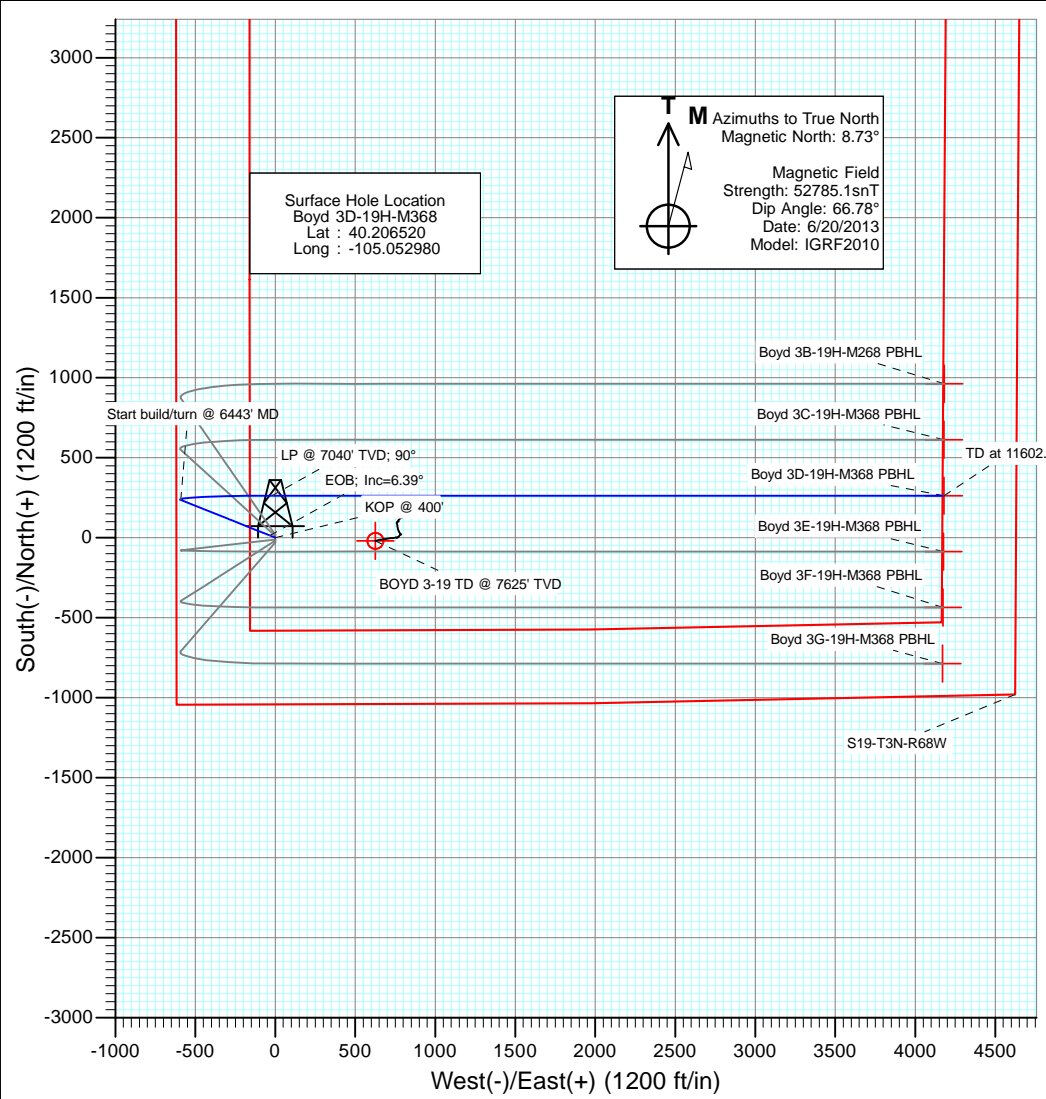
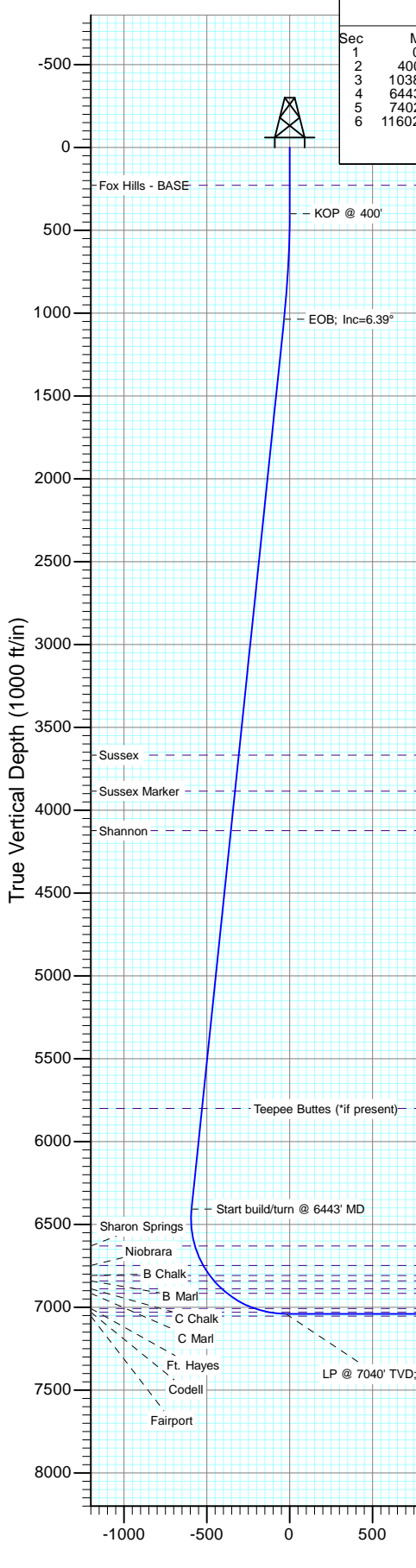




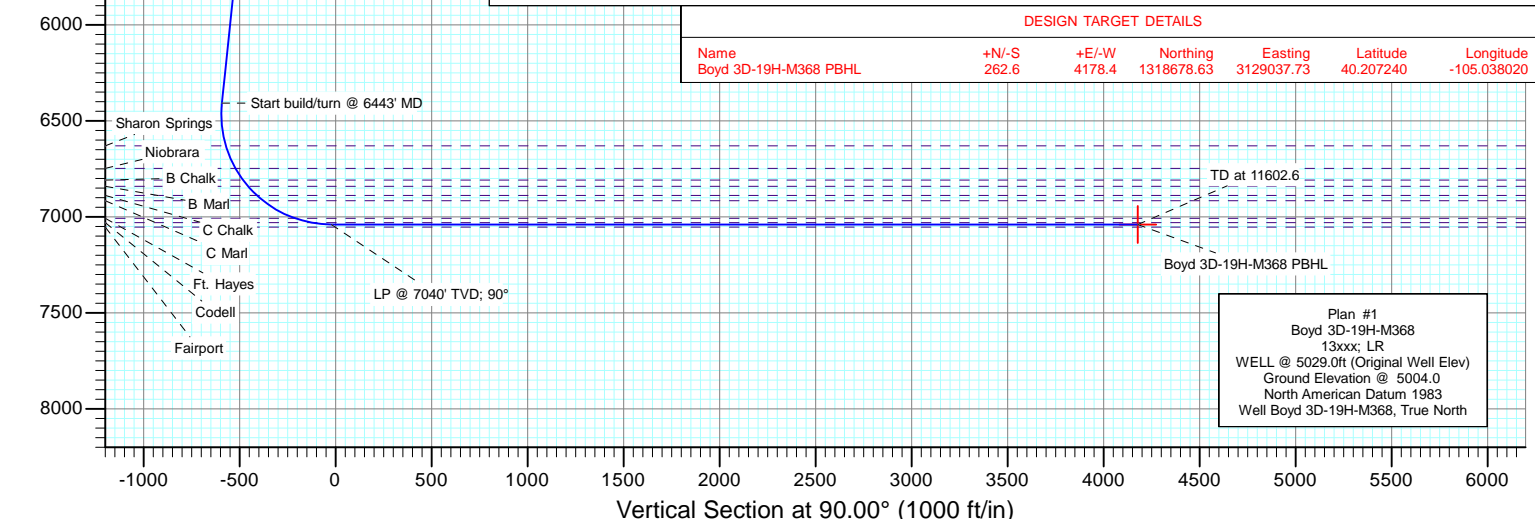
Project: DJ Wattenberg
 Site: S19-T3N-R68W (Boyd)
 Well: Boyd 3D-19H-M368
 Wellbore: Hz
 Design: Plan #1



SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0		KOP @ 400'
3	1038.9	6.39	291.78	1037.6	13.2	-33.0	1.00	291.78	-33.0		EOB; Inc=6.39°
4	6443.3	6.39	291.78	6408.4	236.4	-591.5	0.00	0.00	-591.5		Start build/turn @ 6443' MD
5	7402.6	90.00	90.00	7040.0	262.6	-21.6	10.00	158.09	-21.6		LP @ 7040' TVD; 90°
6	11602.6	90.00	90.00	7040.0	262.6	4178.4	0.00	0.00	4178.4	Boyd 3D-19H-M368 PBHL	TD at 11602.6 LP @ 7040' TVD; 90° TD at 11602.6



DESIGN TARGET DETAILS						
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Boyd 3D-19H-M368 PBHL	262.6	4178.4	1318678.63	3129037.73	40.207240	-105.038020



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site:	S19-T3N-R68W (Boyd)	North Reference:	True
Well:	Boyd 3D-19H-M368	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 S19-T3N-R68W (Boyd)					
Site Position:		Northing:	1,318,413.14 ft	Latitude:	40.206570
From:	Lat/Long	Easting:	3,124,860.64 ft	Longitude:	-105.052980
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.29 °

Well Boyd 3D-19H-M368						
Well Position	+N/-S	0.0 ft	Northing:	1,318,394.92 ft	Latitude:	40.206520
	+E/-W	0.0 ft	Easting:	3,124,860.73 ft	Longitude:	-105.052980
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,004.0 ft

Wellbore Hz					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	6/20/2013	8.73	66.78	52,785

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	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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,038.9	6.39	291.78	1,037.6	13.2	-33.0	1.00	1.00	0.00	291.78	
6,443.3	6.39	291.78	6,408.4	236.4	-591.5	0.00	0.00	0.00	0.00	
7,402.6	90.00	90.00	7,040.0	262.6	-21.6	10.00	8.72	16.49	158.09	
11,602.6	90.00	90.00	7,040.0	262.6	4,178.4	0.00	0.00	0.00	0.00	Boyd 3D-19H-M368 F

