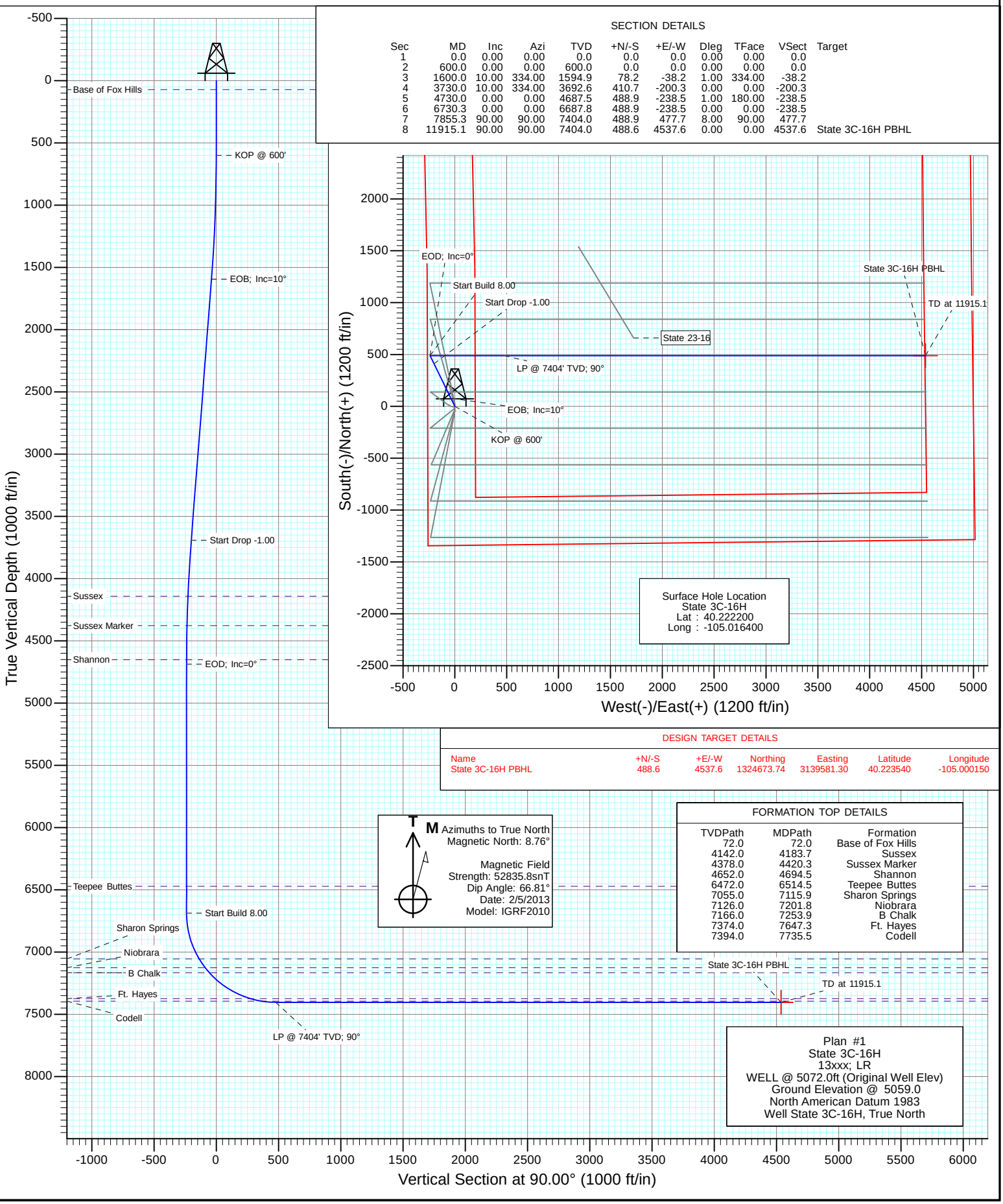
Project: DJ Wattenberg
Site: S16-T3N-R68W (State)
Well: State 3C-16H
Wellbore: Hz
Design: Plan #1

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	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	1600.0	10.00	334.00	1594.9	78.2	-38.2	1.00	334.00	-38.2	
4	3730.0	10.00	334.00	3692.6	410.7	-200.3	0.00	0.00	-200.3	
5	4730.0	0.00	0.00	4687.5	488.9	-238.5	1.00	180.00	-238.5	
6	6730.3	0.00	0.00	6687.8	488.9	-238.5	0.00	0.00	-238.5	
7	7855.3	90.00	90.00	7404.0	488.9	477.7	8.00	90.00	477.7	
8	11915.1	90.00	90.00	7404.0	488.6	4537.6	0.00	0.00	4537.6	State 3C-16H PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
State 3C-16H PBHL	488.6	4537.6	1324673.74	3139581.30	40.223540	-105.000150

T M Azimuths to True North
Magnetic North: 8.76°

Magnetic Field
Strength: 52835.8snT
Dip Angle: 66.81°
Date: 2/5/2013
Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
72.0	72.0	Base of Fox Hills
4142.0	4183.7	Sussex
4378.0	4420.3	Sussex Marker
4652.0	4694.5	Shannon
6472.0	6514.5	Teepee Buttes
7055.0	7115.9	Sharon Springs
7126.0	7201.8	Niobrara
7166.0	7253.9	B Chalk
7374.0	7647.3	Ft. Hayes
7394.0	7735.5	Codell

Plan #1
State 3C-16H
13xxx; LR
WELL @ 5072.0ft (Original Well Elev)
Ground Elevation @ 5059.0
North American Datum 1983
Well State 3C-16H, True North

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State 3C-16H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 3C-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 3C-16H

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,324,160.43 ft	**Latitude:**	40.222200
	+E/-W	0.0 ft	**Easting:**	3,135,046.45 ft	**Longitude:**	-105.016400
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,059.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/5/2013	8.76	66.81	52,836

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	90.00

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,600.0	10.00	334.00	1,594.9	78.2	-38.2	1.00	1.00	0.00	334.00	
3,730.0	10.00	334.00	3,692.6	410.7	-200.3	0.00	0.00	0.00	0.00	
4,730.0	0.00	0.00	4,687.5	488.9	-238.5	1.00	-1.00	0.00	180.00	
6,730.3	0.00	0.00	6,687.8	488.9	-238.5	0.00	0.00	0.00	0.00	
7,855.3	90.00	90.00	7,404.0	488.9	477.7	8.00	8.00	0.00	90.00	
11,915.1	90.00	90.00	7,404.0	488.6	4,537.6	0.00	0.00	0.00	0.00	State 3C-16H PBHL

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State 3C-16H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 3C-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	
72.0	0.00	0.00	72.0	0.0	0.0	0.0	0.00	0.00	Base of Fox Hills
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
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	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	KOP @ 600'
700.0	1.00	334.00	700.0	0.8	-0.4	-0.4	1.00	1.00	
800.0	2.00	334.00	800.0	3.1	-1.5	-1.5	1.00	1.00	
900.0	3.00	334.00	899.9	7.1	-3.4	-3.4	1.00	1.00	
1,000.0	4.00	334.00	999.7	12.5	-6.1	-6.1	1.00	1.00	
1,100.0	5.00	334.00	1,099.4	19.6	-9.6	-9.6	1.00	1.00	
1,200.0	6.00	334.00	1,198.9	28.2	-13.8	-13.8	1.00	1.00	
1,300.0	7.00	334.00	1,298.3	38.4	-18.7	-18.7	1.00	1.00	
1,400.0	8.00	334.00	1,397.4	50.1	-24.4	-24.4	1.00	1.00	
1,500.0	9.00	334.00	1,496.3	63.4	-30.9	-30.9	1.00	1.00	
1,600.0	10.00	334.00	1,594.9	78.2	-38.2	-38.2	1.00	1.00	EOB; Inc=10°
1,700.0	10.00	334.00	1,693.4	93.8	-45.8	-45.8	0.00	0.00	
1,800.0	10.00	334.00	1,791.9	109.5	-53.4	-53.4	0.00	0.00	
1,900.0	10.00	334.00	1,890.4	125.1	-61.0	-61.0	0.00	0.00	
2,000.0	10.00	334.00	1,988.9	140.7	-68.6	-68.6	0.00	0.00	
2,100.0	10.00	334.00	2,087.3	156.3	-76.2	-76.2	0.00	0.00	
2,200.0	10.00	334.00	2,185.8	171.9	-83.8	-83.8	0.00	0.00	
2,300.0	10.00	334.00	2,284.3	187.5	-91.4	-91.4	0.00	0.00	
2,400.0	10.00	334.00	2,382.8	203.1	-99.1	-99.1	0.00	0.00	
2,500.0	10.00	334.00	2,481.3	218.7	-106.7	-106.7	0.00	0.00	
2,600.0	10.00	334.00	2,579.7	234.3	-114.3	-114.3	0.00	0.00	
2,700.0	10.00	334.00	2,678.2	249.9	-121.9	-121.9	0.00	0.00	
2,800.0	10.00	334.00	2,776.7	265.5	-129.5	-129.5	0.00	0.00	
2,900.0	10.00	334.00	2,875.2	281.1	-137.1	-137.1	0.00	0.00	
3,000.0	10.00	334.00	2,973.7	296.7	-144.7	-144.7	0.00	0.00	
3,100.0	10.00	334.00	3,072.1	312.3	-152.3	-152.3	0.00	0.00	
3,200.0	10.00	334.00	3,170.6	328.0	-160.0	-160.0	0.00	0.00	
3,300.0	10.00	334.00	3,269.1	343.6	-167.6	-167.6	0.00	0.00	
3,400.0	10.00	334.00	3,367.6	359.2	-175.2	-175.2	0.00	0.00	
3,500.0	10.00	334.00	3,466.1	374.8	-182.8	-182.8	0.00	0.00	
3,600.0	10.00	334.00	3,564.5	390.4	-190.4	-190.4	0.00	0.00	
3,700.0	10.00	334.00	3,663.0	406.0	-198.0	-198.0	0.00	0.00	
3,730.0	10.00	334.00	3,692.6	410.7	-200.3	-200.3	0.00	0.00	Start Drop -1.00
3,800.0	9.30	334.00	3,761.6	421.2	-205.4	-205.4	1.00	-1.00	
3,900.0	8.30	334.00	3,860.4	435.0	-212.1	-212.1	1.00	-1.00	
4,000.0	7.30	334.00	3,959.5	447.2	-218.1	-218.1	1.00	-1.00	
4,100.0	6.30	334.00	4,058.8	457.8	-223.3	-223.3	1.00	-1.00	
4,183.7	5.46	334.00	4,142.0	465.5	-227.0	-227.0	1.00	-1.00	Sussex
4,200.0	5.30	334.00	4,158.3	466.9	-227.7	-227.7	1.00	-1.00	
4,300.0	4.30	334.00	4,257.9	474.4	-231.4	-231.4	1.00	-1.00	
4,400.0	3.30	334.00	4,357.7	480.4	-234.3	-234.3	1.00	-1.00	
4,420.3	3.10	334.00	4,378.0	481.4	-234.8	-234.8	1.00	-1.00	Sussex Marker
4,500.0	2.30	334.00	4,457.6	484.8	-236.4	-236.4	1.00	-1.00	
4,600.0	1.30	334.00	4,557.5	487.6	-237.8	-237.8	1.00	-1.00	
4,694.5	0.36	334.00	4,652.0	488.8	-238.4	-238.4	1.00	-1.00	Shannon

