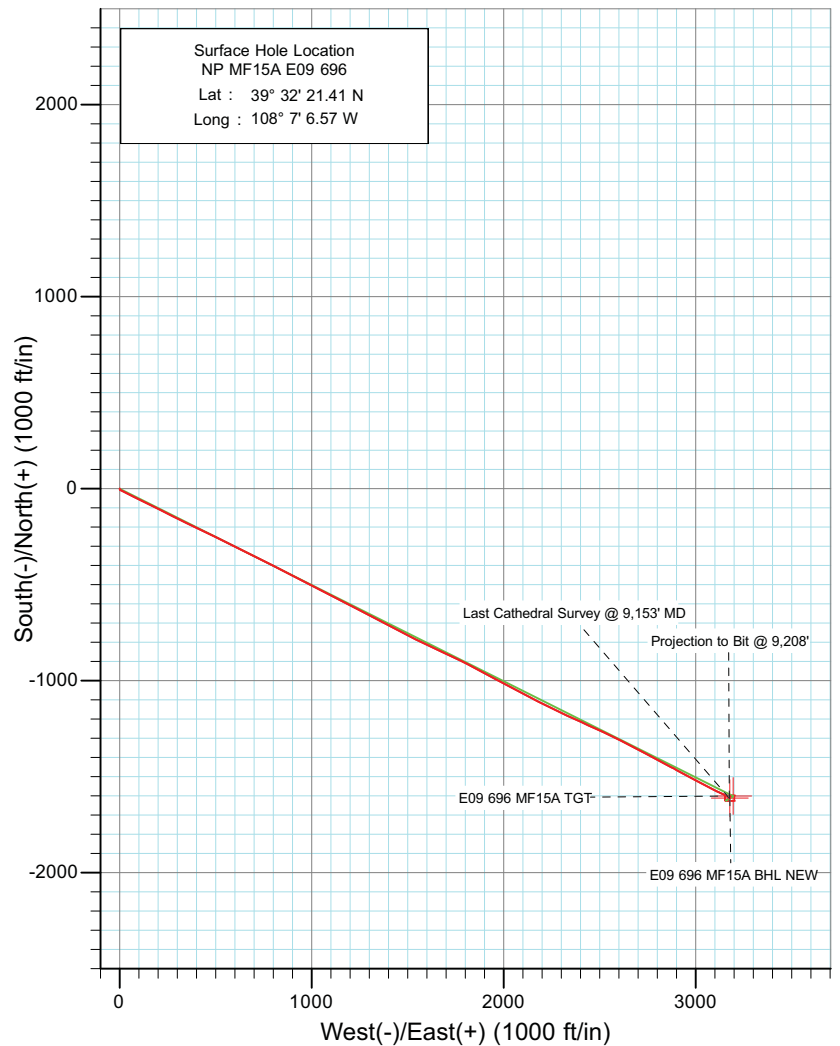
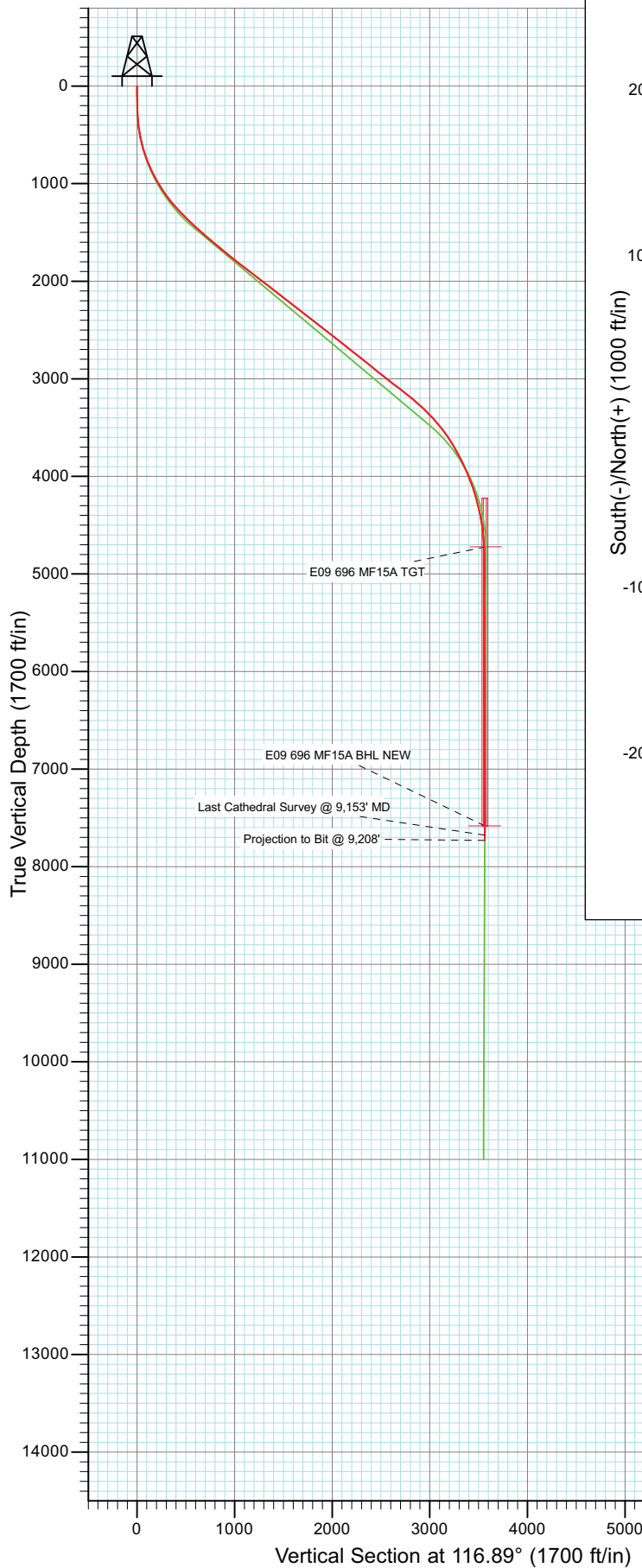




