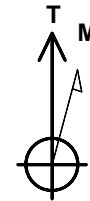
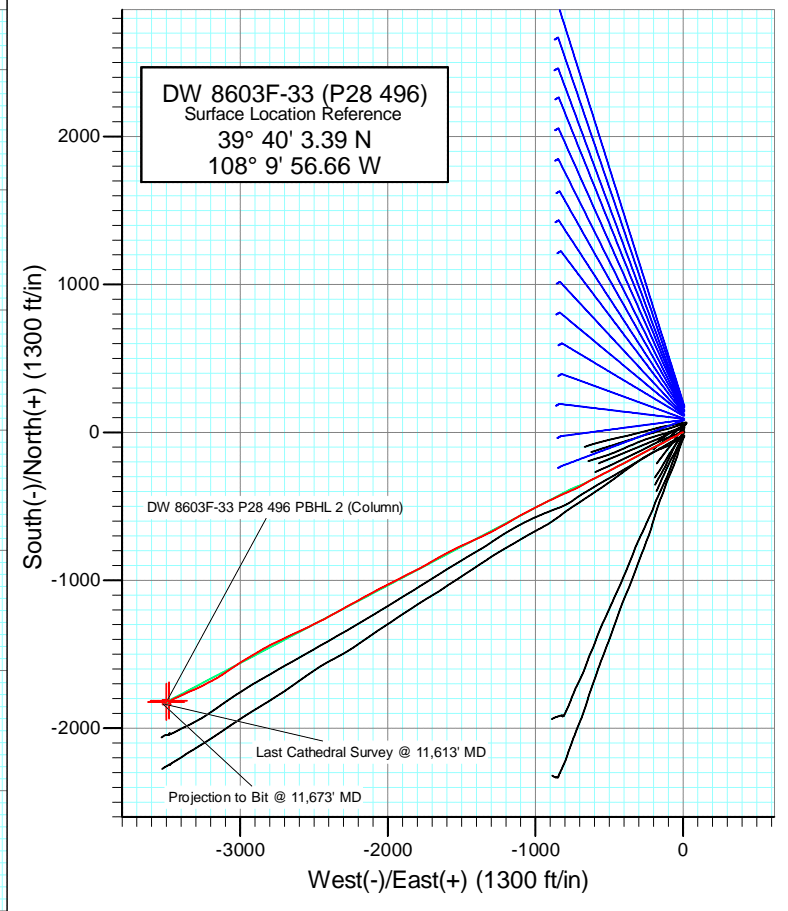




Project: Double Willow
 Site: S28-T4S-R96W (P28 496)(column pattern)
 Well: DW 8603F-33 (P28 496)
 Wellbore: DD
 Design: FINAL



