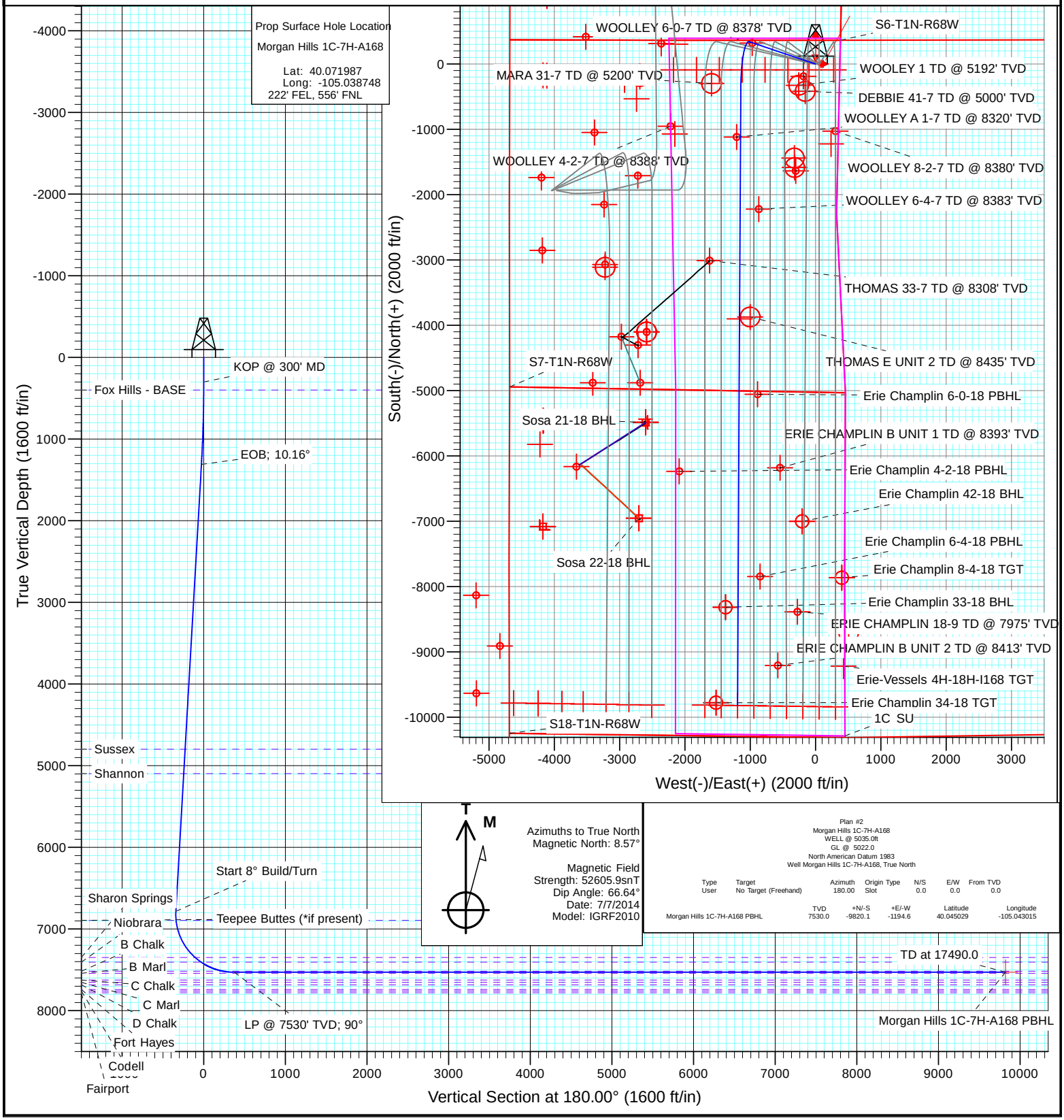
encana natural gas

Project: DJ Wattenberg
Site: S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)
Well: Morgan Hills 1C-7H-A168
Wellbore: HZ
Design: Plan #2

CATHEDRAL

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0		KOP @ 300' MD
3	1315.9	10.16	288.63	1310.6	28.7	-85.1	1.00	288.63	-28.7		EOB; 10.16°
4	6877.3	10.16	288.63	6784.8	342.2	-1014.7	0.00	0.00	-342.2		Start 8° Build/Turn
5	8042.0	90.00	180.30	7530.0	-372.3	-1145.2	8.00	-108.07	372.3		LP @ 7530' TVD; 90°
6	17490.0	90.00	180.30	7530.0	-9820.1	-1194.6	0.00	0.00	9820.1	Morgan Hills 1C-7H-A168 PBHL	TD at 17490.0



Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5035.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5035.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1C-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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 S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)

Site Position:		**Northing:**	1,265,219.42 ft	**Latitude:**	40.060530
From:	Lat/Long	**Easting:**	3,126,139.27 ft	**Longitude:**	-105.049370
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.29 °

Well Morgan Hills 1C-7H-A168

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,269,408.17 ft	**Latitude:**	40.071987
	+E/-W	0.0 ft	**Easting:**	3,129,090.68 ft	**Longitude:**	-105.038748
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	0.0 ft	**Ground Level:**	5,022.0 ft

Wellbore HZ

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/7/2014	8.57	66.64	52,606

Design Plan #2

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	180.00

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,315.9	10.16	288.63	1,310.6	28.7	-85.1	1.00	1.00	0.00	288.63	
6,877.3	10.16	288.63	6,784.8	342.2	-1,014.7	0.00	0.00	0.00	0.00	
8,042.0	90.00	180.30	7,530.0	-372.3	-1,145.2	8.00	6.85	-9.30	-108.07	
17,490.0	90.00	180.30	7,530.0	-9,820.1	-1,194.6	0.00	0.00	0.00	0.00	Morgan Hills 1C-7H-A

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5035.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1C-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300' MD
400.0	1.00	288.63	400.0	0.3	-0.8	-0.3	1.00	1.00	Fox Hills - BASE
500.0	2.00	288.63	500.0	1.1	-3.3	-1.1	1.00	1.00	
600.0	3.00	288.63	599.9	2.5	-7.4	-2.5	1.00	1.00	
700.0	4.00	288.63	699.7	4.5	-13.2	-4.5	1.00	1.00	
800.0	5.00	288.63	799.4	7.0	-20.7	-7.0	1.00	1.00	
900.0	6.00	288.63	898.9	10.0	-29.7	-10.0	1.00	1.00	
1,000.0	7.00	288.63	998.3	13.6	-40.5	-13.6	1.00	1.00	
1,100.0	8.00	288.63	1,097.4	17.8	-52.8	-17.8	1.00	1.00	
1,200.0	9.00	288.63	1,196.3	22.5	-66.8	-22.5	1.00	1.00	
1,300.0	10.00	288.63	1,294.9	27.8	-82.5	-27.8	1.00	1.00	
1,315.9	10.16	288.63	1,310.6	28.7	-85.1	-28.7	1.00	1.00	EOB; 10.16°
1,400.0	10.16	288.63	1,393.4	33.4	-99.2	-33.4	0.00	0.00	
1,500.0	10.16	288.63	1,491.8	39.1	-115.9	-39.1	0.00	0.00	
1,600.0	10.16	288.63	1,590.2	44.7	-132.6	-44.7	0.00	0.00	
1,700.0	10.16	288.63	1,688.7	50.4	-149.3	-50.4	0.00	0.00	
1,800.0	10.16	288.63	1,787.1	56.0	-166.0	-56.0	0.00	0.00	
1,900.0	10.16	288.63	1,885.5	61.6	-182.7	-61.6	0.00	0.00	
2,000.0	10.16	288.63	1,984.0	67.3	-199.5	-67.3	0.00	0.00	
2,100.0	10.16	288.63	2,082.4	72.9	-216.2	-72.9	0.00	0.00	
2,200.0	10.16	288.63	2,180.8	78.5	-232.9	-78.5	0.00	0.00	
2,300.0	10.16	288.63	2,279.3	84.2	-249.6	-84.2	0.00	0.00	
2,400.0	10.16	288.63	2,377.7	89.8	-266.3	-89.8	0.00	0.00	
2,500.0	10.16	288.63	2,476.1	95.4	-283.0	-95.4	0.00	0.00	
2,600.0	10.16	288.63	2,574.6	101.1	-299.7	-101.1	0.00	0.00	
2,700.0	10.16	288.63	2,673.0	106.7	-316.5	-106.7	0.00	0.00	
2,800.0	10.16	288.63	2,771.4	112.3	-333.2	-112.3	0.00	0.00	
2,900.0	10.16	288.63	2,869.8	118.0	-349.9	-118.0	0.00	0.00	
3,000.0	10.16	288.63	2,968.3	123.6	-366.6	-123.6	0.00	0.00	
3,100.0	10.16	288.63	3,066.7	129.3	-383.3	-129.3	0.00	0.00	
3,200.0	10.16	288.63	3,165.1	134.9	-400.0	-134.9	0.00	0.00	
3,300.0	10.16	288.63	3,263.6	140.5	-416.7	-140.5	0.00	0.00	
3,400.0	10.16	288.63	3,362.0	146.2	-433.5	-146.2	0.00	0.00	
3,500.0	10.16	288.63	3,460.4	151.8	-450.2	-151.8	0.00	0.00	
3,600.0	10.16	288.63	3,558.9	157.4	-466.9	-157.4	0.00	0.00	
3,700.0	10.16	288.63	3,657.3	163.1	-483.6	-163.1	0.00	0.00	
3,800.0	10.16	288.63	3,755.7	168.7	-500.3	-168.7	0.00	0.00	
3,900.0	10.16	288.63	3,854.2	174.3	-517.0	-174.3	0.00	0.00	
4,000.0	10.16	288.63	3,952.6	180.0	-533.7	-180.0	0.00	0.00	
4,100.0	10.16	288.63	4,051.0	185.6	-550.5	-185.6	0.00	0.00	
4,200.0	10.16	288.63	4,149.5	191.3	-567.2	-191.3	0.00	0.00	
4,300.0	10.16	288.63	4,247.9	196.9	-583.9	-196.9	0.00	0.00	
4,400.0	10.16	288.63	4,346.3	202.5	-600.6	-202.5	0.00	0.00	
4,500.0	10.16	288.63	4,444.8	208.2	-617.3	-208.2	0.00	0.00	
4,600.0	10.16	288.63	4,543.2	213.8	-634.0	-213.8	0.00	0.00	
4,700.0	10.16	288.63	4,641.6	219.4	-650.7	-219.4	0.00	0.00	
4,800.0	10.16	288.63	4,740.1	225.1	-667.5	-225.1	0.00	0.00	
4,858.9	10.16	288.63	4,798.0	228.4	-677.3	-228.4	0.00	0.00	Sussex
4,900.0	10.16	288.63	4,838.5	230.7	-684.2	-230.7	0.00	0.00	

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Well:	Morgan Hills 1C-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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
5,000.0	10.16	288.63	4,936.9	236.3	-700.9	-236.3	0.00	0.00	
5,100.0	10.16	288.63	5,035.4	242.0	-717.6	-242.0	0.00	0.00	
5,163.6	10.16	288.63	5,098.0	245.6	-728.2	-245.6	0.00	0.00	Shannon
5,200.0	10.16	288.63	5,133.8	247.6	-734.3	-247.6	0.00	0.00	
5,300.0	10.16	288.63	5,232.2	253.3	-751.0	-253.3	0.00	0.00	
5,400.0	10.16	288.63	5,330.6	258.9	-767.7	-258.9	0.00	0.00	
5,500.0	10.16	288.63	5,429.1	264.5	-784.5	-264.5	0.00	0.00	
5,600.0	10.16	288.63	5,527.5	270.2	-801.2	-270.2	0.00	0.00	
5,700.0	10.16	288.63	5,625.9	275.8	-817.9	-275.8	0.00	0.00	
5,800.0	10.16	288.63	5,724.4	281.4	-834.6	-281.4	0.00	0.00	
5,900.0	10.16	288.63	5,822.8	287.1	-851.3	-287.1	0.00	0.00	
6,000.0	10.16	288.63	5,921.2	292.7	-868.0	-292.7	0.00	0.00	
6,100.0	10.16	288.63	6,019.7	298.3	-884.7	-298.3	0.00	0.00	
6,200.0	10.16	288.63	6,118.1	304.0	-901.5	-304.0	0.00	0.00	
6,300.0	10.16	288.63	6,216.5	309.6	-918.2	-309.6	0.00	0.00	
6,400.0	10.16	288.63	6,315.0	315.3	-934.9	-315.3	0.00	0.00	
6,500.0	10.16	288.63	6,413.4	320.9	-951.6	-320.9	0.00	0.00	
6,600.0	10.16	288.63	6,511.8	326.5	-968.3	-326.5	0.00	0.00	
6,700.0	10.16	288.63	6,610.3	332.2	-985.0	-332.2	0.00	0.00	
6,800.0	10.16	288.63	6,708.7	337.8	-1,001.7	-337.8	0.00	0.00	
6,877.3	10.16	288.63	6,784.8	342.2	-1,014.7	-342.2	0.00	0.00	Start 8° Build/Turn
6,900.0	9.75	278.38	6,807.1	343.1	-1,018.5	-343.1	8.00	-1.81	
6,950.0	10.00	254.94	6,856.4	342.6	-1,026.8	-342.6	8.00	0.51	
6,988.2	11.19	239.56	6,894.0	339.8	-1,033.2	-339.8	8.00	3.11	Teepee Buttes (*if present)
7,000.0	11.70	235.54	6,905.5	338.6	-1,035.2	-338.6	8.00	4.27	
7,050.0	14.33	222.06	6,954.3	331.1	-1,043.5	-331.1	8.00	5.26	
7,100.0	17.48	213.00	7,002.4	320.2	-1,051.8	-320.2	8.00	6.30	
7,150.0	20.91	206.74	7,049.6	305.9	-1,059.9	-305.9	8.00	6.87	
7,200.0	24.51	202.21	7,095.7	288.4	-1,067.8	-288.4	8.00	7.20	
7,250.0	28.21	198.79	7,140.5	267.6	-1,075.6	-267.6	8.00	7.40	
7,300.0	31.98	196.11	7,183.7	243.6	-1,083.0	-243.6	8.00	7.54	
7,350.0	35.79	193.94	7,225.2	216.7	-1,090.2	-216.7	8.00	7.63	
7,400.0	39.64	192.15	7,264.8	186.9	-1,097.1	-186.9	8.00	7.69	
7,450.0	43.51	190.62	7,302.2	154.4	-1,103.7	-154.4	8.00	7.74	
7,500.0	47.40	189.30	7,337.3	119.3	-1,109.8	-119.3	8.00	7.78	
7,516.1	48.65	188.91	7,348.0	107.5	-1,111.7	-107.5	8.00	7.79	Sharon Springs
7,550.0	51.30	188.13	7,369.8	81.8	-1,115.5	-81.8	8.00	7.81	
7,600.0	55.21	187.09	7,399.7	42.1	-1,120.8	-42.1	8.00	7.82	
7,611.1	56.08	186.87	7,406.0	33.0	-1,121.9	-33.0	8.00	7.83	Niobrara
7,650.0	59.13	186.14	7,426.8	0.4	-1,125.7	-0.4	8.00	7.84	
7,700.0	63.06	185.26	7,451.0	-43.2	-1,130.0	43.2	8.00	7.85	
7,750.0	66.99	184.44	7,472.1	-88.3	-1,133.8	88.3	8.00	7.86	
7,800.0	70.92	183.67	7,490.1	-134.8	-1,137.1	134.8	8.00	7.87	
7,850.0	74.86	182.94	7,504.8	-182.5	-1,139.9	182.5	8.00	7.88	
7,900.0	78.80	182.23	7,516.2	-231.2	-1,142.1	231.2	8.00	7.88	
7,904.4	79.15	182.17	7,517.0	-235.5	-1,142.2	235.5	8.00	7.88	B Chalk
7,950.0	82.74	181.54	7,524.2	-280.5	-1,143.7	280.5	8.00	7.88	
8,000.0	86.68	180.86	7,528.8	-330.3	-1,144.7	330.3	8.00	7.89	
8,042.0	90.00	180.30	7,530.0	-372.3	-1,145.2	372.3	8.00	7.89	LP @ 7530' TVD; 90°
8,100.0	90.00	180.30	7,530.0	-430.2	-1,145.5	430.2	0.00	0.00	
8,200.0	90.00	180.30	7,530.0	-530.2	-1,146.0	530.2	0.00	0.00	
8,300.0	90.00	180.30	7,530.0	-630.2	-1,146.5	630.2	0.00	0.00	

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Well:	Morgan Hills 1C-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,400.0	90.00	180.30	7,530.0	-730.2	-1,147.0	730.2	0.00	0.00	
8,500.0	90.00	180.30	7,530.0	-830.2	-1,147.6	830.2	0.00	0.00	
8,600.0	90.00	180.30	7,530.0	-930.2	-1,148.1	930.2	0.00	0.00	
8,700.0	90.00	180.30	7,530.0	-1,030.2	-1,148.6	1,030.2	0.00	0.00	
8,800.0	90.00	180.30	7,530.0	-1,130.2	-1,149.1	1,130.2	0.00	0.00	
8,900.0	90.00	180.30	7,530.0	-1,230.2	-1,149.7	1,230.2	0.00	0.00	
9,000.0	90.00	180.30	7,530.0	-1,330.2	-1,150.2	1,330.2	0.00	0.00	
9,100.0	90.00	180.30	7,530.0	-1,430.2	-1,150.7	1,430.2	0.00	0.00	
9,200.0	90.00	180.30	7,530.0	-1,530.2	-1,151.2	1,530.2	0.00	0.00	
9,300.0	90.00	180.30	7,530.0	-1,630.2	-1,151.7	1,630.2	0.00	0.00	
9,400.0	90.00	180.30	7,530.0	-1,730.2	-1,152.3	1,730.2	0.00	0.00	
9,500.0	90.00	180.30	7,530.0	-1,830.2	-1,152.8	1,830.2	0.00	0.00	
9,600.0	90.00	180.30	7,530.0	-1,930.2	-1,153.3	1,930.2	0.00	0.00	
9,700.0	90.00	180.30	7,530.0	-2,030.2	-1,153.8	2,030.2	0.00	0.00	
9,800.0	90.00	180.30	7,530.0	-2,130.2	-1,154.4	2,130.2	0.00	0.00	
9,900.0	90.00	180.30	7,530.0	-2,230.2	-1,154.9	2,230.2	0.00	0.00	
10,000.0	90.00	180.30	7,530.0	-2,330.2	-1,155.4	2,330.2	0.00	0.00	
10,100.0	90.00	180.30	7,530.0	-2,430.2	-1,155.9	2,430.2	0.00	0.00	
10,200.0	90.00	180.30	7,530.0	-2,530.2	-1,156.5	2,530.2	0.00	0.00	
10,300.0	90.00	180.30	7,530.0	-2,630.2	-1,157.0	2,630.2	0.00	0.00	
10,400.0	90.00	180.30	7,530.0	-2,730.2	-1,157.5	2,730.2	0.00	0.00	
10,500.0	90.00	180.30	7,530.0	-2,830.2	-1,158.0	2,830.2	0.00	0.00	
10,600.0	90.00	180.30	7,530.0	-2,930.2	-1,158.6	2,930.2	0.00	0.00	
10,700.0	90.00	180.30	7,530.0	-3,030.2	-1,159.1	3,030.2	0.00	0.00	
10,800.0	90.00	180.30	7,530.0	-3,130.2	-1,159.6	3,130.2	0.00	0.00	
10,900.0	90.00	180.30	7,530.0	-3,230.2	-1,160.1	3,230.2	0.00	0.00	
11,000.0	90.00	180.30	7,530.0	-3,330.2	-1,160.6	3,330.2	0.00	0.00	
11,100.0	90.00	180.30	7,530.0	-3,430.2	-1,161.2	3,430.2	0.00	0.00	
11,200.0	90.00	180.30	7,530.0	-3,530.2	-1,161.7	3,530.2	0.00	0.00	
11,300.0	90.00	180.30	7,530.0	-3,630.2	-1,162.2	3,630.2	0.00	0.00	
11,400.0	90.00	180.30	7,530.0	-3,730.2	-1,162.7	3,730.2	0.00	0.00	
11,500.0	90.00	180.30	7,530.0	-3,830.2	-1,163.3	3,830.2	0.00	0.00	
11,600.0	90.00	180.30	7,530.0	-3,930.2	-1,163.8	3,930.2	0.00	0.00	
11,700.0	90.00	180.30	7,530.0	-4,030.2	-1,164.3	4,030.2	0.00	0.00	
11,800.0	90.00	180.30	7,530.0	-4,130.2	-1,164.8	4,130.2	0.00	0.00	
11,900.0	90.00	180.30	7,530.0	-4,230.2	-1,165.4	4,230.2	0.00	0.00	
12,000.0	90.00	180.30	7,530.0	-4,330.2	-1,165.9	4,330.2	0.00	0.00	
12,100.0	90.00	180.30	7,530.0	-4,430.2	-1,166.4	4,430.2	0.00	0.00	
12,200.0	90.00	180.30	7,530.0	-4,530.2	-1,166.9	4,530.2	0.00	0.00	
12,300.0	90.00	180.30	7,530.0	-4,630.2	-1,167.5	4,630.2	0.00	0.00	
12,400.0	90.00	180.30	7,530.0	-4,730.2	-1,168.0	4,730.2	0.00	0.00	
12,500.0	90.00	180.30	7,530.0	-4,830.2	-1,168.5	4,830.2	0.00	0.00	
12,600.0	90.00	180.30	7,530.0	-4,930.2	-1,169.0	4,930.2	0.00	0.00	
12,700.0	90.00	180.30	7,530.0	-5,030.2	-1,169.5	5,030.2	0.00	0.00	
12,800.0	90.00	180.30	7,530.0	-5,130.2	-1,170.1	5,130.2	0.00	0.00	
12,900.0	90.00	180.30	7,530.0	-5,230.2	-1,170.6	5,230.2	0.00	0.00	
13,000.0	90.00	180.30	7,530.0	-5,330.2	-1,171.1	5,330.2	0.00	0.00	
13,100.0	90.00	180.30	7,530.0	-5,430.2	-1,171.6	5,430.2	0.00	0.00	
13,200.0	90.00	180.30	7,530.0	-5,530.2	-1,172.2	5,530.2	0.00	0.00	
13,300.0	90.00	180.30	7,530.0	-5,630.2	-1,172.7	5,630.2	0.00	0.00	
13,400.0	90.00	180.30	7,530.0	-5,730.2	-1,173.2	5,730.2	0.00	0.00	
13,500.0	90.00	180.30	7,530.0	-5,830.2	-1,173.7	5,830.2	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5035.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5035.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1C-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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
13,600.0	90.00	180.30	7,530.0	-5,930.2	-1,174.3	5,930.2	0.00	0.00	
13,700.0	90.00	180.30	7,530.0	-6,030.1	-1,174.8	6,030.1	0.00	0.00	
13,800.0	90.00	180.30	7,530.0	-6,130.1	-1,175.3	6,130.1	0.00	0.00	
13,900.0	90.00	180.30	7,530.0	-6,230.1	-1,175.8	6,230.1	0.00	0.00	
14,000.0	90.00	180.30	7,530.0	-6,330.1	-1,176.4	6,330.1	0.00	0.00	
14,100.0	90.00	180.30	7,530.0	-6,430.1	-1,176.9	6,430.1	0.00	0.00	
14,200.0	90.00	180.30	7,530.0	-6,530.1	-1,177.4	6,530.1	0.00	0.00	
14,300.0	90.00	180.30	7,530.0	-6,630.1	-1,177.9	6,630.1	0.00	0.00	
14,400.0	90.00	180.30	7,530.0	-6,730.1	-1,178.4	6,730.1	0.00	0.00	
14,500.0	90.00	180.30	7,530.0	-6,830.1	-1,179.0	6,830.1	0.00	0.00	
14,600.0	90.00	180.30	7,530.0	-6,930.1	-1,179.5	6,930.1	0.00	0.00	
14,700.0	90.00	180.30	7,530.0	-7,030.1	-1,180.0	7,030.1	0.00	0.00	
14,800.0	90.00	180.30	7,530.0	-7,130.1	-1,180.5	7,130.1	0.00	0.00	
14,900.0	90.00	180.30	7,530.0	-7,230.1	-1,181.1	7,230.1	0.00	0.00	
15,000.0	90.00	180.30	7,530.0	-7,330.1	-1,181.6	7,330.1	0.00	0.00	
15,100.0	90.00	180.30	7,530.0	-7,430.1	-1,182.1	7,430.1	0.00	0.00	
15,200.0	90.00	180.30	7,530.0	-7,530.1	-1,182.6	7,530.1	0.00	0.00	
15,300.0	90.00	180.30	7,530.0	-7,630.1	-1,183.2	7,630.1	0.00	0.00	
15,400.0	90.00	180.30	7,530.0	-7,730.1	-1,183.7	7,730.1	0.00	0.00	
15,500.0	90.00	180.30	7,530.0	-7,830.1	-1,184.2	7,830.1	0.00	0.00	
15,600.0	90.00	180.30	7,530.0	-7,930.1	-1,184.7	7,930.1	0.00	0.00	
15,700.0	90.00	180.30	7,530.0	-8,030.1	-1,185.3	8,030.1	0.00	0.00	
15,800.0	90.00	180.30	7,530.0	-8,130.1	-1,185.8	8,130.1	0.00	0.00	
15,900.0	90.00	180.30	7,530.0	-8,230.1	-1,186.3	8,230.1	0.00	0.00	
16,000.0	90.00	180.30	7,530.0	-8,330.1	-1,186.8	8,330.1	0.00	0.00	
16,100.0	90.00	180.30	7,530.0	-8,430.1	-1,187.4	8,430.1	0.00	0.00	
16,200.0	90.00	180.30	7,530.0	-8,530.1	-1,187.9	8,530.1	0.00	0.00	
16,300.0	90.00	180.30	7,530.0	-8,630.1	-1,188.4	8,630.1	0.00	0.00	
16,400.0	90.00	180.30	7,530.0	-8,730.1	-1,188.9	8,730.1	0.00	0.00	
16,500.0	90.00	180.30	7,530.0	-8,830.1	-1,189.4	8,830.1	0.00	0.00	
16,600.0	90.00	180.30	7,530.0	-8,930.1	-1,190.0	8,930.1	0.00	0.00	
16,700.0	90.00	180.30	7,530.0	-9,030.1	-1,190.5	9,030.1	0.00	0.00	
16,800.0	90.00	180.30	7,530.0	-9,130.1	-1,191.0	9,130.1	0.00	0.00	
16,900.0	90.00	180.30	7,530.0	-9,230.1	-1,191.5	9,230.1	0.00	0.00	
17,000.0	90.00	180.30	7,530.0	-9,330.1	-1,192.1	9,330.1	0.00	0.00	
17,100.0	90.00	180.30	7,530.0	-9,430.1	-1,192.6	9,430.1	0.00	0.00	
17,200.0	90.00	180.30	7,530.0	-9,530.1	-1,193.1	9,530.1	0.00	0.00	
17,300.0	90.00	180.30	7,530.0	-9,630.1	-1,193.6	9,630.1	0.00	0.00	
17,400.0	90.00	180.30	7,530.0	-9,730.1	-1,194.2	9,730.1	0.00	0.00	
17,490.0	90.00	180.30	7,530.0	-9,820.1	-1,194.6	9,820.1	0.00	0.00	TD at 17490.0

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
Morgan Hills 1C-7H-A16 - plan hits target center - Point	0.00	0.00	7,530.0	-9,820.1	-1,194.6	1,259,581.95	3,127,947.15	40.045029	-105.043015

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5035.0ft
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5035.0ft
Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**North Reference:**	True
Well:	Morgan Hills 1C-7H-A168	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
400.0	400.0	Fox Hills - BASE			
4,858.9	4,798.0	Sussex			
5,163.6	5,098.0	Shannon			
6,988.2	6,894.0	Teepee Buttes (*if present)			
7,516.1	7,348.0	Sharon Springs			
7,611.1	7,406.0	Niobrara			
7,904.4	7,517.0	B Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.0	300.0	0.0	0.0	KOP @ 300' MD
1,315.9	1,310.6	28.7	-85.1	EOB; 10.16°
6,877.3	6,784.8	342.2	-1,014.7	Start 8° Build/Turn
8,042.0	7,530.0	-372.3	-1,145.2	LP @ 7530' TVD; 90°
17,490.0	7,530.0	-9,820.1	-1,194.6	TD at 17490.0

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)
Morgan Hills 1C-7H-A168
HZ
Plan #2

Anticollision Report

03 September, 2014

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Reference	Plan #2

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,550.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 9/3/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	17,490.0	Plan #2 (HZ)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**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
S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)						
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O	12,557.2	7,560.0	1,515.5	1,408.9	14.219	CC
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O	12,600.0	7,560.0	1,516.1	1,408.8	14.126	ES
BEARDEN 24-6 (EXISTING) - ENCANA WELL - PLAN O	12,800.0	7,560.0	1,534.8	1,424.0	13.853	SF
ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO SUR	13,847.2	7,565.0	631.9	507.8	5.089	CC, ES
ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO SUR	13,900.0	7,565.0	634.1	509.0	5.069	SF
ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO SUR	16,874.5	7,560.0	614.1	437.1	3.469	CC, ES
ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO SUR	16,900.0	7,560.0	614.7	437.2	3.464	SF
Morgan Hills 1A-7H-A168 - HZ - Plan #2	166.3	167.3	20.2	19.6	37.531	CC
Morgan Hills 1A-7H-A168 - HZ - Plan #2	200.0	201.0	20.2	19.5	30.792	ES
Morgan Hills 1A-7H-A168 - HZ - Plan #2	17,490.0	17,589.7	500.1	151.0	1.432	Level 3, SF
Morgan Hills 1B-7H-A168 - HZ - Plan #2	232.0	233.0	10.1	9.3	13.157	CC
Morgan Hills 1B-7H-A168 - HZ - Plan #2	300.0	300.9	10.3	9.3	10.267	ES
Morgan Hills 1B-7H-A168 - HZ - Plan #2	17,490.0	17,775.9	345.9	90.3	1.353	Level 3, SF
Morgan Hills 1D-7H-A168 - HZ - Plan #2	300.0	300.0	9.8	8.8	9.777	CC, ES
Morgan Hills 1D-7H-A168 - HZ - Plan #2	17,490.0	17,698.0	346.6	91.0	1.356	Level 3, SF
Morgan Hills 1E-7H-A168 - HZ - Plan #2	300.0	300.0	19.9	18.9	19.834	CC, ES
Morgan Hills 1E-7H-A168 - HZ - Plan #2	17,490.0	17,433.3	500.0	150.9	1.432	Level 3, SF
Morgan Hills 1F-7H-A168 - HZ - Plan #2	300.0	300.0	29.9	28.9	29.890	CC, ES
Morgan Hills 1F-7H-A168 - HZ - Plan #2	17,490.0	17,651.3	787.5	454.4	2.364	SF
Morgan Hills 1G-7H-A168 - HZ - Plan #2	300.0	300.0	40.0	39.0	39.947	CC, ES
Morgan Hills 1G-7H-A168 - HZ - Plan #2	17,490.0	17,404.7	1,000.1	650.9	2.864	SF
Morgan Hills 1H-7H-A168 - HZ - Plan #2	300.0	300.0	49.8	48.8	49.724	CC, ES
Morgan Hills 1H-7H-A168 - HZ - Plan #2	17,490.0	17,635.9	1,272.9	929.8	3.710	SF
Morgan Hills 1I-7H-A168 - HZ - Plan #2	300.0	300.0	59.9	58.9	59.781	CC, ES
Morgan Hills 1I-7H-A168 - HZ - Plan #2	17,490.0	17,400.5	1,500.1	1,151.1	4.298	SF
Sosa 21-18 - DD (MWD) - DD	13,158.7	7,641.0	1,435.0	1,318.3	12.297	CC
Sosa 21-18 - DD (MWD) - DD	13,200.0	7,640.2	1,435.6	1,318.2	12.228	ES
Sosa 21-18 - DD (MWD) - DD	13,500.0	7,634.5	1,475.0	1,352.4	12.031	SF
Sosa 21-18 - DD (MWD) - Plan #2	13,162.1	7,654.2	1,428.7	1,312.0	12.240	CC
Sosa 21-18 - DD (MWD) - Plan #2	13,200.0	7,654.2	1,429.2	1,311.8	12.175	ES
Sosa 21-18 - DD (MWD) - Plan #2	13,500.0	7,654.2	1,468.1	1,345.5	11.975	SF
Sosa 22-18 - DD - DD	14,647.2	7,675.1	1,510.1	1,365.4	10.437	CC, ES
Sosa 22-18 - DD - DD	14,900.0	7,676.2	1,531.1	1,382.0	10.269	SF
Sosa 22-18 - DD - Plan #2	14,630.7	7,648.1	1,525.1	1,380.9	10.579	CC, ES
Sosa 22-18 - DD - Plan #2	14,900.0	7,648.1	1,548.7	1,399.8	10.404	SF
THOMAS 24-7 (EXISTING) - ENCANA WELL - SURVEY						Out of range
THOMAS 33-7 (EXISTING) - ENCANA WELL - SURVEY	10,682.0	7,782.9	464.4	383.1	5.713	CC, ES
THOMAS 33-7 (EXISTING) - ENCANA WELL - SURVEY	10,700.0	7,782.9	464.8	383.2	5.696	SF
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SU	1,460.7	1,450.2	237.7	231.8	40.481	CC
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SU	1,500.0	1,488.8	237.8	231.7	39.173	ES
WOOLLEY 41-7 (EXISTING) - ENCANA WELL - NO SU	2,500.0	2,473.1	300.1	289.7	28.788	SF
WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA - NO S	9,300.6	7,535.0	847.8	801.5	18.303	CC, ES
WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA - NO S	9,600.0	7,535.0	899.1	847.9	17.562	SF
WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - NO SU	8,786.6	7,551.0	58.9	20.5	1.536	CC, ES, SF
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	7,500.0	9,620.7	1,417.5	1,359.3	24.359	SF
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	9,151.6	8,027.3	1,311.1	1,264.4	28.046	CC
Woolley-Becky 2G-7H-E168 - Hz - Plan #1	9,200.0	7,988.6	1,311.4	1,264.2	27.770	ES
Woolley-Becky 2H-7H-E168 - Hz - Plan #2	9,203.7	7,983.2	829.7	782.4	17.539	CC, ES
Woolley-Becky 2H-7H-E168 - Hz - Plan #2	9,500.0	7,812.5	853.1	802.7	16.928	SF
Woolley-Sosa 2E-7H-E168 - HZ - Plan #2						Out of range
Woolley-Sosa 2F-7H-E168 - HZ - Plan #1						Out of range
Woolley-Sosa 2G-7H-E168 - HZ - Plan #1	17,489.2	16,148.7	1,334.4	1,024.4	4.305	CC
Woolley-Sosa 2G-7H-E168 - HZ - Plan #1	17,490.0	16,148.7	1,334.4	1,024.4	4.305	ES, 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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - BEARDEN 24-6 (EXISTING) - ENCANA WELL - P

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
12,300.0	7,530.0	7,560.0	7,487.0	86.5	18.7	90.00	-4,879.4	-2,684.3	1,537.1	1,435.0	102.12	15.052	
12,400.0	7,530.0	7,560.0	7,487.0	88.1	18.7	90.00	-4,879.4	-2,684.3	1,523.6	1,419.8	103.86	14.670	
12,500.0	7,530.0	7,560.0	7,487.0	89.8	18.7	90.00	-4,879.4	-2,684.3	1,516.6	1,411.0	105.59	14.363	
12,557.2	7,530.0	7,560.0	7,487.0	90.8	18.7	90.00	-4,879.4	-2,684.3	1,515.5	1,408.9	106.58	14.219	CC
12,600.0	7,530.0	7,560.0	7,487.0	91.5	18.7	90.00	-4,879.4	-2,684.3	1,516.1	1,408.8	107.32	14.126	ES
12,700.0	7,530.0	7,560.0	7,487.0	93.2	18.7	90.00	-4,879.4	-2,684.3	1,522.2	1,413.1	109.06	13.958	
12,800.0	7,530.0	7,560.0	7,487.0	94.9	18.7	90.00	-4,879.4	-2,684.3	1,534.8	1,424.0	110.79	13.853	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - ERIE CHAMPLIN B UNIT 1 - ENCANA WELL - NO

Offset Site Error: 0.0 ft

Survey Program: 8393-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
12,500.0	7,530.0	7,565.0	7,565.0	89.8	13.2	-90.00	-6,180.7	-543.6	1,488.1	1,387.3	100.76	14.769	
12,600.0	7,530.0	7,565.0	7,565.0	91.5	13.2	-90.00	-6,180.7	-543.6	1,398.2	1,295.7	102.49	13.642	
12,700.0	7,530.0	7,565.0	7,565.0	93.2	13.2	-90.00	-6,180.7	-543.6	1,309.8	1,205.5	104.23	12.566	
12,800.0	7,530.0	7,565.0	7,565.0	94.9	13.2	-90.00	-6,180.7	-543.6	1,223.1	1,117.2	105.96	11.543	
12,900.0	7,530.0	7,565.0	7,565.0	96.6	13.2	-90.00	-6,180.7	-543.6	1,138.7	1,031.0	107.70	10.573	
13,000.0	7,530.0	7,565.0	7,565.0	98.3	13.2	-90.00	-6,180.7	-543.6	1,057.0	947.5	109.44	9.658	
13,100.0	7,530.0	7,565.0	7,565.0	100.0	13.2	-90.00	-6,180.7	-543.6	978.6	867.4	111.18	8.802	
13,200.0	7,530.0	7,565.0	7,565.0	101.7	13.2	-90.00	-6,180.7	-543.6	904.6	791.7	112.91	8.011	
13,300.0	7,530.0	7,565.0	7,565.0	103.4	13.2	-90.00	-6,180.7	-543.6	835.9	721.3	114.65	7.291	
13,400.0	7,530.0	7,565.0	7,565.0	105.1	13.2	-90.00	-6,180.7	-543.6	774.2	657.8	116.39	6.651	
13,500.0	7,530.0	7,565.0	7,565.0	106.8	13.2	-90.00	-6,180.7	-543.6	721.1	602.9	118.13	6.104	
13,600.0	7,530.0	7,565.0	7,565.0	108.5	13.2	-90.00	-6,180.7	-543.6	678.6	558.7	119.87	5.661	
13,700.0	7,530.0	7,565.0	7,565.0	110.3	13.2	-90.00	-6,180.7	-543.6	648.9	527.3	121.61	5.335	
13,800.0	7,530.0	7,565.0	7,565.0	112.0	13.2	-90.00	-6,180.7	-543.6	633.7	510.4	123.36	5.137	
13,847.2	7,530.0	7,565.0	7,565.0	112.8	13.2	-90.00	-6,180.7	-543.6	631.9	507.8	124.18	5.089	CC, ES
13,900.0	7,530.0	7,565.0	7,565.0	113.7	13.2	-90.00	-6,180.7	-543.6	634.1	509.0	125.10	5.069	SF
14,000.0	7,530.0	7,565.0	7,565.0	115.4	13.2	-90.00	-6,180.7	-543.6	650.1	523.3	126.84	5.126	
14,100.0	7,530.0	7,565.0	7,565.0	117.1	13.2	-90.00	-6,180.7	-543.6	680.6	552.0	128.58	5.293	
14,200.0	7,530.0	7,565.0	7,565.0	118.8	13.2	-90.00	-6,180.7	-543.6	723.7	593.4	130.32	5.553	
14,300.0	7,530.0	7,565.0	7,565.0	120.6	13.2	-90.00	-6,180.7	-543.6	777.4	645.3	132.07	5.886	
14,400.0	7,530.0	7,565.0	7,565.0	122.3	13.2	-90.00	-6,180.7	-543.6	839.6	705.8	133.81	6.274	
14,500.0	7,530.0	7,565.0	7,565.0	124.0	13.2	-90.00	-6,180.7	-543.6	908.6	773.0	135.55	6.702	
14,600.0	7,530.0	7,565.0	7,565.0	125.7	13.2	-90.00	-6,180.7	-543.6	982.9	845.6	137.30	7.159	
14,700.0	7,530.0	7,565.0	7,565.0	127.4	13.2	-90.00	-6,180.7	-543.6	1,061.4	922.4	139.04	7.634	
14,800.0	7,530.0	7,565.0	7,565.0	129.2	13.2	-90.00	-6,180.7	-543.6	1,143.3	1,002.5	140.79	8.121	
14,900.0	7,530.0	7,565.0	7,565.0	130.9	13.2	-90.00	-6,180.7	-543.6	1,227.9	1,085.3	142.53	8.615	
15,000.0	7,530.0	7,565.0	7,565.0	132.6	13.2	-90.00	-6,180.7	-543.6	1,314.6	1,170.3	144.28	9.112	
15,100.0	7,530.0	7,565.0	7,565.0	134.3	13.2	-90.00	-6,180.7	-543.6	1,403.1	1,257.1	146.02	9.609	
15,200.0	7,530.0	7,565.0	7,565.0	136.1	13.2	-90.00	-6,180.7	-543.6	1,493.1	1,345.3	147.77	10.104	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - ERIE CHAMPLIN B UNIT 2 - ENCANA WELL - NO

Offset Site Error: 0.0 ft

Survey Program: 8413-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
15,500.0	7,530.0	7,560.0	7,560.0	141.2	13.2	-90.00	-9,207.8	-577.3	1,505.5	1,352.5	153.00	9.840	
15,600.0	7,530.0	7,560.0	7,560.0	143.0	13.2	-90.00	-9,207.8	-577.3	1,414.7	1,260.0	154.74	9.143	
15,700.0	7,530.0	7,560.0	7,560.0	144.7	13.2	-90.00	-9,207.8	-577.3	1,325.4	1,168.9	156.49	8.469	
15,800.0	7,530.0	7,560.0	7,560.0	146.4	13.2	-90.00	-9,207.8	-577.3	1,237.6	1,079.4	158.24	7.821	
15,900.0	7,530.0	7,560.0	7,560.0	148.2	13.2	-90.00	-9,207.8	-577.3	1,151.9	991.9	159.98	7.200	
16,000.0	7,530.0	7,560.0	7,560.0	149.9	13.2	-90.00	-9,207.8	-577.3	1,068.6	906.9	161.73	6.607	
16,100.0	7,530.0	7,560.0	7,560.0	151.6	13.2	-90.00	-9,207.8	-577.3	988.4	825.0	163.48	6.046	
16,200.0	7,530.0	7,560.0	7,560.0	153.4	13.2	-90.00	-9,207.8	-577.3	912.2	747.0	165.22	5.521	
16,300.0	7,530.0	7,560.0	7,560.0	155.1	13.2	-90.00	-9,207.8	-577.3	841.0	674.0	166.97	5.036	
16,400.0	7,530.0	7,560.0	7,560.0	156.8	13.2	-90.00	-9,207.8	-577.3	776.1	607.4	168.72	4.600	
16,500.0	7,530.0	7,560.0	7,560.0	158.6	13.2	-90.00	-9,207.8	-577.3	719.3	548.8	170.47	4.220	
16,600.0	7,530.0	7,560.0	7,560.0	160.3	13.2	-90.00	-9,207.8	-577.3	672.7	500.5	172.22	3.906	
16,700.0	7,530.0	7,560.0	7,560.0	162.0	13.2	-90.00	-9,207.8	-577.3	638.4	464.5	173.96	3.670	
16,800.0	7,530.0	7,560.0	7,560.0	163.8	13.2	-90.00	-9,207.8	-577.3	618.6	442.9	175.71	3.521	
16,874.5	7,530.0	7,560.0	7,560.0	165.0	13.2	-90.00	-9,207.8	-577.3	614.1	437.1	177.01	3.469	CC, ES
16,900.0	7,530.0	7,560.0	7,560.0	165.5	13.2	-90.00	-9,207.8	-577.3	614.7	437.2	177.46	3.464	SF
17,000.0	7,530.0	7,560.0	7,560.0	167.2	13.2	-90.00	-9,207.8	-577.3	626.8	447.6	179.21	3.498	
17,100.0	7,530.0	7,560.0	7,560.0	169.0	13.2	-90.00	-9,207.8	-577.3	654.2	473.3	180.96	3.615	
17,200.0	7,530.0	7,560.0	7,560.0	170.7	13.2	-90.00	-9,207.8	-577.3	695.1	512.4	182.71	3.804	
17,300.0	7,530.0	7,560.0	7,560.0	172.4	13.2	-90.00	-9,207.8	-577.3	747.1	562.7	184.45	4.050	
17,400.0	7,530.0	7,560.0	7,560.0	174.2	13.2	-90.00	-9,207.8	-577.3	808.3	622.1	186.20	4.341	
17,490.0	7,530.0	7,560.0	7,560.0	175.7	13.2	-90.00	-9,207.8	-577.3	869.5	681.7	187.78	4.631	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2

