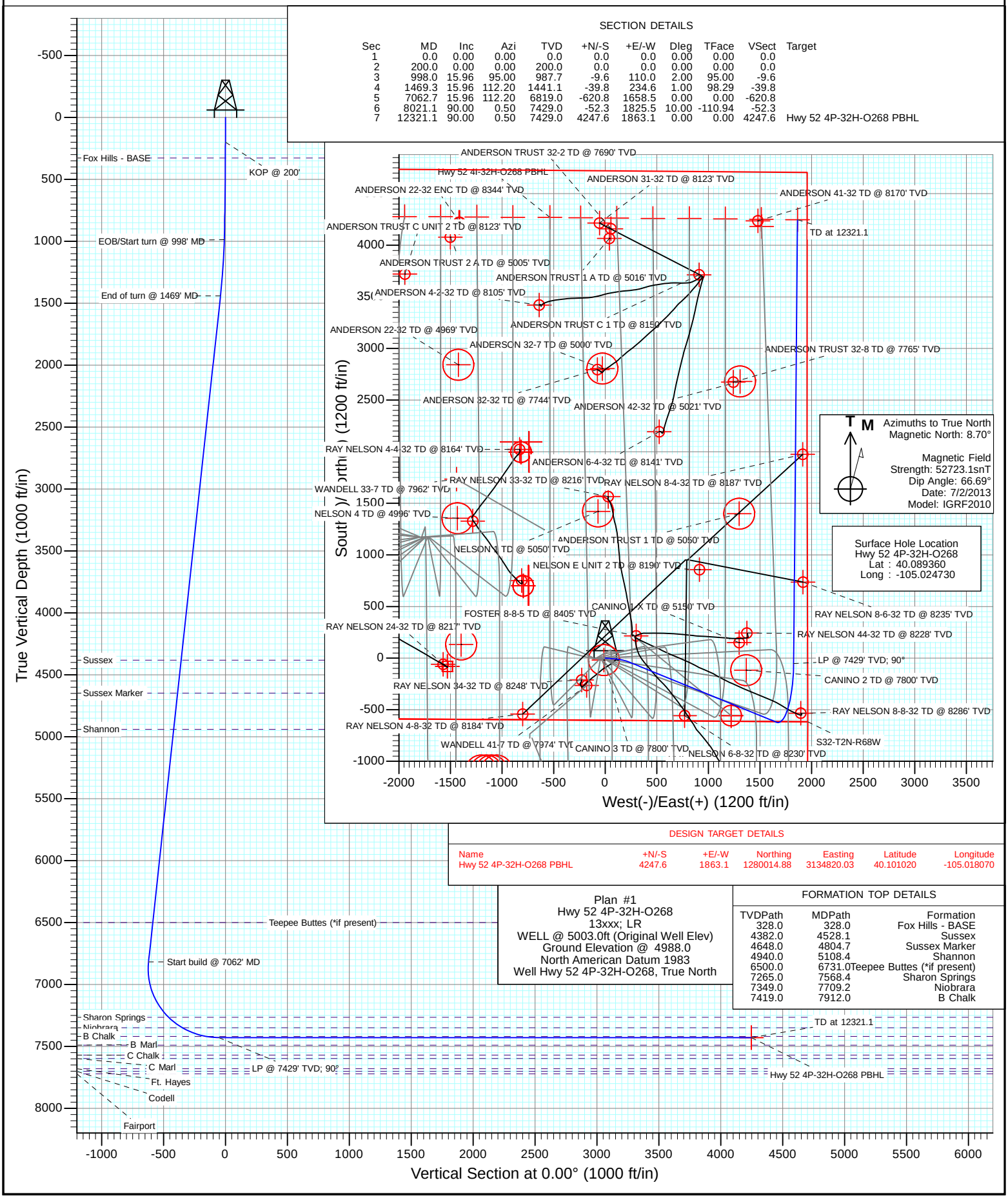
encana

Project: DJ Wattenberg
Site: S32-T2N-R68W (File/Hwy 52)
Well: Hwy 52 4P-32H-O268
Wellbore: Hz
Design: Plan #1

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	998.0	15.96	95.00	987.7	-9.6	110.0	2.00	95.00	-9.6	
4	1469.3	15.96	112.20	1441.1	-39.8	234.6	1.00	98.29	-39.8	
5	7062.7	15.96	112.20	6819.0	-620.8	1658.5	0.00	0.00	-620.8	
6	8021.1	90.00	0.50	7429.0	-52.3	1825.5	10.00	-110.94	-52.3	
7	12321.1	90.00	0.50	7429.0	4247.6	1863.1	0.00	0.00	4247.6	Hwy 52 4P-32H-O268 PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Hwy 52 4P-32H-O268 PBHL	4247.6	1863.1	1280014.88	3134820.03	40.101020	-105.018070

Plan #1
Hwy 52 4P-32H-O268
13xxx; LR
WELL @ 5003.0ft (Original Well Elev)
Ground Elevation @ 4988.0
North American Datum 1983
Well Hwy 52 4P-32H-O268, True North

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
328.0	328.0	Fox Hills - BASE
4382.0	4528.1	Sussex
4648.0	4804.7	Sussex Marker
4940.0	5108.4	Shannon
6500.0	6731.0	Teepee Buttes (*if present)
7265.0	7568.4	Sharon Springs
7349.0	7709.2	Niobrara
7419.0	7912.0	B Chalk

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site:	S32-T2N-R68W (File/Hwy 52)	**North Reference:**	True
Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52)

Site Position:		**Northing:**	1,275,973.93 ft	**Latitude:**	40.089950
From:	Lat/Long	**Easting:**	3,133,277.97 ft	**Longitude:**	-105.023660
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.31 °

Well Hwy 52 4P-32H-O268

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,275,757.39 ft	**Latitude:**	40.089360
	+E/-W	0.0 ft	**Easting:**	3,132,979.76 ft	**Longitude:**	-105.024730
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,988.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/2/2013	8.70	66.69	52,723

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	0.00

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
998.0	15.96	95.00	987.7	-9.6	110.0	2.00	2.00	0.00	95.00	
1,469.3	15.96	112.20	1,441.1	-39.8	234.6	1.00	0.00	3.65	98.29	
7,062.7	15.96	112.20	6,819.0	-620.8	1,658.5	0.00	0.00	0.00	0.00	
8,021.1	90.00	0.50	7,429.0	-52.3	1,825.5	10.00	7.73	-11.66	-110.94	
12,321.1	90.00	0.50	7,429.0	4,247.6	1,863.1	0.00	0.00	0.00	0.00	Hwy 52 4P-32H-O26

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site:	S32-T2N-R68W (File/Hwy 52)	**North Reference:**	True
Well:	Hwy 52 4P-32H-O268	**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	95.00	300.0	-0.2	1.7	-0.2	2.00	2.00	
328.0	2.56	95.00	328.0	-0.2	2.9	-0.2	2.00	2.00	Fox Hills - BASE
400.0	4.00	95.00	399.8	-0.6	7.0	-0.6	2.00	2.00	
500.0	6.00	95.00	499.5	-1.4	15.6	-1.4	2.00	2.00	
600.0	8.00	95.00	598.7	-2.4	27.8	-2.4	2.00	2.00	
700.0	10.00	95.00	697.5	-3.8	43.4	-3.8	2.00	2.00	
800.0	12.00	95.00	795.6	-5.5	62.4	-5.5	2.00	2.00	
900.0	14.00	95.00	893.1	-7.4	84.8	-7.4	2.00	2.00	
998.0	15.96	95.00	987.7	-9.6	110.0	-9.6	2.00	2.00	EOB/Start turn @ 998' MD
1,000.0	15.96	95.07	989.6	-9.7	110.6	-9.7	1.00	-0.14	
1,100.0	15.84	98.70	1,085.8	-13.0	137.7	-13.0	1.00	-0.11	
1,200.0	15.79	102.36	1,182.0	-17.9	164.5	-17.9	1.00	-0.05	
1,300.0	15.80	106.04	1,278.3	-24.6	190.9	-24.6	1.00	0.01	
1,400.0	15.87	109.69	1,374.5	-33.0	216.9	-33.0	1.00	0.07	
1,469.3	15.96	112.20	1,441.1	-39.8	234.6	-39.8	1.00	0.12	End of turn @ 1469' MD
1,500.0	15.96	112.20	1,470.6	-43.0	242.4	-43.0	0.00	0.00	
1,600.0	15.96	112.20	1,566.8	-53.3	267.9	-53.3	0.00	0.00	
1,700.0	15.96	112.20	1,662.9	-63.7	293.3	-63.7	0.00	0.00	
1,800.0	15.96	112.20	1,759.1	-74.1	318.8	-74.1	0.00	0.00	
1,900.0	15.96	112.20	1,855.2	-84.5	344.3	-84.5	0.00	0.00	
2,000.0	15.96	112.20	1,951.4	-94.9	369.7	-94.9	0.00	0.00	
2,100.0	15.96	112.20	2,047.5	-105.3	395.2	-105.3	0.00	0.00	
2,200.0	15.96	112.20	2,143.7	-115.7	420.6	-115.7	0.00	0.00	
2,300.0	15.96	112.20	2,239.8	-126.1	446.1	-126.1	0.00	0.00	
2,400.0	15.96	112.20	2,335.9	-136.5	471.5	-136.5	0.00	0.00	
2,500.0	15.96	112.20	2,432.1	-146.8	497.0	-146.8	0.00	0.00	
2,600.0	15.96	112.20	2,528.2	-157.2	522.4	-157.2	0.00	0.00	
2,700.0	15.96	112.20	2,624.4	-167.6	547.9	-167.6	0.00	0.00	
2,800.0	15.96	112.20	2,720.5	-178.0	573.4	-178.0	0.00	0.00	
2,900.0	15.96	112.20	2,816.7	-188.4	598.8	-188.4	0.00	0.00	
3,000.0	15.96	112.20	2,912.8	-198.8	624.3	-198.8	0.00	0.00	
3,100.0	15.96	112.20	3,009.0	-209.2	649.7	-209.2	0.00	0.00	
3,200.0	15.96	112.20	3,105.1	-219.6	675.2	-219.6	0.00	0.00	
3,300.0	15.96	112.20	3,201.3	-229.9	700.6	-229.9	0.00	0.00	
3,400.0	15.96	112.20	3,297.4	-240.3	726.1	-240.3	0.00	0.00	
3,500.0	15.96	112.20	3,393.5	-250.7	751.6	-250.7	0.00	0.00	
3,600.0	15.96	112.20	3,489.7	-261.1	777.0	-261.1	0.00	0.00	
3,700.0	15.96	112.20	3,585.8	-271.5	802.5	-271.5	0.00	0.00	
3,800.0	15.96	112.20	3,682.0	-281.9	827.9	-281.9	0.00	0.00	
3,900.0	15.96	112.20	3,778.1	-292.3	853.4	-292.3	0.00	0.00	
4,000.0	15.96	112.20	3,874.3	-302.7	878.8	-302.7	0.00	0.00	
4,100.0	15.96	112.20	3,970.4	-313.0	904.3	-313.0	0.00	0.00	
4,200.0	15.96	112.20	4,066.6	-323.4	929.7	-323.4	0.00	0.00	
4,300.0	15.96	112.20	4,162.7	-333.8	955.2	-333.8	0.00	0.00	
4,400.0	15.96	112.20	4,258.9	-344.2	980.7	-344.2	0.00	0.00	
4,500.0	15.96	112.20	4,355.0	-354.6	1,006.1	-354.6	0.00	0.00	
4,528.1	15.96	112.20	4,382.0	-357.5	1,013.3	-357.5	0.00	0.00	Sussex
4,600.0	15.96	112.20	4,451.2	-365.0	1,031.6	-365.0	0.00	0.00	
4,700.0	15.96	112.20	4,547.3	-375.4	1,057.0	-375.4	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site:	S32-T2N-R68W (File/Hwy 52)	**North Reference:**	True
Well:	Hwy 52 4P-32H-O268	**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	15.96	112.20	4,643.4	-385.8	1,082.5	-385.8	0.00	0.00	
4,804.7	15.96	112.20	4,648.0	-386.3	1,083.7	-386.3	0.00	0.00	Sussex Marker
4,900.0	15.96	112.20	4,739.6	-396.2	1,107.9	-396.2	0.00	0.00	
5,000.0	15.96	112.20	4,835.7	-406.5	1,133.4	-406.5	0.00	0.00	
5,100.0	15.96	112.20	4,931.9	-416.9	1,158.9	-416.9	0.00	0.00	
5,108.4	15.96	112.20	4,940.0	-417.8	1,161.0	-417.8	0.00	0.00	Shannon
5,200.0	15.96	112.20	5,028.0	-427.3	1,184.3	-427.3	0.00	0.00	
5,300.0	15.96	112.20	5,124.2	-437.7	1,209.8	-437.7	0.00	0.00	
5,400.0	15.96	112.20	5,220.3	-448.1	1,235.2	-448.1	0.00	0.00	
5,500.0	15.96	112.20	5,316.5	-458.5	1,260.7	-458.5	0.00	0.00	
5,600.0	15.96	112.20	5,412.6	-468.9	1,286.1	-468.9	0.00	0.00	
5,700.0	15.96	112.20	5,508.8	-479.3	1,311.6	-479.3	0.00	0.00	
5,800.0	15.96	112.20	5,604.9	-489.6	1,337.0	-489.6	0.00	0.00	
5,900.0	15.96	112.20	5,701.1	-500.0	1,362.5	-500.0	0.00	0.00	
6,000.0	15.96	112.20	5,797.2	-510.4	1,388.0	-510.4	0.00	0.00	
6,100.0	15.96	112.20	5,893.3	-520.8	1,413.4	-520.8	0.00	0.00	
6,200.0	15.96	112.20	5,989.5	-531.2	1,438.9	-531.2	0.00	0.00	
6,300.0	15.96	112.20	6,085.6	-541.6	1,464.3	-541.6	0.00	0.00	
6,400.0	15.96	112.20	6,181.8	-552.0	1,489.8	-552.0	0.00	0.00	
6,500.0	15.96	112.20	6,277.9	-562.4	1,515.2	-562.4	0.00	0.00	
6,600.0	15.96	112.20	6,374.1	-572.8	1,540.7	-572.8	0.00	0.00	
6,700.0	15.96	112.20	6,470.2	-583.1	1,566.2	-583.1	0.00	0.00	
6,731.0	15.96	112.20	6,500.0	-586.4	1,574.0	-586.4	0.00	0.00	Teepee Buttes (*if present)
6,800.0	15.96	112.20	6,566.4	-593.5	1,591.6	-593.5	0.00	0.00	
6,900.0	15.96	112.20	6,662.5	-603.9	1,617.1	-603.9	0.00	0.00	
7,000.0	15.96	112.20	6,758.7	-614.3	1,642.5	-614.3	0.00	0.00	
7,062.7	15.96	112.20	6,819.0	-620.8	1,658.5	-620.8	0.00	0.00	Start build @ 7062' MD
7,100.0	15.02	98.65	6,854.9	-623.5	1,668.0	-623.5	10.00	-2.51	
7,200.0	16.80	62.13	6,951.3	-618.7	1,693.7	-618.7	10.00	1.78	
7,300.0	23.12	39.00	7,045.4	-596.6	1,718.9	-596.6	10.00	6.31	
7,400.0	31.33	26.38	7,134.3	-558.0	1,742.8	-558.0	10.00	8.22	
7,500.0	40.30	18.76	7,215.4	-503.9	1,764.8	-503.9	10.00	8.97	
7,568.4	46.64	15.03	7,265.0	-458.9	1,778.4	-458.9	10.00	9.27	Sharon Springs
7,600.0	49.61	13.57	7,286.1	-436.1	1,784.2	-436.1	10.00	9.39	
7,700.0	59.09	9.65	7,344.3	-356.6	1,800.4	-356.6	10.00	9.48	
7,709.2	59.97	9.33	7,349.0	-348.7	1,801.7	-348.7	10.00	9.55	Niobrara
7,800.0	68.67	6.45	7,388.3	-267.8	1,812.8	-267.8	10.00	9.58	
7,900.0	78.31	3.65	7,416.7	-172.4	1,821.2	-172.4	10.00	9.63	
7,912.0	79.46	3.33	7,419.0	-160.6	1,821.9	-160.6	10.00	9.65	B Chalk
8,000.0	87.96	1.04	7,428.6	-73.3	1,825.3	-73.3	10.00	9.66	
8,021.1	90.00	0.50	7,429.0	-52.3	1,825.5	-52.3	10.00	9.66	LP @ 7429' TVD; 90°
8,100.0	90.00	0.50	7,429.0	26.7	1,826.2	26.7	0.00	0.00	
8,200.0	90.00	0.50	7,429.0	126.7	1,827.1	126.7	0.00	0.00	
8,300.0	90.00	0.50	7,429.0	226.7	1,828.0	226.7	0.00	0.00	
8,400.0	90.00	0.50	7,429.0	326.7	1,828.8	326.7	0.00	0.00	
8,500.0	90.00	0.50	7,429.0	426.7	1,829.7	426.7	0.00	0.00	
8,600.0	90.00	0.50	7,429.0	526.6	1,830.6	526.6	0.00	0.00	
8,700.0	90.00	0.50	7,429.0	626.6	1,831.5	626.6	0.00	0.00	
8,800.0	90.00	0.50	7,429.0	726.6	1,832.3	726.6	0.00	0.00	
8,900.0	90.00	0.50	7,429.0	826.6	1,833.2	826.6	0.00	0.00	
9,000.0	90.00	0.50	7,429.0	926.6	1,834.1	926.6	0.00	0.00	
9,100.0	90.00	0.50	7,429.0	1,026.6	1,835.0	1,026.6	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site:	S32-T2N-R68W (File/Hwy 52)	**North Reference:**	True
Well:	Hwy 52 4P-32H-O268	**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
9,200.0	90.00	0.50	7,429.0	1,126.6	1,835.8	1,126.6	0.00	0.00	
9,300.0	90.00	0.50	7,429.0	1,226.6	1,836.7	1,226.6	0.00	0.00	
9,400.0	90.00	0.50	7,429.0	1,326.6	1,837.6	1,326.6	0.00	0.00	
9,500.0	90.00	0.50	7,429.0	1,426.6	1,838.4	1,426.6	0.00	0.00	
9,600.0	90.00	0.50	7,429.0	1,526.6	1,839.3	1,526.6	0.00	0.00	
9,700.0	90.00	0.50	7,429.0	1,626.6	1,840.2	1,626.6	0.00	0.00	
9,800.0	90.00	0.50	7,429.0	1,726.6	1,841.1	1,726.6	0.00	0.00	
9,900.0	90.00	0.50	7,429.0	1,826.6	1,841.9	1,826.6	0.00	0.00	
10,000.0	90.00	0.50	7,429.0	1,926.6	1,842.8	1,926.6	0.00	0.00	
10,100.0	90.00	0.50	7,429.0	2,026.6	1,843.7	2,026.6	0.00	0.00	
10,200.0	90.00	0.50	7,429.0	2,126.6	1,844.6	2,126.6	0.00	0.00	
10,300.0	90.00	0.50	7,429.0	2,226.6	1,845.4	2,226.6	0.00	0.00	
10,400.0	90.00	0.50	7,429.0	2,326.6	1,846.3	2,326.6	0.00	0.00	
10,500.0	90.00	0.50	7,429.0	2,426.6	1,847.2	2,426.6	0.00	0.00	
10,600.0	90.00	0.50	7,429.0	2,526.6	1,848.0	2,526.6	0.00	0.00	
10,700.0	90.00	0.50	7,429.0	2,626.6	1,848.9	2,626.6	0.00	0.00	
10,800.0	90.00	0.50	7,429.0	2,726.6	1,849.8	2,726.6	0.00	0.00	
10,900.0	90.00	0.50	7,429.0	2,826.6	1,850.7	2,826.6	0.00	0.00	
11,000.0	90.00	0.50	7,429.0	2,926.6	1,851.5	2,926.6	0.00	0.00	
11,100.0	90.00	0.50	7,429.0	3,026.6	1,852.4	3,026.6	0.00	0.00	
11,200.0	90.00	0.50	7,429.0	3,126.5	1,853.3	3,126.5	0.00	0.00	
11,300.0	90.00	0.50	7,429.0	3,226.5	1,854.2	3,226.5	0.00	0.00	
11,400.0	90.00	0.50	7,429.0	3,326.5	1,855.0	3,326.5	0.00	0.00	
11,500.0	90.00	0.50	7,429.0	3,426.5	1,855.9	3,426.5	0.00	0.00	
11,600.0	90.00	0.50	7,429.0	3,526.5	1,856.8	3,526.5	0.00	0.00	
11,700.0	90.00	0.50	7,429.0	3,626.5	1,857.6	3,626.5	0.00	0.00	
11,800.0	90.00	0.50	7,429.0	3,726.5	1,858.5	3,726.5	0.00	0.00	
11,900.0	90.00	0.50	7,429.0	3,826.5	1,859.4	3,826.5	0.00	0.00	
12,000.0	90.00	0.50	7,429.0	3,926.5	1,860.3	3,926.5	0.00	0.00	
12,100.0	90.00	0.50	7,429.0	4,026.5	1,861.1	4,026.5	0.00	0.00	
12,200.0	90.00	0.50	7,429.0	4,126.5	1,862.0	4,126.5	0.00	0.00	
12,300.0	90.00	0.50	7,429.0	4,226.5	1,862.9	4,226.5	0.00	0.00	
12,321.1	90.00	0.50	7,429.0	4,247.6	1,863.1	4,247.6	0.00	0.00	TD at 12321.1 - Hwy 52 4P-32H-O268 PBHL

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Hwy 52 4P-32H-O268 P - plan hits target center - Point	0.00	0.00	7,429.0	4,247.6	1,863.1	1,280,014.88	3,134,820.03	40.101020	-105.018070

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site:	S32-T2N-R68W (File/Hwy 52)	**North Reference:**	True
Well:	Hwy 52 4P-32H-O268	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
328.0	328.0	Fox Hills - BASE			
4,528.1	4,382.0	Sussex			
4,804.7	4,648.0	Sussex Marker			
5,108.4	4,940.0	Shannon			
6,731.0	6,500.0	Teepee Buttes (*if present)			
7,568.4	7,265.0	Sharon Springs			
7,709.2	7,349.0	Niobrara			
7,912.0	7,419.0	B Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
200.0	200.0	0.0	0.0	KOP @ 200'
998.0	987.7	-9.6	110.0	EOB/Start turn @ 998' MD
1,469.3	1,441.1	-39.8	234.6	End of turn @ 1469' MD
7,062.7	6,819.0	-620.8	1,658.5	Start build @ 7062' MD
8,021.1	7,429.0	-52.3	1,825.5	LP @ 7429' TVD; 90°
12,321.1	7,429.0	4,247.6	1,863.1	TD at 12321.1

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S32-T2N-R68W (File/Hwy 52)
Hwy 52 4P-32H-O268
Hz
Plan #1

