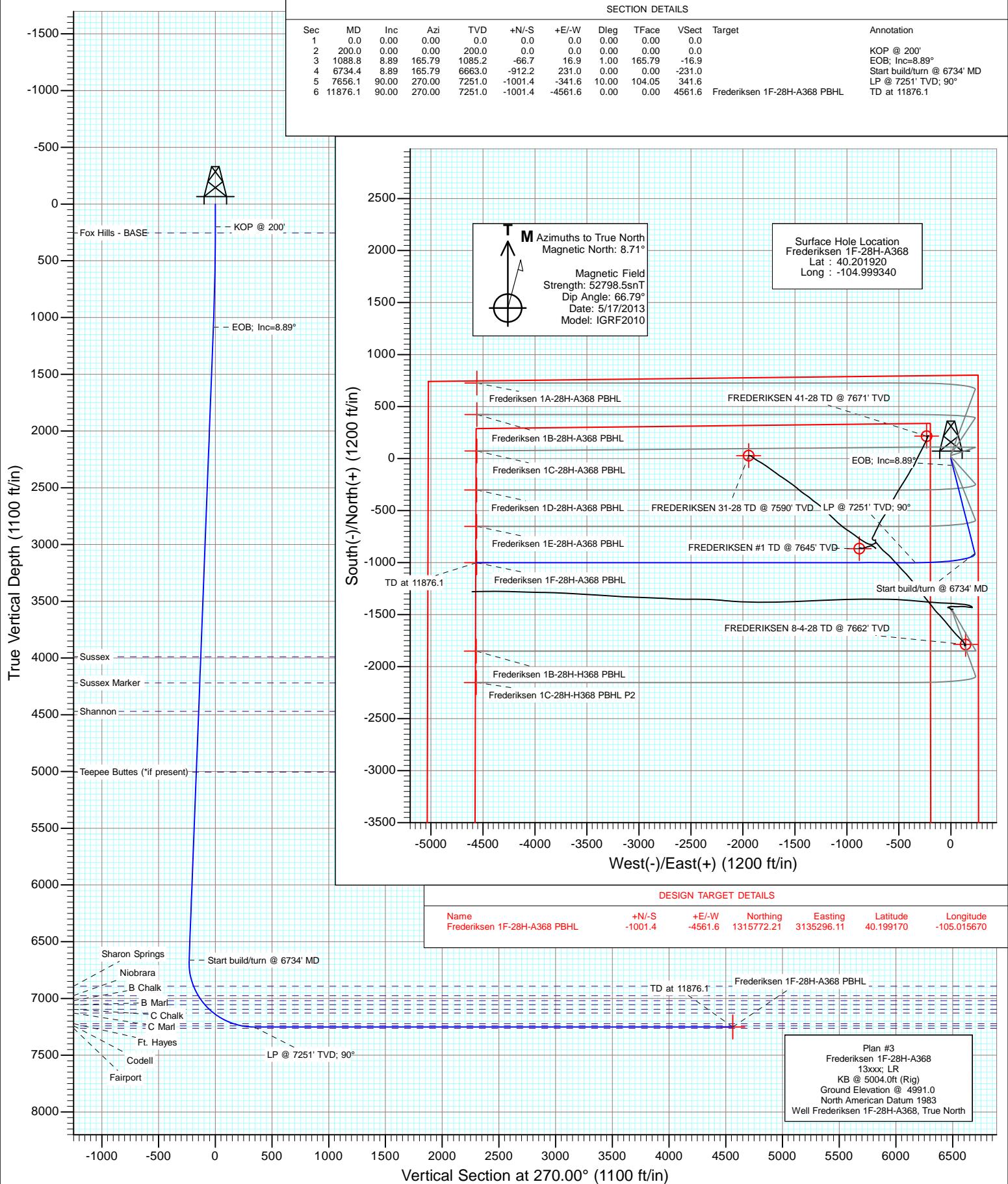




Project: DJ Wattenberg  
Site: S28-T3N-R68W (Frederiksen)  
Well: Frederiksen 1F-28H-A368  
Wellbore: Hz  
Design: Plan #3



## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>North Reference:</b>	True
<b>Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #3		

<b>Project</b>	DJ Wattenberg		
<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 Northern Zone		

Site		S28-T3N-R68W (Frederiksen)			
Site Position:		Northing:	1,315,349.57 ft	Latitude:	40.197940
From:	Lat/Long	Easting:	3,139,876.89 ft	Longitude:	-104.999280
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.32 °

Well	Frederiksen 1F-28H-A368					
Well Position	+N/-S	0.0 ft	Northing:	1,316,799.30 ft	Latitude:	40.201920
	+E/-W	0.0 ft	Easting:	3,139,851.94 ft	Longitude:	-104.999340
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,991.0 ft

<b>Wellbore</b>	Hz				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	5/17/2013	8.71	66.79	52,798

<b>Design</b>	Plan #3				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	270.00	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,088.8	8.89	165.79	1,085.2	-66.7	16.9	1.00	1.00	0.00	165.79	
6,734.4	8.89	165.79	6,663.0	-912.2	231.0	0.00	0.00	0.00	0.00	
7,656.1	90.00	270.00	7,251.0	-1,001.4	-341.6	10.00	8.80	11.31	104.05	
11,876.1	90.00	270.00	7,251.0	-1,001.4	-4,561.6	0.00	0.00	0.00	0.00	Frederiksen 1F-28H-4

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>North Reference:</b>	True
<b>Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #3		

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'
254.0	0.54	165.79	254.0	-0.2	0.1	-0.1	1.00	1.00	Fox Hills - BASE
300.0	1.00	165.79	300.0	-0.8	0.2	-0.2	1.00	1.00	
400.0	2.00	165.79	400.0	-3.4	0.9	-0.9	1.00	1.00	
500.0	3.00	165.79	499.9	-7.6	1.9	-1.9	1.00	1.00	
600.0	4.00	165.79	599.7	-13.5	3.4	-3.4	1.00	1.00	
700.0	5.00	165.79	699.4	-21.1	5.4	-5.4	1.00	1.00	
800.0	6.00	165.79	798.9	-30.4	7.7	-7.7	1.00	1.00	
900.0	7.00	165.79	898.3	-41.4	10.5	-10.5	1.00	1.00	
1,000.0	8.00	165.79	997.4	-54.1	13.7	-13.7	1.00	1.00	
1,088.8	8.89	165.79	1,085.2	-66.7	16.9	-16.9	1.00	1.00	EOB; Inc=8.89°
1,100.0	8.89	165.79	1,096.3	-68.4	17.3	-17.3	0.00	0.00	
1,200.0	8.89	165.79	1,195.1	-83.3	21.1	-21.1	0.00	0.00	
1,300.0	8.89	165.79	1,293.9	-98.3	24.9	-24.9	0.00	0.00	
1,400.0	8.89	165.79	1,392.7	-113.3	28.7	-28.7	0.00	0.00	
1,500.0	8.89	165.79	1,491.5	-128.3	32.5	-32.5	0.00	0.00	
1,600.0	8.89	165.79	1,590.3	-143.3	36.3	-36.3	0.00	0.00	
1,700.0	8.89	165.79	1,689.1	-158.2	40.1	-40.1	0.00	0.00	
1,800.0	8.89	165.79	1,787.9	-173.2	43.9	-43.9	0.00	0.00	
1,900.0	8.89	165.79	1,886.7	-188.2	47.7	-47.7	0.00	0.00	
2,000.0	8.89	165.79	1,985.5	-203.2	51.4	-51.4	0.00	0.00	
2,100.0	8.89	165.79	2,084.3	-218.1	55.2	-55.2	0.00	0.00	
2,200.0	8.89	165.79	2,183.1	-233.1	59.0	-59.0	0.00	0.00	
2,300.0	8.89	165.79	2,281.9	-248.1	62.8	-62.8	0.00	0.00	
2,400.0	8.89	165.79	2,380.7	-263.1	66.6	-66.6	0.00	0.00	
2,500.0	8.89	165.79	2,479.5	-278.0	70.4	-70.4	0.00	0.00	
2,600.0	8.89	165.79	2,578.3	-293.0	74.2	-74.2	0.00	0.00	
2,700.0	8.89	165.79	2,677.1	-308.0	78.0	-78.0	0.00	0.00	
2,800.0	8.89	165.79	2,775.9	-323.0	81.8	-81.8	0.00	0.00	
2,900.0	8.89	165.79	2,874.7	-338.0	85.6	-85.6	0.00	0.00	
3,000.0	8.89	165.79	2,973.5	-352.9	89.4	-89.4	0.00	0.00	
3,100.0	8.89	165.79	3,072.3	-367.9	93.2	-93.2	0.00	0.00	
3,200.0	8.89	165.79	3,171.1	-382.9	97.0	-97.0	0.00	0.00	
3,300.0	8.89	165.79	3,269.9	-397.9	100.7	-100.7	0.00	0.00	
3,400.0	8.89	165.79	3,368.7	-412.8	104.5	-104.5	0.00	0.00	
3,500.0	8.89	165.79	3,467.5	-427.8	108.3	-108.3	0.00	0.00	
3,600.0	8.89	165.79	3,566.3	-442.8	112.1	-112.1	0.00	0.00	
3,700.0	8.89	165.79	3,665.1	-457.8	115.9	-115.9	0.00	0.00	
3,800.0	8.89	165.79	3,763.9	-472.7	119.7	-119.7	0.00	0.00	
3,900.0	8.89	165.79	3,862.7	-487.7	123.5	-123.5	0.00	0.00	
4,000.0	8.89	165.79	3,961.5	-502.7	127.3	-127.3	0.00	0.00	
4,027.8	8.89	165.79	3,989.0	-506.9	128.3	-128.3	0.00	0.00	Sussex
4,100.0	8.89	165.79	4,060.3	-517.7	131.1	-131.1	0.00	0.00	
4,200.0	8.89	165.79	4,159.1	-532.7	134.9	-134.9	0.00	0.00	
4,260.6	8.89	165.79	4,219.0	-541.7	137.2	-137.2	0.00	0.00	Sussex Marker
4,300.0	8.89	165.79	4,257.9	-547.6	138.7	-138.7	0.00	0.00	
4,400.0	8.89	165.79	4,356.7	-562.6	142.5	-142.5	0.00	0.00	
4,500.0	8.89	165.79	4,455.5	-577.6	146.3	-146.3	0.00	0.00	
4,514.7	8.89	165.79	4,470.0	-579.8	146.8	-146.8	0.00	0.00	Shannon
4,600.0	8.89	165.79	4,554.3	-592.6	150.0	-150.0	0.00	0.00	