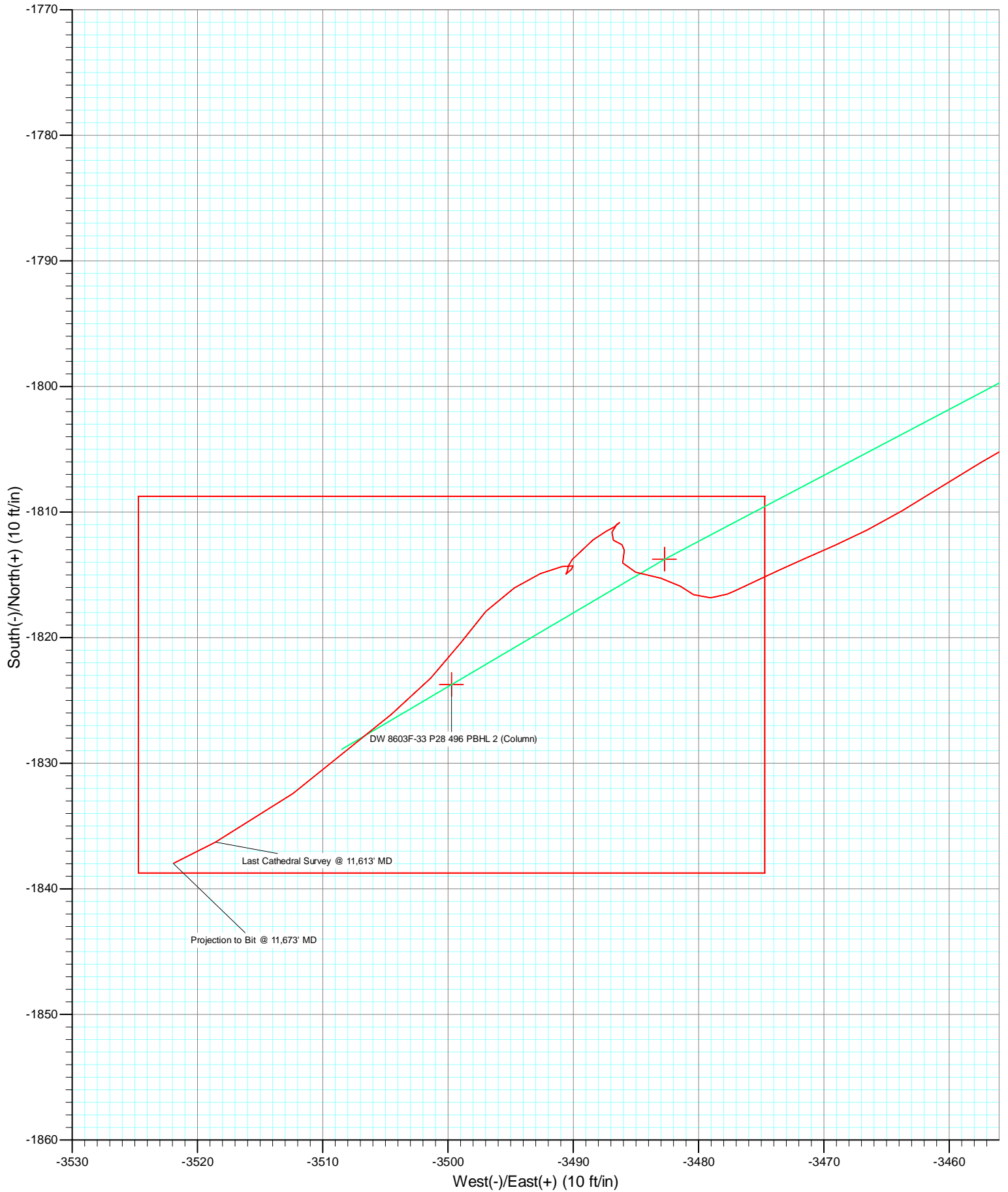
Azimuths to True North
 Magnetic North: 10.44°

Magnetic Field
 Strength: 52298.8snT
 Dip Angle: 65.85°
 Date: 7/13/2011
 Model: IGRF2010

DD DW 8603F-33 (P28 496) 115283 (SH); SC 115413/105955 (MH) SC						
KBE @ 7813.0ft (Patterson 308) North American Datum 1983 Well DW 8603F-33 (P28 496), True North						
Type Target	Target DW 8603F-33 P28 496 PBHL (Column)	Azimuth 242.48	Origin Type Slot	N/S 0.0	E/W 0.0	From TVD 0.0
Name		TVD	+N/-S	+E/-W	Latitude	Longitude
	DW 8603F-33 P28 496 TGT 3 (Column)	7556.3	-1813.8	-3482.7	39° 39' 45.46 N	108° 10' 41.20 W
	DW 8603F-33 P28 496 PBHL 2 (Column)	10483.0	-1823.7	-3499.7	39° 39' 45.36 N	108° 10' 41.41 W



Project: Double Willow
Site: S28-T4S-R96W (P28 496)(column pattern)
Well: DW 8603F-33 (P28 496)
Wellbore: DD
Design: FINAL



Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well DW 8603F-33 (P28 496)
Project:	Double Willow	TVD Reference:	KBE @ 7813.0ft (Patterson 308)
Site:	S28-T4S-R96W (P28 496)(column pattern)	MD Reference:	KBE @ 7813.0ft (Patterson 308)
Well:	DW 8603F-33 (P28 496)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