Anticollision Report

05 July, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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** 7/5/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,030.3	Plan #1 (Hz)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S32-T2N-R68W (File/Hwy 52)						
ANDERSON 21-32 (EXISTING) - ENCANA WELL - NO S						Out of range
ANDERSON 22-32 (EXISTING) - KPK WELL - NO SURV						Out of range
ANDERSON 22-32 ENC (EXISTING) - ENCANA WELL -						Out of range
ANDERSON 31-32 (EXISTING) - ENCANA WELL - PLAN						Out of range
ANDERSON 32-32 (EXISTING) - ENCANA WELL - SUR						Out of range
ANDERSON 32-7 (EXISTING) - KPK WELL - NO SURVE						Out of range
ANDERSON 41-32 (EXISTING) - ENCANA WELL - NO S	12,306.8	7,321.0	384.0	293.6	4.251	CC, ES
ANDERSON 41-32 (EXISTING) - ENCANA WELL - NO S	12,321.1	7,321.0	384.2	293.7	4.242	SF
ANDERSON 42-32 (EXISTING) - BASIN EXP WELL - NO						Out of range
ANDERSON 4-2-32 (EXISTING) - ENCANA WELL - SUR						Out of range
ANDERSON 6-4-32 (EXISTING) - ENCANA WELL - SUR						Out of range
ANDERSON TRUST 1 (EXISTING) - KPK WELL - NO S						Out of range
ANDERSON TRUST 1 A (EXISTING) - ENCANA WELL -						Out of range
ANDERSON TRUST 2 A (EXISTING) - ENCANA WELL -						Out of range
ANDERSON TRUST 32-2 (EXISTING) - ENCANA WELL						Out of range
ANDERSON TRUST 32-8 (EXISTING) - ENCANA WELL						Out of range
ANDERSON TRUST C 1 (EXISTING) - ENCANA WELL						Out of range
ANDERSON TRUST C UNIT 2 (EXISTING) - ENCANA W						Out of range
BROWN 22-5 (EXISTING) - ENCANA WELL - NO SURV						Out of range
BROWN 31-5 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
BROWN 41-5 (EXISTING) - ENCANA WELL - ENCANA	1,750.3	1,716.0	106.5	97.8	12.275	CC, ES
BROWN 41-5 (EXISTING) - ENCANA WELL - ENCANA	4,800.0	4,752.1	454.4	414.7	11.434	SF
BROWN 5-3 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
BROWN 5-5 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
BROWN C UNIT 1 (EXISTING) - ENCANA WELL - NO S						Out of range
BROWN C UNIT 2 (EXISTING) - ENCANA WELL - NO S						Out of range
CANINO 1-X (EXISTING) - ENCANA WELL - NO SURVE						Out of range
CANINO 2 (EXISTING) - HUGHES CW WELL - NO SUR	5,386.6	5,150.4	355.4	320.8	10.280	CC
CANINO 2 (EXISTING) - HUGHES CW WELL - NO SUR	5,400.0	5,163.3	355.4	320.7	10.251	ES
CANINO 2 (EXISTING) - HUGHES CW WELL - NO SUR	5,600.0	5,355.6	360.2	324.3	10.037	SF
CANINO 3 (EXISTING) - HUGHES CW WELL - NO SUR	200.0	143.0	23.4	22.8	40.785	CC, ES
CANINO 3 (EXISTING) - HUGHES CW WELL - NO SUR	500.0	442.5	33.9	32.3	20.623	SF
FEDERAL NOAA 11-32 (EXISTING) - ENCANA WELL - N						Out of range
File 3A-32H-K268 - Hz - Plan #1						Out of range
File 3B-32H-K268 - Hz - Plan #1						Out of range
File 3C-32H-K268 - Hz - Plan #1						Out of range
File 3D-32H-K268 - Hz - Plan #1						Out of range
File 3E-32H-K268 - Hz - Plan #1						Out of range
File 3F-32H-K268 - Hz - Plan #1						Out of range
File 3G-32H-K268 - Hz - Plan #1						Out of range
File 3H-32H-K268 - Hz - Plan #1						Out of range
File 3I-32H-K268 - Hz - Plan #1						Out of range
File 3J-32H-K268 - Hz - Plan #1						Out of range
File 3K-32H-K268 - Hz - Plan #1						Out of range
File 3L-32H-K268 - Hz - Plan #1						Out of range
File 3M-32H-K268 - Hz - Plan #1						Out of range
File 3N-32H-K268 - Hz - Plan #1						Out of range
File 3O-32H-K268 - Hz - Plan #1						Out of range
File 3P-32H-K268 - Hz - Plan #1						Out of range
FOSTER 33-5 (EXISTING) - ENCANA WELL - SURVEY						Out of range
FOSTER 43-5 (EXISTING) - ENCANA WELL - SURVEY						Out of range
FOSTER 4-5 (EXISTING) - ENCANA WELL - SURVEYS						Out of range
FOSTER 4-6-5 (EXISTING) - ENCANA WELL - SURVEY						Out of range

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S32-T2N-R68W (File/Hwy 52)						
FOSTER 6-4-5 (EXISTING) - ENCANA WELL - SURVEY						Out of range
FOSTER 6-4-5X (EXISTING) - ENCANA WELL - SURVE						Out of range
FOSTER 6-8-5 (EXISTING) - ENCANA WELL - SURVEY						Out of range
FOSTER 8-8-5 (EXISTING) - ENCANA WELL - SURVEY						Out of range
FOSTER E UNIT 1 (EXISTING) - ENCANA WELL - NO S						Out of range
GENE 11-5 (EXISTING) - KERR-MCGEE WELL - NO SU						Out of range
HIGHLAND 21-5 (EXISTING) - KPK WELL - NO SURVE						Out of range
HOPE 31-5 (EXISTING) - KPK WELL - NO SURVEYS						Out of range
Hwy 52 4A-32H-O268 - Hz - Plan #1	166.0	168.0	110.9	110.4	209.111	CC
Hwy 52 4A-32H-O268 - Hz - Plan #1	200.0	202.0	110.9	110.3	170.884	ES
Hwy 52 4A-32H-O268 - Hz - Plan #1	700.0	687.1	174.5	172.1	74.093	SF
Hwy 52 4B-32H-O268 - Hz - Plan #1	166.3	167.3	105.7	105.2	199.414	CC
Hwy 52 4B-32H-O268 - Hz - Plan #1	200.0	201.0	105.7	105.0	163.224	ES
Hwy 52 4B-32H-O268 - Hz - Plan #1	800.0	789.9	186.2	183.5	69.008	SF
Hwy 52 4C-32H-O268 - Hz - Plan #1	200.0	201.0	101.0	100.3	155.929	CC, ES
Hwy 52 4C-32H-O268 - Hz - Plan #1	800.0	800.5	157.7	155.0	57.975	SF
Hwy 52 4D-32H-O268 - Hz - Plan #1	200.0	201.0	95.7	95.0	147.777	CC, ES
Hwy 52 4D-32H-O268 - Hz - Plan #1	900.0	905.7	167.2	164.1	54.533	SF
Hwy 52 4E-32H-O268 - Hz - Plan #1	200.0	201.0	81.0	80.4	125.154	CC, ES
Hwy 52 4E-32H-O268 - Hz - Plan #1	700.0	698.5	124.1	121.7	52.222	SF
Hwy 52 4F-32H-O268 - Hz - Plan #1	200.0	201.0	75.7	75.0	116.896	CC, ES
Hwy 52 4F-32H-O268 - Hz - Plan #1	3,400.0	3,392.3	500.0	483.3	29.914	SF
Hwy 52 4G-32H-O268 - Hz - Plan #1	200.0	201.0	71.1	70.4	109.790	CC, ES
Hwy 52 4G-32H-O268 - Hz - Plan #1	7,500.0	7,609.5	344.2	312.8	10.978	SF
Hwy 52 4H-32H-O268 - Hz - Plan #1	200.0	201.0	65.7	65.0	101.457	CC, ES
Hwy 52 4H-32H-O268 - Hz - Plan #1	8,056.1	7,735.6	135.2	107.5	4.871	SF
Hwy 52 4I-32H-O268 - Hz - Plan #1	200.0	200.0	51.3	50.6	79.369	CC, ES
Hwy 52 4I-32H-O268 - Hz - Plan #1	500.0	496.5	72.8	71.1	42.965	SF
Hwy 52 4J-32H-O268 - Hz - Plan #1	200.0	200.0	45.7	45.1	70.775	CC, ES
Hwy 52 4J-32H-O268 - Hz - Plan #1	500.0	499.0	62.0	60.3	36.622	SF
Hwy 52 4K-32H-O268 - Hz - Plan #1	200.0	200.0	41.4	40.7	64.101	CC, ES
Hwy 52 4K-32H-O268 - Hz - Plan #1	600.0	599.6	67.4	65.3	32.968	SF
Hwy 52 4L-32H-O268 - Hz - Plan #1	200.0	200.0	35.7	35.1	55.303	CC, ES
Hwy 52 4L-32H-O268 - Hz - Plan #1	500.0	499.5	51.3	49.6	30.398	SF
Hwy 52 4M-32H-O268 - Hz - Plan #1	200.0	200.0	14.5	13.8	22.389	CC, ES
Hwy 52 4M-32H-O268 - Hz - Plan #1	400.0	399.8	21.2	19.8	15.753	SF
Hwy 52 4N-32H-O268 - Hz - Plan #1	200.0	200.0	8.4	7.7	12.998	CC, ES
Hwy 52 4N-32H-O268 - Hz - Plan #1	300.0	300.0	10.1	9.1	10.190	SF
Hwy 52 4O-32H-O268 - Hz - Plan #1	200.0	200.0	6.7	6.0	10.340	CC, ES
Hwy 52 4O-32H-O268 - Hz - Plan #1	12,300.0	12,417.3	450.1	327.7	3.677	SF
LAURIE 32-5 (EXISTING) - KPK WELL - NO SURVEYS						Out of range
NATALIE 33-5 (EXISTING) - KPK WELL - NO SURVEYS						Out of range
NELSON 1 (EXISTING) - TEXAS TEA WELL - NO SURV						Out of range
NELSON 1 A (EXISTING) - TEXAS TEA WELL - NO SUR						Out of range
NELSON 2 (EXISTING) - TEXAS TEA WELL - NO SURV						Out of range
NELSON 3 (EXISTING) - TEXAS TEA WELL - NO SURV						Out of range
NELSON 4 (EXISTING) - TEXAS TEA WELL - NO SURV						Out of range
NELSON 5 (EXISTING) - VESSELS WELL - NO SURVE						Out of range
NELSON 5 TT (EXISTING) - TEXAS TEA WELL - NO SU						Out of range
NELSON 6 (EXISTING) - VESSELS WELL - NO SURVE						Out of range
NELSON E UNIT 1 (EXISTING) - ENCANA WELL - NO S						Out of range
NELSON E UNIT 2 (EXISTING) - ENCANA WELL - NO S						Out of range
PAQUETTE 13-5 (EXISTING) - KERR-MCGEE WELL - N						Out of range

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S32-T2N-R68W (File/Hwy 52)						
PAQUETTE 14-5 (EXISTING) - KERR-MCGEE WELL - N						Out of range
RAY NELSON 0-4-32 (EXISTING) - ENCANA WELL - NO						Out of range
RAY NELSON 12-32 (EXISTING) - ENCANA WELL - NO						Out of range
RAY NELSON 13-32 (EXISTING) - ENCANA WELL - SU						Out of range
RAY NELSON 14-32 (EXISTING) - ENCANA WELL - SU						Out of range
RAY NELSON 23-32 (EXISTING) - ENCANA WELL - NO						Out of range
RAY NELSON 24-32 (EXISTING) - ENCANA WELL - SU						Out of range
RAY NELSON 2-4-32 (EXISTING) - ENCANA WELL - NO						Out of range
RAY NELSON 33-32 (EXISTING) - ENCANA WELL - EN	1,174.3	1,134.0	259.4	253.8	46.823	CC, ES
RAY NELSON 33-32 (EXISTING) - ENCANA WELL - EN	1,500.0	1,415.0	301.9	294.2	38.828	SF
RAY NELSON 34-32 (EXISTING) - ENCANA WELL - EN	1,054.9	1,034.4	7.5	2.6	1.545	CC, ES, SF
RAY NELSON 44-32 (EXISTING) - ENCANA WELL - EN	150.7	141.7	353.6	353.1	771.151	CC
RAY NELSON 44-32 (EXISTING) - ENCANA WELL - EN	1,144.6	1,073.7	357.1	351.9	68.803	ES
RAY NELSON 44-32 (EXISTING) - ENCANA WELL - EN	8,400.0	7,551.2	460.1	431.1	15.886	SF
RAY NELSON 4-4-32 (EXISTING) - ENCANA WELL - SU						Out of range
RAY NELSON 4-6-32 (EXISTING) - ENCANA WELL - SU						Out of range
RAY NELSON 4-8-32 (EXISTING) - ENCANA WELL - PL						Out of range
RAY NELSON 6-8-32 (EXISTING) - ENCANA WELL - PL	4,605.9	4,647.0	499.7	472.9	18.614	CC, ES, SF
Ray Nelson 7-8-32 - DD - Plan #1	3,600.0	3,557.4	74.5	50.2	3.075	SF
Ray Nelson 7-8-32 - DD - Plan #1	3,700.0	3,657.0	72.9	49.6	3.129	ES
Ray Nelson 7-8-32 - DD - Plan #1	3,783.7	3,740.4	72.5	50.2	3.255	CC
RAY NELSON 8-4-32 (EXISTING) - ENCANA WELL - PL	10,048.2	7,586.7	70.2	8.4	1.136	Level 2, CC, ES, SF
RAY NELSON 8-6-32 (EXISTING) - ENCANA WELL - PL	8,809.9	7,496.6	84.0	50.1	2.478	CC, ES, SF
RAY NELSON 8-8-32 (EXISTING) - ENCANA WELL - SU	7,300.0	7,332.7	192.1	149.9	4.554	SF
RAY NELSON 8-8-32 (EXISTING) - ENCANA WELL - SU	7,511.6	7,513.0	143.4	117.0	5.433	CC, ES
SCHRINER 11-5 (EXISTING) - KERR-MCGEE WELL - N						Out of range
SCHRINER 12-5 (EXISTING) - KERR-MCGEE WELL - N						Out of range
WANDELL 33-7 (EXISTING) - ENCANA WELL - Plan #1						Out of range
WANDELL 41-7 (EXISTING) - ENCANA WELL - Plan #1						Out of range
WANDELL 42-7 (EXISTING) - ENCANA WELL - Plan #1						Out of range
WANDELL 43-7 (EXISTING) - ENCANA WELL - Plan #1						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - ANDERSON 41-32 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8170-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,000.0	7,429.0	7,321.0	7,321.0	79.1	12.8	-90.00	4,236.6	1,479.0	491.5	406.4	85.04	5.779	
12,100.0	7,429.0	7,321.0	7,321.0	80.7	12.8	-90.00	4,236.6	1,479.0	436.1	349.3	86.76	5.027	
12,200.0	7,429.0	7,321.0	7,321.0	82.3	12.8	-90.00	4,236.6	1,479.0	398.5	310.1	88.48	4.504	
12,300.0	7,429.0	7,321.0	7,321.0	83.8	12.8	-90.00	4,236.6	1,479.0	384.0	293.8	90.21	4.257	
12,306.8	7,429.0	7,321.0	7,321.0	84.0	12.8	-90.00	4,236.6	1,479.0	384.0	293.6	90.32	4.251	CC, ES
12,321.1	7,429.0	7,321.0	7,321.0	84.2	12.8	-90.00	4,236.6	1,479.0	384.2	293.7	90.57	4.242	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - BROWN 41-5 (EXISTING) - ENCANA WELL - ENCANA WELL