Project: North Piceance
 Site: E09 696 (SWNW S9-T6S-R96W)
 Well: NP MF15A E09 696
 Wellbore: DD
 Design: FINAL



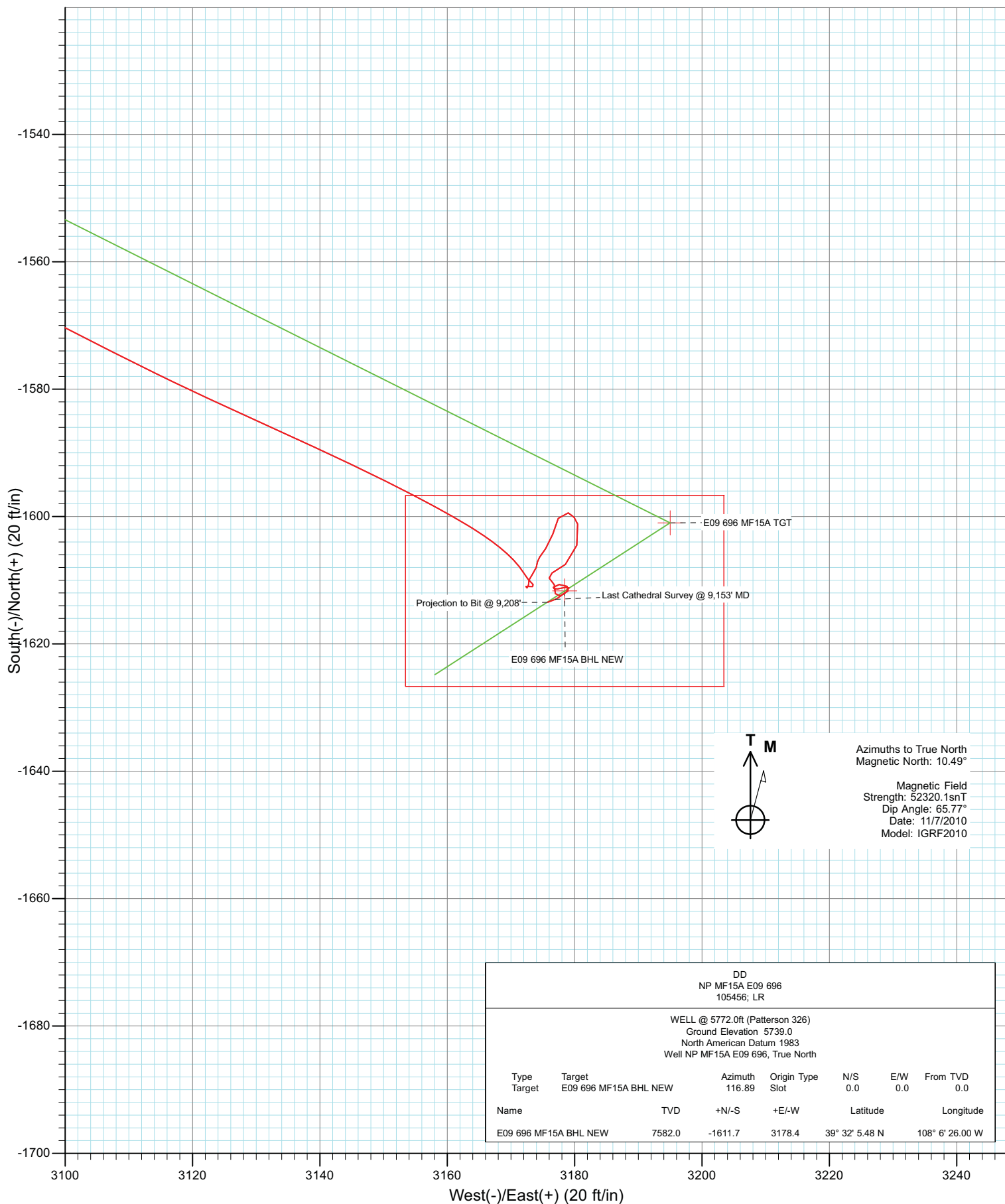
Azimuths to True North
 Magnetic North: 10.49°

