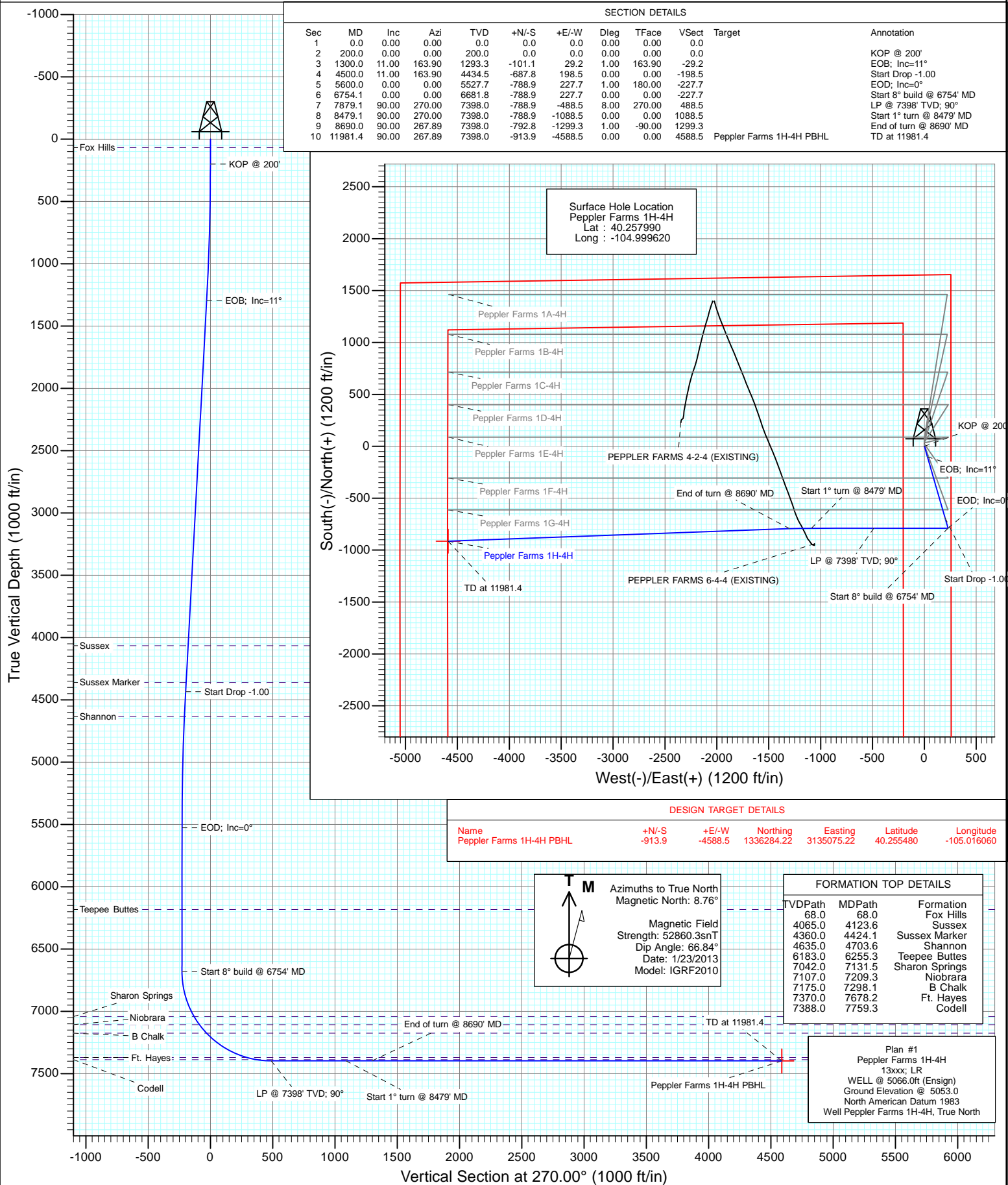




Project: DJ Wattenberg
Site: S4-T3N-R68W (Peppler Farms)
Well: Peppler Farms 1H-4H
Wellbore: Hz
Design: Plan #1



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5066.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5066.0ft (Ensign)
Site:	S4-T3N-R68W (Peppler Farms)	North Reference:	True
Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Project	DJ Wattenberg		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		S4-T3N-R68W (Peppler Farms)			
Site Position:		Northing:	1,337,296.89 ft	Latitude:	40.258190
From:	Lat/Long	Easting:	3,139,658.06 ft	Longitude:	-104.999620
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.32 °

Well	Peppler Farms 1H-4H					
Well Position	+N/-S	0.0 ft	Northing:	1,337,224.03 ft	Latitude:	40.257990
	+E/-W	0.0 ft	Easting:	3,139,658.47 ft	Longitude:	-104.999620
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,053.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/23/2013	8.76	66.84	52,860

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	270.00

Plan Sections										
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	
1,300.0	11.00	163.90	1,293.3	-101.1	29.2	1.00	1.00	0.00	163.90	
4,500.0	11.00	163.90	4,434.5	-687.8	198.5	0.00	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,527.7	-788.9	227.7	1.00	-1.00	0.00	180.00	
6,754.1	0.00	0.00	6,681.8	-788.9	227.7	0.00	0.00	0.00	0.00	
7,879.1	90.00	270.00	7,398.0	-788.9	-488.5	8.00	8.00	0.00	270.00	
8,479.1	90.00	270.00	7,398.0	-788.9	-1,088.5	0.00	0.00	0.00	0.00	
8,690.0	90.00	267.89	7,398.0	-792.8	-1,299.3	1.00	0.00	-1.00	-90.00	
11,981.4	90.00	267.89	7,398.0	-913.9	-4,588.5	0.00	0.00	0.00	0.00	Peppler Farms 1H-4H

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5066.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5066.0ft (Ensign)
Site:	S4-T3N-R68W (Peppler Farms)	North Reference:	True
Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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	
68.0	0.00	0.00	68.0	0.0	0.0	0.0	0.00	0.00	Fox Hills
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'
300.0	1.00	163.90	300.0	-0.8	0.2	-0.2	1.00	1.00	
400.0	2.00	163.90	400.0	-3.4	1.0	-1.0	1.00	1.00	
500.0	3.00	163.90	499.9	-7.5	2.2	-2.2	1.00	1.00	
600.0	4.00	163.90	599.7	-13.4	3.9	-3.9	1.00	1.00	
700.0	5.00	163.90	699.4	-20.9	6.0	-6.0	1.00	1.00	
800.0	6.00	163.90	798.9	-30.2	8.7	-8.7	1.00	1.00	
900.0	7.00	163.90	898.3	-41.0	11.8	-11.8	1.00	1.00	
1,000.0	8.00	163.90	997.4	-53.6	15.5	-15.5	1.00	1.00	
1,100.0	9.00	163.90	1,096.3	-67.8	19.6	-19.6	1.00	1.00	
1,200.0	10.00	163.90	1,194.9	-83.6	24.1	-24.1	1.00	1.00	
1,300.0	11.00	163.90	1,293.3	-101.1	29.2	-29.2	1.00	1.00	EOB; Inc=11°
1,400.0	11.00	163.90	1,391.4	-119.5	34.5	-34.5	0.00	0.00	
1,500.0	11.00	163.90	1,489.6	-137.8	39.8	-39.8	0.00	0.00	
1,600.0	11.00	163.90	1,587.7	-156.1	45.1	-45.1	0.00	0.00	
1,700.0	11.00	163.90	1,685.9	-174.5	50.4	-50.4	0.00	0.00	
1,800.0	11.00	163.90	1,784.1	-192.8	55.6	-55.6	0.00	0.00	
1,900.0	11.00	163.90	1,882.2	-211.1	60.9	-60.9	0.00	0.00	
2,000.0	11.00	163.90	1,980.4	-229.5	66.2	-66.2	0.00	0.00	
2,100.0	11.00	163.90	2,078.6	-247.8	71.5	-71.5	0.00	0.00	
2,200.0	11.00	163.90	2,176.7	-266.1	76.8	-76.8	0.00	0.00	
2,300.0	11.00	163.90	2,274.9	-284.5	82.1	-82.1	0.00	0.00	
2,400.0	11.00	163.90	2,373.0	-302.8	87.4	-87.4	0.00	0.00	
2,500.0	11.00	163.90	2,471.2	-321.1	92.7	-92.7	0.00	0.00	
2,600.0	11.00	163.90	2,569.4	-339.5	98.0	-98.0	0.00	0.00	
2,700.0	11.00	163.90	2,667.5	-357.8	103.3	-103.3	0.00	0.00	
2,800.0	11.00	163.90	2,765.7	-376.1	108.6	-108.6	0.00	0.00	
2,900.0	11.00	163.90	2,863.9	-394.5	113.9	-113.9	0.00	0.00	
3,000.0	11.00	163.90	2,962.0	-412.8	119.1	-119.1	0.00	0.00	
3,100.0	11.00	163.90	3,060.2	-431.1	124.4	-124.4	0.00	0.00	
3,200.0	11.00	163.90	3,158.3	-449.5	129.7	-129.7	0.00	0.00	
3,300.0	11.00	163.90	3,256.5	-467.8	135.0	-135.0	0.00	0.00	
3,400.0	11.00	163.90	3,354.7	-486.1	140.3	-140.3	0.00	0.00	
3,500.0	11.00	163.90	3,452.8	-504.5	145.6	-145.6	0.00	0.00	
3,600.0	11.00	163.90	3,551.0	-522.8	150.9	-150.9	0.00	0.00	
3,700.0	11.00	163.90	3,649.2	-541.1	156.2	-156.2	0.00	0.00	
3,800.0	11.00	163.90	3,747.3	-559.5	161.5	-161.5	0.00	0.00	
3,900.0	11.00	163.90	3,845.5	-577.8	166.8	-166.8	0.00	0.00	
4,000.0	11.00	163.90	3,943.6	-596.1	172.1	-172.1	0.00	0.00	
4,100.0	11.00	163.90	4,041.8	-614.5	177.4	-177.4	0.00	0.00	
4,123.6	11.00	163.90	4,065.0	-618.8	178.6	-178.6	0.00	0.00	Sussex
4,200.0	11.00	163.90	4,140.0	-632.8	182.6	-182.6	0.00	0.00	
4,300.0	11.00	163.90	4,238.1	-651.1	187.9	-187.9	0.00	0.00	
4,400.0	11.00	163.90	4,336.3	-669.4	193.2	-193.2	0.00	0.00	
4,424.1	11.00	163.90	4,360.0	-673.9	194.5	-194.5	0.00	0.00	Sussex Marker
4,500.0	11.00	163.90	4,434.5	-687.8	198.5	-198.5	0.00	0.00	Start Drop -1.00
4,600.0	10.00	163.90	4,532.8	-705.3	203.6	-203.6	1.00	-1.00	
4,700.0	9.00	163.90	4,631.4	-721.1	208.1	-208.1	1.00	-1.00	
4,703.6	8.96	163.90	4,635.0	-721.7	208.3	-208.3	1.00	-1.00	Shannon