Offset Site Error: 0.0 ft

Survey Program: 41-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	55.19	200.4	288.2	351.1				
100.0	100.0	88.4	88.4	0.1	0.1	55.25	200.3	288.8	351.5	351.2	0.28	1,269.898	
200.0	200.0	187.9	187.9	0.3	0.3	55.35	200.3	289.8	352.3	351.7	0.63	563.189	
300.0	300.0	289.3	289.3	0.5	0.5	-39.70	200.0	290.9	351.7	350.7	0.98	359.317	
400.0	399.8	399.4	399.3	0.7	0.7	-40.04	197.7	291.2	346.7	345.3	1.36	255.177	
500.0	499.5	506.7	506.5	0.9	0.9	-40.30	191.1	290.9	336.3	334.5	1.76	191.171	
600.0	598.7	614.3	613.3	1.2	1.1	-40.23	179.2	291.4	321.0	318.7	2.21	145.023	
700.0	697.5	717.3	715.0	1.5	1.5	-39.74	162.5	292.3	300.6	297.8	2.73	110.281	
800.0	795.6	810.8	807.0	1.9	1.8	-39.29	145.8	294.2	277.6	274.3	3.26	85.218	
900.0	893.1	906.5	901.0	2.3	2.1	-38.85	128.0	297.9	253.1	249.2	3.85	65.755	
1,000.0	989.6	1,004.9	997.2	2.8	2.5	-38.37	108.1	302.5	225.8	221.3	4.51	50.038	
1,100.0	1,085.8	1,101.6	1,090.7	3.3	2.9	-40.18	84.6	308.5	197.1	191.8	5.26	37.468	
1,200.0	1,182.0	1,193.2	1,178.7	3.8	3.4	-40.95	60.3	316.4	170.8	164.8	6.01	28.440	
1,300.0	1,278.2	1,285.9	1,267.3	4.3	3.9	-40.52	35.1	327.3	148.7	142.0	6.75	22.024	
1,400.0	1,374.4	1,379.2	1,356.1	4.8	4.4	-39.09	10.1	341.1	131.6	124.1	7.43	17.702	
1,500.0	1,470.6	1,474.0	1,446.1	5.3	4.9	-35.86	-14.4	358.0	119.8	111.8	8.02	14.940	
1,600.0	1,566.7	1,571.1	1,537.8	5.8	5.5	-28.61	-40.1	377.1	111.7	103.2	8.41	13.272	
1,700.0	1,662.9	1,667.7	1,628.9	6.3	6.0	-20.89	-64.8	397.7	107.1	98.5	8.63	12.420	
1,750.3	1,711.2	1,716.0	1,674.2	6.6	6.3	-16.78	-77.4	408.7	106.5	97.8	8.68	12.275	CC, ES
1,800.0	1,759.0	1,764.0	1,718.9	6.9	6.6	-12.47	-90.3	420.1	107.1	98.4	8.71	12.289	
1,900.0	1,855.2	1,862.1	1,809.9	7.4	7.3	-3.07	-118.5	443.9	111.3	102.5	8.78	12.674	
2,000.0	1,951.3	1,960.3	1,900.7	7.9	7.9	6.08	-147.8	466.9	118.1	109.2	8.95	13.200	
2,100.0	2,047.5	2,061.1	1,994.7	8.4	8.6	12.98	-175.0	491.4	126.6	117.3	9.26	13.673	
2,200.0	2,143.6	2,157.3	2,084.3	8.9	9.2	18.58	-200.6	514.9	136.4	126.7	9.67	14.101	
2,300.0	2,239.8	2,257.7	2,177.8	9.5	9.8	23.41	-227.2	539.9	147.7	137.6	10.17	14.525	
2,400.0	2,335.9	2,357.0	2,270.7	10.0	10.5	27.14	-252.1	564.8	158.8	148.1	10.75	14.777	
2,500.0	2,432.1	2,456.6	2,363.7	10.5	11.1	30.69	-277.9	589.3	170.9	159.5	11.45	14.934	
2,600.0	2,528.2	2,558.6	2,459.7	11.0	11.7	34.55	-304.2	611.5	181.9	169.5	12.32	14.757	
2,700.0	2,624.3	2,656.3	2,552.0	11.5	12.3	38.23	-329.5	631.4	192.9	179.5	13.34	14.463	
2,800.0	2,720.5	2,745.4	2,635.3	12.1	13.0	41.06	-354.1	650.8	207.0	192.6	14.34	14.432	
2,900.0	2,816.6	2,838.2	2,720.8	12.6	13.6	43.65	-383.2	672.4	225.7	210.3	15.42	14.637	
3,000.0	2,912.8	2,935.7	2,810.2	13.1	14.3	45.72	-414.1	696.3	245.7	229.2	16.50	14.891	
3,100.0	3,008.9	3,038.8	2,905.1	13.6	15.1	47.63	-445.9	721.0	264.8	247.2	17.62	15.033	
3,200.0	3,105.1	3,139.2	2,998.3	14.1	15.7	49.61	-475.9	742.9	282.7	263.9	18.80	15.042	
3,300.0	3,201.2	3,233.2	3,085.6	14.7	16.4	51.31	-504.2	763.2	300.9	280.9	19.94	15.093	
3,400.0	3,297.4	3,322.2	3,167.6	15.2	17.0	52.82	-533.2	782.4	321.8	300.8	21.05	15.291	
3,500.0	3,393.5	3,424.4	3,261.2	15.7	17.8	54.39	-567.7	804.3	344.3	322.0	22.25	15.472	
3,600.0	3,489.7	3,537.4	3,366.3	16.2	18.5	55.98	-601.9	827.5	363.1	339.5	23.54	15.423	
3,700.0	3,585.8	3,654.1	3,476.8	16.8	19.2	57.68	-632.8	849.4	377.9	353.0	24.87	15.193	
3,800.0	3,682.0	3,779.9	3,598.5	17.3	19.7	60.33	-659.9	865.6	387.2	360.7	26.49	14.617	
3,900.0	3,778.1	3,883.9	3,700.6	17.8	20.1	62.93	-677.5	875.1	392.0	363.9	28.04	13.976	
4,000.0	3,874.2	3,989.6	3,804.3	18.3	20.5	65.36	-694.6	885.8	396.8	367.2	29.58	13.412	
4,100.0	3,970.4	4,100.3	3,913.3	18.9	20.8	67.68	-709.2	898.1	399.2	368.1	31.12	12.830	
4,200.0	4,066.5	4,193.8	4,005.4	19.4	21.2	69.53	-720.9	909.1	401.5	369.0	32.47	12.366	
4,300.0	4,162.7	4,282.7	4,092.6	19.9	21.5	71.12	-734.2	920.4	406.6	372.9	33.74	12.053	
4,400.0	4,258.8	4,371.9	4,179.6	20.4	21.9	72.48	-749.5	933.0	414.1	379.2	34.96	11.845	
4,500.0	4,355.0	4,469.6	4,274.1	21.0	22.4	73.72	-768.7	948.0	424.4	388.2	36.20	11.724	
4,600.0	4,451.1	4,577.6	4,379.1	21.5	22.8	75.00	-787.8	965.0	432.8	395.3	37.48	11.548	
4,700.0	4,547.3	4,662.6	4,461.7	22.0	23.3	76.05	-803.2	977.7	441.9	403.3	38.62	11.443	
4,800.0	4,643.4	4,752.1	4,547.8	22.5	23.7	76.88	-822.6	992.3	454.4	414.7	39.74	11.434	SF
4,900.0	4,739.6	4,839.1	4,630.7	23.0	24.3	77.32	-843.4	1,008.7	469.0	428.2	40.79	11.497	
5,000.0	4,835.7	4,922.6	4,709.3	23.6	24.8	77.52	-866.0	1,025.6	486.4	444.7	41.75	11.651	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - CANINO 2 (EXISTING) - HUGHES CW WELL - NO SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 7800-Geolink MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
4,200.0	4,066.5	4,009.5	4,009.5	19.4	7.0	-48.57	-117.6	1,366.2	482.4	460.7	21.71	22.221	
4,300.0	4,162.7	4,105.7	4,105.7	19.9	7.2	-51.06	-117.6	1,366.2	464.3	441.5	22.77	20.390	
4,400.0	4,258.8	4,201.8	4,201.8	20.4	7.3	-53.73	-117.6	1,366.2	447.1	423.2	23.87	18.730	
4,500.0	4,355.0	4,298.0	4,298.0	21.0	7.5	-56.60	-117.6	1,366.2	430.9	405.9	25.01	17.234	
4,600.0	4,451.1	4,394.1	4,394.1	21.5	7.7	-59.67	-117.6	1,366.2	416.0	389.8	26.17	15.896	
4,700.0	4,547.3	4,490.3	4,490.3	22.0	7.8	-62.95	-117.6	1,366.2	402.4	375.1	27.36	14.710	
4,800.0	4,643.4	4,586.4	4,586.4	22.5	8.0	-66.43	-117.6	1,366.2	390.3	361.7	28.54	13.673	
4,900.0	4,739.6	4,682.6	4,682.6	23.0	8.2	-70.10	-117.6	1,366.2	379.7	350.0	29.72	12.778	
5,000.0	4,835.7	4,778.7	4,778.7	23.6	8.3	-73.96	-117.6	1,366.2	370.9	340.1	30.86	12.020	
5,100.0	4,931.9	4,874.9	4,874.9	24.1	8.5	-77.97	-117.6	1,366.2	364.0	332.1	31.95	11.394	
5,200.0	5,028.0	4,971.0	4,971.0	24.6	8.7	-82.10	-117.6	1,366.2	359.1	326.1	32.96	10.895	
5,300.0	5,124.2	5,067.2	5,067.2	25.1	8.8	-86.31	-117.6	1,366.2	356.2	322.3	33.87	10.516	
5,386.6	5,207.4	5,150.4	5,150.4	25.6	9.0	-90.00	-117.6	1,366.2	355.4	320.8	34.57	10.280	CC
5,400.0	5,220.3	5,163.3	5,163.3	25.7	9.0	-90.57	-117.6	1,366.2	355.4	320.7	34.67	10.251	ES
5,500.0	5,316.4	5,259.4	5,259.4	26.2	9.2	-94.82	-117.6	1,366.2	356.8	321.4	35.34	10.094	
5,600.0	5,412.6	5,355.6	5,355.6	26.7	9.3	-99.02	-117.6	1,366.2	360.2	324.3	35.89	10.037	SF
5,700.0	5,508.7	5,451.7	5,451.7	27.2	9.5	-103.12	-117.6	1,366.2	365.7	329.4	36.30	10.073	
5,800.0	5,604.9	5,547.9	5,547.9	27.8	9.7	-107.09	-117.6	1,366.2	373.1	336.5	36.60	10.195	
5,900.0	5,701.0	5,644.0	5,644.0	28.3	9.9	-110.90	-117.6	1,366.2	382.4	345.6	36.78	10.396	
6,000.0	5,797.2	5,740.2	5,740.2	28.8	10.0	-114.52	-117.6	1,366.2	393.4	356.5	36.88	10.667	
6,100.0	5,893.3	5,836.3	5,836.3	29.3	10.2	-117.95	-117.6	1,366.2	405.9	369.0	36.90	11.001	
6,200.0	5,989.5	5,932.5	5,932.5	29.9	10.4	-121.17	-117.6	1,366.2	419.9	383.0	36.86	11.392	
6,300.0	6,085.6	6,028.6	6,028.6	30.4	10.5	-124.19	-117.6	1,366.2	435.2	398.4	36.77	11.833	
6,400.0	6,181.8	6,124.8	6,124.8	30.9	10.7	-127.01	-117.6	1,366.2	451.6	414.9	36.66	12.318	
6,500.0	6,277.9	6,220.9	6,220.9	31.4	10.9	-129.63	-117.6	1,366.2	469.0	432.5	36.53	12.841	
6,600.0	6,374.1	6,317.1	6,317.1	32.0	11.0	-132.07	-117.6	1,366.2	487.4	451.0	36.39	13.396	
7,700.0	7,344.3	7,287.3	7,287.3	35.7	12.7	-79.87	-117.6	1,366.2	495.6	469.9	25.67	19.304	
7,800.0	7,388.3	7,331.3	7,331.3	35.8	12.8	-85.53	-117.6	1,366.2	471.2	445.2	26.03	18.104	
7,900.0	7,416.7	7,359.7	7,359.7	35.8	12.8	-89.35	-117.6	1,366.2	458.3	431.8	26.46	17.319	
7,933.2	7,422.5	7,365.5	7,365.5	35.8	12.9	-90.00	-117.6	1,366.2	457.4	430.8	26.60	17.196	
8,000.0	7,428.6	7,371.6	7,371.6	35.8	12.9	-90.23	-117.6	1,366.2	461.2	434.5	26.71	17.265	
8,100.0	7,429.0	7,372.0	7,372.0	35.8	12.9	-90.00	-117.6	1,366.2	482.1	455.2	26.93	17.905	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - CANINO 3 (EXISTING) - HUGHES CW WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 7800-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-145.74	-19.3	-13.2	61.6				
100.0	100.0	43.0	43.0	0.1	0.1	-145.74	-19.3	-13.2	23.4	23.1	0.22	104.455	
200.0	200.0	143.0	143.0	0.3	0.2	-145.74	-19.3	-13.2	23.4	22.8	0.57	40.785	CC, ES
300.0	300.0	243.0	243.0	0.5	0.4	122.85	-19.3	-13.2	24.3	23.3	0.92	26.246	
400.0	399.8	342.8	342.8	0.7	0.6	132.01	-19.3	-13.2	27.5	26.2	1.28	21.389	
500.0	499.5	442.5	442.5	0.9	0.8	142.92	-19.3	-13.2	33.9	32.3	1.64	20.623	SF
600.0	598.7	541.7	541.7	1.2	0.9	152.36	-19.3	-13.2	44.3	42.3	2.00	22.151	
700.0	697.5	640.5	640.5	1.5	1.1	159.36	-19.3	-13.2	58.6	56.3	2.34	25.012	
800.0	795.6	738.6	738.6	1.9	1.3	164.28	-19.3	-13.2	76.8	74.1	2.68	28.652	
900.0	893.1	836.1	836.1	2.3	1.5	167.73	-19.3	-13.2	98.6	95.6	3.01	32.772	
1,000.0	989.6	932.6	932.6	2.8	1.6	170.17	-19.3	-13.2	124.1	120.7	3.33	37.209	
1,100.0	1,085.8	1,028.8	1,028.8	3.3	1.8	168.54	-19.3	-13.2	151.1	147.4	3.68	41.067	
1,200.0	1,182.0	1,125.0	1,125.0	3.8	2.0	166.78	-19.3	-13.2	177.8	173.8	4.02	44.187	
1,300.0	1,278.2	1,221.2	1,221.2	4.3	2.1	164.97	-19.3	-13.2	204.3	199.9	4.37	46.762	
1,400.0	1,374.4	1,317.4	1,317.4	4.8	2.3	163.16	-19.3	-13.2	230.6	225.9	4.71	48.927	
1,500.0	1,470.6	1,413.6	1,413.6	5.3	2.5	162.40	-19.3	-13.2	256.9	251.8	5.05	50.815	
1,600.0	1,566.7	1,509.7	1,509.7	5.8	2.6	164.08	-19.3	-13.2	283.3	277.9	5.39	52.549	
1,700.0	1,662.9	1,605.9	1,605.9	6.3	2.8	165.47	-19.3	-13.2	309.9	304.1	5.73	54.108	
1,800.0	1,759.0	1,702.0	1,702.0	6.9	3.0	166.64	-19.3	-13.2	336.6	330.5	6.06	55.513	
1,900.0	1,855.2	1,798.2	1,798.2	7.4	3.1	167.64	-19.3	-13.2	363.5	357.1	6.40	56.786	
2,000.0	1,951.3	1,894.3	1,894.3	7.9	3.3	168.50	-19.3	-13.2	390.4	383.7	6.74	57.941	
2,100.0	2,047.5	1,990.5	1,990.5	8.4	3.5	169.25	-19.3	-13.2	417.4	410.3	7.08	58.995	
2,200.0	2,143.6	2,086.6	2,086.6	8.9	3.6	169.91	-19.3	-13.2	444.5	437.1	7.41	59.959	
2,300.0	2,239.8	2,182.8	2,182.8	9.5	3.8	170.50	-19.3	-13.2	471.6	463.9	7.75	60.843	
2,400.0	2,335.9	2,278.9	2,278.9	10.0	4.0	171.02	-19.3	-13.2	498.8	490.7	8.09	61.658	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4A-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	2.0	2.0	0.0	0.0	-93.67	-7.1	-110.7	110.9				
100.0	100.0	102.0	102.0	0.1	0.2	-93.67	-7.1	-110.7	110.9	110.6	0.30	369.558	
166.0	166.0	168.0	168.0	0.3	0.3	-93.67	-7.1	-110.7	110.9	110.4	0.53	209.111	CC
200.0	200.0	202.0	202.0	0.3	0.3	-93.67	-7.1	-110.7	110.9	110.3	0.65	170.884	ES
300.0	300.0	300.0	300.0	0.5	0.5	171.58	-6.9	-111.6	113.5	112.5	0.99	114.130	
400.0	399.8	397.9	397.8	0.7	0.7	172.27	-6.3	-114.0	121.2	119.8	1.34	90.489	
500.0	499.5	494.9	494.8	0.9	0.9	173.24	-5.3	-118.1	133.9	132.3	1.68	79.667	
600.0	598.7	591.0	590.7	1.2	1.0	174.31	-4.0	-123.7	151.8	149.8	2.02	75.156	
700.0	697.5	687.1	686.5	1.5	1.2	175.37	-2.3	-130.6	174.5	172.1	2.35	74.093	SF
800.0	795.6	783.5	782.6	1.9	1.4	176.27	-0.5	-137.8	200.8	198.1	2.69	74.733	
900.0	893.1	878.9	877.8	2.3	1.7	177.00	1.2	-144.9	230.4	227.4	3.01	76.504	
1,000.0	989.6	973.3	971.9	2.8	1.9	177.59	2.9	-151.9	263.5	260.1	3.33	79.082	
1,100.0	1,085.8	1,067.1	1,065.4	3.3	2.1	174.43	4.6	-158.8	298.0	294.3	3.67	81.183	
1,200.0	1,182.0	1,160.9	1,159.0	3.8	2.3	171.41	6.3	-165.8	332.3	328.2	4.01	82.846	
1,300.0	1,278.2	1,254.8	1,252.6	4.3	2.5	168.50	7.9	-172.7	366.3	362.0	4.35	84.174	
1,400.0	1,374.4	1,348.6	1,346.1	4.8	2.7	165.69	9.6	-179.7	400.2	395.5	4.69	85.240	
1,500.0	1,470.6	1,442.4	1,439.7	5.3	2.9	164.06	11.3	-186.7	433.9	428.9	5.04	86.155	
1,600.0	1,566.7	1,536.2	1,533.2	5.8	3.1	165.09	13.0	-193.6	467.8	462.4	5.37	87.059	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4B-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-90.61	-1.1	-105.7	105.7				
100.0	100.0	101.0	101.0	0.1	0.2	-90.61	-1.1	-105.7	105.7	105.4	0.30	354.116	
166.3	166.3	167.3	167.3	0.3	0.3	-90.61	-1.1	-105.7	105.7	105.2	0.53	199.414	CC
200.0	200.0	201.0	201.0	0.3	0.3	-90.61	-1.1	-105.7	105.7	105.0	0.65	163.224	ES
300.0	300.0	300.0	300.0	0.5	0.5	174.67	-0.8	-106.5	108.2	107.2	0.99	108.804	
400.0	399.8	397.2	397.2	0.7	0.7	175.40	0.2	-108.8	115.8	114.5	1.34	86.525	
500.0	499.5	495.8	495.6	0.9	0.9	176.40	1.8	-112.3	128.1	126.4	1.68	76.126	
600.0	598.7	594.5	594.3	1.2	1.0	177.31	3.5	-116.0	144.0	142.0	2.03	71.103	
700.0	697.5	692.5	692.3	1.5	1.2	178.07	5.1	-119.7	163.4	161.0	2.36	69.111	
800.0	795.6	789.9	789.5	1.9	1.4	178.70	6.7	-123.3	186.2	183.5	2.70	69.008	SF
900.0	893.1	886.4	885.9	2.3	1.6	179.21	8.3	-126.9	212.4	209.3	3.03	70.169	
1,000.0	989.6	981.9	981.4	2.8	1.8	179.61	9.9	-130.4	241.9	238.6	3.35	72.228	
1,100.0	1,085.8	1,076.9	1,076.3	3.3	1.9	176.33	11.4	-133.9	273.0	269.3	3.69	73.990	
1,200.0	1,182.0	1,171.9	1,171.3	3.8	2.1	173.24	13.0	-137.5	303.9	299.9	4.03	75.394	
1,300.0	1,278.2	1,267.0	1,266.2	4.3	2.3	170.31	14.6	-141.0	334.6	330.2	4.37	76.528	
1,400.0	1,374.4	1,362.0	1,361.2	4.8	2.5	167.52	16.1	-144.5	365.2	360.4	4.71	77.456	
1,500.0	1,470.6	1,457.0	1,456.1	5.3	2.7	165.92	17.7	-148.1	395.6	390.6	5.06	78.257	
1,600.0	1,566.7	1,551.9	1,550.9	5.8	2.8	166.96	19.3	-151.6	426.2	420.8	5.39	79.026	
1,700.0	1,662.9	1,646.9	1,645.8	6.3	3.0	167.86	20.8	-155.1	456.9	451.1	5.73	79.727	
1,800.0	1,759.0	1,741.8	1,740.7	6.9	3.2	168.65	22.4	-158.6	487.6	481.6	6.07	80.368	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4C-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-94.06	-7.2	-100.7	101.0				
100.0	100.0	101.0	101.0	0.1	0.2	-94.06	-7.2	-100.7	101.0	100.7	0.30	338.302	
200.0	200.0	201.0	201.0	0.3	0.3	-94.06	-7.2	-100.7	101.0	100.3	0.65	155.929	CC, ES
300.0	300.0	301.0	301.0	0.5	0.5	171.08	-7.2	-100.7	102.7	101.7	1.00	103.073	
400.0	399.8	400.8	400.8	0.7	0.7	171.50	-7.2	-100.7	107.9	106.5	1.34	80.243	
500.0	499.5	500.5	500.5	0.9	0.8	172.11	-7.2	-100.7	116.5	114.8	1.69	68.899	
600.0	598.7	601.7	601.7	1.2	1.0	173.03	-6.7	-99.9	127.8	125.7	2.04	62.685	
700.0	697.5	702.0	701.9	1.5	1.2	174.25	-5.5	-97.7	141.1	138.8	2.38	59.241	
800.0	795.6	800.5	800.5	1.9	1.4	175.41	-4.1	-95.3	157.7	155.0	2.72	57.975	SF
900.0	893.1	898.5	898.3	2.3	1.6	176.42	-2.8	-92.9	177.8	174.8	3.05	58.211	
1,000.0	989.6	995.6	995.5	2.8	1.7	177.26	-1.4	-90.5	201.3	197.9	3.38	59.508	
1,100.0	1,085.8	1,092.4	1,092.2	3.3	1.9	174.47	-0.1	-88.2	226.4	222.7	3.73	60.703	
1,200.0	1,182.0	1,189.1	1,188.9	3.8	2.1	171.84	1.3	-85.8	251.2	247.2	4.08	61.629	
1,300.0	1,278.2	1,285.8	1,285.6	4.3	2.2	169.37	2.6	-83.4	275.9	271.5	4.42	62.365	
1,400.0	1,374.4	1,382.5	1,382.2	4.8	2.4	167.04	3.9	-81.1	300.5	295.7	4.77	62.969	
1,500.0	1,470.6	1,479.1	1,478.8	5.3	2.6	165.86	5.3	-78.7	325.0	319.9	5.12	63.503	
1,600.0	1,566.7	1,575.7	1,575.3	5.8	2.8	167.24	6.6	-76.3	349.6	344.2	5.46	64.034	
1,700.0	1,662.9	1,672.3	1,671.9	6.3	2.9	168.44	7.9	-74.0	374.5	368.7	5.80	64.532	
1,800.0	1,759.0	1,768.9	1,768.4	6.9	3.1	169.49	9.3	-71.6	399.4	393.3	6.15	64.996	
1,900.0	1,855.2	1,865.5	1,865.0	7.4	3.3	170.41	10.6	-69.2	424.5	418.0	6.49	65.427	
2,000.0	1,951.3	1,962.1	1,961.5	7.9	3.5	171.24	12.0	-66.9	449.7	442.9	6.83	65.827	
2,100.0	2,047.5	2,058.7	2,058.1	8.4	3.6	171.97	13.3	-64.5	474.9	467.8	7.17	66.197	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4D-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-90.71	-1.2	-95.7	95.7				
100.0	100.0	101.0	101.0	0.1	0.2	-90.71	-1.2	-95.7	95.7	95.4	0.30	320.615	
200.0	200.0	201.0	201.0	0.3	0.3	-90.71	-1.2	-95.7	95.7	95.0	0.65	147.777	CC, ES
300.0	300.0	301.0	301.0	0.5	0.5	174.39	-1.2	-95.7	97.4	96.4	1.00	97.794	
400.0	399.8	400.8	400.8	0.7	0.7	174.67	-1.2	-95.7	102.6	101.3	1.34	76.373	
500.0	499.5	500.5	500.5	0.9	0.8	175.07	-1.2	-95.7	111.3	109.6	1.69	65.875	
600.0	598.7	601.8	601.8	1.2	1.0	175.65	-1.0	-94.8	122.6	120.6	2.04	60.189	
700.0	697.5	703.2	703.1	1.5	1.2	176.43	-0.3	-92.2	135.7	133.3	2.38	56.952	
800.0	795.6	804.5	804.3	1.9	1.4	177.32	0.7	-87.8	150.5	147.8	2.72	55.236	
900.0	893.1	905.7	905.4	2.3	1.6	178.28	2.2	-81.7	167.2	164.1	3.07	54.533	SF
1,000.0	989.6	1,004.6	1,004.0	2.8	1.8	179.19	3.9	-74.6	186.1	182.7	3.40	54.740	
1,100.0	1,085.8	1,102.4	1,101.5	3.3	2.0	176.49	5.7	-67.4	206.6	202.8	3.75	55.092	
1,200.0	1,182.0	1,200.2	1,199.0	3.8	2.2	174.03	7.4	-60.3	226.9	222.8	4.10	55.329	
1,300.0	1,278.2	1,298.0	1,296.5	4.3	2.4	171.75	9.1	-53.1	247.1	242.6	4.45	55.495	
1,400.0	1,374.4	1,395.6	1,393.9	4.8	2.6	169.64	10.8	-46.0	267.3	262.5	4.81	55.622	
1,500.0	1,470.6	1,493.2	1,491.2	5.3	2.8	168.71	12.6	-38.9	287.5	282.4	5.16	55.735	
1,600.0	1,566.7	1,590.8	1,588.5	5.8	3.0	170.29	14.3	-31.7	308.0	302.5	5.51	55.855	
1,700.0	1,662.9	1,688.3	1,685.8	6.3	3.2	171.67	16.0	-24.6	328.7	322.8	5.87	55.974	
1,800.0	1,759.0	1,785.9	1,783.1	6.9	3.4	172.90	17.7	-17.5	349.5	343.3	6.23	56.086	
1,900.0	1,855.2	1,883.4	1,880.3	7.4	3.6	173.98	19.5	-10.3	370.4	363.8	6.59	56.188	
2,000.0	1,951.3	1,981.0	1,977.6	7.9	3.8	174.95	21.2	-3.2	391.5	384.6	6.96	56.280	
2,100.0	2,047.5	2,078.5	2,074.9	8.4	4.1	175.82	22.9	3.9	412.7	405.4	7.32	56.361	
2,200.0	2,143.6	2,176.1	2,172.2	8.9	4.3	176.61	24.6	11.0	433.9	426.2	7.69	56.432	
2,300.0	2,239.8	2,273.6	2,269.4	9.5	4.5	177.32	26.4	18.2	455.3	447.2	8.06	56.494	
2,400.0	2,335.9	2,371.2	2,366.7	10.0	4.7	177.97	28.1	25.3	476.6	468.2	8.43	56.547	
2,500.0	2,432.1	2,468.7	2,464.0	10.5	4.9	178.56	29.8	32.4	498.1	489.3	8.80	56.593	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4E-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-95.14	-7.3	-80.7	81.0				
100.0	100.0	101.0	101.0	0.1	0.2	-95.14	-7.3	-80.7	81.0	80.7	0.30	271.532	
200.0	200.0	201.0	201.0	0.3	0.3	-95.14	-7.3	-80.7	81.0	80.4	0.65	125.154	CC, ES
300.0	300.0	301.0	301.0	0.5	0.5	170.06	-7.3	-80.7	82.8	81.8	1.00	83.064	
400.0	399.8	400.8	400.8	0.7	0.7	170.64	-7.3	-80.7	87.9	86.6	1.34	65.398	
500.0	499.5	500.5	500.5	0.9	0.8	171.45	-7.3	-80.7	96.5	94.8	1.69	57.083	
600.0	598.7	599.7	599.7	1.2	1.0	172.38	-7.3	-80.7	108.6	106.6	2.04	53.351	
700.0	697.5	698.5	698.5	1.5	1.2	173.30	-7.3	-80.7	124.1	121.7	2.38	52.222	SF
800.0	795.6	796.6	796.6	1.9	1.4	174.15	-7.3	-80.7	143.1	140.4	2.71	52.722	
900.0	893.1	894.1	894.1	2.3	1.5	174.90	-7.3	-80.7	165.5	162.4	3.05	54.321	
1,000.0	989.6	993.7	993.7	2.8	1.7	175.61	-7.1	-80.0	190.6	187.2	3.38	56.401	
1,100.0	1,085.8	1,094.0	1,094.0	3.3	1.9	172.83	-6.7	-77.5	215.5	211.8	3.73	57.749	
1,200.0	1,182.0	1,195.1	1,195.0	3.8	2.1	170.37	-6.0	-73.2	238.5	234.4	4.09	58.360	
1,300.0	1,278.2	1,297.0	1,296.6	4.3	2.3	168.18	-4.9	-67.2	259.6	255.1	4.44	58.436	
1,400.0	1,374.4	1,399.4	1,398.8	4.8	2.5	166.26	-3.6	-59.3	278.9	274.1	4.80	58.119	
1,500.0	1,470.6	1,502.3	1,501.2	5.3	2.7	165.63	-1.9	-49.5	296.5	291.4	5.15	57.532	
1,600.0	1,566.7	1,604.0	1,602.3	5.8	2.9	167.57	0.1	-38.2	312.8	307.3	5.51	56.805	
1,700.0	1,662.9	1,702.3	1,699.8	6.3	3.1	169.28	2.0	-26.9	329.0	323.2	5.86	56.170	
1,800.0	1,759.0	1,800.5	1,797.4	6.9	3.4	170.84	4.0	-15.5	345.5	339.3	6.21	55.611	
1,900.0	1,855.2	1,898.7	1,894.9	7.4	3.6	172.25	6.0	-4.2	362.2	355.6	6.57	55.106	
2,000.0	1,951.3	1,996.9	1,992.4	7.9	3.8	173.54	7.9	7.2	379.1	372.2	6.94	54.641	
2,100.0	2,047.5	2,095.1	2,090.0	8.4	4.1	174.72	9.9	18.5	396.2	388.9	7.31	54.206	
2,200.0	2,143.6	2,193.3	2,187.5	8.9	4.3	175.80	11.9	29.8	413.4	405.7	7.69	53.795	
2,300.0	2,239.8	2,291.6	2,285.1	9.5	4.6	176.79	13.8	41.2	430.8	422.7	8.07	53.403	
2,400.0	2,335.9	2,389.8	2,382.6	10.0	4.8	177.71	15.8	52.5	448.2	439.8	8.45	53.030	
2,500.0	2,432.1	2,488.0	2,480.1	10.5	5.1	178.56	17.7	63.9	465.8	457.0	8.84	52.671	
2,600.0	2,528.2	2,586.2	2,577.7	11.0	5.3	179.35	19.7	75.2	483.5	474.2	9.24	52.328	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4F-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-90.98	-1.3	-75.7	75.7				
100.0	100.0	101.0	101.0	0.1	0.2	-90.98	-1.3	-75.7	75.7	75.4	0.30	253.616	
200.0	200.0	201.0	201.0	0.3	0.3	-90.98	-1.3	-75.7	75.7	75.0	0.65	116.896	CC, ES
300.0	300.0	301.0	301.0	0.5	0.5	174.15	-1.3	-75.7	77.4	76.4	1.00	77.721	
400.0	399.8	400.8	400.8	0.7	0.7	174.51	-1.3	-75.7	82.6	81.3	1.34	61.491	
500.0	499.5	500.5	500.5	0.9	0.8	175.02	-1.3	-75.7	91.3	89.6	1.69	54.039	
600.0	598.7	602.5	602.4	1.2	1.0	176.28	-0.1	-74.3	102.1	100.1	2.04	50.088	
700.0	697.5	704.5	704.3	1.5	1.2	178.62	3.4	-70.1	113.8	111.4	2.39	47.618	
800.0	795.6	806.5	805.9	1.9	1.4	-178.31	9.2	-63.1	126.7	123.9	2.75	45.997	
900.0	893.1	908.2	906.9	2.3	1.7	-174.80	17.4	-53.4	141.0	137.9	3.15	44.817	
1,000.0	989.6	1,008.8	1,006.4	2.8	1.9	-171.88	25.6	-42.0	157.4	153.8	3.56	44.257	
1,100.0	1,085.8	1,109.7	1,106.2	3.3	2.2	-173.31	32.7	-29.3	174.3	170.3	3.99	43.678	
1,200.0	1,182.0	1,211.0	1,206.4	3.8	2.5	-174.87	38.5	-15.2	189.9	185.5	4.43	42.855	
1,300.0	1,278.2	1,312.8	1,307.0	4.3	2.8	-176.47	43.0	0.1	204.4	199.5	4.88	41.875	
1,400.0	1,374.4	1,415.1	1,407.8	4.8	3.1	-178.06	46.2	16.8	217.7	212.4	5.34	40.779	
1,500.0	1,470.6	1,514.6	1,505.9	5.3	3.5	-178.58	48.5	33.9	230.4	224.6	5.81	39.681	
1,600.0	1,566.7	1,613.5	1,603.2	5.8	3.8	-176.63	50.8	50.9	243.4	237.1	6.30	38.652	
1,700.0	1,662.9	1,712.3	1,700.5	6.3	4.1	-174.88	53.1	67.9	256.7	249.9	6.80	37.721	
1,800.0	1,759.0	1,811.1	1,797.9	6.9	4.4	-173.30	55.3	84.8	270.1	262.8	7.33	36.877	
1,900.0	1,855.2	1,910.0	1,895.2	7.4	4.8	-171.88	57.6	101.8	283.8	275.9	7.86	36.109	
2,000.0	1,951.3	2,008.8	1,992.5	7.9	5.1	-170.58	59.9	118.8	297.6	289.2	8.40	35.409	
2,100.0	2,047.5	2,107.6	2,089.9	8.4	5.5	-169.40	62.1	135.8	311.5	302.6	8.96	34.771	
2,200.0	2,143.6	2,206.4	2,187.2	8.9	5.8	-168.32	64.4	152.8	325.6	316.1	9.52	34.188	
2,300.0	2,239.8	2,305.3	2,284.5	9.5	6.1	-167.33	66.7	169.7	339.8	329.7	10.10	33.655	
2,400.0	2,335.9	2,404.1	2,381.8	10.0	6.5	-166.42	68.9	186.7	354.1	343.4	10.68	33.165	
2,500.0	2,432.1	2,502.9	2,479.2	10.5	6.8	-165.58	71.2	203.7	368.4	357.1	11.26	32.716	
2,600.0	2,528.2	2,601.7	2,576.5	11.0	7.2	-164.80	73.5	220.7	382.8	371.0	11.85	32.301	
2,700.0	2,624.3	2,700.6	2,673.8	11.5	7.5	-164.08	75.7	237.7	397.3	384.9	12.45	31.919	
2,800.0	2,720.5	2,799.4	2,771.2	12.1	7.8	-163.41	78.0	254.6	411.8	398.8	13.05	31.566	
2,900.0	2,816.6	2,898.2	2,868.5	12.6	8.2	-162.78	80.2	271.6	426.4	412.8	13.65	31.239	
3,000.0	2,912.8	2,997.0	2,965.8	13.1	8.5	-162.20	82.5	288.6	441.1	426.8	14.26	30.935	
3,100.0	3,008.9	3,095.9	3,063.2	13.6	8.9	-161.65	84.8	305.6	455.7	440.9	14.87	30.653	
3,200.0	3,105.1	3,194.7	3,160.5	14.1	9.2	-161.14	87.0	322.6	470.5	455.0	15.48	30.390	
3,300.0	3,201.2	3,293.5	3,257.8	14.7	9.6	-160.66	89.3	339.5	485.2	469.1	16.10	30.144	
3,400.0	3,297.4	3,392.3	3,355.1	15.2	9.9	-160.21	91.6	356.5	500.0	483.3	16.71	29.914	SF

