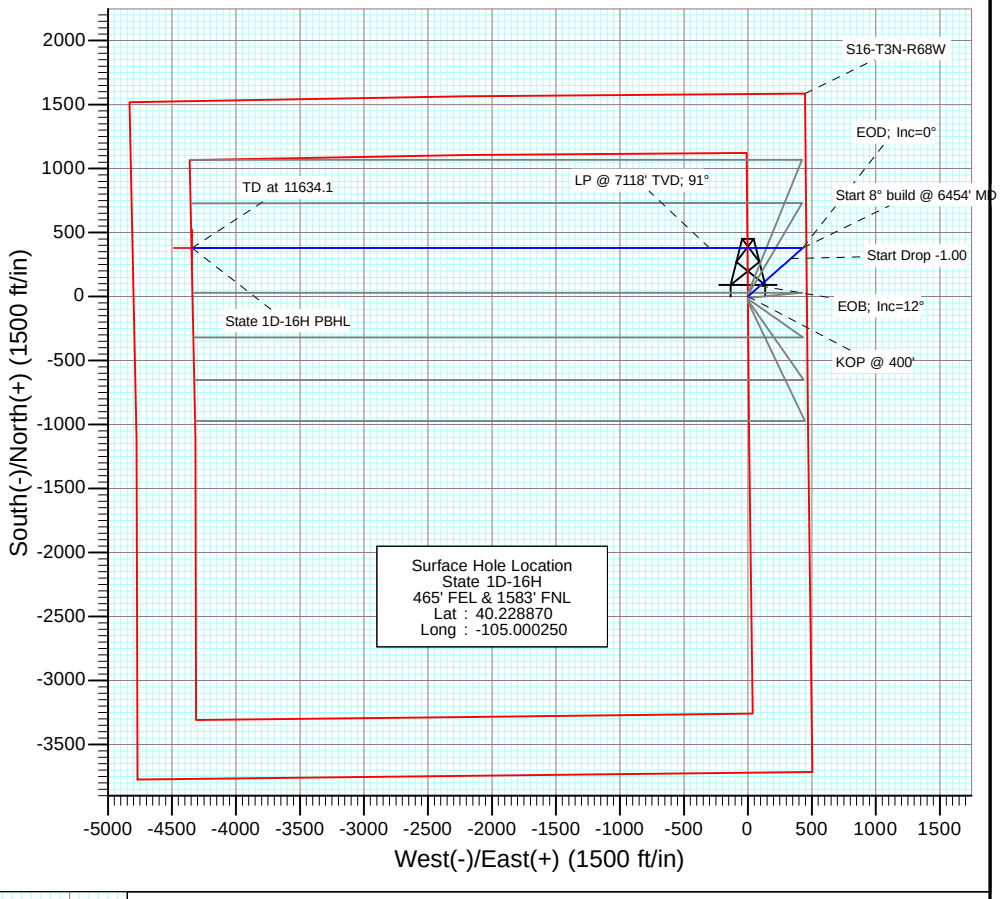
Project: DJ Wattenberg
Site: S16-T3N-R68W (State)
Well: State 1D-16H
Wellbore: Hz
Design: Plan #1

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1600.0	12.00	48.50	1591.2	83.0	93.8	1.00	48.50	-93.8	
4	3150.0	12.00	48.50	3107.4	296.5	335.1	0.00	0.00	-335.1	
5	4350.0	0.00	0.00	4298.6	379.5	428.9	1.00	180.00	-428.9	
6	6454.1	0.00	0.00	6402.7	379.5	428.9	0.00	0.00	-428.9	
7	7591.6	91.00	270.00	7118.8	379.4	-299.8	8.00	270.00	299.8	
8	11634.1	91.00	270.00	7048.2	379.2	-4341.7	0.00	0.00	4341.7	State 1D-16H PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
State 1D-16H PBHL	379.2	-4341.7	1326969.95	3135198.65	40.229910	-105.015800

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4051.4	4102.7	Sussex
4601.5	4652.9	Shannon
6048.5	6099.9	Teepee Buttes (*if present)
6989.2	7141.2	Sharon Springs
7057.1	7279.3	Niobrara
7110.9	7471.7	B Chalk

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

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 1D-16H

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,326,615.18 ft	**Latitude:**	40.228870
	+E/-W	0.0 ft	**Easting:**	3,139,542.43 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 (nT)
	IGRF2010	12/14/2012	8.77	66.82	52,857

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.0	12.00	48.50	1,591.2	83.0	93.8	1.00	1.00	0.00	48.50	
3,150.0	12.00	48.50	3,107.4	296.5	335.1	0.00	0.00	0.00	0.00	
4,350.0	0.00	0.00	4,298.6	379.5	428.9	1.00	-1.00	0.00	180.00	
6,454.1	0.00	0.00	6,402.7	379.5	428.9	0.00	0.00	0.00	0.00	
7,591.6	91.00	270.00	7,118.8	379.4	-299.8	8.00	8.00	0.00	270.00	
11,634.1	91.00	270.00	7,048.2	379.2	-4,341.7	0.00	0.00	0.00	0.00	State 1D-16H PBHL