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5066.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5066.0ft (Ensign)
Site:	S4-T3N-R68W (Peppler Farms)	North Reference:	True
Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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
4,800.0	8.00	163.90	4,730.3	-735.3	212.2	-212.2	1.00	-1.00	
4,900.0	7.00	163.90	4,829.5	-747.9	215.9	-215.9	1.00	-1.00	
5,000.0	6.00	163.90	4,928.8	-758.8	219.0	-219.0	1.00	-1.00	
5,100.0	5.00	163.90	5,028.4	-768.0	221.7	-221.7	1.00	-1.00	
5,200.0	4.00	163.90	5,128.0	-775.5	223.8	-223.8	1.00	-1.00	
5,300.0	3.00	163.90	5,227.9	-781.4	225.5	-225.5	1.00	-1.00	
5,400.0	2.00	163.90	5,327.8	-785.6	226.7	-226.7	1.00	-1.00	
5,500.0	1.00	163.90	5,427.7	-788.1	227.5	-227.5	1.00	-1.00	
5,600.0	0.00	0.00	5,527.7	-788.9	227.7	-227.7	1.00	-1.00	EOD; Inc=0°
5,700.0	0.00	0.00	5,627.7	-788.9	227.7	-227.7	0.00	0.00	
5,800.0	0.00	0.00	5,727.7	-788.9	227.7	-227.7	0.00	0.00	
5,900.0	0.00	0.00	5,827.7	-788.9	227.7	-227.7	0.00	0.00	
6,000.0	0.00	0.00	5,927.7	-788.9	227.7	-227.7	0.00	0.00	
6,100.0	0.00	0.00	6,027.7	-788.9	227.7	-227.7	0.00	0.00	
6,200.0	0.00	0.00	6,127.7	-788.9	227.7	-227.7	0.00	0.00	
6,255.3	0.00	0.00	6,183.0	-788.9	227.7	-227.7	0.00	0.00	Teepee Buttes
6,300.0	0.00	0.00	6,227.7	-788.9	227.7	-227.7	0.00	0.00	
6,400.0	0.00	0.00	6,327.7	-788.9	227.7	-227.7	0.00	0.00	
6,500.0	0.00	0.00	6,427.7	-788.9	227.7	-227.7	0.00	0.00	
6,600.0	0.00	0.00	6,527.7	-788.9	227.7	-227.7	0.00	0.00	
6,700.0	0.00	0.00	6,627.7	-788.9	227.7	-227.7	0.00	0.00	
6,754.1	0.00	0.00	6,681.8	-788.9	227.7	-227.7	0.00	0.00	Start 8° build @ 6754' MD
6,800.0	3.67	270.00	6,727.7	-788.9	226.2	-226.2	8.00	8.00	
6,900.0	11.67	270.00	6,826.7	-788.9	212.9	-212.9	8.00	8.00	
7,000.0	19.67	270.00	6,922.9	-788.9	185.9	-185.9	8.00	8.00	
7,100.0	27.67	270.00	7,014.4	-788.9	145.8	-145.8	8.00	8.00	
7,131.5	30.19	270.00	7,042.0	-788.9	130.5	-130.5	8.00	8.00	Sharon Springs
7,200.0	35.67	270.00	7,099.5	-788.9	93.3	-93.3	8.00	8.00	
7,209.3	36.42	270.00	7,107.0	-788.9	87.8	-87.8	8.00	8.00	Niobrara
7,298.1	43.52	270.00	7,175.0	-788.9	30.8	-30.8	8.00	8.00	B Chalk
7,300.0	43.67	270.00	7,176.4	-788.9	29.5	-29.5	8.00	8.00	
7,400.0	51.67	270.00	7,243.6	-788.9	-44.3	44.3	8.00	8.00	
7,500.0	59.67	270.00	7,300.0	-788.9	-126.9	126.9	8.00	8.00	
7,600.0	67.67	270.00	7,344.3	-788.9	-216.4	216.4	8.00	8.00	
7,678.2	73.93	270.00	7,370.0	-788.9	-290.2	290.2	8.00	8.00	Ft. Hayes
7,700.0	75.67	270.00	7,375.7	-788.9	-311.3	311.3	8.00	8.00	
7,759.3	80.42	270.00	7,388.0	-788.9	-369.2	369.2	8.00	8.00	Codell
7,800.0	83.67	270.00	7,393.6	-788.9	-409.6	409.6	8.00	8.00	
7,879.1	90.00	270.00	7,398.0	-788.9	-488.5	488.5	8.00	8.00	LP @ 7398' TVD; 90°
7,900.0	90.00	270.00	7,398.0	-788.9	-509.4	509.4	0.00	0.00	
8,000.0	90.00	270.00	7,398.0	-788.9	-609.4	609.4	0.00	0.00	
8,100.0	90.00	270.00	7,398.0	-788.9	-709.4	709.4	0.00	0.00	
8,200.0	90.00	270.00	7,398.0	-788.9	-809.4	809.4	0.00	0.00	
8,300.0	90.00	270.00	7,398.0	-788.9	-909.4	909.4	0.00	0.00	
8,400.0	90.00	270.00	7,398.0	-788.9	-1,009.4	1,009.4	0.00	0.00	
8,479.1	90.00	270.00	7,398.0	-788.9	-1,088.5	1,088.5	0.00	0.00	Start 1° turn @ 8479' MD
8,500.0	90.00	269.79	7,398.0	-789.0	-1,109.4	1,109.4	1.00	0.00	
8,600.0	90.00	268.79	7,398.0	-790.2	-1,209.4	1,209.4	1.00	0.00	
8,690.0	90.00	267.89	7,398.0	-792.8	-1,299.3	1,299.3	1.00	0.00	End of turn @ 8690' MD
8,700.0	90.00	267.89	7,398.0	-793.2	-1,309.3	1,309.3	0.00	0.00	
8,800.0	90.00	267.89	7,398.0	-796.9	-1,409.3	1,409.3	0.00	0.00	
8,900.0	90.00	267.89	7,398.0	-800.5	-1,509.2	1,509.2	0.00	0.00	

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5066.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5066.0ft (Ensign)
Site:	S4-T3N-R68W (Peppler Farms)	North Reference:	True
Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

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
9,000.0	90.00	267.89	7,398.0	-804.2	-1,609.1	1,609.1	0.00	0.00	
9,100.0	90.00	267.89	7,398.0	-807.9	-1,709.1	1,709.1	0.00	0.00	
9,200.0	90.00	267.89	7,398.0	-811.6	-1,809.0	1,809.0	0.00	0.00	
9,300.0	90.00	267.89	7,398.0	-815.3	-1,908.9	1,908.9	0.00	0.00	
9,400.0	90.00	267.89	7,398.0	-818.9	-2,008.9	2,008.9	0.00	0.00	
9,500.0	90.00	267.89	7,398.0	-822.6	-2,108.8	2,108.8	0.00	0.00	
9,600.0	90.00	267.89	7,398.0	-826.3	-2,208.7	2,208.7	0.00	0.00	
9,700.0	90.00	267.89	7,398.0	-830.0	-2,308.7	2,308.7	0.00	0.00	
9,800.0	90.00	267.89	7,398.0	-833.7	-2,408.6	2,408.6	0.00	0.00	
9,900.0	90.00	267.89	7,398.0	-837.3	-2,508.5	2,508.5	0.00	0.00	
10,000.0	90.00	267.89	7,398.0	-841.0	-2,608.5	2,608.5	0.00	0.00	
10,100.0	90.00	267.89	7,398.0	-844.7	-2,708.4	2,708.4	0.00	0.00	
10,200.0	90.00	267.89	7,398.0	-848.4	-2,808.3	2,808.3	0.00	0.00	
10,300.0	90.00	267.89	7,398.0	-852.1	-2,908.3	2,908.3	0.00	0.00	
10,400.0	90.00	267.89	7,398.0	-855.7	-3,008.2	3,008.2	0.00	0.00	
10,500.0	90.00	267.89	7,398.0	-859.4	-3,108.1	3,108.1	0.00	0.00	
10,600.0	90.00	267.89	7,398.0	-863.1	-3,208.1	3,208.1	0.00	0.00	
10,700.0	90.00	267.89	7,398.0	-866.8	-3,308.0	3,308.0	0.00	0.00	
10,800.0	90.00	267.89	7,398.0	-870.5	-3,407.9	3,407.9	0.00	0.00	
10,900.0	90.00	267.89	7,398.0	-874.1	-3,507.9	3,507.9	0.00	0.00	
11,000.0	90.00	267.89	7,398.0	-877.8	-3,607.8	3,607.8	0.00	0.00	
11,100.0	90.00	267.89	7,398.0	-881.5	-3,707.7	3,707.7	0.00	0.00	
11,200.0	90.00	267.89	7,398.0	-885.2	-3,807.7	3,807.7	0.00	0.00	
11,300.0	90.00	267.89	7,398.0	-888.9	-3,907.6	3,907.6	0.00	0.00	
11,400.0	90.00	267.89	7,398.0	-892.5	-4,007.5	4,007.5	0.00	0.00	
11,500.0	90.00	267.89	7,398.0	-896.2	-4,107.5	4,107.5	0.00	0.00	
11,600.0	90.00	267.89	7,398.0	-899.9	-4,207.4	4,207.4	0.00	0.00	
11,700.0	90.00	267.89	7,398.0	-903.6	-4,307.3	4,307.3	0.00	0.00	
11,800.0	90.00	267.89	7,398.0	-907.3	-4,407.2	4,407.2	0.00	0.00	
11,900.0	90.00	267.89	7,398.0	-910.9	-4,507.2	4,507.2	0.00	0.00	
11,981.4	90.00	267.89	7,398.0	-913.9	-4,588.5	4,588.5	0.00	0.00	TD at 11981.4 - Peppler Farms 1H-4H PBHL

Targets									
Target Name									
- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Peppler Farms 1H-4H P - plan hits target center - Point	0.00	0.00	7,398.0	-913.9	-4,588.5	1,336,284.22	3,135,075.22	40.255480	-105.016060

