



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Gurtler 2B-30H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site:	NWNW S30-T2N-R64W (Gurtler)	North Reference:	True
Well:	Gurtler 2B-30H	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		NWNW S30-T2N-R64W (Gurtler)			
Site Position:		Northing:	1,286,423.76 ft	Latitude:	40.116110
From:	Lat/Long	Easting:	3,251,800.62 ft	Longitude:	-104.599680
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.58 °

Well	Gurtler 2B-30H					
Well Position	+N/-S	0.0 ft	Northing:	1,286,423.49 ft	Latitude:	40.116110
	+E/-W	0.0 ft	Easting:	3,251,775.45 ft	Longitude:	-104.599770
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,928.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/18/2012	8.62	66.81	52,893

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	180.04

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	
550.0	7.00	357.50	549.1	21.3	-0.9	2.00	2.00	0.00	357.50	
1,350.0	7.00	357.50	1,343.2	118.7	-5.2	0.00	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,692.3	140.1	-6.1	2.00	-2.00	0.00	180.00	
6,445.6	0.00	0.00	6,437.9	140.1	-6.1	0.00	0.00	0.00	0.00	
7,350.6	90.50	180.00	7,010.8	-437.9	-6.1	10.00	10.00	0.00	180.00	
14,202.1	90.50	180.00	6,951.0	-7,289.2	-5.6	0.00	0.00	0.00	0.00	Gurtler 2B-30H PBHL

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Project:	DJ Wattenberg	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site:	NWNW S30-T2N-R64W (Gurtler)	North Reference:	True
Well:	Gurtler 2B-30H	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	2.00	357.50	300.0	1.7	-0.1	-1.7	2.00	2.00	
400.0	4.00	357.50	399.8	7.0	-0.3	-7.0	2.00	2.00	
500.0	6.00	357.50	499.5	15.7	-0.7	-15.7	2.00	2.00	
550.0	7.00	357.50	549.1	21.3	-0.9	-21.3	2.00	2.00	EOB; Inc=7°
600.0	7.00	357.50	598.8	27.4	-1.2	-27.4	0.00	0.00	
700.0	7.00	357.50	698.0	39.6	-1.7	-39.6	0.00	0.00	
800.0	7.00	357.50	797.3	51.8	-2.3	-51.8	0.00	0.00	
900.0	7.00	357.50	896.5	63.9	-2.8	-63.9	0.00	0.00	
1,000.0	7.00	357.50	995.8	76.1	-3.3	-76.1	0.00	0.00	
1,100.0	7.00	357.50	1,095.0	88.3	-3.9	-88.3	0.00	0.00	
1,200.0	7.00	357.50	1,194.3	100.5	-4.4	-100.5	0.00	0.00	
1,300.0	7.00	357.50	1,293.5	112.6	-4.9	-112.6	0.00	0.00	
1,350.0	7.00	357.50	1,343.2	118.7	-5.2	-118.7	0.00	0.00	Start Drop -2.00
1,400.0	6.00	357.50	1,392.8	124.4	-5.4	-124.4	2.00	-2.00	
1,500.0	4.00	357.50	1,492.5	133.1	-5.8	-133.1	2.00	-2.00	
1,600.0	2.00	357.50	1,592.3	138.3	-6.0	-138.3	2.00	-2.00	
1,700.0	0.00	0.00	1,692.3	140.1	-6.1	-140.1	2.00	-2.00	EOD; Inc=0°
1,800.0	0.00	0.00	1,792.3	140.1	-6.1	-140.1	0.00	0.00	
1,900.0	0.00	0.00	1,892.3	140.1	-6.1	-140.1	0.00	0.00	
2,000.0	0.00	0.00	1,992.3	140.1	-6.1	-140.1	0.00	0.00	
2,100.0	0.00	0.00	2,092.3	140.1	-6.1	-140.1	0.00	0.00	
2,200.0	0.00	0.00	2,192.3	140.1	-6.1	-140.1	0.00	0.00	
2,300.0	0.00	0.00	2,292.3	140.1	-6.1	-140.1	0.00	0.00	
2,400.0	0.00	0.00	2,392.3	140.1	-6.1	-140.1	0.00	0.00	
2,500.0	0.00	0.00	2,492.3	140.1	-6.1	-140.1	0.00	0.00	
2,600.0	0.00	0.00	2,592.3	140.1	-6.1	-140.1	0.00	0.00	
2,700.0	0.00	0.00	2,692.3	140.1	-6.1	-140.1	0.00	0.00	
2,800.0	0.00	0.00	2,792.3	140.1	-6.1	-140.1	0.00	0.00	
2,900.0	0.00	0.00	2,892.3	140.1	-6.1	-140.1	0.00	0.00	
3,000.0	0.00	0.00	2,992.3	140.1	-6.1	-140.1	0.00	0.00	
3,100.0	0.00	0.00	3,092.3	140.1	-6.1	-140.1	0.00	0.00	
3,200.0	0.00	0.00	3,192.3	140.1	-6.1	-140.1	0.00	0.00	
3,300.0	0.00	0.00	3,292.3	140.1	-6.1	-140.1	0.00	0.00	
3,400.0	0.00	0.00	3,392.3	140.1	-6.1	-140.1	0.00	0.00	
3,500.0	0.00	0.00	3,492.3	140.1	-6.1	-140.1	0.00	0.00	
3,600.0	0.00	0.00	3,592.3	140.1	-6.1	-140.1	0.00	0.00	
3,700.0	0.00	0.00	3,692.3	140.1	-6.1	-140.1	0.00	0.00	
3,800.0	0.00	0.00	3,792.3	140.1	-6.1	-140.1	0.00	0.00	
3,900.0	0.00	0.00	3,892.3	140.1	-6.1	-140.1	0.00	0.00	
4,000.0	0.00	0.00	3,992.3	140.1	-6.1	-140.1	0.00	0.00	
4,100.0	0.00	0.00	4,092.3	140.1	-6.1	-140.1	0.00	0.00	
4,200.0	0.00	0.00	4,192.3	140.1	-6.1	-140.1	0.00	0.00	
4,300.0	0.00	0.00	4,292.3	140.1	-6.1	-140.1	0.00	0.00	
4,400.0	0.00	0.00	4,392.3	140.1	-6.1	-140.1	0.00	0.00	
4,430.9	0.00	0.00	4,423.2	140.1	-6.1	-140.1	0.00	0.00	Sussex
4,500.0	0.00	0.00	4,492.3	140.1	-6.1	-140.1	0.00	0.00	
4,600.0	0.00	0.00	4,592.3	140.1	-6.1	-140.1	0.00	0.00	
4,664.9	0.00	0.00	4,657.2	140.1	-6.1	-140.1	0.00	0.00	Sussex Marker
4,700.0	0.00	0.00	4,692.3	140.1	-6.1	-140.1	0.00	0.00	