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>North Reference:</b>	True
<b>Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #3		

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,700.0	8.89	165.79	4,653.1	-607.5	153.8	-153.8	0.00	0.00	
4,800.0	8.89	165.79	4,751.9	-622.5	157.6	-157.6	0.00	0.00	
4,900.0	8.89	165.79	4,850.7	-637.5	161.4	-161.4	0.00	0.00	
5,000.0	8.89	165.79	4,949.5	-652.5	165.2	-165.2	0.00	0.00	
5,056.2	8.89	165.79	5,005.0	-660.9	167.3	-167.3	0.00	0.00	Teepee Buttes (*if present)
5,100.0	8.89	165.79	5,048.3	-667.4	169.0	-169.0	0.00	0.00	
5,200.0	8.89	165.79	5,147.1	-682.4	172.8	-172.8	0.00	0.00	
5,300.0	8.89	165.79	5,245.9	-697.4	176.6	-176.6	0.00	0.00	
5,400.0	8.89	165.79	5,344.7	-712.4	180.4	-180.4	0.00	0.00	
5,500.0	8.89	165.79	5,443.5	-727.4	184.2	-184.2	0.00	0.00	
5,600.0	8.89	165.79	5,542.3	-742.3	188.0	-188.0	0.00	0.00	
5,700.0	8.89	165.79	5,641.1	-757.3	191.8	-191.8	0.00	0.00	
5,800.0	8.89	165.79	5,739.9	-772.3	195.6	-195.6	0.00	0.00	
5,900.0	8.89	165.79	5,838.7	-787.3	199.3	-199.3	0.00	0.00	
6,000.0	8.89	165.79	5,937.5	-802.2	203.1	-203.1	0.00	0.00	
6,100.0	8.89	165.79	6,036.3	-817.2	206.9	-206.9	0.00	0.00	
6,200.0	8.89	165.79	6,135.1	-832.2	210.7	-210.7	0.00	0.00	
6,300.0	8.89	165.79	6,233.9	-847.2	214.5	-214.5	0.00	0.00	
6,400.0	8.89	165.79	6,332.7	-862.1	218.3	-218.3	0.00	0.00	
6,500.0	8.89	165.79	6,431.5	-877.1	222.1	-222.1	0.00	0.00	
6,600.0	8.89	165.79	6,530.3	-892.1	225.9	-225.9	0.00	0.00	
6,700.0	8.89	165.79	6,629.1	-907.1	229.7	-229.7	0.00	0.00	
6,734.4	8.89	165.79	6,663.0	-912.2	231.0	-231.0	0.00	0.00	Start build/turn @ 6734' MD
6,800.0	9.67	207.12	6,727.9	-922.1	229.7	-229.7	10.00	1.19	
6,900.0	16.73	239.71	6,825.3	-936.8	213.4	-213.4	10.00	7.06	
6,971.0	23.07	249.16	6,892.0	-946.9	191.6	-191.6	10.00	8.94	Sharon Springs
7,000.0	25.78	251.71	6,918.4	-950.9	180.3	-180.3	10.00	9.32	
7,064.6	31.92	255.91	6,975.0	-959.5	150.3	-150.3	10.00	9.50	Niobrara
7,100.0	35.32	257.65	7,004.5	-964.0	131.3	-131.3	10.00	9.63	
7,118.0	37.06	258.42	7,019.0	-966.2	120.9	-120.9	10.00	9.67	B Chalk
7,164.6	41.59	260.16	7,055.0	-971.6	91.9	-91.9	10.00	9.72	B Marl
7,200.0	45.05	261.30	7,080.8	-975.6	67.9	-67.9	10.00	9.76	
7,220.5	47.05	261.89	7,095.0	-977.7	53.3	-53.3	10.00	9.78	C Chalk
7,271.4	52.04	263.21	7,128.0	-982.7	14.9	-14.9	10.00	9.80	C Marl
7,300.0	54.85	263.87	7,145.1	-985.3	-7.9	7.9	10.00	9.82	
7,400.0	64.70	265.89	7,195.3	-992.9	-93.9	93.9	10.00	9.85	
7,472.0	71.80	267.14	7,222.0	-997.0	-160.6	160.6	10.00	9.87	Ft. Hayes
7,500.0	74.57	267.60	7,230.1	-998.2	-187.4	187.4	10.00	9.88	
7,548.3	79.34	268.37	7,241.0	-999.8	-234.4	234.4	10.00	9.88	Codell
7,600.0	84.45	269.16	7,248.3	-1,000.9	-285.5	285.5	10.00	9.88	
7,656.1	90.00	270.00	7,251.0	-1,001.4	-341.6	341.6	10.00	9.89	LP @ 7251' TVD; 90°
7,700.0	90.00	270.00	7,251.0	-1,001.4	-385.4	385.4	0.00	0.00	
7,800.0	90.00	270.00	7,251.0	-1,001.4	-485.4	485.4	0.00	0.00	
7,900.0	90.00	270.00	7,251.0	-1,001.4	-585.4	585.4	0.00	0.00	
8,000.0	90.00	270.00	7,251.0	-1,001.4	-685.4	685.4	0.00	0.00	
8,100.0	90.00	270.00	7,251.0	-1,001.4	-785.4	785.4	0.00	0.00	
8,200.0	90.00	270.00	7,251.0	-1,001.4	-885.4	885.4	0.00	0.00	
8,300.0	90.00	270.00	7,251.0	-1,001.4	-985.4	985.4	0.00	0.00	
8,400.0	90.00	270.00	7,251.0	-1,001.4	-1,085.4	1,085.4	0.00	0.00	
8,500.0	90.00	270.00	7,251.0	-1,001.4	-1,185.4	1,185.4	0.00	0.00	
8,600.0	90.00	270.00	7,251.0	-1,001.4	-1,285.4	1,285.4	0.00	0.00	
8,700.0	90.00	270.00	7,251.0	-1,001.4	-1,385.4	1,385.4	0.00	0.00	

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>North Reference:</b>	True
<b>Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #3		

### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,800.0	90.00	270.00	7,251.0	-1,001.4	-1,485.4	1,485.4	0.00	0.00	
8,900.0	90.00	270.00	7,251.0	-1,001.4	-1,585.4	1,585.4	0.00	0.00	
9,000.0	90.00	270.00	7,251.0	-1,001.4	-1,685.4	1,685.4	0.00	0.00	
9,100.0	90.00	270.00	7,251.0	-1,001.4	-1,785.4	1,785.4	0.00	0.00	
9,200.0	90.00	270.00	7,251.0	-1,001.4	-1,885.4	1,885.4	0.00	0.00	
9,300.0	90.00	270.00	7,251.0	-1,001.4	-1,985.4	1,985.4	0.00	0.00	
9,400.0	90.00	270.00	7,251.0	-1,001.4	-2,085.4	2,085.4	0.00	0.00	
9,500.0	90.00	270.00	7,251.0	-1,001.4	-2,185.4	2,185.4	0.00	0.00	
9,600.0	90.00	270.00	7,251.0	-1,001.4	-2,285.4	2,285.4	0.00	0.00	
9,700.0	90.00	270.00	7,251.0	-1,001.4	-2,385.4	2,385.4	0.00	0.00	
9,800.0	90.00	270.00	7,251.0	-1,001.4	-2,485.4	2,485.4	0.00	0.00	
9,900.0	90.00	270.00	7,251.0	-1,001.4	-2,585.4	2,585.4	0.00	0.00	
10,000.0	90.00	270.00	7,251.0	-1,001.4	-2,685.4	2,685.4	0.00	0.00	
10,100.0	90.00	270.00	7,251.0	-1,001.4	-2,785.4	2,785.4	0.00	0.00	
10,200.0	90.00	270.00	7,251.0	-1,001.4	-2,885.4	2,885.4	0.00	0.00	
10,300.0	90.00	270.00	7,251.0	-1,001.4	-2,985.4	2,985.4	0.00	0.00	
10,400.0	90.00	270.00	7,251.0	-1,001.4	-3,085.4	3,085.4	0.00	0.00	
10,500.0	90.00	270.00	7,251.0	-1,001.4	-3,185.4	3,185.4	0.00	0.00	
10,600.0	90.00	270.00	7,251.0	-1,001.4	-3,285.4	3,285.4	0.00	0.00	
10,700.0	90.00	270.00	7,251.0	-1,001.4	-3,385.4	3,385.4	0.00	0.00	
10,800.0	90.00	270.00	7,251.0	-1,001.4	-3,485.4	3,485.4	0.00	0.00	
10,900.0	90.00	270.00	7,251.0	-1,001.4	-3,585.4	3,585.4	0.00	0.00	
11,000.0	90.00	270.00	7,251.0	-1,001.4	-3,685.4	3,685.4	0.00	0.00	
11,100.0	90.00	270.00	7,251.0	-1,001.4	-3,785.4	3,785.4	0.00	0.00	
11,200.0	90.00	270.00	7,251.0	-1,001.4	-3,885.4	3,885.4	0.00	0.00	
11,300.0	90.00	270.00	7,251.0	-1,001.4	-3,985.4	3,985.4	0.00	0.00	
11,400.0	90.00	270.00	7,251.0	-1,001.4	-4,085.4	4,085.4	0.00	0.00	
11,500.0	90.00	270.00	7,251.0	-1,001.4	-4,185.4	4,185.4	0.00	0.00	
11,600.0	90.00	270.00	7,251.0	-1,001.4	-4,285.4	4,285.4	0.00	0.00	
11,700.0	90.00	270.00	7,251.0	-1,001.4	-4,385.4	4,385.4	0.00	0.00	
11,800.0	90.00	270.00	7,251.0	-1,001.4	-4,485.4	4,485.4	0.00	0.00	
11,876.1	90.00	270.00	7,251.0	-1,001.4	-4,561.6	4,561.6	0.00	0.00	TD at 11876.1

### Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Frederiksen 1F-28H-A368 - plan hits target center - Point	0.00	0.00	7,251.0	-1,001.4	-4,561.6	1,315,772.21	3,135,296.11	40.199170	-105.015670

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Project:</b>	DJ Wattenberg	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site:</b>	S28-T3N-R68W (Frederiksen)	<b>North Reference:</b>	True
<b>Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #3		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
254.0	254.0	Fox Hills - BASE		0.00		
4,027.8	3,989.0	Sussex				
4,260.6	4,219.0	Sussex Marker				
4,514.7	4,470.0	Shannon				
5,056.2	5,005.0	Teepee Buttes (*if present)				
6,971.0	6,892.0	Sharon Springs				
7,064.6	6,975.0	Niobrara				
7,118.0	7,019.0	B Chalk				
7,164.6	7,055.0	B Marl				
7,220.5	7,095.0	C Chalk				
7,271.4	7,128.0	C Marl				
7,472.0	7,222.0	Ft. Hayes				
7,548.3	7,241.0	Codell				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.0	200.0	0.0	0.0	KOP @ 200'	
1,088.8	1,085.2	-66.7	16.9	EOB; Inc=8.89°	
6,734.4	6,663.0	-912.2	231.0	Start build/turn @ 6734' MD	
7,656.1	7,251.0	-1,001.4	-341.6	LP @ 7251' TVD; 90°	
11,876.1	7,251.0	-1,001.4	-4,561.6	TD at 11876.1	

# **EnCana Oil & Gas (USA) Inc**

**DJ Wattenberg**

**S28-T3N-R68W (Frederiksen)**

**Frederiksen 1F-28H-A368**

**Hz**

**Plan #3**

## **Anticollision Report**

**16 September, 2013**

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Reference	Plan #3		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	9/16/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,876.1	Plan #3 (Hz)	MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S28-T3N-R68W (Frederiksen)						
FREDERIKSEN #1 (Existing) - DD - GYRO	8,188.3	7,233.3	142.1	108.2	4.197	CC, ES
FREDERIKSEN #1 (Existing) - DD - GYRO	8,200.0	7,233.6	142.6	108.5	4.180	SF
FREDERIKSEN 1A-28H (Existing) - Hz - Hz	7,843.7	7,577.1	396.6	360.3	10.923	CC
FREDERIKSEN 1A-28H (Existing) - Hz - Hz	11,700.0	11,432.9	406.3	253.1	2.652	ES
FREDERIKSEN 1A-28H (Existing) - Hz - Hz	11,876.1	11,599.2	413.1	255.9	2.627	SF
Frederiksen 1A-28H-A368 - Hz - Plan #3	166.3	167.3	47.4	46.9	88.346	CC
Frederiksen 1A-28H-A368 - Hz - Plan #3	200.0	201.0	47.4	46.8	72.483	ES
Frederiksen 1A-28H-A368 - Hz - Plan #3	600.0	596.1	74.0	71.9	36.139	SF
Frederiksen 1B-28H-A368 - Hz - Plan #3	200.0	201.0	40.1	39.4	61.224	CC, ES
Frederiksen 1B-28H-A368 - Hz - Plan #3	600.0	598.2	60.1	58.1	29.307	SF
Frederiksen 1B-28H-H368 - Hz - Plan #1						Out of range
Frederiksen 1C-28H-A368 - Hz - Plan #3	200.0	201.0	29.1	28.5	44.527	CC, ES
Frederiksen 1C-28H-A368 - Hz - Plan #3	600.0	600.2	43.8	41.7	21.317	SF
Frederiksen 1C-28H-H368 - Hz - Plan #2						Out of range
Frederiksen 1D-28H-A368 - Hz - Plan #3	200.0	201.0	18.2	17.6	27.829	CC, ES
Frederiksen 1D-28H-A368 - Hz - Plan #3	500.0	500.9	25.9	24.2	15.226	SF
Frederiksen 1E-28H-A368 - Hz - Plan #3	200.0	201.0	7.3	6.6	11.132	CC, ES
Frederiksen 1E-28H-A368 - Hz - Plan #3	11,876.1	11,624.5	412.1	214.0	2.080	SF
FREDERIKSEN 31-28 (Existing) - DD - GYRO						Out of range
FREDERIKSEN 41-28 (Existing) - DD - GYRO						Out of range
FREDERIKSEN 8-4-28 (Existing) - DD - GYRO						Out of range



# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													S28-T3N-R68W (Frederiksen) - FREDERIKSEN #1 (Existing) - DD - GYRO		Offset Site Error:		0.0 ft	
Survey Program: 200-Gyro															Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor						
7,800.0	7,251.0	7,226.4	7,224.2	24.8	6.4	87.65	-859.2	-873.7	413.5	387.7	25.77	16.044						
7,900.0	7,251.0	7,228.2	7,226.0	26.1	6.4	88.38	-859.2	-873.7	321.4	293.7	27.73	11.590						
8,000.0	7,251.0	7,230.0	7,227.8	27.6	6.4	89.10	-859.2	-873.7	235.9	206.1	29.79	7.919						
8,100.0	7,251.0	7,231.8	7,229.6	29.3	6.4	89.82	-859.3	-873.8	167.3	135.4	31.92	5.241						
8,188.3	7,251.0	7,233.3	7,231.1	30.9	6.4	90.45	-859.3	-873.8	142.1	108.2	33.85	4.197	CC, ES					
8,200.0	7,251.0	7,233.6	7,231.3	31.1	6.4	90.53	-859.3	-873.8	142.6	108.5	34.11	4.180	SF					
8,300.0	7,251.0	7,235.3	7,233.1	33.0	6.4	91.24	-859.3	-873.8	180.7	144.4	36.33	4.973						
8,400.0	7,251.0	7,237.1	7,234.8	35.0	6.4	91.95	-859.3	-873.9	254.9	216.3	38.59	6.605						
8,500.0	7,251.0	7,238.8	7,236.6	37.1	6.4	92.65	-859.3	-873.9	342.5	301.6	40.87	8.379						
8,600.0	7,251.0	7,240.5	7,238.3	39.2	6.4	93.35	-859.3	-873.9	435.4	392.3	43.17	10.086						