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

Site	S28-T4S-R96W (P28 496)(column pattern)			
Site Position:		Northing:	1,679,243.29 ft	Latitude: 39° 40' 5.13 N
From:	Lat/Long	Easting:	2,249,687.54 ft	Longitude: 108° 9' 56.55 W
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence: -1.68 °

Well	DW 8603F-33 (P28 496)			
Well Position	+N/-S	0.0 ft	Northing:	1,679,067.70 ft
	+E/-W	0.0 ft	Easting:	2,249,673.40 ft
Position Uncertainty	0.0 ft		Wellhead Elevation:	ft
			Ground Level:	7,780.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/13/2011	10.44	65.85	52,299

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	242.48

Survey Program	Date	9/23/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
175.0	2,062.0	Survey #1 (DD)	MWD	Geolink MWD	
2,162.0	11,673.0	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	
175.0	1.40	267.00	175.0	-0.1	-2.1	1.9	0.80	0.80	
206.0	1.60	260.30	206.0	-0.2	-2.9	2.7	0.86	0.65	
236.0	2.10	262.20	236.0	-0.3	-3.9	3.6	1.68	1.67	
267.0	2.50	257.90	266.9	-0.6	-5.1	4.8	1.40	1.29	
297.0	2.90	259.20	296.9	-0.8	-6.5	6.2	1.35	1.33	
328.0	3.60	255.40	327.8	-1.2	-8.2	7.9	2.36	2.26	
359.0	4.00	250.40	358.8	-1.8	-10.2	9.9	1.67	1.29	
389.0	4.70	246.20	388.7	-2.7	-12.3	12.1	2.56	2.33	
420.0	5.40	241.90	419.6	-3.9	-14.7	14.9	2.57	2.26	
450.0	5.90	238.20	449.4	-5.4	-17.3	17.8	2.06	1.67	
481.0	6.50	235.70	480.2	-7.2	-20.1	21.2	2.12	1.94	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well DW 8603F-33 (P28 496)
Project:	Double Willow	TVD Reference:	KBE @ 7813.0ft (Patterson 308)
Site:	S28-T4S-R96W (P28 496)(column pattern)	MD Reference:	KBE @ 7813.0ft (Patterson 308)
Well:	DW 8603F-33 (P28 496)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 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
511.0	7.30	234.60	510.0	-9.3	-23.1	24.7	2.70	2.67	
541.0	8.20	236.10	539.8	-11.6	-26.4	28.7	3.07	3.00	
571.0	8.90	236.20	569.4	-14.0	-30.1	33.2	2.33	2.33	
606.0	9.70	237.80	604.0	-17.1	-34.8	38.8	2.40	2.29	
636.0	10.30	239.00	633.5	-19.8	-39.3	44.0	2.12	2.00	
667.0	11.00	240.50	664.0	-22.7	-44.2	49.7	2.43	2.26	
698.0	12.00	244.20	694.3	-25.6	-49.7	55.9	4.01	3.23	
728.0	12.90	245.90	723.6	-28.3	-55.6	62.4	3.24	3.00	