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	1.00	48.50	500.0	0.6	0.7	-0.7	1.00	1.00	
600.0	2.00	48.50	600.0	2.3	2.6	-2.6	1.00	1.00	
700.0	3.00	48.50	699.9	5.2	5.9	-5.9	1.00	1.00	
800.0	4.00	48.50	799.7	9.2	10.5	-10.5	1.00	1.00	
900.0	5.00	48.50	899.4	14.4	16.3	-16.3	1.00	1.00	
1,000.0	6.00	48.50	998.9	20.8	23.5	-23.5	1.00	1.00	
1,100.0	7.00	48.50	1,098.3	28.3	32.0	-32.0	1.00	1.00	
1,200.0	8.00	48.50	1,197.4	36.9	41.8	-41.8	1.00	1.00	
1,300.0	9.00	48.50	1,296.3	46.7	52.8	-52.8	1.00	1.00	
1,400.0	10.00	48.50	1,394.9	57.7	65.2	-65.2	1.00	1.00	
1,500.0	11.00	48.50	1,493.3	69.8	78.8	-78.8	1.00	1.00	
1,600.0	12.00	48.50	1,591.2	83.0	93.8	-93.8	1.00	1.00	EOB; Inc=12°
1,700.0	12.00	48.50	1,689.1	96.7	109.3	-109.3	0.00	0.00	
1,800.0	12.00	48.50	1,786.9	110.5	124.9	-124.9	0.00	0.00	
1,900.0	12.00	48.50	1,884.7	124.3	140.5	-140.5	0.00	0.00	
2,000.0	12.00	48.50	1,982.5	138.1	156.1	-156.1	0.00	0.00	
2,100.0	12.00	48.50	2,080.3	151.8	171.6	-171.6	0.00	0.00	
2,200.0	12.00	48.50	2,178.1	165.6	187.2	-187.2	0.00	0.00	
2,300.0	12.00	48.50	2,275.9	179.4	202.8	-202.8	0.00	0.00	
2,400.0	12.00	48.50	2,373.8	193.2	218.3	-218.3	0.00	0.00	
2,500.0	12.00	48.50	2,471.6	207.0	233.9	-233.9	0.00	0.00	
2,600.0	12.00	48.50	2,569.4	220.7	249.5	-249.5	0.00	0.00	
2,700.0	12.00	48.50	2,667.2	234.5	265.1	-265.1	0.00	0.00	
2,800.0	12.00	48.50	2,765.0	248.3	280.6	-280.6	0.00	0.00	
2,900.0	12.00	48.50	2,862.8	262.1	296.2	-296.2	0.00	0.00	
3,000.0	12.00	48.50	2,960.7	275.8	311.8	-311.8	0.00	0.00	
3,100.0	12.00	48.50	3,058.5	289.6	327.3	-327.3	0.00	0.00	
3,150.0	12.00	48.50	3,107.4	296.5	335.1	-335.1	0.00	0.00	Start Drop -1.00
3,200.0	11.50	48.50	3,156.3	303.2	342.8	-342.8	1.00	-1.00	
3,300.0	10.50	48.50	3,254.5	315.9	357.1	-357.1	1.00	-1.00	
3,400.0	9.50	48.50	3,353.0	327.4	370.1	-370.1	1.00	-1.00	
3,500.0	8.50	48.50	3,451.7	337.8	381.8	-381.8	1.00	-1.00	
3,600.0	7.50	48.50	3,550.8	347.0	392.2	-392.2	1.00	-1.00	
3,700.0	6.50	48.50	3,650.0	355.1	401.3	-401.3	1.00	-1.00	
3,800.0	5.50	48.50	3,749.5	362.0	409.2	-409.2	1.00	-1.00	
3,900.0	4.50	48.50	3,849.1	367.8	415.7	-415.7	1.00	-1.00	
4,000.0	3.50	48.50	3,948.8	372.4	420.9	-420.9	1.00	-1.00	
4,100.0	2.50	48.50	4,048.7	375.9	424.8	-424.8	1.00	-1.00	
4,102.7	2.47	48.50	4,051.4	375.9	424.9	-424.9	1.00	-1.00	Sussex
4,200.0	1.50	48.50	4,148.6	378.2	427.4	-427.4	1.00	-1.00	
4,300.0	0.50	48.50	4,248.6	379.3	428.7	-428.7	1.00	-1.00	
4,350.0	0.00	0.00	4,298.6	379.5	428.9	-428.9	1.00	-1.00	EOD; Inc=0°
4,400.0	0.00	0.00	4,348.6	379.5	428.9	-428.9	0.00	0.00	
4,500.0	0.00	0.00	4,448.6	379.5	428.9	-428.9	0.00	0.00	
4,600.0	0.00	0.00	4,548.6	379.5	428.9	-428.9	0.00	0.00	
4,652.9	0.00	0.00	4,601.5	379.5	428.9	-428.9	0.00	0.00	Shannon
4,700.0	0.00	0.00	4,648.6	379.5	428.9	-428.9	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5039.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 1D-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
4,800.0	0.00	0.00	4,748.6	379.5	428.9	-428.9	0.00	0.00	
4,900.0	0.00	0.00	4,848.6	379.5	428.9	-428.9	0.00	0.00	
5,000.0	0.00	0.00	4,948.6	379.5	428.9	-428.9	0.00	0.00	
5,100.0	0.00	0.00	5,048.6	379.5	428.9	-428.9	0.00	0.00	
5,200.0	0.00	0.00	5,148.6	379.5	428.9	-428.9	0.00	0.00	
5,300.0	0.00	0.00	5,248.6	379.5	428.9	-428.9	0.00	0.00	
5,400.0	0.00	0.00	5,348.6	379.5	428.9	-428.9	0.00	0.00	
5,500.0	0.00	0.00	5,448.6	379.5	428.9	-428.9	0.00	0.00	
5,600.0	0.00	0.00	5,548.6	379.5	428.9	-428.9	0.00	0.00	
5,700.0	0.00	0.00	5,648.6	379.5	428.9	-428.9	0.00	0.00	
5,800.0	0.00	0.00	5,748.6	379.5	428.9	-428.9	0.00	0.00	
5,900.0	0.00	0.00	5,848.6	379.5	428.9	-428.9	0.00	0.00	
6,000.0	0.00	0.00	5,948.6	379.5	428.9	-428.9	0.00	0.00	
6,099.9	0.00	0.00	6,048.5	379.5	428.9	-428.9	0.00	0.00	Teepee Buttes (*if present)
6,100.0	0.00	0.00	6,048.6	379.5	428.9	-428.9	0.00	0.00	
6,200.0	0.00	0.00	6,148.6	379.5	428.9	-428.9	0.00	0.00	
6,300.0	0.00	0.00	6,248.6	379.5	428.9	-428.9	0.00	0.00	
6,400.0	0.00	0.00	6,348.6	379.5	428.9	-428.9	0.00	0.00	
6,454.1	0.00	0.00	6,402.7	379.5	428.9	-428.9	0.00	0.00	Start 8° build @ 6454' MD
6,500.0	3.68	270.00	6,448.6	379.5	427.4	-427.4	8.00	8.00	
6,600.0	11.68	270.00	6,547.6	379.5	414.1	-414.1	8.00	8.00	
6,700.0	19.68	270.00	6,643.8	379.5	387.1	-387.1	8.00	8.00	
6,800.0	27.68	270.00	6,735.3	379.5	347.0	-347.0	8.00	8.00	
6,900.0	35.68	270.00	6,820.4	379.5	294.5	-294.5	8.00	8.00	
7,000.0	43.68	270.00	6,897.3	379.5	230.7	-230.7	8.00	8.00	
7,100.0	51.68	270.00	6,964.5	379.5	156.8	-156.8	8.00	8.00	
7,141.2	54.97	270.00	6,989.2	379.5	123.8	-123.8	8.00	8.00	Sharon Springs
7,200.0	59.68	270.00	7,020.9	379.4	74.3	-74.3	8.00	8.00	
7,279.3	66.02	270.00	7,057.1	379.4	3.8	-3.8	8.00	8.00	Niobrara
7,300.0	67.68	270.00	7,065.2	379.4	-15.2	15.2	8.00	8.00	
7,400.0	75.68	270.00	7,096.6	379.4	-110.1	110.1	8.00	8.00	
7,471.7	81.42	270.00	7,110.9	379.4	-180.4	180.4	8.00	8.00	B Chalk
7,500.0	83.68	270.00	7,114.5	379.4	-208.4	208.4	8.00	8.00	
7,591.6	91.00	270.00	7,118.8	379.4	-299.8	299.8	8.00	8.00	LP @ 7118' TVD; 91°
7,600.0	91.00	270.00	7,118.6	379.4	-308.2	308.2	0.00	0.00	
7,700.0	91.00	270.00	7,116.9	379.4	-408.2	408.2	0.00	0.00	
7,800.0	91.00	270.00	7,115.1	379.4	-508.2	508.2	0.00	0.00	
7,900.0	91.00	270.00	7,113.4	379.4	-608.2	608.2	0.00	0.00	
8,000.0	91.00	270.00	7,111.6	379.4	-708.2	708.2	0.00	0.00	
8,100.0	91.00	270.00	7,109.9	379.4	-808.2	808.2	0.00	0.00	
8,200.0	91.00	270.00	7,108.1	379.4	-908.1	908.1	0.00	0.00	
8,300.0	91.00	270.00	7,106.4	379.4	-1,008.1	1,008.1	0.00	0.00	
8,400.0	91.00	270.00	7,104.7	379.4	-1,108.1	1,108.1	0.00	0.00	
8,500.0	91.00	270.00	7,102.9	379.4	-1,208.1	1,208.1	0.00	0.00	
8,600.0	91.00	270.00	7,101.2	379.4	-1,308.1	1,308.1	0.00	0.00	
8,700.0	91.00	270.00	7,099.4	379.4	-1,408.1	1,408.1	0.00	0.00	
8,800.0	91.00	270.00	7,097.7	379.4	-1,508.0	1,508.0	0.00	0.00	
8,900.0	91.00	270.00	7,095.9	379.4	-1,608.0	1,608.0	0.00	0.00	
9,000.0	91.00	270.00	7,094.2	379.4	-1,708.0	1,708.0	0.00	0.00	
9,100.0	91.00	270.00	7,092.4	379.4	-1,808.0	1,808.0	0.00	0.00	
9,200.0	91.00	270.00	7,090.7	379.4	-1,908.0	1,908.0	0.00	0.00	
9,300.0	91.00	270.00	7,089.0	379.4	-2,008.0	2,008.0	0.00	0.00	

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Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 1D-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
9,400.0	91.00	270.00	7,087.2	379.3	-2,108.0	2,108.0	0.00	0.00	
9,500.0	91.00	270.00	7,085.5	379.3	-2,207.9	2,207.9	0.00	0.00	
9,600.0	91.00	270.00	7,083.7	379.3	-2,307.9	2,307.9	0.00	0.00	
9,700.0	91.00	270.00	7,082.0	379.3	-2,407.9	2,407.9	0.00	0.00	
9,800.0	91.00	270.00	7,080.2	379.3	-2,507.9	2,507.9	0.00	0.00	
9,900.0	91.00	270.00	7,078.5	379.3	-2,607.9	2,607.9	0.00	0.00	
10,000.0	91.00	270.00	7,076.7	379.3	-2,707.9	2,707.9	0.00	0.00	
10,100.0	91.00	270.00	7,075.0	379.3	-2,807.9	2,807.9	0.00	0.00	
10,200.0	91.00	270.00	7,073.2	379.3	-2,907.8	2,907.8	0.00	0.00	
10,300.0	91.00	270.00	7,071.5	379.3	-3,007.8	3,007.8	0.00	0.00	
10,400.0	91.00	270.00	7,069.8	379.3	-3,107.8	3,107.8	0.00	0.00	
10,500.0	91.00	270.00	7,068.0	379.3	-3,207.8	3,207.8	0.00	0.00	
10,600.0	91.00	270.00	7,066.3	379.3	-3,307.8	3,307.8	0.00	0.00	
10,700.0	91.00	270.00	7,064.5	379.3	-3,407.8	3,407.8	0.00	0.00	
10,800.0	91.00	270.00	7,062.8	379.3	-3,507.7	3,507.7	0.00	0.00	
10,900.0	91.00	270.00	7,061.0	379.3	-3,607.7	3,607.7	0.00	0.00	
11,000.0	91.00	270.00	7,059.3	379.3	-3,707.7	3,707.7	0.00	0.00	
11,100.0	91.00	270.00	7,057.5	379.3	-3,807.7	3,807.7	0.00	0.00	
11,200.0	91.00	270.00	7,055.8	379.3	-3,907.7	3,907.7	0.00	0.00	
11,300.0	91.00	270.00	7,054.0	379.3	-4,007.7	4,007.7	0.00	0.00	
11,400.0	91.00	270.00	7,052.3	379.3	-4,107.7	4,107.7	0.00	0.00	
11,500.0	91.00	270.00	7,050.6	379.3	-4,207.6	4,207.6	0.00	0.00	
11,600.0	91.00	270.00	7,048.8	379.2	-4,307.6	4,307.6	0.00	0.00	
11,634.1	91.00	270.00	7,048.2	379.2	-4,341.7	4,341.7	0.00	0.00	TD at 11634.1 - State 1D-16H PBHL

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
State 1D-16H PBHL - plan hits target center - Point	0.00	0.00	7,048.2	379.2	-4,341.7	1,326,969.95	3,135,198.65	40.229910	-105.015800

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,102.7	4,044.0	Sussex		-1.00	270.00
4,652.9	4,594.0	Shannon		-1.00	270.00
6,099.9	6,041.0	Teepee Buttes (*if present)		-1.00	270.00
7,141.2	6,987.0	Sharon Springs		-1.00	270.00
7,279.3	7,057.0	Niobrara		-1.00	270.00
7,471.7	7,114.0	B Chalk		-1.00	270.00

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State 1D-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 1D-16H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
400.0	400.0	0.0	0.0	KOP @ 400'
1,600.0	1,591.2	83.0	93.8	EOB; Inc=12°
3,150.0	3,107.4	296.5	335.1	Start Drop -1.00
4,350.0	4,298.6	379.5	428.9	EOD; Inc=0°
6,454.1	6,402.7	379.5	428.9	Start 8° build @ 6454' MD
7,591.6	7,118.8	379.4	-299.8	LP @ 7118' TVD; 91°
11,634.1	7,048.2	379.2	-4,341.7	TD at 11634.1