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S28-T3N-R68W (Frederiksen) - FREDERIKSEN 1A-28H (Existing) - Hz - Hz													Offset Site Error:	0.0 ft
Survey Program: 835-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
6,750.0	6,678.5	6,705.5	6,672.8	20.3	12.0	12.70	-1,406.6	158.2	497.6	472.4	25.22	19.733		
6,800.0	6,727.9	6,741.0	6,705.4	20.5	12.0	-17.27	-1,404.2	144.3	489.7	464.3	25.36	19.311		
6,850.0	6,776.9	6,776.9	6,737.8	20.6	12.0	-36.79	-1,402.3	128.9	482.8	457.3	25.45	18.970		
6,900.0	6,825.3	6,827.3	6,782.4	20.7	12.0	-47.13	-1,399.6	105.6	475.9	450.4	25.54	18.631		
6,950.0	6,872.6	6,862.3	6,812.7	20.8	12.0	-53.53	-1,397.7	88.3	469.0	443.5	25.50	18.394		
7,000.0	6,918.4	6,901.4	6,845.8	20.9	12.1	-57.48	-1,396.2	67.4	462.9	437.4	25.42	18.208		
7,050.0	6,962.5	6,949.9	6,885.1	21.0	12.2	-59.93	-1,394.0	39.2	456.4	431.0	25.35	18.003		
7,100.0	7,004.5	6,987.9	6,914.6	21.1	12.2	-61.92	-1,392.0	15.3	449.6	424.4	25.23	17.822		
7,150.0	7,044.0	7,020.4	6,938.4	21.2	12.3	-63.49	-1,390.7	-6.8	443.6	418.5	25.11	17.664		
7,200.0	7,080.8	7,059.0	6,964.2	21.3	12.5	-64.51	-1,389.5	-35.5	438.3	413.3	25.08	17.480		
7,250.0	7,114.6	7,094.7	6,985.6	21.4	12.7	-65.25	-1,388.2	-64.0	433.5	408.4	25.11	17.260		
7,300.0	7,145.1	7,131.2	7,004.9	21.5	12.9	-65.70	-1,386.8	-95.0	429.2	403.9	25.27	16.987		
7,350.0	7,172.1	7,170.3	7,022.2	21.7	13.2	-65.87	-1,385.2	-129.9	425.5	399.9	25.56	16.644		
7,400.0	7,195.3	7,212.5	7,037.8	21.8	13.6	-65.85	-1,382.9	-169.1	421.6	395.6	26.04	16.190		
7,450.0	7,214.7	7,255.5	7,050.3	22.0	14.1	-65.74	-1,379.9	-210.0	417.6	390.9	26.71	15.637		
7,500.0	7,230.1	7,296.0	7,058.6	22.3	14.6	-65.53	-1,376.1	-249.5	413.4	385.8	27.53	15.013		
7,550.0	7,241.3	7,329.4	7,062.6	22.6	15.0	-65.37	-1,373.0	-282.6	409.7	381.3	28.46	14.396		
7,600.0	7,248.3	7,366.9	7,064.4	22.9	15.6	-65.11	-1,369.9	-319.9	406.8	377.2	29.59	13.747		
7,650.0	7,251.0	7,412.5	7,064.5	23.3	16.3	-64.91	-1,366.0	-365.3	403.6	372.6	31.00	13.021		
7,656.1	7,251.0	7,417.9	7,064.4	23.3	16.4	-64.91	-1,365.5	-370.7	403.2	372.0	31.18	12.930		
7,700.0	7,251.0	7,454.9	7,063.5	23.7	17.0	-64.59	-1,362.4	-407.5	400.4	368.0	32.33	12.382		
7,800.0	7,251.0	7,543.0	7,058.2	24.8	18.6	-63.54	-1,356.6	-495.3	397.0	361.8	35.10	11.308		
7,843.7	7,251.0	7,577.1	7,055.2	25.3	19.3	-63.05	-1,354.9	-529.2	396.6	360.3	36.31	10.923 CC		
7,900.0	7,251.0	7,626.8	7,050.8	26.1	20.2	-62.37	-1,353.1	-578.7	397.1	359.2	37.93	10.470		
8,000.0	7,251.0	7,723.5	7,043.1	27.6	22.1	-61.27	-1,351.5	-675.0	399.4	358.3	41.08	9.722		
8,100.0	7,251.0	7,823.7	7,037.7	29.3	24.2	-60.58	-1,351.2	-775.1	401.8	357.3	44.49	9.030		
8,200.0	7,251.0	7,919.5	7,033.1	31.1	26.3	-60.06	-1,351.8	-870.7	404.7	356.8	47.95	8.441		
8,300.0	7,251.0	8,018.1	7,027.8	33.0	28.5	-59.52	-1,353.3	-969.3	408.7	357.3	51.49	7.939		
8,400.0	7,251.0	8,116.5	7,024.2	35.0	30.7	-59.26	-1,355.9	-1,067.5	412.9	357.7	55.18	7.482		
8,500.0	7,251.0	8,213.3	7,021.2	37.1	32.9	-59.16	-1,359.4	-1,164.2	417.5	358.5	58.96	7.081		
8,600.0	7,251.0	8,315.0	7,019.2	39.2	35.2	-59.22	-1,363.7	-1,265.8	422.2	359.3	62.97	6.705		
8,700.0	7,251.0	8,412.9	7,016.9	41.4	37.5	-59.27	-1,368.2	-1,363.6	427.3	360.4	66.94	6.384		
8,800.0	7,251.0	8,512.6	7,014.4	43.6	39.8	-59.28	-1,372.6	-1,463.1	432.4	361.5	70.95	6.095		
8,900.0	7,251.0	8,622.5	7,013.4	45.9	42.4	-59.50	-1,377.5	-1,572.9	436.8	361.4	75.34	5.797		
9,000.0	7,251.0	8,742.3	7,017.9	48.1	45.2	-60.18	-1,380.2	-1,692.6	436.7	356.4	80.32	5.437		
9,100.0	7,251.0	8,849.1	7,024.3	50.4	47.8	-60.95	-1,380.8	-1,799.2	434.2	349.1	85.17	5.099		
9,200.0	7,251.0	8,956.8	7,031.7	52.7	50.4	-61.77	-1,380.0	-1,906.6	430.2	340.1	90.14	4.773		
9,300.0	7,251.0	9,071.0	7,040.1	55.0	53.1	-62.52	-1,376.0	-2,020.4	423.7	328.5	95.25	4.449		
9,400.0	7,251.0	9,175.4	7,047.3	57.4	55.6	-62.97	-1,369.2	-2,124.3	414.8	314.8	99.97	4.149		
9,500.0	7,251.0	9,266.3	7,051.2	59.7	57.8	-62.97	-1,361.6	-2,214.9	405.5	301.4	104.06	3.897		
9,600.0	7,251.0	9,343.3	7,046.6	62.1	59.6	-61.98	-1,355.4	-2,291.4	401.1	294.1	106.95	3.750		
9,621.3	7,251.0	9,358.7	7,045.2	62.6	60.0	-61.75	-1,354.5	-2,306.7	400.9	293.4	107.50	3.729		
9,700.0	7,251.0	9,426.4	7,038.8	64.4	61.6	-60.82	-1,352.7	-2,374.1	402.5	292.8	109.70	3.669		
9,800.0	7,251.0	9,522.6	7,030.7	66.8	64.0	-59.76	-1,351.8	-2,470.0	405.9	293.2	112.72	3.601		
9,900.0	7,251.0	9,625.8	7,023.6	69.2	66.4	-58.92	-1,352.0	-2,572.9	409.6	293.6	116.02	3.531		
10,000.0	7,251.0	9,745.0	7,015.9	71.6	69.3	-57.67	-1,347.5	-2,691.7	409.7	290.6	119.05	3.441		
10,095.2	7,251.0	9,834.3	7,009.4	73.8	71.5	-56.51	-1,342.3	-2,780.6	408.8	287.5	121.32	3.370		
10,100.0	7,251.0	9,838.7	7,009.0	74.0	71.6	-56.45	-1,342.1	-2,785.1	408.8	287.4	121.43	3.367		
10,200.0	7,251.0	9,932.8	7,002.7	76.4	73.9	-55.45	-1,338.8	-2,878.8	409.7	285.8	123.98	3.305		
10,300.0	7,251.0	10,026.8	6,993.6	78.8	76.2	-54.09	-1,334.7	-2,972.3	411.7	285.9	125.86	3.272		
10,400.0	7,251.0	10,122.9	6,982.1	81.2	78.5	-52.53	-1,331.3	-3,067.7	416.1	288.9	127.25	3.270		
10,500.0	7,251.0	10,225.3	6,969.1	83.6	81.0	-50.77	-1,327.0	-3,169.1	420.7	292.6	128.17	3.283		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S28-T3N-R68W (Frederiksen) - FREDERIKSEN 1A-28H (Existing) - Hz - Hz													Offset Site Error:	0.0 ft
Survey Program: 835-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
10,600.0	7,251.0	10,335.2	6,956.2	86.0	83.6	-48.83	-1,320.2	-3,278.1	423.6	295.0	128.61	3.293		
10,700.0	7,251.0	10,439.3	6,946.9	88.4	86.2	-47.27	-1,313.2	-3,381.5	424.6	295.2	129.34	3.283		
10,800.0	7,251.0	10,556.1	6,941.8	90.8	89.0	-46.12	-1,306.2	-3,497.9	423.2	292.3	130.88	3.233		
10,900.0	7,251.0	10,655.3	6,939.7	93.3	91.4	-45.35	-1,300.3	-3,596.9	420.4	287.6	132.75	3.167		
11,000.0	7,251.0	10,752.6	6,937.9	95.7	93.8	-44.67	-1,295.0	-3,694.1	417.8	283.2	134.68	3.102		
11,100.0	7,251.0	10,855.9	6,935.8	98.1	96.4	-43.96	-1,289.9	-3,797.3	415.8	279.3	136.55	3.045		
11,200.0	7,251.0	10,955.1	6,937.2	100.6	98.8	-43.82	-1,287.1	-3,896.4	412.8	273.2	139.60	2.957		
11,300.0	7,251.0	11,057.2	6,939.5	103.0	101.3	-43.84	-1,285.2	-3,998.5	409.9	266.8	143.10	2.865		