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Well:	Gurtler 2B-30H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,800.0	0.00	0.00	4,792.3	140.1	-6.1	-140.1	0.00	0.00	
4,900.0	0.00	0.00	4,892.3	140.1	-6.1	-140.1	0.00	0.00	
4,999.9	0.00	0.00	4,992.2	140.1	-6.1	-140.1	0.00	0.00	Shannon
5,000.0	0.00	0.00	4,992.3	140.1	-6.1	-140.1	0.00	0.00	
5,100.0	0.00	0.00	5,092.3	140.1	-6.1	-140.1	0.00	0.00	
5,200.0	0.00	0.00	5,192.3	140.1	-6.1	-140.1	0.00	0.00	
5,300.0	0.00	0.00	5,292.3	140.1	-6.1	-140.1	0.00	0.00	
5,400.0	0.00	0.00	5,392.3	140.1	-6.1	-140.1	0.00	0.00	
5,500.0	0.00	0.00	5,492.3	140.1	-6.1	-140.1	0.00	0.00	
5,600.0	0.00	0.00	5,592.3	140.1	-6.1	-140.1	0.00	0.00	
5,700.0	0.00	0.00	5,692.3	140.1	-6.1	-140.1	0.00	0.00	
5,800.0	0.00	0.00	5,792.3	140.1	-6.1	-140.1	0.00	0.00	
5,900.0	0.00	0.00	5,892.3	140.1	-6.1	-140.1	0.00	0.00	
6,000.0	0.00	0.00	5,992.3	140.1	-6.1	-140.1	0.00	0.00	
6,100.0	0.00	0.00	6,092.3	140.1	-6.1	-140.1	0.00	0.00	
6,121.9	0.00	0.00	6,114.2	140.1	-6.1	-140.1	0.00	0.00	Teepee Buttes
6,200.0	0.00	0.00	6,192.3	140.1	-6.1	-140.1	0.00	0.00	
6,300.0	0.00	0.00	6,292.3	140.1	-6.1	-140.1	0.00	0.00	
6,400.0	0.00	0.00	6,392.3	140.1	-6.1	-140.1	0.00	0.00	
6,445.6	0.00	0.00	6,437.9	140.1	-6.1	-140.1	0.00	0.00	Start 10° build @ 6445' MD
6,500.0	5.44	180.00	6,492.2	137.5	-6.1	-137.5	10.00	10.00	
6,600.0	15.44	180.00	6,590.4	119.4	-6.1	-119.4	10.00	10.00	
6,700.0	25.44	180.00	6,684.0	84.5	-6.1	-84.5	10.00	10.00	
6,800.0	35.44	180.00	6,770.1	33.9	-6.1	-33.9	10.00	10.00	
6,875.9	43.04	180.00	6,828.9	-14.1	-6.1	14.1	10.00	10.00	Sharon Springs
6,900.0	45.44	180.00	6,846.1	-30.9	-6.1	30.9	10.00	10.00	
6,943.5	49.80	180.00	6,875.4	-63.0	-6.1	63.0	10.00	10.00	Niobrara
7,000.0	55.44	180.00	6,909.7	-107.9	-6.1	107.9	10.00	10.00	
7,056.9	61.14	180.00	6,939.6	-156.3	-6.1	156.3	10.00	10.00	B Chalk
7,100.0	65.44	180.00	6,959.0	-194.8	-6.1	194.8	10.00	10.00	
7,200.0	75.44	180.00	6,992.4	-288.9	-6.1	288.9	10.00	10.00	
7,300.0	85.44	180.00	7,009.0	-387.4	-6.1	387.4	10.00	10.00	
7,350.6	90.50	180.00	7,010.8	-437.9	-6.1	437.9	10.00	10.00	Landing Pt @ 7350' MD; 90.5°
7,400.0	90.50	180.00	7,010.4	-487.3	-6.1	487.3	0.00	0.00	
7,500.0	90.50	180.00	7,009.5	-587.3	-6.1	587.3	0.00	0.00	
7,600.0	90.50	180.00	7,008.6	-687.3	-6.1	687.3	0.00	0.00	
7,700.0	90.50	180.00	7,007.7	-787.3	-6.1	787.3	0.00	0.00	
7,800.0	90.50	180.00	7,006.9	-887.3	-6.0	887.3	0.00	0.00	
7,900.0	90.50	180.00	7,006.0	-987.3	-6.0	987.3	0.00	0.00	
8,000.0	90.50	180.00	7,005.1	-1,087.3	-6.0	1,087.3	0.00	0.00	
8,100.0	90.50	180.00	7,004.3	-1,187.3	-6.0	1,187.3	0.00	0.00	
8,200.0	90.50	180.00	7,003.4	-1,287.3	-6.0	1,287.3	0.00	0.00	
8,300.0	90.50	180.00	7,002.5	-1,387.3	-6.0	1,387.3	0.00	0.00	
8,400.0	90.50	180.00	7,001.6	-1,487.3	-6.0	1,487.3	0.00	0.00	
8,500.0	90.50	180.00	7,000.8	-1,587.3	-6.0	1,587.3	0.00	0.00	
8,600.0	90.50	180.00	6,999.9	-1,687.3	-6.0	1,687.3	0.00	0.00	
8,700.0	90.50	180.00	6,999.0	-1,787.3	-6.0	1,787.3	0.00	0.00	
8,800.0	90.50	180.00	6,998.1	-1,887.3	-6.0	1,887.3	0.00	0.00	
8,900.0	90.50	180.00	6,997.3	-1,987.3	-6.0	1,987.3	0.00	0.00	
9,000.0	90.50	180.00	6,996.4	-2,087.3	-6.0	2,087.3	0.00	0.00	
9,100.0	90.50	180.00	6,995.5	-2,187.3	-6.0	2,187.3	0.00	0.00	
9,200.0	90.50	180.00	6,994.7	-2,287.3	-5.9	2,287.3	0.00	0.00	

Planning Report

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Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site:	NWNW S30-T2N-R64W (Gurtler)	North Reference:	True
Well:	Gurtler 2B-30H	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
9,300.0	90.50	180.00	6,993.8	-2,387.3	-5.9	2,387.3	0.00	0.00	
9,400.0	90.50	180.00	6,992.9	-2,487.3	-5.9	2,487.3	0.00	0.00	
9,500.0	90.50	180.00	6,992.0	-2,587.2	-5.9	2,587.3	0.00	0.00	
9,600.0	90.50	180.00	6,991.2	-2,687.2	-5.9	2,687.2	0.00	0.00	
9,700.0	90.50	180.00	6,990.3	-2,787.2	-5.9	2,787.2	0.00	0.00	
9,800.0	90.50	180.00	6,989.4	-2,887.2	-5.9	2,887.2	0.00	0.00	
9,900.0	90.50	180.00	6,988.5	-2,987.2	-5.9	2,987.2	0.00	0.00	
10,000.0	90.50	180.00	6,987.7	-3,087.2	-5.9	3,087.2	0.00	0.00	
10,100.0	90.50	180.00	6,986.8	-3,187.2	-5.9	3,187.2	0.00	0.00	
10,200.0	90.50	180.00	6,985.9	-3,287.2	-5.9	3,287.2	0.00	0.00	
10,300.0	90.50	180.00	6,985.1	-3,387.2	-5.9	3,387.2	0.00	0.00	
10,400.0	90.50	180.00	6,984.2	-3,487.2	-5.9	3,487.2	0.00	0.00	
10,500.0	90.50	180.00	6,983.3	-3,587.2	-5.9	3,587.2	0.00	0.00	
10,600.0	90.50	180.00	6,982.4	-3,687.2	-5.8	3,687.2	0.00	0.00	
10,700.0	90.50	180.00	6,981.6	-3,787.2	-5.8	3,787.2	0.00	0.00	
10,800.0	90.50	180.00	6,980.7	-3,887.2	-5.8	3,887.2	0.00	0.00	
10,900.0	90.50	180.00	6,979.8	-3,987.2	-5.8	3,987.2	0.00	0.00	
11,000.0	90.50	180.00	6,978.9	-4,087.2	-5.8	4,087.2	0.00	0.00	
11,100.0	90.50	180.00	6,978.1	-4,187.2	-5.8	4,187.2	0.00	0.00	
11,200.0	90.50	180.00	6,977.2	-4,287.2	-5.8	4,287.2	0.00	0.00	
11,300.0	90.50	180.00	6,976.3	-4,387.2	-5.8	4,387.2	0.00	0.00	
11,400.0	90.50	180.00	6,975.5	-4,487.2	-5.8	4,487.2	0.00	0.00	
11,500.0	90.50	180.00	6,974.6	-4,587.2	-5.8	4,587.2	0.00	0.00	
11,600.0	90.50	180.00	6,973.7	-4,687.2	-5.8	4,687.2	0.00	0.00	
11,700.0	90.50	180.00	6,972.8	-4,787.2	-5.8	4,787.2	0.00	0.00	
11,800.0	90.50	180.00	6,972.0	-4,887.2	-5.8	4,887.2	0.00	0.00	
11,900.0	90.50	180.00	6,971.1	-4,987.2	-5.8	4,987.2	0.00	0.00	
12,000.0	90.50	180.00	6,970.2	-5,087.2	-5.7	5,087.2	0.00	0.00	
12,100.0	90.50	180.00	6,969.3	-5,187.1	-5.7	5,187.2	0.00	0.00	
12,200.0	90.50	180.00	6,968.5	-5,287.1	-5.7	5,287.1	0.00	0.00	
12,300.0	90.50	180.00	6,967.6	-5,387.1	-5.7	5,387.1	0.00	0.00	
12,400.0	90.50	180.00	6,966.7	-5,487.1	-5.7	5,487.1	0.00	0.00	
12,500.0	90.50	180.00	6,965.9	-5,587.1	-5.7	5,587.1	0.00	0.00	
12,600.0	90.50	180.00	6,965.0	-5,687.1	-5.7	5,687.1	0.00	0.00	
12,700.0	90.50	180.00	6,964.1	-5,787.1	-5.7	5,787.1	0.00	0.00	
12,800.0	90.50	180.00	6,963.2	-5,887.1	-5.7	5,887.1	0.00	0.00	
12,900.0	90.50	180.00	6,962.4	-5,987.1	-5.7	5,987.1	0.00	0.00	
13,000.0	90.50	180.00	6,961.5	-6,087.1	-5.7	6,087.1	0.00	0.00	
13,100.0	90.50	180.00	6,960.6	-6,187.1	-5.7	6,187.1	0.00	0.00	
13,200.0	90.50	180.00	6,959.7	-6,287.1	-5.7	6,287.1	0.00	0.00	
13,300.0	90.50	180.00	6,958.9	-6,387.1	-5.7	6,387.1	0.00	0.00	
13,400.0	90.50	180.00	6,958.0	-6,487.1	-5.7	6,487.1	0.00	0.00	
13,500.0	90.50	180.00	6,957.1	-6,587.1	-5.6	6,587.1	0.00	0.00	
13,600.0	90.50	180.00	6,956.3	-6,687.1	-5.6	6,687.1	0.00	0.00	
13,700.0	90.50	180.00	6,955.4	-6,787.1	-5.6	6,787.1	0.00	0.00	
13,800.0	90.50	180.00	6,954.5	-6,887.1	-5.6	6,887.1	0.00	0.00	
13,900.0	90.50	180.00	6,953.6	-6,987.1	-5.6	6,987.1	0.00	0.00	
14,000.0	90.50	180.00	6,952.8	-7,087.1	-5.6	7,087.1	0.00	0.00	
14,100.0	90.50	180.00	6,951.9	-7,187.1	-5.6	7,187.1	0.00	0.00	
14,200.0	90.50	180.00	6,951.0	-7,287.1	-5.6	7,287.1	0.00	0.00	
14,202.1	90.50	180.00	6,951.0	-7,289.2	-5.6	7,289.2	0.00	0.00	TD at 14202.1 - Gurtler 2B-30H PBHL

