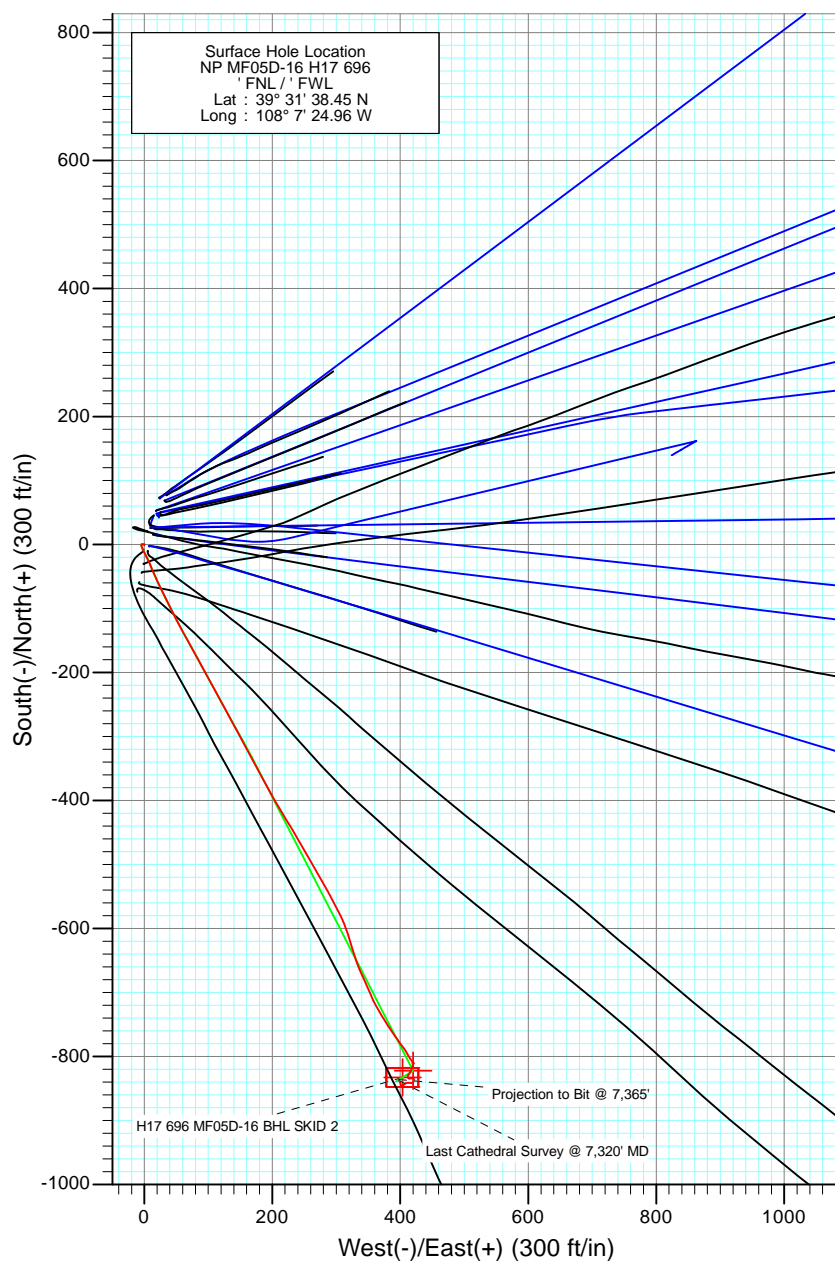