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	-88.96	0.4	-20.1	20.2				
100.0	100.0	101.0	101.0	0.2	0.2	-88.96	0.4	-20.1	20.2	19.8	0.31	65.982	
166.3	166.3	167.3	167.3	0.3	0.3	-88.96	0.4	-20.1	20.2	19.6	0.54	37.531	CC
200.0	200.0	201.0	201.0	0.3	0.3	-88.96	0.4	-20.1	20.2	19.5	0.65	30.792	ES
300.0	300.0	300.6	300.6	0.5	0.5	-88.47	0.6	-21.0	21.0	20.0	1.00	20.945	
400.0	400.0	400.3	400.2	0.7	0.7	-16.44	1.1	-23.6	22.8	21.4	1.35	16.843	
500.0	500.0	500.0	499.9	0.9	0.9	-16.27	2.1	-27.8	24.5	22.8	1.70	14.430	
600.0	599.9	599.4	599.1	1.0	1.1	-16.49	3.5	-33.7	26.4	24.3	2.05	12.853	
700.0	699.7	698.9	698.3	1.2	1.3	-17.02	5.2	-41.3	28.2	25.8	2.40	11.740	
800.0	799.4	798.4	797.3	1.4	1.5	-17.81	7.3	-50.6	30.1	27.3	2.76	10.914	
900.0	898.9	897.8	896.1	1.7	1.8	-18.81	9.9	-61.5	32.0	28.9	3.12	10.274	
1,000.0	998.3	997.3	994.7	1.9	2.0	-19.97	12.7	-74.1	34.0	30.5	3.48	9.759	
1,100.0	1,097.4	1,096.7	1,093.0	2.2	2.3	-21.27	16.0	-88.4	36.0	32.2	3.86	9.330	
1,200.0	1,196.3	1,196.0	1,191.0	2.5	2.7	-22.68	19.7	-104.3	38.1	33.9	4.25	8.960	
1,300.0	1,294.9	1,295.3	1,288.7	2.8	3.0	-24.16	23.7	-121.9	40.3	35.6	4.67	8.630	
1,315.9	1,310.6	1,311.2	1,304.2	2.9	3.1	-24.40	24.4	-124.8	40.6	35.9	4.74	8.580	
1,400.0	1,393.4	1,394.6	1,386.0	3.1	3.4	-25.36	28.1	-141.1	43.1	38.0	5.10	8.447	
1,500.0	1,491.8	1,493.8	1,482.8	3.5	3.8	-25.70	32.9	-161.9	47.5	42.0	5.53	8.592	
1,600.0	1,590.2	1,592.8	1,579.1	3.8	4.2	-25.33	38.0	-184.3	53.6	47.6	5.94	9.009	
1,700.0	1,688.7	1,691.9	1,675.1	4.2	4.7	-24.53	43.5	-208.3	61.1	54.8	6.34	9.639	
1,800.0	1,787.1	1,791.5	1,771.5	4.5	5.1	-23.80	49.2	-232.8	69.1	62.4	6.74	10.256	
1,900.0	1,885.5	1,891.2	1,868.0	4.8	5.6	-23.22	54.8	-257.3	77.1	70.0	7.14	10.805	
2,000.0	1,984.0	1,990.9	1,964.5	5.2	6.1	-22.75	60.4	-281.8	85.1	77.6	7.53	11.296	
2,100.0	2,082.4	2,090.6	2,060.9	5.5	6.5	-22.36	66.0	-306.3	93.1	85.2	7.93	11.737	
2,200.0	2,180.8	2,190.3	2,157.4	5.9	7.0	-22.04	71.6	-330.7	101.1	92.8	8.33	12.136	
2,300.0	2,279.3	2,289.9	2,253.8	6.2	7.5	-21.76	77.2	-355.2	109.1	100.4	8.73	12.499	
2,400.0	2,377.7	2,389.6	2,350.3	6.6	8.0	-21.51	82.9	-379.7	117.1	108.0	9.13	12.830	
2,500.0	2,476.1	2,489.3	2,446.8	6.9	8.4	-21.30	88.5	-404.2	125.1	115.6	9.53	13.133	
2,600.0	2,574.6	2,589.0	2,543.2	7.3	8.9	-21.12	94.1	-428.7	133.1	123.2	9.93	13.411	
2,700.0	2,673.0	2,688.6	2,639.7	7.7	9.4	-20.95	99.7	-453.2	141.1	130.8	10.33	13.668	
2,800.0	2,771.4	2,788.3	2,736.1	8.0	9.9	-20.81	105.3	-477.7	149.1	138.4	10.73	13.906	
2,900.0	2,869.8	2,888.0	2,832.6	8.4	10.3	-20.68	111.0	-502.2	157.2	146.0	11.13	14.126	
3,000.0	2,968.3	2,987.7	2,929.1	8.7	10.8	-20.56	116.6	-526.6	165.2	153.6	11.53	14.331	
3,100.0	3,066.7	3,087.4	3,025.5	9.1	11.3	-20.45	122.2	-551.1	173.2	161.3	11.93	14.522	
3,200.0	3,165.1	3,187.0	3,122.0	9.4	11.8	-20.35	127.8	-575.6	181.2	168.9	12.33	14.701	
3,300.0	3,263.6	3,286.7	3,218.4	9.8	12.3	-20.26	133.4	-600.1	189.2	176.5	12.73	14.869	
3,400.0	3,362.0	3,386.4	3,314.9	10.1	12.7	-20.18	139.1	-624.6	197.2	184.1	13.13	15.026	
3,500.0	3,460.4	3,486.1	3,411.4	10.5	13.2	-20.10	144.7	-649.1	205.2	191.7	13.53	15.174	
3,600.0	3,558.9	3,585.7	3,507.8	10.8	13.7	-20.03	150.3	-673.6	213.3	199.3	13.93	15.313	
3,700.0	3,657.3	3,685.4	3,604.3	11.2	14.2	-19.97	155.9	-698.1	221.3	206.9	14.33	15.445	
3,800.0	3,755.7	3,785.1	3,700.7	11.6	14.7	-19.91	161.5	-722.5	229.3	214.6	14.73	15.569	
3,900.0	3,854.2	3,884.8	3,797.2	11.9	15.2	-19.85	167.2	-747.0	237.3	222.2	15.13	15.687	
4,000.0	3,952.6	3,984.5	3,893.7	12.3	15.6	-19.80	172.8	-771.5	245.3	229.8	15.53	15.798	
4,100.0	4,051.0	4,084.1	3,990.1	12.6	16.1	-19.75	178.4	-796.0	253.3	237.4	15.93	15.904	
4,200.0	4,149.5	4,183.8	4,086.6	13.0	16.6	-19.70	184.0	-820.5	261.4	245.0	16.33	16.005	
4,300.0	4,247.9	4,283.5	4,183.0	13.3	17.1	-19.66	189.6	-845.0	269.4	252.6	16.73	16.101	
4,400.0	4,346.3	4,383.2	4,279.5	13.7	17.6	-19.61	195.2	-869.5	277.4	260.3	17.13	16.192	
4,500.0	4,444.8	4,482.8	4,376.0	14.1	18.0	-19.58	200.9	-894.0	285.4	267.9	17.53	16.279	
4,600.0	4,543.2	4,582.5	4,472.4	14.4	18.5	-19.54	206.5	-918.4	293.4	275.5	17.93	16.363	
4,700.0	4,641.6	4,682.2	4,568.9	14.8	19.0	-19.50	212.1	-942.9	301.4	283.1	18.33	16.442	
4,800.0	4,740.1	4,781.9	4,665.3	15.1	19.5	-19.47	217.7	-967.4	309.5	290.7	18.73	16.519	
4,900.0	4,838.5	4,881.6	4,761.8	15.5	20.0	-19.44	223.3	-991.9	317.5	298.3	19.13	16.592	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2

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
5,000.0	4,936.9	4,981.2	4,858.3	15.8	20.5	-19.41	229.0	-1,016.4	325.5	306.0	19.54	16.662	
5,100.0	5,035.4	5,080.9	4,954.7	16.2	20.9	-19.38	234.6	-1,040.9	333.5	313.6	19.94	16.729	
5,200.0	5,133.8	5,180.6	5,051.2	16.5	21.4	-19.35	240.2	-1,065.4	341.5	321.2	20.34	16.793	
5,300.0	5,232.2	5,280.3	5,147.6	16.9	21.9	-19.33	245.8	-1,089.9	349.5	328.8	20.74	16.855	
5,400.0	5,330.6	5,379.9	5,244.1	17.3	22.4	-19.30	251.4	-1,114.3	357.6	336.4	21.14	16.915	
5,500.0	5,429.1	5,479.6	5,340.6	17.6	22.9	-19.28	257.1	-1,138.8	365.6	344.0	21.54	16.972	
5,600.0	5,527.5	5,579.3	5,437.0	18.0	23.4	-19.26	262.7	-1,163.3	373.6	351.7	21.94	17.028	
5,700.0	5,625.9	5,679.0	5,533.5	18.3	23.8	-19.24	268.3	-1,187.8	381.6	359.3	22.34	17.081	
5,800.0	5,724.4	5,778.7	5,629.9	18.7	24.3	-19.21	273.9	-1,212.3	389.6	366.9	22.74	17.133	
5,900.0	5,822.8	5,878.3	5,726.4	19.0	24.8	-19.19	279.5	-1,236.8	397.7	374.5	23.14	17.182	
6,000.0	5,921.2	5,978.0	5,822.9	19.4	25.3	-19.18	285.1	-1,261.3	405.7	382.1	23.54	17.230	
6,100.0	6,019.7	6,077.7	5,919.3	19.8	25.8	-19.16	290.8	-1,285.8	413.7	389.8	23.95	17.276	
6,200.0	6,118.1	6,177.4	6,015.8	20.1	26.3	-19.14	296.4	-1,310.2	421.7	397.4	24.35	17.321	
6,300.0	6,216.5	6,277.0	6,112.2	20.5	26.7	-19.12	302.0	-1,334.7	429.7	405.0	24.75	17.365	
6,400.0	6,315.0	6,376.7	6,208.7	20.8	27.2	-19.11	307.6	-1,359.2	437.8	412.6	25.15	17.407	
6,500.0	6,413.4	6,476.4	6,305.2	21.2	27.7	-19.09	313.2	-1,383.7	445.8	420.2	25.55	17.447	
6,600.0	6,511.8	6,576.1	6,401.6	21.5	28.2	-19.07	318.9	-1,408.2	453.8	427.8	25.95	17.487	
6,700.0	6,610.3	6,675.8	6,498.1	21.9	28.7	-19.06	324.5	-1,432.7	461.8	435.5	26.35	17.525	
6,800.0	6,708.7	6,775.4	6,594.5	22.3	29.2	-19.05	330.1	-1,457.2	469.8	443.1	26.75	17.562	
6,877.3	6,784.8	6,852.5	6,669.1	22.5	29.5	-19.04	334.4	-1,476.1	476.0	449.0	27.06	17.590	
6,900.0	6,807.1	6,875.1	6,691.0	22.6	29.6	-9.03	335.7	-1,481.7	477.8	450.7	27.18	17.578	
6,950.0	6,856.4	6,924.8	6,739.1	22.8	29.9	14.15	338.5	-1,493.9	481.8	454.5	27.32	17.638	
7,000.0	6,905.5	6,974.2	6,786.9	22.9	30.1	33.69	341.3	-1,506.0	485.8	458.5	27.28	17.808	
7,050.0	6,954.3	7,023.6	6,834.8	23.0	30.3	47.58	343.0	-1,518.2	489.8	462.7	27.12	18.062	
7,100.0	7,002.4	7,073.8	6,883.3	23.1	30.6	57.03	341.3	-1,530.5	494.0	467.0	26.93	18.340	
7,150.0	7,049.6	7,124.6	6,932.3	23.2	30.8	63.68	336.1	-1,542.9	498.2	471.5	26.74	18.630	
7,200.0	7,095.7	7,176.1	6,981.5	23.3	31.0	68.58	327.1	-1,555.4	502.5	475.9	26.56	18.922	
7,250.0	7,140.5	7,228.4	7,030.6	23.4	31.2	72.34	314.2	-1,567.9	506.8	480.4	26.39	19.206	
7,300.0	7,183.7	7,281.4	7,079.3	23.5	31.3	75.33	297.5	-1,580.2	511.1	484.8	26.25	19.471	
7,350.0	7,225.2	7,335.2	7,127.4	23.5	31.5	77.78	276.8	-1,592.4	515.3	489.2	26.15	19.706	
7,400.0	7,264.8	7,389.8	7,174.5	23.6	31.7	79.83	252.0	-1,604.4	519.5	493.4	26.11	19.901	
7,450.0	7,302.2	7,445.1	7,220.3	23.7	31.8	81.56	223.1	-1,616.0	523.6	497.4	26.12	20.048	
7,500.0	7,337.3	7,501.2	7,264.3	23.7	32.0	83.05	190.3	-1,627.2	527.5	501.3	26.19	20.139	
7,550.0	7,369.8	7,558.1	7,306.3	23.8	32.1	84.34	153.4	-1,637.9	531.1	504.8	26.34	20.167	
7,600.0	7,399.7	7,615.7	7,345.8	23.9	32.3	85.46	112.7	-1,647.9	534.6	508.0	26.56	20.131	
7,650.0	7,426.8	7,674.0	7,382.4	24.0	32.4	86.42	68.3	-1,657.2	537.8	510.9	26.85	20.030	
7,700.0	7,451.0	7,733.0	7,415.8	24.2	32.6	87.25	20.4	-1,665.6	540.6	513.4	27.21	19.865	
7,750.0	7,472.1	7,792.6	7,445.4	24.3	32.7	87.96	-30.6	-1,673.2	543.1	515.5	27.62	19.662	
7,800.0	7,490.1	7,852.7	7,471.1	24.5	32.9	88.55	-84.6	-1,679.7	545.3	517.1	28.12	19.388	
7,850.0	7,504.8	7,913.2	7,492.5	24.7	33.1	89.03	-141.0	-1,685.1	547.0	518.3	28.69	19.067	
7,900.0	7,516.2	7,974.2	7,509.3	24.9	33.3	89.40	-199.4	-1,689.4	548.3	519.0	29.31	18.707	
7,950.0	7,524.2	8,035.4	7,521.2	25.1	33.5	89.67	-259.4	-1,692.4	549.1	519.2	29.98	18.315	
8,000.0	7,528.8	8,096.9	7,528.1	25.4	33.8	89.84	-320.4	-1,694.2	549.5	518.8	30.71	17.896	
8,042.0	7,530.0	8,148.6	7,530.0	25.6	34.0	89.90	-372.1	-1,694.6	549.5	518.1	31.35	17.526	
8,100.0	7,530.0	8,206.8	7,530.0	26.0	34.2	89.90	-430.2	-1,694.6	549.2	516.7	32.49	16.902	
8,200.0	7,530.0	8,306.8	7,530.0	26.6	34.7	89.90	-530.2	-1,694.6	548.7	514.0	34.64	15.837	
8,300.0	7,530.0	8,406.8	7,530.0	27.4	35.3	89.90	-630.2	-1,694.6	548.1	511.1	37.00	14.813	
8,400.0	7,530.0	8,506.8	7,530.0	28.3	35.9	89.90	-730.2	-1,694.6	547.6	508.1	39.53	13.852	
8,500.0	7,530.0	8,606.8	7,530.0	29.2	36.7	89.90	-830.2	-1,694.6	547.1	504.9	42.20	12.963	
8,600.0	7,530.0	8,706.8	7,530.0	30.2	37.5	89.90	-930.2	-1,694.6	546.6	501.6	44.99	12.149	
8,700.0	7,530.0	8,806.8	7,530.0	31.3	38.3	89.90	-1,030.2	-1,694.6	546.0	498.2	47.87	11.407	
8,800.0	7,530.0	8,906.8	7,530.0	32.4	39.2	89.89	-1,130.2	-1,694.6	545.5	494.7	50.83	10.733	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2

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
8,900.0	7,530.0	9,006.8	7,530.0	33.6	40.2	89.89	-1,230.2	-1,694.6	545.0	491.1	53.85	10.120	
9,000.0	7,530.0	9,106.8	7,530.0	34.9	41.2	89.89	-1,330.2	-1,694.6	544.5	487.5	56.94	9.563	
9,100.0	7,530.0	9,206.8	7,530.0	36.1	42.3	89.89	-1,430.2	-1,694.6	543.9	483.9	60.06	9.056	
9,200.0	7,530.0	9,306.8	7,530.0	37.5	43.4	89.89	-1,530.2	-1,694.6	543.4	480.2	63.23	8.594	
9,300.0	7,530.0	9,406.8	7,530.0	38.8	44.6	89.89	-1,630.2	-1,694.6	542.9	476.5	66.43	8.172	
9,400.0	7,530.0	9,506.8	7,530.0	40.2	45.8	89.89	-1,730.2	-1,694.6	542.4	472.7	69.66	7.786	
9,500.0	7,530.0	9,606.8	7,530.0	41.6	47.0	89.89	-1,830.2	-1,694.6	541.9	468.9	72.92	7.431	
9,600.0	7,530.0	9,706.8	7,530.0	43.1	48.3	89.89	-1,930.2	-1,694.6	541.3	465.1	76.20	7.104	
9,700.0	7,530.0	9,806.8	7,530.0	44.5	49.6	89.89	-2,030.2	-1,694.6	540.8	461.3	79.50	6.803	
9,800.0	7,530.0	9,906.7	7,530.0	46.0	50.9	89.89	-2,130.2	-1,694.6	540.3	457.5	82.82	6.524	
9,900.0	7,530.0	10,006.7	7,530.0	47.5	52.2	89.89	-2,230.2	-1,694.6	539.8	453.6	86.15	6.266	
10,000.0	7,530.0	10,106.7	7,530.0	49.0	53.6	89.89	-2,330.2	-1,694.6	539.2	449.7	89.49	6.026	
10,100.0	7,530.0	10,206.7	7,530.0	50.6	55.0	89.89	-2,430.2	-1,694.6	538.7	445.9	92.85	5.802	
10,200.0	7,530.0	10,306.7	7,530.0	52.1	56.4	89.89	-2,530.2	-1,694.6	538.2	442.0	96.22	5.594	
10,300.0	7,530.0	10,406.7	7,530.0	53.7	57.9	89.89	-2,630.2	-1,694.6	537.7	438.1	99.59	5.399	
10,400.0	7,530.0	10,506.7	7,530.0	55.2	59.3	89.89	-2,730.2	-1,694.6	537.1	434.2	102.98	5.216	
10,500.0	7,530.0	10,606.7	7,530.0	56.8	60.8	89.89	-2,830.2	-1,694.6	536.6	430.2	106.37	5.045	
10,600.0	7,530.0	10,706.7	7,530.0	58.4	62.3	89.89	-2,930.2	-1,694.6	536.1	426.3	109.77	4.884	
10,700.0	7,530.0	10,806.7	7,530.0	60.0	63.8	89.89	-3,030.2	-1,694.6	535.6	422.4	113.18	4.732	
10,800.0	7,530.0	10,906.7	7,530.0	61.6	65.3	89.89	-3,130.2	-1,694.6	535.0	418.5	116.60	4.589	
10,900.0	7,530.0	11,006.7	7,530.0	63.2	66.8	89.89	-3,230.2	-1,694.6	534.5	414.5	120.01	4.454	
11,000.0	7,530.0	11,106.7	7,530.0	64.9	68.4	89.89	-3,330.2	-1,694.6	534.0	410.6	123.44	4.326	
11,100.0	7,530.0	11,206.7	7,530.0	66.5	69.9	89.89	-3,430.2	-1,694.6	533.5	406.6	126.87	4.205	
11,200.0	7,530.0	11,306.7	7,530.0	68.1	71.5	89.89	-3,530.2	-1,694.6	533.0	402.7	130.30	4.090	
11,300.0	7,530.0	11,406.7	7,530.0	69.8	73.0	89.89	-3,630.2	-1,694.6	532.4	398.7	133.74	3.981	
11,400.0	7,530.0	11,506.7	7,530.0	71.4	74.6	89.89	-3,730.2	-1,694.6	531.9	394.7	137.18	3.878	
11,500.0	7,530.0	11,606.7	7,530.0	73.1	76.2	89.89	-3,830.2	-1,694.6	531.4	390.8	140.62	3.779	
11,600.0	7,530.0	11,706.7	7,530.0	74.7	77.8	89.89	-3,930.2	-1,694.6	530.9	386.8	144.07	3.685	
11,700.0	7,530.0	11,806.7	7,530.0	76.4	79.4	89.89	-4,030.2	-1,694.6	530.3	382.8	147.52	3.595	
11,800.0	7,530.0	11,906.7	7,530.0	78.1	81.0	89.89	-4,130.2	-1,694.6	529.8	378.8	150.97	3.509	
11,900.0	7,530.0	12,006.7	7,530.0	79.7	82.6	89.89	-4,230.2	-1,694.6	529.3	374.9	154.42	3.428	
12,000.0	7,530.0	12,106.7	7,530.0	81.4	84.2	89.89	-4,330.2	-1,694.6	528.8	370.9	157.88	3.349	
12,100.0	7,530.0	12,206.7	7,530.0	83.1	85.8	89.89	-4,430.2	-1,694.6	528.2	366.9	161.34	3.274	
12,200.0	7,530.0	12,306.7	7,530.0	84.8	87.4	89.89	-4,530.2	-1,694.6	527.7	362.9	164.80	3.202	
12,300.0	7,530.0	12,406.7	7,530.0	86.5	89.1	89.89	-4,630.2	-1,694.6	527.2	358.9	168.27	3.133	
12,400.0	7,530.0	12,506.7	7,530.0	88.1	90.7	89.89	-4,730.2	-1,694.6	526.7	354.9	171.73	3.067	
12,500.0	7,530.0	12,606.7	7,530.0	89.8	92.3	89.89	-4,830.2	-1,694.6	526.1	351.0	175.20	3.003	
12,600.0	7,530.0	12,706.7	7,530.0	91.5	94.0	89.89	-4,930.2	-1,694.6	525.6	347.0	178.67	2.942	
12,700.0	7,530.0	12,806.7	7,530.0	93.2	95.6	89.89	-5,030.2	-1,694.6	525.1	343.0	182.14	2.883	
12,800.0	7,530.0	12,906.7	7,530.0	94.9	97.3	89.89	-5,130.2	-1,694.6	524.6	339.0	185.61	2.826	
12,900.0	7,530.0	13,006.7	7,530.0	96.6	98.9	89.89	-5,230.2	-1,694.6	524.1	335.0	189.08	2.772	
13,000.0	7,530.0	13,106.7	7,530.0	98.3	100.6	89.89	-5,330.2	-1,694.6	523.5	331.0	192.56	2.719	
13,100.0	7,530.0	13,206.7	7,530.0	100.0	102.3	89.89	-5,430.2	-1,694.6	523.0	327.0	196.03	2.668	
13,200.0	7,530.0	13,306.7	7,530.0	101.7	103.9	89.89	-5,530.2	-1,694.6	522.5	323.0	199.51	2.619	
13,300.0	7,530.0	13,406.7	7,530.0	103.4	105.6	89.89	-5,630.2	-1,694.6	522.0	319.0	202.98	2.571	
13,400.0	7,530.0	13,506.7	7,530.0	105.1	107.3	89.89	-5,730.2	-1,694.6	521.4	315.0	206.46	2.526	
13,500.0	7,530.0	13,606.7	7,530.0	106.8	108.9	89.89	-5,830.2	-1,694.6	520.9	311.0	209.94	2.481	
13,600.0	7,530.0	13,706.7	7,530.0	108.5	110.6	89.89	-5,930.2	-1,694.6	520.4	307.0	213.42	2.438	
13,700.0	7,530.0	13,806.7	7,530.0	110.3	112.3	89.89	-6,030.1	-1,694.6	519.9	303.0	216.90	2.397	
13,800.0	7,530.0	13,906.7	7,530.0	112.0	114.0	89.89	-6,130.1	-1,694.6	519.3	299.0	220.39	2.357	
13,900.0	7,530.0	14,006.7	7,530.0	113.7	115.6	89.89	-6,230.1	-1,694.7	518.8	295.0	223.87	2.318	
14,000.0	7,530.0	14,106.7	7,530.0	115.4	117.3	89.89	-6,330.1	-1,694.7	518.3	290.9	227.35	2.280	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1A-7H-A168 - HZ - Plan #2

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
14,100.0	7,530.0	14,206.7	7,530.0	117.1	119.0	89.89	-6,430.1	-1,694.7	517.8	286.9	230.84	2.243	
14,200.0	7,530.0	14,306.7	7,530.0	118.8	120.7	89.89	-6,530.1	-1,694.7	517.2	282.9	234.32	2.207	
14,300.0	7,530.0	14,406.7	7,530.0	120.6	122.4	89.89	-6,630.1	-1,694.7	516.7	278.9	237.81	2.173	
14,400.0	7,530.0	14,506.7	7,530.0	122.3	124.1	89.89	-6,730.1	-1,694.7	516.2	274.9	241.30	2.139	
14,500.0	7,530.0	14,606.7	7,530.0	124.0	125.8	89.89	-6,830.1	-1,694.7	515.7	270.9	244.78	2.107	
14,600.0	7,530.0	14,706.7	7,530.0	125.7	127.5	89.89	-6,930.1	-1,694.7	515.2	266.9	248.27	2.075	
14,700.0	7,530.0	14,806.7	7,530.0	127.4	129.2	89.89	-7,030.1	-1,694.7	514.6	262.9	251.76	2.044	
14,800.0	7,530.0	14,906.7	7,530.0	129.2	130.9	89.89	-7,130.1	-1,694.7	514.1	258.9	255.25	2.014	
14,900.0	7,530.0	15,006.7	7,530.0	130.9	132.6	89.89	-7,230.1	-1,694.7	513.6	254.8	258.74	1.985	
15,000.0	7,530.0	15,106.7	7,530.0	132.6	134.3	89.89	-7,330.1	-1,694.7	513.1	250.8	262.23	1.957	
15,100.0	7,530.0	15,206.7	7,530.0	134.3	136.0	89.89	-7,430.1	-1,694.7	512.5	246.8	265.72	1.929	
15,200.0	7,530.0	15,306.7	7,530.0	136.1	137.7	89.89	-7,530.1	-1,694.7	512.0	242.8	269.21	1.902	
15,300.0	7,530.0	15,406.7	7,530.0	137.8	139.4	89.89	-7,630.1	-1,694.7	511.5	238.8	272.70	1.876	
15,400.0	7,530.0	15,506.7	7,530.0	139.5	141.1	89.89	-7,730.1	-1,694.7	511.0	234.8	276.19	1.850	
15,500.0	7,530.0	15,606.7	7,530.0	141.2	142.8	89.89	-7,830.1	-1,694.7	510.4	230.8	279.68	1.825	
15,600.0	7,530.0	15,706.7	7,530.0	143.0	144.5	89.89	-7,930.1	-1,694.7	509.9	226.7	283.18	1.801	
15,700.0	7,530.0	15,806.7	7,530.0	144.7	146.2	89.89	-8,030.1	-1,694.7	509.4	222.7	286.67	1.777	
15,800.0	7,530.0	15,906.7	7,530.0	146.4	147.9	89.89	-8,130.1	-1,694.7	508.9	218.7	290.16	1.754	
15,900.0	7,530.0	16,006.7	7,530.0	148.2	149.6	89.89	-8,230.1	-1,694.7	508.3	214.7	293.66	1.731	
16,000.0	7,530.0	16,106.7	7,530.0	149.9	151.4	89.89	-8,330.1	-1,694.7	507.8	210.7	297.15	1.709	
16,100.0	7,530.0	16,206.7	7,530.0	151.6	153.1	89.89	-8,430.1	-1,694.7	507.3	206.7	300.64	1.687	
16,200.0	7,530.0	16,306.7	7,530.0	153.4	154.8	89.89	-8,530.1	-1,694.7	506.8	202.6	304.14	1.666	
16,300.0	7,530.0	16,406.7	7,530.0	155.1	156.5	89.89	-8,630.1	-1,694.7	506.3	198.6	307.63	1.646	
16,400.0	7,530.0	16,506.7	7,530.0	156.8	158.2	89.89	-8,730.1	-1,694.7	505.7	194.6	311.13	1.625	
16,500.0	7,530.0	16,606.7	7,530.0	158.6	159.9	89.89	-8,830.1	-1,694.7	505.2	190.6	314.62	1.606	
16,600.0	7,530.0	16,706.7	7,530.0	160.3	161.7	89.89	-8,930.1	-1,694.7	504.7	186.6	318.12	1.586	
16,700.0	7,530.0	16,806.7	7,530.0	162.0	163.4	89.89	-9,030.1	-1,694.7	504.2	182.5	321.62	1.568	
16,800.0	7,530.0	16,906.7	7,530.0	163.8	165.1	89.89	-9,130.1	-1,694.7	503.6	178.5	325.11	1.549	
16,900.0	7,530.0	17,006.7	7,530.0	165.5	166.8	89.89	-9,230.1	-1,694.7	503.1	174.5	328.61	1.531	
17,000.0	7,530.0	17,106.7	7,530.0	167.2	168.5	89.89	-9,330.1	-1,694.7	502.6	170.5	332.10	1.513	
17,100.0	7,530.0	17,206.6	7,530.0	169.0	170.3	89.89	-9,430.1	-1,694.7	502.1	166.5	335.60	1.496	Level 3
17,200.0	7,530.0	17,306.6	7,530.0	170.7	172.0	89.89	-9,530.1	-1,694.7	501.5	162.4	339.10	1.479	Level 3
17,300.0	7,530.0	17,406.6	7,530.0	172.4	173.7	89.89	-9,630.1	-1,694.7	501.0	158.4	342.60	1.462	Level 3
17,400.0	7,530.0	17,506.6	7,530.0	174.2	175.4	89.89	-9,730.1	-1,694.7	500.5	154.4	346.09	1.446	Level 3
17,472.7	7,530.0	17,579.3	7,530.0	175.4	176.7	89.89	-9,802.8	-1,694.7	500.1	151.5	348.64	1.434	Level 3
17,490.0	7,530.0	17,589.7	7,530.0	175.7	176.9	89.89	-9,813.2	-1,694.7	500.1	151.0	349.12	1.432	Level 3, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2

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	-87.93	0.4	-10.1	10.1				
100.0	100.0	101.0	101.0	0.2	0.2	-87.93	0.4	-10.1	10.1	9.8	0.31	33.007	
200.0	200.0	201.0	201.0	0.3	0.3	-87.93	0.4	-10.1	10.1	9.4	0.65	15.403	
232.0	232.0	233.0	233.0	0.4	0.4	-87.93	0.4	-10.1	10.1	9.3	0.77	13.157	CC
300.0	300.0	300.9	300.9	0.5	0.5	-87.65	0.4	-10.3	10.3	9.3	1.00	10.267	ES
400.0	400.0	400.7	400.7	0.7	0.7	-15.56	0.9	-12.0	11.2	9.8	1.35	8.270	
500.0	500.0	500.5	500.4	0.9	0.9	-15.46	1.8	-15.4	12.1	10.4	1.70	7.105	
600.0	599.9	600.3	600.1	1.0	1.1	-15.86	3.1	-20.4	13.0	11.0	2.05	6.345	
700.0	699.7	700.0	699.5	1.2	1.3	-16.64	4.9	-27.1	14.0	11.6	2.40	5.813	
800.0	799.4	799.8	799.0	1.4	1.5	-17.73	7.2	-35.5	14.9	12.2	2.76	5.419	
900.0	898.9	899.6	898.2	1.7	1.7	-19.07	9.9	-45.6	16.0	12.8	3.12	5.118	
1,000.0	998.3	999.3	997.1	1.9	2.0	-20.61	13.0	-57.3	17.0	13.5	3.49	4.876	
1,100.0	1,097.4	1,099.0	1,095.9	2.2	2.3	-22.30	16.6	-70.7	18.1	14.2	3.87	4.676	
1,200.0	1,196.3	1,198.7	1,194.3	2.5	2.6	-24.10	20.6	-85.8	19.3	15.0	4.27	4.504	
1,300.0	1,294.9	1,298.3	1,292.5	2.8	2.9	-25.98	25.1	-102.5	20.5	15.8	4.70	4.348	
1,315.9	1,310.6	1,314.2	1,308.1	2.9	3.0	-26.29	25.8	-105.3	20.7	15.9	4.78	4.325	
1,400.0	1,393.4	1,398.0	1,390.3	3.1	3.3	-27.18	30.0	-120.8	22.3	17.1	5.15	4.324	
1,500.0	1,491.8	1,497.7	1,487.9	3.5	3.6	-26.71	35.3	-140.7	25.6	20.0	5.57	4.591	
1,600.0	1,590.2	1,597.6	1,585.6	3.8	4.0	-26.06	40.8	-161.0	29.2	23.2	5.98	4.882	
1,700.0	1,688.7	1,697.5	1,683.3	4.2	4.4	-25.56	46.2	-181.2	32.8	26.4	6.39	5.136	
1,800.0	1,787.1	1,797.5	1,781.0	4.5	4.8	-25.15	51.6	-201.5	36.5	29.7	6.80	5.359	
1,900.0	1,885.5	1,897.4	1,878.7	4.8	5.2	-24.82	57.0	-221.8	40.1	32.9	7.22	5.556	
2,000.0	1,984.0	1,997.3	1,976.4	5.2	5.6	-24.55	62.5	-242.1	43.7	36.1	7.63	5.731	
2,100.0	2,082.4	2,097.3	2,074.1	5.5	6.0	-24.31	67.9	-262.4	47.4	39.3	8.05	5.888	
2,200.0	2,180.8	2,197.2	2,171.8	5.9	6.4	-24.11	73.3	-282.6	51.0	42.6	8.46	6.029	
2,300.0	2,279.3	2,297.1	2,269.5	6.2	6.8	-23.94	78.8	-302.9	54.7	45.8	8.88	6.157	
2,400.0	2,377.7	2,397.1	2,367.2	6.6	7.2	-23.79	84.2	-323.2	58.3	49.0	9.29	6.274	
2,500.0	2,476.1	2,497.0	2,464.9	6.9	7.6	-23.66	89.6	-343.5	62.0	52.2	9.71	6.380	
2,600.0	2,574.6	2,596.9	2,562.6	7.3	8.1	-23.54	95.0	-363.8	65.6	55.5	10.13	6.478	
2,700.0	2,673.0	2,696.9	2,660.3	7.7	8.5	-23.43	100.5	-384.0	69.2	58.7	10.54	6.567	
2,800.0	2,771.4	2,796.8	2,758.0	8.0	8.9	-23.33	105.9	-404.3	72.9	61.9	10.96	6.650	
2,900.0	2,869.8	2,896.7	2,855.7	8.4	9.3	-23.25	111.3	-424.6	76.5	65.1	11.38	6.727	
3,000.0	2,968.3	2,996.7	2,953.4	8.7	9.7	-23.17	116.8	-444.9	80.2	68.4	11.79	6.798	
3,100.0	3,066.7	3,096.6	3,051.1	9.1	10.1	-23.10	122.2	-465.2	83.8	71.6	12.21	6.864	
3,200.0	3,165.1	3,196.5	3,148.8	9.4	10.5	-23.03	127.6	-485.4	87.5	74.8	12.63	6.926	
3,300.0	3,263.6	3,296.5	3,246.5	9.8	10.9	-22.97	133.0	-505.7	91.1	78.1	13.04	6.984	
3,400.0	3,362.0	3,396.4	3,344.2	10.1	11.3	-22.91	138.5	-526.0	94.7	81.3	13.46	7.038	
3,500.0	3,460.4	3,496.3	3,441.9	10.5	11.7	-22.86	143.9	-546.3	98.4	84.5	13.88	7.089	
3,600.0	3,558.9	3,596.3	3,539.6	10.8	12.1	-22.81	149.3	-566.6	102.0	87.7	14.30	7.136	
3,700.0	3,657.3	3,696.2	3,637.3	11.2	12.6	-22.77	154.8	-586.8	105.7	91.0	14.72	7.181	
3,800.0	3,755.7	3,796.1	3,735.0	11.6	13.0	-22.73	160.2	-607.1	109.3	94.2	15.13	7.224	
3,900.0	3,854.2	3,896.1	3,832.7	11.9	13.4	-22.69	165.6	-627.4	113.0	97.4	15.55	7.264	
4,000.0	3,952.6	3,996.0	3,930.4	12.3	13.8	-22.65	171.0	-647.7	116.6	100.6	15.97	7.303	
4,100.0	4,051.0	4,095.9	4,028.2	12.6	14.2	-22.62	176.5	-668.0	120.3	103.9	16.39	7.339	
4,200.0	4,149.5	4,195.9	4,125.9	13.0	14.6	-22.59	181.9	-688.2	123.9	107.1	16.80	7.373	
4,300.0	4,247.9	4,295.8	4,223.6	13.3	15.0	-22.56	187.3	-708.5	127.5	110.3	17.22	7.406	
4,400.0	4,346.3	4,395.7	4,321.3	13.7	15.4	-22.53	192.8	-728.8	131.2	113.5	17.64	7.437	
4,500.0	4,444.8	4,495.7	4,419.0	14.1	15.8	-22.50	198.2	-749.1	134.8	116.8	18.06	7.467	
4,600.0	4,543.2	4,595.6	4,516.7	14.4	16.3	-22.47	203.6	-769.4	138.5	120.0	18.48	7.495	
4,700.0	4,641.6	4,695.5	4,614.4	14.8	16.7	-22.45	209.0	-789.6	142.1	123.2	18.89	7.522	
4,800.0	4,740.1	4,795.5	4,712.1	15.1	17.1	-22.43	214.5	-809.9	145.8	126.5	19.31	7.548	
4,900.0	4,838.5	4,895.4	4,809.8	15.5	17.5	-22.40	219.9	-830.2	149.4	129.7	19.73	7.573	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2

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
5,000.0	4,936.9	4,995.3	4,907.5	15.8	17.9	-22.38	225.3	-850.5	153.1	132.9	20.15	7.596	
5,100.0	5,035.4	5,095.3	5,005.2	16.2	18.3	-22.36	230.8	-870.8	156.7	136.1	20.57	7.619	
5,200.0	5,133.8	5,195.2	5,102.9	16.5	18.7	-22.34	236.2	-891.0	160.3	139.4	20.99	7.641	
5,300.0	5,232.2	5,295.1	5,200.6	16.9	19.1	-22.32	241.6	-911.3	164.0	142.6	21.40	7.662	
5,400.0	5,330.6	5,395.1	5,298.3	17.3	19.5	-22.31	247.0	-931.6	167.6	145.8	21.82	7.682	
5,500.0	5,429.1	5,495.0	5,396.0	17.6	20.0	-22.29	252.5	-951.9	171.3	149.0	22.24	7.701	
5,600.0	5,527.5	5,595.0	5,493.7	18.0	20.4	-22.27	257.9	-972.2	174.9	152.3	22.66	7.720	
5,700.0	5,625.9	5,694.9	5,591.4	18.3	20.8	-22.26	263.3	-992.4	178.6	155.5	23.08	7.738	
5,800.0	5,724.4	5,794.8	5,689.1	18.7	21.2	-22.24	268.8	-1,012.7	182.2	158.7	23.50	7.755	
5,900.0	5,822.8	5,894.8	5,786.8	19.0	21.6	-22.23	274.2	-1,033.0	185.9	161.9	23.91	7.772	
6,000.0	5,921.2	5,994.7	5,884.5	19.4	22.0	-22.22	279.6	-1,053.3	189.5	165.2	24.33	7.788	
6,100.0	6,019.7	6,094.6	5,982.2	19.8	22.4	-22.20	285.0	-1,073.6	193.2	168.4	24.75	7.804	
6,200.0	6,118.1	6,194.6	6,079.9	20.1	22.8	-22.19	290.5	-1,093.8	196.8	171.6	25.17	7.819	
6,300.0	6,216.5	6,294.5	6,177.6	20.5	23.3	-22.18	295.9	-1,114.1	200.4	174.9	25.59	7.834	
6,400.0	6,315.0	6,394.4	6,275.3	20.8	23.7	-22.17	301.3	-1,134.4	204.1	178.1	26.01	7.848	
6,500.0	6,413.4	6,494.4	6,373.0	21.2	24.1	-22.15	306.8	-1,154.7	207.7	181.3	26.42	7.861	
6,600.0	6,511.8	6,594.3	6,470.7	21.5	24.5	-22.14	312.2	-1,175.0	211.4	184.5	26.84	7.875	
6,700.0	6,610.3	6,694.2	6,568.4	21.9	24.9	-22.13	317.6	-1,195.2	215.0	187.8	27.26	7.887	
6,800.0	6,708.7	6,794.2	6,666.1	22.3	25.3	-22.12	323.0	-1,215.5	218.7	191.0	27.68	7.900	
6,877.3	6,784.8	6,871.4	6,741.7	22.5	25.6	-22.11	327.2	-1,231.2	221.5	193.5	28.00	7.909	
6,900.0	6,807.1	6,894.1	6,763.8	22.6	25.7	-11.98	328.5	-1,235.8	222.3	194.2	28.08	7.916	
6,950.0	6,856.4	6,943.9	6,812.6	22.8	25.9	11.84	331.2	-1,245.9	223.9	195.9	27.99	8.000	
7,000.0	6,905.5	6,993.4	6,861.0	22.9	26.1	32.48	333.9	-1,256.0	225.4	197.9	27.59	8.172	
7,050.0	6,954.3	7,042.4	6,908.8	23.0	26.3	48.00	336.5	-1,265.9	227.2	200.2	26.97	8.423	
7,100.0	7,002.4	7,090.5	6,955.8	23.1	26.5	59.76	339.1	-1,275.6	229.6	203.4	26.28	8.737	
7,150.0	7,049.6	7,137.5	7,001.8	23.2	26.7	69.26	341.7	-1,285.2	233.3	207.6	25.68	9.085	
7,200.0	7,095.7	7,184.6	7,047.9	23.3	26.9	77.47	344.0	-1,294.8	238.7	213.4	25.28	9.441	
7,250.0	7,140.5	7,234.8	7,097.0	23.4	27.1	84.67	343.8	-1,304.9	245.8	220.6	25.20	9.755	
7,300.0	7,183.7	7,286.6	7,147.6	23.5	27.3	90.92	339.8	-1,315.5	254.3	228.9	25.38	10.016	
7,350.0	7,225.2	7,340.3	7,199.6	23.5	27.5	96.41	331.8	-1,326.2	263.9	238.2	25.75	10.249	
7,400.0	7,264.8	7,396.0	7,252.7	23.6	27.6	101.28	319.3	-1,337.3	274.5	248.3	26.19	10.483	
7,450.0	7,302.2	7,453.9	7,306.7	23.7	27.8	105.60	301.9	-1,348.5	285.8	259.2	26.61	10.740	
7,500.0	7,337.3	7,514.1	7,361.3	23.7	27.9	109.46	279.1	-1,359.8	297.6	270.6	26.97	11.034	
7,550.0	7,369.8	7,576.8	7,415.9	23.8	28.0	112.89	250.4	-1,371.1	309.5	282.3	27.22	11.373	
7,600.0	7,399.7	7,642.2	7,470.0	23.9	28.2	115.94	215.5	-1,382.4	321.4	294.0	27.33	11.757	
7,650.0	7,426.8	7,710.4	7,522.9	24.0	28.3	118.63	173.9	-1,393.3	332.8	305.5	27.33	12.179	
7,700.0	7,451.0	7,781.5	7,573.6	24.2	28.4	120.98	125.3	-1,403.9	343.7	316.5	27.22	12.629	
7,750.0	7,472.1	7,855.4	7,621.0	24.3	28.6	123.00	69.5	-1,413.7	353.7	326.7	27.01	13.095	
7,800.0	7,490.1	7,932.0	7,664.0	24.5	28.8	124.71	6.7	-1,422.6	362.6	335.9	26.69	13.583	
7,850.0	7,504.8	8,011.2	7,701.3	24.7	29.0	126.11	-62.7	-1,430.4	370.1	343.7	26.44	13.996	
7,900.0	7,516.2	8,092.6	7,731.6	24.9	29.2	127.20	-138.0	-1,436.7	376.1	349.9	26.17	14.372	
7,950.0	7,524.2	8,175.8	7,753.6	25.1	29.5	127.98	-218.0	-1,441.2	380.3	354.4	25.94	14.663	
8,000.0	7,528.8	8,260.2	7,766.6	25.4	29.9	128.44	-301.3	-1,443.9	382.7	356.9	25.78	14.843	
8,042.0	7,530.0	8,331.3	7,770.0	25.6	30.2	128.59	-372.3	-1,444.6	383.2	357.4	25.73	14.892	
8,100.0	7,530.0	8,389.3	7,770.0	26.0	30.5	128.62	-430.2	-1,444.6	382.9	356.3	26.65	14.366	
8,200.0	7,530.0	8,489.3	7,770.0	26.6	31.0	128.67	-530.2	-1,444.6	382.5	354.1	28.39	13.476	
8,300.0	7,530.0	8,589.3	7,770.0	27.4	31.7	128.72	-630.2	-1,444.6	382.1	351.8	30.26	12.626	
8,400.0	7,530.0	8,689.3	7,770.0	28.3	32.4	128.77	-730.2	-1,444.6	381.7	349.4	32.26	11.832	
8,500.0	7,530.0	8,789.3	7,770.0	29.2	33.3	128.82	-830.2	-1,444.6	381.3	346.9	34.36	11.098	
8,600.0	7,530.0	8,889.3	7,770.0	30.2	34.1	128.87	-930.2	-1,444.6	380.9	344.3	36.53	10.425	
8,700.0	7,530.0	8,989.3	7,770.0	31.3	35.1	128.92	-1,030.2	-1,444.6	380.5	341.7	38.78	9.811	
8,800.0	7,530.0	9,089.3	7,770.0	32.4	36.1	128.97	-1,130.2	-1,444.6	380.1	339.0	41.08	9.252	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2