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Gurtler 2B-30H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site:	NWNW S30-T2N-R64W (Gurtler)	North Reference:	True
Well:	Gurtler 2B-30H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Gurtler 2B-30H PBHL	0.00	0.00	6,951.0	-7,289.2	-5.6	1,279,134.60	3,251,843.86	40.096100	-104.599790
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
4,430.9	4,422.0	Sussex		-0.50	180.00	
4,664.9	4,656.0	Sussex Marker		-0.50	180.00	
4,999.9	4,991.0	Shannon		-0.50	180.00	
6,121.9	6,113.0	Teepee Buttes		-0.50	180.00	
6,875.9	6,829.0	Sharon Springs		-0.50	180.00	
6,943.5	6,876.0	Niobrara		-0.50	180.00	
7,056.9	6,941.0	B Chalk		-0.50	180.00	

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
200.0	200.0	0.0	0.0	KOP @ 200'	
550.0	549.1	21.3	-0.9	EOB; Inc=7°	
1,350.0	1,343.2	118.7	-5.2	Start Drop -2.00	
1,700.0	1,692.3	140.1	-6.1	EOD; Inc=0°	
6,445.6	6,437.9	140.1	-6.1	Start 10° build @ 6445' MD	
7,350.6	7,010.8	-437.9	-6.1	Landing Pt @ 7350' MD; 90.5°	
14,202.1	6,951.0	-7,289.2	-5.6	TD at 14202.1	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

NWNW S30-T2N-R64W (Gurtler)

Gurtler 2B-30H

Hz

Plan #1

Anticollision Report

18 June, 2012

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Gurtler 2B-30H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Reference Site:	NWNW S30-T2N-R64W (Gurtler)	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gurtler 2B-30H	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 1,025.4ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	6/18/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	14,201.7	Plan #1 (Hz)	MWD	Geolink MWD

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
NWNW S30-T2N-R64W (Gurtler)						
Gurtler #1 (Existing) - Existing - Existing	7,699.2	6,976.7	182.3	150.6	5.753	CC
Gurtler #1 (Existing) - Existing - Existing	7,700.0	6,976.7	182.3	150.6	5.751	ES, SF
Gurtler 12-30 (Existing) - Existing - Existing	8,874.3	6,951.5	356.0	305.9	7.106	CC, ES
Gurtler 12-30 (Existing) - Existing - Existing	8,900.0	6,951.3	356.9	306.4	7.065	SF
Gurtler 2A-30H - Hz - Plan #1	200.0	200.0	25.2	24.5	38.561	CC, ES
Gurtler 2A-30H - Hz - Plan #1	14,202.1	14,272.4	901.0	641.2	3.468	SF
Kaminsky #1 (Existing) - Existing - Existing						Out of range
Medsker-Overton #1 (Existing) - Existing - Existing	12,949.4	6,980.9	757.1	636.7	6.291	CC, ES
Medsker-Overton #1 (Existing) - Existing - Existing	13,000.0	6,980.5	758.8	637.5	6.259	SF
Starks #1 (Existing) - Existing - Existing	10,669.6	6,960.8	258.7	178.0	3.205	CC, ES, SF
Starks 23-30 (Existing) - Existing - Existing						Out of range
Starks 24-30 (Existing) - Existing - Existing						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Gurtler 2B-30H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Reference Site:	NWNW S30-T2N-R64W (Gurtler)	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gurtler 2B-30H	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 NWNW S30-T2N-R64W (Gurtler) - Gurtler #1 (Existing) - Existing - Existing													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		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)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	167.37	-786.5	176.2	806.6					
100.0	100.0	69.0	69.0	0.2	0.1	167.37	-786.5	176.2	806.0	805.7	0.27		2,959.515	
200.0	200.0	169.0	169.0	0.3	0.3	167.37	-786.5	176.2	806.0	805.4	0.62		1,297.162	
300.0	300.0	269.0	269.0	0.5	0.5	169.89	-786.5	176.2	807.7	806.7	0.97		832.549	
400.0	399.8	368.8	368.8	0.7	0.6	169.93	-786.5	176.2	812.8	811.5	1.32		616.587	
500.0	499.5	468.5	468.5	0.9	0.8	170.01	-786.5	176.2	821.4	819.8	1.67		493.183	
600.0	598.8	567.8	567.8	1.2	1.0	170.13	-786.5	176.2	833.0	831.0	2.01		413.673	
700.0	698.0	667.0	667.0	1.4	1.2	170.27	-786.5	176.2	845.0	842.7	2.36		357.485	
800.0	797.3	766.3	766.3	1.7	1.3	170.41	-786.5	176.2	857.0	854.3	2.71		315.795	
900.0	896.5	865.5	865.5	2.0	1.5	170.54	-786.5	176.2	869.1	866.0	3.06		283.638	
1,000.0	995.8	964.8	964.8	2.2	1.7	170.68	-786.5	176.2	881.1	877.7	3.41		258.083	
1,100.0	1,095.0	1,064.0	1,064.0	2.5	1.9	170.80	-786.5	176.2	893.1	889.4	3.76		237.288	
1,200.0	1,194.3	1,163.3	1,163.3	2.8	2.0	170.92	-786.5	176.2	905.1	901.0	4.11		220.037	
1,300.0	1,293.5	1,262.5	1,262.5	3.1	2.2	171.05	-786.5	176.2	917.2	912.7	4.46		205.496	
1,400.0	1,392.8	1,361.8	1,361.8	3.3	2.4	171.18	-786.5	176.2	928.8	924.0	4.82		192.847	
1,500.0	1,492.5	1,461.5	1,461.5	3.5	2.6	171.28	-786.5	176.2	937.4	932.2	5.17		181.340	
1,600.0	1,592.3	1,561.3	1,561.3	3.7	2.7	171.35	-786.5	176.2	942.6	937.1	5.52		170.812	
1,700.0	1,692.3	1,661.3	1,661.3	3.8	2.9	168.87	-786.5	176.2	944.3	938.5	5.86		161.078	
1,800.0	1,792.3	1,761.3	1,761.3	4.0	3.1	168.87	-786.5	176.2	944.3	938.1	6.21		152.051	
1,900.0	1,892.3	1,861.3	1,861.3	4.1	3.2	168.87	-786.5	176.2	944.3	937.8	6.56		143.980	
2,000.0	1,992.3	1,961.3	1,961.3	4.2	3.4	168.87	-786.5	176.2	944.3	937.4	6.91		136.721	
2,100.0	2,092.3	2,061.3	2,061.3	4.4	3.6	168.87	-786.5	176.2	944.3	937.1	7.26		130.157	
2,200.0	2,192.3	2,161.3	2,161.3	4.5	3.8	168.87	-786.5	176.2	944.3	936.7	7.60		124.194	
2,300.0	2,292.3	2,261.3	2,261.3	4.7	3.9	168.87	-786.5	176.2	944.3	936.4	7.95		118.752	
2,400.0	2,392.3	2,361.3	2,361.3	4.8	4.1	168.87	-786.5	176.2	944.3	936.0	8.30		113.766	
2,500.0	2,492.3	2,461.3	2,461.3	5.0	4.3	168.87	-786.5	176.2	944.3	935.7	8.65		109.181	
2,600.0	2,592.3	2,561.3	2,561.3	5.1	4.5	168.87	-786.5	176.2	944.3	935.3	9.00		104.952	
2,700.0	2,692.3	2,661.3	2,661.3	5.3	4.6	168.87	-786.5	176.2	944.3	935.0	9.35		101.037	
2,800.0	2,792.3	2,761.3	2,761.3	5.4	4.8	168.87	-786.5	176.2	944.3	934.6	9.69		97.403	
2,900.0	2,892.3	2,861.3	2,861.3	5.6	5.0	168.87	-786.5	176.2	944.3	934.3	10.04		94.022	
3,000.0	2,992.3	2,961.3	2,961.3	5.8	5.2	168.87	-786.5	176.2	944.3	933.9	10.39		90.867	
3,100.0	3,092.3	3,061.3	3,061.3	5.9	5.3	168.87	-786.5	176.2	944.3	933.6	10.74		87.917	
3,200.0	3,192.3	3,161.3	3,161.3	6.1	5.5	168.87	-786.5	176.2	944.3	933.2	11.09		85.152	
3,300.0	3,292.3	3,261.3	3,261.3	6.2	5.7	168.87	-786.5	176.2	944.3	932.9	11.44		82.556	
3,400.0	3,392.3	3,361.3	3,361.3	6.4	5.9	168.87	-786.5	176.2	944.3	932.5	11.79		80.113	
3,500.0	3,492.3	3,461.3	3,461.3	6.6	6.0	168.87	-786.5	176.2	944.3	932.2	12.14		77.811	
3,600.0	3,592.3	3,561.3	3,561.3	6.7	6.2	168.87	-786.5	176.2	944.3	931.8	12.48		75.637	
3,700.0	3,692.3	3,661.3	3,661.3	6.9	6.4	168.87	-786.5	176.2	944.3	931.5	12.83		73.581	
3,800.0	3,792.3	3,761.3	3,761.3	7.0	6.6	168.87	-786.5	176.2	944.3	931.1	13.18		71.634	
3,900.0	3,892.3	3,861.3	3,861.3	7.2	6.7	168.87	-786.5	176.2	944.3	930.8	13.53		69.787	
4,000.0	3,992.3	3,961.3	3,961.3	7.4	6.9	168.87	-786.5	176.2	944.3	930.4	13.88		68.033	
4,100.0	4,092.3	4,061.3	4,061.3	7.5	7.1	168.87	-786.5	176.2	944.3	930.1	14.23		66.365	
4,200.0	4,192.3	4,161.3	4,161.3	7.7	7.3	168.87	-786.5	176.2	944.3	929.7	14.58		64.777	
4,300.0	4,292.3	4,261.3	4,261.3	7.9	7.4	168.87	-786.5	176.2	944.3	929.4	14.93		63.263	
4,400.0	4,392.3	4,361.3	4,361.3	8.0	7.6	168.87	-786.5	176.2	944.3	929.0	15.28		61.818	
4,500.0	4,492.3	4,461.3	4,461.3	8.2	7.8	168.87	-786.5	176.2	944.3	928.7	15.62		60.437	
4,600.0	4,592.3	4,561.3	4,561.3	8.4	8.0	168.87	-786.5	176.2	944.3	928.3	15.97		59.117	
4,700.0	4,692.3	4,661.3	4,661.3	8.5	8.1	168.87	-786.5	176.2	944.3	928.0	16.32		57.853	
4,800.0	4,792.3	4,761.3	4,761.3	8.7	8.3	168.87	-786.5	176.2	944.3	927.6	16.67		56.642	
4,900.0	4,892.3	4,861.3	4,861.3	8.9	8.5	168.87	-786.5	176.2	944.3	927.3	17.02		55.481	
5,000.0	4,992.3	4,961.3	4,961.3	9.0	8.7	168.87	-786.5	176.2	944.3	926.9	17.37		54.367	
5,100.0	5,092.3	5,061.3	5,061.3	9.2	8.8	168.87	-786.5	176.2	944.3	926.6	17.72		53.296	

