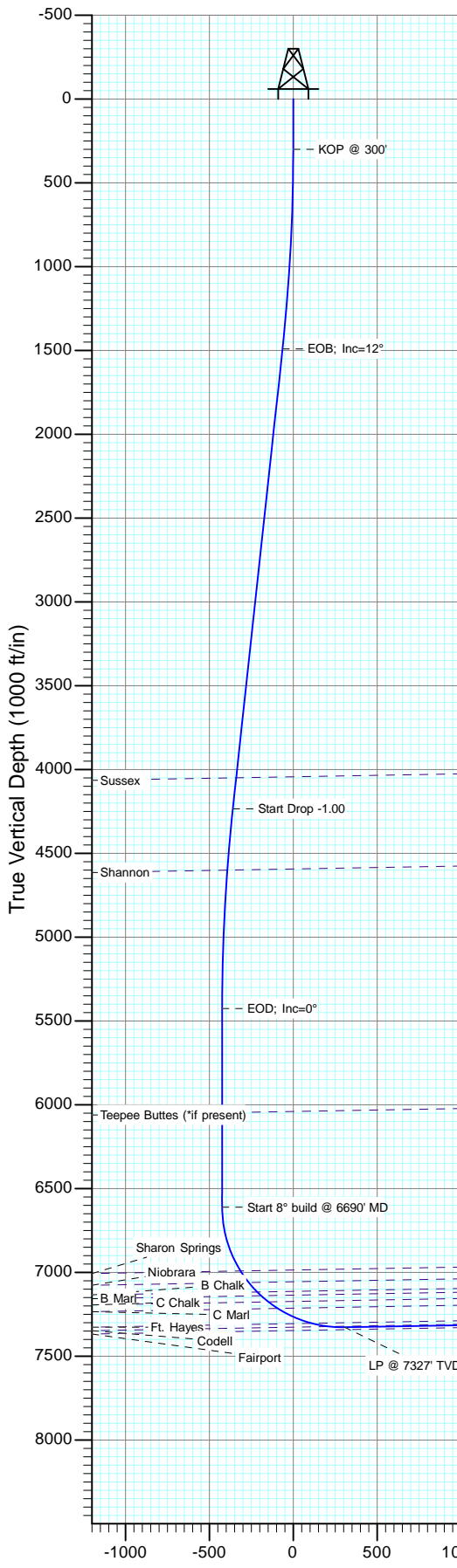
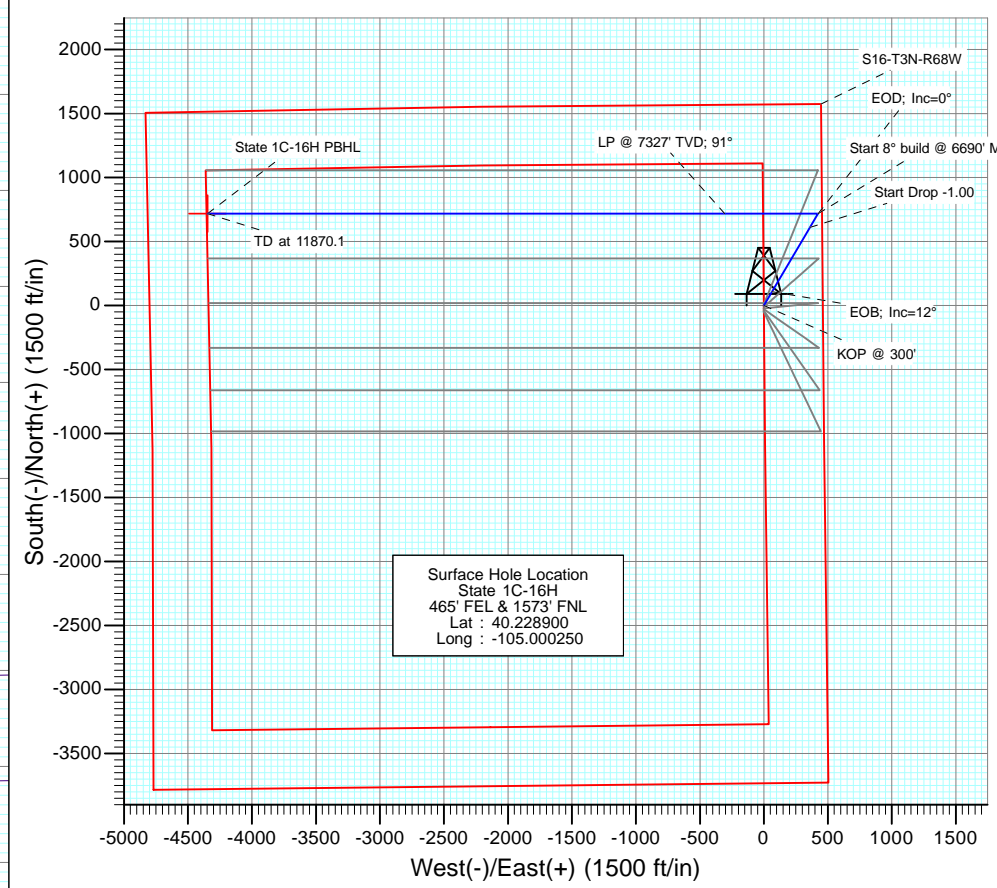




Project: DJ Wattenberg
 Site: S16-T3N-R68W (State)
 Well: State 1C-16H
 Wellbore: Hz
 Design: Plan #1



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	1500.0	12.00	30.50	1491.2	107.9	63.5	1.00	30.50	-63.5	
4	4305.0	12.00	30.50	4235.0	610.4	359.5	0.00	0.00	-359.5	
5	5505.0	0.00	0.00	5426.2	718.3	423.1	1.00	180.00	-423.1	
6	6690.4	0.00	0.00	6611.6	718.3	423.1	0.00	0.00	-423.1	
7	7827.9	91.00	270.00	7327.7	718.2	-305.6	8.00	270.00	305.6	
8	11870.1	91.00	270.00	7257.1	718.0	-4347.2	0.00	0.00	4347.2	State 1C-16H PBHL



DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
State 1C-16H PBHL	718.0	-4347.2	1327319.63	3135191.16	40.230870	-105.015820

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4049.9	4115.8	Sussex
4600.9	4676.8	Shannon
6048.4	6127.2	Teepee Buttes (*if present)
6992.5	7092.0	Sharon Springs
7061.6	7177.0	Niobrara
7117.7	7252.5	B. Chalk
7140.3	7285.2	B. Marl
7176.6	7341.4	C. Chalk
7215.6	7409.1	C. Marl
7305.0	7634.3	Ft. Hayes
7324.1	7743.2	Codell

M Azimuths to True North
 Magnetic North: 8.77°

Magnetic Field
 Strength: 52856.6snT
 Dip Angle: 66.82°
 Date: 12/14/2012
 Model: IGRF2010

Plan #1
 State 1C-16H
 12xxx; LR
 WELL @ 5039.0ft (Original Well Elev)
 Ground Elevation @ 5026.0
 North American Datum 1983
 Well State 1C-16H, True North

Vertical Section at 270.00° (1000 ft/in)

Planning Report

Database: USA EDM 5000 Multi Users DB	Local Co-ordinate Reference: Well State 1C-16H
Company: EnCana Oil & Gas (USA) Inc	TVD Reference: WELL @ 5039.0ft (Original Well Elev)
Project: DJ Wattenberg	MD Reference: WELL @ 5039.0ft (Original Well Elev)
Site: S16-T3N-R68W (State)	North Reference: True
Well: State 1C-16H	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 S16-T3N-R68W (State)					
Site Position:		Northing:	1,326,575.12 ft	Latitude:	40.228760
From: Lat/Long		Easting:	3,139,542.66 ft	Longitude:	-105.000250
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.32 °

Well State 1C-16H						
Well Position	+N/-S	0.0 ft	Northing:	1,326,626.11 ft	Latitude:	40.228900
	+E/-W	0.0 ft	Easting:	3,139,542.37 ft	Longitude:	-105.000250
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,026.0 ft

Wellbore Hz					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	12/14/2012	(°)	(°)	(nT)
			8.77	66.82	52,857

Design Plan #1				
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	12.00	30.50	1,491.2	107.9	63.5	1.00	1.00	0.00	30.50	
4,305.0	12.00	30.50	4,235.0	610.4	359.5	0.00	0.00	0.00	0.00	
5,505.0	0.00	0.00	5,426.2	718.3	423.1	1.00	-1.00	0.00	180.00	
6,690.4	0.00	0.00	6,611.6	718.3	423.1	0.00	0.00	0.00	0.00	
7,827.9	91.00	270.00	7,327.7	718.2	-305.6	8.00	8.00	0.00	270.00	
11,870.1	91.00	270.00	7,257.1	718.0	-4,347.2	0.00	0.00	0.00	0.00	State 1C-16H PBHL