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 3C-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
4,700.0	0.30	334.00	4,657.5	488.8	-238.4	-238.4	1.00	-1.00	
4,730.0	0.00	0.00	4,687.5	488.9	-238.5	-238.5	1.00	-1.00	EOD; Inc=0°
4,800.0	0.00	0.00	4,757.5	488.9	-238.5	-238.5	0.00	0.00	
4,900.0	0.00	0.00	4,857.5	488.9	-238.5	-238.5	0.00	0.00	
5,000.0	0.00	0.00	4,957.5	488.9	-238.5	-238.5	0.00	0.00	
5,100.0	0.00	0.00	5,057.5	488.9	-238.5	-238.5	0.00	0.00	
5,200.0	0.00	0.00	5,157.5	488.9	-238.5	-238.5	0.00	0.00	
5,300.0	0.00	0.00	5,257.5	488.9	-238.5	-238.5	0.00	0.00	
5,400.0	0.00	0.00	5,357.5	488.9	-238.5	-238.5	0.00	0.00	
5,500.0	0.00	0.00	5,457.5	488.9	-238.5	-238.5	0.00	0.00	
5,600.0	0.00	0.00	5,557.5	488.9	-238.5	-238.5	0.00	0.00	
5,700.0	0.00	0.00	5,657.5	488.9	-238.5	-238.5	0.00	0.00	
5,800.0	0.00	0.00	5,757.5	488.9	-238.5	-238.5	0.00	0.00	
5,900.0	0.00	0.00	5,857.5	488.9	-238.5	-238.5	0.00	0.00	
6,000.0	0.00	0.00	5,957.5	488.9	-238.5	-238.5	0.00	0.00	
6,100.0	0.00	0.00	6,057.5	488.9	-238.5	-238.5	0.00	0.00	
6,200.0	0.00	0.00	6,157.5	488.9	-238.5	-238.5	0.00	0.00	
6,300.0	0.00	0.00	6,257.5	488.9	-238.5	-238.5	0.00	0.00	
6,400.0	0.00	0.00	6,357.5	488.9	-238.5	-238.5	0.00	0.00	
6,500.0	0.00	0.00	6,457.5	488.9	-238.5	-238.5	0.00	0.00	
6,514.5	0.00	0.00	6,472.0	488.9	-238.5	-238.5	0.00	0.00	Teepee Buttes
6,600.0	0.00	0.00	6,557.5	488.9	-238.5	-238.5	0.00	0.00	
6,700.0	0.00	0.00	6,657.5	488.9	-238.5	-238.5	0.00	0.00	
6,730.3	0.00	0.00	6,687.8	488.9	-238.5	-238.5	0.00	0.00	Start Build 8.00
6,800.0	5.58	90.00	6,757.4	488.9	-235.1	-235.1	8.00	8.00	
6,900.0	13.58	90.00	6,855.9	488.9	-218.4	-218.4	8.00	8.00	
7,000.0	21.58	90.00	6,951.2	488.9	-188.3	-188.3	8.00	8.00	
7,100.0	29.58	90.00	7,041.3	488.9	-145.1	-145.1	8.00	8.00	
7,115.9	30.84	90.00	7,055.0	488.9	-137.2	-137.2	8.00	8.00	Sharon Springs
7,200.0	37.58	90.00	7,124.5	488.9	-89.9	-89.9	8.00	8.00	
7,201.8	37.72	90.00	7,126.0	488.9	-88.8	-88.8	8.00	8.00	Niobrara
7,253.9	41.89	90.00	7,166.0	488.9	-55.4	-55.4	8.00	8.00	B Chalk
7,300.0	45.58	90.00	7,199.3	488.9	-23.6	-23.6	8.00	8.00	
7,400.0	53.58	90.00	7,264.1	488.9	52.5	52.5	8.00	8.00	
7,500.0	61.58	90.00	7,317.7	488.9	136.8	136.8	8.00	8.00	
7,600.0	69.58	90.00	7,359.0	488.9	227.8	227.8	8.00	8.00	
7,647.3	73.36	90.00	7,374.0	488.9	272.6	272.6	8.00	8.00	Ft. Hayes
7,700.0	77.58	90.00	7,387.2	488.9	323.7	323.7	8.00	8.00	
7,735.5	80.41	90.00	7,394.0	488.9	358.5	358.5	8.00	8.00	Codell
7,800.0	85.58	90.00	7,401.9	488.9	422.5	422.5	8.00	8.00	
7,855.3	90.00	90.00	7,404.0	488.9	477.7	477.7	8.00	8.00	LP @ 7404' TVD; 90°
7,900.0	90.00	90.00	7,404.0	488.9	522.4	522.4	0.00	0.00	
8,000.0	90.00	90.00	7,404.0	488.8	622.4	622.4	0.00	0.00	
8,100.0	90.00	90.00	7,404.0	488.8	722.4	722.4	0.00	0.00	
8,200.0	90.00	90.00	7,404.0	488.8	822.4	822.4	0.00	0.00	
8,300.0	90.00	90.00	7,404.0	488.8	922.4	922.4	0.00	0.00	
8,400.0	90.00	90.00	7,404.0	488.8	1,022.4	1,022.4	0.00	0.00	
8,500.0	90.00	90.00	7,404.0	488.8	1,122.4	1,122.4	0.00	0.00	
8,600.0	90.00	90.00	7,404.0	488.8	1,222.4	1,222.4	0.00	0.00	
8,700.0	90.00	90.00	7,404.0	488.8	1,322.4	1,322.4	0.00	0.00	
8,800.0	90.00	90.00	7,404.0	488.8	1,422.4	1,422.4	0.00	0.00	
8,900.0	90.00	90.00	7,404.0	488.8	1,522.4	1,522.4	0.00	0.00	

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Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 3C-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
9,000.0	90.00	90.00	7,404.0	488.8	1,622.4	1,622.4	0.00	0.00	
9,100.0	90.00	90.00	7,404.0	488.8	1,722.4	1,722.4	0.00	0.00	
9,200.0	90.00	90.00	7,404.0	488.8	1,822.4	1,822.4	0.00	0.00	
9,300.0	90.00	90.00	7,404.0	488.8	1,922.4	1,922.4	0.00	0.00	
9,400.0	90.00	90.00	7,404.0	488.7	2,022.4	2,022.4	0.00	0.00	
9,500.0	90.00	90.00	7,404.0	488.7	2,122.4	2,122.4	0.00	0.00	
9,600.0	90.00	90.00	7,404.0	488.7	2,222.4	2,222.4	0.00	0.00	
9,700.0	90.00	90.00	7,404.0	488.7	2,322.4	2,322.4	0.00	0.00	
9,800.0	90.00	90.00	7,404.0	488.7	2,422.4	2,422.4	0.00	0.00	
9,900.0	90.00	90.00	7,404.0	488.7	2,522.4	2,522.4	0.00	0.00	
10,000.0	90.00	90.00	7,404.0	488.7	2,622.4	2,622.4	0.00	0.00	
10,100.0	90.00	90.00	7,404.0	488.7	2,722.4	2,722.4	0.00	0.00	
10,200.0	90.00	90.00	7,404.0	488.7	2,822.4	2,822.4	0.00	0.00	
10,300.0	90.00	90.00	7,404.0	488.7	2,922.4	2,922.4	0.00	0.00	
10,400.0	90.00	90.00	7,404.0	488.7	3,022.4	3,022.4	0.00	0.00	
10,500.0	90.00	90.00	7,404.0	488.7	3,122.4	3,122.4	0.00	0.00	
10,600.0	90.00	90.00	7,404.0	488.7	3,222.4	3,222.4	0.00	0.00	
10,700.0	90.00	90.00	7,404.0	488.7	3,322.4	3,322.4	0.00	0.00	
10,800.0	90.00	90.00	7,404.0	488.6	3,422.4	3,422.4	0.00	0.00	
10,900.0	90.00	90.00	7,404.0	488.6	3,522.4	3,522.4	0.00	0.00	
11,000.0	90.00	90.00	7,404.0	488.6	3,622.4	3,622.4	0.00	0.00	
11,100.0	90.00	90.00	7,404.0	488.6	3,722.4	3,722.4	0.00	0.00	
11,200.0	90.00	90.00	7,404.0	488.6	3,822.4	3,822.4	0.00	0.00	
11,300.0	90.00	90.00	7,404.0	488.6	3,922.4	3,922.4	0.00	0.00	
11,400.0	90.00	90.00	7,404.0	488.6	4,022.4	4,022.4	0.00	0.00	
11,500.0	90.00	90.00	7,404.0	488.6	4,122.4	4,122.4	0.00	0.00	
11,600.0	90.00	90.00	7,404.0	488.6	4,222.4	4,222.4	0.00	0.00	
11,700.0	90.00	90.00	7,404.0	488.6	4,322.4	4,322.4	0.00	0.00	
11,800.0	90.00	90.00	7,404.0	488.6	4,422.4	4,422.4	0.00	0.00	
11,900.0	90.00	90.00	7,404.0	488.6	4,522.4	4,522.4	0.00	0.00	
11,915.1	90.00	90.00	7,404.0	488.6	4,537.6	4,537.6	0.00	0.00	TD at 11915.1 - State 3C-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 3C-16H PBHL - plan hits target center - Point	0.00	0.00	7,404.0	488.6	4,537.6	1,324,673.74	3,139,581.30	40.223540	-105.000150