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4G-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-95.91	-7.3	-70.7	71.1				
100.0	100.0	101.0	101.0	0.1	0.2	-95.91	-7.3	-70.7	71.1	70.8	0.30	238.199	
200.0	200.0	201.0	201.0	0.3	0.3	-95.91	-7.3	-70.7	71.1	70.4	0.65	109.790	CC, ES
300.0	300.0	301.0	301.0	0.5	0.5	169.35	-7.3	-70.7	72.8	71.8	1.00	73.073	
400.0	399.8	400.8	400.8	0.7	0.7	170.04	-7.3	-70.7	78.0	76.6	1.34	57.983	
500.0	499.5	500.5	500.5	0.9	0.8	171.01	-7.3	-70.7	86.6	84.9	1.69	51.178	
600.0	598.7	599.7	599.7	1.2	1.0	172.08	-7.3	-70.7	98.6	96.6	2.04	48.439	
700.0	697.5	698.5	698.5	1.5	1.2	173.13	-7.3	-70.7	114.1	111.7	2.38	48.012	
800.0	795.6	798.9	798.9	1.9	1.4	174.08	-7.3	-70.3	132.7	130.0	2.72	48.818	
900.0	893.1	902.2	902.1	2.3	1.6	174.90	-7.5	-66.7	151.7	148.6	3.06	49.543	
1,000.0	989.6	1,006.2	1,005.9	2.8	1.8	175.60	-7.7	-59.3	170.5	167.1	3.40	50.111	
1,100.0	1,085.8	1,111.3	1,110.4	3.3	2.0	172.85	-8.1	-48.0	187.3	183.6	3.77	49.736	
1,200.0	1,182.0	1,215.1	1,213.1	3.8	2.2	170.41	-8.7	-33.5	200.6	196.5	4.13	48.588	
1,300.0	1,278.2	1,317.9	1,314.6	4.3	2.5	168.19	-9.9	-17.2	211.7	207.3	4.49	47.180	
1,400.0	1,374.4	1,421.1	1,416.2	4.8	2.8	166.22	-11.6	0.9	221.0	216.2	4.85	45.593	
1,500.0	1,470.6	1,524.6	1,517.7	5.3	3.2	165.51	-13.8	20.8	228.5	223.3	5.20	43.894	
1,600.0	1,566.7	1,628.3	1,619.1	5.8	3.6	167.29	-16.7	42.4	234.3	228.7	5.56	42.130	
1,700.0	1,662.9	1,732.2	1,720.3	6.3	4.0	168.93	-20.1	65.9	238.5	232.6	5.92	40.291	
1,800.0	1,759.0	1,833.0	1,818.2	6.9	4.4	170.43	-23.8	89.8	241.7	235.4	6.28	38.494	
1,900.0	1,855.2	1,932.8	1,915.0	7.4	4.8	171.87	-27.5	113.6	244.9	238.3	6.64	36.887	
2,000.0	1,951.3	2,032.5	2,011.8	7.9	5.3	173.28	-31.2	137.3	248.3	241.3	7.01	35.428	
2,100.0	2,047.5	2,132.3	2,108.6	8.4	5.7	174.65	-34.9	161.1	251.9	244.5	7.39	34.089	
2,200.0	2,143.6	2,232.1	2,205.4	8.9	6.1	175.98	-38.5	184.8	255.5	247.8	7.78	32.847	
2,300.0	2,239.8	2,331.8	2,302.3	9.5	6.6	177.27	-42.2	208.6	259.4	251.2	8.18	31.687	
2,400.0	2,335.9	2,431.6	2,399.1	10.0	7.0	178.52	-45.9	232.3	263.3	254.7	8.61	30.596	
2,500.0	2,432.1	2,531.3	2,495.9	10.5	7.5	179.74	-49.6	256.1	267.4	258.3	9.04	29.566	
2,600.0	2,528.2	2,631.1	2,592.7	11.0	7.9	-179.08	-53.3	279.9	271.5	262.0	9.50	28.592	
2,700.0	2,624.3	2,730.9	2,689.5	11.5	8.4	-177.94	-57.0	303.6	275.8	265.9	9.97	27.667	
2,800.0	2,720.5	2,830.6	2,786.3	12.1	8.9	-176.83	-60.7	327.4	280.2	269.8	10.46	26.790	
2,900.0	2,816.6	2,930.4	2,883.2	12.6	9.3	-175.76	-64.4	351.1	284.7	273.8	10.97	25.957	
3,000.0	2,912.8	3,030.1	2,980.0	13.1	9.8	-174.72	-68.0	374.9	289.3	277.8	11.50	25.166	
3,100.0	3,008.9	3,129.9	3,076.8	13.6	10.2	-173.71	-71.7	398.6	294.0	282.0	12.04	24.416	
3,200.0	3,105.1	3,229.6	3,173.6	14.1	10.7	-172.74	-75.4	422.4	298.8	286.2	12.61	23.705	
3,300.0	3,201.2	3,329.4	3,270.4	14.7	11.1	-171.79	-79.1	446.1	303.7	290.5	13.19	23.031	
3,400.0	3,297.4	3,429.2	3,367.3	15.2	11.6	-170.88	-82.8	469.9	308.6	294.8	13.78	22.394	
3,500.0	3,393.5	3,528.9	3,464.1	15.7	12.1	-169.99	-86.5	493.6	313.6	299.2	14.39	21.791	
3,600.0	3,489.7	3,628.7	3,560.9	16.2	12.5	-169.13	-90.2	517.4	318.7	303.7	15.02	21.220	
3,700.0	3,585.8	3,728.4	3,657.7	16.8	13.0	-168.30	-93.8	541.2	323.9	308.2	15.66	20.681	
3,800.0	3,682.0	3,828.2	3,754.5	17.3	13.4	-167.50	-97.5	564.9	329.1	312.8	16.32	20.172	
3,900.0	3,778.1	3,928.0	3,851.4	17.8	13.9	-166.72	-101.2	588.7	334.4	317.4	16.98	19.691	
4,000.0	3,874.2	4,027.7	3,948.2	18.3	14.4	-165.97	-104.9	612.4	339.7	322.1	17.66	19.236	
4,100.0	3,970.4	4,127.5	4,045.0	18.9	14.8	-165.24	-108.6	636.2	345.2	326.8	18.35	18.807	
4,200.0	4,066.5	4,227.2	4,141.8	19.4	15.3	-164.53	-112.3	659.9	350.6	331.6	19.05	18.401	
4,300.0	4,162.7	4,327.0	4,238.6	19.9	15.7	-163.84	-116.0	683.7	356.1	336.4	19.77	18.018	
4,400.0	4,258.8	4,426.7	4,335.4	20.4	16.2	-163.18	-119.7	707.4	361.7	341.2	20.49	17.655	
4,500.0	4,355.0	4,526.5	4,432.3	21.0	16.7	-162.53	-123.3	731.2	367.3	346.1	21.22	17.312	
4,600.0	4,451.1	4,626.3	4,529.1	21.5	17.1	-161.90	-127.0	754.9	372.9	351.0	21.95	16.987	
4,700.0	4,547.3	4,726.0	4,625.9	22.0	17.6	-161.30	-130.7	778.7	378.6	355.9	22.70	16.680	
4,800.0	4,643.4	4,825.8	4,722.7	22.5	18.1	-160.71	-134.4	802.4	384.4	360.9	23.45	16.389	
4,900.0	4,739.6	4,925.5	4,819.5	23.0	18.5	-160.14	-138.1	826.2	390.2	365.9	24.21	16.113	
5,000.0	4,835.7	5,025.3	4,916.4	23.6	19.0	-159.58	-141.8	850.0	396.0	371.0	24.98	15.851	
5,100.0	4,931.9	5,125.1	5,013.2	24.1	19.4	-159.04	-145.5	873.7	401.8	376.1	25.75	15.603	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4G-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,028.0	5,224.8	5,110.0	24.6	19.9	-158.52	-149.1	897.5	407.7	381.2	26.53	15.367	
5,300.0	5,124.2	5,324.6	5,206.8	25.1	20.4	-158.01	-152.8	921.2	413.6	386.3	27.32	15.143	
5,400.0	5,220.3	5,424.3	5,303.6	25.7	20.8	-157.52	-156.5	945.0	419.6	391.5	28.10	14.930	
5,500.0	5,316.4	5,524.1	5,400.5	26.2	21.3	-157.04	-160.2	968.7	425.6	396.7	28.90	14.727	
5,600.0	5,412.6	5,623.8	5,497.3	26.7	21.8	-156.57	-163.9	992.5	431.6	401.9	29.69	14.534	
5,700.0	5,508.7	5,723.6	5,594.1	27.2	22.2	-156.12	-167.6	1,016.2	437.6	407.1	30.50	14.350	
5,800.0	5,604.9	5,823.4	5,690.9	27.8	22.7	-155.67	-171.3	1,040.0	443.7	412.4	31.30	14.174	
5,900.0	5,701.0	5,923.1	5,787.7	28.3	23.2	-155.24	-175.0	1,063.7	449.8	417.7	32.11	14.007	
6,000.0	5,797.2	6,022.9	5,884.5	28.8	23.6	-154.83	-178.6	1,087.5	455.9	423.0	32.92	13.847	
6,100.0	5,893.3	6,122.6	5,981.4	29.3	24.1	-154.42	-182.3	1,111.3	462.0	428.3	33.74	13.694	
6,200.0	5,989.5	6,222.4	6,078.2	29.9	24.5	-154.02	-186.0	1,135.0	468.2	433.6	34.56	13.548	
6,300.0	6,085.6	6,322.2	6,175.0	30.4	25.0	-153.63	-189.7	1,158.8	474.4	439.0	35.38	13.408	
6,400.0	6,181.8	6,421.9	6,271.8	30.9	25.5	-153.26	-193.4	1,182.5	480.6	444.4	36.20	13.274	
6,500.0	6,277.9	6,521.7	6,368.6	31.4	25.9	-152.89	-197.1	1,206.3	486.8	449.8	37.03	13.146	
6,600.0	6,374.1	6,621.4	6,465.5	32.0	26.4	-152.53	-200.8	1,230.0	493.0	455.2	37.86	13.023	
6,700.0	6,470.2	6,721.2	6,562.3	32.5	26.9	-152.19	-204.4	1,253.8	499.3	460.6	38.69	12.906	
7,200.0	6,951.3	7,479.2	7,257.9	35.0	30.7	-121.42	-376.3	1,424.5	474.0	444.3	29.70	15.956	
7,300.0	7,045.4	7,576.6	7,320.3	35.3	31.3	-117.88	-449.4	1,439.7	417.9	391.2	26.61	15.701	
7,400.0	7,134.3	7,608.6	7,338.0	35.5	31.5	-117.11	-475.6	1,444.1	370.3	339.8	30.45	12.159	
7,500.0	7,215.4	7,609.5	7,338.5	35.6	31.6	-113.79	-476.4	1,444.2	344.2	312.8	31.35	10.978	SF
7,543.9	7,247.8	7,604.2	7,335.6	35.7	31.5	-111.34	-472.0	1,443.5	341.4	310.6	30.87	11.061	
7,600.0	7,286.1	7,594.0	7,330.1	35.7	31.4	-107.38	-463.6	1,442.2	345.8	315.9	29.90	11.568	
7,700.0	7,344.3	7,569.3	7,316.0	35.7	31.3	-98.32	-443.5	1,438.7	373.1	345.0	28.13	13.264	
7,800.0	7,388.3	7,538.6	7,297.4	35.8	31.1	-87.57	-419.6	1,434.1	418.2	391.3	26.94	15.525	
7,900.0	7,416.7	7,500.0	7,272.2	35.8	30.8	-76.18	-391.0	1,428.0	472.8	447.0	25.85	18.291	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4H-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-91.17	-1.3	-65.7	65.7				
100.0	100.0	101.0	101.0	0.1	0.2	-91.17	-1.3	-65.7	65.7	65.4	0.30	220.119	
200.0	200.0	201.0	201.0	0.3	0.3	-91.17	-1.3	-65.7	65.7	65.0	0.65	101.457	CC, ES
300.0	300.0	301.0	301.0	0.5	0.5	173.98	-1.3	-65.7	67.4	66.4	1.00	67.685	
400.0	399.8	400.8	400.8	0.7	0.7	174.41	-1.3	-65.7	72.6	71.3	1.34	54.050	
500.0	499.5	500.5	500.5	0.9	0.8	174.99	-1.3	-65.7	81.3	79.6	1.69	48.121	
600.0	598.7	599.7	599.7	1.2	1.0	175.62	-1.3	-65.7	93.5	91.4	2.03	45.968	
700.0	697.5	698.5	698.5	1.5	1.2	176.23	-1.3	-65.7	109.1	106.7	2.37	45.955	
800.0	795.6	798.8	798.8	1.9	1.4	176.81	-1.3	-64.8	127.3	124.6	2.71	46.911	
900.0	893.1	899.2	899.2	2.3	1.5	177.38	-1.2	-62.2	147.2	144.2	3.05	48.265	
1,000.0	989.6	999.6	999.4	2.8	1.7	177.91	-1.0	-57.9	168.9	165.5	3.38	49.906	
1,100.0	1,085.8	1,100.3	1,100.0	3.3	1.9	175.00	-0.6	-51.7	190.4	186.6	3.74	50.947	
1,200.0	1,182.0	1,201.8	1,201.2	3.8	2.1	172.46	-0.3	-43.7	209.9	205.8	4.09	51.308	
1,300.0	1,278.2	1,304.0	1,302.9	4.3	2.3	170.25	0.2	-33.9	227.6	223.1	4.45	51.169	
1,400.0	1,374.4	1,406.6	1,404.8	4.8	2.6	168.36	0.8	-22.2	243.4	238.6	4.80	50.660	
1,500.0	1,470.6	1,509.7	1,507.0	5.3	2.8	167.79	1.5	-8.6	257.6	252.4	5.16	49.877	
1,600.0	1,566.7	1,613.1	1,609.2	5.8	3.1	169.82	2.3	6.8	270.3	264.7	5.53	48.881	
1,700.0	1,662.9	1,716.9	1,711.5	6.3	3.4	171.78	3.1	24.2	281.5	275.6	5.90	47.678	
1,800.0	1,759.0	1,820.9	1,813.8	6.9	3.8	173.69	4.1	43.5	291.3	285.1	6.30	46.273	
1,900.0	1,855.2	1,925.2	1,915.9	7.4	4.2	175.61	5.1	64.7	299.8	293.0	6.71	44.673	
2,000.0	1,951.3	2,029.6	2,017.7	7.9	4.6	177.55	6.3	87.7	306.8	299.6	7.15	42.883	
2,100.0	2,047.5	2,134.1	2,119.2	8.4	5.0	179.53	7.5	112.7	312.4	304.8	7.64	40.910	
2,200.0	2,143.6	2,238.7	2,220.2	8.9	5.5	-178.40	8.9	139.4	316.8	308.6	8.17	38.768	
2,300.0	2,239.8	2,343.1	2,320.7	9.5	6.0	-176.25	10.3	168.0	319.9	311.2	8.77	36.481	
2,400.0	2,335.9	2,443.0	2,416.4	10.0	6.5	-174.13	11.7	196.4	322.5	313.1	9.41	34.265	
2,500.0	2,432.1	2,542.2	2,511.5	10.5	7.0	-172.06	13.1	224.6	325.5	315.4	10.11	32.208	
2,600.0	2,528.2	2,641.5	2,606.7	11.0	7.5	-170.03	14.5	252.9	329.0	318.1	10.86	30.302	
2,700.0	2,624.3	2,740.7	2,701.8	11.5	8.0	-168.04	15.9	281.1	332.8	321.1	11.66	28.550	
2,800.0	2,720.5	2,840.0	2,797.0	12.1	8.5	-166.11	17.3	309.3	337.0	324.5	12.51	26.948	
2,900.0	2,816.6	2,939.2	2,892.1	12.6	9.1	-164.22	18.7	337.6	341.7	328.3	13.40	25.492	
3,000.0	2,912.8	3,038.5	2,987.3	13.1	9.6	-162.38	20.1	365.8	346.6	332.3	14.34	24.174	
3,100.0	3,008.9	3,137.8	3,082.4	13.6	10.1	-160.59	21.5	394.0	352.0	336.7	15.31	22.984	
3,200.0	3,105.1	3,237.0	3,177.6	14.1	10.6	-158.86	22.9	422.2	357.6	341.3	16.32	21.911	
3,300.0	3,201.2	3,336.3	3,272.7	14.7	11.2	-157.19	24.3	450.5	363.6	346.3	17.36	20.947	
3,400.0	3,297.4	3,435.5	3,367.9	15.2	11.7	-155.57	25.7	478.7	369.9	351.5	18.42	20.079	
3,500.0	3,393.5	3,534.8	3,463.0	15.7	12.2	-154.00	27.2	506.9	376.5	357.0	19.51	19.299	
3,600.0	3,489.7	3,634.1	3,558.2	16.2	12.7	-152.49	28.6	535.2	383.3	362.7	20.61	18.596	
3,700.0	3,585.8	3,733.3	3,653.3	16.8	13.3	-151.04	30.0	563.4	390.5	368.7	21.74	17.964	
3,800.0	3,682.0	3,832.6	3,748.5	17.3	13.8	-149.63	31.4	591.6	397.8	374.9	22.87	17.395	
3,900.0	3,778.1	3,931.8	3,843.6	17.8	14.3	-148.28	32.8	619.8	405.4	381.4	24.02	16.880	
4,000.0	3,874.2	4,031.1	3,938.8	18.3	14.9	-146.97	34.2	648.1	413.2	388.0	25.17	16.416	
4,100.0	3,970.4	4,130.3	4,033.9	18.9	15.4	-145.72	35.6	676.3	421.2	394.9	26.33	15.995	
4,200.0	4,066.5	4,229.6	4,129.1	19.4	15.9	-144.51	37.0	704.5	429.4	401.9	27.50	15.614	
4,300.0	4,162.7	4,328.9	4,224.2	19.9	16.5	-143.35	38.4	732.8	437.8	409.1	28.67	15.268	
4,400.0	4,258.8	4,428.1	4,319.4	20.4	17.0	-142.23	39.8	761.0	446.4	416.5	29.85	14.954	
4,500.0	4,355.0	4,527.4	4,414.5	21.0	17.6	-141.15	41.2	789.2	455.1	424.1	31.03	14.667	
4,600.0	4,451.1	4,626.6	4,509.7	21.5	18.1	-140.12	42.6	817.5	464.0	431.8	32.21	14.406	
4,700.0	4,547.3	4,725.9	4,604.8	22.0	18.6	-139.12	44.0	845.7	473.0	439.6	33.39	14.167	
4,800.0	4,643.4	4,825.1	4,700.0	22.5	19.2	-138.16	45.4	873.9	482.2	447.6	34.57	13.949	
4,900.0	4,739.6	4,924.4	4,795.1	23.0	19.7	-137.23	46.8	902.1	491.5	455.7	35.74	13.749	
7,500.0	7,215.4	8,308.3	7,712.0	35.6	37.5	178.66	-503.8	1,772.7	495.7	438.8	56.93	8.707	
7,600.0	7,286.1	8,118.4	7,686.3	35.7	36.6	-168.27	-316.7	1,763.5	417.2	369.3	47.93	8.706	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4H-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,700.0	7,344.3	7,993.6	7,638.1	35.7	36.0	-156.53	-202.9	1,748.2	334.8	296.2	38.55	8.683	
7,800.0	7,388.3	7,906.2	7,590.8	35.8	35.6	-146.34	-131.0	1,733.5	256.1	225.1	31.02	8.257	
7,900.0	7,416.7	7,833.7	7,543.9	35.8	35.3	-134.40	-77.7	1,719.1	188.0	160.9	27.07	6.942	
8,000.0	7,428.6	7,768.5	7,496.5	35.8	35.0	-118.40	-35.3	1,704.7	143.0	115.8	27.19	5.260	
8,056.1	7,430.1	7,735.6	7,470.9	35.8	34.8	-107.15	-16.2	1,696.9	135.2	107.5	27.76	4.871	SF
8,100.0	7,429.0	7,711.7	7,451.7	35.8	34.7	-99.13	-3.2	1,691.1	140.1	112.3	27.78	5.042	
8,200.0	7,429.0	7,668.5	7,415.7	36.0	34.5	-84.42	18.0	1,680.2	183.3	156.0	27.22	6.733	
8,300.0	7,429.0	7,635.2	7,387.0	36.2	34.3	-74.45	32.4	1,671.6	253.1	226.5	26.58	9.523	
8,400.0	7,429.0	7,608.8	7,363.6	36.5	34.2	-67.70	42.6	1,664.6	334.8	308.6	26.25	12.757	
8,500.0	7,429.0	7,587.5	7,344.5	36.9	34.1	-62.97	49.9	1,658.8	422.4	396.2	26.24	16.098	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4I-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-98.33	-7.4	-50.7	51.3				
100.0	100.0	100.0	100.0	0.1	0.1	-98.33	-7.4	-50.7	51.3	51.0	0.30	172.743	
200.0	200.0	200.0	200.0	0.3	0.3	-98.33	-7.4	-50.7	51.3	50.6	0.65	79.369	CC, ES
300.0	300.0	299.2	299.2	0.5	0.5	166.54	-8.0	-51.3	53.6	52.7	0.99	53.988	
400.0	399.8	398.2	398.1	0.7	0.7	166.20	-9.8	-53.1	60.8	59.5	1.34	45.304	
500.0	499.5	496.5	496.4	0.9	0.9	165.78	-12.8	-56.1	72.8	71.1	1.69	42.965	SF
600.0	598.7	594.0	593.7	1.2	1.1	165.36	-17.0	-60.3	89.4	87.4	2.05	43.670	
700.0	697.5	690.3	689.7	1.5	1.3	164.99	-22.2	-65.5	110.7	108.3	2.41	46.030	
800.0	795.6	786.1	785.1	1.9	1.5	164.70	-28.5	-71.8	136.5	133.7	2.77	49.314	
900.0	893.1	881.7	880.3	2.3	1.7	164.72	-34.9	-78.2	165.7	162.6	3.13	52.876	
1,000.0	989.6	976.3	974.4	2.8	1.9	164.95	-41.2	-84.5	198.2	194.7	3.50	56.606	
1,100.0	1,085.8	1,070.4	1,068.1	3.3	2.1	161.77	-47.5	-90.8	231.9	228.0	3.90	59.492	
1,200.0	1,182.0	1,164.7	1,162.0	3.8	2.4	158.76	-53.8	-97.1	265.0	260.7	4.30	61.564	
1,300.0	1,278.2	1,259.2	1,256.1	4.3	2.6	155.88	-60.1	-103.4	297.5	292.7	4.72	63.029	
1,400.0	1,374.4	1,353.8	1,350.2	4.8	2.8	153.13	-66.4	-109.7	329.4	324.3	5.14	64.034	
1,500.0	1,470.6	1,448.5	1,444.5	5.3	3.0	151.54	-72.7	-116.1	360.9	355.3	5.57	64.772	