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well State 1C-16H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	North Reference:	True
Well:	State 1C-16H	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	
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	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300'
400.0	1.00	30.50	400.0	0.8	0.4	-0.4	1.00	1.00	
500.0	2.00	30.50	500.0	3.0	1.8	-1.8	1.00	1.00	
600.0	3.00	30.50	599.9	6.8	4.0	-4.0	1.00	1.00	
700.0	4.00	30.50	699.7	12.0	7.1	-7.1	1.00	1.00	
800.0	5.00	30.50	799.4	18.8	11.1	-11.1	1.00	1.00	
900.0	6.00	30.50	898.9	27.0	15.9	-15.9	1.00	1.00	
1,000.0	7.00	30.50	998.3	36.8	21.7	-21.7	1.00	1.00	
1,100.0	8.00	30.50	1,097.4	48.0	28.3	-28.3	1.00	1.00	
1,200.0	9.00	30.50	1,196.3	60.8	35.8	-35.8	1.00	1.00	
1,300.0	10.00	30.50	1,294.9	75.0	44.2	-44.2	1.00	1.00	
1,400.0	11.00	30.50	1,393.3	90.7	53.4	-53.4	1.00	1.00	
1,500.0	12.00	30.50	1,491.2	107.9	63.5	-63.5	1.00	1.00	EOB; Inc=12°
1,600.0	12.00	30.50	1,589.1	125.8	74.1	-74.1	0.00	0.00	
1,700.0	12.00	30.50	1,686.9	143.7	84.7	-84.7	0.00	0.00	
1,800.0	12.00	30.50	1,784.7	161.6	95.2	-95.2	0.00	0.00	
1,900.0	12.00	30.50	1,882.5	179.5	105.8	-105.8	0.00	0.00	
2,000.0	12.00	30.50	1,980.3	197.5	116.3	-116.3	0.00	0.00	
2,100.0	12.00	30.50	2,078.1	215.4	126.9	-126.9	0.00	0.00	
2,200.0	12.00	30.50	2,175.9	233.3	137.4	-137.4	0.00	0.00	
2,300.0	12.00	30.50	2,273.8	251.2	148.0	-148.0	0.00	0.00	
2,400.0	12.00	30.50	2,371.6	269.1	158.5	-158.5	0.00	0.00	
2,500.0	12.00	30.50	2,469.4	287.0	169.1	-169.1	0.00	0.00	
2,600.0	12.00	30.50	2,567.2	304.9	179.6	-179.6	0.00	0.00	
2,700.0	12.00	30.50	2,665.0	322.9	190.2	-190.2	0.00	0.00	
2,800.0	12.00	30.50	2,762.8	340.8	200.7	-200.7	0.00	0.00	
2,900.0	12.00	30.50	2,860.7	358.7	211.3	-211.3	0.00	0.00	
3,000.0	12.00	30.50	2,958.5	376.6	221.8	-221.8	0.00	0.00	
3,100.0	12.00	30.50	3,056.3	394.5	232.4	-232.4	0.00	0.00	
3,200.0	12.00	30.50	3,154.1	412.4	242.9	-242.9	0.00	0.00	
3,300.0	12.00	30.50	3,251.9	430.3	253.5	-253.5	0.00	0.00	
3,400.0	12.00	30.50	3,349.7	448.3	264.0	-264.0	0.00	0.00	
3,500.0	12.00	30.50	3,447.5	466.2	274.6	-274.6	0.00	0.00	
3,600.0	12.00	30.50	3,545.4	484.1	285.1	-285.1	0.00	0.00	
3,700.0	12.00	30.50	3,643.2	502.0	295.7	-295.7	0.00	0.00	
3,800.0	12.00	30.50	3,741.0	519.9	306.2	-306.2	0.00	0.00	
3,900.0	12.00	30.50	3,838.8	537.8	316.8	-316.8	0.00	0.00	
4,000.0	12.00	30.50	3,936.6	555.7	327.4	-327.4	0.00	0.00	
4,100.0	12.00	30.50	4,034.4	573.7	337.9	-337.9	0.00	0.00	
4,115.8	12.00	30.50	4,049.9	576.5	339.6	-339.6	0.00	0.00	Sussex
4,200.0	12.00	30.50	4,132.2	591.6	348.5	-348.5	0.00	0.00	
4,300.0	12.00	30.50	4,230.1	609.5	359.0	-359.0	0.00	0.00	
4,305.0	12.00	30.50	4,235.0	610.4	359.5	-359.5	0.00	0.00	Start Drop -1.00
4,400.0	11.05	30.50	4,328.0	626.7	369.2	-369.2	1.00	-1.00	
4,500.0	10.05	30.50	4,426.3	642.5	378.5	-378.5	1.00	-1.00	
4,600.0	9.05	30.50	4,525.0	656.8	386.9	-386.9	1.00	-1.00	
4,676.8	8.28	30.50	4,600.9	666.8	392.8	-392.8	1.00	-1.00	Shannon
4,700.0	8.05	30.50	4,623.8	669.6	394.4	-394.4	1.00	-1.00	
4,800.0	7.05	30.50	4,723.0	680.9	401.1	-401.1	1.00	-1.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well State 1C-16H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	North Reference:	True
Well:	State 1C-16H	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
4,900.0	6.05	30.50	4,822.3	690.8	406.9	-406.9	1.00	-1.00	
5,000.0	5.05	30.50	4,921.9	699.1	411.8	-411.8	1.00	-1.00	
5,100.0	4.05	30.50	5,021.5	705.9	415.8	-415.8	1.00	-1.00	
5,200.0	3.05	30.50	5,121.3	711.3	419.0	-419.0	1.00	-1.00	
5,300.0	2.05	30.50	5,221.2	715.1	421.2	-421.2	1.00	-1.00	
5,400.0	1.05	30.50	5,321.2	717.4	422.6	-422.6	1.00	-1.00	
5,500.0	0.05	30.50	5,421.2	718.3	423.1	-423.1	1.00	-1.00	
5,505.0	0.00	0.00	5,426.2	718.3	423.1	-423.1	1.00	-1.00	EOD; Inc=0°
5,600.0	0.00	0.00	5,521.2	718.3	423.1	-423.1	0.00	0.00	
5,700.0	0.00	0.00	5,621.2	718.3	423.1	-423.1	0.00	0.00	
5,800.0	0.00	0.00	5,721.2	718.3	423.1	-423.1	0.00	0.00	
5,900.0	0.00	0.00	5,821.2	718.3	423.1	-423.1	0.00	0.00	
6,000.0	0.00	0.00	5,921.2	718.3	423.1	-423.1	0.00	0.00	
6,100.0	0.00	0.00	6,021.2	718.3	423.1	-423.1	0.00	0.00	
6,127.2	0.00	0.00	6,048.4	718.3	423.1	-423.1	0.00	0.00	Teepee Buttes (*if present)
6,200.0	0.00	0.00	6,121.2	718.3	423.1	-423.1	0.00	0.00	
6,300.0	0.00	0.00	6,221.2	718.3	423.1	-423.1	0.00	0.00	
6,400.0	0.00	0.00	6,321.2	718.3	423.1	-423.1	0.00	0.00	
6,500.0	0.00	0.00	6,421.2	718.3	423.1	-423.1	0.00	0.00	
6,600.0	0.00	0.00	6,521.2	718.3	423.1	-423.1	0.00	0.00	
6,690.4	0.00	0.00	6,611.6	718.3	423.1	-423.1	0.00	0.00	Start 8° build @ 6690' MD
6,700.0	0.77	270.00	6,621.2	718.3	423.0	-423.0	8.00	8.00	
6,800.0	8.77	270.00	6,720.8	718.3	414.7	-414.7	8.00	8.00	
6,900.0	16.77	270.00	6,818.2	718.3	392.6	-392.6	8.00	8.00	
7,000.0	24.77	270.00	6,911.6	718.3	357.2	-357.2	8.00	8.00	
7,092.0	32.13	270.00	6,992.5	718.3	313.4	-313.4	8.00	8.00	Sharon Springs
7,100.0	32.77	270.00	6,999.2	718.3	309.1	-309.1	8.00	8.00	
7,177.0	38.93	270.00	7,061.6	718.2	264.0	-264.0	8.00	8.00	Niobrara
7,200.0	40.77	270.00	7,079.3	718.2	249.3	-249.3	8.00	8.00	
7,252.5	44.97	270.00	7,117.7	718.2	213.6	-213.6	8.00	8.00	B Chalk
7,285.2	47.58	270.00	7,140.3	718.2	190.0	-190.0	8.00	8.00	B Marl
7,300.0	48.77	270.00	7,150.2	718.2	178.9	-178.9	8.00	8.00	
7,341.4	52.08	270.00	7,176.6	718.2	147.0	-147.0	8.00	8.00	C Chalk
7,400.0	56.77	270.00	7,210.7	718.2	99.4	-99.4	8.00	8.00	
7,409.1	57.50	270.00	7,215.6	718.2	91.7	-91.7	8.00	8.00	C Marl
7,500.0	64.77	270.00	7,259.4	718.2	12.2	-12.2	8.00	8.00	
7,600.0	72.77	270.00	7,295.6	718.2	-81.0	81.0	8.00	8.00	
7,634.3	75.52	270.00	7,305.0	718.2	-114.0	114.0	8.00	8.00	Ft. Hayes
7,700.0	80.77	270.00	7,318.5	718.2	-178.2	178.2	8.00	8.00	
7,743.2	84.23	270.00	7,324.1	718.2	-221.1	221.1	8.00	8.00	Codell
7,800.0	88.77	270.00	7,327.6	718.2	-277.7	277.7	8.00	8.00	
7,827.9	91.00	270.00	7,327.7	718.2	-305.6	305.6	8.00	8.00	LP @ 7327' TVD; 91°
7,900.0	91.00	270.00	7,326.4	718.2	-377.7	377.7	0.00	0.00	
8,000.0	91.00	270.00	7,324.7	718.2	-477.7	477.7	0.00	0.00	
8,100.0	91.00	270.00	7,322.9	718.2	-577.7	577.7	0.00	0.00	
8,200.0	91.00	270.00	7,321.2	718.2	-677.7	677.7	0.00	0.00	
8,300.0	91.00	270.00	7,319.4	718.2	-777.7	777.7	0.00	0.00	
8,400.0	91.00	270.00	7,317.7	718.2	-877.6	877.6	0.00	0.00	
8,500.0	91.00	270.00	7,315.9	718.2	-977.6	977.6	0.00	0.00	
8,600.0	91.00	270.00	7,314.2	718.2	-1,077.6	1,077.6	0.00	0.00	
8,700.0	91.00	270.00	7,312.4	718.2	-1,177.6	1,177.6	0.00	0.00	
8,800.0	91.00	270.00	7,310.7	718.2	-1,277.6	1,277.6	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well State 1C-16H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	North Reference:	True
Well:	State 1C-16H	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
8,900.0	91.00	270.00	7,309.0	718.2	-1,377.6	1,377.6	0.00	0.00	
9,000.0	91.00	270.00	7,307.2	718.2	-1,477.6	1,477.6	0.00	0.00	
9,100.0	91.00	270.00	7,305.5	718.2	-1,577.5	1,577.5	0.00	0.00	
9,200.0	91.00	270.00	7,303.7	718.2	-1,677.5	1,677.5	0.00	0.00	
9,300.0	91.00	270.00	7,302.0	718.2	-1,777.5	1,777.5	0.00	0.00	
9,400.0	91.00	270.00	7,300.2	718.1	-1,877.5	1,877.5	0.00	0.00	
9,500.0	91.00	270.00	7,298.5	718.1	-1,977.5	1,977.5	0.00	0.00	
9,600.0	91.00	270.00	7,296.7	718.1	-2,077.5	2,077.5	0.00	0.00	
9,700.0	91.00	270.00	7,295.0	718.1	-2,177.4	2,177.4	0.00	0.00	
9,800.0	91.00	270.00	7,293.2	718.1	-2,277.4	2,277.4	0.00	0.00	
9,900.0	91.00	270.00	7,291.5	718.1	-2,377.4	2,377.4	0.00	0.00	
10,000.0	91.00	270.00	7,289.8	718.1	-2,477.4	2,477.4	0.00	0.00	
10,100.0	91.00	270.00	7,288.0	718.1	-2,577.4	2,577.4	0.00	0.00	
10,200.0	91.00	270.00	7,286.3	718.1	-2,677.4	2,677.4	0.00	0.00	
10,300.0	91.00	270.00	7,284.5	718.1	-2,777.4	2,777.4	0.00	0.00	
10,400.0	91.00	270.00	7,282.8	718.1	-2,877.3	2,877.3	0.00	0.00	
10,500.0	91.00	270.00	7,281.0	718.1	-2,977.3	2,977.3	0.00	0.00	
10,600.0	91.00	270.00	7,279.3	718.1	-3,077.3	3,077.3	0.00	0.00	
10,700.0	91.00	270.00	7,277.5	718.1	-3,177.3	3,177.3	0.00	0.00	
10,800.0	91.00	270.00	7,275.8	718.1	-3,277.3	3,277.3	0.00	0.00	
10,900.0	91.00	270.00	7,274.0	718.1	-3,377.3	3,377.3	0.00	0.00	
11,000.0	91.00	270.00	7,272.3	718.1	-3,477.2	3,477.2	0.00	0.00	
11,100.0	91.00	270.00	7,270.6	718.1	-3,577.2	3,577.2	0.00	0.00	
11,200.0	91.00	270.00	7,268.8	718.1	-3,677.2	3,677.2	0.00	0.00	
11,300.0	91.00	270.00	7,267.1	718.1	-3,777.2	3,777.2	0.00	0.00	
11,400.0	91.00	270.00	7,265.3	718.1	-3,877.2	3,877.2	0.00	0.00	
11,500.0	91.00	270.00	7,263.6	718.1	-3,977.2	3,977.2	0.00	0.00	
11,600.0	91.00	270.00	7,261.8	718.0	-4,077.2	4,077.2	0.00	0.00	
11,700.0	91.00	270.00	7,260.1	718.0	-4,177.1	4,177.1	0.00	0.00	
11,800.0	91.00	270.00	7,258.3	718.0	-4,277.1	4,277.1	0.00	0.00	
11,870.1	91.00	270.00	7,257.1	718.0	-4,347.2	4,347.2	0.00	0.00	TD at 11870.1 - State 1C-16H PBHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
State 1C-16H PBHL - hit/miss target - Shape - Point	0.00	0.00	7,257.1	718.0	-4,347.2	1,327,319.63	3,135,191.16	40.230870	-105.015820

