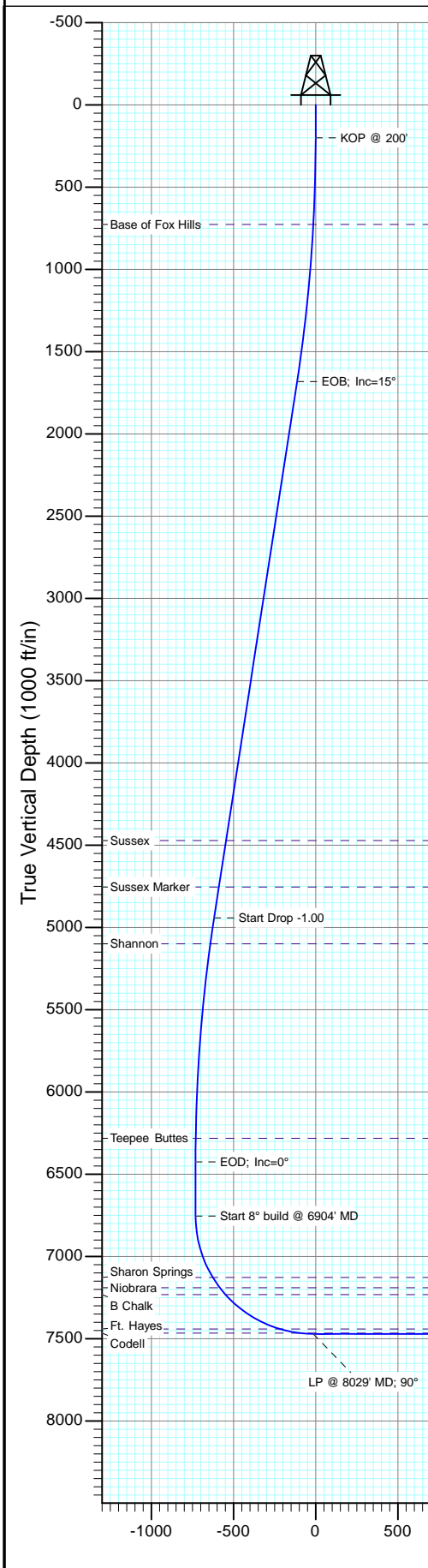
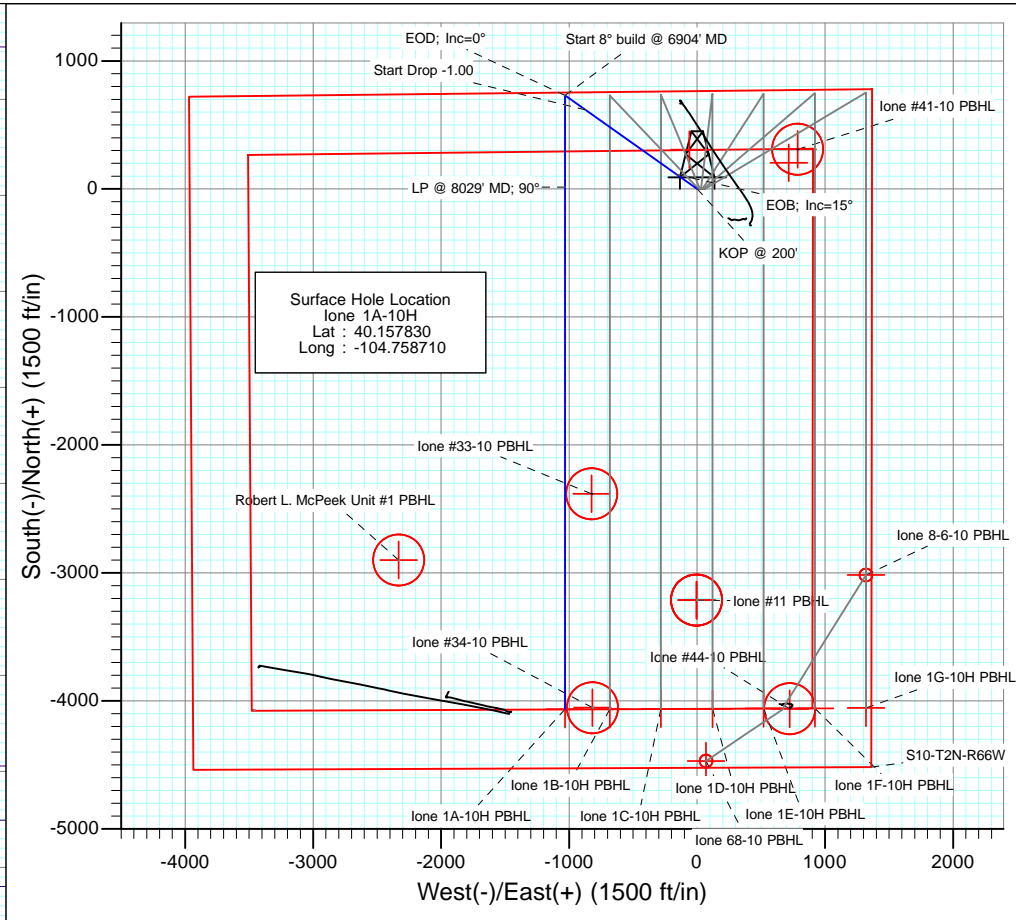




Project: DJ Wattenberg
 Site: S10-T2N-R66W (lone)
 Well: lone 1A-10H
 Wellbore: Hz
 Design: Plan #1



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1700.0	15.00	305.30	1682.9	112.8	-159.3	1.00	305.30	-112.8	
4	5075.0	15.00	305.30	4942.9	617.6	-872.2	0.00	0.00	-617.6	
5	6575.0	0.00	0.00	6425.8	730.4	-1031.6	1.00	180.00	-730.4	
6	6904.0	0.00	0.00	6754.8	730.4	-1031.6	0.00	0.00	-730.4	
7	8029.0	90.00	180.00	7471.0	14.2	-1031.6	8.00	180.00	-14.2	
8	12108.5	90.00	180.00	7471.0	-4065.3	-1031.5	0.00	0.00	4065.3	lone 1A-10H PBHL



DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
lone 1A-10H PBHL	-4065.3	-1031.5	1297135.48	3206200.90	40.146670	-104.762400

M Azimuths to True North
 Magnetic North: 8.60°
 Magnetic Field
 Strength: 52879.2snT
 Dip Angle: 66.82°
 Date: 11/16/2012
 Model: IGRF200510

FORMATION TOP DETAILS		
TVDPPath	MDPath	Formation
727.0	727.7	Base of Fox Hills
4472.0	4587.5	Sussex
4754.0	4879.4	Sussex Marker
5099.0	5236.0	Shannon
6282.0	6431.1	Teepee Buttes
7128.0	7296.5	Sharon Springs
7190.0	7371.7	Niobrara
7232.0	7426.2	B Chalk
7441.0	7820.9	Ft. Hayes
7466.0	7944.3	Codell

Plan #1
 lone 1A-10H
 12xxx; LR
 WELL @ 5012.0ft (Original Well Elev)
 Ground Elevation @ 4999.0
 North American Datum 1983
 Well lone 1A-10H, True North

Vertical Section at 180.00° (1000 ft/in)

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well lone 1A-10H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site:	S10-T2N-R66W (lone)	North Reference:	True
Well:	lone 1A-10H	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 S10-T2N-R66W (lone)					
Site Position:		Northing:	1,297,164.02 ft	Latitude:	40.146710
From:	Lat/Long	Easting:	3,207,875.24 ft	Longitude:	-104.756410
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.48 °

Well lone 1A-10H						
Well Position	+N/-S	0.0 ft	Northing:	1,301,209.31 ft	Latitude:	40.157830
	+E/-W	0.0 ft	Easting:	3,207,198.43 ft	Longitude:	-104.758710
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,999.0 ft

Wellbore Hz					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	11/16/2012	(°)	(°)	(nT)
			8.60	66.82	52,879

Design Plan #1					
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	180.00	

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,700.0	15.00	305.30	1,682.9	112.8	-159.3	1.00	1.00	0.00	305.30	
5,075.0	15.00	305.30	4,942.9	617.6	-872.2	0.00	0.00	0.00	0.00	
6,575.0	0.00	0.00	6,425.8	730.4	-1,031.6	1.00	-1.00	0.00	180.00	
6,904.0	0.00	0.00	6,754.8	730.4	-1,031.6	0.00	0.00	0.00	0.00	
8,029.0	90.00	180.00	7,471.0	14.2	-1,031.6	8.00	8.00	0.00	180.00	
12,108.5	90.00	180.00	7,471.0	-4,065.3	-1,031.5	0.00	0.00	0.00	0.00	lone 1A-10H PBHL