11,400.0	7,251.0	11,153.0	6,941.3	105.4	103.7	-43.82	-1,283.2	-4,094.2	407.1	260.8	146.37	2.781		
11,500.0	7,251.0	11,248.9	6,940.6	107.9	106.0	-43.43	-1,280.0	-4,190.1	405.4	256.7	148.69	2.726		
11,586.0	7,251.0	11,330.4	6,938.5	110.0	108.0	-42.93	-1,277.2	-4,271.5	405.0	254.8	150.20	2.696		
11,600.0	7,251.0	11,344.1	6,938.1	110.3	108.3	-42.86	-1,276.8	-4,285.1	405.0	254.5	150.48	2.691		
11,700.0	7,251.0	11,432.9	6,936.5	112.7	110.5	-42.71	-1,276.8	-4,373.9	406.3	253.1	153.22	2.652 ES		
11,800.0	7,251.0	11,528.1	6,932.5	115.2	112.9	-42.39	-1,277.4	-4,469.1	409.8	254.2	155.58	2.634		
11,876.1	7,251.0	11,599.2	6,929.0	117.0	114.6	-42.12	-1,278.0	-4,540.1	413.1	255.9	157.25	2.627 SF		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S28-T3N-R68W (Frederiksen) - Frederiksen 1A-28H-A368 - Hz - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	3.38	47.4	2.8	47.4					
100.0	100.0	101.0	101.0	0.2	0.2	3.38	47.4	2.8	47.4	47.1	0.31	155.318		
166.3	166.3	167.3	167.3	0.3	0.3	3.38	47.4	2.8	47.4	46.9	0.54	88.346 CC		
200.0	200.0	201.0	201.0	0.3	0.3	3.38	47.4	2.8	47.4	46.8	0.65	72.483 ES		
300.0	300.0	300.0	300.0	0.5	0.5	-162.41	48.2	3.1	49.1	48.1	1.00	49.022		
400.0	400.0	399.2	399.2	0.7	0.7	-162.42	50.6	4.0	54.1	52.8	1.35	40.074		
500.0	499.9	497.9	497.8	0.9	0.9	-162.42	54.6	5.5	62.4	60.7	1.70	36.740		
600.0	599.7	596.1	595.8	1.1	1.1	-162.43	60.2	7.6	74.0	71.9	2.05	36.139 SF		
700.0	699.4	693.7	693.1	1.3	1.3	-162.42	67.3	10.3	88.8	86.4	2.40	37.065		
800.0	798.9	790.5	789.4	1.5	1.5	-162.41	75.8	13.5	106.9	104.2	2.75	38.923		
900.0	898.3	887.4	885.8	1.8	1.7	-162.43	85.7	17.2	128.0	124.9	3.10	41.294		
1,000.0	997.4	984.7	982.5	2.0	2.0	-162.60	95.8	21.0	150.8	147.4	3.45	43.669		
1,088.8	1,085.2	1,070.8	1,068.1	2.3	2.2	-162.85	104.7	24.3	172.5	168.7	3.77	45.758		
1,100.0	1,096.3	1,081.7	1,078.9	2.3	2.2	-162.89	105.8	24.7	175.3	171.5	3.81	46.012		
1,200.0	1,195.1	1,178.5	1,175.1	2.6	2.5	-163.21	115.8	28.5	200.4	196.2	4.17	48.047		
1,300.0	1,293.9	1,275.3	1,271.3	2.9	2.7	-163.46	125.8	32.2	225.5	220.9	4.53	49.752		
1,400.0	1,392.7	1,372.1	1,367.5	3.3	2.9	-163.67	135.8	36.0	250.6	245.7	4.89	51.200		
1,500.0	1,491.5	1,468.9	1,463.7	3.6	3.2	-163.83	145.8	39.7	275.7	270.4	5.26	52.446		
1,600.0	1,590.3	1,565.7	1,559.9	3.9	3.4	-163.97	155.8	43.5	300.8	295.2	5.62	53.528		
1,700.0	1,689.1	1,662.5	1,656.1	4.2	3.7	-164.08	165.8	47.2	325.9	319.9	5.98	54.476		
1,800.0	1,787.9	1,759.3	1,752.3	4.5	3.9	-164.18	175.8	51.0	351.0	344.7	6.35	55.315		
1,900.0	1,886.7	1,856.1	1,848.5	4.8	4.2	-164.27	185.8	54.8	376.2	369.4	6.71	56.061		
2,000.0	1,985.5	1,952.8	1,944.7	5.1	4.4	-164.35	195.9	58.5	401.3	394.2	7.07	56.730		
2,100.0	2,084.3	2,049.6	2,040.9	5.5	4.7	-164.41	205.9	62.3	426.4	418.9	7.44	57.332		
2,200.0	2,183.1	2,146.4	2,137.1	5.8	4.9	-164.47	215.9	66.0	451.5	443.7	7.80	57.878		
2,300.0	2,281.9	2,243.2	2,233.3	6.1	5.2	-164.52	225.9	69.8	476.6	468.5	8.16	58.374		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S28-T3N-R68W (Frederiksen) - Frederiksen 1B-28H-A368 - Hz - Plan #3													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	1.0	1.0	0.0	0.0	0.00	40.1	0.0	40.1					
100.0	100.0	101.0	101.0	0.2	0.2	0.00	40.1	0.0	40.1	39.8	0.31	131.195		
200.0	200.0	201.0	201.0	0.3	0.3	0.00	40.1	0.0	40.1	39.4	0.65	61.224 CC, ES		
300.0	300.0	301.0	301.0	0.5	0.5	-166.09	40.1	0.0	40.9	39.9	1.00	40.774		
400.0	400.0	400.3	400.3	0.7	0.7	-166.25	40.8	0.5	44.2	42.8	1.35	32.695		
500.0	499.9	499.4	499.4	0.9	0.9	-165.75	43.0	1.9	50.6	48.9	1.70	29.749		
600.0	599.7	598.2	598.1	1.1	1.0	-164.86	46.5	4.3	60.1	58.1	2.05	29.307 SF		
700.0	699.4	696.5	696.2	1.3	1.2	-163.85	51.5	7.6	72.8	70.3	2.40	30.263		
800.0	798.9	795.4	794.8	1.5	1.4	-163.20	57.1	11.4	87.7	84.9	2.76	31.777		
900.0	898.3	894.0	893.2	1.8	1.6	-163.00	62.6	15.1	104.3	101.2	3.12	33.463		
1,000.0	997.4	992.3	991.3	2.0	1.8	-163.09	68.2	18.8	122.6	119.1	3.48	35.266		
1,088.8	1,085.2	1,079.3	1,078.1	2.3	2.0	-163.30	73.1	22.1	140.1	136.3	3.79	36.939		
1,100.0	1,096.3	1,090.3	1,089.1	2.3	2.0	-163.34	73.7	22.6	142.4	138.6	3.83	37.147		
1,200.0	1,195.1	1,188.1	1,186.7	2.6	2.2	-163.64	79.3	26.3	163.0	158.8	4.20	38.816		
1,300.0	1,293.9	1,286.0	1,284.3	2.9	2.4	-163.88	84.8	30.0	183.5	178.9	4.56	40.215		
1,400.0	1,392.7	1,383.9	1,382.0	3.3	2.6	-164.06	90.3	33.7	204.0	199.1	4.93	41.403		
1,500.0	1,491.5	1,481.7	1,479.6	3.6	2.8	-164.22	95.9	37.4	224.6	219.3	5.29	42.426		
1,600.0	1,590.3	1,579.6	1,577.3	3.9	3.0	-164.35	101.4	41.1	245.1	239.4	5.66	43.314		
1,700.0	1,689.1	1,677.5	1,674.9	4.2	3.3	-164.45	106.9	44.8	265.6	259.6	6.02	44.094		
1,800.0	1,787.9	1,775.3	1,772.5	4.5	3.5	-164.54	112.5	48.5	286.2	279.8	6.39	44.783		
1,900.0	1,886.7	1,873.2	1,870.2	4.8	3.7	-164.62	118.0	52.2	306.7	300.0	6.76	45.396		
2,000.0	1,985.5	1,971.1	1,967.8	5.1	3.9	-164.69	123.5	55.9	327.3	320.1	7.12	45.946		
2,100.0	2,084.3	2,069.0	2,065.5	5.5	4.1	-164.76	129.1	59.6	347.8	340.3	7.49	46.441		
2,200.0	2,183.1	2,166.8	2,163.1	5.8	4.3	-164.81	134.6	63.3	368.3	360.5	7.86	46.890		
2,300.0	2,281.9	2,264.7	2,260.7	6.1	4.5	-164.86	140.1	67.1	388.9	380.7	8.22	47.298		
2,400.0	2,380.7	2,362.6	2,358.4	6.4	4.7	-164.90	145.7	70.8	409.4	400.8	8.59	47.671		
2,500.0	2,479.5	2,460.4	2,456.0	6.7	4.9	-164.94	151.2	74.5	430.0	421.0	8.96	48.013		
2,600.0	2,578.3	2,558.3	2,553.7	7.0	5.1	-164.98	156.7	78.2	450.5	441.2	9.32	48.328		
2,700.0	2,677.1	2,656.2	2,651.3	7.4	5.3	-165.01	162.3	81.9	471.1	461.4	9.69	48.619		
2,800.0	2,775.9	2,754.0	2,748.9	7.7	5.5	-165.04	167.8	85.6	491.6	481.5	10.06	48.889		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S28-T3N-R68W (Frederiksen) - Frederiksen 1C-28H-A368 - Hz - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	1.0	1.0	0.0	0.0	0.00	29.1	0.0	29.1					
100.0	100.0	101.0	101.0	0.2	0.2	0.00	29.1	0.0	29.1	28.8	0.31	95.414		
200.0	200.0	201.0	201.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.65	44.527 CC, ES		
300.0	300.0	301.0	301.0	0.5	0.5	-166.20	29.1	0.0	30.0	29.0	1.00	29.884		
400.0	400.0	401.0	401.0	0.7	0.7	-167.29	29.1	0.0	32.5	31.2	1.35	24.058		