Magnetic Field
 Strength: 52320.1nT
 Dip Angle: 65.77°
 Date: 11/7/2010
 Model: IGRF2010

DD NP MF15A E09 696 105456; LR						
WELL @ 5772.0ft (Patterson 326) Ground Elevation 5739.0 North American Datum 1983 Well NP MF15A E09 696, True North						
Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
Target	E09 696 MF15A BHL NEW	116.89	Slot	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
E09 696 MF15A BHL NEW	7582.0	-1611.7	3178.4	39° 32' 5.48 N	108° 6' 26.00 W	



Project: North Piceance
 Site: E09 696 (SWNW S9-T6S-R96W)
 Well: NP MF15A E09 696
 Wellbore: DD
 Design: DD



Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF15A 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 MF15A 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 MF15A E09 696					
Well Position	+N/-S	0.0 ft	Northing:	1,631,956.74 ft	Latitude:	39° 32' 21.41 N
	+E/-W	0.0 ft	Easting:	2,261,621.58 ft	Longitude:	108° 7' 6.57 W
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	11/7/2010	10.49	65.77	52,320

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	116.89	

Survey Program	Date	11/16/2010			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
234.0	9,208.0	Survey #1 (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		
234.0	2.20	155.50	233.9	-4.1	1.9	3.5	0.94	0.94		
264.0	2.90	141.00	263.9	-5.2	2.6	4.7	3.16	2.33		
295.0	3.30	117.20	294.9	-6.2	3.9	6.3	4.31	1.29		
326.0	3.90	119.50	325.8	-7.1	5.6	8.2	1.99	1.94		
357.0	4.70	118.60	356.7	-8.3	7.6	10.5	2.59	2.58		
387.0	5.80	112.50	386.6	-9.4	10.1	13.3	4.11	3.67		
418.0	7.30	112.40	417.4	-10.8	13.4	16.8	4.84	4.84		
449.0	8.30	114.70	448.1	-12.5	17.2	21.0	3.38	3.23		
510.0	10.80	118.40	508.3	-17.0	26.2	31.1	4.22	4.10		
573.0	13.10	118.70	569.9	-23.3	37.7	44.1	3.65	3.65		
637.0	15.60	118.60	631.9	-30.9	51.6	60.0	3.91	3.91		
700.0	18.50	116.30	692.1	-39.4	68.0	78.5	4.73	4.60		