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well State 1C-16H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	North Reference:	True
Well:	State 1C-16H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,115.8	4,044.0	Sussex		-1.00	270.00
4,676.8	4,594.0	Shannon		-1.00	270.00
6,127.2	6,041.0	Teepee Buttes (*if present)		-1.00	270.00
7,092.0	6,987.0	Sharon Springs		-1.00	270.00
7,177.0	7,057.0	Niobrara		-1.00	270.00
7,252.5	7,114.0	B Chalk		-1.00	270.00
7,285.2	7,137.0	B Marl		-1.00	270.00
7,341.4	7,174.0	C Chalk		-1.00	270.00
7,409.1	7,214.0	C Marl		-1.00	270.00
7,634.3	7,307.0	Ft. Hayes		-1.00	270.00
7,743.2	7,328.0	Codell		-1.00	270.00

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.0	300.0	0.0	0.0	KOP @ 300'	
1,500.0	1,491.2	107.9	63.5	EOB; Inc=12°	
4,305.0	4,235.0	610.4	359.5	Start Drop -1.00	
5,505.0	5,426.2	718.3	423.1	EOD; Inc=0°	
6,690.4	6,611.6	718.3	423.1	Start 8° build @ 6690' MD	
7,827.9	7,327.7	718.2	-305.6	LP @ 7327' TVD; 91°	
11,870.1	7,257.1	718.0	-4,347.2	TD at 11870.1	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S16-T3N-R68W (State)

State 1C-16H

Hz

Plan #1

Anticollision Report

14 December, 2012

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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	12/14/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,870.1	Plan #1 (Hz)	MWD	Geolink MWD

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						
S16-T3N-R68W (State)						
State 1B-16H - Hz - Plan #1	200.0	200.0	10.9	10.3	16.742	CC, ES
State 1B-16H - Hz - Plan #1	11,870.1	11,709.4	398.1	205.0	2.062	SF
State 1D-16H - Hz - Plan #1	300.0	300.0	10.9	9.9	10.909	CC, ES
State 1D-16H - Hz - Plan #1	11,870.1	11,634.1	407.4	213.6	2.102	SF
State 1E-16H - Hz - Plan #1	300.0	300.0	21.9	20.9	21.817	CC, ES
State 1E-16H - Hz - Plan #1	600.0	599.9	28.9	26.8	14.098	SF
State 1F-16H - Hz - Plan #1	300.0	300.0	29.1	28.1	29.090	CC, ES
State 1F-16H - Hz - Plan #1	600.0	599.2	37.9	35.9	18.470	SF
State 1G-16H - Hz - Plan #1	300.0	300.0	40.1	39.1	39.999	CC, ES
State 1G-16H - Hz - Plan #1	600.0	597.7	53.2	51.2	25.923	SF
State 1H-16H - Hz - Plan #1	200.0	200.0	51.0	50.3	78.124	CC, ES
State 1H-16H - Hz - Plan #1	600.0	595.7	70.3	68.2	34.244	SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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 S16-T3N-R68W (State) - State 1B-16H - 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 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	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	299.8	299.8	0.5	0.5	1.59	11.7	0.3	11.7	10.7	1.00	11.717		
400.0	400.0	399.6	399.6	0.7	0.7	-26.82	14.2	1.3	13.4	12.1	1.35	9.945		
500.0	500.0	499.3	499.2	0.9	0.9	-26.11	18.2	2.9	15.2	13.5	1.70	8.953		
600.0	599.9	599.1	598.7	1.0	1.1	-26.35	23.8	5.2	17.1	15.1	2.05	8.336		
700.0	699.7	698.7	698.1	1.2	1.3	-27.27	31.0	8.1	19.1	16.7	2.41	7.923		
800.0	799.4	798.4	797.3	1.4	1.5	-28.65	39.9	11.7	21.2	18.4	2.78	7.632		
900.0	898.9	898.0	896.3	1.7	1.8	-30.35	50.3	15.9	23.4	20.2	3.16	7.417		
1,000.0	998.3	997.6	995.0	1.9	2.0	-32.27	62.3	20.8	25.7	22.2	3.55	7.246		
1,100.0	1,097.4	1,097.1	1,093.4	2.2	2.3	-34.32	75.9	26.3	28.2	24.2	3.97	7.101		
1,200.0	1,196.3	1,196.6	1,191.6	2.5	2.7	-36.44	91.1	32.4	30.9	26.4	4.43	6.968		
1,300.0	1,294.9	1,296.1	1,289.4	2.8	3.0	-38.59	107.8	39.2	33.7	28.8	4.92	6.838		
1,400.0	1,393.3	1,395.5	1,386.8	3.1	3.4	-40.72	126.2	46.6	36.7	31.2	5.47	6.707		
1,500.0	1,491.2	1,494.9	1,483.9	3.5	3.8	-42.82	146.0	54.6	39.9	33.8	6.07	6.572		
1,600.0	1,589.1	1,594.2	1,580.5	3.9	4.2	-44.09	167.4	63.2	43.9	37.2	6.68	6.570		
1,700.0	1,686.9	1,693.4	1,676.6	4.3	4.7	-43.94	190.4	72.5	49.3	42.1	7.25	6.798		
1,800.0	1,784.7	1,793.2	1,772.9	4.7	5.1	-43.24	214.3	82.2	55.5	47.7	7.80	7.120		
1,900.0	1,882.5	1,893.0	1,869.3	5.1	5.6	-42.68	238.2	91.8	61.8	53.4	8.35	7.398		
2,000.0	1,980.3	1,992.8	1,965.7	5.4	6.1	-42.22	262.2	101.5	68.0	59.1	8.90	7.641		
2,100.0	2,078.1	2,092.6	2,062.1	5.8	6.5	-41.83	286.2	111.2	74.2	64.8	9.45	7.854		
2,200.0	2,175.9	2,192.4	2,158.5	6.2	7.0	-41.51	310.1	120.9	80.5	70.5	10.01	8.043		
2,300.0	2,273.8	2,292.2	2,254.9	6.6	7.5	-41.23	334.1	130.5	86.7	76.2	10.56	8.211		
2,400.0	2,371.6	2,392.0	2,351.3	7.0	8.0	-40.99	358.0	140.2	93.0	81.9	11.12	8.362		
2,500.0	2,469.4	2,491.8	2,447.7	7.4	8.4	-40.78	382.0	149.9	99.2	87.6	11.68	8.498		
2,600.0	2,567.2	2,591.6	2,544.1	7.8	8.9	-40.60	405.9	159.6	105.5	93.3	12.24	8.621		
2,700.0	2,665.0	2,691.4	2,640.5	8.2	9.4	-40.43	429.9	169.3	111.7	98.9	12.80	8.733		
2,800.0	2,762.8	2,791.2	2,736.9	8.6	9.9	-40.29	453.8	178.9	118.0	104.6	13.36	8.835		
2,900.0	2,860.7	2,891.0	2,833.3	9.0	10.3	-40.16	477.8	188.6	124.2	110.3	13.92	8.929		
3,000.0	2,958.5	2,990.8	2,929.7	9.4	10.8	-40.04	501.7	198.3	130.5	116.0	14.48	9.015		
3,100.0	3,056.3	3,090.6	3,026.2	9.8	11.3	-39.93	525.7	208.0	136.8	121.7	15.04	9.095		
3,200.0	3,154.1	3,190.4	3,122.6	10.2	11.8	-39.83	549.6	217.6	143.0	127.4	15.60	9.168		
3,300.0	3,251.9	3,290.2	3,219.0	10.6	12.3	-39.74	573.6	227.3	149.3	133.1	16.16	9.237		
3,400.0	3,349.7	3,390.0	3,315.4	11.0	12.8	-39.65	597.5	237.0	155.5	138.8	16.72	9.300		
3,500.0	3,447.5	3,489.8	3,411.8	11.4	13.2	-39.58	621.5	246.7	161.8	144.5	17.29	9.360		
3,600.0	3,545.4	3,589.6	3,508.2	11.8	13.7	-39.51	645.4	256.3	168.0	150.2	17.85	9.415		
3,700.0	3,643.2	3,689.4	3,604.6	12.2	14.2	-39.44	669.4	266.0	174.3	155.9	18.41	9.467		
3,800.0	3,741.0	3,789.2	3,701.0	12.6	14.7	-39.38	693.3	275.7	180.6	161.6	18.97	9.516		
3,900.0	3,838.8	3,889.0	3,797.4	13.0	15.2	-39.32	717.3	285.4	186.8	167.3	19.54	9.562		
4,000.0	3,936.6	3,988.8	3,893.8	13.4	15.7	-39.27	741.2	295.1	193.1	173.0	20.10	9.605		
4,100.0	4,034.4	4,088.7	3,990.2	13.8	16.1	-39.22	765.2	304.7	199.3	178.7	20.66	9.646		
4,200.0	4,132.2	4,188.5	4,086.6	14.2	16.6	-39.17	789.1	314.4	205.6	184.4	21.23	9.685		
4,300.0	4,230.1	4,288.3	4,183.0	14.6	17.1	-39.13	813.1	324.1	211.8	190.1	21.79	9.721		
4,400.0	4,328.0	4,388.0	4,279.4	15.0	17.6	-39.00	837.0	333.8	218.7	196.4	22.31	9.803		
4,500.0	4,426.3	4,487.7	4,375.6	15.4	18.1	-38.61	860.9	343.4	226.9	204.2	22.74	9.982		
4,600.0	4,525.0	4,588.5	4,473.1	15.7	18.6	-38.00	885.0	353.1	236.4	213.4	23.07	10.249		
4,700.0	4,623.8	4,691.8	4,573.3	16.0	19.0	-37.35	908.3	362.6	246.1	222.7	23.36	10.536		
4,800.0	4,723.0	4,795.3	4,674.1	16.3	19.4	-36.70	930.0	371.3	255.6	232.0	23.61	10.823		
4,900.0	4,822.3	4,899.0	4,775.5	16.5	19.9	-36.06	950.0	379.4	264.9	241.1	23.84	11.112		
5,000.0	4,921.9	5,002.9	4,877.4	16.7	20.2	-35.42	968.4	386.8	274.1	250.1	24.04	11.402		
5,100.0	5,021.5	5,106.9	4,979.9	16.9	20.6	-34.78	985.1	393.6	283.1	258.9	24.21	11.695		

