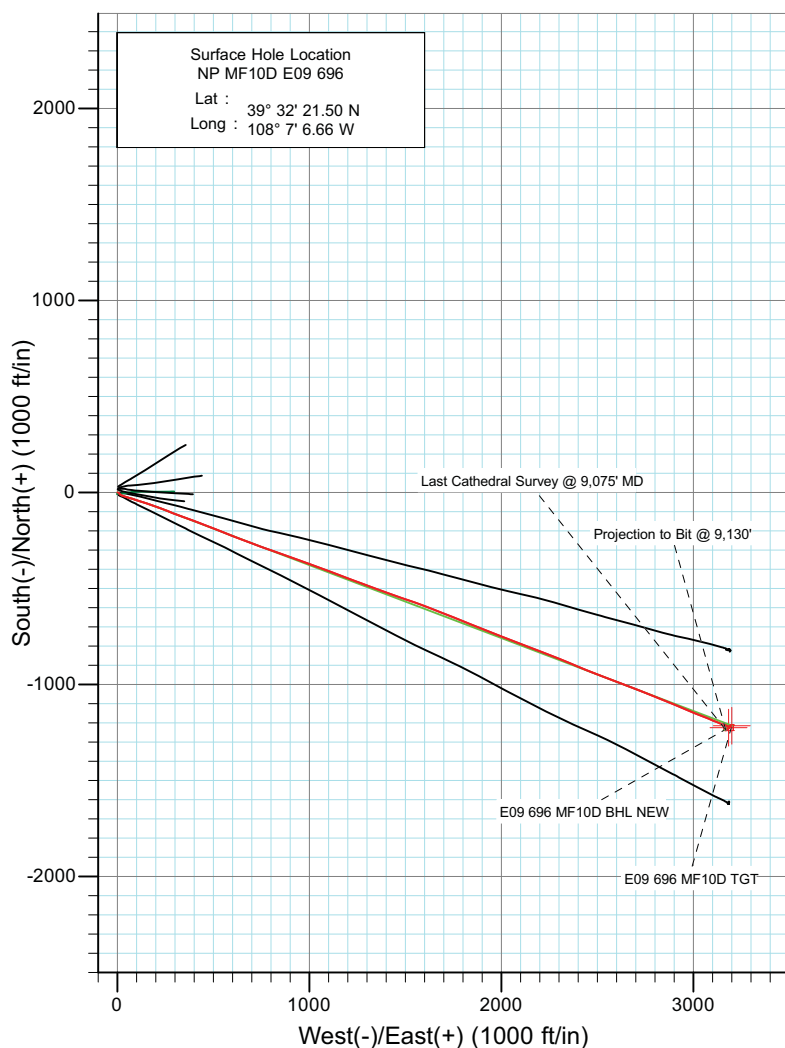
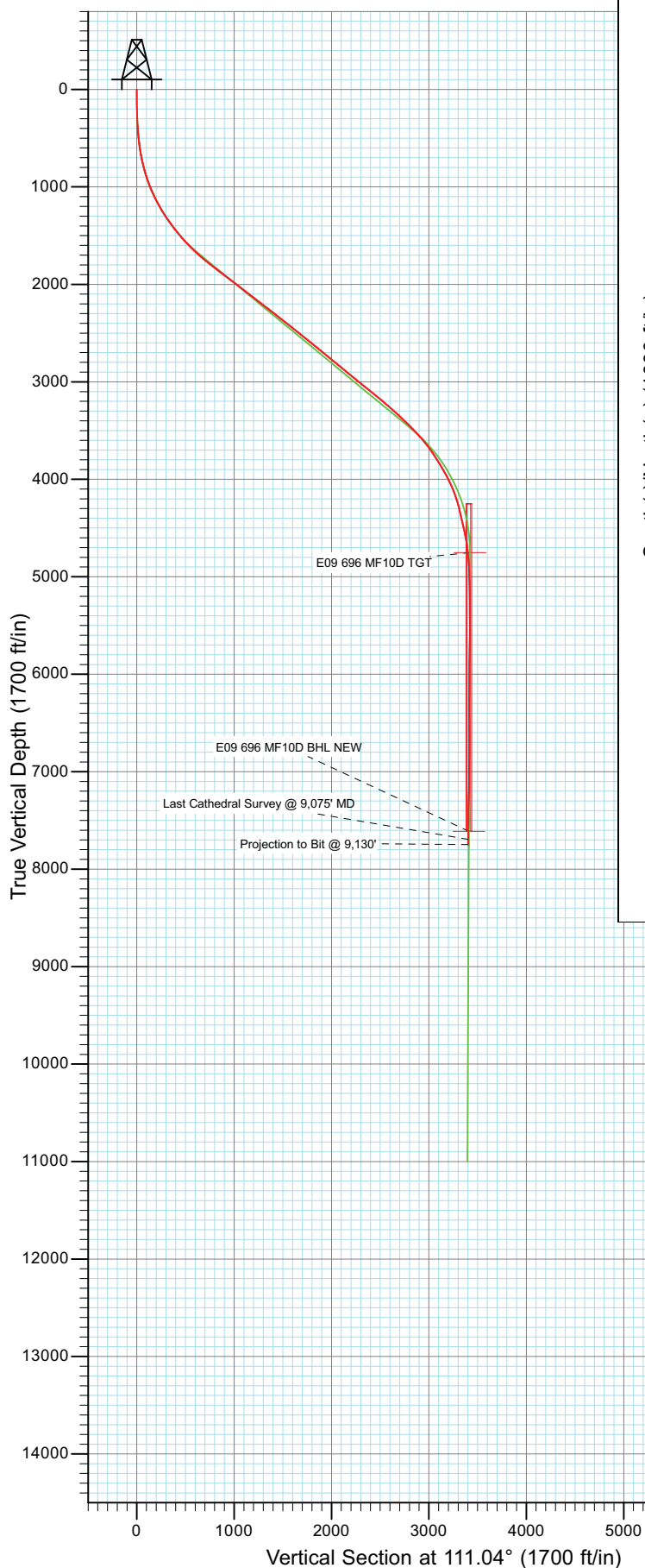