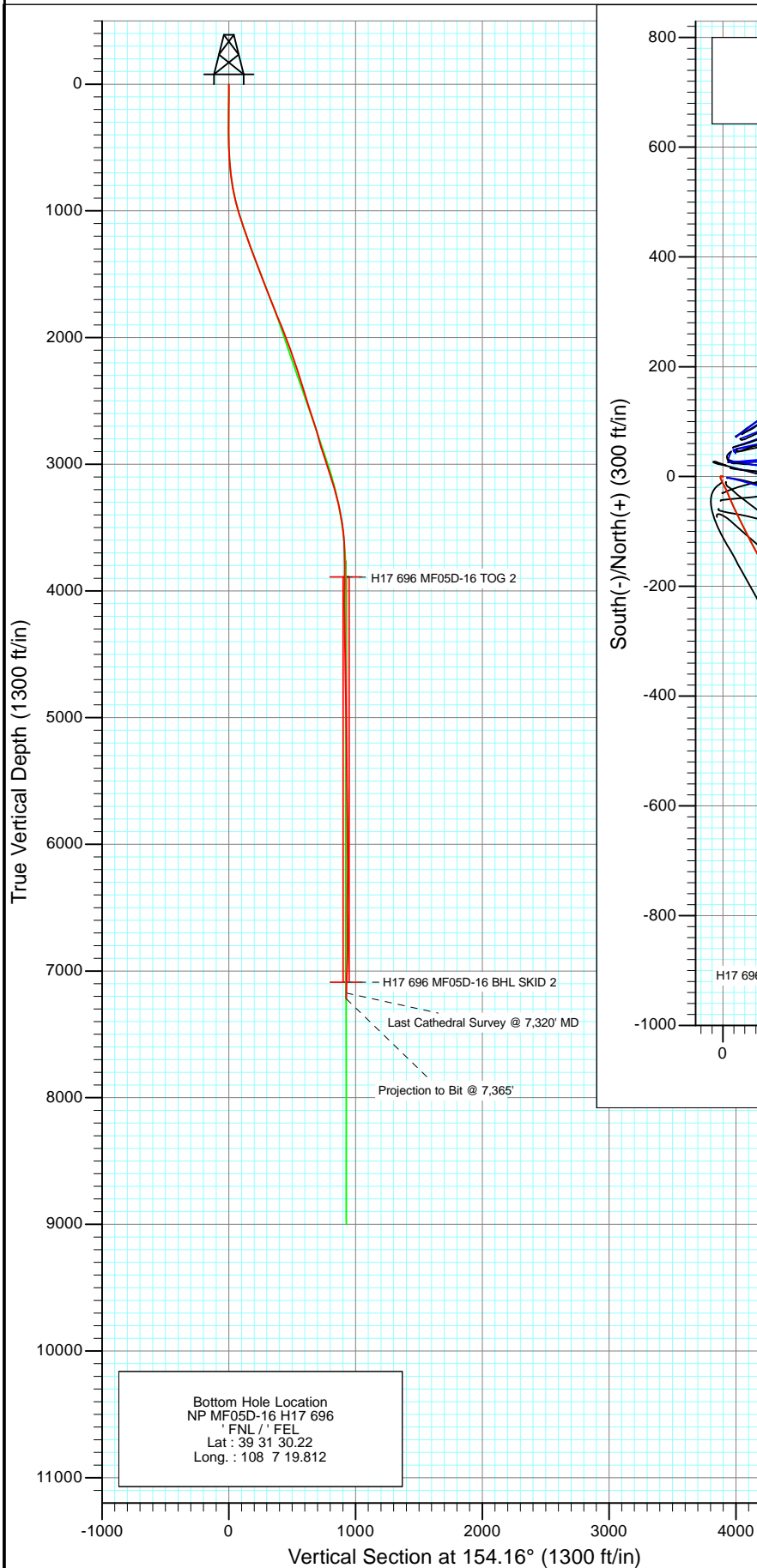