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Pepler Farms 1H-4H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5066.0ft (Ensign)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5066.0ft (Ensign)
Site:	S4-T3N-R68W (Pepler Farms)	North Reference:	True
Well:	Pepler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
68.0	68.0	Fox Hills			
4,123.6	4,065.0	Sussex			
4,424.1	4,360.0	Sussex Marker			
4,703.6	4,635.0	Shannon			
6,255.3	6,183.0	Teepee Buttes			
7,131.5	7,042.0	Sharon Springs			
7,209.3	7,107.0	Niobrara			
7,298.1	7,175.0	B Chalk			
7,678.2	7,370.0	Ft. Hayes			
7,759.3	7,388.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
1,300.0	1,293.3	-101.1	29.2	EOB; Inc=11°
4,500.0	4,434.5	-687.8	198.5	Start Drop -1.00
5,600.0	5,527.7	-788.9	227.7	EOD; Inc=0°
6,754.1	6,681.8	-788.9	227.7	Start 8° build @ 6754' MD
7,879.1	7,398.0	-788.9	-488.5	LP @ 7398' TVD; 90°
8,479.1	7,398.0	-788.9	-1,088.5	Start 1° turn @ 8479' MD
8,690.0	7,398.0	-792.8	-1,299.3	End of turn @ 8690' MD
11,981.4	7,398.0	-913.9	-4,588.5	TD at 11981.4

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S4-T3N-R68W (Peppler Farms)

Peppler Farms 1H-4H

Hz

Plan #1

Anticollision Report

24 January, 2013

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	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	1/24/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,981.4	Plan #1 (Hz)	MWD	Geolink MWD	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

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						
S4-T3N-R68W (Minch)						
HOAGLAND 33-4D (EXISTING) - Existing - Existing						Out of range
HOAGLAND 34-4D (EXISTING) - Existing - Existing						Out of range
HOAGLAND 43-4D (EXISTING) - Existing - Existing						Out of range
HOAGLAND 44-4 (EXISTING) - Existing - Existing						Out of range
HOAGLAND 45-4D (EXISTING) - Existing - Existing						Out of range
MINCH 14-4D (EXISTING) - Existing - Existing						Out of range
MINCH 24-4 RD-D (EXISTING) - Existing - Existing						Out of range
MINCH 35-4D (EXISTING) - Existing - Existing						Out of range
Minch 3A-4H - Hz - Plan #1	7,500.0	11,815.9	428.0	310.5	3.641	SF
Minch 3A-4H - Hz - Plan #1	11,741.6	7,672.7	369.5	270.3	3.723	CC, ES
Minch 3B-4H - Hz - Plan #1						Out of range
Minch 3C-4H - Hz - Plan #1						Out of range
Minch 3D-4H - Hz - Plan #1						Out of range
Minch 3E-4H - Hz - Plan #1						Out of range
Minch 3F-4H - Hz - Plan #1						Out of range
Minch 3G-4H - Hz - Plan #1						Out of range
Minch 3H-4H - Hz - Plan #1						Out of range
S4-T3N-R68W (Peppler Farms)						
Peppler Farms 1A-4H - Hz - Plan #1	166.0	168.0	72.9	72.3	135.553	CC
Peppler Farms 1A-4H - Hz - Plan #1	200.0	202.0	72.9	72.2	111.043	ES
Peppler Farms 1A-4H - Hz - Plan #1	600.0	587.8	113.2	111.1	55.717	SF
Peppler Farms 1B-4H - Hz - Plan #1	200.0	201.0	61.9	61.3	94.620	CC, ES
Peppler Farms 1B-4H - Hz - Plan #1	700.0	694.2	96.4	94.0	40.326	SF
Peppler Farms 1C-4H - Hz - Plan #1	200.0	201.0	51.0	50.3	77.923	CC, ES
Peppler Farms 1C-4H - Hz - Plan #1	600.0	598.5	67.8	65.7	33.100	SF
Peppler Farms 1D-4H - Hz - Plan #1	200.0	201.0	40.1	39.4	61.225	CC, ES
Peppler Farms 1D-4H - Hz - Plan #1	700.0	699.5	62.0	59.6	25.874	SF
Peppler Farms 1E-4H - Hz - Plan #1	200.0	200.0	32.8	32.1	50.227	CC, ES
Peppler Farms 1E-4H - Hz - Plan #1	700.0	699.4	54.1	51.7	22.574	SF
Peppler Farms 1F-4H - Hz - Plan #1	200.0	200.0	21.9	21.2	33.485	CC, ES
Peppler Farms 1F-4H - Hz - Plan #1	9,000.0	8,959.0	498.6	410.2	5.643	SF
Peppler Farms 1G-4H - Hz - Plan #1	200.0	200.0	10.9	10.3	16.742	CC, ES
Peppler Farms 1G-4H - Hz - Plan #1	11,981.4	11,679.3	411.4	238.2	2.375	SF
PEPPLER FARMS 4-2-4 (EXISTING) - Existing - Existing						Out of range
PEPPLER FARMS 6-4-4 (EXISTING) - Existing - Existing	8,450.4	8,000.4	157.4	104.5	2.974	CC, ES, SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Minch) - Minch 3A-4H - Hz - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
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	Warning
7,200.0	7,099.5	11,815.9	7,184.0	18.7	114.5	-63.45	-1,187.6	-195.4	495.9	383.9	112.01	4.427	
7,300.0	7,176.4	11,815.9	7,184.0	18.8	114.5	-66.42	-1,187.6	-195.4	458.0	343.3	114.68	3.994	
7,400.0	7,243.6	11,815.9	7,184.0	18.9	114.5	-68.22	-1,187.6	-195.4	434.4	318.0	116.48	3.730	
7,485.3	7,292.4	11,815.9	7,184.0	19.2	114.5	-68.71	-1,187.6	-195.4	427.8	310.4	117.47	3.642	
7,500.0	7,300.0	11,815.9	7,184.0	19.2	114.5	-68.70	-1,187.6	-195.4	428.0	310.5	117.57	3.641 SF	
7,600.0	7,344.3	11,794.8	7,184.0	19.7	114.0	-66.84	-1,187.6	-216.5	439.2	322.5	116.70	3.763	
7,700.0	7,375.7	11,699.9	7,184.0	20.4	111.7	-62.33	-1,187.6	-311.3	453.3	341.2	112.07	4.045	
7,800.0	7,393.6	11,601.6	7,184.0	21.4	109.3	-59.78	-1,187.5	-409.6	462.0	352.4	109.61	4.215	
7,900.0	7,398.0	11,501.8	7,184.0	22.8	106.9	-59.16	-1,187.5	-509.5	464.3	354.9	109.30	4.247	
8,000.0	7,398.0	11,401.8	7,184.0	24.3	104.4	-59.16	-1,187.5	-609.5	464.2	355.4	108.81	4.266	
8,100.0	7,398.0	11,301.8	7,184.0	26.0	102.0	-59.16	-1,187.5	-709.5	464.2	355.8	108.42	4.282	
8,200.0	7,398.0	11,201.8	7,184.0	27.9	99.5	-59.16	-1,187.5	-809.5	464.2	356.1	108.09	4.295	
8,300.0	7,398.0	11,101.8	7,184.0	29.9	97.1	-59.16	-1,187.5	-909.5	464.2	356.4	107.82	4.305	
8,400.0	7,398.0	11,001.8	7,184.0	31.9	94.7	-59.16	-1,187.5	-1,009.5	464.2	356.6	107.59	4.314	
8,500.0	7,398.0	10,901.8	7,184.0	34.0	92.2	-59.15	-1,187.4	-1,109.5	464.2	356.7	107.46	4.319	
8,600.0	7,398.0	10,801.8	7,184.0	36.2	89.8	-59.07	-1,187.4	-1,209.4	463.1	355.6	107.49	4.308	
8,700.0	7,398.0	10,701.9	7,184.0	38.4	87.4	-58.86	-1,187.4	-1,309.4	460.5	353.1	107.38	4.289	
8,800.0	7,398.0	10,601.9	7,184.0	40.7	85.0	-58.63	-1,187.4	-1,409.3	457.4	350.3	107.01	4.274	
8,900.0	7,398.0	10,502.0	7,184.0	43.0	82.5	-58.38	-1,187.4	-1,509.3	454.2	347.6	106.66	4.258	
9,000.0	7,398.0	10,402.1	7,184.0	45.3	80.1	-58.14	-1,187.4	-1,609.2	451.1	344.8	106.32	4.243	
9,100.0	7,398.0	10,302.1	7,184.0	47.6	77.7	-57.89	-1,187.4	-1,709.1	447.9	342.0	105.98	4.227	
9,200.0	7,398.0	10,202.2	7,184.0	50.0	75.3	-57.63	-1,187.4	-1,809.1	444.8	339.2	105.65	4.210	
9,300.0	7,398.0	10,102.3	7,184.0	52.3	72.9	-57.38	-1,187.3	-1,909.0	441.7	336.4	105.33	4.194	
9,400.0	7,398.0	10,002.3	7,184.0	54.7	70.5	-57.12	-1,187.3	-2,008.9	438.6	333.6	105.00	4.177	
9,500.0	7,398.0	9,902.4	7,184.0	57.0	68.1	-56.85	-1,187.3	-2,108.9	435.5	330.8	104.68	4.160	
9,600.0	7,398.0	9,802.5	7,184.0	59.4	65.7	-56.59	-1,187.3	-2,208.8	432.4	328.0	104.36	4.143	
9,700.0	7,398.0	9,702.5	7,184.0	61.8	63.3	-56.32	-1,187.3	-2,308.7	429.3	325.3	104.05	4.126	
9,800.0	7,398.0	9,602.6	7,184.0	64.2	61.0	-56.04	-1,187.3	-2,408.7	426.3	322.5	103.73	4.109	
9,900.0	7,398.0	9,502.7	7,184.0	66.6	58.6	-55.76	-1,187.3	-2,508.6	423.2	319.8	103.42	4.092	
10,000.0	7,398.0	9,402.7	7,184.0	69.0	56.2	-55.48	-1,187.3	-2,608.5	420.2	317.0	103.10	4.075	
10,100.0	7,398.0	9,302.8	7,184.0	71.4	53.9	-55.19	-1,187.2	-2,708.4	417.1	314.3	102.79	4.058	
10,200.0	7,398.0	9,202.9	7,184.0	73.8	51.5	-54.90	-1,187.2	-2,808.4	414.1	311.6	102.48	4.041	
10,300.0	7,398.0	9,102.9	7,184.0	76.3	49.2	-54.60	-1,187.2	-2,908.3	411.1	308.9	102.17	4.023	
10,400.0	7,398.0	9,003.0	7,184.0	78.7	46.9	-54.30	-1,187.2	-3,008.2	408.1	306.2	101.86	4.006	
10,500.0	7,398.0	8,903.1	7,184.0	81.1	44.6	-54.00	-1,187.2	-3,108.2	405.1	303.5	101.55	3.989	
10,600.0	7,398.0	8,803.2	7,184.0	83.5	42.4	-53.69	-1,187.2	-3,208.1	402.1	300.8	101.25	3.971	
10,700.0	7,398.0	8,703.2	7,184.0	86.0	40.1	-53.37	-1,187.2	-3,308.0	399.1	298.2	100.95	3.954	
10,800.0	7,398.0	8,603.3	7,184.0	88.4	37.9	-53.06	-1,187.1	-3,408.0	396.2	295.5	100.66	3.936	
10,900.0	7,398.0	8,503.4	7,184.0	90.8	35.7	-52.73	-1,187.1	-3,507.9	393.2	292.8	100.38	3.917	
11,000.0	7,398.0	8,403.4	7,184.0	93.3	33.6	-52.40	-1,187.1	-3,607.8	390.3	290.2	100.11	3.899	
11,100.0	7,398.0	8,303.5	7,184.0	95.7	31.5	-52.07	-1,187.1	-3,707.8	387.4	287.5	99.85	3.879	
11,200.0	7,398.0	8,203.6	7,184.0	98.1	29.5	-51.73	-1,187.1	-3,807.7	384.4	284.8	99.62	3.859	
11,300.0	7,398.0	8,103.6	7,184.0	100.6	27.6	-51.39	-1,187.1	-3,907.6	381.6	282.1	99.41	3.838	
11,400.0	7,398.0	8,003.7	7,184.0	103.0	25.8	-51.04	-1,187.1	-4,007.6	378.7	279.4	99.25	3.816	
11,500.0	7,398.0	7,903.8	7,184.0	105.5	24.2	-50.69	-1,187.1	-4,107.5	375.8	276.7	99.13	3.791	
11,600.0	7,398.0	7,803.8	7,184.0	107.9	22.8	-50.33	-1,187.0	-4,207.4	373.0	273.9	99.08	3.764	
11,700.0	7,398.0	7,704.0	7,184.0	110.4	21.7	-49.96	-1,187.0	-4,307.3	370.1	271.0	99.12	3.734	
11,741.6	7,398.0	7,672.7	7,183.3	111.4	21.4	-49.77	-1,187.0	-4,338.5	369.5	270.3	99.25	3.723 CC, ES	
11,800.0	7,398.0	7,629.2	7,180.1	112.8	21.0	-49.23	-1,187.0	-4,381.9	370.7	271.6	99.08	3.741	
11,900.0	7,398.0	7,550.0	7,167.5	115.3	20.5	-47.49	-1,187.0	-4,460.1	378.4	280.8	97.65	3.875	
11,981.4	7,398.0	7,500.0	7,155.2	117.3	20.3	-45.95	-1,187.0	-4,508.5	390.1	293.7	96.43	4.046	