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S16-T3N-R68W (State)
State 1D-16H
Hz
Plan #1

Anticollision Report

14 December, 2012

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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	11,634.1	Plan #1 (Hz)	MWD	Geolink MWD

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S16-T3N-R68W (State)						
State 1B-16H - Hz - Plan #1	200.0	200.0	21.9	21.2	33.485	CC, ES
State 1B-16H - Hz - Plan #1	1,600.0	1,586.2	100.4	93.5	14.556	SF
State 1C-16H - Hz - Plan #1	300.0	300.0	10.9	9.9	10.909	CC, ES
State 1C-16H - Hz - Plan #1	11,634.1	11,868.3	407.4	213.6	2.102	SF
State 1E-16H - Hz - Plan #1	400.0	400.0	10.9	9.6	8.090	CC, ES
State 1E-16H - Hz - Plan #1	11,634.1	11,796.9	407.6	213.8	2.103	SF
State 1F-16H - Hz - Plan #1	400.0	400.0	18.2	16.9	13.483	CC, ES
State 1F-16H - Hz - Plan #1	600.0	599.5	22.5	20.5	10.973	SF
State 1G-16H - Hz - Plan #1	300.0	300.0	29.1	28.1	29.090	CC, ES
State 1G-16H - Hz - Plan #1	600.0	598.4	37.9	35.8	18.463	SF
State 1H-16H - Hz - Plan #1	200.0	200.0	40.1	39.4	61.382	CC, ES
State 1H-16H - Hz - Plan #1	600.0	596.7	55.0	52.9	26.803	SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
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	71.972	
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	299.6	299.6	0.5	0.5	0.82	22.7	0.3	22.7	21.7	1.00	22.621	
400.0	400.0	399.2	399.2	0.7	0.7	2.96	25.1	1.3	25.1	23.8	1.35	18.539	
500.0	500.0	498.7	498.6	0.9	0.9	-43.93	29.1	2.9	28.6	26.9	1.70	16.839	
600.0	600.0	598.1	597.8	1.0	1.1	-43.89	34.7	5.2	32.5	30.5	2.05	15.859	
700.0	699.9	697.5	696.8	1.2	1.3	-44.92	41.9	8.1	36.9	34.4	2.41	15.299	
800.0	799.7	796.7	795.6	1.4	1.5	-46.66	50.6	11.6	41.6	38.8	2.78	14.987	
900.0	899.4	895.8	894.1	1.6	1.8	-48.82	61.0	15.8	46.8	43.7	3.16	14.824	
1,000.0	998.9	994.9	992.3	1.8	2.0	-51.23	72.9	20.6	52.6	49.0	3.57	14.749	
1,100.0	1,098.3	1,093.8	1,090.1	2.1	2.3	-53.74	86.4	26.1	58.9	54.9	4.00	14.718	
1,200.0	1,197.4	1,192.5	1,187.6	2.3	2.6	-56.26	101.4	32.1	65.9	61.4	4.48	14.702	
1,300.0	1,296.3	1,291.2	1,284.6	2.6	3.0	-58.72	117.9	38.8	73.5	68.5	5.00	14.685	
1,400.0	1,394.9	1,389.7	1,381.1	2.9	3.3	-61.07	136.0	46.1	81.8	76.2	5.58	14.656	
1,500.0	1,493.3	1,488.0	1,477.2	3.3	3.7	-63.30	155.5	54.0	90.7	84.5	6.21	14.613	
1,600.0	1,591.2	1,586.2	1,572.7	3.7	4.2	-65.38	176.6	62.5	100.4	93.5	6.90	14.556	SF
1,700.0	1,689.1	1,684.2	1,667.7	4.0	4.6	-67.00	199.1	71.6	111.2	103.6	7.62	14.595	
1,800.0	1,786.9	1,783.3	1,763.4	4.4	5.1	-68.01	222.9	81.2	122.8	114.5	8.34	14.724	
1,900.0	1,884.7	1,882.6	1,859.3	4.8	5.5	-68.83	246.7	90.8	134.5	125.4	9.08	14.819	
2,000.0	1,982.5	1,981.9	1,955.2	5.2	6.0	-69.53	270.5	100.5	146.2	136.4	9.82	14.889	
2,100.0	2,080.3	2,081.2	2,051.1	5.6	6.5	-70.12	294.3	110.1	157.9	147.4	10.57	14.941	
2,200.0	2,178.1	2,180.5	2,147.0	6.0	6.9	-70.63	318.2	119.7	169.7	158.4	11.33	14.980	
2,300.0	2,275.9	2,279.8	2,242.9	6.4	7.4	-71.07	342.0	129.3	181.4	169.4	12.09	15.010	
2,400.0	2,373.8	2,379.1	2,338.8	6.8	7.9	-71.46	365.8	139.0	193.2	180.4	12.85	15.033	
2,500.0	2,471.6	2,478.4	2,434.8	7.2	8.4	-71.80	389.7	148.6	205.0	191.4	13.62	15.051	
2,600.0	2,569.4	2,577.6	2,530.7	7.6	8.8	-72.11	413.5	158.2	216.8	202.4	14.39	15.064	
2,700.0	2,667.2	2,676.9	2,626.6	7.9	9.3	-72.38	437.3	167.9	228.5	213.4	15.16	15.075	
2,800.0	2,765.0	2,776.2	2,722.5	8.3	9.8	-72.63	461.1	177.5	240.3	224.4	15.93	15.083	
2,900.0	2,862.8	2,875.5	2,818.4	8.7	10.3	-72.86	485.0	187.1	252.1	235.4	16.71	15.089	
3,000.0	2,960.7	2,974.8	2,914.3	9.2	10.8	-73.06	508.8	196.7	263.9	246.4	17.49	15.093	
3,100.0	3,058.5	3,074.1	3,010.2	9.6	11.2	-73.25	532.6	206.4	275.7	257.5	18.26	15.097	
3,200.0	3,156.3	3,173.4	3,106.1	9.9	11.7	-73.44	556.5	216.0	287.6	268.5	19.04	15.108	
3,300.0	3,254.5	3,272.7	3,202.0	10.3	12.2	-73.39	580.3	225.6	299.9	280.1	19.75	15.187	
3,400.0	3,353.0	3,371.8	3,297.8	10.6	12.7	-73.06	604.1	235.2	312.7	292.3	20.39	15.335	
3,500.0	3,451.7	3,470.8	3,393.4	11.0	13.1	-72.47	627.8	244.8	326.0	305.1	20.97	15.550	
3,600.0	3,550.8	3,569.7	3,488.9	11.2	13.6	-71.67	651.6	254.4	340.0	318.5	21.47	15.831	
3,700.0	3,650.0	3,668.4	3,584.3	11.5	14.1	-70.67	675.2	264.0	354.5	332.6	21.91	16.179	
3,800.0	3,749.5	3,766.9	3,679.4	11.7	14.6	-69.52	698.9	273.5	369.9	347.6	22.29	16.596	
3,900.0	3,849.1	3,865.1	3,774.3	12.0	15.1	-68.24	722.4	283.1	386.0	363.4	22.59	17.085	
4,000.0	3,948.8	3,963.1	3,868.9	12.1	15.5	-66.85	746.0	292.6	403.0	380.2	22.83	17.650	
4,100.0	4,048.7	4,060.8	3,963.3	12.3	16.0	-65.38	769.4	302.0	421.0	398.0	23.01	18.294	
4,200.0	4,148.6	4,158.1	4,057.3	12.4	16.5	-63.85	792.8	311.5	440.1	417.0	23.14	19.021	
4,300.0	4,248.6	4,255.1	4,151.0	12.6	16.9	-62.28	816.0	320.9	460.3	437.1	23.21	19.834	
4,400.0	4,348.6	4,351.7	4,244.3	12.7	17.4	-12.11	839.2	330.2	481.7	457.5	24.12	19.972	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 1C-16H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
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	
300.0	300.0	300.0	300.0	0.5	0.5	0.00	10.9	0.0	10.9	9.9	1.00	10.909	CC, ES
400.0	400.0	399.8	399.8	0.7	0.7	2.16	11.7	0.4	11.7	10.3	1.35	8.650	
500.0	500.0	499.6	499.6	0.9	0.9	-43.72	13.9	1.8	13.4	11.7	1.70	7.880	
600.0	600.0	599.4	599.2	1.0	1.0	-43.41	17.7	4.0	15.4	13.4	2.05	7.517	
700.0	699.9	699.1	698.8	1.2	1.2	-44.62	22.9	7.1	17.8	15.4	2.41	7.371	
800.0	799.7	798.7	798.1	1.4	1.4	-46.78	29.6	11.0	20.4	17.7	2.78	7.354	
900.0	899.4	898.4	897.3	1.6	1.7	-49.46	37.8	15.8	23.5	20.3	3.17	7.415	
1,000.0	998.9	997.9	996.2	1.8	1.9	-52.37	47.5	21.5	26.9	23.3	3.58	7.521	
1,100.0	1,098.3	1,097.4	1,094.9	2.1	2.2	-55.32	58.7	28.1	30.8	26.8	4.03	7.649	
1,200.0	1,197.4	1,196.9	1,193.2	2.3	2.5	-58.18	71.3	35.6	35.1	30.6	4.52	7.782	
1,300.0	1,296.3	1,296.3	1,291.3	2.6	2.8	-60.89	85.4	43.9	40.0	34.9	5.06	7.908	
1,400.0	1,394.9	1,395.6	1,388.9	2.9	3.1	-63.40	100.9	53.0	45.3	39.7	5.65	8.023	
1,500.0	1,493.3	1,494.8	1,486.2	3.3	3.5	-65.71	117.9	63.0	51.2	44.9	6.30	8.123	
1,600.0	1,591.2	1,594.6	1,583.8	3.7	3.9	-68.42	135.8	73.5	57.0	50.0	7.01	8.130	