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site:	S19-T3N-R68W (Boyd)	North Reference:	True
Well:	Boyd 3D-19H-M368	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	
229.0	0.00	0.00	229.0	0.0	0.0	0.0	0.00	0.00	Fox Hills - BASE
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	1.00	291.78	500.0	0.3	-0.8	-0.8	1.00	1.00	
600.0	2.00	291.78	600.0	1.3	-3.2	-3.2	1.00	1.00	
700.0	3.00	291.78	699.9	2.9	-7.3	-7.3	1.00	1.00	
800.0	4.00	291.78	799.7	5.2	-13.0	-13.0	1.00	1.00	
900.0	5.00	291.78	899.4	8.1	-20.2	-20.2	1.00	1.00	
1,000.0	6.00	291.78	998.9	11.6	-29.1	-29.1	1.00	1.00	
1,038.9	6.39	291.78	1,037.6	13.2	-33.0	-33.0	1.00	1.00	EOB; Inc=6.39°
1,100.0	6.39	291.78	1,098.3	15.7	-39.4	-39.4	0.00	0.00	
1,200.0	6.39	291.78	1,197.7	19.9	-49.7	-49.7	0.00	0.00	
1,300.0	6.39	291.78	1,297.1	24.0	-60.0	-60.0	0.00	0.00	
1,400.0	6.39	291.78	1,396.4	28.1	-70.4	-70.4	0.00	0.00	
1,500.0	6.39	291.78	1,495.8	32.2	-80.7	-80.7	0.00	0.00	
1,600.0	6.39	291.78	1,595.2	36.4	-91.0	-91.0	0.00	0.00	
1,700.0	6.39	291.78	1,694.6	40.5	-101.4	-101.4	0.00	0.00	
1,800.0	6.39	291.78	1,793.9	44.6	-111.7	-111.7	0.00	0.00	
1,900.0	6.39	291.78	1,893.3	48.8	-122.0	-122.0	0.00	0.00	
2,000.0	6.39	291.78	1,992.7	52.9	-132.4	-132.4	0.00	0.00	
2,100.0	6.39	291.78	2,092.1	57.0	-142.7	-142.7	0.00	0.00	
2,200.0	6.39	291.78	2,191.5	61.2	-153.0	-153.0	0.00	0.00	
2,300.0	6.39	291.78	2,290.8	65.3	-163.4	-163.4	0.00	0.00	
2,400.0	6.39	291.78	2,390.2	69.4	-173.7	-173.7	0.00	0.00	
2,500.0	6.39	291.78	2,489.6	73.5	-184.0	-184.0	0.00	0.00	
2,600.0	6.39	291.78	2,589.0	77.7	-194.4	-194.4	0.00	0.00	
2,700.0	6.39	291.78	2,688.4	81.8	-204.7	-204.7	0.00	0.00	
2,800.0	6.39	291.78	2,787.7	85.9	-215.0	-215.0	0.00	0.00	
2,900.0	6.39	291.78	2,887.1	90.1	-225.4	-225.4	0.00	0.00	
3,000.0	6.39	291.78	2,986.5	94.2	-235.7	-235.7	0.00	0.00	
3,100.0	6.39	291.78	3,085.9	98.3	-246.0	-246.0	0.00	0.00	
3,200.0	6.39	291.78	3,185.3	102.5	-256.4	-256.4	0.00	0.00	
3,300.0	6.39	291.78	3,284.6	106.6	-266.7	-266.7	0.00	0.00	
3,400.0	6.39	291.78	3,384.0	110.7	-277.0	-277.0	0.00	0.00	
3,500.0	6.39	291.78	3,483.4	114.8	-287.4	-287.4	0.00	0.00	
3,600.0	6.39	291.78	3,582.8	119.0	-297.7	-297.7	0.00	0.00	
3,685.8	6.39	291.78	3,668.0	122.5	-306.6	-306.6	0.00	0.00	Sussex
3,700.0	6.39	291.78	3,682.1	123.1	-308.0	-308.0	0.00	0.00	
3,800.0	6.39	291.78	3,781.5	127.2	-318.4	-318.4	0.00	0.00	
3,900.0	6.39	291.78	3,880.9	131.4	-328.7	-328.7	0.00	0.00	
3,904.1	6.39	291.78	3,885.0	131.5	-329.1	-329.1	0.00	0.00	Sussex Marker
4,000.0	6.39	291.78	3,980.3	135.5	-339.0	-339.0	0.00	0.00	
4,100.0	6.39	291.78	4,079.7	139.6	-349.4	-349.4	0.00	0.00	
4,144.6	6.39	291.78	4,124.0	141.5	-354.0	-354.0	0.00	0.00	Shannon
4,200.0	6.39	291.78	4,179.0	143.8	-359.7	-359.7	0.00	0.00	
4,300.0	6.39	291.78	4,278.4	147.9	-370.0	-370.0	0.00	0.00	
4,400.0	6.39	291.78	4,377.8	152.0	-380.4	-380.4	0.00	0.00	
4,500.0	6.39	291.78	4,477.2	156.1	-390.7	-390.7	0.00	0.00	
4,600.0	6.39	291.78	4,576.6	160.3	-401.0	-401.0	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site:	S19-T3N-R68W (Boyd)	North Reference:	True
Well:	Boyd 3D-19H-M368	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	6.39	291.78	4,675.9	164.4	-411.4	-411.4	0.00	0.00	
4,800.0	6.39	291.78	4,775.3	168.5	-421.7	-421.7	0.00	0.00	
4,900.0	6.39	291.78	4,874.7	172.7	-432.0	-432.0	0.00	0.00	
5,000.0	6.39	291.78	4,974.1	176.8	-442.4	-442.4	0.00	0.00	
5,100.0	6.39	291.78	5,073.5	180.9	-452.7	-452.7	0.00	0.00	
5,200.0	6.39	291.78	5,172.8	185.1	-463.0	-463.0	0.00	0.00	
5,300.0	6.39	291.78	5,272.2	189.2	-473.4	-473.4	0.00	0.00	
5,400.0	6.39	291.78	5,371.6	193.3	-483.7	-483.7	0.00	0.00	
5,500.0	6.39	291.78	5,471.0	197.4	-494.0	-494.0	0.00	0.00	
5,600.0	6.39	291.78	5,570.3	201.6	-504.4	-504.4	0.00	0.00	
5,700.0	6.39	291.78	5,669.7	205.7	-514.7	-514.7	0.00	0.00	
5,800.0	6.39	291.78	5,769.1	209.8	-525.0	-525.0	0.00	0.00	
5,831.1	6.39	291.78	5,800.0	211.1	-528.3	-528.3	0.00	0.00	Teepee Buttes (*if present)
5,900.0	6.39	291.78	5,868.5	214.0	-535.4	-535.4	0.00	0.00	
6,000.0	6.39	291.78	5,967.9	218.1	-545.7	-545.7	0.00	0.00	
6,100.0	6.39	291.78	6,067.2	222.2	-556.0	-556.0	0.00	0.00	
6,200.0	6.39	291.78	6,166.6	226.4	-566.4	-566.4	0.00	0.00	
6,300.0	6.39	291.78	6,266.0	230.5	-576.7	-576.7	0.00	0.00	
6,400.0	6.39	291.78	6,365.4	234.6	-587.0	-587.0	0.00	0.00	
6,443.3	6.39	291.78	6,408.4	236.4	-591.5	-591.5	0.00	0.00	Start build/turn @ 6443' MD
6,500.0	2.39	353.80	6,465.0	238.7	-594.6	-594.6	10.00	-7.04	
6,600.0	10.03	76.40	6,564.4	242.9	-586.3	-586.3	10.00	7.63	
6,667.5	16.65	82.01	6,630.0	245.6	-571.0	-571.0	10.00	9.83	Sharon Springs
6,700.0	19.88	83.40	6,660.9	246.9	-560.9	-560.9	10.00	9.91	
6,795.9	29.42	85.77	6,748.0	250.5	-521.1	-521.1	10.00	9.95	Niobrara
6,800.0	29.83	85.84	6,751.5	250.7	-519.1	-519.1	10.00	9.96	
6,868.8	36.68	86.80	6,809.0	253.0	-481.5	-481.5	10.00	9.97	B Chalk
6,900.0	39.80	87.14	6,833.5	254.1	-462.2	-462.2	10.00	9.98	
6,909.8	40.78	87.24	6,841.0	254.4	-455.9	-455.9	10.00	9.98	B Marl
6,976.7	47.46	87.81	6,889.0	256.4	-409.4	-409.4	10.00	9.98	C Chalk
7,000.0	49.78	87.99	6,904.4	257.0	-391.9	-391.9	10.00	9.98	
7,018.3	51.61	88.11	6,916.0	257.5	-377.7	-377.7	10.00	9.99	C Marl
7,100.0	59.77	88.61	6,962.0	259.4	-310.3	-310.3	10.00	9.99	
7,200.0	69.76	89.12	7,004.6	261.2	-220.0	-220.0	10.00	9.99	
7,210.1	70.77	89.17	7,008.0	261.3	-210.5	-210.5	10.00	9.99	Ft. Hayes
7,295.3	79.28	89.55	7,030.0	262.2	-128.3	-128.3	10.00	9.99	Codell
7,300.0	79.75	89.57	7,030.8	262.3	-123.7	-123.7	10.00	9.99	
7,400.0	89.74	89.99	7,040.0	262.6	-24.2	-24.2	10.00	9.99	
7,402.6	90.00	90.00	7,040.0	262.6	-21.6	-21.6	10.00	9.99	LP @ 7040' TVD; 90°
7,500.0	90.00	90.00	7,040.0	262.6	75.8	75.8	0.00	0.00	
7,600.0	90.00	90.00	7,040.0	262.6	175.8	175.8	0.00	0.00	
7,700.0	90.00	90.00	7,040.0	262.6	275.8	275.8	0.00	0.00	
7,800.0	90.00	90.00	7,040.0	262.6	375.8	375.8	0.00	0.00	
7,900.0	90.00	90.00	7,040.0	262.6	475.8	475.8	0.00	0.00	
8,000.0	90.00	90.00	7,040.0	262.6	575.8	575.8	0.00	0.00	
8,100.0	90.00	90.00	7,040.0	262.6	675.8	675.8	0.00	0.00	
8,200.0	90.00	90.00	7,040.0	262.6	775.8	775.8	0.00	0.00	
8,300.0	90.00	90.00	7,040.0	262.6	875.8	875.8	0.00	0.00	
8,400.0	90.00	90.00	7,040.0	262.6	975.8	975.8	0.00	0.00	
8,500.0	90.00	90.00	7,040.0	262.6	1,075.8	1,075.8	0.00	0.00	
8,600.0	90.00	90.00	7,040.0	262.6	1,175.8	1,175.8	0.00	0.00	
8,700.0	90.00	90.00	7,040.0	262.6	1,275.8	1,275.8	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site:	S19-T3N-R68W (Boyd)	North Reference:	True
Well:	Boyd 3D-19H-M368	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,800.0	90.00	90.00	7,040.0	262.6	1,375.8	1,375.8	0.00	0.00	
8,900.0	90.00	90.00	7,040.0	262.6	1,475.8	1,475.8	0.00	0.00	
9,000.0	90.00	90.00	7,040.0	262.6	1,575.8	1,575.8	0.00	0.00	
9,100.0	90.00	90.00	7,040.0	262.6	1,675.8	1,675.8	0.00	0.00	
9,200.0	90.00	90.00	7,040.0	262.6	1,775.8	1,775.8	0.00	0.00	
9,300.0	90.00	90.00	7,040.0	262.6	1,875.8	1,875.8	0.00	0.00	
9,400.0	90.00	90.00	7,040.0	262.6	1,975.8	1,975.8	0.00	0.00	
9,500.0	90.00	90.00	7,040.0	262.6	2,075.8	2,075.8	0.00	0.00	
9,600.0	90.00	90.00	7,040.0	262.6	2,175.8	2,175.8	0.00	0.00	
9,700.0	90.00	90.00	7,040.0	262.6	2,275.8	2,275.8	0.00	0.00	
9,800.0	90.00	90.00	7,040.0	262.6	2,375.8	2,375.8	0.00	0.00	
9,900.0	90.00	90.00	7,040.0	262.6	2,475.8	2,475.8	0.00	0.00	
10,000.0	90.00	90.00	7,040.0	262.6	2,575.8	2,575.8	0.00	0.00	
10,100.0	90.00	90.00	7,040.0	262.6	2,675.8	2,675.8	0.00	0.00	
10,200.0	90.00	90.00	7,040.0	262.6	2,775.8	2,775.8	0.00	0.00	
10,300.0	90.00	90.00	7,040.0	262.6	2,875.8	2,875.8	0.00	0.00	
10,400.0	90.00	90.00	7,040.0	262.6	2,975.8	2,975.8	0.00	0.00	
10,500.0	90.00	90.00	7,040.0	262.6	3,075.8	3,075.8	0.00	0.00	
10,600.0	90.00	90.00	7,040.0	262.6	3,175.8	3,175.8	0.00	0.00	
10,700.0	90.00	90.00	7,040.0	262.6	3,275.8	3,275.8	0.00	0.00	
10,800.0	90.00	90.00	7,040.0	262.6	3,375.8	3,375.8	0.00	0.00	
10,900.0	90.00	90.00	7,040.0	262.6	3,475.8	3,475.8	0.00	0.00	
11,000.0	90.00	90.00	7,040.0	262.6	3,575.8	3,575.8	0.00	0.00	
11,100.0	90.00	90.00	7,040.0	262.6	3,675.8	3,675.8	0.00	0.00	
11,200.0	90.00	90.00	7,040.0	262.6	3,775.8	3,775.8	0.00	0.00	
11,300.0	90.00	90.00	7,040.0	262.6	3,875.8	3,875.8	0.00	0.00	
11,400.0	90.00	90.00	7,040.0	262.6	3,975.8	3,975.8	0.00	0.00	
11,500.0	90.00	90.00	7,040.0	262.6	4,075.8	4,075.8	0.00	0.00	
11,600.0	90.00	90.00	7,040.0	262.6	4,175.8	4,175.8	0.00	0.00	
11,602.6	90.00	90.00	7,040.0	262.6	4,178.4	4,178.4	0.00	0.00	TD at 11602.6