1,600.0	1,566.7	1,543.2	1,538.8	5.8	3.2	152.57	-79.0	-122.4	392.3	386.4	5.99	65.503	
1,700.0	1,662.9	1,637.9	1,633.0	6.3	3.5	153.45	-85.4	-128.7	423.9	417.5	6.41	66.149	
1,800.0	1,759.0	1,732.6	1,727.3	6.9	3.7	154.20	-91.7	-135.1	455.5	448.7	6.83	66.725	
1,900.0	1,855.2	1,827.3	1,821.6	7.4	3.9	154.86	-98.0	-141.4	487.2	480.0	7.25	67.240	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4J-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-91.82	-1.5	-45.7	45.7				
100.0	100.0	100.0	100.0	0.1	0.1	-91.82	-1.5	-45.7	45.7	45.4	0.30	154.039	
200.0	200.0	200.0	200.0	0.3	0.3	-91.82	-1.5	-45.7	45.7	45.1	0.65	70.775	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	173.43	-1.5	-45.7	47.4	46.4	0.99	47.700	
400.0	399.8	399.7	399.7	0.7	0.7	173.14	-2.3	-45.8	52.8	51.5	1.34	39.332	
500.0	499.5	499.0	499.0	0.9	0.8	171.72	-4.9	-46.3	62.0	60.3	1.69	36.622	SF
600.0	598.7	597.8	597.7	1.2	1.0	169.80	-9.1	-47.0	75.1	73.0	2.05	36.627	
700.0	697.5	696.0	695.6	1.5	1.2	167.83	-14.9	-48.0	92.0	89.6	2.42	38.086	
800.0	795.6	793.2	792.6	1.9	1.4	166.02	-22.4	-49.3	112.9	110.1	2.80	40.344	
900.0	893.1	889.8	888.8	2.3	1.6	164.57	-31.0	-50.7	137.6	134.4	3.20	43.067	
1,000.0	989.6	985.8	984.4	2.8	1.9	163.81	-39.7	-52.2	165.6	162.0	3.60	46.015	
1,100.0	1,085.8	1,081.4	1,079.6	3.3	2.1	160.02	-48.4	-53.7	194.9	190.8	4.04	48.275	
1,200.0	1,182.0	1,177.2	1,175.0	3.8	2.3	156.64	-57.0	-55.2	223.4	218.9	4.49	49.807	
1,300.0	1,278.2	1,273.2	1,270.6	4.3	2.5	153.53	-65.7	-56.7	251.3	246.3	4.94	50.815	
1,400.0	1,374.4	1,369.4	1,366.4	4.8	2.7	150.64	-74.4	-58.2	278.5	273.0	5.41	51.445	
1,500.0	1,470.6	1,465.7	1,462.2	5.3	3.0	148.98	-83.2	-59.6	305.1	299.2	5.88	51.869	
1,600.0	1,566.7	1,561.9	1,558.1	5.8	3.2	149.91	-91.9	-61.1	331.6	325.3	6.34	52.300	
1,700.0	1,662.9	1,658.2	1,654.0	6.3	3.4	150.71	-100.6	-62.6	358.2	351.4	6.80	52.678	
1,800.0	1,759.0	1,754.5	1,749.9	6.9	3.6	151.40	-109.3	-64.1	384.8	377.6	7.26	53.012	
1,900.0	1,855.2	1,850.8	1,845.7	7.4	3.9	152.00	-118.0	-65.6	411.5	403.8	7.72	53.309	
2,000.0	1,951.3	1,947.1	1,941.6	7.9	4.1	152.53	-126.8	-67.1	438.3	430.1	8.18	53.576	
2,100.0	2,047.5	2,043.4	2,037.5	8.4	4.3	153.00	-135.5	-68.6	465.0	456.4	8.64	53.817	
2,200.0	2,143.6	2,139.7	2,133.4	8.9	4.5	153.41	-144.2	-70.1	491.8	482.7	9.10	54.035	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4K-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-100.41	-7.5	-40.7	41.4				
100.0	100.0	100.0	100.0	0.1	0.1	-100.41	-7.5	-40.7	41.4	41.1	0.30	139.514	
200.0	200.0	200.0	200.0	0.3	0.3	-100.41	-7.5	-40.7	41.4	40.7	0.65	64.101	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	165.20	-7.5	-40.7	43.1	42.1	0.99	43.309	
400.0	399.8	399.8	399.8	0.7	0.7	166.77	-7.5	-40.7	48.2	46.8	1.34	35.851	
500.0	499.5	499.8	499.8	0.9	0.8	167.93	-8.2	-40.3	56.4	54.7	1.69	33.312	
600.0	598.7	599.6	599.5	1.2	1.0	167.97	-10.6	-39.1	67.4	65.3	2.04	32.968	SF
700.0	697.5	699.0	698.9	1.5	1.2	167.34	-14.4	-37.1	81.2	78.8	2.40	33.786	
800.0	795.6	798.2	797.8	1.9	1.4	166.37	-19.7	-34.3	97.8	95.0	2.77	35.237	
900.0	893.1	896.8	896.2	2.3	1.6	165.26	-26.6	-30.8	117.2	114.0	3.17	37.012	
1,000.0	989.6	994.8	993.7	2.8	1.8	164.15	-34.8	-26.5	139.4	135.8	3.58	38.953	
1,100.0	1,085.8	1,092.0	1,090.5	3.3	2.0	160.05	-43.4	-22.1	162.8	158.8	4.03	40.408	
1,200.0	1,182.0	1,189.4	1,187.4	3.8	2.3	156.52	-52.0	-17.6	185.5	181.0	4.49	41.310	
1,300.0	1,278.2	1,286.9	1,284.4	4.3	2.5	153.39	-60.5	-13.1	207.5	202.5	4.96	41.838	
1,400.0	1,374.4	1,384.6	1,381.6	4.8	2.7	150.56	-69.2	-8.7	228.7	223.3	5.43	42.116	
1,500.0	1,470.6	1,482.3	1,478.8	5.3	3.0	149.01	-77.8	-4.2	249.4	243.5	5.90	42.281	
1,600.0	1,566.7	1,580.1	1,576.1	5.8	3.2	150.04	-86.4	0.3	270.0	263.6	6.36	42.484	
1,700.0	1,662.9	1,677.8	1,673.4	6.3	3.4	150.91	-95.0	4.8	290.7	283.8	6.81	42.673	
1,800.0	1,759.0	1,775.6	1,770.7	6.9	3.7	151.68	-103.6	9.2	311.4	304.1	7.27	42.848	
1,900.0	1,855.2	1,873.3	1,867.9	7.4	3.9	152.34	-112.2	13.7	332.1	324.4	7.72	43.010	
2,000.0	1,951.3	1,971.1	1,965.2	7.9	4.1	152.93	-120.8	18.2	352.9	344.8	8.18	43.160	
2,100.0	2,047.5	2,068.8	2,062.5	8.4	4.4	153.45	-129.5	22.7	373.8	365.1	8.63	43.300	
2,200.0	2,143.6	2,166.6	2,159.7	8.9	4.6	153.92	-138.1	27.2	394.6	385.5	9.09	43.430	
2,300.0	2,239.8	2,264.3	2,257.0	9.5	4.8	154.34	-146.7	31.6	415.5	406.0	9.54	43.552	
2,400.0	2,335.9	2,362.1	2,354.3	10.0	5.1	154.72	-155.3	36.1	436.4	426.4	9.99	43.665	
2,500.0	2,432.1	2,459.8	2,451.5	10.5	5.3	155.07	-163.9	40.6	457.3	446.9	10.45	43.771	
2,600.0	2,528.2	2,557.6	2,548.8	11.0	5.6	155.38	-172.5	45.1	478.2	467.3	10.90	43.871	
2,700.0	2,624.3	2,655.4	2,646.1	11.5	5.8	155.67	-181.1	49.5	499.2	487.8	11.35	43.964	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4L-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-92.41	-1.5	-35.7	35.7				
100.0	100.0	100.0	100.0	0.1	0.1	-92.41	-1.5	-35.7	35.7	35.4	0.30	120.366	
200.0	200.0	200.0	200.0	0.3	0.3	-92.41	-1.5	-35.7	35.7	35.1	0.65	55.303	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	172.93	-1.5	-35.7	37.4	36.5	0.99	37.651	
400.0	399.8	399.8	399.8	0.7	0.7	173.78	-1.5	-35.7	42.6	41.3	1.34	31.771	
500.0	499.5	499.5	499.5	0.9	0.8	174.82	-1.5	-35.7	51.3	49.6	1.69	30.398	SF
600.0	598.7	600.0	599.9	1.2	1.0	174.50	-2.9	-34.7	62.5	60.4	2.04	30.689	
700.0	697.5	700.4	700.3	1.5	1.2	172.30	-7.2	-31.7	75.2	72.8	2.39	31.414	
800.0	795.6	800.8	800.2	1.9	1.4	169.13	-14.4	-26.6	89.6	86.8	2.77	32.280	
900.0	893.1	900.9	899.6	2.3	1.7	165.81	-24.0	-19.7	106.0	102.8	3.19	33.166	
1,000.0	989.6	999.2	997.2	2.8	1.9	163.80	-33.2	-11.9	124.9	121.3	3.63	34.368	
1,100.0	1,085.8	1,097.1	1,094.4	3.3	2.1	159.26	-42.4	-4.1	145.2	141.0	4.11	35.297	
1,200.0	1,182.0	1,195.2	1,191.7	3.8	2.4	155.46	-51.6	3.7	164.7	160.1	4.60	35.780	
1,300.0	1,278.2	1,293.4	1,289.2	4.3	2.6	152.17	-60.8	11.6	183.5	178.4	5.10	35.978	
1,400.0	1,374.4	1,391.8	1,386.8	4.8	2.9	149.27	-70.0	19.4	201.5	195.9	5.60	36.002	
1,500.0	1,470.6	1,490.2	1,484.4	5.3	3.2	147.71	-79.3	27.2	218.9	212.8	6.09	35.964	
1,600.0	1,566.7	1,588.6	1,582.1	5.8	3.4	148.72	-88.5	35.1	236.2	229.6	6.56	35.987	
1,700.0	1,662.9	1,687.0	1,679.8	6.3	3.7	149.60	-97.7	42.9	253.5	246.5	7.04	36.021	
1,800.0	1,759.0	1,785.4	1,777.4	6.9	4.0	150.36	-107.0	50.7	270.9	263.4	7.51	36.062	
1,900.0	1,855.2	1,883.8	1,875.1	7.4	4.2	151.02	-116.2	58.6	288.3	280.3	7.98	36.107	
2,000.0	1,951.3	1,982.2	1,972.8	7.9	4.5	151.62	-125.4	66.4	305.8	297.3	8.46	36.155	
2,100.0	2,047.5	2,080.7	2,070.4	8.4	4.8	152.15	-134.7	74.3	323.3	314.3	8.93	36.204	
2,200.0	2,143.6	2,179.1	2,168.1	8.9	5.0	152.62	-143.9	82.1	340.8	331.4	9.40	36.253	
2,300.0	2,239.8	2,277.5	2,265.8	9.5	5.3	153.05	-153.1	89.9	358.3	348.4	9.87	36.302	
2,400.0	2,335.9	2,375.9	2,363.4	10.0	5.6	153.44	-162.4	97.8	375.8	365.5	10.34	36.350	
2,500.0	2,432.1	2,474.3	2,461.1	10.5	5.8	153.79	-171.6	105.6	393.4	382.6	10.81	36.396	
2,600.0	2,528.2	2,572.8	2,558.8	11.0	6.1	154.11	-180.8	113.5	411.0	399.7	11.28	36.442	
2,700.0	2,624.3	2,671.2	2,656.5	11.5	6.4	154.41	-190.1	121.3	428.6	416.8	11.75	36.486	
2,800.0	2,720.5	2,769.6	2,754.1	12.1	6.7	154.68	-199.3	129.1	446.2	434.0	12.21	36.528	
2,900.0	2,816.6	2,868.0	2,851.8	12.6	6.9	154.94	-208.5	137.0	463.8	451.1	12.68	36.570	
3,000.0	2,912.8	2,966.4	2,949.5	13.1	7.2	155.17	-217.8	144.8	481.4	468.2	13.15	36.609	
3,100.0	3,008.9	3,064.8	3,047.1	13.6	7.5	155.39	-227.0	152.7	499.0	485.4	13.62	36.647	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4M-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-104.63	-3.7	-14.0	14.5				
100.0	100.0	100.0	100.0	0.1	0.1	-104.63	-3.7	-14.0	14.5	14.2	0.30	48.728	
200.0	200.0	200.0	200.0	0.3	0.3	-104.63	-3.7	-14.0	14.5	13.8	0.65	22.389	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	162.45	-3.7	-14.0	16.1	15.1	0.99	16.196	
400.0	399.8	399.8	399.8	0.7	0.7	166.70	-3.7	-14.0	21.2	19.8	1.34	15.753	SF
500.0	499.5	499.5	499.5	0.9	0.8	170.54	-3.7	-14.0	29.7	28.0	1.69	17.584	
600.0	598.7	598.7	598.7	1.2	1.0	173.26	-3.7	-14.0	41.8	39.7	2.03	20.551	
700.0	697.5	698.3	698.3	1.5	1.2	174.62	-4.1	-13.3	56.6	54.3	2.37	23.849	
800.0	795.6	797.8	797.8	1.9	1.4	174.91	-5.5	-11.1	73.5	70.8	2.72	27.061	
900.0	893.1	897.2	897.1	2.3	1.6	174.70	-7.7	-7.5	92.3	89.3	3.06	30.199	
1,000.0	989.6	996.5	996.2	2.8	1.7	174.23	-10.9	-2.4	113.1	109.7	3.40	33.268	
1,100.0	1,085.8	1,096.2	1,095.5	3.3	1.9	170.30	-15.0	4.2	134.0	130.2	3.77	35.514	
1,200.0	1,182.0	1,196.4	1,195.4	3.8	2.2	166.71	-20.1	12.3	153.0	148.8	4.16	36.802	
1,300.0	1,278.2	1,297.4	1,295.6	4.3	2.4	163.37	-26.1	21.9	170.0	165.5	4.55	37.351	
1,400.0	1,374.4	1,398.9	1,396.3	4.8	2.7	160.24	-33.2	33.1	185.2	180.3	4.96	37.331	
1,500.0	1,470.6	1,498.8	1,495.1	5.3	2.9	158.34	-40.8	45.3	198.9	193.5	5.37	37.029	
1,600.0	1,566.7	1,597.8	1,593.2	5.8	3.2	159.07	-48.4	57.4	212.4	206.6	5.77	36.795	
1,700.0	1,662.9	1,696.9	1,691.2	6.3	3.5	159.71	-56.0	69.5	225.9	219.7	6.17	36.595	
1,800.0	1,759.0	1,795.9	1,789.2	6.9	3.8	160.28	-63.5	81.6	239.5	232.9	6.57	36.425	
1,900.0	1,855.2	1,895.0	1,887.2	7.4	4.0	160.79	-71.1	93.8	253.1	246.1	6.98	36.279	
2,000.0	1,951.3	1,994.0	1,985.2	7.9	4.3	161.24	-78.7	105.9	266.7	259.3	7.38	36.155	
2,100.0	2,047.5	2,093.1	2,083.2	8.4	4.6	161.65	-86.3	118.0	280.3	272.5	7.77	36.047	
2,200.0	2,143.6	2,192.1	2,181.2	8.9	4.9	162.02	-93.9	130.1	293.9	285.7	8.17	35.955	
2,300.0	2,239.8	2,291.2	2,279.2	9.5	5.2	162.36	-101.5	142.2	307.5	299.0	8.57	35.874	
2,400.0	2,335.9	2,390.2	2,377.3	10.0	5.5	162.68	-109.1	154.4	321.2	312.2	8.97	35.804	
2,500.0	2,432.1	2,489.3	2,475.3	10.5	5.8	162.96	-116.7	166.5	334.8	325.5	9.37	35.743	
2,600.0	2,528.2	2,588.3	2,573.3	11.0	6.1	163.23	-124.3	178.6	348.5	338.7	9.76	35.689	
2,700.0	2,624.3	2,687.4	2,671.3	11.5	6.4	163.47	-131.9	190.7	362.2	352.0	10.16	35.642	
2,800.0	2,720.5	2,786.4	2,769.3	12.1	6.7	163.69	-139.5	202.8	375.8	365.3	10.56	35.600	
2,900.0	2,816.6	2,885.5	2,867.3	12.6	7.0	163.90	-147.0	215.0	389.5	378.6	10.95	35.563	
3,000.0	2,912.8	2,984.5	2,965.3	13.1	7.3	164.10	-154.6	227.1	403.2	391.9	11.35	35.530	
3,100.0	3,008.9	3,083.6	3,063.3	13.6	7.6	164.28	-162.2	239.2	416.9	405.2	11.74	35.501	
3,200.0	3,105.1	3,182.6	3,161.4	14.1	7.9	164.45	-169.8	251.3	430.6	418.5	12.14	35.475	
3,300.0	3,201.2	3,281.7	3,259.4	14.7	8.2	164.61	-177.4	263.4	444.3	431.8	12.53	35.451	
3,400.0	3,297.4	3,380.7	3,357.4	15.2	8.5	164.77	-185.0	275.6	458.0	445.1	12.93	35.430	
3,500.0	3,393.5	3,479.8	3,455.4	15.7	8.8	164.91	-192.6	287.7	471.7	458.4	13.32	35.411	
3,600.0	3,489.7	3,578.8	3,553.4	16.2	9.1	165.04	-200.2	299.8	485.4	471.7	13.71	35.394	
3,700.0	3,585.8	3,677.9	3,651.4	16.8	9.4	165.17	-207.8	311.9	499.1	485.0	14.11	35.378	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4N-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-8.4	8.4				
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-8.4	8.4	8.1	0.30	28.289	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-8.4	8.4	7.7	0.65	12.998	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	175.86	0.0	-8.4	10.1	9.1	0.99	10.190	SF
400.0	399.8	399.8	399.8	0.7	0.7	177.26	0.0	-8.4	15.4	14.0	1.34	11.444	
500.0	499.5	499.5	499.5	0.9	0.8	178.25	0.0	-8.4	24.1	22.4	1.69	14.262	
600.0	598.7	599.0	599.0	1.2	1.0	178.69	-0.1	-8.2	36.1	34.0	2.03	17.755	
700.0	697.5	698.7	698.6	1.5	1.2	178.27	-0.9	-6.7	50.2	47.8	2.37	21.135	
800.0	795.6	798.3	798.2	1.9	1.4	177.48	-2.6	-3.7	66.1	63.4	2.71	24.373	
900.0	893.1	897.8	897.6	2.3	1.6	176.58	-5.0	0.9	84.0	81.0	3.05	27.514	
1,000.0	989.6	997.3	996.8	2.8	1.8	175.68	-8.3	7.0	103.9	100.5	3.40	30.573	
1,100.0	1,085.8	1,097.0	1,096.2	3.3	2.0	171.51	-12.4	14.6	123.7	119.9	3.77	32.832	
1,200.0	1,182.0	1,197.5	1,196.1	3.8	2.2	167.82	-17.4	23.8	141.6	137.4	4.15	34.138	
1,300.0	1,278.2	1,298.5	1,296.4	4.3	2.4	164.47	-23.2	34.6	157.6	153.0	4.54	34.716	
1,400.0	1,374.4	1,400.1	1,397.0	4.8	2.7	161.39	-29.9	47.0	171.6	166.6	4.94	34.739	
1,500.0	1,470.6	1,502.2	1,497.8	5.3	3.0	159.56	-37.5	61.1	183.7	178.3	5.34	34.365	
1,600.0	1,566.7	1,604.7	1,598.7	5.8	3.3	160.14	-46.0	76.8	194.1	188.3	5.76	33.719	
1,700.0	1,662.9	1,707.5	1,699.6	6.3	3.7	160.43	-55.3	94.1	202.9	196.7	6.18	32.818	
1,800.0	1,759.0	1,808.5	1,798.5	6.9	4.1	160.52	-65.2	112.5	210.4	203.8	6.62	31.785	
1,900.0	1,855.2	1,908.2	1,896.0	7.4	4.4	160.59	-75.1	130.7	217.8	210.8	7.06	30.855	
2,000.0	1,951.3	2,007.9	1,993.6	7.9	4.8	160.65	-84.9	148.9	225.2	217.7	7.50	30.020	
2,100.0	2,047.5	2,107.7	2,091.1	8.4	5.2	160.71	-94.7	167.1	232.6	224.7	7.95	29.269	
2,200.0	2,143.6	2,207.4	2,188.7	8.9	5.6	160.76	-104.6	185.3	240.0	231.6	8.39	28.591	
2,300.0	2,239.8	2,307.1	2,286.2	9.5	6.0	160.82	-114.4	203.5	247.4	238.5	8.84	27.976	
2,400.0	2,335.9	2,406.8	2,383.8	10.0	6.4	160.86	-124.2	221.7	254.8	245.5	9.29	27.416	
2,500.0	2,432.1	2,506.6	2,481.3	10.5	6.7	160.91	-134.1	240.0	262.2	252.4	9.74	26.905	
2,600.0	2,528.2	2,606.3	2,578.9	11.0	7.1	160.95	-143.9	258.2	269.6	259.4	10.20	26.436	
2,700.0	2,624.3	2,706.0	2,676.5	11.5	7.5	160.99	-153.7	276.4	277.0	266.3	10.65	26.005	
2,800.0	2,720.5	2,805.7	2,774.0	12.1	7.9	161.03	-163.6	294.6	284.4	273.3	11.10	25.608	
2,900.0	2,816.6	2,905.5	2,871.6	12.6	8.3	161.07	-173.4	312.8	291.8	280.2	11.56	25.241	
3,000.0	2,912.8	3,005.2	2,969.1	13.1	8.7	161.11	-183.2	331.0	299.1	287.1	12.01	24.900	
3,100.0	3,008.9	3,104.9	3,066.7	13.6	9.1	161.14	-193.1	349.2	306.5	294.1	12.47	24.583	
3,200.0	3,105.1	3,204.7	3,164.2	14.1	9.5	161.17	-202.9	367.5	313.9	301.0	12.93	24.288	
3,300.0	3,201.2	3,304.4	3,261.8	14.7	9.9	161.20	-212.7	385.7	321.3	307.9	13.38	24.013	
3,400.0	3,297.4	3,404.1	3,359.3	15.2	10.3	161.23	-222.6	403.9	328.7	314.9	13.84	23.755	
3,500.0	3,393.5	3,503.8	3,456.9	15.7	10.7	161.26	-232.4	422.1	336.1	321.8	14.29	23.514	