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF15A 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 MF15A 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
763.0	20.80	116.50	751.4	-48.8	87.0	99.6	3.65	3.65	
826.0	23.20	115.10	809.8	-59.0	108.2	123.2	3.90	3.81	
889.0	25.60	115.90	867.2	-70.2	131.7	149.3	3.85	3.81	
953.0	27.70	116.80	924.4	-83.0	157.4	178.0	3.34	3.28	
1,016.0	29.80	116.10	979.6	-96.5	184.6	208.3	3.38	3.33	
1,079.0	31.90	117.50	1,033.7	-111.1	213.4	240.6	3.52	3.33	
1,142.0	34.80	116.10	1,086.3	-126.7	244.3	275.2	4.76	4.60	
1,205.0	36.80	116.70	1,137.4	-143.1	277.3	312.0	3.22	3.17	
1,268.0	39.10	116.40	1,187.1	-160.4	312.0	350.8	3.66	3.65	
1,332.0	41.40	116.70	1,236.0	-178.8	349.0	392.1	3.61	3.59	
1,395.0	43.50	115.30	1,282.4	-197.5	387.2	434.6	3.66	3.33	
1,458.0	44.50	117.20	1,327.8	-216.8	426.4	478.4	2.63	1.59	
1,505.0	46.00	115.60	1,360.9	-231.7	456.3	511.8	4.00	3.19	
1,556.0	47.20	113.90	1,395.9	-247.2	490.0	548.8	3.38	2.35	
1,619.0	47.70	116.30	1,438.5	-266.9	532.0	595.2	2.92	0.79	
1,682.0	48.10	116.60	1,480.7	-287.7	573.9	641.9	0.73	0.63	
1,746.0	48.90	117.00	1,523.1	-309.3	616.6	689.9	1.33	1.25	
1,840.0	49.50	116.70	1,584.6	-341.4	680.1	761.0	0.68	0.64	
1,935.0	49.80	116.50	1,646.1	-373.9	744.9	833.4	0.35	0.32	
2,030.0	51.30	116.40	1,706.4	-406.5	810.5	906.8	1.58	1.58	
2,125.0	51.60	116.70	1,765.6	-439.7	877.0	981.1	0.40	0.32	
2,219.0	52.60	116.90	1,823.4	-473.2	943.2	1,055.2	1.08	1.06	
2,314.0	52.80	117.60	1,881.0	-507.8	1,010.4	1,130.8	0.62	0.21	
2,409.0	51.70	117.30	1,939.1	-542.4	1,077.0	1,205.9	1.18	-1.16	
2,503.0	52.00	118.20	1,997.2	-576.8	1,142.5	1,279.8	0.82	0.32	
2,598.0	51.70	117.50	2,055.9	-611.7	1,208.5	1,354.5	0.66	-0.32	
2,692.0	52.60	117.80	2,113.5	-646.2	1,274.3	1,428.7	0.99	0.96	
2,787.0	53.10	118.00	2,170.9	-681.6	1,341.2	1,504.4	0.55	0.53	
2,882.0	51.70	117.60	2,228.9	-716.7	1,407.8	1,579.7	1.51	-1.47	
2,977.0	52.70	116.90	2,287.1	-751.1	1,474.5	1,654.8	1.20	1.05	
3,071.0	52.00	116.10	2,344.5	-784.3	1,541.1	1,729.2	1.00	-0.74	
3,166.0	52.00	115.20	2,403.0	-816.7	1,608.6	1,804.0	0.75	0.00	
3,261.0	52.90	114.60	2,460.9	-848.4	1,676.9	1,879.3	1.07	0.95	
3,356.0	51.40	115.50	2,519.2	-880.2	1,744.8	1,954.3	1.75	-1.58	
3,450.0	51.40	117.50	2,577.8	-912.9	1,810.6	2,027.7	1.66	0.00	
3,545.0	51.70	118.20	2,636.9	-947.7	1,876.4	2,102.1	0.66	0.32	
3,640.0	51.50	117.70	2,695.9	-982.6	1,942.1	2,176.5	0.46	-0.21	
3,735.0	52.30	118.30	2,754.5	-1,017.7	2,008.1	2,251.3	0.98	0.84	