1,700.0	1,689.1	1,694.4	1,681.4	4.0	4.3	-71.43	153.6	84.1	62.7	55.0	7.77	8.069	
1,800.0	1,786.9	1,794.2	1,779.0	4.4	4.6	-73.93	171.5	94.6	68.6	60.0	8.55	8.022	
1,900.0	1,884.7	1,893.9	1,876.6	4.8	5.0	-76.03	189.4	105.1	74.5	65.2	9.33	7.987	
2,000.0	1,982.5	1,993.7	1,974.2	5.2	5.4	-77.82	207.3	115.6	80.6	70.4	10.12	7.961	
2,100.0	2,080.3	2,093.5	2,071.8	5.6	5.8	-79.36	225.1	126.2	86.7	75.7	10.91	7.942	
2,200.0	2,178.1	2,193.3	2,169.4	6.0	6.2	-80.69	243.0	136.7	92.8	81.1	11.71	7.929	
2,300.0	2,275.9	2,293.1	2,267.0	6.4	6.6	-81.86	260.9	147.2	99.0	86.5	12.50	7.919	
2,400.0	2,373.8	2,392.9	2,364.6	6.8	7.0	-82.90	278.8	157.8	105.3	92.0	13.30	7.912	
2,500.0	2,471.6	2,492.7	2,462.2	7.2	7.4	-83.81	296.6	168.3	111.5	97.4	14.10	7.908	
2,600.0	2,569.4	2,592.5	2,559.8	7.6	7.8	-84.63	314.5	178.8	117.8	102.9	14.90	7.905	
2,700.0	2,667.2	2,692.3	2,657.4	7.9	8.2	-85.36	332.4	189.4	124.1	108.4	15.70	7.904	
2,800.0	2,765.0	2,792.0	2,755.1	8.3	8.6	-86.03	350.3	199.9	130.5	114.0	16.51	7.904	
2,900.0	2,862.8	2,891.8	2,852.7	8.7	9.0	-86.63	368.1	210.4	136.8	119.5	17.31	7.904	
3,000.0	2,960.7	2,991.6	2,950.3	9.2	9.4	-87.18	386.0	220.9	143.2	125.1	18.11	7.906	
3,100.0	3,058.5	3,091.4	3,047.9	9.6	9.8	-87.68	403.9	231.5	149.5	130.6	18.91	7.907	
3,200.0	3,156.3	3,191.2	3,145.5	9.9	10.2	-88.09	421.8	242.0	155.9	136.2	19.71	7.913	
3,300.0	3,254.5	3,291.0	3,243.1	10.3	10.6	-87.97	439.7	252.5	162.4	141.9	20.44	7.943	
3,400.0	3,353.0	3,390.7	3,340.7	10.6	11.0	-87.27	457.5	263.1	168.9	147.8	21.13	7.995	
3,500.0	3,451.7	3,490.5	3,438.2	11.0	11.4	-86.05	475.4	273.6	175.6	153.8	21.75	8.073	
3,600.0	3,550.8	3,590.1	3,535.6	11.2	11.8	-84.39	493.2	284.1	182.5	160.2	22.30	8.183	
3,700.0	3,650.0	3,689.6	3,633.0	11.5	12.2	-82.34	511.1	294.6	189.8	167.0	22.77	8.333	
3,800.0	3,749.5	3,788.9	3,730.1	11.7	12.6	-79.96	528.8	305.1	197.6	174.4	23.16	8.532	
3,900.0	3,849.1	3,888.1	3,827.1	12.0	13.0	-77.31	546.6	315.5	206.1	182.7	23.45	8.791	
4,000.0	3,948.8	3,987.0	3,923.9	12.1	13.4	-74.45	564.3	326.0	215.6	191.9	23.64	9.119	
4,100.0	4,048.7	4,085.7	4,020.5	12.3	13.8	-71.43	582.0	336.4	226.1	202.4	23.73	9.527	
4,200.0	4,148.6	4,184.2	4,116.8	12.4	14.2	-68.32	599.7	346.8	237.9	214.1	23.73	10.024	
4,300.0	4,248.6	4,282.3	4,212.8	12.6	14.6	-65.18	617.2	357.1	251.0	227.4	23.64	10.618	
4,400.0	4,348.6	4,382.8	4,311.2	12.7	15.0	-13.53	634.8	367.5	265.3	244.3	20.96	12.655	
4,500.0	4,448.6	4,484.6	4,411.2	12.8	15.3	-10.80	651.1	377.1	279.1	257.1	21.96	12.710	
4,600.0	4,548.6	4,587.1	4,512.3	12.9	15.7	-8.55	666.0	385.9	292.0	269.2	22.84	12.784	
4,700.0	4,648.6	4,690.2	4,614.2	13.0	16.0	-6.69	679.4	393.7	303.9	280.3	23.63	12.862	
4,800.0	4,748.6	4,793.9	4,716.9	13.1	16.3	-5.17	691.2	400.7	314.6	290.3	24.33	12.933	
4,900.0	4,848.6	4,898.0	4,820.3	13.2	16.5	-3.93	701.5	406.8	324.0	299.1	24.95	12.989	
5,000.0	4,948.6	5,002.5	4,924.3	13.3	16.7	-2.94	710.2	411.9	332.1	306.6	25.50	13.025	
5,100.0	5,048.6	5,107.3	5,028.8	13.4	17.0	-2.17	717.3	416.1	338.7	312.7	25.98	13.036	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 1C-16H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,148.6	5,212.4	5,133.8	13.6	17.1	-1.60	722.7	419.3	343.7	317.3	26.40	13.020	
5,300.0	5,248.6	5,317.7	5,239.0	13.7	17.3	-1.22	726.5	421.5	347.3	320.5	26.77	12.976	
5,400.0	5,348.6	5,423.2	5,344.4	13.8	17.4	-1.00	728.7	422.8	349.3	322.2	27.08	12.900	
5,500.0	5,448.6	5,527.4	5,448.6	13.9	17.5	-0.95	729.2	423.1	349.8	322.4	27.34	12.793	
5,600.0	5,548.6	5,627.4	5,548.6	14.0	17.6	-0.95	729.2	423.1	349.8	322.2	27.59	12.677	
5,700.0	5,648.6	5,727.4	5,648.6	14.2	17.7	-0.95	729.2	423.1	349.8	321.9	27.85	12.561	
5,800.0	5,748.6	5,827.4	5,748.6	14.3	17.8	-0.95	729.2	423.1	349.8	321.7	28.10	12.447	
5,900.0	5,848.6	5,927.4	5,848.6	14.4	17.9	-0.95	729.2	423.1	349.8	321.4	28.36	12.334	
6,000.0	5,948.6	6,027.4	5,948.6	14.5	18.0	-0.95	729.2	423.1	349.8	321.2	28.62	12.222	
6,100.0	6,048.6	6,127.4	6,048.6	14.7	18.1	-0.95	729.2	423.1	349.8	320.9	28.88	12.111	
6,200.0	6,148.6	6,227.4	6,148.6	14.8	18.2	-0.95	729.2	423.1	349.8	320.6	29.14	12.002	
6,300.0	6,248.6	6,327.4	6,248.6	14.9	18.3	-0.95	729.2	423.1	349.8	320.4	29.41	11.894	
6,400.0	6,348.6	6,427.4	6,348.6	15.0	18.4	-0.95	729.2	423.1	349.8	320.1	29.67	11.787	
6,500.0	6,448.6	6,527.4	6,448.6	15.1	18.5	89.29	729.2	423.1	349.7	322.5	27.26	12.830	
6,545.3	6,493.7	6,572.5	6,493.7	15.1	18.6	90.00	729.2	423.1	349.7	322.5	27.19	12.863	
6,600.0	6,547.6	6,626.4	6,547.6	15.1	18.6	91.45	729.2	423.1	349.8	322.8	27.00	12.959	
6,700.0	6,643.8	6,724.3	6,645.5	15.0	18.7	95.51	729.2	422.3	351.5	325.2	26.31	13.359	
6,800.0	6,735.3	6,827.2	6,747.5	14.8	18.7	99.98	729.2	410.1	355.6	330.1	25.50	13.943	
6,900.0	6,820.4	6,934.9	6,851.4	14.6	18.6	104.27	729.2	381.8	361.8	337.0	24.77	14.603	
7,000.0	6,897.3	7,048.0	6,954.5	14.4	18.5	108.27	729.2	335.6	369.6	345.4	24.24	15.250	
7,100.0	6,964.5	7,166.8	7,053.6	14.2	18.3	111.86	729.2	270.4	378.3	354.3	24.00	15.765	
7,200.0	7,020.9	7,291.5	7,144.5	14.2	18.1	114.96	729.2	185.3	387.2	363.0	24.17	16.020	
7,300.0	7,065.2	7,421.8	7,222.3	14.5	18.1	117.48	729.2	81.0	395.3	370.4	24.89	15.879	
7,400.0	7,096.6	7,557.0	7,281.7	15.2	18.3	119.34	729.2	-40.3	401.8	375.5	26.23	15.319	
7,500.0	7,114.5	7,695.9	7,317.8	16.4	19.0	120.48	729.2	-174.2	406.0	377.7	28.26	14.365	
7,600.0	7,118.6	7,834.2	7,327.6	18.0	20.4	120.86	729.2	-311.9	407.4	376.5	30.94	13.169	
7,700.0	7,116.9	7,934.2	7,325.8	19.7	21.9	120.86	729.1	-411.9	407.4	373.4	33.97	11.994	
7,800.0	7,115.1	8,034.2	7,324.1	21.6	23.5	120.86	729.1	-511.9	407.4	370.2	37.23	10.944	
7,900.0	7,113.4	8,134.2	7,322.3	23.6	25.3	120.86	729.1	-611.8	407.4	366.7	40.67	10.018	
8,000.0	7,111.6	8,234.2	7,320.6	25.6	27.2	120.86	729.1	-711.8	407.4	363.1	44.25	9.206	
8,100.0	7,109.9	8,334.2	7,318.8	27.8	29.3	120.86	729.1	-811.8	407.4	359.4	47.95	8.497	
8,200.0	7,108.1	8,434.2	7,317.1	29.9	31.4	120.86	729.1	-911.8	407.4	355.7	51.73	7.876	
8,300.0	7,106.4	8,534.2	7,315.3	32.2	33.5	120.86	729.1	-1,011.8	407.4	351.8	55.57	7.331	