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State 3C-16H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site:	S16-T3N-R68W (State)	**North Reference:**	True
Well:	State 3C-16H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
72.0	72.0	Base of Fox Hills			
4,183.7	4,142.0	Sussex			
4,420.3	4,378.0	Sussex Marker			
4,694.5	4,652.0	Shannon			
6,514.5	6,472.0	Teepee Buttes			
7,115.9	7,055.0	Sharon Springs			
7,201.8	7,126.0	Niobrara			
7,253.9	7,166.0	B Chalk			
7,647.3	7,374.0	Ft. Hayes			
7,735.5	7,394.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
600.0	600.0	0.0	0.0	KOP @ 600'
1,600.0	1,594.9	78.2	-38.2	EOB; Inc=10°
3,730.0	3,692.6	410.7	-200.3	Start Drop -1.00
4,730.0	4,687.5	488.9	-238.5	EOD; Inc=0°
6,730.3	6,687.8	488.9	-238.5	Start Build 8.00
7,855.3	7,404.0	488.9	477.7	LP @ 7404' TVD; 90°
11,915.1	7,404.0	488.6	4,537.6	TD at 11915.1

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S16-T3N-R68W (State)
State 3C-16H
Hz
Plan #1

Anticollision Report

05 February, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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** 2/5/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,915.1	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 23-16 - Existing - Existing	9,100.6	7,520.5	170.4	107.6	2.713	CC, ES, SF
State 3A-16H - Hz - Plan #1	200.0	200.0	21.9	21.2	33.484	CC, ES
State 3A-16H - Hz - Plan #1	600.0	597.9	35.6	33.5	17.283	SF
State 3B-16H - Hz - Plan #1	400.0	400.0	10.9	9.6	8.090	CC, ES
State 3B-16H - Hz - Plan #1	11,915.1	11,724.6	414.8	219.3	2.122	SF
State 3D-16H - Hz - Plan #1	320.4	320.5	7.2	6.1	6.676	CC, ES
State 3D-16H - Hz - Plan #1	11,915.1	11,666.6	414.8	219.5	2.124	SF
State 3E-16H - Hz - Plan #1	300.0	300.0	18.2	17.2	18.181	CC, ES
State 3E-16H - Hz - Plan #1	600.0	599.1	23.9	21.9	11.685	SF
State 3F-16H - Hz - Plan #1	400.0	400.0	29.1	27.8	21.573	CC, ES
State 3F-16H - Hz - Plan #1	700.0	698.3	37.2	34.8	15.529	SF
State 3G-16H - Hz - Plan #1	300.0	300.0	40.1	39.1	39.999	CC, ES
State 3G-16H - Hz - Plan #1	700.0	696.6	54.3	51.9	22.699	SF
State 3H-16H - Hz - Plan #1	200.0	200.0	47.4	46.7	72.550	CC, ES
State 3H-16H - Hz - Plan #1	700.0	694.7	69.5	67.1	29.061	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 23-16 - Existing - Existing