3,830.0	51.50	118.60	2,813.2	-1,053.3	2,073.9	2,326.0	0.88	-0.84	
3,924.0	51.20	116.90	2,871.9	-1,087.5	2,138.8	2,399.4	1.45	-0.32	
4,019.0	50.70	116.50	2,931.7	-1,120.6	2,204.7	2,473.2	0.62	-0.53	
4,114.0	52.30	115.50	2,990.9	-1,153.2	2,271.6	2,547.5	1.87	1.68	
4,209.0	52.20	114.80	3,049.0	-1,185.1	2,339.6	2,622.6	0.59	-0.11	
4,303.0	52.40	115.00	3,106.5	-1,216.5	2,407.0	2,696.9	0.27	0.21	
4,398.0	51.60	114.00	3,165.0	-1,247.5	2,475.1	2,771.7	1.18	-0.84	
4,493.0	49.60	115.30	3,225.3	-1,278.1	2,541.9	2,845.1	2.36	-2.11	
4,588.0	47.40	116.80	3,288.2	-1,309.3	2,605.8	2,916.2	2.60	-2.32	
4,683.0	44.70	118.20	3,354.2	-1,340.9	2,666.4	2,984.6	3.03	-2.84	
4,777.0	41.70	117.90	3,422.7	-1,371.1	2,723.2	3,048.9	3.20	-3.19	
4,872.0	38.50	118.10	3,495.3	-1,399.9	2,777.2	3,110.1	3.37	-3.37	
4,967.0	35.50	118.00	3,571.2	-1,426.8	2,827.7	3,167.2	3.16	-3.16	
5,062.0	32.30	117.10	3,650.0	-1,451.3	2,874.7	3,220.2	3.41	-3.37	
5,156.0	29.50	119.20	3,730.7	-1,474.0	2,917.2	3,268.5	3.19	-2.98	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF15A 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 MF15A 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
5,251.0	26.90	118.10	3,814.4	-1,495.5	2,956.6	3,313.3	2.79	-2.74	
5,346.0	24.40	118.20	3,900.0	-1,514.9	2,992.9	3,354.4	2.63	-2.63	
5,440.0	22.90	117.30	3,986.1	-1,532.5	3,026.2	3,392.1	1.64	-1.60	
5,535.0	20.00	116.50	4,074.6	-1,548.2	3,057.2	3,426.9	3.07	-3.05	
5,630.0	17.20	118.00	4,164.6	-1,562.1	3,084.1	3,457.2	2.99	-2.95	
5,725.0	14.70	116.70	4,255.9	-1,574.1	3,107.3	3,483.3	2.66	-2.63	
5,819.0	12.00	114.30	4,347.4	-1,583.5	3,126.9	3,505.0	2.93	-2.87	
5,914.0	11.00	115.30	4,440.5	-1,591.4	3,144.1	3,523.9	1.07	-1.05	
6,009.0	8.50	118.60	4,534.1	-1,598.7	3,158.4	3,540.0	2.70	-2.63	
6,104.0	4.60	127.90	4,628.5	-1,604.4	3,167.6	3,550.7	4.24	-4.11	
6,199.0	2.40	147.80	4,723.3	-1,608.4	3,171.7	3,556.2	2.61	-2.32	
6,293.0	1.20	129.00	4,817.2	-1,610.7	3,173.5	3,558.8	1.41	-1.28	
6,388.0	1.10	289.10	4,912.2	-1,611.0	3,173.4	3,558.9	2.38	-0.11	
6,483.0	0.40	212.00	5,007.2	-1,611.0	3,172.4	3,558.0	1.14	-0.74	
6,578.0	0.40	81.90	5,102.2	-1,611.2	3,172.5	3,558.2	0.76	0.00	
6,672.0	0.50	349.60	5,196.2	-1,610.8	3,172.8	3,558.2	0.69	0.11	
6,767.0	0.50	21.00	5,291.2	-1,610.0	3,172.8	3,557.9	0.28	0.00	
6,862.0	0.90	36.00	5,386.2	-1,609.0	3,173.4	3,558.0	0.46	0.42	
6,956.0	0.50	16.70	5,480.2	-1,608.0	3,174.0	3,558.1	0.49	-0.43	
7,051.0	0.60	10.40	5,575.2	-1,607.1	3,174.2	3,557.8	0.12	0.11	