Project: North Piceance
 Site: E09 696 (SWNW S9-T6S-R96W)
 Well: NP MF10D E09 696
 Wellbore: DD
 Design: FINAL



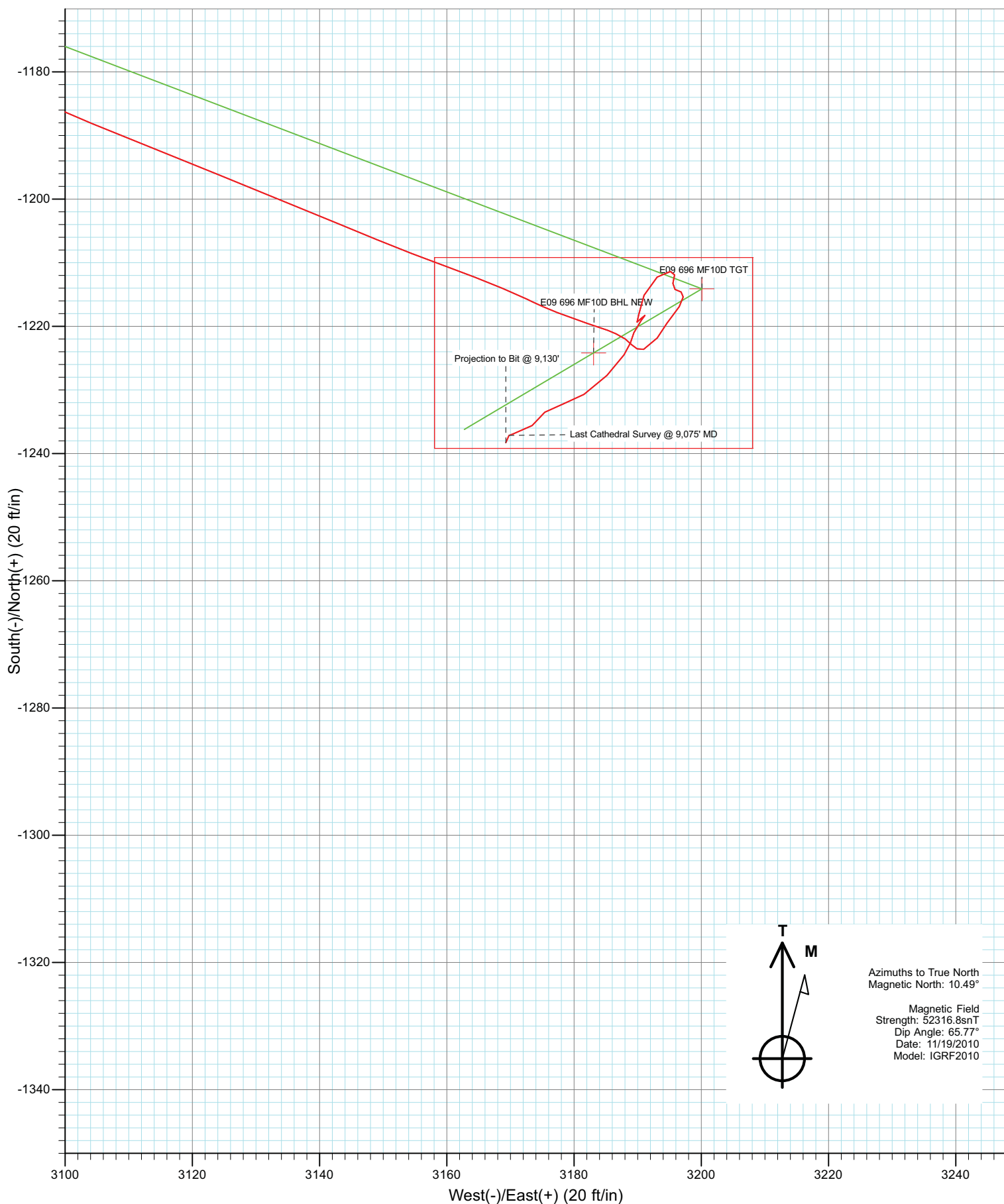
Azimuths to True North
 Magnetic North: 10.49°