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Boyd 3D-19H-M368 PBI - hit/miss target - Shape - Point	0.00	0.00	7,040.0	262.6	4,178.4	1,318,678.63	3,129,037.73	40.207240	-105.038020

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site:	S19-T3N-R68W (Boyd)	North Reference:	True
Well:	Boyd 3D-19H-M368	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
229.0	229.0	Fox Hills - BASE				
3,685.8	3,668.0	Sussex				
3,904.1	3,885.0	Sussex Marker				
4,144.6	4,124.0	Shannon				
5,831.1	5,800.0	Teepee Buttes (*if present)				
6,667.5	6,630.0	Sharon Springs				
6,795.9	6,748.0	Niobrara				
6,868.8	6,809.0	B Chalk				
6,909.8	6,841.0	B Marl				
6,976.7	6,889.0	C Chalk				
7,018.3	6,916.0	C Marl				
7,210.1	7,008.0	Ft. Hayes				
7,295.3	7,030.0	Codell				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
400.0	400.0	0.0	0.0	KOP @ 400'	
1,038.9	1,037.6	13.2	-33.0	EOB; Inc=6.39°	
6,443.3	6,408.4	236.4	-591.5	Start build/turn @ 6443' MD	
7,402.6	7,040.0	262.6	-21.6	LP @ 7040' TVD; 90°	
11,602.6	7,040.0	262.6	4,178.4	TD at 11602.6	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S19-T3N-R68W (Boyd)

Boyd 3D-19H-M368

Hz

Plan #1

Anticollision Report

20 June, 2013

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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	6/20/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,602.6	Plan #1 (Hz)	Geolink 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						
S19-T3N-R68W (Boyd)						
BOYD 3-19 (EXISTING) - ENCANA WELL - SURVEYS	8,106.4	7,044.2	271.8	232.3	6.884	CC, ES, SF
Boyd 3B-19H-M368 - Hz - Plan #1	200.0	200.0	18.2	17.6	29.824	CC, ES
Boyd 3B-19H-M368 - Hz - Plan #1	700.0	697.9	33.6	31.2	14.102	SF
Boyd 3C-19H-M368 - Hz - Plan #1	300.0	300.0	10.9	10.0	11.385	CC, ES
Boyd 3C-19H-M368 - Hz - Plan #1	11,602.6	11,406.0	413.7	225.4	2.198	SF
Boyd 3E-19H-M368 - Hz - Plan #1	400.0	400.0	10.9	9.6	8.349	CC, ES
Boyd 3E-19H-M368 - Hz - Plan #1	11,602.6	11,373.2	413.7	225.7	2.200	SF
Boyd 3F-19H-M368 - Hz - Plan #1	400.0	400.0	18.2	16.9	13.915	CC, ES
Boyd 3F-19H-M368 - Hz - Plan #1	600.0	599.6	21.4	19.4	10.626	SF
Boyd 3G-19H-M368 - Hz - Plan #1	300.0	300.0	29.1	28.2	30.359	CC, ES
Boyd 3G-19H-M368 - Hz - Plan #1	700.0	697.9	42.6	40.2	17.894	SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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	
S19-T3N-R68W (Boyd) - BOYD 3-19 (EXISTING) - ENCANA WELL - SURVEYS															
Survey Program: 75-Geolink MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning		
7,700.0	7,040.0	7,101.8	7,092.3	19.2	12.8	100.23	-10.4	673.6	485.0	453.8	31.21	15.541			
7,800.0	7,040.0	7,089.4	7,079.9	21.0	12.8	97.71	-10.1	675.3	406.8	373.7	33.14	12.277			
7,900.0	7,040.0	7,075.9	7,066.6	22.9	12.8	94.95	-9.8	677.3	339.7	304.5	35.17	9.658			
8,000.0	7,040.0	7,061.2	7,052.1	25.0	12.7	91.92	-9.5	679.5	291.3	254.1	37.26	7.818			
8,100.0	7,040.0	7,045.3	7,036.4	27.1	12.7	88.61	-9.0	682.0	271.8	232.5	39.35	6.909			
8,106.4	7,040.0	7,044.2	7,035.3	27.2	12.7	88.39	-9.0	682.2	271.8	232.3	39.48	6.884	CC, ES, SF		
8,200.0	7,040.0	7,027.9	7,019.2	29.2	12.7	84.99	-8.5	684.9	287.0	245.6	41.36	6.939			
8,300.0	7,040.0	7,008.8	7,000.4	31.4	12.6	81.06	-7.9	688.2	332.0	288.8	43.23	7.681			
8,400.0	7,040.0	6,990.1	6,982.0	33.7	12.6	77.27	-7.3	691.5	396.8	351.8	44.94	8.829			
8,500.0	7,040.0	6,973.4	6,965.6	36.0	12.5	73.97	-6.8	694.5	473.3	426.7	46.54	10.168			

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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 S19-T3N-R68W (Boyd) - Boyd 3B-19H-M368 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	0.00	18.2	0.0	18.2					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	18.2	0.0	18.2	18.0	0.26	69.589		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	18.2	0.0	18.2	17.6	0.61	29.824 CC, ES		
300.0	300.0	299.7	299.7	0.5	0.5	-1.49	18.9	-0.5	18.9	18.0	0.96	19.722		
400.0	400.0	399.4	399.4	0.7	0.7	-5.35	21.1	-2.0	21.2	19.9	1.31	16.111		
500.0	500.0	499.0	498.8	0.8	0.8	59.69	24.6	-4.4	24.6	22.9	1.66	14.816		
600.0	600.0	598.5	598.2	1.0	1.0	58.81	29.6	-7.9	28.7	26.7	2.02	14.260		
700.0	699.9	697.9	697.2	1.2	1.3	59.43	36.0	-12.3	33.6	31.2	2.38	14.102 SF		
800.0	799.7	797.2	796.1	1.4	1.5	60.96	43.8	-17.7	39.1	36.3	2.76	14.163		
900.0	899.4	896.3	894.6	1.6	1.7	62.98	53.0	-24.1	45.3	42.1	3.16	14.343		
1,000.0	998.9	995.3	992.8	1.8	2.0	65.24	63.5	-31.4	52.3	48.7	3.59	14.582		
1,100.0	1,098.3	1,094.2	1,090.5	2.1	2.3	67.31	75.5	-39.6	60.2	56.2	4.04	14.904		
1,200.0	1,197.7	1,192.8	1,187.8	2.3	2.6	68.20	88.8	-48.8	69.6	65.1	4.51	15.436		
1,300.0	1,297.1	1,291.9	1,285.4	2.5	3.0	68.31	103.2	-58.8	80.1	75.1	4.98	16.083		
1,400.0	1,396.4	1,391.3	1,383.2	2.8	3.3	68.35	117.8	-69.0	90.7	85.2	5.46	16.618		
1,500.0	1,495.8	1,490.8	1,481.0	3.0	3.6	68.39	132.4	-79.1	101.3	95.3	5.94	17.055		
1,600.0	1,595.2	1,590.2	1,578.9	3.3	4.0	68.42	147.0	-89.2	111.9	105.4	6.42	17.418		
1,700.0	1,694.6	1,689.6	1,676.7	3.5	4.3	68.44	161.6	-99.3	122.4	115.5	6.91	17.723		
1,800.0	1,793.9	1,789.1	1,774.5	3.8	4.7	68.46	176.2	-109.4	133.0	125.6	7.40	17.984		
1,900.0	1,893.3	1,888.5	1,872.4	4.1	5.0	68.48	190.8	-119.5	143.6	135.7	7.89	18.208		
2,000.0	1,992.7	1,988.0	1,970.2	4.3	5.4	68.49	205.4	-129.6	154.2	145.8	8.38	18.403		
2,100.0	2,092.1	2,087.4	2,068.1	4.6	5.7	68.50	220.0	-139.7	164.8	155.9	8.87	18.574		
2,200.0	2,191.5	2,186.8	2,165.9	4.8	6.1	68.52	234.6	-149.8	175.4	166.0	9.37	18.725		
2,300.0	2,290.8	2,286.3	2,263.7	5.1	6.4	68.53	249.2	-159.9	186.0	176.1	9.86	18.859		
2,400.0	2,390.2	2,385.7	2,361.6	5.3	6.8	68.53	263.8	-170.1	196.6	186.2	10.36	18.979		
2,500.0	2,489.6	2,485.1	2,459.4	5.6	7.1	68.54	278.4	-180.2	207.1	196.3	10.85	19.088		
2,600.0	2,589.0	2,584.6	2,557.3	5.9	7.5	68.55	293.0	-190.3	217.7	206.4	11.35	19.186		
2,700.0	2,688.4	2,684.0	2,655.1	6.1	7.8	68.56	307.6	-200.4	228.3	216.5	11.85	19.274		
2,800.0	2,787.7	2,783.5	2,752.9	6.4	8.2	68.56	322.2	-210.5	238.9	226.6	12.34	19.356		
2,900.0	2,887.1	2,882.9	2,850.8	6.6	8.6	68.57	336.9	-220.6	249.5	236.7	12.84	19.430		
3,000.0	2,986.5	2,982.3	2,948.6	6.9	8.9	68.57	351.5	-230.7	260.1	246.7	13.34	19.498		
3,100.0	3,085.9	3,081.8	3,046.5	7.2	9.3	68.58	366.1	-240.8	270.7	256.8	13.84	19.561		
3,200.0	3,185.3	3,181.2	3,144.3	7.4	9.6	68.58	380.7	-250.9	281.3	266.9	14.34	19.619		
3,300.0	3,284.6	3,280.6	3,242.1	7.7	10.0	68.58	395.3	-261.0	291.8	277.0	14.83	19.673		
3,400.0	3,384.0	3,380.1	3,340.0	7.9	10.3	68.59	409.9	-271.1	302.4	287.1	15.33	19.724		
3,500.0	3,483.4	3,479.5	3,437.8	8.2	10.7	68.59	424.5	-281.3	313.0	297.2	15.83	19.771		
3,600.0	3,582.8	3,579.0	3,535.7	8.5	11.0	68.59	439.1	-291.4	323.6	307.3	16.33	19.814		
3,700.0	3,682.1	3,678.4	3,633.5	8.7	11.4	68.60	453.7	-301.5	334.2	317.4	16.83	19.855		
3,800.0	3,781.5	3,777.8	3,731.3	9.0	11.7	68.60	468.3	-311.6	344.8	327.4	17.33	19.894		
3,900.0	3,880.9	3,877.3	3,829.2	9.2	12.1	68.60	482.9	-321.7	355.4	337.5	17.83	19.930		
4,000.0	3,980.3	3,976.7	3,927.0	9.5	12.5	68.61	497.5	-331.8	366.0	347.6	18.33	19.964		
4,100.0	4,079.7	4,076.1	4,024.8	9.8	12.8	68.61	512.1	-341.9	376.5	357.7	18.83	19.996		
4,200.0	4,179.0	4,175.6	4,122.7	10.0	13.2	68.61	526.7	-352.0	387.1	367.8	19.33	20.027		
4,300.0	4,278.4	4,275.0	4,220.5	10.3	13.5	68.61	541.3	-362.1	397.7	377.9	19.83	20.055		
4,400.0	4,377.8	4,374.5	4,318.4	10.5	13.9	68.61	555.9	-372.2	408.3	388.0	20.33	20.083		
4,500.0	4,477.2	4,473.9	4,416.2	10.8	14.2	68.62	570.5	-382.3	418.9	398.1	20.83	20.109		
4,600.0	4,576.6	4,573.3	4,514.0	11.1	14.6	68.62	585.1	-392.5	429.5	408.1	21.33	20.133		
4,700.0	4,675.9	4,672.8	4,611.9	11.3	14.9	68.62	599.7	-402.6	440.1	418.2	21.83	20.157		
4,800.0	4,775.3	4,772.2	4,709.7	11.6	15.3	68.62	614.3	-412.7	450.6	428.3	22.33	20.179		
4,900.0	4,874.7	4,871.7	4,807.6	11.9	15.7	68.62	628.9	-422.8	461.2	438.4	22.83	20.200		
5,000.0	4,974.1	4,971.1	4,905.4	12.1	16.0	68.62	643.5	-432.9	471.8	448.5	23.33	20.220		
5,100.0	5,073.5	5,070.5	5,003.2	12.4	16.4	68.63	658.1	-443.0	482.4	458.6	23.83	20.240		