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Peppler Farms) - Peppler Farms 1A-4H - Hz - Plan #1													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	2.0	2.0	0.0	0.0	0.00	72.9	0.0	72.9					
100.0	100.0	102.0	102.0	0.2	0.2	0.00	72.9	0.0	72.9	72.6	0.31	237.196		
166.0	166.0	168.0	168.0	0.3	0.3	0.00	72.9	0.0	72.9	72.3	0.54	135.553 CC		
200.0	200.0	202.0	202.0	0.3	0.3	0.00	72.9	0.0	72.9	72.2	0.66	111.043 ES		
300.0	300.0	300.0	300.0	0.5	0.5	-163.87	74.6	0.3	75.5	74.4	1.00	75.308		
400.0	400.0	396.5	396.3	0.7	0.7	-163.79	79.5	1.1	83.1	81.7	1.35	61.742		
500.0	499.9	492.7	492.2	0.9	0.9	-163.70	87.6	2.3	95.7	94.0	1.69	56.640		
600.0	599.7	587.8	586.6	1.1	1.2	-163.59	98.7	4.1	113.2	111.1	2.03	55.717 SF		
700.0	699.4	681.2	679.0	1.3	1.4	-163.49	112.7	6.3	135.5	133.1	2.37	57.135		
800.0	798.9	772.8	769.0	1.5	1.8	-163.39	129.2	8.9	162.6	159.8	2.71	59.983		
900.0	898.3	862.2	856.3	1.8	2.1	-163.29	148.1	11.9	194.2	191.1	3.05	63.754		
1,000.0	997.4	949.1	940.6	2.0	2.5	-163.19	169.0	15.2	230.3	226.9	3.38	68.146		
1,100.0	1,096.3	1,033.3	1,021.6	2.3	2.9	-163.09	191.7	18.8	270.6	266.9	3.71	72.970		
1,200.0	1,194.9	1,121.7	1,106.1	2.7	3.4	-163.02	217.2	22.9	314.2	310.2	4.05	77.662		
1,300.0	1,293.3	1,210.9	1,191.5	3.0	3.9	-163.02	243.0	26.9	359.4	355.0	4.39	81.934		
1,400.0	1,391.4	1,299.7	1,276.4	3.4	4.3	-163.17	268.6	31.0	405.4	400.6	4.74	85.556		
1,500.0	1,489.6	1,388.5	1,361.3	3.7	4.8	-163.28	294.3	35.1	451.3	446.2	5.09	88.660		
1,600.0	1,587.7	1,477.4	1,446.3	4.1	5.3	-163.38	319.9	39.1	497.2	491.8	5.44	91.349		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Peppler Farms) - Peppler Farms 1B-4H - Hz - Plan #1													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	61.9	0.0	61.9					
100.0	100.0	101.0	101.0	0.2	0.2	0.00	61.9	0.0	61.9	61.6	0.31	202.758		
200.0	200.0	201.0	201.0	0.3	0.3	0.00	61.9	0.0	61.9	61.3	0.65	94.620 CC, ES		
300.0	300.0	301.0	301.0	0.5	0.5	-164.12	61.9	0.0	62.8	61.8	1.00	62.547		
400.0	400.0	400.0	400.0	0.7	0.7	-164.56	62.8	0.2	66.1	64.8	1.35	48.964		
500.0	499.9	498.4	498.4	0.9	0.9	-165.00	65.3	0.7	72.9	71.2	1.70	42.936		
600.0	599.7	596.6	596.5	1.1	1.0	-165.37	69.4	1.6	83.0	80.9	2.04	40.592		
700.0	699.4	694.2	693.9	1.3	1.2	-165.66	75.2	2.9	96.4	94.0	2.39	40.326 SF		
800.0	798.9	791.1	790.5	1.5	1.4	-165.87	82.5	4.4	113.1	110.4	2.74	41.341		
900.0	898.3	887.1	886.1	1.8	1.6	-166.01	91.3	6.4	133.1	130.0	3.08	43.196		
1,000.0	997.4	982.1	980.4	2.0	1.9	-166.09	101.6	8.6	156.3	152.9	3.43	45.628		
1,100.0	1,096.3	1,075.8	1,073.5	2.3	2.1	-166.14	113.2	11.1	182.7	179.0	3.77	48.469		
1,200.0	1,194.9	1,168.3	1,165.0	2.7	2.4	-166.15	126.1	13.9	212.3	208.2	4.11	51.606		
1,300.0	1,293.3	1,259.3	1,254.8	3.0	2.7	-166.13	140.2	16.9	244.9	240.4	4.46	54.963		
1,400.0	1,391.4	1,349.1	1,343.2	3.4	3.0	-166.15	155.5	20.2	279.7	274.9	4.81	58.211		
1,500.0	1,489.6	1,437.8	1,430.3	3.7	3.3	-166.10	172.0	23.8	316.0	310.8	5.16	61.287		
1,600.0	1,587.7	1,527.0	1,517.7	4.1	3.6	-165.99	189.8	27.6	353.6	348.1	5.51	64.182		
1,700.0	1,685.9	1,619.5	1,608.2	4.5	4.0	-165.89	208.6	31.7	391.5	385.7	5.87	66.708		
1,800.0	1,784.1	1,712.0	1,698.7	4.8	4.3	-165.81	227.4	35.8	429.5	423.2	6.23	68.935		
1,900.0	1,882.2	1,804.6	1,789.2	5.2	4.7	-165.74	246.2	39.8	467.4	460.8	6.59	70.910		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Peppler Farms) - Peppler Farms 1C-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		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)	Uncertainty Axis	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	0.00	51.0	0.0	51.0					
100.0	100.0	101.0	101.0	0.2	0.2	0.00	51.0	0.0	51.0	50.7	0.31	166.977		
200.0	200.0	201.0	201.0	0.3	0.3	0.00	51.0	0.0	51.0	50.3	0.65	77.923 CC, ES		
300.0	300.0	301.0	301.0	0.5	0.5	-164.17	51.0	0.0	51.8	50.8	1.00	51.656		
400.0	400.0	401.0	401.0	0.7	0.7	-164.91	51.0	0.0	54.4	53.0	1.35	40.192		
500.0	499.9	500.0	500.0	0.9	0.9	-165.70	51.8	0.3	59.4	57.7	1.70	34.944		
600.0	599.7	598.5	598.5	1.1	1.0	-166.18	54.3	1.1	67.8	65.7	2.05	33.100 SF		
700.0	699.4	696.7	696.5	1.3	1.2	-166.38	58.3	2.5	79.4	77.0	2.39	33.160		
800.0	798.9	794.2	793.9	1.5	1.4	-166.39	63.8	4.3	94.3	91.5	2.74	34.391		
900.0	898.3	890.9	890.3	1.8	1.6	-166.28	70.9	6.7	112.4	109.3	3.09	36.386		
1,000.0	997.4	986.7	985.7	2.0	1.8	-166.10	79.4	9.6	133.7	130.3	3.44	38.900		
1,100.0	1,096.3	1,081.4	1,079.8	2.3	2.0	-165.89	89.3	13.0	158.2	154.4	3.79	41.777		
1,200.0	1,194.9	1,174.9	1,172.5	2.7	2.3	-165.67	100.6	16.8	185.8	181.7	4.14	44.913		
1,300.0	1,293.3	1,267.0	1,263.7	3.0	2.5	-165.44	113.0	21.0	216.5	212.0	4.49	48.234		
1,400.0	1,391.4	1,358.0	1,353.5	3.4	2.8	-165.26	126.7	25.6	249.4	244.5	4.85	51.435		
1,500.0	1,489.6	1,450.2	1,444.4	3.7	3.1	-165.03	141.7	30.7	283.5	278.2	5.21	54.372		
1,600.0	1,587.7	1,544.2	1,536.9	4.1	3.4	-164.83	157.2	35.9	317.7	312.1	5.58	56.904		
1,700.0	1,685.9	1,638.1	1,629.5	4.5	3.7	-164.67	172.6	41.2	351.9	346.0	5.95	59.110		
1,800.0	1,784.1	1,732.1	1,722.0	4.8	4.0	-164.54	188.1	46.4	386.2	379.9	6.33	61.048		
1,900.0	1,882.2	1,826.0	1,814.5	5.2	4.3	-164.43	203.5	51.6	420.4	413.7	6.70	62.763		
2,000.0	1,980.4	1,920.0	1,907.0	5.6	4.7	-164.33	219.0	56.9	454.7	447.6	7.07	64.291		
2,100.0	2,078.6	2,013.9	1,999.5	5.9	5.0	-164.25	234.4	62.1	488.9	481.5	7.45	65.660		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Peppler Farms) - Peppler Farms 1D-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total		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)	Uncertainty Axis	Separation Factor		
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	131.196		
200.0	200.0	201.0	201.0	0.3	0.3	0.00	40.1	0.0	40.1	39.4	0.65	61.225 CC, ES		
300.0	300.0	301.0	301.0	0.5	0.5	-164.24	40.1	0.0	40.9	39.9	1.00	40.766		
400.0	400.0	401.0	401.0	0.7	0.7	-165.17	40.1	0.0	43.4	42.1	1.35	32.114		
500.0	499.9	500.9	500.9	0.9	0.9	-166.50	40.1	0.0	47.7	46.0	1.70	28.015		
600.0	599.7	600.7	600.7	1.1	1.0	-168.01	40.1	0.0	53.6	51.6	2.05	26.158		
700.0	699.4	699.5	699.5	1.3	1.2	-169.01	40.8	0.5	62.0	59.6	2.40	25.874 SF		
800.0	798.9	797.9	797.9	1.5	1.4	-169.17	43.0	1.8	73.5	70.7	2.74	26.778		
900.0	898.3	895.8	895.7	1.8	1.6	-168.81	46.5	4.1	87.9	84.9	3.09	28.453		
1,000.0	997.4	992.9	992.6	2.0	1.7	-168.17	51.4	7.3	105.5	102.0	3.44	30.649		
1,100.0	1,096.3	1,089.2	1,088.6	2.3	1.9	-167.41	57.7	11.2	126.0	122.2	3.79	33.206		
1,200.0	1,194.9	1,184.6	1,183.5	2.7	2.1	-166.62	65.2	16.1	149.5	145.4	4.15	36.013		