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
8,700.0	7,404.0	7,520.5	7,405.0	37.9	22.2	-90.00	659.1	1,723.1	435.4	382.0	53.36	8.159	
8,800.0	7,404.0	7,520.5	7,405.0	40.2	22.2	-90.00	659.1	1,723.1	345.6	289.9	55.70	6.205	
8,900.0	7,404.0	7,520.5	7,405.0	42.5	22.2	-90.00	659.1	1,723.1	263.2	205.2	58.05	4.535	
9,000.0	7,404.0	7,520.5	7,405.0	44.8	22.2	-90.00	659.1	1,723.1	197.9	137.5	60.41	3.276	
9,100.0	7,404.0	7,520.5	7,405.0	47.2	22.2	-90.00	659.1	1,723.1	170.4	107.6	62.79	2.714	
9,100.6	7,404.0	7,520.5	7,405.0	47.2	22.2	-90.00	659.1	1,723.1	170.4	107.6	62.80	2.713	CC, ES, SF
9,200.0	7,404.0	7,520.5	7,405.0	49.5	22.2	-90.00	659.1	1,723.1	197.2	132.1	65.17	3.026	
9,300.0	7,404.0	7,520.5	7,405.0	51.9	22.2	-90.00	659.1	1,723.1	262.2	194.7	67.57	3.881	
9,400.0	7,404.0	7,520.5	7,405.0	54.3	22.2	-90.00	659.1	1,723.1	344.4	274.5	69.97	4.923	
9,500.0	7,404.0	7,520.5	7,405.0	56.7	22.2	-90.00	659.1	1,723.1	434.2	361.8	72.37	5.999	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3A-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	33.484	CC, ES
300.0	300.0	299.6	299.6	0.5	0.5	-0.44	22.7	-0.2	22.7	21.7	1.00	22.676	
400.0	400.0	399.2	399.1	0.7	0.7	-1.58	25.2	-0.7	25.3	23.9	1.35	18.699	
500.0	500.0	498.6	498.5	0.8	0.9	-3.04	29.5	-1.6	29.6	27.9	1.70	17.349	
600.0	600.0	597.9	597.6	1.0	1.1	-4.49	35.4	-2.8	35.6	33.5	2.06	17.283	SF
700.0	700.0	697.0	696.3	1.2	1.3	20.62	43.0	-4.3	42.5	40.1	2.39	17.759	
800.0	800.0	795.9	794.8	1.4	1.5	20.47	52.2	-6.2	49.5	46.8	2.74	18.067	
900.0	899.9	894.8	893.1	1.6	1.8	20.78	63.1	-8.5	56.6	53.6	3.09	18.326	
1,000.0	999.7	993.5	990.9	1.7	2.0	21.39	75.6	-11.0	63.8	60.4	3.44	18.549	
1,100.0	1,099.4	1,092.0	1,088.4	2.0	2.3	22.21	89.7	-13.9	71.1	67.3	3.80	18.739	
1,200.0	1,198.9	1,190.5	1,185.6	2.2	2.6	23.18	105.5	-17.2	78.5	74.4	4.16	18.898	
1,300.0	1,298.3	1,288.8	1,282.3	2.4	3.0	24.25	122.9	-20.7	86.0	81.5	4.52	19.024	
1,400.0	1,397.4	1,387.0	1,378.5	2.7	3.3	25.39	141.9	-24.6	93.7	88.8	4.90	19.116	
1,500.0	1,496.3	1,485.0	1,474.3	2.9	3.7	26.59	162.4	-28.9	101.5	96.2	5.29	19.167	
1,600.0	1,594.9	1,582.9	1,569.5	3.2	4.1	27.81	184.6	-33.4	109.4	103.7	5.71	19.175	
1,700.0	1,693.4	1,680.6	1,664.2	3.5	4.6	28.90	208.2	-38.3	118.3	112.1	6.14	19.275	
1,800.0	1,791.9	1,778.0	1,758.2	3.9	5.1	29.63	233.4	-43.4	128.8	122.3	6.57	19.597	
1,900.0	1,890.4	1,876.9	1,853.2	4.2	5.5	30.13	260.0	-48.9	140.5	133.5	7.02	20.025	
2,000.0	1,988.9	1,976.2	1,948.6	4.5	6.0	30.55	286.8	-54.4	152.3	144.8	7.47	20.391	
2,100.0	2,087.3	2,075.5	2,044.1	4.8	6.5	30.90	313.7	-59.9	164.0	156.1	7.92	20.703	
2,200.0	2,185.8	2,174.8	2,139.5	5.2	7.0	31.21	340.5	-65.4	175.8	167.4	8.38	20.971	
2,300.0	2,284.3	2,274.1	2,235.0	5.5	7.5	31.48	367.3	-70.9	187.6	178.7	8.85	21.204	
2,400.0	2,382.8	2,373.4	2,330.4	5.8	8.0	31.72	394.1	-76.4	199.3	190.0	9.31	21.407	
2,500.0	2,481.3	2,472.7	2,425.9	6.2	8.5	31.94	420.9	-81.9	211.1	201.3	9.78	21.584	
2,600.0	2,579.7	2,572.0	2,521.3	6.5	9.0	32.13	447.7	-87.4	222.9	212.6	10.25	21.741	
2,700.0	2,678.2	2,671.3	2,616.8	6.9	9.5	32.30	474.5	-92.9	234.7	223.9	10.72	21.880	
2,800.0	2,776.7	2,770.6	2,712.3	7.2	10.0	32.45	501.3	-98.4	246.4	235.2	11.20	22.004	
2,900.0	2,875.2	2,869.9	2,807.7	7.6	10.5	32.59	528.2	-103.9	258.2	246.5	11.68	22.115	
3,000.0	2,973.7	2,969.2	2,903.2	7.9	11.0	32.72	555.0	-109.4	270.0	257.8	12.15	22.215	
3,100.0	3,072.1	3,068.5	2,998.6	8.2	11.5	32.84	581.8	-114.9	281.8	269.1	12.63	22.306	
3,200.0	3,170.6	3,167.8	3,094.1	8.6	12.0	32.95	608.6	-120.4	293.6	280.4	13.11	22.387	
3,300.0	3,269.1	3,267.1	3,189.5	8.9	12.5	33.05	635.4	-125.9	305.3	291.7	13.59	22.462	
3,400.0	3,367.6	3,366.4	3,285.0	9.3	13.1	33.14	662.2	-131.4	317.1	303.1	14.08	22.530	
3,500.0	3,466.1	3,465.7	3,380.4	9.6	13.6	33.22	689.0	-136.9	328.9	314.4	14.56	22.592	
3,600.0	3,564.5	3,565.0	3,475.9	10.0	14.1	33.30	715.8	-142.5	340.7	325.7	15.04	22.649	
3,700.0	3,663.0	3,664.3	3,571.4	10.3	14.6	33.38	742.6	-148.0	352.5	337.0	15.53	22.702	
3,800.0	3,761.6	3,763.5	3,666.8	10.6	15.1	33.46	769.4	-153.5	364.6	348.6	16.01	22.782	
3,900.0	3,860.4	3,862.6	3,762.0	11.0	15.6	33.42	796.2	-158.9	378.2	361.7	16.45	22.993	
4,000.0	3,959.5	3,961.5	3,857.0	11.2	16.1	33.26	822.9	-164.4	393.1	376.3	16.85	23.332	
4,100.0	4,058.8	4,060.1	3,951.8	11.5	16.6	32.99	849.5	-169.9	409.5	392.3	17.21	23.790	
4,200.0	4,158.3	4,158.4	4,046.3	11.7	17.1	32.63	876.1	-175.3	427.4	409.9	17.54	24.362	
4,300.0	4,257.9	4,256.4	4,140.6	11.9	17.6	32.19	902.5	-180.8	446.8	428.9	17.84	25.040	
4,400.0	4,357.7	4,354.1	4,234.5	12.1	18.1	31.69	928.9	-186.2	467.6	449.5	18.11	25.820	
4,500.0	4,457.6	4,451.4	4,328.0	12.3	18.6	31.14	955.2	-191.6	490.0	471.6	18.35	26.696	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3B-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	
400.0	400.0	400.0	400.0	0.7	0.7	0.00	10.9	0.0	10.9	9.6	1.35	8.090	CC, ES
500.0	500.0	499.8	499.8	0.8	0.9	-1.17	11.8	-0.2	11.8	10.1	1.70	6.923	
600.0	600.0	599.6	599.5	1.0	1.0	-3.84	14.3	-1.0	14.3	12.3	2.05	6.981	
700.0	700.0	699.2	699.1	1.2	1.2	20.26	18.4	-2.2	17.8	15.4	2.40	7.411	
800.0	800.0	798.8	798.5	1.4	1.4	19.77	24.3	-3.8	21.3	18.6	2.75	7.758	
900.0	899.9	898.4	897.7	1.6	1.6	20.09	31.7	-6.0	24.9	21.8	3.10	8.048	
1,000.0	999.7	997.8	996.8	1.7	1.8	20.92	40.9	-8.6	28.6	25.1	3.45	8.296	
1,100.0	1,099.4	1,097.2	1,095.5	2.0	2.1	22.07	51.7	-11.7	32.4	28.6	3.80	8.511	
1,200.0	1,198.9	1,196.6	1,194.0	2.2	2.3	23.43	64.1	-15.2	36.2	32.1	4.16	8.700	
1,300.0	1,298.3	1,295.9	1,292.2	2.4	2.6	24.93	78.1	-19.3	40.2	35.7	4.53	8.863	
1,400.0	1,397.4	1,395.1	1,390.1	2.7	2.9	26.52	93.8	-23.8	44.3	39.4	4.92	9.001	
1,500.0	1,496.3	1,494.2	1,487.6	2.9	3.3	28.17	111.1	-28.7	48.5	43.2	5.32	9.111	
1,600.0	1,594.9	1,593.3	1,584.7	3.2	3.6	29.85	129.9	-34.1	52.9	47.1	5.75	9.192	
1,700.0	1,693.4	1,693.1	1,682.3	3.5	4.0	31.40	149.9	-39.8	57.4	51.2	6.21	9.257	
1,800.0	1,791.9	1,793.0	1,780.0	3.9	4.4	32.71	169.9	-45.6	62.1	55.4	6.67	9.298	
1,900.0	1,890.4	1,892.9	1,877.7	4.2	4.7	33.85	189.8	-51.3	66.7	59.5	7.15	9.322	
2,000.0	1,988.9	1,992.7	1,975.4	4.5	5.1	34.83	209.8	-57.0	71.4	63.7	7.65	9.333	
2,100.0	2,087.3	2,092.6	2,073.1	4.8	5.5	35.70	229.7	-62.7	76.0	67.9	8.15	9.334	
2,200.0	2,185.8	2,192.5	2,170.8	5.2	5.9	36.46	249.7	-68.5	80.7	72.1	8.65	9.328	
2,300.0	2,284.3	2,292.4	2,268.5	5.5	6.3	37.14	269.7	-74.2	85.4	76.3	9.17	9.317	
2,400.0	2,382.8	2,392.3	2,366.2	5.8	6.7	37.75	289.6	-79.9	90.2	80.5	9.69	9.303	
2,500.0	2,481.3	2,492.2	2,463.9	6.2	7.1	38.30	309.6	-85.6	94.9	84.7	10.22	9.286	
2,600.0	2,579.7	2,592.1	2,561.6	6.5	7.5	38.80	329.6	-91.4	99.6	88.9	10.75	9.269	
2,700.0	2,678.2	2,691.9	2,659.3	6.9	7.9	39.25	349.5	-97.1	104.4	93.1	11.28	9.250	
2,800.0	2,776.7	2,791.8	2,757.0	7.2	8.3	39.66	369.5	-102.8	109.1	97.3	11.82	9.230	
2,900.0	2,875.2	2,891.7	2,854.7	7.6	8.7	40.04	389.4	-108.5	113.9	101.5	12.36	9.211	
3,000.0	2,973.7	2,991.6	2,952.4	7.9	9.1	40.38	409.4	-114.3	118.6	105.7	12.91	9.192	
3,100.0	3,072.1	3,091.5	3,050.1	8.2	9.5	40.71	429.4	-120.0	123.4	109.9	13.45	9.173	
3,200.0	3,170.6	3,191.4	3,147.8	8.6	9.9	41.00	449.3	-125.7	128.2	114.2	14.00	9.154	
3,300.0	3,269.1	3,291.2	3,245.5	8.9	10.3	41.28	469.3	-131.4	132.9	118.4	14.55	9.136	
3,400.0	3,367.6	3,391.1	3,343.2	9.3	10.7	41.53	489.3	-137.2	137.7	122.6	15.10	9.118	
3,500.0	3,466.1	3,491.0	3,440.9	9.6	11.1	41.77	509.2	-142.9	142.5	126.8	15.66	9.100	
3,600.0	3,564.5	3,590.9	3,538.6	10.0	11.5	42.00	529.2	-148.6	147.2	131.0	16.21	9.084	
3,700.0	3,663.0	3,690.8	3,636.3	10.3	11.9	42.21	549.1	-154.3	152.0	135.3	16.77	9.068	
3,800.0	3,761.6	3,790.6	3,734.0	10.6	12.3	42.32	569.1	-160.1	157.1	139.8	17.30	9.081	
3,900.0	3,860.4	3,890.4	3,831.6	11.0	12.7	42.06	589.0	-165.8	163.5	145.7	17.76	9.206	
4,000.0	3,959.5	3,990.1	3,929.1	11.2	13.1	41.43	609.0	-171.5	171.1	153.0	18.13	9.438	
4,100.0	4,058.8	4,089.7	4,026.5	11.5	13.5	40.51	628.9	-177.2	180.1	161.6	18.42	9.773	
4,200.0	4,158.3	4,189.1	4,123.7	11.7	13.9	39.35	648.7	-182.9	190.4	171.8	18.65	10.209	
4,300.0	4,257.9	4,288.2	4,220.7	11.9	14.2	38.02	668.5	-188.6	202.2	183.4	18.82	10.744	
4,400.0	4,357.7	4,387.2	4,317.5	12.1	14.6	36.57	688.3	-194.2	215.5	196.6	18.95	11.374	
4,500.0	4,457.6	4,485.9	4,414.1	12.3	15.0	35.06	708.1	-199.9	230.4	211.4	19.04	12.098	
4,600.0	4,557.5	4,586.3	4,512.3	12.4	15.4	33.51	727.9	-205.6	246.7	227.5	19.11	12.904	
4,700.0	4,657.5	4,688.9	4,613.0	12.6	15.8	32.05	746.7	-211.0	263.1	243.9	19.19	13.714	
4,800.0	4,757.5	4,792.0	4,714.5	12.7	16.2	4.69	763.9	-215.9	279.2	252.1	27.09	10.307	
4,900.0	4,857.5	4,895.6	4,816.9	12.8	16.5	3.57	779.3	-220.3	293.8	266.1	27.67	10.619	
5,000.0	4,957.5	4,999.8	4,920.2	12.9	16.8	2.67	793.1	-224.3	306.8	278.6	28.19	10.883	
5,100.0	5,057.5	5,104.5	5,024.1	13.0	17.0	1.94	805.1	-227.7	318.1	289.5	28.67	11.098	