7,146.0	0.40	42.70	5,670.2	-1,606.4	3,174.5	3,557.8	0.36	-0.21	
7,240.0	1.60	34.00	5,764.2	-1,605.0	3,175.5	3,558.0	1.28	1.28	
7,335.0	1.50	17.40	5,859.1	-1,602.7	3,176.6	3,558.0	0.48	-0.11	
7,429.0	1.70	20.90	5,953.1	-1,600.3	3,177.4	3,557.7	0.24	0.21	
7,524.0	1.40	114.40	6,048.1	-1,599.4	3,179.0	3,558.7	2.39	-0.32	
7,619.0	1.60	161.50	6,143.0	-1,601.2	3,180.5	3,560.8	1.28	0.21	
7,714.0	2.60	195.20	6,238.0	-1,604.5	3,180.3	3,562.2	1.63	1.05	
7,808.0	1.90	231.80	6,331.9	-1,607.5	3,178.6	3,561.9	1.66	-0.74	
7,903.0	1.10	247.70	6,426.9	-1,608.9	3,176.5	3,560.7	0.94	-0.84	
8,000.0	0.70	138.90	6,523.9	-1,609.7	3,176.0	3,560.6	1.53	-0.41	
8,095.0	0.90	145.70	6,618.9	-1,610.7	3,176.8	3,561.8	0.23	0.21	
8,190.0	1.00	195.90	6,713.9	-1,612.1	3,177.0	3,562.6	0.85	0.11	
8,284.0	1.30	64.60	6,807.8	-1,612.5	3,177.7	3,563.4	2.23	0.32	
8,379.0	0.50	40.70	6,902.8	-1,611.7	3,179.0	3,564.2	0.91	-0.84	
8,474.0	0.70	313.50	6,997.8	-1,611.0	3,178.8	3,563.7	0.88	0.21	
8,569.0	1.00	262.10	7,092.8	-1,610.7	3,177.6	3,562.5	0.83	0.32	
8,663.0	0.40	197.10	7,186.8	-1,611.1	3,176.7	3,561.9	0.96	-0.64	
8,758.0	0.90	84.50	7,281.8	-1,611.3	3,177.3	3,562.6	1.18	0.53	
8,853.0	0.60	72.60	7,376.8	-1,611.1	3,178.5	3,563.5	0.35	-0.32	
8,947.0	0.30	152.50	7,470.8	-1,611.2	3,179.1	3,564.1	0.66	-0.32	
9,042.0	0.90	232.90	7,565.8	-1,611.9	3,178.6	3,564.0	0.95	0.63	
9,137.0	1.10	235.10	7,660.8	-1,612.8	3,177.3	3,563.2	0.21	0.21	
9,153.0	1.40	249.20	7,676.8	-1,613.0	3,177.0	3,563.0	2.67	1.87	Last Cathedral Survey @ 9,153' MD Projection to Bit @ 9,208'
9,208.0	1.40	249.20	7,731.8	-1,613.5	3,175.7	3,562.1	0.00	0.00	

Cathedral Energy

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well NP MF15A 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 MF15A 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 MF15A BHL NE	0.00	0.00	7,582.0	-1,611.7	3,178.4	1,630,254.14	2,264,752.25	39° 32' 5.48 N	108° 6' 26.00 W
- survey misses target center by 0.4ft at 9058.2ft MD (7582.0 TVD, -1612.0 N, 3178.4 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
E09 696 MF15A TGT	0.00	0.00	4,722.0	-1,601.0	3,195.0	1,630,264.34	2,264,769.11	39° 32' 5.58 N	108° 6' 25.79 W
- survey misses target center by 24.5ft at 6198.4ft MD (4722.7 TVD, -1608.4 N, 3171.7 E)									
- Point									

Survey Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
9,153.0	7,676.8	-1,613.0	3,177.0	Last Cathedral Survey @ 9,153' MD
9,208.0	7,731.8	-1,613.5	3,175.7	Projection to Bit @ 9,208'

Checked By: _____ Approved By: _____ Date: _____