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 Gurtler 2B-30H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Reference Site:	NWNW S30-T2N-R64W (Gurtler)	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gurtler 2B-30H	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 NWNW S30-T2N-R64W (Gurtler) - Gurtler #1 (Existing) - Existing - Existing													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,200.0	5,192.3	5,161.3	5,161.3	9.4	9.0	168.87	-786.5	176.2	944.3	926.2	18.07	52.267		
5,300.0	5,292.3	5,261.3	5,261.3	9.5	9.2	168.87	-786.5	176.2	944.3	925.9	18.42	51.276		
5,400.0	5,392.3	5,361.3	5,361.3	9.7	9.4	168.87	-786.5	176.2	944.3	925.5	18.77	50.323		
5,500.0	5,492.3	5,461.3	5,461.3	9.9	9.5	168.87	-786.5	176.2	944.3	925.2	19.11	49.404		
5,600.0	5,592.3	5,561.3	5,561.3	10.1	9.7	168.87	-786.5	176.2	944.3	924.9	19.46	48.518		
5,700.0	5,692.3	5,661.3	5,661.3	10.2	9.9	168.87	-786.5	176.2	944.3	924.5	19.81	47.664		
5,800.0	5,792.3	5,761.3	5,761.3	10.4	10.1	168.87	-786.5	176.2	944.3	924.2	20.16	46.839		
5,900.0	5,892.3	5,861.3	5,861.3	10.6	10.2	168.87	-786.5	176.2	944.3	923.8	20.51	46.042		
6,000.0	5,992.3	5,961.3	5,961.3	10.7	10.4	168.87	-786.5	176.2	944.3	923.5	20.86	45.271		
6,100.0	6,092.3	6,061.3	6,061.3	10.9	10.6	168.87	-786.5	176.2	944.3	923.1	21.21	44.526		
6,200.0	6,192.3	6,161.3	6,161.3	11.1	10.8	168.87	-786.5	176.2	944.3	922.8	21.56	43.806		
6,300.0	6,292.3	6,261.3	6,261.3	11.2	10.9	168.87	-786.5	176.2	944.3	922.4	21.91	43.108		
6,400.0	6,392.3	6,361.3	6,361.3	11.4	11.1	168.87	-786.5	176.2	944.3	922.1	22.25	42.432		
6,500.0	6,492.2	6,461.2	6,461.2	11.6	11.3	-11.21	-786.5	176.2	941.8	919.3	22.52	41.815		
6,600.0	6,590.4	6,559.4	6,559.4	11.7	11.4	-11.79	-786.5	176.2	924.0	901.6	22.38	41.283		
6,700.0	6,684.0	6,653.0	6,653.0	11.7	11.6	-13.05	-786.5	176.2	889.9	868.0	21.83	40.758		
6,800.0	6,770.1	6,739.1	6,739.1	11.9	11.8	-15.25	-786.5	176.2	840.4	819.4	20.97	40.083		
6,900.0	6,846.1	6,815.1	6,815.1	12.1	11.9	-18.97	-786.5	176.2	777.3	757.3	19.99	38.889		
7,000.0	6,909.7	6,878.7	6,878.7	12.4	12.0	-25.34	-786.5	176.2	702.6	683.3	19.35	36.315		
7,100.0	6,959.0	6,928.0	6,928.0	12.9	12.1	-36.54	-786.5	176.2	619.1	599.1	20.01	30.941		
7,200.0	6,992.4	6,961.4	6,961.4	13.7	12.1	-55.54	-786.5	176.2	529.9	506.9	23.04	23.004		
7,300.0	7,009.0	6,978.0	6,978.0	14.6	12.2	-80.13	-786.5	176.2	438.8	412.2	26.52	16.547		
7,400.0	7,010.4	6,979.4	6,979.4	15.7	12.2	-90.82	-786.5	176.2	350.3	322.4	27.86	12.572		
7,500.0	7,009.5	6,978.5	6,978.5	16.9	12.2	-90.55	-786.5	176.2	270.0	240.9	29.05	9.292		
7,600.0	7,008.6	6,977.6	6,977.6	18.2	12.2	-90.27	-786.5	176.2	207.5	177.2	30.33	6.840		
7,699.2	7,007.7	6,976.7	6,976.7	19.5	12.2	-90.00	-786.5	176.2	182.3	150.6	31.68	5.753 CC		
7,700.0	7,007.7	6,976.7	6,976.7	19.5	12.2	-90.00	-786.5	176.2	182.3	150.6	31.69	5.751 ES, SF		
7,800.0	7,006.9	6,975.9	6,975.9	20.9	12.2	-89.72	-786.5	176.2	208.3	175.2	33.10	6.292		
7,900.0	7,006.0	6,975.0	6,975.0	22.4	12.2	-89.45	-786.5	176.2	271.2	236.6	34.56	7.846		
8,000.0	7,005.1	6,974.1	6,974.1	23.9	12.2	-89.17	-786.5	176.2	351.7	315.7	36.06	9.753		
8,100.0	7,004.3	6,973.3	6,973.3	25.4	12.2	-88.90	-786.5	176.2	440.3	402.7	37.59	11.713		
8,200.0	7,003.4	6,972.4	6,972.4	27.0	12.2	-88.63	-786.5	176.2	532.9	493.8	39.15	13.614		
8,300.0	7,002.5	6,971.5	6,971.5	28.6	12.2	-88.35	-786.5	176.2	627.8	587.1	40.73	15.417		
8,400.0	7,001.6	6,970.6	6,970.6	30.2	12.2	-88.08	-786.5	176.2	724.1	681.8	42.32	17.110		
8,500.0	7,000.8	6,969.8	6,969.8	31.8	12.2	-87.80	-786.5	176.2	821.3	777.3	43.93	18.695		
8,600.0	6,999.9	6,968.9	6,968.9	33.4	12.2	-87.53	-786.5	176.2	919.0	873.5	45.55	20.176		
8,700.0	6,999.0	6,968.0	6,968.0	35.1	12.2	-87.26	-786.5	176.2	1,017.2	970.1	47.18	21.559		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Gurtler 2B-30H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Reference Site:	NWNW S30-T2N-R64W (Gurtler)	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gurtler 2B-30H	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 NWNW S30-T2N-R64W (Gurtler) - Gurtler 12-30 (Existing) - Existing - Existing													Offset Site Error:	0.0 ft
Survey Program:		0-MWD											Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
8,000.0	7,005.1	6,959.1	6,959.1	23.9	12.1	91.23	-1,961.6	-361.9	944.0	908.0	36.03	26.199		
8,100.0	7,004.3	6,958.3	6,958.3	25.4	12.1	91.09	-1,961.6	-361.9	852.2	814.7	37.57	22.686		
8,200.0	7,003.4	6,957.4	6,957.4	27.0	12.1	90.95	-1,961.6	-361.9	762.5	723.4	39.13	19.488		
8,300.0	7,002.5	6,956.5	6,956.5	28.6	12.1	90.81	-1,961.6	-361.9	675.7	635.0	40.71	16.598		
8,400.0	7,001.6	6,955.6	6,955.6	30.2	12.1	90.67	-1,961.6	-361.9	593.0	550.7	42.31	14.016		
8,500.0	7,000.8	6,954.8	6,954.8	31.8	12.1	90.53	-1,961.6	-361.9	516.6	472.6	43.93	11.759		
8,600.0	6,999.9	6,953.9	6,953.9	33.4	12.1	90.39	-1,961.6	-361.9	449.4	403.8	45.56	9.864		
8,700.0	6,999.0	6,953.0	6,953.0	35.1	12.1	90.24	-1,961.6	-361.9	396.4	349.2	47.20	8.397		
8,800.0	6,998.1	6,952.1	6,952.1	36.7	12.1	90.10	-1,961.6	-361.9	363.6	314.8	48.86	7.443		
8,874.3	6,997.5	6,951.5	6,951.5	38.0	12.1	90.00	-1,961.6	-361.9	356.0	305.9	50.09	7.106 CC, ES		
8,900.0	6,997.3	6,951.3	6,951.3	38.4	12.1	89.96	-1,961.6	-361.9	356.9	306.4	50.52	7.065 SF		
9,000.0	6,996.4	6,950.4	6,950.4	40.1	12.1	89.82	-1,961.6	-361.9	377.5	325.3	52.19	7.234		