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 Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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 S19-T3N-R68W (Boyd) - Boyd 3B-19H-M368 - Hz - Plan #1												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis		Separation Factor
5,200.0	5,172.8	5,170.0	5,101.1	12.6	16.7	68.63	672.7	-453.1	493.0	468.7	24.34	20.258	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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-Geolink 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	0.00	10.9	0.0	10.9						
100.0	100.0	100.0	100.0	0.1	0.1	0.00	10.9	0.0	10.9	10.7	0.26	41.744			
200.0	200.0	200.0	200.0	0.3	0.3	0.00	10.9	0.0	10.9	10.3	0.61	17.890			
300.0	300.0	300.0	300.0	0.5	0.5	0.00	10.9	0.0	10.9	10.0	0.96	11.385	CC, ES		
400.0	400.0	399.9	399.9	0.7	0.7	-3.20	11.5	-0.6	11.5	10.2	1.31	8.809			
500.0	500.0	499.7	499.6	0.8	0.8	60.45	13.3	-2.6	13.1	11.4	1.66	7.875			
600.0	600.0	599.5	599.3	1.0	1.0	58.49	16.2	-5.8	15.1	13.1	2.02	7.509			
700.0	699.9	699.2	698.9	1.2	1.2	58.38	20.3	-10.3	17.7	15.3	2.38	7.423			
800.0	799.7	798.9	798.3	1.4	1.4	59.45	25.6	-16.0	20.7	17.9	2.76	7.488			
900.0	899.4	898.5	897.5	1.6	1.7	61.19	32.0	-23.1	24.1	21.0	3.16	7.638			
1,000.0	998.9	998.1	996.4	1.8	1.9	63.27	39.6	-31.4	28.1	24.5	3.59	7.832			
1,100.0	1,098.3	1,097.6	1,095.1	2.1	2.2	64.96	48.3	-41.0	32.7	28.7	4.05	8.095			
1,200.0	1,197.7	1,197.3	1,193.7	2.3	2.4	64.96	57.9	-51.5	38.3	33.8	4.51	8.504			
1,300.0	1,297.1	1,297.2	1,292.5	2.5	2.7	64.87	67.7	-62.2	44.0	39.0	4.97	8.842			
1,400.0	1,396.4	1,397.0	1,391.3	2.8	3.0	64.80	77.4	-72.9	49.6	44.2	5.44	9.113			
1,500.0	1,495.8	1,496.9	1,490.1	3.0	3.3	64.74	87.1	-83.6	55.3	49.3	5.92	9.334			
1,600.0	1,595.2	1,596.7	1,588.9	3.3	3.6	64.69	96.9	-94.3	60.9	54.5	6.40	9.519			
1,700.0	1,694.6	1,696.5	1,687.7	3.5	3.9	64.65	106.6	-104.9	66.6	59.7	6.88	9.674			
1,800.0	1,793.9	1,796.4	1,786.5	3.8	4.2	64.62	116.4	-115.6	72.2	64.8	7.36	9.807			
1,900.0	1,893.3	1,896.2	1,885.2	4.1	4.5	64.59	126.1	-126.3	77.9	70.0	7.85	9.922			
2,000.0	1,992.7	1,996.1	1,984.0	4.3	4.8	64.57	135.8	-137.0	83.5	75.2	8.33	10.021			
2,100.0	2,092.1	2,095.9	2,082.8	4.6	5.1	64.55	145.6	-147.6	89.2	80.3	8.82	10.109			
2,200.0	2,191.5	2,195.7	2,181.6	4.8	5.4	64.53	155.3	-158.3	94.8	85.5	9.31	10.186			
2,300.0	2,290.8	2,295.6	2,280.4	5.1	5.7	64.51	165.0	-169.0	100.4	90.7	9.80	10.255			
2,400.0	2,390.2	2,395.4	2,379.2	5.3	6.0	64.50	174.8	-179.7	106.1	95.8	10.28	10.317			
2,500.0	2,489.6	2,495.3	2,478.0	5.6	6.3	64.48	184.5	-190.4	111.7	101.0	10.77	10.372			
2,600.0	2,589.0	2,595.1	2,576.8	5.9	6.6	64.47	194.2	-201.0	117.4	106.1	11.26	10.422			
2,700.0	2,688.4	2,694.9	2,675.6	6.1	6.9	64.46	204.0	-211.7	123.0	111.3	11.75	10.468			
2,800.0	2,787.7	2,794.8	2,774.3	6.4	7.2	64.45	213.7	-222.4	128.7	116.4	12.24	10.510			
2,900.0	2,887.1	2,894.6	2,873.1	6.6	7.6	64.44	223.5	-233.1	134.3	121.6	12.74	10.548			
3,000.0	2,986.5	2,994.5	2,971.9	6.9	7.9	64.43	233.2	-243.8	140.0	126.8	13.23	10.583			
3,100.0	3,085.9	3,094.3	3,070.7	7.2	8.2	64.43	242.9	-254.4	145.6	131.9	13.72	10.615			
3,200.0	3,185.3	3,194.1	3,169.5	7.4	8.5	64.42	252.7	-265.1	151.3	137.1	14.21	10.646			
3,300.0	3,284.6	3,294.0	3,268.3	7.7	8.8	64.41	262.4	-275.8	156.9	142.2	14.70	10.673			
3,400.0	3,384.0	3,393.8	3,367.1	7.9	9.1	64.41	272.1	-286.5	162.6	147.4	15.20	10.699			
3,500.0	3,483.4	3,493.7	3,465.9	8.2	9.4	64.40	281.9	-297.1	168.2	152.5	15.69	10.723			
3,600.0	3,582.8	3,593.5	3,564.7	8.5	9.7	64.40	291.6	-307.8	173.9	157.7	16.18	10.746			
3,700.0	3,682.1	3,693.3	3,663.4	8.7	10.0	64.39	301.3	-318.5	179.5	162.9	16.67	10.767			
3,800.0	3,781.5	3,793.2	3,762.2	9.0	10.3	64.39	311.1	-329.2	185.2	168.0	17.17	10.787			
3,900.0	3,880.9	3,893.0	3,861.0	9.2	10.6	64.38	320.8	-339.9	190.8	173.2	17.66	10.806			
4,000.0	3,980.3	3,992.9	3,959.8	9.5	10.9	64.38	330.6	-350.5	196.5	178.3	18.15	10.823			
4,100.0	4,079.7	4,092.7	4,058.6	9.8	11.2	64.37	340.3	-361.2	202.1	183.5	18.65	10.840			
4,200.0	4,179.0	4,192.5	4,157.4	10.0	11.5	64.37	350.0	-371.9	207.8	188.6	19.14	10.856			
4,300.0	4,278.4	4,292.4	4,256.2	10.3	11.8	64.37	359.8	-382.6	213.4	193.8	19.63	10.871			
4,400.0	4,377.8	4,392.2	4,355.0	10.5	12.1	64.36	369.5	-393.2	219.1	198.9	20.13	10.885			
4,500.0	4,477.2	4,492.1	4,453.8	10.8	12.5	64.36	379.2	-403.9	224.7	204.1	20.62	10.898			
4,600.0	4,576.6	4,591.9	4,552.6	11.1	12.8	64.36	389.0	-414.6	230.4	209.2	21.11	10.911			
4,700.0	4,675.9	4,691.7	4,651.3	11.3	13.1	64.35	398.7	-425.3	236.0	214.4	21.61	10.923			
4,800.0	4,775.3	4,791.6	4,750.1	11.6	13.4	64.35	408.5	-436.0	241.7	219.6	22.10	10.934			
4,900.0	4,874.7	4,891.4	4,848.9	11.9	13.7	64.35	418.2	-446.6	247.3	224.7	22.59	10.945			
5,000.0	4,974.1	4,991.3	4,947.7	12.1	14.0	64.35	427.9	-457.3	253.0	229.9	23.09	10.956			
5,100.0	5,073.5	5,091.1	5,046.5	12.4	14.3	64.34	437.7	-468.0	258.6	235.0	23.58	10.966			