Magnetic Field
 Strength: 52316.8nT
 Dip Angle: 65.77°
 Date: 11/19/2010
 Model: IGRF2010

DD NP MF10D E09 696 105483 (SH), 105515 (MH); LR						
WELL @ 5772.0ft (Patterson 326) Ground Elevation 5739.0 North American Datum 1983 Well NP MF10D E09 696, True North						
Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
Target	E09 696 MF10D BHL NEW	111.04	Slot	0.0	0.0	0.0
Name	TV	+N/-S	+E/-W	Latitude	Longitude	
E09 696 MF10D BHL NEW	7612.0	-1224.2	3183.1	39° 32' 9.40 N	108° 6' 26.03 W	



Project: North Piceance
Site: E09 696 (SWNW S9-T6S-R96W)
Well: NP MF10D E09 696
Wellbore: DD
Design: FINAL



Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF10D E09 696
Project:	North Piceance	TVD Reference:	WELL @ 5772.0ft (Patterson 326)
Site:	E09 696 (SWNW S9-T6S-R96W)	MD Reference:	WELL @ 5772.0ft (Patterson 326)
Well:	NP MF10D E09 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	E09 696 (SWNW S9-T6S-R96W)			
Site Position:		Northing:	1,632,140.57 ft	Latitude: 39° 32' 23.23 N
From:	Lat/Long	Easting:	2,261,634.68 ft	Longitude: 108° 7' 6.47 W
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in	Grid Convergence: -1.65 °

Well	NP MF10D E09 696			
Well Position	+N/-S	0.0 ft	Northing:	1,631,966.05 ft
	+E/-W	0.0 ft	Easting:	2,261,614.79 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level: 5,739.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/19/2010	10.49	65.77	52,317

Design	DD			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	111.04

Survey Program	Date	11/29/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
17.0	376.0	Survey #1 (DD)	Gyro	Gyro
419.0	9,130.0	Survey #2 (DD)	MWD	Geolink MWD