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
8,900.0	7,530.0	9,189.3	7,770.0	33.6	37.2	129.02	-1,230.2	-1,444.6	379.7	336.2	43.42	8.743	
9,000.0	7,530.0	9,289.3	7,770.0	34.9	38.3	129.06	-1,330.2	-1,444.6	379.2	333.4	45.81	8.279	
9,100.0	7,530.0	9,389.3	7,770.0	36.1	39.4	129.11	-1,430.2	-1,444.6	378.8	330.6	48.22	7.856	
9,200.0	7,530.0	9,489.3	7,770.0	37.5	40.6	129.16	-1,530.2	-1,444.6	378.4	327.8	50.66	7.470	
9,300.0	7,530.0	9,589.3	7,770.0	38.8	41.9	129.21	-1,630.2	-1,444.6	378.0	324.9	53.12	7.116	
9,400.0	7,530.0	9,689.3	7,770.0	40.2	43.2	129.27	-1,730.2	-1,444.6	377.6	322.0	55.60	6.791	
9,500.0	7,530.0	9,789.3	7,770.0	41.6	44.5	129.32	-1,830.2	-1,444.6	377.2	319.1	58.10	6.492	
9,600.0	7,530.0	9,889.3	7,770.0	43.1	45.8	129.37	-1,930.2	-1,444.6	376.8	316.2	60.61	6.217	
9,700.0	7,530.0	9,989.3	7,770.0	44.5	47.2	129.42	-2,030.2	-1,444.6	376.4	313.3	63.13	5.962	
9,800.0	7,530.0	10,089.3	7,770.0	46.0	48.6	129.47	-2,130.2	-1,444.6	376.0	310.3	65.66	5.726	
9,900.0	7,530.0	10,189.3	7,770.0	47.5	50.0	129.52	-2,230.2	-1,444.6	375.6	307.4	68.20	5.507	
10,000.0	7,530.0	10,289.3	7,770.0	49.0	51.5	129.57	-2,330.2	-1,444.6	375.2	304.5	70.75	5.303	
10,100.0	7,530.0	10,389.3	7,770.0	50.6	52.9	129.62	-2,430.2	-1,444.6	374.8	301.5	73.30	5.113	
10,200.0	7,530.0	10,489.3	7,770.0	52.1	54.4	129.67	-2,530.2	-1,444.6	374.4	298.5	75.85	4.936	
10,300.0	7,530.0	10,589.3	7,770.0	53.7	55.9	129.72	-2,630.2	-1,444.6	374.0	295.6	78.41	4.770	
10,400.0	7,530.0	10,689.3	7,770.0	55.2	57.4	129.77	-2,730.2	-1,444.6	373.6	292.6	80.97	4.614	
10,500.0	7,530.0	10,789.3	7,770.0	56.8	58.9	129.82	-2,830.2	-1,444.6	373.2	289.7	83.53	4.468	
10,600.0	7,530.0	10,889.3	7,770.0	58.4	60.5	129.88	-2,930.2	-1,444.6	372.8	286.7	86.10	4.330	
10,700.0	7,530.0	10,989.3	7,770.0	60.0	62.0	129.93	-3,030.2	-1,444.6	372.4	283.7	88.66	4.200	
10,800.0	7,530.0	11,089.3	7,770.0	61.6	63.6	129.98	-3,130.2	-1,444.6	372.0	280.8	91.23	4.078	
10,900.0	7,530.0	11,189.2	7,770.0	63.2	65.1	130.03	-3,230.2	-1,444.6	371.6	277.8	93.79	3.962	
11,000.0	7,530.0	11,289.2	7,770.0	64.9	66.7	130.08	-3,330.2	-1,444.6	371.2	274.8	96.36	3.852	
11,100.0	7,530.0	11,389.2	7,770.0	66.5	68.3	130.14	-3,430.2	-1,444.6	370.8	271.9	98.92	3.748	
11,200.0	7,530.0	11,489.2	7,770.0	68.1	69.9	130.19	-3,530.2	-1,444.6	370.4	268.9	101.49	3.650	
11,300.0	7,530.0	11,589.2	7,770.0	69.8	71.5	130.24	-3,630.2	-1,444.6	370.0	265.9	104.05	3.556	
11,400.0	7,530.0	11,689.2	7,770.0	71.4	73.1	130.29	-3,730.2	-1,444.6	369.6	263.0	106.61	3.467	
11,500.0	7,530.0	11,789.2	7,770.0	73.1	74.7	130.35	-3,830.2	-1,444.6	369.2	260.0	109.17	3.382	
11,600.0	7,530.0	11,889.2	7,770.0	74.7	76.3	130.40	-3,930.2	-1,444.6	368.8	257.1	111.73	3.301	
11,700.0	7,530.0	11,989.2	7,770.0	76.4	78.0	130.45	-4,030.2	-1,444.6	368.4	254.1	114.28	3.223	
11,800.0	7,530.0	12,089.2	7,770.0	78.1	79.6	130.50	-4,130.2	-1,444.6	368.0	251.1	116.84	3.150	
11,900.0	7,530.0	12,189.2	7,770.0	79.7	81.2	130.56	-4,230.2	-1,444.6	367.6	248.2	119.39	3.079	
12,000.0	7,530.0	12,289.2	7,770.0	81.4	82.9	130.61	-4,330.2	-1,444.6	367.2	245.2	121.94	3.011	
12,100.0	7,530.0	12,389.2	7,770.0	83.1	84.5	130.66	-4,430.2	-1,444.6	366.8	242.3	124.48	2.947	
12,200.0	7,530.0	12,489.2	7,770.0	84.8	86.2	130.72	-4,530.2	-1,444.6	366.4	239.4	127.03	2.884	
12,300.0	7,530.0	12,589.2	7,770.0	86.5	87.8	130.77	-4,630.2	-1,444.6	366.0	236.4	129.57	2.825	
12,400.0	7,530.0	12,689.2	7,770.0	88.1	89.5	130.82	-4,730.2	-1,444.6	365.6	233.5	132.10	2.768	
12,500.0	7,530.0	12,789.2	7,770.0	89.8	91.1	130.88	-4,830.2	-1,444.6	365.2	230.6	134.64	2.713	
12,600.0	7,530.0	12,889.2	7,770.0	91.5	92.8	130.93	-4,930.2	-1,444.6	364.8	227.6	137.17	2.660	
12,700.0	7,530.0	12,989.2	7,770.0	93.2	94.5	130.98	-5,030.2	-1,444.6	364.4	224.7	139.69	2.609	
12,800.0	7,530.0	13,089.2	7,770.0	94.9	96.2	131.04	-5,130.2	-1,444.6	364.0	221.8	142.22	2.560	
12,900.0	7,530.0	13,189.2	7,770.0	96.6	97.8	131.09	-5,230.2	-1,444.6	363.6	218.9	144.74	2.512	
13,000.0	7,530.0	13,289.2	7,770.0	98.3	99.5	131.15	-5,330.2	-1,444.6	363.2	216.0	147.25	2.467	
13,100.0	7,530.0	13,389.2	7,770.0	100.0	101.2	131.20	-5,430.2	-1,444.6	362.8	213.1	149.77	2.423	
13,200.0	7,530.0	13,489.2	7,770.0	101.7	102.9	131.26	-5,530.2	-1,444.6	362.4	210.2	152.28	2.380	
13,300.0	7,530.0	13,589.2	7,770.0	103.4	104.6	131.31	-5,630.2	-1,444.6	362.0	207.3	154.78	2.339	
13,400.0	7,530.0	13,689.2	7,770.0	105.1	106.2	131.37	-5,730.2	-1,444.6	361.7	204.4	157.28	2.299	
13,500.0	7,530.0	13,789.2	7,770.0	106.8	107.9	131.42	-5,830.2	-1,444.6	361.3	201.5	159.78	2.261	
13,600.0	7,530.0	13,889.2	7,770.0	108.5	109.6	131.48	-5,930.2	-1,444.6	360.9	198.6	162.27	2.224	
13,700.0	7,530.0	13,989.2	7,770.0	110.3	111.3	131.53	-6,030.1	-1,444.6	360.5	195.7	164.76	2.188	
13,800.0	7,530.0	14,089.2	7,770.0	112.0	113.0	131.59	-6,130.1	-1,444.6	360.1	192.8	167.25	2.153	
13,900.0	7,530.0	14,189.2	7,770.0	113.7	114.7	131.64	-6,230.1	-1,444.6	359.7	190.0	169.73	2.119	
14,000.0	7,530.0	14,289.2	7,770.0	115.4	116.4	131.70	-6,330.1	-1,444.6	359.3	187.1	172.20	2.086	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1B-7H-A168 - HZ - Plan #2

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
14,100.0	7,530.0	14,389.2	7,770.0	117.1	118.1	131.75	-6,430.1	-1,444.6	358.9	184.2	174.68	2.055	
14,200.0	7,530.0	14,489.2	7,770.0	118.8	119.8	131.81	-6,530.1	-1,444.6	358.5	181.4	177.14	2.024	
14,300.0	7,530.0	14,589.2	7,770.0	120.6	121.5	131.86	-6,630.1	-1,444.6	358.1	178.5	179.61	1.994	
14,400.0	7,530.0	14,689.2	7,770.0	122.3	123.2	131.92	-6,730.1	-1,444.6	357.7	175.7	182.07	1.965	
14,500.0	7,530.0	14,789.2	7,770.0	124.0	124.9	131.98	-6,830.1	-1,444.6	357.4	172.8	184.52	1.937	
14,600.0	7,530.0	14,889.2	7,770.0	125.7	126.6	132.03	-6,930.1	-1,444.6	357.0	170.0	186.97	1.909	
14,700.0	7,530.0	14,989.2	7,770.0	127.4	128.3	132.09	-7,030.1	-1,444.6	356.6	167.2	189.42	1.882	
14,800.0	7,530.0	15,089.2	7,770.0	129.2	130.1	132.14	-7,130.1	-1,444.6	356.2	164.3	191.86	1.856	
14,900.0	7,530.0	15,189.2	7,770.0	130.9	131.8	132.20	-7,230.1	-1,444.6	355.8	161.5	194.30	1.831	
15,000.0	7,530.0	15,289.2	7,770.0	132.6	133.5	132.26	-7,330.1	-1,444.6	355.4	158.7	196.73	1.807	
15,100.0	7,530.0	15,389.2	7,770.0	134.3	135.2	132.31	-7,430.1	-1,444.6	355.0	155.9	199.15	1.783	
15,200.0	7,530.0	15,489.2	7,770.0	136.1	136.9	132.37	-7,530.1	-1,444.6	354.6	153.1	201.58	1.759	
15,300.0	7,530.0	15,589.2	7,770.0	137.8	138.6	132.43	-7,630.1	-1,444.6	354.2	150.3	203.99	1.737	
15,400.0	7,530.0	15,689.2	7,770.0	139.5	140.3	132.49	-7,730.1	-1,444.6	353.9	147.5	206.41	1.714	
15,500.0	7,530.0	15,789.2	7,770.0	141.2	142.1	132.54	-7,830.1	-1,444.6	353.5	144.7	208.81	1.693	
15,600.0	7,530.0	15,889.2	7,770.0	143.0	143.8	132.60	-7,930.1	-1,444.6	353.1	141.9	211.22	1.672	
15,700.0	7,530.0	15,989.2	7,770.0	144.7	145.5	132.66	-8,030.1	-1,444.6	352.7	139.1	213.61	1.651	
15,800.0	7,530.0	16,089.2	7,770.0	146.4	147.2	132.72	-8,130.1	-1,444.6	352.3	136.3	216.01	1.631	
15,900.0	7,530.0	16,189.2	7,770.0	148.2	148.9	132.77	-8,230.1	-1,444.6	351.9	133.5	218.39	1.611	
16,000.0	7,530.0	16,289.2	7,770.0	149.9	150.7	132.83	-8,330.1	-1,444.6	351.6	130.8	220.78	1.592	
16,100.0	7,530.0	16,389.2	7,770.0	151.6	152.4	132.89	-8,430.1	-1,444.6	351.2	128.0	223.15	1.574	
16,200.0	7,530.0	16,489.2	7,770.0	153.4	154.1	132.95	-8,530.1	-1,444.6	350.8	125.3	225.53	1.555	
16,300.0	7,530.0	16,589.2	7,770.0	155.1	155.8	133.01	-8,630.1	-1,444.6	350.4	122.5	227.89	1.538	
16,400.0	7,530.0	16,689.2	7,770.0	156.8	157.5	133.06	-8,730.1	-1,444.6	350.0	119.8	230.25	1.520	
16,500.0	7,530.0	16,789.2	7,770.0	158.6	159.3	133.12	-8,830.1	-1,444.6	349.6	117.0	232.61	1.503	
16,600.0	7,530.0	16,889.2	7,770.0	160.3	161.0	133.18	-8,930.1	-1,444.6	349.3	114.3	234.96	1.486	Level 3
16,700.0	7,530.0	16,989.2	7,770.0	162.0	162.7	133.24	-9,030.1	-1,444.6	348.9	111.6	237.31	1.470	Level 3
16,800.0	7,530.0	17,089.2	7,770.0	163.8	164.5	133.30	-9,130.1	-1,444.6	348.5	108.8	239.65	1.454	Level 3
16,900.0	7,530.0	17,189.2	7,770.0	165.5	166.2	133.36	-9,230.1	-1,444.6	348.1	106.1	241.98	1.439	Level 3
17,000.0	7,530.0	17,289.2	7,770.0	167.2	167.9	133.42	-9,330.1	-1,444.6	347.7	103.4	244.31	1.423	Level 3
17,100.0	7,530.0	17,389.2	7,770.0	169.0	169.6	133.48	-9,430.1	-1,444.6	347.4	100.7	246.64	1.408	Level 3
17,200.0	7,530.0	17,489.2	7,770.0	170.7	171.4	133.54	-9,530.1	-1,444.6	347.0	98.0	248.96	1.394	Level 3
17,300.0	7,530.0	17,589.2	7,770.0	172.4	173.1	133.60	-9,630.1	-1,444.6	346.6	95.3	251.27	1.379	Level 3
17,400.0	7,530.0	17,689.2	7,770.0	174.2	174.8	133.66	-9,730.1	-1,444.6	346.2	92.6	253.58	1.365	Level 3
17,474.0	7,530.0	17,763.1	7,770.0	175.5	176.1	133.70	-9,804.1	-1,444.6	345.9	90.6	255.28	1.355	Level 3
17,490.0	7,530.0	17,775.9	7,770.0	175.7	176.3	133.71	-9,816.8	-1,444.6	345.9	90.3	255.62	1.353	Level 3, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1D-7H-A168 - HZ - Plan #2

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	9.8	9.8				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	9.8	9.8	9.5	0.30	32.254	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	9.8	9.8	9.1	0.65	15.006	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	9.8	9.8	8.8	1.00	9.777	CC, ES
400.0	400.0	400.1	400.1	0.7	0.7	162.45	0.1	9.6	10.4	9.1	1.35	7.714	
500.0	500.0	500.3	500.2	0.9	0.9	163.31	0.7	8.0	11.3	9.6	1.70	6.635	
600.0	599.9	600.4	600.4	1.0	1.0	163.61	2.0	4.7	12.2	10.1	2.05	5.937	
700.0	699.7	700.6	700.4	1.2	1.2	163.45	4.0	-0.2	13.1	10.7	2.40	5.449	
800.0	799.4	800.9	800.4	1.4	1.4	162.92	6.6	-6.7	14.0	11.3	2.76	5.091	
900.0	898.9	901.1	900.2	1.7	1.6	162.11	9.9	-14.8	15.0	11.9	3.12	4.816	
1,000.0	998.3	1,001.3	999.9	1.9	1.9	161.06	13.8	-24.5	16.0	12.5	3.49	4.597	
1,100.0	1,097.4	1,101.6	1,099.5	2.2	2.1	159.83	18.3	-35.9	17.1	13.2	3.86	4.417	
1,200.0	1,196.3	1,201.8	1,198.7	2.5	2.4	158.48	23.5	-48.9	18.2	13.9	4.26	4.268	
1,300.0	1,294.9	1,301.8	1,297.6	2.8	2.7	158.43	28.9	-62.3	20.4	15.7	4.65	4.378	
1,315.9	1,310.6	1,317.7	1,313.4	2.9	2.7	158.58	29.8	-64.5	20.9	16.1	4.71	4.428	
1,400.0	1,393.4	1,401.8	1,396.5	3.1	3.0	159.40	34.3	-75.8	23.6	18.6	5.03	4.689	
1,500.0	1,491.8	1,501.7	1,495.4	3.5	3.3	160.16	39.7	-89.3	26.8	21.4	5.41	4.961	
1,600.0	1,590.2	1,601.6	1,594.3	3.8	3.6	160.75	45.1	-102.8	30.1	24.3	5.79	5.197	
1,700.0	1,688.7	1,701.6	1,693.2	4.2	3.9	161.23	50.5	-116.3	33.4	27.2	6.17	5.404	
1,800.0	1,787.1	1,801.5	1,792.0	4.5	4.2	161.62	55.9	-129.7	36.6	30.1	6.56	5.588	
1,900.0	1,885.5	1,901.5	1,890.9	4.8	4.5	161.95	61.3	-143.2	39.9	33.0	6.94	5.751	
2,000.0	1,984.0	2,001.4	1,989.8	5.2	4.8	162.22	66.7	-156.7	43.2	35.9	7.32	5.898	
2,100.0	2,082.4	2,101.4	2,088.7	5.5	5.1	162.46	72.1	-170.2	46.4	38.7	7.70	6.030	
2,200.0	2,180.8	2,201.3	2,187.6	5.9	5.4	162.67	77.5	-183.7	49.7	41.6	8.08	6.149	
2,300.0	2,279.3	2,301.3	2,286.5	6.2	5.7	162.85	83.0	-197.1	53.0	44.5	8.47	6.258	
2,400.0	2,377.7	2,401.2	2,385.4	6.6	6.0	163.01	88.4	-210.6	56.2	47.4	8.85	6.357	
2,500.0	2,476.1	2,501.2	2,484.2	6.9	6.3	163.16	93.8	-224.1	59.5	50.3	9.23	6.449	
2,600.0	2,574.6	2,601.1	2,583.1	7.3	6.6	163.28	99.2	-237.6	62.8	53.2	9.61	6.533	
2,700.0	2,673.0	2,701.1	2,682.0	7.7	6.9	163.40	104.6	-251.0	66.1	56.1	9.99	6.610	
2,800.0	2,771.4	2,801.0	2,780.9	8.0	7.2	163.50	110.0	-264.5	69.3	59.0	10.38	6.682	
2,900.0	2,869.8	2,901.0	2,879.8	8.4	7.5	163.60	115.4	-278.0	72.6	61.8	10.76	6.749	
3,000.0	2,968.3	3,000.9	2,978.7	8.7	7.8	163.69	120.8	-291.5	75.9	64.7	11.14	6.811	
3,100.0	3,066.7	3,100.8	3,077.6	9.1	8.1	163.77	126.2	-305.0	79.2	67.6	11.52	6.869	
3,200.0	3,165.1	3,200.8	3,176.4	9.4	8.4	163.84	131.6	-318.4	82.4	70.5	11.91	6.923	
3,300.0	3,263.6	3,300.7	3,275.3	9.8	8.7	163.91	137.0	-331.9	85.7	73.4	12.29	6.974	
3,400.0	3,362.0	3,400.7	3,374.2	10.1	9.1	163.97	142.4	-345.4	89.0	76.3	12.67	7.022	
3,500.0	3,460.4	3,500.6	3,473.1	10.5	9.4	164.03	147.8	-358.9	92.2	79.2	13.05	7.067	
3,600.0	3,558.9	3,600.6	3,572.0	10.8	9.7	164.08	153.2	-372.4	95.5	82.1	13.44	7.109	
3,700.0	3,657.3	3,700.5	3,670.9	11.2	10.0	164.13	158.6	-385.8	98.8	85.0	13.82	7.150	
3,800.0	3,755.7	3,800.5	3,769.8	11.6	10.3	164.18	164.0	-399.3	102.1	87.9	14.20	7.188	
3,900.0	3,854.2	3,900.4	3,868.6	11.9	10.6	164.23	169.4	-412.8	105.3	90.8	14.58	7.224	
4,000.0	3,952.6	4,000.4	3,967.5	12.3	10.9	164.27	174.8	-426.3	108.6	93.6	14.96	7.258	
4,100.0	4,051.0	4,100.3	4,066.4	12.6	11.2	164.31	180.2	-439.8	111.9	96.5	15.35	7.290	
4,200.0	4,149.5	4,200.3	4,165.3	13.0	11.5	164.34	185.6	-453.2	115.2	99.4	15.73	7.321	
4,300.0	4,247.9	4,300.2	4,264.2	13.3	11.8	164.38	191.0	-466.7	118.4	102.3	16.11	7.350	
4,400.0	4,346.3	4,400.1	4,363.1	13.7	12.1	164.41	196.4	-480.2	121.7	105.2	16.49	7.378	
4,500.0	4,444.8	4,500.1	4,462.0	14.1	12.4	164.44	201.8	-493.7	125.0	108.1	16.88	7.405	
4,600.0	4,543.2	4,600.0	4,560.8	14.4	12.8	164.47	207.2	-507.2	128.3	111.0	17.26	7.431	
4,700.0	4,641.6	4,700.0	4,659.7	14.8	13.1	164.50	212.6	-520.6	131.5	113.9	17.64	7.455	
4,800.0	4,740.1	4,799.9	4,758.6	15.1	13.4	164.53	218.0	-534.1	134.8	116.8	18.02	7.479	
4,900.0	4,838.5	4,899.9	4,857.5	15.5	13.7	164.55	223.4	-547.6	138.1	119.7	18.41	7.501	
5,000.0	4,936.9	4,999.8	4,956.4	15.8	14.0	164.58	228.8	-561.1	141.3	122.6	18.79	7.523	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1D-7H-A168 - HZ - Plan #2

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
5,100.0	5,035.4	5,099.8	5,055.3	16.2	14.3	164.60	234.3	-574.6	144.6	125.5	19.17	7.543	
5,200.0	5,133.8	5,199.7	5,154.2	16.5	14.6	164.62	239.7	-588.0	147.9	128.3	19.55	7.563	
5,300.0	5,232.2	5,299.7	5,253.0	16.9	14.9	164.65	245.1	-601.5	151.2	131.2	19.94	7.582	
5,400.0	5,330.6	5,399.6	5,351.9	17.3	15.2	164.67	250.5	-615.0	154.4	134.1	20.32	7.601	
5,500.0	5,429.1	5,499.6	5,450.8	17.6	15.5	164.69	255.9	-628.5	157.7	137.0	20.70	7.618	
5,600.0	5,527.5	5,599.5	5,549.7	18.0	15.8	164.71	261.3	-642.0	161.0	139.9	21.08	7.636	
5,700.0	5,625.9	5,699.5	5,648.6	18.3	16.1	164.72	266.7	-655.4	164.3	142.8	21.47	7.652	
5,800.0	5,724.4	5,799.4	5,747.5	18.7	16.5	164.74	272.1	-668.9	167.5	145.7	21.85	7.668	
5,900.0	5,822.8	5,899.3	5,846.4	19.0	16.8	164.76	277.5	-682.4	170.8	148.6	22.23	7.683	
6,000.0	5,921.2	5,999.3	5,945.2	19.4	17.1	164.77	282.9	-695.9	174.1	151.5	22.61	7.698	
6,100.0	6,019.7	6,099.2	6,044.1	19.8	17.4	164.79	288.3	-709.4	177.4	154.4	23.00	7.712	
6,200.0	6,118.1	6,199.2	6,143.0	20.1	17.7	164.80	293.7	-722.8	180.6	157.3	23.38	7.726	
6,300.0	6,216.5	6,299.1	6,241.9	20.5	18.0	164.82	299.1	-736.3	183.9	160.1	23.76	7.740	
6,400.0	6,315.0	6,399.1	6,340.8	20.8	18.3	164.83	304.5	-749.8	187.2	163.0	24.14	7.753	
6,500.0	6,413.4	6,499.0	6,439.7	21.2	18.6	164.85	309.9	-763.3	190.5	165.9	24.53	7.765	
6,600.0	6,511.8	6,599.0	6,538.6	21.5	18.9	164.86	315.3	-776.8	193.7	168.8	24.91	7.777	
6,700.0	6,610.3	6,698.9	6,637.4	21.9	19.2	164.87	320.7	-790.2	197.0	171.7	25.29	7.789	
6,800.0	6,708.7	6,798.9	6,736.3	22.3	19.5	164.88	326.1	-803.7	200.3	174.6	25.68	7.801	
6,877.3	6,784.8	6,876.1	6,812.8	22.5	19.8	164.89	330.3	-814.1	202.8	176.8	25.97	7.809	
6,900.0	6,807.1	6,898.8	6,835.2	22.6	19.9	174.96	331.5	-817.2	203.5	177.5	26.06	7.809	
6,950.0	6,856.4	6,948.7	6,884.5	22.8	20.0	-162.75	334.2	-823.9	205.0	178.6	26.41	7.764	
7,000.0	6,905.5	6,998.2	6,933.5	22.9	20.2	-145.42	336.9	-830.6	206.5	179.6	26.95	7.662	
7,050.0	6,954.3	7,047.1	6,981.9	23.0	20.3	-134.86	339.5	-837.2	208.4	180.7	27.70	7.522	
7,100.0	7,002.4	7,095.4	7,029.8	23.1	20.5	-129.47	342.1	-843.7	211.0	182.4	28.62	7.373	
7,150.0	7,049.6	7,145.2	7,079.1	23.2	20.6	-127.11	342.5	-850.4	214.7	185.1	29.53	7.269	
7,200.0	7,095.7	7,196.1	7,129.4	23.3	20.7	-126.37	339.4	-857.3	219.2	188.9	30.28	7.240	
7,250.0	7,140.5	7,248.2	7,180.5	23.4	20.8	-126.59	332.4	-864.3	224.6	193.8	30.82	7.289	
7,300.0	7,183.7	7,301.5	7,232.2	23.5	20.9	-127.38	321.5	-871.3	230.7	199.6	31.11	7.415	
7,350.0	7,225.2	7,356.1	7,284.1	23.5	21.0	-128.49	306.2	-878.4	237.4	206.2	31.15	7.620	
7,400.0	7,264.8	7,412.1	7,336.0	23.6	21.0	-129.76	286.5	-885.5	244.5	213.6	30.94	7.903	
7,450.0	7,302.2	7,469.4	7,387.5	23.7	21.1	-131.10	262.2	-892.5	251.9	221.5	30.49	8.264	
7,500.0	7,337.3	7,528.2	7,438.0	23.7	21.1	-132.44	232.9	-899.4	259.5	229.7	29.83	8.699	
7,550.0	7,369.8	7,588.6	7,487.2	23.8	21.2	-133.72	198.7	-906.1	267.1	238.1	29.00	9.207	
7,600.0	7,399.7	7,650.3	7,534.5	23.9	21.2	-134.93	159.5	-912.5	274.5	246.4	28.06	9.780	
7,650.0	7,426.8	7,713.6	7,579.2	24.0	21.3	-136.03	115.2	-918.6	281.5	254.5	27.06	10.405	
7,700.0	7,451.0	7,778.3	7,620.8	24.2	21.4	-137.02	65.9	-924.3	288.2	262.1	26.07	11.055	
7,750.0	7,472.1	7,844.4	7,658.5	24.3	21.5	-137.89	12.0	-929.4	294.2	269.1	25.19	11.683	
7,800.0	7,490.1	7,911.7	7,691.7	24.5	21.7	-138.61	-46.4	-933.9	299.6	275.1	24.48	12.241	
7,850.0	7,504.8	7,980.1	7,719.7	24.7	21.9	-139.20	-108.7	-937.8	304.2	280.1	24.03	12.656	
7,900.0	7,516.2	8,049.5	7,742.0	24.9	22.1	-139.65	-174.3	-940.8	307.8	283.9	23.93	12.864	
7,950.0	7,524.2	8,119.6	7,758.0	25.1	22.5	-139.95	-242.4	-943.0	310.5	286.3	24.23	12.814	
8,000.0	7,528.8	8,190.2	7,767.4	25.4	22.8	-140.10	-312.3	-944.3	312.2	287.2	24.95	12.510	
8,042.0	7,530.0	8,249.7	7,770.0	25.6	23.2	-140.12	-371.8	-944.6	312.8	286.9	25.88	12.086	
8,100.0	7,530.0	8,308.1	7,770.0	26.0	23.6	-140.08	-430.2	-944.6	313.0	286.4	26.60	11.767	
8,200.0	7,530.0	8,408.1	7,770.0	26.6	24.3	-140.00	-530.2	-944.6	313.3	285.4	27.93	11.216	
8,300.0	7,530.0	8,508.1	7,770.0	27.4	25.2	-139.93	-630.2	-944.6	313.6	284.2	29.39	10.672	
8,400.0	7,530.0	8,608.1	7,770.0	28.3	26.1	-139.86	-730.2	-944.6	314.0	283.0	30.95	10.144	
8,500.0	7,530.0	8,708.1	7,770.0	29.2	27.1	-139.78	-830.2	-944.6	314.3	281.7	32.61	9.639	
8,600.0	7,530.0	8,808.1	7,770.0	30.2	28.2	-139.71	-930.2	-944.6	314.6	280.3	34.34	9.162	
8,700.0	7,530.0	8,908.1	7,770.0	31.3	29.3	-139.64	-1,030.2	-944.6	315.0	278.8	36.15	8.714	
8,800.0	7,530.0	9,008.1	7,770.0	32.4	30.6	-139.57	-1,130.2	-944.6	315.3	277.3	38.01	8.295	
8,900.0	7,530.0	9,108.1	7,770.0	33.6	31.8	-139.49	-1,230.2	-944.6	315.7	275.7	39.93	7.905	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1D-7H-A168 - HZ - Plan #2

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
9,000.0	7,530.0	9,208.1	7,770.0	34.9	33.1	-139.42	-1,330.2	-944.6	316.0	274.1	41.90	7.542	
9,100.0	7,530.0	9,308.1	7,770.0	36.1	34.5	-139.35	-1,430.2	-944.6	316.3	272.4	43.90	7.205	
9,200.0	7,530.0	9,408.1	7,770.0	37.5	35.8	-139.28	-1,530.2	-944.6	316.7	270.7	45.95	6.892	
9,300.0	7,530.0	9,508.1	7,770.0	38.8	37.3	-139.21	-1,630.2	-944.6	317.0	269.0	48.03	6.601	
9,400.0	7,530.0	9,608.1	7,770.0	40.2	38.7	-139.13	-1,730.2	-944.6	317.4	267.2	50.14	6.330	
9,500.0	7,530.0	9,708.1	7,770.0	41.6	40.2	-139.06	-1,830.2	-944.6	317.7	265.4	52.27	6.078	
9,600.0	7,530.0	9,808.1	7,770.0	43.1	41.7	-138.99	-1,930.2	-944.6	318.0	263.6	54.43	5.843	
9,700.0	7,530.0	9,908.1	7,770.0	44.5	43.2	-138.92	-2,030.2	-944.6	318.4	261.8	56.62	5.623	
9,800.0	7,530.0	10,008.1	7,770.0	46.0	44.7	-138.85	-2,130.2	-944.6	318.7	259.9	58.82	5.419	
9,900.0	7,530.0	10,108.1	7,770.0	47.5	46.2	-138.78	-2,230.2	-944.6	319.1	258.0	61.05	5.227	
10,000.0	7,530.0	10,208.1	7,770.0	49.0	47.8	-138.71	-2,330.2	-944.6	319.4	256.1	63.29	5.047	
10,100.0	7,530.0	10,308.1	7,770.0	50.6	49.4	-138.64	-2,430.2	-944.6	319.8	254.2	65.55	4.878	
10,200.0	7,530.0	10,408.1	7,770.0	52.1	50.9	-138.57	-2,530.2	-944.6	320.1	252.3	67.83	4.720	
10,300.0	7,530.0	10,508.1	7,770.0	53.7	52.5	-138.50	-2,630.2	-944.6	320.5	250.3	70.12	4.570	
10,400.0	7,530.0	10,608.1	7,770.0	55.2	54.1	-138.43	-2,730.2	-944.6	320.8	248.4	72.42	4.430	
10,500.0	7,530.0	10,708.1	7,770.0	56.8	55.8	-138.36	-2,830.2	-944.6	321.2	246.4	74.74	4.297	
10,600.0	7,530.0	10,808.1	7,770.0	58.4	57.4	-138.29	-2,930.2	-944.6	321.5	244.4	77.07	4.172	
10,700.0	7,530.0	10,908.1	7,770.0	60.0	59.0	-138.22	-3,030.2	-944.6	321.9	242.4	79.41	4.053	
10,800.0	7,530.0	11,008.1	7,770.0	61.6	60.6	-138.15	-3,130.2	-944.6	322.2	240.4	81.77	3.941	
10,900.0	7,530.0	11,108.1	7,770.0	63.2	62.3	-138.08	-3,230.2	-944.6	322.6	238.4	84.13	3.834	
11,000.0	7,530.0	11,208.1	7,770.0	64.9	63.9	-138.01	-3,330.2	-944.6	322.9	236.4	86.51	3.733	
11,100.0	7,530.0	11,308.1	7,770.0	66.5	65.6	-137.94	-3,430.2	-944.6	323.3	234.4	88.89	3.637	
11,200.0	7,530.0	11,408.1	7,770.0	68.1	67.2	-137.87	-3,530.2	-944.6	323.6	232.3	91.29	3.545	
11,300.0	7,530.0	11,508.1	7,770.0	69.8	68.9	-137.80	-3,630.2	-944.6	324.0	230.3	93.69	3.458	
11,400.0	7,530.0	11,608.1	7,770.0	71.4	70.6	-137.73	-3,730.2	-944.6	324.3	228.2	96.11	3.374	
11,500.0	7,530.0	11,708.1	7,770.0	73.1	72.2	-137.67	-3,830.2	-944.6	324.7	226.1	98.53	3.295	
11,600.0	7,530.0	11,808.1	7,770.0	74.7	73.9	-137.60	-3,930.2	-944.6	325.0	224.1	100.96	3.219	
11,700.0	7,530.0	11,908.1	7,770.0	76.4	75.6	-137.53	-4,030.2	-944.6	325.4	222.0	103.40	3.147	
11,800.0	7,530.0	12,008.1	7,770.0	78.1	77.3	-137.46	-4,130.2	-944.6	325.7	219.9	105.85	3.077	
11,900.0	7,530.0	12,108.1	7,770.0	79.7	79.0	-137.39	-4,230.2	-944.6	326.1	217.8	108.31	3.011	
12,000.0	7,530.0	12,208.1	7,770.0	81.4	80.7	-137.33	-4,330.2	-944.6	326.4	215.7	110.78	2.947	
12,100.0	7,530.0	12,308.1	7,770.0	83.1	82.4	-137.26	-4,430.2	-944.6	326.8	213.5	113.25	2.886	
12,200.0	7,530.0	12,408.1	7,770.0	84.8	84.0	-137.19	-4,530.2	-944.6	327.1	211.4	115.73	2.827	
12,300.0	7,530.0	12,508.1	7,770.0	86.5	85.7	-137.12	-4,630.2	-944.6	327.5	209.3	118.22	2.770	
12,400.0	7,530.0	12,608.1	7,770.0	88.1	87.4	-137.06	-4,730.2	-944.6	327.9	207.1	120.71	2.716	
12,500.0	7,530.0	12,708.1	7,770.0	89.8	89.1	-136.99	-4,830.2	-944.6	328.2	205.0	123.22	2.664	
12,600.0	7,530.0	12,808.1	7,770.0	91.5	90.8	-136.92	-4,930.2	-944.6	328.6	202.8	125.73	2.613	
12,700.0	7,530.0	12,908.1	7,770.0	93.2	92.5	-136.86	-5,030.2	-944.6	328.9	200.7	128.24	2.565	
12,800.0	7,530.0	13,008.1	7,770.0	94.9	94.3	-136.79	-5,130.2	-944.6	329.3	198.5	130.76	2.518	
12,900.0	7,530.0	13,108.1	7,770.0	96.6	96.0	-136.72	-5,230.2	-944.6	329.6	196.4	133.29	2.473	
13,000.0	7,530.0	13,208.1	7,770.0	98.3	97.7	-136.66	-5,330.2	-944.6	330.0	194.2	135.83	2.430	
13,100.0	7,530.0	13,308.1	7,770.0	100.0	99.4	-136.59	-5,430.2	-944.6	330.4	192.0	138.37	2.387	
13,200.0	7,530.0	13,408.1	7,770.0	101.7	101.1	-136.53	-5,530.2	-944.6	330.7	189.8	140.92	2.347	
13,300.0	7,530.0	13,508.1	7,770.0	103.4	102.8	-136.46	-5,630.2	-944.6	331.1	187.6	143.48	2.308	
13,400.0	7,530.0	13,608.1	7,770.0	105.1	104.5	-136.39	-5,730.2	-944.6	331.4	185.4	146.04	2.270	
13,500.0	7,530.0	13,708.1	7,770.0	106.8	106.2	-136.33	-5,830.2	-944.6	331.8	183.2	148.61	2.233	
13,600.0	7,530.0	13,808.1	7,770.0	108.5	108.0	-136.26	-5,930.2	-944.6	332.2	181.0	151.18	2.197	
13,700.0	7,530.0	13,908.1	7,770.0	110.3	109.7	-136.20	-6,030.1	-944.6	332.5	178.8	153.76	2.163	
13,800.0	7,530.0	14,008.1	7,770.0	112.0	111.4	-136.13	-6,130.1	-944.6	332.9	176.5	156.35	2.129	
13,900.0	7,530.0	14,108.1	7,770.0	113.7	113.1	-136.07	-6,230.1	-944.6	333.3	174.3	158.94	2.097	
14,000.0	7,530.0	14,208.1	7,770.0	115.4	114.8	-136.00	-6,330.1	-944.6	333.6	172.1	161.54	2.065	
14,100.0	7,530.0	14,308.1	7,770.0	117.1	116.6	-135.94	-6,430.1	-944.6	334.0	169.8	164.15	2.035	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1D-7H-A168 - HZ - Plan #2

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
14,200.0	7,530.0	14,408.0	7,770.0	118.8	118.3	-135.87	-6,530.1	-944.6	334.3	167.6	166.76	2.005	
14,300.0	7,530.0	14,508.0	7,770.0	120.6	120.0	-135.81	-6,630.1	-944.6	334.7	165.3	169.37	1.976	
14,400.0	7,530.0	14,608.0	7,770.0	122.3	121.7	-135.75	-6,730.1	-944.6	335.1	163.1	171.99	1.948	
14,500.0	7,530.0	14,708.0	7,770.0	124.0	123.5	-135.68	-6,830.1	-944.6	335.4	160.8	174.62	1.921	
14,600.0	7,530.0	14,808.0	7,770.0	125.7	125.2	-135.62	-6,930.1	-944.6	335.8	158.6	177.25	1.895	
14,700.0	7,530.0	14,908.0	7,770.0	127.4	126.9	-135.55	-7,030.1	-944.6	336.2	156.3	179.89	1.869	
14,800.0	7,530.0	15,008.0	7,770.0	129.2	128.7	-135.49	-7,130.1	-944.6	336.5	154.0	182.53	1.844	
14,900.0	7,530.0	15,108.0	7,770.0	130.9	130.4	-135.43	-7,230.1	-944.6	336.9	151.7	185.18	1.819	
15,000.0	7,530.0	15,208.0	7,770.0	132.6	132.1	-135.36	-7,330.1	-944.6	337.3	149.4	187.83	1.796	
15,100.0	7,530.0	15,308.0	7,770.0	134.3	133.8	-135.30	-7,430.1	-944.6	337.6	147.2	190.49	1.772	
15,200.0	7,530.0	15,408.0	7,770.0	136.1	135.6	-135.24	-7,530.1	-944.6	338.0	144.9	193.16	1.750	
15,300.0	7,530.0	15,508.0	7,770.0	137.8	137.3	-135.17	-7,630.1	-944.6	338.4	142.6	195.83	1.728	
15,400.0	7,530.0	15,608.0	7,770.0	139.5	139.0	-135.11	-7,730.1	-944.6	338.8	140.3	198.50	1.707	
15,500.0	7,530.0	15,708.0	7,770.0	141.2	140.8	-135.05	-7,830.1	-944.6	339.1	137.9	201.18	1.686	
15,600.0	7,530.0	15,808.0	7,770.0	143.0	142.5	-134.99	-7,930.1	-944.6	339.5	135.6	203.86	1.665	
15,700.0	7,530.0	15,908.0	7,770.0	144.7	144.2	-134.92	-8,030.1	-944.6	339.9	133.3	206.55	1.645	
15,800.0	7,530.0	16,008.0	7,770.0	146.4	146.0	-134.86	-8,130.1	-944.6	340.2	131.0	209.25	1.626	
15,900.0	7,530.0	16,108.0	7,770.0	148.2	147.7	-134.80	-8,230.1	-944.6	340.6	128.7	211.95	1.607	
16,000.0	7,530.0	16,208.0	7,770.0	149.9	149.4	-134.74	-8,330.1	-944.6	341.0	126.3	214.65	1.588	
16,100.0	7,530.0	16,308.0	7,770.0	151.6	151.2	-134.68	-8,430.1	-944.6	341.3	124.0	217.36	1.570	
16,200.0	7,530.0	16,408.0	7,770.0	153.4	152.9	-134.61	-8,530.1	-944.6	341.7	121.6	220.08	1.553	
16,300.0	7,530.0	16,508.0	7,770.0	155.1	154.7	-134.55	-8,630.1	-944.6	342.1	119.3	222.80	1.535	
16,400.0	7,530.0	16,608.0	7,770.0	156.8	156.4	-134.49	-8,730.1	-944.6	342.5	116.9	225.52	1.519	
16,500.0	7,530.0	16,708.0	7,770.0	158.6	158.1	-134.43	-8,830.1	-944.6	342.8	114.6	228.25	1.502	
16,600.0	7,530.0	16,808.0	7,770.0	160.3	159.9	-134.37	-8,930.1	-944.6	343.2	112.2	230.98	1.486	Level 3
16,700.0	7,530.0	16,908.0	7,770.0	162.0	161.6	-134.31	-9,030.1	-944.6	343.6	109.9	233.72	1.470	Level 3
16,800.0	7,530.0	17,008.0	7,770.0	163.8	163.3	-134.25	-9,130.1	-944.6	344.0	107.5	236.47	1.455	Level 3
16,900.0	7,530.0	17,108.0	7,770.0	165.5	165.1	-134.19	-9,230.1	-944.6	344.3	105.1	239.21	1.439	Level 3
17,000.0	7,530.0	17,208.0	7,770.0	167.2	166.8	-134.13	-9,330.1	-944.6	344.7	102.8	241.96	1.425	Level 3
17,100.0	7,530.0	17,308.0	7,770.0	169.0	168.6	-134.06	-9,430.1	-944.6	345.1	100.4	244.72	1.410	Level 3
17,200.0	7,530.0	17,408.0	7,770.0	170.7	170.3	-134.00	-9,530.1	-944.6	345.5	98.0	247.48	1.396	Level 3
17,300.0	7,530.0	17,508.0	7,770.0	172.4	172.0	-133.94	-9,630.1	-944.6	345.8	95.6	250.25	1.382	Level 3
17,400.0	7,530.0	17,608.0	7,770.0	174.2	173.8	-133.88	-9,730.1	-944.6	346.2	93.2	253.02	1.368	Level 3
17,490.0	7,530.0	17,698.0	7,770.0	175.7	175.3	-133.83	-9,820.1	-944.6	346.6	91.0	255.52	1.356	Level 3, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2

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	19.9	19.9				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	19.9	19.9	19.6	0.30	65.429	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	19.9	19.9	19.2	0.65	30.440	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	19.9	19.9	18.9	1.00	19.834	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	162.13	0.0	19.9	20.7	19.3	1.35	15.323	
500.0	500.0	500.3	500.3	0.9	0.9	163.15	0.4	19.1	22.4	20.7	1.70	13.183	
600.0	599.9	600.7	600.6	1.0	1.0	163.36	1.7	16.8	24.2	22.2	2.05	11.821	
700.0	699.7	701.0	700.9	1.2	1.2	162.92	3.8	12.9	26.2	23.8	2.40	10.889	
800.0	799.4	801.4	801.1	1.4	1.4	161.98	6.7	7.5	28.2	25.5	2.76	10.220	
900.0	898.9	901.9	901.2	1.7	1.6	160.65	10.4	0.5	30.4	27.2	3.12	9.720	
1,000.0	998.3	1,002.3	1,001.2	1.9	1.8	159.02	15.0	-8.0	32.7	29.2	3.50	9.333	
1,100.0	1,097.4	1,102.7	1,100.9	2.2	2.1	157.20	20.4	-18.0	35.1	31.3	3.89	9.031	
1,200.0	1,196.3	1,202.6	1,200.1	2.5	2.3	156.23	26.1	-28.4	38.8	34.5	4.29	9.042	
1,300.0	1,294.9	1,302.5	1,299.3	2.8	2.6	156.36	31.7	-38.8	44.0	39.3	4.69	9.396	
1,315.9	1,310.6	1,318.4	1,315.1	2.9	2.6	156.46	32.6	-40.5	45.0	40.3	4.75	9.480	
1,400.0	1,393.4	1,402.3	1,398.4	3.1	2.8	156.99	37.3	-49.3	50.3	45.2	5.08	9.903	
1,500.0	1,491.8	1,502.1	1,497.5	3.5	3.1	157.49	43.0	-59.7	56.6	51.1	5.48	10.337	
1,600.0	1,590.2	1,601.9	1,596.6	3.8	3.4	157.89	48.6	-70.1	62.9	57.0	5.87	10.713	
1,700.0	1,688.7	1,701.7	1,695.7	4.2	3.6	158.22	54.2	-80.6	69.2	63.0	6.27	11.040	
1,800.0	1,787.1	1,801.5	1,794.8	4.5	3.9	158.49	59.9	-91.0	75.5	68.9	6.67	11.328	
1,900.0	1,885.5	1,901.3	1,893.9	4.8	4.1	158.72	65.5	-101.4	81.8	74.8	7.07	11.583	
2,000.0	1,984.0	2,001.1	1,993.0	5.2	4.4	158.92	71.1	-111.9	88.2	80.7	7.46	11.811	
2,100.0	2,082.4	2,100.9	2,092.1	5.5	4.7	159.09	76.7	-122.3	94.5	86.6	7.86	12.015	
2,200.0	2,180.8	2,200.7	2,191.1	5.9	4.9	159.24	82.4	-132.7	100.8	92.5	8.26	12.199	
2,300.0	2,279.3	2,300.5	2,290.2	6.2	5.2	159.37	88.0	-143.1	107.1	98.4	8.66	12.366	
2,400.0	2,377.7	2,400.3	2,389.3	6.6	5.5	159.49	93.6	-153.6	113.4	104.4	9.06	12.518	
2,500.0	2,476.1	2,500.1	2,488.4	6.9	5.7	159.60	99.3	-164.0	119.7	110.3	9.46	12.657	
2,600.0	2,574.6	2,599.9	2,587.5	7.3	6.0	159.69	104.9	-174.4	126.0	116.2	9.86	12.785	
2,700.0	2,673.0	2,699.7	2,686.6	7.7	6.3	159.78	110.5	-184.9	132.4	122.1	10.26	12.902	
2,800.0	2,771.4	2,799.5	2,785.7	8.0	6.6	159.85	116.2	-195.3	138.7	128.0	10.66	13.011	
2,900.0	2,869.8	2,899.3	2,884.8	8.4	6.8	159.92	121.8	-205.7	145.0	133.9	11.06	13.112	
3,000.0	2,968.3	2,999.1	2,983.9	8.7	7.1	159.99	127.4	-216.1	151.3	139.9	11.46	13.205	
3,100.0	3,066.7	3,098.9	3,083.0	9.1	7.4	160.05	133.0	-226.6	157.6	145.8	11.86	13.293	
3,200.0	3,165.1	3,198.7	3,182.1	9.4	7.6	160.10	138.7	-237.0	163.9	151.7	12.26	13.374	
3,300.0	3,263.6	3,298.5	3,281.2	9.8	7.9	160.16	144.3	-247.4	170.3	157.6	12.66	13.450	
3,400.0	3,362.0	3,398.3	3,380.3	10.1	8.2	160.20	149.9	-257.9	176.6	163.5	13.06	13.522	
3,500.0	3,460.4	3,498.1	3,479.4	10.5	8.4	160.25	155.6	-268.3	182.9	169.4	13.46	13.589	
3,600.0	3,558.9	3,597.9	3,578.5	10.8	8.7	160.29	161.2	-278.7	189.2	175.4	13.86	13.652	
3,700.0	3,657.3	3,697.7	3,677.6	11.2	9.0	160.33	166.8	-289.2	195.5	181.3	14.26	13.712	
3,800.0	3,755.7	3,797.5	3,776.6	11.6	9.2	160.36	172.5	-299.6	201.9	187.2	14.66	13.769	
3,900.0	3,854.2	3,897.3	3,875.7	11.9	9.5	160.40	178.1	-310.0	208.2	193.1	15.06	13.822	
4,000.0	3,952.6	3,997.1	3,974.8	12.3	9.8	160.43	183.7	-320.4	214.5	199.0	15.46	13.873	
4,100.0	4,051.0	4,096.9	4,073.9	12.6	10.1	160.46	189.4	-330.9	220.8	204.9	15.86	13.921	
4,200.0	4,149.5	4,196.7	4,173.0	13.0	10.3	160.49	195.0	-341.3	227.1	210.9	16.26	13.967	
4,300.0	4,247.9	4,296.5	4,272.1	13.3	10.6	160.52	200.6	-351.7	233.4	216.8	16.66	14.010	
4,400.0	4,346.3	4,396.3	4,371.2	13.7	10.9	160.54	206.2	-362.2	239.8	222.7	17.06	14.051	
4,500.0	4,444.8	4,496.1	4,470.3	14.1	11.1	160.57	211.9	-372.6	246.1	228.6	17.46	14.091	
4,600.0	4,543.2	4,595.9	4,569.4	14.4	11.4	160.59	217.5	-383.0	252.4	234.5	17.86	14.129	
4,700.0	4,641.6	4,695.7	4,668.5	14.8	11.7	160.61	223.1	-393.4	258.7	240.5	18.27	14.165	
4,800.0	4,740.1	4,795.5	4,767.6	15.1	11.9	160.63	228.8	-403.9	265.0	246.4	18.67	14.199	
4,900.0	4,838.5	4,895.3	4,866.7	15.5	12.2	160.65	234.4	-414.3	271.4	252.3	19.07	14.232	
5,000.0	4,936.9	4,995.1	4,965.8	15.8	12.5	160.67	240.0	-424.7	277.7	258.2	19.47	14.264	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2