8,400.0	7,104.7	8,634.2	7,313.6	34.4	35.7	120.86	729.1	-1,111.8	407.4	347.9	59.48	6.850	
8,500.0	7,102.9	8,734.2	7,311.8	36.7	37.9	120.86	729.1	-1,211.8	407.4	344.0	63.43	6.423	
8,600.0	7,101.2	8,834.2	7,310.1	39.0	40.2	120.86	729.1	-1,311.7	407.4	340.0	67.41	6.043	
8,700.0	7,099.4	8,934.2	7,308.4	41.4	42.5	120.86	729.1	-1,411.7	407.4	336.0	71.43	5.704	
8,800.0	7,097.7	9,034.2	7,306.6	43.7	44.8	120.86	729.1	-1,511.7	407.4	331.9	75.47	5.398	
8,900.0	7,095.9	9,134.2	7,304.9	46.1	47.1	120.86	729.1	-1,611.7	407.4	327.9	79.53	5.122	
9,000.0	7,094.2	9,234.2	7,303.1	48.4	49.4	120.86	729.1	-1,711.7	407.4	323.8	83.62	4.872	
9,100.0	7,092.4	9,334.2	7,301.4	50.8	51.8	120.86	729.1	-1,811.7	407.4	319.7	87.71	4.645	
9,200.0	7,090.7	9,434.2	7,299.6	53.2	54.1	120.86	729.1	-1,911.7	407.4	315.6	91.83	4.437	
9,300.0	7,089.0	9,534.2	7,297.9	55.6	56.5	120.86	729.1	-2,011.6	407.4	311.4	95.95	4.246	
9,400.0	7,087.2	9,634.2	7,296.1	58.0	58.9	120.86	729.1	-2,111.6	407.4	307.3	100.09	4.070	
9,500.0	7,085.5	9,734.2	7,294.4	60.4	61.2	120.86	729.1	-2,211.6	407.4	303.2	104.23	3.909	
9,600.0	7,083.7	9,834.2	7,292.7	62.8	63.6	120.86	729.1	-2,311.6	407.4	299.0	108.38	3.759	
9,700.0	7,082.0	9,934.2	7,290.9	65.2	66.0	120.86	729.1	-2,411.6	407.4	294.8	112.55	3.620	
9,800.0	7,080.2	10,034.2	7,289.2	67.6	68.4	120.86	729.0	-2,511.6	407.4	290.7	116.71	3.491	
9,900.0	7,078.5	10,134.2	7,287.4	70.1	70.8	120.86	729.0	-2,611.5	407.4	286.5	120.89	3.370	
10,000.0	7,076.7	10,234.2	7,285.7	72.5	73.3	120.86	729.0	-2,711.5	407.4	282.3	125.06	3.257	
10,100.0	7,075.0	10,334.2	7,283.9	74.9	75.7	120.86	729.0	-2,811.5	407.4	278.1	129.25	3.152	
10,200.0	7,073.2	10,434.2	7,282.2	77.4	78.1	120.86	729.0	-2,911.5	407.4	274.0	133.43	3.053	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 1C-16H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,300.0	7,071.5	10,534.2	7,280.4	79.8	80.5	120.86	729.0	-3,011.5	407.4	269.8	137.63	2.960	
10,400.0	7,069.8	10,634.2	7,278.7	82.2	82.9	120.86	729.0	-3,111.5	407.4	265.6	141.82	2.873	
10,500.0	7,068.0	10,734.2	7,276.9	84.7	85.4	120.86	729.0	-3,211.5	407.4	261.4	146.02	2.790	
10,600.0	7,066.3	10,834.2	7,275.2	87.1	87.8	120.86	729.0	-3,311.4	407.4	257.2	150.22	2.712	
10,700.0	7,064.5	10,934.2	7,273.5	89.6	90.2	120.86	729.0	-3,411.4	407.4	253.0	154.42	2.638	
10,800.0	7,062.8	11,034.2	7,271.7	92.0	92.7	120.86	729.0	-3,511.4	407.4	248.8	158.63	2.568	
10,900.0	7,061.0	11,134.2	7,270.0	94.5	95.1	120.86	729.0	-3,611.4	407.4	244.6	162.84	2.502	
11,000.0	7,059.3	11,234.2	7,268.2	96.9	97.5	120.86	729.0	-3,711.4	407.4	240.3	167.05	2.439	
11,100.0	7,057.5	11,334.2	7,266.5	99.4	100.0	120.86	729.0	-3,811.4	407.4	236.1	171.26	2.379	
11,200.0	7,055.8	11,434.2	7,264.7	101.8	102.4	120.86	729.0	-3,911.3	407.4	231.9	175.48	2.322	
11,300.0	7,054.0	11,534.2	7,263.0	104.3	104.9	120.86	729.0	-4,011.3	407.4	227.7	179.70	2.267	
11,400.0	7,052.3	11,634.2	7,261.2	106.7	107.3	120.86	729.0	-4,111.3	407.4	223.5	183.91	2.215	
11,500.0	7,050.6	11,734.2	7,259.5	109.2	109.8	120.86	729.0	-4,211.3	407.4	219.3	188.13	2.165	
11,600.0	7,048.8	11,834.2	7,257.7	111.6	112.2	120.86	729.0	-4,311.3	407.4	215.0	192.36	2.118	
11,634.1	7,048.2	11,868.3	7,257.2	112.5	113.0	120.86	729.0	-4,345.4	407.4	213.6	193.80	2.102	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance 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	
400.0	400.0	400.0	400.0	0.7	0.7	180.00	-10.9	0.0	10.9	9.6	1.35	8.090	CC, ES
500.0	500.0	500.0	500.0	0.9	0.8	134.75	-10.9	0.0	11.5	9.8	1.70	6.779	
600.0	600.0	600.0	600.0	1.0	1.0	142.65	-10.9	0.0	13.5	11.4	2.05	6.584	
700.0	699.9	699.9	699.9	1.2	1.2	151.50	-10.9	0.0	17.2	14.8	2.40	7.155	
800.0	799.7	799.7	799.7	1.4	1.4	158.84	-10.9	0.0	22.7	20.0	2.75	8.269	
900.0	899.4	899.4	899.4	1.6	1.5	164.20	-10.9	0.0	30.2	27.1	3.09	9.751	
1,000.0	998.9	998.9	998.9	1.8	1.7	167.97	-10.9	0.0	39.5	36.0	3.44	11.480	
1,100.0	1,098.3	1,098.9	1,098.9	2.1	1.9	169.94	-10.8	0.8	50.0	46.2	3.79	13.215	
1,200.0	1,197.4	1,198.9	1,198.9	2.3	2.1	170.31	-10.6	3.4	61.1	57.0	4.13	14.782	
1,300.0	1,296.3	1,299.1	1,298.9	2.6	2.3	169.80	-10.2	7.8	72.6	68.2	4.48	16.203	
1,400.0	1,394.9	1,399.3	1,398.9	2.9	2.4	168.78	-9.6	13.8	84.7	79.9	4.84	17.500	
1,500.0	1,493.3	1,499.5	1,498.9	3.3	2.6	167.45	-8.8	21.7	97.4	92.1	5.21	18.686	
1,600.0	1,591.2	1,599.8	1,598.7	3.7	2.8	165.94	-7.9	31.2	110.6	105.0	5.59	19.765	
1,700.0	1,689.1	1,698.8	1,697.2	4.0	3.1	164.58	-6.9	41.5	124.1	118.2	6.00	20.696	
1,800.0	1,786.9	1,797.9	1,795.7	4.4	3.3	163.49	-5.9	51.8	137.8	131.4	6.41	21.490	
1,900.0	1,884.7	1,896.9	1,894.2	4.8	3.5	162.59	-4.9	62.1	151.4	144.6	6.83	22.169	
2,000.0	1,982.5	1,995.9	1,992.7	5.2	3.7	161.85	-4.0	72.4	165.1	157.9	7.26	22.754	
2,100.0	2,080.3	2,095.0	2,091.2	5.6	4.0	161.21	-3.0	82.7	178.8	171.2	7.69	23.262	
2,200.0	2,178.1	2,194.0	2,189.7	6.0	4.2	160.67	-2.0	93.0	192.6	184.5	8.12	23.704	
2,300.0	2,275.9	2,293.1	2,288.2	6.4	4.4	160.20	-1.0	103.4	206.3	197.8	8.56	24.093	
2,400.0	2,373.8	2,392.1	2,386.7	6.8	4.7	159.79	0.0	113.7	220.1	211.1	9.01	24.436	
2,500.0	2,471.6	2,491.1	2,485.2	7.2	4.9	159.43	1.0	124.0	233.9	224.4	9.45	24.740	
2,600.0	2,569.4	2,590.2	2,583.7	7.6	5.1	159.11	2.0	134.3	247.6	237.7	9.90	25.012	
2,700.0	2,667.2	2,689.2	2,682.1	7.9	5.4	158.82	3.0	144.6	261.4	251.1	10.35	25.255	
2,800.0	2,765.0	2,788.2	2,780.6	8.3	5.6	158.56	4.0	154.9	275.2	264.4	10.80	25.474	
2,900.0	2,862.8	2,887.3	2,879.1	8.7	5.8	158.32	5.0	165.2	289.0	277.7	11.26	25.672	
3,000.0	2,960.7	2,986.3	2,977.6	9.2	6.1	158.11	6.0	175.5	302.8	291.1	11.71	25.852	
3,100.0	3,058.5	3,085.4	3,076.1	9.6	6.3	157.92	7.0	185.8	316.6	304.4	12.17	26.015	
3,200.0	3,156.3	3,184.4	3,174.6	9.9	6.6	157.75	8.0	196.1	330.2	317.6	12.63	26.139	
3,300.0	3,254.5	3,283.7	3,273.3	10.3	6.8	157.52	8.9	206.4	342.4	329.3	13.10	26.134	
3,400.0	3,353.0	3,383.1	3,372.2	10.6	7.1	157.19	9.9	216.8	353.1	339.5	13.58	26.005	
3,500.0	3,451.7	3,482.6	3,471.2	11.0	7.3	156.77	10.9	227.1	362.1	348.0	14.05	25.764	
3,600.0	3,550.8	3,582.3	3,570.3	11.2	7.6	156.26	11.9	237.5	369.6	355.0	14.54	25.424	