9,100.0	6,995.5	6,949.5	6,949.5	41.7	12.1	89.68	-1,961.6	-361.9	421.5	367.6	53.86	7.825		
9,200.0	6,994.7	6,948.7	6,948.7	43.4	12.1	89.54	-1,961.6	-361.9	482.4	426.9	55.54	8.686		
9,300.0	6,993.8	6,947.8	6,947.8	45.1	12.1	89.40	-1,961.6	-361.9	554.9	497.6	57.23	9.696		
9,400.0	6,992.9	6,946.9	6,946.9	46.8	12.1	89.26	-1,961.6	-361.9	634.8	575.9	58.92	10.774		
9,500.0	6,992.0	6,946.0	6,946.0	48.5	12.1	89.12	-1,961.6	-361.9	719.8	659.2	60.61	11.875		
9,600.0	6,991.2	6,945.2	6,945.2	50.2	12.1	88.98	-1,961.6	-361.9	808.2	745.9	62.31	12.971		
9,700.0	6,990.3	6,944.3	6,944.3	51.9	12.1	88.84	-1,961.6	-361.9	899.1	835.1	64.01	14.045		
9,800.0	6,989.4	6,943.4	6,943.4	53.6	12.1	88.70	-1,961.6	-361.9	991.7	926.0	65.72	15.091		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Gurtler 2B-30H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Reference Site:	NWNW S30-T2N-R64W (Gurtler)	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gurtler 2B-30H	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 NWNW S30-T2N-R64W (Gurtler) - Gurtler 2A-30H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	89.98	0.0	25.2	25.2					
100.0	100.0	100.0	100.0	0.2	0.2	89.98	0.0	25.2	25.2	24.9	0.30	82.884		
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	25.2	25.2	24.5	0.65	38.561	CC, ES	
300.0	300.0	299.1	299.1	0.5	0.5	95.42	0.3	26.9	27.0	26.0	1.00	26.871		
400.0	399.8	397.9	397.7	0.7	0.7	102.19	1.3	31.9	32.7	31.4	1.37	23.843		
500.0	499.5	496.1	495.5	0.9	0.9	109.22	2.9	40.2	43.0	41.2	1.78	24.206		
600.0	598.8	593.4	592.2	1.2	1.2	114.45	5.2	51.6	57.7	55.5	2.21	26.089		
700.0	698.0	689.9	687.5	1.4	1.5	116.41	8.0	66.2	75.6	73.0	2.67	28.289		
800.0	797.3	787.8	783.9	1.7	1.8	116.91	11.2	82.9	95.2	92.1	3.15	30.226		
900.0	896.5	885.8	880.5	2.0	2.1	117.24	14.5	99.6	114.8	111.2	3.63	31.593		
1,000.0	995.8	983.9	977.0	2.2	2.5	117.47	17.7	116.3	134.4	130.3	4.12	32.601		
1,100.0	1,095.0	1,081.9	1,073.6	2.5	2.8	117.65	21.0	133.0	154.0	149.4	4.62	33.373		
1,200.0	1,194.3	1,180.0	1,170.2	2.8	3.1	117.78	24.2	149.7	173.6	168.5	5.11	33.981		
1,300.0	1,293.5	1,278.1	1,266.7	3.1	3.5	117.89	27.5	166.4	193.2	187.6	5.61	34.471		
1,400.0	1,392.8	1,376.2	1,363.4	3.3	3.8	118.04	30.7	183.2	212.6	206.5	6.10	34.866		
1,500.0	1,492.5	1,474.5	1,460.2	3.5	4.2	117.67	34.0	199.9	230.6	224.1	6.55	35.236		
1,600.0	1,592.3	1,573.0	1,557.2	3.7	4.5	116.64	37.2	216.7	247.1	240.2	6.94	35.587		
1,700.0	1,692.3	1,671.5	1,654.2	3.8	4.9	112.57	40.5	233.5	262.3	255.0	7.29	35.971		
1,800.0	1,792.3	1,769.9	1,751.2	4.0	5.2	110.59	43.8	250.3	277.0	269.3	7.62	36.364		
1,900.0	1,892.3	1,868.4	1,848.1	4.1	5.6	108.81	47.0	267.1	291.9	284.0	7.94	36.783		
2,000.0	1,992.3	1,966.9	1,945.1	4.2	5.9	107.20	50.3	283.8	307.2	298.9	8.25	37.215		
2,100.0	2,092.3	2,065.4	2,042.1	4.4	6.2	105.75	53.6	300.6	322.6	314.1	8.57	37.648		
2,200.0	2,192.3	2,163.9	2,139.1	4.5	6.6	104.43	56.8	317.4	338.3	329.4	8.88	38.077		
2,300.0	2,292.3	2,262.4	2,236.1	4.7	6.9	103.23	60.1	334.2	354.1	344.9	9.20	38.497		
2,400.0	2,392.3	2,360.8	2,333.1	4.8	7.3	102.13	63.3	351.0	370.0	360.5	9.51	38.903		
2,500.0	2,492.3	2,459.3	2,430.1	5.0	7.6	101.12	66.6	367.8	386.1	376.3	9.83	39.296		
2,600.0	2,592.3	2,557.8	2,527.0	5.1	8.0	100.19	69.9	384.6	402.3	392.1	10.14	39.672		
2,700.0	2,692.3	2,656.3	2,624.0	5.3	8.3	99.33	73.1	401.4	418.5	408.1	10.45	40.033		
2,800.0	2,792.3	2,754.8	2,721.0	5.4	8.7	98.54	76.4	418.1	434.9	424.1	10.77	40.378		
2,900.0	2,892.3	2,853.2	2,818.0	5.6	9.0	97.80	79.7	434.9	451.3	440.2	11.09	40.706		
3,000.0	2,992.3	2,951.7	2,915.0	5.8	9.4	97.12	82.9	451.7	467.8	456.4	11.40	41.019		
3,100.0	3,092.3	3,050.2	3,012.0	5.9	9.7	96.48	86.2	468.5	484.4	472.7	11.72	41.317		
3,200.0	3,192.3	3,148.7	3,108.9	6.1	10.1	95.88	89.4	485.3	501.0	488.9	12.04	41.600		
3,300.0	3,292.3	3,247.2	3,205.9	6.2	10.4	95.32	92.7	502.1	517.7	505.3	12.36	41.870		
3,400.0	3,392.3	3,345.6	3,302.9	6.4	10.8	94.80	96.0	518.9	534.4	521.7	12.68	42.127		
3,500.0	3,492.3	3,444.1	3,399.9	6.6	11.1	94.31	99.2	535.7	551.1	538.1	13.01	42.371		
3,600.0	3,592.3	3,542.6	3,496.9	6.7	11.5	93.85	102.5	552.4	567.9	554.6	13.33	42.603		
3,700.0	3,692.3	3,641.1	3,593.9	6.9	11.8	93.41	105.8	569.2	584.7	571.1	13.65	42.824		
3,800.0	3,792.3	3,739.6	3,690.9	7.0	12.1	93.00	109.0	586.0	601.6	587.6	13.98	43.034		
3,900.0	3,892.3	3,838.0	3,787.8	7.2	12.5	92.61	112.3	602.8	618.4	604.1	14.30	43.235		
4,000.0	3,992.3	3,936.5	3,884.8	7.4	12.8	92.24	115.6	619.6	635.3	620.7	14.63	43.426		
4,100.0	4,092.3	4,035.0	3,981.8	7.5	13.2	91.89	118.8	636.4	652.3	637.3	14.96	43.609		
4,200.0	4,192.3	4,133.5	4,078.8	7.7	13.5	91.56	122.1	653.2	669.2	653.9	15.28	43.783		
4,300.0	4,292.3	4,232.0	4,175.8	7.9	13.9	91.25	125.3	669.9	686.2	670.6	15.61	43.949		
4,400.0	4,392.3	4,330.4	4,272.8	8.0	14.2	90.95	128.6	686.7	703.2	687.2	15.94	44.108		
4,500.0	4,492.3	4,428.9	4,369.7	8.2	14.6	90.66	131.9	703.5	720.2	703.9	16.27	44.261		
4,600.0	4,592.3	4,527.4	4,466.7	8.4	14.9	90.39	135.1	720.3	737.2	720.6	16.60	44.406		
4,700.0	4,692.3	4,625.9	4,563.7	8.5	15.3	90.13	138.4	737.1	754.3	737.3	16.93	44.545		
4,800.0	4,792.3	4,724.4	4,660.7	8.7	15.6	89.88	141.7	753.9	771.3	754.0	17.26	44.679		
4,900.0	4,892.3	4,822.9	4,757.7	8.9	16.0	89.64	144.9	770.7	788.4	770.8	17.59	44.807		
5,000.0	4,992.3	4,921.3	4,854.7	9.0	16.3	89.41	148.2	787.5	805.5	787.5	17.93	44.930		
5,100.0	5,092.3	5,019.8	4,951.7	9.2	16.7	89.20	151.4	804.2	822.5	804.3	18.26	45.047		