758.0	13.80	245.10	752.8	-31.2	-61.9	69.3	3.06	3.00	
789.0	14.50	245.00	782.9	-34.4	-68.7	76.8	2.26	2.26	
820.0	15.50	244.50	812.8	-37.8	-76.0	84.9	3.25	3.23	
850.0	16.30	242.10	841.7	-41.5	-83.3	93.1	3.45	2.67	
880.0	17.10	241.00	870.4	-45.6	-90.9	101.7	2.87	2.67	
910.0	17.90	240.20	899.0	-50.0	-98.8	110.7	2.78	2.67	
940.0	19.00	240.40	927.5	-54.7	-107.0	120.2	3.67	3.67	
972.0	19.20	239.40	957.7	-60.0	-116.1	130.7	1.20	0.62	
1,003.0	20.30	238.80	986.9	-65.4	-125.1	141.1	3.61	3.55	
1,033.0	21.30	241.40	1,014.9	-70.7	-134.3	151.8	4.54	3.33	
1,064.0	22.60	243.70	1,043.7	-76.0	-144.6	163.3	5.03	4.19	
1,095.0	24.00	245.50	1,072.2	-81.3	-155.7	175.6	5.07	4.52	
1,125.0	24.60	245.80	1,099.5	-86.4	-166.9	187.9	2.04	2.00	
1,156.0	25.40	245.00	1,127.6	-91.8	-178.8	201.0	2.80	2.58	
1,187.0	26.20	243.60	1,155.5	-97.7	-191.0	214.5	3.24	2.58	
1,217.0	27.20	242.90	1,182.3	-103.7	-203.0	228.0	3.49	3.33	
1,247.0	28.20	242.40	1,208.9	-110.1	-215.4	241.9	3.42	3.33	
1,293.0	29.60	241.50	1,249.2	-120.6	-235.0	264.1	3.19	3.04	
1,339.0	31.20	241.40	1,288.8	-131.7	-255.5	287.4	3.48	3.48	
1,384.0	31.90	241.40	1,327.2	-143.0	-276.1	311.0	1.56	1.56	
1,430.0	31.80	241.90	1,366.2	-154.5	-297.5	335.2	0.61	-0.22	
1,476.0	32.30	241.90	1,405.2	-166.0	-319.0	359.6	1.09	1.09	
1,522.0	33.20	242.60	1,443.9	-177.6	-341.0	384.5	2.12	1.96	
1,568.0	33.00	242.70	1,482.5	-189.1	-363.4	409.6	0.45	-0.43	
1,613.0	33.20	243.10	1,520.2	-200.3	-385.2	434.2	0.66	0.44	
1,659.0	33.00	242.10	1,558.7	-211.9	-407.5	459.3	1.26	-0.43	
1,705.0	33.30	242.70	1,597.2	-223.6	-429.8	484.5	0.97	0.65	
1,751.0	32.70	242.40	1,635.8	-235.1	-452.1	509.5	1.35	-1.30	
1,797.0	32.90	242.80	1,674.5	-246.6	-474.2	534.5	0.64	0.43	
1,843.0	32.50	242.70	1,713.2	-258.0	-496.3	559.3	0.88	-0.87	
1,889.0	32.60	243.30	1,751.9	-269.2	-518.3	584.1	0.73	0.22	
1,935.0	32.20	242.70	1,790.8	-280.4	-540.3	608.7	1.12	-0.87	
1,980.0	32.20	242.80	1,828.9	-291.4	-561.6	632.7	0.12	0.00	
2,062.0	31.90	243.20	1,898.4	-311.1	-600.4	676.2	0.45	-0.37	Last Cathedral Survey @ 2062' MD
2,162.0	28.30	240.70	1,984.9	-334.6	-644.7	726.3	3.81	-3.60	
2,208.0	26.20	238.30	2,025.8	-345.3	-662.8	747.4	5.15	-4.57	