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 State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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	
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		
5,200.0	5,121.3	5,211.2	5,082.9	17.1	20.9	-34.14	1,000.1	399.6	292.0	267.6	24.35	11.988			
5,300.0	5,221.2	5,315.6	5,186.4	17.3	21.2	-33.50	1,013.3	405.0	300.7	276.2	24.48	12.284			
5,400.0	5,321.2	5,420.3	5,290.3	17.4	21.4	-32.86	1,024.8	409.6	309.2	284.6	24.58	12.581			
5,500.0	5,421.2	5,525.1	5,394.6	17.5	21.7	-32.22	1,034.6	413.6	317.6	293.0	24.66	12.880			
5,600.0	5,521.2	5,630.2	5,499.3	17.6	21.9	-1.10	1,042.6	416.8	325.2	288.9	36.29	8.961			
5,700.0	5,621.2	5,735.5	5,604.4	17.7	22.1	-0.65	1,048.9	419.4	331.1	294.4	36.67	9.029			
5,800.0	5,721.2	5,841.1	5,709.9	17.8	22.2	-0.33	1,053.4	421.2	335.3	298.3	36.99	9.065			
5,900.0	5,821.2	5,946.8	5,815.6	17.9	22.3	-0.14	1,056.0	422.2	337.8	300.6	37.26	9.067			
6,000.0	5,921.2	6,052.5	5,921.2	18.0	22.4	-0.08	1,056.9	422.6	338.6	301.1	37.48	9.035			
6,100.0	6,021.2	6,152.5	6,021.2	18.1	22.5	-0.08	1,056.9	422.6	338.6	300.9	37.68	8.988			
6,200.0	6,121.2	6,252.5	6,121.2	18.2	22.6	-0.08	1,056.9	422.6	338.6	300.7	37.88	8.940			
6,300.0	6,221.2	6,352.5	6,221.2	18.3	22.7	-0.08	1,056.9	422.6	338.6	300.5	38.08	8.892			
6,400.0	6,321.2	6,452.5	6,321.2	18.4	22.7	-0.08	1,056.9	422.6	338.6	300.3	38.29	8.844			
6,460.5	6,381.7	6,513.0	6,381.7	18.4	22.8	-0.08	1,056.9	422.6	338.6	300.2	38.41	8.815			
6,500.0	6,421.2	6,552.4	6,421.2	18.5	22.8	-0.12	1,056.9	422.4	338.6	300.1	38.49	8.798			
6,600.0	6,521.2	6,651.3	6,519.5	18.6	22.8	-1.71	1,056.9	413.0	338.8	300.4	38.37	8.830			
6,700.0	6,621.2	6,745.9	6,611.6	18.7	22.8	84.65	1,056.9	391.4	340.2	311.4	28.86	11.790			
6,800.0	6,720.8	6,836.2	6,696.1	18.7	22.7	80.26	1,056.9	359.7	344.0	314.0	29.96	11.481			
6,900.0	6,818.2	6,923.9	6,773.6	18.7	22.6	76.17	1,056.9	319.0	349.4	318.8	30.58	11.427			
7,000.0	6,911.6	7,009.3	6,843.8	18.5	22.5	72.45	1,056.9	270.5	356.1	325.4	30.64	11.620			
7,100.0	6,999.2	7,092.7	6,906.4	18.4	22.4	69.14	1,056.9	215.4	363.4	333.2	30.17	12.046			
7,200.0	7,079.3	7,174.6	6,961.2	18.2	22.3	66.28	1,056.9	154.6	370.9	341.6	29.28	12.667			
7,300.0	7,150.2	7,255.2	7,008.0	18.1	22.3	63.86	1,056.9	89.0	378.1	349.9	28.20	13.408			
7,400.0	7,210.7	7,334.7	7,046.6	18.1	22.3	61.89	1,056.9	19.6	384.6	357.3	27.33	14.071			
7,500.0	7,259.4	7,413.3	7,077.1	18.2	22.5	60.36	1,056.9	-52.9	390.1	363.2	26.83	14.537			
7,600.0	7,295.6	7,491.4	7,099.3	18.5	22.8	59.26	1,056.9	-127.7	394.2	367.0	27.25	14.465			
7,700.0	7,318.5	7,569.1	7,113.1	19.1	23.1	58.58	1,056.9	-204.1	396.9	368.1	28.75	13.803			
7,800.0	7,327.6	7,650.0	7,118.7	20.0	23.7	58.32	1,056.9	-284.8	398.0	366.6	31.35	12.695			
7,835.9	7,328.1	7,675.2	7,118.6	20.5	23.9	58.26	1,056.9	-310.0	398.3	366.0	32.25	12.348			
7,900.0	7,326.4	7,739.3	7,117.5	21.3	24.5	58.32	1,056.9	-374.1	397.9	363.7	34.25	11.618			
8,000.0	7,324.7	7,839.3	7,115.7	22.9	25.7	58.32	1,056.9	-474.1	397.9	360.6	37.34	10.658			
8,100.0	7,322.9	7,939.3	7,114.0	24.7	27.1	58.32	1,056.9	-574.0	397.9	357.3	40.63	9.795			
8,200.0	7,321.2	8,039.3	7,112.2	26.6	28.7	58.32	1,056.9	-674.0	397.9	353.9	44.07	9.029			
8,300.0	7,319.4	8,139.3	7,110.5	28.6	30.4	58.32	1,056.9	-774.0	397.9	350.3	47.65	8.352			
8,400.0	7,317.7	8,239.3	7,108.7	30.6	32.3	58.32	1,056.9	-874.0	398.0	346.6	51.32	7.755			
8,500.0	7,315.9	8,339.3	7,107.0	32.8	34.3	58.32	1,056.9	-974.0	398.0	342.9	55.07	7.227			
8,600.0	7,314.2	8,439.3	7,105.3	34.9	36.3	58.32	1,056.9	-1,074.0	398.0	339.1	58.88	6.759			
8,700.0	7,312.4	8,539.3	7,103.5	37.2	38.4	58.32	1,056.9	-1,174.0	398.0	335.2	62.74	6.343			
8,800.0	7,310.7	8,639.3	7,101.8	39.4	40.6	58.32	1,056.9	-1,273.9	398.0	331.3	66.65	5.971			
8,900.0	7,309.0	8,739.3	7,100.0	41.7	42.8	58.33	1,056.9	-1,373.9	398.0	327.4	70.59	5.638			
9,000.0	7,307.2	8,839.3	7,098.3	44.0	45.0	58.33	1,056.9	-1,473.9	398.0	323.4	74.56	5.338			
9,100.0	7,305.5	8,939.3	7,096.5	46.3	47.2	58.33	1,056.9	-1,573.9	398.0	319.4	78.56	5.066			
9,200.0	7,303.7	9,039.3	7,094.8	48.6	49.5	58.33	1,056.9	-1,673.9	398.0	315.4	82.58	4.819			
9,300.0	7,302.0	9,139.3	7,093.0	51.0	51.8	58.33	1,056.9	-1,773.9	398.0	311.4	86.62	4.595			
9,400.0	7,300.2	9,239.3	7,091.3	53.3	54.1	58.33	1,056.9	-1,873.8	398.0	307.3	90.67	4.389			
9,500.0	7,298.5	9,339.3	7,089.5	55.7	56.4	58.33	1,056.9	-1,973.8	398.0	303.2	94.74	4.201			
9,600.0	7,296.7	9,439.3	7,087.8	58.0	58.8	58.33	1,056.8	-2,073.8	398.0	299.2	98.82	4.027			
9,700.0	7,295.0	9,539.3	7,086.1	60.4	61.1	58.33	1,056.8	-2,173.8	398.0	295.1	102.91	3.867			
9,800.0	7,293.2	9,639.3	7,084.3	62.8	63.5	58.33	1,056.8	-2,273.8	398.0	291.0	107.01	3.719			
9,900.0	7,291.5	9,739.3	7,082.6	65.2	65.9	58.33	1,056.8	-2,373.8	398.0	286.9	111.12	3.582			
10,000.0	7,289.8	9,839.3	7,080.8	67.6	68.2	58.33	1,056.8	-2,473.8	398.0	282.8	115.24	3.454			
10,100.0	7,288.0	9,939.3	7,079.1	70.0	70.6	58.33	1,056.8	-2,573.7	398.0	278.6	119.36	3.334			