Project: North Piceance  
Site: H17 696 (S17-T6S-R96W)  
Well: NP MF05D-16 H17 696  
Wellbore: DD  
Design: FINAL



Azimuths to True North  
Magnetic North: 10.45°

Magnetic Field  
Strength: 52281.4snT  
Dip Angle: 65.75°  
Date: 3/4/2011  
Model: IGRF2010

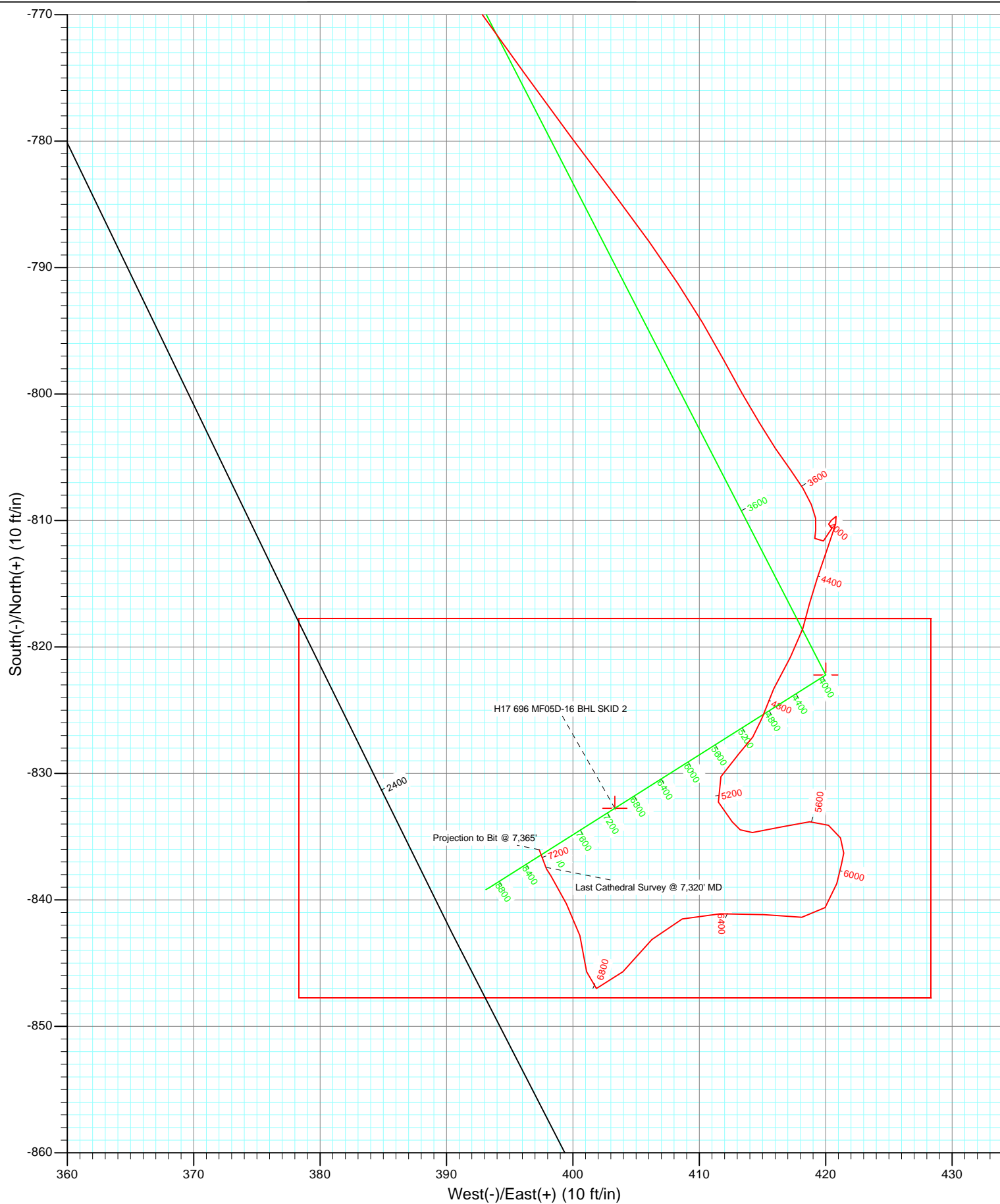
#### DESIGN DETAILS: DD

115086 (SH), 115114 (MH): LR  
KB MF05D-16 @ 5674.0ft (TBD)

Target	Azimuth	Origin	N/S	E/W	From TVD
Neefarget (Freehand)	154.16	Slot	0.0	0.0	0.0



Project: North Piceance  
Site: H17 696 (S17-T6S-R96W)  
Well: NP MF05D-16 H17 696  
Wellbore: DD  
Design: FINAL



## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP MF05D-16 H17 696
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	KB MF05D-16 @ 5674.0ft (TBD)
<b>Site:</b>	H17 696 (S17-T6S-R96W)	<b>MD Reference:</b>	KB MF05D-16 @ 5674.0ft (TBD)
<b>Well:</b>	NP MF05D-16 H17 696	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	EDM 5000.1 US Multi Users DB

<b>Project</b>	North Piceance		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	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 MF05D-16 H17 696					
Well Position	+N/-S	0.0 ft	Northing:	1,627,653.47 ft	Latitude:	39° 31' 38.45 N
	+E/-W	0.0 ft	Easting:	2,260,055.98 ft	Longitude:	108° 7' 24.96 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,652.0 ft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/4/2011	10.45	65.75	52,281

<b>Design</b>	DD				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	154.16	

<b>Survey Program</b>	<b>Date</b>	3/10/2011			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
30.0	1,680.0	Survey #1 (DD)	Gyro	Gyro	
1,756.0	7,365.0	Survey #2 (DD)	MWD	Geolink MWD	