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well lone 1A-10H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site:	S10-T2N-R66W (lone)	North Reference:	True
Well:	lone 1A-10H	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	KOP @ 200'
300.0	1.00	305.30	300.0	0.5	-0.7	-0.5	1.00	1.00	
400.0	2.00	305.30	400.0	2.0	-2.8	-2.0	1.00	1.00	
500.0	3.00	305.30	499.9	4.5	-6.4	-4.5	1.00	1.00	
600.0	4.00	305.30	599.7	8.1	-11.4	-8.1	1.00	1.00	
700.0	5.00	305.30	699.4	12.6	-17.8	-12.6	1.00	1.00	
727.7	5.28	305.30	727.0	14.0	-19.8	-14.0	1.00	1.00	Base of Fox Hills
800.0	6.00	305.30	798.9	18.1	-25.6	-18.1	1.00	1.00	
900.0	7.00	305.30	898.3	24.7	-34.9	-24.7	1.00	1.00	
1,000.0	8.00	305.30	997.4	32.2	-45.5	-32.2	1.00	1.00	
1,100.0	9.00	305.30	1,096.3	40.8	-57.6	-40.8	1.00	1.00	
1,200.0	10.00	305.30	1,194.9	50.3	-71.0	-50.3	1.00	1.00	
1,300.0	11.00	305.30	1,293.3	60.8	-85.9	-60.8	1.00	1.00	
1,400.0	12.00	305.30	1,391.2	72.4	-102.2	-72.4	1.00	1.00	
1,500.0	13.00	305.30	1,488.9	84.9	-119.8	-84.9	1.00	1.00	
1,600.0	14.00	305.30	1,586.1	98.3	-138.9	-98.3	1.00	1.00	
1,700.0	15.00	305.30	1,682.9	112.8	-159.3	-112.8	1.00	1.00	EOB; Inc=15°
1,800.0	15.00	305.30	1,779.5	127.8	-180.5	-127.8	0.00	0.00	
1,900.0	15.00	305.30	1,876.1	142.7	-201.6	-142.7	0.00	0.00	
2,000.0	15.00	305.30	1,972.7	157.7	-222.7	-157.7	0.00	0.00	
2,100.0	15.00	305.30	2,069.3	172.6	-243.8	-172.6	0.00	0.00	
2,200.0	15.00	305.30	2,165.9	187.6	-265.0	-187.6	0.00	0.00	
2,300.0	15.00	305.30	2,262.5	202.6	-286.1	-202.6	0.00	0.00	
2,400.0	15.00	305.30	2,359.1	217.5	-307.2	-217.5	0.00	0.00	
2,500.0	15.00	305.30	2,455.7	232.5	-328.3	-232.5	0.00	0.00	
2,600.0	15.00	305.30	2,552.3	247.4	-349.4	-247.4	0.00	0.00	
2,700.0	15.00	305.30	2,648.8	262.4	-370.6	-262.4	0.00	0.00	
2,800.0	15.00	305.30	2,745.4	277.3	-391.7	-277.3	0.00	0.00	
2,900.0	15.00	305.30	2,842.0	292.3	-412.8	-292.3	0.00	0.00	
3,000.0	15.00	305.30	2,938.6	307.2	-433.9	-307.2	0.00	0.00	
3,100.0	15.00	305.30	3,035.2	322.2	-455.1	-322.2	0.00	0.00	
3,200.0	15.00	305.30	3,131.8	337.2	-476.2	-337.2	0.00	0.00	
3,300.0	15.00	305.30	3,228.4	352.1	-497.3	-352.1	0.00	0.00	
3,400.0	15.00	305.30	3,325.0	367.1	-518.4	-367.1	0.00	0.00	
3,500.0	15.00	305.30	3,421.6	382.0	-539.6	-382.0	0.00	0.00	
3,600.0	15.00	305.30	3,518.2	397.0	-560.7	-397.0	0.00	0.00	
3,700.0	15.00	305.30	3,614.8	411.9	-581.8	-411.9	0.00	0.00	
3,800.0	15.00	305.30	3,711.4	426.9	-602.9	-426.9	0.00	0.00	
3,900.0	15.00	305.30	3,808.0	441.8	-624.0	-441.8	0.00	0.00	
4,000.0	15.00	305.30	3,904.6	456.8	-645.2	-456.8	0.00	0.00	
4,100.0	15.00	305.30	4,001.1	471.8	-666.3	-471.8	0.00	0.00	
4,200.0	15.00	305.30	4,097.7	486.7	-687.4	-486.7	0.00	0.00	
4,300.0	15.00	305.30	4,194.3	501.7	-708.5	-501.7	0.00	0.00	
4,400.0	15.00	305.30	4,290.9	516.6	-729.7	-516.6	0.00	0.00	
4,500.0	15.00	305.30	4,387.5	531.6	-750.8	-531.6	0.00	0.00	
4,587.5	15.00	305.30	4,472.0	544.7	-769.3	-544.7	0.00	0.00	Sussex
4,600.0	15.00	305.30	4,484.1	546.5	-771.9	-546.5	0.00	0.00	
4,700.0	15.00	305.30	4,580.7	561.5	-793.0	-561.5	0.00	0.00	
4,800.0	15.00	305.30	4,677.3	576.5	-814.2	-576.5	0.00	0.00	
4,879.4	15.00	305.30	4,754.0	588.3	-830.9	-588.3	0.00	0.00	Sussex Marker