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 State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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 S16-T3N-R68W (State) - State 1B-16H - 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	7,286.3	10,039.3	7,077.3	72.4	73.0	58.33	1,056.8	-2,673.7	398.0	274.5	123.50	3.223		
10,300.0	7,284.5	10,139.3	7,075.6	74.8	75.4	58.33	1,056.8	-2,773.7	398.0	270.4	127.63	3.118		
10,400.0	7,282.8	10,239.3	7,073.8	77.3	77.8	58.33	1,056.8	-2,873.7	398.0	266.2	131.77	3.020		
10,500.0	7,281.0	10,339.3	7,072.1	79.7	80.2	58.33	1,056.8	-2,973.7	398.0	262.1	135.92	2.928		
10,600.0	7,279.3	10,439.3	7,070.3	82.1	82.6	58.33	1,056.8	-3,073.7	398.0	257.9	140.07	2.842		
10,700.0	7,277.5	10,539.3	7,068.6	84.5	85.0	58.33	1,056.8	-3,173.7	398.0	253.8	144.22	2.760		
10,800.0	7,275.8	10,639.3	7,066.9	87.0	87.4	58.33	1,056.8	-3,273.6	398.0	249.6	148.38	2.682		
10,900.0	7,274.0	10,739.3	7,065.1	89.4	89.8	58.33	1,056.8	-3,373.6	398.0	245.5	152.54	2.609		
11,000.0	7,272.3	10,839.3	7,063.4	91.8	92.3	58.33	1,056.8	-3,473.6	398.0	241.3	156.71	2.540		
11,100.0	7,270.6	10,939.3	7,061.6	94.3	94.7	58.33	1,056.8	-3,573.6	398.0	237.2	160.87	2.474		
11,200.0	7,268.8	11,039.3	7,059.9	96.7	97.1	58.33	1,056.8	-3,673.6	398.0	233.0	165.04	2.412		
11,300.0	7,267.1	11,139.3	7,058.1	99.1	99.5	58.33	1,056.8	-3,773.6	398.0	228.8	169.21	2.352		
11,400.0	7,265.3	11,239.3	7,056.4	101.6	102.0	58.33	1,056.8	-3,873.5	398.0	224.7	173.39	2.296		
11,500.0	7,263.6	11,339.3	7,054.6	104.0	104.4	58.33	1,056.8	-3,973.5	398.0	220.5	177.56	2.242		
11,600.0	7,261.8	11,439.3	7,052.9	106.5	106.8	58.33	1,056.8	-4,073.5	398.0	216.3	181.74	2.190		
11,700.0	7,260.1	11,539.3	7,051.1	108.9	109.3	58.33	1,056.8	-4,173.5	398.0	212.1	185.92	2.141		
11,800.0	7,258.3	11,639.3	7,049.4	111.4	111.7	58.33	1,056.8	-4,273.5	398.1	207.9	190.10	2.094		
11,870.1	7,257.1	11,709.4	7,048.2	113.1	113.4	58.33	1,056.8	-4,343.6	398.1	205.0	193.03	2.062 SF		

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 State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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								
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	Warning									
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-10.9	0.0	10.9													
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-10.9	0.0	10.9	10.6	0.30	35.986										
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-10.9	0.0	10.9	10.3	0.65	16.742										
300.0	300.0	300.0	300.0	0.5	0.5	-180.00	-10.9	0.0	10.9	9.9	1.00	10.909	CC, ES									
400.0	400.0	400.0	400.0	0.7	0.7	151.67	-10.9	0.0	11.7	10.3	1.35	8.652										
500.0	500.0	500.1	500.1	0.9	0.9	154.27	-10.3	0.7	13.4	11.7	1.70	7.880										
600.0	599.9	600.3	600.3	1.0	1.0	154.57	-8.6	2.6	15.4	13.4	2.05	7.519										
700.0	699.7	700.5	700.3	1.2	1.2	153.33	-5.7	5.9	17.8	15.4	2.41	7.375										
800.0	799.4	800.7	800.3	1.4	1.4	151.14	-1.6	10.5	20.5	17.7	2.78	7.360										
900.0	898.9	900.9	900.2	1.7	1.6	148.42	3.6	16.4	23.5	20.3	3.17	7.424										
1,000.0	998.3	1,001.1	1,000.0	1.9	1.8	145.47	9.9	23.6	27.0	23.4	3.58	7.533										
1,100.0	1,097.4	1,101.3	1,099.5	2.2	2.1	142.48	17.5	32.1	30.9	26.8	4.03	7.663										
1,200.0	1,196.3	1,201.5	1,198.9	2.5	2.3	139.56	26.2	41.9	35.3	30.7	4.52	7.798										
1,300.0	1,294.9	1,301.7	1,298.0	2.8	2.6	136.80	36.0	53.0	40.1	35.1	5.06	7.926										
1,400.0	1,393.3	1,401.9	1,396.8	3.1	3.0	134.23	47.0	65.4	45.5	39.8	5.66	8.041										
1,500.0	1,491.2	1,502.1	1,495.3	3.5	3.3	131.86	59.1	79.1	51.4	45.1	6.31	8.142										
1,600.0	1,589.1	1,602.2	1,593.4	3.9	3.7	129.06	72.3	94.1	57.2	50.2	7.03	8.140										
1,700.0	1,686.9	1,702.0	1,691.0	4.3	4.0	126.08	86.1	109.7	62.9	55.2	7.79	8.077										
1,800.0	1,784.7	1,801.8	1,788.6	4.7	4.4	123.60	99.8	125.2	68.8	60.2	8.57	8.029										
1,900.0	1,882.5	1,901.6	1,886.2	5.1	4.8	121.51	113.6	140.7	74.7	65.4	9.35	7.993										
2,000.0	1,980.3	2,001.4	1,983.8	5.4	5.2	119.73	127.3	156.3	80.8	70.6	10.14	7.966										
2,100.0	2,078.1	2,101.1	2,081.4	5.8	5.6	118.20	141.1	171.8	86.9	76.0	10.93	7.946										
2,200.0	2,175.9	2,200.9	2,179.1	6.2	6.0	116.87	154.8	187.3	93.1	81.3	11.73	7.932										
2,300.0	2,273.8	2,300.7	2,276.7	6.6	6.4	115.71	168.6	202.9	99.3	86.7	12.53	7.922										
2,400.0	2,371.6	2,400.5	2,374.3	7.0	6.8	114.68	182.3	218.4	105.5	92.2	13.33	7.915										
2,500.0	2,469.4	2,500.3	2,471.9	7.4	7.2	113.77	196.1	234.0	111.8	97.6	14.13	7.910										
2,600.0	2,567.2	2,600.1	2,569.5	7.8	7.6	112.95	209.8	249.5	118.1	103.1	14.93	7.908										
2,700.0	2,665.0	2,699.9	2,667.1	8.2	7.9	112.22	223.6	265.0	124.4	108.6	15.73	7.906										
2,800.0	2,762.8	2,799.7	2,764.7	8.6	8.3	111.56	237.3	280.6	130.7	114.2	16.53	7.906										
2,900.0	2,860.7	2,899.5	2,862.3	9.0	8.7	110.96	251.1	296.1	137.1	119.7	17.33	7.906										
3,000.0	2,958.5	2,999.2	2,959.9	9.4	9.1	110.41	264.8	311.7	143.4	125.3	18.14	7.907										
3,100.0	3,056.3	3,099.0	3,057.5	9.8	9.5	109.91	278.6	327.2	149.8	130.9	18.94	7.909										
3,200.0	3,154.1	3,198.8	3,155.1	10.2	9.9	109.53	292.2	342.6	156.2	136.5	19.73	7.915										
3,300.0	3,251.9	3,298.5	3,253.0	10.6	10.3	109.71	304.8	356.8	162.6	142.2	20.47	7.946										
3,400.0	3,349.7	3,398.1	3,351.1	11.0	10.6	110.46	316.3	369.8	169.2	148.0	21.15	7.999										
3,500.0	3,447.5	3,497.6	3,449.4	11.4	11.0	111.73	326.6	381.5	175.8	154.1	21.77	8.078										
3,600.0	3,545.4	3,597.0	3,547.8	11.8	11.2	113.43	335.8	391.9	182.7	160.4	22.31	8.189										
3,700.0	3,643.2	3,696.1	3,646.1	12.2	11.5	115.52	343.8	401.0	190.0	167.2	22.78	8.340										
3,800.0	3,741.0	3,794.9	3,744.4	12.6	11.7	117.94	350.7	408.8	197.9	174.7	23.17	8.540										
3,900.0	3,838.8	3,893.4	3,842.5	13.0	11.9	120.62	356.5	415.3	206.4	182.9	23.45	8.799										
4,000.0	3,936.6	3,991.5	3,940.3	13.4	12.1	123.51	361.1	420.5	215.8	192.2	23.64	9.127										
4,100.0	4,034.4	4,089.1	4,037.8	13.8	12.3	126.55	364.6	424.5	226.3	202.5	23.74	9.534										
4,200.0	4,132.2	4,186.2	4,134.8	14.2	12.4	129.67	367.0	427.2	238.0	214.2	23.73	10.027										
4,300.0	4,230.1	4,282.7	4,231.3	14.6	12.5	132.82	368.3	428.6	251.0	227.4	23.65	10.614										
4,400.0	4,328.0	4,379.4	4,328.0	15.0	12.6	135.94	368.5	428.9	265.0	241.5	23.51	11.274										
4,500.0	4,426.3	4,477.7	4,426.3	15.4	12.7	138.63	368.5	428.9	278.6	255.2	23.39	11.912										
4,600.0	4,525.0	4,576.3	4,525.0	15.7	12.9	140.86	368.5	428.9	291.3	268.0	23.32	12.494										
4,700.0	4,623.8	4,675.2	4,623.8	16.0	13.0	142.69	368.5	428.9	303.0	279.7	23.29	13.009										
4,800.0	4,723.0	4,774.4	4,723.0	16.3	13.1	144.21	368.5	428.9	313.6	290.3	23.32	13.450										
4,900.0	4,822.3	4,873.7	4,822.3	16.5	13.2	145.44	368.5	428.9	323.0	299.6	23.38	13.811										
5,000.0	4,921.9	4,973.2	4,921.9	16.7	13.3	146.43	368.5	428.9	331.0	307.5	23.49	14.093										
5,100.0	5,021.5	5,072.9	5,021.5	16.9	13.4	147.21	368.5	428.9	337.6	314.0	23.62	14.293										