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
5,100.0	5,035.4	5,094.9	5,064.9	16.2	12.8	160.69	245.7	-435.2	284.0	264.1	19.87	14.294	
5,200.0	5,133.8	5,194.7	5,164.0	16.5	13.0	160.71	251.3	-445.6	290.3	270.0	20.27	14.323	
5,300.0	5,232.2	5,294.5	5,263.1	16.9	13.3	160.72	256.9	-456.0	296.6	276.0	20.67	14.351	
5,400.0	5,330.6	5,394.3	5,362.2	17.3	13.6	160.74	262.6	-466.5	303.0	281.9	21.07	14.378	
5,500.0	5,429.1	5,494.1	5,461.2	17.6	13.8	160.75	268.2	-476.9	309.3	287.8	21.47	14.404	
5,600.0	5,527.5	5,593.9	5,560.3	18.0	14.1	160.77	273.8	-487.3	315.6	293.7	21.87	14.429	
5,700.0	5,625.9	5,693.7	5,659.4	18.3	14.4	160.78	279.4	-497.7	321.9	299.6	22.27	14.453	
5,800.0	5,724.4	5,793.5	5,758.5	18.7	14.7	160.80	285.1	-508.2	328.2	305.6	22.67	14.476	
5,900.0	5,822.8	5,893.3	5,857.6	19.0	14.9	160.81	290.7	-518.6	334.5	311.5	23.07	14.499	
6,000.0	5,921.2	5,993.1	5,956.7	19.4	15.2	160.82	296.3	-529.0	340.9	317.4	23.47	14.520	
6,100.0	6,019.7	6,092.9	6,055.8	19.8	15.5	160.83	302.0	-539.5	347.2	323.3	23.88	14.541	
6,200.0	6,118.1	6,192.7	6,154.9	20.1	15.7	160.84	307.6	-549.9	353.5	329.2	24.28	14.561	
6,300.0	6,216.5	6,292.5	6,254.0	20.5	16.0	160.86	313.2	-560.3	359.8	335.1	24.68	14.581	
6,400.0	6,315.0	6,392.3	6,353.1	20.8	16.3	160.87	318.9	-570.7	366.1	341.1	25.08	14.600	
6,500.0	6,413.4	6,492.1	6,452.2	21.2	16.6	160.88	324.5	-581.2	372.5	347.0	25.48	14.618	
6,600.0	6,511.8	6,591.9	6,551.3	21.5	16.8	160.89	330.1	-591.6	378.8	352.9	25.88	14.636	
6,700.0	6,610.3	6,691.7	6,650.4	21.9	17.1	160.90	335.8	-602.0	385.1	358.8	26.28	14.653	
6,800.0	6,708.7	6,791.5	6,749.5	22.3	17.4	160.91	341.4	-612.5	391.4	364.7	26.68	14.670	
6,877.3	6,784.8	6,868.8	6,826.3	22.5	17.6	161.16	344.1	-620.5	396.3	369.4	26.91	14.727	
6,900.0	6,807.1	6,891.4	6,848.8	22.6	17.6	171.60	343.4	-622.9	397.7	370.8	26.90	14.788	
6,950.0	6,856.4	6,941.1	6,898.0	22.8	17.7	-164.56	339.6	-628.1	400.9	374.1	26.82	14.946	
7,000.0	6,905.5	6,990.6	6,946.7	22.9	17.7	-144.78	332.3	-633.2	404.1	377.4	26.72	15.126	
7,050.0	6,954.3	7,039.8	6,994.5	23.0	17.8	-130.92	321.7	-638.3	407.4	380.8	26.59	15.321	
7,100.0	7,002.4	7,088.8	7,041.3	23.1	17.8	-121.51	307.9	-643.2	410.6	384.2	26.45	15.526	
7,150.0	7,049.6	7,137.7	7,086.8	23.2	17.8	-114.91	291.0	-648.0	413.9	387.6	26.31	15.732	
7,200.0	7,095.7	7,186.3	7,130.9	23.3	17.9	-110.08	271.2	-652.6	417.1	390.9	26.18	15.933	
7,250.0	7,140.5	7,234.7	7,173.4	23.4	17.9	-106.39	248.4	-657.1	420.2	394.1	26.07	16.121	
7,300.0	7,183.7	7,282.9	7,214.2	23.5	17.9	-103.48	222.9	-661.4	423.3	397.3	25.99	16.288	
7,350.0	7,225.2	7,331.0	7,253.0	23.5	17.9	-101.12	194.8	-665.5	426.2	400.3	25.95	16.428	
7,400.0	7,264.8	7,379.0	7,289.7	23.6	17.9	-99.16	164.3	-669.3	429.1	403.2	25.95	16.535	
7,450.0	7,302.2	7,426.7	7,324.2	23.7	17.9	-97.52	131.5	-673.0	431.9	405.9	26.01	16.603	
7,500.0	7,337.3	7,474.4	7,356.4	23.7	18.0	-96.12	96.5	-676.3	434.5	408.4	26.13	16.629	
7,550.0	7,369.8	7,521.9	7,386.1	23.8	18.0	-94.93	59.6	-679.5	436.9	410.6	26.31	16.610	
7,600.0	7,399.7	7,569.3	7,413.3	23.9	18.1	-93.91	20.8	-682.3	439.2	412.7	26.54	16.549	
7,650.0	7,426.8	7,616.6	7,437.7	24.0	18.2	-93.04	-19.6	-684.9	441.3	414.5	26.84	16.446	
7,700.0	7,451.0	7,663.8	7,459.5	24.2	18.3	-92.29	-61.4	-687.2	443.3	416.1	27.20	16.297	
7,750.0	7,472.1	7,711.0	7,478.4	24.3	18.5	-91.67	-104.5	-689.2	445.0	417.4	27.62	16.110	
7,800.0	7,490.1	7,758.1	7,494.5	24.5	18.7	-91.15	-148.7	-690.9	446.5	418.4	28.10	15.888	
7,850.0	7,504.8	7,805.1	7,507.6	24.7	18.9	-90.74	-193.9	-692.3	447.8	419.1	28.64	15.636	
7,900.0	7,516.2	7,852.1	7,517.7	24.9	19.1	-90.42	-239.7	-693.3	448.8	419.6	29.22	15.358	
7,950.0	7,524.2	7,900.0	7,525.0	25.1	19.4	-90.19	-287.1	-694.1	449.7	419.8	29.87	15.054	
8,000.0	7,528.8	7,945.9	7,528.9	25.4	19.7	-90.05	-332.8	-694.5	450.2	419.7	30.54	14.741	
8,042.0	7,530.0	7,985.4	7,530.0	25.6	20.0	-90.00	-372.3	-694.6	450.5	419.4	31.15	14.465	
8,100.0	7,530.0	8,043.3	7,530.0	26.0	20.4	-90.00	-430.2	-694.6	450.9	418.6	32.30	13.959	
8,200.0	7,530.0	8,143.3	7,530.0	26.6	21.3	-90.00	-530.2	-694.6	451.4	416.9	34.45	13.103	
8,300.0	7,530.0	8,243.3	7,530.0	27.4	22.2	-90.00	-630.2	-694.6	451.9	415.1	36.81	12.278	
8,400.0	7,530.0	8,343.3	7,530.0	28.3	23.3	-90.00	-730.2	-694.6	452.4	413.1	39.34	11.501	
8,500.0	7,530.0	8,443.3	7,530.0	29.2	24.4	-90.00	-830.2	-694.6	452.9	410.9	42.01	10.782	
8,600.0	7,530.0	8,543.3	7,530.0	30.2	25.6	-90.00	-930.2	-694.6	453.5	408.7	44.80	10.123	
8,700.0	7,530.0	8,643.3	7,530.0	31.3	26.9	-90.00	-1,030.2	-694.6	454.0	406.3	47.68	9.522	
8,800.0	7,530.0	8,743.3	7,530.0	32.4	28.2	-90.00	-1,130.2	-694.6	454.5	403.9	50.64	8.975	
8,900.0	7,530.0	8,843.3	7,530.0	33.6	29.6	-90.00	-1,230.2	-694.6	455.0	401.4	53.67	8.479	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2

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
9,000.0	7,530.0	8,943.3	7,530.0	34.9	31.0	-90.00	-1,330.2	-694.6	455.6	398.8	56.75	8.027	
9,100.0	7,530.0	9,043.3	7,530.0	36.1	32.4	-90.00	-1,430.2	-694.6	456.1	396.2	59.88	7.617	
9,200.0	7,530.0	9,143.3	7,530.0	37.5	33.9	-90.00	-1,530.2	-694.6	456.6	393.6	63.05	7.242	
9,300.0	7,530.0	9,243.3	7,530.0	38.8	35.3	-90.00	-1,630.2	-694.6	457.1	390.9	66.25	6.900	
9,400.0	7,530.0	9,343.3	7,530.0	40.2	36.9	-90.00	-1,730.2	-694.6	457.7	388.2	69.49	6.586	
9,500.0	7,530.0	9,443.3	7,530.0	41.6	38.4	-90.00	-1,830.2	-694.6	458.2	385.4	72.75	6.298	
9,600.0	7,530.0	9,543.3	7,530.0	43.1	39.9	-90.00	-1,930.2	-694.6	458.7	382.7	76.03	6.033	
9,700.0	7,530.0	9,643.3	7,530.0	44.5	41.5	-90.00	-2,030.2	-694.6	459.2	379.9	79.33	5.789	
9,800.0	7,530.0	9,743.3	7,530.0	46.0	43.1	-90.00	-2,130.2	-694.6	459.8	377.1	82.65	5.563	
9,900.0	7,530.0	9,843.3	7,530.0	47.5	44.7	-90.00	-2,230.2	-694.6	460.3	374.3	85.98	5.353	
10,000.0	7,530.0	9,943.3	7,530.0	49.0	46.3	-90.00	-2,330.2	-694.6	460.8	371.5	89.32	5.159	
10,100.0	7,530.0	10,043.3	7,530.0	50.6	47.9	-90.00	-2,430.2	-694.6	461.3	368.6	92.68	4.977	
10,200.0	7,530.0	10,143.3	7,530.0	52.1	49.6	-90.00	-2,530.2	-694.6	461.8	365.8	96.05	4.808	
10,300.0	7,530.0	10,243.3	7,530.0	53.7	51.2	-90.00	-2,630.2	-694.6	462.4	362.9	99.43	4.650	
10,400.0	7,530.0	10,343.3	7,530.0	55.2	52.8	-90.00	-2,730.2	-694.6	462.9	360.1	102.82	4.502	
10,500.0	7,530.0	10,443.3	7,530.0	56.8	54.5	-90.00	-2,830.2	-694.6	463.4	357.2	106.21	4.363	
10,600.0	7,530.0	10,543.3	7,530.0	58.4	56.1	-90.00	-2,930.2	-694.6	463.9	354.3	109.61	4.232	
10,700.0	7,530.0	10,643.3	7,530.0	60.0	57.8	-90.00	-3,030.2	-694.6	464.5	351.4	113.02	4.109	
10,800.0	7,530.0	10,743.3	7,530.0	61.6	59.5	-90.00	-3,130.2	-694.6	465.0	348.6	116.44	3.993	
10,900.0	7,530.0	10,843.3	7,530.0	63.2	61.1	-90.00	-3,230.2	-694.6	465.5	345.7	119.86	3.884	
11,000.0	7,530.0	10,943.3	7,530.0	64.9	62.8	-90.00	-3,330.2	-694.6	466.0	342.8	123.28	3.780	
11,100.0	7,530.0	11,043.3	7,530.0	66.5	64.5	-90.00	-3,430.2	-694.6	466.6	339.8	126.71	3.682	
11,200.0	7,530.0	11,143.3	7,530.0	68.1	66.2	-90.00	-3,530.2	-694.6	467.1	336.9	130.15	3.589	
11,300.0	7,530.0	11,243.3	7,530.0	69.8	67.9	-90.00	-3,630.2	-694.6	467.6	334.0	133.58	3.501	
11,400.0	7,530.0	11,343.3	7,530.0	71.4	69.6	-90.00	-3,730.2	-694.6	468.1	331.1	137.02	3.416	
11,500.0	7,530.0	11,443.3	7,530.0	73.1	71.3	-90.00	-3,830.2	-694.6	468.7	328.2	140.47	3.336	
11,600.0	7,530.0	11,543.3	7,530.0	74.7	73.0	-90.00	-3,930.2	-694.6	469.2	325.3	143.92	3.260	
11,700.0	7,530.0	11,643.3	7,530.0	76.4	74.7	-90.00	-4,030.2	-694.6	469.7	322.3	147.37	3.187	
11,800.0	7,530.0	11,743.3	7,530.0	78.1	76.4	-90.00	-4,130.2	-694.6	470.2	319.4	150.82	3.118	
11,900.0	7,530.0	11,843.3	7,530.0	79.7	78.1	-90.00	-4,230.2	-694.6	470.8	316.5	154.27	3.051	
12,000.0	7,530.0	11,943.3	7,530.0	81.4	79.8	-90.00	-4,330.2	-694.6	471.3	313.5	157.73	2.988	
12,100.0	7,530.0	12,043.3	7,530.0	83.1	81.5	-90.00	-4,430.2	-694.6	471.8	310.6	161.19	2.927	
12,200.0	7,530.0	12,143.3	7,530.0	84.8	83.2	-90.00	-4,530.2	-694.6	472.3	307.7	164.65	2.869	
12,300.0	7,530.0	12,243.3	7,530.0	86.5	84.9	-90.00	-4,630.2	-694.6	472.8	304.7	168.12	2.813	
12,400.0	7,530.0	12,343.3	7,530.0	88.1	86.6	-90.00	-4,730.2	-694.6	473.4	301.8	171.58	2.759	
12,500.0	7,530.0	12,443.3	7,530.0	89.8	88.3	-90.00	-4,830.2	-694.6	473.9	298.8	175.05	2.707	
12,600.0	7,530.0	12,543.3	7,530.0	91.5	90.0	-90.00	-4,930.2	-694.6	474.4	295.9	178.52	2.657	
12,700.0	7,530.0	12,643.3	7,530.0	93.2	91.8	-90.00	-5,030.2	-694.6	474.9	292.9	181.99	2.610	
12,800.0	7,530.0	12,743.3	7,530.0	94.9	93.5	-90.00	-5,130.2	-694.6	475.5	290.0	185.46	2.564	
12,900.0	7,530.0	12,843.3	7,530.0	96.6	95.2	-90.00	-5,230.2	-694.6	476.0	287.1	188.94	2.519	
13,000.0	7,530.0	12,943.3	7,530.0	98.3	96.9	-90.00	-5,330.2	-694.6	476.5	284.1	192.41	2.477	
13,100.0	7,530.0	13,043.3	7,530.0	100.0	98.7	-90.00	-5,430.2	-694.6	477.0	281.1	195.89	2.435	
13,200.0	7,530.0	13,143.3	7,530.0	101.7	100.4	-90.00	-5,530.2	-694.6	477.6	278.2	199.36	2.395	
13,300.0	7,530.0	13,243.3	7,530.0	103.4	102.1	-90.00	-5,630.2	-694.6	478.1	275.2	202.84	2.357	
13,400.0	7,530.0	13,343.3	7,530.0	105.1	103.8	-90.00	-5,730.2	-694.6	478.6	272.3	206.32	2.320	
13,500.0	7,530.0	13,443.3	7,530.0	106.8	105.6	-90.00	-5,830.2	-694.6	479.1	269.3	209.80	2.284	
13,600.0	7,530.0	13,543.3	7,530.0	108.5	107.3	-90.00	-5,930.2	-694.6	479.7	266.4	213.28	2.249	
13,700.0	7,530.0	13,643.3	7,530.0	110.3	109.0	-90.00	-6,030.1	-694.6	480.2	263.4	216.76	2.215	
13,800.0	7,530.0	13,743.3	7,530.0	112.0	110.7	-90.00	-6,130.1	-694.6	480.7	260.5	220.24	2.183	
13,900.0	7,530.0	13,843.3	7,530.0	113.7	112.5	-90.00	-6,230.1	-694.6	481.2	257.5	223.73	2.151	
14,000.0	7,530.0	13,943.3	7,530.0	115.4	114.2	-90.00	-6,330.1	-694.6	481.7	254.5	227.21	2.120	
14,100.0	7,530.0	14,043.3	7,530.0	117.1	115.9	-90.00	-6,430.1	-694.6	482.3	251.6	230.70	2.091	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1E-7H-A168 - HZ - Plan #2

Survey Program: 0-Geolink MWD

Offset Site Error: 0.0 ft

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
14,200.0	7,530.0	14,143.3	7,530.0	118.8	117.7	-90.00	-6,530.1	-694.6	482.8	248.6	234.18	2.062	
14,300.0	7,530.0	14,243.3	7,530.0	120.6	119.4	-90.00	-6,630.1	-694.6	483.3	245.7	237.67	2.034	
14,400.0	7,530.0	14,343.3	7,530.0	122.3	121.1	-90.00	-6,730.1	-694.6	483.8	242.7	241.16	2.006	
14,500.0	7,530.0	14,443.3	7,530.0	124.0	122.9	-90.00	-6,830.1	-694.6	484.4	239.7	244.64	1.980	
14,600.0	7,530.0	14,543.3	7,530.0	125.7	124.6	-90.00	-6,930.1	-694.6	484.9	236.8	248.13	1.954	
14,700.0	7,530.0	14,643.3	7,530.0	127.4	126.3	-90.00	-7,030.1	-694.6	485.4	233.8	251.62	1.929	
14,800.0	7,530.0	14,743.3	7,530.0	129.2	128.1	-90.00	-7,130.1	-694.6	485.9	230.8	255.11	1.905	
14,900.0	7,530.0	14,843.3	7,530.0	130.9	129.8	-90.00	-7,230.1	-694.6	486.5	227.9	258.60	1.881	
15,000.0	7,530.0	14,943.2	7,530.0	132.6	131.6	-90.00	-7,330.1	-694.6	487.0	224.9	262.09	1.858	
15,100.0	7,530.0	15,043.2	7,530.0	134.3	133.3	-90.00	-7,430.1	-694.6	487.5	221.9	265.58	1.836	
15,200.0	7,530.0	15,143.2	7,530.0	136.1	135.0	-90.00	-7,530.1	-694.6	488.0	219.0	269.07	1.814	
15,300.0	7,530.0	15,243.2	7,530.0	137.8	136.8	-90.00	-7,630.1	-694.6	488.6	216.0	272.56	1.792	
15,400.0	7,530.0	15,343.2	7,530.0	139.5	138.5	-90.00	-7,730.1	-694.6	489.1	213.0	276.05	1.772	
15,500.0	7,530.0	15,443.2	7,530.0	141.2	140.2	-90.00	-7,830.1	-694.6	489.6	210.1	279.55	1.751	
15,600.0	7,530.0	15,543.2	7,530.0	143.0	142.0	-90.00	-7,930.1	-694.6	490.1	207.1	283.04	1.732	
15,700.0	7,530.0	15,643.2	7,530.0	144.7	143.7	-90.00	-8,030.1	-694.6	490.7	204.1	286.53	1.712	
15,800.0	7,530.0	15,743.2	7,530.0	146.4	145.5	-90.00	-8,130.1	-694.6	491.2	201.2	290.02	1.694	
15,900.0	7,530.0	15,843.2	7,530.0	148.2	147.2	-90.00	-8,230.1	-694.6	491.7	198.2	293.52	1.675	
16,000.0	7,530.0	15,943.2	7,530.0	149.9	148.9	-90.00	-8,330.1	-694.6	492.2	195.2	297.01	1.657	
16,100.0	7,530.0	16,043.2	7,530.0	151.6	150.7	-90.00	-8,430.1	-694.6	492.7	192.2	300.51	1.640	
16,200.0	7,530.0	16,143.2	7,530.0	153.4	152.4	-90.00	-8,530.1	-694.6	493.3	189.3	304.00	1.623	
16,300.0	7,530.0	16,243.2	7,530.0	155.1	154.2	-90.00	-8,630.1	-694.6	493.8	186.3	307.50	1.606	
16,400.0	7,530.0	16,343.2	7,530.0	156.8	155.9	-90.00	-8,730.1	-694.6	494.3	183.3	310.99	1.589	
16,500.0	7,530.0	16,443.2	7,530.0	158.6	157.7	-90.00	-8,830.1	-694.6	494.8	180.4	314.49	1.573	
16,600.0	7,530.0	16,543.2	7,530.0	160.3	159.4	-90.00	-8,930.1	-694.6	495.4	177.4	317.98	1.558	
16,700.0	7,530.0	16,643.2	7,530.0	162.0	161.1	-90.00	-9,030.1	-694.6	495.9	174.4	321.48	1.543	
16,800.0	7,530.0	16,743.2	7,530.0	163.8	162.9	-90.00	-9,130.1	-694.6	496.4	171.4	324.98	1.528	
16,900.0	7,530.0	16,843.2	7,530.0	165.5	164.6	-90.00	-9,230.1	-694.6	496.9	168.5	328.47	1.513	
17,000.0	7,530.0	16,943.2	7,530.0	167.2	166.4	-90.00	-9,330.1	-694.6	497.5	165.5	331.97	1.499	Level 3
17,100.0	7,530.0	17,043.2	7,530.0	169.0	168.1	-90.00	-9,430.1	-694.6	498.0	162.5	335.47	1.484	Level 3
17,200.0	7,530.0	17,143.2	7,530.0	170.7	169.9	-90.00	-9,530.1	-694.6	498.5	159.5	338.96	1.471	Level 3
17,300.0	7,530.0	17,243.2	7,530.0	172.4	171.6	-90.00	-9,630.1	-694.6	499.0	156.6	342.46	1.457	Level 3
17,400.0	7,530.0	17,343.2	7,530.0	174.2	173.3	-90.00	-9,730.1	-694.6	499.6	153.6	345.96	1.444	Level 3
17,490.0	7,530.0	17,433.3	7,530.0	175.7	174.9	-90.00	-9,820.1	-694.6	500.0	150.9	349.11	1.432	Level 3, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2

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	29.9	29.9				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	29.9	29.9	29.6	0.30	98.604	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	29.9	29.9	29.3	0.65	45.875	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	29.9	29.9	28.9	1.00	29.890	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	161.88	0.0	29.9	30.8	29.4	1.35	22.781	
500.0	500.0	500.2	500.2	0.9	0.9	163.06	0.1	29.8	33.1	31.4	1.70	19.464	
600.0	599.9	600.7	600.6	1.0	1.0	163.47	1.2	28.4	35.8	33.8	2.05	17.475	
700.0	699.7	701.1	701.1	1.2	1.2	163.07	3.3	25.5	38.8	36.4	2.40	16.150	
800.0	799.4	801.7	801.4	1.4	1.4	162.03	6.5	21.3	42.0	39.3	2.76	15.228	
900.0	898.9	902.2	901.7	1.7	1.6	160.52	10.7	15.7	45.5	42.4	3.13	14.564	
1,000.0	998.3	1,002.5	1,001.7	1.9	1.8	158.73	15.9	8.8	49.4	45.9	3.50	14.104	
1,100.0	1,097.4	1,102.4	1,101.1	2.2	2.0	157.67	21.3	1.6	54.7	50.8	3.89	14.065	
1,200.0	1,196.3	1,202.2	1,200.5	2.5	2.2	157.42	26.7	-5.6	61.5	57.3	4.27	14.403	
1,300.0	1,294.9	1,301.8	1,299.7	2.8	2.5	157.77	32.1	-12.8	70.0	65.4	4.66	15.031	
1,315.9	1,310.6	1,317.7	1,315.5	2.9	2.5	157.86	33.0	-13.9	71.5	66.8	4.72	15.154	
1,400.0	1,393.4	1,401.3	1,398.9	3.1	2.7	158.37	37.5	-19.9	79.5	74.5	5.05	15.764	
1,500.0	1,491.8	1,500.9	1,498.0	3.5	2.9	158.84	42.9	-27.1	89.1	83.7	5.43	16.393	
1,600.0	1,590.2	1,600.4	1,597.1	3.8	3.1	159.23	48.3	-34.3	98.7	92.8	5.82	16.937	
1,700.0	1,688.7	1,700.0	1,696.3	4.2	3.4	159.55	53.7	-41.4	108.2	102.0	6.21	17.413	
1,800.0	1,787.1	1,799.5	1,795.4	4.5	3.6	159.81	59.1	-48.6	117.8	111.2	6.61	17.831	
1,900.0	1,885.5	1,899.0	1,894.5	4.8	3.8	160.04	64.5	-55.7	127.3	120.4	7.00	18.202	
2,000.0	1,984.0	1,998.6	1,993.7	5.2	4.1	160.23	69.9	-62.9	136.9	129.5	7.39	18.534	
2,100.0	2,082.4	2,098.1	2,092.8	5.5	4.3	160.40	75.2	-70.1	146.5	138.7	7.78	18.831	
2,200.0	2,180.8	2,197.7	2,192.0	5.9	4.5	160.55	80.6	-77.2	156.1	147.9	8.17	19.100	
2,300.0	2,279.3	2,297.2	2,291.1	6.2	4.7	160.68	86.0	-84.4	165.6	157.1	8.56	19.344	
2,400.0	2,377.7	2,396.7	2,390.2	6.6	5.0	160.80	91.4	-91.6	175.2	166.3	8.95	19.567	
2,500.0	2,476.1	2,496.3	2,489.4	6.9	5.2	160.90	96.8	-98.7	184.8	175.4	9.35	19.770	
2,600.0	2,574.6	2,595.8	2,588.5	7.3	5.4	161.00	102.2	-105.9	194.4	184.6	9.74	19.958	
2,700.0	2,673.0	2,695.4	2,687.6	7.7	5.7	161.08	107.6	-113.1	203.9	193.8	10.13	20.130	
2,800.0	2,771.4	2,794.9	2,786.8	8.0	5.9	161.16	113.0	-120.2	213.5	203.0	10.52	20.289	
2,900.0	2,869.8	2,894.4	2,885.9	8.4	6.1	161.23	118.4	-127.4	223.1	212.2	10.92	20.437	
3,000.0	2,968.3	2,994.0	2,985.0	8.7	6.4	161.30	123.7	-134.5	232.7	221.4	11.31	20.575	
3,100.0	3,066.7	3,093.5	3,084.2	9.1	6.6	161.36	129.1	-141.7	242.2	230.5	11.70	20.703	
3,200.0	3,165.1	3,193.1	3,183.3	9.4	6.8	161.41	134.5	-148.9	251.8	239.7	12.09	20.823	
3,300.0	3,263.6	3,292.6	3,282.4	9.8	7.1	161.46	139.9	-156.0	261.4	248.9	12.49	20.935	
3,400.0	3,362.0	3,392.1	3,381.6	10.1	7.3	161.51	145.3	-163.2	271.0	258.1	12.88	21.040	
3,500.0	3,460.4	3,491.7	3,480.7	10.5	7.5	161.56	150.7	-170.4	280.6	267.3	13.27	21.139	
3,600.0	3,558.9	3,591.2	3,579.9	10.8	7.8	161.60	156.1	-177.5	290.1	276.5	13.66	21.233	
3,700.0	3,657.3	3,690.8	3,679.0	11.2	8.0	161.64	161.5	-184.7	299.7	285.7	14.06	21.321	
3,800.0	3,755.7	3,790.3	3,778.1	11.6	8.2	161.67	166.9	-191.8	309.3	294.8	14.45	21.404	
3,900.0	3,854.2	3,889.8	3,877.3	11.9	8.5	161.71	172.2	-199.0	318.9	304.0	14.84	21.483	
4,000.0	3,952.6	3,989.4	3,976.4	12.3	8.7	161.74	177.6	-206.2	328.4	313.2	15.24	21.558	
4,100.0	4,051.0	4,088.9	4,075.5	12.6	8.9	161.77	183.0	-213.3	338.0	322.4	15.63	21.628	
4,200.0	4,149.5	4,188.5	4,174.7	13.0	9.2	161.80	188.4	-220.5	347.6	331.6	16.02	21.696	
4,300.0	4,247.9	4,288.0	4,273.8	13.3	9.4	161.83	193.8	-227.7	357.2	340.8	16.41	21.760	
4,400.0	4,346.3	4,387.5	4,372.9	13.7	9.6	161.85	199.2	-234.8	366.8	350.0	16.81	21.821	
4,500.0	4,444.8	4,487.1	4,472.1	14.1	9.9	161.88	204.6	-242.0	376.3	359.1	17.20	21.879	
4,600.0	4,543.2	4,586.6	4,571.2	14.4	10.1	161.90	210.0	-249.1	385.9	368.3	17.59	21.935	
4,700.0	4,641.6	4,686.2	4,670.3	14.8	10.3	161.92	215.4	-256.3	395.5	377.5	17.99	21.988	
4,800.0	4,740.1	4,785.7	4,769.5	15.1	10.6	161.94	220.7	-263.5	405.1	386.7	18.38	22.039	
4,900.0	4,838.5	4,885.2	4,868.6	15.5	10.8	161.96	226.1	-270.6	414.7	395.9	18.77	22.088	
5,000.0	4,936.9	4,984.8	4,967.8	15.8	11.0	161.98	231.5	-277.8	424.2	405.1	19.17	22.135	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2

Survey Program: 0-Geolink MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,035.4	5,084.3	5,066.9	16.2	11.3	162.00	236.9	-285.0	433.8	414.3	19.56	22.180	
5,200.0	5,133.8	5,183.9	5,166.0	16.5	11.5	162.02	242.3	-292.1	443.4	423.4	19.95	22.223	
5,300.0	5,232.2	5,283.4	5,265.2	16.9	11.7	162.03	247.7	-299.3	453.0	432.6	20.35	22.264	
5,400.0	5,330.6	5,382.9	5,364.3	17.3	12.0	162.05	253.1	-306.4	462.6	441.8	20.74	22.304	
5,500.0	5,429.1	5,482.5	5,463.4	17.6	12.2	162.07	258.5	-313.6	472.1	451.0	21.13	22.343	
5,600.0	5,527.5	5,582.0	5,562.6	18.0	12.4	162.08	263.9	-320.8	481.7	460.2	21.52	22.380	
5,700.0	5,625.9	5,681.6	5,661.7	18.3	12.7	162.10	269.2	-327.9	491.3	469.4	21.92	22.415	
5,800.0	5,724.4	5,781.1	5,760.8	18.7	12.9	162.11	274.6	-335.1	500.9	478.6	22.31	22.450	
5,900.0	5,822.8	5,880.6	5,860.0	19.0	13.1	162.12	280.0	-342.3	510.5	487.8	22.70	22.483	
6,000.0	5,921.2	5,980.2	5,959.1	19.4	13.4	162.14	285.4	-349.4	520.0	496.9	23.10	22.515	
6,100.0	6,019.7	6,079.7	6,058.2	19.8	13.6	162.15	290.8	-356.6	529.6	506.1	23.49	22.546	
6,200.0	6,118.1	6,179.3	6,157.4	20.1	13.8	162.16	296.2	-363.7	539.2	515.3	23.88	22.576	
6,300.0	6,216.5	6,278.8	6,256.5	20.5	14.1	162.17	301.6	-370.9	548.8	524.5	24.28	22.605	
6,400.0	6,315.0	6,378.3	6,355.7	20.8	14.3	162.18	307.0	-378.1	558.4	533.7	24.67	22.633	
6,500.0	6,413.4	6,477.9	6,454.8	21.2	14.5	162.19	312.4	-385.2	567.9	542.9	25.06	22.660	
6,600.0	6,511.8	6,577.4	6,553.9	21.5	14.8	162.20	317.7	-392.4	577.5	552.1	25.46	22.686	
6,700.0	6,610.3	6,677.0	6,653.1	21.9	15.0	162.21	323.1	-399.6	587.1	561.2	25.85	22.712	
6,800.0	6,708.7	6,776.5	6,752.2	22.3	15.2	162.22	328.5	-406.7	596.7	570.4	26.24	22.736	
6,877.3	6,784.8	6,853.4	6,828.8	22.5	15.4	162.23	332.7	-412.3	604.1	577.5	26.55	22.755	
6,900.0	6,807.1	6,876.0	6,851.3	22.6	15.5	172.48	333.9	-413.9	606.3	579.6	26.60	22.788	
6,950.0	6,856.4	6,925.7	6,900.8	22.8	15.6	-164.35	336.6	-417.5	611.0	584.3	26.75	22.843	
7,000.0	6,905.5	6,975.0	6,949.9	22.9	15.7	-145.53	339.3	-421.0	615.8	588.9	26.93	22.868	
7,050.0	6,954.3	7,023.7	6,998.4	23.0	15.8	-132.91	341.9	-424.5	620.7	593.6	27.14	22.874	
7,100.0	7,002.4	7,072.5	7,047.1	23.1	15.9	-124.94	343.9	-428.0	625.8	598.5	27.34	22.889	
7,150.0	7,049.6	7,122.5	7,096.9	23.2	16.0	-119.78	342.7	-431.6	631.1	603.6	27.49	22.958	
7,200.0	7,095.7	7,173.4	7,147.5	23.3	16.1	-116.35	338.0	-435.2	636.6	609.1	27.58	23.084	
7,250.0	7,140.5	7,225.4	7,198.6	23.4	16.1	-114.02	329.4	-438.9	642.3	614.7	27.61	23.266	
7,300.0	7,183.7	7,278.5	7,250.0	23.5	16.1	-112.42	316.9	-442.6	648.1	620.5	27.58	23.500	
7,350.0	7,225.2	7,332.8	7,301.5	23.5	16.1	-111.32	300.1	-446.2	653.9	626.4	27.49	23.782	
7,400.0	7,264.8	7,388.2	7,352.6	23.6	16.1	-110.58	279.0	-449.8	659.7	632.3	27.37	24.104	
7,450.0	7,302.2	7,444.9	7,403.1	23.7	16.1	-110.08	253.5	-453.4	665.5	638.3	27.21	24.455	
7,500.0	7,337.3	7,502.9	7,452.4	23.7	16.1	-109.77	223.2	-456.8	671.2	644.1	27.04	24.820	
7,550.0	7,369.8	7,562.1	7,500.1	23.8	16.0	-109.59	188.3	-460.1	676.7	649.8	26.88	25.177	
7,600.0	7,399.7	7,622.6	7,545.7	23.9	16.0	-109.51	148.7	-463.3	681.9	655.2	26.74	25.500	
7,650.0	7,426.8	7,684.4	7,588.7	24.0	16.1	-109.49	104.4	-466.2	686.9	660.3	26.67	25.761	
7,700.0	7,451.0	7,747.4	7,628.4	24.2	16.1	-109.52	55.6	-468.9	691.6	664.9	26.68	25.926	
7,750.0	7,472.1	7,811.6	7,664.3	24.3	16.2	-109.57	2.5	-471.3	695.8	669.0	26.81	25.956	
7,800.0	7,490.1	7,876.8	7,695.8	24.5	16.4	-109.64	-54.5	-473.4	699.5	672.4	27.08	25.836	
7,850.0	7,504.8	7,943.0	7,722.3	24.7	16.6	-109.70	-115.1	-475.1	702.7	675.2	27.50	25.550	
7,900.0	7,516.2	8,009.9	7,743.3	24.9	16.9	-109.75	-178.6	-476.4	705.4	677.2	28.11	25.090	
7,950.0	7,524.2	8,077.5	7,758.5	25.1	17.3	-109.78	-244.4	-477.2	707.4	678.5	28.90	24.474	
8,000.0	7,528.8	8,145.4	7,767.4	25.4	17.7	-109.79	-311.8	-477.6	708.7	678.9	29.86	23.736	
8,042.0	7,530.0	8,202.8	7,770.0	25.6	18.2	-109.78	-369.0	-477.6	709.4	678.6	30.79	23.040	
8,100.0	7,530.0	8,261.6	7,770.0	26.0	18.7	-109.76	-427.9	-477.4	709.8	678.0	31.85	22.288	
8,200.0	7,530.0	8,361.6	7,770.0	26.6	19.6	-109.74	-527.9	-477.1	710.7	676.8	33.82	21.011	
8,300.0	7,530.0	8,461.6	7,770.0	27.4	20.6	-109.71	-627.9	-476.7	711.5	675.5	35.99	19.766	
8,400.0	7,530.0	8,561.6	7,770.0	28.3	21.8	-109.69	-727.9	-476.4	712.3	674.0	38.33	18.584	
8,500.0	7,530.0	8,661.6	7,770.0	29.2	23.0	-109.67	-827.9	-476.0	713.1	672.3	40.80	17.479	
8,600.0	7,530.0	8,761.6	7,770.0	30.2	24.2	-109.64	-927.9	-475.7	714.0	670.6	43.38	16.457	
8,700.0	7,530.0	8,861.6	7,770.0	31.3	25.6	-109.62	-1,027.9	-475.3	714.8	668.7	46.06	15.519	
8,800.0	7,530.0	8,961.6	7,770.0	32.4	26.9	-109.60	-1,127.9	-475.0	715.6	666.8	48.81	14.660	
8,900.0	7,530.0	9,061.6	7,770.0	33.6	28.4	-109.57	-1,227.9	-474.6	716.4	664.8	51.64	13.874	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2

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
9,000.0	7,530.0	9,161.6	7,770.0	34.9	29.8	-109.55	-1,327.9	-474.3	717.2	662.7	54.51	13.157	
9,100.0	7,530.0	9,261.6	7,770.0	36.1	31.3	-109.53	-1,427.8	-473.9	718.1	660.6	57.44	12.501	
9,200.0	7,530.0	9,361.6	7,770.0	37.5	32.8	-109.50	-1,527.8	-473.6	718.9	658.5	60.41	11.901	
9,300.0	7,530.0	9,461.6	7,770.0	38.8	34.4	-109.48	-1,627.8	-473.2	719.7	656.3	63.41	11.350	
9,400.0	7,530.0	9,561.6	7,770.0	40.2	35.9	-109.46	-1,727.8	-472.9	720.5	654.1	66.44	10.844	
9,500.0	7,530.0	9,661.6	7,770.0	41.6	37.5	-109.43	-1,827.8	-472.5	721.4	651.9	69.50	10.379	
9,600.0	7,530.0	9,761.6	7,770.0	43.1	39.1	-109.41	-1,927.8	-472.2	722.2	649.6	72.59	9.949	
9,700.0	7,530.0	9,861.6	7,770.0	44.5	40.7	-109.39	-2,027.8	-471.8	723.0	647.3	75.69	9.552	
9,800.0	7,530.0	9,961.6	7,770.0	46.0	42.3	-109.36	-2,127.8	-471.5	723.8	645.0	78.81	9.184	
9,900.0	7,530.0	10,061.6	7,770.0	47.5	43.9	-109.34	-2,227.8	-471.1	724.7	642.7	81.95	8.842	
10,000.0	7,530.0	10,161.6	7,770.0	49.0	45.5	-109.32	-2,327.8	-470.8	725.5	640.4	85.11	8.524	
10,100.0	7,530.0	10,261.6	7,770.0	50.6	47.2	-109.30	-2,427.8	-470.4	726.3	638.0	88.27	8.228	
10,200.0	7,530.0	10,361.6	7,770.0	52.1	48.8	-109.27	-2,527.8	-470.1	727.1	635.7	91.45	7.951	
10,300.0	7,530.0	10,461.5	7,770.0	53.7	50.5	-109.25	-2,627.8	-469.7	727.9	633.3	94.64	7.692	
10,400.0	7,530.0	10,561.5	7,770.0	55.2	52.2	-109.23	-2,727.8	-469.4	728.8	630.9	97.84	7.448	
10,500.0	7,530.0	10,661.5	7,770.0	56.8	53.8	-109.21	-2,827.8	-469.0	729.6	628.5	101.05	7.220	
10,600.0	7,530.0	10,761.5	7,770.0	58.4	55.5	-109.18	-2,927.8	-468.7	730.4	626.1	104.27	7.005	
10,700.0	7,530.0	10,861.5	7,770.0	60.0	57.2	-109.16	-3,027.8	-468.3	731.2	623.7	107.49	6.803	
10,800.0	7,530.0	10,961.5	7,770.0	61.6	58.9	-109.14	-3,127.8	-468.0	732.1	621.3	110.72	6.612	
10,900.0	7,530.0	11,061.5	7,770.0	63.2	60.6	-109.12	-3,227.8	-467.6	732.9	618.9	113.96	6.431	
11,000.0	7,530.0	11,161.5	7,770.0	64.9	62.3	-109.09	-3,327.8	-467.3	733.7	616.5	117.21	6.260	
11,100.0	7,530.0	11,261.5	7,770.0	66.5	63.9	-109.07	-3,427.8	-466.9	734.5	614.1	120.46	6.098	
11,200.0	7,530.0	11,361.5	7,770.0	68.1	65.6	-109.05	-3,527.8	-466.6	735.4	611.7	123.71	5.944	
11,300.0	7,530.0	11,461.5	7,770.0	69.8	67.3	-109.03	-3,627.8	-466.2	736.2	609.2	126.97	5.798	
11,400.0	7,530.0	11,561.5	7,770.0	71.4	69.1	-109.00	-3,727.7	-465.9	737.0	606.8	130.23	5.659	
11,500.0	7,530.0	11,661.5	7,770.0	73.1	70.8	-108.98	-3,827.7	-465.6	737.8	604.3	133.50	5.527	
11,600.0	7,530.0	11,761.5	7,770.0	74.7	72.5	-108.96	-3,927.7	-465.2	738.7	601.9	136.78	5.401	
11,700.0	7,530.0	11,861.5	7,770.0	76.4	74.2	-108.94	-4,027.7	-464.9	739.5	599.4	140.05	5.280	
11,800.0	7,530.0	11,961.5	7,770.0	78.1	75.9	-108.92	-4,127.7	-464.5	740.3	597.0	143.33	5.165	
11,900.0	7,530.0	12,061.5	7,770.0	79.7	77.6	-108.90	-4,227.7	-464.2	741.1	594.5	146.62	5.055	
12,000.0	7,530.0	12,161.5	7,770.0	81.4	79.3	-108.87	-4,327.7	-463.8	742.0	592.1	149.90	4.950	
12,100.0	7,530.0	12,261.5	7,770.0	83.1	81.0	-108.85	-4,427.7	-463.5	742.8	589.6	153.19	4.849	
12,200.0	7,530.0	12,361.5	7,770.0	84.8	82.8	-108.83	-4,527.7	-463.1	743.6	587.1	156.48	4.752	
12,300.0	7,530.0	12,461.5	7,770.0	86.5	84.5	-108.81	-4,627.7	-462.8	744.4	584.7	159.78	4.659	
12,400.0	7,530.0	12,561.5	7,770.0	88.1	86.2	-108.79	-4,727.7	-462.4	745.3	582.2	163.08	4.570	
12,500.0	7,530.0	12,661.5	7,770.0	89.8	87.9	-108.76	-4,827.7	-462.1	746.1	579.7	166.38	4.484	
12,600.0	7,530.0	12,761.5	7,770.0	91.5	89.6	-108.74	-4,927.7	-461.7	746.9	577.2	169.68	4.402	
12,700.0	7,530.0	12,861.5	7,770.0	93.2	91.4	-108.72	-5,027.7	-461.4	747.8	574.8	172.99	4.323	
12,800.0	7,530.0	12,961.5	7,770.0	94.9	93.1	-108.70	-5,127.7	-461.0	748.6	572.3	176.29	4.246	
12,900.0	7,530.0	13,061.4	7,770.0	96.6	94.8	-108.68	-5,227.7	-460.7	749.4	569.8	179.60	4.173	
13,000.0	7,530.0	13,161.4	7,770.0	98.3	96.6	-108.66	-5,327.7	-460.3	750.2	567.3	182.92	4.102	
13,100.0	7,530.0	13,261.4	7,770.0	100.0	98.3	-108.64	-5,427.7	-460.0	751.1	564.8	186.23	4.033	
13,200.0	7,530.0	13,361.4	7,770.0	101.7	100.0	-108.62	-5,527.7	-459.6	751.9	562.3	189.55	3.967	
13,300.0	7,530.0	13,461.4	7,770.0	103.4	101.7	-108.59	-5,627.7	-459.3	752.7	559.9	192.86	3.903	
13,400.0	7,530.0	13,561.4	7,770.0	105.1	103.5	-108.57	-5,727.7	-458.9	753.5	557.4	196.18	3.841	
13,500.0	7,530.0	13,661.4	7,770.0	106.8	105.2	-108.55	-5,827.7	-458.6	754.4	554.9	199.50	3.781	
13,600.0	7,530.0	13,761.4	7,770.0	108.5	106.9	-108.53	-5,927.7	-458.2	755.2	552.4	202.83	3.723	
13,700.0	7,530.0	13,861.4	7,770.0	110.3	108.7	-108.51	-6,027.6	-457.9	756.0	549.9	206.15	3.667	
13,800.0	7,530.0	13,961.4	7,770.0	112.0	110.4	-108.49	-6,127.6	-457.5	756.9	547.4	209.48	3.613	
13,900.0	7,530.0	14,061.4	7,770.0	113.7	112.1	-108.47	-6,227.6	-457.2	757.7	544.9	212.81	3.560	
14,000.0	7,530.0	14,161.4	7,770.0	115.4	113.9	-108.45	-6,327.6	-456.8	758.5	542.4	216.14	3.509	
14,100.0	7,530.0	14,261.4	7,770.0	117.1	115.6	-108.43	-6,427.6	-456.5	759.3	539.9	219.47	3.460	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1F-7H-A168 - HZ - Plan #2