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Formations /
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Comments
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	
376.0	3.96	142.24	375.7	-3.7	9.2	9.9	0.00	0.00	
419.0	4.60	142.80	418.6	-6.3	11.1	12.6	1.49	1.49	
449.0	4.70	139.50	448.5	-8.2	12.7	14.7	0.95	0.33	
480.0	5.30	126.90	479.4	-10.0	14.6	17.2	4.02	1.94	
511.0	5.80	122.50	510.3	-11.7	17.1	20.1	2.12	1.61	
542.0	6.50	119.10	541.1	-13.4	19.9	23.4	2.54	2.26	
574.0	7.40	116.70	572.9	-15.2	23.4	27.3	2.95	2.81	
606.0	8.40	108.80	604.6	-16.9	27.4	31.6	4.61	3.12	
669.0	10.60	108.80	666.7	-20.2	37.3	42.0	3.49	3.49	
732.0	12.10	106.20	728.4	-23.9	49.1	54.4	2.52	2.38	
795.0	14.00	107.30	789.8	-28.0	62.7	68.6	3.04	3.02	
858.0	16.50	107.30	850.6	-33.0	78.5	85.1	3.97	3.97	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF10D E09 696
Project:	North Piceance	TVD Reference:	WELL @ 5772.0ft (Patterson 326)
Site:	E09 696 (SWNW S9-T6S-R96W)	MD Reference:	WELL @ 5772.0ft (Patterson 326)
Well:	NP MF10D E09 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
921.0	18.80	107.40	910.6	-38.7	96.8	104.2	3.65	3.65	
984.0	20.90	107.10	969.9	-45.0	117.2	125.5	3.34	3.33	
1,049.0	22.90	108.50	1,030.2	-52.4	140.3	149.7	3.18	3.08	
1,111.0	25.30	108.00	1,086.8	-60.3	164.3	175.0	3.88	3.87	
1,174.0	27.20	110.20	1,143.3	-69.5	190.6	202.9	3.39	3.02	
1,237.0	29.50	110.20	1,198.7	-79.8	218.7	232.8	3.65	3.65	
1,300.0	31.60	110.70	1,253.0	-91.0	248.7	264.8	3.36	3.33	
1,363.0	33.40	112.90	1,306.1	-103.6	280.1	298.6	3.42	2.86	
1,427.0	35.60	109.80	1,358.9	-116.8	313.9	334.9	4.40	3.44	
1,490.0	37.20	110.90	1,409.6	-129.8	348.9	372.3	2.74	2.54	
1,558.0	38.70	108.90	1,463.2	-144.0	388.2	414.1	2.85	2.21	
1,653.0	41.70	111.30	1,535.7	-165.1	445.8	475.3	3.55	3.16	
1,748.0	44.10	111.50	1,605.3	-188.7	506.0	540.0	2.53	2.53	
1,843.0	47.10	111.50	1,671.8	-213.6	569.2	607.9	3.16	3.16	
1,937.0	49.90	111.30	1,734.1	-239.2	634.7	678.3	2.98	2.98	
2,032.0	52.70	111.00	1,793.5	-266.0	703.8	752.4	2.96	2.95	
2,127.0	51.90	109.90	1,851.6	-292.2	774.3	827.6	1.24	-0.84	
2,222.0	52.60	109.00	1,909.7	-317.3	845.1	902.6	1.05	0.74	
2,316.0	53.00	109.60	1,966.5	-342.0	915.8	977.5	0.66	0.43	
2,411.0	52.90	109.20	2,023.8	-367.2	987.3	1,053.3	0.35	-0.11	
2,506.0	52.20	109.80	2,081.5	-392.4	1,058.4	1,128.7	0.89	-0.74	
2,600.0	52.50	111.70	2,139.0	-418.7	1,128.0	1,203.1	1.63	0.32	
2,695.0	53.50	111.10	2,196.1	-446.4	1,198.6	1,279.0	1.17	1.05	
2,789.0	52.40	109.90	2,252.8	-472.7	1,268.9	1,354.0	1.55	-1.17	
2,884.0	52.30	110.20	2,310.8	-498.5	1,339.5	1,429.2	0.27	-0.11	
2,979.0	51.70	109.40	2,369.3	-523.8	1,409.9	1,504.0	0.92	-0.63	
3,074.0	50.30	109.00	2,429.1	-548.1	1,479.7	1,577.8	1.51	-1.47	
3,168.0	51.20	109.50	2,488.6	-572.1	1,548.4	1,650.6	1.04	0.96	