2,254.0	26.30	241.50	2,067.0	-355.5	-680.4	767.7	3.08	0.22	
2,299.0	26.50	241.30	2,107.3	-365.1	-698.0	787.7	0.49	0.44	
2,345.0	26.50	242.30	2,148.5	-374.8	-716.1	808.2	0.97	0.00	
2,391.0	27.10	245.70	2,189.5	-383.9	-734.7	828.9	3.58	1.30	
2,437.0	28.10	246.40	2,230.3	-392.5	-754.2	850.2	2.29	2.17	
2,482.0	29.00	247.30	2,269.8	-401.0	-773.9	871.6	2.22	2.00	
2,528.0	30.20	247.20	2,309.8	-409.8	-794.9	894.3	2.61	2.61	
2,574.0	30.90	244.70	2,349.4	-419.3	-816.2	917.6	3.15	1.52	
2,620.0	32.00	242.90	2,388.7	-429.9	-837.8	941.6	3.14	2.39	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well DW 8603F-33 (P28 496)
Project:	Double Willow	TVD Reference:	KBE @ 7813.0ft (Patterson 308)
Site:	S28-T4S-R96W (P28 496)(column pattern)	MD Reference:	KBE @ 7813.0ft (Patterson 308)
Well:	DW 8603F-33 (P28 496)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 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
2,665.0	33.50	245.30	2,426.5	-440.5	-859.7	965.9	4.41	3.33	
2,711.0	36.20	247.00	2,464.3	-451.1	-883.7	992.2	6.24	5.87	
2,803.0	38.20	243.20	2,537.6	-474.6	-934.1	1,047.7	3.31	2.17	
2,894.0	37.50	242.50	2,609.4	-500.0	-983.8	1,103.5	0.90	-0.77	
2,986.0	38.10	243.00	2,682.1	-525.9	-1,033.9	1,159.9	0.73	0.65	
3,078.0	37.60	241.50	2,754.8	-552.1	-1,083.9	1,216.4	1.14	-0.54	
3,169.0	35.80	240.20	2,827.7	-578.6	-1,131.4	1,270.7	2.15	-1.98	
3,260.0	33.80	238.90	2,902.4	-604.9	-1,176.2	1,322.6	2.34	-2.20	
3,352.0	33.00	241.70	2,979.3	-630.0	-1,220.1	1,373.2	1.89	-0.87	
3,443.0	32.10	240.30	3,056.0	-653.7	-1,263.0	1,422.1	1.29	-0.99	
3,534.0	32.80	243.60	3,132.8	-676.7	-1,306.1	1,470.9	2.09	0.77	
3,626.0	31.60	244.70	3,210.6	-698.1	-1,350.2	1,519.9	1.45	-1.30	
3,717.0	33.70	246.10	3,287.2	-718.5	-1,394.8	1,569.0	2.45	2.31	
3,809.0	36.30	245.60	3,362.6	-740.1	-1,442.9	1,621.6	2.84	2.83	
3,900.0	35.20	245.50	3,436.4	-762.1	-1,491.3	1,674.7	1.21	-1.21	
3,992.0	34.10	243.20	3,512.1	-784.7	-1,538.5	1,727.0	1.86	-1.20	
4,083.0	33.80	243.00	3,587.6	-807.7	-1,583.8	1,777.8	0.35	-0.33	
4,175.0	32.90	242.00	3,664.5	-831.1	-1,628.7	1,828.4	1.15	-0.98	
4,266.0	30.50	239.60	3,741.9	-854.4	-1,670.4	1,876.2	2.98	-2.64	
4,358.0	32.30	239.60	3,820.4	-878.6	-1,711.8	1,924.1	1.96	1.96	