500.0	499.9	500.7	500.7	0.9	0.9	-167.45	29.4	0.8	37.0	35.3	1.70	21.775		
600.0	599.7	600.2	600.2	1.1	1.0	-165.88	30.2	3.3	43.8	41.7	2.05	21.317 SF		
700.0	699.4	699.7	699.6	1.3	1.2	-163.75	31.5	7.2	52.7	50.3	2.41	21.859		
800.0	798.9	799.1	798.9	1.5	1.4	-162.57	32.8	11.1	63.4	60.6	2.77	22.872		
900.0	898.3	898.4	898.1	1.8	1.6	-162.13	34.1	15.1	75.7	72.6	3.13	24.168		
1,000.0	997.4	997.4	997.0	2.0	1.8	-162.15	35.4	19.1	89.7	86.2	3.49	25.659		
1,088.8	1,085.2	1,085.1	1,084.6	2.3	1.9	-162.40	36.6	22.6	103.5	99.6	3.82	27.102		
1,100.0	1,096.3	1,096.2	1,095.7	2.3	1.9	-162.45	36.8	23.0	105.3	101.4	3.86	27.285		
1,200.0	1,195.1	1,194.8	1,194.3	2.6	2.1	-162.80	38.1	27.0	121.6	117.3	4.23	28.757		
1,300.0	1,293.9	1,293.5	1,292.8	2.9	2.3	-163.06	39.4	30.9	137.8	133.2	4.60	29.989		
1,400.0	1,392.7	1,392.2	1,391.4	3.3	2.5	-163.27	40.7	34.8	154.1	149.1	4.97	31.035		
1,500.0	1,491.5	1,490.8	1,490.0	3.6	2.7	-163.44	42.0	38.8	170.4	165.0	5.34	31.935		
1,600.0	1,590.3	1,589.5	1,588.6	3.9	2.9	-163.58	43.3	42.7	186.7	181.0	5.71	32.717		
1,700.0	1,689.1	1,688.2	1,687.2	4.2	3.1	-163.70	44.6	46.7	202.9	196.9	6.08	33.402		
1,800.0	1,787.9	1,786.8	1,785.7	4.5	3.2	-163.80	45.9	50.6	219.2	212.8	6.45	34.008		
1,900.0	1,886.7	1,885.5	1,884.3	4.8	3.4	-163.89	47.2	54.6	235.5	228.7	6.82	34.547		
2,000.0	1,985.5	1,984.1	1,982.9	5.1	3.6	-163.96	48.5	58.5	251.8	244.6	7.19	35.030		
2,100.0	2,084.3	2,082.8	2,081.5	5.5	3.8	-164.03	49.8	62.5	268.1	260.5	7.56	35.465		
2,200.0	2,183.1	2,181.5	2,180.0	5.8	4.0	-164.09	51.1	66.4	284.3	276.4	7.93	35.859		
2,300.0	2,281.9	2,280.1	2,278.6	6.1	4.2	-164.14	52.4	70.4	300.6	292.3	8.30	36.217		
2,400.0	2,380.7	2,378.8	2,377.2	6.4	4.4	-164.19	53.7	74.3	316.9	308.2	8.67	36.544		
2,500.0	2,479.5	2,477.5	2,475.8	6.7	4.5	-164.23	55.0	78.2	333.2	324.1	9.04	36.845		
2,600.0	2,578.3	2,576.1	2,574.4	7.0	4.7	-164.27	56.3	82.2	349.5	340.1	9.41	37.121		
2,700.0	2,677.1	2,674.8	2,672.9	7.4	4.9	-164.30	57.6	86.1	365.8	356.0	9.79	37.376		
2,800.0	2,775.9	2,773.5	2,771.5	7.7	5.1	-164.33	58.9	90.1	382.0	371.9	10.16	37.613		
2,900.0	2,874.7	2,872.1	2,870.1	8.0	5.3	-164.36	60.2	94.0	398.3	387.8	10.53	37.832		
3,000.0	2,973.5	2,970.8	2,968.7	8.3	5.5	-164.39	61.5	98.0	414.6	403.7	10.90	38.037		
3,100.0	3,072.3	3,069.5	3,067.2	8.6	5.7	-164.41	62.8	101.9	430.9	419.6	11.27	38.227		
3,200.0	3,171.1	3,168.1	3,165.8	9.0	5.9	-164.44	64.1	105.9	447.2	435.5	11.64	38.406		
3,300.0	3,269.9	3,266.8	3,264.4	9.3	6.0	-164.46	65.5	109.8	463.4	451.4	12.01	38.574		
3,400.0	3,368.7	3,365.5	3,363.0	9.6	6.2	-164.48	66.8	113.7	479.7	467.3	12.39	38.731		
3,500.0	3,467.5	3,464.1	3,461.6	9.9	6.4	-164.50	68.1	117.7	496.0	483.3	12.76	38.879		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S28-T3N-R68W (Frederiksen) - Frederiksen 1D-28H-A368 - Hz - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	1.0	1.0	0.0	0.0	0.00	18.2	0.0	18.2					
100.0	100.0	101.0	101.0	0.2	0.2	0.00	18.2	0.0	18.2	17.9	0.31	59.634		
200.0	200.0	201.0	201.0	0.3	0.3	0.00	18.2	0.0	18.2	17.6	0.65	27.829 CC, ES		
300.0	300.0	301.0	301.0	0.5	0.5	-166.43	18.2	0.0	19.1	18.1	1.00	18.994		
400.0	400.0	401.0	401.0	0.7	0.7	-168.06	18.2	0.0	21.6	20.3	1.35	15.982		
500.0	499.9	500.9	500.9	0.9	0.9	-170.05	18.2	0.0	25.9	24.2	1.70	15.226 SF		
600.0	599.7	600.7	600.7	1.1	1.0	-171.93	18.2	0.0	31.9	29.9	2.05	15.584		
700.0	699.4	700.4	700.4	1.3	1.2	-173.51	18.2	0.0	39.7	37.3	2.40	16.577		
800.0	798.9	799.9	799.9	1.5	1.4	-174.76	18.2	0.0	49.2	46.5	2.74	17.964		
900.0	898.3	899.3	899.3	1.8	1.5	-175.73	18.2	0.0	60.5	57.4	3.09	19.614		
1,000.0	997.4	998.4	998.4	2.0	1.7	-176.48	18.2	0.0	73.6	70.1	3.43	21.449		
1,088.8	1,085.2	1,086.2	1,086.2	2.3	1.9	-177.00	18.2	0.0	86.6	82.8	3.73	23.192		
1,100.0	1,096.3	1,097.3	1,097.3	2.3	1.9	-177.06	18.2	0.0	88.3	84.5	3.77	23.413		
1,200.0	1,195.1	1,196.1	1,196.1	2.6	2.1	-177.50	18.2	0.0	103.7	99.6	4.12	25.191		
1,300.0	1,293.9	1,294.9	1,294.9	2.9	2.2	-177.82	18.2	0.0	119.2	114.7	4.46	26.695		
1,400.0	1,392.7	1,393.7	1,393.7	3.3	2.4	-178.07	18.2	0.0	134.6	129.8	4.81	27.983		
1,500.0	1,491.5	1,492.5	1,492.5	3.6	2.6	-178.27	18.2	0.0	150.1	144.9	5.16	29.099		
1,600.0	1,590.3	1,591.3	1,591.3	3.9	2.8	-178.43	18.2	0.0	165.5	160.0	5.50	30.074		
1,700.0	1,689.1	1,690.1	1,690.1	4.2	2.9	-178.57	18.2	0.0	180.9	175.1	5.85	30.935		
1,800.0	1,787.9	1,788.9	1,788.9	4.5	3.1	-178.68	18.2	0.0	196.4	190.2	6.20	31.699		
1,900.0	1,886.7	1,887.7	1,887.7	4.8	3.3	-178.78	18.2	0.0	211.8	205.3	6.54	32.383		
2,000.0	1,985.5	1,986.5	1,986.5	5.1	3.4	-178.86	18.2	0.0	227.3	220.4	6.89	32.998		
2,100.0	2,084.3	2,085.3	2,085.3	5.5	3.6	-178.93	18.2	0.0	242.7	235.5	7.23	33.554		
2,200.0	2,183.1	2,184.1	2,184.1	5.8	3.8	-179.00	18.2	0.0	258.2	250.6	7.58	34.060		
2,300.0	2,281.9	2,282.9	2,282.9	6.1	4.0	-179.05	18.2	0.0	273.6	265.7	7.93	34.521		
2,400.0	2,380.7	2,381.7	2,381.7	6.4	4.1	-179.10	18.2	0.0	289.1	280.8	8.27	34.944		
2,500.0	2,479.5	2,480.5	2,480.5	6.7	4.3	-179.15	18.2	0.0	304.5	295.9	8.62	35.333		
2,600.0	2,578.3	2,579.3	2,579.3	7.0	4.5	-179.19	18.2	0.0	320.0	311.0	8.96	35.692		
2,700.0	2,677.1	2,678.1	2,678.1	7.4	4.7	-179.23	18.2	0.0	335.4	326.1	9.31	36.024		
2,800.0	2,775.9	2,776.9	2,776.9	7.7	4.8	-179.26	18.2	0.0	350.9	341.2	9.66	36.332		
2,900.0	2,874.7	2,875.7	2,875.7	8.0	5.0	-179.29	18.2	0.0	366.3	356.3	10.00	36.620		
3,000.0	2,973.5	2,974.5	2,974.5	8.3	5.2	-179.32	18.2	0.0	381.8	371.4	10.35	36.888		
3,100.0	3,072.3	3,073.3	3,073.3	8.6	5.3	-179.35	18.2	0.0	397.2	386.5	10.70	37.138		
3,200.0	3,171.1	3,172.1	3,172.1	9.0	5.5	-179.37	18.2	0.0	412.7	401.6	11.04	37.373		
3,300.0	3,269.9	3,270.9	3,270.9	9.3	5.7	-179.39	18.2	0.0	428.1	416.7	11.39	37.594		
3,400.0	3,368.7	3,369.7	3,369.7	9.6	5.9	-179.42	18.2	0.0	443.5	431.8	11.73	37.801		
3,500.0	3,467.5	3,468.5	3,468.5	9.9	6.0	-179.44	18.2	0.0	459.0	446.9	12.08	37.997		
3,600.0	3,566.3	3,572.6	3,572.6	10.2	6.2	-179.43	17.9	0.3	474.1	461.6	12.44	38.124		
3,700.0	3,665.1	3,679.6	3,679.5	10.6	6.4	-179.32	16.1	1.9	487.6	474.8	12.80	38.106		
3,800.0	3,763.9	3,787.0	3,786.8	10.9	6.6	-179.10	12.9	4.8	499.5	486.4	13.16	37.960		