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 Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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-Geolink MWD													Offset Well Error:		0.0 ft
Reference				Offset			Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
5,200.0	5,172.8	5,190.9	5,145.3	12.6	14.6	64.34	447.4	-478.7	264.2	240.2	24.08	10.976			
5,300.0	5,272.2	5,290.8	5,244.1	12.9	14.9	64.34	457.1	-489.4	269.9	245.3	24.57	10.985			
5,400.0	5,371.6	5,390.6	5,342.9	13.2	15.2	64.34	466.9	-500.0	275.5	250.5	25.06	10.994			
5,500.0	5,471.0	5,490.5	5,441.7	13.4	15.5	64.33	476.6	-510.7	281.2	255.6	25.56	11.002			
5,600.0	5,570.3	5,590.3	5,540.4	13.7	15.8	64.33	486.3	-521.4	286.8	260.8	26.05	11.010			
5,700.0	5,669.7	5,690.1	5,639.2	13.9	16.1	64.33	496.1	-532.1	292.5	265.9	26.55	11.018			
5,800.0	5,769.1	5,790.0	5,738.0	14.2	16.4	64.33	505.8	-542.7	298.1	271.1	27.04	11.025			
5,900.0	5,868.5	5,889.8	5,836.8	14.5	16.8	64.33	515.6	-553.4	303.8	276.3	27.54	11.033			
6,000.0	5,967.9	5,989.7	5,935.6	14.7	17.1	64.33	525.3	-564.1	309.4	281.4	28.03	11.040			
6,100.0	6,067.2	6,089.5	6,034.4	15.0	17.4	64.32	535.0	-574.8	315.1	286.6	28.52	11.046			
6,200.0	6,166.6	6,189.4	6,133.2	15.3	17.7	64.32	544.8	-585.5	320.7	291.7	29.02	11.053			
6,300.0	6,266.0	6,290.7	6,233.6	15.5	17.9	64.65	554.7	-594.4	326.3	296.8	29.53	11.050			
6,400.0	6,365.4	6,391.0	6,333.1	15.8	18.0	67.54	564.5	-588.4	331.4	301.2	30.27	10.949			
6,500.0	6,465.0	6,484.0	6,423.1	16.0	18.0	10.83	573.3	-567.2	338.3	307.2	31.10	10.877			
6,600.0	6,564.4	6,572.5	6,504.5	16.0	17.8	-66.29	581.4	-533.8	347.7	316.3	31.45	11.057			
6,700.0	6,660.9	6,657.5	6,577.1	15.8	17.5	-68.34	588.5	-490.1	358.8	327.6	31.19	11.503			
6,800.0	6,751.5	6,739.9	6,640.6	15.5	17.3	-66.45	594.8	-438.0	370.5	340.2	30.36	12.204			
6,900.0	6,833.5	6,820.2	6,694.6	15.0	17.0	-64.06	600.1	-379.0	382.1	353.0	29.10	13.128			
7,000.0	6,904.4	6,900.0	6,739.6	14.6	16.7	-61.84	604.5	-313.3	392.6	364.9	27.63	14.208			
7,100.0	6,962.0	6,976.2	6,773.7	14.2	16.5	-60.08	607.9	-245.4	401.4	375.1	26.30	15.263			
7,200.0	7,004.6	7,050.0	6,798.0	14.0	16.4	-58.80	610.3	-175.7	408.1	382.6	25.45	16.032			
7,300.0	7,030.8	7,128.5	6,813.8	14.0	16.3	-57.98	611.8	-98.9	412.2	386.8	25.47	16.184			
7,400.0	7,040.0	7,204.1	6,819.0	14.8	16.5	-57.71	612.4	-23.6	413.7	387.2	26.51	15.603			
7,500.0	7,040.0	7,303.4	6,819.0	16.0	17.1	-57.71	612.4	75.8	413.7	385.2	28.45	14.540			
7,600.0	7,040.0	7,403.4	6,819.0	17.5	18.4	-57.71	612.4	175.8	413.7	382.8	30.84	13.413			
7,700.0	7,040.0	7,503.4	6,819.0	19.2	19.9	-57.71	612.4	275.8	413.7	380.1	33.59	12.317			
7,800.0	7,040.0	7,603.4	6,819.0	21.0	21.7	-57.71	612.4	375.8	413.7	377.1	36.61	11.301			
7,900.0	7,040.0	7,703.4	6,819.0	22.9	23.6	-57.71	612.4	475.8	413.7	373.9	39.84	10.384			
8,000.0	7,040.0	7,803.4	6,819.0	25.0	25.6	-57.71	612.4	575.8	413.7	370.5	43.23	9.569			
8,100.0	7,040.0	7,903.4	6,819.0	27.1	27.7	-57.71	612.4	675.8	413.7	366.9	46.76	8.847			
8,200.0	7,040.0	8,003.4	6,819.0	29.2	29.8	-57.71	612.4	775.8	413.7	363.3	50.39	8.211			
8,300.0	7,040.0	8,103.4	6,819.0	31.4	32.0	-57.71	612.4	875.8	413.7	359.6	54.09	7.648			
8,400.0	7,040.0	8,203.4	6,819.0	33.7	34.2	-57.71	612.4	975.8	413.7	355.8	57.87	7.149			
8,500.0	7,040.0	8,303.4	6,819.0	36.0	36.4	-57.71	612.4	1,075.8	413.7	352.0	61.69	6.706			
8,600.0	7,040.0	8,403.4	6,819.0	38.3	38.7	-57.71	612.4	1,175.8	413.7	348.1	65.57	6.310			
8,700.0	7,040.0	8,503.4	6,819.0	40.6	41.0	-57.71	612.4	1,275.8	413.7	344.2	69.47	5.955			
8,800.0	7,040.0	8,603.4	6,819.0	42.9	43.3	-57.71	612.4	1,375.8	413.7	340.3	73.41	5.635			
8,900.0	7,040.0	8,703.4	6,819.0	45.3	45.7	-57.71	612.4	1,475.8	413.7	336.3	77.38	5.346			
9,000.0	7,040.0	8,803.4	6,819.0	47.6	48.0	-57.71	612.4	1,575.8	413.7	332.3	81.37	5.084			
9,100.0	7,040.0	8,903.4	6,819.0	50.0	50.4	-57.71	612.4	1,675.8	413.7	328.3	85.37	4.846			
9,200.0	7,040.0	9,003.4	6,819.0	52.4	52.7	-57.71	612.4	1,775.8	413.7	324.3	89.40	4.628			
9,300.0	7,040.0	9,103.4	6,819.0	54.8	55.1	-57.71	612.4	1,875.8	413.7	320.3	93.43	4.428			
9,400.0	7,040.0	9,203.4	6,819.0	57.2	57.5	-57.71	612.4	1,975.8	413.7	316.2	97.49	4.244			
9,500.0	7,040.0	9,303.4	6,819.0	59.6	59.9	-57.71	612.4	2,075.8	413.7	312.1	101.55	4.074			
9,600.0	7,040.0	9,403.4	6,819.0	62.0	62.3	-57.71	612.4	2,175.8	413.7	308.1	105.62	3.917			
9,700.0	7,040.0	9,503.4	6,819.0	64.4	64.7	-57.71	612.4	2,275.8	413.7	304.0	109.70	3.771			
9,800.0	7,040.0	9,603.4	6,819.0	66.8	67.1	-57.71	612.4	2,375.8	413.7	299.9	113.79	3.636			
9,900.0	7,040.0	9,703.4	6,819.0	69.2	69.5	-57.71	612.4	2,475.8	413.7	295.8	117.88	3.509			
10,000.0	7,040.0	9,803.4	6,819.0	71.7	71.9	-57.71	612.4	2,575.8	413.7	291.7	121.99	3.391			
10,100.0	7,040.0	9,903.4	6,819.0	74.1	74.3	-57.71	612.4	2,675.8	413.7	287.6	126.09	3.281			
10,200.0	7,040.0	10,003.4	6,819.0	76.5	76.8	-57.71	612.4	2,775.8	413.7	283.5	130.21	3.177			
10,300.0	7,040.0	10,103.4	6,819.0	78.9	79.2	-57.71	612.4	2,875.8	413.7	279.4	134.32	3.080			