3,263.0	50.80	110.90	2,548.3	-597.6	1,617.7	1,724.4	1.22	-0.42	
3,358.0	51.30	111.40	2,608.1	-624.3	1,686.6	1,798.3	0.67	0.53	
3,453.0	51.90	112.00	2,667.1	-651.8	1,755.8	1,872.7	0.80	0.63	
3,548.0	51.00	112.00	2,726.3	-679.6	1,824.6	1,947.0	0.95	-0.95	
3,642.0	50.90	112.30	2,785.5	-707.1	1,892.3	2,020.0	0.27	-0.11	
3,737.0	50.30	111.10	2,845.8	-734.3	1,960.5	2,093.4	1.16	-0.63	
3,832.0	49.20	111.20	2,907.2	-760.5	2,028.1	2,165.9	1.16	-1.16	
3,927.0	51.00	110.70	2,968.1	-786.5	2,096.1	2,238.8	1.94	1.89	
4,021.0	51.60	110.50	3,026.9	-812.3	2,164.8	2,312.1	0.66	0.64	
4,116.0	51.50	111.70	3,086.0	-839.1	2,234.2	2,386.5	0.99	-0.11	
4,211.0	51.60	112.20	3,145.0	-866.9	2,303.2	2,460.9	0.43	0.11	
4,306.0	48.50	112.40	3,206.0	-894.5	2,370.6	2,533.7	3.27	-3.26	
4,401.0	49.40	112.90	3,268.4	-922.1	2,436.7	2,605.3	1.03	0.95	
4,495.0	47.80	110.80	3,330.6	-948.4	2,502.1	2,675.8	2.39	-1.70	
4,590.0	45.00	110.30	3,396.1	-972.5	2,566.5	2,744.6	2.97	-2.95	
4,685.0	45.30	111.70	3,463.1	-996.7	2,629.4	2,811.9	1.09	0.32	
4,780.0	43.60	110.90	3,530.9	-1,020.8	2,691.4	2,878.5	1.88	-1.79	
4,874.0	39.70	110.70	3,601.1	-1,043.0	2,749.8	2,940.9	4.15	-4.15	
4,969.0	36.50	112.80	3,675.9	-1,064.7	2,804.2	2,999.5	3.63	-3.37	
5,064.0	33.50	111.70	3,753.7	-1,085.4	2,854.6	3,054.0	3.23	-3.16	
5,159.0	31.50	112.40	3,833.8	-1,104.5	2,902.0	3,105.0	2.14	-2.11	
5,253.0	30.10	114.00	3,914.6	-1,123.5	2,946.2	3,153.1	1.73	-1.49	
5,348.0	27.20	112.10	3,997.9	-1,141.3	2,988.1	3,198.6	3.20	-3.05	
5,443.0	23.30	111.40	4,083.8	-1,156.3	3,025.7	3,239.1	4.12	-4.11	
5,538.0	18.10	111.10	4,172.7	-1,168.5	3,057.0	3,272.7	5.47	-5.47	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF10D E09 696
Project:	North Piceance	TVD Reference:	WELL @ 5772.0ft (Patterson 326)
Site:	E09 696 (SWNW S9-T6S-R96W)	MD Reference:	WELL @ 5772.0ft (Patterson 326)
Well:	NP MF10D E09 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
5,632.0	15.70	113.30	4,262.6	-1,178.8	3,082.3	3,300.0	2.64	-2.55	
5,727.0	13.20	112.60	4,354.6	-1,188.1	3,104.1	3,323.7	2.64	-2.63	
5,822.0	13.00	111.50	4,447.1	-1,196.1	3,124.1	3,345.2	0.34	-0.21	
5,916.0	12.10	113.00	4,538.9	-1,203.9	3,143.0	3,365.7	1.02	-0.96	
6,011.0	9.70	109.90	4,632.1	-1,210.5	3,159.7	3,383.6	2.60	-2.53	
6,106.0	7.20	115.00	4,726.1	-1,215.7	3,172.6	3,397.6	2.74	-2.63	
6,201.0	4.40	107.30	4,820.6	-1,219.3	3,181.5	3,407.1	3.05	-2.95	
6,296.0	2.20	114.70	4,915.4	-1,221.2	3,186.6	3,412.6	2.35	-2.32	
6,390.0	1.50	140.30	5,009.4	-1,222.9	3,189.0	3,415.5	1.13	-0.74	
6,484.0	1.40	79.20	5,103.4	-1,223.6	3,191.0	3,417.5	1.57	-0.11	
6,580.0	2.20	32.20	5,199.3	-1,221.8	3,193.1	3,418.9	1.68	0.83	
6,675.0	1.20	34.90	5,294.3	-1,219.5	3,194.6	3,419.5	1.06	-1.05	
6,769.0	0.60	41.30	5,388.3	-1,218.3	3,195.5	3,419.9	0.65	-0.64	