3,600.0	3,489.7	3,603.6	3,554.4	16.2	11.1	161.29	-242.2	440.3	343.5	328.8	14.75	23.287	
3,700.0	3,585.8	3,703.3	3,652.0	16.8	11.5	161.31	-252.0	458.5	350.9	335.7	15.21	23.073	
3,800.0	3,682.0	3,803.0	3,749.6	17.3	11.9	161.34	-261.9	476.7	358.3	342.6	15.67	22.871	
3,900.0	3,778.1	3,902.7	3,847.1	17.8	12.3	161.36	-271.7	495.0	365.7	349.6	16.12	22.681	
4,000.0	3,874.2	4,002.5	3,944.7	18.3	12.7	161.38	-281.5	513.2	373.1	356.5	16.58	22.501	
4,100.0	3,970.4	4,102.2	4,042.2	18.9	13.1	161.40	-291.4	531.4	380.5	363.4	17.04	22.331	
4,200.0	4,066.5	4,201.9	4,139.8	19.4	13.5	161.42	-301.2	549.6	387.9	370.4	17.50	22.169	
4,300.0	4,162.7	4,301.6	4,237.3	19.9	13.9	161.44	-311.0	567.8	395.3	377.3	17.95	22.016	
4,400.0	4,258.8	4,401.4	4,334.9	20.4	14.4	161.46	-320.9	586.0	402.7	384.3	18.41	21.870	
4,500.0	4,355.0	4,501.1	4,432.4	21.0	14.8	161.48	-330.7	604.2	410.1	391.2	18.87	21.731	
4,600.0	4,451.1	4,600.8	4,530.0	21.5	15.2	161.50	-340.5	622.5	417.5	398.1	19.33	21.599	
4,700.0	4,547.3	4,700.5	4,627.5	22.0	15.6	161.52	-350.4	640.7	424.8	405.1	19.79	21.473	
4,800.0	4,643.4	4,800.3	4,725.1	22.5	16.0	161.53	-360.2	658.9	432.2	412.0	20.24	21.352	
4,900.0	4,739.6	4,900.0	4,822.7	23.0	16.4	161.55	-370.0	677.1	439.6	418.9	20.70	21.237	
5,000.0	4,835.7	4,999.7	4,920.2	23.6	16.8	161.57	-379.9	695.3	447.0	425.9	21.16	21.126	
5,100.0	4,931.9	5,099.5	5,017.8	24.1	17.2	161.58	-389.7	713.5	454.4	432.8	21.62	21.021	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4N-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,028.0	5,199.2	5,115.3	24.6	17.6	161.60	-399.5	731.7	461.8	439.7	22.08	20.919	
5,300.0	5,124.2	5,298.9	5,212.9	25.1	18.0	161.61	-409.4	750.0	469.2	446.7	22.53	20.822	
5,400.0	5,220.3	5,398.6	5,310.4	25.7	18.4	161.62	-419.2	768.2	476.6	453.6	22.99	20.729	
5,500.0	5,316.4	5,498.4	5,408.0	26.2	18.8	161.64	-429.0	786.4	484.0	460.6	23.45	20.639	
5,600.0	5,412.6	5,598.1	5,505.5	26.7	19.2	161.65	-438.9	804.6	491.4	467.5	23.91	20.553	
5,700.0	5,508.7	5,697.8	5,603.1	27.2	19.6	161.66	-448.7	822.8	498.8	474.4	24.37	20.469	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4O-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-123.06	-3.6	-5.6	6.7				
100.0	100.0	100.0	100.0	0.1	0.1	-123.06	-3.6	-5.6	6.7	6.4	0.30	22.504	
200.0	200.0	200.0	200.0	0.3	0.3	-123.06	-3.6	-5.6	6.7	6.0	0.65	10.340	CC, ES
300.0	300.0	300.0	300.0	0.5	0.5	149.53	-3.6	-5.6	8.1	7.1	1.00	8.159	
400.0	399.8	399.8	399.8	0.7	0.7	161.36	-3.6	-5.6	12.9	11.6	1.34	9.601	
500.0	499.5	499.8	499.8	0.9	0.8	167.80	-3.9	-4.8	20.6	18.9	1.69	12.160	
600.0	598.7	599.7	599.7	1.2	1.0	170.45	-4.8	-2.3	30.2	28.2	2.04	14.813	
700.0	697.5	699.6	699.5	1.5	1.2	171.58	-6.2	1.8	41.7	39.3	2.38	17.478	
800.0	795.6	799.5	799.2	1.9	1.4	172.01	-8.3	7.5	55.0	52.3	2.73	20.135	
900.0	893.1	899.3	898.7	2.3	1.6	172.11	-10.8	14.9	70.2	67.1	3.08	22.774	
1,000.0	989.6	999.2	998.1	2.8	1.8	172.04	-14.0	23.9	87.1	83.7	3.43	25.387	
1,100.0	1,085.8	1,099.3	1,097.5	3.3	2.1	168.63	-17.8	34.6	104.0	100.2	3.81	27.287	
1,200.0	1,182.0	1,200.0	1,197.4	3.8	2.3	165.64	-22.1	47.0	118.7	114.5	4.19	28.311	
1,300.0	1,278.2	1,301.2	1,297.5	4.3	2.6	163.00	-27.1	61.1	131.4	126.8	4.58	28.692	
1,400.0	1,374.4	1,402.9	1,397.8	4.8	3.0	160.66	-32.7	77.0	142.0	137.0	4.96	28.605	
1,500.0	1,470.6	1,504.9	1,498.1	5.3	3.3	159.62	-38.8	94.6	150.6	145.3	5.34	28.198	
1,600.0	1,566.7	1,607.3	1,598.4	5.8	3.7	160.97	-45.6	114.0	157.5	151.8	5.71	27.569	
1,700.0	1,662.9	1,709.9	1,698.5	6.3	4.1	162.04	-53.0	135.1	162.8	156.7	6.09	26.730	
1,800.0	1,759.0	1,812.6	1,798.4	6.9	4.5	162.88	-61.1	157.9	166.3	159.9	6.47	25.713	
1,900.0	1,855.2	1,915.5	1,897.9	7.4	5.0	163.54	-69.7	182.4	168.2	161.4	6.85	24.544	
2,000.0	1,951.3	2,015.9	1,994.7	7.9	5.5	164.09	-78.4	207.4	169.0	161.8	7.23	23.361	
2,100.0	2,047.5	2,115.9	2,091.2	8.4	6.0	164.62	-87.2	232.3	169.8	162.2	7.61	22.312	
2,200.0	2,143.6	2,215.9	2,187.6	8.9	6.4	165.15	-95.9	257.2	170.6	162.6	7.98	21.376	
2,300.0	2,239.8	2,315.8	2,284.1	9.5	6.9	165.68	-104.7	282.0	171.4	163.1	8.35	20.537	
2,400.0	2,335.9	2,415.8	2,380.5	10.0	7.4	166.20	-113.4	306.9	172.2	163.5	8.71	19.780	
2,500.0	2,432.1	2,515.8	2,476.9	10.5	7.9	166.72	-122.1	331.8	173.1	164.0	9.06	19.094	
2,600.0	2,528.2	2,615.8	2,573.4	11.0	8.4	167.23	-130.9	356.7	173.9	164.5	9.42	18.470	
2,700.0	2,624.3	2,715.8	2,669.8	11.5	8.9	167.73	-139.6	381.6	174.8	165.0	9.77	17.900	
2,800.0	2,720.5	2,815.8	2,766.3	12.1	9.4	168.24	-148.4	406.5	175.7	165.6	10.11	17.377	
2,900.0	2,816.6	2,915.7	2,862.7	12.6	9.9	168.73	-157.1	431.4	176.6	166.1	10.45	16.894	
3,000.0	2,912.8	3,015.7	2,959.2	13.1	10.4	169.22	-165.9	456.2	177.5	166.7	10.79	16.448	
3,100.0	3,008.9	3,115.7	3,055.6	13.6	10.9	169.71	-174.6	481.1	178.4	167.3	11.13	16.034	
3,200.0	3,105.1	3,215.7	3,152.0	14.1	11.4	170.19	-183.3	506.0	179.4	167.9	11.46	15.649	
3,300.0	3,201.2	3,315.7	3,248.5	14.7	11.9	170.66	-192.1	530.9	180.3	168.5	11.79	15.288	
3,400.0	3,297.4	3,415.7	3,344.9	15.2	12.4	171.13	-200.8	555.8	181.3	169.2	12.13	14.951	
3,500.0	3,393.5	3,515.7	3,441.4	15.7	12.9	171.60	-209.6	580.7	182.3	169.8	12.46	14.633	
3,600.0	3,489.7	3,615.6	3,537.8	16.2	13.4	172.06	-218.3	605.6	183.3	170.5	12.79	14.333	
3,700.0	3,585.8	3,715.6	3,634.3	16.8	13.9	172.52	-227.0	630.4	184.3	171.1	13.11	14.050	
3,800.0	3,682.0	3,815.6	3,730.7	17.3	14.4	172.97	-235.8	655.3	185.3	171.8	13.44	13.781	
3,900.0	3,778.1	3,915.6	3,827.1	17.8	14.9	173.41	-244.5	680.2	186.3	172.5	13.77	13.526	
4,000.0	3,874.2	4,015.6	3,923.6	18.3	15.4	173.85	-253.3	705.1	187.3	173.2	14.10	13.282	
4,100.0	3,970.4	4,115.6	4,020.0	18.9	15.9	174.29	-262.0	730.0	188.4	173.9	14.43	13.049	
4,200.0	4,066.5	4,215.5	4,116.5	19.4	16.4	174.72	-270.7	754.9	189.4	174.6	14.77	12.826	
4,300.0	4,162.7	4,315.5	4,212.9	19.9	16.9	175.15	-279.5	779.8	190.5	175.4	15.10	12.612	
4,400.0	4,258.8	4,415.5	4,309.3	20.4	17.4	175.57	-288.2	804.6	191.6	176.1	15.44	12.407	
4,500.0	4,355.0	4,515.5	4,405.8	21.0	17.9	175.99	-297.0	829.5	192.6	176.9	15.78	12.208	
4,600.0	4,451.1	4,615.5	4,502.2	21.5	18.4	176.40	-305.7	854.4	193.7	177.6	16.12	12.017	
4,700.0	4,547.3	4,715.5	4,598.7	22.0	18.9	176.80	-314.4	879.3	194.8	178.4	16.47	11.832	
4,800.0	4,643.4	4,815.5	4,695.1	22.5	19.4	177.21	-323.2	904.2	196.0	179.1	16.82	11.653	
4,900.0	4,739.6	4,915.4	4,791.6	23.0	19.9	177.61	-331.9	929.1	197.1	179.9	17.17	11.480	
5,000.0	4,835.7	5,015.4	4,888.0	23.6	20.4	178.00	-340.7	954.0	198.2	180.7	17.52	11.311	
5,100.0	4,931.9	5,115.4	4,984.4	24.1	20.9	178.39	-349.4	978.9	199.4	181.5	17.88	11.148	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4O-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,028.0	5,215.4	5,080.9	24.6	21.4	178.77	-358.1	1,003.7	200.5	182.3	18.25	10.989	
5,300.0	5,124.2	5,315.4	5,177.3	25.1	21.9	179.15	-366.9	1,028.6	201.7	183.1	18.62	10.834	
5,400.0	5,220.3	5,415.4	5,273.8	25.7	22.4	179.53	-375.6	1,053.5	202.8	183.9	18.99	10.682	
5,500.0	5,316.4	5,515.3	5,370.2	26.2	22.9	179.90	-384.4	1,078.4	204.0	184.7	19.37	10.535	
5,600.0	5,412.6	5,615.3	5,466.7	26.7	23.4	-179.73	-393.1	1,103.3	205.2	185.5	19.75	10.391	
5,700.0	5,508.7	5,715.3	5,563.1	27.2	23.9	-179.37	-401.8	1,128.2	206.4	186.3	20.14	10.251	
5,800.0	5,604.9	5,815.3	5,659.5	27.8	24.4	-179.01	-410.6	1,153.1	207.6	187.1	20.53	10.113	
5,900.0	5,701.0	5,915.3	5,756.0	28.3	25.0	-178.65	-419.3	1,177.9	208.8	187.9	20.93	9.979	
6,000.0	5,797.2	6,015.3	5,852.4	28.8	25.5	-178.30	-428.1	1,202.8	210.0	188.7	21.33	9.848	
6,100.0	5,893.3	6,115.2	5,948.9	29.3	26.0	-177.96	-436.8	1,227.7	211.3	189.5	21.74	9.720	
6,200.0	5,989.5	6,215.2	6,045.3	29.9	26.5	-177.61	-445.6	1,252.6	212.5	190.4	22.15	9.594	
6,300.0	6,085.6	6,315.2	6,141.8	30.4	27.0	-177.27	-454.3	1,277.5	213.8	191.2	22.57	9.471	
6,400.0	6,181.8	6,415.2	6,238.2	30.9	27.5	-176.94	-463.0	1,302.4	215.0	192.0	22.99	9.350	
6,500.0	6,277.9	6,515.2	6,334.6	31.4	28.0	-176.61	-471.8	1,327.3	216.3	192.8	23.42	9.232	
6,600.0	6,374.1	6,615.2	6,431.1	32.0	28.5	-176.28	-480.5	1,352.1	217.5	193.7	23.86	9.117	
6,700.0	6,470.2	6,715.2	6,527.5	32.5	29.0	-175.96	-489.3	1,377.0	218.8	194.5	24.30	9.004	
6,800.0	6,566.4	6,815.1	6,624.0	33.0	29.5	-175.64	-498.0	1,401.9	220.1	195.3	24.75	8.893	
6,900.0	6,662.5	6,915.1	6,720.4	33.5	30.0	-175.32	-506.7	1,426.8	221.4	196.2	25.20	8.784	
7,000.0	6,758.6	7,015.1	6,816.9	34.1	30.5	-175.01	-515.5	1,451.7	222.7	197.0	25.66	8.678	
7,100.0	6,854.9	7,115.1	6,913.3	34.6	31.0	-161.92	-524.2	1,476.6	223.4	197.4	26.05	8.578	
7,200.0	6,951.3	7,214.0	7,008.7	35.0	31.5	-130.40	-532.9	1,501.2	218.4	192.9	25.50	8.566	
7,300.0	7,045.4	7,309.1	7,100.5	35.3	32.0	-116.92	-541.2	1,524.9	209.1	183.0	26.18	7.990	
7,400.0	7,134.3	7,394.6	7,183.2	35.5	32.4	-115.79	-542.7	1,546.0	203.4	173.4	29.98	6.784	
7,418.5	7,150.0	7,410.9	7,199.0	35.5	32.4	-116.30	-541.6	1,550.0	203.2	172.4	30.83	6.590	
7,500.0	7,215.4	7,485.0	7,270.0	35.6	32.7	-120.04	-530.6	1,567.7	206.3	172.0	34.33	6.009	
7,600.0	7,286.1	7,582.2	7,360.2	35.7	32.9	-126.30	-502.0	1,589.7	218.3	181.8	36.49	5.983	
7,700.0	7,344.3	7,688.2	7,451.7	35.7	33.1	-132.80	-453.5	1,611.3	238.1	202.6	35.44	6.717	
7,800.0	7,388.3	7,805.3	7,541.0	35.8	33.2	-138.70	-380.9	1,631.6	262.7	230.9	31.72	8.281	
7,900.0	7,416.7	7,936.1	7,621.8	35.8	33.2	-143.65	-279.8	1,648.6	288.8	261.8	26.95	10.713	
8,000.0	7,428.6	8,082.6	7,683.4	35.8	33.2	-147.47	-147.8	1,659.7	312.8	289.1	23.74	13.178	
8,100.0	7,429.0	8,245.4	7,711.6	35.8	33.2	-149.75	11.9	1,661.3	327.5	303.9	23.66	13.840	
8,200.0	7,429.0	8,354.2	7,712.0	36.0	33.3	-149.09	120.7	1,657.6	329.9	305.5	24.40	13.523	
8,300.0	7,429.0	8,454.1	7,712.0	36.2	33.5	-148.45	220.6	1,654.1	332.2	307.0	25.23	13.167	
8,400.0	7,429.0	8,554.0	7,712.0	36.5	33.8	-147.81	320.4	1,650.7	334.5	308.3	26.19	12.773	
8,500.0	7,429.0	8,653.9	7,712.0	36.9	34.1	-147.18	420.3	1,647.2	336.8	309.6	27.28	12.349	
8,600.0	7,429.0	8,753.8	7,712.0	37.4	34.6	-146.57	520.1	1,643.7	339.2	310.7	28.49	11.906	
8,700.0	7,429.0	8,853.7	7,712.0	37.9	35.1	-145.96	620.0	1,640.2	341.6	311.8	29.83	11.454	
8,800.0	7,429.0	8,953.6	7,712.0	38.5	35.7	-145.35	719.8	1,636.7	344.1	312.8	31.28	11.000	
8,900.0	7,429.0	9,053.5	7,712.0	39.2	36.4	-144.76	819.6	1,633.2	346.6	313.8	32.85	10.551	
9,000.0	7,429.0	9,153.4	7,712.0	39.9	37.1	-144.18	919.5	1,629.7	349.1	314.6	34.53	10.112	
9,100.0	7,429.0	9,253.4	7,712.0	40.7	37.9	-143.60	1,019.3	1,626.2	351.7	315.4	36.30	9.689	
9,200.0	7,429.0	9,353.3	7,712.0	41.6	38.8	-143.03	1,119.2	1,622.8	354.3	316.1	38.17	9.282	
9,300.0	7,429.0	9,453.2	7,712.0	42.5	39.8	-142.47	1,219.0	1,619.3	357.0	316.8	40.13	8.895	
9,400.0	7,429.0	9,553.1	7,712.0	43.5	40.7	-141.92	1,318.9	1,615.8	359.6	317.5	42.18	8.527	
9,500.0	7,429.0	9,653.0	7,712.0	44.5	41.8	-141.38	1,418.7	1,612.3	362.3	318.0	44.30	8.179	
9,600.0	7,429.0	9,752.9	7,712.0	45.6	42.9	-140.85	1,518.6	1,608.8	365.1	318.6	46.50	7.852	
9,700.0	7,429.0	9,852.8	7,712.0	46.7	44.0	-140.32	1,618.4	1,605.3	367.9	319.1	48.76	7.543	
9,800.0	7,429.0	9,952.7	7,712.0	47.8	45.2	-139.80	1,718.2	1,601.8	370.7	319.6	51.10	7.254	
9,900.0	7,429.0	10,052.6	7,712.0	49.0	46.4	-139.29	1,818.1	1,598.4	373.5	320.0	53.49	6.982	
10,000.0	7,429.0	10,152.5	7,712.0	50.3	47.6	-138.79	1,917.9	1,594.9	376.3	320.4	55.94	6.727	
10,100.0	7,429.0	10,252.4	7,712.0	51.5	48.9	-138.29	2,017.8	1,591.4	379.2	320.8	58.45	6.488	
10,200.0	7,429.0	10,352.3	7,712.0	52.8	50.2	-137.80	2,117.6	1,587.9	382.2	321.1	61.01	6.264	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Hwy 52 4O-32H-O268 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,300.0	7,429.0	10,452.2	7,712.0	54.1	51.6	-137.32	2,217.5	1,584.4	385.1	321.5	63.62	6.053	
10,400.0	7,429.0	10,552.1	7,712.0	55.4	52.9	-136.85	2,317.3	1,580.9	388.1	321.8	66.28	5.855	
10,500.0	7,429.0	10,652.0	7,712.0	56.8	54.3	-136.38	2,417.1	1,577.4	391.1	322.1	68.97	5.670	
10,600.0	7,429.0	10,751.9	7,712.0	58.2	55.7	-135.93	2,517.0	1,573.9	394.1	322.4	71.71	5.495	
10,700.0	7,429.0	10,851.8	7,712.0	59.6	57.1	-135.47	2,616.8	1,570.5	397.1	322.6	74.49	5.331	
10,800.0	7,429.0	10,951.7	7,712.0	61.0	58.6	-135.03	2,716.7	1,567.0	400.2	322.9	77.31	5.177	
10,900.0	7,429.0	11,051.6	7,712.0	62.4	60.0	-134.59	2,816.5	1,563.5	403.3	323.1	80.16	5.031	
11,000.0	7,429.0	11,151.5	7,712.0	63.9	61.5	-134.16	2,916.4	1,560.0	406.4	323.4	83.05	4.894	
11,100.0	7,429.0	11,251.4	7,712.0	65.4	63.0	-133.73	3,016.2	1,556.5	409.6	323.6	85.97	4.764	
11,200.0	7,429.0	11,351.4	7,712.0	66.8	64.5	-133.32	3,116.1	1,553.0	412.7	323.8	88.92	4.642	
11,300.0	7,429.0	11,451.3	7,712.0	68.3	66.0	-132.90	3,215.9	1,549.5	415.9	324.0	91.90	4.526	
11,400.0	7,429.0	11,551.2	7,712.0	69.8	67.5	-132.50	3,315.7	1,546.1	419.1	324.2	94.90	4.416	
11,500.0	7,429.0	11,651.1	7,712.0	71.4	69.1	-132.10	3,415.6	1,542.6	422.4	324.4	97.94	4.312	
11,600.0	7,429.0	11,751.0	7,712.0	72.9	70.6	-131.70	3,515.4	1,539.1	425.6	324.6	101.00	4.214	
11,700.0	7,429.0	11,850.9	7,712.0	74.4	72.2	-131.32	3,615.3	1,535.6	428.9	324.8	104.08	4.121	
11,800.0	7,429.0	11,950.8	7,712.0	76.0	73.7	-130.94	3,715.1	1,532.1	432.2	325.0	107.18	4.032	
11,900.0	7,429.0	12,050.7	7,712.0	77.5	75.3	-130.56	3,815.0	1,528.6	435.5	325.2	110.31	3.948	
12,000.0	7,429.0	12,150.6	7,712.0	79.1	76.9	-130.19	3,914.8	1,525.1	438.8	325.3	113.46	3.867	
12,100.0	7,429.0	12,250.5	7,712.0	80.7	78.5	-129.82	4,014.7	1,521.6	442.1	325.5	116.62	3.791	
12,200.0	7,429.0	12,350.4	7,712.0	82.3	80.1	-129.47	4,114.5	1,518.2	445.5	325.7	119.81	3.718	
12,300.0	7,429.0	12,417.3	7,712.0	83.8	81.1	-129.23	4,181.4	1,515.8	450.1	327.7	122.40	3.677	SF
12,321.1	7,429.0	12,417.3	7,712.0	84.2	81.1	-129.23	4,181.4	1,515.8	452.8	330.1	122.68	3.691	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - RAY NELSON 33-32 (EXISTING) - ENCANA WELL - ENCANA WELL