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well lone 1A-10H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site:	S10-T2N-R66W (lone)	North Reference:	True
Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,900.0	15.00	305.30	4,773.9	591.4	-835.3	-591.4	0.00	0.00	
5,000.0	15.00	305.30	4,870.5	606.4	-856.4	-606.4	0.00	0.00	
5,075.0	15.00	305.30	4,942.9	617.6	-872.2	-617.6	0.00	0.00	Start Drop -1.00
5,100.0	14.75	305.30	4,967.1	621.3	-877.5	-621.3	1.00	-1.00	
5,200.0	13.75	305.30	5,064.0	635.5	-897.6	-635.5	1.00	-1.00	
5,236.0	13.39	305.30	5,099.0	640.4	-904.5	-640.4	1.00	-1.00	Shannon
5,300.0	12.75	305.30	5,161.3	648.8	-916.3	-648.8	1.00	-1.00	
5,400.0	11.75	305.30	5,259.1	661.0	-933.6	-661.0	1.00	-1.00	
5,500.0	10.75	305.30	5,357.1	672.3	-949.5	-672.3	1.00	-1.00	
5,600.0	9.75	305.30	5,455.5	682.6	-964.0	-682.6	1.00	-1.00	
5,700.0	8.75	305.30	5,554.2	691.9	-977.2	-691.9	1.00	-1.00	
5,800.0	7.75	305.30	5,653.2	700.2	-988.9	-700.2	1.00	-1.00	
5,900.0	6.75	305.30	5,752.4	707.4	-999.2	-707.4	1.00	-1.00	
6,000.0	5.75	305.30	5,851.8	713.7	-1,008.1	-713.7	1.00	-1.00	
6,100.0	4.75	305.30	5,951.4	719.0	-1,015.5	-719.0	1.00	-1.00	
6,200.0	3.75	305.30	6,051.1	723.3	-1,021.6	-723.3	1.00	-1.00	
6,300.0	2.75	305.30	6,151.0	726.6	-1,026.2	-726.6	1.00	-1.00	
6,400.0	1.75	305.30	6,250.9	728.9	-1,029.4	-728.9	1.00	-1.00	
6,431.1	1.44	305.30	6,282.0	729.4	-1,030.1	-729.4	1.00	-1.00	Teepee Buttes
6,500.0	0.75	305.30	6,350.8	730.1	-1,031.2	-730.1	1.00	-1.00	
6,575.0	0.00	0.00	6,425.8	730.4	-1,031.6	-730.4	1.00	-1.00	EOD; Inc=0°
6,600.0	0.00	0.00	6,450.8	730.4	-1,031.6	-730.4	0.00	0.00	
6,700.0	0.00	0.00	6,550.8	730.4	-1,031.6	-730.4	0.00	0.00	
6,800.0	0.00	0.00	6,650.8	730.4	-1,031.6	-730.4	0.00	0.00	
6,900.0	0.00	0.00	6,750.8	730.4	-1,031.6	-730.4	0.00	0.00	
6,904.0	0.00	0.00	6,754.8	730.4	-1,031.6	-730.4	0.00	0.00	Start 8° build @ 6904' MD
7,000.0	7.68	180.00	6,850.6	724.0	-1,031.6	-724.0	8.00	8.00	
7,100.0	15.68	180.00	6,948.4	703.7	-1,031.6	-703.7	8.00	8.00	
7,200.0	23.68	180.00	7,042.5	670.1	-1,031.6	-670.1	8.00	8.00	
7,296.5	31.40	180.00	7,128.0	625.5	-1,031.6	-625.5	8.00	8.00	Sharon Springs
7,300.0	31.68	180.00	7,131.0	623.7	-1,031.6	-623.7	8.00	8.00	
7,371.7	37.42	180.00	7,190.0	583.0	-1,031.6	-583.0	8.00	8.00	Niobrara
7,400.0	39.68	180.00	7,212.1	565.4	-1,031.6	-565.4	8.00	8.00	
7,426.2	41.78	180.00	7,232.0	548.3	-1,031.6	-548.3	8.00	8.00	B Chalk
7,500.0	47.68	180.00	7,284.4	496.4	-1,031.6	-496.4	8.00	8.00	
7,600.0	55.68	180.00	7,346.3	418.0	-1,031.6	-418.0	8.00	8.00	
7,700.0	63.68	180.00	7,396.8	331.7	-1,031.6	-331.7	8.00	8.00	
7,800.0	71.68	180.00	7,434.7	239.3	-1,031.6	-239.3	8.00	8.00	
7,820.9	73.36	180.00	7,441.0	219.3	-1,031.6	-219.3	8.00	8.00	Ft. Hayes
7,900.0	79.68	180.00	7,459.4	142.5	-1,031.6	-142.5	8.00	8.00	
7,944.3	83.23	180.00	7,466.0	98.7	-1,031.6	-98.7	8.00	8.00	Codell
8,000.0	87.68	180.00	7,470.4	43.1	-1,031.6	-43.1	8.00	8.00	
8,029.0	90.00	180.00	7,471.0	14.2	-1,031.6	-14.2	8.00	8.00	LP @ 8029' MD; 90°
8,100.0	90.00	180.00	7,471.0	-56.8	-1,031.6	56.8	0.00	0.00	
8,200.0	90.00	180.00	7,471.0	-156.8	-1,031.6	156.8	0.00	0.00	
8,300.0	90.00	180.00	7,471.0	-256.8	-1,031.6	256.8	0.00	0.00	
8,400.0	90.00	180.00	7,471.0	-356.8	-1,031.6	356.8	0.00	0.00	
8,500.0	90.00	180.00	7,471.0	-456.8	-1,031.6	456.8	0.00	0.00	
8,600.0	90.00	180.00	7,471.0	-556.8	-1,031.6	556.8	0.00	0.00	
8,700.0	90.00	180.00	7,471.0	-656.8	-1,031.6	656.8	0.00	0.00	
8,800.0	90.00	180.00	7,471.0	-756.8	-1,031.6	756.8	0.00	0.00	
8,900.0	90.00	180.00	7,471.0	-856.8	-1,031.6	856.8	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well lone 1A-10H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site:	S10-T2N-R66W (lone)	North Reference:	True
Well:	lone 1A-10H	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	180.00	7,471.0	-956.8	-1,031.6	956.8	0.00	0.00	
9,100.0	90.00	180.00	7,471.0	-1,056.8	-1,031.6	1,056.8	0.00	0.00	
9,200.0	90.00	180.00	7,471.0	-1,156.8	-1,031.6	1,156.8	0.00	0.00	
9,300.0	90.00	180.00	7,471.0	-1,256.8	-1,031.6	1,256.8	0.00	0.00	
9,400.0	90.00	180.00	7,471.0	-1,356.8	-1,031.6	1,356.8	0.00	0.00	
9,500.0	90.00	180.00	7,471.0	-1,456.8	-1,031.6	1,456.8	0.00	0.00	
9,600.0	90.00	180.00	7,471.0	-1,556.8	-1,031.6	1,556.8	0.00	0.00	
9,700.0	90.00	180.00	7,471.0	-1,656.8	-1,031.6	1,656.8	0.00	0.00	
9,800.0	90.00	180.00	7,471.0	-1,756.8	-1,031.6	1,756.8	0.00	0.00	
9,900.0	90.00	180.00	7,471.0	-1,856.8	-1,031.6	1,856.8	0.00	0.00	
10,000.0	90.00	180.00	7,471.0	-1,956.8	-1,031.6	1,956.8	0.00	0.00	
10,100.0	90.00	180.00	7,471.0	-2,056.8	-1,031.6	2,056.8	0.00	0.00	
10,200.0	90.00	180.00	7,471.0	-2,156.8	-1,031.6	2,156.8	0.00	0.00	
10,300.0	90.00	180.00	7,471.0	-2,256.8	-1,031.6	2,256.8	0.00	0.00	
10,400.0	90.00	180.00	7,471.0	-2,356.8	-1,031.6	2,356.8	0.00	0.00	
10,500.0	90.00	180.00	7,471.0	-2,456.8	-1,031.6	2,456.8	0.00	0.00	
10,600.0	90.00	180.00	7,471.0	-2,556.8	-1,031.6	2,556.8	0.00	0.00	
10,700.0	90.00	180.00	7,471.0	-2,656.8	-1,031.6	2,656.8	0.00	0.00	
10,800.0	90.00	180.00	7,471.0	-2,756.8	-1,031.6	2,756.8	0.00	0.00	
10,900.0	90.00	180.00	7,471.0	-2,856.8	-1,031.6	2,856.8	0.00	0.00	
11,000.0	90.00	180.00	7,471.0	-2,956.8	-1,031.6	2,956.8	0.00	0.00	
11,100.0	90.00	180.00	7,471.0	-3,056.8	-1,031.6	3,056.8	0.00	0.00	
11,200.0	90.00	180.00	7,471.0	-3,156.8	-1,031.6	3,156.8	0.00	0.00	
11,300.0	90.00	180.00	7,471.0	-3,256.8	-1,031.6	3,256.8	0.00	0.00	
11,400.0	90.00	180.00	7,471.0	-3,356.8	-1,031.6	3,356.8	0.00	0.00	
11,500.0	90.00	180.00	7,471.0	-3,456.8	-1,031.5	3,456.8	0.00	0.00	
11,600.0	90.00	180.00	7,471.0	-3,556.8	-1,031.5	3,556.8	0.00	0.00	
11,700.0	90.00	180.00	7,471.0	-3,656.8	-1,031.5	3,656.8	0.00	0.00	
11,800.0	90.00	180.00	7,471.0	-3,756.8	-1,031.5	3,756.8	0.00	0.00	
11,900.0	90.00	180.00	7,471.0	-3,856.8	-1,031.5	3,856.8	0.00	0.00	
12,000.0	90.00	180.00	7,471.0	-3,956.8	-1,031.5	3,956.8	0.00	0.00	
12,100.0	90.00	180.00	7,471.0	-4,056.8	-1,031.5	4,056.8	0.00	0.00	
12,108.5	90.00	180.00	7,471.0	-4,065.3	-1,031.5	4,065.3	0.00	0.00	TD at 12108.5 - lone 1A-10H PBHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
lone 1A-10H PBHL - hit/miss target - Shape - Point	0.00	0.00	7,471.0	-4,065.3	-1,031.5	1,297,135.48	3,206,200.90	40.146670	-104.762400

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well lone 1A-10H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site:	S10-T2N-R66W (lone)	North Reference:	True
Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
727.7	727.0	Base of Fox Hills				
4,587.5	4,472.0	Sussex				
4,879.4	4,754.0	Sussex Marker				
5,236.0	5,099.0	Shannon				
6,431.1	6,282.0	Teepee Buttes				
7,296.5	7,128.0	Sharon Springs				
7,371.7	7,190.0	Niobrara				
7,426.2	7,232.0	B Chalk				
7,820.9	7,441.0	Ft. Hayes				
7,944.3	7,466.0	Codell				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
200.0	200.0	0.0	0.0	KOP @ 200'	
1,700.0	1,682.9	112.8	-159.3	EOB; Inc=15°	
5,075.0	4,942.9	617.6	-872.2	Start Drop -1.00	
6,575.0	6,425.8	730.4	-1,031.6	EOD; Inc=0°	
6,904.0	6,754.8	730.4	-1,031.6	Start 8° build @ 6904' MD	
8,029.0	7,471.0	14.2	-1,031.6	LP @ 8029' MD; 90°	
12,108.5	7,471.0	-4,065.3	-1,031.5	TD at 12108.5	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S10-T2N-R66W (lone)

lone 1A-10H

Hz

Plan #1

Anticollision Report

26 November, 2012

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	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	11/26/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,107.6	Plan #1 (Hz)	MWD	Geolink MWD

Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Summary						
Offset Well - Wellbore - Design						
S10-T2N-R66W (lone)						
HSR McPeek 13-10A (Existing) - Existing - Existing						Out of range
lone #11 (Existing) - Existing - Existing						Out of range
lone #2 (Exsiting) - Hz - Hz	100.0	88.6	447.6	447.4	1,953.002	CC
lone #2 (Exsiting) - Hz - Hz	200.0	188.8	447.7	447.2	911.401	ES
lone #2 (Exsiting) - Hz - Hz	900.0	891.1	489.0	486.7	209.907	SF
lone #33-10 (Existing) - Existing - Existing	10,425.2	7,455.0	208.1	149.2	3.537	CC, ES, SF
lone #34-10 (Existing) - Existing - Existing	12,096.5	7,449.0	213.9	126.6	2.451	CC
lone #34-10 (Existing) - Existing - Existing	12,100.0	7,449.0	213.9	126.6	2.449	ES
lone #34-10 (Existing) - Existing - Existing	12,108.5	7,449.0	214.2	126.7	2.449	SF
lone #41-10 (Existing) - Existing - Existing						Out of range
lone #44-10 (Existing) - Existing - Existing						Out of range
lone 1B-10H - Hz - Plan #1	200.0	200.0	11.2	10.5	17.128	CC, ES
lone 1B-10H - Hz - Plan #1	12,108.5	11,850.7	415.1	288.4	3.278	SF
lone 1C-10H - Hz - Plan #1	200.0	200.0	22.4	21.7	34.256	CC, ES
lone 1C-10H - Hz - Plan #1	800.0	800.7	43.0	40.2	15.329	SF
lone 1D-10H - Hz - Plan #1	200.0	200.0	30.7	30.1	47.101	CC, ES
lone 1D-10H - Hz - Plan #1	700.0	699.5	49.8	47.4	20.646	SF
lone 1E-10H - Hz - Plan #1	200.0	200.0	41.9	41.3	64.229	CC, ES
lone 1E-10H - Hz - Plan #1	700.0	698.0	64.2	61.8	26.497	SF
lone 1F-10H - Hz - Plan #1	200.0	200.0	50.3	49.7	77.075	CC, ES
lone 1F-10H - Hz - Plan #1	700.0	695.7	78.6	76.2	32.370	SF
lone 1G-10H - Hz - Plan #1	200.0	200.0	61.5	60.8	94.203	CC, ES
lone 1G-10H - Hz - Plan #1	700.0	692.8	97.7	95.3	40.189	SF
lone 4-2-10 (Existing) - Existing - Existing						Out of range
lone 6-0-10 (Existing) - Existing - Existing	1,669.1	1,813.9	468.9	462.5	73.623	CC
lone 6-0-10 (Existing) - Existing - Existing	1,700.0	1,844.5	469.0	462.4	71.782	ES
lone 6-0-10 (Existing) - Existing - Existing	2,400.0	2,519.6	493.9	483.4	46.888	SF
lone 6-8-10 (Existing) - DD - Plan #1						Out of range
lone 8-6-10 (Existing) - DD - Plan #1						Out of range
McPeek #14-10 (Existing) - Existing - Existing						Out of range
McPeek #24-10 (Existing) - Existing - Existing						Out of range
Robert L. McPeek Unit #1 (Existing) - Existing - Existing						Out of range

