.80	7,151.5	-463.7	3,802.1	3,795.0	1.11	-1.10	
8,573.0	7.70	95.60	7,242.5	-464.9	3,815.6	3,808.4	1.74	-1.74	
8,664.0	7.70	96.30	7,332.7	-466.1	3,827.7	3,820.5	0.10	0.00	
8,710.0	7.20	98.00	7,378.3	-466.9	3,833.6	3,826.4	1.19	-1.09	Last Cathedral Survey @ 8,710' MD
8,760.0	7.20	98.00	7,427.9	-467.7	3,839.9	3,832.6	0.00	0.00	Projection to Bit @ 8,760'

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF07C-16 H17 696(was MF07D-16)
Project:	North Piceance	TVD Reference:	KB MF07D-16 @ 5674.0ft (Patterson 303)
Site:	H17 696 (S17-T6S-R96W)	MD Reference:	KB MF07D-16 @ 5674.0ft (Patterson 303)
Well:	NP MF07C-16 H17 696(was MF07D-16)	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 MF07C-16 TG1	0.00	0.00	4,054.0	-455.3	3,840.9	1,627,103.24	2,263,896.74	39° 31' 34.11 N	108° 6' 35.76 W
- actual wellpath misses target center by 726.9ft at 5551.0ft MD (4295.1 TVD, -388.9 N, 3158.4 E)									
- Point									
H17 696 MF07C-16 BHL	0.00	0.00	7,254.0	-467.2	3,824.5	1,627,091.76	2,263,879.93	39° 31' 33.99 N	108° 6' 35.97 W
- actual wellpath misses target center by 7.6ft at 8585.6ft MD (7255.0 TVD, -465.0 N, 3817.3 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
144.0	144.0	-0.1	-0.1	Last Gyro Survey @ 144' MD
8,710.0	7,378.3	-466.9	3,833.6	Last Cathedral Survey @ 8,710' MD
8,760.0	7,427.9	-467.7	3,839.9	Projection to Bit @ 8,760'

Checked By: _____	Approved By: _____	Date: _____
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