6,864.0	1.50	34.00	5,483.3	-1,216.9	3,196.5	3,420.3	0.96	0.95	
6,959.0	0.60	353.10	5,578.2	-1,215.4	3,197.2	3,420.4	1.18	-0.95	
7,053.0	0.50	315.50	5,672.2	-1,214.6	3,196.8	3,419.8	0.39	-0.11	
7,148.0	0.80	278.40	5,767.2	-1,214.2	3,195.9	3,418.7	0.53	0.32	
7,243.0	1.10	20.80	5,862.2	-1,213.2	3,195.6	3,418.1	1.57	0.32	
7,337.0	0.60	351.90	5,956.2	-1,211.9	3,195.8	3,417.8	0.68	-0.53	
7,432.0	0.70	274.30	6,051.2	-1,211.4	3,195.2	3,417.0	0.86	0.11	
7,527.0	2.10	238.20	6,146.2	-1,212.2	3,193.1	3,415.4	1.67	1.47	
7,621.0	2.50	197.90	6,240.1	-1,215.1	3,191.0	3,414.5	1.73	0.43	
7,716.0	1.30	189.10	6,335.1	-1,218.1	3,190.2	3,414.8	1.30	-1.26	
7,811.0	0.20	220.10	6,430.0	-1,219.3	3,189.9	3,415.0	1.19	-1.16	
7,905.0	1.10	45.80	6,524.0	-1,218.8	3,190.5	3,415.3	1.38	0.96	
8,000.0	0.10	149.70	6,619.0	-1,218.3	3,191.2	3,415.8	1.19	-1.05	
8,095.0	1.20	220.80	6,714.0	-1,219.1	3,190.5	3,415.5	1.23	1.16	
8,190.0	1.50	203.30	6,809.0	-1,221.0	3,189.4	3,415.1	0.53	0.32	
8,284.0	0.60	186.80	6,903.0	-1,222.6	3,188.9	3,415.2	1.00	-0.96	
8,379.0	2.00	213.80	6,998.0	-1,224.5	3,187.9	3,415.0	1.57	1.47	
8,474.0	3.10	223.50	7,092.9	-1,227.7	3,185.2	3,413.6	1.24	1.16	
8,569.0	2.60	238.90	7,187.7	-1,230.7	3,181.6	3,411.3	0.96	-0.53	
8,663.0	1.70	255.40	7,281.7	-1,232.1	3,178.4	3,408.9	1.15	-0.96	
8,758.0	2.30	238.50	7,376.6	-1,233.5	3,175.4	3,406.6	0.88	0.63	
8,853.0	1.40	198.70	7,471.6	-1,235.6	3,173.4	3,405.4	1.60	-0.95	
9,042.0	1.50	289.70	7,660.5	-1,236.9	3,170.3	3,403.1	1.09	0.05	
9,075.0	1.30	203.60	7,693.5	-1,237.1	3,169.8	3,402.6	5.81	-0.61	Last Cathedral Survey @ 9,075' MD
9,130.0	1.30	203.60	7,748.5	-1,238.3	3,169.3	3,402.6	0.00	0.00	Projection to Bit @ 9,130'

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF10D E09 696
Project:	North Piceance	TVD Reference:	WELL @ 5772.0ft (Patterson 326)
Site:	E09 696 (SWNW S9-T6S-R96W)	MD Reference:	WELL @ 5772.0ft (Patterson 326)
Well:	NP MF10D E09 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									
E09 696 MF10D TGT	0.00	0.00	4,752.0	-1,214.1	3,200.1	1,630,660.24	2,264,778.57	39° 32' 9.50 N	108° 6' 25.81 W
- survey misses target center by 24.7ft at 6134.3ft MD (4754.2 TVD, -1217.1 N, 3175.6 E)									
- Point									
E09 696 MF10D BHL NF	0.00	0.00	7,612.0	-1,224.2	3,183.1	1,630,650.66	2,264,761.28	39° 32' 9.40 N	108° 6' 26.03 W
- survey misses target center by 17.5ft at 8993.2ft MD (7611.7 TVD, -1237.2 N, 3171.4 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									

Survey Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
9,075.0	7,693.5	-1,237.1	3,169.8	Last Cathedral Survey @ 9,075' MD
9,130.0	7,748.5	-1,238.3	3,169.3	Projection to Bit @ 9,130'

Checked By: _____	Approved By: _____	Date: _____
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