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	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 S10-T2N-R66W (lone) - lone #2 (Exsiting) - Hz - Hz													Offset Site Error:	0.0 ft
Survey Program: 100-Gyro													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	120.90	-229.9	384.0	447.7					
100.0	100.0	88.6	88.6	0.2	0.1	120.92	-230.0	384.0	447.6	447.4	0.23	1,953.002	CC	
200.0	200.0	188.8	188.8	0.3	0.2	121.01	-230.7	383.7	447.7	447.2	0.49	911.401	ES	
300.0	300.0	288.1	288.0	0.5	0.3	175.87	-231.7	383.2	448.7	447.9	0.75	595.566		
400.0	400.0	389.5	389.5	0.7	0.3	176.07	-233.0	382.6	451.4	450.4	1.02	443.777		
500.0	499.9	488.3	488.3	0.9	0.4	176.27	-234.1	381.9	455.7	454.4	1.28	356.441		
600.0	599.7	589.3	589.3	1.1	0.5	176.47	-235.1	381.2	461.8	460.3	1.54	299.525		
700.0	699.4	690.5	690.4	1.3	0.6	176.67	-236.0	380.3	469.4	467.6	1.81	260.024		
800.0	798.9	790.8	790.8	1.5	0.7	176.85	-236.5	379.4	478.4	476.4	2.07	231.402		
900.0	898.3	891.1	891.1	1.8	0.8	177.01	-236.8	378.4	489.0	486.7	2.33	209.907	SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 8215-MWD													Offset Well Error:		0.0 ft
S10-T2N-R66W (lone) - lone #33-10 (Existing) - Existing - Existing															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
10,000.0	7,471.0	7,455.0	7,455.0	42.7	13.0	-90.00	-2,382.0	-823.5	473.4	421.6	51.79	9.139			
10,100.0	7,471.0	7,455.0	7,455.0	44.2	13.0	-90.00	-2,382.0	-823.5	386.0	332.6	53.43	7.225			
10,200.0	7,471.0	7,455.0	7,455.0	45.7	13.0	-90.00	-2,382.0	-823.5	306.6	251.5	55.08	5.566			
10,300.0	7,471.0	7,455.0	7,455.0	47.3	13.0	-90.00	-2,382.0	-823.5	242.8	186.1	56.74	4.279			
10,400.0	7,471.0	7,455.0	7,455.0	48.8	13.0	-90.00	-2,382.0	-823.5	209.6	151.2	58.40	3.588			
10,425.2	7,471.0	7,455.0	7,455.0	49.2	13.0	-90.00	-2,382.0	-823.5	208.1	149.2	58.82	3.537	CC, ES, SF		
10,500.0	7,471.0	7,455.0	7,455.0	50.4	13.0	-90.00	-2,382.0	-823.5	221.1	161.0	60.07	3.680			
10,600.0	7,471.0	7,455.0	7,455.0	51.9	13.0	-90.00	-2,382.0	-823.5	271.7	210.0	61.75	4.401			
10,700.0	7,471.0	7,455.0	7,455.0	53.5	13.0	-90.00	-2,382.0	-823.5	344.7	281.3	63.43	5.434			
10,800.0	7,471.0	7,455.0	7,455.0	55.1	13.0	-90.00	-2,382.0	-823.5	428.7	363.6	65.12	6.583			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor			
11,700.0	7,471.0	7,449.0	7,449.0	69.8	13.0	-90.00	-4,053.3	-817.7	450.5	370.1	80.44	5.600			
11,800.0	7,471.0	7,449.0	7,449.0	71.5	13.0	-90.00	-4,053.3	-817.7	365.6	283.4	82.16	4.450			
11,900.0	7,471.0	7,449.0	7,449.0	73.1	13.0	-90.00	-4,053.3	-817.7	290.4	206.6	83.88	3.463			
12,000.0	7,471.0	7,449.0	7,449.0	74.8	13.0	-90.00	-4,053.3	-817.7	234.6	149.0	85.60	2.741			
12,096.5	7,471.0	7,449.0	7,449.0	76.4	13.0	-90.00	-4,053.3	-817.7	213.9	126.6	87.26	2.451 CC			
12,100.0	7,471.0	7,449.0	7,449.0	76.5	13.0	-90.00	-4,053.3	-817.7	213.9	126.6	87.32	2.449 ES			
12,108.5	7,471.0	7,449.0	7,449.0	76.6	13.0	-90.00	-4,053.3	-817.7	214.2	126.7	87.47	2.449 SF			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	11.2	11.2						
100.0	100.0	100.0	100.0	0.2	0.2	90.04	0.0	11.2	11.2	10.9	0.30	36.815			
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	11.2	11.2	10.5	0.65	17.128 CC, ES			
300.0	300.0	300.0	300.0	0.5	0.5	147.16	0.0	11.2	11.9	10.9	1.00	11.879			
400.0	400.0	400.1	400.1	0.7	0.7	150.61	0.6	10.6	13.5	12.1	1.35	9.980			
500.0	499.9	500.3	500.3	0.9	0.9	152.23	2.5	8.8	15.3	13.6	1.71	8.978			
600.0	599.7	600.5	600.4	1.1	1.0	152.55	5.7	5.8	17.3	15.3	2.06	8.391			
700.0	699.4	700.7	700.4	1.3	1.2	151.95	10.2	1.5	19.5	17.1	2.43	8.025			
800.0	798.9	801.0	800.4	1.5	1.4	150.72	15.9	-3.9	21.9	19.1	2.81	7.785			
900.0	898.3	901.3	900.2	1.8	1.7	149.08	22.9	-10.5	24.5	21.3	3.21	7.619			
1,000.0	997.4	1,001.6	999.8	2.0	1.9	147.17	31.1	-18.3	27.3	23.6	3.64	7.494			
1,100.0	1,096.3	1,101.9	1,099.2	2.3	2.2	145.13	40.6	-27.4	30.3	26.2	4.10	7.391			
1,200.0	1,194.9	1,202.2	1,198.5	2.7	2.5	143.02	51.4	-37.6	33.6	29.0	4.61	7.296			
1,300.0	1,293.3	1,302.5	1,297.4	3.0	2.8	140.90	63.4	-49.0	37.2	32.0	5.17	7.202			
1,400.0	1,391.2	1,402.9	1,396.1	3.4	3.2	138.82	76.7	-61.7	41.0	35.3	5.78	7.106			
1,500.0	1,488.9	1,503.2	1,494.4	3.8	3.5	136.80	91.3	-75.5	45.2	38.7	6.45	7.008			
1,600.0	1,586.1	1,603.6	1,592.4	4.2	3.9	134.86	107.1	-90.5	49.6	42.4	7.18	6.909			
1,700.0	1,682.9	1,703.9	1,689.9	4.7	4.4	133.02	124.1	-106.6	54.4	46.4	7.98	6.809			
1,800.0	1,779.5	1,804.3	1,787.1	5.2	4.8	130.67	142.4	-124.0	58.8	50.0	8.87	6.631			
1,900.0	1,876.1	1,904.2	1,883.6	5.7	5.3	128.02	161.2	-141.8	63.0	53.2	9.82	6.417			
2,000.0	1,972.7	2,004.1	1,980.0	6.1	5.8	125.70	179.9	-159.6	67.3	56.6	10.79	6.242			
2,100.0	2,069.3	2,103.9	2,076.5	6.6	6.2	123.67	198.7	-177.4	71.7	60.0	11.76	6.099			
2,200.0	2,165.9	2,203.8	2,173.0	7.1	6.7	121.87	217.4	-195.1	76.2	63.5	12.75	5.980			
2,300.0	2,262.5	2,303.7	2,269.4	7.6	7.2	120.28	236.2	-212.9	80.8	67.1	13.74	5.881			
2,400.0	2,359.1	2,403.5	2,365.9	8.1	7.7	118.85	254.9	-230.7	85.4	70.7	14.73	5.798			
2,500.0	2,455.7	2,503.4	2,462.4	8.5	8.1	117.58	273.7	-248.5	90.1	74.3	15.72	5.727			
2,600.0	2,552.3	2,603.3	2,558.8	9.0	8.6	116.42	292.4	-266.3	94.7	78.0	16.72	5.667			
2,700.0	2,648.8	2,703.2	2,655.3	9.5	9.1	115.38	311.2	-284.1	99.5	81.8	17.71	5.616			
2,800.0	2,745.4	2,803.0	2,751.8	10.0	9.6	114.43	329.9	-301.9	104.2	85.5	18.71	5.572			
2,900.0	2,842.0	2,902.9	2,848.3	10.5	10.1	113.57	348.7	-319.7	109.0	89.3	19.70	5.533			
3,000.0	2,938.6	3,002.8	2,944.7	11.0	10.6	112.78	367.4	-337.5	113.8	93.1	20.70	5.500			
3,100.0	3,035.2	3,102.7	3,041.2	11.5	11.0	112.05	386.2	-355.3	118.7	97.0	21.69	5.470			
3,200.0	3,131.8	3,202.5	3,137.7	12.0	11.5	111.38	404.9	-373.1	123.5	100.8	22.69	5.444			
3,300.0	3,228.4	3,302.4	3,234.1	12.5	12.0	110.76	423.7	-390.9	128.4	104.7	23.68	5.421			
3,400.0	3,325.0	3,402.3	3,330.6	12.9	12.5	110.18	442.4	-408.7	133.3	108.6	24.67	5.401			
3,500.0	3,421.6	3,502.1	3,427.1	13.4	13.0	109.65	461.2	-426.5	138.1	112.5	25.67	5.382			
3,600.0	3,518.2	3,602.0	3,523.5	13.9	13.5	109.15	479.9	-444.3	143.0	116.4	26.66	5.366			
3,700.0	3,614.8	3,701.9	3,620.0	14.4	14.0	108.69	498.7	-462.0	148.0	120.3	27.65	5.351			
3,800.0	3,711.4	3,801.8	3,716.5	14.9	14.4	108.25	517.4	-479.8	152.9	124.2	28.64	5.338			
3,900.0	3,808.0	3,901.6	3,812.9	15.4	14.9	107.84	536.2	-497.6	157.8	128.2	29.63	5.326			
4,000.0	3,904.6	4,001.5	3,909.4	15.9	15.4	107.46	554.9	-515.4	162.7	132.1	30.62	5.315			