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 Gurtler 2B-30H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Reference Site:	NWNW S30-T2N-R64W (Gurtler)	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gurtler 2B-30H	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 NWNW S30-T2N-R64W (Gurtler) - Gurtler 2A-30H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		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)	Uncertainty Axis			
5,200.0	5,192.3	5,118.3	5,048.6	9.4	17.0	88.99	154.7	821.0	839.7	821.1	18.59	45.161		
5,300.0	5,292.3	5,216.8	5,145.6	9.5	17.4	88.78	158.0	837.8	856.8	837.8	18.93	45.269		
5,400.0	5,392.3	5,321.8	5,249.1	9.7	17.7	88.58	161.4	855.6	873.8	854.6	19.27	45.346		
5,500.0	5,492.3	5,463.9	5,389.8	9.9	18.1	88.36	165.3	875.4	887.8	868.1	19.68	45.122		
5,600.0	5,592.3	5,607.7	5,532.9	10.1	18.4	88.22	167.8	888.4	896.9	876.8	20.09	44.654		
5,700.0	5,692.3	5,752.5	5,677.5	10.2	18.6	88.16	169.0	894.3	901.0	880.5	20.50	43.957		
5,800.0	5,792.3	5,867.3	5,792.3	10.4	18.7	88.16	169.0	894.7	901.3	880.4	20.86	43.202		
5,900.0	5,892.3	5,967.3	5,892.3	10.6	18.8	88.16	169.0	894.7	901.3	880.1	21.20	42.509		
6,000.0	5,992.3	6,067.3	5,992.3	10.7	18.9	88.16	169.0	894.7	901.3	879.8	21.54	41.837		
6,100.0	6,092.3	6,167.3	6,092.3	10.9	19.0	88.16	169.0	894.7	901.3	879.4	21.88	41.186		
6,200.0	6,192.3	6,267.3	6,192.3	11.1	19.1	88.16	169.0	894.7	901.3	879.1	22.22	40.554		
6,300.0	6,292.3	6,367.3	6,292.3	11.2	19.2	88.16	169.0	894.7	901.3	878.7	22.57	39.941		
6,400.0	6,392.3	6,467.3	6,392.3	11.4	19.3	88.16	169.0	894.7	901.3	878.4	22.91	39.346		
6,500.0	6,492.2	6,570.7	6,495.5	11.6	19.4	-91.75	164.9	894.7	901.3	878.0	23.21	38.827		
6,600.0	6,590.4	6,675.4	6,597.8	11.7	19.4	-91.56	142.8	894.7	901.2	877.8	23.41	38.488		
6,700.0	6,684.0	6,779.4	6,693.7	11.7	19.5	-91.32	102.9	894.7	901.1	877.5	23.58	38.218		
6,800.0	6,770.1	6,882.7	6,780.2	11.9	19.5	-91.04	46.8	894.7	901.0	877.2	23.80	37.851		
6,900.0	6,866.1	6,985.0	6,854.7	12.1	19.6	-90.73	-23.2	894.7	900.9	876.7	24.21	37.211		
7,000.0	6,909.7	7,086.5	6,915.0	12.4	19.8	-90.39	-104.6	894.7	900.9	875.9	24.92	36.156		
7,100.0	6,959.0	7,187.0	6,959.8	12.9	20.2	-90.05	-194.4	894.7	900.8	874.8	26.00	34.651		
7,115.7	6,965.3	7,202.7	6,965.3	13.1	20.2	-90.00	-209.1	894.7	900.8	874.6	26.21	34.365		
7,200.0	6,992.4	7,286.5	6,987.9	13.7	20.6	-89.71	-289.7	894.8	900.9	873.4	27.48	32.782		
7,300.0	7,009.0	7,385.1	6,999.2	14.6	21.3	-89.38	-387.6	894.8	900.9	871.6	29.33	30.715		
7,400.0	7,010.4	7,484.7	6,998.7	15.7	22.0	-89.26	-487.2	894.8	900.9	869.4	31.48	28.615		
7,500.0	7,009.5	7,584.7	6,997.9	16.9	22.9	-89.26	-587.2	894.8	900.9	867.1	33.86	26.609		
7,600.0	7,008.6	7,684.7	6,997.0	18.2	23.8	-89.26	-687.2	894.8	900.9	864.5	36.41	24.740		
7,700.0	7,007.7	7,784.7	6,996.1	19.5	24.8	-89.26	-787.2	894.8	900.9	861.8	39.12	23.030		
7,800.0	7,006.9	7,884.7	6,995.2	20.9	26.0	-89.26	-887.2	894.8	900.9	859.0	41.94	21.479		
7,900.0	7,006.0	7,984.7	6,994.4	22.4	27.2	-89.26	-987.1	894.8	900.9	856.0	44.86	20.081		
8,000.0	7,005.1	8,084.7	6,993.5	23.9	28.4	-89.26	-1,087.1	894.8	900.9	853.0	47.86	18.823		
8,100.0	7,004.3	8,184.7	6,992.6	25.4	29.7	-89.26	-1,187.1	894.8	900.9	850.0	50.93	17.690		
8,200.0	7,003.4	8,284.7	6,991.8	27.0	31.1	-89.26	-1,287.1	894.8	900.9	846.9	54.05	16.669		
8,300.0	7,002.5	8,384.7	6,990.9	28.6	32.4	-89.26	-1,387.1	894.8	900.9	843.7	57.21	15.748		
8,400.0	7,001.6	8,484.7	6,990.0	30.2	33.9	-89.26	-1,487.1	894.8	900.9	840.5	60.41	14.913		
8,500.0	7,000.8	8,584.7	6,989.1	31.8	35.3	-89.26	-1,587.1	894.8	900.9	837.3	63.64	14.155		
8,600.0	6,999.9	8,684.7	6,988.3	33.4	36.8	-89.26	-1,687.1	894.8	900.9	834.0	66.91	13.465		
8,700.0	6,999.0	8,784.7	6,987.4	35.1	38.3	-89.26	-1,787.1	894.9	900.9	830.7	70.19	12.835		
8,800.0	6,998.1	8,884.7	6,986.5	36.7	39.8	-89.26	-1,887.1	894.9	900.9	827.4	73.50	12.258		
8,900.0	6,997.3	8,984.7	6,985.6	38.4	41.3	-89.26	-1,987.1	894.9	900.9	824.1	76.82	11.727		
9,000.0	6,996.4	9,084.7	6,984.8	40.1	42.9	-89.26	-2,087.1	894.9	900.9	820.8	80.16	11.239		
9,100.0	6,995.5	9,184.7	6,983.9	41.7	44.5	-89.26	-2,187.1	894.9	900.9	817.4	83.51	10.788		
9,200.0	6,994.7	9,284.7	6,983.0	43.4	46.1	-89.26	-2,287.1	894.9	900.9	814.0	86.88	10.370		
9,300.0	6,993.8	9,384.7	6,982.2	45.1	47.6	-89.26	-2,387.1	894.9	900.9	810.7	90.26	9.982		
9,400.0	6,992.9	9,484.7	6,981.3	46.8	49.3	-89.26	-2,487.1	894.9	900.9	807.3	93.64	9.621		
9,500.0	6,992.0	9,584.7	6,980.4	48.5	50.9	-89.26	-2,587.1	894.9	900.9	803.9	97.04	9.284		
9,600.0	6,991.2	9,684.7	6,979.5	50.2	52.5	-89.26	-2,687.1	894.9	900.9	800.5	100.44	8.970		
9,700.0	6,990.3	9,784.7	6,978.7	51.9	54.1	-89.26	-2,787.1	894.9	900.9	797.1	103.85	8.675		
9,800.0	6,989.4	9,884.7	6,977.8	53.6	55.8	-89.26	-2,887.1	894.9	900.9	793.6	107.26	8.399		
9,900.0	6,988.5	9,984.7	6,976.9	55.3	57.4	-89.26	-2,987.1	894.9	900.9	790.2	110.68	8.139		
10,000.0	6,987.7	10,084.7	6,976.0	57.0	59.1	-89.26	-3,087.1	894.9	900.9	786.8	114.11	7.895		
10,100.0	6,986.8	10,184.7	6,975.2	58.8	60.7	-89.26	-3,187.1	895.0	900.9	783.4	117.54	7.665		
10,200.0	6,985.9	10,284.7	6,974.3	60.5	62.4	-89.26	-3,287.1	895.0	900.9	779.9	120.98	7.447		