Offset Site Error: 0.0 ft

Survey Program: 926-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	50.87	222.6	273.6	352.8				
100.0	100.0	92.8	92.8	0.1	0.2	50.88	222.5	273.6	352.6	352.3	0.31	1,131.126	
200.0	200.0	193.7	193.7	0.3	0.3	50.88	222.3	273.3	352.3	351.6	0.66	530.629	
300.0	300.0	294.5	294.5	0.5	0.5	-44.34	221.9	272.8	350.4	349.4	1.00	348.699	
400.0	399.8	395.2	395.2	0.7	0.7	-45.01	221.3	272.2	345.9	344.5	1.36	253.861	
500.0	499.5	495.6	495.6	0.9	0.9	-46.16	220.6	271.4	338.6	336.9	1.74	195.063	
600.0	598.7	595.5	595.5	1.2	1.0	-47.84	219.7	270.4	329.0	326.8	2.14	153.986	
700.0	697.5	694.9	694.9	1.5	1.2	-50.13	218.7	269.2	317.0	314.5	2.58	123.088	
800.0	795.6	793.5	793.5	1.9	1.4	-53.13	217.5	267.9	303.2	300.2	3.07	98.781	
900.0	893.1	891.3	891.3	2.3	1.6	-56.97	216.1	266.3	288.1	284.4	3.64	79.217	
1,000.0	989.6	984.5	984.4	2.8	1.7	-61.73	215.4	264.5	272.6	268.4	4.29	63.555	
1,100.0	1,085.8	1,070.8	1,070.7	3.3	1.9	-70.55	217.4	262.1	261.8	256.8	4.99	52.417	
1,174.3	1,157.3	1,134.0	1,133.8	3.7	2.0	-77.32	220.9	261.2	259.4	253.8	5.54	46.823	CC, ES
1,200.0	1,182.0	1,155.9	1,155.6	3.8	2.0	-79.70	222.6	261.0	259.7	253.9	5.73	45.346	
1,300.0	1,278.2	1,242.6	1,241.9	4.3	2.2	-89.04	231.0	260.5	266.3	259.8	6.45	41.291	
1,400.0	1,374.4	1,330.1	1,328.7	4.8	2.3	-98.02	241.7	260.9	280.5	273.4	7.14	39.292	
1,500.0	1,470.6	1,415.0	1,412.6	5.3	2.5	-105.48	254.4	260.8	301.9	294.2	7.78	38.828	SF
1,600.0	1,566.7	1,501.4	1,497.6	5.8	2.8	-109.88	269.8	260.7	328.8	320.5	8.37	39.277	
1,700.0	1,662.9	1,584.7	1,579.3	6.3	3.0	-113.62	286.1	260.1	359.3	350.4	8.93	40.254	
1,800.0	1,759.0	1,665.0	1,657.5	6.9	3.3	-116.82	304.1	258.6	394.1	384.7	9.45	41.724	
1,900.0	1,855.2	1,748.3	1,738.2	7.4	3.6	-119.69	324.6	256.5	432.3	422.3	9.95	43.464	
2,000.0	1,951.3	1,831.0	1,818.2	7.9	3.9	-122.15	345.8	254.0	472.4	462.0	10.43	45.299	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - RAY NELSON 34-32 (EXISTING) - ENCANA WELL - ENCANA WELL

Offset Site Error: 0.0 ft

Survey Program: 103-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	97.37	-15.7	121.1	122.4				
100.0	100.0	91.3	91.3	0.1	0.1	97.34	-15.6	121.4	122.4	122.1	0.28	429.945	
200.0	200.0	190.8	190.7	0.3	0.3	97.31	-15.7	122.2	123.3	122.6	0.63	195.407	
300.0	300.0	290.9	290.9	0.5	0.5	2.50	-16.1	123.2	122.5	121.5	0.98	125.126	
400.0	399.8	391.0	391.0	0.7	0.7	2.95	-16.9	123.9	118.0	116.7	1.33	88.944	
500.0	499.5	490.8	490.8	0.9	0.8	3.54	-17.7	124.4	110.0	108.3	1.67	65.722	
600.0	598.7	590.2	590.2	1.2	1.0	4.24	-18.2	124.9	98.4	96.4	2.02	48.779	
700.0	697.5	689.3	689.2	1.5	1.2	5.30	-18.6	125.3	83.2	80.9	2.36	35.267	
800.0	795.6	787.6	787.5	1.9	1.4	7.05	-18.7	125.4	64.4	61.7	2.70	23.840	
900.0	893.1	885.2	885.2	2.3	1.5	10.96	-18.8	125.4	42.2	39.1	3.06	13.775	
1,000.0	989.6	981.7	981.7	2.8	1.7	27.88	-18.7	125.0	17.0	13.3	3.65	4.647	
1,054.9	1,042.4	1,034.4	1,034.4	3.1	1.8	89.61	-18.7	124.7	7.5	2.6	4.86	1.545	CC, ES, SF
1,100.0	1,085.8	1,077.7	1,077.7	3.3	1.9	146.79	-18.7	124.4	14.6	10.4	4.16	3.507	
1,200.0	1,182.0	1,173.6	1,173.6	3.8	2.0	166.06	-18.7	123.6	41.0	36.9	4.09	10.025	
1,300.0	1,278.2	1,269.5	1,269.4	4.3	2.2	168.76	-18.3	122.6	68.8	64.4	4.39	15.683	
1,400.0	1,374.4	1,365.4	1,365.4	4.8	2.4	168.97	-17.7	121.6	96.7	92.0	4.72	20.502	
1,500.0	1,470.6	1,460.6	1,460.5	5.3	2.5	169.31	-16.9	120.4	125.0	119.9	5.05	24.735	
1,600.0	1,566.7	1,555.8	1,555.8	5.8	2.7	171.38	-16.1	118.8	153.8	148.4	5.39	28.529	
1,700.0	1,662.9	1,651.4	1,651.3	6.3	2.9	172.71	-15.5	117.0	183.0	177.3	5.73	31.925	
1,800.0	1,759.0	1,747.9	1,747.8	6.9	3.0	173.82	-14.5	115.6	212.0	205.9	6.08	34.887	
1,900.0	1,855.2	1,843.2	1,843.1	7.4	3.2	174.75	-13.2	114.4	240.8	234.4	6.42	37.521	
2,000.0	1,951.3	1,939.1	1,939.0	7.9	3.4	175.58	-11.5	113.2	269.9	263.2	6.76	39.924	
2,100.0	2,047.5	2,036.3	2,036.2	8.4	3.5	176.19	-10.1	112.3	298.6	291.5	7.11	42.025	
2,200.0	2,143.6	2,135.1	2,134.9	8.9	3.7	176.54	-9.8	111.6	326.7	319.3	7.45	43.858	
2,300.0	2,239.8	2,231.8	2,231.7	9.5	3.9	176.72	-10.3	111.4	354.2	346.4	7.79	45.477	
2,400.0	2,335.9	2,327.0	2,326.8	10.0	4.0	176.86	-10.8	111.1	381.9	373.7	8.13	46.993	
2,500.0	2,432.1	2,424.9	2,424.7	10.5	4.2	176.94	-11.7	110.8	409.3	400.8	8.47	48.344	
2,600.0	2,528.2	2,514.2	2,514.0	11.0	4.4	176.86	-13.3	109.7	437.2	428.5	8.79	49.736	
2,700.0	2,624.3	2,596.8	2,596.5	11.5	4.5	176.69	-14.9	106.6	467.5	458.4	9.10	51.355	
2,800.0	2,720.5	2,692.5	2,692.0	12.1	4.7	176.29	-18.2	101.2	499.0	489.5	9.44	52.861	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - RAY NELSON 44-32 (EXISTING) - ENCANA WELL - ENCANA WELL

Offset Site Error: 0.0 ft

Survey Program: 134-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	53.62	209.8	284.8	353.9				
100.0	100.0	91.6	91.6	0.1	0.1	53.68	209.5	285.0	353.7	353.4	0.29	1,217.761	
150.7	150.7	141.7	141.7	0.2	0.2	53.76	209.0	285.2	353.6	353.1	0.46	771.151	CC
200.0	200.0	185.9	185.9	0.3	0.3	53.82	208.9	285.7	353.9	353.3	0.62	568.572	
300.0	300.0	275.0	274.9	0.5	0.5	-41.30	210.3	287.9	355.6	354.6	0.95	372.827	
400.0	399.8	367.4	367.2	0.7	0.6	-41.74	213.2	292.2	357.3	356.0	1.30	275.081	
500.0	499.5	457.5	457.0	0.9	0.8	-42.42	216.8	298.5	358.7	357.1	1.66	216.622	
600.0	598.7	549.7	548.6	1.2	1.1	-43.32	221.2	307.2	360.3	358.2	2.04	176.445	
700.0	697.5	642.4	640.6	1.5	1.3	-44.45	226.2	317.9	361.3	358.9	2.46	146.618	
800.0	795.6	733.2	730.4	1.9	1.6	-45.73	231.5	330.5	362.2	359.3	2.93	123.482	
900.0	893.1	830.1	825.8	2.3	1.9	-47.17	236.7	346.7	362.7	359.3	3.48	104.111	
1,000.0	989.6	934.8	928.8	2.8	2.3	-48.86	240.4	365.0	360.5	356.4	4.14	87.122	
1,100.0	1,085.8	1,033.3	1,025.6	3.3	2.7	-53.87	241.8	383.3	357.5	352.6	4.86	73.618	
1,144.6	1,128.7	1,073.7	1,065.1	3.5	2.8	-55.94	242.0	391.8	357.1	351.9	5.19	68.803	ES
1,200.0	1,182.0	1,124.3	1,114.3	3.8	3.0	-58.39	241.9	403.5	357.7	352.1	5.61	63.753	
1,300.0	1,278.2	1,216.8	1,203.8	4.3	3.5	-62.71	242.0	426.9	361.8	355.4	6.41	56.397	
1,400.0	1,374.4	1,312.6	1,295.9	4.8	4.0	-66.91	242.2	453.2	369.1	361.8	7.27	50.741	
1,500.0	1,470.6	1,412.8	1,392.0	5.3	4.5	-70.09	242.1	481.5	378.3	370.1	8.19	46.178	
1,600.0	1,566.7	1,517.4	1,492.2	5.8	5.0	-70.66	240.8	511.5	387.2	378.1	9.15	42.321	
1,700.0	1,662.9	1,613.1	1,584.2	6.3	5.5	-71.28	239.7	537.9	395.6	385.5	10.07	39.267	
1,800.0	1,759.0	1,709.3	1,676.6	6.9	6.0	-71.96	239.9	564.7	405.3	394.2	11.02	36.764	
1,900.0	1,855.2	1,806.7	1,769.9	7.4	6.6	-72.54	240.2	592.6	415.6	403.6	11.99	34.667	
2,000.0	1,951.3	1,914.0	1,872.6	7.9	7.1	-73.00	239.1	623.8	425.2	412.2	13.01	32.669	
2,100.0	2,047.5	2,016.1	1,970.5	8.4	7.7	-73.40	237.0	652.7	433.5	419.5	14.01	30.941	
2,200.0	2,143.6	2,116.8	2,067.3	8.9	8.2	-73.89	235.3	680.4	441.6	426.6	15.01	29.427	
2,300.0	2,239.8	2,219.5	2,165.9	9.5	8.7	-74.32	232.9	708.7	449.2	433.2	16.03	28.022	
2,400.0	2,335.9	2,320.0	2,262.5	10.0	9.3	-74.68	229.9	736.4	456.4	439.4	17.03	26.809	
2,500.0	2,432.1	2,420.7	2,359.6	10.5	9.8	-75.20	227.6	763.1	463.5	445.4	18.04	25.691	
2,600.0	2,528.2	2,521.8	2,457.0	11.0	10.3	-75.65	224.7	789.9	470.2	451.2	19.06	24.675	
2,700.0	2,624.3	2,622.7	2,554.5	11.5	10.8	-76.23	222.6	815.8	477.0	456.9	20.08	23.759	
2,800.0	2,720.5	2,725.9	2,654.3	12.1	11.3	-76.80	219.6	841.8	483.0	461.9	21.11	22.879	
2,900.0	2,816.6	2,828.2	2,753.6	12.6	11.7	-77.50	217.1	866.4	488.6	466.5	22.13	22.076	
3,000.0	2,912.8	2,935.1	2,857.8	13.1	12.2	-78.41	214.4	890.1	493.3	470.1	23.20	21.266	
3,100.0	3,008.9	3,024.0	2,944.5	13.6	12.5	-79.19	212.3	909.5	498.0	473.8	24.17	20.607	
8,100.0	7,429.0	7,546.6	7,414.7	35.8	23.6	-89.32	224.7	1,380.2	488.1	461.0	27.11	18.003	
8,200.0	7,429.0	7,548.1	7,416.2	36.0	23.6	-89.52	224.7	1,380.2	457.6	430.0	27.54	16.613	
8,294.2	7,429.0	7,549.6	7,417.7	36.2	23.6	-89.70	224.7	1,380.2	447.8	419.6	28.13	15.918	
8,300.0	7,429.0	7,549.7	7,417.7	36.2	23.6	-89.71	224.7	1,380.2	447.8	419.6	28.17	15.898	
8,400.0	7,429.0	7,551.2	7,419.3	36.5	23.6	-89.91	224.8	1,380.2	460.1	431.1	28.96	15.886	SF
8,500.0	7,429.0	7,552.7	7,420.8	36.9	23.6	-90.10	224.8	1,380.2	492.8	462.9	29.91	16.479	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - RAY NELSON 6-8-32 (EXISTING) - ENCANA WELL - PLAN ONLY