<b>Survey</b>									
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
30.0	0.33	129.76	30.0	-0.1	0.1	0.1	1.10	1.10	
60.0	0.11	173.08	60.0	-0.1	0.1	0.2	0.87	-0.73	
90.0	0.23	352.05	90.0	-0.1	0.1	0.2	1.13	0.40	
120.0	0.55	309.66	120.0	0.0	0.0	0.0	1.37	1.07	
150.0	0.88	257.74	150.0	0.1	-0.3	-0.2	2.31	1.10	
201.0	0.70	287.60	201.0	0.1	-1.0	-0.5	0.87	-0.35	
231.0	1.00	282.20	231.0	0.2	-1.4	-0.8	1.03	1.00	
262.0	1.00	278.00	262.0	0.3	-2.0	-1.1	0.24	0.00	
292.0	1.00	283.80	292.0	0.4	-2.5	-1.4	0.34	0.00	
323.0	0.80	280.50	323.0	0.5	-3.0	-1.7	0.67	-0.65	
353.0	1.00	267.10	353.0	0.5	-3.4	-2.0	0.96	0.67	

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP MF05D-16 H17 696
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	KB MF05D-16 @ 5674.0ft (TBD)
<b>Site:</b>	H17 696 (S17-T6S-R96W)	<b>MD Reference:</b>	KB MF05D-16 @ 5674.0ft (TBD)
<b>Well:</b>	NP MF05D-16 H17 696	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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	1.00	268.40	383.0	0.5	-3.9	-2.2	0.08	0.00	
414.0	1.00	221.40	414.0	0.3	-4.4	-2.2	2.57	0.00	
445.0	1.40	196.30	445.0	-0.3	-4.7	-1.8	2.10	1.29	
476.0	1.80	177.80	475.9	-1.1	-4.8	-1.1	2.09	1.29	
507.0	2.40	161.80	506.9	-2.2	-4.5	0.0	2.69	1.94	
555.0	3.30	159.30	554.9	-4.5	-3.7	2.4	1.89	1.87	
601.0	4.30	154.90	600.8	-7.3	-2.5	5.4	2.26	2.17	
647.0	5.10	154.10	646.6	-10.7	-0.9	9.2	1.74	1.74	
693.0	6.20	152.00	692.4	-14.7	1.1	13.7	2.43	2.39	
738.0	7.60	152.20	737.1	-19.5	3.7	19.1	3.11	3.11	
784.0	9.00	156.30	782.6	-25.5	6.5	25.8	3.30	3.04	
830.0	10.30	157.80	827.9	-32.6	9.5	33.5	2.88	2.83	
876.0	12.00	156.80	873.1	-40.8	13.0	42.3	3.72	3.70	
922.0	13.70	155.50	917.9	-50.1	17.1	52.6	3.75	3.70	
968.0	15.00	155.30	962.5	-60.5	21.9	64.0	2.83	2.83	
1,014.0	16.40	153.50	1,006.7	-71.7	27.2	76.4	3.22	3.04	
1,059.0	17.80	153.20	1,049.8	-83.5	33.2	89.6	3.12	3.11	
1,105.0	17.90	153.50	1,093.5	-96.1	39.5	103.7	0.30	0.22	
1,151.0	18.80	154.10	1,137.2	-109.1	45.9	118.2	2.00	1.96	
1,197.0	19.40	151.80	1,180.7	-122.5	52.7	133.3	2.09	1.30	
1,242.0	19.60	151.40	1,223.1	-135.7	59.9	148.3	0.53	0.44	
1,288.0	20.00	150.70	1,266.4	-149.4	67.4	163.8	1.01	0.87	
1,334.0	20.10	151.70	1,309.6	-163.2	75.0	179.6	0.78	0.22	
1,380.0	20.50	151.40	1,352.7	-177.2	82.6	195.5	0.90	0.87	
1,426.0	20.80	151.70	1,395.8	-191.5	90.4	211.7	0.69	0.65	
1,471.0	20.90	151.00	1,437.8	-205.5	98.0	227.7	0.60	0.22	
1,517.0	21.20	151.20	1,480.8	-220.0	106.0	244.2	0.67	0.65	
1,563.0	20.80	151.40	1,523.7	-234.5	113.9	260.7	0.88	-0.87	
1,609.0	21.10	151.20	1,566.7	-248.9	121.8	277.1	0.67	0.65	
1,680.0	21.60	150.80	1,632.8	-271.5	134.4	302.9	0.73	0.70	Last Cathedral Survey @ 1,680' MD
1,756.0	21.70	152.80	1,703.4	-296.2	147.6	330.9	0.98	0.13	
1,802.0	21.50	151.70	1,746.2	-311.2	155.5	347.9	0.98	-0.43	
1,894.0	21.60	152.10	1,831.8	-341.0	171.4	381.6	0.19	0.11	
1,985.0	22.50	151.20	1,916.1	-371.1	187.6	415.8	1.06	0.99	
2,077.0	22.20	150.00	2,001.2	-401.6	204.8	450.7	0.59	-0.33	
2,168.0	19.70	148.20	2,086.2	-429.5	221.5	483.1	2.84	-2.75	
2,260.0	18.40	150.90	2,173.1	-455.3	236.7	513.0	1.71	-1.41	
2,351.0	18.40	148.30	2,259.5	-480.1	251.3	541.6	0.90	0.00	
2,443.0	17.10	151.80	2,347.1	-504.4	265.3	569.6	1.83	-1.41	
2,534.0	16.60	148.40	2,434.2	-527.3	278.4	595.9	1.21	-0.55	
2,626.0	18.30	153.20	2,522.0	-551.3	291.8	623.4	2.42	1.85	
2,718.0	18.00	152.40	2,609.4	-576.8	304.9	652.1	0.42	-0.33	
2,809.0	17.30	160.80	2,696.1	-602.1	315.9	679.6	2.90	-0.77	
2,901.0	15.70	164.70	2,784.3	-627.0	323.7	705.4	2.11	-1.74	
2,992.0	16.40	160.60	2,871.8	-651.0	331.2	730.3	1.46	0.77	
3,084.0	18.80	154.60	2,959.5	-676.6	341.9	758.0	3.27	2.61	
3,175.0	18.60	157.40	3,045.7	-703.3	353.7	787.1	1.01	-0.22	
3,267.0	17.10	149.20	3,133.3	-728.5	366.3	815.3	3.18	-1.63	
3,358.0	15.50	147.70	3,220.6	-750.2	379.6	840.7	1.82	-1.76	
3,450.0	13.10	144.70	3,309.7	-769.1	392.2	863.2	2.73	-2.61	
3,541.0	11.10	142.70	3,398.7	-784.5	403.5	881.9	2.25	-2.20	
3,633.0	8.10	151.90	3,489.4	-797.3	411.9	897.1	3.65	-3.26	
3,724.0	4.80	143.40	3,579.8	-806.0	417.2	907.3	3.77	-3.63	