Survey Program: 0-Geolink MWD

Offset Site Error: 0.0 ft

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
14,200.0	7,530.0	14,361.4	7,770.0	118.8	117.4	-108.41	-6,527.6	-456.1	760.2	537.4	222.80	3.412	
14,300.0	7,530.0	14,461.4	7,770.0	120.6	119.1	-108.38	-6,627.6	-455.8	761.0	534.9	226.13	3.365	
14,400.0	7,530.0	14,561.4	7,770.0	122.3	120.8	-108.36	-6,727.6	-455.4	761.8	532.4	229.47	3.320	
14,500.0	7,530.0	14,661.4	7,770.0	124.0	122.6	-108.34	-6,827.6	-455.1	762.6	529.8	232.80	3.276	
14,600.0	7,530.0	14,761.4	7,770.0	125.7	124.3	-108.32	-6,927.6	-454.7	763.5	527.3	236.14	3.233	
14,700.0	7,530.0	14,861.4	7,770.0	127.4	126.0	-108.30	-7,027.6	-454.4	764.3	524.8	239.48	3.192	
14,800.0	7,530.0	14,961.4	7,770.0	129.2	127.8	-108.28	-7,127.6	-454.0	765.1	522.3	242.82	3.151	
14,900.0	7,530.0	15,061.4	7,770.0	130.9	129.5	-108.26	-7,227.6	-453.7	766.0	519.8	246.16	3.112	
15,000.0	7,530.0	15,161.4	7,770.0	132.6	131.3	-108.24	-7,327.6	-453.3	766.8	517.3	249.50	3.073	
15,100.0	7,530.0	15,261.4	7,770.0	134.3	133.0	-108.22	-7,427.6	-453.0	767.6	514.8	252.85	3.036	
15,200.0	7,530.0	15,361.4	7,770.0	136.1	134.8	-108.20	-7,527.6	-452.6	768.4	512.3	256.19	2.999	
15,300.0	7,530.0	15,461.4	7,770.0	137.8	136.5	-108.18	-7,627.6	-452.3	769.3	509.7	259.54	2.964	
15,400.0	7,530.0	15,561.4	7,770.0	139.5	138.2	-108.16	-7,727.6	-451.9	770.1	507.2	262.89	2.929	
15,500.0	7,530.0	15,661.3	7,770.0	141.2	140.0	-108.14	-7,827.6	-451.6	770.9	504.7	266.24	2.896	
15,600.0	7,530.0	15,761.3	7,770.0	143.0	141.7	-108.12	-7,927.6	-451.2	771.8	502.2	269.58	2.863	
15,700.0	7,530.0	15,861.3	7,770.0	144.7	143.5	-108.10	-8,027.6	-450.9	772.6	499.7	272.94	2.831	
15,800.0	7,530.0	15,961.3	7,770.0	146.4	145.2	-108.08	-8,127.6	-450.5	773.4	497.1	276.29	2.799	
15,900.0	7,530.0	16,061.3	7,770.0	148.2	146.9	-108.06	-8,227.5	-450.2	774.3	494.6	279.64	2.769	
16,000.0	7,530.0	16,161.3	7,770.0	149.9	148.7	-108.04	-8,327.5	-449.8	775.1	492.1	282.99	2.739	
16,100.0	7,530.0	16,261.3	7,770.0	151.6	150.4	-108.02	-8,427.5	-449.5	775.9	489.6	286.35	2.710	
16,200.0	7,530.0	16,361.3	7,770.0	153.4	152.2	-108.00	-8,527.5	-449.1	776.7	487.0	289.70	2.681	
16,300.0	7,530.0	16,461.3	7,770.0	155.1	153.9	-107.98	-8,627.5	-448.8	777.6	484.5	293.06	2.653	
16,400.0	7,530.0	16,561.3	7,770.0	156.8	155.7	-107.96	-8,727.5	-448.4	778.4	482.0	296.42	2.626	
16,500.0	7,530.0	16,661.3	7,770.0	158.6	157.4	-107.94	-8,827.5	-448.1	779.2	479.5	299.78	2.599	
16,600.0	7,530.0	16,761.3	7,770.0	160.3	159.2	-107.92	-8,927.5	-447.7	780.1	476.9	303.13	2.573	
16,700.0	7,530.0	16,861.3	7,770.0	162.0	160.9	-107.90	-9,027.5	-447.4	780.9	474.4	306.49	2.548	
16,800.0	7,530.0	16,961.3	7,770.0	163.8	162.6	-107.88	-9,127.5	-447.0	781.7	471.9	309.86	2.523	
16,900.0	7,530.0	17,061.3	7,770.0	165.5	164.4	-107.86	-9,227.5	-446.7	782.6	469.3	313.22	2.498	
17,000.0	7,530.0	17,161.3	7,770.0	167.2	166.1	-107.84	-9,327.5	-446.3	783.4	466.8	316.58	2.475	
17,100.0	7,530.0	17,261.3	7,770.0	169.0	167.9	-107.82	-9,427.5	-446.0	784.2	464.3	319.94	2.451	
17,200.0	7,530.0	17,361.3	7,770.0	170.7	169.6	-107.80	-9,527.5	-445.6	785.1	461.7	323.31	2.428	
17,300.0	7,530.0	17,461.3	7,770.0	172.4	171.4	-107.78	-9,627.5	-445.3	785.9	459.2	326.67	2.406	
17,400.0	7,530.0	17,561.3	7,770.0	174.2	173.1	-107.76	-9,727.5	-445.0	786.7	456.7	330.04	2.384	
17,490.0	7,530.0	17,651.3	7,770.0	175.7	174.7	-107.75	-9,817.5	-444.6	787.5	454.4	333.07	2.364	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2

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	40.0	40.0				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	40.0	40.0	39.7	0.30	131.779	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	40.0	40.0	39.4	0.65	61.309	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	40.0	40.0	39.0	1.00	39.947	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	161.75	0.0	40.0	40.8	39.5	1.35	30.239	
500.0	500.0	500.0	500.0	0.9	0.8	162.83	0.0	40.0	43.3	41.6	1.70	25.498	
600.0	599.9	600.2	600.2	1.0	1.0	163.42	0.8	39.7	47.1	45.1	2.05	23.003	
700.0	699.7	700.5	700.4	1.2	1.2	162.70	3.2	38.6	51.9	49.5	2.40	21.599	
800.0	799.4	800.7	800.5	1.4	1.4	161.04	7.3	36.9	57.6	54.8	2.76	20.855	
900.0	898.9	900.6	900.3	1.7	1.6	158.96	12.7	34.6	64.5	61.3	3.13	20.583	
1,000.0	998.3	1,000.2	999.7	1.9	1.8	157.65	18.2	32.3	72.9	69.4	3.51	20.791	
1,100.0	1,097.4	1,099.7	1,099.0	2.2	2.0	157.08	23.8	29.9	83.0	79.1	3.89	21.350	
1,200.0	1,196.3	1,199.0	1,198.2	2.5	2.2	157.04	29.4	27.5	94.7	90.4	4.27	22.169	
1,300.0	1,294.9	1,298.1	1,297.1	2.8	2.4	157.36	34.9	25.2	107.9	103.3	4.65	23.187	
1,315.9	1,310.6	1,313.9	1,312.8	2.9	2.4	157.43	35.8	24.8	110.2	105.5	4.72	23.366	
1,400.0	1,393.4	1,397.1	1,395.9	3.1	2.6	157.84	40.5	22.8	122.2	117.2	5.04	24.235	
1,500.0	1,491.8	1,496.1	1,494.7	3.5	2.7	158.23	46.0	20.5	136.6	131.1	5.44	25.129	
1,600.0	1,590.2	1,595.0	1,593.4	3.8	2.9	158.55	51.5	18.1	150.9	145.1	5.83	25.899	
1,700.0	1,688.7	1,694.0	1,692.2	4.2	3.1	158.81	57.1	15.8	165.3	159.1	6.22	26.571	
1,800.0	1,787.1	1,793.0	1,791.0	4.5	3.3	159.03	62.6	13.4	179.6	173.0	6.61	27.160	
1,900.0	1,885.5	1,891.9	1,889.8	4.8	3.5	159.21	68.2	11.1	194.0	187.0	7.01	27.682	
2,000.0	1,984.0	1,990.9	1,988.6	5.2	3.7	159.38	73.7	8.7	208.3	200.9	7.40	28.147	
2,100.0	2,082.4	2,089.8	2,087.3	5.5	3.9	159.52	79.2	6.4	222.7	214.9	7.80	28.564	
2,200.0	2,180.8	2,188.8	2,186.1	5.9	4.1	159.64	84.8	4.0	237.0	228.9	8.19	28.940	
2,300.0	2,279.3	2,287.8	2,284.9	6.2	4.3	159.75	90.3	1.7	251.4	242.8	8.59	29.281	
2,400.0	2,377.7	2,386.7	2,383.7	6.6	4.5	159.85	95.9	-0.7	265.8	256.8	8.98	29.591	
2,500.0	2,476.1	2,485.7	2,482.5	6.9	4.7	159.94	101.4	-3.0	280.1	270.7	9.38	29.875	
2,600.0	2,574.6	2,584.7	2,581.2	7.3	4.9	160.01	106.9	-5.4	294.5	284.7	9.77	30.135	
2,700.0	2,673.0	2,683.6	2,680.0	7.7	5.1	160.09	112.5	-7.7	308.8	298.7	10.17	30.374	
2,800.0	2,771.4	2,782.6	2,778.8	8.0	5.3	160.15	118.0	-10.1	323.2	312.6	10.56	30.596	
2,900.0	2,869.8	2,881.5	2,877.6	8.4	5.5	160.21	123.6	-12.5	337.6	326.6	10.96	30.801	
3,000.0	2,968.3	2,980.5	2,976.4	8.7	5.8	160.27	129.1	-14.8	351.9	340.6	11.36	30.991	
3,100.0	3,066.7	3,079.5	3,075.1	9.1	6.0	160.32	134.6	-17.2	366.3	354.5	11.75	31.169	
3,200.0	3,165.1	3,178.4	3,173.9	9.4	6.2	160.36	140.2	-19.5	380.7	368.5	12.15	31.335	
3,300.0	3,263.6	3,277.4	3,272.7	9.8	6.4	160.41	145.7	-21.9	395.0	382.5	12.54	31.490	
3,400.0	3,362.0	3,376.4	3,371.5	10.1	6.6	160.45	151.2	-24.2	409.4	396.4	12.94	31.635	
3,500.0	3,460.4	3,475.3	3,470.2	10.5	6.8	160.49	156.8	-26.6	423.7	410.4	13.34	31.772	
3,600.0	3,558.9	3,574.3	3,569.0	10.8	7.0	160.52	162.3	-28.9	438.1	424.4	13.73	31.900	
3,700.0	3,657.3	3,673.3	3,667.8	11.2	7.2	160.55	167.9	-31.3	452.5	438.3	14.13	32.022	
3,800.0	3,755.7	3,772.2	3,766.6	11.6	7.4	160.59	173.4	-33.6	466.8	452.3	14.53	32.136	
3,900.0	3,854.2	3,871.2	3,865.4	11.9	7.6	160.61	178.9	-36.0	481.2	466.3	14.92	32.245	
4,000.0	3,952.6	3,970.1	3,964.1	12.3	7.8	160.64	184.5	-38.3	495.6	480.2	15.32	32.348	
4,100.0	4,051.0	4,069.1	4,062.9	12.6	8.0	160.67	190.0	-40.7	509.9	494.2	15.72	32.445	
4,200.0	4,149.5	4,168.1	4,161.7	13.0	8.2	160.69	195.6	-43.0	524.3	508.2	16.11	32.538	
4,300.0	4,247.9	4,267.0	4,260.5	13.3	8.4	160.71	201.1	-45.4	538.7	522.1	16.51	32.626	
4,400.0	4,346.3	4,366.0	4,359.3	13.7	8.6	160.74	206.6	-47.7	553.0	536.1	16.91	32.710	
4,500.0	4,444.8	4,465.0	4,458.0	14.1	8.8	160.76	212.2	-50.1	567.4	550.1	17.30	32.790	
4,600.0	4,543.2	4,563.9	4,556.8	14.4	9.0	160.78	217.7	-52.4	581.8	564.1	17.70	32.866	
4,700.0	4,641.6	4,662.9	4,655.6	14.8	9.2	160.80	223.3	-54.8	596.1	578.0	18.10	32.939	
4,800.0	4,740.1	4,761.8	4,754.4	15.1	9.4	160.81	228.8	-57.2	610.5	592.0	18.49	33.009	
4,900.0	4,838.5	4,860.8	4,853.2	15.5	9.6	160.83	234.3	-59.5	624.8	606.0	18.89	33.076	
5,000.0	4,936.9	4,959.8	4,951.9	15.8	9.8	160.85	239.9	-61.9	639.2	619.9	19.29	33.140	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2

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
5,100.0	5,035.4	5,058.7	5,050.7	16.2	10.0	160.86	245.4	-64.2	653.6	633.9	19.68	33.202	
5,200.0	5,133.8	5,157.7	5,149.5	16.5	10.2	160.88	251.0	-66.6	667.9	647.9	20.08	33.261	
5,300.0	5,232.2	5,256.7	5,248.3	16.9	10.4	160.89	256.5	-68.9	682.3	661.8	20.48	33.318	
5,400.0	5,330.6	5,355.6	5,347.1	17.3	10.6	160.91	262.0	-71.3	696.7	675.8	20.88	33.372	
5,500.0	5,429.1	5,454.6	5,445.8	17.6	10.8	160.92	267.6	-73.6	711.0	689.8	21.27	33.425	
5,600.0	5,527.5	5,553.5	5,544.6	18.0	11.0	160.93	273.1	-76.0	725.4	703.7	21.67	33.475	
5,700.0	5,625.9	5,652.5	5,643.4	18.3	11.2	160.94	278.7	-78.3	739.8	717.7	22.07	33.524	
5,800.0	5,724.4	5,751.5	5,742.2	18.7	11.4	160.96	284.2	-80.7	754.1	731.7	22.46	33.571	
5,900.0	5,822.8	5,850.4	5,841.0	19.0	11.6	160.97	289.7	-83.0	768.5	745.6	22.86	33.616	
6,000.0	5,921.2	5,949.4	5,939.7	19.4	11.8	160.98	295.3	-85.4	782.9	759.6	23.26	33.660	
6,100.0	6,019.7	6,048.4	6,038.5	19.8	12.0	160.99	300.8	-87.7	797.2	773.6	23.65	33.702	
6,200.0	6,118.1	6,147.3	6,137.3	20.1	12.2	161.00	306.4	-90.1	811.6	787.5	24.05	33.743	
6,300.0	6,216.5	6,246.3	6,236.1	20.5	12.4	161.01	311.9	-92.4	826.0	801.5	24.45	33.783	
6,400.0	6,315.0	6,345.2	6,334.9	20.8	12.6	161.02	317.4	-94.8	840.3	815.5	24.85	33.821	
6,500.0	6,413.4	6,444.2	6,433.6	21.2	12.8	161.03	323.0	-97.1	854.7	829.4	25.24	33.858	
6,600.0	6,511.8	6,543.2	6,532.4	21.5	13.0	161.04	328.5	-99.5	869.1	843.4	25.64	33.894	
6,700.0	6,610.3	6,642.1	6,631.2	21.9	13.2	161.04	334.0	-101.9	883.4	857.4	26.04	33.929	
6,800.0	6,708.7	6,741.1	6,730.0	22.3	13.4	161.05	339.6	-104.2	897.8	871.4	26.43	33.963	
6,877.3	6,784.8	6,817.9	6,806.7	22.5	13.6	161.11	343.1	-106.0	908.9	882.2	26.72	34.016	
6,900.0	6,807.1	6,840.6	6,829.4	22.6	13.6	171.54	343.0	-106.6	912.1	885.4	26.73	34.119	
6,950.0	6,856.4	6,890.4	6,879.0	22.8	13.6	-164.64	340.2	-107.8	919.3	892.6	26.72	34.402	
7,000.0	6,905.5	6,940.0	6,928.3	22.9	13.7	-144.87	334.0	-109.0	926.5	899.8	26.67	34.736	
7,050.0	6,954.3	6,989.5	6,976.8	23.0	13.7	-131.02	324.4	-110.3	933.6	907.0	26.59	35.110	
7,100.0	7,002.4	7,038.9	7,024.5	23.1	13.6	-121.61	311.6	-111.5	940.6	914.1	26.49	35.512	
7,150.0	7,049.6	7,088.2	7,071.0	23.2	13.6	-115.02	295.5	-112.8	947.4	921.0	26.37	35.927	
7,200.0	7,095.7	7,137.4	7,116.3	23.3	13.6	-110.19	276.3	-114.0	954.1	927.9	26.25	36.342	
7,250.0	7,140.5	7,186.5	7,160.0	23.4	13.5	-106.49	254.1	-115.2	960.6	934.5	26.15	36.740	
7,300.0	7,183.7	7,235.4	7,202.0	23.5	13.4	-103.57	229.0	-116.4	966.9	940.9	26.06	37.106	
7,350.0	7,225.2	7,284.4	7,242.2	23.5	13.4	-101.20	201.1	-117.6	972.9	946.9	26.00	37.423	
7,400.0	7,264.8	7,333.2	7,280.3	23.6	13.4	-99.24	170.6	-118.7	978.7	952.7	25.98	37.675	
7,450.0	7,302.2	7,382.0	7,316.2	23.7	13.3	-97.58	137.6	-119.8	984.1	958.1	26.00	37.849	
7,500.0	7,337.3	7,430.7	7,349.7	23.7	13.3	-96.18	102.2	-120.9	989.2	963.1	26.08	37.930	
7,550.0	7,369.8	7,479.4	7,380.8	23.8	13.4	-94.98	64.8	-121.9	993.9	967.6	26.22	37.911	
7,600.0	7,399.7	7,528.0	7,409.1	23.9	13.4	-93.95	25.3	-122.8	998.2	971.8	26.42	37.783	
7,650.0	7,426.8	7,576.6	7,434.8	24.0	13.5	-93.06	-16.0	-123.7	1,002.1	975.4	26.69	37.552	
7,700.0	7,451.0	7,625.2	7,457.5	24.2	13.7	-92.31	-58.9	-124.6	1,005.5	978.5	27.03	37.207	
7,750.0	7,472.1	7,673.7	7,477.3	24.3	13.9	-91.68	-103.2	-125.4	1,008.6	981.1	27.44	36.758	
7,800.0	7,490.1	7,722.2	7,494.0	24.5	14.1	-91.16	-148.7	-126.1	1,011.1	983.2	27.92	36.215	
7,850.0	7,504.8	7,770.7	7,507.6	24.7	14.4	-90.74	-195.2	-126.8	1,013.2	984.7	28.47	35.587	
7,900.0	7,516.2	7,819.1	7,518.0	24.9	14.7	-90.41	-242.5	-127.3	1,014.8	985.7	29.09	34.887	
7,950.0	7,524.2	7,867.5	7,525.2	25.1	15.1	-90.18	-290.3	-127.9	1,015.9	986.1	29.77	34.129	
8,000.0	7,528.8	7,915.9	7,529.2	25.4	15.5	-90.05	-338.5	-128.3	1,016.5	986.0	30.50	33.325	
8,042.0	7,530.0	7,956.7	7,530.0	25.6	15.8	-90.00	-379.4	-128.6	1,016.6	985.4	31.16	32.624	
8,100.0	7,530.0	8,014.7	7,530.0	26.0	16.4	-90.00	-437.3	-129.0	1,016.5	984.2	32.31	31.465	
8,200.0	7,530.0	8,114.7	7,530.0	26.6	17.5	-90.00	-537.3	-129.7	1,016.3	981.9	34.46	29.491	
8,300.0	7,530.0	8,214.7	7,530.0	27.4	18.6	-90.00	-637.3	-130.4	1,016.1	979.3	36.83	27.592	
8,400.0	7,530.0	8,314.7	7,530.0	28.3	19.9	-90.00	-737.3	-131.1	1,016.0	976.6	39.36	25.810	
8,500.0	7,530.0	8,414.7	7,530.0	29.2	21.2	-90.00	-837.3	-131.8	1,015.8	973.8	42.04	24.162	
8,600.0	7,530.0	8,514.7	7,530.0	30.2	22.6	-90.00	-937.3	-132.5	1,015.6	970.8	44.83	22.654	
8,700.0	7,530.0	8,614.7	7,530.0	31.3	24.0	-90.00	-1,037.3	-133.2	1,015.4	967.7	47.72	21.280	
8,800.0	7,530.0	8,714.7	7,530.0	32.4	25.5	-90.00	-1,137.3	-133.9	1,015.3	964.6	50.68	20.032	
8,900.0	7,530.0	8,814.7	7,530.0	33.6	27.0	-90.00	-1,237.3	-134.6	1,015.1	961.4	53.71	18.898	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2

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
9,000.0	7,530.0	8,914.7	7,530.0	34.9	28.5	-90.00	-1,337.3	-135.3	1,014.9	958.1	56.80	17.869	
9,100.0	7,530.0	9,014.7	7,530.0	36.1	30.1	-90.00	-1,437.3	-136.0	1,014.7	954.8	59.93	16.932	
9,200.0	7,530.0	9,114.7	7,530.0	37.5	31.7	-90.00	-1,537.3	-136.7	1,014.6	951.5	63.10	16.078	
9,300.0	7,530.0	9,214.7	7,530.0	38.8	33.3	-90.00	-1,637.3	-137.4	1,014.4	948.1	66.31	15.298	
9,400.0	7,530.0	9,314.7	7,530.0	40.2	34.9	-90.00	-1,737.3	-138.1	1,014.2	944.7	69.54	14.584	
9,500.0	7,530.0	9,414.7	7,530.0	41.6	36.5	-90.00	-1,837.3	-138.8	1,014.1	941.2	72.80	13.929	
9,600.0	7,530.0	9,514.7	7,530.0	43.1	38.2	-90.00	-1,937.3	-139.5	1,013.9	937.8	76.08	13.326	
9,700.0	7,530.0	9,614.7	7,530.0	44.5	39.8	-90.00	-2,037.3	-140.2	1,013.7	934.3	79.39	12.769	
9,800.0	7,530.0	9,714.7	7,530.0	46.0	41.5	-90.00	-2,137.3	-140.9	1,013.5	930.8	82.70	12.255	
9,900.0	7,530.0	9,814.7	7,530.0	47.5	43.1	-90.00	-2,237.3	-141.6	1,013.4	927.3	86.04	11.778	
10,000.0	7,530.0	9,914.7	7,530.0	49.0	44.8	-90.00	-2,337.3	-142.3	1,013.2	923.8	89.39	11.335	
10,100.0	7,530.0	10,014.7	7,530.0	50.6	46.5	-90.00	-2,437.3	-143.0	1,013.0	920.3	92.74	10.923	
10,200.0	7,530.0	10,114.7	7,530.0	52.1	48.1	-90.00	-2,537.3	-143.7	1,012.8	916.7	96.11	10.538	
10,300.0	7,530.0	10,214.7	7,530.0	53.7	49.8	-90.00	-2,637.3	-144.3	1,012.7	913.2	99.49	10.178	
10,400.0	7,530.0	10,314.7	7,530.0	55.2	51.5	-90.00	-2,737.3	-145.0	1,012.5	909.6	102.88	9.841	
10,500.0	7,530.0	10,414.7	7,530.0	56.8	53.2	-90.00	-2,837.3	-145.7	1,012.3	906.0	106.28	9.525	
10,600.0	7,530.0	10,514.7	7,530.0	58.4	54.9	-90.00	-2,937.3	-146.4	1,012.1	902.5	109.68	9.228	
10,700.0	7,530.0	10,614.7	7,530.0	60.0	56.6	-90.00	-3,037.3	-147.1	1,012.0	898.9	113.09	8.948	
10,800.0	7,530.0	10,714.7	7,530.0	61.6	58.3	-90.00	-3,137.3	-147.8	1,011.8	895.3	116.50	8.685	
10,900.0	7,530.0	10,814.7	7,530.0	63.2	60.0	-90.00	-3,237.2	-148.5	1,011.6	891.7	119.92	8.436	
11,000.0	7,530.0	10,914.7	7,530.0	64.9	61.8	-90.00	-3,337.2	-149.2	1,011.4	888.1	123.35	8.200	
11,100.0	7,530.0	11,014.7	7,530.0	66.5	63.5	-90.00	-3,437.2	-149.9	1,011.3	884.5	126.78	7.977	
11,200.0	7,530.0	11,114.7	7,530.0	68.1	65.2	-90.00	-3,537.2	-150.6	1,011.1	880.9	130.21	7.765	
11,300.0	7,530.0	11,214.7	7,530.0	69.8	66.9	-90.00	-3,637.2	-151.3	1,010.9	877.3	133.65	7.564	
11,400.0	7,530.0	11,314.7	7,530.0	71.4	68.6	-90.00	-3,737.2	-152.0	1,010.7	873.6	137.09	7.373	
11,500.0	7,530.0	11,414.7	7,530.0	73.1	70.3	-90.00	-3,837.2	-152.7	1,010.6	870.0	140.54	7.191	
11,600.0	7,530.0	11,514.7	7,530.0	74.7	72.1	-90.00	-3,937.2	-153.4	1,010.4	866.4	143.98	7.017	
11,700.0	7,530.0	11,614.7	7,530.0	76.4	73.8	-90.00	-4,037.2	-154.1	1,010.2	862.8	147.43	6.852	
11,800.0	7,530.0	11,714.7	7,530.0	78.1	75.5	-90.00	-4,137.2	-154.8	1,010.0	859.2	150.89	6.694	
11,900.0	7,530.0	11,814.7	7,530.0	79.7	77.2	-90.00	-4,237.2	-155.5	1,009.9	855.5	154.34	6.543	
12,000.0	7,530.0	11,914.7	7,530.0	81.4	79.0	-90.00	-4,337.2	-156.2	1,009.7	851.9	157.80	6.399	
12,100.0	7,530.0	12,014.7	7,530.0	83.1	80.7	-90.00	-4,437.2	-156.9	1,009.5	848.3	161.26	6.260	
12,200.0	7,530.0	12,114.7	7,530.0	84.8	82.4	-90.00	-4,537.2	-157.6	1,009.3	844.6	164.72	6.128	
12,300.0	7,530.0	12,214.7	7,530.0	86.5	84.2	-90.00	-4,637.2	-158.3	1,009.2	841.0	168.19	6.000	
12,400.0	7,530.0	12,314.7	7,530.0	88.1	85.9	-90.00	-4,737.2	-159.0	1,009.0	837.3	171.65	5.878	
12,500.0	7,530.0	12,414.7	7,530.0	89.8	87.6	-90.00	-4,837.2	-159.7	1,008.8	833.7	175.12	5.761	
12,600.0	7,530.0	12,514.7	7,530.0	91.5	89.4	-90.00	-4,937.2	-160.4	1,008.6	830.1	178.59	5.648	
12,700.0	7,530.0	12,614.7	7,530.0	93.2	91.1	-90.00	-5,037.2	-161.1	1,008.5	826.4	182.06	5.539	
12,800.0	7,530.0	12,714.7	7,530.0	94.9	92.8	-90.00	-5,137.2	-161.8	1,008.3	822.8	185.53	5.435	
12,900.0	7,530.0	12,814.7	7,530.0	96.6	94.6	-90.00	-5,237.2	-162.5	1,008.1	819.1	189.01	5.334	
13,000.0	7,530.0	12,914.7	7,530.0	98.3	96.3	-90.00	-5,337.2	-163.2	1,007.9	815.5	192.48	5.237	
13,100.0	7,530.0	13,014.7	7,530.0	100.0	98.0	-90.00	-5,437.2	-163.9	1,007.8	811.8	195.96	5.143	
13,200.0	7,530.0	13,114.7	7,530.0	101.7	99.8	-90.00	-5,537.2	-164.6	1,007.6	808.2	199.43	5.052	
13,300.0	7,530.0	13,214.7	7,530.0	103.4	101.5	-90.00	-5,637.2	-165.3	1,007.4	804.5	202.91	4.965	
13,400.0	7,530.0	13,314.7	7,530.0	105.1	103.2	-90.00	-5,737.2	-166.0	1,007.3	800.9	206.39	4.880	
13,500.0	7,530.0	13,414.7	7,530.0	106.8	105.0	-90.00	-5,837.2	-166.7	1,007.1	797.2	209.87	4.799	
13,600.0	7,530.0	13,514.7	7,530.0	108.5	106.7	-90.00	-5,937.2	-167.4	1,006.9	793.6	213.35	4.719	
13,700.0	7,530.0	13,614.7	7,530.0	110.3	108.5	-90.00	-6,037.2	-168.1	1,006.7	789.9	216.83	4.643	
13,800.0	7,530.0	13,714.7	7,530.0	112.0	110.2	-90.00	-6,137.2	-168.8	1,006.6	786.2	220.32	4.569	
13,900.0	7,530.0	13,814.7	7,530.0	113.7	112.0	-90.00	-6,237.2	-169.5	1,006.4	782.6	223.80	4.497	
14,000.0	7,530.0	13,914.7	7,530.0	115.4	113.7	-90.00	-6,337.2	-170.2	1,006.2	778.9	227.28	4.427	
14,100.0	7,530.0	14,014.7	7,530.0	117.1	115.4	-90.00	-6,437.2	-170.9	1,006.0	775.3	230.77	4.359	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1G-7H-A168 - HZ - Plan #2

Survey Program: 0-Geolink MWD

Offset Site Error: 0.0 ft

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
14,200.0	7,530.0	14,114.7	7,530.0	118.8	117.2	-90.00	-6,537.2	-171.6	1,005.9	771.6	234.26	4.294	
14,300.0	7,530.0	14,214.7	7,530.0	120.6	118.9	-90.00	-6,637.2	-172.3	1,005.7	767.9	237.74	4.230	
14,400.0	7,530.0	14,314.7	7,530.0	122.3	120.7	-90.00	-6,737.2	-173.0	1,005.5	764.3	241.23	4.168	
14,500.0	7,530.0	14,414.7	7,530.0	124.0	122.4	-90.00	-6,837.2	-173.7	1,005.3	760.6	244.72	4.108	
14,600.0	7,530.0	14,514.7	7,530.0	125.7	124.1	-90.00	-6,937.2	-174.4	1,005.2	757.0	248.20	4.050	
14,700.0	7,530.0	14,614.7	7,530.0	127.4	125.9	-90.00	-7,037.2	-175.1	1,005.0	753.3	251.69	3.993	
14,800.0	7,530.0	14,714.7	7,530.0	129.2	127.6	-90.00	-7,137.1	-175.8	1,004.8	749.6	255.18	3.938	
14,900.0	7,530.0	14,814.7	7,530.0	130.9	129.4	-90.00	-7,237.1	-176.5	1,004.6	746.0	258.67	3.884	
15,000.0	7,530.0	14,914.7	7,530.0	132.6	131.1	-90.00	-7,337.1	-177.2	1,004.5	742.3	262.16	3.831	
15,100.0	7,530.0	15,014.7	7,530.0	134.3	132.9	-90.00	-7,437.1	-177.9	1,004.3	738.6	265.65	3.780	
15,200.0	7,530.0	15,114.7	7,530.0	136.1	134.6	-90.00	-7,537.1	-178.5	1,004.1	735.0	269.14	3.731	
15,300.0	7,530.0	15,214.7	7,530.0	137.8	136.4	-90.00	-7,637.1	-179.2	1,003.9	731.3	272.64	3.682	
15,400.0	7,530.0	15,314.7	7,530.0	139.5	138.1	-90.00	-7,737.1	-179.9	1,003.8	727.6	276.13	3.635	
15,500.0	7,530.0	15,414.7	7,530.0	141.2	139.9	-90.00	-7,837.1	-180.6	1,003.6	724.0	279.62	3.589	
15,600.0	7,530.0	15,514.7	7,530.0	143.0	141.6	-90.00	-7,937.1	-181.3	1,003.4	720.3	283.11	3.544	
15,700.0	7,530.0	15,614.7	7,530.0	144.7	143.3	-90.00	-8,037.1	-182.0	1,003.2	716.6	286.61	3.500	
15,800.0	7,530.0	15,714.7	7,530.0	146.4	145.1	-90.00	-8,137.1	-182.7	1,003.1	713.0	290.10	3.458	
15,900.0	7,530.0	15,814.7	7,530.0	148.2	146.8	-90.00	-8,237.1	-183.4	1,002.9	709.3	293.59	3.416	
16,000.0	7,530.0	15,914.7	7,530.0	149.9	148.6	-90.00	-8,337.1	-184.1	1,002.7	705.6	297.09	3.375	
16,100.0	7,530.0	16,014.7	7,530.0	151.6	150.3	-90.00	-8,437.1	-184.8	1,002.5	702.0	300.58	3.335	
16,200.0	7,530.0	16,114.7	7,530.0	153.4	152.1	-90.00	-8,537.1	-185.5	1,002.4	698.3	304.08	3.296	
16,300.0	7,530.0	16,214.7	7,530.0	155.1	153.8	-90.00	-8,637.1	-186.2	1,002.2	694.6	307.57	3.258	
16,400.0	7,530.0	16,314.7	7,530.0	156.8	155.6	-90.00	-8,737.1	-186.9	1,002.0	691.0	311.07	3.221	
16,500.0	7,530.0	16,414.7	7,530.0	158.6	157.3	-90.00	-8,837.1	-187.6	1,001.8	687.3	314.56	3.185	
16,600.0	7,530.0	16,514.7	7,530.0	160.3	159.1	-90.00	-8,937.1	-188.3	1,001.7	683.6	318.06	3.149	
16,700.0	7,530.0	16,614.7	7,530.0	162.0	160.8	-90.00	-9,037.1	-189.0	1,001.5	679.9	321.56	3.115	
16,800.0	7,530.0	16,714.7	7,530.0	163.8	162.6	-90.00	-9,137.1	-189.7	1,001.3	676.3	325.05	3.081	
16,900.0	7,530.0	16,814.7	7,530.0	165.5	164.3	-90.00	-9,237.1	-190.4	1,001.1	672.6	328.55	3.047	
17,000.0	7,530.0	16,914.7	7,530.0	167.2	166.1	-90.00	-9,337.1	-191.1	1,001.0	668.9	332.05	3.015	
17,100.0	7,530.0	17,014.7	7,530.0	169.0	167.8	-90.00	-9,437.1	-191.8	1,000.8	665.3	335.54	2.983	
17,200.0	7,530.0	17,114.7	7,530.0	170.7	169.6	-90.00	-9,537.1	-192.5	1,000.6	661.6	339.04	2.951	
17,300.0	7,530.0	17,214.7	7,530.0	172.4	171.3	-90.00	-9,637.1	-193.2	1,000.5	657.9	342.54	2.921	
17,400.0	7,530.0	17,314.7	7,530.0	174.2	173.1	-90.00	-9,737.1	-193.9	1,000.3	654.2	346.04	2.891	
17,490.0	7,530.0	17,404.7	7,530.0	175.7	174.6	-90.00	-9,827.1	-194.5	1,000.1	650.9	349.19	2.864	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1H-7H-A168 - HZ - Plan #2

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	49.8	49.8				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	49.8	49.8	49.5	0.30	164.033	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	49.8	49.8	49.2	0.65	76.315	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	49.8	49.8	48.8	1.00	49.724	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	161.68	0.0	49.8	50.6	49.3	1.35	37.490	
500.0	500.0	500.0	500.0	0.9	0.8	162.56	0.0	49.8	53.1	51.4	1.70	31.259	
600.0	599.9	599.9	599.9	1.0	1.0	163.64	0.2	49.8	57.3	55.3	2.05	27.970	
700.0	699.7	699.7	699.7	1.2	1.2	163.60	2.0	49.8	63.1	60.7	2.40	26.308	
800.0	799.4	799.5	799.4	1.4	1.4	162.55	5.4	49.9	70.6	67.8	2.75	25.620	
900.0	898.9	899.0	898.8	1.7	1.6	160.93	10.5	50.0	79.7	76.6	3.12	25.570	
1,000.0	998.3	998.4	998.1	1.9	1.7	159.80	15.9	50.0	90.5	87.1	3.49	25.975	
1,100.0	1,097.4	1,097.6	1,097.1	2.2	1.9	159.25	21.3	50.1	103.0	99.2	3.86	26.699	
1,200.0	1,196.3	1,196.6	1,196.0	2.5	2.1	159.11	26.6	50.2	117.1	112.9	4.23	27.658	
1,300.0	1,294.9	1,295.4	1,294.6	2.8	2.3	159.26	32.0	50.3	132.8	128.2	4.61	28.797	
1,315.9	1,310.6	1,311.1	1,310.3	2.9	2.3	159.30	32.9	50.3	135.5	130.8	4.67	28.994	
1,400.0	1,393.4	1,394.0	1,393.0	3.1	2.5	159.56	37.4	50.4	149.6	144.6	5.00	29.940	
1,500.0	1,491.8	1,492.6	1,491.5	3.5	2.7	159.82	42.7	50.4	166.4	161.0	5.38	30.911	
1,600.0	1,590.2	1,591.1	1,589.9	3.8	2.9	160.03	48.1	50.5	183.1	177.4	5.77	31.746	
1,700.0	1,688.7	1,689.7	1,688.3	4.2	3.1	160.20	53.4	50.6	199.9	193.8	6.16	32.473	
1,800.0	1,787.1	1,788.3	1,786.8	4.5	3.3	160.34	58.8	50.7	216.7	210.2	6.55	33.110	
1,900.0	1,885.5	1,886.9	1,885.2	4.8	3.5	160.47	64.1	50.7	233.5	226.6	6.93	33.673	
2,000.0	1,984.0	1,985.5	1,983.6	5.2	3.7	160.58	69.5	50.8	250.3	243.0	7.32	34.174	
2,100.0	2,082.4	2,084.0	2,082.1	5.5	3.9	160.67	74.8	50.9	267.1	259.4	7.71	34.623	
2,200.0	2,180.8	2,182.6	2,180.5	5.9	4.1	160.76	80.1	51.0	283.9	275.8	8.10	35.027	
2,300.0	2,279.3	2,281.2	2,278.9	6.2	4.2	160.83	85.5	51.1	300.7	292.2	8.50	35.393	
2,400.0	2,377.7	2,379.8	2,377.4	6.6	4.4	160.90	90.8	51.1	317.5	308.6	8.89	35.725	
2,500.0	2,476.1	2,478.3	2,475.8	6.9	4.6	160.96	96.2	51.2	334.2	325.0	9.28	36.029	
2,600.0	2,574.6	2,576.9	2,574.2	7.3	4.8	161.01	101.5	51.3	351.0	341.4	9.67	36.308	
2,700.0	2,673.0	2,675.5	2,672.7	7.7	5.0	161.06	106.9	51.4	367.8	357.8	10.06	36.564	
2,800.0	2,771.4	2,774.1	2,771.1	8.0	5.2	161.10	112.2	51.5	384.6	374.2	10.45	36.801	
2,900.0	2,869.8	2,872.7	2,869.6	8.4	5.4	161.14	117.6	51.5	401.4	390.6	10.84	37.020	
3,000.0	2,968.3	2,971.2	2,968.0	8.7	5.6	161.18	122.9	51.6	418.2	407.0	11.24	37.224	
3,100.0	3,066.7	3,069.8	3,066.4	9.1	5.8	161.22	128.3	51.7	435.0	423.4	11.63	37.413	
3,200.0	3,165.1	3,168.4	3,164.9	9.4	6.0	161.25	133.6	51.8	451.8	439.8	12.02	37.590	
3,300.0	3,263.6	3,267.0	3,263.3	9.8	6.2	161.28	139.0	51.8	468.6	456.2	12.41	37.755	
3,400.0	3,362.0	3,365.6	3,361.7	10.1	6.4	161.31	144.3	51.9	485.4	472.6	12.80	37.910	
3,500.0	3,460.4	3,464.1	3,460.2	10.5	6.6	161.33	149.7	52.0	502.2	489.0	13.20	38.056	
3,600.0	3,558.9	3,562.7	3,558.6	10.8	6.8	161.36	155.0	52.1	519.0	505.4	13.59	38.193	
3,700.0	3,657.3	3,661.3	3,657.0	11.2	7.0	161.38	160.4	52.2	535.8	521.8	13.98	38.322	
3,800.0	3,755.7	3,759.9	3,755.5	11.6	7.2	161.40	165.7	52.2	552.6	538.2	14.37	38.444	
3,900.0	3,854.2	3,858.5	3,853.9	11.9	7.4	161.42	171.1	52.3	569.3	554.6	14.77	38.559	
4,000.0	3,952.6	3,957.0	3,952.3	12.3	7.6	161.44	176.4	52.4	586.1	571.0	15.16	38.669	
4,100.0	4,051.0	4,055.6	4,050.8	12.6	7.8	161.46	181.8	52.5	602.9	587.4	15.55	38.772	
4,200.0	4,149.5	4,154.2	4,149.2	13.0	7.9	161.47	187.1	52.5	619.7	603.8	15.94	38.871	
4,300.0	4,247.9	4,252.8	4,247.6	13.3	8.1	161.49	192.5	52.6	636.5	620.2	16.34	38.964	
4,400.0	4,346.3	4,351.4	4,346.1	13.7	8.3	161.51	197.8	52.7	653.3	636.6	16.73	39.053	
4,500.0	4,444.8	4,449.9	4,444.5	14.1	8.5	161.52	203.2	52.8	670.1	653.0	17.12	39.138	
4,600.0	4,543.2	4,548.5	4,542.9	14.4	8.7	161.53	208.5	52.9	686.9	669.4	17.51	39.219	
4,700.0	4,641.6	4,647.1	4,641.4	14.8	8.9	161.55	213.9	52.9	703.7	685.8	17.91	39.297	
4,800.0	4,740.1	4,745.7	4,739.8	15.1	9.1	161.56	219.2	53.0	720.5	702.2	18.30	39.371	
4,900.0	4,838.5	4,844.3	4,838.2	15.5	9.3	161.57	224.6	53.1	737.3	718.6	18.69	39.442	
5,000.0	4,936.9	4,942.8	4,936.7	15.8	9.5	161.58	229.9	53.2	754.1	735.0	19.09	39.510	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1H-7H-A168 - HZ - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,035.4	5,041.4	5,035.1	16.2	9.7	161.59	235.3	53.2	770.9	751.4	19.48	39.575	
5,200.0	5,133.8	5,140.0	5,133.5	16.5	9.9	161.60	240.6	53.3	787.7	767.8	19.87	39.638	
5,300.0	5,232.2	5,238.6	5,232.0	16.9	10.1	161.61	246.0	53.4	804.5	784.2	20.26	39.698	
5,400.0	5,330.6	5,337.2	5,330.4	17.3	10.3	161.62	251.3	53.5	821.3	800.6	20.66	39.756	
5,500.0	5,429.1	5,435.7	5,428.8	17.6	10.5	161.63	256.7	53.6	838.0	817.0	21.05	39.811	
5,600.0	5,527.5	5,534.3	5,527.3	18.0	10.7	161.64	262.0	53.6	854.8	833.4	21.44	39.865	
5,700.0	5,625.9	5,632.9	5,625.7	18.3	10.9	161.65	267.4	53.7	871.6	849.8	21.84	39.916	
5,800.0	5,724.4	5,731.5	5,724.1	18.7	11.1	161.66	272.7	53.8	888.4	866.2	22.23	39.966	
5,900.0	5,822.8	5,830.1	5,822.6	19.0	11.3	161.67	278.1	53.9	905.2	882.6	22.62	40.014	
6,000.0	5,921.2	5,928.6	5,921.0	19.4	11.5	161.67	283.4	53.9	922.0	899.0	23.02	40.060	
6,100.0	6,019.7	6,027.2	6,019.5	19.8	11.7	161.68	288.8	54.0	938.8	915.4	23.41	40.105	
6,200.0	6,118.1	6,125.8	6,117.9	20.1	11.9	161.69	294.1	54.1	955.6	931.8	23.80	40.148	
6,300.0	6,216.5	6,224.4	6,216.3	20.5	12.1	161.69	299.5	54.2	972.4	948.2	24.19	40.190	
6,400.0	6,315.0	6,323.0	6,314.8	20.8	12.2	161.70	304.8	54.3	989.2	964.6	24.59	40.231	
6,500.0	6,413.4	6,421.5	6,413.2	21.2	12.4	161.71	310.2	54.3	1,006.0	981.0	24.98	40.270	
6,600.0	6,511.8	6,520.1	6,511.6	21.5	12.6	161.71	315.5	54.4	1,022.8	997.4	25.37	40.308	
6,700.0	6,610.3	6,618.7	6,610.1	21.9	12.8	161.72	320.9	54.5	1,039.6	1,013.8	25.77	40.345	
6,800.0	6,708.7	6,717.3	6,708.5	22.3	13.0	161.73	326.2	54.6	1,056.4	1,030.2	26.16	40.380	
6,877.3	6,784.8	6,793.5	6,784.6	22.5	13.2	161.73	330.3	54.6	1,069.4	1,042.9	26.46	40.407	
6,900.0	6,807.1	6,815.8	6,806.9	22.6	13.2	172.13	331.6	54.7	1,073.2	1,046.7	26.51	40.485	
6,950.0	6,856.4	6,865.0	6,856.0	22.8	13.3	-164.27	334.2	54.7	1,081.6	1,055.0	26.60	40.664	
7,000.0	6,905.5	6,913.8	6,904.8	22.9	13.4	-144.89	336.9	54.7	1,089.9	1,063.3	26.69	40.837	
7,050.0	6,954.3	6,962.1	6,952.9	23.0	13.5	-131.59	339.5	54.8	1,098.3	1,071.6	26.78	41.007	
7,100.0	7,002.4	7,009.5	7,000.3	23.1	13.6	-122.86	342.1	54.8	1,106.8	1,079.9	26.88	41.182	
7,150.0	7,049.6	7,057.7	7,048.4	23.2	13.7	-117.06	343.9	54.8	1,115.4	1,088.4	26.95	41.384	
7,200.0	7,095.7	7,107.5	7,098.2	23.3	13.7	-113.01	342.5	54.9	1,124.0	1,097.0	26.99	41.649	
7,250.0	7,140.5	7,158.5	7,149.0	23.4	13.8	-110.09	337.6	54.9	1,132.7	1,105.7	26.99	41.969	
7,300.0	7,183.7	7,211.0	7,200.7	23.5	13.8	-107.93	328.7	55.0	1,141.3	1,114.3	26.96	42.335	
7,350.0	7,225.2	7,264.9	7,253.0	23.5	13.8	-106.30	315.7	55.0	1,149.8	1,122.9	26.90	42.738	
7,400.0	7,264.8	7,320.4	7,305.7	23.6	13.7	-105.05	298.2	55.0	1,158.2	1,131.4	26.83	43.164	
7,450.0	7,302.2	7,377.6	7,358.4	23.7	13.7	-104.09	275.9	55.1	1,166.4	1,139.7	26.76	43.595	
7,500.0	7,337.3	7,436.6	7,410.7	23.7	13.6	-103.35	248.7	55.1	1,174.4	1,147.7	26.68	44.010	
7,550.0	7,369.8	7,497.5	7,462.1	23.8	13.5	-102.79	216.1	55.2	1,182.0	1,155.4	26.63	44.380	
7,600.0	7,399.7	7,560.3	7,512.0	23.9	13.5	-102.36	178.1	55.2	1,189.2	1,162.6	26.62	44.670	
7,650.0	7,426.8	7,625.0	7,559.8	24.0	13.4	-102.04	134.5	55.2	1,195.9	1,169.3	26.67	44.842	
7,700.0	7,451.0	7,691.6	7,604.7	24.2	13.5	-101.81	85.3	55.3	1,202.1	1,175.3	26.80	44.860	
7,750.0	7,472.1	7,760.2	7,645.9	24.3	13.5	-101.64	30.6	55.3	1,207.6	1,180.6	27.03	44.677	
7,800.0	7,490.1	7,830.4	7,682.5	24.5	13.7	-101.53	-29.3	55.3	1,212.5	1,185.1	27.39	44.264	
7,850.0	7,504.8	7,902.3	7,713.7	24.7	13.9	-101.45	-94.0	55.4	1,216.6	1,188.7	27.89	43.616	
7,900.0	7,516.2	7,975.5	7,738.7	24.9	14.3	-101.39	-162.8	55.4	1,219.9	1,191.3	28.56	42.712	
7,950.0	7,524.2	8,049.7	7,756.7	25.1	14.7	-101.36	-234.8	55.4	1,222.3	1,192.9	29.38	41.607	
8,000.0	7,528.8	8,124.7	7,767.2	25.4	15.3	-101.33	-309.0	55.4	1,223.8	1,193.4	30.36	40.315	
8,042.0	7,530.0	8,188.0	7,770.0	25.6	15.9	-101.30	-372.3	55.4	1,224.3	1,193.1	31.28	39.147	
8,100.0	7,530.0	8,246.0	7,770.0	26.0	16.4	-101.30	-430.2	55.4	1,224.6	1,192.2	32.38	37.816	
8,200.0	7,530.0	8,346.0	7,770.0	26.6	17.5	-101.30	-530.2	55.4	1,225.1	1,190.7	34.46	35.554	
8,300.0	7,530.0	8,446.0	7,770.0	27.4	18.6	-101.29	-630.2	55.4	1,225.7	1,188.9	36.74	33.362	
8,400.0	7,530.0	8,546.0	7,770.0	28.3	19.9	-101.29	-730.2	55.4	1,226.2	1,187.0	39.19	31.289	
8,500.0	7,530.0	8,646.0	7,770.0	29.2	21.2	-101.28	-830.2	55.4	1,226.7	1,184.9	41.78	29.361	
8,600.0	7,530.0	8,746.0	7,770.0	30.2	22.6	-101.28	-930.2	55.4	1,227.2	1,182.7	44.49	27.586	
8,700.0	7,530.0	8,846.0	7,770.0	31.3	24.0	-101.27	-1,030.2	55.4	1,227.7	1,180.4	47.29	25.962	
8,800.0	7,530.0	8,946.0	7,770.0	32.4	25.5	-101.27	-1,130.2	55.4	1,228.2	1,178.1	50.17	24.481	
8,900.0	7,530.0	9,046.0	7,770.0	33.6	27.0	-101.26	-1,230.2	55.4	1,228.7	1,175.6	53.12	23.132	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1H-7H-A168 - HZ - Plan #2