1,300.0	1,293.3	1,278.8	1,277.2	3.0	2.4	-165.86	73.9	21.6	176.0	171.5	4.51	38.991		
1,400.0	1,391.4	1,372.0	1,369.7	3.4	2.6	-165.16	83.8	28.0	204.7	199.8	4.89	41.852		
1,500.0	1,489.6	1,464.4	1,461.2	3.7	2.8	-164.41	94.9	35.1	234.6	229.3	5.27	44.498		
1,600.0	1,587.7	1,556.0	1,551.6	4.1	3.1	-163.66	107.1	42.9	265.9	260.2	5.66	46.965		
1,700.0	1,685.9	1,648.8	1,643.0	4.5	3.4	-162.91	120.5	51.5	298.3	292.2	6.06	49.238		
1,800.0	1,784.1	1,743.3	1,736.0	4.8	3.7	-162.28	134.4	60.3	330.9	324.4	6.46	51.210		
1,900.0	1,882.2	1,837.8	1,829.1	5.2	4.0	-161.76	148.2	69.1	363.5	356.6	6.87	52.940		
2,000.0	1,980.4	1,932.2	1,922.1	5.6	4.3	-161.33	162.0	78.0	396.1	388.8	7.27	54.468		
2,100.0	2,078.6	2,026.7	2,015.2	5.9	4.6	-160.96	175.8	86.8	428.8	421.1	7.68	55.826		
2,200.0	2,176.7	2,121.2	2,108.2	6.3	4.9	-160.65	189.7	95.7	461.4	453.3	8.09	57.041		
2,300.0	2,274.9	2,215.7	2,201.3	6.7	5.2	-160.38	203.5	104.5	494.1	485.6	8.50	58.133		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Peppler Farms) - Peppler Farms 1E-4H - Hz - Plan #1													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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty	Separation			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	32.8	0.0	32.8					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	32.8	0.0	32.8	32.5	0.30	107.959		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	32.8	0.0	32.8	32.1	0.65	50.227	CC, ES	
300.0	300.0	300.0	300.0	0.5	0.5	-164.31	32.8	0.0	33.6	32.6	1.00	33.565		
400.0	400.0	400.0	400.0	0.7	0.7	-165.43	32.8	0.0	36.2	34.8	1.35	26.764		
500.0	499.9	499.9	499.9	0.9	0.8	-166.97	32.8	0.0	40.4	38.7	1.70	23.764		
600.0	599.7	599.7	599.7	1.1	1.0	-168.66	32.8	0.0	46.4	44.3	2.05	22.636		
700.0	699.4	699.4	699.4	1.3	1.2	-170.28	32.8	0.0	54.1	51.7	2.40	22.574	SF	
800.0	798.9	798.9	798.9	1.5	1.4	-171.73	32.8	0.0	63.5	60.8	2.74	23.176		
900.0	898.3	898.2	898.1	1.8	1.5	-172.31	33.0	0.8	74.8	71.7	3.09	24.237		
1,000.0	997.4	997.2	997.1	2.0	1.7	-171.76	33.6	3.3	88.0	84.6	3.44	25.613		
1,100.0	1,096.3	1,095.8	1,095.7	2.3	1.9	-170.54	34.6	7.4	103.0	99.3	3.79	27.197		
1,200.0	1,194.9	1,194.1	1,193.8	2.7	2.1	-168.96	35.9	13.2	120.1	115.9	4.15	28.916		
1,300.0	1,293.3	1,291.8	1,291.2	3.0	2.3	-167.21	37.7	20.5	139.1	134.6	4.53	30.709		
1,400.0	1,391.4	1,389.2	1,388.1	3.4	2.5	-165.40	39.8	29.4	159.4	154.5	4.93	32.310		
1,500.0	1,489.6	1,486.2	1,484.5	3.7	2.7	-163.48	42.3	39.9	180.2	174.8	5.36	33.616		
1,600.0	1,587.7	1,582.8	1,580.4	4.1	2.9	-161.50	45.2	51.9	201.5	195.7	5.81	34.677		
1,700.0	1,685.9	1,680.0	1,676.6	4.5	3.2	-159.62	48.3	65.1	223.4	217.2	6.28	35.560		
1,800.0	1,784.1	1,777.3	1,773.0	4.8	3.4	-158.06	51.4	78.3	245.5	238.8	6.76	36.297		
1,900.0	1,882.2	1,874.7	1,869.4	5.2	3.7	-156.76	54.6	91.4	267.8	260.5	7.25	36.920		
2,000.0	1,980.4	1,972.0	1,965.8	5.6	4.0	-155.66	57.7	104.6	290.1	282.3	7.75	37.452		
2,100.0	2,078.6	2,069.3	2,062.2	5.9	4.2	-154.72	60.8	117.8	312.5	304.3	8.24	37.912		
2,200.0	2,176.7	2,166.7	2,158.6	6.3	4.5	-153.91	64.0	131.0	335.0	326.3	8.74	38.312		
2,300.0	2,274.9	2,264.0	2,255.0	6.7	4.8	-153.19	67.1	144.1	357.6	348.3	9.25	38.663		
2,400.0	2,373.0	2,361.3	2,351.3	7.0	5.1	-152.56	70.3	157.3	380.2	370.4	9.75	38.974		
2,500.0	2,471.2	2,458.7	2,447.7	7.4	5.3	-152.01	73.4	170.5	402.8	392.6	10.26	39.250		
2,600.0	2,569.4	2,557.8	2,546.0	7.8	5.6	-151.53	76.5	183.6	425.4	414.6	10.77	39.506		
2,700.0	2,667.5	2,658.7	2,646.1	8.2	5.9	-151.29	79.3	195.5	447.3	436.0	11.25	39.745		
2,800.0	2,765.7	2,759.9	2,746.7	8.5	6.1	-151.28	81.8	205.6	468.4	456.7	11.72	39.981		
2,900.0	2,863.9	2,861.4	2,847.9	8.9	6.3	-151.46	83.8	214.0	488.9	476.7	12.16	40.218		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Peppler Farms) - Peppler Farms 1F-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		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)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	0.00	21.9	0.0	21.9					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	21.9	0.0	21.9	21.6	0.30	71.973		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	21.9	0.0	21.9	21.2	0.65	33.485 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-164.51	21.9	0.0	22.7	21.7	1.00	22.656		
400.0	400.0	400.0	400.0	0.7	0.7	-166.09	21.9	0.0	25.2	23.9	1.35	18.678		
500.0	499.9	499.9	499.9	0.9	0.8	-168.12	21.9	0.0	29.5	27.8	1.70	17.348		
600.0	599.7	599.7	599.7	1.1	1.0	-170.14	21.9	0.0	35.5	33.4	2.05	17.328		
700.0	699.4	700.0	700.0	1.3	1.2	-171.38	21.1	0.5	42.5	40.1	2.40	17.720		
800.0	798.9	800.5	800.4	1.5	1.4	-171.64	19.0	2.0	49.6	46.9	2.75	18.073		
900.0	898.3	901.0	900.9	1.8	1.6	-171.27	15.4	4.5	56.9	53.8	3.10	18.390		
1,000.0	997.4	1,001.7	1,001.4	2.0	1.8	-170.49	10.3	8.1	64.4	61.0	3.45	18.673		
1,100.0	1,096.3	1,102.5	1,101.8	2.3	2.0	-169.43	3.8	12.6	72.1	68.3	3.81	18.924		
1,200.0	1,194.9	1,203.3	1,202.2	2.7	2.2	-168.18	-4.1	18.2	80.0	75.9	4.18	19.140		
1,300.0	1,293.3	1,304.2	1,302.4	3.0	2.4	-166.80	-13.5	24.8	88.2	83.6	4.57	19.314		
1,400.0	1,391.4	1,405.3	1,402.6	3.4	2.7	-165.22	-24.4	32.4	95.7	90.8	4.97	19.244		
1,500.0	1,489.6	1,506.4	1,502.7	3.7	3.0	-163.30	-36.8	41.0	101.9	96.5	5.41	18.829		
1,600.0	1,587.7	1,607.6	1,602.4	4.1	3.3	-161.02	-50.5	50.7	106.8	100.9	5.89	18.139		
1,700.0	1,685.9	1,707.4	1,700.7	4.5	3.6	-158.73	-64.7	60.6	111.2	104.8	6.39	17.407		
1,800.0	1,784.1	1,807.2	1,799.0	4.8	3.9	-156.62	-78.9	70.6	115.8	108.9	6.92	16.745		
1,900.0	1,882.2	1,907.0	1,897.3	5.2	4.2	-154.67	-93.1	80.5	120.6	113.1	7.47	16.149		
2,000.0	1,980.4	2,006.8	1,995.6	5.6	4.5	-152.87	-107.3	90.4	125.5	117.4	8.04	15.612		
2,100.0	2,078.6	2,106.6	2,093.9	5.9	4.9	-151.20	-121.5	100.4	130.4	121.8	8.62	15.128		
2,200.0	2,176.7	2,206.5	2,192.2	6.3	5.2	-149.66	-135.7	110.3	135.5	126.3	9.22	14.694		
2,300.0	2,274.9	2,306.3	2,290.5	6.7	5.5	-148.24	-149.9	120.3	140.7	130.9	9.84	14.303		
2,400.0	2,373.0	2,406.1	2,388.7	7.0	5.9	-146.91	-164.1	130.2	146.0	135.5	10.47	13.951		
2,500.0	2,471.2	2,505.9	2,487.0	7.4	6.2	-145.68	-178.3	140.2	151.3	140.2	11.10	13.633		
2,600.0	2,569.4	2,605.7	2,585.3	7.8	6.6	-144.53	-192.5	150.1	156.7	145.0	11.74	13.346		
2,700.0	2,667.5	2,705.5	2,683.6	8.2	6.9	-143.46	-206.7	160.0	162.2	149.8	12.40	13.086		
2,800.0	2,765.7	2,805.3	2,781.9	8.5	7.2	-142.46	-220.9	170.0	167.7	154.7	13.05	12.850		
2,900.0	2,863.9	2,905.0	2,880.1	8.9	7.6	-141.52	-235.1	179.9	173.3	159.6	13.71	12.636		