4,100.0	4,001.1	4,101.4	4,005.9	16.4	15.9	107.10	573.7	-533.2	167.7	136.1	31.61	5.305			
4,200.0	4,097.7	4,201.2	4,102.3	16.9	16.4	106.77	592.4	-551.0	172.6	140.0	32.60	5.296			
4,300.0	4,194.3	4,300.7	4,198.8	17.4	16.8	106.84	610.2	-567.9	177.7	144.2	33.51	5.302			
4,400.0	4,290.9	4,400.2	4,295.6	17.9	17.3	107.44	626.9	-583.7	183.0	148.6	34.35	5.327			
4,500.0	4,387.5	4,499.6	4,392.7	18.3	17.7	108.53	642.2	-598.3	188.5	153.4	35.10	5.370			
4,600.0	4,484.1	4,598.8	4,490.0	18.8	18.0	110.05	656.4	-611.7	194.3	158.6	35.75	5.436			
4,700.0	4,580.7	4,697.8	4,587.3	19.3	18.4	111.96	669.3	-623.9	200.6	164.4	36.28	5.531			
4,800.0	4,677.3	4,796.5	4,684.7	19.8	18.7	114.21	680.9	-635.0	207.5	170.9	36.68	5.658			
4,900.0	4,773.9	4,894.8	4,782.0	20.3	19.0	116.74	691.3	-644.8	215.2	178.3	36.93	5.827			
5,000.0	4,870.5	4,992.8	4,879.1	20.8	19.2	119.49	700.4	-653.5	223.8	186.8	37.04	6.043			
5,100.0	4,967.1	5,090.3	4,976.0	21.3	19.5	122.42	708.3	-661.0	233.5	196.5	36.99	6.313			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft								
Survey Program: 0-MWD													Offset Well Error:		0.0 ft							
Reference													Offset		Semi Major Axis		Distance				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning									
5,200.0	5,064.0	5,187.4	5,072.7	21.8	19.7	125.29	714.9	-667.3	243.8	206.9	36.82	6.621										
5,300.0	5,161.3	5,284.4	5,169.4	22.2	19.9	127.95	720.4	-672.5	254.2	217.7	36.58	6.951										
5,400.0	5,259.1	5,381.1	5,265.9	22.6	20.0	130.42	724.7	-676.5	264.9	228.6	36.28	7.302										
5,500.0	5,357.1	5,477.6	5,362.3	23.0	20.2	132.73	727.8	-679.5	275.7	239.8	35.94	7.672										
5,600.0	5,455.5	5,573.9	5,458.6	23.3	20.3	134.90	729.7	-681.3	286.7	251.1	35.57	8.060										
5,700.0	5,554.2	5,669.9	5,554.6	23.6	20.3	136.93	730.4	-682.0	297.7	262.5	35.17	8.464										
5,800.0	5,653.2	5,768.5	5,653.2	23.9	20.4	138.81	730.4	-682.0	308.4	273.6	34.79	8.864										
5,900.0	5,752.4	5,867.7	5,752.4	24.2	20.5	140.36	730.4	-682.0	318.0	283.5	34.50	9.219										
6,000.0	5,851.8	5,967.1	5,851.8	24.4	20.6	141.63	730.4	-682.0	326.5	292.2	34.29	9.522										
6,100.0	5,951.4	6,066.7	5,951.4	24.6	20.7	142.65	730.4	-682.0	333.7	299.6	34.16	9.770										
6,200.0	6,051.1	6,166.4	6,051.1	24.8	20.8	143.44	730.4	-682.0	339.7	305.6	34.10	9.960										
6,300.0	6,151.0	6,266.3	6,151.0	24.9	20.9	144.03	730.4	-682.0	344.2	310.1	34.12	10.090										
6,400.0	6,250.9	6,366.2	6,250.9	25.1	21.0	144.43	730.4	-682.0	347.4	313.2	34.19	10.161										
6,500.0	6,350.8	6,466.2	6,350.8	25.2	21.1	144.65	730.4	-682.0	349.2	314.9	34.33	10.173										
6,600.0	6,450.8	6,566.2	6,450.8	25.2	21.1	90.00	730.4	-682.0	349.6	315.1	34.52	10.127										
6,663.5	6,514.3	6,629.6	6,514.3	25.3	21.2	90.00	730.4	-682.0	349.6	314.9	34.67	10.083										
6,700.0	6,550.8	6,666.2	6,550.8	25.3	21.2	90.04	730.1	-682.0	349.6	314.9	34.72	10.069										
6,709.6	6,560.4	6,675.7	6,560.4	25.3	21.2	90.10	729.8	-682.0	349.6	314.9	34.71	10.071										
6,800.0	6,650.8	6,765.1	6,649.2	25.4	21.2	91.61	720.6	-682.0	349.7	315.6	34.17	10.236										
6,900.0	6,750.8	6,859.6	6,741.2	25.5	21.0	95.16	698.8	-682.0	351.2	318.5	32.71	10.736										
7,000.0	6,850.6	6,950.0	6,825.6	25.5	20.8	-80.28	666.9	-682.0	355.1	324.4	30.71	11.563										
7,100.0	6,948.4	7,036.1	6,901.8	25.4	20.5	-76.08	626.8	-682.0	361.0	332.1	28.87	12.502										
7,200.0	7,042.5	7,120.6	6,971.4	25.1	20.1	-72.22	578.9	-682.0	368.2	340.9	27.32	13.478										
7,300.0	7,131.0	7,200.0	7,031.1	24.8	19.8	-68.89	526.7	-682.0	376.3	350.1	26.15	14.389										
7,400.0	7,212.1	7,284.0	7,087.6	24.5	19.4	-65.81	464.7	-682.0	384.5	359.3	25.25	15.231										
7,500.0	7,284.4	7,363.5	7,134.1	24.1	19.0	-63.29	400.2	-682.0	392.5	367.9	24.63	15.933										
7,600.0	7,346.3	7,441.9	7,172.7	23.8	18.7	-61.23	332.0	-682.0	399.7	375.5	24.22	16.506										
7,700.0	7,396.8	7,519.4	7,203.2	23.4	18.5	-59.62	260.7	-682.0	405.8	381.9	23.97	16.932										
7,800.0	7,434.7	7,600.0	7,226.7	23.2	18.3	-58.41	183.7	-682.0	410.6	386.7	23.87	17.203										
7,900.0	7,459.4	7,672.8	7,240.3	23.1	18.2	-57.70	112.2	-682.0	413.7	389.8	23.95	17.272										
8,000.0	7,470.4	7,750.0	7,246.7	23.0	18.2	-57.37	35.3	-682.0	415.1	390.9	24.21	17.147										
8,100.0	7,471.0	7,842.2	7,247.0	23.2	18.4	-57.35	-56.9	-682.0	415.2	390.5	24.73	16.786										
8,200.0	7,471.0	7,942.2	7,247.0	23.4	18.7	-57.35	-156.9	-682.0	415.2	389.6	25.57	16.237										
8,300.0	7,471.0	8,042.2	7,247.0	23.8	19.2	-57.35	-256.9	-682.0	415.2	388.5	26.71	15.544										
8,400.0	7,471.0	8,142.2	7,247.0	24.3	19.8	-57.35	-356.9	-682.0	415.2	387.1	28.12	14.767										
8,500.0	7,471.0	8,242.2	7,247.0	24.9	20.6	-57.35	-456.9	-682.0	415.2	385.4	29.75	13.955										
8,600.0	7,471.0	8,342.2	7,247.0	25.6	21.5	-57.35	-556.9	-682.0	415.2	383.6	31.58	13.146										
8,700.0	7,471.0	8,442.2	7,247.0	26.4	22.5	-57.35	-656.9	-682.0	415.2	381.6	33.57	12.366										
8,800.0	7,471.0	8,542.2	7,247.0	27.3	23.5	-57.35	-756.9	-682.0	415.2	379.5	35.70	11.630										
8,900.0	7,471.0	8,642.2	7,247.0	28.3	24.7	-57.35	-856.9	-682.0	415.2	377.2	37.94	10.944										
9,000.0	7,471.0	8,742.2	7,247.0	29.4	25.9	-57.35	-956.9	-682.0	415.2	374.9	40.27	10.310										
9,100.0	7,471.0	8,842.2	7,247.0	30.5	27.2	-57.35	-1,056.9	-682.0	415.2	372.5	42.68	9.728										
9,200.0	7,471.0	8,942.2	7,247.0	31.7	28.6	-57.35	-1,156.9	-682.0	415.2	370.0	45.15	9.194										
9,300.0	7,471.0	9,042.2	7,247.0	33.0	29.9	-57.35	-1,256.9	-682.0	415.2	367.5	47.69	8.706										
9,400.0	7,471.0	9,142.2	7,247.0	34.3	31.4	-57.35	-1,356.9	-682.0	415.2	364.9	50.26	8.259										
9,500.0	7,471.0	9,242.2	7,247.0	35.6	32.8	-57.35	-1,456.9	-682.0	415.1	362.3	52.88	7.850										
9,600.0	7,471.0	9,342.2	7,247.0	37.0	34.3	-57.35	-1,556.9	-682.0	415.1	359.6	55.53	7.475										
9,700.0	7,471.0	9,442.2	7,247.0	38.4	35.8	-57.35	-1,656.9	-682.0	415.1	356.9	58.22	7.131										
9,800.0	7,471.0	9,542.2	7,247.0	39.8	37.3	-57.35	-1,756.9	-682.0	415.1	354.2	60.93	6.814										
9,900.0	7,471.0	9,642.2	7,247.0	41.2	38.8	-57.34	-1,856.9	-682.0	415.1	351.5	63.66	6.522										
10,000.0	7,471.0	9,742.2	7,247.0	42.7	40.4	-57.34	-1,956.9	-682.0	415.1	348.7	66.41	6.251										
10,100.0	7,471.0	9,842.2	7,247.0	44.2	42.0	-57.34	-2,056.9	-682.0	415.1	346.0	69.17	6.001										