4,449.0	33.40	240.80	3,896.9	-903.1	-1,754.6	1,973.4	1.40	1.21	
4,541.0	34.90	243.20	3,973.0	-927.4	-1,800.2	2,025.0	2.19	1.63	
4,632.0	34.10	243.70	4,048.0	-950.4	-1,846.3	2,076.5	0.93	-0.88	
4,724.0	32.10	241.90	4,125.1	-973.3	-1,891.0	2,126.8	2.42	-2.17	
4,816.0	32.80	242.90	4,202.7	-996.2	-1,934.8	2,176.1	0.96	0.76	
4,907.0	34.10	243.60	4,278.6	-1,018.8	-1,979.5	2,226.3	1.49	1.43	
4,999.0	32.50	243.10	4,355.5	-1,041.4	-2,024.7	2,276.8	1.76	-1.74	
5,090.0	33.90	242.00	4,431.7	-1,064.4	-2,068.9	2,326.6	1.67	1.54	
5,182.0	32.40	241.20	4,508.7	-1,088.3	-2,113.2	2,376.9	1.70	-1.63	
5,273.0	31.70	241.70	4,585.8	-1,111.4	-2,155.6	2,425.2	0.82	-0.77	
5,365.0	30.40	240.10	4,664.6	-1,134.5	-2,197.0	2,472.6	1.67	-1.41	
5,456.0	31.60	242.50	4,742.6	-1,157.0	-2,238.1	2,519.5	1.89	1.32	
5,548.0	33.30	241.40	4,820.3	-1,180.2	-2,281.7	2,568.8	1.96	1.85	
5,639.0	32.00	240.30	4,896.9	-1,204.1	-2,324.6	2,617.9	1.57	-1.43	
5,731.0	32.80	241.80	4,974.6	-1,227.9	-2,367.7	2,667.2	1.23	0.87	
5,822.0	30.80	240.60	5,051.9	-1,251.0	-2,409.7	2,715.1	2.30	-2.20	
5,914.0	31.90	243.30	5,130.5	-1,273.5	-2,452.0	2,763.0	1.94	1.20	
6,005.0	31.90	244.30	5,207.7	-1,294.7	-2,495.1	2,811.0	0.58	0.00	
6,097.0	31.40	243.20	5,286.1	-1,316.1	-2,538.4	2,859.3	0.83	-0.54	
6,189.0	32.30	245.50	5,364.2	-1,337.1	-2,582.2	2,907.8	1.64	0.98	
6,280.0	32.00	245.80	5,441.2	-1,357.1	-2,626.3	2,956.2	0.37	-0.33	
6,372.0	32.40	244.50	5,519.1	-1,377.7	-2,670.8	3,005.1	0.87	0.43	
6,464.0	32.40	244.70	5,596.8	-1,398.8	-2,715.3	3,054.4	0.12	0.00	
6,555.0	33.20	244.40	5,673.3	-1,420.0	-2,759.8	3,103.7	0.90	0.88	
6,647.0	34.20	242.50	5,749.8	-1,442.8	-2,805.5	3,154.7	1.58	1.09	
6,739.0	35.80	240.00	5,825.2	-1,468.2	-2,851.7	3,207.4	2.34	1.74	
6,831.0	34.60	239.00	5,900.4	-1,495.1	-2,897.4	3,260.4	1.45	-1.30	
6,922.0	33.40	239.40	5,975.8	-1,521.2	-2,941.1	3,311.2	1.34	-1.32	
7,014.0	34.90	237.80	6,051.9	-1,548.1	-2,985.2	3,362.7	1.90	1.63	
7,105.0	33.80	236.70	6,127.1	-1,575.9	-3,028.4	3,413.9	1.39	-1.21	
7,197.0	33.20	236.10	6,203.8	-1,604.0	-3,070.7	3,464.3	0.74	-0.65	
7,288.0	32.30	235.10	6,280.3	-1,631.8	-3,111.3	3,513.2	1.15	-0.99	
7,380.0	31.30	239.60	6,358.5	-1,657.9	-3,152.1	3,561.5	2.80	-1.09	