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 State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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 S16-T3N-R68W (State) - State 1D-16H - 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 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)				
5,200.0	5,121.3	5,172.7	5,121.3	17.1	13.5	147.80	368.5	428.9	342.9	319.1	23.79	14.413		
5,300.0	5,221.2	5,272.6	5,221.2	17.3	13.6	148.21	368.5	428.9	346.6	322.7	23.98	14.455		
5,400.0	5,321.2	5,372.6	5,321.2	17.4	13.8	148.46	368.5	428.9	348.9	324.7	24.20	14.420		
5,500.0	5,421.2	5,472.6	5,421.2	17.5	13.9	148.55	368.5	428.9	349.8	325.3	24.44	14.312		
5,600.0	5,521.2	5,572.6	5,521.2	17.6	14.0	179.05	368.5	428.9	349.8	322.2	27.52	12.709		
5,700.0	5,621.2	5,672.6	5,621.2	17.7	14.1	179.05	368.5	428.9	349.8	322.0	27.78	12.593		
5,800.0	5,721.2	5,772.6	5,721.2	17.8	14.2	179.05	368.5	428.9	349.8	321.7	28.03	12.478		
5,900.0	5,821.2	5,872.6	5,821.2	17.9	14.4	179.05	368.5	428.9	349.8	321.5	28.29	12.365		
6,000.0	5,921.2	5,972.6	5,921.2	18.0	14.5	179.05	368.5	428.9	349.8	321.2	28.55	12.252		
6,100.0	6,021.2	6,072.6	6,021.2	18.1	14.6	179.05	368.5	428.9	349.8	321.0	28.81	12.141		
6,200.0	6,121.2	6,172.6	6,121.2	18.2	14.7	179.05	368.5	428.9	349.8	320.7	29.07	12.032		
6,300.0	6,221.2	6,272.6	6,221.2	18.3	14.9	179.05	368.5	428.9	349.8	320.4	29.33	11.923		
6,400.0	6,321.2	6,372.6	6,321.2	18.4	15.0	179.05	368.5	428.9	349.8	320.2	29.60	11.816		
6,500.0	6,421.2	6,472.7	6,421.3	18.5	15.1	179.09	368.5	428.7	349.8	319.9	29.88	11.708		
6,572.5	6,493.7	6,545.3	6,493.7	18.6	15.1	180.00	368.5	423.1	349.7	319.5	30.22	11.573		
6,600.0	6,521.2	6,572.5	6,520.5	18.6	15.1	-179.35	368.5	419.1	349.7	319.3	30.40	11.506		
6,700.0	6,621.2	6,667.8	6,613.3	18.7	15.1	-85.77	368.5	397.2	350.8	324.2	26.54	13.215		
6,800.0	6,720.8	6,758.8	6,698.3	18.7	14.9	-81.46	368.5	365.1	353.9	328.2	25.76	13.740		
6,900.0	6,818.2	6,846.9	6,776.2	18.7	14.7	-77.42	368.5	323.8	358.9	333.8	25.06	14.324		
7,000.0	6,911.6	6,932.8	6,846.5	18.5	14.5	-73.72	368.5	274.8	365.2	340.6	24.54	14.879		
7,100.0	6,999.2	7,016.6	6,909.2	18.4	14.3	-70.41	368.5	219.1	372.2	347.9	24.27	15.337		
7,200.0	7,079.3	7,100.0	6,964.5	18.2	14.2	-67.49	368.5	156.8	379.5	355.3	24.24	15.654		
7,300.0	7,150.2	7,179.7	7,010.4	18.1	14.2	-65.06	368.5	91.7	386.6	362.1	24.51	15.776		
7,400.0	7,210.7	7,259.4	7,048.7	18.1	14.3	-63.03	368.5	21.9	393.1	368.1	25.02	15.713		
7,500.0	7,259.4	7,338.2	7,078.8	18.2	14.7	-61.44	368.5	-51.0	398.7	372.8	25.84	15.427		
7,600.0	7,295.6	7,416.4	7,100.5	18.5	15.4	-60.27	368.5	-126.0	403.0	376.0	26.98	14.938		
7,700.0	7,318.5	7,494.2	7,113.8	19.1	16.4	-59.51	368.5	-202.6	405.9	377.5	28.43	14.278		
7,800.0	7,327.6	7,571.6	7,118.8	20.0	17.5	-59.16	368.5	-279.9	407.3	377.1	30.20	13.486		
7,900.0	7,326.4	7,665.8	7,117.5	21.3	19.1	-59.14	368.5	-374.1	407.4	374.5	32.91	12.381		
8,000.0	7,324.7	7,765.8	7,115.7	22.9	20.9	-59.14	368.5	-474.0	407.4	371.3	36.09	11.289		
8,100.0	7,322.9	7,865.8	7,114.0	24.7	22.9	-59.14	368.5	-574.0	407.4	367.9	39.47	10.320		
8,200.0	7,321.2	7,965.8	7,112.2	26.6	24.9	-59.14	368.5	-674.0	407.4	364.4	43.01	9.471		
8,300.0	7,319.4	8,065.8	7,110.5	28.6	27.0	-59.14	368.5	-774.0	407.4	360.7	46.67	8.729		
8,400.0	7,317.7	8,165.8	7,108.7	30.6	29.2	-59.14	368.5	-874.0	407.4	357.0	50.43	8.079		
8,500.0	7,315.9	8,265.8	7,107.0	32.8	31.4	-59.14	368.5	-974.0	407.4	353.1	54.25	7.509		
8,600.0	7,314.2	8,365.8	7,105.3	34.9	33.7	-59.14	368.5	-1,073.9	407.4	349.3	58.14	7.007		
8,700.0	7,312.4	8,465.8	7,103.5	37.2	35.9	-59.14	368.5	-1,173.9	407.4	345.3	62.07	6.563		
8,800.0	7,310.7	8,565.8	7,101.8	39.4	38.2	-59.14	368.5	-1,273.9	407.4	341.3	66.05	6.168		
8,900.0	7,309.0	8,665.8	7,100.0	41.7	40.6	-59.14	368.5	-1,373.9	407.4	337.3	70.05	5.816		
9,000.0	7,307.2	8,765.8	7,098.3	44.0	42.9	-59.14	368.4	-1,473.9	407.4	333.3	74.09	5.499		
9,100.0	7,305.5	8,865.8	7,096.5	46.3	45.3	-59.14	368.4	-1,573.9	407.4	329.3	78.14	5.214		
9,200.0	7,303.7	8,965.8	7,094.8	48.6	47.6	-59.14	368.4	-1,673.9	407.4	325.2	82.22	4.955		
9,300.0	7,302.0	9,065.8	7,093.0	51.0	50.0	-59.14	368.4	-1,773.8	407.4	321.1	86.31	4.720		
9,400.0	7,300.2	9,165.8	7,091.3	53.3	52.4	-59.14	368.4	-1,873.8	407.4	317.0	90.42	4.506		
9,500.0	7,298.5	9,265.8	7,089.5	55.7	54.8	-59.14	368.4	-1,973.8	407.4	312.9	94.54	4.309		
9,600.0	7,296.7	9,365.8	7,087.8	58.0	57.2	-59.14	368.4	-2,073.8	407.4	308.7	98.67	4.129		
9,700.0	7,295.0	9,465.8	7,086.1	60.4	59.6	-59.14	368.4	-2,173.8	407.4	304.6	102.81	3.962		
9,800.0	7,293.2	9,565.8	7,084.3	62.8	62.0	-59.14	368.4	-2,273.8	407.4	300.4	106.96	3.809		
9,900.0	7,291.5	9,665.8	7,082.6	65.2	64.4	-59.14	368.4	-2,373.8	407.4	296.3	111.12	3.666		
10,000.0	7,289.8	9,765.8	7,080.8	67.6	66.8	-59.14	368.4	-2,473.7	407.4	292.1	115.29	3.534		
10,100.0	7,288.0	9,865.8	7,079.1	70.0	69.2	-59.14	368.4	-2,573.7	407.4	287.9	119.46	3.410		
10,200.0	7,286.3	9,965.8	7,077.3	72.4	71.7	-59.14	368.4	-2,673.7	407.4	283.8	123.64	3.295		