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
9,000.0	7,530.0	9,146.0	7,770.0	34.9	28.5	-101.26	-1,330.2	55.4	1,229.2	1,173.1	56.12	21.902	
9,100.0	7,530.0	9,246.0	7,770.0	36.1	30.1	-101.25	-1,430.2	55.4	1,229.8	1,170.6	59.18	20.781	
9,200.0	7,530.0	9,346.0	7,770.0	37.5	31.6	-101.25	-1,530.2	55.4	1,230.3	1,168.0	62.27	19.757	
9,300.0	7,530.0	9,446.0	7,770.0	38.8	33.2	-101.24	-1,630.2	55.4	1,230.8	1,165.4	65.40	18.820	
9,400.0	7,530.0	9,546.0	7,770.0	40.2	34.8	-101.24	-1,730.2	55.4	1,231.3	1,162.7	68.56	17.960	
9,500.0	7,530.0	9,646.0	7,770.0	41.6	36.5	-101.24	-1,830.2	55.4	1,231.8	1,160.1	71.74	17.170	
9,600.0	7,530.0	9,746.0	7,770.0	43.1	38.1	-101.23	-1,930.2	55.4	1,232.3	1,157.4	74.95	16.442	
9,700.0	7,530.0	9,846.0	7,770.0	44.5	39.7	-101.23	-2,030.2	55.4	1,232.8	1,154.7	78.18	15.769	
9,800.0	7,530.0	9,946.0	7,770.0	46.0	41.4	-101.22	-2,130.2	55.4	1,233.4	1,151.9	81.42	15.147	
9,900.0	7,530.0	10,046.0	7,770.0	47.5	43.1	-101.22	-2,230.2	55.4	1,233.9	1,149.2	84.69	14.570	
10,000.0	7,530.0	10,146.0	7,770.0	49.0	44.7	-101.21	-2,330.2	55.4	1,234.4	1,146.4	87.96	14.033	
10,100.0	7,530.0	10,246.0	7,770.0	50.6	46.4	-101.21	-2,430.2	55.4	1,234.9	1,143.7	91.25	13.533	
10,200.0	7,530.0	10,346.0	7,770.0	52.1	48.1	-101.20	-2,530.2	55.4	1,235.4	1,140.9	94.55	13.066	
10,300.0	7,530.0	10,446.0	7,770.0	53.7	49.8	-101.20	-2,630.2	55.4	1,235.9	1,138.1	97.86	12.630	
10,400.0	7,530.0	10,546.0	7,770.0	55.2	51.5	-101.19	-2,730.2	55.4	1,236.4	1,135.3	101.18	12.221	
10,500.0	7,530.0	10,646.0	7,770.0	56.8	53.1	-101.19	-2,830.2	55.4	1,237.0	1,132.5	104.50	11.837	
10,600.0	7,530.0	10,746.0	7,770.0	58.4	54.8	-101.18	-2,930.2	55.4	1,237.5	1,129.6	107.84	11.475	
10,700.0	7,530.0	10,846.0	7,770.0	60.0	56.5	-101.18	-3,030.2	55.4	1,238.0	1,126.8	111.18	11.135	
10,800.0	7,530.0	10,946.0	7,770.0	61.6	58.3	-101.17	-3,130.2	55.4	1,238.5	1,124.0	114.52	10.814	
10,900.0	7,530.0	11,046.0	7,770.0	63.2	60.0	-101.17	-3,230.2	55.4	1,239.0	1,121.1	117.88	10.511	
11,000.0	7,530.0	11,146.0	7,770.0	64.9	61.7	-101.16	-3,330.2	55.4	1,239.5	1,118.3	121.23	10.224	
11,100.0	7,530.0	11,246.0	7,770.0	66.5	63.4	-101.16	-3,430.2	55.4	1,240.0	1,115.4	124.60	9.952	
11,200.0	7,530.0	11,345.9	7,770.0	68.1	65.1	-101.16	-3,530.2	55.4	1,240.6	1,112.6	127.96	9.695	
11,300.0	7,530.0	11,445.9	7,770.0	69.8	66.8	-101.15	-3,630.2	55.4	1,241.1	1,109.7	131.34	9.450	
11,400.0	7,530.0	11,545.9	7,770.0	71.4	68.5	-101.15	-3,730.2	55.4	1,241.6	1,106.9	134.71	9.217	
11,500.0	7,530.0	11,645.9	7,770.0	73.1	70.3	-101.14	-3,830.2	55.4	1,242.1	1,104.0	138.09	8.995	
11,600.0	7,530.0	11,745.9	7,770.0	74.7	72.0	-101.14	-3,930.2	55.4	1,242.6	1,101.1	141.47	8.783	
11,700.0	7,530.0	11,845.9	7,770.0	76.4	73.7	-101.13	-4,030.2	55.4	1,243.1	1,098.3	144.86	8.582	
11,800.0	7,530.0	11,945.9	7,770.0	78.1	75.4	-101.13	-4,130.2	55.4	1,243.6	1,095.4	148.24	8.389	
11,900.0	7,530.0	12,045.9	7,770.0	79.7	77.2	-101.12	-4,230.2	55.4	1,244.1	1,092.5	151.63	8.205	
12,000.0	7,530.0	12,145.9	7,770.0	81.4	78.9	-101.12	-4,330.2	55.4	1,244.7	1,089.6	155.03	8.029	
12,100.0	7,530.0	12,245.9	7,770.0	83.1	80.6	-101.11	-4,430.2	55.4	1,245.2	1,086.8	158.42	7.860	
12,200.0	7,530.0	12,345.9	7,770.0	84.8	82.3	-101.11	-4,530.2	55.4	1,245.7	1,083.9	161.82	7.698	
12,300.0	7,530.0	12,445.9	7,770.0	86.5	84.1	-101.10	-4,630.2	55.4	1,246.2	1,081.0	165.22	7.543	
12,400.0	7,530.0	12,545.9	7,770.0	88.1	85.8	-101.10	-4,730.2	55.4	1,246.7	1,078.1	168.62	7.394	
12,500.0	7,530.0	12,645.9	7,770.0	89.8	87.5	-101.09	-4,830.2	55.4	1,247.2	1,075.2	172.03	7.250	
12,600.0	7,530.0	12,745.9	7,770.0	91.5	89.3	-101.09	-4,930.2	55.4	1,247.7	1,072.3	175.43	7.112	
12,700.0	7,530.0	12,845.9	7,770.0	93.2	91.0	-101.09	-5,030.2	55.4	1,248.3	1,069.4	178.84	6.980	
12,800.0	7,530.0	12,945.9	7,770.0	94.9	92.7	-101.08	-5,130.2	55.4	1,248.8	1,066.5	182.25	6.852	
12,900.0	7,530.0	13,045.9	7,770.0	96.6	94.5	-101.08	-5,230.2	55.4	1,249.3	1,063.6	185.66	6.729	
13,000.0	7,530.0	13,145.9	7,770.0	98.3	96.2	-101.07	-5,330.2	55.4	1,249.8	1,060.7	189.07	6.610	
13,100.0	7,530.0	13,245.9	7,770.0	100.0	97.9	-101.07	-5,430.2	55.4	1,250.3	1,057.8	192.48	6.496	
13,200.0	7,530.0	13,345.9	7,770.0	101.7	99.7	-101.06	-5,530.2	55.4	1,250.8	1,054.9	195.89	6.385	
13,300.0	7,530.0	13,445.9	7,770.0	103.4	101.4	-101.06	-5,630.2	55.4	1,251.3	1,052.0	199.31	6.278	
13,400.0	7,530.0	13,545.9	7,770.0	105.1	103.2	-101.05	-5,730.2	55.4	1,251.9	1,049.1	202.73	6.175	
13,500.0	7,530.0	13,645.9	7,770.0	106.8	104.9	-101.05	-5,830.2	55.4	1,252.4	1,046.2	206.14	6.075	
13,600.0	7,530.0	13,745.9	7,770.0	108.5	106.6	-101.04	-5,930.1	55.4	1,252.9	1,043.3	209.56	5.979	
13,700.0	7,530.0	13,845.9	7,770.0	110.3	108.4	-101.04	-6,030.1	55.4	1,253.4	1,040.4	212.98	5.885	
13,800.0	7,530.0	13,945.9	7,770.0	112.0	110.1	-101.03	-6,130.1	55.4	1,253.9	1,037.5	216.40	5.794	
13,900.0	7,530.0	14,045.9	7,770.0	113.7	111.9	-101.03	-6,230.1	55.4	1,254.4	1,034.6	219.82	5.707	
14,000.0	7,530.0	14,145.9	7,770.0	115.4	113.6	-101.03	-6,330.1	55.4	1,254.9	1,031.7	223.25	5.621	
14,100.0	7,530.0	14,245.9	7,770.0	117.1	115.3	-101.02	-6,430.1	55.4	1,255.5	1,028.8	226.67	5.539	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1H-7H-A168 - HZ - Plan #2

Survey Program: 0-Geolink MWD

Offset Site Error: 0.0 ft

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
14,200.0	7,530.0	14,345.9	7,770.0	118.8	117.1	-101.02	-6,530.1	55.4	1,256.0	1,025.9	230.09	5.459	
14,300.0	7,530.0	14,445.9	7,770.0	120.6	118.8	-101.01	-6,630.1	55.4	1,256.5	1,023.0	233.52	5.381	
14,400.0	7,530.0	14,545.9	7,770.0	122.3	120.6	-101.01	-6,730.1	55.4	1,257.0	1,020.1	236.94	5.305	
14,500.0	7,530.0	14,645.9	7,770.0	124.0	122.3	-101.00	-6,830.1	55.4	1,257.5	1,017.1	240.37	5.232	
14,600.0	7,530.0	14,745.9	7,770.0	125.7	124.1	-101.00	-6,930.1	55.4	1,258.0	1,014.2	243.80	5.160	
14,700.0	7,530.0	14,845.9	7,770.0	127.4	125.8	-100.99	-7,030.1	55.4	1,258.5	1,011.3	247.23	5.091	
14,800.0	7,530.0	14,945.9	7,770.0	129.2	127.5	-100.99	-7,130.1	55.4	1,259.1	1,008.4	250.65	5.023	
14,900.0	7,530.0	15,045.9	7,770.0	130.9	129.3	-100.98	-7,230.1	55.4	1,259.6	1,005.5	254.08	4.957	
15,000.0	7,530.0	15,145.9	7,770.0	132.6	131.0	-100.98	-7,330.1	55.4	1,260.1	1,002.6	257.51	4.893	
15,100.0	7,530.0	15,245.9	7,770.0	134.3	132.8	-100.98	-7,430.1	55.4	1,260.6	999.7	260.94	4.831	
15,200.0	7,530.0	15,345.9	7,770.0	136.1	134.5	-100.97	-7,530.1	55.4	1,261.1	996.7	264.37	4.770	
15,300.0	7,530.0	15,445.9	7,770.0	137.8	136.3	-100.97	-7,630.1	55.4	1,261.6	993.8	267.80	4.711	
15,400.0	7,530.0	15,545.9	7,770.0	139.5	138.0	-100.96	-7,730.1	55.4	1,262.1	990.9	271.24	4.653	
15,500.0	7,530.0	15,645.9	7,770.0	141.2	139.8	-100.96	-7,830.1	55.4	1,262.7	988.0	274.67	4.597	
15,600.0	7,530.0	15,745.9	7,770.0	143.0	141.5	-100.95	-7,930.1	55.4	1,263.2	985.1	278.10	4.542	
15,700.0	7,530.0	15,845.9	7,770.0	144.7	143.3	-100.95	-8,030.1	55.4	1,263.7	982.2	281.54	4.489	
15,800.0	7,530.0	15,945.9	7,770.0	146.4	145.0	-100.94	-8,130.1	55.4	1,264.2	979.2	284.97	4.436	
15,900.0	7,530.0	16,045.9	7,770.0	148.2	146.7	-100.94	-8,230.1	55.4	1,264.7	976.3	288.40	4.385	
16,000.0	7,530.0	16,145.9	7,770.0	149.9	148.5	-100.93	-8,330.1	55.4	1,265.2	973.4	291.84	4.335	
16,100.0	7,530.0	16,245.9	7,770.0	151.6	150.2	-100.93	-8,430.1	55.4	1,265.7	970.5	295.27	4.287	
16,200.0	7,530.0	16,345.9	7,770.0	153.4	152.0	-100.93	-8,530.1	55.4	1,266.3	967.5	298.71	4.239	
16,300.0	7,530.0	16,445.9	7,770.0	155.1	153.7	-100.92	-8,630.1	55.4	1,266.8	964.6	302.15	4.193	
16,400.0	7,530.0	16,545.9	7,770.0	156.8	155.5	-100.92	-8,730.1	55.4	1,267.3	961.7	305.58	4.147	
16,500.0	7,530.0	16,645.9	7,770.0	158.6	157.2	-100.91	-8,830.1	55.4	1,267.8	958.8	309.02	4.103	
16,600.0	7,530.0	16,745.9	7,770.0	160.3	159.0	-100.91	-8,930.1	55.4	1,268.3	955.9	312.46	4.059	
16,700.0	7,530.0	16,845.9	7,770.0	162.0	160.7	-100.90	-9,030.1	55.4	1,268.8	952.9	315.89	4.017	
16,800.0	7,530.0	16,945.9	7,770.0	163.8	162.5	-100.90	-9,130.1	55.4	1,269.3	950.0	319.33	3.975	
16,900.0	7,530.0	17,045.9	7,770.0	165.5	164.2	-100.89	-9,230.1	55.4	1,269.9	947.1	322.77	3.934	
17,000.0	7,530.0	17,145.9	7,770.0	167.2	166.0	-100.89	-9,330.1	55.4	1,270.4	944.2	326.21	3.894	
17,100.0	7,530.0	17,245.9	7,770.0	169.0	167.7	-100.89	-9,430.1	55.4	1,270.9	941.2	329.65	3.855	
17,200.0	7,530.0	17,345.9	7,770.0	170.7	169.5	-100.88	-9,530.1	55.4	1,271.4	938.3	333.09	3.817	
17,300.0	7,530.0	17,445.9	7,770.0	172.4	171.2	-100.88	-9,630.1	55.4	1,271.9	935.4	336.53	3.780	
17,400.0	7,530.0	17,545.9	7,770.0	174.2	173.0	-100.87	-9,730.1	55.4	1,272.4	932.5	339.97	3.743	
17,490.0	7,530.0	17,635.9	7,770.0	175.7	174.5	-100.87	-9,820.1	55.4	1,272.9	929.8	343.07	3.710	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1I-7H-A168 - HZ - Plan #2

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	59.9	59.9				
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	59.9	59.9	59.6	0.30	197.208	
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	59.9	59.9	59.2	0.65	91.749	
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	59.9	59.9	58.9	1.00	59.781	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	161.63	0.0	59.9	60.7	59.4	1.35	44.948	
500.0	500.0	500.0	500.0	0.9	0.8	162.37	0.0	59.9	63.2	61.5	1.70	37.185	
600.0	599.9	599.9	599.9	1.0	1.0	163.48	0.0	59.9	67.4	65.3	2.05	32.887	
700.0	699.7	699.1	699.0	1.2	1.2	164.23	0.7	60.3	73.7	71.3	2.40	30.737	
800.0	799.4	798.0	798.0	1.4	1.4	164.12	2.9	61.7	82.5	79.8	2.75	30.035	
900.0	898.9	896.6	896.5	1.7	1.6	163.41	6.5	64.0	93.9	90.8	3.10	30.265	
1,000.0	998.3	994.8	994.5	1.9	1.7	162.33	11.5	67.2	107.7	104.3	3.46	31.121	
1,100.0	1,097.4	1,093.5	1,092.9	2.2	1.9	161.43	17.1	70.8	123.7	119.9	3.83	32.299	
1,200.0	1,196.3	1,191.9	1,191.1	2.5	2.1	160.96	22.7	74.4	141.3	137.1	4.20	33.633	
1,300.0	1,294.9	1,290.0	1,289.1	2.8	2.3	160.79	28.3	77.9	160.5	155.9	4.58	35.084	
1,315.9	1,310.6	1,305.7	1,304.6	2.9	2.4	160.78	29.2	78.5	163.7	159.1	4.63	35.325	
1,400.0	1,393.4	1,388.0	1,386.8	3.1	2.5	160.81	33.9	81.5	180.8	175.8	4.96	36.474	
1,500.0	1,491.8	1,485.9	1,484.4	3.5	2.7	160.84	39.5	85.0	201.1	195.7	5.34	37.649	
1,600.0	1,590.2	1,583.8	1,582.1	3.8	2.9	160.86	45.1	88.6	221.4	215.6	5.73	38.654	
1,700.0	1,688.7	1,681.7	1,679.8	4.2	3.1	160.88	50.7	92.2	241.6	235.5	6.11	39.524	
1,800.0	1,787.1	1,779.6	1,777.5	4.5	3.3	160.89	56.3	95.7	261.9	255.4	6.50	40.284	
1,900.0	1,885.5	1,877.6	1,875.2	4.8	3.5	160.91	61.9	99.3	282.2	275.3	6.89	40.953	
2,000.0	1,984.0	1,975.5	1,972.9	5.2	3.7	160.92	67.5	102.9	302.5	295.2	7.28	41.547	
2,100.0	2,082.4	2,073.4	2,070.6	5.5	3.9	160.93	73.1	106.4	322.8	315.1	7.67	42.076	
2,200.0	2,180.8	2,171.3	2,168.3	5.9	4.1	160.94	78.7	110.0	343.1	335.0	8.06	42.551	
2,300.0	2,279.3	2,269.3	2,266.0	6.2	4.3	160.95	84.3	113.5	363.4	354.9	8.45	42.980	
2,400.0	2,377.7	2,367.2	2,363.7	6.6	4.5	160.95	89.9	117.1	383.7	374.8	8.85	43.369	
2,500.0	2,476.1	2,465.1	2,461.4	6.9	4.7	160.96	95.5	120.7	404.0	394.7	9.24	43.723	
2,600.0	2,574.6	2,563.0	2,559.1	7.3	4.9	160.97	101.1	124.2	424.2	414.6	9.63	44.047	
2,700.0	2,673.0	2,660.9	2,656.8	7.7	5.1	160.97	106.7	127.8	444.5	434.5	10.02	44.345	
2,800.0	2,771.4	2,758.9	2,754.5	8.0	5.4	160.98	112.3	131.3	464.8	454.4	10.42	44.619	
2,900.0	2,869.8	2,856.8	2,852.2	8.4	5.6	160.98	117.9	134.9	485.1	474.3	10.81	44.872	
3,000.0	2,968.3	2,954.7	2,949.9	8.7	5.8	160.99	123.5	138.5	505.4	494.2	11.20	45.106	
3,100.0	3,066.7	3,052.6	3,047.6	9.1	6.0	160.99	129.1	142.0	525.7	514.1	11.60	45.324	
3,200.0	3,165.1	3,150.5	3,145.3	9.4	6.2	160.99	134.7	145.6	546.0	534.0	11.99	45.527	
3,300.0	3,263.6	3,248.5	3,243.0	9.8	6.4	161.00	140.3	149.1	566.3	553.9	12.39	45.717	
3,400.0	3,362.0	3,346.4	3,340.7	10.1	6.6	161.00	145.8	152.7	586.6	573.8	12.78	45.895	
3,500.0	3,460.4	3,444.3	3,438.4	10.5	6.8	161.00	151.4	156.3	606.8	593.7	13.17	46.061	
3,600.0	3,558.9	3,542.2	3,536.0	10.8	7.0	161.00	157.0	159.8	627.1	613.6	13.57	46.217	
3,700.0	3,657.3	3,640.1	3,633.7	11.2	7.2	161.01	162.6	163.4	647.4	633.5	13.96	46.365	
3,800.0	3,755.7	3,738.1	3,731.4	11.6	7.4	161.01	168.2	167.0	667.7	653.4	14.36	46.504	
3,900.0	3,854.2	3,836.0	3,829.1	11.9	7.6	161.01	173.8	170.5	688.0	673.2	14.75	46.635	
4,000.0	3,952.6	3,933.9	3,926.8	12.3	7.8	161.01	179.4	174.1	708.3	693.1	15.15	46.759	
4,100.0	4,051.0	4,031.8	4,024.5	12.6	8.0	161.02	185.0	177.6	728.6	713.0	15.54	46.876	
4,200.0	4,149.5	4,129.7	4,122.2	13.0	8.2	161.02	190.6	181.2	748.9	732.9	15.94	46.988	
4,300.0	4,247.9	4,227.7	4,219.9	13.3	8.4	161.02	196.2	184.8	769.2	752.8	16.33	47.094	
4,400.0	4,346.3	4,325.6	4,317.6	13.7	8.6	161.02	201.8	188.3	789.4	772.7	16.73	47.195	
4,500.0	4,444.8	4,423.5	4,415.3	14.1	8.8	161.02	207.4	191.9	809.7	792.6	17.12	47.291	
4,600.0	4,543.2	4,521.4	4,513.0	14.4	9.0	161.02	213.0	195.4	830.0	812.5	17.52	47.383	
4,700.0	4,641.6	4,619.3	4,610.7	14.8	9.3	161.03	218.6	199.0	850.3	832.4	17.91	47.470	
4,800.0	4,740.1	4,717.3	4,708.4	15.1	9.5	161.03	224.2	202.6	870.6	852.3	18.31	47.553	
4,900.0	4,838.5	4,815.2	4,806.1	15.5	9.7	161.03	229.8	206.1	890.9	872.2	18.70	47.633	
5,000.0	4,936.9	4,913.1	4,903.8	15.8	9.9	161.03	235.4	209.7	911.2	892.1	19.10	47.710	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1I-7H-A168 - HZ - Plan #2

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
5,100.0	5,035.4	5,011.0	5,001.5	16.2	10.1	161.03	241.0	213.3	931.5	912.0	19.49	47.783	
5,200.0	5,133.8	5,108.9	5,099.2	16.5	10.3	161.03	246.6	216.8	951.8	931.9	19.89	47.854	
5,300.0	5,232.2	5,206.9	5,196.9	16.9	10.5	161.03	252.2	220.4	972.0	951.8	20.28	47.921	
5,400.0	5,330.6	5,304.8	5,294.6	17.3	10.7	161.03	257.8	223.9	992.3	971.7	20.68	47.986	
5,500.0	5,429.1	5,402.7	5,392.3	17.6	10.9	161.04	263.4	227.5	1,012.6	991.5	21.08	48.048	
5,600.0	5,527.5	5,500.6	5,490.0	18.0	11.1	161.04	269.0	231.1	1,032.9	1,011.4	21.47	48.108	
5,700.0	5,625.9	5,598.5	5,587.7	18.3	11.3	161.04	274.5	234.6	1,053.2	1,031.3	21.87	48.166	
5,800.0	5,724.4	5,696.5	5,685.3	18.7	11.5	161.04	280.1	238.2	1,073.5	1,051.2	22.26	48.222	
5,900.0	5,822.8	5,794.4	5,783.0	19.0	11.7	161.04	285.7	241.7	1,093.8	1,071.1	22.66	48.276	
6,000.0	5,921.2	5,892.3	5,880.7	19.4	11.9	161.04	291.3	245.3	1,114.1	1,091.0	23.05	48.327	
6,100.0	6,019.7	5,990.2	5,978.4	19.8	12.1	161.04	296.9	248.9	1,134.4	1,110.9	23.45	48.377	
6,200.0	6,118.1	6,088.1	6,076.1	20.1	12.3	161.04	302.5	252.4	1,154.6	1,130.8	23.84	48.426	
6,300.0	6,216.5	6,186.1	6,173.8	20.5	12.6	161.04	308.1	256.0	1,174.9	1,150.7	24.24	48.472	
6,400.0	6,315.0	6,284.0	6,271.5	20.8	12.8	161.04	313.7	259.5	1,195.2	1,170.6	24.63	48.518	
6,500.0	6,413.4	6,381.9	6,369.2	21.2	13.0	161.04	319.3	263.1	1,215.5	1,190.5	25.03	48.561	
6,600.0	6,511.8	6,479.8	6,466.9	21.5	13.2	161.04	324.9	266.7	1,235.8	1,210.4	25.43	48.604	
6,700.0	6,610.3	6,577.7	6,564.6	21.9	13.4	161.04	330.5	270.2	1,256.1	1,230.3	25.82	48.645	
6,800.0	6,708.7	6,675.7	6,662.3	22.3	13.6	161.05	336.1	273.8	1,276.4	1,250.2	26.22	48.684	
6,877.3	6,784.8	6,751.3	6,737.8	22.5	13.7	161.05	340.4	276.5	1,292.1	1,265.5	26.52	48.714	
6,900.0	6,807.1	6,773.6	6,760.0	22.6	13.8	171.51	341.7	277.4	1,296.7	1,270.1	26.57	48.810	
6,950.0	6,856.4	6,822.5	6,808.8	22.8	13.9	-164.67	343.6	279.1	1,306.8	1,280.2	26.63	49.079	
7,000.0	6,905.5	6,871.5	6,857.8	22.9	13.9	-144.90	342.3	280.9	1,317.0	1,290.4	26.65	49.425	
7,050.0	6,954.3	6,920.8	6,906.8	23.0	14.0	-131.06	337.6	282.7	1,327.1	1,300.5	26.63	49.836	
7,100.0	7,002.4	6,970.2	6,955.5	23.1	14.0	-121.65	329.5	284.5	1,337.1	1,310.5	26.58	50.298	
7,150.0	7,049.6	7,019.9	7,003.8	23.2	14.0	-115.06	318.1	286.2	1,347.0	1,320.4	26.52	50.799	
7,200.0	7,095.7	7,069.9	7,051.5	23.3	13.9	-110.22	303.2	288.0	1,356.6	1,330.2	26.43	51.321	
7,250.0	7,140.5	7,120.1	7,098.2	23.4	13.9	-106.53	284.9	289.7	1,366.0	1,339.7	26.35	51.848	
7,300.0	7,183.7	7,170.6	7,143.8	23.5	13.9	-103.61	263.2	291.3	1,375.1	1,348.8	26.26	52.361	
7,350.0	7,225.2	7,221.4	7,188.0	23.5	13.8	-101.23	238.2	293.0	1,383.9	1,357.7	26.19	52.839	
7,400.0	7,264.8	7,272.5	7,230.6	23.6	13.8	-99.26	210.0	294.5	1,392.2	1,366.1	26.14	53.259	
7,450.0	7,302.2	7,324.0	7,271.3	23.7	13.7	-97.61	178.6	296.0	1,400.2	1,374.1	26.12	53.600	
7,500.0	7,337.3	7,375.7	7,309.8	23.7	13.7	-96.20	144.2	297.4	1,407.7	1,381.5	26.15	53.837	
7,550.0	7,369.8	7,427.7	7,346.0	23.8	13.7	-94.99	106.8	298.7	1,414.7	1,388.5	26.22	53.949	
7,600.0	7,399.7	7,480.1	7,379.6	23.9	13.7	-93.96	66.7	299.9	1,421.1	1,394.8	26.36	53.916	
7,650.0	7,426.8	7,532.7	7,410.3	24.0	13.8	-93.08	24.0	301.1	1,427.0	1,400.4	26.56	53.723	
7,700.0	7,451.0	7,585.6	7,437.9	24.2	13.9	-92.32	-21.1	302.1	1,432.3	1,405.4	26.85	53.346	
7,750.0	7,472.1	7,638.8	7,462.2	24.3	14.1	-91.69	-68.4	303.0	1,437.0	1,409.7	27.21	52.801	
7,800.0	7,490.1	7,692.2	7,483.1	24.5	14.3	-91.17	-117.5	303.7	1,441.0	1,413.3	27.67	52.081	
7,850.0	7,504.8	7,745.7	7,500.3	24.7	14.5	-90.74	-168.2	304.3	1,444.3	1,416.1	28.21	51.198	
7,900.0	7,516.2	7,799.5	7,513.6	24.9	14.9	-90.42	-220.2	304.8	1,446.9	1,418.1	28.84	50.171	
7,950.0	7,524.2	7,853.3	7,523.1	25.1	15.2	-90.19	-273.2	305.2	1,448.9	1,419.3	29.56	49.017	
8,000.0	7,528.8	7,907.2	7,528.5	25.4	15.7	-90.05	-326.9	305.4	1,450.1	1,419.8	30.36	47.771	
8,042.0	7,530.0	7,952.6	7,530.0	25.6	16.1	-90.00	-372.2	305.4	1,450.6	1,419.5	31.08	46.677	
8,100.0	7,530.0	8,010.6	7,530.0	26.0	16.6	-90.00	-430.2	305.4	1,450.9	1,418.7	32.21	45.039	
8,200.0	7,530.0	8,110.6	7,530.0	26.6	17.7	-90.00	-530.2	305.4	1,451.4	1,417.1	34.36	42.241	
8,300.0	7,530.0	8,210.6	7,530.0	27.4	18.8	-90.00	-630.2	305.4	1,451.9	1,415.2	36.72	39.544	
8,400.0	7,530.0	8,310.6	7,530.0	28.3	20.0	-90.00	-730.2	305.4	1,452.5	1,413.2	39.25	37.009	
8,500.0	7,530.0	8,410.6	7,530.0	29.2	21.3	-90.00	-830.2	305.4	1,453.0	1,411.1	41.92	34.664	
8,600.0	7,530.0	8,510.6	7,530.0	30.2	22.7	-90.00	-930.2	305.4	1,453.5	1,408.8	44.70	32.515	
8,700.0	7,530.0	8,610.6	7,530.0	31.3	24.1	-90.00	-1,030.2	305.4	1,454.0	1,406.4	47.58	30.557	
8,800.0	7,530.0	8,710.6	7,530.0	32.4	25.6	-90.00	-1,130.2	305.4	1,454.6	1,404.0	50.55	28.777	
8,900.0	7,530.0	8,810.6	7,530.0	33.6	27.1	-90.00	-1,230.2	305.4	1,455.1	1,401.5	53.57	27.161	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1I-7H-A168 - HZ - Plan #2

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
9,000.0	7,530.0	8,910.6	7,530.0	34.9	28.6	-90.00	-1,330.2	305.4	1,455.6	1,398.9	56.66	25.692	
9,100.0	7,530.0	9,010.6	7,530.0	36.1	30.1	-90.00	-1,430.2	305.4	1,456.1	1,396.3	59.79	24.356	
9,200.0	7,530.0	9,110.6	7,530.0	37.5	31.7	-90.00	-1,530.2	305.4	1,456.6	1,393.7	62.95	23.138	
9,300.0	7,530.0	9,210.6	7,530.0	38.8	33.3	-90.00	-1,630.2	305.4	1,457.2	1,391.0	66.16	22.025	
9,400.0	7,530.0	9,310.6	7,530.0	40.2	34.9	-90.00	-1,730.2	305.4	1,457.7	1,388.3	69.39	21.007	
9,500.0	7,530.0	9,410.6	7,530.0	41.6	36.5	-90.00	-1,830.2	305.4	1,458.2	1,385.6	72.65	20.072	
9,600.0	7,530.0	9,510.6	7,530.0	43.1	38.2	-90.00	-1,930.2	305.4	1,458.7	1,382.8	75.93	19.211	
9,700.0	7,530.0	9,610.6	7,530.0	44.5	39.8	-90.00	-2,030.2	305.4	1,459.3	1,380.0	79.23	18.418	
9,800.0	7,530.0	9,710.6	7,530.0	46.0	41.4	-90.00	-2,130.2	305.4	1,459.8	1,377.2	82.55	17.684	
9,900.0	7,530.0	9,810.6	7,530.0	47.5	43.1	-90.00	-2,230.2	305.4	1,460.3	1,374.4	85.88	17.004	
10,000.0	7,530.0	9,910.6	7,530.0	49.0	44.8	-90.00	-2,330.2	305.4	1,460.8	1,371.6	89.23	16.372	
10,100.0	7,530.0	10,010.6	7,530.0	50.6	46.4	-90.00	-2,430.2	305.4	1,461.4	1,368.8	92.59	15.784	
10,200.0	7,530.0	10,110.6	7,530.0	52.1	48.1	-90.00	-2,530.2	305.4	1,461.9	1,365.9	95.96	15.235	
10,300.0	7,530.0	10,210.6	7,530.0	53.7	49.8	-90.00	-2,630.2	305.4	1,462.4	1,363.1	99.33	14.722	
10,400.0	7,530.0	10,310.6	7,530.0	55.2	51.5	-90.00	-2,730.2	305.4	1,462.9	1,360.2	102.72	14.242	
10,500.0	7,530.0	10,410.6	7,530.0	56.8	53.2	-90.00	-2,830.2	305.4	1,463.5	1,357.3	106.12	13.791	
10,600.0	7,530.0	10,510.6	7,530.0	58.4	54.9	-90.00	-2,930.2	305.4	1,464.0	1,354.5	109.52	13.367	
10,700.0	7,530.0	10,610.6	7,530.0	60.0	56.6	-90.00	-3,030.2	305.4	1,464.5	1,351.6	112.93	12.969	
10,800.0	7,530.0	10,710.6	7,530.0	61.6	58.3	-90.00	-3,130.2	305.4	1,465.0	1,348.7	116.34	12.592	
10,900.0	7,530.0	10,810.6	7,530.0	63.2	60.0	-90.00	-3,230.2	305.4	1,465.6	1,345.8	119.76	12.237	
11,000.0	7,530.0	10,910.6	7,530.0	64.9	61.7	-90.00	-3,330.2	305.4	1,466.1	1,342.9	123.19	11.901	
11,100.0	7,530.0	11,010.6	7,530.0	66.5	63.4	-90.00	-3,430.2	305.4	1,466.6	1,340.0	126.62	11.583	
11,200.0	7,530.0	11,110.6	7,530.0	68.1	65.1	-90.00	-3,530.2	305.4	1,467.1	1,337.1	130.05	11.281	
11,300.0	7,530.0	11,210.6	7,530.0	69.8	66.8	-90.00	-3,630.2	305.4	1,467.6	1,334.2	133.49	10.995	
11,400.0	7,530.0	11,310.6	7,530.0	71.4	68.5	-90.00	-3,730.2	305.4	1,468.2	1,331.2	136.93	10.722	
11,500.0	7,530.0	11,410.6	7,530.0	73.1	70.3	-90.00	-3,830.2	305.4	1,468.7	1,328.3	140.37	10.463	
11,600.0	7,530.0	11,510.6	7,530.0	74.7	72.0	-90.00	-3,930.2	305.4	1,469.2	1,325.4	143.82	10.216	
11,700.0	7,530.0	11,610.6	7,530.0	76.4	73.7	-90.00	-4,030.2	305.4	1,469.7	1,322.5	147.27	9.980	
11,800.0	7,530.0	11,710.6	7,530.0	78.1	75.4	-90.00	-4,130.2	305.4	1,470.3	1,319.5	150.72	9.755	
11,900.0	7,530.0	11,810.5	7,530.0	79.7	77.2	-90.00	-4,230.2	305.4	1,470.8	1,316.6	154.18	9.540	
12,000.0	7,530.0	11,910.5	7,530.0	81.4	78.9	-90.00	-4,330.2	305.4	1,471.3	1,313.7	157.64	9.334	
12,100.0	7,530.0	12,010.5	7,530.0	83.1	80.6	-90.00	-4,430.2	305.4	1,471.8	1,310.7	161.10	9.136	
12,200.0	7,530.0	12,110.5	7,530.0	84.8	82.3	-90.00	-4,530.2	305.4	1,472.4	1,307.8	164.56	8.947	
12,300.0	7,530.0	12,210.5	7,530.0	86.5	84.1	-90.00	-4,630.2	305.4	1,472.9	1,304.9	168.02	8.766	
12,400.0	7,530.0	12,310.5	7,530.0	88.1	85.8	-90.00	-4,730.2	305.4	1,473.4	1,301.9	171.49	8.592	
12,500.0	7,530.0	12,410.5	7,530.0	89.8	87.5	-90.00	-4,830.2	305.4	1,473.9	1,299.0	174.96	8.425	
12,600.0	7,530.0	12,510.5	7,530.0	91.5	89.3	-90.00	-4,930.2	305.4	1,474.5	1,296.0	178.42	8.264	
12,700.0	7,530.0	12,610.5	7,530.0	93.2	91.0	-90.00	-5,030.2	305.4	1,475.0	1,293.1	181.90	8.109	
12,800.0	7,530.0	12,710.5	7,530.0	94.9	92.7	-90.00	-5,130.2	305.4	1,475.5	1,290.1	185.37	7.960	
12,900.0	7,530.0	12,810.5	7,530.0	96.6	94.5	-90.00	-5,230.2	305.4	1,476.0	1,287.2	188.84	7.816	
13,000.0	7,530.0	12,910.5	7,530.0	98.3	96.2	-90.00	-5,330.2	305.4	1,476.6	1,284.2	192.32	7.678	
13,100.0	7,530.0	13,010.5	7,530.0	100.0	97.9	-90.00	-5,430.2	305.4	1,477.1	1,281.3	195.79	7.544	
13,200.0	7,530.0	13,110.5	7,530.0	101.7	99.7	-90.00	-5,530.2	305.4	1,477.6	1,278.3	199.27	7.415	
13,300.0	7,530.0	13,210.5	7,530.0	103.4	101.4	-90.00	-5,630.2	305.4	1,478.1	1,275.4	202.75	7.291	
13,400.0	7,530.0	13,310.5	7,530.0	105.1	103.1	-90.00	-5,730.2	305.4	1,478.6	1,272.4	206.22	7.170	
13,500.0	7,530.0	13,410.5	7,530.0	106.8	104.9	-90.00	-5,830.1	305.4	1,479.2	1,269.5	209.70	7.054	
13,600.0	7,530.0	13,510.5	7,530.0	108.5	106.6	-90.00	-5,930.1	305.4	1,479.7	1,266.5	213.19	6.941	
13,700.0	7,530.0	13,610.5	7,530.0	110.3	108.4	-90.00	-6,030.1	305.4	1,480.2	1,263.6	216.67	6.832	
13,800.0	7,530.0	13,710.5	7,530.0	112.0	110.1	-90.00	-6,130.1	305.4	1,480.7	1,260.6	220.15	6.726	
13,900.0	7,530.0	13,810.5	7,530.0	113.7	111.8	-90.00	-6,230.1	305.4	1,481.3	1,257.6	223.63	6.624	
14,000.0	7,530.0	13,910.5	7,530.0	115.4	113.6	-90.00	-6,330.1	305.4	1,481.8	1,254.7	227.12	6.524	
14,100.0	7,530.0	14,010.5	7,530.0	117.1	115.3	-90.00	-6,430.1	305.4	1,482.3	1,251.7	230.60	6.428	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Morgan Hills 1I-7H-A168 - HZ - Plan #2