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 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3B-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	5,157.5	5,209.7	5,128.7	13.1	17.3	1.37	815.3	-230.7	327.8	298.7	29.10	11.265	
5,300.0	5,257.5	5,315.2	5,233.9	13.3	17.5	0.92	823.7	-233.1	335.7	306.2	29.48	11.385	
5,400.0	5,357.5	5,421.0	5,339.4	13.4	17.7	0.59	830.2	-234.9	341.8	312.0	29.83	11.458	
5,500.0	5,457.5	5,527.0	5,445.3	13.5	17.8	0.36	834.9	-236.3	346.2	316.1	30.15	11.485	
5,600.0	5,557.5	5,633.1	5,551.4	13.6	18.0	0.23	837.7	-237.1	348.9	318.4	30.42	11.467	
5,700.0	5,657.5	5,739.2	5,657.5	13.8	18.1	0.18	838.6	-237.3	349.7	319.0	30.67	11.403	
5,800.0	5,757.5	5,839.2	5,757.5	13.9	18.2	0.18	838.6	-237.3	349.7	318.8	30.90	11.317	
5,900.0	5,857.5	5,939.2	5,857.5	14.0	18.3	0.18	838.6	-237.3	349.7	318.6	31.14	11.232	
6,000.0	5,957.5	6,039.2	5,957.5	14.1	18.4	0.18	838.6	-237.3	349.7	318.3	31.37	11.147	
6,100.0	6,057.5	6,139.2	6,057.5	14.3	18.5	0.18	838.6	-237.3	349.7	318.1	31.61	11.063	
6,200.0	6,157.5	6,239.2	6,157.5	14.4	18.6	0.18	838.6	-237.3	349.7	317.9	31.85	10.979	
6,300.0	6,257.5	6,339.2	6,257.5	14.5	18.7	0.18	838.6	-237.3	349.7	317.6	32.10	10.896	
6,400.0	6,357.5	6,439.2	6,357.5	14.7	18.8	0.18	838.6	-237.3	349.7	317.4	32.34	10.814	
6,500.0	6,457.5	6,539.2	6,457.5	14.8	18.9	0.18	838.6	-237.3	349.7	317.1	32.59	10.732	
6,522.4	6,479.9	6,561.5	6,479.8	14.8	18.9	0.21	838.6	-237.2	349.7	317.1	32.64	10.714	
6,600.0	6,557.5	6,638.5	6,556.6	14.9	18.9	1.15	838.6	-231.4	349.8	317.0	32.74	10.685	
6,700.0	6,657.5	6,734.5	6,650.6	15.1	19.0	4.19	838.6	-212.8	350.7	318.0	32.67	10.735	
6,800.0	6,757.4	6,825.1	6,736.4	15.2	19.0	-81.38	838.6	-183.8	354.1	328.1	25.92	13.660	
6,900.0	6,855.9	6,912.6	6,815.2	15.2	19.0	-77.09	838.6	-145.8	359.5	333.1	26.43	13.602	
7,000.0	6,951.2	7,000.0	6,888.6	15.2	19.0	-73.07	838.6	-98.5	366.4	339.8	26.64	13.756	
7,100.0	7,041.3	7,080.7	6,950.8	15.2	19.0	-69.63	838.6	-47.2	374.3	347.7	26.52	14.110	
7,200.0	7,124.5	7,162.0	7,007.3	15.2	19.1	-66.56	838.6	11.2	382.5	356.2	26.25	14.568	
7,300.0	7,199.3	7,241.8	7,055.9	15.3	19.3	-63.94	838.6	74.5	390.5	364.5	25.93	15.060	
7,400.0	7,264.1	7,320.5	7,096.7	15.5	19.6	-61.78	838.6	141.8	397.8	372.0	25.83	15.401	
7,500.0	7,317.7	7,400.0	7,130.2	16.0	19.9	-60.05	838.6	213.8	404.2	378.0	26.22	15.415	
7,600.0	7,359.0	7,475.5	7,154.3	16.7	20.5	-58.80	838.6	285.3	409.2	381.9	27.33	14.973	
7,700.0	7,387.2	7,550.0	7,170.7	17.8	21.1	-57.97	838.6	358.0	412.7	383.5	29.24	14.115	
7,800.0	7,401.9	7,628.5	7,179.7	19.3	22.0	-57.53	838.6	435.9	414.5	382.5	32.01	12.948	
7,900.0	7,404.0	7,715.1	7,181.0	21.0	23.1	-57.48	838.6	522.5	414.8	379.6	35.21	11.780	
8,000.0	7,404.0	7,815.1	7,181.0	22.8	24.7	-57.48	838.6	622.5	414.8	376.3	38.45	10.788	
8,100.0	7,404.0	7,915.1	7,181.0	24.8	26.4	-57.48	838.6	722.5	414.8	372.9	41.85	9.911	
8,200.0	7,404.0	8,015.1	7,181.0	26.8	28.3	-57.48	838.5	822.5	414.8	369.4	45.38	9.139	
8,300.0	7,404.0	8,115.1	7,181.0	28.9	30.3	-57.48	838.5	922.5	414.8	365.7	49.02	8.462	
8,400.0	7,404.0	8,215.1	7,181.0	31.1	32.3	-57.48	838.5	1,022.5	414.8	362.0	52.73	7.865	
8,500.0	7,404.0	8,315.1	7,181.0	33.3	34.4	-57.48	838.5	1,122.5	414.8	358.2	56.51	7.339	
8,600.0	7,404.0	8,415.1	7,181.0	35.6	36.6	-57.48	838.5	1,222.5	414.8	354.4	60.35	6.873	
8,700.0	7,404.0	8,515.1	7,181.0	37.9	38.8	-57.48	838.5	1,322.5	414.8	350.5	64.22	6.458	
8,800.0	7,404.0	8,615.1	7,181.0	40.2	41.0	-57.48	838.5	1,422.5	414.8	346.6	68.13	6.088	
8,900.0	7,404.0	8,715.1	7,181.0	42.5	43.3	-57.48	838.5	1,522.5	414.8	342.7	72.07	5.755	
9,000.0	7,404.0	8,815.1	7,181.0	44.8	45.6	-57.48	838.5	1,622.5	414.8	338.7	76.04	5.454	
9,100.0	7,404.0	8,915.1	7,181.0	47.2	47.9	-57.48	838.5	1,722.5	414.8	334.7	80.03	5.183	
9,200.0	7,404.0	9,015.1	7,181.0	49.5	50.2	-57.48	838.5	1,822.5	414.8	330.7	84.04	4.936	
9,300.0	7,404.0	9,115.1	7,181.0	51.9	52.6	-57.48	838.5	1,922.5	414.8	326.7	88.06	4.710	
9,400.0	7,404.0	9,215.1	7,181.0	54.3	54.9	-57.48	838.5	2,022.5	414.8	322.7	92.09	4.504	
9,500.0	7,404.0	9,315.1	7,181.0	56.7	57.3	-57.48	838.5	2,122.5	414.8	318.6	96.14	4.314	
9,600.0	7,404.0	9,415.1	7,181.0	59.1	59.7	-57.48	838.4	2,222.5	414.8	314.6	100.20	4.139	
9,700.0	7,404.0	9,515.1	7,181.0	61.5	62.1	-57.48	838.4	2,322.5	414.8	310.5	104.27	3.978	
9,800.0	7,404.0	9,615.1	7,181.0	63.9	64.4	-57.48	838.4	2,422.5	414.8	306.4	108.35	3.828	
9,900.0	7,404.0	9,715.1	7,181.0	66.3	66.8	-57.48	838.4	2,522.5	414.8	302.3	112.43	3.689	
10,000.0	7,404.0	9,815.1	7,181.0	68.7	69.2	-57.48	838.4	2,622.5	414.8	298.2	116.52	3.559	
10,100.0	7,404.0	9,915.1	7,181.0	71.2	71.6	-57.48	838.4	2,722.5	414.8	294.1	120.62	3.439	
10,200.0	7,404.0	10,015.1	7,181.0	73.6	74.1	-57.48	838.4	2,822.5	414.8	290.0	124.72	3.325	