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 Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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
S19-T3N-R68W (Boyd) - Boyd 3C-19H-M368 - Hz - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-Geolink 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	
10,400.0	7,040.0	10,203.4	6,819.0	81.4	81.6	-57.71	612.4	2,975.8	413.7	275.2	138.45	2.988		
10,500.0	7,040.0	10,303.4	6,819.0	83.8	84.0	-57.71	612.4	3,075.8	413.7	271.1	142.57	2.902		
10,600.0	7,040.0	10,403.4	6,819.0	86.3	86.5	-57.71	612.4	3,175.8	413.7	267.0	146.70	2.820		
10,700.0	7,040.0	10,503.4	6,819.0	88.7	88.9	-57.71	612.4	3,275.8	413.7	262.9	150.83	2.743		
10,800.0	7,040.0	10,603.4	6,819.0	91.2	91.4	-57.71	612.4	3,375.8	413.7	258.7	154.97	2.670		
10,900.0	7,040.0	10,703.4	6,819.0	93.6	93.8	-57.71	612.4	3,475.8	413.7	254.6	159.11	2.600		
11,000.0	7,040.0	10,803.4	6,819.0	96.0	96.2	-57.71	612.4	3,575.8	413.7	250.4	163.25	2.534		
11,100.0	7,040.0	10,903.4	6,819.0	98.5	98.7	-57.71	612.4	3,675.8	413.7	246.3	167.39	2.471		
11,200.0	7,040.0	11,003.4	6,819.0	100.9	101.1	-57.71	612.4	3,775.8	413.7	242.2	171.54	2.412		
11,300.0	7,040.0	11,103.4	6,819.0	103.4	103.6	-57.71	612.4	3,875.8	413.7	238.0	175.68	2.355		
11,400.0	7,040.0	11,203.4	6,819.0	105.9	106.0	-57.71	612.4	3,975.8	413.7	233.9	179.83	2.300		
11,500.0	7,040.0	11,303.4	6,819.0	108.3	108.5	-57.71	612.4	4,075.8	413.7	229.7	183.99	2.248		
11,600.0	7,040.0	11,403.4	6,819.0	110.8	110.9	-57.71	612.4	4,175.8	413.7	225.6	188.14	2.199		
11,601.7	7,040.0	11,405.2	6,819.0	110.8	111.0	-57.71	612.4	4,177.5	413.7	225.5	188.21	2.198		
11,602.6	7,040.0	11,406.0	6,819.0	110.8	111.0	-57.71	612.4	4,178.3	413.7	225.4	188.24	2.198 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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 S19-T3N-R68W (Boyd) - Boyd 3E-19H-M368 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-10.9	0.0	10.9					
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-10.9	0.0	10.9	10.7	0.26	41.744		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-10.9	0.0	10.9	10.3	0.61	17.890		
300.0	300.0	300.0	300.0	0.5	0.5	180.00	-10.9	0.0	10.9	10.0	0.96	11.385		
400.0	400.0	400.0	400.0	0.7	0.7	180.00	-10.9	0.0	10.9	9.6	1.31	8.349 CC, ES		
500.0	500.0	500.0	500.0	0.8	0.8	-115.90	-10.9	0.0	11.3	9.6	1.66	6.802		
600.0	600.0	600.0	600.0	1.0	1.0	-122.68	-11.0	-0.9	12.6	10.5	2.01	6.243		
700.0	699.9	700.0	699.9	1.2	1.2	-126.79	-11.3	-3.5	14.7	12.4	2.37	6.228		
800.0	799.7	800.0	799.8	1.4	1.4	-128.62	-11.8	-7.8	17.8	15.0	2.74	6.496		
900.0	899.4	900.0	899.6	1.6	1.6	-128.93	-12.5	-13.9	21.6	18.5	3.12	6.915		
1,000.0	998.9	999.9	999.3	1.8	1.8	-128.34	-13.4	-21.7	26.2	22.6	3.53	7.413		
1,100.0	1,098.3	1,099.9	1,098.8	2.1	2.0	-126.84	-14.5	-31.2	31.4	27.4	3.97	7.901		
1,200.0	1,197.7	1,199.8	1,198.1	2.3	2.2	-123.89	-15.8	-42.0	36.5	32.0	4.43	8.231		
1,300.0	1,297.1	1,299.6	1,297.3	2.5	2.4	-121.56	-17.0	-52.9	41.6	36.7	4.90	8.493		
1,400.0	1,396.4	1,399.5	1,396.6	2.8	2.7	-119.74	-18.3	-63.8	46.9	41.5	5.39	8.706		
1,500.0	1,495.8	1,499.3	1,495.8	3.0	2.9	-118.30	-19.6	-74.6	52.2	46.3	5.87	8.882		
1,600.0	1,595.2	1,599.2	1,595.1	3.3	3.2	-117.12	-20.8	-85.5	57.5	51.1	6.36	9.028		
1,700.0	1,694.6	1,699.0	1,694.3	3.5	3.4	-116.13	-22.1	-96.4	62.8	55.9	6.86	9.153		
1,800.0	1,793.9	1,798.9	1,793.6	3.8	3.7	-115.31	-23.3	-107.3	68.1	60.8	7.36	9.259		
1,900.0	1,893.3	1,898.7	1,892.8	4.1	3.9	-114.60	-24.6	-118.2	73.5	65.6	7.86	9.351		
2,000.0	1,992.7	1,998.6	1,992.1	4.3	4.2	-113.99	-25.9	-129.1	78.8	70.5	8.36	9.431		
2,100.0	2,092.1	2,098.4	2,091.3	4.6	4.4	-113.45	-27.1	-140.0	84.2	75.3	8.86	9.502		
2,200.0	2,191.5	2,198.3	2,190.6	4.8	4.7	-112.99	-28.4	-150.9	89.6	80.2	9.36	9.565		
2,300.0	2,290.8	2,298.1	2,289.8	5.1	4.9	-112.57	-29.6	-161.7	94.9	85.1	9.87	9.620		
2,400.0	2,390.2	2,398.0	2,389.1	5.3	5.2	-112.20	-30.9	-172.6	100.3	89.9	10.37	9.670		
2,500.0	2,489.6	2,497.9	2,488.3	5.6	5.5	-111.86	-32.1	-183.5	105.7	94.8	10.88	9.716		
2,600.0	2,589.0	2,597.7	2,587.6	5.9	5.7	-111.56	-33.4	-194.4	111.1	99.7	11.39	9.756		
2,700.0	2,688.4	2,697.6	2,686.8	6.1	6.0	-111.29	-34.7	-205.3	116.5	104.6	11.89	9.794		
2,800.0	2,787.7	2,797.4	2,786.1	6.4	6.2	-111.04	-35.9	-216.2	121.9	109.5	12.40	9.828		
2,900.0	2,887.1	2,897.3	2,885.3	6.6	6.5	-110.81	-37.2	-227.1	127.3	114.4	12.91	9.859		
3,000.0	2,986.5	2,997.1	2,984.6	6.9	6.7	-110.60	-38.4	-238.0	132.7	119.3	13.42	9.888		
3,100.0	3,085.9	3,097.0	3,083.8	7.2	7.0	-110.41	-39.7	-248.8	138.1	124.1	13.93	9.914		
3,200.0	3,185.3	3,196.8	3,183.1	7.4	7.2	-110.23	-41.0	-259.7	143.5	129.0	14.44	9.939		
3,300.0	3,284.6	3,296.7	3,282.3	7.7	7.5	-110.06	-42.2	-270.6	148.9	133.9	14.94	9.961		
3,400.0	3,384.0	3,396.5	3,381.6	7.9	7.8	-109.91	-43.5	-281.5	154.3	138.8	15.45	9.983		
3,500.0	3,483.4	3,496.4	3,480.8	8.2	8.0	-109.77	-44.7	-292.4	159.7	143.7	15.96	10.002		
3,600.0	3,582.8	3,596.2	3,580.1	8.5	8.3	-109.63	-46.0	-303.3	165.1	148.6	16.47	10.021		
3,700.0	3,682.1	3,696.1	3,679.3	8.7	8.5	-109.51	-47.2	-314.2	170.5	153.5	16.98	10.038		
3,800.0	3,781.5	3,795.9	3,778.6	9.0	8.8	-109.39	-48.5	-325.1	175.9	158.4	17.49	10.055		
3,900.0	3,880.9	3,895.8	3,877.8	9.2	9.1	-109.28	-49.8	-336.0	181.3	163.3	18.00	10.070		
4,000.0	3,980.3	3,995.6	3,977.1	9.5	9.3	-109.17	-51.0	-346.8	186.7	168.2	18.51	10.085		
4,100.0	4,079.7	4,095.5	4,076.3	9.8	9.6	-109.07	-52.3	-357.7	192.1	173.1	19.02	10.098		
4,200.0	4,179.0	4,195.4	4,175.6	10.0	9.8	-108.98	-53.5	-368.6	197.5	178.0	19.54	10.111		
4,300.0	4,278.4	4,295.2	4,274.8	10.3	10.1	-108.89	-54.8	-379.5	202.9	182.9	20.05	10.123		
4,400.0	4,377.8	4,395.1	4,374.1	10.5	10.3	-108.81	-56.1	-390.4	208.3	187.8	20.56	10.135		
4,500.0	4,477.2	4,494.9	4,473.3	10.8	10.6	-108.73	-57.3	-401.3	213.8	192.7	21.07	10.146		
4,600.0	4,576.6	4,594.8	4,572.6	11.1	10.9	-108.65	-58.6	-412.2	219.2	197.6	21.58	10.157		
4,700.0	4,675.9	4,694.6	4,671.8	11.3	11.1	-108.58	-59.8	-423.1	224.6	202.5	22.09	10.167		
4,800.0	4,775.3	4,794.5	4,771.1	11.6	11.4	-108.51	-61.1	-433.9	230.0	207.4	22.60	10.176		
4,900.0	4,874.7	4,894.3	4,870.3	11.9	11.6	-108.45	-62.4	-444.8	235.4	212.3	23.11	10.185		
5,000.0	4,974.1	4,994.2	4,969.6	12.1	11.9	-108.39	-63.6	-455.7	240.8	217.2	23.62	10.194		
5,100.0	5,073.5	5,094.0	5,068.8	12.4	12.2	-108.33	-64.9	-466.6	246.2	222.1	24.13	10.202		

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 Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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-Geolink MWD													Offset Well Error:		0.0 ft
Reference				Offset				Semi Major Axis			Distance		Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
5,200.0	5,172.8	5,193.9	5,168.1	12.6	12.4	-108.27	-66.1	-477.5	251.6	227.0	24.65	10.210			
5,300.0	5,272.2	5,293.7	5,267.3	12.9	12.7	-108.21	-67.4	-488.4	257.1	231.9	25.16	10.218			
5,400.0	5,371.6	5,393.6	5,366.6	13.2	12.9	-108.16	-68.6	-499.3	262.5	236.8	25.67	10.225			
5,500.0	5,471.0	5,493.4	5,465.8	13.4	13.2	-108.11	-69.9	-510.2	267.9	241.7	26.18	10.232			
5,600.0	5,570.3	5,593.3	5,565.1	13.7	13.5	-108.06	-71.2	-521.0	273.3	246.6	26.69	10.239			
5,700.0	5,669.7	5,693.1	5,664.3	13.9	13.7	-108.02	-72.4	-531.9	278.7	251.5	27.20	10.245			
5,800.0	5,769.1	5,793.0	5,763.6	14.2	14.0	-107.97	-73.7	-542.8	284.1	256.4	27.72	10.252			
5,900.0	5,868.5	5,892.9	5,862.8	14.5	14.2	-107.93	-74.9	-553.7	289.5	261.3	28.23	10.258			
6,000.0	5,967.9	5,992.7	5,962.1	14.7	14.5	-107.89	-76.2	-564.6	295.0	266.2	28.74	10.263			
6,100.0	6,067.2	6,092.6	6,061.3	15.0	14.7	-107.85	-77.5	-575.5	300.4	271.1	29.25	10.269			
6,200.0	6,166.6	6,192.4	6,160.6	15.3	15.0	-107.81	-78.7	-586.4	305.8	276.0	29.76	10.274			
6,300.0	6,266.0	6,294.6	6,262.5	15.5	15.2	-108.77	-80.0	-592.1	310.9	280.7	30.16	10.309			
6,400.0	6,365.4	6,393.0	6,360.1	15.8	15.1	-112.68	-81.2	-580.9	316.0	285.7	30.23	10.452			
6,500.0	6,465.0	6,483.0	6,446.5	16.0	14.9	179.37	-82.3	-556.1	323.9	294.0	29.90	10.834			
6,600.0	6,564.4	6,568.2	6,523.8	16.0	14.6	90.94	-83.3	-520.5	335.2	306.1	29.16	11.496			
6,700.0	6,660.9	6,650.0	6,592.3	15.8	14.2	78.81	-84.2	-475.9	348.6	320.5	28.18	12.372			
6,800.0	6,751.5	6,729.1	6,651.8	15.5	13.8	72.02	-84.9	-423.9	362.8	335.7	27.07	13.401			
6,900.0	6,833.5	6,806.1	6,702.4	15.0	13.4	67.17	-85.6	-365.9	376.6	350.7	25.97	14.501			
7,000.0	6,904.4	6,881.5	6,743.9	14.6	13.2	63.55	-86.1	-303.0	389.1	364.1	25.03	15.546			
7,100.0	6,962.0	6,950.0	6,774.2	14.2	13.2	60.99	-86.5	-241.6	399.6	375.2	24.41	16.371			
7,200.0	7,004.6	7,029.2	6,799.7	14.0	13.3	59.09	-86.8	-166.7	407.3	383.0	24.29	16.771			
7,300.0	7,030.8	7,100.0	6,813.7	14.0	13.7	58.05	-87.0	-97.3	412.1	387.4	24.77	16.641			
7,400.0	7,040.0	7,178.2	6,819.0	14.8	14.4	57.71	-87.1	-19.4	413.7	387.8	25.96	15.936			
7,435.3	7,040.1	7,208.6	6,819.0	15.2	14.7	57.70	-87.1	11.1	413.8	387.2	26.59	15.559			
7,500.0	7,040.0	7,273.4	6,819.0	16.0	15.6	57.71	-87.1	75.8	413.7	385.8	27.91	14.820			
7,600.0	7,040.0	7,373.4	6,819.0	17.5	17.0	57.71	-87.1	175.8	413.7	383.4	30.33	13.638			
7,700.0	7,040.0	7,473.4	6,819.0	19.2	18.7	57.71	-87.1	275.8	413.7	380.6	33.11	12.494			
7,800.0	7,040.0	7,573.4	6,819.0	21.0	20.5	57.71	-87.1	375.8	413.7	377.5	36.16	11.440			
7,900.0	7,040.0	7,673.4	6,819.0	22.9	22.5	57.71	-87.1	475.8	413.7	374.3	39.42	10.494			
8,000.0	7,040.0	7,773.4	6,819.0	25.0	24.5	57.71	-87.1	575.8	413.7	370.8	42.84	9.656			
8,100.0	7,040.0	7,873.4	6,819.0	27.1	26.6	57.71	-87.1	675.8	413.7	367.3	46.39	8.917			
8,200.0	7,040.0	7,973.4	6,819.0	29.2	28.8	57.71	-87.1	775.8	413.7	363.7	50.04	8.267			
8,300.0	7,040.0	8,073.4	6,819.0	31.4	31.0	57.71	-87.1	875.8	413.7	359.9	53.76	7.694			
8,400.0	7,040.0	8,173.4	6,819.0	33.7	33.3	57.71	-87.1	975.8	413.7	356.1	57.56	7.188			
8,500.0	7,040.0	8,273.4	6,819.0	36.0	35.6	57.71	-87.1	1,075.8	413.7	352.3	61.40	6.738			
8,600.0	7,040.0	8,373.4	6,819.0	38.3	37.9	57.71	-87.1	1,175.8	413.7	348.4	65.28	6.337			
8,700.0	7,040.0	8,473.4	6,819.0	40.6	40.2	57.71	-87.1	1,275.8	413.7	344.5	69.20	5.978			
8,800.0	7,040.0	8,573.4	6,819.0	42.9	42.6	57.71	-87.1	1,375.8	413.7	340.5	73.15	5.655			
8,900.0	7,040.0	8,673.4	6,819.0	45.3	44.9	57.71	-87.1	1,475.8	413.7	336.6	77.13	5.364			
9,000.0	7,040.0	8,773.4	6,819.0	47.6	47.3	57.71	-87.1	1,575.8	413.7	332.6	81.12	5.099			
9,100.0	7,040.0	8,873.4	6,819.0	50.0	49.7	57.71	-87.1	1,675.8	413.7	328.6	85.14	4.859			
9,200.0	7,040.0	8,973.4	6,819.0	52.4	52.1	57.71	-87.1	1,775.8	413.7	324.5	89.17	4.639			
9,300.0	7,040.0	9,073.4	6,819.0	54.8	54.5	57.71	-87.1	1,875.8	413.7	320.5	93.22	4.438			
9,400.0	7,040.0	9,173.4	6,819.0	57.2	56.9	57.71	-87.1	1,975.8	413.7	316.4	97.27	4.253			
9,500.0	7,040.0	9,273.4	6,819.0	59.6	59.3	57.71	-87.1	2,075.8	413.7	312.4	101.34	4.082			
9,600.0	7,040.0	9,373.4	6,819.0	62.0	61.7	57.71	-87.1	2,175.8	413.7	308.3	105.42	3.924			
9,700.0	7,040.0	9,473.4	6,819.0	64.4	64.1	57.71	-87.1	2,275.8	413.7	304.2	109.50	3.778			
9,800.0	7,040.0	9,573.4	6,819.0	66.8	66.6	57.71	-87.1	2,375.8	413.7	300.1	113.60	3.642			
9,900.0	7,040.0	9,673.4	6,819.0	69.2	69.0	57.71	-87.1	2,475.8	413.7	296.0	117.70	3.515			
10,000.0	7,040.0	9,773.4	6,819.0	71.7	71.4	57.71	-87.1	2,575.8	413.7	291.9	121.80	3.396			
10,100.0	7,040.0	9,873.4	6,819.0	74.1	73.8	57.71	-87.1	2,675.8	413.7	287.8	125.92	3.285			
10,200.0	7,040.0	9,973.4	6,819.0	76.5	76.3	57.71	-87.1	2,775.8	413.7	283.7	130.03	3.181			