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
14,200.0	7,530.0	14,110.5	7,530.0	118.8	117.1	-90.00	-6,530.1	305.4	1,482.8	1,248.8	234.09	6.335	
14,300.0	7,530.0	14,210.5	7,530.0	120.6	118.8	-90.00	-6,630.1	305.4	1,483.4	1,245.8	237.57	6.244	
14,400.0	7,530.0	14,310.5	7,530.0	122.3	120.6	-90.00	-6,730.1	305.4	1,483.9	1,242.8	241.06	6.156	
14,500.0	7,530.0	14,410.5	7,530.0	124.0	122.3	-90.00	-6,830.1	305.4	1,484.4	1,239.9	244.55	6.070	
14,600.0	7,530.0	14,510.5	7,530.0	125.7	124.0	-90.00	-6,930.1	305.4	1,484.9	1,236.9	248.04	5.987	
14,700.0	7,530.0	14,610.5	7,530.0	127.4	125.8	-90.00	-7,030.1	305.4	1,485.5	1,233.9	251.52	5.906	
14,800.0	7,530.0	14,710.5	7,530.0	129.2	127.5	-90.00	-7,130.1	305.4	1,486.0	1,231.0	255.01	5.827	
14,900.0	7,530.0	14,810.5	7,530.0	130.9	129.3	-90.00	-7,230.1	305.4	1,486.5	1,228.0	258.50	5.750	
15,000.0	7,530.0	14,910.5	7,530.0	132.6	131.0	-90.00	-7,330.1	305.4	1,487.0	1,225.0	261.99	5.676	
15,100.0	7,530.0	15,010.5	7,530.0	134.3	132.8	-90.00	-7,430.1	305.4	1,487.6	1,222.1	265.48	5.603	
15,200.0	7,530.0	15,110.5	7,530.0	136.1	134.5	-90.00	-7,530.1	305.4	1,488.1	1,219.1	268.97	5.532	
15,300.0	7,530.0	15,210.5	7,530.0	137.8	136.2	-90.00	-7,630.1	305.4	1,488.6	1,216.1	272.47	5.463	
15,400.0	7,530.0	15,310.5	7,530.0	139.5	138.0	-90.00	-7,730.1	305.4	1,489.1	1,213.2	275.96	5.396	
15,500.0	7,530.0	15,410.5	7,530.0	141.2	139.7	-90.00	-7,830.1	305.4	1,489.7	1,210.2	279.45	5.331	
15,600.0	7,530.0	15,510.5	7,530.0	143.0	141.5	-90.00	-7,930.1	305.4	1,490.2	1,207.2	282.94	5.267	
15,700.0	7,530.0	15,610.5	7,530.0	144.7	143.2	-90.00	-8,030.1	305.4	1,490.7	1,204.3	286.44	5.204	
15,800.0	7,530.0	15,710.5	7,530.0	146.4	145.0	-90.00	-8,130.1	305.4	1,491.2	1,201.3	289.93	5.143	
15,900.0	7,530.0	15,810.5	7,530.0	148.2	146.7	-90.00	-8,230.1	305.4	1,491.7	1,198.3	293.42	5.084	
16,000.0	7,530.0	15,910.5	7,530.0	149.9	148.5	-90.00	-8,330.1	305.4	1,492.3	1,195.4	296.92	5.026	
16,100.0	7,530.0	16,010.5	7,530.0	151.6	150.2	-90.00	-8,430.1	305.4	1,492.8	1,192.4	300.41	4.969	
16,200.0	7,530.0	16,110.5	7,530.0	153.4	152.0	-90.00	-8,530.1	305.4	1,493.3	1,189.4	303.91	4.914	
16,300.0	7,530.0	16,210.5	7,530.0	155.1	153.7	-90.00	-8,630.1	305.4	1,493.8	1,186.4	307.40	4.860	
16,400.0	7,530.0	16,310.5	7,530.0	156.8	155.5	-90.00	-8,730.1	305.4	1,494.4	1,183.5	310.90	4.807	
16,500.0	7,530.0	16,410.5	7,530.0	158.6	157.2	-90.00	-8,830.1	305.4	1,494.9	1,180.5	314.39	4.755	
16,600.0	7,530.0	16,510.5	7,530.0	160.3	159.0	-90.00	-8,930.1	305.4	1,495.4	1,177.5	317.89	4.704	
16,700.0	7,530.0	16,610.5	7,530.0	162.0	160.7	-90.00	-9,030.1	305.4	1,495.9	1,174.6	321.38	4.655	
16,800.0	7,530.0	16,710.5	7,530.0	163.8	162.4	-90.00	-9,130.1	305.4	1,496.5	1,171.6	324.88	4.606	
16,900.0	7,530.0	16,810.5	7,530.0	165.5	164.2	-90.00	-9,230.1	305.4	1,497.0	1,168.6	328.38	4.559	
17,000.0	7,530.0	16,910.5	7,530.0	167.2	165.9	-90.00	-9,330.1	305.4	1,497.5	1,165.6	331.87	4.512	
17,100.0	7,530.0	17,010.5	7,530.0	169.0	167.7	-90.00	-9,430.1	305.4	1,498.0	1,162.7	335.37	4.467	
17,200.0	7,530.0	17,110.5	7,530.0	170.7	169.4	-90.00	-9,530.1	305.4	1,498.6	1,159.7	338.87	4.422	
17,300.0	7,530.0	17,210.5	7,530.0	172.4	171.2	-90.00	-9,630.1	305.4	1,499.1	1,156.7	342.37	4.379	
17,400.0	7,530.0	17,310.5	7,530.0	174.2	172.9	-90.00	-9,730.1	305.4	1,499.6	1,153.7	345.86	4.336	
17,490.0	7,530.0	17,400.5	7,530.0	175.7	174.5	-90.00	-9,820.1	305.4	1,500.1	1,151.1	349.01	4.298	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - DD

Offset Site Error: 0.0 ft

Survey Program: 814-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
12,600.0	7,530.0	7,651.6	7,508.5	91.5	25.2	89.34	-5,481.1	-2,606.9	1,539.9	1,432.9	107.02	14.388	
12,700.0	7,530.0	7,649.7	7,506.6	93.2	25.2	89.27	-5,481.2	-2,606.9	1,506.5	1,397.8	108.75	13.853	
12,800.0	7,530.0	7,647.8	7,504.7	94.9	25.2	89.19	-5,481.2	-2,606.8	1,479.2	1,368.7	110.48	13.388	
12,900.0	7,530.0	7,645.9	7,502.8	96.6	25.2	89.11	-5,481.3	-2,606.8	1,458.1	1,345.9	112.21	12.994	
13,000.0	7,530.0	7,644.0	7,500.9	98.3	25.2	89.04	-5,481.3	-2,606.7	1,443.8	1,329.8	113.94	12.671	
13,100.0	7,530.0	7,642.1	7,499.0	100.0	25.2	88.96	-5,481.3	-2,606.7	1,436.2	1,320.5	115.68	12.416	
13,158.7	7,530.0	7,641.0	7,497.9	101.0	25.2	88.92	-5,481.3	-2,606.7	1,435.0	1,318.3	116.69	12.297	CC
13,200.0	7,530.0	7,640.2	7,497.1	101.7	25.2	88.89	-5,481.4	-2,606.7	1,435.6	1,318.2	117.41	12.228	ES
13,300.0	7,530.0	7,638.3	7,495.2	103.4	25.2	88.81	-5,481.4	-2,606.6	1,442.0	1,322.8	119.14	12.103	
13,400.0	7,530.0	7,636.4	7,493.3	105.1	25.2	88.73	-5,481.4	-2,606.6	1,455.2	1,334.3	120.87	12.039	
13,500.0	7,530.0	7,634.5	7,491.4	106.8	25.2	88.66	-5,481.5	-2,606.6	1,475.0	1,352.4	122.60	12.031	SF
13,600.0	7,530.0	7,632.6	7,489.5	108.5	25.2	88.58	-5,481.5	-2,606.5	1,501.3	1,377.0	124.34	12.075	
13,700.0	7,530.0	7,630.7	7,487.6	110.3	25.2	88.51	-5,481.5	-2,606.5	1,533.7	1,407.6	126.07	12.165	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 21-18 - DD (MWD) - Plan #2

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
12,600.0	7,530.0	7,654.2	7,525.0	91.5	25.2	90.00	-5,484.8	-2,600.6	1,535.3	1,428.3	106.96	14.354	
12,700.0	7,530.0	7,654.2	7,525.0	93.2	25.2	90.00	-5,484.8	-2,600.6	1,501.6	1,392.9	108.70	13.814	
12,800.0	7,530.0	7,654.2	7,525.0	94.9	25.2	90.00	-5,484.8	-2,600.6	1,473.9	1,363.4	110.43	13.346	
12,900.0	7,530.0	7,654.2	7,525.0	96.6	25.2	90.00	-5,484.8	-2,600.6	1,452.5	1,340.4	112.17	12.950	
13,000.0	7,530.0	7,654.2	7,525.0	98.3	25.2	90.00	-5,484.8	-2,600.6	1,437.8	1,323.9	113.91	12.623	
13,100.0	7,530.0	7,654.2	7,525.0	100.0	25.2	90.00	-5,484.8	-2,600.6	1,430.0	1,314.4	115.64	12.366	
13,162.1	7,530.0	7,654.2	7,525.0	101.1	25.2	90.00	-5,484.8	-2,600.6	1,428.7	1,312.0	116.72	12.240	CC
13,200.0	7,530.0	7,654.2	7,525.0	101.7	25.2	90.00	-5,484.8	-2,600.6	1,429.2	1,311.8	117.38	12.175	ES
13,300.0	7,530.0	7,654.2	7,525.0	103.4	25.2	90.00	-5,484.8	-2,600.6	1,435.3	1,316.2	119.12	12.049	
13,400.0	7,530.0	7,654.2	7,525.0	105.1	25.2	90.00	-5,484.8	-2,600.6	1,448.3	1,327.5	120.86	11.984	
13,500.0	7,530.0	7,654.2	7,525.0	106.8	25.2	90.00	-5,484.8	-2,600.6	1,468.1	1,345.5	122.60	11.975	SF
13,600.0	7,530.0	7,654.2	7,525.0	108.5	25.2	90.00	-5,484.8	-2,600.6	1,494.3	1,369.9	124.34	12.018	
13,700.0	7,530.0	7,654.2	7,525.0	110.3	25.2	90.00	-5,484.8	-2,600.6	1,526.6	1,400.5	126.08	12.108	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 22-18 - DD - DD

Offset Site Error: 0.0 ft

Survey Program: 41-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
14,300.0	7,530.0	7,673.7	7,537.8	120.6	25.4	90.49	-6,969.4	-2,689.8	1,549.5	1,410.9	138.63	11.177	
14,400.0	7,530.0	7,674.1	7,538.3	122.3	25.4	90.50	-6,969.4	-2,689.8	1,530.2	1,389.8	140.37	10.901	
14,500.0	7,530.0	7,674.5	7,538.7	124.0	25.4	90.52	-6,969.4	-2,689.8	1,517.2	1,375.1	142.12	10.676	
14,600.0	7,530.0	7,674.9	7,539.1	125.7	25.4	90.53	-6,969.4	-2,689.7	1,510.8	1,367.0	143.86	10.502	
14,647.2	7,530.0	7,675.1	7,539.3	126.5	25.4	90.54	-6,969.4	-2,689.7	1,510.1	1,365.4	144.68	10.437	CC, ES
14,700.0	7,530.0	7,675.4	7,539.5	127.4	25.4	90.55	-6,969.4	-2,689.7	1,511.0	1,365.4	145.60	10.378	
14,800.0	7,530.0	7,675.8	7,539.9	129.2	25.4	90.57	-6,969.4	-2,689.7	1,517.8	1,370.5	147.35	10.301	
14,900.0	7,530.0	7,676.2	7,540.4	130.9	25.4	90.58	-6,969.4	-2,689.7	1,531.1	1,382.0	149.09	10.269	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Sosa 22-18 - DD - Plan #2

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
14,400.0	7,530.0	7,648.1	7,525.0	122.3	25.0	90.00	-6,952.8	-2,704.7	1,542.5	1,402.3	140.14	11.006	
14,500.0	7,530.0	7,648.1	7,525.0	124.0	25.0	90.00	-6,952.8	-2,704.7	1,530.7	1,388.8	141.89	10.788	
14,600.0	7,530.0	7,648.1	7,525.0	125.7	25.0	90.00	-6,952.8	-2,704.7	1,525.4	1,381.8	143.63	10.620	
14,630.7	7,530.0	7,648.1	7,525.0	126.2	25.0	90.00	-6,952.8	-2,704.7	1,525.1	1,380.9	144.17	10.579	CC, ES
14,700.0	7,530.0	7,648.1	7,525.0	127.4	25.0	90.00	-6,952.8	-2,704.7	1,526.7	1,381.3	145.37	10.502	
14,800.0	7,530.0	7,648.1	7,525.0	129.2	25.0	90.00	-6,952.8	-2,704.7	1,534.5	1,387.4	147.12	10.430	
14,900.0	7,530.0	7,648.1	7,525.0	130.9	25.0	90.00	-6,952.8	-2,704.7	1,548.7	1,399.8	148.86	10.404	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - THOMAS 33-7 (EXISTING) - ENCANA WELL - SU

Offset Site Error: 0.0 ft

Survey Program: 59-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
9,300.0	7,530.0	7,780.2	7,508.9	38.8	34.7	89.61	-3,009.7	-1,623.4	1,457.9	1,399.7	58.21	25.047	
9,400.0	7,530.0	7,780.4	7,509.1	40.2	34.7	89.64	-3,009.7	-1,623.4	1,363.5	1,303.7	59.83	22.792	
9,500.0	7,530.0	7,780.6	7,509.3	41.6	34.7	89.66	-3,009.7	-1,623.4	1,270.0	1,208.5	61.46	20.665	
9,600.0	7,530.0	7,780.8	7,509.5	43.1	34.7	89.68	-3,009.7	-1,623.4	1,177.5	1,114.4	63.10	18.661	
9,700.0	7,530.0	7,781.0	7,509.7	44.5	34.7	89.71	-3,009.8	-1,623.4	1,086.3	1,021.5	64.75	16.777	
9,800.0	7,530.0	7,781.2	7,509.9	46.0	34.7	89.73	-3,009.8	-1,623.4	996.8	930.4	66.41	15.011	
9,900.0	7,530.0	7,781.4	7,510.1	47.5	34.7	89.76	-3,009.8	-1,623.4	909.5	841.4	68.07	13.361	
10,000.0	7,530.0	7,781.6	7,510.2	49.0	34.7	89.78	-3,009.8	-1,623.4	825.1	755.4	69.75	11.830	
10,100.0	7,530.0	7,781.8	7,510.4	50.6	34.7	89.81	-3,009.8	-1,623.4	744.6	673.2	71.42	10.425	
10,200.0	7,530.0	7,781.9	7,510.6	52.1	34.7	89.83	-3,009.8	-1,623.4	669.3	596.2	73.11	9.155	
10,300.0	7,530.0	7,782.1	7,510.8	53.7	34.7	89.85	-3,009.8	-1,623.4	601.3	526.5	74.80	8.039	
10,400.0	7,530.0	7,782.3	7,511.0	55.2	34.7	89.88	-3,009.8	-1,623.4	543.3	466.8	76.49	7.103	
10,500.0	7,530.0	7,782.5	7,511.2	56.8	34.7	89.90	-3,009.8	-1,623.4	498.8	420.6	78.19	6.379	
10,600.0	7,530.0	7,782.7	7,511.4	58.4	34.7	89.93	-3,009.8	-1,623.4	471.6	391.7	79.89	5.903	
10,682.0	7,530.0	7,782.9	7,511.6	59.7	34.7	89.94	-3,009.8	-1,623.4	464.4	383.1	81.29	5.713	CC, ES
10,700.0	7,530.0	7,782.9	7,511.6	60.0	34.7	89.95	-3,009.8	-1,623.4	464.8	383.2	81.60	5.696	SF
10,800.0	7,530.0	7,783.1	7,511.8	61.6	34.7	89.97	-3,009.8	-1,623.4	479.2	395.9	83.30	5.752	
10,900.0	7,530.0	7,783.3	7,512.0	63.2	34.7	90.00	-3,009.8	-1,623.4	513.0	428.0	85.01	6.035	
11,000.0	7,530.0	7,783.5	7,512.2	64.9	34.7	90.02	-3,009.8	-1,623.4	562.9	476.1	86.73	6.490	
11,100.0	7,530.0	7,783.7	7,512.3	66.5	34.7	90.04	-3,009.8	-1,623.4	624.8	536.4	88.44	7.065	
11,200.0	7,530.0	7,783.8	7,512.5	68.1	34.7	90.06	-3,009.8	-1,623.4	695.7	605.6	90.16	7.717	
11,300.0	7,530.0	7,784.0	7,512.7	69.8	34.7	90.09	-3,009.8	-1,623.4	773.1	681.2	91.88	8.414	
11,400.0	7,530.0	7,784.2	7,512.9	71.4	34.7	90.11	-3,009.8	-1,623.4	855.1	761.5	93.60	9.136	
11,500.0	7,530.0	7,784.4	7,513.1	73.1	34.7	90.13	-3,009.8	-1,623.4	940.7	845.3	95.32	9.868	
11,600.0	7,530.0	7,784.6	7,513.3	74.7	34.7	90.16	-3,009.8	-1,623.4	1,028.8	931.8	97.05	10.601	
11,700.0	7,530.0	7,784.8	7,513.4	76.4	34.7	90.18	-3,009.8	-1,623.4	1,118.9	1,020.2	98.77	11.329	
11,800.0	7,530.0	7,784.9	7,513.6	78.1	34.7	90.20	-3,009.8	-1,623.4	1,210.6	1,110.1	100.50	12.046	
11,900.0	7,530.0	7,785.1	7,513.8	79.7	34.7	90.22	-3,009.8	-1,623.4	1,303.5	1,201.3	102.23	12.752	
12,000.0	7,530.0	7,785.3	7,514.0	81.4	34.7	90.24	-3,009.8	-1,623.4	1,397.4	1,293.5	103.95	13.443	
12,100.0	7,530.0	7,785.5	7,514.2	83.1	34.7	90.27	-3,009.8	-1,623.4	1,492.1	1,386.4	105.68	14.119	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 41-7 (EXISTING) - ENCANA WELL - N

Offset Site Error: 0.0 ft

Survey Program: 8370-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	-135.47	-188.3	-185.3	264.2				
100.0	100.0	97.0	97.0	0.2	0.2	-135.47	-188.3	-185.3	264.2	263.9	0.32	822.133	
200.0	200.0	197.0	197.0	0.3	0.3	-135.47	-188.3	-185.3	264.2	263.5	0.67	394.066	
300.0	300.0	297.0	297.0	0.5	0.5	-135.47	-188.3	-185.3	264.2	263.2	1.02	259.139	
400.0	400.0	397.0	397.0	0.7	0.7	-64.28	-188.3	-185.3	263.8	262.4	1.37	192.690	
500.0	500.0	497.0	497.0	0.9	0.9	-64.80	-188.3	-185.3	262.7	261.0	1.72	152.593	
600.0	599.9	596.9	596.9	1.0	1.0	-65.69	-188.3	-185.3	260.8	258.8	2.08	125.431	
700.0	699.7	696.7	696.7	1.2	1.2	-66.94	-188.3	-185.3	258.4	255.9	2.45	105.593	
800.0	799.4	796.4	796.4	1.4	1.4	-68.58	-188.3	-185.3	255.4	252.6	2.83	90.333	
900.0	898.9	895.9	895.9	1.7	1.6	-70.63	-188.3	-185.3	252.1	248.8	3.22	78.162	
1,000.0	998.3	995.3	995.3	1.9	1.7	-73.12	-188.3	-185.3	248.5	244.9	3.64	68.215	
1,100.0	1,097.4	1,094.4	1,094.4	2.2	1.9	-76.05	-188.3	-185.3	245.0	240.9	4.09	59.967	
1,200.0	1,196.3	1,193.3	1,193.3	2.5	2.1	-79.44	-188.3	-185.3	241.8	237.3	4.56	53.085	
1,300.0	1,294.9	1,291.9	1,291.9	2.8	2.3	-83.30	-188.3	-185.3	239.3	234.3	5.05	47.358	
1,315.9	1,310.6	1,307.6	1,307.6	2.9	2.3	-83.96	-188.3	-185.3	239.0	233.9	5.13	46.553	
1,400.0	1,393.4	1,390.4	1,390.4	3.1	2.4	-87.46	-188.3	-185.3	237.9	232.3	5.56	42.776	
1,460.7	1,453.2	1,450.2	1,450.2	3.3	2.5	-90.00	-188.3	-185.3	237.7	231.8	5.87	40.481	CC
1,500.0	1,491.8	1,488.8	1,488.8	3.5	2.6	-91.64	-188.3	-185.3	237.8	231.7	6.07	39.173	ES
1,600.0	1,590.2	1,587.2	1,587.2	3.8	2.8	-95.81	-188.3	-185.3	238.9	232.4	6.57	36.356	
1,700.0	1,688.7	1,685.7	1,685.7	4.2	2.9	-99.91	-188.3	-185.3	241.4	234.3	7.06	34.170	
1,800.0	1,787.1	1,784.1	1,784.1	4.5	3.1	-103.92	-188.3	-185.3	245.1	237.5	7.54	32.494	
1,900.0	1,885.5	1,882.5	1,882.5	4.8	3.3	-107.79	-188.3	-185.3	250.0	242.0	8.00	31.230	
2,000.0	1,984.0	1,981.0	1,981.0	5.2	3.5	-111.50	-188.3	-185.3	256.0	247.5	8.45	30.299	
2,100.0	2,082.4	2,079.4	2,079.4	5.5	3.6	-115.03	-188.3	-185.3	263.0	254.2	8.88	29.637	
2,200.0	2,180.8	2,177.8	2,177.8	5.9	3.8	-118.37	-188.3	-185.3	271.1	261.8	9.29	29.194	
2,300.0	2,279.3	2,276.3	2,276.3	6.2	4.0	-121.51	-188.3	-185.3	280.0	270.3	9.68	28.927	
2,400.0	2,377.7	2,374.7	2,374.7	6.6	4.1	-124.46	-188.3	-185.3	289.7	279.6	10.06	28.801	
2,500.0	2,476.1	2,473.1	2,473.1	6.9	4.3	-127.21	-188.3	-185.3	300.1	289.7	10.43	28.788	SF
2,600.0	2,574.6	2,571.6	2,571.6	7.3	4.5	-129.77	-188.3	-185.3	311.2	300.4	10.78	28.865	
2,700.0	2,673.0	2,670.0	2,670.0	7.7	4.7	-132.16	-188.3	-185.3	322.9	311.8	11.13	29.014	
2,800.0	2,771.4	2,768.4	2,768.4	8.0	4.8	-134.37	-188.3	-185.3	335.1	323.6	11.47	29.219	
2,900.0	2,869.8	2,866.8	2,866.8	8.4	5.0	-136.44	-188.3	-185.3	347.7	335.9	11.80	29.467	
3,000.0	2,968.3	2,965.3	2,965.3	8.7	5.2	-138.35	-188.3	-185.3	360.8	348.7	12.13	29.749	
3,100.0	3,066.7	3,063.7	3,063.7	9.1	5.3	-140.14	-188.3	-185.3	374.3	361.8	12.45	30.055	
3,200.0	3,165.1	3,162.1	3,162.1	9.4	5.5	-141.80	-188.3	-185.3	388.1	375.3	12.77	30.379	
3,300.0	3,263.6	3,260.6	3,260.6	9.8	5.7	-143.34	-188.3	-185.3	402.2	389.1	13.09	30.716	
3,400.0	3,362.0	3,359.0	3,359.0	10.1	5.9	-144.78	-188.3	-185.3	416.5	403.1	13.41	31.061	
3,500.0	3,460.4	3,457.4	3,457.4	10.5	6.0	-146.13	-188.3	-185.3	431.1	417.4	13.73	31.411	
3,600.0	3,558.9	3,555.9	3,555.9	10.8	6.2	-147.39	-188.3	-185.3	445.9	431.9	14.04	31.762	
3,700.0	3,657.3	3,654.3	3,654.3	11.2	6.4	-148.56	-188.3	-185.3	461.0	446.6	14.35	32.112	
3,800.0	3,755.7	3,752.7	3,752.7	11.6	6.5	-149.67	-188.3	-185.3	476.2	461.5	14.67	32.460	
3,900.0	3,854.2	3,851.2	3,851.2	11.9	6.7	-150.70	-188.3	-185.3	491.5	476.5	14.98	32.805	
4,000.0	3,952.6	3,949.6	3,949.6	12.3	6.9	-151.67	-188.3	-185.3	507.0	491.7	15.30	33.144	
4,100.0	4,051.0	4,048.0	4,048.0	12.6	7.1	-152.59	-188.3	-185.3	522.7	507.1	15.61	33.477	
4,200.0	4,149.5	4,146.5	4,146.5	13.0	7.2	-153.45	-188.3	-185.3	538.5	522.5	15.93	33.804	
4,300.0	4,247.9	4,244.9	4,244.9	13.3	7.4	-154.26	-188.3	-185.3	554.3	538.1	16.24	34.124	
4,400.0	4,346.3	4,343.3	4,343.3	13.7	7.6	-155.03	-188.3	-185.3	570.3	553.8	16.56	34.437	
4,500.0	4,444.8	4,441.8	4,441.8	14.1	7.8	-155.75	-188.3	-185.3	586.4	569.5	16.88	34.742	
4,600.0	4,543.2	4,540.2	4,540.2	14.4	7.9	-156.44	-188.3	-185.3	602.6	585.4	17.20	35.040	
4,700.0	4,641.6	4,638.6	4,638.6	14.8	8.1	-157.09	-188.3	-185.3	618.8	601.3	17.52	35.330	
4,800.0	4,740.1	4,737.1	4,737.1	15.1	8.3	-157.71	-188.3	-185.3	635.1	617.3	17.83	35.613	
4,900.0	4,838.5	4,835.5	4,835.5	15.5	8.4	-158.30	-188.3	-185.3	651.5	633.4	18.15	35.888	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 41-7 (EXISTING) - ENCANA WELL - N

Offset Site Error: 0.0 ft

Survey Program: 8370-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
5,000.0	4,936.9	4,933.9	4,933.9	15.8	8.6	-158.86	-188.3	-185.3	668.0	649.5	18.48	36.155	
5,100.0	5,035.4	5,032.4	5,032.4	16.2	8.8	-159.39	-188.3	-185.3	684.5	665.7	18.80	36.415	
5,200.0	5,133.8	5,130.8	5,130.8	16.5	9.0	-159.89	-188.3	-185.3	701.1	682.0	19.12	36.668	
5,300.0	5,232.2	5,229.2	5,229.2	16.9	9.1	-160.38	-188.3	-185.3	717.7	698.2	19.44	36.914	
5,400.0	5,330.6	5,327.6	5,327.6	17.3	9.3	-160.84	-188.3	-185.3	734.4	714.6	19.77	37.153	
5,500.0	5,429.1	5,426.1	5,426.1	17.6	9.5	-161.28	-188.3	-185.3	751.1	731.0	20.09	37.385	
5,600.0	5,527.5	5,524.5	5,524.5	18.0	9.6	-161.70	-188.3	-185.3	767.8	747.4	20.41	37.611	
5,700.0	5,625.9	5,622.9	5,622.9	18.3	9.8	-162.11	-188.3	-185.3	784.6	763.9	20.74	37.830	
5,800.0	5,724.4	5,721.4	5,721.4	18.7	10.0	-162.49	-188.3	-185.3	801.4	780.4	21.07	38.043	
5,900.0	5,822.8	5,819.8	5,819.8	19.0	10.2	-162.86	-188.3	-185.3	818.3	796.9	21.39	38.251	
6,000.0	5,921.2	5,918.2	5,918.2	19.4	10.3	-163.22	-188.3	-185.3	835.2	813.5	21.72	38.452	
6,100.0	6,019.7	6,016.7	6,016.7	19.8	10.5	-163.56	-188.3	-185.3	852.1	830.1	22.05	38.649	
6,200.0	6,118.1	6,115.1	6,115.1	20.1	10.7	-163.89	-188.3	-185.3	869.1	846.7	22.38	38.839	
6,300.0	6,216.5	6,213.5	6,213.5	20.5	10.8	-164.21	-188.3	-185.3	886.1	863.3	22.70	39.025	
6,400.0	6,315.0	6,312.0	6,312.0	20.8	11.0	-164.51	-188.3	-185.3	903.1	880.0	23.03	39.205	
6,500.0	6,413.4	6,410.4	6,410.4	21.2	11.2	-164.80	-188.3	-185.3	920.1	896.7	23.36	39.381	
6,600.0	6,511.8	6,508.8	6,508.8	21.5	11.4	-165.09	-188.3	-185.3	937.1	913.4	23.69	39.552	
6,700.0	6,610.3	6,607.3	6,607.3	21.9	11.5	-165.36	-188.3	-185.3	954.2	930.2	24.02	39.718	
6,800.0	6,708.7	6,705.7	6,705.7	22.3	11.7	-165.62	-188.3	-185.3	971.3	946.9	24.36	39.881	
6,877.3	6,784.8	6,781.8	6,781.8	22.5	11.8	-165.82	-188.3	-185.3	984.5	959.9	24.61	40.003	
6,900.0	6,807.1	6,804.1	6,804.1	22.6	11.9	-155.53	-188.3	-185.3	988.2	963.5	24.74	39.944	
6,950.0	6,856.4	6,853.4	6,853.4	22.8	12.0	-132.26	-188.3	-185.3	995.0	970.0	24.99	39.818	
7,000.0	6,905.5	6,902.5	6,902.5	22.9	12.0	-113.31	-188.3	-185.3	1,000.0	974.8	25.18	39.708	
7,050.0	6,954.3	6,951.3	6,951.3	23.0	12.1	-100.55	-188.3	-185.3	1,003.2	977.9	25.33	39.611	
7,100.0	7,002.4	6,999.4	6,999.4	23.1	12.2	-92.48	-188.3	-185.3	1,004.7	979.3	25.42	39.519	
7,150.0	7,049.6	7,046.6	7,046.6	23.2	12.3	-87.45	-188.3	-185.3	1,004.6	979.1	25.49	39.418	
7,200.0	7,095.7	7,092.7	7,092.7	23.3	12.4	-84.38	-188.3	-185.3	1,003.1	977.5	25.53	39.295	
7,250.0	7,140.5	7,137.5	7,137.5	23.4	12.5	-82.65	-188.3	-185.3	1,000.2	974.7	25.56	39.135	
7,300.0	7,183.7	7,180.7	7,180.7	23.5	12.5	-81.85	-188.3	-185.3	996.3	970.7	25.59	38.925	
7,350.0	7,225.2	7,222.2	7,222.2	23.5	12.6	-81.72	-188.3	-185.3	991.5	965.8	25.65	38.659	
7,400.0	7,264.8	7,261.8	7,261.8	23.6	12.7	-82.10	-188.3	-185.3	986.0	960.3	25.72	38.334	
7,450.0	7,302.2	7,299.2	7,299.2	23.7	12.7	-82.83	-188.3	-185.3	980.3	954.4	25.83	37.957	
7,500.0	7,337.3	7,334.3	7,334.3	23.7	12.8	-83.81	-188.3	-185.3	974.4	948.4	25.95	37.541	
7,550.0	7,369.8	7,366.8	7,366.8	23.8	12.9	-84.94	-188.3	-185.3	968.7	942.6	26.11	37.102	
7,600.0	7,399.7	7,396.7	7,396.7	23.9	12.9	-86.14	-188.3	-185.3	963.5	937.2	26.28	36.658	
7,650.0	7,426.8	7,423.8	7,423.8	24.0	13.0	-87.32	-188.3	-185.3	959.1	932.7	26.48	36.224	
7,700.0	7,451.0	7,448.0	7,448.0	24.2	13.0	-88.42	-188.3	-185.3	955.8	929.1	26.69	35.812	
7,750.0	7,472.1	7,469.1	7,469.1	24.3	13.0	-89.38	-188.3	-185.3	953.8	926.9	26.92	35.430	
7,789.0	7,486.4	7,483.4	7,483.4	24.5	13.1	-90.00	-188.3	-185.3	953.3	926.2	27.12	35.150	
7,800.0	7,490.1	7,487.1	7,487.1	24.5	13.1	-90.15	-188.3	-185.3	953.4	926.2	27.18	35.080	
7,850.0	7,504.8	7,501.8	7,501.8	24.7	13.1	-90.68	-188.3	-185.3	954.6	927.2	27.46	34.767	
7,900.0	7,516.2	7,513.2	7,513.2	24.9	13.1	-90.93	-188.3	-185.3	957.8	930.0	27.77	34.492	
7,950.0	7,524.2	7,521.2	7,521.2	25.1	13.1	-90.89	-188.3	-185.3	962.8	934.7	28.10	34.263	
8,000.0	7,528.8	7,525.8	7,525.8	25.4	13.1	-90.54	-188.3	-185.3	969.9	941.5	28.45	34.089	
8,042.0	7,530.0	7,527.0	7,527.0	25.6	13.1	-90.00	-188.3	-185.3	977.4	948.6	28.75	33.998	
8,100.0	7,530.0	7,527.0	7,527.0	26.0	13.1	-90.00	-188.3	-185.3	990.2	960.9	29.31	33.778	
8,200.0	7,530.0	7,527.0	7,527.0	26.6	13.1	-90.00	-188.3	-185.3	1,019.7	989.3	30.39	33.554	
8,300.0	7,530.0	7,527.0	7,527.0	27.4	13.1	-90.00	-188.3	-185.3	1,057.9	1,026.4	31.57	33.509	
8,400.0	7,530.0	7,527.0	7,527.0	28.3	13.1	-90.00	-188.3	-185.3	1,103.9	1,071.1	32.84	33.617	
8,500.0	7,530.0	7,527.0	7,527.0	29.2	13.1	-90.00	-188.3	-185.3	1,156.7	1,122.6	34.17	33.848	
8,600.0	7,530.0	7,527.0	7,527.0	30.2	13.1	-90.00	-188.3	-185.3	1,215.5	1,179.9	35.57	34.174	
8,700.0	7,530.0	7,527.0	7,527.0	31.3	13.1	-90.00	-188.3	-185.3	1,279.4	1,242.4	37.01	34.569	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 41-7 (EXISTING) - ENCANA WELL - N

Offset Site Error: 0.0 ft

Survey Program: 8370-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
8,800.0	7,530.0	7,527.0	7,527.0	32.4	13.1	-90.00	-188.3	-185.3	1,347.7	1,309.2	38.49	35.013	
8,900.0	7,530.0	7,527.0	7,527.0	33.6	13.1	-90.00	-188.3	-185.3	1,419.7	1,379.7	40.00	35.489	
9,000.0	7,530.0	7,527.0	7,527.0	34.9	13.1	-90.00	-188.3	-185.3	1,495.0	1,453.4	41.55	35.984	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY 42-7 ENCANA (EXISTING) - ENCANA

Offset Site Error: 0.0 ft

Survey Program: 8381-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
8,042.0	7,530.0	7,535.0	7,535.0	25.6	13.2	-90.00	-1,635.2	-303.9	1,517.5	1,488.7	28.76	52.761	
8,100.0	7,530.0	7,535.0	7,535.0	26.0	13.2	-90.00	-1,635.2	-303.9	1,469.8	1,440.4	29.33	50.113	
8,200.0	7,530.0	7,535.0	7,535.0	26.6	13.2	-90.00	-1,635.2	-303.9	1,389.3	1,358.9	30.41	45.692	
8,300.0	7,530.0	7,535.0	7,535.0	27.4	13.2	-90.00	-1,635.2	-303.9	1,311.5	1,279.9	31.59	41.521	
8,400.0	7,530.0	7,535.0	7,535.0	28.3	13.2	-90.00	-1,635.2	-303.9	1,236.9	1,204.0	32.85	37.650	
8,500.0	7,530.0	7,535.0	7,535.0	29.2	13.2	-90.00	-1,635.2	-303.9	1,166.1	1,131.9	34.19	34.108	
8,600.0	7,530.0	7,535.0	7,535.0	30.2	13.2	-90.00	-1,635.2	-303.9	1,099.8	1,064.2	35.58	30.910	
8,700.0	7,530.0	7,535.0	7,535.0	31.3	13.2	-90.00	-1,635.2	-303.9	1,039.0	1,002.0	37.02	28.063	
8,800.0	7,530.0	7,535.0	7,535.0	32.4	13.2	-90.00	-1,635.2	-303.9	984.6	946.1	38.50	25.570	
8,900.0	7,530.0	7,535.0	7,535.0	33.6	13.2	-90.00	-1,635.2	-303.9	937.7	897.7	40.02	23.432	
9,000.0	7,530.0	7,535.0	7,535.0	34.9	13.2	-90.00	-1,635.2	-303.9	899.5	858.0	41.56	21.644	
9,100.0	7,530.0	7,535.0	7,535.0	36.1	13.2	-90.00	-1,635.2	-303.9	871.2	828.1	43.12	20.202	
9,200.0	7,530.0	7,535.0	7,535.0	37.5	13.2	-90.00	-1,635.2	-303.9	853.8	809.1	44.71	19.096	
9,300.0	7,530.0	7,535.0	7,535.0	38.8	13.2	-90.00	-1,635.2	-303.9	847.8	801.5	46.31	18.307	
9,300.6	7,530.0	7,535.0	7,535.0	38.8	13.2	-90.00	-1,635.2	-303.9	847.8	801.5	46.32	18.303	CC, ES
9,400.0	7,530.0	7,535.0	7,535.0	40.2	13.2	-90.00	-1,635.2	-303.9	853.6	805.7	47.93	17.811	
9,500.0	7,530.0	7,535.0	7,535.0	41.6	13.2	-90.00	-1,635.2	-303.9	870.9	821.4	49.56	17.575	
9,600.0	7,530.0	7,535.0	7,535.0	43.1	13.2	-90.00	-1,635.2	-303.9	899.1	847.9	51.20	17.562	SF
9,700.0	7,530.0	7,535.0	7,535.0	44.5	13.2	-90.00	-1,635.2	-303.9	937.2	884.3	52.85	17.734	
9,800.0	7,530.0	7,535.0	7,535.0	46.0	13.2	-90.00	-1,635.2	-303.9	984.0	929.5	54.51	18.053	
9,900.0	7,530.0	7,535.0	7,535.0	47.5	13.2	-90.00	-1,635.2	-303.9	1,038.3	982.1	56.17	18.484	
10,000.0	7,530.0	7,535.0	7,535.0	49.0	13.2	-90.00	-1,635.2	-303.9	1,099.1	1,041.2	57.85	19.000	
10,100.0	7,530.0	7,535.0	7,535.0	50.6	13.2	-90.00	-1,635.2	-303.9	1,165.3	1,105.7	59.52	19.576	
10,200.0	7,530.0	7,535.0	7,535.0	52.1	13.2	-90.00	-1,635.2	-303.9	1,236.0	1,174.8	61.21	20.194	
10,300.0	7,530.0	7,535.0	7,535.0	53.7	13.2	-90.00	-1,635.2	-303.9	1,310.6	1,247.7	62.90	20.837	
10,400.0	7,530.0	7,535.0	7,535.0	55.2	13.2	-90.00	-1,635.2	-303.9	1,388.3	1,323.8	64.59	21.494	
10,500.0	7,530.0	7,535.0	7,535.0	56.8	13.2	-90.00	-1,635.2	-303.9	1,468.8	1,402.5	66.29	22.158	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - N

Offset Site Error: 0.0 ft

Survey Program: 8320-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
2,100.0	2,082.4	2,103.4	2,103.4	5.5	3.7	-69.12	-1,116.5	-1,207.9	1,548.6	1,539.6	9.01	171.971	
2,200.0	2,180.8	2,201.8	2,201.8	5.9	3.8	-69.72	-1,116.5	-1,207.9	1,542.3	1,532.8	9.52	161.975	
2,300.0	2,279.3	2,300.3	2,300.3	6.2	4.0	-70.33	-1,116.5	-1,207.9	1,536.2	1,526.2	10.04	152.987	
2,400.0	2,377.7	2,398.7	2,398.7	6.6	4.2	-70.94	-1,116.5	-1,207.9	1,530.3	1,519.7	10.56	144.868	
2,500.0	2,476.1	2,497.1	2,497.1	6.9	4.4	-71.56	-1,116.5	-1,207.9	1,524.5	1,513.4	11.09	137.504	
2,600.0	2,574.6	2,595.6	2,595.6	7.3	4.5	-72.18	-1,116.5	-1,207.9	1,519.0	1,507.3	11.61	130.797	
2,700.0	2,673.0	2,694.0	2,694.0	7.7	4.7	-72.81	-1,116.5	-1,207.9	1,513.6	1,501.4	12.14	124.667	
2,800.0	2,771.4	2,792.4	2,792.4	8.0	4.9	-73.44	-1,116.5	-1,207.9	1,508.4	1,495.7	12.67	119.047	
2,900.0	2,869.8	2,890.8	2,890.8	8.4	5.0	-74.07	-1,116.5	-1,207.9	1,503.4	1,490.2	13.20	113.878	
3,000.0	2,968.3	2,989.3	2,989.3	8.7	5.2	-74.71	-1,116.5	-1,207.9	1,498.6	1,484.8	13.73	109.112	
3,100.0	3,066.7	3,087.7	3,087.7	9.1	5.4	-75.36	-1,116.5	-1,207.9	1,493.9	1,479.7	14.27	104.706	
3,200.0	3,165.1	3,186.1	3,186.1	9.4	5.6	-76.00	-1,116.5	-1,207.9	1,489.5	1,474.7	14.80	100.622	
3,300.0	3,263.6	3,284.6	3,284.6	9.8	5.7	-76.65	-1,116.5	-1,207.9	1,485.3	1,469.9	15.34	96.830	
3,400.0	3,362.0	3,383.0	3,383.0	10.1	5.9	-77.31	-1,116.5	-1,207.9	1,481.2	1,465.4	15.88	93.301	
3,500.0	3,460.4	3,481.4	3,481.4	10.5	6.1	-77.96	-1,116.5	-1,207.9	1,477.4	1,461.0	16.41	90.011	
3,600.0	3,558.9	3,579.9	3,579.9	10.8	6.2	-78.62	-1,116.5	-1,207.9	1,473.8	1,456.8	16.95	86.938	
3,700.0	3,657.3	3,678.3	3,678.3	11.2	6.4	-79.29	-1,116.5	-1,207.9	1,470.3	1,452.9	17.49	84.063	
3,800.0	3,755.7	3,776.7	3,776.7	11.6	6.6	-79.95	-1,116.5	-1,207.9	1,467.1	1,449.1	18.03	81.370	
3,900.0	3,854.2	3,875.2	3,875.2	11.9	6.8	-80.62	-1,116.5	-1,207.9	1,464.1	1,445.5	18.57	78.843	
4,000.0	3,952.6	3,973.6	3,973.6	12.3	6.9	-81.30	-1,116.5	-1,207.9	1,461.3	1,442.2	19.11	76.469	
4,100.0	4,051.0	4,072.0	4,072.0	12.6	7.1	-81.97	-1,116.5	-1,207.9	1,458.7	1,439.0	19.65	74.237	
4,200.0	4,149.5	4,170.5	4,170.5	13.0	7.3	-82.65	-1,116.5	-1,207.9	1,456.3	1,436.1	20.19	72.134	
4,300.0	4,247.9	4,268.9	4,268.9	13.3	7.5	-83.33	-1,116.5	-1,207.9	1,454.1	1,433.4	20.73	70.152	
4,400.0	4,346.3	4,367.3	4,367.3	13.7	7.6	-84.01	-1,116.5	-1,207.9	1,452.1	1,430.8	21.27	68.282	
4,500.0	4,444.8	4,465.8	4,465.8	14.1	7.8	-84.69	-1,116.5	-1,207.9	1,450.3	1,428.5	21.80	66.516	
4,600.0	4,543.2	4,564.2	4,564.2	14.4	8.0	-85.37	-1,116.5	-1,207.9	1,448.8	1,426.5	22.34	64.846	
4,700.0	4,641.6	4,662.6	4,662.6	14.8	8.1	-86.06	-1,116.5	-1,207.9	1,447.5	1,424.6	22.88	63.267	
4,800.0	4,740.1	4,761.1	4,761.1	15.1	8.3	-86.74	-1,116.5	-1,207.9	1,446.3	1,422.9	23.41	61.771	
4,900.0	4,838.5	4,859.5	4,859.5	15.5	8.5	-87.43	-1,116.5	-1,207.9	1,445.4	1,421.5	23.95	60.354	
5,000.0	4,936.9	4,957.9	4,957.9	15.8	8.7	-88.12	-1,116.5	-1,207.9	1,444.7	1,420.2	24.48	59.011	
5,100.0	5,035.4	5,056.4	5,056.4	16.2	8.8	-88.81	-1,116.5	-1,207.9	1,444.2	1,419.2	25.01	57.736	
5,200.0	5,133.8	5,154.8	5,154.8	16.5	9.0	-89.50	-1,116.5	-1,207.9	1,444.0	1,418.4	25.55	56.527	
5,273.2	5,205.8	5,226.8	5,226.8	16.8	9.1	-90.00	-1,116.5	-1,207.9	1,443.9	1,418.0	25.93	55.680	
5,300.0	5,232.2	5,253.2	5,253.2	16.9	9.2	-90.18	-1,116.5	-1,207.9	1,443.9	1,417.9	26.07	55.378	
5,400.0	5,330.6	5,351.6	5,351.6	17.3	9.3	-90.87	-1,116.5	-1,207.9	1,444.1	1,417.5	26.60	54.287	
5,500.0	5,429.1	5,450.1	5,450.1	17.6	9.5	-91.56	-1,116.5	-1,207.9	1,444.5	1,417.3	27.13	53.249	
5,600.0	5,527.5	5,548.5	5,548.5	18.0	9.7	-92.25	-1,116.5	-1,207.9	1,445.1	1,417.4	27.65	52.263	
5,700.0	5,625.9	5,646.9	5,646.9	18.3	9.9	-92.94	-1,116.5	-1,207.9	1,445.9	1,417.7	28.17	51.324	
5,800.0	5,724.4	5,745.4	5,745.4	18.7	10.0	-93.62	-1,116.5	-1,207.9	1,446.9	1,418.2	28.69	50.432	
5,900.0	5,822.8	5,843.8	5,843.8	19.0	10.2	-94.31	-1,116.5	-1,207.9	1,448.1	1,418.9	29.21	49.582	
6,000.0	5,921.2	5,942.2	5,942.2	19.4	10.4	-94.99	-1,116.5	-1,207.9	1,449.6	1,419.9	29.72	48.772	
6,100.0	6,019.7	6,040.7	6,040.7	19.8	10.5	-95.68	-1,116.5	-1,207.9	1,451.3	1,421.0	30.23	48.001	
6,200.0	6,118.1	6,139.1	6,139.1	20.1	10.7	-96.36	-1,116.5	-1,207.9	1,453.1	1,422.4	30.74	47.267	
6,300.0	6,216.5	6,237.5	6,237.5	20.5	10.9	-97.04	-1,116.5	-1,207.9	1,455.2	1,424.0	31.25	46.568	
6,400.0	6,315.0	6,336.0	6,336.0	20.8	11.1	-97.72	-1,116.5	-1,207.9	1,457.5	1,425.8	31.75	45.901	
6,500.0	6,413.4	6,434.4	6,434.4	21.2	11.2	-98.39	-1,116.5	-1,207.9	1,460.0	1,427.8	32.26	45.266	
6,600.0	6,511.8	6,532.8	6,532.8	21.5	11.4	-99.06	-1,116.5	-1,207.9	1,462.8	1,430.0	32.75	44.660	
6,700.0	6,610.3	6,631.3	6,631.3	21.9	11.6	-99.74	-1,116.5	-1,207.9	1,465.7	1,432.4	33.25	44.083	
6,800.0	6,708.7	6,729.7	6,729.7	22.3	11.7	-100.40	-1,116.5	-1,207.9	1,468.8	1,435.1	33.74	43.533	
6,877.3	6,784.8	6,805.8	6,805.8	22.5	11.9	-100.92	-1,116.5	-1,207.9	1,471.4	1,437.3	34.12	43.125	
6,900.0	6,807.1	6,828.1	6,828.1	22.6	11.9	-90.97	-1,116.5	-1,207.9	1,471.8	1,437.6	34.22	43.005	
6,950.0	6,856.4	6,877.4	6,877.4	22.8	12.0	-68.17	-1,116.5	-1,207.9	1,470.2	1,435.9	34.35	42.796	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - WOOLLEY A 1-7 (EXISTING) - ENCANA WELL - N