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S28-T3N-R68W (Frederiksen) - Frederiksen 1E-28H-A368 - Hz - Plan #3													Offset Site Error:	0.0 ft
Survey Program:		0-MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	0.00	7.3	0.0	7.3					
100.0	100.0	101.0	101.0	0.2	0.2	0.00	7.3	0.0	7.3	7.0	0.31	23.854		
200.0	200.0	201.0	201.0	0.3	0.3	0.00	7.3	0.0	7.3	6.6	0.65	11.132 CC, ES		
300.0	300.0	301.0	301.0	0.5	0.5	-167.30	7.3	0.0	8.1	7.1	1.00	8.106		
400.0	400.0	401.0	401.0	0.7	0.7	-170.38	7.3	0.0	10.7	9.4	1.35	7.915		
500.0	499.9	501.1	501.1	0.9	0.9	-172.27	6.5	0.3	14.2	12.5	1.70	8.324		
600.0	599.7	601.3	601.3	1.1	1.0	-172.71	4.0	1.3	17.7	15.6	2.05	8.617		
700.0	699.4	701.6	701.4	1.3	1.2	-172.40	-0.1	2.9	21.2	18.8	2.40	8.838		
800.0	798.9	801.9	801.6	1.5	1.4	-171.66	-5.8	5.2	24.8	22.0	2.75	9.013		
900.0	898.3	902.3	901.6	1.8	1.6	-170.67	-13.2	8.1	28.4	25.3	3.10	9.156		
1,000.0	997.4	1,002.7	1,001.6	2.0	1.8	-169.51	-22.2	11.6	32.1	28.6	3.46	9.273		
1,088.8	1,085.2	1,091.6	1,090.0	2.3	2.1	-168.50	-31.3	15.2	35.7	31.9	3.78	9.420		
1,100.0	1,096.3	1,102.8	1,101.1	2.3	2.1	-168.41	-32.4	15.7	36.2	32.3	3.83	9.454		
1,200.0	1,195.1	1,202.7	1,200.4	2.6	2.3	-167.69	-42.8	19.8	40.8	36.6	4.19	9.725		
1,300.0	1,293.9	1,302.6	1,299.7	2.9	2.6	-167.12	-53.2	23.9	45.4	40.9	4.57	9.948		
1,400.0	1,392.7	1,402.5	1,398.9	3.3	2.8	-166.66	-63.5	28.0	50.1	45.1	4.94	10.134		
1,500.0	1,491.5	1,502.4	1,498.2	3.6	3.1	-166.27	-73.9	32.1	54.7	49.4	5.31	10.292		
1,600.0	1,590.3	1,602.3	1,597.5	3.9	3.3	-165.95	-84.2	36.2	59.3	53.6	5.69	10.426		
1,700.0	1,689.1	1,702.2	1,696.7	4.2	3.6	-165.67	-94.6	40.3	64.0	57.9	6.07	10.542		
1,800.0	1,787.9	1,802.1	1,796.0	4.5	3.8	-165.43	-105.0	44.4	68.6	62.2	6.45	10.643		
1,900.0	1,886.7	1,902.0	1,895.3	4.8	4.1	-165.22	-115.3	48.5	73.3	66.4	6.83	10.732		
2,000.0	1,985.5	2,001.9	1,994.5	5.1	4.3	-165.03	-125.7	52.6	77.9	70.7	7.21	10.810		
2,100.0	2,084.3	2,101.8	2,093.8	5.5	4.6	-164.87	-136.0	56.7	82.5	75.0	7.59	10.880		
2,200.0	2,183.1	2,201.7	2,193.1	5.8	4.8	-164.72	-146.4	60.7	87.2	79.2	7.97	10.942		
2,300.0	2,281.9	2,301.5	2,292.3	6.1	5.1	-164.59	-156.8	64.8	91.8	83.5	8.35	10.998		
2,400.0	2,380.7	2,401.4	2,391.6	6.4	5.4	-164.47	-167.1	68.9	96.5	87.8	8.73	11.049		
2,500.0	2,479.5	2,501.3	2,490.9	6.7	5.6	-164.36	-177.5	73.0	101.1	92.0	9.12	11.095		
2,600.0	2,578.3	2,601.2	2,590.2	7.0	5.9	-164.26	-187.8	77.1	105.8	96.3	9.50	11.137		
2,700.0	2,677.1	2,701.1	2,689.4	7.4	6.1	-164.17	-198.2	81.2	110.4	100.5	9.88	11.175		
2,800.0	2,775.9	2,801.0	2,788.7	7.7	6.4	-164.09	-208.6	85.3	115.1	104.8	10.26	11.211		
2,900.0	2,874.7	2,900.9	2,888.0	8.0	6.7	-164.01	-218.9	89.4	119.7	109.1	10.65	11.243		
3,000.0	2,973.5	3,000.8	2,987.2	8.3	6.9	-163.94	-229.3	93.5	124.4	113.3	11.03	11.273		
3,100.0	3,072.3	3,100.7	3,086.5	8.6	7.2	-163.87	-239.6	97.6	129.0	117.6	11.42	11.301		
3,200.0	3,171.1	3,200.6	3,185.8	9.0	7.4	-163.81	-250.0	101.7	133.7	121.9	11.80	11.327		
3,300.0	3,269.9	3,300.5	3,285.0	9.3	7.7	-163.76	-260.4	105.8	138.3	126.1	12.18	11.351		
3,400.0	3,368.7	3,400.4	3,384.3	9.6	8.0	-163.70	-270.7	109.9	143.0	130.4	12.57	11.374		
3,500.0	3,467.5	3,500.2	3,483.6	9.9	8.2	-163.65	-281.1	114.0	147.6	134.7	12.95	11.395		
3,600.0	3,566.3	3,600.1	3,582.8	10.2	8.5	-163.61	-291.5	118.1	152.3	138.9	13.34	11.415		
3,700.0	3,665.1	3,700.0	3,682.1	10.6	8.7	-163.56	-301.8	122.2	156.9	143.2	13.72	11.434		
3,800.0	3,763.9	3,799.9	3,781.4	10.9	9.0	-163.52	-312.2	126.3	161.6	147.4	14.11	11.451		
3,900.0	3,862.7	3,899.8	3,880.6	11.2	9.3	-163.48	-322.5	130.4	166.2	151.7	14.49	11.468		
4,000.0	3,961.5	3,999.7	3,979.9	11.5	9.5	-163.44	-332.9	134.5	170.9	156.0	14.88	11.483		
4,100.0	4,060.3	4,099.6	4,079.2	11.8	9.8	-163.41	-343.3	138.6	175.5	160.2	15.26	11.498		
4,200.0	4,159.1	4,199.5	4,178.5	12.2	10.0	-163.37	-353.6	142.7	180.1	164.5	15.65	11.512		
4,300.0	4,257.9	4,299.4	4,277.7	12.5	10.3	-163.34	-364.0	146.7	184.8	168.8	16.03	11.526		
4,400.0	4,356.7	4,399.3	4,377.0	12.8	10.6	-163.31	-374.3	150.8	189.4	173.0	16.42	11.538		
4,500.0	4,455.5	4,499.2	4,476.3	13.1	10.8	-163.28	-384.7	154.9	194.1	177.3	16.80	11.550		
4,600.0	4,554.3	4,599.1	4,575.5	13.5	11.1	-163.26	-395.1	159.0	198.7	181.6	17.19	11.562		
4,700.0	4,653.1	4,698.9	4,674.8	13.8	11.3	-163.23	-405.4	163.1	203.4	185.8	17.58	11.573		
4,800.0	4,751.9	4,798.8	4,774.1	14.1	11.6	-163.20	-415.8	167.2	208.0	190.1	17.96	11.583		
4,900.0	4,850.7	4,898.7	4,873.3	14.4	11.9	-163.18	-426.1	171.3	212.7	194.3	18.35	11.593		
5,000.0	4,949.5	4,998.6	4,972.6	14.7	12.1	-163.16	-436.5	175.4	217.3	198.6	18.73	11.602		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S28-T3N-R68W (Frederiksen) - Frederiksen 1E-28H-A368 - Hz - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.0	5,048.3	5,098.5	5,071.9	15.1	12.4	-163.14	-446.9	179.5	222.0	202.9	19.12	11.611		
5,200.0	5,147.1	5,198.4	5,171.1	15.4	12.6	-163.12	-457.2	183.6	226.6	207.1	19.50	11.620		
5,300.0	5,245.9	5,298.3	5,270.4	15.7	12.9	-163.09	-467.6	187.7	231.3	211.4	19.89	11.629		
5,400.0	5,344.7	5,398.2	5,369.7	16.0	13.2	-163.08	-477.9	191.8	235.9	215.7	20.28	11.637		
5,500.0	5,443.5	5,498.1	5,468.9	16.3	13.4	-163.06	-488.3	195.9	240.6	219.9	20.66	11.644		
5,600.0	5,542.3	5,598.0	5,568.2	16.7	13.7	-163.04	-498.7	200.0	245.2	224.2	21.05	11.652		
5,700.0	5,641.1	5,697.9	5,667.5	17.0	13.9	-163.02	-509.0	204.1	249.9	228.5	21.43	11.659		
5,800.0	5,739.9	5,797.8	5,766.7	17.3	14.2	-163.01	-519.4	208.2	254.5	232.7	21.82	11.666		
5,900.0	5,838.7	5,897.7	5,866.0	17.6	14.5	-162.99	-529.7	212.3	259.2	237.0	22.21	11.672		
6,000.0	5,937.5	5,997.5	5,965.3	17.9	14.7	-162.97	-540.1	216.4	263.8	241.2	22.59	11.679		
6,100.0	6,036.3	6,097.4	6,064.6	18.3	15.0	-162.96	-550.5	220.5	268.5	245.5	22.98	11.685		
6,200.0	6,135.1	6,197.3	6,163.8	18.6	15.2	-162.94	-560.8	224.6	273.1	249.8	23.36	11.691		
6,300.0	6,233.9	6,297.2	6,263.1	18.9	15.5	-162.93	-571.2	228.7	277.8	254.0	23.75	11.697		
6,400.0	6,332.7	6,397.1	6,362.4	19.2	15.8	-162.92	-581.5	232.7	282.4	258.3	24.14	11.702		
6,500.0	6,431.5	6,497.5	6,462.2	19.5	16.0	-162.98	-592.0	236.5	287.1	262.6	24.50	11.715		
6,600.0	6,530.3	6,598.3	6,561.9	19.9	16.2	-165.45	-602.4	228.0	291.4	267.0	24.38	11.948		
6,700.0	6,629.1	6,692.0	6,652.0	20.2	16.3	-170.68	-611.8	204.4	297.2	273.3	23.92	12.423		
6,734.4	6,663.0	6,721.9	6,679.8	20.3	16.4	-172.88	-614.7	193.8	300.3	276.5	23.80	12.619		
6,750.0	6,678.5	6,735.1	6,691.9	20.3	16.4	175.92	-615.9	188.7	301.9	278.2	23.75	12.714		
6,800.0	6,727.9	6,776.7	6,729.2	20.5	16.4	141.44	-619.8	170.7	307.9	284.2	23.72	12.981		
6,850.0	6,776.9	6,817.3	6,764.3	20.6	16.4	117.66	-623.5	150.6	314.9	291.0	23.89	13.181		
6,900.0	6,825.3	6,857.1	6,797.1	20.7	16.5	102.89	-626.9	128.5	322.7	298.4	24.22	13.321		
6,950.0	6,872.6	6,900.0	6,830.8	20.8	16.5	92.82	-630.4	102.1	330.9	306.2	24.69	13.402		
7,000.0	6,918.4	6,934.3	6,856.3	20.9	16.6	85.88	-633.1	79.2	339.4	314.3	25.16	13.492		
7,050.0	6,962.5	6,972.0	6,882.6	21.0	16.6	80.36	-635.8	52.4	348.1	322.4	25.67	13.560		
7,100.0	7,004.5	7,009.2	6,906.8	21.1	16.7	75.93	-638.4	24.3	356.6	330.6	26.08	13.675		
7,150.0	7,044.0	7,050.0	6,931.2	21.2	16.8	72.15	-640.9	-8.3	365.0	338.5	26.52	13.761		
7,200.0	7,080.8	7,082.3	6,948.9	21.3	16.9	69.26	-642.8	-35.2	372.9	346.1	26.79	13.921		
7,250.0	7,114.6	7,118.3	6,966.7	21.4	17.0	66.72	-644.6	-66.4	380.3	353.3	27.04	14.068		
7,300.0	7,145.1	7,150.0	6,980.8	21.5	17.1	64.68	-646.1	-94.8	387.2	360.0	27.17	14.250		
7,350.0	7,172.1	7,189.4	6,996.1	21.7	17.3	62.82	-647.7	-131.0	393.3	365.9	27.36	14.373		
7,400.0	7,195.3	7,224.6	7,007.7	21.8	17.5	61.37	-648.9	-164.3	398.6	371.1	27.49	14.500		
7,450.0	7,214.7	7,259.7	7,017.1	22.0	17.8	60.21	-649.9	-198.0	403.2	375.5	27.63	14.592		
7,500.0	7,230.1	7,300.0	7,025.4	22.3	18.1	59.26	-650.7	-237.5	406.9	379.0	27.87	14.599		
7,550.0	7,241.3	7,329.4	7,029.7	22.6	18.4	58.66	-651.2	-266.5	409.5	381.5	28.05	14.600		
7,600.0	7,248.3	7,364.1	7,032.9	22.9	18.8	58.25	-651.5	-301.1	411.3	382.9	28.37	14.495		
7,650.0	7,251.0	7,399.5	7,034.0	23.3	19.2	58.07	-651.6	-336.5	412.1	383.3	28.80	14.306		
7,656.1	7,251.0	7,404.6	7,034.0	23.3	19.2	58.06	-651.6	-341.6	412.1	383.2	28.88	14.270		
7,700.0	7,251.0	7,448.5	7,034.0	23.7	19.8	58.06	-651.6	-385.4	412.1	381.9	30.17	13.657		
7,800.0	7,251.0	7,548.5	7,034.0	24.8	21.3	58.06	-651.6	-485.4	412.1	378.8	33.29	12.381		
7,900.0	7,251.0	7,648.5	7,034.0	26.1	23.0	58.06	-651.6	-585.4	412.1	375.5	36.62	11.255		
8,000.0	7,251.0	7,748.5	7,034.0	27.6	24.9	58.06	-651.6	-685.4	412.1	372.0	40.11	10.274		
8,100.0	7,251.0	7,848.5	7,034.0	29.3	26.8	58.06	-651.6	-785.4	412.1	368.4	43.73	9.423		
8,200.0	7,251.0	7,948.5	7,034.0	31.1	28.9	58.06	-651.6	-885.4	412.1	364.6	47.45	8.685		
8,300.0	7,251.0	8,048.5	7,034.0	33.0	31.0	58.06	-651.6	-985.4	412.1	360.9	51.24	8.042		
8,400.0	7,251.0	8,148.5	7,034.0	35.0	33.2	58.06	-651.6	-1,085.4	412.1	357.0	55.10	7.480		
8,500.0	7,251.0	8,248.5	7,034.0	37.1	35.4	58.06	-651.6	-1,185.4	412.1	353.1	59.00	6.985		
8,600.0	7,251.0	8,348.5	7,034.0	39.2	37.7	58.06	-651.6	-1,285.4	412.1	349.2	62.94	6.548		
8,700.0	7,251.0	8,448.5	7,034.0	41.4	40.0	58.06	-651.6	-1,385.4	412.1	345.2	66.91	6.159		
8,800.0	7,251.0	8,548.5	7,034.0	43.6	42.3	58.06	-651.6	-1,485.4	412.1	341.2	70.91	5.812		
8,900.0	7,251.0	8,648.5	7,034.0	45.9	44.6	58.06	-651.6	-1,585.4	412.1	337.2	74.93	5.500		
9,000.0	7,251.0	8,748.5	7,034.0	48.1	46.9	58.06	-651.6	-1,685.4	412.1	333.1	78.97	5.218		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

# Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design S28-T3N-R68W (Frederiksen) - Frederiksen 1E-28H-A368 - Hz - Plan #3													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
9,100.0	7,251.0	8,848.5	7,034.0	50.4	49.3	58.06	-651.6	-1,785.4	412.1	329.1	83.03	4.963		
9,200.0	7,251.0	8,948.5	7,034.0	52.7	51.6	58.06	-651.6	-1,885.4	412.1	325.0	87.10	4.731		
9,300.0	7,251.0	9,048.5	7,034.0	55.0	54.0	58.06	-651.6	-1,985.4	412.1	320.9	91.18	4.519		
9,400.0	7,251.0	9,148.5	7,034.0	57.4	56.4	58.06	-651.6	-2,085.4	412.1	316.8	95.28	4.325		
9,500.0	7,251.0	9,248.5	7,034.0	59.7	58.8	58.06	-651.6	-2,185.4	412.1	312.7	99.38	4.147		
9,600.0	7,251.0	9,348.5	7,034.0	62.1	61.2	58.06	-651.6	-2,285.4	412.1	308.6	103.49	3.982		
9,700.0	7,251.0	9,448.5	7,034.0	64.4	63.6	58.06	-651.6	-2,385.4	412.1	304.5	107.61	3.829		
9,800.0	7,251.0	9,548.5	7,034.0	66.8	66.0	58.06	-651.6	-2,485.4	412.1	300.4	111.74	3.688		
9,900.0	7,251.0	9,648.5	7,034.0	69.2	68.4	58.06	-651.6	-2,585.4	412.1	296.2	115.87	3.557		
10,000.0	7,251.0	9,748.5	7,034.0	71.6	70.8	58.06	-651.6	-2,685.4	412.1	292.1	120.00	3.434		
10,100.0	7,251.0	9,848.5	7,034.0	74.0	73.2	58.06	-651.6	-2,785.4	412.1	288.0	124.14	3.319		
10,200.0	7,251.0	9,948.5	7,034.0	76.4	75.6	58.06	-651.6	-2,885.4	412.1	283.8	128.29	3.212		
10,300.0	7,251.0	10,048.5	7,034.0	78.8	78.1	58.06	-651.6	-2,985.4	412.1	279.7	132.44	3.112		
10,400.0	7,251.0	10,148.5	7,034.0	81.2	80.5	58.06	-651.6	-3,085.4	412.1	275.5	136.59	3.017		
10,500.0	7,251.0	10,248.5	7,034.0	83.6	82.9	58.06	-651.6	-3,185.4	412.1	271.4	140.74	2.928		
10,600.0	7,251.0	10,348.5	7,034.0	86.0	85.4	58.06	-651.6	-3,285.4	412.1	267.2	144.90	2.844		
10,700.0	7,251.0	10,448.5	7,034.0	88.4	87.8	58.06	-651.6	-3,385.4	412.1	263.0	149.06	2.765		
10,800.0	7,251.0	10,548.5	7,034.0	90.8	90.2	58.06	-651.6	-3,485.4	412.1	258.9	153.23	2.689		
10,900.0	7,251.0	10,648.5	7,034.0	93.3	92.7	58.06	-651.6	-3,585.4	412.1	254.7	157.39	2.618		
11,000.0	7,251.0	10,748.5	7,034.0	95.7	95.1	58.06	-651.6	-3,685.4	412.1	250.5	161.56	2.551		
11,100.0	7,251.0	10,848.5	7,034.0	98.1	97.6	58.06	-651.6	-3,785.4	412.1	246.4	165.73	2.487		
11,200.0	7,251.0	10,948.5	7,034.0	100.6	100.0	58.06	-651.6	-3,885.4	412.1	242.2	169.90	2.426		
11,300.0	7,251.0	11,048.5	7,034.0	103.0	102.5	58.06	-651.6	-3,985.4	412.1	238.0	174.07	2.367		
11,400.0	7,251.0	11,148.5	7,034.0	105.4	104.9	58.06	-651.6	-4,085.4	412.1	233.9	178.25	2.312		
11,500.0	7,251.0	11,248.5	7,034.0	107.9	107.4	58.06	-651.6	-4,185.4	412.1	229.7	182.42	2.259		
11,600.0	7,251.0	11,348.5	7,034.0	110.3	109.8	58.06	-651.6	-4,285.4	412.1	225.5	186.60	2.208		
11,700.0	7,251.0	11,448.5	7,034.0	112.7	112.3	58.06	-651.6	-4,385.4	412.1	221.3	190.78	2.160		
11,800.0	7,251.0	11,548.5	7,034.0	115.2	114.7	58.06	-651.6	-4,485.4	412.1	217.1	194.95	2.114		
11,855.7	7,251.0	11,604.2	7,034.0	116.5	116.1	58.06	-651.6	-4,541.2	412.1	214.8	197.28	2.089		
11,876.1	7,251.0	11,624.5	7,034.0	117.0	116.6	58.06	-651.6	-4,561.5	412.1	214.0	198.13	2.080 SF		

## Anticollision Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Frederiksen 1F-28H-A368
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Reference Site:</b>	S28-T3N-R68W (Frederiksen)	<b>MD Reference:</b>	KB @ 5004.0ft (Rig)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Frederiksen 1F-28H-A368	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Hz	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #3	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB @ 5004.0ft (Rig)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Frederiksen 1F-28H-A368

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.32°