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 Gurtler 2B-30H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Reference Site:	NWNW S30-T2N-R64W (Gurtler)	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gurtler 2B-30H	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 NWNW S30-T2N-R64W (Gurtler) - Gurtler 2A-30H - Hz - Plan #1												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		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)	Uncertainty Axis		
10,300.0	6,985.1	10,384.7	6,973.4	62.2	64.1	-89.26	-3,387.1	895.0	900.9	776.5	124.42	7.241	
10,400.0	6,984.2	10,484.7	6,972.6	63.9	65.7	-89.26	-3,487.1	895.0	900.9	773.0	127.86	7.046	
10,500.0	6,983.3	10,584.7	6,971.7	65.6	67.4	-89.26	-3,587.0	895.0	900.9	769.6	131.31	6.861	
10,600.0	6,982.4	10,684.7	6,970.8	67.4	69.1	-89.26	-3,687.0	895.0	900.9	766.1	134.76	6.685	
10,700.0	6,981.6	10,784.7	6,969.9	69.1	70.8	-89.26	-3,787.0	895.0	900.9	762.7	138.21	6.518	
10,800.0	6,980.7	10,884.7	6,969.1	70.8	72.5	-89.26	-3,887.0	895.0	900.9	759.2	141.67	6.359	
10,900.0	6,979.8	10,984.7	6,968.2	72.5	74.2	-89.26	-3,987.0	895.0	900.9	755.8	145.13	6.208	
11,000.0	6,978.9	11,084.7	6,967.3	74.3	75.9	-89.26	-4,087.0	895.0	900.9	752.3	148.59	6.063	
11,100.0	6,978.1	11,184.7	6,966.4	76.0	77.6	-89.26	-4,187.0	895.0	900.9	748.9	152.05	5.925	
11,200.0	6,977.2	11,284.7	6,965.6	77.7	79.3	-89.26	-4,287.0	895.0	900.9	745.4	155.51	5.793	
11,300.0	6,976.3	11,384.7	6,964.7	79.5	81.0	-89.26	-4,387.0	895.0	900.9	741.9	158.98	5.667	
11,400.0	6,975.5	11,484.7	6,963.8	81.2	82.7	-89.26	-4,487.0	895.0	900.9	738.5	162.45	5.546	
11,500.0	6,974.6	11,584.7	6,963.0	82.9	84.4	-89.26	-4,587.0	895.0	900.9	735.0	165.92	5.430	
11,600.0	6,973.7	11,684.7	6,962.1	84.7	86.1	-89.26	-4,687.0	895.1	900.9	731.5	169.39	5.319	
11,700.0	6,972.8	11,784.7	6,961.2	86.4	87.8	-89.26	-4,787.0	895.1	900.9	728.0	172.86	5.212	
11,800.0	6,972.0	11,884.7	6,960.3	88.2	89.5	-89.26	-4,887.0	895.1	900.9	724.6	176.34	5.109	
11,900.0	6,971.1	11,984.7	6,959.5	89.9	91.2	-89.26	-4,987.0	895.1	900.9	721.1	179.81	5.010	
12,000.0	6,970.2	12,084.7	6,958.6	91.6	92.9	-89.26	-5,087.0	895.1	900.9	717.6	183.29	4.915	
12,100.0	6,969.3	12,184.7	6,957.7	93.4	94.6	-89.26	-5,187.0	895.1	900.9	714.1	186.77	4.824	
12,200.0	6,968.5	12,284.7	6,956.8	95.1	96.4	-89.26	-5,287.0	895.1	900.9	710.7	190.25	4.735	
12,300.0	6,967.6	12,384.7	6,956.0	96.9	98.1	-89.26	-5,387.0	895.1	900.9	707.2	193.73	4.650	
12,400.0	6,966.7	12,484.7	6,955.1	98.6	99.8	-89.26	-5,487.0	895.1	900.9	703.7	197.21	4.568	
12,500.0	6,965.9	12,584.7	6,954.2	100.3	101.5	-89.26	-5,587.0	895.1	900.9	700.2	200.69	4.489	
12,600.0	6,965.0	12,684.7	6,953.4	102.1	103.2	-89.26	-5,687.0	895.1	900.9	696.7	204.17	4.412	
12,700.0	6,964.1	12,784.7	6,952.5	103.8	105.0	-89.26	-5,787.0	895.1	900.9	693.2	207.66	4.338	
12,800.0	6,963.2	12,884.7	6,951.6	105.6	106.7	-89.26	-5,887.0	895.1	900.9	689.8	211.14	4.267	
12,900.0	6,962.4	12,984.7	6,950.7	107.3	108.4	-89.26	-5,987.0	895.1	900.9	686.3	214.63	4.198	
13,000.0	6,961.5	13,084.7	6,949.9	109.0	110.1	-89.26	-6,087.0	895.1	900.9	682.8	218.11	4.130	
13,100.0	6,960.6	13,184.7	6,949.0	110.8	111.9	-89.26	-6,186.9	895.2	900.9	679.3	221.60	4.065	
13,200.0	6,959.7	13,284.7	6,948.1	112.5	113.6	-89.26	-6,286.9	895.2	900.9	675.8	225.09	4.002	
13,300.0	6,958.9	13,384.7	6,947.2	114.3	115.3	-89.26	-6,386.9	895.2	900.9	672.3	228.57	3.941	
13,400.0	6,958.0	13,484.7	6,946.4	116.0	117.0	-89.26	-6,486.9	895.2	900.9	668.8	232.06	3.882	
13,500.0	6,957.1	13,584.7	6,945.5	117.8	118.8	-89.26	-6,586.9	895.2	900.9	665.4	235.55	3.825	
13,600.0	6,956.3	13,684.7	6,944.6	119.5	120.5	-89.26	-6,686.9	895.2	900.9	661.9	239.04	3.769	
13,700.0	6,955.4	13,784.7	6,943.8	121.3	122.2	-89.26	-6,786.9	895.2	900.9	658.4	242.53	3.715	
13,800.0	6,954.5	13,884.7	6,942.9	123.0	124.0	-89.26	-6,886.9	895.2	900.9	654.9	246.02	3.662	
13,900.0	6,953.6	13,984.7	6,942.0	124.8	125.7	-89.26	-6,986.9	895.2	900.9	651.4	249.51	3.611	
14,000.0	6,952.8	14,084.7	6,941.1	126.5	127.4	-89.26	-7,086.9	895.2	900.9	647.9	253.00	3.561	
14,100.0	6,951.9	14,184.7	6,940.3	128.2	129.2	-89.26	-7,186.9	895.2	900.9	644.4	256.50	3.512	
14,167.0	6,951.3	14,251.7	6,939.7	129.4	130.3	-89.26	-7,253.9	895.2	900.9	642.1	258.84	3.481	
14,200.0	6,951.0	14,272.4	6,939.5	130.0	130.7	-89.26	-7,274.6	895.2	901.0	641.2	259.77	3.468	