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
S10-T2N-R66W (lone) - lone 1B-10H - Hz - Plan #1												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,200.0	7,471.0	9,942.2	7,247.0	45.7	43.6	-57.34	-2,156.9	-682.1	415.1	343.2	71.96	5.769	
10,300.0	7,471.0	10,042.2	7,247.0	47.3	45.2	-57.34	-2,256.9	-682.1	415.1	340.4	74.75	5.553	
10,400.0	7,471.0	10,142.2	7,247.0	48.8	46.8	-57.34	-2,356.9	-682.1	415.1	337.6	77.56	5.352	
10,500.0	7,471.0	10,242.2	7,247.0	50.4	48.4	-57.34	-2,456.9	-682.1	415.1	334.7	80.38	5.164	
10,600.0	7,471.0	10,342.2	7,247.0	51.9	50.0	-57.34	-2,556.9	-682.1	415.1	331.9	83.21	4.989	
10,700.0	7,471.0	10,442.2	7,247.0	53.5	51.7	-57.34	-2,656.9	-682.1	415.1	329.1	86.05	4.824	
10,800.0	7,471.0	10,542.2	7,247.0	55.1	53.3	-57.34	-2,756.9	-682.1	415.1	326.2	88.90	4.669	
10,900.0	7,471.0	10,642.2	7,247.0	56.7	55.0	-57.34	-2,856.9	-682.1	415.1	323.4	91.75	4.524	
11,000.0	7,471.0	10,742.2	7,247.0	58.3	56.6	-57.34	-2,956.9	-682.1	415.1	320.5	94.61	4.387	
11,100.0	7,471.0	10,842.2	7,247.0	59.9	58.3	-57.34	-3,056.9	-682.1	415.1	317.6	97.48	4.258	
11,200.0	7,471.0	10,942.2	7,247.0	61.6	60.0	-57.34	-3,156.9	-682.1	415.1	314.7	100.35	4.136	
11,300.0	7,471.0	11,042.2	7,247.0	63.2	61.6	-57.34	-3,256.9	-682.1	415.1	311.9	103.23	4.021	
11,400.0	7,471.0	11,142.2	7,247.0	64.8	63.3	-57.34	-3,356.9	-682.1	415.1	309.0	106.11	3.912	
11,500.0	7,471.0	11,242.2	7,247.0	66.5	65.0	-57.34	-3,456.9	-682.1	415.1	306.1	108.99	3.808	
11,600.0	7,471.0	11,342.2	7,247.0	68.1	66.7	-57.34	-3,556.9	-682.1	415.1	303.2	111.88	3.710	
11,700.0	7,471.0	11,442.2	7,247.0	69.8	68.4	-57.34	-3,656.9	-682.1	415.1	300.3	114.78	3.616	
11,800.0	7,471.0	11,542.2	7,247.0	71.5	70.1	-57.34	-3,756.9	-682.1	415.1	297.4	117.67	3.527	
11,900.0	7,471.0	11,642.2	7,247.0	73.1	71.8	-57.34	-3,856.9	-682.1	415.1	294.5	120.57	3.443	
12,000.0	7,471.0	11,742.2	7,247.0	74.8	73.5	-57.34	-3,956.9	-682.1	415.1	291.6	123.47	3.362	
12,100.0	7,471.0	11,842.2	7,247.0	76.5	75.2	-57.34	-4,056.9	-682.1	415.1	288.7	126.38	3.284	
12,108.5	7,471.0	11,850.7	7,247.0	76.6	75.3	-57.34	-4,065.4	-682.1	415.1	288.4	126.63	3.278 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	22.4	22.4						
100.0	100.0	100.0	100.0	0.2	0.2	90.04	0.0	22.4	22.4	22.1	0.30	73.630			
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	22.4	22.4	21.7	0.65	34.256 CC, ES			
300.0	300.0	300.0	300.0	0.5	0.5	145.99	0.0	22.4	23.1	22.1	1.00	23.032			
400.0	400.0	400.0	400.0	0.7	0.7	149.30	0.0	22.4	25.3	23.9	1.35	18.705			
500.0	499.9	500.1	500.1	0.9	0.9	152.18	0.8	22.0	28.7	27.0	1.70	16.832			
600.0	599.7	600.3	600.3	1.1	1.0	153.18	3.2	21.0	32.8	30.7	2.06	15.912			
700.0	699.4	700.5	700.4	1.3	1.2	152.85	7.3	19.3	37.5	35.1	2.42	15.483			
800.0	798.9	800.7	800.4	1.5	1.4	151.64	12.9	17.0	43.0	40.2	2.80	15.329 SF			
900.0	898.3	900.9	900.3	1.8	1.6	149.90	20.2	14.0	49.1	45.9	3.20	15.333			
1,000.0	997.4	1,001.1	1,000.0	2.0	1.8	147.86	29.1	10.3	56.0	52.3	3.63	15.422			
1,100.0	1,096.3	1,101.2	1,099.4	2.3	2.1	145.69	39.6	6.0	63.6	59.5	4.09	15.550			
1,200.0	1,194.9	1,201.2	1,198.6	2.7	2.3	143.51	51.7	1.0	72.1	67.5	4.60	15.687			
1,300.0	1,293.3	1,301.2	1,297.5	3.0	2.6	141.37	65.3	-4.7	81.4	76.3	5.15	15.815			
1,400.0	1,391.2	1,401.1	1,396.1	3.4	2.9	139.32	80.6	-11.0	91.7	85.9	5.75	15.927			
1,500.0	1,488.9	1,501.0	1,494.2	3.8	3.3	137.39	97.4	-18.0	102.8	96.3	6.42	16.018			
1,600.0	1,586.1	1,600.7	1,591.9	4.2	3.6	135.58	115.8	-25.6	114.8	107.6	7.13	16.089			
1,700.0	1,682.9	1,700.3	1,689.1	4.7	4.0	133.90	135.7	-33.9	127.7	119.8	7.91	16.143			
1,800.0	1,779.5	1,799.8	1,785.9	5.2	4.5	132.17	157.2	-42.7	141.0	132.2	8.75	16.117			
1,900.0	1,876.1	1,898.8	1,882.0	5.7	4.9	130.42	179.3	-51.9	154.2	144.6	9.61	16.049			
2,000.0	1,972.7	1,997.8	1,978.0	6.1	5.3	128.95	201.4	-61.1	167.5	157.0	10.48	15.988			
2,100.0	2,069.3	2,096.8	2,074.1	6.6	5.7	127.70	223.6	-70.3	181.0	169.6	11.36	15.935			
2,200.0	2,165.9	2,195.9	2,170.2	7.1	6.2	126.63	245.7	-79.4	194.5	182.2	12.24	15.888			
2,300.0	2,262.5	2,294.9	2,266.3	7.6	6.6	125.69	267.8	-88.6	208.0	194.9	13.13	15.847			
2,400.0	2,359.1	2,393.9	2,362.4	8.1	7.1	124.87	290.0	-97.8	221.6	207.6	14.02	15.812			
2,500.0	2,455.7	2,492.9	2,458.4	8.5	7.5	124.14	312.1	-106.9	235.3	220.4	14.91	15.780			
2,600.0	2,552.3	2,591.9	2,554.5	9.0	7.9	123.49	334.2	-116.1	249.0	233.2	15.81	15.753			
2,700.0	2,648.8	2,691.0	2,650.6	9.5	8.4	122.91	356.4	-125.3	262.7	246.0	16.70	15.728			
2,800.0	2,745.4	2,790.0	2,746.7	10.0	8.8	122.39	378.5	-134.4	276.4	258.8	17.60	15.706			
2,900.0	2,842.0	2,889.0	2,842.8	10.5	9.3	121.92	400.6	-143.6	290.2	271.7	18.50	15.687			
3,000.0	2,938.6	2,988.0	2,938.8	11.0	9.7	121.48	422.8	-152.8	304.0	284.6	19.40	15.669			
3,100.0	3,035.2	3,087.0	3,034.9	11.5	10.2	121.09	444.9	-161.9	317.8	297.5	20.30	15.654			
3,200.0	3,131.8	3,186.1	3,131.0	12.0	10.6	120.73	467.0	-171.1	331.6	310.4	21.20	15.640			
3,300.0	3,228.4	3,285.1	3,227.1	12.5	11.1	120.40	489.1	-180.3	345.4	323.3	22.10	15.627			
3,400.0	3,325.0	3,384.1	3,323.2	12.9	11.5	120.09	511.3	-189.4	359.2	336.2	23.01	15.615			
3,500.0	3,421.6	3,483.1	3,419.3	13.4	12.0	119.81	533.4	-198.6	373.1	349.2	23.91	15.604			
3,600.0	3,518.2	3,582.2	3,515.3	13.9	12.4	119.55	555.5	-207.8	386.9	362.1	24.81	15.594			
3,700.0	3,614.8	3,681.2	3,611.4	14.4	12.9	119.30	577.7	-216.9	400.8	375.0	25.71	15.585			
3,800.0	3,711.4	3,780.5	3,708.0	14.9	13.3	119.20	599.1	-225.8	414.6	388.0	26.58	15.597			
3,900.0	3,808.0	3,879.8	3,804.9	15.4	13.7	119.33	618.9	-234.0	428.4	401.0	27.40	15.633			
4,000.0	3,904.6	3,979.0	3,902.2	15.9	14.1	119.68	637.2	-241.6	442.1	413.9	28.17	15.691			
4,100.0	4,001.1	4,078.2	3,999.7	16.4	14.4	120.23	653.9	-248.5	455.8	426.9	28.89	15.774			
4,200.0	4,097.7	4,177.2	4,097.3	16.9	14.7	120.95	669.1	-254.8	469.5	439.9	29.56	15.881			
4,300.0	4,194.3	4,275.9	4,194.9	17.4	15.0	121.83	682.6	-260.4	483.3	453.1	30.18	16.016			
4,400.0	4,290.9	4,374.4	4,292.6	17.9	15.3	122.86	694.6	-265.3	497.2	466.5	30.73	16.181			