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 State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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 S16-T3N-R68W (State) - State 1D-16H - 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		
10,300.0	7,284.5	10,065.8	7,075.6	74.8	74.1	-59.14	368.4	-2,773.7	407.4	279.6	127.82	3.187		
10,400.0	7,282.8	10,165.8	7,073.8	77.3	76.5	-59.14	368.4	-2,873.7	407.4	275.4	132.00	3.086		
10,500.0	7,281.0	10,265.8	7,072.1	79.7	79.0	-59.14	368.4	-2,973.7	407.4	271.2	136.19	2.991		
10,600.0	7,279.3	10,365.8	7,070.3	82.1	81.4	-59.14	368.4	-3,073.6	407.4	267.0	140.39	2.902		
10,700.0	7,277.5	10,465.8	7,068.6	84.5	83.8	-59.14	368.4	-3,173.6	407.4	262.8	144.58	2.818		
10,800.0	7,275.8	10,565.8	7,066.9	87.0	86.3	-59.14	368.4	-3,273.6	407.4	258.6	148.78	2.738		
10,900.0	7,274.0	10,665.8	7,065.1	89.4	88.7	-59.14	368.4	-3,373.6	407.4	254.4	152.99	2.663		
11,000.0	7,272.3	10,765.8	7,063.4	91.8	91.2	-59.14	368.4	-3,473.6	407.4	250.2	157.19	2.592		
11,100.0	7,270.6	10,865.8	7,061.6	94.3	93.6	-59.14	368.4	-3,573.6	407.4	246.0	161.40	2.524		
11,200.0	7,268.8	10,965.8	7,059.9	96.7	96.1	-59.14	368.3	-3,673.6	407.4	241.8	165.61	2.460		
11,300.0	7,267.1	11,065.8	7,058.1	99.1	98.5	-59.14	368.3	-3,773.5	407.4	237.6	169.82	2.399		
11,400.0	7,265.3	11,165.8	7,056.4	101.6	101.0	-59.14	368.3	-3,873.5	407.4	233.4	174.04	2.341		
11,500.0	7,263.6	11,265.8	7,054.6	104.0	103.4	-59.14	368.3	-3,973.5	407.4	229.1	178.26	2.285		
11,600.0	7,261.8	11,365.8	7,052.9	106.5	105.9	-59.14	368.3	-4,073.5	407.4	224.9	182.47	2.233		
11,700.0	7,260.1	11,465.8	7,051.2	108.9	108.3	-59.14	368.3	-4,173.5	407.4	220.7	186.69	2.182		
11,800.0	7,258.3	11,565.8	7,049.4	111.4	110.8	-59.14	368.3	-4,273.5	407.4	216.5	190.91	2.134		
11,851.1	7,257.5	11,617.0	7,048.5	112.6	112.0	-59.14	368.3	-4,324.6	407.4	214.3	193.07	2.110		
11,870.1	7,257.1	11,634.1	7,048.2	113.1	112.5	-59.14	368.3	-4,341.7	407.4	213.6	193.83	2.102 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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 S16-T3N-R68W (State) - State 1E-16H - 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	0.0	0.0	0.0	0.0	-180.00	-21.9	0.0	21.9					
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-21.9	0.0	21.9	21.6	0.30	71.972		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-21.9	0.0	21.9	21.2	0.65	33.485		
300.0	300.0	300.0	300.0	0.5	0.5	-180.00	-21.9	0.0	21.9	20.9	1.00	21.817 CC, ES		
400.0	400.0	400.0	400.0	0.7	0.7	150.62	-21.9	0.0	22.6	21.3	1.35	16.739		
500.0	500.0	500.0	500.0	0.9	0.8	153.56	-21.9	0.0	24.9	23.2	1.70	14.660		
600.0	599.9	599.9	599.9	1.0	1.0	157.40	-21.9	0.0	28.9	26.8	2.05	14.098 SF		
700.0	699.7	699.7	699.7	1.2	1.2	161.27	-21.9	0.0	34.6	32.2	2.40	14.430		
800.0	799.4	799.4	799.4	1.4	1.4	164.67	-21.9	0.0	42.1	39.4	2.75	15.336		
900.0	898.9	898.9	898.9	1.7	1.5	167.48	-21.9	0.0	51.4	48.3	3.09	16.629		
1,000.0	998.3	998.3	998.3	1.9	1.7	169.71	-21.9	0.0	62.5	59.1	3.44	18.191		
1,100.0	1,097.4	1,098.0	1,098.0	2.2	1.9	170.90	-21.8	0.8	75.0	71.2	3.78	19.836		
1,200.0	1,196.3	1,197.7	1,197.7	2.5	2.1	170.90	-21.5	3.4	88.5	84.3	4.13	21.421		
1,300.0	1,294.9	1,297.4	1,297.3	2.8	2.2	170.18	-21.1	7.7	102.8	98.4	4.48	22.940		
1,400.0	1,393.3	1,397.1	1,396.7	3.1	2.4	169.02	-20.5	13.7	118.2	113.3	4.85	24.391		
1,500.0	1,491.2	1,496.6	1,496.0	3.5	2.6	167.59	-19.8	21.4	134.5	129.3	5.22	25.766		
1,600.0	1,589.1	1,596.1	1,595.0	3.9	2.8	165.97	-18.9	30.8	151.1	145.5	5.63	26.858		
1,700.0	1,686.9	1,694.7	1,693.1	4.3	3.0	164.38	-17.9	41.1	167.5	161.4	6.05	27.698		
1,800.0	1,784.7	1,793.2	1,791.1	4.7	3.3	163.07	-16.9	51.3	184.0	177.5	6.48	28.399		
1,900.0	1,882.5	1,891.8	1,889.1	5.1	3.5	161.98	-15.9	61.6	200.5	193.6	6.92	28.987		
2,000.0	1,980.3	1,990.3	1,987.1	5.4	3.7	161.06	-14.9	71.9	217.1	209.7	7.36	29.483		
2,100.0	2,078.1	2,088.9	2,085.1	5.8	3.9	160.26	-14.0	82.1	233.7	225.9	7.82	29.905		
2,200.0	2,175.9	2,187.5	2,183.1	6.2	4.2	159.58	-13.0	92.4	250.4	242.2	8.27	30.266		
2,300.0	2,273.8	2,286.0	2,281.2	6.6	4.4	158.97	-12.0	102.6	267.2	258.4	8.74	30.578		
2,400.0	2,371.6	2,384.6	2,379.2	7.0	4.6	158.44	-11.0	112.9	283.9	274.7	9.20	30.848		
2,500.0	2,469.4	2,483.1	2,477.2	7.4	4.9	157.97	-10.0	123.1	300.7	291.0	9.67	31.084		
2,600.0	2,567.2	2,581.7	2,575.2	7.8	5.1	157.55	-9.0	133.4	317.4	307.3	10.14	31.291		
2,700.0	2,665.0	2,680.2	2,673.2	8.2	5.3	157.17	-8.0	143.6	334.2	323.6	10.62	31.475		
2,800.0	2,762.8	2,778.8	2,771.2	8.6	5.6	156.83	-7.0	153.9	351.0	339.9	11.10	31.637		
2,900.0	2,860.7	2,877.4	2,869.3	9.0	5.8	156.52	-6.1	164.1	367.9	356.3	11.57	31.783		
3,000.0	2,958.5	2,975.9	2,967.3	9.4	6.1	156.23	-5.1	174.4	384.7	372.6	12.05	31.913		
3,100.0	3,056.3	3,074.5	3,065.3	9.8	6.3	155.97	-4.1	184.7	401.5	389.0	12.54	32.030		
3,200.0	3,154.1	3,173.0	3,163.3	10.2	6.5	155.73	-3.1	194.9	418.4	405.4	13.02	32.136		
3,300.0	3,251.9	3,271.6	3,261.3	10.6	6.8	155.51	-2.1	205.2	435.2	421.7	13.50	32.232		
3,400.0	3,349.7	3,370.1	3,359.3	11.0	7.0	155.30	-1.1	215.4	452.1	438.1	13.99	32.320		
3,500.0	3,447.5	3,468.7	3,457.4	11.4	7.3	155.11	-0.1	225.7	469.0	454.5	14.47	32.400		
3,600.0	3,545.4	3,567.2	3,555.4	11.8	7.5	154.94	0.9	235.9	485.8	470.9	14.96	32.473		

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 State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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
S16-T3N-R68W (State) - State 1F-16H - Hz - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-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	
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-29.1	0.0	29.1					
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-29.1	0.0	29.1	28.8	0.30	95.963		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-29.1	0.0	29.1	28.5	0.65	44.646		
300.0	300.0	300.0	300.0	0.5	0.5	-180.00	-29.1	0.0	29.1	28.1	1.00	29.090	CC, ES	
400.0	400.0	400.0	400.0	0.7	0.7	150.35	-29.1	0.0	29.9	28.5	1.35	22.131		
500.0	500.0	499.7	499.6	0.9	0.8	151.34	-29.6	0.7	32.7	31.0	1.70	19.211		
600.0	599.9	599.2	599.1	1.0	1.0	151.18	-31.1	2.8	37.9	35.9	2.05	18.470	SF	
700.0	699.7	698.5	698.3	1.2	1.2	150.28	-33.6	6.4	45.7	43.2	2.41	18.929		
800.0	799.4	797.4	797.1	1.4	1.4	149.07	-37.0	11.3	55.9	53.1	2.78	20.099		
900.0	898.9	896.0	895.4	1.7	1.6	147.82	-41.4	17.6	68.6	65.4	3.16	21.703		
1,000.0	998.3	994.0	993.0	1.9	1.8	146.64	-46.8	25.2	83.8	80.3	3.56	23.566		
1,100.0	1,097.4	1,091.5	1,089.8	2.2	2.1	145.59	-53.0	34.1	101.5	97.6	3.97	25.570		
1,200.0	1,196.3	1,188.2	1,185.7	2.5	2.3	144.67	-60.2	44.3	121.7	117.3	4.40	27.636		
1,300.0	1,294.9	1,284.2	1,280.7	2.8	2.6	143.87	-68.2	55.8	144.4	139.5	4.86	29.705		
1,400.0	1,393.3	1,379.3	1,374.5	3.1	2.9	143.16	-77.0	68.4	169.4	164.1	5.34	31.741		
1,500.0	1,491.2	1,475.1	1,468.9	3.5	3.2	142.64	-86.6	82.0	196.6	190.7	5.84	33.688		
1,600.0	1,589.1	1,571.2	1,563.5	3.9	3.5	142.51	-96.1	95.7	224.4	218.1	6.35	35.356		
1,700.0	1,686.9	1,667.2	1,658.1	4.3	3.8	142.40	-105.7	109.3	252.3	245.4	6.87	36.741		
1,800.0	1,784.7	1,763.3	1,752.7	4.7	4.1	142.32	-115.3	123.0	280.1	272.7	7.39	37.906		
1,900.0	1,882.5	1,859.3	1,847.3	5.1	4.5	142.25	-124.8	136.6	307.9	300.0	7.92	38.897		
2,000.0	1,980.3	1,955.4	1,941.8	5.4	4.8	142.19	-134.4	150.3	335.8	327.3	8.45	39.750		
2,100.0	2,078.1	2,051.4	2,036.4	5.8	5.1	142.14	-143.9	164.0	363.6	354.6	8.98	40.489		
2,200.0	2,175.9	2,147.4	2,131.0	6.2	5.4	142.10	-153.5	177.6	391.5	382.0	9.52	41.136		
2,300.0	2,273.8	2,243.5	2,225.6	6.6	5.8	142.06	-163.1	191.3	419.3	409.3	10.05	41.706		
2,400.0	2,371.6	2,339.5	2,320.2	7.0	6.1	142.03	-172.6	204.9	447.2	436.6	10.59	42.212		
2,500.0	2,469.4	2,435.6	2,414.8	7.4	6.4	142.01	-182.2	218.6	475.0	463.9	11.13	42.664		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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
S16-T3N-R68W (State) - State 1G-16H - Hz - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-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	
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-40.1	0.0	40.1					
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-40.1	0.0	40.1	39.8	0.30	131.949		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-40.1	0.0	40.1	39.4	0.65	61.388		
300.0	300.0	300.0	300.0	0.5	0.5	-180.00	-40.1	0.0	40.1	39.1	1.00	39.999 CC, ES		
400.0	400.0	399.4	399.4	0.7	0.7	149.42	-40.8	0.5	41.5	40.2	1.35	30.762		
500.0	500.0	498.7	498.7	0.9	0.9	149.20	-42.9	2.0	45.9	44.2	1.70	27.011		
600.0	599.9	597.7	597.6	1.0	1.0	148.91	-46.4	4.4	53.2	51.2	2.05	25.923 SF		
700.0	699.7	696.4	696.1	1.2	1.2	148.62	-51.3	7.9	63.4	61.0	2.41	26.308		
800.0	799.4	794.5	793.9	1.4	1.4	148.34	-57.5	12.2	76.5	73.8	2.78	27.571		
900.0	898.9	892.0	891.0	1.7	1.7	148.09	-65.1	17.5	92.5	89.4	3.15	29.378		
1,000.0	998.3	988.8	987.2	1.9	1.9	147.88	-73.9	23.7	111.3	107.8	3.53	31.525		
1,100.0	1,097.4	1,084.7	1,082.3	2.2	2.1	147.68	-84.0	30.8	133.0	129.0	3.92	33.878		
1,200.0	1,196.3	1,179.7	1,176.3	2.5	2.4	147.51	-95.3	38.7	157.4	153.0	4.33	36.347		
1,300.0	1,294.9	1,273.6	1,268.9	2.8	2.7	147.35	-107.7	47.3	184.5	179.8	4.75	38.870		
1,400.0	1,393.3	1,366.4	1,360.2	3.1	3.0	147.19	-121.1	56.8	214.4	209.2	5.18	41.401		
1,500.0	1,491.2	1,457.9	1,450.0	3.5	3.4	147.04	-135.6	66.9	247.0	241.3	5.62	43.910		
1,600.0	1,589.1	1,550.2	1,540.4	3.9	3.7	147.01	-151.2	77.8	281.3	275.2	6.09	46.194		
1,700.0	1,686.9	1,644.1	1,632.2	4.3	4.1	146.97	-167.2	89.0	315.7	309.1	6.56	48.111		
1,800.0	1,784.7	1,738.0	1,724.0	4.7	4.4	146.94	-183.2	100.2	350.1	343.1	7.04	49.741		
1,900.0	1,882.5	1,831.9	1,815.9	5.1	4.8	146.92	-199.2	111.4	384.6	377.0	7.52	51.140		
2,000.0	1,980.3	1,925.8	1,907.7	5.4	5.2	146.90	-215.1	122.6	419.0	411.0	8.00	52.353		
2,100.0	2,078.1	2,019.7	1,999.5	5.8	5.5	146.88	-231.1	133.8	453.4	444.9	8.49	53.414		
2,200.0	2,175.9	2,113.5	2,091.4	6.2	5.9	146.87	-247.1	145.0	487.9	478.9	8.98	54.347		