3,700.0	3,650.0	3,682.0	3,669.5	11.5	7.8	155.66	12.9	247.9	375.5	360.4	15.02	24.995	
3,800.0	3,749.5	3,781.8	3,768.8	11.7	8.1	154.96	13.9	258.3	379.8	364.3	15.51	24.486	
3,900.0	3,849.1	3,881.6	3,868.0	12.0	8.3	154.15	14.9	268.6	382.7	366.7	16.01	23.906	
4,000.0	3,948.8	3,981.4	3,967.3	12.1	8.5	153.24	15.9	279.0	384.1	367.6	16.51	23.263	
4,100.0	4,048.7	4,081.2	4,066.5	12.3	8.8	152.20	16.9	289.4	384.0	367.0	17.02	22.566	
4,200.0	4,148.6	4,180.9	4,165.6	12.4	9.0	151.04	17.9	299.8	382.6	365.0	17.53	21.820	
4,300.0	4,248.6	4,280.4	4,264.7	12.6	9.3	149.73	18.9	310.1	379.7	361.7	18.05	21.035	
4,400.0	4,348.6	4,379.9	4,363.6	12.7	9.5	-163.22	19.9	320.5	375.8	356.4	19.42	19.356	
4,500.0	4,448.6	4,479.4	4,462.5	12.8	9.8	-164.70	20.9	330.8	372.0	352.4	19.58	19.000	
4,600.0	4,548.6	4,578.8	4,561.4	12.9	10.0	-166.21	21.9	341.2	368.4	348.6	19.73	18.666	
4,700.0	4,648.6	4,678.3	4,660.3	13.0	10.3	-167.76	22.9	351.5	365.0	345.1	19.89	18.354	
4,800.0	4,748.6	4,777.7	4,759.2	13.1	10.5	-169.32	23.9	361.9	362.0	341.9	20.04	18.062	
4,900.0	4,848.6	4,877.2	4,858.1	13.2	10.8	-170.92	24.9	372.2	359.2	339.0	20.19	17.788	
5,000.0	4,948.6	4,976.6	4,957.0	13.3	11.0	-172.53	25.9	382.6	356.7	336.3	20.34	17.533	
5,100.0	5,048.6	5,075.8	5,055.6	13.4	11.3	-174.16	26.9	392.8	354.5	334.0	20.50	17.295	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,148.6	5,174.2	5,153.7	13.6	11.5	-175.59	27.8	401.8	352.8	332.1	20.67	17.068	
5,300.0	5,248.6	5,273.0	5,252.1	13.7	11.7	-176.77	28.5	409.1	351.6	330.7	20.87	16.846	
5,400.0	5,348.6	5,371.9	5,350.9	13.8	11.9	-177.68	29.0	414.7	350.8	329.7	21.10	16.624	
5,500.0	5,448.6	5,471.1	5,450.0	13.9	12.1	-178.32	29.4	418.7	350.2	328.9	21.36	16.400	
5,600.0	5,548.6	5,570.3	5,549.2	14.0	12.2	-178.69	29.6	420.9	350.0	328.3	21.64	16.172	
5,700.0	5,648.6	5,669.7	5,648.6	14.2	12.4	-178.78	29.7	421.4	349.9	327.9	21.95	15.942	
5,800.0	5,748.6	5,769.7	5,748.6	14.3	12.5	-178.78	29.7	421.4	349.9	327.6	22.27	15.714	
5,900.0	5,848.6	5,869.7	5,848.6	14.4	12.6	-178.78	29.7	421.4	349.9	327.3	22.59	15.492	
6,000.0	5,948.6	5,969.7	5,948.6	14.5	12.8	-178.78	29.7	421.4	349.9	327.0	22.91	15.276	
6,100.0	6,048.6	6,069.7	6,048.6	14.7	12.9	-178.78	29.7	421.4	349.9	326.7	23.23	15.065	
6,200.0	6,148.6	6,169.7	6,148.6	14.8	13.1	-178.78	29.7	421.4	349.9	326.3	23.55	14.859	
6,300.0	6,248.6	6,269.7	6,248.6	14.9	13.2	-178.78	29.7	421.4	349.9	326.0	23.87	14.659	
6,400.0	6,348.6	6,369.7	6,348.6	15.0	13.4	-178.78	29.7	421.4	349.9	325.7	24.19	14.463	
6,500.0	6,448.6	6,469.7	6,448.6	15.1	13.5	-89.02	29.7	421.4	349.9	322.9	26.99	12.964	
6,557.6	6,505.9	6,527.0	6,505.9	15.1	13.6	-90.00	29.7	421.4	349.8	322.7	27.13	12.892	
6,600.0	6,547.6	6,568.7	6,547.6	15.1	13.6	-91.18	29.7	421.4	349.9	322.6	27.27	12.831	
6,700.0	6,643.8	6,666.5	6,645.4	15.0	13.8	-95.25	29.7	420.6	351.4	323.9	27.49	12.786	
6,800.0	6,735.3	6,769.1	6,747.2	14.8	13.8	-99.73	29.7	408.5	355.4	328.0	27.39	12.973	
6,900.0	6,820.4	6,876.5	6,850.8	14.6	13.7	-104.03	29.7	380.3	361.5	334.5	26.97	13.404	
7,000.0	6,897.3	6,989.3	6,953.7	14.4	13.4	-108.05	29.7	334.5	369.2	342.9	26.30	14.039	
7,100.0	6,964.5	7,107.8	7,052.6	14.2	13.2	-111.67	29.6	269.5	377.9	352.3	25.57	14.778	
7,200.0	7,020.9	7,232.2	7,143.5	14.2	13.1	-114.80	29.6	184.8	386.8	361.7	25.09	15.418	
7,300.0	7,065.2	7,362.1	7,221.3	14.5	13.3	-117.35	29.6	80.9	394.9	369.7	25.20	15.671	
7,400.0	7,096.6	7,497.1	7,280.9	15.2	14.1	-119.25	29.6	-39.9	401.5	375.3	26.26	15.292	
7,500.0	7,114.5	7,635.8	7,317.4	16.4	15.6	-120.43	29.6	-173.5	405.9	377.4	28.43	14.275	
7,600.0	7,118.6	7,774.8	7,327.6	18.0	17.7	-120.85	29.6	-311.9	407.5	375.9	31.58	12.904	
7,700.0	7,116.9	7,874.8	7,325.8	19.7	19.5	-120.85	29.6	-411.9	407.5	372.9	34.57	11.786	
7,800.0	7,115.1	7,974.8	7,324.1	21.6	21.4	-120.85	29.6	-511.8	407.5	369.7	37.80	10.780	
7,900.0	7,113.4	8,074.8	7,322.3	23.6	23.4	-120.85	29.6	-611.8	407.5	366.2	41.21	9.887	
8,000.0	7,111.6	8,174.8	7,320.6	25.6	25.5	-120.85	29.6	-711.8	407.5	362.7	44.77	9.102	
8,100.0	7,109.9	8,274.8	7,318.8	27.8	27.7	-120.85	29.6	-811.8	407.5	359.0	48.44	8.412	
8,200.0	7,108.1	8,374.8	7,317.1	29.9	29.9	-120.85	29.6	-911.8	407.5	355.3	52.19	7.807	
8,300.0	7,106.4	8,474.8	7,315.3	32.2	32.1	-120.86	29.6	-1,011.8	407.5	351.4	56.02	7.273	
8,400.0	7,104.7	8,574.8	7,313.6	34.4	34.4	-120.86	29.6	-1,111.7	407.4	347.5	59.91	6.801	
8,500.0	7,102.9	8,674.8	7,311.8	36.7	36.7	-120.86	29.6	-1,211.7	407.4	343.6	63.84	6.382	
8,600.0	7,101.2	8,774.8	7,310.1	39.0	39.0	-120.86	29.6	-1,311.7	407.4	339.6	67.81	6.009	
8,700.0	7,099.4	8,874.8	7,308.4	41.4	41.3	-120.86	29.6	-1,411.7	407.4	335.6	71.81	5.674	
8,800.0	7,097.7	8,974.8	7,306.6	43.7	43.7	-120.86	29.6	-1,511.7	407.4	331.6	75.85	5.372	
8,900.0	7,095.9	9,074.8	7,304.9	46.1	46.1	-120.86	29.6	-1,611.7	407.4	327.5	79.90	5.099	
9,000.0	7,094.2	9,174.8	7,303.1	48.4	48.4	-120.86	29.6	-1,711.7	407.4	323.5	83.97	4.852	
9,100.0	7,092.4	9,274.8	7,301.4	50.8	50.8	-120.86	29.6	-1,811.6	407.4	319.4	88.06	4.627	
9,200.0	7,090.7	9,374.8	7,299.6	53.2	53.2	-120.86	29.6	-1,911.6	407.4	315.3	92.17	4.421	
9,300.0	7,089.0	9,474.8	7,297.9	55.6	55.6	-120.86	29.6	-2,011.6	407.4	311.1	96.28	4.232	
9,400.0	7,087.2	9,574.8	7,296.1	58.0	58.0	-120.86	29.6	-2,111.6	407.4	307.0	100.41	4.058	
9,500.0	7,085.5	9,674.8	7,294.4	60.4	60.4	-120.86	29.6	-2,211.6	407.4	302.9	104.55	3.897	
9,600.0	7,083.7	9,774.8	7,292.7	62.8	62.9	-120.86	29.6	-2,311.6	407.4	298.7	108.70	3.748	
9,700.0	7,082.0	9,874.8	7,290.9	65.2	65.3	-120.86	29.6	-2,411.5	407.4	294.6	112.85	3.610	
9,800.0	7,080.2	9,974.8	7,289.2	67.6	67.7	-120.86	29.6	-2,511.5	407.4	290.4	117.02	3.482	
9,900.0	7,078.5	10,074.8	7,287.4	70.1	70.1	-120.86	29.6	-2,611.5	407.4	286.2	121.18	3.362	
10,000.0	7,076.7	10,174.8	7,285.7	72.5	72.6	-120.86	29.6	-2,711.5	407.4	282.1	125.36	3.250	
10,100.0	7,075.0	10,274.8	7,283.9	74.9	75.0	-120.86	29.6	-2,811.5	407.4	277.9	129.54	3.145	
10,200.0	7,073.2	10,374.8	7,282.2	77.4	77.4	-120.86	29.6	-2,911.5	407.4	273.7	133.72	3.047	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,300.0	7,071.5	10,474.8	7,280.4	79.8	79.9	-120.86	29.6	-3,011.5	407.4	269.5	137.91	2.954	