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference															
Offset				Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	30.7	30.7						
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	30.7	30.7	30.4	0.30	101.241			
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	30.7	30.7	30.1	0.65	47.101	CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	145.66	0.0	30.7	31.5	30.5	1.00	31.398			
400.0	400.0	400.0	400.0	0.7	0.7	148.16	0.0	30.7	33.7	32.3	1.35	24.890			
500.0	499.9	499.9	499.9	0.9	0.8	151.67	0.0	30.7	37.4	35.7	1.70	21.978			
600.0	599.7	599.7	599.7	1.1	1.0	154.36	0.8	30.8	42.9	40.8	2.06	20.848			
700.0	699.4	699.5	699.5	1.3	1.2	155.24	3.4	31.2	49.8	47.4	2.41	20.646	SF		
800.0	798.9	799.2	799.1	1.5	1.4	154.88	7.7	31.7	58.2	55.5	2.78	20.955			
900.0	898.3	898.8	898.5	1.8	1.6	153.77	13.7	32.4	68.1	65.0	3.16	21.559			
1,000.0	997.4	998.1	997.5	2.0	1.8	152.25	21.5	33.3	79.6	76.0	3.56	22.329			
1,100.0	1,096.3	1,097.3	1,096.2	2.3	2.0	150.54	30.9	34.5	92.6	88.6	3.99	23.179			
1,200.0	1,194.9	1,196.1	1,194.4	2.7	2.2	148.78	41.9	35.8	107.2	102.7	4.46	24.051			
1,300.0	1,293.3	1,294.6	1,292.1	3.0	2.5	147.06	54.6	37.3	123.4	118.4	4.95	24.908			
1,400.0	1,391.2	1,392.7	1,389.1	3.4	2.8	145.41	68.9	39.0	141.3	135.8	5.49	25.725			
1,500.0	1,488.9	1,490.5	1,485.5	3.8	3.1	143.87	84.8	40.9	160.8	154.7	6.07	26.488			
1,600.0	1,586.1	1,587.7	1,581.2	4.2	3.4	142.43	102.2	43.0	182.0	175.3	6.69	27.192			
1,700.0	1,682.9	1,684.5	1,676.1	4.7	3.7	141.10	121.1	45.3	204.9	197.6	7.36	27.835			
1,800.0	1,779.5	1,780.9	1,770.2	5.2	4.1	139.88	141.5	47.8	228.8	220.7	8.07	28.342			
1,900.0	1,876.1	1,877.6	1,864.5	5.7	4.5	138.63	163.1	50.3	253.0	244.2	8.81	28.722			
2,000.0	1,972.7	1,974.5	1,958.9	6.1	4.9	137.60	184.8	52.9	277.3	267.8	9.55	29.026			
2,100.0	2,069.3	2,071.4	2,053.3	6.6	5.2	136.73	206.4	55.5	301.7	291.4	10.31	29.274			
2,200.0	2,165.9	2,168.3	2,147.7	7.1	5.6	135.99	228.0	58.1	326.1	315.1	11.06	29.480			
2,300.0	2,262.5	2,265.2	2,242.1	7.6	6.0	135.35	249.7	60.7	350.6	338.8	11.82	29.653			
2,400.0	2,359.1	2,362.1	2,336.5	8.1	6.4	134.80	271.3	63.3	375.1	362.5	12.59	29.800			
2,500.0	2,455.7	2,459.0	2,430.9	8.5	6.8	134.32	293.0	65.9	399.6	386.3	13.35	29.927			
2,600.0	2,552.3	2,555.8	2,525.4	9.0	7.2	133.89	314.6	68.5	424.2	410.1	14.12	30.036			
2,700.0	2,648.8	2,652.7	2,619.8	9.5	7.7	133.50	336.2	71.1	448.8	433.9	14.89	30.132			
2,800.0	2,745.4	2,749.6	2,714.2	10.0	8.1	133.16	357.9	73.7	473.4	457.7	15.67	30.216			
2,900.0	2,842.0	2,846.5	2,808.6	10.5	8.5	132.85	379.5	76.3	498.0	481.6	16.44	30.291			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
S10-T2N-R66W (lone) - lone 1E-10H - Hz - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	41.9	41.9					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	41.9	41.9	41.6	0.30	138.056		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	41.9	41.9	41.3	0.65	64.229 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	145.42	0.0	41.9	42.6	41.6	1.00	42.554		
400.0	400.0	400.0	400.0	0.7	0.7	147.31	0.0	41.9	44.8	43.5	1.35	33.144		
500.0	499.9	499.5	499.5	0.9	0.8	149.16	0.7	42.4	49.0	47.2	1.70	28.733		
600.0	599.7	598.8	598.8	1.1	1.0	149.99	2.9	43.8	55.4	53.4	2.06	26.914		
700.0	699.4	698.0	697.8	1.3	1.2	150.01	6.5	46.1	64.2	61.8	2.42	26.497 SF		
800.0	798.9	796.8	796.5	1.5	1.4	149.51	11.5	49.3	75.3	72.5	2.80	26.897		
900.0	898.3	895.2	894.6	1.8	1.6	148.71	18.0	53.5	88.7	85.5	3.19	27.787		
1,000.0	997.4	993.2	992.1	2.0	1.8	147.77	25.8	58.5	104.3	100.7	3.60	28.969		
1,100.0	1,096.3	1,090.6	1,088.9	2.3	2.1	146.81	34.9	64.4	122.3	118.3	4.03	30.317		
1,200.0	1,194.9	1,187.4	1,184.9	2.7	2.3	145.86	45.4	71.1	142.6	138.1	4.49	31.744		
1,300.0	1,293.3	1,283.4	1,279.9	3.0	2.6	144.97	57.2	78.6	165.1	160.2	4.97	33.195		
1,400.0	1,391.2	1,378.7	1,373.9	3.4	2.9	144.13	70.1	87.0	190.0	184.5	5.49	34.629		
1,500.0	1,488.9	1,473.1	1,466.9	3.8	3.2	143.35	84.3	96.1	217.0	211.0	6.02	36.024		
1,600.0	1,586.1	1,566.6	1,558.6	4.2	3.5	142.63	99.6	105.9	246.3	239.7	6.59	37.362		
1,700.0	1,682.9	1,659.2	1,649.1	4.7	3.9	141.96	115.9	116.4	277.8	270.6	7.19	38.637		
1,800.0	1,779.5	1,750.9	1,738.4	5.2	4.3	141.45	133.4	127.6	310.8	303.0	7.82	39.758		
1,900.0	1,876.1	1,843.4	1,828.2	5.7	4.7	140.84	152.0	139.5	344.6	336.1	8.47	40.707		
2,000.0	1,972.7	1,937.4	1,919.4	6.1	5.1	140.30	171.2	151.8	378.5	369.4	9.13	41.481		
2,100.0	2,069.3	2,031.4	2,010.6	6.6	5.5	139.85	190.3	164.1	412.5	402.7	9.79	42.131		
2,200.0	2,165.9	2,125.4	2,101.9	7.1	5.9	139.47	209.4	176.4	446.5	436.0	10.46	42.683		
2,300.0	2,262.5	2,219.4	2,193.1	7.6	6.3	139.15	228.6	188.7	480.5	469.4	11.13	43.156		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
S10-T2N-R66W (lone) - lone 1F-10H - Hz - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	50.3	50.3					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	50.3	50.3	50.0	0.30	165.667		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	50.3	50.3	49.7	0.65	77.075 CC, ES		
300.0	300.0	300.0	300.0	0.5	0.5	145.31	0.0	50.3	51.0	50.0	1.00	50.922		
400.0	400.0	399.3	399.3	0.7	0.7	146.26	0.5	51.0	53.8	52.5	1.35	39.834		
500.0	499.9	498.4	498.4	0.9	0.9	146.88	2.2	52.9	59.4	57.7	1.70	34.846		
600.0	599.7	597.3	597.1	1.1	1.0	147.16	5.0	56.2	67.7	65.6	2.06	32.801		
700.0	699.4	695.7	695.4	1.3	1.2	147.19	8.9	60.7	78.6	76.2	2.43	32.370 SF		
800.0	798.9	793.7	793.1	1.5	1.4	147.04	13.8	66.4	92.3	89.5	2.81	32.891		
900.0	898.3	891.1	890.1	1.8	1.7	146.78	19.8	73.4	108.7	105.5	3.20	33.993		
1,000.0	997.4	987.9	986.2	2.0	1.9	146.47	26.9	81.6	127.7	124.1	3.60	35.450		