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

Anticollision Report

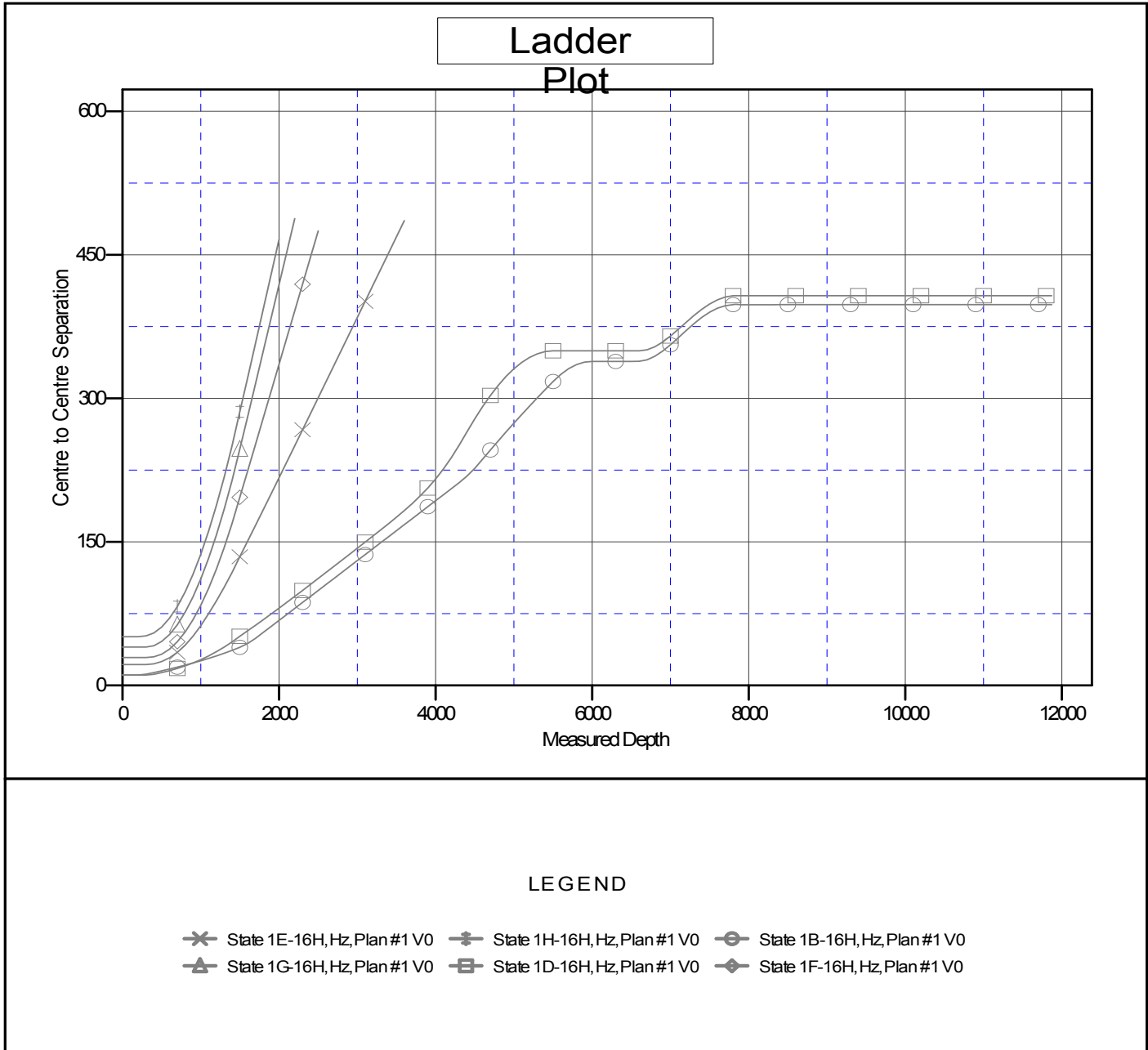
Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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
S16-T3N-R68W (State) - State 1H-16H - Hz - Plan #1													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	
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-51.0	0.0	51.0					
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-51.0	0.0	51.0	50.7	0.30	167.922		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-51.0	0.0	51.0	50.3	0.65	78.124	CC, ES	
300.0	300.0	299.2	299.2	0.5	0.5	179.59	-51.8	0.4	51.8	50.8	1.00	51.757		
400.0	400.0	398.3	398.3	0.7	0.7	148.40	-54.1	1.5	54.9	53.5	1.35	40.683		
500.0	500.0	497.2	497.1	0.9	0.9	147.98	-58.0	3.3	61.0	59.3	1.70	35.931		
600.0	599.9	595.7	595.4	1.0	1.1	147.81	-63.3	5.9	70.3	68.2	2.05	34.244	SF	
700.0	699.7	693.8	693.2	1.2	1.3	147.83	-70.2	9.2	82.5	80.1	2.41	34.254		
800.0	799.4	791.2	790.2	1.4	1.5	147.94	-78.5	13.1	97.7	95.0	2.77	35.283		
900.0	898.9	887.9	886.3	1.7	1.7	148.10	-88.2	17.8	116.0	112.8	3.14	36.954		
1,000.0	998.3	983.7	981.3	1.9	2.0	148.28	-99.3	23.0	137.2	133.6	3.51	39.038		
1,100.0	1,097.4	1,078.5	1,075.1	2.2	2.3	148.44	-111.7	28.9	161.3	157.4	3.90	41.386		
1,200.0	1,196.3	1,172.2	1,167.6	2.5	2.6	148.58	-125.3	35.4	188.3	184.0	4.29	43.900		
1,300.0	1,294.9	1,264.7	1,258.6	2.8	2.9	148.69	-140.0	42.5	218.1	213.4	4.69	46.510		
1,400.0	1,393.3	1,355.9	1,348.0	3.1	3.2	148.78	-155.9	50.0	250.7	245.6	5.10	49.167		
1,500.0	1,491.2	1,447.7	1,437.9	3.5	3.6	148.86	-172.9	58.2	285.9	280.4	5.52	51.785		
1,600.0	1,589.1	1,540.9	1,529.1	3.9	3.9	149.15	-190.4	66.5	322.0	316.0	5.96	54.020		
1,700.0	1,686.9	1,634.2	1,620.3	4.3	4.3	149.39	-207.9	74.9	358.0	351.6	6.40	55.917		
1,800.0	1,784.7	1,727.4	1,711.5	4.7	4.7	149.58	-225.5	83.2	394.1	387.3	6.85	57.546		
1,900.0	1,882.5	1,820.7	1,802.7	5.1	5.0	149.74	-243.0	91.6	430.2	422.9	7.30	58.956		
2,000.0	1,980.3	1,914.0	1,894.0	5.4	5.4	149.87	-260.5	99.9	466.3	458.5	7.75	60.189		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State 1C-16H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5039.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	MD Reference:	WELL @ 5039.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	State 1C-16H	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 @ 5039.0ft (Original Well Elev) Coordinates are relative to: State 1C-16H
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
 Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.32°



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