3,000.0	2,962.0	3,003.2	2,976.9	9.3	7.9	-140.91	-248.3	189.2	179.4	165.1	14.33	12.521		
3,100.0	3,060.2	3,101.3	3,074.0	9.7	8.2	-140.77	-260.1	197.5	186.4	171.6	14.88	12.531		
3,200.0	3,158.3	3,200.0	3,171.9	10.0	8.5	-141.07	-270.7	204.8	194.4	179.0	15.36	12.654		
3,300.0	3,256.5	3,296.9	3,268.2	10.4	8.7	-141.74	-279.7	211.1	203.3	187.5	15.78	12.884		
3,400.0	3,354.7	3,394.4	3,365.2	10.8	8.9	-142.73	-287.4	216.5	213.1	197.0	16.13	13.215		
3,500.0	3,452.8	3,491.6	3,462.1	11.1	9.1	-143.98	-293.7	221.0	224.0	207.6	16.42	13.644		
3,600.0	3,551.0	3,588.4	3,558.7	11.5	9.3	-145.43	-298.7	224.5	236.0	219.3	16.65	14.172		
3,700.0	3,649.2	3,684.8	3,655.0	11.9	9.5	-147.03	-302.4	227.0	249.1	232.3	16.84	14.797		
3,800.0	3,747.3	3,780.7	3,750.9	12.3	9.6	-148.74	-304.7	228.6	263.5	246.5	16.98	15.520		
3,900.0	3,845.5	3,876.2	3,846.3	12.6	9.7	-150.52	-305.6	229.3	279.3	262.2	17.09	16.339		
4,000.0	3,943.6	3,973.5	3,943.6	13.0	9.8	-152.31	-305.7	229.3	296.0	278.8	17.19	17.217		
4,100.0	4,041.8	4,071.7	4,041.8	13.4	10.0	-153.93	-305.7	229.3	313.1	295.8	17.32	18.080		
4,200.0	4,140.0	4,169.9	4,140.0	13.8	10.1	-155.38	-305.7	229.3	330.4	313.0	17.47	18.919		
4,300.0	4,238.1	4,268.0	4,238.1	14.1	10.2	-156.68	-305.7	229.3	347.9	330.3	17.63	19.733		
4,400.0	4,336.3	4,366.2	4,336.3	14.5	10.3	-157.86	-305.7	229.3	365.6	347.8	17.81	20.521		
4,500.0	4,434.5	4,464.4	4,434.5	14.9	10.5	-158.94	-305.7	229.3	383.4	365.3	18.01	21.283		
4,600.0	4,532.8	4,562.7	4,532.8	15.3	10.6	-159.93	-305.7	229.3	400.5	382.2	18.23	21.968		
4,700.0	4,631.4	4,661.3	4,631.4	15.6	10.7	-160.76	-305.7	229.3	416.0	397.6	18.46	22.531		
4,800.0	4,730.3	4,760.2	4,730.3	15.9	10.8	-161.45	-305.7	229.3	430.0	411.3	18.71	22.979		
4,900.0	4,829.5	4,859.3	4,829.5	16.1	11.0	-162.03	-305.7	229.3	442.4	423.5	18.97	23.316		
5,000.0	4,928.8	4,958.7	4,928.8	16.4	11.1	-162.50	-305.7	229.3	453.2	434.0	19.25	23.549		
5,100.0	5,028.4	5,058.2	5,028.4	16.6	11.3	-162.89	-305.7	229.3	462.4	442.8	19.52	23.682		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Peppler Farms) - Peppler Farms 1F-4H - Hz - Plan #1													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)				Between Centres (ft)	Between Ellipses (ft)	
5,200.0	5,128.0	5,157.9	5,128.0	16.8	11.4	-163.19	-305.7	229.3	469.9	450.1	19.81	23.721		
5,300.0	5,227.9	5,257.7	5,227.9	17.0	11.5	-163.42	-305.7	229.3	475.7	455.6	20.10	23.670		
5,400.0	5,327.8	5,357.6	5,327.8	17.1	11.7	-163.58	-305.7	229.3	479.9	459.5	20.39	23.534		
5,500.0	5,427.7	5,457.6	5,427.7	17.3	11.8	-163.68	-305.7	229.3	482.4	461.7	20.69	23.317		
5,600.0	5,527.7	5,557.6	5,527.7	17.3	11.9	0.19	-305.7	229.3	483.3	455.1	28.11	17.190		
5,700.0	5,627.7	5,657.6	5,627.7	17.4	12.1	0.19	-305.7	229.3	483.3	454.9	28.36	17.037		
5,800.0	5,727.7	5,757.6	5,727.7	17.5	12.2	0.19	-305.7	229.3	483.3	454.6	28.62	16.886		
5,900.0	5,827.7	5,857.6	5,827.7	17.6	12.4	0.19	-305.7	229.3	483.3	454.4	28.87	16.737		
6,000.0	5,927.7	5,957.6	5,927.7	17.7	12.5	0.19	-305.7	229.3	483.3	454.1	29.13	16.589		
6,100.0	6,027.7	6,057.6	6,027.7	17.9	12.7	0.19	-305.7	229.3	483.3	453.9	29.39	16.442		
6,200.0	6,127.7	6,157.6	6,127.7	18.0	12.8	0.19	-305.7	229.3	483.3	453.6	29.65	16.298		
6,300.0	6,227.7	6,257.6	6,227.7	18.1	13.0	0.19	-305.7	229.3	483.3	453.3	29.91	16.155		
6,400.0	6,327.7	6,357.6	6,327.7	18.2	13.1	0.19	-305.7	229.3	483.3	453.1	30.18	16.013		
6,500.0	6,427.7	6,457.6	6,427.7	18.3	13.3	0.19	-305.7	229.3	483.3	452.8	30.44	15.874		
6,600.0	6,527.7	6,557.6	6,527.7	18.4	13.4	0.19	-305.7	229.3	483.3	452.5	30.71	15.735		
6,700.0	6,627.7	6,657.6	6,627.7	18.5	13.5	0.19	-305.7	229.3	483.3	452.3	30.98	15.599		
6,737.6	6,665.3	6,695.2	6,665.3	18.5	13.6	90.25	-305.7	229.3	483.3	458.5	24.71	19.557		
6,800.0	6,727.7	6,757.7	6,727.8	18.6	13.7	90.19	-305.7	227.9	483.3	458.4	24.88	19.420		
6,900.0	6,826.7	6,857.9	6,827.0	18.6	13.8	90.19	-305.7	214.5	483.3	458.2	25.04	19.303		
7,000.0	6,922.9	6,958.2	6,923.4	18.7	13.8	90.18	-305.7	187.3	483.3	458.2	25.08	19.269		
7,100.0	7,014.4	7,058.4	7,015.1	18.7	13.8	90.17	-305.7	147.1	483.3	458.2	25.09	19.259		
7,200.0	7,099.5	7,158.5	7,100.2	18.7	13.8	90.16	-305.7	94.4	483.3	458.1	25.19	19.182		
7,300.0	7,176.4	7,258.7	7,177.2	18.8	13.9	90.14	-305.7	30.4	483.3	457.7	25.54	18.924		
7,400.0	7,243.6	7,358.9	7,244.4	18.9	14.1	90.12	-305.7	-43.7	483.3	457.0	26.30	18.375		
7,500.0	7,300.0	7,459.0	7,300.7	19.2	14.6	90.10	-305.7	-126.4	483.3	455.6	27.64	17.486		
7,600.0	7,344.3	7,559.1	7,344.9	19.7	15.5	90.07	-305.7	-216.2	483.3	453.6	29.64	16.307		
7,700.0	7,375.7	7,659.2	7,376.1	20.4	16.7	90.05	-305.7	-311.2	483.3	451.0	32.29	14.967		
7,800.0	7,393.6	7,759.2	7,393.8	21.4	18.2	90.02	-305.7	-409.5	483.3	447.8	35.50	13.614		
7,900.0	7,398.0	7,859.2	7,398.0	22.8	20.0	90.00	-305.7	-509.4	483.3	444.2	39.11	12.356		
8,000.0	7,398.0	7,959.2	7,398.0	24.3	21.9	90.00	-305.6	-609.4	483.3	440.3	43.00	11.240		
8,100.0	7,398.0	8,059.2	7,398.0	26.0	23.9	90.00	-305.6	-709.4	483.3	436.2	47.08	10.266		
8,200.0	7,398.0	8,159.2	7,398.0	27.9	26.0	90.00	-305.6	-809.4	483.3	432.0	51.31	9.419		
8,300.0	7,398.0	8,259.2	7,398.0	29.9	28.1	90.00	-305.6	-909.4	483.3	427.6	55.66	8.683		
8,400.0	7,398.0	8,359.2	7,398.0	31.9	30.3	90.00	-305.6	-1,009.4	483.3	423.2	60.10	8.041		
8,457.4	7,398.0	8,416.7	7,398.0	33.1	31.6	90.00	-305.6	-1,066.8	483.3	420.6	62.72	7.707		
8,500.0	7,398.0	8,459.2	7,398.0	34.0	32.6	90.00	-305.6	-1,109.4	483.3	418.7	64.66	7.474		
8,600.0	7,398.0	8,559.2	7,398.0	36.2	34.8	90.00	-305.6	-1,209.4	484.6	415.1	69.45	6.977		
8,700.0	7,398.0	8,659.2	7,398.0	38.4	37.1	90.00	-305.6	-1,309.3	487.5	413.3	74.26	6.565		
8,800.0	7,398.0	8,759.1	7,398.0	40.7	39.4	90.00	-305.6	-1,409.3	491.2	412.3	78.93	6.224		
8,900.0	7,398.0	8,859.0	7,398.0	43.0	41.8	90.00	-305.6	-1,509.2	494.9	411.3	83.62	5.918		
9,000.0	7,398.0	8,959.0	7,398.0	45.3	44.1	90.00	-305.6	-1,609.1	498.6	410.2	88.35	5.643 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Peppler Farms) - Peppler Farms 1G-4H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		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)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	0.00	10.9	0.0	10.9					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	10.9	0.0	10.9	10.6	0.30	35.986		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	10.9	0.0	10.9	10.3	0.65	16.742 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	-165.08	10.9	0.0	11.8	10.8	1.00	11.749		