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP MF05D-16 H17 696
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	KB MF05D-16 @ 5674.0ft (TBD)
<b>Site:</b>	H17 696 (S17-T6S-R96W)	<b>MD Reference:</b>	KB MF05D-16 @ 5674.0ft (TBD)
<b>Well:</b>	NP MF05D-16 H17 696	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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
3,816.0	2.10	190.20	3,671.7	-810.7	419.2	912.4	4.01	-2.93	
3,907.0	1.50	49.50	3,762.7	-811.6	419.8	913.5	3.73	-0.66	
3,999.0	0.40	307.40	3,854.6	-810.6	420.5	912.9	1.77	-1.20	
4,091.0	0.20	5.40	3,946.6	-810.3	420.2	912.4	0.37	-0.22	
4,182.0	0.30	54.60	4,037.6	-810.0	420.5	912.3	0.25	0.11	
4,274.0	0.30	43.90	4,129.6	-809.7	420.8	912.1	0.06	0.00	
4,365.0	1.00	193.90	4,220.6	-810.3	420.8	912.7	1.39	0.77	
4,457.0	1.50	202.00	4,312.6	-812.2	420.2	914.1	0.58	0.54	
4,548.0	1.60	195.90	4,403.6	-814.5	419.4	915.8	0.21	0.11	
4,640.0	1.10	198.90	4,495.6	-816.6	418.7	917.4	0.55	-0.54	
4,731.0	1.50	191.90	4,586.5	-818.6	418.2	919.0	0.47	0.44	
4,823.0	1.60	214.30	4,678.5	-820.8	417.2	920.6	0.66	0.11	
4,914.0	2.00	202.70	4,769.5	-823.3	415.9	922.3	0.59	0.44	
5,006.0	1.10	200.50	4,861.4	-825.6	415.0	923.9	0.98	-0.98	
5,097.0	1.00	211.10	4,952.4	-827.1	414.2	925.0	0.24	-0.11	
5,189.0	1.10	228.00	5,044.4	-828.4	413.2	925.7	0.35	0.11	
5,280.0	1.90	212.60	5,135.4	-830.3	411.7	926.7	0.98	0.88	
5,372.0	1.20	139.40	5,227.3	-832.3	411.5	928.4	2.10	-0.76	
5,463.0	1.20	150.40	5,318.3	-833.8	412.6	930.3	0.25	0.00	
5,555.0	1.40	90.60	5,410.3	-834.7	414.2	931.8	1.42	0.22	
5,646.0	1.70	69.70	5,501.3	-834.2	416.6	932.4	0.70	0.33	
5,738.0	1.10	95.40	5,593.2	-833.8	418.7	933.0	0.93	-0.65	
5,829.0	0.80	107.20	5,684.2	-834.1	420.2	933.9	0.39	-0.33	
5,921.0	1.10	157.30	5,776.2	-835.1	421.2	935.2	0.92	0.33	
6,012.0	0.50	190.90	5,867.2	-836.3	421.4	936.4	0.81	-0.66	
6,104.0	0.60	192.60	5,959.2	-837.2	421.3	937.1	0.11	0.11	
6,195.0	1.40	194.20	6,050.2	-838.7	420.9	938.3	0.88	0.88	
6,287.0	1.30	218.70	6,142.2	-840.6	420.0	939.6	0.63	-0.11	
6,378.0	1.50	271.70	6,233.1	-841.4	418.1	939.5	1.39	0.22	
6,469.0	2.30	275.50	6,324.1	-841.2	415.1	938.0	0.89	0.88	
6,561.0	2.00	266.30	6,416.0	-841.1	411.7	936.4	0.50	-0.33	
6,653.0	1.80	257.80	6,508.0	-841.5	408.7	935.5	0.38	-0.22	
6,744.0	2.10	216.90	6,598.9	-843.1	406.3	935.9	1.53	0.33	
6,836.0	2.20	227.00	6,690.9	-845.7	404.0	937.2	0.43	0.11	
6,928.0	1.00	261.90	6,782.8	-847.0	401.9	937.5	1.62	-1.30	
7,019.0	1.80	0.60	6,873.8	-845.7	401.1	936.0	2.40	0.88	
7,111.0	1.90	338.60	6,965.8	-842.8	400.6	933.1	0.77	0.11	
7,203.0	1.50	335.50	7,057.7	-840.3	399.5	930.4	0.45	-0.43	
7,294.0	1.70	327.00	7,148.7	-838.1	398.3	927.9	0.34	0.22	
7,315.0	1.70	327.00	7,169.7	-837.6	397.9	927.3	0.00	0.00	
7,320.0	1.90	339.60	7,174.7	-837.4	397.9	927.1	8.84	4.00	Last Cathedral Survey @ 7,320' MD
7,365.0	1.90	339.60	7,219.6	-836.0	397.3	925.6	0.00	0.00	Projection to Bit @ 7,365'