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 Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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
S19-T3N-R68W (Boyd) - Boyd 3E-19H-M368 - Hz - Plan #1													Offset Well Error:	0.0 ft
Survey Program: 0-Geolink 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		
10,300.0	7,040.0	10,073.4	6,819.0	78.9	78.7	57.71	-87.1	2,875.8	413.7	279.5	134.15	3.084		
10,400.0	7,040.0	10,173.4	6,819.0	81.4	81.2	57.71	-87.1	2,975.8	413.7	275.4	138.28	2.992		
10,500.0	7,040.0	10,273.4	6,819.0	83.8	83.6	57.71	-87.1	3,075.8	413.7	271.3	142.41	2.905		
10,600.0	7,040.0	10,373.4	6,819.0	86.3	86.0	57.71	-87.1	3,175.8	413.7	267.2	146.54	2.823		
10,700.0	7,040.0	10,473.4	6,819.0	88.7	88.5	57.71	-87.1	3,275.8	413.7	263.0	150.67	2.746		
10,800.0	7,040.0	10,573.4	6,819.0	91.2	90.9	57.71	-87.1	3,375.8	413.7	258.9	154.81	2.672		
10,900.0	7,040.0	10,673.4	6,819.0	93.6	93.4	57.71	-87.1	3,475.8	413.7	254.7	158.95	2.603		
11,000.0	7,040.0	10,773.4	6,819.0	96.0	95.8	57.71	-87.1	3,575.8	413.7	250.6	163.10	2.536		
11,100.0	7,040.0	10,873.4	6,819.0	98.5	98.3	57.71	-87.1	3,675.8	413.7	246.5	167.24	2.474		
11,200.0	7,040.0	10,973.4	6,819.0	100.9	100.7	57.71	-87.1	3,775.8	413.7	242.3	171.39	2.414		
11,300.0	7,040.0	11,073.4	6,819.0	103.4	103.2	57.71	-87.1	3,875.8	413.7	238.2	175.54	2.357		
11,400.0	7,040.0	11,173.4	6,819.0	105.9	105.7	57.71	-87.1	3,975.8	413.7	234.0	179.69	2.302		
11,500.0	7,040.0	11,273.4	6,819.0	108.3	108.1	57.71	-87.1	4,075.8	413.7	229.8	183.84	2.250		
11,561.6	7,040.0	11,335.0	6,819.0	109.8	109.6	57.71	-87.1	4,137.4	413.7	227.3	186.40	2.219		
11,600.0	7,040.0	11,373.2	6,819.0	110.8	110.6	57.71	-87.1	4,175.6	413.7	225.7	187.99	2.201		
11,602.6	7,040.0	11,373.2	6,819.0	110.8	110.6	57.71	-87.1	4,175.6	413.7	225.7	188.05	2.200 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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 S19-T3N-R68W (Boyd) - Boyd 3F-19H-M368 - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-Geolink MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-18.2	0.0	18.2					
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-18.2	0.0	18.2	18.0	0.26	69.573		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-18.2	0.0	18.2	17.6	0.61	29.817		
300.0	300.0	300.0	300.0	0.5	0.5	180.00	-18.2	0.0	18.2	17.3	0.96	18.974		
400.0	400.0	400.0	400.0	0.7	0.7	180.00	-18.2	0.0	18.2	16.9	1.31	13.915 CC, ES		
500.0	500.0	499.8	499.8	0.8	0.8	-112.01	-18.7	-0.7	19.0	17.3	1.66	11.460		
600.0	600.0	599.6	599.6	1.0	1.0	-112.57	-20.1	-2.9	21.4	19.4	2.01	10.626 SF		
700.0	699.9	699.3	699.2	1.2	1.2	-113.28	-22.4	-6.6	25.4	23.0	2.38	10.669		
800.0	799.7	798.9	798.6	1.4	1.4	-113.95	-25.7	-11.7	30.9	28.2	2.76	11.217		
900.0	899.4	898.4	897.7	1.6	1.6	-114.52	-29.9	-18.2	38.1	34.9	3.16	12.060		
1,000.0	998.9	997.6	996.5	1.8	1.8	-114.96	-35.0	-26.2	46.8	43.2	3.58	13.065		
1,100.0	1,098.3	1,096.7	1,094.9	2.1	2.1	-115.05	-41.0	-35.6	57.0	52.9	4.03	14.127		
1,200.0	1,197.7	1,196.0	1,193.6	2.3	2.3	-114.51	-47.6	-45.9	67.7	63.2	4.49	15.058		
1,300.0	1,297.1	1,295.5	1,292.3	2.5	2.6	-114.11	-54.1	-56.2	78.4	73.4	4.96	15.791		
1,400.0	1,396.4	1,394.9	1,390.9	2.8	2.8	-113.81	-60.7	-66.5	89.1	83.6	5.44	16.381		
1,500.0	1,495.8	1,494.3	1,489.6	3.0	3.1	-113.57	-67.3	-76.7	99.8	93.9	5.92	16.865		
1,600.0	1,595.2	1,593.7	1,588.3	3.3	3.3	-113.38	-73.8	-87.0	110.5	104.1	6.40	17.267		
1,700.0	1,694.6	1,693.2	1,686.9	3.5	3.6	-113.22	-80.4	-97.3	121.2	114.3	6.89	17.606		
1,800.0	1,793.9	1,792.6	1,785.6	3.8	3.9	-113.08	-87.0	-107.6	131.9	124.6	7.37	17.895		
1,900.0	1,893.3	1,892.0	1,884.3	4.1	4.1	-112.97	-93.5	-117.8	142.7	134.8	7.86	18.145		
2,000.0	1,992.7	1,991.4	1,983.0	4.3	4.4	-112.87	-100.1	-128.1	153.4	145.0	8.35	18.363		
2,100.0	2,092.1	2,090.9	2,081.6	4.6	4.7	-112.79	-106.7	-138.4	164.1	155.3	8.84	18.553		
2,200.0	2,191.5	2,190.3	2,180.3	4.8	5.0	-112.72	-113.3	-148.6	174.8	165.5	9.34	18.722		
2,300.0	2,290.8	2,289.7	2,279.0	5.1	5.2	-112.65	-119.8	-158.9	185.5	175.7	9.83	18.873		
2,400.0	2,390.2	2,389.1	2,377.7	5.3	5.5	-112.59	-126.4	-169.2	196.3	185.9	10.33	19.007		
2,500.0	2,489.6	2,488.6	2,476.3	5.6	5.8	-112.54	-133.0	-179.5	207.0	196.2	10.82	19.128		
2,600.0	2,589.0	2,588.0	2,575.0	5.9	6.0	-112.49	-139.5	-189.7	217.7	206.4	11.32	19.238		
2,700.0	2,688.4	2,687.4	2,673.7	6.1	6.3	-112.45	-146.1	-200.0	228.4	216.6	11.81	19.338		
2,800.0	2,787.7	2,786.8	2,772.3	6.4	6.6	-112.41	-152.7	-210.3	239.1	226.8	12.31	19.429		
2,900.0	2,887.1	2,886.2	2,871.0	6.6	6.9	-112.38	-159.2	-220.6	249.9	237.1	12.81	19.512		
3,000.0	2,986.5	2,985.7	2,969.7	6.9	7.1	-112.34	-165.8	-230.8	260.6	247.3	13.30	19.589		
3,100.0	3,085.9	3,085.1	3,068.4	7.2	7.4	-112.31	-172.4	-241.1	271.3	257.5	13.80	19.660		
3,200.0	3,185.3	3,184.5	3,167.0	7.4	7.7	-112.29	-178.9	-251.4	282.0	267.7	14.30	19.726		
3,300.0	3,284.6	3,283.9	3,265.7	7.7	8.0	-112.26	-185.5	-261.7	292.8	278.0	14.80	19.786		
3,400.0	3,384.0	3,383.4	3,364.4	7.9	8.2	-112.24	-192.1	-271.9	303.5	288.2	15.29	19.843		
3,500.0	3,483.4	3,482.8	3,463.1	8.2	8.5	-112.22	-198.7	-282.2	314.2	298.4	15.79	19.896		
3,600.0	3,582.8	3,582.2	3,561.7	8.5	8.8	-112.19	-205.2	-292.5	324.9	308.6	16.29	19.945		
3,700.0	3,682.1	3,681.6	3,660.4	8.7	9.0	-112.18	-211.8	-302.8	335.6	318.9	16.79	19.991		
3,800.0	3,781.5	3,781.1	3,759.1	9.0	9.3	-112.16	-218.4	-313.0	346.4	329.1	17.29	20.035		
3,900.0	3,880.9	3,880.5	3,857.7	9.2	9.6	-112.14	-224.9	-323.3	357.1	339.3	17.79	20.076		
4,000.0	3,980.3	3,979.9	3,956.4	9.5	9.9	-112.12	-231.5	-333.6	367.8	349.5	18.29	20.114		
4,100.0	4,079.7	4,079.3	4,055.1	9.8	10.1	-112.11	-238.1	-343.9	378.5	359.7	18.79	20.150		
4,200.0	4,179.0	4,178.8	4,153.8	10.0	10.4	-112.09	-244.6	-354.1	389.2	370.0	19.28	20.185		
4,300.0	4,278.4	4,278.2	4,252.4	10.3	10.7	-112.08	-251.2	-364.4	400.0	380.2	19.78	20.217		
4,400.0	4,377.8	4,377.6	4,351.1	10.5	11.0	-112.07	-257.8	-374.7	410.7	390.4	20.28	20.248		
4,500.0	4,477.2	4,477.0	4,449.8	10.8	11.2	-112.06	-264.3	-385.0	421.4	400.6	20.78	20.277		
4,600.0	4,576.6	4,576.4	4,548.5	11.1	11.5	-112.04	-270.9	-395.2	432.1	410.9	21.28	20.305		
4,700.0	4,675.9	4,675.9	4,647.1	11.3	11.8	-112.03	-277.5	-405.5	442.9	421.1	21.78	20.332		
4,800.0	4,775.3	4,775.3	4,745.8	11.6	12.1	-112.02	-284.0	-415.8	453.6	431.3	22.28	20.357		
4,900.0	4,874.7	4,874.7	4,844.5	11.9	12.3	-112.01	-290.6	-426.1	464.3	441.5	22.78	20.381		
5,000.0	4,974.1	4,974.1	4,943.1	12.1	12.6	-112.00	-297.2	-436.3	475.0	451.7	23.28	20.404		
5,100.0	5,073.5	5,073.6	5,041.8	12.4	12.9	-111.99	-303.8	-446.6	485.7	462.0	23.78	20.426		