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 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3B-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	7,404.0	10,115.1	7,181.0	76.0	76.5	-57.48	838.4	2,922.5	414.8	285.9	128.83	3.219	
10,400.0	7,404.0	10,215.1	7,181.0	78.5	78.9	-57.48	838.4	3,022.5	414.8	281.8	132.94	3.120	
10,500.0	7,404.0	10,315.1	7,181.0	80.9	81.3	-57.48	838.4	3,122.5	414.8	277.7	137.06	3.026	
10,600.0	7,404.0	10,415.1	7,181.0	83.3	83.7	-57.48	838.4	3,222.5	414.8	273.6	141.18	2.938	
10,700.0	7,404.0	10,515.1	7,181.0	85.8	86.2	-57.48	838.4	3,322.5	414.8	269.5	145.30	2.855	
10,800.0	7,404.0	10,615.1	7,181.0	88.2	88.6	-57.48	838.4	3,422.5	414.8	265.3	149.42	2.776	
10,900.0	7,404.0	10,715.1	7,181.0	90.6	91.0	-57.48	838.4	3,522.5	414.8	261.2	153.55	2.701	
11,000.0	7,404.0	10,815.1	7,181.0	93.1	93.5	-57.48	838.3	3,622.5	414.8	257.1	157.68	2.630	
11,100.0	7,404.0	10,915.1	7,181.0	95.5	95.9	-57.48	838.3	3,722.5	414.8	252.9	161.82	2.563	
11,200.0	7,404.0	11,015.1	7,181.0	98.0	98.3	-57.48	838.3	3,822.5	414.8	248.8	165.95	2.499	
11,300.0	7,404.0	11,115.1	7,181.0	100.4	100.8	-57.48	838.3	3,922.5	414.8	244.7	170.09	2.438	
11,400.0	7,404.0	11,215.1	7,181.0	102.9	103.2	-57.48	838.3	4,022.5	414.8	240.5	174.23	2.381	
11,500.0	7,404.0	11,315.1	7,181.0	105.3	105.7	-57.48	838.3	4,122.5	414.8	236.4	178.37	2.325	
11,600.0	7,404.0	11,415.1	7,181.0	107.8	108.1	-57.48	838.3	4,222.5	414.8	232.2	182.52	2.272	
11,700.0	7,404.0	11,515.1	7,181.0	110.2	110.6	-57.48	838.3	4,322.5	414.8	228.1	186.66	2.222	
11,800.0	7,404.0	11,615.1	7,181.0	112.7	113.0	-57.48	838.3	4,422.5	414.8	224.0	190.81	2.174	
11,900.0	7,404.0	11,715.1	7,181.0	115.1	115.4	-57.48	838.3	4,522.5	414.8	219.8	194.95	2.127	
11,901.5	7,404.0	11,716.6	7,181.0	115.2	115.5	-57.48	838.3	4,524.0	414.8	219.7	195.02	2.127	
11,915.1	7,404.0	11,724.6	7,181.0	115.5	115.7	-57.48	838.3	4,531.9	414.8	219.3	195.46	2.122	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3D-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	-7.3	0.0	7.3				
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-7.3	0.0	7.3	7.0	0.30	23.991	
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-7.3	0.0	7.3	6.6	0.65	11.161	
300.0	300.0	300.0	300.0	0.5	0.5	-173.13	-7.1	-0.9	7.2	6.2	1.00	7.167	
320.4	320.4	320.5	320.4	0.5	0.5	-169.99	-7.1	-1.2	7.2	6.1	1.07	6.676	CC, ES
400.0	400.0	400.0	399.9	0.7	0.7	-152.78	-6.7	-3.4	7.5	6.2	1.35	5.548	
500.0	500.0	499.8	499.7	0.8	0.9	-127.49	-5.9	-7.7	9.7	8.0	1.70	5.721	
600.0	600.0	599.4	599.1	1.0	1.1	-109.56	-4.9	-13.7	14.6	12.5	2.05	7.115	
700.0	700.0	698.9	698.3	1.2	1.3	-75.50	-3.5	-21.4	21.5	19.1	2.41	8.928	
800.0	800.0	798.4	797.3	1.4	1.5	-72.58	-1.3	-30.4	29.3	26.5	2.76	10.595	
900.0	899.9	897.8	896.2	1.6	1.8	-70.99	2.4	-40.3	37.3	34.2	3.13	11.912	
1,000.0	999.7	997.2	994.8	1.7	2.0	-70.05	7.5	-51.1	45.5	42.0	3.51	12.952	
1,100.0	1,099.4	1,096.4	1,093.2	2.0	2.3	-69.47	14.1	-62.8	53.9	50.0	3.92	13.761	
1,200.0	1,198.9	1,195.6	1,191.2	2.2	2.6	-69.11	22.1	-75.4	62.4	58.1	4.34	14.374	
1,300.0	1,298.3	1,294.7	1,289.0	2.4	2.9	-68.89	31.5	-88.9	71.1	66.3	4.80	14.819	
1,400.0	1,397.4	1,394.4	1,387.1	2.7	3.2	-69.35	41.7	-102.9	79.6	74.3	5.29	15.038	
1,500.0	1,496.3	1,494.0	1,485.2	2.9	3.6	-70.79	51.8	-116.9	87.5	81.6	5.83	14.995	
1,600.0	1,594.9	1,593.7	1,583.4	3.2	3.9	-72.99	62.0	-130.9	94.9	88.4	6.43	14.756	
1,700.0	1,693.4	1,693.3	1,681.5	3.5	4.2	-75.40	72.2	-144.9	102.2	95.1	7.06	14.476	
1,800.0	1,791.9	1,793.0	1,779.6	3.9	4.6	-77.48	82.3	-158.9	109.6	101.9	7.70	14.233	
1,900.0	1,890.4	1,893.3	1,878.5	4.2	4.9	-79.40	92.5	-172.8	117.1	108.7	8.36	14.006	
2,000.0	1,988.9	1,994.2	1,978.2	4.5	5.2	-81.68	101.7	-185.6	123.7	114.7	9.03	13.709	
2,100.0	2,087.3	2,095.2	2,078.1	4.8	5.5	-84.37	110.0	-196.9	129.6	119.9	9.70	13.358	
2,200.0	2,185.8	2,196.0	2,178.2	5.2	5.8	-87.47	117.1	-206.8	134.8	124.4	10.38	12.992	
2,300.0	2,284.3	2,296.7	2,278.3	5.5	6.0	-90.97	123.3	-215.2	139.6	128.5	11.04	12.641	
2,400.0	2,382.8	2,397.2	2,378.4	5.8	6.2	-94.86	128.4	-222.3	144.1	132.5	11.68	12.336	
2,500.0	2,481.3	2,497.4	2,478.4	6.2	6.4	-99.12	132.4	-227.8	148.8	136.5	12.29	12.105	
2,600.0	2,579.7	2,597.2	2,578.1	6.5	6.6	-103.72	135.5	-232.0	153.7	140.9	12.84	11.972	
2,700.0	2,678.2	2,696.7	2,677.6	6.9	6.8	-108.60	137.5	-234.7	159.3	146.0	13.32	11.962	
2,800.0	2,776.7	2,795.8	2,776.6	7.2	6.9	-113.69	138.4	-236.1	165.9	152.2	13.71	12.096	
2,900.0	2,875.2	2,894.3	2,875.2	7.6	7.0	-118.83	138.5	-236.2	173.7	159.6	14.03	12.380	
3,000.0	2,973.7	2,992.8	2,973.7	7.9	7.1	-123.55	138.5	-236.2	182.8	168.5	14.29	12.790	
3,100.0	3,072.1	3,091.3	3,072.1	8.2	7.3	-127.81	138.5	-236.2	193.0	178.5	14.51	13.296	
3,200.0	3,170.6	3,189.8	3,170.6	8.6	7.4	-131.63	138.5	-236.2	204.2	189.5	14.72	13.874	
3,300.0	3,269.1	3,288.3	3,269.1	8.9	7.5	-135.04	138.5	-236.2	216.2	201.3	14.91	14.502	
3,400.0	3,367.6	3,386.7	3,367.6	9.3	7.6	-138.10	138.5	-236.2	228.9	213.8	15.10	15.165	
3,500.0	3,466.1	3,485.2	3,466.1	9.6	7.8	-140.82	138.5	-236.2	242.2	226.9	15.28	15.848	
3,600.0	3,564.5	3,583.7	3,564.5	10.0	7.9	-143.27	138.5	-236.2	256.0	240.5	15.48	16.541	
3,700.0	3,663.0	3,682.2	3,663.0	10.3	8.1	-145.46	138.5	-236.2	270.2	254.5	15.67	17.236	
3,800.0	3,761.6	3,780.7	3,761.6	10.6	8.2	-147.44	138.5	-236.2	284.4	268.5	15.88	17.901	
3,900.0	3,860.4	3,879.6	3,860.4	11.0	8.3	-149.09	138.5	-236.2	297.4	281.3	16.11	18.463	
4,000.0	3,959.5	3,978.6	3,959.5	11.2	8.5	-150.44	138.5	-236.2	309.2	292.8	16.35	18.913	
4,100.0	4,058.8	4,077.9	4,058.8	11.5	8.6	-151.53	138.5	-236.2	319.5	302.9	16.60	19.253	
4,200.0	4,158.3	4,177.4	4,158.3	11.7	8.8	-152.41	138.5	-236.2	328.5	311.6	16.86	19.484	
4,300.0	4,257.9	4,277.1	4,257.9	11.9	8.9	-153.11	138.5	-236.2	335.9	318.8	17.13	19.612	
4,400.0	4,357.7	4,376.8	4,357.7	12.1	9.0	-153.64	138.5	-236.2	341.8	324.4	17.41	19.639	
4,500.0	4,457.6	4,476.7	4,457.6	12.3	9.2	-154.02	138.5	-236.2	346.2	328.5	17.69	19.572	
4,600.0	4,557.5	4,576.7	4,557.5	12.4	9.3	-154.25	138.5	-236.2	349.1	331.1	17.98	19.413	
4,700.0	4,657.5	4,676.7	4,657.5	12.6	9.5	-154.36	138.5	-236.2	350.3	332.0	18.28	19.168	
4,800.0	4,757.5	4,776.7	4,757.5	12.7	9.6	179.64	138.5	-236.2	350.4	329.7	20.68	16.942	
4,900.0	4,857.5	4,876.7	4,857.5	12.8	9.8	179.64	138.5	-236.2	350.4	329.4	20.97	16.708	
5,000.0	4,957.5	4,976.7	4,957.5	12.9	9.9	179.64	138.5	-236.2	350.4	329.1	21.26	16.480	