400.0	400.0	400.0	400.0	0.7	0.7	-167.77	10.9	0.0	14.3	13.0	1.35	10.598		
500.0	499.9	500.2	500.2	0.9	0.9	-169.97	10.1	0.3	17.8	16.1	1.70	10.444		
600.0	599.7	600.4	600.4	1.1	1.0	-171.13	7.6	1.2	21.2	19.2	2.05	10.359		
700.0	699.4	700.8	700.6	1.3	1.2	-171.70	3.5	2.7	24.7	22.3	2.40	10.307		
800.0	798.9	801.2	800.8	1.5	1.4	-171.88	-2.3	4.8	28.2	25.5	2.75	10.272		
900.0	898.3	901.6	901.0	1.8	1.6	-171.81	-9.7	7.5	31.8	28.7	3.10	10.246		
1,000.0	997.4	1,002.1	1,001.0	2.0	1.8	-171.55	-18.8	10.8	35.3	31.8	3.45	10.224		
1,100.0	1,096.3	1,102.7	1,100.9	2.3	2.1	-171.17	-29.5	14.7	38.8	35.0	3.81	10.203		
1,200.0	1,194.9	1,203.3	1,200.7	2.7	2.4	-170.69	-41.9	19.2	42.4	38.2	4.17	10.181		
1,300.0	1,293.3	1,304.0	1,300.3	3.0	2.6	-170.14	-56.0	24.3	46.0	41.5	4.53	10.154		
1,400.0	1,391.4	1,404.8	1,399.6	3.4	3.0	-169.35	-71.6	30.1	48.7	43.8	4.91	9.931		
1,500.0	1,489.6	1,504.7	1,498.1	3.7	3.3	-168.41	-88.0	36.0	50.7	45.4	5.29	9.583		
1,600.0	1,587.7	1,604.7	1,596.5	4.1	3.6	-167.54	-104.3	41.9	52.7	47.0	5.68	9.273		
1,700.0	1,685.9	1,704.7	1,695.0	4.5	3.9	-166.73	-120.6	47.9	54.7	48.6	6.08	8.996		
1,800.0	1,784.1	1,804.7	1,793.4	4.8	4.3	-165.99	-136.9	53.8	56.7	50.2	6.48	8.746		
1,900.0	1,882.2	1,904.6	1,891.9	5.2	4.6	-165.29	-153.2	59.7	58.7	51.8	6.89	8.520		
2,000.0	1,980.4	2,004.6	1,990.4	5.6	4.9	-164.64	-169.5	65.7	60.8	53.5	7.31	8.313		
2,100.0	2,078.6	2,104.6	2,088.8	5.9	5.3	-164.03	-185.8	71.6	62.8	55.1	7.73	8.124		
2,200.0	2,176.7	2,204.6	2,187.3	6.3	5.6	-163.46	-202.2	77.6	64.8	56.7	8.16	7.951		
2,300.0	2,274.9	2,304.5	2,285.7	6.7	6.0	-162.93	-218.5	83.5	66.9	58.3	8.59	7.792		
2,400.0	2,373.0	2,404.5	2,384.2	7.0	6.3	-162.43	-234.8	89.4	69.0	59.9	9.02	7.644		
2,500.0	2,471.2	2,504.5	2,482.7	7.4	6.6	-161.95	-251.1	95.4	71.0	61.6	9.46	7.508		
2,600.0	2,569.4	2,604.5	2,581.1	7.8	7.0	-161.51	-267.4	101.3	73.1	63.2	9.90	7.381		
2,700.0	2,667.5	2,704.5	2,679.6	8.2	7.3	-161.08	-283.7	107.2	75.1	64.8	10.35	7.263		
2,800.0	2,765.7	2,804.4	2,778.0	8.5	7.7	-160.68	-300.0	113.2	77.2	66.4	10.80	7.153		
2,900.0	2,863.9	2,904.4	2,876.5	8.9	8.0	-160.30	-316.4	119.1	79.3	68.1	11.25	7.050		
3,000.0	2,962.0	3,004.4	2,974.9	9.3	8.4	-159.95	-332.7	125.1	81.4	69.7	11.70	6.954		
3,100.0	3,060.2	3,104.4	3,073.4	9.7	8.7	-159.60	-349.0	131.0	83.5	71.3	12.16	6.864		
3,200.0	3,158.3	3,204.3	3,171.9	10.0	9.1	-159.28	-365.3	136.9	85.5	72.9	12.62	6.779		
3,300.0	3,256.5	3,304.3	3,270.3	10.4	9.4	-158.97	-381.6	142.9	87.6	74.6	13.08	6.699		
3,400.0	3,354.7	3,404.3	3,368.8	10.8	9.8	-158.67	-397.9	148.8	89.7	76.2	13.55	6.624		
3,500.0	3,452.8	3,504.3	3,467.2	11.1	10.1	-158.39	-414.2	154.7	91.8	77.8	14.01	6.553		
3,600.0	3,551.0	3,604.2	3,565.7	11.5	10.5	-158.12	-430.5	160.7	93.9	79.4	14.48	6.486		
3,700.0	3,649.2	3,704.2	3,664.1	11.9	10.8	-157.87	-446.9	166.6	96.0	81.1	14.95	6.422		
3,800.0	3,747.3	3,804.2	3,762.6	12.3	11.1	-157.62	-463.2	172.6	98.1	82.7	15.42	6.362		
3,900.0	3,845.5	3,904.2	3,861.1	12.6	11.5	-157.38	-479.5	178.5	100.2	84.3	15.90	6.305		
4,000.0	3,943.6	4,004.2	3,959.5	13.0	11.8	-157.16	-495.8	184.4	102.3	85.9	16.37	6.250		
4,100.0	4,041.8	4,104.1	4,058.0	13.4	12.2	-156.94	-512.1	190.4	104.4	87.6	16.85	6.198		
4,200.0	4,140.0	4,204.1	4,156.4	13.8	12.5	-156.73	-528.4	196.3	106.5	89.2	17.32	6.149		
4,300.0	4,238.1	4,302.5	4,253.5	14.1	12.9	-156.72	-543.8	201.9	109.3	91.5	17.76	6.156		
4,400.0	4,336.3	4,400.0	4,349.9	14.5	13.2	-157.08	-557.5	206.9	113.6	95.5	18.11	6.275		
4,500.0	4,434.5	4,498.8	4,447.8	14.9	13.4	-157.79	-569.8	211.4	119.5	101.1	18.38	6.499		
4,600.0	4,532.8	4,596.6	4,545.0	15.3	13.7	-158.63	-580.4	215.2	126.1	107.4	18.62	6.771		
4,700.0	4,631.4	4,694.4	4,642.3	15.6	13.9	-159.43	-589.4	218.5	132.6	113.7	18.85	7.036		
4,800.0	4,730.3	4,792.1	4,739.6	15.9	14.1	-160.20	-596.9	221.2	139.1	120.0	19.07	7.294		
4,900.0	4,829.5	4,889.6	4,836.9	16.1	14.3	-160.93	-602.8	223.4	145.5	126.2	19.28	7.547		
5,000.0	4,928.8	4,987.1	4,934.3	16.4	14.4	-161.63	-607.1	224.9	151.9	132.4	19.49	7.793		
5,100.0	5,028.4	5,084.4	5,031.6	16.6	14.6	-162.31	-609.9	226.0	158.2	138.5	19.69	8.032		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Peppler Farms) - Peppler Farms 1G-4H - Hz - Plan #1													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		
5,200.0	5,128.0	5,181.6	5,128.8	16.8	14.7	-162.97	-611.1	226.4	164.4	144.5	19.89	8.266		
5,300.0	5,227.9	5,280.7	5,227.9	17.0	14.8	-163.58	-611.2	226.4	170.2	150.1	20.10	8.467		
5,400.0	5,327.8	5,380.6	5,327.8	17.1	14.9	-163.99	-611.2	226.4	174.4	154.0	20.34	8.573		
5,500.0	5,427.7	5,480.6	5,427.7	17.3	15.0	-164.23	-611.2	226.4	176.9	156.3	20.61	8.585		
5,600.0	5,527.7	5,580.5	5,527.7	17.3	15.1	-0.41	-611.2	226.4	177.7	146.2	31.51	5.641		
5,700.0	5,627.7	5,680.5	5,627.7	17.4	15.2	-0.41	-611.2	226.4	177.7	146.0	31.73	5.602		
5,800.0	5,727.7	5,780.5	5,727.7	17.5	15.3	-0.41	-611.2	226.4	177.7	145.8	31.95	5.564		
5,900.0	5,827.7	5,880.5	5,827.7	17.6	15.5	-0.41	-611.2	226.4	177.7	145.6	32.17	5.525		
6,000.0	5,927.7	5,980.5	5,927.7	17.7	15.6	-0.41	-611.2	226.4	177.7	145.3	32.39	5.487		
6,100.0	6,027.7	6,080.5	6,027.7	17.9	15.7	-0.41	-611.2	226.4	177.7	145.1	32.62	5.449		
6,200.0	6,127.7	6,180.5	6,127.7	18.0	15.8	-0.41	-611.2	226.4	177.7	144.9	32.85	5.411		
6,300.0	6,227.7	6,280.5	6,227.7	18.1	15.9	-0.41	-611.2	226.4	177.7	144.7	33.08	5.373		
6,400.0	6,327.7	6,380.5	6,327.7	18.2	16.0	-0.41	-611.2	226.4	177.7	144.4	33.31	5.335		
6,457.4	6,385.1	6,437.9	6,385.1	18.2	16.1	-0.41	-611.2	226.4	177.7	144.3	33.45	5.314		
6,500.0	6,427.7	6,480.5	6,427.7	18.3	16.2	-0.55	-611.2	226.0	177.7	144.2	33.56	5.296		
6,600.0	6,527.7	6,579.1	6,525.6	18.4	16.2	-3.83	-611.2	215.8	178.1	144.1	34.08	5.227		
6,700.0	6,627.7	6,673.2	6,617.0	18.5	16.2	-10.85	-611.2	193.6	181.3	146.6	34.65	5.231		
6,800.0	6,727.7	6,760.7	6,698.7	18.6	16.2	69.76	-611.2	162.4	191.0	167.4	23.64	8.080		
6,900.0	6,826.7	6,844.4	6,772.8	18.6	16.2	61.01	-611.2	123.5	206.1	181.5	24.64	8.365		
7,000.0	6,922.9	6,925.5	6,839.7	18.7	16.3	53.85	-611.2	77.8	224.1	198.3	25.81	8.682		
7,100.0	7,014.4	7,000.0	6,896.2	18.7	16.3	48.36	-611.2	29.3	243.1	216.5	26.60	9.142		
7,200.0	7,099.5	7,081.5	6,952.0	18.7	16.5	43.66	-611.2	-30.1	261.8	234.8	27.02	9.691		
7,300.0	7,176.4	7,157.2	6,997.4	18.8	16.7	40.18	-611.2	-90.6	279.3	252.4	26.92	10.375		
7,400.0	7,243.6	7,231.7	7,035.7	18.9	17.0	37.51	-611.2	-154.5	294.9	268.5	26.45	11.151		