10,400.0	7,069.8	10,574.8	7,278.7	82.2	82.3	-120.86	29.6	-3,111.4	407.4	265.3	142.10	2.867	
10,500.0	7,068.0	10,674.8	7,276.9	84.7	84.8	-120.86	29.6	-3,211.4	407.4	261.1	146.29	2.785	
10,600.0	7,066.3	10,774.8	7,275.2	87.1	87.2	-120.86	29.6	-3,311.4	407.4	256.9	150.49	2.707	
10,700.0	7,064.5	10,874.8	7,273.5	89.6	89.7	-120.86	29.6	-3,411.4	407.4	252.7	154.69	2.634	
10,800.0	7,062.8	10,974.8	7,271.7	92.0	92.1	-120.86	29.6	-3,511.4	407.4	248.5	158.90	2.564	
10,900.0	7,061.0	11,074.8	7,270.0	94.5	94.6	-120.86	29.5	-3,611.4	407.4	244.3	163.10	2.498	
11,000.0	7,059.3	11,174.8	7,268.2	96.9	97.0	-120.86	29.5	-3,711.4	407.4	240.1	167.31	2.435	
11,100.0	7,057.5	11,274.8	7,266.5	99.4	99.5	-120.86	29.5	-3,811.3	407.4	235.9	171.52	2.375	
11,200.0	7,055.8	11,374.8	7,264.7	101.8	101.9	-120.86	29.5	-3,911.3	407.4	231.7	175.73	2.318	
11,300.0	7,054.0	11,474.8	7,263.0	104.3	104.4	-120.86	29.5	-4,011.3	407.4	227.4	179.95	2.264	
11,400.0	7,052.3	11,574.8	7,261.2	106.7	106.8	-120.86	29.5	-4,111.3	407.4	223.2	184.17	2.212	
11,500.0	7,050.6	11,674.8	7,259.5	109.2	109.3	-120.86	29.5	-4,211.3	407.4	219.0	188.38	2.163	
11,600.0	7,048.8	11,774.8	7,257.7	111.6	111.7	-120.86	29.5	-4,311.3	407.4	214.8	192.60	2.115	
11,621.6	7,048.4	11,796.4	7,257.4	112.1	112.3	-120.86	29.5	-4,332.9	407.4	213.9	193.51	2.105	
11,634.1	7,048.2	11,796.9	7,257.4	112.5	112.3	-120.86	29.5	-4,333.4	407.6	213.8	193.79	2.103	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 1F-16H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-18.2	0.0	18.2				
100.0	100.0	100.0	100.0	0.2	0.2	180.00	-18.2	0.0	18.2	17.9	0.30	59.977	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-18.2	0.0	18.2	17.6	0.65	27.904	
300.0	300.0	300.0	300.0	0.5	0.5	180.00	-18.2	0.0	18.2	17.2	1.00	18.181	
400.0	400.0	400.0	400.0	0.7	0.7	180.00	-18.2	0.0	18.2	16.9	1.35	13.483	CC, ES
500.0	500.0	499.8	499.8	0.9	0.9	131.31	-18.7	0.7	19.3	17.6	1.70	11.347	
600.0	600.0	599.5	599.5	1.0	1.0	130.86	-20.2	2.8	22.5	20.5	2.05	10.973	SF
700.0	699.9	699.1	699.0	1.2	1.2	130.33	-22.7	6.4	27.9	25.5	2.41	11.569	
800.0	799.7	798.5	798.2	1.4	1.4	129.85	-26.2	11.3	35.5	32.7	2.78	12.734	
900.0	899.4	897.6	897.0	1.6	1.6	129.46	-30.6	17.7	45.1	42.0	3.17	14.235	
1,000.0	998.9	996.4	995.3	1.8	1.8	129.14	-36.0	25.4	56.9	53.4	3.58	15.924	
1,100.0	1,098.3	1,094.8	1,093.1	2.1	2.1	128.88	-42.3	34.5	70.9	66.9	4.00	17.700	
1,200.0	1,197.4	1,192.7	1,190.1	2.3	2.3	128.66	-49.6	44.8	86.9	82.5	4.46	19.496	
1,300.0	1,296.3	1,290.0	1,286.4	2.6	2.6	128.47	-57.8	56.5	105.1	100.1	4.94	21.263	
1,400.0	1,394.9	1,386.8	1,381.9	2.9	2.9	128.30	-66.8	69.4	125.3	119.8	5.45	22.970	
1,500.0	1,493.3	1,484.2	1,477.8	3.3	3.2	128.33	-76.5	83.3	147.2	141.2	5.99	24.564	
1,600.0	1,591.2	1,581.5	1,573.7	3.7	3.5	128.77	-86.2	97.1	170.1	163.6	6.55	25.977	
1,700.0	1,689.1	1,678.7	1,669.3	4.0	3.9	129.45	-95.9	110.9	193.6	186.5	7.12	27.194	
1,800.0	1,786.9	1,775.8	1,765.0	4.4	4.2	129.98	-105.6	124.8	217.2	209.5	7.70	28.209	
1,900.0	1,884.7	1,873.0	1,860.7	4.8	4.5	130.41	-115.3	138.6	240.7	232.5	8.28	29.066	
2,000.0	1,982.5	1,970.2	1,956.4	5.2	4.8	130.76	-124.9	152.4	264.3	255.4	8.87	29.797	
2,100.0	2,080.3	2,067.3	2,052.1	5.6	5.2	131.06	-134.6	166.2	287.9	278.4	9.46	30.428	
2,200.0	2,178.1	2,164.5	2,147.8	6.0	5.5	131.31	-144.3	180.1	311.5	301.4	10.06	30.976	
2,300.0	2,275.9	2,261.7	2,243.5	6.4	5.8	131.52	-154.0	193.9	335.1	324.4	10.65	31.457	
2,400.0	2,373.8	2,358.9	2,339.2	6.8	6.2	131.71	-163.6	207.7	358.6	347.4	11.25	31.882	
2,500.0	2,471.6	2,456.0	2,434.9	7.2	6.5	131.87	-173.3	221.5	382.2	370.4	11.85	32.260	
2,600.0	2,569.4	2,553.2	2,530.6	7.6	6.8	132.02	-183.0	235.3	405.8	393.4	12.45	32.598	
2,700.0	2,667.2	2,650.4	2,626.3	7.9	7.2	132.15	-192.7	249.2	429.4	416.4	13.05	32.902	
2,800.0	2,765.0	2,747.5	2,722.0	8.3	7.5	132.26	-202.4	263.0	453.0	439.4	13.65	33.177	
2,900.0	2,862.8	2,844.7	2,817.7	8.7	7.9	132.36	-212.0	276.8	476.6	462.4	14.26	33.427	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 1G-16H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance 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	399.6	399.6	0.7	0.7	179.05	-29.9	0.5	29.9	28.5	1.35	22.115	
500.0	500.0	499.1	499.0	0.9	0.9	129.13	-32.0	2.0	32.6	30.9	1.70	19.174	
600.0	600.0	598.4	598.3	1.0	1.0	128.62	-35.5	4.5	37.9	35.8	2.05	18.463	SF
700.0	699.9	697.5	697.2	1.2	1.2	128.78	-40.4	7.9	45.8	43.3	2.41	18.973	
800.0	799.7	796.2	795.6	1.4	1.4	129.30	-46.7	12.3	56.2	53.4	2.78	20.202	
900.0	899.4	894.5	893.4	1.6	1.7	129.94	-54.4	17.7	69.1	65.9	3.16	21.867	
1,000.0	998.9	992.2	990.5	1.8	1.9	130.59	-63.4	24.0	84.6	81.0	3.55	23.790	
1,100.0	1,098.3	1,089.3	1,086.8	2.1	2.2	131.17	-73.6	31.1	102.6	98.6	3.97	25.855	
1,200.0	1,197.4	1,185.6	1,182.1	2.3	2.4	131.68	-85.1	39.2	123.0	118.6	4.40	27.981	
1,300.0	1,296.3	1,281.1	1,276.3	2.6	2.7	132.11	-97.8	48.1	146.0	141.1	4.85	30.112	
1,400.0	1,394.9	1,375.7	1,369.4	2.9	3.1	132.47	-111.6	57.7	171.4	166.1	5.32	32.210	
1,500.0	1,493.3	1,469.3	1,461.2	3.3	3.4	132.75	-126.5	68.2	199.2	193.4	5.82	34.249	
1,600.0	1,591.2	1,563.9	1,553.7	3.7	3.8	133.04	-142.6	79.4	229.1	222.8	6.33	36.170	
1,700.0	1,689.1	1,659.1	1,646.8	4.0	4.1	133.58	-158.8	90.8	259.7	252.8	6.87	37.797	
1,800.0	1,786.9	1,754.2	1,739.9	4.4	4.5	134.01	-175.0	102.1	290.3	282.8	7.41	39.155	
1,900.0	1,884.7	1,849.4	1,833.0	4.8	4.9	134.35	-191.2	113.5	320.8	312.9	7.96	40.305	
2,000.0	1,982.5	1,944.6	1,926.2	5.2	5.2	134.64	-207.4	124.8	351.5	342.9	8.51	41.287	
2,100.0	2,080.3	2,039.8	2,019.3	5.6	5.6	134.88	-223.6	136.2	382.1	373.0	9.07	42.135	
2,200.0	2,178.1	2,135.0	2,112.4	6.0	6.0	135.08	-239.9	147.5	412.7	403.1	9.63	42.873	
2,300.0	2,275.9	2,230.2	2,205.5	6.4	6.4	135.26	-256.1	158.9	443.3	433.1	10.19	43.521	
2,400.0	2,373.8	2,325.4	2,298.6	6.8	6.7	135.41	-272.3	170.2	473.9	463.2	10.75	44.094	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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 1H-16H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