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 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3D-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
5,100.0	5,057.5	5,076.7	5,057.5	13.0	10.1	179.64	138.5	-236.2	350.4	328.8	21.55	16.256	
5,200.0	5,157.5	5,176.7	5,157.5	13.1	10.3	179.64	138.5	-236.2	350.4	328.5	21.85	16.037	
5,300.0	5,257.5	5,276.7	5,257.5	13.3	10.4	179.64	138.5	-236.2	350.4	328.2	22.14	15.824	
5,400.0	5,357.5	5,376.7	5,357.5	13.4	10.6	179.64	138.5	-236.2	350.4	327.9	22.44	15.615	
5,500.0	5,457.5	5,476.7	5,457.5	13.5	10.7	179.64	138.5	-236.2	350.4	327.6	22.74	15.410	
5,600.0	5,557.5	5,576.7	5,557.5	13.6	10.9	179.64	138.5	-236.2	350.4	327.3	23.04	15.210	
5,700.0	5,657.5	5,676.7	5,657.5	13.8	11.0	179.64	138.5	-236.2	350.4	327.0	23.34	15.014	
5,800.0	5,757.5	5,776.7	5,757.5	13.9	11.2	179.64	138.5	-236.2	350.4	326.7	23.64	14.823	
5,900.0	5,857.5	5,876.7	5,857.5	14.0	11.3	179.64	138.5	-236.2	350.4	326.4	23.94	14.635	
6,000.0	5,957.5	5,976.7	5,957.5	14.1	11.5	179.64	138.5	-236.2	350.4	326.1	24.24	14.452	
6,100.0	6,057.5	6,076.7	6,057.5	14.3	11.7	179.64	138.5	-236.2	350.4	325.8	24.55	14.273	
6,200.0	6,157.5	6,176.7	6,157.5	14.4	11.8	179.64	138.5	-236.2	350.4	325.5	24.86	14.097	
6,300.0	6,257.5	6,276.7	6,257.5	14.5	12.0	179.64	138.5	-236.2	350.4	325.2	25.16	13.925	
6,400.0	6,357.5	6,376.7	6,357.5	14.7	12.1	179.64	138.5	-236.2	350.4	324.9	25.47	13.757	
6,500.0	6,457.5	6,476.7	6,457.5	14.8	12.3	179.64	138.5	-236.2	350.4	324.6	25.78	13.592	
6,512.9	6,470.4	6,489.6	6,470.4	14.8	12.3	179.63	138.5	-236.2	350.4	324.6	25.82	13.571	
6,600.0	6,557.5	6,575.9	6,556.5	14.9	12.4	178.67	138.5	-230.3	350.5	324.3	26.14	13.406	
6,700.0	6,657.5	6,671.7	6,650.4	15.1	12.4	175.65	138.5	-211.8	351.5	324.9	26.61	13.210	
6,800.0	6,757.4	6,762.2	6,736.0	15.2	12.4	81.23	138.5	-182.9	354.9	330.7	24.20	14.667	
6,900.0	6,855.9	6,850.0	6,815.1	15.2	12.4	76.94	138.5	-144.7	360.4	336.2	24.12	14.939	
7,000.0	6,951.2	6,934.6	6,886.3	15.2	12.4	73.04	138.5	-99.1	367.3	343.2	24.15	15.212	
7,100.0	7,041.3	7,017.5	6,950.4	15.2	12.5	69.54	138.5	-46.5	375.2	350.9	24.31	15.432	
7,200.0	7,124.5	7,100.0	7,007.6	15.2	12.7	66.45	138.6	12.8	383.3	358.7	24.60	15.581	
7,300.0	7,199.3	7,178.6	7,055.5	15.3	13.1	63.89	138.6	75.0	391.3	366.2	25.09	15.595	
7,400.0	7,264.1	7,257.2	7,096.4	15.5	13.7	61.75	138.6	142.2	398.6	372.8	25.80	15.454	
7,500.0	7,317.7	7,335.0	7,129.2	16.0	14.5	60.05	138.6	212.7	404.9	378.2	26.77	15.126	
7,600.0	7,359.0	7,412.1	7,154.1	16.7	15.5	58.80	138.6	285.6	409.9	381.9	28.05	14.615	
7,700.0	7,387.2	7,488.8	7,170.9	17.8	16.7	57.97	138.6	360.3	413.3	383.7	29.66	13.936	
7,800.0	7,401.9	7,565.1	7,179.7	19.3	18.0	57.56	138.6	436.1	415.0	383.4	31.61	13.128	
7,900.0	7,404.0	7,651.5	7,181.0	21.0	19.6	57.52	138.6	522.5	415.2	381.0	34.25	12.125	
8,000.0	7,404.0	7,751.5	7,181.0	22.8	21.6	57.52	138.6	622.5	415.2	377.7	37.55	11.059	
8,100.0	7,404.0	7,851.5	7,181.0	24.8	23.6	57.51	138.6	722.5	415.2	374.2	41.01	10.126	
8,200.0	7,404.0	7,951.5	7,181.0	26.8	25.8	57.51	138.6	822.5	415.2	370.6	44.59	9.312	
8,300.0	7,404.0	8,051.5	7,181.0	28.9	27.9	57.51	138.6	922.5	415.2	366.9	48.27	8.602	
8,400.0	7,404.0	8,151.5	7,181.0	31.1	30.2	57.51	138.6	1,022.5	415.2	363.2	52.02	7.981	
8,500.0	7,404.0	8,251.5	7,181.0	33.3	32.4	57.51	138.6	1,122.5	415.2	359.3	55.84	7.435	
8,600.0	7,404.0	8,351.5	7,181.0	35.6	34.7	57.51	138.6	1,222.5	415.1	355.4	59.70	6.954	
8,700.0	7,404.0	8,451.5	7,181.0	37.9	37.1	57.51	138.6	1,322.5	415.1	351.5	63.60	6.527	
8,800.0	7,404.0	8,551.5	7,181.0	40.2	39.4	57.51	138.6	1,422.5	415.1	347.6	67.54	6.146	
8,900.0	7,404.0	8,651.5	7,181.0	42.5	41.8	57.51	138.7	1,522.5	415.1	343.6	71.50	5.805	
9,000.0	7,404.0	8,751.5	7,181.0	44.8	44.1	57.51	138.7	1,622.5	415.1	339.6	75.49	5.499	
9,100.0	7,404.0	8,851.5	7,181.0	47.2	46.5	57.50	138.7	1,722.5	415.1	335.6	79.50	5.221	
9,200.0	7,404.0	8,951.5	7,181.0	49.5	48.9	57.50	138.7	1,822.5	415.1	331.6	83.52	4.970	
9,300.0	7,404.0	9,051.5	7,181.0	51.9	51.3	57.50	138.7	1,922.5	415.1	327.5	87.56	4.740	
9,400.0	7,404.0	9,151.5	7,181.0	54.3	53.7	57.50	138.7	2,022.5	415.1	323.4	91.61	4.531	
9,500.0	7,404.0	9,251.5	7,181.0	56.7	56.1	57.50	138.7	2,122.5	415.0	319.4	95.67	4.338	
9,600.0	7,404.0	9,351.5	7,181.0	59.1	58.5	57.50	138.7	2,222.5	415.0	315.3	99.74	4.161	
9,700.0	7,404.0	9,451.5	7,181.0	61.5	60.9	57.50	138.7	2,322.5	415.0	311.2	103.82	3.997	
9,800.0	7,404.0	9,551.5	7,181.0	63.9	63.4	57.50	138.7	2,422.5	415.0	307.1	107.91	3.846	
9,900.0	7,404.0	9,651.5	7,181.0	66.3	65.8	57.50	138.7	2,522.5	415.0	303.0	112.00	3.705	
10,000.0	7,404.0	9,751.5	7,181.0	68.7	68.2	57.50	138.7	2,622.5	415.0	298.9	116.10	3.574	
10,100.0	7,404.0	9,851.5	7,181.0	71.2	70.6	57.49	138.7	2,722.5	415.0	294.8	120.21	3.452	