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well NP MF05D-16 H17 696
<b>Project:</b>	North Piceance	<b>TVD Reference:</b>	KB MF05D-16 @ 5674.0ft (TBD)
<b>Site:</b>	H17 696 (S17-T6S-R96W)	<b>MD Reference:</b>	KB MF05D-16 @ 5674.0ft (TBD)
<b>Well:</b>	NP MF05D-16 H17 696	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	DD	<b>Database:</b>	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 MF05D-16 BHL	0.00	0.00	7,089.0	-832.8	403.3	1,626,809.42	2,260,435.09	39° 31' 30.22 N	108° 7' 19.81 W
- actual wellpath misses target center by 8.0ft at 7234.4ft MD (7089.1 TVD, -839.6 N, 399.1 E)									
- Rectangle (sides W30.0 H50.0 D0.0)									
H17 696 MF05D-16 TOC	0.00	0.00	3,889.0	-822.2	420.0	1,626,819.47	2,260,452.08	39° 31' 30.32 N	108° 7' 19.60 W
- actual wellpath misses target center by 11.7ft at 4033.3ft MD (3889.0 TVD, -810.5 N, 420.3 E)									
- Point									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,680.0	1,632.8	-271.5	134.4	Last Cathedral Survey @ 1,680' MD
7,320.0	7,174.7	-837.4	397.9	Last Cathedral Survey @ 7,320' MD
7,365.0	7,219.6	-836.0	397.3	Projection to Bit @ 7,365'

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_