Offset Site Error: 0.0 ft

Survey Program: 8320-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
7,000.0	6,905.5	6,926.5	6,926.5	22.9	12.1	-49.37	-1,116.5	-1,207.9	1,465.3	1,430.9	34.35	42.658	
7,050.0	6,954.3	6,975.3	6,975.3	23.0	12.2	-36.44	-1,116.5	-1,207.9	1,456.9	1,422.7	34.21	42.589	
7,100.0	7,002.4	7,023.4	7,023.4	23.1	12.3	-27.91	-1,116.5	-1,207.9	1,445.1	1,411.2	33.93	42.590	
7,150.0	7,049.6	7,070.6	7,070.6	23.2	12.3	-22.13	-1,116.5	-1,207.9	1,430.1	1,396.6	33.52	42.661	
7,200.0	7,095.7	7,116.7	7,116.7	23.3	12.4	-18.04	-1,116.5	-1,207.9	1,411.8	1,378.8	32.98	42.804	
7,250.0	7,140.5	7,161.5	7,161.5	23.4	12.5	-15.04	-1,116.5	-1,207.9	1,390.4	1,358.0	32.32	43.021	
7,300.0	7,183.7	7,204.7	7,204.7	23.5	12.6	-12.75	-1,116.5	-1,207.9	1,365.8	1,334.3	31.53	43.316	
7,350.0	7,225.2	7,246.2	7,246.2	23.5	12.6	-10.93	-1,116.5	-1,207.9	1,338.4	1,307.8	30.63	43.691	
7,400.0	7,264.8	7,285.8	7,285.8	23.6	12.7	-9.43	-1,116.5	-1,207.9	1,308.1	1,278.5	29.63	44.150	
7,450.0	7,302.2	7,323.2	7,323.2	23.7	12.8	-8.15	-1,116.5	-1,207.9	1,275.2	1,246.6	28.53	44.697	
7,500.0	7,337.3	7,358.3	7,358.3	23.7	12.8	-7.01	-1,116.5	-1,207.9	1,239.7	1,212.3	27.35	45.334	
7,550.0	7,369.8	7,390.8	7,390.8	23.8	12.9	-5.94	-1,116.5	-1,207.9	1,201.9	1,175.8	26.09	46.061	
7,600.0	7,399.7	7,420.7	7,420.7	23.9	13.0	-4.88	-1,116.5	-1,207.9	1,161.9	1,137.1	24.79	46.874	
7,650.0	7,426.8	7,447.8	7,447.8	24.0	13.0	-3.74	-1,116.5	-1,207.9	1,119.9	1,096.4	23.45	47.761	
7,700.0	7,451.0	7,472.0	7,472.0	24.2	13.0	-2.44	-1,116.5	-1,207.9	1,076.1	1,054.0	22.10	48.690	
7,750.0	7,472.1	7,493.1	7,493.1	24.3	13.1	-0.82	-1,116.5	-1,207.9	1,030.8	1,010.1	20.78	49.599	
7,800.0	7,490.1	7,511.1	7,511.1	24.5	13.1	1.38	-1,116.5	-1,207.9	984.2	964.6	19.55	50.347	
7,850.0	7,504.8	7,525.8	7,525.8	24.7	13.1	4.70	-1,116.5	-1,207.9	936.4	917.9	18.51	50.595	
7,900.0	7,516.2	7,537.2	7,537.2	24.9	13.2	10.31	-1,116.5	-1,207.9	887.8	869.8	17.96	49.421	
7,950.0	7,524.2	7,545.2	7,545.2	25.1	13.2	21.52	-1,116.5	-1,207.9	838.5	819.5	18.94	44.261	
8,000.0	7,528.8	7,549.8	7,549.8	25.4	13.2	48.43	-1,116.5	-1,207.9	788.8	764.4	24.39	32.345	
8,042.0	7,530.0	7,551.0	7,551.0	25.6	13.2	90.00	-1,116.5	-1,207.9	746.9	718.1	28.79	25.942	
8,100.0	7,530.0	7,551.0	7,551.0	26.0	13.2	90.00	-1,116.5	-1,207.9	689.1	659.7	29.36	23.473	
8,200.0	7,530.0	7,551.0	7,551.0	26.6	13.2	90.00	-1,116.5	-1,207.9	589.5	559.1	30.43	19.371	
8,300.0	7,530.0	7,551.0	7,551.0	27.4	13.2	90.00	-1,116.5	-1,207.9	490.1	458.5	31.61	15.503	
8,400.0	7,530.0	7,551.0	7,551.0	28.3	13.2	90.00	-1,116.5	-1,207.9	391.0	358.1	32.88	11.893	
8,500.0	7,530.0	7,551.0	7,551.0	29.2	13.2	90.00	-1,116.5	-1,207.9	292.6	258.3	34.22	8.550	
8,600.0	7,530.0	7,551.0	7,551.0	30.2	13.2	90.00	-1,116.5	-1,207.9	195.6	160.0	35.61	5.494	
8,700.0	7,530.0	7,551.0	7,551.0	31.3	13.2	90.00	-1,116.5	-1,207.9	104.7	67.6	37.05	2.826	
8,786.6	7,530.0	7,551.0	7,551.0	32.3	13.2	90.00	-1,116.5	-1,207.9	58.9	20.5	38.33	1.536	CC, ES, SF
8,800.0	7,530.0	7,551.0	7,551.0	32.4	13.2	90.00	-1,116.5	-1,207.9	60.4	21.8	38.53	1.567	
8,900.0	7,530.0	7,551.0	7,551.0	33.6	13.2	90.00	-1,116.5	-1,207.9	127.8	87.7	40.05	3.191	
9,000.0	7,530.0	7,551.0	7,551.0	34.9	13.2	90.00	-1,116.5	-1,207.9	221.4	179.8	41.59	5.324	
9,100.0	7,530.0	7,551.0	7,551.0	36.1	13.2	90.00	-1,116.5	-1,207.9	318.9	275.8	43.15	7.390	
9,200.0	7,530.0	7,551.0	7,551.0	37.5	13.2	90.00	-1,116.5	-1,207.9	417.6	372.9	44.74	9.334	
9,300.0	7,530.0	7,551.0	7,551.0	38.8	13.2	90.00	-1,116.5	-1,207.9	516.8	470.5	46.34	11.152	
9,400.0	7,530.0	7,551.0	7,551.0	40.2	13.2	90.00	-1,116.5	-1,207.9	616.2	568.3	47.96	12.850	
9,500.0	7,530.0	7,551.0	7,551.0	41.6	13.2	90.00	-1,116.5	-1,207.9	715.9	666.3	49.58	14.437	
9,600.0	7,530.0	7,551.0	7,551.0	43.1	13.2	90.00	-1,116.5	-1,207.9	815.6	764.3	51.23	15.921	
9,700.0	7,530.0	7,551.0	7,551.0	44.5	13.2	90.00	-1,116.5	-1,207.9	915.3	862.4	52.88	17.311	
9,800.0	7,530.0	7,551.0	7,551.0	46.0	13.2	90.00	-1,116.5	-1,207.9	1,015.1	960.6	54.53	18.615	
9,900.0	7,530.0	7,551.0	7,551.0	47.5	13.2	90.00	-1,116.5	-1,207.9	1,115.0	1,058.8	56.20	19.840	
10,000.0	7,530.0	7,551.0	7,551.0	49.0	13.2	90.00	-1,116.5	-1,207.9	1,214.9	1,157.0	57.87	20.992	
10,100.0	7,530.0	7,551.0	7,551.0	50.6	13.2	90.00	-1,116.5	-1,207.9	1,314.7	1,255.2	59.55	22.077	
10,200.0	7,530.0	7,551.0	7,551.0	52.1	13.2	90.00	-1,116.5	-1,207.9	1,414.7	1,353.4	61.24	23.102	
10,300.0	7,530.0	7,551.0	7,551.0	53.7	13.2	90.00	-1,116.5	-1,207.9	1,514.6	1,451.6	62.93	24.069	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2G-7H-E168 - 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
7,250.0	7,140.5	9,768.7	7,803.0	23.4	50.2	86.50	255.8	-2,445.2	1,527.3	1,467.0	60.30	25.326	
7,300.0	7,183.7	9,744.8	7,803.0	23.5	49.8	90.21	232.0	-2,445.0	1,501.6	1,441.4	60.20	24.943	
7,350.0	7,225.2	9,718.0	7,803.0	23.5	49.5	93.12	205.1	-2,444.8	1,477.8	1,417.9	59.93	24.661	
7,400.0	7,264.8	9,688.2	7,803.0	23.6	49.1	95.41	175.4	-2,444.6	1,455.9	1,396.4	59.49	24.473	
7,450.0	7,302.2	9,655.8	7,803.0	23.7	48.6	97.21	142.9	-2,444.3	1,435.8	1,376.9	58.91	24.374	
7,500.0	7,337.3	9,620.7	7,803.0	23.7	48.1	98.60	107.9	-2,444.0	1,417.5	1,359.3	58.19	24.359	SF
7,550.0	7,369.8	9,583.3	7,803.0	23.8	47.6	99.67	70.4	-2,443.7	1,401.1	1,343.7	57.37	24.422	
7,600.0	7,399.7	9,543.6	7,803.0	23.9	47.1	100.47	30.8	-2,443.3	1,386.5	1,330.0	56.46	24.559	
7,650.0	7,426.8	9,501.9	7,803.0	24.0	46.6	101.07	-10.9	-2,443.0	1,373.6	1,318.2	55.46	24.766	
7,700.0	7,451.0	9,458.4	7,803.0	24.2	46.0	101.50	-54.4	-2,442.6	1,362.4	1,308.0	54.42	25.038	
7,750.0	7,472.1	9,413.3	7,803.0	24.3	45.4	101.81	-99.5	-2,442.2	1,352.9	1,299.5	53.32	25.372	
7,800.0	7,490.1	9,366.8	7,803.0	24.5	44.8	102.02	-146.0	-2,441.8	1,344.8	1,292.6	52.19	25.766	
7,850.0	7,504.8	9,319.1	7,803.0	24.7	44.2	102.17	-193.7	-2,441.4	1,338.3	1,287.2	51.04	26.218	
7,900.0	7,516.2	9,270.5	7,803.0	24.9	43.6	102.27	-242.3	-2,441.0	1,333.1	1,283.2	49.88	26.726	
7,950.0	7,524.2	9,221.2	7,803.0	25.1	43.0	102.35	-291.6	-2,440.6	1,329.3	1,280.6	48.71	27.291	
8,000.0	7,528.8	9,171.5	7,803.0	25.4	42.4	102.41	-341.4	-2,440.1	1,326.9	1,279.4	47.54	27.913	
8,042.0	7,530.0	9,129.5	7,803.0	25.6	41.9	102.46	-383.4	-2,439.8	1,325.9	1,279.3	46.55	28.482	
8,100.0	7,530.0	9,071.5	7,803.0	26.0	41.2	102.47	-441.3	-2,439.3	1,325.1	1,278.9	46.21	28.672	
8,200.0	7,530.0	8,971.5	7,803.0	26.6	40.0	102.48	-541.3	-2,438.4	1,323.7	1,278.0	45.74	28.939	
8,300.0	7,530.0	8,871.5	7,803.0	27.4	38.9	102.49	-641.3	-2,437.6	1,322.4	1,277.0	45.39	29.134	
8,400.0	7,530.0	8,771.5	7,803.0	28.3	37.9	102.50	-741.3	-2,436.7	1,321.1	1,275.9	45.15	29.261	
8,500.0	7,530.0	8,671.6	7,803.0	29.2	36.9	102.52	-841.3	-2,435.8	1,319.7	1,274.7	45.00	29.326	
8,600.0	7,530.0	8,571.6	7,803.0	30.2	35.9	102.53	-941.2	-2,435.0	1,318.4	1,273.4	44.94	29.334	
8,700.0	7,530.0	8,471.6	7,803.0	31.3	35.0	102.54	-1,041.2	-2,434.1	1,317.0	1,272.0	44.97	29.284	
8,800.0	7,530.0	8,371.6	7,803.0	32.4	34.2	102.56	-1,141.2	-2,433.3	1,315.7	1,270.6	45.09	29.178	
8,900.0	7,530.0	8,269.9	7,802.1	33.6	33.4	102.53	-1,242.9	-2,432.6	1,314.3	1,269.0	45.28	29.026	
9,000.0	7,530.0	8,166.8	7,787.2	34.9	32.7	101.88	-1,344.7	-2,434.7	1,312.7	1,267.1	45.64	28.760	
9,100.0	7,530.0	8,071.9	7,757.9	36.1	32.1	100.59	-1,434.8	-2,439.7	1,311.4	1,265.1	46.30	28.323	
9,151.6	7,530.0	8,027.3	7,739.2	36.8	31.8	99.76	-1,475.0	-2,443.1	1,311.1	1,264.4	46.75	28.046	CC
9,200.0	7,530.0	7,988.6	7,720.4	37.5	31.6	98.93	-1,508.8	-2,446.6	1,311.4	1,264.2	47.22	27.770	ES
9,300.0	7,530.0	7,917.7	7,680.6	38.8	31.2	97.16	-1,566.9	-2,454.0	1,314.0	1,265.6	48.35	27.176	
9,400.0	7,530.0	7,858.4	7,642.1	40.2	30.9	95.46	-1,611.4	-2,461.3	1,320.3	1,270.7	49.62	26.609	
9,500.0	7,530.0	7,809.0	7,606.7	41.6	30.6	93.90	-1,645.1	-2,468.0	1,331.2	1,280.2	50.98	26.111	
9,600.0	7,530.0	7,767.9	7,575.2	43.1	30.4	92.52	-1,670.8	-2,474.1	1,347.2	1,294.8	52.41	25.705	
9,700.0	7,530.0	7,733.4	7,547.4	44.5	30.3	91.31	-1,690.5	-2,479.4	1,368.8	1,314.9	53.88	25.401	
9,800.0	7,530.0	7,700.0	7,519.4	46.0	30.1	90.10	-1,707.9	-2,484.8	1,395.9	1,340.5	55.36	25.212	
9,900.0	7,530.0	7,679.4	7,501.7	47.5	30.0	89.34	-1,717.8	-2,488.3	1,428.5	1,371.6	56.92	25.095	
10,000.0	7,530.0	7,650.0	7,475.8	49.0	29.9	88.24	-1,730.8	-2,493.3	1,466.6	1,408.2	58.43	25.102	
10,100.0	7,530.0	7,650.0	7,475.8	50.6	29.9	88.24	-1,730.8	-2,493.3	1,509.8	1,449.7	60.10	25.119	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2H-7H-E168 - Hz - Plan #2

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
6,700.0	6,610.3	9,744.5	7,550.0	21.9	53.2	-28.48	221.1	-2,139.9	1,501.2	1,451.2	50.04	30.000	
6,800.0	6,708.7	9,751.7	7,550.0	22.3	53.2	-28.06	228.3	-2,140.6	1,427.8	1,377.3	50.56	28.240	
6,877.3	6,784.8	9,757.3	7,550.0	22.5	53.3	-27.75	233.9	-2,141.1	1,373.4	1,322.4	50.96	26.951	
6,900.0	6,807.1	9,758.6	7,550.0	22.6	53.3	-15.87	235.1	-2,141.2	1,357.8	1,306.1	51.72	26.254	
6,950.0	6,856.4	9,758.9	7,550.0	22.8	53.3	10.92	235.4	-2,141.2	1,323.9	1,270.6	53.24	24.866	
7,000.0	6,905.5	9,755.7	7,550.0	22.9	53.3	33.32	232.3	-2,140.9	1,290.8	1,236.3	54.55	23.661	
7,050.0	6,954.3	9,749.1	7,550.0	23.0	53.2	49.41	225.7	-2,140.3	1,258.8	1,203.1	55.65	22.621	
7,100.0	7,002.4	9,739.0	7,550.0	23.1	53.1	60.68	215.7	-2,139.3	1,228.0	1,171.5	56.51	21.732	
7,150.0	7,049.6	9,725.6	7,550.0	23.2	52.9	68.75	202.3	-2,138.1	1,198.7	1,141.5	57.13	20.980	
7,200.0	7,095.7	9,708.8	7,550.0	23.3	52.7	74.69	185.6	-2,136.5	1,170.9	1,113.3	57.53	20.352	
7,250.0	7,140.5	9,688.9	7,550.0	23.4	52.5	79.16	165.8	-2,134.6	1,144.7	1,087.0	57.70	19.838	
7,300.0	7,183.7	9,665.8	7,550.0	23.5	52.2	82.54	142.8	-2,132.3	1,120.3	1,062.6	57.66	19.428	
7,350.0	7,225.2	9,639.7	7,550.0	23.5	51.9	85.11	116.8	-2,129.8	1,097.7	1,040.2	57.43	19.114	
7,400.0	7,264.8	9,610.7	7,550.0	23.6	51.6	87.03	87.9	-2,127.1	1,076.8	1,019.8	57.02	18.886	
7,450.0	7,302.2	9,578.9	7,550.0	23.7	51.2	88.44	56.3	-2,124.0	1,057.7	1,001.3	56.46	18.735	
7,500.0	7,337.3	9,544.6	7,550.0	23.7	50.8	89.46	22.1	-2,120.7	1,040.4	984.6	55.77	18.654	
7,550.0	7,369.8	9,507.8	7,550.0	23.8	50.4	90.15	-14.5	-2,117.2	1,024.7	969.7	54.99	18.635	
7,600.0	7,399.7	9,468.8	7,550.0	23.9	50.0	90.60	-53.3	-2,113.5	1,010.5	956.4	54.13	18.668	
7,650.0	7,426.8	9,427.7	7,550.0	24.0	49.5	90.87	-94.2	-2,109.6	997.8	944.5	53.23	18.745	
7,700.0	7,451.0	9,384.8	7,550.0	24.2	49.1	91.01	-136.9	-2,105.5	986.3	934.0	52.30	18.859	
7,750.0	7,472.1	9,340.2	7,550.0	24.3	48.6	91.08	-181.3	-2,101.2	976.1	924.7	51.37	19.001	
7,800.0	7,490.1	9,294.2	7,550.0	24.5	48.1	91.13	-227.1	-2,096.8	966.8	916.4	50.45	19.166	
7,850.0	7,504.8	9,247.0	7,550.0	24.7	47.7	91.19	-274.1	-2,092.3	958.6	909.0	49.54	19.347	
7,900.0	7,516.2	9,198.8	7,550.0	24.9	47.2	91.29	-322.1	-2,087.7	951.1	902.4	48.66	19.545	
7,950.0	7,524.2	9,149.9	7,550.0	25.1	46.7	91.46	-370.8	-2,083.0	944.4	896.6	47.80	19.758	
8,000.0	7,528.8	9,100.4	7,550.0	25.4	46.2	91.73	-420.0	-2,078.2	938.4	891.5	46.94	19.992	
8,042.0	7,530.0	9,058.6	7,550.0	25.6	45.8	92.04	-461.6	-2,074.2	934.0	887.7	46.22	20.208	
8,100.0	7,530.0	9,001.0	7,550.0	26.0	45.3	92.05	-519.0	-2,068.7	928.1	882.2	45.87	20.233	
8,200.0	7,530.0	8,901.5	7,550.0	26.6	44.5	92.07	-618.0	-2,059.2	918.0	872.6	45.39	20.226	
8,300.0	7,530.0	8,802.0	7,550.0	27.4	43.7	92.09	-717.0	-2,049.7	907.9	862.9	45.03	20.161	
8,400.0	7,530.0	8,702.5	7,550.0	28.3	42.9	92.12	-816.1	-2,040.2	897.9	853.1	44.79	20.046	
8,500.0	7,530.0	8,603.0	7,550.0	29.2	42.2	92.14	-915.1	-2,030.6	887.8	843.1	44.65	19.883	
8,600.0	7,530.0	8,503.5	7,550.0	30.2	41.6	92.17	-1,014.1	-2,021.1	877.7	833.1	44.61	19.676	
8,700.0	7,530.0	8,404.0	7,550.0	31.3	41.0	92.19	-1,113.2	-2,011.6	867.6	823.0	44.66	19.429	
8,800.0	7,530.0	8,304.5	7,550.0	32.4	40.5	92.22	-1,212.2	-2,002.1	857.5	812.7	44.80	19.141	
8,900.0	7,530.0	8,205.1	7,550.0	33.6	40.1	92.24	-1,311.2	-1,992.6	847.4	802.4	45.05	18.812	
9,000.0	7,530.0	8,124.4	7,548.0	34.9	39.8	92.13	-1,391.6	-1,985.5	838.1	792.5	45.63	18.370	
9,100.0	7,530.0	8,050.0	7,537.3	36.1	39.5	91.40	-1,465.0	-1,981.7	832.0	785.7	46.36	17.948	
9,200.0	7,530.0	7,985.6	7,520.9	37.5	39.3	90.27	-1,527.2	-1,980.9	829.7	782.5	47.27	17.552	
9,203.7	7,530.0	7,983.2	7,520.1	37.5	39.3	90.21	-1,529.5	-1,980.9	829.7	782.4	47.31	17.539	CC, ES
9,300.0	7,530.0	7,922.3	7,498.3	38.8	39.1	88.71	-1,586.3	-1,982.3	832.0	783.7	48.25	17.244	
9,400.0	7,530.0	7,864.5	7,472.4	40.2	38.9	86.94	-1,637.9	-1,985.5	839.5	790.2	49.29	17.031	
9,500.0	7,530.0	7,812.5	7,445.0	41.6	38.7	85.09	-1,681.8	-1,989.8	853.1	802.7	50.40	16.928	SF
9,600.0	7,530.0	7,766.3	7,417.6	43.1	38.5	83.27	-1,718.7	-1,994.9	873.4	821.9	51.55	16.944	
9,700.0	7,530.0	7,725.4	7,391.1	44.5	38.4	81.55	-1,749.4	-2,000.2	900.6	847.9	52.73	17.081	
9,800.0	7,530.0	7,700.0	7,373.6	46.0	38.3	80.44	-1,767.4	-2,004.0	934.9	880.8	54.06	17.293	
9,900.0	7,530.0	7,650.0	7,337.2	47.5	38.1	78.18	-1,800.6	-2,012.2	975.7	920.6	55.06	17.719	
10,000.0	7,530.0	7,629.3	7,321.3	49.0	38.0	77.23	-1,813.3	-2,015.9	1,022.7	966.3	56.42	18.127	
10,100.0	7,530.0	7,600.0	7,298.1	50.6	37.8	75.86	-1,830.4	-2,021.6	1,075.6	1,018.0	57.62	18.667	
10,200.0	7,530.0	7,582.2	7,283.7	52.1	37.8	75.03	-1,840.1	-2,025.1	1,133.7	1,074.7	58.98	19.220	
10,300.0	7,530.0	7,550.0	7,256.9	53.7	37.6	73.52	-1,856.6	-2,032.0	1,196.5	1,136.4	60.08	19.915	
10,400.0	7,530.0	7,550.0	7,256.9	55.2	37.6	73.52	-1,856.6	-2,032.0	1,263.1	1,201.4	61.70	20.471	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Becky 2H-7H-E168 - Hz - Plan #2

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
10,500.0	7,530.0	7,528.8	7,238.8	56.8	37.5	72.53	-1,866.6	-2,036.7	1,333.4	1,270.4	62.96	21.179	
10,600.0	7,530.0	7,500.0	7,213.7	58.4	37.4	71.19	-1,879.1	-2,043.3	1,407.0	1,343.0	64.04	21.972	
10,700.0	7,530.0	7,500.0	7,213.7	60.0	37.4	71.19	-1,879.1	-2,043.3	1,482.9	1,417.3	65.65	22.589	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2G-7H-E168 - 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
8,500.0	7,530.0	7,668.5	7,475.7	29.2	30.7	88.45	-1,438.1	-2,567.8	1,545.3	1,508.4	36.94	41.829	
8,600.0	7,530.0	7,700.0	7,502.1	30.2	30.8	89.52	-1,454.4	-2,562.0	1,508.0	1,469.7	38.24	39.439	
8,700.0	7,530.0	7,719.7	7,518.1	31.3	30.8	90.17	-1,465.3	-2,558.4	1,475.4	1,435.8	39.60	37.257	
8,800.0	7,530.0	7,750.0	7,541.9	32.4	30.8	91.14	-1,483.2	-2,553.1	1,448.0	1,407.0	40.96	35.350	
8,900.0	7,530.0	7,788.9	7,571.1	33.6	30.8	92.34	-1,508.0	-2,546.6	1,425.5	1,383.2	42.30	33.702	
9,000.0	7,530.0	7,832.4	7,601.8	34.9	30.8	93.62	-1,538.2	-2,539.8	1,407.9	1,364.2	43.62	32.273	
9,100.0	7,530.0	7,883.6	7,634.9	36.1	30.8	95.00	-1,576.5	-2,532.5	1,394.8	1,349.8	44.92	31.049	
9,200.0	7,530.0	7,943.3	7,669.1	37.5	30.8	96.44	-1,624.8	-2,524.9	1,385.7	1,339.5	46.19	29.997	
9,300.0	7,530.0	8,012.3	7,702.2	38.8	30.8	97.85	-1,684.8	-2,517.6	1,379.8	1,332.3	47.46	29.071	
9,400.0	7,530.0	8,090.5	7,730.9	40.2	30.8	99.07	-1,757.2	-2,511.2	1,376.4	1,327.6	48.78	28.214	
9,500.0	7,530.0	8,176.4	7,751.1	41.6	30.8	99.93	-1,840.5	-2,506.7	1,374.6	1,324.3	50.24	27.360	
9,600.0	7,530.0	8,266.9	7,759.0	43.1	30.9	100.27	-1,930.5	-2,505.0	1,373.7	1,321.8	51.90	26.466	
9,700.0	7,530.0	8,366.3	7,759.0	44.5	31.0	100.28	-2,030.0	-2,505.0	1,373.2	1,319.4	53.84	25.506	
9,800.0	7,530.0	8,466.3	7,759.0	46.0	31.2	100.28	-2,130.0	-2,505.0	1,372.7	1,316.8	55.95	24.535	
9,900.0	7,530.0	8,566.3	7,759.0	47.5	31.5	100.29	-2,230.0	-2,505.1	1,372.2	1,314.0	58.24	23.561	
10,000.0	7,530.0	8,666.3	7,759.0	49.0	32.0	100.29	-2,330.0	-2,505.1	1,371.7	1,311.0	60.69	22.601	
10,100.0	7,530.0	8,766.3	7,759.0	50.6	32.5	100.29	-2,430.0	-2,505.1	1,371.2	1,307.9	63.28	21.668	
10,200.0	7,530.0	8,866.3	7,759.0	52.1	33.0	100.30	-2,530.0	-2,505.1	1,370.7	1,304.7	65.99	20.771	
10,300.0	7,530.0	8,966.3	7,759.0	53.7	33.7	100.30	-2,630.0	-2,505.1	1,370.2	1,301.4	68.80	19.916	
10,400.0	7,530.0	9,066.3	7,759.0	55.2	34.4	100.30	-2,730.0	-2,505.1	1,369.7	1,298.0	71.69	19.106	
10,500.0	7,530.0	9,166.3	7,759.0	56.8	35.3	100.31	-2,830.0	-2,505.1	1,369.2	1,294.6	74.65	18.342	
10,600.0	7,530.0	9,266.3	7,759.0	58.4	36.1	100.31	-2,930.0	-2,505.2	1,368.7	1,291.0	77.67	17.622	
10,700.0	7,530.0	9,366.3	7,759.0	60.0	37.1	100.32	-3,030.0	-2,505.2	1,368.2	1,287.5	80.74	16.946	
10,800.0	7,530.0	9,466.3	7,759.0	61.6	38.1	100.32	-3,130.0	-2,505.2	1,367.7	1,283.9	83.85	16.311	
10,900.0	7,530.0	9,566.3	7,759.0	63.2	39.1	100.32	-3,230.0	-2,505.2	1,367.2	1,280.2	87.00	15.715	
11,000.0	7,530.0	9,666.3	7,759.0	64.9	40.3	100.33	-3,330.0	-2,505.2	1,366.7	1,276.5	90.18	15.156	
11,100.0	7,530.0	9,766.3	7,759.0	66.5	41.4	100.33	-3,430.0	-2,505.2	1,366.2	1,272.8	93.38	14.630	
11,200.0	7,530.0	9,866.3	7,759.0	68.1	42.6	100.33	-3,530.0	-2,505.3	1,365.7	1,269.1	96.61	14.136	
11,300.0	7,530.0	9,966.3	7,759.0	69.8	43.8	100.34	-3,630.0	-2,505.3	1,365.2	1,265.4	99.86	13.672	
11,400.0	7,530.0	10,066.3	7,759.0	71.4	45.1	100.34	-3,730.0	-2,505.3	1,364.7	1,261.6	103.12	13.234	
11,500.0	7,530.0	10,166.3	7,759.0	73.1	46.4	100.35	-3,830.0	-2,505.3	1,364.2	1,257.8	106.40	12.822	
11,600.0	7,530.0	10,266.3	7,759.0	74.7	47.7	100.35	-3,930.0	-2,505.3	1,363.7	1,254.0	109.69	12.432	
11,700.0	7,530.0	10,366.3	7,759.0	76.4	49.1	100.35	-4,030.0	-2,505.3	1,363.2	1,250.2	113.00	12.064	
11,800.0	7,530.0	10,466.3	7,759.0	78.1	50.5	100.36	-4,130.0	-2,505.4	1,362.7	1,246.4	116.31	11.716	
11,900.0	7,530.0	10,566.3	7,759.0	79.7	51.9	100.36	-4,230.0	-2,505.4	1,362.2	1,242.6	119.64	11.386	
12,000.0	7,530.0	10,666.3	7,759.0	81.4	53.3	100.37	-4,330.0	-2,505.4	1,361.7	1,238.8	122.97	11.074	
12,100.0	7,530.0	10,766.3	7,759.0	83.1	54.8	100.37	-4,430.0	-2,505.4	1,361.2	1,234.9	126.31	10.777	
12,200.0	7,530.0	10,866.3	7,759.0	84.8	56.2	100.37	-4,530.0	-2,505.4	1,360.7	1,231.1	129.66	10.495	
12,300.0	7,530.0	10,966.3	7,759.0	86.5	57.7	100.38	-4,630.0	-2,505.4	1,360.2	1,227.2	133.01	10.226	
12,400.0	7,530.0	11,066.3	7,759.0	88.1	59.2	100.38	-4,730.0	-2,505.5	1,359.7	1,223.4	136.37	9.971	
12,500.0	7,530.0	11,166.3	7,759.0	89.8	60.7	100.38	-4,829.9	-2,505.5	1,359.2	1,219.5	139.74	9.727	
12,600.0	7,530.0	11,266.3	7,759.0	91.5	62.2	100.39	-4,929.9	-2,505.5	1,358.7	1,215.6	143.11	9.495	
12,700.0	7,530.0	11,366.3	7,759.0	93.2	63.8	100.39	-5,029.9	-2,505.5	1,358.2	1,211.8	146.48	9.272	
12,800.0	7,530.0	11,466.3	7,759.0	94.9	65.3	100.40	-5,129.9	-2,505.5	1,357.7	1,207.9	149.86	9.060	
12,900.0	7,530.0	11,566.3	7,759.0	96.6	66.9	100.40	-5,229.9	-2,505.5	1,357.2	1,204.0	153.24	8.857	
13,000.0	7,530.0	11,666.3	7,759.0	98.3	68.4	100.40	-5,329.9	-2,505.6	1,356.7	1,200.1	156.62	8.662	
13,100.0	7,530.0	11,766.3	7,759.0	100.0	70.0	100.41	-5,429.9	-2,505.6	1,356.2	1,196.2	160.01	8.476	
13,200.0	7,530.0	11,866.3	7,759.0	101.7	71.6	100.41	-5,529.9	-2,505.6	1,355.7	1,192.3	163.40	8.297	
13,300.0	7,530.0	11,966.3	7,759.0	103.4	73.2	100.42	-5,629.9	-2,505.6	1,355.2	1,188.4	166.80	8.125	
13,400.0	7,530.0	12,066.3	7,759.0	105.1	74.8	100.42	-5,729.9	-2,505.6	1,354.7	1,184.6	170.19	7.960	
13,500.0	7,530.0	12,166.3	7,759.0	106.8	76.4	100.42	-5,829.9	-2,505.6	1,354.2	1,180.7	173.59	7.801	
13,600.0	7,530.0	12,266.3	7,759.0	108.5	78.0	100.43	-5,929.9	-2,505.7	1,353.7	1,176.8	176.99	7.649	

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 Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Offset Design S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills) - Woolley-Sosa 2G-7H-E168 - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

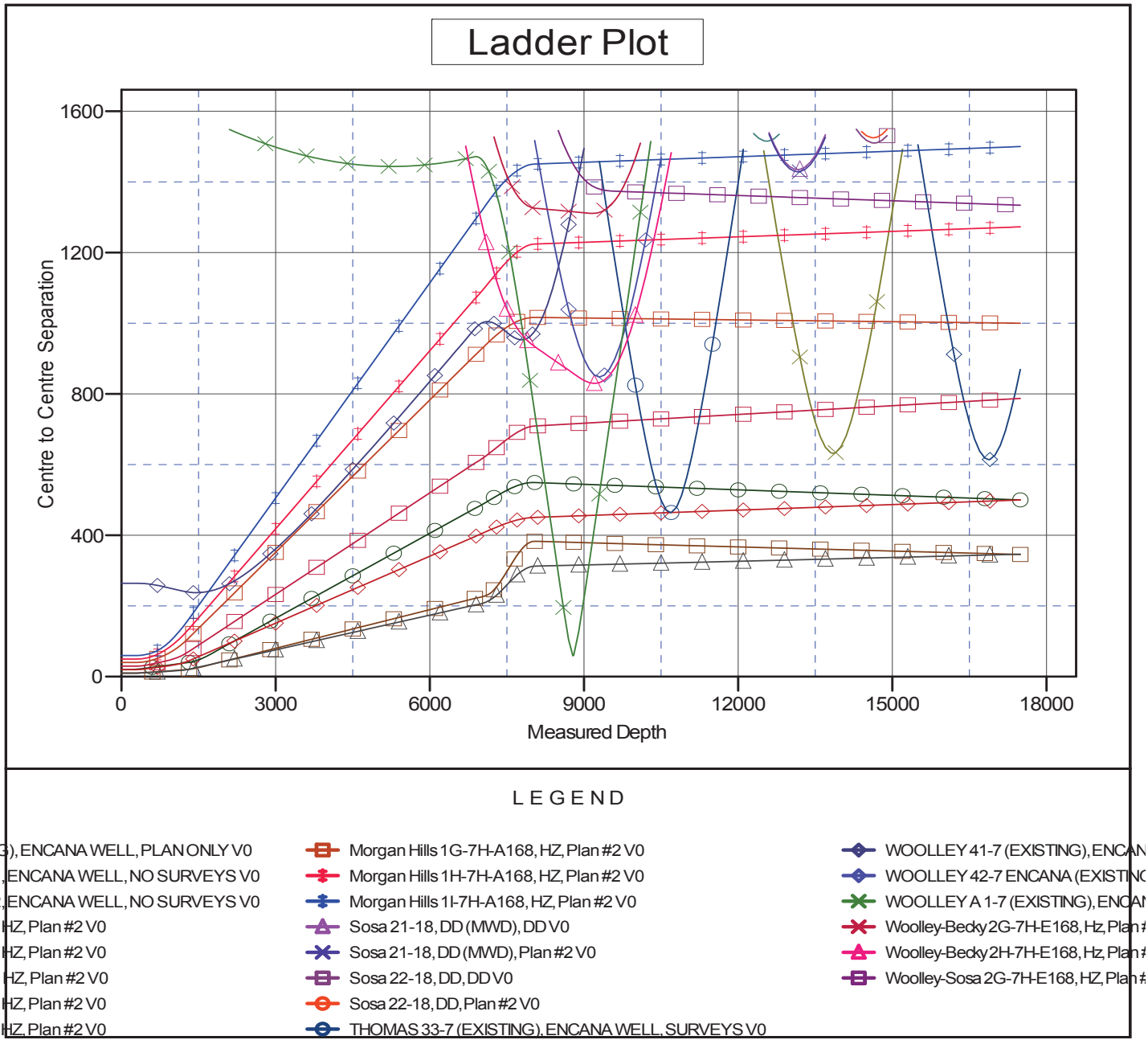
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
13,700.0	7,530.0	12,366.3	7,759.0	110.3	79.6	100.43	-6,029.9	-2,505.7	1,353.2	1,172.9	180.39	7.502	
13,800.0	7,530.0	12,466.3	7,759.0	112.0	81.2	100.43	-6,129.9	-2,505.7	1,352.7	1,169.0	183.80	7.360	
13,900.0	7,530.0	12,566.3	7,759.0	113.7	82.9	100.44	-6,229.9	-2,505.7	1,352.2	1,165.0	187.20	7.224	
14,000.0	7,530.0	12,666.3	7,759.0	115.4	84.5	100.44	-6,329.9	-2,505.7	1,351.8	1,161.1	190.61	7.092	
14,100.0	7,530.0	12,766.3	7,759.0	117.1	86.1	100.45	-6,429.9	-2,505.7	1,351.3	1,157.2	194.02	6.965	
14,200.0	7,530.0	12,866.3	7,759.0	118.8	87.8	100.45	-6,529.9	-2,505.7	1,350.8	1,153.3	197.43	6.842	
14,300.0	7,530.0	12,966.3	7,759.0	120.6	89.4	100.45	-6,629.9	-2,505.8	1,350.3	1,149.4	200.84	6.723	
14,400.0	7,530.0	13,066.3	7,759.0	122.3	91.1	100.46	-6,729.9	-2,505.8	1,349.8	1,145.5	204.25	6.608	
14,500.0	7,530.0	13,166.3	7,759.0	124.0	92.7	100.46	-6,829.9	-2,505.8	1,349.3	1,141.6	207.67	6.497	
14,600.0	7,530.0	13,266.3	7,759.0	125.7	94.4	100.47	-6,929.9	-2,505.8	1,348.8	1,137.7	211.08	6.390	
14,700.0	7,530.0	13,366.3	7,759.0	127.4	96.1	100.47	-7,029.9	-2,505.8	1,348.3	1,133.8	214.50	6.286	
14,800.0	7,530.0	13,466.2	7,759.0	129.2	97.7	100.47	-7,129.9	-2,505.8	1,347.8	1,129.8	217.91	6.185	
14,900.0	7,530.0	13,566.2	7,759.0	130.9	99.4	100.48	-7,229.9	-2,505.9	1,347.3	1,125.9	221.33	6.087	
15,000.0	7,530.0	13,666.2	7,759.0	132.6	101.1	100.48	-7,329.9	-2,505.9	1,346.8	1,122.0	224.75	5.992	
15,100.0	7,530.0	13,766.2	7,759.0	134.3	102.7	100.49	-7,429.9	-2,505.9	1,346.3	1,118.1	228.17	5.900	
15,200.0	7,530.0	13,866.2	7,759.0	136.1	104.4	100.49	-7,529.9	-2,505.9	1,345.8	1,114.2	231.59	5.811	
15,300.0	7,530.0	13,966.2	7,759.0	137.8	106.1	100.49	-7,629.9	-2,505.9	1,345.3	1,110.3	235.01	5.724	
15,400.0	7,530.0	14,066.2	7,759.0	139.5	107.8	100.50	-7,729.9	-2,505.9	1,344.8	1,106.3	238.44	5.640	
15,500.0	7,530.0	14,166.2	7,759.0	141.2	109.5	100.50	-7,829.9	-2,506.0	1,344.3	1,102.4	241.86	5.558	
15,600.0	7,530.0	14,266.2	7,759.0	143.0	111.1	100.51	-7,929.9	-2,506.0	1,343.8	1,098.5	245.28	5.478	
15,700.0	7,530.0	14,366.2	7,759.0	144.7	112.8	100.51	-8,029.9	-2,506.0	1,343.3	1,094.6	248.71	5.401	
15,800.0	7,530.0	14,466.2	7,759.0	146.4	114.5	100.51	-8,129.9	-2,506.0	1,342.8	1,090.6	252.13	5.326	
15,900.0	7,530.0	14,566.2	7,759.0	148.2	116.2	100.52	-8,229.9	-2,506.0	1,342.3	1,086.7	255.56	5.252	
16,000.0	7,530.0	14,666.2	7,759.0	149.9	117.9	100.52	-8,329.9	-2,506.0	1,341.8	1,082.8	258.98	5.181	
16,100.0	7,530.0	14,766.2	7,759.0	151.6	119.6	100.52	-8,429.9	-2,506.1	1,341.3	1,078.9	262.41	5.111	
16,200.0	7,530.0	14,866.2	7,759.0	153.4	121.3	100.53	-8,529.9	-2,506.1	1,340.8	1,074.9	265.83	5.044	
16,300.0	7,530.0	14,966.2	7,759.0	155.1	123.0	100.53	-8,629.9	-2,506.1	1,340.3	1,071.0	269.26	4.978	
16,400.0	7,530.0	15,066.2	7,759.0	156.8	124.7	100.54	-8,729.9	-2,506.1	1,339.8	1,067.1	272.69	4.913	
16,500.0	7,530.0	15,166.2	7,759.0	158.6	126.4	100.54	-8,829.9	-2,506.1	1,339.3	1,063.2	276.12	4.850	
16,600.0	7,530.0	15,266.2	7,759.0	160.3	128.1	100.54	-8,929.9	-2,506.1	1,338.8	1,059.2	279.54	4.789	
16,700.0	7,530.0	15,366.2	7,759.0	162.0	129.8	100.55	-9,029.9	-2,506.2	1,338.3	1,055.3	282.97	4.729	
16,800.0	7,530.0	15,466.2	7,759.0	163.8	131.5	100.55	-9,129.9	-2,506.2	1,337.8	1,051.4	286.40	4.671	
16,900.0	7,530.0	15,566.2	7,759.0	165.5	133.2	100.56	-9,229.9	-2,506.2	1,337.3	1,047.5	289.83	4.614	
17,000.0	7,530.0	15,666.2	7,759.0	167.2	134.9	100.56	-9,329.9	-2,506.2	1,336.8	1,043.5	293.26	4.558	
17,100.0	7,530.0	15,766.2	7,759.0	169.0	136.6	100.56	-9,429.9	-2,506.2	1,336.3	1,039.6	296.69	4.504	
17,200.0	7,530.0	15,866.2	7,759.0	170.7	138.4	100.57	-9,529.9	-2,506.2	1,335.8	1,035.7	300.12	4.451	
17,300.0	7,530.0	15,966.2	7,759.0	172.4	140.1	100.57	-9,629.9	-2,506.3	1,335.3	1,031.7	303.55	4.399	
17,400.0	7,530.0	16,066.2	7,759.0	174.2	141.8	100.58	-9,729.9	-2,506.3	1,334.8	1,027.8	306.98	4.348	
17,489.2	7,530.0	16,148.7	7,759.0	175.7	143.2	100.58	-9,812.4	-2,506.3	1,334.4	1,024.4	309.93	4.305	CC
17,490.0	7,530.0	16,148.7	7,759.0	175.7	143.2	100.58	-9,812.4	-2,506.3	1,334.4	1,024.4	309.94	4.305	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Morgan Hills 1C-7H-A168
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5035.0ft
Reference Site:	S7-T1N-R68W (Woolley-Sosa/Becky/Morgan Hills)	**MD Reference:**	WELL @ 5035.0ft
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Morgan Hills 1C-7H-A168	**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 #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5035.0ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Morgan Hills 1C-7H-A168
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.30°

Ladder Plot



L E G E N D

NG), ENCANA WELL, PLAN ONLY V0
1, ENCANA WELL, NO SURVEYS V0
2, ENCANA WELL, NO SURVEYS V0
3, HZ, Plan #2 V0
3, HZ, Plan #2 V0
3, HZ, Plan #2 V0
3, HZ, Plan #2 V0
3, HZ, Plan #2 V0
Morgan Hills 1G-7H-A168, HZ, Plan #2 V0
Morgan Hills 1H-7H-A168, HZ, Plan #2 V0
Morgan Hills 1I-7H-A168, HZ, Plan #2 V0
Sosa 21-18, DD (MWD), DD V0
Sosa 21-18, DD (MWD), Plan #2 V0
Sosa 22-18, DD, DD V0
Sosa 22-18, DD, Plan #2 V0
THOMAS 33-7 (EXISTING), ENCANA WELL, SURVEYS V0
WOOLLEY 41-7 (EXISTING), ENCAN
WOOLLEY 42-7 ENCANA (EXISTING
WOOLLEY A 1-7 (EXISTING), ENCAN
Woolley-Becky 2G-7H-E168, Hz, Plan #
Woolley-Becky 2H-7H-E168, Hz, Plan #
Woolley-Sosa 2G-7H-E168, HZ, Plan #