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 Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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 S19-T3N-R68W (Boyd) - Boyd 3F-19H-M368 - Hz - Plan #1												Offset Site Error: 0.0 ft	
Survey Program: 0-Geolink MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis		Separation Factor
5,200.0	5,172.8	5,173.0	5,140.5	12.6	13.2	-111.98	-310.3	-456.9	496.5	472.2	24.28		20.447

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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

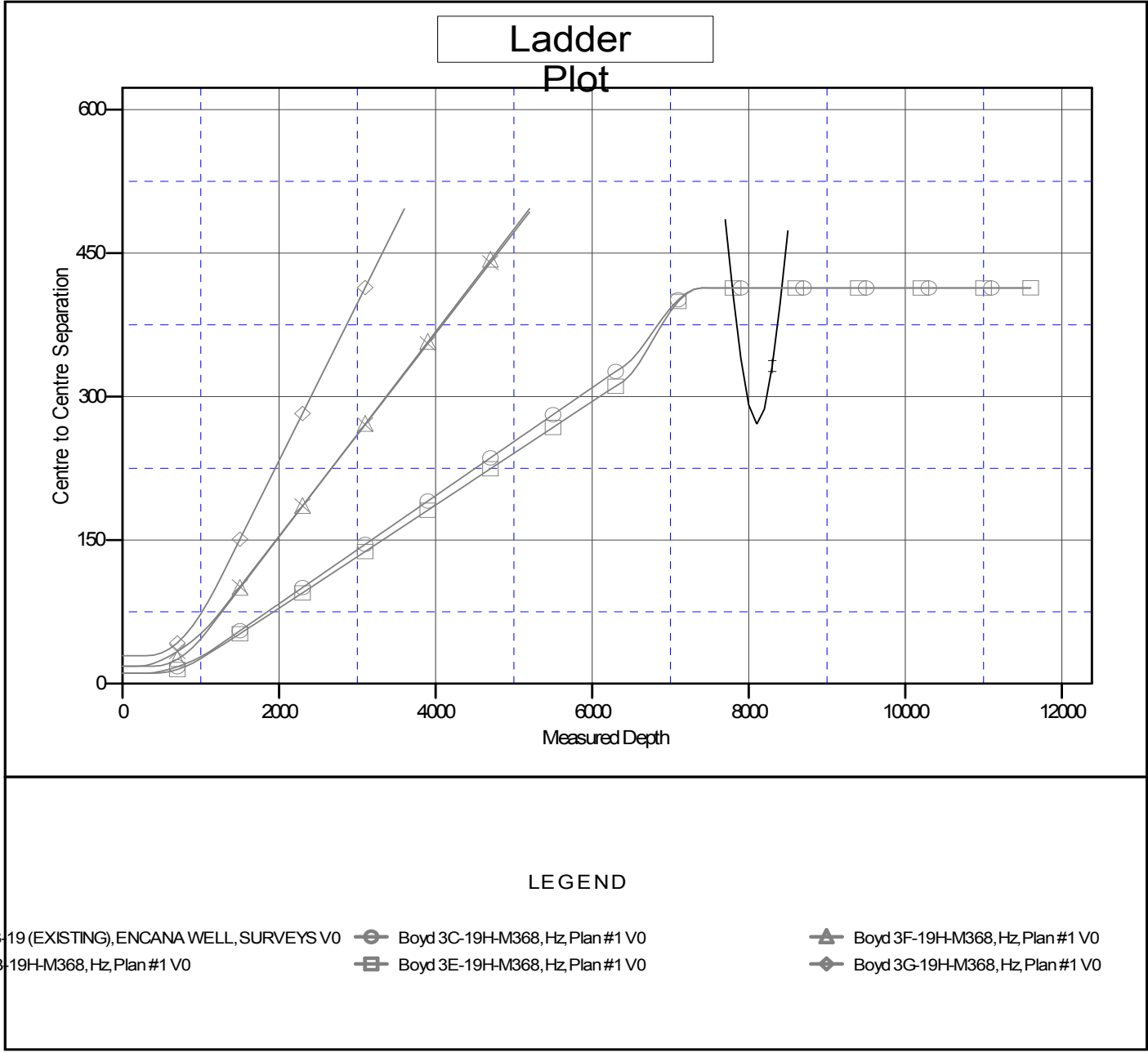
Offset Design													Offset Site Error:	0.0 ft	
Survey Program: 0-Geolink MWD													Offset Well Error:		0.0 ft
Reference				Offset			Semi Major Axis			Distance			Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-29.1	0.0	29.1						
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-29.1	0.0	29.1	28.9	0.26	111.317			
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-29.1	0.0	29.1	28.5	0.61	47.707			
300.0	300.0	300.0	300.0	0.5	0.5	180.00	-29.1	0.0	29.1	28.2	0.96	30.359 CC, ES			
400.0	400.0	399.6	399.6	0.7	0.7	-178.91	-29.8	-0.6	29.8	28.5	1.31	22.778			
500.0	500.0	499.2	499.1	0.8	0.8	-109.15	-31.8	-2.3	32.1	30.5	1.66	19.364			
600.0	600.0	598.6	598.5	1.0	1.0	-108.76	-35.0	-5.1	36.4	34.4	2.01	18.064			
700.0	699.9	697.9	697.6	1.2	1.2	-109.23	-39.6	-9.1	42.6	40.2	2.38	17.894 SF			
800.0	799.7	796.9	796.3	1.4	1.4	-110.17	-45.4	-14.1	50.7	47.9	2.76	18.377			
900.0	899.4	895.7	894.6	1.6	1.6	-111.30	-52.5	-20.3	60.8	57.6	3.16	19.246			
1,000.0	998.9	994.1	992.4	1.8	1.9	-112.44	-60.8	-27.5	72.8	69.2	3.58	20.336			
1,100.0	1,098.3	1,092.1	1,089.6	2.1	2.2	-113.39	-70.4	-35.9	86.6	82.6	4.02	21.541			
1,200.0	1,197.7	1,189.8	1,186.2	2.3	2.4	-113.52	-81.2	-45.2	101.8	97.3	4.48	22.721			
1,300.0	1,297.1	1,287.7	1,282.9	2.5	2.7	-113.11	-93.1	-55.6	118.0	113.1	4.95	23.857			
1,400.0	1,396.4	1,386.4	1,380.2	2.8	3.0	-112.73	-105.3	-66.2	134.5	129.1	5.42	24.797			
1,500.0	1,495.8	1,485.0	1,477.5	3.0	3.4	-112.44	-117.5	-76.8	150.9	145.0	5.90	25.569			
1,600.0	1,595.2	1,583.6	1,574.8	3.3	3.7	-112.20	-129.7	-87.3	167.3	161.0	6.38	26.211			
1,700.0	1,694.6	1,682.3	1,672.1	3.5	4.0	-112.00	-141.9	-97.9	183.8	176.9	6.87	26.754			
1,800.0	1,793.9	1,780.9	1,769.4	3.8	4.3	-111.84	-154.1	-108.5	200.2	192.9	7.36	27.217			
1,900.0	1,893.3	1,879.6	1,866.7	4.1	4.6	-111.70	-166.2	-119.1	216.7	208.8	7.85	27.618			
2,000.0	1,992.7	1,978.2	1,964.0	4.3	5.0	-111.58	-178.4	-129.7	233.1	224.8	8.34	27.966			
2,100.0	2,092.1	2,076.8	2,061.3	4.6	5.3	-111.48	-190.6	-140.3	249.6	240.7	8.83	28.273			
2,200.0	2,191.5	2,175.5	2,158.6	4.8	5.6	-111.39	-202.8	-150.9	266.0	256.7	9.32	28.544			
2,300.0	2,290.8	2,274.1	2,255.9	5.1	5.9	-111.31	-215.0	-161.5	282.4	272.6	9.81	28.785			
2,400.0	2,390.2	2,372.7	2,353.3	5.3	6.3	-111.24	-227.2	-172.1	298.9	288.6	10.31	29.002			
2,500.0	2,489.6	2,471.4	2,450.6	5.6	6.6	-111.17	-239.4	-182.6	315.3	304.5	10.80	29.197			
2,600.0	2,589.0	2,570.0	2,547.9	5.9	6.9	-111.11	-251.6	-193.2	331.8	320.5	11.30	29.373			
2,700.0	2,688.4	2,668.7	2,645.2	6.1	7.2	-111.06	-263.7	-203.8	348.2	336.4	11.79	29.534			
2,800.0	2,787.7	2,767.3	2,742.5	6.4	7.6	-111.01	-275.9	-214.4	364.7	352.4	12.29	29.681			
2,900.0	2,887.1	2,865.9	2,839.8	6.6	7.9	-110.97	-288.1	-225.0	381.1	368.3	12.78	29.815			
3,000.0	2,986.5	2,964.6	2,937.1	6.9	8.2	-110.93	-300.3	-235.6	397.6	384.3	13.28	29.939			
3,100.0	3,085.9	3,063.2	3,034.4	7.2	8.6	-110.90	-312.5	-246.2	414.0	400.3	13.78	30.053			
3,200.0	3,185.3	3,161.8	3,131.7	7.4	8.9	-110.86	-324.7	-256.8	430.5	416.2	14.27	30.159			
3,300.0	3,284.6	3,260.5	3,229.0	7.7	9.2	-110.83	-336.9	-267.3	446.9	432.2	14.77	30.257			
3,400.0	3,384.0	3,359.1	3,326.3	7.9	9.6	-110.80	-349.1	-277.9	463.4	448.1	15.27	30.349			
3,500.0	3,483.4	3,457.8	3,423.6	8.2	9.9	-110.77	-361.2	-288.5	479.8	464.1	15.77	30.434			
3,600.0	3,582.8	3,556.4	3,520.9	8.5	10.2	-110.75	-373.4	-299.1	496.3	480.0	16.26	30.514			

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 Boyd 3D-19H-M368
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5029.0ft (Original Well Elev)
Reference Site:	S19-T3N-R68W (Boyd)	MD Reference:	WELL @ 5029.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Boyd 3D-19H-M368	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 @ 5029.0ft (Original Well Elev) Coordinates are relative to: Boyd 3D-19H-M368
 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: 0.29°



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