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well DW 8603F-33 (P28 496)
Project:	Double Willow	TVD Reference:	KBE @ 7813.0ft (Patterson 308)
Site:	S28-T4S-R96W (P28 496)(column pattern)	MD Reference:	KBE @ 7813.0ft (Patterson 308)
Well:	DW 8603F-33 (P28 496)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 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
7,471.0	29.10	243.60	6,437.2	-1,679.7	-3,192.3	3,607.2	3.28	-2.42	
7,563.0	28.30	240.60	6,517.9	-1,700.4	-3,231.3	3,651.4	1.79	-0.87	
7,654.0	25.70	245.20	6,598.9	-1,719.3	-3,268.0	3,692.7	3.66	-2.86	
7,746.0	22.30	245.20	6,683.0	-1,734.9	-3,302.0	3,730.0	3.70	-3.70	
7,838.0	19.90	247.00	6,768.8	-1,748.4	-3,332.3	3,763.1	2.70	-2.61	
7,929.0	17.10	245.80	6,855.1	-1,759.9	-3,358.7	3,791.9	3.11	-3.08	
8,021.0	15.10	244.50	6,943.5	-1,770.6	-3,381.9	3,817.4	2.21	-2.17	
8,112.0	13.40	245.80	7,031.7	-1,780.1	-3,402.2	3,839.7	1.90	-1.87	
8,203.0	10.80	245.00	7,120.7	-1,788.0	-3,419.6	3,858.8	2.86	-2.86	
8,295.0	10.90	246.90	7,211.0	-1,795.0	-3,435.4	3,876.1	0.40	0.11	
8,386.0	9.10	242.50	7,300.6	-1,801.7	-3,449.7	3,891.9	2.15	-1.98	
8,478.0	6.90	237.40	7,391.7	-1,808.1	-3,460.8	3,904.6	2.51	-2.39	
8,569.0	5.10	246.50	7,482.2	-1,812.6	-3,469.1	3,914.1	2.23	-1.98	
8,661.0	3.00	244.70	7,574.0	-1,815.3	-3,475.0	3,920.6	2.29	-2.28	
8,752.0	0.70	247.50	7,664.9	-1,816.5	-3,477.7	3,923.5	2.53	-2.53	
8,822.0	1.10	263.70	7,734.9	-1,816.8	-3,478.8	3,924.6	0.67	0.57	
8,839.0	1.10	257.50	7,751.9	-1,816.8	-3,479.1	3,924.9	0.70	0.00	
8,930.0	0.80	312.70	7,842.9	-1,816.6	-3,480.4	3,926.0	1.01	-0.33	
9,022.0	0.80	292.30	7,934.9	-1,815.9	-3,481.5	3,926.6	0.31	0.00	
9,113.0	1.30	291.90	8,025.9	-1,815.3	-3,483.0	3,927.7	0.55	0.55	
9,205.0	1.30	275.20	8,117.9	-1,814.8	-3,485.0	3,929.2	0.41	0.00	
9,297.0	0.80	0.50	8,209.9	-1,814.0	-3,486.1	3,929.8	1.60	-0.54	
9,388.0	0.50	18.00	8,300.9	-1,813.0	-3,485.9	3,929.2	0.39	-0.33	
9,480.0	0.40	280.40	8,392.8	-1,812.6	-3,486.1	3,929.2	0.74	-0.11	
9,571.0	0.60	309.80	8,483.8	-1,812.2	-3,486.8	3,929.6	0.35	0.22	
9,663.0	0.50	37.20	8,575.8	-1,811.6	-3,486.9	3,929.4	0.83	-0.11	
9,754.0	0.40	24.66	8,666.8	-1,811.0	-3,486.5	3,928.8	0.15	-0.11	
9,846.0	0.20	140.60	8,758.8	-1,810.8	-3,486.3	3,928.5	0.56	-0.22	
9,937.0	0.70	247.00	8,849.8	-1,811.2	-3,486.7	3,929.1	0.86	0.55	
10,029.0	1.80	235.20	8,941.8	-1,812.2	-3,488.4	3,931.1	1.22	1.20	
10,120.0	1.10	213.30	9,032.8	-1,813.8	-3,490.1	3,933.2	0.97	-0.77	
10,212.0	0.20	67.50	9,124.8	-1,814.4	-3,490.4	3,933.9	1.38	-0.98	
10,304.0	0.60	211.60	9,216.8	-1,814.8	-3,490.5	3,934.1	0.84	0.43	
10,395.0	0.40	34.80	9,307.8	-1,814.9	-3,490.6	3,934.2	1.10	-0.22	
10,486.0	0.10	149.50	9,398.8	-1,814.7	-3,490.4	3,933.9	0.50	-0.33	
10,578.0	0.40	35.70	9,490.8	-1,814.5	-3,490.1	3,933.7	0.49	0.33	
10,670.0	0.10	280.40	9,582.8	-1,814.3	-3,490.0	3,933.4	0.49	-0.33	
10,761.0	1.00	264.70	9,673.8	-1,814.3	-3,490.9	3,934.2	0.99	0.99	
10,853.0	1.30	242.10	9,765.7	-1,814.9	-3,492.6	3,936.0	0.58	0.33	
10,944.0	1.70	240.70	9,856.7	-1,816.0	-3,494.7	3,938.4	0.44	0.44	
11,036.0	2.00	221.90	9,948.7	-1,817.9	-3,497.0	3,941.3	0.73	0.33	
11,127.0	2.10	215.90	10,039.6	-1,820.4	-3,499.0	3,944.2	0.26	0.11	
11,310.0	2.90	230.20	10,222.4	-1,826.1	-3,504.5	3,951.8	0.55	0.44	
11,493.0	3.40	232.20	10,405.1	-1,832.4	-3,512.4	3,961.6	0.28	0.27	
11,613.0	3.60	243.30	10,524.9	-1,836.3	-3,518.6	3,968.9	0.59	0.17	Last Cathedral Survey @ 11,613' MD
11,673.0	3.60	243.30	10,584.8	-1,838.0	-3,521.9	3,972.7	0.00	0.00	Projection to Bit @ 11,673' MD