7,500.0	7,300.0	7,300.0	7,064.7	19.2	17.4	35.60	-611.2	-216.3	308.1	282.4	25.70	11.987		
7,600.0	7,344.3	7,378.3	7,090.6	19.7	18.1	34.08	-611.2	-290.1	318.4	293.4	25.00	12.733		
7,700.0	7,375.7	7,450.0	7,107.1	20.4	18.9	33.13	-611.2	-359.9	325.7	301.3	24.40	13.346		
7,800.0	7,393.6	7,522.8	7,116.7	21.4	19.9	32.61	-611.2	-432.0	329.8	305.7	24.15	13.658		
7,900.0	7,398.0	7,600.3	7,119.0	22.8	21.1	32.49	-611.2	-509.4	330.8	306.1	24.68	13.404		
8,000.0	7,398.0	7,700.3	7,119.0	24.3	22.8	32.49	-611.3	-609.4	330.8	304.0	26.73	12.374		
8,100.0	7,398.0	7,800.3	7,119.0	26.0	24.7	32.49	-611.3	-709.4	330.8	301.9	28.89	11.450		
8,200.0	7,398.0	7,900.3	7,119.0	27.9	26.7	32.49	-611.3	-809.4	330.8	299.6	31.12	10.627		
8,300.0	7,398.0	8,000.3	7,119.0	29.9	28.8	32.49	-611.3	-909.4	330.8	297.3	33.43	9.895		
8,400.0	7,398.0	8,100.3	7,119.0	31.9	30.9	32.48	-611.3	-1,009.4	330.7	295.0	35.78	9.244		
8,459.4	7,398.0	8,159.7	7,119.0	33.2	32.2	32.49	-611.3	-1,068.8	330.8	293.6	37.23	8.885		
8,500.0	7,398.0	8,200.3	7,119.0	34.0	33.1	32.49	-611.3	-1,109.4	330.8	292.6	38.21	8.656		
8,600.0	7,398.0	8,300.3	7,119.0	36.2	35.4	32.66	-611.3	-1,209.4	331.4	290.5	40.94	8.096		
8,700.0	7,398.0	8,400.2	7,119.0	38.4	37.6	33.08	-611.3	-1,309.4	333.0	289.1	43.92	7.582		
8,800.0	7,398.0	8,500.2	7,119.0	40.7	39.9	33.61	-611.3	-1,409.3	335.1	288.1	46.97	7.133		
8,900.0	7,398.0	8,600.1	7,119.0	43.0	42.2	34.13	-611.3	-1,509.2	337.1	287.0	50.10	6.729		
9,000.0	7,398.0	8,700.0	7,119.0	45.3	44.5	34.64	-611.3	-1,609.2	339.2	285.9	53.31	6.362		
9,100.0	7,398.0	8,800.0	7,119.0	47.6	46.9	35.15	-611.3	-1,709.1	341.3	284.7	56.60	6.030		
9,200.0	7,398.0	8,899.9	7,119.0	50.0	49.2	35.65	-611.3	-1,809.0	343.4	283.5	59.96	5.728		
9,300.0	7,398.0	8,999.8	7,119.0	52.3	51.6	36.14	-611.4	-1,909.0	345.6	282.2	63.39	5.452		
9,400.0	7,398.0	9,099.8	7,119.0	54.7	54.0	36.63	-611.4	-2,008.9	347.7	280.9	66.88	5.199		
9,500.0	7,398.0	9,199.7	7,119.0	57.0	56.4	37.11	-611.4	-2,108.8	349.9	279.5	70.44	4.968		
9,600.0	7,398.0	9,299.6	7,119.0	59.4	58.7	37.59	-611.4	-2,208.8	352.2	278.1	74.06	4.755		
9,700.0	7,398.0	9,399.6	7,119.0	61.8	61.1	38.06	-611.4	-2,308.7	354.4	276.7	77.74	4.559		
9,800.0	7,398.0	9,499.5	7,119.0	64.2	63.5	38.52	-611.4	-2,408.6	356.7	275.2	81.47	4.378		
9,900.0	7,398.0	9,599.4	7,119.0	66.6	65.9	38.98	-611.4	-2,508.6	359.0	273.7	85.25	4.211		
10,000.0	7,398.0	9,699.4	7,119.0	69.0	68.4	39.43	-611.4	-2,608.5	361.3	272.2	89.09	4.056		
10,100.0	7,398.0	9,799.3	7,119.0	71.4	70.8	39.88	-611.4	-2,708.4	363.7	270.7	92.98	3.911		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design S4-T3N-R68W (Peppler Farms) - Peppler Farms 1G-4H - Hz - Plan #1													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		
10,200.0	7,398.0	9,899.2	7,119.0	73.8	73.2	40.32	-611.4	-2,808.4	366.0	269.1	96.91	3.777		
10,300.0	7,398.0	9,999.2	7,119.0	76.3	75.6	40.76	-611.4	-2,908.3	368.4	267.5	100.89	3.652		
10,400.0	7,398.0	10,099.1	7,119.0	78.7	78.1	41.19	-611.4	-3,008.2	370.8	265.9	104.92	3.535		
10,500.0	7,398.0	10,199.0	7,119.0	81.1	80.5	41.61	-611.5	-3,108.2	373.3	264.3	108.98	3.425		
10,600.0	7,398.0	10,298.9	7,119.0	83.5	82.9	42.03	-611.5	-3,208.1	375.7	262.6	113.09	3.322		
10,700.0	7,398.0	10,398.9	7,119.0	86.0	85.3	42.44	-611.5	-3,308.0	378.2	260.9	117.23	3.226		
10,800.0	7,398.0	10,498.8	7,119.0	88.4	87.8	42.85	-611.5	-3,407.9	380.7	259.3	121.42	3.135		
10,900.0	7,398.0	10,598.7	7,119.0	90.8	90.2	43.25	-611.5	-3,507.9	383.2	257.5	125.63	3.050		
11,000.0	7,398.0	10,698.7	7,119.0	93.3	92.7	43.65	-611.5	-3,607.8	385.7	255.8	129.89	2.970		
11,100.0	7,398.0	10,798.6	7,119.0	95.7	95.1	44.04	-611.5	-3,707.7	388.2	254.1	134.18	2.894		
11,200.0	7,398.0	10,898.5	7,119.0	98.1	97.6	44.43	-611.5	-3,807.7	390.8	252.3	138.50	2.822		
11,300.0	7,398.0	10,998.5	7,119.0	100.6	100.0	44.81	-611.5	-3,907.6	393.4	250.5	142.85	2.754		
11,400.0	7,398.0	11,098.4	7,119.0	103.0	102.4	45.19	-611.5	-4,007.5	396.0	248.8	147.23	2.690		
11,500.0	7,398.0	11,198.3	7,119.0	105.5	104.9	45.56	-611.5	-4,107.5	398.6	247.0	151.64	2.629		
11,600.0	7,398.0	11,298.3	7,119.0	107.9	107.3	45.93	-611.5	-4,207.4	401.2	245.2	156.07	2.571		
11,700.0	7,398.0	11,398.2	7,119.0	110.4	109.8	46.29	-611.5	-4,307.3	403.9	243.3	160.54	2.516		
11,800.0	7,398.0	11,498.1	7,119.0	112.8	112.2	46.65	-611.6	-4,407.3	406.5	241.5	165.03	2.463		
11,900.0	7,398.0	11,598.1	7,119.0	115.3	114.7	47.00	-611.6	-4,507.2	409.2	239.7	169.54	2.414		
11,981.4	7,398.0	11,679.3	7,119.0	117.3	116.7	47.28	-611.6	-4,588.4	411.4	238.2	173.23	2.375 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
S4-T3N-R68W (Peppler Farms) - PEPLER FARMS 6-4-4 (EXISTING) - Existing - Existing												Offset Well Error:	0.0 ft
Survey Program: 77-MWD													
Reference		Offset		Semi Major Axis		Distance							
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	Warning
8,000.0	7,398.0	8,000.7	7,417.1	24.3	46.8	-91.12	-946.4	-1,059.5	476.9	433.6	43.29	11.016	
8,100.0	7,398.0	8,000.6	7,417.0	26.0	46.8	-91.09	-946.4	-1,059.5	383.9	338.6	45.33	8.469	
8,200.0	7,398.0	8,000.5	7,416.9	27.9	46.8	-91.07	-946.4	-1,059.5	295.6	248.1	47.45	6.229	
8,300.0	7,398.0	8,000.5	7,416.9	29.9	46.8	-91.05	-946.4	-1,059.5	217.6	168.0	49.63	4.384	
8,400.0	7,398.0	8,000.4	7,416.8	31.9	46.8	-91.02	-946.4	-1,059.5	165.3	113.4	51.85	3.188	
8,450.4	7,398.0	8,000.4	7,416.8	33.0	46.8	-91.01	-946.4	-1,059.5	157.4	104.5	52.95	2.974	CC, ES, SF
8,500.0	7,398.0	8,000.3	7,416.7	34.0	46.8	-91.00	-946.4	-1,059.5	165.2	111.1	54.03	3.057	
8,600.0	7,398.0	8,000.2	7,416.7	36.2	46.8	-90.96	-946.4	-1,059.5	216.5	160.6	55.91	3.872	
8,700.0	7,398.0	8,000.1	7,416.5	38.4	46.8	-90.90	-946.4	-1,059.5	293.1	235.2	57.86	5.065	
8,800.0	7,398.0	8,000.0	7,416.4	40.7	46.8	-90.85	-946.4	-1,059.5	380.4	320.2	60.19	6.319	
8,900.0	7,398.0	7,999.9	7,416.3	43.0	46.8	-90.81	-946.4	-1,059.5	472.8	410.2	62.55	7.558	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Peppler Farms 1H-4H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5066.0ft (Ensign)
Reference Site:	S4-T3N-R68W (Peppler Farms)	MD Reference:	WELL @ 5066.0ft (Ensign)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Peppler Farms 1H-4H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5066.0ft (Ensign)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Peppler Farms 1H-4H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.32°