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 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3D-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
10,200.0	7,404.0	9,951.5	7,181.0	73.6	73.1	57.49	138.7	2,822.5	415.0	290.6	124.31	3.338	
10,300.0	7,404.0	10,051.5	7,181.0	76.0	75.5	57.49	138.7	2,922.5	415.0	286.5	128.43	3.231	
10,400.0	7,404.0	10,151.5	7,181.0	78.5	78.0	57.49	138.8	3,022.5	414.9	282.4	132.55	3.131	
10,500.0	7,404.0	10,251.5	7,181.0	80.9	80.4	57.49	138.8	3,122.5	414.9	278.3	136.67	3.036	
10,600.0	7,404.0	10,351.5	7,181.0	83.3	82.9	57.49	138.8	3,222.5	414.9	274.1	140.79	2.947	
10,700.0	7,404.0	10,451.5	7,181.0	85.8	85.3	57.49	138.8	3,322.5	414.9	270.0	144.92	2.863	
10,800.0	7,404.0	10,551.5	7,181.0	88.2	87.7	57.49	138.8	3,422.5	414.9	265.8	149.05	2.784	
10,900.0	7,404.0	10,651.5	7,181.0	90.6	90.2	57.49	138.8	3,522.5	414.9	261.7	153.18	2.708	
11,000.0	7,404.0	10,751.5	7,181.0	93.1	92.6	57.49	138.8	3,622.5	414.9	257.6	157.32	2.637	
11,100.0	7,404.0	10,851.5	7,181.0	95.5	95.1	57.48	138.8	3,722.5	414.9	253.4	161.45	2.570	
11,200.0	7,404.0	10,951.5	7,181.0	98.0	97.6	57.48	138.8	3,822.5	414.8	249.3	165.59	2.505	
11,300.0	7,404.0	11,051.5	7,181.0	100.4	100.0	57.48	138.8	3,922.5	414.8	245.1	169.73	2.444	
11,400.0	7,404.0	11,151.5	7,181.0	102.9	102.5	57.48	138.8	4,022.5	414.8	240.9	173.87	2.386	
11,500.0	7,404.0	11,251.5	7,181.0	105.3	104.9	57.48	138.8	4,122.5	414.8	236.8	178.02	2.330	
11,600.0	7,404.0	11,351.5	7,181.0	107.8	107.4	57.48	138.8	4,222.5	414.8	232.6	182.16	2.277	
11,700.0	7,404.0	11,451.5	7,181.0	110.2	109.8	57.48	138.8	4,322.5	414.8	228.5	186.31	2.226	
11,800.0	7,404.0	11,551.5	7,181.0	112.7	112.3	57.48	138.8	4,422.5	414.8	224.3	190.46	2.178	
11,900.0	7,404.0	11,651.5	7,181.0	115.1	114.8	57.48	138.9	4,522.5	414.8	220.2	194.60	2.131	
11,915.1	7,404.0	11,666.6	7,181.0	115.5	115.1	57.48	138.9	4,537.6	414.8	219.5	195.23	2.124	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3E-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	CC, ES
400.0	400.0	399.8	399.8	0.7	0.7	-177.94	-18.8	-0.7	18.8	17.4	1.35	13.901	
500.0	500.0	499.5	499.5	0.8	0.9	-172.46	-20.4	-2.7	20.6	18.9	1.70	12.112	
600.0	600.0	599.1	599.0	1.0	1.0	-165.30	-23.1	-6.1	23.9	21.9	2.05	11.685	SF
700.0	700.0	698.5	698.2	1.2	1.2	-133.41	-26.9	-10.8	29.7	27.2	2.41	12.328	
800.0	800.0	797.6	797.0	1.4	1.4	-130.28	-31.8	-16.8	38.2	35.5	2.76	13.858	
900.0	899.9	896.3	895.2	1.6	1.7	-128.99	-37.7	-24.1	49.5	46.4	3.12	15.881	
1,000.0	999.7	994.5	992.8	1.7	1.9	-128.70	-44.7	-32.7	63.4	60.0	3.49	18.199	
1,100.0	1,099.4	1,092.0	1,089.5	2.0	2.2	-128.90	-52.6	-42.5	80.0	76.1	3.86	20.692	
1,200.0	1,198.9	1,188.8	1,185.2	2.2	2.5	-129.33	-61.5	-53.5	99.1	94.8	4.26	23.276	
1,300.0	1,298.3	1,284.8	1,279.9	2.4	2.8	-129.83	-71.3	-65.6	120.7	116.1	4.66	25.893	
1,400.0	1,397.4	1,381.6	1,375.3	2.7	3.1	-130.45	-81.9	-78.7	144.4	139.3	5.09	28.398	
1,500.0	1,496.3	1,478.5	1,470.7	2.9	3.4	-131.30	-92.5	-91.7	169.3	163.8	5.53	30.634	
1,600.0	1,594.9	1,574.9	1,565.7	3.2	3.7	-132.27	-103.0	-104.7	195.3	189.3	5.98	32.651	
1,700.0	1,693.4	1,671.2	1,660.5	3.5	4.0	-133.33	-113.6	-117.7	222.0	215.5	6.45	34.404	
1,800.0	1,791.9	1,767.5	1,755.4	3.9	4.4	-134.17	-124.1	-130.7	248.7	241.8	6.93	35.902	
1,900.0	1,890.4	1,863.9	1,850.2	4.2	4.7	-134.84	-134.6	-143.7	275.5	268.1	7.41	37.195	
2,000.0	1,988.9	1,960.2	1,945.1	4.5	5.0	-135.39	-145.1	-156.7	302.3	294.4	7.89	38.321	
2,100.0	2,087.3	2,056.5	2,039.9	4.8	5.4	-135.86	-155.7	-169.7	329.1	320.7	8.37	39.309	
2,200.0	2,185.8	2,157.8	2,139.8	5.2	5.7	-136.35	-166.2	-182.8	355.3	346.4	8.86	40.089	
2,300.0	2,284.3	2,260.0	2,240.9	5.5	6.0	-136.93	-175.7	-194.5	380.0	370.7	9.35	40.660	
2,400.0	2,382.8	2,362.9	2,342.9	5.8	6.3	-137.60	-184.2	-204.9	403.5	393.6	9.83	41.062	
2,500.0	2,481.3	2,466.4	2,445.7	6.2	6.5	-138.35	-191.5	-214.0	425.5	415.2	10.30	41.327	
2,600.0	2,579.7	2,570.4	2,549.3	6.5	6.8	-139.17	-197.7	-221.6	446.2	435.4	10.76	41.483	
2,700.0	2,678.2	2,674.9	2,653.5	6.9	7.0	-140.06	-202.7	-227.8	465.5	454.3	11.20	41.551	
2,800.0	2,776.7	2,779.8	2,758.2	7.2	7.2	-141.02	-206.5	-232.5	483.5	471.9	11.64	41.549	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3F-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	
400.0	400.0	400.0	400.0	0.7	0.7	-180.00	-29.1	0.0	29.1	27.8	1.35	21.573	CC, ES
500.0	500.0	499.5	499.5	0.8	0.8	-179.35	-29.9	-0.3	29.9	28.2	1.70	17.623	
600.0	600.0	599.0	598.9	1.0	1.0	-177.61	-32.3	-1.4	32.4	30.3	2.05	15.810	
700.0	700.0	698.3	698.2	1.2	1.2	-149.88	-36.3	-3.0	37.2	34.8	2.40	15.529	SF
800.0	800.0	797.3	797.0	1.4	1.4	-149.02	-41.8	-5.4	45.2	42.5	2.75	16.471	
900.0	899.9	895.8	895.2	1.6	1.6	-148.79	-48.9	-8.4	56.3	53.3	3.10	18.205	
1,000.0	999.7	993.8	992.7	1.7	1.8	-148.92	-57.4	-12.0	70.6	67.1	3.45	20.474	
1,100.0	1,099.4	1,091.0	1,089.3	2.0	2.1	-149.21	-67.5	-16.3	87.9	84.1	3.80	23.117	
1,200.0	1,198.9	1,187.4	1,184.9	2.2	2.3	-149.54	-78.9	-21.1	108.2	104.1	4.16	26.021	
1,300.0	1,298.3	1,282.7	1,279.2	2.4	2.6	-149.87	-91.6	-26.5	131.6	127.1	4.52	29.106	
1,400.0	1,397.4	1,376.9	1,372.2	2.7	2.9	-150.17	-105.6	-32.5	158.0	153.1	4.89	32.313	
1,500.0	1,496.3	1,469.9	1,463.7	2.9	3.2	-150.43	-120.8	-38.9	187.3	182.0	5.26	35.596	
1,600.0	1,594.9	1,561.5	1,553.6	3.2	3.5	-150.64	-137.1	-45.8	219.5	213.8	5.64	38.920	
1,700.0	1,693.4	1,654.1	1,644.1	3.5	3.8	-150.93	-154.7	-53.3	253.5	247.5	6.03	42.034	
1,800.0	1,791.9	1,748.0	1,736.1	3.9	4.2	-151.14	-172.7	-60.9	287.7	281.3	6.43	44.744	
1,900.0	1,890.4	1,842.0	1,828.0	4.2	4.6	-151.31	-190.7	-68.6	322.0	315.1	6.83	47.116	
2,000.0	1,988.9	1,936.0	1,919.9	4.5	4.9	-151.44	-208.7	-76.2	356.2	348.9	7.24	49.208	
2,100.0	2,087.3	2,029.9	2,011.8	4.8	5.3	-151.55	-226.7	-83.8	390.4	382.8	7.65	51.064	
2,200.0	2,185.8	2,123.9	2,103.7	5.2	5.6	-151.65	-244.7	-91.5	424.6	416.6	8.05	52.722	
2,300.0	2,284.3	2,217.8	2,195.6	5.5	6.0	-151.73	-262.6	-99.1	458.8	450.4	8.46	54.209	
2,400.0	2,382.8	2,311.8	2,287.5	5.8	6.4	-151.80	-280.6	-106.7	493.1	484.2	8.88	55.551	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3G-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	131.949	
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	399.3	399.3	0.7	0.7	-179.69	-40.9	-0.2	40.9	39.6	1.35	30.309	
500.0	500.0	498.6	498.5	0.8	0.9	-178.82	-43.4	-0.9	43.4	41.7	1.70	25.581	
600.0	600.0	597.7	597.6	1.0	1.0	-177.59	-47.5	-2.0	47.6	45.6	2.05	23.288	
700.0	700.0	696.6	696.3	1.2	1.2	-150.61	-53.3	-3.6	54.3	51.9	2.39	22.699	SF
800.0	800.0	795.1	794.5	1.4	1.4	-150.31	-60.7	-5.5	64.2	61.5	2.74	23.430	
900.0	899.9	893.1	892.0	1.6	1.7	-150.46	-69.7	-7.9	77.3	74.2	3.09	25.024	
1,000.0	999.7	990.4	988.7	1.7	1.9	-150.85	-80.2	-10.8	93.5	90.1	3.44	27.208	
1,100.0	1,099.4	1,086.8	1,084.3	2.0	2.2	-151.33	-92.2	-14.0	112.9	109.1	3.79	29.806	
1,200.0	1,198.9	1,182.2	1,178.7	2.2	2.4	-151.82	-105.5	-17.5	135.3	131.2	4.14	32.703	
1,300.0	1,298.3	1,276.5	1,271.8	2.4	2.7	-152.28	-120.3	-21.5	160.9	156.4	4.49	35.813	
1,400.0	1,397.4	1,369.5	1,363.3	2.7	3.0	-152.70	-136.2	-25.8	189.4	184.6	4.85	39.075	
1,500.0	1,496.3	1,461.2	1,453.3	2.9	3.4	-153.06	-153.4	-30.4	221.0	215.8	5.21	42.443	
1,600.0	1,594.9	1,553.7	1,543.8	3.2	3.7	-153.39	-171.8	-35.3	255.2	249.7	5.57	45.811	
1,700.0	1,693.4	1,647.3	1,635.3	3.5	4.1	-153.85	-190.6	-40.3	290.4	284.4	5.95	48.791	
1,800.0	1,791.9	1,740.9	1,726.9	3.9	4.4	-154.21	-209.4	-45.4	325.5	319.2	6.33	51.395	
1,900.0	1,890.4	1,834.5	1,818.4	4.2	4.8	-154.50	-228.2	-50.4	360.7	353.9	6.72	53.689	
2,000.0	1,988.9	1,928.1	1,910.0	4.5	5.2	-154.74	-247.0	-55.4	395.8	388.7	7.10	55.722	
2,100.0	2,087.3	2,021.7	2,001.5	4.8	5.5	-154.94	-265.8	-60.5	431.0	423.5	7.49	57.535	
2,200.0	2,185.8	2,115.3	2,093.1	5.2	5.9	-155.11	-284.6	-65.5	466.1	458.3	7.88	59.162	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 3H-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	-47.4	0.0	47.4				
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-47.4	0.0	47.4	47.1	0.30	155.940	
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-47.4	0.0	47.4	46.7	0.65	72.550	CC, ES
300.0	300.0	299.2	299.2	0.5	0.5	-179.81	-48.2	-0.2	48.2	47.2	1.00	48.185	
400.0	400.0	398.3	398.3	0.7	0.7	-179.27	-50.7	-0.6	50.8	49.4	1.35	37.645	
500.0	500.0	497.3	497.2	0.8	0.9	-178.49	-54.9	-1.5	55.0	53.3	1.70	32.426	
600.0	600.0	596.1	595.8	1.0	1.1	-177.57	-60.8	-2.6	61.0	59.0	2.05	29.809	
700.0	700.0	694.7	694.1	1.2	1.3	-150.94	-68.3	-4.0	69.5	67.1	2.39	29.061	SF
800.0	800.0	792.7	791.7	1.4	1.5	-150.88	-77.4	-5.8	81.1	78.4	2.74	29.649	
900.0	899.9	890.1	888.4	1.6	1.7	-151.16	-88.1	-7.8	96.0	92.9	3.08	31.142	
1,000.0	999.7	986.7	984.3	1.7	2.0	-151.64	-100.3	-10.2	114.0	110.6	3.43	33.256	
1,100.0	1,099.4	1,082.4	1,078.9	2.0	2.3	-152.18	-114.0	-12.8	135.1	131.4	3.77	35.810	
1,200.0	1,198.9	1,177.0	1,172.3	2.2	2.6	-152.72	-129.0	-15.6	159.4	155.3	4.12	38.681	
1,300.0	1,298.3	1,270.4	1,264.2	2.4	2.9	-153.23	-145.3	-18.8	186.8	182.3	4.47	41.784	
1,400.0	1,397.4	1,362.4	1,354.5	2.7	3.2	-153.69	-162.8	-22.1	217.2	212.4	4.82	45.055	
1,500.0	1,496.3	1,453.1	1,443.1	2.9	3.6	-154.09	-181.4	-25.7	250.6	245.4	5.17	48.446	
1,600.0	1,594.9	1,542.1	1,529.9	3.2	4.0	-154.44	-201.0	-29.5	286.9	281.4	5.53	51.921	
1,700.0	1,693.4	1,629.8	1,615.0	3.5	4.4	-154.86	-221.7	-33.4	325.3	319.4	5.89	55.239	
1,800.0	1,791.9	1,717.5	1,699.8	3.9	4.8	-155.13	-243.5	-37.6	365.1	358.9	6.26	58.364	
1,900.0	1,890.4	1,809.0	1,788.2	4.2	5.2	-155.35	-266.8	-42.1	405.4	398.8	6.63	61.128	
2,000.0	1,988.9	1,900.5	1,876.6	4.5	5.6	-155.53	-290.1	-46.5	445.7	438.7	7.01	63.580	
2,100.0	2,087.3	1,992.1	1,965.0	4.8	6.0	-155.68	-313.3	-51.0	485.9	478.5	7.39	65.769	

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 3C-16H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Reference Site:	S16-T3N-R68W (State)	**MD Reference:**	WELL @ 5072.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State 3C-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 @ 5072.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: State 3C-16H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.31°