1,100.0	1,096.3	1,083.8	1,081.3	2.3	2.1	146.14	34.9	90.9	149.3	145.3	4.02	37.120		
1,200.0	1,194.9	1,178.8	1,175.4	2.7	2.4	145.81	43.8	101.3	173.6	169.1	4.46	38.906		
1,300.0	1,293.3	1,272.9	1,268.2	3.0	2.7	145.48	53.7	112.8	200.4	195.5	4.92	40.743		
1,400.0	1,391.2	1,365.9	1,359.8	3.4	3.0	145.16	64.4	125.3	229.8	224.4	5.39	42.588		
1,500.0	1,488.9	1,457.8	1,449.9	3.8	3.4	144.84	76.0	138.7	261.6	255.7	5.89	44.408		
1,600.0	1,586.1	1,548.4	1,538.6	4.2	3.7	144.54	88.3	153.0	295.9	289.5	6.41	46.186		
1,700.0	1,682.9	1,637.8	1,625.7	4.7	4.1	144.24	101.3	168.2	332.7	325.7	6.94	47.908		
1,800.0	1,779.5	1,726.0	1,711.4	5.2	4.5	144.11	115.1	184.2	371.1	363.6	7.50	49.455		
1,900.0	1,876.1	1,813.4	1,795.9	5.7	4.9	143.87	129.5	201.0	410.7	402.6	8.08	50.832		
2,000.0	1,972.7	1,900.0	1,879.3	6.1	5.3	143.55	144.7	218.6	451.3	442.6	8.67	52.070		
2,100.0	2,069.3	1,985.5	1,961.3	6.6	5.7	143.18	160.5	236.9	492.9	483.6	9.27	53.187		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
S10-T2N-R66W (lone) - lone 1G-10H - Hz - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	61.5	61.5					
100.0	100.0	100.0	100.0	0.2	0.2	90.05	0.0	61.5	61.5	61.2	0.30	202.482		
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	61.5	61.5	60.8	0.65	94.203	CC, ES	
300.0	300.0	299.1	299.1	0.5	0.5	144.79	0.4	62.2	62.9	61.9	1.00	62.903		
400.0	400.0	398.0	398.0	0.7	0.7	144.91	1.7	64.4	67.3	66.0	1.35	49.829		
500.0	499.9	496.7	496.6	0.9	0.9	145.08	3.9	68.1	74.6	72.9	1.70	43.740		
600.0	599.7	595.0	594.7	1.1	1.1	145.26	6.9	73.2	84.7	82.6	2.06	41.033		
700.0	699.4	692.8	692.2	1.3	1.3	145.43	10.8	79.7	97.7	95.3	2.43	40.189	SF	
800.0	798.9	790.1	789.0	1.5	1.5	145.57	15.5	87.5	113.6	110.8	2.81	40.455		
900.0	898.3	886.5	884.9	1.8	1.7	145.68	21.1	96.7	132.3	129.1	3.20	41.410		
1,000.0	997.4	982.2	979.7	2.0	2.0	145.75	27.3	107.2	153.8	150.2	3.59	42.800		
1,100.0	1,096.3	1,076.9	1,073.5	2.3	2.3	145.79	34.4	118.9	178.1	174.1	4.01	44.463		
1,200.0	1,194.9	1,170.5	1,165.9	2.7	2.6	145.81	42.1	131.8	205.1	200.7	4.43	46.291		
1,300.0	1,293.3	1,263.0	1,256.9	3.0	2.9	145.80	50.5	145.8	234.8	229.9	4.87	48.211		
1,400.0	1,391.2	1,354.3	1,346.5	3.4	3.2	145.76	59.5	160.9	267.2	261.9	5.33	50.172		
1,500.0	1,488.9	1,444.2	1,434.5	3.8	3.6	145.71	69.1	176.9	302.1	296.3	5.79	52.140		
1,600.0	1,586.1	1,532.8	1,520.8	4.2	3.9	145.64	79.2	193.9	339.7	333.4	6.28	54.088		
1,700.0	1,682.9	1,619.9	1,605.4	4.7	4.3	145.55	89.9	211.6	379.7	372.9	6.78	56.001		
1,800.0	1,779.5	1,705.7	1,688.4	5.2	4.7	145.63	101.0	230.2	421.5	414.2	7.30	57.731		
1,900.0	1,876.1	1,790.5	1,770.2	5.7	5.2	145.61	112.7	249.7	464.5	456.7	7.83	59.296		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well lone 1A-10H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (lone)	MD Reference:	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	lone 1A-10H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Hz	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
S10-T2N-R66W (lone) - lone 6-0-10 (Existing) - Existing - Existing													Offset Well Error:	0.0 ft
Survey Program: 94-Gyro														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	8.1	8.1	0.0	0.0	123.44	-273.2	413.7	495.7					
100.0	100.0	118.1	118.0	0.2	0.1	123.36	-271.6	412.5	494.1	493.8	0.24	2,022.204		
200.0	200.0	211.2	211.1	0.3	0.2	123.14	-269.3	412.4	492.6	492.1	0.50	985.749		
229.9	229.9	239.5	239.5	0.4	0.2	177.74	-268.4	412.8	492.4	491.9	0.58	846.957		
300.0	300.0	306.6	306.5	0.5	0.3	177.42	-266.1	414.1	493.1	492.3	0.77	642.201		
400.0	400.0	405.2	404.8	0.7	0.4	176.73	-261.1	417.7	496.1	495.0	1.05	474.184		
1,000.0	997.4	1,105.3	1,091.7	2.0	1.6	164.93	-135.8	416.1	498.9	495.6	3.28	152.326		
1,100.0	1,096.3	1,224.4	1,206.6	2.3	1.9	162.92	-107.4	402.2	494.0	490.3	3.69	133.699		
1,200.0	1,194.9	1,338.2	1,315.4	2.7	2.2	161.06	-79.2	384.8	487.3	483.2	4.12	118.256		
1,300.0	1,293.3	1,439.3	1,411.8	3.0	2.4	159.46	-53.9	367.8	481.1	476.6	4.54	105.945		
1,400.0	1,391.2	1,543.9	1,511.3	3.4	2.7	157.81	-27.3	349.4	476.1	471.1	5.00	95.295		
1,500.0	1,488.9	1,646.7	1,608.6	3.8	3.0	156.15	-0.3	330.5	472.0	466.5	5.48	86.117		
1,600.0	1,586.1	1,746.6	1,702.8	4.2	3.3	154.43	27.3	312.0	469.4	463.4	6.00	78.232		
1,669.1	1,653.0	1,813.9	1,766.3	4.6	3.5	153.32	45.9	299.5	468.9	462.5	6.37	73.623 CC		
1,700.0	1,682.9	1,844.5	1,795.2	4.7	3.5	152.85	54.1	293.9	469.0	462.4	6.53	71.782 ES		
1,800.0	1,779.5	1,941.2	1,886.9	5.2	3.8	151.54	79.0	275.9	469.8	462.8	7.07	66.455		
1,900.0	1,876.1	2,038.4	1,979.6	5.7	4.1	150.41	102.4	258.5	471.8	464.2	7.62	61.955		
2,000.0	1,972.7	2,135.5	2,072.2	6.1	4.3	149.25	126.1	241.2	474.1	465.9	8.18	57.939		
2,100.0	2,069.3	2,229.5	2,162.0	6.6	4.6	148.17	148.8	225.4	477.6	468.8	8.75	54.562		
2,200.0	2,165.9	2,326.4	2,255.0	7.1	4.8	147.14	171.5	210.0	482.2	472.9	9.34	51.643		
2,300.0	2,262.5	2,421.0	2,345.9	7.6	5.1	146.21	193.3	195.3	487.5	477.5	9.92	49.133		
2,400.0	2,359.1	2,519.6	2,440.7	8.1	5.3	145.27	215.9	181.0	493.9	483.4	10.53	46.888 SF		

Anticollision Report

Company: EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference: Well lone 1A-10H	
Project: DJ Wattenberg	TVD Reference: WELL @ 5012.0ft (Original Well Elev)	
Reference Site: S10-T2N-R66W (lone)	MD Reference: WELL @ 5012.0ft (Original Well Elev)	
Site Error: 0.0ft	North Reference: True	
Reference Well: lone 1A-10H	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 @ 5012.0ft (Original Well Elev) Coordinates are relative to: lone 1A-10H
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
 Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.48°