14,202.1	6,951.0	14,272.4	6,939.5	130.0	130.7	-89.26	-7,274.6	895.2	901.0	641.2	259.81	3.468 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Gurtler 2B-30H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Reference Site:	NWNW S30-T2N-R64W (Gurtler)	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gurtler 2B-30H	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 NWNW S30-T2N-R64W (Gurtler) - Medsker-Overton #1 (Existing) - Existing - Existing												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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)			
12,300.0	6,967.6	6,986.6	6,986.6	96.9	12.2	-90.43	-6,036.5	751.4	997.4	888.4	109.05	9.147	
12,400.0	6,966.7	6,985.7	6,985.7	98.6	12.2	-90.36	-6,036.5	751.4	935.4	824.6	110.79	8.443	
12,500.0	6,965.9	6,984.9	6,984.9	100.3	12.2	-90.30	-6,036.5	751.4	880.4	767.9	112.53	7.824	
12,600.0	6,965.0	6,984.0	6,984.0	102.1	12.2	-90.23	-6,036.5	751.4	833.8	719.5	114.27	7.297	
12,700.0	6,964.1	6,983.1	6,983.1	103.8	12.2	-90.16	-6,036.5	751.4	797.1	681.1	116.01	6.871	
12,800.0	6,963.2	6,982.2	6,982.2	105.6	12.2	-90.10	-6,036.5	751.4	771.7	653.9	117.75	6.554	
12,900.0	6,962.4	6,981.4	6,981.4	107.3	12.2	-90.03	-6,036.5	751.4	758.7	639.2	119.49	6.349	
12,949.4	6,961.9	6,980.9	6,980.9	108.2	12.2	-90.00	-6,036.5	751.4	757.1	636.7	120.35	6.291	CC, ES
13,000.0	6,961.5	6,980.5	6,980.5	109.0	12.2	-89.97	-6,036.5	751.4	758.8	637.5	121.23	6.259	SF
13,100.0	6,960.6	6,979.6	6,979.6	110.8	12.2	-89.90	-6,036.5	751.4	771.9	648.9	122.97	6.277	
13,200.0	6,959.7	6,978.7	6,978.7	112.5	12.2	-89.83	-6,036.5	751.4	797.5	672.8	124.72	6.394	
13,300.0	6,958.9	6,977.9	6,977.9	114.3	12.2	-89.77	-6,036.5	751.4	834.3	707.9	126.46	6.598	
13,400.0	6,958.0	6,977.0	6,977.0	116.0	12.2	-89.70	-6,036.5	751.4	881.0	752.8	128.20	6.872	
13,500.0	6,957.1	6,976.1	6,976.1	117.8	12.2	-89.64	-6,036.5	751.4	936.1	806.2	129.94	7.204	
13,600.0	6,956.3	6,975.3	6,975.3	119.5	12.2	-89.57	-6,036.5	751.4	998.2	866.5	131.69	7.580	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Gurtler 2B-30H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Reference Site:	NWNW S30-T2N-R64W (Gurtler)	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gurtler 2B-30H	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 NWNW S30-T2N-R64W (Gurtler) - Starks #1 (Existing) - Existing - Existing												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
9,700.0	6,990.3	6,969.3	6,969.3	51.9	12.2	-91.87	-3,756.8	252.9	1,003.5	939.5	64.04	15.671	
9,800.0	6,989.4	6,968.4	6,968.4	53.6	12.2	-91.68	-3,756.8	252.9	907.3	841.5	65.75	13.799	
9,900.0	6,988.5	6,967.5	6,967.5	55.3	12.2	-91.49	-3,756.8	252.9	811.9	744.5	67.46	12.035	
10,000.0	6,987.7	6,966.7	6,966.7	57.0	12.2	-91.29	-3,756.8	252.9	717.8	648.7	69.18	10.376	
10,100.0	6,986.8	6,965.8	6,965.8	58.8	12.2	-91.10	-3,756.8	252.9	625.6	554.7	70.90	8.824	
10,200.0	6,985.9	6,964.9	6,964.9	60.5	12.2	-90.91	-3,756.8	252.9	536.2	463.5	72.62	7.383	
10,300.0	6,985.1	6,964.1	6,964.1	62.2	12.2	-90.71	-3,756.8	252.9	451.2	376.8	74.34	6.069	
10,400.0	6,984.2	6,963.2	6,963.2	63.9	12.2	-90.52	-3,756.8	252.9	373.7	297.6	76.07	4.912	
10,500.0	6,983.3	6,962.3	6,962.3	65.6	12.2	-90.33	-3,756.8	252.9	309.4	231.6	77.79	3.977	
10,600.0	6,982.4	6,961.4	6,961.4	67.4	12.1	-90.13	-3,756.8	252.9	267.9	188.4	79.51	3.369	
10,669.6	6,981.8	6,960.8	6,960.8	68.6	12.1	-90.00	-3,756.8	252.9	258.7	178.0	80.72	3.205 CC, ES, SF	
10,700.0	6,981.6	6,960.6	6,960.6	69.1	12.1	-89.94	-3,756.8	252.9	260.5	179.2	81.24	3.206	
10,800.0	6,980.7	6,959.7	6,959.7	70.8	12.1	-89.75	-3,756.8	252.9	289.7	206.7	82.97	3.492	
10,900.0	6,979.8	6,958.8	6,958.8	72.5	12.1	-89.55	-3,756.8	252.9	346.4	261.7	84.69	4.090	
11,000.0	6,978.9	6,957.9	6,957.9	74.3	12.1	-89.36	-3,756.8	252.9	419.6	333.2	86.42	4.856	
11,100.0	6,978.1	6,957.1	6,957.1	76.0	12.1	-89.17	-3,756.8	252.9	502.1	414.0	88.15	5.697	
11,200.0	6,977.2	6,956.2	6,956.2	77.7	12.1	-88.98	-3,756.8	252.9	590.1	500.2	89.87	6.566	
11,300.0	6,976.3	6,955.3	6,955.3	79.5	12.1	-88.78	-3,756.8	252.9	681.4	589.8	91.60	7.439	
11,400.0	6,975.5	6,954.5	6,954.5	81.2	12.1	-88.59	-3,756.8	252.9	774.8	681.5	93.32	8.302	
11,500.0	6,974.6	6,953.6	6,953.6	82.9	12.1	-88.40	-3,756.8	252.9	869.7	774.7	95.05	9.150	
11,600.0	6,973.7	6,952.7	6,952.7	84.7	12.1	-88.20	-3,756.8	252.9	965.6	868.9	96.77	9.978	

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 Gurtler 2B-30H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4941.0ft (Original Well Elev)
Reference Site:	NWNW S30-T2N-R64W (Gurtler)	MD Reference:	WELL @ 4941.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gurtler 2B-30H	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 @ 4941.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Gurtler 2B-30H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