Survey Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well DW 8603F-33 (P28 496)
Project:	Double Willow	TVD Reference:	KBE @ 7813.0ft (Patterson 308)
Site:	S28-T4S-R96W (P28 496)(column pattern)	MD Reference:	KBE @ 7813.0ft (Patterson 308)
Well:	DW 8603F-33 (P28 496)	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	DD	Database:	USA EDM 5000 Multi Users DB

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
DW 8603F-33 P28 496 \uparrow - actual wellpath misses target center by 144.6ft at 7922.5ft MD (6848.9 TVD, -1759.1 N, -3357.0 E) - Point	0.00	0.00	6,803.0	-1,813.8	-3,482.7	1,677,356.91	2,246,138.97	39° 39' 45.46 N	108° 10' 41.20 W
DW 8603F-33 P28 496 \uparrow - actual wellpath misses target center by 8.6ft at 8643.8ft MD (7556.8 TVD, -1814.9 N, -3474.2 E) - Point	0.00	0.00	7,556.3	-1,813.8	-3,482.7	1,677,356.91	2,246,138.97	39° 39' 45.46 N	108° 10' 41.20 W
DW 8603F-33 P28 496 \uparrow - actual wellpath misses target center by 16.2ft at 8541.2ft MD (7454.6 TVD, -1811.5 N, -3466.8 E) - Point	0.00	0.00	7,453.0	-1,813.8	-3,482.7	1,677,356.91	2,246,138.97	39° 39' 45.46 N	108° 10' 41.20 W
DW 8603F-33 P28 496 \downarrow - actual wellpath misses target center by 18.8ft at 11549.8ft MD (10461.9 TVD, -1834.4 N, -3515.2 E) - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	10,463.0	-1,823.7	-3,499.7	1,677,347.42	2,246,121.68	39° 39' 45.36 N	108° 10' 41.41 W
DW 8603F-33 P28 496 \uparrow - actual wellpath misses target center by 9.0ft at 8637.5ft MD (7550.5 TVD, -1814.7 N, -3473.8 E) - Point	0.00	0.00	7,550.0	-1,813.8	-3,482.7	1,677,356.91	2,246,138.97	39° 39' 45.46 N	108° 10' 41.20 W
DW 8603F-33 P28 496 \downarrow - actual wellpath misses target center by 20.0ft at 11569.8ft MD (10481.8 TVD, -1835.0 N, -3516.2 E) - Rectangle (sides W30.0 H50.0 D0.0)	0.00	0.00	10,483.0	-1,823.7	-3,499.7	1,677,347.42	2,246,121.68	39° 39' 45.36 N	108° 10' 41.41 W

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
2,062.0	1,898.4	-311.1	-600.4	Last Cathedral Survey @ 2062' MD
11,613.0	10,524.9	-1,836.3	-3,518.6	Last Cathedral Survey @ 11,613' MD
11,673.0	10,584.8	-1,838.0	-3,521.9	Projection to Bit @ 11,673' MD

Checked By: _____	Approved By: _____	Date: _____
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