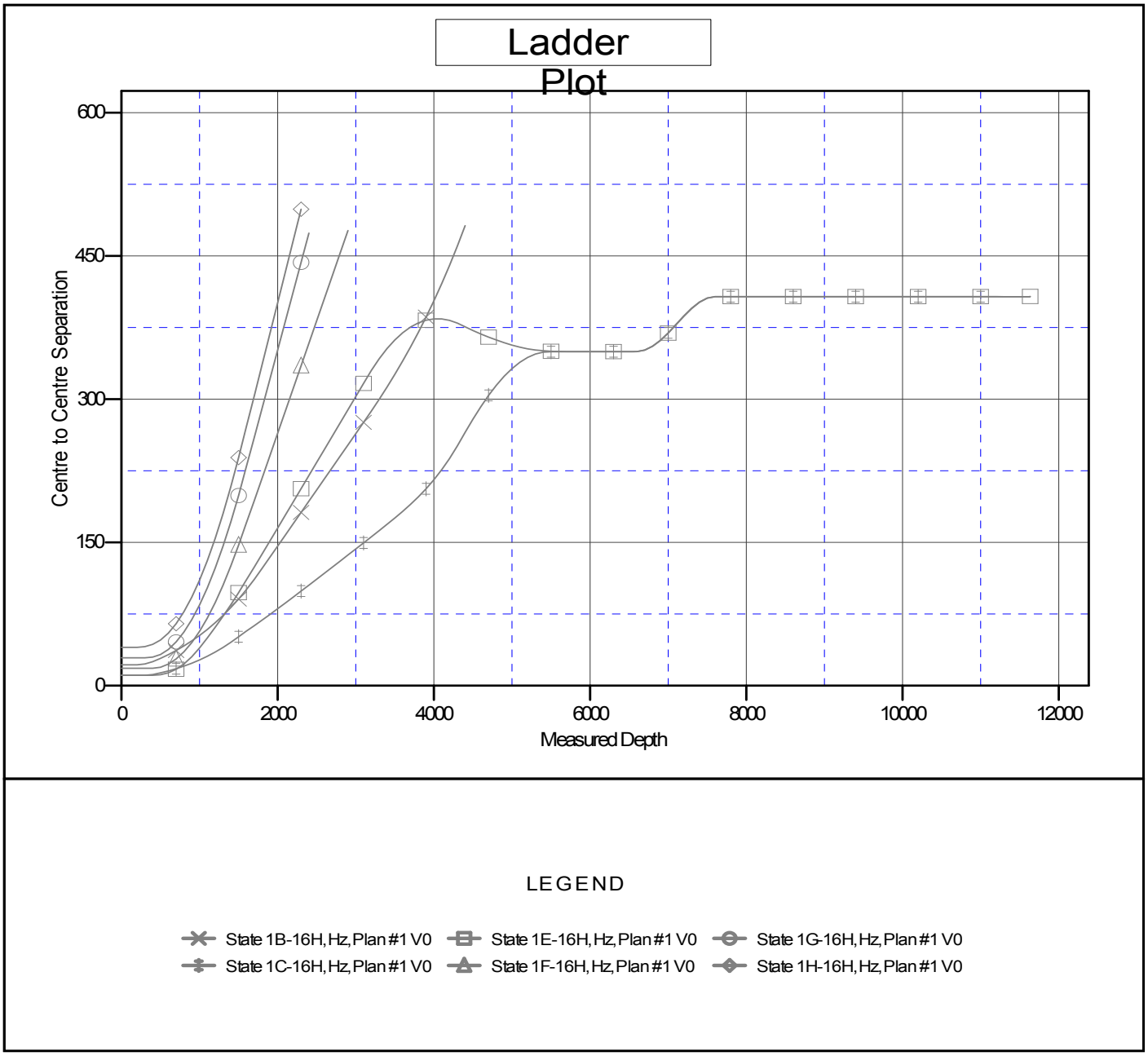
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance 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	131.936	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-40.1	0.0	40.1	39.4	0.65	61.382	CC, ES
300.0	300.0	299.4	299.4	0.5	0.5	179.48	-40.8	0.4	40.9	39.9	1.00	40.817	
400.0	400.0	398.7	398.6	0.7	0.7	178.03	-43.2	1.5	43.2	41.9	1.35	32.025	
500.0	500.0	497.8	497.7	0.9	0.9	128.24	-47.1	3.3	47.8	46.1	1.70	28.109	
600.0	600.0	596.7	596.4	1.0	1.1	127.94	-52.5	5.9	55.0	52.9	2.05	26.803	SF
700.0	699.9	695.3	694.7	1.2	1.3	128.32	-59.4	9.2	64.9	62.5	2.41	26.928	
800.0	799.7	793.4	792.3	1.4	1.5	129.08	-67.8	13.2	77.4	74.6	2.77	27.902	
900.0	899.4	890.9	889.2	1.6	1.7	129.99	-77.6	17.9	92.6	89.5	3.15	29.399	
1,000.0	998.9	987.7	985.2	1.8	2.0	130.90	-88.9	23.3	110.5	107.0	3.54	31.219	
1,100.0	1,098.3	1,083.7	1,080.2	2.1	2.3	131.75	-101.5	29.3	131.0	127.1	3.94	33.231	
1,200.0	1,197.4	1,178.9	1,174.1	2.3	2.6	132.52	-115.4	35.9	154.2	149.8	4.36	35.346	
1,300.0	1,296.3	1,273.0	1,266.8	2.6	2.9	133.18	-130.5	43.1	179.9	175.1	4.80	37.502	
1,400.0	1,394.9	1,366.1	1,358.1	2.9	3.3	133.75	-146.8	50.9	208.3	203.0	5.25	39.654	
1,500.0	1,493.3	1,460.2	1,450.1	3.3	3.6	134.29	-164.4	59.3	238.9	233.1	5.73	41.716	
1,600.0	1,591.2	1,554.9	1,542.8	3.7	4.0	134.92	-182.1	67.8	270.8	264.5	6.22	43.543	
1,700.0	1,689.1	1,649.4	1,635.2	4.0	4.3	135.72	-199.9	76.2	303.3	296.6	6.73	45.091	
1,800.0	1,786.9	1,743.9	1,727.6	4.4	4.7	136.37	-217.6	84.7	335.9	328.6	7.24	46.398	
1,900.0	1,884.7	1,838.4	1,820.0	4.8	5.1	136.90	-235.3	93.1	368.5	360.7	7.75	47.513	
2,000.0	1,982.5	1,932.8	1,912.4	5.2	5.5	137.35	-253.1	101.6	401.1	392.8	8.27	48.474	
2,100.0	2,080.3	2,027.3	2,004.9	5.6	5.8	137.73	-270.8	110.1	433.7	424.9	8.80	49.311	
2,200.0	2,178.1	2,121.8	2,097.3	6.0	6.2	138.06	-288.5	118.5	466.4	457.1	9.32	50.044	
2,300.0	2,275.9	2,216.3	2,189.7	6.4	6.6	138.34	-306.3	127.0	499.0	489.2	9.84	50.692	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 1D-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 1D-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)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: State 1D-16H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.32°



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