Offset Site Error: 0.0 ft

Survey Program: 850-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
4,600.0	4,451.1	4,641.3	4,524.9	21.5	19.3	-144.78	50.2	777.4	499.7	472.9	26.82	18.634	
4,605.9	4,456.8	4,647.0	4,530.3	21.5	19.3	-144.97	48.7	777.3	499.7	472.9	26.85	18.614	CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Ray Nelson 7-8-32 - DD - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	57.18	193.1	299.4	356.3				
100.0	100.0	91.0	91.0	0.1	0.1	57.18	193.1	299.4	356.2	355.9	0.28	1,257.179	
200.0	200.0	191.0	191.0	0.3	0.3	57.18	193.1	299.4	356.2	355.6	0.63	565.383	
300.0	300.0	291.0	291.0	0.5	0.5	-38.01	193.1	299.4	354.9	353.9	0.98	361.985	
400.0	399.8	390.8	390.8	0.7	0.7	-38.59	193.1	299.4	350.7	349.4	1.34	262.433	
500.0	499.5	490.5	490.5	0.9	0.8	-39.58	193.1	299.4	344.0	342.3	1.71	201.713	
600.0	598.7	587.0	587.0	1.2	1.0	-40.76	192.2	300.4	335.0	332.9	2.09	160.222	
700.0	697.5	683.5	683.3	1.5	1.2	-41.88	189.4	303.9	324.4	321.9	2.51	129.112	
800.0	795.6	780.0	779.6	1.9	1.4	-42.93	184.4	310.0	312.1	309.1	2.99	104.483	
900.0	893.1	876.6	875.5	2.3	1.6	-43.92	177.4	318.5	298.1	294.6	3.53	84.428	
1,000.0	989.6	973.2	971.1	2.8	1.9	-44.86	168.4	329.6	282.5	278.3	4.16	67.917	
1,100.0	1,085.8	1,070.1	1,066.4	3.3	2.2	-48.91	157.3	343.2	267.0	262.1	4.87	54.845	
1,200.0	1,182.0	1,168.1	1,162.1	3.8	2.5	-52.57	144.2	359.3	253.5	247.9	5.63	45.052	
1,300.0	1,278.2	1,267.3	1,258.9	4.3	2.9	-56.30	130.4	376.3	241.7	235.2	6.44	37.553	
1,400.0	1,374.4	1,366.8	1,355.9	4.8	3.3	-60.28	116.5	393.3	231.2	223.9	7.28	31.741	
1,500.0	1,470.6	1,466.3	1,453.0	5.3	3.7	-63.51	102.7	410.2	222.1	213.9	8.17	27.189	
1,600.0	1,566.7	1,565.9	1,550.1	5.8	4.1	-64.32	88.8	427.2	213.4	204.4	9.07	23.527	
1,700.0	1,662.9	1,665.5	1,647.3	6.3	4.5	-65.20	75.0	444.2	204.8	194.8	9.99	20.500	
1,800.0	1,759.0	1,765.1	1,744.4	6.9	4.9	-66.15	61.1	461.2	196.3	185.3	10.93	17.962	
1,900.0	1,855.2	1,864.6	1,841.5	7.4	5.3	-67.19	47.3	478.2	187.7	175.9	11.87	15.810	
2,000.0	1,951.3	1,964.2	1,938.7	7.9	5.8	-68.33	33.4	495.2	179.3	166.5	12.84	13.967	
2,100.0	2,047.5	2,063.8	2,035.8	8.4	6.2	-69.58	19.6	512.2	170.9	157.1	13.81	12.374	
2,200.0	2,143.6	2,163.4	2,132.9	8.9	6.6	-70.95	5.7	529.2	162.7	147.8	14.80	10.988	
2,300.0	2,239.8	2,262.9	2,230.1	9.5	7.0	-72.48	-8.1	546.2	154.5	138.7	15.80	9.775	
2,400.0	2,335.9	2,362.5	2,327.2	10.0	7.4	-74.17	-22.0	563.2	146.4	129.6	16.81	8.709	
2,500.0	2,432.1	2,462.1	2,424.3	10.5	7.9	-76.06	-35.8	580.2	138.5	120.7	17.83	7.768	
2,600.0	2,528.2	2,561.7	2,521.5	11.0	8.3	-78.17	-49.7	597.2	130.8	111.9	18.85	6.938	
2,700.0	2,624.3	2,661.2	2,618.6	11.5	8.7	-80.55	-63.5	614.2	123.2	103.4	19.86	6.204	
2,800.0	2,720.5	2,760.8	2,715.7	12.1	9.1	-83.22	-77.4	631.2	115.9	95.1	20.86	5.558	
2,900.0	2,816.6	2,860.4	2,812.9	12.6	9.5	-86.25	-91.2	648.2	108.9	87.1	21.82	4.992	
3,000.0	2,912.8	2,960.0	2,910.0	13.1	10.0	-89.69	-105.1	665.2	102.2	79.5	22.72	4.500	
3,100.0	3,008.9	3,059.6	3,007.1	13.6	10.4	-93.58	-119.0	682.2	96.0	72.4	23.52	4.079	
3,200.0	3,105.1	3,159.1	3,104.3	14.1	10.8	-98.00	-132.8	699.1	90.2	66.0	24.19	3.729	
3,300.0	3,201.2	3,258.7	3,201.4	14.7	11.2	-102.97	-146.7	716.1	85.1	60.4	24.66	3.449	
3,400.0	3,297.4	3,358.3	3,298.5	15.2	11.7	-108.53	-160.5	733.1	80.6	55.8	24.87	3.243	
3,500.0	3,393.5	3,457.9	3,395.7	15.7	12.1	-114.67	-174.4	750.1	77.1	52.3	24.73	3.116	
3,600.0	3,489.7	3,557.4	3,492.8	16.2	12.5	-121.32	-188.2	767.1	74.5	50.2	24.21	3.075	SF
3,700.0	3,585.8	3,657.0	3,589.9	16.8	12.9	-128.34	-202.1	784.1	72.9	49.6	23.30	3.129	ES
3,783.7	3,666.3	3,740.4	3,671.3	17.2	13.3	-134.38	-213.7	798.3	72.5	50.2	22.28	3.255	CC
3,800.0	3,682.0	3,756.6	3,687.1	17.3	13.3	-135.55	-215.9	801.1	72.5	50.5	22.06	3.288	
3,900.0	3,778.1	3,856.2	3,784.2	17.8	13.8	-142.73	-229.8	818.1	73.3	52.7	20.62	3.555	
4,000.0	3,874.2	3,955.7	3,881.3	18.3	14.2	-149.65	-243.6	835.1	75.2	56.0	19.17	3.923	
4,100.0	3,970.4	4,055.3	3,978.5	18.9	14.6	-156.14	-257.5	852.1	78.1	60.2	17.90	4.364	
4,200.0	4,066.5	4,154.9	4,075.6	19.4	15.0	-162.10	-271.3	869.1	82.0	65.0	16.96	4.834	
4,300.0	4,162.7	4,254.5	4,172.7	19.9	15.5	-167.47	-285.2	886.1	86.7	70.2	16.43	5.276	
4,400.0	4,258.8	4,354.0	4,269.9	20.4	15.9	-172.26	-299.0	903.1	92.0	75.7	16.30	5.647	
4,500.0	4,355.0	4,453.6	4,367.0	21.0	16.3	-176.49	-312.9	920.1	98.0	81.4	16.53	5.926	
4,600.0	4,451.1	4,553.2	4,464.1	21.5	16.7	179.77	-326.8	937.1	104.4	87.3	17.06	6.116	
4,700.0	4,547.3	4,652.8	4,561.3	22.0	17.2	176.47	-340.6	954.1	111.1	93.3	17.82	6.236	
4,800.0	4,643.4	4,752.4	4,658.4	22.5	17.6	173.56	-354.5	971.1	118.3	99.5	18.74	6.309	
4,900.0	4,739.6	4,851.9	4,755.5	23.0	18.0	170.99	-368.3	988.0	125.7	105.9	19.77	6.357	
5,000.0	4,835.7	4,951.5	4,852.7	23.6	18.4	168.70	-382.2	1,005.0	133.3	112.4	20.85	6.393	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - Ray Nelson 7-8-32 - DD - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	4,931.9	5,051.1	4,949.8	24.1	18.9	166.67	-396.0	1,022.0	141.1	119.1	21.95	6.426	
5,200.0	5,028.0	5,150.7	5,046.9	24.6	19.3	164.84	-409.9	1,039.0	149.0	126.0	23.07	6.459	
5,300.0	5,124.2	5,250.2	5,144.1	25.1	19.7	163.21	-423.7	1,056.0	157.1	132.9	24.19	6.496	
5,400.0	5,220.3	5,349.8	5,241.2	25.7	20.1	161.74	-437.6	1,073.0	165.3	140.0	25.29	6.538	
5,500.0	5,316.4	5,449.4	5,338.3	26.2	20.6	160.40	-451.4	1,090.0	173.6	147.3	26.38	6.583	
5,600.0	5,412.6	5,549.0	5,435.5	26.7	21.0	159.19	-465.3	1,107.0	182.0	154.6	27.45	6.631	
5,700.0	5,508.7	5,648.5	5,532.6	27.2	21.4	158.08	-479.1	1,124.0	190.5	162.0	28.51	6.683	
5,800.0	5,604.9	5,748.1	5,629.7	27.8	21.8	157.07	-493.0	1,141.0	199.0	169.5	29.54	6.737	
5,900.0	5,701.0	5,847.7	5,726.9	28.3	22.3	156.15	-506.8	1,158.0	207.6	177.1	30.56	6.793	
6,000.0	5,797.2	5,944.2	5,821.1	28.8	22.6	155.40	-520.0	1,174.1	216.6	185.2	31.49	6.881	
6,100.0	5,893.3	6,038.1	5,913.4	29.3	23.0	155.21	-531.0	1,187.6	227.9	195.8	32.10	7.100	
6,200.0	5,989.5	6,131.4	6,005.6	29.9	23.2	155.52	-540.1	1,198.8	241.6	209.2	32.42	7.452	
6,300.0	6,085.6	6,224.0	6,097.4	30.4	23.5	156.24	-547.2	1,207.5	257.8	225.3	32.50	7.933	
6,400.0	6,181.8	6,315.5	6,188.6	30.9	23.6	157.27	-552.4	1,213.8	276.4	244.1	32.37	8.540	
6,500.0	6,277.9	6,405.9	6,278.8	31.4	23.8	158.51	-555.7	1,217.9	297.6	265.5	32.09	9.273	
6,600.0	6,374.1	6,495.1	6,368.0	32.0	23.9	159.90	-557.2	1,219.8	321.4	289.6	31.71	10.133	
6,700.0	6,470.2	6,588.3	6,461.2	32.5	23.9	161.39	-557.3	1,219.9	347.2	316.0	31.28	11.100	
6,800.0	6,566.4	6,684.5	6,557.4	33.0	24.0	162.73	-557.3	1,219.9	373.5	342.6	30.94	12.072	
6,900.0	6,662.5	6,780.6	6,653.5	33.5	24.1	163.89	-557.3	1,219.9	399.9	369.2	30.70	13.028	
7,000.0	6,758.6	6,876.8	6,749.6	34.1	24.2	164.92	-557.3	1,219.9	426.5	395.9	30.53	13.968	
7,100.0	6,854.9	6,973.0	6,845.9	34.6	24.3	179.74	-557.3	1,219.9	453.0	423.0	30.04	15.081	
7,200.0	6,951.3	7,069.4	6,942.3	35.0	24.3	-143.57	-557.3	1,219.9	477.7	448.0	29.71	16.081	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - RAY NELSON 8-4-32 (EXISTING) - ENCANA WELL - PLAN ONLY

Offset Site Error: 0.0 ft

Survey Program: 850-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,600.0	7,429.0	7,586.7	7,390.0	45.6	30.0	90.00	1,974.2	1,913.4	453.7	399.2	54.58	8.313	
9,700.0	7,429.0	7,586.7	7,390.0	46.7	30.0	90.00	1,974.2	1,913.4	355.3	299.1	56.17	6.325	
9,800.0	7,429.0	7,586.7	7,390.0	47.8	30.0	90.00	1,974.2	1,913.4	258.0	200.2	57.78	4.465	
9,900.0	7,429.0	7,586.7	7,390.0	49.0	30.0	90.00	1,974.2	1,913.4	164.1	104.7	59.40	2.762	
10,000.0	7,429.0	7,586.7	7,390.0	50.3	30.0	90.00	1,974.2	1,913.4	85.2	24.2	61.03	1.396	Level 3
10,048.2	7,429.0	7,586.7	7,390.0	50.9	30.0	90.00	1,974.2	1,913.4	70.2	8.4	61.82	1.136	Level 2, CC, ES, SF
10,100.0	7,429.0	7,586.7	7,390.0	51.5	30.0	90.00	1,974.2	1,913.4	87.2	24.5	62.67	1.391	Level 3
10,200.0	7,429.0	7,586.7	7,390.0	52.8	30.0	90.00	1,974.2	1,913.4	167.2	102.9	64.32	2.599	
10,300.0	7,429.0	7,586.7	7,390.0	54.1	30.0	90.00	1,974.2	1,913.4	261.3	195.3	65.98	3.961	
10,400.0	7,429.0	7,586.7	7,390.0	55.4	30.0	90.00	1,974.2	1,913.4	358.7	291.0	67.65	5.302	
10,500.0	7,429.0	7,586.7	7,390.0	56.8	30.0	90.00	1,974.2	1,913.4	457.1	387.8	69.32	6.595	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - RAY NELSON 8-6-32 (EXISTING) - ENCANA WELL - PLAN ONLY

Offset Site Error: 0.0 ft

Survey Program: 850-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,400.0	7,429.0	7,496.6	7,390.0	36.5	23.9	90.00	735.9	1,916.4	418.5	389.1	29.39	14.238	
8,500.0	7,429.0	7,496.6	7,390.0	36.9	23.9	90.00	735.9	1,916.4	321.2	290.8	30.32	10.592	
8,600.0	7,429.0	7,496.6	7,390.0	37.4	23.9	90.00	735.9	1,916.4	226.2	194.8	31.38	7.208	
8,700.0	7,429.0	7,496.6	7,390.0	37.9	23.9	90.00	735.9	1,916.4	138.4	105.9	32.53	4.254	
8,800.0	7,429.0	7,496.6	7,390.0	38.5	23.9	90.00	735.9	1,916.4	84.6	50.8	33.78	2.505	
8,809.9	7,429.0	7,496.6	7,390.0	38.6	23.9	90.00	735.9	1,916.4	84.0	50.1	33.91	2.478	CC, ES, SF
8,900.0	7,429.0	7,496.6	7,390.0	39.2	23.9	90.00	735.9	1,916.4	123.1	88.0	35.09	3.509	
9,000.0	7,429.0	7,496.6	7,390.0	39.9	23.9	90.00	735.9	1,916.4	207.8	171.3	36.46	5.698	
9,100.0	7,429.0	7,496.6	7,390.0	40.7	23.9	90.00	735.9	1,916.4	301.9	264.1	37.89	7.970	
9,200.0	7,429.0	7,496.6	7,390.0	41.6	23.9	90.00	735.9	1,916.4	399.0	359.6	39.35	10.139	
9,300.0	7,429.0	7,496.6	7,390.0	42.5	23.9	90.00	735.9	1,916.4	497.2	456.3	40.85	12.172	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - RAY NELSON 8-8-32 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 70-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	57.18	193.1	299.4	356.3				
100.0	100.0	87.8	87.8	0.1	0.1	57.20	193.2	299.8	356.7	356.4	0.28	1,292.679	
200.0	200.0	184.3	184.3	0.3	0.3	57.29	193.4	301.1	357.9	357.3	0.62	576.700	
300.0	300.0	281.8	281.7	0.5	0.5	-37.42	192.1	304.3	358.6	357.6	0.97	368.577	
400.0	399.8	374.5	374.2	0.7	0.7	-37.02	189.3	310.0	358.0	356.7	1.34	267.041	
500.0	499.5	470.6	469.8	0.9	0.9	-36.52	185.0	318.9	356.5	354.8	1.75	203.771	
600.0	598.7	565.5	563.9	1.2	1.2	-35.91	178.8	329.5	353.0	350.8	2.20	160.534	
700.0	697.5	658.3	655.5	1.5	1.5	-35.19	171.4	342.9	348.6	345.9	2.70	129.276	
800.0	795.6	750.9	746.1	1.9	1.9	-34.29	162.5	359.2	343.5	340.2	3.24	106.167	
900.0	893.1	842.4	835.4	2.3	2.2	-33.52	153.9	377.7	337.9	334.1	3.80	88.887	
1,000.0	989.6	937.9	928.1	2.8	2.7	-32.85	145.0	398.8	331.4	326.9	4.42	74.914	
1,100.0	1,085.8	1,031.4	1,018.0	3.3	3.2	-35.39	134.4	421.7	325.2	320.1	5.10	63.780	
1,200.0	1,182.0	1,121.3	1,103.4	3.8	3.7	-37.59	122.3	447.1	322.9	317.1	5.78	55.841	
1,201.0	1,183.0	1,122.2	1,104.3	3.8	3.7	-37.61	122.2	447.4	322.9	317.1	5.79	55.774	
1,300.0	1,278.2	1,212.0	1,188.5	4.3	4.3	-39.59	109.3	476.0	325.0	318.5	6.48	50.162	
1,400.0	1,374.4	1,305.6	1,275.1	4.8	5.0	-41.41	95.0	508.3	330.6	323.5	7.19	45.963	
1,500.0	1,470.6	1,403.7	1,365.0	5.3	5.7	-41.99	78.0	543.9	338.7	330.8	7.92	42.769	
1,600.0	1,566.7	1,503.3	1,455.6	5.8	6.5	-39.93	59.1	580.4	347.3	338.7	8.60	40.367	
1,700.0	1,662.9	1,597.5	1,541.5	6.3	7.2	-38.24	42.4	615.3	356.9	347.7	9.22	38.728	
1,800.0	1,759.0	1,693.9	1,629.5	6.9	8.0	-36.87	27.1	651.5	367.8	358.0	9.83	37.429	
1,900.0	1,855.2	1,790.2	1,717.3	7.4	8.7	-35.57	12.0	688.1	379.5	369.1	10.42	36.431	
2,000.0	1,951.3	1,887.3	1,805.4	7.9	9.5	-34.35	-3.0	726.0	392.4	381.4	10.99	35.715	
2,100.0	2,047.5	1,995.3	1,903.7	8.4	10.3	-32.98	-20.5	767.2	404.5	392.9	11.55	35.027	
2,200.0	2,143.6	2,105.4	2,004.9	8.9	11.1	-31.67	-39.0	806.4	414.0	401.9	12.07	34.286	
2,300.0	2,239.8	2,201.9	2,094.0	9.5	11.8	-30.63	-55.0	839.9	422.7	410.1	12.57	33.632	
2,400.0	2,335.9	2,309.4	2,193.3	10.0	12.6	-29.40	-73.7	876.7	431.0	418.0	13.04	33.051	
2,500.0	2,432.1	2,416.2	2,292.7	10.5	13.3	-28.33	-91.9	911.0	437.4	423.9	13.48	32.444	
2,600.0	2,528.2	2,513.9	2,384.4	11.0	13.9	-27.78	-105.5	941.8	443.3	429.4	13.96	31.763	
2,700.0	2,624.3	2,620.0	2,484.2	11.5	14.6	-27.38	-118.9	975.2	449.4	434.9	14.48	31.028	
2,800.0	2,720.5	2,728.9	2,587.4	12.1	15.3	-26.91	-133.5	1,007.1	453.2	438.2	15.00	30.219	
2,900.0	2,816.6	2,817.9	2,671.5	12.6	15.8	-26.53	-145.3	1,033.8	457.6	442.2	15.46	29.602	
3,000.0	2,912.8	2,930.0	2,777.3	13.1	16.5	-25.85	-162.0	1,066.6	461.4	445.5	15.93	28.962	
3,100.0	3,008.9	3,032.7	2,874.3	13.6	17.1	-24.97	-179.5	1,095.5	463.9	447.6	16.29	28.483	
3,200.0	3,105.1	3,129.6	2,966.2	14.1	17.7	-24.43	-193.7	1,122.4	466.3	449.6	16.68	27.945	
3,300.0	3,201.2	3,224.3	3,055.9	14.7	18.3	-23.95	-207.3	1,149.8	469.8	452.7	17.11	27.463	
3,400.0	3,297.4	3,321.0	3,146.9	15.2	18.9	-23.24	-223.0	1,178.6	474.3	456.8	17.45	27.185	
3,500.0	3,393.5	3,419.0	3,239.1	15.7	19.6	-22.71	-237.4	1,208.3	479.4	461.6	17.81	26.922	
3,600.0	3,489.7	3,522.8	3,337.2	16.2	20.2	-22.42	-250.4	1,239.7	484.4	466.1	18.25	26.537	
3,700.0	3,585.8	3,626.7	3,435.6	16.8	20.8	-22.05	-264.4	1,269.8	488.1	469.5	18.67	26.147	
3,800.0	3,682.0	3,722.6	3,526.6	17.3	21.4	-21.77	-276.6	1,297.8	492.1	473.0	19.08	25.784	
3,900.0	3,778.1	3,823.5	3,622.0	17.8	22.0	-21.43	-290.0	1,327.9	496.7	477.2	19.49	25.481	
6,000.0	5,797.2	6,052.6	5,756.3	28.8	33.6	-18.06	-549.2	1,881.9	496.5	468.0	28.44	17.455	
6,100.0	5,893.3	6,157.7	5,861.2	29.3	33.7	-19.01	-550.8	1,887.6	475.7	446.2	29.43	16.162	
6,200.0	5,989.5	6,258.9	5,962.3	29.9	33.8	-20.09	-551.9	1,892.1	454.0	423.5	30.51	14.878	
6,300.0	6,085.6	6,358.6	6,061.9	30.4	33.9	-21.32	-552.4	1,895.7	431.7	400.0	31.72	13.611	
6,400.0	6,181.8	6,461.6	6,164.9	30.9	34.0	-22.83	-552.3	1,898.6	408.8	375.7	33.14	12.337	
6,500.0	6,277.9	6,559.1	6,262.4	31.4	34.1	-24.47	-552.0	1,900.3	385.2	350.5	34.68	11.107	
6,600.0	6,374.1	6,657.8	6,361.0	32.0	34.2	-26.40	-551.4	1,901.6	361.5	325.1	36.46	9.917	
6,700.0	6,470.2	6,755.8	6,459.1	32.5	34.2	-28.63	-550.6	1,902.4	337.8	299.3	38.49	8.775	
6,800.0	6,566.4	6,852.4	6,555.6	33.0	34.3	-31.17	-549.7	1,902.8	314.3	273.5	40.79	7.705	
6,900.0	6,662.5	6,948.8	6,652.0	33.5	34.3	-34.12	-548.7	1,903.2	291.4	248.0	43.40	6.713	
7,000.0	6,758.6	7,045.1	6,748.3	34.1	34.4	-37.56	-547.7	1,903.5	269.3	222.9	46.39	5.805	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 S32-T2N-R68W (File/Hwy 52) - RAY NELSON 8-8-32 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 70-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,100.0	6,854.9	7,141.4	6,844.7	34.6	34.4	-27.49	-546.7	1,903.7	247.8	198.9	48.94	5.064	
7,200.0	6,951.3	7,238.0	6,941.3	35.0	34.5	9.04	-545.5	1,903.8	222.4	174.8	47.68	4.666	
7,300.0	7,045.4	7,332.7	7,036.0	35.3	34.5	37.49	-544.4	1,903.7	192.1	149.9	42.18	4.554	SF
7,400.0	7,134.3	7,422.4	7,125.6	35.5	34.6	62.35	-543.3	1,903.6	161.4	128.3	33.06	4.882	
7,500.0	7,215.4	7,504.1	7,207.3	35.6	34.6	87.80	-542.4	1,903.3	143.7	117.1	26.61	5.400	
7,511.6	7,224.2	7,513.0	7,216.2	35.7	34.6	90.64	-542.3	1,903.2	143.4	117.0	26.40	5.433	CC, ES
7,600.0	7,286.1	7,575.5	7,278.7	35.7	34.7	109.52	-541.7	1,902.9	158.9	132.3	26.60	5.973	
7,700.0	7,344.3	7,634.2	7,337.4	35.7	34.7	123.27	-541.1	1,902.6	211.0	185.2	25.81	8.174	
7,800.0	7,388.3	7,678.5	7,381.7	35.8	34.7	129.11	-540.8	1,902.4	287.3	263.9	23.45	12.251	
7,900.0	7,416.7	7,707.2	7,410.4	35.8	34.7	126.13	-540.6	1,902.2	377.0	353.3	23.69	15.913	
8,000.0	7,428.6	7,719.6	7,422.8	35.8	34.8	103.00	-540.5	1,902.1	473.5	442.7	30.79	15.379	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Hwy 52 4P-32H-O268
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Reference Site:	S32-T2N-R68W (File/Hwy 52)	**MD Reference:**	WELL @ 5003.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Hwy 52 4P-32H-O268	**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 @ 5003.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Hwy 52 4P-32H-O268
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.31°